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**YUCCA VALLEY 105
NOISE ANALYSIS
COUNTY OF SAN BERNARDINO, CALIFORNIA**

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TABLE OF CONTENTS

| <u>SECTION</u> | <u>PAGE</u> |
|--|-------------|
| 1.0 EXECUTIVE SUMMARY | 1-1 |
| 1.1 Off-Site Noise Analysis | 1-1 |
| 1.2 On-Site Noise Analysis | 1-1 |
| 1.3 Construction Noise Analysis | 1-4 |
| 2.0 INTRODUCTION | 2-1 |
| 2.1 Purpose of Report..... | 2-1 |
| 2.2 Site Location | 2-1 |
| 2.3 Existing On-Site and Surrounding Land Use..... | 2-3 |
| 2.4 Proposed Project | 2-3 |
| 3.0 NOISE FUNDAMENTALS | 3-1 |
| 3.1 Introduction | 3-1 |
| 3.2 Noise Descriptors | 3-1 |
| 3.3 Traffic Noise Prediction | 3-2 |
| 3.4 Noise Control | 3-2 |
| 3.5 Ground Absorption | 3-3 |
| 3.6 Noise Barrier Attenuation..... | 3-3 |
| 4.0 NOISE STANDARDS | 4-1 |
| 4.1 City of San Bernardino Standards | 4-1 |
| 4.2 Noise Ordinance Criteria | 4-1 |
| 4.3 City of San Bernardino Noise Element | 4-1 |
| 5.0 EXISTING NOISE LEVEL MEASUREMENTS..... | 5-1 |
| 5.1 Measurement Procedure and Criteria | 5-1 |
| 5.2 Noise Measurement Locations | 5-1 |
| 5.3 Noise Measurement Results | 5-3 |
| 6.0 METHODS AND PROCEDURES | 6-1 |
| 6.1 FHWA Traffic Noise Prediction Model | 6-1 |
| 6.2 Traffic Noise Prediction Model Inputs | 6-1 |
| 7.0 OFF-SITE NOISE ANALYSIS | 7-1 |
| 7.1 Existing Off-Site Noise Setting..... | 7-1 |
| 7.2 Off-Site Transportation Related Noise Analysis | 7-1 |
| 7.3 Off-Site Transportation Related Noise Impacts | 7-8 |
| 7.4 Off-Site Non-Transportation Related Project Noise Analysis | 7-11 |
| 7.5 Off-Site Non-Transportation Related Project Noise Mitigation | 7-11 |
| 8.0 ON-SITE EXTERIOR NOISE ANALYSIS..... | 8-1 |
| 8.1 Existing On-Site Exterior Noise Setting | 8-1 |
| 8.2 On-Site Transportation Related Noise Impacts | 8-2 |
| 8.3 Non-Transportation Related Noise Impacts | 8-4 |

| | | |
|------|---|------|
| 8.4 | On-Site Noise Mitigation | 8-5 |
| 9.0 | ON-SITE INTERIOR NOISE ANALYSIS | 9-1 |
| 9.1 | Interior Noise Reduction Methodology | 9-1 |
| 9.2 | Interior Noise Level Assessment | 9-1 |
| 10.0 | SHORT-TERM CONSTRUCTION NOISE IMPACTS | 10-1 |
| 10.1 | Existing Conditions | 10-1 |
| 10.2 | Threshold of Significance | 10-1 |
| 10.3 | Construction Impacts | 10-3 |
| 10.4 | Mitigation Measures | 10-3 |

APPENDICES

| | |
|--|---|
| CITY OF SAN BERNARDINO NOISE DEVELOPMENT STANDARDS | A |
| CITY OF SAN BERNARDINO GENERAL PLAN NOISE ELEMENT | B |
| STUDY AREA PHOTOS | C |
| NOISE MONITORING DATA PRINTOUTS | D |
| Leq TO CNEL CONVERSION PRINTOUTS | E |
| OFF-SITE FHWA TRAFFIC NOISE MODEL PRINTOUTS | F |
| ON-SITE FHWA TRAFFIC NOISE MODEL PRINTOUTS..... | G |

LIST OF EXHIBITS

| <u>EXHIBIT</u> | <u>PAGE</u> |
|--|-------------|
| 1-A SUMMARY OF RECOMMENDATIONS | 1-3 |
| 2-A LOCATION MAP | 2-2 |
| 2-B SITE PLAN | 2-4 |
| 4-A LAND USE AND NOISE COMPATIBILITY MATRIX..... | 4-2 |
| 5-A NOISE MONITORING LOCATIONS | 5-2 |
| 10-A TYPICAL CONSTRUCTION NOISE LEVELS..... | 10-2 |

LIST OF TABLES

| <u>TABLE</u> | | <u>PAGE</u> |
|--------------|--|-------------|
| 5-1 | EXISTING NOISE LEVEL MEASUREMENTS..... | 5-4 |
| 6-1 | ROADWAY PARAMETERS | 6-2 |
| 6-2 | AVERAGE DAILY TRAFFIC (1000's)..... | 6-4 |
| 6-3 | HOURLY TRAFFIC FLOW DISTRIBUTION | 6-5 |
| 7-1 | EXISTING CONDITIONS NOISE CONTOURS | 7-3 |
| 7-2 | 2006 NO PROJECT CONDITIONS NOISE CONTOURS..... | 7-4 |
| 7-3 | 2006 WITH PROJECT CONDITIONS NOISE CONTOURS..... | 7-5 |
| 7-4 | 2030 NO PROJECT CONDITIONS NOISE CONTOURS..... | 7-6 |
| 7-5 | 2030 WITH PROJECT CONDITIONS NOISE CONTOURS..... | 7-7 |
| 7-6 | OPENING YEAR 2006 PROJECT CONTRIBUTIONS | 7-9 |
| 7-7 | YEAR 2030 PROJECT CONTRIBUTIONS | 7-10 |
| 7-8 | YEAR 2030 CUMULATIVE NOISE IMPACTS | 7-12 |
| 8-1 | FUTURE ON-SITE EXTERIOR NOISE LEVELS (dBA CNEL)..... | 8-3 |
| 9-1 | FIRST FLOOR INTERIOR NOISE IMPACTS (dBA CNEL) | 9-2 |
| 9-2 | SECOND FLOOR INTERIOR NOISE IMPACTS (dBA CNEL) | 9-3 |

**YUCCA VALLEY 105
NOISE ANALYSIS
COUNTY OF SAN BERNARDINO, CALIFORNIA**

1.0 EXECUTIVE SUMMARY

This noise study has been completed to determine the noise impacts associated with the development of the proposed Yucca Valley 105 Residential Development (proposed project). The project site is generally located north of Alta Loma Drive and west of Sunny Vista Road in the County of San Bernardino. This analysis presents three land use alternatives. The less intense alternative consists of 210 single-family homes, the preferred alternative consists of 270 single-family homes, and the more intense alternative consists of 315 single-family homes.

1.1 Off-Site Noise Analysis

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 County of San Bernardino 65 dBA CNEL exterior noise standard.

(Buildout Conditions), the development of the proposed project will increase the off-site noise levels on Sunny Vista Road north of Torres Avenue between 3.0 dBA CNEL and 4.0 dBA CNEL for some scenarios in Year 2010 and Year 2030. Though the increase is greater than 3.0 dBA, the overall level will only reach a maximum of 58.4 dBA CNEL. 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 County of San Bernardino General Plan.

1.2 On-Site Noise Analysis

1.2.1 Transportation Noise Impacts

It is expected that the primary source of noise impacts to the site will be traffic noise from Alta Loma Drive and Sunny Vista Road. The expected transportation noise impacts at the noise sensitive areas within the project were evaluated according to the noise level contours for Year 2030 (Buildout Conditions) are presented in this report. All noise sensitive uses located within the 60 dBA CNEL noise contours adjacent to Alta Loma Drive will require noise mitigation to meet the County of San Bernardino noise standards. A 5.0 to 6.0-foot sound wall may be required to all lots facing Alta Loma Drive to reduce the exterior noise levels at the home's exterior areas. Once grading and site plans are available, specifications of noise mitigation can be made in order to meet the County of San Bernardino noise standards for residential uses.

1.2.2 Stationary Noise Impacts

Outdoor activities from the adjacent Friendly Hills Elementary School may create noise impacts to the proposed residential lots. Stationary related noise must not exceed 55 dBA during the daytime hours between 7 a.m. until 10 p.m. for a cumulative period of more than 30 minutes in any hour (for the daytime and nighttime hours) to any portion of any surrounding property containing a habitable dwelling, hospital, school, library, or nursing home. The potential noise sources associated with outdoor school activities are the ball fields located approximately 180 feet from the proposed project. While school outdoor activities may be heard, it is not expected that the school will create significant noise impacts to the adjacent homes if the outdoor

activities at the school comply with the San Bernardino County Development Code for stationary noise sources. A 6.0-foot high privacy wall is recommended to further reduce any potential noise impacts associated with school outdoor activities.

1.3 Construction Noise Analysis

The project site is currently vacant. Adjacent land uses include: vacant land to the north, single-family homes and Friendly Elementary School to the east, and single-family homes to the south and west.

Section 83.01(g) of the County Development Code exempts construction noise activities from the noise standards between 7:00 a.m. and 7:00 p.m. except Sundays and holidays. Construction noise is of short-term duration and will not present any long-term impacts on the project site or the surrounding area.

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 County staff.

2.0 INTRODUCTION

This noise study has been completed to determine the noise impacts associated with the development of the proposed Yucca Valley 105 Residential Development. The project site shown on Exhibit 2-A is generally located north of Alta Loma Drive and west of Sunny Vista Road in the County of San Bernardino. The project site is currently vacant. Adjacent land uses include: vacant land to the north, single-family homes and Friendly Elementary School to the east, and single-family homes to the south and west.

This analysis presents three land use alternatives. The less intense alternative consists of 210 single-family homes, the preferred alternative presented on Exhibit 2-B consists of 270 single-family homes, and the more intense alternative consists of 315 single-family homes. This study has been prepared to satisfy the County of San Bernardino noise standards.

EXHIBIT 2-A
LOCATION MAP

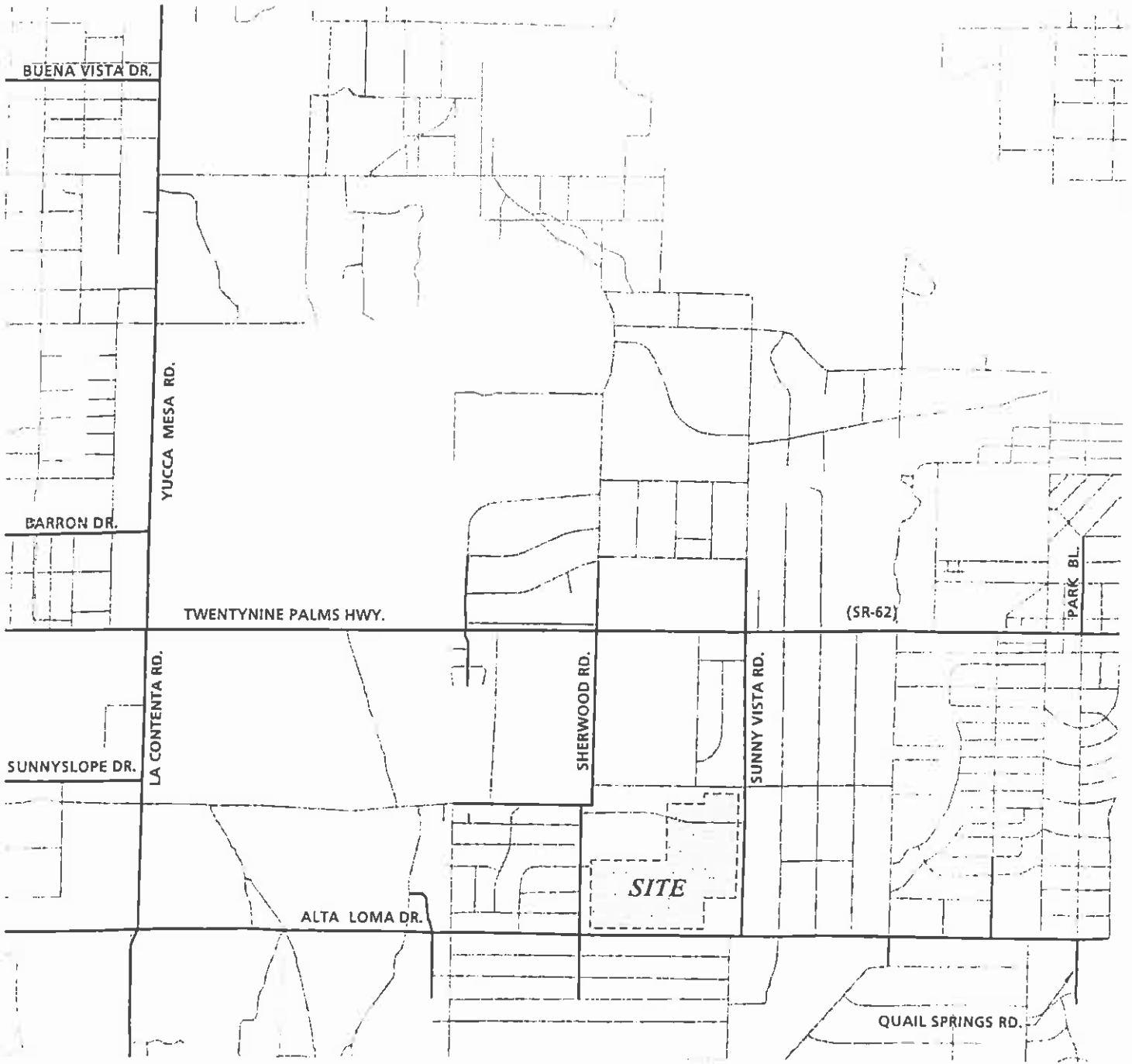
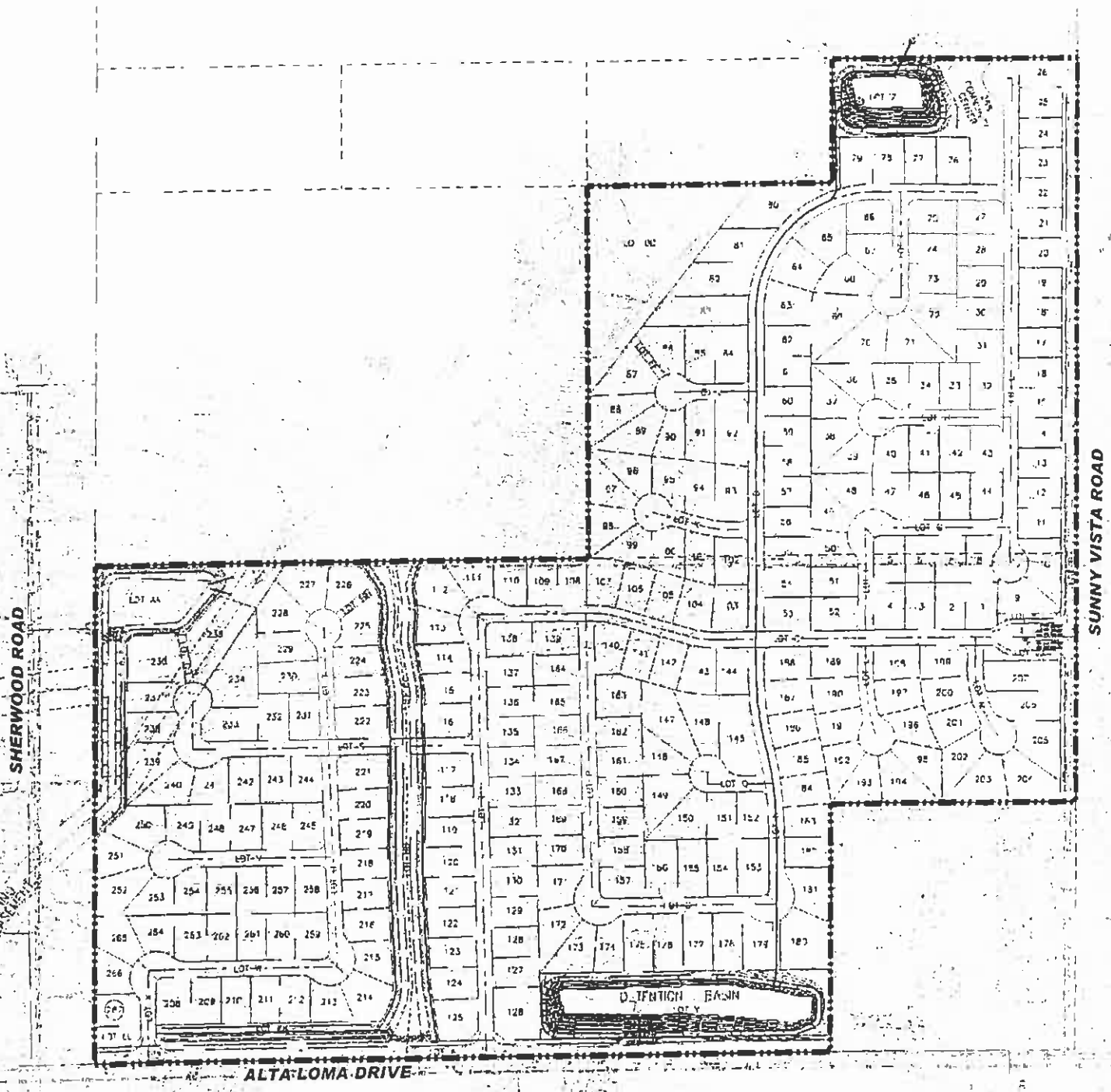


EXHIBIT 2-B SITE PLAN



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 County of San Bernardino relies on the CNEL to assess transportation related impacts on noise sensitive land uses.

The Community Noise Equivalent Level (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 San Bernardino County Development Code, the County 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,

4.0 NOISE STANDARDS

The County of San Bernardino has identified two separate types of noise sources: (1) mobile, and (2) stationary. The County of San Bernardino Development Code is included in Appendix "A".

4.1 Transportation Noise Criteria

The County of San Bernardino has adopted interior and exterior noise standards as part of the County Developmental Code for assessing the compatibility of land uses with transportation related noise impacts. For residential uses, the maximum exterior noise level is 60 dBA CNEL. An exterior noise level of up to 65 dBA CNEL will be allowed if noise has been substantially mitigated through a reasonable application of the best available noise reduction technology. For interior areas the noise standard is 45 dBA CNEL.

4.2 Stationary Noise Criteria

The County of San Bernardino had developed a set of requirements for determining and mitigating non-transportation/stationary noise source impacts to residential properties. Noise sources covered by this standard include, but are not limited to: industrial facilities, mining activities, loading dock activities, loud speakers, sporting events, musical performances, well pumps, equipment, vehicles operated off the public roadways, or any noise producing activities associated with a permanent fixed base of operation.

For the purpose of this analysis, the noise standards associated with traffic noise to this project are controlled by the standards described in Section 4.1 of this report and the impacts associated with the school are controlled by the standards described in Section 4.2.

4.3 Community Noise Assessment Criteria

In community noise assessment, changes in noise levels greater than 3 dBA are often identified as "barely perceptible", while 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. No scientific evidence is available to support the use of 3 dBA as the significance threshold. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dBA. However, 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. Therefore, 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 should be considered significant if the project increases noise levels 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).

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 11:00 a.m. and 1:00 p.m. on July 17, 2007. Appendix "B" includes a photo index and study area photos.

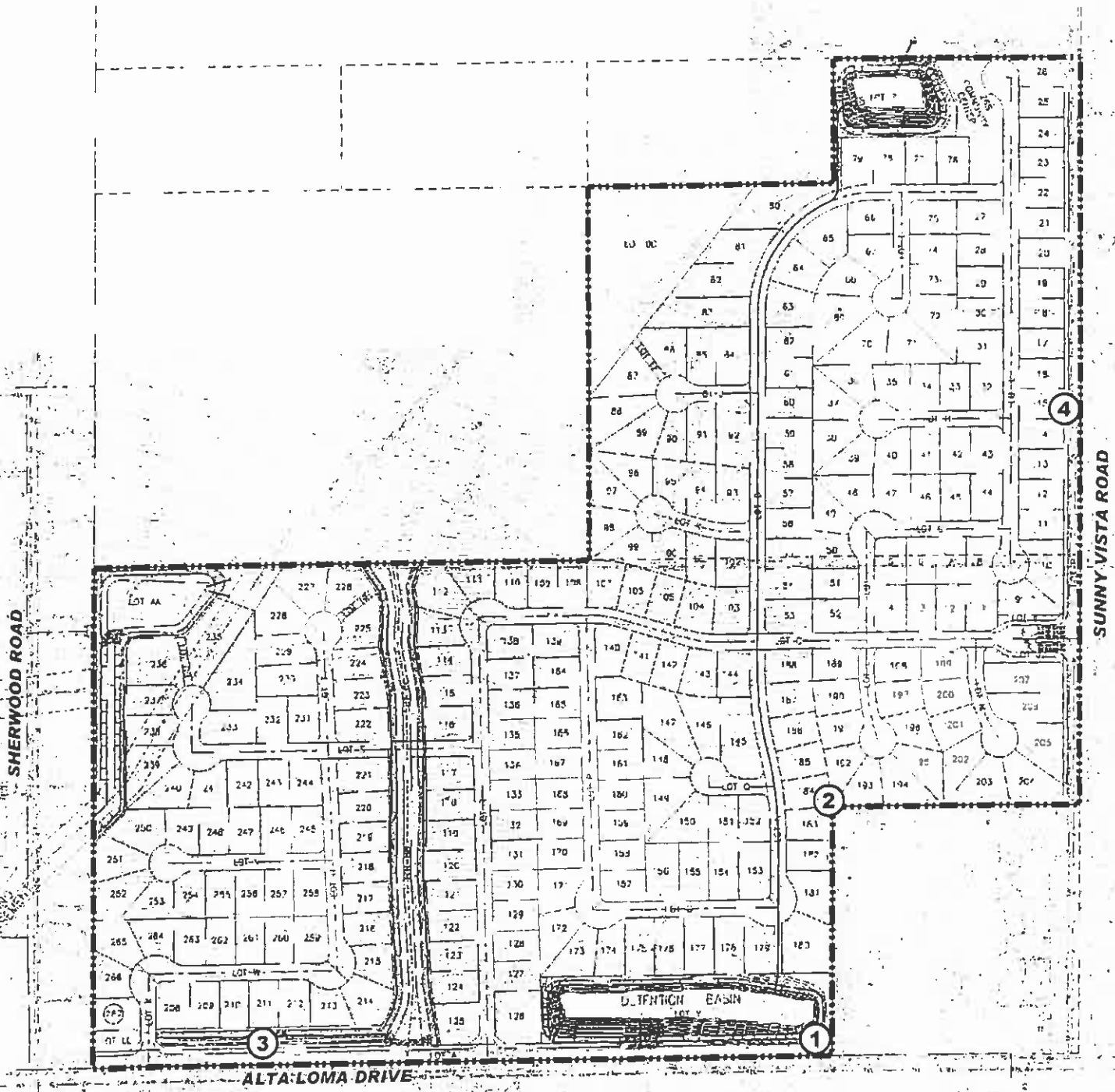
5.1 Measurement Procedure and Criteria

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 is vacant and is located in a relatively undeveloped area. The project site is subject to noise from Sunny Vista Road, Alta Loma Drive, and the adjacent elementary school. The proposed site is surrounded by sporadic single-family residential uses and an elementary school to the southeast.

EXHIBIT 5-A
NOISE MEASUREMENT LOCATIONS



LEGEND:

① = NOISE MONITORING LOCATIONS

TABLE 5-1

EXISTING (AMBIENT) NOISE LEVEL MEASUREMENTS¹

| OBSERVER LOCATION ² | DESCRIPTION | TIME OF MEASUREMENT ³ | PRIMARY NOISE SOURCE | MEASURED NOISE LEVELS (Leq dBA) | CALCULATED NOISE LEVELS (Leq CNEL) |
|--------------------------------|---|----------------------------------|---|---------------------------------|------------------------------------|
| 1 | Located 50 feet from the centerline of Alla Loma Drive adjacent to the elementary school property line. | 11:51 AM | Traffic on Alla Loma Drive | 60.5 | 61.0 |
| 2 | Located at the northwest corner of the elementary school property line on the proposed project site. | 12:05 PM | Ambient, Air Conditioning Units at School | 44.9 | - |
| 3 | Located 50 feet from the centerline of Alla Loma Drive near the southwest portion of the proposed project site. | 12:21 PM | Traffic on Alla Loma Drive | 62.2 | 62.7 |
| 4 | Located 100 feet from the centerline of Sunny Vista Road on the eastern portion of the proposed project site. | 12:37 PM | Traffic on Sunny Vista Drive | 45.7 | 46.2 |

¹ Noise measurements taken by Urban Crossroads, Inc. on July 17, 2007

² See Exhibit 5-A for the location of the monitoring sites, and Appendix B for Study Area Photos.

³ Taken with a Larson Davis 824 Series Type 1 noise meter.

Noise monitoring locations were selected by Urban Crossroads based on the impact potential. Site 1 is located approximately 50 feet from the centerline of Alta Loma Drive on the southern portion of the project site at the property line of the existing elementary school. Site 2 is located at the northeast corner of the existing elementary school at the property line of the proposed project. Site 3 is located approximately 50 feet from the centerline of Alta Loma Drive on the southwestern portion of the project site. Site 4 is located approximately 100 feet from the centerline of Sunny Vista Road on the northeastern portion of the project site. 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. Sites 1 thru 4 were monitored for a minimum time period of 10 minutes. Their noise levels measured in the range from 44.9 to 62.2 dBA Leq. Short-term measurements 1,3, and 4 were then converted to CNEL (Community Noise Equivalent Level) and ranged from 46.2 to 62.7 dBA CNEL. The noise monitoring results printouts are included in Appendix "C" and the Leq to CNEL conversions are presented in Appendix "D".

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.

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 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

TABLE 6-1

ROADWAY PARAMETERS

| ROADWAY | SEGMENT | CLASSIFICATION ¹ | SPEED (MPH) | SITE CONDITIONS |
|--------------------------|------------------------------|-----------------------------|-------------|-----------------|
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | Major Highway | 45 | Soft |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | Major Highway | 45 | Soft |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | Major Highway | 45 | Soft |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | Major Highway | 45 | Soft |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | Major Highway | 45 | Soft |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | Major Highway | 45 | Soft |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | Major Highway | 45 | Soft |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | Major Highway | 45 | Soft |
| Yucca Trail | w/o Avalon Avenue | Secondary Highway | 45 | Soft |
| Yucca Trail | w/o La Contenta Road | Secondary Highway | 45 | Soft |
| Alta Loma Drive | w/o Sherwood Avenue | Secondary Highway | 45 | Soft |
| Alta Loma Drive | w/o Sunny Vista Road | Secondary Highway | 45 | Soft |
| Alta Loma Drive | e/o Sunny Vista Road | Secondary Highway | 45 | Soft |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | Collector | 45 | Soft |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | Collector | 45 | Soft |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | Secondary Highway | 45 | Soft |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | Secondary Highway | 45 | Soft |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | Major Highway | 45 | Soft |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | Collector | 45 | Soft |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | Collector | 45 | Soft |
| La Contenta Road | s/o Alta Loma Drive | Collector | 45 | Soft |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | Collector | 45 | Soft |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | Collector | 45 | Soft |
| Sherwood Avenue | s/o Alta Loma Drive | Collector | 45 | Soft |
| Sherwood Avenue | n/o Alta Loma Drive | Collector | 45 | Soft |
| Sunny Vista Road | s/o Alta Loma Drive | Secondary Highway | 45 | Soft |
| Sunny Vista Road | n/o Alta Loma Drive | Secondary Highway | 45 | Soft |
| Sunny Vista Road | n/o Torres Avenue | Secondary Highway | 45 | Soft |

¹ According to the Town of Yucca Valley and San Bernardino Circulation Elements.

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. The noise level measurement results also support the use of soft site in this case.

The average daily traffic volumes used for this study presented in Table 6-2 were provided by the Yucca Valley 105 Traffic Impact Analysis Report prepared by Kunzman Associates on July 12, 2007.

Table 6-3 presents the hourly traffic flow distributions (vehicle mix) used for this analysis with the 62 Freeway vehicle mix based on the 2005 Annual Average Daily Truck Traffic on the California State Highway System by Caltrans. The county roads vehicle mix is based on a typical average axle traffic count observed in Southern California. 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 2010 WITHOUT PROJECT | YEAR 2010 WITH PROJECT LESS INTENSE ALT. | YEAR 2010 WITH PROJECT PREFERRED ALT. | YEAR 2010 WITH PROJECT MORE INTENSE ALT. | |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 22.1 | 30.4 | 30.6 | 30.7 | 30.7 | |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 29.5 | 50.8 | 52.0 | 52.3 | 52.6 | |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 31.0 | 46.0 | 47.0 | 47.3 | 47.5 | |
| 29 Palms Highway (SR-62) | w/o Pioneerstown Road | 27.5 | 42.2 | 43.3 | 43.6 | 43.8 | |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 39.2 | 56.5 | 57.7 | 58.0 | 58.2 | |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 22.7 | 31.1 | 32.4 | 32.8 | 33.1 | |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 25.2 | 47.5 | 48.8 | 49.2 | 49.5 | |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 29.5 | 52.2 | 53.4 | 53.7 | 54.0 | |
| Alta Loma Drive | e/o Sunny Vista Road | 1.0 | 2.2 | 2.3 | 2.3 | 2.4 | |
| Alta Loma Drive | w/o Sherwood Avenue | 3.9 | 7.4 | 7.8 | 7.9 | 8.0 | |
| Alta Loma Drive | w/o Sunny Vista Road | 3.6 | 4.9 | 5.2 | 5.4 | 5.4 | |
| Avalon Avenue | 62) | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 2.4 | 3.9 | 3.9 | 3.9 | 3.9 | |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 1.5 | 7.1 | 7.2 | 7.2 | 7.3 | |
| La Contenta Road | s/o Alta Loma Drive | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| Old Woman Springs Road | 62) | 12.3 | 18.6 | 18.8 | 18.9 | 18.9 | |
| Pioneerstown Road | 62) | 2.4 | 3.6 | 3.7 | 3.7 | 3.7 | |
| Pioneerstown Road | s/o 29 Palms Highway (SR-62) | 1.7 | 2.5 | 2.5 | 2.6 | 2.6 | |
| Sage Avenue | 62) | 2.8 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 17.8 | 18.9 | 18.9 | 18.9 | 18.9 | |
| Sherwood Avenue | n/o Alta Loma Drive | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | |
| Sherwood Avenue | s/o Alta Loma Drive | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | |
| Sunny Vista Road | n/o Alta Loma Drive | 1.7 | 1.8 | 2.2 | 2.3 | 2.4 | |
| Sunny Vista Road | n/o Torres Avenue | 1.4 | 1.5 | 3.0 | 3.4 | 3.8 | |
| Sunny Vista Road | s/o Alta Loma Drive | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | |
| Yucca Mesa Road | 62) | 4.0 | 9.6 | 9.8 | 9.9 | 9.9 | |
| Yucca Trail | w/o Avalon Avenue | 8.3 | 9.6 | 9.6 | 9.6 | 9.6 | |
| Yucca Trail | w/o La Contenta Road | 4.1 | 7.6 | 7.9 | 8.0 | 8.1 | |

¹ According to the Yucca Valley 105 Traffic Impact Analysis prepared by Kuntzman Associates in July, 2007.

TABLE 6-2

AVERAGE DAILY TRAFFIC (1000's)¹

| ROADWAY | SEGMENT | AVERAGE DAILY TRAFFIC (IN 1000's) | | | |
|--------------------------|------------------------------|-----------------------------------|--|---------------------------------------|--|
| | | YEAR 2030 WITHOUT PROJECT | YEAR 2030 WITH PROJECT LESS INTENSE ALT. | YEAR 2030 WITH PROJECT PREFERRED ALT. | YEAR 2030 WITH PROJECT MORE INTENSE ALT. |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 41.9 | 42.1 | 42.2 | 42.2 |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 66.1 | 67.3 | 67.6 | 67.9 |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 62.1 | 63.1 | 63.4 | 63.6 |
| 29 Palms Highway (SR-62) | w/o Pioneerstown Road | 56.5 | 57.6 | 57.9 | 58.1 |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 76.8 | 78.0 | 78.3 | 78.5 |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 42.9 | 44.2 | 44.6 | 44.9 |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 60.6 | 61.9 | 62.3 | 62.6 |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 67.5 | 68.7 | 69.0 | 69.3 |
| Alta Loma Drive | e/o Sunny Vista Road | 2.7 | 2.8 | 2.8 | 2.9 |
| Alta Loma Drive | w/o Sherwood Avenue | 9.5 | 9.9 | 10.0 | 10.1 |
| Alta Loma Drive | w/o Sunny Vista Road | 6.8 | 7.1 | 7.3 | 7.3 |
| Avalon Avenue | 62) | 1.4 | 1.4 | 1.4 | 1.4 |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 5.2 | 5.2 | 5.2 | 5.2 |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 7.9 | 8.0 | 8.0 | 8.1 |
| La Contenta Road | s/o Alta Loma Drive | 0.2 | 0.2 | 0.2 | 0.2 |
| Old Woman Springs Road | 62) | 25.0 | 25.2 | 25.3 | 25.3 |
| Pioneerstown Road | 62) | 4.9 | 5.0 | 5.0 | 5.0 |
| Pioneerstown Road | s/o 29 Palms Highway (SR-62) | 1.8 | 1.8 | 1.9 | 1.9 |
| Sage Avenue | 62) | 4.4 | 4.4 | 4.4 | 4.4 |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 28.1 | 28.1 | 28.1 | 28.1 |
| Sherwood Avenue | n/o Alta Loma Drive | 0.9 | 0.9 | 0.9 | 0.9 |
| Sherwood Avenue | s/o Alta Loma Drive | 1.6 | 1.6 | 1.6 | 1.6 |
| Sunny Vista Road | n/o Alta Loma Drive | 2.7 | 3.1 | 3.2 | 3.3 |
| Sunny Vista Road | n/o Torres Avenue | 2.2 | 3.7 | 4.1 | 4.5 |
| Sunny Vista Road | s/o Alta Loma Drive | 1.4 | 1.4 | 1.4 | 1.4 |
| Yucca Mesa Road | 62) | 11.7 | 11.9 | 12.0 | 12.0 |
| Yucca Trail | w/o Avalon Avenue | 13.9 | 13.9 | 13.9 | 13.9 |
| Yucca Trail | w/o La Contenta Road | 9.8 | 10.1 | 10.2 | 10.3 |

¹ According to the Yucca Valley 105 Traffic Impact Analysis prepared by Kunzman Associates in July, 2007.

TABLE 6-3

HOURLY TRAFFIC FLOW DISTRIBUTION

| MOTOR-VEHICLE TYPE | DAYTIME (7 AM TO 7 PM) | EVENING (7 PM TO 10 PM) | NIGHT (10 PM TO 7 AM) | TOTAL % TRAFFIC FLOW |
|--|---------------------------|----------------------------|--------------------------|-------------------------|
| <u>Collector and Arterial</u> ¹ | | | | |
| 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% |
| <u>62 Freeway</u> ² | | | | |
| Automobiles | 77.5% | 14.0% | 10.5% | 94.10% |
| Medium Trucks | 48.0% | 2.0% | 50.0% | 3.72% |
| Heavy Trucks | 48.0% | 2.0% | 50.0% | 2.18% |

¹ Based on typical southern California vehicle mix.

² Based on the 2005 Truck Traffic Mix by Caltrans.

7.0 OFF-SITE NOISE ANALYSIS

The proposed project is subject to transportation and non-transportation related noise. 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 on traffic noise from Alta Loma Drive and Sunny Vista Road. Currently the traffic volumes on Alta Loma Drive and Sunny Vista Road are low.

7.2 Off-Site Transportation Related Noise Analysis

To assess the off-site transportation related noise level impacts associated with development of the proposed Yucca Valley 105 project, traffic noise contours were developed for the following traffic scenarios:

- Existing: This scenario refers to the existing present-day noise conditions, without construction of the proposed project.
- Year 2010 Less Intense Alternative With / Without Project: This scenario refers to the background noise conditions at future year 2010 with and without the proposed project. This corresponds to the completion of the project buildout with the less intense alternative.
- Year 2010 Preferred Alternative With / Without Project: This scenario refers to the background noise conditions at future year 2010 with and without the

proposed project. This corresponds to the completion of the project buildout with the preferred alternative.

- Year 2010 More Intense Alternative With / Without Project: This scenario refers to the background noise conditions at future year 2010 with and without the proposed project. This corresponds to the completion of the project buildout with the more intense alternative.

- 2030 Less Intense Alternative With / Without Project: This scenario refers to the background noise conditions at future year 2030 with and without the proposed project. This corresponds to the completion of the project buildout with the less intense alternative.

- Year 2030 Preferred Alternative With / Without Project: This scenario refers to the background noise conditions at future year 2030 with and without the proposed project. This corresponds to the completion of the project buildout with the preferred alternative.

- Year 2030 More Intense Alternative With / Without Project: This scenario refers to the background noise conditions at future year 2030 with and without the proposed project. This corresponds to the completion of the project buildout with the more intense alternative.

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 through 7-9 present the calculated distances from each study area roadway segment to the estimated noise contour boundaries for the 55, 60, 65 and 70 dBA 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 County of San Bernardino General Plan Noise Element. The off-site FHWA model off-site transportation related CNEL noise contour calculations are included in Appendix "E." Project contributions are discussed in the following sections.

7.2.1 Year 2010 Less Intense Alternative Project Traffic Noise Level Contributions

Table 7-10 presents a comparison of the Year 2010 less intense alternative with and without project noise levels shown in Tables 7-2 and 7-3. The roadway noise impacts on all segments will increase from 0.0 dBA CNEL to 3.0 dBA CNEL with the development of the proposed project.

7.2.2 Year 2010 Preferred Alternative Project Traffic Noise Level Contributions

Table 7-11 presents a comparison of the Year 2010 preferred alternative with and without project noise levels shown in Tables 7-2 and 7-4. The roadway noise impacts on all segments will increase from 0.0 dBA CNEL to 3.6 dBA CNEL with the development of the proposed project.

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 |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 70.3 | 105 | 226 | 488 | 1,051 |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 71.6 | 127 | 275 | 591 | 1,274 |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 71.8 | 132 | 284 | 611 | 1,317 |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 71.3 | 122 | 262 | 564 | 1,216 |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 72.8 | 154 | 332 | 715 | 1,540 |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 70.4 | 107 | 231 | 497 | 1,070 |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 70.9 | 115 | 247 | 532 | 1,147 |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 71.6 | 127 | 275 | 591 | 1,274 |
| Alta Loma Drive | e/o Sunny Vista Road | 52.1 | RW | RW | RW | 64 |
| Alta Loma Drive | w/o Sherwood Avenue | 58.0 | RW | RW | 73 | 158 |
| Alta Loma Drive | w/o Sunny Vista Road | 57.6 | RW | RW | 69 | 149 |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 51.5 | RW | RW | RW | 59 |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 55.8 | RW | RW | 52 | 113 |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 53.8 | RW | RW | 38 | 83 |
| La Contenta Road | s/o Alta Loma Drive | 42.0 | RW | RW | RW | RW |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 69.8 | 96 | 208 | 447 | 964 |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 55.8 | RW | RW | 52 | 113 |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 54.3 | RW | RW | 42 | 90 |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 56.5 | RW | RW | 59 | 126 |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 64.6 | RW | RW | RW | 45 |
| Sherwood Avenue | n/o Alta Loma Drive | 49.8 | RW | RW | RW | 63 |
| Sherwood Avenue | s/o Alta Loma Drive | 52.0 | RW | RW | 42 | 91 |
| Sunny Vista Road | n/o Alta Loma Drive | 54.4 | RW | RW | RW | 80 |
| Sunny Vista Road | n/o Torres Avenue | 53.5 | RW | RW | RW | 59 |
| Sunny Vista Road | s/o Alta Loma Drive | 51.6 | RW | RW | 74 | 159 |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 58.0 | RW | 56 | 121 | 261 |
| Yucca Trail | w/o Avalon Avenue | 61.2 | RW | RW | 76 | 163 |
| Yucca Trail | w/o La Contenta Road | 58.2 | RW | RW | RW | RW |

¹ RW. Noise contour located within the road right of way.

TABLE 7-2

YEAR 2010 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 |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 71.7 | 130 | 280 | 603 | 1,300 |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 73.9 | 183 | 394 | 850 | 1,831 |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 73.5 | 171 | 369 | 795 | 1,713 |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 73.1 | 162 | 349 | 751 | 1,618 |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 74.4 | 197 | 423 | 912 | 1,965 |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 71.8 | 132 | 284 | 613 | 1,320 |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 73.6 | 175 | 377 | 812 | 1,750 |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 74.1 | 186 | 402 | 865 | 1,864 |
| Alta Loma Drive | e/o Sunny Vista Road | 55.5 | RW | RW | 50 | 108 |
| Alta Loma Drive | w/o Sherwood Avenue | 60.7 | RW | 52 | 112 | 242 |
| Alta Loma Drive | w/o Sunny Vista Road | 59.0 | RW | RW | 85 | 184 |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 52.0 | RW | RW | RW | 63 |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 57.9 | RW | 34 | 73 | 156 |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 60.5 | RW | 50 | 108 | 233 |
| La Contenta Road | s/o Alta Loma Drive | 42.0 | RW | RW | RW | RW |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 71.6 | 127 | 274 | 590 | 1,270 |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 57.6 | RW | RW | 69 | 148 |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 56.0 | RW | RW | 54 | 116 |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 56.8 | RW | RW | 61 | 132 |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 64.8 | RW | RW | RW | 45 |
| Sherwood Avenue | n/o Alta Loma Drive | 49.8 | RW | RW | RW | 67 |
| Sherwood Avenue | s/o Alta Loma Drive | 52.4 | RW | RW | 44 | 94 |
| Sunny Vista Road | n/o Alta Loma Drive | 54.6 | RW | RW | RW | 83 |
| Sunny Vista Road | n/o Torres Avenue | 53.8 | RW | RW | RW | 64 |
| Sunny Vista Road | s/o Alta Loma Drive | 52.1 | RW | 61 | 132 | 285 |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 61.8 | RW | 62 | 133 | 287 |
| Yucca Trail | w/o Avalon Avenue | 61.9 | RW | 53 | 114 | 246 |
| Yucca Trail | w/o La Contenta Road | 60.9 | RW | RW | RW | RW |

RW Noise contour located within the road right of way.

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TABLE 7-3

YEAR 2010 WITH PROJECT LESS INTENSE ALTERNATIVE 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 |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 71.7 | 131 | 281 | 606 | 1,306 |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 74.0 | 186 | 401 | 863 | 1,859 |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 73.6 | 174 | 374 | 807 | 1,738 |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 73.2 | 165 | 355 | 764 | 1,646 |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 74.5 | 199 | 429 | 925 | 1,993 |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 72.0 | 136 | 292 | 630 | 1,356 |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 73.8 | 178 | 384 | 827 | 1,782 |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 74.2 | 189 | 408 | 878 | 1,893 |
| Alta Loma Drive | e/o Sunny Vista Road | 55.7 | RW | RW | 51 | 111 |
| Alta Loma Drive | w/o Sherwood Avenue | 61.0 | RW | 54 | 116 | 250 |
| Alta Loma Drive | w/o Sunny Vista Road | 59.2 | RW | RW | 89 | 191 |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 52.0 | RW | RW | RW | 63 |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 57.9 | RW | 34 | 73 | 156 |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 60.6 | RW | 51 | 109 | 235 |
| La Contenta Road | s/o Alta Loma Drive | 42.0 | RW | RW | RW | RW |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 71.6 | 128 | 276 | 594 | 1,279 |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 57.7 | RW | RW | 70 | 151 |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 56.0 | RW | RW | 54 | 116 |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 56.8 | RW | RW | 61 | 132 |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 64.8 | RW | RW | RW | 45 |
| Sherwood Avenue | n/o Alta Loma Drive | 49.8 | RW | RW | RW | 67 |
| Sherwood Avenue | s/o Alta Loma Drive | 52.4 | RW | RW | 50 | 108 |
| Sunny Vista Road | n/o Alta Loma Drive | 55.5 | RW | RW | 61 | 132 |
| Sunny Vista Road | n/o Torres Avenue | 56.8 | RW | RW | RW | 64 |
| Sunny Vista Road | s/o Alta Loma Drive | 52.1 | RW | 62 | 134 | 289 |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 61.9 | RW | 62 | 133 | 287 |
| Yucca Trail | w/o Avalon Avenue | 61.9 | RW | 54 | 117 | 252 |
| Yucca Trail | w/o La Contenta Road | 61.0 | RW | RW | RW | RW |

¹ RW: Noise contour located within the road right of way.

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TABLE 7-4

YEAR 2010 WITH PROJECT PREFERRED ALTERNATIVE 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 |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 71.8 | 131 | 282 | 607 | 1,309 |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 74.1 | 187 | 402 | 866 | 1,866 |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 73.6 | 175 | 376 | 810 | 1,746 |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 73.3 | 165 | 356 | 767 | 1,653 |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 74.5 | 200 | 431 | 928 | 2,000 |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 72.0 | 137 | 295 | 635 | 1,368 |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 73.8 | 179 | 386 | 832 | 1,792 |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 74.2 | 190 | 409 | 882 | 1,900 |
| Alta Loma Drive | e/o Sunny Vista Road | 55.7 | RW | RW | 51 | 111 |
| Alta Loma Drive | w/o Sherwood Avenue | 61.0 | RW | 54 | 117 | 252 |
| Alta Loma Drive | w/o Sunny Vista Road | 59.4 | RW | RW | 91 | 196 |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 52.0 | RW | RW | RW | 63 |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 57.9 | RW | 34 | 73 | 156 |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 60.6 | RW | 51 | 109 | 235 |
| La Contenta Road | s/o Alta Loma Drive | 42.0 | RW | RW | RW | RW |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 71.6 | 128 | 277 | 596 | 1,284 |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 57.7 | RW | RW | 70 | 151 |
| Ploneertown Road | s/o 29 Palms Highway (SR-62) | 56.1 | RW | RW | 55 | 119 |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 56.8 | RW | RW | 61 | 132 |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 64.8 | RW | RW | RW | 45 |
| Sherwood Avenue | n/o Alta Loma Drive | 49.8 | RW | RW | RW | 67 |
| Sherwood Avenue | s/o Alta Loma Drive | 52.4 | RW | RW | 51 | 111 |
| Sunny Vista Road | n/o Alta Loma Drive | 55.7 | RW | RW | 67 | 144 |
| Sunny Vista Road | n/o Torres Avenue | 57.4 | RW | RW | RW | 64 |
| Sunny Vista Road | s/o Alta Loma Drive | 52.1 | RW | 63 | 135 | 291 |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 62.0 | RW | 62 | 133 | 287 |
| Yucca Trail | w/o Avalon Avenue | 61.9 | RW | 55 | 118 | 255 |
| Yucca Trail | w/o La Contenta Road | 61.1 | RW | RW | RW | RW |

¹ RW: Noise contour located within the road right of way.

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TABLE 7-5

YEAR 2010 WITH PROJECT MORE INTENSE ALTERNATIVE 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 |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 71.8 | 131 | 282 | 607 | 1,309 |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 74.1 | 187 | 404 | 870 | 1,874 |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 73.6 | 175 | 377 | 812 | 1,750 |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 73.3 | 166 | 357 | 770 | 1,658 |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 74.5 | 200 | 432 | 930 | 2,004 |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 72.1 | 138 | 296 | 639 | 1,376 |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 73.8 | 180 | 388 | 835 | 1,799 |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 74.2 | 191 | 411 | 885 | 1,907 |
| Alta Loma Drive | e/o Sunny Vista Road | 55.9 | RW | RW | 53 | 114 |
| Alta Loma Drive | w/o Sherwood Avenue | 61.1 | RW | 55 | 118 | 255 |
| Alta Loma Drive | w/o Sunny Vista Road | 59.4 | RW | RW | 91 | 196 |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 52.0 | RW | RW | RW | 63 |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 57.9 | RW | 34 | 73 | 156 |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 60.6 | RW | 51 | 110 | 237 |
| La Contenta Road | s/o Alta Loma Drive | 42.0 | RW | RW | RW | RW |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 71.6 | 128 | 277 | 596 | 1,284 |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 57.7 | RW | RW | 70 | 151 |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 56.1 | RW | RW | 55 | 119 |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 56.8 | RW | RW | 61 | 132 |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 64.8 | RW | RW | RW | 45 |
| Sherwood Avenue | n/o Alta Loma Drive | 49.8 | RW | RW | RW | 67 |
| Sherwood Avenue | s/o Alta Loma Drive | 52.4 | RW | RW | 53 | 114 |
| Sunny Vista Road | n/o Alta Loma Drive | 55.9 | RW | RW | 72 | 155 |
| Sunny Vista Road | n/o Torres Avenue | 57.9 | RW | RW | RW | 64 |
| Sunny Vista Road | s/o Alta Loma Drive | 52.1 | RW | 63 | 135 | 291 |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 62.0 | RW | 62 | 133 | 287 |
| Yucca Trail | w/o Avalon Avenue | 61.9 | RW | 55 | 119 | 257 |
| Yucca Trail | w/o La Contenta Road | 61.1 | RW | RW | RW | RW |

¹ RW: Noise contour located within the road right of way

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TABLE 7-6

YEAR 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 |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 73.1 | 161 | 347 | 747 | 1,610 |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 75.1 | 218 | 470 | 1,013 | 2,182 |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 74.8 | 209 | 451 | 971 | 2,093 |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 74.4 | 197 | 423 | 912 | 1,965 |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 75.7 | 241 | 520 | 1,119 | 2,411 |
| 29 Palms Highway (SR-62) | w/o Sunny Visla Road | 73.2 | 164 | 352 | 759 | 1,636 |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 74.7 | 206 | 444 | 956 | 2,059 |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 75.2 | 221 | 477 | 1,027 | 2,213 |
| Alta Loma Drive | e/o Sunny Vista Road | 56.4 | RW | RW | 57 | 123 |
| Alta Loma Drive | w/o Sherwood Avenue | 61.8 | RW | 61 | 132 | 285 |
| Alta Loma Drive | w/o Sunny Vista Road | 60.4 | RW | 49 | 106 | 228 |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 53.5 | RW | RW | 37 | 79 |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 59.2 | RW | 41 | 88 | 189 |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 61.0 | RW | 54 | 116 | 250 |
| La Contenta Road | s/o Alta Loma Drive | 45.0 | RW | RW | RW | RW |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 72.8 | 155 | 333 | 718 | 1,547 |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 58.9 | RW | 39 | 84 | 182 |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 54.5 | RW | RW | 43 | 93 |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 58.5 | RW | 37 | 79 | 171 |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 66.5 | RW | RW | RW | 59 |
| Sherwood Avenue | n/o Alta Loma Drive | 51.5 | RW | RW | 40 | 86 |
| Sherwood Avenue | s/o Alta Loma Drive | 54.0 | RW | RW | 57 | 123 |
| Sunny Vista Road | n/o Alta Loma Drive | 56.4 | RW | RW | 50 | 108 |
| Sunny Vista Road | n/o Torres Avenue | 55.5 | RW | RW | RW | 80 |
| Sunny Vista Road | s/o Alta Loma Drive | 53.5 | RW | 70 | 151 | 325 |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 62.7 | 37 | 79 | 171 | 368 |
| Yucca Trail | w/o Avalon Avenue | 63.5 | RW | 63 | 135 | 291 |
| Yucca Trail | w/o La Contenta Road | 62.0 | RW | RW | RW | RW |

¹ RW. Noise contour located within the road right of way

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TABLE 7-7

YEAR 2030 WITH PROJECT LESS INTENSE ALTERNATIVE 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 |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 73.1 | 162 | 348 | 750 | 1,615 |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 75.2 | 221 | 476 | 1,025 | 2,208 |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 74.9 | 212 | 456 | 982 | 2,115 |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 74.5 | 199 | 429 | 924 | 1,991 |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 75.8 | 244 | 525 | 1,131 | 2,436 |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 73.3 | 167 | 359 | 774 | 1,668 |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 74.8 | 209 | 450 | 969 | 2,088 |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 75.2 | 224 | 482 | 1,039 | 2,239 |
| Alta Loma Drive | e/o Sunny Vista Road | 56.5 | RW | RW | 59 | 126 |
| Alta Loma Drive | w/o Sherwood Avenue | 62.0 | RW | 63 | 136 | 293 |
| Alta Loma Drive | w/o Sunny Vista Road | 60.6 | RW | 51 | 109 | 235 |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 53.5 | RW | RW | 37 | 79 |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 59.2 | RW | 41 | 88 | 189 |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 61.0 | RW | 54 | 117 | 252 |
| La Contenta Road | s/o Alta Loma Drive | 45.0 | RW | RW | RW | RW |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 72.9 | 156 | 335 | 722 | 1,555 |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 59.0 | RW | 40 | 86 | 184 |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 54.5 | RW | RW | 43 | 93 |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 58.5 | RW | 37 | 79 | 171 |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 66.5 | RW | RW | RW | 59 |
| Sherwood Avenue | n/o Alta Loma Drive | 51.5 | RW | RW | 40 | 86 |
| Sherwood Avenue | s/o Alta Loma Drive | 54.0 | RW | RW | 63 | 135 |
| Sunny Vista Road | n/o Alta Loma Drive | 57.0 | RW | RW | 71 | 152 |
| Sunny Vista Road | n/o Torres Avenue | 57.7 | RW | RW | RW | 80 |
| Sunny Vista Road | s/o Alta Loma Drive | 53.5 | RW | 71 | 153 | 329 |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 62.8 | 37 | 79 | 171 | 368 |
| Yucca Trail | w/o Avalon Avenue | 63.5 | RW | 64 | 138 | 297 |
| Yucca Trail | w/o La Contenta Road | 62.1 | RW | RW | RW | RW |

RW Noise contour located within the road right of way

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TABLE 7-8

YEAR 2030 WITH PROJECT PREFERRED ALTERNATIVE 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 |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 73.1 | 162 | 349 | 751 | 1,618 |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 75.2 | 221 | 477 | 1,028 | 2,215 |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 74.9 | 212 | 457 | 985 | 2,122 |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 74.5 | 200 | 430 | 927 | 1,997 |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 75.8 | 244 | 526 | 1,134 | 2,443 |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 73.4 | 168 | 362 | 779 | 1,678 |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 74.8 | 210 | 452 | 974 | 2,097 |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 75.3 | 225 | 484 | 1,042 | 2,245 |
| Alta Loma Drive | e/o Sunny Vista Road | 56.5 | RW | RW | 59 | 126 |
| Alta Loma Drive | w/o Sherwood Avenue | 62.1 | RW | 64 | 137 | 295 |
| Alta Loma Drive | w/o Sunny Vista Road | 60.7 | RW | 52 | 111 | 239 |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 53.5 | RW | RW | 37 | 79 |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 59.2 | RW | 41 | 88 | 189 |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 61.0 | RW | 54 | 117 | 252 |
| La Contenta Road | s/o Alta Loma Drive | 45.0 | RW | RW | RW | RW |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 72.9 | 156 | 336 | 724 | 1,559 |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 59.0 | RW | 40 | 86 | 184 |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 54.8 | RW | RW | 45 | 97 |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 58.5 | RW | 37 | 79 | 171 |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 66.5 | RW | RW | RW | 59 |
| Sherwood Avenue | n/o Alta Loma Drive | 51.5 | RW | RW | 40 | 86 |
| Sherwood Avenue | s/o Alta Loma Drive | 54.0 | RW | RW | 64 | 138 |
| Sunny Vista Road | n/o Alta Loma Drive | 57.1 | RW | RW | 76 | 163 |
| Sunny Vista Road | n/o Torres Avenue | 58.2 | RW | RW | RW | 80 |
| Sunny Vista Road | s/o Alta Loma Drive | 53.5 | RW | 71 | 153 | 330 |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 62.8 | 37 | 79 | 171 | 368 |
| Yucca Trail | w/o Avalon Avenue | 63.5 | RW | 64 | 139 | 299 |
| Yucca Trail | w/o La Contenta Road | 62.1 | RW | RW | RW | RW |

¹ RW. Noise contour located within the road right of way

TABLE 7-9

YEAR 2030 WITH PROJECT MORE INTENSE ALTERNATIVE 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 |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 73.1 | 162 | 349 | 751 | 1,618 |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 75.2 | 222 | 479 | 1,031 | 2,221 |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 74.9 | 213 | 458 | 987 | 2,126 |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 74.5 | 200 | 431 | 929 | 2,002 |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 75.8 | 245 | 527 | 1,136 | 2,447 |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 73.4 | 169 | 363 | 783 | 1,686 |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 74.8 | 210 | 453 | 977 | 2,104 |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 75.3 | 225 | 485 | 1,045 | 2,252 |
| Alta Loma Drive | e/o Sunny Vista Road | 56.7 | RW | RW | 60 | 129 |
| Alta Loma Drive | w/o Sherwood Avenue | 62.1 | RW | 64 | 138 | 297 |
| Alta Loma Drive | w/o Sunny Vista Road | 60.7 | RW | 52 | 111 | 239 |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 53.5 | RW | RW | 37 | 79 |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 59.2 | RW | 41 | 88 | 189 |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 61.1 | RW | 55 | 118 | 254 |
| La Contenta Road | s/o Alta Loma Drive | 45.0 | RW | RW | RW | RW |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 72.9 | 156 | 336 | 724 | 1,559 |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 59.0 | RW | 40 | 86 | 184 |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 54.8 | RW | RW | 45 | 97 |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 58.5 | RW | 37 | 79 | 171 |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 66.5 | RW | RW | RW | 59 |
| Sherwood Avenue | n/o Alta Loma Drive | 51.5 | RW | RW | 40 | 86 |
| Sherwood Avenue | s/o Alta Loma Drive | 54.0 | RW | RW | 65 | 141 |
| Sunny Vista Road | n/o Alta Loma Drive | 57.2 | RW | RW | 81 | 173 |
| Sunny Vista Road | n/o Torres Avenue | 58.6 | RW | RW | RW | 80 |
| Sunny Vista Road | s/o Alta Loma Drive | 53.5 | RW | 71 | 153 | 330 |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 62.8 | 37 | 79 | 171 | 368 |
| Yucca Trail | w/o Avalon Avenue | 63.5 | RW | 65 | 140 | 301 |
| Yucca Trail | w/o La Contenta Road | 62.2 | RW | RW | RW | RW |

¹ RW. Noise contour located within the road right of way.

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TABLE 7-10

YEAR 2010 LESS INTENSE ALTERNATIVE PROJECT CONTRIBUTIONS

| ROAD | SEGMENT | CNEL AT 100 FEET (dBA) | | PROJECT CONTRIBUTION | POTENTIAL SIGNIFICANT IMPACT? ¹ |
|--------------------------|------------------------------|------------------------|--------------|----------------------|--|
| | | WITHOUT PROJECT | WITH PROJECT | | |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 71.7 | 71.7 | 0.0 | NO |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 73.9 | 74.0 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 73.5 | 73.6 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 73.1 | 73.2 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 74.4 | 74.5 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 71.8 | 72.0 | 0.2 | NO |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 73.6 | 73.8 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 74.1 | 74.2 | 0.1 | NO |
| Alta Loma Drive | e/o Sunny Vista Road | 55.5 | 55.7 | 0.2 | NO |
| Alta Loma Drive | w/o Sherwood Avenue | 60.7 | 61.0 | 0.2 | NO |
| Alta Loma Drive | w/o Sunny Vista Road | 59.0 | 59.2 | 0.3 | NO |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 52.0 | 52.0 | 0.0 | NO |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 57.9 | 57.9 | 0.0 | NO |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 60.5 | 60.6 | 0.1 | NO |
| La Contenta Road | s/o Alta Loma Drive | 42.0 | 42.0 | 0.0 | NO |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 71.6 | 71.6 | 0.0 | NO |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 57.6 | 57.7 | 0.1 | NO |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 56.0 | 56.0 | 0.0 | NO |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 56.8 | 56.8 | 0.0 | NO |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 64.8 | 64.8 | 0.0 | NO |
| Sherwood Avenue | n/o Alta Loma Drive | 49.8 | 49.8 | 0.0 | NO |
| Sherwood Avenue | s/o Alta Loma Drive | 52.4 | 52.4 | 0.0 | NO |
| Sunny Vista Road | n/o Alta Loma Drive | 54.6 | 55.5 | 0.9 | NO |
| Sunny Vista Road | n/o Torres Avenue | 53.8 | 56.8 | 3.0 | NO |
| Sunny Vista Road | s/o Alta Loma Drive | 52.1 | 52.1 | 0.0 | NO |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 61.8 | 61.9 | 0.1 | NO |
| Yucca Trall | w/o Avalon Avenue | 61.9 | 61.9 | 0.0 | NO |
| Yucca Trail | w/o La Contenta Road | 60.9 | 61.0 | 0.2 | NO |

¹ A potential significant impact occurs when the With Project is greater than 65 dBA and the project contribution is greater than 3 dBA.

TABLE 7-11

YEAR 2010 PREFERRED ALTERNATIVE PROJECT CONTRIBUTIONS

| ROAD | SEGMENT | CNEL AT 100 FEET (dBA) | | PROJECT CONTRIBUTION | POTENTIAL SIGNIFICANT IMPACT? ¹ |
|--------------------------|------------------------------|------------------------|--------------|----------------------|--|
| | | WITHOUT PROJECT | WITH PROJECT | | |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 71.7 | 71.8 | 0.0 | NO |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 73.9 | 74.1 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 73.5 | 73.6 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 73.1 | 73.3 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 74.4 | 74.5 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 71.8 | 72.0 | 0.2 | NO |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 73.6 | 73.8 | 0.2 | NO |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 74.1 | 74.2 | 0.1 | NO |
| Alta Loma Drive | e/o Sunny Vista Road | 55.5 | 55.7 | 0.2 | NO |
| Alta Loma Drive | w/o Sherwood Avenue | 60.7 | 61.0 | 0.3 | NO |
| Alta Loma Drive | w/o Sunny Vista Road | 59.0 | 59.4 | 0.4 | NO |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 52.0 | 52.0 | 0.0 | NO |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 57.9 | 57.9 | 0.0 | NO |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 60.5 | 60.6 | 0.1 | NO |
| La Contenta Road | s/o Alta Loma Drive | 42.0 | 42.0 | 0.0 | NO |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 71.6 | 71.6 | 0.1 | NO |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 57.6 | 57.7 | 0.1 | NO |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 56.0 | 56.1 | 0.2 | NO |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 56.8 | 56.8 | 0.0 | NO |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 64.8 | 64.8 | 0.0 | NO |
| Sherwood Avenue | n/o Alta Loma Drive | 49.8 | 49.8 | 0.0 | NO |
| Sherwood Avenue | s/o Alta Loma Drive | 52.4 | 52.4 | 0.0 | NO |
| Sunny Vista Road | n/o Alta Loma Drive | 54.6 | 55.7 | 1.1 | NO |
| Sunny Vista Road | n/o Torres Avenue | 53.8 | 57.4 | 3.6 | NO |
| Sunny Vista Road | s/o Alta Loma Drive | 52.1 | 52.1 | 0.0 | NO |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 61.8 | 62.0 | 0.1 | NO |
| Yucca Trail | w/o Avalon Avenue | 61.9 | 61.9 | 0.0 | NO |
| Yucca Trail | w/o La Contenta Road | 60.9 | 61.1 | 0.2 | NO |

¹ A potential significant impact occurs when the With Project is greater than 65 dBA and the project contribution is greater than 3 dBA.

7.2.3 Year 2010 More Intense Alternative Project Traffic Noise Level Contributions

Table 7-12 presents a comparison of the Year 2010 more intense alternative with and without project noise levels shown in Tables 7-2 and 7-5. The roadway noise impacts on all segments will increase from 0.0 dBA CNEL to 4.0 dBA CNEL with the development of the proposed project.

7.2.4 Year 2030 Less Intense Alternative Project Traffic Noise Level Contributions

Table 7-13 presents a comparison of the Year 2030 less intense alternative with and without project noise levels shown in Tables 7-6 and 7-7. The roadway noise impacts on all segments will increase from 0.0 dBA CNEL to 2.3 dBA CNEL with the development of the proposed project.

7.2.5 Year 2030 Preferred Alternative Project Traffic Noise Level Contributions

Table 7-14 presents a comparison of the Year 2030 preferred alternative with and without project noise levels shown in Tables 7-6 and 7-8. The roadway noise impacts on all segments will increase from 0.0 dBA CNEL to 2.7 dBA CNEL with the development of the proposed project.

7.2.6 Year 2030 More Intense Alternative Project Traffic Noise Level Contributions

Table 7-15 presents a comparison of the Year 2030 more intense alternative with and without project noise levels shown in Tables 7-6 and 7-9. The roadway noise impacts on all segments will increase from 0.0 dBA CNEL to 3.1 dBA CNEL with the development of the proposed project.

TABLE 7-12

YEAR 2010 MORE INTENSE ALTERNATIVE PROJECT CONTRIBUTIONS

| ROAD | SEGMENT | CNEL AT 100 FEET (dBA) | | PROJECT CONTRIBUTION | POTENTIAL SIGNIFICANT IMPACT? ¹ |
|--------------------------|------------------------------|------------------------|--------------|----------------------|--|
| | | WITHOUT PROJECT | WITH PROJECT | | |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 71.7 | 71.8 | 0.0 | NO |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 73.9 | 74.1 | 0.2 | NO |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 73.5 | 73.6 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 73.1 | 73.3 | 0.2 | NO |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 74.4 | 74.5 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 71.8 | 72.1 | 0.3 | NO |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 73.6 | 73.8 | 0.2 | NO |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 74.1 | 74.2 | 0.1 | NO |
| Alta Loma Drive | e/o Sunny Vista Road | 55.5 | 55.9 | 0.4 | NO |
| Alta Loma Drive | w/o Sherwood Avenue | 60.7 | 61.1 | 0.3 | NO |
| Alta Loma Drive | w/o Sunny Vista Road | 59.0 | 59.4 | 0.4 | NO |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 52.0 | 52.0 | 0.0 | NO |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 57.9 | 57.9 | 0.0 | NO |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 60.5 | 60.6 | 0.1 | NO |
| La Contenta Road | s/o Alta Loma Drive | 42.0 | 42.0 | 0.0 | NO |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 71.6 | 71.6 | 0.1 | NO |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 57.6 | 57.7 | 0.1 | NO |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 56.0 | 56.1 | 0.2 | NO |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 56.8 | 56.8 | 0.0 | NO |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 64.8 | 64.8 | 0.0 | NO |
| Sherwood Avenue | n/o Alta Loma Drive | 49.8 | 49.8 | 0.0 | NO |
| Sherwood Avenue | s/o Alta Loma Drive | 52.4 | 52.4 | 0.0 | NO |
| Sunny Vista Road | n/o Alta Loma Drive | 54.6 | 55.9 | 1.2 | NO |
| Sunny Vista Road | n/o Torres Avenue | 53.8 | 57.9 | 4.0 | NO |
| Sunny Vista Road | s/o Alta Loma Drive | 52.1 | 52.1 | 0.0 | NO |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 61.8 | 62.0 | 0.1 | NO |
| Yucca Trail | w/o Avalon Avenue | 61.9 | 61.9 | 0.0 | NO |
| Yucca Trail | w/o La Contenta Road | 60.9 | 61.1 | 0.3 | NO |

¹ A potential significant impact occurs when the With Project is greater than 65 dBA and the project contribution is greater than 3 dBA.

TABLE 7-13

YEAR 2030 LESS INTENSE ALTERNATIVE PROJECT CONTRIBUTIONS

| ROAD | SEGMENT | CNEL AT 100 FEET (dBA) | | PROJECT CONTRIBUTION | POTENTIAL SIGNIFICANT IMPACT? ¹ |
|--------------------------|------------------------------|------------------------|--------------|----------------------|--|
| | | WITHOUT PROJECT | WITH PROJECT | | |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 73.1 | 73.1 | 0.0 | NO |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 75.1 | 75.2 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 74.8 | 74.9 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 74.4 | 74.5 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 75.7 | 75.8 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 73.2 | 73.3 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 74.7 | 74.8 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 75.2 | 75.2 | 0.1 | NO |
| Alta Loma Drive | e/o Sunny Vista Road | 56.4 | 56.5 | 0.2 | NO |
| Alta Loma Drive | w/o Sherwood Avenue | 61.8 | 62.0 | 0.2 | NO |
| Alta Loma Drive | w/o Sunny Vista Road | 60.4 | 60.6 | 0.2 | NO |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 53.5 | 53.5 | 0.0 | NO |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 59.2 | 59.2 | 0.0 | NO |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 61.0 | 61.0 | 0.1 | NO |
| La Contenta Road | s/o Alta Loma Drive | 45.0 | 45.0 | 0.0 | NO |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 72.8 | 72.9 | 0.0 | NO |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 58.9 | 59.0 | 0.1 | NO |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 54.5 | 54.5 | 0.0 | NO |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 58.5 | 58.5 | 0.0 | NO |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 66.5 | 66.5 | 0.0 | NO |
| Sherwood Avenue | n/o Alta Loma Drive | 51.5 | 51.5 | 0.0 | NO |
| Sherwood Avenue | s/o Alta Loma Drive | 54.0 | 54.0 | 0.0 | NO |
| Sunny Vista Road | n/o Alta Loma Drive | 56.4 | 57.0 | 0.6 | NO |
| Sunny Vista Road | n/o Torres Avenue | 55.5 | 57.7 | 2.3 | NO |
| Sunny Vista Road | s/o Alta Loma Drive | 53.5 | 53.5 | 0.0 | NO |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 62.7 | 62.8 | 0.1 | NO |
| Yucca Trail | w/o Avalon Avenue | 63.5 | 63.5 | 0.0 | NO |
| Yucca Trail | w/o La Contenta Road | 62.0 | 62.1 | 0.1 | NO |

¹ A potential significant impact occurs when the With Project is greater than 65 dBA and the project contribution is greater than 3 dBA.

TABLE 7-14

YEAR 2030 PREFERRED ALTERNATIVE PROJECT CONTRIBUTIONS

| ROAD | SEGMENT | CNEL AT 100 FEET (dBA) | | PROJECT CONTRIBUTION | POTENTIAL SIGNIFICANT IMPACT? ¹ |
|--------------------------|------------------------------|------------------------|--------------|----------------------|--|
| | | WITHOUT PROJECT | WITH PROJECT | | |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 73.1 | 73.1 | 0.0 | NO |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 75.1 | 75.2 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 74.8 | 74.9 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 74.4 | 74.5 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 75.7 | 75.8 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 73.2 | 73.4 | 0.2 | NO |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 74.7 | 74.8 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 75.2 | 75.3 | 0.1 | NO |
| Alta Loma Drive | e/o Sunny Vista Road | 56.4 | 56.5 | 0.2 | NO |
| Alta Loma Drive | w/o Sherwood Avenue | 61.8 | 62.1 | 0.2 | NO |
| Alta Loma Drive | w/o Sunny Vista Road | 60.4 | 60.7 | 0.3 | NO |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 53.5 | 53.5 | 0.0 | NO |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 59.2 | 59.2 | 0.0 | NO |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 61.0 | 61.0 | 0.1 | NO |
| La Contenta Road | s/o Alta Loma Drive | 45.0 | 45.0 | 0.0 | NO |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 72.8 | 72.9 | 0.1 | NO |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 58.9 | 59.0 | 0.1 | NO |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 54.5 | 54.8 | 0.2 | NO |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 58.5 | 58.5 | 0.0 | NO |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 66.5 | 66.5 | 0.0 | NO |
| Sherwood Avenue | n/o Alta Loma Drive | 51.5 | 51.5 | 0.0 | NO |
| Sherwood Avenue | s/o Alta Loma Drive | 54.0 | 54.0 | 0.0 | NO |
| Sunny Vista Road | n/o Alta Loma Drive | 56.4 | 57.1 | 0.7 | NO |
| Sunny Vista Road | n/o Torres Avenue | 55.5 | 58.2 | 2.7 | NO |
| Sunny Vista Road | s/o Alta Loma Drive | 53.5 | 53.5 | 0.0 | NO |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 62.7 | 62.8 | 0.1 | NO |
| Yucca Trail | w/o Avalon Avenue | 63.5 | 63.5 | 0.0 | NO |
| Yucca Trail | w/o La Contenta Road | 62.0 | 62.1 | 0.2 | NO |

¹ A potential significant impact occurs when the With Project is greater than 65 dBA and the project contribution is greater than 3 dBA.

TABLE 7-15

YEAR 2030 MORE INTENSE ALTERNATIVE PROJECT CONTRIBUTIONS

| ROAD | SEGMENT | CNEL AT 100 FEET (dBA) | | PROJECT CONTRIBUTION | POTENTIAL SIGNIFICANT IMPACT? ¹ |
|--------------------------|------------------------------|------------------------|--------------|----------------------|--|
| | | WITHOUT PROJECT | WITH PROJECT | | |
| 29 Palms Highway (SR-62) | e/o Sunny Vista Road | 73.1 | 73.1 | 0.0 | NO |
| 29 Palms Highway (SR-62) | w/o Avalon Avenue | 75.1 | 75.2 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Old Woman Springs Road | 74.8 | 74.9 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Pioneertown Road | 74.4 | 74.5 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Sage Avenue | 75.7 | 75.8 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Sunny Vista Road | 73.2 | 73.4 | 0.2 | NO |
| 29 Palms Highway (SR-62) | w/o Torres Avenue | 74.7 | 74.8 | 0.1 | NO |
| 29 Palms Highway (SR-62) | w/o Yucca Mesa Road | 75.2 | 75.3 | 0.1 | NO |
| Alta Loma Drive | e/o Sunny Vista Road | 56.4 | 56.7 | 0.3 | NO |
| Alta Loma Drive | w/o Sherwood Avenue | 61.8 | 62.1 | 0.3 | NO |
| Alta Loma Drive | w/o Sunny Vista Road | 60.4 | 60.7 | 0.3 | NO |
| Avalon Avenue | n/o 29 Palms Highway (SR-62) | 53.5 | 53.5 | 0.0 | NO |
| Avalon Avenue | s/o 29 Palms Highway (SR-62) | 59.2 | 59.2 | 0.0 | NO |
| La Contenta Road | s/o 29 Palms Highway (SR-62) | 61.0 | 61.1 | 0.1 | NO |
| La Contenta Road | s/o Alta Loma Drive | 45.0 | 45.0 | 0.0 | NO |
| Old Woman Springs Road | n/o 29 Palms Highway (SR-62) | 72.8 | 72.9 | 0.1 | NO |
| Pioneertown Road | n/o 29 Palms Highway (SR-62) | 58.9 | 59.0 | 0.1 | NO |
| Pioneertown Road | s/o 29 Palms Highway (SR-62) | 54.5 | 54.8 | 0.2 | NO |
| Sage Avenue | n/o 29 Palms Highway (SR-62) | 58.5 | 58.5 | 0.0 | NO |
| Sage Avenue | s/o 29 Palms Highway (SR-62) | 66.5 | 66.5 | 0.0 | NO |
| Sherwood Avenue | n/o Alta Loma Drive | 51.5 | 51.5 | 0.0 | NO |
| Sherwood Avenue | s/o Alta Loma Drive | 54.0 | 54.0 | 0.0 | NO |
| Sunny Vista Road | n/o Alta Loma Drive | 56.4 | 57.2 | 0.9 | NO |
| Sunny Vista Road | n/o Torres Avenue | 55.5 | 58.6 | 3.1 | NO |
| Sunny Vista Road | s/o Alta Loma Drive | 53.5 | 53.5 | 0.0 | NO |
| Yucca Mesa Road | n/o 29 Palms Highway (SR-62) | 62.7 | 62.8 | 0.1 | NO |
| Yucca Trail | w/o Avalon Avenue | 63.5 | 63.5 | 0.0 | NO |
| Yucca Trail | w/o La Contenta Road | 62.0 | 62.2 | 0.2 | NO |

¹ A potential significant impact occurs when the With Project is greater than 65 dBA and the project contribution is greater than 3 dBA.

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 County of San Bernardino 65 dBA CNEL exterior noise standard.

Tables 7-10, 7-11, 7-12, and 7-15 show that for some scenarios in Year 2010 and Year 2030, the development of the proposed project will increase the off-site noise levels on Sunny Vista Road north of Torres Avenue between 3.0 dBA CNEL and 4.0 dBA CNEL. Though the increase is greater than 3.0 dBA, the overall level will only reach a maximum of 58.6 dBA CNEL. 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 County of San Bernardino Noise Standards.

8.0 ON-SITE NOISE ANALYSIS

The noise sensitive residential areas in the project site will be impacted by transportation noise from the adjacent streets and noise impacts produced by the neighboring elementary school.

8.1 Transportation Noise Impacts

It is expected that the primary source of noise impacts to the site will be traffic noise from Alta Loma Drive and Sunny Vista Road. The expected transportation noise impacts at the noise sensitive areas within the project were evaluated according to the noise level contours for all three alternatives in Year 2030 (Buildout Conditions) presented in Section 7.4 of this report. Table 8-1 presents the on-site noise level contours. All noise sensitive uses located within the 60 dBA CNEL noise contours adjacent to Alta Loma Drive will require noise mitigation to meet the County of San Bernardino noise standards. A 5.0 to 6.0-foot sound wall may be required to all lots facing Alta Loma Drive to reduce the exterior noise levels at the home's exterior areas. Once grading and site plans are available, specifications of noise mitigation can be made in order to meet the County of San Bernardino exterior noise level standard of 60 dBA CNEL and the 45 dBA CNEL interior noise standard for residential uses.

8.2 Stationary Noise Impacts

Outdoor activities from the adjacent Friendly Hills Elementary School may create noise impacts to the proposed residential lots. According to the stationary source noise standards, included in Appendix "A", stationary related noise must not exceed 55 dBA during the daytime hours between 7 a.m. until 10 p.m. for a cumulative period of more than 30 minutes in any hour (for the daytime and nighttime hours) to any portion of any surrounding property containing a habitable dwelling, hospital, school, library, or nursing home. It should not exceed the 55 dBA plus 5 dBA for a cumulative period of more than 15 minutes in any hour, or plus 10 dBA for a

TABLE 8-1

NOISE LEVELS OF ROADWAY SEGEMENTS BORDERING THE PROJECT SITE

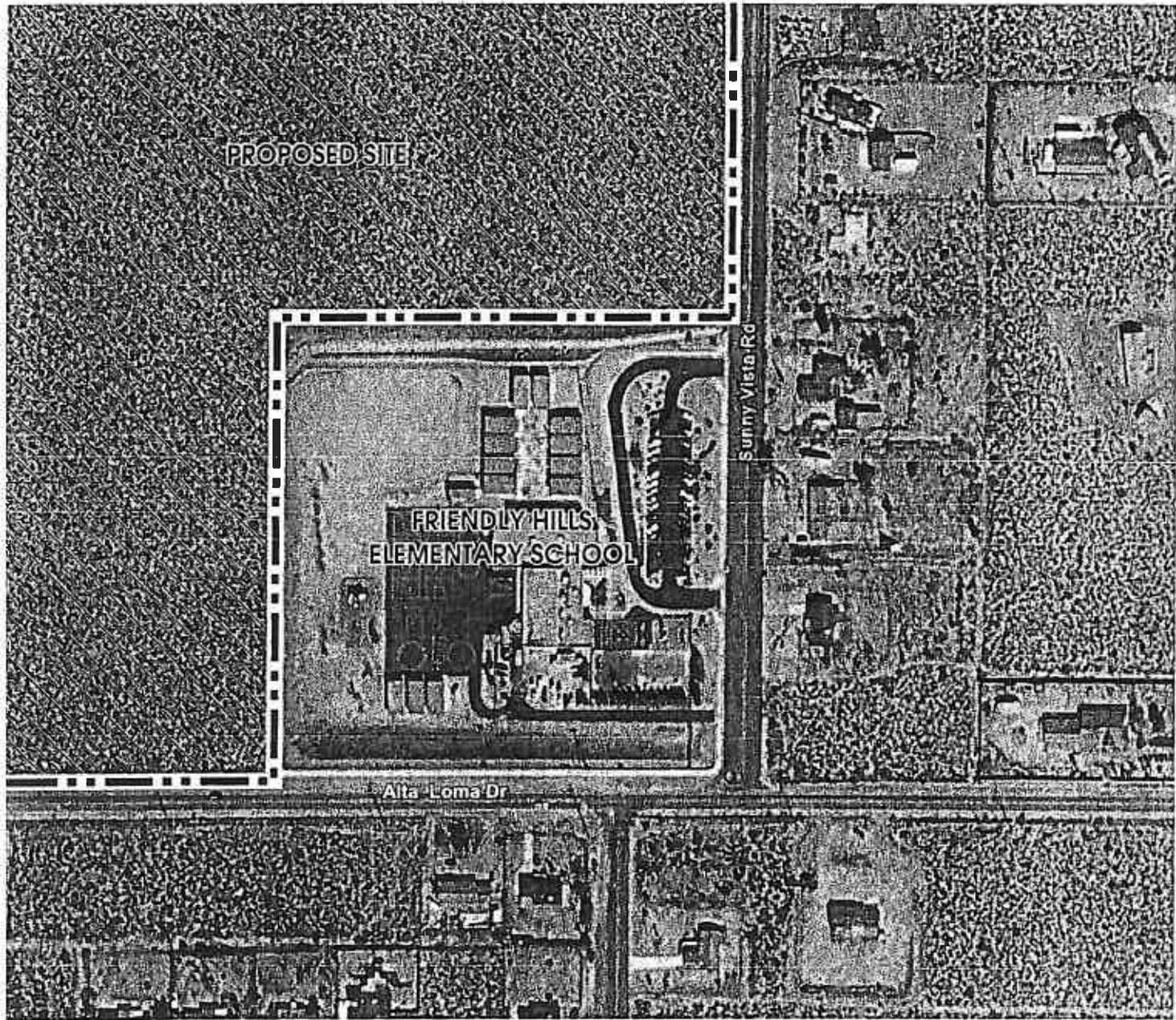
| ROAD | SEGMENT | CNEL AT 100 FEET (dBA) | DISTANCE TO CONTOUR (FEET) | | | |
|---------------------------------|----------------------|------------------------------|----------------------------|----------------|----------------|----------------|
| | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL | 55 dBA CNEL |
| Less Intense Alternative | | | | | | |
| Alta Loma Drive | w/o Sunny Vista Road | 60.6 | RW | 51 | 109 | 235 |
| Sunny Vista Road | n/o Alta Loma Drive | 57.0 | RW | RW | 63 | 135 |
| Preferred Alternative | | | | | | |
| Alta Loma Drive | w/o Sunny Vista Road | 60.7 | RW | 52 | 111 | 239 |
| Sunny Vista Road | n/o Alta Loma Drive | 57.1 | RW | RW | 64 | 138 |
| More Intense Alternative | | | | | | |
| Alta Loma Drive | w/o Sunny Vista Road | 60.7 | RW | 52 | 111 | 239 |
| Sunny Vista Road | n/o Alta Loma Drive | 57.2 | RW | RW | 65 | 141 |

¹ RW: Noise contour located within the road right of way.

cumulative period of more than five minutes in any hour, or plus 15 dBA for a cumulative period of more than 1 minute in any hour or the standard plus 20 dBA for any period of time.

Exhibit 8-A shows that the potential noise sources associated with outdoor school activities are the ball fields located approximately 180 feet from the proposed project. While school outdoor activities may be heard, it is not expected that the school will create significant noise impacts to the adjacent homes if the outdoor activities at the school comply with the San Bernardino County Development Code for stationary noise sources. A 6.0-foot high privacy wall is recommended to further reduce any potential noise impacts associated with school outdoor activities.

EXHIBIT 8-A
FRIENDLY HILLS ELEMENTARY SCHOOL



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

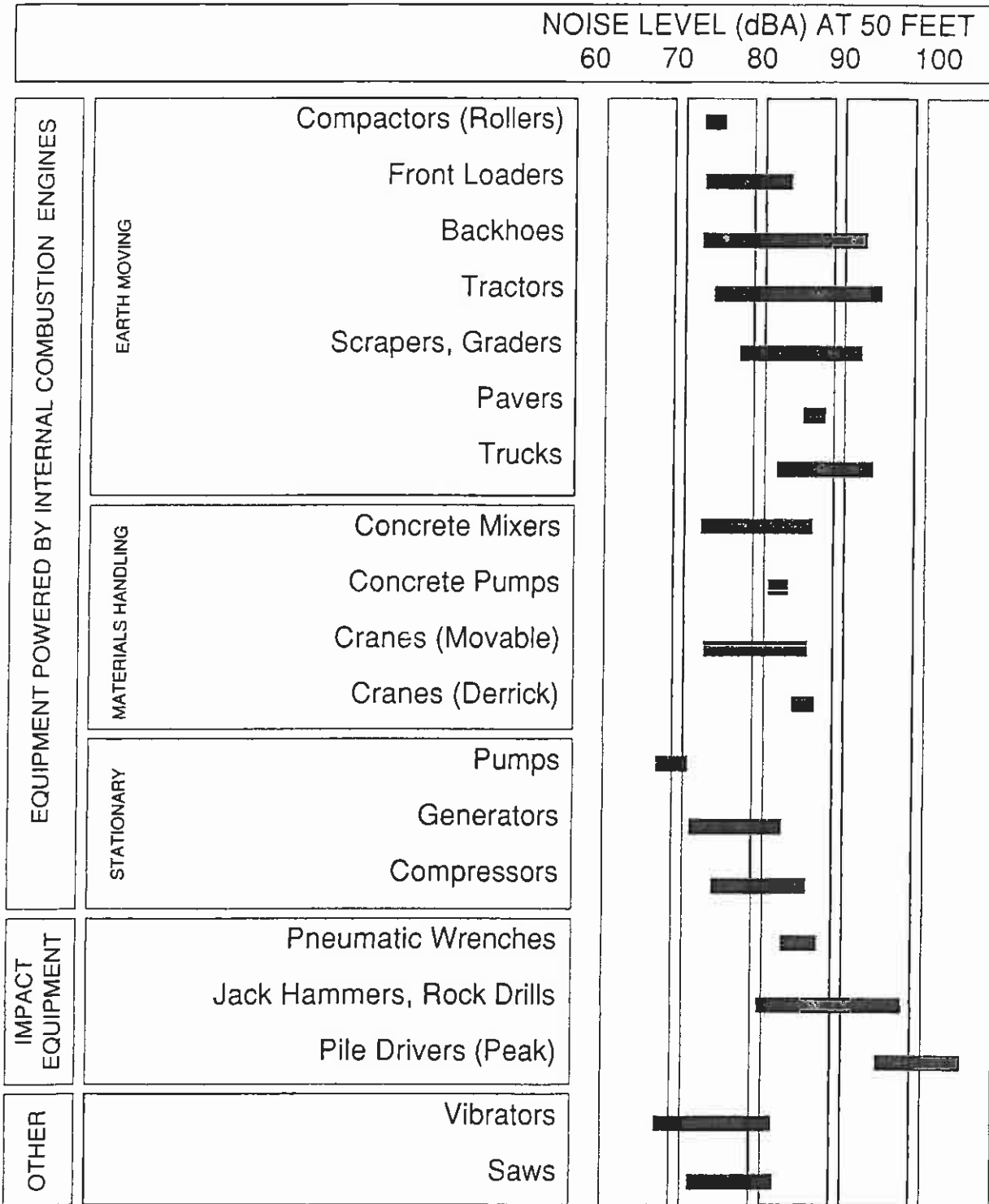
The project site is currently vacant. Adjacent land uses include: vacant land to the north, single-family homes and Friendly Hills Elementary School to the east, and single-family homes to the south and west. The project site is subject to traffic noise from Sunny Vista Road, Alta Loma Drive and Friendly Elementary School.

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. For the

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.

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. Using a drop-off rate of 6 dBA per doubling of distance, noise levels at 100 feet are estimated at 83 dBA and 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.

9.3 Construction Impacts

Section 83.01(g) of the County Development Code exempts construction noise activities from the noise standards between 7:00 a.m. and 7:00 p.m. except Sundays and holidays. Construction noise is of short-term duration and will not present any long-term impacts on the project site or the surrounding area.

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 County 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.