NOISE IMPACT ANALYSIS

Apollo Senior Care
3141 East Valley Parkway
Escondido, California 92027

Prepared For

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Job #S190415

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1.0 EXECUTIVE SUMMARY

The proposed project, Apollo Senior Care, consists of the demolition of existing structures on site and the construction of a new three-story senior care facility. The project site is located at 3141 East Valley Parkway in the City of Escondido, California.

Noise from the anticipated rooftop HVAC equipment and kitchen exhaust fan has been calculated to determine impacts at off-site receivers. Calculations show that noise levels from the rooftop mechanical equipment will be in compliance with the City of Escondido noise regulations found within the Municipal Code. No mitigation is deemed necessary to control project-generated noise impacts from mechanical equipment.

The proposed project is expected to add approximately 178 Average Daily Trips (ADT) to surrounding roadways. Considering the existing traffic volumes present on roadways in the vicinity of the project site, project-generated traffic noise is expected to be less than significant.

The City of Escondido Municipal Code states that construction activity is prohibited except on Monday through Friday during a week between the hours of 7 a.m. and 6 p.m. and on Saturdays between the hours of 9 a.m. and 5 p.m. Construction activity is also prohibited on Sundays and legal holidays. During permissible hours of operation, noise levels from construction activity may not exceed a one-hour average sound level limit of 75 dBA at any time. An analysis of temporary construction noise considering typical and anticipated activity on site demonstrates that construction noise impacts are expected to remain at or below an hourly average noise level of 75 dBA at surrounding residential properties. Provided construction is limited to the allowable hours of the City of Escondido and equipment is maintained in proper working condition, temporary noise impacts are expected to be less than significant. No mitigation is deemed necessary for the attenuation of temporary noise impacts.

The proposed project is not expected to result in any potentially significant noise impacts by the standards of the California Environmental Quality Act (CEQA). Noise impacts to and from the project site are summarized in Section 5.3.

2.0 INTRODUCTION

This acoustical analysis report is submitted to satisfy the noise requirements of the City of Escondido. Its purpose is to assess noise impacts from potential project-related noise sources, such as mechanical equipment and project-generated traffic, and to assess temporary construction noise. This analysis aims to determine if mitigation is necessary and feasible to reduce these noise impacts to comply with the applicable noise regulations of the City of Escondido Municipal Code. Potential impacts will also be assessed for significance per the California Environmental Quality Act (CEQA).

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting, abbreviated "dBA," to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol "$L_{EQ.}$" Unless a different time period is specified, "L_{EQ}" is implied to mean a period of one hour. Some of the data may also be presented as octave-band-filtered and/or A-octave-band-filtered data, which are a series of sound spectra centered about each

stated frequency, with half of the bandwidth above and half of the bandwidth below each stated frequency. This data is typically used for machinery noise analysis and barrier calculations.
Sound pressure is the actual noise experienced by a human or registered by a sound level instrument. When sound pressure is used to describe a noise source, the distance from the noise source must be specified in order to provide complete information. Sound power, on the other hand, is a specialized analytical metric to provide information without the distance requirement, but it may be used to calculate the sound pressure at any desired distance.

2.1 Project Description

The proposed project, Apollo Senior Care, consists of the demolition of existing structures on site and the construction of a new three-story senior care facility. The facility will include 55 assisted living units and 25 memory care units. The total building area is 60,277-square feet. For additional project details, please refer to the project plans provided in Appendix A.

The project site is surrounded by sites zoned Specific Plan (S-P) to the north (across Hidden Trails Road) and east, Residential Estates (R-E) or S-P to the south, and Single-Family Residential (R-1) to the west, across Valley Parkway. Areas zoned S-P are part of the East Grove Specific Plan and are designated for residential or otherwise noise-sensitive use.

2.2 Project Location

The project site is located at 3141 East Valley Parkway in the City of Escondido, California. The site is currently occupied by an existing residence, which will be demolished. For a graphical representation of the site, please refer to the Vicinity Map, Assessor's Parcel Map, Satellite Aerial Photograph, and Topographic Map, provided as Figures 1 through 4, respectively.

2.3 Applicable Noise Regulations

According to the Escondido Municipal Code, Section 17-229, average hourly noise levels shall not exceed 50 dBA L_{EQ} between the hours of 7 a.m. and 10 p.m. and 45 dBA L_{EQ} between the hours of 10 p.m. and 7 a.m. at residential zones. These noise limits have been applied to noise impacts generated at the project site by HVAC equipment.

Additionally, Section 17-234 of the City of Escondido Municipal Code states that construction activity is prohibited except on Monday through Friday between the hours of 7 a.m. and 6 p.m. and on Saturdays between the hours of 9 a.m. and 5 p.m. Construction activity is also prohibited on Sundays and legal holidays. During permissible hours of operation, noise levels from construction activity may not exceed a one-hour average sound level limit of 75 dBA at any time, unless a variance has been obtained in advance from the city manager.

For pertinent sections of the City of Escondido Municipal Code, please refer to Appendix B.

3.0 ENVIRONMENTAL SETTING

3.1 Existing Noise Environment

Long-term noise monitoring was conducted near the rear portion of the proposed building on the project site, approximately 430 feet and 280 feet from the centerlines of Valley Parkway and Hidden Trails Road, respectively. Noise monitoring was performed between May 8 and May 9, 2019 to establish the existing ambient noise conditions at the site. The long-term noise monitor was placed at a height of approximately 4 feet above the existing grade. The results of the ambient noise monitoring are shown in Table 1. Please refer to Figure 5 for a graphical representation of the ambient noise measurement location.

Table 1. Long-Term Ambient Noise Monitoring Results

Date	Time	Noise Level (dBA)
May 8, 2019	1 p.m. – 2 p.m.	52.5
	2 p.m. – 3 p.m.	52.7
	3 p.m. – 4 p.m.	54.4
	4 p.m. – 5 p.m.	53.8
	5 p.m. – 6 p.m.	53.9
	6 p.m. – 7 p.m.	53.4
	7 p.m. – 8 p.m.	51.6
	8 p.m. – 9 p.m.	50.4
	9 p.m. – 10 p.m.	50.1
	10 p.m. – 11 p.m.	47.5
	11 p.m. – 12 a.m.	44.7
May 9, 2019	12 a.m. – 1 a.m.	44.5
	1 a.m. – 2 a.m.	47.5
	2 a.m. – 3 a.m.	42.6
	3 a.m. – 4 a.m.	43.2
	4 a.m. – 5 a.m.	46.7
	5 a.m. – 6 a.m.	51.1
	6 a.m. – 7 a.m.	52.8
	7 a.m. – 8 a.m.	51.6
	8 a.m. – 9 a.m.	52.0
	9 a.m. – 10 a.m.	55.0
	10 a.m. – 11 a.m.	53.1
	11 a.m. – 12 p.m.	52.2
	12 p.m. – 1 p.m.	53.6
	1 p.m. – 2 p.m.	54.6
	2 p.m. – 3 p.m.	54.0

As shown above in Table 1, the ambient noise levels on the project site ranged from 42.6 dBA between the hours of 2 a.m. and 3 a.m. on May 9 to 55.0 dBA between the hours of 9 a.m. and 10 a.m. on May 9.

3.2 Future Noise Environment

The future noise environment in the vicinity of the project site will be primarily a result of the same ambient noise sources, as well as the noise generated by the proposed uses at the project site.

3.2.1 Mechanical Equipment On-Site

Mechanical equipment on site is expected to consist of roof-mounted HVAC units and a kitchen exhaust fan. While detailed mechanical equipment information was not available at the time this study was conducted, according to Joe Holasek, approximately 20 VRF units would be used at the project site. Typical VRF units were therefore selected based on the square footage of the building. It is expected that the HVAC units servicing the building will be comparable to 20 Mitsubishi Electric City Multi PURY-P72 (6-ton) units. Sound pressure levels for the units, measured at a distance of 3.3 feet (1 meter) from equipment, were provided by the manufacturer, and are shown in Table 2 below.

Table 2. Sound Pressure Level Spectrum for Mitsubishi PURY-P72 Units, At 3.3 Feet

Source	Sound Pressure Level at Octave Band Frequency (dBA)								Total (dBA)
	63	125	250	500	1000	2000	4000	8000	
PURY-P72 Unit	65.0	63.5	61.0	54.5	51.5	47.0	40.5	37.5	58.0

In addition to the HVAC units on site, an exhaust fan will likely be needed for the kitchen. Detailed equipment information was not available at the time this study was prepared, and for this reason, a typical exhaust fan that would be used for a restaurant kitchen was incorporated into the analysis. The typical fan selected was the CUBE-300XP exhaust fan, manufactured by Greenheck. Sound power data was provided by the manufacturer and is shown in Table 3.

Table 3. Sound Power Level Spectrum for Greenheck CUBE-300XP Exhaust Fan

Source	Sound Pressure Level at Octave Band Frequency (dBA)								Total (dBA)
	63	125	250	500	1000	2000	4000	8000	
CUBE-300XP	81	85	82	80	76	73	67	63	82

Operational mechanical noise levels have been calculated for the project site using the above information. Results of this analysis are provided in Section 5.1.1. For further details on the mechanical equipment, please refer to Appendix D.

3.2.2 Project-Generated Traffic

The proposed project is anticipated to generate approximately 178 Average Daily Trips (ADT) in the vicinity of the project site. The impacts of project-generated traffic noise have been assessed using this trip generation value and the following existing traffic volumes, provided in the form of either counts in the SANDAG Transportation Data Average Traffic Volume database, or projections in the SANDAG Series 13 Transportation Forecast Information Center (see references).

- Valley Parkway, North of El Norte Parkway: 29,700 ADT (2014 count)
- Valley Parkway, South of El Norte Parkway: 20,900 ADT (2012 count)
- El Norte Parkway: 6,800 ADT (2012 count)
- Hidden Trails Road: 1,200 ADT (Series 13 2012 projection)

The analysis of project-generated traffic noise is provided in Section 5.1.2.

3.2.3 Temporary Construction Equipment

In order to evaluate anticipated temporary construction noise impacts, typical assumptions have been made regarding stages of construction and equipment to be used. Although no equipment list has been provided for the site, the equipment listed in Table 4 is typical of what is expected to be used on site based on the information provided and professional experience. Unless otherwise noted, construction equipment noise levels were obtained from the DEFRA Construction Equipment Noise Database (see reference).

Table 4. Typical Construction Stages and Equipment Noise Levels

Stage of Construction	Equipment	Duty Cycle (%)	Noise Level, at 50 feet (dBA)
Grading/Demolition	Backhoe	40	64.3
	Excavator	40	74.3
	Dump Truck	40	75.3
	Dozer	40	71.3
	Water Truck*	40	74.4
Roadway Improvements	Backhoe	40	64.3
Foundations	Concrete Mixer Truck	40	71.3
	Concrete Pump	20	71.3
Paving	Paver	50	71.3
	Roller	20	69.3

*Source: Eilar Associates, Inc. noise measurements performed for Brutoco Engineering & Construction, Inc. for the Orange Line Extension Product, Metro Contract #C0943, City of Los Angeles, California.

These noise levels have been incorporated into the temporary construction noise analysis for the site, provided in Section 5.2.

4.0 METHODOLOGY AND EQUIPMENT

4.1 Methodology

4.1.1 Cadna Noise Modeling Software

Modeling of the outdoor noise environment is accomplished using Cadna Version 2019, which is a model-based computer program developed by DataKustik for predicting noise impacts in a wide variety of conditions. Cadna (Computer Aided Noise Abatement) assists in the calculation, presentation, assessment, and alleviation of noise exposure. It allows for the input of project information such as noise source data, barriers, structures, and topography to create a detailed model and uses the most up-to-date calculation standards to predict outdoor noise impacts. Noise standards used by Cadna that are particularly relevant to this analysis include ISO 9613 (Attenuation of sound during propagation outdoors). Cadna provides results that are in line with basic acoustical calculations for distance attenuation and barrier insertion loss.

4.1.2 Formulas and Calculations

Decibel Addition

To determine the combined logarithmic noise level of two known noise source levels, the values are converted to the base values, added together, and then converted back to the final logarithmic value, using the following formula:

$$L_C = 10\log(10^{L1/10} + 10^{L2/10} + 10^{LN/10})$$

where L_C = the combined noise level (dB), and
L_N = the individual noise sources (dB).

This procedure is also valid when used successively for each added noise source beyond the first two. The reverse procedure can be used to estimate the contribution of one source when the contribution of another concurrent source is known and the combined noise level is known. These methods can be used for L_{EQ} or other metrics (such as L_{DN} or CNEL), as long as the same metric is used for all components.

Project-Generated Traffic Noise Impacts

Changes in traffic noise levels can be predicted by inputting the ratio of the two scenarios into the following logarithmic equation:

$$\Delta = 10\log(V2/V1)$$

where: Δ= Change in sound energy,
V1 = original or existing traffic volume, and
V2 = future or cumulative traffic volume.

4.2 Measurement Equipment

The following equipment was used at the site to measure existing noise levels:

- Larson Davis Model 720 Type 2 Sound Level Meter, Serial # 0312
- Larson Davis Model CA150 Calibrator, Serial # 5954
- Microphone with windscreen, tripods

The sound level meter was field-calibrated immediately prior to the noise measurement and checked afterward, to ensure accuracy. All sound level measurements conducted and presented in this report, in accordance with the regulations, were made with a sound level meter that conforms to the American National Standards Institute specifications for sound level meters (ANSI S1.4). All instruments are maintained with National Bureau of Standards traceable calibration, per the manufacturers' standards.

5.0 IMPACTS AND MITIGATION

5.1 Permanent Project-Related Noise Impacts

5.1.1 Mechanical Equipment Noise

Noise levels from rooftop HVAC units and the kitchen exhaust fan were calculated in Cadna at the nearest properties using data presented in Section 3.2.1. All equipment was assumed to be in constant operation for 100 percent of the time, although in actuality, equipment will only operate intermittently. Calculations consider the topography of the surrounding area as well as shielding that would be provided by the proposed on-site structure, with the exception of any parapet walls. For this reason, the analysis is considered to represent a conservative estimate of noise impacts at off-site receivers.

Table 5 shows the project-related mechanical noise impacts at surrounding receivers. All receivers have been calculated at a height of five feet above their respective grade. Additional information is provided in Appendix D: Cadna Analysis Data and Results. For a graphic showing mechanical equipment noise contours and receiver locations, please refer to Figure 6.

Table 5. Project-Related Mechanical Noise Impacts

Receiver	Description	Noise Limit (dBA)	Noise Level (dBA)
R1	North Property Line	45	28.2
R2	South Property Line	45	41.5
R3	East Property Line	45	34.4
R4	West Property Line	45	25.7

As shown above, noise levels at adjacent property lines are anticipated to comply with the applicable nighttime noise limits of the City of Escondido with the project as currently designed. For

these reasons, no mitigation is deemed necessary to reduce noise impacts from rooftop mechanical equipment.

5.1.2 Project-Generated Traffic Noise

As detailed herein, the proposed project is anticipated to generate approximately 178 ADT on surrounding roadways. As the project does not exceed the thresholds above which a detailed traffic impact analysis would be prepared, the distribution of these trips on surrounding roadways has not been determined. For this reason, for a worst-case analysis of project-generated traffic noise, the anticipated project traffic has been added to each surrounding roadway's existing traffic volume to determine the anticipated increase in noise levels along each roadway resulting from the addition of project traffic. A significant impact is generally expected to be an increase of three decibels. Project-generated traffic noise increases are shown in Table 6.

Table 6. Anticipated Traffic Noise Increases with Project-Generated Traffic

Roadway	Traffic Volume (ADT)		Noise Level Increase (dB)
	Existing	Existing + Project	
Valley Parkway, North of El Norte Parkway	29,700	29,878	0.0
Valley Parkway, South of El Norte Parkway	20,900	21,078	0.0
El Norte Parkway	6,800	6,978	0.1
Hidden Trails Parkway	1,200	1,378	0.6

As shown in Table 6, based on the minimal amount of traffic generated by the project, the increase in noise levels on surrounding roadways will be well below the three-decibel threshold of significance. Project-generated traffic noise levels are therefore less than significant.

5.2 Temporary Construction Noise Impacts

The City of Escondido states that, during permissible hours of operation, noise levels from construction activity may not exceed a one-hour average sound level limit of 75 dBA at any time. It is assumed that this noise standard would be applied at surrounding noise-sensitive property lines.

Estimated construction noise impacts have been calculated assuming the typical stages and pieces of equipment shown in Table 4. Noise levels were calculated using Cadna with equipment placed at various locations around the project site to account for varying noise levels as equipment moves around the site. Noise levels have been calculated along the south property line of the project site, as these locations represent the nearest potentially affected receivers. Any other potentially affected receivers are located at a greater distance from the project site, and therefore would be subject to lower noise impacts due to additional distance attenuation or shielding provided by intervening structures or topography.

Calculated construction noise impacts are shown in Table 7. Graphics showing anticipated construction noise contours during each stage of operation are provided as Figures 7 through 10. Please refer to Appendix D for additional information.

Table 7. Temporary Construction Noise Levels at Surrounding Properties				
Stage	**Equipment**	**Receiver Location**	**Distance from Center of Activity (ft)**	**Average Hourly Noise Level (dBA)**
Grading/Demolition	Backhoe, Excavator, Dump Truck, Dozer, Water Truck	C1 (Southwest)	158	66.4
		C2 (Southeast)	57	74.8
Roadway Improvements	Backhoe	C1 (Southwest)	27	65.0
		C2 (Southeast)	245	43.9
Foundations	Concrete Mixer Truck, Concrete Pump	C1 (Southwest)	265	55.1
		C2 (Southeast)	57	67.8
Paving	Paver, Roller	C1 (Southwest)	27	74.6
		C2 (Southeast)	225	56.5

As shown in Table 7, based on the typical noise levels and duty cycles of construction equipment, average hourly noise levels are anticipated to remain at or below 75 dBA at the nearest noise-sensitive property lines. Any other noise-sensitive properties are located at a greater distance from on-site activity and therefore would be exposed to lesser noise levels. It should be noted that actual occupied residential structures are located at a significant distance beyond the calculated property line receiver locations, thereby further reducing construction noise levels at actual sensitive receiver locations.

Despite the fact that noise impacts are expected to remain in compliance with the construction noise limit of the City of Escondido, the following “good practice” measures should still be practiced as a courtesy to residential neighbors.

1. Staging areas should be placed as far as possible from residential receivers.

2. Place stationary equipment in locations that will have a lesser noise impact on nearby sensitive receivers.

3. Turn off equipment when not in use.

4. Limit the use of enunciators or public address systems, except for emergency notifications.

5. Equipment used in construction should be maintained in proper operating condition, and all loads should be properly secured, to prevent rattling and banging.

6. Schedule work to avoid simultaneous construction activities that both generate high noise levels.

7. Use equipment with effective mufflers.

8. Minimize the use of backup alarms.

With operating hours limited to those permitted by the City of Escondido and adherence to the general good practice construction noise control techniques, temporary construction noise impacts are expected to be less than significant at surrounding properties.

5.3 CEQA Significance Determination

Noise impacts from the project site are summarized below and classified per the noise portion of the CEQA Environmental Checklist form. This list summarizes conclusions made within the report and classifies the level of significance as: Potentially Significant Impact, Less than Significant with Mitigation Incorporated, Less than Significant Impact, or No Impact.

Italics are used to denote language from the CEQA Environmental Checklist form.

XII. NOISE—Would the project result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact. Operational noise impacts calculated in Section 5.1.1 are not expected to generate a substantial permanent increase in ambient noise levels in the vicinity of the project site. A substantial increase would be considered an increase of three decibels or more, which would represent a doubling of sound energy.

In order to demonstrate this fact, minimum measured ambient noise levels have been compared to the calculated noise impacts of the rooftop equipment. Results are shown in Table 8. Please refer to Figure 5 for a graphic showing the noise monitoring location and to Figure 6 for the mechanical equipment noise contours and receiver locations.

Table 8. Operational Noise Impacts Compared to Minimum Ambient Noise Levels

Receiver	Description	Noise Level (dBA)			
		Minimum Existing Ambient	Operational Noise Impacts	Ambient + Operational	Increase
R1	North Property Line	42.6	28.2	42.8	0.2
R2	South Property Line	42.6	41.5	45.1	2.5
R3	East Property Line	42.6	34.4	43.2	0.6
R4	West Property Line	42.6	25.7	42.7	0.1

As demonstrated in Table 8, the increase in ambient noise levels is not expected to exceed the three-decibel threshold of significance, and therefore, this impact is considered to be less than significant.

Additionally, as demonstrated in Section 5.1.2 of this report, noise impacts from project-generated traffic are not expected to cause a significant increase (greater than three decibels) on any surrounding roadway. This impact is also considered to be less than significant.

As shown in Section 5.2 of this report, noise from temporary construction is expected be less than significant considering the anticipated construction schedule and assuming that equipment is maintained in proper operating condition and using appropriate mufflers. Noise impacts from anticipated construction activity are expected to remain at or below the 75 dBA construction noise limit set by the City of Escondido. It is also unlikely that noise from temporary construction activity will cause a significant increase in ambient noise levels at actual sensitive receiver locations beyond property lines, due to high levels of traffic noise from Valley Parkway. Additionally, no construction activity will take place during the more sensitive nighttime hours when ambient noise levels tend to be lower, as per City of Escondido requirements. For these reasons, this impact is deemed to be less than significant.

As demonstrated above, the project is not expected to cause a substantial permanent or temporary increase in ambient noise levels, and therefore, this impact can be classified as less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Proposed construction phases for this project are not expected to include any significant vibration-inducing equipment, such as pile driving or heavy soil compaction. As these types of equipment will not be present, excessive levels of groundborne vibration and groundborne levels are not expected to be received by any persons.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project site is not located within an airport land use plan nor is it located within two miles of a private airstrip, public airport, or public use airport. Therefore, the proposed project would not expose people working in the project area to excessive noise levels from such uses.

6.0 CONCLUSION

Noise from the anticipated rooftop HVAC equipment and kitchen exhaust fan has been calculated to determine impacts at off-site receivers. Calculations show that noise levels from the rooftop mechanical equipment will be in compliance with the City of Escondido noise regulations found within the Municipal Code. No mitigation is deemed necessary to control project-generated noise impacts from mechanical equipment.

The proposed project is expected to add approximately 178 ADT to surrounding roadways. Considering the existing traffic volumes present on roadways in the vicinity of the project site, project-generated traffic noise is expected to be less than significant.

The City of Escondido Municipal Code states that construction activity is prohibited except on Monday through Friday during a week between the hours of 7 a.m. and 6 p.m. and on Saturdays between the hours of 9 a.m. and 5 p.m. Construction activity is also prohibited on Sundays and legal holidays. An analysis of temporary construction noise considering typical and anticipated activity on site demonstrates that construction noise impacts are expected to remain at or below an hourly average noise level of 75 dBA at surrounding residential properties. Provided construction is limited to the allowable hours of the City of Escondido and equipment is maintained in proper working condition, temporary noise impacts are expected to be less than significant. No mitigation is deemed necessary for the attenuation of temporary noise impacts.

The proposed project is not expected to result in any potentially significant noise impacts by the standards of the California Environmental Quality Act (CEQA). Noise impacts to and from the project site are summarized in Section 5.3.

7.0 CERTIFICATION

All recommendations for noise control are based on the best information available at the time our consulting services are provided. However, as there are many factors involved in sound transmission, and Eilar Associates has no control over the construction, workmanship or materials, Eilar Associates is specifically not liable for final results of any recommendations or implementation of the recommendations.

This report is based on the related project information received and measured noise levels, and represents a true and factual analysis of the acoustical impact issues associated with the Apollo Senior Care project to be located at 3141 East Valley Parkway in the City of Escondido, California. This report was prepared by Amy Hool and Jonathan Brothers.

Amy Hool, Senior Acoustical Consultant

Jonathan Brothers, Principal Acoustical Consultant

8.0 REFERENCES

1. City of Escondido Municipal Code, Article 12. Noise Abatement and Control.

2. California Environmental Quality Act (CEQA), Statute and Guidelines, 2018.

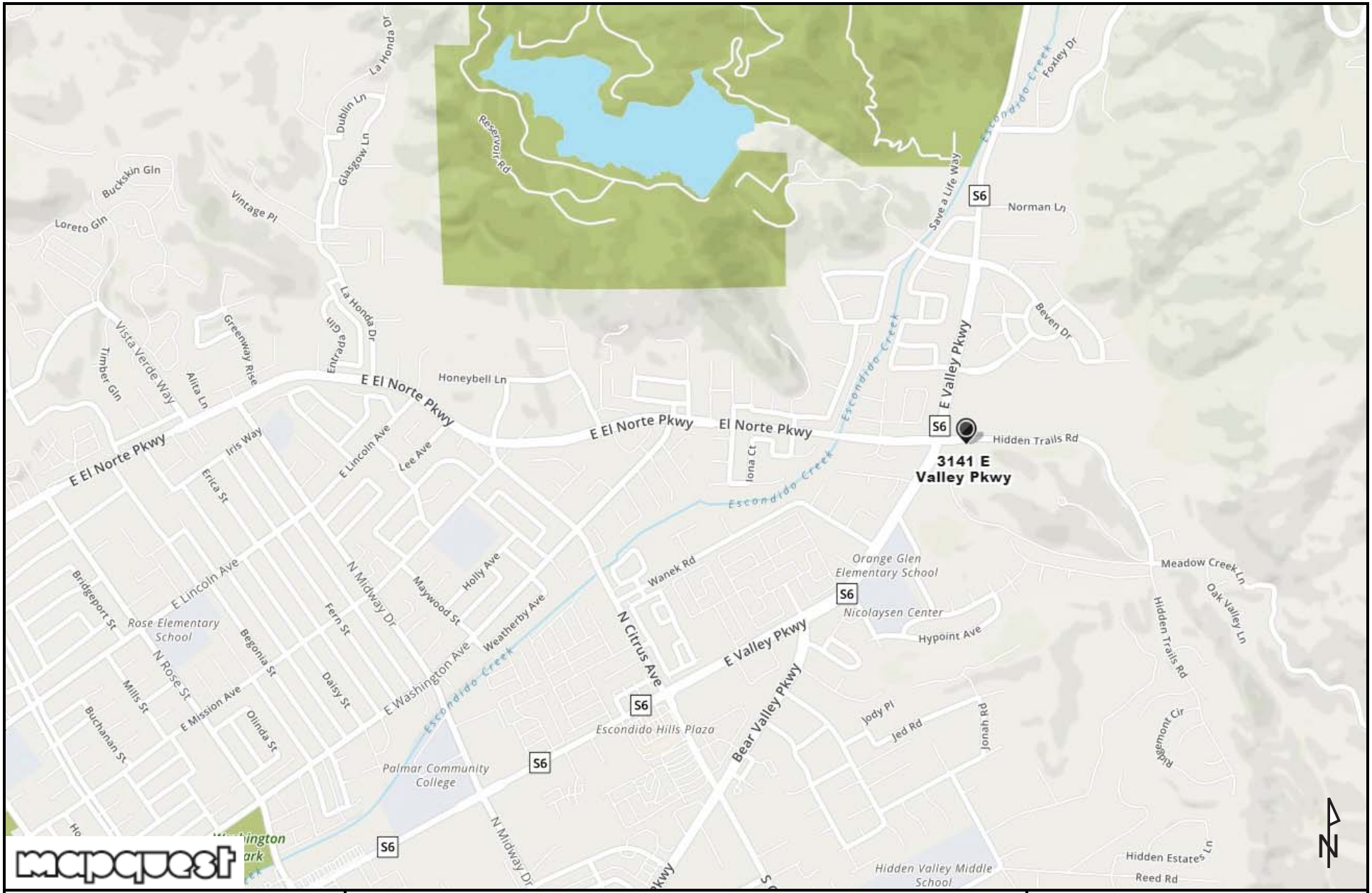
3. San Diego Association of Governments (SANDAG), Average Traffic Volumes – Local Jurisdictions, http://www.sandag.org/resources/demographics_and_other_data/transportation/adtv/index.asp.

4. San Diego Association of Governments (SANDAG), Transportation Forecast Information Center (TFIC), Series 13, http://tfic.sandag.org/.

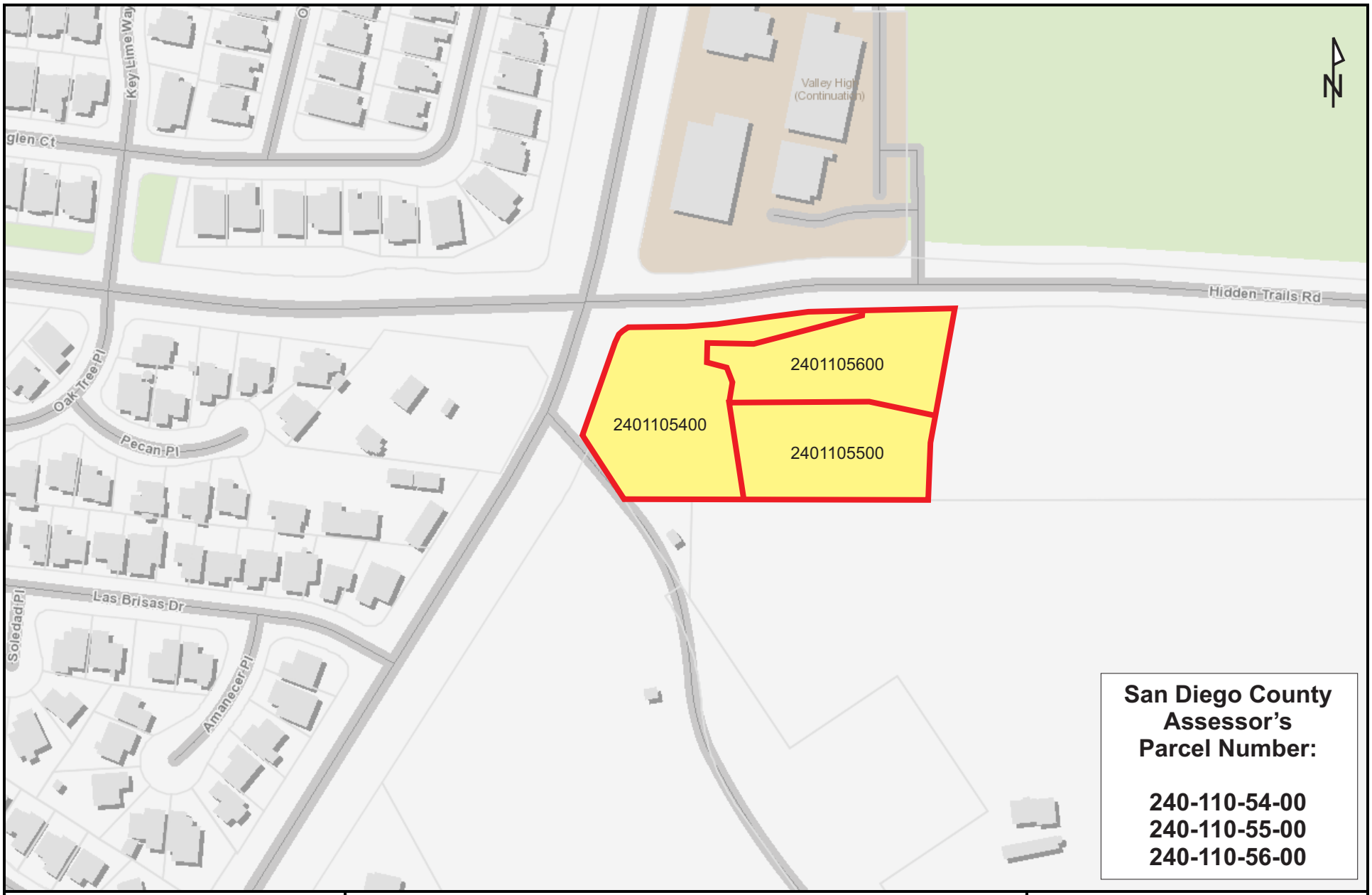
5. Department for Environment Food and Rural Affairs (DEFRA), Update of Noise Database for Prediction of Noise on Construction and Open Sites, 2005.

6. DataKustik, CadnaA (Computer Aided Noise Abatement), Version 2019.

FIGURES

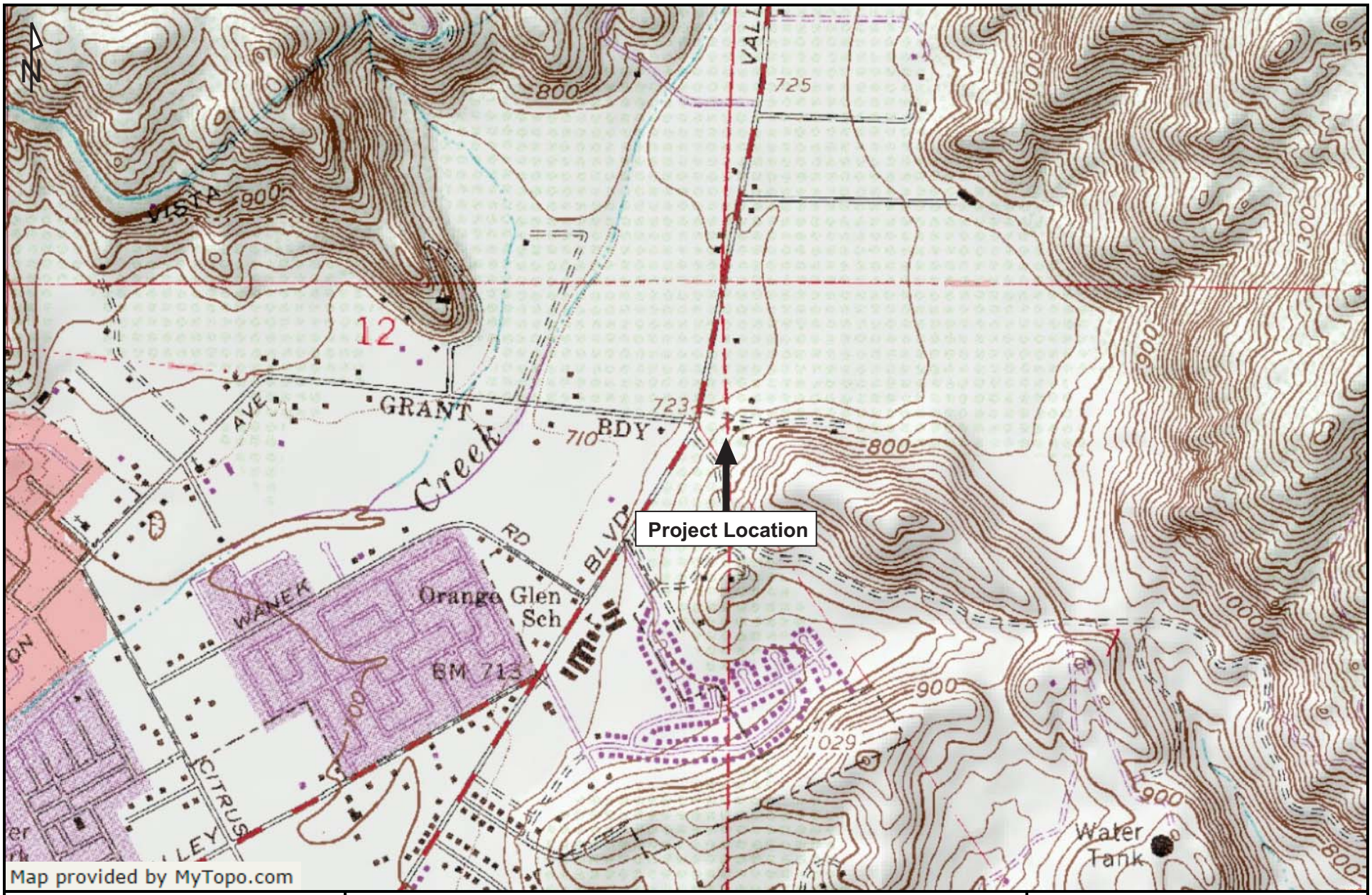


Eilar Associates, Inc. **210 South Juniper Street, Suite 100** **Escondido, California 92025** **760-738-5570**	**Vicinity Map** **Job # S190415**	**Figure 1**



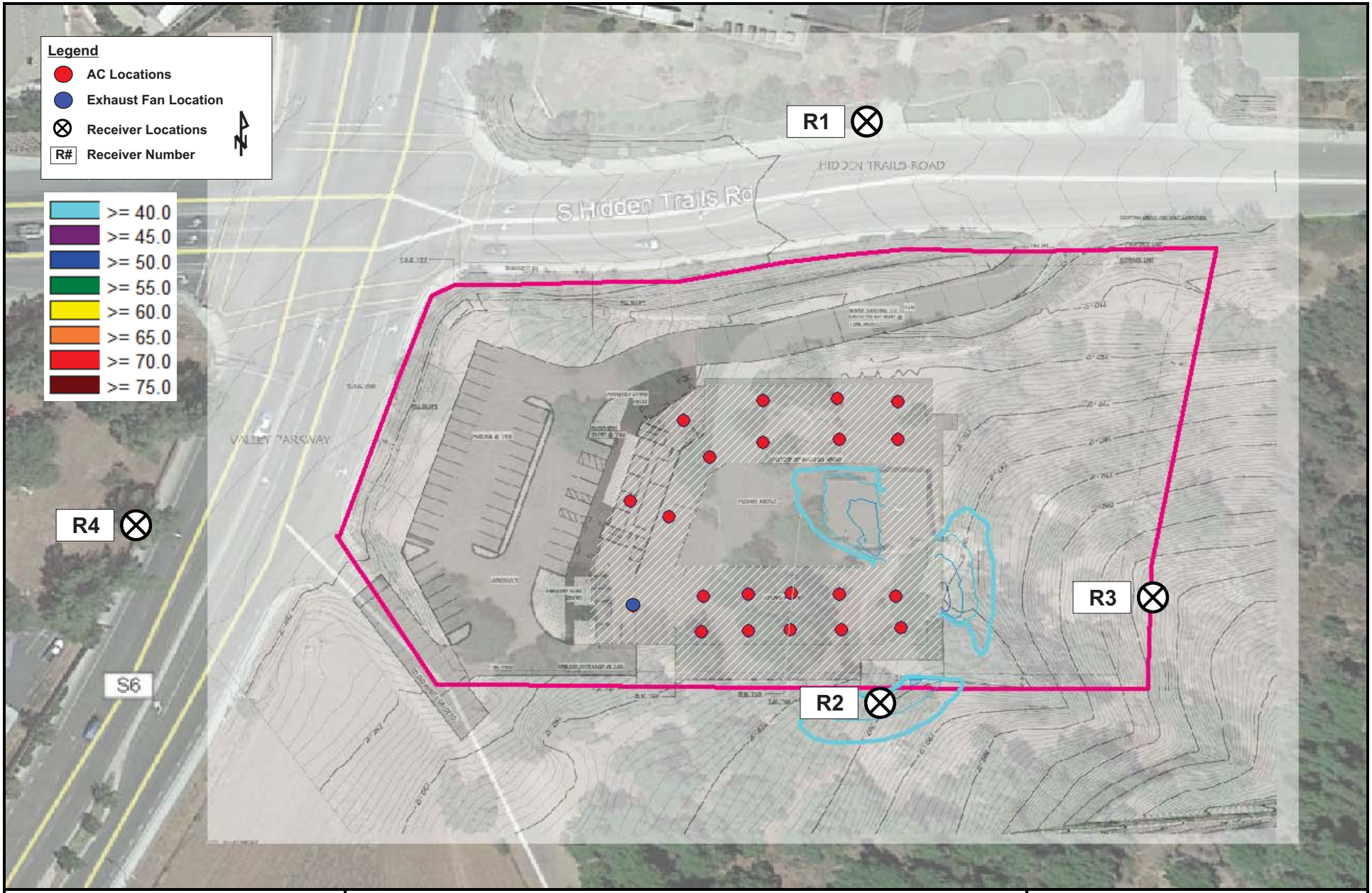
Eilar Associates, Inc. **210 South Juniper Street, Suite 100** **Escondido, California 92025** **760-738-5570**	**Assessor's Parcel Map** **Job # S190415**	**Figure 2**

Eilar Associates, Inc. **210 South Juniper Street, Suite 100** **Escondido, California 92025** **760-738-5570**	**Satellite Aerial Photograph** **Job # S190415**	**Figure 3**



Eilar Associates, Inc. **210 South Juniper Street, Suite 100** **Escondido, California 92025** **760-738-5570**	**Topographic Map** **Job # S190415**	**Figure 4**

Eilar Associates, Inc. **210 South Juniper Street, Suite 100** **Escondido, California 92025** **760-738-5570**	**Satellite Aerial Photograph Showing Noise Measurement Location** **Job # S190415**	**Figure 5**



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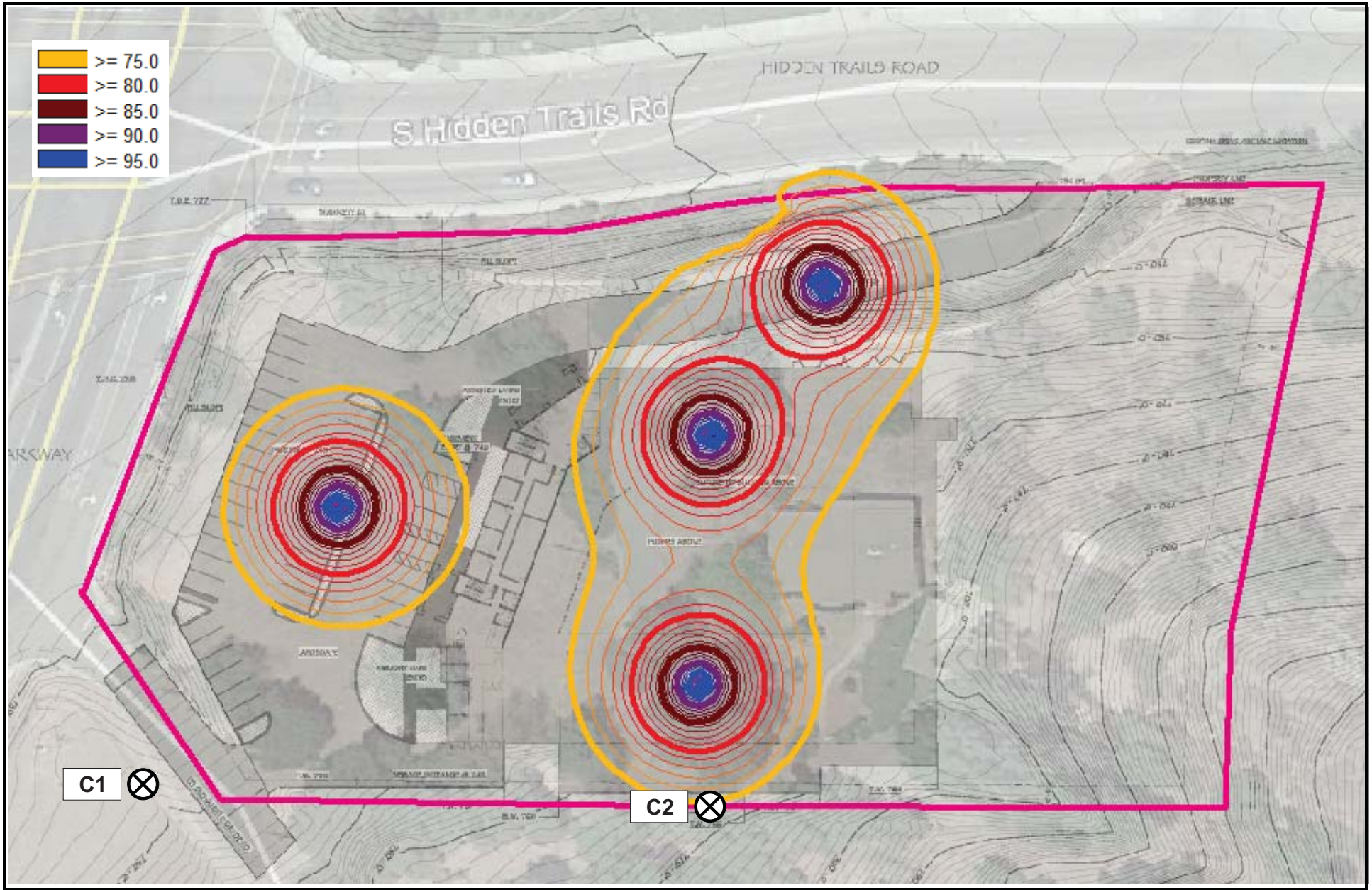
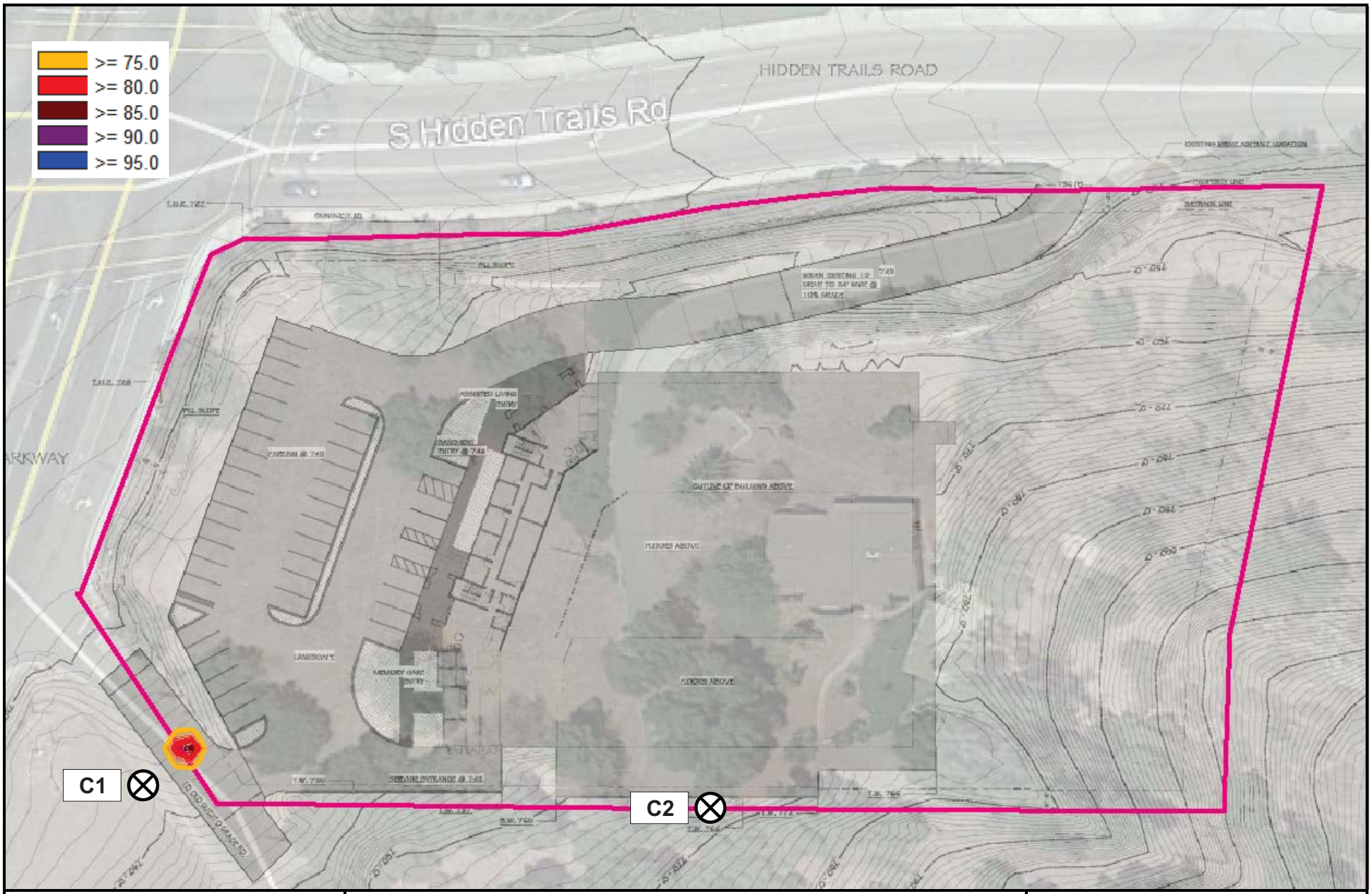
760-738-5570

Satellite Aerial Photograph Showing Mechanical Equipment Noise Contours and Receiver Locations
Job # S190415

Figure 6



Eilar Associates, Inc. **210 South Juniper Street, Suite 100** **Escondido, California 92025** **760-738-5570**	**Satellite Aerial Photograph Showing Construction Noise Contours and Receiver Locations - Grading** **Job # S190415**	**Figure 7**

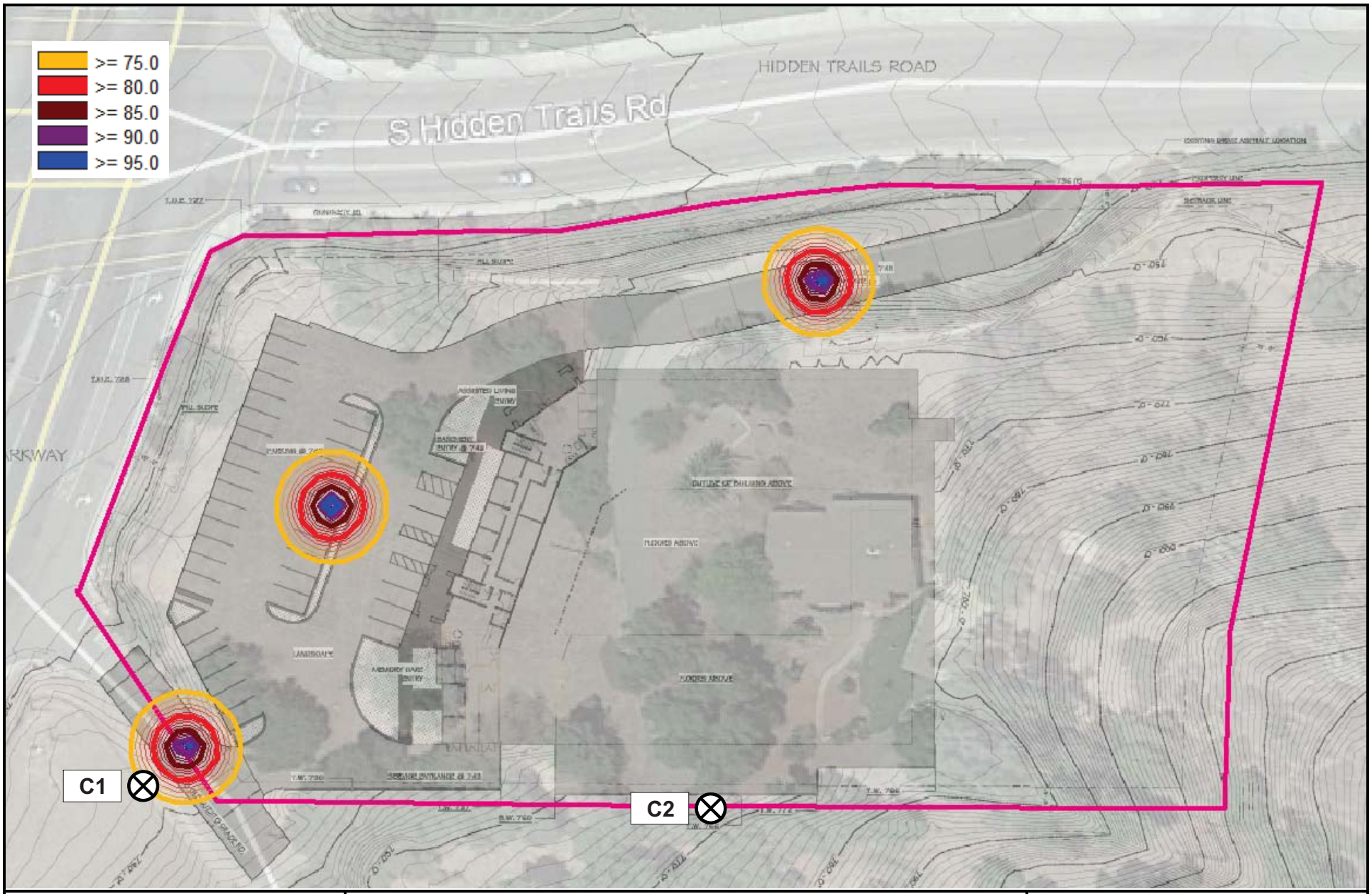


Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025
760-738-5570

Satellite Aerial Photograph Showing Construction Noise Contours and Receiver Locations - Roadway Improvements
Job # S190415

Figure 8

Eilar Associates, Inc. **210 South Juniper Street, Suite 100** **Escondido, California 92025** **760-738-5570**	**Satellite Aerial Photograph Showing Construction Noise Contours and Receiver Locations - Foundations** **Job # S190415**	**Figure 9**



Eilar Associates, Inc. **210 South Juniper Street, Suite 100** **Escondido, California 92025** **760-738-5570**	**Satellite Aerial Photograph Showing Construction Noise Contours and Receiver Locations - Paving** **Job # S190415**	**Figure 10**

APPENDIX A

Project Plans

GENERAL NOTES

THE USE AND PUBLICATION OF THESE PLANS, SPECIFICATIONS, AND DESIGNS SHALL BE RESTRICTED TO THE ORIGINAL SITE AND PHASE FOR WHICH THEY WERE PREPARED AND TITLE THERETO REMAINS IN THE ARCHITECT. USE WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT IS PROHIBITED. VISUAL CONTACT CONSTITUTES ACCEPTANCE OF THESE RESTRICTIONS.

1. EACH TRADE SHALL BE RESPONSIBLE FOR KNOWLEDGE OF RELATIVE INFORMATION CONTAINED IN THESE DOCUMENTS AND THE CONDITIONS UNDER WHICH HE WILL BE EXPECTED TO PERFORM.
2. DIMENSIONS, GRADES, AND DETAILS SHALL BE VERIFIED PRIOR TO COMMENCEMENT OF CONSTRUCTION. TYPICAL DETAILS SHALL APPLY WHERE SPECIFIC DETAILS (OR SECTIONS) AREN'T GIVEN.
3. DEVIATIONS FROM THESE DOCUMENTS NECESSITATED BY FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY, PRIOR TO COMMENCING WITH SAID WORK.
4. ALL CONSTRUCTION SHALL CONFORM WITH THE CURRENT BUILDING CODES AND ALL LAWS AND ORDINANCES OF THE PLACE OF THE BUILDING.
5. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. IF DISCREPANCIES ARE FOUND, THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.
6. SHOULD THERE BE ANY DISCREPANCY BETWEEN THE VARIOUS DRAWINGS, IT SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION FOR CLARIFICATION, PRIOR TO COMMENCING OF SAID WORK.
7. THE CONTRACTOR SHALL COORDINATE WITH THE OWNERS REPRESENTATIVE FOR INSTALLATION OF SPECIAL MANUFACTURING EQUIPMENT NOT SHOWN IN THESE DRAWINGS. THE CONTRACTOR SHALL VERIFY EQUIPMENT LOCATIONS WITH THE OWNER'S REPRESENTATIVE AND/OR THE EQUIPMENT MANUFACTURER PRIOR TO FORMING THE SLAB, FOR THE PROPER SIZE AND LOCATION OF FOUNDATION DEPRESSIONS, DRAINS, AND WARPS.
8. THE CONTRACTOR SHALL CONSULT THE ELECTRICAL, MECHANICAL, AND PLUMBING DRAWINGS FOR LOCATION OF ALL SLEEVES THROUGH WALLS AND FLOOR SLABS.
9. MISCELLANEOUS SIGNAGE SHALL BE UNDER SEPARATE CONTRACT. HANDICAP SIGNAGE IS IN CONTRACT.
10. PROVIDE SOUND ATTENUATION BLANKET INSULATION AT ALL INTERIOR RESTROOM WALLS.
11. ALL EXITS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY AND SHALL BE LABELED "THIS DOOR IS TO REMAIN UNLOCKED WHENEVER BUILDING IS OCCUPIED" IN 1" HIGH MINIMUM, BLOCK LETTERS.
12. ALL SUSPENDED ACOUSTIC TILE CEILING FRAMING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH CBC SECTION 808.
13. INTERIOR FINISHES TO CONFORM TO THE REQUIREMENTS OF CHAPTER 8, CBC.
14. UNO: STATED MANUFACTURERS ITEMS SHALL BE "OR EQUAL". CONTRACTOR SHALL VERIFY SUBSTITUTIONS WITH THE ARCHITECT PRIOR TO BID AND/OR INSTALLATION.
15. CONTRACTOR TO OBTAIN A PERMIT FROM THE DEPARTMENT OF INDUSTRIAL RELATIONS, DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (CalOSHA) FOR TRENCHES OR EXCAVATIONS 5'0" OR DEEPER.
16. GLAZING TO CONFORM TO CBC SECTION 24 AS WELL AS COMPLYING WITH FEDERAL SAFETY STANDARDS FOR ARCHITECTURAL GLAZING (CBC STANDARDS CHAPTER 24).
17. PROVIDE A MINIMUM OF ONE 2A-10BC RATED FIRE EXTINGUISHER FOR EACH 6000 SF TRAVEL DISTANCE NOT TO EXCEED 75' FOR OFFICE, RETAIL, AND APARTMENTS, AND A MINIMUM OF ONE 4A-20BC RATED FIRE EXTINGUISHER FOR EACH 3000 SF TRAVEL DISTANCE NOT TO EXCEED 50' FOR PARKING GARAGES AND HAZARDOUS LOCATIONS. (CBC SECTION 904)
18. FIRE PROTECTION FACILITIES INCLUDING ACCESS MUST BE PROVIDED PRIOR TO AND DURING CONSTRUCTION.
19. ALL WINDOWS AND EXTERIOR DOORS TO BE FULLY WEATHERSTRIPPED AND LABELED CERTIFYING COMPLIANCE WITH APPLICABLE ANSI AND NWMA STANDARDS.
20. ALL REQUIRED PERMITS MUST BE OBTAINED FROM THE FIRE PREVENTION BUREAU PRIOR TO CONSTRUCTION.
21. PROVIDE "CERTIFICATE OF PERFORMANCE" FOR GLUED LAMINATED WOOD MEMBERS PRIOR TO ERECTION.
22. BUILDING ADDRESS SHALL BE EASILY SEEN FROM STREET.
23. PROVIDE FLUSH-MOUNTED FIRE EXTINGUISHERS AS DICTATED BY FIRE MARSHALL. SEE DETAIL 4- FOR RECESSED FIRE EXTINGUISHERS.
24. NOT USED
25. INSTALL VISIBLE ALARMS TO MEET REQUIREMENTS FOR SLEEPING ACCOMMODATIONS AS REQUIRED BY 2013 CBC, SECTION 420.5 & 420.6. REFER TO 2016 CBC TABLE 907.5.2.3.3 AND 2016 CBC 11B-807.3.1 (SPM) (DSA-AC). COORDINATE WITH ELECTRICAL DRAWINGS.

ABBREVIATIONS

@	AT
AC	ASPHALTIC CONCRETE
AC UNIT	AIR CONDITIONING UNIT
ADJ	ADJUSTABLE
ALUM	ALUMINUM
ASTM	AMERICAN SOCIETY OF TESTING MATERIAL
BR	BEDROOM
BLK	BLOCK OR BLOCKING
BLDG	BUILDING
BM	BEAM
BN	BOUNDRY NAIL
BU ROOF	BUILT UP ROOF
CAB	CABINET
CB	COLUMN BASE
CC	COLUMN CAB
CFM	CUBIC FEET/MINUTE
CI	CAST IRON
CJ	CEILING JOIST OR CONTROL JOINT
CLG	CEILING
CL	CLOSET
CLR	CLEAR
℄	CENTER LINE
CMU	CONCRETE MASONARY UNIT
CO	CLEAN OUT
CW	COLD WATER
COL	COLUMN
CONC	CONCRETE
CONTIN	CONTINUOUS
CT	CERAMIC TILE
CU FT	CUBIC FEET
CU IN	CUBIC INCH
CU YD	CUBIC YARD
D	DRYER
DG	DECOMPOSED GRANITE
DIA OR ⌀	DIAMETER
DR	DINING ROOM
DN	DOWN
DS	DOWNSPOUT
DBL	DOUBLE
DRWG	DRAWING
EA	EACH
ELECT	ELECTRICAL
ELEV	ELEVATION
EN	EDGE NAIL
EQ	EQUAL
ETC	ET CETRA
EXT	EXTERIOR
EXISTG OR (E)	EXISTING
FAU	FORCED AIR UNIT
FND	FOUNDATION
FIN FL	FINISH FLOOR
FIN	FINISH
FIN GR	FINISH GRADE
FJ	FLOOR JOIST
FL	FLOWLINE
FLR	FLOOR
FLHDR	FLUSH HEADER
FN	FIELD NAIL
FIX GL	FIXED GLASS
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONARY
FOS	FACE OF STUD
FTG	FOOTING
GA	GAUGE
GAR	GARAGE
GI	GALVANIZED IRON
GLU-LAM	GLUE LAMINATED BEAM
GL	GLASS
GFI	GROUND FAULT INTERCEPTOR
GR	GRADE
GYP BD	GYPSUM BOARD
HB	HOSE BIBB
HC	HANDICAPPED
HDR	HEADER
HDWD	HARDWOOD
HD	HOLD DOWN
HP	HEAT PUMP
HT	HEIGHT
HW	HOT WATER
HORIZ	HORIZONTAL
HR	HOUR
ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS
INSUL	INSULATION
INT	INTERIOR
JT	JOINT
JST	JOIST
KIT	KITCHEN
L	
LAM	LAMINATED
LS	LANDSCAPE
LAV	LAVATORY
LAUND	LAUNDRY
LB	POUND
	LINEN
LR	LIVING ROOM
LB	LAG BOLT
MFG	MANUFACTURER
MATL	MATERIAL
MB	MACHINE BOLT
MBR	MASTER BEDROOM
MC	MEDICINE CABINET
MAX	MAXIMUM
MECH	MECHANICAL
MO	MASONRY OPENING
MIN	MINIMUM
MTL	METAL
MTD	MOUNTED
NO OR #	NUMBER
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
OC	ON CENTER
P	PANTRY
PB	POST BASE
℗	PROPERTY LINE
PL	PLATE
PLAS LAM	PLASTIC LAMINATE
PLUMBG	PLUMBING
PLYWD	PLYWOOD
PR	PAIR
PCC	PORTLAND CEMENT CONCRETE
PSI	POUND PER SQ. INCH
PSF	POUND PER SQ. FOOT
PTDF	PRESSURE TREATED DOUGLAS FIR
REQD	REQUIRED
R	RISER
RD	ROOF DRAIN
RDWD	REDWOOD
RCJ	ROOF/CEILING JOIST
RJ	ROOF JOIST
RS	RESAWN
REF	REFRIGERATOR
REINF	REINFORCING
RO	ROUGH OPENING
RM	ROOM
SC	SOLID CORE
SD	SMOKE DETECTOR
SECT	SECTION
SF	SQUARE FOOT
SHT	SHEET
SHWR	SHOWER
SIMP HD	"SIMPSON" HOLD DOWN
SIM	SIMILAR
S&P	SHELF AND POLE
SPEC	SPECIFICATION
SQ	SQUARE
STL	STEEL
STD	STANDARD
STOR	STORAGE
S4S	SURFACE FOUR SIDES
T	TREAD
T & B	TOP & BOTTOM
TEMP	TEMPERED
T & G	TONGUE AND GROOVE
THRU	THROUGH
TI	TENANT IMPROVEMENTS
TC	TOP OF CURB
TOS	TOP OF SLAB
TOW	TOP OF WALL
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UNO	UNLESS NOTED OTHERWISE
VGDF	VERTICAL GRAIN DOUGLAS FIR
VTR	VENT THROUGH ROOF
VTW	VENT THROUGH WALL
VERT	VERTICAL
W	WASHER
WAINS	WAINSCOT
WD	WOOD
WC	WATER CLOSET
WF	WIDE FLANGE
WH	WATER HEATER
WP	WATER PROOF
W/	WITH

DRAWING SYMBOLS

- PROPERTY LINE
- FURNITURE (NIC)
- EDGE OF OVERHEAD PLANES
- CENTER LINE
- FACE OF STUD DIMENSION UNO
- CENTER LINE DIMENSION UNO
- FIRE HYDRANT
- NEW WINDOW
- DOOR
- NEW CONSTRUCTION NOTES
- DEMOLITION NOTES
- INTERIOR ELEVATION
- DETAIL CUT
- PARTIAL BUILDING SECTION
- BUILDING SECTION
- EXTERIOR ELEVATION
- INSULATION
- HVAC SUPPLY
- HVAC RETURN
- EXISTING ELEVATION TO REMAIN
- EXISTING SPOT ELEVATION REFERENCE ONLY
- NEW SPOT ELEVATION
- FLUORESCENT STRIP
- WALL MOUNTED LIGHT FIXTURE
- PENDANT MOUNTED LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- NIGHT LIGHT
- EXIT SIGN
- GYP. BD. CEILING
- ACOUSTIC TILE CEILING
- RECESSED FLUORESCENT FIXTURE
- 2X4 STUDS PER SECTION
- 2X6 STUD WALL

BUILDING INFORMATION

SITE ADDRESS:
3141 E. VALLEY PARKWAY
ESCONDIDO, CA 92027

OCCUPANCY:
R-2.1

PROPOSED USE:
RCFE

ZONING:
SPA-5

BUILDING AREA:
60,277 S.F.

ACCESSORS PARCEL NO.:
240-110-23-00
240-110-24-00
240-110-48-00

BUILDING HEIGHT:
SEE HEIGHT ANALYSIS EXHIBIT

STORIES:
3 STORIES (OVER PARTIAL BASEMENT)

DESIGN INFORMATION

OWNER:
APOLLO SENIOR CARE LLC
2661 PUMMELO COURT
ESCONDIDO, CA 92037
ATTN: CHINTU PATEL
760-855-8847

ARCHITECTURAL DESIGN TEAM:
NDAA GROUP
4990 N. HARBOR DR., SUITE 201
SAN DIEGO, CA 92106
CONTACT: JOE HOLASEK
619-297-8066 x 13

CIVIL ENGINEER:
MASSON & ASSOCIATES, INC.
200 E. WASHINGTON AVENUE, SUITE 200
ESCONDIDO, CA 92025
ROB D'AMARO
760-741-3570

LANDSCAPE ARCHITECT:
AHLES LANDSCAPE ARCHITECTURE
2410 MANCHESTER AVENUE
RANCHO SANTE FE, CA 92091
STEVE AHLES
858-756-8963

SHEET INDEX

ARCHITECTURAL	
A-001	COVER SHEET INDEX
A-002	BASEMENT FLOOR PLAN
A-003	FIRST FLOOR PLAN
A-004	SECOND FLOOR PLAN
A-005	THIRD FLOOR PLAN
A-006	ROOF PLAN
A-007	ELEVATIONS
A-008	ELEVATIONS
A-009	ALLOWABLE BUILDING HEIGHT TABULATION
A-010	SITE PLAN
CIVIL	
C-1	CONCEPTUAL GRADING PLAN
LANDSCAPE	
L-1	TITLE / LEGEND
L-2	PRELIMINARY LANDSCAPE PLAN

UNIT TABULATION

ASSISTED LIVING:	STUDIO (306-357 SF)	34 UNITS
	ONE BEDROOM (510-556 SF)	21 UNITS
	TWO BEDROOM (827 SF)	1 UNIT
	TOTAL:	55 UNITS
MEMORY CARE:	STUDIO (306 SF)	8 UNITS
	DOUBLE BED (484 SF)	17 UNITS
	TOTAL:	25 UNITS

PARKING TABULATION

PARKING:	REGULAR	37 SPOTS
	HANDICAP	3 SPOTS
	TOTAL:	40 SPOTS

AREA BREAKDOWN

FLOOR SQUARE FOOTAGE:	BASEMENT	5,003 SF
	1ST FLOOR	15,844 SF
	2ND FLOOR	26,062 SF
	3RD FLOOR	13,367 SF
	TOTAL:	60,277 SF

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San Diego, CA 92106
tel: 619-297-8066
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GARY W. NOBLE
No. C11956
STATE OF CALIFORNIA

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ESCONDIDO, CA 92027

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COVER SHEET INDEX

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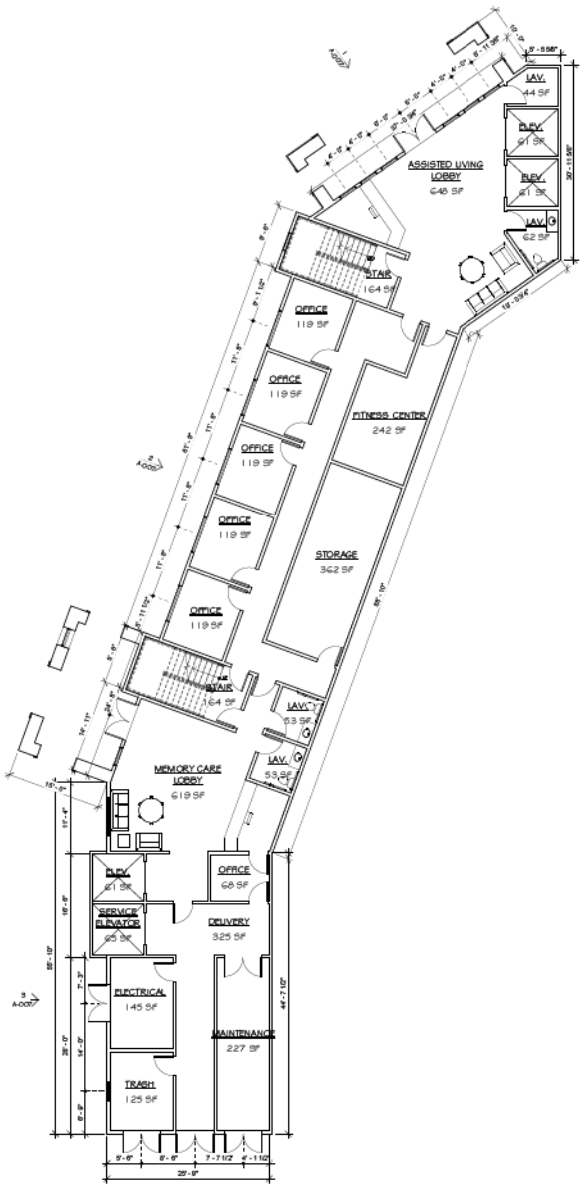

1 BASEMENT
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BASEMENT FLOOR PLAN

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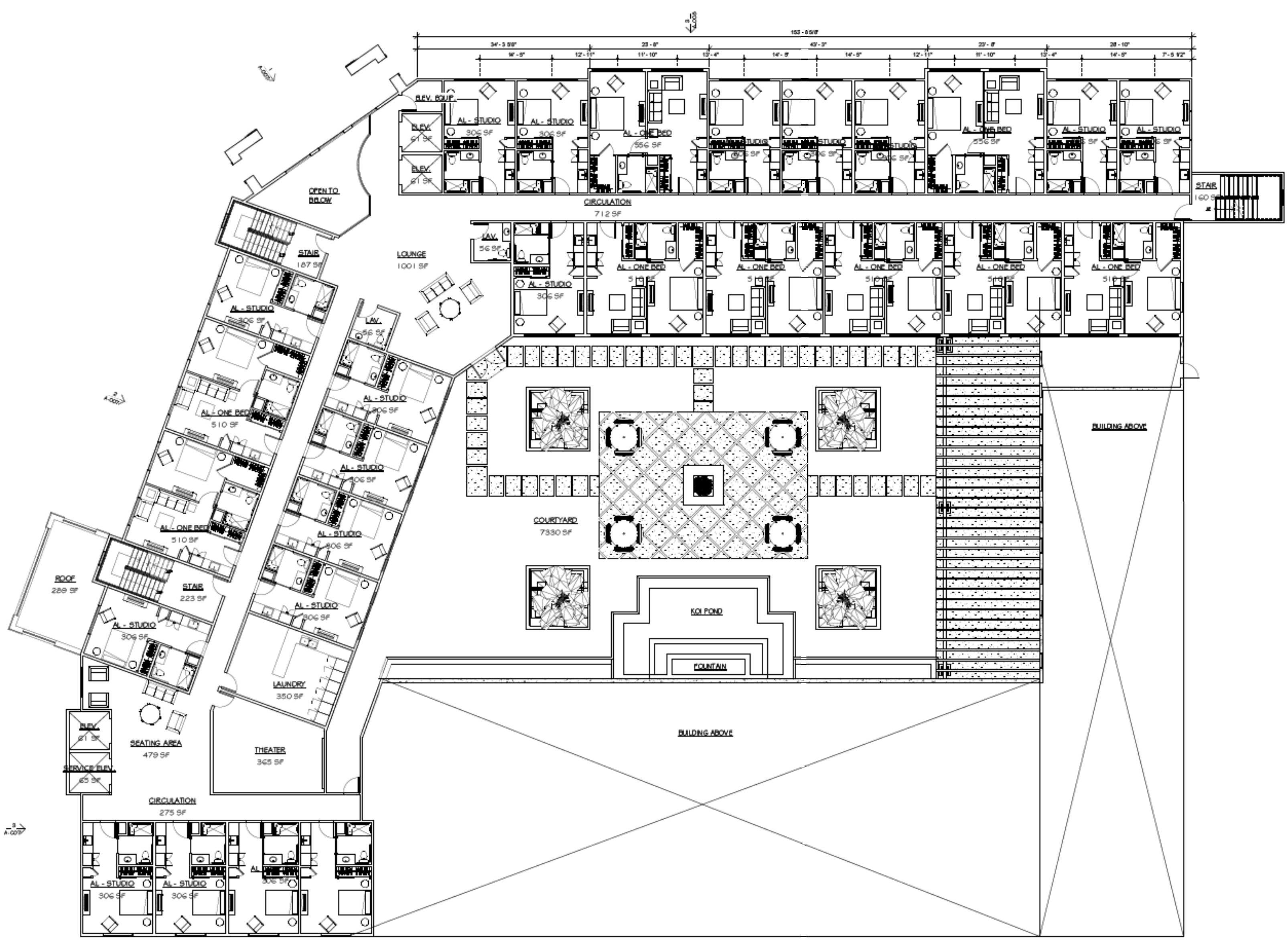

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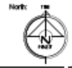

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FIRST FLOOR PLAN

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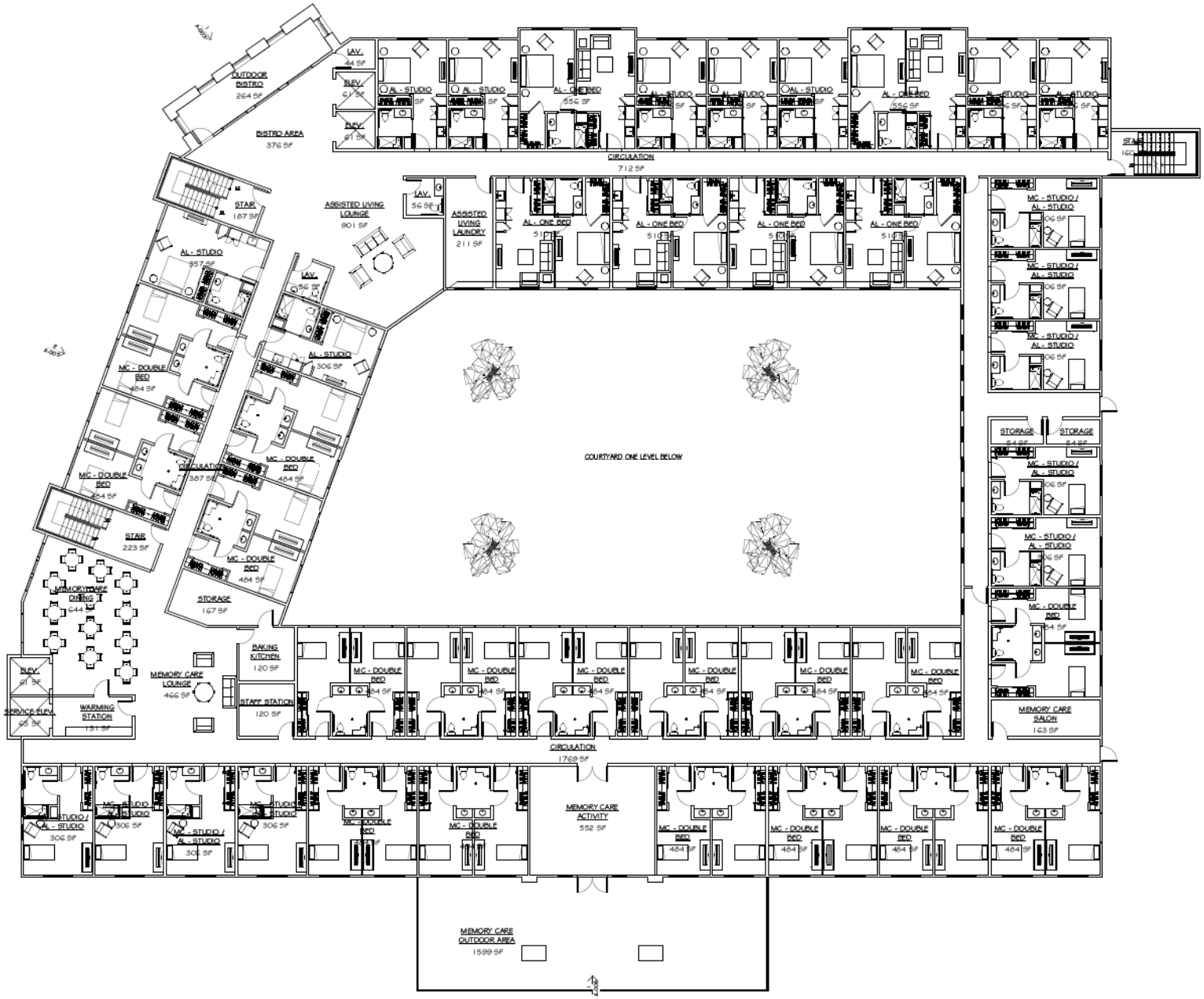

1 2ND FLOOR
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SECOND FLOOR PLAN

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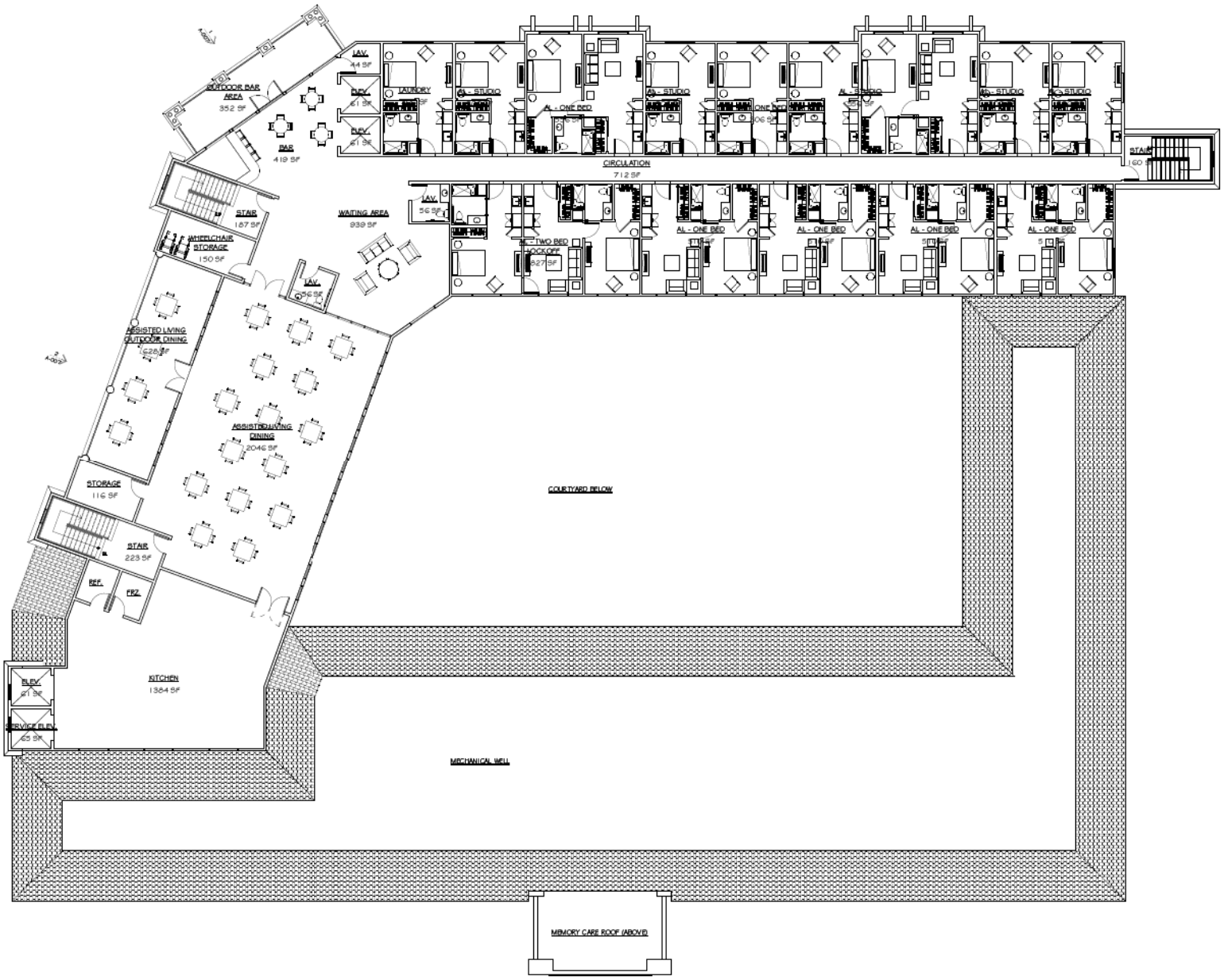

1 3RD FLOOR
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THIRD FLOOR PLAN

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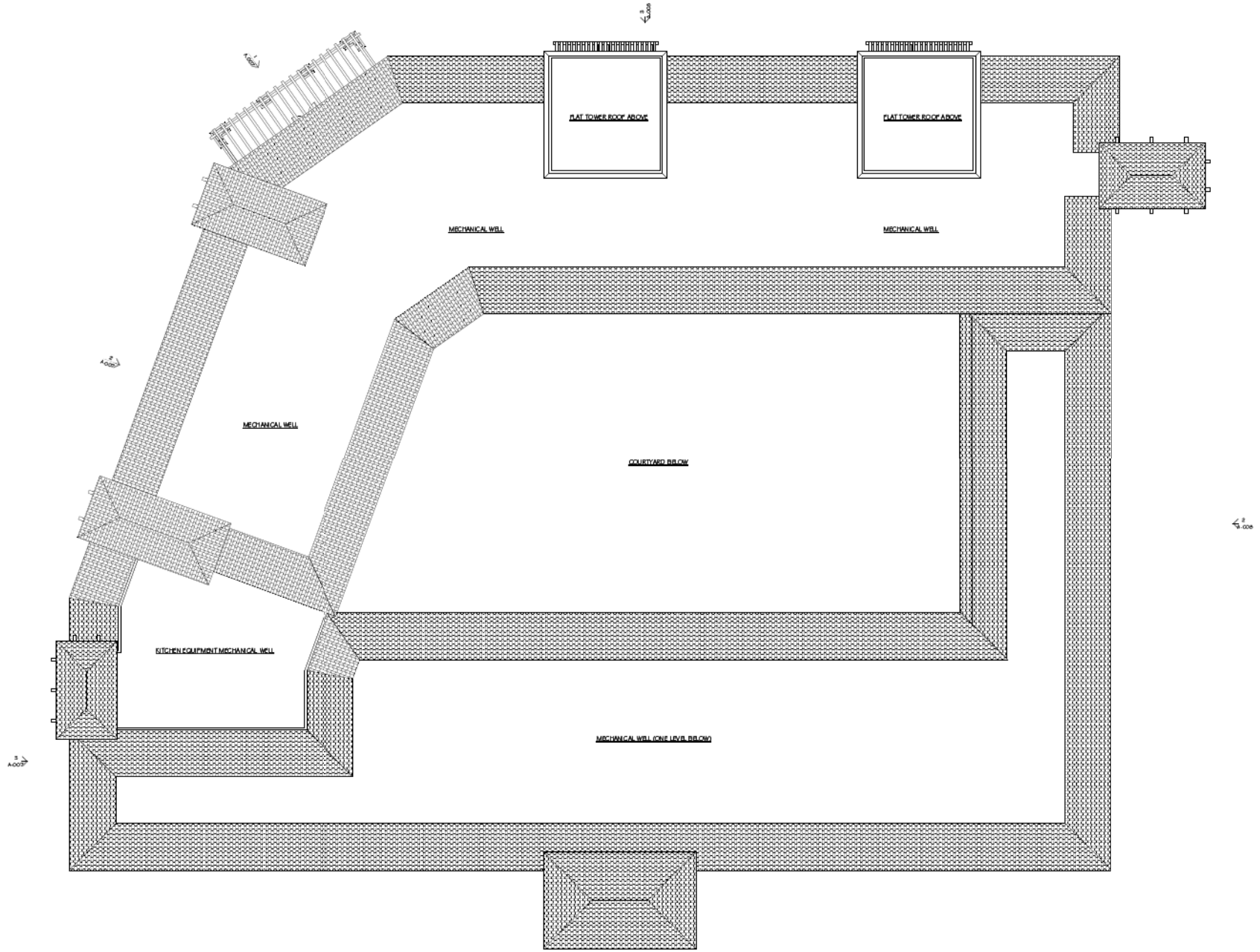

1 ROOF
Ref: A-007 / Scale: 1/8" = 1'-0"

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ROOF PLAN

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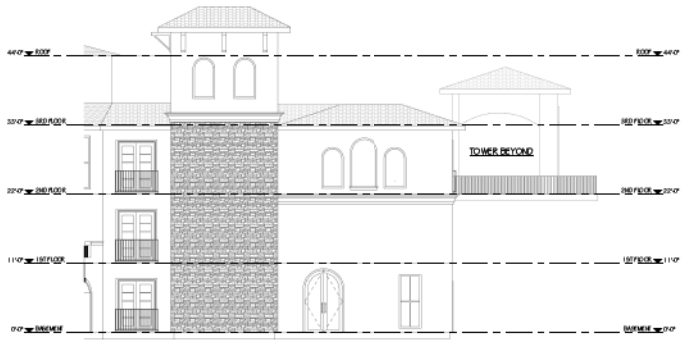
ELEVATION NOTES

1. CONCRETE S-TILE (HIGH PROFILE). COLOR TO BE MIXED TUSCAN BLEND.
   (ROOF)
2. HEAVY TIMBER TRELLIS. STAINED COLOR TO BE DARK BROWN.
3. PRECAST TWO PIECE CONCRETE COLUMNS. COLOR TO BE NATURAL.
4. JELD WEN VINYL CLAD WINDOWS. TRIM COLOR TO BE BROWN.
5. METAL GUARD RAILS AND PICKETS. COLOR TO BE BROWN.
6. GFRC CORNICE MOLDING. COLOR TO BE DARK SAND.
7. GFRC WINDOW/ OPENING TRIM. COLOR TO BE BROWN.
8. GFRC TRIM. COLOR TO BE DARK SAND.
9. ELDORADO STONE CLADDING.
10. SAND FINISH STUCCO. COLOR TO BE SOFT WHITE.
11. DECORATIVE LIGHT FIXTURES. STYLE TBD.
12. SAND FINISH STUCCO WAINSCOT. COLOR TO BE DARK SAND.

1 AL ENTRANCE
Ref: A-002 / Scale: 1/8" = 1'-0"

2 NORTH-WEST
Ref: A-002 / Scale: 1/8" = 1'-0"



3 WEST
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ELEVATIONS

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Sheet No:

A-007

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1 SOUTH
Ref: A-002 / Scale: 1/8" = 1'-0"

ELEVATION NOTES

1. CONCRETE S-TILE (HIGH PROFILE). COLOR TO BE MIXED TUSCAN BLEND. (ROOF)
2. HEAVY TIMBER TRELLIS. STAINED COLOR TO BE DARK BROWN.
3. PRECAST TWO PIECE CONCRETE COLUMNS. COLOR TO BE NATURAL.
4. JELD WEN VINYL CLAD WINDOWS. TRIM COLOR TO BE BROWN.
5. METAL GUARD RAILS AND RIGHTS. COLOR TO BE BROWN.
6. GFRC CORNICE MOLDING. COLOR TO BE DARK SAND.
7. GFRC WINDOW / OPENING TRIM. COLOR TO BE BROWN.
8. GFRC TRIM. COLOR TO BE DARK SAND.
9. ELDORADO STONE CLADDING.
10. SAND FINISH STUCCO. COLOR TO BE SOFT WHITE.
11. DECORATIVE LIGHT FIXTURES. STYLE TBD.
12. SAND FINISH STUCCO WAINSCOT. COLOR TO BE DARK SAND.

2 EAST
Ref: A-003 / Scale: 1/8" = 1'-0"

3 NORTH
Ref: A-003 / Scale: 1/8" = 1'-0"

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NO	DATE	ISSUE
REVISION SCHEDULE		

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Drawn:	Designer
Checked:	Checker
Revision:	

Sheet Name:

ELEVATIONS

Scale: As indicated

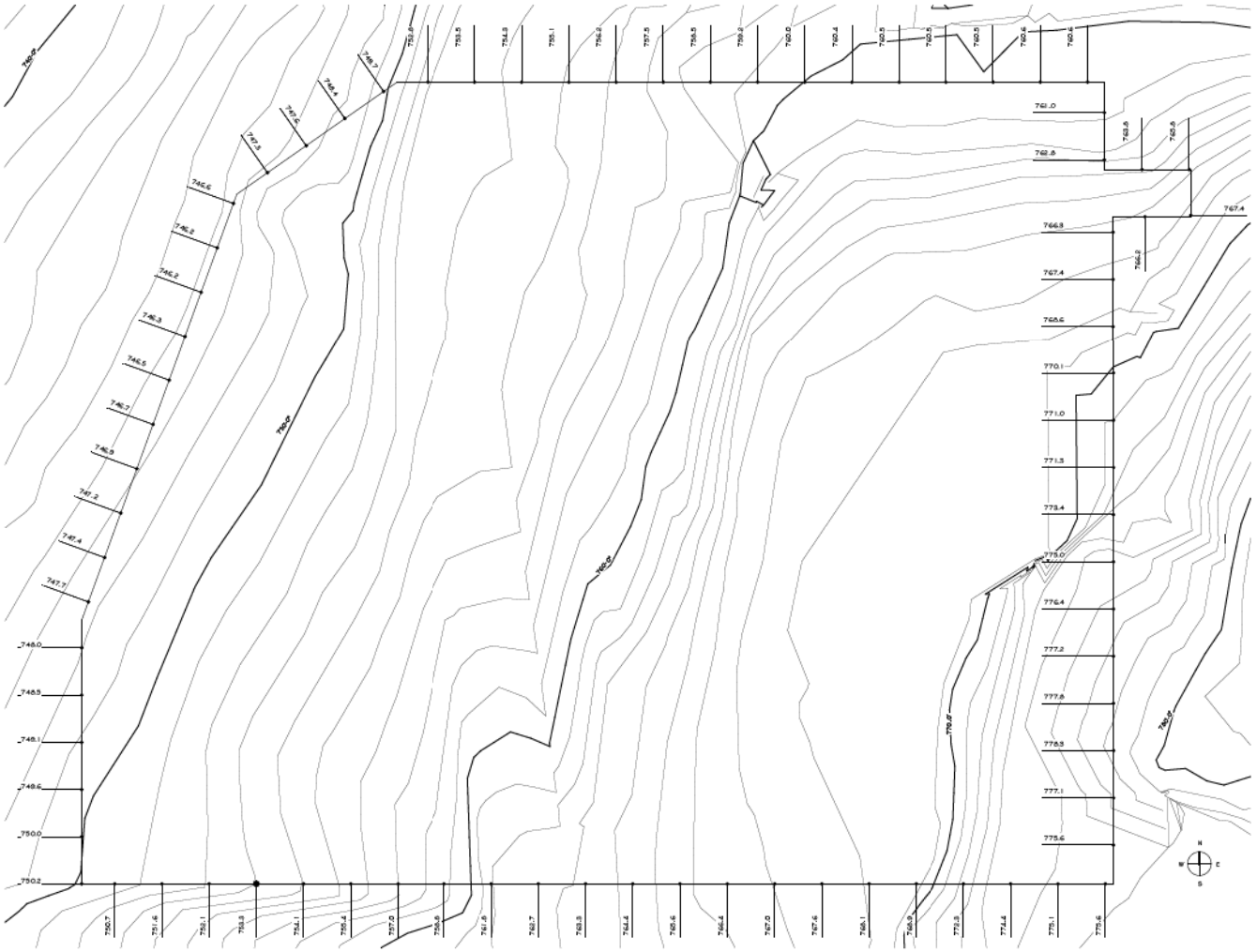
Sheet No:

North:

A-008

3/20/2019 9:22:39 AM

NDAA group architects
4910 N Harbor Drive, Ste 201
San Diego, CA 92106
and
1230 Rosecrans Street #301
San Diego, CA 92106
tel: 619.297.8066
web: www.ndaadesign.com



1 SITE
Scale: 1" = 10'-0"

SUMMARY OF ELEVATIONS

NORTH SIDE: (15)	752.8	EAST SIDE: (20)	761	TOTAL ELEVATION HEIGHTS: 58,525
	753.5		762.8	TOTAL ELEVATION POINTS: 77
	754.3		763.8	
	755.1		765.8	AVERAGE ELEVATION
	756.2		767.4	58,528 / 77 = 760.06
	757.5		766.2	
	758.5		766.3	ALLOWABLE HEIGHT = 35'-0"
	759.2		767.4	
	760		768.6	760.06 + 35' = 795.06 MAX HEIGHT
	760.4		770.1	
	760.5		771	(THE PROPOSED FINISH FLOOR IS AT 745 +/-,
	760.5		771.3	AND THE PROPOSED BUILDING HEIGHT IS 49
	760.5		773.4	+/- TALL AT ITS TALLEST POINT, INCLUDING
	760.6		775	MECHANICAL WELLS, WHICH IS AT 784.
	760.6		776.4	784 < 795, THEREFORE OK)
TOTAL:	11,370.2		777.2	
			777.8	
			778.3	
SOUTH SIDE: (22)	750.7		777.1	
	751.6		775.6	
	752.1	TOTAL:	15,412.5	
	753.3			
	754.1			
	755.4	WEST SIDE: (20)	749.7	
	757.0		748.4	
	758.8		747.6	
	761.8		747.3	
	762.7		746.6	
	763.3		746.2	
	764.4		746.2	
	765.6		746.3	
	766.4		746.5	
	767.0		746.7	
	767.6		746.9	
	768.1		747.2	
	768.9		747.4	
	772.3		747.7	
	774.4		748	
	775.1		748.5	
	775.6		749.1	
TOTAL:	16,786.2		749.6	
			750	
			750.2	
		TOTAL:	14,956.1	

APOLLO - SENIOR CARE
3141 E VALLEY PARKWAY
ESCONDIDO, CA 92027

NO	DATE	ISSUE
REVISION ISSUE		

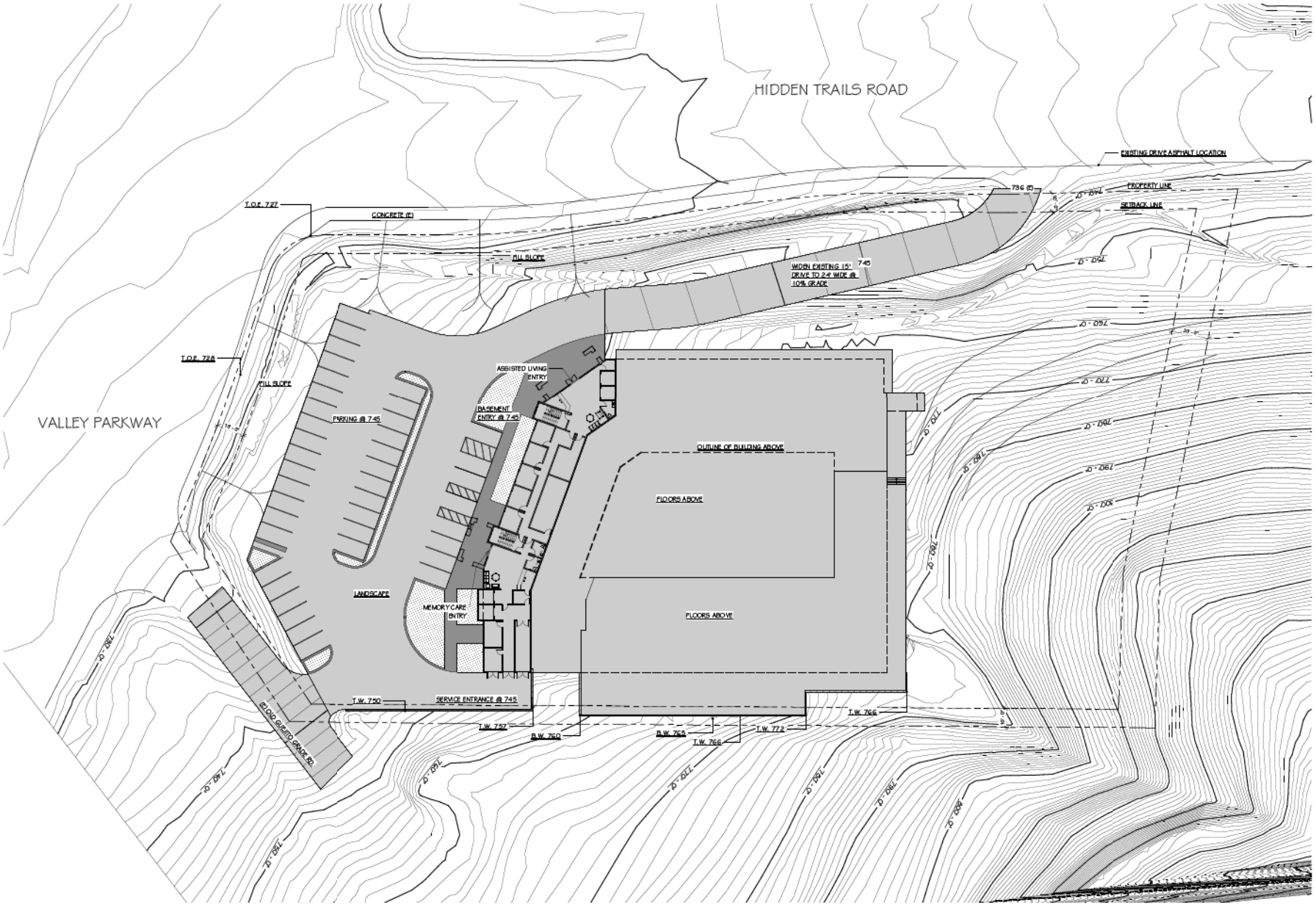
Project No: Project Number
Project Start Date: Issue Date
Drawn: Designer
Checked: Checker
Revision:
Sheet Name:

ALLOWABLE BUILDING HEIGHT TABULATION

Scale: As indicated
Sheet No:

A-009

3/20/2019 9:20:54 AM



1 SITE - BASEMENT
Scale: 1" = 20'-0"

NDAA group architects

APOLLO - SENIOR CARE

3141 E VALLEY PARKWAY
ESCONDIDO, CA 92027

NO	DATE	ISSUE
		REVISION ISSUE

Project No:	Project Number
Project Start Date:	Issue Date
Drawn:	Designer
Checked:	Checker
Revision:	

Sheet Name:

SITE PLAN

Scale: 1" = 20'-0"
Sheet No:

A-010

3/20/2019 8:33:45 AM

APPENDIX B

Pertinent Sections of the City of Escondido Municipal Code

(c) For outside measurements, the microphone shall be not less than four (4) feet above the ground, at least four (4) feet distant from walls or other large reflecting surfaces and shall be protected from the effects of wind noises by the use of appropriate wind screens and the location selected shall be at any point on the affected property. In cases when the microphone must be located within ten (10) feet of walls or similar large reflecting surfaces, the actual measured distances and orientation of sources, microphone and reflecting surfaces shall be noted and recorded. In no case shall a noise measurement be taken within five (5) feet of the noise source.

(d) For inside measurements, the microphone shall be at least three (3) feet distant from any wall, ceiling or partition, and the average measurement of at least three (3) microphone positions throughout the room shall be determined. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-229. Sound level limits.

(a) Unless a variance has been applied for and granted pursuant to this article, it shall be unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property on which the sound is produced, exceeds the applicable limits set forth in the following table, except that construction noise level limits shall be governed by Section 17-234 of this article.

TABLE 17-229

Zone	Time	Applicable Limit One-hour Average Sound Level (Decibels)
Residential zones	7 a.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
Multi-residential zones	7 a.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Commercial zones	7 a.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55
Light industrial/	Anytime	70*
Industrial park zones		
General industrial zones	Anytime	75*

*Subject to provisions of Section 17-229 (c)(5).

(b) Maximum Permissible Sound Levels by Receiving Land Use.

(1) The noise standards for the various categories of land use as presented in subsection (a) of this section shall, unless otherwise specifically indicated, apply to each property or portion of property substantially used for a particular type of land use reasonably similar to the land use types shown in subsection (a) of this section. Where two (2) or more dissimilar land uses occur on a single property, the more restrictive noise limits shall apply.

(2) Additional land use classifications may be added by action of the city council to reflect both lower and higher existing ambient levels than those shown.

(3) Where doubt exists when making identification of receiving land use, the city manager shall make an interpretation.

(4) No person shall operate or cause to be operated, any source of sound 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 environmental and/or nuisance interpretation of the applicable limits given in subsection (a) of this section.

(5)(A) Environmental noise shall be measured by the equivalent sound level (Leq) for such hours as are specified.

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

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

(D) 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 equipment is located.

(c) Corrections to Exterior Noise Level Limits.

(1) If the noise is continuous, the Leq for any hour will be represented by any lesser time period within that hour. Noise measurements of a few minutes only will thus suffice to define the noise level.

(2) If the noise is intermittent, the Leq for any hour may be represented by a time period typical of the operating cycle. Measurement should be made of a representative number of noisy/quiet periods. A measurement period of not less than fifteen (15) minutes is, however, strongly recommended when dealing with intermittent noise.

(3) In the event the alleged offensive noise, as judged by the enforcement officer, 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 limits set forth in Table 17-229 shall be reduced by ten (10) dB or to the ambient noise level when such noises are not occurring.

(4) If the measured ambient level exceeds that permissible in subsection (a) of this section, the allowable noise exposure standard shall be the ambient noise level. The ambient level shall be measured when the alleged noise violations source is not operating.

(5) The sound level limit at a location on a boundary between two (2) land use classifications is the limit applicable to the receiving land use; provided, however, that the one-hour average sound level limit applicable to extractive industries including but not limited to borrow pits and mines, shall be seventy-five (75) decibels (dB) at the property line regardless of the zone where the extractive industry is actually located.

Fixed-location public utility distribution or transmission facilities located on or adjacent to a property line shall be subject to the noise level limits of this section, measured at or beyond six (6) feet from the boundary of the easement upon which the equipment is located. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-230. Motor vehicles.

(a) Repairs of Motor Vehicles. It shall be unlawful for any person within the city to repair, rebuild or test any motor vehicle in such a manner as to cause disturbing, excessive, or offensive noises as defined in section 17-227 (k) of this article.

(b) On-Highway. Violations for exceeding applicable noise level limits as to persons operating motor vehicles on a public street or highway in the city shall be prosecuted under applicable California Vehicle Code provisions and under federal regulation adopted pursuant to 42 U.S.C. 4905 (a)(1)(A), (B), and (C)(ii), (iii) for which enforcement responsibility is delegated to local governmental agencies.

(c) Off-Highway. Except as otherwise provided for in this article, it shall be unlawful to operate any motor vehicle of any type on any site other than on a public street or highway as defined in the California Vehicle Code in a manner so as to cause noise in excess of those noise levels permitted for on-highway motor vehicles as specified in the table “35 miles per hour or less speed limits” contained in Section 23130 of the California Vehicle Code.

(d) Emergency Vehicles. Nothing in this section shall apply to authorized emergency vehicles when being used in emergency situations.

(e) Urban Transit Buses. Buses as defined in the California Vehicle Code shall at all times comply with the requirements of this section. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-231. Powered model vehicles.

It shall be unlawful for any person to operate any powered model vehicle except between the hours of seven (7) a.m. and nine (9) p.m. and then only in such a manner so as not to emit noise in excess of those levels set forth in section 17-229; however, if powered model vehicles are operated in public parks at a point more than one hundred (100) feet from the property line, the noise level shall be determined at a distance of one hundred (100) feet from the noise source instead of at the property line, and noises from powered model vehicles measured at that distance in excess of the noise limits specified in section 17-229 of this article are prohibited. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-232. Refuse vehicles and parking lot sweepers.

No person shall operate, or permit to be operated, a refuse compacting, processing, or collection vehicle or parking lot sweeper between the hours of ten (10) p.m. to six (6) a.m. in or adjacent to any residential zone unless a variance has been applied for and granted pursuant to this article. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-233. Reserved.

Sec. 17-234. Construction equipment.

Except for emergency work, it shall be unlawful for any person, including the City of Escondido, to operate construction equipment as follows:

(a) It shall be unlawful for any person, including the City of Escondido, to operate construction equipment at any construction site, except on Monday through Friday during a week between the hours of seven (7) a.m. and six (6) p.m. and on Saturdays between the hours of nine (9) a.m. and five (5) p.m., and provided that the operation of such construction equipment complies with the requirements of subsection (d) of this section.

(b) It shall be unlawful for any person, including the City of Escondido, to operate construction equipment at any construction site on Sundays and on days designated by the president, governor or city council as public holidays.

(c) A person may operate construction equipment at his/her residence or for the purpose of constructing or modifying a residence for himself/herself on Monday through Friday of a week between the hours of seven (7) a.m. and six (6) p.m., and on Saturdays, Sundays, and holidays between the hours of nine (9) a.m. and five (5) p.m.; provided, that such operation of construction equipment is not carried on for profit or livelihood and complies with the requirements of subsection (d) of this section.

(d) No construction equipment or combination of equipment, regardless of age or date of acquisition, shall be operated so as to cause noise in excess of a one-hour average sound level limit of seventy-five (75) dB at any time, unless a variance has been obtained in advance from the city manager.

(e) Persons engaged in construction for profit or as a business shall post signs at conspicuous places on a construction site, indicating hours of work as prescribed by this article or authorized by permit and the applicable noise level limits. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-235. Containers and construction material.

It shall be unlawful for any person to handle or transport or cause to be handled or transported in any public place, any container or any construction material in such a way as to create a disturbing, excessive or offensive noise as defined under section 17-227 (k) of this article. (Ord. No. 90-8, § 2, 3-28-90)

Sec. 17-236. Signal device for food trucks.

No person shall operate or cause to have operated or used any sound signal device other than sound-amplification equipment attached to a motor vehicle wagon or manually propelled cart from which food or any other items are sold which emits a sound signal more frequently than once every ten (10) minutes in any one street block and with a duration of more than ten (10) seconds for any single emission. The sound level of this sound signal shall not exceed ninety (90) decibels at fifty (50) feet. (Ord. No. 90-8, § 2, 3-28-90)

APPENDIX C

Manufacturer Data Sheets

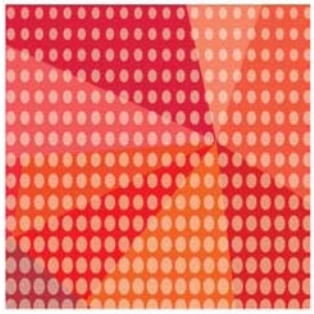
MITSUBISHI ELECTRIC

Changes for the Better

for a greener tomorrow eco Changes

AIR CONDITIONING SYSTEMS

CITY MULTI



DATA BOOK

MODEL

PURY-P72-288T(S)KMU-A (-BS)

PURY-P72-288Y(S)KMU-A (-BS)

GENERAL LINE-UP

Heat Recovery R2-Series (K) - 208-230 V


Type(BTU/h)	72K	96K	120K	144K
Model Name	PURY-P72TKMU-A	PURY-P96TKMU-A	PURY-P120TKMU-A	PURY-P144TKMU-A


Type(BTU/h)	168K	192K	216K
Model Name	PURY-P168TSKMU-A	PURY-P192TSKMU-A	PURY-P216TSKMU-A

Type(BTU/h)	240K	264K	288K
Model Name	PURY-P240TSKMU-A	PURY-P264TSKMU-A	PURY-P288TSKMU-A

Heat Recovery R2-Series (K) - 460 V

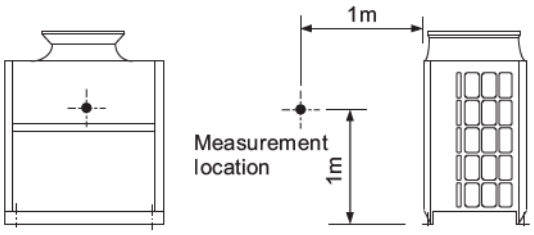

Type(BTU/h)	72K	96K	120K	144K
Model Name	PURY-P72YKMU-A	PURY-P96YKMU-A	PURY-P120YKMU-A	PURY-P144YKMU-A

Type(BTU/h)	144K	168K	192K
Model Name	PURY-P144YSKMU-A	PURY-P168YSKMU-A	PURY-P192YSKMU-A

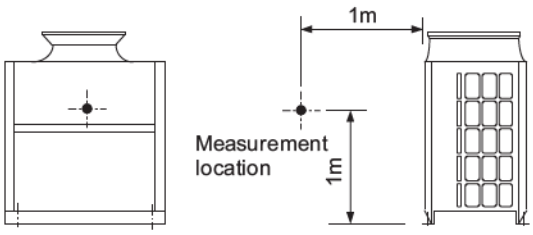
Type(BTU/h)	216K
Model Name	PURY-P216YSKMU-A

Type(BTU/h)	240K	264K	288K
Model Name	PURY-P240YSKMU-A	PURY-P264YSKMU-A	PURY-P288YSKMU-A

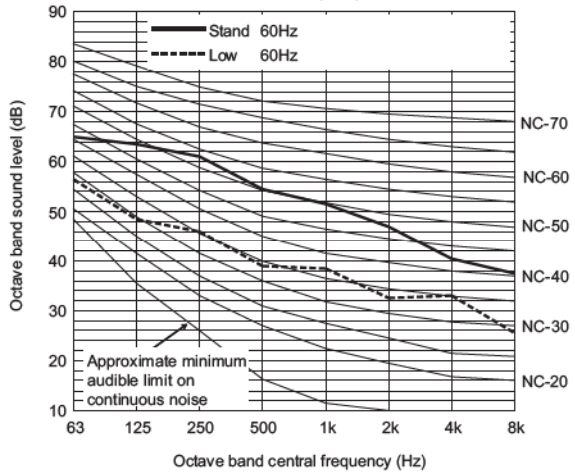
Measurement condition
PURY-P72TKMU/YKMU



Measurement condition
PURY-P96TKMU/YKMU



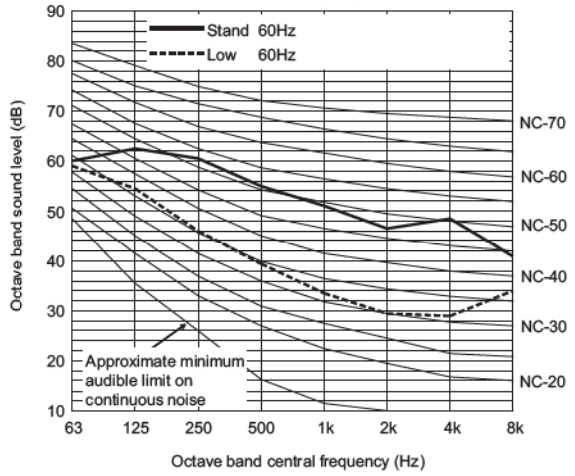
Sound level of PURY-P72T/YKMU-A(-BS)



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	65.0	63.5	61.0	54.5	51.5	47.0	40.5	37.5	58.0
Low noise mode	60Hz	56.5	48.5	46.0	39.0	38.5	32.5	33.0	25.5	44.0

When Low noise mode is set,the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Sound level of PURY-P96T/YKMU-A(-BS)



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard	60Hz	60.0	62.5	60.5	55.0	51.0	46.5	48.5	41.0	58.0
Low noise mode	60Hz	59.0	54.5	46.0	39.5	33.5	29.5	29.0	34.0	44.0

When Low noise mode is set,the A/C system's capacity is limited. The system could return to normal operation from Low noise mode automatically in the case that the operation condition is severe.

Model	Actual Volume (CFM)	Total External SP (in. wg)	Drive Type	Fan Speed (RPM)	Max Fan Speed (Selected) RPM	Max Fan Speed (Mech.) RPM	Drive Loss (%)	Operating Power (hp)	Motor Size NEMA (hp)	Inlet Sound Power								Total		
										62.5 Hz	125 Hz	250	500	1000	2000	4000	8000	LwA	dBA (at 5 feet)	Sones
CUBE-300XP-VGD	3,650	2.5	Belt	1311	1397	1691	4.6	2.48	3	81	85	82	80	76	73	67	63	82	71	18.7

APPENDIX D

Cadna Analysis Data and Results

Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025-4230
Phone: (760) 738-5570

Date: 16 May 2019

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	1
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
North		R1	28.2	28.2	0.0	0.0		x	Total	1.52	r	346.29	254.81	226.01
South		R2	41.5	41.5	0.0	0.0		x	Total	1.52	r	349.18	138.02	239.03
East		R3	34.4	34.4	0.0	0.0		x	Total	1.52	r	403.68	160.07	252.45
West		R4	25.7	25.7	0.0	0.0		x	Total	1.52	r	199.46	174.03	221.29

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
AC 1		1	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	352.43	198.99	242.32
AC 1		2	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	352.53	191.32	242.32
AC 1		3	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	340.35	199.52	242.32
AC 1		4	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	340.77	191.43	242.32
AC 1		5	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	325.48	199.20	242.32
AC 1		6	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	325.33	190.80	242.32
AC 1		7	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	314.77	187.91	242.32
AC 1		8	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	309.36	195.21	242.32
AC 1		9	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	298.65	178.93	242.32
AC 1		10	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	242.32	a	306.52	175.88	242.32
AC 1		11	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	313.35	159.81	238.97
AC 1		12	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	312.93	152.67	238.97
AC 1		13	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	322.49	160.34	238.97
AC 1		14	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	322.39	152.98	238.97
AC 1		15	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	331.00	160.55	238.97
AC 1		16	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	330.79	153.09	238.97
AC 1		17	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	340.77	160.34	238.97
AC 1		18	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	341.08	153.19	238.97
AC 1		19	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	352.11	159.81	238.97
AC 1		20	68.8	68.8	68.8	Lw	SPL1		0.0	0.0	0.0							0.0		(none)	238.97	a	353.06	153.61	238.97
KEF		21	81.8	81.8	81.8	Lw	SPL2		0.0	0.0	0.0							0.0		(none)	241.40	a	299.34	157.97	241.40

Buildings

Name	M.	ID	RB	Residents	Absorption	Height
						Begin
						(m)
	+		x	0	0.37	
	+		x	0	0.37	

Geometry - Buildings

Name	M.	ID	RB	Residents	Absorption	Height	Coordinates			
						Begin	x	y	z	Ground
						(m)	(m)	(m)	(m)	(m)
	+		x	0	0.37		313.79	202.55	240.49	227.08
							300.96	194.48	240.49	227.08
							290.77	166.17	240.49	227.08
							290.64	150.29	240.49	227.08
							307.53	150.42	240.49	227.08
							307.44	165.77	240.49	227.08
							315.51	185.22	240.49	227.08
							318.07	186.68	240.49	227.08
							360.14	186.53	240.49	227.08
							360.32	190.01	240.49	227.08
							359.70	202.42	240.49	227.08
							322.39	202.29	240.49	227.08
							316.96	202.29	240.49	227.08
	+		x	0	0.37		307.49	166.01	237.14	227.08
							307.91	143.11	237.14	227.08
							344.78	143.11	237.14	227.08
							344.88	147.32	237.14	227.08
							361.38	147.32	237.14	227.08
							360.64	186.71	237.14	227.08
							349.61	186.39	237.14	227.08
							349.61	166.01	237.14	227.08

Terrain Contours

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
850				259.07		240.32	-41.70	259.07
						342.36	66.85	259.07
						403.08	117.49	259.07
						411.48	121.48	259.07
						418.52	122.95	259.07
						424.19	126.63	259.07
						425.03	133.45	259.07
						426.60	141.96	259.07
						439.73	158.34	259.07
830				252.97		224.04	-37.43	252.97
						388.48	116.37	252.97
						395.14	122.04	252.97
						412.48	129.37	252.97
						409.48	140.87	252.97
						408.98	157.20	252.97
						408.81	159.54	252.97
						412.64	162.04	252.97
						449.31	169.87	252.97
810				246.88		215.05	-36.16	246.88
						293.57	38.23	246.88
						372.69	111.05	246.88
						376.70	116.98	246.88
						383.00	125.28	246.88
						384.16	126.64	246.88
						399.81	133.26	246.88
						396.76	143.44	246.88
						393.09	156.46	246.88
						393.93	166.33	246.88
						400.23	172.21	246.88
						440.34	179.56	246.88
						458.08	179.56	246.88
790				240.78		207.01	-34.65	240.78
						343.32	103.91	240.78
						350.07	117.34	240.78
						362.37	135.07	240.78
						379.97	137.45	240.78
						386.85	137.58	240.78
						377.06	156.24	240.78
						378.51	169.20	240.78
						383.41	180.05	240.78
						402.06	185.34	240.78
						421.38	189.97	240.78
						466.35	192.75	240.78
780				237.73		163.93	-37.90	237.73
						219.92	20.64	237.73

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						326.61	103.78	237.73
						336.78	114.78	237.73
						349.12	137.78	237.73
						357.28	142.62	237.73
						370.62	142.37	237.73
						379.12	141.62	237.73
						367.95	157.12	237.73
						364.78	156.95	237.73
						362.12	159.87	237.73
						370.31	181.50	237.73
						374.72	187.17	237.73
						416.30	195.57	237.73
						475.10	204.18	237.73
770				234.68		145.25	-26.24	234.68
						307.61	112.75	234.68
						310.44	114.61	234.68
						326.81	134.31	234.68
						340.29	142.19	234.68
770				234.68		363.15	187.95	234.68
						372.48	196.95	234.68
						492.16	210.62	234.68
760				231.64		135.46	-23.57	231.64
						260.26	105.31	231.64
						282.98	116.28	231.64
						287.98	125.78	231.64
						281.64	131.78	231.64
						286.81	135.95	231.64
						307.22	141.36	231.64
760				231.64		342.99	204.67	231.64
						356.32	205.78	231.64
						479.66	214.29	231.64
						501.33	215.29	231.64
750				228.59		133.63	-17.57	228.59
						248.92	109.65	228.59
						261.14	125.95	228.59
						274.48	132.45	228.59
						280.59	142.82	228.59
						299.15	142.28	228.59
						301.47	149.78	228.59
750				228.59		318.09	204.37	228.59
						317.91	214.61	228.59
						336.91	219.65	228.59
						343.42	217.55	228.59
						349.72	213.14	228.59
						368.62	212.51	228.59
						383.64	217.86	228.59
						397.92	223.32	228.59

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						412.93	221.01	228.59
						410.73	222.90	228.59
						446.64	227.00	228.59
						470.74	230.41	228.59
						471.81	252.67	228.59
740				225.54		129.72	-12.59	225.54
						223.92	111.98	225.54
						245.23	131.76	225.54
						250.73	140.09	225.54
						264.06	142.43	225.54
						263.23	145.76	225.54
						249.42	168.15	225.54
						252.26	177.82	225.54
						266.93	212.82	225.54
						292.23	208.93	225.54
						298.06	214.93	225.54
						298.40	215.77	225.54
						348.40	225.77	225.54
						369.24	228.10	225.54
						370.49	225.12	225.54
						375.65	220.49	225.54
						377.24	220.36	225.54
						389.21	229.16	225.54
						405.75	231.41	225.54
						428.04	233.87	225.54
						428.68	253.94	225.54
730				222.49		71.49	-99.08	222.49
						228.64	151.55	222.49
						232.47	160.55	222.49
						240.64	163.88	222.49
						245.47	166.55	222.49
						246.97	179.05	222.49
						258.64	208.72	222.49
						263.64	218.55	222.49
						274.64	220.72	222.49
						308.81	223.05	222.49
						321.98	225.55	222.49
						329.65	231.89	222.49
						322.81	238.72	222.49
						325.81	247.89	222.49
						314.98	252.05	222.49
						277.64	251.72	222.49
						273.81	259.55	222.49
						275.54	287.40	222.49
						326.73	560.93	222.49
720				219.46		285.74	573.68	219.46
						226.52	278.83	219.46

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						215.18	214.15	219.46
						188.30	153.67	219.46
						151.76	95.71	219.46
						72.66	-26.51	219.46
725				221.00		65.73	-85.76	221.00
						82.80	-56.72	221.00
						125.40	-0.75	221.00
						164.07	58.25	221.00
						207.74	127.93	221.00
						229.41	167.26	221.00
						252.41	211.93	221.00
						285.75	386.57	221.00
						323.85	579.19	221.00
725				221.00		294.04	584.18	221.00
						228.95	255.03	221.00
						220.49	216.93	221.00
						201.44	159.77	221.00
						48.75	-70.58	221.00
712				217.00		105.61	543.34	217.00
						11.53	217.41	217.00
						-27.95	-58.96	217.00
730				222.50		417.74	340.97	222.50
						419.84	266.42	222.50
						424.88	264.32	222.50
						604.44	260.54	222.50
						609.90	341.39	222.50
						415.64	342.65	222.50
735				224.00		298.24	373.10	224.00
						281.86	286.37	224.00
						279.76	264.11	224.00
						284.59	259.49	224.00
						331.84	266.63	224.00
						383.09	274.40	224.00
						409.97	278.18	224.00
						411.65	362.18	224.00
						412.49	374.99	224.00
						295.30	374.99	224.00
745				227.08		252.42	169.99	227.08
						265.43	144.65	227.08
						298.93	144.48	227.08
						300.76	150.15	227.08
						317.43	203.16	227.08
						314.60	213.66	227.08
						303.10	211.49	227.08
						289.26	205.49	227.08
						273.09	209.49	227.08
						267.59	211.32	227.08

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						252.26	170.32	227.08
756				230.43		318.08	204.20	230.43
						301.54	149.81	230.43
						307.45	149.65	230.43
						307.04	142.64	230.43
						345.88	142.48	230.43
						345.88	146.39	230.43
						362.80	146.56	230.43
						360.16	203.79	230.43
						318.14	204.14	230.43

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
PURY-P72	SPL1	Lw (c)			76.0	74.5	72.0	65.5	62.5	58.0	51.5	48.5	68.8	79.5	Mfr
EF	SPL2	Lw			81.0	85.0	82.0	80.0	76.0	73.0	67.0	63.0	81.8	88.9	Mfr

Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025-4230
Phone: (760) 738-5570

Date: 16 May 2019

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	1.00
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
Southwest		C1	66.4	-80.2	0.0	0.0		x	Total	1.52	r	248.73	144.79	226.46
Southeast		C2	74.8	-80.2	0.0	0.0		x	Total	1.52	r	329.58	141.68	235.41

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
backhoe			98.8	98.8	98.8	Lw	CS1		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	275.95	183.82	226.51
excavator			108.9	108.9	108.9	Lw	CS2		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	276.45	184.24	226.54
dump truck			110.2	110.2	110.2	Lw	CS3		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	276.43	183.76	226.56
dozer			105.6	105.6	105.6	Lw	CS4		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	276.24	183.32	226.56
water truck			109.1	109.1	109.1	Lw	CS5		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	276.80	183.67	226.60
backhoe			98.8	98.8	98.8	Lw	CS1		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	327.28	158.87	234.45
excavator			108.9	108.9	108.9	Lw	CS2		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	327.69	159.05	234.50
dump truck			110.2	110.2	110.2	Lw	CS3		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	327.72	158.57	234.55
dozer			105.6	105.6	105.6	Lw	CS4		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	328.05	158.71	234.59
water truck			109.1	109.1	109.1	Lw	CS5		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	327.41	158.24	234.52
backhoe			98.8	98.8	98.8	Lw	CS1		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	329.00	194.28	232.30
excavator			108.9	108.9	108.9	Lw	CS2		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	329.42	194.58	232.33
dump truck			110.2	110.2	110.2	Lw	CS3		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	329.25	194.03	232.34
dozer			105.6	105.6	105.6	Lw	CS4		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	329.50	194.24	232.36
water truck			109.1	109.1	109.1	Lw	CS5		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	329.63	193.87	232.39
backhoe			98.8	98.8	98.8	Lw	CS1		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	344.96	215.80	230.25
excavator			108.9	108.9	108.9	Lw	CS2		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	345.61	215.97	230.12
dump truck			110.2	110.2	110.2	Lw	CS3		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	345.43	215.50	230.24
dozer			105.6	105.6	105.6	Lw	CS4		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	345.46	215.01	230.34
water truck			109.1	109.1	109.1	Lw	CS5		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	345.99	215.24	230.21

Terrain Contours

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
850				259.07		240.32	-41.70	259.07
						342.36	66.85	259.07
						403.08	117.49	259.07
						411.48	121.48	259.07
						418.52	122.95	259.07
						424.19	126.63	259.07
						425.03	133.45	259.07
						426.60	141.96	259.07
						439.73	158.34	259.07
830				252.97		224.04	-37.43	252.97
						388.48	116.37	252.97
						395.14	122.04	252.97
						412.48	129.37	252.97
						409.48	140.87	252.97
						408.98	157.20	252.97
						408.81	159.54	252.97
						412.64	162.04	252.97
						449.31	169.87	252.97
810				246.88		215.05	-36.16	246.88
						293.57	38.23	246.88
						372.69	111.05	246.88
						376.70	116.98	246.88
						383.00	125.28	246.88
						384.16	126.64	246.88
						399.81	133.26	246.88
						396.76	143.44	246.88
						393.09	156.46	246.88
						393.93	166.33	246.88
						400.23	172.21	246.88
						440.34	179.56	246.88
						458.08	179.56	246.88
790				240.78		207.01	-34.65	240.78
						343.32	103.91	240.78
						350.07	117.34	240.78
						362.37	135.07	240.78
						379.97	137.45	240.78
						386.85	137.58	240.78
						377.06	156.24	240.78
						378.51	169.20	240.78
						383.41	180.05	240.78
						402.06	185.34	240.78
						421.38	189.97	240.78
						466.35	192.75	240.78
780				237.73		163.93	-37.90	237.73
						219.92	20.64	237.73

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						326.61	103.78	237.73
						336.78	114.78	237.73
						349.12	137.78	237.73
						357.28	142.62	237.73
						370.62	142.37	237.73
						379.12	141.62	237.73
						367.95	157.12	237.73
						364.78	156.95	237.73
						362.12	159.87	237.73
						370.31	181.50	237.73
						374.72	187.17	237.73
						416.30	195.57	237.73
						475.10	204.18	237.73
770				234.68		145.46	-26.24	234.68
						310.65	114.61	234.68
						327.31	135.78	234.68
						342.98	144.61	234.68
						342.48	168.28	234.68
						358.48	187.45	234.68
						363.15	187.95	234.68
						372.48	196.95	234.68
						492.16	210.62	234.68
760				231.64		135.46	-23.57	231.64
						260.26	105.31	231.64
						282.98	116.28	231.64
						287.98	125.78	231.64
						281.64	131.78	231.64
						286.81	135.95	231.64
						312.81	145.45	231.64
						342.15	203.62	231.64
						356.32	205.78	231.64
						479.66	214.29	231.64
						501.33	215.29	231.64
750				228.59		133.63	-17.57	228.59
						248.92	109.65	228.59
						261.14	125.95	228.59
						274.48	132.45	228.59
						282.31	144.78	228.59
						311.92	203.16	228.59
						317.91	214.61	228.59
						336.91	219.65	228.59
						343.42	217.55	228.59
						349.72	213.14	228.59
						368.62	212.51	228.59
						383.64	217.86	228.59
						397.92	223.32	228.59
						412.93	221.01	228.59

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						410.73	222.90	228.59
						446.64	227.00	228.59
						470.74	230.41	228.59
						471.81	252.67	228.59
740				225.54		129.72	-12.59	225.54
						223.92	111.98	225.54
						245.23	131.76	225.54
						250.73	140.09	225.54
						264.06	142.43	225.54
						265.56	144.43	225.54
						292.23	208.93	225.54
						298.06	214.93	225.54
						298.40	215.77	225.54
						348.40	225.77	225.54
						369.24	228.10	225.54
						370.49	225.12	225.54
						375.65	220.49	225.54
						377.24	220.36	225.54
						389.21	229.16	225.54
						405.75	231.41	225.54
						428.04	233.87	225.54
						428.68	253.94	225.54
730				222.49		71.49	-99.08	222.49
						228.64	151.55	222.49
						232.47	160.55	222.49
						240.64	163.88	222.49
						245.47	166.55	222.49
						246.97	179.05	222.49
						258.64	208.72	222.49
						263.64	218.55	222.49
						274.64	220.72	222.49
						308.81	223.05	222.49
						321.98	225.55	222.49
						329.65	231.89	222.49
						322.81	238.72	222.49
						325.81	247.89	222.49
						314.98	252.05	222.49
						277.64	251.72	222.49
						273.81	259.55	222.49
						275.54	287.40	222.49
						326.73	560.93	222.49
720				219.46		285.74	573.68	219.46
						226.52	278.83	219.46
						215.18	214.15	219.46
						188.30	153.67	219.46
						151.76	95.71	219.46
						72.66	-26.51	219.46

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
725				221.00		65.73	-85.76	221.00
						82.80	-56.72	221.00
						125.40	-0.75	221.00
						164.07	58.25	221.00
						207.74	127.93	221.00
						229.41	167.26	221.00
						252.41	211.93	221.00
						285.75	386.57	221.00
						323.85	579.19	221.00
725				221.00		294.04	584.18	221.00
						228.95	255.03	221.00
						220.49	216.93	221.00
						201.44	159.77	221.00
						48.75	-70.58	221.00
712				217.00		105.61	543.34	217.00
						11.53	217.41	217.00
						-27.95	-58.96	217.00
730				222.50		417.74	340.97	222.50
						419.84	266.42	222.50
						424.88	264.32	222.50
						604.44	260.54	222.50
						609.90	341.39	222.50
						415.64	342.65	222.50
735				224.00		298.24	373.10	224.00
						281.86	286.37	224.00
						279.76	264.11	224.00
						284.59	259.49	224.00
						331.84	266.63	224.00
						383.09	274.40	224.00
						409.97	278.18	224.00
						411.65	362.18	224.00
						412.49	374.99	224.00
						295.30	374.99	224.00

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
Backhoe	CS1	Lw (c)			105.0	97.0	95.0	95.0	94.0	91.0	90.0	81.0	98.8	106.8	DEFRA
Excavator	CS2	Lw (c)			111.0	114.0	107.0	104.0	103.0	101.0	100.0	97.0	108.9	117.0	DEFRA
Dump Truck	CS3	Lw (c)			119.0	115.0	106.0	104.0	106.0	103.0	99.0	91.0	110.2	120.9	DEFRA
Dozer	CS4	Lw (c)			104.0	110.0	104.0	103.0	100.0	98.0	92.0	88.0	105.6	112.8	DEFRA
Water Truck	CS5	Lw (c)			102.0	107.0	107.0	107.0	103.0	102.0	97.0	95.0	109.1	113.2	Eilar/Brutoco
Concrete Mixer	CS6	Lw (c)			111.0	100.0	97.0	101.0	102.0	100.0	95.0	89.0	106.1	112.6	DEFRA
Concrete Pump	CS7	Lw (c)			106.0	107.0	102.0	101.0	102.0	99.0	95.0	91.0	106.1	111.7	DEFRA
Paver	CS8	Lw (c)			113.0	113.0	109.0	103.0	100.0	98.0	92.0	85.0	106.7	117.1	DEFRA
Roller	CS9	Lw (c)			111.0	106.0	108.0	103.0	98.0	93.0	85.0	77.0	104.6	114.1	DEFRA

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Date: 16 May 2019

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	1.00
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
Southwest		C1	65.0	-80.2	0.0	0.0		x	Total	1.52	r	248.73	144.79	226.46
Southeast		C2	43.9	-80.2	0.0	0.0		x	Total	1.52	r	329.58	141.68	235.41

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
backhoe			98.8	98.8	98.8	Lw	CS1		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	255.17	149.96	226.13

Terrain Contours

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
850				259.07		240.32	-41.70	259.07
						342.36	66.85	259.07
						403.08	117.49	259.07
						411.48	121.48	259.07
						418.52	122.95	259.07
						424.19	126.63	259.07
						425.03	133.45	259.07
						426.60	141.96	259.07
						439.73	158.34	259.07
830				252.97		224.04	-37.43	252.97
						388.48	116.37	252.97
						395.14	122.04	252.97
						412.48	129.37	252.97
						409.48	140.87	252.97
						408.98	157.20	252.97
						408.81	159.54	252.97
						412.64	162.04	252.97
						449.31	169.87	252.97
810				246.88		215.05	-36.16	246.88
						293.57	38.23	246.88
						372.69	111.05	246.88
						376.70	116.98	246.88
						383.00	125.28	246.88
						384.16	126.64	246.88
						399.81	133.26	246.88
						396.76	143.44	246.88
						393.09	156.46	246.88
						393.93	166.33	246.88
						400.23	172.21	246.88
						440.34	179.56	246.88
						458.08	179.56	246.88
790				240.78		207.01	-34.65	240.78
						343.32	103.91	240.78
						350.07	117.34	240.78
						362.37	135.07	240.78
						379.97	137.45	240.78
						386.85	137.58	240.78
						377.06	156.24	240.78
						378.51	169.20	240.78
						383.41	180.05	240.78
						402.06	185.34	240.78
						421.38	189.97	240.78
						466.35	192.75	240.78
780				237.73		163.93	-37.90	237.73
						219.92	20.64	237.73

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						326.61	103.78	237.73
						336.78	114.78	237.73
						349.12	137.78	237.73
						357.28	142.62	237.73
						370.62	142.37	237.73
						379.12	141.62	237.73
						367.95	157.12	237.73
						364.78	156.95	237.73
						362.12	159.87	237.73
						370.31	181.50	237.73
						374.72	187.17	237.73
						416.30	195.57	237.73
						475.10	204.18	237.73
770				234.68		145.46	-26.24	234.68
						310.65	114.61	234.68
						327.31	135.78	234.68
						342.98	144.61	234.68
						342.48	168.28	234.68
						358.48	187.45	234.68
						363.15	187.95	234.68
						372.48	196.95	234.68
						492.16	210.62	234.68
760				231.64		135.46	-23.57	231.64
						260.26	105.31	231.64
						282.98	116.28	231.64
						287.98	125.78	231.64
						281.64	131.78	231.64
						286.81	135.95	231.64
						312.81	145.45	231.64
						342.15	203.62	231.64
						356.32	205.78	231.64
						479.66	214.29	231.64
						501.33	215.29	231.64
750				228.59		133.63	-17.57	228.59
						248.92	109.65	228.59
						261.14	125.95	228.59
						274.48	132.45	228.59
						282.31	144.78	228.59
						311.92	203.16	228.59
						317.91	214.61	228.59
						336.91	219.65	228.59
						343.42	217.55	228.59
						349.72	213.14	228.59
						368.62	212.51	228.59
						383.64	217.86	228.59
						397.92	223.32	228.59
						412.93	221.01	228.59

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						410.73	222.90	228.59
						446.64	227.00	228.59
						470.74	230.41	228.59
						471.81	252.67	228.59
740				225.54		129.72	-12.59	225.54
						223.92	111.98	225.54
						245.23	131.76	225.54
						250.73	140.09	225.54
						264.06	142.43	225.54
						265.56	144.43	225.54
						292.23	208.93	225.54
						298.06	214.93	225.54
						298.40	215.77	225.54
						348.40	225.77	225.54
						369.24	228.10	225.54
						370.49	225.12	225.54
						375.65	220.49	225.54
						377.24	220.36	225.54
						389.21	229.16	225.54
						405.75	231.41	225.54
						428.04	233.87	225.54
						428.68	253.94	225.54
730				222.49		71.49	-99.08	222.49
						228.64	151.55	222.49
						232.47	160.55	222.49
						240.64	163.88	222.49
						245.47	166.55	222.49
						246.97	179.05	222.49
						258.64	208.72	222.49
						263.64	218.55	222.49
						274.64	220.72	222.49
						308.81	223.05	222.49
						321.98	225.55	222.49
						329.65	231.89	222.49
						322.81	238.72	222.49
						325.81	247.89	222.49
						314.98	252.05	222.49
						277.64	251.72	222.49
						273.81	259.55	222.49
						275.54	287.40	222.49
						326.73	560.93	222.49
720				219.46		285.74	573.68	219.46
						226.52	278.83	219.46
						215.18	214.15	219.46
						188.30	153.67	219.46
						151.76	95.71	219.46
						72.66	-26.51	219.46

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
725				221.00		65.73	-85.76	221.00
						82.80	-56.72	221.00
						125.40	-0.75	221.00
						164.07	58.25	221.00
						207.74	127.93	221.00
						229.41	167.26	221.00
						252.41	211.93	221.00
						285.75	386.57	221.00
						323.85	579.19	221.00
725				221.00		294.04	584.18	221.00
						228.95	255.03	221.00
						220.49	216.93	221.00
						201.44	159.77	221.00
						48.75	-70.58	221.00
712				217.00		105.61	543.34	217.00
						11.53	217.41	217.00
						-27.95	-58.96	217.00
730				222.50		417.74	340.97	222.50
						419.84	266.42	222.50
						424.88	264.32	222.50
						604.44	260.54	222.50
						609.90	341.39	222.50
						415.64	342.65	222.50
735				224.00		298.24	373.10	224.00
						281.86	286.37	224.00
						279.76	264.11	224.00
						284.59	259.49	224.00
						331.84	266.63	224.00
						383.09	274.40	224.00
						409.97	278.18	224.00
						411.65	362.18	224.00
						412.49	374.99	224.00
						295.30	374.99	224.00

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
Backhoe	CS1	Lw (c)			105.0	97.0	95.0	95.0	94.0	91.0	90.0	81.0	98.8	106.8	DEFRA
Excavator	CS2	Lw (c)			111.0	114.0	107.0	104.0	103.0	101.0	100.0	97.0	108.9	117.0	DEFRA
Dump Truck	CS3	Lw (c)			119.0	115.0	106.0	104.0	106.0	103.0	99.0	91.0	110.2	120.9	DEFRA
Dozer	CS4	Lw (c)			104.0	110.0	104.0	103.0	100.0	98.0	92.0	88.0	105.6	112.8	DEFRA
Water Truck	CS5	Lw (c)			102.0	107.0	107.0	107.0	103.0	102.0	97.0	95.0	109.1	113.2	Eilar/Brutoco
Concrete Mixer	CS6	Lw (c)			111.0	100.0	97.0	101.0	102.0	100.0	95.0	89.0	106.1	112.6	DEFRA
Concrete Pump	CS7	Lw (c)			106.0	107.0	102.0	101.0	102.0	99.0	95.0	91.0	106.1	111.7	DEFRA
Paver	CS8	Lw (c)			113.0	113.0	109.0	103.0	100.0	98.0	92.0	85.0	106.7	117.1	DEFRA
Roller	CS9	Lw (c)			111.0	106.0	108.0	103.0	98.0	93.0	85.0	77.0	104.6	114.1	DEFRA

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Phone: (760) 738-5570

Date: 16 May 2019

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	1.00
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
Southwest		C1	55.1	-80.2	0.0	0.0		x	Total	1.52	r	248.73	144.79	226.46
Southeast		C2	67.8	-80.2	0.0	0.0		x	Total	1.52	r	329.58	141.68	235.41

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
conc mixer			106.1	106.1	106.1	Lw	CS6		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	327.28	158.87	234.45
conc pump			106.1	106.1	106.1	Lw	CS7		0.0	0.0	0.0				12.00	0.00	0.00	0.0		(none)	1.52	r	327.41	158.24	234.52
conc mixer			106.1	106.1	106.1	Lw	CS6		0.0	0.0	0.0				24.00	0.00	0.00	0.0		(none)	1.52	r	329.25	194.03	232.34
conc pump			106.1	106.1	106.1	Lw	CS7		0.0	0.0	0.0				12.00	0.00	0.00	0.0		(none)	1.52	r	329.63	193.87	232.39

Terrain Contours

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
850				259.07		240.32	-41.70	259.07
						342.36	66.85	259.07
						403.08	117.49	259.07
						411.48	121.48	259.07
						418.52	122.95	259.07
						424.19	126.63	259.07
						425.03	133.45	259.07
						426.60	141.96	259.07
						439.73	158.34	259.07
830				252.97		224.04	-37.43	252.97
						388.48	116.37	252.97
						395.14	122.04	252.97
						412.48	129.37	252.97
						409.48	140.87	252.97
						408.98	157.20	252.97
						408.81	159.54	252.97
						412.64	162.04	252.97
						449.31	169.87	252.97
810				246.88		215.05	-36.16	246.88
						293.57	38.23	246.88
						372.69	111.05	246.88
						376.70	116.98	246.88
						383.00	125.28	246.88
						384.16	126.64	246.88
						399.81	133.26	246.88
						396.76	143.44	246.88
						393.09	156.46	246.88
						393.93	166.33	246.88
						400.23	172.21	246.88
						440.34	179.56	246.88
						458.08	179.56	246.88
790				240.78		207.01	-34.65	240.78
						343.32	103.91	240.78
						350.07	117.34	240.78
						362.37	135.07	240.78
						379.97	137.45	240.78
						386.85	137.58	240.78
						377.06	156.24	240.78
						378.51	169.20	240.78
						383.41	180.05	240.78
						402.06	185.34	240.78
						421.38	189.97	240.78
						466.35	192.75	240.78
780				237.73		163.93	-37.90	237.73
						219.92	20.64	237.73

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						326.61	103.78	237.73
						336.78	114.78	237.73
						349.12	137.78	237.73
						357.28	142.62	237.73
						370.62	142.37	237.73
						379.12	141.62	237.73
						367.95	157.12	237.73
						364.78	156.95	237.73
						362.12	159.87	237.73
						370.31	181.50	237.73
						374.72	187.17	237.73
						416.30	195.57	237.73
						475.10	204.18	237.73
770				234.68		145.46	-26.24	234.68
						310.65	114.61	234.68
						327.31	135.78	234.68
						342.98	144.61	234.68
						342.48	168.28	234.68
						358.48	187.45	234.68
						363.15	187.95	234.68
						372.48	196.95	234.68
						492.16	210.62	234.68
760				231.64		135.46	-23.57	231.64
						260.26	105.31	231.64
						282.98	116.28	231.64
						287.98	125.78	231.64
						281.64	131.78	231.64
						286.81	135.95	231.64
						312.81	145.45	231.64
						342.15	203.62	231.64
						356.32	205.78	231.64
						479.66	214.29	231.64
						501.33	215.29	231.64
750				228.59		133.63	-17.57	228.59
						248.92	109.65	228.59
						261.14	125.95	228.59
						274.48	132.45	228.59
						282.31	144.78	228.59
						311.92	203.16	228.59
						317.91	214.61	228.59
						336.91	219.65	228.59
						343.42	217.55	228.59
						349.72	213.14	228.59
						368.62	212.51	228.59
						383.64	217.86	228.59
						397.92	223.32	228.59
						412.93	221.01	228.59

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						410.73	222.90	228.59
						446.64	227.00	228.59
						470.74	230.41	228.59
						471.81	252.67	228.59
740				225.54		129.72	-12.59	225.54
						223.92	111.98	225.54
						245.23	131.76	225.54
						250.73	140.09	225.54
						264.06	142.43	225.54
						265.56	144.43	225.54
						292.23	208.93	225.54
						298.06	214.93	225.54
						298.40	215.77	225.54
						348.40	225.77	225.54
						369.24	228.10	225.54
						370.49	225.12	225.54
						375.65	220.49	225.54
						377.24	220.36	225.54
						389.21	229.16	225.54
						405.75	231.41	225.54
						428.04	233.87	225.54
						428.68	253.94	225.54
730				222.49		71.49	-99.08	222.49
						228.64	151.55	222.49
						232.47	160.55	222.49
						240.64	163.88	222.49
						245.47	166.55	222.49
						246.97	179.05	222.49
						258.64	208.72	222.49
						263.64	218.55	222.49
						274.64	220.72	222.49
						308.81	223.05	222.49
						321.98	225.55	222.49
						329.65	231.89	222.49
						322.81	238.72	222.49
						325.81	247.89	222.49
						314.98	252.05	222.49
						277.64	251.72	222.49
						273.81	259.55	222.49
						275.54	287.40	222.49
						326.73	560.93	222.49
720				219.46		285.74	573.68	219.46
						226.52	278.83	219.46
						215.18	214.15	219.46
						188.30	153.67	219.46
						151.76	95.71	219.46
						72.66	-26.51	219.46

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
725				221.00		65.73	-85.76	221.00
						82.80	-56.72	221.00
						125.40	-0.75	221.00
						164.07	58.25	221.00
						207.74	127.93	221.00
						229.41	167.26	221.00
						252.41	211.93	221.00
						285.75	386.57	221.00
						323.85	579.19	221.00
725				221.00		294.04	584.18	221.00
						228.95	255.03	221.00
						220.49	216.93	221.00
						201.44	159.77	221.00
						48.75	-70.58	221.00
712				217.00		105.61	543.34	217.00
						11.53	217.41	217.00
						-27.95	-58.96	217.00
730				222.50		417.74	340.97	222.50
						419.84	266.42	222.50
						424.88	264.32	222.50
						604.44	260.54	222.50
						609.90	341.39	222.50
						415.64	342.65	222.50
735				224.00		298.24	373.10	224.00
						281.86	286.37	224.00
						279.76	264.11	224.00
						284.59	259.49	224.00
						331.84	266.63	224.00
						383.09	274.40	224.00
						409.97	278.18	224.00
						411.65	362.18	224.00
						412.49	374.99	224.00
						295.30	374.99	224.00

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
Backhoe	CS1	Lw (c)			105.0	97.0	95.0	95.0	94.0	91.0	90.0	81.0	98.8	106.8	DEFRA
Excavator	CS2	Lw (c)			111.0	114.0	107.0	104.0	103.0	101.0	100.0	97.0	108.9	117.0	DEFRA
Dump Truck	CS3	Lw (c)			119.0	115.0	106.0	104.0	106.0	103.0	99.0	91.0	110.2	120.9	DEFRA
Dozer	CS4	Lw (c)			104.0	110.0	104.0	103.0	100.0	98.0	92.0	88.0	105.6	112.8	DEFRA
Water Truck	CS5	Lw (c)			102.0	107.0	107.0	107.0	103.0	102.0	97.0	95.0	109.1	113.2	Eilar/Brutoco
Concrete Mixer	CS6	Lw (c)			111.0	100.0	97.0	101.0	102.0	100.0	95.0	89.0	106.1	112.6	DEFRA
Concrete Pump	CS7	Lw (c)			106.0	107.0	102.0	101.0	102.0	99.0	95.0	91.0	106.1	111.7	DEFRA
Paver	CS8	Lw (c)			113.0	113.0	109.0	103.0	100.0	98.0	92.0	85.0	106.7	117.1	DEFRA
Roller	CS9	Lw (c)			111.0	106.0	108.0	103.0	98.0	93.0	85.0	77.0	104.6	114.1	DEFRA

Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025-4230
Phone: (760) 738-5570

Date: 16 May 2019

Calculation Configuration

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	1000.00
Min. Length of Section (#(Unit,LEN))	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	0
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	1.00
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receivers

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
Southwest		C1	74.6	-80.2	0.0	0.0		x	Total	1.52	r	248.73	144.79	226.46
Southeast		C2	56.5	-80.2	0.0	0.0		x	Total	1.52	r	329.58	141.68	235.41

Point Sources

Name	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
paver			106.7	106.7	106.7	Lw	CS8		0.0	0.0	0.0				30.00	0.00	0.00	0.0		(none)	1.52	r	255.33	149.59	226.17
roller			104.6	104.6	104.6	Lw	CS9		0.0	0.0	0.0				12.00	0.00	0.00	0.0		(none)	1.52	r	255.00	149.92	226.13
paver			106.7	106.7	106.7	Lw	CS8		0.0	0.0	0.0				30.00	0.00	0.00	0.0		(none)	1.52	r	275.95	183.82	226.51
roller			104.6	104.6	104.6	Lw	CS9		0.0	0.0	0.0				12.00	0.00	0.00	0.0		(none)	1.52	r	276.45	184.24	226.54
paver			106.7	106.7	106.7	Lw	CS8		0.0	0.0	0.0				30.00	0.00	0.00	0.0		(none)	1.52	r	344.96	215.80	230.25
roller			104.6	104.6	104.6	Lw	CS9		0.0	0.0	0.0				12.00	0.00	0.00	0.0		(none)	1.52	r	345.61	215.97	230.12

Terrain Contours

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
850				259.07		240.32	-41.70	259.07
						342.36	66.85	259.07
						403.08	117.49	259.07
						411.48	121.48	259.07
						418.52	122.95	259.07
						424.19	126.63	259.07
						425.03	133.45	259.07
						426.60	141.96	259.07
						439.73	158.34	259.07
830				252.97		224.04	-37.43	252.97
						388.48	116.37	252.97
						395.14	122.04	252.97
						412.48	129.37	252.97
						409.48	140.87	252.97
						408.98	157.20	252.97
						408.81	159.54	252.97
						412.64	162.04	252.97
						449.31	169.87	252.97
810				246.88		215.05	-36.16	246.88
						293.57	38.23	246.88
						372.69	111.05	246.88
						376.70	116.98	246.88
						383.00	125.28	246.88
						384.16	126.64	246.88
						399.81	133.26	246.88
						396.76	143.44	246.88
						393.09	156.46	246.88
						393.93	166.33	246.88
						400.23	172.21	246.88
						440.34	179.56	246.88
						458.08	179.56	246.88
790				240.78		207.01	-34.65	240.78
						343.32	103.91	240.78
						350.07	117.34	240.78
						362.37	135.07	240.78
						379.97	137.45	240.78
						386.85	137.58	240.78
						377.06	156.24	240.78
						378.51	169.20	240.78
						383.41	180.05	240.78
						402.06	185.34	240.78
						421.38	189.97	240.78
						466.35	192.75	240.78
780				237.73		163.93	-37.90	237.73
						219.92	20.64	237.73

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						326.61	103.78	237.73
						336.78	114.78	237.73
						349.12	137.78	237.73
						357.28	142.62	237.73
						370.62	142.37	237.73
						379.12	141.62	237.73
						367.95	157.12	237.73
						364.78	156.95	237.73
						362.12	159.87	237.73
						370.31	181.50	237.73
						374.72	187.17	237.73
						416.30	195.57	237.73
						475.10	204.18	237.73
770				234.68		145.46	-26.24	234.68
						310.65	114.61	234.68
						327.31	135.78	234.68
						342.98	144.61	234.68
						342.48	168.28	234.68
						358.48	187.45	234.68
						363.15	187.95	234.68
						372.48	196.95	234.68
						492.16	210.62	234.68
760				231.64		135.46	-23.57	231.64
						260.26	105.31	231.64
						282.98	116.28	231.64
						287.98	125.78	231.64
						281.64	131.78	231.64
						286.81	135.95	231.64
						312.81	145.45	231.64
						342.15	203.62	231.64
						356.32	205.78	231.64
						479.66	214.29	231.64
						501.33	215.29	231.64
750				228.59		133.63	-17.57	228.59
						248.92	109.65	228.59
						261.14	125.95	228.59
						274.48	132.45	228.59
						282.31	144.78	228.59
						311.92	203.16	228.59
						317.91	214.61	228.59
						336.91	219.65	228.59
						343.42	217.55	228.59
						349.72	213.14	228.59
						368.62	212.51	228.59
						383.64	217.86	228.59
						397.92	223.32	228.59
						412.93	221.01	228.59

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
						410.73	222.90	228.59
						446.64	227.00	228.59
						470.74	230.41	228.59
						471.81	252.67	228.59
740				225.54		129.72	-12.59	225.54
						223.92	111.98	225.54
						245.23	131.76	225.54
						250.73	140.09	225.54
						264.06	142.43	225.54
						265.56	144.43	225.54
						292.23	208.93	225.54
						298.06	214.93	225.54
						298.40	215.77	225.54
						348.40	225.77	225.54
						369.24	228.10	225.54
						370.49	225.12	225.54
						375.65	220.49	225.54
						377.24	220.36	225.54
						389.21	229.16	225.54
						405.75	231.41	225.54
						428.04	233.87	225.54
						428.68	253.94	225.54
730				222.49		71.49	-99.08	222.49
						228.64	151.55	222.49
						232.47	160.55	222.49
						240.64	163.88	222.49
						245.47	166.55	222.49
						246.97	179.05	222.49
						258.64	208.72	222.49
						263.64	218.55	222.49
						274.64	220.72	222.49
						308.81	223.05	222.49
						321.98	225.55	222.49
						329.65	231.89	222.49
						322.81	238.72	222.49
						325.81	247.89	222.49
						314.98	252.05	222.49
						277.64	251.72	222.49
						273.81	259.55	222.49
						275.54	287.40	222.49
						326.73	560.93	222.49
720				219.46		285.74	573.68	219.46
						226.52	278.83	219.46
						215.18	214.15	219.46
						188.30	153.67	219.46
						151.76	95.71	219.46
						72.66	-26.51	219.46

Name	M.	ID	OnlyPts	Height		Coordinates		
				Begin	End	x	y	z
				(m)	(m)	(m)	(m)	(m)
725				221.00		65.73	-85.76	221.00
						82.80	-56.72	221.00
						125.40	-0.75	221.00
						164.07	58.25	221.00
						207.74	127.93	221.00
						229.41	167.26	221.00
						252.41	211.93	221.00
						285.75	386.57	221.00
						323.85	579.19	221.00
725				221.00		294.04	584.18	221.00
						228.95	255.03	221.00
						220.49	216.93	221.00
						201.44	159.77	221.00
						48.75	-70.58	221.00
712				217.00		105.61	543.34	217.00
						11.53	217.41	217.00
						-27.95	-58.96	217.00
730				222.50		417.74	340.97	222.50
						419.84	266.42	222.50
						424.88	264.32	222.50
						604.44	260.54	222.50
						609.90	341.39	222.50
						415.64	342.65	222.50
735				224.00		298.24	373.10	224.00
						281.86	286.37	224.00
						279.76	264.11	224.00
						284.59	259.49	224.00
						331.84	266.63	224.00
						383.09	274.40	224.00
						409.97	278.18	224.00
						411.65	362.18	224.00
						412.49	374.99	224.00
						295.30	374.99	224.00

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
Backhoe	CS1	Lw (c)			105.0	97.0	95.0	95.0	94.0	91.0	90.0	81.0	98.8	106.8	DEFRA
Excavator	CS2	Lw (c)			111.0	114.0	107.0	104.0	103.0	101.0	100.0	97.0	108.9	117.0	DEFRA
Dump Truck	CS3	Lw (c)			119.0	115.0	106.0	104.0	106.0	103.0	99.0	91.0	110.2	120.9	DEFRA
Dozer	CS4	Lw (c)			104.0	110.0	104.0	103.0	100.0	98.0	92.0	88.0	105.6	112.8	DEFRA
Water Truck	CS5	Lw (c)			102.0	107.0	107.0	107.0	103.0	102.0	97.0	95.0	109.1	113.2	Eilar/Brutoco
Concrete Mixer	CS6	Lw (c)			111.0	100.0	97.0	101.0	102.0	100.0	95.0	89.0	106.1	112.6	DEFRA
Concrete Pump	CS7	Lw (c)			106.0	107.0	102.0	101.0	102.0	99.0	95.0	91.0	106.1	111.7	DEFRA
Paver	CS8	Lw (c)			113.0	113.0	109.0	103.0	100.0	98.0	92.0	85.0	106.7	117.1	DEFRA
Roller	CS9	Lw (c)			111.0	106.0	108.0	103.0	98.0	93.0	85.0	77.0	104.6	114.1	DEFRA