Eilar Associates, Inc.
Acoustical and Environmental Consulting Services

Acoustical Analysis Report for Tentative Tract Map 36864

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Job # S230401

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Table of Contents

1.0 Executive Summary

The proposed project, Tentative Tract Map 36864, is a proposed seven-lot residential subdivision. The project site is located to the south of Corona Avenue and to the west of the Interstate 15 (I-15) overpass in the City of Corona, California.

The primary noise source in the vicinity of the project site is traffic noise from I-15. The City of Corona Municipal Code states that noise exposure to single-family residential properties should be 65 CNEL or less. As designed, future noise levels at the proposed outdoor use areas of residences (backyards) are anticipated to be less than 65 CNEL, as outdoor use areas will receive sufficient noise shielding from the freeway noise barrier located along this portion of I-15. For this reason, no mitigation is deemed necessary for attenuating exterior noise impacts to the site.

The City of Corona and the State of California require interior noise levels not exceeding 45 CNEL in residential habitable space. Contemporary exterior building construction is expected to achieve at least 15 decibels of exterior-to-interior noise attenuation with windows opened. Exterior noise levels at many on-site building facades are expected to exceed 60 CNEL, and therefore interior noise levels may exceed 45 CNEL within residential units without proper mitigation. It is anticipated that, with windows and glass doors with a sound rating of STC 28 or greater, doors equipped with appropriate perimeter gaskets, a typical exterior wall assembly, and mechanical ventilation in units, interior noise levels of 45 CNEL or less will be achieved within residences. This mitigation should be verified to be sufficient when construction documents become available, prior to the issuance of building permits.

2.0 Introduction

This acoustical analysis report is submitted to satisfy the acoustical requirements of the City of Corona. Its purpose is to assess noise impacts from nearby roadway traffic to identify project features or requirements necessary to adequately control traffic noise levels at outdoor use areas, as per City of Corona noise regulations.

All noise level or sound level values presented herein are expressed in terms of decibels, with A-weighting to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ} for a specified duration. Unless a different time period is specified, L_{EQ} is implied to mean a period of one hour. The Community Noise Equivalent Level (CNEL) is a calculated 24-hour weighted average, where sound levels during evening hours of 7 p.m. to 10 p.m. have an added 5 dB weighting, and sound levels during nighttime hours of 10 p.m. to 7 a.m. have an added 10 dB weighting. This is similar to the Day-Night sound level (L_{DN}), which is a 24-hour average with an added 10 dB weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL are always based on A-weighted decibels. These metrics are used to express noise levels for both measurement and municipal regulations, for land use guidelines, and for enforcement of noise ordinances.

2.1 Project Description

The proposed project, Tentative Tract Map 36864, is a proposed seven-lot residential subdivision. The total proposed site area is approximately 2.09 acres, with individual lot sizes ranging from 7,453 square feet to 14,014 square feet. More information is provided on project plans, which can be found in Appendix A.

2.2 Project Location

The project site is located to the south of Corona Avenue and to the west of the Interstate 15 (I-15) overpass in the City of Corona, California. I-15 is elevated above the project site. A freeway noise barrier is currently located between I-15 and the project site, at the top of the slope adjacent to the project site. The Assessor's Parcel Number (APN) for the site is 122-180-027. The project site is currently unoccupied. The project location is shown on the Vicinity Map, Figure 1, following this report. An Assessor's Parcel Map, Satellite Aerial Photograph, and Topographic Map are also provided as Figures 2 through 4, respectively.

2.3 Applicable Noise Regulations

The proposed project must meet the acoustical requirements of the City of Corona in order to obtain permit approval. The City of Corona Municipal Code, Section 17.84, states the following:

> *A noise study shall be performed prior to the construction of new master planned roads, roadway improvements, rail lines and/or prior to the construction of residential or sensitive land uses adjacent to existing or master planned roads or railways. The noise study shall identify the existing and future noise contours for the roadway and propose mitigation measures to reduce the noise impacts to a maximum of 65 dBA CNEL in the private outdoor living area of residences and to a maximum interior noise level of 45 dBA CNEL for residential and sensitive land uses.*

An analysis has been performed in order to determine appropriate design features needed to achieve noise levels of 65 CNEL or less at the primary common outdoor use areas (backyards of residences) in the future noise environment. Additionally, the required interior noise limit of 45 CNEL must be met within residences. Pertinent sections of the City of Corona Municipal Code are provided as Appendix B.

3.0 Environmental Setting

3.1 Existing Noise Environment

3.1.1 Vehicle Noise Sources

The primary noise source in the vicinity of the project site is traffic from I-15. Corona Avenue carries a negligible amount of traffic and is not anticipated to significantly impact the noise environment on the site. The current traffic volumes of this roadway are given based on information from the Caltrans Traffic Census (see reference).

I-15 is an eight-lane, two-way Freeway running north-south to the east of the project site. The posted speed limit is 65 mph. According to Caltrans, I-15 carries an approximate traffic volume of 158,000 Average Daily Trips (ADT) as of the year 2019. The truck percentage mix for I-15 was provided by Caltrans. It was determined that 1.95% of the traffic on this freeway consists of medium trucks and 3.66% of traffic consists of heavy trucks.

Current traffic noise contours were calculated considering the existing freeway sound barrier wall located between I-15 and the project site. Without proposed project structures, the proposed project site is currently exposed to noise levels ranging from approximately 58 CNEL to 64 CNEL. Contours are irregularly shaped due to topography and the presence of the freeway sound barrier. For a graphical representation of current noise contours, please refer to Figure 5: Site Plan Showing Current Traffic CNEL Contours and Noise Measurement Locations.

3.1.2 Measured Noise Levels

An on-site inspection and traffic noise measurement were made on the afternoon of Thursday, December 4, 2014, in support of the original noise study prepared for this project. The weather conditions were as follows: partly cloudy skies, moderate humidity, temperatures in the low 70s with winds at 3-5 mph. Two noise measurements were made: one at the west boundary of the project site, across the proposed Street A from Lot 3, and another on the sidewalk near Corona Avenue, at the north end of the project site. The microphone position was approximately five feet above grade for both measurements. Traffic counts could not be performed due to the high amount of traffic on I-15 as well as decreased visibility of the roadway due to topography. At the time the noise measurements were performed, the freeway sound barrier wall was not yet constructed. After continuous sound level measurements, there was no change in the L_{EQ} and results were then recorded. The measured noise levels and related weather conditions are found below in Table 1. Measurement locations are shown in Figures 5 and 6.

Table 1. On-Site Noise Measurement Conditions and Results		
Date	Thursday, December 4, 2014	
Conditions	Partly cloudy skies, winds at 3-5 mph, temperature low 70s with moderate humidity	
Time	3:47 p.m. – 3:53 p.m.	3:30 p.m. – 3:45 p.m.
Location	NML 1, West Boundary of Project Site	NML 2, at Sidewalk near Corona Avenue
Measured Traffic Noise Level	62.5 dBA L_{EQ}	62.6 dBA L_{EQ}

3.1.3 Calculated Noise Level

Noise levels were calculated for the site using the methodology described in Section 4.1.1. The calculated noise levels (L_{EQ}) were compared with the measured traffic noise level to determine if adjustments or corrections (calibration) should be applied to the traffic noise prediction model. Adjustments are intended to account for site-specific differences, such as reflection and absorption, which may be greater or lesser than accounted for in the model.

The measured noise levels of 62.5 dBA L_{EQ} and 62.6 dBA L_{EQ} were compared to the calculated (modeled) noise level of 63.0 dBA L_{EQ} and 64.0 dBA L_{EQ} for the same anticipated traffic flow. According to the Federal Highway Administration's Highway Traffic Noise: Analysis and Abatement Guide (see reference), a traffic noise model is considered validated if the measured and calculated noise impacts differ by three decibels or less. No adjustment was deemed necessary to model future noise levels for this location as the difference between the measured and calculated levels was found to be less than three decibels. The traffic noise model is assumed to be representative of actual traffic noise that is experienced on site. This information is shown in Table 2.

Table 2. Calculated versus Measured Traffic Noise Data				
Location	**Calculated**	**Measured**	**Difference**	**Correction**
NML 1, West Boundary of Project Site	63.0 dBA L_{EQ}	62.5 dBA L_{EQ}	0.5 dB	None Applied
NML 2, at Sidewalk near Corona Avenue	64.0 dBA L_{EQ}	62.6 dBA L_{EQ}	1.4 dB	None Applied

3.2 Future Noise Environment

The future on-site noise environment will be the result of the same traffic noise sources. The future (year 2050) traffic volumes for I-15 were estimated using an annual growth rate of one percent. This growth rate is considered appropriate based on the existing level of development in the area and the practical limitations of the freeway. Considering a one percent annual growth rate, by the year 2050, the traffic volume of I-15 is estimated to increase to 215,090 ADT. The same truck percentages from the current traffic volumes were used for future traffic volume modeling.

Future traffic noise contours were calculated considering the existing freeway sound barrier wall located between I-15 and the project site. Without proposed project structures, the proposed project site will be exposed to noise levels ranging from approximately 59 CNEL to 65 CNEL. Contours are irregularly shaped due to topography and the presence of the freeway sound barrier. For a graphical representation of current noise contours, please refer to Figure 6: Site Plan Showing Future Traffic CNEL Contours and Noise Measurement Locations.

4.0 Methodology and Equipment

4.1 Methodology

4.1.1 Traffic Noise Measurement

Typically, a "one-hour" equivalent sound level measurement (L_{EQ}, A-Weighted) is recorded for at least one noise-sensitive location on the site. During the on-site noise measurement, start and end times are recorded and vehicle counts are made for cars, medium trucks (double-tires/two axles), and heavy trucks (three or more axles) for the corresponding road segment(s). Supplemental sound measurements of one hour or less in duration are often made to further describe the noise environment of the site.

For measurements of less than one hour in duration, the measurement time is long enough for a representative traffic volume to occur and the noise level (L_{EQ}) to stabilize. The vehicle counts are then converted to one-hour equivalent volumes by applying an appropriate factor. Other field data gathered include measuring or estimating distances, angles-of-view, slopes, elevations, roadway grades, and vehicle speeds. This information is subsequently verified using available maps and records.

4.1.2 Roadway Noise Calculation

The Traffic Noise Model (TNM) calculation protocol in CadnaA Version 2023 (based on the methodology used in TNM Version 2.5, released in February 2004 by the U.S. Department of Transportation) was used for all traffic modeling in the preparation of this report. Using the TNM protocol, the CNEL is calculated as 9.2 percent of the ADT for surrounding roadways, based on the studies made by Wyle Laboratories (see reference). Future CNEL is calculated for desired receptor locations using future road alignment, elevations, lane configurations, projected traffic volumes, estimated truck mixes, and vehicle speeds. Noise attenuation methods may be analyzed, tested, and planned with TNM, as required.

4.2 Measurement Equipment

Some or all of the following equipment was used at the site to measure existing noise levels:

- Larson Davis Model 720 Integrating Sound Level Meter, Serial # 0462
- Larson Davis Model CA150 Calibrator, Serial # 0203

The sound level meters were 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 calibrated and maintained per the manufacturers' standards.

5.0 Noise Impacts and Mitigation

5.1 Exterior

The future noise environment is primarily the result of vehicle traffic traveling on I-15. Traffic noise impacts were calculated using the information detailed in Section 3.2. Additional information is provided in Appendix C: CadnaA Analysis Data and Results.

5.1.1 Noise Impacts to Outdoor Use Areas

The City of Corona Municipal Code states that noise impacts at outdoor use areas must be limited to 65 CNEL or less. An analysis has therefore been performed in order to determine appropriate design features needed to achieve noise levels of 65 CNEL or less at the primary outdoor use areas of the residences on site (backyards).

Seven receivers were placed in the Traffic Noise Model at the assumed backyards of each residence to be located on site. Backyards of all lots are assumed to be located to the east of proposed residences. Existing traffic noise levels were calculated in these locations considering site topography and shielding provided by the existing freeway barrier wall. Results are shown in Table 3. A graphical representation of these receiver locations is provided as Figure 7, and further information is provided in Appendix C.

Table 3. Future Traffic CNEL at Proposed Outdoor Use Areas

Receiver Number	Location	Exterior Traffic Noise Level (CNEL)
OU1	Lot 1 Backyard	64.8
OU2	Lot 2 Backyard	63.9
OU3	Lot 3 Backyard	62.8
OU4	Lot 4 Backyard	61.6
OU5	Lot 5 Backyard	60.4
OU6	Lot 6 Backyard	58.9
OU7	Lot 7 Backyard	60.3

As shown above, traffic noise levels at the backyard areas of proposed residences are anticipated to meet City of Corona noise regulations as currently designed, as these receivers will receive sufficient noise shielding from the existing freeway barrier adjacent to I-15. No mitigation is deemed necessary for attenuating exterior noise impacts.

5.1.2 Noise Impacts at Building Facades

Future traffic noise levels have also been evaluated at anticipated building facades to determine impacts in these locations. Additional information regarding the interior noise environment is provided in Section 5.2. Exterior noise levels were calculated for receivers at anticipated facade locations at each building on the first and second floor and were found to range from 38.1 CNEL at the west facade of the residence on Lot 5 on the first floor to 66.2 CNEL at the east facade of the residence on Lot 1 on the second floor. The complete table of results is shown in Table 4. A graphical representation of receiver locations is provided as Figure 7. Further information is provided in Appendix C.

Table 4. Future Exterior Traffic Noise Levels at Building Facades

Lot	Receiver	Facade Location	Exterior Traffic Noise Level (CNEL)	
			First Floor	Second Floor
1	1-1	North	64.1	65.4
	1-2	East	64.9	66.2
	1-3	South	55.9	55.7
	1-4	West	41.3	47.4
2	2-1	North	63.2	64.4
	2-2	East	63.9	64.9
	2-3	South	53.6	54.8
	2-4	West	41.0	47.5
3	3-1	North	61.4	64.0
	3-2	East	63.2	64.4
	3-3	South	53.7	55.0
	3-4	West	39.8	46.9
4	4-1	North	58.7	60.0
	4-2	East	61.5	63.2
	4-3	South	40.8	48.5
	4-4	West	55.2	56.1
5	5-1	North	55.1	56.9
	5-2	East	60.1	62.3
	5-3	South	53.8	55.8
	5-4	West	38.1	45.9
6	6-1	North	54.7	56.3
	6-2	East	59.5	61.9
	6-3	South	57.3	60.2
	6-4	West	39.5	47.4

Table 4. Future Exterior Traffic Noise Levels at Building Facades				
Lot	Receiver	Facade Location	Exterior Traffic Noise Level (CNEL)	
			First Floor	Second Floor
7	7-1	North	56.4	58.2
	7-2	East	61.7	64.8
	7-3	South	62.0	64.8
	7-4	West	42.3	50.2

5.2 Interior

The State of California and the City of Corona require buildings to be designed in order to attenuate, control, and maintain interior noise levels to 45 CNEL or less in habitable residential space. Current exterior building construction is generally expected to achieve at least 15 decibels of exterior-to-interior noise attenuation, with windows opened. Therefore, proposed project building structures exposed to exterior noise levels greater than 60 CNEL could be subject to interior noise levels exceeding the 45 CNEL noise limit for residential habitable space without appropriate design features implemented.

Calculations show that future noise levels on site exceed 60 CNEL at many building facades on site, and therefore interior noise levels may exceed 45 CNEL in these locations without appropriate design features. Due to high noise levels on-site, an exterior-to-interior analysis should be performed when building plans become available, prior to the issuance of building permits. The following mitigation would likely be necessary, although this should be confirmed when construction documents become available:

1. Windows and glass doors should have a minimum Sound Transmission Class (STC) rating of STC 28.

2. Entry doors should be insulated solid-core doors with full perimeter gaskets to prevent sound leakage through cracks and gaps.

3. The project may use a typical exterior wall detail with gypsum board on the interior side of wood studs, an exterior-rated material at the exterior, and batt insulation in the cavity.

4. As residences will not meet the 45 CNEL interior noise level requirement with windows and doors open, mechanical ventilation will be required. Appropriate means of air circulation and provision of fresh air must be present to allow windows to remain closed for extended intervals of time so that acceptable levels of noise can be maintained on the interior. The ventilation system shall not compromise the sound insulation capability of the exterior wall or be dependent on ventilation through windows.

It is expected that the mitigation measures detailed above will be sufficient for reducing interior noise levels to be 45 CNEL or less; however, as building footprints and floor plans have not yet been prepared, these mitigation measures should be verified as sufficient upon preparation of construction documents, prior to issuance of building permits.

6.0 Conclusion

As designed, future noise levels at the proposed outdoor use areas of residences (backyards) are anticipated to be less than 65 CNEL, as outdoor use areas will receive sufficient noise shielding from the freeway noise barrier located along this portion of I-15. For this reason, no mitigation is deemed necessary for attenuating exterior noise impacts to the site.

The City of Corona and the State of California require interior noise levels not exceeding 45 CNEL in residential habitable space. Contemporary exterior building construction is expected to achieve at least 15 decibels of exterior-to-interior noise attenuation with windows opened. Exterior noise levels at many on-site building facades are expected to exceed 60 CNEL, and therefore interior noise levels may exceed 45 CNEL within residential units without proper mitigation. It is anticipated that, with windows and glass doors with a sound rating of STC 28 or greater, doors equipped with appropriate perimeter gaskets, a typical exterior wall assembly, and mechanical ventilation in units, interior noise levels of 45 CNEL or less will be achieved within residences. This mitigation should be verified to be sufficient when construction documents become available, prior to the issuance of building permits.

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 and impact 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.

The findings and recommendations of this acoustical analysis report are based on the information available and are a true and factual analysis of the potential acoustical issues associated with the Tentative Tract Map 36864 project, to be located to the south of Corona Avenue and to the west of the I-15 overpass in the City of Corona, California. This report was prepared by Amy Hool and Jonathan Brothers.

Amy Hool, INCE
President/CEO

Jonathan Brothers, INCE
Principal Acoustical Consultant

8.0 References

City of Corona Municipal Code.

California Building Code, Based on the International Building Code, Chapter 12, Section 1206 – Sound Transmission Control.

Caltrans Traffic Census Program, http://www.dot.ca.gov/trafficops/census/.

DataKustik, CadnaA (Computer Aided Noise Abatement), Version 2023.

Federal Highway Administration, Highway Traffic Noise: Analysis and Abatement Guide, December 2011.

Wyle Laboratories, Development of Ground Transportation Systems Noise Contours for the San Diego Region, December 1973.

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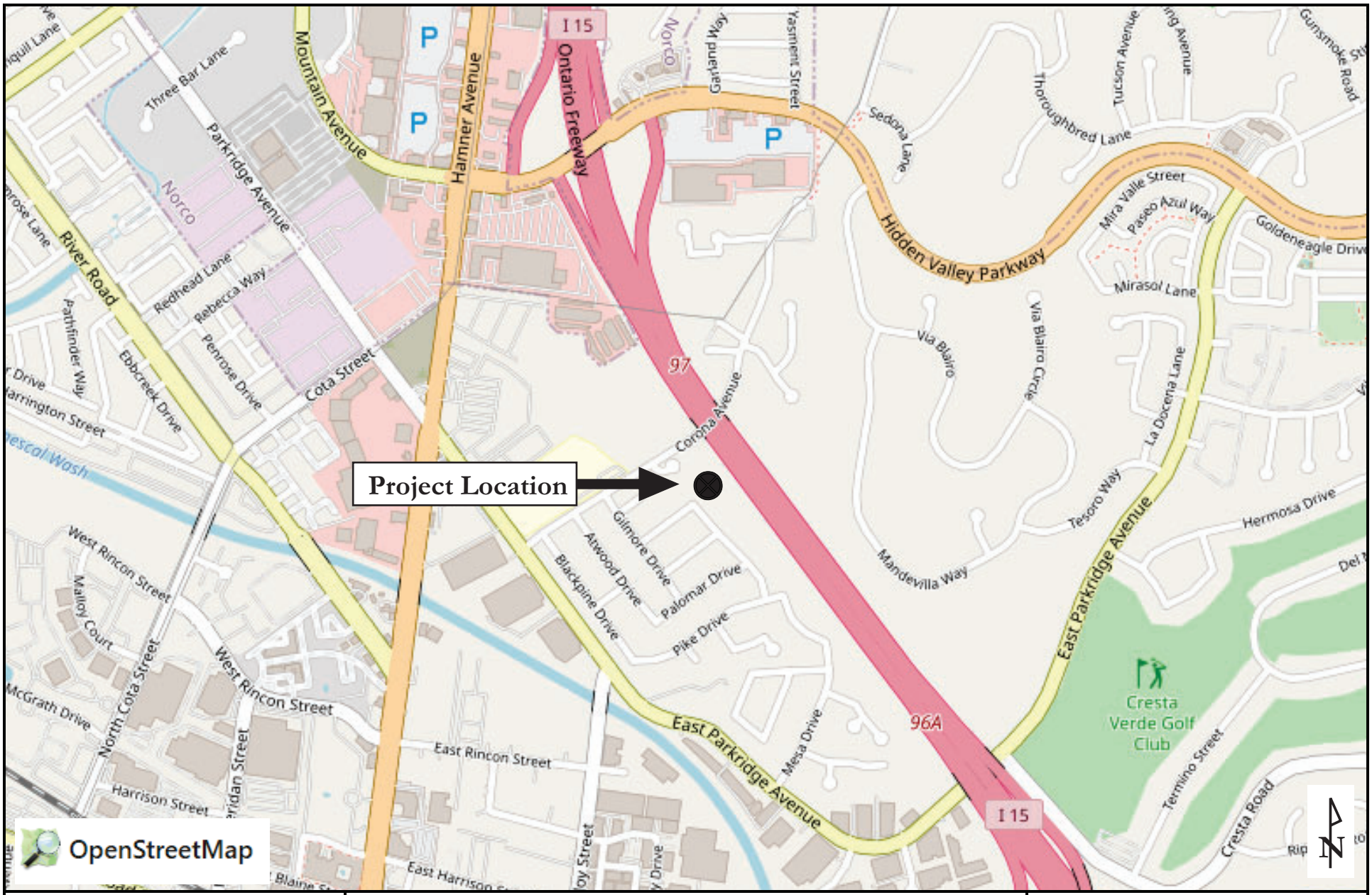
Figures



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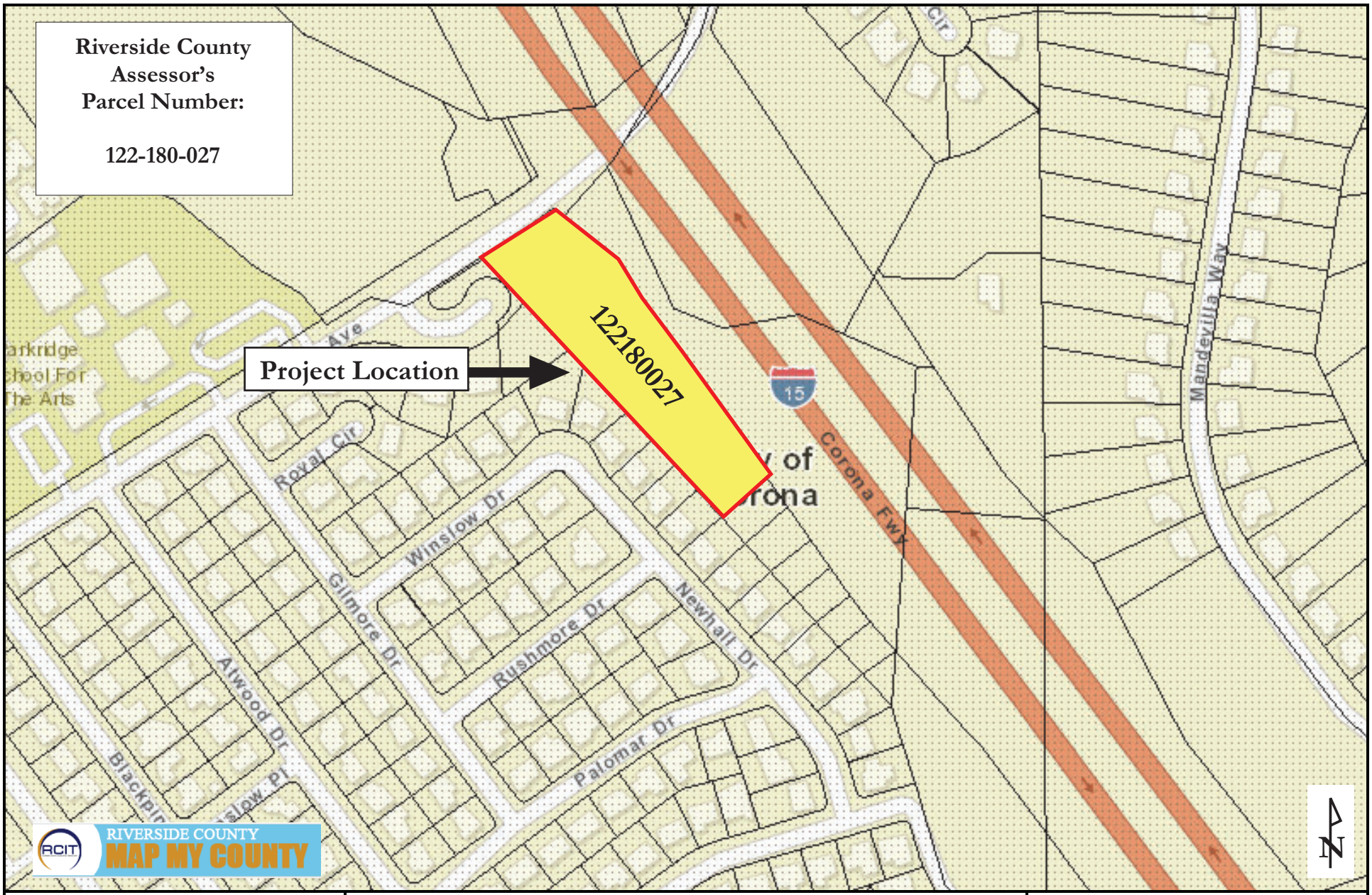
Vicinity Map
Job # S230401

Figure 1



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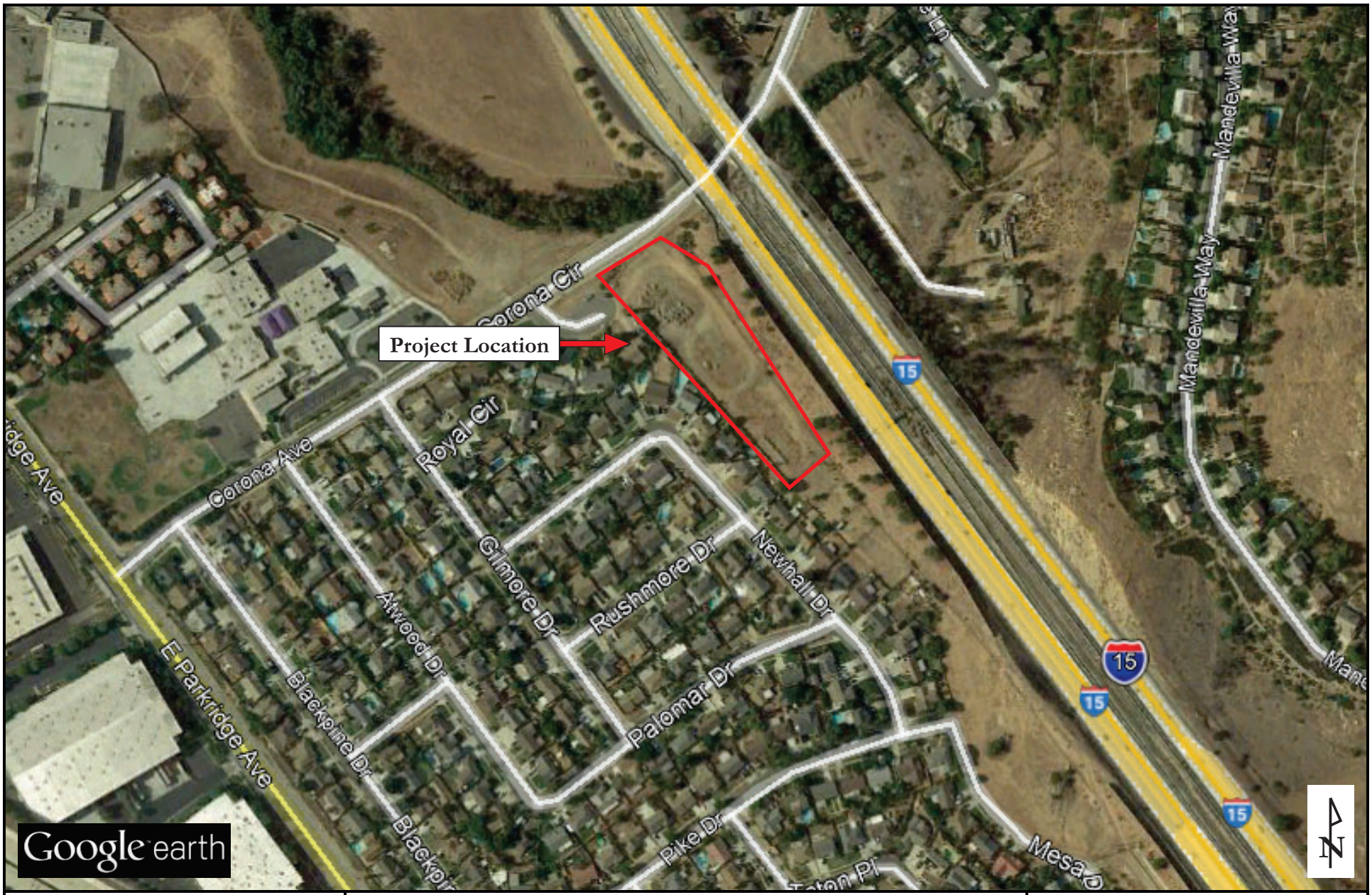
Assessor's Parcel Map
Job # S230401

Figure 2



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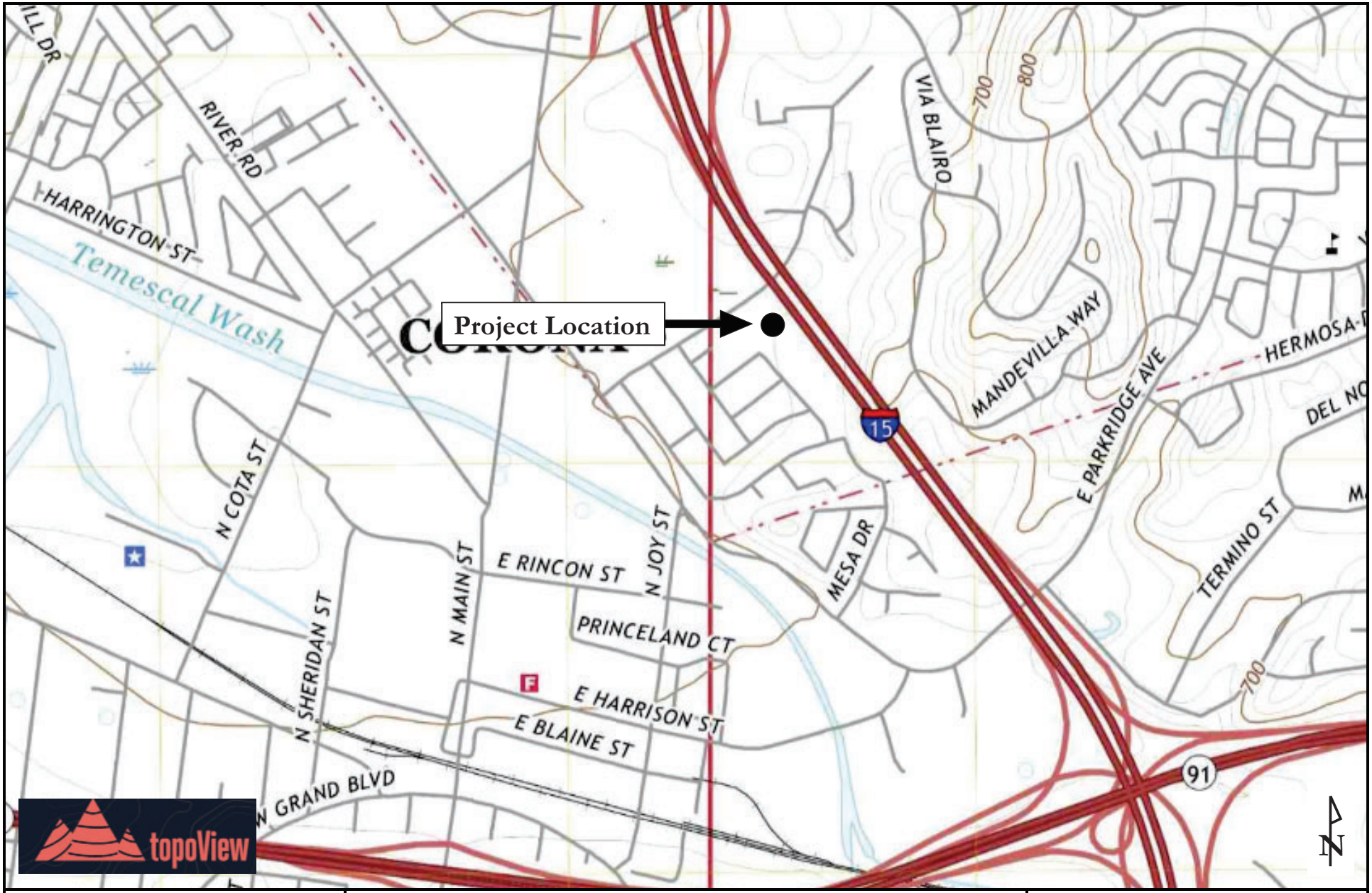
Satellite Aerial Photograph
Job # S230401

Figure 3



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Topographic Map
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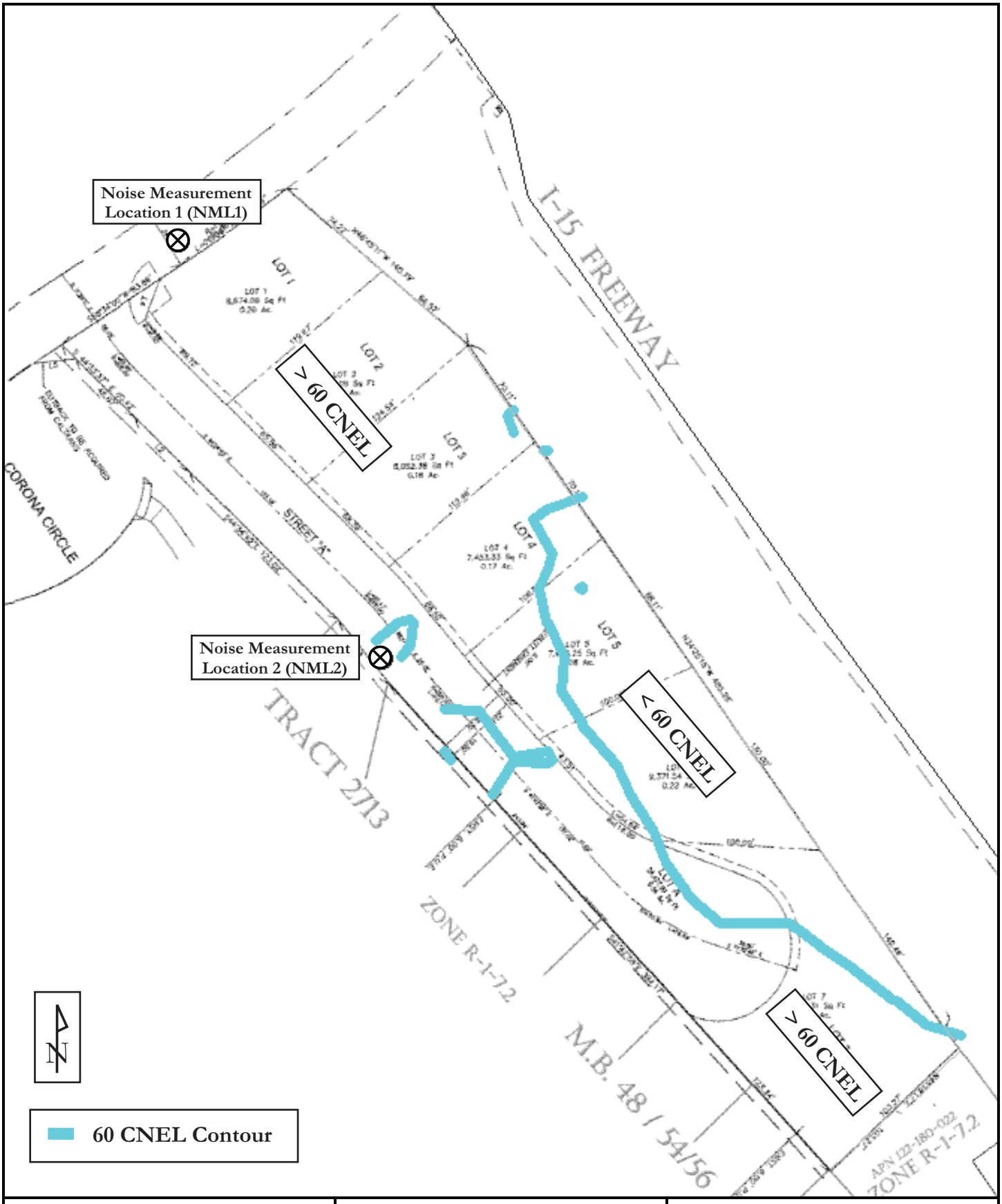
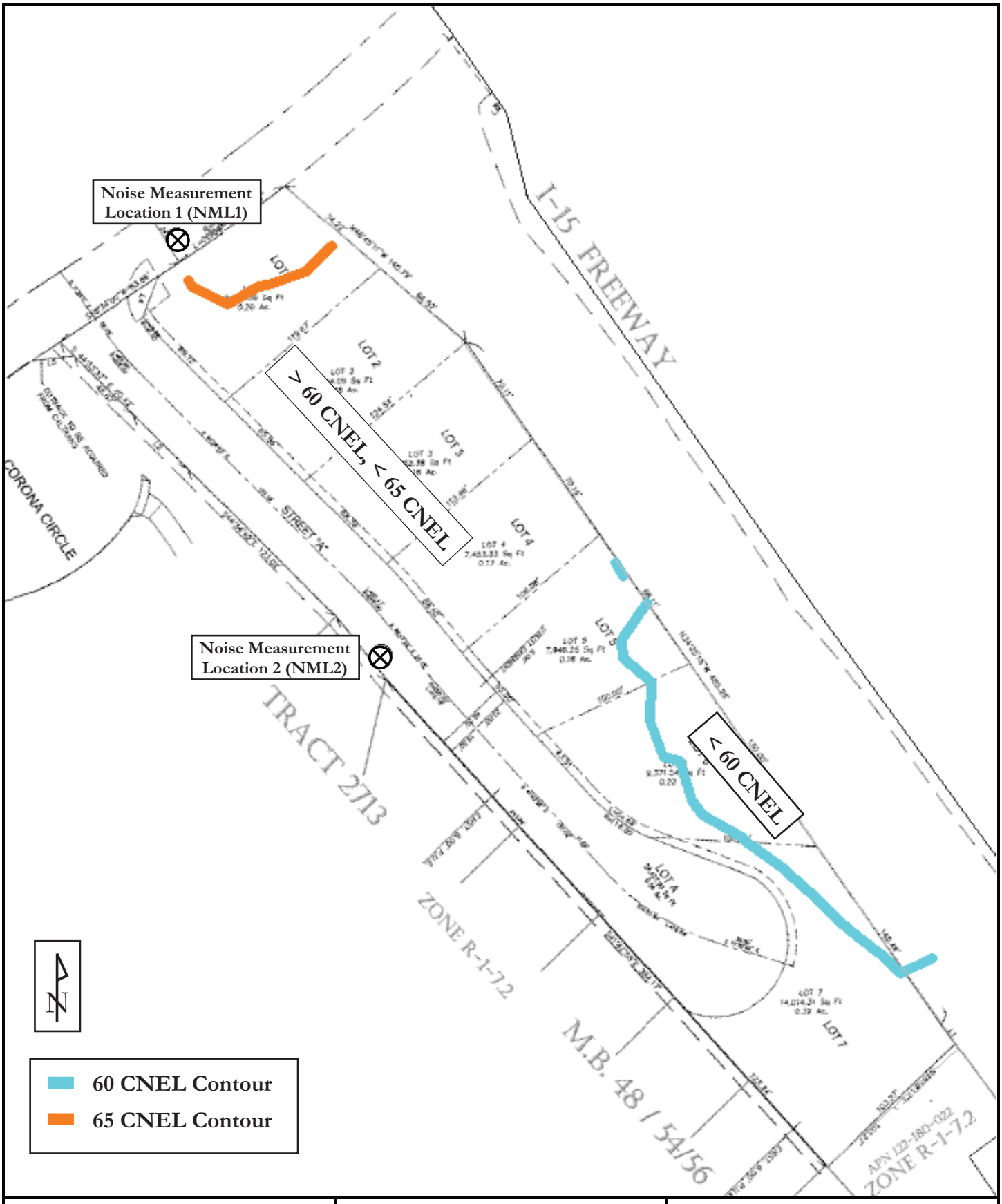
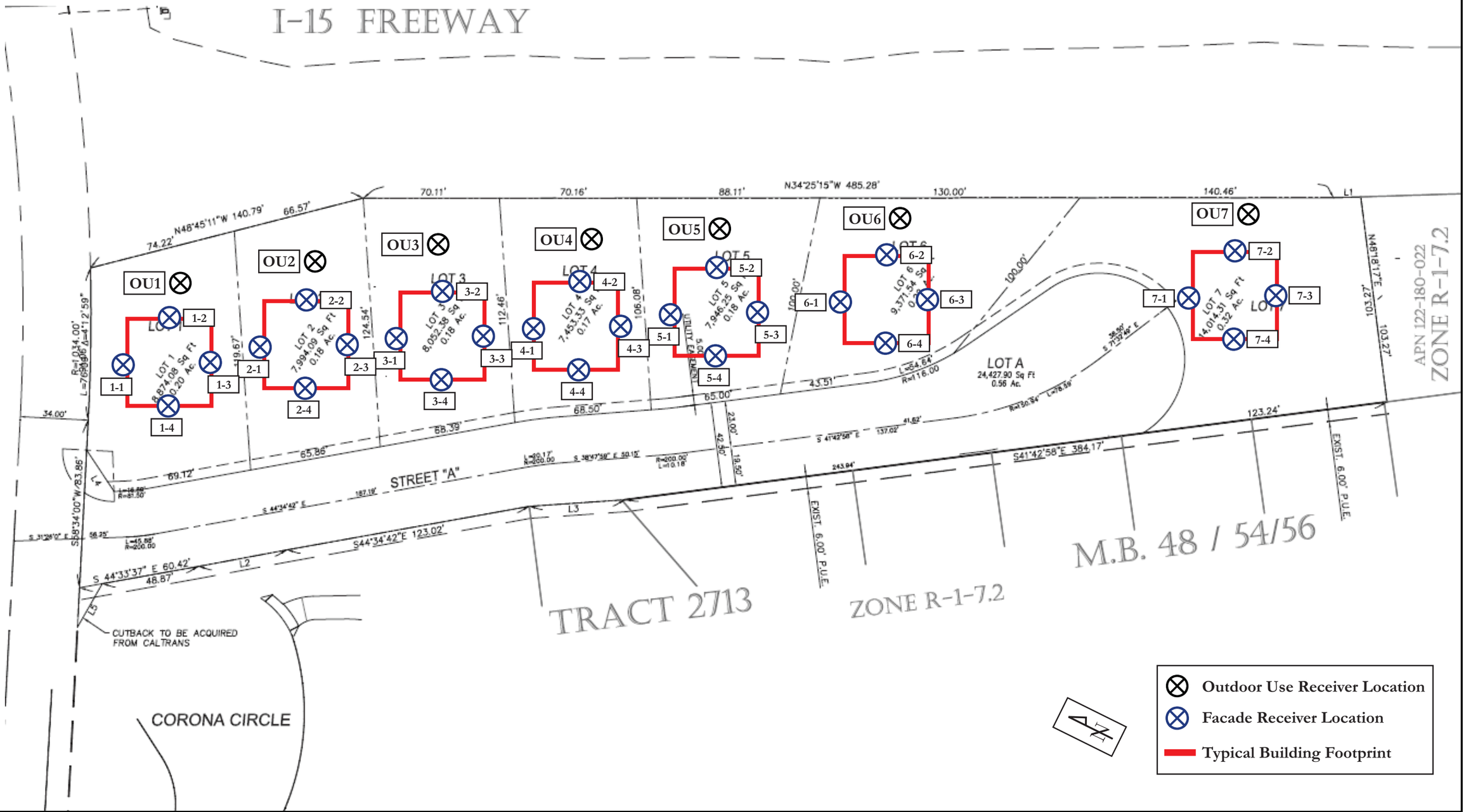
Figure 4



Eilar Associates, Inc. 210 South Juniper Street, Suite 100 Escondido, California 92025 760-738-5570	**Site Plan Showing Current Traffic CNEL Contours and Noise Measurement Location** **Job # S230401**	**Figure 5**



Eilar Associates, Inc. 210 South Juniper Street, Suite 100 Escondido, California 92025 760-738-5570	**Site Plan Showing Future Traffic CNEL Contours and Noise Measurement Location** **Job # S230401**	**Figure 6**



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Site Plan Showing Outdoor Use and Building Facade Receiver Locations
Job # S230401

Figure 7

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Appendix A
Project Plans

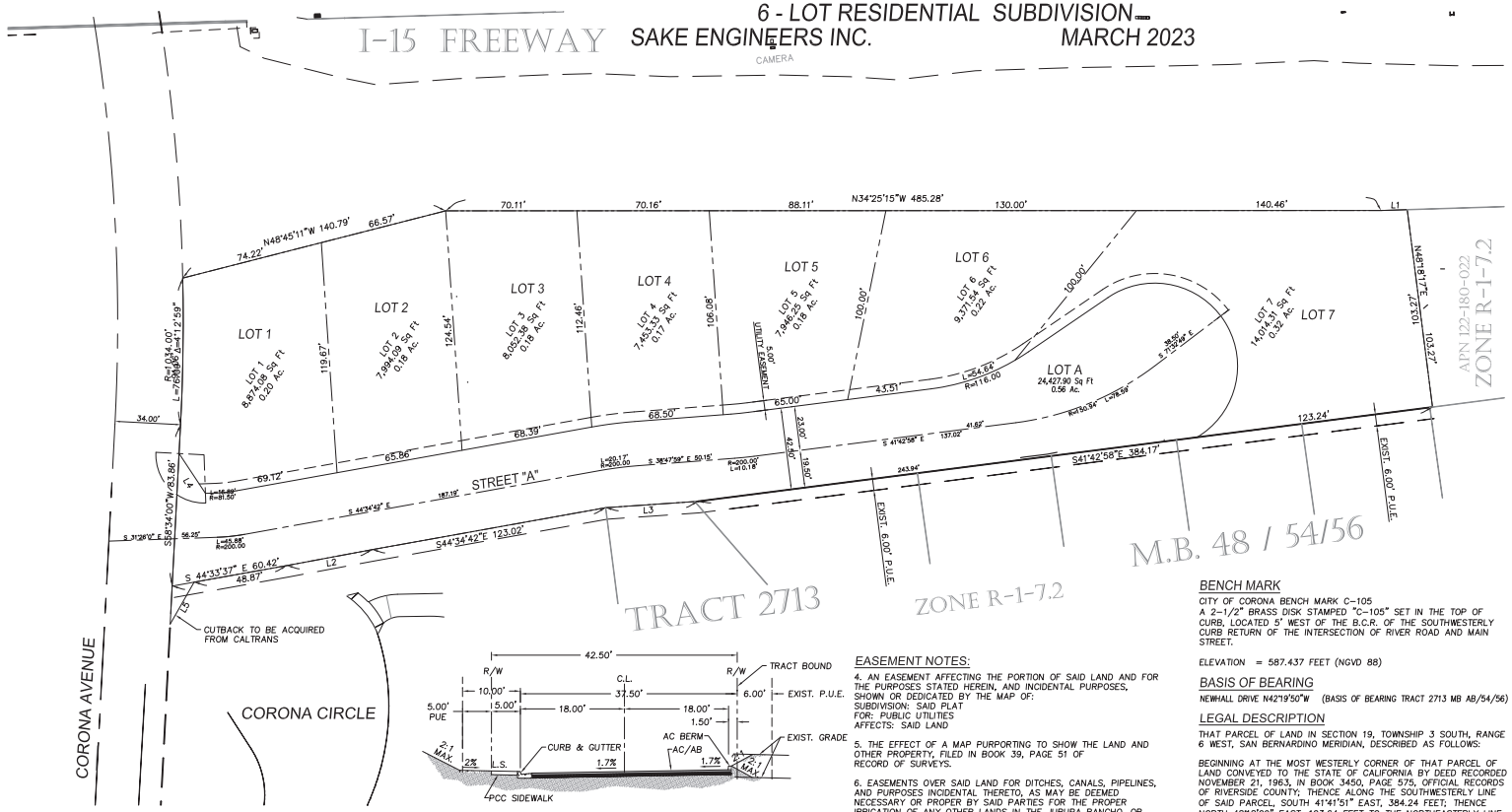
DPR 2021-0009

TENTATIVE TRACT 36864

APN. 122-180-027

6 - LOT RESIDENTIAL SUBDIVISION

SAKE ENGINEERS INC. MARCH 2023



STREET "A"
(TYPICAL SECTION)
MODIFIED STD. 111 (PUBLIC)

LINE	BEARING	DISTANCE
L1	N36°11'34"W	13.56'
L2	S44°57'53"E	45.10'
L3	S38°20'13"E	48.00'
L4	N26°45'45"E	28.72'
L5	N85°14'46"E	25.04'

FIRE DEPARTMENT GENERAL NOTES:

PLACE FIRE DEPARTMENT DPR COMMENTS ON PLANS AS GENERAL NOTES.

1. ANY REVISED SITE PLAN SHALL BE SUBMITTED TO THE FIRE DEPARTMENT FOR SCREEN CHECK APPROVAL PRIOR TO BUILDING PLAN SUBMITTAL.
2. DEAD END ACCESS DRIVES SHALL NOT EXCEED ONE HUNDRED FIFTY (150) FEET IN LENGTH.
3. PROVIDE TURN-AROUND FOR ACCESS DRIVE(S) MEETING FIRE DEPARTMENT STANDARDS/APPROVAL.
4. STREET AND DRIVE GRADES SHALL NOT EXCEED 10% UNLESS APPROVED BY THE FIRE CHIEF AND CITY ENGINEER.
5. A MINIMUM FIRE FLOW OF 1500 GALLONS PER MINUTE AT 20 PSI SHALL BE PROVIDED FOR ONE- AND TWO-FAMILY DWELLINGS.
6. FIRE HYDRANTS ARE TO BE SPACED A MAXIMUM 300 FEET APART, ONE- AND TWO-FAMILY DWELLINGS ONLY.
7. PROVIDE ONE-HOUR CONSTRUCTED EAVES FOR ALL HOMES LOCATED WITHIN TWO HUNDRED (200) FEET OF WILDLAND AREAS. ENTIRE HOUSE PERIMETER SHALL COMPLY.
8. PROVIDE CLASS A ROOFING MATERIAL ON ALL STRUCTURES PER THE CORONA MUNICIPAL CODE.
9. GROVES AND WEED ABATEMENT SHALL BE MAINTAINED SO AS NOT TO POSE A FIRE HAZARD UNTIL TIME OF DEVELOPMENT.
10. A SPECIFIC ADDRESS, ASSIGNED BY THE CITY OF CORONA, PUBLIC WORKS DEPARTMENT, SHALL BE PROVIDED FOR EACH BUILDING AS SPECIFIED BY THE FIRE DEPARTMENT ADDRESS STANDARD WHICH CAN BE OBTAINED AT CORONACA.GOV/FIRE. ADDRESSES MUST BE ILLUMINATED DURING ALL HOURS OF DARKNESS.
11. AT NO TIME SHALL FIRE HYDRANTS OR FIRE LANES BE BLOCKED BY BUILDING MATERIALS, STORAGE, EQUIPMENT, AND/OR VEHICLES.
12. RESIDENTIAL FIRE SPRINKLERS SHALL BE INSTALLED PER CALIFORNIA FIRE AND RESIDENTIAL CODE, AND NFPA 13.

EASEMENT NOTES:

4. AN EASEMENT AFFECTING THE PORTION OF SAID LAND AND FOR THE PURPOSES STATED HEREIN, AND INCIDENTAL PURPOSES, SHOWN OR DEDICATED BY THE MAP OF:
SUBDIVISION: SAID PLAT
FOR: PUBLIC UTILITIES
AFFECTS: SAID LAND

5. THE EFFECT OF A MAP PURPORTING TO SHOW THE LAND AND OTHER PROPERTY, FILED IN BOOK 39, PAGE 51 OF RECORD OF SURVEYS.

6. EASEMENTS OVER SAID LAND FOR DITCHES, CANALS, PIPELINES, AND PURPOSES INCIDENTAL THERETO, AS MAY BE DEEMED NECESSARY OR PROPER BY SAID PARTIES FOR THE PROPER IRRIGATION OF ANY OTHER LANDS IN THE JURUPA RANCHO, OR FOR SUPPLYING OF THE MAIN CANAL WITH WATER, PROVIDED, HOWEVER, THAT SUCH DITCHES SHALL, WHEN PRACTICABLE, FOLLOW THE LINES OF THE SURVEYS SUBDIVISION OF THE JURUPA RANCHO, IN FAVOR OF THE STEARNS RANCHOS COMPANY AND JURUPA LAND AND WATER COMPANY, THEIR SUCCESSORS OR ASSIGNS.

7. AN EASEMENT FOR WATER PIPES AND DITCHES, FLUMES AND CONDUITS AND INCIDENTAL PURPOSES, RECORDED AUGUST 27, 1900 IN BOOK 112 OF DEEDS, PAGE 122.
IN FAVOR OF: JOHN FITACHER MOULTON AND HERBERT BULKLEY PRAED
AFFECTS: AS DESCRIBED THEREIN
THE LOCATION OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

8. AN EASEMENT FOR ROADS, PIPELINES, WATER CONDUITS, POWER LINES, TELEPHONE AND TELEGRAPH LINES AND INCIDENTAL PURPOSES, RECORDED FEBRUARY 7, 1911 IN BOOK 324 OF DEEDS, PAGE 389.
IN FAVOR OF: HERBERT BULKLEY PRAED AND CHARLES GRANVILLE KEKEWICH
AFFECTS: AS DESCRIBED THEREIN
THE LOCATION OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

9. AN EASEMENT FOR ELECTRIC LINES AND TELEPHONE POLES AND INCIDENTAL PURPOSES, RECORDED OCTOBER 26, 1962 AS INSTRUMENT NO. 99640 OF OFFICIAL RECORDS.
IN FAVOR OF: CALIFORNIA ELECTRIC POWER COMPANY
AFFECTS: AS DESCRIBED THEREIN

BENCH MARK

CITY OF CORONA BENCH MARK C-105
A 2-1/2" BRASS DISK STAMPED "C-105" SET IN THE TOP OF CURB, LOCATED 5' WEST OF THE B.C.R. OF THE SOUTHWESTERLY CURB RETURN OF THE INTERSECTION OF RIVER ROAD AND MAIN STREET.

ELEVATION = 587.437 FEET (NGVD 88)

BASIS OF BEARING

NEWHALL DRIVE N42°19'50"W (BASIS OF BEARING TRACT 2713 MB AB/54/56)

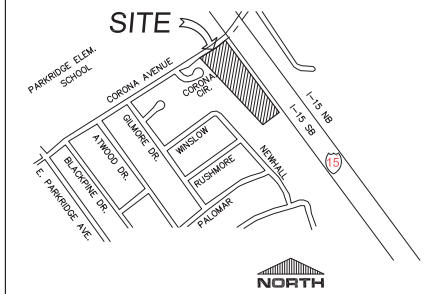
LEGAL DESCRIPTION

THAT PARCEL OF LAND IN SECTION 19, TOWNSHIP 3 SOUTH, RANGE 6 WEST, SAN BERNARDINO MERIDIAN, DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST WESTERLY CORNER OF THAT PARCEL OF LAND CONVEYED TO THE STATE OF CALIFORNIA BY DEED RECORDED NOVEMBER 21, 1963, IN BOOK 3450, PAGE 575, OFFICIAL RECORDS OF RIVERSIDE COUNTY; THENCE ALONG THE SOUTHWESTERLY LINE OF SAID PARCEL, SOUTH 41°41'51" EAST, 384.24 FEET; THENCE NORTH 48°18'09" EAST, 103.64 FEET TO THE NORTHEASTERLY LINE OF SAID PARCEL; THENCE ALONG SAID NORTHEASTERLY LINE, NORTH 36°11'42" WEST, 13.56 FEET; THENCE CONTINUING ALONG SAID NORTHEASTERLY LINE, NORTH 34°25'23" WEST, 352.92 FEET TO THE NORTHWEST LINE OF SAID PARCEL; THENCE NORTH 34°25'23" WEST 132.91 FEET, THENCE NORTH 48°45'29" WEST, 140.73 FEET TO THE SOUTH LINE OF CORONA AVENUE AS SHOWN ON DIVISION OF HIGHWAYS MAP, RECORDED AS MAP 205-159, OFFICIAL RECORDS OF SAID COUNTY, SAID POINT BEING THE BEGINNING OF A NON-TANGENT CURVE CONCAVE NORTHWESTERLY AND HAVING A RADIUS OF 1034.00 FEET; THENCE ALONG SAID CURVE AND SAID SOUTH LINE FROM A TANGENT BEARING OF SOUTH 54°20'59" WEST, THROUGH A CENTRAL ANGLE OF 04°13'01", AN ARC DISTANCE OF 76.10 FEET; THENCE SOUTH 58°34'00" WEST, 83.86 FEET; THENCE LEAVING SAID SOUTH LINE SOUTH 44°30'21" EAST, 60.37 FEET; THENCE SOUTH 44°54'35" EAST, 45.06 FEET; THENCE SOUTH 44°31'24" EAST 122.92 FEET; THENCE SOUTH 38°21'44" EAST, 48.00 FEET TO THE POINT OF BEGINNING.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 inch = 30 ft.

REGISTERED PROFESSIONAL ENGINEER SAM A. KABBARDY C053038 CIVIL STATE OF CALIFORNIA



VICINITY MAP
NTS

OWNER:
FATHI MANASRAH, P.E.
AL-WAAFA FAMILY TRUST
9319 ALTA CRESTA AVENUE
RIVERSIDE, CA 92508
TEL. (951) 581-2330

CIVIL ENGINEER:
SAKE ENGINEERS, INC.
400 S. RAMONA AVE. STE. 202
CORONA, CA 92879
TEL. (951) 279-4041

ARCHITECT:
A.K.A. & ASSOCIATES INC.
BUILDING DESIGNERS / ENGINEERS
2222 KANSAS AVE. SUITE K
RIVERSIDE , CA . 92507
(951) 684-4222

SOIL ENGINEER:
HAYTHAM NABILSI, GE 2375
GEOMAT TESTING LABORATORIES, INC.
9980 INDIANA AVENUE, SUITE 14
RIVERSIDE, CA 92503

EARTHWORK QUANTITIES:

CUT = 3570 ±C.Y.
FILL = 2194 ±C.Y.
SUBSIDENCE = 1376 ±C.Y.

DISTURBED AREA:

TOTAL DISTURBED AREA: 90,853 SQFT = 2.09 ACRES

ZONING INFO

GROSS AREA: 90853 SQ. FT. (2.09 AC)
ADJUSTED GROSS AREA (LESS STREET = 23605 SQ. FT) = 67248 SQ. FT. (1.54 AC)
EXISTING LAND USE – VACANT
EXISTING ZONING: R-1-7.2
GENERAL PLAN DESIGNATION=LDR (3-6 D.U./ AC.)
PROPOSED DENSITY=2.87 D.U. /AC.
PROPOSED LAND USE – SINGLE FAMILY RESIDENTIAL

REVISIONS	DATE	BY

TENTATIVE TRACT 36864

TENTATIVE MAP
CITY OF CORONA

SCALE 1" = 30'	SAKE ENGINEERS, INC.	J.N. 3360
DATE 3-22-2023	ENGINEERING • SURVEYING • LAND DEVELOPMENT	SHEET 1
DRAWN: RL	400 S. RAMONA AVE., STE. 202 CORONA, CALIFORNIA 92879 (951) 279-4041 FAX: (951) 279-2830	OF 1 SHEETS
DESIGNED: SA	PREPARED BY: R.C.E. NO. 53038	DWG. NO.
CHECKED: SA		
PLN CK REF:	DATE:	

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

Eilar Associates, Inc.
Acoustical and Environmental Consulting Services

Appendix B

Applicable Noise Regulations

noise level standard applicable to the zone shall apply.

(c) If the intruding noise is continuous and cannot be reasonably discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the source is in operation shall be compared directly to the allowable noise level standards as specified respective to the measurement location's designated land use and for the time of the day the noise level is measured. The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the Code Enforcement Officer for the purpose of establishing the existing ambient noise level at the measurement location.

(d) Exterior noise:

1. It shall be unlawful for any person, entity or operation at any location within the incorporated area of the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property to exceed:

a. The noise standard for a cumulative period of more than 30 minutes in any hour;

b. The noise standard plus 5 dB for a cumulative period of more than 15 minutes in any hour;

c. The noise standard plus 10 dB for a cumulative period of more than five minutes in any hour;

d. The noise standard plus 15 dB for a cumulative period of more than one minute in any hour; or

e. The noise standard plus 20 dB for any period of time.

2. In the event the ambient noise level exceeds any of the first four noise limit categories above, the cumulative period applicable to the category shall be increased to reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

(e) Interior noise. It shall be unlawful for any person at any location within the incorporated area of the city to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such a person which causes the noise level when measured within any other residential dwelling unit or sensitive land use to exceed:

1. The noise standard for a cumulative period of more than five minutes in any hour;

2. The noise standard plus 5 dB for a cumulative period of more than one minute in any hour; or

3. The noise standard plus 10 dB, or the maximum measured ambient, for any period of time.

(3) Transportation noise sources.

TABLE 2
TRANSPORTATION NOISE SOURCE STANDARDS

	EXTERIOR NOISE LEVEL	INTERIOR NOISE LEVEL

TYPE OF LAND USE	(Private Outdoor Living Areas)	
Residential (Roadway)	65 CNEL	45 CNEL
Residential (Airport)	65 CNEL	45 CNEL
Other sensitive land uses (Roadway)	65 CNEL	45 CNEL
Other sensitive land uses (Airport)	65 CNEL	45 CNEL
Hotels/Motels (Roadway)	65 CNEL	45 CNEL
Hotels/Motels (Airport)	65 CNEL	45 CNEL

(a) **Roadway noise**. A noise study shall be performed prior to the construction of new master planned roads, roadway improvements, rail lines and/or prior to the construction of residential or sensitive land uses adjacent to existing or master planned roads or railways. The noise study shall identify the existing and future noise contours for the roadway and propose mitigation measures to reduce the noise impacts to a maximum of 65 dBA CNEL in the private outdoor living area of residences and to a maximum interior noise level of 45 dBA CNEL for residential and sensitive land uses, as shown in Table 2.

(b) **Airport noise**. Sensitive land uses, site-built homes and institutional uses are prohibited in airport noise contours above 65 dBA CNEL. All subdivisions within two miles of the Corona Municipal Airport or within the 65 dBA CNEL contour shall show and record an avigation easement for the benefit of the airport. The avigation easement shall provide notification to potential buyers and occupants of the presence of the easement and the potential for over flights and aircraft noise.

(D) **Special provisions**.

(1) **Mechanical equipment in residential zones**. Upon application for a building permit to install mechanical equipment such as air conditioners and pool equipment in a residential zone, the equipment shall be setback at least ten feet from an adjoining property line except where a five foot block sound wall is maintained extending a distance of two feet on each side of such equipment and situated either between such equipment and the property line or on said property line.

(2) **Construction noise**. Construction noise is prohibited between the hours of 8:00 p.m. to 7:00 a.m., Monday through Saturday and 6:00 p.m. to 10:00 a.m. on Sundays and federal holidays. Construction noise is defined as noise which is disturbing, excessive or offensive and constitutes a nuisance involving discomfort or annoyance to persons of normal sensitivity residing in the area, which is generated by the use of any tools, machinery or equipment used in connection with construction operations.

(3) **Noise devices**. In accordance with Chapter 9.24, no loudspeaker, bells, gongs, buzzers, mechanical equipment or other sounds, attention-attracting or communication device associated with any use adjacent to residential or sensitive land uses shall be discernible beyond the boundary line of the parcel, except fire protection devices, burglar alarms and church bells. Noise generated by these sources shall be enforced by the Police Department.

(4) **Noisy animals**. Noise generated by animals shall be regulated by the Police Department in accordance with Chapter 6.11.

(E) **Exemptions**. The following activities shall be exempt from these noise standards:

Eilar Associates, Inc.
Acoustical and Environmental Consulting Services

Appendix C

CadnaA Analysis Data and Results

Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025-4230
Phone: (760) 738-5570
Date: 11 Apr 2023

Calculation Configuration

Configuration	
Parameter	Value
General	
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	0.75
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	Sel.	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)				(ft)		(ft)	(ft)	(ft)
Cal 1				63.0	-75.6	0.0	0.0		x	Total	4.99	r	1123.82	658.96	612.63
Cal 2				64.0	-75.1	0.0	0.0		x	Total	4.99	r	1005.61	901.31	604.99

Roads

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)
I-15 NB			RO_1	77.8	0.0	0.0			6240.0	0.0	0.0	5.6	0.0	0.0	65		12	0.0	1	0.0	0.0		
I-15 SB			RO_2	77.8	0.0	0.0			6240.0	0.0	0.0	5.6	0.0	0.0	65		12	0.0	1	0.0	0.0		

Geometry - Roads

Name	Height				Coordinates				Dist	LSlope
	Begin		End		x	y	z	Ground	(ft)	(%)
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)		
I-15 NB					2152.23	-81.36	642.91	642.91		
					1519.36	794.95	639.99	639.99		
					1243.77	1164.70	631.69	631.69		
					907.81	1648.29	619.00	619.00		
					752.95	1971.13	619.00	619.00		
I-15 SB					639.76	1928.48	619.09	619.09		
					792.32	1610.89	619.09	619.09		
					999.67	1293.31	625.00	625.00		
					1291.67	895.34	634.84	634.84		
					1486.55	639.44	640.09	640.09		
					1884.84	126.97	638.12	638.12		
					2044.95	-86.61	639.44	639.44		

Barriers

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height	
				left	right		horz.	vert.	Begin	End
						(ft)	(ft)	(ft)	(ft)	(ft)

Geometry - Barriers

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
											1127.30	1073.49	634.97	629.99
											1166.99	1017.72	634.97	629.99

Terrain Contours

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)
600					600.07		957.68	911.42	600.07
							960.63	818.90	600.07
							999.67	701.44	600.07
							1045.93	620.08	600.07
							1055.12	591.54	600.07
							1045.93	493.44	600.07
							1078.41	450.13	600.07
							1108.60	445.54	600.07
							1171.26	357.28	600.07
610					609.91		1073.82	936.35	609.91
							1076.44	843.50	609.91
							1115.81	726.05	609.91
							1161.75	644.69	609.91
							1171.26	616.14	609.91
							1161.75	518.04	609.91
							1194.55	474.74	609.91
							1224.41	470.14	609.91
							1287.07	382.22	609.91
620					620.08		1126.64	989.50	620.08
							1134.84	889.44	620.08
							1220.14	676.18	620.08
							1262.80	626.64	620.08
							1294.95	602.69	620.08
							1278.87	532.15	620.08
							1436.35	264.11	620.08
630-1					629.92		1185.37	936.35	629.92
							1209.65	849.41	629.92
							1288.06	672.24	629.92
							1348.10	626.64	629.92
							1342.85	577.43	629.92
							1340.22	533.46	629.92
							1532.15	226.71	629.92
630-2					629.92		961.94	1283.14	629.92
							1166.34	1014.76	629.92
640					640.09		1298.88	788.06	640.09
							1369.42	661.42	640.09
							1406.82	583.99	640.09
							1450.79	545.60	640.09
							1481.63	461.61	640.09
							1717.52	180.12	640.09
freeway							1163.27	1011.63	629.92
							1254.76	876.87	634.84
							1449.65	620.96	640.09
							1847.94	108.50	638.12

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)
							2008.04	-105.09	639.44

Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025-4230
Phone: (760) 738-5570
Date: 11 Apr 2023

Calculation Configuration

Configuration	
Parameter	Value
General	
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	0.75
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	Sel.	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)				(ft)		(ft)	(ft)	(ft)
Cal 1				59.9	-76.9	0.0	0.0		x	Total	5.00	r	1123.82	658.96	612.64
Cal 2				63.4	-75.4	0.0	0.0		x	Total	5.00	r	1005.61	901.31	605.00

Roads

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)
I-15 NB			RO_1	78.5	0.0	0.0			7268.0	0.0	0.0	5.6	0.0	0.0	65		12	0.0	1	0.0	0.0		
I-15 SB			RO_2	78.5	0.0	0.0			7268.0	0.0	0.0	5.6	0.0	0.0	65		12	0.0	1	0.0	0.0		

Geometry - Roads

Name	Height				Coordinates				Dist	LSlope
	Begin		End		x	y	z	Ground	(ft)	(%)
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)		
I-15 NB					2152.23	-81.36	642.91	642.91		
					1519.36	794.95	639.99	639.99		
					1243.77	1164.70	631.69	631.69		
					907.81	1648.29	619.00	619.00		
					752.95	1971.13	619.00	619.00		
I-15 SB					639.76	1928.48	619.09	619.09		
					792.32	1610.89	619.09	619.09		
					999.67	1293.31	625.00	625.00		
					1291.67	895.34	634.84	635.00		
					1486.55	639.44	640.09	635.00		
					1884.84	126.97	638.12	638.12		
					2044.95	-86.61	639.44	639.44		

Barriers

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height	
				left	right		horz.	vert.	Begin	End
						(ft)	(ft)	(ft)	(ft)	(ft)
		+								

Geometry - Barriers

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
											1128.12	1072.94	635.00	630.00
											1165.22	1021.56	635.00	630.00
											1197.48	974.54	640.00	635.00
											1209.09	925.59	640.00	635.00
		+									1208.55	926.59	653.00	640.00
											1374.59	689.58	653.00	640.00
											1559.24	436.03	653.00	640.00

Terrain Contours

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)
600					600.07		957.68	911.42	600.07
							960.63	818.90	600.07
							999.67	701.44	600.07
							1045.93	620.08	600.07
							1055.12	591.54	600.07
							1045.93	493.44	600.07
							1078.41	450.13	600.07
							1108.60	445.54	600.07
							1171.26	357.28	600.07
610					609.91		1073.82	936.35	609.91
							1041.65	814.91	609.91
							1115.81	726.05	609.91
							1161.75	644.69	609.91
							1171.26	616.14	609.91
							1161.75	518.04	609.91
							1194.55	474.74	609.91
							1224.41	470.14	609.91
							1287.07	382.22	609.91
630-2					629.92		961.94	1283.14	629.92
							1166.34	1014.76	629.92
lot 1					606.00		999.28	862.47	606.00
							1015.40	842.43	606.00
							1038.90	814.59	606.00
							1116.07	885.90	606.00
							1073.69	925.17	606.00
							999.97	861.44	606.00
lot 2					608.50		1044.06	818.38	608.50
							1083.68	770.49	608.50
							1160.85	841.81	608.50
							1118.48	881.08	608.50
							1044.75	817.35	608.50
lot 3					613.50		1100.91	775.32	613.50
							1127.78	716.41	613.50
							1200.81	784.96	613.50
							1165.67	838.36	613.50
							1100.56	774.28	613.50
lot 4					615.00		1132.94	712.62	615.00
							1174.97	660.94	615.00
							1247.32	729.15	615.00
							1203.57	782.55	615.00
							1132.26	711.24	615.00
lot 5					615.50		1176.35	660.25	615.50
							1229.40	606.17	615.50
							1296.58	654.74	615.50

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)
							1249.04	722.61	615.50
							1178.76	657.84	615.50
lot 6					616.50		1233.88	603.07	616.50
							1260.75	571.37	616.50
							1348.60	535.55	616.50
							1357.56	537.61	616.50
							1369.27	547.95	616.50
							1302.09	652.33	616.50
							1232.85	603.41	616.50
lot 7					618.00		1356.52	526.25	618.00
							1356.87	459.41	618.00
							1387.53	404.29	618.00
							1443.68	447.70	618.00
							1376.50	541.06	618.00
							1356.87	525.90	618.00
635					635.00		1366.73	662.45	635.00
							1354.71	678.30	635.00
							1320.81	731.33	635.00
							1302.77	759.76	635.00
							1243.17	846.15	635.00
							1198.34	910.11	635.00
							1196.16	925.42	635.00
							1186.86	954.94	635.00
							1186.19	963.53	635.00
							1195.61	971.35	635.00
640					640.00		1545.52	436.69	640.00
							1457.50	569.00	640.00
							1385.33	664.13	640.00
							1297.75	792.88	640.00
							1209.13	921.43	640.00
							1197.22	969.38	640.00
620					620.00		1491.94	395.14	620.00
							1455.31	449.27	620.00
							1302.78	677.25	620.00
							1247.15	753.39	620.00
							1222.27	793.57	620.00
							1205.74	818.03	620.00
							1182.14	853.67	620.00
							1175.94	864.52	620.00
							1167.16	878.47	620.00
							1158.69	894.33	620.00
							1153.77	906.36	620.00
							1152.40	945.17	620.00
							1154.86	1009.69	620.00
630					630.00		1514.44	414.49	630.00
							1434.61	536.96	630.00

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)
							1336.75	675.28	630.00
							1239.97	821.26	630.00
							1181.39	911.52	630.00
							1175.75	944.07	630.00
							1172.30	990.91	630.00
							1177.12	999.18	630.00
635					635.00		1198.19	976.10	635.00
							1571.39	472.72	635.00

Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025-4230
Phone: (760) 738-5570
Date: 11 Apr 2023

Calculation Configuration

Configuration	
Parameter	Value
General	
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	0.75
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	Sel.	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)				(ft)		(ft)	(ft)	(ft)
Cal 1				61.3	-76.9	0.0	0.0		x	Total	5.00	r	1123.82	658.96	612.64
Cal 2				64.7	-75.4	0.0	0.0		x	Total	5.00	r	1005.61	901.31	605.00

Roads

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)
I-15 NB			RO_1	79.8	0.0	0.0			9894.0	0.0	0.0	5.6	0.0	0.0	65		12	0.0	1	0.0	0.0		
I-15 SB			RO_2	79.8	0.0	0.0			9894.0	0.0	0.0	5.6	0.0	0.0	65		12	0.0	1	0.0	0.0		

Geometry - Roads

Name	Height				Coordinates				Dist	LSlope
	Begin		End		x	y	z	Ground	(ft)	(%)
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)		
I-15 NB					2152.23	-81.36	642.91	642.91		
					1519.36	794.95	639.99	639.99		
					1243.77	1164.70	631.69	631.69		
					907.81	1648.29	619.00	619.00		
					752.95	1971.13	619.00	619.00		
I-15 SB					639.76	1928.48	619.09	619.09		
					792.32	1610.89	619.09	619.09		
					999.67	1293.31	625.00	625.00		
					1291.67	895.34	634.84	635.00		
					1486.55	639.44	640.09	635.00		
					1884.84	126.97	638.12	638.12		
					2044.95	-86.61	639.44	639.44		

Barriers

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height			
				left	right		horz.	vert.	Begin		End	
						(ft)	(ft)	(ft)	(ft)		(ft)	
		+										

Geometry - Barriers

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height				Coordinates			
				left	right		horz.	vert.	Begin		End		x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
													1128.12	1072.94	635.00	630.00
													1165.22	1021.56	635.00	630.00
													1197.48	974.54	640.00	635.00
													1209.09	925.59	640.00	635.00
		+											1208.55	926.59	653.00	640.00
													1374.59	689.58	653.00	640.00
													1559.24	436.03	653.00	640.00

Terrain Contours

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)
600					600.07		957.68	911.42	600.07
							960.63	818.90	600.07
							999.67	701.44	600.07
							1045.93	620.08	600.07
							1055.12	591.54	600.07
							1045.93	493.44	600.07
							1078.41	450.13	600.07
							1108.60	445.54	600.07
							1171.26	357.28	600.07
610					609.91		1073.82	936.35	609.91
							1041.65	814.91	609.91
							1115.81	726.05	609.91
							1161.75	644.69	609.91
							1171.26	616.14	609.91
							1161.75	518.04	609.91
							1194.55	474.74	609.91
							1224.41	470.14	609.91
							1287.07	382.22	609.91
630-2					629.92		961.94	1283.14	629.92
							1166.34	1014.76	629.92
lot 1					606.00		999.28	862.47	606.00
							1015.40	842.43	606.00
							1038.90	814.59	606.00
							1116.07	885.90	606.00
							1073.69	925.17	606.00
							999.97	861.44	606.00
lot 2					608.50		1044.06	818.38	608.50
							1083.68	770.49	608.50
							1160.85	841.81	608.50
							1118.48	881.08	608.50
							1044.75	817.35	608.50
lot 3					613.50		1100.91	775.32	613.50
							1127.78	716.41	613.50
							1200.81	784.96	613.50
							1165.67	838.36	613.50
							1100.56	774.28	613.50
lot 4					615.00		1132.94	712.62	615.00
							1174.97	660.94	615.00
							1247.32	729.15	615.00
							1203.57	782.55	615.00
							1132.26	711.24	615.00
lot 5					615.50		1176.35	660.25	615.50
							1229.40	606.17	615.50
							1296.58	654.74	615.50

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)
							1249.04	722.61	615.50
							1178.76	657.84	615.50
lot 6					616.50		1233.88	603.07	616.50
							1260.75	571.37	616.50
							1348.60	535.55	616.50
							1357.56	537.61	616.50
							1369.27	547.95	616.50
							1302.09	652.33	616.50
							1232.85	603.41	616.50
lot 7					618.00		1356.52	526.25	618.00
							1356.87	459.41	618.00
							1387.53	404.29	618.00
							1443.68	447.70	618.00
							1376.50	541.06	618.00
							1356.87	525.90	618.00
635					635.00		1366.73	662.45	635.00
							1354.71	678.30	635.00
							1320.81	731.33	635.00
							1302.77	759.76	635.00
							1243.17	846.15	635.00
							1198.34	910.11	635.00
							1196.16	925.42	635.00
							1186.86	954.94	635.00
							1186.19	963.53	635.00
							1195.61	971.35	635.00
640					640.00		1545.52	436.69	640.00
							1457.50	569.00	640.00
							1385.33	664.13	640.00
							1297.75	792.88	640.00
							1209.13	921.43	640.00
							1197.22	969.38	640.00
620					620.00		1491.94	395.14	620.00
							1455.31	449.27	620.00
							1302.78	677.25	620.00
							1247.15	753.39	620.00
							1222.27	793.57	620.00
							1205.74	818.03	620.00
							1182.14	853.67	620.00
							1175.94	864.52	620.00
							1167.16	878.47	620.00
							1158.69	894.33	620.00
							1153.77	906.36	620.00
							1152.40	945.17	620.00
							1154.86	1009.69	620.00
630					630.00		1514.44	414.49	630.00
							1434.61	536.96	630.00

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)
							1336.75	675.28	630.00
							1239.97	821.26	630.00
							1181.39	911.52	630.00
							1175.75	944.07	630.00
							1172.30	990.91	630.00
							1177.12	999.18	630.00
635					635.00		1198.19	976.10	635.00
							1571.39	472.72	635.00

Eilar Associates, Inc.
210 South Juniper Street, Suite 100
Escondido, California 92025-4230
Phone: (760) 738-5570
Date: 11 Apr 2023

Calculation Configuration

Configuration	
Parameter	Value
General	
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	0.75
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	Sel.	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)				(ft)		(ft)	(ft)	(ft)
Cal 1				54.3	-78.7	0.0	0.0		x	Total	5.00	r	1123.82	658.96	612.64
Cal 2				64.5	-75.7	0.0	0.0		x	Total	5.00	r	1005.61	901.31	605.00
OU1				64.8	-75.5	0.0	0.0		x	Total	5.00	r	1080.13	888.20	611.00
OU2				63.9	-75.8	0.0	0.0		x	Total	5.00	r	1128.70	846.52	613.50
OU3				62.8	-76.0	0.0	0.0		x	Total	5.00	r	1173.70	807.29	618.50
OU4				61.6	-76.6	0.0	0.0		x	Total	5.00	r	1217.10	748.26	620.00
OU5				60.4	-77.1	0.0	0.0		x	Total	5.00	r	1265.32	685.19	620.50
OU6				58.9	-77.3	0.0	0.0		x	Total	5.00	r	1320.48	605.64	621.50
OU7				60.3	-77.1	0.0	0.0		x	Total	5.00	r	1410.71	480.32	623.00
F1-1				64.1	-76.4	0.0	0.0		x	Total	5.00	r	1031.35	881.38	611.00
F1-2				64.9	-75.5	0.0	0.0		x	Total	5.00	r	1062.70	883.44	611.00
F1-3				55.9	-79.1	0.0	0.0		x	Total	5.00	r	1057.53	852.78	611.00
F1-4				41.3	-80.2	0.0	0.0		x	Total	5.00	r	1027.91	853.82	611.00
F1-1-2				65.4	-76.2	0.0	0.0		x	Total	15.00	r	1031.35	881.38	621.00
F1-2-2				66.2	-75.5	0.0	0.0		x	Total	15.00	r	1062.70	883.44	621.00
F1-3-2				55.7	-79.2	0.0	0.0		x	Total	15.00	r	1057.53	852.78	621.00
F1-4-2				47.4	-79.9	0.0	0.0		x	Total	15.00	r	1027.91	853.82	621.00
F2-1				63.2	-76.9	0.0	0.0		x	Total	5.00	r	1079.91	833.04	613.50
F2-2				63.9	-76.0	0.0	0.0		x	Total	5.00	r	1112.02	834.34	613.50
F2-3				53.6	-79.1	0.0	0.0		x	Total	5.00	r	1108.12	803.53	613.50
F2-4				41.0	-80.2	0.0	0.0		x	Total	5.00	r	1076.66	803.53	613.50
F2-1-2				64.4	-76.8	0.0	0.0		x	Total	15.00	r	1079.91	833.04	623.50
F2-2-2				64.9	-76.1	0.0	0.0		x	Total	15.00	r	1112.02	834.34	623.50
F2-3-2				54.8	-79.0	0.0	0.0		x	Total	15.00	r	1108.12	803.53	623.50
F2-4-2				47.5	-79.9	0.0	0.0		x	Total	15.00	r	1076.66	803.53	623.50
F3-1				61.4	-77.5	0.0	0.0		x	Total	5.00	r	1128.73	782.05	618.50
F3-2				63.2	-76.2	0.0	0.0		x	Total	5.00	r	1159.76	781.84	618.50
F3-3				53.7	-79.1	0.0	0.0		x	Total	5.00	r	1153.25	750.81	618.50
F3-4				39.8	-80.2	0.0	0.0		x	Total	5.00	r	1123.96	752.11	618.50
F3-1-2				64.0	-77.0	0.0	0.0		x	Total	15.00	r	1128.73	782.05	628.50
F3-2-2				64.4	-76.2	0.0	0.0		x	Total	15.00	r	1159.76	781.84	628.50
F3-3-2				55.0	-79.1	0.0	0.0		x	Total	15.00	r	1153.25	750.81	628.50
F3-4-2				46.9	-79.9	0.0	0.0		x	Total	15.00	r	1123.96	752.11	628.50
F4-1				58.7	-78.2	0.0	0.0		x	Total	5.00	r	1174.51	728.25	620.00
F4-2				61.5	-76.8	0.0	0.0		x	Total	5.00	r	1206.56	730.36	620.00
F4-3				40.8	-80.2	0.0	0.0		x	Total	5.00	r	1170.05	699.71	620.00
F4-4				55.2	-79.0	0.0	0.0		x	Total	5.00	r	1200.01	697.99	620.00
F4-1-2				60.0	-78.1	0.0	0.0		x	Total	15.00	r	1174.51	728.25	630.00
F4-2-2				63.2	-76.6	0.0	0.0		x	Total	15.00	r	1206.56	730.36	630.00
F4-3-2				48.5	-79.8	0.0	0.0		x	Total	15.00	r	1170.05	699.71	630.00
F4-4-2				56.1	-78.9	0.0	0.0		x	Total	15.00	r	1200.01	697.99	630.00
F5-1				55.1	-78.8	0.0	0.0		x	Total	5.00	r	1221.31	670.11	620.50
F5-2				60.1	-77.1	0.0	0.0		x	Total	5.00	r	1254.12	671.20	620.50
F5-3				53.8	-79.2	0.0	0.0		x	Total	5.00	r	1247.56	636.21	620.50

Name	Sel.	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)				(ft)		(ft)	(ft)	(ft)
F5-4				38.1	-80.2	0.0	0.0		x	Total	5.00	r	1216.39	641.13	620.50
F5-1-2				56.9	-78.8	0.0	0.0		x	Total	15.00	r	1221.31	670.11	630.50
F5-2-2				62.3	-76.9	0.0	0.0		x	Total	15.00	r	1254.12	671.20	630.50
F5-3-2				55.8	-79.1	0.0	0.0		x	Total	15.00	r	1247.56	636.21	630.50
F5-4-2				45.9	-80.0	0.0	0.0		x	Total	15.00	r	1216.39	641.13	630.50
F6-1				54.7	-78.9	0.0	0.0		x	Total	5.00	r	1269.42	609.97	621.50
F6-2				59.5	-77.2	0.0	0.0		x	Total	5.00	r	1301.68	612.16	621.50
F6-3				57.3	-78.6	0.0	0.0		x	Total	5.00	r	1296.76	579.36	621.50
F6-4				39.5	-80.2	0.0	0.0		x	Total	5.00	r	1266.69	579.90	621.50
F6-1-2				56.3	-78.8	0.0	0.0		x	Total	15.00	r	1269.42	609.97	631.50
F6-2-2				61.9	-77.1	0.0	0.0		x	Total	15.00	r	1301.68	612.16	631.50
F6-3-2				60.2	-78.2	0.0	0.0		x	Total	15.00	r	1296.76	579.36	631.50
F6-4-2				47.4	-79.9	0.0	0.0		x	Total	15.00	r	1266.69	579.90	631.50
F7-1				56.4	-78.4	0.0	0.0		x	Total	5.00	r	1372.75	471.65	623.00
F7-2				61.7	-76.9	0.0	0.0		x	Total	5.00	r	1406.65	471.65	623.00
F7-3				62.0	-77.3	0.0	0.0		x	Total	5.00	r	1401.73	439.94	623.00
F7-4				42.3	-80.2	0.0	0.0		x	Total	5.00	r	1369.47	440.49	623.00
F7-1-2				58.2	-78.3	0.0	0.0		x	Total	15.00	r	1372.75	471.65	633.00
F7-2-2				64.8	-76.2	0.0	0.0		x	Total	15.00	r	1406.65	471.65	633.00
F7-3-2				64.8	-76.7	0.0	0.0		x	Total	15.00	r	1401.73	439.94	633.00
F7-4-2				50.2	-79.6	0.0	0.0		x	Total	15.00	r	1369.47	440.49	633.00

Roads

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface			Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)
I-15 NB			RO_1	79.8	0.0	0.0			9894.0	0.0	0.0	5.6	0.0	0.0	65		12	0.0	1	0.0	0.0		
I-15 SB			RO_2	79.8	0.0	0.0			9894.0	0.0	0.0	5.6	0.0	0.0	65		12	0.0	1	0.0	0.0		

Geometry - Roads

Name	Height				Coordinates				Dist	LSlope
	Begin		End		x	y	z	Ground	(ft)	(%)
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)		
I-15 NB					2152.23	-81.36	642.91	642.91		
					1519.36	794.95	639.99	639.99		
					1243.77	1164.70	631.69	631.69		
					907.81	1648.29	619.00	619.00		
					752.95	1971.13	619.00	619.00		
I-15 SB					639.76	1928.48	619.09	619.09		
					792.32	1610.89	619.09	619.09		
					999.67	1293.31	625.00	625.00		
					1291.67	895.34	634.84	635.00		
					1486.55	639.44	640.09	635.00		
					1884.84	126.97	638.12	638.12		
					2044.95	-86.61	639.44	639.44		

Barriers

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height			
				left	right		horz.	vert.	Begin		End	
						(ft)	(ft)	(ft)	(ft)		(ft)	
		+										

Geometry - Barriers

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height				Coordinates			
				left	right		horz.	vert.	Begin		End		x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
													1128.12	1072.94	635.00	630.00
													1165.22	1021.56	635.00	630.00
													1197.48	974.54	640.00	635.00
													1209.09	925.59	640.00	635.00
		+											1208.55	926.59	653.00	640.00
													1374.59	689.58	653.00	640.00
													1559.24	436.03	653.00	640.00

Buildings

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	
							Begin	
							(ft)	
Lot 1				x	0		20.00	r
Lot 2				x	0		20.00	r
Lot 3				x	0		20.00	r
Lot 4				x	0		20.00	r
Lot 5				x	0		20.00	r
Lot 6				x	0		20.00	r
Lot 7				x	0		20.00	r

Geometry - Buildings

Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinates			
							Begin		x	y	z	Ground
							(ft)		(ft)	(ft)	(ft)	(ft)
Lot 1				x	0		20.00	r	1017.83	868.61	626.00	606.00
									1040.39	840.41	626.00	606.00
									1074.67	867.31	626.00	606.00
									1051.68	895.51	626.00	606.00
Lot 2				x	0		20.00	r	1066.40	819.35	628.50	608.50
									1088.97	791.14	628.50	608.50
									1123.25	818.05	628.50	608.50
									1100.25	846.25	628.50	608.50
Lot 3				x	0		20.00	r	1113.70	767.71	633.50	613.50
									1136.26	739.51	633.50	613.50
									1170.54	766.41	633.50	613.50
									1147.55	794.62	633.50	613.50
Lot 4				x	0		20.00	r	1160.56	714.77	635.00	615.00
									1183.13	686.57	635.00	615.00
									1217.41	713.47	635.00	615.00
									1194.41	741.68	635.00	615.00
Lot 5				x	0		20.00	r	1207.43	654.89	635.50	615.50
									1229.99	626.69	635.50	615.50
									1264.27	653.59	635.50	615.50
									1241.27	681.80	635.50	615.50
Lot 6				x	0		20.00	r	1256.89	595.45	636.50	616.50
									1279.46	567.24	636.50	616.50
									1313.74	594.14	636.50	616.50
									1290.74	622.35	636.50	616.50
Lot 7				x	0		20.00	r	1360.17	456.59	638.00	618.00
									1382.73	428.39	638.00	618.00
									1417.01	455.29	638.00	618.00
									1394.01	483.49	638.00	618.00

Terrain Contours

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)
lot 1					606.00		999.28	862.47	606.00
							1015.40	842.43	606.00
							1038.90	814.59	606.00
							1116.07	885.90	606.00
							1073.69	925.17	606.00
							999.97	861.44	606.00
lot 2					608.50		1044.06	818.38	608.50
							1083.68	770.49	608.50
							1160.85	841.81	608.50
							1118.48	881.08	608.50
							1044.75	817.35	608.50
lot 3					613.50		1100.91	775.32	613.50
							1127.78	716.41	613.50
							1200.81	784.96	613.50
							1165.67	838.36	613.50
							1100.56	774.28	613.50
lot 4					615.00		1132.94	712.62	615.00
							1174.97	660.94	615.00
							1247.32	729.15	615.00
							1203.57	782.55	615.00
							1132.26	711.24	615.00
lot 5					615.50		1176.35	660.25	615.50
							1229.40	606.17	615.50
							1296.58	654.74	615.50
							1249.04	722.61	615.50
							1178.76	657.84	615.50
lot 6					616.50		1233.88	603.07	616.50
							1260.75	571.37	616.50
							1348.60	535.55	616.50
							1357.56	537.61	616.50
							1369.27	547.95	616.50
							1302.09	652.33	616.50
							1232.85	603.41	616.50
lot 7					618.00		1356.52	526.25	618.00
							1356.87	459.41	618.00
							1387.53	404.29	618.00
							1443.68	447.70	618.00
							1376.50	541.06	618.00
							1356.87	525.90	618.00
600					600.07		957.68	911.42	600.07
							960.63	818.90	600.07
							999.67	701.44	600.07
							1045.93	620.08	600.07
							1055.12	591.54	600.07

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)
							1045.93	493.44	600.07
							1078.41	450.13	600.07
							1108.60	445.54	600.07
							1171.26	357.28	600.07
610					609.91		1073.82	936.35	609.91
							1041.65	814.91	609.91
							1115.81	726.05	609.91
							1161.75	644.69	609.91
							1171.26	616.14	609.91
							1161.75	518.04	609.91
							1194.55	474.74	609.91
							1224.41	470.14	609.91
							1287.07	382.22	609.91
630-2					629.92		961.94	1283.14	629.92
							1166.34	1014.76	629.92
635					635.00		1366.73	662.45	635.00
							1354.71	678.30	635.00
							1320.81	731.33	635.00
							1302.77	759.76	635.00
							1243.17	846.15	635.00
							1198.34	910.11	635.00
							1196.16	925.42	635.00
							1186.86	954.94	635.00
							1186.19	963.53	635.00
							1195.61	971.35	635.00
640					640.00		1545.52	436.69	640.00
							1457.50	569.00	640.00
							1385.33	664.13	640.00
							1297.75	792.88	640.00
							1209.13	921.43	640.00
							1197.22	969.38	640.00
620					620.00		1491.94	395.14	620.00
							1455.31	449.27	620.00
							1302.78	677.25	620.00
							1247.15	753.39	620.00
							1222.27	793.57	620.00
							1205.74	818.03	620.00
							1182.14	853.67	620.00
							1175.94	864.52	620.00
							1167.16	878.47	620.00
							1158.69	894.33	620.00
							1153.77	906.36	620.00
							1152.40	945.17	620.00
							1154.86	1009.69	620.00
630					630.00		1514.44	414.49	630.00
							1434.61	536.96	630.00

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)
							1336.75	675.28	630.00
							1239.97	821.26	630.00
							1181.39	911.52	630.00
							1175.75	944.07	630.00
							1172.30	990.91	630.00
							1177.12	999.18	630.00
635					635.00		1198.19	976.10	635.00
							1571.39	472.72	635.00