Noise Study Report

Interstate 10 Corridor Project

In the Counties of San Bernardino and Los Angeles

07-LA-10 PM 44.9/48.3
08-SBD-10 PM 0.0/R37.0

EA 0C2500
EFIS ID 0800000040

July 2015

Caltrans

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Prepared By: _____ Date: 7/10/15
Greg J. Berg
Senior Noise and Vibration Specialist
Phone Number (626) 440-6021
Office Name Pasadena
Company Parsons

Reviewed By: _____ Date: 7/10/15
Areg Gharabegian, P.E.
Principal Task Manager
Phone Number (626) 440-6047
Office Name Pasadena
Company Parsons

PARSONS
100 West Walnut Street, Pasadena, CA 91124

Approved By: _____ Date: 7/14/15
Tony Louka,
Environmental Engineering Branch Chief
Phone Number (909) 383-6385
Office Name Caltrans, San Bernardino
District/Region 8

Summary

The purpose of this Noise Study Report (NSR) is to evaluate traffic noise impacts and abatement under the requirements of Title 23, Part 772 of the Code of Federal Regulations (Title 23 CFR 772) "Procedures for Abatement of Highway Traffic Noise." Title 23 CFR 772 provides procedures for preparing operational and construction noise studies as well as evaluating noise abatement considered for federal and federal-aid highway projects. According to Title 23 CFR 772.3, all highway projects that are developed in conformance with this regulation are deemed to be in conformance with Federal Highway Administration (FHWA) noise standards.

The California Department of Transportation (Caltrans), in cooperation with the San Bernardino Associated Governments (SANBAG), proposes to add freeway lanes through all or a portion of the 33-mile stretch of Interstate 10 (I-10) from the Los Angeles/San Bernardino (LA/SB) County Line to Ford Street in San Bernardino County. The project limits including transition areas extend from approximately 0.4 miles west of White Avenue in the City of Pomona at Post Mile (PM) 44.9 to Live Oak Canyon Road in the City of Yucaipa at PM 37.0. However, for the purpose of the noise study, the project limits extend from Towne Avenue in the City of Pomona (Los Angeles County) to 0.75 miles east of Ford Street in the City of Redlands (San Bernardino County).

The No-Build Alternative (Alternative 1) and two build alternatives (Alternatives 2 and 3) are under consideration The No-Build Alternative would maintain the existing lane configuration of I-10 within the project limits with no additional mainline lanes or associated improvements to be provided.

Alternative 2 (One High Occupancy Vehicle Lane in Each Direction) would extend the existing high occupancy vehicle (HOV) lane in each direction of I-10 from the current HOV terminus near Haven Avenue in the City of Ontario to Ford Street in the City of Redlands, a distance of approximately 25 miles.

Alternative 3 (Two Express Lanes in Each Direction) would provide two Express Lanes in each direction of I-10 from the LA/SB county line to California Street (near State Route [SR] 210) in the City of Redlands and one Express Lane in each direction from California Street to Ford Street in the City of Redlands for a total of 33 miles. The Express Lanes would be priced managed lanes in which vehicles not meeting the minimum occupancy requirement would pay a toll. West of Haven Avenue, a single new lane would be constructed and combined with the existing HOV lane to provide two Express Lanes in each direction; east of Haven Avenue the Express Lanes would be constructed by the project.

Land uses vary throughout the I-10 project corridor. Single-family and multi-family residences as well as mobile homes were identified as Activity Category B land uses. Five parks, eight schools, five churches, two pre-schools, a community center, a tennis club, a golf course, a picnic, Boomers Entertainment Park, Splash Kingdom Water Park, and a museum area were identified as Activity Category C land uses. Several hotels/motels, schools, places of worship, and a radio station were identified as Activity

Category D land uses. Various hotels/motels, restaurants, and office buildings as well as were identified as Activity Category E land uses. There are also multiple empty lots and some agricultural uses throughout the corridor. The terrain throughout the project corridor varies from the highway being depressed to the highway being elevated compared to the adjacent land uses.

Traffic on I-10 is the dominant source of noise in the study area except for the areas between Etiwanda Channel to Warm Creek where Union Pacific Railroad (UPRR) tracks run parallel to the eastbound I-10 mainline and the area between Rancho Avenue and La Cadena Drive where Burlington Northern Santa Fe (BNSF) tracks run north/south. For these areas, train noise contributions have been considered in the analysis; however, train noise is not considered when determining impacts because train noise is not related to the I-10 project. This NSR analyzes 24 distinct segments that are based on major local interchanges. The 24 segments are:

- Segment 1 –Towne Avenue to Indian Hills Boulevard
- Segment 2 – Indian Hills Boulevard to Monte Vista Avenue
- Segment 3 – Monte Vista Avenue to Central Avenue
- Segment 4 – Central Avenue to Mountain Avenue
- Segment 5 – Mountain Avenue to Euclid Avenue
- Segment 6 – Euclid Avenue to 6th Street
- Segment 7 – 6th Street to 4th Street
- Segment 8 – 4th Street to Vineyard Avenue
- Segment 9 – West of Cherry Avenue to Citrus Avenue
- Segment 10 – Citrus Avenue to Sierra Avenue
- Segment 11 – Sierra Avenue to west of Cedar Avenue
- Segment 12 – Cedar Avenue to South Riverside Avenue
- Segment 13 – South Riverside Avenue to Pepper Avenue
- Segment 14 –Pepper Avenue to Rancho Avenue
- Segment 15 – Rancho Avenue to La Cadena Drive
- Segment 16 – La Cadena Drive to Interstate 215 (I-125)
- Segment 17 – West of Tippecanoe Avenue to Mountain View Avenue
- Segment 18 – Mountain View Avenue to Nevada Street
- Segment 18A – Nevada Street to SR-210
- Segment 19 – Tennessee Street to Orange Street
- Segment 20 – Orange Street to East Cypress Avenue
- Segment 21 – East Cypress Avenue to 0.75 mile east of Ford Street
- Segment 22 – Vineyard Avenue to west of Cherry Avenue
- Segment 23 – I-215 to west of Tippecanoe Avenue

Short-term noise monitoring was conducted at 126 sites in October through December of 2013, May, July, October, November, and December of 2014, and January, March, and June of 2015. Measurements were taken for a duration of 20-minutes at each site. Meteorological conditions (i.e., temperature, wind speed and direction, relative humidity) were logged for each measurement session using a hand-held weather station. Long-term noise monitoring was conducted at 40 locations. Noise measurements were conducted using Larson-Davis Models 812, 820, 824, 870, and LxT1 as well as B&K Model 2250 Type 1 sound level meters. Measured hourly averaged noise levels from both the short-term and long-term sites ranged from 55 to 81 A-weighted decibels (dBA) in the worst noise hour.

Level of service (LOS) C and year 2045 forecasted traffic volumes were used to predict traffic noise levels and analyze noise impacts at receivers located on both sides of I-10. Modeled future build noise levels tended to be higher than existing, measured peak hour noise levels by approximately 1 to 2 decibels (dB).

Because of the constrained configuration and suburban location of the project, abatement in the form of noise barriers is the only abatement measure considered to be practical. Noise barrier analysis was conducted by placing soundwalls at the highway mainline shoulders, on and off-ramp shoulders, and right-of-way (R/W) lines.

This report analyzes noise barriers with heights from 8 to 24 feet to determine feasible noise abatement for Alternatives 2 and 3. Soundwalls are considered feasible when they provide at least 5 dB of noise reduction. The Noise Reduction Design Goal, which is one measure in determining whether a soundwall is reasonable, is achieved when a barrier is predicted to provide a noise reduction of at least 7 dB at one or more benefitted receivers. The project limits of the noise study for Alternative 2 are Cherry Avenue to Nevada Street which includes Segments 9 through 18. The project limits of the noise study for Alternative 3 are Towne Avenue to east of Ford Street which includes Segments 1 through 23. The following summarizes the range of existing and predicted future traffic noise levels, number of impacts, number of soundwalls in each segment, number of benefitted land uses, and range of their reasonable allowances per segment for each alternative.

Alternative 2:

Segment 9:

Existing Exterior Traffic Noise Level Range: 59 to 76 dBA

Existing Exterior Traffic and Train Noise Levels: 58 to 70 dBA

Future Exterior Traffic Noise Level Range: 58 to 74 dBA

Number of Impacts: 55

Number of Proposed Soundwalls: 1

Number of Existing Soundwalls: 1

Number of Benefitted Land Uses: 1

Reasonable Allowance: $71,000

Segment 10:

Existing Exterior Traffic Noise Level Range: 65 to 76 dBA
Existing Exterior Traffic and Train Noise Levels: 62 to 72 dBA
Future Exterior Traffic Noise Level Range: 59 to 76 dBA
Number of Impacts: 52
Number of Proposed Soundwalls: 2
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: 37
Reasonable Allowance Range: $142,000 to $2,343,000

Segment 11:

Existing Exterior Traffic Noise Level Range: 60 to 78 dBA
Existing Interior Traffic Noise Level Range: 35 to 46 dBA
Existing Exterior Traffic and Train Noise Levels: 63 to 65 dBA
Future Exterior Traffic Noise Level Range: 59 to 77 dBA
Future Interior Traffic Noise Level Range: 34 to 46 dBA
Number of Impacts: 166
Number of Proposed Soundwalls: 3
Number of Existing Soundwalls: 1
Number of Benefitted Land Uses: 114
Reasonable Allowance Range: $71,000 to $4,686,000

Segment 12:

Existing Exterior Traffic Noise Level Range: 53 to 73 dBA
Existing Interior Traffic Noise Level Range: 44 to 51 dBA
Future Exterior Traffic Noise Level Range: 55 to 74 dBA
Future Interior Traffic Noise Level Range: 45 to 52 dBA
Number of Impacts: 29
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: 1
Number of Benefitted Land Uses: 4
Reasonable Allowance: $284,000

Segment 13:

Existing Exterior Traffic Noise Level Range: 58 to 69 dBA
Existing Interior Traffic Noise Level Range: 38 to 44 dBA
Future Exterior Traffic Noise Level Range: 60 to 71 dBA
Future Interior Traffic Noise Level Range: 39 to 45 dBA
Number of Impacts: 4
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: 4
Reasonable Allowance Range: $71,000 to $284,000

Segment 14:

Existing Exterior Traffic Noise Level Range: 59 to 75 dBA
Existing Interior Traffic Noise Level: 55 dBA
Future Exterior Traffic Noise Level Range: 62 to 77 dBA
Future Interior Traffic Noise Level: 56 dBA
Number of Impacts: 44
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: 45
Reasonable Allowance Range: $213,000 to $3,195,000

Segment 15:

Existing Exterior Traffic Noise Level Range: 55 to 75 dBA
Future Exterior Traffic Noise Level Range: 58 to 74 dBA
Number of Impacts: 38
Number of Proposed Soundwalls: None
Number of Existing Soundwalls: 1
Number of Benefitted Land Uses: N/A
Reasonable Allowance Range: N/A

Segment 16:

Existing Exterior Traffic Noise Level Range: 55 to 75 dBA
Existing Interior Traffic Noise Level Range: 41 to 46 dBA
Future Exterior Traffic Noise Level Range: 58 to 76 dBA
Future Interior Traffic Noise Level Range: 42 to 46 dBA
Number of Impacts: 8
Number of Proposed Soundwalls: None
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: N/A
Reasonable Allowance Range: N/A

Segment 17:

Existing Exterior Traffic Noise Level Range: 59 to 77 dBA
Existing Interior Traffic Noise Level Range: 39 to 46 dBA
Future Exterior Traffic Noise Level Range: 57 to 80 dBA
Future Interior Traffic Noise Level Range: 41 to 47 dBA
Number of Impacts: 78
Number of Proposed Soundwalls: 6
Number of Existing Soundwalls: 2
Number of Benefitted Land Uses: 56
Reasonable Allowance Range: $71,000 to $2,840,000

Segment 18:

Existing Exterior Traffic Noise Level Range: 60 to 73 dBA
Existing Interior Traffic Noise Level Range: 48 dBA
Future Exterior Traffic Noise Level Range: 61 to 72 dBA
Future Interior Traffic Noise Level Range: 47 dBA
Number of Impacts: 61
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: 74
Reasonable Allowance Range: $568,000 to $5,254,000

Alternative 3:

Segment 1:

Existing Exterior Traffic Noise Level Range: 59 to 73 dBA
Future Exterior Traffic Noise Level Range: 58 to 72 dBA
Number of Impacts: 64
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: 8
Number of Benefitted Land Uses: 16
Reasonable Allowance: $1,136,000

Segment 2:

Existing Exterior Traffic Noise Level Range: 56 to 73 dBA
Future Exterior Traffic Noise Level Range: 58 to 73 dBA
Number of Impacts: 85
Number of Proposed Soundwalls: None
Number of Existing Soundwalls: 6
Number of Replace-in-Kind Soundwalls: 4
Number of Benefitted Land Uses: N/A
Reasonable Allowance Range: N/A

Segment 3:

Existing Traffic Noise Level Range: 63 to 75 dBA
Future Traffic Noise Level Range: 64 to 80 dBA
Number of Impacts: 17
Number of Proposed Soundwalls: None
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: N/A
Reasonable Allowance Range: N/A

Segment 4:

Existing Exterior Traffic Noise Level Range: 59 to 78 dBA
Existing Interior Traffic Noise Level Range: 51 to 52 dBA
Future Exterior Traffic Noise Level Range: 62 to 82 dBA
Future Interior Traffic Noise Level Range: 54 to 55 dBA
Number of Impacts: 93
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: None
Number of Replace-in-Kind Soundwalls: 3
Number of Benefitted Land Uses: 4
Reasonable Allowance: $284,000

Segment 5:

Existing Exterior Traffic Noise Level Range: 54 to 75 dBA
Existing Interior Traffic Noise Level Range: 41 to 43 dBA
Future Exterior Traffic Noise Level Range: 58 to 78 dBA
Future Interior Traffic Noise Level Range: 43 to 48 dBA
Number of Impacts: 71
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: 4
Number of Benefitted Land Uses: 2
Reasonable Allowance Range: $71,000 to $142,000

Segment 6:

Existing Exterior Traffic Noise Level Range: 59 to 71 dBA
Existing Interior Traffic Noise Level Range: 34 to 41 dBA
Future Exterior Traffic Noise Level Range: 60 to 74 dBA
Future Interior Traffic Noise Level Range: 37 to 46 dBA
Number of Impacts: 66
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: 4
Number of Benefitted Land Uses: 10
Reasonable Allowance Range: $71,000 to $710,000

Segment 7:

Existing Exterior Traffic Noise Level Range: 56 to 75 dBA
Existing Interior Traffic Noise Level Range: 42 to 50 dBA
Future Exterior Traffic Noise Level Range: 57 to 77 dBA
Future Interior Traffic Noise Level Range: 44 to 52 dBA
Number of Impacts: 66
Number of Proposed Soundwalls: 3
Number of Existing Soundwalls: None
Number of Replace-in-Kind Soundwalls: 6
Number of Benefitted Land Uses: 4
Reasonable Allowance Range: $71,000 to $213,000

Segment 8:

Existing Exterior Traffic Noise Level Range: 57 to 81 dBA
Existing Interior Traffic Noise Level Range: 44 to 56 dBA
Future Exterior Traffic Noise Level Range: 62 to 82 dBA
Future Interior Traffic Noise Level Range: 41 to 57 dBA
Number of Impacts: 200
Number of Proposed Soundwalls: 4
Number of Existing Soundwalls: 1
Number of Replace-in-Kind Soundwalls: 1
Number of Benefitted Land Uses: 108
Reasonable Allowance Range: $142,000 to $5,538,000

Segment 9:

Existing Traffic Noise Level Range: 59 to 75 dBA
Existing Traffic and Train Noise Levels: 58 to 70 dBA
Future Traffic Noise Level Range: 59 to 76 dBA
Number of Impacts: 48
Number of Proposed Soundwalls: None
Number of Existing Soundwalls: 1
Number of Replace-in-Kind Soundwalls: 1
Number of Benefitted Land Uses: N/A
Reasonable Allowance Range: N/A

Segment 10:

Existing Traffic Noise Level Range: 65 to 76 dBA
Existing Traffic and Train Noise Levels: 62 to 72 dBA
Future Traffic Noise Level Range: 59 to 79 dBA
Number of Impacts: 48
Number of Proposed Soundwalls: 2
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: 37
Reasonable Allowance Range: $142,000 to $2,343,000

Segment 11:

Existing Exterior Traffic Noise Level Range: 60 to 78 dBA
Existing Interior Traffic Noise Level Range: 35 to 46 dBA
Existing Exterior Traffic and Train Noise Levels: 63 to 65 dBA
Future Exterior Traffic Noise Level Range: 61 to 78 dBA
Future Interior Traffic Noise Level Range: 36 to 47 dBA
Number of Impacts: 183
Number of Proposed Soundwalls: 3
Number of Existing Soundwalls: 1
Number of Benefitted Land Uses: 137
Reasonable Allowance Range: $71,000 to $5,112,000

Segment 12:

Existing Exterior Traffic Noise Level Range: 53 to 73 dBA
Existing Interior Traffic Noise Level Range: 44 to 51 dBA
Future Exterior Traffic Noise Level Range: 56 to 76 dBA
Future Interior Traffic Noise Level Range: 48 to 54 dBA
Number of Impacts: 29
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: 1
Number of Benefitted Land Uses: 4
Reasonable Allowance: $284,000

Segment 13:

Existing Exterior Traffic Noise Level Range: 58 to 69 dBA
Existing Interior Traffic Noise Level Range: 38 to 44 dBA
Future Exterior Traffic Noise Level Range: 61 to 71 dBA
Future Interior Traffic Noise Level Range: 40 to 46 dBA
Number of Impacts: 4
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: 4
Reasonable Allowance: $284,000

Segment 14:

Existing Exterior Traffic Noise Level Range: 59 to 75 dBA
Existing Interior Traffic Noise Level: 55 dBA
Future Exterior Traffic Noise Level Range: 62 to 78 dBA
Future Interior Traffic Noise Level: 56 dBA
Number of Impacts: 44
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: 43
Reasonable Allowance Range: $213,000 to $3,053,000

Segment 15:

Existing Exterior Traffic Noise Level Range: 55 to 75 dBA
Future Exterior Traffic Noise Level Range: 59 to 74 dBA
Number of Impacts: 59
Number of Proposed Soundwalls: None
Number of Existing Soundwalls: 1
Number of Replace-in-Kind Soundwalls: 2
Number of Benefitted Land Uses: N/A
Reasonable Allowance Range: N/A

Segment 16:

Existing Exterior Traffic Noise Level Range: 55 to 75 dBA
Existing Interior Traffic Noise Level Range: 41 to 46 dBA
Future Exterior Traffic Noise Level Range: 60 to 77 dBA
Future Interior Traffic Noise Level Range: 42 to 47 dBA
Number of Impacts: 22
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: 46
Reasonable Allowance Range: $1,917,000 to $3,266,000

Segment 17:

Existing Exterior Traffic Noise Level Range: 59 to 77 dBA
Existing Interior Traffic Noise Level Range: 39 to 46 dBA
Future Exterior Traffic Noise Level Range: 58 to 82 dBA
Future Interior Traffic Noise Level Range: 38 to 48 dBA
Number of Impacts: 74
Number of Proposed Soundwalls: 6
Number of Existing Soundwalls: 2
Number of Benefitted Land Uses: 53 (Option 1), 51 (Option 2)
Reasonable Allowance Range: $71,000 to $2,840,000

Segment 18:

Existing Exterior Traffic Noise Level Range: 60 to 73 dBA
Existing Interior Traffic Noise Level Range: 47 dBA
Future Exterior Traffic Noise Level Range: 61 to 71 dBA
Future Interior Traffic Noise Level Range: 45 dBA
Number of Impacts: 73
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: 70
Reasonable Allowance Range: $568,000 to $4,970,000

Segment 18A:

Existing Exterior Traffic Noise Level Range: 61 to 76 dBA
Existing Interior Traffic Noise Level Range: 37 to 53 dBA
Future Exterior Traffic Noise Level Range: 62 to 77 dBA
Future Interior Traffic Noise Level Range: 37 to 54 dBA
Number of Impacts: 8
Number of Proposed Soundwalls: None
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: N/A
Reasonable Allowance Range: N/A

Segment 19:

Existing Exterior Traffic Noise Level Range: 61 to 72 dBA
Future Exterior Traffic Noise Level Range: 63 to 73 dBA
Number of Impacts: 40
Number of Proposed Soundwalls: 1
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: 17
Reasonable Allowance Range: $781,000 to $1,207,000

Segment 20:

Existing Exterior Traffic Noise Level Range: 57 to 75 dBA
Existing Interior Traffic Noise Level Range: 44 to 48 dBA
Future Exterior Traffic Noise Level Range: 59 to 75 dBA
Future Interior Traffic Noise Level Range: 44 to 47 dBA
Number of Impacts: 84
Number of Proposed Soundwalls: 2
Number of Existing Soundwalls: 15
Number of Benefitted Land Uses: 20
Reasonable Allowance Range: $568,000 to $1,420,000

Segment 21:

Existing Exterior Traffic Noise Level Range: 51 to 81dBA
Existing Interior Traffic Noise Level Range: 27 to 49 dBA
Future Exterior Traffic Noise Level Range: 52 to 82 dBA
Future Interior Traffic Noise Level Range: 28 to 49 dBA
Number of Impacts: 28
Number of Proposed Soundwalls: 3
Number of Existing Soundwalls: 14
Number of Benefitted Land Uses: 22
Reasonable Allowance Range: $71,000 to $1,136,000

Segment 22:

Future Interior Traffic Noise Level Range: 21 to 47 dBA
Number of Impacts: None
Number of Proposed Soundwalls: None
Number of Existing Soundwalls: 1
Number of Benefitted Land Uses: None
Reasonable Allowance Range: Not Applicable

Segment 23:

Future Interior Traffic Noise Level Range: 40 to 47 dBA
Number of Impacts: None
Number of Proposed Soundwalls: None
Number of Existing Soundwalls: None
Number of Benefitted Land Uses: None
Reasonable Allowance Range: Not Applicable

The total reasonable allowance for Alternative 2 ranges from $1,491,000 to $17,957,000 and the total reasonable allowance for Alternative 3 ranges from $6,674,000 to $32,938,000.

Details about the number of benefited receivers per soundwall as well as insertion losses and abated noise levels are provided in Chapter 7 and Appendix B.

Construction noise control shall conform to the provisions in Section 14-8.02, ”Noise Control,” of the Standard Specifications and 14-8.02 “Noise Control” of the Standard Special Provisions. The requirements state that all equipment shall be fitted with adequate mufflers and operated according to the manufacturers’ specifications. Construction noise varies greatly depending on the construction process, type and condition of equipment used, as well as layout of the construction site. Temporary construction noise impacts would be unavoidable at areas located immediately adjacent to the proposed project alignment.

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List of Abbreviated Terms

°F	degrees Fahrenheit
ADT	average daily traffic
BNSF	Burlington Northern Santa Fe
CAD	computer-assisted drafting
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CFR	*Code of Federal Regulations*
CNEL	Community Noise Equivalent Level
dB	Decibels
dBA	A-weighted decibels
dtm	digital terrain map
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GP	general purpose
HOV	High-occupancy vehicle
Hz	Hertz
I-10	Interstate 10
I-15	Interstate 15
I-215	Interstate 215
kHz	Kilohertz
LA/SB	Los Angeles/San Bernardino
L_{dn}	Day-Night Level
L_{eq}	Equivalent Sound Level
$L_{eq}(h)$	Equivalent Sound Level over one hour
L_{max}	Maximum Sound Level
LOS	Level of Service
L_n	Percentile-Exceeded Sound Level
µPa	micro-Pascals
mph	miles per hour
MWD	Metropolitan Water District of Southern California
NAC	Noise Abatement Criteria
NADR	Noise Abatement Decision Report
NEPA	National Environmental Policy Act
NSR	Noise Study Report

List of Abbreviated Terms (Cont'd)

PeMS	Performance Measurement System
PM	Post Mile
Protocol	Caltrans Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects
PTE	Permit to Enter
R/W	right-of-way
SANBAG	San Bernardino Associated Governments
SCAG	Southern California Association of Governments
SPL	sound pressure level
SR	State Route
TeNS	Caltrans' Technical Noise Supplement
TNM 2.5	Traffic Noise Model Version 2.5
UPRR	Union Pacific Railroad
v/c	volume to capacity
vph	Vehicles per hour

Chapter 1. Introduction

1.1. Purpose of the Noise Study Report

The purpose of this Noise Study Report (NSR) is to evaluate noise impacts and abatement measures under the requirements of Title 23, Part 772 of the Code of Federal Regulations (Title 23 CFR 772) "Procedures for Abatement of Highway Traffic Noise and Construction Noise" for the Interstate 10 (I-10) Corridor Project. Title 23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. According to Title 23 CFR 772.3, all highway projects that are developed in conformance with this regulation are deemed to be in conformance with Federal Highway Administration (FHWA) noise standards.

The California Department of Transportation (Caltrans) Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects (Protocol) (Caltrans, 2011) provides Caltrans policy for implementing Title 23 CFR 772 in California. The Protocol outlines the requirements for preparing NSRs in support of State highway projects. Noise impacts associated with this project under the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) are evaluated in the Environmental Impact Report/Environmental Impact Statement (EIR/EIS).

This NSR analyzes 24 distinct segments that are based on major local interchanges. The 24 segments are:

- Segment 1 –Towne Avenue to Indian Hills Boulevard
- Segment 2 – Indian Hills Boulevard to Monte Vista Avenue
- Segment 3 – Monte Vista Avenue to Central Avenue
- Segment 4 – Central Avenue to Mountain Avenue
- Segment 5 – Mountain Avenue to Euclid Avenue
- Segment 6 – Euclid Avenue to 6th Street
- Segment 7 – 6th Street to 4th Street
- Segment 8 – 4th Street to Vineyard Avenue
- Segment 9 – West of Cherry Avenue to Citrus Avenue
- Segment 10 – Citrus Avenue to Sierra Avenue
- Segment 11 – Sierra Avenue to west of Cedar Avenue
- Segment 12 – Cedar Avenue to South Riverside Avenue
- Segment 13 – South Riverside Avenue to Pepper Avenue
- Segment 14 – Pepper Avenue to Rancho Avenue

- Segment 15 – Rancho Avenue to La Cadena Drive
- Segment 16 – La Cadena Drive to Interstate 215 (I-215)
- Segment 17 – West of Tippecanoe Avenue to Mountain View Avenue
- Segment 18 – Mountain View Avenue to Nevada Street
- Segment 18A – Nevada Street to State Route (SR) 210
- Segment 19 – Tennessee Street to Orange Street
- Segment 20 – Orange Street to East Cypress Avenue
- Segment 21 – East Cypress Avenue to 0.75 miles east of Ford Street
- Segment 22 – Vineyard Avenue to west of Cherry Avenue
- Segment 23 – I-215 to west of Tippecanoe Avenue

The study includes (a) short-term noise measurements; (b) long-term noise measurements; (c) roadway traffic noise modeling using FHWA's Traffic Noise Model version 2.5 (TNM 2.5); (d) train noise using the Federal Transit Administration's (FTA's) procedures; (e) feasible noise abatement measures; and (f) construction noise.

1.2. Project Purpose and Need

1.2.1. Purpose

The project's purpose is to improve traffic operations on I-10 in San Bernardino County to reduce congestion, increase throughput, and enhance trip reliability for the planning design year of 2045. The objectives of the project are to:

- Reduce volume-to-capacity (v/c) ratios along the corridor;
- Improve travel times within the corridor;
- Provide a facility that is compatible with transit and other modal options;
- Provide consistency with the Southern California Association of Governments (SCAG) Regional Transportation Plan;
- Provide a cost effective project solution; and
- Minimize environmental impacts and right-of-way (R/W) acquisition.

1.2.2. Need

The project's need is based on the deficiencies of I-10 within the project limits which are summarized below:

- Substantial portions of the I-10 mainline general purpose (GP) lanes peak-period traffic demand currently exceeds capacity;
- Nearly all of the I-10 mainline GP lanes are projected to exceed capacity in future years; and
- The I-10 existing mainline high occupancy vehicle (HOV) lanes operation is degraded during peak-periods.

Chapter 2. Project Description

Caltrans, in cooperation with the San Bernardino Associated Governments (SANBAG), proposes to add freeway lanes through all or a portion of the 33-mile long stretch of I-10 from the Los Angeles/San Bernardino (LA/SB) county line to Ford Street in San Bernardino County. The project limits including transition areas extend from approximately 0.4 mile west of White Avenue in the City of Pomona at Post Mile (PM) 44.9 to Live Oak Canyon Road in the City of Yucaipa at PM 37.0. However, for the purpose of the noise study, the project limits extend from Towne Avenue in the City of Pomona (Los Angeles County) to 0.75 mile east of Ford Street in the City of Redlands (San Bernardino County). Figures 2-1 and 2-2 show the project vicinity and project location, respectively.

The No-Build Alternative (Alternative 1) and two build alternatives (Alternatives 2 and 3) are under consideration.

2.1. Alternative 1: No-Build Alternative

Alternative 1 (No Build) would maintain the existing lane configuration of I-10 within the project limits with no additional mainline lanes or associated improvements to be provided.

2.2. Build Alternatives

Two build alternatives are proposed for evaluation in the environmental document.

Alternative 2: One High-Occupancy Vehicle Lane in Each Direction

Alternative 2 would extend the existing HOV lane in each direction of I-10 from the current HOV terminus near Haven Avenue in the City of Ontario to Ford Street in the City of Redlands, a distance of approximately 25 miles.

Alternative 3: Two Express Lanes in Each Direction

Alternative 3 would provide two Express Lanes in each direction of I-10 from the LA/SB county line to California Street (near SR-210) in the City of Redlands and one Express Lane in each direction from California Street to Ford Street in the City of Redlands, for a total of 33 miles. The Express Lanes would be priced managed lanes in which vehicles not meeting the minimum occupancy requirement would pay a toll. West of Haven Avenue, a single new lane would be constructed and combined with the existing HOV lane to provide two Express Lanes in each direction; east of Haven Avenue the Express Lanes would be constructed by the project.

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Figure 2-1. Project Vicinity Map

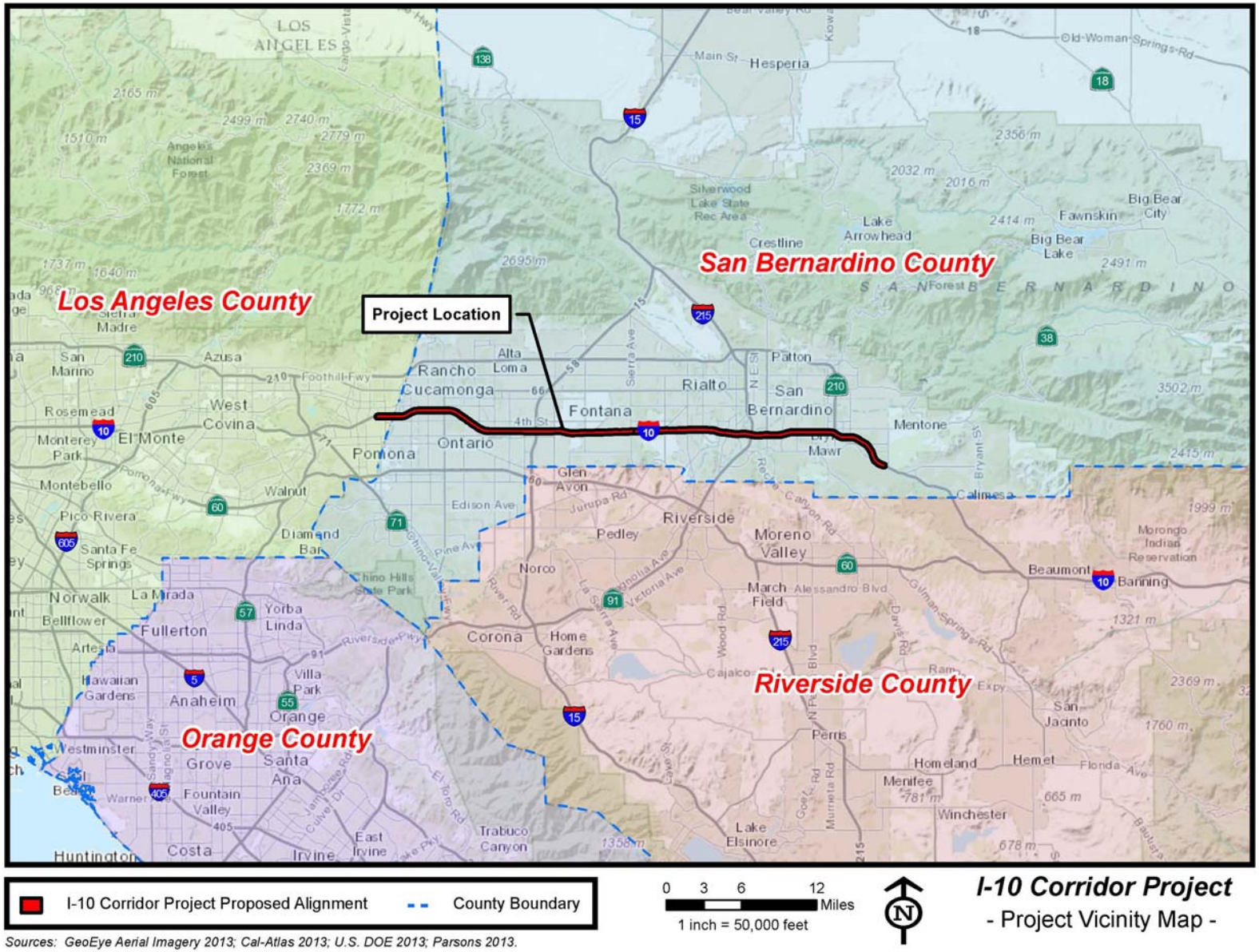
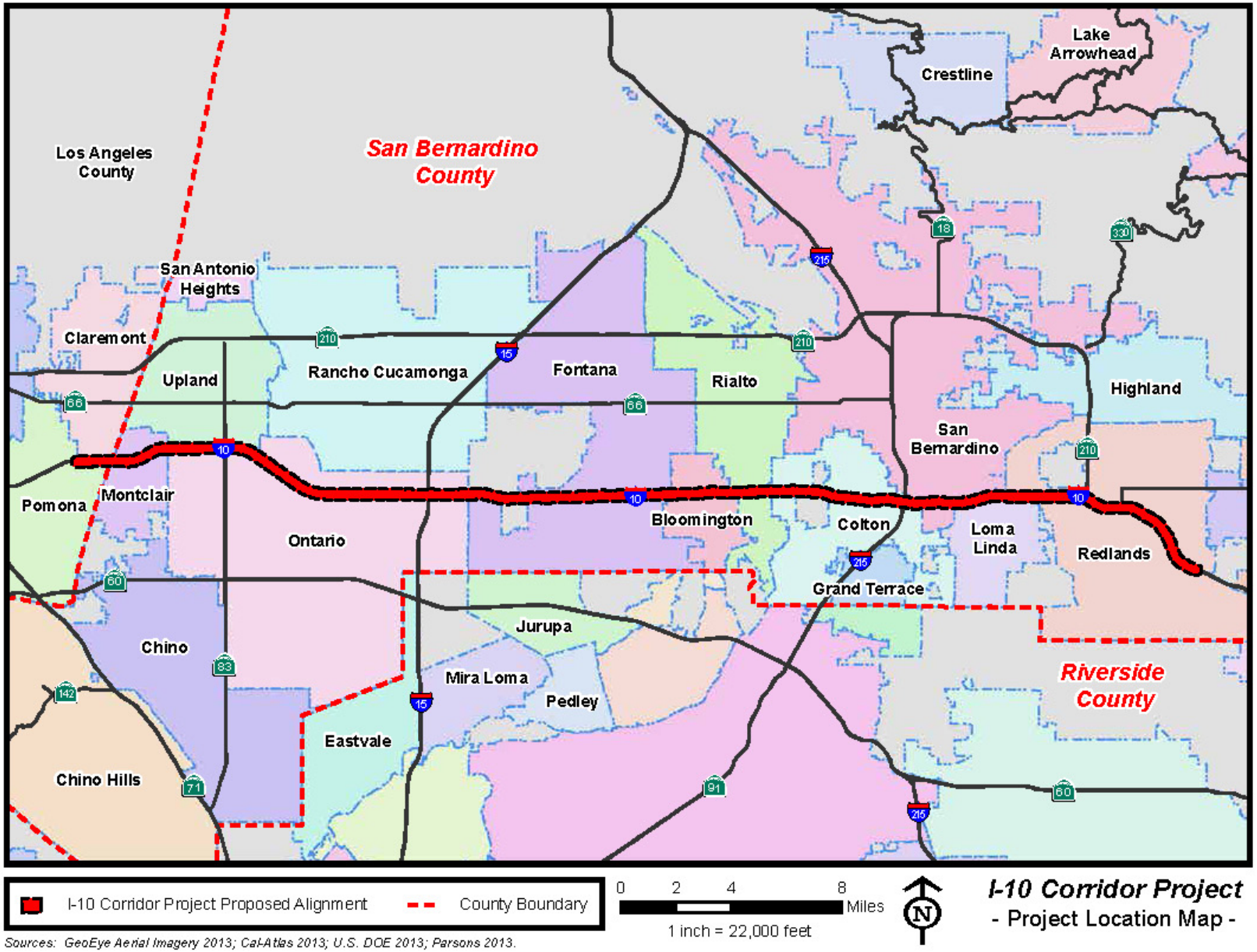


Figure 2-2. Project Location Map



Chapter 3. Fundamentals of Traffic Noise

The following is a brief discussion of fundamental traffic noise concepts. For a detailed discussion, please refer to Caltrans' Technical Noise Supplement (TeNS) (Caltrans, 2013), a technical supplement to the Protocol, which is available on the Caltrans Web site (http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf).

3.1. Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

3.2. Frequency and Hertz

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

3.3. Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (µPa). One µPa is approximately one hundred billionths (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 µPa. Because of this huge range of values, sound is rarely expressed in terms of µPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 µPa.

3.4. Addition of Decibels

Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces an

SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB - rather, they would combine to produce 73 dB, a difference of 3 dB. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dB louder than one source.

3.5. A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz, and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When judgments are made of the relative loudness or annoyance of a sound, these judgments correlate well with the A-weighted levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with highway-traffic noise. Noise levels for traffic noise reports are typically reported in terms of A-weighted decibels or dBA. Table 3-1 describes typical A-weighted noise levels for various noise sources.

3.6. Human Response to Changes in Noise Levels

As discussed above, doubling sound energy results in a 3 dB increase in sound. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different than what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels, when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000 Hz–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5 dB increase is generally perceived as a distinctly noticeable increase, and a 10 dB increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3 dB increase in sound, would generally be perceived as barely detectable by the average person.

Table 3-1. Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	**— 70 —**	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	**— 60 —**	
		Large business office
Quiet urban daytime	**— 50 —**	Dishwasher next room
Quiet urban nighttime	**— 40 —**	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	**— 0 —**	Lowest threshold of human hearing

Source: Caltrans, 2013.

3.7. Noise Descriptors

Noise in our daily environment fluctuates over time. Some fluctuations are minor, but some are substantial. Some noise levels occur in regular patterns, but others are random. Some noise levels fluctuate rapidly, but others slowly. Some noise levels vary widely, but others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors most commonly used in traffic noise analysis:

- **Equivalent Sound Level (L_{eq}):** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour A-weighted equivalent sound level ($L_{eq}[h]$) is the energy average of A-weighted sound levels occurring during a one-hour period, and is the basis for noise abatement criteria (NAC) used by Caltrans and FHWA.

- **Percentile-Exceeded Sound Level (L_n):** L_n represents the sound level exceeded for a given percentage of a specified period (e.g., L_{10} is the sound level exceeded 10% of the time, and L_{90} is the sound level exceeded 90% of the time).

- **Maximum Sound Level (L_{max}):** L_{max} is the highest instantaneous sound level measured during a specified period.

- **Day-Night Level (L_{dn}):** L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during nighttime hours between 10 p.m. and 7 a.m.

- **Community Noise Equivalent Level (CNEL):** Similar to L_{dn}, CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during the nighttime hours between 10 p.m. and 7 a.m., and a 5 dB penalty applied to the A-weighted sound levels occurring during evening hours between 7 p.m. and 10 p.m.

3.8. Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

3.8.1. Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path, and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

3.8.2. Ground Absorption

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water,), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance for a line source.

3.8.3. Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from the highway due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

3.8.4. Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction. Taller barriers provide increased noise reduction. Vegetation between the highway and receiver is rarely effective in reducing noise because it does not create a solid barrier.

Chapter 4. Federal Regulations and State Policies

This report focuses on the requirements of Title 23 CFR 772, as discussed below.

4.1. Federal Regulations

4.1.1. Title 23 CFR 772

Title 23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. Under Title 23 CFR 772.7, projects are categorized as Type I, Type II, or Type III projects. FHWA defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes. A Type II project is a noise barrier retrofit project that involves no changes to highway capacity or alignment. A Type III project is a federal or federal-aid highway project that does not meet the classifications of a Type I or Type II project. Type III projects do not require a noise analysis.

Type I projects include those that create a completely new noise source, as well as those that increase the volume or speed of traffic or move the traffic closer to a receiver. Type I projects include the addition of an interchange, HOV lane, Express Lane, ramp, or truck-climbing lane to an existing highway, or the addition of an auxiliary lane, except when an auxiliary lane is a turning lane, or restriping existing pavement for the purpose of adding a through-traffic lane or auxiliary lane, or the addition of a new substantial alteration of a weigh station, rest stop, ride share lot, or toll plaza. Projects unrelated to increased noise levels, such as lighting, signing, and landscaping projects would be considered Type III.

Under Title 23 CFR 772.11, noise abatement must be considered for Type I projects if the project is predicted to result in a traffic noise impact. In such cases, Title 23 CFR 772 requires that the project sponsor "consider" noise abatement before adoption of the final NEPA document. This process involves identification of noise abatement measures that are reasonable, feasible, and likely to be incorporated into the project, and of noise impacts for which no apparent solution is available.

Traffic noise impacts, as defined in Title 23 CFR 772.5, occur when the predicted noise level in the design year approaches or exceeds the Noise Abatement Criteria (NAC) specified in Title 23 CFR 772, or a predicted noise level substantially exceeds the existing noise level (a "substantial" noise increase). Title 23 CFR 772 does not specifically define the terms "substantial increase" or "approach"; these criteria are defined in the Protocol, as described in the next subsection.

Table 4-1 summarizes NAC corresponding to various land use activity categories. Activity categories and related traffic noise impacts are determined based on the actual land use in a given area.

Table 4-1. Activity Categories and Noise Abatement Criteria

Activity Category	Activity $L_{eq}[h]$[1]	Evaluation Location	Description of Activities
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[2]	67	Exterior	Residential.
C[2]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F.
F	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	--	--	Undeveloped lands that are not permitted (without building permits)

[1] The $L_{eq}(h)$ activity criteria values are for impact determination only and are not design standards for noise abatement measures. All values are A-weighted decibels (dBA).
[2] Includes undeveloped lands permitted for this activity category.

Source: 23 CFR Part 772, 2014

In identifying noise impacts, primary consideration is given to exterior areas of frequent human use. In situations where there are no exterior activity areas, or where the exterior activities occur far from the roadway or physically shielded in a manner that prevents an impact on exterior activities, the interior criterion (Activity Category D) is used as the basis for determining a noise impact.

4.2. State Regulations and Policies

4.2.1. Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects

The Caltrans Traffic Noise Analysis Protocol (Protocol) for New Highway Construction, Reconstruction, and Retrofit Barrier Projects (Caltrans, 2011) specifies the policies, procedures, and practices to be used by agencies that sponsor new construction or

reconstruction of federal or federal-aid highway projects. The NAC specified in the Protocol are the same as those specified in Title 23 CFR 772. The Protocol defines a noise increase as substantial when the predicted noise levels with project implementation exceed existing noise levels by 12 dB. The Protocol also states that a sound level is considered to approach an NAC level when the sound level is within 1 dB of the NAC identified in Title 23 CFR 772 (e.g., 66 dBA is considered to approach the NAC of 67 dBA, but 65 dBA is not).

The TeNS to the Protocol provides detailed technical guidance for the evaluation of highway traffic noise. This includes field measurement methods, noise modeling methods, and report preparation guidance.

4.2.2. Section 216 of the California Streets and Highways Code

Section 216 of the California Streets and Highways Code relates to the noise effects of a proposed freeway project on public and private elementary and secondary schools. Under this code, a noise impact occurs if, as a result of a proposed freeway project, noise levels exceed an $L_{eq}(h)$ of 52 dBA in the interior of public or private elementary or secondary classrooms, libraries, multipurpose rooms, or spaces. This requirement does not replace the “approach or exceed” NAC criterion for FHWA Activity Category C for classroom exteriors, but it is a requirement that must be addressed in addition to the requirements of Title 23 CFR 772.

If a project results in a noise impact under this code, noise abatement must be provided to reduce classroom noise to a level that is at or below an $L_{eq}(h)$ of 52 dBA. If the noise levels generated from freeway and non-freeway sources exceed an $L_{eq}(h)$ of 52 dBA prior to construction of the proposed freeway project, then noise abatement must be provided to reduce the noise to the level that existed prior to construction of the project.

Chapter 5. Study Methods and Procedures

5.1. Methods for Identifying Land Uses and Selecting Noise Measurement and Modeling Locations

A thorough field investigation was conducted to identify frequent outdoor use areas that could be subject to traffic noise impacts and to consider the physical setting of the highway alignment relative to those areas. Land uses in the project area were categorized as defined in the Activity Category of Table 4-1. As stated in the Protocol, noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, this impact analysis focuses on locations with defined outdoor use activity areas, such as residential backyards and common use areas at multi-family residences. In some cases, second story balconies of residences with a view to the highway are also considered as outdoor activity areas. The interior criterion has also been used throughout the corridor to determine whether there are impacts at the interior of hotels/motels, schools, and places of worship. Figures in Appendix H indicate the locations of relevant land use types within the study corridor.

Multiple outdoor noise measurements were taken throughout the project study corridor to evaluate existing noise levels and to calibrate the TNM 2.5 computer noise model. Specific measurement sites were chosen to be representative of receiver sites with similar topography, orientation to the highway, exposure angles, etc. with respect to frequent outdoor use areas adjacent to I-10. Locations that are expected to receive the greatest traffic noise impacts, such as the first row of houses from the highway, were chosen for noise measurement locations.

Noise measurements were mainly conducted in frequent outdoor human-use areas along the project alignment primarily in backyard locations. Where permits to enter were not obtained, short-term measurements were conducted within a nearby public use area or sidewalks that were determined to be acoustically representative of the actual nearby frequent use area. Several additional noise measurements were also conducted at commercial establishments. All short-term and long-term measurement sites were selected so that unusual noise from sources such as barking dogs, air-conditioners, pool pumps, or car alarms would not affect the measurement.

Additional indoor/outdoor measurements were conducted to determine the insertion loss that a building shell would provide for Category D (Interior) land uses such as hotels/motels and continuing education schools. This information is further used to determine the predicted future interior traffic noise levels at these land uses.

5.2. Field Measurement Procedures

Noise measurements were conducted at selected locations to evaluate the existing noise environment. Noise measurements were conducted in conformance with the TeNS and with the guidelines outlined in FHWA's "Measuring of Highway Related Noise,"

FHWA-DP-96-046. The following is a brief description of the measurement procedures used for this project:

- Microphones were primarily placed approximately 5 feet above the ground and were positioned more than 10 feet from any wall or building to prevent reflections or unrepresentative shielding of the noise.
- Sound level meters were calibrated before and after each set of measurements.
- Following the calibration of equipment, a windscreen was placed over the microphone.
- Frequency weighting was set on "A", and the slow detector response was selected.
- Results of the short-term noise measurements were recorded on data sheets in the field. Long-term measured data were downloaded to the computer for tabulation and graphing. This information is located in Appendix C.
- During the short-term noise measurements, any noise contaminations such as barking dogs, air conditioning units, power tools, etc. that could affect measured results were avoided.
- Traffic was counted for model calibration measurements. Vehicle types were separated into three vehicle groups: automobiles, medium trucks (two-axle with six-wheels but not including dually pick-up trucks), and heavy trucks (three or more axle vehicles). Average traffic speeds were measured using a radar gun or by driving on the freeway immediately after the calibration measurement. Traffic data is located in Appendix A.
- Wind speed, temperature, humidity, and sky conditions were observed and documented during the short-term noise measurements. This information is located in Appendix C.

Instruments used for the noise measurements included the following:

- Sound Level Meters – Larson Davis models 812, 820, 824, 870, and LxT1 as well as Brüel & Kjær model 2250.
- Microphone Systems:
    - Larson Davis 812 and 820 System – Larson Davis model PRM 828 microphone preamp; Larson Davis model 2560, ½-inch pressure microphone.
    - Larson Davis 824 System – Larson Davis model PRM902 microphone preamps; PCB model 377A02, ½-inch pressure microphone.
    - Larson Davis 870 System – Larson Davis model 900B microphone preamps; Larson Davis model 2559, ½-inch pressure microphone.
    - Larson Davis LxT1 System – Larson Davis model PRMLxT1 microphone preamps; PCB model 377B02, ½-inch pressure microphone.
    - Brüel & Kjær 2250 System – Brüel & Kjær model ZC-0032 microphone preamp; Brüel & Kjær model 4189, ½-inch pressure microphone.

- Acoustic Field Calibrators – Larson Davis models CA200 and CA250 and Brüel & Kjær model 4231 constant pressure microphone calibrators.
- Microphone cables; 4-inch diameter windscreens; and tripods.
- Wind Monitor/Temperature and Humidity Gauge – Kestrel 3000 Pocket Weather Meter.
- Stationary Handheld Traffic Radar Detector – Kustom Signals, Inc. Falcon Radar Gun.

The following is a brief description of the procedures used for indoor/outdoor noise measurements:

- Sound level meters were calibrated before and after the measurements.
- Following the calibration of equipment, a windscreen was placed over the microphone.
- The overall noise level was recorded for each measurement with the frequency weighting set on "A" and the slow detector response was selected.
- Wind speed, temperature, humidity, and sky conditions were observed and documented during the noise measurements.

Instruments used for the noise measurements included the following:

- Sound Level Meter – Larson Davis model 812.
- Real-Time Spectrum Analyzer (RTA) – Larson Davis model 2900, two channel analyzer.
- Microphone Systems:
  - Larson Davis 812 System – Larson Davis model PRM 828 microphone preamp; Larson Davis model 2560, ½-inch pressure microphone.
  - Larson Davis 2900 System – Larson Davis model 900B microphone preamps; Larson Davis model 2559, ½-inch pressure microphone.
- Acoustic Field Calibrators – Larson Davis model CA250.
- Microphone cables; 4-inch diameter windscreens; and tripods.
- Wind Monitor/Temperature and Humidity Gauge – Kestal Weather Meter.
- Behringer Eurolive B212A high-power 400-Watt 2-Way PA sound reinforcement speaker system.
- Pink noise generator.

Instrumentation serial numbers, calibration data, noise measurement dates and times, noise measurement data, meteorological data, and measurement locations are noted on the noise measurement field forms located in Appendix C. Noise measurement instrumentation calibration records are located in Appendix E.

5.2.1. Short-Term Measurements

Short-term noise measurements were conducted at 125 sites in October through December of 2013, May, July, October, November, and December of 2014, as well as January and March of 2015 using Larson-Davis models 812, 820, 824, 870, and LxT1, as well as Brüel & Kjær model 2250 Precision Type 1 sound level meters. Measurements were taken for a duration of 20-minutes at each site. Short-term monitoring was typically conducted at or adjacent to Activity Categories B and C land uses. Additional short-term monitoring was conducted at Activity Category E land uses. The short-term measurement locations are identified in Figures 5-1 through 5-19 and in Appendix H, and addresses are listed in Table 6-1 of Chapter 6 Existing Noise Environment. Noise measurement field notes are located in Appendix C and measurement site photographs are presented in Appendix D.

Field staff attended each meter during the short-term measurements (20 minutes in duration). Noise sources other than I-10 traffic that were observed during these measurement periods were logged. Any non traffic noise sources (e.g., air conditioning units and dogs barking) that could potentially contaminate the measured noise levels were avoided. Some of the short-term measurements on the south side of I-10 were conducted with a1- minute time history to extract train noise from the measurements for noise model calibration purposes for areas where train noise was present.

The calibration of the meter was checked before and after the measurement using Larson-Davis Models CA200 or CAL250 and Brüel & Kjær 4231 calibrators. Temperature, wind speed, and humidity were recorded manually during the short-term monitoring session using a Kestrel 3000 portable weather station. During the short-term measurements, wind speeds typically ranged from zero to 4 miles per hour (mph) and measured as high as 8 mph. Temperatures ranged from 47 to 96 degrees Fahrenheit (°F), with relative humidity typically ranging from 13 to 62 percent measuring as low as 9 percent and as high as 71 percent.

5.2.2. Long-Term Measurements

Long-term monitoring was conducted at 40 locations in October through December of 2013, and October of 2014 using Larson-Davis model 812, 820, 870, and LxT1 Type 1 sound level meters. The purpose of these measurements was to identify variations in sound levels throughout the day. The long-term sound level data was collected for 24 to 31 hour periods. Long-term monitoring locations are shown in Figures 5-1 through 5-19 and in Appendix H, and addresses are listed in Table 6-2 of Chapter 6 Existing Noise Environment. Noise measurement field notes and graphed noise levels are located in Appendix C and measurement site photographs are presented in Appendix D.

5.2.3. Indoor/Outdoor Measurements

Indoor/outdoor measurements were conducted at eight locations in April of 2009, four locations in November of 2014, and two locations in January of 2015 using Larson-Davis model 812 Type 1 sound level meters and Larson Davis model 2900 Type 1 Real Time Spectrum Analyzers. The purpose of these measurements was to determine the noise reduction provided by the building shell to later determine future indoor noise levels.

Indoor/outdoor monitoring locations are shown in Figures 5-1 through 5-19 and in Appendix H, and addresses are listed in Table 6-3 of Chapter 6 Existing Noise Environment. Noise measurement field notes are located in Appendix C and measurement site photographs are presented in Appendix D.

5.3. Prediction Methods

5.3.1. Traffic Noise Levels

Traffic Noise Model:

TNM version 2.5 was used for the noise computations (FHWA, 2004). TNM 2.5 inputs are based on a three-dimensional grid created for the study area to be modeled. All roadway, barrier, terrain lines, and receiver points are defined by their x, y, and z coordinates. The x and y coordinates are obtained by digitizing line strings into a provided computer-assisted drafting (CAD) layout drawing and later exported into a spreadsheet. The z coordinates are determined by the existing ground digital terrain map (dtm), which is a 3-D rendering of the topographic data as well as topographic contours included in the CAD layout map and roadway profiles. The coordinates are then exported from the spreadsheet into TNM 2.5.

Roadways, terrain lines, and barriers are coded into TNM 2.5 as line segments defined by their end points. Receivers, defined as single points, are typically located at frequent outdoor use areas such as residences, schools, and hotels/motels. In general, receivers are modeled at a height of 5 feet above ground elevation. When the frequent outdoor use is on a second story overlooking the freeway, an appropriate elevation from the ground level was added into the receiver height of 5 feet. The assumed receiver heights for second and third story representative receivers at multi-family residences and hotels/motels are 15 and 25 feet, respectively. Appendix F lists the addresses of modeled noise receivers. TNM files are contained on a CD that is located under Appendix J.

To determine the noise levels generated by traffic, the TNM computer program requires inputs of traffic volumes, speeds, and vehicle types. Three vehicle types were input into the model: cars, medium trucks, and heavy trucks. The propagation path between the source and receiver is modeled in TNM by specifying special terrain features, rows of houses or building structures, retaining walls, safety barriers, and existing walls. Propagation of noise can be further specified by selecting ground types such as hard soil, loose soil, pavement, lawn, and field grass. The lawn option was chosen as the overall ground type for this study, because the TNM models have been calibrated with the lawn option. Hard ground zones were used in a few locations to represent areas such as large parking lots. All other natural obstructions, such as cuts and fills that could affect the future predicted noise levels were also included in the input files.

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Figure 5-1. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 1 and 2

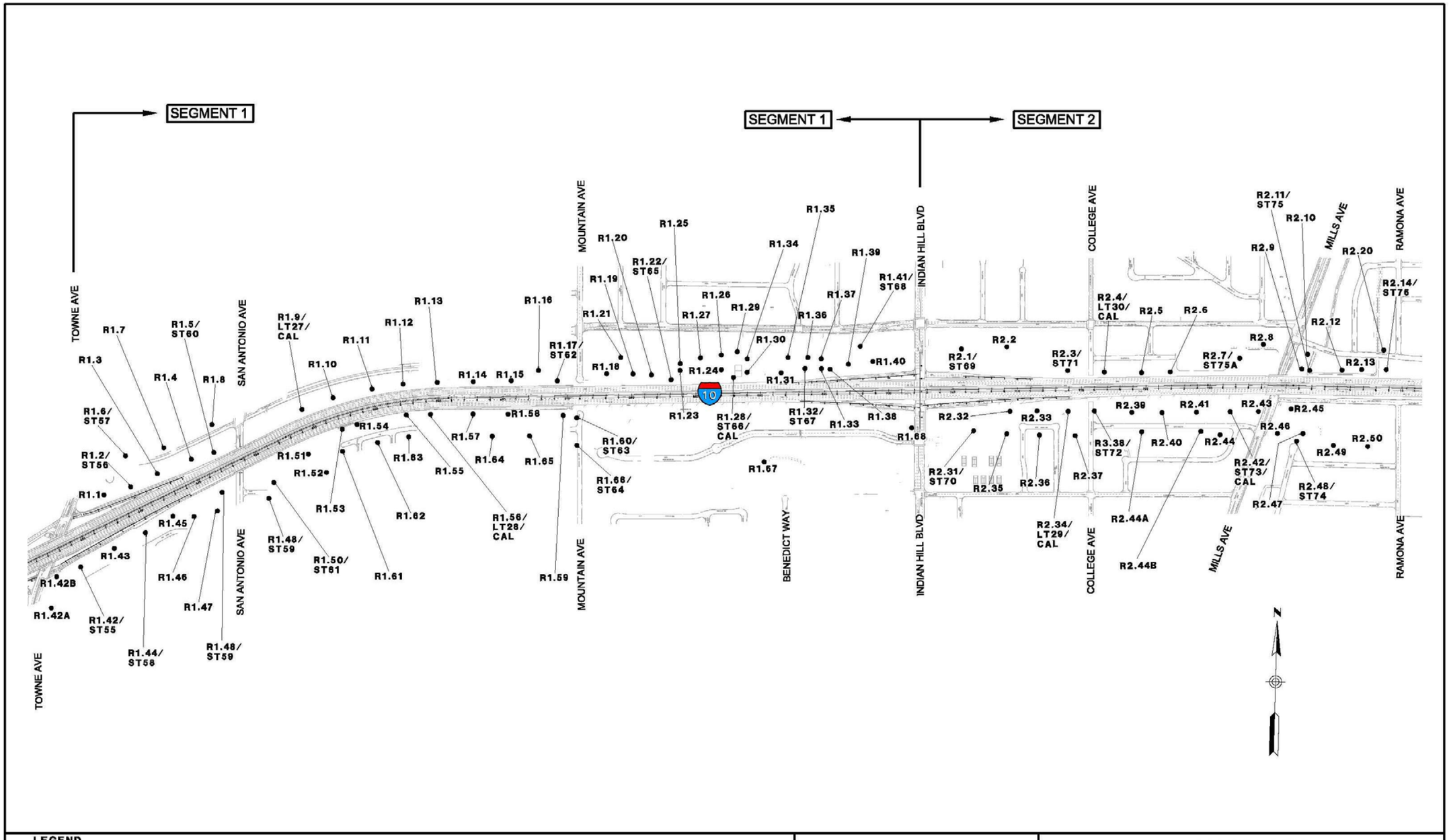

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Figure 5-2. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 2 to 4

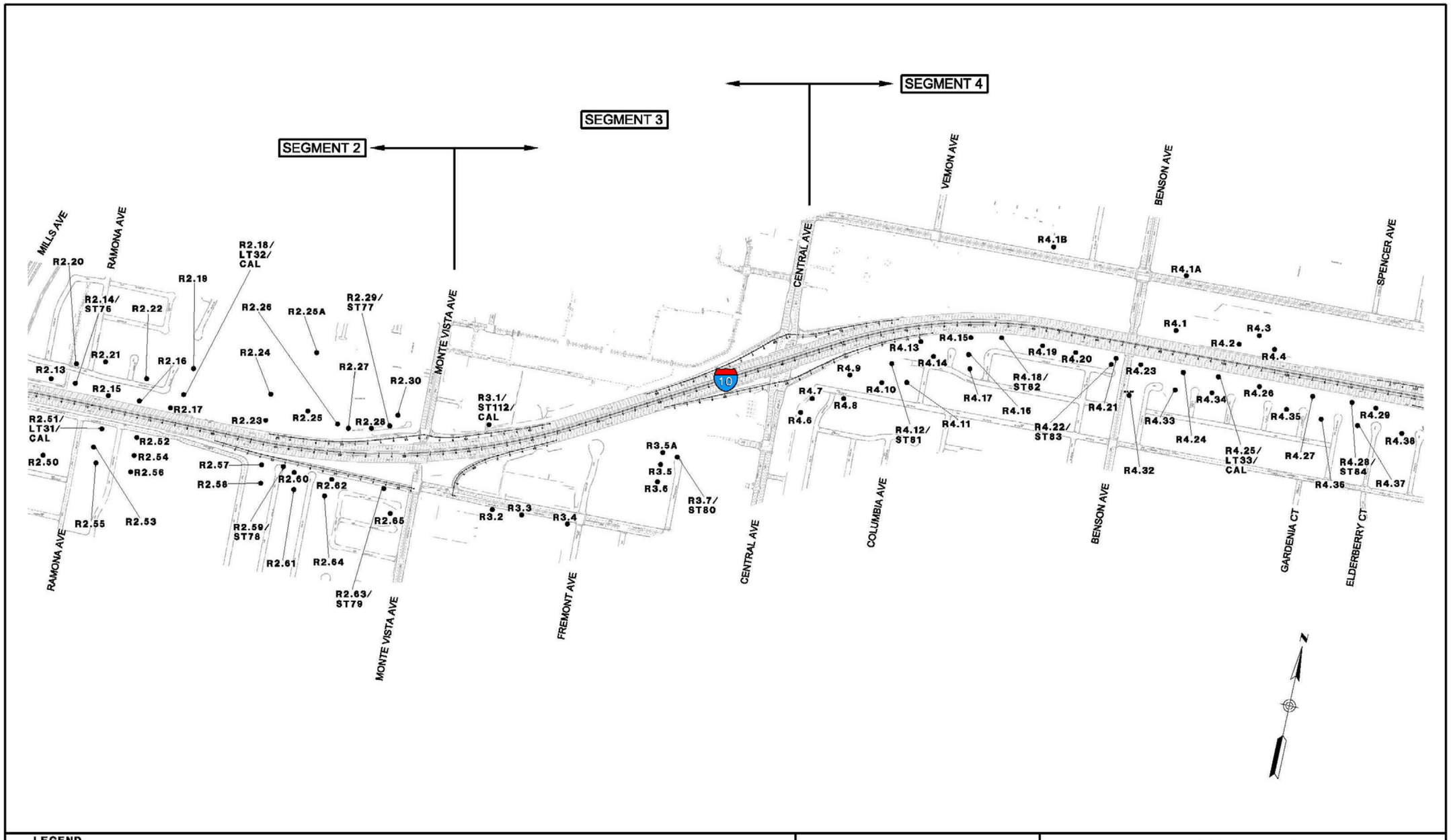

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Figure 5-3. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 4 to 6

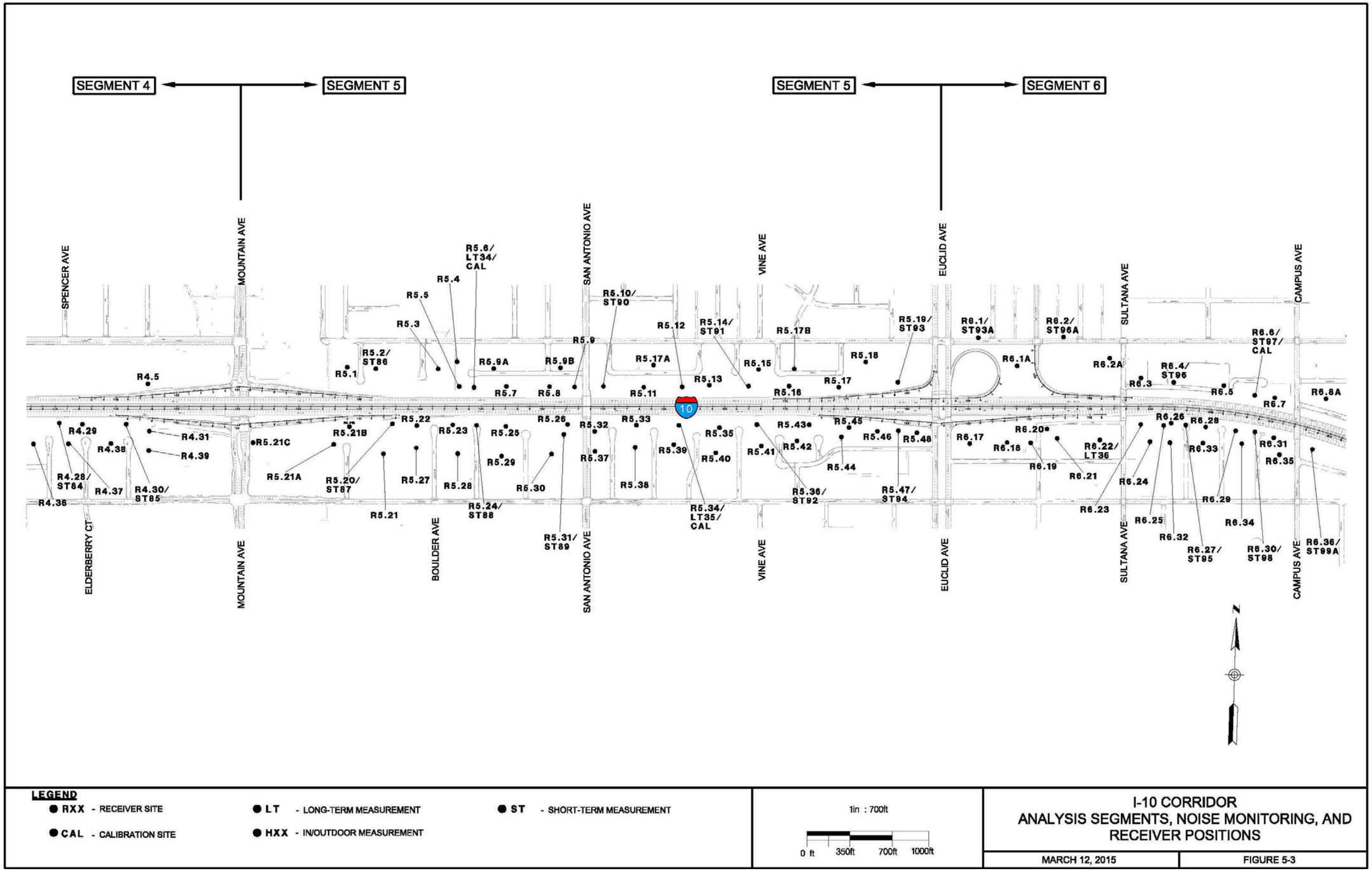

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Figure 5-4. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 6 to 8

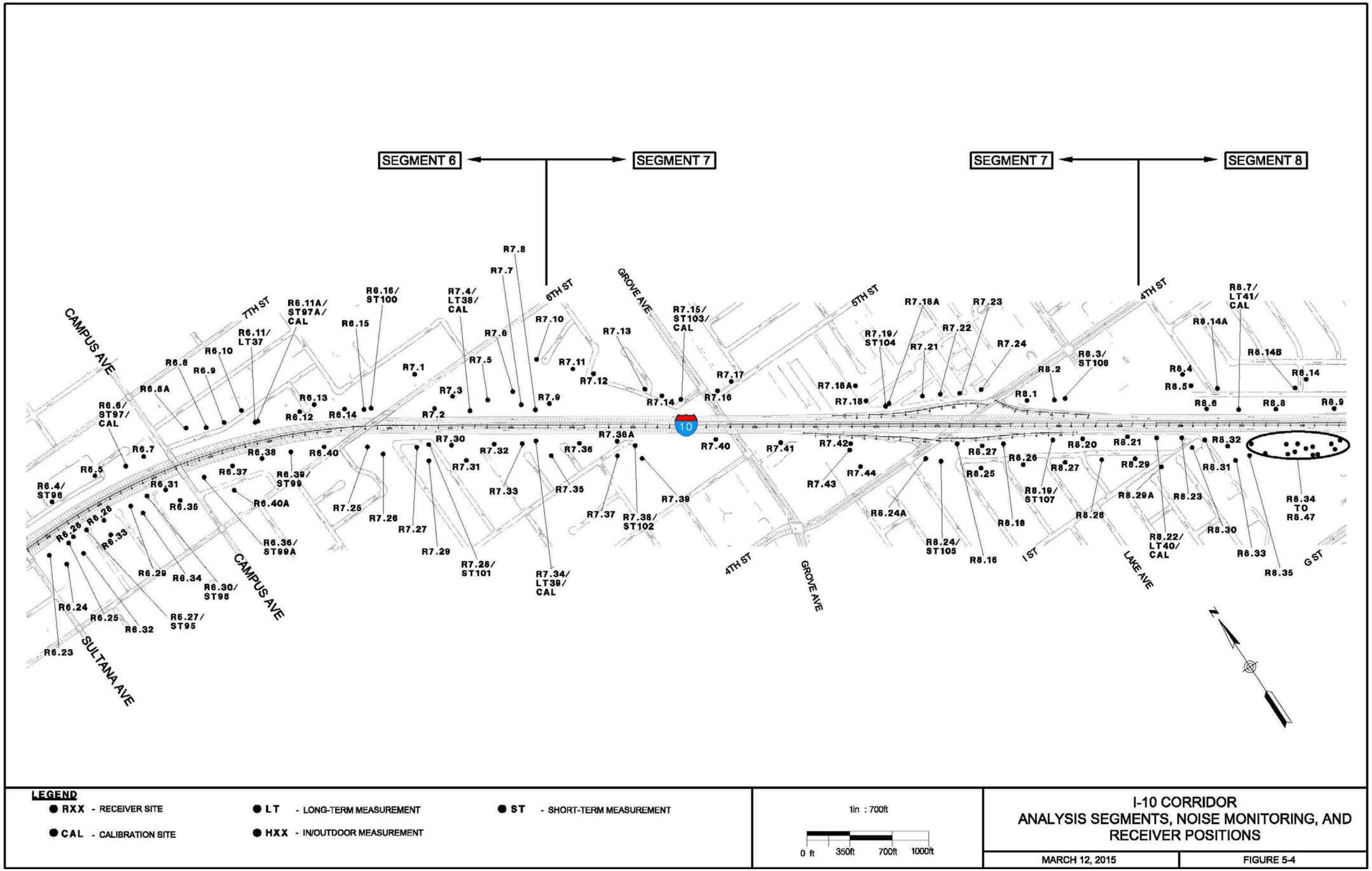

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Figure 5-5. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 8 and 22

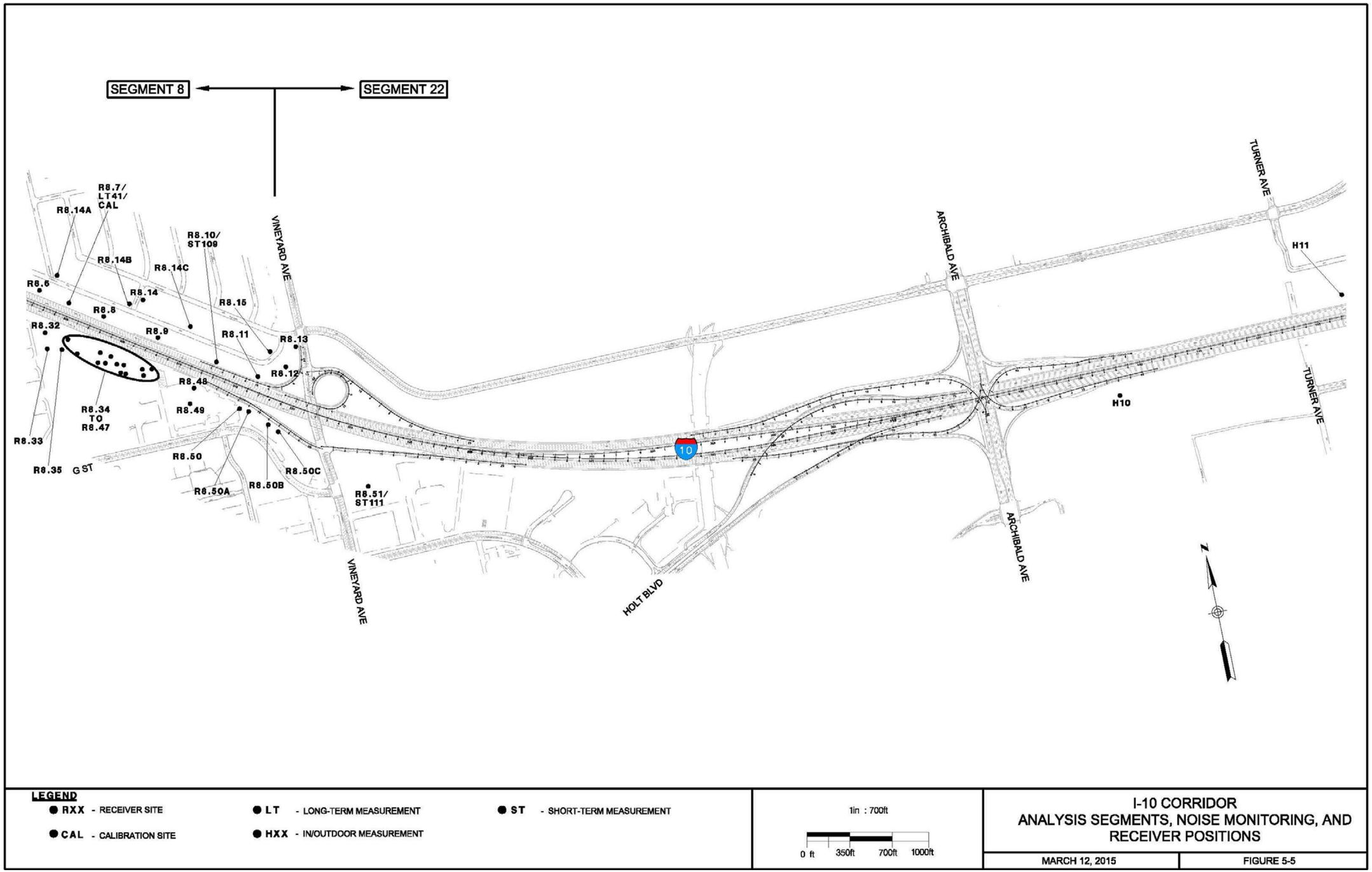

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Figure 5-6. Analysis Areas, Noise Monitoring, and Analysis Positions – Segment 22

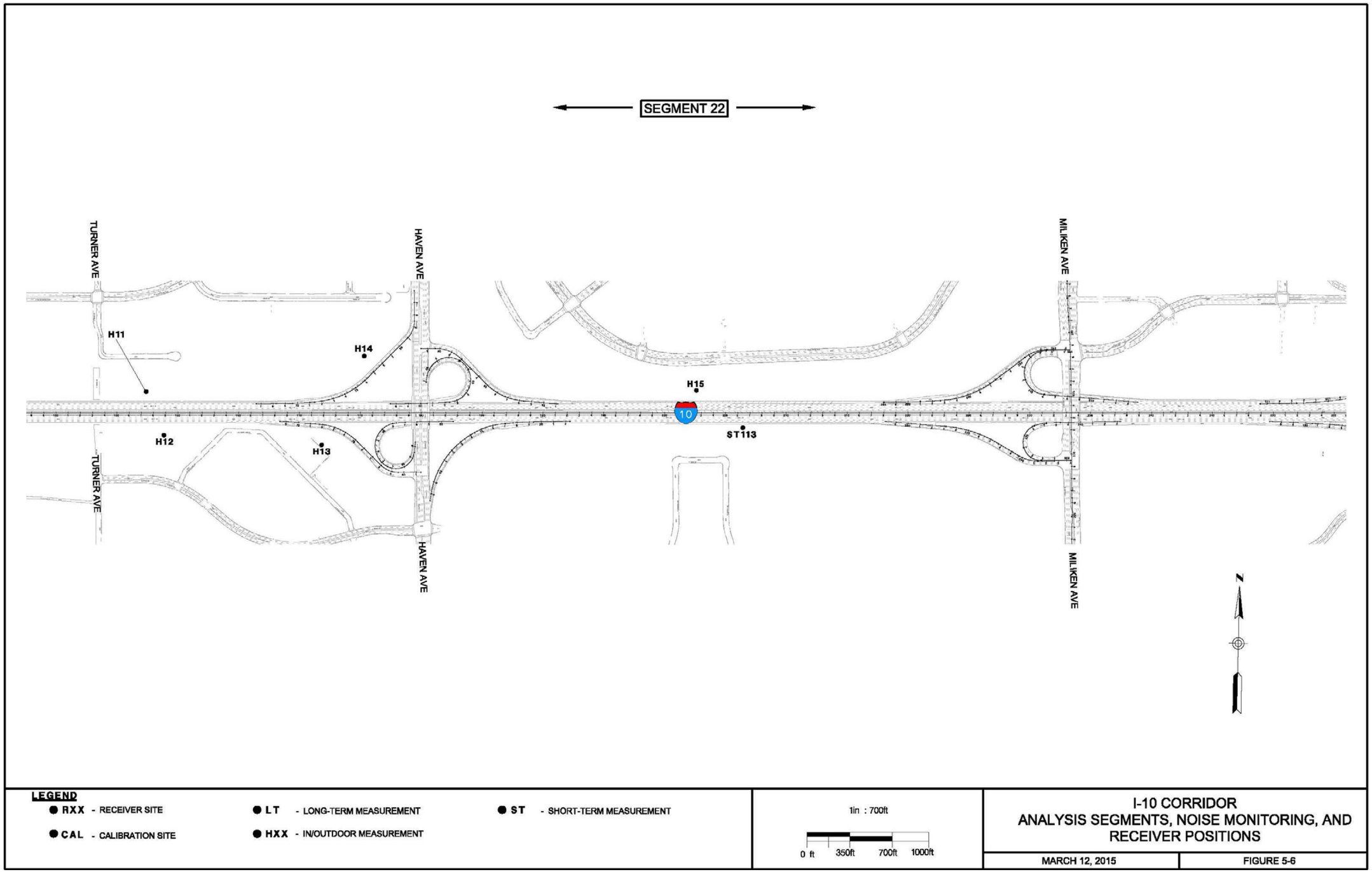

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Figure 5-7. Analysis Areas, Noise Monitoring, and Analysis Positions – Segment 22

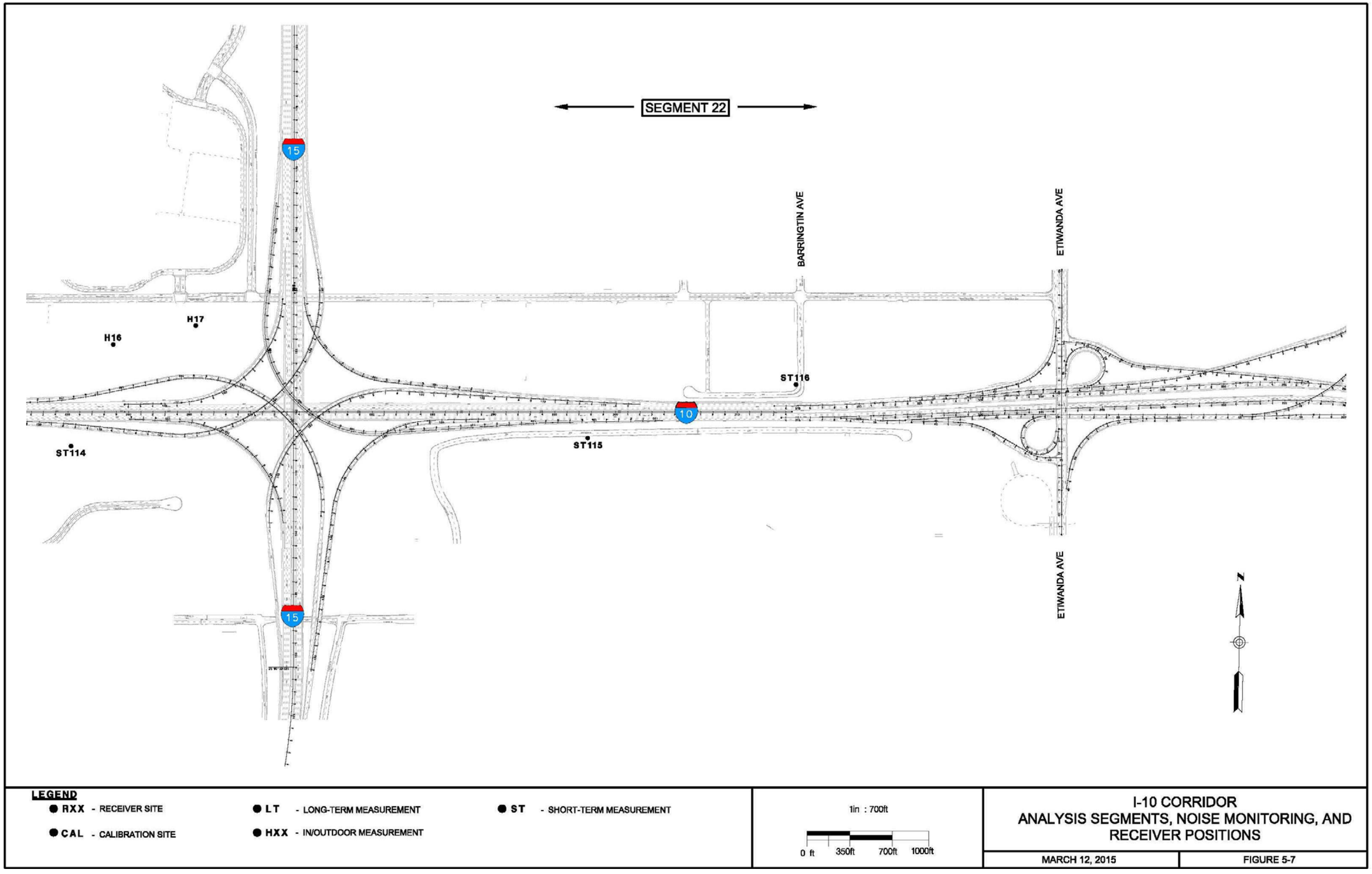

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Figure 5-8. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 22 and 9

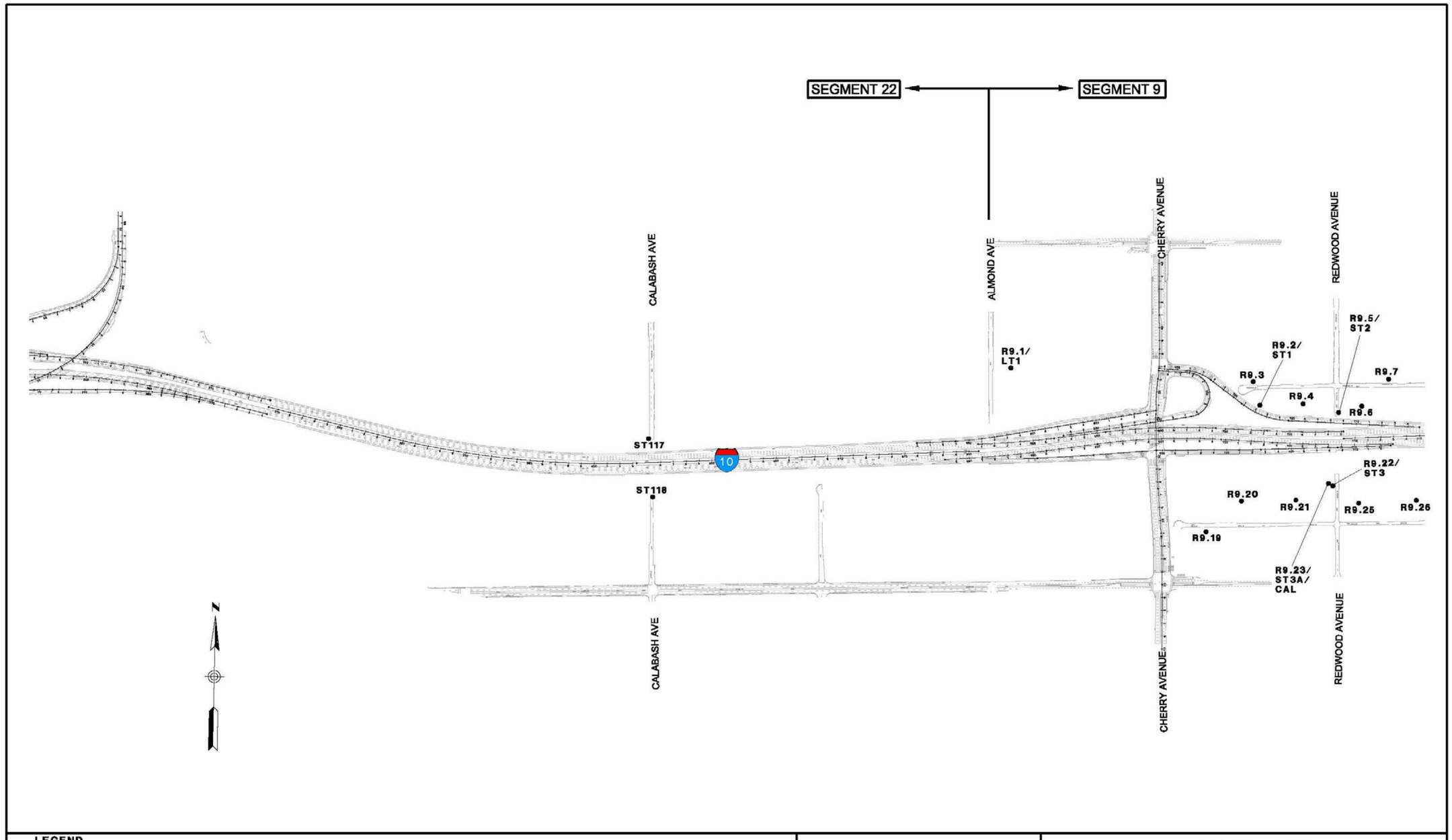

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Figure 5-9. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 9 and 10

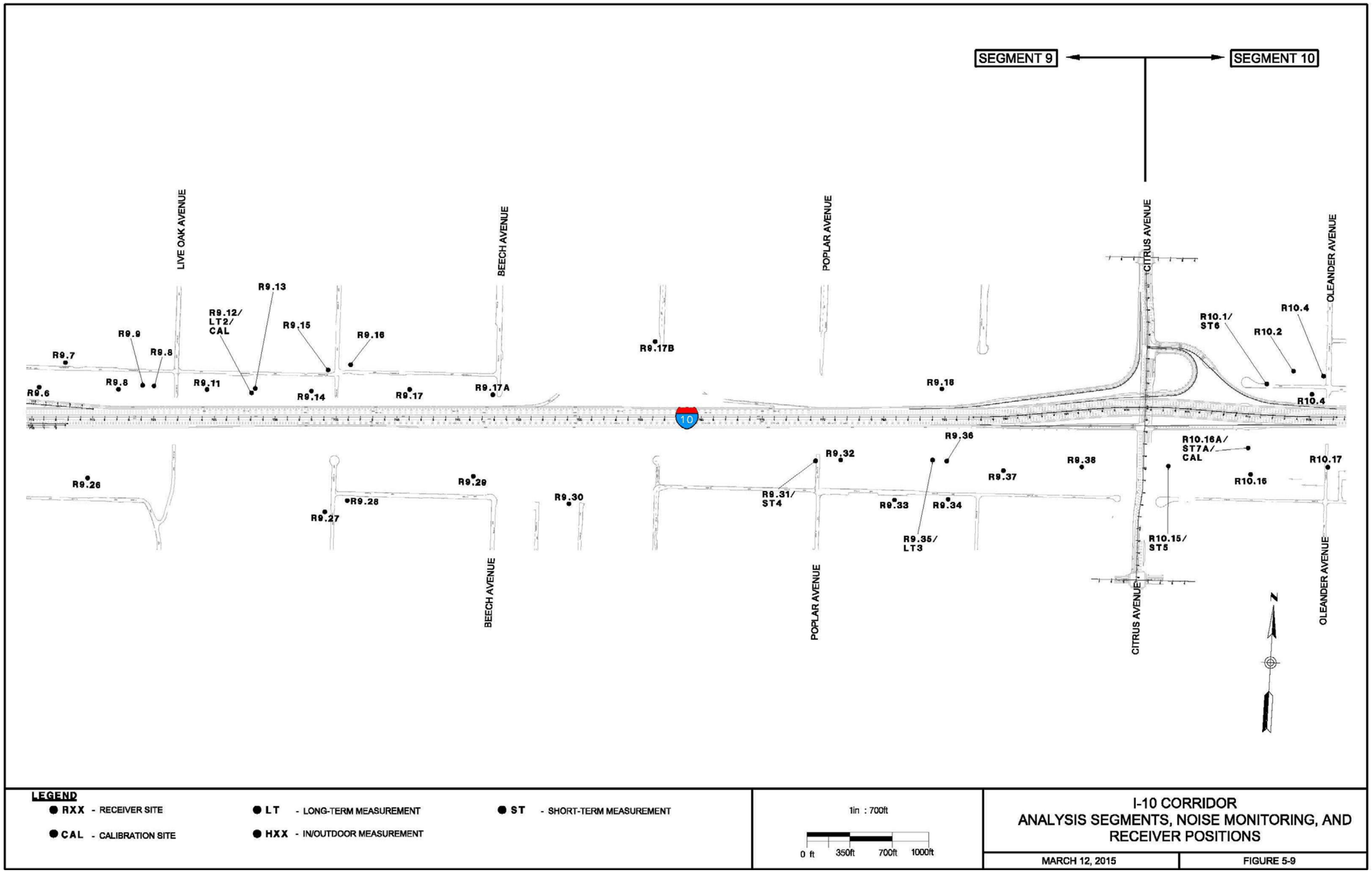

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Figure 5-10. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 10 and 11

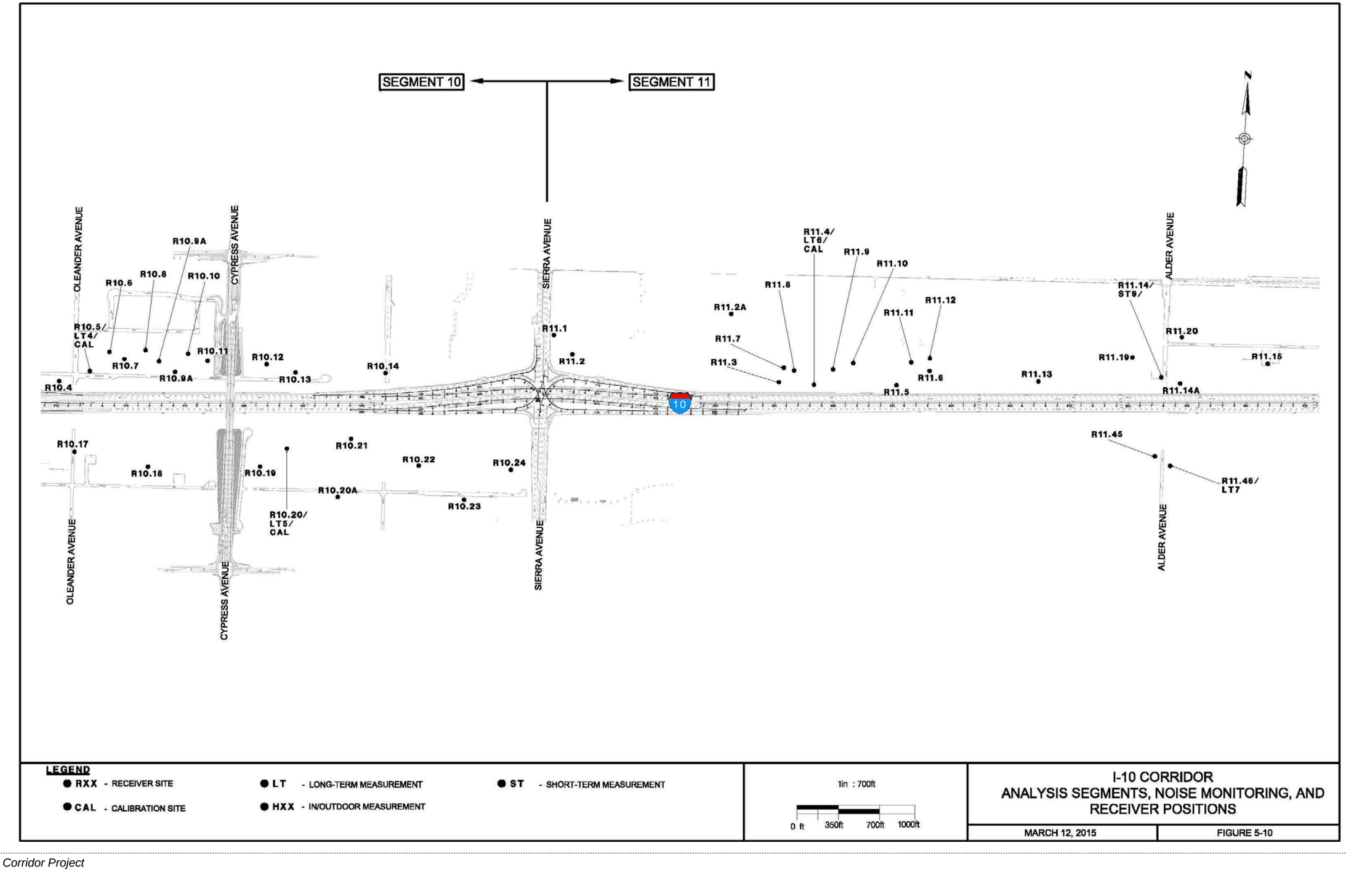

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Figure 5-11. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 11 and 12

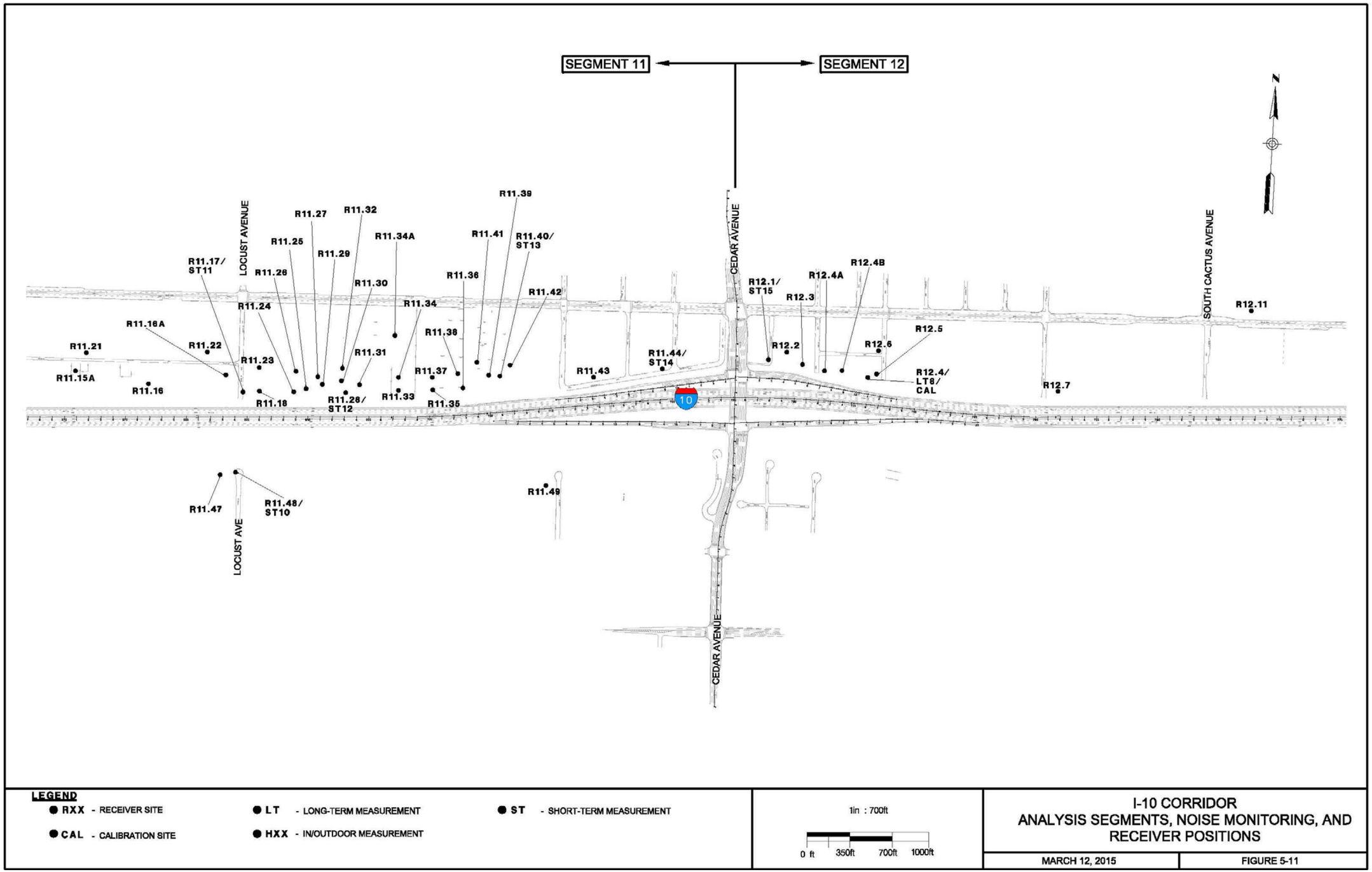

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Figure 5-12. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 12 to 14

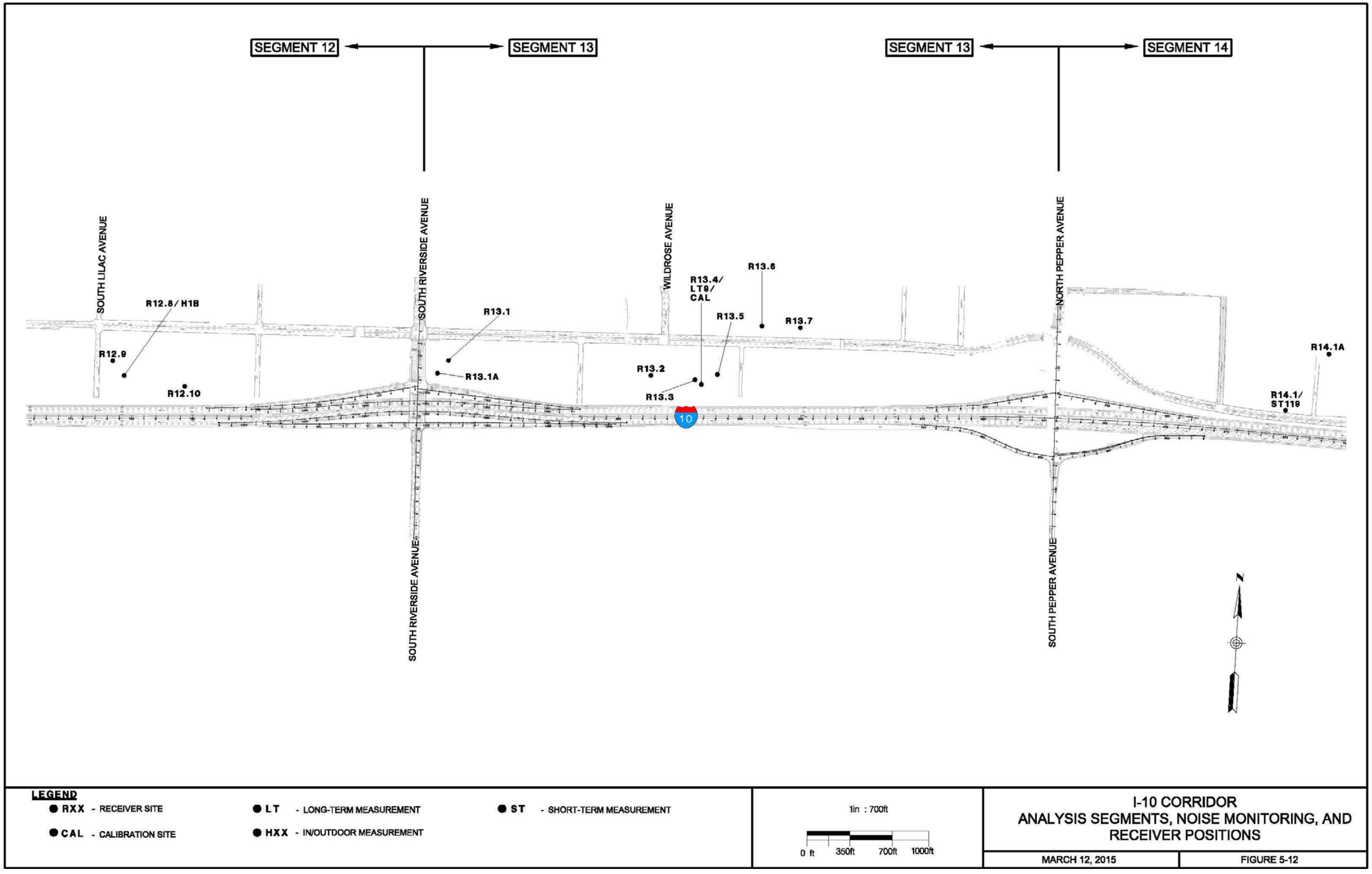

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Figure 5-13. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 14 to 16

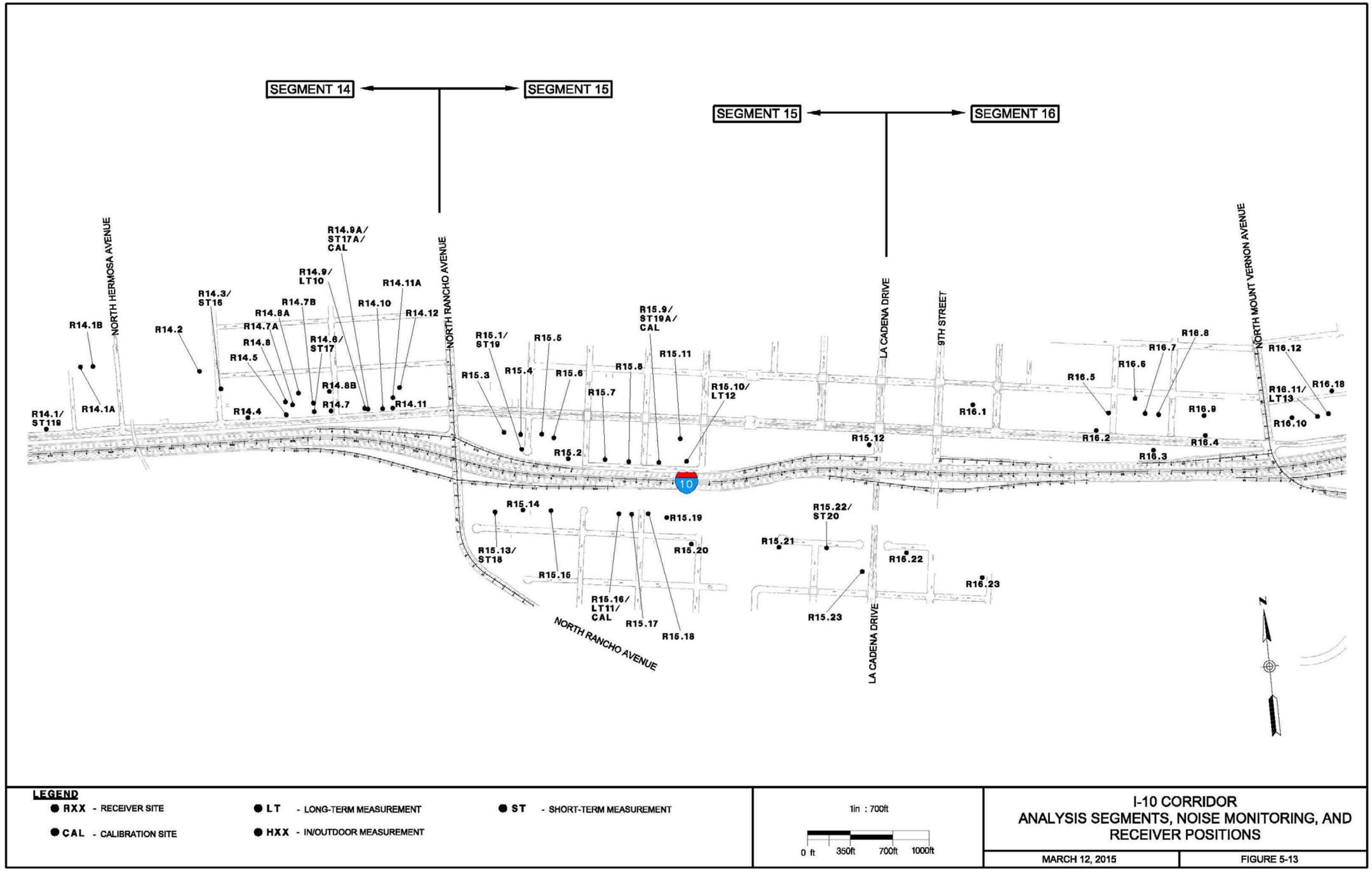

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Figure 5-14. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 16 and 23

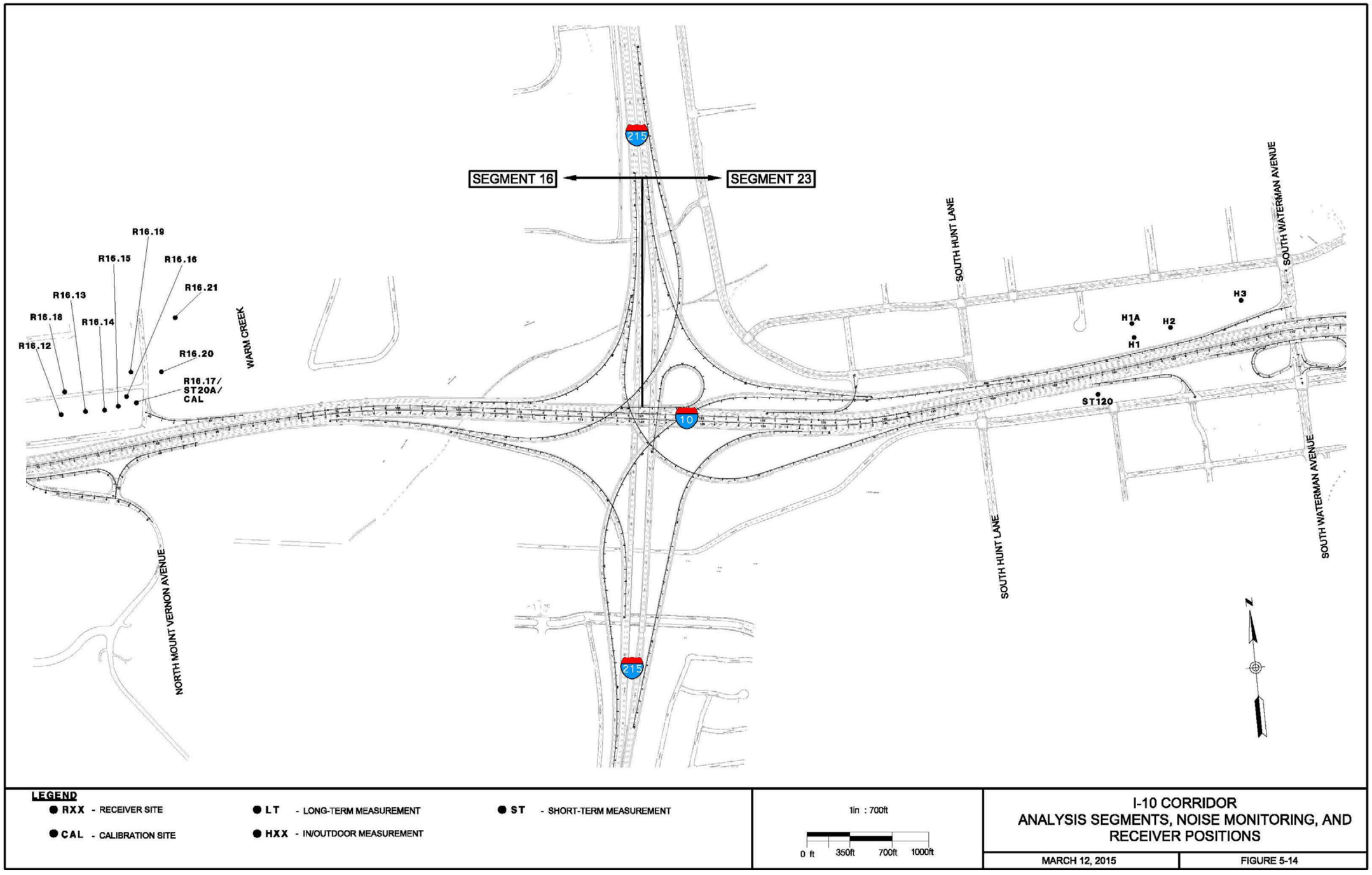

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Figure 5-15. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 23 and 17

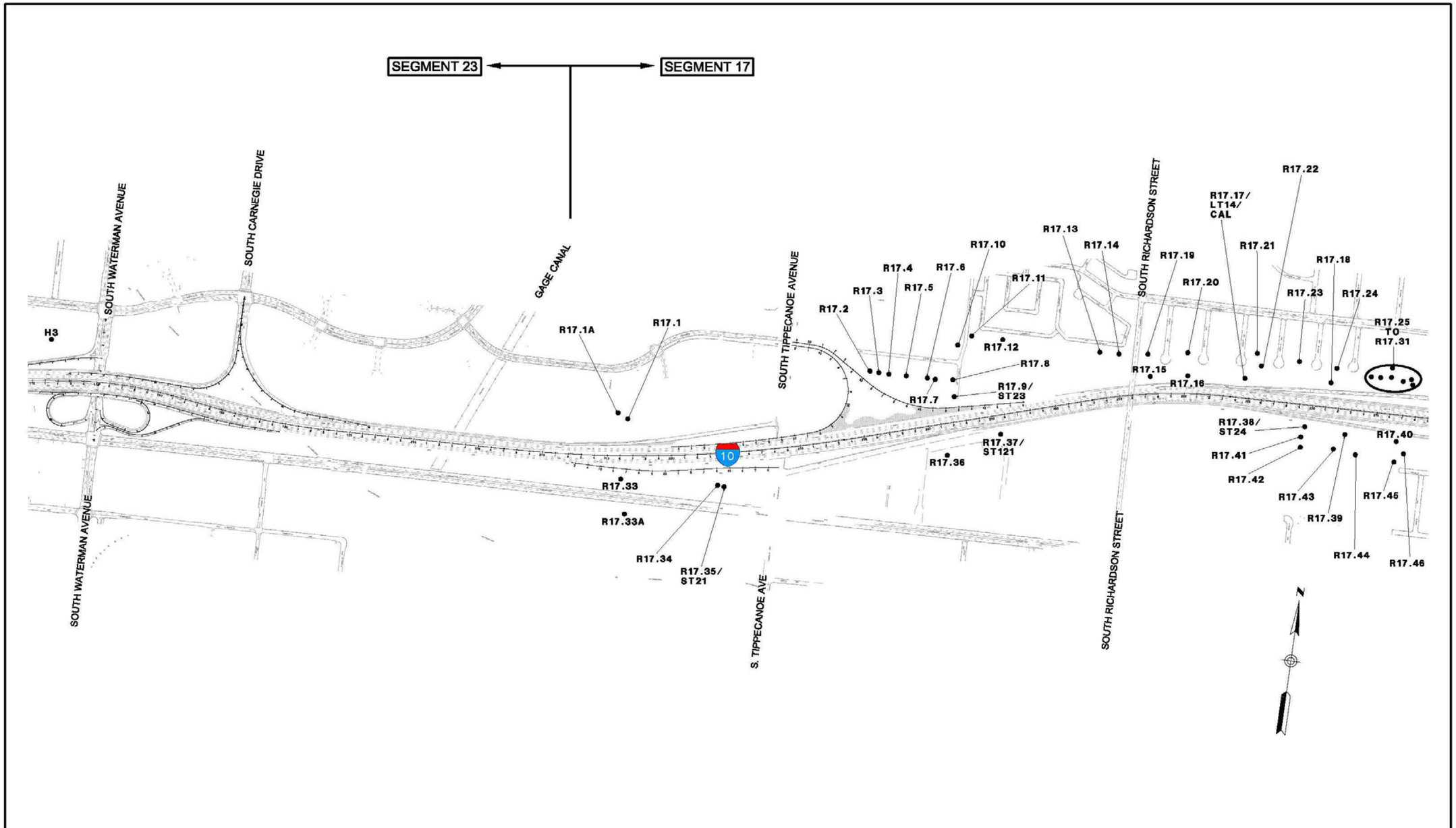

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Figure 5-16. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 17 to 18A

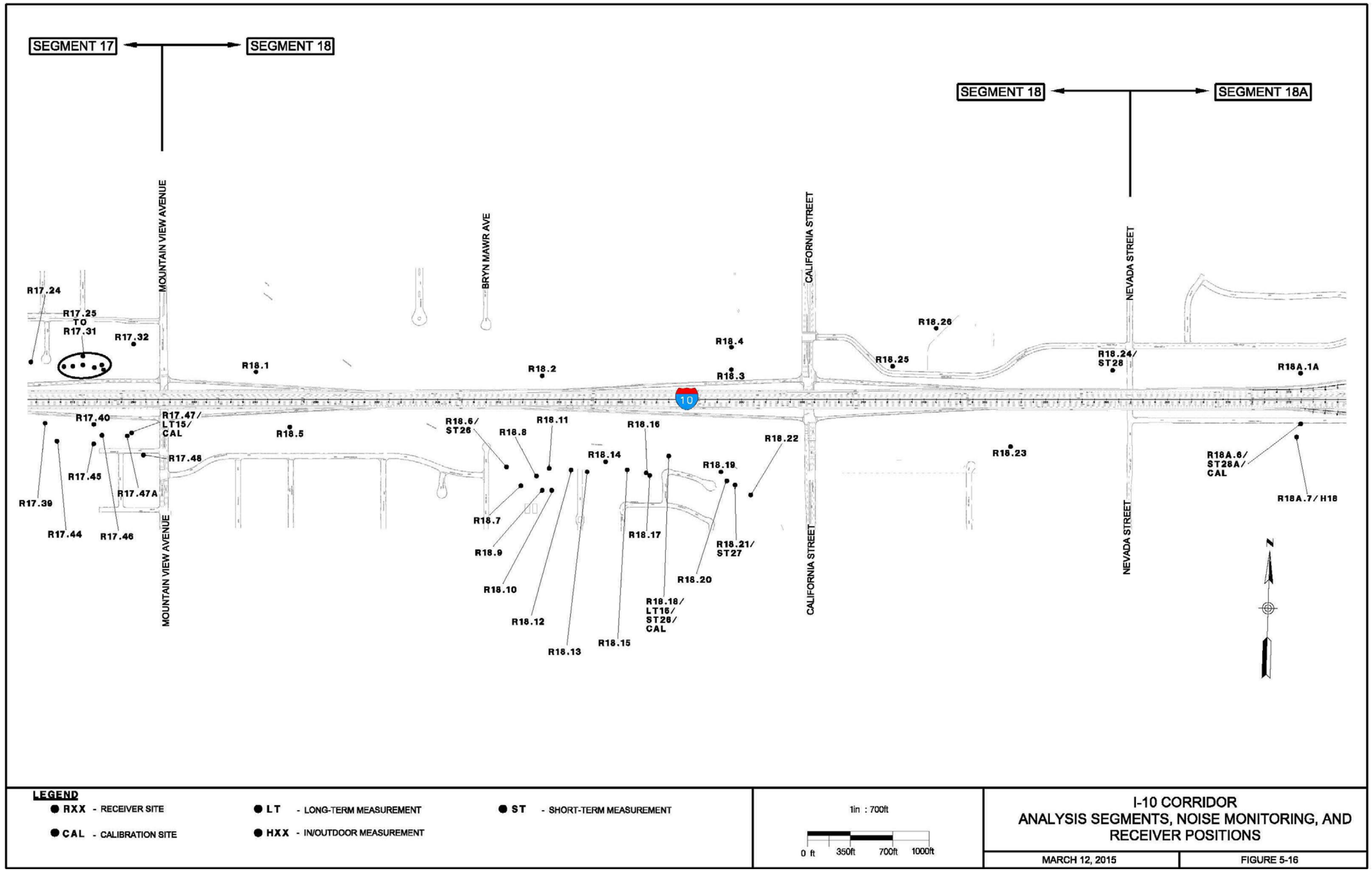

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Figure 5-17. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 18A to 20

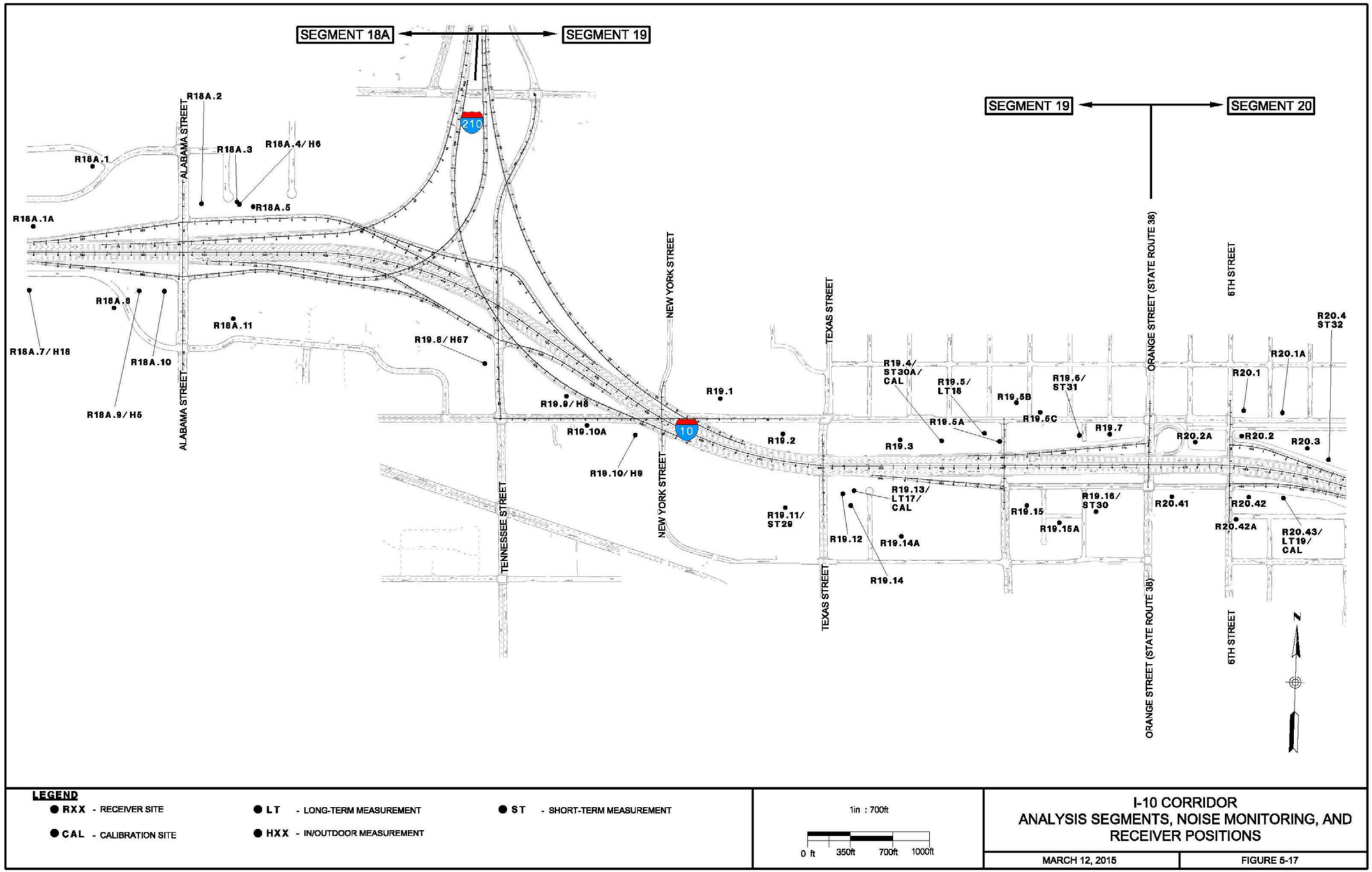

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Figure 5-18. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 20 and 21

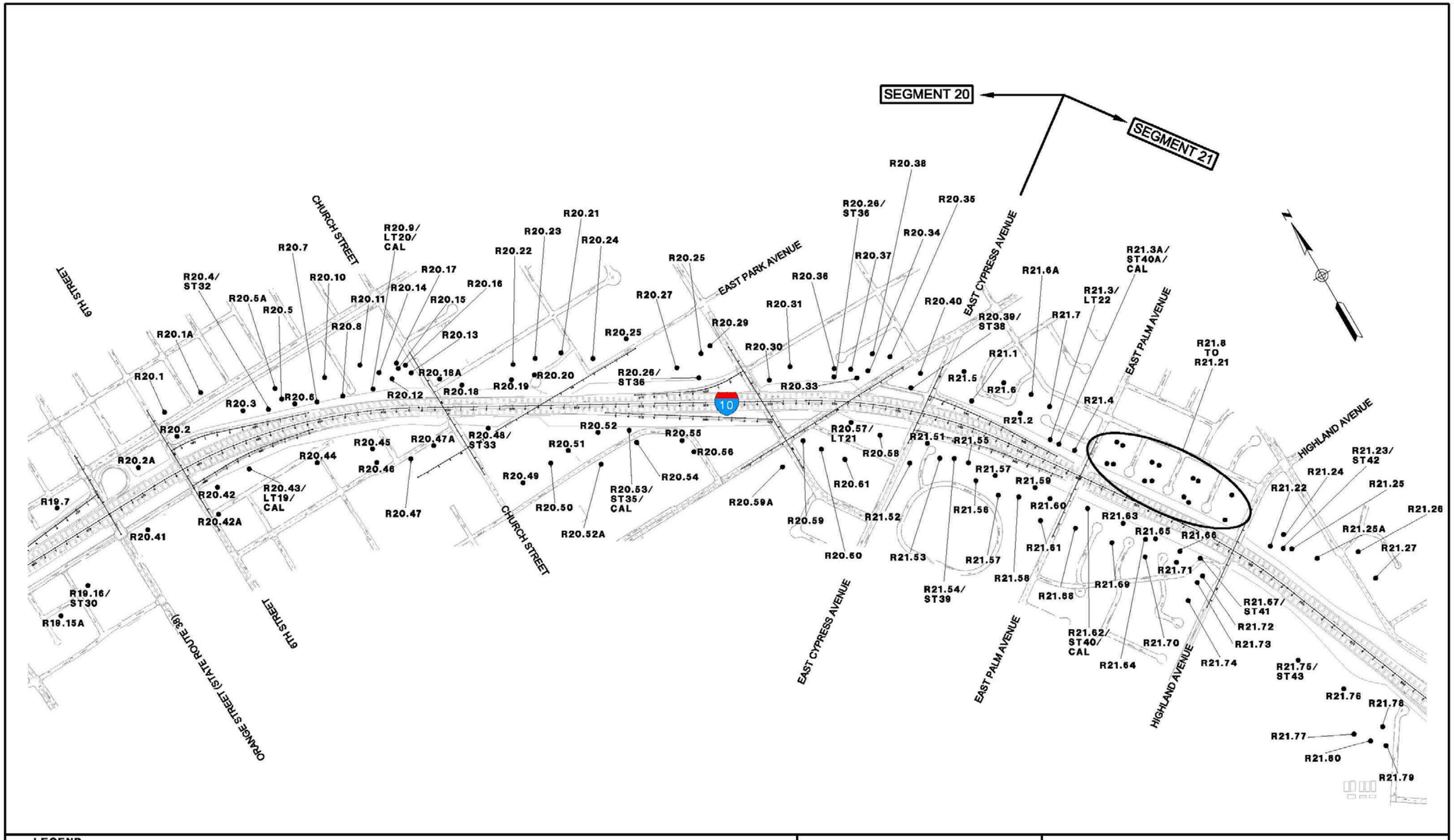

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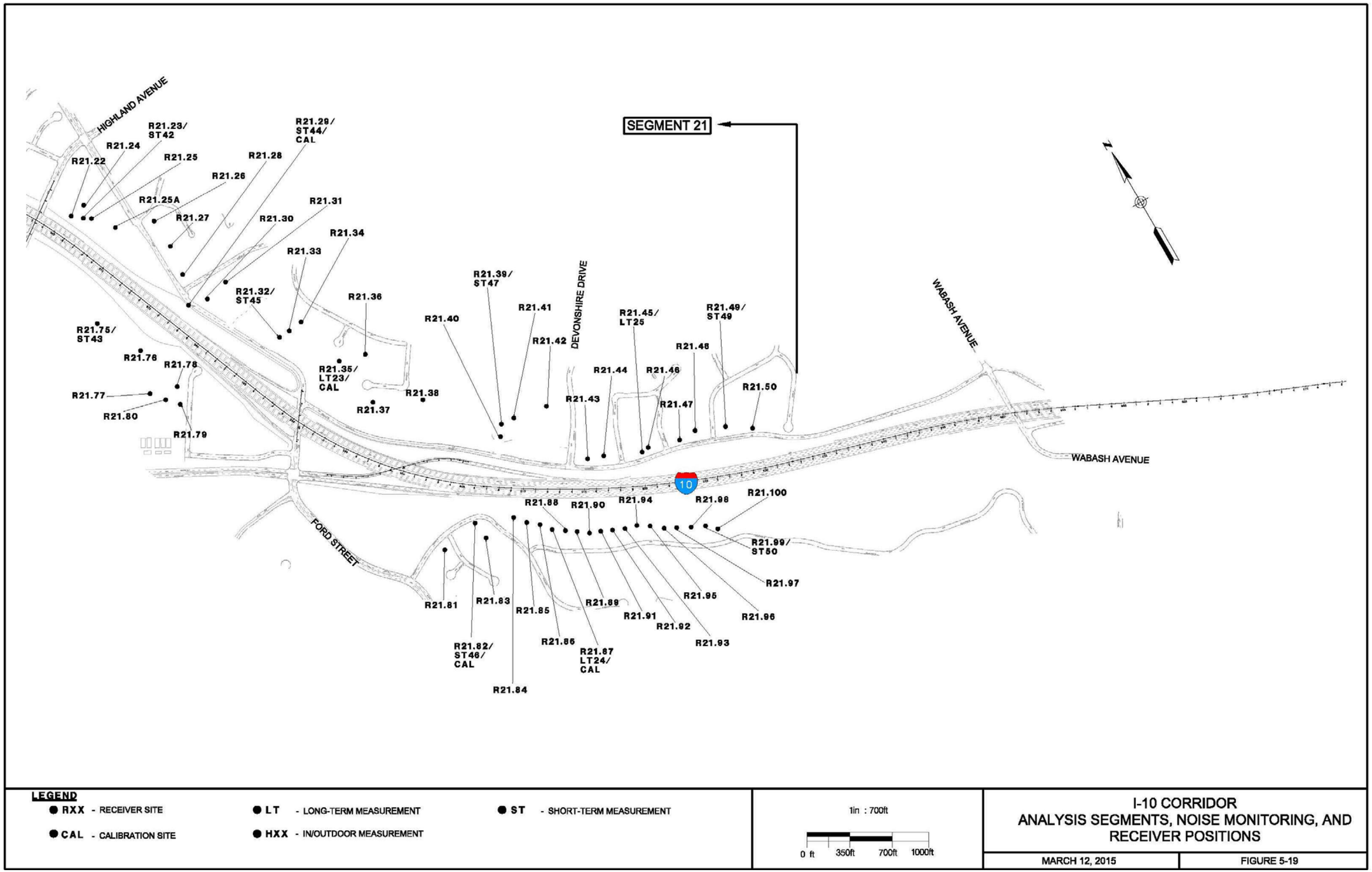
Figure 5-19. Analysis Areas, Noise Monitoring, and Analysis Positions – Segment 21



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Traffic Volumes and Truck Percentages

Traffic noise is a function of traffic type, volume, and speed. Generally, noise increases with increased speed and with higher volumes of traffic. However, at much higher volumes, travel speed decreases (stop and go conditions), so the worst-case noise levels are experienced when there is an optimum balance between the volume and speed. For purposes of determining noise impacts, the worst-case traffic noise occurs when traffic is operating under Level of Service (LOS) D/E conditions. Under these conditions, traffic is heavy, but remains free flowing. The volume on any lane is a function of its traffic type (i.e., GP lane, Express Lane, HOV lane, and ramp) for LOS D/E conditions. Appendix A presents the future traffic volumes and traffic distribution per direction of travel for the future no-build and build conditions as well as the existing condition for the areas of Tippecanoe Avenue, Alabama Street, and Tennessee Street.

Truck percentages relative to the total traffic volume were determined using traffic counts and long-term noise measurements. First, the peak noise hour, not peak traffic hour, was determined for several areas using the long-term noise measurements. The hours determined to be the worst noise hour were then used to gather traffic data for those areas during the peak noise hour(s). Three sources of traffic counts were utilized; traffic counts conducted for the Traffic Volumes Report (Iteris, 2014), Caltrans Performance Measurement System (PeMS) data, and traffic counts conducted by Parsons personnel.

Ten interchanges throughout the corridor were utilized in determining the truck percentages. Specifically, traffic counts were analyzed at:

1. Monte Vista Avenue,
2. Euclid Avenue
3. Vineyard Avenue
4. Archibald Avenue
5. Cherry Avenue
6. Citrus Avenue
7. Rancho Avenue
8. Mountain View Avenue
9. Alabama Street
10. East Cypress Avenue

These interchanges were further grouped into three major segments: west of Interstate 15 (I-15), between I-15 and I-215, and east of I-215. The medium and heavy truck percentages of the counts that fell within the three major segments were then averaged. Table 5-1 shows the medium and heavy truck percentages used for this study. It was assumed that the truck percentages in the future would remain similar to the existing conditions.

Table 5-1. Truck Percentages

Traffic Direction	Location along I-10	Traffic Percentage By Vehicle[1]			
		Car Percentage	Medium Truck Percentage	Heavy Truck Percentage	Total Truck Percentage
Eastbound	West End to I-15	86.77%	4.48%	8.75%	13.23%
Westbound	West End to I-15	87.27%	3.80%	8.93%	12.73%
Eastbound	I-15 to I-215	88.26%	4.43%	7.31%	11.74%
Westbound	I-15 to I-215	91.51%	2.86%	5.63%	8.49%
Eastbound	I-215 to Wabash Avenue	91.93%	3.24%	4.84%	8.07%
Westbound	I-215 to Wabash Avenue	94.90%	1.16%	3.95%	5.10%

Note:
1 - Truck percentages determined from existing traffic volume counts during peak noise hour conducted by Parsons and Iteris as well as one PeMS station.

The forecasted 2045 Average Daily Traffic (ADT) truck percentages from the Traffic Volumes Report (Iteris, 2014) were used for the ramps. The total truck percentages for the ramps were equally divided between medium and heavy trucks for almost all of the ramps except for two that have a high percentage of heavy trucks due to the commercial and/or industrial activities at the nearby areas. For those ramps at Vineyard Avenue and Cherry Avenue, it was assumed that medium trucks would be 25 percent of the total and heavy trucks would be 75 percent of the total truck percentage. Truck percentages on the auxiliary lanes equal the highest truck percentages of the on or off-ramps before and after the auxiliary lanes.

Typically, heavy trucks do not travel in the inner or “fast” lanes; thus, heavy truck traffic volumes were modeled only in the outer two GP lanes. In the modeling, it was assumed that heavy trucks would not travel in the HOV or Express Lane.

The following assumptions were used for modeling peak-noise hour traffic noise levels for the No-Build Alternative, Alternative 2, and Alternative 3:

- I-10 General Purpose: 1,850 vehicles-per-hour (vph)/lane
65 mph autos and medium trucks
55 mph heavy trucks
- HOV: 1,600 vph/lane
65 mph autos and medium trucks
- Express Lanes: 1,700 vph/lane
65 mph autos and medium trucks
- Auxiliary Lanes: 1,000 vph/lane
65 mph autos and medium trucks
55 mph heavy trucks
- On-Ramp (without metering): 1,000 vph/lane (or predicted volume, if less)
10 to 65 mph autos and medium trucks
10 to 55 mph heavy trucks

- On-Ramp (with metering): Los Angeles County:
  900 vph/lane (or predicted volume, if less)
  Half the traffic:
  10 to 65 mph autos and medium trucks
  10 to 55 mph heavy trucks

  Half the traffic:
  10 to 0 then 0 to 65 mph autos and medium trucks
  10 to 0 then 0 to 55 mph heavy trucks
- On-Ramp (with metering): San Bernardino County:
  900 vph/lane (or predicted volume, if less)
  10 to 0 then 0 to 65 mph autos and medium trucks
  10 to 0 then 0 to 55 mph heavy trucks
- Off-Ramp (with stop sign):
  1,000 vph/lane (or predicted volume, if less)
  65 to 0 mph autos and medium trucks
  55 to 0 mph heavy trucks
- Off-Ramp (with signal):
  1,000 vph/lane (or predicted volume, if less)
  Half the traffic
  65 to 0 mph autos and medium trucks
  55 to 0 mph heavy trucks

  Half the traffic
  65 to 10 mph autos and medium trucks
  55 to 10 mph heavy trucks

Existing Noise Determination

A combination of measurements and modeling was used to determine existing noise levels. The reason for using both measurements and modeling was that it is not practical to measure existing noise levels at all of the receiver locations and modeling only could be used because the traffic volumes associated with the worst-noise hour was not available.

Results of the long-term noise measurements and adjusted short-term noise measurements were used to determine peak existing noise levels at the measurement sites. Next, the design year no-build condition was modeled using the calibrated TNM model for all measurement positions and modeling-only positions. From this the relationship between the existing measured worst-hour noise levels and the no-build worst-hour noise levels was developed. This relationship was then applied to the no-build modeling results to develop the existing noise levels at the modeling-only receivers.

Because existing and no-build are based on the same roadway geometry, the proportional differences between traffic noise levels at various locations will be the same for both cases. In other words, if the difference between the future no-build modeled case for a measurement site and a nearby modeled receiver is 3 dB, then for the existing case the difference of the noise levels between the same two points will be 3 dB.

The following procedure was used for estimating the existing noise levels for modeling-only receivers that are affected by train noise:

- Areas where the existing noise measurement includes train noise contributions, the existing noise levels for modeling-only receivers will be estimated from the "Design Year No-Build Traffic + Train Noise Levels." This will apply to receivers south of I-10 in Segments 9, 10, and 11.

- There are receivers affected by train noise in Segments 14, 15, and 16; however, it was determined that the existing noise measurements did not include any train noise. Therefore, the existing noise levels for modeling-only receivers will be estimated from the "Design Year No-Build Traffic Noise Levels" which does not include train noise contributions.

- There are no receivers with train noise contributions in Segments 12 and 13 because there are no nearby land uses to the train tracks south of I-10 within the study limits.

In the area of the westbound Tippecanoe Avenue off-ramp, the existing case was modeled in TNM because there is a difference between the existing and no-build geometry. In the areas of Alabama Street and Tennessee Street, the existing case was modeled in TNM because there were no existing noise measurements for this area because there was no secure location for a long-term measurement, and short-term measurements cannot be adjusted to peak noise hour without an associated long-term measurement. Year 2012 existing traffic volumes capped at LOS D/E volumes were used in TNM to determine the existing noise levels.

Isolated Hotels, Motels, and Schools

There are several isolated hotels, motels, and continuing education schools (e.g., private colleges and vocational schools) along the project alignment that are located in commercial or industrial areas. Most of these hotels/motels and continuing education schools do not have outdoor frequent use areas.

Modeled locations along the project corridor with similar geometric site characteristics to the isolated hotels, motels, and continuing education schools were used to predict their future-build noise level. Simultaneous indoor and outdoor noise measurements were conducted at the hotels, motels, and continuing education schools to determine the interior traffic noise level during the peak traffic hour. If the future predicted interior traffic noise level of any of the build alternatives exceeded the NAC, the affected hotel, motel, or school was included in TNM for further analysis. The future predicted build interior traffic noise levels only exceeded the NAC at one location; therefore, detailed analysis was conducted for that area utilizing TNM.

Noise Model Calibration

TNM 2.5 was used to compare measured traffic noise levels to modeled noise levels at field measurement locations to validate the accuracy of the model. Traffic volumes

counted during each measurement period were normalized to 1-hour volumes. Appendix A contains traffic volumes counted for the model calibration. These normalized volumes were assigned to the corresponding project area roadways to simulate the noise source strength at the roadways during the actual measurement periods. Modeled and corresponding measured sound levels were then compared to determine the accuracy of the model and if additional calibration of the model was necessary.

5.3.2. Train Noise Levels

Train traffic noise was estimated using the latest version of the noise model based on Federal Transit Administration (FTA) General Transit Noise Assessment methodology (FTA, 2006). As such, FTA's *Noise Impact Assessment Spreadsheet* was used to generate train noise levels prior to abatement (FTA, 2007). Calculation of peak-hour train noise required various input parameters such as predicted future train operation volumes, operational speeds, distances from the representative receptors to the railroad tracks, as well as number of locomotives and freight cars. Train operations were obtained from the *Regional Rail Simulation Findings Technical Appendix* (SCAG, 2011) authored by Dr. Robert C. Leachman. Train speeds were obtained from the *Inland Empire Railroad Main Line Study* (SCAG, 2005). The number of trains during the traffic peak noise hours and other information are summarized in Appendix G.

In Segments 9 through 16, the Union Pacific Railroad (UPRR) mainline runs parallel to the eastbound I-10 mainline. Because there are no at-grade crossings or passenger stations within the study areas of Segments 9 through 16, train horn noise was not considered in the noise assessment. In Segment 15, the Burlington Northern Santa Fe (BNSF) tracks run north/south.

It was assumed that horn noise would not be generated near the crossing of the UPRR and BNSR mainline tracks (Colton Crossing) because of the grade separation.

Freight trains tend to operate during off peak hours to minimize delays at grade crossings or avoid commuter trains; furthermore, there is not a firm schedule set for freight train operations. Field observations and analysis of long-term noise measurement data showed trains were operating throughout the full 24 hour period and not limited to daytime hours. Due to the unpredictability of freight train operation schedules, an hourly train pass-by quantity was estimated by equally distributing the total daily train pass-bys within a 24 hour period.

Amtrak is assumed to be the sole operator of projected future passenger train operations along the UPRR mainline; however, Amtrak operations were only a maximum of two operations per day. Therefore, they have been considered negligible compared to freight operations, and they were not included in the peak day rail operation totals.

Along the BNSF mainline, future passenger train activity would include both Metrolink and Amtrak operations. The existing Metrolink schedule shows that operations would occur within normal peak commute periods, with most activity occurring during a 12 hour window. For the purposes of this analysis, the average rate of Metrolink operations

along the BNSF mainline during the loudest hour at receivers along I-10 was assumed to be one-twelfth of the average daily peak passenger train volumes.

Cruising speeds and the number of peak-hour operations were assumed to be constant for all receivers along the UPRR mainline south of the I-10 eastbound lanes for Segments 9, 10, 14, 15, and 16; however, receivers in Segment 11 experience a different type of noise contribution from the UPRR mainline due to reduced cruising speeds along the West Colton Receiving and Departure yards south of the UPRR mainline. There are no receivers south of I-10 in Segments 12 and 13 within 700 feet of the nearest traveled way.

In areas with train yards, train operations were divided to through trains and trains that go into the yard. In these areas, for the modeling purpose, it was assumed that trains on the tracks next to I-10 will be traveling at the cursing speed. Because there are no set patterns how trains are moving around in the yard, operations in the yard were modeled on a single track at the middle of the yard at speed limit of 10 mph to represent different movements in the yard.

A breakdown of the number of train operations as well as speeds used for calculation of the peak-hour train noise is summarized in Figures G-1 and G-2 in Appendix G. Figure G-2 shows operations details in the West Colton rail yards.

Because receivers located on the south side of I-10 in Segments 9 through 16 are exposed to train noise in addition to traffic noise, the composite noise levels of trains and I-10 traffic were modeled for these receivers. Train noise is determined to be insignificant relative to noise from the constant flow of traffic on I-10 for the receivers north of I-10. Table 5-2 demonstrates traffic and train noise levels at two selected receivers located north of I-10. The chosen receivers are some of the closest receivers to the train tracks that are located across from I-10.

Differences between the highway and train noise levels are estimated to be more than 11 dB. In terms of acoustical contribution, a secondary noise source that is lower than 10 dB from the dominant noise source can be considered negligible. Therefore, train noise analysis is not performed for the frequent outdoor use areas north of I-10.

Table 5-2. Train Noise Contribution on the North Side of I-10

Noise Sources	Receiver R9.17A Leq, dBA	Receiver R10.4 Leq, dBA
No-Build Alternative traffic noise with 3 foot center barrier	75	74
Train noise without 3 foot center barrier	64	63
Train noise with 3 foot center barrier [1]	62	62
Difference between traffic and train noise	13	12
Alternative 2 traffic noise with 3 foot center barrier and 3 foot shoulder barrier	74	76
Train noise without 3 foot barriers	64	63
Train noise with 3 foot barriers [2]	62	62
Difference between traffic and train noise	12	12

Notes: 1 – Noise reduction of the center divider is calculated using FTA procedures.
2 – FTA procedures do not have provision to calculate effect of a second barrier; therefore, the effect of the shoulder barrier is not included, which means the actual noise level could be less.

When calculating the noise prediction with barrier noise levels, the calculated train noise is added to the noise levels with barrier at all heights. This is because the barrier on shoulder has no effect on train noise since the source of the train noise is between the barrier and receiver.

5.4. Methods for Identifying Traffic Noise Impacts and Consideration of Abatement

Traffic noise impacts are considered to occur at receiver locations where predicted design-year traffic noise levels are at least 12 dB greater than existing noise levels, or where predicted design year traffic noise levels approach or exceed the NAC for the applicable activity category. Where traffic noise impacts are identified, noise abatement must be considered for reasonability and feasibility as required by Title 23 CFR 772 and the Protocol.

According to the Protocol, abatement measures are considered acoustically feasible if a minimum noise reduction of 5 dB at impacted receiver locations is predicted with implementation of the abatement measures. In addition, barriers should be designed to intercept the line-of-sight from the exhaust stack of a truck to the first tier of receivers, as suggested by the Caltrans Highway Design Manual, Chapter 1100. Other factors that affect feasibility include topography, access requirements for driveways and ramps,

presence of local cross streets, utility conflicts, train crossings, and safety considerations. The overall reasonableness of noise abatement is determined by considering the noise reduction design goal; cost of noise abatement; and viewpoints of benefitted receivers (including property owners and tenants).

The Protocol defines the procedure for applying an acoustical design goal to all noise abatement measures. Caltrans' acoustical design goal is that a barrier must be predicted to provide at least 7 dB of noise reduction at one or more benefitted receivers. For a wall to be considered reasonable, the 7 dB design goal must be achieved at one or more benefitted receivers. This design goal applies to any receiver and is not limited to impacted receivers.

The Protocol further defines the procedure for assessing reasonableness of noise barriers from a cost perspective. A cost-per-residence allowance is calculated for each benefited residence (i.e., residences that receive at least 5 dB of noise reduction from a noise barrier). The 2015 base allowance of $71,000 is used for this project. Total allowances are calculated by multiplying the cost-per-residence by the number of benefited residences.

Chapter 6. Existing Noise Environment

6.1. Existing Land Uses

A detailed field investigation was conducted to identify land uses that could be subject to traffic noise impacts from the proposed project. Single-family and multi-family residences as well as mobile homes were identified as Activity Category B land uses. Five parks, eight schools, five churches, two pre-schools, a community center, a tennis club, a golf course, a picnic area, Boomers Entertainment Park, Splash Kingdom Water Park, a radio station, and a museum were identified as Activity Category C land uses. Several hotels/motels, schools, and places of worship were identified as Activity Category D land use. Various hotels/motels, restaurants, and office buildings were identified as Activity Category E land uses. There are also multiple empty lots and some agricultural uses throughout the corridor. The interior rooms of hotels and motels have been considered Activity Category D throughout the study area. This is because when the project began in 2009, the interior criterion was still used for hotels/motels and analyzing the interior rooms of the hotels/motels was carried over from 2009. In addition, analyzing the interior noise levels was mainly done for hotels/motels without any outdoor use areas.

As required by the Protocol, noise abatement is considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, this impact analysis focuses primarily on locations with defined outdoor activity areas, such as residential backyards, common use areas at multi-family residences, parks, churches, schools, and hotels/motels.

This NSR analyzes 24 distinct segments that are based on major local interchanges. The 24 segments are:

Segment 1 – Towne Avenue to Indian Hill Boulevard: The area north of I-10 is a mix of single-family and multi-family residences (Activity Category B), Rancho San Jose Park and the playground of Kinder Kountry Preschool (Activity Category C), and outdoor seating areas of each room in Howard Johnson Hotel (Activity Category E). The area south of I-10 includes single-family residences (Activity Category B), the playgrounds of Covenant United Methodist Church, and a community center, as well as Jaycee Park (Activity Category C). The south side of I-10 also includes several commercial establishments including the outdoor seating area of Norm's Restaurant (Activity Category E). There are existing soundwalls located at the shoulder and R/W protecting Activity Category B and C land uses to the north and south of this segment from highway traffic noise. The adjacent land uses are at a lower elevation relative to I-10 except in the middle of the segment where the freeway is at grade.

Segment 2 – Indian Hill Boulevard to Monte Vista Avenue: Areas north of I-10 are a mixture of single-family and multi-family residences including Claremont Place Assisted Living (Activity Category B) along with the Claremont City Blessing Church School, Serrano Middle School, and the playground of a multi-family complex (Activity Category C) as well as the pool area of the Claremont Lodge (Activity Category E) and some commercial establishments. The area south of I-10 consists of single-family residences (Activity Category B) and the pool area of Hotel Claremont and Tennis Club (Activity Category C). There are also a Jehovah's Witnesses church with no windows and no outdoor use area, a couple of commercial establishments, and utility south of I-10 in this segment. There are existing

soundwalls located at the shoulder and R/W along eastbound and westbound I-10 that protect most of the Activity Category B and C land uses in this segment from highway traffic noise. Along this segment of I-10 the highway is elevated with respect to adjacent land uses.

Segment 3 – Monte Vista Avenue to Central Avenue: Montclair Plaza Mall covers the areas along I-10 on the north side, with an outdoor seating area of Acapulco's Restaurant (Activity Category E). Land uses south of I-10 include multi-family residences (Activity Category B) and several commercial establishments, including two car dealerships. The land uses adjacent to I-10 are at a lower elevation than the highway at the west and east ends and at grade in the middle.

Segment 4 – Central Avenue to Mountain Avenue: Areas north of I-10 contain multi-family residences and mobile homes (Activity Category B), Boomers Entertainment Park (Activity Category C), and Super 8 Motel with the pool exposed to the traffic noise (Activity Categories D and E). Areas south of I-10 contain single-family residences (Activity Category B), MacArthur Park (Activity Category C), a Cineplex and some other commercial uses. There are existing soundwalls located along the eastbound shoulder protecting Activity Category B and C land uses from highway traffic noise. Along this segment of I-10, the adjacent land uses are at a lower elevation relative to I-10.

Segment 5 – Mountain Avenue to Euclid Avenue: The land use north of I-10 is a composite of single-family and multi-family residences (Activity Category B), as well as Westwood College (Activity Category D), and a couple of commercial establishments. The land use south of I-10 consists of a mixture of single-family residences (Activity Category B), Redeemer Lutheran School and outdoor use area of Church of Christ (Activity Category C), Church of Christ (Activity Category D), and commercial uses including the outdoor seating area of Wingnuts Restaurant (Activity Category E). There are existing soundwalls located at the R/W along eastbound and westbound I-10 that protect most of the Activity Category B and C land uses in this segment from highway traffic noise. Along this segment of I-10, the highway is at a higher elevation with respect to the adjacent land uses at the west end and quickly transitions to become depressed for the remainder of the segment.

Segment 6 – Euclid Avenue to 6th Street: The area north of I-10 is a mix of single-family and multi-family residences including common use areas of multi-family complexes (Activity Category B), the OPARC Resource Center (Activity Category C), Kingdom Hall of Jehovah's Witness and medical offices (Activity Category D), and office buildings. The area south of I-10 includes single-family residences (Activity Category B) and Edison Elementary School (Activity Category C). There are existing soundwalls located at the R/W protecting most of the Activity Categories B and C land uses to the north and south of this segment from highway traffic noise. The adjacent land uses are at a higher elevation relative to I-10.

Segment 7 – 6th Street to 4th Street: Areas north of I-10 are a mixture of single-family and multi-family residences as well as mobile homes (Activity Category B) along with Little Learners Preschool (Activity Category C) and some commercial establishments. The area south of I-10 consists of single-family and multi-family residences (Activity Category B), West Coast Inn, Travelodge, and Days Inn (Activity Category D), as well as the pool areas of Travelodge and Days Inn (Activity Category E). There are also two large parcels of land on either side of I-10 that are owned by Metropolitan Water District of Southern California (MWD). There are existing soundwalls located at the shoulder and R/W along eastbound and

westbound I-10 that protect most of the Activity Categories B and C land uses in this segment from highway traffic noise. Along this segment of I-10 the highway is depressed with respect to adjacent land uses at the west end transitioning to become elevated with respect to adjacent land uses at the eastern half of this segment.

Segment 8 – 4th Street to Vineyard Avenue: The land use north of I-10 consists of single-family residences (Activity Category B), as well as a fire station and Motel 6 (Activity Category D), and a few commercial establishments. The land use south of I-10 consists of a mixture of single-family and multi-family residences including a common use area of a multi-family complex (Activity Category B), Ontario Airport Inn and Ramada Inn (Activity Category D), as well as the pool areas of Ontario Airport Inn, Ramada Inn, and Quality Inn (Activity Category E). There are existing soundwalls located at the shoulder and R/W along both eastbound and westbound I-10 as well as existing 10 to 13 feet in height property walls on the south side of I-10 that protect most of the Activity Category B land uses in this segment from highway traffic noise. Along this segment of I-10, the highway is at a higher elevation with respect to the adjacent land uses at the west end and transitions to become depressed at the east end.

Segment 9 – West of Cherry Avenue to Citrus Avenue: The land use north of I-10 consists of a mix between single-family and multi-family residences (Activity Category B) and commercial establishments (Activity Category E). The land use south of I-10 consists of pockets of single-family and multi-family residences as well as mobile homes (Activity Category B) mixed with commercial uses (Activity Category E). There is an existing soundwall located at the R/W along westbound I-10 that protect most of the Activity Category B land uses to the north from highway traffic noise. There are also UPRR train tracks that run parallel to eastbound I-10 on the south side in this segment. Land uses adjacent to I-10 are at grade compared to the highway.

Segment 10 – Citrus Avenue to Sierra Avenue: The area north of I-10 is a mix of single-family residences (Activity Category B) and commercial uses, including Pancho Villas Restaurant (Activity Category E). The area south of I-10 includes single-family residences (Activity Category B) and a few commercial establishments (Activity Category E). There are UPRR train tracks that run parallel to eastbound I-10 on the south side in this segment. The adjacent land uses are at grade relative to I-10.

Segment 11 – Sierra Avenue to Cedar Avenue: Areas north of I-10 include single-family and multi-family residences as well as Bloomington, Idle Wheels, and Log Cabin Mobile Home Parks (Activity Category B), along with Ayala Park (Activity Category C), Motel 6, and Econo Lodge (Activity Category D), as well as the pool area of the Motel 6 and several commercial establishments (Activity Category E). There is also a firehouse located north of I-10. The area south of I-10 consists of single-family residences (Activity Category B) and commercial uses (Activity Category E). There is an existing soundwall located at the R/W along westbound I-10 that protects the Bloomington, Idle Wheels, and Log Cabin Mobile Home Parks, as well as Ayala Park, from highway traffic noise. There is also the UPRR West Colton Receiving Freight Yard that runs parallel to eastbound I-10 in this segment where the yard runs between I-10 and the land uses south of I-10. Along this segment of I-10 the highway is at grade with respect to adjacent land uses.

Segment 12 – Cedar Avenue to Riverside Avenue: Areas north of I-10 are a mixture of single-family residences (Activity Category B), Joe Baca Middle School, and a picnic area next to the Teamsters Local 63 offices (Activity Category C), Days Inn (Activity Category D), and the pool area of Days Inn and other commercial establishments (Activity Category E). There is also an industrial park and empty lots north of I-10. The area south of I-10 contains a rail yard and commercial uses. Land uses south of the rail yard are too far from I-10 to be considered. There is an existing soundwall located on the R/W along westbound I-10 that protects some of the Activity B land uses. Along this segment of I-10 the highway's elevation is depressed compared to the adjacent land uses.

Segment 13 – Riverside Avenue to Pepper Avenue: Along I-10 to the north, the Activity Category B land uses are three single-family residences. Other land uses include Sam Sanead Golf Course (Activity Category C), American Inn, and Valley View Inn (Activity Category D), as well as Taco Joe's Restaurant with an outdoor seating area and other commercial establishments (Activity Category E). The area south of I-10 contains a rail yard where land uses south of the rail yard are too far from I-10 to be considered. The land uses adjacent to I-10 for this segment are elevated relative to I-10.

Segment 14 – Pepper Avenue to Rancho Avenue: Areas north of I-10 are a mixture of single-family residences and mobile homes with one duplex (Activity Category B), Slover Mountain High School (Activity Category C), Lido Motel (Activity Category D), a school administration office (Activity Category E), and several commercial establishments as well as large open lots. There are also railroad tracks that travel north/south in the northern area of this segment. The area south of I-10 contains a rail yard and a cement plant. Land uses south of the rail yard and cement plant are too far from I-10 to be considered. Along this segment of I-10, the land uses are at grade relative to I-10.

Segment 15 – Rancho Avenue to La Cadena Drive: The land use north of I-10 consists of a mix between single-family and multi-family residences (Activity Category B) and commercial establishments (Activity Category E). The land use south of I-10 consists of single-family residences (Activity Category B) along with commercial uses (Activity Category E). There is an existing soundwall located at the R/W and shoulder along westbound I-10 that protect Activity Category B land uses to the north from highway traffic noise. There are also UPRR train tracks that run parallel to eastbound I-10 on the south side in this segment as well as BNSF train tracks that run north/south in this segment. The UPRR tracks are elevated on a flyover through this segment. Land uses adjacent to I-10 are at grade compared to the highway at the west end and depressed compared to I-10 at the east end of the segment.

Segment 16 – La Cadena Drive to I-215: The area north of I-10 is a mix of single-family residences and mobile homes (Activity Category B), Colony Motel and Colton Motel (Activity Category D), as well as commercial uses including the pool areas of Hampton Inn, Colony Motel, and Comfort Inn (Activity Category E). There is also a church north of I-10 in this segment; however, there are no outdoor use areas associated with this church. The area south of I-10 includes single-family and multi-family residences (Activity Category B) and commercial establishments and an electrical substation. There are UPRR train tracks that run parallel to eastbound I-10 as well as a rail yard on the south side in this segment. The UPRR tracks are elevated on a flyover through this segment. At the east end of the segment, Warm Creek and Santa Ana River pass under I-10. The adjacent land uses are depressed relative to

I-10 at the west end of the segment but transitioning to become elevated compared to I-10 at the east end of the segment.

Segment 17 – West of Tippecanoe Avenue to Mountain View Avenue: Areas north of I-10 are a mixture of single-family and multi-family residences (Activity Category B) along with the Fairfield Inn (Activity Category D), and some commercial establishments. The area south of I-10 consists of single-family residences and mobile homes (Activity Category B), as well as the International Christian Faith Church (Activity Category D), commercial establishments (Activity Category E), and some empty lots and a sod farm. There is an existing soundwall located at the R/W along westbound I-10 that protect the Activity Category B land uses immediately east of South Richardson Street in this segment from highway traffic noise. There is a second soundwall that is planned but has not been constructed yet east of Tippecanoe north of I-10. For the interchange of Tippecanoe Avenue, the existing westbound off-ramp configuration is different than the no-build configuration due to the approved I-10/Tippecanoe Interchange Improvement Project. Along this segment of I-10 the highway is elevated with respect to adjacent land uses.

Segment 18 – Mountain View Avenue to Nevada Street: The land use north of I-10 consists of commercial establishments including Splash Kingdom Water Park, and San Bernardino County Museum (Activity Category C), a radio station (Activity Category D), as well as a couple of sod farms. The land use south of I-10 consists of multi-family residences (Activity Category B) and commercial uses (Activity Category E). Along this segment of I-10, the adjacent land uses are at a lower elevation compared to I-10.

Segment 18A – Nevada Street to SR- 210: Land use in this area is predominantly commercial uses including retail establishments. There is also the playground of Redlands Day Nursery (Activity Category C) and Super 8 located to the north of I-10 as well as Good Nite Inn and Country Inn Suites located to the south (Activity Category D). In addition, both Super 8 and Country Inn Suites have a pool area facing I-10 and The Old Spaghetti Factory has an outdoor seating area (Activity Category E). The adjacent land uses are at a lower elevation relative to I-10 at the west end of this segment and transitions to be roughly at grade by the east end of the segment.

Segment 19 – Tennessee Street to Orange Street: The land use north of I-10 is a composite of single-family and multi-family residences (Activity Category B), as well as commercial establishments including Shakey's Restaurant (Activity Category E). The land use south of I-10 consists of a mixture of single-family residences and a trailer park (Activity Category B), Orangewood High School which includes We Care Baby Care (Activity Category C), Comfort Suites, Motel 6, and Ayres Hotel (Activity Category D), and commercial uses including an outdoor patio area of Comfort Suites and the pool area of Motel 6 (Activity Category E). Along this segment of I-10, the highway is at a higher elevation with respect to the adjacent land uses.

Segment 20 – Orange Street to East Cypress Avenue: The area north of I-10 is a mix of single-family and multi-family residences (Activity Category B), a Spiritual Treatment Center, Sylvan Park, and Ahrens Child Care Center (Activity Category C), Budget Inn (Activity Category D) the pool area of Stardust Motel (Activity Category E), and several commercial establishments. The area south of I-10 includes single-family and multi-family residences (Activity Category B), Redlands High School athletic fields (Activity Category C),

The Living Word Fellowship Church and The Blessing Center (Activity Category D), and various commercial establishments (Activity Category E). There are existing soundwalls located at the shoulder protecting most of the Activity Categories B and C land uses to the north and south of this segment from highway traffic noise. The adjacent land uses are at a lower elevation relative to I-10.

Segment 21 – East Cypress Avenue to East of Ford Street: Areas north of I-10 are a mixture of single-family and multi-family residences (Activity Category B) along with the outdoor use areas of Church on the Hill and Trinity Evangelical Free Church as well as a playground for a school (Activity Category C), The interior of Kingdom Hall of Jehovah Witness, Church on the Hill, and the school associated with Trinity Evangelical Free Church (Activity Category D), as well as an office building. The area south of I-10 consists of single-family residences and multi-family residences with a tennis court (Activity Category B), El Carmelo Retreat House (Activity Category C), and some commercial establishments. There are existing soundwalls located at the shoulder along eastbound and westbound I-10 that protect most of the Activity Category B land uses in this segment from highway traffic noise. Along this segment of I-10 the highway is elevated with respect to adjacent land uses except for the south side at the east end where the adjacent land uses are elevated with respect to I-10.

Areas not Analyzed using TNM:

In addition, there are two segments that have not been analyzed using TNM modeling due to the lack of identifiable frequent human outdoor use areas; however, there are several isolated hotels, motels, and continuing education schools located in these areas. These two segments are:

Segment 22 – Vineyard Avenue to West of Cherry Avenue: Land use in this area is predominantly commercial uses including restaurants, hotels, continuing education schools, auto dealerships, and truck stops. Specifically, the areas north of I-10 contain American Career College, Best Western, Platt College, Extended Stay America, Country Inn Suites, and United Education Institute (Activity Category D). The pool areas of Best Western and Extended Stay America are shielded from freeway traffic noise by the hotels; however, the pool area for Country Inn Suites is exposed to freeway traffic noise (Activity Category E).

The areas south of I-10 include Residence Inn, Holiday Inn, West Coast University, Fairfield Inn, and Argosy University (Activity Category D) as well as Marie Callender's with an outdoor seating area on the opposite side of the restaurant than the freeway (Activity Category E). The Residence Inn is protected from freeway traffic noise by an existing soundwall located at the shoulder of eastbound I-10 and Holiday Inn, which is set farther back from I-10 and is shielded by an office building and Marie Callender's Restaurant. The pool areas of Residence Inn, Holiday Inn, and Fairfield Inn are shielded by the hotel building from freeway traffic noise. The adjacent land uses are generally at grade relative to I-10 throughout this area.

Segment 23 – I-215 to west of Tippecanoe Avenue: Land use in this area is predominantly commercial uses including several restaurants without any outdoor use areas. There are also La Quinta Inn, Super 8, and Hilton Hotel located to the north of I-10 west of Waterman Avenue (Activity Category D). Along this area of I-10, the adjacent land uses are at a lower elevation compared to I-10.

6.2. Noise Measurement Results

The existing noise environment in the project area is characterized in the following sections based on short-term and long-term noise monitoring. The primary objective of the short-term and long-term noise measurements was to evaluate the existing noise environment as well as to calibrate the TNM noise model. In addition, indoor/outdoor noise measurements were conducted to determine the building shell noise reduction at some hotels and educational institutions.

6.2.1. Short-Term Monitoring

Short-term noise measurements were conducted at 126 sites in October through December of 2013; May, July, October, and December of 2014; as well as January, March, and June of 2015 for a typical duration of 20 minutes each. The exception to a duration of 20 minutes would be in cases where 1-minute time history was captured to eliminate non-freeway noise sources such as trains. Table 6-1 summarizes the short-term noise measurement results. Also included in Table 6-1 are the addresses and land use types for each of the measurement sites. Appendix C includes noise measurement data sheets recorded in the field with meteorological data, Appendix E includes the noise measurement site photographs, Appendix F contains the equipment calibration records, and Figures 1 through 165 in Appendix H present the noise measurement locations.

Some of the short-term measurements were conducted using 1-minute time history for the purpose of eliminating any nearby train noise for noise model calibration purposes. Furthermore, some noise measurements were conducted at front yards or side yards (on sidewalks) which are not frequent outdoor use areas; however, the data collected accurately represents the nearby frequent outdoor use areas. As summarized in Table 6-1, most of the measurement sites along the project corridor already approach or exceed the NAC of 67 dBA for Activity Categories B and C receivers and the NAC of 72 dBA for Activity Category E receivers.

Most of the short-term measurements were not made when the highest hourly traffic noise levels occurred because taking short-term noise measurements at 125 locations during only the worst noise hours is not possible within a reasonable amount of time. The measured noise levels shown in Table 6-1 were taken at different times throughout the day during free-flowing traffic conditions, and they are not necessarily indicative of the existing peak-hour noise levels. These measurements have been adjusted to reflect the worst-hour noise levels. This adjustment is done by evaluating the relationship between the worst-hour noise level determined by the long-term measurement and the noise levels during other hours of the day. The difference in noise levels between the hour in which the short-term level was recorded and the hour that the actual worst-hour noise level occurred was then applied to each of the short-term levels to adjust it to the worst-hour noise level. This is one of the methods suggested by the TeNS to adjust measured noise levels taken at times other than the noisiest hour. Table 6-1 identifies the long-term measurement that was used to adjust each short-term measurement to worst-hour noise levels.

Table 6-1. Short-Term Noise Measurement Results

Site No.[1]	Street Address, City, State	Land Use[2]	Activity Category and (NAC)	Meter Location	Measurement Dates	Start Time[3]	Measured Leq(h), dBA	Adjusted Worst-Hour Leq(h), dBA[4]	Adjusted to Long-Term Site
ST1	14609 Washington Drive, Fontana, CA	SFR	B (67)	Back Yard	10/21/2014	13:00	60	61	LT2
ST2	10287 Redwood Avenue, Fontana, CA	SFR	B (67)	Front Yard[5]	10/21/2014	13:40	63	64	LT2
ST3	10388 Redwood Avenue, Fontana, CA	SFR	B (67)	Side Yard[5]	10/21/2014	15:00	61	65	LT3
ST3A	10338 Redwood Avenue, Fontana, CA	COM	E (72)	Open Area	10/30/2014	08:38	65	69	LT3
ST4	10338 Poplar Avenue, Fontana, CA	COM	E (72)	Sidewalk	10/21/2014	14:20	68	70	LT3
ST5	16120 Boyle Avenue, Fontana, CA	SFR	B (67)	Back Yard	10/21/2014	16:00	63	66	LT5
ST6	16226 Washington Drive, Fontana, CA	SFR	B (67)	Front Yard[5]	10/21/2014	15:40	73	75	LT4
ST7	16222 Boyle Avenue, Fontana, CA	SFR	B (67)	Back Yard	12/18/2014	09:10	67	N/A[7]	N/A[7]
ST9	10231 Alder Avenue, Bloomington, CA	SFR	B (67)	Front Yard[5]	10/16/2013	16:00	70	71	LT6
ST10	10346 Locust Avenue, Bloomington, CA	SFR	B (67)	Front Yard[5]	10/16/2013	16:40	59	65	LT7
ST11	10196 Locust Avenue, Bloomington, CA	SFR	B (67)	Front Yard[5]	10/16/2013	15:20	71	73	LT6
ST12	18219 Valley Boulevard, Bloomington, CA	MH	B (67)	Front Yard[5]	10/16/2013	14:40	68	72	LT6
ST13	Log Cabin Mobile Homes Park 18411 Valley Boulevard, Lot #50 Bloomington, CA	MH	B (67)	Side Yard[5]	10/16/2013	14:40	64	72[8]	LT6
ST14	10174 Magnolia Street, Bloomington, CA	SFR	B (67)	Side Yard[5]	10/16/2013	15:20	65	67	LT6
ST15	10166 Church Street, Bloomington, CA	SFR	B (67)	Front Yard[5]	10/16/2013	16:00	60	62	LT8
ST16A	2016 W. Valley Boulevard, Colton, CA	SFR	B (67)	Back Yard	11/14/2014	09:00	67	N/A[7]	N/A[7]
ST16	2448 Cypress Avenue, Colton, CA	SFR	B (67)	Front Yard[5]	10/18/2013	08:00	65	67	LT10
ST17	Mt. Slover Trailer Park 1015 West Valley Boulevard, Unit #8 Colton, CA	MH	B (67)	Front Yard[5]	10/18/2013	08:40	69	71	LT10
ST17A	871 Valley Boulevard, Colton, CA	SFR	B (67)	Front Yard[5]	02/06/2015	10:00	72	N/A[7]	N/A[7]

Table 6-1. Short-Term Noise Measurement Results (Cont'd)

Site No.[1]	Street Address, City, State	Land Use[2]	Activity Category and (NAC)	Meter Location	Measurement Dates	Start Time[3]	Measured Leq(h), dBA	Adjusted Worst-Hour Leq(h), dBA[4]	Adjusted to Long-Term Site
ST18	745 West K Street, Colton, CA	SFR	B (67)	Back Yard	10/18/2013	11:06	54	60	LT11
ST19	155 North 2nd Street, Colton, CA	SFR	B (67)	Side Yard[5]	10/18/2013	09:00	66	68	LT12
ST19A	110 4th Street, Colton, CA	SFR	B (67)	Back Yard	02/06/2015	11:20	67	69	LT12
ST20	192 West K Street Colton, CA	SFR	B (67)	Front Yard[5]	10/18/2013	09:40	53	55	LT11
ST20A	Colony Inn, 255 Sperry Drive	MOT	B (67)	Pool Area	12/30/2014	08:44	66	70	LT13
ST21	24818 E. Redlands Boulevard, Colton, CA	SFR	B (67)	Side Yard[5]	05/02/0214	07:34	66	66	LT15
ST23	1294 E. Rosewood Drive, San Bernardino, CA	SFR	B (67)	Open Lot[5]	10/21/2013	15:00	73	74	LT14
ST24	Alto Camino Mobile Home Park 25526 Redland Boulevard, #84, Redlands, CA	MH	B (67)	Back Yard	11/07/2013	08:00	75	75	LT15
ST25	1965 Coulston Street, Loma Linda, CA	MFR	B (67)	Patio Adjacent	10/21/2013	15:40	69	70	LT14
ST26	26232 Redland Boulevard, Redlands, CA	MFR	B (67)	Patio Adjacent	10/21/2013	16:00	61	66	LT16
ST26A	26326 Tudor Court, Redlands, CA	SFR	B (67)	Back Yard	12/11/2014	09:40	58	N/A[7]	N/A[7]
ST27	26454 Redland Boulevard, Redlands, CA	MFR	B (67)	Patio Adjacent	10/21/2013	13:20	58	63	LT16
ST28	1901 Orange Tree Lane, Redlands, CA	COM	E (72)	Parking Area	12/18/2014	06:00	72	72	LT16
ST28A	Good Nite Inn 1675 Industrial Park Avenue, Redlands, CA	MOT	E (72)	Grassy Area	02/06/2015	13:40	75	N/A[7]	N/A[7]
ST29	Orange Wood High School, 515 Texas Street, Redlands, CA	SCH	B (67)	Basketball Court	10/21/2013	15:20	60	63	LT17
ST30A	503 W. Colton Avenue, Redlands, CA	SFR	B (67)	Back Yard	01/28/2015	12:40	68	71	LT18
ST30	640 Third Street, Redlands, CA	SFR	B (67)	Back Yard	10/22/2013	10:20	64	67	LT19

Table 6-1. Short-Term Noise Measurement Results (Cont'd)

Site No.[1]	Street Address, City, State	Land Use[2]	Activity Category and (NAC)	Meter Location	Measurement Dates	Start Time[3]	Measured Leq(h), dBA	Adjusted Worst-Hour Leq(h), dBA[4]	Adjusted to Long-Term Site
ST31	127 Third Street, Redlands, CA	SFR	B (67)	Side Yard[5]	10/21/2013	16:20	68	69	LT18
ST32	Park Magnolia Apartments 416 The Terrace, Redlands, CA	MFR	B (67)	Pool Area	10/22/2013	10:00	65	69	LT20
ST33	Rose Gardens Apartments 400 Church Street, Redlands, CA	MFR	B (67)	Patio Adjacent	10/22/2013	09:00	67	70	LT19
ST35	911 E. Central Avenue, Redlands, CA	SFR	B (67)	Open Lot[5]	10/22/2013	11:20	59	62	LT19
ST36	Ahrens Child Care Center 201 N. University Street, Redlands, CA	REC	C (67)	Playground	10/22/2013	13:00	61	64	LT20
ST37	1118 Cero Court, Redlands, CA	MFR	B (67)	Patio Adjacent	12/03/2013	13:20	63	65	LT22
ST38	1123 E. Cypress Avenue, Redlands, CA	SFR	B (67)	Side Yard[5]	12/03/2013	13:20	65	67	LT22
ST39	1040 Ardmore Circle, Redlands, CA	MFR	B (67)	Grassy Area	12/02/2013	14:40	62	64	LT21
ST40A	738 McAuliffe Court, Redlands, CA	SFR	B (67)	Back Yard	03/03/2015	11:40	64	66	LT22
ST40	1049 Dracaena Court, Redlands, CA	SFR	B (67)	Back Yard	12/03/2013	10:00	60	62	LT21
ST41	1041 Cimarron Drive, Redlands, CA	SFR	B (67)	Side Yard[5]	12/02/2013	15:20	63	65	LT21
ST42	1200 E. Highland Avenue, Redlands, CA	MFR	B (67)	Patio	12/03/2013	12:00	65	67	LT22
ST43	El Carmelo Retreat House 926 East Highland Avenue, Redlands, CA	REC	C (67)	Open Area	12/03/2013	11:20	61	64	LT21
ST44	1312 Crestview Road, Redlands, CA	--	--	R/W Line[6]	12/03/2013	10:00	79	81	LT23
ST45	Church on the Hill, 1445 Ford Street, Redlands, CA	REC	C (67)	Basketball Court	12/03/2013	14:07	73	74	LT23
ST46	1378 Patricia Drive, Redlands, CA	SFR	B (67)	Side Yard	03/03/2015	12:40	66	69	LT24
ST47	Trinity Church 1551 Reservoir Road, Redlands, CA	REC	C (67)	Grassy Area	12/04/2013	11:20	66	67	LT25

Table 6-1. Short-Term Noise Measurement Results (Cont'd)

Site No.[1]	Street Address, City, State	Land Use[2]	Activity Category and (NAC)	Meter Location	Measurement Dates	Start Time[3]	Measured Leq(h), dBA	Adjusted Worst-Hour Leq(h), dBA[4]	Adjusted to Long-Term Site
ST49	825 Buckingham Road, Redlands, CA	SFR	B (67)	Side Yard[5]	12/04/2013	12:00	59	60	LT25
ST50	537 Golden West Drive, Redlands, CA	SFR	B (67)	Back Yard	12/04/2013	10:40	66	69	LT24
ST55	635 Elaine Street, Pomona, CA	SFR	B (67)	Back Yard	10/14/2013	14:20	59	62	LT28
ST56	676 La Verne Avenue, Pomona, CA	SFR	B (67)	Back Yard	10/03/2013	15:20	59	60	LT27
ST58	689 Elaine Street, Pomona, CA	SFR	B (67)	Back Yard	10/04/2013	15:05	60	64	LT28
ST59	795 Briarwood Lane, Pomona, CA	SFR	B (67)	Front Yard[5]	12/11/2013	13:40	60	63	LT28
ST60	778 La Verne Avenue, Pomona, CA	SFR	B (67)	Back Yard	10/03/2013	16:00	62	62	LT27
ST61	Jayces Park, Pomona, CA	REC	C (67)	Playground	12/11/2013	14:20	61	64	LT28
ST62	2108 Crystal Place, Pomona, CA	SFR	B (67)	Back Yard	10/04/2013	14:40	62	66	LT27
ST63	1187 Terryview Avenue, Pomona, CA	SFR	B (67)	Side Yard[5]	10/14/2013	11:20	67	69	LT28
ST64	1188 Terryview Avenue, Pomona, CA	SFR	B (67)	Side Yard[5]	10/14/2013	11:20	60	62	LT28
ST65	690 San Jose Avenue, Claremont, CA	MFR	B (67)	Parking Lot[5]	10/04/2013	15:00	67	68	LT27
ST66	Rancho San Jose Park 662 W. San Jose Avenue, Claremont, CA	REC	C (67)	Grassy Area	10/14/2013	12:00	69	71	LT27
ST67	Claremont Cottages 512 W. San Jose Avenue, Claremont, CA	MFR	B (67)	Patio Adjacent	10/04/2013	15:20	65	66	LT27
ST68	Howard Johnson 721 S. Indian Hill Boulevard, Claremont, CA	MOT	E (72)	Pool Area	10/04/2013	14:40	59	61	LT27
ST69	Claremont Lodge 736 S. Indian Hill Boulevard, Claremont, CA	MOT	E (72)	Pool Area	10/04/2013	13:40	63	64	LT30
ST70	Hotel Claremont 840 S Indian Hill Boulevard, Claremont, CA	MOT	E (72)	Pool Area	10/04/2013	09:20	61	62	LT29
ST71	Claremont Place Assisted Living 120 W. San Jose, Claremont, CA	REC	C (67)	Patio	10/04/2013	10:20	70	71	LT30

Table 6-1. Short-Term Noise Measurement Results (Cont'd)

Site No.[1]	Street Address, City, State	Land Use[2]	Activity Category and (NAC)	Meter Location	Measurement Dates	Start Time[3]	Measured Leq(h), dBA	Adjusted Worst-Hour Leq(h), dBA[4]	Adjusted to Long-Term Site
ST72	790 Collage Avenue, Claremont, CA	SFR	B (67)	Front Yard[5]	10/04/2013	10:00	67	67	LT29
ST73	201 Bryn Mawr Road, Claremont, CA	SFR	B (67)	Back Yard	07/28/2014	10:40	63	63	LT29
ST74	9551 Pradera Avenue, Montclair, CA	SFR	B (67)	Front Yard[5]	10/04/2013	14:00	54	56	LT31
ST75A	Claremont City Blessing Church School 735 S. Mills Avenue, Claremont, CA	SCH	C (67)	Grassy Area	12/11/2013	12:00	62	62	LT30
ST75	4435 Bonnie Brae Street, Montclair, CA	MFR	B (67)	Back Yard	10/03/2013	16:02	67	67	LT32
ST76	4497 Bonnie Brae Street, Montclair, CA	MFR	B (67)	Grassy Area	10/04/2013	13:40	67	70	LT32
ST77	4826 San Jose Street, Montclair, CA	MFR	B (67)	Parking Area	10/03/2014	17:00	67	68	LT32
ST78	9511 Bolton Avenue, Montclair, CA	SFR	B (67)	Front Yard[5]	10/04/2013	11:20	65	66	LT31
ST79	4862 Yale Street, Montclair, CA	SFR	B (67)	Back Yard	10/04/2013	13:40	55	57	LT31
ST80	9404 Carrillo Avenue, Montclair, CA	MFR	B (67)	Parking Area	10/08/2013	08:40	61	63	LT33
ST81	Mac Arthur Park, Montclair, CA	REC	C (67)	Grassy Area	10/07/2013	15:00	66	64[9]	LT33
ST82	5554 Caroline Street, Montclair, CA	SFR	B (67)	Back Yard	10/07/2013	14:20	62	64	LT33
ST83	15676 Caroline Street, Montclair, CA	SFR	B (67)	Front Yard[5]	10/07/2013	13:40	57	59	LT33
ST84	1552 Fuchsia Avenue, Ontario, CA	SFR	B (67)	Back Yard	10/08/2013	11:20	64	65	LT33
ST85	1558 N. Dahlia Court, Ontario, CA	SFR	B (67)	Back Yard	10/08/2013	10:20	65	66	LT33
ST86	1040 W. 7th Street, Upland, CA	MFR	B (67)	Pool Area	10/08/2013	09:00	63	63	LT34
ST87	Redeemer Lutheran School 920 W. 6th Street, Ontario, CA	SCH	C (67)	Basketball Court	10/07/2013	13:40	67	68	LT35
ST88	1559 Granite Avenue, Ontario, CA	SFR	B (67)	Front Yard[5]	10/07/2013	11:40	63	64	LT35
ST89	1551 N. San Antonio, Ontario, CA	SFR	B (67)	Back Yard	10/07/2013	11:40	56	57	LT35

Table 6-1. Short-Term Noise Measurement Results (Cont'd)

Site No.[1]	Street Address, City, State	Land Use[2]	Activity Category and (NAC)	Meter Location	Measurement Dates	Start Time[3]	Measured Leq(h), dBA	Adjusted Worst-Hour Leq(h), dBA[4]	Adjusted to Long-Term Site
ST90	754 Azore Court, Upland, CA	SFR	B (67)	Back Yard	10/07/2013	15:20	68	68	LT34
ST91	436 S. Shasta Way, Upland, CA	SFR	B (67)	Back Yard	10/07/2013	14:40	66	66	LT34
ST92	1560 N. Bonita Court, Ontario, CA	SFR	B (67)	Back Yard	10/07/2013	14:40	61	62	LT35
ST93	Westwood College 20 W. 7th Street Upland, CA	SCH	C (67)	Side of Building	06/04/2015	09:40	72	72	LT34
ST93A	77 7th Street, Ontario, CA	COM	E (72)	Front of Building	12/11/2013	16:20	68	68	LT34
ST94	124 W. Caroline Court, Ontario, CA	SFR	B (67)	Back Yard	10/07/2013	15:20	62	62	LT35
ST95	1557 Pleasant Avenue, Ontario, CA	SFR	B (67)	Front Yard[5]	10/10/2013	14:40	63	65	LT39
ST96A	265 E. 7th Street, Ontario, CA	SFR	B (67)	Front Yard[5]	12/11/2013	17:00	67	67	LT37
ST96	479 Richland Street, Upland, CA	MFR	B (67)	Patio Adjacent	10/10/2013	12:00	65	66	LT37
ST97	650 Richland Street, Upland, CA	MFR	B (67)	BBQ Area	07/11/2014	11:20	67	68	LT37
ST97A	768 Richland Street, Upland, CA	MFR	B (67)	Back Yard	07/11/2014	11:20	68	69	LT37
ST98	1549 Miramonte Avenue, Ontario, CA	SFR	B (67)	Front Yard[5]	10/10/2013	13:40	64	65	LT39
ST99	809 E. 6th Street, Ontario, CA	SFR	B (67)	Back Yard	10/10/2013	16:00	66	69	LT39
ST99A	709 Deodar Street, Ontario, CA	SFR	B (67)	Back Yard	10/10/2013	15:20	65	67	LT39
ST100	916 E. Deodar Street, Ontario, CA	MFR	B (67)	Back Yard	10/10/2013	10:23	68	69	LT37
ST101	1429 N. Orchard Lane, Ontario, CA	SFR	B (67)	Front Yard[5]	10/11/2013	09:40	66	67	LT39
ST102	1128 E 5th Street, Ontario, CA	SFR	B (67)	Front Yard[5]	07/11/2014	08:20	67	67	LT39

Table 6-1. Short-Term Noise Measurement Results (Cont'd)

Site No.[1]	Street Address, City, State	Land Use[2]	Activity Category and (NAC)	Meter Location	Measurement Dates	Start Time[3]	Measured Leq(h), dBA	Adjusted Worst-Hour Leq(h), dBA[4]	Adjusted to Long-Term Site
ST103	1233 E. 5th Street, Ontario, CA	MFR	B (67)	Front Yard[5]	10/10/2013	13:42	66	66	LT38
ST104	Fernwood Mobile Home Community 1512 E. 5th Street, Lot 62, Ontario, CA	MH	B (67)	Side Yard[5]	10/10/2013	14:40	66	66	LT38
ST105	1041 N. Glenn Avenue, Ontario, CA	SFR	B (67)	Back Yard	10/11/2013	11:00	58	59	LT40
ST106	Motel 6, 1560 E. 4th Street, Ontario, CA	MOT	E (72)	Pool Area	10/10/2013	15:20	75	75	LT41
ST107	1415 E. Fresno Street, Ontario, CA	SFR	B (67)	Back Yard	10/11/2013	10:20	63	64	LT40
ST108	The Waverly Apartments 1675 E G Street, Ontario, CA	MFR	B (67)	Patio Adjacent	10/11/2013	11:20	68	69	LT40
ST109	1828 E. Granada Court, Ontario, CA	SFR	B (67)	Back Yard	10/10/2013	11:40	66	66	LT41
ST110	Ramada Inn, 1841 E G Street, Ontario, CA	MOT	E (72)	Pool Area	10/11/2013	10:40	74	75	LT40
ST111	Quality Inn 514 N Vineyard Avenue, Ontario, CA	MOT	E (72)	Pool Area	10/10/2013	16:00	55	57	LT40
ST112	Acapulco Restaurant 9405 Monte Vista Avenue, Montclair, CA	COM	E (72)	Patio Adjacent	10/28/2014	11:18	74	75	LT32
ST113	Service Master Clean 500 Sequoia Ave, Ontario, CA	COM	E (72)	Parking Lot	05/02/2014	09:08	80	80	LT41
ST114	Bosch, 4641 Guasti Road, Ontario, CA	COM	E (72)	Grassy Area	05/02/2014	08:32	67	67	LT41
ST115	5200 Shea Center Drive, Ontario, CA	COM	E (72)	Grassy Area	05/16/2014	06:00	74	74	LT01
ST116	5555 Gibralter Street, Ontario, CA	COM	E (72)	Parking Lot	05/16/2014	06:33	74	74	LT01
ST117	10288 Calabash Avenue, Fontana, CA	COM	E (72)	Parking Lot	05/15/2014	06:33	73	73	LT01
ST118	Franklin Truck Parts 13932 Slover Avenue, Fontana, CA	COM	E (72)	Empty Land	05/15/2014	06:00	71	71	LT01

Table 6-1. Short-Term Noise Measurement Results (Cont'd)

Site No.[1]	Street Address, City, State	Land Use[2]	Activity Category and (NAC)	Meter Location	Measurement Dates	Start Time[3]	Measured Leq(h), dBA	Adjusted Worst-Hour Leq(h), dBA[4]	Adjusted to Long-Term Site
ST119	1313 Valley Boulevard, San Bernardino, CA	COM	E (72)	Empty Lot	05/02/2014	06:52	72	72	LT10
ST120	100 E. Redlands Boulevard, San Bernardino, CA	COM	E (72)	Parking Lot	05/02/2014	06:13	77	77	LT14
ST121	25160 Redlands Boulevard, Loma Linda, CA	COM	E (72)	Parking Lot	05/02/2014	05:40	76	77	LT15

Notes:

1 - ST – Short-Term Measurements.

2 - Land Use: SFR – single-family residence; MFR – multi-family residence; MH – mobile home, REC – recreational; SCH – school; MOT – hotel/motel; COM - commercial.

3 - Short-term measured noise levels were measured for a period of 20 minutes.

4 - Measurements conducted during off-peak hours were adjusted to the worst-hour Leq(h) based on a comparison with long-term noise levels measured at a nearby measurement site, listed in the last column.

5 - At these locations, microphone positions were selected that were representative of frequent human use areas, with equivalent exposure to traffic noise.

6 - This measurement location was chosen for traffic noise model calibration and does not represent an area of frequent human use.

7 - This measurement was used for noise model calibration purposes only and has not been adjusted to worst-hour noise levels.

8 - Worst-hour noise level at this location has been adjusted up by an additional +4.0 dB to compensate for movable storage containers that were present during the noise measurement, but not included in the noise model.

9 - Worst-hour noise level at this location has been adjusted by -4.0 dB based on the nearby long-term measurement and the calculated No-Build noise levels.

6.2.2. Long-Term Monitoring

Long-term noise measurements were conducted to observe hourly noise distribution and identify the worst-noise hours. Long-term noise measurements were conducted at 40 locations during the months of October through December of 2013 and October of 2014 for at least 24 hours using Larson-Davis Model 812, 820, 870, and LxT1 Type 1 sound level meters.

Table 6-2 summarizes long-term monitoring results and shows addresses and land use types of the monitoring locations. Appendix C includes field survey sheets and hourly L_{eq} graphs and Appendix D includes the noise measurement site photographs. Appendix E contains the equipment calibration records and Appendix H shows the noise measurement locations. Table 6-2 shows that most of the long-term measurement sites along the project corridor already approach or exceed the NAC of 67 dBA for Activity Category B receivers during the worst-noise hour.

6.2.3. Indoor/Outdoor Monitoring

Short-term measurements have been conducted specifically for the purpose of surveying the hotels and motels as well as continuing education schools within the project corridor that fall in heavily commercial areas. TNM modeling was not developed to predict future noise levels for the lodgings and schools primarily located in heavily commercial areas and away from residential outdoor use areas. Instead, indoor and outdoor noise measurements were conducted at the hotels/motels and schools to determine the interior traffic noise levels from exterior traffic noise levels for these areas. Then, modeled locations along the project corridor with similar geometric site characteristics to the isolated hotels, motels, and continuing education schools were used to predict the build alternative traffic noise levels. Table 6-3 presents the indoor/outdoor noise measurement results. Four of the isolated establishments at sites H10, H11, H13, and H15 did not allow conducting indoor/outdoor noise measurements.

Table 6-2. Long-Term Noise Measurement Results

Site No.[1]	Street Address, City	Land Use[2]	Activity Category and (NAC)	Meter Location	Measurement Dates	Start Time	Measured Worst-Hour Leq(h), dBA[3]	Peak-Hour Time
LT1	10245 Almond Avenue, Fontana, CA	MFR	B (67)	Side Yard[5]	10/20/2014 to 10/21/2014	10:00	59	17:00 to 19:00
LT2	15021 Washington Drive, Fontana, CA	SFR	B (67)	Back Yard	10/20/2014 to 10/21/2014	09:00	67	09:00 and 16:00
LT3	15842 Boyle Avenue, Fontana, CA	COM[4]	B (67)	Back Yard	10/20/2014 to 10/21/2014	16:00	68	17:00
LT4	10241 Oleander Avenue, Fontana, CA	SFR	B (67)	Back Yard	10/20/2014 to 10/21/2014	11:00	68	17:00
LT5	10350 Palm Drive, Fontana, CA	SFR	B (67)	Back Yard	10/20/2014 to 10/21/2014	14:00	70	16:00
LT6	17333 Valley Boulevard, Fontana, CA	SFR	B (67)	Back Yard	10/16/2013 to 10/17/2013	08:00	74	05:00 to 08:00
LT7	10349 Alder Street, Bloomington, CA	SFR	B (67)	Back Yard	10/16/2013 to 10/17/2013	11:00	63	06:00
LT8	18881 Lynwood Street, Bloomington, CA	SFR	B (67)	Back Yard	10/16/2013 to 10/17/2013	08:00	70	06:00 to 09:00 and 10:00 to 12:00
LT9	2016 W. Valley Boulevard, Colton, CA	SFR	B (67)	Back Yard	11/07/2013 to 11/08/2013	09:00	68	06:00 and 16:00
LT10	871 Valley Boulevard, Colton, CA	SFR	B (67)	Back Yard	10/17/2013 to 10/18/2013	15:00	71	06:00 to 08:00 and 17:00 to 19:00
LT11	523 K Street, Colton, CA	SFR	B (67)	Back Yard	10/17/2013 to 10/18/2013	14:00	66	06:00 to 08:00 and 20:00
LT12	125 3rd Street, Colton, CA	SFR	B (67)	Back Yard	10/17/2013 to 10/18/2013	13:00	67	06:00
LT13	832 E. H Street, Colton, CA	SFR	B (67)	Back Yard	10/17/2013 to 10/18/2013	14:00	61	16:00 to 18:00
LT14	1895 Coloma Street, Loma Linda, CA	SFR	B (67)	Back Yard	10/21/2013 to 10/22/2013	11:00	66	06:00 to 08:00 and 17:00

Table 6-2. Long-Term Noise Measurement Results (Cont'd)

Site No.[1]	Street Address, City, State	Land Use[2]	Activity Category and (NAC)	Meter Location	Measurement Dates	Start Time	Measured Worst-Hour Leq(h), dBA[3]	Peak-Hour Time
LT15	25660 Rosewood Drive, Loma Linda, CA	SFR	B (67)	Back Yard	10/21/2013 to 10/22/2013	11:00	68	06:00 to 09:00
LT16	26326 Tudror Court, Redlands, CA	SFR	B (67)	Back Yard	10/21/2013 to 10/22/2013	11:00	62	06:00 to 08:00
LT17	615 Lawnton Avenue, Redlands, CA	SFR	B (67)	Back Yard	10/21/2013 to 10/22/2013	14:00	67	06:00 to 08:00
LT18	319 W. Colton Avenue, Redlands, CA	SFR	B (67)	Back Yard	10/21/2013 to 10/22/2013	13:00	67	07:00
LT19	313 E. High Avenue, Redlands, CA	SFR	B (67)	Back Yard	10/21/2013 to 10/22/2013	12:00	69	06:00
LT20	610 11th Street, Redlands, CA	SFR	B (67)	Back Yard	10/21/2013 to 10/22/2013	13:00	65	06:00
LT21	515 University Place, Redlands, CA	SFR	B (67)	Back Yard	12/02/2013 to 12/03/2013	13:00	64	17:00
LT22	730 McAuliffe Court, Redlands, CA	SFR	B (67)	Back Yard	12/02/2013 to 12/03/2013	13:00	66	06:00
LT23	679 Chaucer Court, Redlands, CA	SFR	B (67)	Back Yard	12/02/2013 to 12/03/2013	16:00	70	15:00 to 17:00
LT24	453 Golden West Drive, Redlands, CA	SFR	B (67)	Back Yard	12/03/2013 to 12/04/2013	15:00	63	06:00 to 08:00
LT25	815 Concord Lane, Redlands, CA	SFR	B (67)	Back Yard	12/03/2013 to 12/04/2013	16:00	63	10:00 and 13:00
LT27	860 E. La Verne Avenue, Pomona, CA	SFR	B (67)	Back Yard	10/03/2013 to 10/04/2013	12:00	62	16:00
LT28	987 Terryview Avenue, Pomona, CA	SFR	B (67)	Back Yard	12/11/2013 to 12/12/2013	10:00	66	06:00 to 08:00, 10:00, and 19:00 to 22:00

Table 6-2. Long-Term Noise Measurement Results (Cont'd)

Site No.[1]	Street Address, City, State	Land Use[2]	Activity Category and (NAC)	Meter Location	Measurement Dates	Start Time	Measured Worst-Hour Leq(h), dBA[3]	Peak-Hour Time
LT29	807 Drake Avenue, Claremont, CA	SFR	B (67)	Back Yard	10/03/2013 to 10/04/2013	12:00	64	06:00 to 08:00, 09:00 to 15:00, and 19:00 to 22:00
LT30	106 Bellhaven Place, Claremont, CA	SFR	B (67)	Back Yard	10/03/2013 to 10/04/2013	11:00	69	05:00 to 09:00, 12:00, and 16:00
LT31	9512 Camulos Avenue, Ontario, CA	SFR	B (67)	Back Yard	10/03/2013 to 10/04/2013	10:00	65	06:00 to 8:00
LT32	9451 Felipe Avenue, Montclair, CA	SFR	B (67)	Back Yard	10/03/2013 to 10/04/2013	13:00	69	08:00 and 16:00
LT33	1553 N. Helen Court, Ontario, CA	SFR	B (67)	Back Yard	10/07/2013 to 10/08/2013	10:00	66	05:00 to 08:00, 10:00, 16:00 and 18:00
LT34	928 Azure Court, Ontario, CA	SFR	B (67)	Back Yard	10/07/2013 to 10/08/2013	11:00	69	09:00 to 12:00 and 13:00 to 17:00
LT35	1555 N. Oakland Avenue, Ontario, Ca	SFR	B (67)	Back Yard	10/07/2013 to 10/08/2013	11:00	62	05:00 to 07:00, 11:00, 15:00 to 17:00, and 18:00
LT36	312 E. Alvarado Street, Ontario, CA	SFR	B (67)	Back Yard	12/11/2013 to 12/12/2013	10:00	60	05:00 to 07:00
LT37	768 Richland Street, Ontario, CA	SFR	B (67)	Back Yard	10/10/2013 to 10/11/2013	08:00	69	06:00 to 08:00 and 16:00 to 18:00

Table 6-2. Long-Term Noise Measurement Results (Cont'd)

Site No.[1]	Street Address, City, State	Land Use[2]	Activity Category and (NAC)	Meter Location	Measurement Dates	Start Time	Measured Worst-Hour $L_{eq(h)}$, dBA[3]	Peak-Hour Time
LT38	1010 E. 6th Street, Ontario, CA	SFR	B (67)	Back Yard	10/10/2013 to 10/11/2013	09:00	67	05:00 to 08:00, 11:00, and 13:00 to 19:00
LT39	1336 N. Holmes Court, Ontario, CA	SFR	B (67)	Back Yard	10/10/2013 to 10/11/2013	11:00	67	06:00 to 09:00
LT40	1553 E. Fresno Street, Ontario, CA	SFR	B (67)	Back Yard	10/10/2013 to 10/11/2013	10:00	67	06:00 to 11:00 and 12:00
LT41	1702 E. Granada Court, Ontario, CA	SFR	B (67)	Back Yard	10/10/2013 to 10/11/2013	10:00	68	05:00 to 17:00 and 18:00

Notes:

1 - LT – Long-Term Measurements.

2 - Land Use: SFR – single-family residence; MFR – multi-family residence; COM – commercial.

3 - The measured peak hour noise level is used to adjust short-tem measurements to peak hour.

4 - An adjacent commercial site was used to represent nearby residences due to equipment security and tampering issues.

5 - At this location, microphone position selected was representative of frequent human use areas, with equivalent exposure to traffic noise.

Table 6-3. Indoor/Outdoor Noise Measurement Results

Site No.	Street Address, City, State	Land Use[1]	Activity Category and (NAC)	Measurement Date	Start Time	Measured Leq, dBA Interior / Exterior	Interior / Exterior Insertion Loss, dB
H1	La Quinta Inn – Room #143 205 E Hospitality Lane, San Bernardino, CA	MOT	D (52)	04/22/2009	09:40	43 / 73	30
H2	Super 8 – Room #112 225 E Hospitality Lane, San Bernardino, CA	MOT	D (52)	04/22/2009	16:50	42 / 68	26
H3	Hilton – Room #123 285 E Hospitality Lane, San Bernardino, CA	MOT	D (52)	04/22/2009	15:40	37 / 65	28
H4	Fairfield Inn – Room #102 1041 E. Harriman Place, San Bernardino, CA	MOT	D (52)	04/22/2009	14:00	41 / 69	28
H5	Country Inn – Room #111 1650 Industrial Park Avenue, Redlands, CA	MOT	D (52)	04/30/2009	14:20	39 / 64	25
H6	Super 8 – Room #135 1160 Arizona Street, Redlands, CA	MOT	D (52)	01/28/2015	10:11	68 / 91	23
H7	Comfort Inn – Room #201 1230 W Colton Avenue, Redlands, CA	MOT	D (52)	04/30/2009	17:40	38 / 64	26
H8	Howard Johnson – Room #112 1120 W Colton Avenue, Redlands, CA	MOT	D (52)	04/30/2009	12:20	46 / 69	23
H9	Ayres Hotel – Room #101 1015 W Colton Avenue, Redlands, CA	MOT	D (52)	04/30/2009	11:20	40 / 67	27
H12	Fairfield Inn - Room #143 3201 Centre Lake Drive, Ontario, CA	MOT	D (52)	11/11/2014	11:52	58 / 90	32
H14	Best Western Plus – Room #132 3400 Shelby Street, Ontario, CA	MOT	D (52)	11/10/2014	9:58	59 / 94	35
H16	Country Inn – Conference Room[2] 4674 Ontario Mills Parkway, Ontario, CA	MOT	D (52)	11/11/2014	10:32	52 / 94	42

Table 6-3. Indoor/Outdoor Noise Measurement Results (Cont'd)

Site No.	Street Address, City, State	Land Use[1]	Activity Category and (NAC)	Measurement Date	Start Time	Measured Leq, dBA Interior / Exterior	Interior / Exterior Insertion Loss, dB
H17	UEI College 4730 Ontario Mills Parkway, Ontario, CA	SCH	D (52)	11/11/2014	9:32	64 / 96	32
H18	Good Nite Inn – Room #112 1675 Industrial Park Avenue, Redlands, CA	MOT	D (52)	01/28/2015	14:02	74 / 94	20

Note:

1 - Land Use: MOT hotel/motel; SCH – school.

2 - Conference room was chosen because it was the closest room to the freeway.

6.3. Traffic Noise Model Calibration

Noise measurements for the calibration were conducted with simultaneous traffic counts at 48 locations in October through December of 2013; July and December of 2014; as well as January, February, and June of 2015. These measurements were conducted to calibrate the TNM 2.5 model. Concurrent with the measurements, traffic volumes were recorded through the use of a video camera and/or by a manual count. Traffic speeds were recorded with a radar gun and/or by driving on the roadways immediately after a calibration measurement when it was not possible to use the radar gun due to the geometry of the area. The traffic counts were tabulated according to three vehicle types, including automobiles, medium trucks (two-axle with six-wheels but not including pick-up trucks), and heavy trucks (three or more axles). Long-term noise measurements were used for 27 of the calibration sites where a 20 minute interval that coincides with a traffic count was extracted from the long-term data.

As a general rule, the noise model is considered to be calibrated if the field measured noise levels versus the modeled noise levels (using field-collected traffic data) agree within 3 dB of each other. If differences are more than 3 dB, refinement of the noise model is performed until there is agreement between the two values. If, after thorough re-evaluation, calibration still cannot be achieved due to complex topography or other unusual circumstances, then a calibration constant is added such that the measured versus modeled values agree before any predictions can be made with the model.

Table 6-4 summarizes the calibration results of 48 measurement locations. Only the 20 minute interval data extracted from the long-term data is shown in Table 6-4. The traffic volumes that were used in the calibration process are located in Appendix A. Out of the 48 measurement sites, seven calibration factors, or “K” factors, have been applied to the noise model results for the areas acoustically represented by seven measurement sites. Tables B-1 through B-33 in Appendix B show the “K” factors applied and to which receivers they are applied to. The following explains possible causes of the noise level differences at the seven areas where “K” factors were applied:

- A calibration or “K” factor of -3 dB has been applied to the residences that have similar acoustical and geometrical characteristics to measurement site LT27. This calibration factor is needed to account for the elements that affect sound propagation that are not accounted for in the noise model, which is possibly due to the existing soundwalls providing more shielding to the residences in the real world than in the noise model. This adjustment factor was applied to Receivers R1.1 through R1.17.
- A calibration or “K” factor of -5 dB has been applied to the areas that have similar acoustical and geometrical characteristics to measurement site ST73. This short-term measurement location was measured on October 13, 2013 and re-measured on July 28, 2014 as a noise model calibration location. Both measurements indicate that the model is over-predicting traffic noise levels for this area. There are storage buildings parallel to I-10 traffic lanes that have flat roofs that are approximately the same elevation as the roadway. The difference in measured versus modeled noise levels is attributed to this horizontal barrier which is not able to be modeled in TNM. This adjustment factor was applied to Receivers R2.39 through R2.42, which are behind the storage facility.
- A calibration or “K” factor of +3 dB has been applied to the residences that have similar acoustical and geometrical characteristics to measurement site ST97A. This calibration factor

is needed to account for the elements that affect sound propagation that are not accounted for in the noise model, which is possibly due to the existing soundwall providing more shielding in the noise model than in the real world. This adjustment factor was applied to Receivers R6.11 through R6.13.

- A calibration or "K" factor of -4 dB has been applied to the areas that have similar acoustical and geometrical characteristics to measurement site LT8. This calibration factor is needed to account for the elements that affect sound propagation that are not accounted for in the noise model due to new design features at the westbound off-ramp to Cedar Avenue that are not reflected in the topographic information. This adjustment was applied to Receivers R12.1 through R12.6.
- A calibration or "K" factor of +3 dB has been applied to the residences that have similar acoustical and geometrical characteristics to measurement site ST44. This calibration factor is needed to account for the elements that affect sound propagation that are not accounted for in the noise model, which is possibly due to the terrain of the area. This adjustment factor was applied to Receivers R21.26 through R21.31.

In addition to calibration factors, an adjustment factor of +3 dB has been applied to the areas that have similar acoustical and geometrical characteristics to measurement sites ST32, ST36, ST37, ST38, and LT20. The noise model calibrated for site LT20 was within 1 dB of measured levels; however, possibly due to traffic variation, future predicted traffic noise levels were much lower than measured existing noise levels in this area. This adjustment factor is applied to increase the modeled no-build noise levels to near that of the measured noise levels of the area. This adjustment factor was applied to Receivers R20.1 through R20.40.

Table 6-4. Noise Model Calibration Results

Measurement Site	Modeled Receiver No.	Date	Start Time	Noise Levels, Leq(h), dBA		Deviation, dB	Applied Adjustment, dB
				Measured	Modeled		
LT27	R1.9	10/04/2013	11:20	59.5	62.7	-3.2	-3
ST66	R1.28	10/14/2013	12:00	68.9	67.8	1.1	--
LT28	R1.56	12/12/2013	09:20	63.2	63.6	-0.4	--
LT29	R2.34	10/04/2013	11:20	64.1	64.0	0.1	--
ST73	R2.42	07/28/2014	09:40	62.5	67.6	-5.1	-5
LT30	R2.4	10/04/2013	11:20	67.7	67.4	0.3	--
LT31	R2.49	10/04/2013	11:20	63.3	64.4	-1.1	--
LT32	R2.18	10/04/2013	11:20	67.8	68.7	-0.9	--
ST112	R3.1	10/28/2014	11:18	74.2	75.0	-0.8	--
LT33	R4.25	10/08/2013	11:00	63.6	64.9	-1.3	--
LT34	R5.6	10/08/2013	10:20	69.1	67.9	1.2	--
LT35	R5.33			61.4	63.8	-2.4	--
ST93	R5.19	06/04/2015	9:40	72.4	72.4	0.0	--
ST97	R6.6	07/11/2014	11:20	67.4	65.5	1.9	--
ST97A	R6.11A			67.5	64.4	3.1	+3
ST98	R6.30	10/10/2013	13:40	64.3	63.1	1.2	--
LT38	R7.4			67.0	66.3	0.7	--
LT39	R7.34			65.2	65.4	-0.2	--
ST103	R7.15			66.1	64.2	1.9	--
LT40	R8.22	10/10/2013	15:00	66.2	66.2	0.0	--
LT41	R8.7			68.6	66.3	2.3	--
LT2	R9.13	10/21/2014	15:00	65.7	65.3	0.4	--
ST3A	R9.23	10/30/2014	08:49	64.5	63.4	1.1	--
LT4	R10.5	10/21/2014	10:00	66.3	66.3	0.0	--
LT5	R10.20			68.4	66.7	1.7	--
ST7	R10.16A	12/18/2014	09:10	66.5	68.1	-1.6	--
LT6	R11.4	10/17/2013	09:40	73.2	72.3	0.9	--
LT8	R12.4	10/17/2013	09:40	69.0	72.9	-3.9	-4
LT9	R13.4	11/14/2014	09:00	66.6	67.9	-1.3	--
ST17A	R14.9A	02/06/2015	10:00	72.1	73.3	-1.2	--
ST19A	R15.9	02/06/2015	11:20	66.6	65.8	0.8	--
LT11	R15.16	10/18/2013	12:40	62.1	62.3	-0.2	--
ST20A	R16.17	12/30/2014	08:44	65.6	67.8	-2.2	--
LT14	R17.17	10/22/2013	10:00	64.7	63.7	1.0	--
LT15	R17.47			66.3	67.2	-0.9	--
ST26A	R18.18	12/11/2014	9:40	58.0	59.7	-1.7	--
ST28A	R18A.6	02/06/2015	13:40	74.5	75.1	-0.6	--
ST30A	R19.4	02/28/2015	12:40	68.2	69.8	-1.6	--
LT17	R19.13	10/22/2013	11:20	63.4	66.1	-2.7	--
LT19	R20.43			65.8	66.7	-0.9	--
LT20	R20.9			60.8	60.0	0.8	--
ST35	R20.53			58.9	59.3	-0.4	--
ST40A	R21.3A	03/03/2015	11:40	64.2	62.4	1.8	--
ST40	R21.62	12/03/2013	10:00	60.1	60.9	-0.8	--
ST44	R21.29			78.5	75.7	2.8	+3
LT23	R21.35			68.3	68.9	-0.6	--
LT24	R21.87	12/04/2013	09:40	60.8	59.9	0.9	--
ST46	R21.82	03/03/2015	12:40	66.4	66.4	0.0	--

Chapter 7. Future Noise Environment, Impacts, and Considered Abatement

This NSR was produced to determine future traffic noise impacts of the proposed project at frequent human use areas within the highway corridor. The future worst case traffic noise impact at frequent outdoor human use areas along the project corridor was modeled for the No-Build Alternative and the two build alternatives to determine appropriate abatement measures. This section discusses the future noise environment and feasible noise abatement measures for impacted locations.

7.1. Future Noise Environment and Impacts

Tables in Appendix B summarize the predicted traffic noise levels for the existing and design-year No-Build Alternative 1 condition, as well as for design-year Build Alternatives 2 and 3. Predicted design-year traffic noise levels with the project are compared to existing conditions and to the design-year no-build conditions. The comparison to existing conditions is included in the analysis to identify "substantial" traffic noise impacts under Title 23 CFR 772. The comparison to no-build conditions indicates the direct impact of noise resulting from the project.

As stated in the TeNS, modeling results are rounded to the nearest decibel before comparisons are made. In some cases, this can result in relative changes that may not appear intuitive. An example would be a comparison between sound levels of 64.4 and 64.5 dBA. The difference between these two values is 0.1 dB. However, after rounding, the difference is reported as 1 dB.

Modeling results in Appendix B indicate that predicted worst-hour traffic noise levels ($L_{eq[h]}$) for the design-year with-project conditions approach or exceed the NAC of 67 dBA for Activity Categories B and C land uses at many of the residences, schools, churches, and parks throughout the study corridor. Modeling results in Appendix B also indicate that in some areas, predicted worst-hour traffic noise levels ($L_{eq[h]}$) for the design-year with-project conditions approach or exceed the NAC of 52 dBA and 72 dBA for Activity Categories D and E land uses, respectively. These land uses include the interiors of schools, churches, and hotels (Activity Category D) as well as the pool areas of hotels and outdoor seating areas of restaurants (Activity Category E). Therefore, traffic noise impacts are predicted to occur at Activity Categories B, C, D, and E land uses within the project area. Accordingly, noise abatement must be considered at those locations; however, in some cases, noise abatement has not been considered for Activity Category E land uses because there are no discernible formal activity areas. Interior noise levels for Activity Category D land uses are calculated by applying a building reduction factor to the exterior noise level predicted by TNM. The reduction is based on measurements or published data.

7.2. Preliminary Noise Abatement Analysis

In accordance with Title 23 CFR 772, noise abatement is considered where traffic noise impacts are predicted in areas of frequent human use that would benefit from a lowered noise level. Potential noise abatement measures identified in the Protocol include the following:

- Constructing noise barriers
- Using traffic management measures to regulate types of vehicles and speeds
- Avoiding the impact by using design alternatives, such as altering the horizontal and vertical alignment of the project
- Acquiring property to serve as a buffer zone
- Acoustically insulating public use or nonprofit institutional structures

These abatement options have been considered; however, because of the constrained configuration and suburban location of the project, abatement in the form of soundwalls is the only abatement measure considered. Noise barrier analysis was conducted by placing soundwalls at the highway mainline shoulders, on/off-ramp shoulders, and right-of-way lines.

Each noise barrier has been evaluated for feasibility based on achievable noise reduction (5 dB or more) at the outdoor frequent use areas of the representative receivers. For each noise barrier determined to be acoustically feasible, it was determined if the Caltrans acoustical design goal could be achieved, then reasonable cost allowances were calculated. Tables in Appendix B summarize the existing noise levels as well as predicted future noise levels at receiver locations for soundwalls with heights ranging from 8 to 24 feet. The maximum height of 24 feet was analyzed on the R/W line when feasible noise reduction plus achieving the design goal was not possible with lower soundwalls. In some cases, soundwalls located at the R/W line were analyzed up to 22 feet in height. However, it is demonstrated in the analysis that feasible noise abatement and achieving the design goal would not be possible even if the soundwall was raised to 24 feet in height.

The Caltrans acoustical design goal must be met for a noise barrier to be considered reasonable. The design goal is that a barrier must be predicted to provide at least 7 dB of noise reduction at one or more benefitted receivers. In addition, the estimated cost to build the noise barrier should be equal to or less than the total cost allowance of benefited receivers calculated for the barrier to be considered reasonable from a cost perspective. The cost calculations of the noise barrier should include all items appropriate and necessary for construction of the barrier, such as traffic control, drainage modification, retaining walls, and other items. Construction cost estimates are not provided in this NSR, but they are presented in the Noise Abatement Decision Report (NADR). The NADR is a design responsibility and is prepared to compile information from the NSR, other relevant environmental studies, and design considerations into a single, comprehensive document before public review of the project. The NADR is prepared by the project engineer after completion of the NSR and prior to publication of the draft environmental document. The NADR includes noise abatement construction cost

estimates that have been prepared and signed by the project engineer based on site-specific conditions. Construction cost estimates are compared to reasonableness allowances in the NADR to identify which wall configurations are reasonable from a cost perspective. The reasonableness of noise abatement is also determined by obtaining the viewpoints of benefitted receivers, including property owners and residents.

The design of noise barriers presented in this report is preliminary and has been conducted at a level appropriate for environmental review and not for final design of the project. Preliminary information on the physical location, length, and height of noise barriers is provided in this report. If pertinent parameters change substantially during the final project design, preliminary noise barrier designs may be modified or eliminated from the final project. A final decision on the construction of location specific noise abatement will be made upon completion of the project design.

The minimum heights and locations of the soundwalls that would provide feasible abatement and achieve the 7 dB design goal are shown graphically in the figures in Appendix H. However, in the NADR, an effort should be made to achieve the greatest noise reduction possible within the calculated abatement allowance.

The minimum barrier height required to cut the line-of-sight from each receiver to the exhaust stacks of heavy trucks has been calculated for all feasible barriers. These heights were evaluated through calculations performed by TNM 2.5.

The following discussion considers 24 segments of the corridor. Noise abatement was considered for 21 segments. Tables 7-1 through 7-43 summarize the data used to assess the abatement cost allowances at each of the considered barrier heights. The following analysis presents predicted future traffic noise levels at various receivers and abatement measures for the two alternatives. Predicted noise levels are shown in Appendix B. Two segments that only contain isolated hotels, motels, and continuing education schools are also discussed; however, traffic noise impacts are not predicted to occur in these areas.

7.2.1. Alternative 2

Alternative 2 would extend the existing HOV lane in each direction of I-10 from the current HOV terminus near Haven Avenue in the City of Ontario to Ford Street in the City of Redlands. No frequent outdoor use areas are located west of Cherry Avenue. In addition, from California Street to Ford Street in the City of Redlands; Alternative 2 has the same design footprint as Alternative 3; hence, the noise study for Alternative 2 stretches between Cherry Avenue and just east of California Street which includes Segments 9 through 18A. Segments 19 through 21 have not been analyzed under Alternative 2 conditions because it has the same design footprint as Alternative 3 with the difference being the HOV lanes in Alternative 2 are considered Express Lanes in Alternative 3. Because it has been assumed that Express Lanes would contain slightly higher traffic volume than HOV lanes, Alternative 3 would yield the worst-case noise levels. Therefore, only Alternative 3 conditions were analyzed from California Street to Ford Street. There is also a gap in the TNM analysis between I-215 and just west of Tippecanoe Avenue (Segment 23). Tables B-1 through B-10 in Appendix B present the results of the barrier analysis. Figures 65 through 101 in Appendix H show the proposed alignment of Alternative 2.

7.2.1.1. SEGMENT 9 – WEST OF CHERRY AVENUE TO CITRUS AVENUE

UPRR train lines run parallel to I-10 on the south side throughout Segment 9. The tracks are at grade and train noise affects the existing and future predicted noise levels at receivers located south of I-10. However, train noise is not considered when determining impacts because train noise is not related to the I-10 Corridor Project.

Existing exterior traffic noise levels north of I-10 in Segment 9 range from 59 to 76 dBA for Receivers R9.1 through R9.18. South of I-10, existing exterior traffic and train noise levels range from 58 to 70 dBA for Receivers R9.19 through R9.38. The future predicted exterior traffic noise levels north of I-10 in Segment 9 range from 61 to 74 dBA. The future predicted exterior traffic noise levels south of I-10 in Segment 9, excluding train noise, range from 58 to 69 dBA. Several areas approach or exceed the NAC for Activity Category B, and one area exceeds the NAC for Activity Category E; therefore, consideration of noise abatement is required. Table B-1 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 9 with Alternative 2.

Areas with Proposed Noise Abatement

Soundwall S1749: Soundwall S1749 would be located north of I-10 on the R/W line and would provide 8 dB of noise abatement for the outdoor use area of one single-family residence represented by Receiver R9.17A. Table 7-1 summarizes the range of allowances for the feasible noise abatement measure considered. Figure 76 in Appendix H shows the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement and meet the design goal.

Table 7-1. Summary of Reasonableness Determination Data – Alternative 2 – Soundwall S1749 [a]

Barrier I.D.: S1749	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	1	1	1	1	1
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$71,000	$71,000	$71,000	$71,000	$71,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

Areas with Existing Noise Abatement

Receivers R9.2 through R9.17: Traffic noise impacts would occur at 38 single-family and eight multi-family residences north of I-10, represented by Receivers R9.5, R9.6, R9.8 through R9.14, and R9.17. These receivers are currently protected by an existing 14-foot high Soundwall SW697, located at the R/W line and the westbound Cherry Avenue off-ramp shoulder. Soundwall SW697 was analyzed at the R/W line for heights up to 24 feet. The results summarized in Table B-1 in Appendix B demonstrate that increasing the height of the existing soundwall at this location would not provide 5 dB of additional noise reduction at the impacted residences. Figures 74, 75, and 76 in Appendix H show these receivers and Soundwall SW697.

Areas without Noise Abatement

Receiver R9.18: Traffic noise impacts would occur at three empty commercial lots and three existing commercial land uses north of I-10, represented by Receiver R9.18. One of the empty lots is a future Department of Motor Vehicles (DMV) site, and there are no plans for the other two areas. Because there are no discernible formal outdoor use areas at the existing commercial land uses, and none are planned at the empty lots, R9.18 was placed as a generalized receiver no closer than 100 feet from the edge of the outside traffic lane for information purposes, and noise abatement was not considered. Figure 77 in Appendix H shows this receiver.

Receivers R9.29, R9.32, and R9.36: Traffic noise impacts would occur at two multi-family and five single-family residences along the eastbound side of I-10. The soundwall analysis results summarized in Table B-1 in Appendix B demonstrate that feasible noise reduction is not possible at the seven single-family and multi-family residences represented by Receivers R9.29, R9.32, and R9.36, due to the unmitigated noise contribution from the UPRR freight traffic parallel to I-10. UPRR will not allow soundwalls to be constructed on their right-of-way; therefore, soundwall analysis was only performed on the shoulder of I-10.

7.2.1.2. SEGMENT 10 – CITRUS AVENUE TO SIERRA AVENUE

UPRR train lines run parallel to I-10 on the south side throughout Segment 10. The tracks are at grade and train noise affects the existing and future predicted noise levels at receivers located south of I-10. However, train noise is not considered when determining impacts because train noise is not related to the I-10 Corridor Project.

Existing exterior traffic noise levels north of I-10 in Segment 10 range from 65 to 76 dBA for Receivers R10.1 through R10.14. South of I-10, existing exterior traffic and train noise levels range from 62 to 72 dBA for Receivers R10.15 through R10.24. The future predicted exterior traffic noise levels north of I-10 in Segment 10 range from 64 to 76 dBA. The future predicted exterior traffic noise levels south of I-10 in Segment 10, excluding train noise, range from 59 to 70 dBA. Several areas approach or exceed the NAC for Activity Category B, and one area exceeds the NAC for Activity Category E; therefore, consideration of noise abatement is required. Table B-2 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 10 with Alternative 2.

Areas with Proposed Noise Abatement

Soundwall S1819: Soundwall S1819 would be located north of I-10 on the R/W line and would provide feasible noise abatement for the frequent outdoor use areas of 33 single-family residences represented by Receivers R10.1 through R10.4 and R10.6 through R10.9A. This soundwall would also meet the design goal by providing a 7 dB reduction in traffic noise level at several locations. Soundwall S1819 is raised higher than otherwise required in front of Receivers R10.1 through R10.4 and R10.7 through R10.9A to provide feasible abatement at adjacent Receiver R10.6. A traffic noise impact would occur at one single-family residence represented by Receiver R10.5; however, feasible noise abatement was not possible with Soundwall S1819. This is most likely because the existing property wall is already providing noise abatement and obtaining an additional

5 dB of attenuation is not possible.. Table 7-2 summarizes the range of allowances for each feasible noise abatement measure considered. Figures 78 and 79 in Appendix H show the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement and meet the design goal.

Table 7-2. Summary of Reasonableness Determination Data – Alternative 2 – Soundwall S1819 [a]

Barrier I.D.: S1819	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	18-Foot Barrier
Number of Benefited Receivers	2	3	13	13	22	33
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$142,000	$213,000	$923,000	$923,000	$1,562,000	$2,343,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

Soundwall S1833: Soundwall S1833 would be located north of I-10 on the R/W line and would provide feasible noise abatement for the frequent outdoor use areas of four single-family residences represented by Receivers R10.12 and R10.13. This soundwall would also meet the design goal by providing a 7 dB reduction in traffic noise level at R10.13. Table 7-3 summarizes the range of allowances for each feasible noise abatement measure considered. Figure 79 in Appendix H shows the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement and meet the design goal.

Table 7-3. Summary of Reasonableness Determination Data – Alternative 2 – Soundwall S1833 [a]

Barrier I.D.: S1883	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	18-Foot Barrier
Number of Benefited Receivers	N/A	3	3	3	4	4
Reasonable Allowance Per Benefited Receiver	N/A	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	$213,000	$213,000	$213,000	$284,000	$284,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

Receiver R10.14: Traffic noise impacts would occur at Pancho Villa's restaurant north of I-10; however, because there is no identified frequent outdoor use area on this commercial establishment, noise abatement has not been considered. Figure 79 in Appendix H shows this receiver.

Receivers R10.16, R10.17, R10.20, and R10.22: Traffic noise impacts would occur at 20 single-family residences along the eastbound side of I-10. The soundwall analysis results summarized in Table B-1 in Appendix B demonstrate that feasible noise reduction is not

possible at the 20 single-family residences represented by Receivers R10.16, R10.17, R10.20, and R10.22, due to the unmitigated noise contribution from the UPRR freight traffic parallel to I-10. UPRR will not allow soundwalls to be constructed on their right-of-way; therefore, soundwall analysis was only performed on the shoulder of I-10. Figures 78 and 79 in Appendix H show these receivers.

7.2.1.3. SEGMENT 11 – SIERRA AVENUE TO CEDAR AVENUE

UPRR train lines run parallel to I-10 on the south side throughout Segment 11. The tracks are at grade and train noise affects the existing and future predicted noise levels of receivers located south of I-10. However, train noise is not considered when determining impacts because train noise is not related to the I-10 Corridor Project.

Existing exterior traffic noise levels north of I-10 in Segment 11 range from 60 to 78 dBA for Receivers R11.1 through R11.44. Existing interior traffic noise levels north of I-10 range from 35 to 46 dBA for Receivers R11.2-1 through R11.2A-2. South of I-10, existing exterior traffic and train noise levels range from 63 to 65 dBA for Receivers R11.45 through R11.49. The future predicted exterior traffic noise levels north of I-10 in Segment 11 range from 59 to 77 dBA. The future predicted exterior traffic noise levels south of I-10 in Segment 11, excluding train noise, range from 63 to 65 dBA. Several areas to the north approach or exceed the NAC for Activity Categories B, C, and E; therefore, consideration of noise abatement is required. The future predicted interior traffic noise levels range from 34 to 46 dBA; therefore, there would be no interior traffic noise impacts. Table B-3 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 11 with Alternative 2.

Areas with Proposed Noise Abatement

Soundwall S1877: Soundwall S1877 would be located on the R/W line along westbound I-10. This soundwall would provide feasible noise abatement for the frequent outdoor use areas of 72 mobile homes represented by Receivers R11.3 through R11.7, R11.9, and R11.10. Soundwall S1877 would also meet the design goal by providing 7 dB in traffic noise reduction at Receiver R11.4. Soundwall S1877 is raised higher than otherwise required in front of Receivers R11.4, R11.5, R11.6, and R11.9 to achieve feasible abatement at adjacent receivers. Soundwall S1877 would be located adjacent to an existing 7-foot high property wall located at the property line. Table 7-4 summarizes the range of reasonable allowances for the feasible noise abatement measure considered. Figures 80 and 81 in Appendix H show the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement.

Table 7-4. Summary of Reasonableness Determination Data – Alternative 2 – Soundwall S1877[a]

Barrier I.D.: S1877	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	N/A	N/A	33	44	66
Reasonable Allowance Per Benefited Receiver	N/A	N/A	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	N/A	$2,343,000	$3,124,000	$4,686,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

Soundwall 1907: Soundwall S1907 would be located on the R/W line north of I-10 and would tie into Soundwall SW1, which will be constructed as part of the Cedar Avenue Improvement Project, also located at the R/W line. Soundwall 1907 would provide feasible noise abatement for the frequent outdoor use areas of 30 single-family and 16 multi-family residences including four second story residences represented by Receivers R11.14, R11.14A, R11.15A through R11.18, and R11.22 through R11.26. Soundwall S1907 would also meet the design goal by providing at least a 7 dB reduction in traffic noise levels at several locations. Soundwall S1907 is raised higher than otherwise required in front of Receivers R11.14A, R11.16, R11.18, R11.23, R11.24-1, R11.25-1, and R11.26-1 to block line-of-sight to truck stacks at Receiver R11.24-2. Table 7-5 summarizes the range of reasonable allowances for the feasible noise abatement measure considered. Figures 81 and 82 in Appendix H show the locations, minimum lengths, and heights required for this soundwall to provide feasible traffic noise abatement.

Table 7-5. Summary of Reasonableness Determination Data – Alternative 2 – Soundwall S1907[a]

Barrier I.D.: S1907	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	1	13	20	35	47	46
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$71,000	$923,000	$1,420,000	$2,485,000	$3,337,000	$3,266,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Soundwall S1969: Soundwall S1969 would be located on the R/W line of westbound I-10 and transition to edge of shoulder of the westbound on-ramp from Cedar Avenue to avoid blocking the entrance to the park-and-ride lot. This soundwall would provide feasible traffic noise abatement for the outdoor use areas of one single-family residence and one fire station represented by Receiver R11.44. Soundwall S1969 would also meet the design goal by providing a 7 dB reduction in traffic noise levels. Table 7-6 summarizes the range of reasonable allowances for the feasible noise abatement measure considered. Figure 83 in Appendix H shows the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement.

Table 7-6. Summary of Reasonableness Determination Data – Alternative 2 – Soundwall S1969[a]

Barrier I.D.: S1969	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	2	2	2	2	2
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$142,000	$142,000	$142,000	$142,000	$142,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

Areas with Existing Noise Abatement

Receivers R11.28 through R11.42: Traffic noise impacts would occur at three mobile homes of Bloomington Mobile Home Park, Ayala Park, and six mobile homes of Idle Wheels Mobile Home Park, located north of I-10 represented by Receivers R11.28, R11.33, and R11.35, respectively. Soundwall SW1 will be constructed in front of these receivers as part of the Cedar Avenue Improvements Project and has been considered as an existing soundwall for this noise analysis. Soundwall SW1 will be 16 feet in height located at the R/W line. The results of the traffic noise analysis summarized in Table B-3 in Appendix B demonstrate that increasing the height of Soundwall SW1 to a height of 24 feet would not provide 5 dB or more of noise reduction at the impacted residences. Figures 82 and 83 in Appendix H show these receivers.

Areas without Noise Abatement

Receiver R11.13: Traffic noise impacts would occur at a commercial land use used for the Bel-Air Swapmeet north of I-10. However, because there is no discernible formal outdoor activity area, Receiver R11.13 was placed as a generalized receiver no closer than 100 feet from the edge of the outside traffic lane for information purposes, and noise abatement was not considered. Figure 81 in Appendix H shows this receiver.

Receiver R11.43: Traffic noise impacts would occur at an empty lot representative of several commercial land uses north of I-10. However, because there is no discernible formal outdoor activity area, Receiver R11.43 was placed as a generalized receiver no closer than 100 feet from the edge of the outside traffic lane for information purposes, and noise abatement was not considered. Figure 83 in Appendix H shows this receiver.

7.2.1.4. SEGMENT 12 – CEDAR AVENUE TO RIVERSIDE AVENUE

UPRR train lines run parallel to I-10 on the south side throughout Segment 12. The tracks are at grade and train noise affects the existing and future predicted noise levels of receivers located south of I-10. However, there are no receivers south of I-10 within 1,000 feet of the R/W line in Segment 12; therefore, train noise has not been considered in this area.

Existing exterior traffic noise levels in Segment 12 range from 53 to 73 dBA for Receivers R12.1 through R12.11. Existing interior traffic noise levels range from 44 to 51 dBA for Receivers R12.8-1 through R12.8-3. The future predicted exterior traffic noise levels in Segment 12 range from 55 to 74 dBA and predicted interior traffic noise levels

range from 45 to 52 dBA where a few of the receivers exceed the NAC for Activity Categories C, D, and E; therefore, consideration of noise abatement is required. Table B-4 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 12 with Alternative 2.

Areas with Proposed Noise Abatement

Soundwall S2033: Soundwall S2033 would be located on the R/W line along the westbound side of I-10. Soundwall S2033 would provide at least 7–dB of noise reduction for the four discrete picnic areas of Teamsters Local 63 Union Hall represented by Receiver R12.10. Figure 85 in Appendix H shows the location, minimum length, and height of Soundwall S2033 to provide feasible abatement and meet the design goal. Table 7-7 summarizes the range of reasonable allowances for the feasible noise abatement measure considered.

Table 7-7. Summary of Reasonableness Determination Data – Alternative 2 – Soundwall S2033[a]

Barrier I.D.: S2033	16-Foot Barrier	18-Foot Barrier	20-Foot Barrier	22-Foot Barrier	24-Foot Barrier
Number of Benefited Receivers	4	4	4	4	4
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$284,000	$284,000	$284,000	$284,000	$284,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

Areas without Noise Abatement

Receiver R12.7: Traffic noise impacts would occur at an empty lot representative of several commercial and industrial land uses north of I-10 However, because there is no discernible formal outdoor activity area, Receiver R12.7 was placed as a generalized receiver no closer than 100 feet from the edge of the outside traffic lane for information purposes, and noise abatement was not considered. Figure 84 in Appendix H shows this Receiver.

Receivers R12.8-2 and R12.8-3: Traffic noise impacts would occur at 12 second story room interiors and 12 third story room interiors of the Days Inn north of I-10. However, consideration of noise abatement is not required because there are no traffic noise impacts that occur at the ground floor of the Days Inn. Therefore, noise abatement has not been considered for this area. Figure 85 in Appendix H shows these receivers.

7.2.1.5. SEGMENT 13 – RIVERSIDE AVENUE TO PEPPER AVENUE

UPRR train lines run parallel to I-10 on the south side throughout Segment 13. The tracks are at grade and train noise affects the existing and future predicted noise levels at receivers located south of I-10. However, there are no frequent outdoor use areas south of I-10 in Segment 13; therefore, train noise has not been considered in this area.

Existing exterior noise levels in Segment 13 range from 58 to 69 dBA for Receivers R13.1-1 through R13.7. Existing interior noise levels range from 38 to 44 dBA for

Receivers R13.1-1, R13.1-2, R13.2-1, and R13.2-2. The future predicted exterior noise levels in Segment 13 range from 60 to 71 dBA and predicted interior noise levels range from 39 to 45 dBA. While there are no interior traffic noise impacts, there are two instances where areas exceed the NAC for Activity Category B; therefore, consideration of noise abatement is required. Table B-5 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 13 with Alternative 2.

Areas with Proposed Noise Abatement

Soundwall S2079: Soundwall S2079 would be located north of I-10 on the R/W line and would provide feasible noise abatement for the frequent outdoor use areas of four single-family residences represented by Receivers R13.3 and R13.4. This soundwall is raised in front of Receiver R13.3 higher than otherwise required to achieve the design goal of 7 dB of noise reduction at Receiver R13.4. Table 7-8 summarizes the range of allowances for the feasible noise abatement measure considered. Figure 87 in Appendix H shows the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement, and meet the design goal.

Table 7-8. Summary of Reasonableness Determination Data – Alternative 2 – Soundwall S2079 [a]

Barrier I.D.: S2079	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	18-Foot Barrier
Number of Benefited Receivers	N/A	1	4	4	4
Reasonable Allowance Per Benefited Receiver	N/A	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	$71,000	$284,000	$284,000	$284,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

There are no frequent outdoor use areas in this segment that are impacted by the project where it was not feasible to apply standard noise abatement techniques.

7.2.1.6. SEGMENT 14 – PEPPER AVENUE TO RANCHO AVENUE

UPRR train lines run parallel to I-10 on the south side throughout Segment 14. The tracks are at grade and train noise affects the existing and future predicted noise levels of all receivers located south of I-10. However, there are no receivers south of I-10 in Segment 14; therefore, train noise has not been considered in this area. The UPRR train lines also run perpendicular to I-10 on the north side of Segment 14. These tracks are elevated when they cross I-10, but then they gradually become at grade. Train noise affects the existing and future predicted noise levels for three receivers, R14.1A through R14.2, on the north side. However, train noise is not considered when determining impacts because train noise is not related to the I-10 Corridor Project.

Existing exterior traffic noise levels in Segment 14 range from 59 to 75 dBA for Receivers R14.1 and R14.3 through R14.12. The existing exterior traffic noise levels range from 62 to 64 dBA for Receivers R14.1A through R14.2. The existing interior traffic noise level for Receiver 14.4 is 55 dBA. The future predicted exterior traffic noise levels with the project range from 62 to 77 dBA for Receivers R14.1 and R14.3 through R14.12. The future predicted exterior traffic noise levels for Receivers R14.1A through R14.2, excluding train noise, range from 63 to 65 dBA. The future predicted interior noise level with the project for Receiver R14.4 is 56 dBA. Several of the receivers exceed the NAC for Activity Category B and one receiver each for Activity Categories D and E exceed the NAC thresholds; therefore, consideration of noise abatement is required. Table B-6 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 14 with Alternative 2.

Areas with Proposed Noise Abatement

Soundwall S2145: Soundwall S2145 would be located on the R/W line along westbound I-10. This soundwall would provide feasible noise abatement for the frequent outdoor use areas of five single-family and 37 mobile home residences and three motel rooms of Lido Motel represented by Receivers R14.3 through R14.8, R14.8B, R14.9, and R14.10 through R14.11A. Soundwall S2145 would also meet the design goal by providing a 7 dB or more reduction in traffic noise levels at several locations. Soundwall S2145 is raised higher in front of Receivers R14.5 through R14.8, R14.8B, R14.9, R14.11, and R14.11A to achieve feasible noise abatement at adjacent receivers. Table 7-9 summarizes the range of reasonable allowances for the feasible noise abatement measure considered. Figure 89 in Appendix H shows the location, minimum length, and heights of Soundwall S2145 to provide feasible abatement and meet the design goal.

Table 7-9. Summary of Reasonableness Determination Data – Alternative 2 – Soundwall S2145 [a]

Barrier I.D.: S2145	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	N/A	3	11	33	37
Reasonable Allowance Per Benefited Receiver	N/A	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	$213,000	$781,000	$2,343,000	$2,627,000
	18-Foot Barrier	**20-Foot Barrier**	**22-Foot Barrier**	**24-Foot Barrier**	**Design Barrier[b]**
Number of Benefited Receivers	40	42	45	45	45
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$2,840,000	$2,982,000	$3,195,000	$3,195,000	$3,195,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

Receiver R14.1: Traffic noise impacts would occur with the project at a school administration office north of I-10. However, because there are no clearly identified frequent outdoor use areas on this commercial land use, noise abatement has not been considered. Figure 88 in Appendix H shows this receiver.

7.2.1.7. SEGMENT 15 – RANCHO AVENUE TO 9TH STREET

UPRR train lines run parallel to I-10 on the south side throughout Segment 15, and BNSF and Metrolink lines run perpendicular to I-10 at the Colton Crossing between North 4th Street and La Cadena Drive. The UPRR tracks begin at grade and transition eastward to an elevated flyover structure, while the BNSF and Metrolink tracks remain at grade and cross under the UPRR tracks and I-10. Although train noise was not included in measurements ST18, ST20, and LT11, the UPRR train noise affects the future predicted noise levels at receivers located south of I-10, and the BNSF and Metrolink train noise affects the future predicted noise levels of Receivers R15.18 through R15.23. However, train noise is not considered when determining impacts because train noise is not related to the I-10 Corridor Project.

Existing exterior traffic noise levels north of I-10 in Segment 15 range from 65 to 75 dBA for Receivers R15.1 through R15.12. South of I-10, existing exterior traffic noise levels range from 55 to 69 dBA for Receivers R15.13 through R15.23. The future predicted exterior traffic noise levels north of I-10 in Segment 15 range from 65 to 74 dBA. The future predicted exterior traffic noise levels south of I-10 in Segment 15, excluding train noise, range from 58 to 67 dBA. Several areas approach or exceed the NAC for Activity Category B, and one area exceeds the NAC for Activity Category E; therefore, consideration of noise abatement is required. Table B-7 in Appendix B shows the existing and future noise levels as well as barrier analysis for Segment 15, Alternative 2.

Areas with Proposed Noise Abatement

There are no outdoor use areas in this segment that are impacted by the project where it is feasible to apply standard noise abatement techniques.

Areas with Existing Noise Abatement

Receivers R15.1 through R15.11: Traffic noise impacts would occur at 26 single-family residences north of I-10, represented by Receivers R15.1 through R15.4, R15.6 through R15.9, and R15.11. These receivers are currently protected by existing Soundwall SW5 located at the R/W line as well as shoulders of I-10 and the westbound Rancho Avenue off-ramp. Because the shoulder is less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Consequently, a soundwall was analyzed at the existing location for heights up to 14 feet when located on the shoulder, and 24 feet when located on the R/W. The results summarized in Table B-7 in Appendix B demonstrate that although Receiver R15.1 achieves a feasible reduction of 5 dB at 22 feet, increasing the height of the existing soundwall at this location would not provide 7 dB of additional noise reduction for any of the impacted residences. Therefore,

increasing the height of the existing soundwall does not satisfy the design goal and is not reasonable. Figure 90 in Appendix H shows these receivers and Soundwall SW5.

Areas without Noise Abatement

Receiver R15.12: Traffic noise impacts would occur at a commercial land use north of I-10. However, because there is no discernible formal activity area, Receiver R15.12 was placed as a generalized receiver more than 100 feet from the edge of the outside traffic lane for information purposes, and noise abatement was not considered. Figure 91 in Appendix H shows this receiver.

Receivers R15.14 and R15.15: Traffic noise impacts would occur at 11 single-family residences along eastbound I-10. The soundwall analysis results summarized in Table B-7 in Appendix B demonstrate that feasible noise reduction is not possible at the impacted residences represented by Receivers R15.14 and R15.15, due to the unmitigated noise contribution from the UPRR freight traffic parallel to I-10. UPRR will not allow soundwalls to be constructed on the flyover retaining structure; therefore, soundwall analysis was only performed on the shoulder of I-10. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Therefore, the analyzed soundwall was considered at heights up to 14 feet. Figure 90 in Appendix H shows these receivers.

7.2.1.8. SEGMENT 16 – 9TH STREET TO INTERSTATE 215

UPRR train lines run parallel to I-10 on the south side throughout Segment 16. The tracks are elevated on a flyover structure; although train noise is not included in the existing conditions, the UPRR train noise affects the future predicted noise levels at receivers located south of I-10. However, train noise is not considered when determining impacts because train noise is not related to the I-10 Corridor Project.

Existing exterior traffic noise levels north of I-10 in Segment 16 range from 61 to 75 dBA for Receivers R16.1 through R16.21. Existing interior noise levels north of I-10 range from 41 to 46 dBA for Receivers R16.15-1 through R16.16-2, R16.20-1, and R16.20-2. South of I-10, existing exterior traffic noise levels range from 55 to 56 dBA for Receivers R16.22 and R16.23. The future predicted exterior traffic noise levels north of I-10 in Segment 16 range from 61 to 76 dBA and the future predicted interior traffic noise levels range from 42 to 46 dBA. The future predicted exterior traffic noise levels south of I-10 in Segment 16, excluding train noise, range from 58 to 59 dBA. While there are no interior traffic noise impacts, there are several areas that approach or exceed the NAC for Activity Categories B and E; therefore, consideration of noise abatement is required. Table B-8 in Appendix B shows the existing, and future noise levels, as well as barrier analysis for Segment 16 with Alternative 2.

Areas with Proposed Noise Abatement

There are no frequent outdoor use areas in this segment that are impacted by the project where it is feasible to apply standard noise abatement techniques and achieve the design goal.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

Receivers R16.2 through R16.4: Traffic noise impacts would occur north of I-10 at two single-family residences represented by Receivers R16.2 and R16.4, and one commercial land use represented by Receiver R16.3. Because there is no defined frequent outdoor use area at the commercial land use, noise abatement was only considered for the single-family residences in this area. The soundwall analysis results summarized in Table B-8 in Appendix B demonstrate that feasible noise reduction is only possible at one of the impacted single family residences with a soundwall located on the shoulder. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Although feasible noise reduction is possible at Receiver R16.4 with a soundwall height of 14 feet, the maximum reduction at Receiver R16.2 is only 3 dB. Furthermore, the soundwall analyzed at this location would be unable to meet the design goal of 7 dB attenuation at either of the impacted frequent outdoor use areas. This is due to the noise reduction already provided by the existing buildings between Valley Boulevard and I-10, the height limitation of the soundwall analyzed on the shoulder being 14 feet, and the unmitigated noise contribution from traffic on Valley Boulevard. Figure 91 in Appendix H shows these receivers.

Receivers R16.12 and R16.13: Traffic noise impacts would occur at five single-family residences north of I-10. A soundwall was considered on the shoulder of I-10 and on the R/W line, which is along the shoulder of Valley Boulevard. Because the I-10 shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from the edge of traveled way. In addition, the maximum height of a noise barrier should not exceed 16 feet when located more than 15 feet from the edge of traveled way. Therefore the analyzed soundwall was considered for heights up to 14 feet when located on the shoulder of I-10, and heights up to 16 feet when located on the shoulder of Valley Boulevard. The soundwall analysis results summarized in Table B-8 in Appendix B demonstrate that feasible noise reduction at these impacted residences is not possible. This is due to the maximum allowable heights at the analyzed soundwall location, and the unmitigated noise contribution from traffic on Valley Boulevard, which is between the receivers and I-10. Figure 92 in Appendix H shows these receivers.

7.2.1.9. SEGMENT 17 – WEST OF TIPPECANOE AVENUE TO MOUNTAIN VIEW AVENUE

Existing exterior traffic noise levels in Segment 17 range from 59 to 77 dBA for Receivers R17.1A through R17.48. Existing interior traffic noise levels range from 39 to 46 dBA for Receivers R17.1A, R17.1, and R17.33A. The future predicted exterior traffic noise levels in Segment 17 range from 57 to 80 dBA, where several areas approach or exceed the NAC for Activity Categories B and E; therefore, consideration of noise abatement is required. The future predicted interior traffic noise levels range from 41 to 47 dBA; therefore, there would be no interior traffic noise impacts. For the interchange of Tippecanoe Avenue, the existing westbound off-ramp configuration is different than the no-build configuration due to the approved I-10/Tippecanoe Interchange Improvement

Project. As such, the existing noise levels for the area of Tippecanoe Avenue were calculated using TNM. Year 2012 existing traffic volumes capped at LOS D/E volumes were used in TNM to determine the existing noise levels. Furthermore, existing Soundwall SW241 is not considered in the existing case, but is included in the future no-build and build cases. Table B-9 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 17 with Alternative 2.

Areas with Proposed Noise Abatement

Soundwalls S2382 and S2384: Soundwalls S2382 and S2384 work as a system where Soundwall S2382 would be located on top of a retaining wall along the eastbound shoulder of I-10 and Soundwall S2384 would be located on the R/W line along the eastbound off-ramp to Tippecanoe Avenue. Soundwalls S2382 and S2384 would provide at least 7 dB of noise reduction for one single-family residence represented by Receiver R17.34. Figure 97 in Appendix H shows the locations, minimum lengths, and heights of Soundwalls S2382 and S2384 to provide feasible abatement and meet the design goal. Table 7-10 summarizes the range of reasonable allowances for the feasible noise abatement measure considered.

Table 7-10. Summary of Reasonableness Determination Data – Alternative 2 – Soundwalls S2382 and S2384[a]

Barrier I.D.: S2382 & S2384	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	N/A	N/A	N/A	1	1	1
Reasonable Allowance Per Benefited Receiver	N/A	N/A	N/A	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	N/A	N/A	$71,000	$71,000	$71,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Soundwalls S2434A and S2438 (Option 1): Two options have been considered for the location of Soundwall S2434 – the R/W line (S2434A) and the shoulder of eastbound off-ramp to Mountain View Avenue (S2434B). Soundwalls S2434A and S2438 would work as a system where Soundwall S2434A would be located on the R/W line and Soundwall S2438 would be located on the shoulder of eastbound I-10. Soundwalls S2434A and S2438 would provide feasible noise reduction for four single-family residences and 36 mobile homes represented by Receivers R17.38 through R17.47A. Receiver R17.48 would be impacted by the project; however, the soundwall analysis results summarized in Table B-9 demonstrate that feasible abatement is not possible. This is mainly due to the noise contributions originating from Mountain View Avenue traffic. Soundwall S2434A is raised higher at Receivers R11.38 and R17.41 than otherwise required to provide feasible abatement at Receiver R17.42. Figures 98-1 and 99-1 in Appendix H show the locations, minimum lengths, and heights of Soundwalls S2434A and S2438 to provide feasible abatement and meet the design goal. Table 7-11 summarizes the range of reasonable allowances for the feasible noise abatement measure considered.

Table 7-11. Summary of Reasonableness Determination Data – Alternative 2 – Soundwalls S2434A and S2438[a]

Barrier I.D.: S2434A & S2438	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	4	10	36	38	40	40
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$284,000	$710,000	$2,556,000	$2,698,000	$2,840,000	$2,840,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Soundwalls S2434B and S2438 (Option 2): Soundwalls S2434B and S2438 would work as a system where Soundwall S2434B would be located on the shoulder of the eastbound off-ramp to Mountain View Avenue and Soundwall S2438 would be located on the shoulder of eastbound I-10. Soundwalls S2434B and S2438 would provide feasible noise reduction for four single-family residences and 36 mobile homes represented by Receivers R17.38 through R17.47A. Receiver R17.48 would be impacted by the project; however, the soundwall analysis results summarized in Table B-9 demonstrate that feasible abatement is not possible. This is mainly due to the noise contributions originating from Mountain View Avenue traffic. Both Soundwalls S2434A and S2434B are higher than otherwise required at Receivers R17.38 through R17.41 and R17.43 through R17.46 to provide feasible abatement at adjacent receivers. Figures 98-2 and 99-2 in Appendix H show the locations, minimum lengths, and heights of Soundwalls S2434B and S2438 to provide feasible abatement and meet the design goal. Table 7-12 summarizes the range of reasonable allowances for the feasible noise abatement measure considered.

Table 7-12. Summary of Reasonableness Determination Data – Alternative 2 – Soundwalls S2434B and S2438[a]

Barrier I.D.: S2434B & S2438	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	11	30	38	40	--[c]	40
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	--[c]	$71,000
Total Reasonable Allowance	$781,000	$2,130,000	$2,698,000	$2,840,000	--[c]	$2,840,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

[c] Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Soundwalls S2435 and S2437: Soundwalls S2435 and S2437 would work as a system where Soundwall S2435 would be located on the R/W line north of I-10 and Soundwall S2437 would be located along the shoulder of westbound I-10. Soundwall S2435 would tie into existing Soundwall SW264, which is also located at the R/W line. These soundwalls would provide feasible noise abatement for the frequent outdoor use areas of

15 multi-family residences represented by Receivers R17.25 through R17.27, R17.29, and R17.31. Soundwalls S2435 and S2437 would also meet the design goal by providing at least a 7 dB reduction in traffic noise levels at Receiver R17.27. Soundwall S2437 is raised higher than otherwise required at Receivers R17.25, R17.26, and R17.31 to achieve feasible noise reduction at Receiver R17.29 and to meet the design goal at Receiver R17.27. Table 7-13 summarizes the range of reasonable allowances for the feasible noise abatement measure considered. Figures 98-1, 99-1, 98-2, and 99-2 in Appendix H show the locations, minimum lengths, and heights required for these soundwalls to provide feasible traffic noise abatement.

Table 7-13. Summary of Reasonableness Determination Data – Alternative 2 – Soundwalls S2435 and S2437[a]

Barrier I.D.: S2435 & S2437	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	N/A	3	13	15	15	15
Reasonable Allowance Per Benefited Receiver	N/A	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	$213,000	$923,000	$1,065,000	$1,065,000	$1,065,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Areas with Existing Noise Abatement

Receivers R17.15 through R17.24: Traffic noise impacts would occur at 19 single-family residences along the westbound side of I-10 represented by Receivers R7.15 through R17.18 and R17.24. These receivers are currently protected by existing 16-foot high Soundwall SW264 located at the R/W line. However, the soundwall analysis results summarized in Table B-9 demonstrate that replacing this soundwall with a soundwall 24 feet in height would not provide 5 dB of additional noise reduction at any of the residences. Figures 98-1, 99-1, 98-2, and 99-2 in Appendix H show these receivers and existing Soundwall SW264.

Areas without Noise Abatement

Receiver R17.33: Traffic noise impacts would occur at a commercial land use representative of several commercial land uses north of I-10. However, because there are no clearly identified frequent outdoor use areas on this commercial land use, noise abatement has not been considered. Figure 97 in Appendix H shows this receiver.

Receivers R17.36 and R17.37: Traffic noise impacts would occur at commercial land uses representative of several commercial land uses including Hometown Buffet and a sod farm south of I-10. However, because there are no clearly identified frequent outdoor use areas on these commercial land uses, noise abatement has not been considered. Figures 98-1 and 98-2 in Appendix H show these receivers.

7.2.1.10. SEGMENT 18 – MOUNTAIN VIEW AVENUE TO EAST OF CALIFORNIA STREET

Existing exterior traffic noise levels with the project in Segment 18 range from 60 to 73 dBA for Receivers R18.1 through R18.26, and the existing interior noise level for Receiver R18.25 is 48 dBA. The future predicted exterior traffic noise levels in Segment

18 range from 61 to 72 dBA where several of the receivers exceed the NAC for Activity Category B, one receiver approaches the Activity Category C NAC thresholds, and two receivers approach the NAC for Activity Category E; therefore, consideration of noise abatement is required. The future predicted interior noise level for Receiver R18.25 is 47 dBA; therefore, there would be no interior traffic noise impacts. Table B-10 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 18 with Alternative 2.

Areas with Proposed Noise Abatement

Soundwall S2476: Soundwall S2476 would be located on the shoulder of eastbound I-10. This soundwall would provide feasible noise abatement for the frequent outdoor use areas of 74 multi-family residences represented by Receivers R18.6-1 through R18.7-1, R18.8-1 through R18.9-1, and R18.11-1 through R18.16-2. Soundwall S2476 would also meet the design goal by providing a 7 dB reduction in traffic noise levels at several locations. Soundwall S2476 is raised higher in front of second story balconies represented by Receivers R18.11-2, R18.13-2, and R18.15-2 through R18.16-2 to achieve feasible noise abatement at adjacent first-story receivers. Soundwall S2476 is raised higher in front of Receivers R18.6-2, R18.8-2, R18.12-2, and R18.14-2 to achieve feasible noise abatement at adjacent receivers and meet the design goal.

Traffic noise impacts would occur at a second story balcony represented by Receiver R18.7-2. Typically, noise abatement is not considered for the second story outdoor use area when there are ground floor use areas. Because there are no traffic noise impacts at the ground floor outdoor use area, represented by Receiver R18.7-1, no abatement is considered for the second story balcony. Figure 100 in Appendix H shows the location, minimum length, and heights of Soundwall S2476 to provide feasible abatement and meet the design goal. Table 7-14 summarizes the range of reasonable allowances for the feasible noise abatement measure considered.

Table 7-14. Summary of Reasonableness Determination Data – Alternative 2 – Soundwall S2476 [a]

Barrier I.D.: S2476	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	8	28	70	88	--[c]	74
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	--[c]	$71,000
Total Reasonable Allowance	$568,000	$1,988,000	$4,970,000	$6,248,000	--[c]	$5,254,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

[c] Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

Receiver R18.3: Traffic noise impacts would occur at Splash Kingdom Water Park located north of I-10 represented by Receiver R18.3. Noise abatement was not considered for this area because the park prefers to have travelers on I-10 able to see the park from the freeway and not have the view to the park obstructed by a soundwall. A letter from the park refusing noise abatement in the form of a soundwall is located in Appendix K. Figure 100 in Appendix H shows this receiver.

Receiver R18.5: Traffic noise impacts would occur at the exterior of commercial office buildings located south of I-10 represented by Receiver R18.5. However, because there are no clearly identified frequent outdoor use areas on this commercial land use, noise abatement has not been considered. Figures 99-1 and 99-2 in Appendix H show this receiver.

Receiver R18.26: Traffic noise impacts would occur at the exterior of the San Bernardino County Museum located along the westbound off-ramp to California Street. A soundwall was considered on the shoulder of the I-10, and the results summarized in Table B-10 demonstrate that a soundwall at this location would not meet the design goal at the impacted museum. Figure 101 in Appendix H shows this receiver.

7.2.1.11. SEGMENT 18A – NEVADA STREET TO STATE ROUTE 210

Segment 18A was analyzed using TNM as a result of the procedures used to determine traffic noise impacts at isolated hotel, motels, and continuing education schools. Based on that analysis, it was determined that the Good Nite Inn located west of Alabama Street along the eastbound side of I-10 would possibly be impacted by the traffic noise. Table I-1 in Appendix I show the results of the traffic noise analysis conducted for isolated hotels, motels, and continuing education schools. Because a TNM model was developed for this area to conduct a detailed analysis of the Good Nite Inn, receivers were added to include nearby hotels as well as a restaurant, a daycare, and a commercial establishment.

Existing exterior traffic noise levels in Segment 18A range from 61 to 76 dBA for Receivers R18A.1A through R18A.11. Existing interior traffic noise levels range from 37 to 53 dBA for Receivers R18A.2, R18A.4, R18A.5, R18A.7, and R18A.9. Existing noise levels in this segment were calculated using TNM because there were no long-term measurements conducted in this area to determine the worst hour noise levels. Year 2012 existing traffic volumes capped at LOS D/E volumes were used in TNM to determine the existing noise levels. The future predicted exterior traffic noise levels in Segment 18A range from 62 to 77 dBA and the future predicted interior traffic noise levels range from 37 to 53 dBA, in which a second story receiver located at the Good Nite Inn exceeds the NAC for Activity Category D. Table B-11 in Appendix B shows the existing and future noise levels for Segment 18A with Alternative 2.

Areas with Proposed Noise Abatement

There are no outdoor use areas in this segment that are impacted by the project where it is required to apply standard noise abatement techniques.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

Receiver R18A.1A: Traffic noise impacts would occur at a commercial land use north of I-10; however, because there is no discernible formal activity area, Receiver R18A.1A was placed as a generalized receiver 100 feet from the edge of the outside traffic lane for information purposes, and noise abatement was not considered. Figure 101A in Appendix H shows this receiver.

Receiver R18A.7-2: Traffic noise impacts would occur at a second story receiver located at the Good Nite Inn south of I-10. However, consideration of noise abatement is not required because there are no traffic noise impacts that occur at the ground floor receiver of the Good Nite Inn. Figure 101A in Appendix H shows this receiver.

7.2.2. Alternative 3

Alternative 3 would provide two Express Lanes in each direction of I-10 from the Los Angeles/San Bernardino county line to California Street (near SR-210) in the City of Redlands and one Express Lane in each direction from California Street to Ford Street in the City of Redlands. However, there is a transition area that begins at Towne Avenue and extends to Indian Hill Boulevard. Therefore, the noise study for Alternative 3 stretches between Towne Avenue and just east of Ford Street which includes Segments 1 through 21. Segments 18A through 21 have only been analyzed under Alternative 3 conditions because Alternative 3 has the same design footprint as Alternative 2 with the difference being the HOV lanes in Alternative 2 are considered Express Lanes in Alternative 3. Because it has been assumed that Express Lanes would contain slightly higher traffic volume than HOV lanes, Alternative 3 would yield the worst case noise levels. Therefore, only Alternative 3 conditions were analyzed from California Street to Ford Street. There are also gaps in the TNM analysis between Vineyard Avenue and Cherry Avenue (Segment 22), as well as I-215 and just west of Tippecanoe Avenue (Segment 23). Tables B-12 through B-33 in Appendix B present the results of the barrier analysis. Figures 102 through 165 in Appendix H show the proposed alignment of Alternative 3.

7.2.2.1. SEGMENT 1 – TOWNE AVENUE TO INDIAN HILL BOULEVARD

Existing exterior traffic noise levels in Segment 1 range from 59 to 73 dBA for Receivers R1.1 through R1.68. The future predicted exterior traffic noise levels in Segment 1 range from 58 to 72 dBA where some receivers exceed the NAC for Activity Category B; therefore, consideration of noise abatement is required. Table B-12 in Appendix B presents the future predicted noise levels and barrier analysis results for Segment 1 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S699: Soundwall S699 would be located along the shoulder of the westbound I-10 Indian Hill Boulevard on-ramp. The soundwall would be joined at its western terminus to existing Soundwall SW651. This soundwall would provide feasible noise abatement for eight frequent outdoor use areas of the Howard Johnson motel adjacent to the on-ramp. The impacted patios are represented by Receiver R1.40. An additional eight patios used as frequent outdoor use areas, represented by Receiver R1.39, would also be

benefited by Soundwall S699. Table 7-15 summarizes the range of allowances for the considered feasible noise abatement measure. Figure 104 in Appendix H shows the location, minimum length, and heights required for this soundwall to provide feasible traffic noise abatement.

Table 7-15. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S699 [a]

Barrier I.D.: S699	14-Foot Barrier	16-Foot Barrier	18-Foot Barrier	20-Foot Barrier	22-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	16	16	16	16	16	16
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$1,136,000	$1,136,000	$1,136,000	$1,136,000	$1,136,000	$1,136,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Areas with Existing Noise Abatement

Receivers R1.9 through R1.38: Traffic noise impacts would occur at 26 frequent outdoor use areas of a multi-family residential complex, an outdoor use area of Rancho San Jose Park, and the playground area of a preschool located north of I-10 represented by Receivers R1.18, R1.19, R1.20, R1.28, R1.30, R1.31, and R1.38. These outdoor use areas are currently protected by existing Soundwall SW651, which is at a height of 14 feet and located at the shoulder of westbound I-10. Because the shoulder is less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way; therefore, providing additional abatement by increasing the height of the existing soundwall cannot be attempted. In addition, although proposed Soundwall S699 is located near Receiver R1.38, the soundwall does not provide feasible abatement for Receiver R1.38. Figures 102 through 104 in Appendix H show the location of these receivers as well as the height and location of the existing soundwall.

Receivers R1.49 through R1.66: Traffic noise impacts would occur at 28 single-family residences located north of I-10 represented by Receivers R1.53 through R1.58, R1.59, and R1.60. These single-family residences are currently protected by existing Soundwall SW650 at a height of 14 feet located at the shoulder and R/W of eastbound I-10 on top of a retaining wall. An attempt to provide feasible abatement by increasing the height of the existing soundwall located on the R/W to 22 feet in height could not be achieved for Receivers R1.53 through R1.58. In addition, an extension of existing Soundwall SW650 to the east was analyzed and feasible abatement is possible at Receiver R1.60; however, Receiver R1.60 was not able to attain the design goal of 7–dB. Figures 102 and 103 in Appendix H show the location of these receivers as well as the height and location of the existing soundwall.

7.2.2.2. SEGMENT 2 – INDIAN HILL BOULEVARD TO MONTE VISTA AVENUE

Existing exterior traffic noise levels in Segment 2 range from 56 to 73 dBA for Receivers R2.1 through R2.65. The future predicted exterior traffic noise levels in Segment 2 range

from 58 to 73 dBA where some receivers exceed the NAC for Activity Category B; therefore, consideration of noise abatement is required. Table B-13 in Appendix B presents the future predicted noise levels and barrier analysis results for Segment 2, Alternative 3.

Areas with Proposed Noise Abatement

There are no frequent outdoor use areas in this segment that are impacted by the project where it is feasible to apply standard noise abatement techniques.

Areas with Existing Noise Abatement

Receivers R2.4 through R2.22: Traffic noise impacts would occur at 24 single-family and five multi-family residences located north of I-10 represented by Receivers R2.4 through R2.6, and R2.11 through R2.19. These residences are currently protected by existing Soundwalls SW715, SW725, and SW1 which are 14 feet in height and located at the shoulder of westbound I-10. Because the shoulder is less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier on the shoulder of the roadway should not exceed 14 feet when located 15 feet or less from edge of traveled way. Therefore, providing additional abatement by increasing the height of the existing soundwall could not be attempted. Because there is a gap between the end points of Soundwalls SW1 and SW23, a soundwall was analyzed at the shoulder of the roadway to close the gap. Receiver R2.18 was able to attain the feasible abatement reduction of 5 dB with a soundwall height of 14 feet; however, the soundwall would not be reasonable because the design goal of a 7 dB reduction could not be met. Figures 104 through 106 in Appendix H show the location of these receivers as well as the height and location of the existing soundwalls.

Receivers R2.23 through R2.30: Traffic noise impacts would occur at eight multi-family residential units and three frequent outdoor use areas of Serrano Middle School located north of I-10 represented by Receivers R2.23 through R2.25 and R2.26 through R2.29. The multi-family residences have second floor balconies that function as the primary outdoor use areas. These residences are currently protected by existing Soundwall SW23 which is located at the shoulder of the westbound I-10 Monte Vista Avenue on-ramp at a height of 16 feet. Due to modifications to the horizontal alignment of the on-ramp by the project, a small portion of Soundwall SW23 would be replaced in-kind. Per the Caltrans' Caltrans Highway Design Manual, the maximum height of a noise barrier on the shoulder of the roadway should not exceed 16 feet when located more than 15 feet from the edge of traveled way. Therefore, increasing the height of Soundwall SW716 beyond 16 feet was not allowable along the roadway shoulder. Because there is a gap between the end points of Soundwalls SW1 and SW23, a soundwall was analyzed at the shoulder of the roadway to close the gap. None of the impacted receivers were able to attain noise reduction of 5 dB with an analyzed soundwall height of 14 feet; therefore, the soundwall would not be feasible. Figure 106 in Appendix H shows the location of these receivers as well as the heights and locations of the existing soundwalls.

Receivers R2.32 through R2.38: Traffic noise impacts would occur at 13 single-family residences located south of I-10 represented by Receivers R2.32 through R2.38. These residences are currently protected by existing Soundwalls SW708 and SW716. Soundwall SW708 is 16 feet in height and located on the R/W along the eastbound I-10

Indian Hill Boulevard on-ramp. Soundwall SW716 is connected to Soundwall SW708 and transitions from the R/W to the shoulder of the roadway. Soundwall SW716 is 16 feet in height on the R/W and transitions to a height of 14 feet along the shoulder. Although Soundwall SW708 was analyzed at heights greater than 16 feet, none of the impacted receivers were able to attain the required 5 dB reduction of traffic noise levels; therefore, feasible abatement was not possible for these receivers. Figures 104 and 105 in Appendix H show the location of these receivers as well as the heights and locations of the existing soundwalls.

Receivers R2.45 through R2.56: Traffic noise impacts were determined to occur for the frequent outdoor use areas of three single-family residential dwellings located south of I-10 represented by Receivers R2.45 and R2.52. Existing soundwalls in this area include Soundwalls SW2, SW6, and SW10. These soundwalls are located along the roadway shoulder and are 14 feet in height. Due to modifications to the horizontal alignment under Alternative 3, these three soundwalls would be replaced in-kind at the original height of 14 feet. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier on the shoulder of the roadway should not exceed 14 feet when located 15 feet or less from edge of traveled way. Consequently, increasing the heights of replace-in-kind Soundwalls SW2, SW6, and SW10 above 14 feet is not allowable; therefore, providing feasible abatement was not possible. Figures 105 and 106 in Appendix H show the location of these receivers as well as the heights and locations of the in-kind replacement soundwalls.

Receivers R2.57 through R2.65: Traffic noise impacts were determined to occur for the frequent outdoor use areas of 12 single-family residential dwellings located south of I-10 represented by Receivers R2.57, R2.58, R2.60, and R2.61. Existing soundwalls in this area include SW22 and SW30 which are both 12 feet in height. Soundwall SW22 is located on the R/W and transitions to the roadway shoulder of the eastbound I-10 Monte Vista Avenue off-ramp as the ramp diverges from the general purpose lanes. Soundwall SW30 is located along the roadway shoulder of the general purpose lanes between the gore point of the off-ramp and the Monte Vista Avenue over-crossing. Due to modifications to the horizontal alignment under Alternative 3, Soundwall SW30 would be replaced in-kind at the original height of 12 feet. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier on the shoulder of the roadway should not exceed 14 feet when located 15 feet or less from edge of traveled way. In addition, the maximum height of a noise barrier should not exceed 16 feet when located more than 15 feet from the edge of traveled way. Consequently for analysis purposes, the maximum allowable the height would be 14 feet for Soundwall SW30 as well as the analyzed soundwall extension of Soundwall SW30. Similarly, Soundwall SW22 could not be analyzed for heights above 16 feet. Results of the analysis show that feasible abatement could not be provided; none of the impacted receivers was able to attain the required 5 dB reduction of future traffic noise levels. Figure 5 in Appendix H shows the location of these receivers as well as the heights and locations of the existing soundwalls. Figure 106 in Appendix H shows the height and location of in-kind replacement Soundwall SW30.

Areas without Noise Abatement

Receivers R2.2 and R2.3: These receivers represent the frequent outdoor use areas of the Claremont Place Assisted Living complex and one single-family residence that would be impacted by traffic noise. An existing noise barrier, Soundwall SW715, is located at the edge of the westbound I-10 shoulder at a height of 14 feet. A portion of the multi-family residence, represented by Receiver R2.3, is behind Soundwall SW715. In addition, there are private property walls of 5 and 9 feet in height near Receivers R2.2 and R2.3, respectively. Per the Caltrans Highway Design Manual, because the shoulder of the Indian Hill Boulevard off-ramp is less than 15 feet in width, the maximum height of the analyzed noise barrier could not exceed 14 feet. Receivers R2.2 and R2.3 were able to attain noise reduction of 5 dB with a soundwall height of 14 feet; however, the soundwall would not be reasonable because the design goal of a 7 dB reduction could not be met. Figure 104 in Appendix H shows the location of these receivers as well as the height and location of the existing soundwall.

Receivers R2.39, R2.40, and R2.42 through R2.44: Traffic noise impacts were determined to occur for the frequent outdoor use areas of 12 single-family residential dwellings. Existing Soundwall SW716 is connected to Soundwall SW708 and transitions from the R/W to the shoulder of the roadway. Soundwall SW716 is 16 feet in height on the R/W and transitions to a height of 14 feet along the shoulder. Replace-in-kind Soundwall SW2 is 14 feet in height and is located along the roadway shoulder. Because there is a large gap between the end points of Soundwalls SW716 and SW2, a soundwall was analyzed between the two existing barriers at the shoulder of the roadway to close the gap. Per the Caltrans Highway Design Manual, the maximum height of a noise barrier on the shoulder of the roadway should not exceed 16 feet when located more than 15 feet from the edge of traveled way. In addition, the maximum height of a noise barrier on the shoulder of the roadway should not exceed 14 feet when located 15 feet or less from edge of traveled way. Consequently, increasing the height of Soundwall SW716 as well as the analyzed noise barrier beyond 16 feet was not allowable along the roadway shoulder. The analyzed noise barrier was not able to exceed a height of 14 feet near Receivers R2.41 to R2.44 because the width of the roadway shoulder changes to a width less than 15 feet. Although some of the impacted receivers were able to attain the required 5 dB reduction of traffic noise levels, the analyzed soundwall would not be reasonable because the design goal of a 7 dB reduction could not be met. Figure 105 in Appendix H shows the location of these receivers as well as the heights and locations of the existing and in-kind replacement soundwalls.

7.2.2.3. SEGMENT 3 – MONTE VISTA AVENUE TO CENTRAL AVENUE:

Existing exterior traffic noise levels in Segment 3 range from 63 to 75 dBA for Receivers R3.1 through R3.7. The future predicted exterior traffic noise levels in Segment 3 range from 64 to 80 dBA, in which several areas approach or exceed the NAC for Activity Categories B and E; therefore, consideration of noise abatement is required. Table B-14 in Appendix B shows the existing and future noise levels, as well as barrier analysis for Segment 3 with Alternative 3.

Areas with Proposed Noise Abatement

There are no frequent outdoor use areas in this segment that are impacted by the project where it is feasible to apply standard noise abatement techniques.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

Receiver R3.1: Traffic noise impacts would occur at Acapulco Restaurant north of I-10. There is no outside dining area; however, there is a smoking area attached to the restaurant bar. Because the only clearly identified outdoor use area is reserved for intermittent evening use, noise abatement has not been considered. Figures 106 and 107 in Appendix H show this receiver.

Receivers R3.2 through R3.4: Traffic noise impacts would occur at 12 multi-family residences along the eastbound side of I-10. The soundwall analysis results summarized in Table B-14 demonstrate that feasible noise reduction at these impacted residences is not possible with a soundwall located on the shoulder of both the eastbound on-ramp from Monte Vista Avenue and the I-10 mainline. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Therefore, the analyzed soundwall on the shoulder was considered at heights up to 14 feet. Noise reduction of at least 5 dB is not possible due to the large distance between I-10 and the receivers, as well as the unmitigated traffic noise contribution from Palo Verde Street. Figures 106 and 107 in Appendix H show these receivers.

Receiver R3.6: Traffic noise impacts would occur at four multi-family residences south of I-10. The soundwall analysis results summarized in Table B-14 demonstrate that while feasible noise reduction of 5 dB is possible with a soundwall located on the shoulder of I-10, the design goal of 7 dB attenuation is not able to be met. Therefore, the analyzed soundwall is not reasonable. Figure 107 in Appendix H shows this receiver.

7.2.2.4. SEGMENT 4 – CENTRAL AVENUE TO MOUNTAIN AVENUE

Existing exterior traffic noise levels in Segment 4 range from 59 to 78 dBA for Receivers R4.1A through R4.39 and existing interior traffic noise levels are 51 and 52 dBA for Receivers R4.5-1 and R4.5-2, respectively. The future predicted exterior traffic noise levels in Segment 4 range from 62 to 82 dBA and future predicted interior traffic noise levels are 54 and 55 dBA where several of the receivers exceed the NAC for Activity Categories B, D, and E; therefore, consideration of noise abatement is required. Table B-15 in Appendix B shows the existing and future noise levels as well as barrier analysis for Segment 4, Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S1117: Soundwall S1117 would be located on the R/W line along the westbound on-ramp from Mountain Avenue. Soundwall S1117 would provide at least 7 dB of noise reduction for the pool area and first floor interior room of the Super 8 Motel represented by Receiver R4.5-1. Figure 109 in Appendix H shows the location, minimum length, and height of Soundwall S1117 to provide feasible abatement and meet the design goal. Table 7-16 summarizes the range of reasonable allowances for the feasible noise abatement measure considered.

Table 7-16. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S1117 [a]

Barrier I.D.: S1117	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	N/A	4	4	4	4
Reasonable Allowance Per Benefited Receiver	N/A	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	$284,000	$284,000	$284,000	$284,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

Areas with Existing Noise Abatement

Receivers R4.6 through R4.39: Traffic noise impacts would occur at 51 single-family residences and MacArthur Park located south of I-10 represented by Receivers R4.6, R4.7, R4.9, R4.12 through R4.16, R4.19, R4.20, and R4.24 through R4.31. These single-family residences and park would be protected by replace-in-kind Soundwalls SW66, SW68, and SW94 located on retaining walls along the eastbound shoulder and shoulder of the eastbound on-ramp from Central Avenue. Soundwalls SW66 and SW94 would be replace-in-kind at 14 feet because the shoulder would be less than 15 feet in width and per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Therefore, providing additional abatement by increasing the height of the existing soundwall could not be attempted. Replace-in-kind Soundwall SW66 was extended to the west to determine if feasible abatement was possible at Receivers R4.6 and R4.7. In addition, a combination of extending Soundwall SW66 to the west and raising Soundwall SW68 was considered to determine if feasible noise abatement was possible at Receivers R4.8 and R4.9; however, the results summarized in Table B-15 demonstrate that a soundwall at this location would not provide 5 dB or more of noise reduction at the impacted residences. Furthermore, replace-in-kind Soundwall SW94 was extended to the east to determine if feasible abatement was possible at impacted Receiver R4.31; however, the results summarized in Table B-15 demonstrate that a soundwall at this location would not provide 5 dB or more of noise reduction at the impacted residences. Figures 107 through 109 in Appendix H show these receivers and replace-in-kind soundwalls.

Areas without Noise Abatement

Receivers R4.1A-1 and R4.1A-2: Traffic noise impacts would occur at both the first and second story of the Canyon Club Apartment Homes north of I-10. A soundwall was

considered on the shoulder of I-10 and the results summarized in Table B-15 demonstrate that a soundwall at this location would not provide 5 dB or more of noise reduction at the impacted residence. This is due to the large distance between I-10 and the receiver as well as the noise contribution from local traffic on Moreno Street. Figures 108 and 109 in Appendix H show these receivers.

Receivers R4.1 through R4.4: Traffic noise impacts would occur at Boomer's entertainment park located north of I-10 represented by Receivers R4.1 through R4.4. Noise abatement was not considered for this area because the park prefers to have travelers on I-10 be able to see the park from the freeway and not have the view to the park obstructed by a soundwall. A letter from the park refusing noise abatement in the form of a soundwall is located in Appendix K. Figures 108 and 109 in Appendix H show these receivers.

7.2.2.5. SEGMENT 5 – MOUNTAIN AVENUE TO EUCLID AVENUE

Existing exterior traffic noise levels in Segment 5 range from 54 to 75 dBA for Receivers R5.1 through R5.48 and existing interior traffic noise levels are 42 and 43 dBA for Receivers R5.19 and R5.21B, respectively The future predicted exterior traffic noise levels in Segment 5 range from 58 to 78 dBA, in which several areas exceed the NAC for Activity Categories B, C, and E; therefore, consideration of noise abatement is required. The future predicted interior traffic noise levels are 43 to 48 dBA; therefore, there would not be interior traffic noise impacts. Table B-16 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 5 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S1132: Soundwall S1132 would be located on the shoulder of the eastbound on-ramp from Mountain Avenue and would end where existing Soundwall SW136 begins. Soundwall S1132 would provide feasible noise abatement at the basketball court of Church of Christ represented by Receiver R5.21A. This soundwall would also achieve the design goal of 7 dB at Receiver R5.21B which represents the interior of the church. Figure 110 in Appendix H shows the location, minimum length, and height of Soundwall S1132 to provide feasible abatement and meet the design goal. Table 7-17 summarizes the range of reasonable allowances for the feasible noise abatement measure considered.

Table 7-17. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S1132 [a]

Barrier I.D.: S1132	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	1	1	1	2	--[b]
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	--[b]
Total Reasonable Allowance	$71,000	$71,000	$71,000	$142,000	--[b]

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Areas with Existing Noise Abatement

Receivers R5.5 through R5.9B: Traffic noise impacts would occur at 14 single-family residences along the westbound side of I-10 represented by Receivers R5.5 through R5.9. These receivers are currently protected by existing 10-foot high Soundwall SW143 located at the R/W line; however, the soundwall analysis results summarized in Table B-16 demonstrate that replacing this soundwall with a soundwall 20 feet in height would only provide 5 dB of additional noise reduction at one receiver. However, a 20-foot high soundwall would not provide the required 7 dB of noise reduction to become reasonable. Figure 110 in Appendix H shows these receivers and existing Soundwall SW143.

Receivers R5.10 through R5.17B: Traffic noise impacts would occur at 26 single-family residences north of I-10 represented by Receivers R5.10 through R5.14, R5.16, and R5.17. These receivers are currently protected by existing 8- to 10-foot high Soundwall SW157 located at the R/W line; however, the soundwall analysis results summarized in Table B-16 demonstrate that replacing this soundwall with a soundwall 20 feet in height would provide 5 dB or more of additional noise reduction at three receivers. However, a 20-foot high soundwall would not provide the required 7 dB of noise reduction to become reasonable. Figures 110 and 111 in Appendix H show these receivers and existing Soundwall SW157.

Receivers R5.20 and R5.21: Traffic noise impacts would occur at the playground of Redeemer Lutheran School along the eastbound side of I-10 represented by Receiver R5.20. The playground is currently protected by existing 14-foot high Soundwall SW136 located at the R/W line. The soundwall analysis results summarized in Table B-16 demonstrate that raising Soundwall SW136 to 24 feet would not provide 5 dB of additional noise reduction at the impacted receiver. In addition, Soundwall SW136 was combined with Soundwall S1132 and a combination of these two soundwalls would not provide 5 dB of additional noise reduction at the impacted receiver. Figure 110 in Appendix H shows this receiver and Soundwall SW136.

Receivers R5.22 through R5.31: Traffic noise impacts would occur at 10 single-family residences south of I-10 represented by Receivers R5.22, R5.23, and R5.25. These receivers are currently protected by existing 14-foot high Soundwall SW140 located at the R/W line. However, the soundwall analysis results summarized in Table B-16 demonstrate that replacing this soundwall with a soundwall as high as 24 feet in height would not provide 5 dB or more of additional noise reduction at these receivers. Figure 110 in Appendix H shows these receivers and existing Soundwall SW140.

Receivers R5.32 through R5.48: Traffic noise impacts would occur at 18 single-family residences south of I-10 represented by Receivers R5.34, R5.36, R5.43, R5.45, and R5.25. These receivers are currently protected by existing 14-foot high Soundwall SW154 located at the R/W line. However, the soundwall analysis results summarized in Table B-16 demonstrate that replacing this soundwall with a soundwall as high as 24 feet in height would not provide 5 dB or more of additional noise reduction at these receivers. Figures 110 and 111 in Appendix H show these receivers and existing Soundwall SW154.

Areas without Noise Abatement

Receiver R5.21C: Traffic noise impacts would occur at the outdoor seating area of the Wingnuts Restaurant located south of I-10. However, due to the close proximity to Mountain Avenue traffic, noise abatement has not been considered because traffic noise contributions from Mountain Avenue would hinder any attempts to achieve the design goal of 7 dB attenuation. Figure 110 in Appendix H shows this receiver.

7.2.2.6. SEGMENT 6 – EUCLID AVENUE TO 6TH STREET

Existing exterior traffic noise levels in Segment 6 range from 59 to 71 dBA for Receivers R6.1 through R6.40A and existing interior traffic noise levels range from 34 to 41 dBA for Receivers R6.1A, R6.2A-1, and R6.2A-2. The future predicted exterior traffic noise levels in Segment 6 range from 60 to 74 dBA, in which several areas exceed the NAC for Activity Categories B; C, and E; therefore, consideration of noise abatement is required. The future predicted interior traffic noise levels range from 37 to 46 dBA; therefore, there would be no interior traffic noise impacts. Table B-17 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 6 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S1190: Soundwall S1190 would be located along the R/W line south of I-10. This soundwall would provide feasible noise abatement for the frequent outdoor use areas of 10 single-family residences represented by Receivers R6.20 and R6.21. Soundwall S1190 is raised higher than otherwise required in front of Receiver R6.21 to achieve the design goal of 7 dB of noise reduction at Receiver R6.20. Table 7-18 summarizes the range of reasonable allowances for the feasible noise abatement measure considered. Figure 112 in Appendix H shows the location, minimum length, and heights required for this soundwall to provide feasible traffic noise abatement and meet the design goal.

Table 7-18. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S1190[a]

Barrier I.D.: S1190	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	1	10	20	20	20	10
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$71,000	$710,000	$1,420,000	$1,420,000	$1,420,000	$710,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Areas with Existing Noise Abatement

Receivers R6.3 through R6.7: Traffic noise impacts would occur at the outdoor use areas of two multi-family residences and two common areas of multi-family residences represented by Receivers R6.4 through R6.7. Some of the multi-family buildings do not have outdoor use areas. Existing Soundwall SW201 is located at the R/W at a height of 13 feet and currently protects these areas from I-10 traffic noise. The soundwall analysis results summarized in Table B-17 demonstrate that replacing this soundwall with a

soundwall 22 feet in height would provide 5 dB or more of additional noise reduction at one receiver. However, a 22-foot high soundwall would not provide the required 7 dB of noise reduction to become reasonable. Figure 112 in Appendix H shows these receivers and existing Soundwall SW201.

Receivers R6.8A through R6.16: Traffic noise impacts would occur at 30 multi-family residences north of I-10 represented by Receivers R6.8-2, R6.9-2, and R6.11 through R6.16, from which 19 are second story residences. These receivers are currently protected by the existing 13-foot high Soundwall SW213 located at the R/W line. However, the soundwall analysis results summarized in Table B-17 demonstrate that replacing this soundwall with a soundwall 22 feet in height would not provide 5 dB or more of additional noise reduction at any of the receivers. Figures 112 and 113 in Appendix H show these receivers and existing Soundwall SW213.

Receivers R6.23 through R6.35: Traffic noise impacts would occur at two outdoor use areas of Edison Elementary School and 11 single-family residences represented by Receivers R6.23 and R6.25 through R6.31. The existing Soundwall SW198, which is located at the R/W at a height of 13 feet, currently protects these areas from I-10 traffic noise. The soundwall analysis results summarized in Table B-17 demonstrate that replacing this soundwall with a soundwall 22 feet in height would not provide 5 dB or more of additional noise reduction at any of the receivers. Figures 112 and 113 in Appendix H show these receivers and existing Soundwall SW198.

Receivers R6.36 through R6.40A: Traffic noise impacts would occur at 15 single-family residences south of I-10 represented by Receivers R6.36 through R6.40. These receivers are currently protected by the existing 14-foot high Soundwall SW212 located at the R/W line. However, the soundwall analysis results summarized in Table B-17 demonstrate that replacing this soundwall with a soundwall 22 feet in height would not provide 5 dB or more of additional noise reduction at any of the receivers. Figures 112 and 113 in Appendix H show these receivers and existing Soundwall SW212.

Areas without Noise Abatement

Receiver R6.1: Traffic noise impacts would occur at the exterior of an office building located north of I-10. However, because there are no clearly identified frequent outdoor use areas on this commercial land use, noise abatement has not been considered. Figure 112 in Appendix H shows this receiver.

Receiver R6.17: Traffic noise impacts would occur at three single-family residences located along the eastbound on-ramp from Euclid Avenue. The soundwall analysis results summarized in Table B-17 demonstrate that feasible noise reduction at these impacted residences is not possible with a soundwall located on the R/W line. Figures 111 and 112 in Appendix H show this receiver.

7.2.2.7. SEGMENT 7 – 6TH STREET TO 4TH STREET

Existing exterior traffic noise levels in Segment 7 range from 56 to 75 dBA for Receivers R7.1 through R7.44 and existing interior traffic noise levels range from 42 to 50 dBA for Receivers R7.40, R7.43, and R7.44. The future predicted exterior traffic noise levels in Segment 7 range from 57 to 77 dBA and the future predicted interior traffic noise levels range from 44 to 52 dBA, in which several areas approach or exceed the NAC for

Activity Categories B, D, and E; therefore, consideration of noise abatement is required. Table B-18 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 7 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S1244: Soundwall S1244 would be located along the shoulder of eastbound I-10. This soundwall would close a gap that would exist between replace-in-kind Soundwalls SW230 and SW246 because replace-in-kind Soundwall SW230 would end short of its current location at the east end due to design constraints. Therefore, the soundwall has been moved to the shoulder to provide seamless abatement for this area. Table B-18 in Appendix B shows that nearby Receiver R7.35 which represents three single-family residences would not be impacted with Soundwall S1244. Figure 114 in Appendix H shows the location, minimum length, and height of Soundwall S1244.

Soundwall S1262: Soundwall S1262 would be located on the shoulder along eastbound I-10. This soundwall would provide feasible noise abatement and meet the design goal for the pool area of the Travelodge represented by Receiver R7.41. This hotel has no windows facing I-10; therefore, receivers were not placed at the hotel rooms. However, based on the noise level at the pool, and an assumed building shell insertion loss of 40 dB (no windows), the interior traffic noise levels of the hotel would be 33 dBA, which is well below the impact threshold. Therefore, interior traffic noise impacts are not predicted for this hotel. Table 7-19 summarizes the range of reasonable allowances for the feasible noise abatement measure considered. Figure 114 in Appendix H shows the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement and meet the design goal.

Table 7-19. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S1262[a]

Barrier I.D.: S1262	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	1	1	1	1	--[b]
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	--[b]
Total Reasonable Allowance	$71,000	$71,000	$71,000	$71,000	--[b]

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Soundwall S1266: Soundwall S1266 would be located along the shoulder of eastbound I-10 as well as the eastbound off-ramp to 4th Street. This soundwall would provide feasible noise abatement and meet the design goal for the pool area and room interiors of the Days Inn represented by Receivers R7.42, R7.43-1, and R7.43-2 where Receiver R7.43-2 is a second story receiver. Soundwall S1266 is raised higher than otherwise required in front of Receiver R7.43-1 to achieve the design goal of 7 dB of noise reduction at Receiver R7.42. Receivers R7.44-1 and R7.44-2 are located behind this soundwall and feasible noise abatement was not possible; however, these receivers are not predicted to be impacted by traffic noise. Table 7-20 summarizes the range of

reasonable allowances for the feasible noise abatement measure considered. Figures 114 and 115 in Appendix H show the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement and meet the design goal.

Table 7-20. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S1266 [a]

Barrier I.D.: S1266	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	1	3	3	3	--[b]
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	--[b]
Total Reasonable Allowance	$71,000	$213,000	$213,000	$213,000	--[b]

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Areas with Existing Noise Abatement

Receivers R7.2 through R7.8: Traffic noise impacts would occur at seven single-family and four multi-family residences represented by Receivers R7.2, R7.4, R7.7, and R7.8. These receivers would be protected from I-10 traffic noise by replace-in-kind Soundwall SW231 located at the R/W at a height of 14 feet. The soundwall analysis results summarized in Table B-17 demonstrate that replacing this soundwall with a soundwall 24 feet in height would not provide 5 dB or more of additional noise reduction at any of the receivers. Figures 113 and 114 in Appendix H show these receivers and replace-in-kind Soundwall SW231.

Receivers R7.9 through R7.15: Traffic noise impacts would occur at five multi-family residences north of I-10, from which four are second story receivers. These receivers would be protected from I-10 traffic noise by replace-in-kind Soundwall SW245 located at the shoulder of I-10 at a height of 14 feet. Due to a shoulder width of 15 feet or less, replace-in-kind Soundwall SW245 would already be at a maximum height of 14 feet; therefore, additional noise abatement is not possible for these receivers. Figure 114 in Appendix H shows these receivers and replace-in-kind Soundwall SW245.

Receivers R7.18 through R7.24: Traffic noise impacts would occur at two single-family residences and 20 mobile homes north of I-10. These receivers would be protected from I-10 traffic noise by replace-in-kind Soundwalls SW259 and SW275. Soundwall SW259 would be located along the shoulder of the westbound on-ramp from 4th Street and Soundwall SW 275 would be located along the I-10 mainline. Soundwalls SW259 and SW275 would be replaced at the maximum height allowed along the shoulder of 14-feet and additional noise abatement is not possible. Replace-in-kind Soundwall SW259 was extended to the west to determine if feasible abatement was possible at Receivers R7.18 and R7.18A; however, the results summarized in Table B-17 demonstrate that a soundwall at this location would not provide 5 dB or more of noise reduction at the impacted residences. Furthermore, replace-in-kind Soundwall SW259 was extended to the east to determine if feasible abatement was possible at Receivers R7.23 and R7.24; however, the results summarized in Table B-17 demonstrate that a soundwall at this

location would not provide 5 dB or more of noise reduction at the impacted residences. Figures 114 and 115 in Appendix H show these receivers and replace-in-kind soundwalls.

Receivers R7.27 through R7.34: Traffic noise impacts would occur at nine single-family residences represented by Receivers R7.27, R7.28, R7.30, and R7.32 through R7.34. There is replace-in-kind Soundwall SW230 located at the R/W at a height of 14 to 16 feet that would protect these areas from I-10 traffic noise. The soundwall analysis results summarized in Table B-18 demonstrate that replacing this soundwall with a soundwall 24 feet in height would not provide 5 dB or more of additional noise reduction at any of the receivers. Figures 113 and 114 in Appendix H show these receivers and replace-in-kind Soundwall SW230.

Receivers R7.36 through R7.39: Traffic noise impacts would occur at six single-family residences and five multi-family residences south of I-10. These receivers would be protected from I-10 traffic noise by replace-in-kind Soundwall SW246 located at the shoulder of I-10 at a height of 14 feet. Replace-in-kind Soundwall SW245 would already be at a maximum height of 14 feet because the shoulder would be less than 15 feet in width and, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way; therefore, additional noise abatement is not possible for these receivers, and the analyzed soundwall on the shoulder was considered at heights up to 14 feet. Figure 114 in Appendix H shows these receivers and replace-in-kind Soundwall SW245.

Areas without Noise Abatement

Receivers R7.16 and R7.17: Traffic noise impacts would occur at two single-family residences located along westbound I-10. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way; therefore, the analyzed soundwall on the shoulder was considered at heights up to 14 feet. The soundwall analysis results summarized in Table B-18 demonstrate that feasible noise reduction at these impacted residences is not possible with a soundwall located on the shoulder. Figure 114 in Appendix H shows these receivers.

Receivers R7.25 and R7.26: Traffic noise impacts would occur at four single-family residences located along eastbound I-10. These residences are currently protected from I-10 traffic noise by an existing 7- to 8-foot in height property wall. The soundwall analysis results summarized in Table B-18 demonstrate that feasible noise reduction at these impacted residences is not possible with replacing the existing property wall with heights up to 24-feet. Figure 113 in Appendix H shows these receivers.

7.2.2.8. SEGMENT 8 – 4TH STREET TO VINEYARD AVENUE

Existing exterior traffic noise levels in Segment 8 range from 57 to 81 dBA for Receivers R8.1 through R8.51. Existing interior traffic noise levels range from 44 to 56 dBA for Receivers R8.1, R8.2-1, and R8.2-2, R8.48-1 through R8.48-3, and R8.50A-1 through R8.50C-2. The future predicted exterior traffic noise levels in Segment 8 range from 62 to 82 dBA, and the future predicted interior traffic noise levels range from 41 to 57 dBA, in which several areas approach or exceed the NAC for Activity Categories B, D, and E; therefore, consideration of noise abatement is required. Table B-19 in Appendix B shows

the existing and future noise levels, as well as barrier analysis, for Segment 8 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S1285: Soundwall S1285 would be located north of I-10 on the shoulder of the westbound off-ramp to 4th Street, and it would provide feasible noise abatement for the pool area and the interior of 12 first floor and 12 second floor rooms of Motel 6, represented by Receivers R8.2-1 through R8.3. This soundwall is raised higher than otherwise required in front of Receiver R8.3 to achieve feasible noise reduction at Receiver R8.2-2 and to meet the design goal at Receiver R8.2-1. Table 7-21 summarizes the range of allowances for each feasible noise abatement measure considered. Figure 115 in Appendix H shows the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement and meet the design goal.

Table 7-21. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S1285 [a]

Barrier I.D.: S1285	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	N/A	12	13	25	--[b]
Reasonable Allowance Per Benefited Receiver	N/A	$71,000	$71,000	$71,000	--[b]
Total Reasonable Allowance	N/A	$852,000	$923,000	$1,775,000	--[b]

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Soundwall S21: Soundwall S21 would be located north of I-10, on the shoulder of the westbound on-ramp from North Vineyard Avenue, and it would provide 7 dB of noise reduction at two single-family residences represented by Receiver R8.13. Traffic noise impacts would also occur at three single-family residences represented by Receiver R8.12; however, the results summarized in Table B-19 demonstrate that a soundwall at this location would not provide 5 dB or more of noise reduction for this receiver. The western terminus of the soundwall would overlap with the existing 14-foot high Soundwall SW296. Figure 116 in Appendix H shows the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement and meet the design goal. Table 7-22 summarizes the range of allowances for the feasible noise abatement measure considered.

Table 7-22. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S21 [a]

Barrier I.D.: S21	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	2	2	2	2	--[b]
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	--[b]
Total Reasonable Allowance	$142,000	$142,000	$142,000	$142,000	--[b]

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Soundwall S1276: Soundwall S1276 would be located south of I-10, on the shoulder of the eastbound on-ramp from East 4th Street, and it would provide 8 dB of noise reduction at three single-family residences represented by Receiver R8.16. The soundwall would be joined at its eastern terminus with the in-kind replacement Soundwall SW278. Figure 115 in Appendix H shows the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement and meet the design goal. Table 7-23 summarizes the range of allowances for the feasible noise abatement measure considered.

Table 7-23. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S1276 [a]

Barrier I.D.: S1276	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	3	3	3	3	--[b]
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	--[b]
Total Reasonable Allowance	$213,000	$213,000	$213,000	$213,000	--[b]

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Soundwall S1306: Soundwall S1306 would be located along the eastbound shoulder of I-10 and the shoulder of the eastbound off-ramp to North Vineyard Avenue. This soundwall would provide feasible noise reduction at 44 multi-family residences represented by Receivers R8.32-1, R8.32-2, R8.34-2, R8.36-1 through R8.37, R8.39, R8.41 through R8.44-2, R8.45-2, and R8.46-2 through R8.47-2, from which 22 benefits are second story residences. Soundwall S1306 would also provide feasible noise reduction at the pool area of Ramada Inn, as well as the interior of 33 hotel rooms of Ontario Airport Inn and Ramada Inn, represented by Receivers R8.48-1, R8.48-2, R8.50, R8.50A-2, R8.50B-2, and R8.50C-2, from which 21 of the benefits are second story rooms. Soundwall S1306 would connect with replace-in-kind Soundwall SW278 at the west end. Figures 115 and 116 in Appendix H show the location, minimum length, and heights required for this soundwall to provide feasible traffic noise abatement and meet

the design goal. Table 7-24 summarizes the range of allowances for the feasible noise abatement measure considered.

Table 7-24. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S1306[a]

Barrier I.D.: S1306	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	19	34	64	84	--[c]	78
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	--[c]	$71,000
Total Reasonable Allowance	$1,349,000	$2,414,000	$4,544,000	$5,964,000	--[c]	$5,538,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

[c] Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Areas with Existing Noise Abatement

Receivers R8.6 through R8.14C: Traffic noise impacts would occur at 38 single-family residences located north of I-10 represented by Receivers R8.6 through R8.11 and R8.14A. These single-family residences would be protected by existing and replace-in-kind Soundwall SW296 located on the R/W line and shoulder of the westbound on-ramp from Vineyard Avenue. Only a portion of Soundwall SW296 would need to be a replace-in-kind soundwall. Soundwall SW296 was raised to 22 feet in height to determine if feasible noise abatement was possible at the impacted receivers. However, the results summarized in Table B-19 demonstrate that a soundwall at this location would not provide an additional 5 dB or more of noise reduction. Figures 115 and 116 in Appendix H show these receivers and existing/replace-in-kind soundwall.

Receivers R8.17 through R8.23, and R8.25 through R8.30: Traffic noise impacts would occur at 25 single-family residences located south of I-10 represented by Receivers R8.17, R8.19 through R8.23, R8.25, and R8.30. These single-family residences would be protected by replace-in-kind Soundwall SW278 located on the shoulder of the eastbound on-ramp from 4th Street as well as the mainline. Soundwall SW278 would be at a height of 14 and 16-feet; therefore, additional noise abatement is not possible for these receivers because the shoulder would be less than 15 feet in width and per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Additional noise abatement was attempted for Receivers R8.17 and R8.25; however the soundwall analysis results summarized in Table B-19 demonstrate that feasible noise reduction at Receivers R8.17 and R8.25 is not possible with a soundwall located on the shoulder of the mainline. Figure 115 in Appendix H shows these receivers and replace-in-kind soundwall.

Areas without Noise Abatement

Receivers R8.4 and R8.5: Traffic noise impacts would occur at four single-family residences located along westbound I-10. The soundwall analysis results summarized in Table B-19 demonstrate that feasible noise reduction at these impacted residences is not possible with a soundwall located on the shoulder. Because the shoulder would be less

than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Therefore, the analyzed soundwall on the shoulder was considered at heights up to 14 feet. Figure 115 in Appendix H shows these receivers.

Receiver R8.24A: Traffic noise impacts would occur at two single-family residences located south of I-10. The soundwall analysis results summarized in Table B-19 demonstrate that feasible noise reduction at these impacted residences is not possible with a soundwall located on the shoulder on the mainline. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Therefore, the analyzed soundwall on the shoulder was considered at heights up to 14 feet. Figure 115 in Appendix H shows these receivers.

7.2.2.9. SEGMENT 9 – WEST OF CHERRY AVENUE TO CITRUS AVENUE

UPRR train lines run parallel to I-10 on the south side throughout Segment 9. The tracks are at grade and train noise affects the existing and future predicted noise levels at receivers located south of I-10. However, train noise is not considered when determining impacts because train noise is not related to the I-10 Corridor Project.

Existing exterior traffic noise levels north of I-10 in Segment 9 range from 59 to 75 dBA for Receivers R9.1 through R9.18. South of I-10, existing exterior traffic and train noise levels range from 58 to 70 dBA for receivers R9.19 through R9.38. The future predicted exterior traffic noise levels north of I-10 in Segment 9 range from 62 to 76 dBA. The future predicted exterior traffic noise levels south of I-10 in Segment 9, excluding train noise, range from 59 to 69 dBA. Several areas approach or exceed the NAC for Activity Category B, and one area exceeds the NAC for Activity Category E; therefore, consideration of noise abatement is required. Table B-20 in appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 9 with Alternative 3.

Areas with Proposed Noise Abatement

There are no outdoor use areas in this segment that are impacted by the project where it is feasible to apply standard noise abatement techniques.

Areas with Existing Noise Abatement

Receivers R9.2 through R9.17: Traffic noise impacts would occur at 34 single-family and one multi-family residences north of I-10, represented by Receivers R9.4, R9.6, R9.8 through R9.14, and R9.17. These receivers would be protected by existing and replace-in-kind 14-foot high Soundwall SW697 located at the westbound Cherry Avenue off-ramp shoulder and the R/W line. Soundwall SW697 was analyzed as a replace-in-kind soundwall on the R/W line for heights up to 24 feet. The results summarized in Table B-1 in Appendix B demonstrate that increasing the height of the replace-in-kind portion of Soundwall SW967 would not provide 5 dB of additional noise reduction at the impacted residences. Figures 129, 130, and 131 in Appendix H show these receivers and Soundwall SW697.

Areas without Noise Abatement

Receiver R9.18: Traffic noise impacts would occur at three empty commercial lots and three existing commercial land uses north of I-10, represented by Receiver R9.18. One of the empty lots is a future DMV site, and there are no plans for the other two areas. Because there are no discernible frequent outdoor use areas at the existing commercial land uses, and none are planned at the empty lots, Receiver R9.18 was placed as a generalized receiver no closer than 100 feet from the edge of the outside traffic lane for information purposes, and noise abatement was not considered. Figure 132 in Appendix H shows this receiver.

Receiver R9.22: Traffic noise impacts would occur at two single-family residences along eastbound I-10. The soundwall analysis results summarized in Table B-20 in Appendix B demonstrate that feasible noise reduction is not possible at the impacted residences represented by Receiver R9.22, due to the unmitigated noise contribution from the UPRR freight traffic parallel to I-10. UPRR will not allow soundwalls to be constructed on their R/W; therefore, soundwall analysis was only performed on the shoulder of I-10. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way; therefore, the analyzed soundwall was considered at heights up to 14 feet. Figure 130 in Appendix H shows this receiver.

Receivers R9.29, R9.32, R9.36, and R9.37: Traffic noise impacts would occur at two multi-family and eight single-family residences along the eastbound side of I-10. The soundwall analysis results summarized in Table B-20 in Appendix B demonstrate that feasible noise reduction is not possible at the single-family and multi-family residences represented by Receivers R9.29, R9.32, R9.36, and R9.37 due to the unmitigated noise contribution from the freight trains operating parallel to I-10. UPRR will not allow soundwalls to be constructed on their R/W; therefore, soundwall analysis was only performed on the shoulder of the I-10.

7.2.2.10. SEGMENT 10 – CITRUS AVENUE TO SIERRA AVENUE:

UPRR train lines run parallel to I-10 on the south side throughout Segment 10. The tracks are at grade and train noise affects the existing and future predicted noise levels at receivers located south of I-10. However, train noise is not considered when determining impacts because train noise is not related to the I-10 Corridor Project.

Existing exterior traffic noise levels north of I-10 in Segment 10 range from 65 to 76 dBA for Receivers R10.1 through R10.14. South of I-10, existing exterior traffic and train noise levels range from 62 to 72 dBA for Receivers R10.15 through R10.24. The future predicted exterior traffic noise levels north of I-10 in Segment 10 range from 65 to 79 dBA. The future predicted exterior traffic noise levels south of I-10 in Segment 10, excluding train noise, range from 59 to 69 dBA. Several areas approach or exceed the NAC for Activity Category B, and one area exceeds the NAC for Activity Category E; therefore, consideration of noise abatement is required. Table B-21 in appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 10 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S1819: Soundwall S1819 would be located north of I-10 on the R/W line and would provide feasible noise abatement for the frequent outdoor use areas of 33 single-

family residences represented by Receivers R10.1 through R10.4 and R10.6 through R10.11. This soundwall would also meet the design goal by providing a 7 dB reduction in traffic noise levels at several locations. Soundwall S1819 is raised higher than otherwise required in front of Receivers R10.1 through R10.4, and R10.7 through R10.9A to provide feasible abatement at adjacent Receiver R10.6. A traffic noise impact would occur at one single-family residence represented by Receiver R10.5; however, feasible noise abatement was not possible with Soundwall S1819. This is most likely because the existing property wall is already providing noise abatement and obtaining an additional 5 dB of attenuation is not possible.. Table 7-25 summarizes the range of allowances for each feasible noise abatement measure considered. Figures 133 and 134 in Appendix H show the location, minimum length, and heights required for this soundwall to provide feasible traffic noise abatement and meet the design goal.

Table 7-25. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S1819 [a]

Barrier I.D.: S1819	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	18-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	2	3	17	22	29	33	33
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$142,000	$213,000	$1,207,000	$1,562,000	$2,059,000	$2,343,000	$2,343,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Soundwall S1833: Soundwall S1833 would be located north of I-10 on the R/W line and would provide feasible noise abatement for the frequent outdoor use areas of four single-family residences represented by Receivers R10.12 and R10.13. This soundwall would also meet the design goal by providing a 7 dB reduction in traffic noise levels at Receiver R10.13. Table 7-26 summarizes the range of allowances for each feasible noise abatement measure considered. Figure 134 in Appendix H shows the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement and meet the design goal.

Table 7-26. Summary of Reasonableness Determination Data – Alternative 2 – Soundwall S1833 [a]

Barrier I.D.: S1883	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	18-Foot Barrier
Number of Benefited Receivers	N/A	3	3	4	4	4
Reasonable Allowance Per Benefited Receiver	N/A	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	$213,000	$213,000	$284,000	$284,000	$284,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

Receiver R10.14: Traffic noise impacts would occur at Pancho Villa's restaurant north of I-10. However, because there is no identified frequent outdoor use area on this commercial establishment, noise abatement has not been considered. Figure 134 in Appendix H shows this receiver.

Receivers R10.17 and R10.20: Traffic noise impacts would occur at 11 single-family residences along the eastbound side of I-10. The soundwall analysis results summarized in Table B-21 in Appendix B demonstrate that feasible noise reduction is not possible at the 11 single-family residences represented by Receivers R10.17 and R10.20 due to the unmitigated noise contribution from the freight trains parallel to I-10. UPRR will not allow soundwalls to be constructed on their right-of-way; therefore, soundwall analysis was only performed on the shoulder of I-10. Figures 133 and 134 in Appendix H show these receivers.

7.2.2.11. SEGMENT 11 – SIERRA AVENUE TO CEDAR AVENUE

UPRR train lines run parallel to I-10 on the south side throughout Segment 11. The tracks are at grade and train noise affects the existing and future predicted noise levels of receivers located south of I-10. However, train noise is not considered when determining impacts because train noise is not related to the I-10 Corridor Project.

Existing exterior traffic noise levels north of I-10 in Segment 11 range from 60 to 78 dBA for Receivers R11.1 through R11.44. Existing interior traffic noise levels north of I-10 range from 35 to 46 dBA for Receivers R11.2-1 through R11.2A-2. South of I-10, existing exterior traffic and train noise levels range from 63 to 65 dBA for Receivers R11.45 through R11.49. The future predicted exterior traffic noise levels north of I-10 in Segment 11 range from 61 to 78 dBA. The future predicted exterior traffic noise levels south of I-10 in Segment 11, excluding train noise, range from 64 to 66 dBA. Several areas to the north approach or exceed the NAC for Activity Categories B, C, and E; therefore, consideration of noise abatement is required. The future predicted interior traffic noise levels range from 36 to 47 dBA; therefore, there would be no interior traffic noise impacts. Table B-22 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 11 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S1877: Soundwall S1877 would be located on the R/W line along westbound I-10. This soundwall would provide feasible noise abatement for the frequent outdoor use areas of 72 mobile homes represented by Receivers R11.3 through R11.12. Soundwall S1877 would also meet the design goal by providing 7 dB in traffic noise reduction at Receiver R11.4. Soundwall S1877 is raised higher than otherwise required in front of Receivers R11.5 and R11.7 to achieve feasible abatement at adjacent receivers. Soundwall S1877 would be located adjacent to an existing 7-foot high property wall located at the property line. Table 7-27 summarizes the range of reasonable allowances for the feasible noise abatement measure considered. Figures 135 and 136 in Appendix H show the location, minimum length, and heights required for this soundwall to provide feasible traffic noise abatement.

Table 7-27. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S1877 [a]

Barrier I.D.: S1877	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	N/A	N/A	24	60	72	72
Reasonable Allowance Per Benefited Receiver	N/A	N/A	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	N/A	$1,704,000	$4,260,000	$5,112,000	$5,112,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Soundwall 1907: Soundwall S1907 would be located on the R/W line north of I-10 and would tie into Soundwall SW1, which will be constructed as part of the Cedar Avenue Improvement Project, also located at the R/W line. Soundwall 1907 would provide feasible noise abatement for the frequent outdoor use areas of 39 single-family and 24 multi-family residences including 12 second story residences represented by Receivers R11.14 through R11.18, and R11.21 through R11.26. Soundwall S1907 would also meet the design goal by providing at least a 7 dB reduction in traffic noise levels at several locations. Soundwall S1907 is raised higher than otherwise required in front of Receivers R11.14A, R11.15A, R11.16, R11.18, R11.24-1, R11.24-2, R11.25-1, and R11.26-1 to achieve feasible abatement at adjacent receivers. Table 7-28 summarizes the range of reasonable allowances for the feasible noise abatement measure considered. Figures 136 and 137 in Appendix H show the location, minimum length, and heights required for this soundwall to provide feasible traffic noise abatement.

Table 7-28. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S1907 [a]

Barrier I.D.: S1907	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	1	13	21	42	63	63
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$71,000	$923,000	$1,491,000	$2,982,000	$4,473,000	$4,473,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Soundwall S1969: Soundwall S1969 would be located on the edge of shoulder of the westbound on-ramp from Cedar Avenue. This soundwall would provide feasible traffic noise abatement for the outdoor use areas of one single-family residence and one fire station represented by Receiver R11.44. Soundwall S1969 would also meet the design goal by providing a 7 dB reduction in traffic noise levels. Table 7-29 summarizes the range of reasonable allowances for the feasible noise abatement measure considered. Figure 138 in Appendix H shows the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement.

Table 7-29. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S1969 [a]

Barrier I.D.: S1969	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	N/A	2	2	2	2
Reasonable Allowance Per Benefited Receiver	N/A	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	$142,000	$142,000	$142,000	$142,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

Areas with Existing Noise Abatement

Receiver R11.27-2: Traffic noise impacts would occur at two second story multi-family residences north of I-10. An existing 16-foot high soundwall located at the R/W line already protects this area from I-10 traffic noise and as a result ground floor frequent outdoor use areas would not be impacted. Because the first story receivers are the primary concern of the traffic noise study and impacts at this area occur only at the second story, no additional noise abatement has been considered for this receiver. Figure 137 in Appendix H shows this receiver.

Receivers R11.28 through R11.42: Traffic noise impacts would occur at six mobile homes of Bloomington Mobile Home Park, Ayala Park, and 10 mobile homes of Idle Wheels Mobile Home Park, located north of I-10 represented by Receivers R11.28, R11.31, R11.33, R11.35, and R11.36. Soundwall SW1 will be 16 feet in height located at the R/W line and will protect these land uses from I-10 traffic noise. Soundwall SW1 will be constructed as part of the Cedar Avenue Improvements Project and has been considered an existing soundwall for this analysis. The results summarized in Table B-22 in Appendix B demonstrate that increasing the height of Soundwall SW1 to a height of 24 feet would not provide 5 dB or more of noise reduction at the impacted residences. Figures 137 and 138 in Appendix H show these receivers.

Areas without Noise Abatement

Receiver R11.13: Traffic noise impacts would occur at a commercial land use used for the Bel-Air Swapmeet north of I-10. However, because there is no discernible frequent outdoor use area, Receiver R11.13 was placed as a generalized receiver no closer than 100 feet from the edge of the outside traffic lane for information purposes, and noise abatement was not considered. Figure 81 in Appendix H shows this Receiver.

Receiver R11.43: Traffic noise impacts would occur at an empty lot representative of several commercial land uses north of I-10. However, because there is no discernible formal outdoor activity area, Receiver R11.43 was placed as a generalized receiver no closer than 100 feet from the edge of the outside traffic lane for information purposes, and noise abatement was not considered. Figure 83 in Appendix H shows this receiver.

7.2.2.12. SEGMENT 12 – CEDAR AVENUE TO RIVERSIDE AVENUE

UPRR train lines run parallel to I-10 on the south side throughout Segment 12. The tracks are at grade and train noise affects the existing and future predicted noise levels of receivers located south of I-10. However, there are no frequent outdoor use areas south of I-10 within 1,000 feet of the R/W line in Segment 12; therefore, train noise has not been considered in this area.

Existing exterior traffic noise levels in Segment 12 range from 53 to 73 dBA for Receivers R12.1 through R12.11. Existing interior traffic noise levels range from 44 to 51 dBA for Receivers R12.8-1 through R12.8-3. The future predicted exterior traffic noise levels in Segment 12 range from 56 to 76 dBA and predicted interior traffic noise levels range from 48 to 54 dBA where a few of the receivers exceed the NAC for Activity Categories C, D, and E; therefore, consideration of noise abatement is required. Table B-23 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 12 with Alternative 3.

Areas with Noise Abatement

Soundwall S2033: Soundwall S2033 would be located on the R/W line along the westbound side of I-10. Soundwall S2033 would provide at least 7 dB of noise reduction for the four discrete picnic areas of Teamsters Local 63 Union Hall represented by Receiver R12.10. Figure 140 in Appendix H shows the location, minimum length, and height of Soundwall S2033 to provide feasible abatement and meet the design goal. Table 7-30 summarizes the range of reasonable allowances for the feasible noise abatement measure considered.

Table 7-30. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S2033 [a]

Barrier I.D.: S2033	16-Foot Barrier	18-Foot Barrier	20-Foot Barrier	22-Foot Barrier	24-Foot Barrier
Number of Benefited Receivers	4	4	4	4	4
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$284,000	$284,000	$284,000	$284,000	$284,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

Areas without Noise Abatement

Receiver R12.7: Traffic noise impacts would occur at an empty lot representative of several commercial and industrial land uses north of I-10. However, because there are no discernible frequent outdoor use areas, Receiver R12.7 was placed as a generalized receiver no closer than 100 feet from the edge of the outside traffic lane for information purposes, and noise abatement was not considered. Figure 139 in Appendix H shows this receiver.

Receivers R12.8-2 and R12.8-3: Traffic noise impacts would occur at 12 second story room interiors and 12 third story room interiors of the Days Inn north of I-10. However, consideration of noise abatement is not required because there are no traffic noise

impacts that occur at the ground floor receiver of the Days Inn. Therefore, noise abatement has not been considered for this area. Figure 140 in Appendix H shows these receivers.

7.2.2.13. SEGMENT 13 – RIVERSIDE AVENUE TO PEPPER AVENUE:

UPRR train lines run parallel to I-10 on the south side throughout Segment 13. The tracks are at grade and train noise affects the existing and future predicted noise levels at receivers located south of I-10. However, there are no frequent outdoor use areas south of I-10 in Segment 13; therefore, train noise has not been considered in this area.

Existing exterior noise levels in Segment 13 range from 58 to 69 dBA for Receivers R13.1-1 through R13.7. Existing interior noise levels range from 38 to 44 dBA for Receivers R13.1-1, R13.1-2, R13.2-1, and R13.2-2. The future predicted exterior noise levels in Segment 13 range from 61 to 71 dBA and predicted interior noise levels range from 40 to 46 dBA. While there are no interior traffic noise impacts, there are two instances where areas exceed the NAC for Activity Category B; therefore, consideration of noise abatement is required. Table B-24 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 13 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S2079: Soundwall S2079 would be located north of I-10 on the R/W line and it would provide feasible noise abatement for the frequent outdoor use areas of four single-family residences represented by Receivers R13.3 and R13.4. This soundwall is raised in front of Receiver R13.3 higher than otherwise required to achieve the design goal of 7 dB of noise reduction at Receiver R13.4. Table 7-31 summarizes the range of allowances for the feasible noise abatement measure considered. Figure 142 in Appendix H shows the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement, and meet the design goal.

Table 7-31. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S2079 [a]

Barrier I.D.: S2079	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	18-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	N/A	N/A	4	4	4	4
Reasonable Allowance Per Benefited Receiver	N/A	N/A	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	N/A	$284,000	$284,000	$284,000	$284,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

There are no frequent outdoor use areas in this segment that are impacted by the project where it was not feasible to apply standard noise abatement techniques.

7.2.2.14. SEGMENT 14 – PEPPER AVENUE TO RANCHO AVENUE

UPRR train lines run parallel to I-10 on the south side throughout Segment 14. The tracks are at grade and train noise affects the existing and future predicted noise levels of all receivers located south of I-10. However, there are no receivers south of I-10 in Segment 14; therefore, train noise has not been considered in this area. The UPRR train lines also run perpendicular to I-10 on the north side of Segment 14. These tracks are elevated when they cross I-10, but then gradually become at grade. Train noise affects the existing and future predicted noise levels for three receivers, R14.1A through R14.2, on the north side. However, train noise is not considered when determining impacts because train noise is not related to the I-10 Corridor Project.

Existing exterior traffic noise levels in Segment 14 range from 59 to 75 dBA for Receivers R14.1 and R14.3 through R14.12. Existing exterior traffic noise levels range from 62 to 64 dBA for Receivers R14.1A through R14.2. The existing interior traffic noise level for Receiver 14.4 is 55 dBA. The future predicted exterior traffic noise levels with the project range from 62 to 78 dBA for Receivers R14.1 and R14.3 through R14.12. The future predicted exterior traffic noise levels for Receivers R14.1A through R14.2, excluding train noise, range from 64 to 65 dBA. The future predicted interior noise level with the project for Receiver R14.4 is 56 dBA. Several of the receivers exceed the NAC for Activity Category B and only one receiver each for Activity Categories D and E exceed the NAC thresholds; therefore, consideration of noise abatement is required. Table B-25 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 14 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S2145: Soundwall S2145 would be located on the shoulder and R/W line along westbound I-10. This soundwall would provide feasible noise abatement for the frequent outdoor use areas of five single-family and 35 mobile home residences and three motel rooms of Lido Motel represented by Receivers R14.3 through R14.8, R14.8B, R14.9, R14.10, and R14.11. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Therefore, Soundwall S2145 was raised to the maximum height of 14 feet in front of Receivers R14.3 through R14.6 and R14.7A through R14.8. Soundwall S2145 would also meet the design goal by providing at least a 7 dB reduction in traffic noise levels at Receiver R14.7. Soundwall S2145 is raised higher in front of Receivers R14.4, R14.5, and R14.11 to achieve feasible noise abatement at adjacent receivers. Soundwall S2145 is raised higher in front of Receivers R14.7 through R14.8, R14.8B, and R14.9 to achieve feasible noise abatement at adjacent receivers and meet the design goal.

Table 7-32 summarizes the range of reasonable allowances for the feasible noise abatement measure considered. Figure 144 in Appendix H shows the location, as well as the minimum length and heights, of Soundwall S2145 to provide feasible abatement and meet the design goal.

Table 7-32. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S2145 [a]

Barrier I.D.: S2145	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	3	5	28	40	43	43
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$213,000	$355,000	$1,988,000	$2,840,000	$3,053,000	$3,053,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

Receiver R14.1: Traffic noise impacts would occur at a school administration office north of I-10. However, because there are no clearly identified frequent outdoor use areas on this commercial land use, noise abatement has not been considered. Figure 143 in Appendix H shows this receiver.

7.2.2.15. SEGMENT 15 – RANCHO AVENUE TO 9TH STREET

UPRR train lines run parallel to I-10 on the south side throughout Segment 15, and BNSF and Metrolink lines run perpendicular to I-10 at the Colton Crossing between North 4th Street and La Cadena Drive. The UPRR tracks begin at grade and transition eastward to an elevated flyover structure, while the BNSF and Metrolink tracks remain at grade and cross under the UPRR tracks and I-10. Although train noise was not included in measurements ST18, ST20, and LT11, the UPRR train noise affects the future predicted noise levels at receivers located south of I-10, and the BNSF and Metrolink train noise affects the future predicted noise levels of Receivers R15.18 through R15.23. However, train noise is not considered when determining impacts because train noise is not related to the I-10 Corridor Project.

Existing exterior traffic noise levels north of I-10 in Segment 15 range from 65 to 75 dBA for Receivers R15.1 through R15.12. South of I-10, existing exterior traffic noise levels range from 55 to 69 dBA for Receivers R15.13 through R15.23. The future predicted exterior traffic noise levels north of I-10 in Segment 15 range from 65 to 74 dBA. The future predicted exterior traffic noise levels south of I-10 in Segment 15, excluding train noise, range from 59 to 68 dBA. Several areas approach or exceed the NAC for Activity Category B, and one area exceeds the NAC for Activity Category E; therefore, consideration of noise abatement is required. Table B-26 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 15 with Alternative 3.

Areas with Proposed Noise Abatement

There are no outdoor use areas in this segment that are impacted by the project where it is feasible to apply standard noise abatement techniques.

Areas with Existing Noise Abatement

Receivers R15.1 through R15.11: Traffic noise impacts would occur at 25 single-family residences north of I-10, represented by Receivers R15.1, R15.2, and R15.4 through R15.9. These receivers are currently protected by existing and replace-in-kind Soundwall SW5 located at the R/W line as well as shoulders of I-10 and the westbound Rancho Avenue off-ramp. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Consequently, a soundwall was analyzed at the existing location for heights up to 14 feet when located on the shoulder, and 24 feet when located on the R/W. The results summarized in Table B-25 in Appendix B demonstrate increasing the height of the existing soundwall at this location would not provide 5 dB of additional noise reduction for any of the impacted residences. Therefore, increasing the height of the existing and replace-in-kind soundwall would not be feasible. Figure 145 in Appendix H shows these receivers and Soundwall SW5.

Areas without Noise Abatement

Receiver R15.12: Traffic noise impact would occur at a commercial land use north of I-10. However, because there is no discernible formal activity area, Receiver R15.12 was placed as a generalized receiver more than 100 feet from the edge of the outside traffic lane for information purposes, and noise abatement was not considered. Figure 91 in Appendix H shows this receiver.

Receivers R15.14 through R15.17: Traffic noise impacts would occur at 19 single-family residences along eastbound I-10. The soundwall analysis results summarized in Table B-25 in Appendix B demonstrate that feasible noise reduction is not possible at the impacted residences represented by Receivers R15.14 through R15.17, due to the unmitigated noise contribution from the freight trains parallel to I-10. UPRR will not allow soundwalls to be constructed on the flyover retaining structure; therefore, soundwall analysis was only performed on the shoulder of I-10. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Therefore, the analyzed soundwall was considered at heights up to 14 feet. Figure 145 in Appendix H shows these receivers.

7.2.2.16. SEGMENT 16 – 9TH STREET TO INTERSTATE 215

UPRR train lines run parallel to I-10 on the south side throughout Segment 16. The tracks are elevated on a flyover structure, and although train noise is not included in the existing conditions, the UPRR train noise affects the future predicted noise levels at receivers located south of I-10. However, train noise is not considered when determining impacts because train noise is not related to the I-10 Corridor Project.

Existing exterior traffic noise levels north of I-10 in Segment 16 range from 61 to 75 dBA for Receivers R16.1 through R16.21. Existing interior noise levels north of I-10 range from 41 to 46 dBA for Receivers R16.15-1 through R16.16-2, R16.20-1, and R16.20-2. South of I-10, existing exterior traffic noise levels range from 55 to 56 dBA for Receivers R16.22 and R16.23. The future predicted exterior traffic noise levels north of I-10 in Segment 16 range from 61 to 77 dBA and the future predicted interior traffic noise levels range from 42 to 47 dBA. The future predicted exterior traffic noise levels south of I-10 in Segment 16, excluding train noise, range from 60 to 61 dBA. While there are no interior traffic noise impacts, there are several areas that approach or exceed the NAC for Activity Categories B and E; therefore, consideration of noise abatement is required. Table B-27 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 16 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S2238: Soundwall S2238 would be located north of I-10 on the R/W line and shoulder, and it would provide feasible noise abatement for the frequent outdoor use areas of one single-family residence and the pool area of Colony Motel represented by Receivers R16.12 and R16.17, respectively. Soundwall S2238 would also provide feasible noise abatement for the interiors of 44 motel rooms represented by Receivers R16.15-1, R16.2-2, R16.16-1, R16.16-2, and R169.20-2, from which 24 of the benefited are second story receivers. Soundwall S2238 is raised higher in front of Receivers R16.15-1 and R16.16-2 than otherwise required to achieve the design goal of 7 dB of noise reduction at Receiver R16.17. Table 7-33 summarizes the range of allowances for the feasible noise abatement measure considered. Figure 147 in Appendix H shows the location, minimum length, and heights required for this soundwall to provide feasible traffic noise abatement, and meet the design goal.

Table 7-33. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S2238 [a]

Barrier I.D.: S1819	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	N/A	N/A	27	45	46	46
Reasonable Allowance Per Benefited Receiver	N/A	N/A	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	N/A	$1,917,000	$3,195,000	$3,266,000	$3,266,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

Receivers R16.2 through R16.5, and R16.8: Traffic noise impacts would occur north of I-10 at six single-family residences and six trailers represented by Receivers R16.2, R16.4, and R16.8 and one commercial land use represented by Receiver R16.3. Because there is no defined frequent outdoor use area at the commercial land use, noise abatement

was only considered for the single-family residences and mobile homes in this area. The soundwall analysis results summarized in Table B-8 in Appendix B demonstrate that feasible noise reduction is only possible at one of the impacted single family residences and the six mobile homes with a soundwall located on the shoulder. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Although feasible noise reduction is possible at Receivers R16.4 and R16.8 with a soundwall height of 14 feet, the maximum reduction at Receiver R16.2 is only 3 dB. Furthermore, the soundwall analyzed at this location would be unable to meet the design goal of 7 dB attenuation at any of the impacted frequent outdoor use areas. This is due to the noise reduction already provided by the existing buildings between Valley Boulevard and I-10, the height limitation of the soundwall analyzed on the shoulder being 14 feet, and the unmitigated noise contribution from traffic on Valley Boulevard. Figures 146 and 147 in Appendix H show these receivers.

7.2.2.17. SEGMENT 17 – WEST OF TIPPECANOE AVENUE TO MOUNTAIN VIEW AVENUE:

Existing exterior traffic noise levels in Segment 17 range from 59 to 77 dBA for Receivers R17.1A through R17.48. Existing interior traffic noise levels range from 39 to 46 dBA for Receivers R17.1A, R17.1, and R17.33A. The future predicted exterior traffic noise levels in Segment 17 range from 58 to 82 dBA, in which several areas approach or exceed the NAC for Activity Categories B and E; therefore, consideration of noise abatement is required. The future predicted interior traffic noise levels range from 38 to 48 dBA; therefore, there would be no interior traffic noise impacts. For the interchange of Tippecanoe Avenue, the existing westbound off-ramp configuration is different than the no-build configuration due to the approved I-10/Tippecanoe Interchange Improvement Project. As such, the existing noise levels for the area of Tippecanoe Avenue were calculated using TNM. Year 2012 existing traffic volumes capped at LOS D/E volumes were used in TNM to determine the existing noise levels. Furthermore, existing Soundwall SW241 is not considered in the existing case, but is included in the future no-build and build cases. Table B-28 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 17 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwalls S2382 and S2384: Soundwalls S2382 and S2384 work as a system where Soundwall S2382 would be located on top of a retaining wall along the eastbound shoulder of I-10 and Soundwall S2384 would be located on the R/W line along the eastbound off-ramp to Tippecanoe Avenue. Soundwalls S2382 and S2384 would provide at least 7 dB of noise reduction for one single-family residence represented by Receiver R17.34. Figure 152 in Appendix H shows the locations, minimum lengths, and heights of Soundwalls S2382 and S2384 to provide feasible abatement and meet the design goal. Table 7-34 summarizes the range of reasonable allowances for the feasible noise abatement measure considered.

Table 7-34. Summary of Reasonableness Determination Data – Alternative 3 – Soundwalls S2382 and S2384[a]

Barrier I.D.: S2382 & S2384	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	N/A	1	1	1	1	1
Reasonable Allowance Per Benefited Receiver	N/A	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	$71,000	$71,000	$71,000	$71,000	$71,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Soundwalls S2434A and S2438 (Option 1): Two options have been considered for the location of Soundwall S2434: the R/W line (S2434A) and the shoulder of eastbound off-ramp to Mountain View Avenue (S2434B). Soundwalls S2434A and S2438 would work as a system where Soundwall S2434A would be located on the R/W line and Soundwall S2438 would be located on the shoulder of eastbound I-10. Soundwalls S2434A and S2438 would provide feasible noise reduction for four single-family residences and 36 mobile homes represented by Receivers R17.38 through R17.47A. Receiver R17.48 would be impacted by the project; however, the soundwall analysis results summarized in Table B-28 demonstrate that feasible abatement is not possible. This is mainly due to the noise contributions originating from Mountain View Avenue traffic. Soundwall S2434A is raised higher at Receivers R17.38 through R17.41, R17.43, and R17.46 than otherwise required to provide feasible abatement at adjacent receivers. Figures 153-1 and 154-1 in Appendix H show the locations, minimum lengths, and heights of Soundwalls S2434A and S2438 to provide feasible abatement and meet the design goal. Table 7-35 summarizes the range of reasonable allowances for the feasible noise abatement measure considered.

Table 7-35. Summary of Reasonableness Determination Data – Alternative 3 – Soundwalls S2434A S2438[a]

Barrier I.D.: S2434A & S2438	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	4	16	25	32	40	40
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$284,000	$1,136,000	$1,775,000	$2,272,000	$2,840,000	$2,840,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

Soundwalls S2434B and S2438 (Option 2): Soundwalls S2434B and S2438 would work as a system where Soundwall S2434B would be located on the shoulder of the eastbound off-ramp to Mountain View Avenue and Soundwall S2438 would be located on the shoulder of eastbound I-10. Soundwalls S2434B and S2438 would provide feasible noise reduction for four single-family residences and 36 mobile homes represented by Receivers R17.38 through R17.46. Receivers 17.47A and R17.48 would be impacted by

the project; however, the soundwall analysis results summarized in Table B-28 demonstrate that feasible abatement is not possible. This is mainly due to the noise contributions originating from Mountain View Avenue traffic. Soundwalls S2434A and S2434B are higher than otherwise required at Receivers R17.38 through R17.41 and R17.43 to provide feasible abatement at adjacent receivers. Figures 153-2 and 154-2 in Appendix H show the locations, minimum lengths, and heights of Soundwalls S2434B and S2438 to provide feasible abatement and meet the design goal. Table 7-36 summarizes the range of reasonable allowances for the feasible noise abatement measure considered.

Table 7-36. Summary of Reasonableness Determination Data – Alternative 3 – Soundwalls S2434B S2438[a]

Barrier I.D.: S2434B & S2438	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	10	24	36	38	--[c]	38
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	--[c]	$71,000
Total Reasonable Allowance	$710,000	$1,704,000	$2,556,000	$2,698,000	--[c]	$2,698,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

[c] Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Soundwalls S2435 and S2437: Soundwalls S2435 and S2437 would work as a system where Soundwall S2435 would be located on the R/W line north of I-10 and Soundwall S2437 would be located along the shoulder of westbound I-10. Soundwall S2435 would tie into existing Soundwall SW264, which is also located at the R/W line. These soundwalls would provide feasible noise abatement for the frequent outdoor use areas of 15 multi-family residences represented by Receivers R17.25 through R17.27, R17.29, and R17.31. Soundwalls S2435 and S2437 would also meet the design goal by providing at least a 7 dB reduction in traffic noise levels at Receiver R17.27. Soundwall S2437 is raised higher than otherwise required at Receivers R17.25, R17.26, and R17.31 to achieve feasible noise reduction at Receiver R17.29 and to meet the design goal at Receiver R17.26. Table 7-37 summarizes the range of reasonable allowances for the feasible noise abatement measure considered. Figures 154-1 and 154-2 in Appendix H show the locations, minimum lengths, and heights required for these soundwalls to provide feasible traffic noise abatement.

Table 7-37. Summary of Reasonableness Determination Data – Alternative 3 – Soundwalls S2435 S2437[a]

Barrier I.D.: S2435 & S2437	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	N/A	N/A	13	15	15
Reasonable Allowance Per Benefited Receiver	N/A	N/A	$71,000	$71,000	$71,000
Total Reasonable Allowance	N/A	N/A	$923,000	$1,065,000	$1,065,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

Areas with Existing Noise Abatement

Receivers R17.15 through R17.24: Traffic noise impacts would occur at 16 single-family residences along the westbound side of I-10 represented by Receivers R7.15 through R17.17, R17.22, and R17.24. These receivers are currently protected by existing 16-foot high Soundwall SW264 located at the R/W line; however, the soundwall analysis results summarized in Table B-28 demonstrate that replacing this soundwall with a soundwall 24 feet in height would not provide 5 dB of additional noise reduction at any of the residences. Figures 153-1, 154-1, 153-2, and 154-2 in Appendix H show these receivers and existing Soundwall SW264.

Areas without Noise Abatement

Receiver R17.33: Traffic noise impacts would occur at a commercial land use representative of several commercial land uses north of I-10. However, because there are no clearly identified frequent outdoor use areas on this commercial land use, noise abatement has not been considered. Figure 152 in Appendix H shows this receiver.

Receivers R17.36 and R17.37: Traffic noise impacts would occur at commercial land uses representative of several commercial land uses including Hometown Buffet and a sod farm south of I-10. However, because there are no clearly identified frequent outdoor use areas on these commercial land uses, noise abatement has not been considered. Figures 153-1 and 153-2 in Appendix H show these receivers.

7.2.2.18. SEGMENT 18 – MOUNTAIN VIEW AVENUE TO NEVADA STREET

Existing exterior traffic noise levels in Segment 18 range from 60 to 73 dBA for Receivers R18.1 through R18.26 and the existing interior noise level for Receiver R18.25 is 47 dBA. The future predicted exterior traffic noise levels with the proposed project in Segment 18 range from 61 to 71 dBA where several of the receivers exceed the NAC for Activity Category B, one receiver approaches the Activity Category C NAC thresholds, and two receivers approach the NAC for Activity Category E; therefore, consideration of noise abatement is required. The future predicted interior noise level with the proposed project for Receiver R18.25 is 45 dBA; therefore, there would not be interior traffic noise impacts. Table B-29 in Appendix B shows the existing and future noise levels, as well as barrier analysis, for Segment 18 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S2476: Soundwall S2476 would be located on the shoulder of eastbound I-10. This soundwall would provide feasible noise abatement for the frequent outdoor use areas of 70 multi-family residences represented by Receivers R18.6-1 through R18.7-1, R18.8-1 through R18.9-1, and R18.11-1 through R18.16-1. Soundwall S2476 would also meet the design goal by providing a 7 dB reduction in traffic noise levels at Receiver R18.8-2. Soundwall S2476 is raised higher in front of Receivers R18.14-1, R18.14-2, and R18.15-2 to achieve feasible noise abatement at adjacent receivers. Soundwall S2476 is raised higher in front of Receiver R18.8-2 to achieve feasible noise abatement at adjacent receivers and meet the design goal.

Traffic noise impacts would occur at a second story balcony represented by Receiver R18.7-2. Typically, noise abatement is not considered for the second story outdoor use area when there are ground floor outdoor use areas. Because there is no traffic noise impact at the ground floor outdoor use area, represented by Receiver R18.7-1, no abatement is considered for the second story balcony. In addition a traffic noise impact would occur at Receivers R18.16-2 and R18.22. Because the shoulder would be less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way. Therefore, providing additional abatement by increasing the height of the existing soundwall could not be attempted. Figure 155 in Appendix H shows the location, minimum length, and height of Soundwall S2476 to provide feasible abatement and meet the design goal. Table 7-38 summarizes the range of reasonable allowances for the feasible noise abatement measure considered.

Table 7-38. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S2476 [a.]

Barrier I.D.: S2476	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	N/A	8	62	76	--[c]	70
Reasonable Allowance Per Benefited Receiver	N/A	$71,000	$71,000	$71,000	--[c]	$71,000
Total Reasonable Allowance	N/A	$568,000	$4,402,000	$5,396,000	--[c]	$4,970,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

[c] Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

Receiver R18.3: Traffic noise impacts would occur at Splash Kingdom Water Park located north of I-10 represented by Receiver R18.3. Noise abatement was not considered for this area because the park prefers to have travelers on I-10 able to see the park from I-10 and not have the view to the park obstructed by a soundwall. A letter from the park

refusing noise abatement in the form of a soundwall is located in Appendix K. Figure 155 in Appendix H shows this receiver.

Receiver R18.5: Traffic noise impacts would occur at the exterior of commercial office buildings located south of I-10 represented by Receiver R18.5. However, because there are no clearly identified frequent outdoor use areas on this commercial land use, noise abatement has not been considered. Figures 154-1 and 154-2 in Appendix H show this receiver.

Receiver R18.26: Traffic noise impacts would occur at the exterior of the San Bernardino County Museum located along the westbound off-ramp to California Street. A soundwall was considered on the shoulder of I-10 and the results summarized in Table B-28 demonstrate that a soundwall at this location would not meet the design goal at the impacted museum. Figure 156 in Appendix H shows this receiver.

7.2.2.19. SEGMENT 18A – NEVADA STREET TO STATE ROUTE 210

Segment 18A was analyzed using TNM as a result of the procedures used to determine traffic noise impacts at isolated hotel, motels, and continuing education schools. Based on that analysis, it was determined that the Good Nite Inn located west of Alabama Street along the eastbound side of I-10 would possibly be impacted by the traffic noise. Table I-1 in Appendix I show the results of the traffic noise analysis conducted for isolated hotels, motels, and continuing education schools. Because a TNM model was developed for this area to conduct a detailed analysis of the Good Nite Inn, receivers were added to include nearby hotels as well as a restaurant, a daycare, and a commercial establishment.

Existing exterior traffic noise levels in Segment 18A range from 61 to 76 dBA for Receivers R18A.1A through R18A.11. Existing interior traffic noise levels range from 37 to 53 dBA for Receivers R18A.2, R18A.4, R18A.5, R18A.7, and R18A.9. Existing noise levels in this segment were calculated using TNM because there were no long-term measurements conducted in this area to determine the worst hour noise levels. Year 2012 existing traffic volumes capped at LOS D/E volumes were used in TNM to determine the existing noise levels. The future predicted exterior traffic noise levels in Segment 18A range from 62 to 77 dBA and the future predicted interior traffic noise levels range from 37 to 54 dBA, in which a second story receiver located at the Good Nite Inn exceeds the NAC for Activity Category D. Table B-30 in Appendix B shows the existing and future noise levels for Segment 18A with Alternative 3.

Areas with Proposed Noise Abatement

There are no outdoor use areas in this segment that are impacted by the project where it is required to apply standard noise abatement techniques.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

Receiver R18A.1A: Traffic noise impacts would occur at a commercial land use north of I-10; however, because there is no discernible formal activity area, Receiver R18A.1A was placed as a generalized receiver 100 feet from the edge of the outside traffic lane for

information purposes, and noise abatement was not considered. Figure 157 in Appendix H shows this receiver.

Receiver R18A.7-2: Traffic noise impacts would occur at a second story receiver located at the Good Nite Inn south of I-10. However, consideration of noise abatement is not required because there are no traffic noise impacts that occur at the ground floor receiver of the Good Nite Inn. Figure 157 in Appendix H shows this receiver.

7.2.2.20. SEGMENT 19 – TENNESSEE STREET TO ORANGE STREET

Existing noise levels in Segment 19 range from 61 to 72 dBA for Receivers R19.1 through R19.16. Existing noise levels for receivers west of New York Street in this segment were calculated using TNM because there were no long-term measurements conducted in this area to determine the worst hour noise levels. Year 2012 existing traffic volumes capped at LOS D/E volumes were used in TNM to determine the existing noise levels. The future predicted noise levels in Segment 19 range from 63 to 73 dBA, in which most areas exceed the NAC for Activity Category B; therefore, consideration of noise abatement is required. Traffic noise impacts were identified for 39 Activity Category B receivers which represent 29 single-family, four multi-family, and six mobile home residences. In addition, one commercial area (Activity Category E) would be impacted by traffic noise. Table B-31 in Appendix B presents the future predicted noise levels and barrier analysis results for Segment 19 with Alternative 3.

Areas with Noise Abatement

Soundwall S2619: Soundwall S2619 would be located along westbound I-10 at the edge-of-shoulder of the general purpose lanes as well as the Orange Street on-ramp. This soundwall would provide feasible noise abatement for the frequent outdoor use areas of 13 single-family and four multi-family residential dwellings represented by Receivers R19.3 to R19.7. Table 7-39 summarizes the range of allowances for the considered feasible noise abatement measure. Figures 159 and 160 in Appendix H show the location, minimum length, and heights required for this soundwall to provide feasible traffic noise abatement.

Receiver R19.5A represents the frequent outdoor use areas of two single-family residences that would be impacted by traffic noise. Per the Caltrans Highway Design Manual, because the shoulder of westbound I-10 would be less than 15 feet in width, the maximum height of the analyzed noise barrier could not exceed 14 feet. The results of the barrier analysis show that Receiver R19.5A could not achieve a feasible reduction of 5 dB in traffic noise level. In addition, local traffic on Eureka and Colton streets reduce the effectiveness of the potential abatement measure. Receiver R19.5A would receive partial noise abatement of 3 dB from proposed Soundwall S2619. Figure 160 in Appendix H shows the location of this receiver.

Table 7-39. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S2619 [a]

Barrier I.D.: S2619	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	N/A	11	17	17	--[c]	17
Reasonable Allowance Per Benefited Receiver	N/A	$71,000	$71,000	$71,000	--[c]	$71,000
Total Reasonable Allowance	N/A	$781,000	$1,207,000	$1,207,000	--[c]	$1,207,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

[c] Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Areas with Existing Noise Abatement

There are no areas in this segment that are protected by existing soundwalls.

Areas without Noise Abatement

Receiver R19.1: This receiver represents a commercial property Shakey's that would be impacted by traffic noise. However, because there is no clearly identifiable frequent outdoor use area, noise abatement is not required. Figure 159 in Appendix H shows the location of this receiver.

Receivers R19.12 through R19.16: These receivers represent the frequent outdoor use areas of 14 single-family and six mobile homes that would be impacted by traffic noise. Per the Caltrans Highway Design Manual, because the shoulder of eastbound I-10 would be less than 15 feet in width, the maximum height of the analyzed noise barrier could not exceed 14 feet. The results of the barrier analysis show that although most of the impacted receivers were able to achieve a feasible reduction of 5 dB in traffic noise levels, the analyzed soundwall would not be reasonable because the design goal of a 7 dB reduction for at least one receiver could not be satisfied. Figures 159 and 160 in Appendix H show the locations of these receivers.

7.2.2.21. SEGMENT 20 – ORANGE STREET TO EAST CYPRESS AVENUE

Existing exterior noise levels in Segment 20 range from 57 to 75 dBA for Receivers R20.1 through R20.61. Existing interior noise levels range from 44 to 48 dBA for Receivers R20.2A, R20.42A, and R20.47A. The future predicted exterior noise levels in Segment 20 range from 59 to 75 dBA, in which several areas exceed the NAC for Activity Categories B, C, and E; therefore, consideration of noise abatement is required. The future predicted interior noise levels range from 44 to 47 dBA; therefore, there are no interior noise impacts. Table B-32 in Appendix B presents the future predicted noise levels and barrier analysis results for Segment 20 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwalls S2638 and S2654: Soundwalls S2638 and S2654 would act as a noise barrier system to provide feasible abatement for impacted Receivers R20.42 through R20.48.

Soundwall S2638 would be located along the shoulder of the general purpose lanes of eastbound I-10 from the edge of the Orange Street over-crossing to the 6th Street on-ramp. Soundwall S2654 would begin along the shoulder of the 6th Street on-ramp and continue along the shoulder of eastbound I-10 until joining to existing Soundwall SW158 which is located near the start of the eastbound I-10 University Street off-ramp.

Per the Caltrans Highway Design Manual, because the shoulder width of eastbound I-10 would be less than 15 feet in this area, the maximum height of the analyzed noise barrier could not exceed 14 feet. The results of the barrier analysis show that all of the impacted receivers were able to achieve a feasible reduction of at least 5 dB of traffic noise levels. The required design goal of a 7 dB reduction for at least one receptor was satisfied by Receiver R20.43.

Soundwalls S2638 and S2654 would provide feasible noise abatement for the frequent outdoor use areas of 15 single-family and four multi-family residential dwellings represented by Receivers R20.42 through R20.47 and Receiver 20.48, respectively. Interior receivers R20.42A and R20.47A were not impacted; however, Receiver R20.47A would be benefited by the soundwalls because it would experience a 5 dB reduction of future traffic noise levels. Table 7-40 summarizes the range of allowances for the considered feasible noise abatement measure. Figures 160 and 161 in Appendix H show the locations, minimum lengths, and heights required for these soundwalls to provide feasible traffic noise abatement.

Table 7-40. Summary of Reasonableness Determination Data – Alternative 3 – Soundwalls S2638 and S2654 [a]

Barrier I.D.: S2638 & S2654	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	8	9	20	20	--[c]	20
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	--[c]	$71,000
Total Reasonable Allowance	$568,000	$639,000	$1,420,000	$1,420,000	--[c]	$1,420,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design goal.

[c] Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Areas with Existing Noise Abatement

Receivers R20.3 through R20.29: Traffic noise impacts were determined to occur for the frequent outdoor use areas of six single-family and 20 multi-family residences as well as the Spiritual Treatment Center represented by Receivers R20.3, R20.4, R20.6 through R20.9, R20.12-2, R20.18A, R20.18, and R20.19. There are many existing soundwalls in this area along westbound I-10 that combine as a contiguous noise barrier from the 6th Street off-ramp to the University Street on-ramp. The following is a list of these existing soundwalls in order of increasing stationing: SW149, SW499, SW153, SW509, SW157 and SW159. These soundwalls are located along the roadway shoulder and are 14 feet in height. Because the shoulder is less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier on the shoulder of the roadway should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Consequently, increasing the heights of the existing soundwall above 14 feet is not allowable; therefore, providing feasible abatement was not possible. Furthermore, I-10 is elevated compared to the receivers adjacent to the roadway. The current location of the existing soundwalls on the shoulder is the most optimal placement and an alternative location such as the R/W line would not be effective. Figures 161 and 162 in Appendix H show the location of these receivers as well as the heights and locations of the existing soundwalls.

Receivers R20.30 through R20.40: Traffic noise impacts were determined to occur for the frequent outdoor use areas of 13 single-family and two multi-family residences located south of I-10 represented by Receivers R20.30 through R20.32, R20.39, and R20.40. There are many existing soundwalls in this area along westbound I-10 which combine as a contiguous noise barrier between the University Street on-ramp and Cypress Avenue off-ramp. The following is a list of these existing soundwalls in order of increasing stationing: SW159, SW523, SW161, SW531, SW163, SW537, and SW165. These soundwalls are located along the roadway shoulder and are 14 feet in height. Because the shoulder is less than 15 feet in width, per the Caltrans Highway Design Manual, the maximum height of a noise barrier on the shoulder of the roadway should not exceed 14 feet when located 15 feet or less from edge of traveled way. Consequently, increasing the heights of the existing soundwall above 14 feet is not allowable; therefore, providing feasible abatement was not possible. Furthermore, I-10 is elevated compared to the receivers adjacent to the roadway. The current location of the existing soundwalls on the shoulder is the most optimal placement and an alternative location such as the R/W line would not be effective. Figure 162 in Appendix H shows the location of these receivers as well as the heights and locations of the existing soundwalls.

Receivers R20.57 through R20.61: There are many existing soundwalls in this area along eastbound I-10 that combine as a contiguous noise barrier between the University Street off-ramp and Cypress Avenue on-ramp. The following is a list of the existing soundwalls in order of increasing stationing: SW160, SW530, SW162, SW536, and SW164. These soundwalls are located along the roadway shoulder and are 14 feet in height. I-10 is elevated compared to the receivers adjacent to the roadway; therefore, the shoulder is the most optimal placement and an alternative location such as the R/W line would not be effective. Per the Caltrans Highway Design Manual, because the shoulder of eastbound I-10 is less than 15 feet in width, the maximum height of the analyzed noise barrier could not exceed 14 feet. In addition, increasing the heights of the existing soundwall above 14 feet was not allowable on the shoulder of the roadway.

Traffic noise impacts were determined to occur for the frequent outdoor use areas of six single-family and two multi-family residences as well as one playing field of Redlands High School represented by Receivers R20.57, R20.59A, and R20.59. Feasible abatement was not able to be provided to Receiver R20.57 because the existing soundwalls are currently at the maximum allowable height of 14 feet along the roadway shoulder. A soundwall was analyzed along the shoulder of I-10 from the gore of the University Street off-ramp to the end of the University Street over crossing which coincides with an end point of existing Soundwall SW160. The analyzed soundwall was not able to provide a 5 dB reduction of traffic noise levels to Receivers R20.59A and R20.59. Figure 162 in Appendix H shows the location of these receivers as well as the heights and locations of the existing soundwalls.

Areas without Noise Abatement

Receivers R20.1, R20.1A, and R20.2: These receptors would be impacted by traffic noise. Receivers R20.1 and R20.1A represent the frequent outdoor use areas of six single family residences and Receiver R20.2 represents the pool of the Stardust Motel. I-10 is elevated compared to the receivers adjacent to the roadway; therefore, the shoulder was the most optimal placement. Per the Caltrans Highway Design Manual, because the shoulder of westbound I-10 and the 6th Street off-ramp is less than 15 feet in width, the maximum height of the analyzed noise barrier could not exceed 14 feet on the shoulder of the roadway. Existing Soundwall SW149 currently extends along the 6th Street off-ramp, but stops short of these receivers; therefore, noise barriers were analyzed along the shoulder of westbound I-10 as well as an extension of Soundwall SW149 farther down the 6th Street off-ramp. Results of the barrier analysis show that these receptors could not achieve a feasible reduction of 5 dB in traffic noise levels most likely due to the local traffic on 6th and Colton streets, which reduced the effectiveness of the analyzed soundwall. Figure 160 in Appendix H shows the location of these receivers as well as the height and location of existing Soundwall SW149.

7.2.2.22. SEGMENT 21 – EAST CYPRESS AVENUE TO EAST OF FORD STREET

Existing exterior noise levels in Segment 21 range from 51 to 81 dBA for Receivers R21.1 through R21.100. Existing interior noise levels range from 27 to 49 dBA for Receivers R21.25A, R21.32, and R21.41. The future predicted exterior noise levels in Segment 21 range from 52 to 82 dBA, in which several areas approach or exceeds the NAC for Activity Categories B and C; therefore, consideration of noise abatement is required. The future predicted interior noise levels range from 28 to 49 dBA; therefore, there are no interior noise impacts. The calculated interior noise levels at Receiver R21.25A includes only traffic noise contributions and do not contain other ambient noise sources. Table B-33 in Appendix B presents the future predicted noise levels and barrier analysis results for Segment 21 with Alternative 3.

Areas with Proposed Noise Abatement

Soundwall S2730: Soundwall S2730 would provide feasible abatement for impacted Receiver R21.75 which represents an outdoor use area of the El Carmelo Retreat. This soundwall would be connected to existing Soundwall SW172 along the shoulder of eastbound I-10. The soundwall would immediately transition from the shoulder of the roadway to the R/W line which rises in elevation compared to I–10. Table 7-41 summarizes the range of allowances for the considered feasible noise abatement measure. Figures 163 and 164 in Appendix H show the location, minimum length, and heights required for this soundwall to provide feasible traffic noise abatement.

Receiver R21.76 represents the other outdoor use area of the El Carmelo Retreat. Several soundwall configurations were analyzed that included placement of a soundwall along the R/W as well as the shoulder of the roadway. However, because this area is elevated approximately 50 feet above I-10, Receiver R21.76 was unable to achieve a feasible traffic noise level reduction of at least 5 dB. Figure 164 in Appendix H shows the location of this receiver.

Table 7-41. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S2730 [a]

Barrier I.D.: S2730	16-Foot Barrier	18-Foot Barrier	20-Foot Barrier	22-Foot Barrier	24-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	1	1	1	1	1	1
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design

Soundwall S2737: Soundwall S2737 would provide feasible abatement for two multi-family and three single-family residences. Receiver R21.25 represents two frequent outdoor use areas of a multi-family residential complex. Receivers R21.30 and R21.31 represent the backyards of three single-family residences. The soundwall would be located at the R/W line along the westbound lanes of I-10. Receiver R21.28 represents the frequent outdoor use areas of three single-family residences that would be impacted by traffic noise. However, results of the barrier analysis showed that Receiver R21.28 was unable to achieve a reduction of at least 5 dB of traffic noise levels with Soundwall S2737. Table 7-42 summarizes the range of allowances for the considered feasible noise abatement measure. Figures 163 and 164 in Appendix H show the location, minimum length, and heights required for this soundwall to provide feasible traffic noise abatement.

Table 7-42. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S2737 [a]

Barrier I.D.: S2737	16-Foot Barrier	18-Foot Barrier	20-Foot Barrier	22-Foot Barrier	24-Foot Barrier	Design Barrier[b]
Number of Benefited Receivers	2	3	5	5	6	5
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	$71,000	$71,000
Total Reasonable Allowance	$142,000	$213,000	$355,000	$355,000	$426,000	$355,000

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Design barrier represents the minimum height required to achieve feasible noise reduction and design

Soundwall S2765: Soundwall S2765 would provide feasible abatement for impacted Receivers R21.39 and R21.40. This soundwall would be located along the shoulder of the general purpose lanes of westbound I-10. The results of the barrier analysis show that the impacted receivers were able to achieve a feasible reduction of at least 5 dB of traffic noise levels. The required design goal of a 7 dB reduction was satisfied by Receivers R21.39 and R21.40. Soundwall S2765 would provide feasible noise abatement for two frequent outdoor use areas of the Trinity Evangelical Free Church and School. In addition, 14 non-impacted classroom interiors would also be benefited by this soundwall. Table 7-43 summarizes the range of allowances for the considered feasible noise abatement measure. Figures 164 and 165 in Appendix H show the location, minimum length, and height required for this soundwall to provide feasible traffic noise abatement.

Table 7-43. Summary of Reasonableness Determination Data – Alternative 3 – Soundwall S2765 [a]

Barrier I.D.: S2765	8-Foot Barrier	10-Foot Barrier	12-Foot Barrier	14-Foot Barrier	16-Foot Barrier
Number of Benefited Receivers	14	15	16	16	--[b]
Reasonable Allowance Per Benefited Receiver	$71,000	$71,000	$71,000	$71,000	--[b]
Total Reasonable Allowance	$994,000	$1,065,000	$1,136,000	$1,136,000	--[b]

Note: N/A-Not applicable. Barrier does not provide 5 dB of noise reduction.

[a] An NADR will be prepared that will identify noise barrier construction cost information and the noise barriers that are reasonable from a cost perspective.

[b] Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

Areas with Existing Noise Abatement

Receivers R21.22 through R21.25: Traffic noise impacts were determined to occur for the frequent outdoor use areas of eight multi-family dwelling units represented by Receivers R21.22and R21.25. These receivers are behind existing Soundwalls SW563 and SW171 which are located along the roadway shoulder along westbound I-10 and are 14 feet in height. Per the Caltrans Highway Design Manual, because the shoulder of eastbound I-10 is less than 15 feet in width, the maximum height of a noise barrier should not exceed 14 feet; therefore, increasing the heights of the existing soundwall above 14 feet was not allowable. A soundwall was analyzed along the shoulder and right-of-way extending from Soundwall SW171. The analyzed soundwall was unable to provide feasible traffic noise abatement for Receiver R21.22. Receiver R21.25 was only able to achieve a traffic noise reduction of 6 dB; therefore, the design goal of 7 dB was not able to be met and the barrier would not be reasonable. Figure 163 in Appendix H shows the location of these receivers and the height and location of the existing soundwalls.

Receiver R21.51: There are many existing soundwalls in this area along eastbound I-10 that combine as a contiguous noise barrier between the South University Street off-ramp and Cypress Avenue on-ramp. The following is a list of the existing soundwalls in order of increasing stationing: SW160, SW530, SW162, SW536, and SW164. These soundwalls are located along the roadway shoulder and are 14 feet in height. Per the Caltrans Highway Design Manual, because the shoulder of eastbound I-10 is less than 15 feet in width, the maximum height of a noise barrier should not exceed 14 feet; therefore, increasing the heights of the existing soundwall above 14 feet was not allowable. A traffic noise impact was determined to occur for the frequent outdoor use area of one single-family residence represented by Receiver R21.51; however, feasible abatement was not able to be provided to Receiver R21.51 because the existing soundwalls are currently at the maximum allowable height of 14 feet along the roadway shoulder. Figure 162 in Appendix H shows the location of these receivers and the height and location of the existing soundwalls.

Areas without Noise Abatement

Receivers R21.33, R21.34, R21.35, and R21.37: Receiver R21.33 represents the basketball court of the Church on the Hill. Receivers R21.34, R21.35, and R21.37 represent the frequent outdoor use areas of six single-family residences that would be impacted by traffic noise. The receivers in this area are located 50 feet or more above the

R/W and travel lanes of I-10. A noise barrier located along the R/W line would be ineffective at cutting the line-of-sight to the freeway; therefore, a soundwall was analyzed along the westbound shoulder of the roadway. Results of the barrier analysis showed that a feasible reduction of at least 5 dB of traffic noise levels was not able to be provided to these receivers. Furthermore, because most of the backyard is an extreme down slope, a noise barrier at the property line would be ineffective at reducing traffic noise levels. Figure 164 in Appendix H shows the locations of these receivers.

Receiver R21.82: This receiver represents the frequent outdoor use areas of one single-family residence that would be impacted by traffic noise. The R/W and roadway shoulder are very close to each other in this area. This receiver is elevated compared to the R/W line and edge-of-shoulder by approximately 20 feet. In addition, the top of a berm between the receiver and travel lanes of I-10 is taller than the maximum allowable soundwall height. Per the Caltrans Highway Design Manual, the maximum height of a noise barrier on the shoulder of the roadway should not exceed 16 feet when located more than 15 feet from the edge of traveled way. In addition, the maximum height of a noise barrier on the shoulder of the roadway should not exceed 14 feet when located 15 feet or less from edge of traveled way. Therefore, a soundwall placed along the roadway shoulder or R/W would be ineffective. Figure 165 in Appendix H shows the location of this receiver.

Receiver R21.99: This receiver represents the frequent outdoor use areas of one single-family residence that would be impacted by traffic noise. The backyard of this house is approximately 30 feet above the R/W and more than 100 feet above the travel lanes of I-10. A noise barrier located along the R/W line or shoulder would be ineffective and would not cut the line-of-sight to I-10. The houses in this area have a 6-foot high property wall; however, the homeowner has reduced the height of the property wall to 4 feet. Because none of the other houses in this area are impacted, a soundwall was not analyzed within private property. Figure 165 in Appendix H shows the location of this receiver.

7.2.3. Isolated Hotels, Motels, and Schools

There are several isolated hotels, motels, and continuing education schools (e.g, private colleges and vocational schools) along the project alignment that are located in commercial or industrial areas (Segments 22 and 23). Most of these hotels/motels and continuing education schools do not have outdoor frequent use areas other than pool areas of the hotels and motels.

Modeled locations along the project corridor with similar geometric site characteristics to the isolated hotels, motels, and continuing education schools were used to predict their future-build traffic noise level. This approach was utilized to expedite the modeling process by not modeling these areas that only contain isolated hotels, motels, and schools. Future Alternative 3 noise levels were used in this analysis because Alternative 3 includes higher traffic volumes than Alternative 2 and would produce the worst case noise level for that area.

Simultaneous indoor and outdoor noise measurements were conducted at the hotels, motels, and continuing education schools to determine the building shell noise reduction that is required for predicting interior traffic noise level during the worst noise hour. Based on this analysis, if traffic noise impacts are predicted to occur at any of these

locations, then that area will be modeled to determine noise abatement measures. Four of the isolated establishments at sites H10, H11, H13, and H15 did not allow conducting indoor/outdoor noise measurements; therefore, an assumed insertion loss of 30 dB was used based on the building structure and window types.

Table I-1 in Appendix I indicates that traffic noise impacts are only predicted to occur at one of these establishments. Therefore, TNM modeling is required and was conducted for that area. See Segment 18A under Alternative 3.

Three of the hotels have pools located at the same distance to I-10 as the closest rooms. These three pool areas were also considered and noise impacts are not predicted to occur at these locations. Pool areas of the other hotels and motels have not been considered because they are set farther back from I-10 and/or are shielded by the hotel building and based on nearby exterior traffic noise levels, would not be impacted by traffic noise. Sites H4, H7, H8, and H9 were located close enough to modeled areas that the models were extended to include those hotels/motels.

Chapter 8. Construction Noise and Vibration

During the construction phases of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Table 8-1 summarizes noise levels produced by construction equipment commonly used on roadway construction projects. As indicated, equipment involved in construction is expected to generate noise levels ranging from 80 to 89 dBA at a distance of 50 feet. Noise produced by construction equipment would be reduced over distance at a rate of approximately 6 dB per doubling of distance.

Table 8-1. Construction Equipment Noise

Equipment	Maximum Noise Level (dBA at 50 feet)
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: Federal Transit Administration, 2006

Construction noise varies greatly depending on the construction process, type and condition of equipment used, as well as layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, which makes it difficult to accurately estimate levels of construction noise. Construction noise estimates are approximate because of the lack of specific information available at the time of the assessment. Temporary construction noise impacts would be unavoidable at areas located immediately adjacent to the proposed project alignment.

The noise level requirement specified herein shall apply to the equipment on the job or related to the job, including, but not limited to, trucks, transit mixers, or transient equipment that may or may not be owned by the Contractor.

Sound control shall conform to the provisions in Section 14-8.02, ”Noise Control,” of the Standard Specifications and 14-8.02 “Noise Control” of the Standard Special Provisions. According to requirements of these specifications, construction noise cannot exceed 86 dBA at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m.

There are many measures that can be taken to minimize noise intrusion without placing unreasonable constraints on the construction process or substantially increasing costs. These include noise monitoring to ensure that contractors take all reasonable steps to minimize impacts when near sensitive areas; noise testing and inspection of equipment to ensure that all equipment on site is in good condition and effectively muffled; and an active community liaison program. A community liaison program would keep residents informed about construction plans so they can plan around periods of particularly high noise or vibration levels, and it would provide a conduit for residents to express any concerns or complaints.

The following are possible control measures that can be implemented to minimize noise disturbances at sensitive areas during construction:

- All equipment shall have sound-control devices no less effective than those provided on the original equipment. Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine should be operated on the job site without an appropriate muffler.

- Construction methods or equipment that will provide the lowest level of noise impact (e.g., avoid impact pile driving near residences and consider alternative methods that are also suitable for the soil condition) should be used.

- Idling equipment shall be turned off.

- Truck loading, unloading, and hauling operations shall be restricted so that noise and vibration are kept to a minimum through residential neighborhoods to the greatest possible extent.

- Construction activities shall be coordinated to build recommended permanent soundwalls during the first phase of construction to protect sensitive receivers from subsequent construction noise, dust, light, glare, and other impacts, to the extent feasible.

- Temporary noise barriers shall be used and relocated, as needed, to protect sensitive receivers against excessive noise from construction activities involving large equipment and by small items such as compressors, generators, pneumatic tools, and jackhammers. Noise barriers can be made of heavy plywood, moveable insulated sound blankets, or other best available control techniques.

- Newer equipment with improved noise muffling shall be used, and all equipment items shall have the manufacturers' recommended noise-abatement measures (e.g., mufflers, engine covers, and engine vibration isolators) intact and operational. Newer equipment will generally be quieter in operation than older equipment. All construction equipment shall be inspected at periodic intervals to ensure proper maintenance and presence of noise-control devices (e.g., mufflers and shrouding).

- Construction activities shall be minimized in residential areas during evening, nighttime, weekend, and holiday periods. Noise impacts are typically minimized when construction activities are performed during daytime hours; however, nighttime construction may be desirable (e.g., in commercial areas where businesses may be disrupted during daytime hours) or necessary to avoid major traffic disruption. Coordination with

each city shall occur before construction can be performed in noise-sensitive areas.

- Construction lay-down or staging areas shall be selected in industrially zoned districts. If industrially zoned areas are not available, commercially zoned areas may be used, or locations that are at least 100 feet from any noise-sensitive land use (e.g., residences).

- Contractor shall prepare a Noise and Vibration Monitoring and Mitigation Plan by a qualified Acoustical Engineer and submit it for approval. The Plan must outline noise and vibration monitoring procedures at predetermined noise and vibration sensitive sites as well as historic properties. The Plan also must include calculated noise and vibration levels for various construction phases and mitigation measures that may be needed to meet the project specifications. The Contractor shall not start any construction work or operate any noise-generating construction equipment at the construction site before approval of the Plan. The Plan must be updated every three months or sooner if there are any changes to the construction activities.

It is possible that certain construction activities could cause intermittent localized concern from vibration in the project area. Processes such as earth moving with bulldozers, the use of vibratory compaction rollers, impact pile driving, demolitions, or pavement braking may cause construction related vibration impacts such as human annoyance or, in some cases, building damage. There are cases where it may be necessary to use this type of equipment in close proximity to residential buildings. The following are some procedures that can be used to minimize the potential impacts from construction vibration:

- Restrict the hours of vibration-intensive equipment or activities such as vibratory rollers so that impacts to residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).

- The owner of a building close enough to a construction vibration source that damage to that structure due to vibration is possible would be entitled to a preconstruction building inspection to document the preconstruction condition of that structure.

- Conduct vibration monitoring during vibration-intensive activities.

A combination of the mitigation techniques for equipment vibration control as well as administrative measures, when properly implemented, can be selected to provide the most effective means to minimize the effects of construction activity. Application of the mitigation measures will reduce the construction impacts; however, temporary increases in vibration would likely occur at some locations.

Chapter 9. References

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Appendix A Traffic Data

Table A-1 – Traffic Data for No-Build Conditions

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Mainline Traffic										
Eastbound I-10 (Total)	West to Vineyard Avenue	5	9,000	86.77%	7,809	4.48%	403	8.75%	788	65/65/55
HOV Lane		1	1,600	95.52%	1,528	4.48%	72	0.00%	0	
Inside Lanes		2	3,700	95.52%	3,534	4.48%	166	0.00%	0	
Outside Lanes		2	3,700	74.24%	2,746	4.48%	166	21.28%	788	
Eastbound I-10 (Total)	Cherry Avenue to Interstate 215	4	7,400	88.26%	6,531	4.43%	328	7.31%	541	65/65/55
Inside Lanes		2	3,700	95.57%	3,536	4.43%	164	0.00%	0	
Outside Lanes		2	3,700	80.95%	2,995	4.43%	164	14.62%	541	
Eastbound I-10 (Total)	Tippecanoe Avenue to East	4	7,400	91.92%	6,802	3.24%	240	4.84%	358	65/65/55
Inside Lanes		2	3,700	96.76%	3,580	3.24%	120	0.00%	0	
Outside Lanes		2	3,700	87.08%	3,222	3.24%	120	9.68%	358	
Westbound I-10 (Total)	West to Vineyard Avenue	5	9,000	87.27%	7,854	3.80%	342	8.93%	804	65/65/55
HOV Lane		1	1,600	96.20%	1,539	3.80%	61	0.00%	0	
Inside Lanes		2	3,700	96.20%	3,559	3.80%	141	0.00%	0	
Outside Lanes		2	3,700	74.48%	2,755	3.80%	141	21.72%	804	
Westbound I-10 (Total)	Cherry Avenue to Interstate 215	4	7,400	91.51%	6,771	2.86%	212	5.63%	417	65/65/55
Inside Lanes		2	3,700	97.14%	3,594	2.86%	106	0.00%	0	
Outside Lanes		2	3,700	85.86%	3,177	2.86%	106	11.26%	417	
Westbound I-10 (Total)	Tippecanoe Avenue to East	4	7,400	94.89%	7,022	1.16%	86	3.95%	292	65/65/55
Inside Lanes		2	3,700	98.84%	3,657	1.16%	43	0.00%	0	
Outside Lanes		2	3,700	90.95%	3,365	1.16%	43	7.90%	292	

Notes:

1 - Total volume based on LOS D/E volumes of 1,850 vehicles per hour per lane for main lanes and 1,600 vehicles per hour per lane for HOV lanes.

2 - Truck percenatges determined from traffic counts performed during worst-noise hour. Total truck percentages for no build and build are the same for each freeway direction. However, percentages per lane are different due to the HOV or Express Lanes that do not contain heavy trucks.

3 - Posted speeds were used for modeling.

Table A-1 – Traffic Data for No-Build Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Towne Avenue	1	900	97.00%	436	1.50%	7	1.50%	7	65/65/55 to 10
				97.00%	436	1.50%	7	1.50%	7	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	870	95.00%	413	2.50%	11	2.50%	11	10 to 65/65/55
				95.00%	413	2.50%	11	2.50%	11	10 to 0 to 65/65/55
Westbound On-Ramp (Meter)		1	900	98.00%	440	1.00%	5	1.00%	5	10 to 65/65/55
				98.00%	440	1.00%	5	1.00%	5	10 to 0 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	96.00%	480	2.00%	10	2.00%	10	65/65/55 to 10
				96.00%	480	2.00%	10	2.00%	10	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Indian Hill Boulevard	1	900	96.00%	432	2.00%	9	2.00%	9	65/65/55 to 10
				96.00%	432	2.00%	9	2.00%	9	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	96.00%	432	2.00%	9	2.00%	9	10 to 65/65/55
				96.00%	432	2.00%	9	2.00%	9	10 to 0 to 65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	432	2.00%	9	2.00%	9	10 to 65/65/55
				96.00%	432	2.00%	9	2.00%	9	10 to 0 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Monte Vista Avenue	1	930	97.00%	451	1.50%	7	1.50%	7	65/65/55 to 10
				97.00%	451	1.50%	7	1.50%	7	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	95.00%	854	2.50%	23	2.50%	23	10 to 65/65/55
Westbound On-Ramp (Meter)		1	830	98.00%	814	1.00%	8	1.00%	8	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	95.00%	474	2.50%	13	2.50%	13	65/65/55 to 10
				95.00%	474	2.50%	13	2.50%	13	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Central Avenue	1	940	96.00%	452	2.00%	9	2.00%	9	65/65/55 to 10
				96.00%	452	2.00%	9	2.00%	9	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	96.00%	480	2.00%	10	2.00%	10	65/65/55 to 10
				96.00%	480	2.00%	10	2.00%	10	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-1 – Traffic Data for No-Build Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Mountain Avenue	1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	94.00%	470	3.00%	15	3.00%	15	65/65/55 to 10
				94.00%	470	3.00%	15	3.00%	15	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Euclid Avenue	1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound On-Ramp (Meter)		1	750	97.00%	728	1.50%	11	1.50%	11	10 to 65/65/55
Westbound Loop On-Ramp (Meter)		1	530	97.00%	514	1.50%	8	1.50%	8	10 to 65/65/55
Westbound Off-Ramp (Stop)	7th Street	1	1000	96.00%	960	2.00%	20	2.00%	20	65/65/55 to 0
Eastbound Off-Ramp (Signal)	4th Street	1	1000	95.00%	474	2.50%	13	2.50%	13	65/65/55 to 10
				95.00%	474	2.50%	13	2.50%	13	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Vineyard Avenue	1	920	91.00%	419	2.25%	10	6.75%	31	65/65/55 to 10
				91.00%	419	2.25%	10	6.75%	31	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound On-Ramp (Meter)		1	420	98.00%	412	1.00%	4	1.00%	4	10 to 65/65/55
Westbound Loop On-Ramp (Meter)		1	300	90.00%	269	2.50%	8	7.50%	23	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-1 – Traffic Data for No-Build Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Cherry Avenue	2	1250	93.00%	581	1.75%	11	5.25%	33	65/65/55 to 10
				93.00%	581	1.75%	11	5.25%	33	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	95.00%	854	2.50%	23	2.50%	23	10 to 65/65/55
Westbound On-Ramp (Meter)		1	810	93.00%	753	1.75%	14	5.25%	43	10 to 65/65/55
Westbound Loop On-Ramp (Meter)		1	290	93.00%	270	1.75%	5	5.25%	15	10 to 65/65/55
Westbound Off-Ramp (Signal)		2	1270	95.00%	603	2.50%	16	2.50%	16	65/65/55 to 10
				95.00%	603	2.50%	16	2.50%	16	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Citrus Avenue	1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	710	97.00%	688	1.50%	11	1.50%	11	10 to 65/65/55
Westbound On-Ramp (Meter)		1	760	96.00%	730	2.00%	15	2.00%	15	10 to 65/65/55
Westbound Loop On-Ramp (Meter)		1	520	96.00%	500	2.00%	10	2.00%	10	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	780	97.00%	378	1.50%	6	1.50%	6	65/65/55 to 10
				97.00%	378	1.50%	6	1.50%	6	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Sierra Avenue	2	1630	96.00%	783	2.00%	16	2.00%	16	65/65/55 to 10
				96.00%	783	2.00%	16	2.00%	16	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound Off-Ramp (Signal)		2	1270	98.00%	623	1.00%	6	1.00%	6	65/65/55 to 10
				98.00%	623	1.00%	6	1.00%	6	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Cedar Avenue	2	1540	96.00%	740	2.00%	15	2.00%	15	65/65/55 to 10
				96.00%	740	2.00%	15	2.00%	15	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	910	97.00%	441	1.50%	7	1.50%	7	65/65/55 to 10
				97.00%	441	1.50%	7	1.50%	7	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-1 – Traffic Data for No-Build Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Riverside Avenue	2	940	96.00%	452	2.00%	9	2.00%	9	65/65/55 to 10
				96.00%	452	2.00%	9	2.00%	9	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	890	96.00%	427	2.00%	9	2.00%	9	65/65/55 to 10
				96.00%	427	2.00%	9	2.00%	9	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Pepper Avenue	1	540	97.00%	262	1.50%	4	1.50%	4	65/65/55 to 10
				97.00%	262	1.50%	4	1.50%	4	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
Westbound On-Ramp (Meter)		1	840	97.00%	814	1.50%	13	1.50%	13	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	840	98.00%	412	1.00%	4	1.00%	4	65/65/55 to 10
				98.00%	412	1.00%	4	1.00%	4	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Rancho Avenue	1	660	97.00%	320	1.50%	5	1.50%	5	65/65/55 to 10
				97.00%	320	1.50%	5	1.50%	5	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	750	98.00%	734	1.00%	8	1.00%	8	10 to 65/65/55
Westbound On-Ramp (Meter)		1	500	97.00%	484	1.50%	8	1.50%	8	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	630	99.00%	311	0.50%	2	0.50%	2	65/65/55 to 10
				99.00%	311	0.50%	2	0.50%	2	65/65/55 to 0
Eastbound Off-Ramp (Stop)	La Cadena Drive / 9th Street	1	220	95.00%	208	2.50%	6	2.50%	6	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	460	98.00%	450	1.00%	5	1.00%	5	10 to 65/65/55
Westbound On-Ramp (Meter)		1	340	96.00%	326	2.00%	7	2.00%	7	10 to 65/65/55
Westbound Off-Ramp (Stop)		1	610	98.00%	598	1.00%	6	1.00%	6	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Mount Vernon Avenue / Sperry Drive	1	800	97.00%	388	1.50%	6	1.50%	6	65/65/55 to 10
				97.00%	388	1.50%	6	1.50%	6	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	560	97.00%	544	1.50%	8	1.50%	8	10 to 65/65/55
Westbound On-Ramp (Meter)		1	780	97.00%	756	1.50%	12	1.50%	12	10 to 65/65/55
Westbound Off-Ramp (Stop)		1	910	98.00%	892	1.00%	9	1.00%	9	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-1 – Traffic Data for No-Build Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Tippecanoe Avenue	2	1100	96.00%	528	2.00%	11	2.00%	11	65/65/55 to 10
				96.00%	528	2.00%	11	2.00%	11	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	99.00%	890	0.50%	5	0.50%	5	10 to 65/65/55
Westbound On-Ramp (Meter)		1	840	98.00%	824	1.00%	8	1.00%	8	10 to 65/65/55
Westbound Loop On-Ramp (Meter)		1	640	98.00%	628	1.00%	6	1.00%	6	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	840	99.00%	416	0.50%	2	0.50%	2	65/65/55 to 10
				99.00%	416	0.50%	2	0.50%	2	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Mountain View Avenue	1	1000	95.00%	474	2.50%	13	2.50%	13	65/65/55 to 10
				95.00%	474	2.50%	13	2.50%	13	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	95.00%	854	2.50%	23	2.50%	23	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound Off-Ramp (Signal)	California Street	1	1000	95.00%	474	2.50%	13	2.50%	13	65/65/55 to 10
				95.00%	474	2.50%	13	2.50%	13	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	95.00%	854	2.50%	23	2.50%	23	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	98.00%	490	1.00%	5	1.00%	5	65/65/55 to 10
				98.00%	490	1.00%	5	1.00%	5	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Alabama Street	1	1000	96.00%	480	2.00%	10	2.00%	10	65/65/55 to 10
				96.00%	480	2.00%	10	2.00%	10	65/65/55 to 0
Eastbound On-Ramp (No Meter)		1	685	97.00%	665	1.50%	10	1.50%	10	10 to 65/65/55
EB I-10 to NB SR-210 Connector		2	2250	97.00%	2,182	1.50%	34	1.50%	34	65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	98.00%	490	1.00%	5	1.00%	5	65/65/55 to 10
				98.00%	490	1.00%	5	1.00%	5	65/65/55 to 0
SB SR-210 to WB I-10 Connector		1	1500	98.00%	1,470	1.00%	15	1.00%	15	65/65/55
Eastbound Off-Ramp to Frontage	Tennessee Street	1	500	95.00%	474	2.50%	13	2.50%	13	65/65/55 to 40
Eastbound Off-Ramp and Frontage (Signa		2	1185	95.78%	569	2.11%	12	2.11%	12	40 to 10
				96.01%	571	2.00%	11	2.00%	11	40 to 0
Eastbound On-Ramp (No Meter)		1	1000	98.00%	980	1.00%	10	1.00%	10	10 to 65/65/55
SB SR-210 to EB I-10 Connector	Colton Avenue / New York Street	1	1500	85.00%	1,275	3.75%	56	11.25%	169	65/65/55
WB I-10 to NB SR-210 Connector		2	3000	87.00%	2,609	3.25%	98	9.75%	293	65/65/55
Eastbound Off-Ramp (Signal)	Eureka Street	1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-1 – Traffic Data for No-Build Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound On-Ramp (No Meter)	Orange Avenue / 6th Street	1	760	98.00%	744	1.00%	8	1.00%	8	10 to 65/65/55
Westbound On-Ramp (No Meter)		1	730	96.00%	700	2.00%	15	2.00%	15	10 to 65/65/55
Westbound Loop On-Ramp (No Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
Westbound Off-Ramp (Stop)		1	490	97.00%	476	1.50%	7	1.50%	7	65/65/55 to 0
Eastbound Off-Ramp (Stop)	University Street	1	1000	97.00%	970	1.50%	15	1.50%	15	65/65/55 to 0
Westbound On-Ramp (No Meter)		1	1000	97.00%	970	1.50%	15	1.50%	15	10 to 65/65/55
Eastbound On-Ramp (No Meter)	E. Cypress Avenue	1	660	98.00%	646	1.00%	7	1.00%	7	10 to 65/65/55
Westbound Off-Ramp (Stop)		1	470	98.00%	460	1.00%	5	1.00%	5	65/65/55 to 0
Eastbound Off-Ramp (Stop)	Ford Street	1	770	99.00%	762	0.50%	4	0.50%	4	65/65/55 to 0
Eastbound On-Ramp (No Meter)		1	900	99.00%	890	0.50%	5	0.50%	5	10 to 65/65/55
Westbound On-Ramp (No Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	910	98.00%	445	1.00%	5	1.00%	5	65/65/55 to 10
				98.00%	445	1.00%	5	1.00%	5	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-1 – Traffic Data for No-Build Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Auxiliary Lane Traffic										
Eastbound Auxiliary Lane	Monte Vista Avenue to Central Avenue	1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane	Central Avenue to Mountain Avenue	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Eastbound Auxiliary Lane	Etiwanda Avenue to Cherry Avenue	1	1000	93.00%	965	1.75%	9	5.25%	26	65/65/55
Westbound Auxiliary Lane		1	1000	93.00%	965	1.75%	9	5.25%	26	65/65/55
Eastbound Auxiliary Lane	Cherry Avenue to Citrus Avenue	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane	Citrus Avenue to Sierra Avenue	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane		1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Eastbound Auxiliary Lane	Sierra Avenue to Cedar Avenue	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane		1	1000	98.00%	990	1.00%	5	1.00%	5	65/65/55
Westbound Auxiliary Lane	Cedar Avenue to Riverside Avenue	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Eastbound Auxiliary Lane	9th Street to Mount Vernon Avenue	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Eastbound Auxiliary Lane	Mount Vernon Avenue to Interstate 215	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Eastbound Auxiliary Lane	Waterman Avenue to Tippecanoe Avenue	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane		1	1000	98.00%	990	1.00%	5	1.00%	5	65/65/55
Eastbound Auxiliary Lane	Tippecanoe Avenue to Mountain View Avenue	1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane	Mountain View Avenue to California Street	1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane 1	California Street to Alabama Street	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Eastbound Auxiliary Lane 2		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane 1		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane 2		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane	I-210 to Eureka Street/ Orange Avenue	2	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Eastbound Auxiliary Lane	Ford Street to East	1	1000	99.00%	994	0.50%	3	0.50%	3	65/65/55

Notes:

1 - Auxiliary lane volume based on LOS D/E volume of 1,000 vehicles per hour per lane when less than one mile in length or 1,850 vehicles per hour per lane when greater than one mile in length.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-1 – Traffic Data for No-Build Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
NB Approaching EB On-Ramp	Indian Hill Boulevard	2	1,360	99.29%	1,351	0.39%	5	0.32%	4	35/35/35
NB Between Ramps		2	1,360	99.29%	1,351	0.39%	5	0.32%	4	
NB After WB Off-Ramp		2	1,360	99.29%	1,351	0.39%	5	0.32%	4	
SB Approaching WB On-Ramp		2	1,360	98.56%	1,340	0.66%	9	0.78%	11	
SB Between Ramps		2	1,360	98.56%	1,340	0.66%	9	0.78%	11	
SB After EB Off-Ramp		2	1,360	98.56%	1,340	0.66%	9	0.78%	11	
NB Approaching Palo Verde Street	Monte Vista Avenue	2	1360	96.00%	1,306	2.00%	27	2.00%	27	40/40/40
NB Between Palo Verde Street and WB Off-Ramp		2	1360	96.00%	1,306	2.00%	27	2.00%	27	
NB After WB Off-Ramp		3	1790	96.00%	1,718	2.00%	36	2.00%	36	
SB Approaching WB On-Ramp		3	1439	96.00%	1,381	2.00%	29	2.00%	29	
SB Between Ramps		2	1360	96.00%	1,306	2.00%	27	2.00%	27	
SB After EB Off-Ramp		2	1360	96.00%	1,306	2.00%	27	2.00%	27	
EB Approaching EB On-Ramp	Palo Verde Street	2	1246	96.00%	1,196	2.00%	25	2.00%	25	40/40/40
EB After EB On-Ramp		2	267	96.00%	257	2.00%	5	2.00%	5	
WB Approaching EB On-Ramp		2	413	96.00%	397	2.00%	8	2.00%	8	
WB After EB On-Ramp		2	261	96.00%	251	2.00%	5	2.00%	5	
SB Approaching Ramp	Central Avenue	3	2020	98.00%	1,996	1.00%	12	1.00%	12	40/40/40
SB Between Ramps		3	2020	98.00%	1,996	1.00%	12	1.00%	12	
SB After Ramps - 1		3	2020	98.00%	1,996	1.00%	12	1.00%	12	
SB After Ramps - 2		3	2020	98.00%	1,996	1.00%	12	1.00%	12	
NB Approaching Ramp - 1		3	1859	98.00%	1,833	1.00%	12	1.00%	14	
NB Approaching Ramp - 2		3	1859	98.00%	1,833	1.00%	12	1.00%	14	
NB Between Ramps		3	1859	98.00%	1,833	1.00%	12	1.00%	14	
NB After Ramps		3	1859	98.00%	1,833	1.00%	12	1.00%	14	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-1 – Traffic Data for No-Build Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
NB Between 6th Avenue and EB On-Ramp	Mountain Avenue	3	1790	97.00%	1,736	1.50%	27	1.50%	27	40/40/40
NB Between Ramps		4	2083	97.00%	2,021	1.50%	31	1.50%	31	
NB Between WB Off-Ramp and 7th Street		5	2587	97.00%	2,509	1.50%	39	1.50%	39	
NB After 7th Street		3	2040	97.00%	1,978	1.50%	31	1.50%	31	
SB Approaching 7th Street		4	2125	97.00%	2,061	1.50%	32	1.50%	32	
SB Between 7th Street and WB On-Ramp		3	2040	97.00%	1,978	1.50%	31	1.50%	31	
SB Between Ramps		4	2273	97.00%	2,205	1.50%	34	1.50%	34	
SB Between EB Off-Ramp and 6th Street		3	2040	97.00%	1,978	1.50%	31	1.50%	31	
EB Approaching Mountain Avenue	7th Street at Mountain Avenue	2	479	97.00%	465	1.50%	7	1.50%	7	40/40/40
WB After Mountain Avenue		2	554	97.00%	538	1.50%	8	1.50%	8	
EB Approaching Euclid Avenue	7th Street at Euclid Avenue	1	128	96.00%	122	2.00%	3	2.00%	3	40/40/40
EB Between Euclid Avenue and WB Off-Ramp		1	213	96.00%	205	2.00%	4	2.00%	4	
EB After WB Off-Ramp		1	309	96.00%	297	2.00%	6	2.00%	6	
WB Approaching WB Off-Ramp		1	203	96.00%	195	2.00%	4	2.00%	4	
WB Between WB Off-Ramp and Euclid Avenue		3	1161	96.00%	1,115	2.00%	23	2.00%	23	
WB After Euclid Avenue		1	323	96.00%	311	2.00%	6	2.00%	6	
NB 2nd Street	2nd Street	2	259	100.00%	259	0.00%	0	0.00%	0	25/25/25
NB Approaching EB On-Ramp	Euclid Avenue	3	2040	97.00%	1,978	1.50%	31	1.50%	31	40/40/40
NB Between Ramps		3	2040	97.00%	1,978	1.50%	31	1.50%	31	
NB Between WB Off-Ramp and 7th Street		3	2040	97.00%	1,978	1.50%	31	1.50%	31	
NB After 7th Street		3	2040	97.00%	1,978	1.50%	31	1.50%	31	
SB Approaching 7th Street		3	2040	97.00%	1,978	1.50%	31	1.50%	31	
SB Between 7th Street and WB On-Ramp		3	2040	97.00%	1,978	1.50%	31	1.50%	31	
SB Between Ramps		3	1982	97.00%	1,922	1.50%	30	1.50%	30	
SB After EB Off-Ramp		3	1815	97.00%	1,761	1.50%	27	1.50%	27	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-1 – Traffic Data for No-Build Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
EB Approaching Ramp - 1	4th Street	2	694	99.20%	688	0.40%	3	0.40%	3	35/35/35
EB Approaching Ramp - 2		1	680	99.20%	674	0.40%	3	0.40%	3	
EB Between Ramps		1	680	99.20%	674	0.40%	3	0.40%	3	
EB After Ramp - 1		2	694	99.20%	688	0.40%	3	0.40%	3	
EB After Ramp - 2		2	694	99.20%	688	0.40%	3	0.40%	3	
WB Approaching Ramp		1	673	99.60%	670	0.30%	2	0.10%	1	
WB Between Ramps		1	673	99.60%	670	0.30%	2	0.10%	1	
WB After Ramp - 1		1	673	99.60%	670	0.30%	2	0.10%	1	
WB After Ramp - 2		2	673	99.60%	670	0.30%	2	0.10%	1	
NB Approaching EB On-Ramp	Vineyard Avenue	2	1360	94.00%	1,279	1.50%	20	4.50%	61	45/45/45
NB Between Ramps		2	1360	94.00%	1,279	1.50%	20	4.50%	61	
NB After WB Off-Ramp		2	1360	94.00%	1,279	1.50%	20	4.50%	61	
SB Approaching WB On-Ramp		2	1360	94.00%	1,279	1.50%	20	4.50%	61	50/50/50
SB Between Ramps		2	1360	94.00%	1,279	1.50%	20	4.50%	61	
SB After EB Off-Ramp		2	1360	94.00%	1,279	1.50%	20	4.50%	61	
NB Approaching EB On-Ramp	Cherry Avenue	3	2040	97.94%	1,998	0.66%	13	1.40%	29	50/50/50
NB Between Ramps		3	2040	97.94%	1,998	0.66%	13	1.40%	29	
NB After WB Off-Ramp		2	1360	97.94%	1,332	0.66%	9	1.40%	19	
SB Approaching WB On-Ramp		3	1824	96.55%	1,761	1.04%	19	2.41%	44	50/50/50
SB Between Ramps		3	1824	96.55%	1,761	1.04%	19	2.41%	44	
SB After EB Off-Ramp		3	1824	96.55%	1,761	1.04%	19	2.41%	44	
NB Approaching EB On-Ramp	Citrus Avenue	2	1360	98.20%	1,335	0.73%	10	1.07%	15	35/35/35
NB Between Ramps		3	1780	98.20%	1,748	0.73%	13	1.07%	19	
NB After WB Off-Ramp		2	1360	98.20%	1,335	0.73%	10	1.07%	15	
SB Approaching WB On-Ramp		1	680	97.73%	665	0.79%	5	1.48%	10	35/35/35
SB Between Ramps		2	1012	97.73%	989	0.79%	8	1.48%	15	
SB After EB Off-Ramp		1	680	97.73%	665	0.79%	5	1.48%	10	
SB Approaching WB Ramps	Sierra Avenue	3	2040	98.60%	2,012	0.70%	14	0.70%	14	35/35/35
SB After WB Ramps		3	2040	98.60%	2,012	0.70%	14	0.70%	14	
NB Approaching EB Ramps		3	1648	98.40%	1,622	0.80%	13	0.80%	13	
NB After EB Ramps		3	1648	98.40%	1,622	0.80%	13	0.80%	13	
SB Approaching Ramps	Cedar Ave	3	1373	98.00%	1,345	0.90%	13	1.10%	15	40/40/40
SB Between Ramps		2	1360	98.00%	1,332	0.90%	13	1.10%	15	
NB Between Ramps		2	1360	98.30%	1,337	0.70%	9	1.00%	14	
NB After Ramps		2	1360	98.30%	1,337	0.70%	9	1.00%	14	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-1 – Traffic Data for No-Build Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
SB Approaching Valley Blvd	Riverside Avenue	3	1877	97.00%	1,828	1.00%	19	2.00%	30	35/35/35
SB Approaching Ramps		3	1877	97.00%	1,828	1.00%	19	2.00%	30	
SB Between Ramps		2	1360	97.00%	1,324	1.00%	14	2.00%	22	
NB Between Ramps		3	2040	98.20%	2,003	0.80%	16	1.00%	21	
NB Approaching Valley Blvd		3	2040	98.20%	2,003	0.80%	16	1.00%	21	
NB After Valley Blvd		2	1360	98.20%	1,336	0.80%	10	1.00%	14	
EB Between Pepper Avenue and Rancho Avenue	Valley Boulevard	2	623	99.00%	617	0.48%	3	0.52%	3	45/45/45
WB Between Pepper Avenue and Rancho Avenue		2	598	99.32%	594	0.34%	2	0.34%	2	
NB Approaching Ramps	Rancho Avenue	2	1360	98.72%	1,343	0.57%	8	0.71%	10	45/45/45
NB Between Ramps		2	1360	98.72%	1,343	0.57%	8	0.71%	10	
NB After Ramps		2	1360	98.72%	1,343	0.57%	8	0.71%	10	
NB After Valley Blvd		2	1360	98.72%	1,343	0.57%	8	0.71%	10	
SB Approaching Valley Blvd		2	980	98.78%	968	0.61%	6	0.61%	6	
SB Approaching Ramps		2	980	98.78%	968	0.61%	6	0.61%	6	
SB Between Ramps		2	980	98.78%	968	0.61%	6	0.61%	6	
SB After Ramps		2	980	98.78%	968	0.61%	6	0.61%	6	
NB Direction	La Cadena Drive	2	1269	98.50%	1,250	0.63%	8	0.87%	11	45/45/45
SB Direction		2	971	98.77%	959	0.51%	5	0.72%	7	
NB Direction	9th Street	1	459	97.39%	447	0.87%	4	1.74%	8	30/30/30
SB Direction		1	530	98.87%	524	0.38%	2	0.75%	4	
EB Between Rancho Avenue and La Cadena Drive	Valley Boulevard	2	537	99.07%	532	0.37%	2	0.56%	3	35/35/35
WB Between Rancho Avenue and La Cadena Drive		2	478	99.02%	473	0.43%	2	0.55%	3	
EB Between La Cadena Drive and 9th Street		2	533	98.66%	526	0.61%	3	0.73%	4	35/35/35
WB Between La Cadena Drive and 9th Street		2	404	98.71%	399	0.41%	2	0.88%	3	
EB Between 9th Street and Mt. Vernon Avenue		2	533	98.66%	526	0.61%	3	0.73%	4	35/35/35
WB Between 9th Street and Mt. Vernon Avenue		2	404	98.71%	399	0.41%	2	0.88%	3	
EB Between Mt. Vernon Avenue and Sperry Drive		1	89	96.63%	86	1.12%	1	2.25%	2	35/35/35
WB Between Mt. Vernon Avenue and Sperry Drive		1	537	99.07%	532	0.37%	2	0.56%	3	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-1 – Traffic Data for No-Build Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
NB Direction	Mt. Vernon Avenue	2	804	98.51%	792	0.62%	5	0.87%	7	30/30/30
SB Direction (Two Lanes)		2	910	99.01%	901	0.44%	4	0.55%	5	
SB Direction (One Lane)		1	680	99.01%	673	0.44%	3	0.55%	4	
NB Direction	Sperry Drive	1	544	96.63%	526	1.12%	6	2.25%	12	30/30/30
SB Direction		1	82	100.00%	82	0.00%	0	0.00%	0	
NB Approaching EB On-Ramp	Tippecanoe Avenue	3	1689	99.29%	1,677	0.24%	4	0.47%	8	35/35/35
NB Between Ramps		2	1360	99.29%	1,351	0.24%	3	0.47%	6	
NB After WB Off-Ramp		3	1689	99.29%	1,677	0.24%	4	0.47%	8	
SB Approaching WB On-Ramp		3	1104	99.73%	1,101	0.09%	1	0.18%	2	
SB Between Ramps		2	1104	99.73%	1,101	0.09%	1	0.18%	2	
SB After EB Off-Ramp		2	1104	99.73%	1,101	0.09%	1	0.18%	2	
NB Approaching EB On-Ramp	Mountain View Avenue	2	1360	97.55%	1,327	0.90%	12	1.55%	21	35/35/35
NB Between Ramps		2	1360	97.55%	1,327	0.90%	12	1.55%	21	
NB After WB Off-Ramp		2	1360	97.55%	1,327	0.90%	12	1.55%	21	
SB Approaching WB On-Ramp		2	1360	98.64%	1,342	0.55%	7	0.82%	11	
SB Between Ramps		2	1360	98.64%	1,342	0.55%	7	0.82%	11	
SB After EB Off-Ramp		2	1360	98.64%	1,342	0.55%	7	0.82%	11	
NB Approaching Ramps	California Street	2	1360	97.80%	1,330	0.90%	12	1.30%	18	40/40/40
NB Between Ramps		2	1360	97.80%	1,330	0.90%	12	1.30%	18	
NB Approaching Orange Tree		3	1472	97.80%	1,440	0.90%	13	1.30%	19	
NB After Orange Tree		2	1360	97.80%	1,330	0.90%	12	1.30%	18	
SB Approaching Orange Tree		2	1220	98.77%	1,205	0.57%	7	0.66%	8	
SB Approaching Ramps		2	1220	98.77%	1,205	0.57%	7	0.66%	8	
SB Between Ramps		2	1220	98.77%	1,205	0.57%	7	0.66%	8	
SB After Ramps		2	1220	98.77%	1,205	0.57%	7	0.66%	8	
NB Direction	Alabama Street	2	1360	98.11%	1,334	0.78%	11	1.11%	15	40/40/40
SB Direction		2	1340	98.80%	1,324	0.60%	8	0.60%	8	
Frontage Road (Alabama to Tennessee)	Tennessee Street	1	685	97.00%	665	1.50%	10	1.50%	10	40/40/40
SB Between Ramps		2	824	98.00%	808	1.00%	8	1.00%	8	
SB After EB Off-Ramp		2	837	98.00%	821	1.00%	8	1.00%	8	
NB Approaching EB On-Ramp		2	1228	98.00%	1,204	1.00%	12	1.00%	12	
NB Between Ramps		2	1220	98.00%	1,196	1.00%	12	1.00%	12	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
WB (Tennessee to Texas Streets)	Colton Avenue	2	168	98.80%	166	0.60%	1	0.60%	1	35/35/35
EB (Tennessee to Texas Streets)		2	413	99.28%	410	0.48%	2	0.24%	1	
WB (East of Texas Street)		1	168	98.80%	166	0.60%	1	0.60%	1	
EB (East of Texas Street)		1	413	99.28%	410	0.48%	2	0.24%	1	
NB Direction	Texas Street	2	426	99.06%	422	0.47%	2	0.47%	2	40/40/40
SB Direction		2	266	98.87%	263	0.75%	2	0.38%	1	
NB Before W Pearl Avenue	Eureka Street	2	283	98.23%	278	0.71%	2	1.06%	3	30/30/30
NB After W Pearl Avenue		1	283	98.23%	278	0.71%	2	1.06%	3	30 to 10
SB Before W Pearl Avenue		1	160	98.75%	158	0.63%	1	0.63%	1	30/30/30
SB After W Pearl Avenue		2	160	98.75%	158	0.63%	1	0.63%	1	
NB Direction	Orange Street	2	2125	99.06%	2,105	0.38%	8	0.56%	12	25/25/25
SB Direction		2	901	99.01%	892	0.44%	4	0.55%	5	
NB Direction	Sixth Street	2	14	100.00%	14	0.00%	0	0.00%	0	25/25/25
SB Direction		2	442	98.87%	437	0.45%	2	0.68%	3	
West Pearl Avenue	Pearl Avenue	2	1000	97.00%	970	1.50%	15	1.50%	15	30/30/30
East Pearl Avenue		2	1000	97.00%	970	1.50%	15	1.50%	15	
NB Direction	Church Street	2	323	99.38%	321	0.31%	1	0.31%	1	30/30/30
SB Direction		2	184	98.92%	182	0.54%	1	0.54%	1	
NB Direction	University Street	2	1095	99.08%	1,085	0.37%	4	0.55%	6	30/30/30
SB Direction		2	105	100.00%	105	0.00%	0	0.00%	0	
EB Direction	Citrus Avenue	1	882	99.32%	876	0.34%	3	0.34%	3	40/40/40
WB Direction		1	281	98.22%	276	0.71%	2	1.07%	3	
NB Direction	Cypress Avenue	1	119	100.00%	119	0.00%	0	0.00%	0	45/45/45
SB Direction		1	479	99.58%	477	0.21%	1	0.21%	1	
NB Direction	Palm Avenue	1	107	100.00%	107	0.00%	0	0.00%	0	40
SB Direction		1	75	100.00%	75	0.00%	0	0.00%	0	
NB Direction	Highland Avenue	1	287	98.95%	284	0.70%	2	0.35%	1	45/45/45
SB Direction		1	240	99.16%	238	0.42%	1	0.42%	1	
NB Direction	Ford Street	1	724	99.31%	719	0.28%	2	0.41%	3	40/40/40
SB Direction		1	70	100.00%	70	0.00%	0	0.00%	0	
EB Direction	Resivoir Road	1	46	100.00%	46	0.00%	0	0.00%	0	45
WB Direction		1	46	100.00%	46	0.00%	0	0.00%	0	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-2 – Traffic Data for Build Alternative 2 Conditions

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Mainline Traffic										
Eastbound I-10 (Total)	Cherry Avenue to Interstate 215	5	9,000	88.26%	7,943	4.43%	399	7.31%	658	65/65/55
HOV Lane		1	1,600	95.57%	1,529	4.43%	71	0.00%	0	
Inside Lanes		2	3,700	95.57%	3,536	4.43%	164	0.00%	0	
Outside Lanes		2	3,700	77.79%	2,878	4.43%	164	17.78%	658	
Eastbound I-10 (Total)	Tippecanoe Avenue to California Street	5	9,000	91.92%	8,272	3.24%	292	4.84%	436	65/65/55
HOV Lane		1	1,600	96.76%	1,548	3.24%	52	0.00%	0	
Inside Lanes		2	3,700	96.76%	3,580	3.24%	120	0.00%	0	
Outside Lanes		2	3,700	84.99%	3,144	3.24%	120	11.77%	436	
Westbound I-10 (Total)	Cherry Avenue to Interstate 215	5	9,000	91.51%	8,236	2.86%	257	5.63%	507	65/65/55
HOV Lane		1	1,600	97.14%	1,554	2.86%	46	0.00%	0	
Inside Lanes		2	3,700	97.14%	3,594	2.86%	106	0.00%	0	
Outside Lanes		2	3,700	83.45%	3,087	2.86%	106	13.69%	507	
Westbound I-10 (Total)	Tippecanoe Avenue to California Street	5	9,000	94.89%	8,540	1.16%	104	3.95%	356	65/65/55
HOV Lane		1	1,600	98.84%	1,581	1.16%	19	0.00%	0	
Inside Lanes		2	3,700	98.84%	3,657	1.16%	43	0.00%	0	
Outside Lanes		2	3,700	89.23%	3,301	1.16%	43	9.61%	356	

Notes:

1 - Total volume based on LOS D/E volumes of 1,850 vehicles per hour per lane for main lanes and 1,600 vehicles per hour per lane for HOV lanes.

2 - Truck percenatges determined from traffic counts performed during worst-noise hour. Total truck percentages for no build and build are the same for each freeway direction. However, percentages per lane are different due to the HOV or Express Lanes that do not contain heavy trucks.

3 - Posted speeds were used for modeling.

Table A-2 – Traffic Data for Build Alternative 2 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Cherry Avenue	2	1290	93.00%	600	1.75%	11	5.25%	34	65/65/55 to 10
				93.00%	600	1.75%	11	5.25%	34	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	95.00%	854	2.50%	23	2.50%	23	10 to 65/65/55
Westbound On-Ramp (Meter)		1	860	93.00%	800	1.75%	15	5.25%	45	10 to 65/65/55
Westbound Loop On-Ramp (Meter)		1	330	93.00%	307	1.75%	6	5.25%	17	10 to 65/65/55
Westbound Off-Ramp (Signal)		2	1400	95.00%	664	2.50%	18	2.50%	18	65/65/55 to 10
				95.00%	664	2.50%	18	2.50%	18	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Citrus Avenue	1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	680	97.00%	660	1.50%	10	1.50%	10	10 to 65/65/55
Westbound On-Ramp (Meter)		1	770	96.00%	740	2.00%	15	2.00%	15	10 to 65/65/55
Westbound Loop On-Ramp (Meter)		1	520	96.00%	500	2.00%	10	2.00%	10	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	810	97.00%	393	1.50%	6	1.50%	6	65/65/55 to 10
				97.00%	393	1.50%	6	1.50%	6	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Sierra Avenue	2	1630	96.00%	783	2.00%	16	2.00%	16	65/65/55 to 10
				96.00%	783	2.00%	16	2.00%	16	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound Off-Ramp (Signal)		2	1240	98.00%	608	1.00%	6	1.00%	6	65/65/55 to 10
				98.00%	608	1.00%	6	1.00%	6	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Cedar Avenue	2	1500	96.00%	720	2.00%	15	2.00%	15	65/65/55 to 10
				96.00%	720	2.00%	15	2.00%	15	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-2 – Traffic Data for Build Alternative 2 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Riverside Avenue	2	980	96.00%	470	2.00%	10	2.00%	10	65/65/55 to 10
				96.00%	470	2.00%	10	2.00%	10	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	930	96.00%	447	2.00%	9	2.00%	9	65/65/55 to 10
				96.00%	447	2.00%	9	2.00%	9	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Pepper Avenue	1	560	97.00%	272	1.50%	4	1.50%	4	65/65/55 to 10
				97.00%	272	1.50%	4	1.50%	4	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
Westbound On-Ramp (Meter)		1	840	97.00%	814	1.50%	13	1.50%	13	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	810	98.00%	397	1.00%	4	1.00%	4	65/65/55 to 10
				98.00%	397	1.00%	4	1.00%	4	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Rancho Avenue	1	640	97.00%	310	1.50%	5	1.50%	5	65/65/55 to 10
				97.00%	310	1.50%	5	1.50%	5	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	750	98.00%	734	1.00%	8	1.00%	8	10 to 65/65/55
Westbound On-Ramp (Meter)		1	530	97.00%	514	1.50%	8	1.50%	8	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	600	99.00%	296	0.50%	2	0.50%	2	65/65/55 to 10
				99.00%	296	0.50%	2	0.50%	2	65/65/55 to 0
Eastbound Off-Ramp (Stop)	La Cadena Drive / 9th Street	1	250	95.00%	238	2.50%	6	2.50%	6	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	460	98.00%	450	1.00%	5	1.00%	5	10 to 65/65/55
Westbound On-Ramp (Meter)		1	340	96.00%	326	2.00%	7	2.00%	7	10 to 65/65/55
Westbound Off-Ramp (Stop)		1	440	98.00%	432	1.00%	4	1.00%	4	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Mount Vernon Avenue / Sperry Drive	1	770	97.00%	373	1.50%	6	1.50%	6	65/65/55 to 10
				97.00%	373	1.50%	6	1.50%	6	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	730	97.00%	708	1.50%	11	1.50%	11	10 to 65/65/55
Westbound On-Ramp (Meter)		1	810	97.00%	786	1.50%	12	1.50%	12	10 to 65/65/55
Westbound Off-Ramp (Stop)		1	1000	98.00%	980	1.00%	10	1.00%	10	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-2 – Traffic Data for Build Alternative 2 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Tippecanoe Avenue	2	1130	96.00%	543	2.00%	11	2.00%	11	65/65/55 to 10
				96.00%	543	2.00%	11	2.00%	11	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	99.00%	890	0.50%	5	0.50%	5	10 to 65/65/55
Westbound On-Ramp (Meter)		1	790	98.00%	774	1.00%	8	1.00%	8	10 to 65/65/55
Westbound Loop On-Ramp (Meter)		1	720	98.00%	706	1.00%	7	1.00%	7	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	840	99.00%	416	0.50%	2	0.50%	2	65/65/55 to 10
				99.00%	416	0.50%	2	0.50%	2	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Mountain View Avenue	1	1000	95.00%	474	2.50%	13	2.50%	13	65/65/55 to 10
				95.00%	474	2.50%	13	2.50%	13	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	95.00%	854	2.50%	23	2.50%	23	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound Off-Ramp (Signal)	California Street	1	1000	95.00%	474	2.50%	13	2.50%	13	65/65/55 to 10
				95.00%	474	2.50%	13	2.50%	13	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	95.00%	854	2.50%	23	2.50%	23	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	98.00%	490	1.00%	5	1.00%	5	65/65/55 to 10
				98.00%	490	1.00%	5	1.00%	5	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-2 – Traffic Data for Build Alternative 2 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Auxiliary Lane Traffic										
Eastbound Auxiliary Lane	Etiwanda Avenue to Cherry Avenue	1	1000	93.00%	965	1.75%	9	5.25%	26	65/65/55
Westbound Auxiliary Lane		1	1000	93.00%	965	1.75%	9	5.25%	26	65/65/55
Eastbound Auxiliary Lane	Cherry Avenue to Citrus Avenue	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane	Citrus Avenue to Sierra Avenue	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane		1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Eastbound Auxiliary Lane	Sierra Avenue to Cedar Avenue	1	1000	98.00%	990	1.00%	5	1.00%	5	65/65/55
Westbound Auxiliary Lane		1	1000	98.00%	990	1.00%	5	1.00%	5	65/65/55
Westbound Auxiliary Lane	Cedar Avenue to Riverside Avenue	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane	Rancho Avenue to La Cadena Drive	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Eastbound Auxiliary Lane	9th Street to Mount Vernon Avenue	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Eastbound Auxiliary Lane	Mount Vernon Avenue to Interstate 215	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Eastbound Auxiliary Lane	Waterman Avenue to Tippecanoe Avenue	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane		1	1000	98.00%	990	1.00%	5	1.00%	5	65/65/55
Eastbound Auxiliary Lane	Tippecanoe Avenue to Mountain View Avenue	1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane	Mountain View Avenue to California Street	1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane	Califronia Street to Alabama Street	1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Westbound Auxiliary Lane		2	2000	95.00%	1,950	2.50%	25	2.50%	25	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane	Interstate 210 to Eureka Street	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55

Notes:

1 - Auxiliary lane volume based on LOS D/E volume of 1,000 vehicles per hour per lane when less than one mile in length or 1,850 vehicles per hour per lane when greater than one mile in length.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-2 – Traffic Data for Build Alternative 2 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
NB Approaching EB On-Ramp	Cherry Avenue	3	2040	97.75%	1,994	0.68%	14	1.57%	32	50/50/50
NB Between Ramps		3	2040	97.75%	1,994	0.68%	14	1.57%	32	
NB After WB Off-Ramp		2	1360	97.75%	1,330	0.68%	9	1.57%	21	
SB Approaching WB On-Ramp		3	1878	96.70%	1,816	1.01%	19	2.29%	43	50/50/50
SB Between Ramps		3	1878	96.70%	1,816	1.01%	19	2.29%	43	
SB After EB Off-Ramp		3	1878	96.70%	1,816	1.01%	19	2.29%	43	
NB Approaching EB On-Ramp	Citrus Avenue	2	1360	98.20%	1,335	0.71%	10	1.09%	15	35/35/35
NB Between Ramps		3	1830	98.20%	1,797	0.71%	13	1.09%	20	
NB After WB Off-Ramp		2	1360	98.20%	1,335	0.71%	10	1.09%	15	
SB Approaching WB On-Ramp		1	680	97.82%	665	0.76%	5	1.42%	10	35/35/35
SB Between Ramps		2	1058	97.82%	1,035	0.76%	8	1.42%	15	
SB After EB Off-Ramp		1	680	97.82%	665	0.76%	5	1.42%	10	
SB Approaching WB Ramps	Sierra Avenue	3	1690	98.40%	1,662	0.80%	14	0.80%	14	35/35/35
SB After WB Ramps		3	1690	98.40%	1,662	0.80%	14	0.80%	14	
NB Approaching EB Ramps		3	2040	98.60%	2,011	0.70%	14	0.70%	15	
NB After EB Ramps		3	2040	98.60%	2,011	0.70%	14	0.70%	15	
SB Approaching Ramps	Cedar Ave	3	1377	97.90%	1,348	1.00%	14	1.10%	15	40/40/40
SB Between Ramps		2	1360	97.90%	1,331	1.00%	14	1.10%	15	
NB Between Ramps		2	1360	98.30%	1,337	0.70%	9	1.00%	14	
NB After Ramps		2	1360	98.30%	1,337	0.70%	9	1.00%	14	
SB Approaching Valley Blvd	Riverside Avenue	3	1888	97.00%	1,841	1.00%	18	2.00%	29	35/35/35
SB Approaching Ramps		3	1888	97.00%	1,841	1.00%	18	2.00%	29	
SB Between Ramps		2	1360	97.00%	1,326	1.00%	13	2.00%	21	
NB Between Ramps		3	2040	98.30%	2,005	0.70%	15	1.00%	20	
NB Approaching Valley Blvd		3	2040	98.30%	2,005	0.70%	15	1.00%	20	
NB After Valley Blvd		2	1360	98.30%	1,336	0.70%	10	1.00%	14	
EB Between Pepper Avenue and Rancho Avenue	Valley Boulevard	2	950	99.05%	941	0.42%	4	0.53%	5	45/45/45
WB Between Pepper Avenue and Rancho Avenue		2	589	99.32%	585	0.34%	2	0.34%	2	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-2 – Traffic Data for Build Alternative 2 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
NB Approaching Ramps	Rancho Avenue	2	1163	98.79%	1,149	0.52%	6	0.69%	8	45/45/45
NB Between Ramps		2	1163	98.79%	1,149	0.52%	6	0.69%	8	
NB After Ramps		2	1163	98.79%	1,149	0.52%	6	0.69%	8	
NB After Valley Blvd		2	1163	98.79%	1,149	0.52%	6	0.69%	8	
SB Approaching Valley Blvd		2	1078	98.70%	1,064	0.65%	7	0.65%	7	
SB Approaching Ramps		2	1078	98.70%	1,064	0.65%	7	0.65%	7	
SB Between Ramps		2	1078	98.70%	1,064	0.65%	7	0.65%	7	
SB After Ramps		2	1078	98.70%	1,064	0.65%	7	0.65%	7	
NB Direction	La Cadena Drive	2	1242	98.47%	1,223	0.64%	8	0.89%	11	45/45/45
SB Direction		2	1060	98.49%	1,044	0.57%	6	0.94%	10	
NB Direction	9th Street	1	559	96.96%	542	1.07%	6	1.97%	11	30/30/30
SB Direction		1	531	98.87%	525	0.38%	2	0.75%	4	
EB Between Rancho Avenue and La Cadena Drive	Valley Boulevard	2	645	99.68%	643	0.16%	1	0.16%	1	35/35/35
WB Between Rancho Avenue and La Cadena Drive		2	512	99.42%	508	0.29%	2	0.29%	2	
EB Between La Cadena Drive and 9th Street		2	638	98.94%	631	0.50%	3	0.56%	4	35/35/35
WB Between La Cadena Drive and 9th Street		2	661	99.45%	656	0.22%	2	0.33%	3	
EB Between 9th Street and Mt. Vernon Avenue		2	638	98.94%	631	0.50%	3	0.56%	4	35/35/35
WB Between 9th Street and Mt. Vernon Avenue		2	661	99.45%	656	0.22%	2	0.33%	3	
EB Between Mt. Vernon Avenue and Sperry Drive		1	55	96.36%	53	1.82%	1	1.82%	1	35/35/35
WB Between Mt. Vernon Avenue and Sperry Drive		1	645	99.68%	643	0.16%	1	0.16%	1	
NB Direction	Mt. Vernon Avenue	2	763	98.56%	752	0.52%	4	0.92%	7	30/30/30
SB Direction (Two Lanes)		2	950	99.36%	944	0.32%	3	0.32%	3	
SB Direction (One Lane)		1	680	99.36%	676	0.32%	2	0.32%	2	
NB Direction	Sperry Drive	1	555	96.36%	535	1.82%	10	1.82%	10	30/30/30
SB Direction		1	145	100.00%	145	0.00%	0	0.00%	0	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-2 – Traffic Data for Build Alternative 2 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
NB Approaching EB On-Ramp	Tippecanoe Avenue	3	1816	98.90%	1,677	0.39%	7	0.72%	13	35/35/35
NB Between Ramps		2	1360	98.89%	1,345	0.39%	5	0.72%	10	
NB After WB Off-Ramp		3	1816	98.90%	1,677	0.39%	7	0.72%	13	
SB Approaching WB On-Ramp		3	1110	99.73%	1,101	0.09%	1	0.18%	2	
SB Between Ramps		2	1110	99.73%	1,101	0.09%	1	0.18%	2	
SB After EB Off-Ramp		2	1110	99.73%	1,101	0.09%	1	0.18%	2	
NB Approaching EB On-Ramp	Mountain View Avenue	2	1360	97.38%	1,324	0.96%	13	1.66%	23	35/35/35
NB Between Ramps		2	1360	97.38%	1,324	0.96%	13	1.66%	23	
NB After WB Off-Ramp		2	1360	97.38%	1,324	0.96%	13	1.66%	23	
SB Approaching WB On-Ramp		2	1360	98.66%	1,342	0.54%	7	0.80%	11	
SB Between Ramps		2	1360	98.66%	1,342	0.54%	7	0.80%	11	
SB After EB Off-Ramp		2	1360	98.66%	1,342	0.54%	7	0.80%	11	
NB Approaching Ramps	California Street	2	1360	97.66%	1,328	0.92%	13	1.42%	19	40/40/40
NB Between Ramps		2	1360	97.66%	1,328	0.92%	13	1.42%	19	
NB Approaching Orange Tree		3	1407	97.66%	1,374	0.92%	13	1.42%	20	
NB After Orange Tree		2	1360	97.66%	1,328	0.92%	13	1.42%	19	
SB Approaching Orange Tree		2	1118	98.92%	1,106	0.54%	6	0.54%	6	
SB Approaching Ramps		2	1118	98.92%	1,106	0.54%	6	0.54%	6	
SB Between Ramps		2	1118	98.92%	1,106	0.54%	6	0.54%	6	
SB After Ramps		2	1118	98.92%	1,106	0.54%	6	0.54%	6	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Mainline Traffic										
Eastbound I-10 (Total)	West to Station 1006+00	5	9,250	86.77%	8,027	4.48%	414	8.75%	809	65/65/55
Inside Lane		1	1,850	95.52%	1,767	4.48%	83	0.00%	0	
Middle Lanes		2	3,700	95.52%	3,534	4.48%	166	0.00%	0	
Outside Lanes		2	3,700	73.65%	2,725	4.48%	166	21.88%	809	
Eastbound I-10 (Total)	Station 1006+00 to Station 1022+00	6	11,100	86.77%	9,632	4.48%	497	8.75%	971	65/65/55
Inside Lanes		2	3,700	95.52%	3,534	4.48%	166	0.00%	0	
Middle Lanes		2	3,700	95.52%	3,534	4.48%	166	0.00%	0	
Outside Lanes		2	3,700	69.27%	2,563	4.48%	166	26.25%	971	
Eastbound I-10 (Total)	Station 1022+00 to Vineyard Avenue	6	10,800	86.77%	9,371	4.48%	484	8.75%	945	65/65/55
Express Lanes		2	3,400	95.52%	3,248	4.48%	152	0.00%	0	
Inside Lanes		2	3,700	95.52%	3,534	4.48%	166	0.00%	0	
Outside Lanes		2	3,700	69.98%	2,589	4.48%	166	25.54%	945	
Eastbound I-10 (Total)	Cherry Avenue to Interstate 215	6	10,800	88.26%	9,533	4.43%	478	7.31%	789	65/65/55
Express Lanes		2	3,400	95.57%	3,249	4.43%	151	0.00%	0	
Inside Lanes		2	3,700	95.57%	3,536	4.43%	164	0.00%	0	
Outside Lanes		2	3,700	74.23%	2,747	4.43%	164	21.34%	789	
Eastbound I-10 (Total)	Tippecanoe Avenue to California Street	6	10,800	91.92%	9,927	3.24%	350	4.84%	523	65/65/55
Express Lanes		2	3,400	96.76%	3,290	3.24%	110	0.00%	0	
Inside Lanes		2	3,700	96.76%	3,580	3.24%	120	0.00%	0	
Outside Lanes		2	3,700	82.63%	3,057	3.24%	120	14.13%	523	
Eastbound I-10 (Total)	California Street to Alabama Street	6	9,100	91.92%	8,365	3.24%	295	4.84%	440	65/65/55
Express Lanes		1	1,700	96.76%	1,645	3.24%	55	0.00%	0	
Inside Lane		1	1,850	96.76%	1,790	3.24%	60	0.00%	0	
Middle Lanes		2	3,700	96.76%	3,580	3.24%	120	0.00%	0	
Outside Lanes		2	3,700	84.86%	3,140	3.24%	120	11.90%	440	
Eastbound I-10 (Total)	Alabama Street to East	5	9,100	91.92%	8,365	3.24%	295	4.84%	440	65/65/55
Express Lanes		1	1,700	96.76%	1,645	3.24%	55	0.00%	0	
Inside Lanes		2	3,700	96.76%	3,580	3.24%	120	0.00%	0	
Outside Lanes		2	3,700	84.86%	3,140	3.24%	120	11.90%	440	

Notes:

1 - Total volume based on LOS D/E volumes of 1,850 vehicles per hour per lane for main lanes and 1,700 vehicles per hour per lane for express lanes.

2 - Truck percenatges determined from traffic counts performed during worst-noise hour. Total truck percentages for no build and build are the same for each freeway direction. However, percentages per lane are different due to the HOV or Express Lanes that do not contain heavy trucks.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Mainline Traffic										
Westbound I-10 (Total)	West to Station 1000+00	5	9,000	87.27%	7,854	3.80%	342	8.93%	804	65/65/55
HOV Lane		1	1,600	96.20%	1,539	3.80%	61	0.00%	0	
Inside Lanes		2	3,700	96.20%	3,559	3.80%	141	0.00%	0	
Outside Lanes		2	3,700	74.48%	2,755	3.80%	141	21.72%	804	
Westbound I-10 (Total)	Station 1000+00 to Station 1024+00	5	9,250	87.27%	8,072	3.80%	352	8.93%	826	65/65/55
Inside Lane		1	1,850	96.20%	1,780	3.80%	70	0.00%	0	
Middle Lanes		2	3,700	96.20%	3,559	3.80%	141	0.00%	0	
Outside Lanes		2	3,700	73.88%	2,733	3.80%	141	22.33%	826	
Westbound I-10 (Total)	Station 1024+00 to Station 1044+00	6	11,100	87.27%	9,687	3.80%	422	8.93%	991	65/65/55
Inside Lanes		2	3,700	96.20%	3,559	3.80%	141	0.00%	0	
Middle Lanes		2	3,700	96.20%	3,559	3.80%	141	0.00%	0	
Outside Lanes		2	3,700	69.41%	2,568	3.80%	141	26.79%	991	
Westbound I-10 (Total)	Station 1044+00 to Vineyard Avenue	6	10,800	87.27%	9,426	3.80%	410	8.93%	964	65/65/55
Express Lanes		2	3,400	96.20%	3,271	3.80%	129	0.00%	0	
Inside Lanes		2	3,700	96.20%	3,559	3.80%	141	0.00%	0	
Outside Lanes		2	3,700	70.13%	2,595	3.80%	141	26.07%	964	
Westbound I-10 (Total)	Cherry Avenue to Interstate 215	6	10,800	91.51%	9,883	2.86%	309	5.63%	608	65/65/55
Express Lanes		2	3,400	97.14%	3,303	2.86%	97	0.00%	0	
Inside Lanes		2	3,700	97.14%	3,594	2.86%	106	0.00%	0	
Outside Lanes		2	3,700	80.71%	2,986	2.86%	106	16.43%	608	
Westbound I-10 (Total)	Tippecanoe Avenue to California Street	6	10,800	94.89%	10,248	1.16%	125	3.95%	427	65/65/55
Express Lanes		2	3,400	98.84%	3,361	1.16%	39	0.00%	0	
Inside Lanes		2	3,700	98.84%	3,657	1.16%	43	0.00%	0	
Outside Lanes		2	3,700	87.31%	3,230	1.16%	43	11.53%	427	
Westbound I-10 (Total)	California Street to Alabama Street	5	9,100	94.89%	8,635	1.16%	106	3.95%	359	65/65/55
Express Lanes		1	1,700	98.84%	1,680	1.16%	20	0.00%	0	
Inside Lanes		2	3,700	98.84%	3,657	1.16%	43	0.00%	0	
Outside Lanes		2	3,700	89.13%	3,298	1.16%	43	9.71%	359	
Westbound I-10 (Total)	Tennessee Street to East	5	9,100	94.89%	8,635	1.16%	106	3.95%	359	65/65/55
Express Lanes		1	1,700	98.84%	1,680	1.16%	20	0.00%	0	
Inside Lanes		2	3,700	98.84%	3,657	1.16%	43	0.00%	0	
Outside Lanes		2	3,700	89.13%	3,298	1.16%	43	9.71%	359	

Notes:

1 - Total volume based on LOS D/E volumes of 1,850 vehicles per hour per lane for main lanes and 1,700 vehicles per hour per lane for express lanes.

2 - Truck percenatges determined from traffic counts performed during worst-noise hour. Total truck percentages for no build and build are the same for each freeway direction. However, percentages per lane are different due to the HOV or Express Lanes that do not contain heavy trucks.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Towne Avenue	1	900	97.00%	436	1.50%	7	1.50%	7	65/65/55 to 10
				97.00%	436	1.50%	7	1.50%	7	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	890	95.00%	423	2.50%	11	2.50%	11	10 to 65/65/55
				95.00%	423	2.50%	11	2.50%	11	10 to 0 to 65/65/55
Westbound On-Ramp (Meter)		1	900	98.00%	440	1.00%	5	1.00%	5	10 to 65/65/55
				98.00%	440	1.00%	5	1.00%	5	10 to 0 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	96.00%	480	2.00%	10	2.00%	10	65/65/55 to 10
				96.00%	480	2.00%	10	2.00%	10	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Indian Hill Boulevard	1	900	96.00%	432	2.00%	9	2.00%	9	65/65/55 to 10
				96.00%	432	2.00%	9	2.00%	9	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	96.00%	432	2.00%	9	2.00%	9	10 to 65/65/55
				96.00%	432	2.00%	9	2.00%	9	10 to 0 to 65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	432	2.00%	9	2.00%	9	10 to 65/65/55
				96.00%	432	2.00%	9	2.00%	9	10 to 0 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Monte Vista Avenue	1	930	97.00%	451	1.50%	7	1.50%	7	65/65/55 to 10
				97.00%	451	1.50%	7	1.50%	7	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	95.00%	854	2.50%	23	2.50%	23	10 to 65/65/55
Westbound On-Ramp (Meter)		1	810	98.00%	794	1.00%	8	1.00%	8	10 to 65/65/55
Westbound Off-Ramp (Signal)		2	1370	95.00%	651	2.50%	17	2.50%	17	65/65/55 to 10
				95.00%	651	2.50%	17	2.50%	17	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Central Avenue	1	940	96.00%	452	2.00%	9	2.00%	9	65/65/55 to 10
				96.00%	452	2.00%	9	2.00%	9	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	96.00%	480	2.00%	10	2.00%	10	65/65/55 to 10
				96.00%	480	2.00%	10	2.00%	10	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Mountain Avenue	1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound Off-Ramp (Signal)		2	1490	94.00%	701	3.00%	22	3.00%	22	65/65/55 to 10
				94.00%	701	3.00%	22	3.00%	22	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Euclid Avenue	2	1570	97.00%	761	1.50%	12	1.50%	12	65/65/55 to 10
				97.00%	761	1.50%	12	1.50%	12	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound On-Ramp (Meter)		1	750	97.00%	728	1.50%	11	1.50%	11	10 to 65/65/55
Westbound On-Ramp (Meter)	7th Street	1	530	97.00%	514	1.50%	8	1.50%	8	10 to 65/65/55
Westbound Off-Ramp (Stop)		1	1000	96.00%	960	2.00%	20	2.00%	20	65/65/55 to 0
Eastbound Off-Ramp (Signal)	4th Street	1	1000	95.00%	474	2.50%	13	2.50%	13	65/65/55 to 10
				95.00%	474	2.50%	13	2.50%	13	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Vineyard Avenue	1	980	91.00%	446	2.25%	11	6.75%	33	65/65/55 to 10
				91.00%	446	2.25%	11	6.75%	33	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound On-Ramp (Meter)		1	340	98.00%	334	1.00%	3	1.00%	3	10 to 65/65/55
Westbound Loop On-Ramp (Meter)		1	330	90.00%	297	2.50%	8	7.50%	25	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Cherry Avenue	2	1390	93.00%	647	1.75%	12	5.25%	36	65/65/55 to 10
				93.00%	647	1.75%	12	5.25%	36	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	95.00%	854	2.50%	23	2.50%	23	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	93.00%	837	1.75%	16	5.25%	47	10 to 65/65/55
Westbound Loop On-Ramp (Meter)		1	320	93.00%	297	1.75%	6	5.25%	17	10 to 65/65/55
Westbound Off-Ramp (Signal)		2	1250	95.00%	593	2.50%	16	2.50%	16	65/65/55 to 10
				95.00%	593	2.50%	16	2.50%	16	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Citrus Avenue	1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	720	97.00%	698	1.50%	11	1.50%	11	10 to 65/65/55
Westbound On-Ramp (Meter)		1	800	96.00%	768	2.00%	16	2.00%	16	10 to 65/65/55
Westbound Loop On-Ramp (Meter)		1	570	96.00%	548	2.00%	11	2.00%	11	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	830	97.00%	403	1.50%	6	1.50%	6	65/65/55 to 10
				97.00%	403	1.50%	6	1.50%	6	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Sierra Avenue	2	1630	96.00%	783	2.00%	16	2.00%	16	65/65/55 to 10
				96.00%	783	2.00%	16	2.00%	16	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound Off-Ramp (Signal)		2	1290	98.00%	633	1.00%	6	1.00%	6	65/65/55 to 10
				98.00%	633	1.00%	6	1.00%	6	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Cedar Avenue	2	1660	96.00%	796	2.00%	17	2.00%	17	65/65/55 to 10
				96.00%	796	2.00%	17	2.00%	17	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Riverside Avenue	2	1180	96.00%	566	2.00%	12	2.00%	12	65/65/55 to 10
				96.00%	566	2.00%	12	2.00%	12	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	96.00%	873	2.00%	18	2.00%	9	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	873	2.00%	18	2.00%	9	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	920	96.00%	442	2.00%	9	2.00%	9	65/65/55 to 10
				96.00%	442	2.00%	9	2.00%	9	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Pepper Avenue	1	620	97.00%	300	1.50%	5	1.50%	5	65/65/55 to 10
				97.00%	300	1.50%	5	1.50%	5	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	98.00%	886	1.00%	9	1.00%	5	10 to 65/65/55
Westbound On-Ramp (Meter)		1	840	97.00%	821	1.50%	13	1.50%	6	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	860	98.00%	422	1.00%	4	1.00%	4	65/65/55 to 10
				98.00%	422	1.00%	4	1.00%	4	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Rancho Avenue	1	710	97.00%	345	1.50%	5	1.50%	5	65/65/55 to 10
				97.00%	345	1.50%	5	1.50%	5	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	750	98.00%	738	1.00%	8	1.00%	4	10 to 65/65/55
Westbound On-Ramp (Meter)		1	540	97.00%	528	1.50%	8	1.50%	4	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	720	99.00%	356	0.50%	2	0.50%	2	65/65/55 to 10
				99.00%	356	0.50%	2	0.50%	2	65/65/55 to 0
Eastbound Off-Ramp (Stop)	La Cadena Drive / 9th Street	1	230	95.00%	218	2.50%	6	2.50%	6	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	480	98.00%	473	1.00%	5	1.00%	2	10 to 65/65/55
Westbound On-Ramp (Meter)		1	340	96.00%	330	2.00%	7	2.00%	3	10 to 65/65/55
Westbound Off-Ramp (Stop)		1	570	98.00%	558	1.00%	6	1.00%	6	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Mount Vernon Avenue / Sperry Drive	1	870	97.00%	421	1.50%	7	1.50%	7	65/65/55 to 10
				97.00%	421	1.50%	7	1.50%	7	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	680	97.00%	665	1.50%	10	1.50%	5	10 to 65/65/55
Westbound On-Ramp (Meter)		1	810	97.00%	792	1.50%	12	1.50%	6	10 to 65/65/55
Westbound Off-Ramp (Stop)		1	920	98.00%	902	1.00%	9	1.00%	9	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Tippecanoe Avenue	2	1150	96.00%	551	2.00%	12	2.00%	12	65/65/55 to 10
				96.00%	551	2.00%	12	2.00%	12	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	99.00%	890	0.50%	5	0.50%	5	10 to 65/65/55
Westbound On-Ramp (Meter)		1	740	98.00%	726	1.00%	7	1.00%	7	10 to 65/65/55
Westbound Loop On-Ramp (Meter)		1	780	98.00%	764	1.00%	8	1.00%	8	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	860	99.00%	426	0.50%	2	0.50%	2	65/65/55 to 10
				99.00%	426	0.50%	2	0.50%	2	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Mountain View Avenue	1	1000	95.00%	474	2.50%	13	2.50%	13	65/65/55 to 10
				95.00%	474	2.50%	13	2.50%	13	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	97.00%	872	1.50%	14	1.50%	14	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	95.00%	854	2.50%	23	2.50%	23	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound Off-Ramp (Signal)	California Street	1	1000	95.00%	474	2.50%	13	2.50%	13	65/65/55 to 10
				95.00%	474	2.50%	13	2.50%	13	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	95.00%	854	2.50%	23	2.50%	23	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	98.00%	490	1.00%	5	1.00%	5	65/65/55 to 10
				98.00%	490	1.00%	5	1.00%	5	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Alabama Street	1	1000	96.00%	480	2.00%	10	2.00%	10	65/65/55 to 10
				96.00%	480	2.00%	10	2.00%	10	65/65/55 to 0
Eastbound On-Ramp (No Meter)		1	658	97.00%	638	1.50%	10	1.50%	10	10 to 65/65/55
EB I-10 to NB SR-210 Connector		2	2710	97.00%	2,628	1.50%	41	1.50%	41	65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	1000	98.00%	490	1.00%	5	1.00%	5	65/65/55 to 10
				98.00%	490	1.00%	5	1.00%	5	65/65/55 to 0
SB SR-210 to WB I-10 Connector		1	1500	98.00%	1,470	1.00%	15	1.00%	15	65/65/55
Eastbound Off-Ramp to Frontage	Tennessee Street	1	560	95.00%	532	2.50%	14	2.50%	14	65/65/55 to 40
Eastbound Off-Ramp and Frontage (Signa		2	1218	95.92%	585	2.04%	12	2.04%	12	40 to 10
				95.92%	585	2.04%	12	2.04%	12	40 to 0
Eastbound On-Ramp (Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
SB SR-210 to EB I-10 Connector	Colton Avenue / New York Street	1	1500	85.00%	1,275	3.75%	56	11.25%	169	65/65/55
WB I-10 to NB SR-210 Connector		2	3000	87.00%	2,609	3.25%	98	9.75%	293	65/65/55
Eastbound Off-Ramp (Signal)	Eureka Street	1	1000	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 10
				97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound On-Ramp (No Meter)	Orange Avenue / 6th Street	1	660	98.00%	646	1.00%	7	1.00%	7	10 to 65/65/55
Westbound On-Ramp (No Meter)		1	760	96.00%	730	2.00%	15	2.00%	15	10 to 65/65/55
Westbound Loop On-Ramp (No Meter)		1	950	98.00%	930	1.00%	10	1.00%	10	10 to 65/65/55
Westbound Off-Ramp (Stop)		1	500	97.00%	484	1.50%	8	1.50%	8	65/65/55 to 0
Eastbound Off-Ramp (Stop)	University Street	1	1000	97.00%	970	1.50%	15	1.50%	15	65/65/55 to 0
Westbound On-Ramp (No Meter)		1	1000	97.00%	970	1.50%	15	1.50%	15	10 to 65/65/55
Eastbound On-Ramp (No Meter)	E. Cypress Avenue	1	480	98.00%	470	1.00%	5	1.00%	5	10 to 65/65/55
Westbound Off-Ramp (Stop)		1	420	98.00%	412	1.00%	4	1.00%	4	65/65/55 to 0
Eastbound Off-Ramp (Stop)	Ford Street	1	900	99.00%	890	0.50%	5	0.50%	5	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	99.00%	890	0.50%	5	0.50%	5	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	800	98.00%	392	1.00%	4	1.00%	4	65/65/55 to 10
				98.00%	392	1.00%	4	1.00%	4	65/65/55 to 0

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Auxiliary Lane Traffic										
Westbound Auxiliary Lane	Indian Hill Boulevard to Monte Vista Avenue	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Eastbound Auxiliary Lane	Monte Vista Avenue to Central Avenue	1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane	Central Avenue to Mountain Avenue	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Eastbound Auxiliary Lane	Mountain Avenue to Euclid Avenue	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane		1	1000	94.00%	970	3.00%	15	3.00%	15	65/65/55
Eastbound Auxiliary Lane	Etiwanda Avenue to Cherry Avenue	1	1000	93.00%	965	1.75%	9	5.25%	26	65/65/55
Westbound Auxiliary Lane		1	1000	93.00%	965	1.75%	9	5.25%	26	65/65/55
Eastbound Auxiliary Lane	Cherry Avenue to Citrus Avenue	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane	Citrus Avenue to Sierra Avenue	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane		1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Eastbound Auxiliary Lane	Sierra Avenue to Cedar Avenue	1	1000	98.00%	990	1.00%	5	1.00%	5	65/65/55
Westbound Auxiliary Lane		1	1000	98.00%	990	1.00%	5	1.00%	5	65/65/55
Eastbound Auxiliary Lane	Cedar Avenue to Riverside	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane	Riverside Avenue to Pepper Avenue	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane	Rancho Avenue to La Cadena Drive	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Eastbound Auxiliary Lane	9th Street to Mt Vernon Avenue	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Eastbound Auxiliary Lane	Mt Vernon Avenue to Interstate 215	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55

Notes:

1 - Auxiliary lane volume based on LOS D/E volume of 1,000 vehicles per hour per lane when less than one mile in length or 1,850 vehicles per hour per lane when greater than one mile in length.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Auxiliary Lane Traffic										
Eastbound Auxiliary Lane	Waterman Avenue to Tippecanoe Avenue	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane		1	1000	98.00%	990	1.00%	5	1.00%	5	65/65/55
Eastbound Auxiliary Lane	Tippecanoe Avenue to Mountain View Avenue	1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane	Mountain View Avenue to California Street	1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane	California Street to Alabama Street	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane 1		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane 2		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Eastbound Auxiliary Lane	Interstate 210 to Eureka Street	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Eastbound Auxiliary Lane	Ford Street to East	1	1000	99.00%	994	0.50%	3	0.50%	3	65/65/55

Notes:

1 - Auxiliary lane volume based on LOS D/E volume of 1,000 vehicles per hour per lane when less than one mile in length or 1,850 vehicles per hour per lane when greater than one mile in length.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
NB Approaching EB On-Ramp	Indian Hill Boulevard	2	1,340	98.50%	1,320	0.75%	10	0.76%	10	35/35/35
NB Between Ramps		2	1,340	98.50%	1,320	0.75%	10	0.76%	10	
NB After WB Off-Ramp		2	1,340	98.50%	1,320	0.75%	10	0.76%	10	
SB Approaching WB On-Ramp		2	1,360	98.42%	1,339	0.69%	9	0.89%	12	
SB Between Ramps		2	1,360	98.42%	1,339	0.69%	9	0.89%	12	
SB After EB Off-Ramp		2	1,360	98.42%	1,339	0.69%	9	0.89%	12	
NB Approaching Palo Verde Street	Monte Vista Avenue	2	1,360	96.00%	1,306	2.00%	27	2.00%	27	40/40/40
NB Between Palo Verde Street and WB Off-Ramp		2	1,308	96.00%	1,256	2.00%	26	2.00%	26	
NB After WB Off-Ramp		3	1,307	96.00%	1,255	2.00%	26	2.00%	26	
SB Approaching WB On-Ramp		3	1,759	96.00%	1,689	2.00%	35	2.00%	35	
SB Between Ramps		2	1,360	96.00%	1,306	2.00%	27	2.00%	27	
SB After EB Off-Ramp		2	1,360	96.00%	1,306	2.00%	27	2.00%	27	
EB Approaching EB On-Ramp	Palo Verde Street	2	1,360	96.00%	1,306	2.00%	27	2.00%	27	40/40/40
EB After EB On-Ramp		2	267	96.00%	257	2.00%	5	2.00%	5	
WB Approaching EB On-Ramp		2	400	96.00%	384	2.00%	8	2.00%	8	
WB After EB On-Ramp		2	253	96.00%	243	2.00%	5	2.00%	5	
SB Approaching Ramp	Central Avenue	3	2,040	98.00%	2,016	1.00%	12	1.00%	12	40/40/40
SB Between Ramps		3	2,040	98.00%	2,016	1.00%	12	1.00%	12	
SB After Ramps - 1		3	2,040	98.00%	2,016	1.00%	12	1.00%	12	
SB After Ramps - 2		3	2,040	98.00%	2,016	1.00%	12	1.00%	12	
NB Approaching Ramp - 1		3	1,900	98.00%	1,875	1.00%	12	1.00%	13	
NB Approaching Ramp - 2		3	1,900	98.00%	1,875	1.00%	12	1.00%	13	
NB Between Ramps		3	1,900	98.00%	1,875	1.00%	12	1.00%	13	
NB After Ramps		3	1,900	98.00%	1,875	1.00%	12	1.00%	13	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
NB Between 6th Avenue and EB On-Ramp	Mountain Avenue	3	1,790	97.00%	1,736	1.50%	27	1.50%	27	40/40/40
NB Between Ramps		4	2,155	97.00%	2,091	1.50%	32	1.50%	32	
NB Between WB Off-Ramp and 7th Street		5	2,600	97.00%	2,522	1.50%	39	1.50%	39	
NB After 7th Street		3	2,040	97.00%	1,978	1.50%	31	1.50%	31	
SB Approaching 7th Street		4	2,208	97.00%	2,142	1.50%	33	1.50%	33	
SB Between 7th Street and WB On-Ramp		3	2,040	97.00%	1,978	1.50%	31	1.50%	31	
SB Between Ramps		4	2,338	97.00%	2,268	1.50%	35	1.50%	35	
SB Between EB Off-Ramp and 6th Street		3	1,983	97.00%	1,923	1.50%	30	1.50%	30	
EB Approaching Mountain Avenue	7th Street at Mountain Avenue	2	472	97.00%	458	1.50%	7	1.50%	7	40/40/40
WB After Mountain Avenue		2	560	97.00%	544	1.50%	8	1.50%	8	
EB Approaching Euclid Avenue	7th Street at Euclid Avenue	1	130	96.00%	124	2.00%	3	2.00%	3	40/40/40
EB Between Euclid Avenue and WB Off-Ramp		1	743	96.00%	680	2.00%	15	2.00%	15	
EB After WB Off-Ramp		1	400	96.00%	384	2.00%	8	2.00%	8	
WB Approaching WB Off-Ramp		1	200	96.00%	192	2.00%	4	2.00%	4	
WB Between WB Off-Ramp and Euclid Avenue		3	1,130	96.00%	1,084	2.00%	23	2.00%	23	
WB After Euclid Avenue		1	329	96.00%	315	2.00%	7	2.00%	7	
NB 2nd Street	2nd Street	2	259	100.00%	259	0.00%	0	0.00%	0	25/25/25
NB Approaching EB On-Ramp	Euclid Avenue	3	2,040	97.00%	1,978	1.50%	31	1.50%	31	40/40/40
NB Between Ramps		3	2,040	97.00%	1,978	1.50%	31	1.50%	31	
NB Between WB Off-Ramp and 7th Street		3	2,040	97.00%	1,978	1.50%	31	1.50%	31	
NB After 7th Street		3	2,040	97.00%	1,978	1.50%	31	1.50%	31	
SB Approaching 7th Street		3	2,040	97.00%	1,978	1.50%	31	1.50%	31	
SB Between 7th Street and WB On-Ramp		3	2,040	97.00%	1,978	1.50%	31	1.50%	31	
SB Between Ramps		3	2,040	97.00%	1,978	1.50%	31	1.50%	31	
SB After EB Off-Ramp		3	1,841	97.00%	1,785	1.50%	28	1.50%	28	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
EB Approaching Ramp - 1	4th Street	2	696	98.80%	688	0.60%	4	0.60%	4	35/35/35
EB Approaching Ramp - 2		1	680	98.80%	672	0.60%	4	0.60%	4	
EB Between Ramps		1	680	98.80%	672	0.60%	4	0.60%	4	
EB After Ramp - 1		2	696	98.80%	688	0.60%	4	0.60%	4	
EB After Ramp - 2		2	696	98.80%	688	0.60%	4	0.60%	4	
WB Approaching Ramp		1	599	99.40%	595	0.30%	2	0.30%	2	
WB Between Ramps		1	599	99.40%	595	0.30%	2	0.30%	2	
WB After Ramp - 1		1	599	99.40%	595	0.30%	2	0.30%	2	
WB After Ramp - 2		2	599	99.40%	595	0.30%	2	0.30%	2	
NB Approaching EB On-Ramp	Vineyard Avenue	2	1,360	94.00%	1,279	1.50%	20	4.50%	61	45/45/45
NB Between Ramps		2	1,360	94.00%	1,279	1.50%	20	4.50%	61	
NB After WB Off-Ramp		2	1,360	94.00%	1,279	1.50%	20	4.50%	61	
SB Approaching WB On-Ramp		2	1,360	94.00%	1,279	1.50%	20	4.50%	61	50/50/50
SB Between Ramps		2	1,360	94.00%	1,279	1.50%	20	4.50%	61	
SB After EB Off-Ramp		2	1,360	94.00%	1,279	1.50%	20	4.50%	61	
NB Approaching EB On-Ramp	Cherry Avenue	3	2040	97.86%	1,997	0.66%	13	1.48%	30	50/50/50
NB Between Ramps		3	2040	97.86%	1,997	0.66%	13	1.48%	30	
NB After WB Off-Ramp		2	1360	97.86%	1,331	0.66%	9	1.48%	20	
SB Approaching WB On-Ramp		3	1764	96.38%	1,700	1.13%	20	2.49%	44	50/50/50
SB Between Ramps		3	1764	96.38%	1,700	1.13%	20	2.49%	44	
SB After EB Off-Ramp		3	1764	96.38%	1,700	1.13%	20	2.49%	44	
NB Approaching EB On-Ramp	Citrus Avenue	2	1360	98.33%	1,337	0.70%	10	0.97%	13	35/35/35
NB Between Ramps		3	1850	98.33%	1,819	0.70%	13	0.97%	18	
NB After WB Off-Ramp		2	1360	98.33%	1,337	0.70%	10	0.97%	13	
SB Approaching WB On-Ramp		1	680	97.77%	665	0.78%	5	1.45%	10	
SB Between Ramps		2	1032	97.77%	1,009	0.78%	8	1.45%	15	
SB After EB Off-Ramp		1	680	97.77%	665	0.78%	5	1.45%	10	
SB Approaching WB Ramps	Sierra Avenue	3	1640	98.50%	1,615	0.70%	12	0.80%	13	35/35/35
SB After WB Ramps		3	1640	98.50%	1,615	0.70%	12	0.80%	13	
NB Approaching EB Ramps		3	2040	98.50%	2,010	0.70%	14	0.80%	16	
NB After EB Ramps		3	2040	98.50%	2,010	0.70%	14	0.80%	16	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
SB Approaching Ramps	Cedar Ave	3	1379	97.80%	1,349	1.00%	14	1.20%	16	40/40/40
SB Between Ramps		2	1360	97.80%	1,330	1.00%	14	1.20%	16	
NB Between Ramps		2	1360	98.40%	1,337	0.60%	9	1.00%	14	
NB After Ramps		2	1360	98.40%	1,337	0.60%	9	1.00%	14	
SB Approaching Valley Blvd	Riverside Avenue	3	1885	97.00%	1,837	1.00%	19	2.00%	29	35/35/35
SB Approaching Ramps		3	1885	97.00%	1,837	1.00%	19	2.00%	29	
SB Between Ramps		2	1360	97.00%	1,325	1.00%	14	2.00%	21	
NB Between Ramps		3	2040	98.30%	2,005	0.70%	15	1.00%	20	
NB Approaching Valley Blvd		3	2040	98.30%	2,005	0.70%	15	1.00%	20	
NB After Valley Blvd		2	1360	98.30%	1,337	0.70%	10	1.00%	13	
EB Between Pepper Avenue and Rancho Avenue	Valley Boulevard	2	847	98.94%	838	0.47%	4	0.59%	5	45/45/45
WB Between Pepper Avenue and Rancho Avenue		2	544	99.26%	540	0.37%	2	0.37%	2	
NB Approaching Ramps	Rancho Avenue	2	1150	98.87%	1,137	0.52%	6	0.61%	7	45/45/45
NB Between Ramps		2	1150	98.87%	1,137	0.52%	6	0.61%	7	
NB After Ramps		2	1150	98.87%	1,137	0.52%	6	0.61%	7	
NB After Valley Blvd		2	1150	98.87%	1,137	0.52%	6	0.61%	7	
SB Approaching Valley Blvd		2	1076	98.70%	1,062	0.65%	7	0.65%	7	
SB Approaching Ramps		2	1076	98.70%	1,062	0.65%	7	0.65%	7	
SB Between Ramps		2	1076	98.70%	1,062	0.65%	7	0.65%	7	
SB After Ramps		2	1076	98.70%	1,062	0.65%	7	0.65%	7	
NB Direction	La Cadena Drive	2	1237	98.46%	1,218	0.65%	8	0.89%	11	45/45/45
SB Direction		2	1005	98.70%	992	0.50%	5	0.80%	8	
NB Direction	9th Street	1	539	97.03%	523	0.93%	5	2.04%	11	30/30/30
SB Direction		1	553	98.92%	547	0.36%	2	0.72%	4	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
EB Between Rancho Avenue and La Cadena Drive	Valley Boulevard	2	524	99.05%	519	0.38%	2	0.57%	3	35/35/35
WB Between Rancho Avenue and La Cadena Drive		2	429	99.12%	424	0.35%	2	0.53%	3	
EB Between La Cadena Drive and 9th Street		2	524	98.54%	517	0.67%	3	0.79%	4	35/35/35
WB Between La Cadena Drive and 9th Street		2	404	99.01%	399	0.45%	2	0.54%	3	
EB Between 9th Street and Mt. Vernon Avenue		2	524	98.54%	517	0.67%	3	0.79%	4	35/35/35
WB Between 9th Street and Mt. Vernon Avenue		2	404	99.01%	399	0.45%	2	0.54%	3	
EB Between Mt. Vernon Avenue and Sperry Drive		1	78	97.44%	76	1.28%	1	1.28%	1	35/35/35
WB Between Mt. Vernon Avenue and Sperry Drive		1	524	99.05%	519	0.38%	2	0.57%	3	
NB Direction	Mt. Vernon Avenue	2	857	98.83%	847	0.47%	4	0.70%	6	30/30/30
SB Direction (Two Lanes)		2	905	99.01%	896	0.44%	4	0.55%	5	
SB Direction (One Lane)		1	680	99.01%	673	0.44%	3	0.55%	4	
NB Direction	Sperry Drive	1	538	97.44%	524	1.28%	7	1.28%	7	30/30/30
SB Direction		1	64	100.00%	64	0.00%	0	0.00%	0	
NB Approaching EB On-Ramp	Tippecanoe Avenue	3	1,866	99.14%	1,677	0.27%	5	0.59%	11	35/35/35
NB Between Ramps		2	1,360	99.14%	1,348	0.27%	4	0.59%	8	
NB After WB Off-Ramp		3	1,866	99.14%	1,677	0.27%	5	0.59%	11	
SB Approaching WB On-Ramp		3	1,122	99.73%	1,101	0.09%	1	0.18%	2	
SB Between Ramps		2	1,122	99.73%	1,101	0.09%	1	0.18%	2	
SB After EB Off-Ramp		2	1,122	99.73%	1,101	0.09%	1	0.18%	2	
NB Approaching EB On-Ramp	Mountain View Avenue	2	1,360	97.47%	1,326	0.95%	13	1.58%	21	35/35/35
NB Between Ramps		2	1,360	97.47%	1,326	0.95%	13	1.58%	21	
NB After WB Off-Ramp		2	1,360	97.47%	1,326	0.95%	13	1.58%	21	
SB Approaching WB On-Ramp		2	1,360	98.71%	1,342	0.50%	7	0.79%	11	
SB Between Ramps		2	1,360	98.71%	1,342	0.50%	7	0.79%	11	
SB After EB Off-Ramp		2	1,360	98.71%	1,342	0.50%	7	0.79%	11	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
NB Approaching Ramps	California Street	2	1360	97.77%	1,330	0.88%	12	1.35%	18	40/40/40
NB Between Ramps		2	1360	97.77%	1,330	0.88%	12	1.35%	18	
NB Approaching Orange Tree		3	1483	97.77%	1,450	0.88%	13	1.35%	20	
NB After Orange Tree		2	1360	97.77%	1,330	0.88%	12	1.35%	18	
SB Approaching Orange Tree		2	1008	98.80%	996	0.60%	6	0.60%	6	
SB Approaching Ramps		2	1008	98.80%	996	0.60%	6	0.60%	6	
SB Between Ramps		2	1008	98.80%	996	0.60%	6	0.60%	6	
SB After Ramps		2	1008	98.80%	996	0.60%	6	0.60%	6	
NB Direction	Alabama Street	2	1360	98.11%	1,334	0.77%	10	1.12%	15	40/40/40
SB Direction		2	1290	98.84%	1,275	0.62%	8	0.54%	7	
Frontage Road (Alabama to Tennessee)	Tennessee Street	1	658	97.00%	638	1.50%	10	1.50%	10	40/40/40
SB Between Ramps		2	877	98.00%	859	1.00%	9	1.00%	9	
SB After EB Off-Ramp		2	895	98.00%	877	1.00%	9	1.00%	9	
NB Approaching EB On-Ramp		2	1,242	98.00%	1,218	1.00%	12	1.00%	12	
NB Between Ramps		2	1,211	98.00%	1,187	1.00%	12	1.00%	12	
WB (Tennessee to Texas Streets)	Colton Avenue	2	166	98.80%	164	0.60%	1	0.60%	1	35/35/35
EB (Tennessee to Texas Streets)		2	378	99.21%	375	0.53%	2	0.26%	1	
WB (East of Texas Street)		1	166	98.80%	164	0.60%	1	0.60%	1	
EB (East of Texas Street)		1	378	99.21%	375	0.53%	2	0.26%	1	
NB Direction	Texas Street	2	417	99.04%	413	0.48%	2	0.48%	2	40/40/40
SB Direction		2	265	98.87%	262	0.75%	2	0.38%	1	
NB Before W Pearl Avenue	Eureka Street	2	287	98.25%	282	0.70%	2	1.05%	3	30/30/30
NB After W Pearl Avenue		1	287	98.25%	282	0.70%	2	1.05%	3	30 to 10
SB Before W Pearl Avenue		1	132	98.48%	130	0.76%	1	0.76%	1	30/30/30
SB After W Pearl Avenue		2	132	98.48%	130	0.76%	1	0.76%	1	
NB Direction	Orange Street	2	2,142	98.97%	2,120	0.42%	9	0.61%	13	25/25/25
SB Direction		2	810	98.89%	801	0.49%	4	0.62%	5	
NB Direction	Sixth Street	2	15	100.00%	15	0.00%	0	0.00%	0	25/25/25
SB Direction		2	468	98.72%	462	0.64%	3	0.64%	3	
West Pearl Avenue	Pearl Avenue	2	1,000	97.00%	970	1.50%	15	1.50%	15	30/30/30
East Pearl Avenue		2	1,000	97.00%	970	1.50%	15	1.50%	15	
NB Direction	Church Street	2	319	99.38%	317	0.31%	1	0.31%	1	30/30/30
SB Direction		2	170	98.82%	168	0.59%	1	0.59%	1	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-3 – Traffic Data for Build Alternative 3 Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
NB Direction	University Street	2	1014	99.02%	1,004	0.39%	4	0.59%	6	30/30/30
SB Direction		2	102	100.00%	102	0.00%	0	0.00%	0	
EB Direction	Citrus Avenue	1	890	99.32%	884	0.34%	3	0.34%	3	40/40/40
WB Direction		1	277	98.20%	272	0.72%	2	1.08%	3	
NB Direction	Cypress Avenue	1	226	99.56%	225	0.44%	1	0.00%	0	45/45/45
SB Direction		1	339	99.42%	337	0.29%	1	0.29%	1	
NB Direction	Palm Avenue	1	105	100.00%	105	0.00%	0	0.00%	0	40
SB Direction		1	76	100.00%	76	0.00%	0	0.00%	0	
NB Direction	Highland Avenue	1	309	99.03%	306	0.65%	2	0.32%	1	45/45/45
SB Direction		1	236	99.16%	234	0.42%	1	0.42%	1	
NB Direction	Ford Street	1	823	99.40%	818	0.24%	2	0.36%	3	40/40/40
SB Direction		1	97	100.00%	97	0.00%	0	0.00%	0	
EB Direction	Resivoir Road	1	50	100.00%	50	0.00%	0	0.00%	0	45
WB Direction		1	50	100.00%	50	0.00%	0	0.00%	0	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Site LT27 - 11:20 to 11:40 - 10/04/2013										
Eastbound I-10 (Total)	Towne Avenue to Indian Hill Boulevard	5	6,114	84.64%	5,175	5.54%	339	9.81%	600	60
HOV Lane		1	1,223	94.46%	1,155	5.54%	68	0.00%	0	
Inside Lanes		2	2,446	94.46%	2,310	5.54%	136	0.00%	0	
Outside Lanes		2	2,446	69.92%	1,710	5.54%	136	24.53%	600	
Westbound I-10 (Total)		5	6,711	86.99%	5,838	3.53%	237	9.48%	636	60
HOV Lane		1	1,342	96.47%	1,295	3.53%	47	0.00%	0	
Inside Lanes		2	2,684	96.47%	2,589	3.53%	95	0.00%	0	
Outside Lanes		2	2,684	72.78%	1,953	3.53%	95	23.69%	636	
Noise Model Calibration Site LT28 - 09:20 to 09:40 - 12/12/2013										
Eastbound I-10 (Total)	Towne Avenue to Indian Hill Boulevard	5	5,340	86.63%	4,626	3.54%	189	9.83%	525	54
HOV Lane		1	1,068	96.46%	1,030	3.54%	38	0.00%	0	
Inside Lanes		2	2,136	96.46%	2,060	3.54%	76	0.00%	0	
Outside Lanes		2	2,136	71.88%	1,535	3.54%	76	24.58%	525	
Westbound I-10 (Total)		5	6,147	86.87%	5,340	3.81%	234	9.32%	573	54
HOV Lane		1	1,229	96.19%	1,182	3.81%	47	0.00%	0	
Inside Lanes		2	2,459	96.19%	2,365	3.81%	94	0.00%	0	
Outside Lanes		2	2,459	72.89%	1,792	3.81%	94	23.30%	573	
Noise Model Calibration Site ST66 - 12:00 to 12:20 - 10/14/2013										
Eastbound I-10 (Total)	Towne Avenue to Indian Hill Boulevard	5	6,171	87.12%	5,376	2.82%	174	10.06%	621	60
HOV Lane		1	1,234	97.18%	1,199	2.82%	35	0.00%	0	
Inside Lanes		2	2,468	97.18%	2,398	2.82%	70	0.00%	0	
Outside Lanes		2	2,468	72.02%	1,777	2.82%	70	25.16%	621	
Westbound I-10 (Total)		5	6,147	88.19%	5,421	2.64%	162	9.18%	564	60
HOV Lane		1	1,229	97.36%	1,197	2.64%	32	0.00%	0	
Inside Lanes		2	2,459	97.36%	2,394	2.64%	65	0.00%	0	
Outside Lanes		2	2,459	74.43%	1,830	2.64%	65	22.94%	564	

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Sites LT29, LT30, LT31, and LT32 - 11:20 to 11:40 - 10/04/2013										
Eastbound I-10 (Total)	Indian Hill Boulevard to Monte Vista Avenue	5	5,925	84.15%	4,986	4.96%	294	10.89%	645	55
HOV Lane		1	1,185	95.04%	1,126	4.96%	59	0.00%	0	
Inside Lanes		2	2,370	95.04%	2,252	4.96%	118	0.00%	0	
Outside Lanes		2	2,370	67.82%	1,607	4.96%	118	27.22%	645	
Westbound I-10 (Total)		5	5,043	79.42%	4,005	11.06%	558	9.52%	480	65
HOV Lane		1	1,009	88.94%	897	11.06%	112	0.00%	0	
Inside Lanes		2	2,017	88.94%	1,794	11.06%	223	0.00%	0	
Outside Lanes		2	2,017	65.14%	1,314	11.06%	223	23.80%	480	
Eastbound Off-Ramp to Monte Vista Avenue		1	687	96.94%	666	2.18%	15	0.87%	6	55 to 10
Westbound On-Ramp from Monte Vista Avenue		1	582	95.88%	558	2.58%	15	1.55%	9	10 to 65
Noise Model Calibration Site ST73 - 09:40 to 10:00 - 07/28/2014										
Eastbound I-10 (Total)	Indian Hill Boulevard to Monte Vista Avenue	5	5,121	85.76%	4,392	5.21%	267	9.02%	462	65
HOV Lane		1	1,024	94.79%	971	5.21%	53	0.00%	0	
Inside Lanes		2	2,048	94.79%	1,941	5.21%	107	0.00%	0	
Outside Lanes		2	2,048	72.23%	1,479	5.21%	107	22.55%	462	
Westbound I-10 (Total)		5	6,099	86.33%	5,265	3.44%	210	10.23%	624	65
HOV Lane		1	1,220	96.56%	1,178	3.44%	42	0.00%	0	
Inside Lanes		2	2,440	96.56%	2,356	3.44%	84	0.00%	0	
Outside Lanes		2	2,440	70.98%	1,732	3.44%	84	25.58%	624	
Eastbound On-Ramp from Indian Hill Boulevard		1	648	96.30%	624	2.31%	15	1.39%	9	65 to 10
Westbound Off-Ramp to Indian Hill Boulevard		1	741	93.93%	696	3.64%	27	2.43%	18	10 to 65

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Site ST112 - 11:18 to 11:38 - 10/28/2014										
Eastbound I-10 (Total)	Monte Vista Avenue to Central Avenue	5	5,397	84.71%	4,572	5.95%	321	9.34%	504	
HOV Lane		1	1,079	94.05%	1,015	5.95%	64	0.00%	0	57
Inside Lanes		2	2,159	94.05%	2,031	5.95%	128	0.00%	0	
Outside Lanes		2	2,159	70.71%	1,527	5.95%	128	23.35%	504	
Westbound I-10 (Total)		5	6,069	86.26%	5,235	4.50%	273	9.24%	561	
HOV Lane		1	1,214	95.50%	1,159	4.50%	55	0.00%	0	57
Inside Lanes		2	2,428	95.50%	2,319	4.50%	109	0.00%	0	
Outside Lanes		2	2,428	72.39%	1,758	4.50%	109	23.11%	561	
Eastbound On-Ramp from Monte Vista Avenue		1	402	98.51%	396	1.49%	6	0.00%	0	57 to 10
Westbound Off-Ramp to Monte Vista Avenue		1	477	93.71%	447	6.29%	30	0.00%	0	10 to 57
Noise Model Calibration Site LT33 - 11:00 to 11:20 - 10/08/2013										
Eastbound I-10 (Total)	Central Avenue to Mountain Avenue	5	4,266	81.15%	3,462	4.92%	210	13.92%	594	
HOV Lane		1	853	95.08%	811	4.92%	42	0.00%	0	54
Inside Lanes		2	1,706	95.08%	1,622	4.92%	84	0.00%	0	
Outside Lanes		2	1,706	60.27%	1,028	4.92%	84	34.81%	594	
Westbound I-10 (Total)		5	4,536	80.42%	3,648	5.36%	243	14.22%	645	
HOV Lane		1	907	94.64%	858	5.36%	49	0.00%	0	54
Inside Lanes		2	1,814	94.64%	1,717	5.36%	97	0.00%	0	
Outside Lanes		2	1,814	59.09%	1,072	5.36%	97	35.55%	645	
Eastbound Off-Ramp to Mountain Avenue		1	597	97.49%	582	1.51%	9	1.01%	6	54 to 10

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Site LT34 and LT35 - 10:20 to 10:40 - 10/08/2013										
Eastbound I-10 (Total)	Mountain Avenue to Euclid Avenue	5	4,746	81.92%	3,888	9.17%	435	8.91%	423	
HOV Lane		1	949	90.83%	862	9.17%	87	0.00%	0	69
Inside Lanes		2	1,898	90.83%	1,724	9.17%	174	0.00%	0	
Outside Lanes		2	1,898	68.55%	1,301	9.17%	174	22.28%	423	
Westbound I-10 (Total)		5	6,225	83.86%	5,220	5.30%	330	10.84%	675	
HOV Lane		1	1,245	94.70%	1,179	5.30%	66	0.00%	0	64
Inside Lanes		2	2,490	94.70%	2,358	5.30%	132	0.00%	0	
Outside Lanes		2	2,490	67.59%	1,683	5.30%	132	27.11%	675	
Eastbound Off-Ramp to Euclid Avenue		1	591	98.48%	582	1.02%	6	0.51%	3	69 to 10
Westbound On-Ramp from Euclid Avenue		1	480	99.38%	477	0.00%	0	0.63%	3	10 to 64
Noise Model Calibration Site ST98, ST103, LT38, and LT39 - 13:40 to 14:00 - 10/10/2013										
Eastbound I-10 (Total)	Euclid Avenue to 4th Street	5	6,105	87.96%	5,370	4.62%	282	7.42%	453	
HOV Lane		1	1,221	95.38%	1,165	4.62%	56	0.00%	0	65
Inside Lanes		2	2,442	95.38%	2,329	4.62%	113	0.00%	0	
Outside Lanes		2	2,442	76.83%	1,876	4.62%	113	18.55%	453	
Westbound I-10 (Total)		5	6,369	87.80%	5,592	3.44%	219	8.76%	558	
HOV Lane		1	1,274	96.56%	1,230	3.44%	44	0.00%	0	64
Inside Lanes		2	2,548	96.56%	2,460	3.44%	88	0.00%	0	
Outside Lanes		2	2,548	74.66%	1,902	3.44%	88	21.90%	558	
Eastbound On-Ramp from Euclid Avenue		1	549	96.17%	528	3.83%	21	0.00%	0	10 to 65
Westbound Off-Ramp to 7th Street		1	630	97.62%	615	1.90%	12	0.48%	3	64 to 10

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Site ST93 - 9:40 to 10:00 - 06/04/2015										
Eastbound I-10 (Total)	Euclid Avenue to 4th Street	5	5,529	85.30%	4,716	4.29%	237	10.42%	576	
HOV Lane		1	1,106	95.71%	1,059	4.29%	47	0.00%	0	65
Inside Lanes		2	2,212	95.71%	2,117	4.29%	95	0.00%	0	
Outside Lanes		2	2,212	69.67%	1,541	4.29%	95	26.04%	576	
Westbound I-10 (Total)		5	6,666	85.78%	5,718	4.19%	279	10.04%	669	
HOV Lane		1	1,333	95.81%	1,277	4.19%	56	0.00%	0	67
Inside Lanes		2	2,666	95.81%	2,554	4.19%	112	0.00%	0	
Outside Lanes		2	2,666	70.72%	1,885	4.19%	112	25.09%	669	
Eastbound I-10 (Total)	Mountain Avenue to Euclid Avenue	5	6,144	86.28%	5,301	4.25%	261	9.47%	582	
HOV Lane		1	1,229	95.75%	1,177	4.25%	52	0.00%	0	65
Inside Lanes		2	2,458	95.75%	2,354	4.25%	104	0.00%	0	
Outside Lanes		2	2,458	72.07%	1,772	4.25%	104	23.68%	582	
Westbound I-10 (Total)		5	7,236	86.82%	6,282	3.94%	285	9.25%	669	
HOV Lane		1	1,447	96.06%	1,390	3.94%	57	0.00%	0	67
Inside Lanes		2	2,894	96.06%	2,780	3.94%	114	0.00%	0	
Outside Lanes		2	2,894	72.95%	2,111	3.94%	114	23.11%	669	
Eastbound Off-Ramp to Euclid Avenue		1	615	95.12%	585	3.90%	24	0.98%	6	65 to 10
Westbound On-Ramp from Euclid Avenue		1	570	98.95%	564	1.05%	6	0.00%	0	10 to 67

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Site ST97 and ST97A - 11:20 to 11:40 - 07/11/2014										
Eastbound I-10 (Total)	Euclid Avenue to 4th Street	5	6,435	86.48%	5,565	2.94%	189	10.58%	681	63
HOV Lane		1	1,287	97.06%	1,249	2.94%	38	0.00%	0	
Inside Lanes		2	2,574	97.06%	2,498	2.94%	76	0.00%	0	
Outside Lanes		2	2,574	70.61%	1,817	2.94%	76	26.46%	681	
Westbound I-10 (Total)		5	6,045	86.10%	5,205	3.77%	228	10.12%	612	64
HOV Lane		1	1,209	96.23%	1,163	3.77%	46	0.00%	0	
Inside Lanes		2	2,418	96.23%	2,327	3.77%	91	0.00%	0	
Outside Lanes		2	2,418	70.92%	1,715	3.77%	91	25.31%	612	
Eastbound On-Ramp from Euclid Avenue		1	585	97.44%	570	2.05%	12	0.51%	3	10 to 63
Westbound Off-Ramp to 7th Street		1	552	96.74%	534	2.72%	15	0.54%	3	64 to 10
Noise Model Calibration Sites LT40 and LT41 - 15:00 to 15:20 - 10/10/2013										
Eastbound I-10 (Total)	4th Street to Vineyard Avenue	5	6,543	90.23%	5,904	2.61%	171	7.15%	468	60
HOV Lane		1	1,309	97.39%	1,275	2.61%	34	0.00%	0	
Inside Lanes		2	2,617	97.39%	2,549	2.61%	68	0.00%	0	
Outside Lanes		2	2,617	79.50%	2,081	2.61%	68	17.88%	468	
Westbound I-10 (Total)		5	6,789	90.54%	6,147	2.65%	180	6.81%	462	60
HOV Lane		1	1,358	97.35%	1,322	2.65%	36	0.00%	0	
Inside Lanes		2	2,716	97.35%	2,644	2.65%	72	0.00%	0	
Outside Lanes		2	2,716	80.34%	2,182	2.65%	72	17.01%	462	
Eastbound Off-Ramp to Vineyard Avenue		1	570	98.42%	561	1.05%	6	0.53%	3	60 to 10
Westbound On-Ramp from Vineyard Avenue		1	261	95.40%	249	3.45%	9	1.15%	3	10 to 60

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Site ST3A - 08:49 to 09:04 - 10/30/2014										
Eastbound I-10 (Total)	Cherry Avenue to Citrus Avenue	4	4,080	85.00%	3,468	5.29%	216	9.71%	396	
Inside Lanes		2	2,040	94.71%	1,932	5.29%	108	0.00%	0	65
Outside Lanes		2	2,040	75.29%	1,536	5.29%	108	19.41%	396	
Westbound I-10 (Total)		4	4,900	86.12%	4,220	6.04%	296	7.84%	384	
Inside Lanes		2	2,450	93.96%	2,302	6.04%	148	0.00%	0	66
Outside Lanes		2	2,450	78.29%	1,918	6.04%	148	15.67%	384	
Eastbound On-Ramp from Cherry Avenue		1	356	75.28%	268	14.61%	52	10.11%	36	10 to 65
Westbound Off-Ramp to Cherry Avenue		1	500	76.00%	380	12.80%	64	11.20%	56	66 to 10
Eastbound Auxiliary Lane		1	356	75.28%	268	14.61%	52	10.11%	36	65
Westbound Auxiliary Lane		1	500	76.00%	380	12.80%	64	11.20%	56	66
Noise Model Calibration Site LT2 - 15:00 to 15:20 - 10/21/2014										
Eastbound I-10 (Total)	Cherry Avenue to Citrus Avenue	4	6,540	89.95%	5,883	4.08%	267	5.96%	390	
Inside Lanes		2	3,270	95.92%	3,136	4.08%	134	0.00%	0	64
Outside Lanes		2	3,270	83.99%	2,746	4.08%	134	11.93%	390	
Westbound I-10 (Total)		4	5,520	88.64%	4,893	5.22%	288	6.14%	339	
Inside Lanes		2	2,760	94.78%	2,616	5.22%	144	0.00%	0	66
Outside Lanes		2	2,760	82.50%	2,277	5.22%	144	12.28%	339	
Noise Model Calibration Site LT4 - 10:00 to 10:20 - 10/21/2014										
Eastbound I-10 (Total)	Citrus Avenue to Sierra Avenue	4	3,711	83.19%	3,087	5.82%	216	10.99%	408	
Inside Lanes		2	1,856	94.18%	1,748	5.82%	108	0.00%	0	67
Outside Lanes		2	1,856	72.19%	1,340	5.82%	108	21.99%	408	
Westbound I-10 (Total)		4	4,617	84.08%	3,882	6.04%	279	9.88%	456	
Inside Lanes		2	2,309	93.96%	2,169	6.04%	140	0.00%	0	64
Outside Lanes		2	2,309	74.20%	1,713	6.04%	140	19.75%	456	
Eastbound On-Ramp from Citrus Avenue		1	504	79.76%	402	9.52%	48	10.71%	54	10 to 67
Westbound Off-Ramp to Citrus Avenue		1	438	77.40%	339	8.90%	39	13.70%	60	64 to 10
Eastbound Auxiliary Lane		1	504	79.76%	402	9.52%	48	10.71%	54	67
Westbound Auxiliary Lane		1	438	77.40%	339	8.90%	39	13.70%	60	64

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Site ST7 - 11:47 to 12:07 - 10/28/2014										
Eastbound I-10 (Total)	Citrus Avenue to Sierra Avenue	4	4,851	83.36%	4,044	6.43%	312	10.20%	495	65
Inside Lanes		2	2,426	93.57%	2,270	6.43%	156	0.00%	0	
Outside Lanes		2	2,426	73.16%	1,775	6.43%	156	20.41%	495	
Westbound I-10 (Total)		4	4,839	84.81%	4,104	5.58%	270	9.61%	465	65
Inside Lanes		2	2,420	94.42%	2,285	5.58%	135	0.00%	0	
Outside Lanes		2	2,420	75.20%	1,820	5.58%	135	19.22%	465	
Eastbound On-Ramp from Citrus Avenue		1	516	84.30%	435	8.14%	42	7.56%	39	10 to 65
Westbound Off-Ramp to Citrus Avenue		1	510	85.29%	435	8.24%	42	6.47%	33	65 to 10
Eastbound Auxiliary Lane		1	516	84.30%	435	8.14%	42	7.56%	39	65
Westbound Auxiliary Lane		1	510	85.29%	435	8.24%	42	6.47%	33	65
Noise Model Calibration Site ST5A - 09:10 to 09:30 - 12/18/2014										
Eastbound I-10 (Total)	Citrus Avenue to Sierra Avenue	4	3,708	82.20%	3,048	6.72%	249	11.08%	411	65
Inside Lanes		2	1,854	93.28%	1,729	6.72%	125	0.00%	0	
Outside Lanes		2	1,854	71.12%	1,318	6.72%	125	22.17%	411	
Westbound I-10 (Total)		4	5,001	86.44%	4,323	4.08%	204	9.48%	474	64
Inside Lanes		2	2,501	95.92%	2,399	4.08%	102	0.00%	0	
Outside Lanes		2	2,501	76.96%	1,925	4.08%	102	18.96%	474	
Eastbound On-Ramp from Citrus Avenue		1	552	84.78%	468	10.33%	57	4.89%	27	10 to 65
Westbound Off-Ramp to Citrus Avenue		1	450	88.67%	399	3.33%	15	8.00%	36	64 to 10
Eastbound Auxiliary Lane		1	552	84.78%	468	10.33%	57	4.89%	27	65
Westbound Auxiliary Lane		1	450	88.67%	399	3.33%	15	8.00%	36	64

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Sites LT6 - 09:40 to 10:00 - 10/17/2013										
Eastbound I-10 (Total)	Sierra Avenue to Cedar Avenue	4	4,053	82.31%	3,336	5.18%	210	12.51%	507	66
Inside Lanes		2	2,027	94.82%	1,922	5.18%	105	0.00%	0	
Outside Lanes		2	2,027	69.80%	1,415	5.18%	105	25.02%	507	
Westbound I-10 (Total)		5	3,594	87.65%	3,150	3.01%	108	9.35%	336	60
Inside Lanes		2	1,438	96.99%	1,395	3.01%	43	0.00%	0	
Outside Lanes		2	1,438	78.30%	1,126	3.01%	43	18.70%	269	
Auxiliary Lane		1	718	87.63%	629	3.01%	22	9.36%	67	60
Noise Model Calibration Site LT8 - 09:40 to 10:00 - 10/17/2013										
Eastbound I-10 (Total)	Cedar Avenue to Riverside Avenue	4	3,513	88.13%	3,096	3.25%	114	8.63%	303	66
Inside Lanes		2	1,757	96.75%	1,700	3.25%	57	0.00%	0	
Outside Lanes		2	1,757	79.50%	1,397	3.25%	57	17.25%	303	
Westbound I-10 (Total)		4	3,978	84.39%	3,357	3.54%	141	12.07%	480	60
Inside Lanes		2	1,989	96.46%	1,918	3.54%	71	0.00%	0	
Outside Lanes		2	1,989	72.32%	1,438	3.54%	71	24.13%	480	
Eastbound On-Ramp from Cedar Avenue		1	462	96.10%	444	0.65%	3	3.25%	15	10 to 66
Westbound Off-Ramp to Cedar Avenue		1	450	93.33%	420	3.33%	15	3.33%	15	60 to 10
Westbound Auxiliary Lane		1	450	93.33%	420	3.33%	15	3.33%	15	60
Noise Model Calibration Site LT9 - 09:00 to 09:20 - 11/14/2014										
Eastbound I-10 (Total)	Riverside Avenue to Pepper Avenue	4	3,990	83.01%	3,312	7.67%	306	9.32%	372	66
Inside Lanes		2	1,995	92.33%	1,842	7.67%	153	0.00%	0	
Outside Lanes		2	1,995	73.68%	1,470	7.67%	153	18.65%	372	
Westbound I-10 (Total)		4	4,272	86.24%	3,684	5.20%	222	8.57%	366	63
Inside Lanes		2	2,136	94.80%	2,025	5.20%	111	0.00%	0	
Outside Lanes		2	2,136	77.67%	1,659	5.20%	111	17.13%	366	
Westbound Off-Ramp to Riverside Avenue		1	582	79.38%	462	12.37%	72	8.25%	48	63 to 10

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Site ST17A - 10:00 to 10:20 - 02/06/2015										
Eastbound I-10 (Total)	Pepper Avenue to Rancho Avenue	4	3,972	85.35%	3,390	4.31%	171	10.35%	411	70
Inside Lanes		2	1,986	95.69%	1,900	4.31%	86	0.00%	0	
Outside Lanes		2	1,986	75.00%	1,489	4.31%	86	20.69%	411	
Westbound I-10 (Total)		4	4,377	86.50%	3,786	3.43%	150	10.08%	441	70
Inside Lanes		2	2,189	96.57%	2,114	3.43%	75	0.00%	0	
Outside Lanes		2	2,189	76.42%	1,673	3.43%	75	20.15%	441	
Eastbound Off-Ramp to Rancho Avenue		1	243	95.06%	231	2.47%	6	2.47%	6	70 to 10
Westbound On-Ramp from Rancho Avenue		1	315	91.43%	288	3.81%	12	4.76%	15	10 to 70
Eastbound Valley Boulevard		1	285	95.79%	273	3.16%	9	1.05%	3	45
Westbound Valley Boulevard		1	246	91.46%	225	7.32%	18	1.22%	3	45
Noise Model Calibration Site ST19A - 11:20 to 11:40 - 02/06/2015										
Eastbound I-10 (Total)	Rancho Avenue to La Cadena Drive	4	4,917	86.39%	4,248	4.09%	201	9.52%	468	67
Inside Lanes		2	2,459	95.91%	2,358	4.09%	101	0.00%	0	
Outside Lanes		2	2,459	76.88%	1,890	4.09%	101	19.04%	468	
Westbound I-10 (Total)		4	4,776	87.63%	4,185	4.46%	213	7.91%	378	65
Inside Lanes		2	2,388	95.54%	2,281	4.46%	107	0.00%	0	
Outside Lanes		2	2,388	79.71%	1,903	4.46%	107	15.83%	378	
Eastbound On-Ramp from Rancho Avenue		1	381	91.34%	348	3.94%	15	4.72%	18	10 to 67
Westbound Off-Ramp to Rancho Avenue		1	351	88.89%	312	5.13%	18	5.98%	21	65 to 10
Westbound On-Ramp from La Cadena Avenue		1	219	97.26%	213	0.00%	0	2.74%	6	10 to 65
West J Street		1	6	100.00%	6	0.00%	0	0.00%	0	25

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Site LT11 - 12:40 to 13:00 - 10/18/2013										
Eastbound I-10 (Total)	Rancho Avenue to La Cadena Drive	4	5,211	88.89%	4,632	3.51%	183	7.60%	396	65
Inside Lanes		2	2,606	96.49%	2,514	3.51%	92	0.00%	0	
Outside Lanes		2	2,606	81.29%	2,118	3.51%	92	15.20%	396	
Westbound I-10 (Total)		4	5,013	87.91%	4,407	3.95%	198	8.14%	408	65
Inside Lanes		2	2,507	96.05%	2,408	3.95%	99	0.00%	0	
Outside Lanes		2	2,507	79.77%	2,000	3.95%	99	16.28%	408	
Eastbound Off-Ramp to Rancho Avenue		1	384	86.72%	333	7.81%	30	5.47%	21	65 to 10
Westbound On-Ramp from Rancho Avenue		1	294	90.82%	267	3.06%	9	6.12%	18	10 to 65
Eastbound On-Ramp from Rancho Avenue		1	312	89.42%	279	3.85%	12	6.73%	21	10 to 65
Westbound Off-Ramp to Rancho Avenue		1	396	91.67%	363	3.79%	15	4.55%	18	65 to 10
Noise Model Calibration Site ST20A - 08:44 to 09:04 - 12/30/2014										
Eastbound I-10 (Total)	La Cadena Drive to Mount Vernon Ave	4	4,254	87.52%	3,723	3.81%	162	8.67%	369	59
Inside Lanes		2	2,127	96.19%	2,046	3.81%	81	0.00%	0	
Outside Lanes		2	2,127	78.84%	1,677	3.81%	81	17.35%	369	
Westbound I-10 (Total)		4	4,032	87.20%	3,516	3.87%	156	8.93%	360	59
Inside Lanes		2	2,016	96.13%	1,938	3.87%	78	0.00%	0	
Outside Lanes		2	2,016	78.27%	1,578	3.87%	78	17.86%	360	
Eastbound Off-Ramp to Mountain View Avenue		1	237	86.08%	204	2.53%	6	11.39%	27	59 to 0
WB Valley Blvd Between Mt. Vernon Avenue and Sperry Drive		1	119	86.08%	102	2.53%	3	11.39%	14	35
NB Sperry Drive		1	120	85.36%	102	2.51%	3	12.13%	15	35

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Sites LT14 and LT15 - 10:00 to 10:20 - 10/22/2013										
Eastbound I-10 (Total)	Tippecanoe Avenue to Mountain View Avenue	4	4,221	89.48%	3,777	3.55%	150	6.97%	294	67
Inside Lanes		2	2,111	96.45%	2,036	3.55%	75	0.00%	0	
Outside Lanes		2	2,111	82.52%	1,742	3.55%	75	13.93%	294	
Westbound I-10 (Total)		4	4,566	91.26%	4,167	2.63%	120	6.11%	279	67
Inside Lanes		2	2,283	97.37%	2,223	2.63%	60	0.00%	0	
Outside Lanes		2	2,283	85.15%	1,944	2.63%	60	12.22%	279	
Eastbound Off-Ramp to Mountain View Avenue		1	519	89.02%	462	1.16%	6	9.83%	51	67 to 10
Westbound On-Ramp from Mountain View Avenue		1	456	90.13%	411	5.26%	24	4.61%	21	10 to 67
Noise Model Calibration Site ST26A - 9:40 to 10:00 - 12/11/2014										
Eastbound I-10 (Total)	Mountain View Avenue to California Street	4	3,933	89.93%	3,537	5.19%	204	4.88%	192	63
Inside Lanes		2	1,967	94.81%	1,865	5.19%	102	0.00%	0	
Outside Lanes		2	1,967	85.05%	1,673	5.19%	102	9.76%	192	
Westbound I-10 (Total)		4	4,446	92.85%	4,128	2.36%	105	4.79%	213	63
Inside Lanes		2	2,223	97.64%	2,170	2.36%	53	0.00%	0	
Outside Lanes		2	2,223	88.06%	1,957	2.36%	53	9.58%	213	
Eastbound Off-Ramp to California		1	789	87.83%	693	4.94%	39	7.22%	57	63 to 10
Westbound On-Ramp from California		1	531	84.18%	447	4.52%	24	11.30%	60	10 to 63
Eastbound Auxiliary Lane		1	789	87.83%	693	4.94%	39	7.22%	57	63

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Site ST28A - 13:40 to 14:00 - 02/06/2015										
Eastbound I-10 (Total)	California Street to Alabama Street	4	6,546	93.95%	6,150	2.75%	180	3.30%	216	65
Inside Lanes		2	3,273	97.25%	3,183	2.75%	90	0.00%	0	
Outside Lanes		2	3,273	90.65%	2,967	2.75%	90	6.60%	216	
Auxiliary Lane		1	930	96.13%	894	2.26%	21	1.61%	15	
Westbound I-10 (Total)		4	4,266	92.19%	3,933	4.36%	186	3.45%	147	70
Inside Lanes		2	1,706	95.64%	1,632	4.36%	74	0.00%	0	
Outside Lanes		2	1,706	91.33%	1,558	4.36%	74	4.31%	74	
Auxiliary Lane		1	853	87.03%	742	4.36%	37	8.61%	74	
Eastbound Off-Ramp to Alabama Street		1	930	96.13%	894	2.26%	21	1.61%	15	65 to 10
Westbound On-Ramp from Alabama Street		1	1,173	96.16%	1,128	3.07%	36	0.77%	9	10 to 70
SB SR-210 to WB I-10 Connector		1	853	87.03%	742	4.36%	37	8.61%	74	70
Eastbound Industrial Park Avenue		1	90	93.33%	84	6.67%	6	0.00%	0	35
Westbound Industrial Park Avenue		1	105	94.29%	99	2.86%	3	2.86%	3	35

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Sites LT17, LT19, LT20, and ST35 - 11:20 to 11:40 - 10/22/2013										
Eastbound I-10 (Total)	Alabama Street to Tennessee Street	4	4,551	92.29%	4,200	2.44%	111	5.27%	240	65
Inside Lanes		2	2,276	97.56%	2,220	2.44%	56	0.00%	0	
Outside Lanes		2	2,276	87.17%	1,984	2.29%	52	10.55%	240	
Eastbound I-10 (Total)	Tennessee Street to Eureka Street	5	4,551	92.29%	4,200	2.44%	111	5.27%	240	65
Inside Lanes		2	1,820	97.56%	1,776	2.44%	44	0.00%	0	
Outside Lanes		2	1,820	88.77%	1,616	2.44%	44	8.79%	160	
Auxiliary Lane		1	910	88.77%	808	2.44%	22	8.79%	80	
Eastbound I-10 (Total)	Eureka Street to Orange Street	5	3,489	90.28%	3,150	3.01%	105	6.71%	234	65
Inside Lanes		2	1,396	96.99%	1,354	3.01%	42	0.00%	0	
Outside Lanes		2	1,396	85.81%	1,198	3.01%	42	11.18%	156	
Auxiliary Lane		1	698	85.81%	599	3.01%	21	11.18%	78	
Eastbound I-10 (Total)	Orange Street to Sixth Street	4	3,489	90.28%	3,150	3.01%	105	6.71%	234	65
Inside Lanes		2	1,745	96.99%	1,692	3.01%	53	0.00%	0	
Outside Lanes		2	1,745	83.61%	1,459	2.98%	52	13.41%	234	
Eastbound I-10 (Total)	Sixth Street to University Street	4	3,765	90.92%	3,423	2.79%	105	6.29%	237	65
Inside Lanes		2	1,883	97.21%	1,830	2.79%	53	0.00%	0	
Outside Lanes		2	1,883	84.65%	1,594	2.76%	52	12.59%	237	
Westbound I-10 (Total)	Tennessee Street to Sixth Street	4	3,789	91.77%	3,477	1.82%	69	6.41%	243	65
Inside Lanes		2	1,895	98.18%	1,860	1.82%	35	0.00%	0	
Outside Lanes		2	1,895	85.38%	1,618	1.79%	34	12.83%	243	
Auxiliary Lane		1	918	96.08%	882	3.59%	33	0.33%	3	
Westbound I-10 (Total)	Sixth Street to University Street	4	4,260	92.54%	3,942	1.76%	75	5.70%	243	65
Inside Lanes		2	2,130	98.24%	2,092	1.76%	38	0.00%	0	
Outside Lanes		2	2,130	87.00%	1,853	1.60%	34	11.41%	243	
Eastbound Off-Ramp to Eureka Street	Alabama Street to University Street	1	1,062	98.87%	1,050	0.56%	6	0.56%	6	65 to 10
Westbound On-Ramp from Orange Street		1	225	92.00%	207	6.67%	15	1.33%	3	10 to 65
Westbound Loop On-Ramp from Orange Street		1	693	97.40%	675	2.60%	18	0.00%	0	10 to 65
Eastbound On-Ramp from 6th Street		1	276	98.91%	273	0.00%	0	1.09%	3	10 to 65
Westbound Off-Ramp to 6th Street		1	471	98.73%	465	1.27%	6	0.00%	0	65 to 10

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Site ST30A - 12:40 to 13:00 - 01/28/2015										
Eastbound I-10 (Total)	Alabama Street to Tennessee Street	4	4,962	90.08%	4,470	1.93%	96	7.98%	396	70
Inside Lanes		2	2,481	98.07%	2,433	1.93%	48	0.00%	0	
Outside Lanes		2	2,481	81.94%	2,033	2.10%	52	15.96%	396	
Eastbound I-10 (Total)	Tennessee Street to Eureka Street	5	4,962	90.08%	4,470	1.93%	96	7.98%	396	70
Inside Lanes		2	1,985	98.07%	1,947	1.93%	38	0.00%	0	
Outside Lanes		2	1,985	84.76%	1,683	1.93%	38	13.30%	264	
Auxiliary Lane		1	992	84.76%	841	1.93%	19	13.30%	132	
Eastbound I-10 (Total)	Eureka Street to Orange Street	5	4,158	88.46%	3,678	2.09%	87	9.45%	393	70
Inside Lanes		2	1,663	97.91%	1,628	2.09%	35	0.00%	0	
Outside Lanes		2	1,663	82.15%	1,366	2.09%	35	15.75%	262	
Auxiliary Lane		1	832	82.15%	684	2.09%	17	15.75%	131	
Eastbound I-10 (Total)	Orange Street to Sixth Street	4	4,158	88.46%	3,678	2.09%	87	9.45%	393	70
Inside Lanes		2	2,079	97.91%	2,035	2.09%	44	0.00%	0	
Outside Lanes		2	2,079	78.60%	1,634	2.50%	52	18.90%	393	
Westbound I-10 (Total)	Tennessee Street to Sixth Street	4	3,999	89.95%	3,597	2.33%	93	7.73%	309	70
Inside Lanes		2	2,000	97.67%	1,953	2.33%	47	0.00%	0	
Outside Lanes		2	2,000	82.85%	1,657	1.70%	34	15.45%	309	
Auxiliary Lane		1	1,007	97.42%	981	2.09%	21	0.50%	5	
Eastbound Off-Ramp to Eureka Street	Tennessee Street to Sixth Street	1	804	98.51%	792	1.12%	9	0.37%	3	70 to 10
Westbound On-Ramp from Orange Street		1	282	97.87%	276	1.06%	3	1.06%	3	10 to 70
Westbound Loop On-Ramp from Orange Street		1	726	97.11%	705	2.48%	18	0.41%	3	10 to 70
EB Colton Avenue		1	466	99.14%	462	0.00%	0	0.86%	4	35
WB Colton Avenue		1	406	98.28%	399	1.48%	6	0.25%	1	
NB Before W Pearl Avenue		1	127	99.21%	126	0.00%	0	0.79%	1	30
NB After W Pearl Avenue		1	127	99.21%	126	0.00%	0	0.79%	1	30 to 10
SB Eureka Street		1	103	96.12%	99	2.91%	3	0.97%	1	30

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Sites ST40, ST44, and LT23 - 10:00 to 10:20 - 12/03/2013										
Eastbound I-10 (Total)	East Cypress Avenue to Ford Street	4	3,354	86.23%	2,892	5.64%	189	8.14%	273	70/65/65
Inside Lanes		2	1,677	94.36%	1,582	5.64%	95	0.00%	0	
Outside Lanes		2	1,677	78.09%	1,309	5.64%	95	16.28%	273	
Westbound I-10 (Total)		4	3,996	92.12%	3,681	2.03%	81	5.86%	234	70/65/65
Inside Lanes		2	1,998	97.97%	1,957	2.03%	41	0.00%	0	
Outside Lanes		2	1,998	86.26%	1,723	2.03%	41	11.71%	234	
Eastbound Off-Ramp to Ford Street		1	270	92.22%	249	7.78%	21	0.00%	0	65 to 10
Westbound On-Ramp from Ford Street		1	390	99.23%	387	0.77%	3	0.00%	0	10 to 65
Noise Model Calibration Sites LT24 - 09:40 to 10:00 - 12/04/2013										
Eastbound I-10 (Total)	Ford Street to East	4	2,703	86.68%	2,343	5.22%	141	8.10%	219	70
Inside Lanes		2	1,352	94.78%	1,281	5.22%	71	0.00%	0	
Outside Lanes		2	1,352	78.58%	1,062	5.22%	71	16.20%	219	
Westbound I-10 (Total)		4	4,131	91.07%	3,762	3.41%	141	5.52%	228	70
Inside Lanes		2	2,066	96.59%	1,995	3.41%	71	0.00%	0	
Outside Lanes		2	2,066	85.55%	1,767	3.41%	71	11.04%	228	
Eastbound On-Ramp from Ford Street		1	276	100.00%	276	0.00%	0	0.00%	0	10 to 70
Westbound Off-Ramp to Ford Street		1	231	100.00%	231	0.00%	0	0.00%	0	70 to 10

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-4 – Traffic Data for Noise Model Calibration (Cont'd)

	Segment	Number of Lanes	Total Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3]
				%	Volume	%	Volume	%	Volume	
Noise Model Calibration Site ST40A - 11:40 to 12:00 - 03/03/2015										
Eastbound I-10 (Total)	Ford Street to East	4	4,092	87.61%	3,585	3.23%	132	9.16%	375	
Inside Lanes		2	2,046	96.77%	1,980	3.23%	66	0.00%	0	68
Outside Lanes		2	2,046	78.45%	1,605	3.23%	66	18.33%	375	
Westbound I-10 (Total)		4	4,371	91.56%	4,002	2.88%	126	5.56%	243	
Inside Lanes		2	2,186	97.12%	2,123	2.88%	63	0.00%	0	71
Outside Lanes		2	2,186	86.00%	1,880	2.88%	63	11.12%	243	
Eastbound On-Ramp from Citrus Avenue		1	78	96.15%	75	3.85%	3	0.00%	0	10 to 68
Westbound Off-Ramp to Citrus Avenue		1	207	100.00%	207	0.00%	0	0.00%	0	71 to 10
Noise Model Calibration Site ST46 - 12:40 to 1:00 - 03/03/2015										
Eastbound I-10 (Total)	Ford Street to East	4	3,573	87.32%	3,120	2.77%	99	9.91%	354	
Inside Lanes		2	1,787	97.23%	1,737	2.77%	50	0.00%	0	68
Outside Lanes		2	1,787	77.41%	1,383	2.77%	50	19.82%	354	
Westbound I-10 (Total)		4	3,786	89.38%	3,384	3.88%	147	6.74%	255	
Inside Lanes		2	1,893	96.12%	1,819	3.88%	74	0.00%	0	71
Outside Lanes		2	1,893	82.65%	1,564	3.88%	74	13.47%	255	
Westbound I-10 (Total)		4	4,071	90.13%	3,669	3.61%	147	6.26%	255	
Inside Lanes		2	2,036	96.39%	1,962	3.61%	74	0.00%	0	71
Outside Lanes		2	2,036	83.86%	1,707	3.61%	74	12.53%	255	
Eastbound Auxiliary Lane		1	285	98.95%	282	1.05%	3	0.00%	0	68
Eastbound On-Ramp from Ford Street		1	285	98.95%	282	1.05%	3	0.00%	0	10 to 68
Westbound Off-Ramp to Ford Street		1	285	100.00%	285	0.00%	0	0.00%	0	71 to 10

Notes:

1 - It is assumed that the traffic volumes are equally distributed across the mainlines.

2 - Truck percenatges determined from traffic counts performed during calibration noise measurements.

3 - Observed speeds were used for modeling.

Table A-5 – Traffic Data for Existing Conditions

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Mainline Traffic										
Eastbound I-10 (Total)	Tippecanoe Avenue to East	4	7,400	91.92%	6,802	3.24%	240	4.84%	358	65/65/55
Inside Lanes		2	3,700	96.76%	3,580	3.24%	120	0.00%	0	
Outside Lanes		2	3,700	87.08%	3,222	3.24%	120	9.68%	358	
Westbound I-10 (Total)	Tippecanoe Avenue to East	4	7,400	94.89%	7,022	1.16%	86	3.95%	292	65/65/55
Inside Lanes		2	3,700	98.84%	3,657	1.16%	43	0.00%	0	
Outside Lanes		2	3,700	90.95%	3,365	1.16%	43	7.90%	292	

Notes:

1 - Total volume based on LOS D/E volumes of 1,850 vehicles per hour per lane for main lanes and 1,600 vehicles per hour per lane for HOV lanes.

2 - Truck percenatges determined from traffic counts performed during worst-noise hour. Total truck percentages for no build and build are the same for each freeway direction. However, percentages per lane are different due to the HOV or Express Lanes that do not contain heavy trucks.

3 - Posted speeds were used for modeling.

Table A-5 – Traffic Data for Existing Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Ramp Traffic										
Eastbound Off-Ramp (Signal)	Tippecanoe Avenue	1	950	96.00%	455	2.00%	10	2.00%	10	65/65/55 to 10
				96.00%	455	2.00%	10	2.00%	10	65/65/55 to 0
Eastbound On-Ramp (Meter)		1	900	99.00%	890	0.50%	5	0.50%	5	10 to 65/65/55
Westbound On-Ramp (Meter)		1	900	98.00%	882	1.00%	9	1.00%	9	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	730	99.00%	361	0.50%	2	0.50%	2	65/65/55 to 10
				99.00%	361	0.50%	2	0.50%	2	65/65/55 to 0
Eastbound Off-Ramp (Signal)	Alabama Street	1	860	96.00%	412	2.00%	9	2.00%	9	65/65/55 to 10
				96.00%	412	2.00%	9	2.00%	9	65/65/55 to 0
Eastbound On-Ramp (No Meter)		1	514	97.00%	498	1.50%	8	1.50%	8	10 to 65/65/55
EB I-10 to NB SR-210 Connector		2	1540	97.00%	1,494	1.50%	23	1.50%	23	65/65/55
Westbound On-Ramp (Meter)		1	900	96.00%	864	2.00%	18	2.00%	18	10 to 65/65/55
Westbound Off-Ramp (Signal)		1	978	98.00%	479	1.00%	5	1.00%	5	65/65/55 to 10
				98.00%	479	1.00%	5	1.00%	5	65/65/55 to 0
SB SR-210 to WB I-10 Connector		1	1500	98.00%	1,470	1.00%	15	1.00%	15	65/65/55
Eastbound Off-Ramp to Frontage	Tennessee Street	1	390	95.00%	370	2.50%	10	2.50%	10	65/65/55 to 40
Eastbound Off-Ramp and Frontage (Signal)		2	1,294	96.26%	623	1.87%	12	1.87%	12	40 to 10
				96.26%	623	1.87%	12	1.87%	12	40 to 0
Eastbound On-Ramp (No Meter)		1	1,000	98.00%	980	1.00%	10	1.00%	10	10 to 65/65/55
SB SR-210 to EB I-10 Connector	Colton Avenue / New York Street	2	3,000	85.00%	2,549	3.75%	113	11.25%	338	65/65/55
WB I-10 to NB SR-210 Connector		2	3,000	87.00%	2,609	3.25%	98	9.75%	293	65/65/55

Notes:

1 - Ramp volumes based on 2045 peak hour traffic volumes from the I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014, or capped at either 900 or 1,000 vehicles per hour per lane where 900 vehicles is used for metered on-ramps. Connector volumes capped at 1,500 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

Table A-5 – Traffic Data for Existing Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Auxiliary Lane Traffic										
Eastbound Auxiliary Lane	Tippecanoe Avenue to Mountain View Avenue	1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Westbound Auxiliary Lane		1	1000	95.00%	974	2.50%	13	2.50%	13	65/65/55
Eastbound Auxiliary Lane 1	California Street to Alabama Street	1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Eastbound Auxiliary Lane 2		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane 1		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Westbound Auxiliary Lane 2		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55
Eastbound Auxiliary Lane	I-210 to Eureka Street/ Orange Avenue	1	1000	97.00%	984	1.50%	8	1.50%	8	65/65/55
Westbound Auxiliary Lane		1	1000	96.00%	980	2.00%	10	2.00%	10	65/65/55

Notes:

1 - Auxiliary lane volume based on LOS D/E volume of 1,000 vehicles per hour per lane when less than one mile in length or 1,850 vehicles per hour per lane when greater than one mile in length.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014.

3 - Posted speeds were used for modeling.

Table A-5 – Traffic Data for Existing Conditions (Cont'd)

	Segment	Number of Lanes	Total Peak Hour Volume[1]	Auto		Medium Trucks[2]		Heavy Trucks[2]		Speed[3] (A/MT/HT)
				%	Volume	%	Volume	%	Volume	
Arterial Roadway Traffic										
NB Approaching EB On-Ramp	Tippecanoe Avenue	2	1360	98.87%	1,344	0.35%	5	0.78%	11	35/35/35
NB Between Ramps		2	1360	98.87%	1,344	0.35%	5	0.78%	11	
NB After WB Off-Ramp		2	1360	98.87%	1,344	0.35%	5	0.78%	11	
SB Approaching WB On-Ramp		2	735	99.73%	733	0.14%	1	0.14%	1	
SB Between Ramps		2	735	99.73%	733	0.14%	1	0.14%	1	
SB After EB Off-Ramp		2	735	99.73%	733	0.14%	1	0.14%	1	
NB Direction	Alabama Street	2	1360	98.10%	1,334	0.84%	11	1.06%	15	40/40/40
SB Direction		2	755	98.81%	746	0.66%	5	0.53%	4	
Frontage Road (Alabama to Tennessee)	Tennessee Street	1	904	97.00%	876	1.50%	14	1.50%	14	40/40/40
SB Between Ramps		2	719	98.00%	705	1.00%	7	1.00%	7	
SB After EB Off-Ramp		2	743	98.00%	729	1.00%	7	1.00%	7	
NB Approaching EB On-Ramp		2	1011	98.00%	991	1.00%	10	1.00%	10	
NB Between Ramps		2	881	98.00%	863	1.00%	9	1.00%	9	
WB (Tennessee to Texas Streets)	Colton Avenue	2	102	99.02%	101	0.98%	1	0.00%	0	35/35/35
EB (Tennessee to Texas Streets)		2	268	99.26%	266	0.37%	1	0.37%	1	

Notes:

1 - Arterial roadway volumes based on 2045 peak hour traffic volumes, or capped at 680 vehicles per hour per lane.

2 - Truck percenatges from I-10 Corridor Study - PA/ED HOV and Express Lanes Traffic Volumes Report, Iteris, January 2014 or developed for the traffic noise study.

3 - Posted speeds were used for modeling.

Appendix B Predicted Future Noise Levels and Noise Barrier Analysis

Table B-1 – Predicted Future Noise Levels and Barrier Analysis – Segment 9 - Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 9.1 [W]	--	SFR/MFR	4	59 [M,LT1]	60	61	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.2 [W]	SW697[X] Shoulder	SFR	2	61 [M,ST1]	62	63	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.3 [W]		SFR	1	62 [E]	63	63	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											16 feet			18 feet			20 feet			22 feet			24 feet		
R 9.4 [W]	SW697[X] R/W	SFR	6	64 [E]	65	65	1	0	B (67)	NONE	65	0	*0*	64	1	*0*	63	2	*0*	62	3	*0*	62	3	*0*
R 9.5 [W,8]		SFR	7	64 [M,ST2]	65	66	1	1	B (67)	A/E	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*	62	4	*0*
R 9.6 [W]		SFR	8	65 [E]	66	66	1	0	B (67)	A/E	66	0	*0*	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R 9.7 [W,7]		SFR	4	62 [E]	63	64	1	1	B (67)	NONE	63	1	*0*	62	2	*0*	62	2	*0*	61	3	*0*	61	3	*0*
R 9.8 [W]		SFR	3	65 [E]	66	67	1	1	B (67)	A/E	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*	63	4	*0*
R 9.9 [W]		SFR	4	64 [E]	65	66	1	1	B (67)	A/E	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*	62	4	*0*
R 9.10 [W]		SFR	2	65 [E]	66	67	1	1	B (67)	A/E	66	1	*0*	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*
R 9.11 [W]		SFR/MFR	6	67 [E]	66	66	-1	0	B (67)	A/E	66	0	*0*	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*
R 9.12 [W,9]		SFR	--	67 [M,LT2,CAL]	66	67	-1	1	B (67)	A/E	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*	63	4	*0*
R 9.13 [W]		SFR	2	67 [E]	66	67	-1	1	B (67)	A/E	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*	63	4	*0*
R 9.14 [W]		SFR	2	67 [E]	66	67	-1	1	B (67)	A/E	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*	63	4	*0*
R 9.15 [W,7]		SFR	6	65 [E]	64	65	-1	1	B (67)	NONE	64	1	*0*	64	1	*0*	63	2	*0*	63	2	*0*	62	3	*0*
R 9.16 [W,7]		SFR	4	65 [E]	64	64	-1	0	B (67)	NONE	63	1	*0*	63	1	*0*	62	2	*0*	62	2	*0*	61	3	*0*
R 9.17 [W]		SFR/MFR	12	68 [E]	67	67	-1	0	B (67)	A/E	66	1	*0*	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take in Alternative 3.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-1 – Predicted Future Noise Levels and Barrier Analysis – Segment 9 - Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 9.17A	S1749[P] R/W	SFR	1	76 [E]	75	74	-1	-1	B (67)	A/E	68 [T]	6	*1*	**66** [R]	**8**	*1*	65	9	*1*	64	10	*1*	64	10	*1*
R 9.17B	--	COM	1	65 [E]	64	65	-1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.18		COM	1	75 [E]	74	74	-1	0	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take in Alternative 3.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-1 – Predicted Future Noise Levels and Barrier Analysis – Segment 9 - Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Traffic + Train Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
															8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year Train Noise Level Leq(h), dBA [1]	Design Year No Build Traffic Noise Level Leq(h), dBA [1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year Build Traffic Noise Level Leq(h), dBA [1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year No Build Traffic + Train Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 9.19 [B,7]	--	SFR	3	62 [E]	61	60	63	60	63	1	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.20 [B]		SFR	3	65 [E]	64	61	66	62	66	1	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.21		SFR/MFR	10	66 [E]	64	63	67	64	67	1	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.22 [W]		SFR	2	65 [M,ST3]	62	64	66	65	66	1	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.23 [B]		COM	1	69 [M,ST3A,CAL]	67	64	69	65	69	0	1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.25 [B]		SFR	3	65 [E]	63	62	66	63	66	1	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.26 [B]		SFR	3	65 [E]	63	63	66	64	67	1	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.27 [W]	--	SFR	1	58 [E]	55	58	59	58	60	1	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.28 [W]		SFR	1	60 [E]	56	60	61	61	62	1	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.29	Shoulder	SFR/MFR	3	67 [E]	64	66	68	67	68	1	1	0	B (67)	A/E	67	1	*0*	67	1	*0*	66	2	*0*	66	2	*0*	-- [10]	--	--
R 9.30		SFR	3	63 [E]	60	61	64	62	64	1	1	0	B (67)	NONE	64	0	*0*	63	1	*0*	63	1	*0*	62	2	*0*	-- [10]	--	--
R 9.31 [8]		COM	1	70 [M,ST4]	68	68	71	69	71	1	1	0	E (72)	NONE	70	1	*0*	70	1	*0*	69	2	*0*	69	2	*0*	-- [10]	--	--
R 9.32		SFR	1	69 [E]	67	68	70	68	71	1	0	1	B (67)	A/E	70	1	*0*	70	1	*0*	69	2	*0*	69	2	*0*	-- [10]	--	--
R 9.33 [W,7]		MH	6	62 [E]	56	59	61	60	62	-1	1	1	B (67)	NONE	61	1	*0*	61	1	*0*	60	2	*0*	60	2	*0*	-- [10]	--	--
R 9.34 [W,7]		SFR	5	63 [E]	56	61	62	62	63	-1	1	1	B (67)	NONE	62	1	*0*	62	1	*0*	61	2	*0*	60	3	*0*	-- [10]	--	--
R 9.35 [W]		COM	1	68 [M,LT3]	62	65	67	66	68	-1	1	1	E (72)	NONE	67	1	*0*	67	1	*0*	65	3	*0*	65	3	*0*	-- [10]	--	--
R 9.36 [W]		SFR	3	68 [E]	62	65	67	66	67	-1	1	0	B (67)	A/E	67	0	*0*	66	1	*0*	65	2	*0*	65	2	*0*	-- [10]	--	--
R 9.37		SFR	3	69 [E]	65	64	68	65	68	-1	1	0	B (67)	NONE	68	0	*0*	67	1	*0*	67	1	*0*	66	2	*0*	-- [10]	--	--
R 9.38 [W]		SFR	2	68 [E]	66	62	67	62	67	-1	0	0	B (67)	NONE	67	0	*0*	67	0	*0*	67	0	*0*	67	0	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-2 – Predicted Future Noise Levels and Barrier Analysis – Segment 10 - Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																										
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)																			
											8 feet			10 feet			12 feet			14 feet			16 feet			18 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 10.1	S1819[P] R/W	SFR	1	75 [M,ST6]	73	74	-2	1	B (67)	A/E	71	3	*0*	68	6	*1*	67 [T]	7	*1*	66	8	*1*	65	9	*1*	**65** [R,5]	**9**	*1*
R 10.2 [B]		SFR	3	70 [E]	68	70	-2	2	B (67)	A/E	68	2	*0*	67	3	*0*	66 [T]	4	*0*	66	4	*0*	65	5	*3*	**65** [R,5]	**5**	*3*
R 10.3 [B]		SFR	1	70 [E]	69	69	-1	0	B (67)	A/E	67	2	*0*	66	3	*0*	65 [T]	4	*0*	65	4	*0*	64	5	*1*	**64** [R,5]	**5**	*1*
R 10.4 [B]		SFR	2	75 [E]	74	76	-1	2	B (67)	A/E	69	7	*2*	68 [T]	8	*2*	67	9	*2*	65	11	*2*	65	11	*2*	**64** [R,5]	**12**	*2*
R 10.5 [B,W]		SFR	1	68 [M,LT4,CAL]	67	66	-1	-1	B (67)	A/E	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*	63	3	*0*	63	3	*0*
R 10.6 [B,7]		SFR	4	70 [E]	69	67	-1	-2	B (67)	A/E	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*	63	4	*0*	**62** [R]	**5**	*4*
R 10.7 [B]		SFR	5	72 [E]	71	69	-1	-2	B (67)	A/E	67	2	*0*	66	3	*0*	64	5	*5*	63	6	*5*	62	7	*5*	**62** [R,5]	**7**	*5*
R 10.8 [B,7]		SFR	5	70 [E]	69	67	-1	-2	B (67)	A/E	66	1	*0*	65	2	*0*	63 [T]	4	*0*	63	4	*0*	62	5	*5*	**62** [R,5]	**5**	*5*
R 10.9 [B]		SFR	4	73 [E]	72	70	-1	-2	B (67)	A/E	68	2	*0*	67	3	*0*	65 [T]	5	*4*	65	5	*4*	64	6	*4*	**64** [R,5]	**6**	*4*
R 10.9A		SFR	1	76 [E]	75	73	-1	-2	B (67)	A/E	70	3	*0*	69	4	*0*	67 [T]	6	*1*	66	7	*1*	65	8	*1*	**64** [R,5]	**9**	*1*
R 10.10 [B,7]		SFR	5	67 [E]	66	65	-1	-1	B (67)	NONE	64	1	*0*	64	1	*0*	63	2	*0*	61	4	*0*	61	4	*0*	**60** [R]	**5**	*5*
R 10.11 [B,W]		SFR	2	65 [E]	64	64	-1	0	B (67)	NONE	63	1	*0*	63	1	*0*	62	2	*0*	60	4	*0*	60	4	*0*	**59** [R]	**5**	*2*
R 10.12 [B]	S1883[P] R/W	SFR	1	71 [E]	70	69	-1	-1	B (67)	A/E	67	2	*0*	66	3	*0*	65 [T]	4	*0*	65	4	*0*	**64** [R]	**5**	*1*	64	5	*1*
R 10.13		SFR	3	76 [E]	75	73	-1	-2	B (67)	A/E	70	3	*0*	68 [T]	5	*3*	67	6	*3*	67	6	*3*	**66** [R]	**7**	*3*	66	7	*3*
R 10.14	--	COM	1	75 [E]	74	74	-1	0	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take in Alternative 3.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-2 – Predicted Future Noise Levels and Barrier Analysis – Segment 10 - Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Traffic + Train Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
															8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year Train Noise Level Leq(h), dBA [1]	Design Year No Build Traffic Noise Level Leq(h), dBA [1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year Build Traffic Noise Level Leq(h), dBA [1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year No Build Traffic + Train Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 10.15		SFR	4	66 M,ST5	66	60	67	61	67	1	1	0	B (67)	NONE	67	0	*0*	67	0	*0*	67	0	*0*	67	0	*0*	-- [10]	--	--
R 10.16		SFR	7	67 E	64	65	68	66	68	1	1	0	B (67)	A/E	67	1	*0*	67	1	*0*	66 T	2	*0*	66	2	*0*	-- [10]	--	--
R 10.16A [8]	Shoulder	--	--	69 M,ST7,CAL	72	69	74	70	74	--	1	0	--	--	73	1	*0*	73	1	*0*	73	1	*0*	73	1	*0*	-- [10]	--	--
R 10.17 W		SFR	7	70 E	66	67	70	68	70	0	1	0	B (67)	A/E	68	2	*0*	68	2	*0*	67 T	3	*0*	67	3	*0*	-- [10]	--	--
R 10.18		SFR	3	64 E	58	63	64	64	65	0	1	1	B (67)	NONE	64	1	*0*	64	1	*0*	62	3	*0*	62	3	*0*	-- [10]	--	--
R 10.19		SFR	5	66 E	63	64	66	65	67	0	1	1	B (67)	NONE	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*	-- [10]	--	--
R 10.20		SFR	4	70 M,LT5,CAL	66	67	70	69	71	0	2	1	B (67)	A/E	69	2	*0*	69	2	*0*	68 T	3	*0*	68	3	*0*	-- [10]	--	--
R 10.20A [7]		SFR	16	63 E	60	60	63	61	63	0	1	0	B (67)	NONE	62	1	*0*	62	1	*0*	62	1	*0*	61	2	*0*	-- [10]	--	--
R 10.21	Shoulder	COM	1	72 E	69	68	72	68	72	0	0	0	E (72)	NONE	71	1	*0*	71	1	*0*	70	2	*0*	70	2	*0*	-- [10]	--	--
R 10.22		SFR	2	67 E	63	65	67	66	68	0	1	1	B (67)	A/E	66	2	*0*	66	2	*0*	65 T	3	*0*	65	3	*0*	-- [10]	--	--
R 10.23 [7]		SFR	12	62 E	59	58	62	59	62	0	1	0	B (67)	NONE	62	0	*0*	61	1	*0*	61	1	*0*	61	1	*0*	-- [10]	--	--
R 10.24		SFR	2	65 E	63	60	65	61	65	0	1	0	B (67)	NONE	64	1	*0*	64	1	*0*	64	1	*0*	64	1	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-3 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																							
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)																
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 11.1 B		MOT	1	67 E	67	68	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-1		MOT	--	67 E	67	66	0	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-1 int		MOT	4	42 E	42	41	0	-1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-2		MOT	--	71 E	71	71	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-2 Int	--	MOT	4	46 E	46	46	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-1		MOT	--	60 E	60	59	0	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-1 Int		MOT	2	35 E	35	34	0	-1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-2		MOT	--	64 E	64	64	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-2 Int		MOT	2	39 E	39	39	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.3 W		MH	6	72 E	72	72	0	0	B (67)	A/E	71	1	*0*	70	2	*0*	69 T	3	*0*	68	4	*0*	**67 R**	**5**	*6*
R 11.4 W		MH	16	74 M,LT6.CAL	74	74	0	0	B (67)	A/E	73	1	*0*	70 T	4	*0*	69	5	*16*	67	7	*16*	**67 R,5**	**7**	*16*
R 11.5 W		MH	8	72 E	72	71	0	-1	B (67)	A/E	71	0	*0*	69 T	2	*0*	67	4	*0*	66	5	*8*	**65 R,5**	**6**	*8*
R 11.6 B,W		MH	3	68 E	68	68	0	0	B (67)	A/E	67	1	*0*	66 T	2	*0*	64	4	*0*	63	5	*3*	**62 R,5**	**6**	*3*
R 11.7 B,W,7	S1877 P	MH	3	68 E	68	68	0	0	B (67)	A/E	67	1	*0*	67	1	*0*	65 T	3	*0*	64	4	*0*	**63 R**	**5**	*3*
R 11.8 B,W,7	R/W	MH	6	70 E	70	70	0	0	B (67)	A/E	69	1	*0*	69	1	*0*	67 T	3	*0*	66	4	*0*	66	4	*0*
R 11.9 B,W,7		MH	17	70 E	70	70	0	0	B (67)	A/E	68	2	*0*	67	3	*0*	65 T	5	*17*	64	6	*17*	**64 R,5**	**6**	*17*
R 11.10 B,W,7		MH	13	68 E	68	68	0	0	B (67)	A/E	67	1	*0*	66	2	*0*	64 T	4	*0*	64	4	*0*	**63 R**	**5**	*13*
R 11.11 B,W,7		MH	13	67 E	67	67	0	0	B (67)	A/E	66	1	*0*	66	1	*0*	64 T	3	*0*	64	3	*0*	63	4	*0*
R 11.12 B,W,7		MH	2	65 E	65	65	0	0	B (67)	NONE	64	1	*0*	64	1	*0*	63 T	2	*0*	62	3	*0*	61	4	*0*
R 11.13	--	COM	1	78 E	78	75	0	-3	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-3 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																					
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 11.14	W	SFR	1	71 M,ST9	74	72	3	-2	B (67)	A/E	70	2	0	68 T	4	0	**67 R**	**5**	***1***	67	5	*1*	67	5	*1*
R 11.14A	W	SFR	1	73 E	76	75	3	-1	B (67)	A/E	70 T	5	*1*	69	6	*1*	**68 R,5**	**7**	***1***	67	8	*1*	65	10	*1*
R 11.15	W	SFR	1	62 E	65	65	3	0	B (67)	NONE	64	1	0	64	1	0	62	3	0	61	4	0	60	5	*1*
R 11.15A		SFR	5	68 E	71	70	3	-1	B (67)	A/E	68	2	0	68	2	0	66 T	4	0	**65 R**	**5**	***5***	64	6	*5*
R 11.16		SFR	6	72 E	75	73	3	-2	B (67)	A/E	70	3	0	68	5	6	67 T	6	6	**66 R,5**	**7**	***6***	65	8	*6*
R 11.16A	W	SFR	7	66 E	70	69	4	-1	B (67)	A/E	68	1	0	67	2	0	65 T	4	0	65	4	0	**64 R**	**5**	***7***
R 11.17	B,8	SFR	--	73 M,ST11	77	74	4	-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.18	B	SFR	2	71 E	75	72	4	-3	B (67)	A/E	69	3	0	67 T	5	2	66	6	2	65	7	2	**65 R,5**	**7**	***2***
R 11.19	B,W	SFR	5	66 E	69	68	3	-1	B (67)	A/E	68	0	0	68	0	0	68	0	0	68	0	0	67	1	0
R 11.20	B,7	SFR	3	62 E	65	65	3	0	B (67)	NONE	64	1	0	64	1	0	64	1	0	63	2	0	63	2	0
R 11.21	B,7	SFR	8	64 E	67	66	3	-1	B (67)	A/E	65	1	0	65	1	0	64 T	2	0	62	4	0	62	4	0
R 11.22	B,7	SFR	6	62 E	66	66	4	0	B (67)	A/E	64	2	0	64	2	0	62 T	4	0	**61 R**	**5**	***6***	60	6	*6*
R 11.23	B,7	SFR	2	65 E	69	68	4	-1	B (67)	A/E	66	2	0	66	2	0	64 T	4	0	63	5	*2*	**62 R,5**	**6**	***2***
R 11.24-1	B	MFR	4	73 E	77	73	4	-4	B (67)	A/E	70	3	0	67 T	6	4	67	6	4	65	8	4	**65 R,5**	**8**	***4***
R 11.24-2	B,6	MFR	4	74 E	77	77	3	0	B (67)	A/E	77	0	0	77	0	0	76	1	0	74	3	0	**70 R,T**	**7**	***4***
R 11.25-1	B,W	MFR	2	73 E	74	71	1	-3	B (67)	A/E	69	2	0	68 T	3	0	67	4	0	66	5	*2*	**65 R,5**	**6**	***2***
R 11.25-2	B,W,6	MFR	2	73 E	75	74	2	-1	B (67)	A/E	74	0	0	74	0	0	74	0	0	72	2	0	70	4	0
R 11.26-1	B,7	MFR	6	63 E	67	66	4	-1	B (67)	A/E	63	3	0	63	3	0	61 T	5	6	61	5	6	**60 R,5**	**6**	***6***
R 11.26-2	B,W,6,7	MFR	6	66 E	69	67	3	-2	B (67)	A/E	67	0	0	66	1	0	65	2	0	64	3	0	63	4	0
R 11.27-1	B,W,7	MFR	2	63 E	61	63	-2	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.27-2	B,W,6,7	MFR	2	69 E	65	65	-4	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

S1907[P] R/W

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-3 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																							
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)																
											16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 11.28	W	SW1[X]	MH	3	72 [M,ST12]	65	66	-7	1	B (67)	A/E	-- [T]	--	--	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*
R 11.29	B,W,7		MH	3	70 [E]	64	64	-6	0	B (67)	NONE	--	--	--	64 [T]	0	*0*	63	1	*0*	63	1	*0*	63	1	*0*
R 11.30	B,W,7		MH	3	69 [E]	64	65	-5	1	B (67)	NONE	--	--	--	64 [T]	1	*0*	64	1	*0*	63	2	*0*	63	2	*0*
R 11.31	B,W,7		MH	3	70 [E]	65	65	-5	0	B (67)	NONE	--	--	--	65 [T]	0	*0*	64	1	*0*	64	1	*0*	63	2	*0*
R 11.32	B,W,7		MH	3	67 [E]	61	62	-6	1	B (67)	NONE	--	--	--	62 [T]	0	*0*	61	1	*0*	61	1	*0*	60	2	*0*
R 11.33	W		REC	1	77 [E]	65	66	-12	1	C (67)	A/E	--	--	--	65 [T]	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R 11.34	W		REC	1	73 [E]	64	65	-9	1	C (67)	NONE	--	--	--	64	1	*0*	63	2	*0*	63	2	*0*	62	3	*0*
R 11.34A	W		REC	1	63 [E]	59	61	-4	2	C (67)	NONE	--	--	--	60	1	*0*	60	1	*0*	60	1	*0*	60	1	*0*
R 11.35	B,W		MH	6	75 [E]	65	66	-10	1	B (67)	A/E	--	--	--	65 [T]	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*
R 11.36	B,W,7		MH	4	71 [E]	64	65	-7	1	B (67)	NONE	-- [T]	--	--	64	1	*0*	63	2	*0*	63	2	*0*	62	3	*0*
R 11.37	B,W		MH	4	72 [E]	63	64	-9	1	B (67)	NONE	--	--	--	63	1	*0*	63 [T]	1	*0*	62	2	*0*	62	2	*0*
R 11.38	B,W,7		MH	7	69 [E]	63	63	-6	0	B (67)	NONE	--	--	--	63 [T]	0	*0*	62	1	*0*	61	2	*0*	61	2	*0*
R 11.39	B,W		MH	8	71 [E]	64	65	-7	1	B (67)	NONE	--	--	--	64 [T]	1	*0*	64	1	*0*	63	2	*0*	63	2	*0*
R 11.40	B,W		MH	3	72 [M,ST13]	65	65	-7	0	B (67)	NONE	--	--	--	64	1	*0*	64 [T]	1	*0*	63	2	*0*	63	2	*0*
R 11.41	B,W,7		MH	8	66 [E]	62	62	-4	0	B (67)	NONE	--	--	--	62	0	*0*	61 [T]	1	*0*	61	1	*0*	60	2	*0*
R 11.42	B,W,7		MH	2	68 [E]	62	62	-6	0	B (67)	NONE	--	--	--	62	0	*0*	61 [T]	1	*0*	60	2	*0*	60	2	*0*
R 11.43		--	COM	1	71 [E]	75	76	4	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 11.44		S1969[P] R/W and Shoulder	SFR/FS	2	67 [M,ST14]	71	74	4	3	B (67)	A/E	69	5	*2*	68	6	*2*	**67** [R,T]	**7**	*2*	67	7	*2*	67	7	*2*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-3 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Traffic + Train Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																										
					Design Year Train Noise Level Leq(h), dBA [1]	Design Year No Build Traffic Noise Level Leq(h), dBA [1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year Build Traffic Noise Level L eq(h), dBA [1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year No Build Traffic + Train Noise Level Minus Existing Conditions Leq(h), dBA [1,14]	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA [1]	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(H), dBA [1,12]	Activity Category (NAC)	Impact Type [4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)															
															8 feet			10 feet			12 feet			14 feet			16 feet		
															Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 11.45		SFR	1	64 [E]	68	64	69	65	70	5	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.46	W	SFR	2	63 [M,LT7]	66	63	68	63	68	5	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.47	W	SFR	2	64 [E]	67	65	69	65	69	5	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.48	W,8	--	--	65 [M,ST10]	68	65	70	66	70	5	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.49		COM	1	63 [E]	65	64	68	65	68	5	1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Noise Level Leq(h), dBA".

14 - Noise measurements LT7 and ST10 were conducted when train cars were parked on tracks reducing the existing traffic and train noise levels.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-4 – Predicted Future Noise Levels and Barrier Analysis – Segment 12 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 12.1 K	--	SFR	2	62 M,ST15	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.2 K		SFR	2	60 E	60	61	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.3 K		SFR	4	63 E	63	65	0	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.4A K	--	SFR	1	67 E	59	59	-8	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.4B K		SFR	1	67 E	59	59	-8	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.4 K		SFR	4	70 M,LT8,CAL	57	57	-13	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.5 K		SFR	1	67 E	59	60	-8	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.6 B,K,7		SFR	2	59 E	55	55	-4	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.7	--	COM	1	70 E	71	72	1	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-1 W,8	--	MOT	--	66 E,H1B	67	67	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-1 W,Int		MOT	12	44 E	45	45	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-2 W,6		MOT	--	71 E	72	73	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-2 W,Int,6		MOT	12	49 E	50	51	1	1	D (52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-3 W		MOT	--	73 E	74	74	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-3 W,Int,12		MOT	12	51 E	52	52	1	0	D (52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.9 B,W		MOT	1	53 E	54	55	1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.10 W	S2033 R/W	REC	4	66 E	67	68	1	1	C (67)	A/E	62 T	6	*4*	62	6	*4*	**61 R**	**7**	***4***	61	7	*4*	60	8	*4*
R 12.11 B	--	SCH	1	56 E	57	57	1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

K - A calibration factor of -4 dB is applied for this receiver and adjacent receivers with similar geographic features.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Insertion losses obtained from interior versus exterior noise measurements have been been applied to exterior noise levels to determine interior noise levels: R12.8-1/H1B - Days Inn: 22 dB reduction.

Table B-5 – Predicted Future Noise Levels and Barrier Analysis – Segment 13 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											10 feet			12 feet			14 feet			16 feet			18 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R13.1-1 [B]	--	MOT	--	63 [E]	64	64	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1-1 [Int]		MOT	18	38 [E]	39	39	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1-2 [B,6]		MOT	--	65 [E]	66	67	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1-2 [Int,6]		MOT	18	40 [E]	41	42	1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1A		COM	1	67 [E]	68	68	1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-1 [B]	--	MOT	--	65 [E]	66	68	1	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-1 [Int]		MOT	15	40 [E]	41	43	1	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-2 [B,6]		MOT	--	69 [E]	70	70	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-2 [Int,6]		MOT	15	44 [E]	45	45	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.3	S2079[P] R/W	SFR	3	66 [E]	67	69	1	2	B (67)	A/E	66	3	*0*	65	4	*0*	64 [T]	5	*3*	**63** [R,5]	**6**	*3*	63	6	*3*
R13.4		SFR	1	68 [M,ST16A/LT9,CAL]	69	71	1	2	B (67)	A/E	68	3	*0*	66	5	*1*	65 [T]	6	*1*	**64** [R]	**7**	*1*	63	8	*1*
R13.5		COM	1	65 [E]	66	67	1	1	E (72)	NONE	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*	63	4	*0*
R13.6	--	REC	1	58 [E]	59	60	1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.7		REC	1	58 [E]	59	60	1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-6 – Predicted Future Noise Levels and Barrier Analysis – Segment 14 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 14.1	--	COM	1	72 M,ST119	76	77	4	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.3		SFR	1	67 M,ST16	67	68	0	1	B (67)	A/E	66	2	*0*	65	3	*0*	65	3	*0*	64	4	*0*	**63 R,T**	**5**	***1***
R 14.4		MOT	--	75 E	77	76	2	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.4	Int	MOT	3	55 E	57	56	2	-1	D (52)	A/E	54	2	*0*	53	3	*0*	52	4	*0*	51 T	5	*3*	**51 R**	**5**	***3***
R 14.5	W	MH	5	71 E	73	73	2	0	B (67)	A/E	70	3	*0*	71	2	*0*	69 T	4	*0*	68	5	*5*	**68 R,5**	**5**	***5***
R 14.6	W	MH	6	71 M,ST17	73	73	2	0	B (67)	A/E	71	2	*0*	70	3	*0*	69	4	*0*	68 T	5	*6*	67	6	*6*
R 14.7		MH	3	73 E	75	76	2	1	B (67)	A/E	72	4	*0*	70	6	*3*	70 T	6	*3*	69	7	*3*	69	7	*3*
R 14.7A	B,W,7	MH	7	67 E	69	69	2	0	B (67)	A/E	68	1	*0*	67	2	*0*	65 T	4	*0*	64	5	*7*	**64 R,5**	**5**	***7***
R 14.7B	B,W,7	MH	6	69 E	71	71	2	0	B (67)	A/E	69	2	*0*	68	3	*0*	66 T	5	*6*	65	6	*6*	65	6	*6*
R 14.8	B,W,7	MH	2	65 E	67	67	2	0	B (67)	A/E	65	2	*0*	64	3	*0*	63 T	4	*0*	62	5	*2*	**62 R,5**	**5**	***2***
R 14.8A		SFR	2	59	61	62	2	1	B (67)	NONE	61	1	*0*	60	2	*0*	59	3	*0*	59	3	*0*	59	3	*0*
R 14.8B		SFR	2	65	67	68	2	1	B (67)	A/E	65	3	*0*	65 T	3	*0*	64	4	*0*	63	5	*2*	62	6	*2*
R 14.9		SFR	2	71 M,LT10	73	74	2	1	B (67)	A/E	70	4	*0*	70	4	*0*	69 T	5	*2*	69	5	*2*	69	5	*2*
R 14.9A		SFR	--	72 M,ST17A/CAL	74	75	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.10	W	MH	3	68 E	70	71	2	1	B (67)	A/E	69	2	*0*	68	3	*0*	68 T	3	*0*	67	4	*0*	67	4	*0*
R 14.11	W	MH	3	68 E	70	71	2	1	B (67)	A/E	69	2	*0*	68	3	*0*	67 T	4	*0*	67	4	*0*	67	4	*0*
R 14.11A	B,W,7	MH	2	62 E	64	64	2	0	B (67)	NONE	63	1	*0*	62	2	*0*	61	3	*0*	61	3	*0*	60	4	*0*
R 14.12	B,W,7	MH	2	61 E	63	63	2	0	B (67)	NONE	62	1	*0*	61	2	*0*	61	2	*0*	60	3	*0*	60	3	*0*

S2145 R/W

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 20 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-6 – Predicted Future Noise Levels and Barrier Analysis – Segment 14 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																	
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)											
											18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 14.1	--	COM	1	72 M,ST119	76	77	4	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--
R 14.3		SFR	1	67 M,ST16	67	68	0	1	B (67)	A/E	63	5	*1*	62	6	*1*	62	6	*1*	62	6	*1*
R 14.4		MOT	--	75 E	77	76	2	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.4	Int	MOT	3	55 E	57	56	2	-1	D (52)	A/E	51	5	*3*	50	6	*3*	50	6	*3*	50	6	*3*
R 14.5	W	MH	5	71 E	73	73	2	0	B (67)	A/E	67	6	*5*	67	6	*5*	66	7	*5*	66	7	*5*
R 14.6	W	MH	6	71 M,ST17	73	73	2	0	B (67)	A/E	67	6	*6*	**66** R,5	**7**	***6***	66	7	*6*	65	8	*6*
R 14.7		MH	3	73 E	75	76	2	1	B (67)	A/E	69	7	*3*	**69** R,5	**7**	***3***	69	7	*3*	68	8	*3*
R 14.7A	B,W,7	MH	7	67 E	69	69	2	0	B (67)	A/E	63	6	*7*	63	6	*7*	62	7	*7*	62	7	*7*
R 14.7B	B,W,7	MH	6	69 E	71	71	2	0	B (67)	A/E	64	7	*6*	**63** R,5	**8**	***6***	63	8	*6*	63	8	*6*
R 14.8	B,W,7	MH	2	65 E	67	67	2	0	B (67)	A/E	62	5	*2*	61	6	*2*	61	6	*2*	60	7	*2*
R 14.8A		SFR	2	59	61	62	2	1	B (67)	NONE	59	3	*0*	59	3	*0*	59	3	*0*	58	4	*0*
R 14.8B		SFR	2	65	67	68	2	1	B (67)	A/E	61	7	*2*	61	7	*2*	**60** R,5	**8**	***2***	60	8	*2*
R 14.9		SFR	2	71 M,LT10	73	74	2	1	B (67)	A/E	69	5	*2*	68	6	*2*	**68** R,5	**6**	***2***	68	6	*2*
R 14.9A		SFR	--	72 M,ST17A/CAL	74	75	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.10	W	MH	3	68 E	70	71	2	1	B (67)	A/E	67	4	*0*	67	4	*0*	**66** R	**5**	***3***	66	5	*3*
R 14.11	W	MH	3	68 E	70	71	2	1	B (67)	A/E	66	5	*3*	66	5	*3*	**66** R,5	**5**	***3***	66	5	*3*
R 14.11A	B,W,7	MH	2	62 E	64	64	2	0	B (67)	NONE	60	4	*0*	59	5	*2*	**59** R,5	**5**	***2***	59	5	*2*
R 14.12	B,W,7	MH	2	61 E	63	63	2	0	B (67)	NONE	60	3	*0*	59	4	*0*	59	4	*0*	59	4	*0*

S2145 R/W

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 20 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-6 – Predicted Future Noise Levels and Barrier Analysis – Segment 14 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Traffic Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																									
					Design Year Train Noise Level Leq(h), dBA [1]	Design Year No Build Traffic Noise Level Leq(h), dBA [1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year Build Traffic Noise Level Leq(h), dBA [1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year No Build Traffic Noise Level Minus Existing Conditions Leq(h), dBA [4]	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA [1]	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(H), dBA [1,12]	Activity Category (NAC)	Impact Type [4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
															8 feet			10 feet			12 feet			14 feet			16 feet		
															Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 14.1A		SCH	1	62 [E]	56	62	63	63	64	0	1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.1B	--	SCH	1	63 [E]	58	63	64	64	65	0	1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.2		MFR	2	64 [E]	46	64	64	65	65	0	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Noise Level Leq(h), dBA".

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 20 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-7 – Predicted Future Noise Levels and Barrier Analysis – Segment 15 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 15.1	W	SW5[X] R/W	SFR	2	68 M,ST19	68	69	0	1	B (67)	A/E	--	--	--	--	--	--	68	1	0	67	2	0	66 T	3	0
R 15.2	W		SFR	3	68 E	68	68	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	68 T	0	0	67	1	0
R 15.3	W		SFR	1	66 E	66	66	0	0	B (67)	A/E	--	--	--	--	--	--	66	0	0	65	1	0	65 T	1	0
R 15.4	B,W,7		SFR	2	65 E	65	66	0	1	B (67)	A/E	--	--	--	--	--	--	65	1	0	64	2	0	64	2	0
R 15.5	B,W,7		SFR	4	65 E	65	65	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	64	1	0	64	1	0
R 15.6	W		SFR	3	66 E	66	66	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	65	1	0	64	2	0
											18 feet			20 feet			22 feet			24 feet			--		
R 15.1	W	SW5[X] R/W	SFR	2	68 M,ST19	68	69	0	1	B (67)	A/E	65	4	0	65	4	0	64	5	2	64	5	2	--	--	--
R 15.2	W		SFR	3	68 E	68	68	0	0	B (67)	A/E	66	2	0	66	2	0	65	3	0	65	3	0	--	--	--
R 15.3	W		SFR	1	66 E	66	66	0	0	B (67)	A/E	64	2	0	64	2	0	64	2	0	64	2	0	--	--	--
R 15.4	B,W,7		SFR	2	65 E	65	66	0	1	B (67)	A/E	63 T	3	0	63	3	0	63	3	0	63	3	0	--	--	--
R 15.5	B,W,7		SFR	4	65 E	65	65	0	0	B (67)	NONE	63	2	0	63	2	0	64	1	0	64	1	0	--	--	--
R 15.6	W		SFR	3	66 E	66	66	0	0	B (67)	A/E	64 T	2	0	63	3	0	63	3	0	63	3	0	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take in Alternative 3.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-7 – Predicted Future Noise Levels and Barrier Analysis – Segment 15 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 15.7 W	SW5[X] Shoulder	SFR	2	69 [E]	67	68	-2	1	B (67)	A/E	--	--	--	--	--	--	67 [T]	1	*0*	66	2	*0*	-- [10]	--	--
R 15.8 W		SFR	5	69 [E]	67	67	-2	0	B (67)	A/E	--	--	--	67 [T]	0	*0*	66	1	*0*	66	1	*0*	-- [10]	--	--
R 15.9 W		SFR	4	69 [M,ST19A,CAL]	67	67	-2	0	B (67)	A/E	-- [T]	--	--	66	1	*0*	66	1	*0*	65	2	*0*	-- [10]	--	--
R 15.10 B,W		SFR	4	67 [M,LT12]	65	65	-2	0	B (67)	NONE	--	--	--	65	0	*0*	65	0	*0*	64	1	*0*	-- [10]	--	--
R 15.11 B,W,7		SFR	4	68 [E]	66	66	-2	0	B (67)	A/E	--	--	--	65	1	*0*	64 [T]	2	*0*	64	2	*0*	-- [10]	--	--
R 15.12	--	COM	1	75 [E]	73	74	-2	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take in Alternative 3.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-7 – Predicted Future Noise Levels and Barrier Analysis – Segment 15 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Traffic Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
															8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year Train Noise Level Leq(h), dBA [1]	Design Year No Build Traffic Noise Level Leq(h), dBA [1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year Build Traffic Noise Level Leq(h), dBA [1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year No Build Traffic Noise Level Minus Existing Conditions Leq(h), dBA [14]	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 15.13	Shoulder	SFR	5	60 [M,ST18]	64	60	65	61	65	0	1	0	B (67)	NONE	65	0	*0*	65	0	*0*	65	0	*0*	65	0	*0*	-- [10]	--	--
R 15.14		SFR	5	66 [E]	70	66	71	67	71	0	1	0	B (67)	A/E	71	0	*0*	71	0	*0*	71 [T]	0	*0*	70	1	*0*	-- [10]	--	--
R 15.15		SFR	6	69 [E]	70	66	71	67	72	-3	1	1	B (67)	A/E	71	1	*0*	71	1	*0*	71 [T]	1	*0*	71	1	*0*	-- [10]	--	--
R 15.16		SFR	6	66 [M,LT11,CAL]	68	63	69	65	70	-3	2	1	B (67)	NONE	69	1	*0*	69	1	*0*	69	1	*0*	69	1	*0*	-- [10]	--	--
R 15.17		SFR	2	66 [E]	68	63	69	65	69	-3	2	0	B (67)	NONE	69	0	*0*	69	0	*0*	69	0	*0*	69	0	*0*	-- [10]	--	--
R 15.18		SFR	2	65 [E]	68	62	69	64	69	-3	2	0	B (67)	NONE	69	0	*0*	69	0	*0*	68	1	*0*	68	1	*0*	-- [10]	--	--
R 15.19		SFR	3	66 [E]	66	63	68	63	68	-3	0	0	B (67)	NONE	68	0	*0*	67	1	*0*	67	1	*0*	67	1	*0*	-- [10]	--	--
R 15.20	--	SFR	4	62 [E]	64	64	67	63	66	2	-1	-1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 15.21		SFR	3	57 [E]	66	59	66	60	67	2	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 15.22		SFR	4	55 [M,ST20]	62	57	63	58	63	2	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 15.23		SFR	5	56 [E]	60	58	62	58	62	2	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

14 - Existing Conditions do not include train noise for ST18 and ST20; however there is potential train noise included in noise measurement LT11.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-8 – Predicted Future Noise Levels and Barrier Analysis – Segment 16 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 16.1 [B,W]	--	MOT	1	61 [E]	62	62	1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 16.2 [B]	Shoulder	SFR	1	69 [E]	70	70	1	0	B (67)	A/E	69	1	*0*	68	2	*0*	67 [T]	3	*0*	67	3	*0*	-- [10]	--	--
R 16.3 [B]		COM	1	75 [E]	76	76	1	0	E (72)	A/E	71	5	*1*	69	7	*1*	68	8	*1*	67 [T]	9	*1*	-- [10]	--	--
R 16.4 [B]		SFR	1	70 [E]	71	72	1	1	B (67)	A/E	69	3	*0*	68	4	*0*	68	4	*0*	67 [T]	5	*1*	-- [10]	--	--
R 16.5 [B,W,7]		SFR	4	65 [E]	66	65	1	-1	B (67)	NONE	64	1	*0*	64	1	*0*	62	3	*0*	62	3	*0*	-- [10]	--	--
R 16.6 [B,W]		REL	1	63 [E]	64	63	1	-1	--	--	62	1	*0*	62	1	*0*	60	3	*0*	59	4	*0*	-- [10]	--	--
R 16.7 [B,7]		SFR	2	61 [E]	62	63	1	1	B (67)	NONE	62	1	*0*	61	2	*0*	60	3	*0*	59	4	*0*	-- [10]	--	--
R 16.8 [B,7]		MH	6	65 [E]	66	65	1	-1	B (67)	NONE	63	2	*0*	63	2	*0*	62	3	*0*	60	5	*6*	-- [10]	--	--
R 16.9 [B,7]		SFR	6	62 [E]	63	63	1	0	B (67)	NONE	61	2	*0*	61	2	*0*	60	3	*0*	60	3	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take in Alternative 3.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-8 – Predicted Future Noise Levels and Barrier Analysis – Segment 16 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 16.10	W,B	SFR	3	63 E	64	65	1	1	B (67)	NONE	65	0	0	65	0	0	65	0	0	65	0	0	65	0	0
R 16.11	W,B	SFR	3	61 M,LT13	62	63	1	1	B (67)	NONE	62	1	0	62	1	0	61	2	0	61	2	0	61	2	0
R 16.12	B	SFR	1	66 E	67	67	1	0	B (67)	A/E	65	2	0	64	3	0	64	3	0	63 T	4	0	63	4	0
R 16.13	B	SFR	4	65 E	66	66	1	0	B (67)	A/E	65	1	0	64	2	0	63	3	0	62 T	4	0	62	4	0
R 16.14	B	SFR	2	62 E	63	64	1	1	B (67)	NONE	63	1	0	63	1	0	62	2	0	62	2	0	62	2	0
R 16.15-1		MOT	--	67 E	67	68	0	1	--	--	65	3	--	65	3	--	64	4	--	63	5	--	-- [10]	--	--
R 16.15-1	Int,B	MOT	6	42 E	42	43	0	1	D (52)	NONE	40	3	0	40	3	0	39	4	0	38	5	6	-- [10]	--	--
R 16.15-2		MOT	--	71 E	71	71	0	0	--	--	69	2	--	68	3	--	68	3	--	66	5	--	-- [10]	--	--
R 16.15-2	Int,B,6	MOT	6	46 E	46	46	0	0	D (52)	NONE	44	2	0	43	3	0	43	3	0	41	5	6	-- [10]	--	--
R 16.16-1		MOT	--	67 E	67	67	0	0	--	--	65	2	--	64	3	--	63	4	--	62	5	--	-- [10]	--	--
R 16.16-1	Int,B	MOT	14	42 E	42	42	0	0	D (52)	NONE	40	2	0	39	3	0	38	4	0	37	5	14	-- [10]	--	--
R 16.16-2		MOT	--	71 E	71	71	0	0	--	--	69	2	--	68	3	--	68	3	--	67	4	--	-- [10]	--	--
R 16.16-2	Int,B,6	MOT	14	46 E	46	46	0	0	D (52)	NONE	44	2	0	43	3	0	43	3	0	42	4	0	-- [10]	--	--
R 16.17	B,W	MOT	1	70 M,ST20A,CAL	70	70	0	0	E (72)	NONE	67	3	0	66	4	0	65	5	1	64	6	1	-- [10]	--	--
R 16.18	B,7	SFR	8	61 E	62	63	1	1	B (67)	NONE	62	1	0	61	2	0	61	2	0	60	3	0	-- [10]	--	--
R 16.19	B,7	SFR	3	63 E	64	65	1	1	B (67)	NONE	63	2	0	63	2	0	63	2	0	62	3	0	-- [10]	--	--
R 16.20-1		MOT	--	66 E	66	67	0	1	--	--	65	2	--	65	2	--	65	2	--	64	3	--	-- [10]	--	--
R 16.20-1	Int,B	MOT	4	41 E	41	42	0	1	D (52)	NONE	40	2	0	40	2	0	40	2	0	39	3	0	-- [10]	--	--
R 16.20-2		MOT	--	69 E	69	69	0	0	--	--	67	2	--	67	2	--	67	2	--	66	3	--	-- [10]	--	--
R 16.20-2	Int,B,6	MOT	4	44 E	44	44	0	0	D (52)	NONE	42	2	0	42	2	0	42	2	0	41	3	0	-- [10]	--	--
R 16.21	B	MOT	1	61 E	61	61	0	0	E (72)	NONE	60	1	0	60	1	0	60	1	0	60	1	0	-- [10]	--	--

R/W & Shoulder

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-8 – Predicted Future Noise Levels and Barrier Analysis – Segment 16 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Traffic Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)											
															8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year Train Noise Level Leq(h), dBA [1]	Design Year No Build Traffic Noise Level Leq(h), dBA [1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year Build Traffic Noise Level Leq(h), dBA [1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year No Build Traffic Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 16.22	--	SFR	3	55 [E]	61	57	63	58	63	2	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 16.23		SFR/MFR	14	56 [E]	60	58	62	59	62	2	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - $L_{eq(h)}$ are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); *A*/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 1A-1	--	MOT	--	67 C	67	69	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-1 Int		MOT	6	39 C	39	41	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-2 6		MOT	--	70 C	70	72	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-2 Int,6		MOT	6	42 C	42	44	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-3 12		MOT	--	71 C	71	72	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-3 Int,12		MOT	6	43 C	43	44	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-1		MOT	--	70 C	70	72	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-1 Int		MOT	6	42 C	42	44	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-2 6		MOT	--	73 C	73	74	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-2 Int,6		MOT	6	45 C	45	46	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-3 12		MOT	--	74 C	74	75	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-3 Int,12		MOT	6	46 C	46	47	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. A 28 dB reduction has been applied to exterior noise levels based on building noise reduction measurements conducted for this site.

Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																			
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)												
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 2 [13]	SW241[X] Property Line	SFR	1	66 [C]	58	59	-8	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 3 [13]		SFR	1	67 [C]	58	59	-9	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 4 [13]		SFR	2	67 [C]	58	59	-9	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 5 [13]		SFR	2	68 [C]	58	59	-10	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 6 [13]		SFR	2	68 [C]	59	60	-9	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 7 [13]		SFR	2	69 [C]	59	60	-10	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 8 [13]		SFR	1	69 [C]	61	63	-8	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 9 [9]	--	--	--	74 [M,ST23]	74	77	0	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 10 [B,7]	--	SFR	3	62 [C]	62	64	0	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 11 [W]	--	SFR	4	59 [C]	59	60	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 12 [W]		SFR	12	60 [C]	60	62	0	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 13 [W]		SFR	7	61 [C]	61	61	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 14 [W]		SFR	3	62 [C]	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R17. 15 [W]	SW264[X] Property Line	SFR	2	65 [E]	64	66	-1	2	B (67)	A/E	--	--	--	65	1	*0*	64	2	*0*	63	3	*0*	62	4	*0*
R17. 16 [W]		SFR	3	65 [E]	64	66	-1	2	B (67)	A/E	--	--	--	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R17. 17 [W]		SFR	5	66 [M,LT14,CAL]	65	66	-1	1	B (67)	A/E	--	--	--	65	1	*0*	65	1	*0*	64	2	*0*	63	3	*0*
R17. 18 [W]		SFR	6	65 [E]	64	67	-1	3	B (67)	A/E	--	--	--	66	1	*0*	66	1	*0*	65	2	*0*	65	2	*0*
R17. 19 [B,W,7]		SFR	2	63 [E]	62	62	-1	0	B (67)	NONE	--	--	--	62	0	*0*	62	0	*0*	61	1	*0*	61	1	*0*
R17. 20 [B,W,7]		SFR	6	63 [E]	62	64	-1	2	B (67)	NONE	--	--	--	63	1	*0*	63	1	*0*	63	1	*0*	62	2	*0*
R17. 21 [B,W,7]		SFR	3	64 [E]	63	64	-1	1	B (67)	NONE	--	--	--	64	0	*0*	63	1	*0*	63	1	*0*	62	2	*0*
R17. 22 [B,W,7]		SFR	3	65 [E]	64	65	-1	1	B (67)	NONE	--	--	--	64	1	*0*	63	2	*0*	63	2	*0*	62	3	*0*
R17. 23 [B,W,7]		SFR	4	63 [E]	62	63	-1	1	B (67)	NONE	--	--	--	63	0	*0*	62	1	*0*	62	1	*0*	61	2	*0*
R17. 24 [B,W,7]		SFR	3	66 [E]	65	68	-1	3	B (67)	A/E	--	--	--	67	1	*0*	67	1	*0*	67	1	*0*	67	1	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 18 W	S2435[P] R/W and S2437[P] Shoulder	SFR	5	65 E	64	67	-1	3	B (67)	A/E	65	2	*0*	65	2	*0*	64	3	*0*	64	3	*0*	64	3	*0*
R17. 24 B,W,7		SFR	3	66 E	65	68	-1	3	B (67)	A/E	65	3	*0*	65	3	*0*	64	4	*0*	64	4	*0*	64	4	*0*
R17. 25 B,W		MFR	4	68 E	66	66	-2	0	B (67)	A/E	64	2	*0*	62 T	4	*0*	61	5	*4*	**61** R,5	**5**	***4***	60	6	*4*
R17. 26 W		MFR	3	70 E	68	68	-2	0	B (67)	A/E	66	2	*0*	64 T	4	*0*	63	5	*3*	**62** R,5	**6**	***3***	62	6	*3*
R17. 27 B,W		MFR	3	68 E	66	66	-2	0	B (67)	A/E	63	3	*0*	61 T	5	*3*	60	6	*3*	**59** R	**7**	***3***	59	7	*3*
R17. 28 B,W		MFR	1	61 E	59	60	-2	1	B (67)	NONE	59	1	*0*	59 T	1	*0*	58	2	*0*	58	*2*	*0*	58	2	*0*
R17. 29 B,W		MFR	2	68 E	66	66	-2	0	B (67)	A/E	64	2	*0*	62 T	4	*0*	62	4	*0*	**61** R	**5**	***2***	61	5	*2*
R17. 30 W,8		MFR	--	70 M,ST25	68	68	-2	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 31 B,W,7		MFR	3	60 E	58	58	-2	0	B (67)	NONE	55	3	*0*	55	3	*0*	53	5	*3*	**52** R,5	**6**	***3***	52	6	*3*
R17. 32 B,W	--	MFR	10	59 E	57	57	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R17. 33A	--	REL	--	68 C	68	69	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 33A Int		REL	1	43 C	43	44	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 33	--	COM	1	75 C	75	76	0	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 34	S2384P R/W and S2382P Shoulder	SFR	1	69 C	69	70	0	1	B (67)	A/E	68	2	*0*	67	3	*0*	66 T	4	*0*	65	5	*1*	**63 R**	**7**	***1***
R17. 35 [8]		--	--	66 M,ST21	67	69	1	2	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 36	--	COM	1	74 C	74	76	0	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 37		COM	1	77 M,ST121	79	80	2	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. A 25 dB reduction has been applied to exterior noise levels.

Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 38	S2434A[P] R/W and S2438[P] Shoulder Option 1	MH	4	75 [M,ST24]	77	78	2	1	B (67)	A/E	71	7	*4*	70 [T]	8	*4*	68	10	*4*	**67** [R,5]	**11**	***4***	67	11	*4*
R17. 39		MH	6	71 [E]	73	75	2	2	B (67)	A/E	72	3	*0*	71 [T]	4	*0*	**70** [R]	**5**	***6***	70	5	*6*	70	5	*6*
R17. 40		MH	6	68 [E]	70	71	2	1	B (67)	A/E	68	3	*0*	65 [T]	6	*6*	**64** [R]	**7**	***6***	64	7	*6*	63	8	*6*
R17. 41 [B,7]		MH	1	71 [E]	73	74	2	1	B (67)	A/E	71	3	*0*	70	4	*0*	68	6	*1*	67	7	*1*	**67** [R,5]	**7**	***1***
R17. 42 [B,7]		MH	2	68 [E]	70	71	2	1	B (67)	A/E	69	2	*0*	68	3	*0*	67	4	*0*	67	4	*0*	**66** [R]	**5**	***2***
R17. 43 [B,7]		MH	7	68 [E]	70	72	2	2	B (67)	A/E	70	2	*0*	69	3	*0*	**67** [R]	**5**	***7***	67	5	*7*	66	6	*7*
R17. 44 [B,7]		MH	6	67 [E]	69	71	2	2	B (67)	A/E	68	3	*0*	68	3	*0*	**66** [R]	**5**	***6***	66	5	*6*	65	6	*6*
R17. 45 [B,7]		MH	4	66 [E]	68	69	2	1	B (67)	A/E	66	3	*0*	66	3	*0*	**64** [R]	**5**	***4***	63	6	*4*	63	6	*4*
R17. 46 [W]		SFR	2	65 [E]	66	68	1	2	B (67)	A/E	66	2	*0*	64 [T]	4	*0*	**63** [R]	**5**	***2***	63	5	*2*	62	6	*2*
R17. 47A [W]		SFR	2	66 [E]	67	68	1	1	B (67)	A/E	67	1	*0*	65 [T]	3	*0*	64	4	*0*	**63** [R]	**5**	***2***	63	5	*2*
R17. 47 [9]		--	--	68 [M,LT15,CAL]	69	69	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 48		SFR	2	67 [E]	68	68	1	0	B (67)	A/E	67	1	*0*	67 [T]	1	*0*	66	2	*0*	65	3	*0*	65	3	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

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B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 38		MH	4	75 M,ST24	77	78	2	1	B (67)	A/E	72	6	4	69 T	9	4	**68 R,5**	**10**	***4***	68	10	4	-- [10]	--	--
R17. 39		MH	6	71 E	73	75	2	2	B (67)	A/E	70	5	6	69 T	6	6	**67 R,5**	**8**	***6***	66	9	6	-- [10]	--	--
R17. 40		MH	6	68 E	70	71	2	1	B (67)	A/E	68	3	0	66 T	5	6	64	7	6	**64 R,5**	**7**	***6***	-- [10]	--	--
R17. 41 B,7		MH	1	71 E	73	74	2	1	B (67)	A/E	69	5	1	69	5	1	**67 R,5**	**7**	***1***	67	7	1	-- [10]	--	--
R17. 42 B,7	S2434B[P] and S2438[P] Shoulder Option 2	MH	2	68 E	70	71	2	1	B (67)	A/E	67	4	0	67	4	0	**66 R**	**5**	***2***	66	5	2	-- [10]	--	--
R17. 43 B,7		MH	7	68 E	70	72	2	2	B (67)	A/E	68	4	0	67	5	7	**65 R,5**	**7**	***7***	64	8	7	-- [10]	--	--
R17. 44 B,7		MH	6	67 E	69	71	2	2	B (67)	A/E	67	4	0	66	5	6	**64 R,5**	**7**	***6***	64	7	6	-- [10]	--	--
R17. 45 B,7		MH	4	66 E	68	69	2	1	B (67)	A/E	66	3	0	66	3	0	63	6	4	**63 R,5**	**6**	***4***	-- [10]	--	--
R17. 46 W		SFR	2	65 E	66	68	1	2	B (67)	A/E	66	2	0	64 T	4	0	63	5	2	**63 R,5**	**5**	***2***	-- [10]	--	--
R17. 47A W		SFR	2	66 E	67	68	1	1	B (67)	A/E	67	1	0	65 T	3	0	64	4	0	**63 R**	**5**	***2***	-- [10]	--	--
R17. 47 9		--	--	68 M,LT15,CAL	69	69	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R17. 48		SFR	2	67 E	68	68	1	0	B (67)	A/E	67	1	0	67 T	1	0	66	2	0	65	3	0	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

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8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

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10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

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B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-10 – Predicted Future Noise Levels and Barrier Analysis – Segment 18 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA1																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18. 1	--	COM	1	72 E	70	70	-2	0	F	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 2		COM	1	72 E	70	70	-2	0	F	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 3	--	REC	1	73 E	71	71	-2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 4		REC	1	70 E	68	68	-2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 5	--	COM	1	70 E	70	71	0	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 6-1	S2476P Shoulder	MFR	2	66 M,ST26	66	67	0	1	B (67)	A/E	64	3	*0*	63	4	*0*	**62** R,T	**5**	***2***	61	6	*2*	-- 10	--	--
R18. 6-2 [6]		MFR	2	69 E	69	69	0	0	B (67)	A/E	64	5	*2*	64	5	*2*	**62** R,T,5	**7**	***2***	61	8	*2*	-- 10	--	--
R18. 7-1		MFR	6	65 E	65	64	0	-1	B (67)	NONE	61	3	*0*	61	3	*0*	**59** R,T	**5**	***6***	58	6	*6*	-- 10	--	--
R18. 7-2 [6]		MFR	6	67 E	67	66	0	-1	B (67)	A/E	63	3	*0*	62	4	*0*	62	4	*0*	61	5	*6*	-- 10	--	--
R18. 8-1		MFR	8	65 E	65	65	0	0	B (67)	NONE	62	3	*0*	61	4	*0*	**59** R,T	**6**	***8***	58	7	*8*	-- 10	--	--
R18. 8-2 [6]		MFR	8	68 E	68	67	0	-1	B (67)	A/E	63	4	*0*	62	5	*8*	**60** R,T,5	**7**	***8***	59	8	*8*	-- 10	--	--
R18. 9-1 [7]		MFR	4	62 E	62	61	0	-1	B (67)	NONE	58	3	*0*	58	3	*0*	**56** R,T	**5**	***4***	55	6	*4*	-- 10	--	--
R18. 9-2 [6,7]		MFR	4	64 E	64	63	0	-1	B (67)	NONE	60	3	*0*	60	3	*0*	59	4	*0*	58	5	*4*	-- 10	--	--
R18. 10-1 [7]		MFR	4	60 E	60	61	0	1	B (67)	NONE	59	2	*0*	58	3	*0*	57	4	*0*	56	5	*4*	-- 10	--	--
R18. 10-2 [6,7]		MFR	4	63 E	63	63	0	0	B (67)	NONE	61	2	*0*	60	3	*0*	59	4	*0*	59	4	*0*	-- 10	--	--
R18. 11-1		MFR	2	67 E	67	68	0	1	B (67)	A/E	65	3	*0*	64	4	*0*	**63** R,T	**5**	***2***	62	6	*2*	-- 10	--	--
R18. 11-2 [6]		MFR	2	70 E	70	70	0	0	B (67)	A/E	66	4	*0*	65	5	*2*	**64** R,T,5	**6**	***2***	63	7	*2*	-- 10	--	--
R18. 12-1		MFR	4	67 E	67	68	0	1	B (67)	A/E	64	4	*0*	64	4	*0*	**62** R,T	**6**	***4***	62	6	*4*	-- 10	--	--
R18. 12-2 [6]		MFR	4	70 E	70	70	0	0	B (67)	A/E	66	4	*0*	65	5	*4*	**63** R,T,5	**7**	***4***	62	8	*4*	-- 10	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; RS - radio station; PI - public institute.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-10 – Predicted Future Noise Levels and Barrier Analysis – Segment 18 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA1																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18. 13-1 [7]	S2476[P] Shoulder	MFR	2	66 [E]	66	66	0	0	B (67)	A/E	62	4	*0*	62	4	*0*	**60** [R,T]	**6**	***2***	60	6	*2*	-- [10]	--	--
R18. 13-2 [6,7]		MFR	2	68 [E]	68	68	0	0	B (67)	A/E	64	4	*0*	63	5	*2*	**62** [R,T,5]	**6**	***2***	61	7	*2*	-- [10]	--	--
R18. 14-1		MFR	6	68 [E]	68	69	0	1	B (67)	A/E	65	4	*0*	65	4	*0*	**63** [R,T]	**6**	***6***	63	6	*6*	-- [10]	--	--
R18. 14-2 [6]		MFR	6	71 [E]	71	72	0	1	B (67)	A/E	67	5	*6*	66	6	*6*	**65** [R,T,5]	**7**	***6***	64	8	*6*	-- [10]	--	--
R18. 15-1		MFR	4	67 [E]	67	67	0	0	B (67)	A/E	65	2	*0*	64	3	*0*	63 [T]	4	*0*	**62** [R]	**5**	***4***	-- [10]	--	--
R18. 15-2 [6]		MFR	4	69 [E]	69	70	0	1	B (67)	A/E	66	4	*0*	65	5	*4*	64 [T]	6	*4*	**64** [R,5]	**6**	***4***	-- [10]	--	--
R18. 16-1		MFR	4	62 [E]	62	64	0	2	B (67)	NONE	60	4	*0*	60	4	*0*	59 [T]	5	*4*	**58** [R,5]	**6**	***4***	-- [10]	--	--
R18. 16-2 [6]		MFR	4	67 [E]	67	69	0	2	B (67)	A/E	66	3	*0*	65	4	*0*	64 [T]	5	*4*	**64** [R,5]	**5**	***4***	-- [10]	--	--
R18. 17 [B,W,7]		SFR	3	62 [E]	62	63	0	1	B (67)	NONE	61	2	*0*	61	2	*0*	60	3	*0*	60	3	*0*	-- [10]	--	--
R18. 18 [W]		SFR	8	62 [M,LT16,ST26A,CAL]	62	63	0	1	B (67)	NONE	62	1	*0*	61	2	*0*	61	2	*0*	60	3	*0*	-- [10]	--	--
R18. 19 [W]		SFR	5	63 [E]	63	63	0	0	B (67)	NONE	63	0	*0*	63	0	*0*	62	1	*0*	62	1	*0*	-- [10]	--	--
R18. 20	--	MFR	4	64 [E]	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 21		MFR	4	63 [M,ST27]	63	64	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 22		MFR	4	64 [E]	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 23	--	COM	1	68 [E]	68	68	0	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 24	--	COM	1	72 [M,ST28]	70	69	-2	-1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 25	Shoulder	RS	--	73 [E]	71	72	-2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 25 [Int]		RS	1	48 [E]	46	47	-2	1	D (52)	NONE	44	3	*0*	43	4	*0*	42	5	*1*	41	6	*1*	-- [10]	--	--
R18. 26		PI	1	67 [E]	65	66	-2	1	C (67)	A/E	63	3	*0*	62	4	*0*	62	4	*0*	61	5	*1*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; RS - radio station; PI - public institute.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates that no barrier was analuzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-11 – Predicted Future Noise Levels and Barrier Analysis – Segment 18A – Alternative 2

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18A. 1A	--	COM	1	74 C	74	77	0	3	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 1	--	SCH	1	62 C	62	64	0	2	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-1	--	MOT	--	62 C	62	62	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-1 Int	--	MOT	5	37 C	37	37	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-2 6	--	MOT	--	65 C	66	66	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-2 6,Int	--	MOT	5	40 C	41	41	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 3	--	MOT	1	61 C	61	62	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-1	--	MOT	--	61 C,H6	61	62	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-1 Int	--	MOT	4	38 C	38	39	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-2 6	--	MOT	--	67 C	68	69	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-2 6,Int	--	MOT	4	44 C	45	46	1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-1	--	MOT	--	63 C	63	63	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-1 Int	--	MOT	4	40 C	40	40	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-2 6	--	MOT	--	70 C	70	71	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-2 6,Int	--	MOT	4	47 C	47	48	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; PI - public institute.

3 - M - Measured noise level; STxx or LTxx - measurement site number; C - calculated existing noise level; CAL - model calibration site; Hxx - indoor/outdoor measurement; E - estimated from No Build noise level and measurement sites.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of a calibration location.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels of Americas Best Value Inn based o building construction; a 23, 20, and 25 dB reduction has been applied to exterior noise levels of Super 8, Good Nite Inn, and Country Inn Suites, respectively, based on building noise reduction measurements conducted at these sites.

Table B-11 – Predicted Future Noise Levels and Barrier Analysis – Segment 18A – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA[1]																				
											Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18A. 6 [8]		MOT	-	76 [C,ST28A,CAL]	76	76	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-1 [B,W]		MOT	--	70 [C,H18]	70	70	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-1 [B,Int,W]	--	MOT	7	50 [C]	50	50	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-2 [B,6]		MOT	--	73 [C]	73	73	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-2 [B,6,Int]		MOT	7	53 [C]	53	53	0	0	D (52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 8	--	COM	1	65 [C]	66	67	1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-1		MOT	--	67 [C,H5]	67	68	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-1 [Int]		MOT	12	42 [C]	42	43	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-2 [6]		MOT	--	71 [C]	71	72	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-2 [6,Int]	--	MOT	12	46 [C]	46	47	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-3 [12]		MOT	--	74 [C]	74	75	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-3 [12,Int]		MOT	12	49 [C]	49	50	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 10		MOT	1	64 [C]	64	65	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 11	--	COM	1	63 [C]	63	64	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; PI - public institute; RS - radio station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; C - calculated existing noise level; CAL - model calibration site; Hxx - indoor/outdoor measurement; E - estimated from No Build noise level and measurement sites.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of a calibration location.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels of Americas Best Value Inn based o building construction; a 23, 20, and 25 dB reduction has been applied to exterior noise levels of Super 8, Good Nite Inn, and Country Inn Suites, respectively, based on building noise reduction measurements conducted at these sites.

Table B-12 – Predicted Future Noise Levels and Barrier Analysis – Segment 1 – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																			
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)												
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 1.1 W,K	SW639 / Shoulder	SFR	2	61 E	61	61	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.2 W,K		SFR	2	60 M,ST56	60	60	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.3 W,K		SFR	4	60 E	60	60	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.4 W,K		SFR	4	62 E	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.5 W,K		SFR	5	62 M,ST60	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.6 W,B,7,K		SFR	2	63 E	63	63	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.7 W,B,7,K		SFR	5	62 E	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.8 W,B,7,K		SFR	4	62 E	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.9 W,K	SW651 / Shoulder	SFR	8	62 M,LT27,CAL	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.10 W,K		SFR	5	62 E	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.11 W,K		SFR	4	63 E	62	62	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.12 W,K		SFR	4	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.13 W,K		SFR	4	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.14 W,K		SFR	4	65 E	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.15 W,K		SFR	3	65 E	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.16 W,K		SFR	4	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.17 W,K		SFR	2	66 M,ST62	65	65	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; SCH - educational center; REC - recreational; COM - commercial.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

K - A calibration factor of -3 dB is applied for this receiver and adjacent receivers with similar geographic

Table B-12 – Predicted Future Noise Levels and Barrier Analysis – Segment 1 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 1.18 W,B	SW651 / Shoulder	MFR	6	67 E	67	67	0	0	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 1.19 W,B		MFR	6	67 E	67	67	0	0	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 1.20 W,B		MFR	4	67 E	67	67	0	0	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 1.21 W,B,7		MFR	4	60 E	60	60	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.22 W,8		MFR	--	68 M,ST65	68	68	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.23 W,B		MFR	2	65 E	65	65	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.24 W,B		MFR	2	66 E	65	65	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.25 W,B		MFR	6	62 E	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.26 W,B		MFR	6	61 E	60	61	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.27 W,B		REC	1	65 E	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.28 W		REC	1	71 M,ST66,CAL	70	70	-1	0	C (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 1.29 W,B		REC	1	64 E	63	63	-1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; SCH - educational center; REC - recreational; COM - commercial.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-12 – Predicted Future Noise Levels and Barrier Analysis – Segment 1 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 1.30 W	SW651 / Shoulder	MFR	4	68 E	67	67	-1	0	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 1.31 W		MFR	6	69 E	68	68	-1	0	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 1.32 W		MFR	2	66 M,ST67	65	65	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.33 W		MFR	1	66 E	65	65	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.34 W,B		MFR	4	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.35 W,B		MFR	6	62 E	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.36 W,B		MFR	4	62 E	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.37 W,B		MFR	2	62 E	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											14 feet			16 feet			18 feet			20 feet			22 feet		
R 1.38 W	S699 / Shoulder	REC	1	68 E	67	67	-1	0	C (67)	A/E	66	1	*0*	66	1	*0*	66	1	*0*	66	1	*0*	66	1	*0*
R 1.39 W		MOT	8	72 E	71	71	-1	0	E (72)	NONE	66	5	*8*	**66** R	**5**	*8*	65	6	*8*	65	6	*8*	65	6	*8*
R 1.40 W		MOT	8	73 E	72	72	-1	0	E (72)	A/E	67	5	*8*	66	6	*8*	66	6	*8*	**65** R	**7**	*8*	65	7	*8*
R 1.41 B,7		MOT	1	61 M,ST68	61	61	0	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; SCH - educational center; REC - recreational; COM - commercial.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-12 – Predicted Future Noise Levels and Barrier Analysis – Segment 1 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																			
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)												
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 1.42A W	--	REC	1	59 E	62	62	3	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.42B W		REC	1	61 E	64	64	3	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.42 W		SFR	4	62 M,ST55	65	65	3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.43 W		SFR	4	62 E	65	65	3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.44 W	SW636 / Shoulder	SFR	5	64 M,ST58	62	62	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.45 W		SFR	3	65 E	63	63	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.46 W		SFR	4	64 E	62	62	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.47 W,B,7		SFR	4	60 E	58	58	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.48 W		SFR	1	63 M,ST59	62	62	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.49 W	SW650 / Shoulder	SFR	2	63 E	62	62	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.50 W		REC	1	64 M,ST61	63	64	-1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.51 W		REC	1	66 E	65	65	-1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.52 W		REC	1	63 E	62	62	-1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; SCH - educational center; REC - recreational; COM - commercial.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-12 – Predicted Future Noise Levels and Barrier Analysis – Segment 1 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											14 feet			16 feet			18 feet			20 feet			22 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 1.53 W	SW650 / R/W	SFR	1	65 E	66	66	1	0	B (67)	A/E	-- T	--	--	66	0	0	66	0	0	66	0	0	66	0	0
R 1.54 W		SFR	5	65 E	66	66	1	0	B (67)	A/E	-- T	--	--	66	0	0	66	0	0	65	1	0	65	1	0
R 1.55 W		SFR	4	66 E	67	68	1	1	B (67)	A/E	-- T	--	--	67	1	0	66	2	0	65	3	0	65	3	0
R 1.56 W		SFR	4	66 M,LT28,CAL	67	67	1	0	B (67)	A/E	-- T	--	--	66	1	0	65	2	0	65	2	0	64	3	0
R 1.57 W		SFR	5	66 E	67	67	1	0	B (67)	A/E	-- T	--	--	66	1	0	65	2	0	65	2	0	64	3	0
R 1.58 W		SFR	4	66 E	67	67	1	0	B (67)	A/E	-- T	--	--	66	1	0	66	1	0	65	2	0	64	3	0
R 1.61 W,B,7		SFR	1	65 E	64	64	-1	0	B (67)	NONE	--	--	--	64	0	0	64	0	0	63	1	0	63	1	0
R 1.62 W,B,7		SFR	2	65 E	64	64	-1	0	B (67)	NONE	--	--	--	64	0	0	63	1	0	63	1	0	62	2	0
R 1.63 W,B,7		SFR	1	64 E	63	63	-1	0	B (67)	NONE	--	--	--	63	0	0	63	0	0	62	1	0	62	1	0
R 1.64 W,B,7		SFR	2	64 E	63	63	-1	0	B (67)	NONE	--	--	--	62	1	0	62	1	0	62	1	0	61	2	0
R 1.65 W,B,7		SFR	2	64 E	63	63	-1	0	B (67)	NONE	--	--	--	62	1	0	62	1	0	61	2	0	61	2	0
R 1.59 W	R/W	SFR	4	68 E	68	68	0	0	B (67)	A/E	66 T	2	0	66	2	0	65	3	0	65	3	0	64	4	0
R 1.60 W		SFR	1	69 M,ST63	69	69	0	0	B (67)	A/E	66 T	3	0	66	3	0	65	4	0	65	4	0	64	5	1
R 1.66 W,B,7		SFR	1	62 M,ST64	63	63	1	0	B (67)	NONE	60	3	0	60	3	0	59	4	0	59	4	0	58	5	1
R 1.67	--	COM	1	66 E	65	65	-1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.68		COM	1	68 E	67	67	-1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; SCH - educational center; REC - recreational; COM - commercial.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-13 – Predicted Future Noise Levels and Barrier Analysis – Segment 2 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 2.1 [B]	Shoulder	MOT	1	64 [M,ST69]	63	63	-1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.2 [W]		SFR	1	73 [E]	72	73	-1	1	B (67)	A/E	70	3	*0*	70	3	*0*	68	5	*1*	67 [T]	6	*1*	-- [10]	--	--
R 2.3 [W]		MFR	1	71 [M,ST71]	71	71	0	0	B (67)	A/E	69	2	*0*	68	3	*0*	67 [T]	4	*0*	65	6	*1*	-- [10]	--	--
R 2.4 [W]	SW715[X] / Shoulder	SFR	3	69 [M,LT30,CAL]	69	69	0	0	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.5 [W]		SFR	3	68 [E]	68	68	0	0	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.6 [W]		SFR	2	67 [E]	67	67	0	0	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.7 [W]	SW725[X] / Shoulder	SCH	1	62 [M,ST75A]	63	63	1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.8 [W,B]		SFR	3	61 [E]	62	63	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.9 [W,B]	SW1[X] / Shoulder	MFR	2	66 [E]	65	64	-1	-1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.10 [W,B,7]		MFR	1	64 [E]	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.11 [W,B]		MFR	1	67 [M,ST75]	66	66	-1	0	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.12 [W]		MFR	2	69 [E]	68	68	-1	0	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.13 [W]		MFR	2	70 [E]	69	69	-1	0	B (67)	A/E	--	--	--	--	--	--	-- [T]	--	--	--	--	--	-- [10]	--	--
R 2.14 [W]		MFR	--	70 [M,ST76]	69	69	-1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.15 [W]		SFR	5	70 [E]	69	68	-1	-1	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.16 [W]		SFR	5	70 [E]	69	69	-1	0	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-13 – Predicted Future Noise Levels and Barrier Analysis – Segment 2 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
											Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 2.17 W	Shoulder	SFR	2	69 E	70	69	1	-1	B (67)	A/E	69	0	*0*	68 T	1	*0*	68	1	*0*	68	1	*0*	-- [10]	--	--
R 2.18 W		SFR	2	69 M,LT32,CAL	70	71	1	1	B (67)	A/E	68	3	*0*	68	3	*0*	66 T	5	*2*	66	5	*2*	-- [10]	--	--
R 2.19 W		SFR	2	67 E	68	68	1	0	B (67)	A/E	66	2	*0*	66	2	*0*	65 T	3	*0*	64	4	*0*	-- [10]	--	--
R 2.20 W,B,7	SW1 X / Shoulder	SFR	2	63 E	64	64	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.21 W,B,7		SFR	3	59 E	60	61	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.22 W,B,7		SFR	1	61 E	62	62	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.23 W	Shoulder	SCH	1	70 E	71	71	1	0	C (67)	A/E	70	1	*0*	70	1	*0*	69	2	*0*	69 T	2	*0*	-- [10]	--	--
R 2.24 W		SCH	1	66 E	67	68	1	1	C (67)	A/E	66	2	*0*	66	2	*0*	65	3	*0*	65 T	3	*0*	-- [10]	--	--
R 2.25 W		SCH	1	65 E	66	67	1	1	C (67)	A/E	67	0	*0*	66	1	*0*	66	1	*0*	66 T	1	*0*	-- [10]	--	--
R 2.25A W		SCH	1	62 E	63	64	1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.26 W,6	SW29 D & SW23 X / Shoulder	MFR	2	73 E	70	71	-3	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.27 W,6		MFR	2	73 E	70	71	-3	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.28 W,6		MFR	2	71 E	68	68	-3	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.29-1 W		--	--	68 M,ST77	65	66	-3	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.29-2 W,6		MFR	2	71 E	68	68	-3	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.30 W		REC	2	67 E	64	64	-3	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-13 – Predicted Future Noise Levels and Barrier Analysis – Segment 2 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 2.31 [B]	--	REC	1	62 [M,ST70]	62	62	0	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											14 feet			16 feet			18 feet			20 feet			22 feet		
R 2.32 [W]	SW708[X] & SW716[X] / Shoulder	SFR	1	65 [E]	67	67	2	0	B (67)	A/E	--	--	--	--	--	--	67	0	*0*	66	1	*0*	65	2	*0*
R 2.33 [W]		SFR	4	65 [E]	67	67	2	0	B (67)	A/E	--	--	--	--	--	--	66	1	*0*	65	2	*0*	65	2	*0*
R 2.34 [W]		SFR	4	64 [M,LT29,CAL]	66	67	2	1	B (67)	A/E	--	--	--	--	--	--	66	1	*0*	65	2	*0*	65	2	*0*
R 2.35 [W,B,7]		SFR	2	63 [E]	65	66	2	1	B (67)	A/E	--	--	--	--	--	--	64	2	*0*	64	2	*0*	63	3	*0*
R 2.36 [W,B,7]		SFR	2	64 [E]	66	66	2	0	B (67)	A/E	--	--	--	--	--	--	66	0	*0*	65	1	*0*	65	1	*0*
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 2.37 [W,B,7]	Shoulder	SFR	2	65 [E]	67	68	2	1	B (67)	A/E	66	2	*0*	66	2	*0*	65 [T]	3	*0*	64	4	*0*	64	4	*0*
R 2.38 [B]		SFR	1	67 [M,ST72]	68	69	1	1	B (67)	A/E	68	1	*0*	67 [T]	2	*0*	66	3	*0*	66	3	*0*	66	3	*0*
R 2.39 [B,K]		SFR	4	64 [E]	66	67	2	1	B (67)	A/E	66	1	*0*	64 [T]	3	*0*	62	5	*4*	61	6	*4*	61	6	*4*
R 2.40 [B,K]		SFR	3	63 [E]	65	66	2	1	B (67)	A/E	65	1	*0*	63 [T]	3	*0*	62	4	*0*	61	5	*3*	60	6	*3*
R 2.41 [B,K]		SFR	4	62 [E]	64	64	2	0	B (67)	NONE	63	1	*0*	62	2	*0*	60	4	*0*	61	3	*0*	--	--	--
R 2.42 [B,K]		SFR	3	63 [M,ST73]	65	66	2	1	B (67)	A/E	65	1	*0*	62	4	*0*	61 [T]	5	*3*	61	5	*3*	-- [10]	--	--
R 2.43 [K]		SFR	1	63 [E]	65	66	2	1	B (67)	A/E	65	1	*0*	61 [T]	5	*1*	60	6	*1*	60	6	*1*	-- [10]	--	--
R 2.44A [B,7]		SFR	7	63 [E]	65	65	2	0	B (67)	NONE	64	1	*0*	63	2	*0*	62	3	*0*	60	5	*7*	60	5	*7*
R 2.44B [B,7]		SFR	5	62 [E]	64	65	2	1	B (67)	NONE	63	2	*0*	63	2	*0*	61	4	*0*	60	5	*5*	--	--	--
R 2.44 [B,7]		SFR	1	64 [E]	66	66	2	0	B (67)	A/E	65	1	*0*	65 [T]	1	*0*	63	3	*0*	62	4	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

K - A calibration factor of -5 dB is applied for this receiver and adjacent receivers with similar geographic features.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-13 – Predicted Future Noise Levels and Barrier Analysis – Segment 2 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 2.45 B	SW2[D] / Shoulder	SFR	1	65 [E]	67	67	2	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.46 W,B		SFR	3	63 [E]	64	65	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.47 W		SFR	3	62 [E]	63	64	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.48 W,B,8		--	--	56 [M,ST74]	57	58	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.49 W	SW6[D] / Shoulder	SFR	5	59 [E]	60	62	1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.50 W		SFR	6	59 [E]	60	60	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.51 W	SW10[D] / Shoulder	SFR	4	65 [M,LT31,CAL]	65	65	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.52 W		SFR	2	68 [E]	68	67	0	-1	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.53 W,B,7		SFR	4	64 [E]	64	64	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.54 W,B,7		SFR	2	66 [E]	66	65	0	-1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.55 W,B,7		SFR	2	61 [E]	61	62	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.56 W,B,7		SFR	2	64 [E]	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.57 W	SW22[X] & SW30[D] / R/W & Shoulder	SFR	2	65 [E]	67	68	2	1	B (67)	A/E	--	--	--	-- [T]	--	--	68	0	*0*	67	1	*0*	66	2	*0*
R 2.58 W,B,7		SFR	4	65 [E]	67	67	2	0	B (67)	A/E	--	--	--	-- [T]	--	--	67	0	*0*	66	1	*0*	66	1	*0*
R 2.59 W,8		--	--	66 [M,ST78]	68	69	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.60 W		SFR	2	66 [E]	68	69	2	1	B (67)	A/E	--	--	--	-- [T]	--	--	68	1	*0*	67	2	*0*	66	3	*0*
R 2.61 W,B,7		SFR	4	63 [E]	65	66	2	1	B (67)	A/E	--	--	--	-- [T]	--	--	65	1	*0*	63	3	*0*	62	4	*0*
R 2.62 W		SFR	4	58 [E]	62	63	4	1	B (67)	NONE	--	--	--	--	--	--	61	2	*0*	60	3	*0*	59	4	*0*
R 2.63 W		SFR	7	57 [M,ST79]	61	61	4	0	B (67)	NONE	--	--	--	--	--	--	61	0	*0*	60	1	*0*	60	1	*0*
R 2.64 W,B,7		SFR	4	59 [E]	63	64	4	1	B (67)	NONE	--	--	--	--	--	--	61	3	*0*	60	4	*0*	60	4	*0*
R 2.65 W,B,7		SFR	2	61 [E]	65	64	4	-1	B (67)	NONE	--	--	--	--	--	--	64	0	*0*	63	1	*0*	63	1	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-14 – Predicted Future Noise Levels and Barrier Analysis – Segment 3 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 3.1	--	COM	1	75 M,ST112,CAL	78	80	3	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 3.2		MFR	4	70 E	70	70	0	0	B (67)	A/E	69	1	*0*	68	2	*0*	67	3	*0*	67	3	*0*	-- [10]	--	--
R 3.3 B	Shoulder [12]	MFR	2	69 E	69	69	0	0	B (67)	A/E	67	2	*0*	67	2	*0*	66	3	*0*	66	3	*0*	-- [10]	--	--
R 3.4 B		MFR	6	67 E	67	68	0	1	B (67)	A/E	67	1	*0*	66	2	*0*	66	2	*0*	65	3	*0*	-- [10]	--	--
R 3.5 B		MFR	4	65 E	65	65	0	0	B (67)	NONE	64	1	*0*	63	2	*0*	62	3	*0*	61	4	*0*	-- [10]	--	--
R 3.5A B	Shoulder	MFR	2	64 E	64	65	0	1	B (67)	NONE	63	2	*0*	63	2	*0*	62	3	*0*	60	5	*2*	-- [10]	--	--
R 3.6 B,W		MFR	4	66 E	66	66	0	0	B (67)	A/E	64	2	*0*	64	2	*0*	62	4	*0*	61	5	*4*	-- [10]	--	--
R 3.7 B,W,8		--	--	63 M,ST80	63	64	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Noise barrier at this location is not able to meet reasonableness desgin goal due to traffic modeled on Palo Verde Street.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-15 – Predicted Future Noise Levels and Barrier Analysis – Segment 4 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 4.1A-1 [B]	Shoulder	MFR	10	67 [E]	69	69	2	0	B (67)	A/E	68	1	*0*	68	1	*0*	67	2	*0*	67	2	*0*	-- [10]	--	--
R 4.1A-2 [B,6]		MFR	10	68 [E]	70	70	2	0	B (67)	A/E	69	1	*0*	69	1	*0*	68	2	*0*	68	2	*0*	-- [10]	--	--
R 4.1A-1 [B,*]	--	MFR	10	67 [E]	69	65	2	-4	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 41.A-2 [B,6,*]		MFR	10	68 [E]	70	68	2	-2	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.1B [B]	--	MH	2	61 [E]	63	64	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.1	--	REC	1	73 [E]	75	75	2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.2		REC	1	78 [E]	80	82	2	2	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.3		REC	1	70 [E]	72	73	2	1	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.4		REC	1	78 [E]	80	81	2	1	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.5-1 [W]	S1117[P] R/W	MOT	1	76 [E]	78	79	2	1	E (72)	A/E	76	3	*0*	74	5	*1*	**71** [R,T]	**8**	***1***	70	9	*1*	69	10	*1*
R 4.5-1 [Int,W]		MOT	3	51 [E]	53	54	2	1	D (52)	A/E	51	3	*0*	49	5	*3*	**46** [R,T]	**8**	***3***	45	9	*3*	44	10	*3*
R 4.5-2 [W,6]		MOT	--	77 [E]	79	80	2	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.5-2 [Int,W]		MOT	3	52 [E]	54	55	2	1	D (52)	A/E	55	0	*0*	55	0	*0*	55	0	*0*	54	1	*0*	51	4	*0*
R 4.6 [W]	SW66[D] Shoulder	SFR	2	67 [E]	69	69	2	0	B (67)	A/E	68	1	*0*	68	1	*0*	67	2	*0*	67	2	*0*	-- [10]	--	--
R 4.7 [W]		SFR	2	66 [E]	68	69	2	1	B (67)	A/E	68	1	*0*	67	2	*0*	67	2	*0*	67	2	*0*	-- [10]	--	--
R 4.8 [B,W,7]	SW66[D] Shoulder and SW68[D] Shoulder	SFR	2	63 [E]	65	65	2	0	B (67)	NONE	64	1	*0*	64	1	*0*	63	2	*0*	63	2	*0*	-- [10]	--	--
R 4.9 [W]		SFR	2	64 [E]	66	66	2	0	B (67)	A/E	65	1	*0*	65	1	*0*	64	2	*0*	64	2	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home SCH - educational center; COM - commercial; MOT - motel; REC - recreational

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

* - Alt 3 noise levels without local traffic.

Table B-15 – Predicted Future Noise Levels and Barrier Analysis – Segment 4 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 4.10	W	SFR	3	62 E	64	64	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.11	W	SFR	4	59 E	61	62	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.12	W	REC	1	64 M,ST81	66	66	2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.13	W	SFR	3	66 E	68	69	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.14	B,W,7	SFR	1	61 E	63	66	2	3	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.15	W	SFR	3	66 E	68	69	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.16	B,W,7	SFR	3	63 E	65	66	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.17	B,W,7	SFR	3	60 E	62	65	2	3	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.18	W,9	--	--	64 M,ST82	66	68	2	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.19	W	SFR	6	64 E	66	67	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.20	W	SFR	3	63 E	65	66	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.21	W	SFR	4	62 E	64	65	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.22	B,W,8	SFR	4	59 M,ST83	61	62	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.23	W	SFR	4	63 E	65	65	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.24	W	SFR	4	63 E	65	66	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--

SW94[D] Shoulder

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home SCH - educational center; COM - commercial; MOT - motel; REC - recreational

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

* - Alt 3 noise levels without local traffic.

Table B-15 – Predicted Future Noise Levels and Barrier Analysis – Segment 4 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 4.25 W	SW94[D] Shoulder	SFR	3	66 M,LT33,CAL	67	68	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.26 W		SFR	3	67 E	68	68	1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.27 W		SFR	3	65 E	67	68	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.28 W		SFR	2	65 M,ST84	67	68	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.29 W		SFR	5	64 E	66	67	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.30 B,W,7		SFR	3	66 M,ST85	66	67	0	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.31 B,W,7		SFR	3	66 E	66	66	0	0	B (67)	A/E	66	0	*0*	65	1	*0*	64	2	*0*	63	3	*0*	-- [10]	--	--
R 4.32 B,W,7		SFR	4	61 E	63	63	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.33 B,W,7		SFR	2	61 E	63	63	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.34 B,W,7		SFR	8	63 E	64	64	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.35 B,W,7		SFR	6	62 E	64	64	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.36 B,W,7		SFR	4	60 E	62	63	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.37 B,W,7		SFR	4	60 E	62	63	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.38 B,W,7		SFR	4	63 E	63	64	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.39 B,W,7		SFR	1	63 E	63	64	0	1	B (67)	NONE	63	1	*0*	62	2	*0*	61	3	*0*	60	4	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home SCH - educational center; COM - commercial; MOT - motel; REC - recreational

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

* - Alt 3 noise levels without local traffic.

Table B-16 – Predicted Future Noise Levels and Barrier Analysis – Segment 5 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1-3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 5.1 [B]	--	MFR	10	65 [E]	64	65	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.2 [B]		MFR	10	63 [M,ST86]	62	62	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.3 [B]		MFR	10	65 [E]	64	65	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											12 feet			14 feet			16 feet			18 feet			20 feet		
R 5.4 [B,W,7]	SW143[X] R/W	SFR	2	58 [E]	58	59	0	1	B (67)	NONE	59	0	0	58	1	0	58	1	0	57	2	0	57	2	0
R 5.5 [W]		SFR	2	69 [E]	69	70	0	1	B (67)	A/E	69	1	0	68	2	0	68	2	0	67	3	0	67	3	0
R 5.6 [W]		SFR	3	69 [M,LT34,CAL]	69	69	0	0	B (67)	A/E	68	1	0	67	2	0	66	3	0	65	4	0	64	5	3
R 5.7 [W]		SFR	3	69 [E]	69	69	0	0	B (67)	A/E	68	1	0	67	2	0	66	3	0	65	4	0	65	4	0
R 5.8 [W]		SFR	3	68 [E]	68	68	0	0	B (67)	A/E	67	1	0	66	2	0	65	3	0	65	3	0	65	3	0
R 5.9 [W]		SFR	3	70 [E]	70	71	0	1	B (67)	A/E	70	1	0	69	2	0	68	3	0	68	3	0	68	3	0
R 5.9A [B,W,7]		SFR	3	63 [E]	63	63	0	0	B (67)	NONE	63	0	0	62	1	0	62	1	0	61	2	0	61	2	0
R 5.9B [B,W,7]		SFR	2	62 [E]	62	62	0	0	B (67)	NONE	62	0	0	62	0	0	61	1	0	62	0	0	61	1	0
R 5.10 [W]	SW157[X] R/W	SFR	3	68 [M,ST90]	69	69	1	0	B (67)	A/E	68	1	0	67	2	0	67	2	0	67	2	0	66	3	0
R 5.11 [W]		SFR	4	67 [E]	68	69	1	1	B (67)	A/E	66	3	0	65	4	0	65	4	0	64	5	4	63	6	4
R 5.12 [W]		SFR	4	67 [E]	68	69	1	1	B (67)	A/E	67	2	0	66	3	0	65	4	0	64	5	4	64	5	4
R 5.13 [W]		SFR	3	66 [E]	67	68	1	1	B (67)	A/E	66	2	0	66	2	0	65	3	0	65	3	0	64	4	0
R 5.14 [W]		SFR	3	66 [M,ST91]	67	68	1	1	B (67)	A/E	67	1	0	66	2	0	65	3	0	65	3	0	64	4	0
R 5.15 [W,7]		SFR	4	59 [E]	60	62	1	2	B (67)	NONE	62	0	0	62	0	0	61	1	0	61	1	0	61	1	0
R 5.16 [W]		SFR	5	65 [E]	66	67	1	1	B (67)	A/E	66	1	0	65	2	0	64	3	0	64	3	0	63	4	0
R 5.17 [W]		SFR	4	66 [E]	67	68	1	1	B (67)	A/E	67	1	0	66	2	0	65	3	0	64	4	0	63	5	4
R 5.17A [B,W,7]		SFR	4	60 [E]	61	62	1	1	B (67)	NONE	61	1	0	61	1	0	61	1	0	61	1	0	61	1	0
R 5.17B [B,W,7]		SFR	1	59 [E]	60	61	1	1	B (67)	NONE	61	0	0	61	0	0	61	0	0	61	0	0	60	1	0

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 30 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

K - A calibration factor of -2 dB is applied for this receiver and adjacent receivers with similar geographic features.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-16 – Predicted Future Noise Levels and Barrier Analysis – Segment 5 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 5.18 W	--	SFR	6	60 E	61	62	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.19		SCH	--	72 M,ST93,CAL	73	78	1	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.19 Int		SCH	1	42	43	48	1	5	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.20 W	SW136X	SCH	1	68 M,ST87	68	69	0	1	C (67)	A/E	69	0	*0*	68	1	*0*	67	2	*0*	67	2	*0*	66	3	*0*
R 5.21 B,W	R/W	SCH	1	63 E	63	64	0	1	C (67)	NONE	64	0	*0*	63	1	*0*	63	1	*0*	63	1	*0*	63	1	*0*
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 5.21A B	S1132P	REC	1	68 E	68	68	0	0	C (67)	A/E	67	1	*0*	65	3	*0*	64	4	*0*	**63** R,T	**5**	***1***	-- 10	--	--
R 5.21B	Shoulder	REL	--	73 E	73	73	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.21B Int		REL	1	43 E	43	43	0	0	D (52)	NONE	38 T	5	*1*	38	5	*1*	37	6	*1*	**36** R,5	**7**	***1***	-- 10	--	--
R 5.21C		COM	1	75 E	75	75	0	0	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											16 feet			18 feet			20 feet			22 feet			24 feet		
R 5.22 W	SW140X R/W	SFR	2	67 E	68	69	1	1	B (67)	A/E	69	0	*0*	69	0	*0*	69	0	*0*	69	0	*0*	68	1	*0*
R 5.23 W		SFR	4	65 E	66	67	1	1	B (67)	A/E	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*	63	4	*0*
R 5.24 W,8		--	--	64 M,ST88	65	66	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.25 W		SFR	4	65 E	66	67	1	1	B (67)	A/E	66	1	*0*	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*
R 5.26 W		SFR	1	63 E	66	67	3	1	B (67)	A/E	66	1	*0*	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*
R 5.27 B,W,7		SFR	2	61 E	62	62	1	0	B (67)	NONE	62	0	*0*	62	0	*0*	62	0	*0*	62	0	*0*	62	0	*0*
R 5.28 B,W,7		SFR	6	58 E	59	60	1	1	B (67)	NONE	60	0	*0*	60	0	*0*	60	0	*0*	59	1	*0*	59	1	*0*
R 5.29 B,W,7		SFR	5	58 E	59	60	1	1	B (67)	NONE	60	0	*0*	59	1	*0*	59	1	*0*	59	1	*0*	59	1	*0*
R 5.30 B,W,7		SFR	2	57 E	58	59	1	1	B (67)	NONE	59	0	*0*	59	0	*0*	58	1	*0*	58	1	*0*	58	1	*0*
R 5.31 B,W,7		SFR	3	57 M,ST89	60	61	3	1	B (67)	NONE	62	-1	*0*	62	-1	*0*	62	-1	*0*	61	0	*0*	61	0	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 30 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-16 – Predicted Future Noise Levels and Barrier Analysis – Segment 5 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 5.32 W,7	SW154[X] R/W	SFR	2	59 E	62	64	3	2	B (67)	NONE	64	0	0	64	0	0	64	0	0	64	0	0	64	0	0
R 5.33 W		SFR	4	61 E	64	65	3	1	B (67)	NONE	64	1	0	64	1	0	63	2	0	63	2	0	63	2	0
R 5.34 W		SFR	4	62 M,LT35,CAL	65	66	3	1	B (67)	A/E	65	1	0	64	2	0	64	2	0	63	3	0	63	3	0
R 5.35 W		SFR	4	61 E	64	64	3	0	B (67)	NONE	64	0	0	63	1	0	63	1	0	62	2	0	62	2	0
R 5.36 W		SFR	4	62 M,ST92	65	66	3	1	B (67)	A/E	65	1	0	64	2	0	64	2	0	63	3	0	63	3	0
R 5.37 B,W,7		SFR	2	54 E	57	58	3	1	B (67)	NONE	58	0	0	58	0	0	58	0	0	58	0	0	58	0	0
R 5.38 B,W,7		SFR	6	54 E	57	58	3	1	B (67)	NONE	58	0	0	58	0	0	58	0	0	57	1	0	57	1	0
R 5.39 B,W,7		SFR	4	56 E	59	59	3	0	B (67)	NONE	59	0	0	59	0	0	59	0	0	58	1	0	58	1	0
R 5.40 B,W,7		SFR	3	54 E	57	58	3	1	B (67)	NONE	58	0	0	58	0	0	57	1	0	57	1	0	57	1	0
R 5.41 B,W,7		SFR	2	55 E	58	58	3	0	B (67)	NONE	58	0	0	58	0	0	57	1	0	57	1	0	57	1	0
R 5.42 B,W,7		SFR	2	57 E	60	61	3	1	B (67)	NONE	61	0	0	60	1	0	60	1	0	60	1	0	59	2	0
R 5.43 W		SFR	6	62 E	65	66	3	1	B (67)	A/E	65	1	0	65	1	0	64	2	0	64	2	0	63	3	0
R 5.44 W,7		SFR	1	60 E	62	63	2	1	B (67)	NONE	62	1	0	62	1	0	61	2	0	61	2	0	61	2	0
R 5.45 W		SFR	3	63 E	65	66	2	1	B (67)	A/E	65	1	0	64	2	0	64	2	0	63	3	0	62	4	0
R 5.46 W		SFR	2	62 E	64	65	2	1	B (67)	NONE	64	1	0	64	1	0	63	2	0	63	2	0	62	3	0
R 5.47 W		SFR	2	62 M,ST94	64	65	2	1	B (67)	NONE	65	0	0	64	1	0	63	2	0	63	2	0	62	3	0
R 5.48 W		SFR	1	64 E	66	66	2	0	B (67)	A/E	66	0	0	65	1	0	65	1	0	64	2	0	64	2	0

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 30 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-17 – Predicted Future Noise Levels and Barrier Analysis – Segment 6 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											14 feet			16 feet			18 feet			20 feet			22 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R6.1 [8]	--	COM	1	68 [M,ST93A]	73	74	5	1	E (72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.1A		--	--	66	71	71	5	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.1A [Int]		REL	1	41	46	46	5	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.2-1 [12]		SFR	5	67 [M,ST96A]	69	69	2	0	B (67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.2A-1		--	2	59	61	62	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.2A-1 [Int]		MED	1	34	36	37	2	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.2A-2		--		64	66	67	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.2A-2 [Int,6]		MED	1	39	41	42	2	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.3 [W]	SW201[X] R/W	NP	1	67 [E]	66	67	-1	1	C (67)	A/E	-- [T]	--	--	67	0	*0*	66	1	*0*	66	1	*0*	66	1	*0*
R6.4 [W]		MFR	--	66 [M,ST96]	65	66	-1	1	B (67)	A/E	-- [T]	--	--	65	1	*0*	65	1	*0*	64	2	*0*	64	2	*0*
R6.5 [W]		MFR	2	66 [E]	65	66	-1	1	B (67)	A/E	-- [T]	--	--	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*
R6.6 [W]		REC	1	68 [M,ST97/CAL]	67	68	-1	1	B (67)	A/E	-- [T]	--	--	66	2	*0*	65	3	*0*	64	4	*0*	63	5	*1*
R6.7 [W]		REC	1	67 [E]	66	68	-1	2	B (67)	A/E	-- [T]	--	--	66	2	*0*	66	2	*0*	65	3	*0*	65	3	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MED - medical facility; NP - nonprofit; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Noise impact is due to local street traffic noise; therefore, noise abatement was not considred .

B - Includes the benefit of an existing building or building row.

K - A calibration factor of +3 dB is applied for this receiver and adjacent receivers with similar geographic features

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 40 dB reduction has been applied to exterior noise levels of the Kingdom Hall of Jehovah's Witness based on buildings having no windows; a 25 dB reduction has been applied to the Golden Medical Plaza based on building construction.

Table B-17 – Predicted Future Noise Levels and Barrier Analysis – Segment 6 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																			
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)												
											14 feet			16 feet			18 feet			20 feet			22 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R6.8A [W]	SW213[X] R/W	MFR	2	64 [E]	63	64	-1	1	B (67)	NONE	--	--	--	63	1	*0*	63	1	*0*	63	1	*0*	63	1	*0*
R6.8-1 [W]		MFR	8	66 [E]	65	65	-1	0	B (67)	NONE	--	--	--	65	0	*0*	64	1	*0*	64	1	*0*	63	2	*0*
R6.8-2 [W,6]		MFR	8	69 [E]	68	69	-1	1	B (67)	A/E	--	--	--	67	2	*0*	66	3	*0*	66	3	*0*	65	4	*0*
R6.9-1 [W]		MFR	6	65 [E]	64	65	-1	1	B (67)	NONE	--	--	--	64	1	*0*	64	1	*0*	63	2	*0*	63	2	*0*
R6.9-2 [W,6]		MFR	6	68 [E]	67	68	-1	1	B (67)	A/E	--	--	--	66	2	*0*	65	3	*0*	64	4	*0*	64	4	*0*
R6.10-1 [W,7]		MFR	6	63 [E]	62	63	-1	1	B (67)	NONE	--	--	--	62	1	*0*	62	1	*0*	61	2	*0*	61	2	*0*
R6.10-2 [W,7,6]		MFR	6	66 [E]	65	65	-1	0	B (67)	NONE	--	--	--	64	1	*0*	64	1	*0*	63	2	*0*	62	3	*0*
R6.11 [W,K]		MFR	1	69 [M,LT37]	68	69	-1	1	B (67)	A/E	-- [T]	--	--	68	1	*0*	67	2	*0*	67	2	*0*	66	3	*0*
R6.11A [W,K]		MFR	--	69 [M,ST97A,CAL]	68	69	-1	1	B (67)	A/E	-- [T]	--	--	68	1	*0*	67	2	*0*	67	2	*0*	66	3	*0*
R6.12 [W,K]		SFR	1	70 [E]	69	70	-1	1	B (67)	A/E	-- [T]	--	--	69	1	*0*	68	2	*0*	67	3	*0*	67	3	*0*
R6.13-2 [W,B,K]		MFR	5	70 [E]	69	70	-1	1	B (67)	A/E	-- [T]	--	--	68	2	*0*	67	3	*0*	67	3	*0*	66	4	*0*
R6.14 [W,B]		MFR	2	68 [E]	67	68	-1	1	B (67)	A/E	-- [T]	--	--	67	1	*0*	66	2	*0*	65	3	*0*	65	3	*0*
R6.15 [W]		MFR	2	68 [E]	67	68	-1	1	B (67)	A/E	-- [T]	--	--	67	1	*0*	66	2	*0*	66	2	*0*	65	3	*0*
R6.16 [W]		MFR	5	69 [M,ST100]	68	69	-1	1	B (67)	A/E	-- [T]	--	--	69	0	*0*	68	1	*0*	68	1	*0*	67	2	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MED - medical facility; NP - nonprofit; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

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8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

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B - Includes the benefit of an existing building or building row.

K - A calibration factor of +3 dB is applied for this receiver and adjacent receivers with similar geographic features

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 40 dB reduction has been applied to exterior noise levels of the Kingdom Hall of Jehovah's Witness based on buildings having no windows; a 25 dB reduction has been applied to the Golden Medical Plaza based on building construction.

Table B-17 – Predicted Future Noise Levels and Barrier Analysis – Segment 6 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R6.17	R/W	SFR	3	64 E	65	67	1	2	B (67)	A/E	65 T	2	0	65	2	0	64	3	0	64	3	0	64	3	0
R6.18		SFR	3	62 E	63	63	1	0	B (67)	NONE	62	1	0	63 T	0	0	62	1	0	62	1	0	62	1	0
R6.19	S1190P R/W	SFR	2	61 E	62	62	1	0	B (67)	NONE	62	0	0	62	0	0	62	0	0	62	0	0	61	1	0
R6.20		SFR	1	71 E	72	73	1	1	B (67)	A/E	68 T	5	1	67	6	1	**66 R**	**7**	***1***	66	7	1	65	8	1
R6.21 B		SFR	9	61 E	62	62	1	0	B (67)	NONE	58 T	4	0	57	5	9	**57 R,5**	**5**	***9***	57	5	9	57	5	9
R6.22 B		SFR	10	60 M,LT36	61	62	1	1	B (67)	NONE	58 T	4	0	58	4	0	57	5	10	57	5	10	57	5	10

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MED - medical facility; NP - nonprofit; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Noise impact is due to local street traffic noise; therefore noise abatement was not considred .

B - Includes the benefit of an existing building or building row.

K - A calibration factor of +3 dB is applied for this receiver and adjacent receivers with similar geographic features

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 40 dB reduction has been applied to exterior noise levels of the Kingdom Hall of Jehovah's Witness based on buildings having no windows; a 25 dB reduction has been applied to the Golden Medical Plaza based on building construction.

Table B-17 – Predicted Future Noise Levels and Barrier Analysis – Segment 6 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											14 feet			16 feet			18 feet			20 feet			22 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R6.23 [W]	SW198[x] R/W	SCH	1	67 [E]	67	69	0	2	C (67)	A/E	-- [T]	--	--	68	1	*0*	68	1	*0*	68	1	*0*	67	2	*0*
R6.24 [W]		SCH	1	61 [E]	61	63	0	2	C (67)	NONE	-- [T]	--	--	63	0	*0*	63	0	*0*	62	1	*0*	62	1	*0*
R6.25 [W]		SCH	1	65 [E]	65	66	0	1	C (67)	A/E	-- [T]	--	--	65	1	*0*	65	1	*0*	64	2	*0*	64	2	*0*
R6.26 [W]		SFR	2	65 [E]	65	66	0	1	B (67)	A/E	-- [T]	--	--	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R6.27 [W,8]		SFR	--	65 [M,ST95]	65	66	0	1	B (67)	A/E	-- [T]	--	--	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R6.28 [W,B]		SFR	4	65 [E]	65	66	0	1	B (67)	A/E	-- [T]	--	--	64	2	*0*	64	2	*0*	63	3	*0*	62	4	*0*
R6.29 [W]		SFR	2	66 [E]	66	66	0	0	B (67)	A/E	-- [T]	--	--	66	0	*0*	65	1	*0*	64	2	*0*	63	3	*0*
R6.30 [W,8]		SFR	--	65 [M,ST98]	65	66	0	1	B (67)	A/E	-- [T]	--	--	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R6.31 [W,B]		SFR	3	66 [E]	66	66	0	0	B (67)	A/E	-- [T]	--	--	66	0	*0*	65	1	*0*	64	2	*0*	64	2	*0*
R6.32 [W,B,7]		SFR	1	59 [E]	59	60	0	1	B (67)	NONE	-- [T]	--	--	60	0	*0*	59	1	*0*	59	1	*0*	59	1	*0*
R6.33 [W,B,7]		SFR	2	59 [E]	59	60	0	1	B (67)	NONE	-- [T]	--	--	59	1	*0*	59	1	*0*	58	2	*0*	58	2	*0*
R6.34 [W,B,7]		SFR	2	60 [E]	60	61	0	1	B (67)	NONE	-- [T]	--	--	61	0	*0*	60	1	*0*	60	1	*0*	59	2	*0*
R6.35 [W,7]		SFR	3	59 [E]	59	60	0	1	B (67)	NONE	-- [T]	--	--	60	0	*0*	60	0	*0*	60	0	*0*	60	0	*0*
R6.36 [W]	SW212[x]	SFR	4	67 [M,ST99A]	65	66	-2	1	B (67)	A/E	-- [T]	--	--	66	0	*0*	65	1	*0*	65	1	*0*	65	1	*0*
R6.37 [W]		SFR	4	68 [E]	66	67	-2	1	B (67)	A/E	-- [T]	--	--	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*
R6.38 [W]		SFR	3	68 [E]	66	67	-2	1	B (67)	A/E	-- [T]	--	--	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*
R6.39 [W]		SFR	2	69 [M,ST99]	66	67	-3	1	B (67)	A/E	-- [T]	--	--	66	1	*0*	66	1	*0*	65	2	*0*	65	2	*0*
R6.40 [W]		SFR	2	69 [E]	66	67	-3	1	B (67)	A/E	-- [T]	--	--	67	0	*0*	66	1	*0*	66	1	*0*	65	2	*0*
R6.40A [B,W,7]		SFR	5	62 [E]	59	60	-3	1	B (67)	NONE	-- [T]	--	--	60	0	*0*	60	0	*0*	59	1	*0*	59	1	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MED - medical facility; NP - nonprofit; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Noise impact is due to local street traffic noise; therefore, noise abatement was not considred .

B - Includes the benefit of an existing building or building row.

K - A calibration factor of +3 dB is applied for this receiver and adjacent receivers with similar geographic features

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 40 dB reduction has been applied to exterior noise levels of the Kingdom Hall of Jehovah's Witness based on buildings having no windows; a 25 dB reduction has been applied to the Golden Medical Plaza based on building construction.

Table B-18 – Predicted Future Noise Levels and Barrier Analysis – Segment 7 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 7.1	7,B,W	--	SCH	1	56 E	57	57	1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 7.2	W	SW231 D R/W	SFR	3	66 E	67	68	1	1	B (67)	A/E	67	1	0	66	2	0	66	2	0	65	3	0	65	3	0
R 7.3	W		SFR	1	62 E	63	64	1	1	B (67)	NONE	63	1	0	62	2	0	62	2	0	62	2	0	61	3	0
R 7.4	W		SFR/MFR	4	67 M,LT38,CAL	68	68	1	0	B (67)	A/E	67	1	0	66	2	0	65	3	0	64	4	0	64	4	0
R 7.5	B,W		REC	1	62 E	63	63	1	0	C (67)	NONE	62	1	0	62	1	0	61	2	0	60	3	0	59	4	0
R 7.6	7,B,W		MFR	6	61 E	62	62	1	0	B (67)	NONE	61	1	0	61	1	0	60	2	0	60	2	0	60	2	0
R 7.7	W		MFR	2	65 E	66	66	1	0	B (67)	A/E	65	1	0	64	2	0	63	3	0	63	3	0	62	4	0
R 7.8	W		MFR	2	69 E	70	70	1	0	B (67)	A/E	69	1	0	69	1	0	69	1	0	68	2	0	68	2	0
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 7.9	B,W	SW245 D Shoulder	MFR	2	63 E	64	64	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 7.10-1	7,B,W		MFR	2	61 E	61	61	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 7.10-2	6,7,B,W		MFR	1	62 E	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 7.11	W		MFR	6	62 E	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 7.12	W		MFR	1	63 E	63	63	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 7.13-1	W		MFR	1	65 E	65	65	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 7.13-2	6,W		MFR	3	66 E	66	66	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 7.14	W		MFR	1	65 E	65	65	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 7.15-1	W		MFR	1	66 M,ST103,CAL	66	66	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 7.15-2	6,W		MFR	1	68 E	68	68	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

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10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-18 – Predicted Future Noise Levels and Barrier Analysis – Segment 7 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 7.16	Shoulder	SFR	1	69 E	69	70	0	1	B (67)	A/E	69	1	0	66	4	0	66	4	0	66	4	0	-- [10]	--	--
R 7.17 [7,B]	Shoulder	SFR	1	68 E	68	69	0	1	B (67)	A/E	68	1	0	67	2	0	65	4	0	65	4	0	-- [10]	--	--
R 7.18 [W]	Shoulder	MH	4	68 E	68	69	0	1	B (67)	A/E	68	1	0	67	2	0	67	2	0	67	2	0	-- [10]	--	--
R 7.18A [B,W]	Shoulder	SFR	2	69	69	69	0	0	B (67)	A/E	68	1	0	68	1	0	67	2	0	67	2	0	-- [10]	--	--
R 7.19 [W]	SW259[D] Shoulder	MH	2	66 M,ST104	66	66	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.20 [W]	SW259[D] Shoulder	MH	8	66 E	66	66	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.21 [W]	SW259[D] Shoulder	MH	3	64 E	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.22 [W]	SW259[D] Shoulder	MH	3	66 E	66	65	0	-1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.23 [W]	Ramp Shoulder & SW275[D] Shoulder	MH	4	68 E	68	67	0	-1	B (67)	A/E	67	0	0	66	1	0	65	2	0	65	2	0	-- [10]	--	--
R 7.24 [W]	Ramp Shoulder & SW275[D] Shoulder	MH	2	67 E	67	68	0	1	B (67)	A/E	68	0	0	68	0	0	67	1	0	67	1	0	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-18 – Predicted Future Noise Levels and Barrier Analysis – Segment 7 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 7.25 [W]	R/W	SFR	2	68 [E]	68	68	0	0	B (67)	A/E	65	3	0	65	3	0	64	4	0	64	4	0	64	4	0
R 7.26 [7,B,W]		SFR	2	66 [E]	66	66	0	0	B (67)	A/E	63	3	0	63	3	0	62	4	0	62	4	0	62	4	0
R 7.27 [W]	SW230 [D] R/W	SFR	3	66 [E]	66	67	0	1	B (67)	A/E	66	1	0	66	1	0	65	2	0	65	2	0	64	3	0
R 7.28 [8,W]		SFR	--	67 [M,ST101]	67	68	0	1	B (67)	A/E	67	1	0	66	2	0	66	2	0	65	3	0	65	3	0
R 7.29 [7,B,W]		SFR	4	62 [E]	62	62	0	0	B (67)	NONE	62	0	0	61	1	0	61	1	0	61	1	0	60	2	0
R 7.30 [B,W]		SFR	2	67 [E]	67	68	0	1	B (67)	A/E	67	1	0	66	2	0	66	2	0	65	3	0	65	3	0
R 7.31 [W]		SFR	4	65 [E]	65	65	0	0	B (67)	NONE	64	1	0	64	1	0	63	2	0	62	3	0	62	3	0
R 7.32 [W]		SFR	1	67 [E]	67	68	0	1	B (67)	A/E	67	1	0	67	1	0	66	2	0	65	3	0	65	3	0
R 7.33 [W]		SFR	2	67 [E]	67	67	0	0	B (67)	A/E	67	0	0	66	1	0	66	1	0	65	2	0	65	2	0
R 7.34 [W]		SFR	1	67 [M,LT39,CAL]	67	66	0	-1	B (67)	A/E	66	0	0	65	1	0	64	2	0	64	2	0	63	3	0
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 7.35 [7,B,W]	S1244 Shoulder [P]	SFR	3	66 [E]	66	65	0	-1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

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B - Includes the benefit of an existing building or building row.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-18 – Predicted Future Noise Levels and Barrier Analysis – Segment 7 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 7.36 W	SW246 D Shoulder	SFR/MFR	6	67 E	67	68	0	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.36A		SFR	2	67	67	67	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.37 7,B,W		SFR	1	66 E	67	67	1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.38 8,W		SFR	--	67 M,ST102	68	68	1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.39 7,B,W		SFR	2	67 E	68	69	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.40-1	--	MOT	--	68 E	69	69	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.40-1 Int		MOT	1	43 E	44	44	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.40-2 6		MOT	--	74 E	75	73	1	-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.40-2 6,Int		MOT	1	49 E	50	48	1	-2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.41 W	S1262 Shoulder P	MOT	1	71 E	72	73	1	1	E (72)	A/E	68 T	5	*1*	67	6	*1*	67	6	*1*	**66 R**	**7**	*1*	-- [10]	--	--
R 7.42	S1266 P Shoulder	MOT	1	72 E	73	75	1	2	E (72)	A/E	70 T	5	*1*	69	6	*1*	**68 R**	**7**	*1*	68	7	*1*	-- [10]	--	--
R 7.43-1		MOT	--	70 E	71	72	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.43-1 Int		MOT	1	45 E	46	47	1	1	D (52)	NONE	44	3	*0*	42 T	5	*1*	**41 R,5**	**6**	*1*	40	7	*1*	-- [10]	--	--
R 7.43-2 6		MOT	--	75 E	76	77	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.43-2 6,Int		MOT	1	50 E	51	52	1	1	D (52)	A/E	48	4	*0*	47	5	*1*	**45 R**	**7**	*1*	44	8	*1*	-- [10]	--	--
R 7.44-1		MOT	--	67 E	68	69	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.44-1 Int		MOT	1	42 E	43	44	1	1	D (52)	NONE	43	1	*0*	43	1	*0*	42	2	*0*	42	2	*0*	-- [10]	--	--
R 7.44-2 6		MOT	--	70 E	71	73	1	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.44-2 6,Int		MOT	1	45 E	46	48	1	2	D (52)	NONE	46	2	*0*	46	2	*0*	45	3	*0*	45	3	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-19 – Predicted Future Noise Levels and Barrier Analysis – Segment 8 – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R8.1 W		FS	--	69 E	71	70	2	-1	F (--)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.1 W,Int		FS	1	44 E	46	45	2	-1	D (52)	NONE	43	2	*0*	43	2	*0*	42	3	*0*	42	3	*0*	-- [10]	--	--
R8.2-1	S1285[P]	MOT	--	75 E	77	76	2	-1	--	--	--	--	--	--	--	--	--	--	--	**--**	**--**	--	--	--	--
R8.2-1 Int	& SW275[D]	MOT	12	50 E	52	51	2	-1	D (52)	A/E	48	3	*0*	46	5	*12*	45 T	6	*12*	**44 R**	**7**	*12*	-- [10]	--	--
R8.2-2	Shoulder	MOT	--	76 E	78	79	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.2-2 Int		MOT	12	51 E	53	54	2	1	D (52)	A/E	52	2	*0*	51	3	*0*	50	4	*0*	**48 R**	**6**	*12*	-- [10]	--	--
R8.3		MOT	1	75 M,ST106	77	77	2	0	E (72)	A/E	74	3	*0*	74	3	*0*	72	5	*1*	**72 R,T,5**	**5**	*1*	-- [10]	--	--
R8.4 W,B,7	Shoulder	SFR	2	63 E	65	66	2	1	B (67)	A/E	66	0	*0*	65	1	*0*	64	2	*0*	64	2	*0*	-- [10]	--	--
R8.5 W,B,7		SFR	2	65 E	67	67	2	0	B (67)	A/E	66	1	*0*	66	1	*0*	64	3	*0*	64	3	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; FS - fire station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

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10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-19 – Predicted Future Noise Levels and Barrier Analysis – Segment 8 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											14 feet			16 feet			18 feet			20 feet			22 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R8.6 [W]	SW296[D] R/W / Shoulder	SFR	3	66 [E]	68	69	2	1	B (67)	A/E	--	--	--	68	1	*0*	67	2	*0*	66	3	*0*	65	4	*0*
R8.7 [W]		SFR	5	68 [M,LT41,CAL]	69	70	1	1	B (67)	A/E	--	--	--	69	1	*0*	68	2	*0*	67	3	*0*	66	4	*0*
R8.8 [W]		SFR	7	67 [E]	69	70	2	1	B (67)	A/E	--	--	--	69	1	*0*	68	2	*0*	67	3	*0*	66	4	*0*
R8.9 [W]		SFR	9	66 [E]	68	69	2	1	B (67)	A/E	--	--	--	69	0	*0*	68	1	*0*	67	2	*0*	67	2	*0*
R8.10 [W]		SFR	9	66 [M,ST109]	69	69	3	0	B (67)	A/E	--	--	--	69	0	*0*	69	0	*0*	69	0	*0*	69	0	*0*
R8.11 [W]		SFR	4	66 [E]	69	69	3	0	B (67)	A/E	--	--	--	69	0	*0*	68	1	*0*	67	2	*0*	67	2	*0*
R8.14 [W,B,7]		SFR	1	59 [E]	61	62	2	1	B (67)	NONE	--	--	--	61	1	*0*	61	1	*0*	60	2	*0*	60	2	*0*
R8.14A [W,B,7]		SFR	1	64 [E]	66	67	2	1	B (67)	A/E	--	--	--	67	0	*0*	66	1	*0*	66	1	*0*	66	1	*0*
R8.14B [W,B,7]		SFR	4	62 [E]	64	64	2	0	B (67)	NONE	--	--	--	64	0	*0*	63	1	*0*	63	1	*0*	62	2	*0*
R8.14C [W,B,7]		SFR	8	63 [E]	65	65	2	0	B (67)	NONE	--	--	--	65	0	*0*	64	1	*0*	64	1	*0*	64	1	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; FS - fire station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-19 – Predicted Future Noise Levels and Barrier Analysis – Segment 8 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
											Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year No Build Noise Level Leq (h), dBA[1]	Design Year Build Noise Level Leq (h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R8.12 [W]	S21[P] Shoulder	SFR	3	66 [E]	69	69	3	0	B (67)	A/E	67	2	*0*	66	3	*0*	66	3	*0*	65	4	*0*	--	--	--
R8.13 [W,B,7]		SFR	2	67 [E]	70	71	3	1	B (67)	A/E	66	5	*2*	65	6	*2*	**64** [R,T]	**7**	*2*	63	8	*2*	--	--	--
R8.15 [W,B,7]		SFR	2	62 [E]	65	65	3	0	B (67)	NONE	65	0	*0*	65	0	*0*	64	1	*0*	64	1	*0*	--	--	--
R8.16	S1276[P] Shoulder	SFR	3	71 [E]	74	74	3	0	B (67)	A/E	**66** [R,T]	**8**	*3*	64	10	*3*	63	11	*3*	62	12	*3*	-- [10]	--	--
R8.17 [W]	Shoulder	SFR	2	64 [E]	67	66	3	-1	B (67)	A/E	63	3	*0*	63	3	*0*	62	4	*0*	62	4	*0*	-- [10]	--	--
R8.24 [W,B]		SFR	2	59 [M,ST105]	62	63	3	1	B (67)	NONE	62	1	*0*	60	3	*0*	59	4	*0*	59	4	*0*	-- [10]	--	--
R8.24 A[W]		SFR	2	66 [E]	69	70	3	1	B (67)	A/E	69	1	*0*	68	2	*0*	67	3	*0*	67	3	*0*	-- [10]	--	--
R8.25 [W,B,7]		SFR	3	64 [E]	67	68	3	1	B (67)	A/E	67	1	*0*	65	3	*0*	65	3	*0*	64	4	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; FS - fire station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-19 – Predicted Future Noise Levels and Barrier Analysis – Segment 8 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
											Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R8.18 W	SW278D Shoulder	SFR	4	62 E	64	64	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.19 W		SFR	5	64 M,ST107	66	67	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.20 W		SFR	5	64 E	66	67	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.21 W		SFR	5	67 E	68	69	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.22 W		SFR	3	67 M,LT40,CAL	68	69	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.23 W		SFR	1	68 E	69	70	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.26 W,B,7		SFR	2	63 E	65	65	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.27 W,B,7		SFR	2	62 E	64	65	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.28 W,B,7		SFR	2	62 E	64	65	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.29 W,B,7		SFR	3	64 E	65	65	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.29 A W,B,7		SFR	2	63 E	64	65	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.30 W,7		SFR	1	64 E	65	66	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; FS - fire station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

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R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-19 – Predicted Future Noise Levels and Barrier Analysis – Segment 8 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
											Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R8.31 W	S1306P Shoulder	REC	1	67 E	68	69	1	1	B (67)	A/E	69	0	0	67	2	0	67	2	0	67	2	0	-- [10]	--	--
R8.32-1 W		MFR	3	70 E	71	72	1	1	B (67)	A/E	71	1	0	69 T	3	0	67	5	3	**66 R**	**6**	3	-- [10]	--	--
R8.32-2 W,6		MFR	3	73 E	74	75	1	1	B (67)	A/E	74	1	0	73	2	0	70	5	3	**69 R**	**6**	3	-- [10]	--	--
R8.33-1 W,B,7		MFR	2	64 E	65	65	1	0	B (67)	NONE	65	0	0	65	0	0	63	2	0	62	3	0	-- [10]	--	--
R8.33-2 W,B,6,7		MFR	2	66 E	67	68	1	1	B (67)	A/E	67	1	0	67	1	0	66	2	0	64	4	0	-- [10]	--	--
R8.34-1 W		MFR	3	69 M,ST108	70	71	1	1	B (67)	A/E	71	0	0	69	2	0	69	2	0	68	3	0	-- [10]	--	--
R8.34-2 W,6		MFR	3	74 E	75	76	1	1	B (67)	A/E	76	0	0	75	1	0	72	4	0	**70 R**	**6**	3	-- [10]	--	--
R8.35 W,B,7		REC	1	63 E	64	65	1	1	B (67)	NONE	64	1	0	64	1	0	63	2	0	61	4	0	-- [10]	--	--
R8.36-1 W,B,7		MFR	2	67 E	68	69	1	1	B (67)	A/E	68	1	0	68	1	0	65 T	4	0	**64 R**	**5**	2	-- [10]	--	--
R8.36-2 W,B,6,7		MFR	2	70 E	71	72	1	1	B (67)	A/E	71	1	0	70	2	0	67	5	2	**66 R**	**6**	2	-- [10]	--	--
R8.37 W		MFR	3	71 E	72	73	1	1	B (67)	A/E	72	1	0	69 T	4	0	68	5	3	**67 R**	**6**	3	-- [10]	--	--
R8.38 W,B,7		MFR	4	62 E	63	64	1	1	B (67)	NONE	64	0	0	64	0	0	62	2	0	61	3	0	-- [10]	--	--
R8.39 W		MFR	2	71 E	72	73	1	1	B (67)	A/E	72	1	0	70 T	3	0	68	5	2	**67 R**	**6**	2	-- [10]	--	--
R8.40 W,B,7		REC	1	63 E	64	65	1	1	B (67)	NONE	64	1	0	64	1	0	62	3	0	61	4	0	-- [10]	--	--
R8.41 W,B		MFR	3	66 E	67	68	1	1	B (67)	A/E	67	1	0	67 T	1	0	63	5	3	**62 R**	**6**	3	-- [10]	--	--
R8.42-1 W,B		MFR	2	67 E	68	69	1	1	B (67)	A/E	68	1	0	68 T	1	0	65	4	0	**64 R**	**5**	2	-- [10]	--	--
R8.42-2 W,B,6		MFR	2	71 E	72	73	1	1	B (67)	A/E	72	1	0	72	1	0	68	5	2	**67 R**	**6**	2	-- [10]	--	--
R8.43-1 W,B,7		MFR	2	64 E	65	66	1	1	B (67)	A/E	65	1	0	65	1	0	63 T	3	0	**61 R**	**5**	2	-- [10]	--	--
R8.43-2 W,B,6,7		MFR	2	66 E	67	68	1	1	B (67)	A/E	67	1	0	67	1	0	65	3	0	**63 R**	**5**	2	-- [10]	--	--
R8.44-1 W,B,7		MFR	3	65 E	66	67	1	1	B (67)	A/E	66	1	0	66	1	0	63 T	4	0	**62 R**	**5**	3	-- [10]	--	--
R8.44-2 W,B,6,7		MFR	3	67 E	68	69	1	1	B (67)	A/E	68	1	0	68	1	0	65	4	0	**64 R**	**5**	3	-- [10]	--	--
R8.45-1 W,B		MFR	2	65 E	66	67	1	1	B (67)	A/E	65	2	0	64	3	0	64	3	0	64	3	0	-- [10]	--	--
R8.45-2 W,B,6		MFR	2	70 E	71	72	1	1	B (67)	A/E	70	2	0	70	2	0	67 T	5	2	**66 R**	**6**	2	-- [10]	--	--
R8.46-1 W,B,7		MFR	3	64 E	65	66	1	1	B (67)	A/E	65	1	0	64	2	0	63	3	0	63	3	0	-- [10]	--	--
R8.46-2 W,B,6,7		MFR	3	70 E	71	72	1	1	B (67)	A/E	69	3	0	68	4	0	67	5	3	**67 R**	**5**	3	-- [10]	--	--
R8.47-1 W,B		MFR	2	66 E	67	67	1	0	B (67)	A/E	66	1	0	64 T	3	0	62	5	2	**62 R**	**5**	2	-- [10]	--	--
R8.47-2 W,B,6		MFR	2	77 E	78	79	1	1	B (67)	A/E	77	2	0	75	4	0	71 T	8	2	**69 R**	**10**	2	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; FS - fire station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-19 – Predicted Future Noise Levels and Barrier Analysis – Segment 8 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																						
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)															
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R8.48-1	S1306[P] Shoulder	MOT	--	80 [E]	80	76	0	-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.48-1 [Int]		MOT	12	55 [E]	55	51	0	-4	D (52)	A/E	46	5	*12*	**44** [R]	**7**	*12*	43 [T]	8	*12*	42	9	*12*	-- [10]	--	--
R8.48-2		MOT	--	80 [E]	80	81	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.48-2 [Int]		MOT	12	55 [E]	55	56	0	1	D (52)	A/E	53	3	*0*	**51** [R]	**5**	*12*	47	9	*12*	45	11	*12*	-- [10]	--	--
R8.48-3		MOT	--	81 [E]	81	82	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.48-3 [Int]		MOT	12	56 [E]	56	57	0	1	D (52)	A/E	57	0	*0*	56	1	*0*	55	2	*0*	54	3	*0*	-- [10]	--	--
R8.49 [B]		MOT	1	65 [E]	65	65	0	0	E (72)	NONE	63	2	*0*	63	2	*0*	62	3	*0*	61	4	*0*	-- [10]	--	--
R8.50 [B]		MOT	1	75 [M,ST110]	75	74	0	-1	E (72)	A/E	69	5	*1*	**68** [R,T]	**6**	*1*	67	7	*1*	66	8	*1*	-- [10]	--	--
R8.50 A-1		MOT	--	77 [E]	77	71	0	-6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.50 A-1[Int]		MOT	3	52 [E]	52	46	0	-6	D (52)	NONE	43	3	*0*	42	4	*0*	41	5	*3*	40	6	*3*	-- [10]	--	--
R8.50 A-2		MOT	--	80 [E]	80	81	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.50 A-2[Int]		MOT	3	55 [E]	55	56	0	1	D (52)	A/E	53	3	*0*	**49** [R]	**7**	*3*	45	11	*3*	44	12	*3*	-- [10]	--	--
R8.50 B-1		MOT	--	73 [E]	73	68	0	-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.50 B-1[Int]		MOT	3	48 [E]	48	43	0	-5	D (52)	NONE	40	3	*0*	40	3	*0*	39	4	*0*	38	5	*3*	-- [10]	--	--
R8.50 B-2		MOT	--	77 [E]	77	78	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.50 B-2[Int]		MOT	3	52 [E]	52	53	0	1	D (52)	A/E	**45** [R]	**8**	*3*	43	10	*3*	42	11	*3*	41	12	*3*	-- [10]	--	--
R8.50 C-1		MOT	--	70 [E]	70	66	0	-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.50 C-1[Int]		MOT	3	45 [E]	45	41	0	-4	D (52)	NONE	39	2	*0*	38	3	*0*	38	3	*0*	37	4	*0*	-- [10]	--	--
R8.50 C-2		MOT	--	76 [E]	76	75	0	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.50 C-2[Int]		MOT	3	51 [E]	51	50	0	-1	D (52)	NONE	**44** [R]	**6**	*3*	42	8	*3*	41	9	*3*	40	10	*3*	-- [10]	--	--
R8.51 [B]	--	MOT	1	57 [M,ST111]	61	62	4	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; FS - fire station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-20 – Predicted Future Noise Levels and Barrier Analysis – Segment 9 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																			
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)												
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 9.1 W	--	SFR/MFR	4	59 M,LT1	60	62	1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.2 W	SW697 X Shoulder	SFR	2	61 M,ST1	62	64	1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.3 W		SFR	1	62 E	63	64	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											16 feet			18 feet			20 feet			22 feet			24 feet		
R 9.4 W	SW697 D R/W	SFR	9	64 E	65	67	1	2	B (67)	A/E	66	1	0	65	2	0	64	3	0	63	4	0	63	4	0
R 9.5 W,9		SFR	--	64 M,ST2	65	--	1	--	B (67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.6 W		SFR	8	65 E	66	67	1	1	B (67)	A/E	66	1	0	65	2	0	65	2	0	64	3	0	64	3	0
R 9.7 W,7		SFR	4	62 E	63	65	1	2	B (67)	NONE	64	1	0	64	1	0	63	2	0	63	2	0	62	3	0
R 9.8 W		SFR	3	65 E	66	67	1	1	B (67)	A/E	66	1	0	65	2	0	64	3	0	64	3	0	63	4	0
R 9.9 W		SFR	2	64 E	65	67	1	2	B (67)	A/E	66	1	0	65	2	0	64	3	0	64	3	0	63	4	0
R 9.10 W		SFR	1	65 E	66	67	1	1	B (67)	A/E	66	1	0	65	2	0	65	2	0	64	3	0	63	4	0
R 9.11 W		SFR/MFR	5	67 E	66	66	-1	0	B (67)	A/E	66	0	0	65	1	0	64	2	0	63	3	0	63	3	0
R 9.12 W,9		SFR	--	67 M,LT2,CAL	66	--	-1	--	B (67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.13 W		SFR	2	67 E	66	66	-1	0	B (67)	A/E	65	1	0	65	1	0	64	2	0	63	3	0	63	3	0
R 9.14 W		SFR	1	67 E	66	66	-1	0	B (67)	A/E	65	1	0	64	2	0	64	2	0	63	3	0	62	4	0
R 9.15 W,7		SFR	6	65 E	64	65	-1	1	B (67)	NONE	65	0	0	64	1	0	64	1	0	63	2	0	63	2	0
R 9.16 W,7		SFR	4	65 E	64	65	-1	1	B (67)	NONE	65	0	0	64	1	0	63	2	0	63	2	0	63	2	0
R 9.17 W		SFR/MFR	4	68 E	67	67	-1	0	B (67)	A/E	66	1	0	65	2	0	65	2	0	64	3	0	64	3	0
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 9.17B	--	COM	1	65 E	64	68	-1	4	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.18		COM	1	75 E	74	76	-1	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-20 – Predicted Future Noise Levels and Barrier Analysis – Segment 9 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Traffic + Train Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																										
					Design Year Train Noise Level Leq(h), dBA [1]	Design Year No Build Traffic Noise Level Leq(h), dBA [1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year Build Traffic Noise Level Leq(h), dBA [1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year No Build Traffic + Train Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)															
															8 feet			10 feet			12 feet			14 feet			16 feet		
															Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 9.19 [B,7]	--	SFR	3	62 [E]	61	60	63	61	64	1	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.20 [B]		SFR	3	65 [E]	64	61	66	63	67	1	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.21		SFR/MFR	10	66 [E]	64	63	67	65	67	1	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.22 [W]	Shoulder	SFR	2	65 [M,ST3]	62	64	66	66	67	1	2	1	B (67)	A/E	67	0	*0*	66	1	*0*	65	2	*0*	64	3	*0*	-- [10]	--	--	--	--
R 9.23 [B]	--	COM	1	69 [M,ST3A,CAL]	67	64	69	66	70	0	2	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.25 [B]		SFR	3	65 [E]	63	62	66	63	66	1	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.26 [B]		SFR	3	65 [E]	63	63	66	65	67	1	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.27 [W]	--	SFR	1	58 [E]	55	58	59	59	60	1	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.28 [W]		SFR	1	60 [E]	56	60	61	61	62	1	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.29	Shoulder	SFR/MFR	3	67 [E]	64	66	68	67	69	1	1	1	B (67)	A/E	67	2	*0*	67	2	*0*	66	3	*0*	66	3	*0*	-- [10]	--	--	--	--
R 9.30		SFR	3	63 [E]	60	61	64	62	64	1	1	0	B (67)	NONE	64	0	*0*	64	0	*0*	63	1	*0*	62	2	*0*	-- [10]	--	--	--	--
R 9.31 [8]		COM	1	70 [M,ST4]	68	68	71	69	72	1	1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.32		SFR	1	69 [E]	67	68	70	69	71	1	1	1	B (67)	A/E	70	1	*0*	70	1	*0*	69	2	*0*	69	2	*0*	-- [10]	--	--	--	--
R 9.33 [W,7]		MH	6	62 [E]	56	59	61	60	62	-1	1	1	B (67)	NONE	61	1	*0*	61	1	*0*	60	2	*0*	60	2	*0*	-- [10]	--	--	--	--
R 9.34 [W,7]		SFR	5	63 [E]	56	61	62	62	63	-1	1	1	B (67)	NONE	63	0	*0*	62	1	*0*	61	2	*0*	61	2	*0*	-- [10]	--	--	--	--
R 9.35 [W]		COM	1	68 [M,LT3]	62	65	67	67	68	-1	2	1	E (72)	NONE	67	1	*0*	67	1	*0*	66	2	*0*	65	3	*0*	-- [10]	--	--	--	--
R 9.36 [W]		SFR	3	68 [E]	62	65	67	66	68	-1	1	1	B (67)	A/E	67	1	*0*	67	1	*0*	65	3	*0*	65	3	*0*	-- [10]	--	--	--	--
R 9.37		SFR	3	69 [E]	65	64	68	66	68	-1	2	0	B (67)	A/E	68	0	*0*	68	0	*0*	67	1	*0*	67	1	*0*	-- [10]	--	--	--	--
R 9.38 [W]		SFR	2	68 [E]	66	62	67	63	68	-1	1	1	B (67)	NONE	67	1	*0*	67	1	*0*	67	1	*0*	67	1	*0*	-- [10]	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-21 – Predicted Future Noise Levels and Barrier Analysis – Segment 10 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																							
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)																
											8 feet			10 feet			12 feet			14 feet			16 feet			18 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 10.1	S1819[P] R/W	SFR	1	75 [M,ST6]	73	76	-2	3	B (67)	A/E	72	4	*0*	70	6	*1*	69 [T]	7	*1*	68	8	*1*	**67** [R,5]	**9**	*1*	66	10	*1*
R 10.2 [B]		SFR	3	70 [E]	68	71	-2	3	B (67)	A/E	69	2	*0*	68	3	*0*	66 [T]	5	*3*	65	6	*3*	**64** [R,5]	**7**	*3*	64	7	*3*
R 10.3 [B]		SFR	1	70 [E]	69	70	-1	1	B (67)	A/E	68	2	*0*	67	3	*0*	65 [T]	5	*1*	65	5	*1*	**64** [R,5]	**6**	*1*	63	7	*1*
R 10.4 [B]		SFR	2	75 [E]	74	79	-1	5	B (67)	A/E	72	7	*2*	69	10	*2*	68 [T]	11	*2*	67	12	*2*	**66** [R,5]	**13**	*2*	65	14	*2*
R 10.5 [B,W]		SFR	1	68 [M,LT4,CAL]	67	67	-1	0	B (67)	A/E	66	1	*0*	65	2	*0*	64	3	*0*	63	4	*0*	63	4	*0*	63	4	*0*
R 10.6 [B,7]		SFR	4	70 [E]	69	68	-1	-1	B (67)	A/E	67	1	*0*	67	1	*0*	65	3	*0*	65	3	*0*	64	4	*0*	**63** [R]	**5**	*4*
R 10.7 [B]		SFR	5	72 [E]	71	70	-1	-1	B (67)	A/E	68	2	*0*	67	3	*0*	65	5	*5*	64	6	*5*	63	7	*5*	**62** [R,5]	**8**	*5*
R 10.8 [B,7]		SFR	5	70 [E]	69	68	-1	-1	B (67)	A/E	66	2	*0*	66	2	*0*	64 [T]	4	*0*	63	5	*5*	62	6	*5*	**62** [R,5]	**6**	*5*
R 10.9 [B]		SFR	4	73 [E]	72	71	-1	-1	B (67)	A/E	69	2	*0*	68	3	*0*	66 [T]	5	*4*	66	5	*4*	**65** [R,5]	**6**	*4*	64	7	*4*
R 10.9A		SFR	1	76 [E]	75	74	-1	-1	B (67)	A/E	71	3	*0*	70	4	*0*	68 [T]	6	*1*	67	7	*1*	**66** [R,5]	**8**	*1*	65	9	*1*
R 10.10 [B,7]		SFR	5	67 [E]	66	66	-1	0	B (67)	A/E	65	1	*0*	65	1	*0*	63	3	*0*	62	4	*0*	**61** [R]	**5**	*5*	61	5	*5*
R 10.11 [B,W]		SFR	2	65 [E]	64	65	-1	1	B (67)	NONE	64	1	*0*	63	2	*0*	62	3	*0*	61	4	*0*	**60** [R]	**5**	*2*	60	5	*2*
R 10.12 [B]	S1883[P] R/W	SFR	1	71 [E]	70	70	-1	0	B (67)	A/E	68	2	*0*	67	3	*0*	66 [T]	4	*0*	**65** [R]	**5**	*1*	65	5	*1*	65	5	*1*
R 10.13		SFR	3	76 [E]	75	74	-1	-1	B (67)	A/E	71	3	*0*	69	5	*3*	68 [T]	6	*3*	**67** [R]	**7**	*3*	67	7	*3*	66	8	*3*
R 10.14	--	COM	1	75 [E]	74	76	-1	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take in Alternative 3.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-21 – Predicted Future Noise Levels and Barrier Analysis – Segment 10 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Traffic + Train Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																							
					Design Year Train Noise Level Leq(h), dBA [1]	Design Year No Build Traffic Noise Level Leq(h), dBA [1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year Build Traffic Noise Level Leq(h), dBA [1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year No Build Traffic + Train Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)											
															8 feet			10 feet			12 feet			14 feet			16 feet		
															Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 10.15		SFR	4	66 [M,ST5]	66	60	67	61	67	1	1	0	B (67)	NONE	67	0	*0*	67 [T]	0	*0*	67	0	*0*	67	0	*0*	-- [10]	--	--
R 10.16		SFR	7	67 [E]	64	65	68	65	68	1	0	0	B (67)	NONE	67	1	*0*	67	1	*0*	66 [T]	2	*0*	66	2	*0*	-- [10]	--	--
R 10.16A [8]	Shoulder	--	--	67 [M,ST7,CAL]	72	69	74	69	74	--	0	0	--	--	74	0	*0*	73	1	*0*	73	1	*0*	73	1	*0*	-- [10]	--	--
R 10.17 [W]		SFR	7	70 [E]	66	67	70	67	69	0	0	-1	B (67)	A/E	69	0	*0*	69	0	*0*	68	1	*0*	67 [T]	2	*0*	-- [10]	--	--
R 10.18		SFR	3	64 [E]	58	63	64	64	65	0	1	1	B (67)	NONE	64	1	*0*	64	1	*0*	63 [T]	2	*0*	62	3	*0*	-- [10]	--	--
R 10.19		SFR	5	66 [E]	63	64	66	64	67	0	0	1	B (67)	NONE	66	1	*0*	66	1	*0*	65 [T]	2	*0*	65	2	*0*	-- [10]	--	--
R 10.20		SFR	4	70 [M,LT5,CAL]	66	67	70	67	70	0	0	0	B (67)	A/E	70	0	*0*	69	1	*0*	68 [T]	2	*0*	68	2	*0*	-- [10]	--	--
R 10.20A [7]		SFR	16	63 [E]	60	60	63	61	63	0	1	0	B (67)	NONE	63	0	*0*	63	0	*0*	62 [T]	1	*0*	62	1	*0*	-- [10]	--	--
R 10.21	Shoulder	COM	1	72 [E]	69	68	72	68	72	0	0	0	E (72)	NONE	72	0	*0*	71	1	*0*	71 [T]	1	*0*	70	2	*0*	-- [10]	--	--
R 10.22		SFR	2	67 [E]	63	65	67	65	67	0	0	0	B (67)	NONE	66	1	*0*	66	1	*0*	65 [T]	2	*0*	65	2	*0*	-- [10]	--	--
R 10.23 [7]		SFR	12	62 [E]	59	58	62	59	62	0	1	0	B (67)	NONE	62	0	*0*	62	0	*0*	61 [T]	1	*0*	61	1	*0*	-- [10]	--	--
R 10.24		SFR	2	65 [E]	63	60	65	61	65	0	1	0	B (67)	NONE	65	0	*0*	65	0	*0*	64 [T]	1	*0*	64	1	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-22 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 11.1 [B]		MOT	1	67 [E]	67	68	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-1		MOT	--	67 [E]	67	67	0	0	E (72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-1 [int]		MOT	4	42 [E]	42	42	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-2		MOT	--	71 [E]	71	72	0	1	E (72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-2 [Int]	--	MOT	4	46 [E]	46	47	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-1		MOT	--	60 [E]	60	61	0	1	E (72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-1 [Int]		MOT	2	35 [E]	35	36	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-2		MOT	--	64 [E]	64	65	0	1	E (72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-2 [Int]		MOT	2	39 [E]	39	40	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.3 [W]		MH	6	72 [E]	72	73	0	1	B (67)	A/E	73	0	*0*	71	2	*0*	69 [T]	4	*0*	69	4	*0*	**68 [R]**	**5**	***6***
R 11.4 [W]		MH	16	74 [M,LT6.CAL]	74	75	0	1	B (67)	A/E	74	1	*0*	71 [T]	4	*0*	70	5	*16*	**68 [R]**	**7**	*16*	67	8	*16*
R 11.5 [W]		MH	8	72 [E]	72	73	0	1	B (67)	A/E	72	1	*0*	70 [T]	3	*0*	68	5	*8*	**67 [R,5]**	**6**	*8*	66	7	*8*
R 11.6 [B,W]		MH	3	68 [E]	68	69	0	1	B (67)	A/E	68	1	*0*	67 [T]	2	*0*	65	4	*0*	**64 [R]**	**5**	*3*	63	6	*3*
R 11.7 [B,W,7]	S1877[p]	MH	3	68 [E]	68	69	0	1	B (67)	A/E	68	1	*0*	67	2	*0*	65 [T]	4	*0*	64	5	*3*	**63 [R,5]**	**6**	*3*
R 11.8 [B,W,7]	R/W	MH	6	70 [E]	70	71	0	1	B (67)	A/E	70	1	*0*	69	2	*0*	68 [T]	3	*0*	67	4	*0*	**66 [R]**	**5**	*6*
R 11.9 [B,W,7]		MH	17	70 [E]	70	70	0	0	B (67)	A/E	69	1	*0*	68	2	*0*	66 [T]	4	*0*	**65 [R]**	**5**	*17*	65	5	*17*
R 11.10 [B,W,7]		MH	13	68 [E]	68	69	0	1	B (67)	A/E	67	2	*0*	66	3	*0*	65 [T]	4	*0*	**64 [R]**	**5**	*13*	63	6	*13*
R 11.11 [B,W,7]		MH	13	67 [E]	67	68	0	1	B (67)	A/E	67	1	*0*	66	2	*0*	65 [T]	3	*0*	64	4	*0*	64	4	*0*
R 11.12 [B,W,7]		MH	2	65 [E]	65	66	0	1	B (67)	A/E	65	1	*0*	65	1	*0*	63 [T]	3	*0*	62	4	*0*	62	4	*0*
R 11.13	--	COM	1	78 [E]	78	77	0	-1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-22 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 11.14	W	SFR	1	71 M,ST9	74	73	3	-1	B (67)	A/E	71	2	0	70 T	3	0	**68 R**	**5**	***1***	68	5	*1*	68	5	*1*
R 11.14A	W	SFR	1	73 E	76	77	3	1	B (67)	A/E	72 T	5	*1*	70	7	*1*	**69 R,5**	**8**	***1***	68	9	*1*	66	11	*1*
R 11.15	W	SFR	1	62 E	65	66	3	1	B (67)	A/E	65	1	0	64	2	0	63	3	0	62	4	0	**61 R**	**5**	***1***
R 11.15A		SFR	5	68 E	71	71	3	0	B (67)	A/E	69	2	0	68	3	0	66 T	5	5	65	6	5	**65 R,5**	**6**	***5***
R 11.16		SFR	6	72 E	75	74	3	-1	B (67)	A/E	71	3	0	69	5	6	67 T	7	6	**67 R,5**	**7**	***6***	66	8	6
R 11.16A	W	SFR	7	66 E	70	70	4	0	B (67)	A/E	69	1	0	68	2	0	66 T	4	0	**65 R**	**5**	***7***	64	6	7
R 11.17	B,8	SFR	--	73 M,ST11	77	75	4	-2	--	--	71	--	--	69	--	--	68	--	--	67	--	--	67	--	--
R 11.18	B	SFR	2	71 E	75	74	4	-1	B (67)	A/E	70	4	0	68 T	6	2	67	7	2	**66 R,5**	**8**	***2***	66	8	2
R 11.19	B,W	SFR	5	66 E	69	69	3	0	B (67)	A/E	69	0	0	69	0	0	68	1	0	68	1	0	67	2	0
R 11.20	B,7	SFR	3	62 E	65	66	3	1	B (67)	A/E	65	1	0	65	1	0	65	1	0	64	2	0	63	3	0
R 11.21	B,7	SFR	8	64 E	67	67	3	0	B (67)	A/E	66	1	0	66	1	0	65 T	2	0	63	4	0	**62 R**	**5**	***8***
R 11.22	B,7	SFR	6	62 E	66	66	4	0	B (67)	A/E	65	1	0	65	1	0	63 T	3	0	**61 R**	**5**	***6***	61	5	6
R 11.23	B,7	SFR	2	65 E	69	69	4	0	B (67)	A/E	67	2	0	66	3	0	65 T	4	0	**64 R**	**5**	***2***	63	6	2
R 11.24-1	B	MFR	4	73 E	77	75	4	-2	B (67)	A/E	71	4	0	69 T	6	4	68	7	4	66	9	4	**66 R,5**	**9**	***4***
R 11.24-2	B,6	MFR	4	74 E	77	78	3	1	B (67)	A/E	78	0	0	78	0	0	77	1	0	74	4	0	**71 R,5**	**7**	***4***
R 11.25-1	B,W	MFR	2	73 E	74	72	1	-2	B (67)	A/E	70	2	0	69 T	3	0	67	5	2	67	5	2	**66 R,5**	**6**	***2***
R 11.25-2	B,W,6	MFR	2	73 E	75	75	2	0	B (67)	A/E	75	0	0	75	0	0	74	1	0	72	3	0	**70 R,T**	**5**	***2***
R 11.26-1	B,7	MFR	6	63 E	67	66	4	-1	B (67)	A/E	64	2	0	64	2	0	62 T	4	0	61	5	6	**61 R,5**	**5**	***6***
R 11.26-2	B,W,6,7	MFR	6	66 E	69	68	3	-1	B (67)	A/E	67	1	0	66	2	0	65	3	0	65	3	0	**63 R,T**	**5**	***6***
R 11.27-1	B,W,7	MFR	2	63 E	61	63	-2	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.27-2	B,W,6,7	MFR	2	69 E	65	66	-4	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

S1907[p] R/W

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-22 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 11.28 W	SW1[X]	MH	3	72 [M,ST12]	65	67	-7	2	B (67)	A/E	-- [T]	--	--	66	1	*0*	66	1	*0*	65	2	*0*	64	3	*0*
R 11.29 B,W,7		MH	3	71 [E]	64	65	-7	1	B (67)	NONE	--	--	--	65 [T]	0	*0*	64	1	*0*	64	1	*0*	63	2	*0*
R 11.30 B,W,7		MH	3	71 [E]	64	65	-7	1	B (67)	NONE	--	--	--	64 [T]	1	*0*	64	1	*0*	64	1	*0*	63	2	*0*
R 11.31 B,W,7		MH	3	72 [E]	65	67	-7	2	B (67)	A/E	--	--	--	66 [T]	1	*0*	66	1	*0*	66	1	*0*	65	2	*0*
R 11.32 B,W,7		MH	3	68 [E]	61	63	-7	2	B (67)	NONE	--	--	--	62 [T]	1	*0*	62	1	*0*	61	2	*0*	61	2	*0*
R 11.33 W		REC	1	72 [E]	65	66	-7	1	C (67)	A/E	--	--	--	66 [T]	0	*0*	65	1	*0*	64	2	*0*	64	2	*0*
R 11.34 W		REC	1	71 [E]	64	65	-7	1	C (67)	NONE	--	--	--	64	1	*0*	64 [T]	1	*0*	63	2	*0*	63	2	*0*
R 11.34A W		REC	1	66 [E]	59	61	-7	2	C (67)	NONE	--	--	--	61	0	*0*	61	0	*0*	60	1	*0*	60	1	*0*
R 11.35 B,W		MH	6	72 [E]	65	66	-7	1	B (67)	A/E	--	--	--	66 [T]	0	*0*	65	1	*0*	64	2	*0*	64	2	*0*
R 11.36 B,W,7		MH	4	71 [E]	64	66	-7	2	B (67)	A/E	-- [T]	--	--	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*
R 11.37 B,W		MH	4	70 [E]	63	65	-7	2	B (67)	NONE	--	--	--	64	1	*0*	63 [T]	2	*0*	63	2	*0*	63	2	*0*
R 11.38 B,W,7		MH	7	70 [E]	63	64	-7	1	B (67)	NONE	--	--	--	63 [T]	1	*0*	62	2	*0*	62	2	*0*	61	3	*0*
R 11.39 B,W		MH	8	71 [E]	64	65	-7	1	B (67)	NONE	--	--	--	65 [T]	0	*0*	65	0	*0*	64	1	*0*	64	1	*0*
R 11.40 B,W		MH	3	72 [M,ST13]	65	65	-7	0	B (67)	NONE	--	--	--	65	0	*0*	65 [T]	0	*0*	64	1	*0*	64	1	*0*
R 11.41 B.W,7		MH	8	69 [E]	62	63	-7	1	B (67)	NONE	--	--	--	62	1	*0*	61 [T]	2	*0*	61	2	*0*	60	3	*0*
R 11.42 B.W,7		MH	2	69 [E]	62	63	-7	1	B (67)	NONE	--	--	--	62	1	*0*	61 [T]	2	*0*	61	2	*0*	60	3	*0*
R 11.43	--	COM	1	71 [E]	75	77	4	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 11.44	S1969[P] R/W and Shoulder	SFR/FS	2	67 [M,ST14]	71	74	4	3	B (67)	A/E	69	5	*2*	68	6	*2*	**67** [R,T]	**7**	*2*	66	8	*2*	66	8	*2*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-22 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Traffic + Train Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
					Design Year Train Noise Level Leq(h), dBA [1]	Design Year No Build Traffic Noise Level Leq(h), dBA [1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year Build Traffic Noise Level Leq(h), dBA [1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year No Build Traffic + Train Noise Level Minus Existing Conditions Leq(h), dBA [4,14]	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Level Leq(H), dBA [4,12]	Activity Category (NAC)	Impact Type [4,13]	8 feet			10 feet			12 feet			14 feet			16 feet	
															Traffic + Train Noise Leq(h)	I.L.	*NBR*	Traffic + Train Noise Leq(h)	I.L.	*NBR*	Traffic + Train Noise Leq(h)	I.L.	*NBR*	Traffic + Train Noise Leq(h)	I.L.	*NBR*	Traffic + Train Noise Leq(h)	I.L.
R 11.45	--	SFR	1	64 E	68	64	69	65	70	5	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.46 W		SFR	2	63 M,LT7	66	63	68	64	68	5	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.47 W	Shoulder	SFR	2	64 E	67	65	69	66	70	5	1	1	B (67)	A/E	69	1	*0*	69	1	*0*	69 T	1	*0*	68	2	*0*	68	2
R 11.48 W,8	--	--	--	65 M,ST10	68	65	70	66	70	5	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.49		COM	1	63 E	65	64	68	66	69	5	2	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Noise Level Leq(h), dBA".

14 - Noise measurements LT7 and ST10 were conducted when train cars were parked on tracks reducing the existing traffic and train noise levels.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-23 – Predicted Future Noise Levels and Barrier Analysis – Segment 12 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 12.1 [K]	--	SFR	2	62 [M,ST15]	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.2 [K]		SFR	2	60 [E]	60	61	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.3 [K]		SFR	4	63 [E]	63	64	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.4A [K]	--	SFR	1	67 [E]	59	61	-8	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.4B [K]		SFR	1	67 [E]	59	60	-8	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.4 [K]		SFR	4	70 [M,LT8,CAL]	57	59	-13	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.5 [K]		SFR	1	67 [E]	59	61	-8	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.6 [B,K,7]		SFR	2	59 [E]	55	56	-4	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.7	--	COM	1	70 [E]	71	73	1	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-1 [W,8]	--	MOT	--	66 [E,H1B]	67	70	1	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-1 [W,Int]		MOT	12	44 [E]	45	48	1	3	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-2 [W,6]		MOT	--	71 [E]	72	75	1	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-2 [W,Int,6]		MOT	12	49 [E]	50	53	1	3	D (52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-3 [W,12]		MOT	--	73 [E]	74	76	1	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-3 [W,Int,12]		MOT	12	51 [E]	52	54	1	2	D (52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.9 [B,W]		MOT	1	53 [E]	54	56	1	2	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.10 [W]	S2033 R/W	REC	4	66 [E]	67	69	1	2	C (67)	A/E	63 [T]	6	*4*	63	6	*4*	**62** [R]	**7**	***4***	62	7	*4*	61	8	*4*
R 12.11 [B]	--	SCH	1	56 [E]	57	59	1	2	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home SCH - educational center; COM - commercial; MOT - motel; REC - recreational

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

K - A calibration factor of -4 dB is applied for this receiver and adjacent receivers with similar geographic features.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Insertion losses obtained from interior versus exterior noise measurements have been been applied to exterior noise levels to determine interior noise levels: R12.8-1/H1B - Days Inn: 22 dB reduction.

Table B-24 – Predicted Future Noise Levels and Barrier Analysis – Segment 13 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
											Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											12 feet			14 feet			16 feet			18 feet			20 feet		
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R13.1-1 [B]	--	MOT	--	63 [E]	64	65	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1-1 [Int]		MOT	18	38 [E]	39	40	1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1-2 [B,6]		MOT	--	65 [E]	66	67	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1-2 [Int,6]		MOT	18	40 [E]	41	42	1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1A		COM	1	67 [E]	68	69	1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-1 [B]	--	MOT	--	65 [E]	66	68	1	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-1 [Int]		MOT	15	40 [E]	41	43	1	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-2 [B,6]		MOT	--	69 [E]	70	71	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-2 [Int,6]		MOT	15	44 [E]	45	46	1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.3	S2079[P] R/W	SFR	3	66 [E]	67	70	1	3	B (67)	A/E	66	4	*0*	65 [T]	5	*3*	65	5	*3*	**64** [R,5]	**6**	*3*	64	6	*3*
R13.4		SFR	1	68 [M,ST16A/LT9,CAL]	69	71	1	2	B (67)	A/E	67	4	*0*	66 [T]	5	*1*	65	6	*1*	**64** [R]	**7**	*1*	64	7	*1*
R13.5		COM	1	65 [E]	66	69	1	3	E (72)	NONE	66	3	*0*	65	4	*0*	65	4	*0*	65	4	*0*	64	5	*1*
R13.6	--	REC	1	58 [E]	59	62	1	3	C (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.7		REC	1	58 [E]	59	61	1	2	C (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-25 – Predicted Future Noise Levels and Barrier Analysis – Segment 14 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq (h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq (h), dBA [1]	Design Year Build Noise Level Leq (h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 14.1	--	COM	1	72 M,ST119	76	78	4	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.3		SFR	1	67 M,ST16	67	68	0	1	B (67)	A/E	66	2	*0*	65	3	*0*	64 T	4	*0*	**63 R**	**5**	***1***	-- 10	--	--
R 14.4		MOT	--	75 E	77	76	2	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.4	Int	MOT	3	55 E	57	56	2	-1	D (52)	A/E	53	3	*0*	53	3	*0*	51 T	5	*3*	**51 R,5**	**5**	***3***	-- 10	--	--
R 14.5	W	MH	5	71 E	73	75	2	2	B (67)	A/E	71	4	*0*	71	4	*0*	69 T	6	*5*	**69 R,5**	**6**	***5***	-- 10	--	--
R 14.6	W	MH	6	71 M,ST17	73	74	2	1	B (67)	A/E	71	3	*0*	71	3	*0*	70 T	4	*0*	**68 R**	**6**	***6***	-- 10	--	--
R 14.7		MH	3	73 E	75	77	2	2	B (67)	A/E	72	5	*3*	71	6	*3*	70 T	7	*3*	70	7	*3*	**69 R,5**	**8**	***3***
R 14.7A	B,W,7	MH	7	67 E	69	70	2	1	B (67)	A/E	68	2	*0*	67	3	*0*	65 T	5	*7*	**65 R,5**	**5**	***7***	-- 10	--	--
R 14.7B	B,W,7	MH	6	69 E	71	72	2	1	B (67)	A/E	69	3	*0*	69	3	*0*	67 T	5	*6*	**66 R,5**	**6**	***6***	-- 10	--	--
R 14.8	B,W,7	MH	2	65 E	67	68	2	1	B (67)	A/E	66	2	*0*	65	3	*0*	63 T	5	*2*	**63 R,5**	**5**	***2***	-- 10	--	--
R 14.8A		SFR	2	59	61	62	2	1	B (67)	NONE	61	1	*0*	60	2	*0*	60 T	2	*0*	59	3	*0*	-- 10	--	--
R 14.8B		SFR	2	65	67	68	2	1	B (67)	A/E	66	2	*0*	65	3	*0*	64 T	4	*0*	63	5	*2*	**63 R,5**	**5**	***2***
R 14.9		SFR	2	71 M,LT10	73	75	2	2	B (67)	A/E	71	4	*0*	70	5	*2*	70 T	5	*2*	70	5	*2*	**69 R,5**	**6**	***2***
R 14.9A		SFR	--	72 M,ST17A,CAL	74	76	2	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**--**	**--**	--
R 14.10	W	MH	3	68 E	70	72	2	2	B (67)	A/E	69	3	*0*	69	3	*0*	68	4	*0*	68	4	*0*	**67 R,T**	**5**	***3***
R 14.11	W	MH	3	68 E	70	72	2	2	B (67)	A/E	69	3	*0*	68	4	*0*	68	4	*0*	67	5	*3*	**67 R,T,5**	**5**	***3***
R 14.11A	B,W,7	MH	2	62 E	64	65	2	1	B (67)	NONE	63	2	*0*	62	3	*0*	62	3	*0*	61	4	*0*	61	4	*0*
R 14.12	B,W,7	MH	2	61 E	63	64	2	1	B (67)	NONE	62	2	*0*	62	2	*0*	61	3	*0*	61	3	*0*	60	4	*0*

S2145 Shoulder and R/W

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 20 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-25 – Predicted Future Noise Levels and Barrier Analysis – Segment 14 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Traffic Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																									
					Design Year Train Noise Level Leq(h), dBA [1]	Design Year No Build Traffic Noise Level Leq(h), dBA [1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year Build Traffic Noise Level Leq(h), dBA [1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year No Build Traffic Noise Level Minus Existing Conditions Leq(h), dBA [1]	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA [1]	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(H), dBA [1,12]	Activity Category (NAC)	Impact Type [4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
															8 feet			10 feet			12 feet			14 feet			16 feet		
															Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 14.1A		SCH	1	62 [E]	56	62	63	64	65	0	2	2	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.1B	--	SCH	1	63	58	63	64	65	66	0	2	2	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.2		MFR	2	64 [E]	46	64	64	65	65	0	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Noise Level Leq(h), dBA".

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-26 – Predicted Future Noise Levels and Barrier Analysis – Segment 15 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 15.1	W	SW5[D] Shoulder & R/W	SFR	2	68 [M,ST19]	68	68	0	0	B (67)	A/E	--	--	--	--	--	--	68 [T]	0	0	67	1	0	66	2	0
R 15.2	W		SFR	3	68 [E]	68	69	0	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	69 [T]	0	0	68	1	0
R 15.3	W		SFR	1	66 [E]	66	65	0	-1	B (67)	NONE	--	--	--	--	--	--	65	0	0	64	1	0	64	1	0
R 15.4	B,W,7		SFR	2	65 [E]	65	66	0	1	B (67)	A/E	--	--	--	--	--	--	65 [T]	1	0	65	1	0	64	2	0
R 15.5	B,W,7		SFR	4	65 [E]	65	66	0	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	65 [T]	1	0	64	2	0
R 15.6	W		SFR	3	66 [E]	66	67	0	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	66 [T]	1	0	65	2	0
											18 feet			20 feet			22 feet			24 feet			--		
R 15.1	W	SW5[D] Shoulder & R/W	SFR	2	68 [M,ST19]	68	68	0	0	B (67)	A/E	66	2	0	66	2	0	66	2	0	66	2	0	--	--	--
R 15.2	W		SFR	3	68 [E]	68	69	0	1	B (67)	A/E	67	2	0	67	2	0	66	3	0	66	3	0	--	--	--
R 15.3	W		SFR	1	66 [E]	66	65	0	-1	B (67)	NONE	64	1	0	64	1	0	64	1	0	64	1	0	--	--	--
R 15.4	B,W,7		SFR	2	65 [E]	65	66	0	1	B (67)	A/E	64	2	0	64	2	0	64	2	0	63	3	0	--	--	--
R 15.5	B,W,7		SFR	4	65 [E]	65	66	0	1	B (67)	A/E	64	2	0	64	2	0	64	2	0	64	2	0	--	--	--
R 15.6	W		SFR	3	66 [E]	66	67	0	1	B (67)	A/E	65	2	0	64	3	0	64	3	0	64	3	0	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take in Alternative 3.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-26 – Predicted Future Noise Levels and Barrier Analysis – Segment 15 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 15.7 W	SW5 [D] Shoulder	SFR	2	69 [E]	67	68	-2	1	B (67)	A/E	--	--	--	--	--	--	68 [T]	0	*0*	67	1	*0*	-- [10]	--	--
R 15.8 W		SFR	5	69 [E]	67	68	-2	1	B (67)	A/E	--	--	--	-- [T]	--	--	67	1	*0*	67	1	*0*	-- [10]	--	--
R 15.9 W		SFR	4	69 [M,ST19A,CAL]	67	67	-2	0	B (67)	A/E	-- [T]	--	--	--	--	--	66	1	*0*	66	1	*0*	-- [10]	--	--
R 15.10 B,W		SFR	4	67 [M,LT12]	65	65	-2	0	B (67)	NONE	--	--	--	--	--	--	65	0	*0*	65	0	*0*	-- [10]	--	--
R 15.11 B,W,7		SFR	4	68 [E]	66	65	-2	-1	B (67)	NONE	--	--	--	--	--	--	65	0	*0*	64	1	*0*	-- [10]	--	--
R 15.12	--	COM	1	75 [E]	73	74	-2	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take in Alternative 3.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-26 – Predicted Future Noise Levels and Barrier Analysis – Segment 15 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Traffic Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
															8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year Train Noise Level Leq(h), dBA [1]	Design Year No Build Traffic Noise Level Leq(h), dBA [1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year Build Traffic Noise Level Leq(h), dBA [1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year No Build Traffic Noise Level Minus Existing Conditions Leq(h), dBA [14]	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 15.13	Shoulder	SFR	5	60 [M,ST18]	64	60	65	61	66	0	1	1	B (67)	NONE	65	1	*0*	65	1	*0*	65	1	*0*	65	1	*0*	-- [10]	--	--
R 15.14		SFR	5	66 [E]	70	66	71	67	72	0	1	1	B (67)	A/E	71	1	*0*	71	1	*0*	71 [T]	1	*0*	71	1	*0*	-- [10]	--	--
R 15.15		SFR	6	69 [E]	70	66	71	68	72	-3	2	1	B (67)	A/E	72	0	*0*	71	1	*0*	71 [T]	1	*0*	71	1	*0*	-- [10]	--	--
R 15.16		SFR	6	66 [M,LT11,CAL]	68	63	69	66	70	-3	3	1	B (67)	A/E	70	0	*0*	69	1	*0*	69	1	*0*	69	1	*0*	-- [10]	--	--
R 15.17		SFR	2	66 [E]	68	63	69	66	70	-3	3	1	B (67)	A/E	70	0	*0*	69	1	*0*	69	1	*0*	69	1	*0*	-- [10]	--	--
R 15.18		SFR	2	65 [E]	68	62	69	64	69	-3	2	0	B (67)	NONE	69	0	*0*	69	0	*0*	68	1	*0*	68	1	*0*	-- [10]	--	--
R 15.19		SFR	3	66 [E]	66	63	68	64	68	-3	1	0	B (67)	NONE	68	0	*0*	68	0	*0*	67	1	*0*	67	1	*0*	-- [10]	--	--
R 15.20	--	SFR	4	62 [E]	64	64	67	63	66	2	-1	-1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 15.21		SFR	3	57 [E]	66	59	66	61	67	2	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 15.22		SFR	4	55 [M,ST20]	62	57	63	59	64	2	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 15.23		SFR	5	56 [E]	60	58	62	60	63	2	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

14 - Existing Conditions do not include train noise for ST18 and ST20; however there is potential train noise included in noise measurement LT11.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-27 – Predicted Future Noise Levels and Barrier Analysis – Segment 16 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
											Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 16.1	B,W	--	MOT	1	61 E	62	63	1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 16.2	B	Shoulder	SFR	1	69 E	70	70	1	0	B (67)	A/E	68	2	0	68	2	0	67 T	3	0	67	3	0	-- [10]	--	--
R 16.3	B		COM	1	75 E	76	77	1	1	E (72)	A/E	71	6	1	70	7	1	68 T	9	1	67	10	1	-- [10]	--	--
R 16.4	B		SFR	1	70 E	71	72	1	1	B (67)	A/E	69	3	0	68	4	0	68	4	0	67 T	5	1	-- [10]	--	--
R 16.5	B,W,7		SFR	4	65 E	66	66	1	0	B (67)	A/E	64	2	0	64	2	0	63 T	3	0	62	4	0	-- [10]	--	--
R 16.6	B,W		REL	1	63 E	64	64	1	0	--	--	63	1	0	62	2	0	61 T	3	0	60	4	0	-- [10]	--	--
R 16.7	B,7		SFR	2	61 E	62	63	1	1	B (67)	NONE	62	1	0	62	1	0	61	2	0	60	3	0	-- [10]	--	--
R 16.8	B,7		MH	6	65 E	66	67	1	1	B (67)	A/E	64	3	0	63	4	0	63	4	0	61 T	6	6	-- [10]	--	--
R 16.9	B,7		SFR	6	62 E	63	64	1	1	B (67)	NONE	62	2	0	61	3	0	61	3	0	61	3	0	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take in Alternative 3.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-27 – Predicted Future Noise Levels and Barrier Analysis – Segment 16 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 16.10	W,B	SFR	3	63 E	64	66	1	2	B (67)	A/E	65	1	0	65	1	0	65	1	0	65 T	1	0	65	1	0
R 16.11	W,B	SFR	3	61 M,LT13	62	64	1	2	B (67)	NONE	63	1	0	62	2	0	62	2	0	62	2	0	62	2	0
R 16.12	B	SFR	1	66 E	67	68	1	1	B (67)	A/E	66	2	0	65	3	0	64 T	4	0	64	4	0	**63** R	**5**	1
R 16.13	B	SFR	4	65 E	66	67	1	1	B (67)	A/E	65	2	0	64	3	0	63 T	4	0	63	4	0	63	4	0
R 16.14	B	SFR	2	62 E	63	65	1	2	B (67)	NONE	63	2	0	63	2	0	62	3	0	61	4	0	61	4	0
R 16.15-1		MOT	--	67 E	67	68	0	1	--	--	65	3	--	64	4	--	63	5	--	62	6	--	-- 10	--	--
R 16.15-1	Int,B	MOT	6	42 E	42	43	0	1	D (52)	NONE	40	3	0	39	4	0	38	5	6	**37** R,5	**6**	6	-- 10	--	--
R 16.15-2		MOT	--	71 E	71	72	0	1	--	--	69	3	--	68	4	--	67	5	--	65	7	--	-- 10	--	--
R 16.15-2	Int,B,6	MOT	6	46 E	46	47	0	1	D (52)	NONE	44	3	0	43	4	0	42	5	6	**40** R	**7**	6	-- 10	--	--
R 16.16-1		MOT	--	67 E	67	67	0	0	--	--	65	2	--	64	3	--	63	4	--	62	5	--	-- 10	--	--
R 16.16-1	Int,B	MOT	14	42 E	42	42	0	0	D (52)	NONE	40	2	0	39	3	0	38	4	0	**37** R	**5**	14	-- 10	--	--
R 16.16-2		MOT	--	71 E	71	72	0	1	--	--	68	4	--	68	4	--	67	5	--	65	7	--	-- 10	--	--
R 16.16-2	Int,B,6	MOT	14	46 E	46	47	0	1	D (52)	NONE	43	4	0	43	4	0	42	5	14	**40** R,5	**7**	14	-- 10	--	--
R 16.17	B,W	MOT	1	70 M,ST20A,CAL	70	71	0	1	E (72)	A/E	67	4	0	67	4	0	66 T	5	1	**64** R	**7**	1	-- 10	--	--
R 16.18	B,7	SFR	8	61 E	62	63	1	1	B (67)	NONE	62	1	0	61	2	0	61	2	0	60	3	0	-- 10	--	--
R 16.19	B,7	SFR	3	63 E	64	65	1	1	B (67)	NONE	63	2	0	63	2	0	62	3	0	61	4	0	-- 10	--	--
R 16.20-1		MOT	--	66 E	66	67	0	1	--	--	65	2	--	64	3	--	64	3	--	63	4	--	-- 10	--	--
R 16.20-1	Int,B	MOT	4	41 E	41	42	0	1	D (52)	NONE	40	2	0	39	3	0	39	3	0	38	4	0	-- 10	--	--
R 16.20-2		MOT	--	69 E	69	70	0	1	--	--	67	3	--	67	3	--	66	4	--	65	5	--	-- 10	--	--
R 16.20-2	Int,B,6	MOT	4	44 E	44	45	0	1	D (52)	NONE	42	3	0	42	3	0	41	4	0	**40** R	**5**	4	-- 10	--	--
R 16.21	B	MOT	1	61 E	61	61	0	0	E (72)	NONE	61	0	0	60	1	0	60	1	0	60	1	0	-- 10	--	--
		S2238 P R/W & Shoulder																							

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-27 – Predicted Future Noise Levels and Barrier Analysis – Segment 16 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Traffic Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
															8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year Train Noise Level Leq(h), dBA [1]	Design Year No Build Traffic Noise Level Leq(h), dBA [1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year Build Traffic Noise Level Leq(h), dBA [1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA [1,12]	Design Year No Build Traffic Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 16.22	--	SFR	3	55 E	61	57	63	60	63	2	3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 16.23		SFR/MFR	14	56 E	60	58	62	61	63	2	3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 1A-1	--	MOT	--	67 C	67	66	0	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-1 Int		MOT	6	39 C	39	38	0	-1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-2 6		MOT	--	70 C	70	71	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-2 Int,6		MOT	6	42 C	42	43	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-3 12		MOT	--	71 C	71	73	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-3 Int,12		MOT	6	43 C	43	45	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-1		MOT	--	70 C	70	71	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-1 Int		MOT	6	42 C	42	43	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-2 6		MOT	--	73 C	73	75	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-2 Int,6		MOT	6	45 C	45	47	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-3 12		MOT	--	74 C	74	76	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-3 Int,12		MOT	6	46 C	46	48	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. A 28 dB reduction has been applied to exterior noise levels based on building noise reduction measurements conducted for this site.

Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 2 [13]	SW241[X] Property Line	SFR	1	66 [C]	58	59	-8	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 3 [13]		SFR	1	67 [C]	58	59	-9	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 4 [13]		SFR	2	67 [C]	58	60	-9	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 5 [13]		SFR	2	68 [C]	58	60	-10	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 6 [13]		SFR	2	68 [C]	59	61	-9	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 7 [13]		SFR	2	69 [C]	59	61	-10	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 8 [13]		SFR	1	69 [C]	61	64	-8	3	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 9 [9]	--	--	--	74 [M,ST23]	74	78	0	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 10 [B,7]	--	SFR	3	62 [C]	62	65	0	3	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 11 [W]	--	SFR	4	59 [C]	59	61	0	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 12 [W]		SFR	12	60 [C]	60	62	0	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 13 [W]		SFR	7	61 [C]	61	62	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 14 [W]		SFR	3	62 [C]	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.

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5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

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B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

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Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 15 W	SW264[X] Property Line	SFR	2	65 E	64	67	-1	3	B (67)	A/E	--	--	--	66	1	0	65	2	0	64	3	0	63	4	0
R17. 16 W		SFR	3	65 E	64	67	-1	3	B (67)	A/E	--	--	--	66	1	0	65	2	0	64	3	0	63	4	0
R17. 17 W		SFR	5	66 M,LT14,CAL	65	67	-1	2	B (67)	A/E	--	--	--	66	1	0	65	2	0	65	2	0	64	3	0
R17. 18 W		SFR	6	65 E	64	65	-1	1	B (67)	NONE	--	--	--	65	0	0	64	1	0	63	2	0	63	2	0
R17. 19 B,W,7		SFR	2	63 E	62	61	-1	-1	B (67)	NONE	--	--	--	61	0	0	60	1	0	60	1	0	59	2	0
R17. 20 B,W,7		SFR	6	63 E	62	63	-1	1	B (67)	NONE	--	--	--	62	1	0	61	2	0	61	2	0	60	3	0
R17. 21 B,W,7		SFR	3	64 E	63	64	-1	1	B (67)	NONE	--	--	--	63	1	0	62	2	0	61	3	0	61	3	0
R17. 22 B,W,7		SFR	3	65 E	64	66	-1	2	B (67)	A/E	--	--	--	65	1	0	64	2	0	63	3	0	63	3	0
R17. 23 B,W,7		SFR	4	63 E	62	64	-1	2	B (67)	NONE	--	--	--	63	1	0	62	2	0	62	2	0	61	3	0
R17. 24 B,W,7		SFR	3	66 E	65	67	-1	2	B (67)	A/E	--	--	--	66	1	0	66	1	0	66	1	0	65	2	0

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

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T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

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Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 18 W	S2435 [P] R/W and S2437 [P] Shoulder	SFR	5	65 E	64	65	-1	1	B (67)	NONE	65	0	*0*	65	0	*0*	65	0	*0*	65	0	*0*	65	0	*0*
R17. 24 B,W,7		SFR	3	66 E	65	67	-1	2	B (67)	A/E	66	1	*0*	65	2	*0*	65	2	*0*	65	2	*0*	65	2	*0*
R17. 25 B,W		MFR	4	68 E	66	67	-2	1	B (67)	A/E	65	2	*0*	63 T	4	*0*	62	5	*4*	**61** R,5	**6**	***4***	60	7	*4*
R17. 26 W		MFR	3	70 E	68	69	-2	1	B (67)	A/E	67	2	*0*	65 T	4	*0*	63	6	*3*	**62** R	**7**	***3***	61	8	*3*
R17. 27 B,W		MFR	3	68 E	66	66	-2	0	B (67)	A/E	64	2	*0*	62 T	4	*0*	60	6	*3*	**60** R,5	**6**	***3***	59	7	*3*
R17. 28 B,W		MFR	1	61 E	59	60	-2	1	B (67)	NONE	59	1	*0*	59 T	1	*0*	59	1	*0*	59	1	*0*	59	1	*0*
R17. 29 B,W		MFR	2	68 E	66	66	-2	0	B (67)	A/E	65	1	*0*	63 T	3	*0*	62	4	*0*	**61** R	**5**	***2***	61	5	*2*
R17. 30 W,8		MFR	--	70 M,ST25	68	69	-2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 31 B,W,7		MFR	3	60 E	58	59	-2	1	B (67)	NONE	56	3	*0*	56	3	*0*	54	5	*3*	**53** R,5	**6**	***3***	53	6	*3*
R17. 32 B,W	--	MFR	10	59 E	57	58	-2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

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6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

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10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

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Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 33A	--	REL	--	68 C	68	70	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 33A Int		REL	1	43 C	43	45	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 33	--	COM	1	75 C	75	74	0	-1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 34	S2384P R/W and S2382P	SFR	1	69 C	69	71	0	2	B (67)	A/E	67	4	*0*	66	5	*1*	65 T	6	*1*	**63 R**	**8**	***1***	61	10	*1*
R17. 35 [8]		--	--	66 M,ST21	67	70	1	3	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 36	--	COM	1	74 C	74	77	0	3	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 37		COM	1	77 M,ST121	79	82	2	3	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

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R - The minimum height to meet feasibility requirements and design goal.

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W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. A 25 dB reduction has been applied to exterior noise levels.

Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 38		MH	4	75 M,ST24	77	77	2	0	B (67)	A/E	72	5	4	70 T	7	4	69	8	4	68	9	4	**67 R,5**	**10**	***4***
R17. 39		MH	6	71 E	73	76	2	3	B (67)	A/E	73	3	0	71 T	5	6	70	6	6	69	7	6	**69 R,5**	**7**	***6***
R17. 40		MH	6	68 E	70	71	2	1	B (67)	A/E	68	3	0	66 T	5	6	65	6	6	**65 R,5**	**6**	***6***	65	6	6
R17. 41 B,7	S2434A P R/W and S2438 P Shoulder Option 1	MH	1	71 E	73	74	2	1	B (67)	A/E	72	2	0	71	3	0	70	4	0	68	6	1	**68 R,5**	**6**	***1***
R17. 42 B,7		MH	2	68 E	70	71	2	1	B (67)	A/E	70	1	0	69	2	0	68	3	0	67	4	0	**66 R**	**5**	***2***
R17. 43 B,7		MH	7	68 E	70	73	2	3	B (67)	A/E	71	2	0	69	4	0	68	5	7	67	6	7	**66 R,5**	**7**	***7***
R17. 44 B,7		MH	6	67 E	69	71	2	2	B (67)	A/E	69	2	0	69	2	0	67	4	0	67	4	0	**66 R**	**5**	***6***
R17. 45 B,7		MH	4	66 E	68	69	2	1	B (67)	A/E	67	2	0	67	2	0	65	4	0	**64 R**	**5**	***4***	64	5	4
R17. 46 W		SFR	2	65 E	66	69	1	3	B (67)	A/E	67	2	0	65 T	4	0	64	5	2	**63 R,5**	**6**	***2***	63	6	2
R17. 47A W		SFR	2	66 E	67	68	1	1	B (67)	A/E	68	0	0	65 T	3	0	64	4	0	**63 R**	**5**	***2***	63	5	2
R17. 47		--	--	68 M,LT15,CAL	69	70	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 48		SFR	2	67 E	68	69	1	1	B (67)	A/E	67	2	0	67 T	2	0	66	3	0	66	3	0	66	3	0

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B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]																				
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 38	S2434B[P] and S2438[P] Shoulder Option 2	MH	4	75 [M,ST24]	77	77	2	0	B (67)	A/E	72	5	4	71 [T]	6	4	70	7	4	**69** [R,5]	**8**	***4***	-- [10]	--	--
R17. 39		MH	6	71 [E]	73	76	2	3	B (67)	A/E	71	5	6	69 [T]	7	6	**67** [R,5]	**9**	***6***	66	10	6	-- [10]	--	--
R17. 40		MH	6	68 [E]	70	71	2	1	B (67)	A/E	67	4	0	64 [T]	7	6	**62** [R,5]	**9**	***6***	61	10	6	-- [10]	--	--
R17. 41 [B,7]		MH	1	71 [E]	73	74	2	1	B (67)	A/E	70	4	0	69	5	1	68	6	1	**67** [R,5]	**7**	***1***	-- [10]	--	--
R17. 42 [B,7]		MH	2	68 [E]	70	71	2	1	B (67)	A/E	68	3	0	68	3	0	67	4	0	**66** [R]	**5**	***2***	-- [10]	--	--
R17. 43 [B,7]		MH	7	68 [E]	70	73	2	3	B (67)	A/E	69	4	0	68	5	7	66	7	7	**65** [R,5]	**8**	***7***	-- [10]	--	--
R17. 44 [B,7]		MH	6	67 [E]	69	71	2	2	B (67)	A/E	68	3	0	67	4	0	**66** [R]	**5**	***6***	65	6	6	-- [10]	--	--
R17. 45 [B,7]		MH	4	66 [E]	68	69	2	1	B (67)	A/E	67	2	0	66	3	0	**64** [R]	**5**	***4***	63	6	4	-- [10]	--	--
R17. 46 [W]		SFR	2	65 [E]	66	69	1	3	B (67)	A/E	67	2	0	65 [T]	4	0	**64** [R]	**5**	***2***	63	6	2	-- [10]	--	--
R17. 47A [W]		SFR	2	66 [E]	67	68	1	1	B (67)	A/E	68	0	0	65 [T]	3	0	64	4	0	64	4	0	-- [10]	--	--
R17. 47 [9]		--	--	68 [M,LT15,CAL]	69	70	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R17. 48		SFR	2	67 [E]	68	69	1	1	B (67)	A/E	67	2	0	67 [T]	2	0	66	3	0	66	3	0	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-29 – Predicted Future Noise Levels and Barrier Analysis – Segment 18 – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA1																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18. 1	--	COM	1	72 E	70	68	-2	-2	F	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 2		COM	1	72 E	70	70	-2	0	F	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 3	--	REC	1	73 E	71	71	-2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 4		REC	1	70 E	68	68	-2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 5	--	COM	1	70 E	70	71	0	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 6-1	S2476P Shoulder	MFR	2	66 M,ST26	66	67	0	1	B (67)	A/E	65	2	*0*	64	3	*0*	**62** R,T	**5**	***2***	62	5	*2*	-- 10	--	--
R18. 6-2 6		MFR	2	69 E	69	68	0	-1	B (67)	A/E	65	3	*0*	64	4	*0*	**63** R,T	**5**	***2***	62	6	*2*	-- 10	--	--
R18. 7-1		MFR	6	65 E	65	65	0	0	B (67)	NONE	62	3	*0*	61	4	*0*	**60** R,T	**5**	***6***	59	6	*6*	-- 10	--	--
R18. 7-2 6		MFR	6	67 E	67	66	0	-1	B (67)	A/E	64	2	*0*	63	3	*0*	62	4	*0*	61	5	*6*	-- 10	--	--
R18. 8-1		MFR	8	65 E	65	66	0	1	B (67)	A/E	62	4	*0*	62	4	*0*	**60** R,T	**6**	***8***	59	7	*8*	-- 10	--	--
R18. 8-2 6		MFR	8	68 E	68	67	0	-1	B (67)	A/E	63	4	*0*	62	5	*8*	**60** R,T,5	**7**	***8***	60	7	*8*	-- 10	--	--
R18. 9-1 7		MFR	4	62 E	62	62	0	0	B (67)	NONE	59	3	*0*	59	3	*0*	**57** R,T	**5**	***4***	56	6	*4*	-- 10	--	--
R18. 9-2 6,7		MFR	4	64 E	64	63	0	-1	B (67)	NONE	61	2	*0*	60	3	*0*	59	4	*0*	59	4	*0*	-- 10	--	--
R18. 10-1 7		MFR	4	60 E	60	61	0	1	B (67)	NONE	59	2	*0*	59	2	*0*	58	3	*0*	57	4	*0*	-- 10	--	--
R18. 10-2 6,7		MFR	4	63 E	63	63	0	0	B (67)	NONE	62	1	*0*	61	2	*0*	60	3	*0*	60	3	*0*	-- 10	--	--
R18. 11-1		MFR	2	67 E	67	68	0	1	B (67)	A/E	65	3	*0*	65	3	*0*	**63** R,T	**5**	***2***	63	5	*2*	-- 10	--	--
R18. 11-2 6		MFR	2	70 E	70	70	0	0	B (67)	A/E	67	3	*0*	66	4	*0*	**64** R,T	**6**	***2***	64	6	*2*	-- 10	--	--
R18. 12-1		MFR	4	67 E	67	68	0	1	B (67)	A/E	65	3	*0*	65	3	*0*	**63** R,T	**5**	***4***	62	6	*4*	-- 10	--	--
R18. 12-2 6		MFR	4	70 E	70	69	0	-1	B (67)	A/E	66	3	*0*	66	3	*0*	**64** R,T	**5**	***4***	63	6	*4*	-- 10	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; PI - public institute.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - indoor/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates thatn o barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-29 – Predicted Future Noise Levels and Barrier Analysis – Segment 18 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA1																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18. 13-1 [7]		MFR	2	66 [E]	66	66	0	0	B (67)	A/E	63	3	*0*	63	3	*0*	**61** [R,T]	**5**	***2***	60	6	*2*	-- [10]	--	--
R18. 13-2 [6,7]		MFR	2	68 [E]	68	67	0	-1	B (67)	A/E	64	3	*0*	64	3	*0*	**62** [R,T]	**5**	***2***	62	5	*2*	-- [10]	--	--
R18. 14-1		MFR	6	68 [E]	68	69	0	1	B (67)	A/E	66	3	*0*	66	3	*0*	64 [T]	5	*6*	**64** [R,5]	**5**	***6***	-- [10]	--	--
R18. 14-2 [6]		MFR	6	71 [E]	71	71	0	0	B (67)	A/E	68	3	*0*	67	4	*0*	66 [T]	5	*6*	**65** [R,5]	**6**	***6***	-- [10]	--	--
R18. 15-1		MFR	4	67 [E]	67	68	0	1	B (67)	A/E	65	3	*0*	65	3	*0*	64 [T]	4	*0*	**63** [R]	**5**	***4***	-- [10]	--	--
R18. 15-2 [6]		MFR	4	69 [E]	69	70	0	1	B (67)	A/E	68	2	*0*	66	4	*0*	65 [T]	5	*4*	**65** [R,5]	**5**	***4***	-- [10]	--	--
R18. 16-1	S2476[P]	MFR	4	62 [E]	62	64	0	2	B (67)	NONE	62	2	*0*	61	3	*0*	60 [T]	4	*0*	**59** [R]	**5**	***4***	-- [10]	--	--
R18. 16-2 [6]	Shoulder	MFR	4	67 [E]	67	69	0	2	B (67)	A/E	67	2	*0*	66	3	*0*	65	4	*0*	65	4	*0*	-- [10]	--	--
R18. 17 [B,W,7]		SFR	3	62 [E]	62	64	0	2	B (67)	NONE	62	2	*0*	62	2	*0*	61	3	*0*	60	4	*0*	-- [10]	--	--
R18. 18 [W]		SFR	8	62 [M,LT16,ST26A,CAL]	62	63	0	1	B (67)	NONE	63	0	*0*	62	1	*0*	61	2	*0*	61	2	*0*	-- [10]	--	--
R18. 19 [W]		SFR	5	63 [E]	63	64	0	1	B (67)	NONE	63	1	*0*	63	1	*0*	63	1	*0*	62	2	*0*	-- [10]	--	--
R18. 20		MFR	4	64 [E]	64	65	0	1	B (67)	NONE	65	0	*0*	65	0	*0*	65	0	*0*	64	1	*0*	-- [10]	--	--
R18. 21		MFR	4	63 [M,ST27]	63	64	0	1	B (67)	NONE	64	0	*0*	64	0	*0*	64	0	*0*	64	0	*0*	-- [10]	--	--
R18. 22		MFR	4	64 [E]	64	66	0	2	B (67)	A/E	66	0	*0*	65	1	*0*	65	1	*0*	65	1	*0*	-- [10]	--	--
R18. 23	--	COM	1	68 [E]	68	69	0	1	E(72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 24	--	COM	1	72 [M,ST28]	70	70	-2	0	E(72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 25		RS	--	73 [E]	71	70	-2	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 25 [Int]	Shoulder	RS	1	48 [E]	46	45	-2	-1	D(52)	NONE	42	3	*0*	41	4	*0*	41	4	*0*	40	5	*1*	-- [10]	--	--
R18. 26		PI	1	67 [E]	65	67	-2	2	C(67)	A/E	64	3	*0*	64	3	*0*	63	4	*0*	62	5	*1*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; PI - public institute; RS - radio station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - indoor/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates thatn o barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-30 – Predicted Future Noise Levels and Barrier Analysis – Segment 18A – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18A. 1A	--	COM	1	74 C	74	77	0	3	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 1	--	SCH	1	62 C	62	64	0	2	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-1	--	MOT	--	62 C	62	62	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-1 Int	--	MOT	5	37 C	37	37	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-2 6	--	MOT	--	65 C	66	66	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-2 6,Int	--	MOT	5	40 C	41	41	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 3	--	MOT	1	61 C	61	63	0	2	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-1	--	MOT	--	61 C,H6	61	62	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-1 Int	--	MOT	4	38 C	38	39	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-2 6	--	MOT	--	67 C	68	68	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-2 6,Int	--	MOT	4	44 C	45	45	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-1	--	MOT	--	63 C	63	64	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-1 Int	--	MOT	4	40 C	40	41	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-2 6	--	MOT	--	70 C	70	71	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-2 6,Int	--	MOT	4	47 C	47	48	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; PI - public institute.

3 - M - Measured noise level; STxx or LTxx - measurement site number; C - calculated existing noise level; CAL - model calibration site; Hxx - indoor/outdoor measurement; E - estimated from No Build noise level and measurement sites.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of a calibration location.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels of Travelodge based on building construction; a 23, 20, and 25 dB reduction has been applied to exterior noise levels of Super 8, Good Nite Inn, and Country Inn Suites, respectively, based on building noise reduction measurements conducted at these sites.

Table B-30 – Predicted Future Noise Levels and Barrier Analysis – Segment 18A – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18A. 6 [8]		MOT	-	76 [C,ST28A,CAL]	76	76	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-1 [B,W]		MOT	--	70 [C,H18]	70	69	0	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-1 [B,Int,W]	--	MOT	7	50 [C]	50	49	0	-1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-2 [B,6]		MOT	--	73 [C]	73	74	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-2 [B,6,Int]		MOT	7	53 [C]	53	54	0	1	D (52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 8	--	COM	1	65 [C]	66	65	1	-1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-1		MOT	--	67 [C,H5]	67	67	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-1 [Int]		MOT	12	42 [C]	42	42	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-2 [6]		MOT	--	71 [C]	71	71	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-2 [6,Int]	--	MOT	12	46 [C]	46	46	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-3 [12]		MOT	--	74 [C]	74	75	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-3 [12,Int]		MOT	12	49 [C]	49	50	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 10		MOT	1	64 [C]	64	64	0	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 11	--	COM	1	63 [C]	63	64	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; PI - public institute; RS - radio station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; C - calculated existing noise level; CAL - model calibration site; Hxx - indoor/outdoor measurement; E - estimated from No Build noise level and measurement sites.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of a calibration location.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels of Travelodge based on building construction; a 23, 20, and 25 dB reduction has been applied to exterior noise levels of Super 8, Good Nite Inn, and Country Inn Suites, respectively, based on building noise reduction measurements conducted at these sites.

Table B-31 – Predicted Future Noise Levels and Barrier Analysis – Segment 19 – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 19.1	--	COM	1	72 E	71	72	-1	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.2		COM	1	72 E	71	71	-1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.3	S2619P / Shoulder	SFR	1	72 E	71	71	-1	0	B (67)	A/E	67	4	0	67 T	4	0	**66** R	**5**	1	66	5	1	-- 10	--	--
R 19.4		SFR	1	71 M,ST30A,CAL	70	70	-1	0	B (67)	A/E	66	4	0	**65** R,T	**5**	1	65	5	1	64	6	1	-- 10	--	--
R 19.5 B		MFR	4	67 M,LT18	68	69	1	1	B (67)	A/E	65	4	0	**64** R,T	**5**	4	63	6	4	63	6	4	-- 10	--	--
R 19.5A		SFR	2	70 E	71	72	1	1	B (67)	A/E	69	3	0	69	3	0	69	3	0	69	3	0	-- 10	--	--
R 19.5B B,7		SFR	4	61 E	62	63	1	1	B (67)	NONE	62	1	0	61	2	0	60	3	0	60	3	0	-- 10	--	--
R 19.5C B,7		SFR	5	68 E	69	70	1	1	B (67)	A/E	66	4	0	66	4	0	**65** R,T	**5**	5	64	6	5	-- 10	--	--
R 19.6 B		SFR	5	69 M,ST31	69	70	0	1	B (67)	A/E	66	4	0	65	5	5	64 T	6	5	**64** R,5	**6**	5	-- 10	--	--
R 19.7		SFR	1	72 E	72	73	0	1	B (67)	A/E	69	4	0	68	5	1	67 T	6	1	**66** R	**7**	1	-- 10	--	--
R 19.8-1	--	MOT	1	64 C	64	64	0	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.8-1 Int		MOT	10	38 C	38	38	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.8-2 6		MOT	--	67 C	68	68	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.8-2 Int,6		MOT	14	41 C	42	42	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.8-3 12		MOT	--	70 C	71	71	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.8-3 Int,12		MOT	14	44 C	45	45	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.9-1		MOT	1	64 C	64	65	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.9-1 Int		MOT	16	41 C	41	42	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.9-2 6		MOT	--	66 C	67	68	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.9-2 Int,6		MOT	16	43 C	44	45	1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Insertion losses obtained from interior versus exterior noise measurements have been been applied to exterior noise levels to determine interior noise levels: R19.8/H7 - Comfort Suites: 26 dB reduction; R19.9/H8 - Motel 6: 23 dB reduction; R19.10/H9 - Ayres Hotel: 27 dB reduction.

Table B-31 – Predicted Future Noise Levels and Barrier Analysis – Segment 19 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																			
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)												
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 19.10-1		MOT	--	65 [C]	65	66	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.10-1 [Int]		MOT	7	38 [C]	38	39	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.10-2 [6]	--	MOT	--	67 [C]	67	68	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.10-2 [Int,6]		MOT	7	40 [C]	40	41	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.10A		COM	1	66 [C]	67	67	1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.11 [B]		SCH	1	63 [M,ST29]	65	65	2	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.12 [B]		SFR	1	65 [E]	67	66	2	-1	B (67)	A/E	64	2	*0*	63 [T]	3	*0*	63	3	*0*	62	4	*0*	-- [10]	--	--
R 19.13	Shoulder	SFR	1	67 [M,LT17]	69	67	2	-2	B (67)	A/E	64	3	*0*	64 [T]	3	*0*	63	4	*0*	62	5	*1*	-- [10]	--	--
R 19.14 [B]		SFR	3	65 [E]	67	67	2	0	B (67)	A/E	63	4	*0*	63 [T]	4	*0*	62	5	*3*	62	5	*3*	-- [10]	--	--
R 19.14A		MH	6	63 [E]	65	66	2	1	B (67)	A/E	63	3	*0*	61	5	*6*	60 [T]	6	*6*	60	6	*6*	-- [10]	--	--
R 19.15 [W,B]		SFR	2	66 [E]	66	67	0	1	B (67)	A/E	65	2	*0*	64 [T]	3	*0*	63	4	*0*	63	4	*0*	-- [10]	--	--
R 19.15A	Shoulder	SFR	6	67 [E]	67	67	0	0	B (67)	A/E	65	2	*0*	63 [T]	4	*0*	62	5	*6*	61	6	*6*	-- [10]	--	--
R 19.16 [W]		SFR	1	67 [M,ST30]	67	68	0	1	B (67)	A/E	66	2	*0*	64 [T]	4	*0*	63	5	*1*	63	5	*1*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Insertion losses obtained from interior versus exterior noise measurements have been been applied to exterior noise levels to determine interior noise levels: R19.8/H7 - Comfort Suites: 26 dB reduction; R19.9/H8 - Motel 6: 23 dB reduction; R19.10/H9 - Ayres Hotel: 27 dB reduction.

Table B-32 – Predicted Future Noise Levels and Barrier Analysis – Segment 20 – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 20.1 B,7,K	Shoulder	SFR	5	71 E	70	70	-1	0	B (67)	A/E	69	1	*0*	69	1	*0*	69 T	1	*0*	69	1	*0*	-- 10	--	--
R 20.1A B,7,K		SFR	1	69 E	68	68	-1	0	B (67)	A/E	67	1	*0*	67	1	*0*	67 T	1	*0*	67	1	*0*	-- 10	--	--
R 20.2A B,K		MOT	--	73 E	72	72	-1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.2A B,Int,K		MOT	1	48 E	47	47	-1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.2 B,K		MOT	1	75 E	74	75	-1	1	E (72)	A/E	72	3	*0*	72 T	3	*0*	71	4	*0*	71	4	*0*	-- 10	--	--
R 20.3 W,K	SW149[X] / Shoulder	SFR/MFR	7	72 E	71	71	-1	0	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 20.4 W,K		MFR	6	69 M,ST32	68	69	-1	1	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 20.5 B,W,K		MFR	4	61 E	60	61	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.5A B,W,K		MFR	5	60 E	59	59	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.6-1 W,K		MFR	2	69 E	68	68	-1	0	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 20.6-2 W,6,K		MFR	2	71 E	70	71	-1	1	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 20.7 W,K		MFR	5	68 E	68	68	0	0	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.8 W,K		SFR	1	66 E	66	67	0	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.9 W,K		SFR	1	65 M,LT20,CAL	65	66	0	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.10 B,W,7,K		SFR/MFR	4	63 E	63	64	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.11 B,W,7,K		SFR	3	63 E	63	63	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

K - Modeled traffic noise levels for this analysis area calibrated to within 1 dB of measured levels. However, due to unknown reasons, future predicted traffic noise levels were much lower than existing levels. Therefore, an adjustment factor of +3 dB was applied to these receivers to account for this anomaly.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-32 – Predicted Future Noise Levels and Barrier Analysis – Segment 20 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 20.12-1 B,W,K	SW149[X] SW499[X] / Shoulder	MFR	4	64 E	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.12-2 B,W,6,K		MFR	4	65 E	65	66	0	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.13-1 B,W,K		MFR	2	64 E	64	64	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.13-2 B,W,6,K		MFR	2	65 E	65	65	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.14-1 B,W,K		MFR	1	60 E	60	61	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.14-2 B,W,6,K		MFR	1	63 E	63	64	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.15-1 B,W,7,K		MFR	2	59 E	59	60	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.15-2 B,W,6,7,K		MFR	2	61 E	61	62	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.16-1 B,W,7,K		MFR	2	63 E	63	63	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.16-2 B,W,6,7,K		MFR	2	64 E	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.17-1 B,W,7,K		MFR	2	60 E	60	61	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.17-2 B,W,6,7,K		MFR	2	64 E	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.18A W,K	SW499[X] SW153[X] SW509[X] / Shoulder	REL	1	67 E	67	68	0	1	C (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.18 W,K		SFR	2	67 E	67	68	0	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.19 W,K		SFR/MFR	3	65 E	65	66	0	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.20 W,K		SFR	2	64 E	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.21 W,K		SFR	2	62 E	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.22 B,W,7,K		SFR	4	64 E	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.23 B,W,K		SFR	3	62 E	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

K - Modeled traffic noise levels for this analysis area calibrated to within 1 dB of measured levels. However, due to unknown reasons, future predicted traffic noise levels were much lower than existing levels. Therefore, an adjustment factor of +3 dB was applied to these receivers to account for this anomaly.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-32 – Predicted Future Noise Levels and Barrier Analysis – Segment 20 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 20.24 W,K	SW153[X] SW509[X] SW157[X] SW159[X] / Shoulder	REC	1	64 E	63	64	-1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.25 W,K		REC	1	63 E	62	63	-1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.26 W,K		SCH	1	64 M,ST36	63	64	-1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.27 W,K		MFR	4	65 E	64	65	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.28 W,K		MFR	4	61 E	60	61	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.29 W,K		MFR	4	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.30 B,W,K	SW523[X] SW161[X] SW531[X] SW163[X] SW537[X] / Shoulder	SFR	5	63 E	65	66	2	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.31 W,K		MFR	1	64 E	66	67	2	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.32 W,K		MFR	1	65 M,ST37	67	67	2	0	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.33 B,W,K		MFR	4	60 E	62	63	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.34 B,W,K		MFR	4	59 E	61	62	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.35 B,W,K		MFR	8	57 E	59	60	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.36 B,W,K		MFR	8	61 E	63	63	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.37 B,W,7,K		MFR	4	62 E	64	65	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.38 B,W,7,K		MFR	8	61 E	63	64	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.39 W,K		SFR	3	67 M,ST38	68	68	1	0	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.40 B,W,7,K		SFR	5	66 E	67	67	1	0	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

K - Modeled traffic noise levels for this analysis area calibrated to within 1 dB of measured levels. However, due to unknown reasons, future predicted traffic noise levels were much lower than existing levels. Therefore, an adjustment factor of +3 dB was applied to these receivers to account for this anomaly.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-32 – Predicted Future Noise Levels and Barrier Analysis – Segment 20 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																							
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)																
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 20.41		COM	1	70 E	70	71	0	1	E (72)	NONE	70	1	0	69	2	0	69	2	0	69	2	0	--	--	--
R 20.42		SFR	3	69 E	69	70	0	1	B (67)	A/E	68	2	0	65	5	3	**65** R,T,5	**5**	3	64	6	3	-- 10	--	--
R 20.42A		REL	--	69 E	69	69	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.42A Int		REL	1	44 E	44	44	0	0	D (52)	NONE	42	2	0	42	2	0	40	4	0	40	4	0	--	--	--
R 20.43		SFR	4	69 M,LT19,CAL	69	70	0	1	B (67)	A/E	66	4	0	64	6	4	**63** R,T	**7**	4	62	8	4	-- 10	--	--
R 20.44 B	S2638P	SFR	1	69 E	68	68	-1	0	B (67)	A/E	66	2	0	64	4	0	**63** R,T	**5**	1	62	6	1	-- 10	--	--
R 20.45	S2654P /	SFR	1	70 E	69	70	-1	1	B (67)	A/E	67	3	0	65	5	1	**64** R,T,5	**6**	1	63	7	1	-- 10	--	--
R 20.46	Shoulder	SFR	5	69 E	68	68	-1	0	B (67)	A/E	66	2	0	64	4	0	**63** R,T	**5**	5	62	6	5	-- 10	--	--
R 20.47		SFR	1	68 E	67	68	-1	1	B (67)	A/E	66	2	0	65	3	0	**63** R,T	**5**	1	62	6	1	-- 10	--	--
R 20.47A		REL	--	69 E	68	69	-1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.47A Int		REL	1	44 E	43	44	-1	1	D (52)	NONE	42	2	0	40	4	0	39	5	1	38	6	1	--	--	--
R 20.48		MFR	4	70 M,ST33	69	70	-1	1	B (67)	A/E	65 T	5	4	**64** R,5	**6**	4	64	6	4	63	7	4	-- 10	--	--
R 20.49 B,7		SFR	2	63 E	62	63	-1	1	B (67)	NONE	63	0	0	63	0	0	62	1	0	62	1	0	--	--	--
R 20.50 B,W,7	SW158X /	SFR	4	61 E	60	62	-1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.51 W	Shoulder	SFR/MFR	3	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

K - Modeled traffic noise levels for this analysis area calibrated to within 1 dB of measured levels. However, due to unknown reasons, future predicted traffic noise levels were much lower than existing levels. Therefore, an adjustment factor of +3 dB was applied to these receivers to account for this anomaly.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-32 – Predicted Future Noise Levels and Barrier Analysis – Segment 20 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 20.52A [W,7]	SW158[X] / Shoulder	SCH	1	61 [E]	61	62	0	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.52 [W]		SFR	2	63 [E]	63	63	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.53 [W]		SFR	1	62 [M,ST35,CAL]	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.54 [W]		MFR	4	62 [E]	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.55 [W]		MFR	2	62 [E]	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.56 [W]		MFR	3	64 [E]	64	64	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.57 [W]	SW158[X] SW530[X] SW162[X] SW536[X] / Shoulder	SFR	5	64 [M,LT21]	65	66	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 20.58 [W]		SFR	5	63 [E]	64	65	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.59A [W]		SCH	1	66 [E]	67	67	1	0	C (67)	A/E	66	1	*0*	66	1	*0*	66	1	*0*	65	2	*0*	-- [10]	--	--
R 20.59 [W]		SFR/MFR	3	67 [E]	68	69	1	1	B (67)	A/E	68	1	*0*	68	1	*0*	68	1	*0*	68	1	*0*	-- [10]	--	--
R 20.60 [B,W,7]		SFR	4	61 [E]	62	63	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.61 [B,W,7]		SFR	4	62 [E]	63	64	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
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10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
K - Modeled traffic noise levels for this analysis area calibrated to within 1 dB of measured levels. However, due to unknown reasons, future predicted traffic noise levels were much lower than existing levels. Therefore, an adjustment factor of +3 dB was applied to these receivers to account for this anomaly.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 21.1 W	SW165X SW167X SW551X / Shoulder	SFR	6	66 E	63	64	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.2 W		SFR	3	63 E	60	61	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.3 W		SFR	4	66 M,LT22	63	64	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.3A W		SFR	2	66 M,ST40A,CAL	63	64	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.4 W		SFR	2	67 E	64	65	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.5 W,7		SFR	5	65 E	62	62	-3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.6 W,B,7		SFR	5	64 E	61	61	-3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.6A W,7		SFR	3	63 E	60	61	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.7 W,B,7		SFR	4	63 E	60	61	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.8 W	SW167X SW551X SW169X SW563X / Shoulder	SFR	2	65 E	62	63	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.9 W		SFR	2	67 E	64	65	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.10 W		SFR	2	64 E	61	62	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.11 W		SFR	2	65 E	62	63	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.12 W		SFR	2	63 E	60	61	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.13 W		SFR	2	65 E	62	63	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.14 W		SFR	4	67 E	64	64	-3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.15 W,7		SFR	2	61 E	58	60	-3	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.16 W,7		SFR	2	63 E	60	61	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.17 W,7		SFR	2	61 E	58	59	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.18 W,7		SFR	2	64 E	61	62	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.19 W,7		SFR	2	61 E	58	58	-3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.20 W,7		SFR	2	63 E	60	61	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.21 W,7		SFR	4	60 E	57	58	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 21.22 W,6	SW563[X]	MFR	6	70 E	66	67	-4	1	B (67)	A/E	66	1	0	66	1	0	66	1	0	66	1	0	66	1	0
R 21.23 W	SW171[X] / Shoulder	MFR	1	67 M,ST42	63	64	-4	1	B (67)	NONE	63	1	0	63	1	0	62	2	0	62	2	0	62	2	0
R 21.24 W,B		MFR	1	59 E	55	56	-4	1	B (67)	NONE	55	1	0	55	1	0	55	1	0	54	2	0	54	2	0
R 21.25 W,6	S2737[P] / RW	MFR	2	73 E	69	69	-4	0	B (67)	A/E	**64** R,T	**5**	2	64	5	2	63	6	2	63	6	2	63	6	2
R 21.25A		REL	--	65 E	65	66	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.25A Int		REL	1	25 E	25	26	0	1	D (52)	NONE	23	3	0	22	4	0	22	4	0	22	4	0	21	5	1
R 21.26 B,K		SFR	2	58 E	58	59	0	1	B (67)	NONE	58	1	0	58	1	0	58	1	0	58	1	0	58	1	0
R 21.27 B,K		SFR	3	57 E	57	58	0	1	B (67)	NONE	56	2	0	56	2	0	56	2	0	56	2	0	56	2	0
R 21.28 K		SFR	3	69 E	69	70	0	1	B (67)	A/E	68	2	0	68	2	0	67	3	0	67	3	0	67	3	0
R 21.29 8,K		--	--	81 M,ST44,CAL	81	82	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.30 K		SFR	1	73 E	73	74	0	1	B (67)	A/E	70	4	0	69	5	1	68	6	1	68	6	1	**67** R	**7**	1
R 21.31 7,K		SFR	2	67 E	67	68	0	1	B (67)	A/E	65	3	0	64	4	0	63	5	2	63	5	2	**63** R,5	**5**	2
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 21.32	Shoulder	REL	--	74 M,ST45	73	74	-1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.32		REL	1	49 E	48	49	-1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.33		REL	1	68 E	67	68	-1	1	C (67)	A/E	67	1	0	66	2	0	66	2	0	65	3	0	-- [10]	--	--
R 21.34 7		SFR	3	67 E	68	69	1	1	B (67)	A/E	68	1	0	67	2	0	67	2	0	66	3	0	-- [10]	--	--
R 21.35		SFR	2	70 M.,LT23	71	71	1	0	B (67)	A/E	70	1	0	70	1	0	69	2	0	69	2	0	-- [10]	--	--
R 21.36 B,7		SFR	2	58 E	59	60	1	1	B (67)	NONE	59	1	0	59	1	0	59	1	0	59	1	0	--	--	--
R 21.37		SFR	1	72 E	73	74	1	1	B (67)	A/E	73	1	0	72	2	0	72	2	0	71	3	0	-- [10]	--	--
R 21.38 W		SFR	2	61 E	62	63	1	1	B (67)	NONE	62	1	0	61	2	0	61	2	0	61	2	0	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 40 dB reduction has been applied to exterior noise levels of the Kingdom Hall of Jehovah's Witnesses based on buildings having no windows.

K - A calibration factor of +3 dB is applied to this receiver and adjacent receivers with similar geographic features.

Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 21.39	S2765[P] / Shoulder	REL	1	67 [M,ST47]	69	70	2	1	C (67)	A/E	66	4	*0*	65	5	*1*	64	6	*1*	**63** [R,T]	**7**	*1*	-- [10]	--	--
R 21.40		REC	1	69 [E]	71	71	2	0	C (67)	A/E	67	4	*0*	67	4	*0*	65 [T]	6	*1*	**64** [R,5]	**7**	*1*	-- [10]	--	--
R 21.41		SCH	--	65 [E]	67	67	2	0	--	--	64	3	--	63	4	--	62	5	--	60	7	--	--	--	--
R 21.41 [Int]		SCH	14	40 [E]	42	42	2	0	D (52)	NONE	34	8	*14*	33	9	*14*	33	9	*14*	32	10	*14*	--	--	--
R 21.42 [W,B]		REC	1	58 [E]	60	60	2	0	C (67)	NONE	59	1	*0*	58	2	*0*	58	2	*0*	57	3	*0*	--	--	--
R 21.43 [W]	SW187[X] / Shoulder	SFR	1	65 [E]	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.44 [W]		SFR	1	65 [E]	64	65	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.45 [W]		SFR	1	63 [M,LT25]	62	62	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.46 [W]		SFR	1	62 [E]	61	62	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.47 [W]		SFR	1	59 [E]	58	59	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.48 [W]		SFR	1	59 [E]	60	61	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.49 [W]		SFR	1	60 [M,ST49]	61	61	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.50 [W]		SFR	2	62 [E]	63	63	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 21.51 W	SW536[X] SW164[X] SW166[X] SW550[X] / Shoulder	SFR	1	68 E	67	67	-1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 21.52 W,7		SFR	3	66 E	65	65	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.53 W		MFR	2	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.54 W		--	--	64 M,ST39	63	64	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.55 W		MFR	2	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.56 W,B,7		MFR	1	58 E	57	58	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.57 W		MFR	2	62 E	61	62	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.58 W		MFR	2	61 E	60	61	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.59 W		MFR	1	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.60 W		SFR	2	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

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Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 21.61 W,B,7	SW550[X] SW170[X] SW564[X] SW172[X] / Shoulder	SFR	2	60 E	59	61	-1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.62 W		SFR	4	62 M,ST40,CAL	63	64	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.63 W		SFR	4	61 E	62	63	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.64 W		SFR	3	59 E	60	61	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.65 W		SFR	1	64 E	62	63	-2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.66 W		SFR	2	64 E	62	62	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.67 W		SFR	1	65 M,ST41	63	63	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.68 W,B,7		SFR	4	56 E	57	58	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.69 W,B,7		SFR	4	58 E	59	60	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.70 W,B,7		SFR	2	62 E	60	60	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.71 W,B,7		SFR	2	62 E	60	61	-2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.72 W		SFR	1	64 E	62	63	-2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.73 W,7		SFR	1	62 E	60	61	-2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.74 W,B,7		SFR	2	61 E	59	60	-2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																				
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
											16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 21.75	S2730[P] / RW	REL	1	64 [M,ST43]	64	66	0	2	C (67)	A/E	61	5	*1*	60 [T]	6	*1*	**59** [R]	**7**	*1*	59	7	*1*	59	7	*1*
R 21.76	R/W	REL	1	67 [E]	67	68	0	1	C (67)	A/E	67	1	*0*	67	1	*0*	67	1	*0*	66	2	*0*	66	2	*0*
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 21.77-1 [B]		MFR	1	51 [E]	51	52	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.77-2 [B,6]		MFR	1	56 [E]	56	56	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.78-1 [B]		MFR	1	60 [E]	60	62	0	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.78-2 [B,6]	--	MFR	1	64 [E]	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.79-1 [B]		MFR	1	56 [E]	56	57	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.79-2 [B,6]		MFR	1	59 [E]	59	60	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.80 [B]		MFR	1	56 [E]	56	57	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home
COM - commercial; MOT - motel; REC - recreational; SCH - educational center;
MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]																			
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)												
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 21.81	W,B		SFR	1	59 E	58	58	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.82			SFR	1	69 M,ST46,CAL	68	68	-1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.83	B		SFR	1	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.84	W		SFR	1	65 E	64	65	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.85	W		SFR	1	65 E	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.86	W		SFR	1	65 E	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.87	W		SFR	1	63 M,LT24,CAL	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.88	W		SFR	1	64 E	63	64	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.89	W		SFR	1	65 E	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.90	W		SFR	1	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.91	W	--	SFR	1	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.92	W		SFR	1	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.93	W		SFR	1	63 E	62	62	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.94	W		SFR	1	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.95	W		SFR	1	62 E	61	62	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.96	W		SFR	1	60 E	59	60	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.97	W		SFR	1	61 E	60	61	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.98	W		SFR	1	62 E	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.99	W		SFR	1	69 M,ST50	68	68	-1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.100	W		SFR	1	65 E	64	65	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Appendix C Noise Measurement Data Forms and Graphs

SHORT-TERM MEASUREMENTS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | M. Sharp / J. Ogden | DATE: 10/21/14

MEASUREMENT ADDRESS: 14609 Washington Dr. | CITY: Fontana | ☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST 1

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☒ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 2676029

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☒ RANDOM
☒ WIND SCREEN
SERIAL #: 4189 → 266101

PRE AMP:
☐ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☒ N/A
SERIAL #: N/A

CALIBRATOR:
☐ LD CA250 ☐ LD CA200
☒ B&K 4231 ☐ _____
S/N 2507137
Freq, Hz.: ☐ 250 ☒ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before: 93.6, 47.6mV/Pa, 0.0, 12:54
After: 93.6, 47.2mV/Pa, -0.09, 15:55

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 1 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

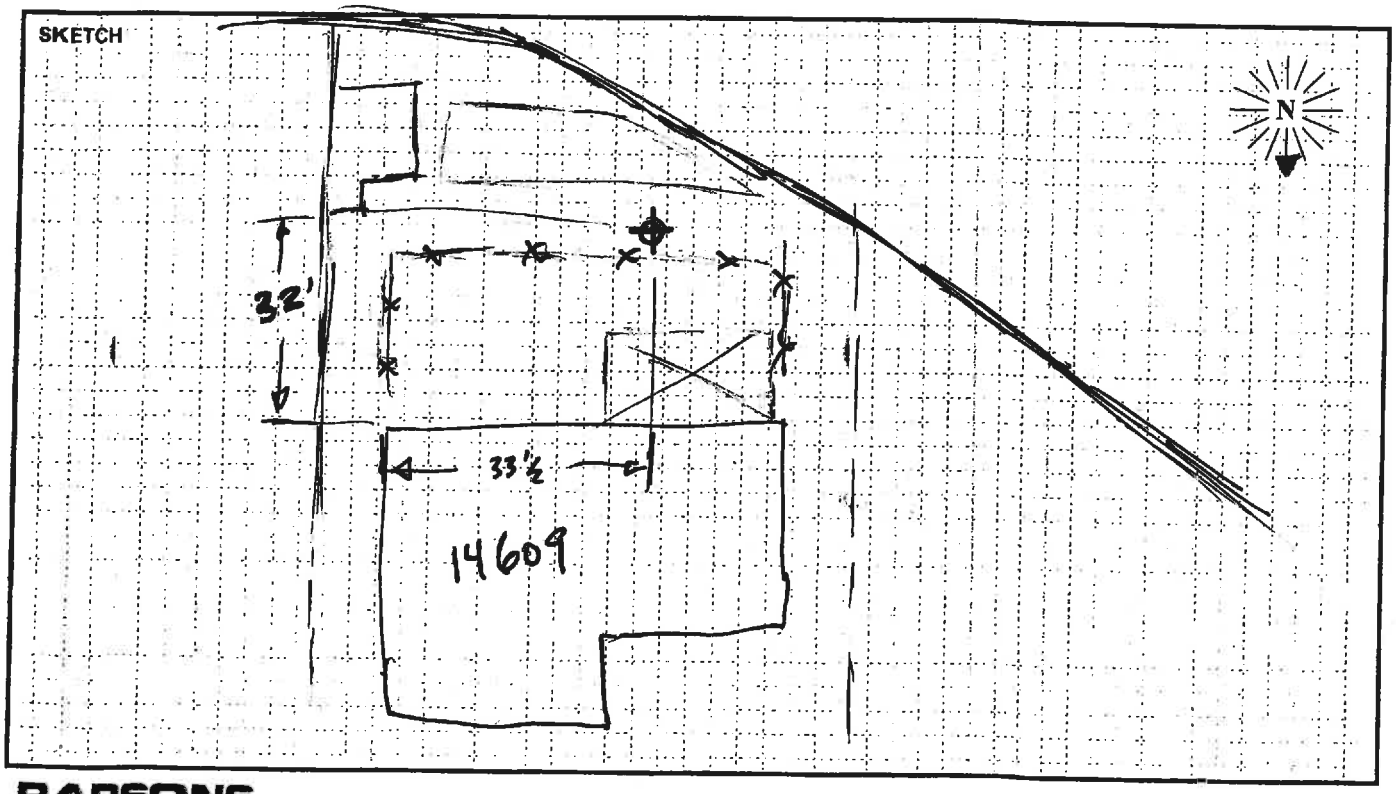
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 85.5 °F R.H.: 47.1 %
WIND SPEED: CALM MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA Jason Phone
PHOTO NOs. _____

NOTES: Interval set to 1 min due to animals / birds
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	13:20	13:20	52.5	56.1	56.8	58.1	–	60.4	63.6	68.8	60.3	~~1 min~~ 1 min data downloaded

SKETCH



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R VARGAS		DATE: 10/21/14
MEASUREMENT ADDRESS: 10287 REDWOOD AVE	CITY: FONTANA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST2

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☒ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 3119

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 52820

PRE AMP:
☐ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☒ LD-824 ☐ _____
SERIAL #: 32704

CALIBRATOR:
☐ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 113.6, -48.03, 12:52
After 114.0, 113.6, -48.03, 14:19

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

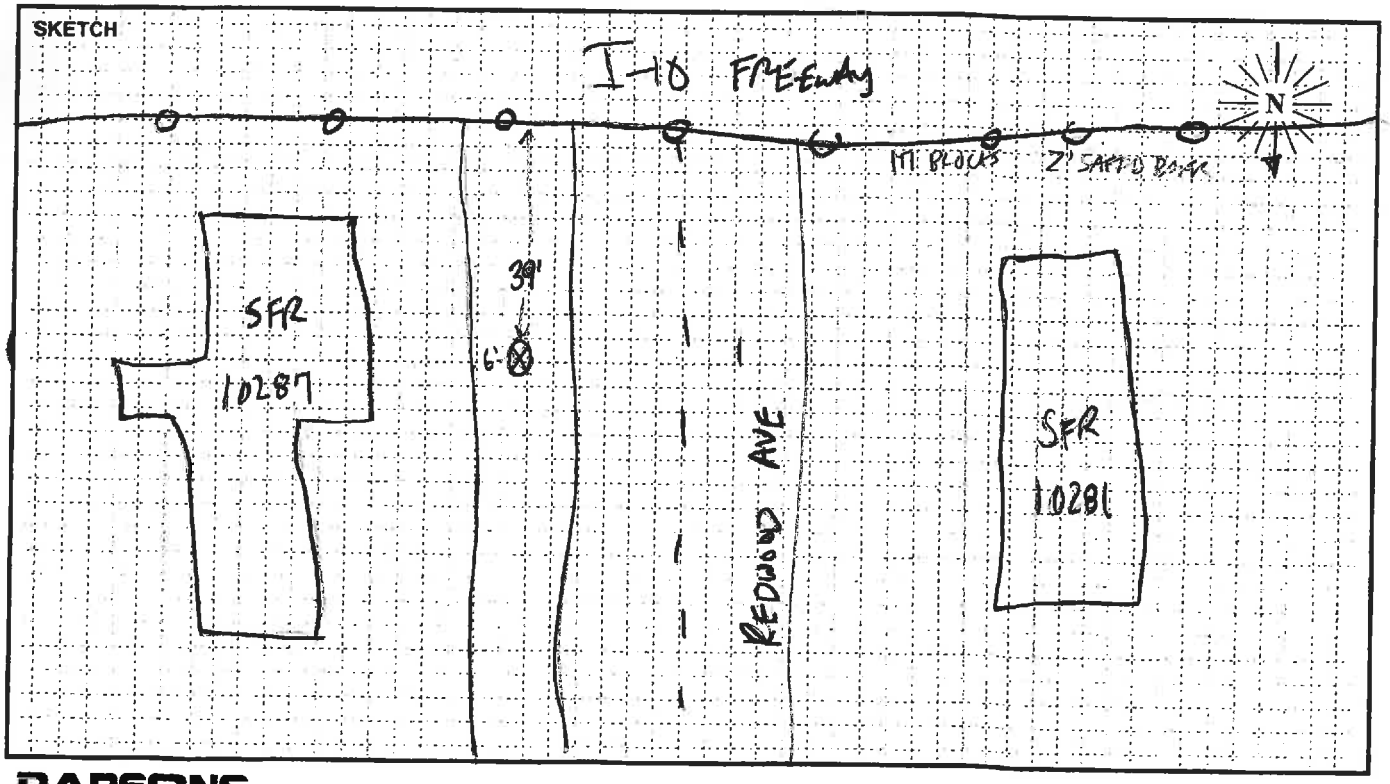
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 95.5 °F R.H.: 47.1 %
WIND SPEED: 0.7 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA Ryan Phone
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	13:40	14:00	58	59.2	60.9	63.1	63.9	64.8	67.6	72.1	63.3	UPS TRUCK Passed by 1:16 pm

SKETCH



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE	URENNA		DATE: 10/21/14
MEASUREMENT ADDRESS: 10388 REDWOOD AVE	CITY: FONTANA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST 3

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☒ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 3119

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 52820

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☒ LD-824 ☐ _____
SERIAL #: 3274

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 113.5, -48.02, 14:54
After 114.0, 113.5, -48.02, 15:36

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

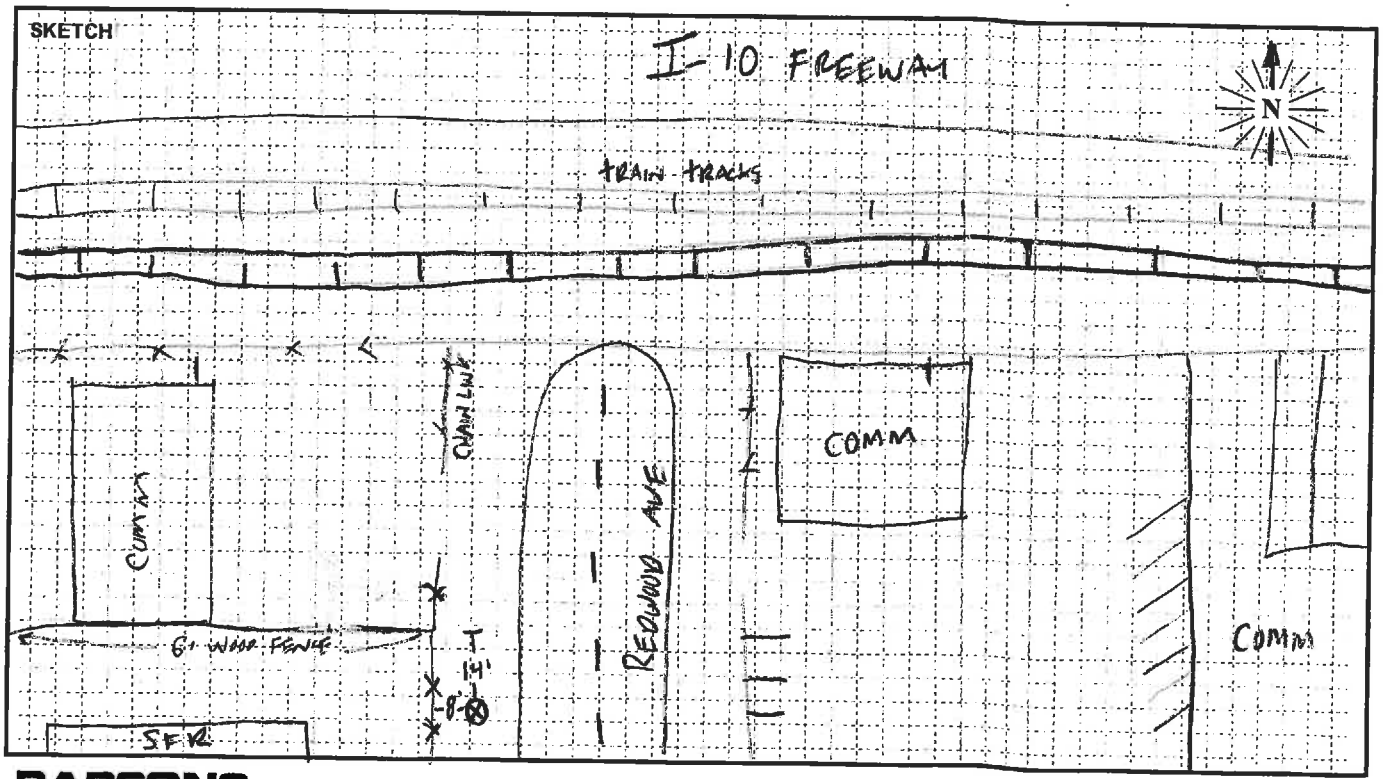
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 96 °F R.H.: 20.1 %
WIND SPEED: 0.7 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	15:00	15:20	55	55.3	56.7	58.8	60.5	62.1	71.6	74.2	60.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE	URBANIA		DATE: 10/30/14
MEASUREMENT ADDRESS: 10338 REDWOOD AVE	CITY: FONTANA	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: ST3A/CAL

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0344

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2206

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3200

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2129
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 22.8 / 8:39
After 114.0 / 113.9 / 22.8 / 9:19

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ iMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 70.7 °F R.H.: 34.6 %
WIND SPEED: 0.8 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☒ Video ☒ Radar

Counts	AT	MT	HT
WB	1055	94	96
EB	867	54	79
EB-ON	67	13	9
WB-OFF	95	16	14

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/30	8:38	9:18	61.6	62.9	63.2	64.4	65	65.6	66.2	68.4	64.5	DATA DOWNLOADED

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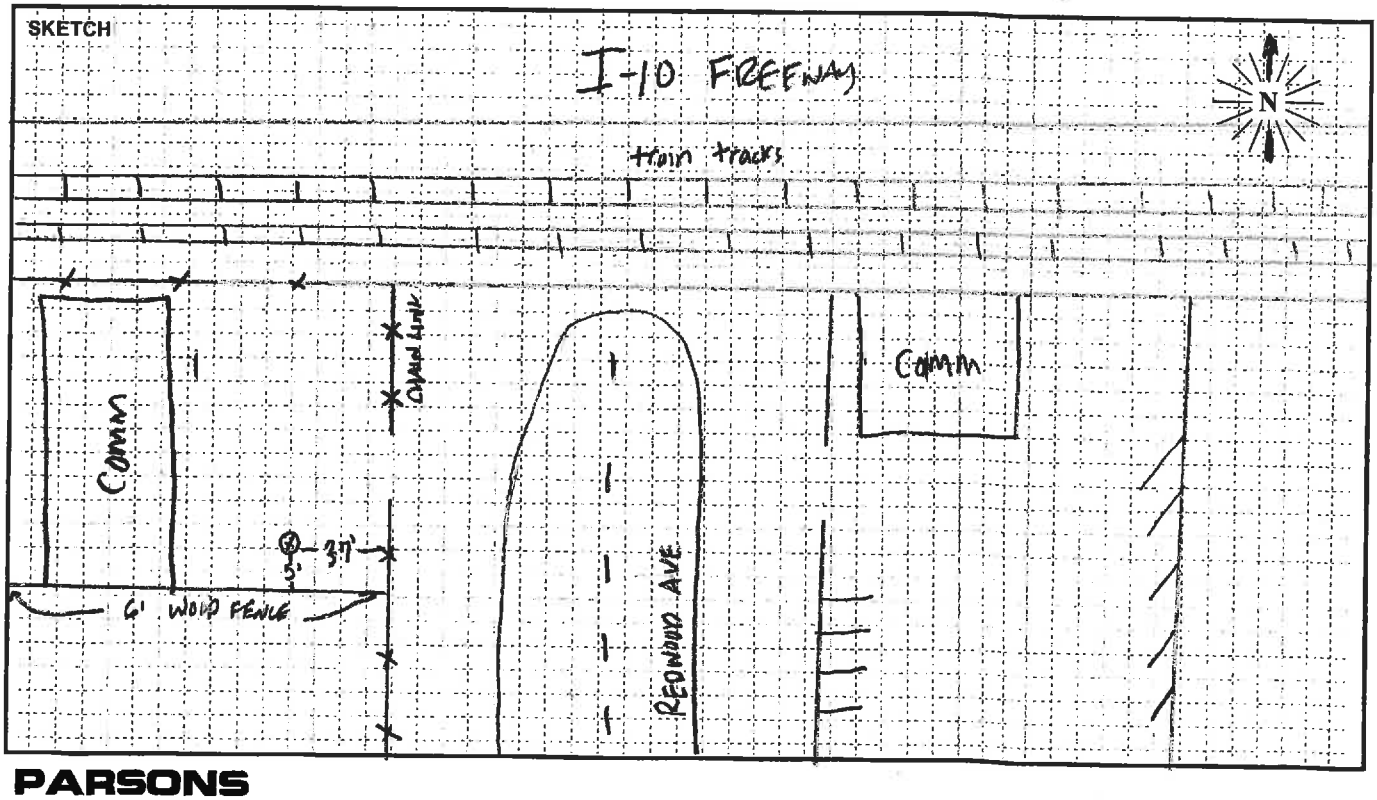


PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URFANO | DATE: 10/21/14

MEASUREMENT ADDRESS: 10338 POPLAR AVE | CITY: FONTANA | ☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial | SITE NO.: ST4

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☒ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 3119

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 52820

PRE AMP:
☐ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☒ LD-824 ☐ _____
SERIAL #: 3274

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 113.6, -48.0, 14:19
After 114.0, 113.5, -48.0, 14:54

METER SETTINGS:
☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 86.7 °F R.H.: 45.0 %
WIND SPEED: 0.5 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA Ruben Phone
PHOTO NOs. _____

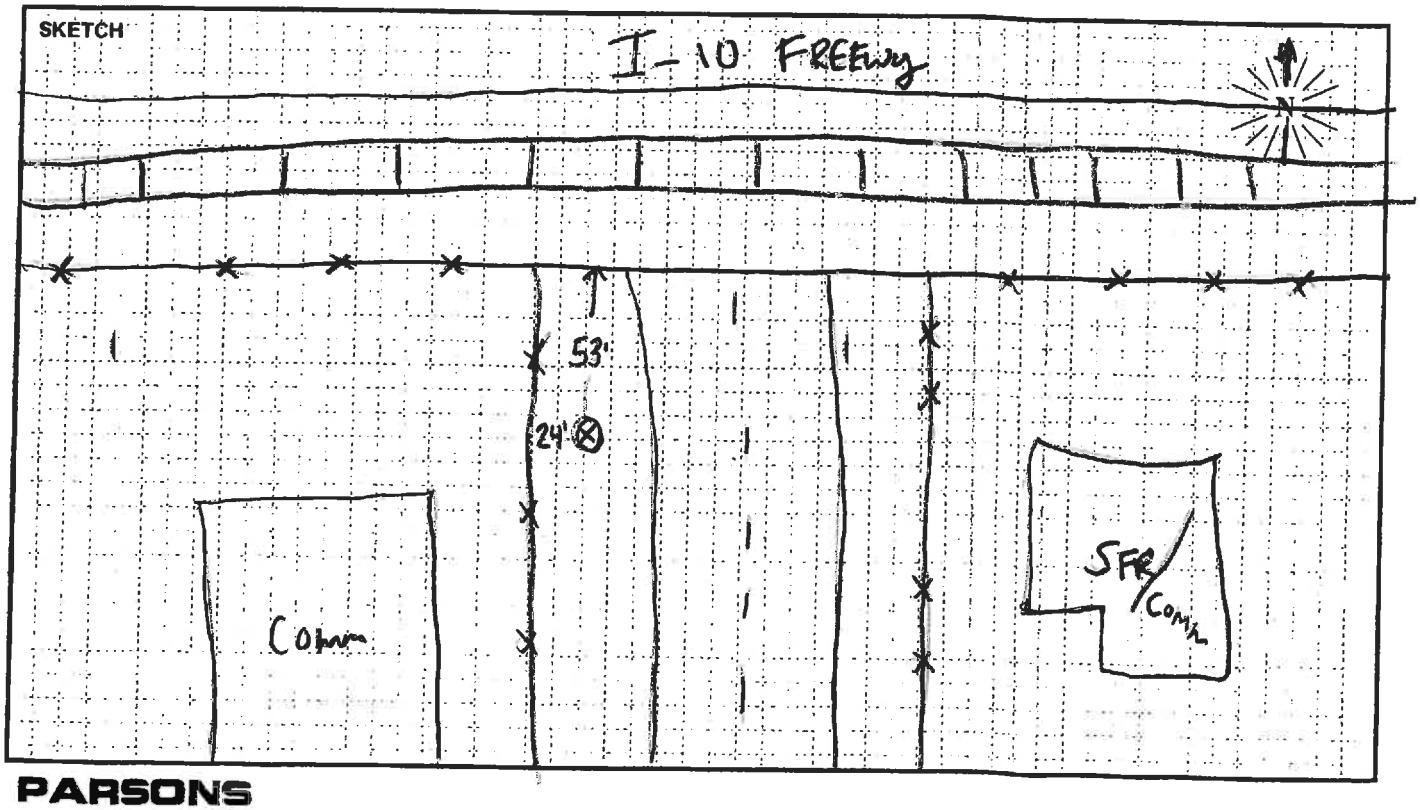
NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

#6

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	14:20	14:40	56.6	57.3	59.4	62.7	65.5	69.7	78.9	88.8	68.1	TRAIN 14:20 - 14:22, 14:38 - 14:39

SKETCH



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: M. Sharp	DATE: 10/21/14
MEASUREMENT ADDRESS: 16120 Boyle Ave	CITY: Fontana	☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST5

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ LD-LxT
☐ LD-824 ☐ LD-812 ☑ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 2676029

MICROPHONE:
☑ NON-POLAR ☐ POLARIZED
☑ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☑ RANDOM
☑ WIND SCREEN
SERIAL #: 4/89 → 266310 1

PRE AMP:
☐ LD-900 ☐ LD-LxT
☐ LD-828 ☐ ZC-0032
☐ LD-902 ☑ N/A
SERIAL #: N/A

NOTES:
SYSTEM PWR: ☑ BAT ☐ AC
(observations at start of measurement)
TEMP: 81 °F R.H.: 34 %
WIND SPEED: 3.2 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA Matt's Phone
PHOTO NOs. _____

CALIBRATOR:
☐ LD CA250 ☐ LD CA200
☑ B&K 4231 ☐ _____
S/N 2507137
Freq, Hz.
☐ 250
☑ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 94.4 / 47.2mV/Pa / -0.09 / 15:55
After 94.4 / 47.1mV / Pa / -0.05 / 16:44

METER SETTINGS:
☑ A-WTD ☐ LINEAR ☑ SLOW ☐ 1/1 OCT ☑ INTERVALS 1 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☑ L_N PERCENTILE VALUES

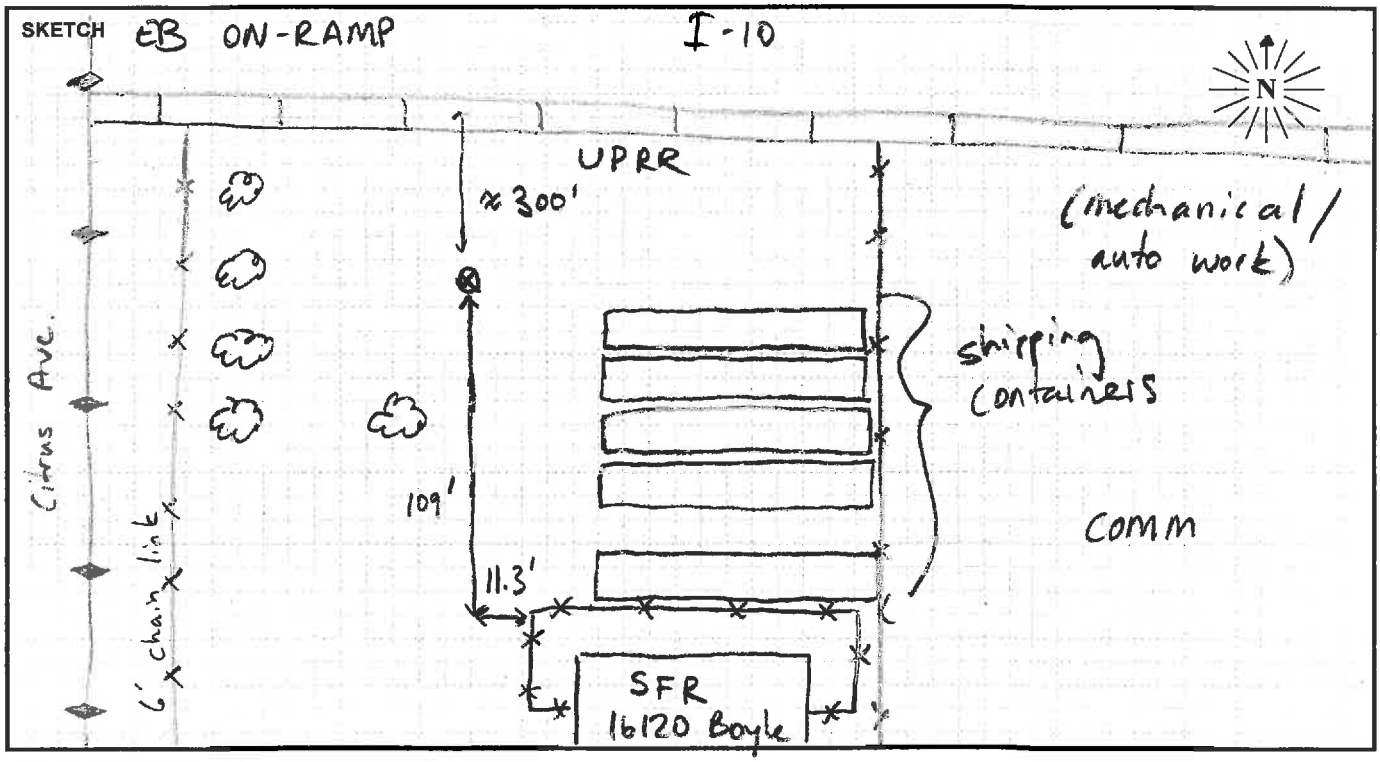
NOTES: trains - 16:00 - 16:02
16:12 - 16:15
commjet fly by - 16:19
mech work - 16:20, 16:34

Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☑ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	16:00	16:20	50.3	55.9	57.7	60.7	-	66.3	70.9	81.4	62.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		R. URENA	DATE: 10/21/14
MEASUREMENT ADDRESS: 16226 WASHINGTON DR	CITY: FONTANA	☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST6

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☒ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 3119

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 52820

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☒ LD-824 ☐ _____
SERIAL #: 3724

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 113.5, -48.07, 15:36
After 114.0, 113.5, -48.03, 14:01

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

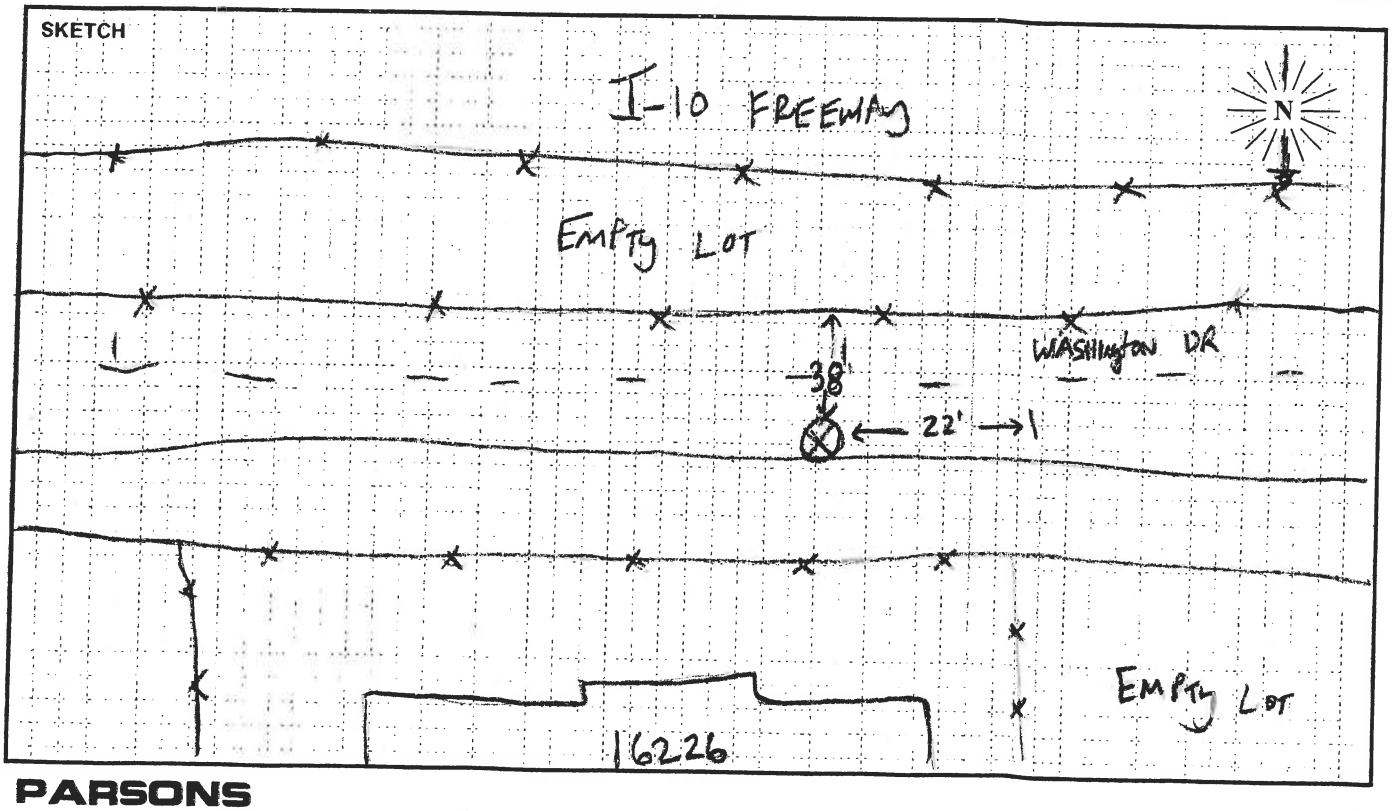
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 81.4 °F R.H.: 33.9 %
WIND SPEED: 3.2 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN'S PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	15:40	16:00	68.3	68.6	70.5	72.6	73.5	74.2	76.5	80.3	72.8	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOT EXPRESS | R. URRUTIA | DATE: 12/10/14

MEASUREMENT ADDRESS: 16222 Bowie Ave | CITY: Fontana

☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial

SITE NO.: ST7/CAL

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3378

PRE AMP:
☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3200

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 63.4 °F R.H.: 50 %
WIND SPEED: 0.7 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA: RUBEN PHONE
PHOTO NOs. _____

CALIBRATOR:
☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 113.9, 8.6, 8:45
After 114.0, 113.9, 8.6, 9:51

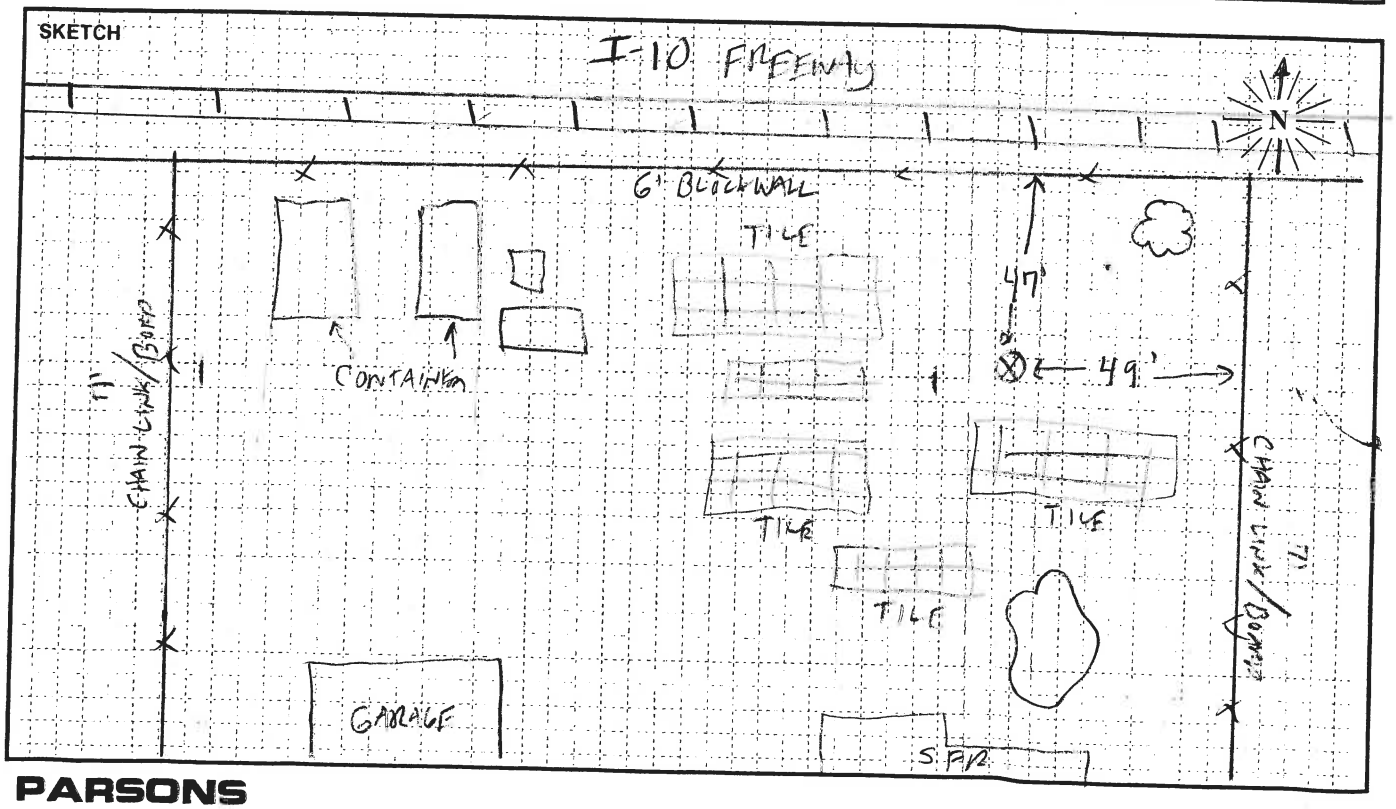
METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 1 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/8	9:10	9:30	62.5	64.4	65.1	66.4	67.1	67.7	69.4	72.6	66.5	

SKETCH



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | B. Tarjuera | DATE: 10/16/13

MEASUREMENT ADDRESS: 10231 Alder Avenue | CITY: Bloomington, CA | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST9

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114 / 113.9 / 22.1 / 15:42
After 114 / 113.9 / 22.1 / 16:22

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

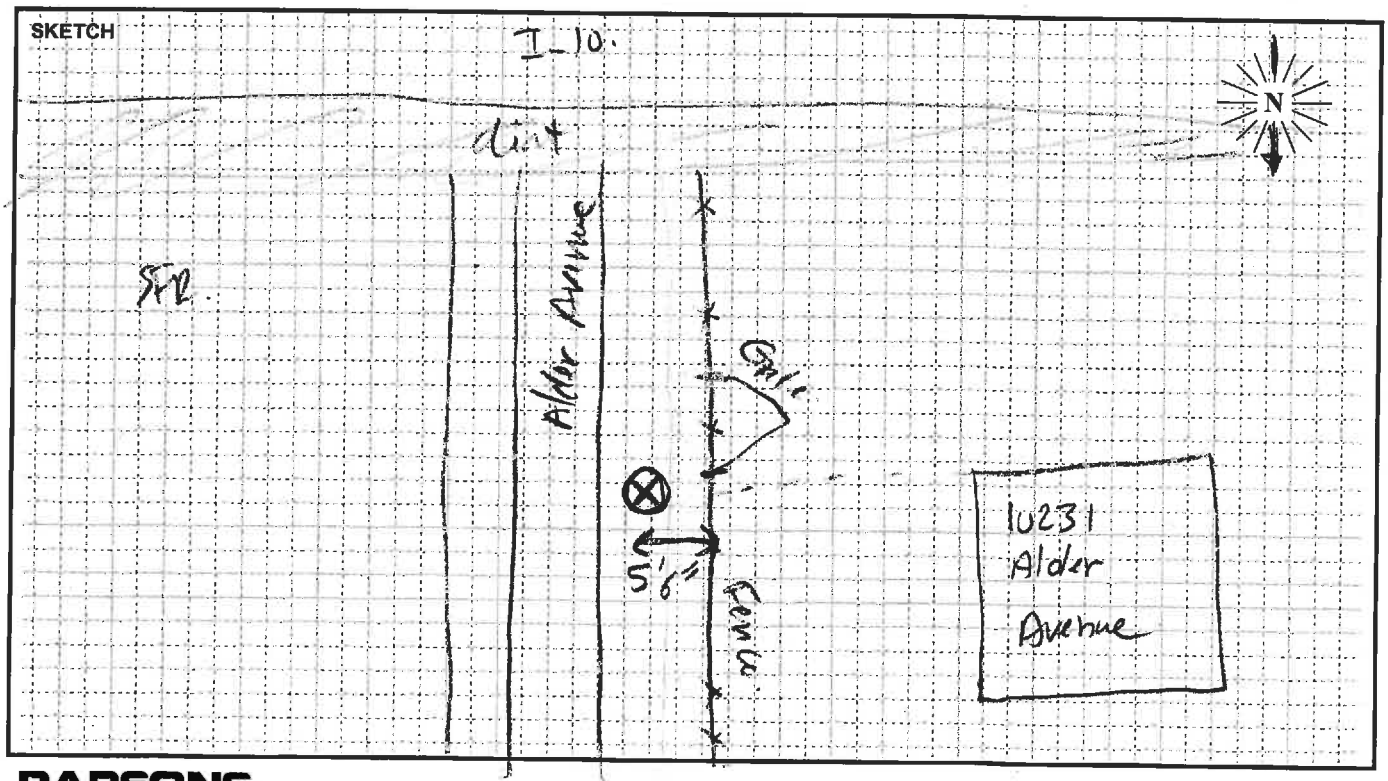
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 89 °F R.H.: 13 %
WIND SPEED: 4 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BJ iphone
PHOTO NOs. 11-14

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/16	16:00	16:20	62.5	64.3	66.1	68.2	69.4	70.7	74.3	88.2	69.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | B. Jarquin | DATE: 10/16/13

MEASUREMENT ADDRESS: 10346 Lovet Ave | CITY: Bloomington | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST10

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2141

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.9 / .22 / 16:22
After 114.0 / 113.8 / .22 / 17:02

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

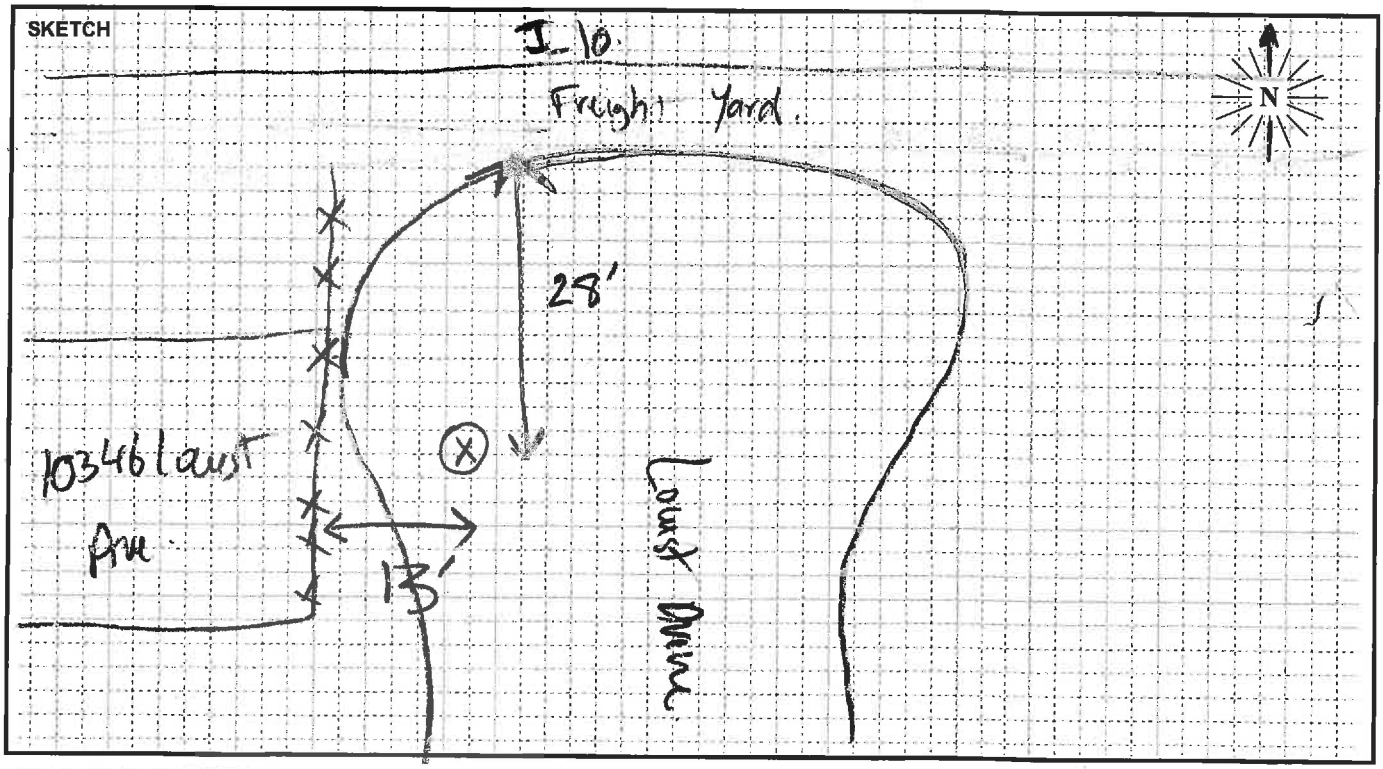
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 82 °F R.H.: 13 %
WIND SPEED: 4 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BJ iphone
PHOTO NOs. 15 - 19

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/16	16:40	17:00	52.4	53.1	54.1	56.3	58.8	60.9	65.4	79.3	58.7	Freeway noise Hard to hear by train wheels. SBW train at 4:58

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | B. Jarjoura | DATE: 10/16/13

MEASUREMENT ADDRESS: 10196 Lowest Avenue | CITY: Bloomington, CA | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST11

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2141

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 113.9, 22.1, 15:01
After 114.0, 113.9, 22.1, 15:42

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

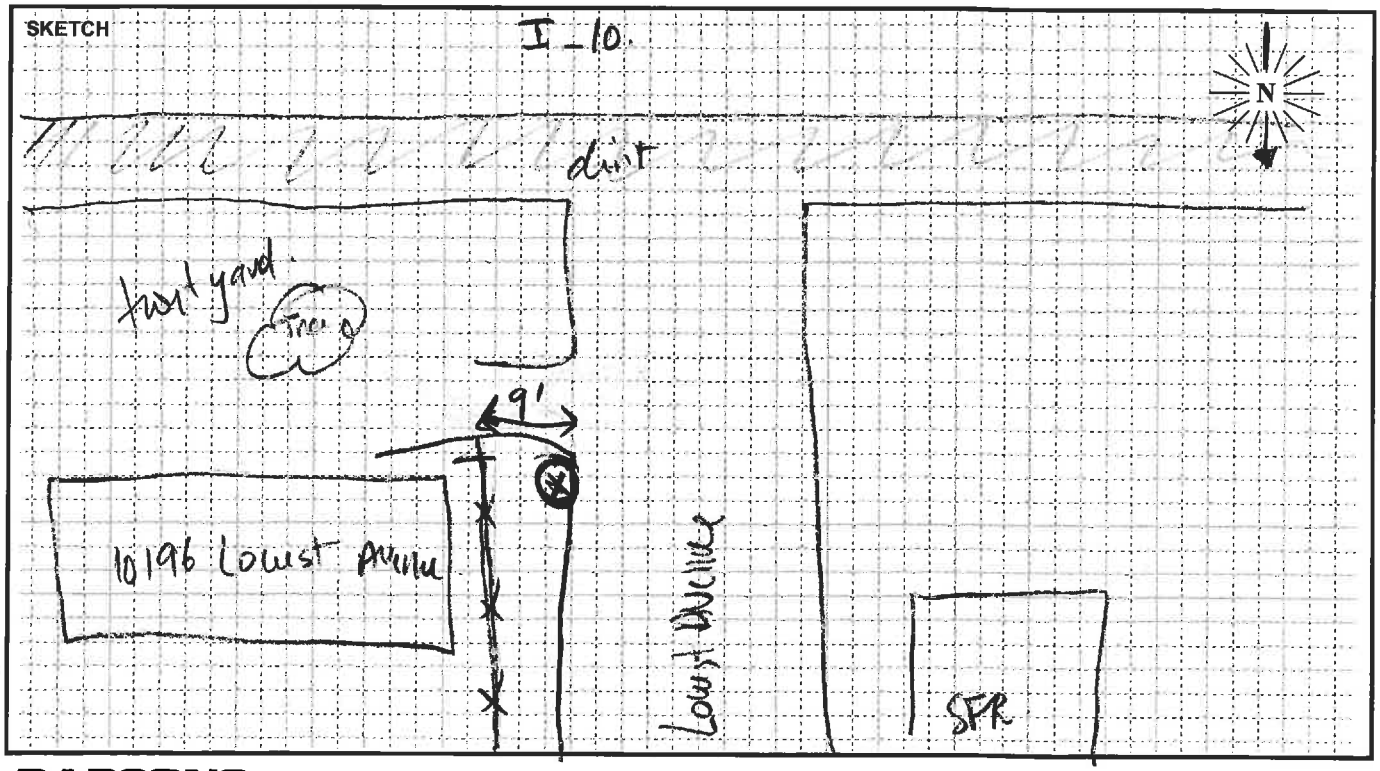
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 81 °F R.H.: 13 %
WIND SPEED: 4 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA B.J Iphone
PHOTO NOs. 7-10

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/16	15:20	15:40	64.1	65.8	68.3	70.7	72.0	73.2	75.6	84.4	71.3	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | Bryan Jarjura | DATE: 10/16/13

MEASUREMENT ADDRESS: 18219 Valley Blvd. | CITY: Bloomington, CA | ☐ Single-Family ☒ Multi-Family ☐ School ☐ Recreational ☐ Commercial MH | SITE NO.: ST12

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 22.1, 14:30
After 114.0, 113.9, 22.1, 15:01

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

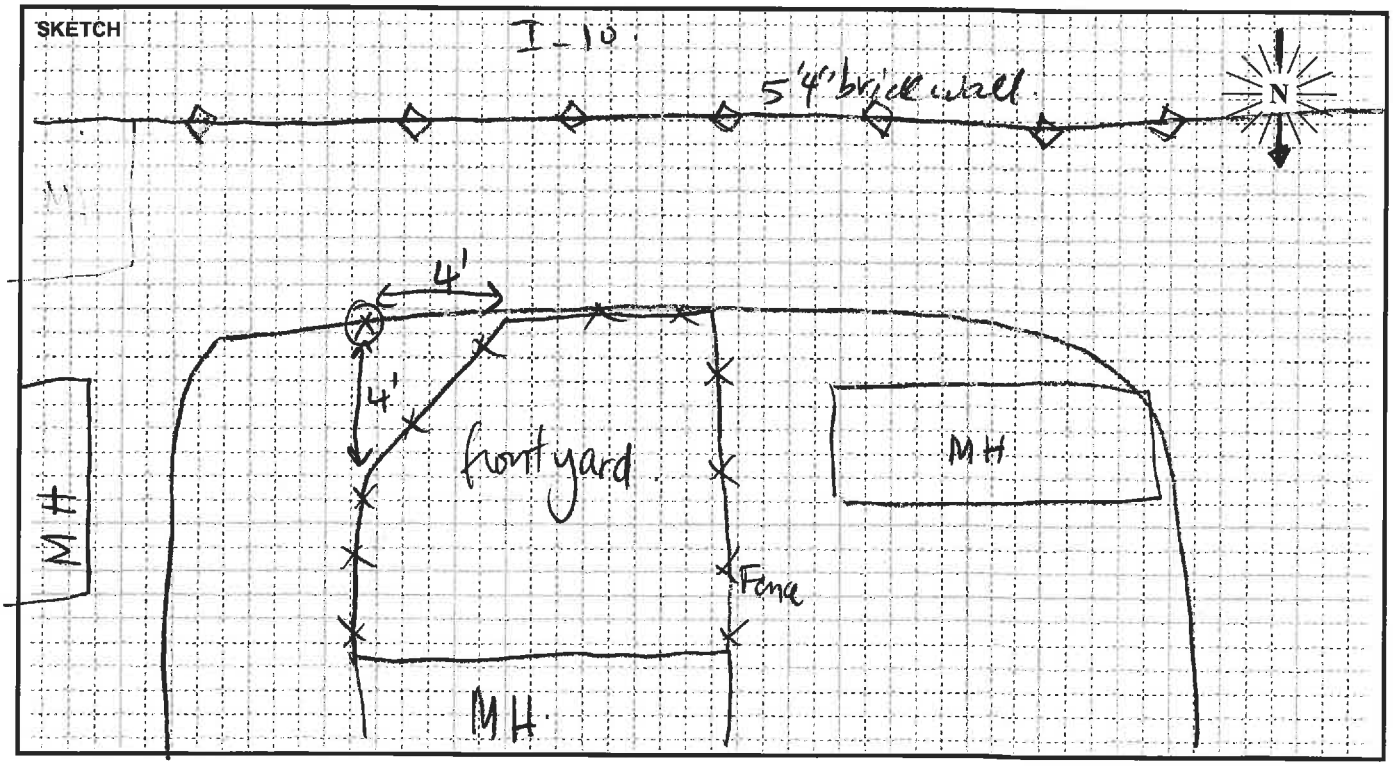
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 81 °F R.H.: 13 %
WIND SPEED: 5 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BJ iphone
PHOTO NOs. 1-6

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/16	14:40	15:00	61.2	62.5	65.0	67.5	68.7	69.8	71.8	72.8	67.8	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URENJA | DATE: 10/16/13

MEASUREMENT ADDRESS: LOG CABIN MB PARK | CITY: BLOOMINGTON | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST13

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 21.8, 14:34
After 114.0, 114.0, 21.8, 16:25

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

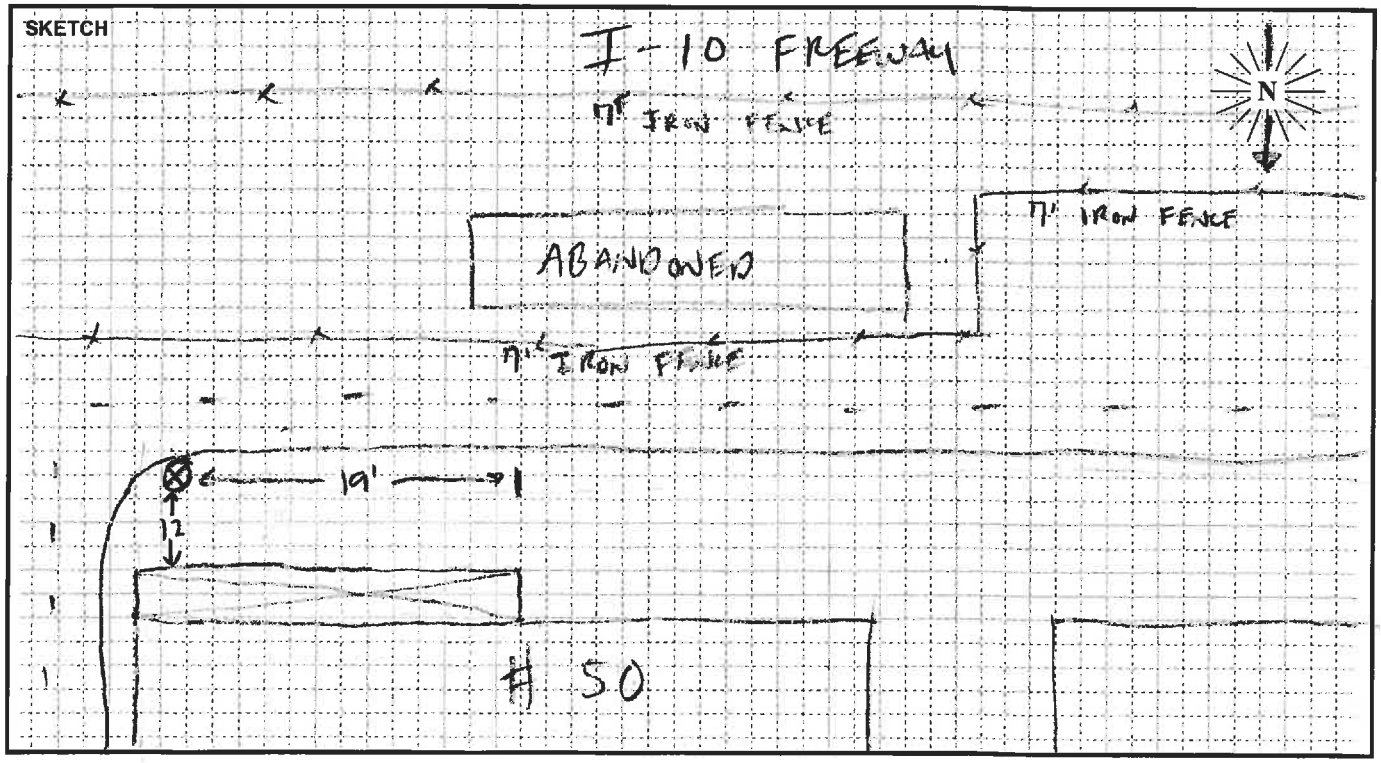
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 87.8 °F R.H.: 15.5 %
WIND SPEED: 2.2 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/16	14:40	15:00	56.6	59.1	60.2	63.1	64.6	65.7	67.6	70.4	63.5	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. URENDA	DATE: 10/16/13
MEASUREMENT ADDRESS: 10174 MAGNOLIA ST FIRE STATION H76	CITY: BLOOMINGTON	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial — SITE NO.: ST14

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3015

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 21.8, 15:11
After 114.0, 114.0, 21.8, 16:25

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84.3 °F R.H.: 14.9 %
WIND SPEED: 0.7 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

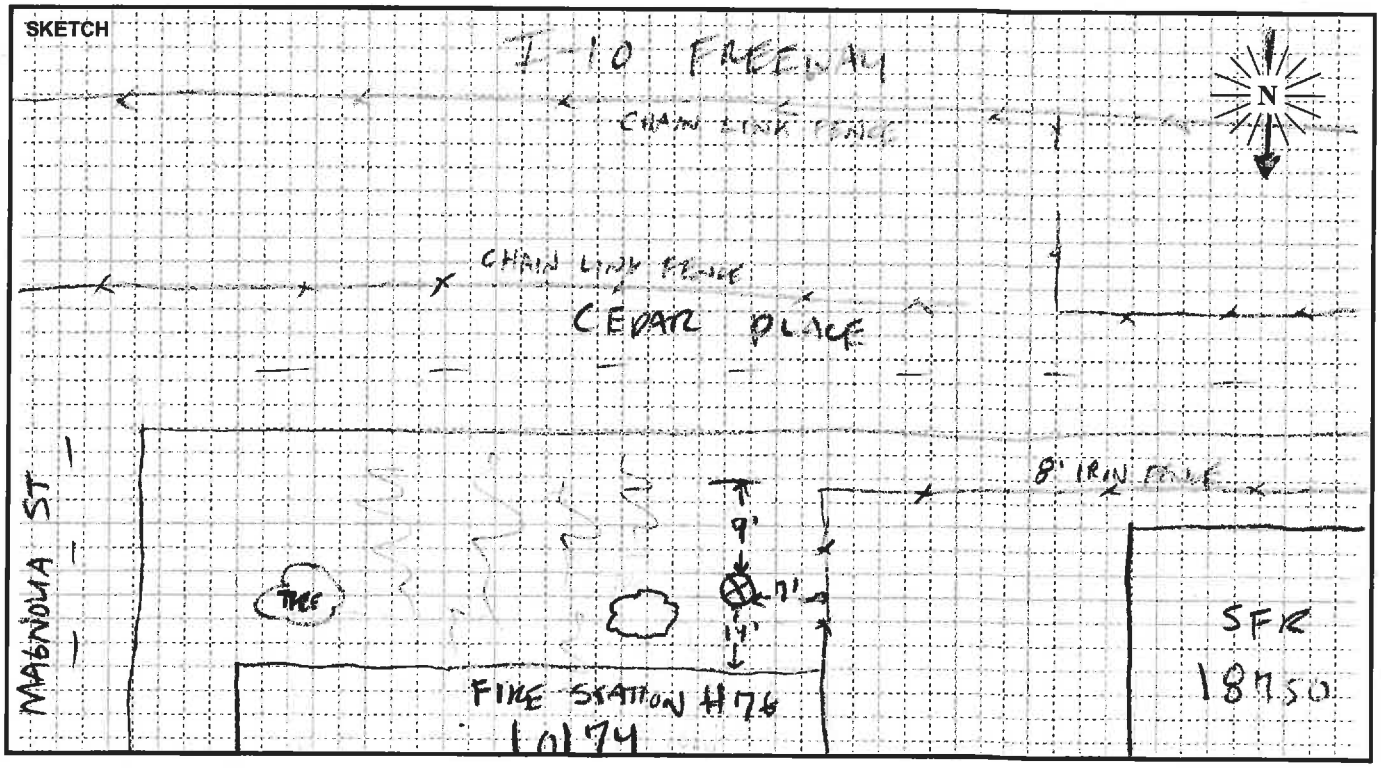
NOTES: TRAFFIC HIT

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/16	15:20	15:40	58.6	60.3	62.3	64.6	65.9	67.1	70.1	75.4	65.2	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

R. URBINA

DATE: 10/16/12

MEASUREMENT ADDRESS: 10166 CHURCH ST

CITY: BLOOMINGTON

☒ Single-Family ☐ Recreational ☐ Multi-Family ☐ Commercial ☐ School

SITE NO.: ST 15

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

SERIAL #: 0129

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN

SERIAL #: 1785

PRE AMP:
☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____

SERIAL #: 3095

CALIBRATOR:
☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2480

Freq, Hz.
☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 21.8, 15:50
After 114.0, 114.0, 21.8, 16:25

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84 °F R.H.: 15.6 %
WIND SPEED: 0.7 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: TRAFFIC
111

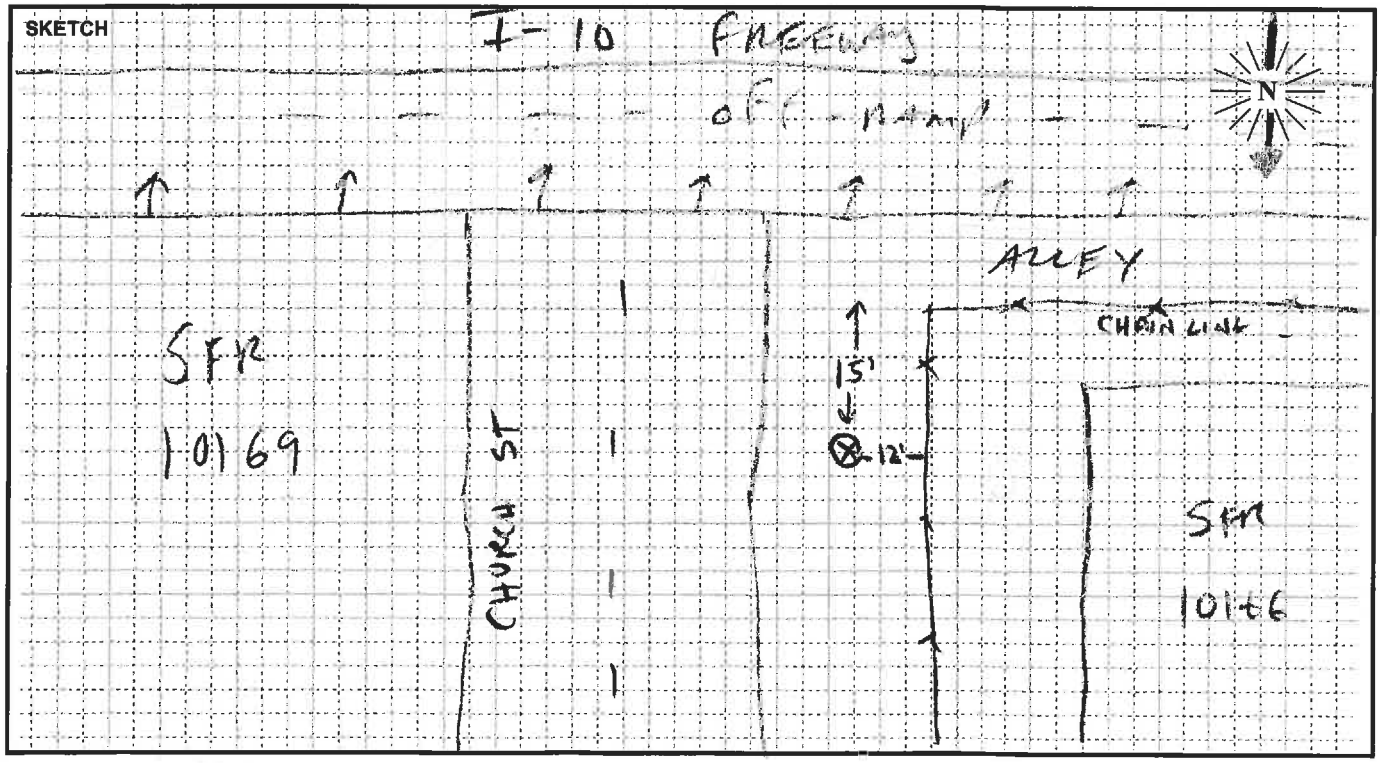
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE:
☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/16	16:00	16:20	54.1	54.9	56.7	58.6	59.9	61.8	66.1	70.9	59.6	OFF RAMP BACKED UP WITH TRAFFIC

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOT EXPRESS	R. URSAIZA		DATE: 11/14/14
MEASUREMENT ADDRESS: 2016 W VALLEY BLVD	CITY: COLTON	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST16A/CAL

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0659

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3155

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1901

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 6.7, 8:33am
After 114.0, 113.6, 6.7, 9:32am

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 1 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 67.9 °F R.H.: 57.3 %
WIND SPEED: 0.8 MPH
TOWARD (DIR): _____
SKIES: CLOUDY
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Started METER 9:34 Rags barely

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

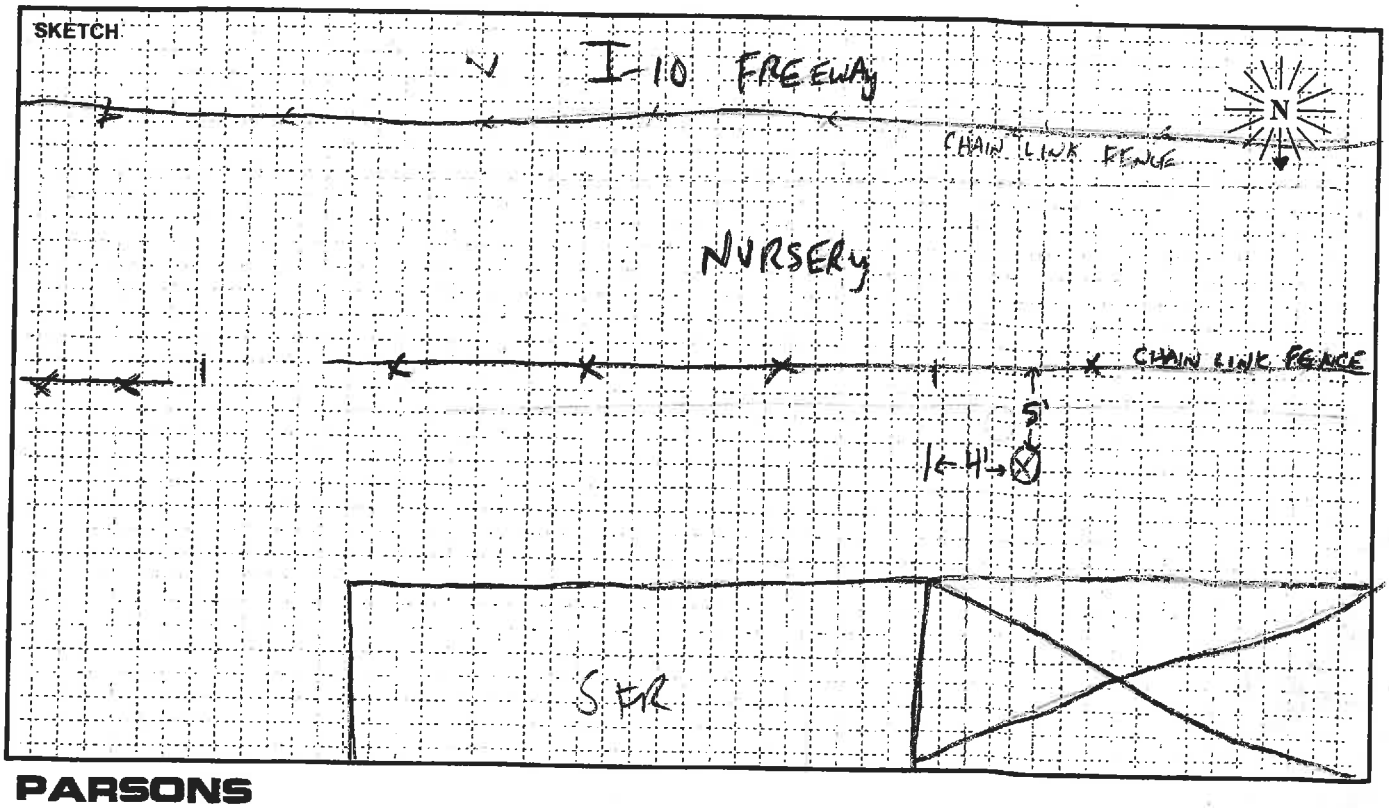
Counts

	AT	MT	HT
WB	614	37	61
EB	552	51	62
WB OH	77	12	8
EB OH	71	15	11

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
11/14	9:00	9:20	63.2	-	65.0	66.6	67.3	67.9	-	71.0	66.7	train PASS 9:10-9:14
												9:17-9:20

SKETCH



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URREGO | DATE: 10/19/18

MEASUREMENT ADDRESS: 248 CYPRESS AVE | CITY: COLTON | ☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST 16

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE:
☑ NON-POLAR ☐ POLARIZED
☑ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☑ WIND SCREEN
SERIAL #: 1785

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz.: ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 , 113.9 , 21.8 , 7:59
After 114.0 , 113.9 , 21.8 , 11:13

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☑ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

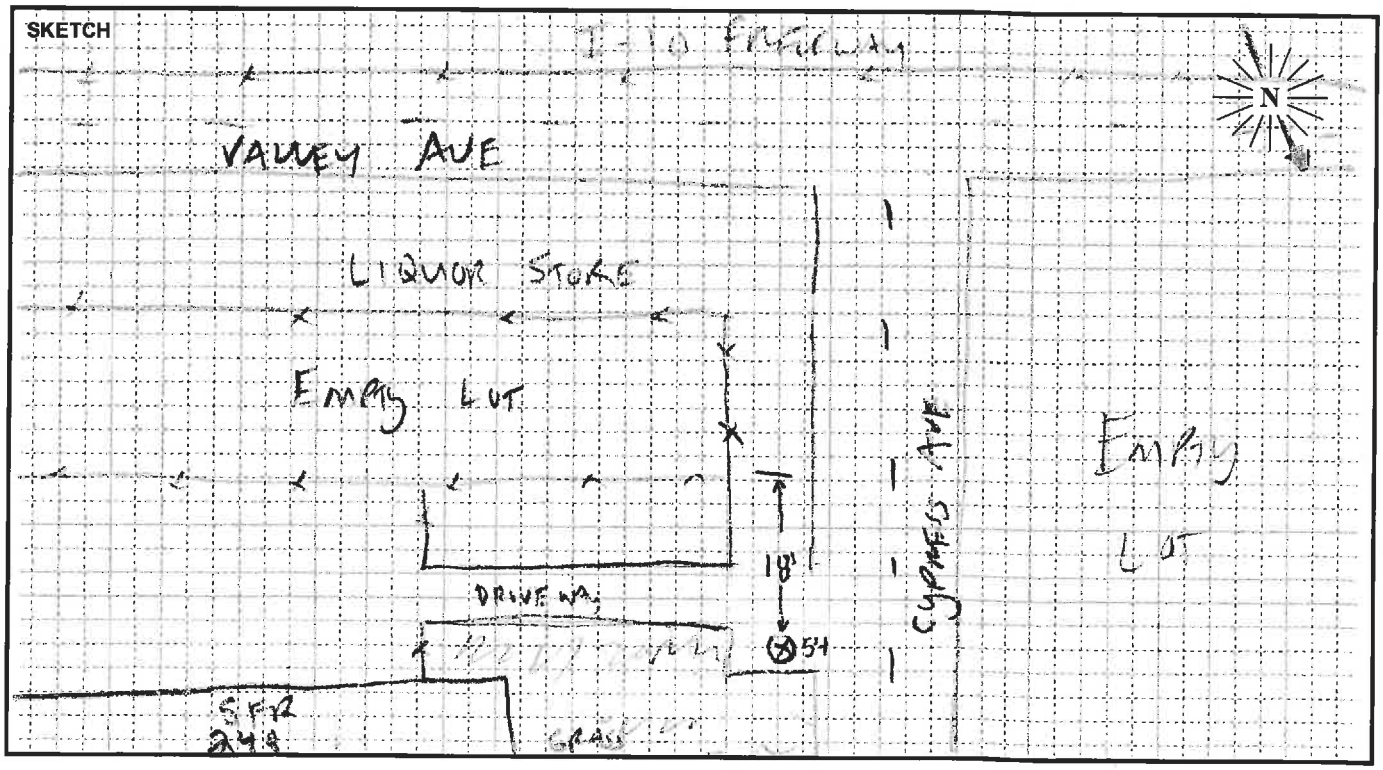
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 65.7 °F R.H.: 41.3 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: TRAFFIC
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/18	8:00	9:30	60.8	61.4	62.7	64.7	65.9	67	70.6	80.8	65.4	LMAX = ENGINE OF CAR

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

R. URENDS

DATE: 10/18/13

MEASUREMENT ADDRESS: #8 MT SLOVER TRAILER PARK

CITY: COLTON

☑ Single-Family ☐ Recreational ☐ Multi-Family ☐ Commercial ☐ School

SITE NO.: STI9

SOUND LEVEL METER:
☑ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

SERIAL #: 0128

MICROPHONE:
☑ NON-POLAR ☐ POLARIZED ☑ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☑ WIND SCREEN

SERIAL #: 1185

PRE AMP:
☑ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____

SERIAL #: 3095

CALIBRATOR:
☑ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.9 / 21.8 / 8:32
After 114.0 / 113.9 / 21.8 / 11:13

METER SETTINGS:
☑ A-WTD ☐ LINEAR ☑ SLOW ☐ 1/1 OCT ☑ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☐ BAT ☐ AC

(observations at start of measurement)

TEMP: 54 °F R.H.: 34.2 %

WIND SPEED: 0 MPH

TOWARD (DIR): _____

SKIES: CLEAR

CAMERA _____

PHOTO NOs. _____

NOTES: TRAFFIC

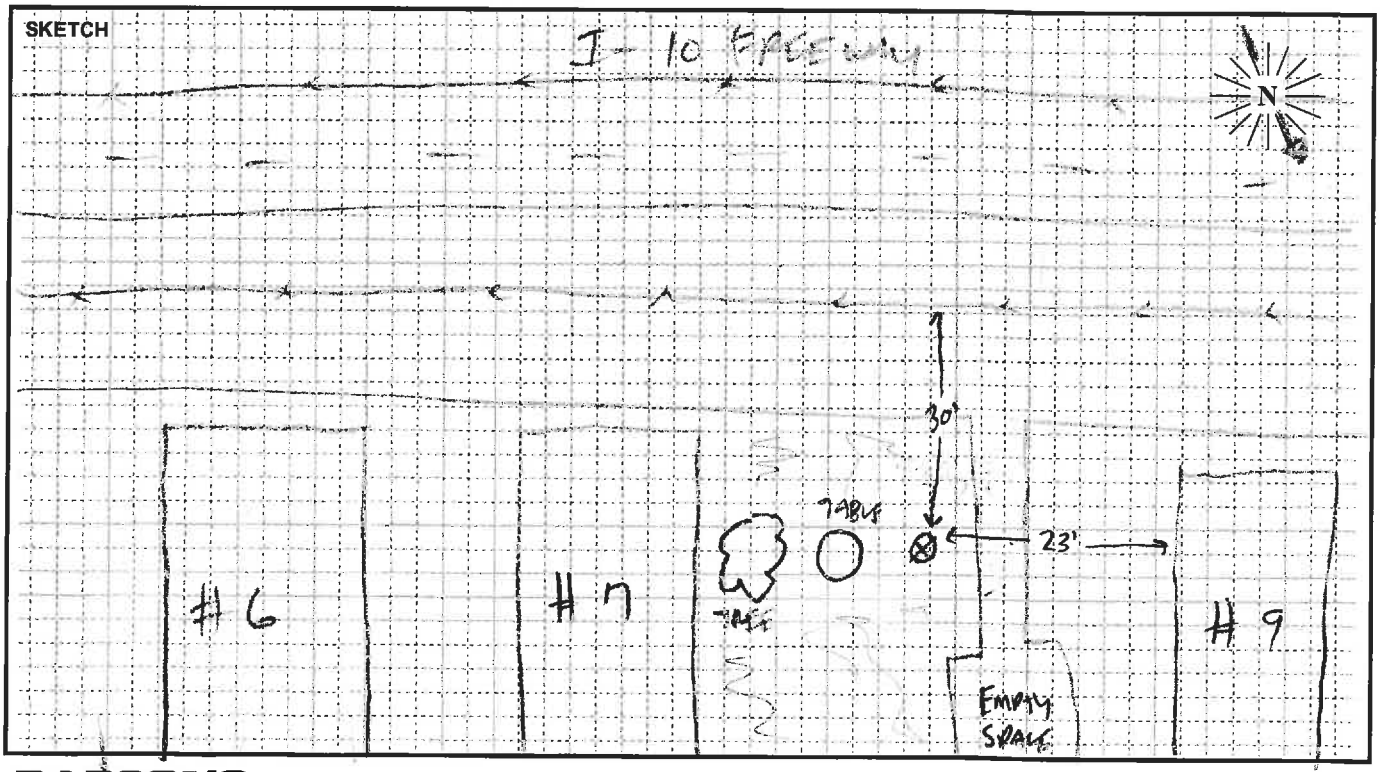
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE:
☐ Long Term ☑ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/14	8:40	9:00	64.8	65.4	66.9	68.5	69.4	70	71.5	73.5	68.7	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT:	ENGINEER:	DATE:
I-10 EXPRESS LANE	VRENDA	2/6/15

MEASUREMENT ADDRESS:	CITY:		SITE NO.:
871 VALLEY BLVD	COLTON	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	STMA/CAR

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0638

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 3155

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-902 ☐ _____
SERIAL #: 1901

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 0.0, 9:30 am
After 114.0, 114.2, 0.0, 10:44 am

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

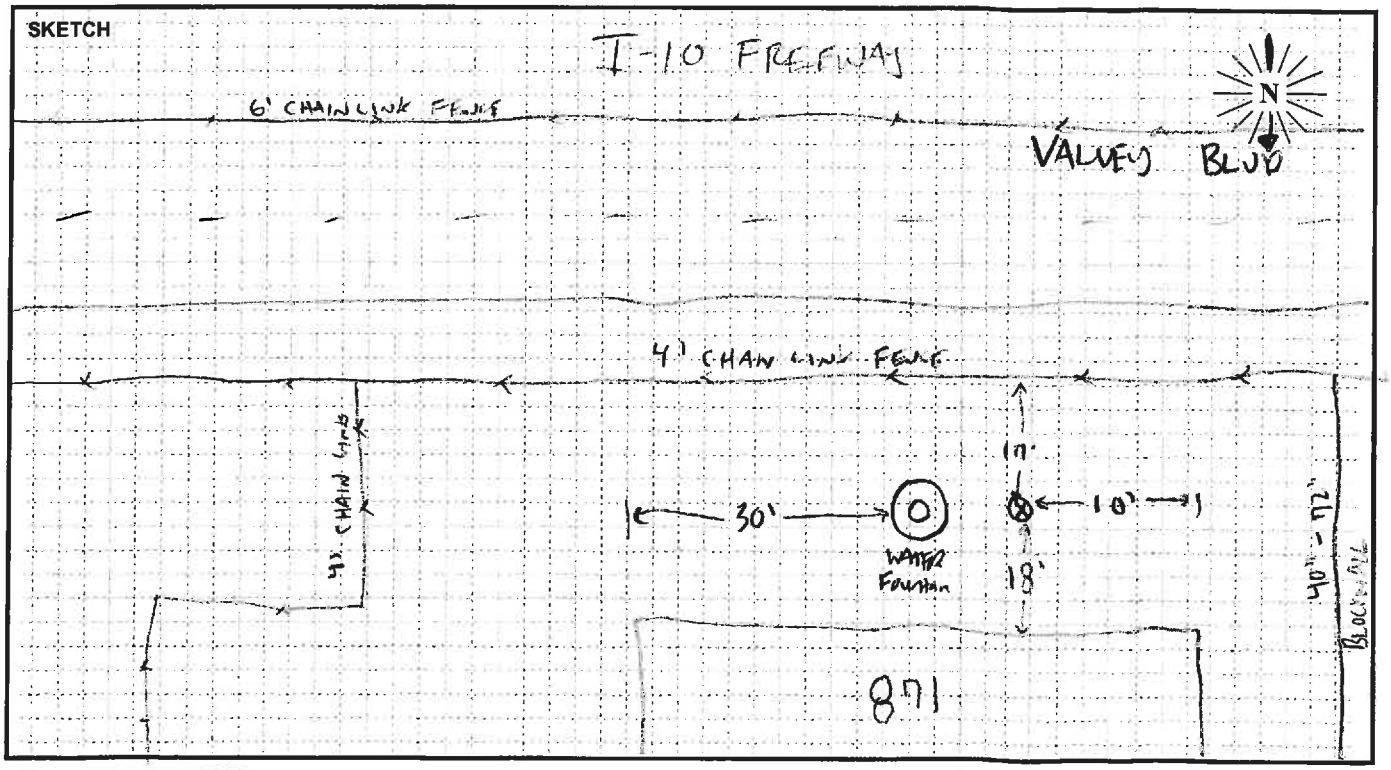
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 82.7 °F R.H.: 28.4 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
2/6	10:00	10:20	67.1	—	69.6	71.8	72.8	73.8	—	81.6	72.1	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | B. Tarjara | DATE: 10/19/13

MEASUREMENT ADDRESS: 745 W. K Street | CITY: Colton, CA | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST18

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2916

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2330

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 22.1, 9:24
After 114.0, 114.2, 22.1, 11:24

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

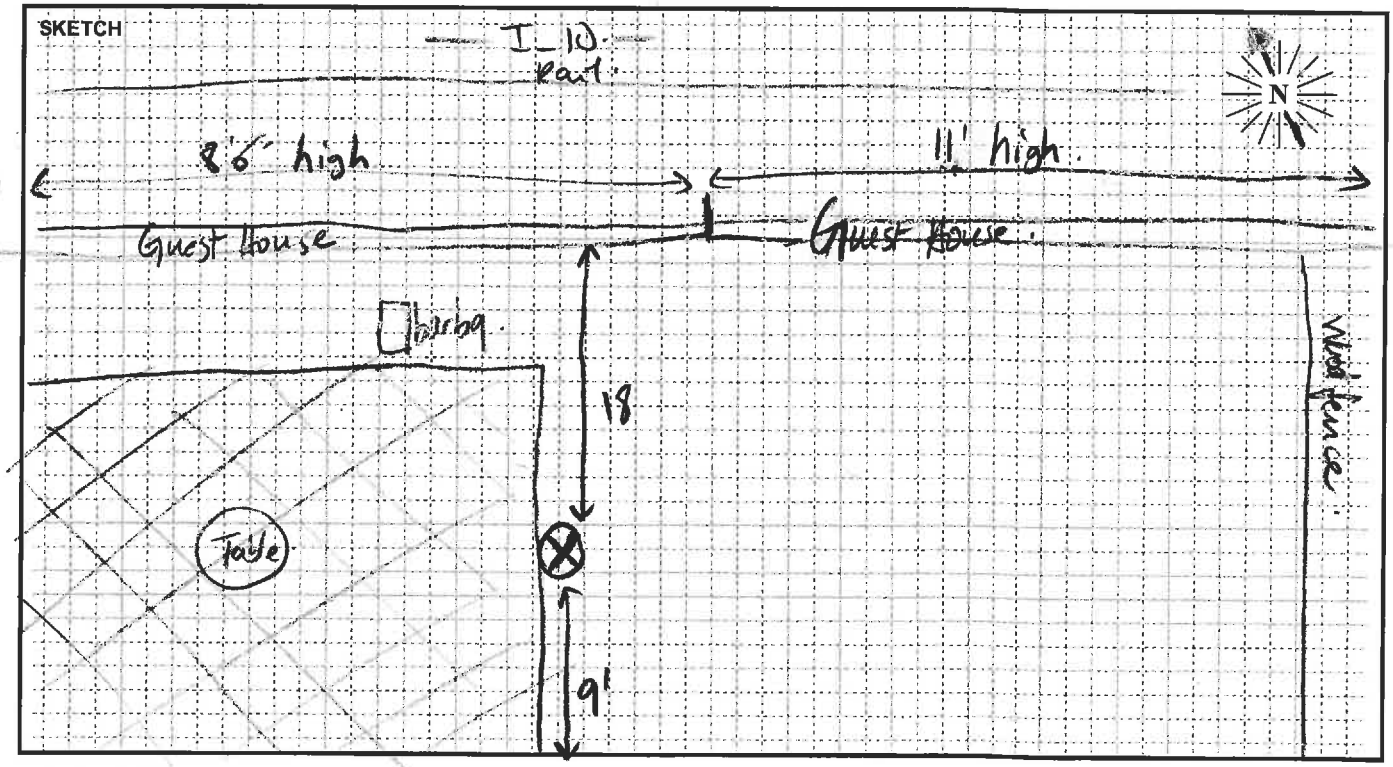
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 72 °F R.H.: 20 %
WIND SPEED: 2 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BJ iphone
PHOTO NOs. 30 - 34.

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/19	11:06	11:11	49.6	50.0	50.9	52.8	53.8	54.6	55.8	56.1	53.0	11:06 to
	11:11	11:16	51.4	51.4	52.2	53.6	54.7	55.8	60.5	64.4	54.3	11:20
	11:16		50.6	50.6	51.4	53.5	54.6	56.0	57.9	60.3	53.9	no train.

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | B. Jardon | DATE: 10/18/13

MEASUREMENT ADDRESS: 155 N. 2nd Street | CITY: Colton, CA | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST19

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☐ 1/2-INCH ☐ FREEFIELD ☒ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2916

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2330

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 22.1, 8:44
After 114.0, 114.0, 22.1, 9:24

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

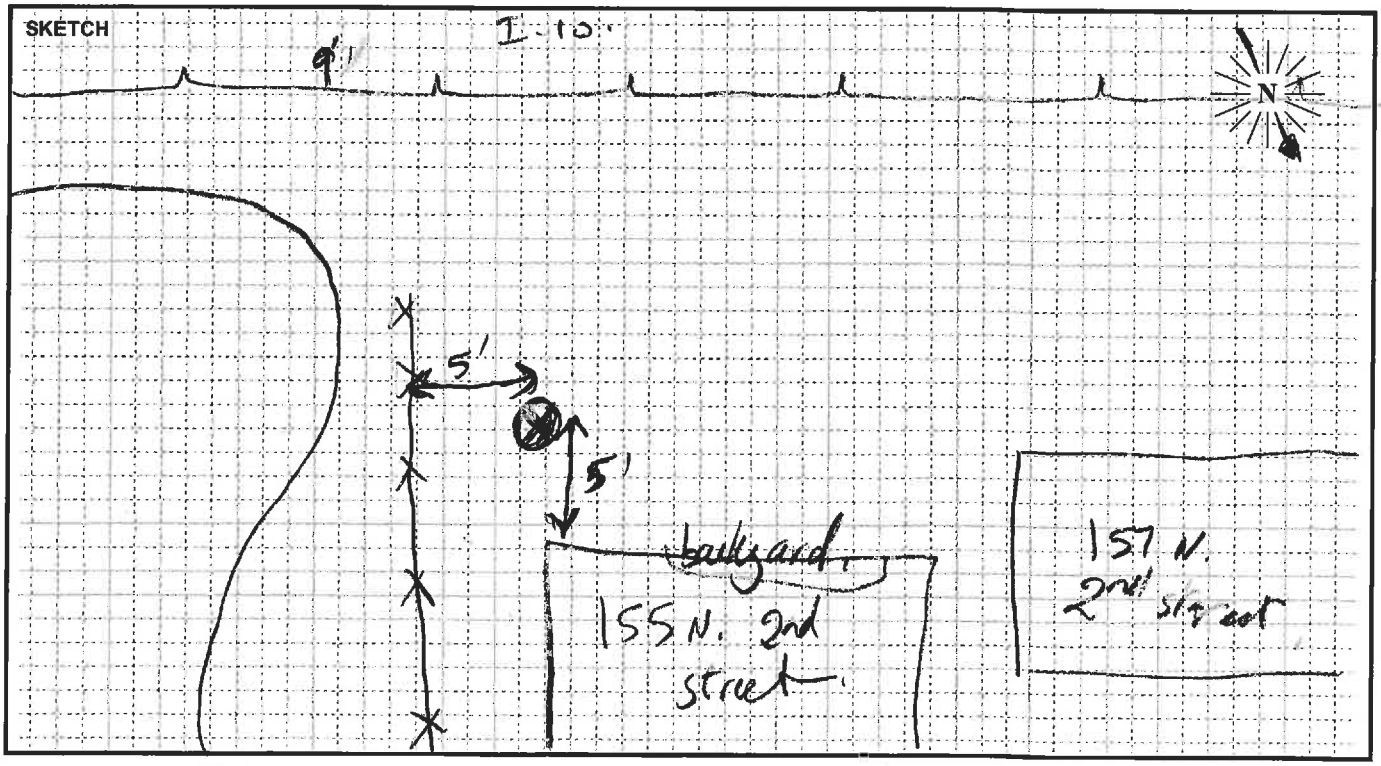
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 72 °F R.H.: 20 %
WIND SPEED: 2 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA B's iphone.
PHOTO NOs. 26-29

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/9	9:00	9:20	60.8	62.0	63.7	65.7	66.6	67.5	68.6	69.8	65.8	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOT EXPRESS LANE	ENGINEER: VREDNA		DATE: 2/6/15
MEASUREMENT ADDRESS: 110 4th Street	CITY: COLTON	☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST194

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0638

MICROPHONE:
☑ NON-POLAR ☐ POLARIZED
☐ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☑ WIND SCREEN
SERIAL #: 3155

PRE AMP:
☐ LD-900 ☐ ZC-0030
☑ LD-828 ☐ ZC-0032
☐ LD-902 ☐ _____
SERIAL #: 1901

CALIBRATOR:
☑ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☑ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.2, 8.0, 10:44
After 114.0, 114.3, 8.0, 11:50

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 95.8 °F R.H.: 27.6 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA PUBLIC PWR
PHOTO NOs. _____

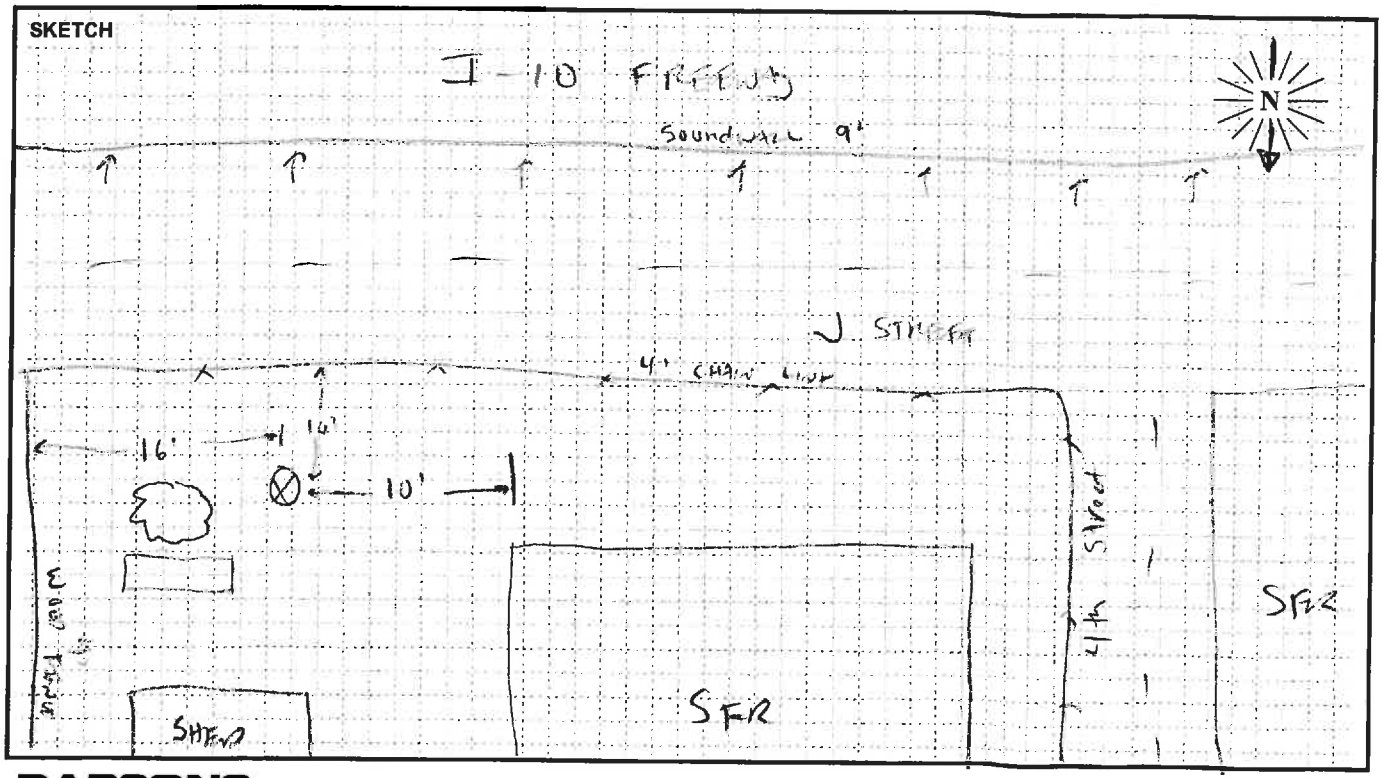
METER SETTINGS:
☑ A-WTD ☐ LINEAR ☑ SLOW ☐ 1/1 OCT ☑ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☑ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
2/6	11:20	11:40	63.4	–	65.1	66.4	67.2	67.9	–	71.5	66.6	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		R. ORENA	DATE: 10/19/13
MEASUREMENT ADDRESS: 192 W. K STREET	CITY: COLTON	☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST20

SOUND LEVEL METER:
☑ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0129

MICROPHONE:
☑ NON-POLAR ☐ POLARIZED
☑ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☑ WIND SCREEN
SERIAL #: 1784

PRE AMP:
☑ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR:
☑ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz.
☐ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.9 / 2.8 / 9:14
After 114.0 / 113.9 / 2.8 / 11:13

METER SETTINGS:
☑ A-WTD ☐ LINEAR ☑ SLOW ☐ 1/1 OCT ☑ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

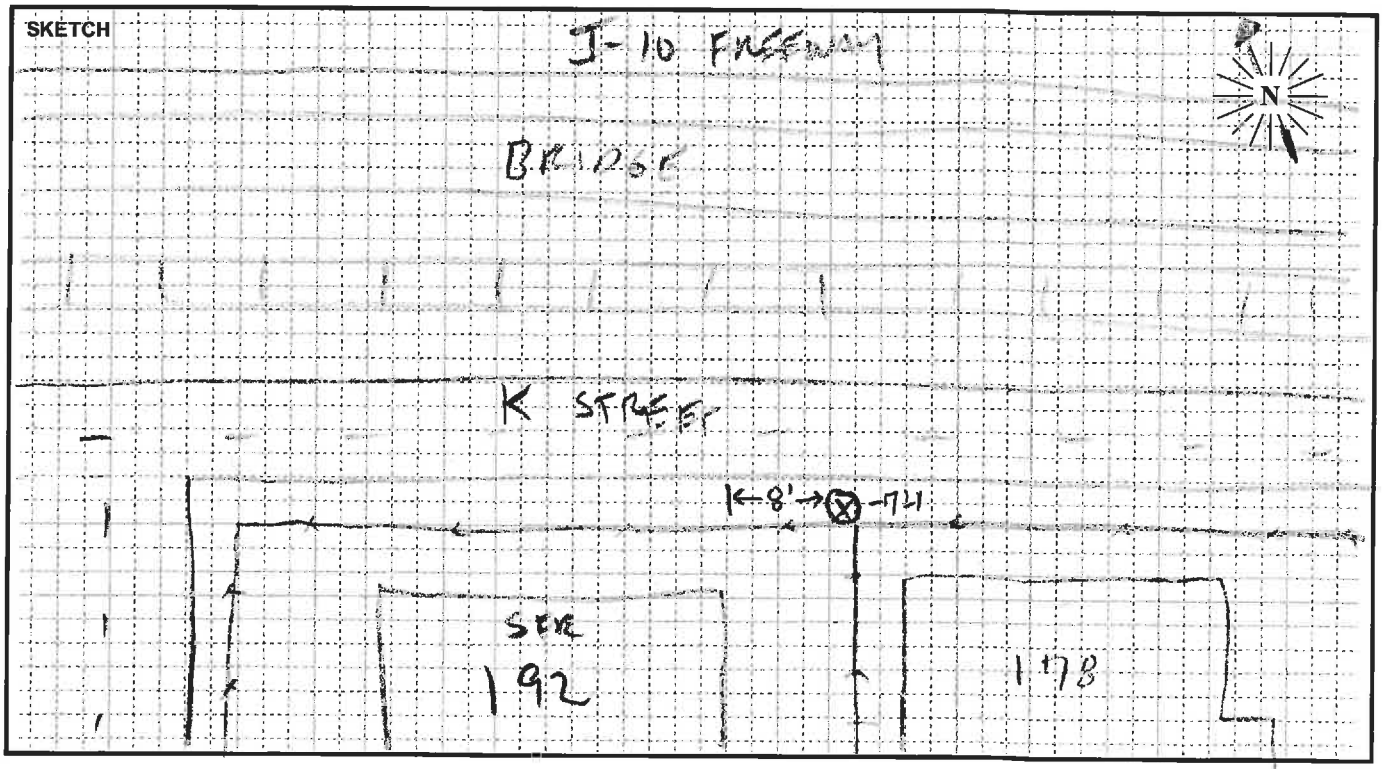
NOTES:
SYSTEM PWR: ☑ BAT ☐ AC
(observations at start of measurement)
TEMP: 69.4 °F R.H.: 35.2 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PANE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☑ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/19	9:20	9:40	51.5	52	52.9	55.4	63.6	66.3	87.8	91.2	73.2	TRANS 9:26 am - 9:28 am Big Boys
	9:40	10:00	50.1	50.3	51.3	52.9	53.7	54.7	60	63.4	53.4	OPEN AMBIENT

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URENA | DATE: 12-30-14

MEASUREMENT ADDRESS: Colony Inn 255 Sperry DR | CITY: Colton | ☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial | SITE NO.: ST20A/CAL

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3378

PRE AMP:
☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3200

CALIBRATOR:
☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 8.7 / 8:21am
After 114.0 / 114.0 / 8.7 / 9:13am

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 53.4 °F R.H.: 38.7 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUDEL PHONE
PHOTO NOs. _____

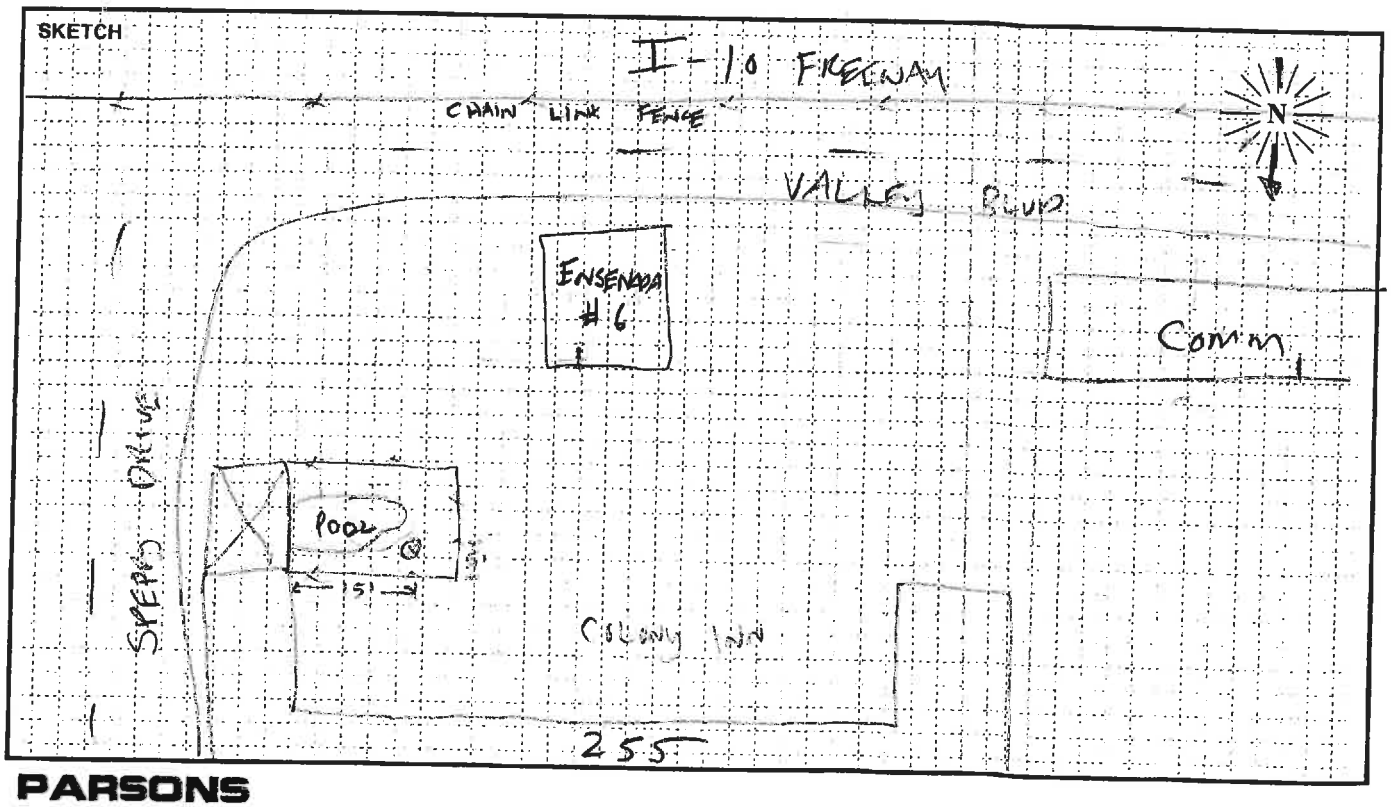
NOTES:
Dist. to Center of Nearest Lane _____ ☒ Video ☐ Radar

Counts	AT	MT	HT
WB	1172	52	120
EB	1241	54	123
WB OFF	68	2	9

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/29	8:44	9:04	61.8	63.1	63.9	65.3	66.1	67.1	69.0	75.1	65.6	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		R. URENA	DATE: 5/2/14
MEASUREMENT ADDRESS: 24818 E. Redlands Blvd	CITY: Loma Linda	☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST21

SOUND LEVEL METER:
☐ LD-870 ☒ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 1616

MICROPHONE:
☑ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☑ WIND SCREEN
SERIAL #: 3159

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 1891

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 113.9, 7.9, 7:33 am
After 114.0, 113.8, 7.9, 7:57 am

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☑ SLOW ☐ 1/1 OCT ☑ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

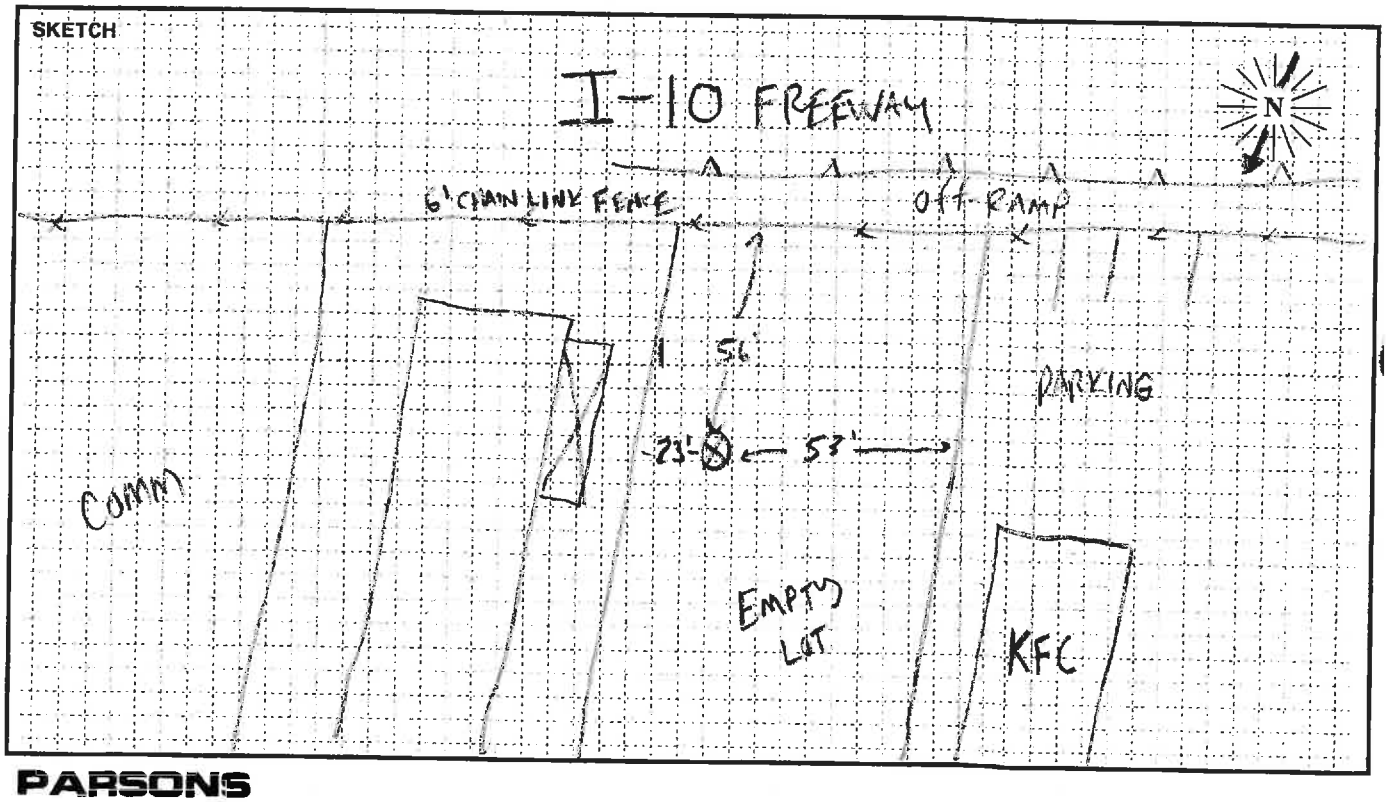
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 73.3 °F R.H.: 23.7 %
WIND SPEED: 0.9 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RICOH PHONE
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
5/2	7:34	7:54	62.7	63	64	65.4	66.4	67.5	69.9	73.6	65.8	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | B. Tarjoura | DATE: 10/21/13

MEASUREMENT ADDRESS: 1294 E. Rosewood Drive | CITY: San Bernardino | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST23

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2916

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2330

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.9 / 22.1 / 14:55
After 114.0 / 113.8 / 22.1 / 15:22

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

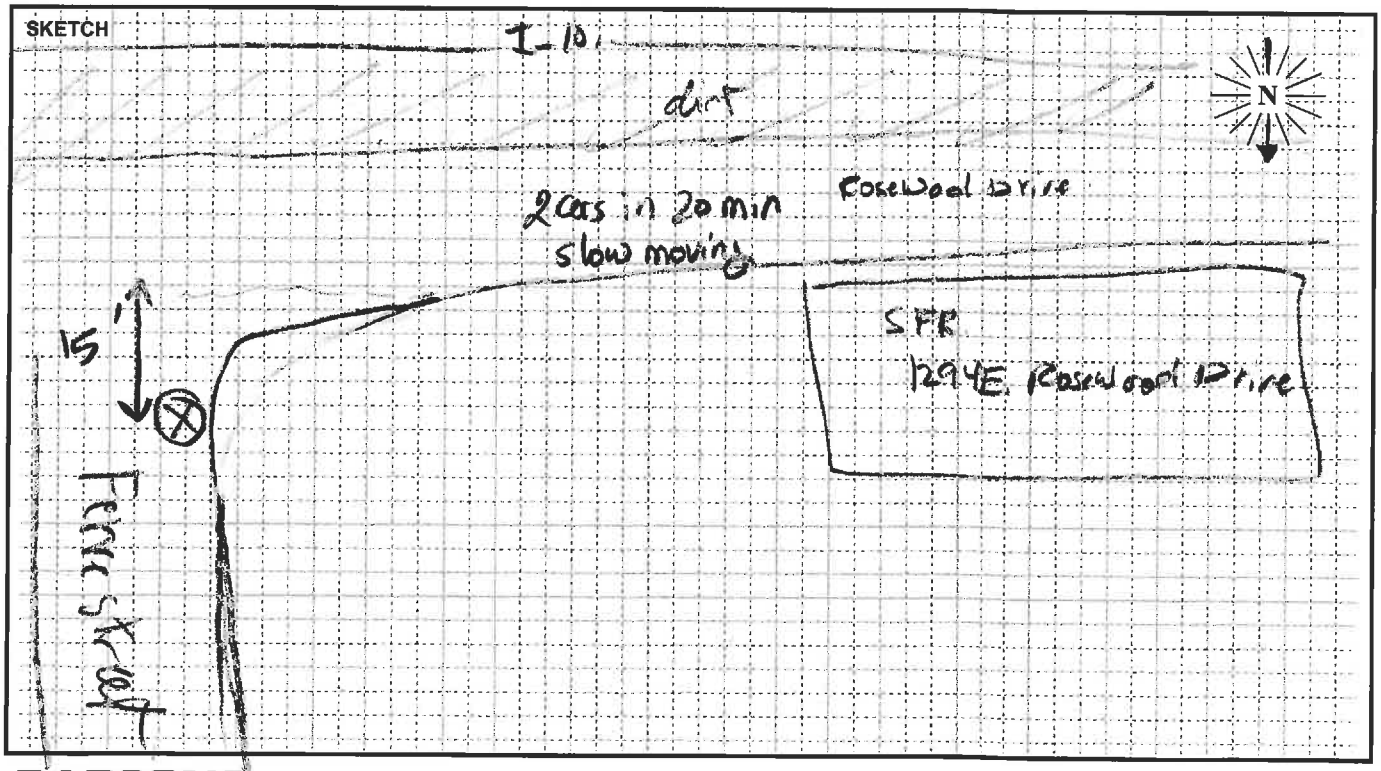
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84 °F R.H.: 14 %
WIND SPEED: 7 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BT iphone
PHOTO NOs. 56-59

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	15:00	15:20	68.1	69.1	70.8	72.9	73.9	74.8	76.7	77.7	73.1	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. UREÑA		DATE: 11/7/13
MEASUREMENT ADDRESS: # 84 25526 REDLANDS BLVD	CITY: Loma Linda	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST24

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☑ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3159

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 8.7, 7:55
After 114.0, 113.8, 8.7, 8:24

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

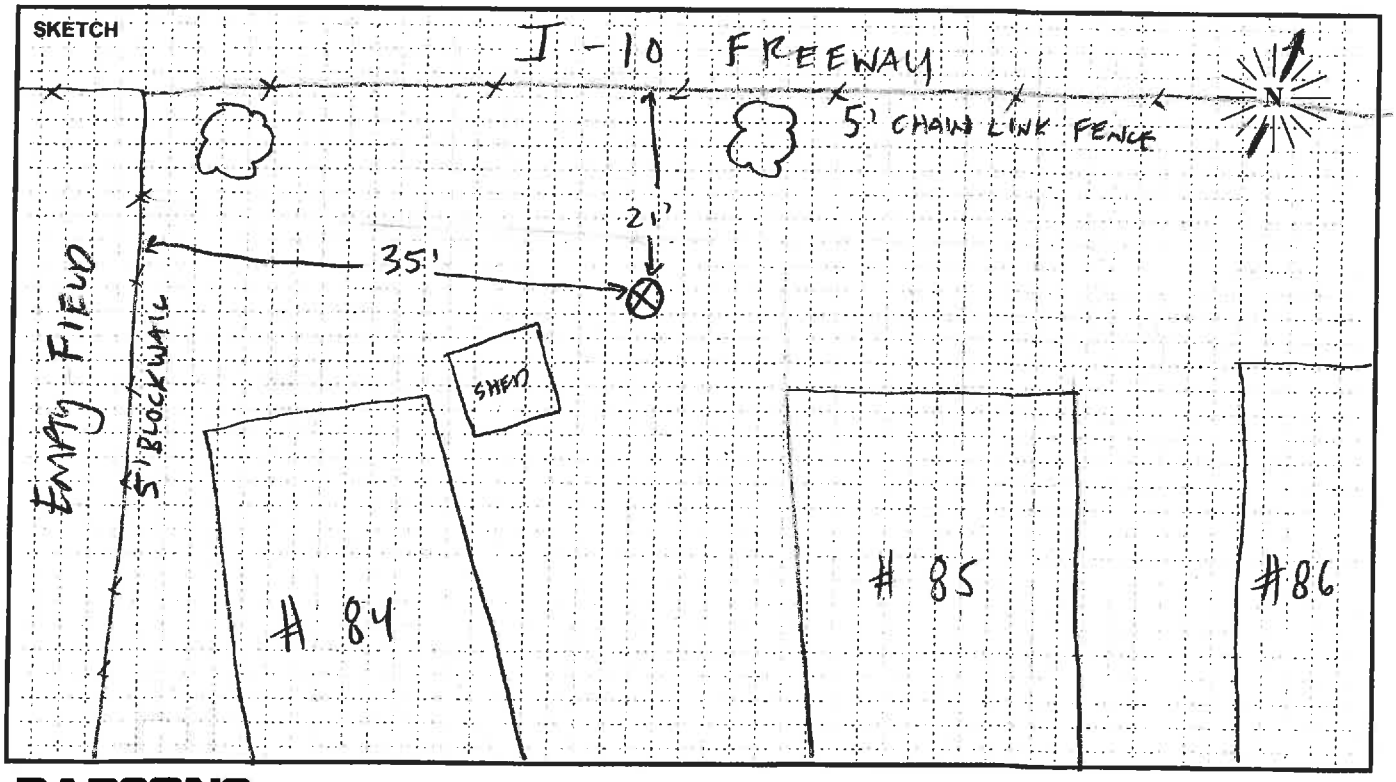
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 65.5 °F R.H.: 30.9 %
WIND SPEED: 1.1 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
11/7	8:00	8:20	68.9	69.9	72.3	74.6	75.7	76.8	78.7	79.9	74.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

B. Tanjura

DATE: 10/21/13

MEASUREMENT ADDRESS: 1965 Coulston Street

CITY: Loma Linda

☐ Single-Family ☐ Recreational
☒ Multi-Family ☐ Commercial
☐ School

SITE NO.: ST 25

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____

SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN

SERIAL #: 2916

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____

SERIAL #: 2330

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 84 °F R.H.: 16 %

WIND SPEED: 8 MPH

TOWARD (DIR): _____

SKIES: Sunny

CAMERA BJ iphone

PHOTO NOs. 52-55

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127

Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:

Input, dB / Reading, dB / Offset, dB / Time

Before 114.0 / 113.8 / 22.1 / 15:22

After 114.0 / 113.9 / 22.1 / 16:01

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:

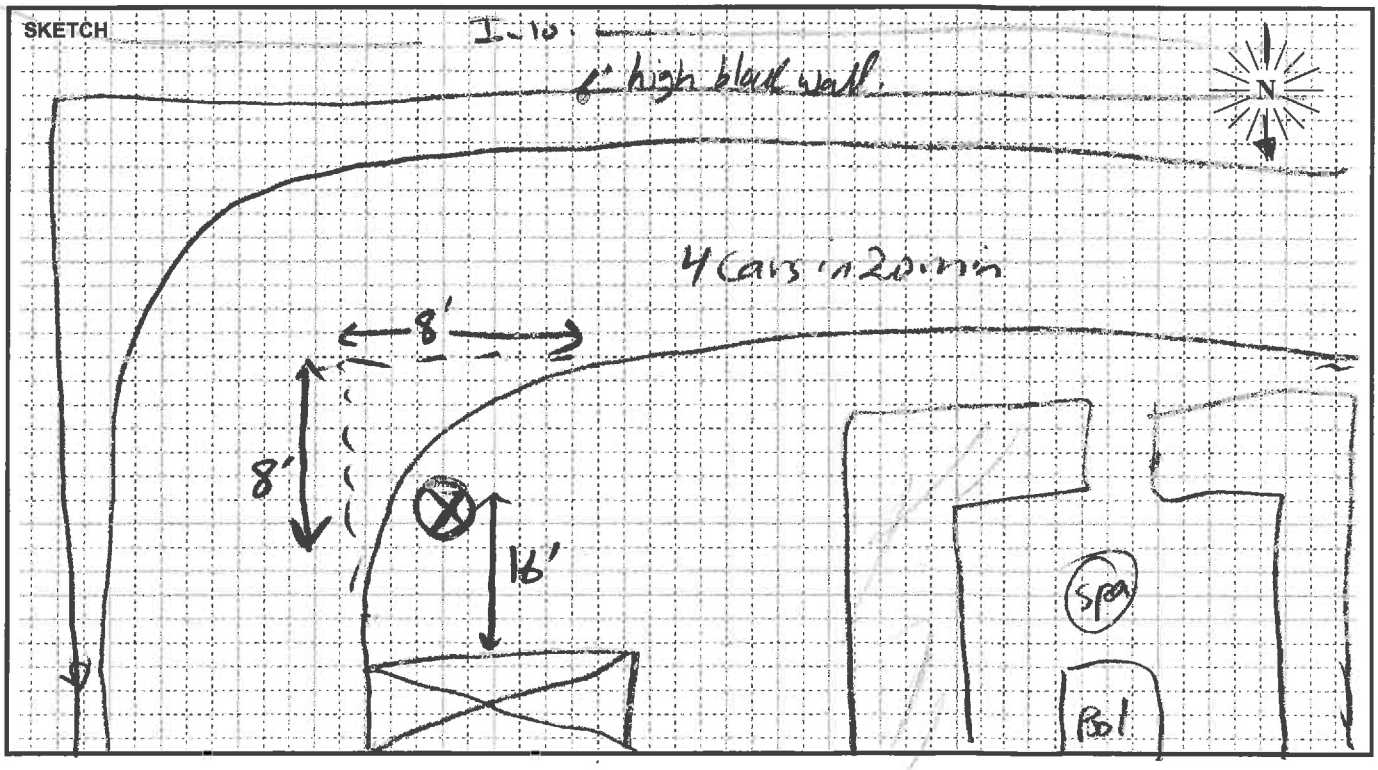
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	15:40	16:00	64.9	65.3	66.8	68.6	69.7	70.7	72.9	75.7	69.0	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor | ENGINEER: OGDEN | DATE: 10/21/13

MEASUREMENT ADDRESS: 26232 Redlands Blvd. | CITY: Redlands | ☐ Single-Family ☒ Multi-Family ☐ Recreational ☐ Commercial | SITE NO.: ST26

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820
☐ LD-824 ☐ LD-812
☒ B&K-2250 ☐ _____
SERIAL #: 2676029

MICROPHONE: ☒ WIND SCREEN
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☒ FREEFIELD
☐ 1-INCH ☐ RANDOM
SERIAL #: 4189 - 2663101

PRE AMP:
☐ LD-900
☐ LD-828
☐ _____
SERIAL #: 10769

CALIBRATOR:
☐ LD CA250
☒ B&K 4231
S/N 2507137
Freq, Hz.
☐ 250
☒ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before _____ / 47.2 / _____ / 15:52
After _____ / 47.1 / _____ / 16:32

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

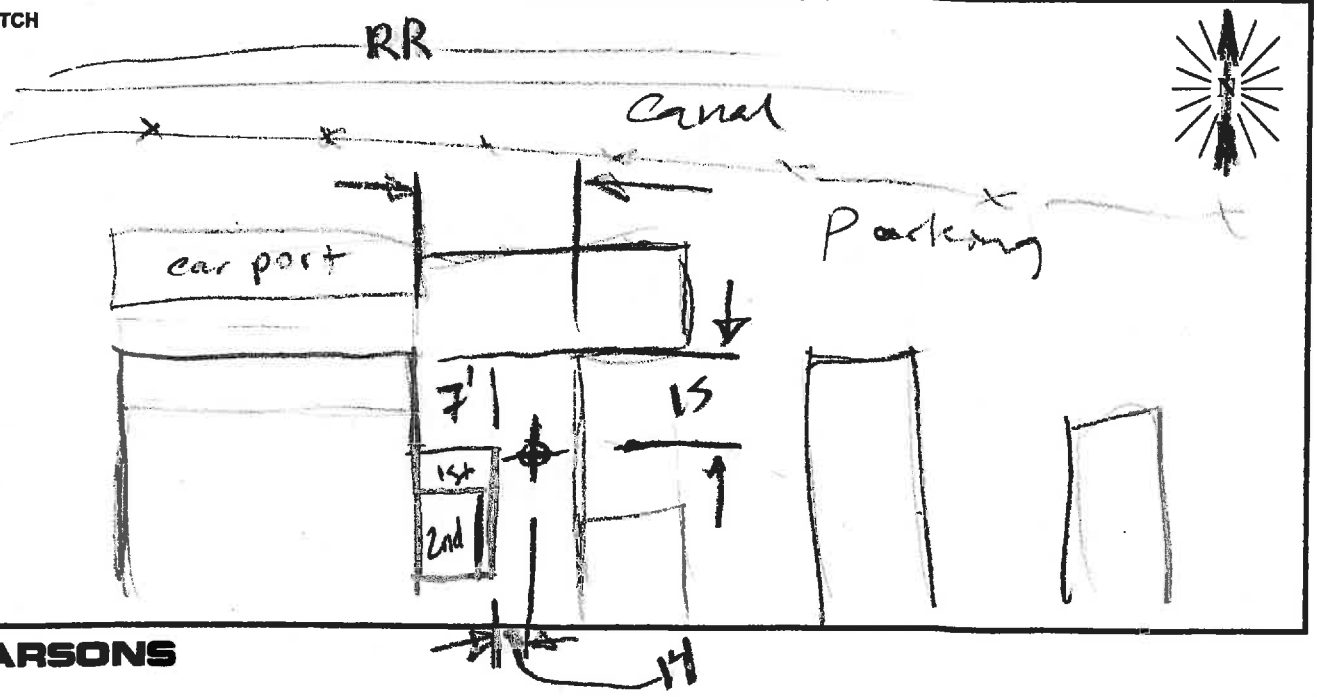
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84 °F R.H.: 14 %
WIND SPEED: 4 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA JASON PAYNE
PHOTO NOs. _____

NOTES: Rosewood Apts.
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	16:00	16:20	56.0	57.2	58.2	60.5	[illegible]	62.4	64.4	66.4	60.8	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor Project | R. URENDA | DATE: 12/11/14

MEASUREMENT ADDRESS: 26326 TUDOR CT | CITY: REDLANDS CA | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST26A/CAL

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3378

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3200

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 8.6 / 8:54 am
After 114.0 / 113.9 / 8.6 / 10:19 am

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

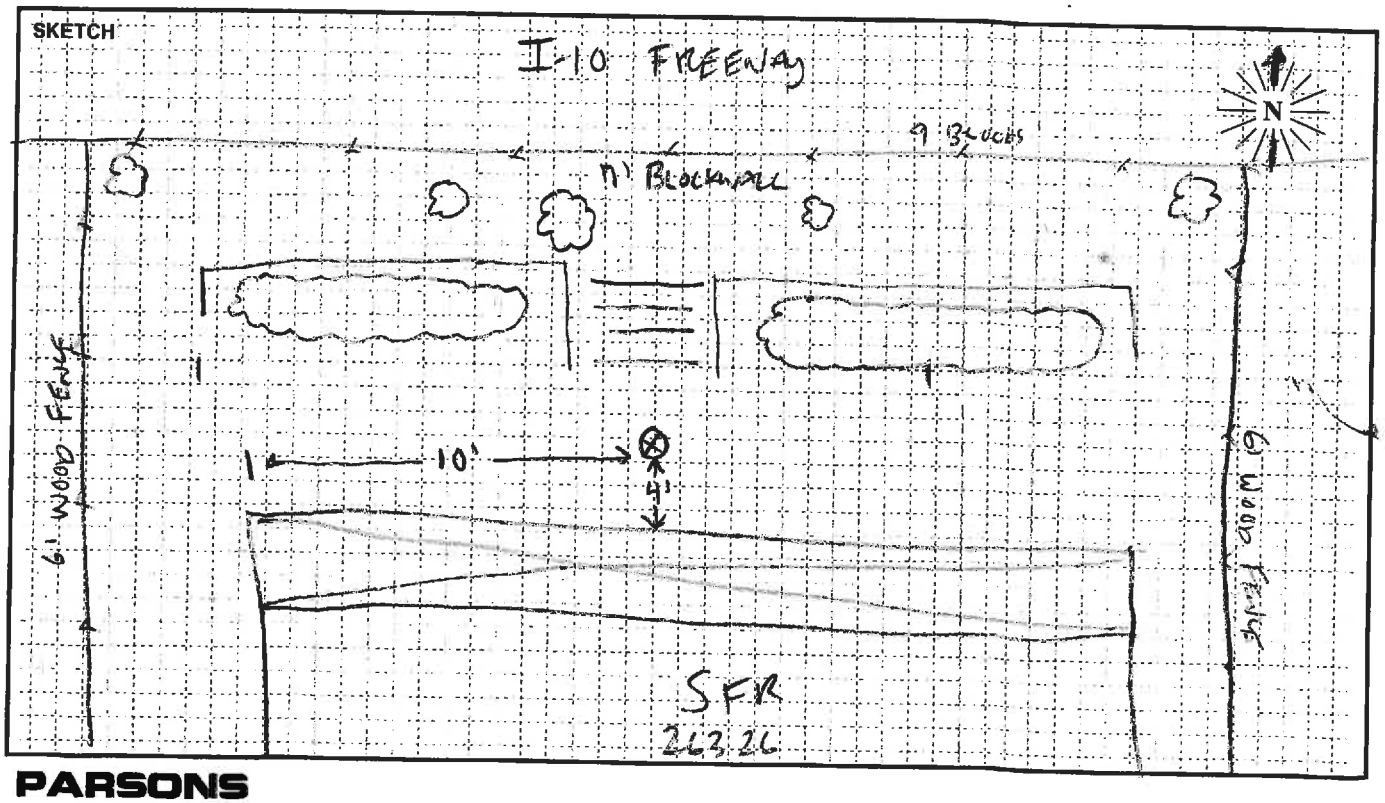
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 65 °F R.H.: 55.5 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: Cloudy
CAMERA PUBLIC PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/11	9:40	10:00	54.6	56.3	56.7	57.8	58.5	59.2	60.0	63.2	58.0	Cal

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor		ENGINEER: OGDEN	DATE: 10/21/13
MEASUREMENT ADDRESS: 26454 Redlands Blvd	CITY: Redlands	☐ Single-Family ☒ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: ST27

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☐ LD-870 ☐ LD-820	☒ WIND SCREEN	☐ LD-900	SYSTEM PWR: ☒ BAT ☐ AC
☐ LD-824 ☐ LD-812	☐ NON-POLAR ☐ POLARIZED	☐ LD-828	(observations at start of measurement)
☒ B&K-2250 ☐ _____	☒ 1/2-INCH ☒ FREEFIELD	☐ _____	TEMP: 84 °F R.H.: 14 %
SERIAL #: 2676029	☐ 1-INCH ☐ RANDOM	SERIAL #: 10769	WIND SPEED: 4 MPH
	SERIAL #: 4139-2663101		TOWARD (DIR): Breezy

CALIBRATOR:	Freq, Hz.	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
☐ LD CA250	☐ 250	Before _____ / 47.3 / _____ / 15:12
☒ B&K 4231	☒ 1000	After _____ / 47.2 / _____ / 15:52
S/N 2507137	☐ _____	

SKIES: CLEAR

CAMERA JASON PHONE

PHOTO NOs. _____

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES: Somerset Apts.

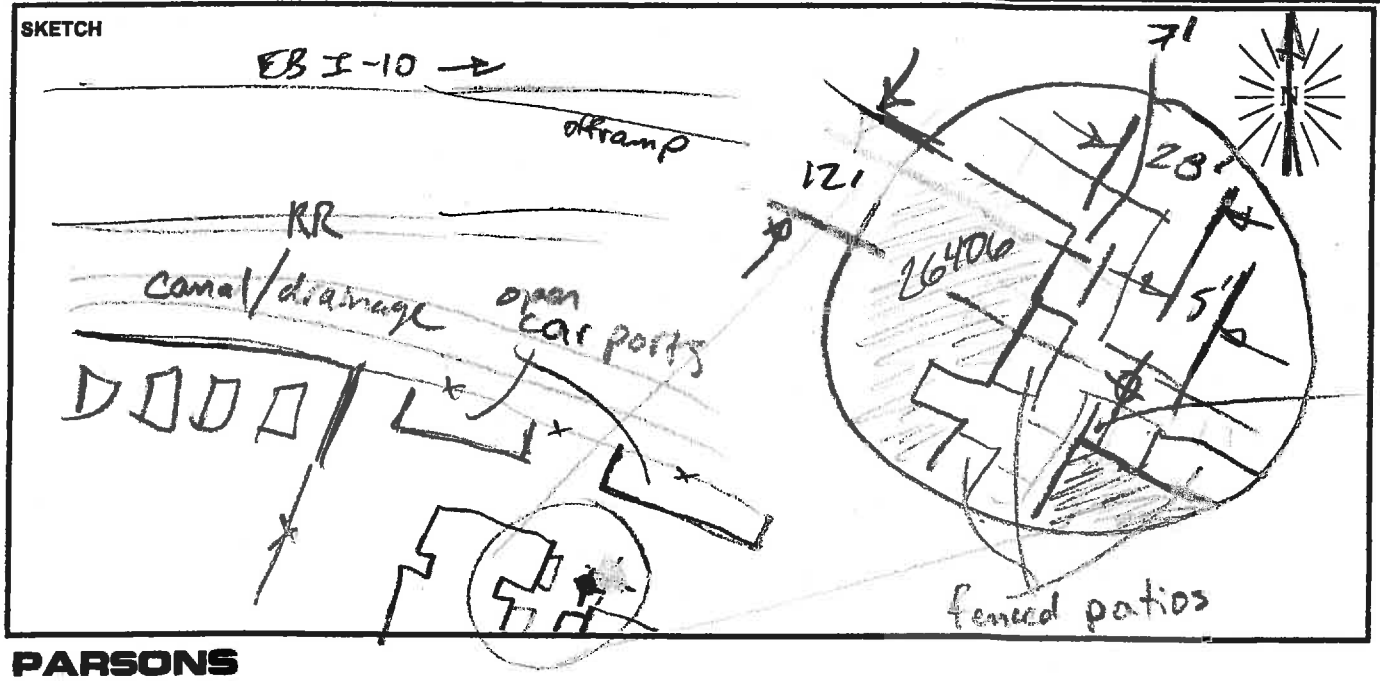
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	13:20	13:40	51.9	53.5	55.1	57.3	[illegible]	59.5	61.0	61.9	57.6	Meas 012

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOT EXPRESS | R. URENDA | DATE: 12/18/14

MEASUREMENT ADDRESS: 1901 ORANGE TREE LN | CITY: REDLANDS | ☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial | SITE NO.: ST28

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3378

PRE AMP:
☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3200

CALIBRATOR:
☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 8.6 / 5:32a
After 114.0 / 113.8 / 8.6 / 6:24a

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

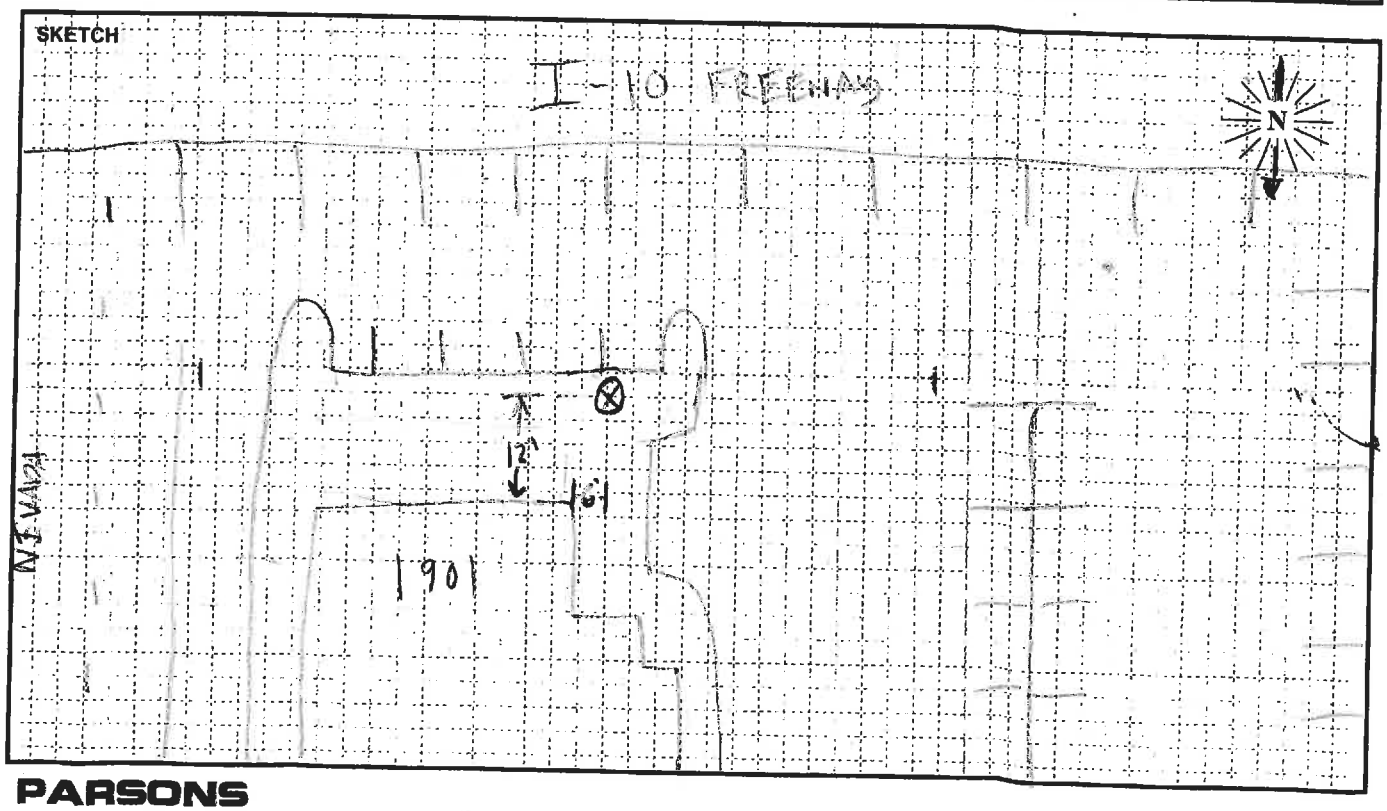
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 49.1 °F R.H.: 61.9 %
WIND SPEED: 1.2 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: CARS 5:40 HT 6:00 HT 1
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/18	5:40	6:00	66.5	66.9	70.5	72.5	73.4	74.1	75	75.4	72.8	
12/18	6:00	6:20	68.9	69.6	70.9	72.6	73.5	74.4	75.9	78.9	72.2	6:08 HT

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor	ENGINEER: G. Berg		DATE: 2/6/15
MEASUREMENT ADDRESS: Good Nite Inn 1675 Industrial Park Ave	CITY: Redlands	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: ST28A

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0638

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 3155

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-902 ☐ _____
SERIAL #: 1901

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2147
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.3, —, _____
After 114.0, 114.1, —, 14:05

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES: CAL

SYSTEM PWR: ☐ BAT ☐ AC

(observations at start of measurement)

TEMP: 80 °F R.H.: 24 %

WIND SPEED: 2 MPH

TOWARD (DIR): _____

SKIES: Clear

CAMERA _____

PHOTO NOs. _____

NOTES: 13:20 1342; 13:23 1343; 13:35 1352

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

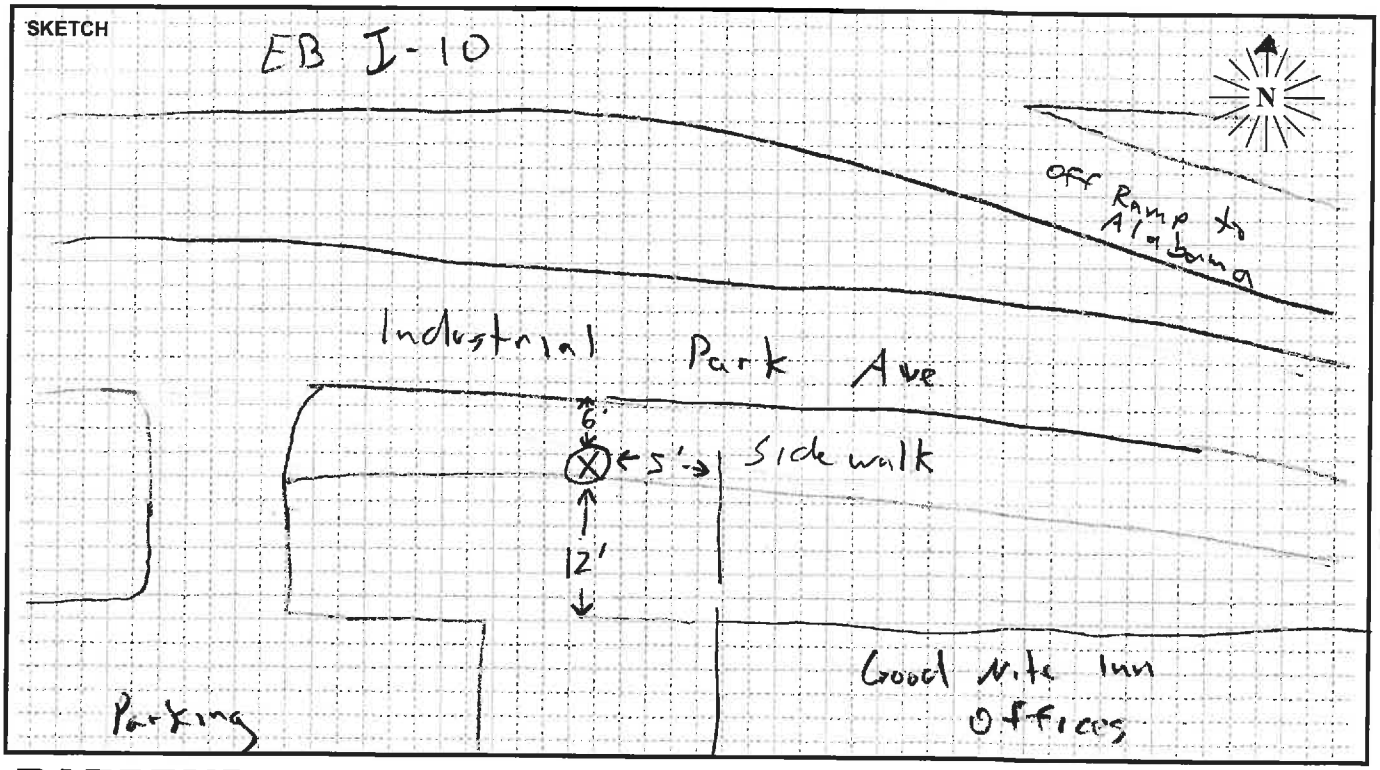
EB Speed 65 mph

WB Speed 70 mph

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
2/6	13:20	13:40	70.3	—	72.2	74.1	75.3	76.3	—	84.7	74.7	Truck block 13:23
2/6	13:40	14:00	68.8	—	72.3	74.2	75.3	76.3	—	80.2	74.5	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. URENA	DATE: 10/21/13
MEASUREMENT ADDRESS: ORANGE WOOD HIGH SCHOOL	CITY: REDLANDS	☐ Single-Family ☐ Multi-Family ☒ School ☐ Recreational ☐ Commercial — SITE NO.: ST29

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.9 / 21.8 / 15:10
After 114.0 / 114.0 / 21.8 / 16:48

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

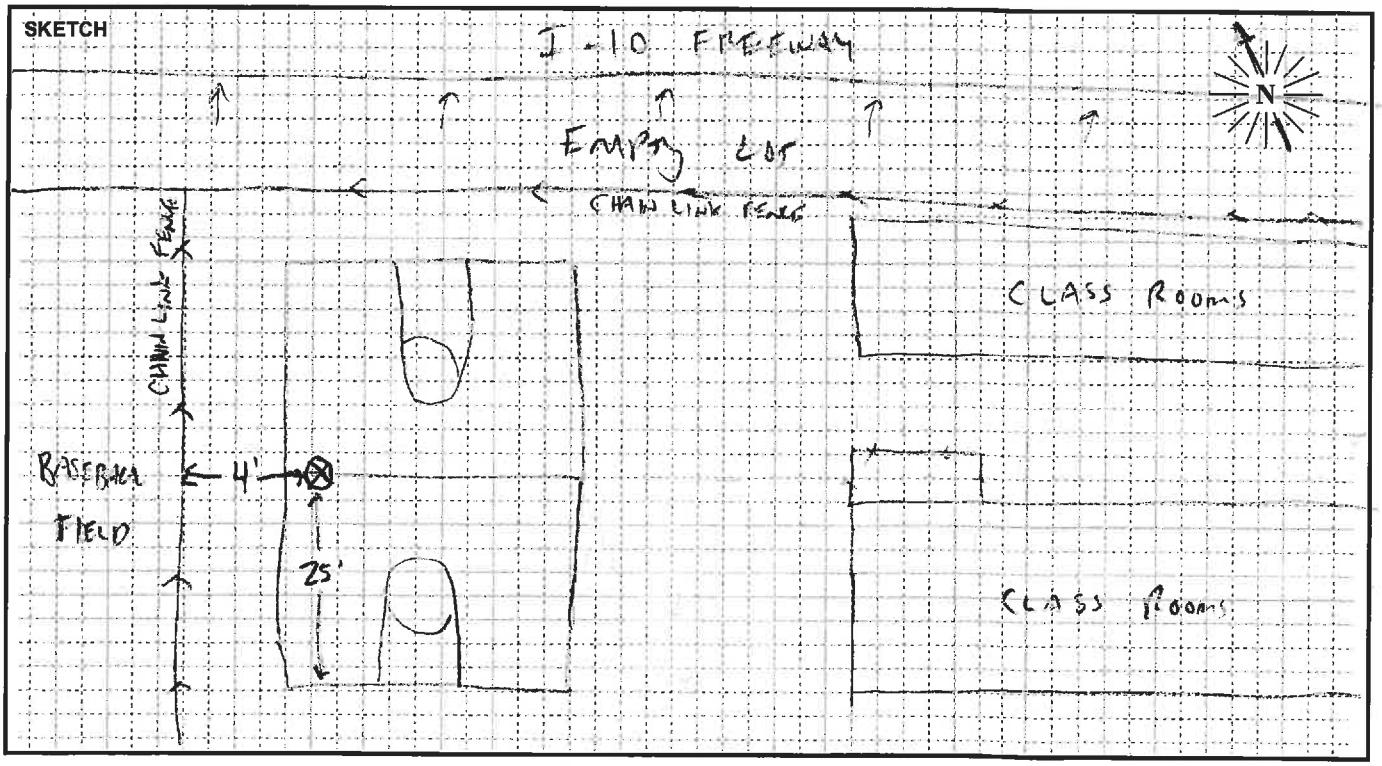
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84.1 °F R.H.: 25.4 %
WIND SPEED: 1.4 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	15:10	15:40	56.1	56.4	57.6	59.5	60.6	61.8	66.4		60.3	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | BJarjoura | DATE: 10/22/13

MEASUREMENT ADDRESS: 640 third Street | CITY: Redlands, CA | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST30

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2916

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2330

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 70 °F R.H.: 23 %
WIND SPEED: 1 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BJ iphone
PHOTO NOs. 60-64

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114 / 113.9 / 22.1 / 10:17
After 114 / 114.2 / 22.1 / 10:42

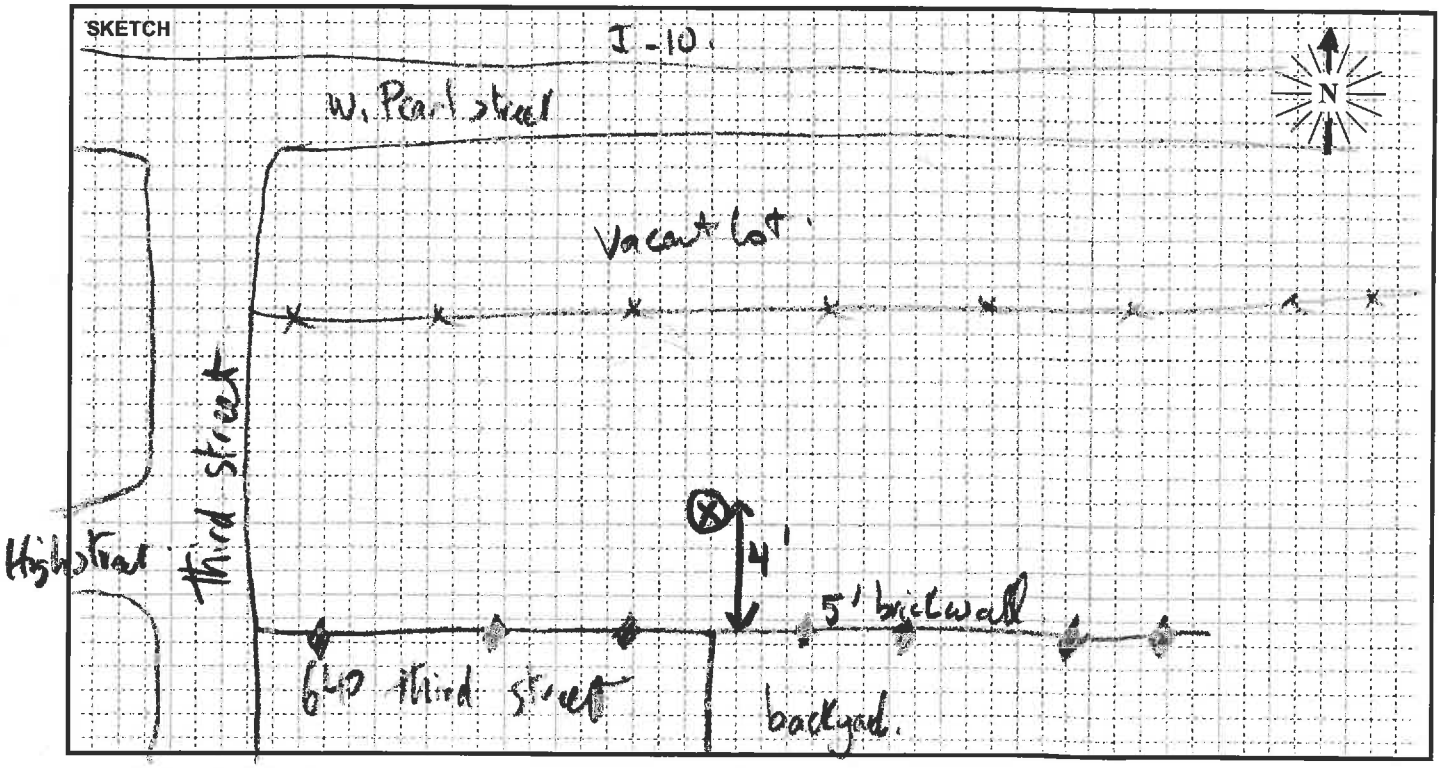
METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/22	10:20	10:40	59.1	60.4	62.0	63.6	64.7	65.6	66.9	69.4	63.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOT EXPRESS	ENGINEER: UREÑA		DATE: 1/29/15
MEASUREMENT ADDRESS: 503 W. COLTON AVE	CITY: REDLANDS	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST30A

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____	☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN	☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-902 ☐ _____	SYSTEM PWR: ☒ BAT ☐ AC
SERIAL #: 0639	SERIAL #: 1891	SERIAL #: 3155	(observations at start of measurement)

CALIBRATOR:	Freq, Hz.	CALIBRATION RECORD:	
☒ LD CA250 ☐ LD CA200	☒ 250	Input, dB / Reading, dB / Offset, dB / TIme	TEMP: 73.4 °F R.H.: 34.6 %
☐ B&K 4231 ☐ _____	☐ 1000	Before 114.0 / 114.0 / 6.9 / 11:46	WIND SPEED: 1.0 MPH
S/N 2127	☐ 84	After 114.0 / 113.9 / - / 14:14	TOWARD (DIR): _____
	☐ _____		SKIES: CLEAR
			CAMERA _____
			PHOTO NOs. _____

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

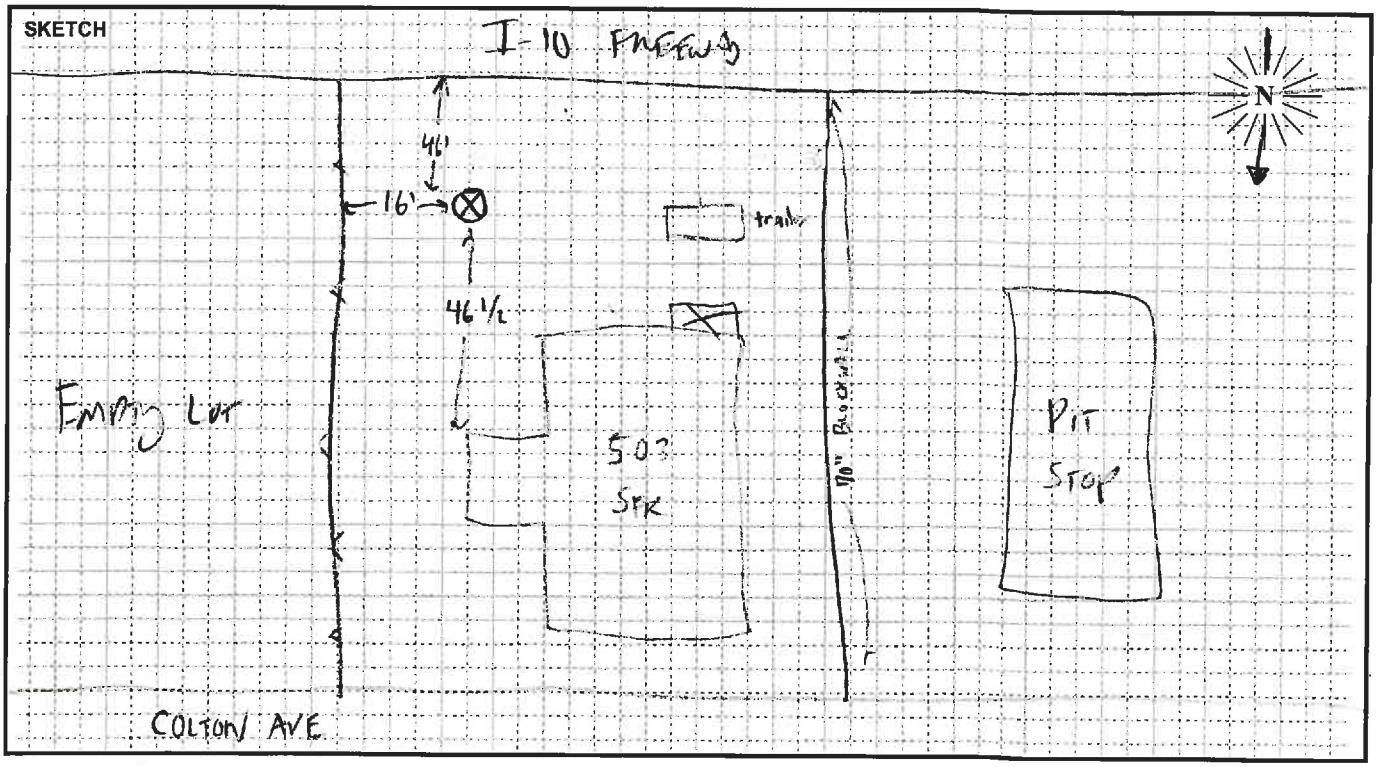
NOTES:
12:47
Truck drove by meter

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
1/28	12:40	13:00	63.3	—	65.8	67.9	69.1	70.1	—	75.8	68.2	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. URENA	DATE: 10/21/13
MEASUREMENT ADDRESS: 127 3rd STREET	CITY: REDLANDS	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: ST31

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz.: ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 113.9, 21.8, 16:08
After 114.0, 114.0, 21.8, 16:48

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

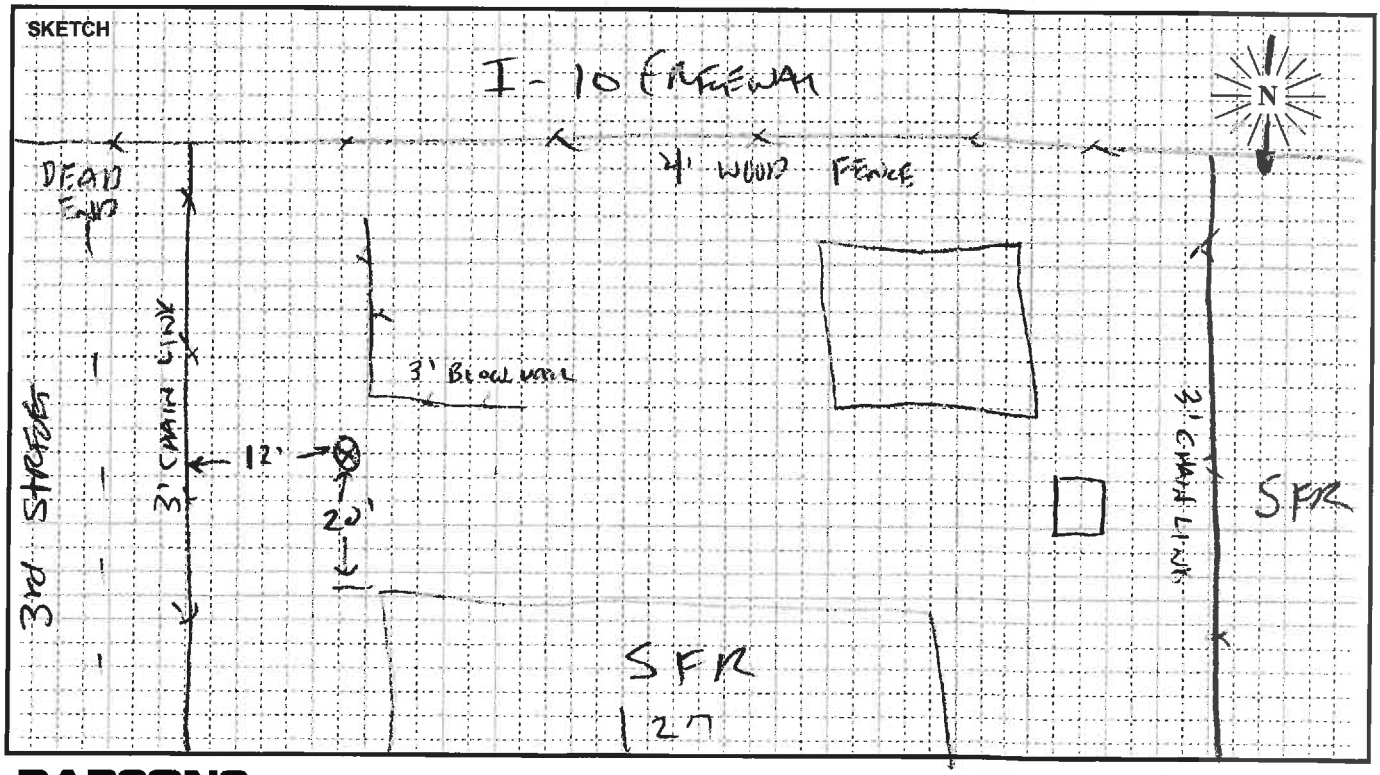
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 82.7 °F R.H.: 27.4 %
WIND SPEED: 1.2 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA _____
PHOTO NOs. RUBEN PHONE

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	16:20	16:40	62.9	63.5	65.5	67.7	68.9	69.7	71.7	75.1	68	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URENDA | DATE: 10/22/13

MEASUREMENT ADDRESS: PARK MAGNOLIA APARTMENTS | CITY: REDLANDS | ☐ Single-Family ☒ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST32

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0187

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 1785

PRE AMP:
☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3015

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 70.3 °F R.H.: 31 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

CALIBRATOR:
☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz.: ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 21.8 / 9:47
After 114.0 / 114.0 / 21.8 / 10:21

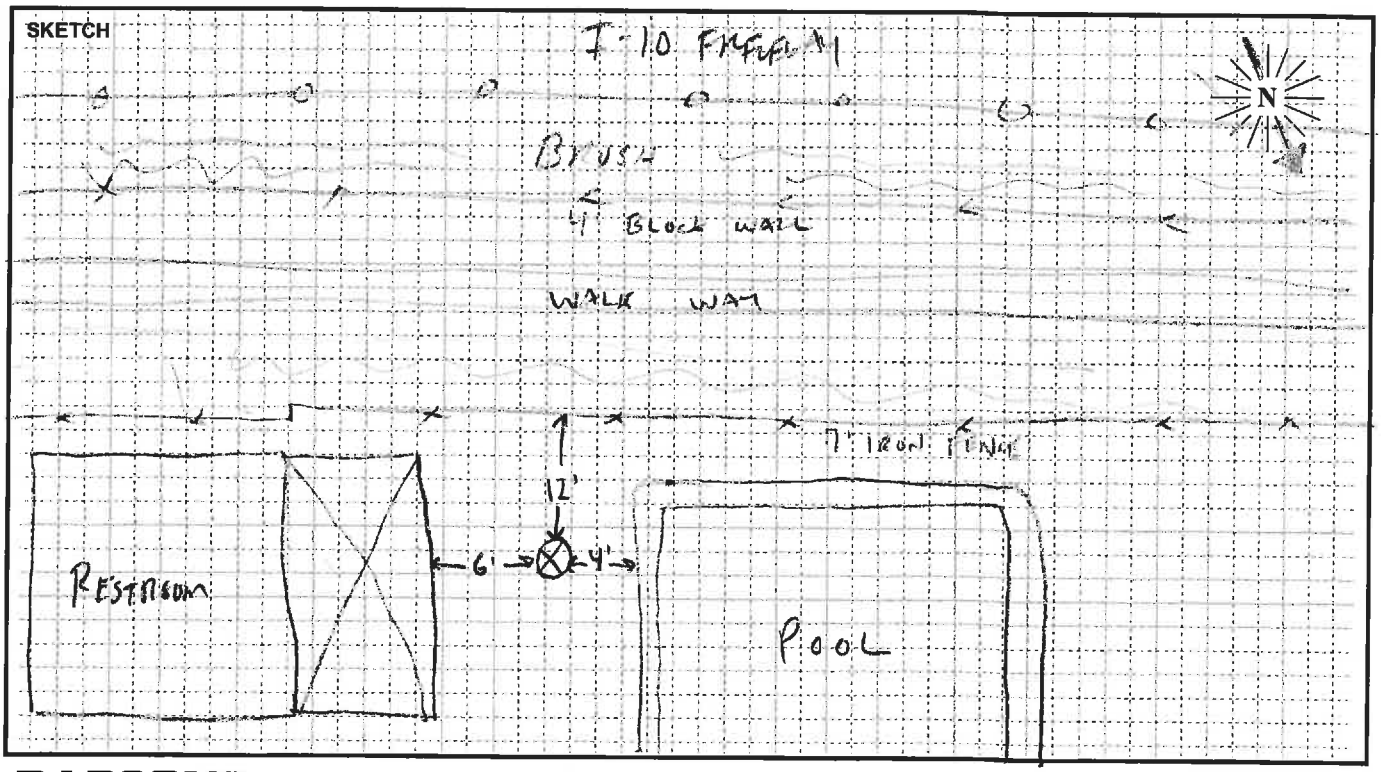
METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/22	10:00	10:20	60.5	61.6	63.7	65.3	66.1	66.9	68	71.2	65.3	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

R. URENDA

DATE: 10/22/13

MEASUREMENT ADDRESS: ROSE Gardens APARTMENTS

CITY: REDLANDS

☐ Single-Family ☐ Recreational
☒ Multi-Family ☐ Commercial
☐ School

SITE NO.: ST33

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____

SERIAL #: 0128

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN

SERIAL #: 1785

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____

SERIAL #: 3095

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2480

Freq, Hz.
☐ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.9 / 21.8 / 8:48
After 114.0 / 114.0 / 21.8 / 10:20

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 75.6 °F R.H.: 34.4 %

WIND SPEED: 0 MPH

TOWARD (DIR): _____

SKIES: CLEAR

CAMERA RUBEN PHONE

PHOTO NOs. _____

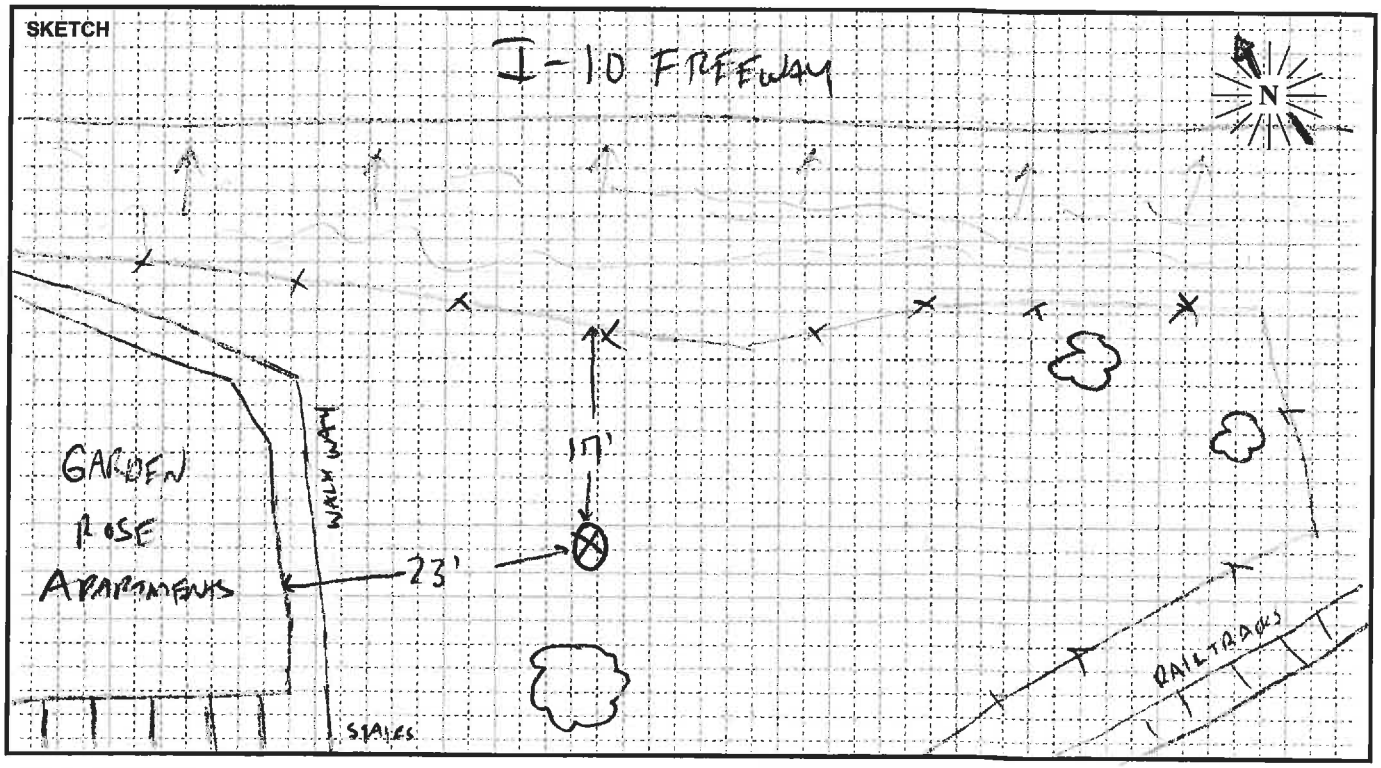
NOTES:

Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/22	9:00	9:20	60.4	61.5	64	65.9	67.3	68.6	70.8	72.3	66.5	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		B. Tarjoura	DATE: 10/22/13
MEASUREMENT ADDRESS: Near 911 E. Central Avenue	CITY: Redlands, CA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST35

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____	☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN	☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____	SYSTEM PWR: ☒ BAT ☐ AC
SERIAL #: 0555	SERIAL #: 216	SERIAL #: 2330	(observations at start of measurement) TEMP: 70 °F R.H.: 23 % WIND SPEED: 1 MPH

CALIBRATOR:	Freq, Hz.	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time	
☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127	☒ 250 ☐ 1000 ☐ 84 ☐ _____	Before	114 / 114.2 / 22.1 / 10:42
		After	114 / 114.1 / 22.1 / 11:49

TOWARD (DIR): _____

SKIES: Sunny

CAMERA BJ iphone

PHOTO NOs. 65-68

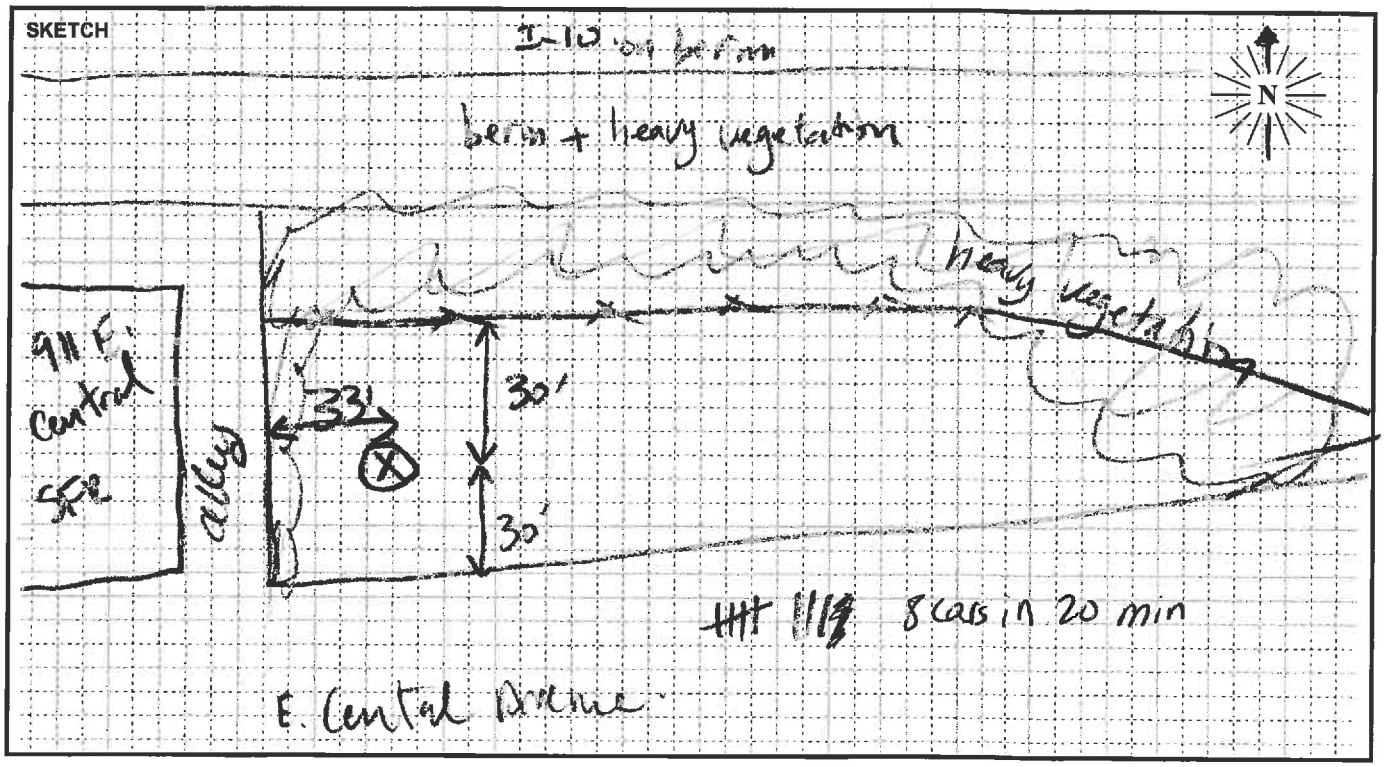
METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/22	11:20	11:40	55.4	55.8	56.9	58.6	59.6	60.4	64.0	66.9	58.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

DATE: 10/22/13

MEASUREMENT ADDRESS: 201 N. University Avenue

CITY: Redlands, CA

☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial

SITE NO.: ST 36.

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2916

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2330

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114 / 114.1 / 22.1 / 11:49
After 114 / 113.9 / 22.1 / 13:21

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

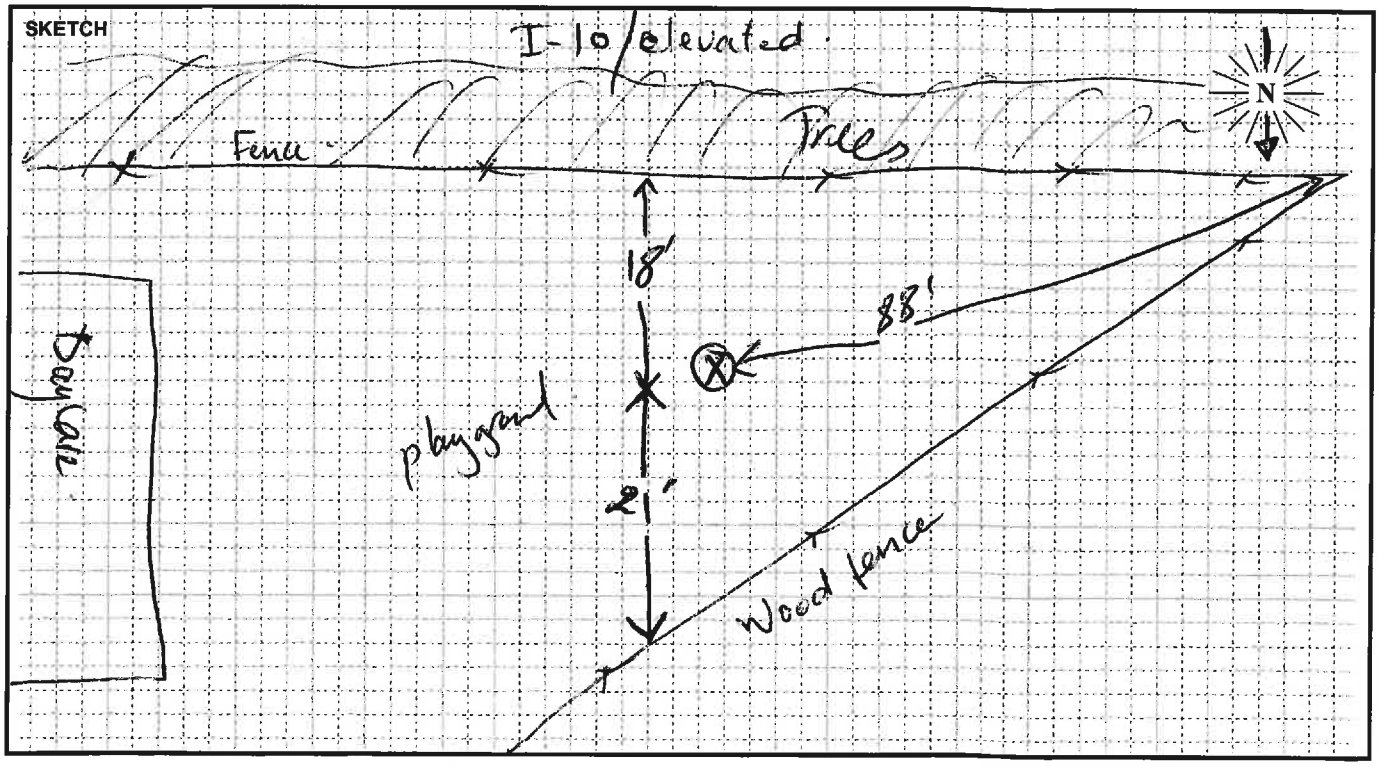
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 87 °F R.H.: 9 %
WIND SPEED: 7 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BJ iphone
PHOTO NOs. 69-73

NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/22	1:00	1:20	57.5	58.1	59.3	61.0	61.7	62.5	63.9	65.3	61.0	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		J. Rodriguez	DATE: 12/3
MEASUREMENT ADDRESS: 1118 Cero Ct.	CITY: Redlands	☐ Single-Family ☒ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST37

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2315

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114 / 113.9 / 22.5 / 13:08
After 114 / 114 / 22.5 / 13:49

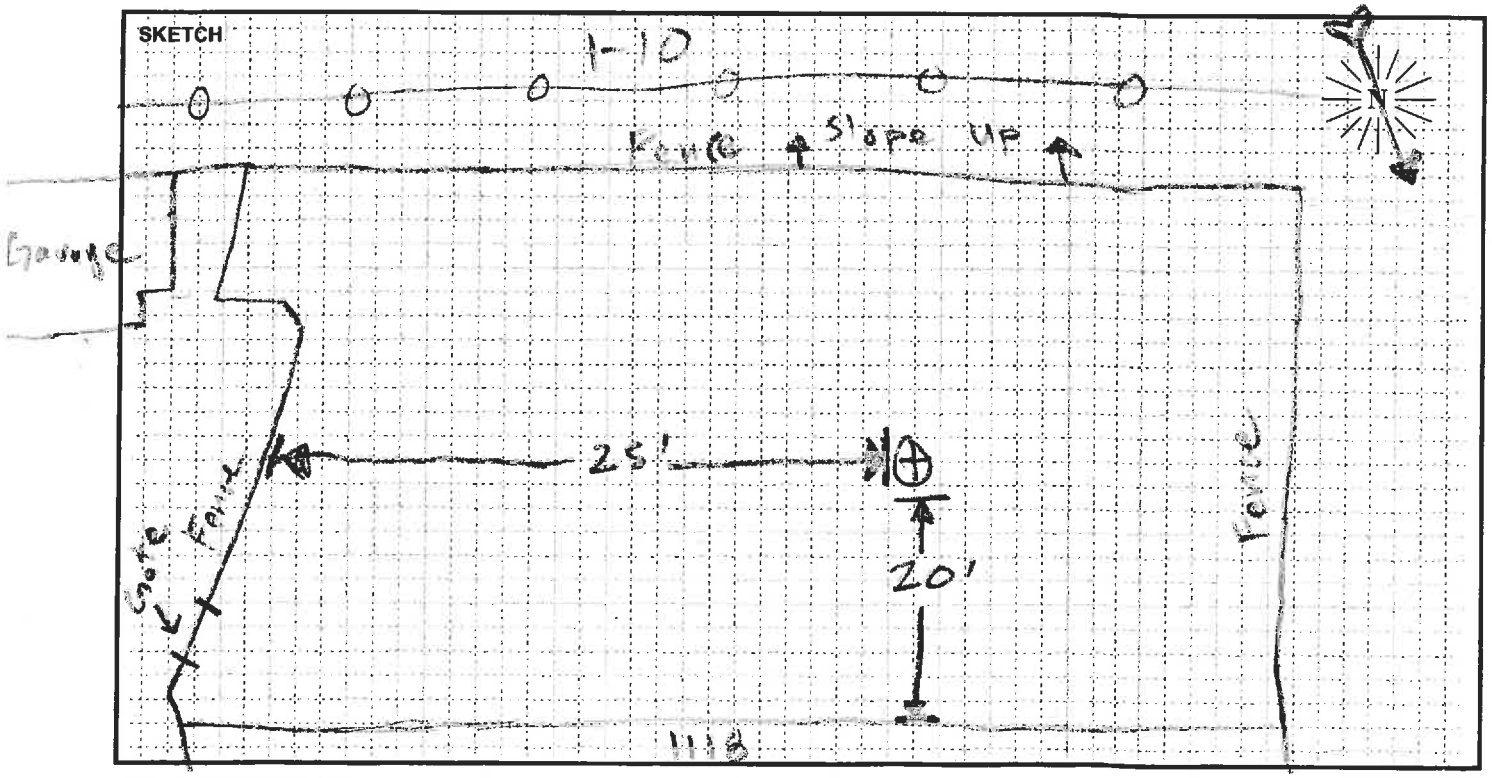
METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 66.3 °F R.H.: 41.7 %
WIND SPEED: 1.4 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA Julio's Phone
PHOTO NOs. _____

NOTES: -Approx. 8' sound wall
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT
MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/3	13:20	13:40	58.5	59.1	61	62.9	63.2	63.8	65.5	66.5	62.6	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. URENA	DATE: 12/3/13
MEASUREMENT ADDRESS: 1123 E CYPRESS AVE	CITY: REDLANDS	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: ST3B

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.1, 22.4, 13:15
After 114.0, 114.1, 22.4, 13:43

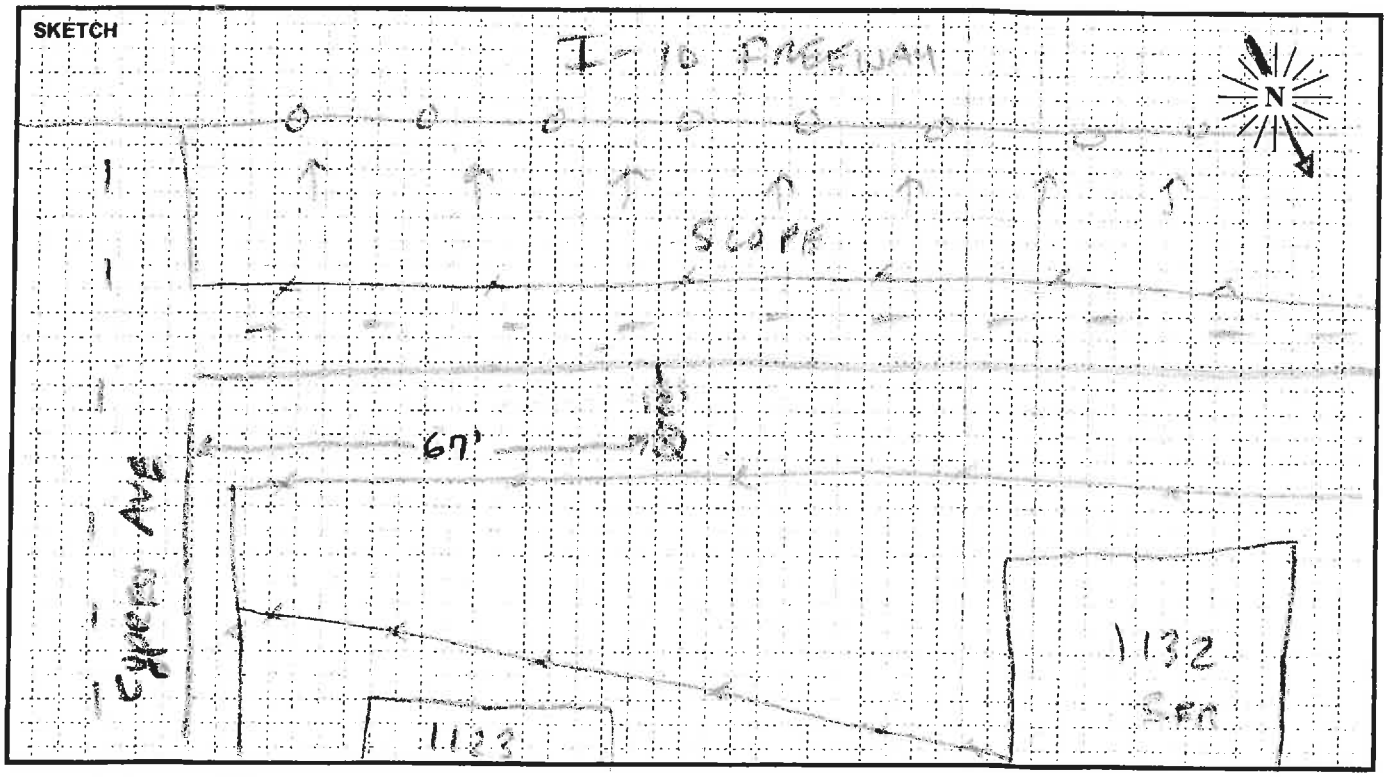
METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 30 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 66.3 °F R.H.: 41.7 %
WIND SPEED: 6.9 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: TRAFFIC 11H
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT
MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/3	13:30	13:40	61	61.4	62.8	64.5	65.6	66.7	71.4	80.6	65.4	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URENDA | DATE: 12/2/13

MEASUREMENT ADDRESS: 1040 Ardmore Cir | CITY: REDLAND | ☐ Single-Family ☐ Recreational ☒ Multi-Family ☐ Commercial ☐ School | SITE NO.: ST39

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2313

PRE AMP:
☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR:
☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 22.5, 14:29
After 114.0, 114.0, 22.5, 15:01

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

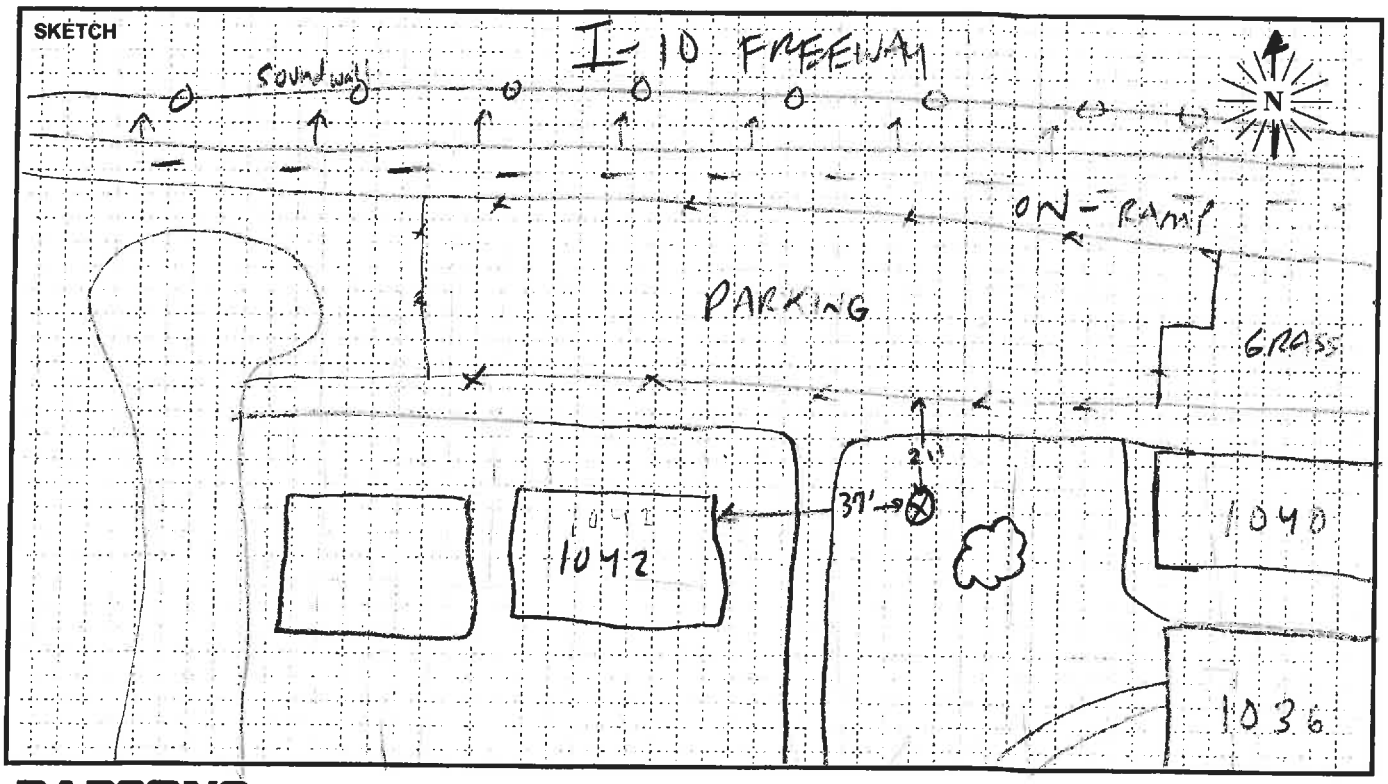
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 69 °F R.H.: 42.3 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/2	14:40	15:00	58.3	59	60.1	61.4	62	62.9	65.5	72.5	61.6	LMAX RAMP NOISE

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOT EXPRESS		ENGINEER: R. URENA	DATE: 3/3/15
MEASUREMENT ADDRESS: 738 McAULIFFE Court	CITY: REDLANDS	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST40A1

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0659

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3378

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-902 ☐ _____
SERIAL #: 2330

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2479
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 7.1 / 11:06
After 114.0 / 113.9 / 7.1 / 12:20

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

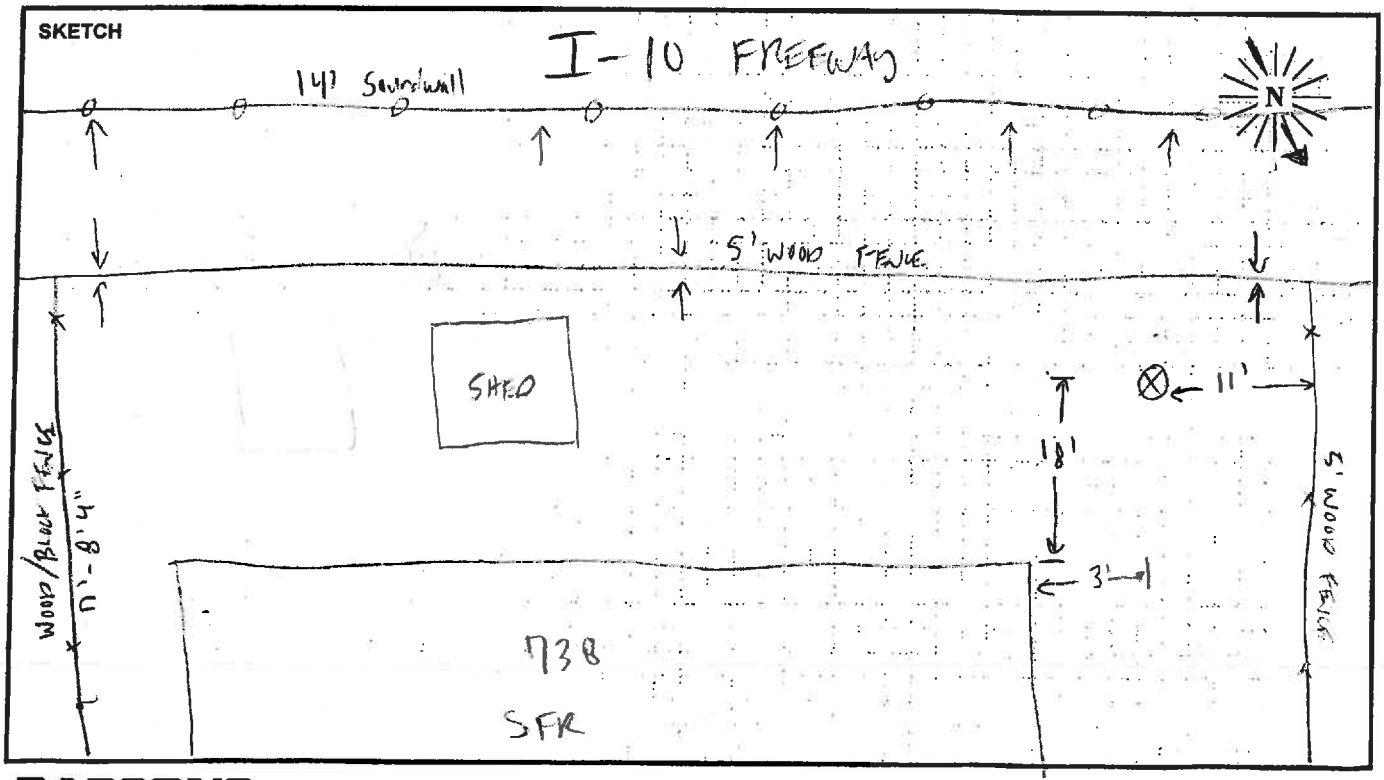
NOTES: CAL
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 73 °F R.H.: 37.3 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☒ Video ☒ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
3/3	11:20	11:40	56.5		61.9	64		65.8	67.1	68	64.1	
*	11:40	12:00	59.4		62.2	63.9		65.8	68	72	64.2	
	12:00	12:19	58.3		61.6	63.4		65.2	66.6	67.3	63.6	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | J. Rodriguez | DATE: 12/3

MEASUREMENT ADDRESS: 1049 Draena ct | CITY: Redlands | ☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST40

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☑ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☑ WIND SCREEN
SERIAL #: 2313

PRE AMP: ☑ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☑ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz: ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.1 / 22.5 / 9:28
After 114.9 / 113.9 / 22.5 / 10:41

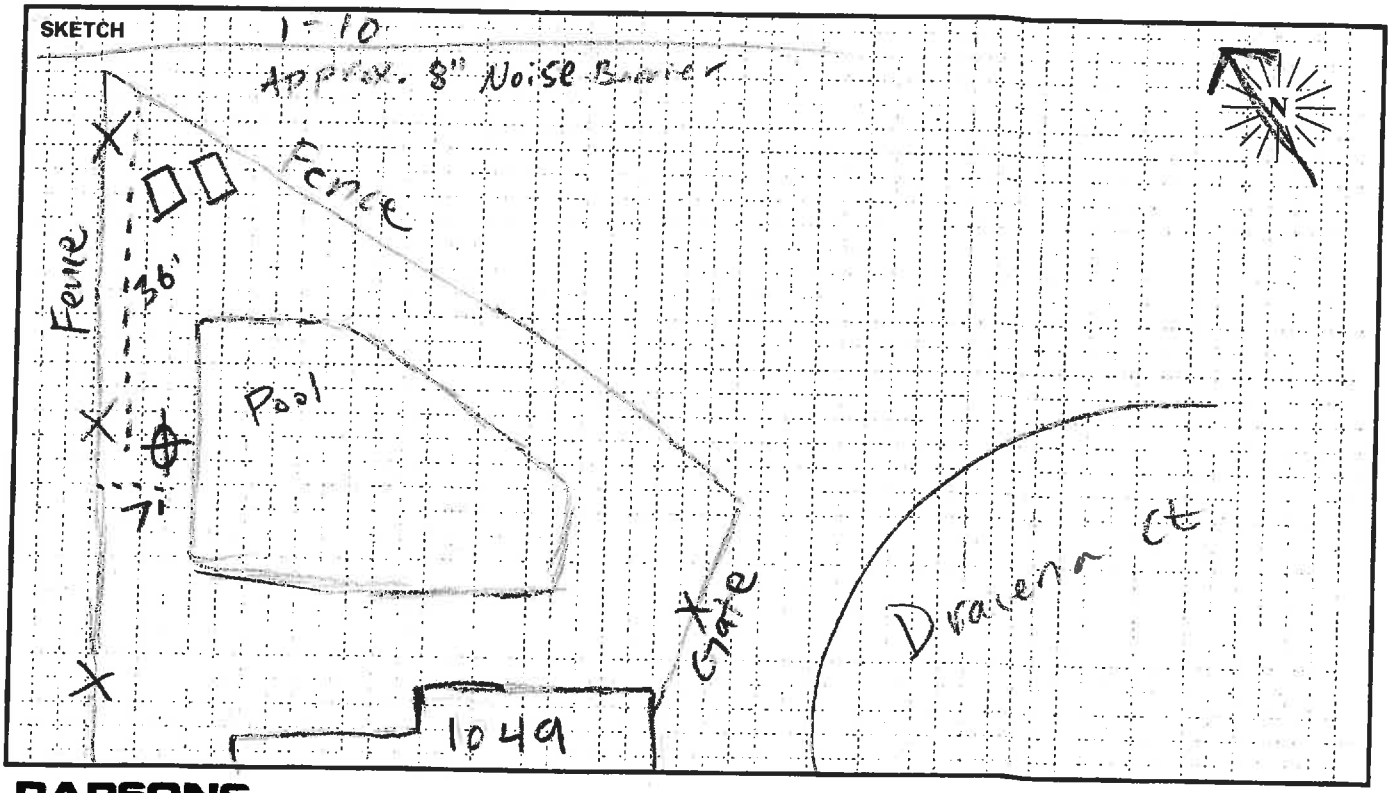
METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☑ BAT ☐ AC
(observations at start of measurement)
TEMP: 64 °F R.H.: 37 %
WIND SPEED: 1.6 MPH
TOWARD (DIR): NE
SKIES: Clear
CAMERA Cell Phone
PHOTO NOs. _____

NOTES: 7" from fence, between grass & pool
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT
MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/3	10:01	10:20	55.6	56.7	58.3	59.9	60.8	61.6	63.9	67	60.1	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. URENDA	DATE: 12/2/13
MEASUREMENT ADDRESS: 1041 CIMARON DR	CITY: REDLANDS	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: ST 41

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2313

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2129
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.6 , 114.0 , 22.5, 15:11
After 114.0 , 114.0 , 22.5 , 15:41

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 68.5 °F R.H.: 39.5 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHone
PHOTO NOs. _____

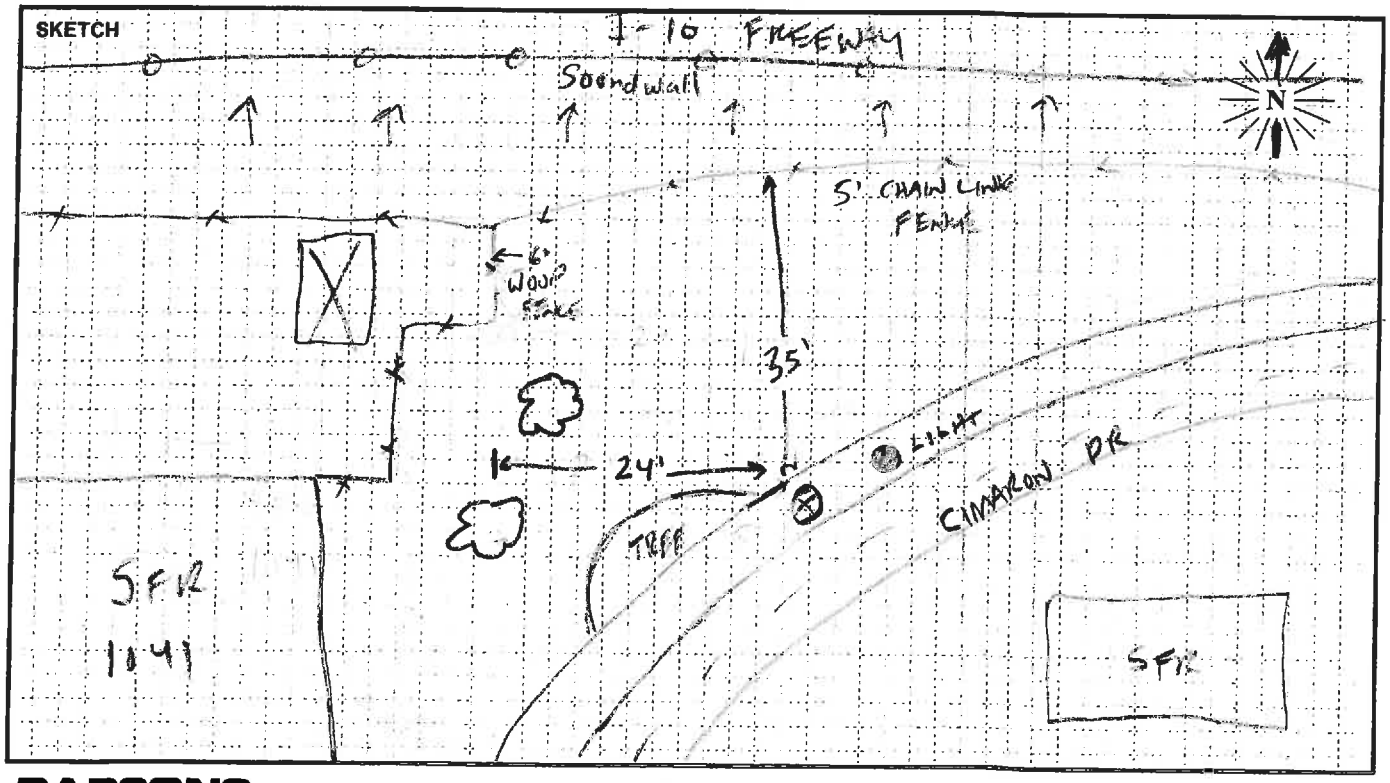
NOTES: TRAFFIC 111

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/2	15:20	15:40	59.8	60.4	61.6	62.9	63.7	64.6	66	68.8	63.2	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

J. Rodriguez
R. Uvenda

DATE: 12/3

MEASUREMENT ADDRESS: Condos 1200 E Highland

CITY: Redlands

☐ Single-Family ☐ Recreational
☒ Multi-Family ☐ Commercial
☐ School

SITE NO.: ST42

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2141

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114, 114.2, 22.4, 11:53
After 114, 114.1, 22.4, 12:24

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

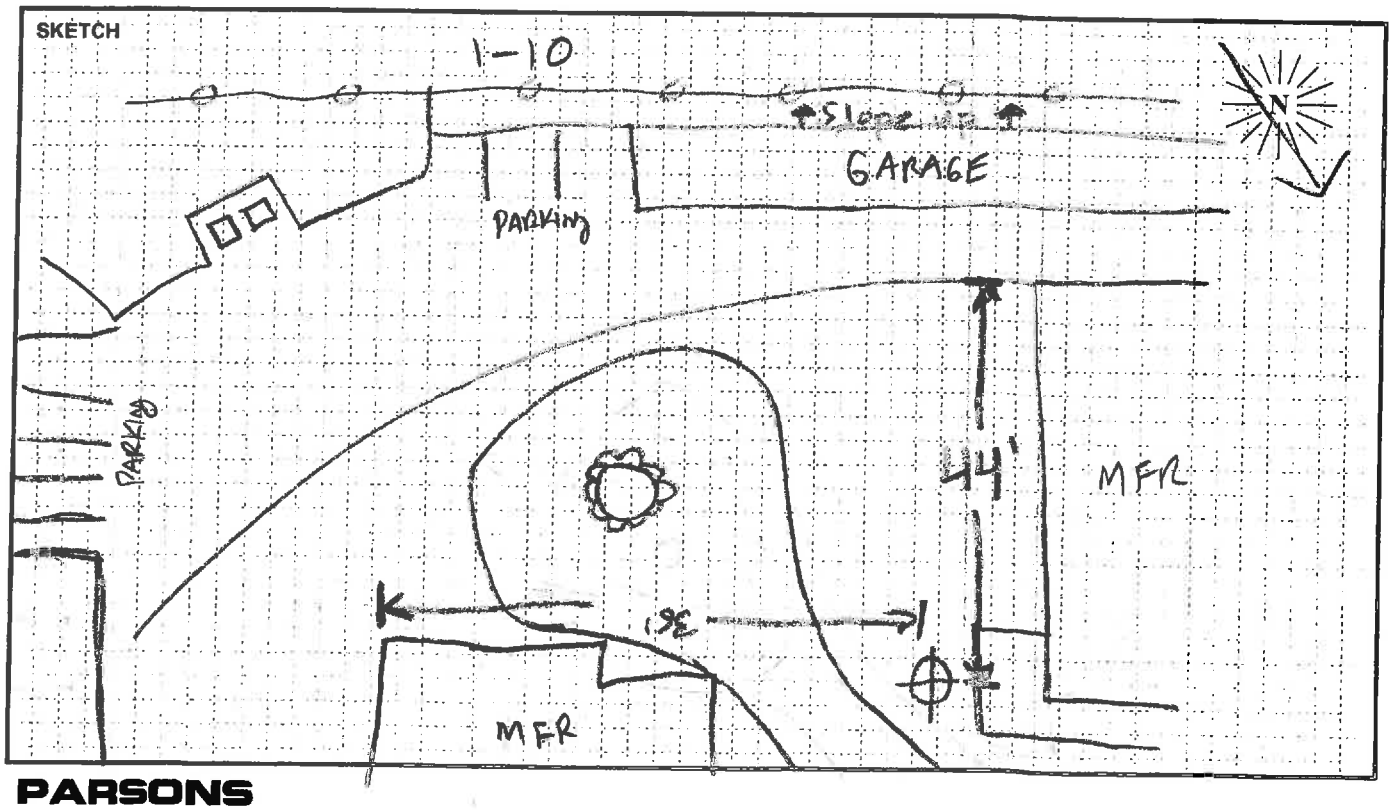
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 70.3 °F R.H.: 35.9 %
WIND SPEED: 0.7 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA Ruben's Phone
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/3	12:00	12:20	57.3	59.9	62.1	64.9	65.7	66.7	68.7	70.8	64.5	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

J. Rodriguez
E. Urenda

DATE: 12/3

MEASUREMENT ADDRESS: El Carmelo Retreat Home

CITY: Redlands

☐ Single-Family ☒ Recreational
☐ Multi-Family ☐ Commercial
☐ School

SITE NO.: ST 4/3

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2141

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114, 114.1, 22.4 11:08
After 114, 114.3, 22.4 11:40

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

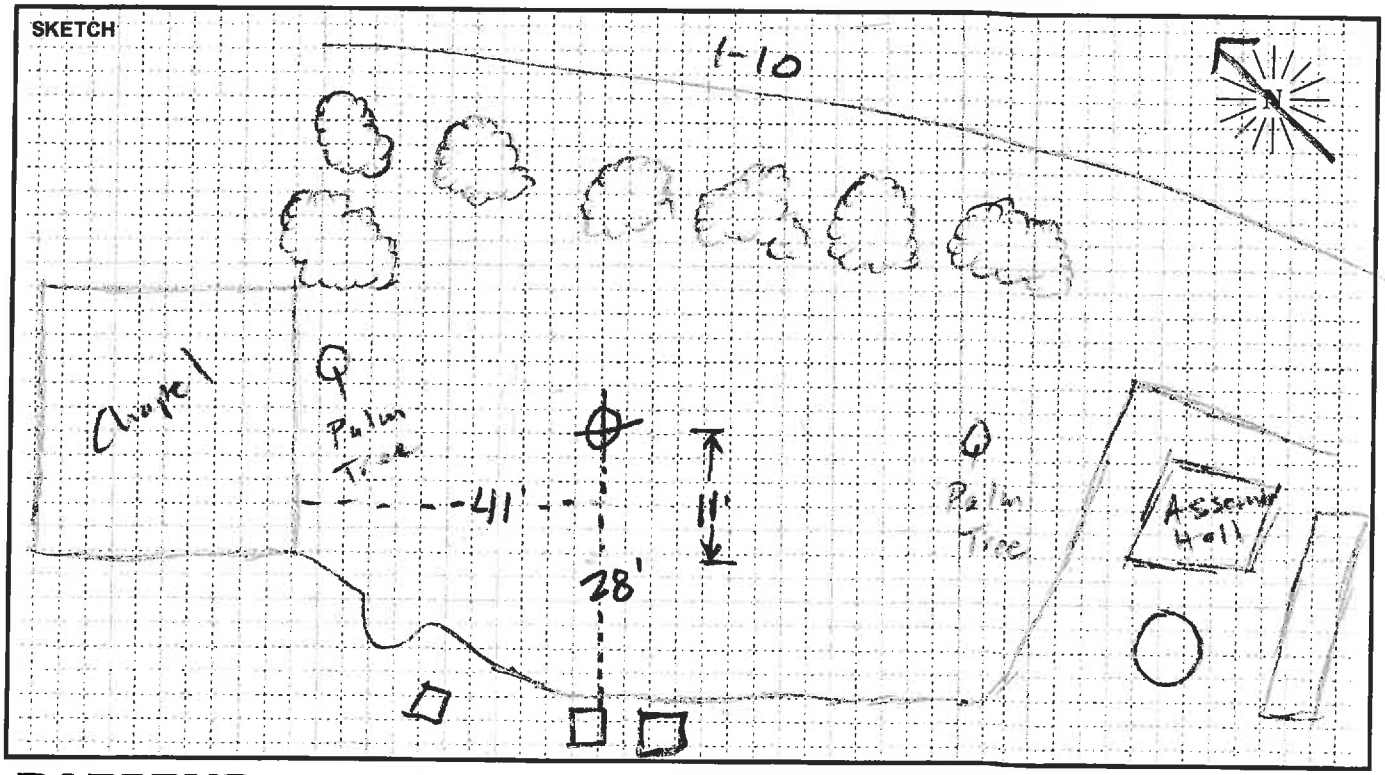
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 63.3 °F R.H.: 43.8%
WIND SPEED: 1-1 MPH
TOWARD (DIR): _____
SKIES: clear
CAMERA Ruben's Phone
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/3	11:20	11:40	55.8	56.4	58	60.2	61.4	62.5	64.8	66.4	60.6	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | P. Ortenzo | DATE: 12/5/13

MEASUREMENT ADDRESS: 1312 Crestview Rd | CITY: Redlands | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST44

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2141

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 3129
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 22.4 / 9:55
After 114.0 / 114.0 / 22.4 / 10:25

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

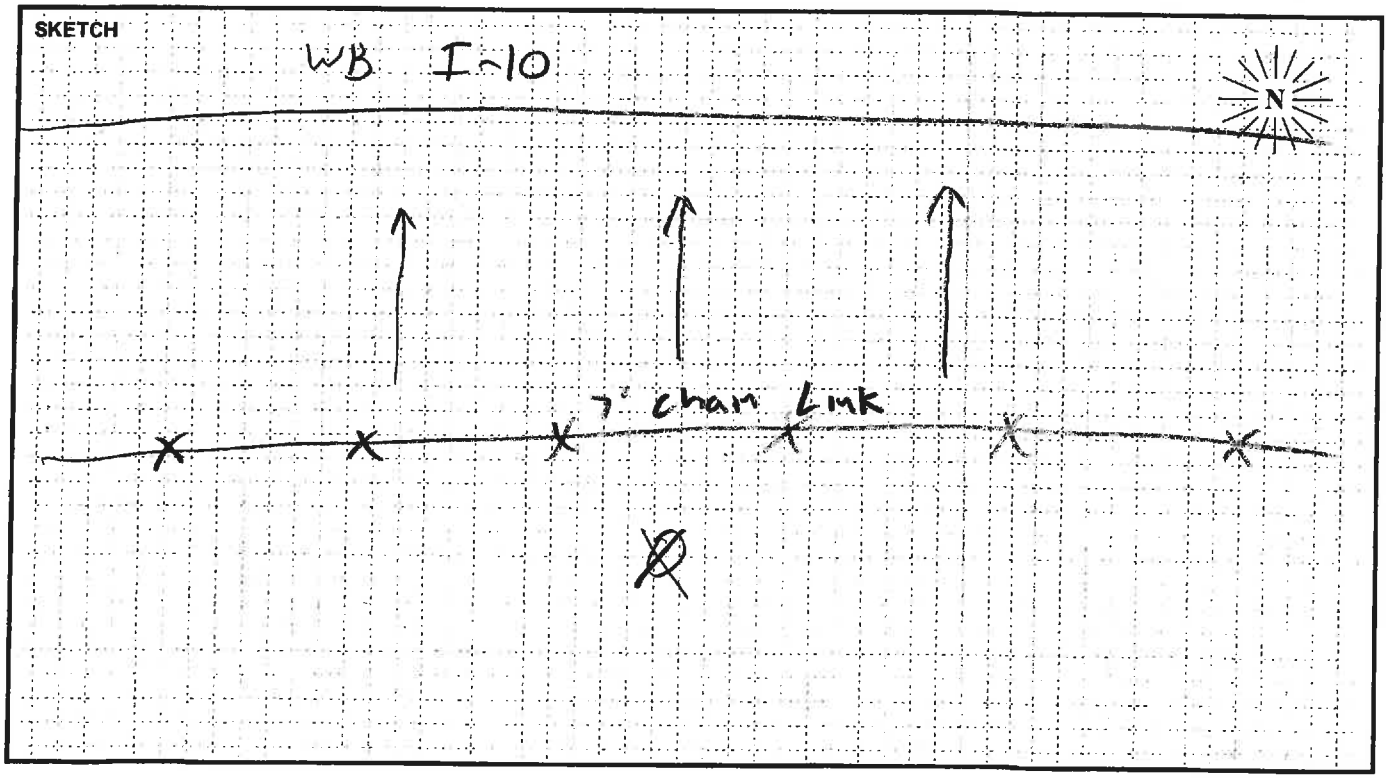
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 64 °F R.H.: 34 %
WIND SPEED: 1.6 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA Robert Phone
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/3	10:00	10:20	73.7	74.5	76.2	78.2	79.3	80.3	81.9		78.5	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	S. Rodriguez	DATE: 12/3/13
MEASUREMENT ADDRESS: 1445 FORD ST.	CITY: Redlands	☐ Single-Family ☐ Multi-Family ☐ School ☒ Recreational ☐ Commercial — SITE NO.: ST45

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0554

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☐ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3791

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114, 114.1, 22.4, 14:02
After 114, 114, 22.4, 14:37

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

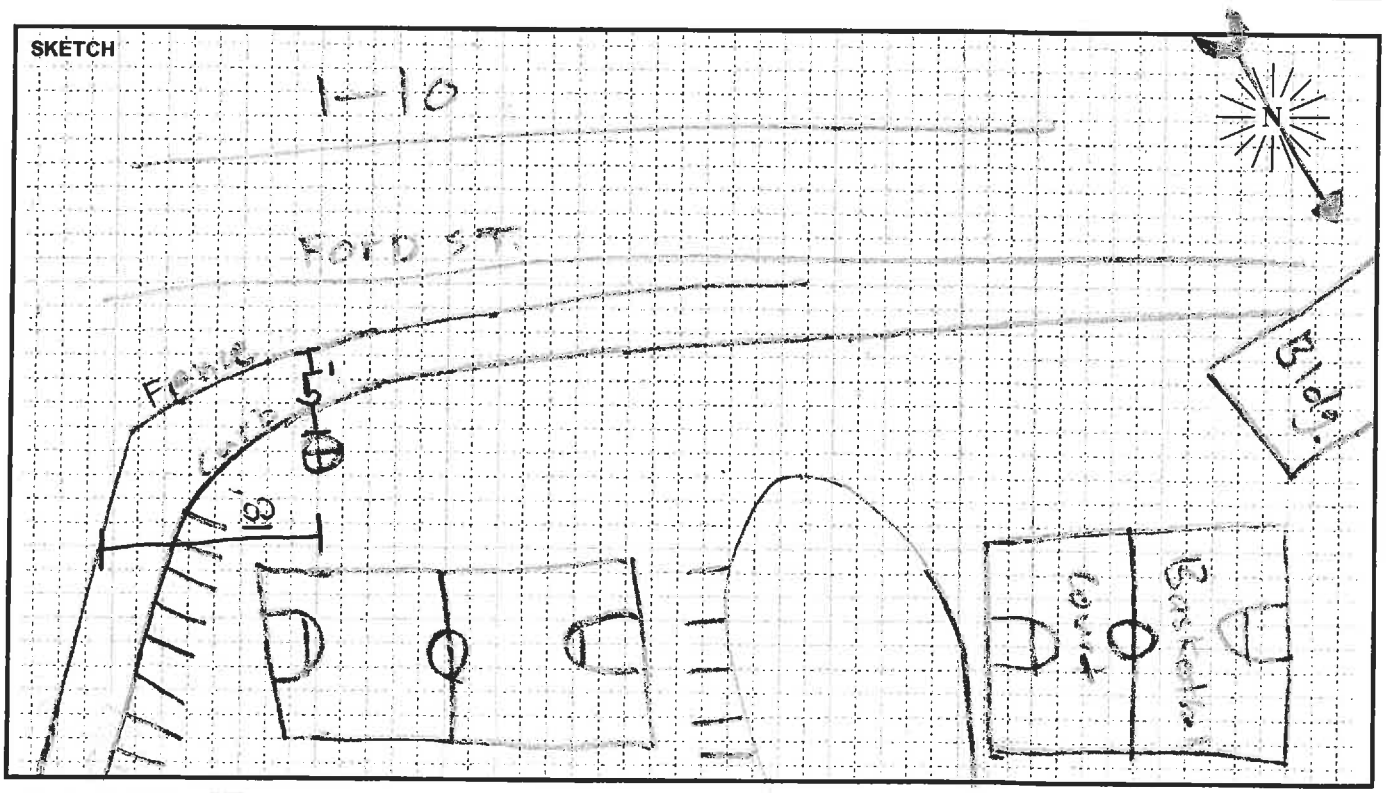
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 66.3 °F R.H.: 41.7 %
WIND SPEED: 1.4 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA Julio's Phone
PHOTO NOs. _____

NOTES: Location is above I-10.
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/3	14:01	14:21	68.8	70.1	71.4	73.1	73.9	74.9	76	79.9	73.3	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOT EXPRESS		ENGINEER: R. UREÑA	DATE: 3/3/15
MEASUREMENT ADDRESS: 1378 PATRICIA DR	CITY: REDLANDS	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST46/CA

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 1659

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☑ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 337

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-902 ☐ _____
SERIAL #: 2330

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2479
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 , 114.0 , 0.1 , 12:35
After 114.1 , 113.8 , 0.1 , 1:06

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☑ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

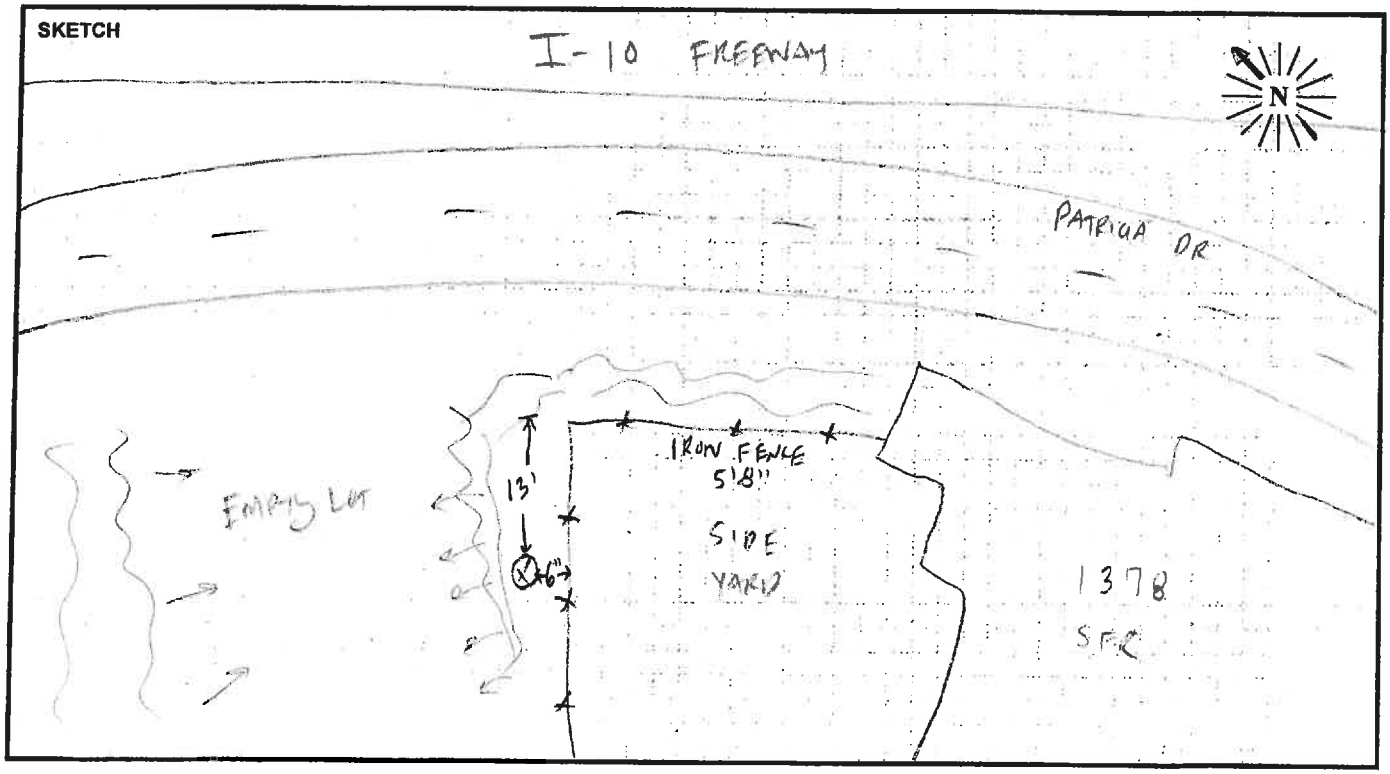
NOTES:
SYSTEM PWR: ☑ BAT ☐ AC
(observations at start of measurement)
TEMP: 68.2 °F R.H.: 43.3 %
WIND SPEED: 0.8 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☒ Video ☑ Radar
Counts (AT / MT / HT)
WB Patricia Dr: 7 / 1 / 0
EB Patricia Dr: 5 / 0 / 0

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
3/3	12:40	1:00	59.4		63.6	66.1		68.4	70.3	71.0	66.4	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

J. Rodriguez, R. Uconda — DATE: 12/4

MEASUREMENT ADDRESS: Trinity Church, 1551 Reservoir Rd — CITY: Redlands

☐ Single-Family ☒ Recreational ☐ Multi-Family ☐ Commercial ☐ School — SITE NO.: ST47

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP:
☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR:
☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.3, 22.4, 11:15
After 114.0, 114.1, 22.4, 11:41

METER SETTINGS:
☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

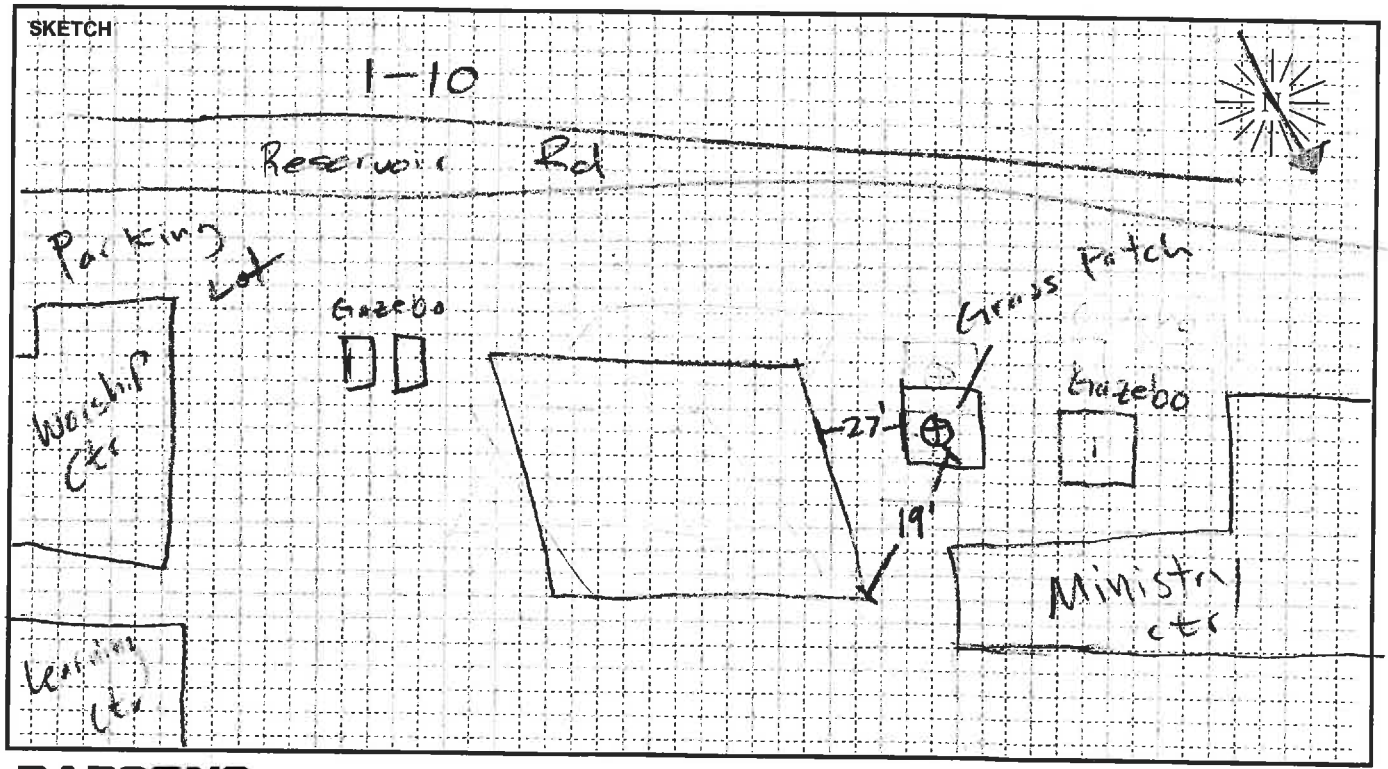
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 60.4 °F R.H.: 27.8 %
WIND SPEED: 1.1 MPH
TOWARD (DIR): _____
SKIES: Clear,
CAMERA Ruben's Phone.
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts: AT MT HT

MEAS. TYPE:
☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/4	11:20	11:40	60.6	61.5	63.2	65.3	66.4	67.5	69.3	71.2	65.6	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

J. Rodriguez
A. Uranga

DATE: 12/4

MEASUREMENT ADDRESS: 825 Buckingham Dr.

CITY: Redlands

☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial

SITE NO.: ST49

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

SERIAL #: 0555

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN

SERIAL #: 2141

PRE AMP:
☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____

SERIAL #: 2771

CALIBRATOR:
☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 3127

Freq, Hz.
☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.7, 22.3, 11:56
After 114.0 114.2, 22.4, 12:21

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

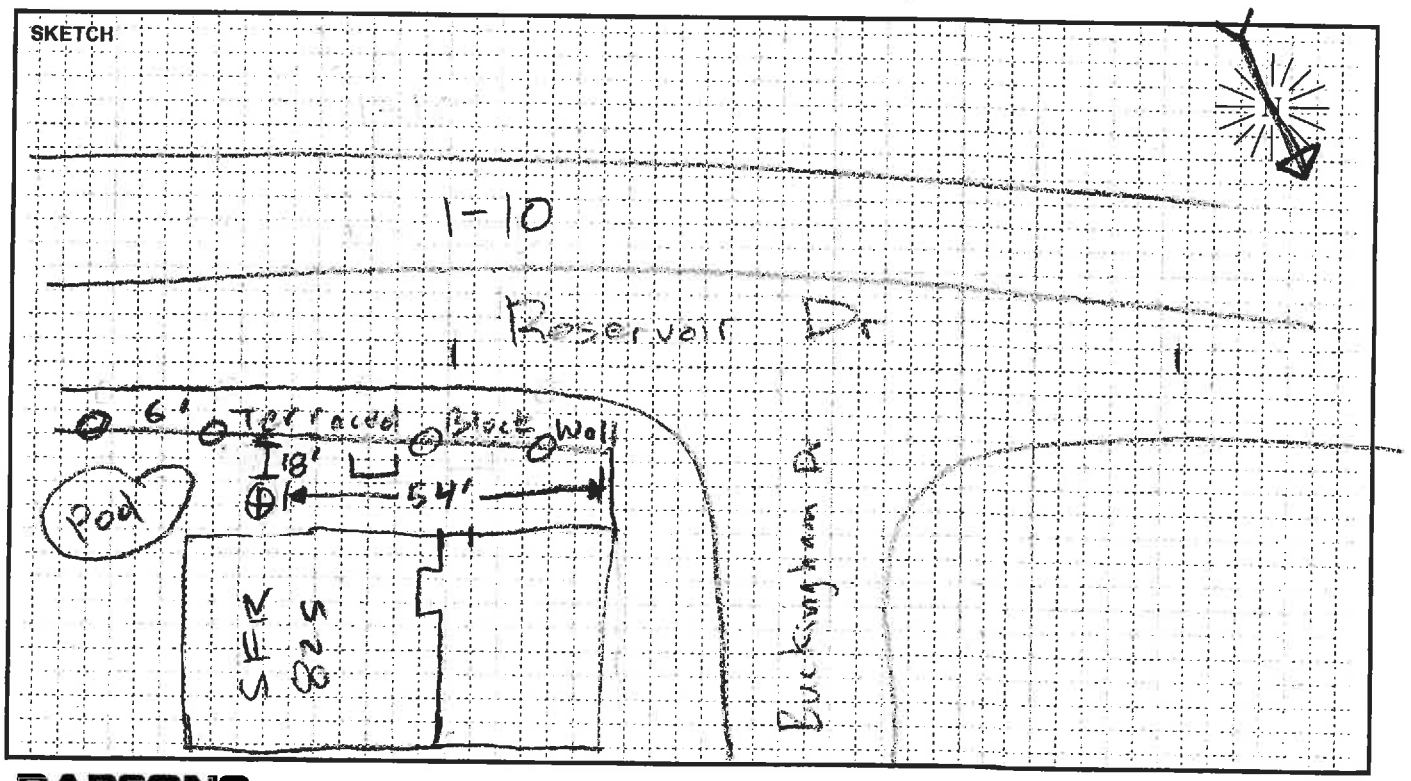
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 64.1 °F R.H.: 24.1 %
WIND SPEED: 0.0 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA Ruben's Phone
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/4	12:00	12:20	53.8	54.3	56.1	58.5	59.5	60.3	65.5	70	58.8	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

J. Rodriguez, R. Urenda

DATE: 12/4

MEASUREMENT ADDRESS: 537 Golden West Dr

CITY: Redlands

☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial

SITE NO.: ST50

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2141

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114, 114.4, 22.4, 10:27
After 114, 114.4, 22.4, 11:01

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

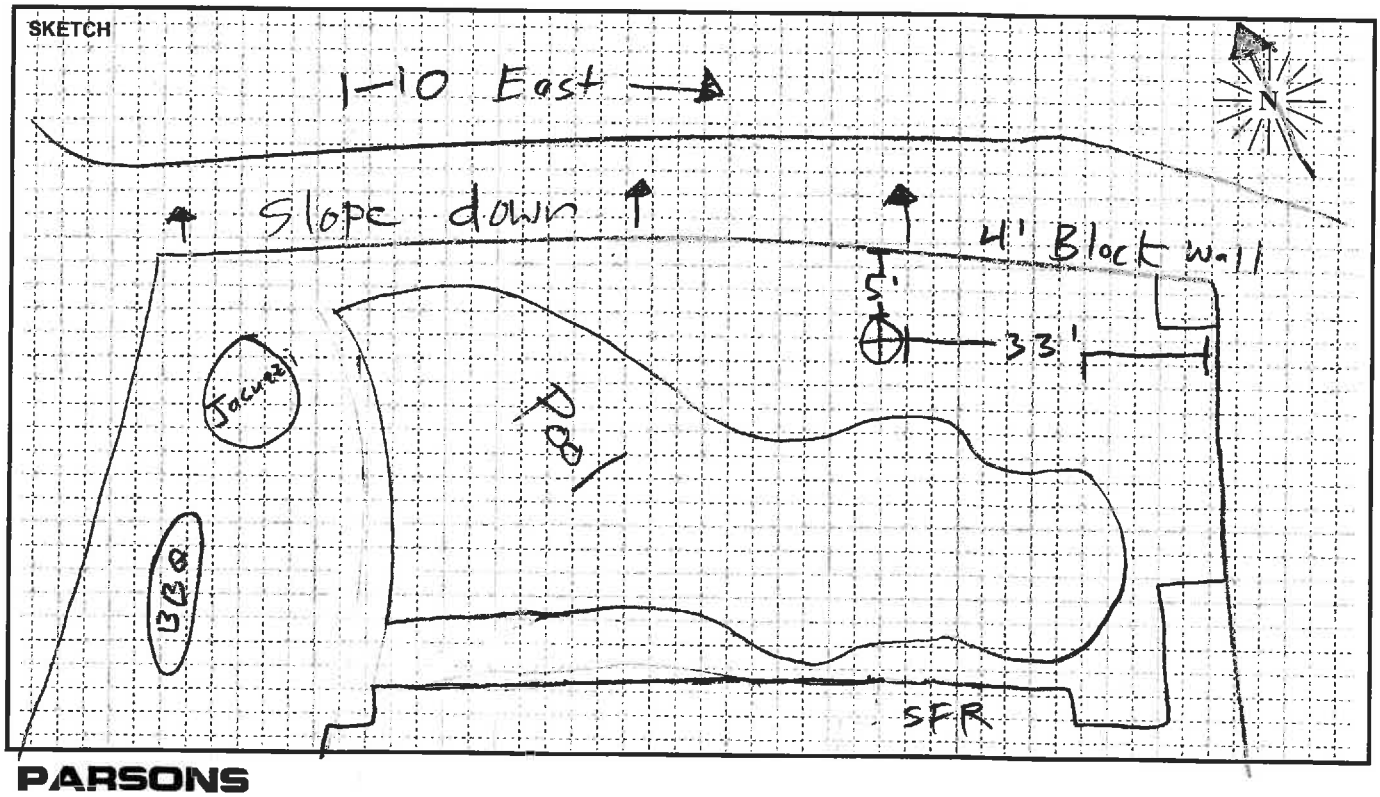
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 55.3 °F R.H.: 45.2 %
WIND SPEED: 2.0 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA Ruben's Phone
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/4	10:40	11:00	62.1	62.7	64.1	66	66.9	67.8	69.3	70.1	66.2	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. OREGEL	DATE: 10/14/13
MEASUREMENT ADDRESS: 635 ELAINE ST	CITY: Pomona	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: ST55

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____	☒ NON-POLAR ☐ POLARIZED ☑ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN	☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____	SYSTEM PWR: ☒ BAT ☐ AC
SERIAL #: 0128	SERIAL #: 1785	SERIAL #: 3095	(observations at start of measurement) TEMP: 85.5 °F R.H.: 20.1 % WIND SPEED: 0.9 MPH TOWARD (DIR): _____ SKIES: CLEAR CAMERA _____ PHOTO NOs. _____

CALIBRATOR:	Freq, Hz.	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480	☐ 250 ☐ 1000 ☐ 84 ☐ _____	Before 114.0 / 113.9 / 21.8 / 2:19 After 114.6 / 113.9 / 21.8 / 2:41

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:

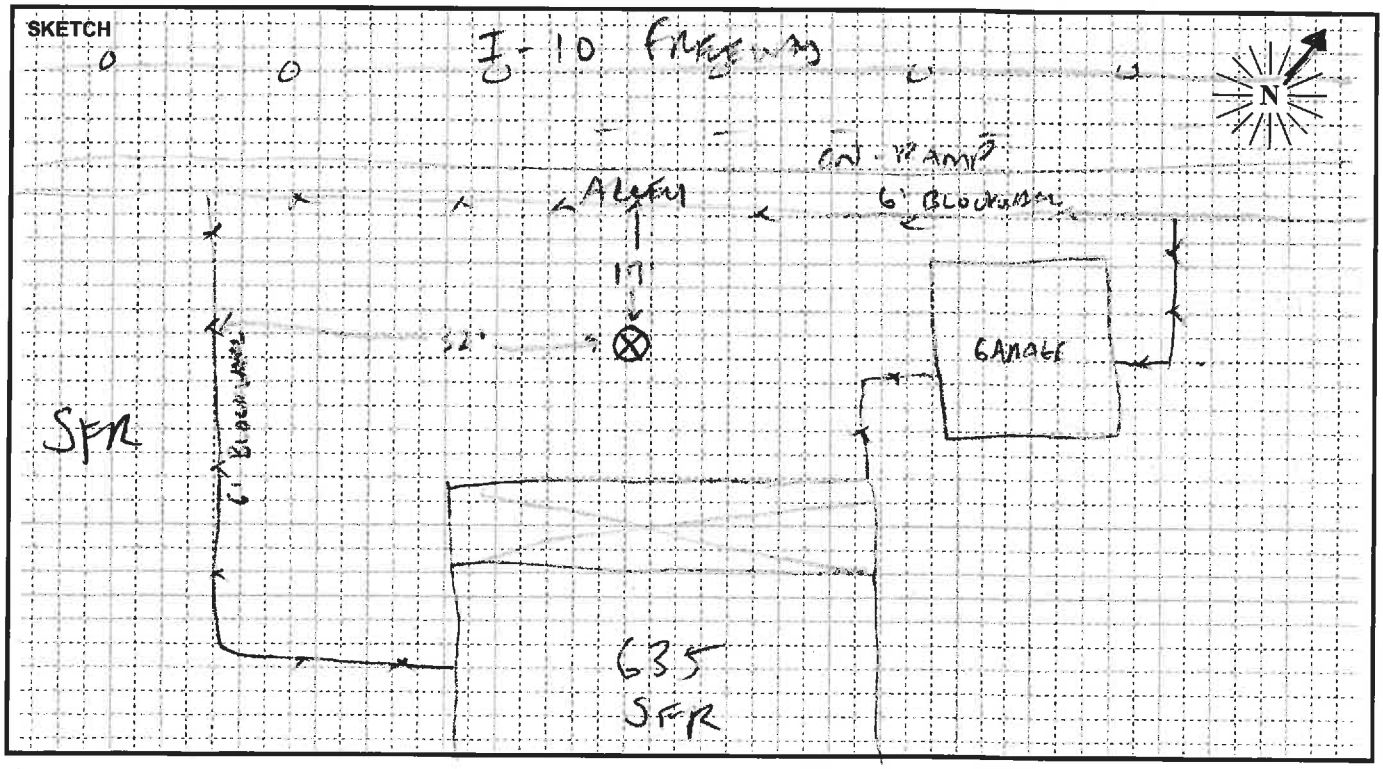
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/14	2:20	2:40	53.8	54.5	56	58.1	59.3	60.5	64.9	74.9	59.1	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE		ENGINEER: M. MEYER	DATE: 10/3/13
MEASUREMENT ADDRESS: 676 LA VERNE AVE	CITY: POMONA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST56

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☒ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: A3119

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☒ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 52820

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☒ LD-824 ☐ _____
SERIAL #: 3274

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____
S/N 10473
Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, -47.71, 15:05
After 114.0, 114.0, -47.71, 15:43

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

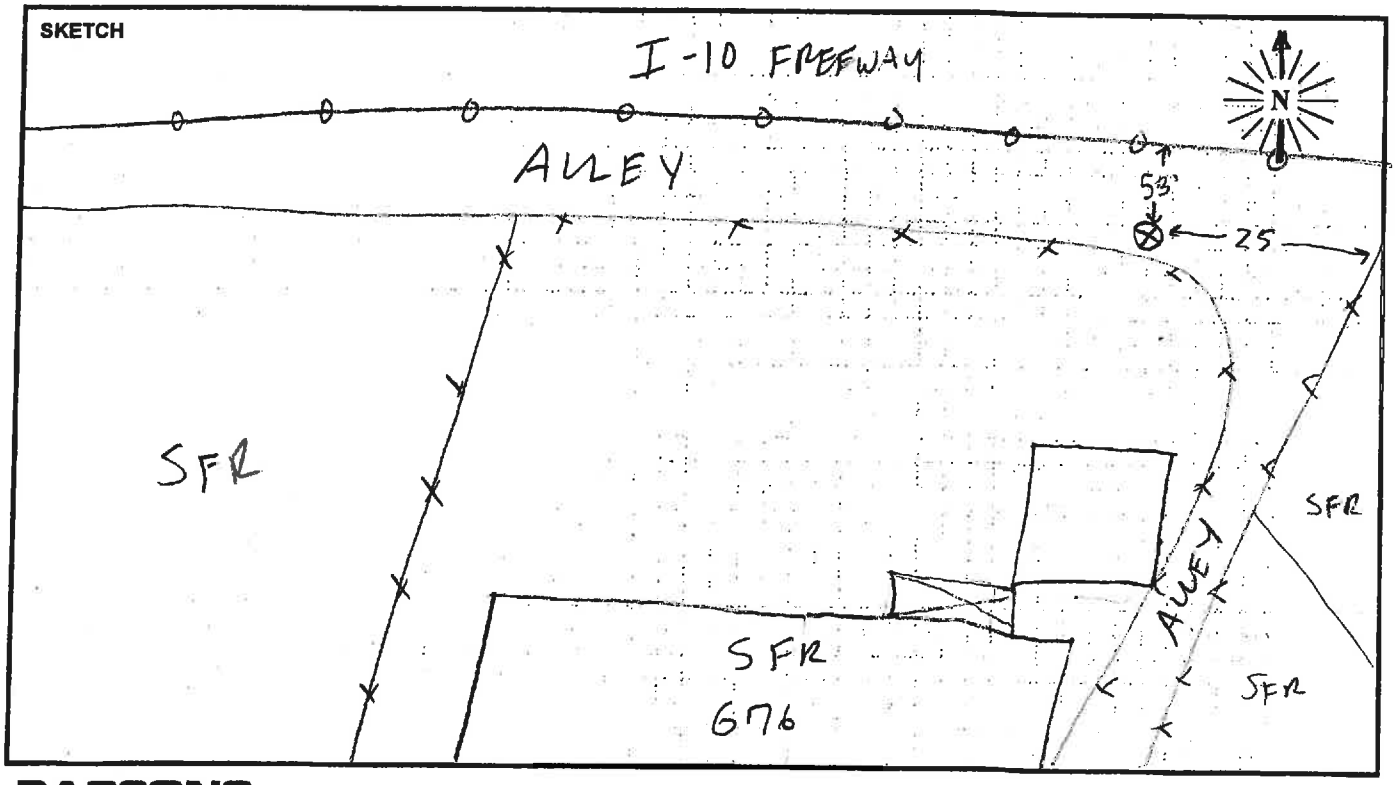
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 70 °F R.H.: 52 %
WIND SPEED: 1.6 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA MARTY PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/3	3:20	3:40	53.6							65.5	58.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOV		ENGINEER: OGDEN	DATE: 10/4/13
MEASUREMENT ADDRESS: 689 Elaine St.	CITY: Pomona	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: ST58

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820
☐ LD-824 ☐ LD-812
☒ B&K-2250 ☐ _____
SERIAL #: 2676029

MICROPHONE: ☒ WIND SCREEN
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☒ RANDOM
SERIAL #: 4189-2663101

PRE AMP:
☐ LD-900
☐ LD-828
☒ _____
SERIAL #: 10769

CALIBRATOR:
☐ LD CA250
☒ B&K 4231
S/N 2507137
Freq, Hz.
☐ 250
☒ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before _____ / 47.1 / _____ / 13:38
After _____ / 47.8 / _____ / 15:30

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 5 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

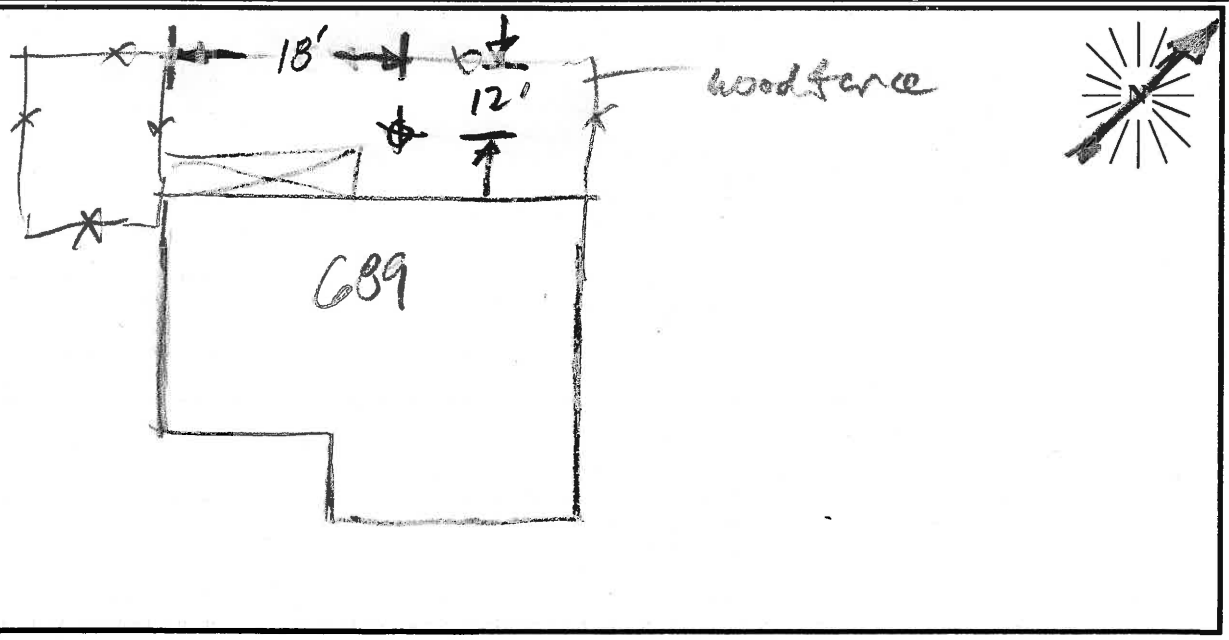
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 70 °F R.H.: 58 %
WIND SPEED: 1.6 MPH
TOWARD (DIR): _____
SKIES: Cloudy
CAMERA Jason PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/4	15:05	15:10	53.1	53.4	55.7	57.8		66.6	71.2	71.4	62.0	barking 1509
"	15:10	15:15	51.5	51.8	53.8	57.1		63.8	68.0	69.0	59.3	
"	15:15	15:20	52.2	52.4	54.3	57.3		65.5	69.4	70.1	61.3	
"	15:20	15:25	47.9	48.2	51.2	54.8		57.8	61.0	65.8	55.7	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		R. UREÑA	DATE: 12/11/13
MEASUREMENT ADDRESS: 795 BRIARWOOD LN	CITY: POMONA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST 59

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2029

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.5 / 22.2 / 13:26
After 114.0 / 114.6 / 22.2 / 14:01

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

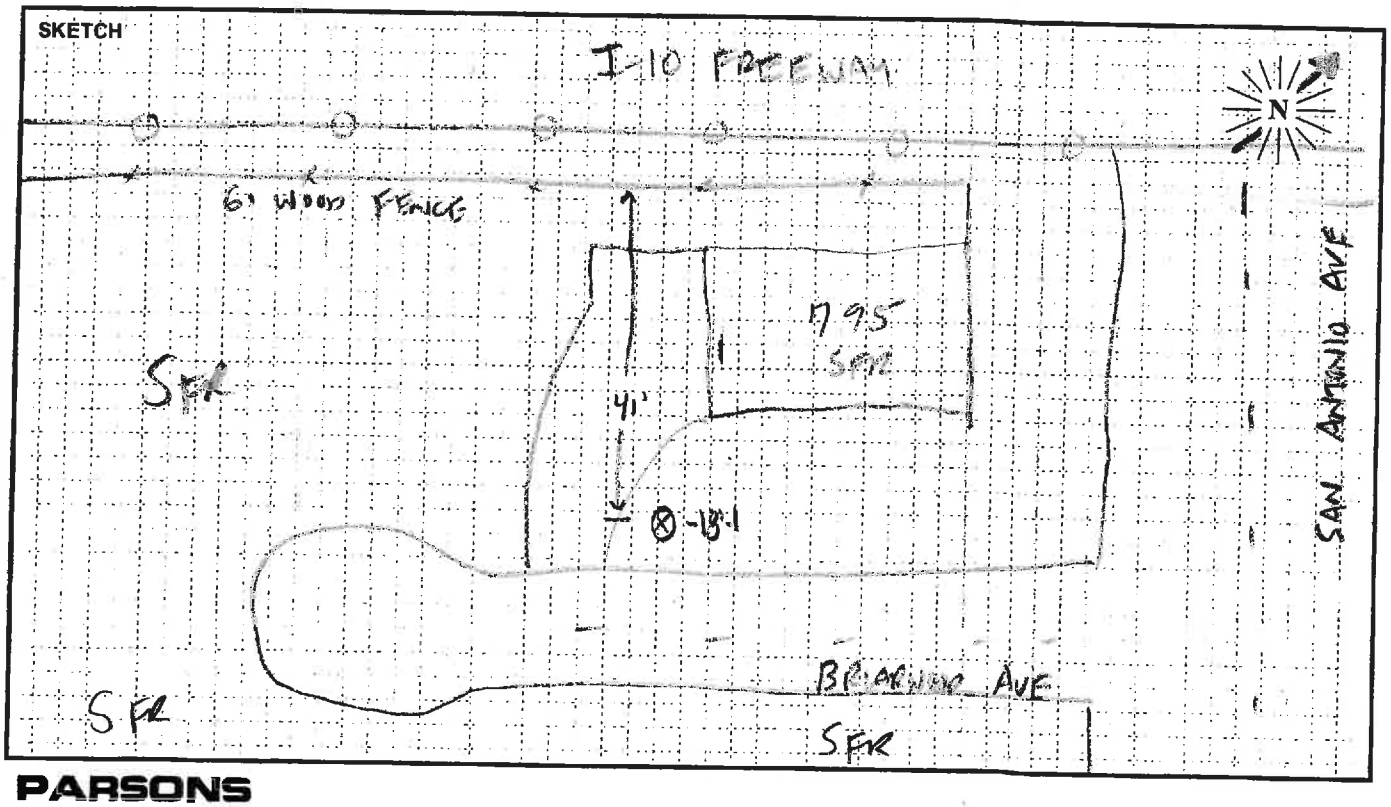
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 73.8 °F R.H.: 10.1 %
WIND SPEED: 1.1 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/11	13:40	14:00	54.7	55.3	56.9	59.4	60.9	61.9	64.3	67.4	59.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE		ENGINEER: M. MEYER	DATE: 10/3/13
MEASUREMENT ADDRESS: 778 LA VERNE AVE	CITY: POMONA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST 60

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☒ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: A 3119

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☒ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 52820

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☒ LD-824 ☐ _____
SERIAL #: 3274

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____ S/N 10473
Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, -40.7, 15:43
After 114.0, 113.9, -40.7, 16:22

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

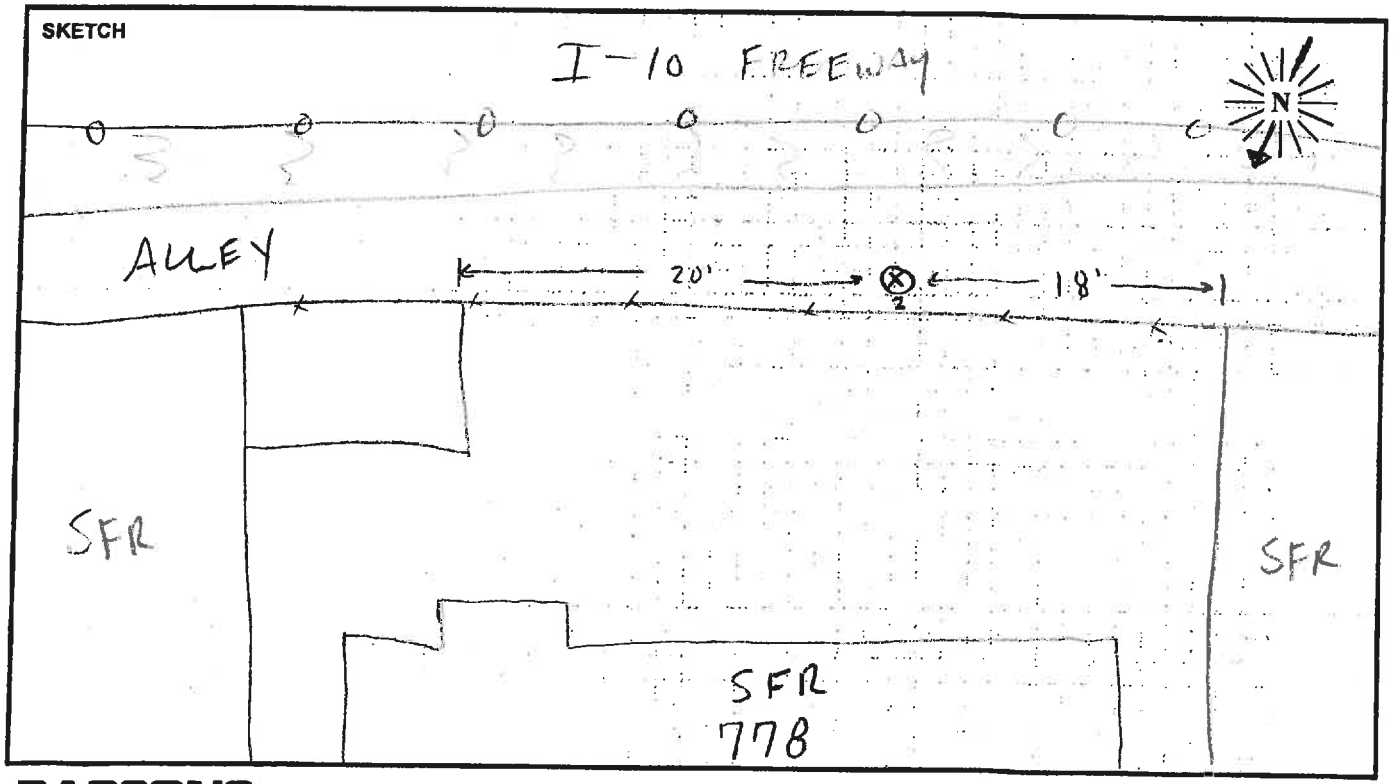
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 72 °F R.H.: 50 %
WIND SPEED: 1.6 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA MARTY PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/3	16:00	16:20	57.1							68.1	61.7	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. URENA		DATE: 12/11/13
MEASUREMENT ADDRESS: JAYCEE PARK	CITY: POMONA	☐ Single-Family ☐ Multi-Family ☐ School ☒ Recreational ☐ Commercial	SITE NO.: ST61

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2029

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 , 114.6 , 22.2 , 14:13
After 114.0 , 114.5 , 22.2 , 14:42

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 30 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

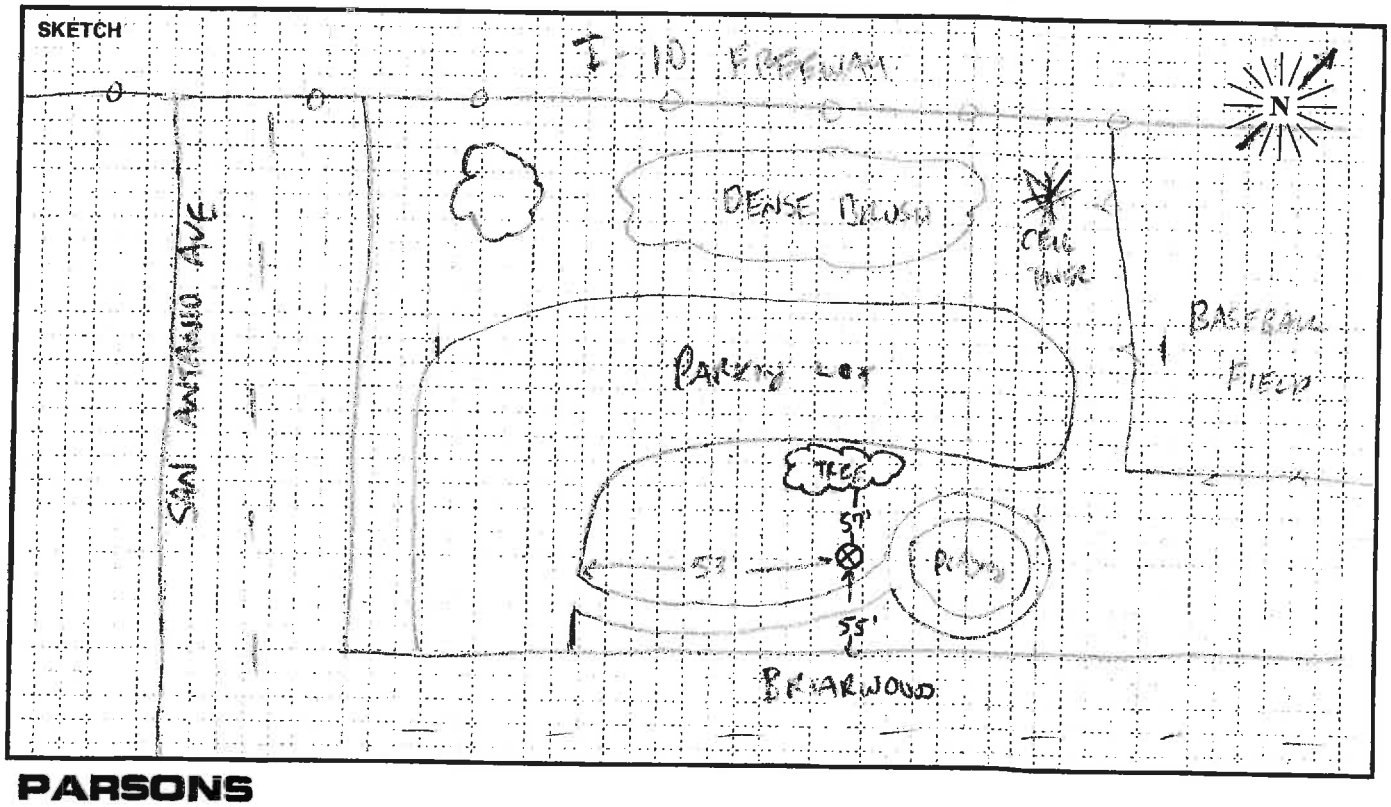
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 92 °F R.H.: 21 %
WIND SPEED: 0.7 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/11	14:20	14:40	56.3	56.4	57.9	59.9	60.7	61.6	64.7	78.9	61	AMBULANCE 14:30

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE		ENGINEER: [redacted] G Berg	DATE: [redacted] 10/4/13
MEASUREMENT ADDRESS: 2108 Crystal Pl	CITY: Pomona	☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST62

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☒ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 3119

MICROPHONE: ☐ NON-POLAR ☒ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 52820

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☒ LD-824 ☐ _____
SERIAL #: 3274

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____ S/N 10473
Freq, Hz. ☐ 250 ☒ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, -47.7, 10:19
After 114.0, 114.0, —, 15:07

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☑ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

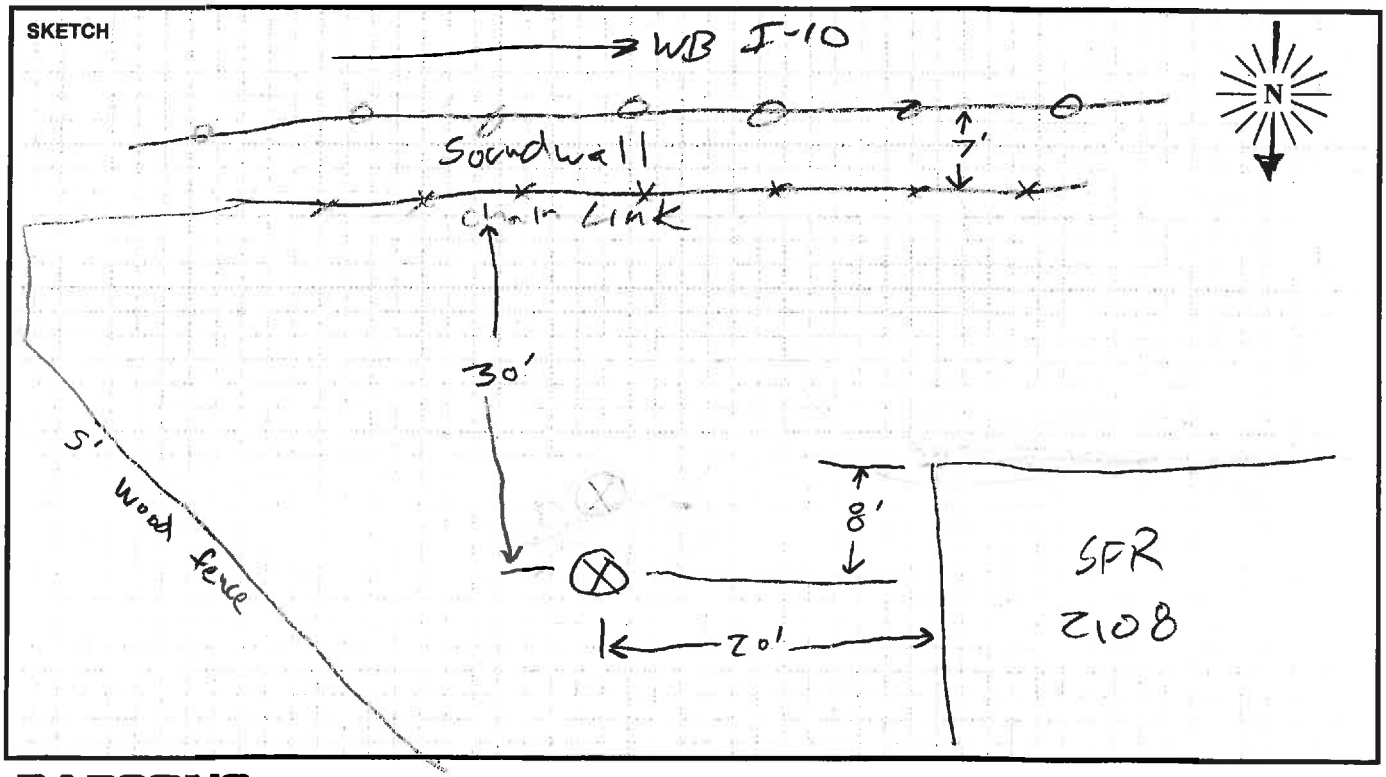
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 95 °F R.H.: 15 %
WIND SPEED: 1 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA _____
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/4	14:40	15:00	57.9	58.7	60.3	62.0	63.0	63.9	65.7	67.8	62.3	Store 2

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | BRYAN | DATE: 10/14/13

MEASUREMENT ADDRESS: 1187 TERRY VIEW | CITY: Pomona, CA | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST63

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2141

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 9127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 22.1 / 11:19
After 114.0 / 114.0 / 22.1 / 11:41

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

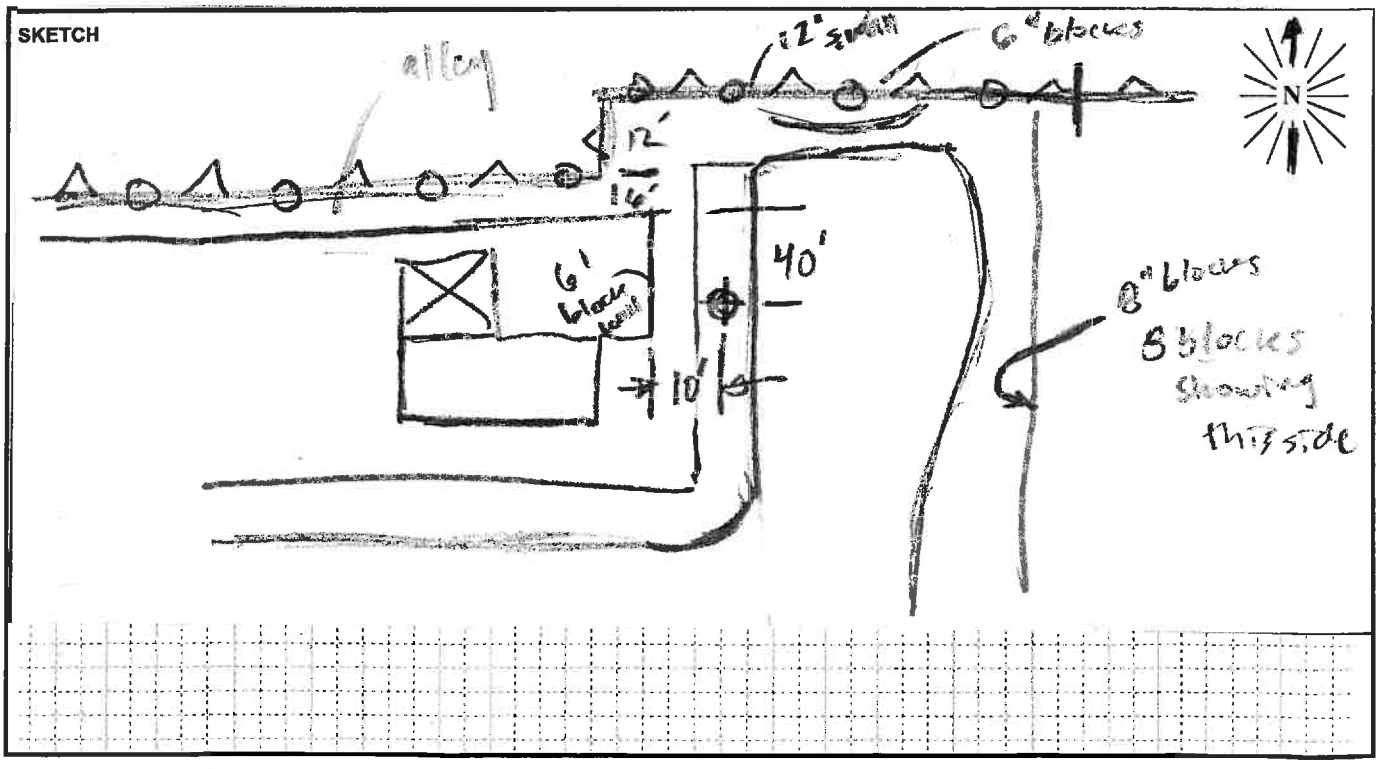
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 72 °F R.H.: 20 %
WIND SPEED: 1, 6 MPH
TOWARD (DIR): _____
SKIES: SUNNY
CAMERA BRYAN IPHONE
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/14	11:20	11:40	62.3	63.5	65.2	67.0	67.8	68.6	69.9	71.8	67.1	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. J PEREZ | DATE: 10/14/13

MEASUREMENT ADDRESS: 1188 TERRVIEW AVE | CITY: Pomona | ☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST64

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 21.8 / 11:19
After 114.0 / 114.0 / 21.8 / 13:15

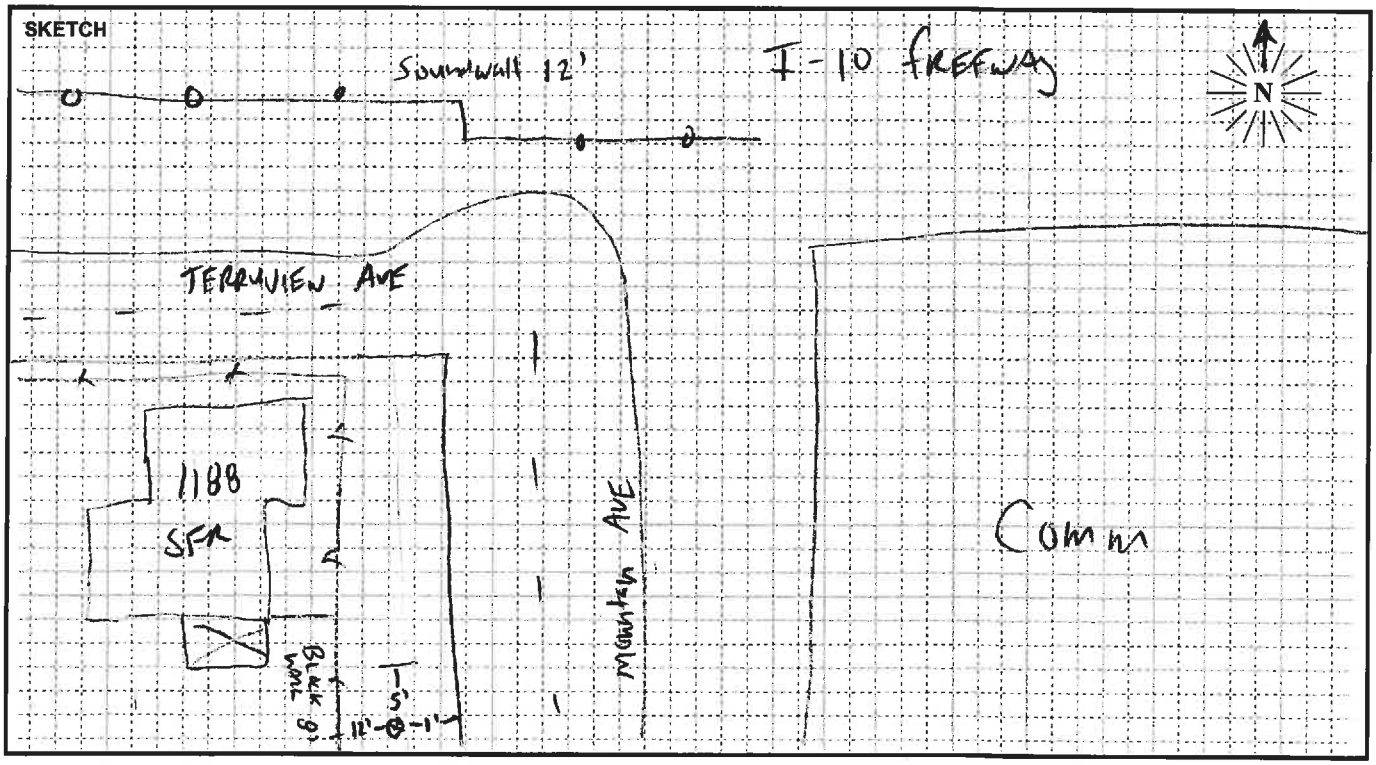
METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 82.4 °F R.H.: 45.8 %
WIND SPEED: 0.9 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: TRAFFIC LIT
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT
MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/14	11:20	11:40	54.5	55.8	57.8	59.7	60.6	61.6	66.2	70.2	60.1	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE	ENGINEER: M. MEYER	DATE: 10/3/13
MEASUREMENT ADDRESS: 690 San Jose Ave	CITY: Claremont	☐ Single-Family ☐ Recreational ☒ Multi-Family ☐ Commercial ☐ School — SITE NO.: ST 65

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 40555

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 1763

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.6 / .21 / 10:53
After 114.0 / 113.8 / .21 / 15:24

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

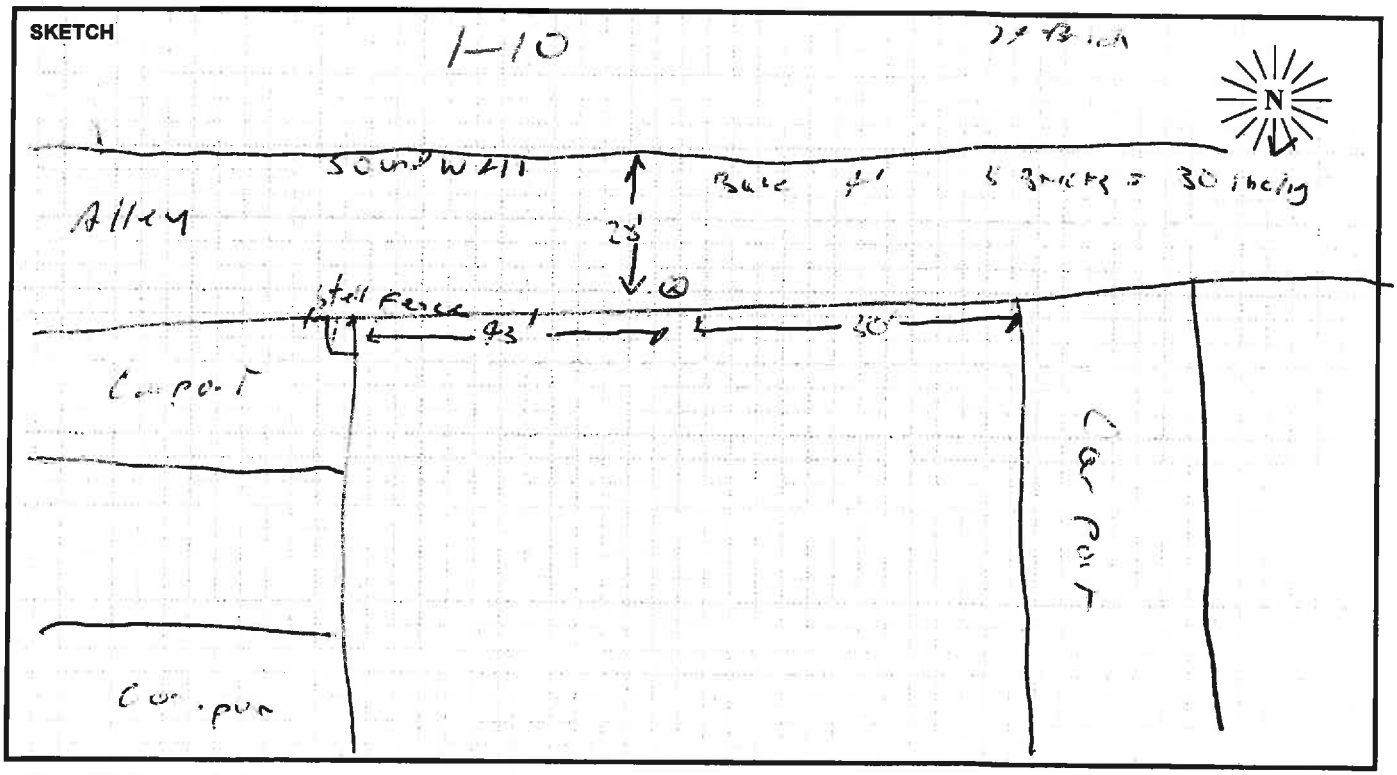
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84 °F R.H.: 25 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA _____
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/1	15:00	15:20	64.7	65.1	66.1	67.6	68.7	69.0	72.7	73.8	67.2	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | BRYAN | DATE: 10/4/13

MEASUREMENT ADDRESS: 662 W. San Bernardino Avenue | CITY: Lacemont, CA | ☐ Single-Family ☐ Multi-Family ☐ School ☒ Recreational ☐ Commercial | SITE NO.: ST66

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2141

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 22.1, 11:41
After 114.0, 113.8, 22.1, 12:22

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

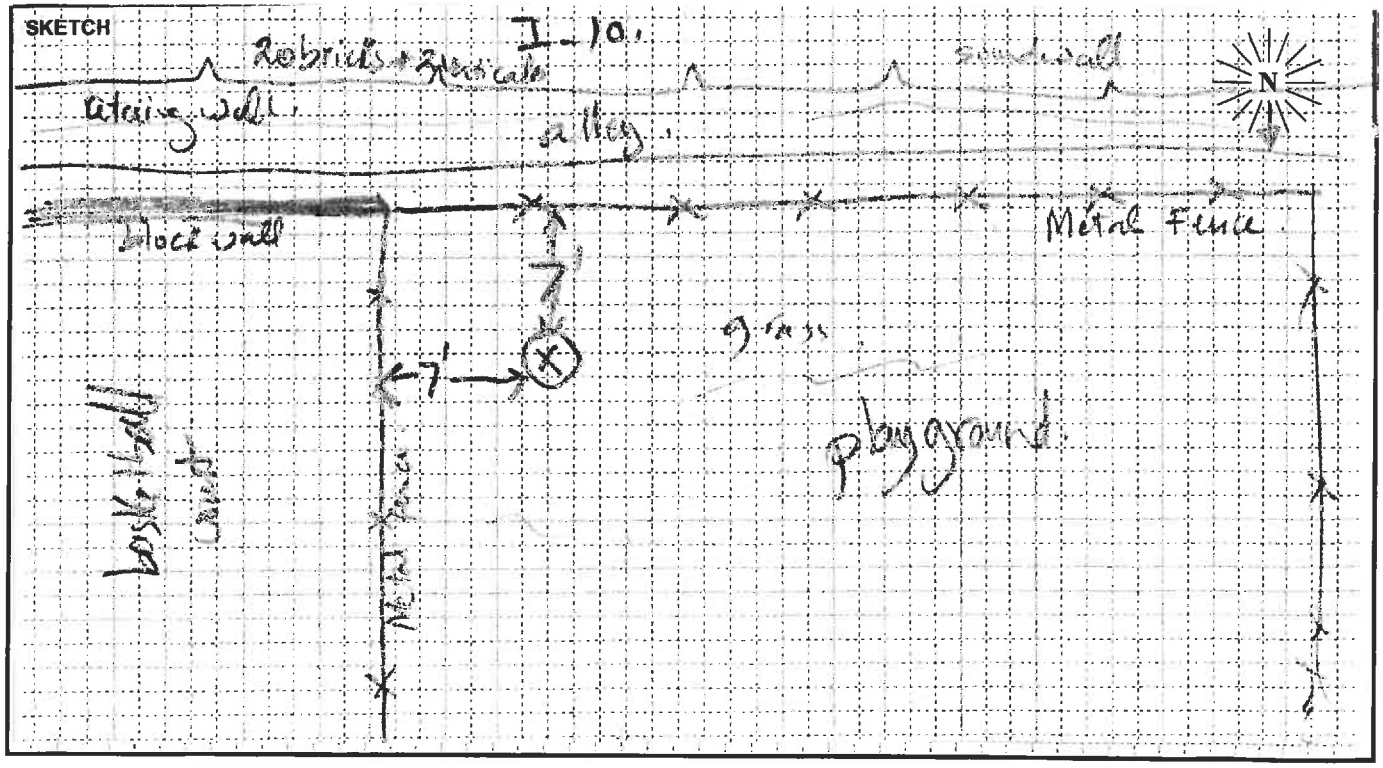
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 72 °F R.H.: 20 %
WIND SPEED: 1.6 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BJ Phone
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/4	12:00	12:20	65.2	66.1	67.3	68.8	69.6	70.3	71.3	72.2	68.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: B. Jarjoura	DATE: 10/4/13
MEASUREMENT ADDRESS: 512 W. San Jose Ave (Claremont Cottages)	CITY: Claremont	☐ Single-Family ☐ Recreational ☒ Multi-Family ☐ Commercial ☐ School — SITE NO.: ST67

SOUND LEVEL METER: ☑ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☒ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.8 / 12.8 / 15:01
After 114.0 / 113.8 / 12.8 / 15:41

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 1 - MINUTE ☐ L_N PERCENTILE VALUES

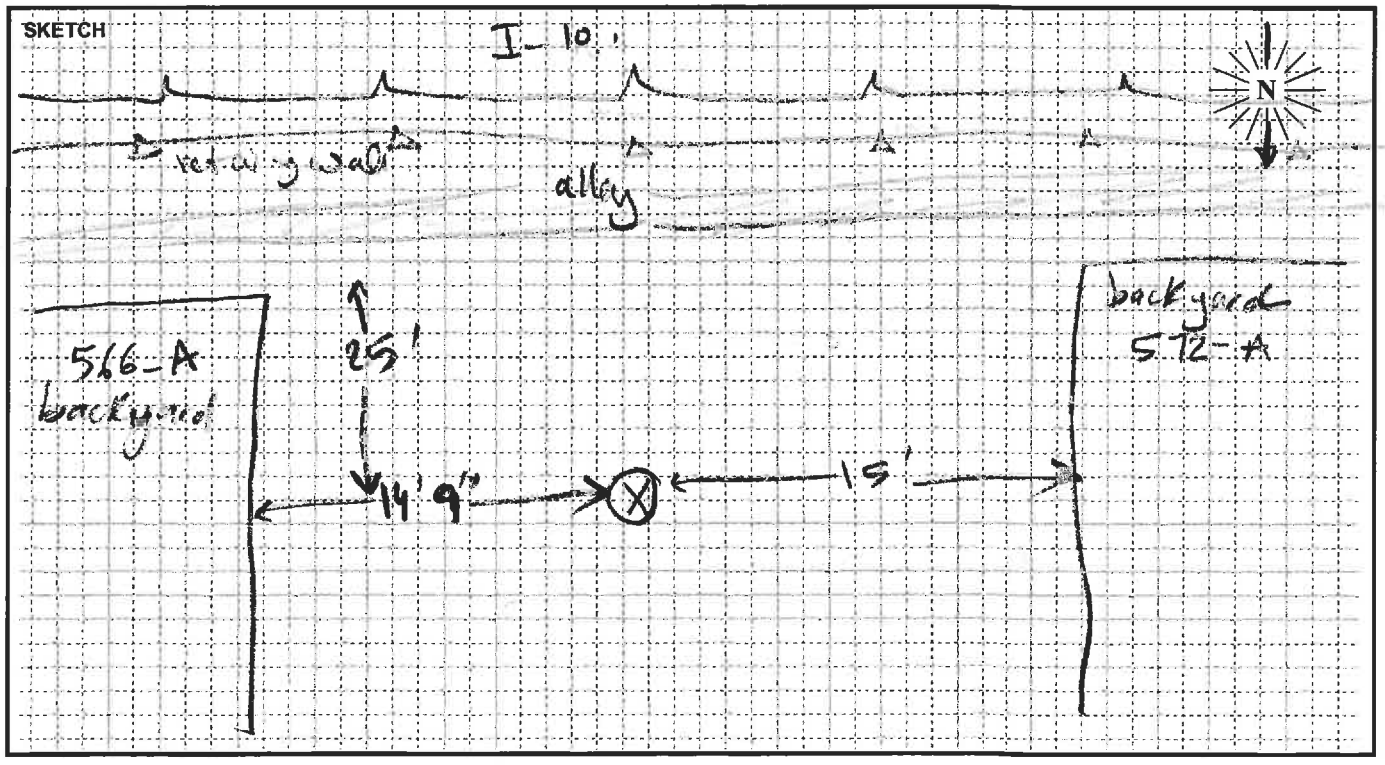
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84 °F R.H.: 25 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BJ. iphone
PHOTO NOs. 53-57

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/4/13	15:20	15:40	59.5	61.2	62.5	64.1	65.1	66.1	68.6	76.2	64.5	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: B. Jarjoura	DATE: 10/04/13
MEASUREMENT ADDRESS: 721 S. Indian Hill Blvd (Howard Johnson)	CITY: Claremont	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial Hotel — SITE NO.: ST 68

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☒ RANDOM ☒ WIND SCREEN
SERIAL #: 214

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 22.8 / 14:28
After 114.0 / 113.8 / 22.8 / 15:01

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

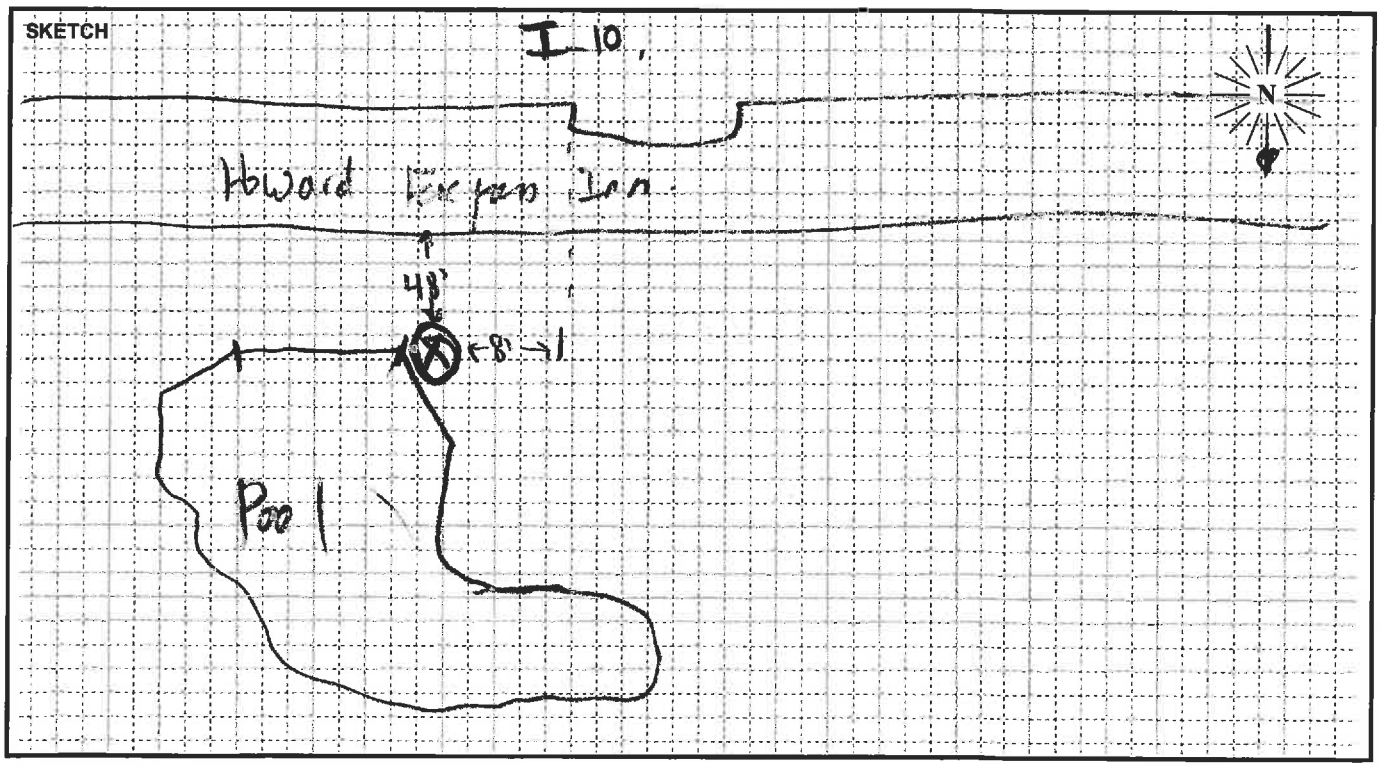
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84 °F R.H.: 25 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA B.J. iphone
PHOTO NOs. 47 - 52

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/04/	2:40	3:00	55.3	55.9	57.3	59.1	59.9	60.8	62.8	65.5	59.3	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: B. Jarjoura	DATE: 10/04/13
MEASUREMENT ADDRESS: 736 S. Indian Hill Blvd (Claremont lodge)	CITY: Claremont	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial Hotel — SITE NO.: ST69

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☐ 1/2-INCH ☐ FREEFIELD ☒ 1-INCH ☒ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 22.8 / 13:33
After 114 / 114.0 / 22.8 / 14:01

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

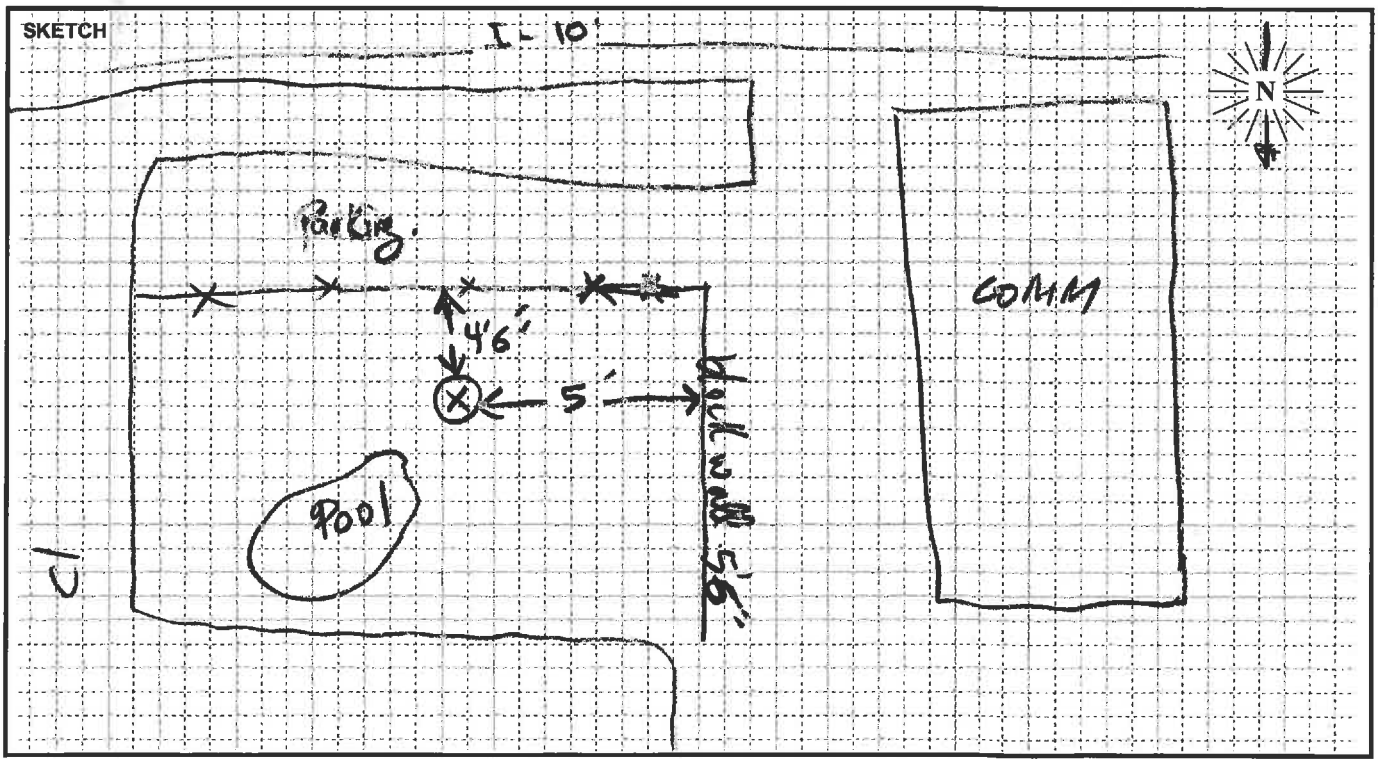
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 82 °F R.H.: 23 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BJ iphone
PHOTO NOs. 42-46

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/4/13	1:40	2:00	59.4	60.0	61.0	62.5	63.5	64.5	67.3	72.3	62.9	Truck passed 1:55, 1:56

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE		ENGINEER: URENDA	DATE: ~~10/2/13~~ 10/4/13
MEASUREMENT ADDRESS: HOTEL CLAREMONT	CITY: CLAREMONT	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: ST 70

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 21.0 / 9:15 am
After 114.0 / 114.0 / 21.0 / 11:47

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

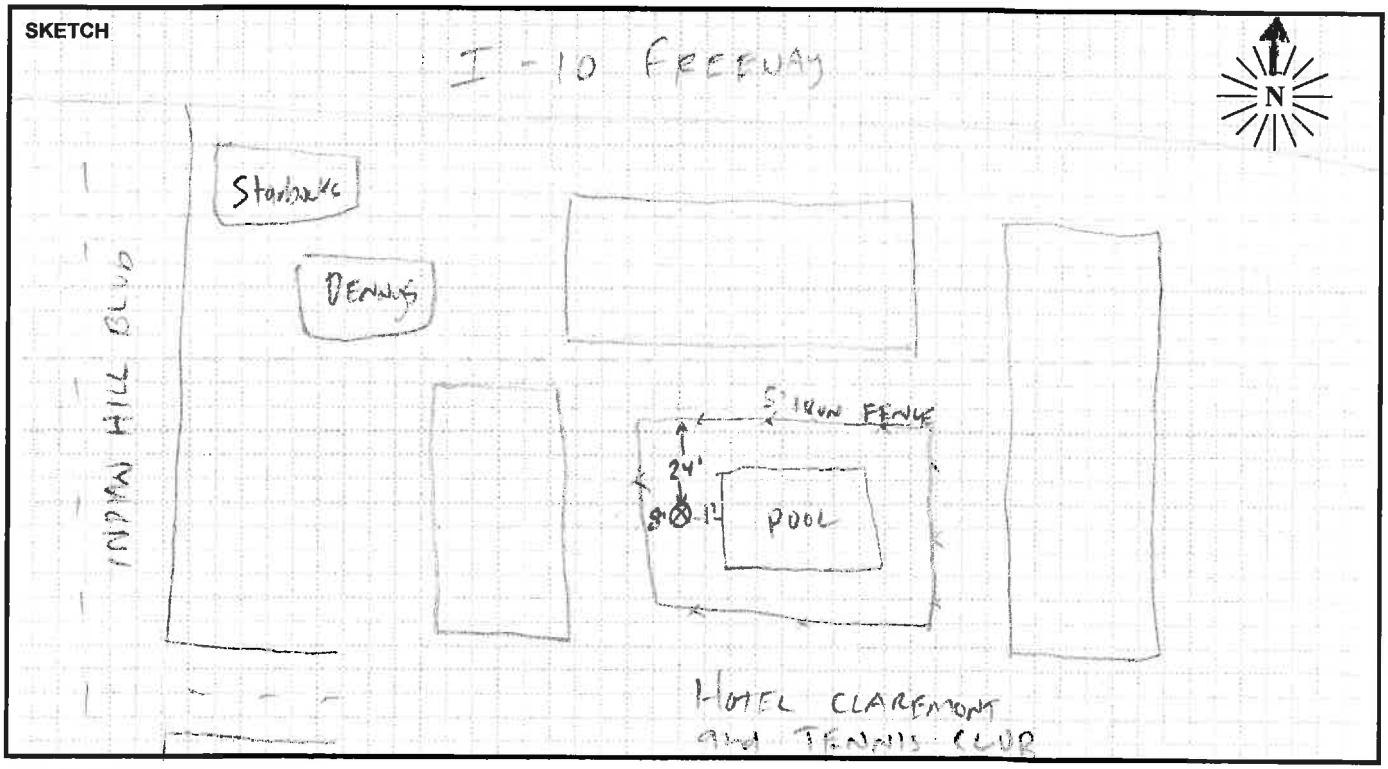
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 72.4 °F R.H.: 53.9 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUDEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/4	9:20	9:40	56.4	57.3	59.2	60.9	61.7	62.5	66.2	73.4	61.3	motorcycle pass by 9:35 am

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: B. Jarjoura	DATE: 10/04/13
MEASUREMENT ADDRESS: 120 W. San Jose	CITY: Claremont	☐ Single-Family ☐ Multi-Family ☐ School ☒ Recreational ☐ Commercial	SITE NO.: ST71

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____	☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☒ RANDOM ☐ WIND SCREEN	☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____	SYSTEM PWR: ☒ BAT ☐ AC
SERIAL #: 0129	SERIAL #: 2141	SERIAL #: 2771	(observations at start of measurement)

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2480

Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.9 / 22.8 / 10:13
After 114.0 / 113.8 / 22.8 / 10:43

TEMP: 66 °F R.H.: 40 %
WIND SPEED: 0.4 MPH
TOWARD (DIR): _____
SKIES: Sunny.
CAMERA BJ iphone
PHOTO NOs. 32 - 37

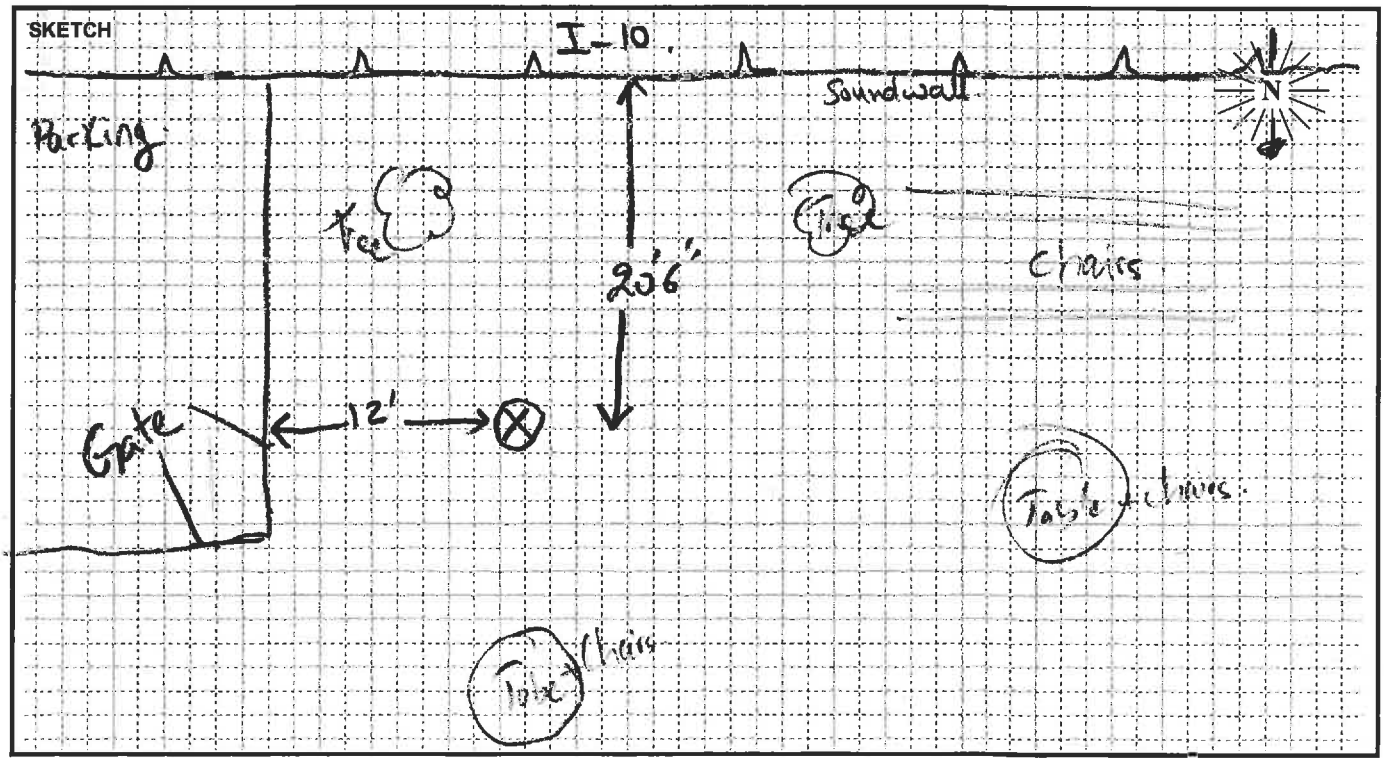
METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/4/13	10:20	10:40	66.1	67.1	68.9	70.2	70.8	71.4	72.6	77.1	70.2	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE	ENGINEER: URENDA	DATE: ~~10/2/13~~ 10/4/13
MEASUREMENT ADDRESS: 790 COLLEGE AVE	CITY: CLAREMONT	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: ST72

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.8 / 21.0 / 9:55
After 114.0 / 114.0 / 21 / 11:47

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

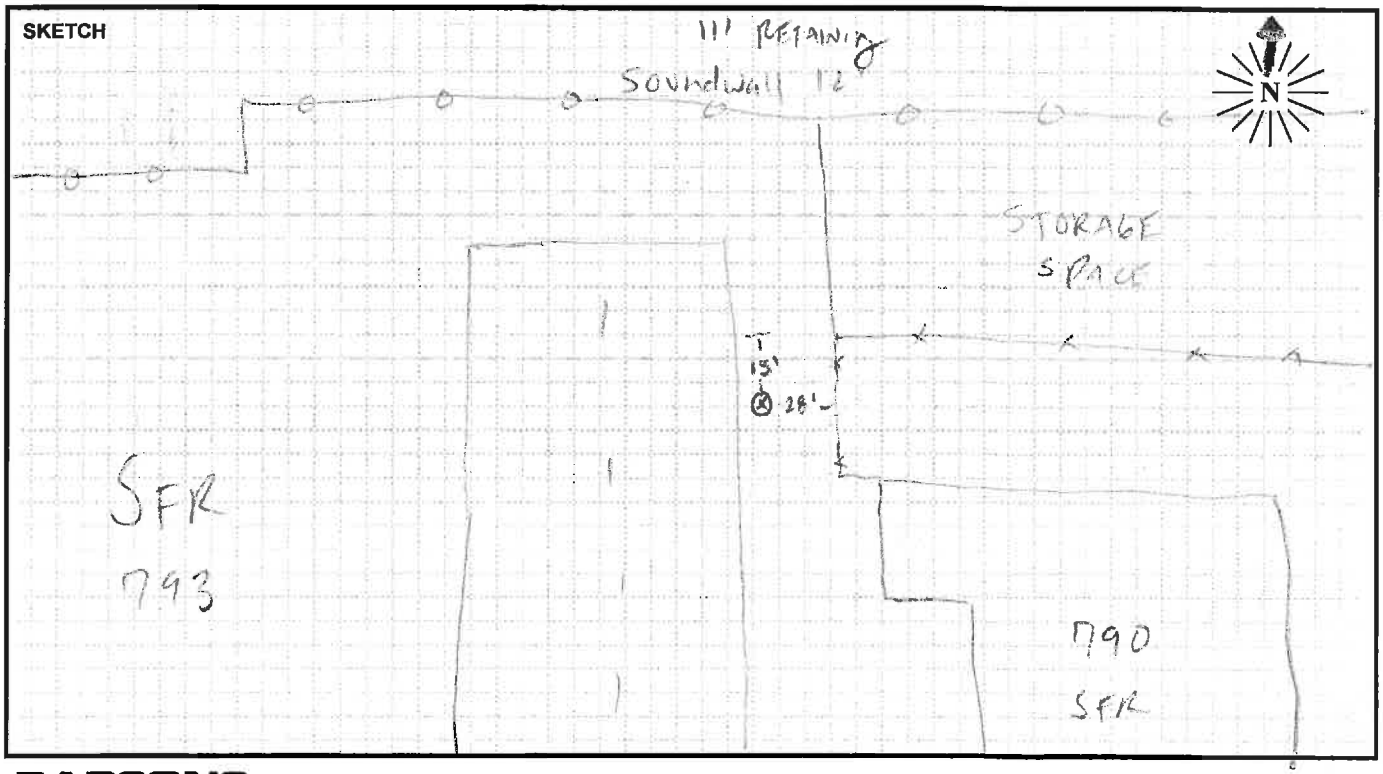
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 73.9 °F R.H.: 55.3 %
WIND SPEED: 1.8 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/4	10:00	10:20	64.1	64.8	65.4	67.3	68.0	68.7	69.9	72.1	67.4	YARD WORK LIKE 600' FROM MIKE

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R URENA		DATE: 7/28/14
MEASUREMENT ADDRESS: 201 BRYN MAWR RD	CITY: CLAREMONT	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST 73

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☐ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2661

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2479
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 21.0 / 9:22
After 114.0 / 113.9 / 21.2 / 10:19

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 81.7 °F R.H.: 23 %
WIND SPEED: 1.4 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

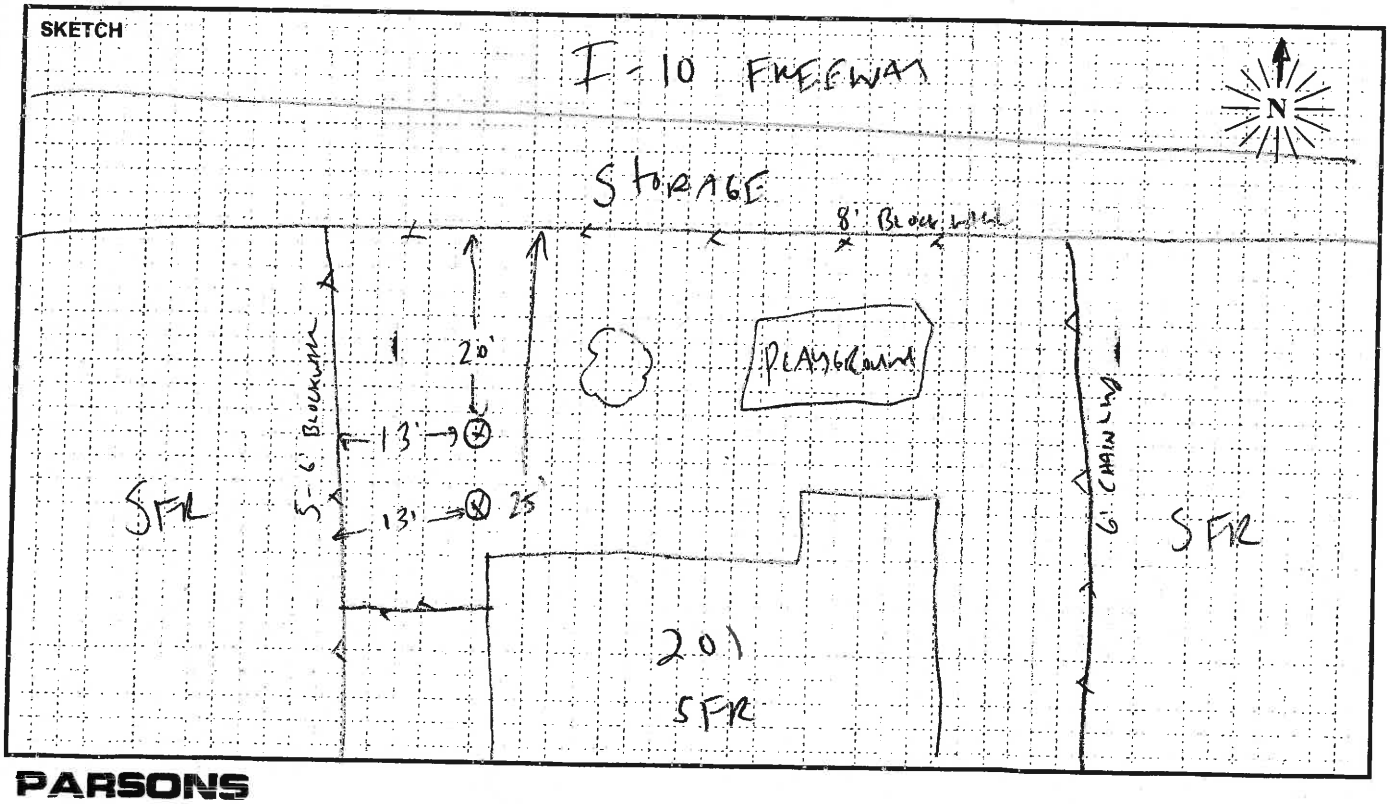
31 x 5 + 2
15 x 5 =
20'

NOTES: Counts HT MT AT
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/28	9:40	10:00	58.3	59	60.2	61.9	63.1	64.2	67.8	71	62.5	
7/28	9:40	10:00	58.6	59.2	60.6	62.4	63.6	64.8	68.5	72.3	63	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | M. MEYER | DATE: 10/4/13

MEASUREMENT ADDRESS: 9551 PRADERA AVE | CITY: Montclair | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST74

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 1785

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2129
Freq, Hz.: ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 21.0 / 11:54
After 114.0 / 114.0 / 21.0 / 14.22

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

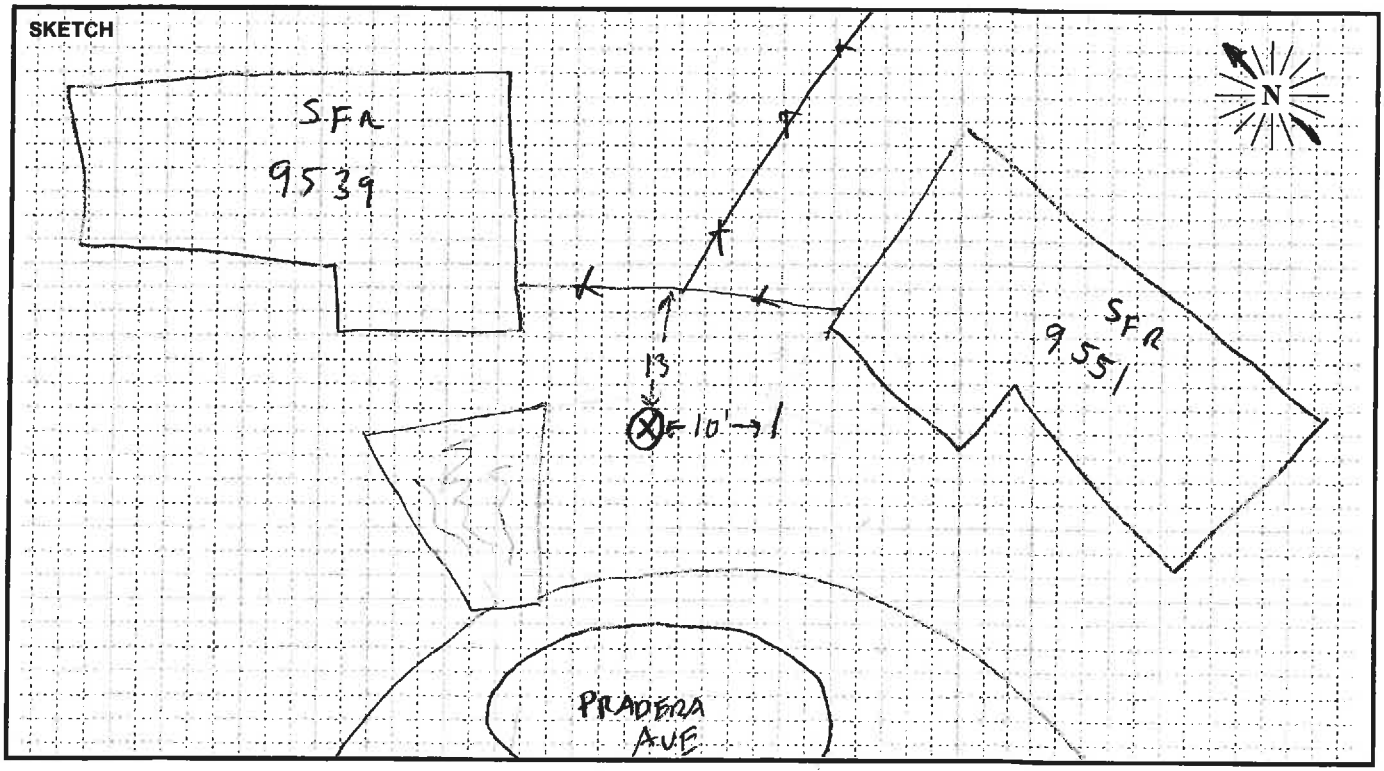
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 70 °F R.H.: 50 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA MARTY PHONE
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/4	14:00	14:20	50.6	51	51.9	53.6	54.5	55.1	56.9	59.4	53.7	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		R. URENA	DATE: 12/11/13
MEASUREMENT ADDRESS: CLAREMONT CHRISTIAN BLESSED CHURCH 735 S. MILLS AVE	CITY: CLAREMONT	☐ Single-Family ☐ Multi-Family ☒ School ☒ Recreational ☐ Commercial	SITE NO.: ST735A

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2029

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.5 / 22.2 / 11:48
After 114.0 / 114.2 / 22.2 / 12:22

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

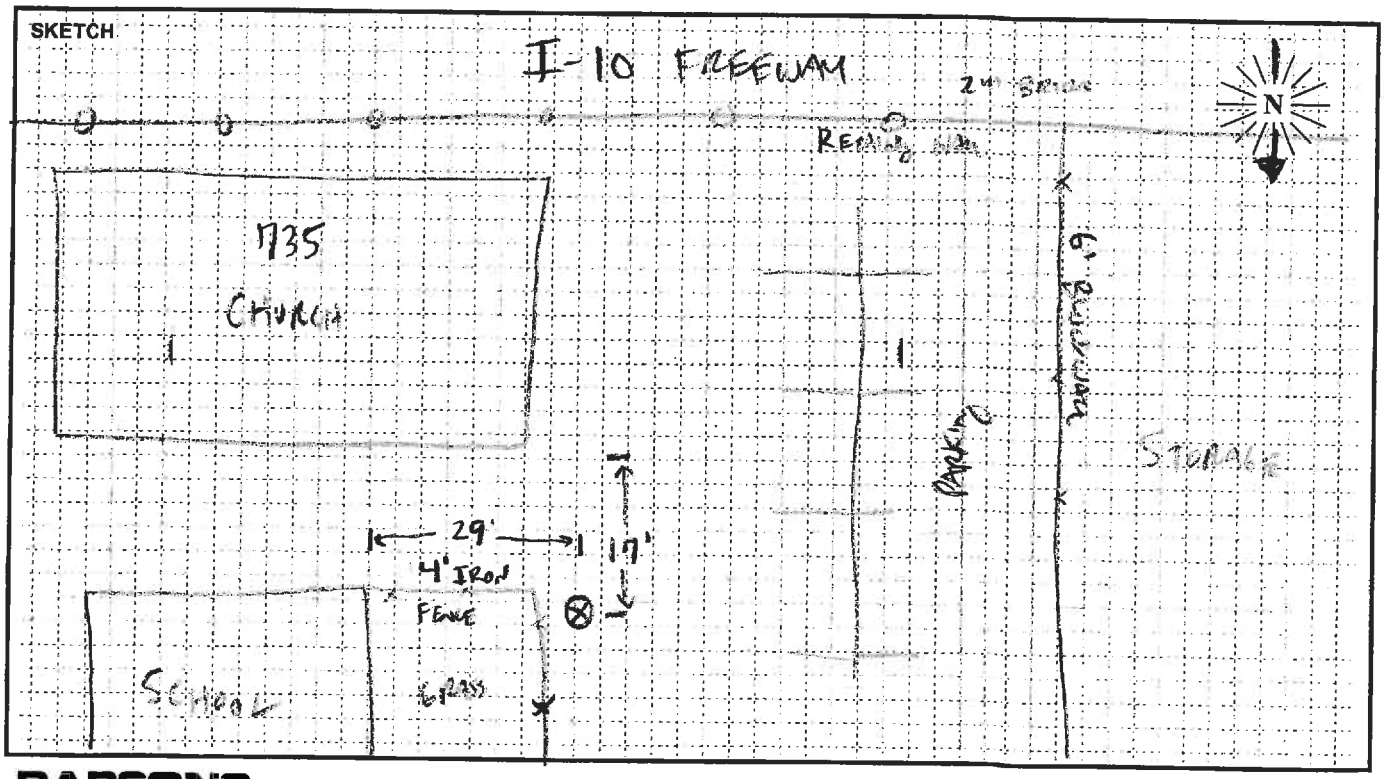
NOTES:
SYSTEM PWR: ☐ BAT ☐ AC
(observations at start of measurement)
TEMP: 69.3 °F R.H.: 19.7 %
WIND SPEED: 0.8 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{80}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/11	12:00	12:20	58.2	59.0	60	61.5	62.5	63.3	64.3	70.5	61.7	LMAX PEPSI Box Truck 12:07

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: B. Jarjoura	DATE: 10/3/13
MEASUREMENT ADDRESS: 4435 Bonnie Brae Street	CITY: Montclair.	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial
		SITE NO.: ST75

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☑ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☒ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114 / 113.9 / 22.8 / 15:45
After 114 / 113.9 / 22.8 / 16:23

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

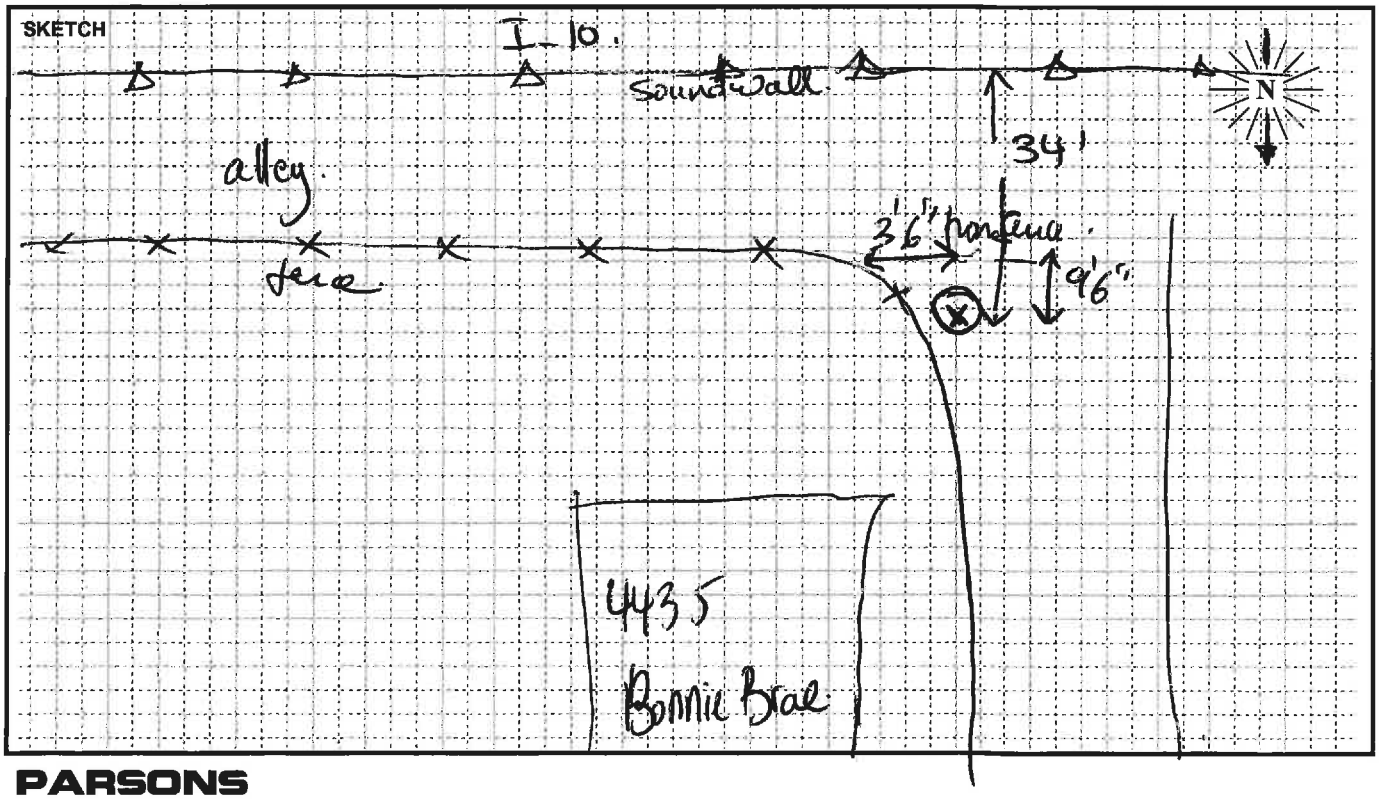
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 70 °F R.H.: 50 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: cloudy
CAMERA BJ iphone
PHOTO NOs. ~~1~~ 22-25

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/3	16:02	16:20	63.6	64.0	65.2	66.7	67.5	68.4	69.8	70.6	66.9	Car passed at 16:04
												Truck at 16:18
												69.9 dB peak.

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE	ENGINEER: [redacted] G. Berg	DATE: [redacted] 10/4/13
MEASUREMENT ADDRESS: 4497 Bonnie Brea	CITY: Montclair	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: ST76

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☒ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 3119

MICROPHONE:
☐ NON-POLAR ☒ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☒ RANDOM
☒ WIND SCREEN
SERIAL #: 52820

PRE AMP:
☐ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☒ LD-824 ☐ _____
SERIAL #: 3274

CALIBRATOR:
☐ LD CA250 ☒ LD CA200
☐ B&K 4231 ☐ _____
S/N 10473
Freq, Hz.
☐ 250
☒ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, -47.7, 10:19
After 114.0, 113.9, —, 14:04

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

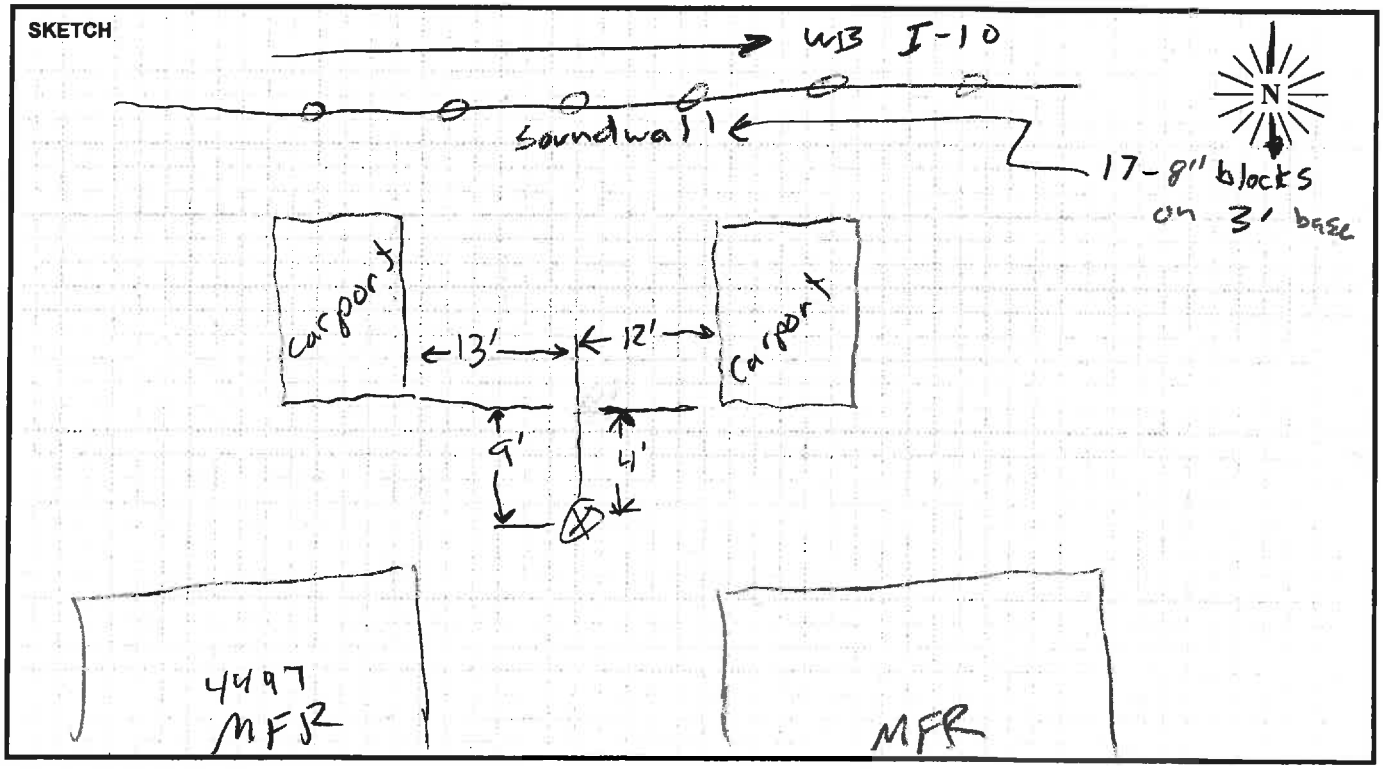
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 92 °F R.H.: 17 %
WIND SPEED: 2 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA _____
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/4	1340	14:00	63.4	63.4	64.5	66.2	—	—	69.8	71.1	66.6	Store 1

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | ENGINEER: B. Jarjoura | DATE: 10/3/18

MEASUREMENT ADDRESS: 4926 San Jose st (9424) | CITY: Montclair | ☐ Single-Family ☐ Recreational ☒ Multi-Family ☐ Commercial ☐ School | SITE NO.: ST7

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☒ RANDOM ☒ WIND SCREEN

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____

SERIAL #: 0128 | SERIAL #: 2141 | SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480

Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 114 / 113.9 / 22.8 / 16:23

After 114 / 113.8 / 22.8 / 17:24

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 70 °F R.H.: 50 %

WIND SPEED: 0.6 MPH

TOWARD (DIR): _____

SKIES: partly cloudy.

CAMERA B.J iphone.

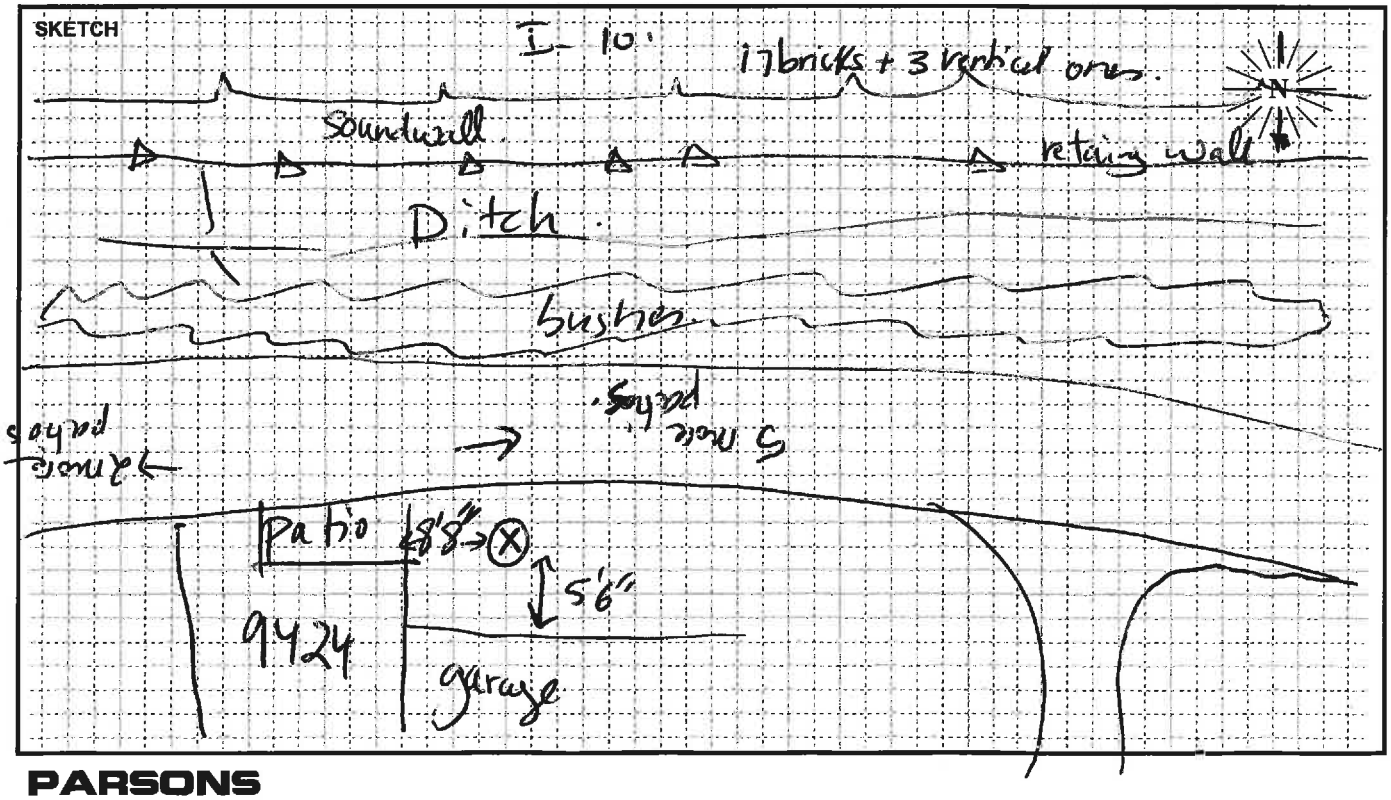
PHOTO NOs. 26-31

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/3	17:00	17:20	63.9	64.2	65.3	66.6	67.4	67.9	70.5	74.8	66.8	Frequent dogs barks first 10 minutes

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	**ENGINEER:** URENDA	**DATE:** 10/4/13	
MEASUREMENT ADDRESS: 9511 BOLTON AVE	**CITY:** MONTCLAIR	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	**SITE NO.:** ST28

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ WIND SCREEN ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ LD-828 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ B&K 4231
S/N 3127
Freq, Hz. ☒ 250 ☐ 1000 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.8 / 21.0 / 11:13
After 114.0 / 114.0 / 21.0 / 11:40

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 24 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

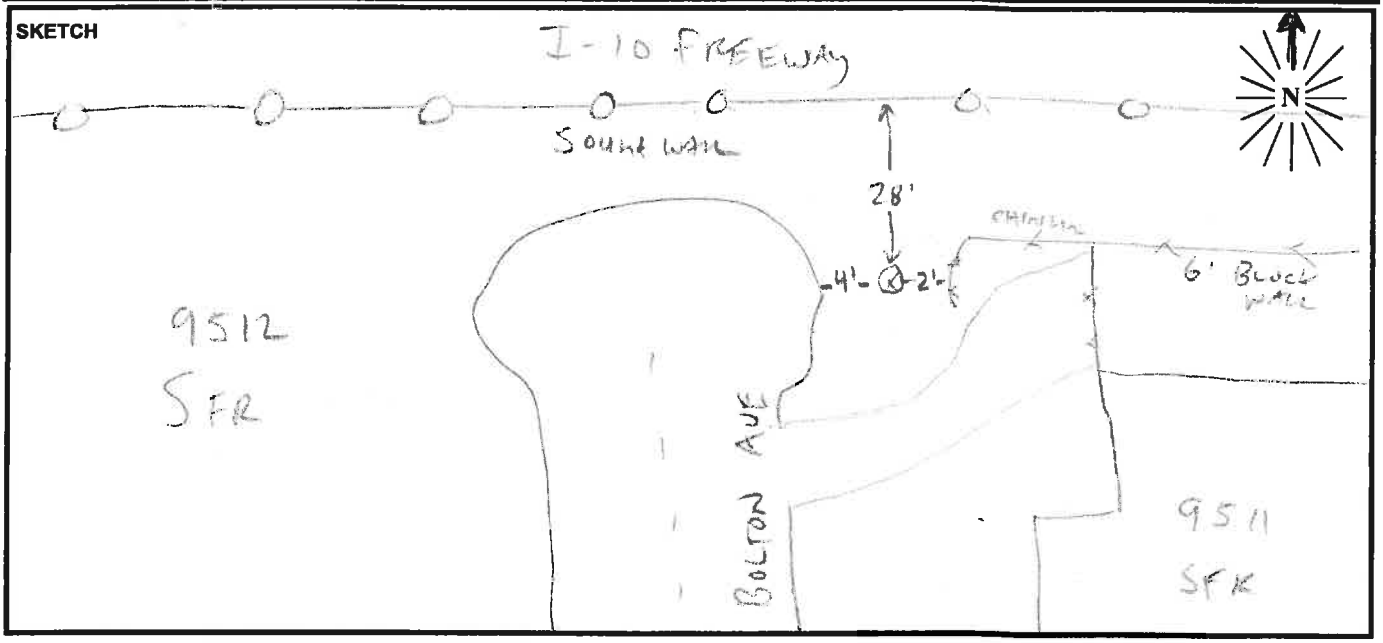
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 80.6 °F R.H.: 27.5 %
WIND SPEED: 1.5 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/4	11:20	11:40	59.9	61.6	63.7	65.2	66	69.1	69.9	71.4	65.4	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOV | ENGINEER: OGDEN | DATE: 10/4/13

MEASUREMENT ADDRESS: 4862 Yale St | CITY: Montclair | ☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial | SITE NO.: ST79

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820
☐ LD-824 ☐ LD-812
☒ B&K-2250 ☐ _____
SERIAL #:

MICROPHONE: ☒ WIND SCREEN
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☒ RANDOM
SERIAL #:

PRE AMP:
☐ LD-900
☐ LD-828
☐ _____
SERIAL #:

CALIBRATOR:
☐ LD CA250
☒ B&K 4231
S/N _____
Freq, Hz.
☐ 250
☒ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before _____/_____/_____/_____
After _____/_____/_____/_____

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

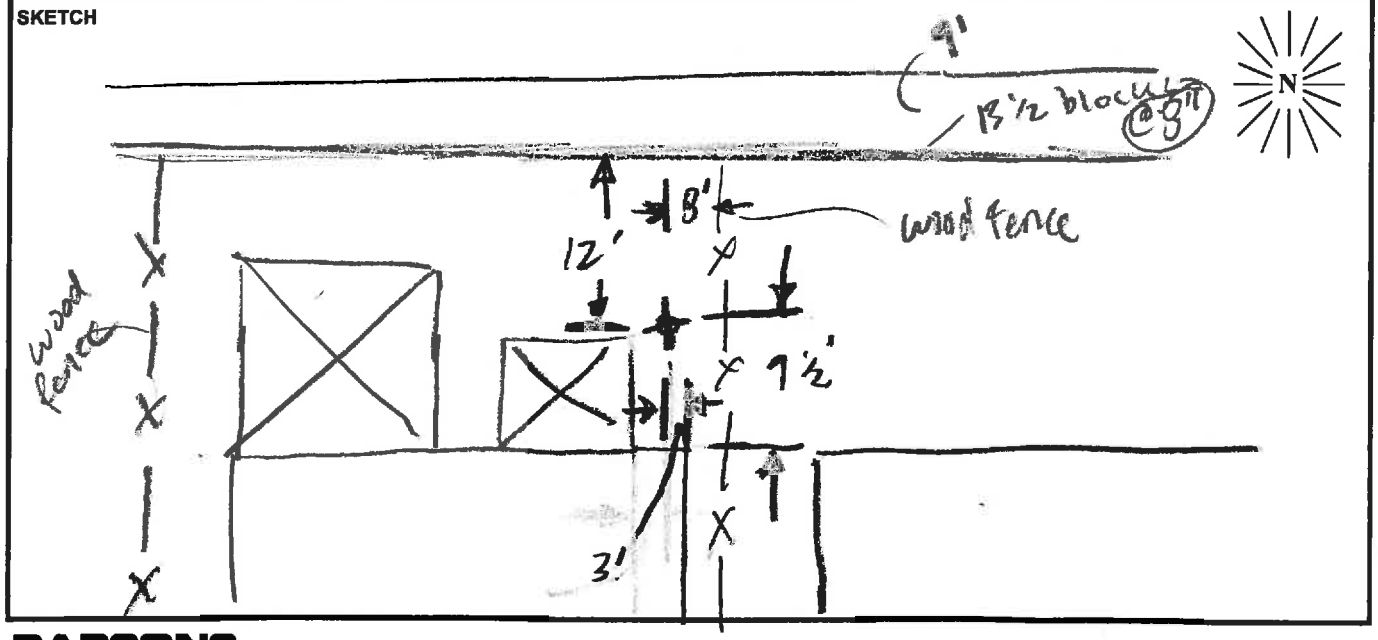
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: _____ °F R.H.: _____ %
WIND SPEED: _____ MPH
TOWARD (DIR): light breeze
SKIES: Clear
CAMERA Cannon
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/4	13:40	14:00	51.6	52.2	53.1	54.7	[illegible]	56.7	60.1	64.6	55.2	13:45
												13:52 crying
												13:56 motorcycle
												idle + take off
												Meas 004

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE	ENGINEER: M. MEYER	DATE: 10/2/13
MEASUREMENT ADDRESS: 9409 Carrillo	CITY: Montclair	☐ Single-Family ☐ Recreational ☒ Multi-Family ☐ Commercial ☐ School — SITE NO.: ST 80

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☒ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: A3119

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 52820

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☒ LD-824 ☐ _____
SERIAL #: 3274

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____ S/N 104723
Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 147.2, 8:37
After 114.0, 114.0, 147.2, 9:03

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

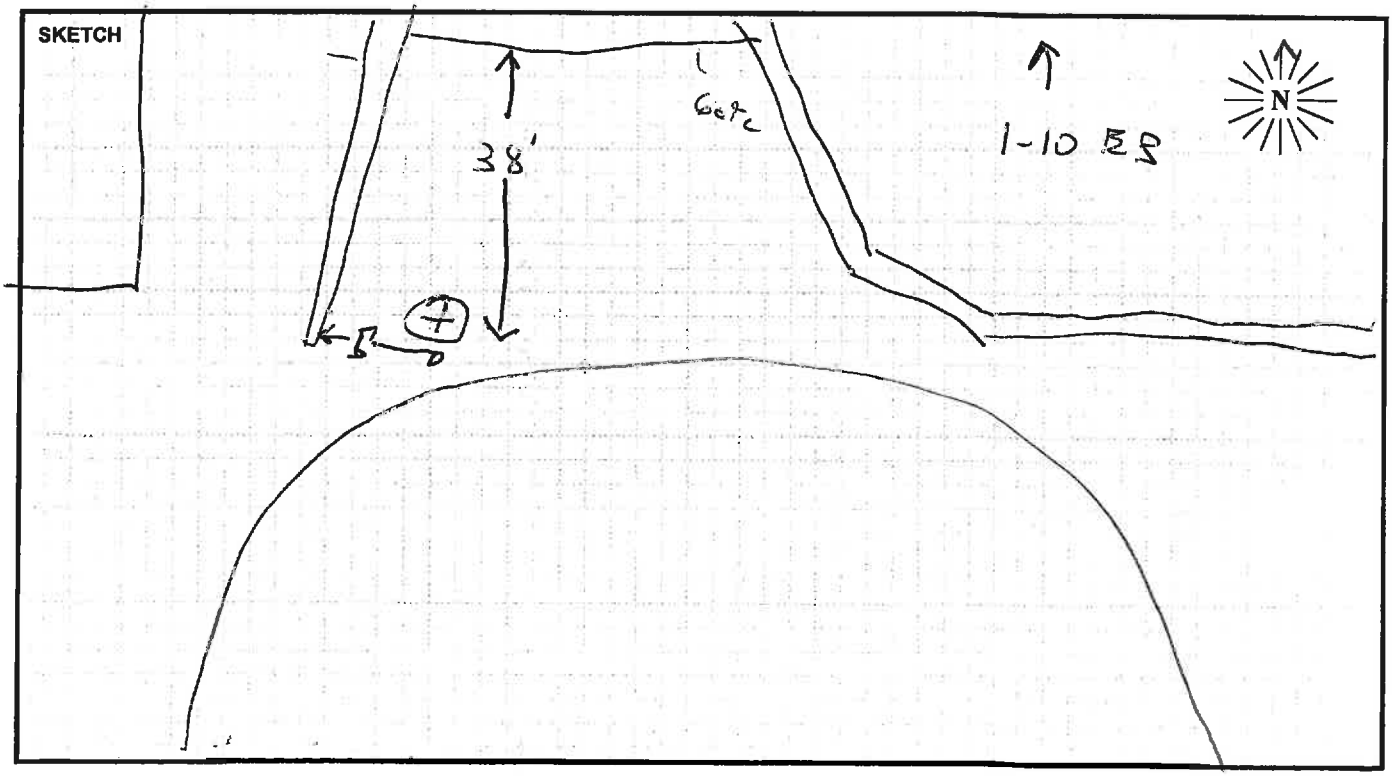
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 62 °F R.H.: 49 %
WIND SPEED: 1.2 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA MARTY PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/8	8:40	9:00	55.5							68.8	60.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE		ENGINEER: M. MEYER	DATE: 10/3/13
MEASUREMENT ADDRESS: Park MacArthur	CITY: Montclair	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST 81

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: A3119

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☐ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☐ WIND SCREEN
SERIAL #: 3280

PRE AMP:
☐ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 3274

CALIBRATOR:
☐ LD CA250 ☑ LD CA200
☐ B&K 4231 ☐ _____
S/N 101773
Freq, Hz.
☐ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 17.72, 17:52
After 114.0, 113.9, 17.72, 15:24

METER SETTINGS:
☑ A-WTD ☐ LINEAR ☑ SLOW ☐ 1/1 OCT ☐ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☐ BAT ☐ AC
(observations at start of measurement)
TEMP: 85 °F R.H.: 43 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA MARTY PAYNE
PHOTO NOs. _____

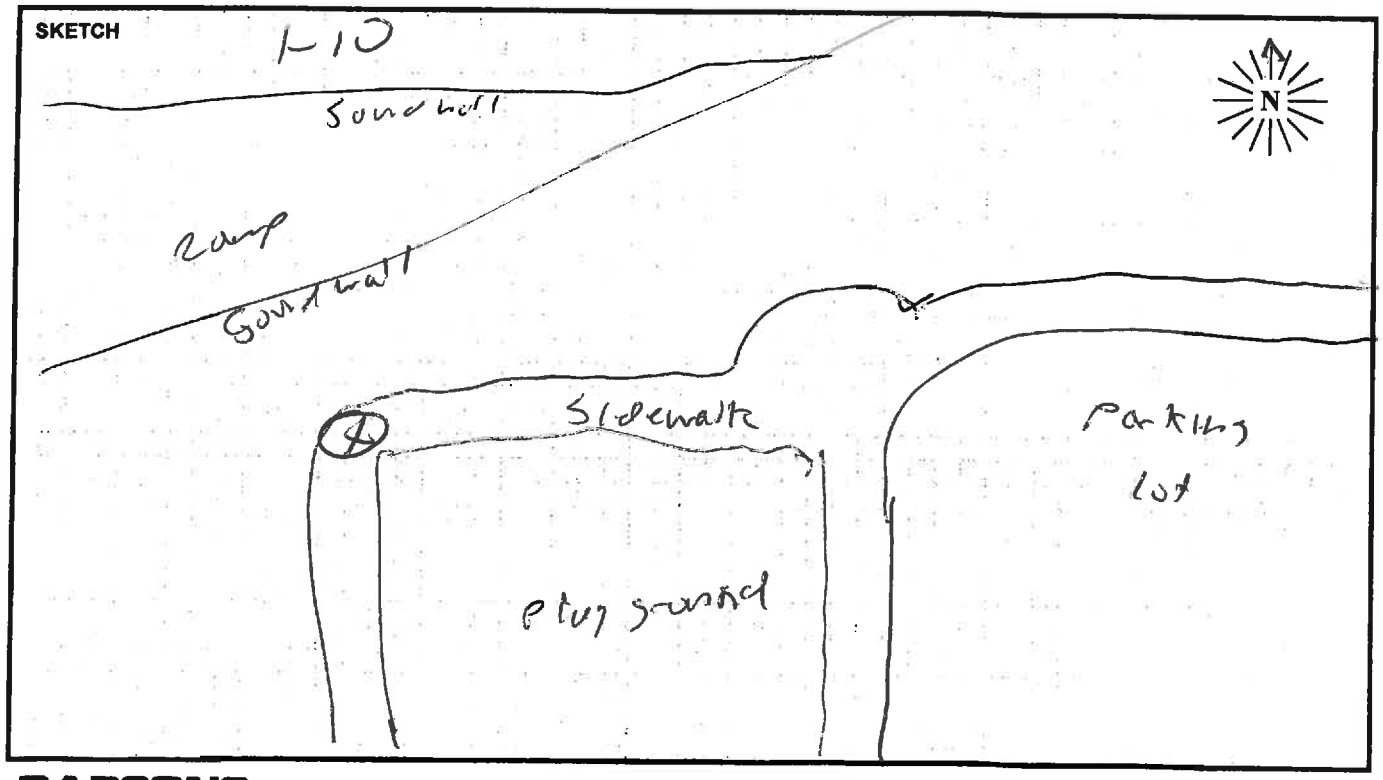
NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☑ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/7	15:00	15:20	63.6							69.6	65.6	

66.1

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE	ENGINEER: M. MEYER	DATE: 10/3/13
MEASUREMENT ADDRESS: 5554 Caroline St	CITY: Montclair	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: ST 82

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: A3119

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 52620

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☒ LD-824 ☐ _____
SERIAL #: 3274

NOTES:
SYSTEM PWR: ☐ BAT ☐ AC
(observations at start of measurement)
TEMP: 84 °F R.H.: 15 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA MARTY PHONE
PHOTO NOs. _____

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____
S/N 101473
Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 0.0, 14:12
After 114.0, 114.0, 0.0, 14:52

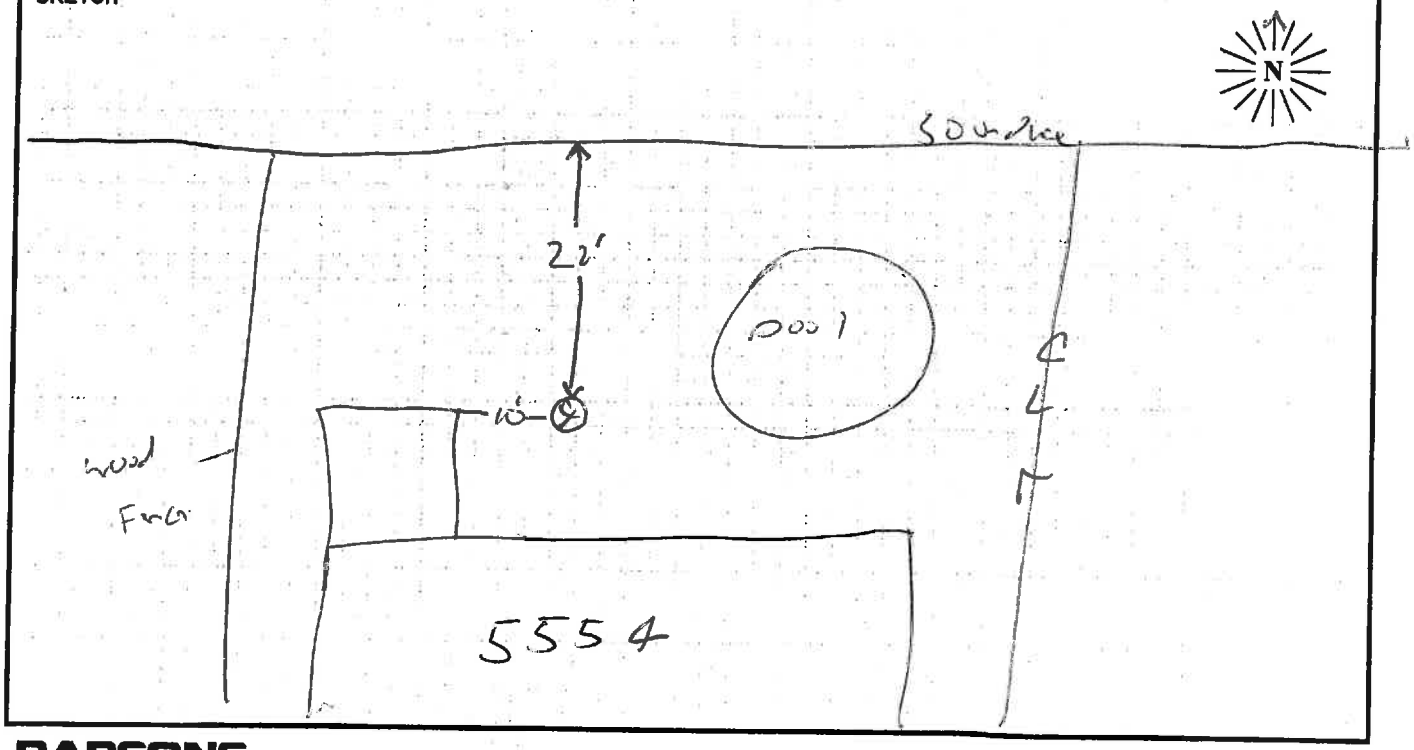
METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/7	14:20	15:00	59.1							66.7	61.8	Cars
												Truck
												Back

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: High Desert Corridor High-Speed Rail		ENGINEER: M Mayo	DATE: 9/25/13
MEASUREMENT ADDRESS: 15676 Caroline ST	CITY: Montclair	☒ Single-Family ☐ Multi-Family ☐ School ☑ Recreational ☐ Commercial	SITE NO.: ST8

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☒ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____	☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☑ WIND SCREEN	☐ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☒ LD-824 ☐ _____	SYSTEM PWR: ☐ BAT ☐ AC
SERIAL #: A3119	SERIAL #: 5280	SERIAL #: 3274	(observations at start of measurement)

CALIBRATOR:	CALIBRATION RECORD:	
☐ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 1078147B	Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____	Input, dB / Reading, dB / Offset, dB / Time Before 114.0, 113.7, 47.7, 13:35 After 114.0, 114.0, 47.7, 19:12

TEMP: 84 °F R.H.: 15 %

WIND SPEED: 0.6 MPH

TOWARD (DIR): _____

SKIES: Clear

CAMERA Many Phone

PHOTO NOs. _____

METER SETTINGS:

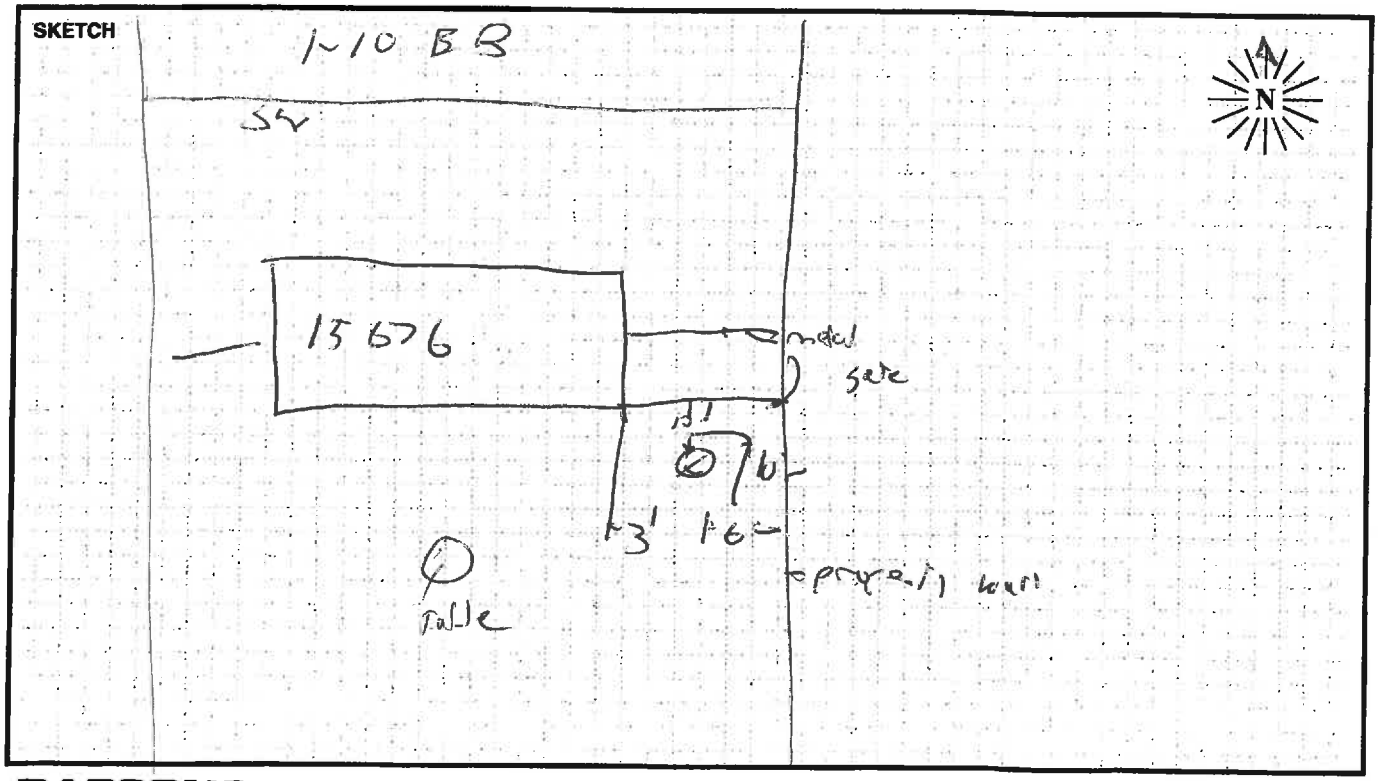
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
9/7	13:40	14:00	51.6							83	56.9	Front yard
												overlook VR

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: B. Jarjoura	DATE: 10/9/13
MEASUREMENT ADDRESS: 1552 Fuchsia Ave	CITY: ONTARIO	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST84

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2701

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 22.1 / 11:08
After 114.0 / 114.0 / 22.1 / 11:41

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

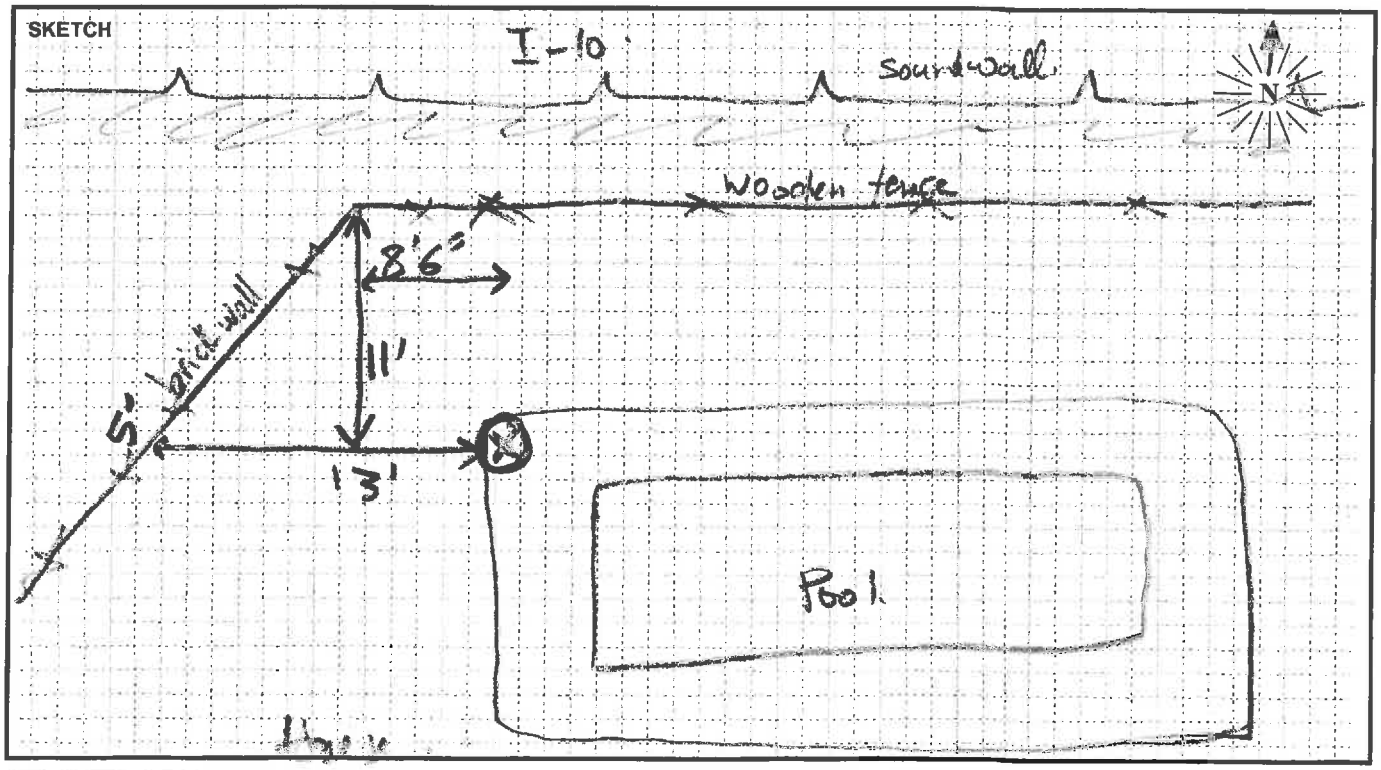
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 76 °F R.H.: 45 %
WIND SPEED: 9.6 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA Kasey
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/9	11:20	11:40	60.9	61.3	62.4	64	64.9	65.7	67.3	75.6	64.8	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

ENGINEER: ~~B. Jarjoura~~ R. URENDA

DATE: 10/8/13

MEASUREMENT ADDRESS: 1558 N. Dahlia Ct

CITY: ONTARIO CA

☒ Single-Family ☐ Recreational ☐ Multi-Family ☐ Commercial ☐ School

SITE NO.: ST85

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN

SERIAL #: 2141

PRE AMP:
☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____

SERIAL #: 2771

CALIBRATOR:
☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2480

Freq, Hz.
☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 22.1, 10:19
After 114.0, 114.0, 22.1, 11:41

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

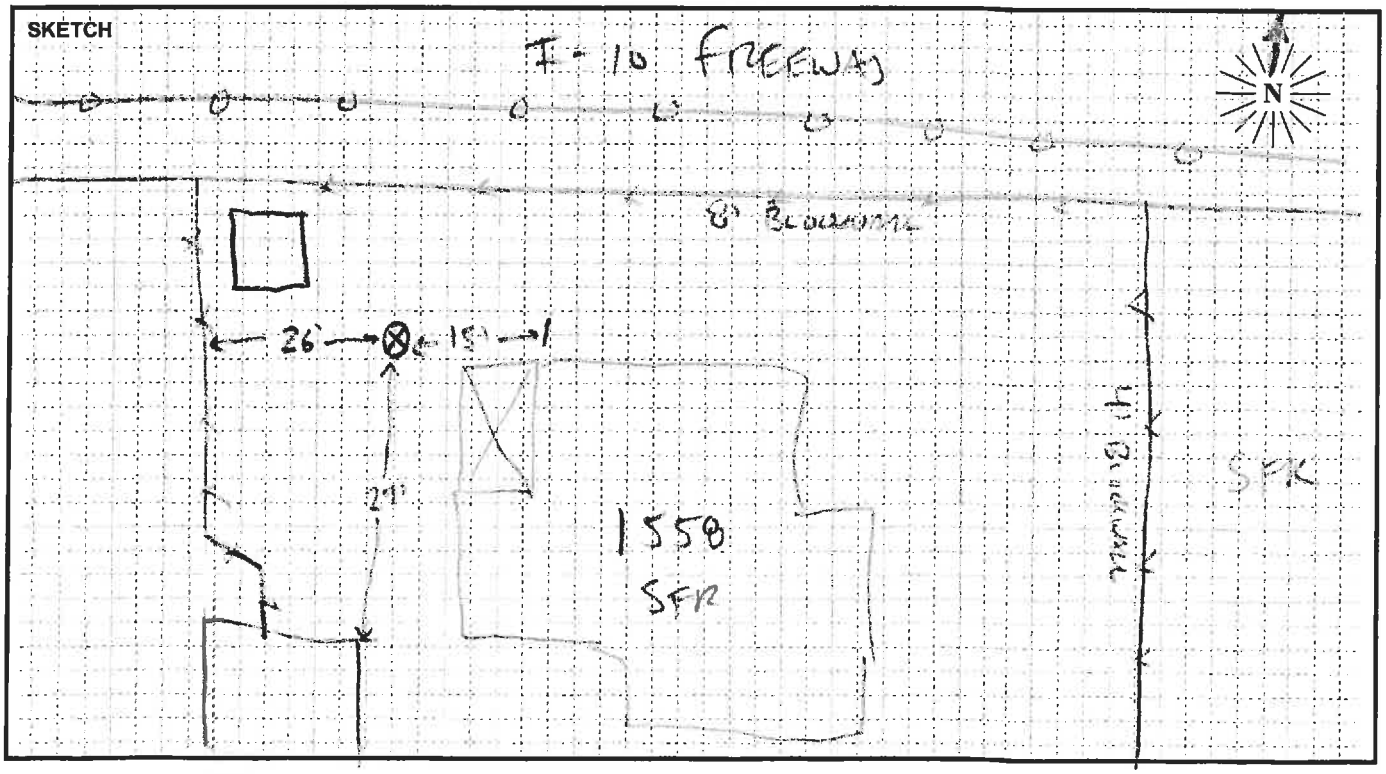
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 68.1 °F R.H.: 51.5 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/8	10:20	10:40	60.1	61.5	62.8	64.1	65.6	66.3	67.1	69	64.8	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

ENGINEER: ~~B. Barjoura~~ R. URESTI

DATE: 10/8/17

MEASUREMENT ADDRESS: 1040 W. 7th St

CITY: UPLAND

☐ Single-Family ☐ Recreational
☒ Multi-Family ☐ Commercial
☐ School

SITE NO.: ST86

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____

SERIAL #: 0555

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN

SERIAL #: 2141

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____

SERIAL #: 2771

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2480

Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 113.9, 22.1, 8:59
After 114.0, 114.0, 22.1, 11:41

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 69 °F R.H.: 48 %

WIND SPEED: 0.7 MPH

TOWARD (DIR): _____

SKIES: CLEAR

CAMERA RUBEN PHONE

PHOTO NOs. _____

NOTES:

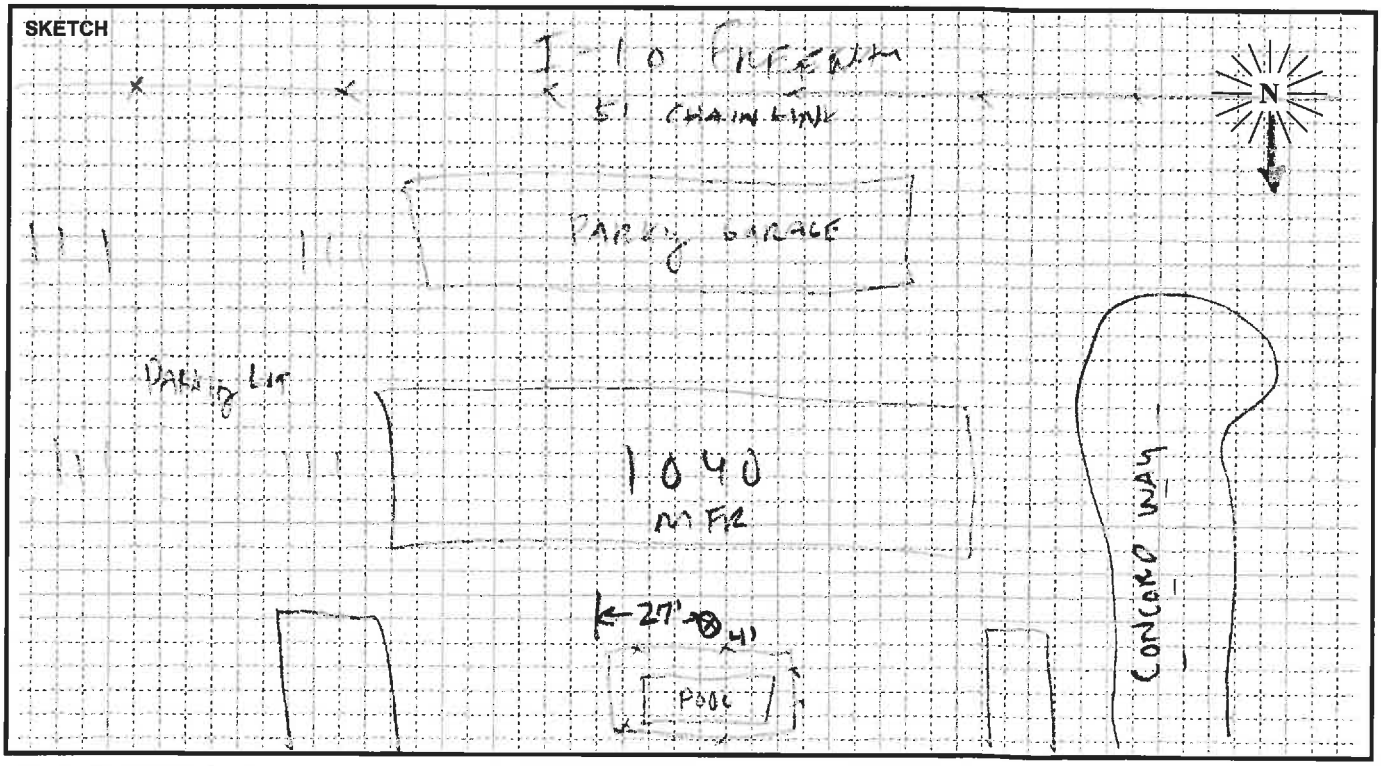
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/8	9:01	9:20	61.5	61.5	61.7	62.7	63.4	64	64.9	64.9	62.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: B. Jarjoura	DATE: 10/7/13
MEASUREMENT ADDRESS: 920 W. 6th Street (Redeemer Lutheran school)	CITY: Ontario, CA	☐ Single-Family ☐ Recreational ☐ Multi-Family ☐ Commercial ☒ School — SITE NO.: ST87

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☒ RANDOM ☒ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.9 / 22.8 / 13:36
After 114.0 / 114.7 / 22.8 / 14:02

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

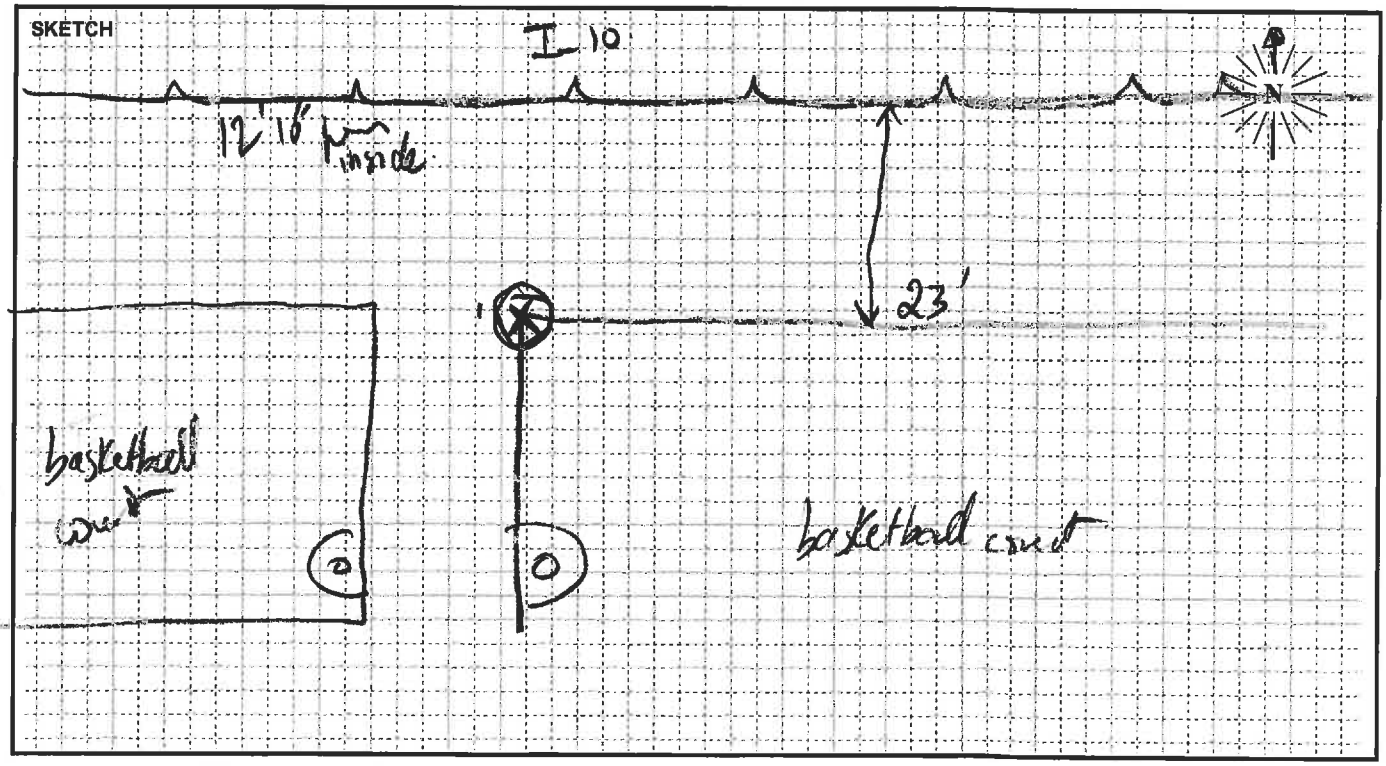
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84 °F R.H.: 18 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: Mostly sunny
CAMERA BJ iphone.
PHOTO NOs. 71 - 76

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/7/13	1:40	2:00	63.1	64.1	65.3	67.0	67.9	68.7	70.1	72.5	67.2	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: URENA	DATE: 10/17/13
MEASUREMENT ADDRESS: 1559 Granite AVE	CITY: ONTARIO	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: ST88

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☒ LD-870 ☐ LD-820 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ _____	☒ WIND SCREEN ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM	☒ LD-900 ☐ LD-828 ☐ _____	SYSTEM PWR: ☒ BAT ☐ AC (observations at start of measurement) TEMP: 84.6 °F R.H.: 18.4 % WIND SPEED: 0.6 MPH TOWARD (DIR): _____ SKIES: CLEAR CAMERA RUBEN PHONE PHOTO NOs. _____
SERIAL #: 0555	SERIAL #: 2141	SERIAL #: 2791	

CALIBRATOR:	CALIBRATION RECORD:
☒ LD CA250 ☐ B&K 4231 S/N 2480 Freq, Hz. ☐ 250 ☐ 1000 ☐ _____	Input, dB / Reading, dB / Offset, dB / Time Before 114.0, 114.0, 22.1, 11:39 After 114.0, 114.0, 22.1, 3:42

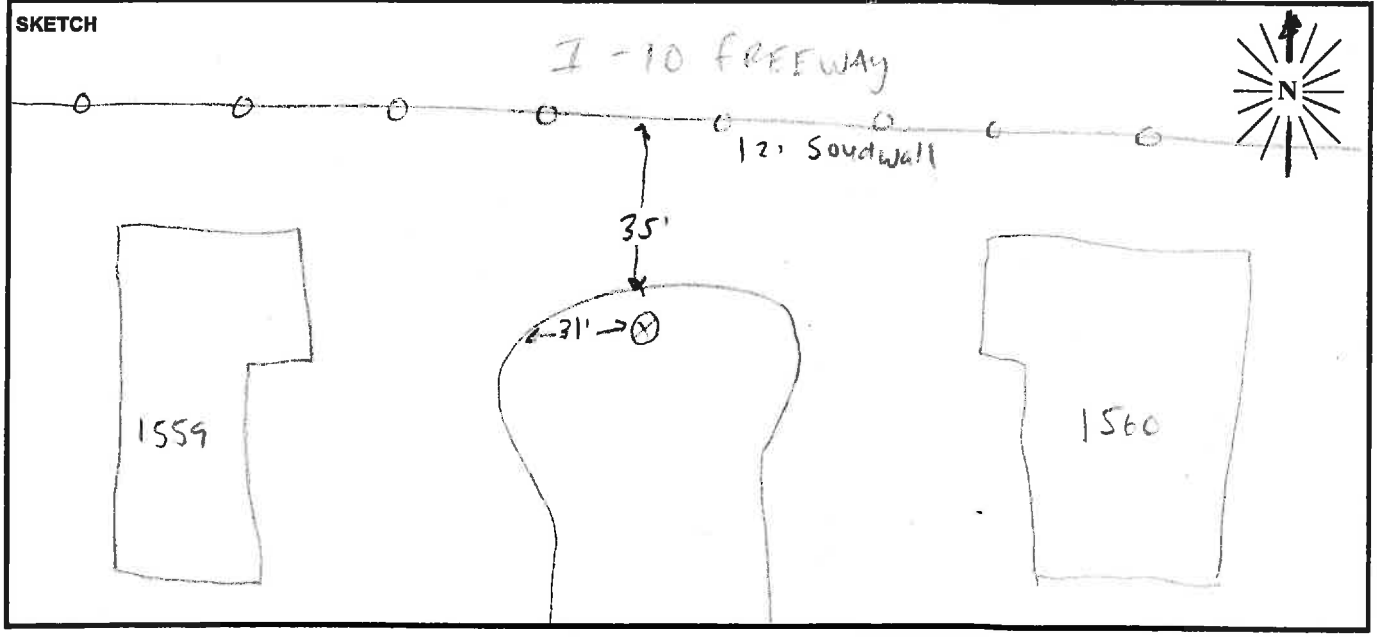
METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/17	11:40	12:00	57.9	59.1	61	62.8	63.6	64.4	65.6	67.9	62.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE		ENGINEER: M. MEYER	DATE: 10/3/13 (10/2/13)
MEASUREMENT ADDRESS: 1551 N San Antonio	CITY: Ontario	☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST 89

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☑ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 13119

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☑ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 5280

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☒ LD-824 ☐ _____
SERIAL #: 3274

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____
S/N 10473
Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 47.2 / 11:36
After 114.0 / 114.0 / 47.2 / 12:02

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☑ SLOW ☐ 1/1 OCT ☐ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

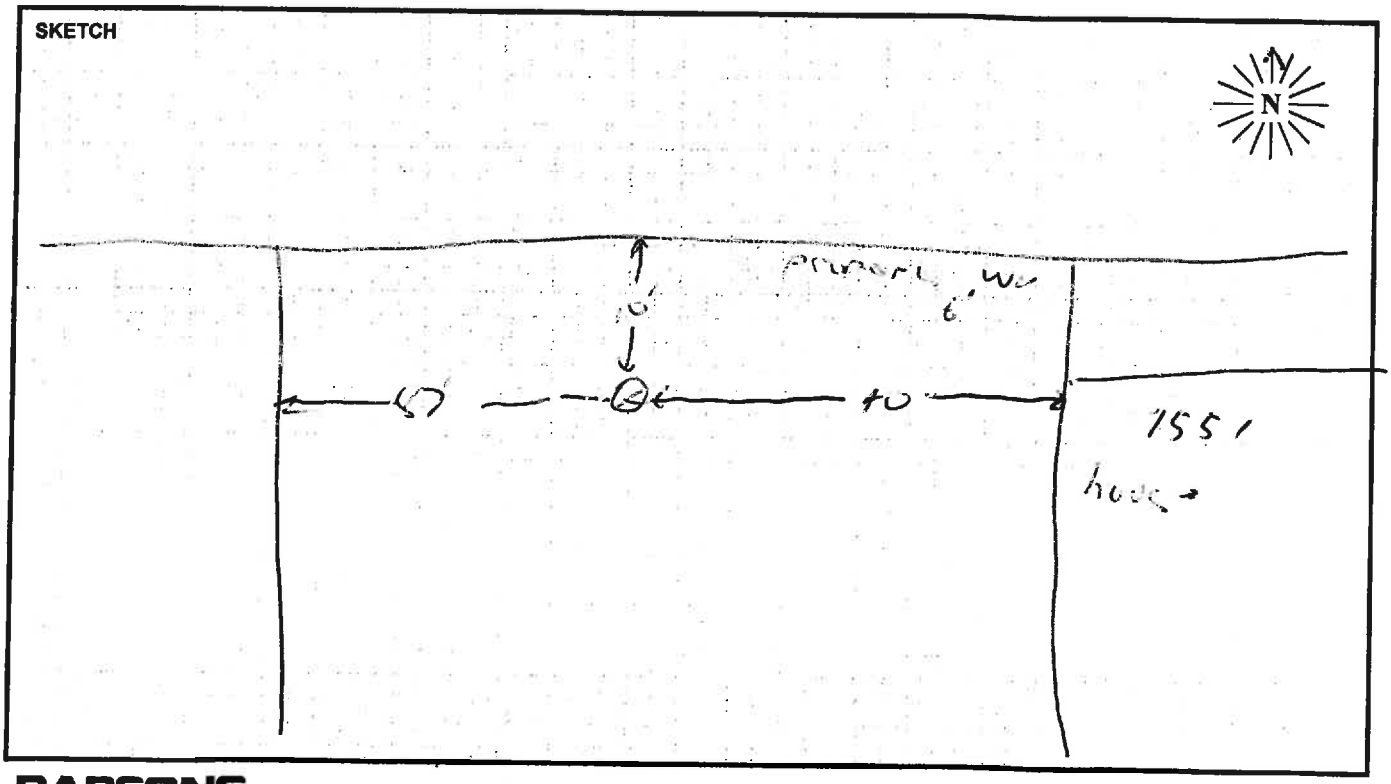
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84 °F R.H.: 15 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA MARTY PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/7	11:40	12:00	52.7							66.7	55.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

ENGINEER: ~~B. Jafjoura~~ R. URBINA

DATE: 10/7/13

MEASUREMENT ADDRESS: 754 AZURE Ct

CITY: UPLAND

☒ Single-Family ☐ Recreational ☐ Multi-Family ☐ Commercial ☐ School

SITE NO.: ST90

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN

SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____

SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480

Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 114.0, 114.0, 22.1, 3:19

After 114.0, 114.0, 22.1, 3:42

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 84 °F R.H.: 37 %

WIND SPEED: 0.0 MPH

TOWARD (DIR): _____

SKIES: CLEAR

CAMERA RUBEN PHONE

PHOTO NOs. _____

NOTES:

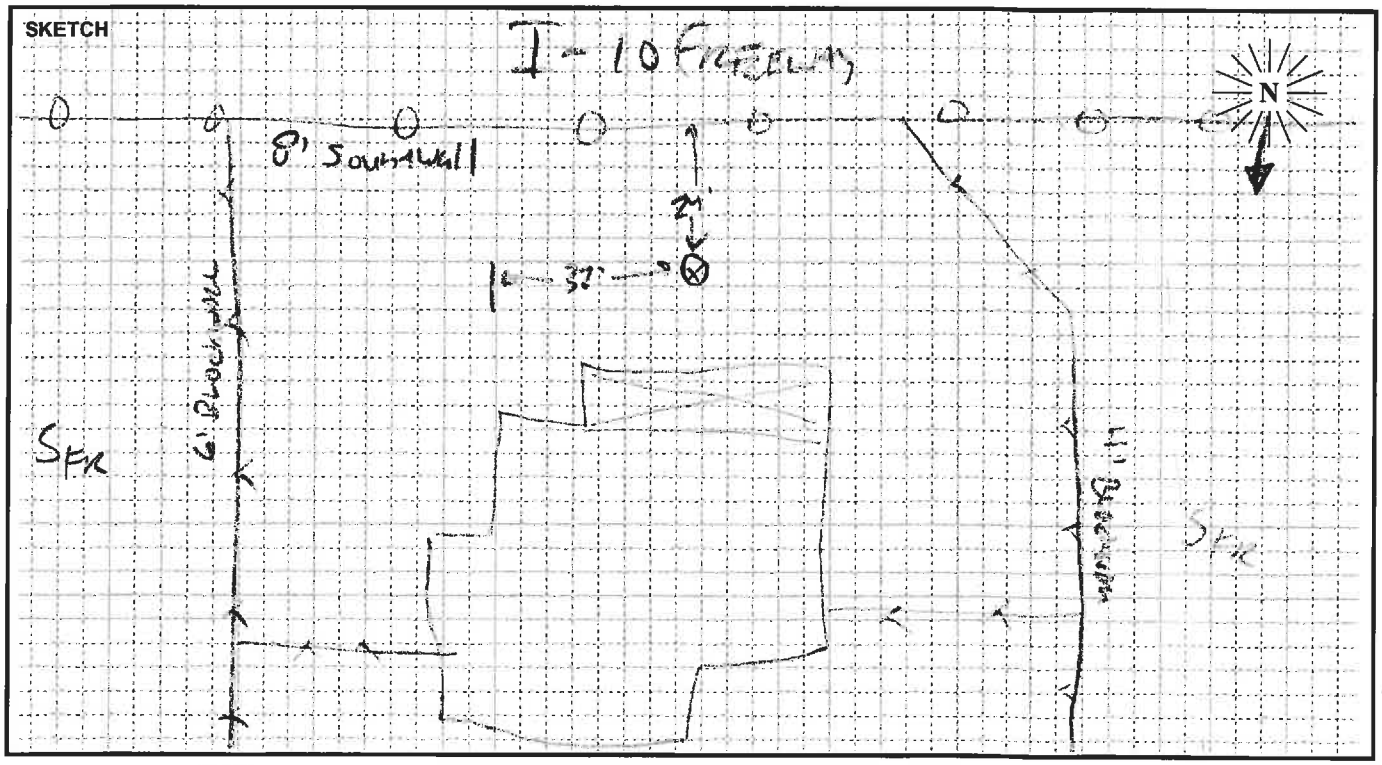
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/7	3:20	3:40	65.8	66.1	67.1	68.2	68.6	69.4	70.6	77.8	68.3	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: ~~B. Jarjoura~~ R. URENA	DATE: 10/7/13
MEASUREMENT ADDRESS: 4136 S. SHASTA WAY	CITY: Upland	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial
		SITE NO.: ST91

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84 °F R.H.: 37 %
WIND SPEED: 0.5 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 27.1, 2:34
After 114.0, 114.0, 22.1, 3:42

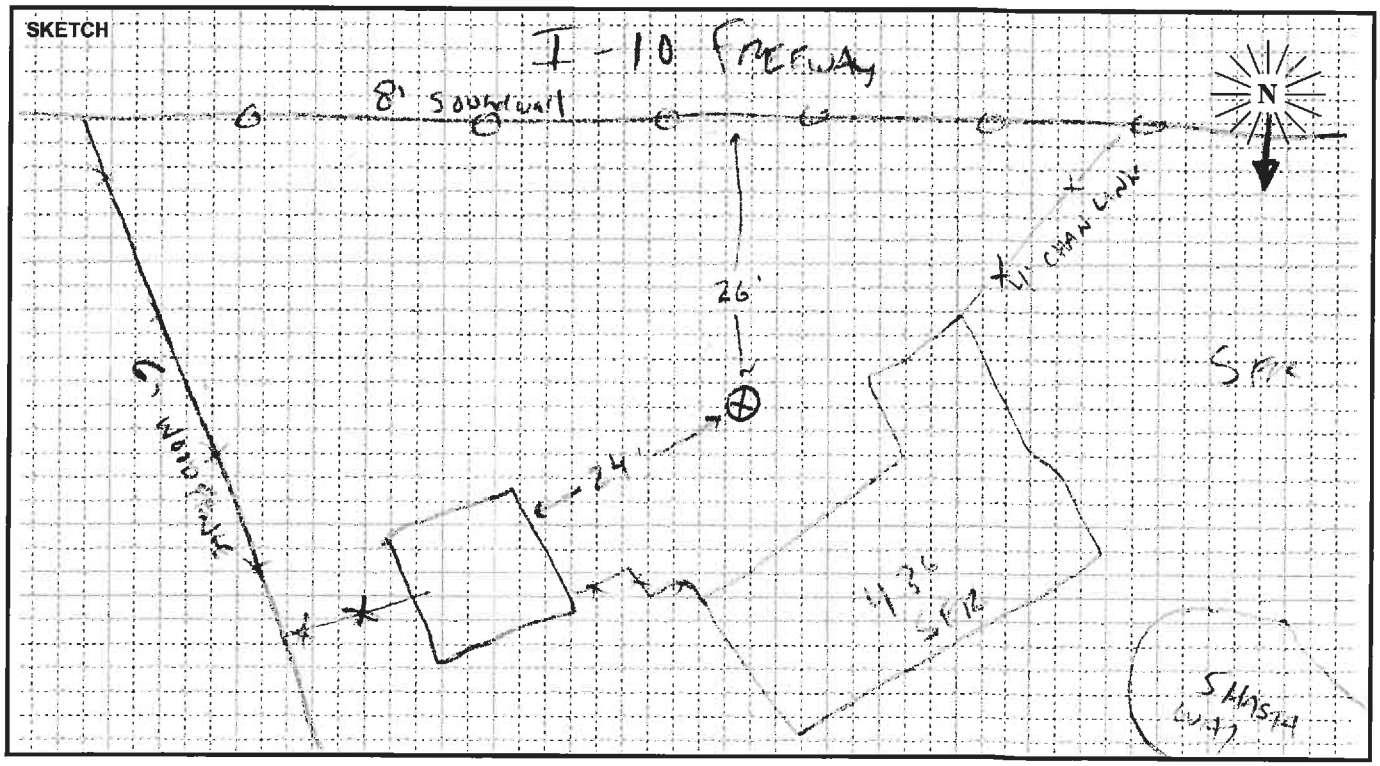
METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 10 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/7	2:46	3:00	62.4	63.1	64.2	65.4	66.0	66.6	67.2	69.8	65.5	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | ENGINEER: B. Jarjoura | DATE: 10/7/13

MEASUREMENT ADDRESS: 1560 N. Bonita Ct. | CITY: Ontario, CA | ☐ Single-Family ☐ Multi-Family ☒ School ☐ Recreational ☐ Commercial | SITE NO.: ST92

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☒ RANDOM
☒ WIND SCREEN
SERIAL #: 1785

PRE AMP:
☒ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127

Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114 / 114.8 / 22.8 / 14:32
After 114 / 114.8 / 22.8 / 15:01

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

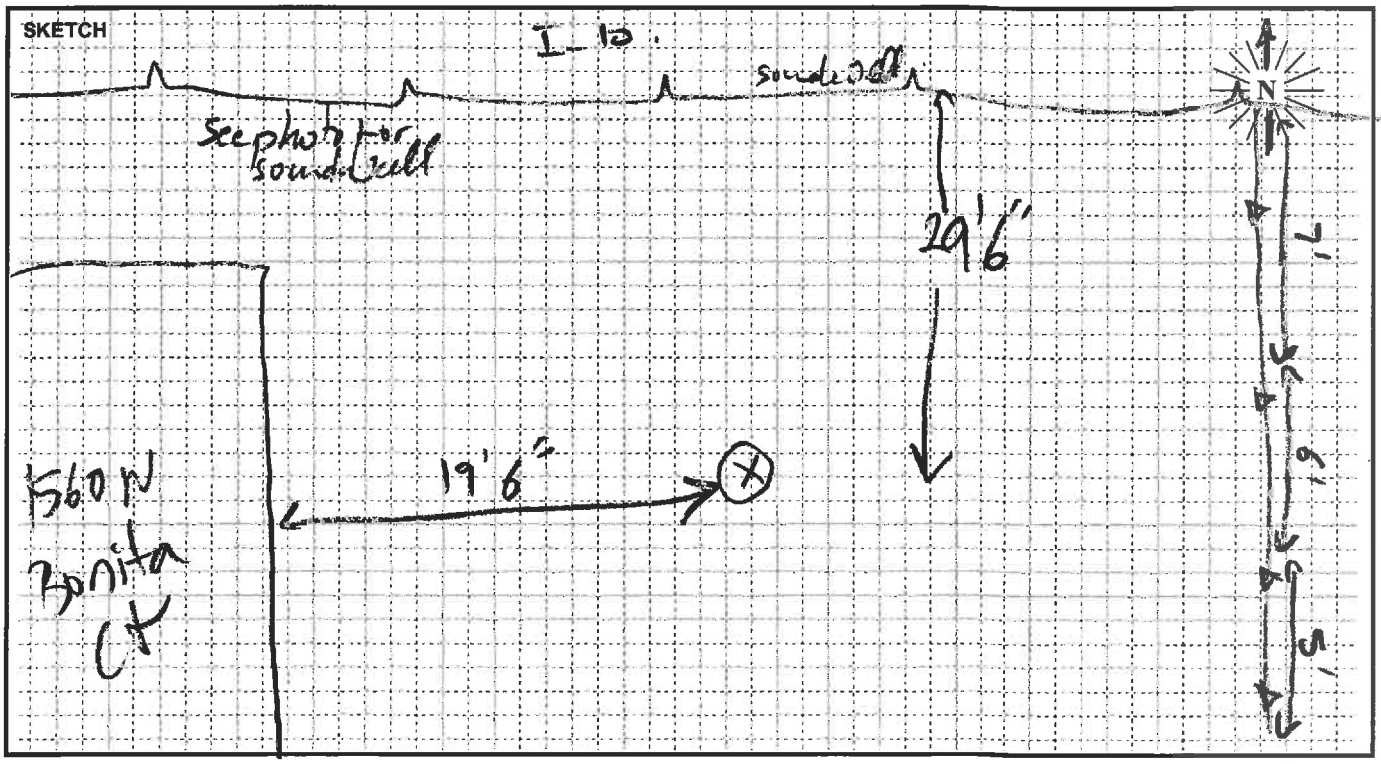
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84 °F R.H.: 31 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA B. Jphone
PHOTO NOs. 77-83

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/7/13	2:40	3:00	57.2	58.0	59.1	60.5	61.3	62.0	64.1	67.7	60.7	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Express Lane	R. Urenda		DATE: 6/4/15
MEASUREMENT ADDRESS: Westwood College	CITY: Upland	☐ Single-Family ☐ Multi-Family ☒ School ☐ Recreational ☐ Commercial	SITE NO.: ST93

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0638

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3159

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1938

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2479
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 0.0 / 9:16am
After 114.0 / 113.9 / 0.0 / 10:18am

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

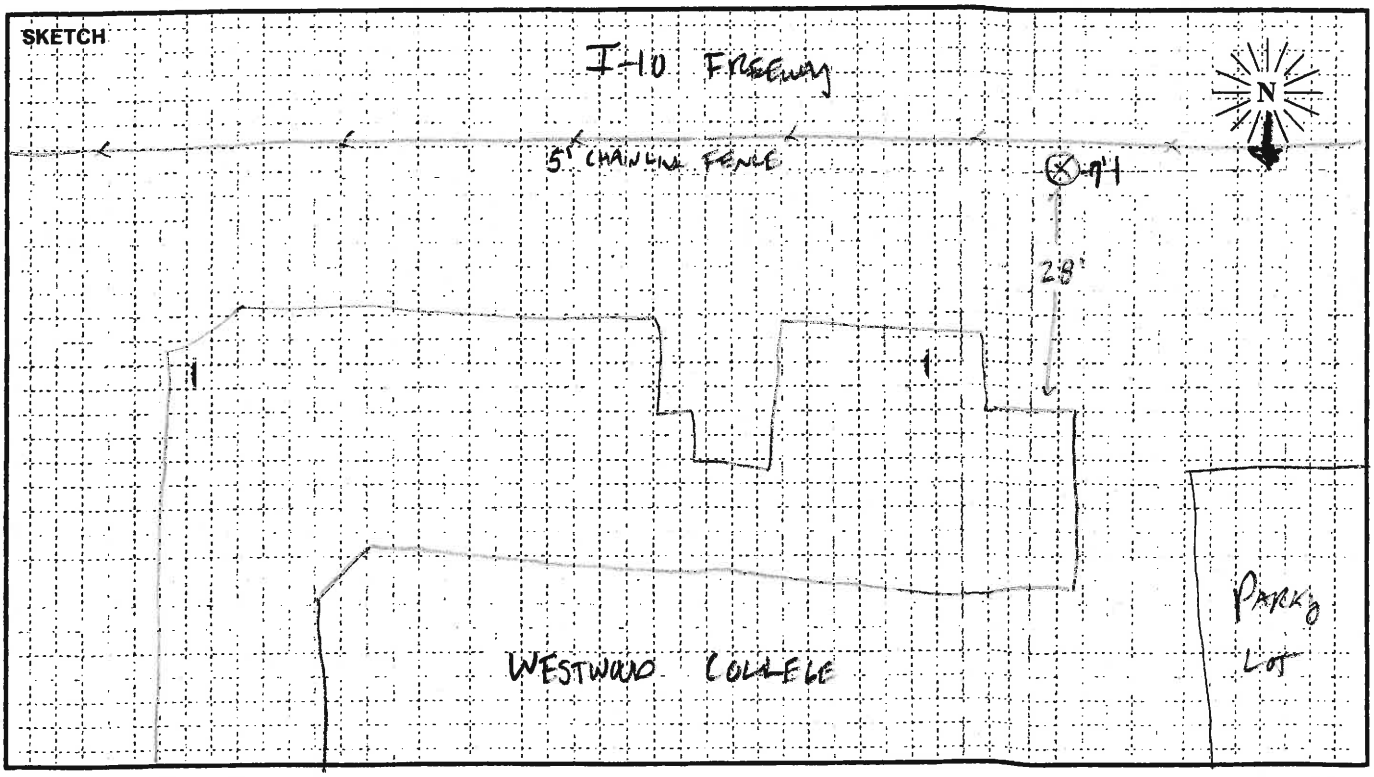
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 65.8 °F R.H.: 54 %
WIND SPEED: 2.9 MPH
TOWARD (DIR): _____
SKIES: Cloudy
CAMERA Ruben Phone
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
6/4	9:40	10:00	68.1	–	70.4	71.8	72.6	73.4	–	84.7	72.4	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. UPENDRA	DATE: 12/11/13
MEASUREMENT ADDRESS: 77 SEVENTH ST	CITY: ONTARIO	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial — SITE NO.: ST934

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2029

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.2 / 22.2 / 16:13
After 114.0 / 113.9 / 22.2 / 16:47

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

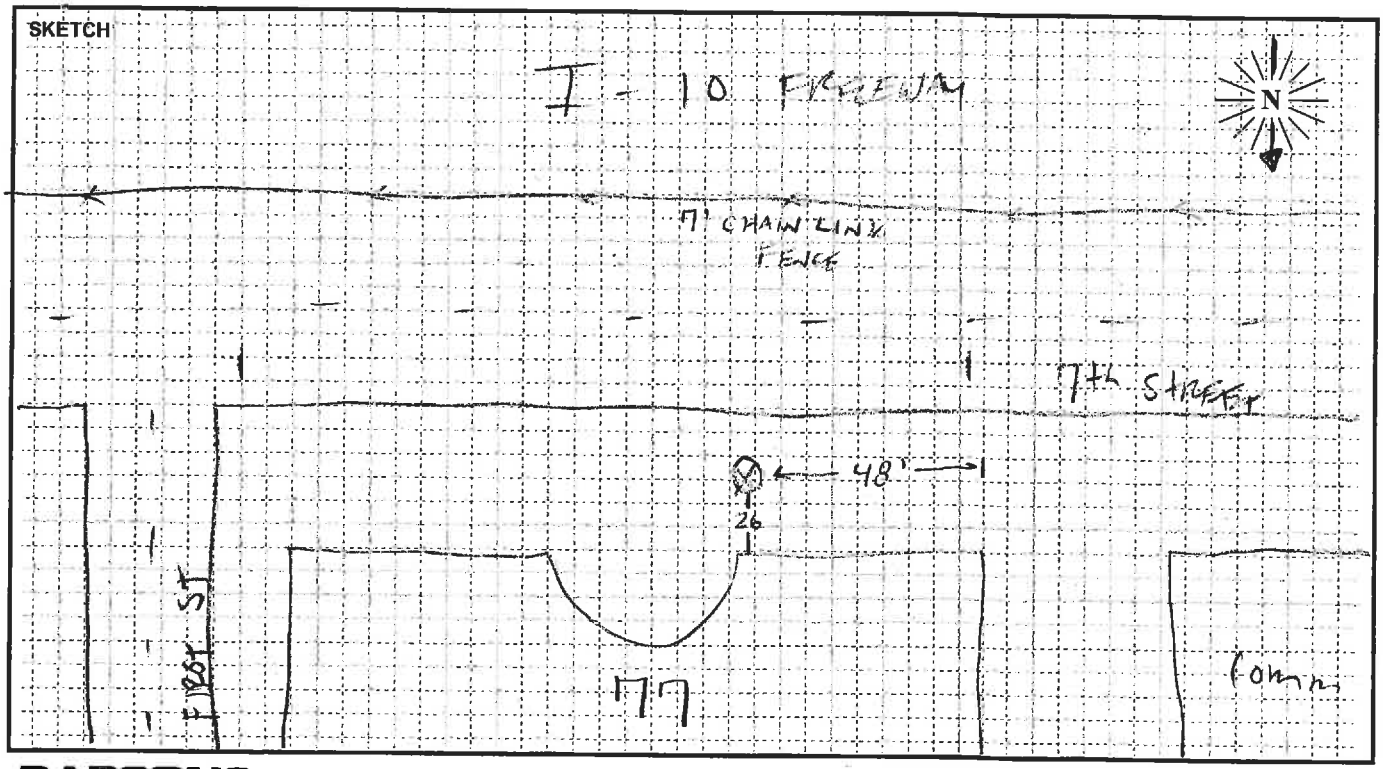
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 70.8 °F R.H.: 19 3 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: TRAFFIC Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/11	16:20	16:40	60.7	61.2	62.6	66	68.1	70.4	75.8	84.6	67.9	HEAVY TRAFFIC ON 7TH ST

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: B. Jarjoura	DATE: 10/17/13
MEASUREMENT ADDRESS: 124 W. Caroline Ct	CITY: Ontario, CA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: ST94

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☒ RANDOM ☒ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before: 114.0 / 114.8 / 22.8 / 15:01
After: 114.0 / 114.9 / 22.8 / 15:41

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

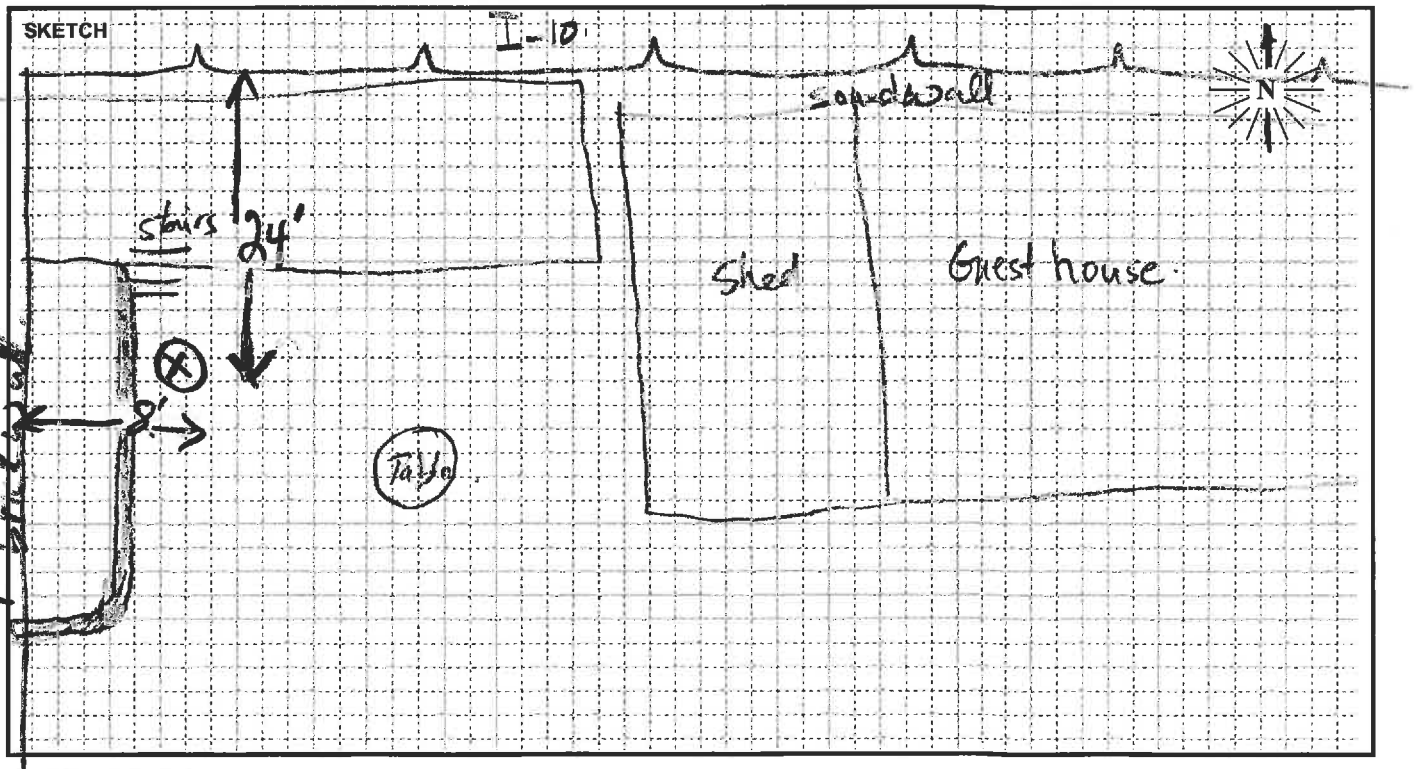
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 86 °F R.H.: 13 %
WIND SPEED: 0.7 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BJ iphone
PHOTO NOs. 84 - 88

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/17/	15:20	15:40	58.8	59.1	60.1	61.4	62.0	62.8	64.0	66.5	61.5	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: ~~B. Jarjoura~~ R. URBINA	DATE: 10/10/13
MEASUREMENT ADDRESS: 1557 PHEASANT AVE	CITY: ONTARIO	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST95

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2486
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.1, 22.1, 14:28
After 114.0, 113.9, 22.1, 16:23

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

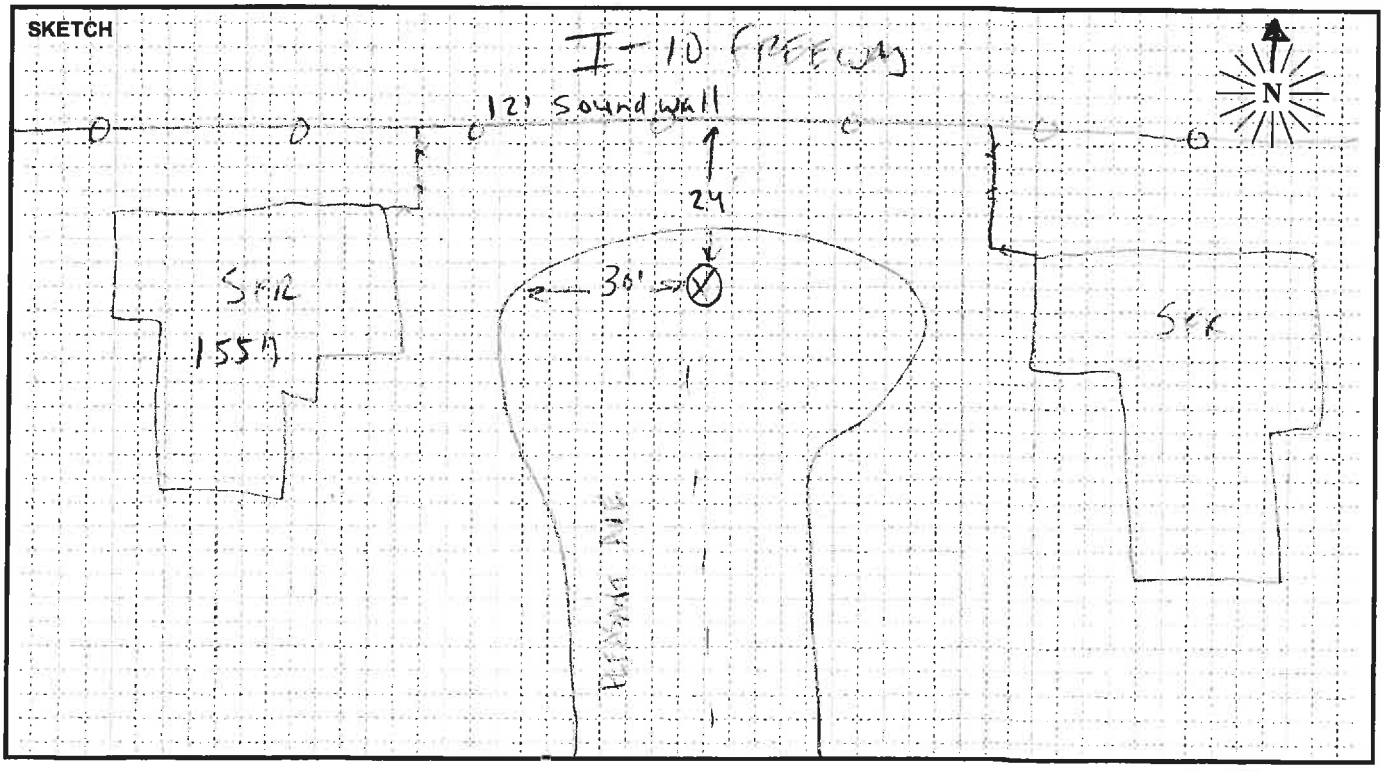
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 79.1 °F R.H.: 47.3 %
WIND SPEED: 0.7 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RURAL PHOTO
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	14:40	15:00	59.7	60.3	61.6	63.1	63.8	64.5	67.1	72.3	63.3	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		R. VRENNA	DATE: 12/11/13
MEASUREMENT ADDRESS: 265 E. SEVENTH ST	CITY: ONTARIO	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST96A

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☑ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____

SERIAL #:	SERIAL #:	SERIAL #:
0555	2029	2071

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480

Freq, Hz.: ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 114.0 / 113.9 / 22.2 / 16:47

After 114.0 / 113.9 / 22.2 / 17:23

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 60 °F R.H.: 24.9 %

WIND SPEED: 0 MPH

TOWARD (DIR): _____

SKIES: CLEAR

CAMERA RUBEN PHONE

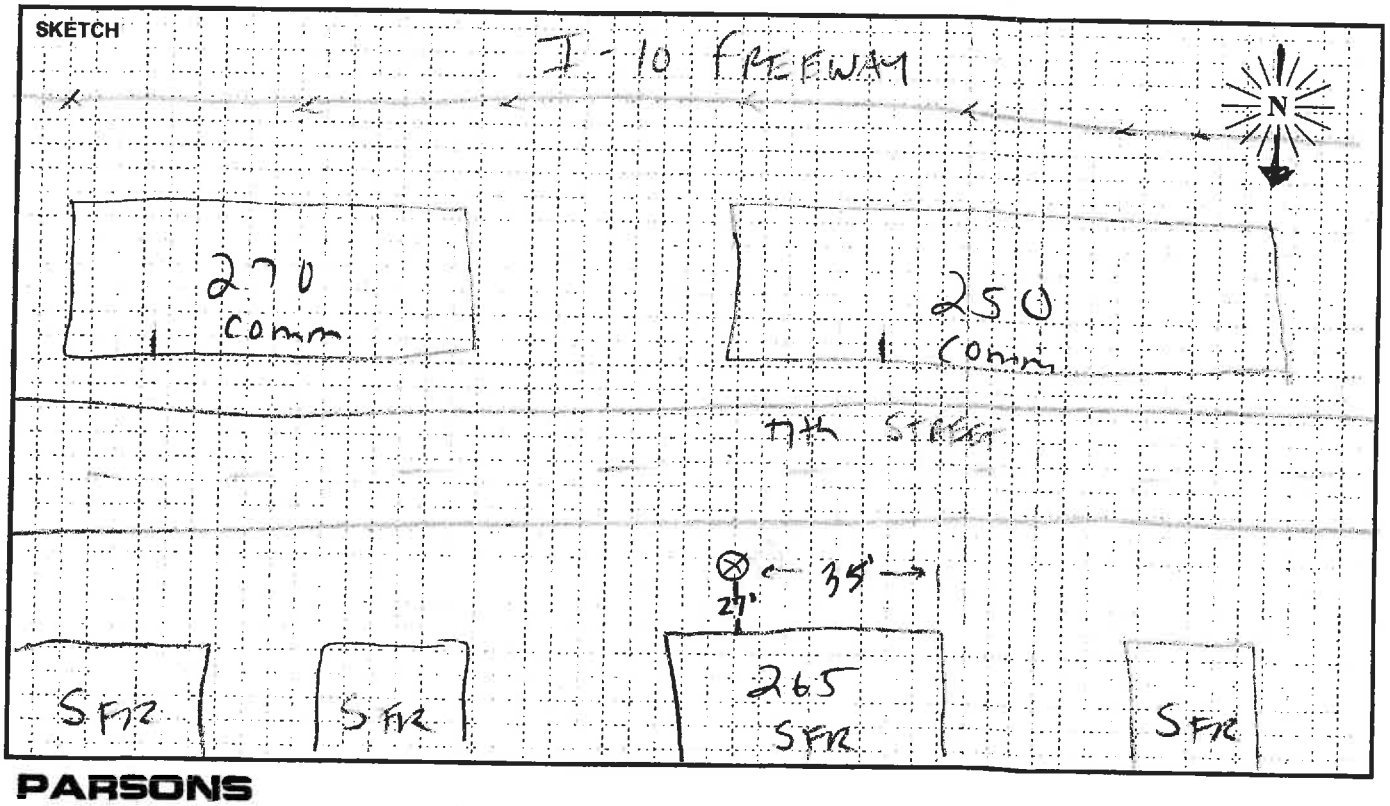
PHOTO NOs. _____

NOTES: TRAFFIC Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/11	17:00	17:20	61	61.2	62.5	65.9	68.1	70.6	73.5	74.6	67.3	CAR HONK 17:12

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: B. Jarjoura	DATE: 10/10/13
MEASUREMENT ADDRESS: 479 Richland Street	CITY: Upland, CA	☐ Single-Family ☐ Recreational ☒ Multi-Family ☐ Commercial ☐ School — SITE NO.: ST96

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114 / 114.9 / 22.8 / 11:41
After 114 / 115.1 / 22.8 / 12:21

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

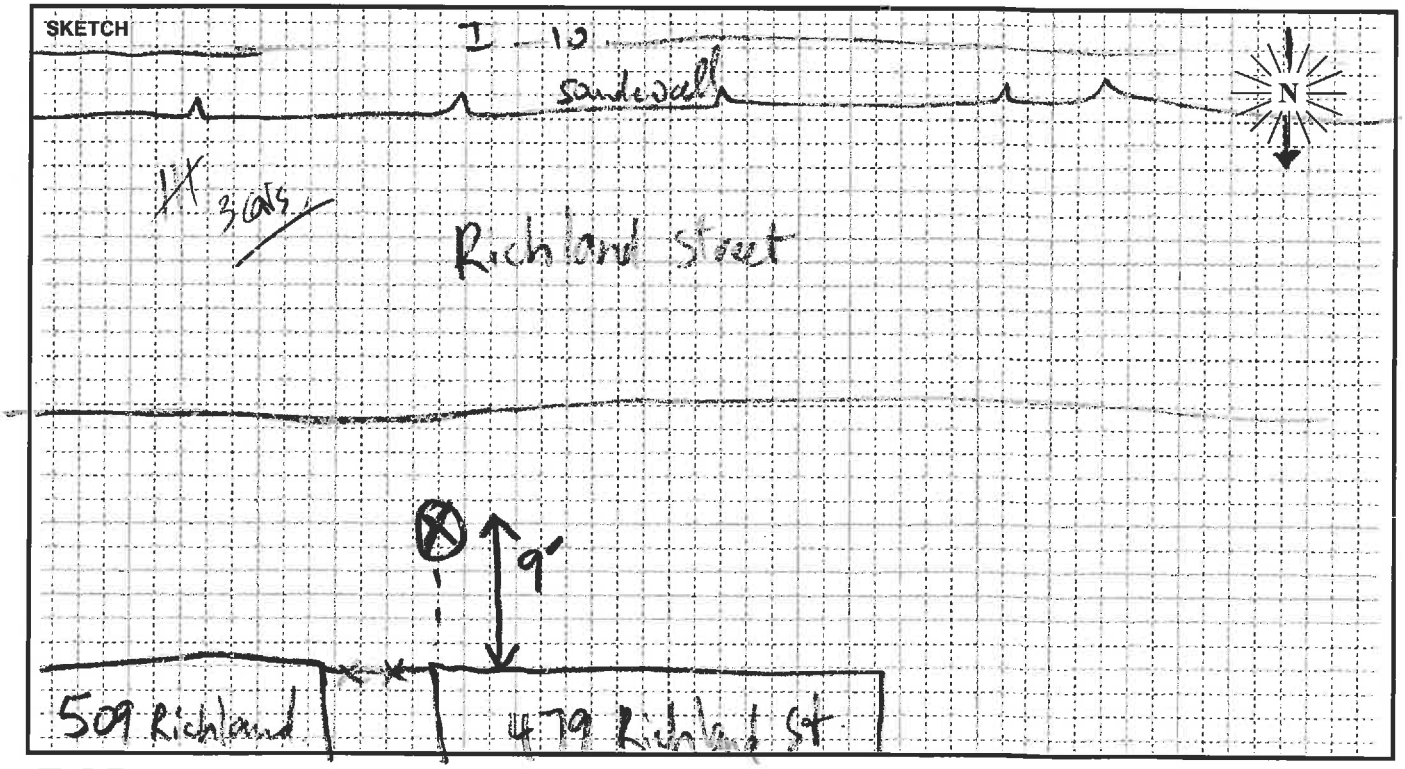
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 57 °F R.H.: 37 %
WIND SPEED: 0.2 MPH
TOWARD (DIR): _____
SKIES: Some clouds
CAMERA BJ iphone
PHOTO NOs. 24-28

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	12:00	12:20	61.7	62.2	63.4	65.1	65.9	66.8	67.9	69.4	65.2	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor

ENGINEER: Corea Barg/Julie R.

DATE: 7/11/14

MEASUREMENT ADDRESS: 650 Richland St

CITY: Upland

☐ Single-Family ☐ Multi-Family ☐ School ☒ Recreational ☐ Commercial

SITE NO.: ST97

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____

SERIAL #: 0639

MICROPHONE:
☐ NON-POLAR ☒ POLARIZED
☐ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☒ RANDOM
☒ WIND SCREEN

SERIAL #: 3155

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-902 ☐ _____

SERIAL #: 1629

NOTES: CAL

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 78 °F R.H.: 57.9 %

WIND SPEED: 1.0 MPH

TOWARD (DIR): _____

SKIES: Clear

CAMERA Digital Camera

PHOTO NOs. _____

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2480

Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time

Before 114.0, 113.8, —, 9:04

After 114.0, 113.9, —, 11:52

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES:

Dist. to Center of Nearest Lane _____

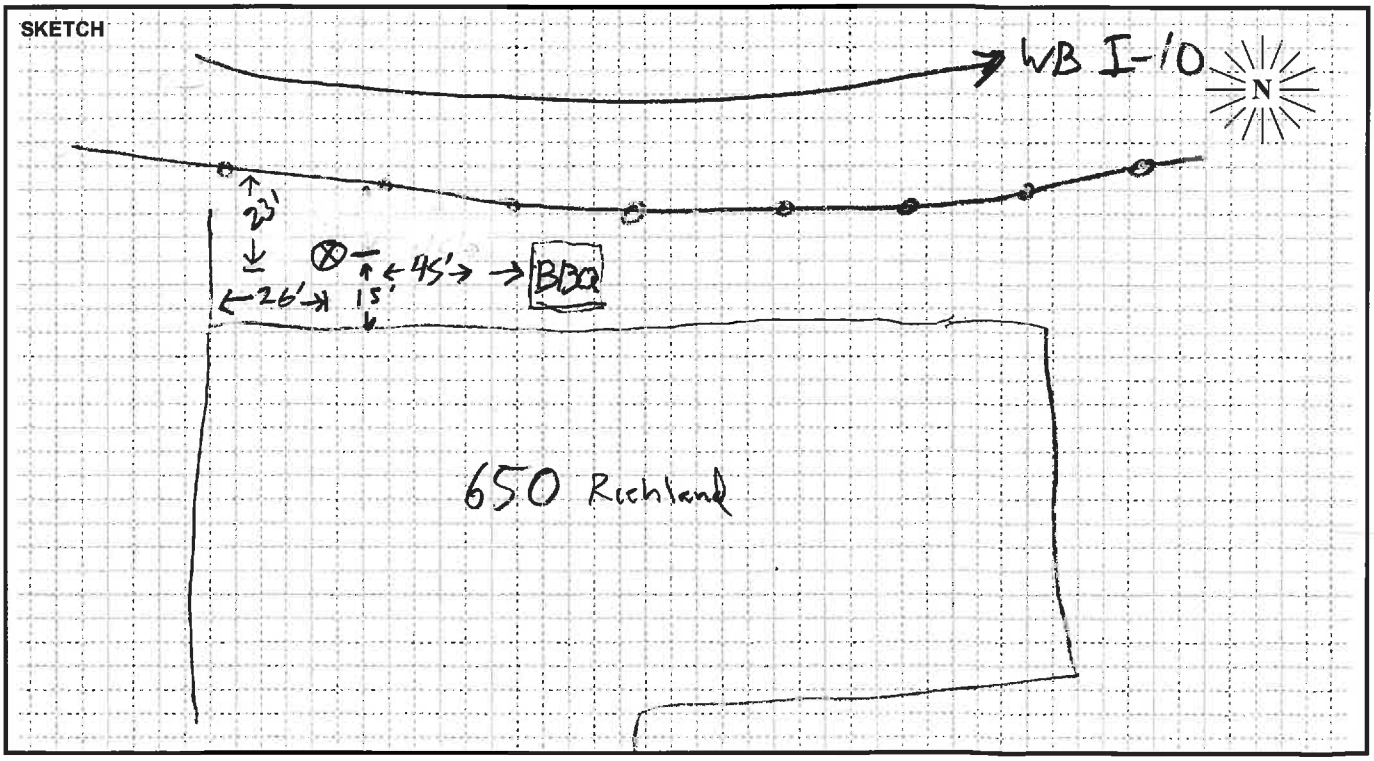
☒ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/11	11:20	11:40	63.9	—	65.6	67.2	67.9	68.7	—	74.7	67.4	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor		ENGINEER: Greg Berg	DATE: 7/11/14
MEASUREMENT ADDRESS: 768 Richland	CITY: UPLAND	☐ Single-Family ☐ Recreational ☑ Multi-Family ☐ Commercial ☐ School	SITE NO.: ST97A

SOUND LEVEL METER: ☑ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0344

MICROPHONE: ☐ NON-POLAR ☑ POLARIZED ☑ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☑ RANDOM ☑ WIND SCREEN
SERIAL #: 2313

PRE AMP: ☑ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-902 ☐ _____
SERIAL #: 2661

CALIBRATOR: ☑ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz.: ☑ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.6, 23.1, 10:12
After 114.0, 113.9, –, 12:43

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

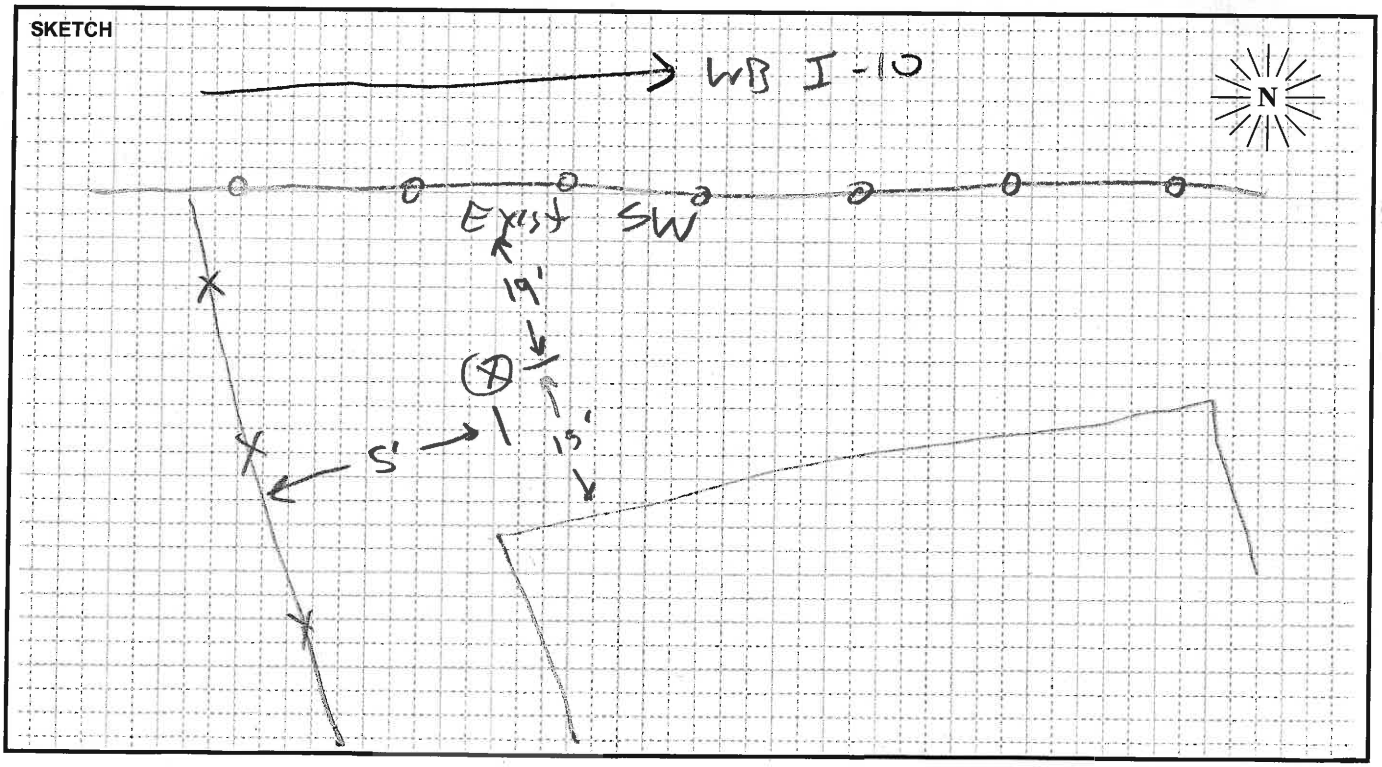
NOTES: CAL
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 78 °F R.H.: 57.5 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA Digital Camera
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☒ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/11	10:18											
7/11	11:20	11:40	63.4	64.3	65.8	67.3	68.1	68.8	70.6	75	67.5	CAL
		12:41										

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Express Lanes | ENGINEER: M. Meyer | DATE: 10/10/13

MEASUREMENT ADDRESS: 1549 Miramonte Ave | CITY: Ontario | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST98

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☒ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: A3119

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☒ RANDOM
☒ WIND SCREEN
SERIAL #: 5280

PRE AMP:
☐ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☒ LD-902 ☐ _____
SERIAL #: 3274

CALIBRATOR:
☐ LD CA250 ☒ LD CA200
☐ B&K 4231 ☐ _____
S/N 10473
Freq, Hz.: ☐ 250 ☒ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 47.72, 13:36
After 114.0, 114.0, 47.72, 14:03

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

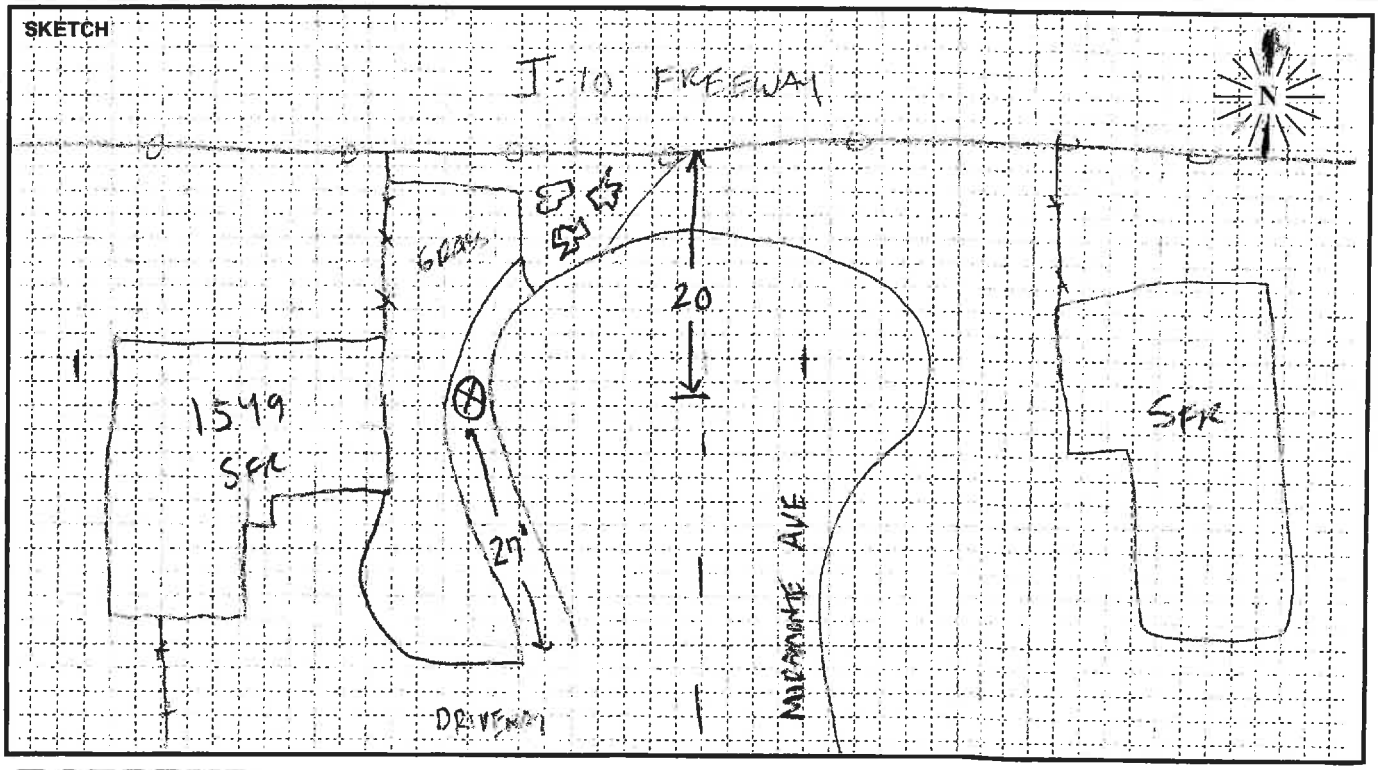
NOTES: CAL
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 62 °F R.H.: 41 %
WIND SPEED: 3 MPH
TOWARD (DIR): _____
SKIES: Partly Cloudy
CAMERA _____
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	13:40	14:00	59.8							73.2	64.3	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: ~~B. Jarjoura~~ R. URTENDA	DATE: 10/10/13
MEASUREMENT ADDRESS: 809 E. 6th St	CITY: ONTARIO	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial
		SITE NO.: ST99

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 22.1, 15:56
After 114.0, 113.8, 22.1, 16:23

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

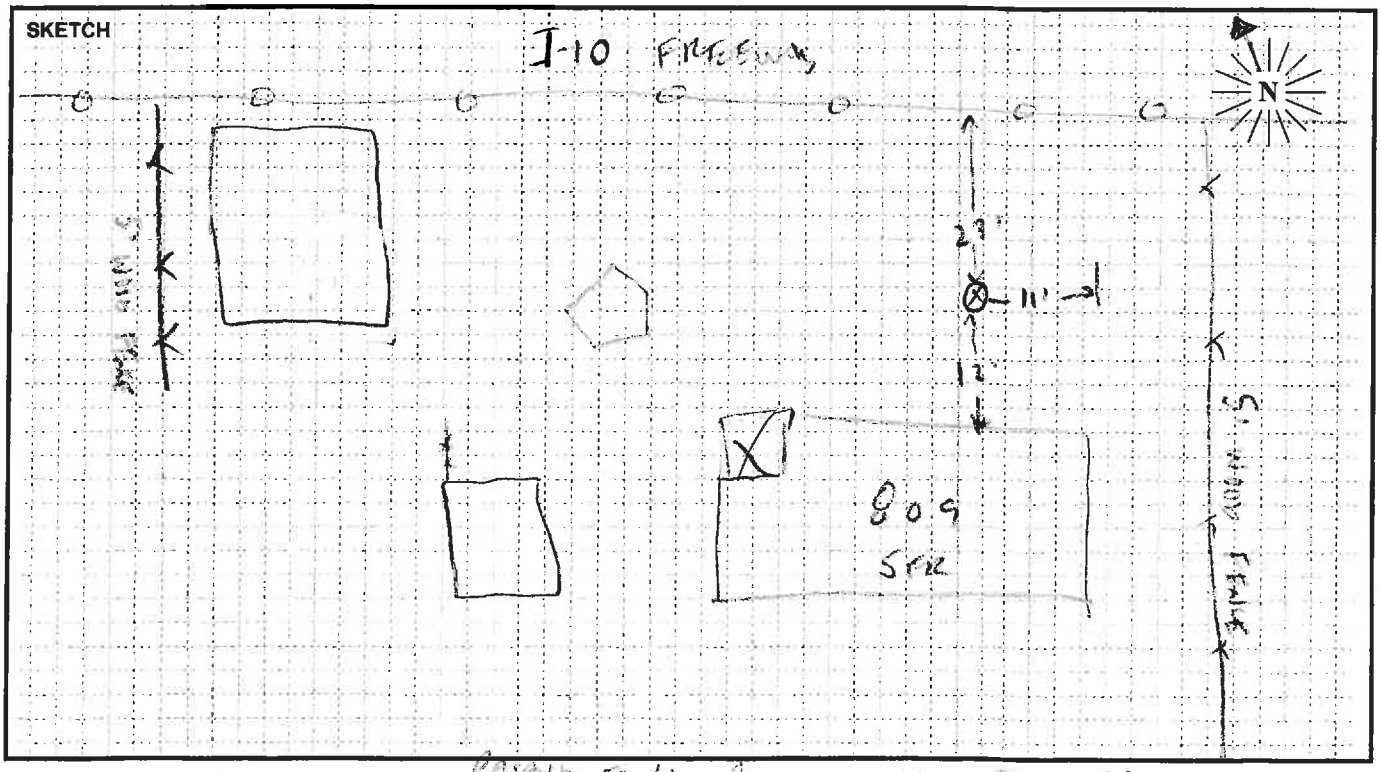
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 68.4 °F R.H.: 44.9 %
WIND SPEED: 0.7 MPH
TOWARD (DIR): _____
SKIES: Cloudy
CAMERA RUGER PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	16:00	16:20	63.2	63.7	64.3	65.6	66.9	67.1	69.3	72.6	65.9	

SKETCH



PARSONS

PASADENA 52 110 PASADENA 54, 57 CEN
VIP MADISON

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: ~~B. Jarjoura~~ R. URENO	DATE: 10/10/13
MEASUREMENT ADDRESS: 709 DEVAN ST	CITY: ONTARIO	☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial
		SITE NO.: ST998

SOUND LEVEL METER:
☑ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE:
☑ NON-POLAR ☐ POLARIZED
☑ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☑ WIND SCREEN
SERIAL #: 2141

PRE AMP:
☑ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR:
☑ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz.
☐ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.9 / 22.1 / 15:11
After 114.0 / 113.9 / 22.1 / 16:23

METER SETTINGS:
☑ A-WTD ☐ LINEAR ☑ SLOW ☐ 1/1 OCT ☑ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

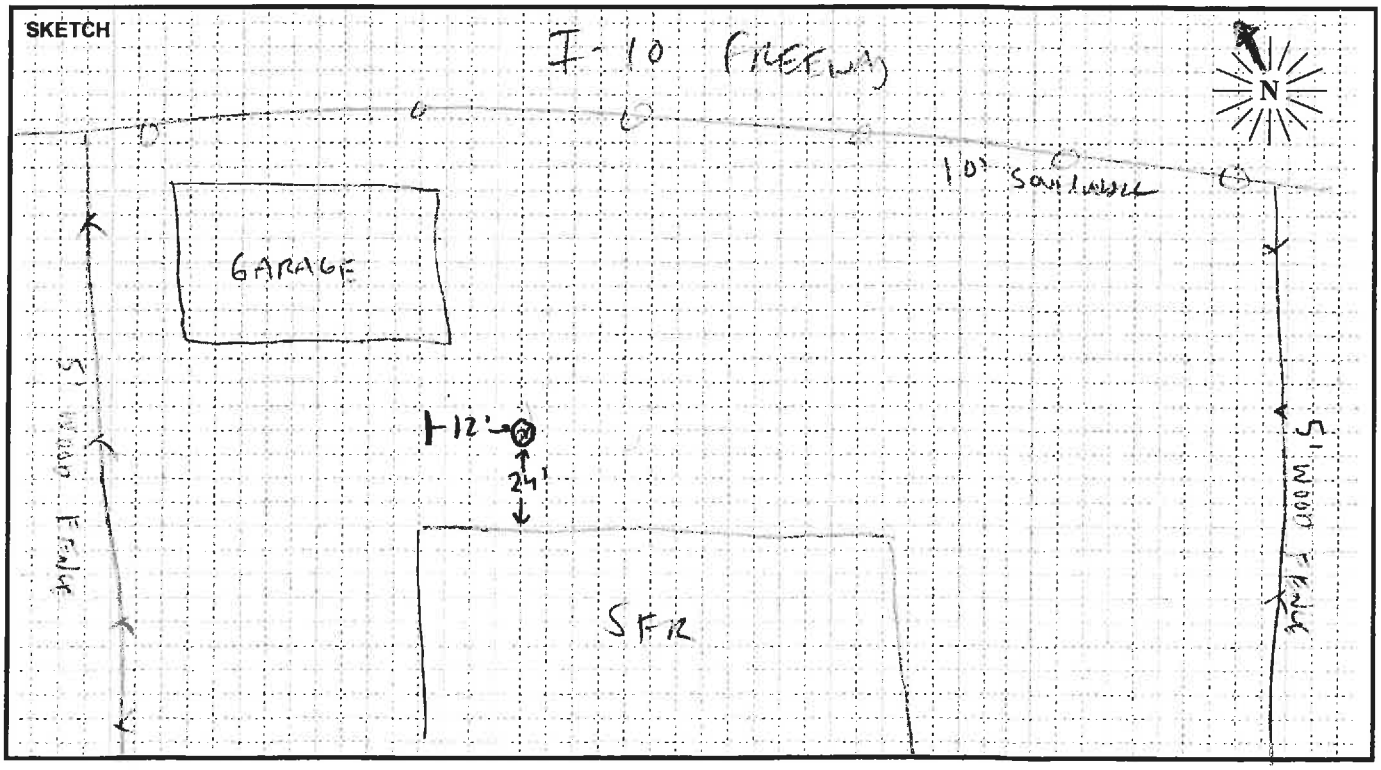
NOTES:
SYSTEM PWR: ☑ BAT ☐ AC
(observations at start of measurement)
TEMP: 69.4 °F R.H.: 44.4 %
WIND SPEED: 0.9 MPH
TOWARD (DIR): _____
SKIES: CLOUDY
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☑ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	15:20	15:40	60.2	61.1	62.5	64.1	64.8	65.9	69.6	72.1	64.5	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: B. Jarjoura	DATE: 10/10/13
MEASUREMENT ADDRESS: 916 E. Deodar Street	CITY: Ontario	☐ Single-Family ☐ Recreational ☒ Multi-Family ☐ Commercial ☐ School — SITE NO.: ST100

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 115.0 / 22.8 / 10:19
After 114. / 115.2 / 22.8 / 10:46

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20' - MINUTE ☐ L_N PERCENTILE VALUES

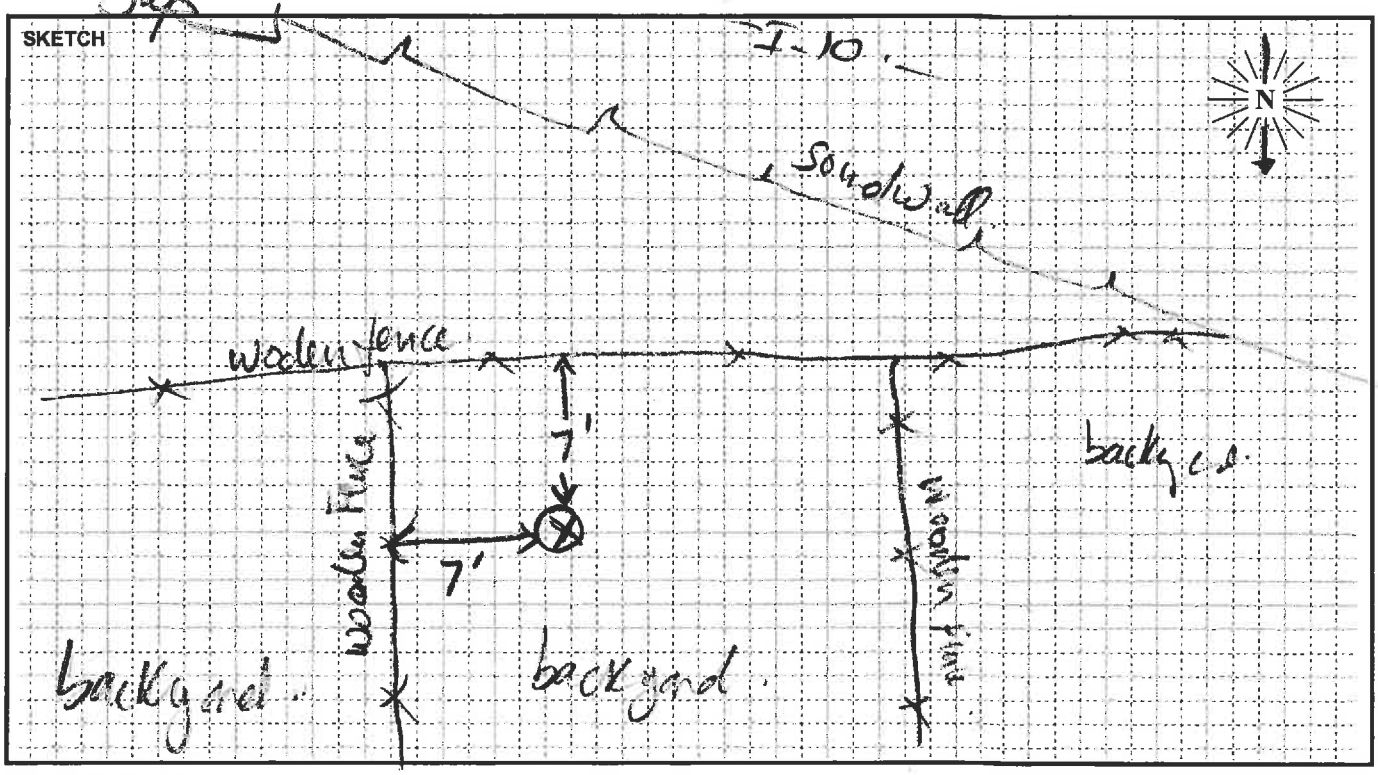
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 57 °F R.H.: 32 %
WIND SPEED: 0.2 MPH
TOWARD (DIR): _____
SKIES: Partly cloudy
CAMERA B. Jarjoura
PHOTO NOs. 12-17

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	10:23	10:43	59.9	63.3	65.1	67.3	68.2	68.9	71.0	75.9	67.5	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: B. Jarjoura	DATE: 10/11/13
MEASUREMENT ADDRESS: 1429 N. Orchard Lane	CITY: Ontario, CA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST101

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.9 / 22.8 / 9:28
After 114.0 / 114.0 / 22.8 / 10:02

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

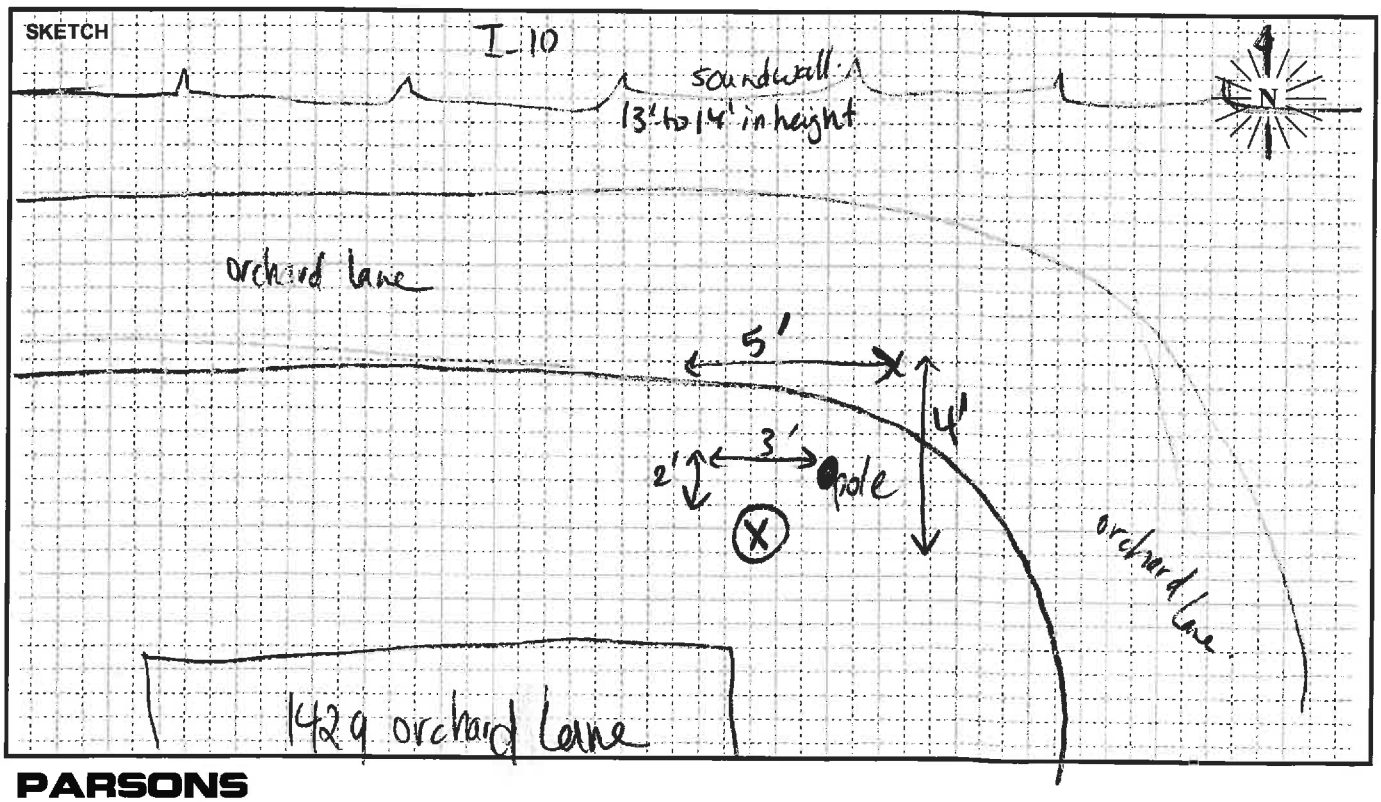
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 59 °F R.H.: 34 %
WIND SPEED: 0.1 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BJ iphone
PHOTO NOs. 37-41

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/11	9:40	10:00	62.1	63.5	64.9	66.2	66.8	67.4	68.6	70.3	66.2	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor | ENGINEER: Greg Berg | DATE: 7/11/14

MEASUREMENT ADDRESS: 1128 E. 5th St | CITY: Ontario | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: ST102

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE:
☐ NON-POLAR ☒ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☒ RANDOM
☒ WIND SCREEN
SERIAL #: 3155

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-902 ☐ _____
SERIAL #: 1629

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 6.7, 8:07
After 114.0, 113.8, —, 9:04

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

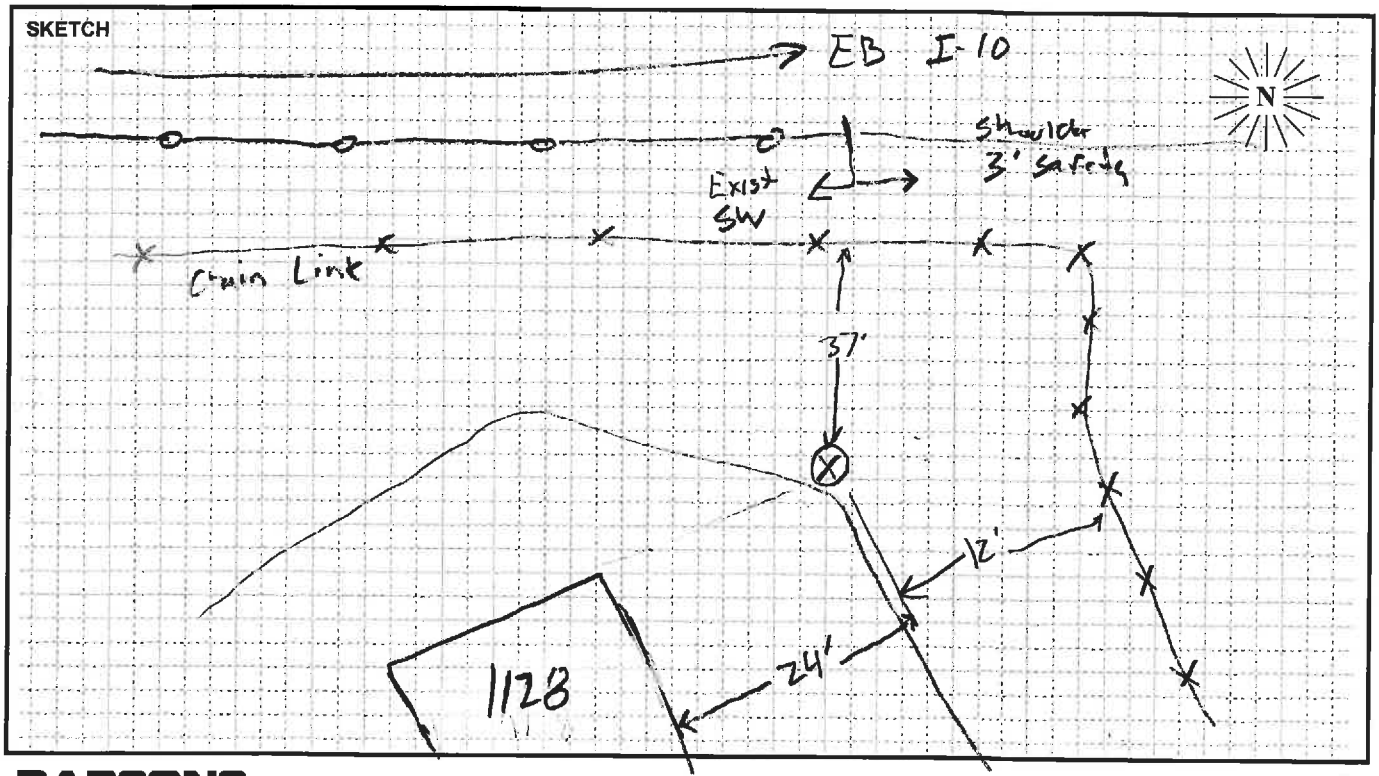
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 75 °F R.H.: 67 %
WIND SPEED: 1.1 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA _____
PHOTO NOs. _____

NOTES: 824-825 car pass
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
7/11	8:20	8:40	62.9	—	64.8	66.7	67.6	68.3	—	71.4	66.8	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: B. Jarjoura	DATE: 10/10/13
MEASUREMENT ADDRESS: 1233 E. 5th street	CITY: Ontario, CA	☐ Single-Family ☐ Recreational ☒ Multi-Family ☐ Commercial ☐ School — SITE NO.: ST103

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2247
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114 , 115.1 , 22.8, 12:21
After 114 , 115.0 , 22.8 , 14:05

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

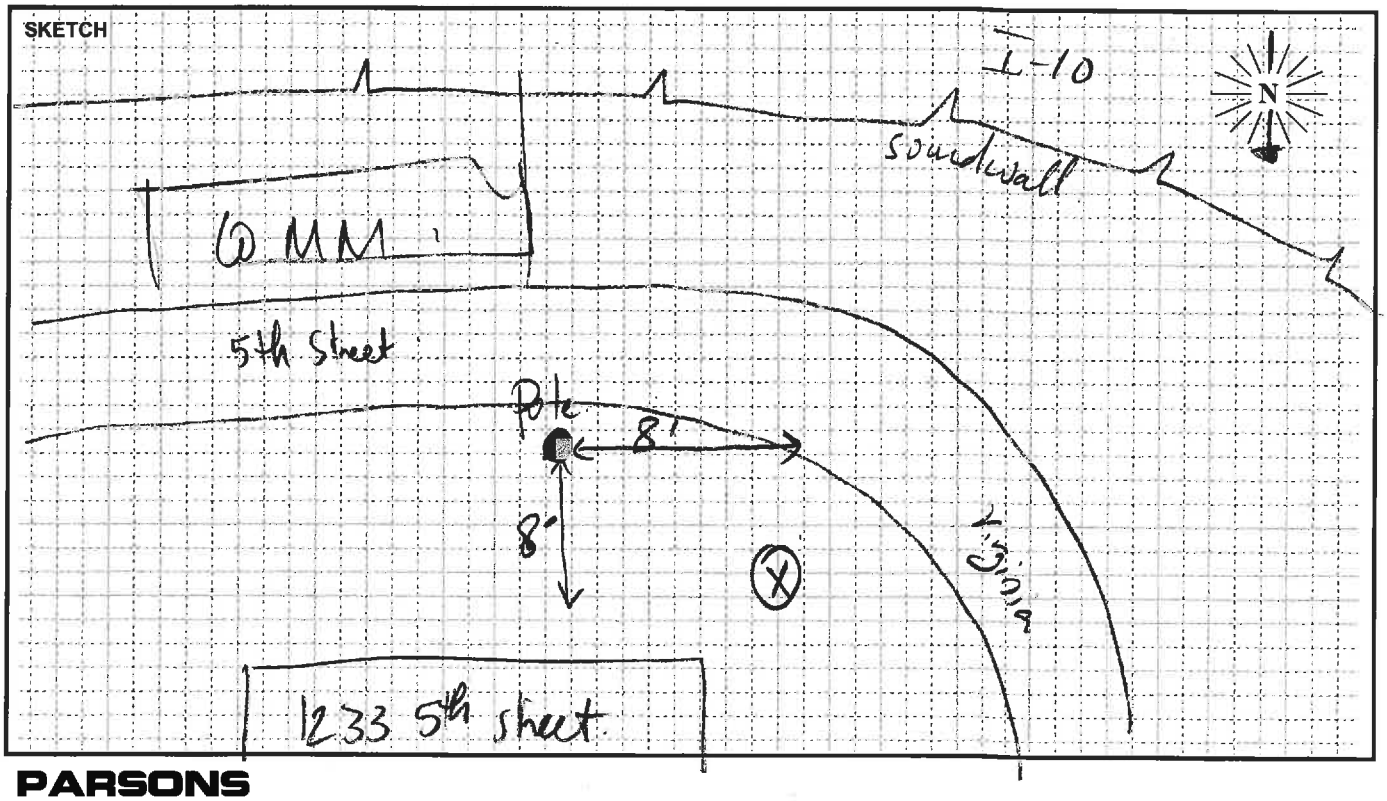
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 63 °F R.H.: 34 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: Some clouds
CAMERA B.J. iphone
PHOTO NOs. 29-32

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	1:42	2:02	62.6	63.1	64.2	66.0	66.8	67.5	69.0	72.5	66.1	

SKETCH



PARSONS

FIELD SURVEY FORM

10/10/18

PROJECT: I-10 EXPRESS LANE		ENGINEER: M. MEYER MM	DATE: 10/3/13
MEASUREMENT ADDRESS: Lot 62 1512 E. 5th ST.	CITY: Ontario	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST 604

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☒ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: A3119

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☐ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☐ WIND SCREEN
SERIAL #: [redacted]8 5280

PRE AMP:
☐ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: [redacted]1901

CALIBRATOR:
☐ LD CA250 ☒ LD CA200
☐ B&K 4231 ☐ _____
S/N 10473
Freq, Hz.
☐ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 97.02 / 14:34
After 114.0 / 114.0 / 97.22 / 15:03

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

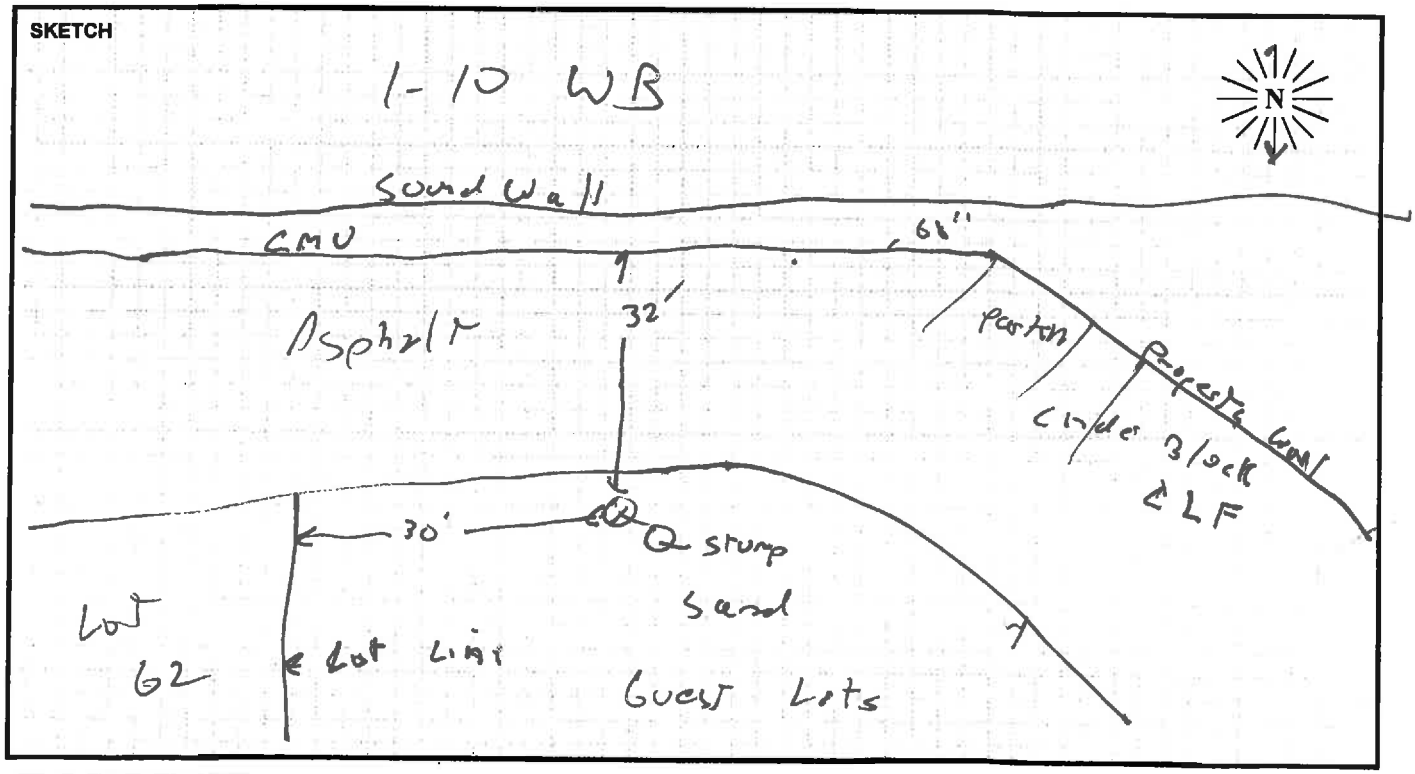
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 64 °F R.H.: 90 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: Cloudy
CAMERA _____
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	14:45	15:00	62.2							70.7	65.7	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: B. Jarjoura	DATE: 10/11/13
MEASUREMENT ADDRESS: 1041 N. Glenn Ave	CITY: Ontario	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial
		SITE NO.: ST105

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☐ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2771

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114 , 114.0 , 22.1 , 10:47
After 114 , 113.9 , 22.1 , 11:21

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

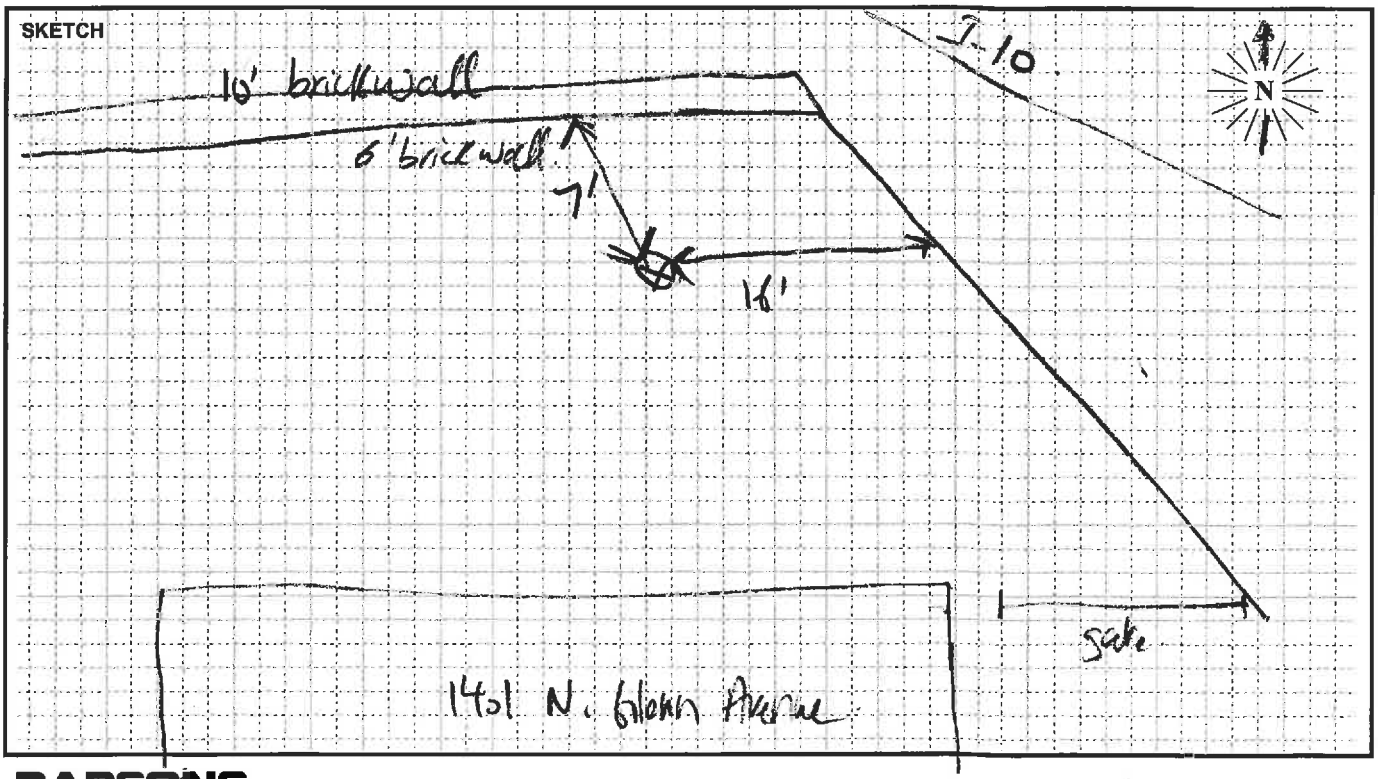
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 61 °F R.H.: 58 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA B.J. phone.
PHOTO NOs. 42-48

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/11	11:00	11:20	52.8	53.4	54.9	56.8	57.9	59.0	64.2	73.6	577	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	M. MEYER	DATE: 10/10/13
MEASUREMENT ADDRESS: MOTEL 6 1560 E 4th St	CITY: ONTARIO	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial — SITE NO.: ST106

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☒ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: A 3119

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 5280

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1901

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____
S/N 10423
Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 47.7, 15:17
After 114.0, 114.0, 47.7, 15:41

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☐ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

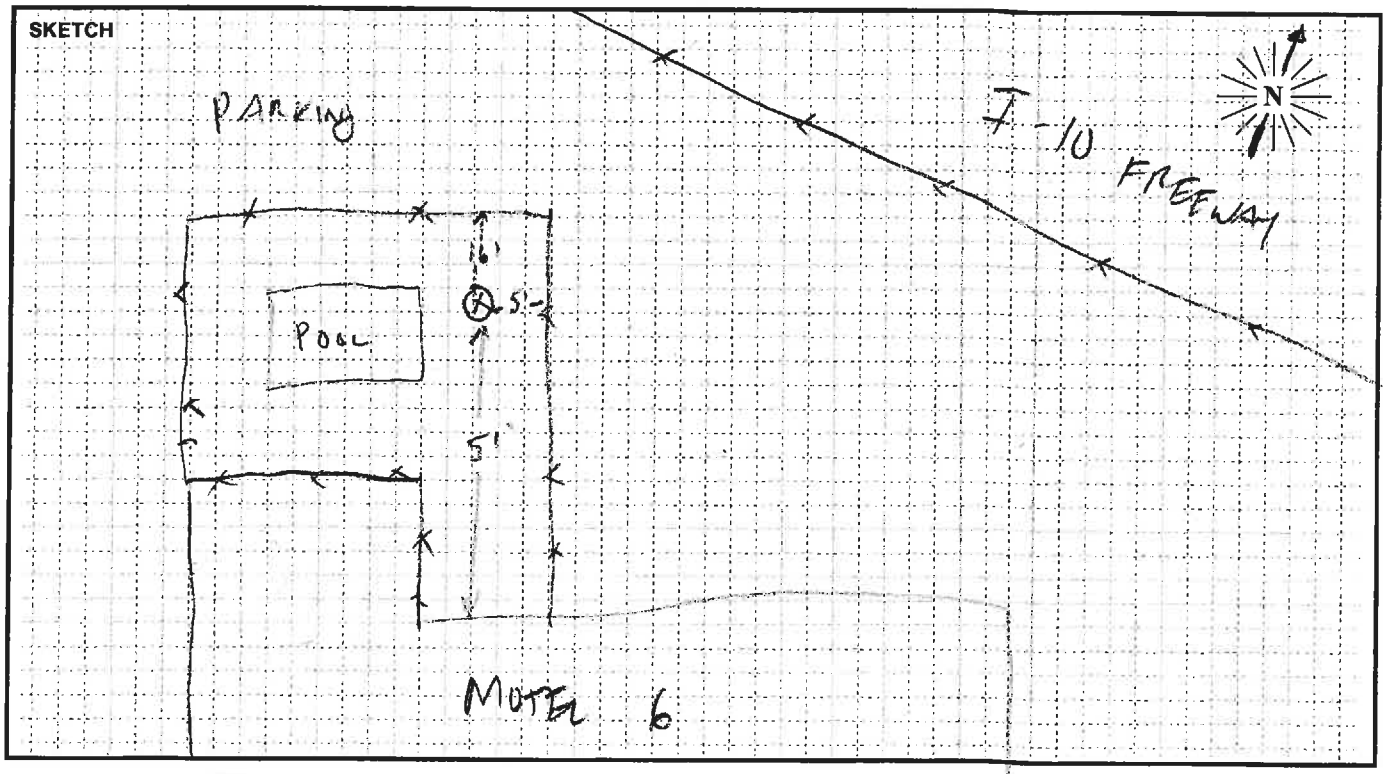
NOTES:
SYSTEM PWR: ☐ BAT ☐ AC
(observations at start of measurement)
TEMP: 63 °F R.H.: 41 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLOUDY
CAMERA MARK'S PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	15:20	15:40	70.7							78.4	74.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE		ENGINEER: M. MEYER	DATE: ~~10/3/13~~ 10/11/17
MEASUREMENT ADDRESS: 1415 E. Fresno St.	CITY: Ontario	☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST107

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:
☐ LD-870 ☐ LD-820 ☐ B&K-2238	☐ NON-POLAR ☐ POLARIZED	☐ LD-900 ☐ ZC-0030
☑ LD-824 ☐ LD-812 ☐ B&K-2250	☑ 1/2-INCH ☐ FREEFIELD	☐ LD-828 ☐ ZC-0032
☐ LD-2900 ☐ _____	☐ 1-INCH ☐ RANDOM	☑ LD-824 ☐ _____
SERIAL #: A 3119	☐ WIND SCREEN	SERIAL #: 3274
	SERIAL #: 52820	

CALIBRATOR:

☐ LD CA250 ☑ LD CA200 ☐ B&K 4231 ☐ _____ S/N 12473

Freq, Hz.: ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:

Input, dB / Reading, dB / Offset, dB / Time

Before 114.0, 114.0, 17.2, 10:18

After 114.0, 114.1, 17.2, 10:42

METER SETTINGS:

☑ A-WTD ☐ LINEAR ☑ SLOW ☐ 1/1 OCT ☐ INTERVALS 20 - MINUTE

☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☐ BAT ☐ AC

(observations at start of measurement)

TEMP: 61 °F R.H.: 58 %

WIND SPEED: 0 MPH

TOWARD (DIR): _____

SKIES: Clear

CAMERA MARK PHONE

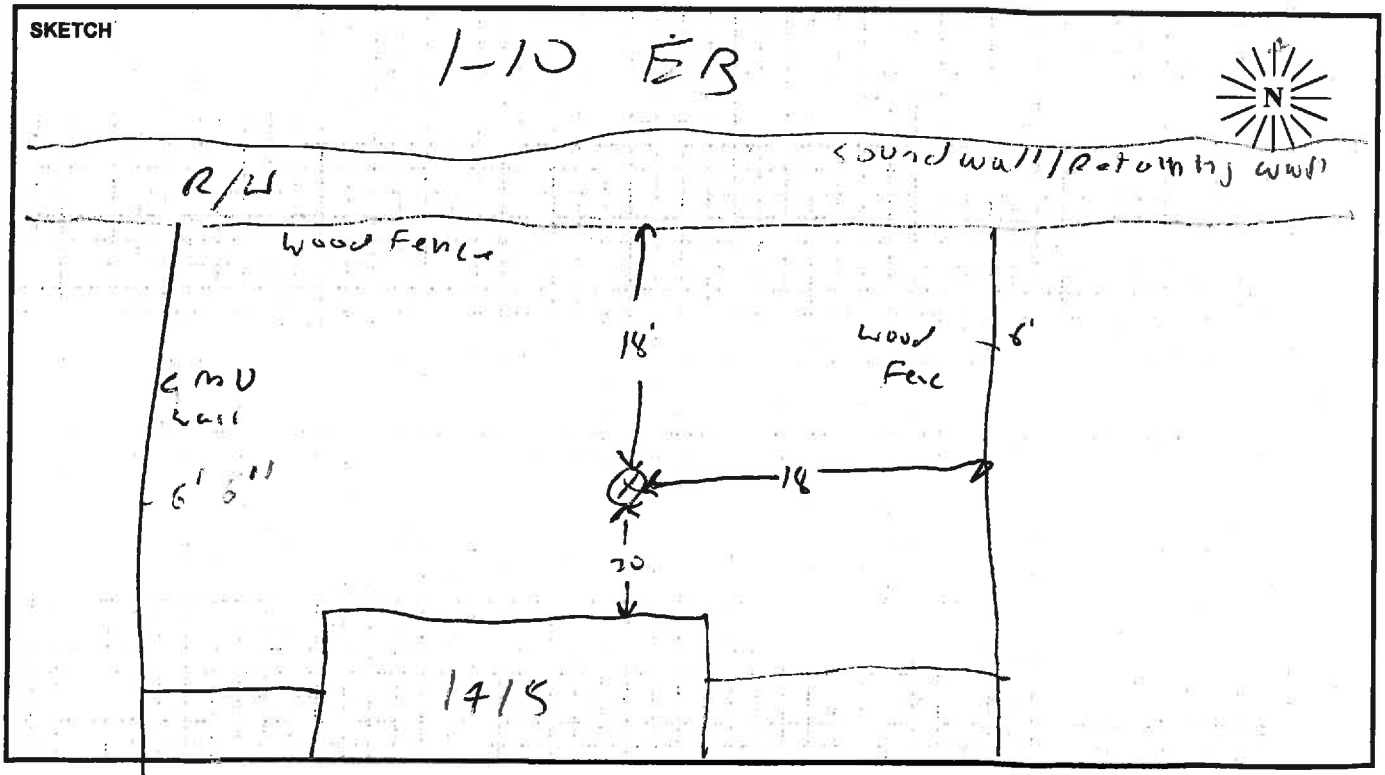
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/11	10:20	10:40	56.7							70.9	63.3	store 4

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor		ENGINEER: OGDEN	DATE: 10/11/13
MEASUREMENT ADDRESS: The Waverly Apartments	CITY: Ontario	☐ Single-Family ☒ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: ST108

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☐ LD-870 ☐ LD-820	☒ WIND SCREEN	☐ LD-900	SYSTEM PWR: ☐ BAT ☐ AC
☐ LD-824 ☐ LD-812	☐ NON-POLAR ☐ POLARIZED	☐ LD-828	(observations at start of measurement)
☒ B&K-2250 ☐ _____	☒ 1/2-INCH ☐ FREEFIELD	☐ _____	TEMP: 61 °F R.H.: 58 %
SERIAL #: 2676029	☐ 1-INCH ☒ RANDOM	SERIAL #: 10769	WIND SPEED: 0 MPH
	SERIAL #: 4189-2663101		TOWARD (DIR): _____

CALIBRATOR:	Freq, Hz.	CALIBRATION RECORD: Sensitivity	
☐ LD CA250	☐ 250		Input, dB / Reading / Rel Offset / Time
☒ B&K 4231	☐ 1000	Before	47.3 / 11:05
S/N 2507137	☐ _____	After	47.5 / 11:42

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

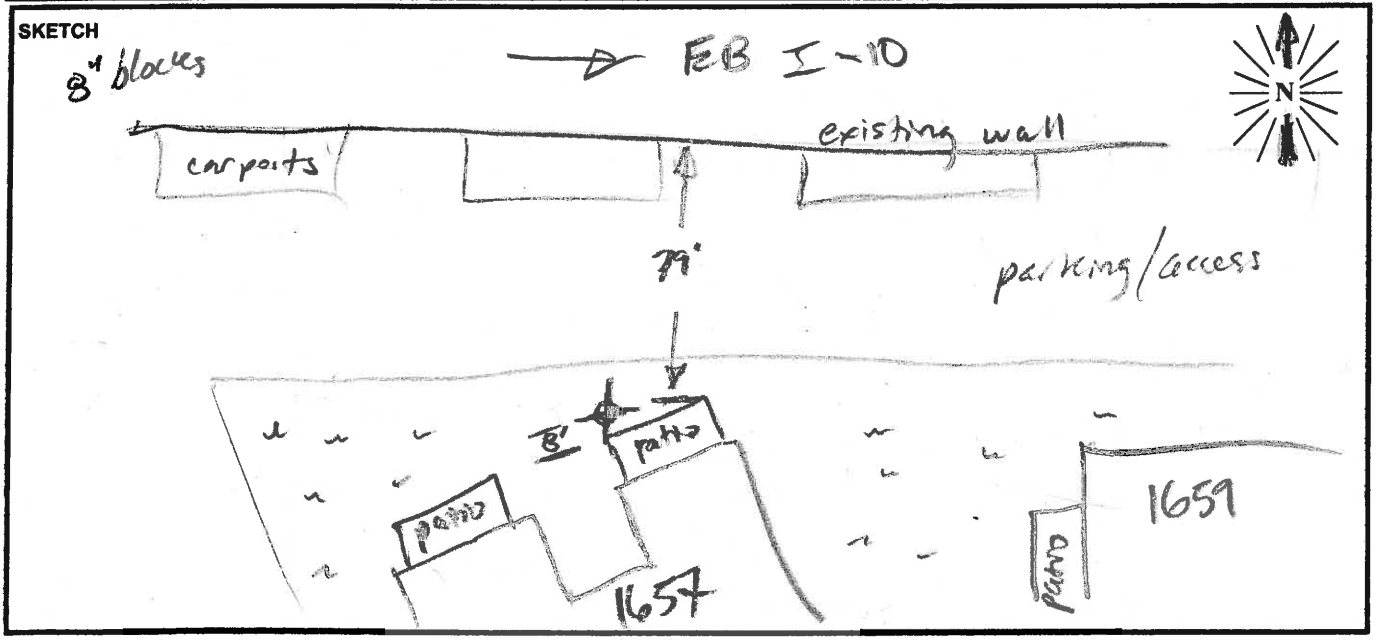
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/11	11:20	11:40	62.5	64.3	66.3	68.1	[illegible]	71.0	71.9	72.7	68.4	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: ~~High Desert Corridor High Speed Rail~~ I-10	ENGINEER: M Berger	DATE: ~~9/25/13~~ 10/10/13
MEASUREMENT ADDRESS: 1828 E Granada ct	CITY: Ontario	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: ST109

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☒ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: A3119

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 5280

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☒ LD-824 ☐ _____
SERIAL #: 3274

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____ S/N 10473
Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 97.0, 11:30
After 114.0, 114.0, 97.0, 12:04

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

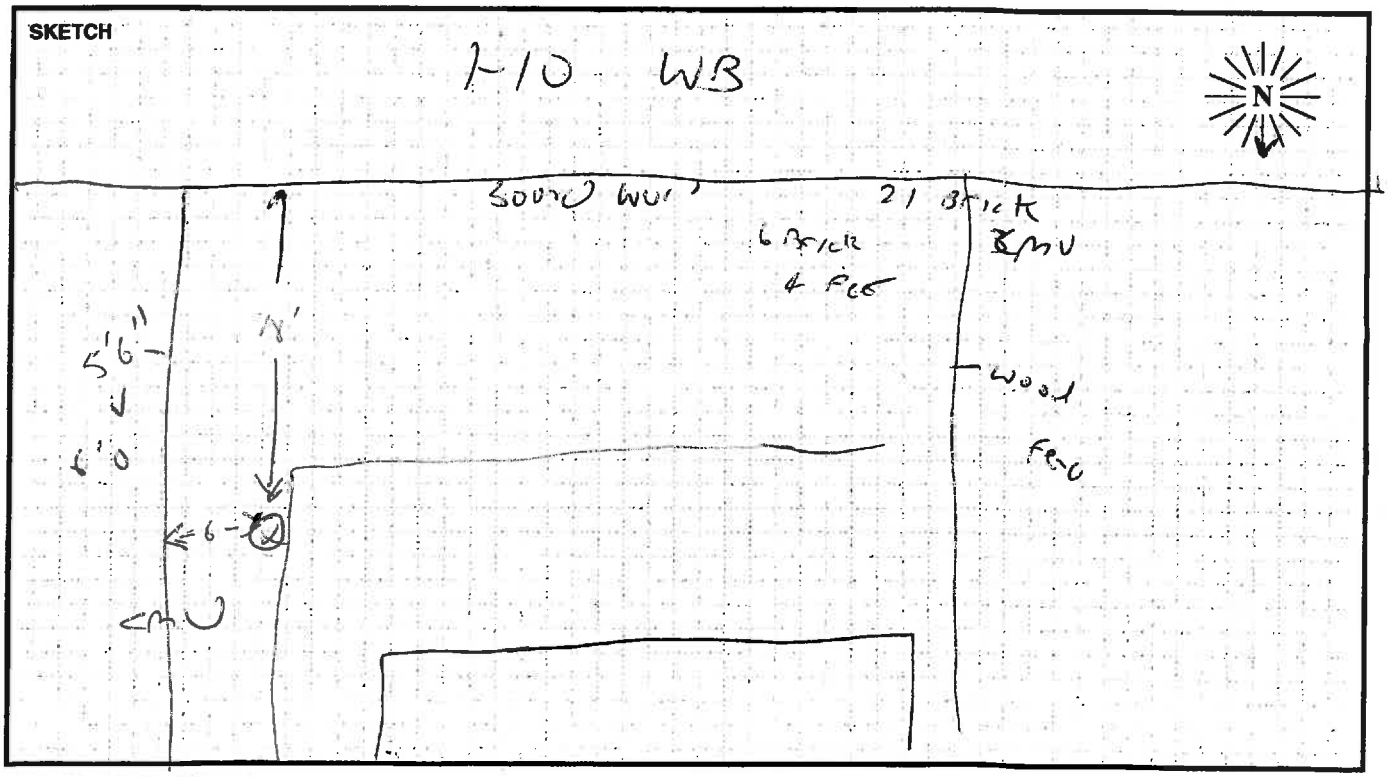
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 58 °F R.H.: 58 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA _____
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	11:40	12:00	55.8							74.0	65.9	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor | ENGINEER: OGDEN | DATE: 10/11/13

MEASUREMENT ADDRESS: Ramada Inn | CITY: Ontario | ☐ Single-Family ☐ Multi-Family ☐ Recreational ☒ Commercial | SITE NO.: ST110

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ LD-824 ☐ LD-812 ☒ B&K-2250 ☐ _____ | SERIAL #: 2676029

MICROPHONE: ☒ WIND SCREEN ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☒ RANDOM | SERIAL #: 4189-2663101

PRE AMP: ☐ LD-900 ☐ LD-828 ☐ _____ | SERIAL #: 10769

CALIBRATOR: ☐ LD CA250 ☒ B&K 4231 S/N 2507137 | Freq, Hz. ☐ 250 ☒ 1000 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before _____ / 47.5 / _____ / 10:30

After _____ / 47.3 / _____ / 11:05

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☒ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☐ BAT ☐ AC

(observations at start of measurement)

TEMP: 61 °F R.H.: 58 %

WIND SPEED: 0 MPH

TOWARD (DIR): _____

SKIES: Clear

CAMERA MARTY PHONE

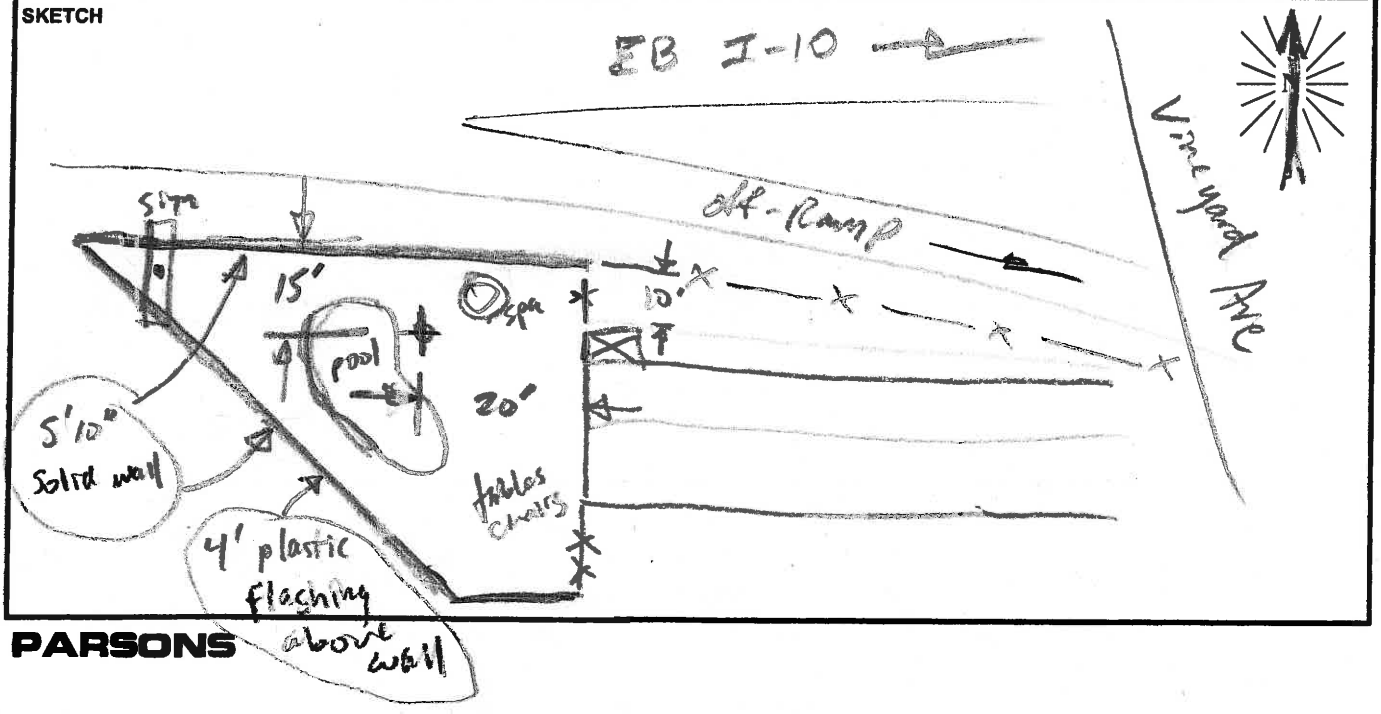
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/11	10:33	10:40										
10/11	10:40	11:00	69.3	69.9	71.3	73.7		75.9	77.3	80.3	74.1	
												meas 006

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor		ENGINEER: OATDEN	DATE: 10/16/13
MEASUREMENT ADDRESS: Quality Inn	CITY: Ontario	☐ Single-Family ☐ Multi-Family ☐ Recreational ☒ Commercial	SITE NO.: ST111

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ LD-824 ☐ LD-812 ☒ B&K-2250 ☐ _____
SERIAL #: 2676029

MICROPHONE: ☒ WIND SCREEN ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☒ RANDOM
SERIAL #: 4189-2663101

PRE AMP: ☐ LD-900 ☐ LD-828 ☐ _____
SERIAL #: 10769

CALIBRATOR: ☐ LD CA250 ☒ B&K 4231 S/N 2507137
Freq, Hz. ☐ 250 ☒ 1000 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before _____ / 47.5 / _____ / 15:32
After _____ / 47.5 / _____ / 16:08

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☒ L_N PERCENTILE VALUES

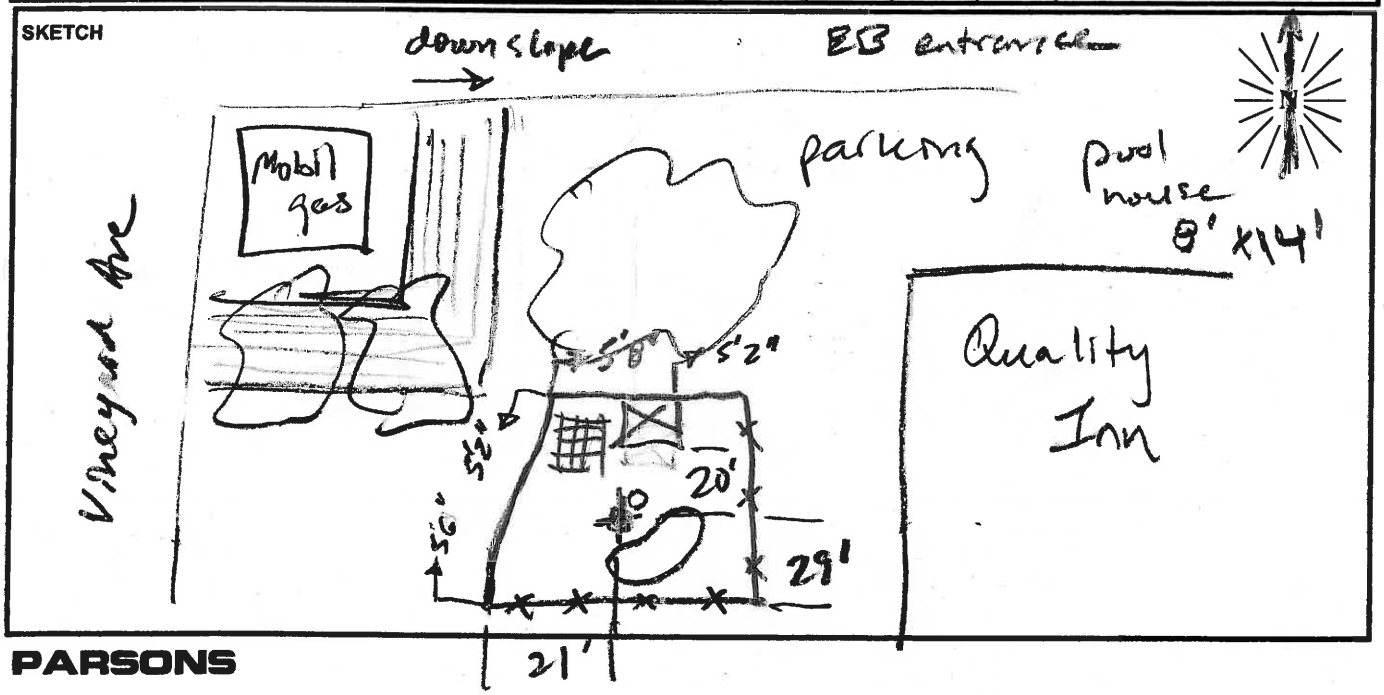
NOTES:
SYSTEM PWR: ☐ BAT ☐ AC
(observations at start of measurement)
TEMP: 63 °F R.H.: 41 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: Cloudy
CAMERA iPhone
PHOTO NOs. _____

NOTES: freeway very quiet; can only hear some motorcycles and local traffic
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	16:00	16:20	51.1	51.5	52.6	54.8	[illegible]	57.4	60.1	64.0	55.4	some talking
												doors closing
												freeway is not only dominant source
												meas 005

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. URENA		DATE: 10/28/14
MEASUREMENT ADDRESS: ACAPULCOS RESTAURANT	CITY: MONTCLAIR	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: ST112

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0344

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☐ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2206

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3200

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N _____
Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114 / 114.0 / 22.5 / 1046
After 114 / 113.5 / 22.5 / 1510

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 1 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 75.9 °F R.H.: 54.6 %
WIND SPEED: 0.7 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN'S PHONE
PHOTO NOs. _____

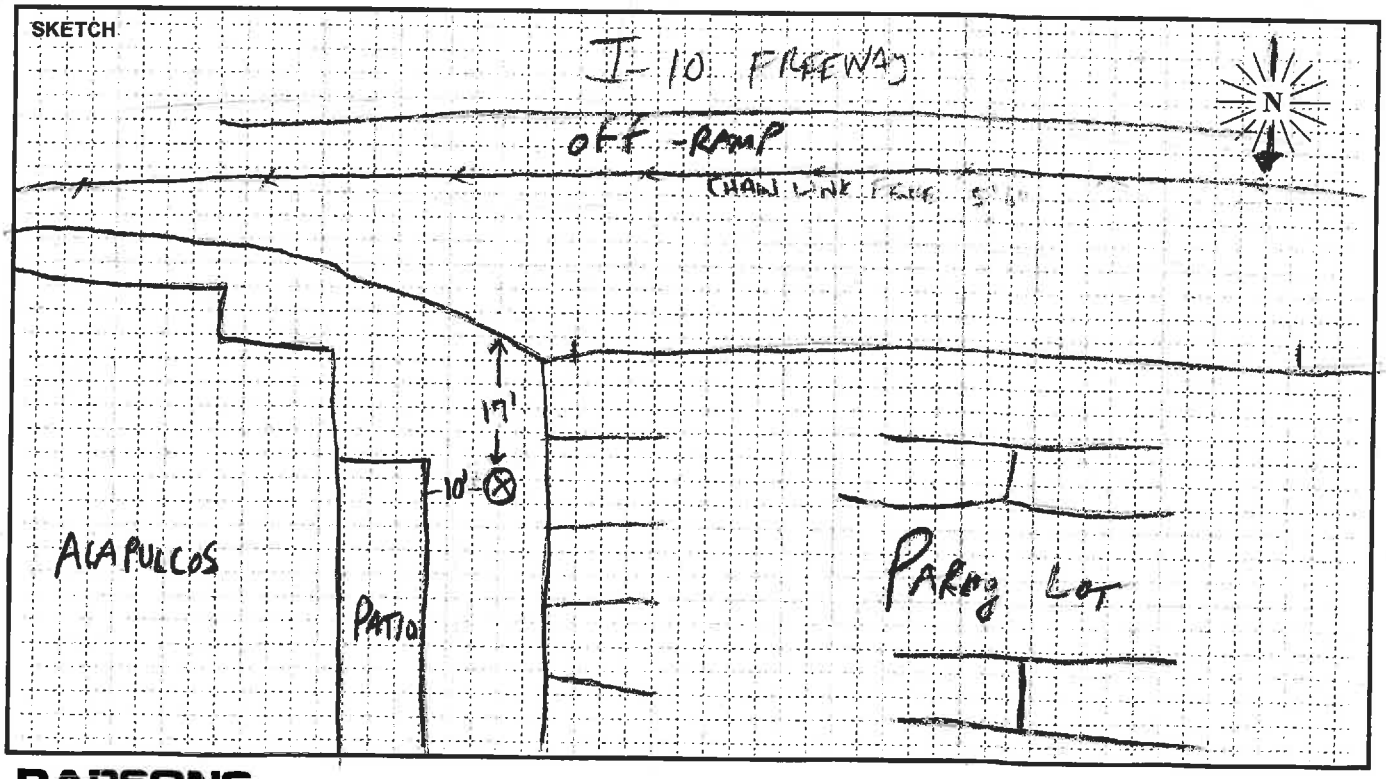
NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts	AT	MT	HT
WB	1745	91	187
EB	1524	107	168
offramp	132	2	0

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/28	11:18	11:38	69.1	71.5	72.4	74.1	75.0	75.8	76.6	77.9	74.3	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. URENA	DATE: 5/2/14
MEASUREMENT ADDRESS: SERVICE MASTER CLEAN	CITY: ONTARIO	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial — SITE NO.: ST113

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 1616

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3159

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1891

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 , 113.8 , 7.9 , 9:07
After 114.0 , 113.9 , 7.9 , 9:31

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

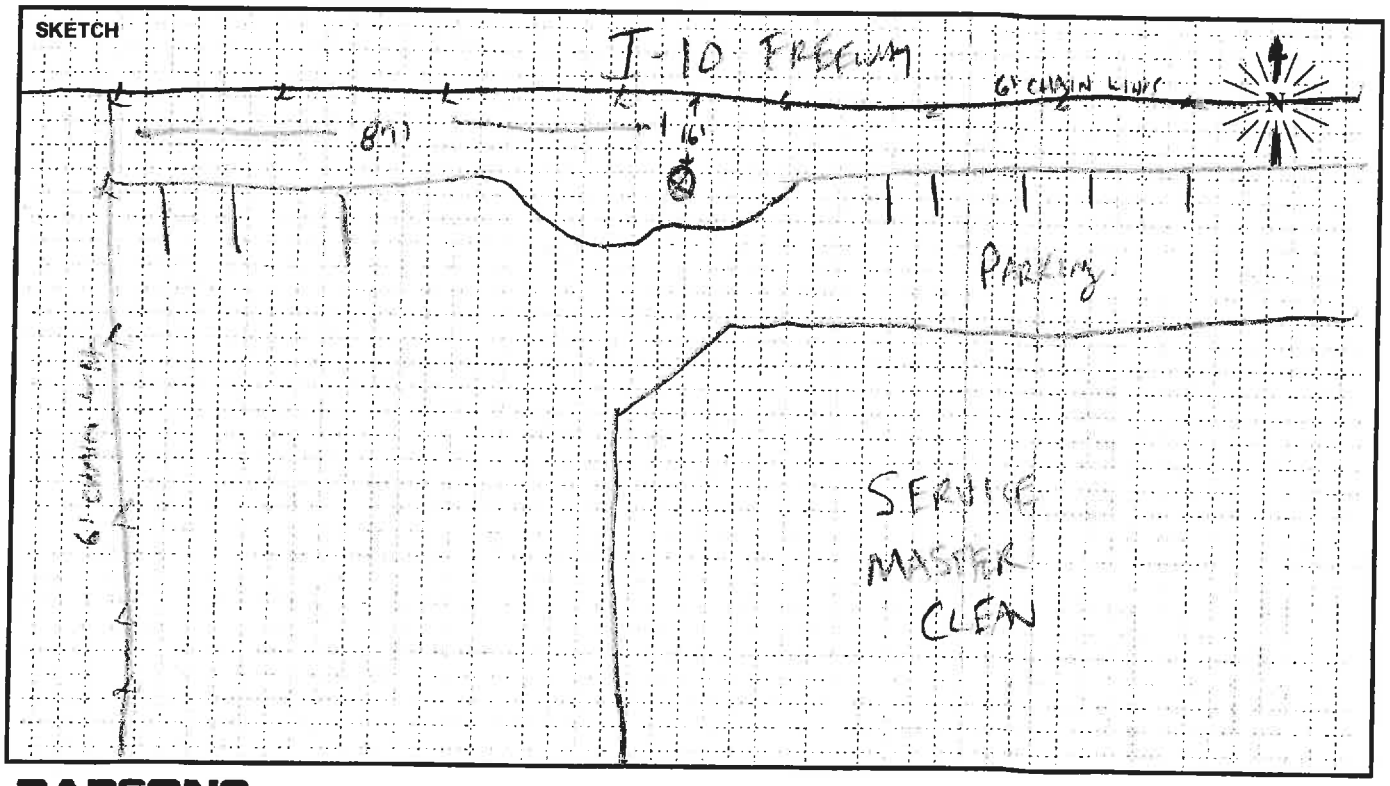
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 89.1 °F R.H.: 18.8 %
WIND SPEED: 0.8 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
5/2	9:08	9:28	73	75.1	77.5	79.8	80.9	82.1	84.9	86.9	80.2	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URENDA | DATE: 5/2/14

MEASUREMENT ADDRESS: BOSCH 4641 GUASTI RD | CITY: ONTARIO | ☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial | SITE NO.: ST114

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

SERIAL #: 1616 | SERIAL #: 3159 | SERIAL #: 1891

(observations at start of measurement)

TEMP: 81.2 °F R.H.: 28.5 %

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127

Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 114.0 / 114.0 / 0.0 / 9:31

After 114.0 / 113.7 / 0.9 / 8:55AM

WIND SPEED: 0.9 MPH

TOWARD (DIR): _____

SKIES: CLEAR

CAMERA RUBEN PHONE

PHOTO NOs. _____

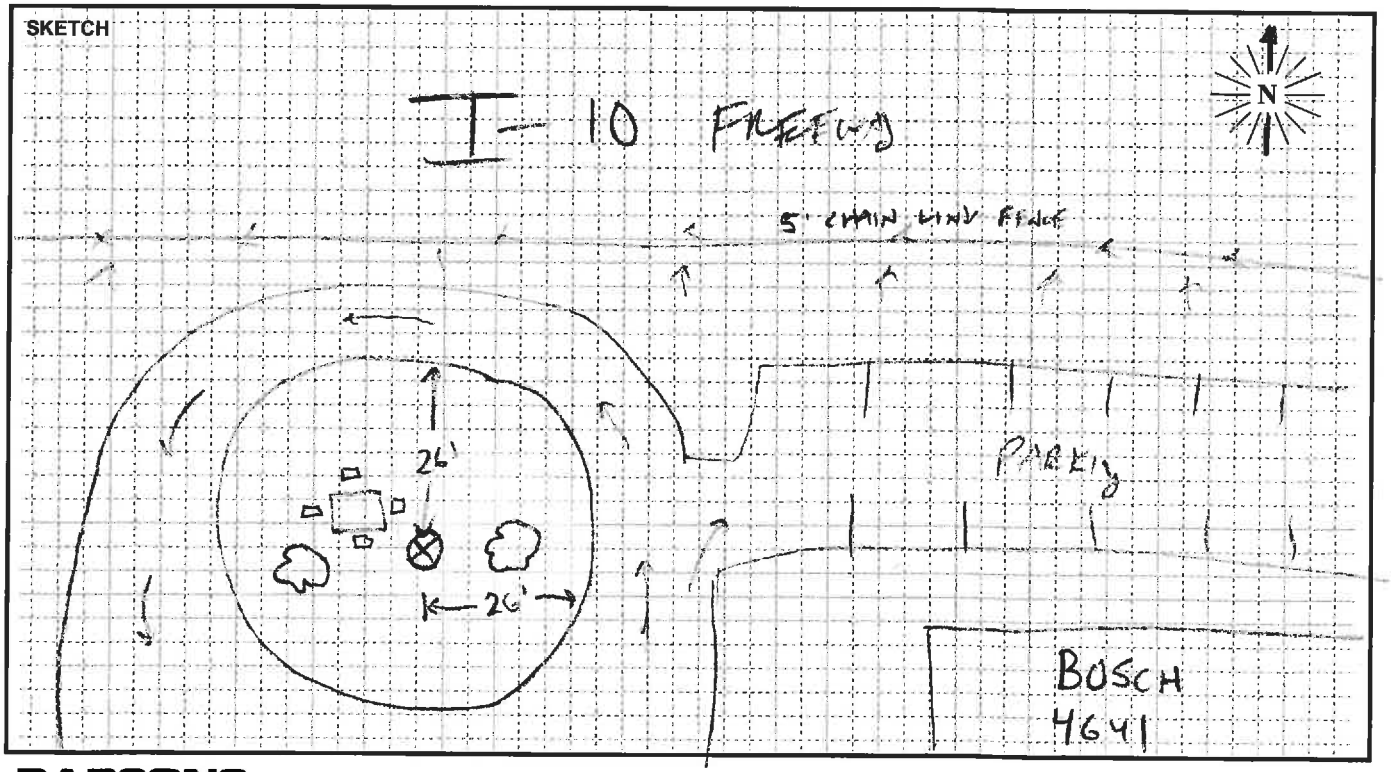
METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
5/2	8:32	8:52	64.1	64.2	65.4	67.1	68.2	69.1	71	72.4	67.4	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: R. URENDA	DATE: 5/16/19
MEASUREMENT ADDRESS: 5200 SHEA CENTER DRIVE	CITY: ONTARIO CA	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: ST115

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 1616

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3159

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-902 ☐ _____
SERIAL #: 1891

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2129
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 7.9 / 5:37am
After 114.0 / 114.0 / 7.9 / 6:21am

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 69.3 °F R.H.: 34.1 %
WIND SPEED: 0.7 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

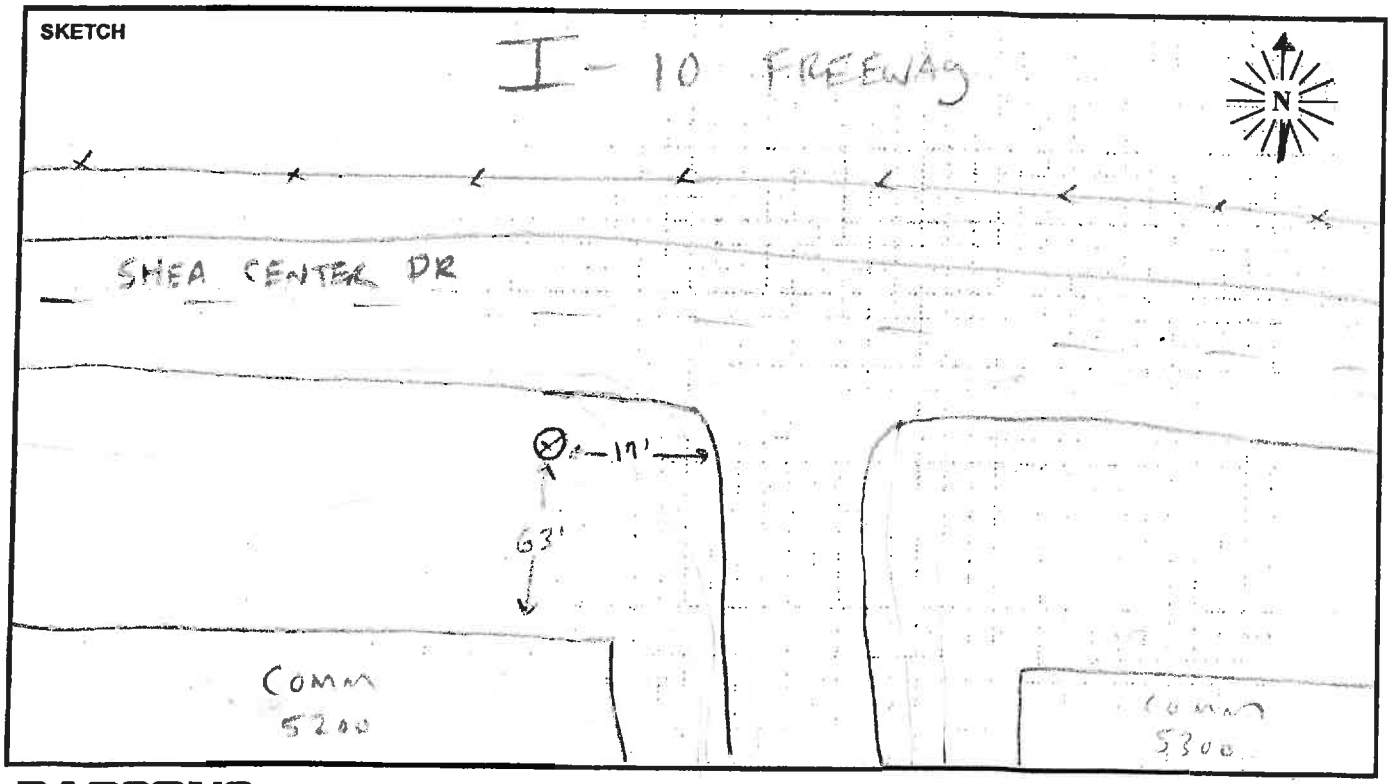
NOTES: TRAFFIC SEA CENTER
CAR 1111
MT
HT 1111

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
5/16	6:00	6:20	70.1	70.9	72.1	73.5	74.4	75.1	77	82.5	73.8	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: R. URENDA	DATE: 5/16/14
MEASUREMENT ADDRESS: 5555 GIBRALTAR ST	CITY: ONTARIO CA	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: ST116

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-902 ☐ _____

SERIAL #:	SERIAL #:	SERIAL #:
1616	3159	1991

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127

Freq, Hz. ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 114.0 / 114.1 / 7.9 / 6:32

After 114.0 / 114.0 / 7.9 / 6:54

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 69.5 °F R.H.: 37.1 %

WIND SPEED: 0 MPH

TOWARD (DIR): _____

SKIES: CLEAR

CAMERA RUBEN ANNE

PHOTO NOs. _____

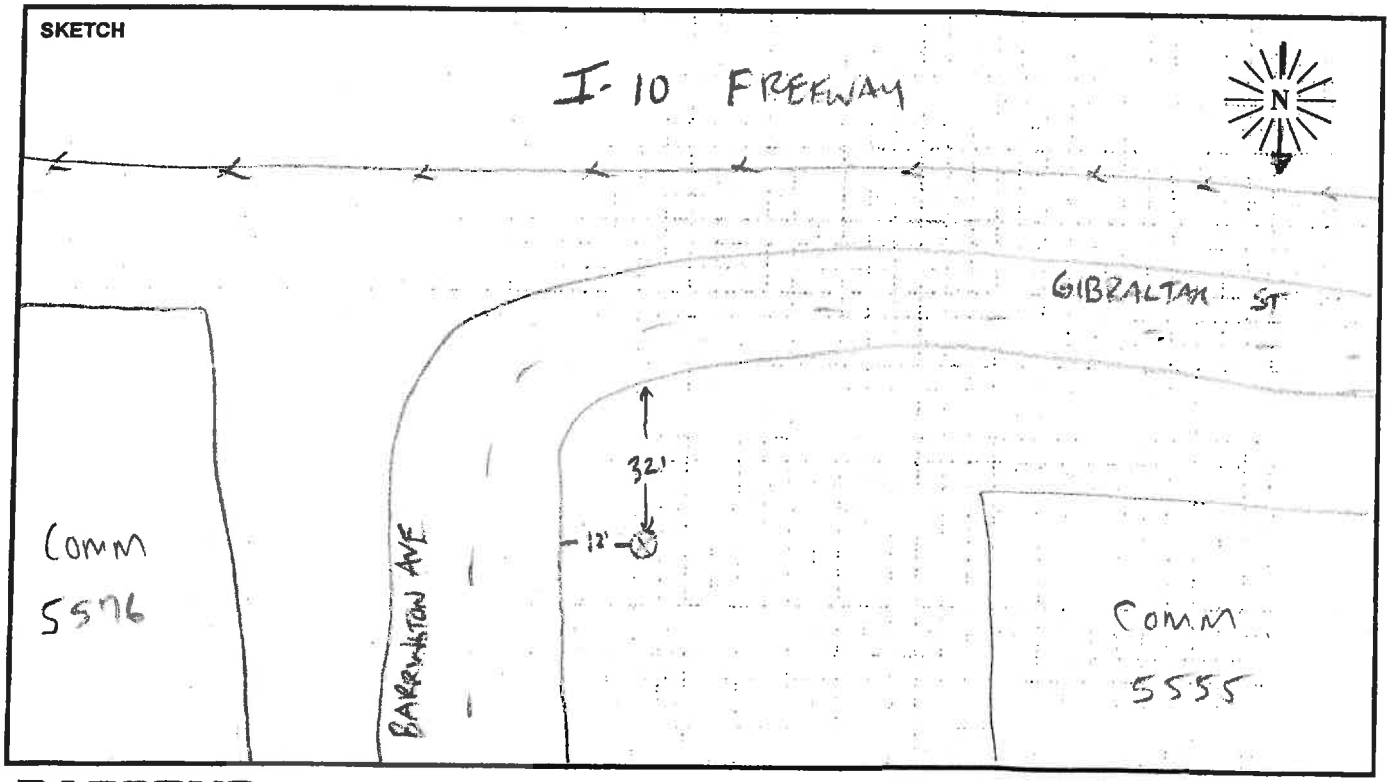
NOTES: GIBRALTAR ST CARS 11

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
5/16	6:33	6:53	69.9	70.8	72.1	73.6	74.4	75.2	77.2	81.1	73.8	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: R. URGELINA	DATE: 5/15/14	
MEASUREMENT ADDRESS: 10288 CALABASH AVE	CITY: FONTANA CA	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: ST117

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-902 ☐ _____

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 74.4 °F R.H.: 24.3 %

WIND SPEED: 0 MPH

TOWARD (DIR): _____

SKIES: CLEAR

CAMERA RUBEI PHONE

PHOTO NOs. _____

SERIAL #:	SERIAL #:	SERIAL #:
1616	3159	1891

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2120

Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:

Input, dB / Reading, dB / Offset, dB / Time

Before 114.0, 113.9, 7.9, 6:21 am

After 114.0, 113.8, 7.9, 6:54 pm

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:

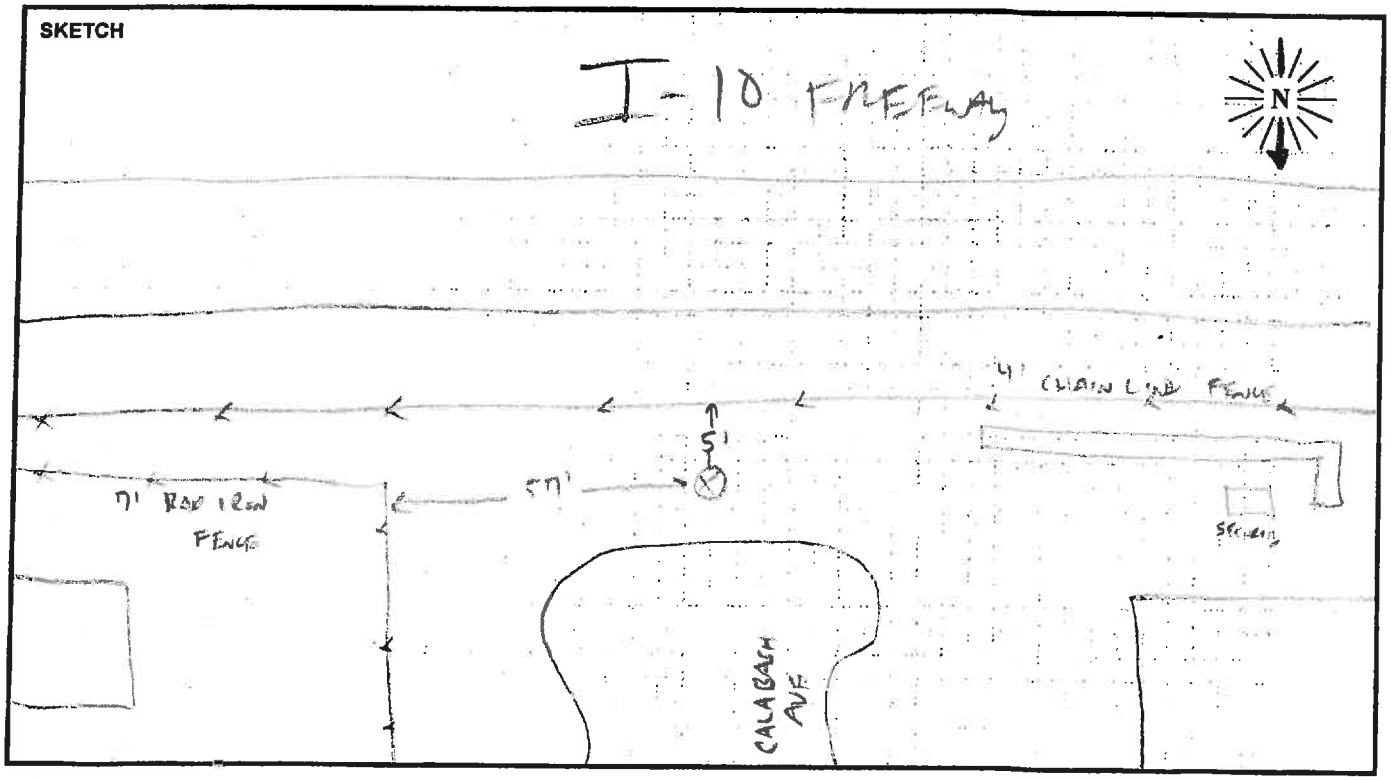
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
5/15	6:33	6:53	69.6	70.5	71.6	73	73.8	74.5	75.8	77.9	73.2	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE	ENGINEER: R. URENDA		DATE: 5/15/14
MEASUREMENT ADDRESS: FRANKLIN TRUCK PARTS	CITY: FONTANA	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: ST118

SOUND LEVEL METER: ☐ LD-870 ☑ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 1616

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 3159

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-902 ☐ _____
SERIAL #: 1891

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 7.9 / 5:41am
After 114.0 / 113.9 / 7.9 / 6:21am

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☐ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

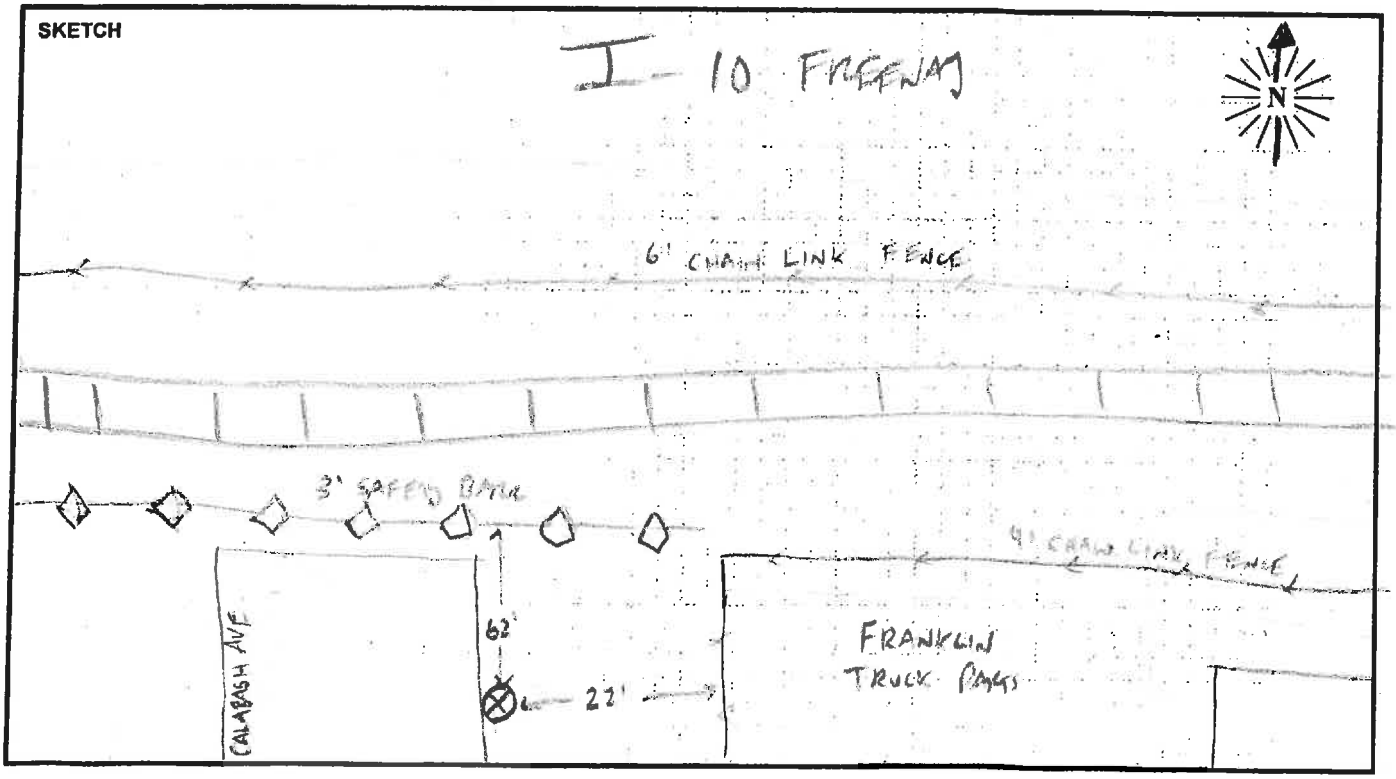
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 69.0 °F R.H.: 22.2 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN'S PHONE
PHOTO NOs. _____

NOTES: TRAIN PASSED 6:05 - 6:07pm
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
5/15	6:00	6:20	64.2	64.3	65.1	67.3	68.3	70.1	78.6	90.6	70.6	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. UREÑA | DATE: 5/2/14

MEASUREMENT ADDRESS: 1313 VALLEY BLVD | CITY: SAN BERNARDINO | ☐ Single-Family ☐ Multi-Family ☐ School ☒ Recreational ☒ Commercial | SITE NO.: ST119

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____ | SERIAL #: 1616

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN | SERIAL #: 3159

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____ | SERIAL #: 1891

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127

Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 114.0 / 114.1 / 7.5 / 6:51am

After 114.0 / 113.9 / 7.9 / 7:15am

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 66.2 °F R.H.: 29.7 %

WIND SPEED: 0 MPH

TOWARD (DIR): _____

SKIES: CLEAR

CAMERA RUBEN PHONE

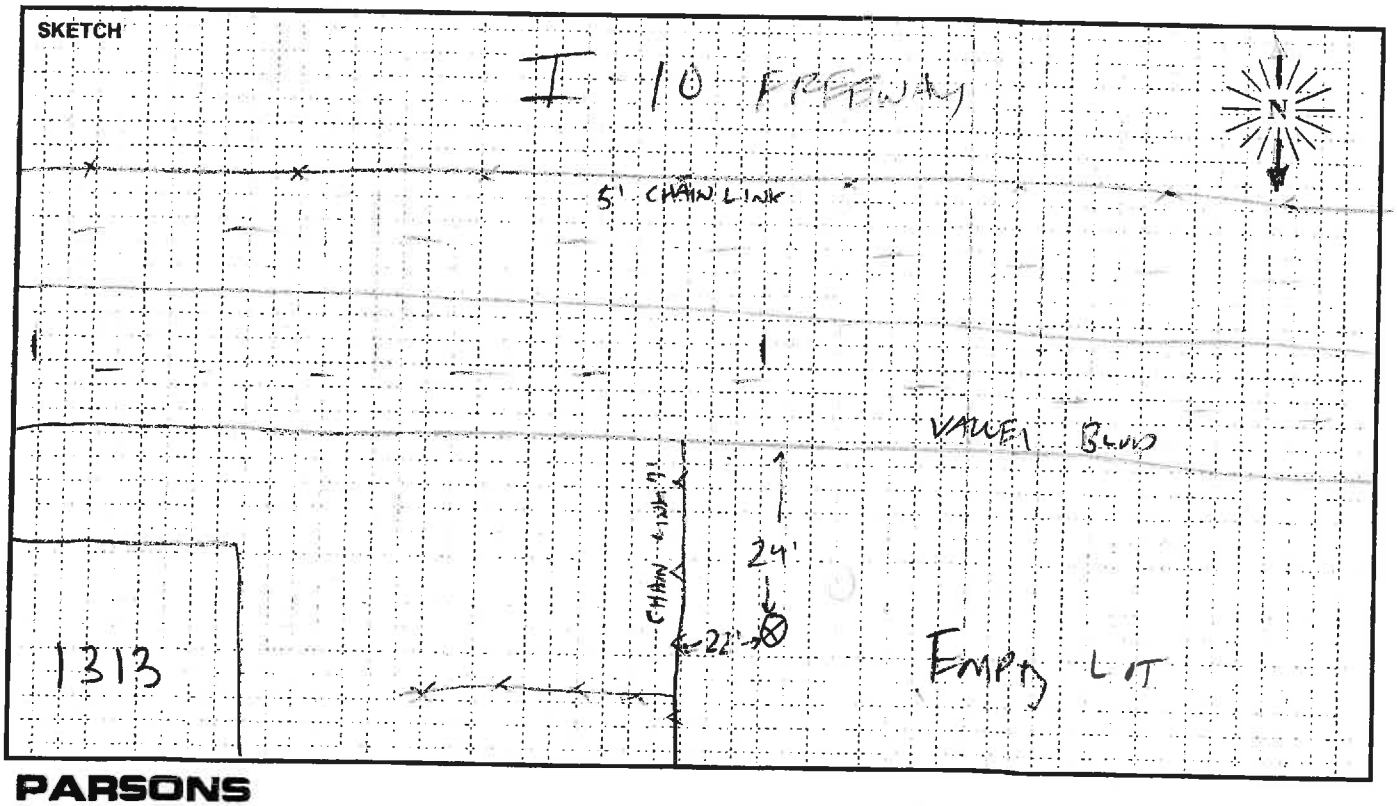
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☒ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
5/2	6:52	7:12	67.3	68.1	69.5	71.6	72.9	74	77	83.2	72.2	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. UREÑA		DATE: 5/2/14
MEASUREMENT ADDRESS: 100 E. Rialto Blvd	CITY: San Bernardino	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: ST120

SOUND LEVEL METER:
☐ LD-870 ☒ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 1616

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 3159

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 1891

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 7.9 / 6:13
After 114.0 / 114.0 / 7.9 / 6:37

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

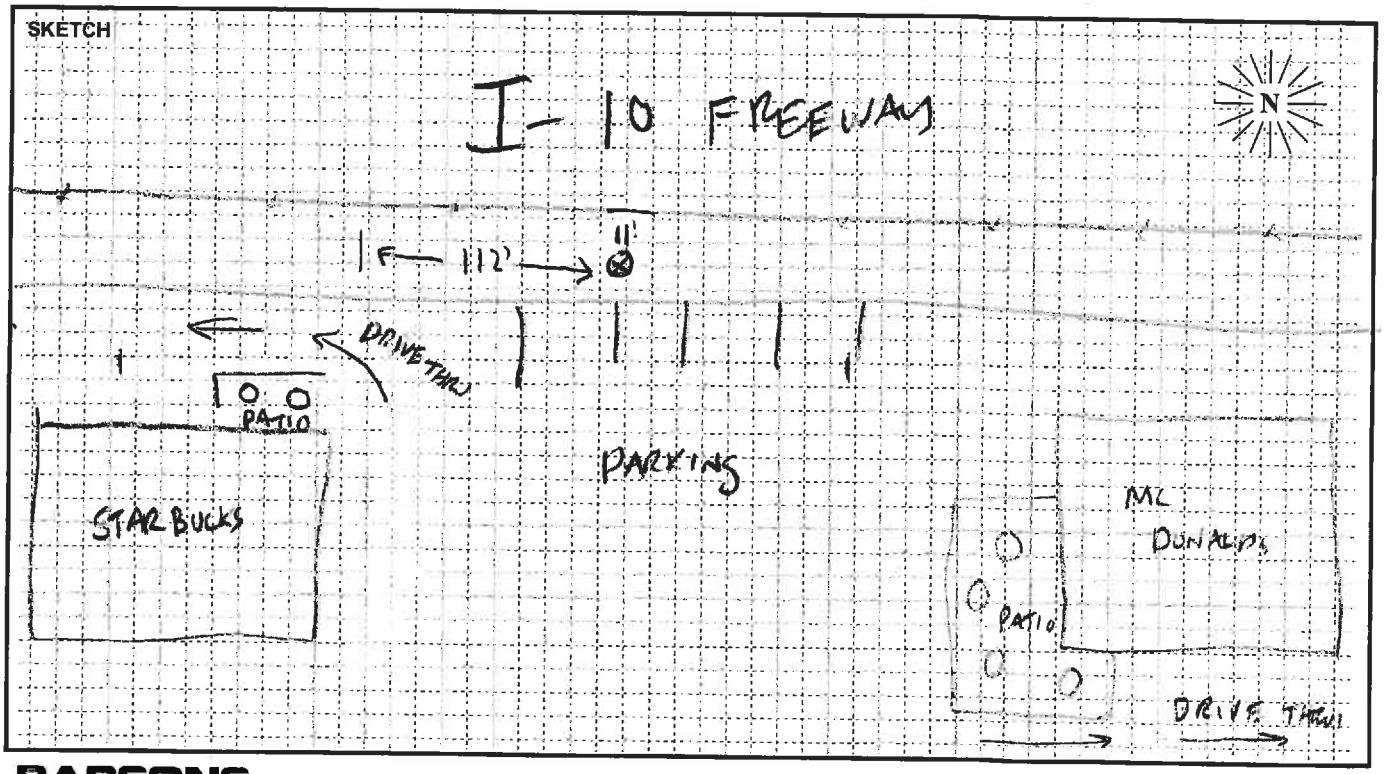
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 63.5 °F R.H.: 40.3 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
5/2	6:13	6:33	72	72.9	74.9	76.9	78.1	79	80.8	81.9	77.3	

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		R. URENDA	DATE: 5/2/14
MEASUREMENT ADDRESS: 25160 REDLANDS BLVD	CITY: LOMA LINDA	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: ST121

SOUND LEVEL METER:
☐ LD-870 ☒ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 1616

MICROPHONE:
☑ NON-POLAR ☐ POLARIZED
☑ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 3159

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 1991

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 7.9 / 5:39
After 114.0 / 114.2 / 7.9 / 6:03

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

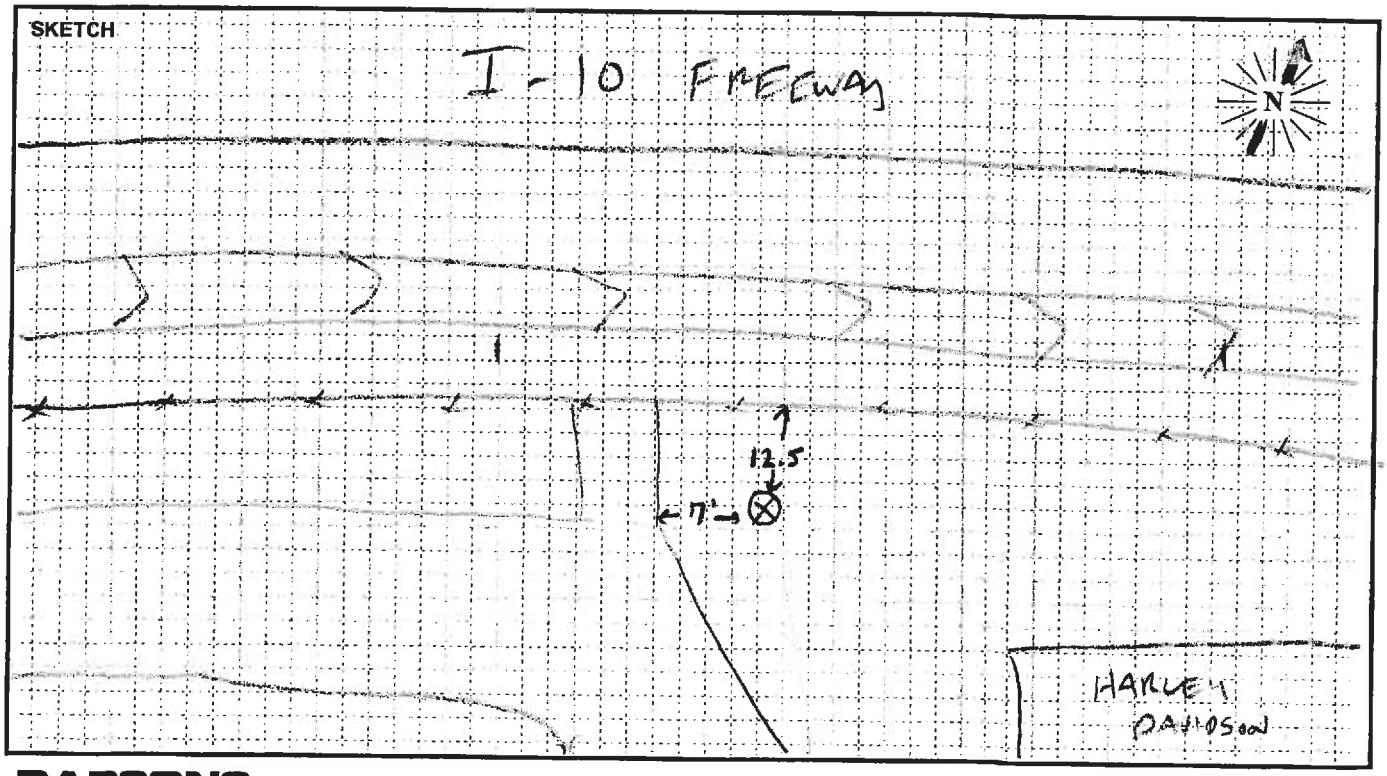
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 62 °F R.H.: 25.1 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
5/2	5:40	6:00	68	70	72.4	75.7	77.2	78.4	80.3	83.9	76.1	

SKETCH



PARSONS

LONG-TERM MEASUREMENTS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URENDA | DATE: 10/20/14

MEASUREMENT ADDRESS: 10245 ALMOND AVE | CITY: FONTANA | ☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: LT1

SOUND LEVEL METER:
☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0344

MICROPHONE:
☑ NON-POLAR ☐ POLARIZED ☑ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☑ WIND SCREEN
SERIAL #: 2029

PRE AMP:
☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3200

CALIBRATOR:
☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2120
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 22.5 / 9:32
After 114 / 114.3 / 22.5 / 16:49

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☐ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☒ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

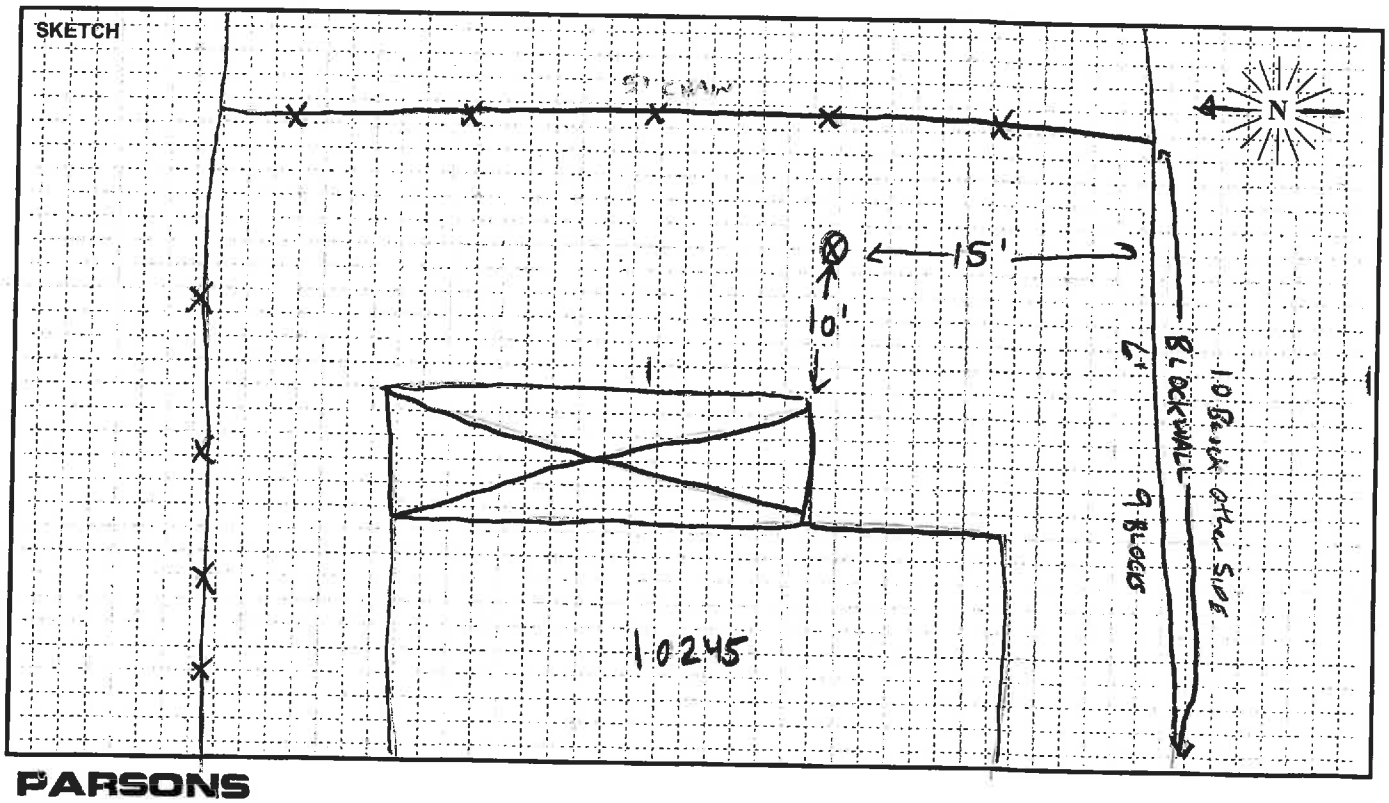
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 69 °F R.H.: 55 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☒ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/20	9:39											
10/21		13:56										

SKETCH

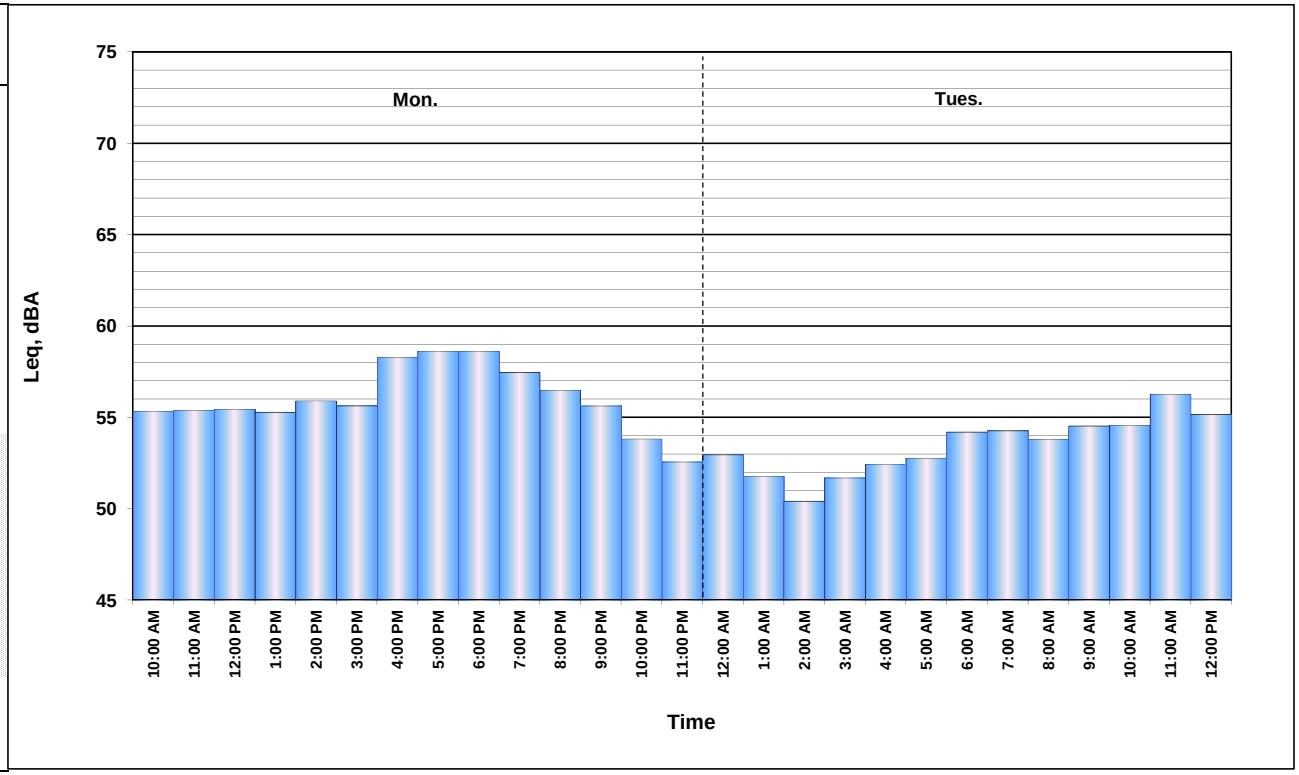


PARSONS

Site LT01 Hourly Noise Levels, $L_{eq}(h)$

Location: 10245 Almond Drive, Fontana, CA
Position: Side Yard
Sources: Interstate 10
Date: 10/20/14 -10/21/14 See attached Noise Measurement Form.

TIME	10/20 - 10/21 $L_{eq(h)}$ dBA	10/21 $L_{eq(h)}$ dBA
10:00 - 11:00 AM	55	55
11:00 - 12:00 PM	55	56
12:00 - 01:00 PM	55	55
01:00 - 02:00 PM	55	-
02:00 - 03:00 PM	56	-
03:00 - 04:00 PM	56	-
04:00 - 05:00 PM	58	-
05:00 - 06:00 PM	59	-
06:00 - 07:00 PM	59	-
07:00 - 08:00 PM	57	-
08:00 - 09:00 PM	56	-
09:00 - 10:00 PM	56	-
10:00 - 11:00 PM	54	-
11:00 - 12:00 AM	53	-
12:00 - 01:00 AM	53	-
01:00 - 02:00 AM	52	-
02:00 - 03:00 AM	50	-
03:00 - 04:00 AM	52	-
04:00 - 05:00 AM	52	-
05:00 - 06:00 AM	53	-
06:00 - 07:00 AM	54	-
07:00 - 08:00 AM	54	-
08:00 - 09:00 AM	54	-
09:00 - 10:00 AM	55	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URENA | DATE: 10/20/14

MEASUREMENT ADDRESS: 15021 WASHINGTON DR | CITY: FONTANA | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: LT2/CAL

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0128

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 1785

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 3095

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 , 114.0 , 21.7 , 8:58a.
After 114.0 , 113.8 , 21.7 , 16:26

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 67.1 °F R.H.: 55.2 %
WIND SPEED: 09 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

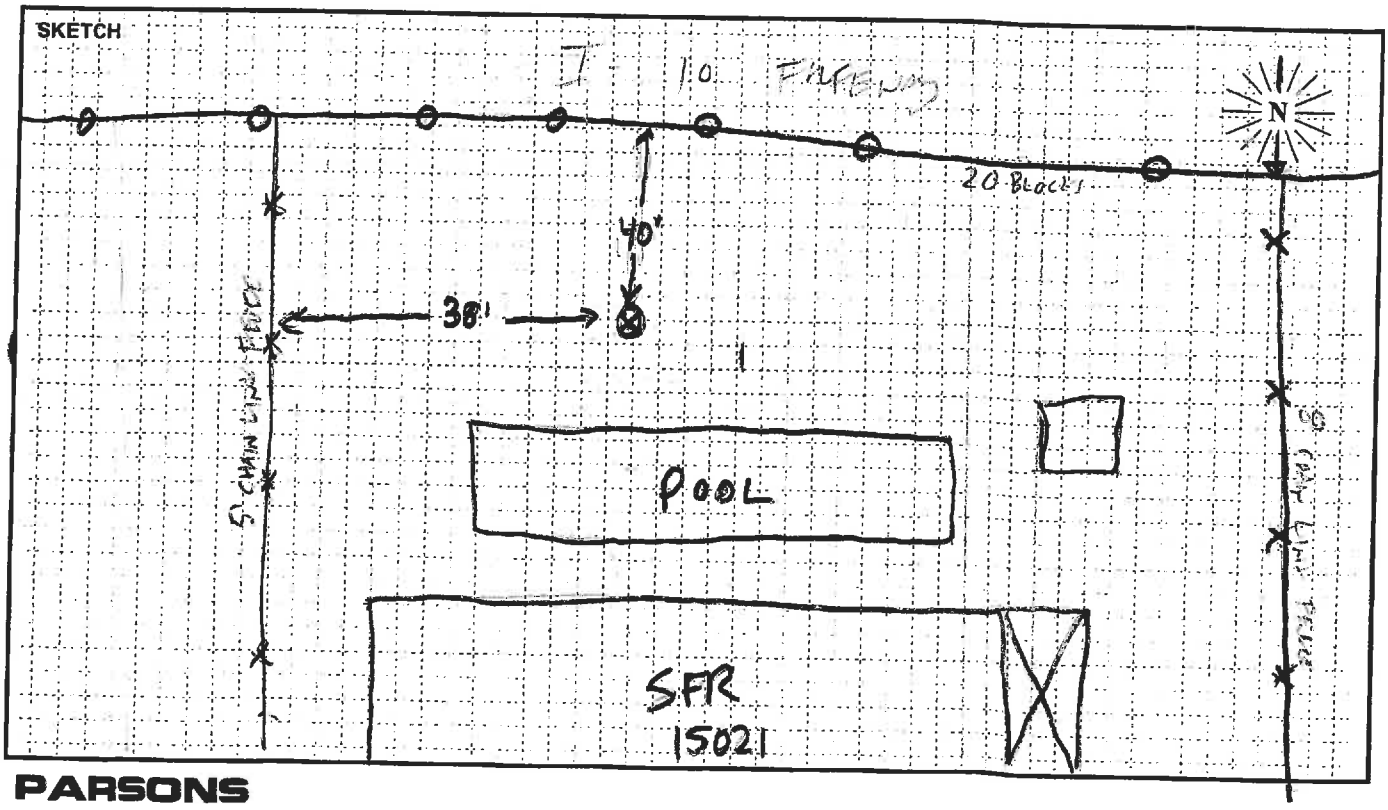
NOTES: Dist. to Center of Nearest Lane _____ ☒ Video ☒ Radar

Counts	AT	MT	HT
WB	1631	96	113
EB	1961	89	130

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/20	9:05											
10/21		16:25										
10/21	15:00	15:20	59.1	60.4	63.2	65.4	66.4	67.3	70.8	74.6	65.7	Calibration data

SKETCH

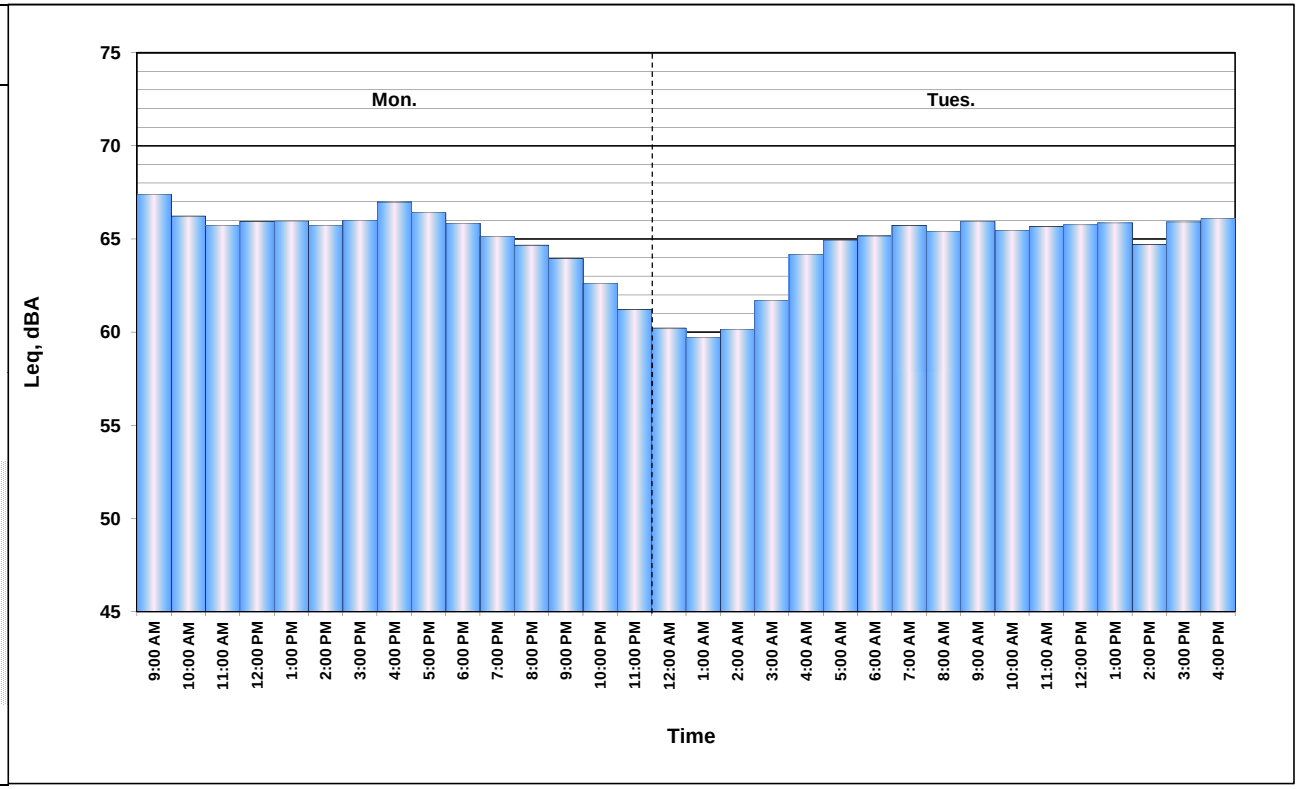


PARSONS

Site LT02 Hourly Noise Levels, $L_{eq}(h)$

Location: 15021 Washington Drive, Fontana, CA
Position: Back Yard
Sources: Interstate 10
Date: 10/20/14 -10/21/14 See attached Noise Measurement Form.

TIME	10/20 - 10/21 $L_{eq(h)}$ dBA	10/21 $L_{eq(h)}$ dBA
09:00 - 10:00 AM	67	66
10:00 - 11:00 AM	66	65
11:00 - 12:00 PM	66	66
12:00 - 01:00 PM	66	66
01:00 - 02:00 PM	66	66
02:00 - 03:00 PM	66	65
03:00 - 04:00 PM	66	66
04:00 - 05:00 PM	67	-
05:00 - 06:00 PM	66	-
06:00 - 07:00 PM	66	-
07:00 - 08:00 PM	65	-
08:00 - 09:00 PM	65	-
09:00 - 10:00 PM	64	-
10:00 - 11:00 PM	63	-
11:00 - 12:00 AM	61	-
12:00 - 01:00 AM	60	-
01:00 - 02:00 AM	60	-
02:00 - 03:00 AM	60	-
03:00 - 04:00 AM	62	-
04:00 - 05:00 AM	64	-
05:00 - 06:00 AM	65	-
06:00 - 07:00 AM	65	-
07:00 - 08:00 AM	66	-
08:00 - 09:00 AM	65	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		M. Sharp / R. Vienda	DATE: 10/20/14
MEASUREMENT ADDRESS: 15842 Boyle Ave	CITY: Fontana	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☑ Commercial	SITE NO.: LT3

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☑ LD-LxT
SERIAL #: ~~00038~~ 003280

MICROPHONE:
☑ NON-POLAR ☐ POLARIZED
☑ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☑ WIND SCREEN
SERIAL #: 132441

PRE AMP:
☐ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☑ LD-LxT
SERIAL #: 32188

CALIBRATOR:
☐ LD CA250 ☑ LD CA200
☐ B&K 4231 ☐ _____
S/N 11048
Freq, Hz.: ☐ 250 ☑ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114 / 114.15 / -0.15 / 16:09
After 114 / 114 / 0 / 16:21

METER SETTINGS:
☑ A-WTD ☐ LINEAR ☑ SLOW ☐ 1/1 OCT ☑ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

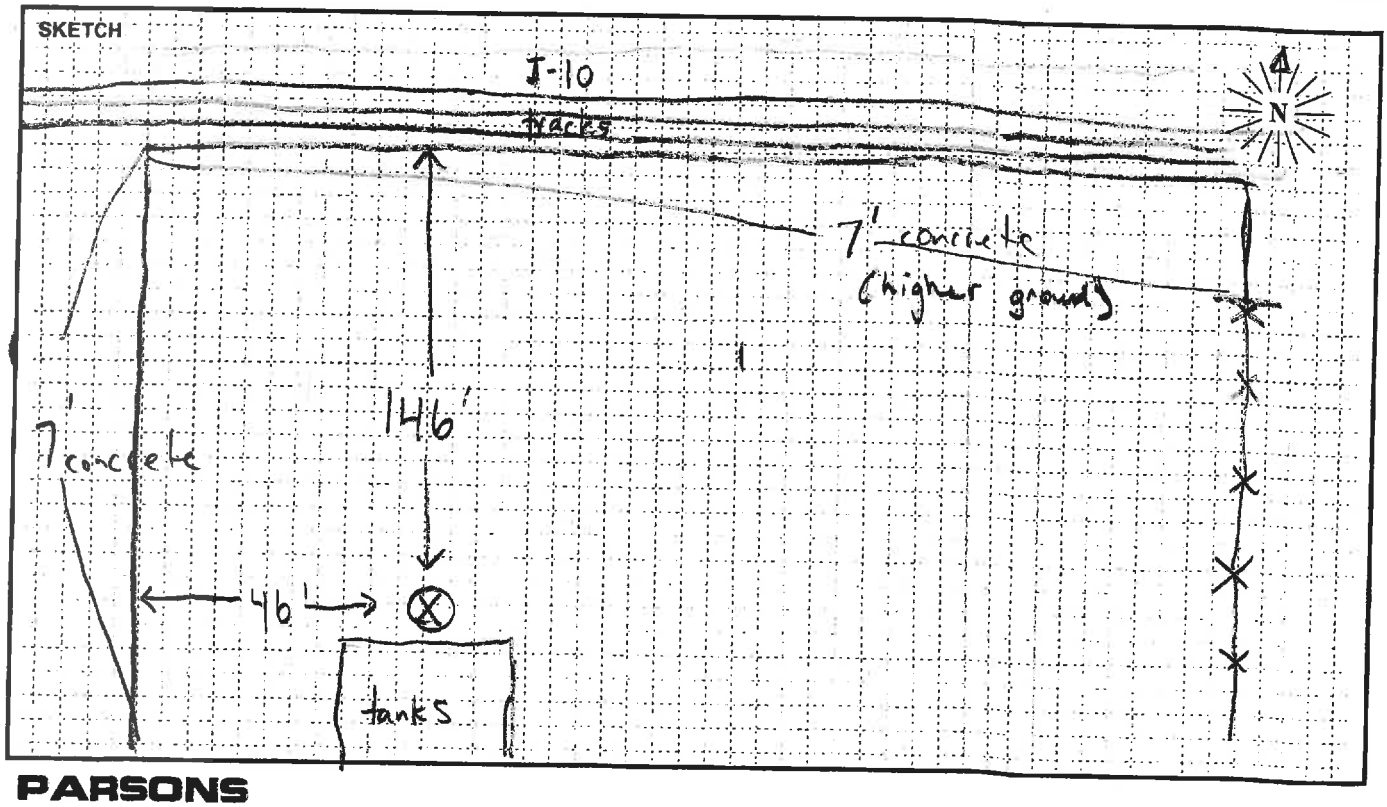
NOTES:
SYSTEM PWR: ☑ BAT ☐ AC
(observations at start of measurement)
TEMP: 83.1 °F R.H.: 59.3 %
WIND SPEED: 1 MPH
TOWARD (DIR): _____
SKIES: clear
CAMERA Matt's phone
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☑ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/20	16:17	[illegible]										Sensitivity = -50.1
10/21		16:20										

SKETCH

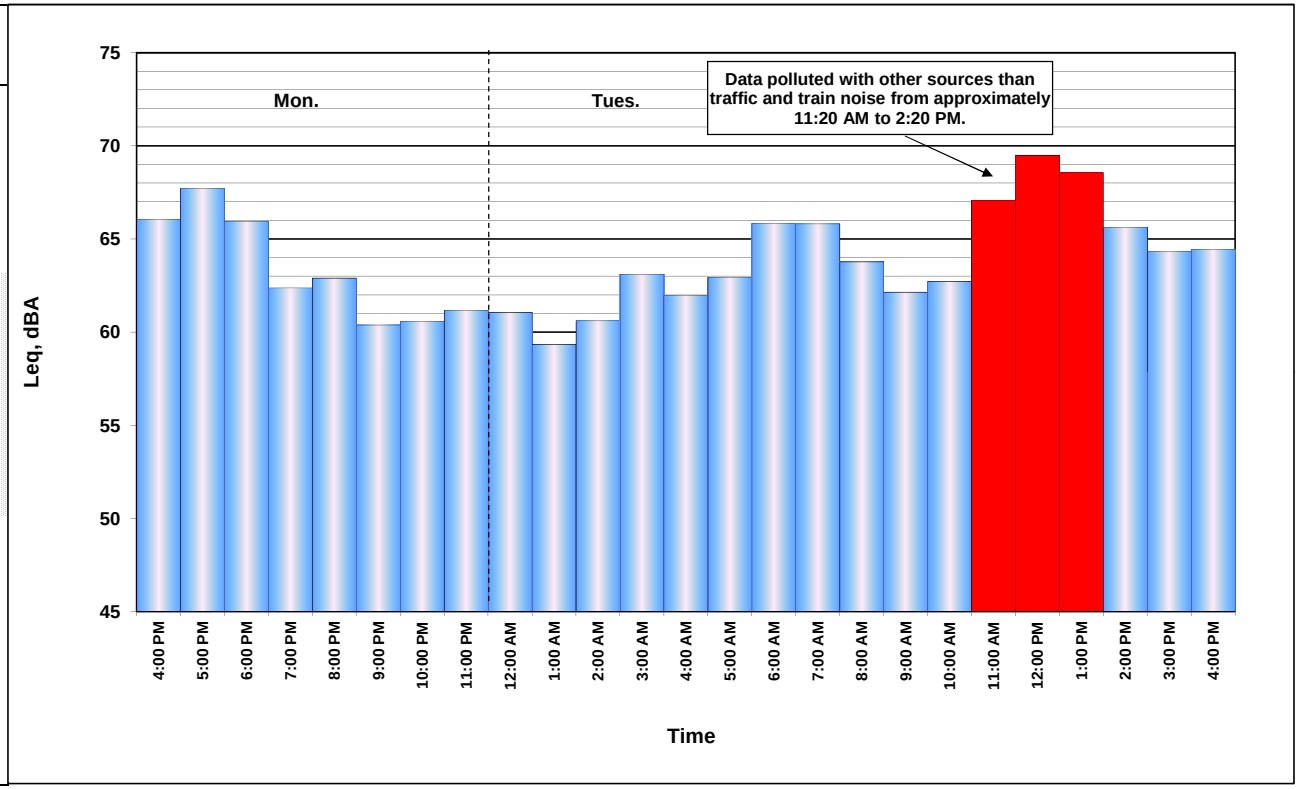


PARSONS

Site LT03 Hourly Noise Levels, $L_{eq}(h)$

Location: 15842 Boyle Avenue, Fontana, CA
Position: Back Yard
Sources: Interstate 10; UPRR
Date: 10/20/14 -10/21/14 See attached Noise Measurement Form.

TIME	10/20 - 10/21 $L_{eq(h)}$ dBA	10/21 $L_{eq(h)}$ dBA
04:00 - 05:00 PM	66	64
05:00 - 06:00 PM	68	-
06:00 - 07:00 PM	66	-
07:00 - 08:00 PM	62	-
08:00 - 09:00 PM	63	-
09:00 - 10:00 PM	60	-
10:00 - 11:00 PM	61	-
11:00 - 12:00 AM	61	-
12:00 - 01:00 AM	61	-
01:00 - 02:00 AM	59	-
02:00 - 03:00 AM	61	-
03:00 - 04:00 AM	63	-
04:00 - 05:00 AM	62	-
05:00 - 06:00 AM	63	-
06:00 - 07:00 AM	66	-
07:00 - 08:00 AM	66	-
08:00 - 09:00 AM	64	-
09:00 - 10:00 AM	62	-
10:00 - 11:00 AM	63	-
11:00 - 12:00 PM	67	-
12:00 - 01:00 PM	69	-
01:00 - 02:00 PM	69	-
02:00 - 03:00 PM	66	-
03:00 - 04:00 PM	64	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. UREÑA | DATE: 10/20/14

MEASUREMENT ADDRESS: 10241 OLEANDER AVE | CITY: FONTANA | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: LT 4/CAL

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0555

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2141

PRE AMP: ☒ LD-900 ☐ ZC-0030 ☐ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2661

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 22.2 / 11:03
After 114.0 / 113.6 / 22.2 / 14:07

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 70 °F R.H.: 59.5 %

WIND SPEED: 0.7 MPH

TOWARD (DIR): _____

SKIES: CLEAR

CAMERA RUBENS PHONE

PHOTO NOs. _____

NOTES:

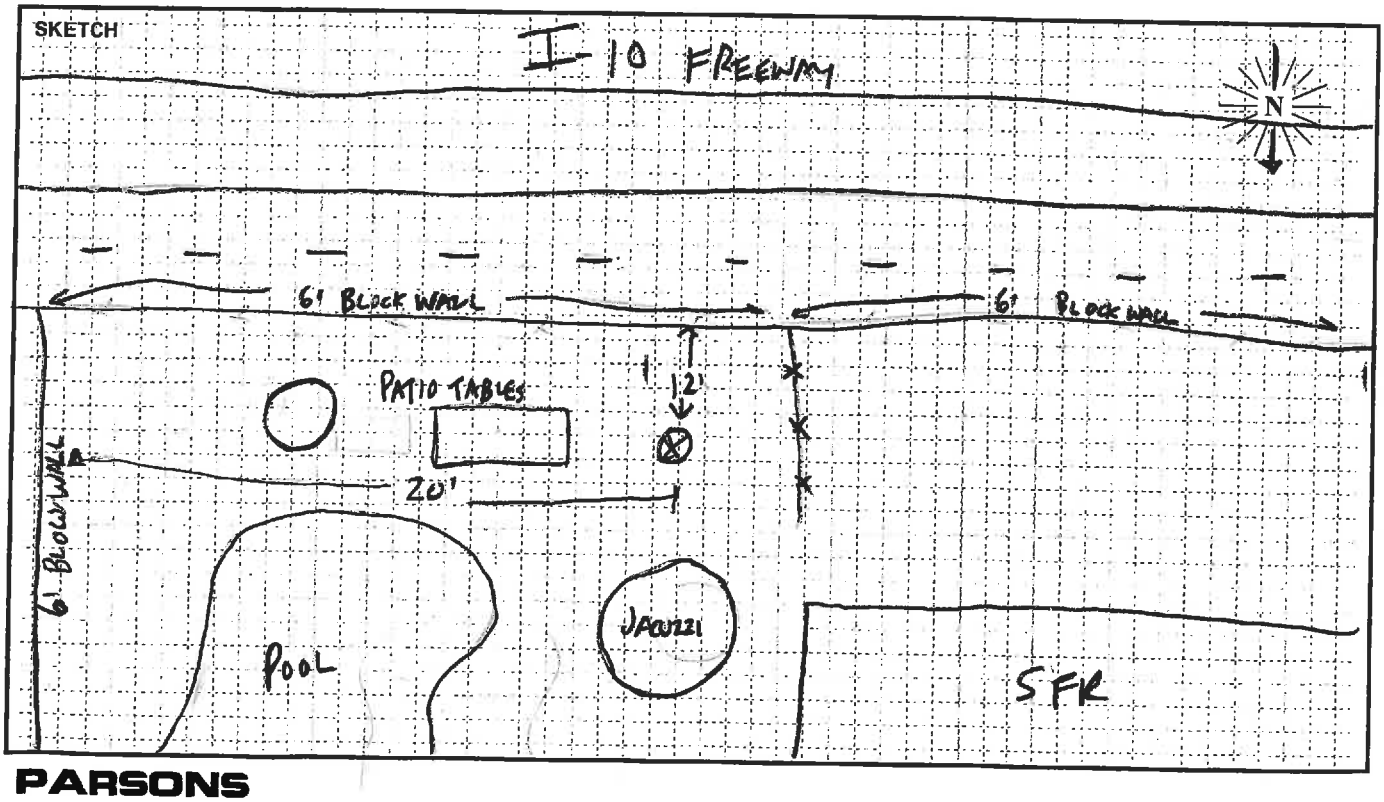
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts	AT	MT	HT
EB	1029	92	136
EB on-Ramp	134	16	18
WB	1294	93	152
WB off-Ramp	113	13	20

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/20	14:12											
10/21		16:29										
10/21	10:00	10:20	63.6	63.7	64.7	66.1	66.9	67.8	69	70.4	66.3	Calibration data

SKETCH

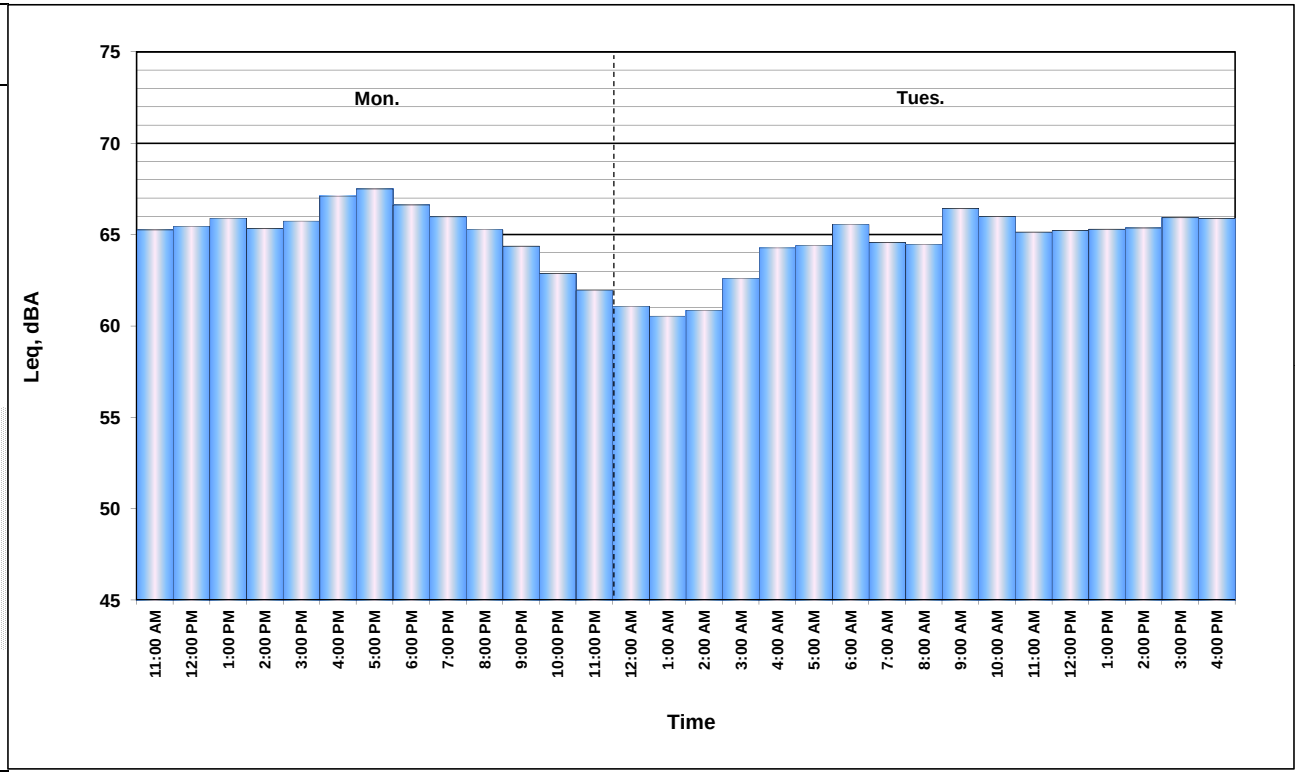


PARSONS

Site LT04 Hourly Noise Levels, $L_{eq}(h)$

Location: 10241 Oleander Avenue, Fontana, CA
Position: Back Yard
Sources: Interstate 10
Date: 10/20/14 -10/21/14 See attached Noise Measurement Form.

TIME	10/20 - 10/21 $L_{eq(h)}$ dBA	10/21 $L_{eq(h)}$ dBA
11:00 - 12:00 PM	65	65
12:00 - 01:00 PM	65	65
01:00 - 02:00 PM	66	65
02:00 - 03:00 PM	65	65
03:00 - 04:00 PM	66	66
04:00 - 05:00 PM	67	66
05:00 - 06:00 PM	68	-
06:00 - 07:00 PM	67	-
07:00 - 08:00 PM	66	-
08:00 - 09:00 PM	65	-
09:00 - 10:00 PM	64	-
10:00 - 11:00 PM	63	-
11:00 - 12:00 AM	62	-
12:00 - 01:00 AM	61	-
01:00 - 02:00 AM	61	-
02:00 - 03:00 AM	61	-
03:00 - 04:00 AM	63	-
04:00 - 05:00 AM	64	-
05:00 - 06:00 AM	64	-
06:00 - 07:00 AM	66	-
07:00 - 08:00 AM	65	-
08:00 - 09:00 AM	64	-
09:00 - 10:00 AM	66	-
10:00 - 11:00 AM	66	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: M Sharp / J Darden	DATE: 10/20/14
MEASUREMENT ADDRESS: 10350 Palm Dr.	CITY: Fontana	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: LTS/CAL

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☒ LD-LxT ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0002862

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: LW138391

PRE AMP: ☐ LD-900 ☒ LD-LxT ☐ LD-828 ☐ ZC-0032 ☐ LD-902 ☐ _____
SERIAL #: 15555

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____ S/N 11048
Freq, Hz.: ☐ 250 ☒ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114 / 114 / 0 / 13:57
After 114 / 114 / 0 / 16:30

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 30 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84.1 °F R.H.: 66.4 %
WIND SPEED: 2.2 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA Matt's phone
PHOTO NOs. _____

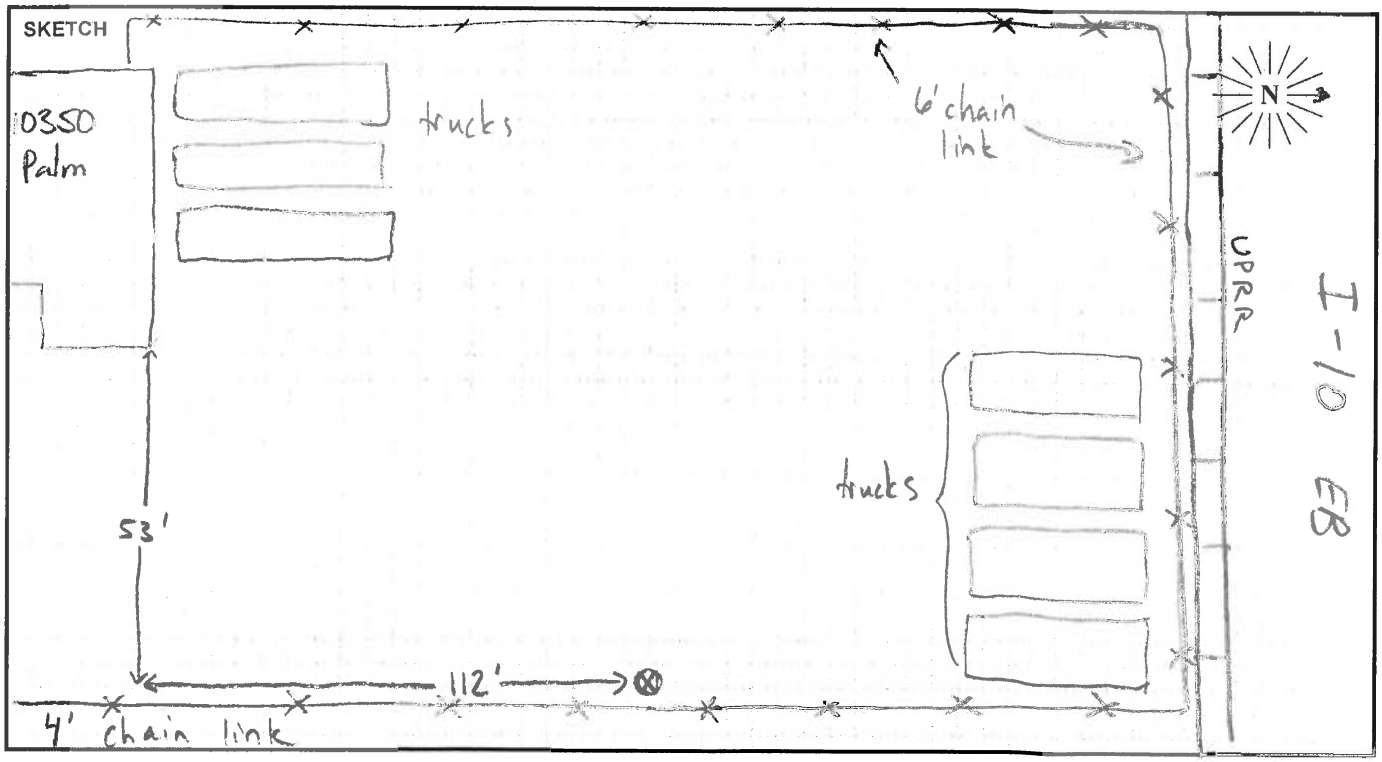
NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts	AT	MT	HT
EB	1029	72	136
EB DN	134	16	18
WB	1294	93	152
WB off	113	13	20

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/20	14:12											
10/21		16:29										
10/21	10:00	10:20	60.4	61.4	62.9	65.8	67.4	72.7	76.2	82.4	68.4	Calibration data

SKETCH



PARSONS

Site LT05 Hourly Noise Levels, $L_{eq}(h)$

Location: 10350 Palm Drive, Fontana, CA
Position: Back Yard
Sources: Interstate 10; UPRR
Date: 10/20/14 -10/21/14 See attached Noise Measurement Form.

TIME	10/20 - 10/21 $L_{eq(h)}$ dBA	10/21 $L_{eq(h)}$ dBA
02:00 - 03:00 PM	65	65
03:00 - 04:00 PM	66	65
04:00 - 05:00 PM	70	67
05:00 - 06:00 PM	68	-
06:00 - 07:00 PM	64	-
07:00 - 08:00 PM	63	-
08:00 - 09:00 PM	64	-
09:00 - 10:00 PM	62	-
10:00 - 11:00 PM	64	-
11:00 - 12:00 AM	63	-
12:00 - 01:00 AM	64	-
01:00 - 02:00 AM	62	-
02:00 - 03:00 AM	62	-
03:00 - 04:00 AM	65	-
04:00 - 05:00 AM	65	-
05:00 - 06:00 AM	65	-
06:00 - 07:00 AM	68	-
07:00 - 08:00 AM	68	-
08:00 - 09:00 AM	67	-
09:00 - 10:00 AM	68	-
10:00 - 11:00 AM	67	-
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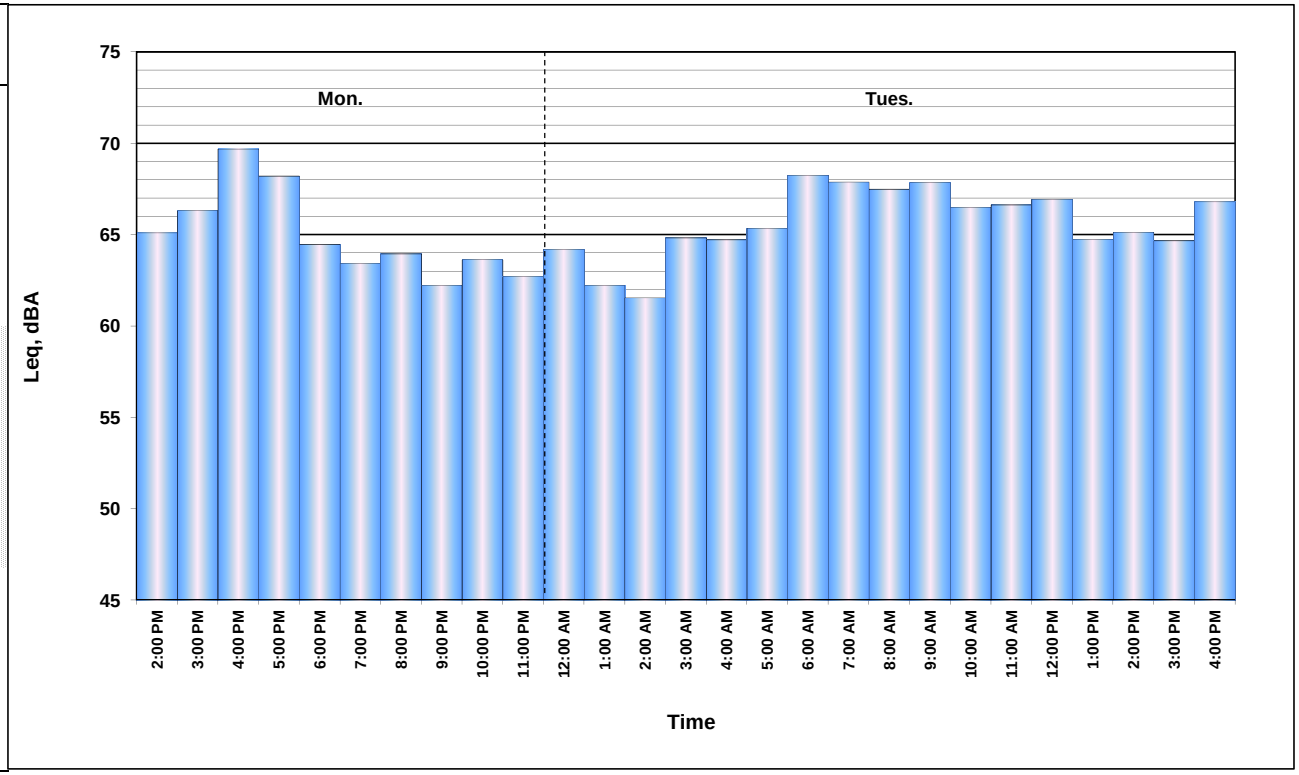
12:00 - 01:00 PM	67	-
01:00 - 02:00 PM	65	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: R. URENDA	DATE: 10/16/13	
MEASUREMENT ADDRESS: SIERRA ESTATES 17333 VALLEY Blvd	CITY: FONTANA	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: LT6

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820
☐ LD-824 ☒ LD-812
☐ B&K-2250 ☐ _____
SERIAL #: 0639

MICROPHONE: ☒ WIND SCREEN
☒ NON-POLAR ☐ POLARIZED
☑ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
SERIAL #: 2916

PRE AMP:
☐ LD-900
☒ LD-828
☐ _____
SERIAL #: 2330

CALIBRATOR:
☒ LD CA250
☐ B&K 4231
S/N 2480

Freq, Hz.
☒ 250
☐ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 7.9, 14:50
After 114.0, 113.9, 7.8, 11:24

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

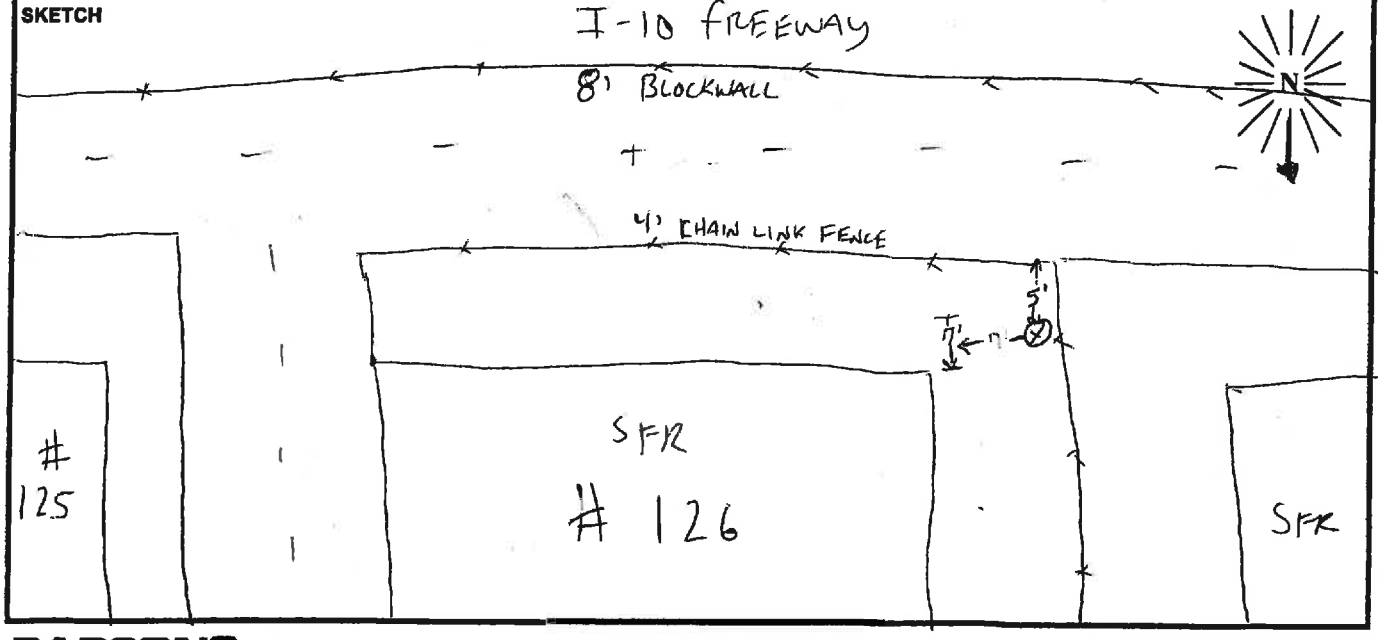
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 84.6 °F R.H.: 16.6 %
WIND SPEED: 2.0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PENE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/16	14:55											
10/17		11:20										

SKETCH



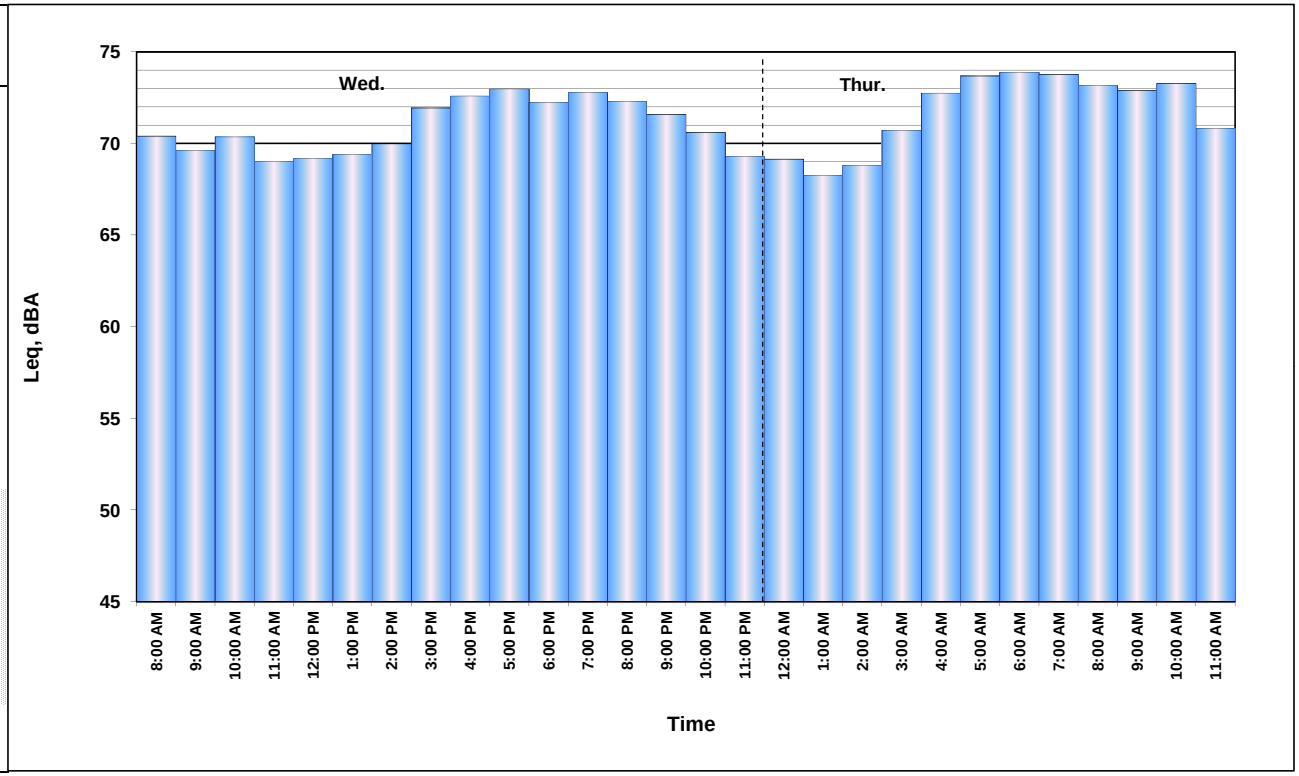
PARSONS

Site LT06 Hourly Noise Levels, $L_{eq}(h)$

Location: 17333 Valley Blvd, Fontana Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/16/13 -10/17/13

See attached Noise Measurement Form.

TIME	10/16 - 10/17 $L_{eq(h)}$ dBA	10/17 $L_{eq(h)}$ dBA
08:00 - 09:00 AM	70	73
09:00 - 10:00 AM	70	73
10:00 - 11:00 AM	70	73
11:00 - 12:00 PM	69	71
12:00 - 01:00 PM	69	-
01:00 - 02:00 PM	69	-
02:00 - 03:00 PM	70	-
03:00 - 04:00 PM	72	-
04:00 - 05:00 PM	73	-
05:00 - 06:00 PM	73	-
06:00 - 07:00 PM	72	-
07:00 - 08:00 PM	73	-
08:00 - 09:00 PM	72	-
09:00 - 10:00 PM	72	-
10:00 - 11:00 PM	71	-
11:00 - 12:00 AM	69	-
12:00 - 01:00 AM	69	-
01:00 - 02:00 AM	68	-
02:00 - 03:00 AM	69	-
03:00 - 04:00 AM	71	-
04:00 - 05:00 AM	73	-
05:00 - 06:00 AM	74	-
06:00 - 07:00 AM	74	-
07:00 - 08:00 AM	74	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: R. URBINA	DATE: 10/16/13	
MEASUREMENT ADDRESS: 10349 ALDER ST	CITY: BLOOMINGTON	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: LT7

SOUND LEVEL METER:
☐ LD-870 ☒ LD-820
☐ LD-824 ☐ LD-812
☐ B&K-2250 ☐ _____
SERIAL #: 1662

MICROPHONE: ☒ WIND SCREEN
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
SERIAL #: 3159

PRE AMP:
☐ LD-900
☒ LD-828
☐ _____
SERIAL #: 1891

CALIBRATOR:
☒ LD CA250
☐ B&K 4231
S/N 2480

Freq, Hz.
☒ 250
☐ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 6.9 / 16:01
After 114.0 / 113.8 / 6.9 / 12:20

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

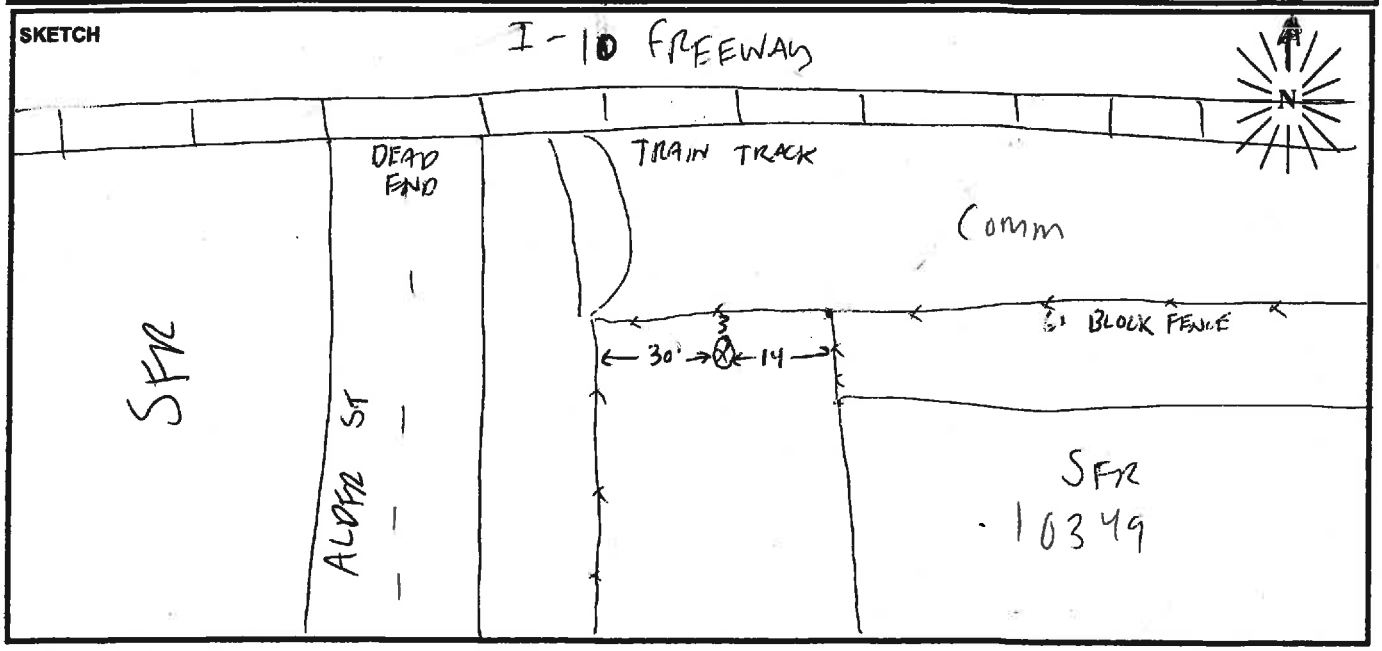
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 83.5 °F R.H.: 15.5 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/16	16:06											
10/17		12:16										

SKETCH

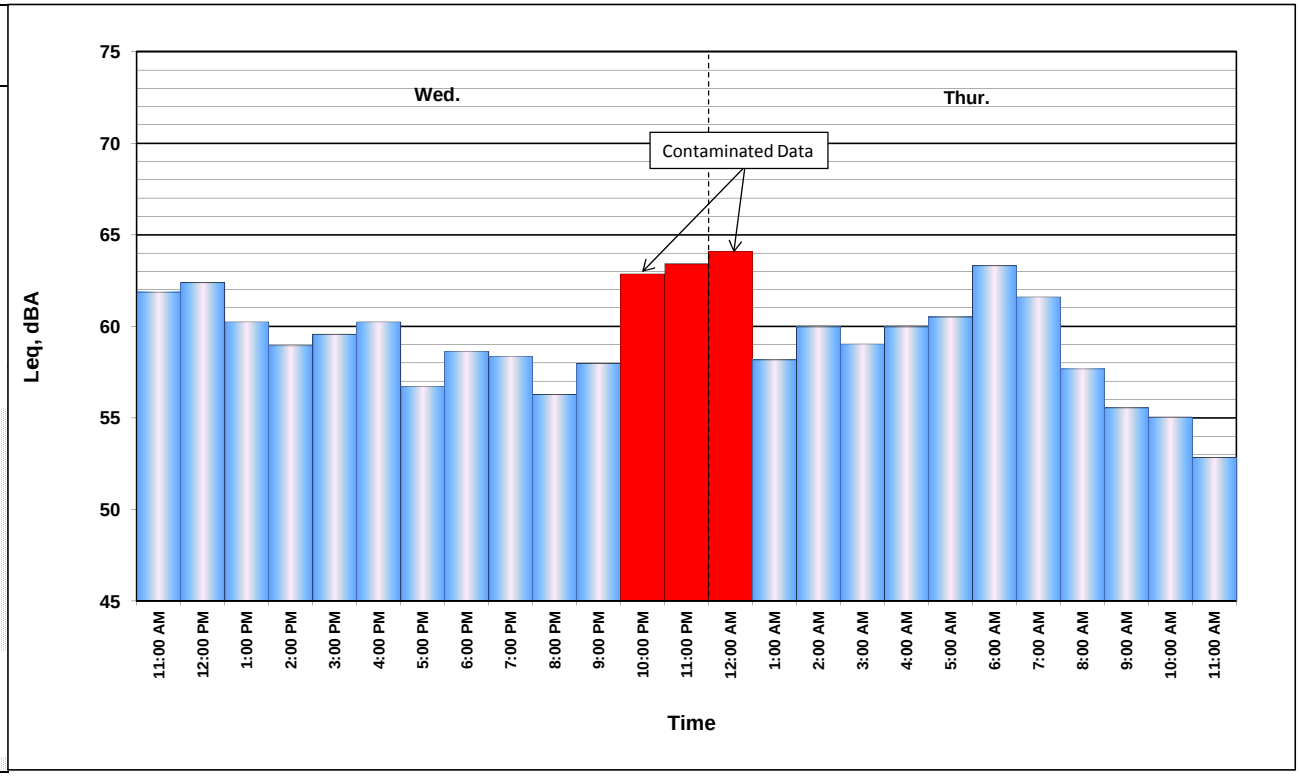


PARSONS

Site LT07 Hourly Noise Levels, $L_{eq}(h)$

Location: 10349 Alder St, Bloomington Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/16/13 -10/17/13 See attached Noise Measurement Form.

TIME	10/16 - 10/17 $L_{eq(h)}$ dBA	10/17 $L_{eq(h)}$ dBA
11:00 - 12:00 PM	62	53
12:00 - 01:00 PM	62	-
01:00 - 02:00 PM	60	-
02:00 - 03:00 PM	59	-
03:00 - 04:00 PM	60	-
04:00 - 05:00 PM	60	-
05:00 - 06:00 PM	57	-
06:00 - 07:00 PM	59	-
07:00 - 08:00 PM	58	-
08:00 - 09:00 PM	56	-
09:00 - 10:00 PM	58	-
10:00 - 11:00 PM	63	-
11:00 - 12:00 AM	63	-
12:00 - 01:00 AM	64	-
01:00 - 02:00 AM	58	-
02:00 - 03:00 AM	60	-
03:00 - 04:00 AM	59	-
04:00 - 05:00 AM	60	-
05:00 - 06:00 AM	61	-
06:00 - 07:00 AM	63	-
07:00 - 08:00 AM	62	-
08:00 - 09:00 AM	58	-
09:00 - 10:00 AM	56	-
10:00 - 11:00 AM	55	-



FIELD SURVEY FORM

PROJECT:		**ENGINEER:** R. ORTEGA	**DATE:** 10/16/13
MEASUREMENT ADDRESS: 18881 Lynwood St	**CITY:** Bloomington, California	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	**SITE NO.:** LT B

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ _____	**MICROPHONE:** ☒ WIND SCREEN ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM	**PRE AMP:** ☐ LD-900 ☒ LD-828 ☐ _____	**NOTES:** SYSTEM PWR: ☒ BAT ☐ AC (observations at start of measurement) TEMP: 84.1 °F R.H.: 16.6 % WIND SPEED: 2.0 MPH TOWARD (DIR): _____ SKIES: CLEAR CAMERA RUBEN PHONE PHOTO NOs. _____
SERIAL #: 0659	**SERIAL #:** 3384	**SERIAL #:** 2667	

CALIBRATOR: ☒ LD CA250 ☐ B&K 4231 S/N 2480

Freq, Hz.: ☒ 250 ☐ 1000 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 114.0 / 114.0 / 6.8 / 15:24

After 114.0 / 113.7 / 6.8 / 12:16

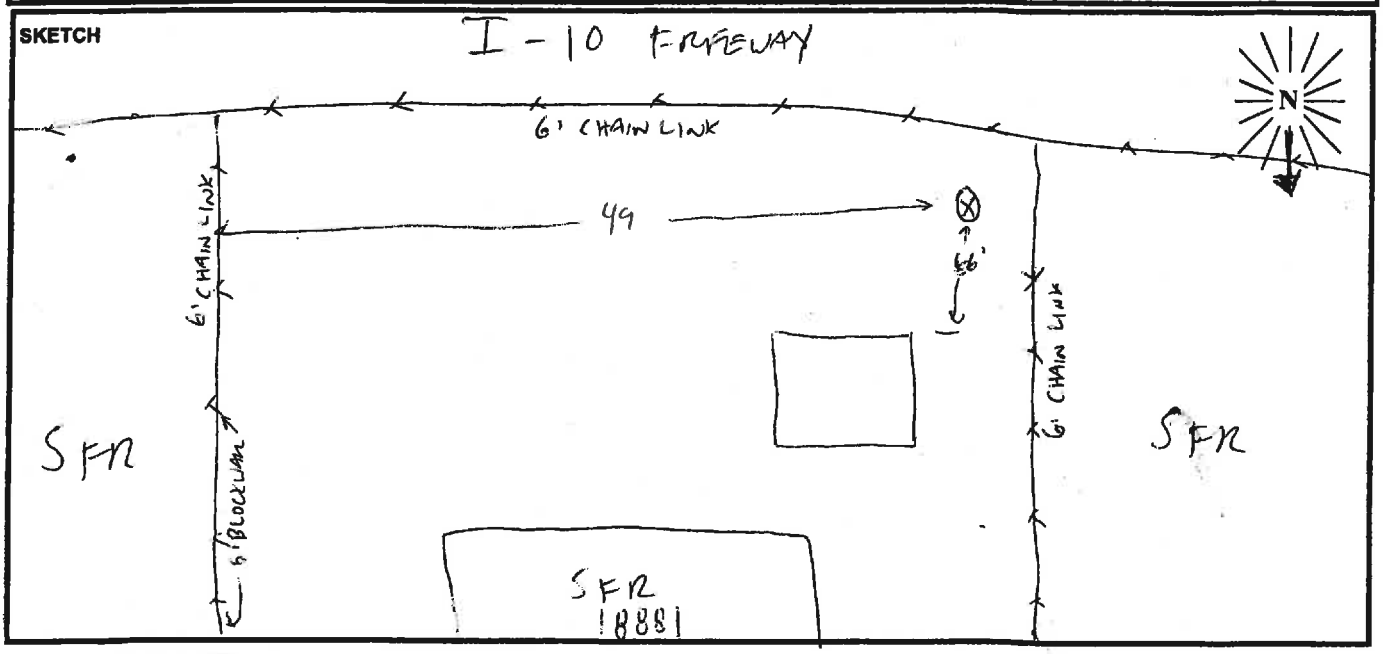
METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/16	15:29											
10/17		11:49										

SKETCH

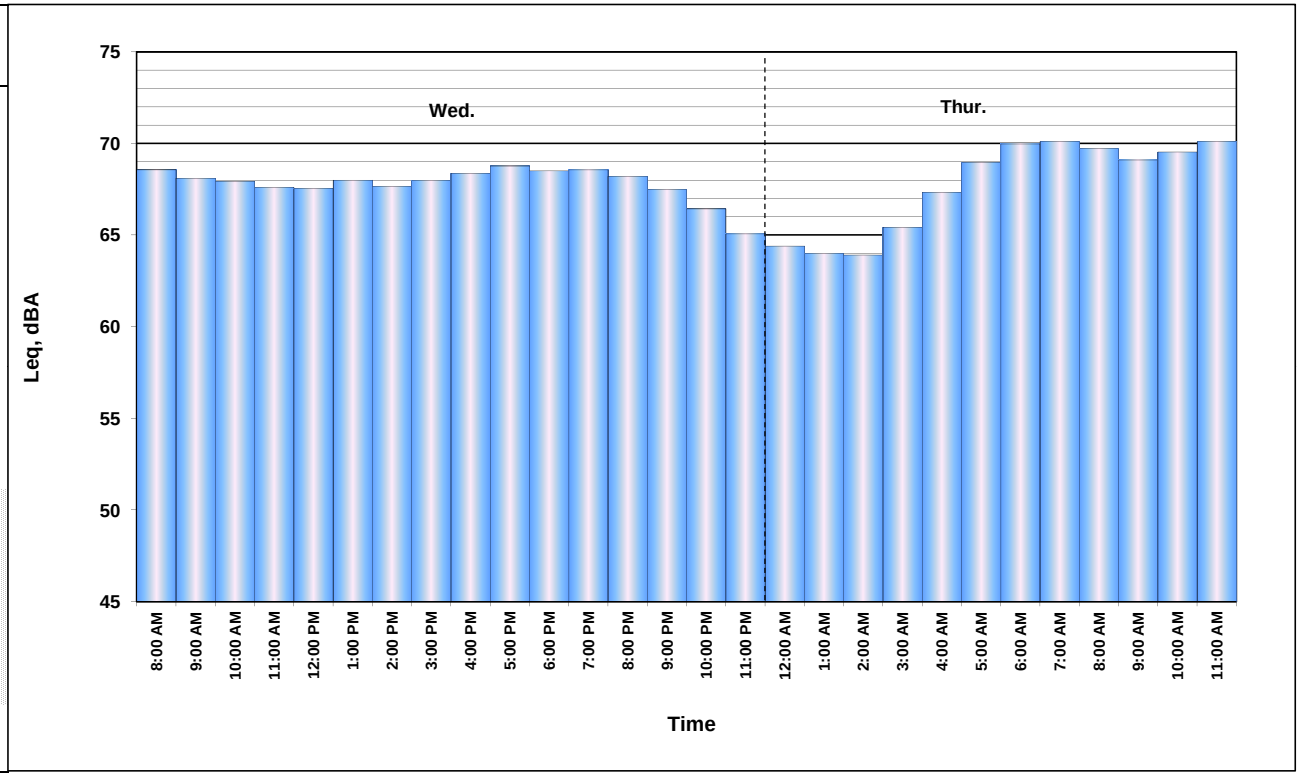


PARSONS

Site LT08 Hourly Noise Levels, $L_{eq}(h)$

Location: 18881 Lynwood St, Bloomington Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/16/13 -10/17/13 See attached Noise Measurement Form.

TIME	10/16 - 10/17 $L_{eq(h)}$ dBA	10/17 $L_{eq(h)}$ dBA
08:00 - 09:00 AM	69	70
09:00 - 10:00 AM	68	69
10:00 - 11:00 AM	68	70
11:00 - 12:00 PM	68	70
12:00 - 01:00 PM	68	-
01:00 - 02:00 PM	68	-
02:00 - 03:00 PM	68	-
03:00 - 04:00 PM	68	-
04:00 - 05:00 PM	68	-
05:00 - 06:00 PM	69	-
06:00 - 07:00 PM	69	-
07:00 - 08:00 PM	69	-
08:00 - 09:00 PM	68	-
09:00 - 10:00 PM	67	-
10:00 - 11:00 PM	66	-
11:00 - 12:00 AM	65	-
12:00 - 01:00 AM	64	-
01:00 - 02:00 AM	64	-
02:00 - 03:00 AM	64	-
03:00 - 04:00 AM	65	-
04:00 - 05:00 AM	67	-
05:00 - 06:00 AM	69	-
06:00 - 07:00 AM	70	-
07:00 - 08:00 AM	70	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		R. VARELA	DATE: 11/7/13
MEASUREMENT ADDRESS: 2016 W. VALLEY BLVD	CITY: BLOOMINGTON	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: LT9

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0638

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3155

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2330

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 8.1, 8:56
After 114.0, 114.1, 8.1, 14:31

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

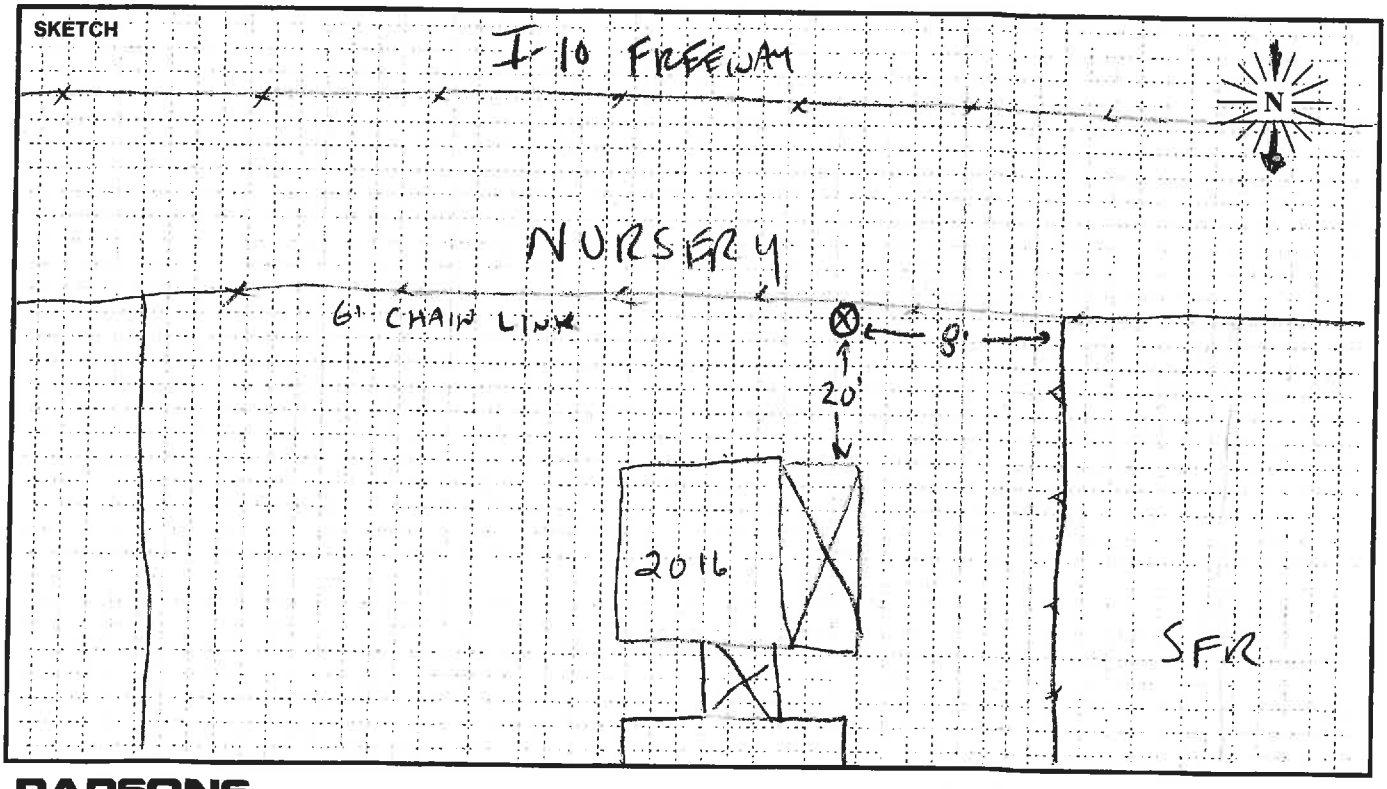
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 69.8 °F R.H.: 28.4 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
11/7	8:57											
11/8		14:30										

SKETCH



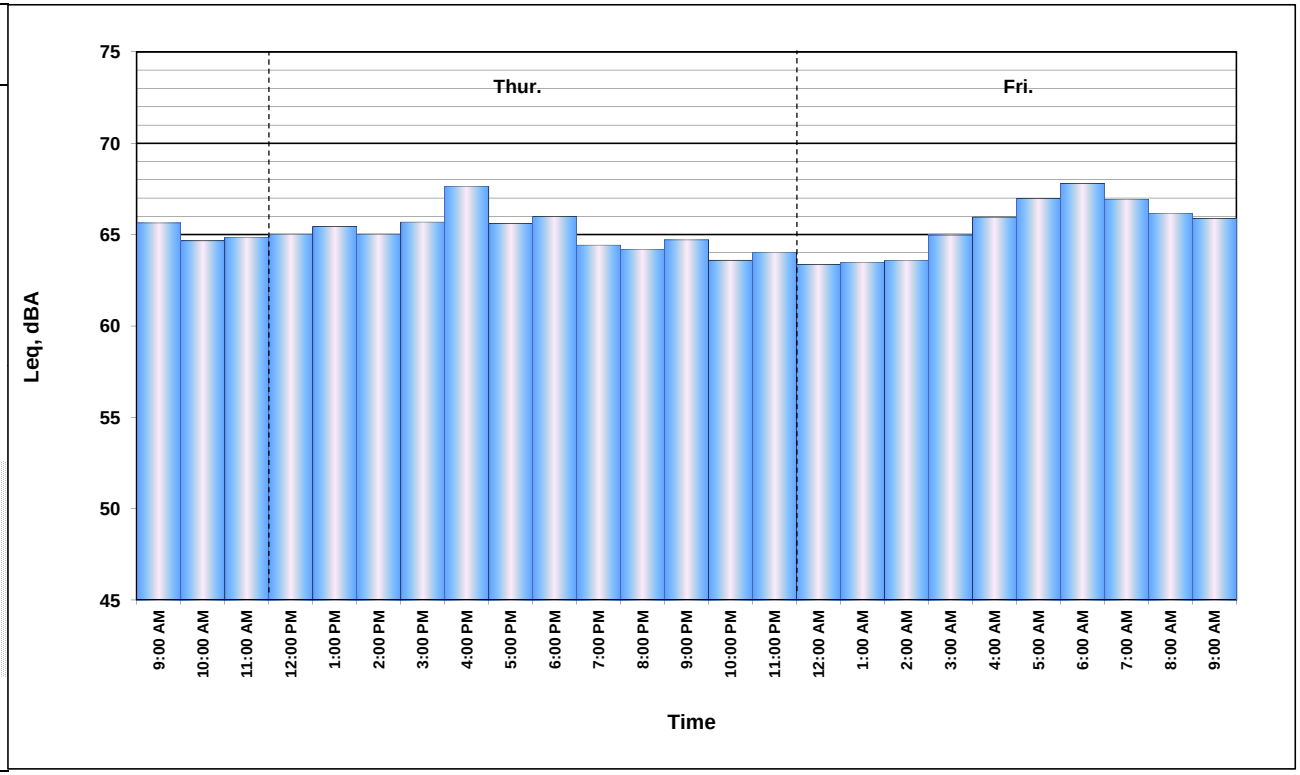
PARSONS

Site LT09 Hourly Noise Levels, $L_{eq}(h)$

Location: 2016 W. Valley Blvd, Colton Ca
Position: Back Yard
Sources: Interstate 10
Date: 11/7/13 -11/8/13

See attached Noise Measurement Form.

TIME	11/7 - 11/8 $L_{eq(h)}$ dBA	11/8 $L_{eq(h)}$ dBA
09:00 - 10:00 AM	66	66
10:00 - 11:00 AM	65	-
11:00 - 12:00 PM	65	-
12:00 - 01:00 PM	65	-
01:00 - 02:00 PM	65	-
02:00 - 03:00 PM	65	-
03:00 - 04:00 PM	66	-
04:00 - 05:00 PM	68	-
05:00 - 06:00 PM	66	-
06:00 - 07:00 PM	66	-
07:00 - 08:00 PM	64	-
08:00 - 09:00 PM	64	-
09:00 - 10:00 PM	65	-
10:00 - 11:00 PM	64	-
11:00 - 12:00 AM	64	-
12:00 - 01:00 AM	63	-
01:00 - 02:00 AM	63	-
02:00 - 03:00 AM	64	-
03:00 - 04:00 AM	65	-
04:00 - 05:00 AM	66	-
05:00 - 06:00 AM	67	-
06:00 - 07:00 AM	68	-
07:00 - 08:00 AM	67	-
08:00 - 09:00 AM	66	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

R. URENA

DATE: 10/17/13

MEASUREMENT ADDRESS: 871 VALLEY BLVD

CITY: COLTON

☒ Single-Family ☐ Recreational ☐ Multi-Family ☐ Commercial ☐ School

SITE NO.: LT10

SOUND LEVEL METER:
☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

SERIAL #: 1662

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN

SERIAL #: 3159

PRE AMP:
☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____

SERIAL #: 2667

CALIBRATOR:
☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____
S/N 10473

Freq, Hz.
☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 7.2, 14:59
After 114.0, 114.0, 7.2, 15:59

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

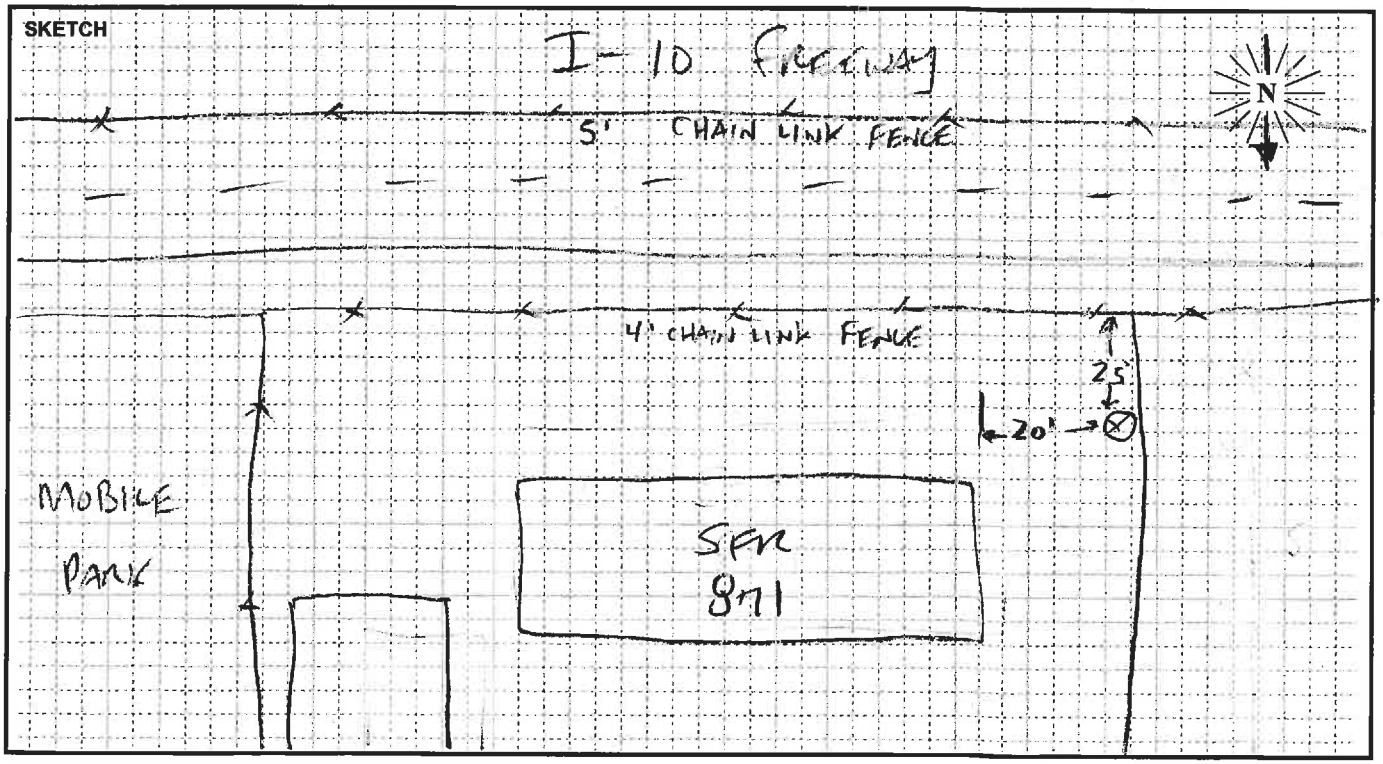
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 86 °F R.H.: 16 %
WIND SPEED: 0.8 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/17	15:26											
10/18		15:56										

SKETCH

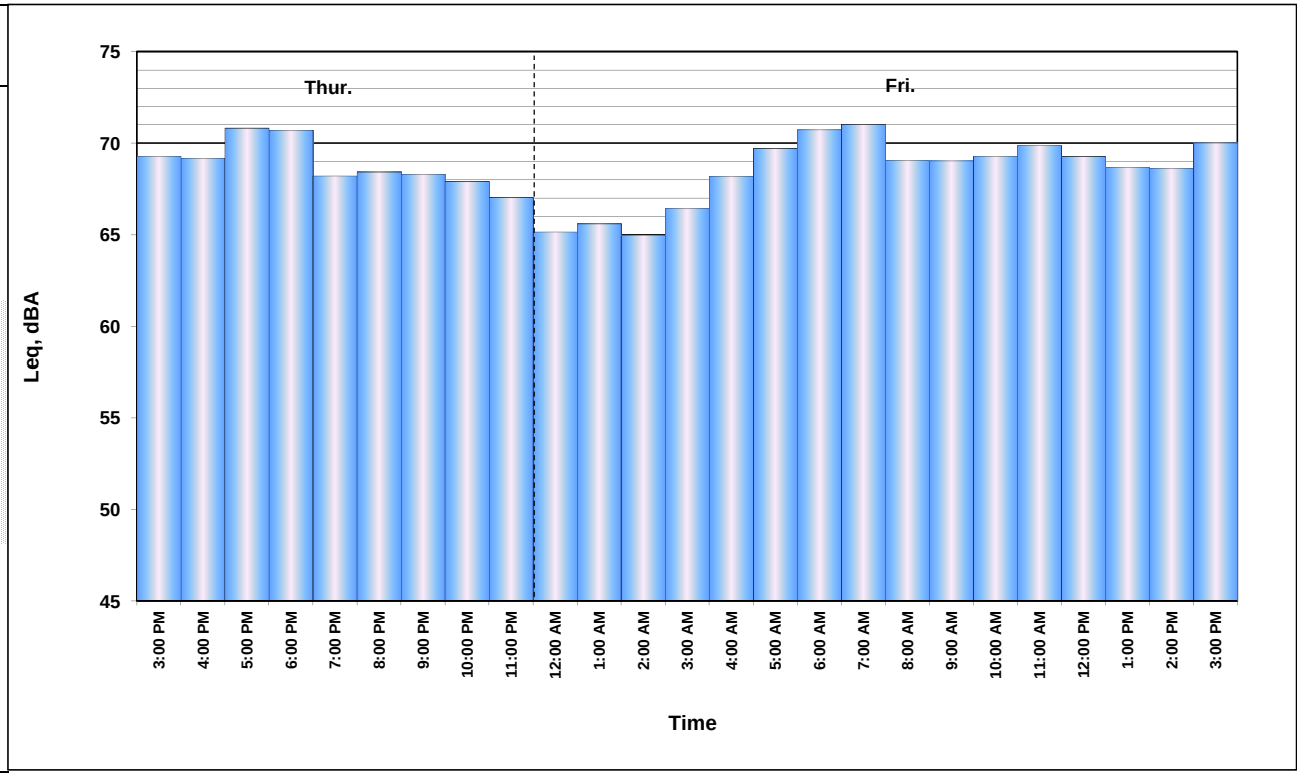


PARSONS

Site LT10 Hourly Noise Levels, $L_{eq}(h)$

Location: 871 Valley Blvd, Colton Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/17/13 -10/18/13 See attached Noise Measurement Form.

TIME	10/17 - 10/18 $L_{eq(h)}$ dBA	10/18 $L_{eq(h)}$ dBA
03:00 - 04:00 PM	69	70
04:00 - 05:00 PM	69	-
05:00 - 06:00 PM	71	-
06:00 - 07:00 PM	71	-
07:00 - 08:00 PM	68	-
08:00 - 09:00 PM	68	-
09:00 - 10:00 PM	68	-
10:00 - 11:00 PM	68	-
11:00 - 12:00 AM	67	-
12:00 - 01:00 AM	65	-
01:00 - 02:00 AM	66	-
02:00 - 03:00 AM	65	-
03:00 - 04:00 AM	66	-
04:00 - 05:00 AM	68	-
05:00 - 06:00 AM	70	-
06:00 - 07:00 AM	71	-
07:00 - 08:00 AM	71	-
08:00 - 09:00 AM	69	-
09:00 - 10:00 AM	69	-
10:00 - 11:00 AM	69	-
11:00 - 12:00 PM	70	-
12:00 - 01:00 PM	69	-
01:00 - 02:00 PM	69	-
02:00 - 03:00 PM	69	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R-URBANA	DATE: 10/10/19
MEASUREMENT ADDRESS: 523 K STREET	CITY: COLTON	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: LT11

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0659

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3384

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1891

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____
S/N 104978
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 16.8 / 14:28
After 114.0 / 114.0 / 16.8 / 15:13

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 10 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

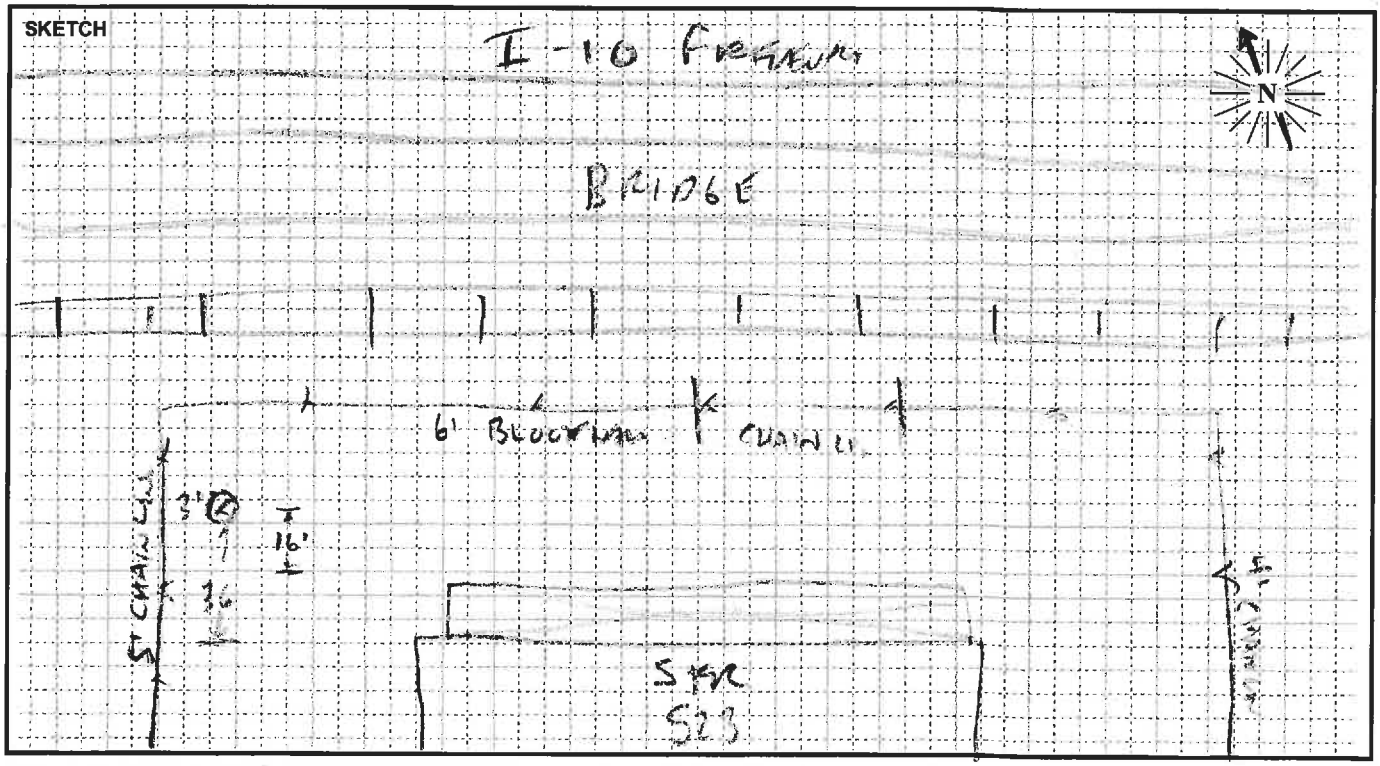
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 96 °F R.H.: 16 %
WIND SPEED: 0.8 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN ALANIS
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	14:30											
10/19		15:07										

SKETCH

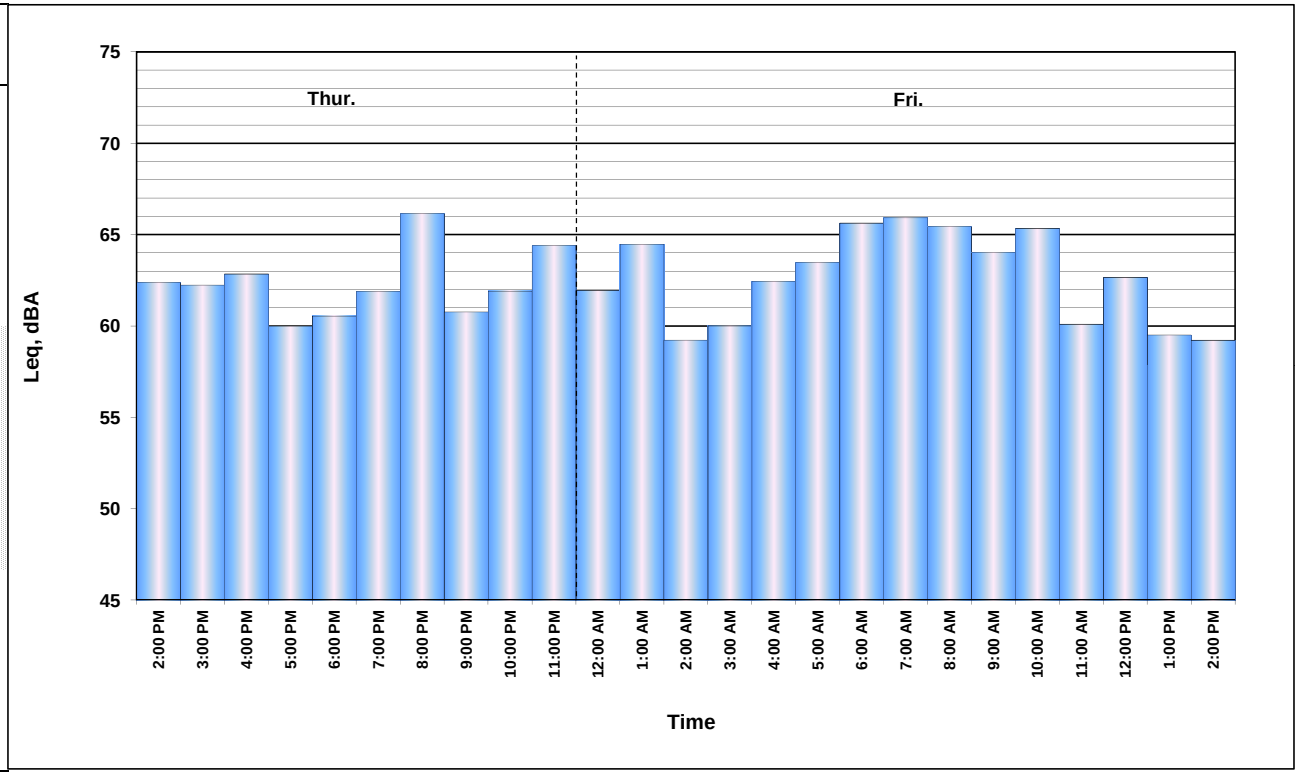


PARSONS

Site LT11 Hourly Noise Levels, $L_{eq}(h)$

Location: 523 K Street, Colton Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/17/13 -10/18/13 See attached Noise Measurement Form.

TIME	10/17 - 10/18 $L_{eq(h)}$ dBA	10/18 $L_{eq(h)}$ dBA
02:00 - 03:00 PM	62	59
03:00 - 04:00 PM	62	-
04:00 - 05:00 PM	63	-
05:00 - 06:00 PM	60	-
06:00 - 07:00 PM	61	-
07:00 - 08:00 PM	62	-
08:00 - 09:00 PM	66	-
09:00 - 10:00 PM	61	-
10:00 - 11:00 PM	62	-
11:00 - 12:00 AM	64	-
12:00 - 01:00 AM	62	-
01:00 - 02:00 AM	64	-
02:00 - 03:00 AM	59	-
03:00 - 04:00 AM	60	-
04:00 - 05:00 AM	62	-
05:00 - 06:00 AM	63	-
06:00 - 07:00 AM	66	-
07:00 - 08:00 AM	66	-
08:00 - 09:00 AM	65	-
09:00 - 10:00 AM	64	-
10:00 - 11:00 AM	65	-
11:00 - 12:00 PM	60	-
12:00 - 01:00 PM	63	-
01:00 - 02:00 PM	60	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URENA | DATE: 10/17/13

MEASUREMENT ADDRESS: 115 N. PENNSYLVANIA AVE | CITY: COLTON | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: LT12

SOUND LEVEL METER:
☐ LD-870 ☒ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 1674

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 3155

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 1938

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 79 °F R.H.: 11 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA Rugged Phone
PHOTO NOs. _____

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.
☐ 250
☒ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 6.7 / 12:46
After 114.0 / 114.0 / 6.7 / 14:40

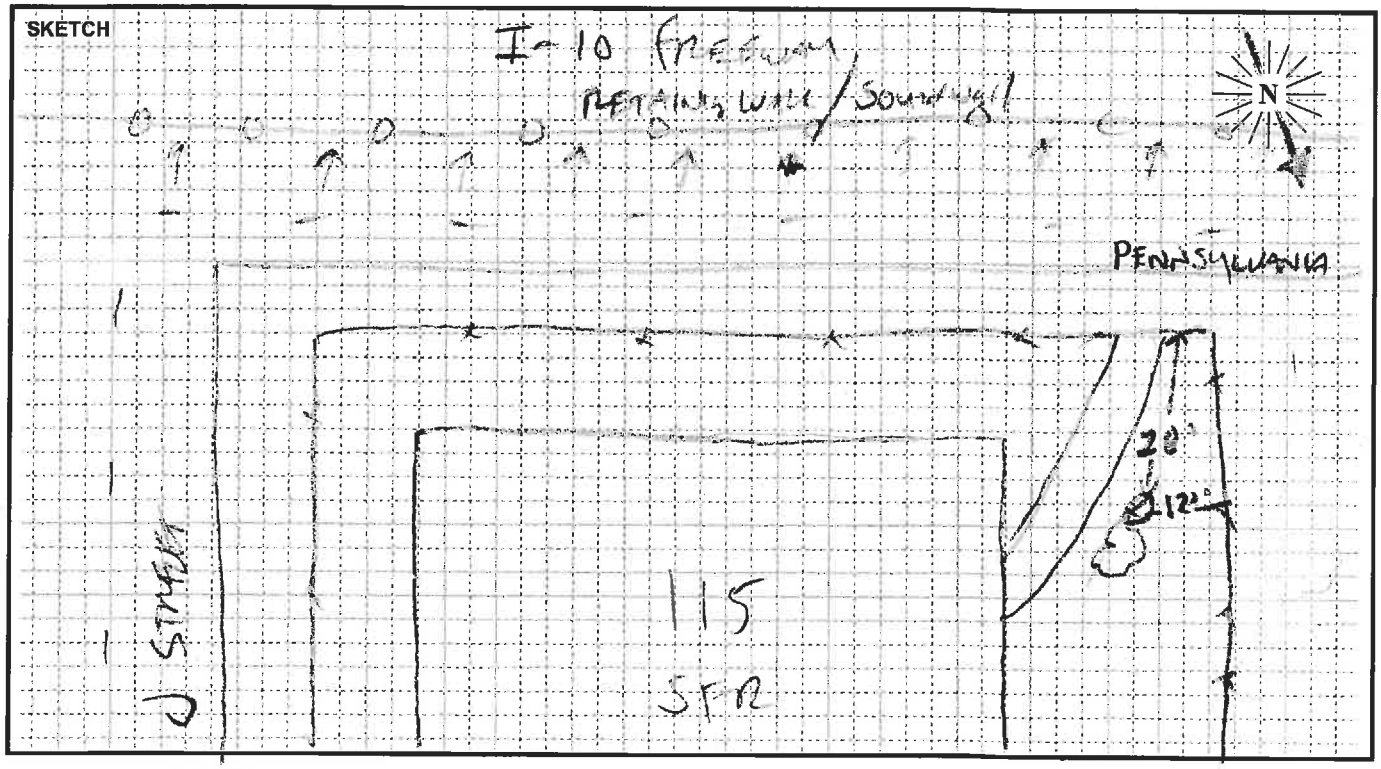
METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: | Dist. to Center of Nearest Lane _____ | ☐ Video ☐ Radar | Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/17	12:39											
10/18		14:20										

SKETCH

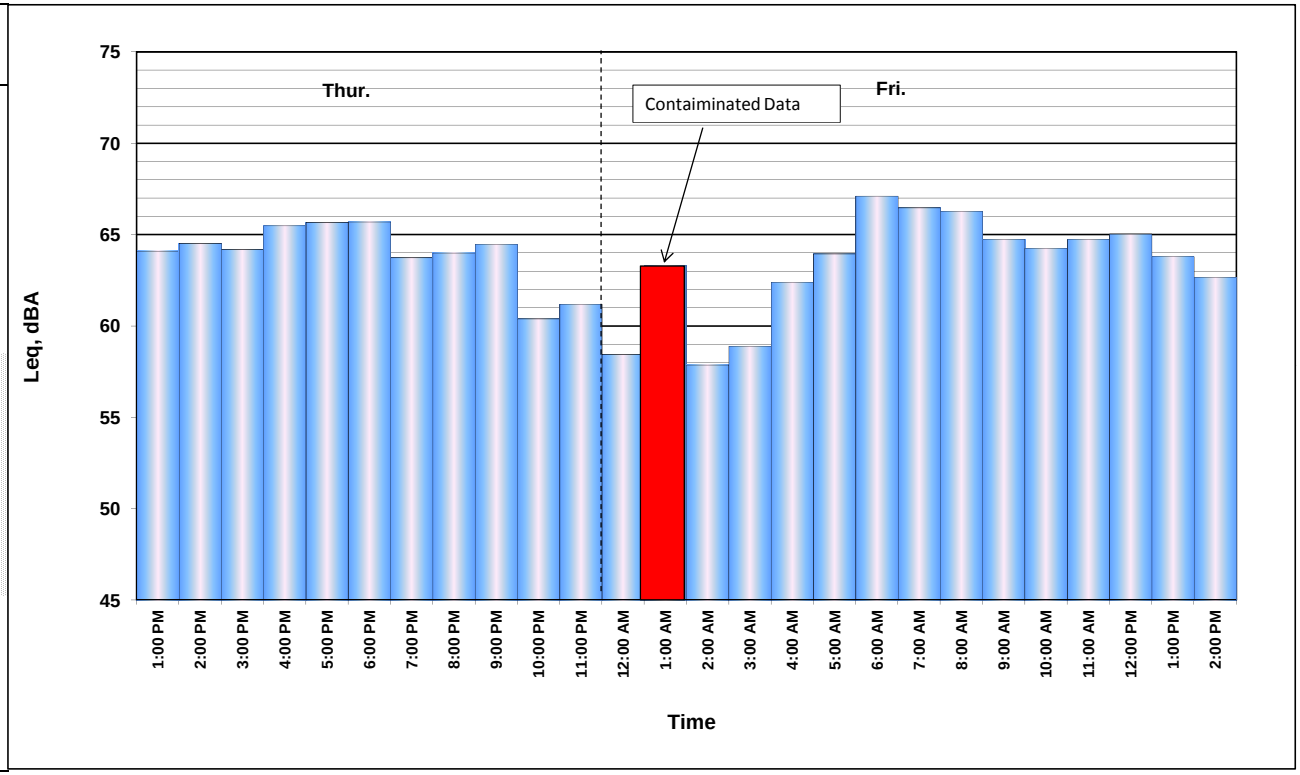


PARSONS

Site LT12 Hourly Noise Levels, $L_{eq}(h)$

Location: 125 3rd Street, Colton Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/17/13 -10/18/13 See attached Noise Measurement Form.

TIME	10/17 - 10/18 $L_{eq(h)}$ dBA	10/18 $L_{eq(h)}$ dBA
01:00 - 02:00 PM	64	64
02:00 - 03:00 PM	65	63
03:00 - 04:00 PM	64	-
04:00 - 05:00 PM	65	-
05:00 - 06:00 PM	66	-
06:00 - 07:00 PM	66	-
07:00 - 08:00 PM	64	-
08:00 - 09:00 PM	64	-
09:00 - 10:00 PM	64	-
10:00 - 11:00 PM	60	-
11:00 - 12:00 AM	61	-
12:00 - 01:00 AM	58	-
01:00 - 02:00 AM	63	-
02:00 - 03:00 AM	58	-
03:00 - 04:00 AM	59	-
04:00 - 05:00 AM	62	-
05:00 - 06:00 AM	64	-
06:00 - 07:00 AM	67	-
07:00 - 08:00 AM	66	-
08:00 - 09:00 AM	66	-
09:00 - 10:00 AM	65	-
10:00 - 11:00 AM	64	-
11:00 - 12:00 PM	65	-
12:00 - 01:00 PM	65	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | B. Jacobera | DATE: 10/17/13

MEASUREMENT ADDRESS: 832 E. H Street | CITY: Colton, CA | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: LT13

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2916

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2330

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2827
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.1 / 8.0 / 14:26
After 114.0 / 114.1 / 9.5 / 14:44

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

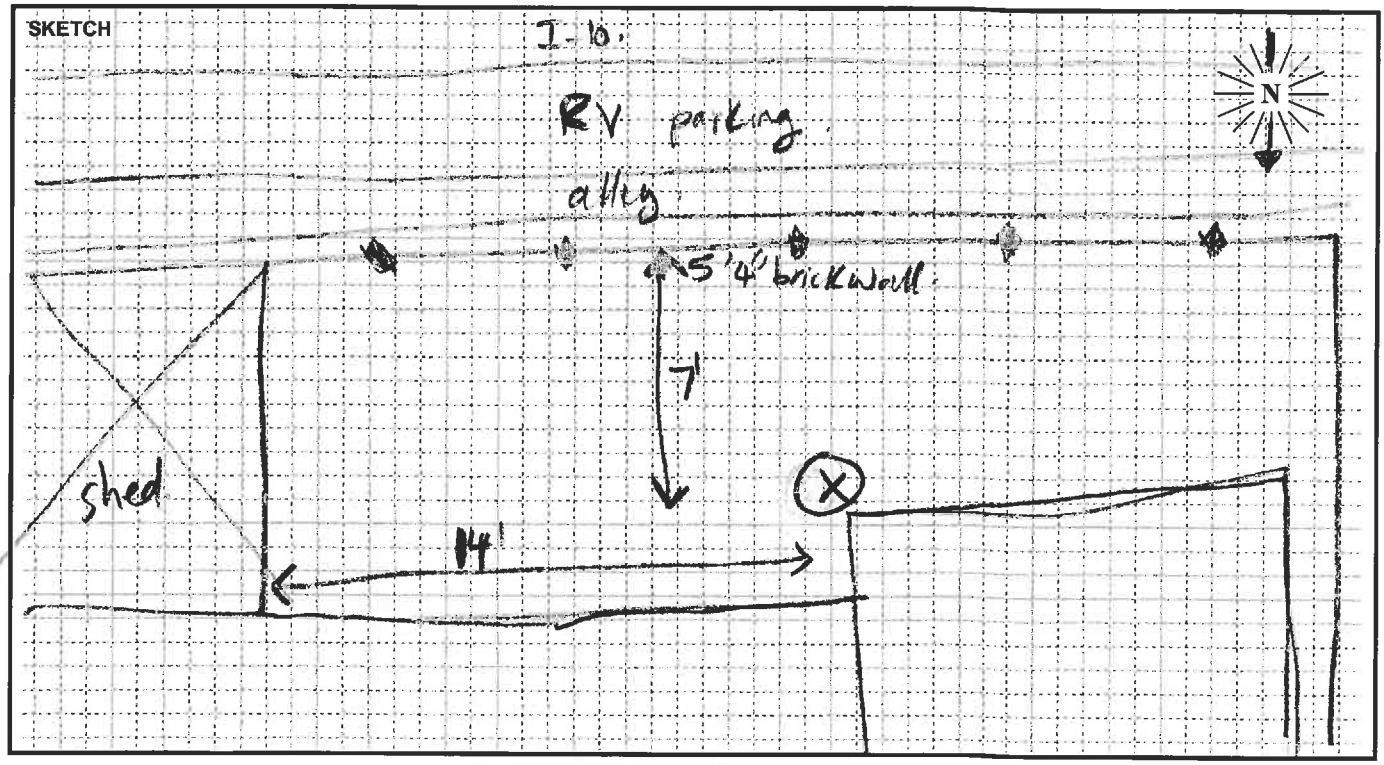
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 81 °F R.H.: 13 %
WIND SPEED: 4 MPH
TOWARD (DIR): Colton
SKIES: Sunny
CAMERA B.J. Phone
PHOTO NOs 20 - 25

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/17	14:36	14:42										
		10/18										

SKETCH

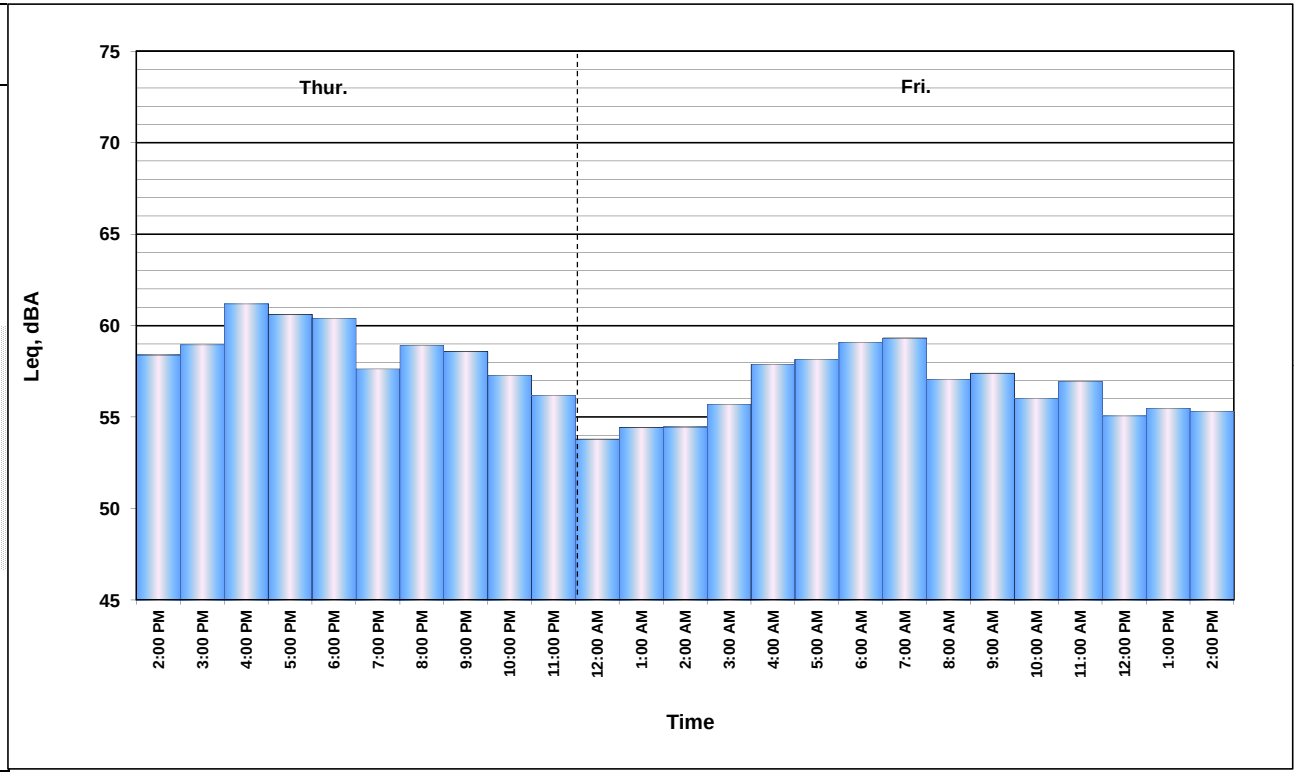


PARSONS

Site LT13 Hourly Noise Levels, $L_{eq}(h)$

Location: 832 E. H Street, Colton Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/17/13 -10/18/13 See attached Noise Measurement Form.

TIME	10/17 - 10/18 $L_{eq(h)}$ dBA	10/18 $L_{eq(h)}$ dBA
02:00 - 03:00 PM	58	55
03:00 - 04:00 PM	59	-
04:00 - 05:00 PM	61	-
05:00 - 06:00 PM	61	-
06:00 - 07:00 PM	60	-
07:00 - 08:00 PM	58	-
08:00 - 09:00 PM	59	-
09:00 - 10:00 PM	59	-
10:00 - 11:00 PM	57	-
11:00 - 12:00 AM	56	-
12:00 - 01:00 AM	54	-
01:00 - 02:00 AM	54	-
02:00 - 03:00 AM	54	-
03:00 - 04:00 AM	56	-
04:00 - 05:00 AM	58	-
05:00 - 06:00 AM	58	-
06:00 - 07:00 AM	59	-
07:00 - 08:00 AM	59	-
08:00 - 09:00 AM	57	-
09:00 - 10:00 AM	57	-
10:00 - 11:00 AM	56	-
11:00 - 12:00 PM	57	-
12:00 - 01:00 PM	55	-
01:00 - 02:00 PM	55	-



FIELD SURVEY FORM

PROJECT: I-10 Corridor	ENGINEER: OGDEN		DATE: 10/21/13
MEASUREMENT ADDRESS: 1895 Coloma St	CITY: LIMA LINDA	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: LT14

SOUND LEVEL METER: ☒ LD-870 ☐ LD-820 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ _____
SERIAL #: 0344

MICROPHONE: ☒ WIND SCREEN ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM
SERIAL #: 2313

PRE AMP: ☒ LD-900 ☐ LD-828 ☐ _____
SERIAL #: 3200

CALIBRATOR: ☒ LD CA250 ☐ B&K 4231 S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114, 114.0, 22.6, 11:08
After 114, 114.0, 22.6, 13:02

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ N PERCENTILE VALUES

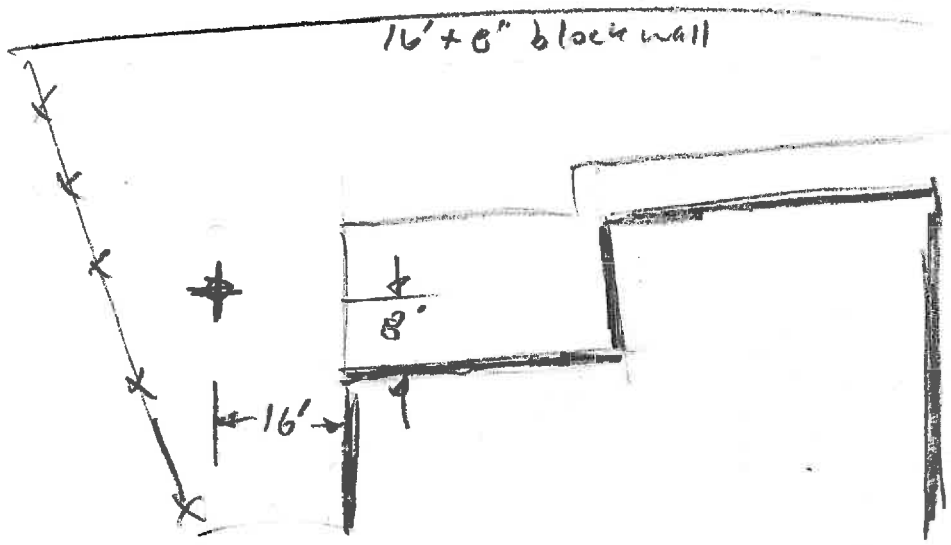
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 72 °F R.H.: 20 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA JASON PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	11:12											
10/21		1307										

SKETCH

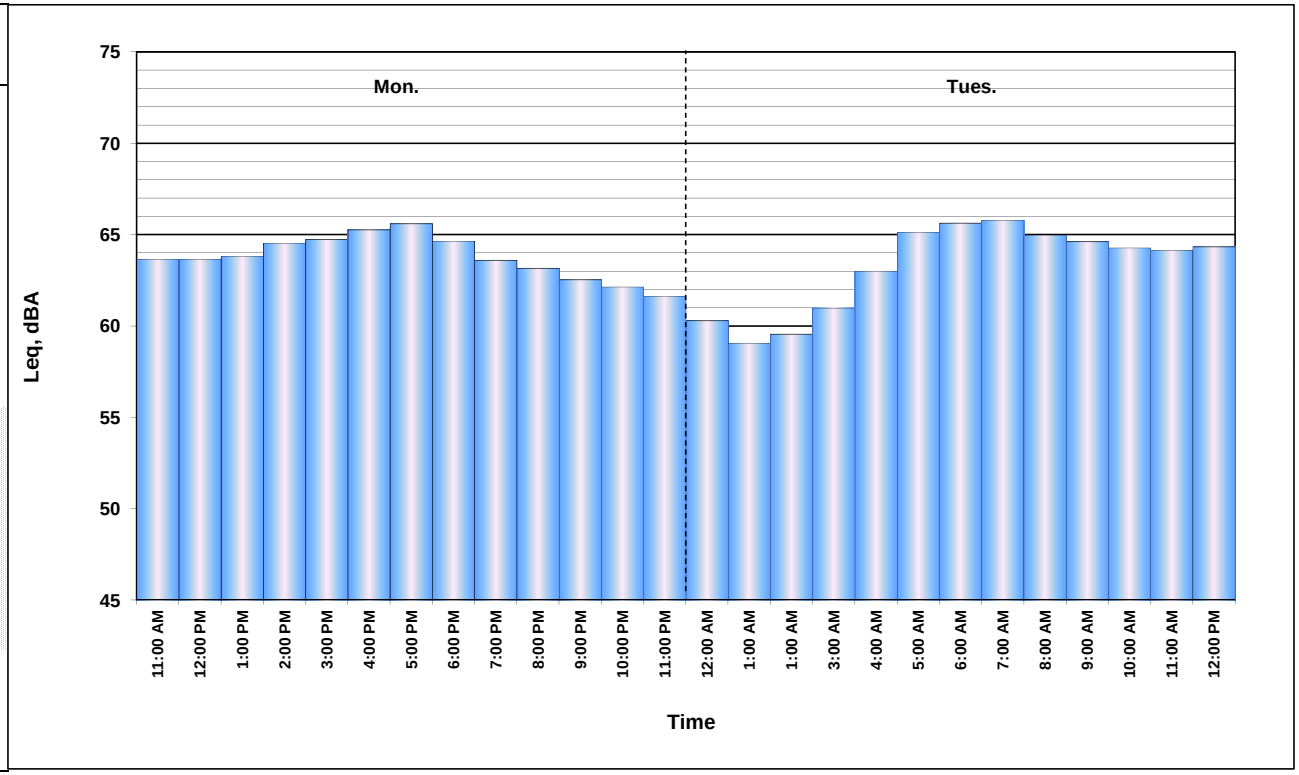


PARSONS

Site LT14 Hourly Noise Levels, $L_{eq}(h)$

Location: 1895 Coloma St, Loma Linda Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/21/13 -10/22/13 See attached Noise Measurement Form.

TIME	10/21 - 10/22 $L_{eq(h)}$ dBA	10/22 $L_{eq(h)}$ dBA
11:00 - 12:00 PM	64	64
12:00 - 01:00 PM	64	64
01:00 - 02:00 PM	64	-
02:00 - 03:00 PM	65	-
03:00 - 04:00 PM	65	-
04:00 - 05:00 PM	65	-
05:00 - 06:00 PM	66	-
06:00 - 07:00 PM	65	-
07:00 - 08:00 PM	64	-
08:00 - 09:00 PM	63	-
09:00 - 10:00 PM	63	-
10:00 - 11:00 PM	62	-
11:00 - 12:00 AM	62	-
12:00 - 01:00 AM	60	-
01:00 - 01:00 AM	59	-
01:00 - 03:00 AM	60	-
03:00 - 04:00 AM	61	-
04:00 - 05:00 AM	63	-
05:00 - 06:00 AM	65	-
06:00 - 07:00 AM	66	-
07:00 - 08:00 AM	66	-
08:00 - 09:00 AM	65	-
09:00 - 10:00 AM	65	-
10:00 - 11:00 AM	64	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. VASQUEZ | DATE: 10/21/12

MEASUREMENT ADDRESS: 25660 Rosewood Pl | CITY: LOMA LINDA | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: LT15

SOUND LEVEL METER:
☐ LD-870 ☒ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 1674

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☐ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 3155

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 1928

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2129
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 6.6 / 10:58
After 114.6 / 114.6 / 6.6 / 13:15

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

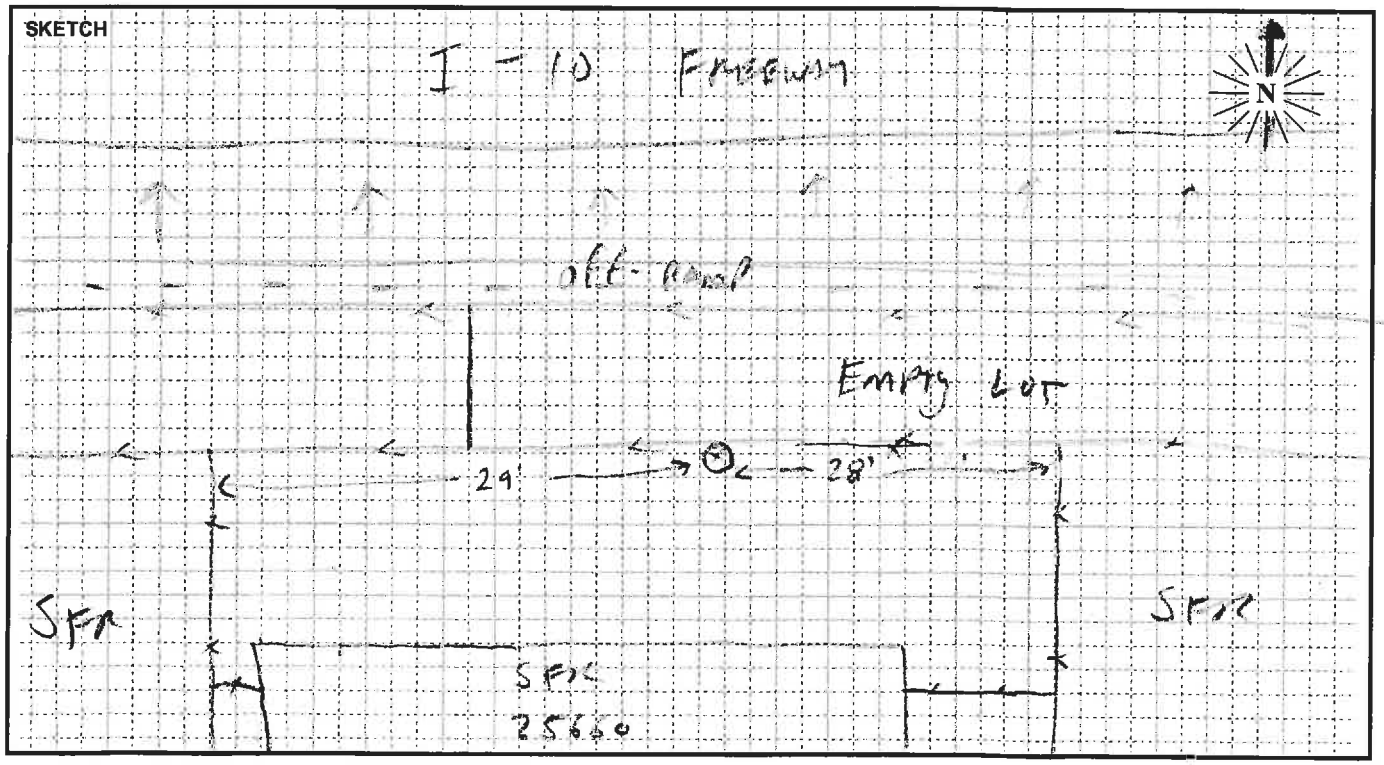
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 72 °F R.H.: 20 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RJ IPhone
PHOTO NOs. 35-39

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE:
☒ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	10:59											
10/22		13:17										

SKETCH

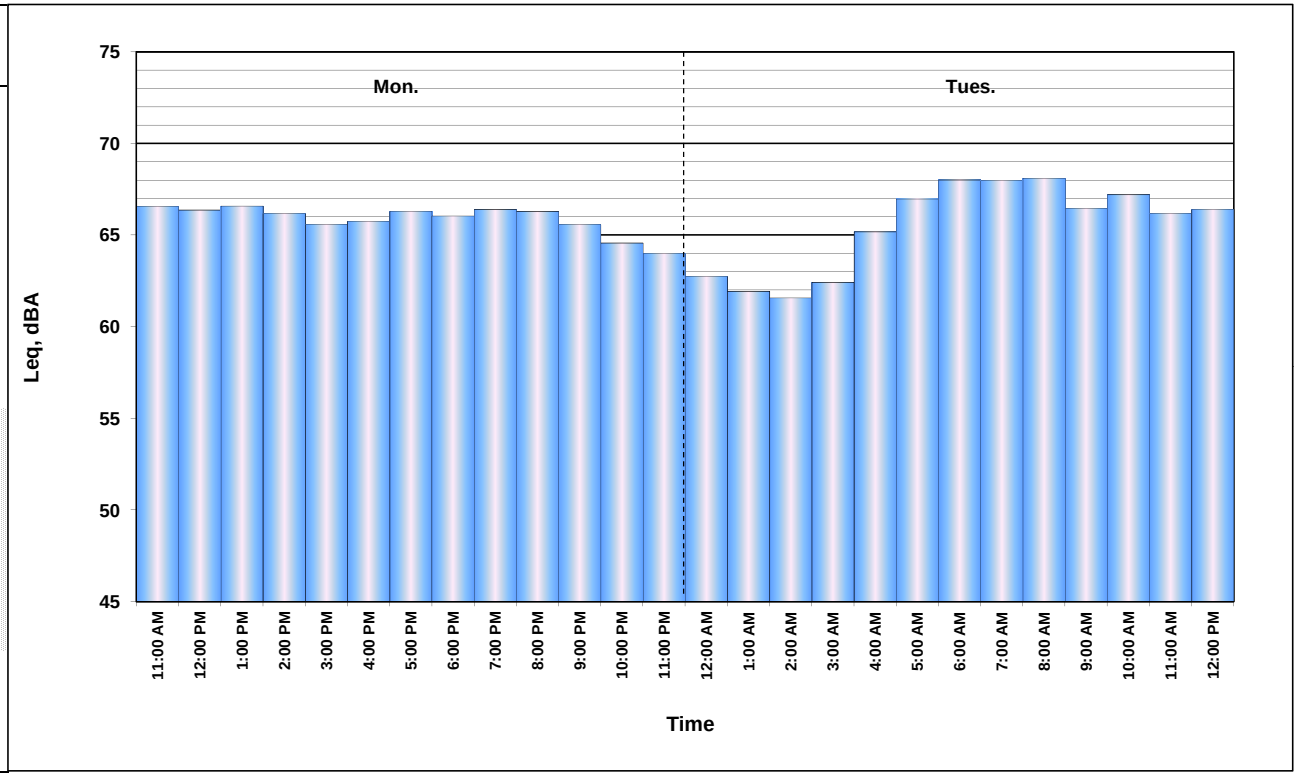


PARSONS

Site LT15 Hourly Noise Levels, $L_{eq}(h)$

Location: 25660 Rosewood Dr, Loma Linda Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/21/13 -10/22/13 See attached Noise Measurement Form.

TIME	10/21 - 10/22 $L_{eq(h)}$ dBA	10/22 $L_{eq(h)}$ dBA
11:00 - 12:00 PM	67	66
12:00 - 01:00 PM	66	66
01:00 - 02:00 PM	67	63
02:00 - 03:00 PM	66	-
03:00 - 04:00 PM	66	-
04:00 - 05:00 PM	66	-
05:00 - 06:00 PM	66	-
06:00 - 07:00 PM	66	-
07:00 - 08:00 PM	66	-
08:00 - 09:00 PM	66	-
09:00 - 10:00 PM	66	-
10:00 - 11:00 PM	65	-
11:00 - 12:00 AM	64	-
12:00 - 01:00 AM	63	-
01:00 - 02:00 AM	62	-
02:00 - 03:00 AM	62	-
03:00 - 04:00 AM	62	-
04:00 - 05:00 AM	65	-
05:00 - 06:00 AM	67	-
06:00 - 07:00 AM	68	-
07:00 - 08:00 AM	68	-
08:00 - 09:00 AM	68	-
09:00 - 10:00 AM	66	-
10:00 - 11:00 AM	67	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. ORTEGA | DATE: 10/21/13

MEASUREMENT ADDRESS: 26326 TUDOR | CITY: REDLANDS | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: LT16

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2916

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2320

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 72 °F R.H.: 20 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA BJ IPHONE
PHOTO NOs. 40-45

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 0.0, 11:41
After 114.0, 113.9, 0.0, 13:22

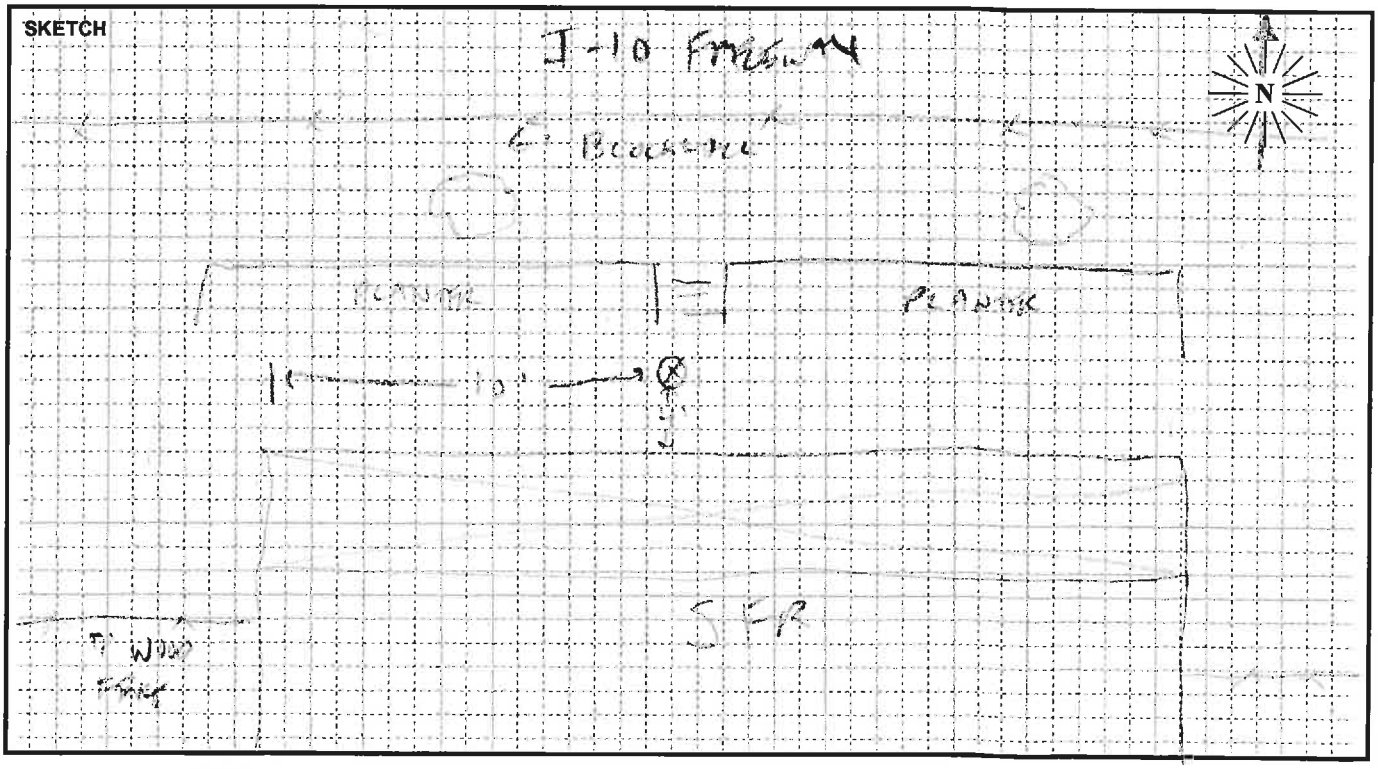
METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: | Dist. to Center of Nearest Lane _____ | ☐ Video ☐ Radar | Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	11:41											
10/22		13:25										

SKETCH

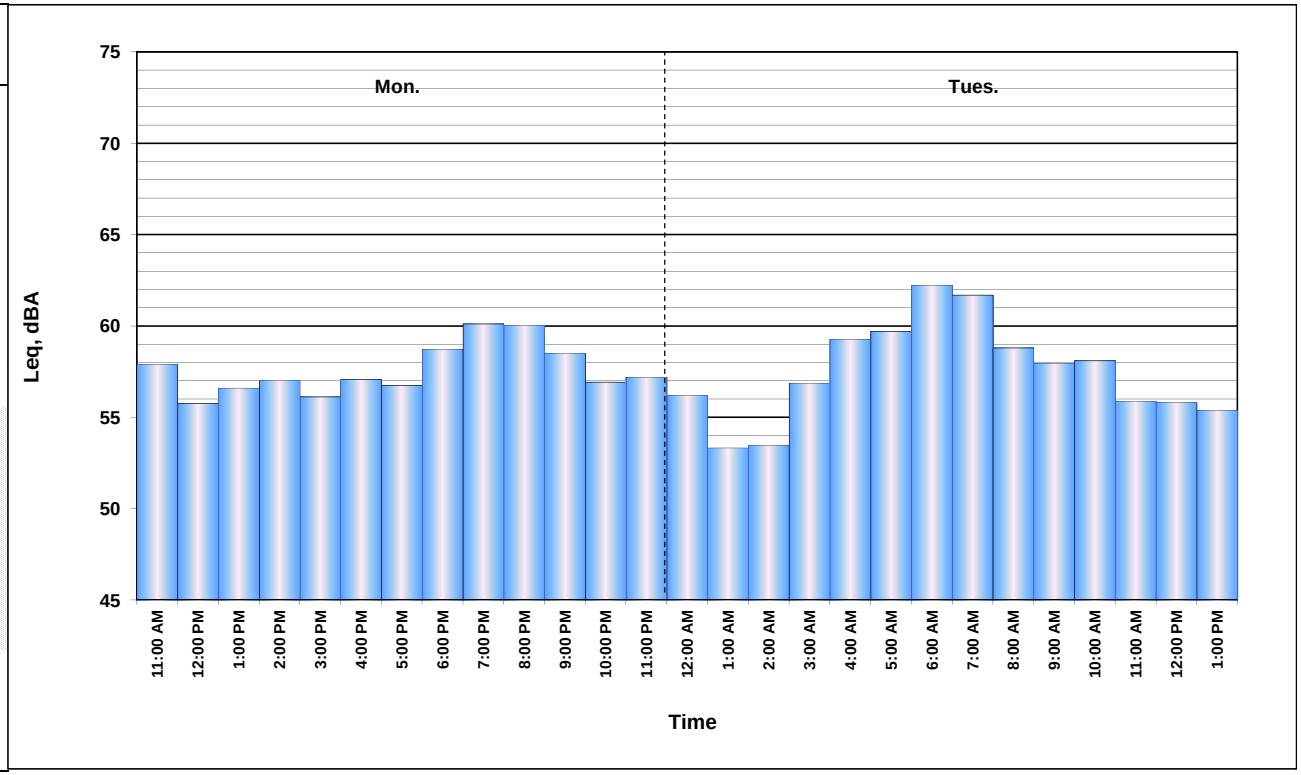


PARSONS

Site LT16 Hourly Noise Levels, $L_{eq}(h)$

Location: 26326 Tudror Ct, Redlands Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/21/13 -10/22/13 See attached Noise Measurement Form.

TIME	10/21 - 10/22 $L_{eq(h)}$ dBA	10/22 $L_{eq(h)}$ dBA
11:00 - 12:00 PM	58	56
12:00 - 01:00 PM	56	56
01:00 - 02:00 PM	57	55
02:00 - 03:00 PM	57	-
03:00 - 04:00 PM	56	-
04:00 - 05:00 PM	57	-
05:00 - 06:00 PM	57	-
06:00 - 07:00 PM	59	-
07:00 - 08:00 PM	60	-
08:00 - 09:00 PM	60	-
09:00 - 10:00 PM	59	-
10:00 - 11:00 PM	57	-
11:00 - 12:00 AM	57	-
12:00 - 01:00 AM	56	-
01:00 - 02:00 AM	53	-
02:00 - 03:00 AM	53	-
03:00 - 04:00 AM	57	-
04:00 - 05:00 AM	59	-
05:00 - 06:00 AM	60	-
06:00 - 07:00 AM	62	-
07:00 - 08:00 AM	62	-
08:00 - 09:00 AM	59	-
09:00 - 10:00 AM	58	-
10:00 - 11:00 AM	58	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URENA | DATE: 10/21/13

MEASUREMENT ADDRESS: 615 LAWTON AVE | CITY: REDLANDS | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: LT17

SOUND LEVEL METER:
☐ LD-870 ☒ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 1616

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 16967

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 1629

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 8.9, 14:43
After 114.0, 114.0, 8.8, 15:05

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 87.1 °F R.H.: 27.6 %
WIND SPEED: 1.7 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA ROBEN Photo
PHOTO NOs. _____

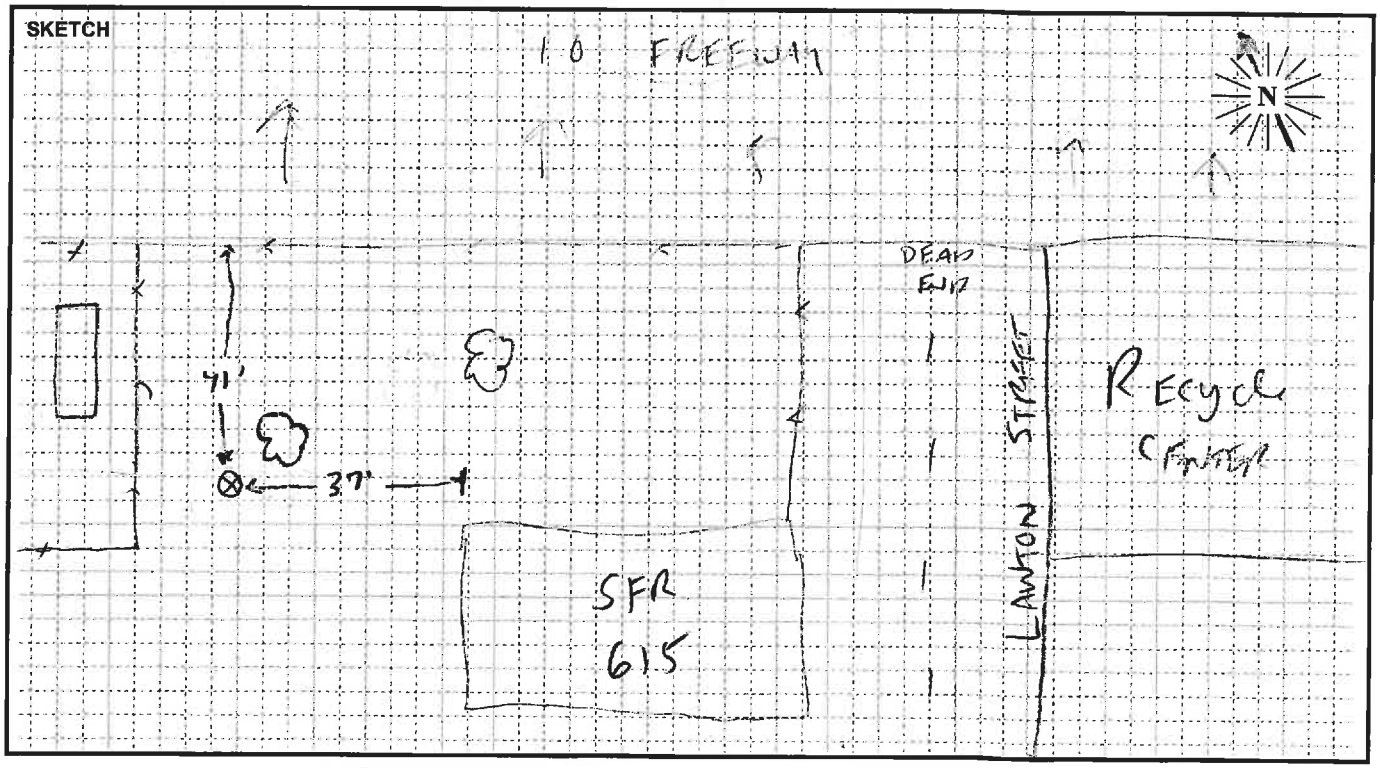
NOTES:
Pick up 5:30 pm 10/22/13

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE:
☒ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	14:43	15:04										

SKETCH

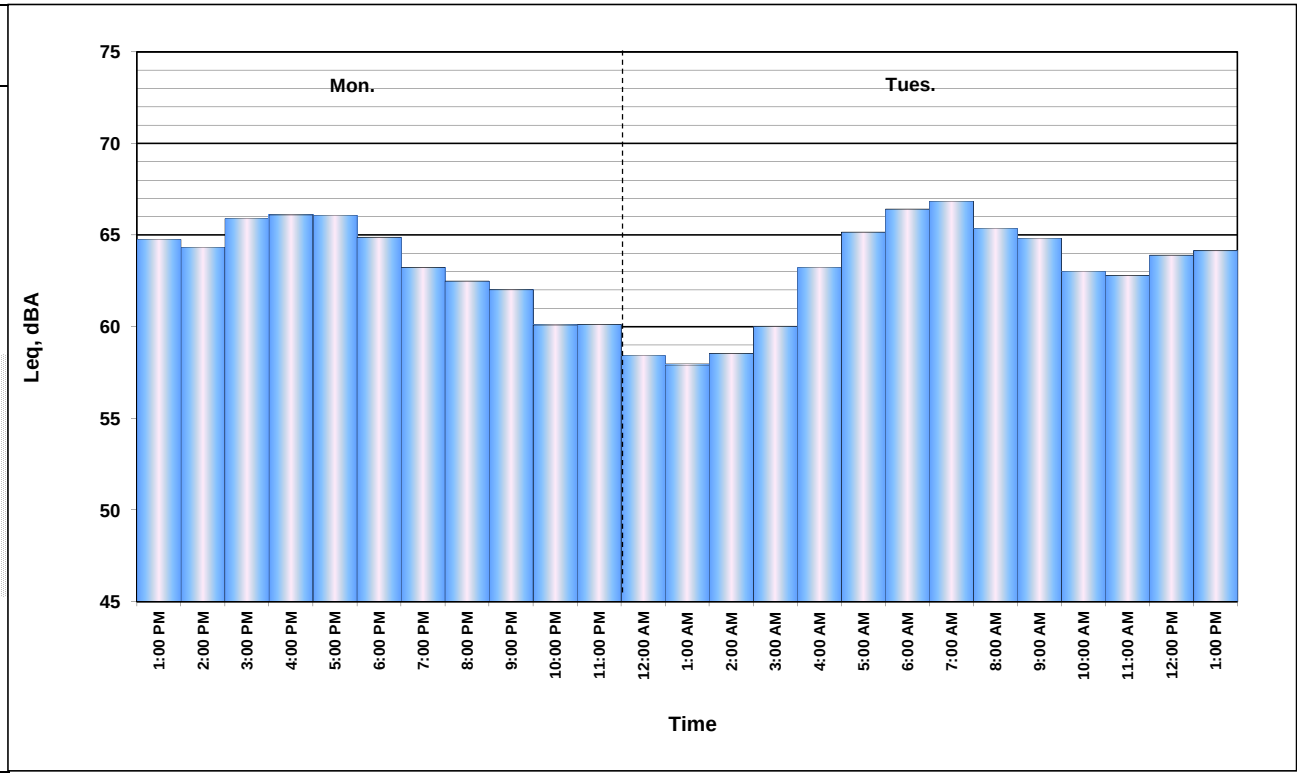


PARSONS

Site LT18 Hourly Noise Levels, $L_{eq}(h)$

Location: 319 W. Colton Ave, Redlands Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/21/13 -10/22/13 See attached Noise Measurement Form.

TIME	10/21 - 10/22 $L_{eq(h)}$ dBA	10/22 $L_{eq(h)}$ dBA
01:00 - 02:00 PM	65	64
02:00 - 03:00 PM	64	-
03:00 - 04:00 PM	66	-
04:00 - 05:00 PM	66	-
05:00 - 06:00 PM	66	-
06:00 - 07:00 PM	65	-
07:00 - 08:00 PM	63	-
08:00 - 09:00 PM	62	-
09:00 - 10:00 PM	62	-
10:00 - 11:00 PM	60	-
11:00 - 12:00 AM	60	-
12:00 - 01:00 AM	58	-
01:00 - 02:00 AM	58	-
02:00 - 03:00 AM	59	-
03:00 - 04:00 AM	60	-
04:00 - 05:00 AM	63	-
05:00 - 06:00 AM	65	-
06:00 - 07:00 AM	66	-
07:00 - 08:00 AM	67	-
08:00 - 09:00 AM	65	-
09:00 - 10:00 AM	65	-
10:00 - 11:00 AM	63	-
11:00 - 12:00 PM	63	-
12:00 - 01:00 PM	64	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | B. Jaiswal / Wender | DATE: 10/21/13

MEASUREMENT ADDRESS: 319 W. COLTON AVE | CITY: Redlands, CA | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: LT 18

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0659

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 3384

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 1891

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 6.7, 12:59
After 114.0, 114.0, 6.7, 13:45

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

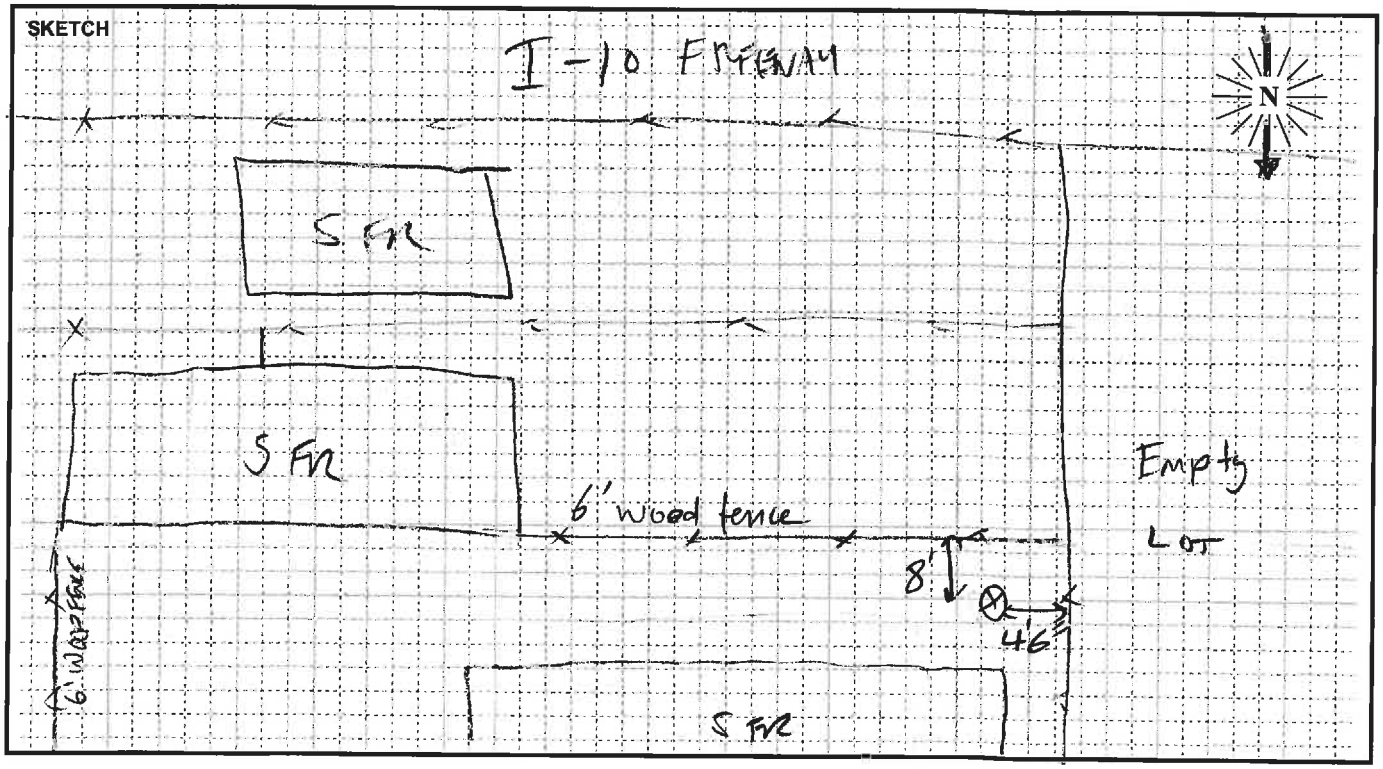
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 79 °F R.H.: 13 %
WIND SPEED: 1 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA BJ iphone
PHOTO NOs. 46 - 49

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☒ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	12:59											
10/22		13:43										

SKETCH

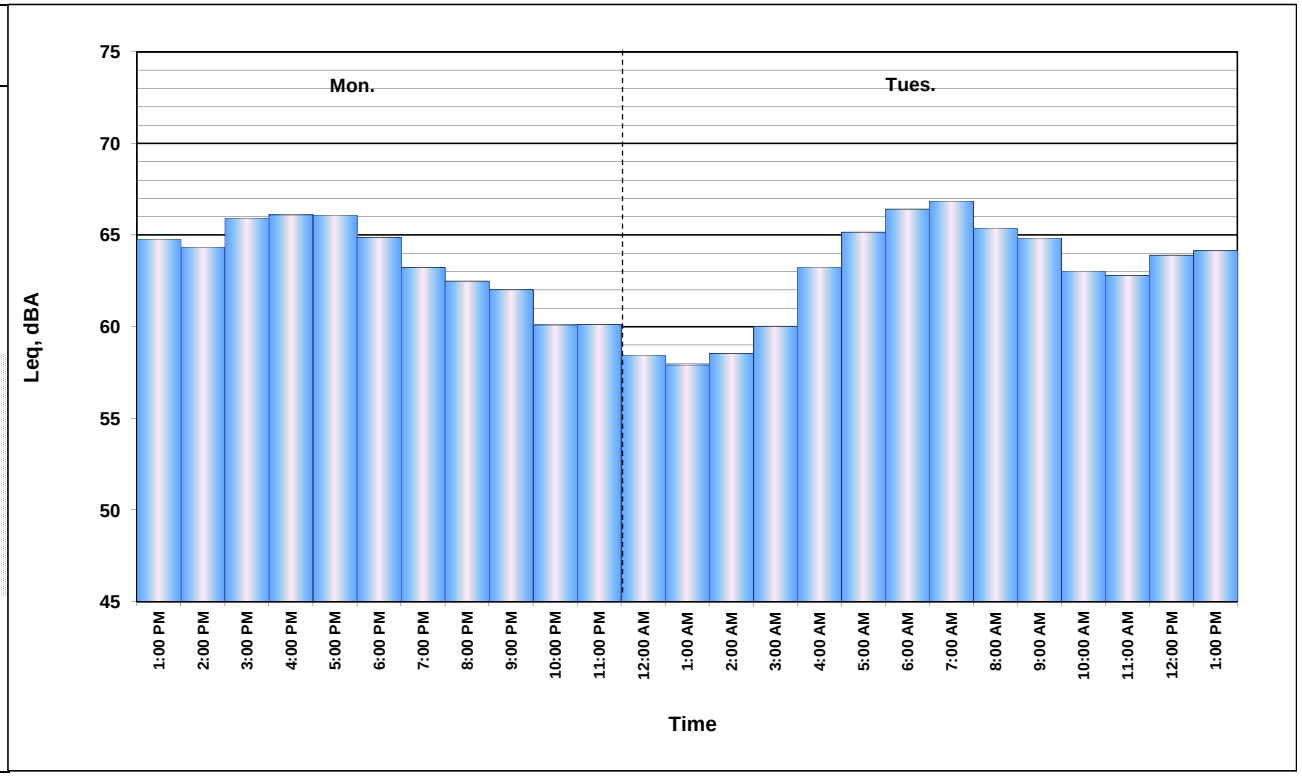


PARSONS

Site LT18 Hourly Noise Levels, $L_{eq}(h)$

Location: 319 W. Colton Ave, Redlands Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/21/13 -10/22/13 See attached Noise Measurement Form.

TIME	10/21 - 10/22 $L_{eq(h)}$ dBA	10/22 $L_{eq(h)}$ dBA
01:00 - 02:00 PM	65	64
02:00 - 03:00 PM	64	-
03:00 - 04:00 PM	66	-
04:00 - 05:00 PM	66	-
05:00 - 06:00 PM	66	-
06:00 - 07:00 PM	65	-
07:00 - 08:00 PM	63	-
08:00 - 09:00 PM	62	-
09:00 - 10:00 PM	62	-
10:00 - 11:00 PM	60	-
11:00 - 12:00 AM	60	-
12:00 - 01:00 AM	58	-
01:00 - 02:00 AM	58	-
02:00 - 03:00 AM	59	-
03:00 - 04:00 AM	60	-
04:00 - 05:00 AM	63	-
05:00 - 06:00 AM	65	-
06:00 - 07:00 AM	66	-
07:00 - 08:00 AM	67	-
08:00 - 09:00 AM	65	-
09:00 - 10:00 AM	65	-
10:00 - 11:00 AM	63	-
11:00 - 12:00 PM	63	-
12:00 - 01:00 PM	64	-



FIELD SURVEY FORM

PROJECT: I-10 Corridor		ENGINEER: OGDEN	DATE: 10/21/13
MEASUREMENT ADDRESS: 313 E High Avenue	CITY: REDLANDS	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: LT19

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820
☐ LD-824 ☒ LD-812
☐ B&K-2250 ☐ _____
SERIAL #: 0630

MICROPHONE: ☒ WIND SCREEN
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☒ RANDOM
SERIAL #: 3159

PRE AMP:
☐ LD-900
☒ LD-828
☐ _____
SERIAL #: 1667

CALIBRATOR:
☒ CA200
☐ LD CA250
☐ B&K 4231
S/N 10473
Freq, Hz.
☐ 250
☒ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114, 114.0, 7.9, 12:28
After 114, 113.8, 7.9, 13:44

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

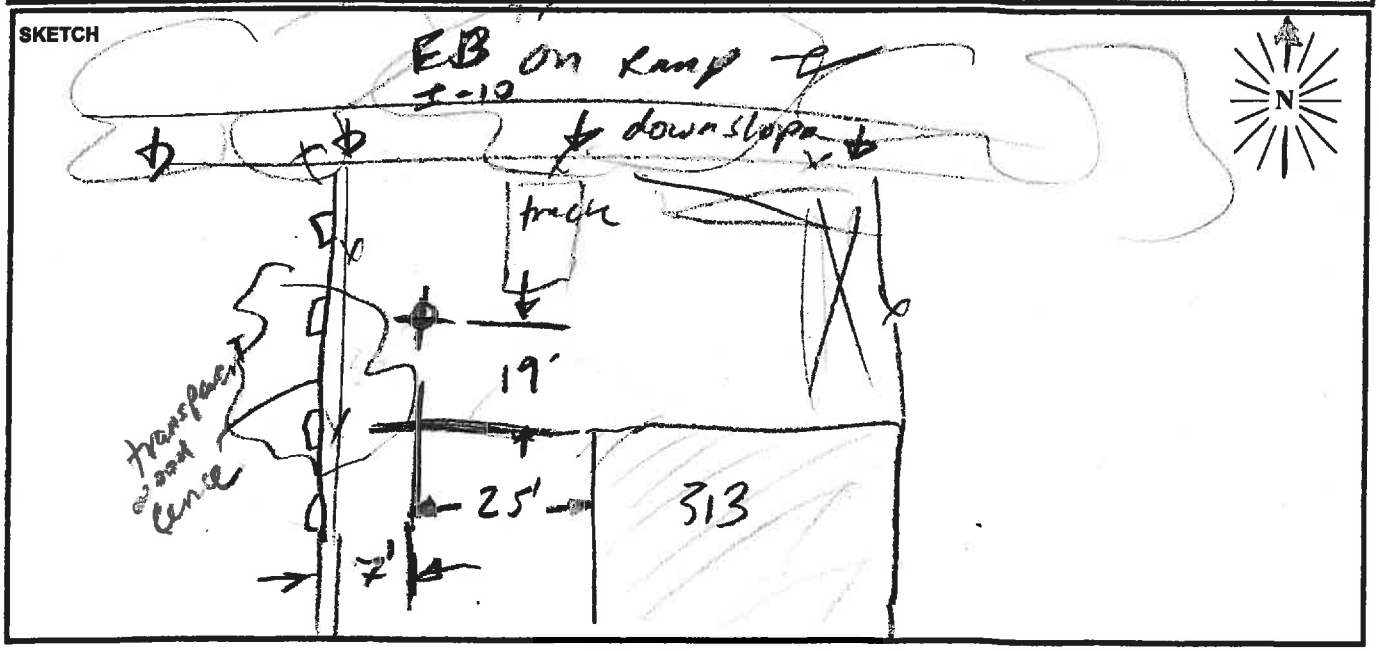
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 79 °F R.H.: 13 %
WIND SPEED: 1 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA Jason PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	12:28	1:42										

SKETCH

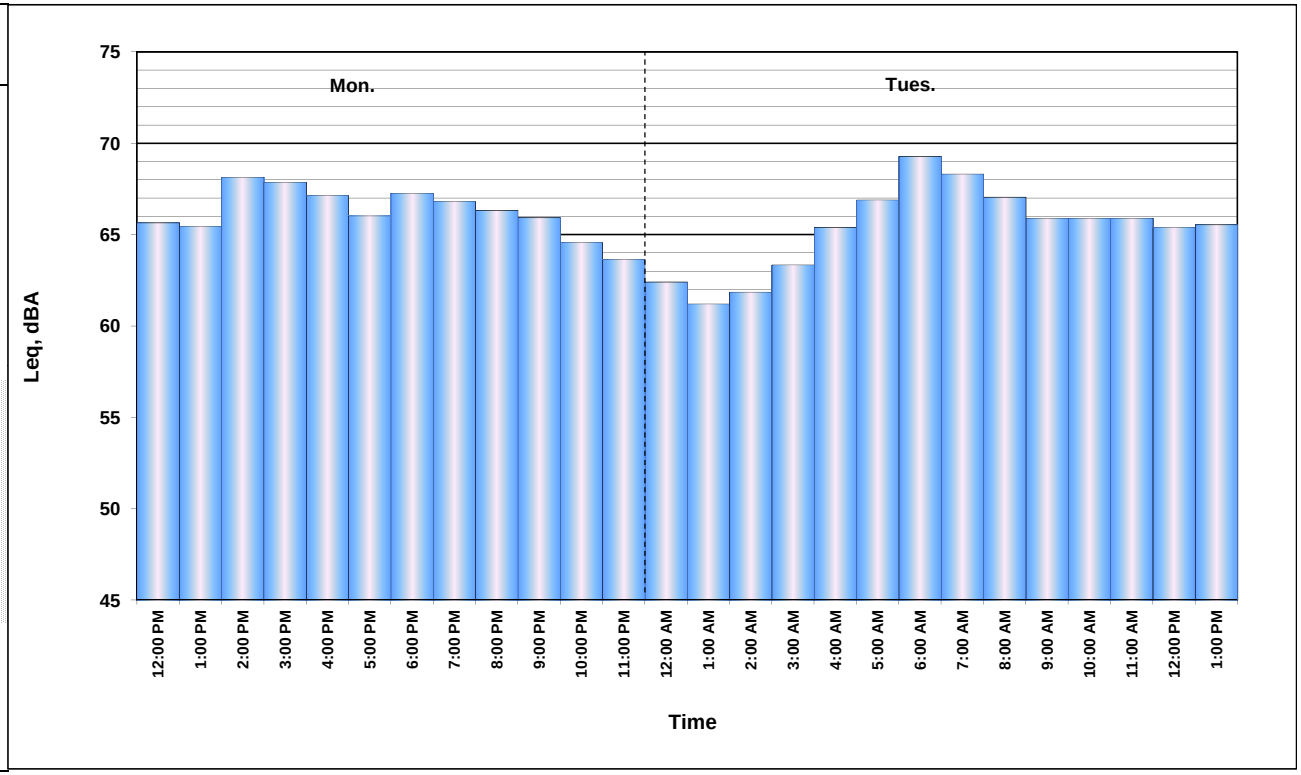


PARSONS

Site LT19 Hourly Noise Levels, $L_{eq}(h)$

Location: 313 E. High Ave, Redlands Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/21/13 -10/22/13 See attached Noise Measurement Form.

TIME	10/21 - 10/22 $L_{eq(h)}$ dBA	10/22 $L_{eq(h)}$ dBA
12:00 - 01:00 PM	66	65
01:00 - 02:00 PM	65	66
02:00 - 03:00 PM	68	-
03:00 - 04:00 PM	68	-
04:00 - 05:00 PM	67	-
05:00 - 06:00 PM	66	-
06:00 - 07:00 PM	67	-
07:00 - 08:00 PM	67	-
08:00 - 09:00 PM	66	-
09:00 - 10:00 PM	66	-
10:00 - 11:00 PM	65	-
11:00 - 12:00 AM	64	-
12:00 - 01:00 AM	62	-
01:00 - 02:00 AM	61	-
02:00 - 03:00 AM	62	-
03:00 - 04:00 AM	63	-
04:00 - 05:00 AM	65	-
05:00 - 06:00 AM	67	-
06:00 - 07:00 AM	69	-
07:00 - 08:00 AM	68	-
08:00 - 09:00 AM	67	-
09:00 - 10:00 AM	66	-
10:00 - 11:00 AM	66	-
11:00 - 12:00 PM	66	-



FIELD SURVEY FORM

PROJECT: I-10 Corridor	ENGINEER: O'BRIEN		DATE: 10/21/13
MEASUREMENT ADDRESS: 610 11th Street	CITY: REDLANDS	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: LT20

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ _____	MICROPHONE: ☒ WIND SCREEN ☒ NON-POLAR ☐ POLARIZED ☐ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM	PRE AMP: ☐ LD-900 ☒ LD-828 ☐ _____	NOTES: SYSTEM PWR: ☒ BAT ☐ AC (observations at start of measurement) TEMP: 84 °F R.H.: 14 % WIND SPEED: 7 MPH TOWARD (DIR): _____ SKIES: CLEAR CAMERA Bj iphone PHOTO NOs. 74-77.
SERIAL #: 1662	SERIAL #: 3378	SERIAL #: 1101	

CALIBRATOR: ☒ CA20 ☐ LD CA250 ☐ B&K 4231 S/N 10473

Freq, Hz.: ☐ 250 ☒ 1000 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 114, 114.0, 6.7, 13:17

After 114, 113.8, 6.7, 14:05

METER SETTINGS:

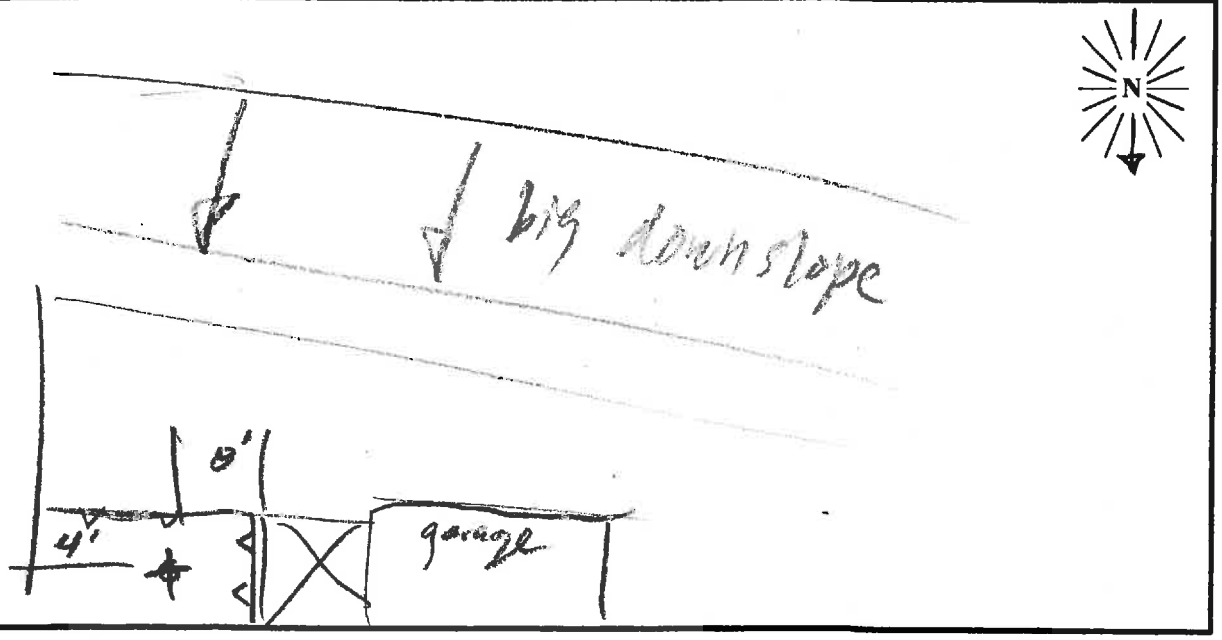
☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☒ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/21	13:23	14:04										

SKETCH

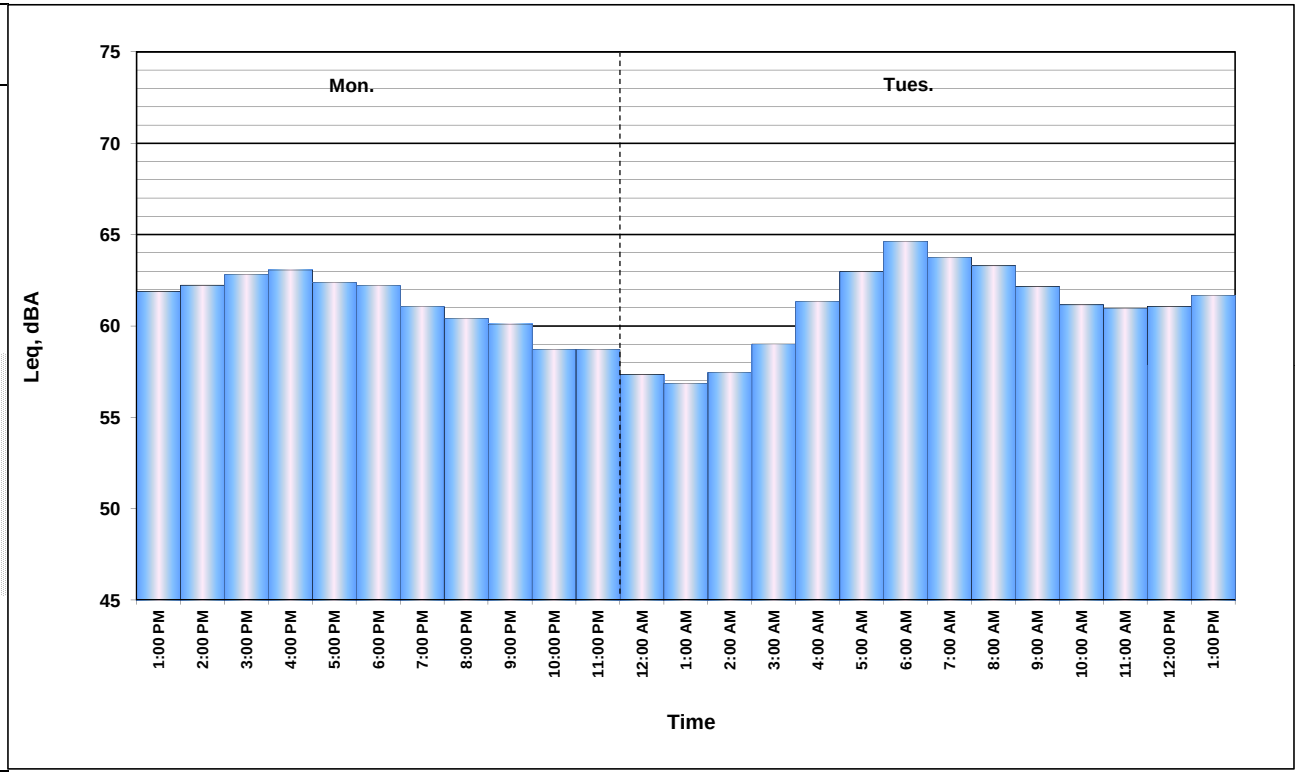


PARSONS

Site LT20 Hourly Noise Levels, $L_{eq}(h)$

Location: 610 11th Street, Redlands Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/21/13 -10/22/13 See attached Noise Measurement Form.

TIME	10/21 - 10/22 $L_{eq(h)}$ dBA	10/22 $L_{eq(h)}$ dBA
01:00 - 02:00 PM	62	62
02:00 - 03:00 PM	62	-
03:00 - 04:00 PM	63	-
04:00 - 05:00 PM	63	-
05:00 - 06:00 PM	62	-
06:00 - 07:00 PM	62	-
07:00 - 08:00 PM	61	-
08:00 - 09:00 PM	60	-
09:00 - 10:00 PM	60	-
10:00 - 11:00 PM	59	-
11:00 - 12:00 AM	59	-
12:00 - 01:00 AM	57	-
01:00 - 02:00 AM	57	-
02:00 - 03:00 AM	57	-
03:00 - 04:00 AM	59	-
04:00 - 05:00 AM	61	-
05:00 - 06:00 AM	63	-
06:00 - 07:00 AM	65	-
07:00 - 08:00 AM	64	-
08:00 - 09:00 AM	63	-
09:00 - 10:00 AM	62	-
10:00 - 11:00 AM	61	-
11:00 - 12:00 PM	61	-
12:00 - 01:00 PM	61	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. URENA		DATE: 12/2/13
MEASUREMENT ADDRESS: 515 UNIVERSITY PLACE	CITY: REDLANDS	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: LT21

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 1616

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3155

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1901

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 , 114.0 , 7.6 , 12:54
After 114.0, 113.9 , 7.6 , 14:16

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

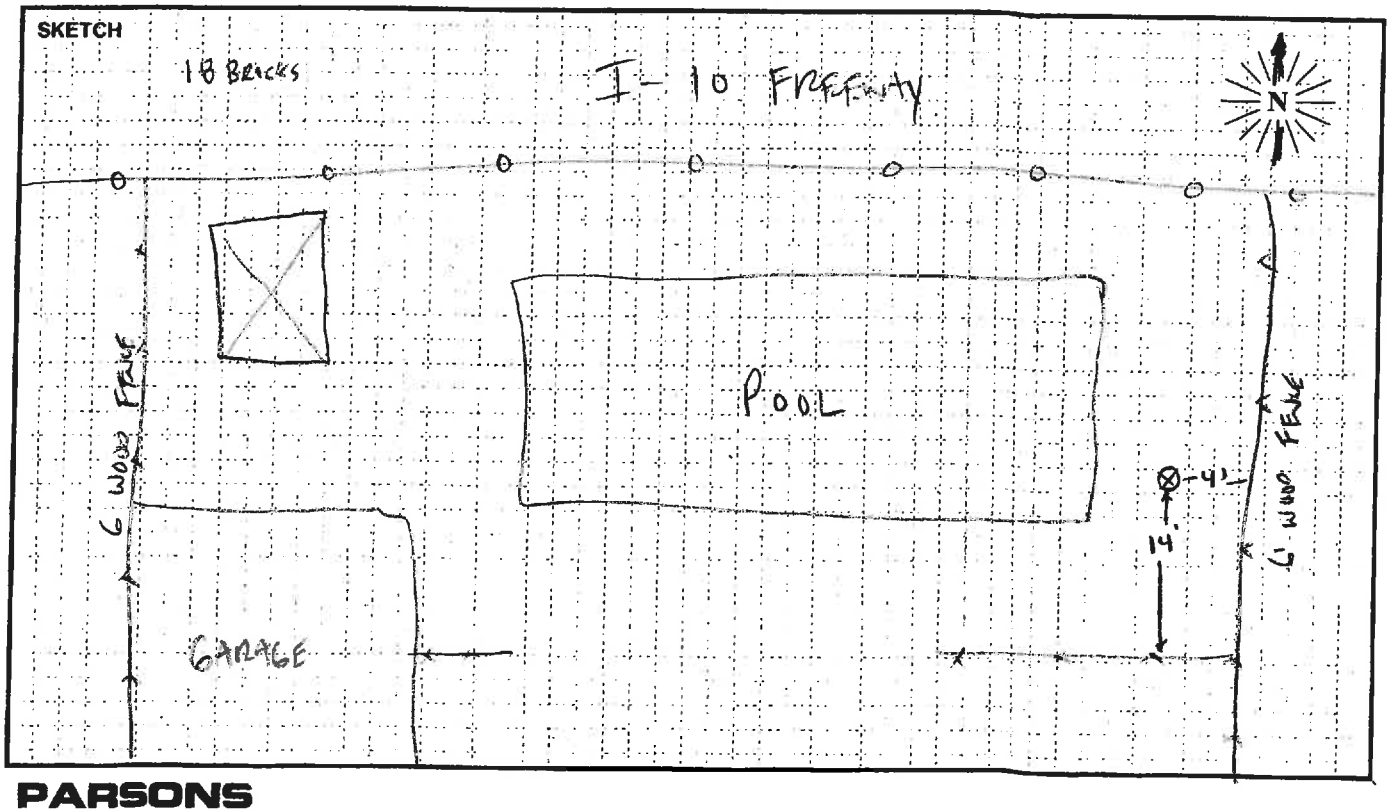
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 74.2 °F R.H.: 24.9 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: (909) 307-6948 DIANA + MAMA
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/2	12:57											
12/3		14:15										

SKETCH



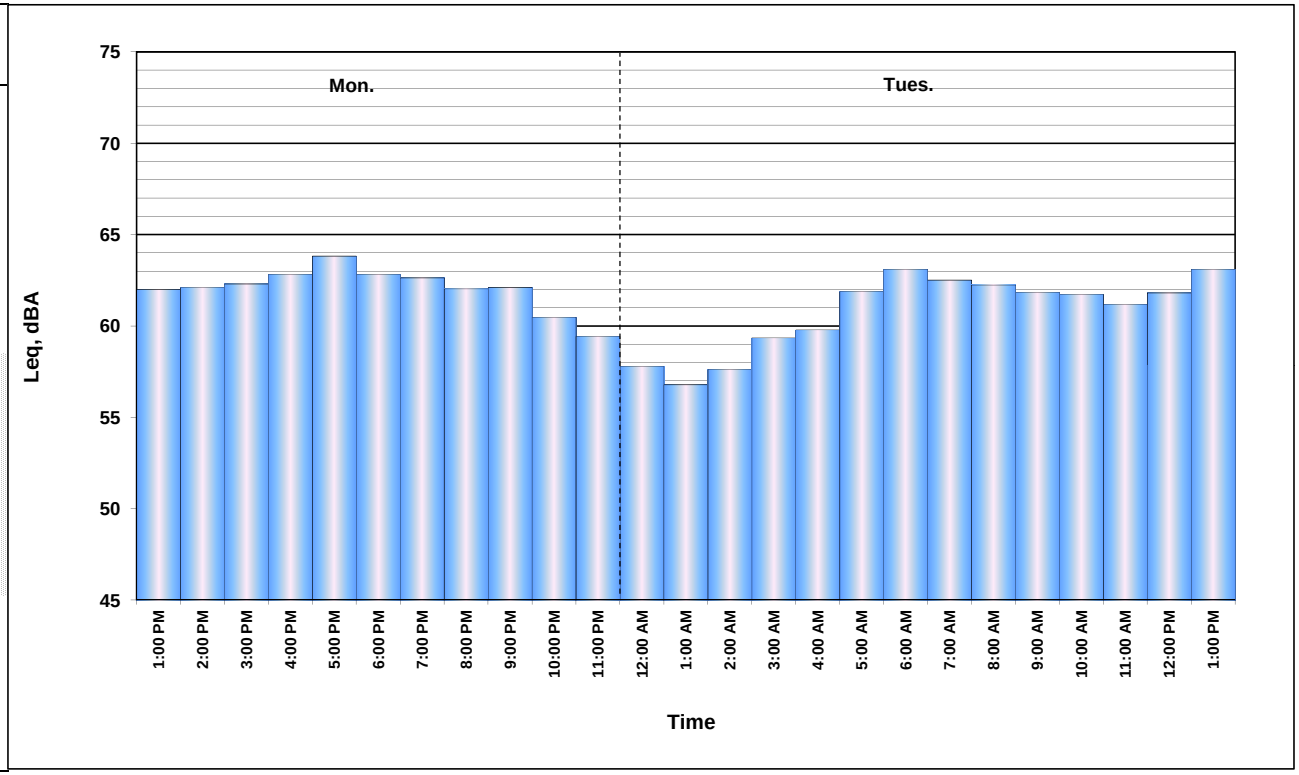
PARSONS

Site LT21 Hourly Noise Levels, $L_{eq}(h)$

Location: 515 University Pl, Redlands Ca
Position: Back Yard
Sources: Interstate 10
Date: 12/2/13 -12/3/13

See attached Noise Measurement Form.

TIME	12/2 - 12/3 $L_{eq(h)}$ dBA	12/3 $L_{eq(h)}$ dBA
01:00 - 02:00 PM	62	63
02:00 - 03:00 PM	62	-
03:00 - 04:00 PM	62	-
04:00 - 05:00 PM	63	-
05:00 - 06:00 PM	64	-
06:00 - 07:00 PM	63	-
07:00 - 08:00 PM	63	-
08:00 - 09:00 PM	62	-
09:00 - 10:00 PM	62	-
10:00 - 11:00 PM	60	-
11:00 - 12:00 AM	59	-
12:00 - 01:00 AM	58	-
01:00 - 02:00 AM	57	-
02:00 - 03:00 AM	58	-
03:00 - 04:00 AM	59	-
04:00 - 05:00 AM	60	-
05:00 - 06:00 AM	62	-
06:00 - 07:00 AM	63	-
07:00 - 08:00 AM	63	-
08:00 - 09:00 AM	62	-
09:00 - 10:00 AM	62	-
10:00 - 11:00 AM	62	-
11:00 - 12:00 PM	61	-
12:00 - 01:00 PM	62	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. URENDA	DATE: 12/2/13
MEASUREMENT ADDRESS: 1730 Mc Auliffe Ct	CITY: REDLANDS	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: LT22

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2916

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1938

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 7.4 / 13:30
After 114 / 114 / 7.4 / 14:44

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☑ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

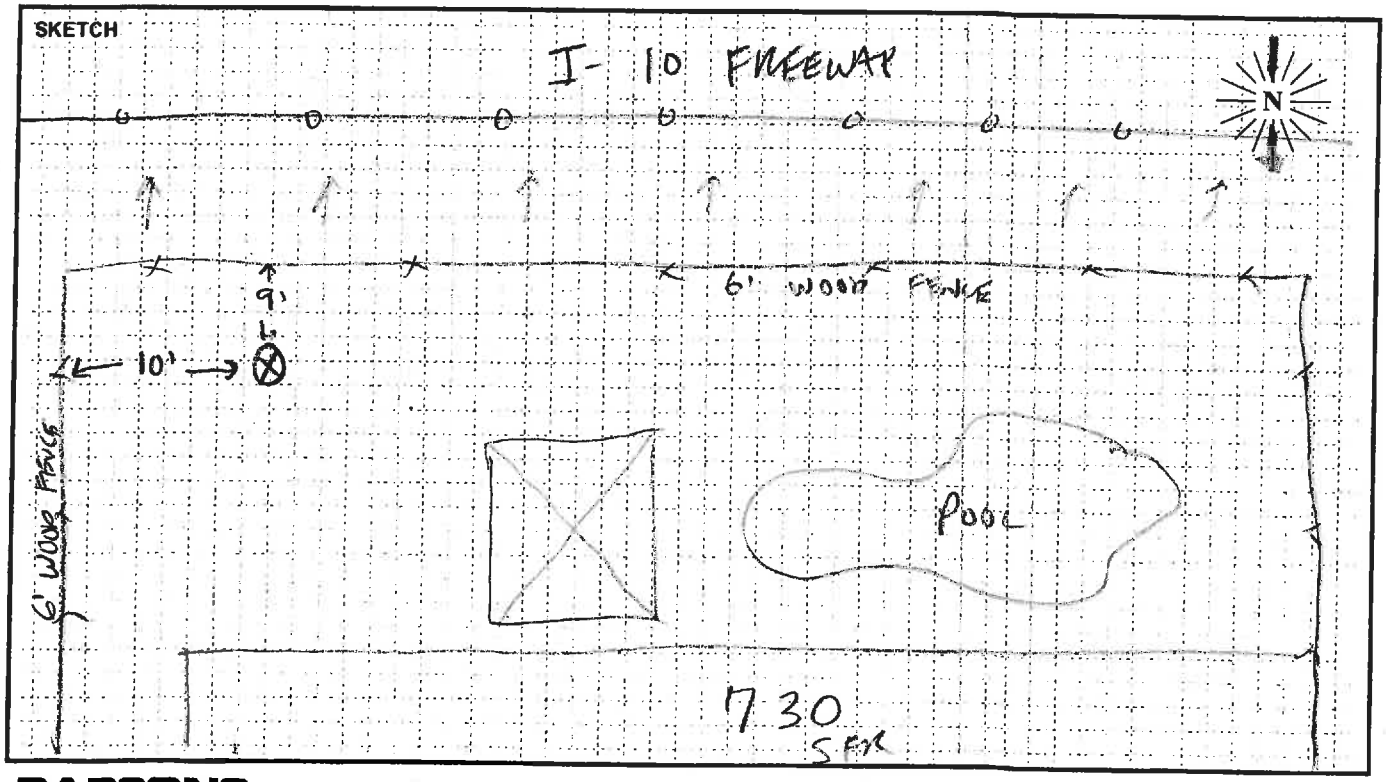
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 93 °F R.H.: 36.8 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/2	13:31	1-										
12/3		14:43										

SKETCH



PARSONS

Site LT22 Hourly Noise Levels, $L_{eq}(h)$

Location: 730 Mc Auliffe Ct, Redlands Ca
Position: Back Yard
Sources: Interstate 10
Date: 12/2/13 -12/3/13

See attached Noise Measurement Form.

TIME	12/2 - 12/3 $L_{eq(h)}$ dBA	12/3 $L_{eq(h)}$ dBA
01:00 - 02:00 PM	64	64
02:00 - 03:00 PM	64	-
03:00 - 04:00 PM	65	-
04:00 - 05:00 PM	64	-
05:00 - 06:00 PM	64	-
06:00 - 07:00 PM	64	-
07:00 - 08:00 PM	63	-
08:00 - 09:00 PM	63	-
09:00 - 10:00 PM	62	-
10:00 - 11:00 PM	61	-
11:00 - 12:00 AM	60	-
12:00 - 01:00 AM	59	-
01:00 - 02:00 AM	59	-
02:00 - 03:00 AM	59	-
03:00 - 04:00 AM	61	-
04:00 - 05:00 AM	62	-
05:00 - 06:00 AM	64	-
06:00 - 07:00 AM	66	-
07:00 - 08:00 AM	64	-
08:00 - 09:00 AM	64	-
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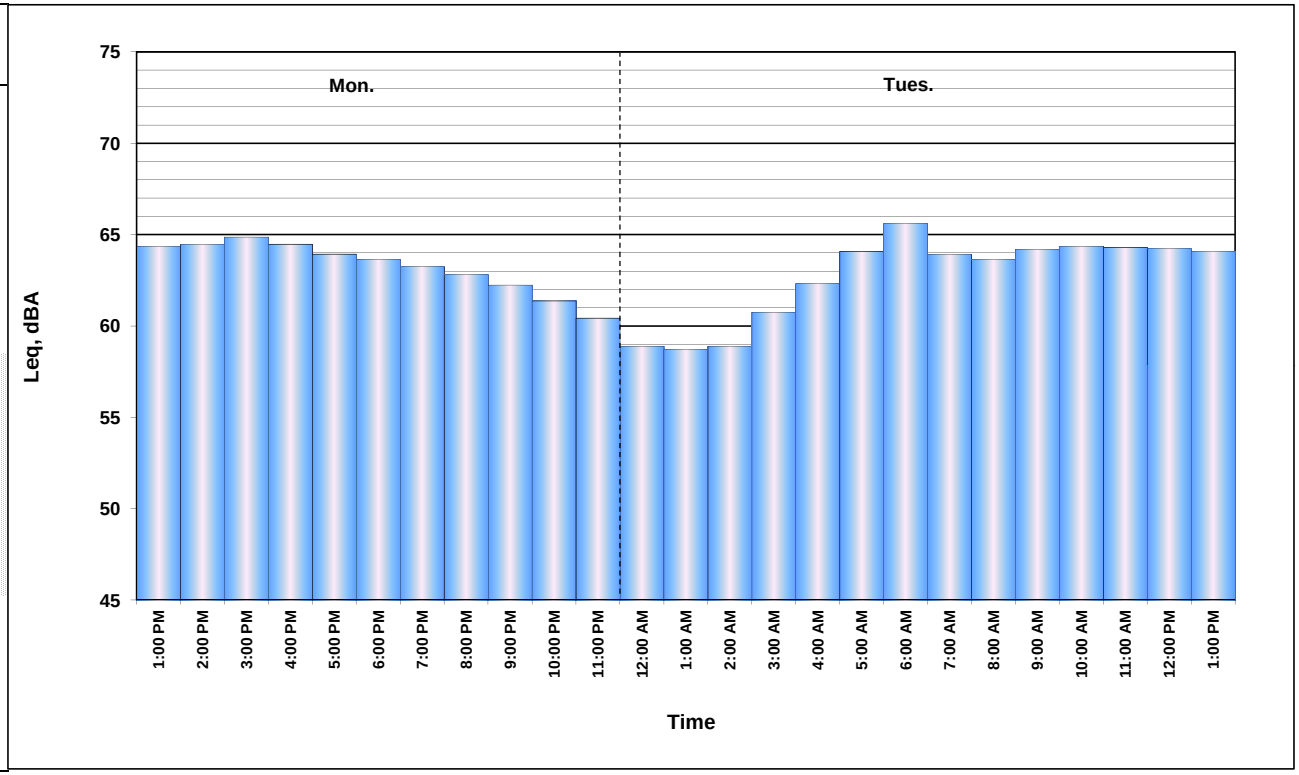
10:00 - 11:00 AM	64	-
11:00 - 12:00 PM	64	-
12:00 - 01:00 PM	64	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URENDA | DATE: 12/2/13

MEASUREMENT ADDRESS: 679 CHANDLER | CITY: REDLANDS | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: LT23

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0638

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☐ WIND SCREEN
SERIAL #: 3159

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 7330

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 67.6 °F R.H.: 30.4 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA ROLL FILM
PHOTO NOs. _____

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2120
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 8.2 / 16:03
After 114.0 / 114.0 / 8.2 / 8:35

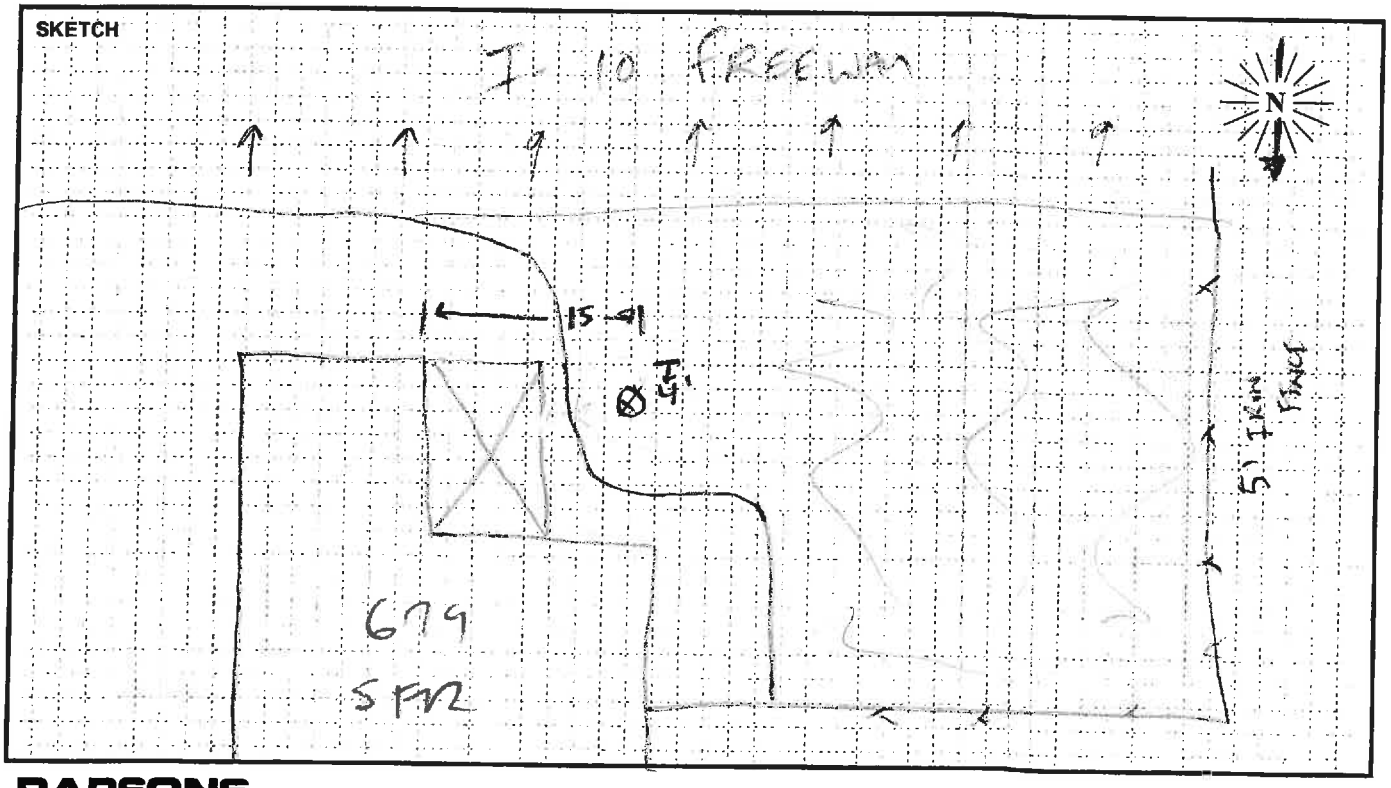
METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/2	16:03											
12/4		8:34										

SKETCH



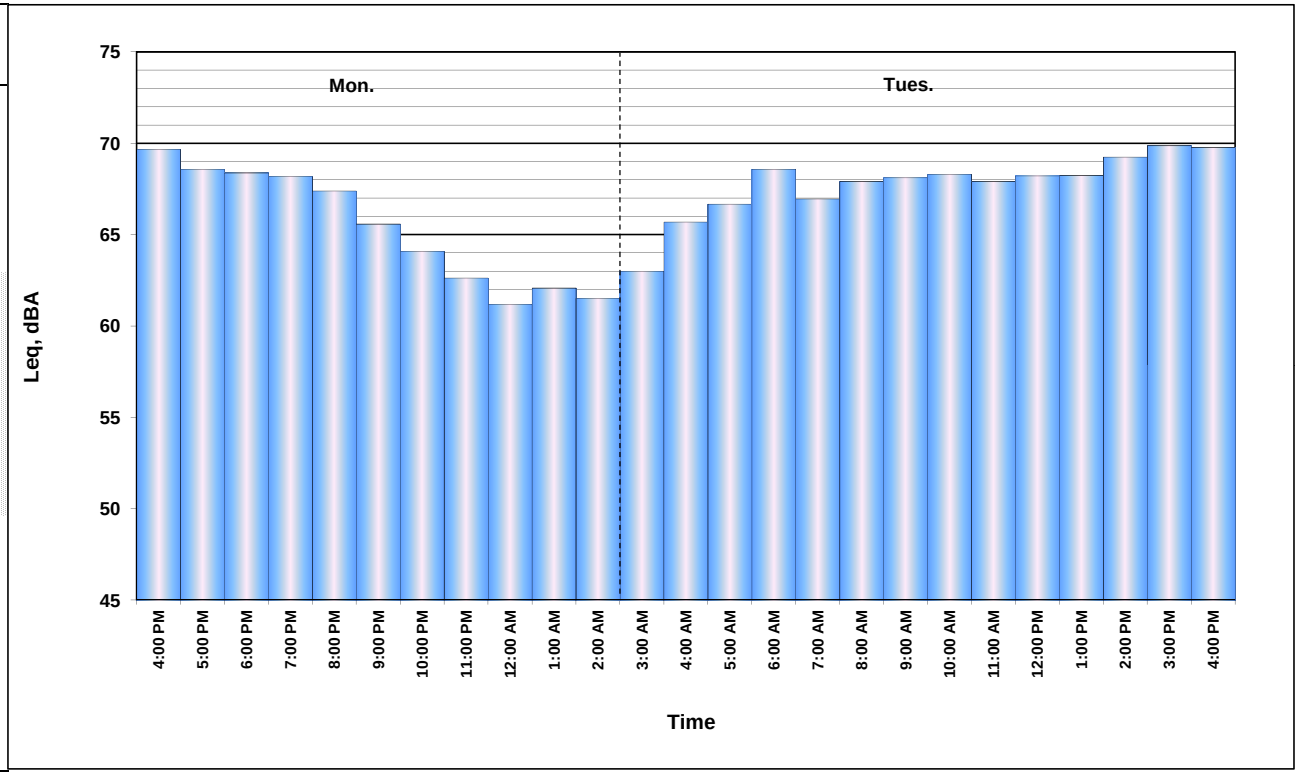
PARSONS

Site LT23 Hourly Noise Levels, $L_{eq}(h)$

Location: 679 Chaucer Ct, Redlands Ca
Position: Back Yard
Sources: Interstate 10
Date: 12/2/13 -12/3/13

See attached Noise Measurement Form.

TIME	12/2 - 12/3 $L_{eq(h)}$ dBA	12/3 $L_{eq(h)}$ dBA
04:00 - 05:00 PM	70	70
05:00 - 06:00 PM	69	-
06:00 - 07:00 PM	68	-
07:00 - 08:00 PM	68	-
08:00 - 09:00 PM	67	-
09:00 - 10:00 PM	66	-
10:00 - 11:00 PM	64	-
11:00 - 12:00 AM	63	-
12:00 - 01:00 AM	61	-
01:00 - 02:00 AM	62	-
02:00 - 03:00 AM	62	-
03:00 - 04:00 AM	63	-
04:00 - 05:00 AM	66	-
05:00 - 06:00 AM	67	-
06:00 - 07:00 AM	69	-
07:00 - 08:00 AM	67	-
08:00 - 09:00 AM	68	-
09:00 - 10:00 AM	68	-
10:00 - 11:00 AM	68	-
11:00 - 12:00 PM	68	-
12:00 - 01:00 PM	68	-
01:00 - 02:00 PM	68	-
02:00 - 03:00 PM	69	-
03:00 - 04:00 PM	70	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	J. Rodriguez	DATE: 12/3/13
MEASUREMENT ADDRESS: 453 Golden West Dr.	CITY: Redlands	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial
		SITE NO.: LT 24

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 1616

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2155

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1901

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114 , 114 , 7.8 , 15:44
After 114.0 , 114.2 , 7.8 , 16:04

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 61.3 °F R.H.: 56.1 %
WIND SPEED: 1.2 MPH
TOWARD (DIR): _____
SKIES: Cloudy
CAMERA Ruben's Phone
PHOTO NOs. _____

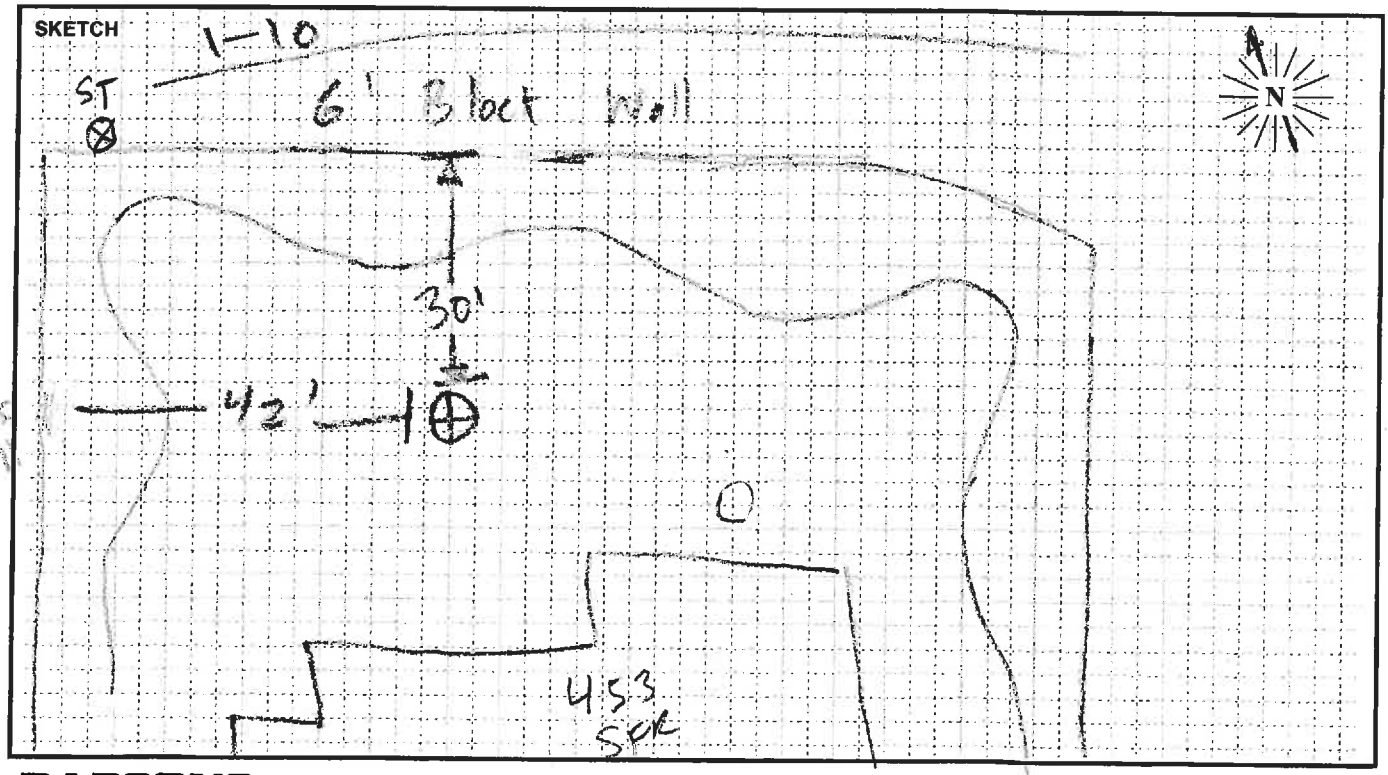
NOTES: Gardener Present Next Door 15:20
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/3	15:45											
12/4		16:02										
12/4	15:40	16:00	69.1	70.1	72.2	76.3	77.5	78.4	79.7	81.5	76.2	

ST LT24A

SKETCH



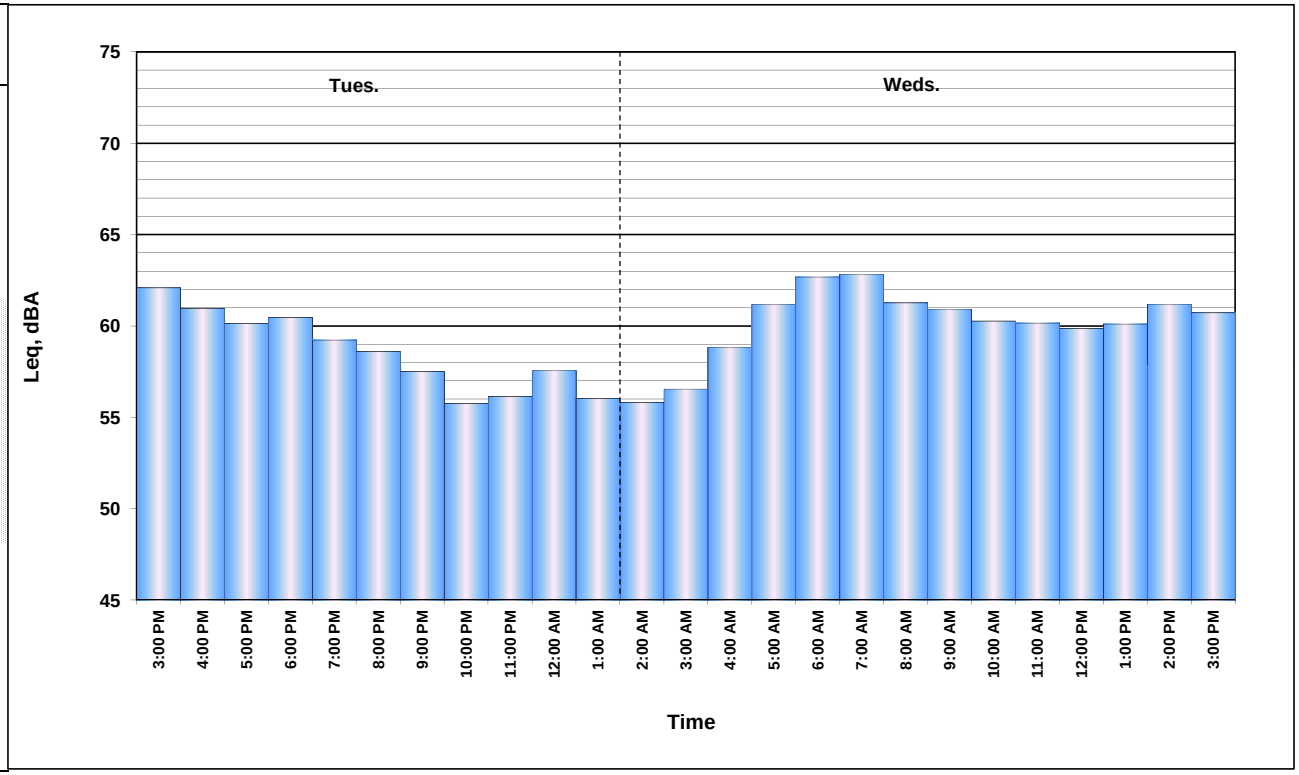
PARSONS

Site LT24 Hourly Noise Levels, $L_{eq}(h)$

Location: 453 Golden West Dr, Redlands Ca
Position: Back Yard
Sources: Interstate 10
Date: 12/3/13 -12/4/13

See attached Noise Measurement Form.

TIME	12/3 - 12/4 $L_{eq(h)}$ dBA	12/4 $L_{eq(h)}$ dBA
03:00 - 04:00 PM	62	61
04:00 - 05:00 PM	61	-
05:00 - 06:00 PM	60	-
06:00 - 07:00 PM	60	-
07:00 - 08:00 PM	59	-
08:00 - 09:00 PM	59	-
09:00 - 10:00 PM	58	-
10:00 - 11:00 PM	56	-
11:00 - 12:00 AM	56	-
12:00 - 01:00 AM	58	-
01:00 - 02:00 AM	56	-
02:00 - 03:00 AM	56	-
03:00 - 04:00 AM	57	-
04:00 - 05:00 AM	59	-
05:00 - 06:00 AM	61	-
06:00 - 07:00 AM	63	-
07:00 - 08:00 AM	63	-
08:00 - 09:00 AM	61	-
09:00 - 10:00 AM	61	-
10:00 - 11:00 AM	60	-
11:00 - 12:00 PM	60	-
12:00 - 01:00 PM	60	-
01:00 - 02:00 PM	60	-
02:00 - 03:00 PM	61	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | S. Rodriguez | DATE: 12/3

MEASUREMENT ADDRESS: 815 Concord | CITY: Redlands | ☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: LT25

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 296

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 1938

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114, 114, 7.5, 16:19
After 114.0, 114.3, 7.5, 16:30

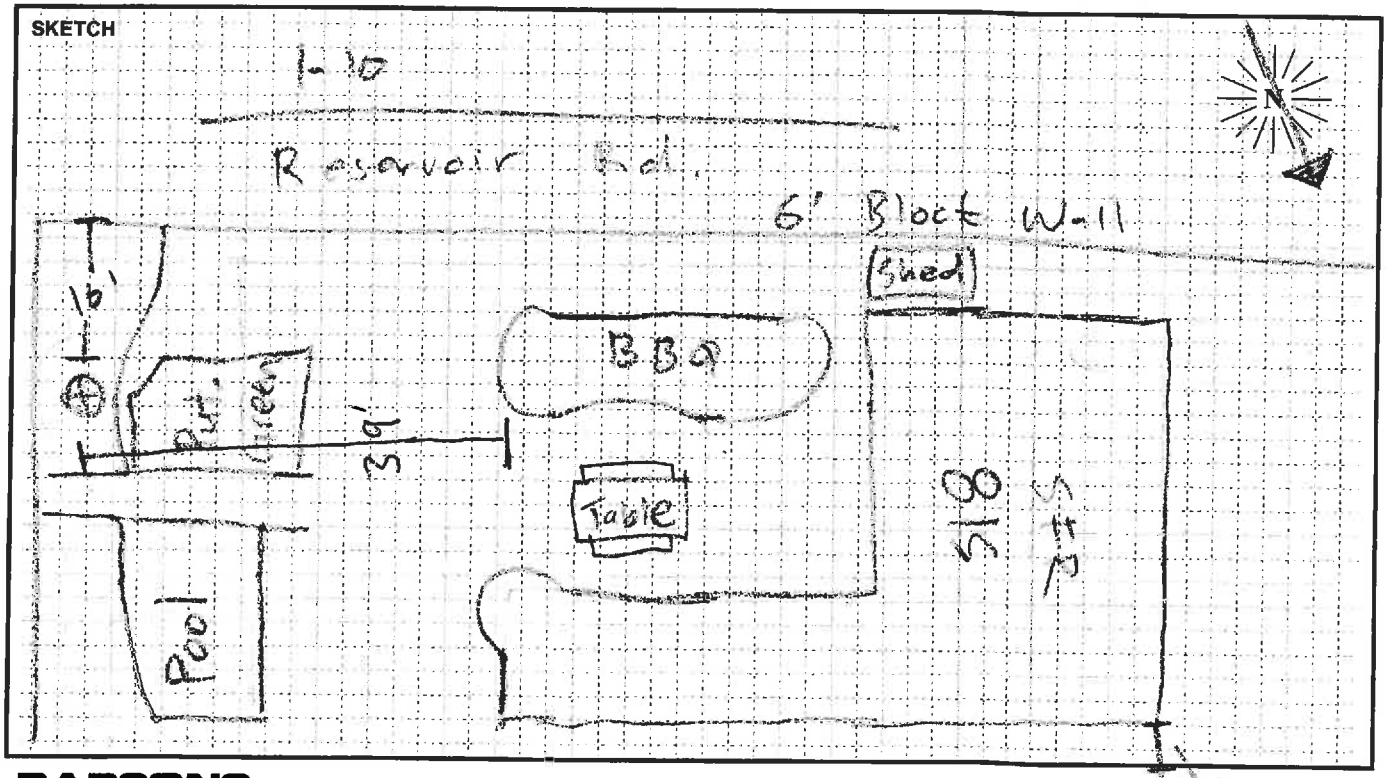
METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 60.8 °F R.H.: 58.9 %
WIND SPEED: 6 MPH
TOWARD (DIR): _____
SKIES: Cloudy
CAMERA Ruben's Phones
PHOTO NOs. _____

NOTES: Noise meter 7' above ground level
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT
MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/3	16:16											
12/4		16:28										

SKETCH



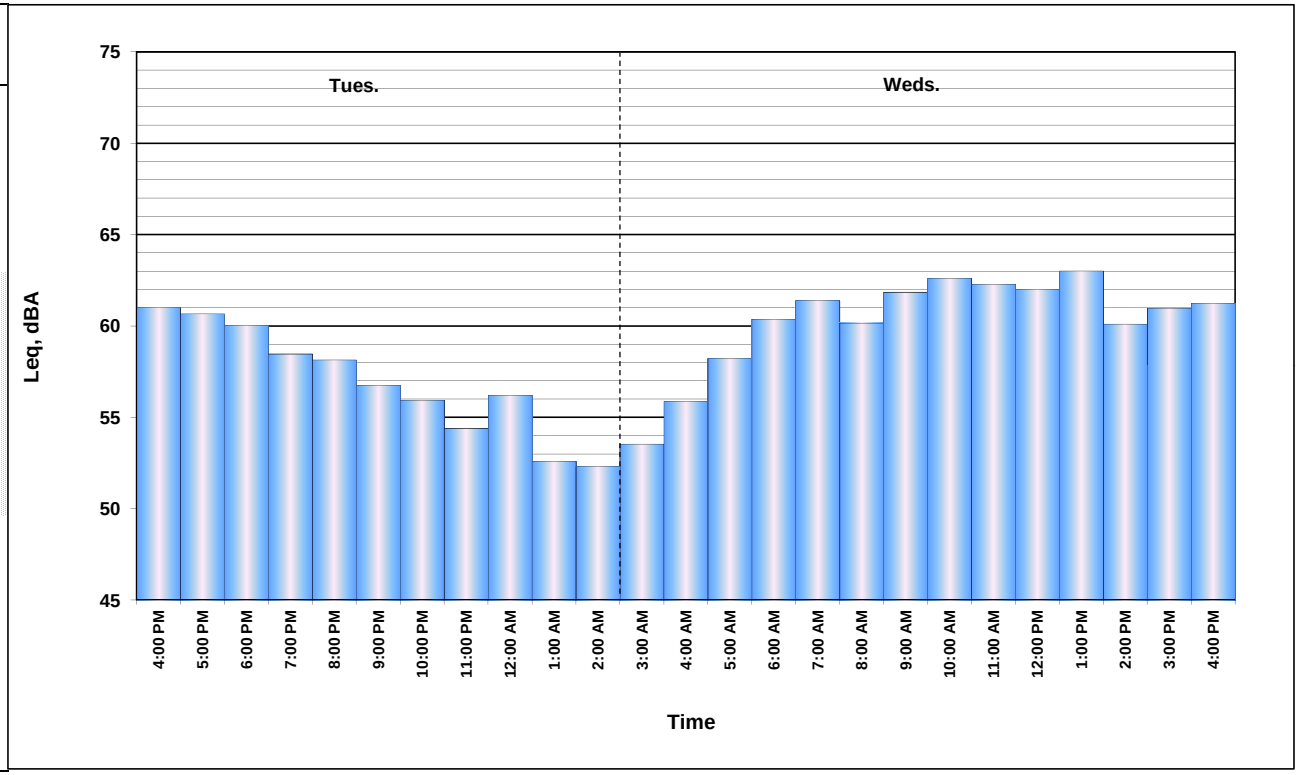
PARSONS

Site LT25 Hourly Noise Levels, $L_{eq}(h)$

Location: 815 Concord Ln, Redlands
Position: Back Yard
Sources: Interstate 10
Date: 12/3/13 -12/4/13

See attached Noise Measurement Form.

TIME	12/3 - 12/4 $L_{eq(h)}$ dBA	12/4 $L_{eq(h)}$ dBA
04:00 - 05:00 PM	61	61
05:00 - 06:00 PM	61	-
06:00 - 07:00 PM	60	-
07:00 - 08:00 PM	58	-
08:00 - 09:00 PM	58	-
09:00 - 10:00 PM	57	-
10:00 - 11:00 PM	56	-
11:00 - 12:00 AM	54	-
12:00 - 01:00 AM	56	-
01:00 - 02:00 AM	53	-
02:00 - 03:00 AM	52	-
03:00 - 04:00 AM	54	-
04:00 - 05:00 AM	56	-
05:00 - 06:00 AM	58	-
06:00 - 07:00 AM	60	-
07:00 - 08:00 AM	61	-
08:00 - 09:00 AM	60	-
09:00 - 10:00 AM	62	-
10:00 - 11:00 AM	63	-
11:00 - 12:00 PM	62	-
12:00 - 01:00 PM	62	-
01:00 - 02:00 PM	63	-
02:00 - 03:00 PM	60	-
03:00 - 04:00 PM	61	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: B. Jarjoura	DATE: 10/03/13
MEASUREMENT ADDRESS: 860 E. la Verne Ave	CITY: Pomona, CA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: LT27

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 1662

MICROPHONE: ☐ NON-POLAR ☒ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3384

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2667

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____ S/N 10473
Freq, Hz. ☐ 250 ☒ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114 , 114.0 , 6.7 , 11:35
After 114.0 , 114.0 , 6.7 , 16:25

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

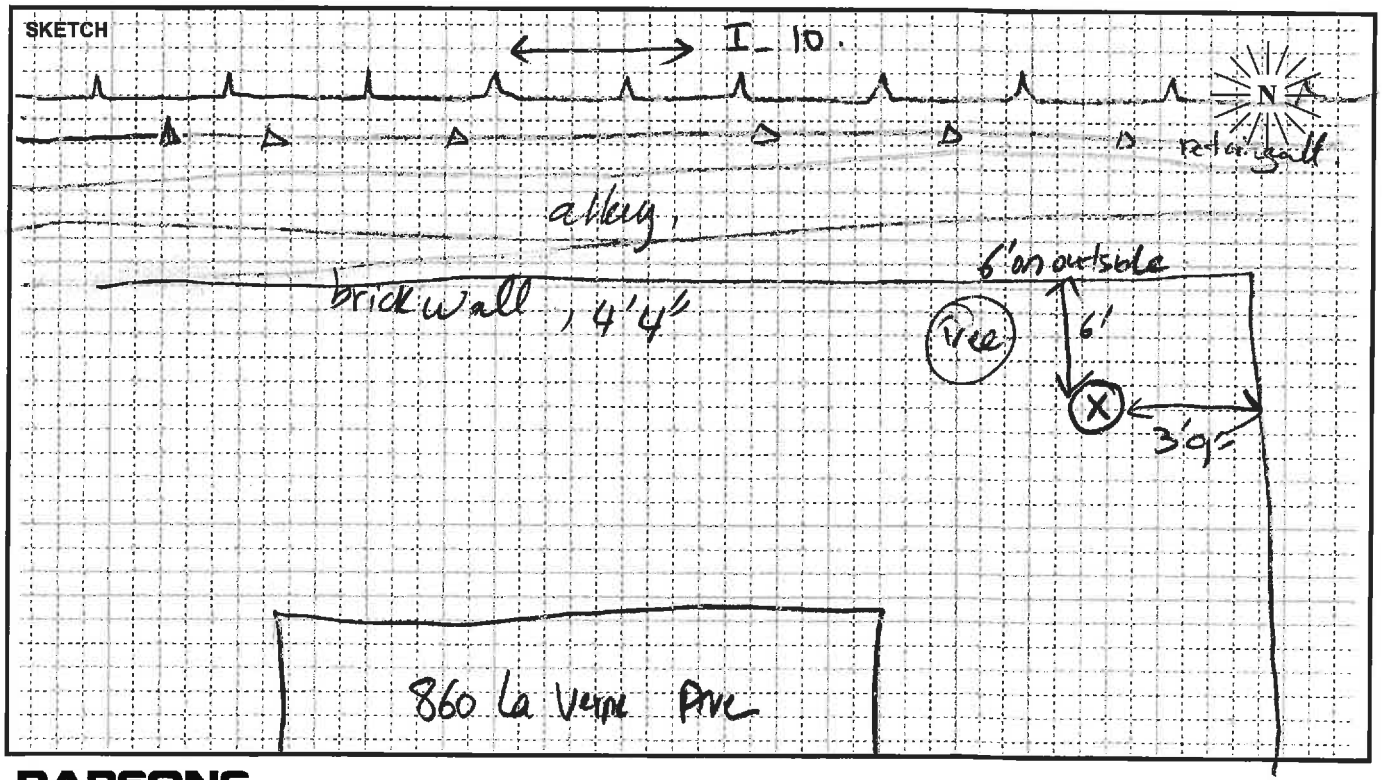
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 64 °F R.H.: 55 %
WIND SPEED: 1.6 MPH
TOWARD (DIR): _____
SKIES: Partly cloudy
CAMERA B.J iphone
PHOTO NOs. 10-16

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/03	11:54											

SKETCH

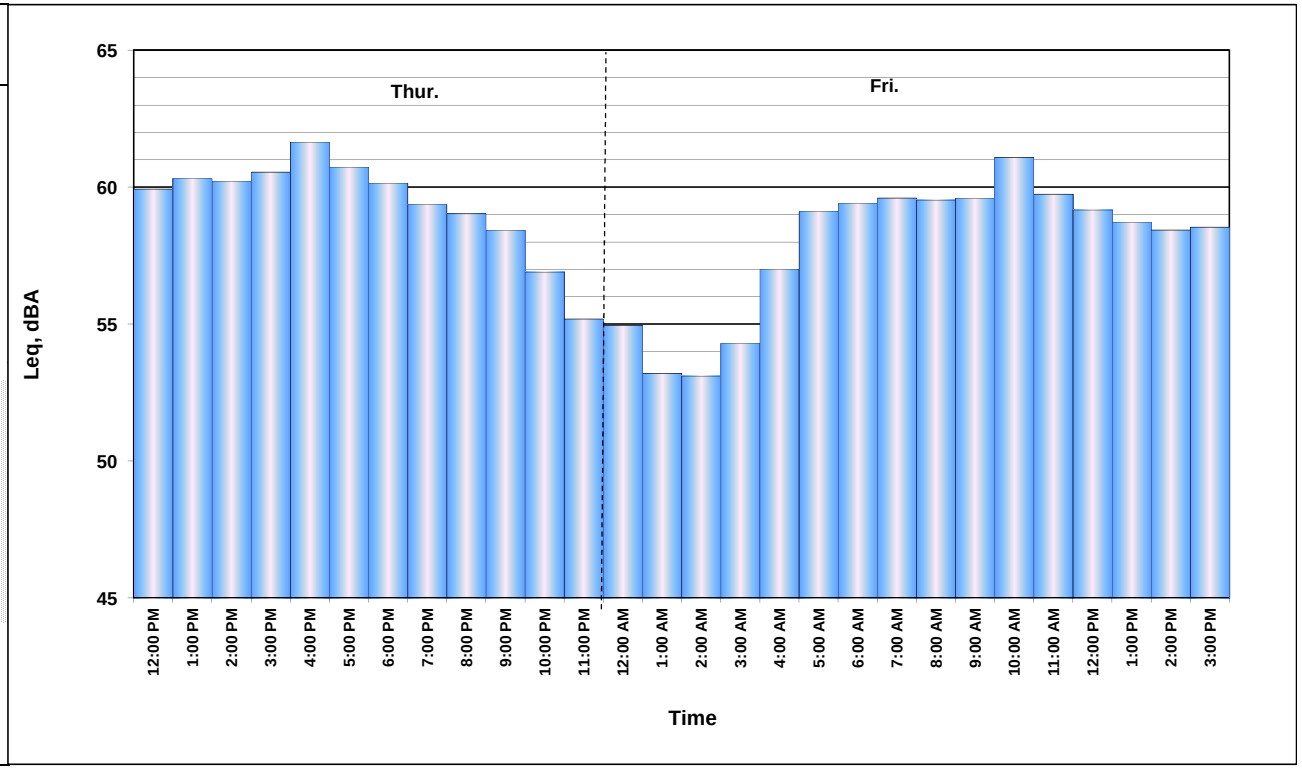


PARSONS

Site LT27 Hourly Noise Levels, $L_{eq}(h)$

Location: 860 E. La Verne Ave, Pomona Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/3/13 -10/4/13 See attached Noise Measurement Form.

TIME	10/3 - 10/4 $L_{eq(h)}$ dBA	10/4 $L_{eq(h)}$ dBA
12:00 - 01:00 PM	60	59
01:00 - 02:00 PM	60	59
02:00 - 03:00 PM	60	58
03:00 - 04:00 PM	61	59
04:00 - 05:00 PM	62	-
05:00 - 06:00 PM	61	-
06:00 - 07:00 PM	60	-
07:00 - 08:00 PM	59	-
08:00 - 09:00 PM	59	-
09:00 - 10:00 PM	58	-
10:00 - 11:00 PM	57	-
11:00 - 12:00 AM	55	-
12:00 - 01:00 AM	55	-
01:00 - 02:00 AM	53	-
02:00 - 03:00 AM	53	-
03:00 - 04:00 AM	54	-
04:00 - 05:00 AM	57	-
05:00 - 06:00 AM	59	-
06:00 - 07:00 AM	59	-
07:00 - 08:00 AM	60	-
08:00 - 09:00 AM	60	-
09:00 - 10:00 AM	60	-
10:00 - 11:00 AM	61	-
11:00 - 12:00 PM	60	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	R. URENA		DATE: 12/11/13
MEASUREMENT ADDRESS: 987 TERRYVIEW AVE	CITY: POMONA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: LT28

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 1616

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☐ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3155

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1629

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2480
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 , 114.0 , 10.8 , 8:51 am
After 114.0 , 113.7 , 10.8 , 10:01

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

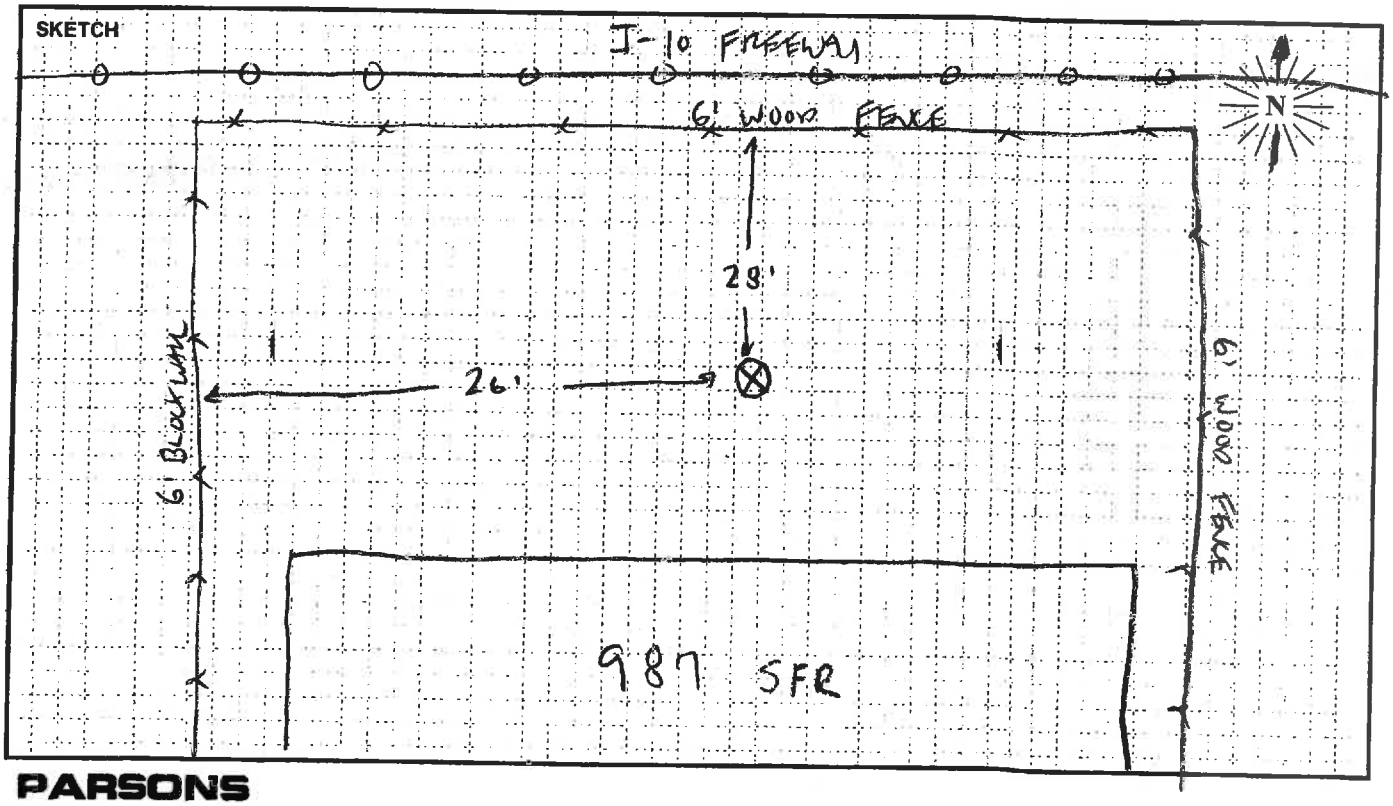
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 52.4 °F R.H.: 25 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/11	8:52											
12/12		9:59										

SKETCH

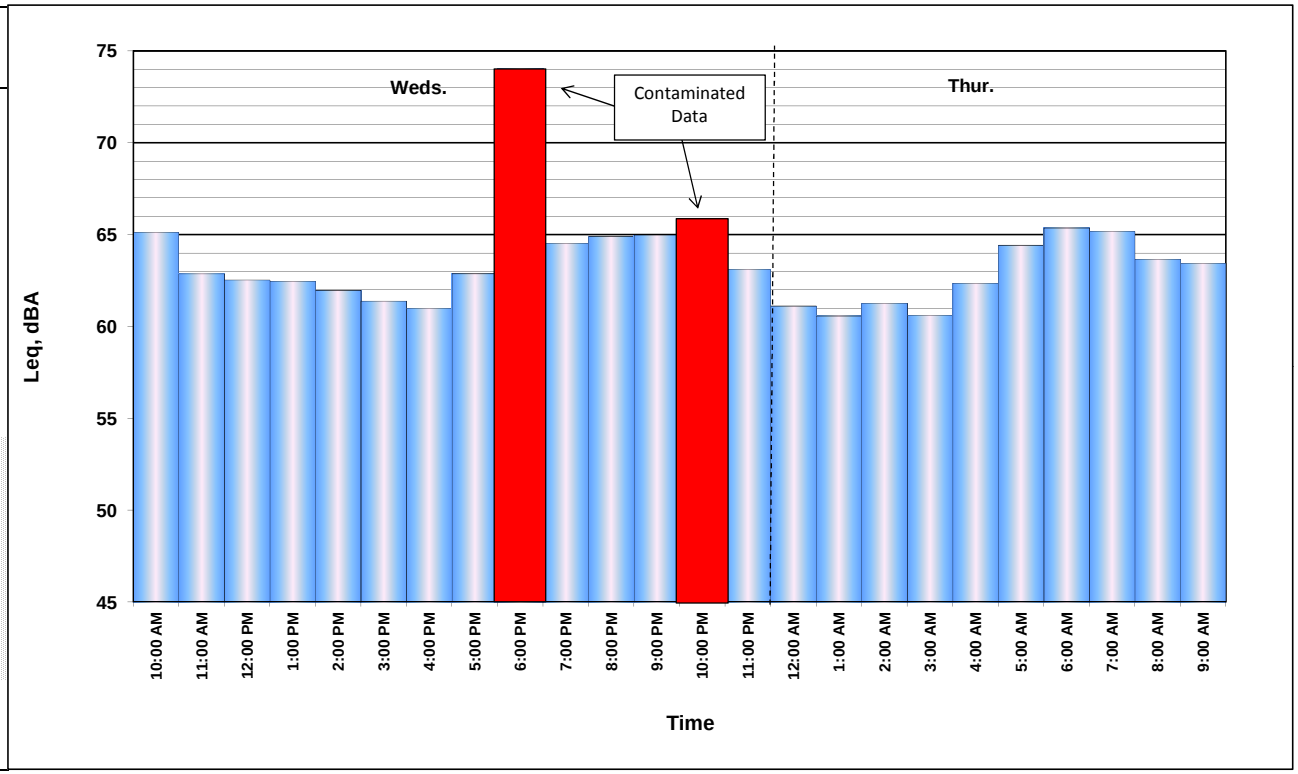


PARSONS

Site LT28 Hourly Noise Levels, $L_{eq}(h)$

Location: 987 Terryview Ave, Pomona Ca
Position: Back Yard
Sources: Interstate 10
Date: 12/11/13 -12/12/13 See attached Noise Measurement Form.

TIME	12/11 - 12/12 $L_{eq(h)}$ dBA	12/12 $L_{eq(h)}$ dBA
10:00 - 11:00 AM	65	-
11:00 - 12:00 PM	63	-
12:00 - 01:00 PM	63	-
01:00 - 02:00 PM	62	-
02:00 - 03:00 PM	62	-
03:00 - 04:00 PM	61	-
04:00 - 05:00 PM	61	-
05:00 - 06:00 PM	63	-
06:00 - 07:00 PM	74	-
07:00 - 08:00 PM	65	-
08:00 - 09:00 PM	65	-
09:00 - 10:00 PM	65	-
10:00 - 11:00 PM	66	-
11:00 - 12:00 AM	63	-
12:00 - 01:00 AM	61	-
01:00 - 02:00 AM	61	-
02:00 - 03:00 AM	61	-
03:00 - 04:00 AM	61	-
04:00 - 05:00 AM	62	-
05:00 - 06:00 AM	64	-
06:00 - 07:00 AM	65	-
07:00 - 08:00 AM	65	-
08:00 - 09:00 AM	64	-
09:00 - 10:00 AM	63	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE	ENGINEER: R. URENDA	DATE: ~~10/2/13~~ 10/3/13
MEASUREMENT ADDRESS: 807 DRAKE AVE	CITY: CLAREMONT	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: LT29

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0638

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2916

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1891

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 8.7 / 11:33
After 114.0 / 114.1 / 8.6 / 16:03

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

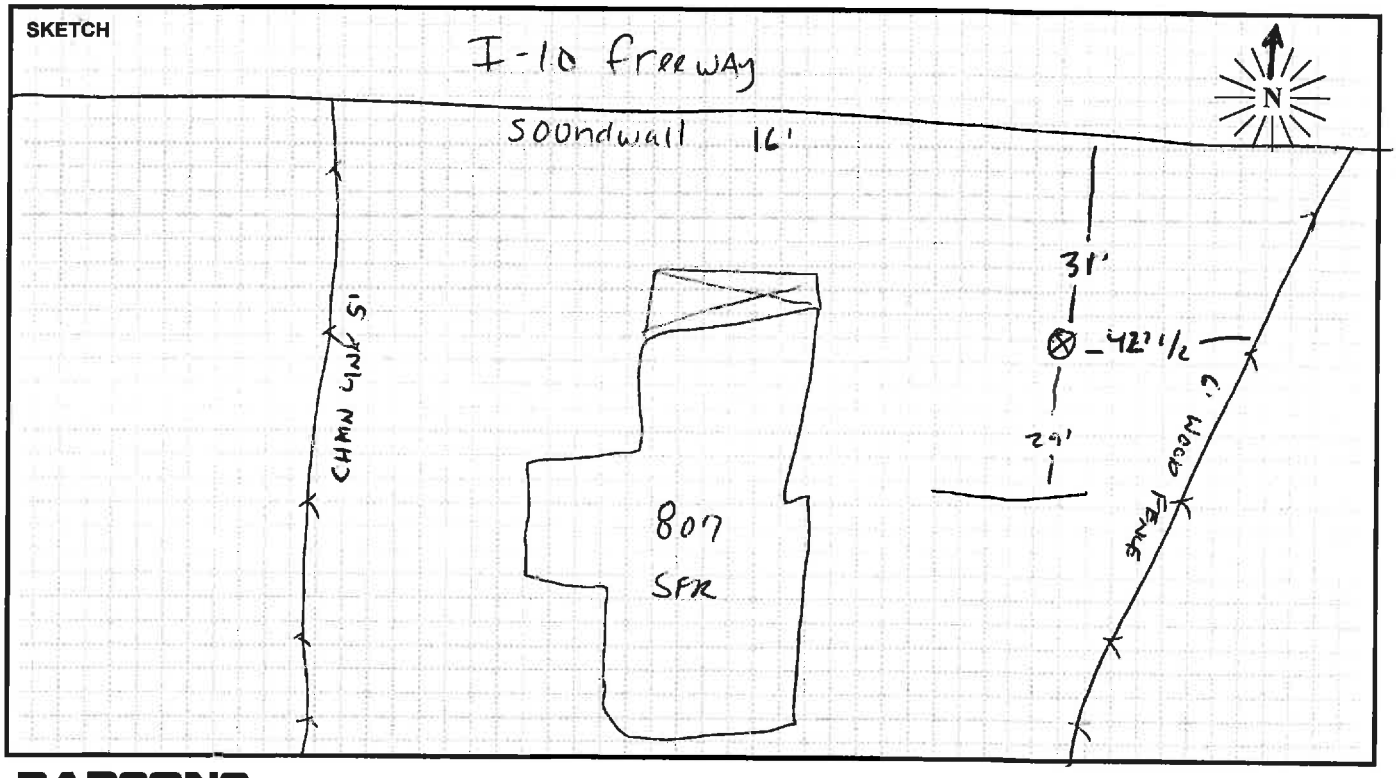
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 79.8 °F R.H.: 43.1 %
WIND SPEED: 1.7 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PIZANO
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/3	11:38											
10/4		15:55										

SKETCH



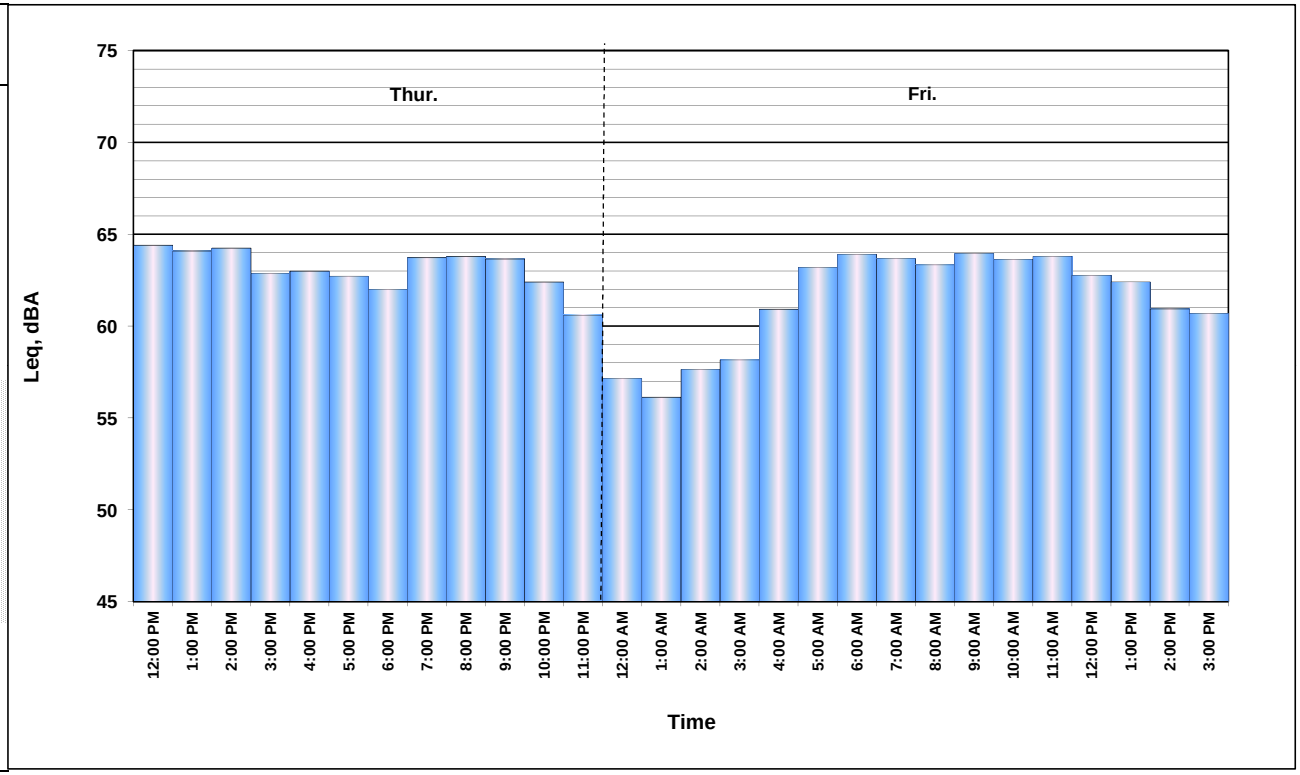
PARSONS

Site LT29 Hourly Noise Levels, $L_{eq}(h)$

Location: 807 Drake Ave, Claremont Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/3/13 -10/4/13

See attached Noise Measurement Form.

TIME	10/3 - 10/4 $L_{eq(h)}$ dBA	10/4 $L_{eq(h)}$ dBA
12:00 - 01:00 PM	64	63
01:00 - 02:00 PM	64	62
02:00 - 03:00 PM	64	61
03:00 - 04:00 PM	63	61
04:00 - 05:00 PM	63	-
05:00 - 06:00 PM	63	-
06:00 - 07:00 PM	62	-
07:00 - 08:00 PM	64	-
08:00 - 09:00 PM	64	-
09:00 - 10:00 PM	64	-
10:00 - 11:00 PM	62	-
11:00 - 12:00 AM	61	-
12:00 - 01:00 AM	57	-
01:00 - 02:00 AM	56	-
02:00 - 03:00 AM	58	-
03:00 - 04:00 AM	58	-
04:00 - 05:00 AM	61	-
05:00 - 06:00 AM	63	-
06:00 - 07:00 AM	64	-
07:00 - 08:00 AM	64	-
08:00 - 09:00 AM	63	-
09:00 - 10:00 AM	64	-
10:00 - 11:00 AM	64	-
11:00 - 12:00 PM	64	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: B. Jarjoura	DATE: 10/03/18
MEASUREMENT ADDRESS: 106 Bellhaven Place	CITY: Claremont, CA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: LT30

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

SERIAL #: 166

MICROPHONE: ☐ NON-POLAR ☒ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN

SERIAL #: 16967

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____

SERIAL #: 1629

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____ S/N 10473

Freq, Hz. ☐ 250 ☒ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 114.0, 114.0, 8.8, 10:46AM

After 114.0, 113.8, 8.8, 15:55

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 64 °F R.H.: 55 %

WIND SPEED: 1.6 MPH

TOWARD (DIR): _____

SKIES: cloudy

CAMERA BJ iphone

PHOTO NOs. 1-9

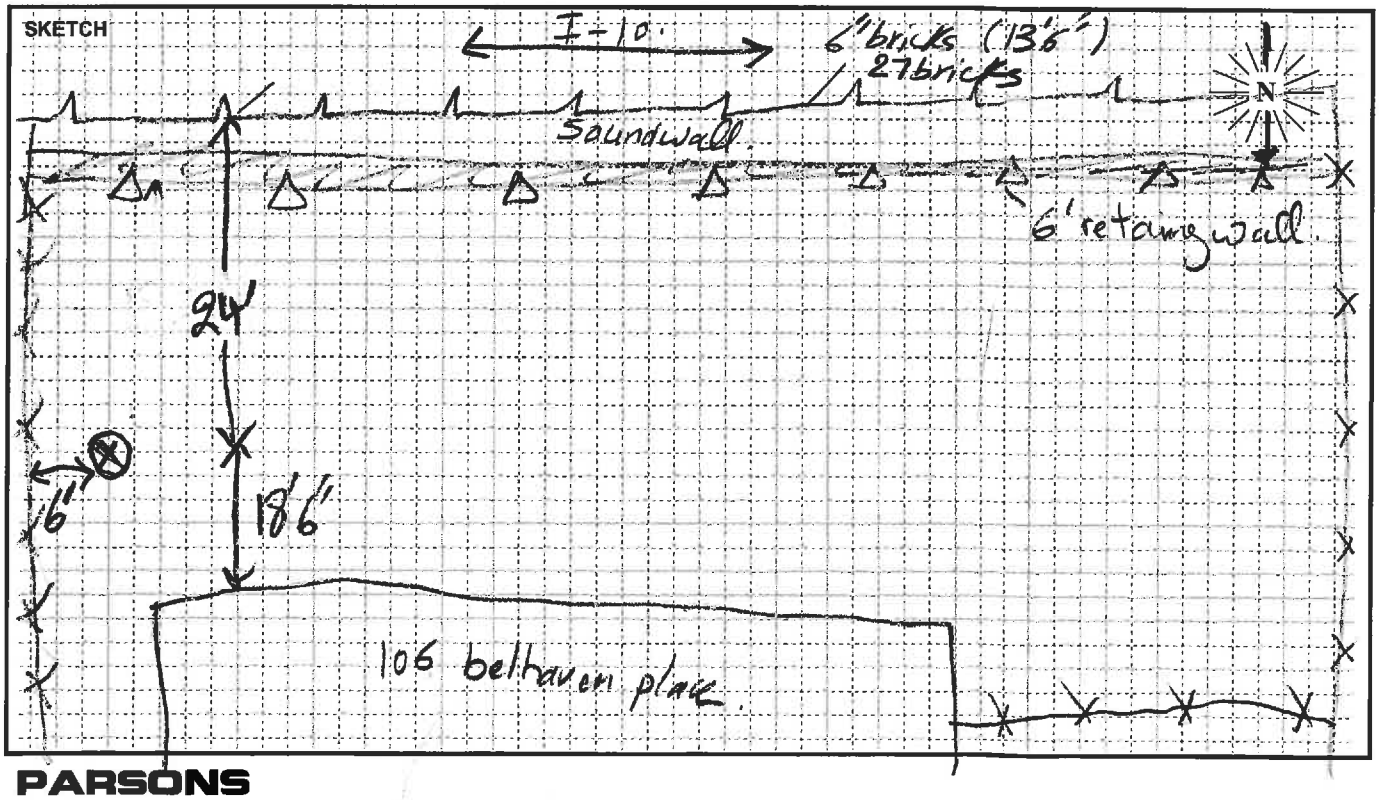
NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/3	10:56											
10/4		15:53										

SKETCH



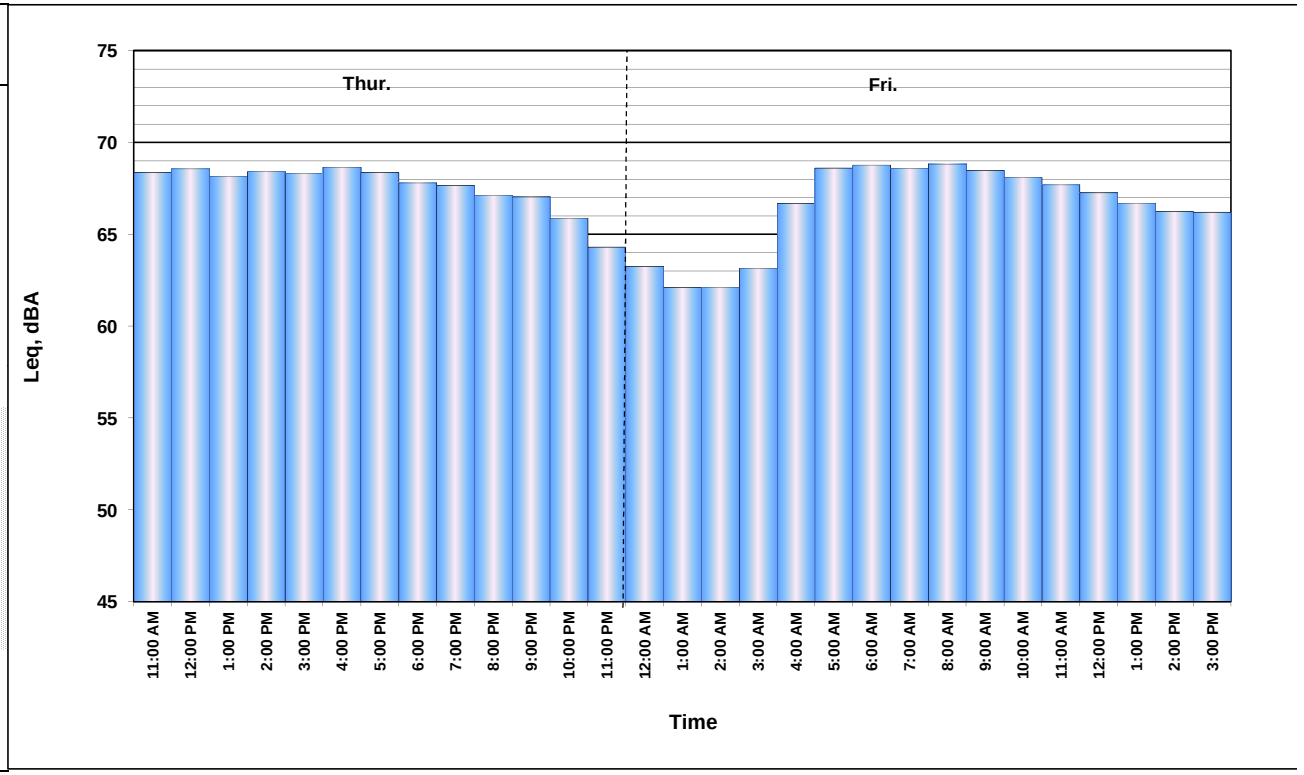
PARSONS

Site LT30 Hourly Noise Levels, $L_{eq}(h)$

Location: 106 Bellhaven Pl, Claremont Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/3/13 -10/4/13

See attached Noise Measurement Form.

TIME	10/3 - 10/4 $L_{eq(h)}$ dBA	10/4 $L_{eq(h)}$ dBA
11:00 - 12:00 PM	68	68
12:00 - 01:00 PM	69	67
01:00 - 02:00 PM	68	67
02:00 - 03:00 PM	68	66
03:00 - 04:00 PM	68	-
04:00 - 05:00 PM	69	-
05:00 - 06:00 PM	68	-
06:00 - 07:00 PM	68	-
07:00 - 08:00 PM	68	-
08:00 - 09:00 PM	67	-
09:00 - 10:00 PM	67	-
10:00 - 11:00 PM	66	-
11:00 - 12:00 AM	64	-
12:00 - 01:00 AM	63	-
01:00 - 02:00 AM	62	-
02:00 - 03:00 AM	62	-
03:00 - 04:00 AM	63	-
04:00 - 05:00 AM	67	-
05:00 - 06:00 AM	69	-
06:00 - 07:00 AM	69	-
07:00 - 08:00 AM	69	-
08:00 - 09:00 AM	69	-
09:00 - 10:00 AM	68	-
10:00 - 11:00 AM	68	-



1:00 pm CARLOS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE		ENGINEER: R. URENDA URENDA	DATE: ~~10/2/13~~ 10/3/13
MEASUREMENT ADDRESS: 9512 CAMUCOS AVE	CITY: MONTCLAIR	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: LT31

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0659

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 3155

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1438

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 7.0 / 9:32
After 114 / 113.8 / 7.0 / 14:29

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☐ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

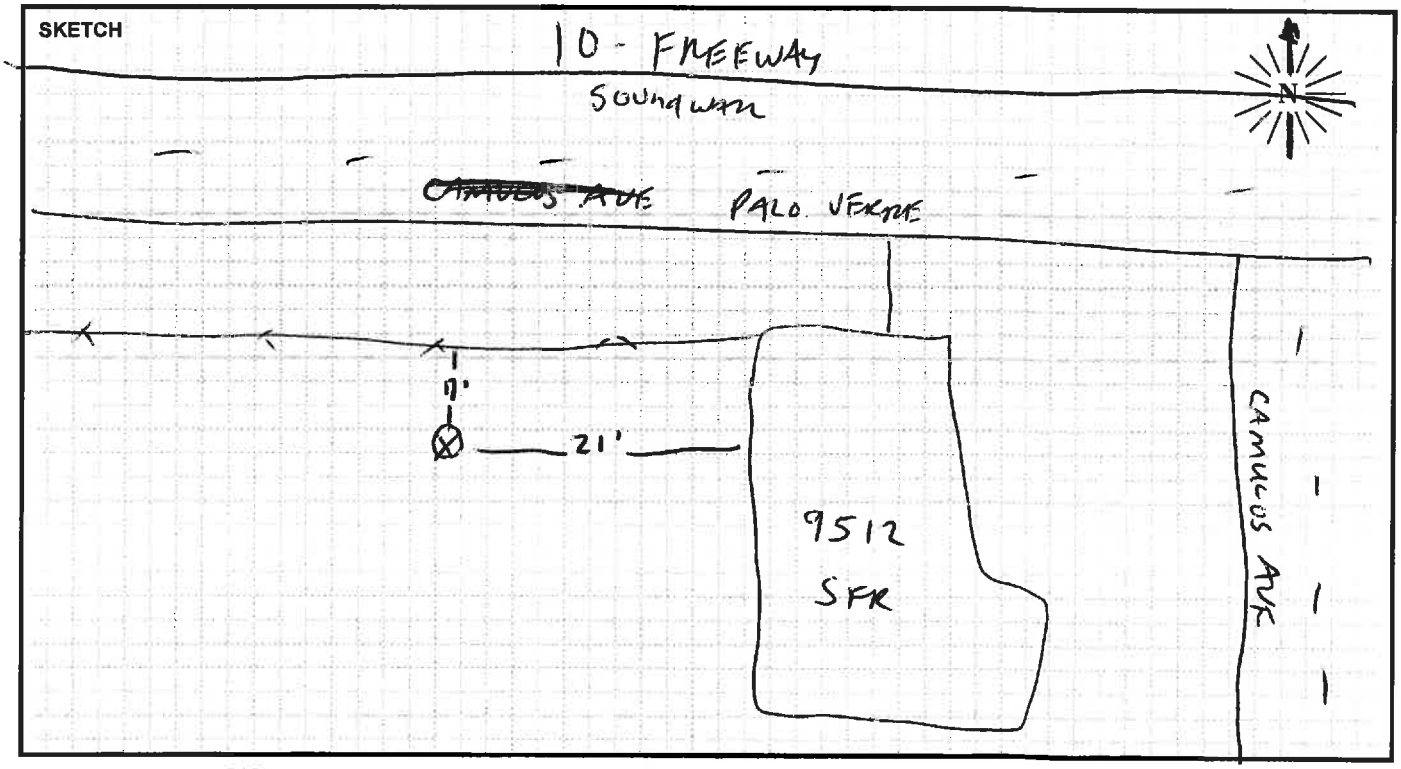
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 68 °F R.H.: 65.2 %
WIND SPEED: 1.6 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/3	9:47											
10/4		14:20										

SKETCH



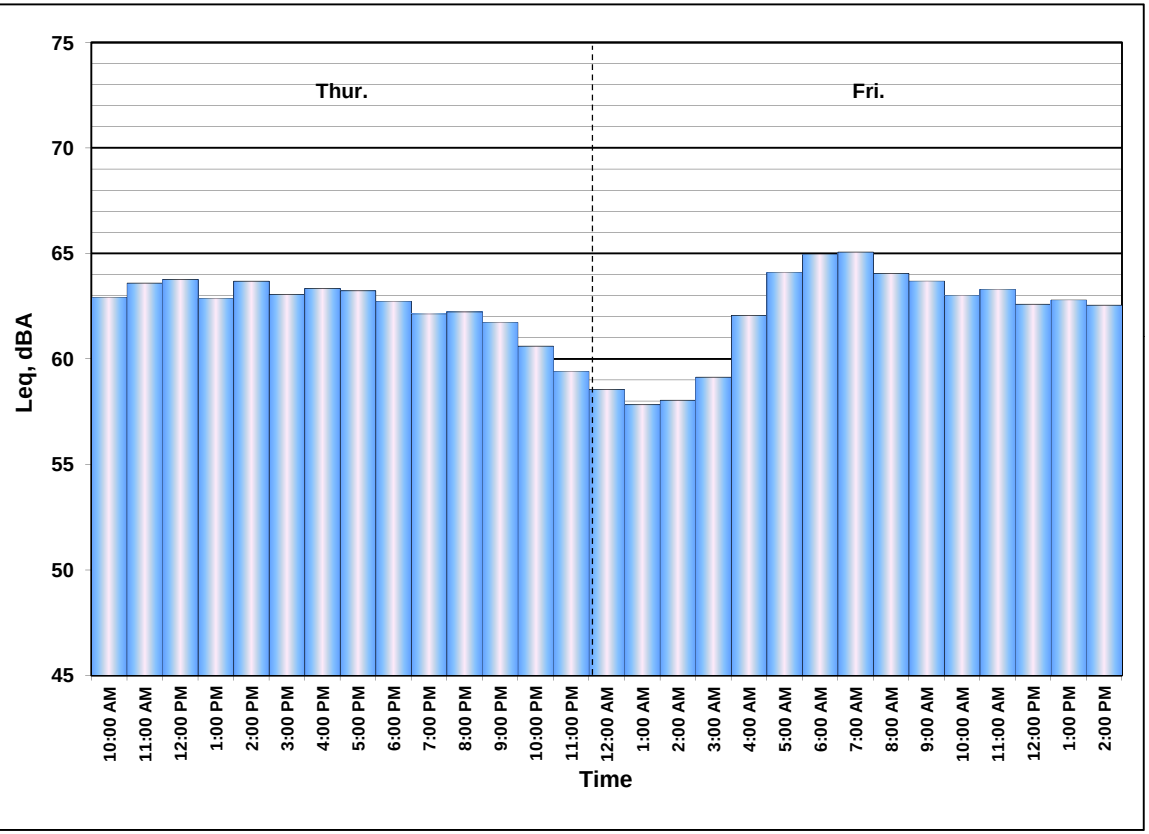
PARSONS

Site LT31 Hourly Noise Levels, $L_{eq}(h)$

Location: 9512 Camulos Avenue, Ontario, CA
Position: Back Yard
Sources: Interstate 10
Date: 10/03/13 - 10/04/13

Notes: See attached Noise Measurement Form.

TIME	10/03-10/04 $L_{eq(h)}$ dBA	10/04
10:00 - 11:00 AM	63	63
11:00 - 12:00 PM	64	63
12:00 - 01:00 PM	64	63
01:00 - 02:00 PM	63	63
02:00 - 03:00 PM	64	63
03:00 - 04:00 PM	63	-
04:00 - 05:00 PM	63	-
05:00 - 06:00 PM	63	-
06:00 - 07:00 PM	63	-
07:00 - 08:00 PM	62	-
08:00 - 09:00 PM	62	-
09:00 - 10:00 PM	62	-
10:00 - 11:00 PM	61	-
11:00 - 12:00 AM	59	-
12:00 - 01:00 AM	59	-
01:00 - 02:00 AM	58	-
02:00 - 03:00 AM	58	-
03:00 - 04:00 AM	59	-
04:00 - 05:00 AM	62	-
05:00 - 06:00 AM	64	-
06:00 - 07:00 AM	65	-
07:00 - 08:00 AM	65	-
08:00 - 09:00 AM	64	-
09:00 - 10:00 AM	64	-



FIELD SURVEY FORM

PROJECT: I-10 Express Lane		ENGINEER: Ogden	DATE: 10/3/13
MEASUREMENT ADDRESS: 9451 Felipe Ave	CITY: Montclair	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: LT32

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ _____
SERIAL #: 1674

MICROPHONE: ☒ WIND SCREEN ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☒ RANDOM
SERIAL #: 3378

PRE AMP: ☐ LD-900 ☒ LD-828 ☐ _____
SERIAL #: 2330

CALIBRATOR: ☒ CA250 ☐ LD CA250 ☐ B&K 4231 S/N _____
Freq, Hz. ☐ 250 ☒ 1000 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114, 114, 7.1, 13:14
After 114, 114.2, 7.1, 15:47

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

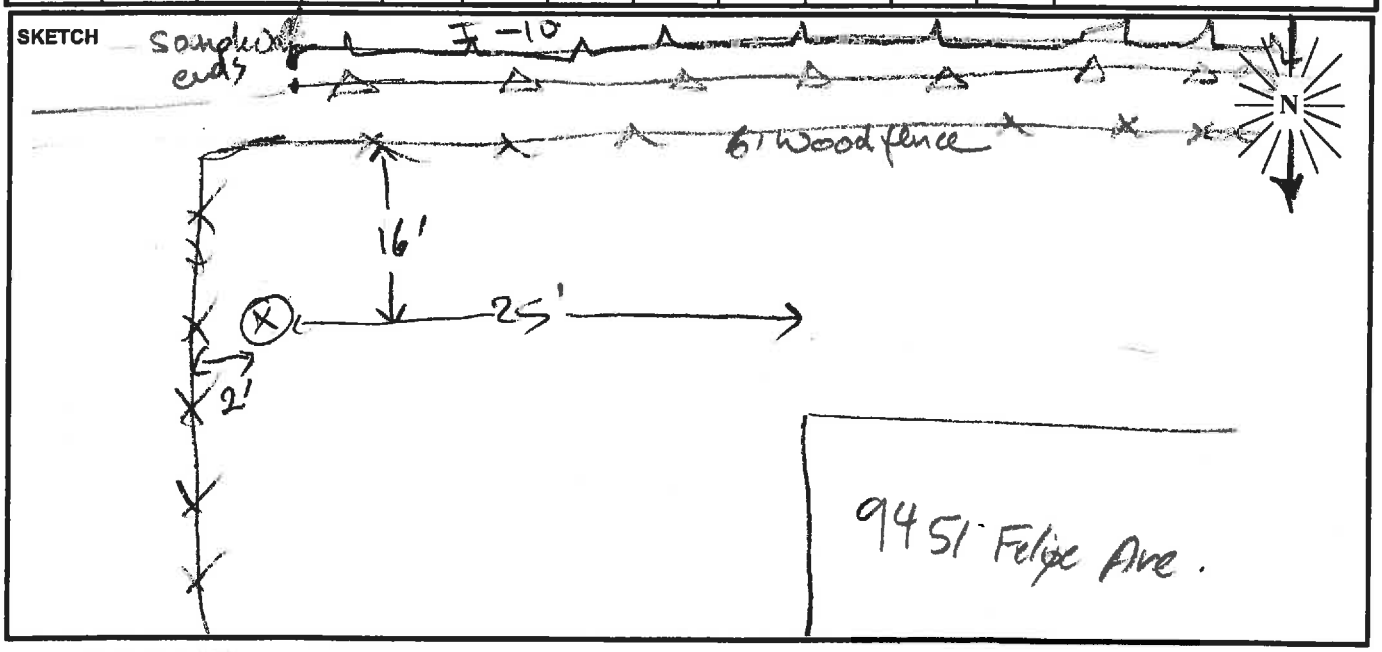
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 71 °F R.H.: 57 %
WIND SPEED: 1.6 MPH
TOWARD (DIR): _____
SKIES: partly cloudy
CAMERA Marky phone
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/3	13:17											
10/4		15:44										

SKETCH

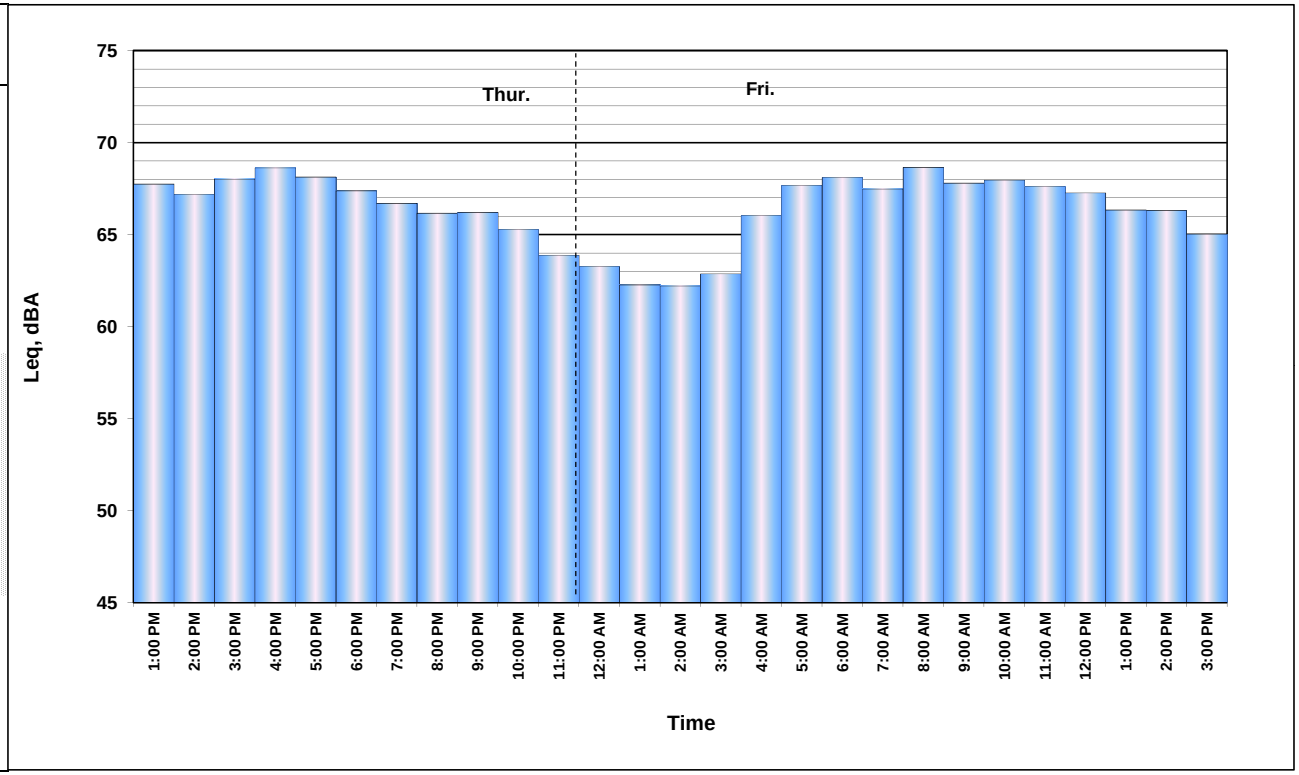


PARSONS

Site LT32 Hourly Noise Levels, $L_{eq}(h)$

Location: 9451 Felipe Avenue, Montclaire, CA
Position: Back Yard
Sources: Interstate 10
Date: 10/3/13 -10/4/13 See attached Noise Measurement Form.

TIME	10/3 - 10/4 $L_{eq(h)}$ dBA	10/4 $L_{eq(h)}$ dBA
01:00 - 02:00 PM	68	66
02:00 - 03:00 PM	67	66
03:00 - 04:00 PM	68	65
04:00 - 05:00 PM	69	-
05:00 - 06:00 PM	68	-
06:00 - 07:00 PM	67	-
07:00 - 08:00 PM	67	-
08:00 - 09:00 PM	66	-
09:00 - 10:00 PM	66	-
10:00 - 11:00 PM	65	-
11:00 - 12:00 AM	64	-
12:00 - 01:00 AM	63	-
01:00 - 02:00 AM	62	-
02:00 - 03:00 AM	62	-
03:00 - 04:00 AM	63	-
04:00 - 05:00 AM	66	-
05:00 - 06:00 AM	68	-
06:00 - 07:00 AM	68	-
07:00 - 08:00 AM	67	-
08:00 - 09:00 AM	69	-
09:00 - 10:00 AM	68	-
10:00 - 11:00 AM	68	-
11:00 - 12:00 PM	68	-
12:00 - 01:00 PM	67	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: B. Jarjoura	DATE: 10/07/13
MEASUREMENT ADDRESS: 1553 N. Helen Court	CITY: Ontario, CA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: LT33

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

SERIAL #: 1662

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☒ RANDOM ☐ WIND SCREEN

SERIAL #: 3384

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____

SERIAL #: 2667

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127

Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 114 , 114.1 , 6.7 , 9:33

After 114 , 113.8 , 6.8 , 11:47

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 61.9 °F R.H.: 98 %

WIND SPEED: 0.17 MPH

TOWARD (DIR): _____

SKIES: Partly cloudy.

CAMERA B.J. phone.

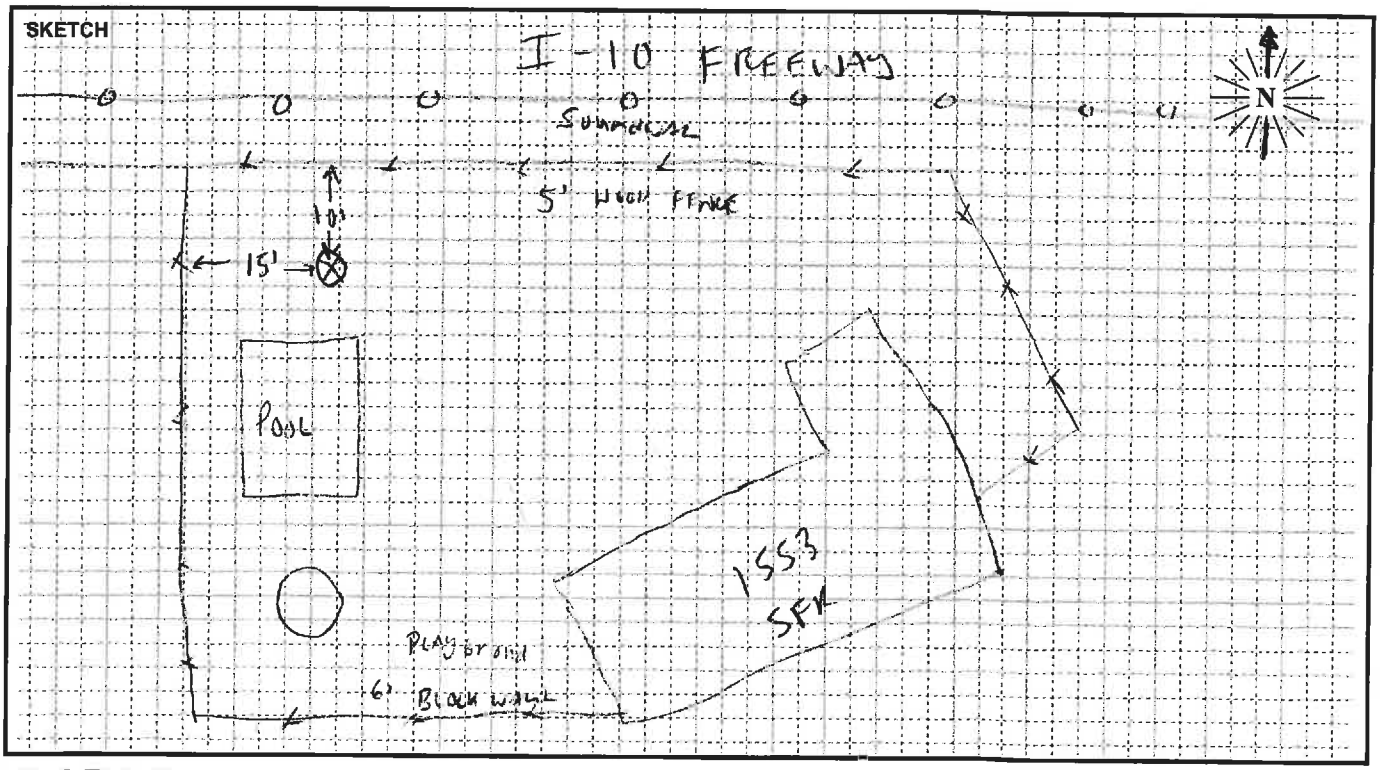
PHOTO NOs. 58-65

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/07	9:46											
10/8		11:41										

SKETCH



PARSONS

Site LT33 Hourly Noise Levels, $L_{eq}(h)$

Location: 1553 N. Helen Ct, Ontario Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/7/13 -10/8/13 See attached Noise Measurement Form.

TIME	10/7 - 10/8 $L_{eq(h)}$ dBA	10/8 $L_{eq(h)}$ dBA
09:00 - 10:00 AM	66	64
10:00 - 11:00 AM	65	64
11:00 - 12:00 PM	64	64
12:00 - 01:00 PM	63	-
01:00 - 02:00 PM	63	-
02:00 - 03:00 PM	64	-
03:00 - 04:00 PM	64	-
04:00 - 05:00 PM	65	-
05:00 - 06:00 PM	66	-
06:00 - 07:00 PM	65	-
07:00 - 08:00 PM	63	-
08:00 - 09:00 PM	63	-
09:00 - 10:00 PM	63	-
10:00 - 11:00 PM	63	-
11:00 - 12:00 AM	62	-
12:00 - 01:00 AM	61	-
01:00 - 02:00 AM	60	-
02:00 - 03:00 AM	60	-
03:00 - 04:00 AM	61	-
04:00 - 05:00 AM	63	-
05:00 - 06:00 AM	65	-
06:00 - 07:00 AM	65	-
07:00 - 08:00 AM	65	-
08:00 - 09:00 AM	64	-

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: VIRENDRA	DATE: 10/7/13	
MEASUREMENT ADDRESS: 928 AZURE CT	CITY:	☒ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: LT34

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ _____
SERIAL #: 1674

MICROPHONE: ☒ WIND SCREEN ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM
SERIAL #: 3155

PRE AMP: ☒ LD-900 ☐ LD-828 ☐ _____
SERIAL #: 1938

CALIBRATOR: ☒ LD CA250 ☐ B&K 4231
S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114 / 113.9 / 16.6 / 10:46
After 114.0 / 113.9 / 16.6 / 12:08

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

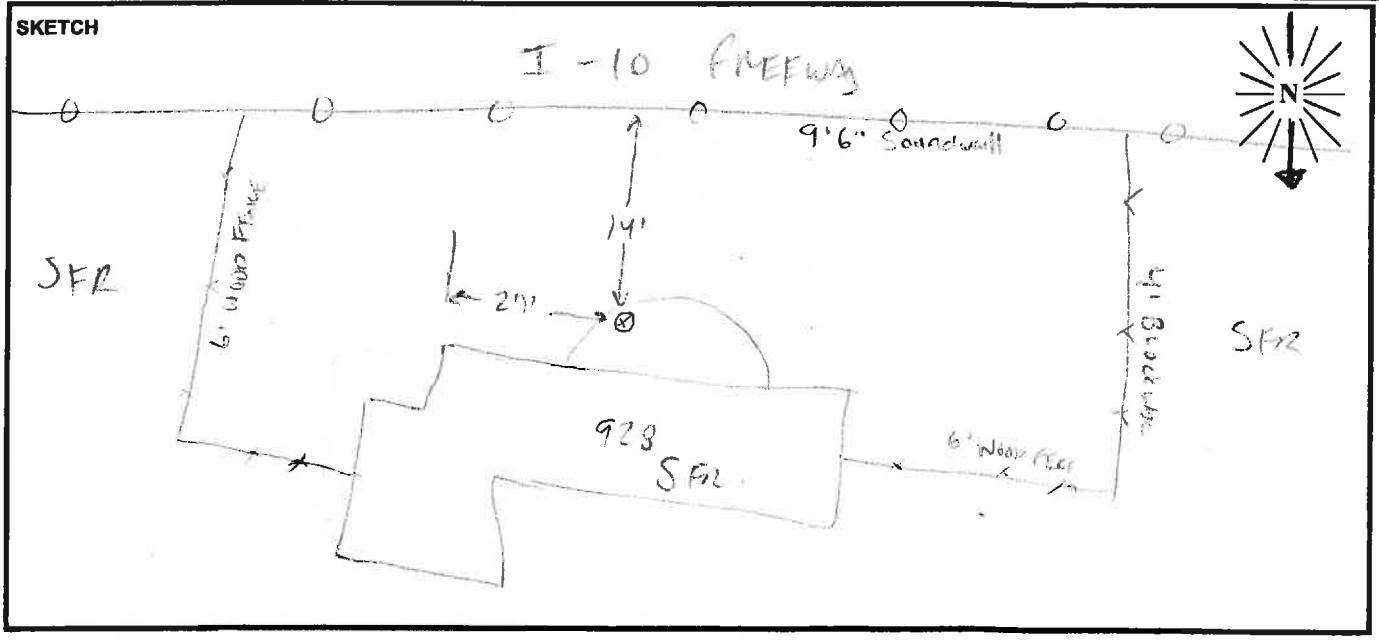
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 76 °F R.H.: 45 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: cloudy
CAMERA My IPHONE
PHOTO NOs. 66-70

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/7	11:56											
10/8		12:06										

SKETCH



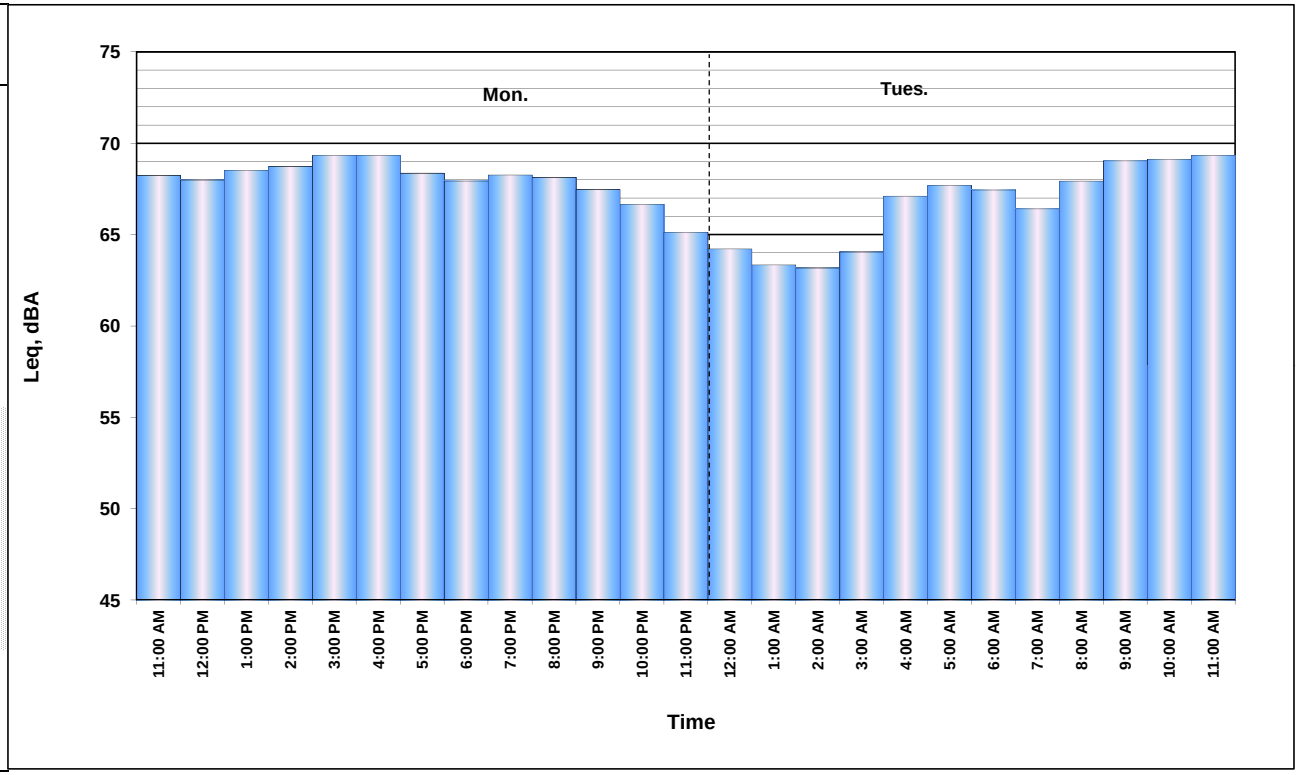
PARSONS

Site LT34 Hourly Noise Levels, $L_{eq}(h)$

Location: 928 Azure Court, Ontario, CA
Position: Back Yard
Sources: Interstate 10
Date: 10/7/13 -10/8/13

See attached Noise Measurement Form.

TIME	10/7 - 10/8 $L_{eq(h)}$ dBA	10/8 $L_{eq(h)}$ dBA
11:00 - 12:00 PM	68	69
12:00 - 01:00 PM	68	-
01:00 - 02:00 PM	69	-
02:00 - 03:00 PM	69	-
03:00 - 04:00 PM	69	-
04:00 - 05:00 PM	69	-
05:00 - 06:00 PM	68	-
06:00 - 07:00 PM	68	-
07:00 - 08:00 PM	68	-
08:00 - 09:00 PM	68	-
09:00 - 10:00 PM	67	-
10:00 - 11:00 PM	67	-
11:00 - 12:00 AM	65	-
12:00 - 01:00 AM	64	-
01:00 - 02:00 AM	63	-
02:00 - 03:00 AM	63	-
03:00 - 04:00 AM	64	-
04:00 - 05:00 AM	67	-
05:00 - 06:00 AM	68	-
06:00 - 07:00 AM	67	-
07:00 - 08:00 AM	66	-
08:00 - 09:00 AM	68	-
09:00 - 10:00 AM	69	-
10:00 - 11:00 AM	69	-



FIELD SURVEY FORM

10/7/13

PROJECT: ~~High Desert Corridor High-Speed Rail~~ I-10

ENGINEER: M Meyer

DATE: 10/7/13 ~~8/28/13~~

MEASUREMENT ADDRESS: 1555 N Oatland

CITY: Ontario

☑ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial

SITE NO.: LT 35

SOUND LEVEL METER:
☐ LD-870 ☑ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____

SERIAL #: 1616

MICROPHONE:
☐ NON-POLAR ☐ POLARIZED
☑ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☐ WIND SCREEN

SERIAL #: 4040

PRE AMP:
☐ LD-900 ☐ ZC-0030
☐ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____

SERIAL #: 1629

CALIBRATOR:
☐ LD CA250 ☑ LD CA200
☐ B&K 4231 ☐ _____
S/N 10473

Freq, Hz.
☐ 250
☑ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 8.9, 10:11
After 114.0, 113.9, 8.9, 12:27

METER SETTINGS:
☑ A-WTD ☐ LINEAR ☑ SLOW ☐ 1/1 OCT ☑ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☐ BAT ☐ AC

(observations at start of measurement)

TEMP: 73 °F R.H.: 40 %

WIND SPEED: 0, 2 MPH

TOWARD (DIR): _____

SKIES: Cloudy

CAMERA _____

PHOTO NOs. _____

NOTES:

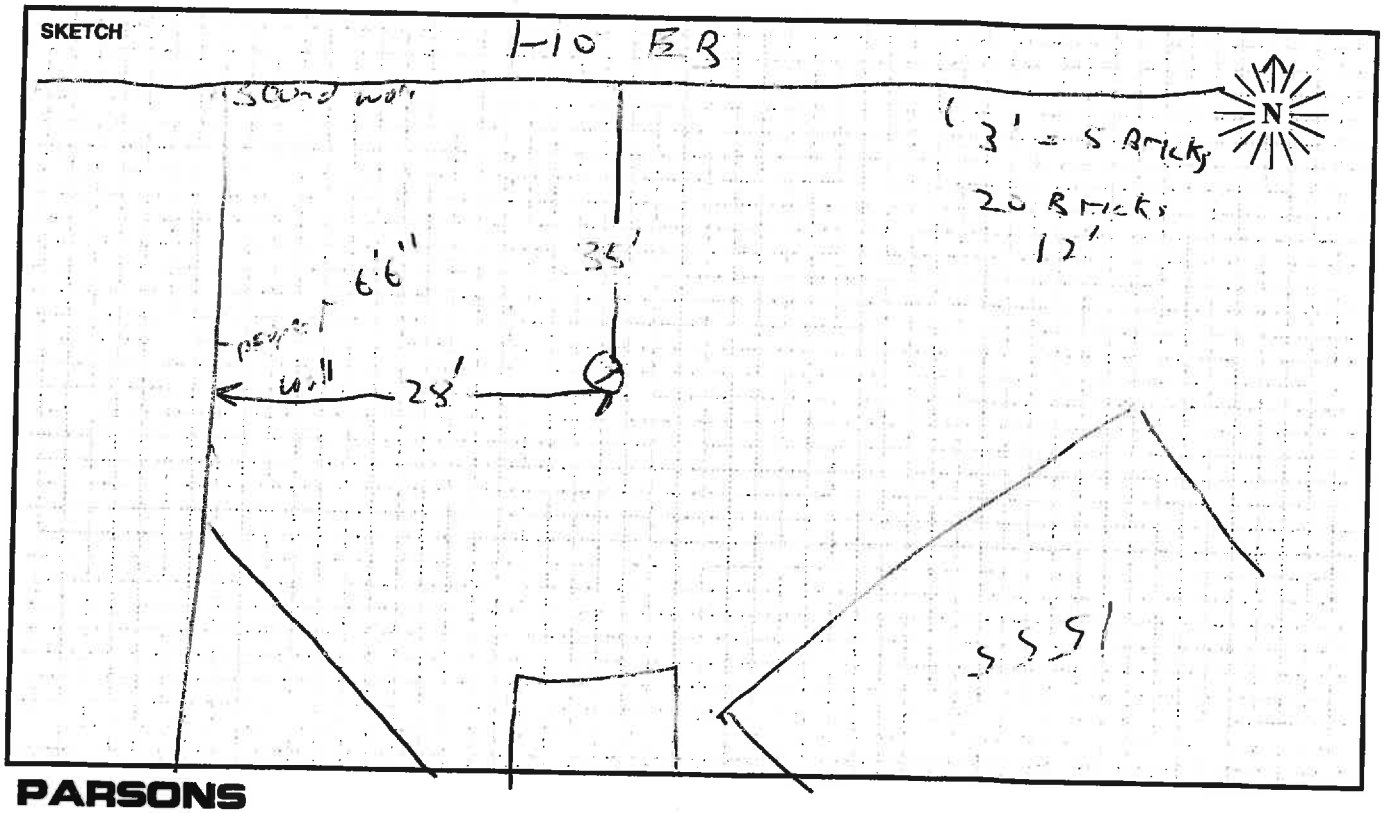
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE:
☑ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/7	10:53											
10/8	~~12:26~~	12:26										

SKETCH



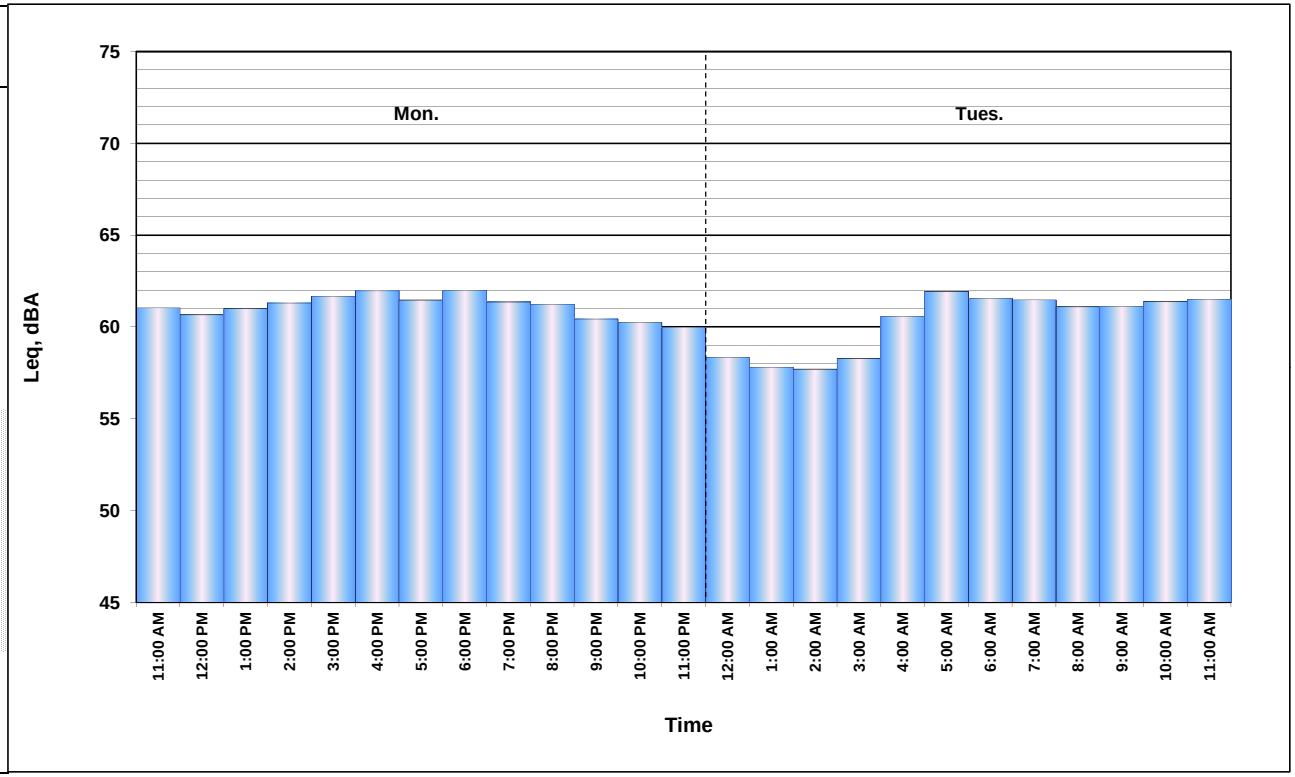
PARSONS

Site LT35 Hourly Noise Levels, $L_{eq}(h)$

Location: 1555 N. Oakland Ave, Ontario Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/7/13 -10/8/13

See attached Noise Measurement Form.

TIME	10/7 - 10/8 $L_{eq(h)}$ dBA	10/8 $L_{eq(h)}$ dBA
11:00 - 12:00 PM	61	62
12:00 - 01:00 PM	61	-
01:00 - 02:00 PM	61	-
02:00 - 03:00 PM	61	-
03:00 - 04:00 PM	62	-
04:00 - 05:00 PM	62	-
05:00 - 06:00 PM	61	-
06:00 - 07:00 PM	62	-
07:00 - 08:00 PM	61	-
08:00 - 09:00 PM	61	-
09:00 - 10:00 PM	60	-
10:00 - 11:00 PM	60	-
11:00 - 12:00 AM	60	-
12:00 - 01:00 AM	58	-
01:00 - 02:00 AM	58	-
02:00 - 03:00 AM	58	-
03:00 - 04:00 AM	58	-
04:00 - 05:00 AM	61	-
05:00 - 06:00 AM	62	-
06:00 - 07:00 AM	62	-
07:00 - 08:00 AM	61	-
08:00 - 09:00 AM	61	-
09:00 - 10:00 AM	61	-
10:00 - 11:00 AM	61	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

R. URENDA

DATE: 12/11/13

MEASUREMENT ADDRESS: 416 ALVARADO ST

CITY: ONTARIO

☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial

SITE NO.: LT36

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 2916

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 1901

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 7.4 / 9:50
After 114.0 / 113.8 / 7.4 / 10:35

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

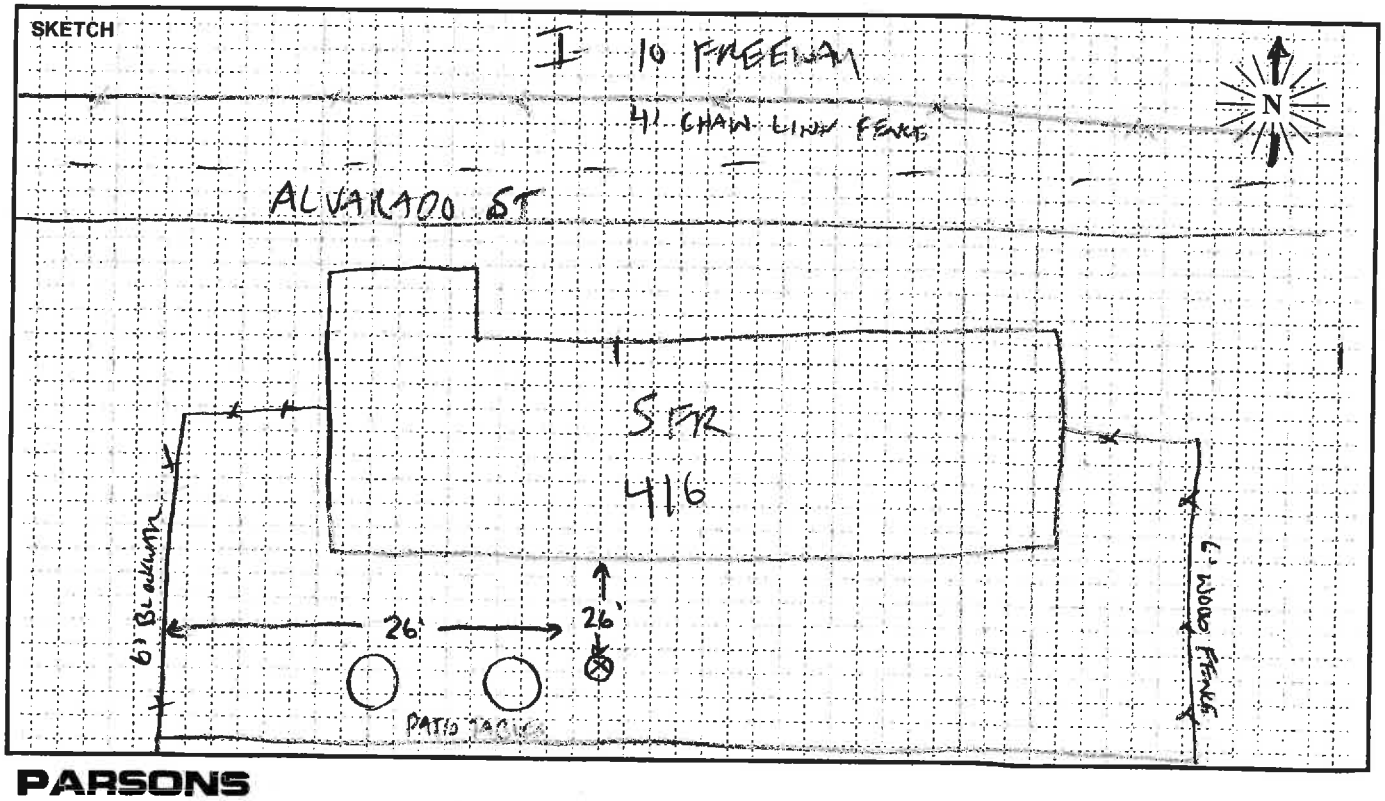
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 68 °F R.H.: 28.6 %
WIND SPEED: 0 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☒ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
12/11	9:51											
12/12		10:34										

SKETCH



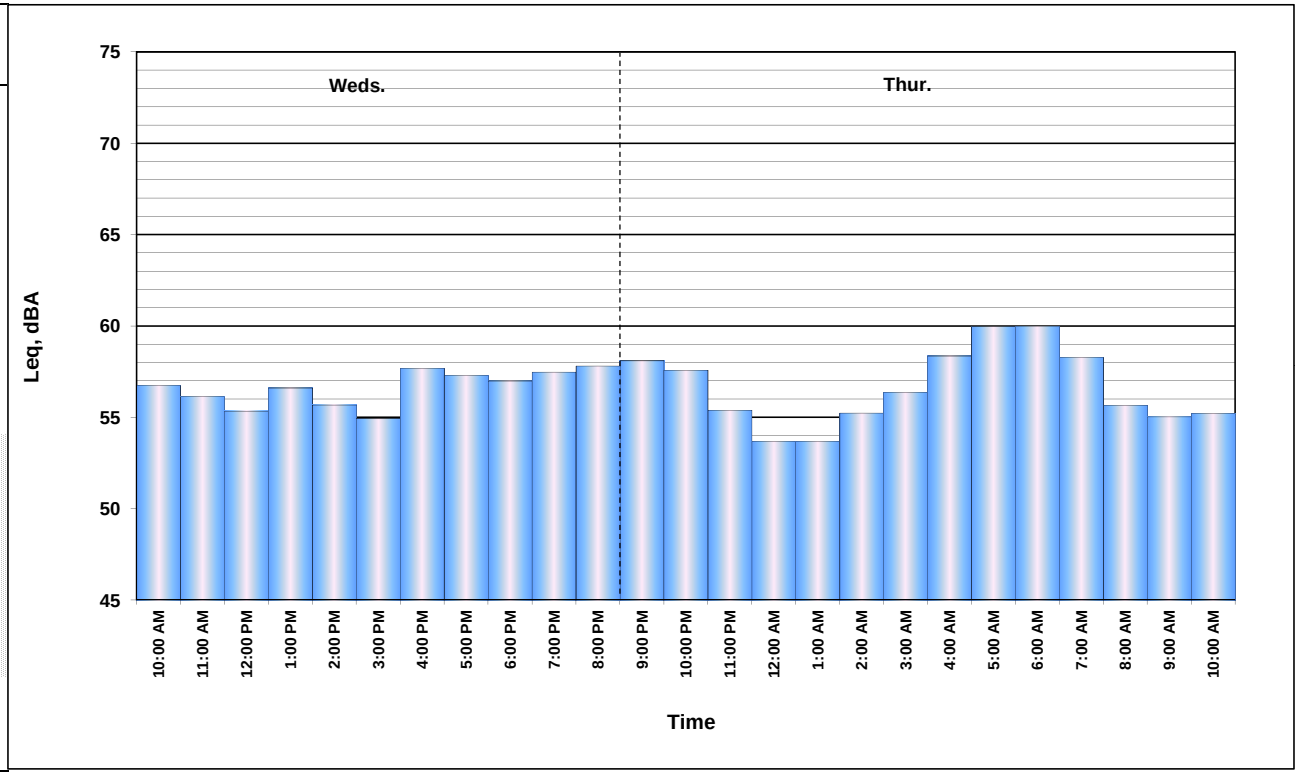
PARSONS

Site LT36 Hourly Noise Levels, $L_{eq}(h)$

Location: 416 Alvarado St, Ontario Ca
Position: Back Yard
Sources: Interstate 10
Date: 12/11/13 -12/12/13

See attached Noise Measurement Form.

TIME	12/11 - 12/12 $L_{eq(h)}$ dBA	12/12 $L_{eq(h)}$ dBA
10:00 - 11:00 AM	57	55
11:00 - 12:00 PM	56	-
12:00 - 01:00 PM	55	-
01:00 - 02:00 PM	57	-
02:00 - 03:00 PM	56	-
03:00 - 04:00 PM	55	-
04:00 - 05:00 PM	58	-
05:00 - 06:00 PM	57	-
06:00 - 07:00 PM	57	-
07:00 - 08:00 PM	57	-
08:00 - 09:00 PM	58	-
09:00 - 10:00 PM	58	-
10:00 - 11:00 PM	58	-
11:00 - 12:00 AM	55	-
12:00 - 01:00 AM	54	-
01:00 - 02:00 AM	54	-
02:00 - 03:00 AM	55	-
03:00 - 04:00 AM	56	-
04:00 - 05:00 AM	58	-
05:00 - 06:00 AM	60	-
06:00 - 07:00 AM	60	-
07:00 - 08:00 AM	58	-
08:00 - 09:00 AM	56	-
09:00 - 10:00 AM	55	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: B. Jarjoura	DATE: 10/10/13
MEASUREMENT ADDRESS: 768 Richland Street	CITY: UPLAND	☐ Single-Family ☐ Recreational ☒ Multi-Family ☐ Commercial ☐ School	SITE NO.: LT37

SOUND LEVEL METER:
☐ LD-870 ☒ LD-820 ☐ B&K-2238
☐ LD-824 ☐ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 52 °F R.H.: 88 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA B.J iphone
PHOTO NOs. 1 – 4

SERIAL #:	SERIAL #:	SERIAL #:
1616	1967	1629

CALIBRATOR:
☐ LD CA250 ☒ LD CA200
☐ B&K 4231 ☐ _____
S/N 10473

Freq, Hz.
☐ 250
☒ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 8.9 / 8:31
After 114.0 / 114.1 / 8.5 / 9:40

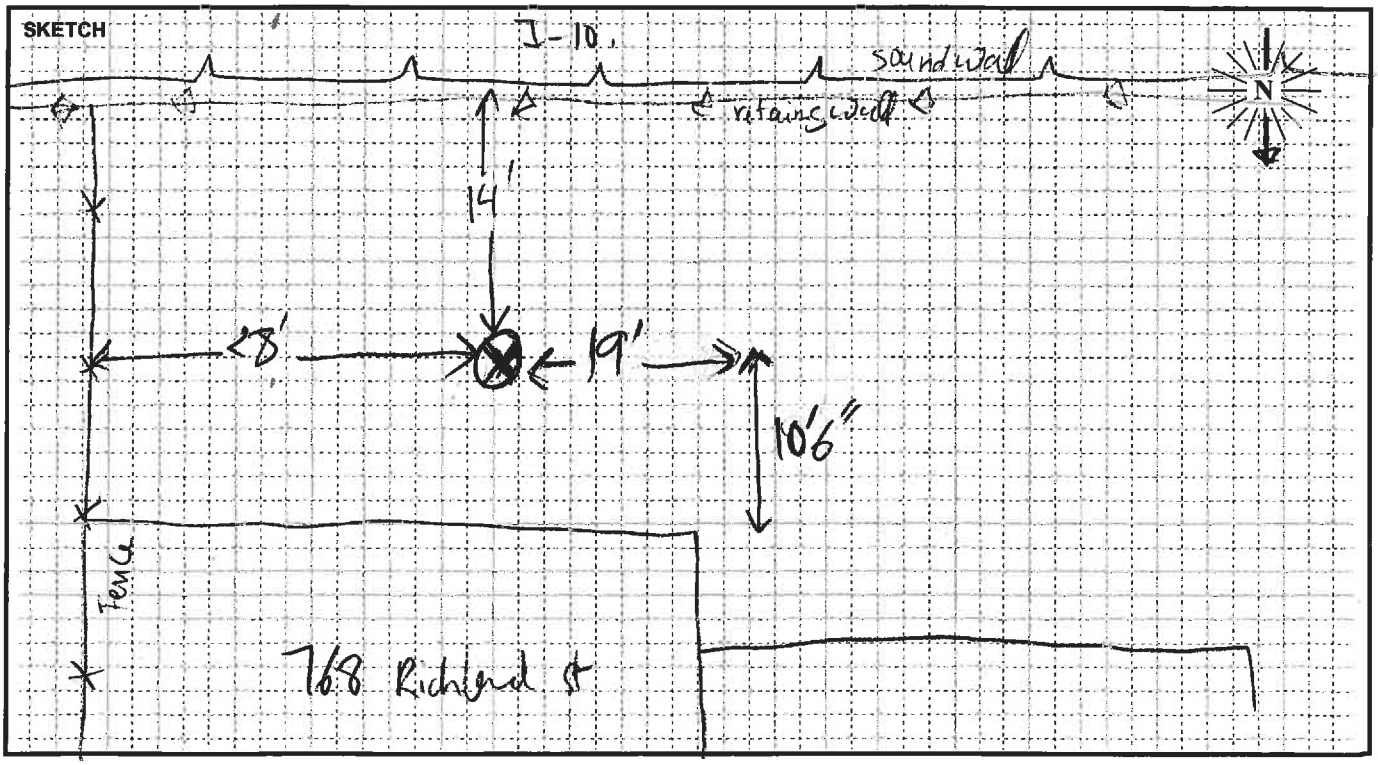
METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☒ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	8:35	9:24										

SKETCH

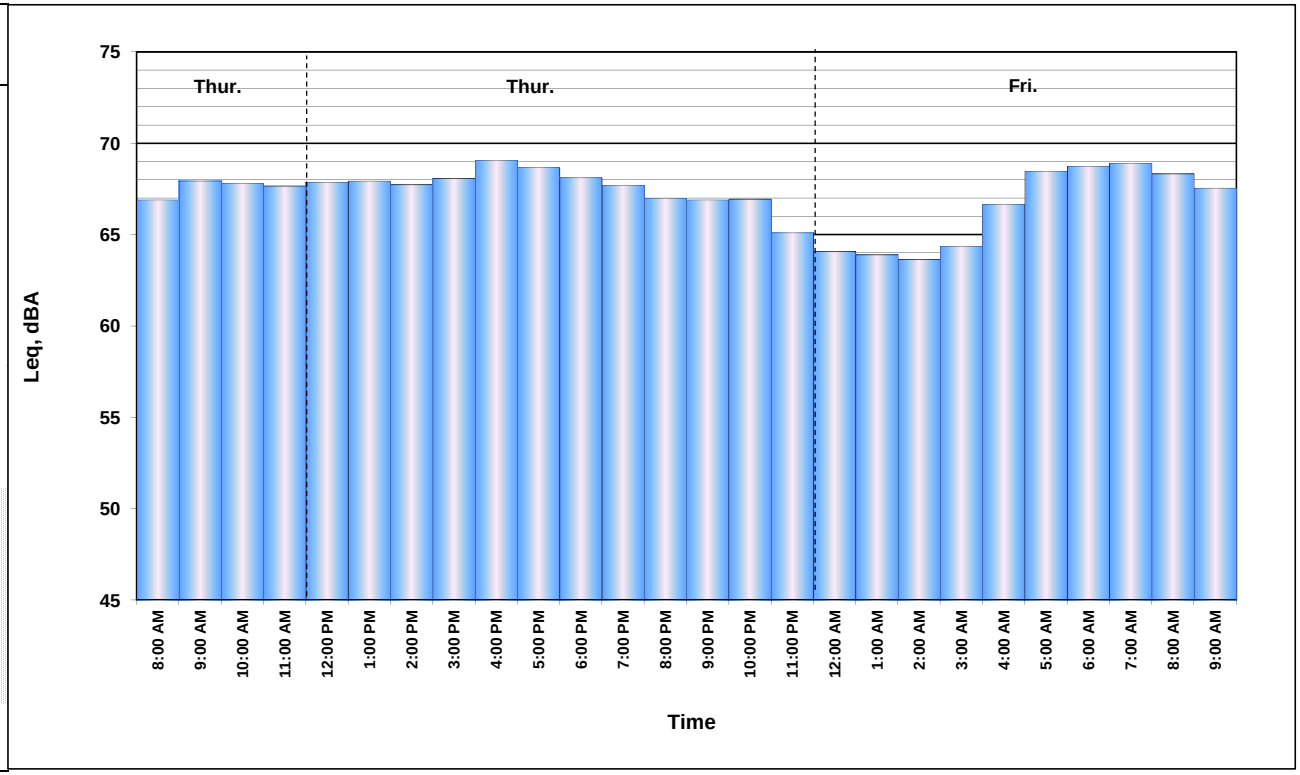


PARSONS

Site LT37 Hourly Noise Levels, $L_{eq}(h)$

Location: 768 Richland Street, Ontario, CA
Position: Back Yard
Sources: Interstate 10
Date: 10/10/13 - 10/11/13 See attached Noise Measurement Form.

TIME	10/10-10/11 $L_{eq(h)}$ dBA	10/11 $L_{eq(h)}$ dBA
08:00 - 09:00 AM	67	68
09:00 - 10:00 AM	68	68
10:00 - 11:00 AM	68	-
11:00 - 12:00 PM	68	-
12:00 - 01:00 PM	68	-
01:00 - 02:00 PM	68	-
02:00 - 03:00 PM	68	-
03:00 - 04:00 PM	68	-
04:00 - 05:00 PM	69	-
05:00 - 06:00 PM	69	-
06:00 - 07:00 PM	68	-
07:00 - 08:00 PM	68	-
08:00 - 09:00 PM	67	-
09:00 - 10:00 PM	67	-
10:00 - 11:00 PM	67	-
11:00 - 12:00 AM	65	-
12:00 - 01:00 AM	64	-
01:00 - 02:00 AM	64	-
02:00 - 03:00 AM	64	-
03:00 - 04:00 AM	64	-
04:00 - 05:00 AM	67	-
05:00 - 06:00 AM	68	-
06:00 - 07:00 AM	69	-
07:00 - 08:00 AM	69	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES	ENGINEER: B. Jarjoura	DATE: 10/10/13
MEASUREMENT ADDRESS: 1010. E. 6th Street	CITY: Ontario, CA	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: LT38

SOUND LEVEL METER: ☐ LD-870 ☒ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 1674

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3155

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1938

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____ S/N 10473
Freq, Hz.: ☐ 250 ☒ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114 , 114.3 , 6.7 , 9:13
After 114 , 114.1 , 6.7 , 13:18

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

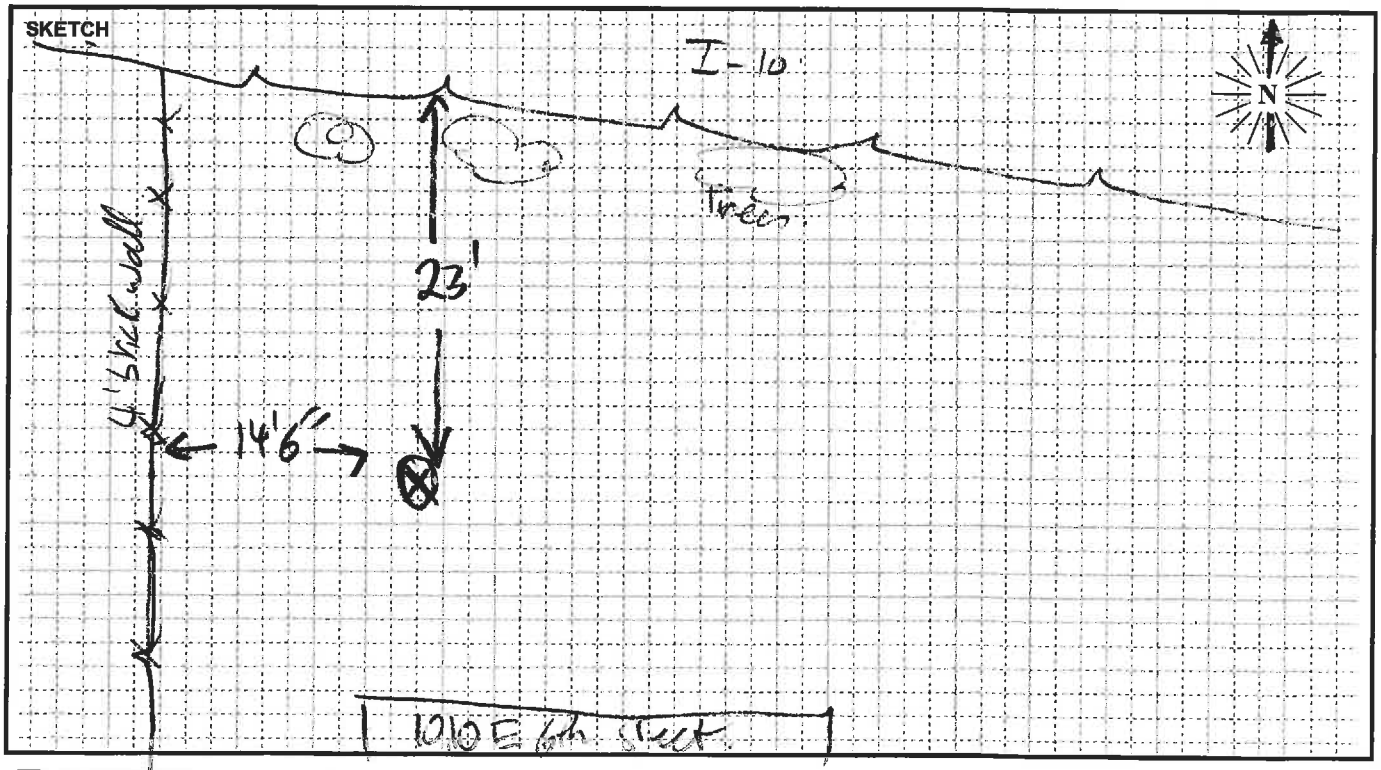
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 52 °F R.H.: 88 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: Sunny
CAMERA B.J. iph
PHOTO NOs. 5-11

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	9:18											
10/11		13:15										

SKETCH

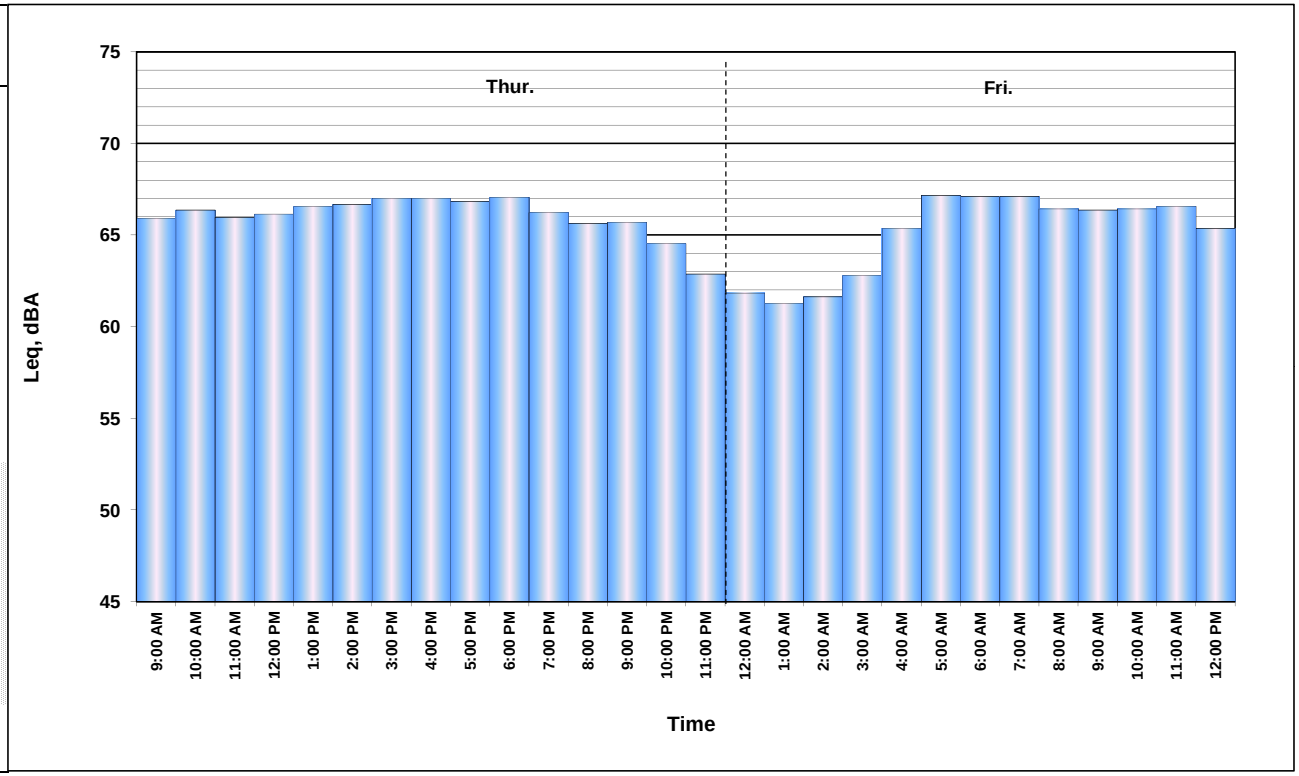


PARSONS

Site LT38 Hourly Noise Levels, $L_{eq}(h)$

Location: 1010 E. 6th Street, Ontario Ca
Position: Back Yard
Sources: Interstate 10
Date: 10/10/13 - 10/11/13 See attached Noise Measurement Form.

TIME	10/10-10/11 $L_{eq(h)}$ dBA	10/11 $L_{eq(h)}$ dBA
09:00 - 10:00 AM	66	66
10:00 - 11:00 AM	66	66
11:00 - 12:00 PM	66	67
12:00 - 01:00 PM	66	65
01:00 - 02:00 PM	67	-
02:00 - 03:00 PM	67	-
03:00 - 04:00 PM	67	-
04:00 - 05:00 PM	67	-
05:00 - 06:00 PM	67	-
06:00 - 07:00 PM	67	-
07:00 - 08:00 PM	66	-
08:00 - 09:00 PM	66	-
09:00 - 10:00 PM	66	-
10:00 - 11:00 PM	65	-
11:00 - 12:00 AM	63	-
12:00 - 01:00 AM	62	-
01:00 - 02:00 AM	61	-
02:00 - 03:00 AM	62	-
03:00 - 04:00 AM	63	-
04:00 - 05:00 AM	65	-
05:00 - 06:00 AM	67	-
06:00 - 07:00 AM	67	-
07:00 - 08:00 AM	67	-
08:00 - 09:00 AM	66	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES

ENGINEER: [redacted] R. URENA

DATE: 10/10/13

MEASUREMENT ADDRESS: 1336 N Holmes Ct

CITY: ONTARIO

☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial

SITE NO.: LT39

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____

SERIAL #: 0659

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN

SERIAL #: 3384

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____

SERIAL #: 2667

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2480

Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 6.9, 11:02
After 114.0, 113.5, 6.5, 11:29

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 67 °F R.H.: 51.3 %

WIND SPEED: 0.6 MPH

TOWARD (DIR): _____

SKIES: CLEAR

CAMERA Rubel Photo

PHOTO NOs. _____

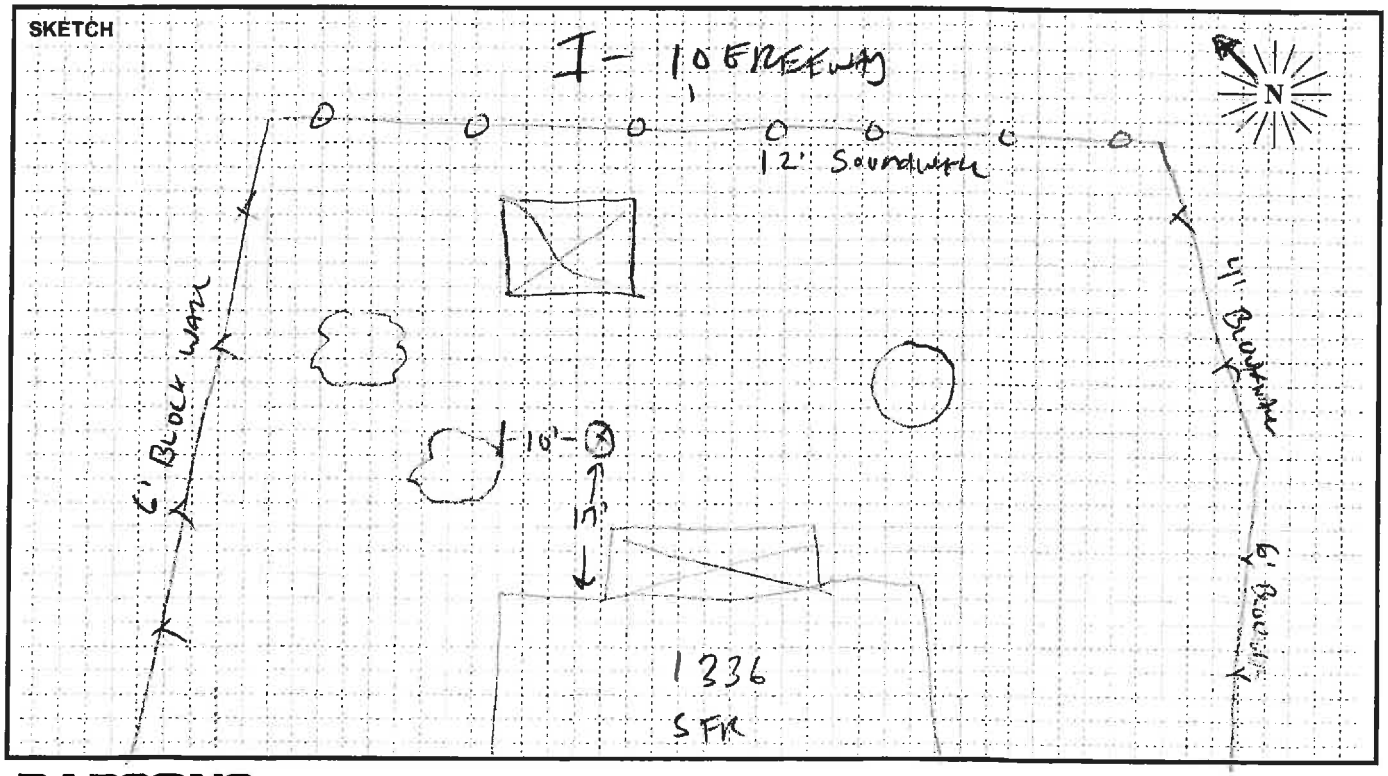
NOTES:

Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☒ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	11:08											
10/11		11:26										

SKETCH

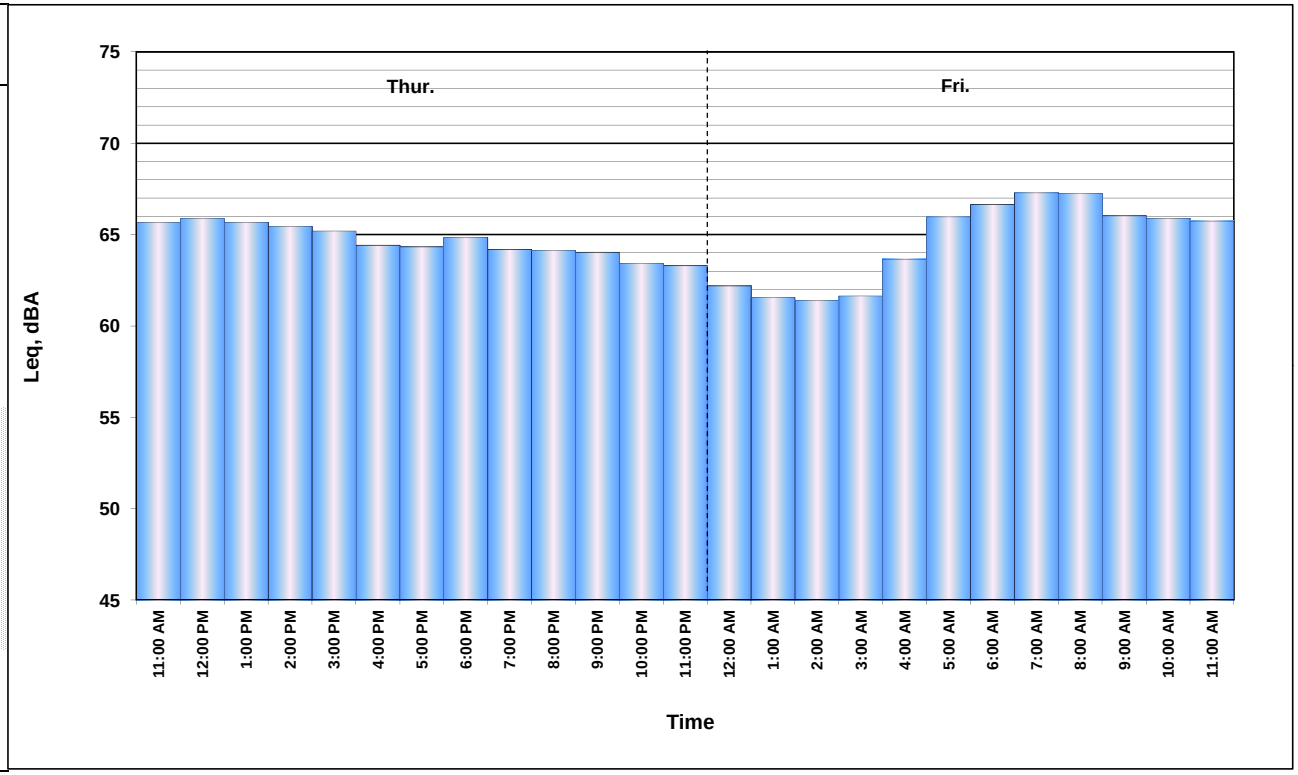


PARSONS

Site LT39 Hourly Noise Levels, $L_{eq}(h)$

Location: 1336 N. Holmes Court, Ontario, CA
Position: Back Yard
Sources: Interstate 10
Date: 10/10/13 - 10/11/13 See attached Noise Measurement Form.

TIME	10/10-10/11 $L_{eq(h)}$ dBA	10/11 $L_{eq(h)}$ dBA
11:00 - 12:00 PM	66	66
12:00 - 01:00 PM	66	-
01:00 - 02:00 PM	66	-
02:00 - 03:00 PM	65	-
03:00 - 04:00 PM	65	-
04:00 - 05:00 PM	64	-
05:00 - 06:00 PM	64	-
06:00 - 07:00 PM	65	-
07:00 - 08:00 PM	64	-
08:00 - 09:00 PM	64	-
09:00 - 10:00 PM	64	-
10:00 - 11:00 PM	63	-
11:00 - 12:00 AM	63	-
12:00 - 01:00 AM	62	-
01:00 - 02:00 AM	62	-
02:00 - 03:00 AM	61	-
03:00 - 04:00 AM	62	-
04:00 - 05:00 AM	64	-
05:00 - 06:00 AM	66	-
06:00 - 07:00 AM	67	-
07:00 - 08:00 AM	67	-
08:00 - 09:00 AM	67	-
09:00 - 10:00 AM	66	-
10:00 - 11:00 AM	66	-



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		ENGINEER: [redacted] R. URENA	DATE: 10/10/13
MEASUREMENT ADDRESS: 1553 E. FRESNO ST	CITY: ONTARIO	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: LT40

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 2916

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2330

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____
S/N 2480
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 , 114.0 , 0.6 , 9:47
After 114.0 , 113.8 , 0.6 , 12:02

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

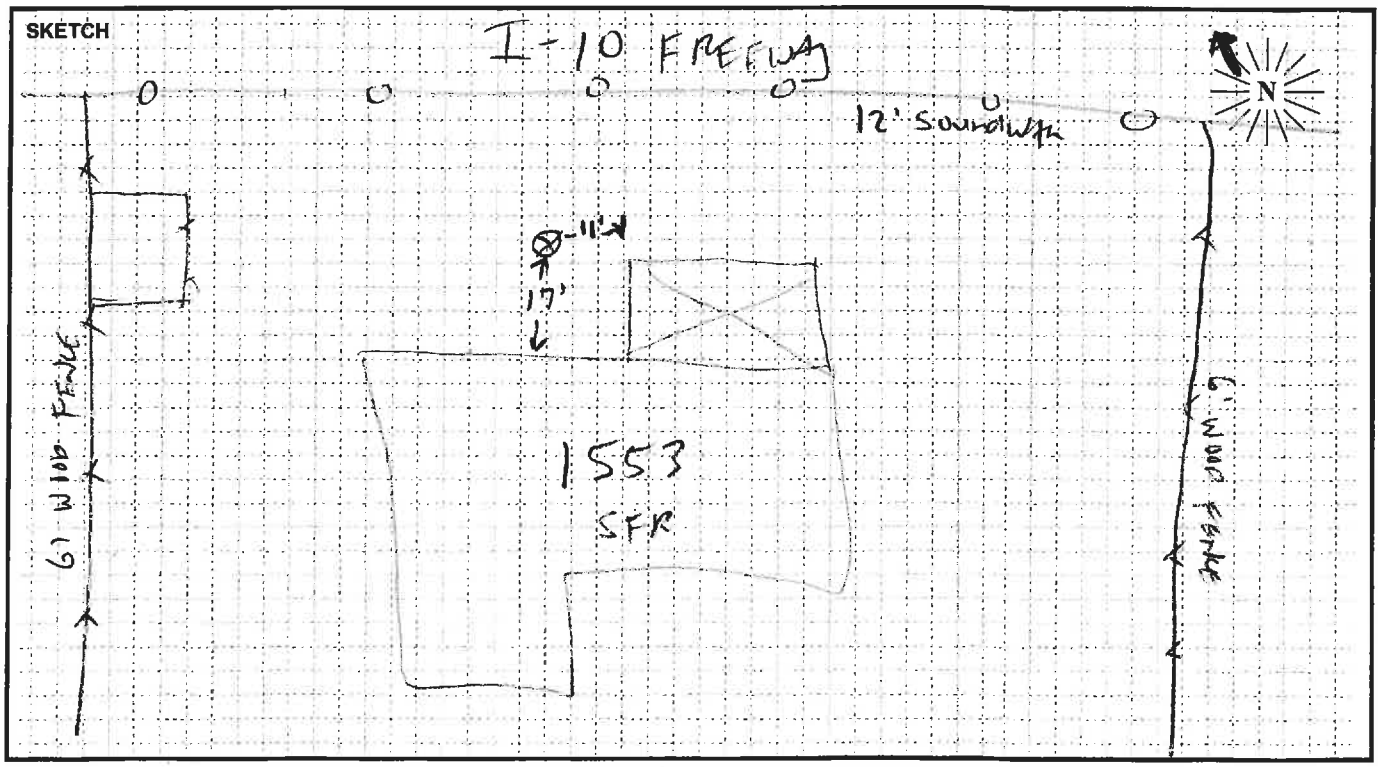
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 68.4 °F R.H.: 49.4 %
WIND SPEED: 0.6 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA _____
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	10:02											
10/11		11:58										

SKETCH

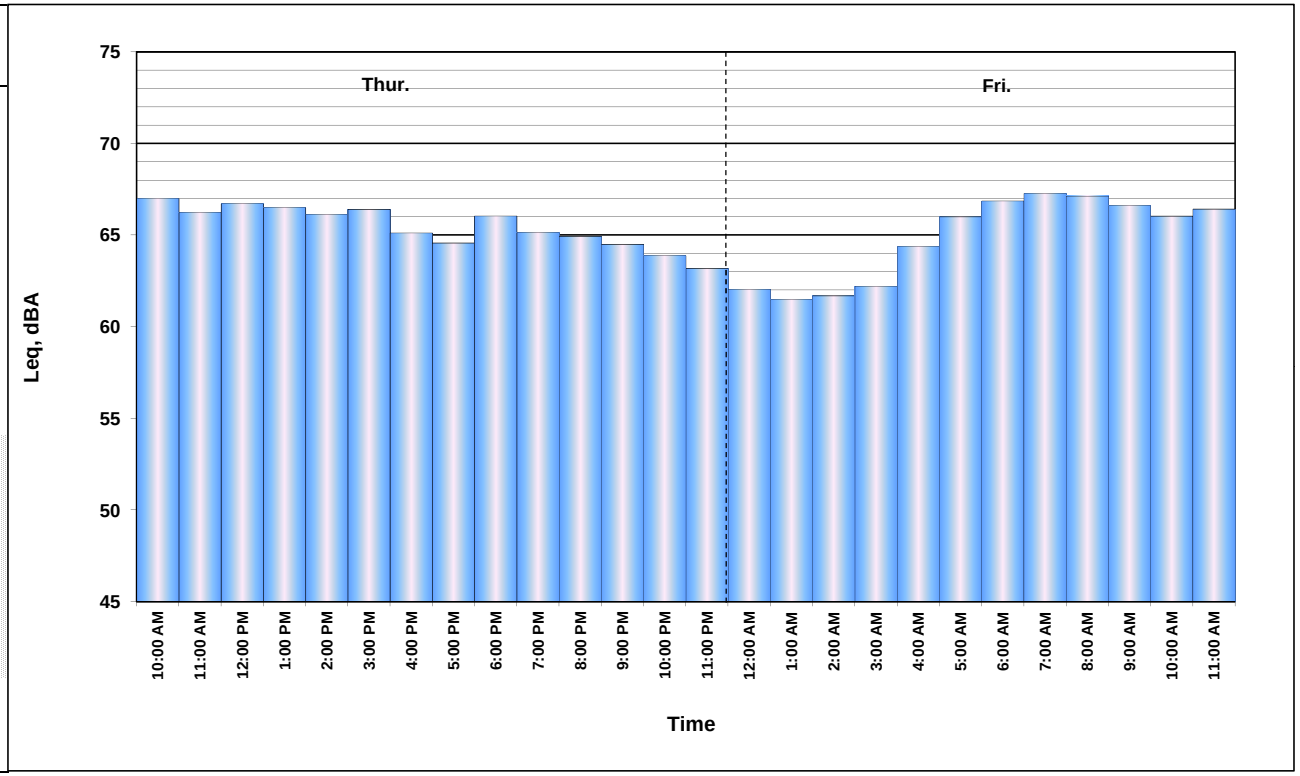


PARSONS

Site LT40 Hourly Noise Levels, $L_{eq}(h)$

Location: 1553 E. Fresno Street, Ontario, CA
Position: Back Yard
Sources: Interstate 10
Date: 10/10/13 - 10/11/13 See attached Noise Measurement Form.

TIME	10/10-10/11 $L_{eq(h)}$ dBA	10/11 $L_{eq(h)}$ dBA
10:00 - 11:00 AM	67	66
11:00 - 12:00 PM	66	66
12:00 - 01:00 PM	67	-
01:00 - 02:00 PM	66	-
02:00 - 03:00 PM	66	-
03:00 - 04:00 PM	66	-
04:00 - 05:00 PM	65	-
05:00 - 06:00 PM	65	-
06:00 - 07:00 PM	66	-
07:00 - 08:00 PM	65	-
08:00 - 09:00 PM	65	-
09:00 - 10:00 PM	65	-
10:00 - 11:00 PM	64	-
11:00 - 12:00 AM	63	-
12:00 - 01:00 AM	62	-
01:00 - 02:00 AM	61	-
02:00 - 03:00 AM	62	-
03:00 - 04:00 AM	62	-
04:00 - 05:00 AM	64	-
05:00 - 06:00 AM	66	-
06:00 - 07:00 AM	67	-
07:00 - 08:00 AM	67	-
08:00 - 09:00 AM	67	-
09:00 - 10:00 AM	67	-



FIELD SURVEY FORM

10/10/R

PROJECT: I-10 EXPRESS LANE	ENGINEER: M. MEYER	DATE: 10/3/13
MEASUREMENT ADDRESS: 1702 E Granada CT	CITY: Ontario	☒ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial — SITE NO.: LT41

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☐ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0688

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 3378

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 7901

CALIBRATOR: ☐ LD CA250 ☒ LD CA200 ☐ B&K 4231 ☐ _____ S/N 10473
Freq, Hz.: ☐ 250 ☒ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 8.0, 9:56
After 114.0, 114.0, 8.0, 15:59

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

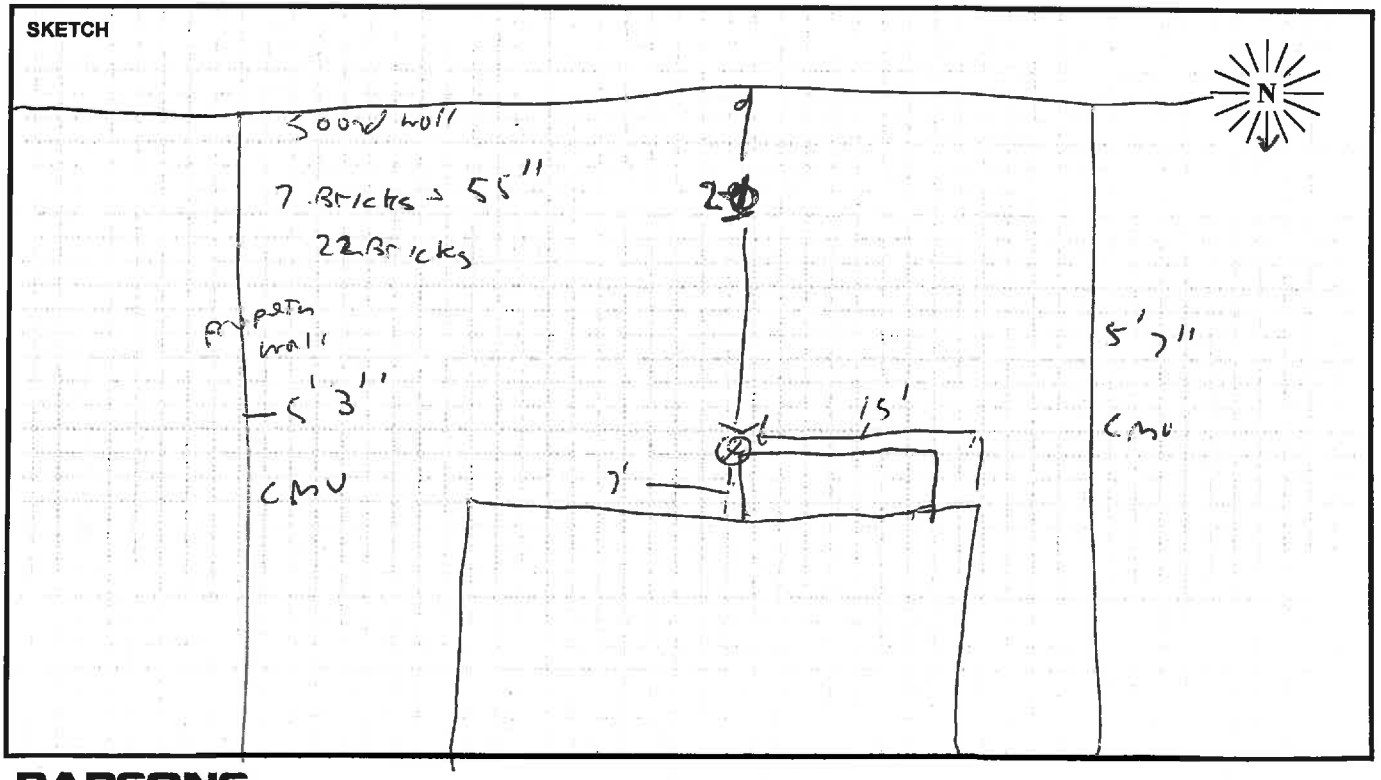
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 68 °F R.H.: 49 %
WIND SPEED: 04 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA _____
PHOTO NOs. _____

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar — Counts AT MT HT

MEAS. TYPE: ☒ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
10/10	10:00	9:58										

05 OCT 11

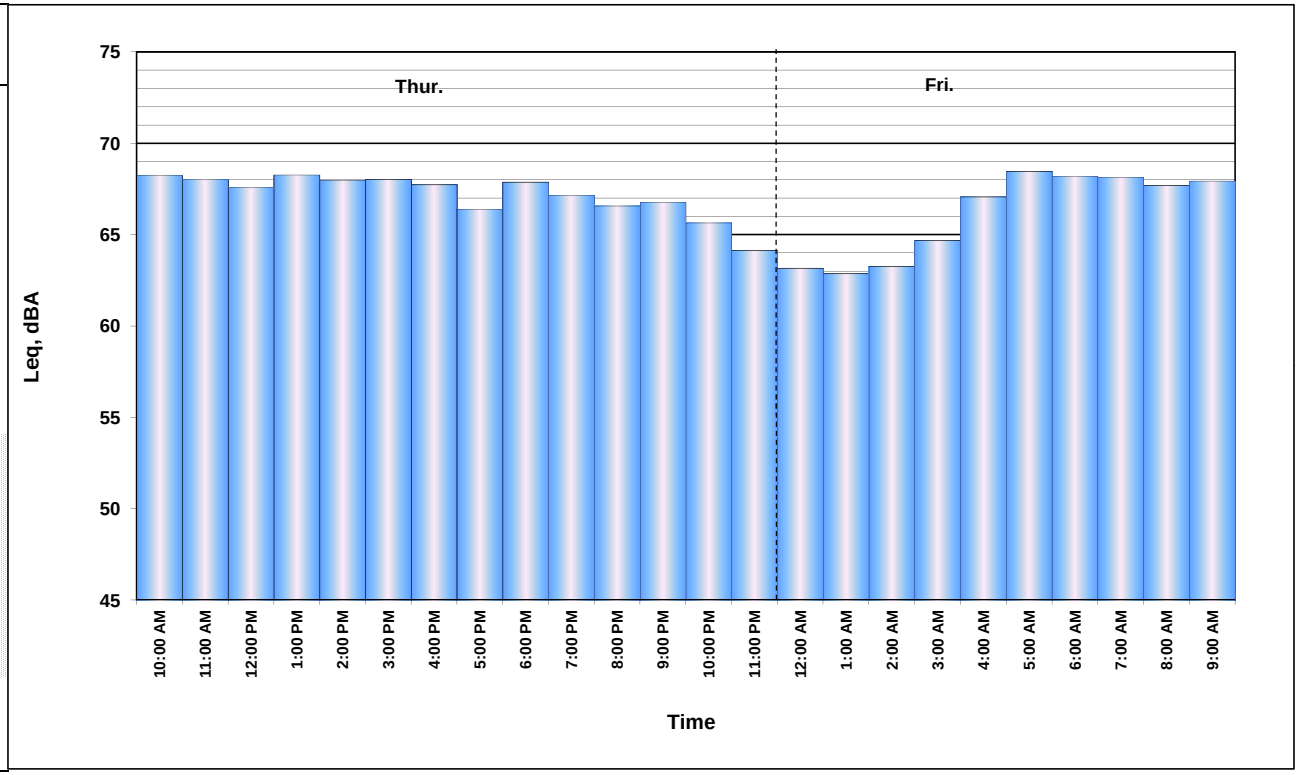


PARSONS

Site LT41 Hourly Noise Levels, $L_{eq}(h)$

Location: 1702 E. Granada Ct, Ontario, CA
Position: Back Yard
Sources: Interstate 10
Date: 10/10/13 - 10/11/13 See attached Noise Measurement Form.

TIME	10/10-10/11 $L_{eq(h)}$ dBA	10/11 $L_{eq(h)}$ dBA
10:00 - 11:00 AM	68	-
11:00 - 12:00 PM	68	-
12:00 - 01:00 PM	68	-
01:00 - 02:00 PM	68	-
02:00 - 03:00 PM	68	-
03:00 - 04:00 PM	68	-
04:00 - 05:00 PM	68	-
05:00 - 06:00 PM	66	-
06:00 - 07:00 PM	68	-
07:00 - 08:00 PM	67	-
08:00 - 09:00 PM	67	-
09:00 - 10:00 PM	67	-
10:00 - 11:00 PM	66	-
11:00 - 12:00 AM	64	-
12:00 - 01:00 AM	63	-
01:00 - 02:00 AM	63	-
02:00 - 03:00 AM	63	-
03:00 - 04:00 AM	65	-
04:00 - 05:00 AM	67	-
05:00 - 06:00 AM	68	-
06:00 - 07:00 AM	68	-
07:00 - 08:00 AM	68	-
08:00 - 09:00 AM	68	-
09:00 - 10:00 AM	68	-



INDOOR/OUTDOOR MEASUREMENTS

FIELD SURVEY FORM

PROJECT: I-10 HOV		ENGINEER:	DATE: 4/22/09
MEASUREMENT ADDRESS: La Quinta Inn #143	CITY:	☐ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: H1

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ LD-824 ☐ LD-812 ☒ LD-2900 ☐ _____	MICROPHONE: ☒ WIND SCREEN ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM	PRE AMP: ☒ LD-900 ☐ LD-828 ☐ _____	NOTES: SYSTEM PWR: ☐ BAT ☐ AC (observations at start of measurement) TEMP: _____ °F R.H.: _____ % WIND SPEED: _____ MPH TOWARD (DIR): _____ SKIES: _____ CAMERA _____ PHOTO NOs. _____
SERIAL #: 0427/0484	SERIAL #: 1785/2206	SERIAL #: 3200/2661	

CALIBRATOR: ☒ LD CA250 ☐ _____ S/N 2127	Freq, Hz. ☒ 250 ☐ 1000 ☐ _____	CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time Before 105.4, 105.4, —, 9:28 After _____/_____/_____/_____

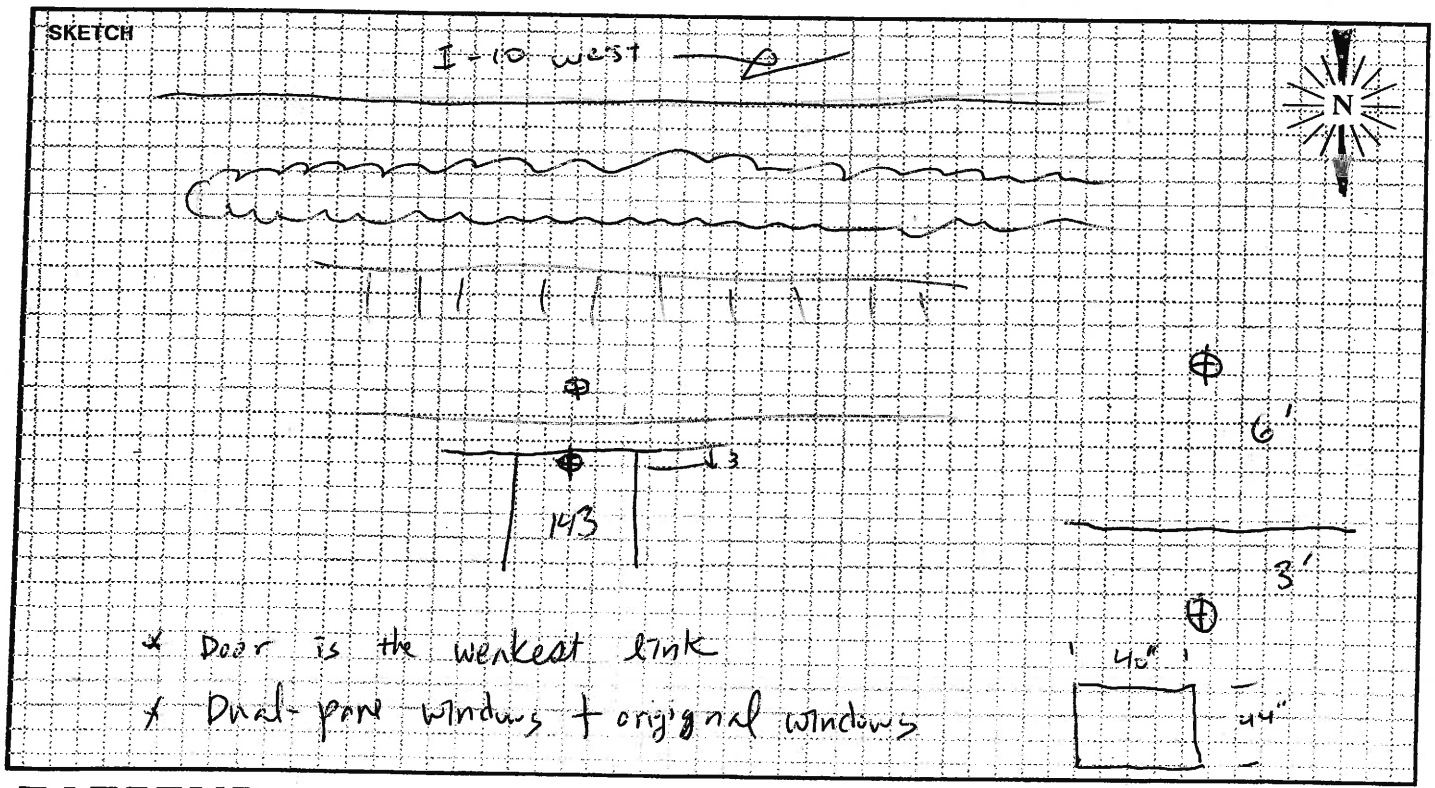
METER SETTINGS:
☐ A-WTD ☐ LINEAR ☐ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:	interio
4/22	9:40	10:00									73.3	window closed	42.9
	10:05	10:08									73.5	window open	57.4

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOV		ENGINEER:	DATE: 4/22/09
MEASUREMENT ADDRESS: Super 8 #112	CITY:	☐ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: H2

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820
☐ LD-824 ☐ LD-812
☒ LD-2900 ☐ x 2
SERIAL #: 0427 / 0484

MICROPHONE: ☑ WIND SCREEN
☑ NON-POLAR ☐ POLARIZED
☑ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
SERIAL #: 1785 / 2206

PRE AMP:
☒ LD-900
☐ LD-828
☐ _____
SERIAL #: 2200 / 2661

NOTES:
SYSTEM PWR: ☐ BAT ☐ AC
(observations at start of measurement)
TEMP: 80 °F R.H.: 40 %
WIND SPEED: 0.8 MPH
TOWARD (DIR): _____
SKIES: _____
CAMERA _____
PHOTO NOs. _____

CALIBRATOR:
☒ LD CA250
☐ _____
S/N 2127

Freq, Hz.
☒ 250
☐ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 105.4 / 105.4 / — / _____
After _____ / _____ / _____ / _____

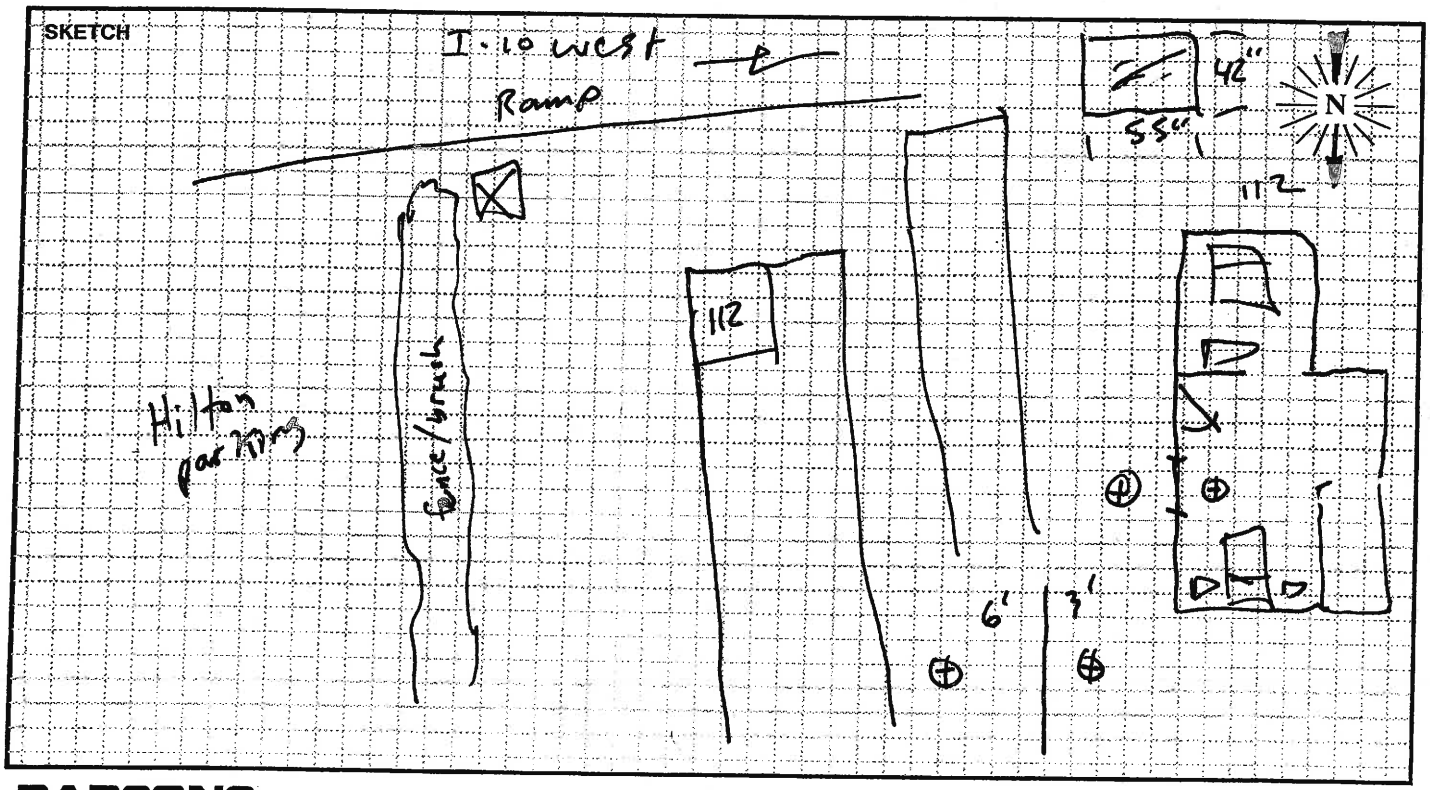
METER SETTINGS:
☐ A-WTD ☐ LINEAR ☐ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:	
4/22	16:50	17:10									68.4	Closed	42.5
4/22	17:13	17:16									68.0	Open	58.7

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOV		ENGINEER:	DATE: 4/22/09
MEASUREMENT ADDRESS: (Hilton Hotel) #123	CITY:	☐ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: H3

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ LD-824 ☐ LD-812 ☒ LD-2900 ☐ _____	MICROPHONE: ☒ WIND SCREEN ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM	PRE AMP: ☒ LD-900 ☐ LD-828 ☐ _____	NOTES: SYSTEM PWR: ☒ BAT ☐ AC (observations at start of measurement) TEMP: _____ °F R.H.: _____ % WIND SPEED: _____ MPH TOWARD (DIR): _____ SKIES: Partly cloudy CAMERA _____ PHOTO NOs. _____
SERIAL #: 0427/0484	SERIAL #: 1785/2206	SERIAL #: 3200/2661	

CALIBRATOR: ☒ LD CA250 ☐ _____ S/N _____

Freq, Hz.: ☐ 250 ☐ 1000 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 105.4 / 105.4 / — / _____

After _____ / _____ / _____ / _____

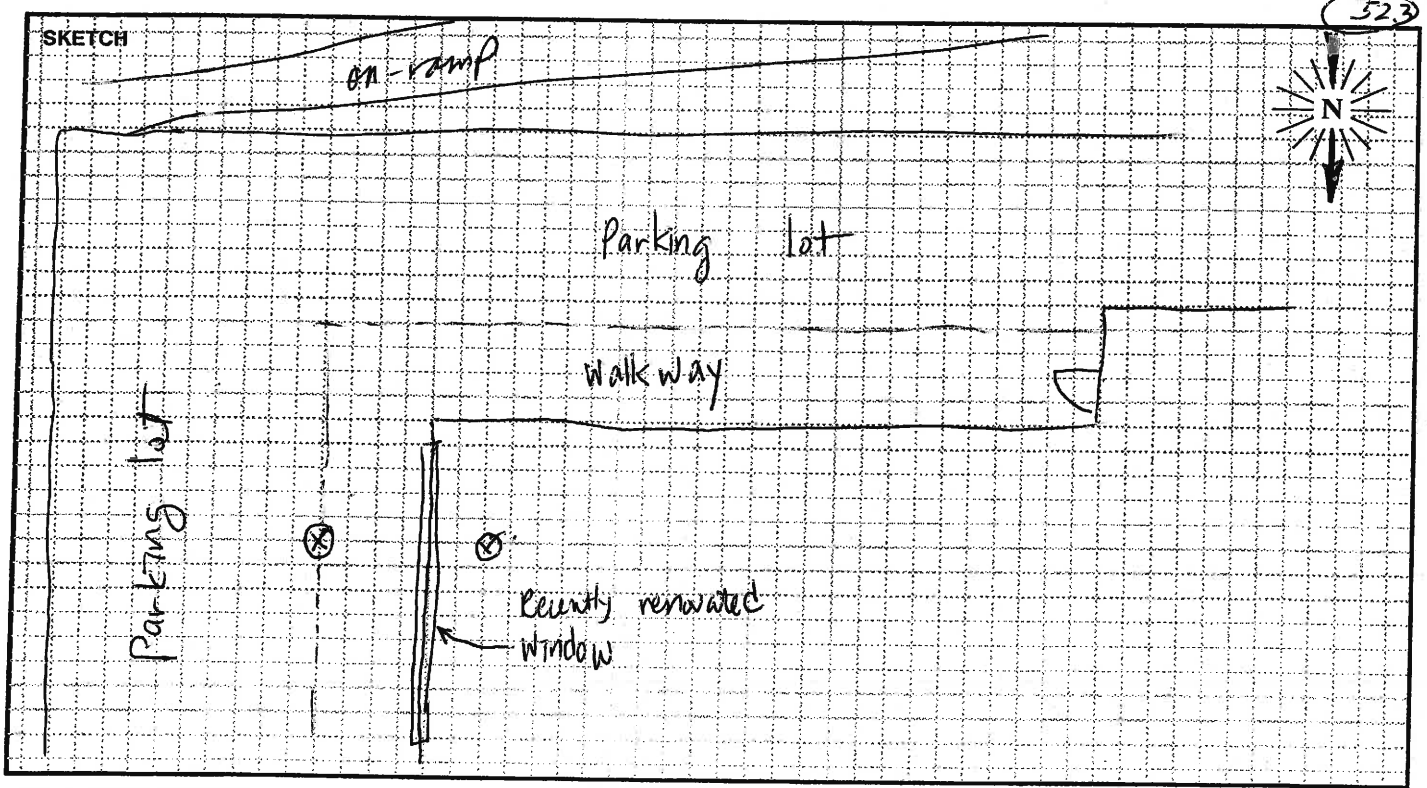
METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 20 - MINUTE ☐ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
123 4/22	15:33	15:36									64.7	Windows open (50.9)
4/22	15:40	16:00									65.0	36.5
230	16:12											(40.1) Windows closed

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOV		ENGINEER:	DATE: 4/22/09
MEASUREMENT ADDRESS: Fairfield Inn # 102	CITY:	☐ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: H4

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820
☐ LD-824 ☐ LD-812
☒ LD-2900 ☐ _____
SERIAL #: 0427/0484

MICROPHONE: ☒ WIND SCREEN
☒ NON-POLAR ☐ POLARIZED
☑ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
SERIAL #: 1785/2206

PRE AMP:
☒ LD-900
☐ LD-828
☐ _____
SERIAL #: 3200/2661

CALIBRATOR:
☒ LD CA250
☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 105.4, 105.4, —, 13:40
After _____/_____/_____/_____

METER SETTINGS:
☐ A-WTD ☐ LINEAR ☐ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

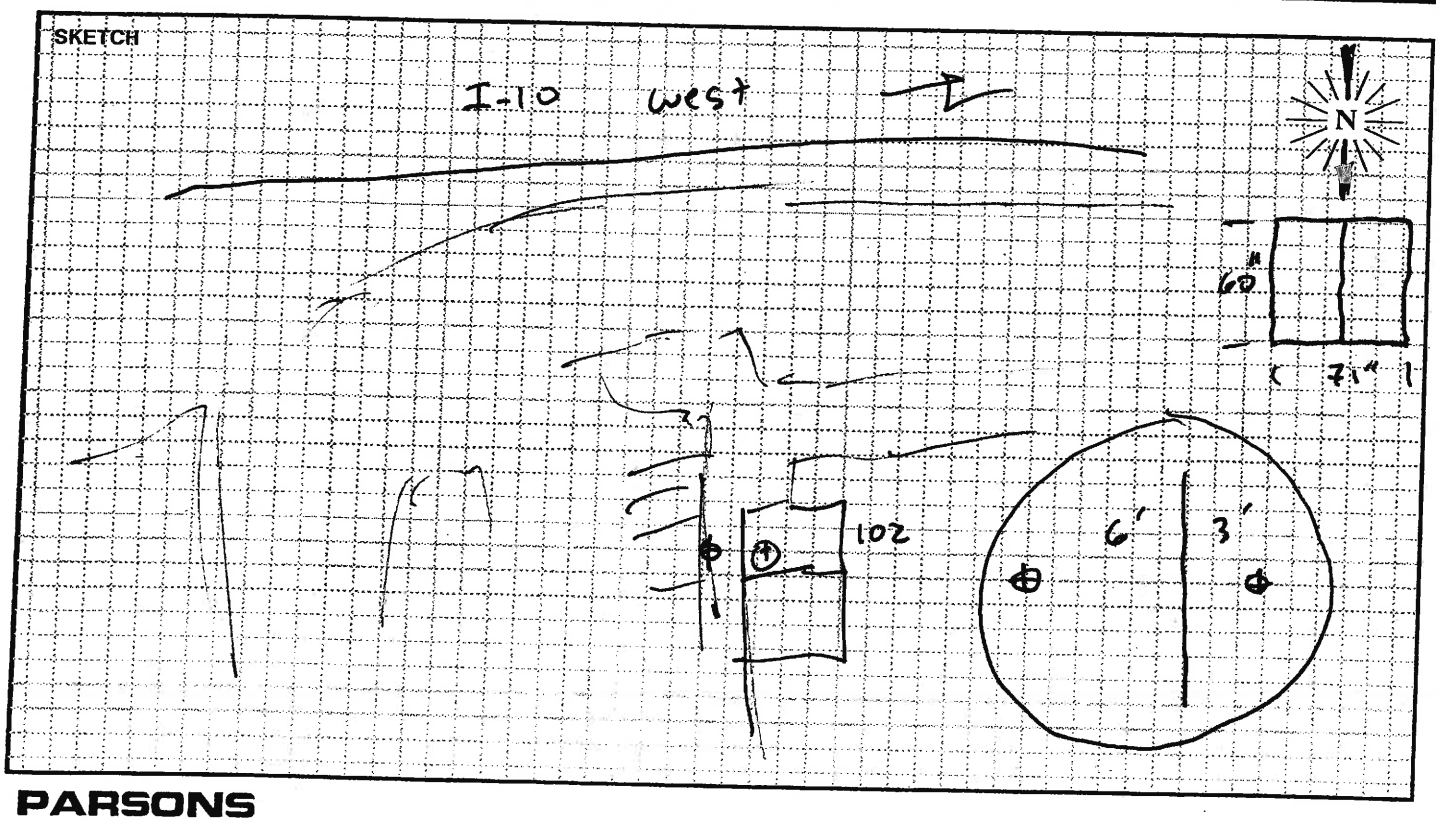
NOTES:
SYSTEM PWR: ☐ BAT ☐ AC
(observations at start of measurement)
TEMP: 88 °F R.H.: 22 %
WIND SPEED: 2.6 MPH
TOWARD (DIR): W
SKIES: Clear
CAMERA _____
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:	
	14:00	14:20									69.1	Closed	40.7
	1422	14:25									68.7	Open	61.5

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOV		ENGINEER: Philip Ju	DATE: 4/30/09
MEASUREMENT ADDRESS: Country Inn & Suites	CITY: Redland	☐ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: H 5

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820
☐ LD-824 ☐ LD-812
☒ LD-2900 ☐ _____
SERIAL #: 0427 / 0484

MICROPHONE: ☒ WIND SCREEN
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
SERIAL #: 1399 / 3200

PRE AMP:
☒ LD-900
☐ LD-828
☐ _____
SERIAL #: 2206 / 2313

CALIBRATOR:
☒ LD CA250
☐ _____
S/N 2480
Freq, Hz.
☒ 250
☐ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 105.4 / 105.3 / – / 14:11
After _____ / _____ / _____ / _____

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☒ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

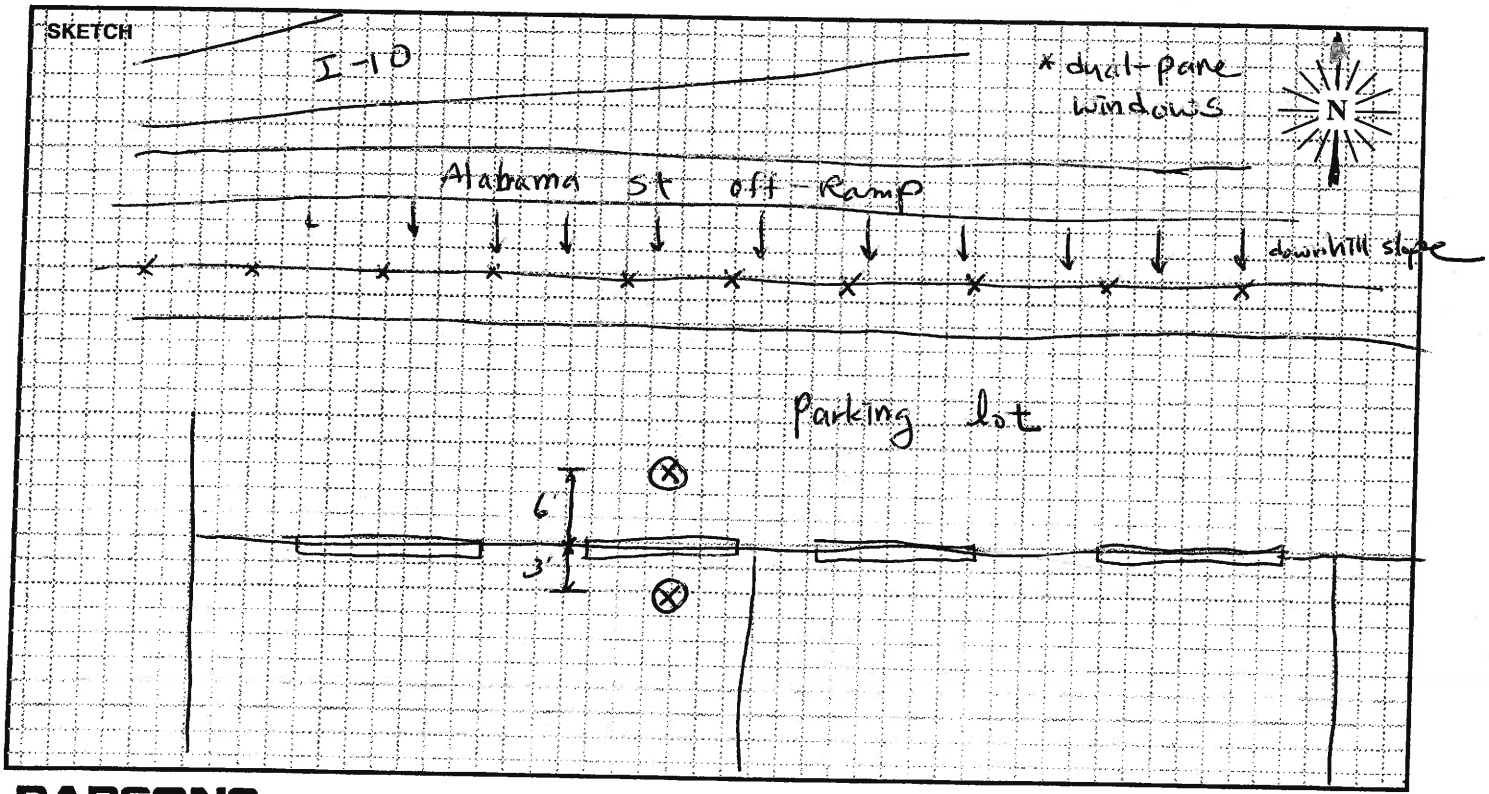
NOTES:
SYSTEM PWR: ☐ BAT ☐ AC
(observations at start of measurement)
TEMP: _____ °F R.H.: _____ %
WIND SPEED: _____ MPH
FROM (DIR): _____
SKIES: clear
CAMERA _____
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:	
4/30	14:20	14:40									63.7	Windows closed	388
	14:51										63.7	Windows open	52.6

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor | ENGINEER: G. Berg, R. Urenda | DATE: 1/28/15

MEASUREMENT ADDRESS: Super 8 Rm 135 | CITY: Redlands | ☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial | SITE NO.: H6

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE: ☐ NON-POLAR ☒ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3155

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-902 ☐ _____
SERIAL #: 1891

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 114.0, 6.7, 9:44a
After 114.0, 113.9, 6.7, 10:29a

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 5 - MINUTE ☒ L_N PERCENTILE VALUES

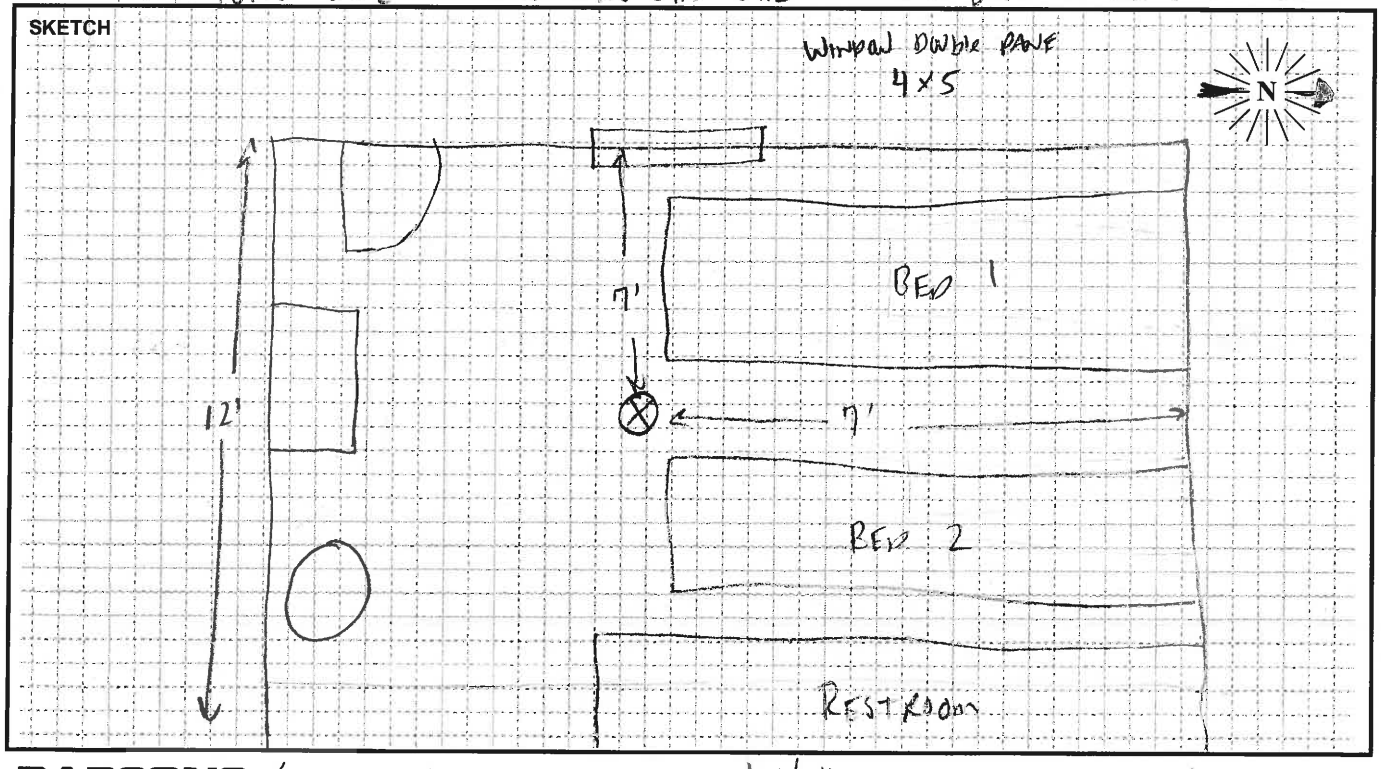
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 73 °F R.H.: 42 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: Hazy
CAMERA _____
PHOTO NOs. _____

NOTES: Interior | Dist. to Center of Nearest Lane _____ | ☐ Video ☐ Radar | Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
1/28	10:03	10:04	36.1		36.7	38.1	39.8	41.5		47.3	39.2	AMBIENT DOOR CLOSED
1/28	10:06	10:07	51.6		51.8	53.2	54	54.6		55.2	53.4	AMBIENT DOOR OPEN
1/28	10:11	10:12	68.1		68.1	68.5	68.6	68.6		68.6	68.3	SPEAKER DOOR CLOSED
1/28	10:14	10:15	84.2		84.8	84.8	84.5	84.2		84.8	84.6	SPEAKER DOOR OPEN

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor | ENGINEER: R. Urenda | DATE: 1/28/15

MEASUREMENT ADDRESS: Super 8 - Rm 135 | CITY: Redlands | ☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial | SITE NO.: 176

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 6639

MICROPHONE:
☑ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☑ WIND SCREEN
SERIAL #: 3155

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-902 ☐ _____
SERIAL #: 1891

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 6.7 / 9:44
After 114.0 / 113.9 / — / 10:29

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES: cont'd

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 73 °F R.H.: 42 %

WIND SPEED: 1.0 MPH

TOWARD (DIR): _____

SKIES: Hazy

CAMERA _____

PHOTO NOs. _____

NOTES: Interior cont'd

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
1/28	10:16	10:17	77.5		77.5	77.7	78	78.3		78.7	77.9	SPEAKER WINDOW OPEN
1/28	10:19	10:20	84.5		84.5	84.6	85	85.2		85.2	84.9	SPEAKER WINDOW AND DOOR OPEN
1/28	10:22	10:23	50.3		51.1	52.6	54	55.4		56.5	53.3	AMBIENT WINDOW & DOOR OPEN
1/28	10:24	10:25	44.2		45.3	47.7	48	49.7		55.6	48	AMBIENT WINDOW OPEN

SKETCH

See previous sketch

N

PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOV		ENGINEER:	DATE: 4/30/08
MEASUREMENT ADDRESS: Comfort Suites #201	CITY: Redland	☐ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: H7

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820
☐ LD-824 ☐ LD-812
☒ LD-2900 ☐ _____
SERIAL #: 0427 / 0484

MICROPHONE: ☒ WIND SCREEN
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
SERIAL #: 1399 / 3200

PRE AMP:
☒ LD-900
☐ LD-828
☐ _____
SERIAL #: 2206 / 2313

CALIBRATOR:
☒ LD CA250
☐ _____
S/N 2480

Freq, Hz.
☐ 250
☐ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 105.4 / 105.3 / -0.1 / 14:11
After 105.4 / 105.4 / 105.2 / -0.2 / 16:08

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☒ 1/3 OCT ☐ L_N PERCENTILE VALUES

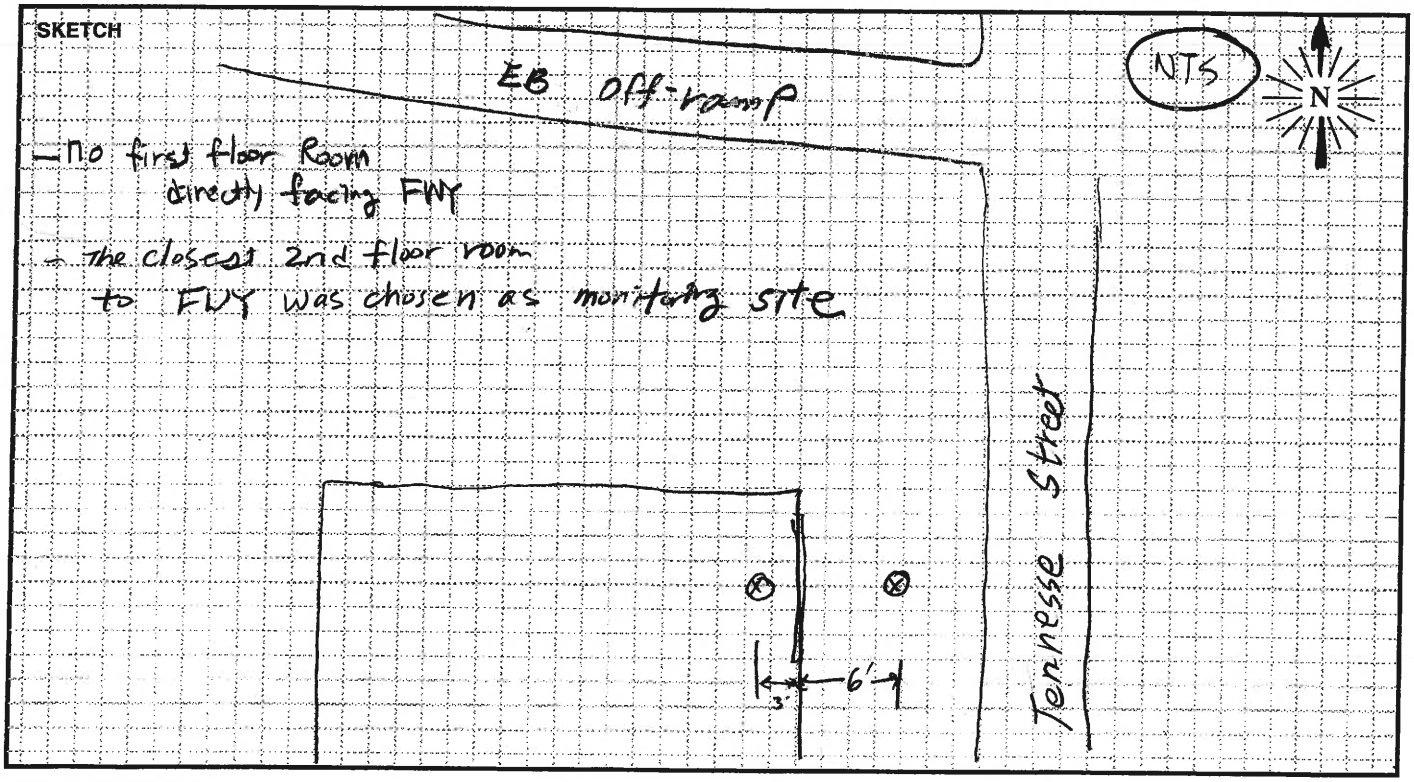
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: _____ °F R.H.: _____ %
WIND SPEED: _____ MPH
FROM (DIR): _____
SKIES: _____
CAMERA _____
PHOTO NOs. _____

NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
4/30	17:31	17:34									62.8	Windows open 57.9
4/30	17:40	18:00									64.3	38.0

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOV		ENGINEER: Jason Ogden / Parsons JO	DATE: 4/30
MEASUREMENT ADDRESS: Howard Johnson #112	CITY: Redland	☐ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: H 8

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820
☐ LD-824 ☐ LD-812
☒ LD-2900 ☐ _____
SERIAL #: 0427 / 0484

MICROPHONE: ☒ WIND SCREEN
☐ NON-POLAR ☐ POLARIZED
☐ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
SERIAL #: 1399 / 3200

PRE AMP:
☐ LD-900
☐ LD-828
☐ _____
SERIAL #: 2206 / 2313

CALIBRATOR:
☐ LD CA250
☒ CAL200
S/N _____
Freq, Hz.
☐ 250
☐ 1000
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114 / 114 / — /
After 114 / 114.1 / 113.8 / +.1 / −.3 / 12:47 / 12:48

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☒ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: _____ °F R.H.: _____ %
WIND SPEED: _____ MPH
FROM (DIR): _____
SKIES: clear sky
CAMERA _____
PHOTO NOs. _____

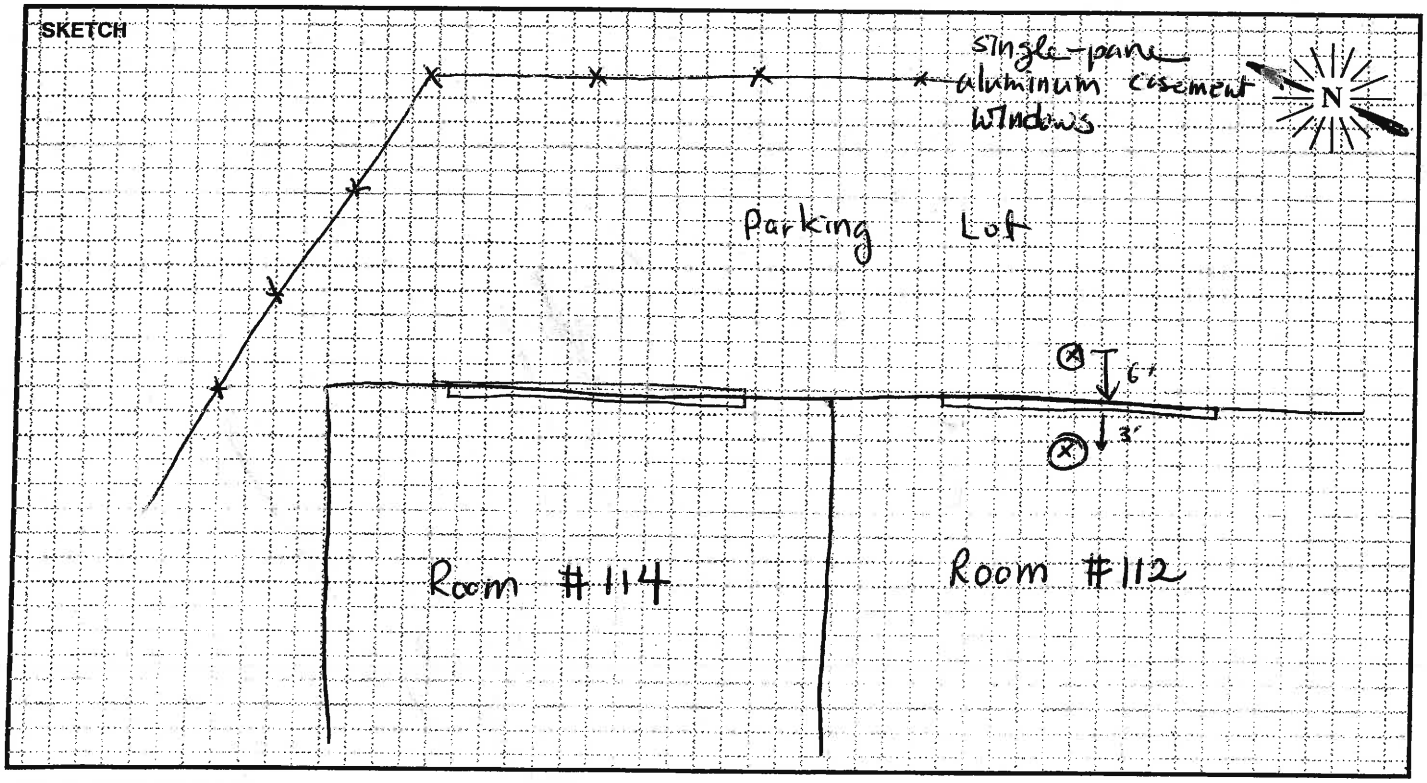
NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
4/30/09	12:20	12:40									68.8	Windows closed
												Windows bolted

45.6

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 HOV		ENGINEER: Philip J. / Jason Ogden	DATE: 4/30
MEASUREMENT ADDRESS: Ayres Hotel #101	CITY:	☐ Single-Family ☐ Multi-Family ☐ Recreational ☐ Commercial	SITE NO.: H9

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:	NOTES:
☐ LD-870 ☐ LD-820	☒ WIND SCREEN		
☐ LD-824 ☐ LD-812	☐ NON-POLAR ☐ POLARIZED	☒ LD-900	SYSTEM PWR: ☒ BAT ☐ AC
☒ LD-2900 ☐ _____	☒ 1/2-INCH ☐ FREEFIELD	☐ LD-828	(observations at start of measurement)
SERIAL #: 0427 / 0484	☐ 1-INCH ☐ RANDOM	☐ _____	TEMP: _____ °F R.H.: _____ %
	SERIAL #: 1785 / 2206	SERIAL #: 3200 / 2661	WIND SPEED: _____ MPH

CALIBRATOR:	CALIBRATION RECORD:	
☐ LD CA250	Freq, Hz.	Input, dB / Reading, dB / Offset, dB / Time
☒ CAL200	☐ 250	Before 114 / 114 / – / 10:30
S/N _____	☒ 1000	After _____ / _____ / _____ / _____
	☐ _____	TOWARD (DIR): _____
		SKIES: Partly Cloudy

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☐ SLOW ☐ 1/1 OCT ☒ INTERVALS 20 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☒ 1/3 OCT ☐ L_N PERCENTILE VALUES

CAMERA _____
PHOTO NOs. _____

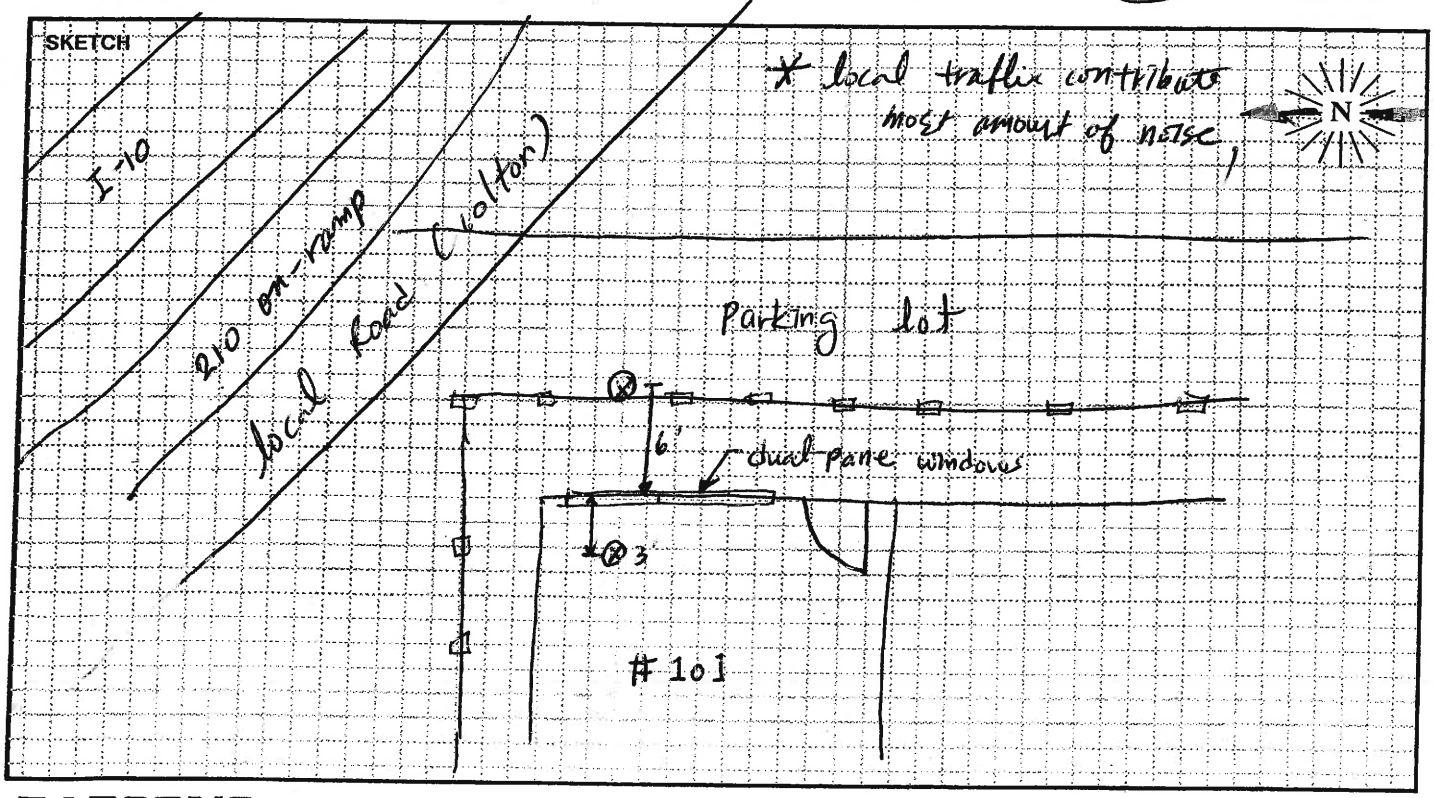
NOTES:
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☐ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
4/30/09	10:40	11:00									69.6	46.7 interior
4/30	11:08	11:11									65.9	Windows open (~5")
4/30/09	11:20	11:40									66.5	39.4 interior

continuous because truck horn noise 49.1

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. UREÑA | DATE: 11/11/14

MEASUREMENT ADDRESS: #102 FAIRFIELD INN | CITY: ONTARIO | ☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial | SITE NO.: H12

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0659

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3155

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1939

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 6.9 / 11:49
After 114.0 / 114.0 / 6.9 / 12:10

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 1 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

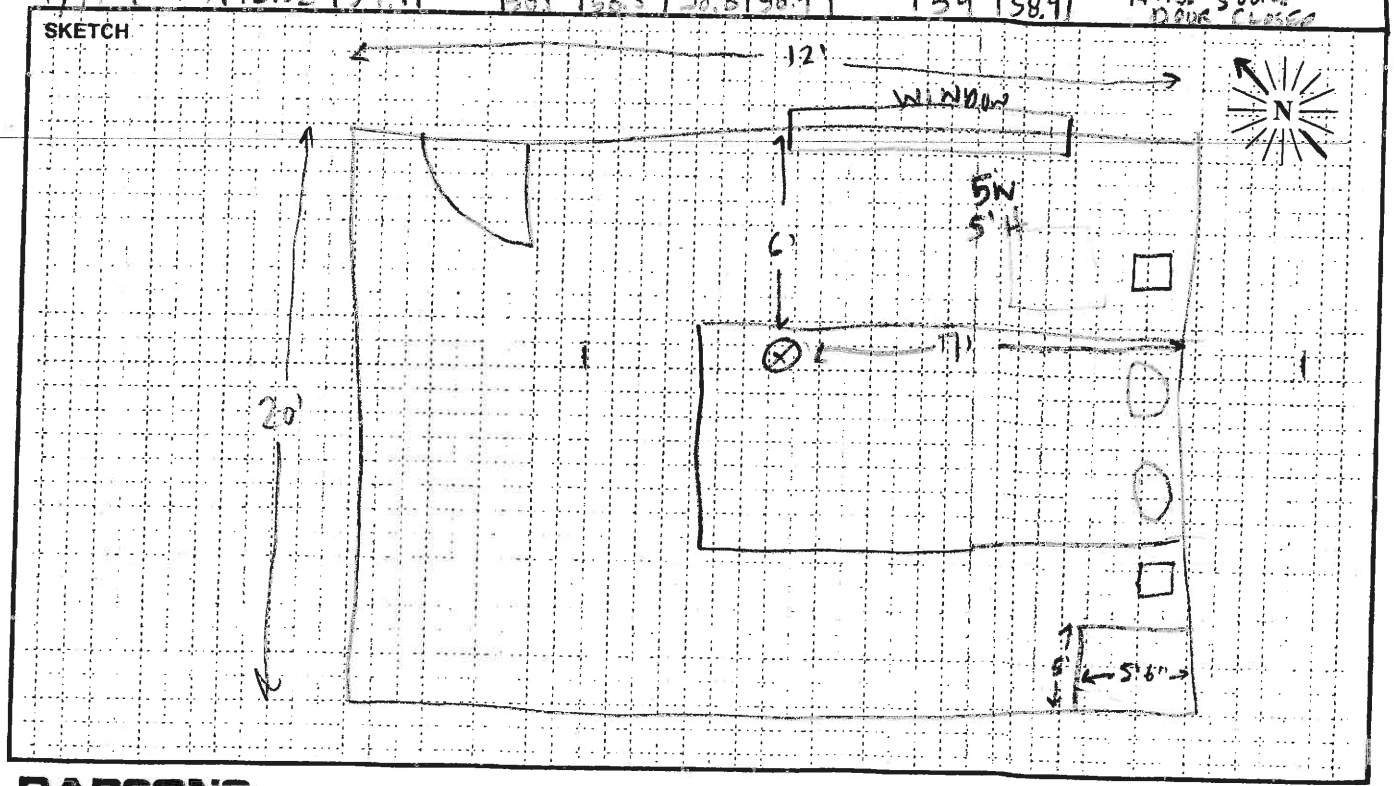
NOTES: SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: — °F R.H.: — %
WIND SPEED: — MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA ROBEI PHONE
PHOTO NOs. _____

NOTES: INTERIOR | Dist. to Center of Nearest Lane _____ | ☐ Video ☐ Radar | Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
11/11	11:52	11:53	42.1		42.5	43.6	44.2	44.7		45.3	43.7	DOOR CLOSE BACKGROUND
11/11	11:55	11:56	63.5		64.3	65.9	67.3	68.1		72.4	66.5	DOOR OPEN BACKGROUND
11/11	11:58	11:59	81.5		81.5	81.6	81.9	82.1		82.1	81.9	NOISE SOURCE DOOR OPEN
11/11	12:01	12:02	57.9		58.1	58.5	58.8	58.9		59	58.4	NOISE SOURCE DOOR CLOSED

SKETCH



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		R. URENDA	DATE: 11/10/14
MEASUREMENT ADDRESS: BEST WESTERN PLUS	CITY: ONTARIO	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: H14

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0659

MICROPHONE: ☐ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3155

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1939

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 , 114.0 , 6.9 , 9:52a
After 114.0 , 114.0 , 6.9 , 10:52a

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 5 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☑ L_N PERCENTILE VALUES

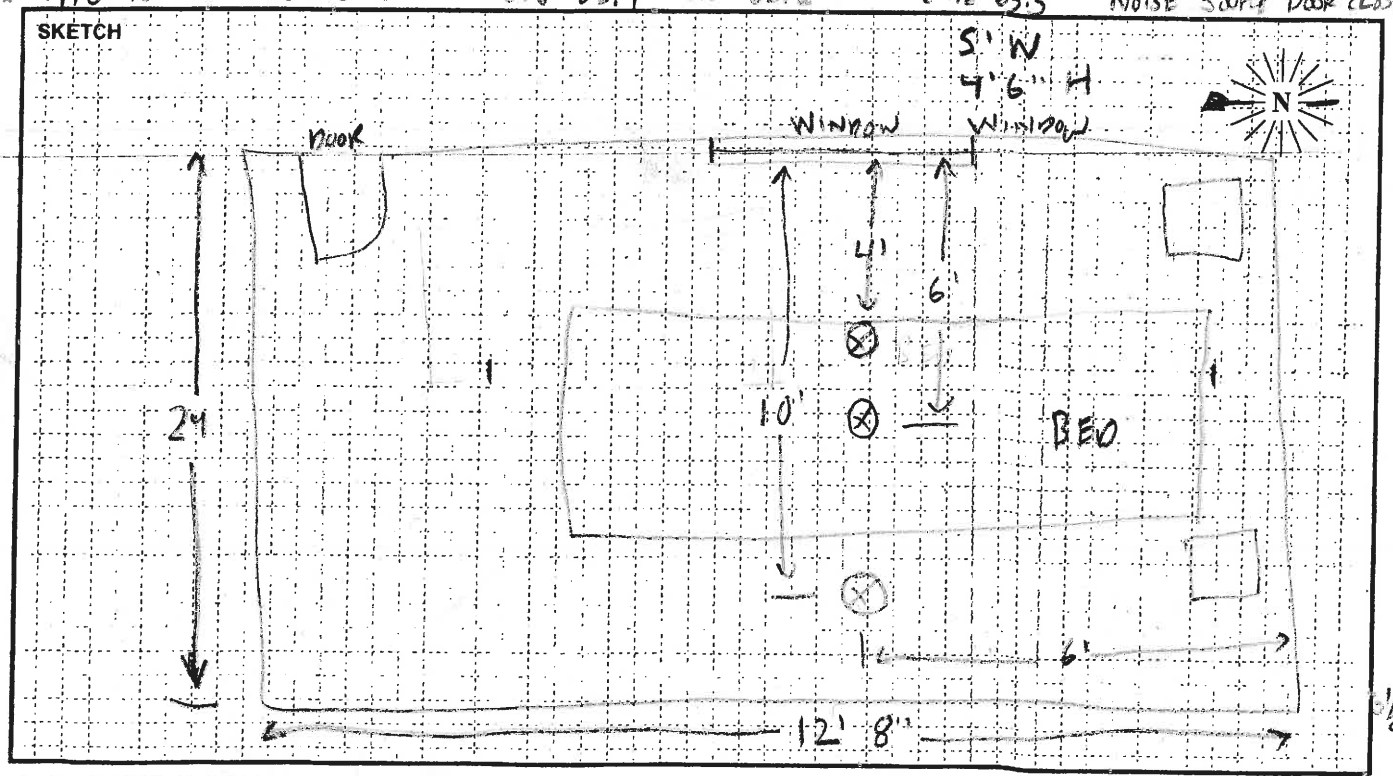
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 83 °F R.H.: 45 %
WIND SPEED: 1.7 MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: #2 WESTBOUND
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

	DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
1 of 2	11/10	9:58	9:59	35		36.7	38.2	38.8	39.4		44.6	38.2	DOOR CLOSED BACKGROUND
1 of 2	11/10	10:03	10:04	52.5		52.5	54	56.3	58.3		61.3	55.4	DOOR OPEN BACKGROUND
1 of 2	11/10	10:09	10:09	82.1		82.3	83.2	83.6	83.7		83.7	83.1	NOISE SOURCE DOOR OPEN
1 of 2	11/10	10:11	10:12	64.8		64.8	65.4	65.8	66.2		66.2	65.5	NOISE SOURCE DOOR CLOSED

SKETCH



NOISE MEASUREMENT FORM

H14

TIME START	TIME END	L_1	L_{10}	L_{25}	L_{50}	L_{90}	L_{99}	L_{MIN}	L_{MAX}	L_{eq}	NOTES:
10:16	10:17		33.4	32.4	31	28.6		28.3	40.9	31.8	DOOR CLOSED Background
10:21	10:22		50.3	49.9	48.3	46.8		45.8	52.2	48.6	DOOR OPEN "
10:23	10:24		78.3	77.4	77.6	77.3		77.3	78.3	77.9	SOURCE NOISE DOOR OPEN
10:26	10:27		58.9	58.8	58.5	58.3		58.3	59.2	58.5	" " " CLOSED
10:34	10:35		77.4	77.4	76.9	75.6		75.6	77.4	76.7	" " " OPEN
10:37	10:38		59.5	59.6	59.3	58.7		58.7	59.8	59.1	" " " CLOSED
10:40	10:41		44.4	37.3	33.5	30.4		30.1	71.2	52.3	DOOR CLOSED Background
10:43	10:44		49.7	49	48	46.4		45.7	50.6	48.3	" OPEN "
10:47	10:48		42.4	35.9	33.5	31.8		30.6	62.2	47	" CLOSED "

PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		R. UREÑA	DATE: 11/11/14
MEASUREMENT ADDRESS: Country Wood	CITY: ONTARIO	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: H16

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0659

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☑ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3155

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 1939

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz. ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 6.9 / 10:31 am
After 114.0 / 114.0 / 6.9 / 11:49 am

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 1 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

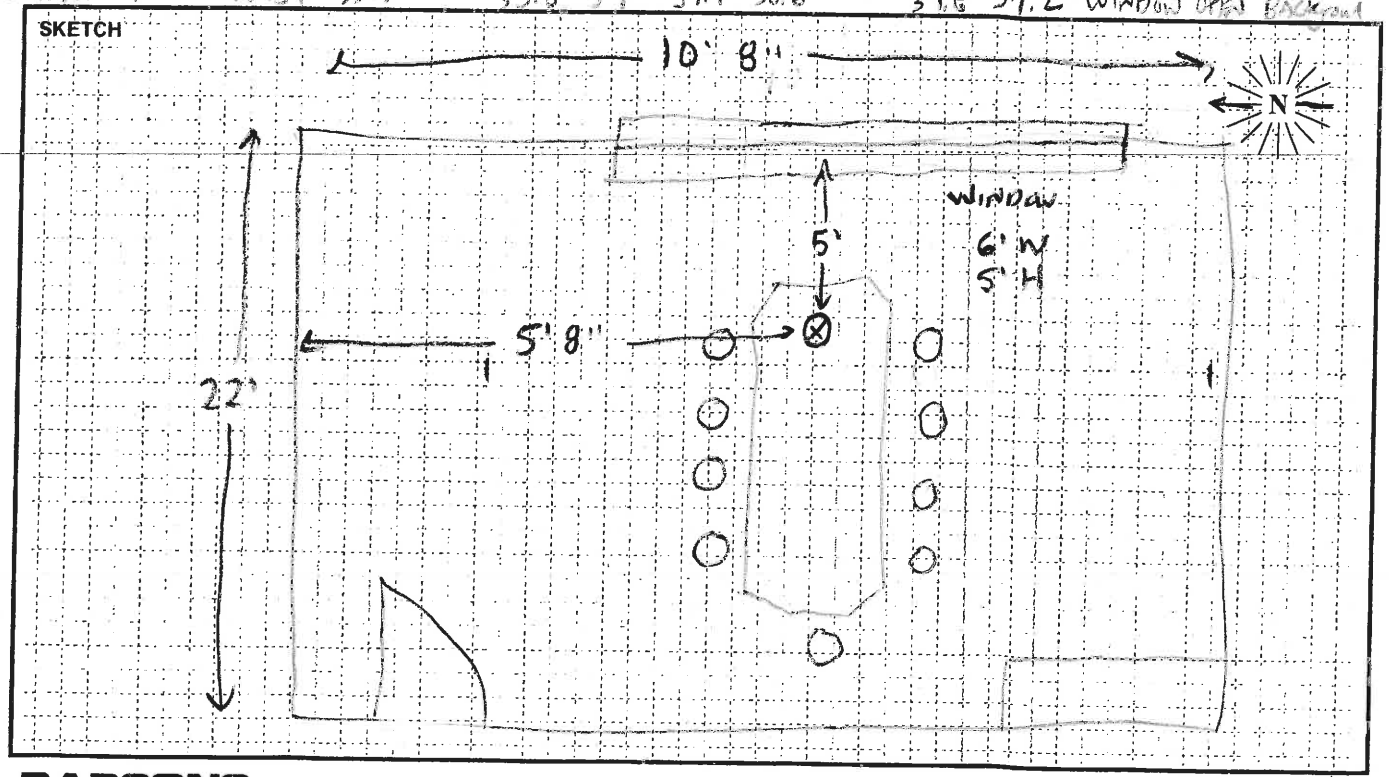
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 64 °F R.H.: 60 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: CLOUDY
CAMERA RUBEN'S PHONE
PHOTO NOs. _____

NOTES: INTERIOR
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

	DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
5ft	11/11	10:41	10:42	67.3		67.3	67.6	67.9	68.4		69.2	67.9	NOISE SOURCE WINDOW OPEN
5ft	11/11	10:43	10:44	34.8		35.3	36.4	36.9	37.9		39.8	36.6	OPEN WINDOW Background
5ft	11/11	10:49	10:49	21.2		21.5	22.8	24.2	33.1		60.7	40.8	WINDOW CLOSED BACKGROUND
5ft	11/11	10:50	10:51	35.3		35.8	37	37.7	38.6		39.8	37.2	WINDOW OPEN BACKGROUND

SKETCH



PARSONS

H16

NOISE MEASUREMENT FORM

TIME START	TIME END	L_1	L_{10}	L_{25}	L_{50}	L_{90}	L_{99}	L_{MIN}	L_{MAX}	L_{eq}	NOTES:
10:54	10:55		48.9	48.8	48.5	48.1		47.6	49.5	48.5	SOURCE WINDOW CLOSED
10:56	10:57		52	51.8	51.5	51.1		51	52.5	51.7	" " "
11:00	11:01		32.4	27.5	25.9	23		22.4	46.9	31.8	Background WINDOW CLOSED

PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES | R. URENA | DATE: 11/11/14

MEASUREMENT ADDRESS: #CLASS 4-123 UEI COLLEGE | CITY: ONTARIO | ☐ Single-Family ☐ Multi-Family ☒ School ☐ Recreational ☐ Commercial | SITE NO.: H17

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0659

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 3155

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 1939

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☐ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.3 / 6.9 / 9:23 am
After 114.0 / 114.0 / 6.9 / 10:31 am

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 1 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

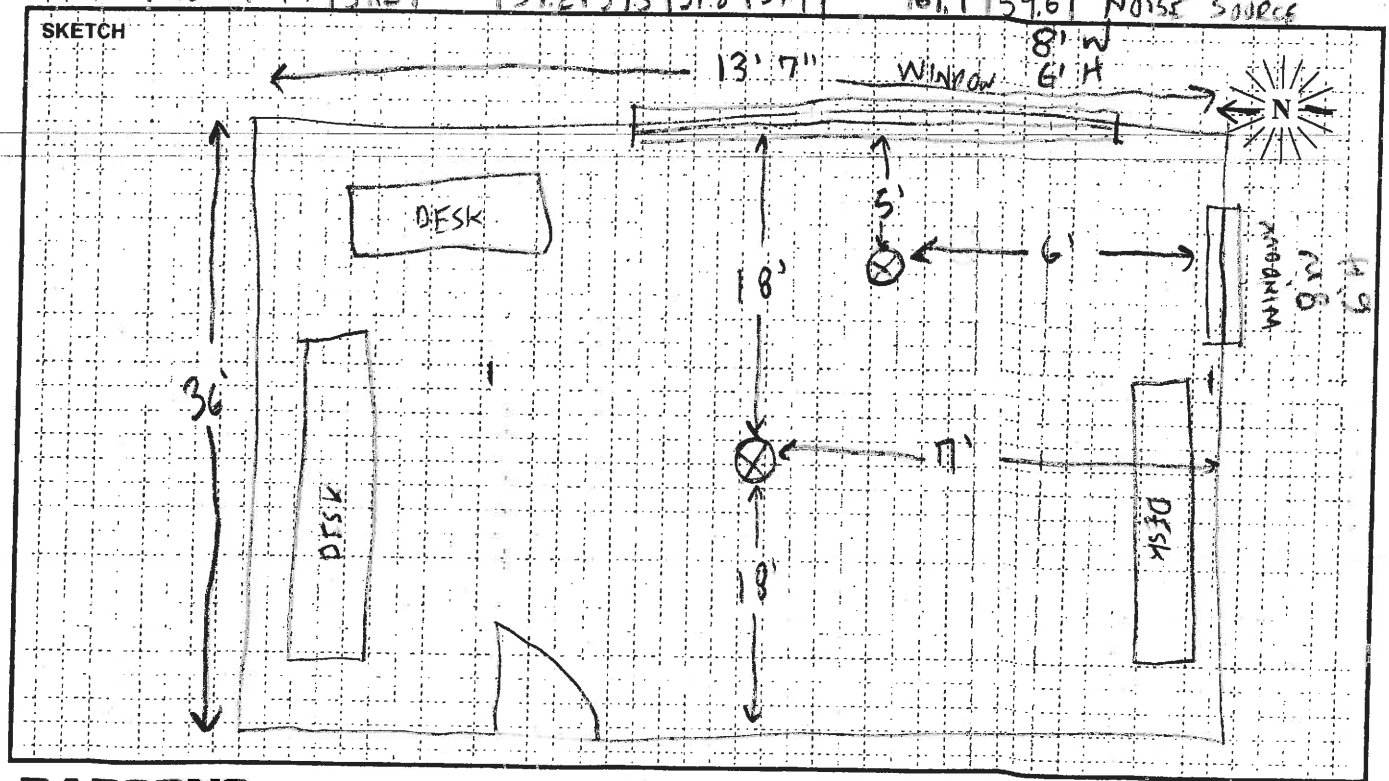
NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 63.6 °F R.H.: 65 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: CLOUDY
CAMERA RUBEN PHONE
PHOTO NOs. _____

NOTES: INTERIOR
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

	DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
5'	11/11	9:32	9:33	36.9		37.2	38.3	39.3	40.9		62.5	44.6	Background
5'	11/11	9:35	9:36	63.4		63.4	63.5	63.8	64		64.7	63.7	NOISE SOURCE
5'	11/11	9:39	9:40	63.3		63.3	63.5	63.8	63.9		64.2	63.7	NOISE SOURCE
18'	11/11	9:43	9:44	59.2		59.2	59.5	59.8	59.9		61.1	59.6	NOISE SOURCE

SKETCH



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANE		ENGINEER: R. URENA	DATE: 1/28/15
MEASUREMENT ADDRESS: Good Nite INN Rm 112	CITY: REDLANDS	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: H18

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 3155

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-902 ☐ _____
SERIAL #: 1991

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2120
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0, 113.9, 6.7, 10:24am
After 114.0, 113.9, —, 14:14

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 1 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 72 °F R.H.: 35 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: Hazy
CAMERA _____
PHOTO NOs. _____

NOTES: INTERIOR

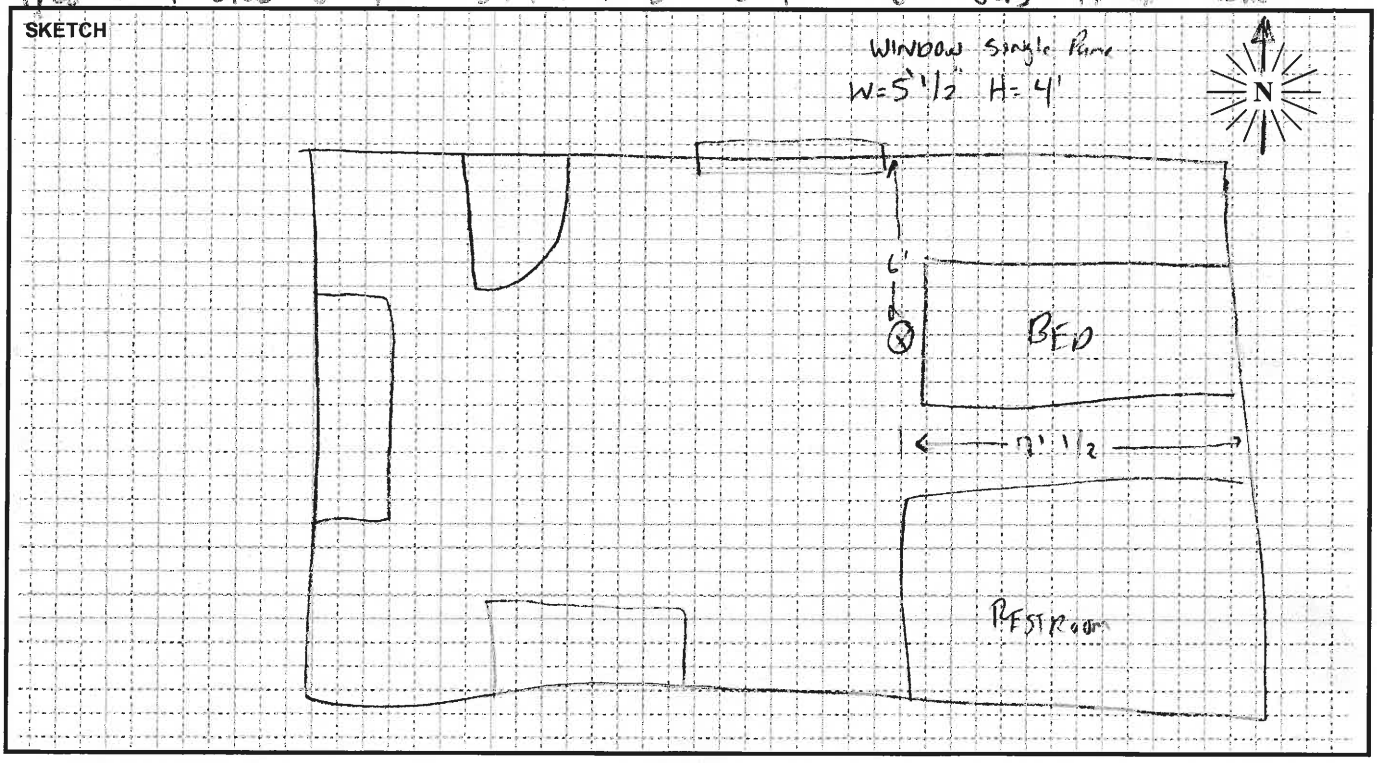
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
1/28	1:55	1:56	42.2		44.2	46.4	47.4	48.6		53.7	47	AMBIENT DOOR CLOSED
1/28	1:57	1:58	55.2		58.3	61.3	62.1	62.8		63.7	61.2	AMBIENT DOOR OPEN
1/28	2:02	2:03	73.4		73.4	73.5	73.8	73.9		74.1	73.7	SPEAKER ALL CLOSED
1/28	2:04	2:05	81.7		81.7	82.3	82.6	82.9		83	82.3	SPEAKER WINDOW

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor | ENGINEER: R. Urenda | DATE: 1/29/15

MEASUREMENT ADDRESS: Good Nite Inn Rm 112 | CITY: Redlands | ☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial | SITE NO.: H18

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 3155

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-902 ☐ _____
SERIAL #: 1891

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.9 / 6.7 / 10:29
After 114.0 / 113.9 / – / 14:14

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☐ INTERVALS _____ - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES: CONT

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 72 °F R.H.: 35 %

WIND SPEED: 1.0 MPH

TOWARD (DIR): _____

SKIES: Hazy

CAMERA _____

PHOTO NOs. _____

NOTES: Interior cont'd

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
1/28	2:07	2:08	91.4		91.4	91.5	91.8	91.9		92.7	91.7	SPEAKER DOOR & WINDOW OPEN
1/29	2:09	2:10	91		91.1	91.5	91.8	91.9		92.2	91.4	SPEAKER DOOR ONLY

SKETCH

See previous sketch

N

PARSONS

FIELD SURVEY FORM

PROJECT: I-10 Corridor		ENGINEER: G. Berg	DATE: 1/28/15
MEASUREMENT ADDRESS: Super 8 - Rm 135	CITY: Redlands	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: H6

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0659

MICROPHONE: ☐ NON-POLAR ☒ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN
SERIAL #: 3378

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-902 ☐ _____
SERIAL #: 1901

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2127
Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 6.9 / 9:50
After 114.0 / 114.0 / 6.9 / 10:29

METER SETTINGS: ☒ A-WTD ☐ C-WTD ☐ LINEAR ☐ IMPULSE ☒ SLOW ☐ FAST ☐ 1/1 OCT ☐ 1/3 OCT ☒ INTERVALS 5 - MINUTE ☒ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 73 °F R.H.: 42 %
WIND SPEED: 1.0 MPH
TOWARD (DIR): _____
SKIES: Hazy
CAMERA _____
PHOTO NOs. _____

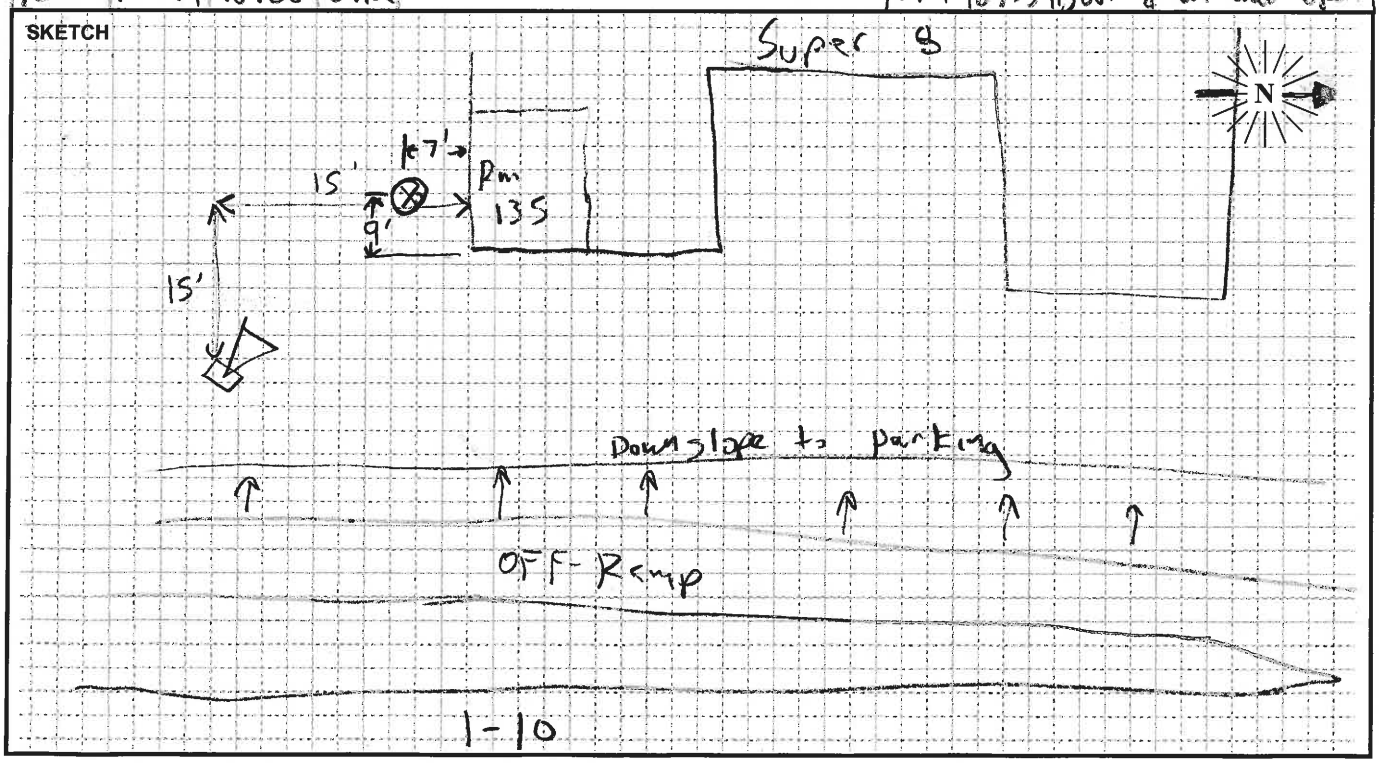
NOTES: Exterior
Double Pane Windows

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
1/28	10:11	10:12	90.9							91.7	91.1	Door Closed
1/28	10:14	10:13	90.7							91.2	90.9	Door open
1/28	10:16	10:17	90.8							91.3	91.1	Window open
1/28	10:19	10:20	87.2							87.7	87.5	Door & window open

SKETCH



PARSONS

FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		M. MEYER	DATE: 11/11
MEASUREMENT ADDRESS: Fairfield INN	CITY: Ontario	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☐ Commercial	SITE NO.: H12

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN
SERIAL #: 3159

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____
SERIAL #: 2330

CALIBRATOR: ☑ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2479
Freq, Hz. ☑ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 7.3 / 11:56
After _____ / _____ / _____ / _____

METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 5 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☐ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: — °F R.H.: — %
WIND SPEED: — MPH
TOWARD (DIR): _____
SKIES: CLEAR
CAMERA _____
PHOTO NOs. _____

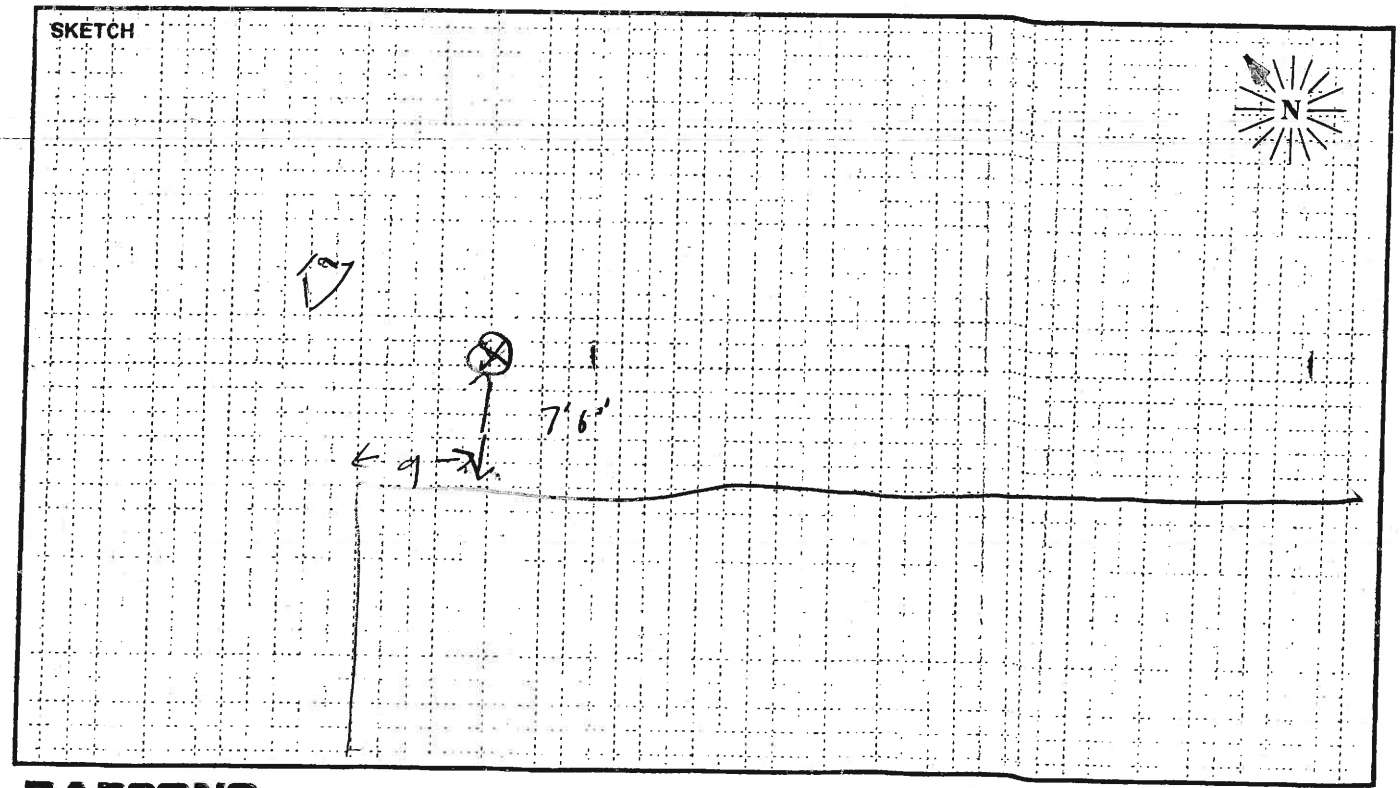
NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
11/11	11:52	11:53	72.4		72.6	73.9	74.5	74.9		75.9	73.9	BG
	11:58	11:[illegible]	87.2		87.2	87.6	87.8	87.6		91.1	89.7	NS OD
	12:01	12:02	69.3		67.3	87.5	90.4	98.4		90.7	89.5	

19
23'6"
30

SKETCH



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		M. MEYER	DATE: 11/10/14
MEASUREMENT ADDRESS: BEST WESTERN PLUS	CITY: ONTARIO	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: H14

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 3159

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2330

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2127
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 114.0 / 7.7 / 9:48am
After 114.6 / 114.0 / 7.3 / 11:56am

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 5 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 83 °F R.H.: 9%
WIND SPEED: 1/7 MPH
TOWARD (DIR): _____
SKIES: Clear
CAMERA _____
PHOTO NOs. _____

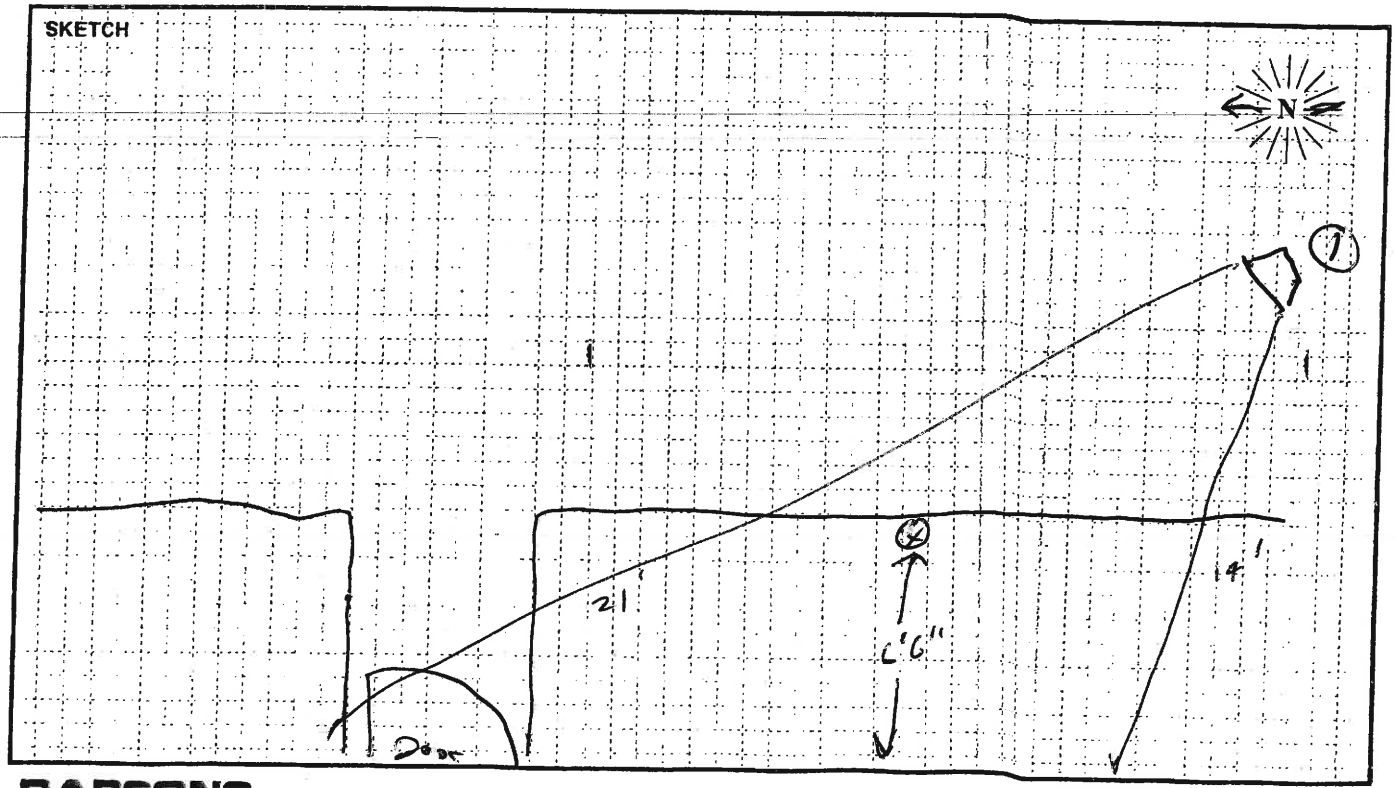
NOTES: H1 EXTERIOR

Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
11/10	9:58	9:59	63.8		64.6	67.1	67.9	68.6		69.0	67.0	BG 1
	10:03		62.9		65.1	65.9	67.4	68.5		71.0	66.9	BG 2
	10:04		74.6		94.1	94.6	94.8	95.0		95.1	94.8	Noise source changed

SKETCH



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		M. MEYER	DATE: 11/11
MEASUREMENT ADDRESS: Country INN	CITY:	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	SITE NO.: H16

SOUND LEVEL METER:
☐ LD-870 ☐ LD-820 ☐ B&K-2238
☐ LD-824 ☒ LD-812 ☐ B&K-2250
☐ LD-2900 ☐ _____
SERIAL #: 0639

MICROPHONE:
☒ NON-POLAR ☐ POLARIZED
☒ 1/2-INCH ☐ FREEFIELD
☐ 1-INCH ☐ RANDOM
☒ WIND SCREEN
SERIAL #: 3159

PRE AMP:
☐ LD-900 ☐ ZC-0030
☒ LD-828 ☐ ZC-0032
☐ LD-824 ☐ _____
SERIAL #: 2330

CALIBRATOR:
☒ LD CA250 ☐ LD CA200
☐ B&K 4231 ☐ _____
S/N 2479
Freq, Hz.
☒ 250
☐ 1000
☐ 84
☐ _____

CALIBRATION RECORD:
Input, dB / Reading, dB / Offset, dB / Time
Before 114.0 / 113.9 / 7.3 / 10:34
After _____ / _____ / _____ / _____

METER SETTINGS:
☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 5 - MINUTE
☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES:
SYSTEM PWR: ☒ BAT ☐ AC
(observations at start of measurement)
TEMP: 64 °F R.H.: 60 %
WIND SPEED: 10 MPH
TOWARD (DIR): _____
SKIES: Cloudy
CAMERA _____
PHOTO NOs. _____

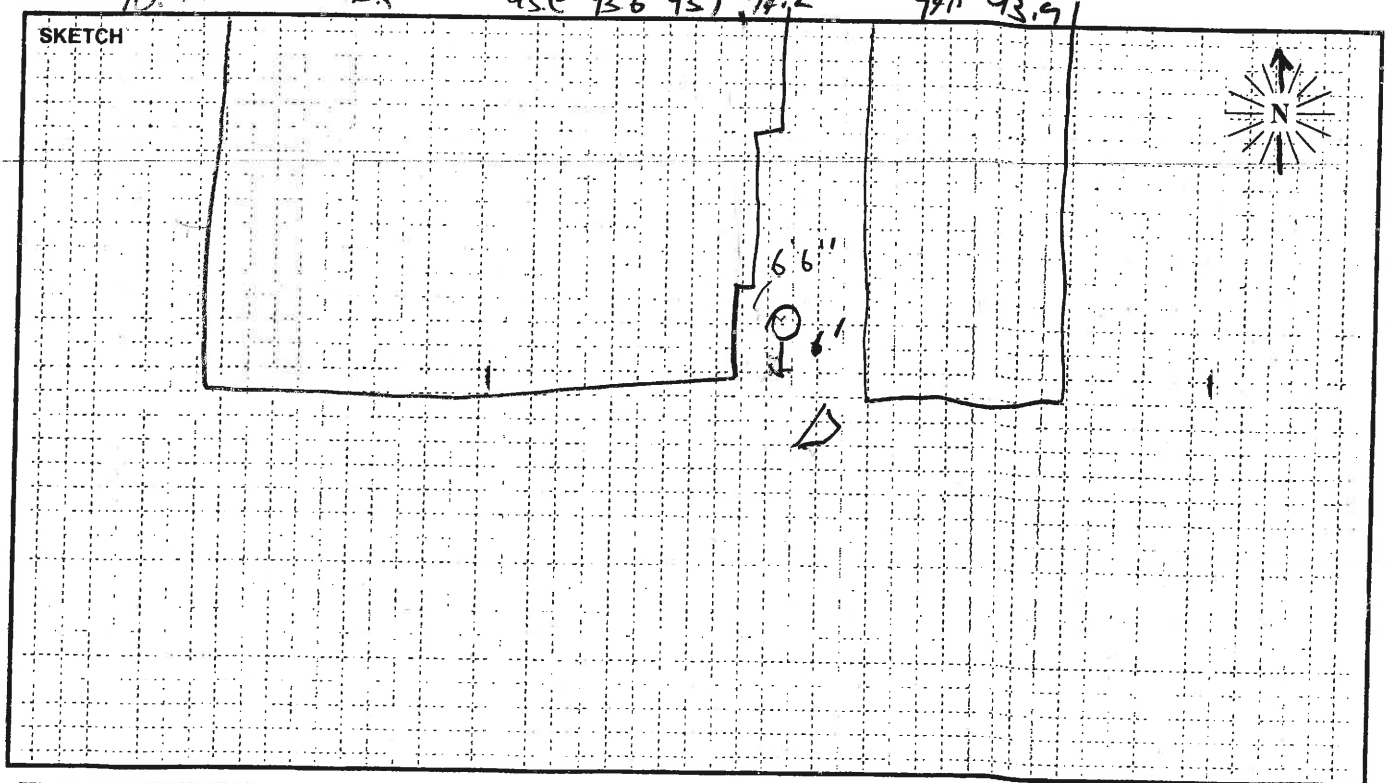
NOTES:
Dist. to Center of Nearest Lane _____
☐ Video ☐ Radar
Counts AT MT HT

MEAS. TYPE:
☐ Long Term
☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
11/11	10:34	10:36	60.6		61.2	62.5	63.2	63.8		64.4	62.6	RC
	10:41	10:42	90.5		90.5	90.4	90.8	91.0		91.1	90.8	NS OW
	10:54	10:56			90.1	90.5	90.7	90.7			90.4	CW

10:57 93.5 93.5 93.6 93.9 94.2 99.1 93.9

SKETCH



FIELD SURVEY FORM

PROJECT: I-10 EXPRESS LANES		M. MEYER	DATE: 11/11/14
MEASUREMENT ADDRESS: UEP	CITY: Ontario	☐ Single-Family ☐ Multi-Family ☒ School ☐ Recreational ☐ Commercial	SITE NO.: H17

SOUND LEVEL METER: ☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____

MICROPHONE: ☒ NON-POLAR ☐ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☒ WIND SCREEN

PRE AMP: ☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-824 ☐ _____

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

SERIAL #:	SERIAL #:	SERIAL #:
0639	3159	2330

CALIBRATOR: ☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____ S/N 2479

Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD: Input, dB / Reading, dB / Offset, dB / Time

Before 114.0 / 114.3 / 7.3 / 9:05 am

After 114.0 / 114.0 / 7.3 / 9:48 am

(observations at start of measurement)

TEMP: 63.6 °F R.H.: 65 %

WIND SPEED: 1.0 MPH

TOWARD (DIR): _____

SKIES: Cloudy

CAMERA _____

PHOTO NOs. _____

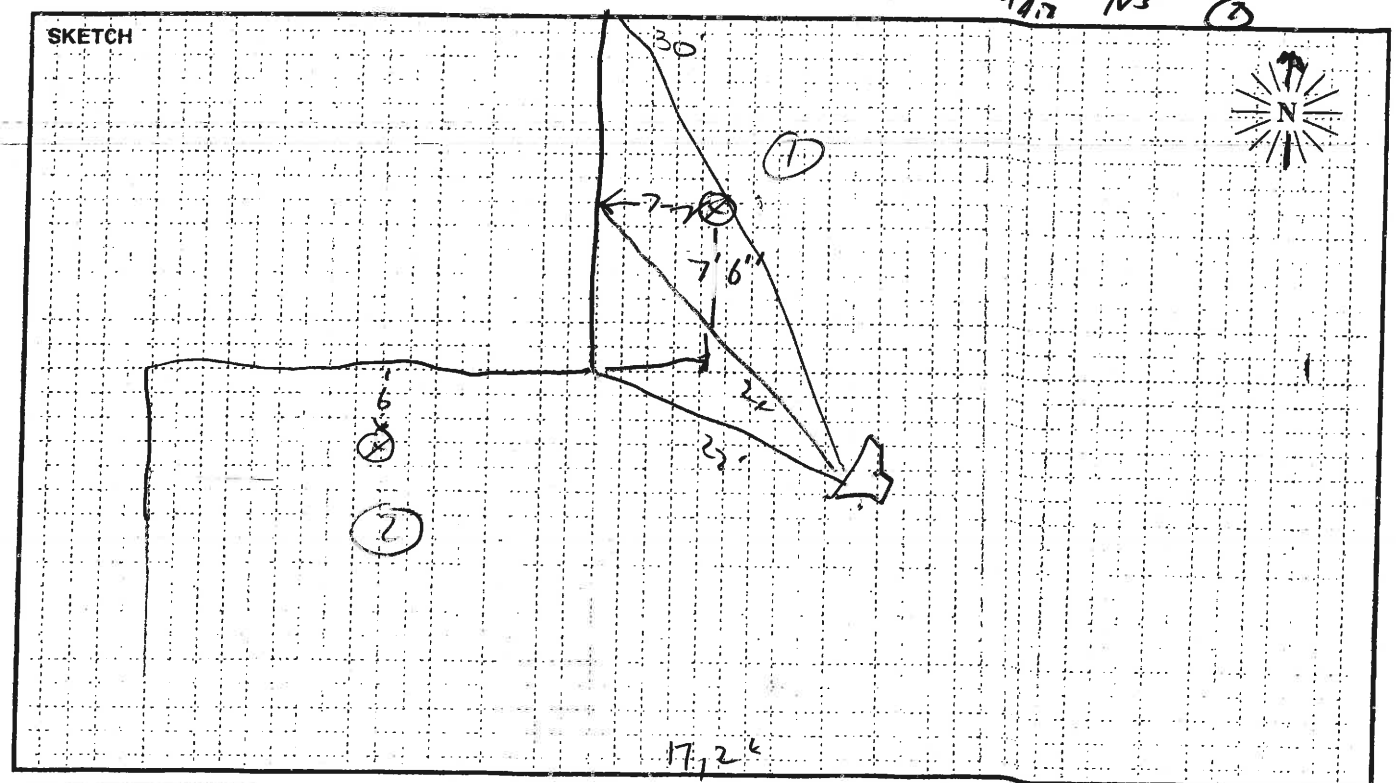
METER SETTINGS: ☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 5 - MINUTE ☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES: Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
11/11/14	9:31	9:32	66.3		66.6	67.1	68.4	69.0		69.7	67.9	RC
	9:35	9:36	94.9		95.1	95.6	95.8	96.9		95.9	95.6	NS (1)
	9:39		94.5		95.1	95.6	95.7	95.8		95.8	95.4	NS (1)
											94.7	NS (2)

SKETCH



FIELD SURVEY FORM

PROJECT:	ENGINEER:	DATE:
	G. Berg	1/28/15

MEASUREMENT ADDRESS:	CITY:		SITE NO.:
Good Nite Inn - Rm 112	Redlands	☐ Single-Family ☐ Multi-Family ☐ School ☐ Recreational ☒ Commercial	H18

SOUND LEVEL METER:	MICROPHONE:	PRE AMP:
☐ LD-870 ☐ LD-820 ☐ B&K-2238 ☐ LD-824 ☒ LD-812 ☐ B&K-2250 ☐ LD-2900 ☐ _____	☐ NON-POLAR ☒ POLARIZED ☒ 1/2-INCH ☐ FREEFIELD ☐ 1-INCH ☐ RANDOM ☐ WIND SCREEN	☐ LD-900 ☐ ZC-0030 ☒ LD-828 ☐ ZC-0032 ☐ LD-902 ☐ _____
SERIAL #: 0659	SERIAL #: 3378	SERIAL #: 1901

CALIBRATOR:

☒ LD CA250 ☐ LD CA200 ☐ B&K 4231 ☐ _____

S/N 2127

Freq, Hz.: ☒ 250 ☐ 1000 ☐ 84 ☐ _____

CALIBRATION RECORD:

Input, dB / Reading, dB / Offset, dB / Time

Before 114.0 / 114.0 / 6.9 / 10:28 am

After 114.0 / 113.8 / — / 14:13

METER SETTINGS:

☒ A-WTD ☐ LINEAR ☒ SLOW ☐ 1/1 OCT ☒ INTERVALS 5 - MINUTE

☐ C-WTD ☐ IMPULSE ☐ FAST ☐ 1/3 OCT ☒ L_N PERCENTILE VALUES

NOTES:

SYSTEM PWR: ☒ BAT ☐ AC

(observations at start of measurement)

TEMP: 72 °F R.H.: 35 %

WIND SPEED: 1.0 MPH

TOWARD (DIR): _____

SKIES: Hazy

CAMERA _____

PHOTO NOs. _____

NOTES: Exterior

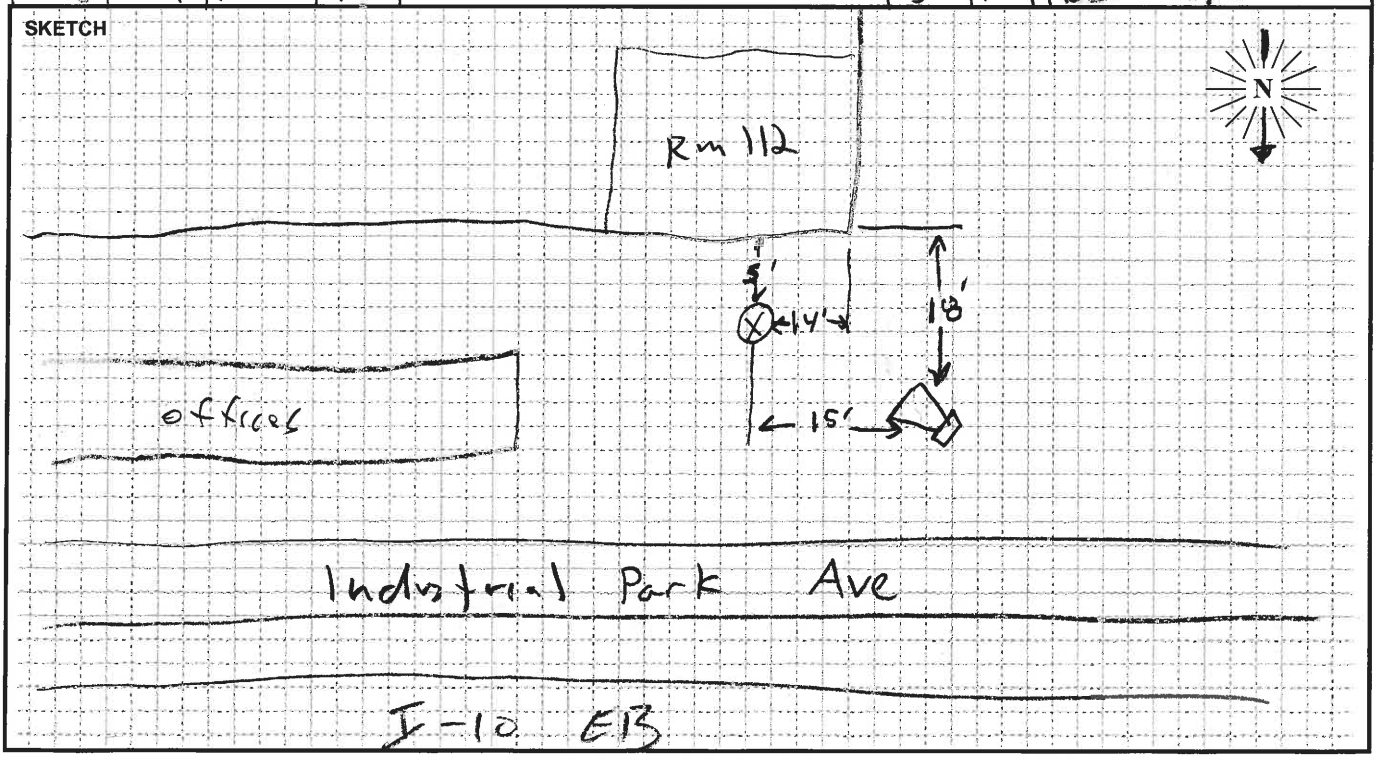
Dist. to Center of Nearest Lane _____ ☐ Video ☐ Radar

Counts AT MT HT

MEAS. TYPE: ☐ Long Term ☒ Short Term

DATE	START TIME	STOP TIME	L_{MIN}	L_{99}	L_{90}	L_{50}	L_{25}	L_{10}	L_{01}	L_{MAX}	L_{EQ}	NOTES:
1/28	14:02	14:03	93.3							94.1	93.5	All closed
1/28	14:04	1405	96.5							97.3	96.8	window open
1/28	1407	1408	92.9							93.6	93.1	All open
1/28	1409	14:10	92.7							93.1	92.9	Door open

SKETCH



PARSONS

Appendix D Noise Measurement Site Photographs

SHORT-TERM MEASUREMENTS

SHORT-TERM MEASUREMENT SITE ST1

SHORT-TERM MEASUREMENT SITE ST2

SHORT-TERM MEASUREMENT SITE ST3

SHORT-TERM MEASUREMENT SITE ST4

SHORT-TERM MEASUREMENT SITE ST5

SHORT-TERM MEASUREMENT SITE ST6

SHORT-TERM MEASUREMENT SITE ST7

SHORT-TERM MEASUREMENT SITE ST9

SHORT-TERM MEASUREMENT SITE ST10

SHORT-TERM MEASUREMENT SITE ST11

SHORT-TERM MEASUREMENT SITE ST12

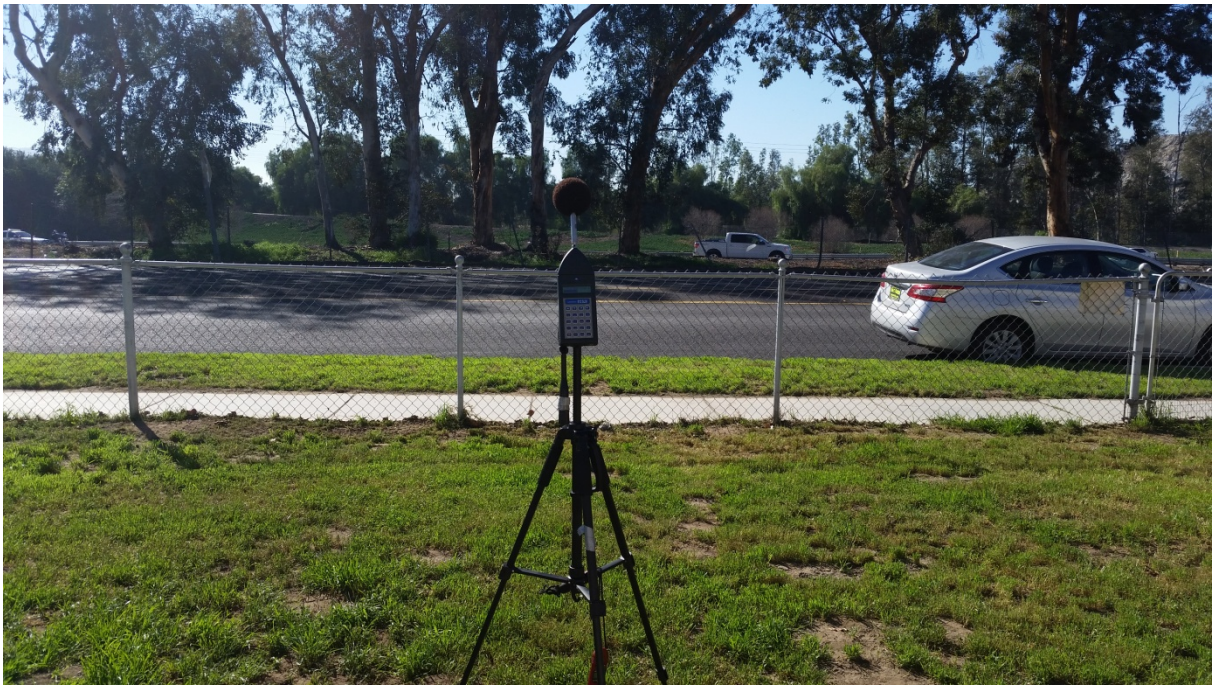
SHORT-TERM MEASUREMENT SITE ST13

SHORT-TERM MEASUREMENT SITE ST14

SHORT-TERM MEASUREMENT SITE ST15

SHORT-TERM MEASUREMENT SITE ST16

SHORT-TERM MEASUREMENT SITE ST17



SHORT-TERM MEASUREMENT SITE ST17A

SHORT-TERM MEASUREMENT SITE ST18

SHORT-TERM MEASUREMENT SITE ST19

SHORT-TERM MEASUREMENT SITE ST19A

SHORT-TERM MEASUREMENT SITE ST20

SHORT-TERM MEASUREMENT SITE ST20A

SHORT-TERM MEASUREMENT SITE ST21

SHORT-TERM MEASUREMENT SITE ST23

SHORT-TERM MEASUREMENT SITE ST24

SHORT-TERM MEASUREMENT SITE ST25

SHORT-TERM MEASUREMENT SITE ST26

SHORT-TERM MEASUREMENT SITE ST27

SHORT-TERM MEASUREMENT SITE ST28A

SHORT-TERM MEASUREMENT SITE ST29

SHORT-TERM MEASUREMENT SITE ST30

SHORT-TERM MEASUREMENT SITE ST30A

SHORT-TERM MEASUREMENT SITE ST31

SHORT-TERM MEASUREMENT SITE ST32

SHORT-TERM MEASUREMENT SITE ST33

SHORT-TERM MEASUREMENT SITE ST35

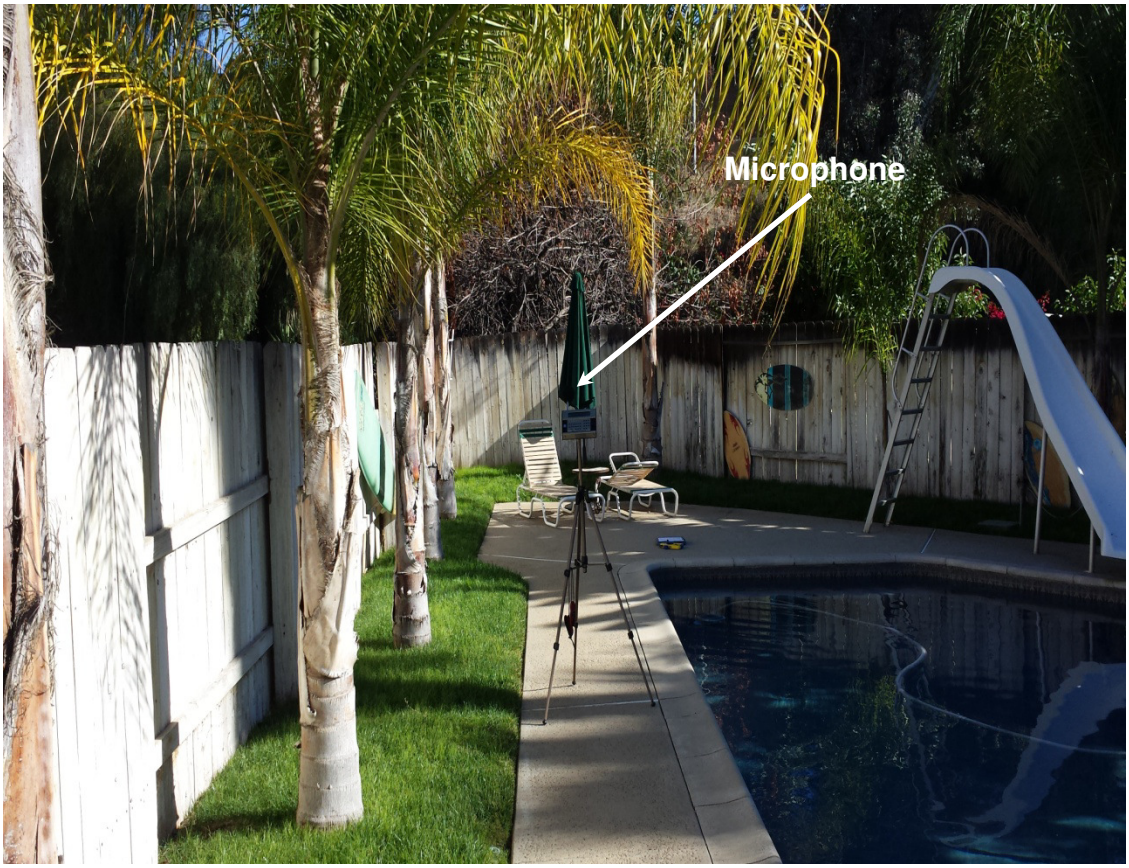
SHORT-TERM MEASUREMENT SITE ST36

SHORT-TERM MEASUREMENT SITE ST37

SHORT-TERM MEASUREMENT SITE ST38

SHORT-TERM MEASUREMENT SITE ST39

SHORT-TERM MEASUREMENT SITE ST40A



SHORT-TERM MEASUREMENT SITE ST40

SHORT-TERM MEASUREMENT SITE ST41

SHORT-TERM MEASUREMENT SITE ST42

SHORT-TERM MEASUREMENT SITE ST43

SHORT-TERM MEASUREMENT SITE ST44

SHORT-TERM MEASUREMENT SITE ST45

SHORT-TERM MEASUREMENT SITE ST46

SHORT-TERM MEASUREMENT SITE ST47

SHORT-TERM MEASUREMENT SITE ST49

SHORT-TERM MEASUREMENT SITE ST50

SHORT-TERM MEASUREMENT SITE ST55

SHORT-TERM MEASUREMENT SITE ST56

SHORT-TERM MEASUREMENT SITE ST57

SHORT-TERM MEASUREMENT SITE ST58

SHORT-TERM MEASUREMENT SITE ST59

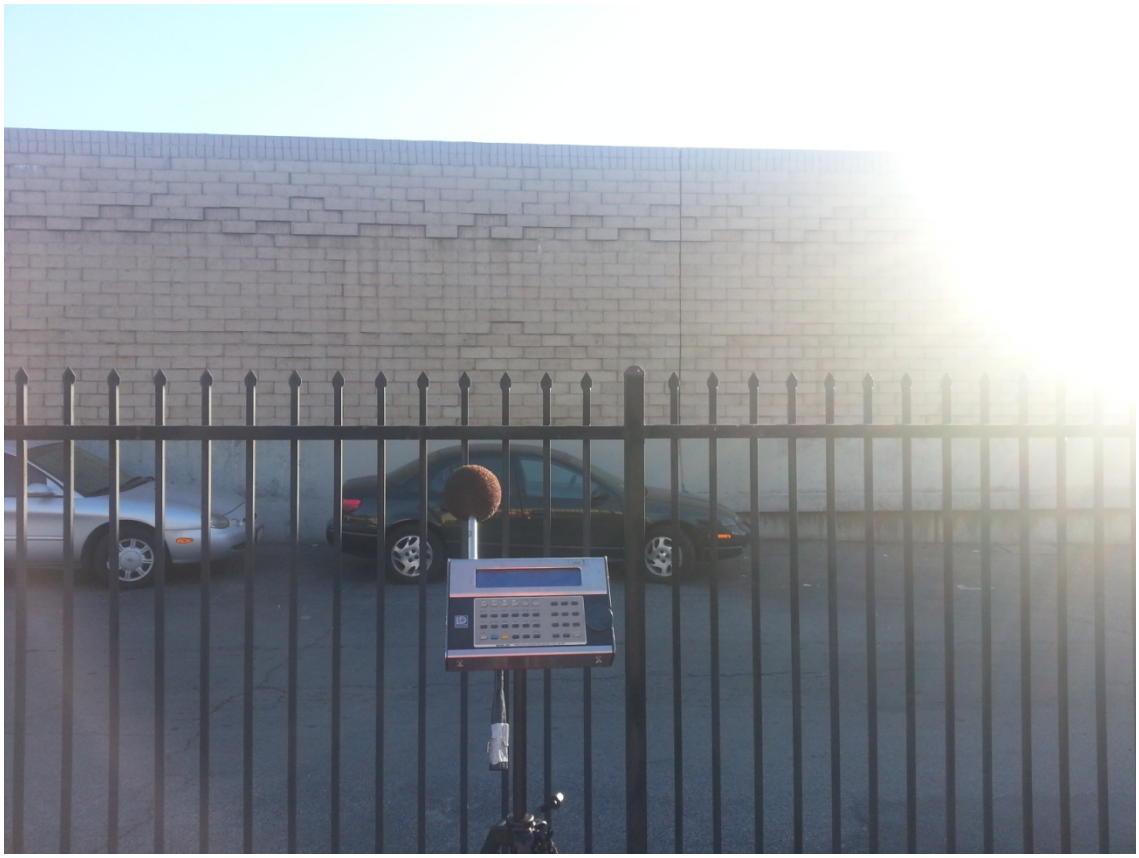
SHORT-TERM MEASUREMENT SITE ST60

SHORT-TERM MEASUREMENT SITE ST61

SHORT-TERM MEASUREMENT SITE ST62

SHORT-TERM MEASUREMENT SITE ST63

SHORT-TERM MEASUREMENT SITE ST64



SHORT-TERM MEASUREMENT SITE ST65

SHORT-TERM MEASUREMENT SITE ST66

SHORT-TERM MEASUREMENT SITE ST67

SHORT-TERM MEASUREMENT SITE ST68

SHORT-TERM MEASUREMENT SITE ST69

SHORT-TERM MEASUREMENT SITE ST70

SHORT-TERM MEASUREMENT SITE ST71

SHORT-TERM MEASUREMENT SITE ST72

SHORT-TERM MEASUREMENT SITE ST73

SHORT-TERM MEASUREMENT SITE ST74

SHORT-TERM MEASUREMENT SITE ST75

SHORT-TERM MEASUREMENT SITE ST75A

SHORT-TERM MEASUREMENT SITE ST76

SHORT-TERM MEASUREMENT SITE ST77

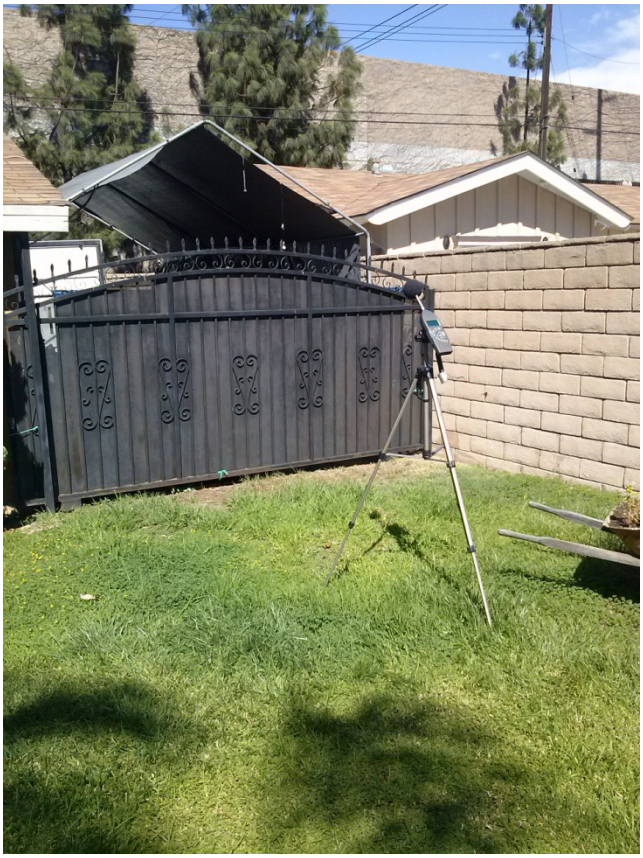
SHORT-TERM MEASUREMENT SITE ST78

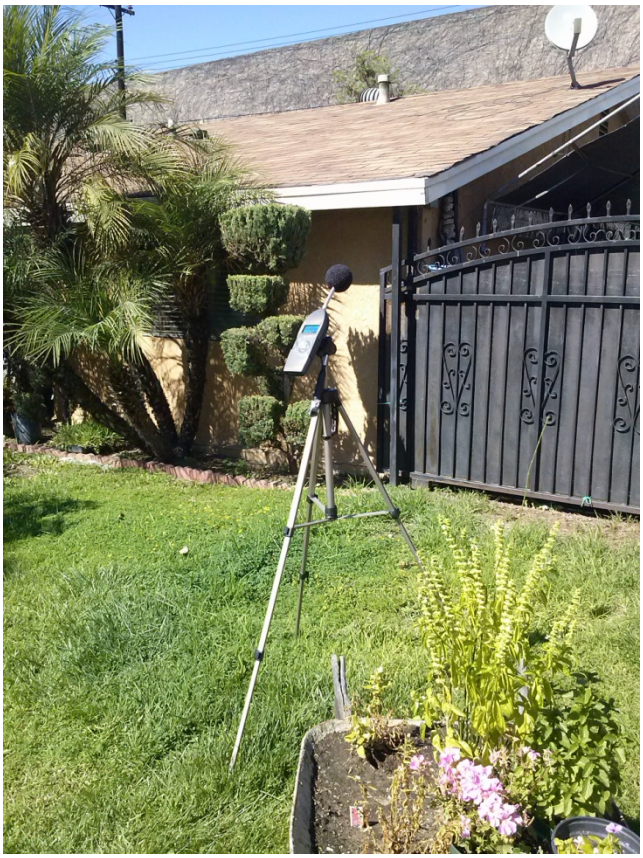
SHORT-TERM MEASUREMENT SITE ST79

SHORT-TERM MEASUREMENT SITE ST80

SHORT-TERM MEASUREMENT SITE ST81

SHORT-TERM MEASUREMENT SITE ST82





SHORT-TERM MEASUREMENT SITE ST83

SHORT-TERM MEASUREMENT SITE ST84

SHORT-TERM MEASUREMENT SITE ST85

SHORT-TERM MEASUREMENT SITE ST86

SHORT-TERM MEASUREMENT SITE ST87

SHORT-TERM MEASUREMENT SITE ST88

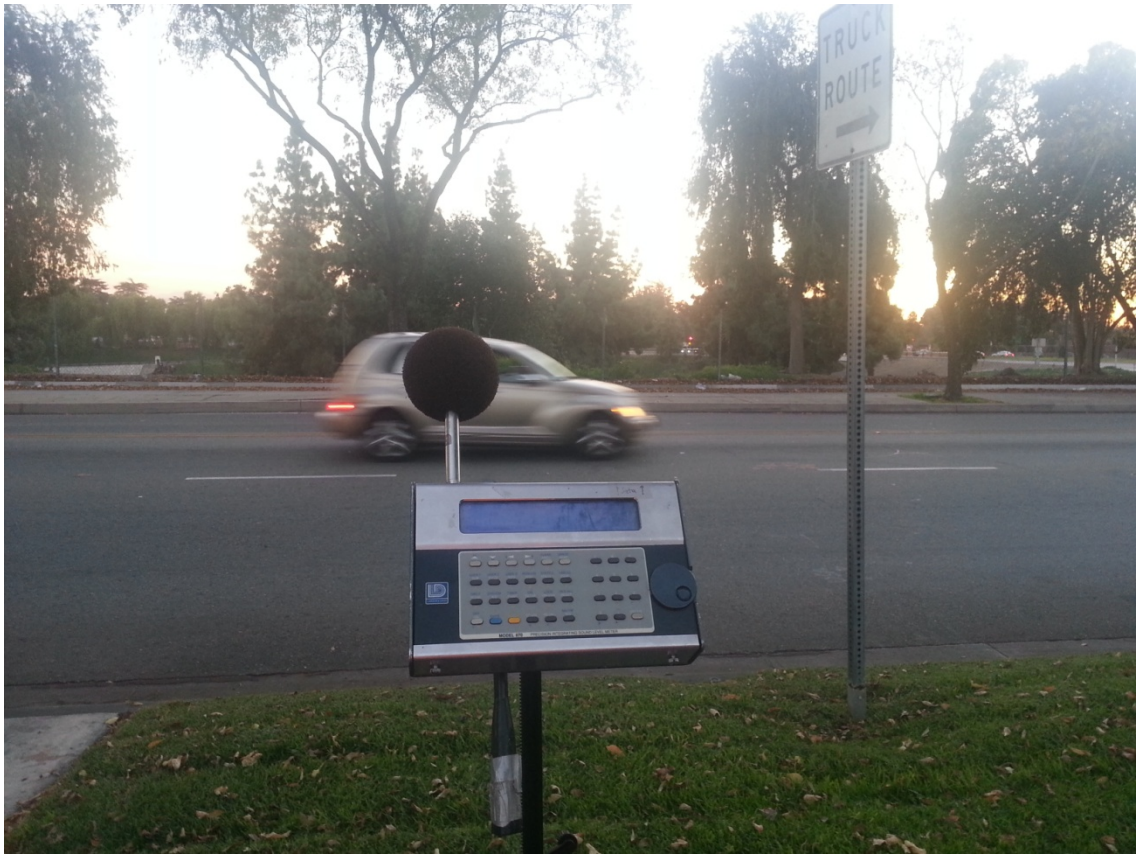
SHORT-TERM MEASUREMENT SITE ST89

SHORT-TERM MEASUREMENT SITE ST90

SHORT-TERM MEASUREMENT SITE ST91

SHORT-TERM MEASUREMENT SITE ST92

SHORT-TERM MEASUREMENT SITE ST93



SHORT-TERM MEASUREMENT SITE ST93A

SHORT-TERM MEASUREMENT SITE ST94

SHORT-TERM MEASUREMENT SITE ST95

SHORT-TERM MEASUREMENT SITE ST96

SHORT-TERM MEASUREMENT SITE ST96A

SHORT-TERM MEASUREMENT SITE ST97

SHORT-TERM MEASUREMENT SITE ST98

SHORT-TERM MEASUREMENT SITE ST99

SHORT-TERM MEASUREMENT SITE ST99A

SHORT-TERM MEASUREMENT SITE ST100

SHORT-TERM MEASUREMENT SITE ST101

SHORT-TERM MEASUREMENT SITE ST102

SHORT-TERM MEASUREMENT SITE ST103

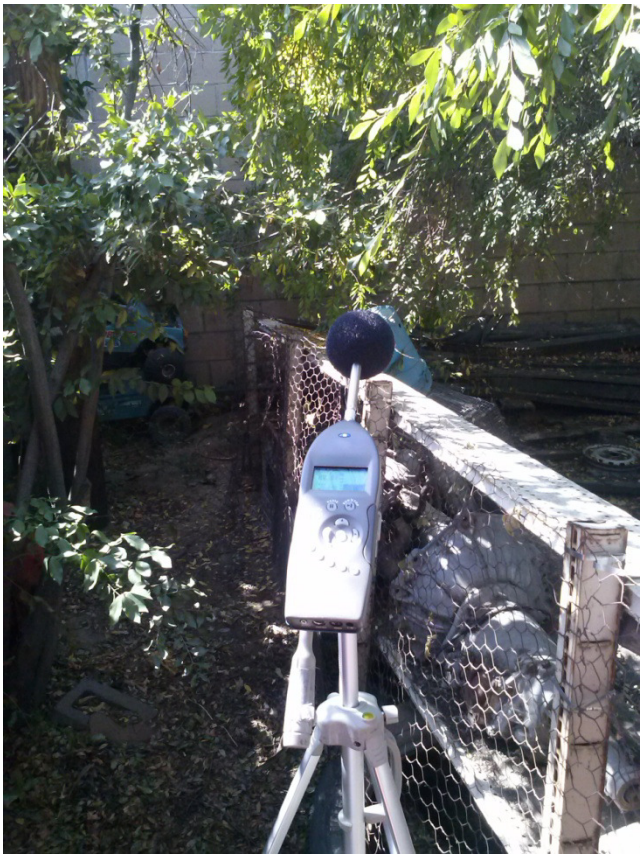
SHORT-TERM MEASUREMENT SITE ST104

SHORT-TERM MEASUREMENT SITE ST105

SHORT-TERM MEASUREMENT SITE ST106

SHORT-TERM MEASUREMENT SITE ST107

SHORT-TERM MEASUREMENT SITE ST108



SHORT-TERM MEASUREMENT SITE ST109

SHORT-TERM MEASUREMENT SITE ST110

SHORT-TERM MEASUREMENT SITE ST111

SHORT-TERM MEASUREMENT SITE ST112

SHORT-TERM MEASUREMENT SITE ST113

SHORT-TERM MEASUREMENT SITE ST114

SHORT-TERM MEASUREMENT SITE ST115

SHORT-TERM MEASUREMENT SITE ST116

SHORT-TERM MEASUREMENT SITE ST117

SHORT-TERM MEASUREMENT SITE ST118

SHORT-TERM MEASUREMENT SITE ST119

SHORT-TERM MEASUREMENT SITE ST120

SHORT-TERM MEASUREMENT SITE ST121

LONG-TERM MEASUREMENTS

LONG-TERM MEASUREMENT SITE LT1 (2008)

LONG-TERM MEASUREMENT SITE LT2

LONG-TERM MEASUREMENT SITE LT3

LONG-TERM MEASUREMENT SITE LT4

LONG-TERM MEASUREMENT SITE LT5

LONG-TERM MEASUREMENT SITE LT6

LONG-TERM MEASUREMENT SITE LT7

LONG-TERM MEASUREMENT SITE LT8

LONG-TERM MEASUREMENT SITE LT9

LONG-TERM MEASUREMENT SITE LT10

LONG-TERM MEASUREMENT SITE LT11

LONG-TERM MEASUREMENT SITE LT12

LONG-TERM MEASUREMENT SITE LT13

LONG-TERM MEASUREMENT SITE LT14

LONG-TERM MEASUREMENT SITE LT15

LONG-TERM MEASUREMENT SITE LT16

LONG-TERM MEASUREMENT SITE LT17

LONG-TERM MEASUREMENT SITE LT18

LONG-TERM MEASUREMENT SITE LT19

LONG-TERM MEASUREMENT SITE LT20

LONG-TERM MEASUREMENT SITE LT21

LONG-TERM MEASUREMENT SITE LT22

LONG-TERM MEASUREMENT SITE LT23

LONG-TERM MEASUREMENT SITE LT24

LONG-TERM MEASUREMENT SITE LT25

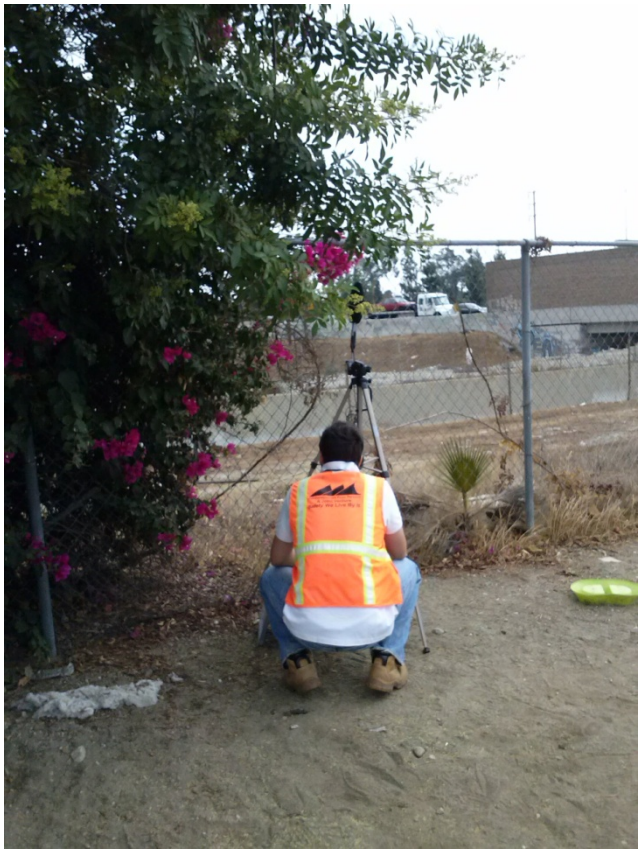
LONG-TERM MEASUREMENT SITE LT27

LONG-TERM MEASUREMENT SITE LT28

LONG-TERM MEASUREMENT SITE LT29

LONG-TERM MEASUREMENT SITE LT30

LONG-TERM MEASUREMENT SITE LT31



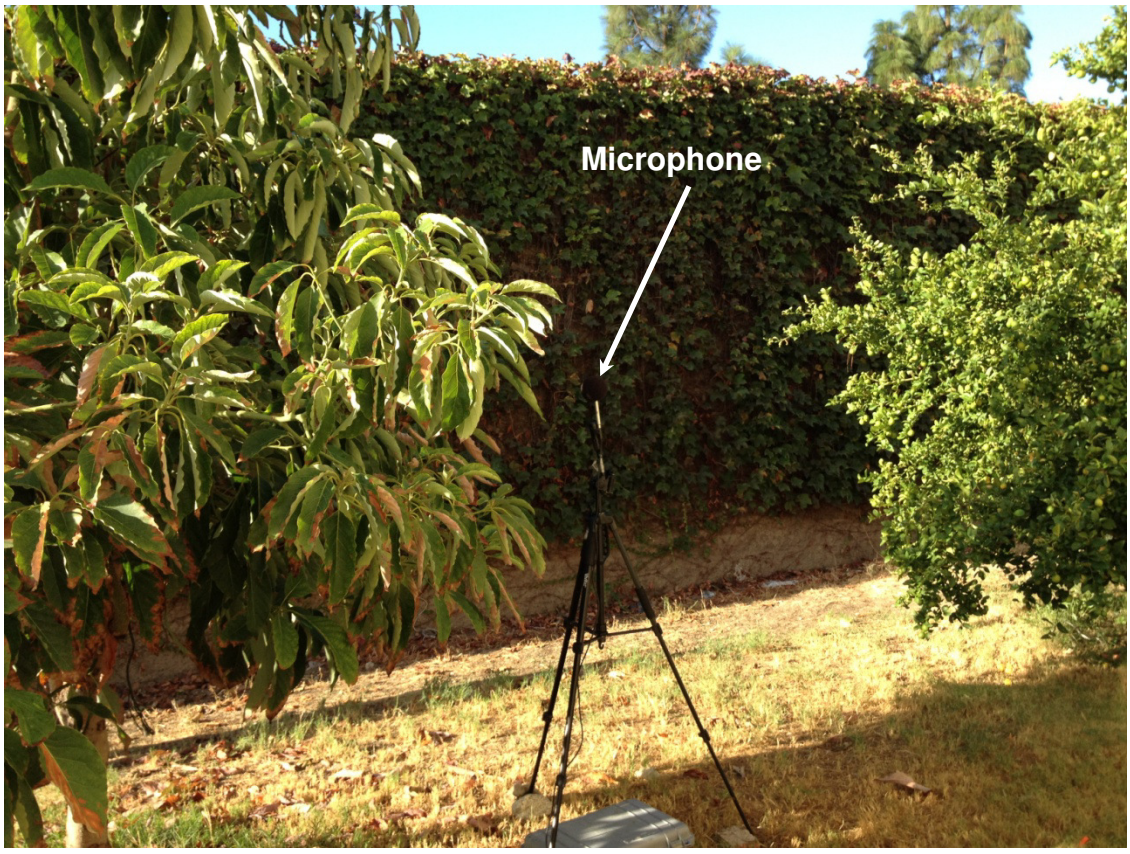
LONG-TERM MEASUREMENT SITE LT32

LONG-TERM MEASUREMENT SITE LT33

LONG-TERM MEASUREMENT SITE LT34

LONG-TERM MEASUREMENT SITE LT35

LONG-TERM MEASUREMENT SITE LT36

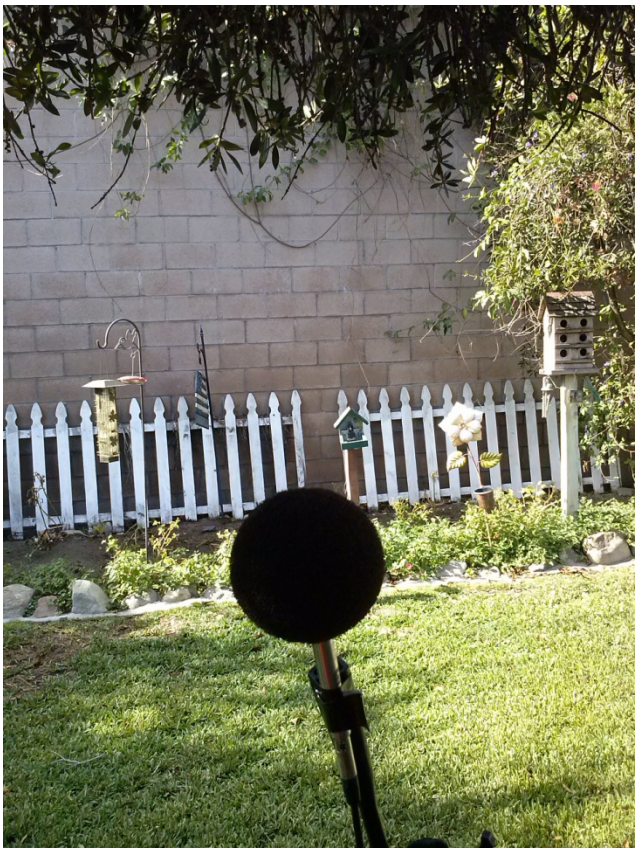


LONG-TERM MEASUREMENT SITE LT37

LONG-TERM MEASUREMENT SITE LT38

LONG-TERM MEASUREMENT SITE LT39

LONG-TERM MEASUREMENT SITE LT40



LONG-TERM MEASUREMENT SITE LT41

INDOOR/OUTDOOR MEASUREMENTS

INDOOR/OUTDOOR MEASUREMENT SITE H1

INDOOR/OUTDOOR MEASUREMENT SITE H2

INDOOR/OUTDOOR MEASUREMENT SITE H3

INDOOR/OUTDOOR MEASUREMENT SITE H4

INDOOR/OUTDOOR MEASUREMENT SITE H5

INDOOR/OUTDOOR MEASUREMENT SITE H6

INDOOR/OUTDOOR MEASUREMENT SITE H7

INDOOR/OUTDOOR MEASUREMENT SITE H8

INDOOR/OUTDOOR MEASUREMENT SITE H9

INDOOR/OUTDOOR MEASUREMENT SITE H12

INDOOR/OUTDOOR MEASUREMENT SITE H14

INDOOR/OUTDOOR MEASUREMENT SITE H16

INDOOR/OUTDOOR MEASUREMENT SITE H17

INDOOR/OUTDOOR MEASUREMENT SITE H18

Appendix E Noise Measurement Instrumentation Calibration Records

SOUND LEVEL METERS

CERTIFICATE OF CALIBRATION
20928-7
FOR LARSON DAVIS
PRECISION INTEGRATING AND LOGGING
SOUND LEVEL METER

Model **812** Serial No. **0639**
ID No. **N/A**

With Microphone Model **2560** Serial No. **3155**
With Preamplifier Model **900B** Serial No. **2771**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met Larson Davis specifications at the points tested and as outlined in ANSI S1.4-1983 Type 1; IEC 651-1979 Type 1

on **28 JUL 2014** **BY HAROLD LYNCH**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **28 JUL 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1314996	12 JUN 2014	12 JUN 2015
B&K	2636	1423390	07 JAN 2014	07 JAN 2015
B&K	4226	2141942	02 DEC 2013	02 DEC 2014
B&K	4231	1770857	19 SEP 2013	19 SEP 2014
HP	34401A	MY45023668	08 FEB 2014	08 FEB 2015
HP	3458A	2823A07179	09 JUL 2014	09 JUL 2015

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" condition.

Reference Test Procedure: **ACCT Procedure 812-820 Version 3.5.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**37 %**	**991.73** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed: Harold Lynch

ODIN METROLOGY, INC.
CALIBRATION OF SOUND & VIBRATION INSTRUMENTATION
3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

CERTIFICATE OF CALIBRATION
20928-4
FOR LARSON DAVIS
PRECISION INTEGRATING AND LOGGING
SOUND LEVEL METER

Model **812** Serial No. **0659**
ID No. **N/A**

With Microphone Model **2560** Serial No. **3378**
With Preamplifier Model **PRM828** Serial No. **1901**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met Larson Davis specifications at the points tested and as outlined in ANSI S1.4-1983 Type 1; IEC 651-1979 Type 1

on **28 JUL 2014** **BY HAROLD LYNCH**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **28 JUL 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1314996	12 JUN 2014	12 JUN 2015
B&K	2636	1423390	07 JAN 2014	07 JAN 2015
B&K	4226	2141942	02 DEC 2013	02 DEC 2014
B&K	4231	1770857	19 SEP 2013	19 SEP 2014
HP	34401A	MY45023668	08 FEB 2014	08 FEB 2015
HP	3458A	2823A07179	09 JUL 2014	09 JUL 2015

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" condition.

Reference Test Procedure: **ACCT Procedure 812-820 Version 3.5.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**37 %**	**991.73** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed: Harold Lynch

ODIN METROLOGY, INC.
CALIBRATION OF SOUND & VIBRATION INSTRUMENTATION
3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

CERTIFICATE OF CALIBRATION
20242-4
FOR LARSON DAVIS
PRECISION INTEGRATING AND LOGGING
SOUND LEVEL METER

Model **820** Serial No. **1616**
ID No. **N/A**
With Microphone Model **40AQ** Serial No. **16967**
With Preamplifier Model **PRM828** Serial No. **2330**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met factory specifications at the points tested.
Complies to: ANSI S1.4-1983 Type 1; IEC 651-1979 Type 1

on **30 SEP 2013** **BY HAROLD LYNCH**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **30 SEP 2014**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1288946	05 NOV 2012	05 NOV 2013
B&K	2636	1601487	20 MAY 2013	20 MAY 2014
B&K	4226	1774068	14 MAR 2013	14 MAR 2014
B&K	4231	2094472	27 FEB 2013	27 FEB 2014
HP	34401A	3146A74093	14 MAY 2013	14 MAY 2014
HP	3458A	2823A17713	19 JUL 2013	19 JUL 2014

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" condition.

Reference Test Procedure: **ACCT Procedure 812-820 Version 3.5.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**30** %	**987.81** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed: Harold Lynch

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3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

Certificate of Calibration and Conformance

Instrument Model **820**, Serial Number **1662** was calibrated on May 16, 2013. The instrument meets factory specifications according to The Modal Shop Production Test Procedure PRD-P227, ISO 10012, ANSI S1.4 1983, IEC 651-Type 1 1979, and IEC 804-Type 1 1985.

Instrument found to be in calibration as received: YES
Date Calibrated: May 16, 2013
Calibration due:

Calibration Standards Used

Manufacturer	Model	Serial Number	Interval	Cal Due	Traceability No.
Larson Davis	LDSigGn/2209	0760 / 0101	12 Months	4/12/2014	2013-172613

Certified Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Ambient Temperature: 75.2°F Relative Humidity: 32%

Notes

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with ISO 10012. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

Due to state-of-the-art limitations, 4:1 calibration ratios are not possible on pressure measurement standards, microphones and acoustic calibrators. Calibration ratios for these types of devices are limited to 1:1.

The results documented in this certificate relate only to the item(s) calibrated or tested. Calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of The Modal Shop.

Technician: Tim Rarden
Service Center: The Modal Shop, Inc.

Signature: _____

THE MODAL SHOP INC.
A PCB GROUP CO.

The Modal Shop
3149 East Kemper Road
Cincinnati, OH 45241
Ph (513) 351-9919
FAX (513) 458-2172

CERTIFICATE OF CALIBRATION
20928-1
FOR LARSON DAVIS
PRECISION INTEGRATING AND LOGGING
SOUND LEVEL METER

Model **812** Serial No. **0638**
ID No. **N/A**

With Microphone Model **2560** Serial No. **3159**
With Preamplifier Model **PRM828** Serial No. **1891**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met Larson Davis specifications at the points tested and as outlined in ANSI S1.4-1983 Type 1; IEC 651-1979 Type 1

on **28 JUL 2014** **BY HAROLD LYNCH**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **28 JUL 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1314996	12 JUN 2014	12 JUN 2015
B&K	2636	1423390	07 JAN 2014	07 JAN 2015
B&K	4226	2141942	02 DEC 2013	02 DEC 2014
B&K	4231	1770857	19 SEP 2013	19 SEP 2014
HP	34401A	MY45023668	08 FEB 2014	08 FEB 2015
HP	3458A	2823A07179	09 JUL 2014	09 JUL 2015

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" condition.

Reference Test Procedure: **ACCT Procedure 812-820 Version 3.5.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**37 %**	**991.73** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed: Harold Lynch

ODIN METROLOGY, INC.
CALIBRATION OF SOUND & VIBRATION INSTRUMENTATION
3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

Certificate of Calibration and Conformance

Instrument Model **820**, Serial Number **1674** was calibrated on June 26, 2013. The instrument meets factory specifications according to The Modal Shop Production Test Procedure PRD-P227, ISO 10012, ANSI S1.4 1983, IEC 651-Type 1 1979, and IEC 804-Type 1 1985.

Instrument found to be in calibration as received: YES
Date Calibrated: June 26, 2013
Calibration due:

Calibration Standards Used

Manufacturer	Model	Serial Number	Interval	Cal Due	Traceability No.
Larson Davis	LDSigGn/2209	0760 / 0101	12 Months	4/12/2014	2013-172613

Certified Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Ambient Temperature: 75.2°F Relative 32%

Notes

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with ISO 10012. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

Due to state-of-the-art limitations, 4:1 calibration ratios are not possible on pressure measurement standards, microphones and acoustic calibrators. Calibration ratios for these types of devices are limited to 1:1.

The results documented in this certificate relate only to the item(s) calibrated or tested. Calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of The Modal Shop.

Technician: Tim Rarden
Service Center: The Modal Shop, Inc.

Signature: _____

THE MODAL SHOP INC.
A PCB GROUP CO.

The Modal Shop
3149 East Kemper Road
Cincinnati, OH 45241
Ph (513) 351-9919
FAX (513) 458-2172

CERTIFICATE OF CALIBRATION
20242-1
FOR LARSON DAVIS
INTEGRATING SOUND LEVEL METER

Model **824** Serial No. **824A3119**
ID No. **N/A**

With Microphone Model **377A02** Serial No. **52820**
With Preamplifier Model **PRM902** Serial No. **3274**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met factory specifications at the points tested.
Complies to: ANSI S1.4-1983 Type 1: IEC 651-1979 Type 1

on **30 SEP 2013** **BY HAROLD LYNCH**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **30 SEP 2014**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1288946	05 NOV 2012	05 NOV 2013
B&K	2636	1601487	20 MAY 2013	20 MAY 2014
B&K	4226	1774068	14 MAR 2013	14 MAR 2014
B&K	4231	2094472	27 FEB 2013	27 FEB 2014
HP	34401A	3146A74093	14 MAY 2013	14 MAY 2014
HP	3458A	2823A17713	19 JUL 2013	19 JUL 2014

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" condition.

Reference Test Procedure: **ACCT Procedure 824 Version 1.9.** Rev Jul 2007

Temperature	Relative Humidity	Barometric Pressure
23°C	**30 %**	**987.81** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed: Harold Lynch

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PHONE: (805) 375-0830 FAX: (805) 375-0405

CERTIFICATE OF CALIBRATION
20718-3
FOR LARSON DAVIS PRECISION INTEGRATING SOUND LEVEL METER

Model **870**

Serial No. **870A0128**
ID No. **N/A**

With Microphone Model **N/A**
Serial No. **N/A**

With Preamplifier Model **PRM900B**
Serial No. **3202**

Customer: **Parsons**
Pasadena, CA 91124

P.O. No. **Verbal**

was tested and met specifications per Larson Davis product specifications, at the points tested and ANSI S1.4.1983 Type 1 Sound Level Meter specifications as listed on data pages

on **14 APR 2014**

BY Harold Lynch
Service Manager

As received condition: Within Specification.
Re-calibration due on: **14 APR 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1288946	04 NOV 2013	04 NOV 2014
B&K	2636	1601487	20 MAY 2013	20 MAY 2014
B&K	4226	1774068	17 MAR 2014	17 MAR 2015
B&K	4231	2094472	26 FEB 2014	26 FEB 2015
HP	34401A	3146A74093	14 MAY 2013	14 MAY 2014
HP	3458A	2823A17713	19 JUL 2013	19 JUL 2014

Performed in Compliance with ANSI, NCSL Z-540-1, 1994 and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" condition.

Reference Test Procedure: **ACCT Procedure 870 Version 1.0 Per IEC 61672-3**
Rev Jul 2007

Temperature	Relative Humidity	Barometric Pressure
23°C	**34 %**	**990.21** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed:

ODIN METROLOGY, INC.
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3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

CERTIFICATE OF CALIBRATION
20718-1
FOR LARSON DAVIS PRECISION INTEGRATING SOUND LEVEL METER

Model **870** Serial No. **870A0344**
ID No. **N/A**
With Microphone Model **N/A** Serial No. **N/A**
With Preamplifier Model **PRM900B** Serial No. **3202**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met specifications per Larson Davis product specifications, at the points tested and ANSI S1.4.1983 Type 1 Sound Level Meter specifications as listed on data pages

on **14 APR 2014** **BY Harold Lynch**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **14 APR 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1288946	04 NOV 2013	04 NOV 2014
B&K	2636	1601487	20 MAY 2013	20 MAY 2014
B&K	4226	1774068	17 MAR 2014	17 MAR 2015
B&K	4231	2094472	26 FEB 2014	26 FEB 2015
HP	34401A	3146A74093	14 MAY 2013	14 MAY 2014
HP	3458A	2823A17713	19 JUL 2013	19 JUL 2014

Performed in Compliance with ANSI, NCSL Z-540-1, 1994 and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" condition.

Reference Test Procedure: **ACCT Procedure 870 Version 1.0 Per IEC 61672-3** Rev Jul 2007

Temperature	Relative Humidity	Barometric Pressure
23°C	**34 %**	**990.21** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed: Harold Lynch

ODIN METROLOGY, INC.
CALIBRATION OF SOUND & VIBRATION INSTRUMENTATION
3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

CERTIFICATE OF CALIBRATION
20718-2
FOR LARSON DAVIS PRECISION INTEGRATING SOUND LEVEL METER

Model **870** Serial No. **870A0555**
ID No. **N/A**

With Microphone Model **N/A** Serial No. **N/A**
With Preamplifier Model **PRM900B** Serial No. **3202**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met specifications per Larson Davis product specifications, at the points tested and ANSI S1.4.1983 Type 1 Sound Level Meter specifications as listed on data pages

on **15 APR 2014** **BY** **Harold Lynch**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **15 APR 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1288946	04 NOV 2013	04 NOV 2014
B&K	2636	1601487	20 MAY 2013	20 MAY 2014
B&K	4226	1774068	17 MAR 2014	17 MAR 2015
B&K	4231	2094472	26 FEB 2014	26 FEB 2015
HP	34401A	3146A74093	14 MAY 2013	14 MAY 2014
HP	3458A	2823A17713	19 JUL 2013	19 JUL 2014

Performed in Compliance with ANSI, NCSL Z-540-1, 1994 and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" condition.

Reference Test Procedure: **ACCT Procedure 870 Version 1.0 Per IEC 61672-3**
Rev Jul 2007

Temperature	Relative Humidity	Barometric Pressure
23°C	**34 %**	**987.47** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed: Harold Lynch

ODIN METROLOGY, INC.
CALIBRATION OF SOUND & VIBRATION INSTRUMENTATION
3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

Certificate of Calibration and Conformance

This document certifies that the instrument referenced below meets published specifications per Procedure PRD-P263; ANSI S1.4-1983 (R 2006) Type 1; S1.4A-1985; S1.43-1997 Type 1; S1.11-2004 Octave Band Class 0; S1.25-1991; IEC 61672-2002 Class 1; 60651-2001 Type 1; 60804-2000 Type 1; 61260-2001 Class 0; 61252-2002.

Manufacturer:	Larson Davis	Temperature:	76.4	°F
Model Number:	LxT1		24.67	°C
Serial Number:	2862	Rel. Humidity:	34.5	%
Customer:	TMS Rental	Pressure:	994.1	mbars
Description:	Sound Level Meter		994.1	hPa

Note: As Found / As Left: In Tolerance

Upon receipt for testing, this instrument was found to be:

Within the Stated tolerance of the manufacturer's specification

Calibration Date: 12-Feb-14 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due	Traceability No.
Larson Davis	LDSigGen/2239	0760/0109	4/12/2014	2012-161465

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. Calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of The Modal Shop.

Technician: Wayne Underwood Signature:

The Modal Shop, Inc.
3149 East Kemper Road
Cincinnati, OH 45241
Phone: (513) 351-9919
(800) 860-4867
www.modalshop.com

CERTIFICATE OF CALIBRATION
20718-4
FOR BRÜEL & KJÆR
HANDHELD ANALYZER

Model **2250** Serial No. **2676029**
ID No. **N/A**

With Microphone **4189** Serial No. **2663101**
With Preamplifier **ZC0032** ID No. **10769**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met factory specifications at the points tested.
Complies to: IEC 61672:2002 Class 1

on **13 APR 2014** **BY** **HAROLD LYNCH**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **13 APR 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1314996	12 JUN 2013	12 JUN 2014
B&K	2636	1423390	07 JAN 2014	07 JAN 2015
B&K	4226	2141942	02 DEC 2013	02 DEC 2014
B&K	4231	1770857	19 SEP 2013	19 SEP 2014
HP	34401A	MY45023668	08 FEB 2014	08 FEB 2015
HP	3458A	2823A07179	08 JUL 2013	08 JUL 2014

Performed in Compliance with ANSI, NCSL Z-540-1, 1994 and ISO 17025,
ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" conditions.

Reference Test Procedure: **ACCT Procedure 2250-Light-2270 Version 3.2.1.** *Rev. 1/29/14*

Temperature	Relative Humidity	Barometric Pressure
23°C	**32 %**	**986.66** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.
Signed: Harold Lynch

ODIN METROLOGY, INC.
CALIBRATION OF BRÜEL & KJÆR INSTRUMENTS
3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

MICROPHONES

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **21299-4**

Certificate of Calibration for Larson Davis 1/2" Random Incidence Microphone

This calibration is performed by comparison with measurement reference standard microphone:

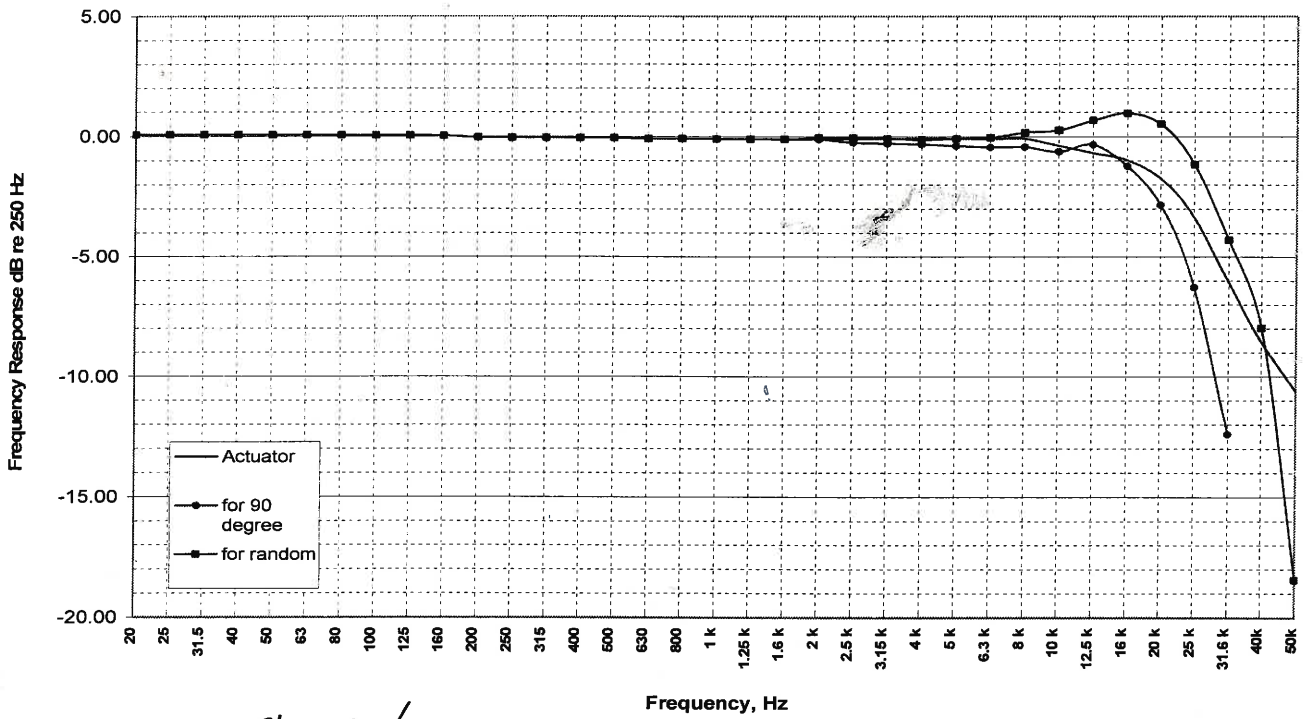
Reference Standards	
Type No.	4134/UA0825
Serial No.	1866523
Calibrated by	DANAK
Cal Date	23 OCT 2014
Due Date	23 OCT 2016

Type no.	**2559**
Serial no.	**1785**
With preamplifier type no.	**N/A**
Preamplifier Serial no.	**N/A**
Submitted by	**Parsons**
	Pasadena, CA 91124
Purchase order no.	**Verbal**
Asset no.	**N/A**

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.064** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.13** dB

Performance Data		
Open circuit sensitivity at 1,013 hPa, 23°C, 50% RH, 251.2 Hz	**-38.66**	dB re 1 V/Pa
	11.67	mV/Pa
Open circuit correction factor K_0	**12.7**	dB
System sensitivity (with preamplifier) at 251.2 Hz	**N/A**	dB re 1 V/Pa
	N/A	mV/Pa
Correction factor K	**N/A**	dB

Microphone Frequency Response Type 2559
S/N 1785 : Measured 20 Jan 2015



Calibration performed by

Harold Lynch, Service Manager

Condition of Test		
Ambient Pressure	**989.61**	hPa
Temperature	**23**	°C
Relative Humidity	**36**	%
Polarization Voltage	**200**	V
Frequency	**251.2**	Hz
Date of Calibration	**20 JAN 2015**	
Re-calibration due on	**20 JAN 2016**	

Odin Metrology, Inc.
3533 Old Conejo Road, Suite 125
Thousand Oaks, CA 91320
Phone: (805) 375-0830; Fax: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.

This calibration is traceable to NIST Test Number: **TN-638/282477, 2012.**
Calibration Procedure: **OM-P-1008-Microphone Rev. 1.2 20130618.**

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **21299-5**

Certificate of Calibration for Larson Davis 1/2" Random Incidence Microphone

This calibration is performed by comparison with measurement reference standard microphone:

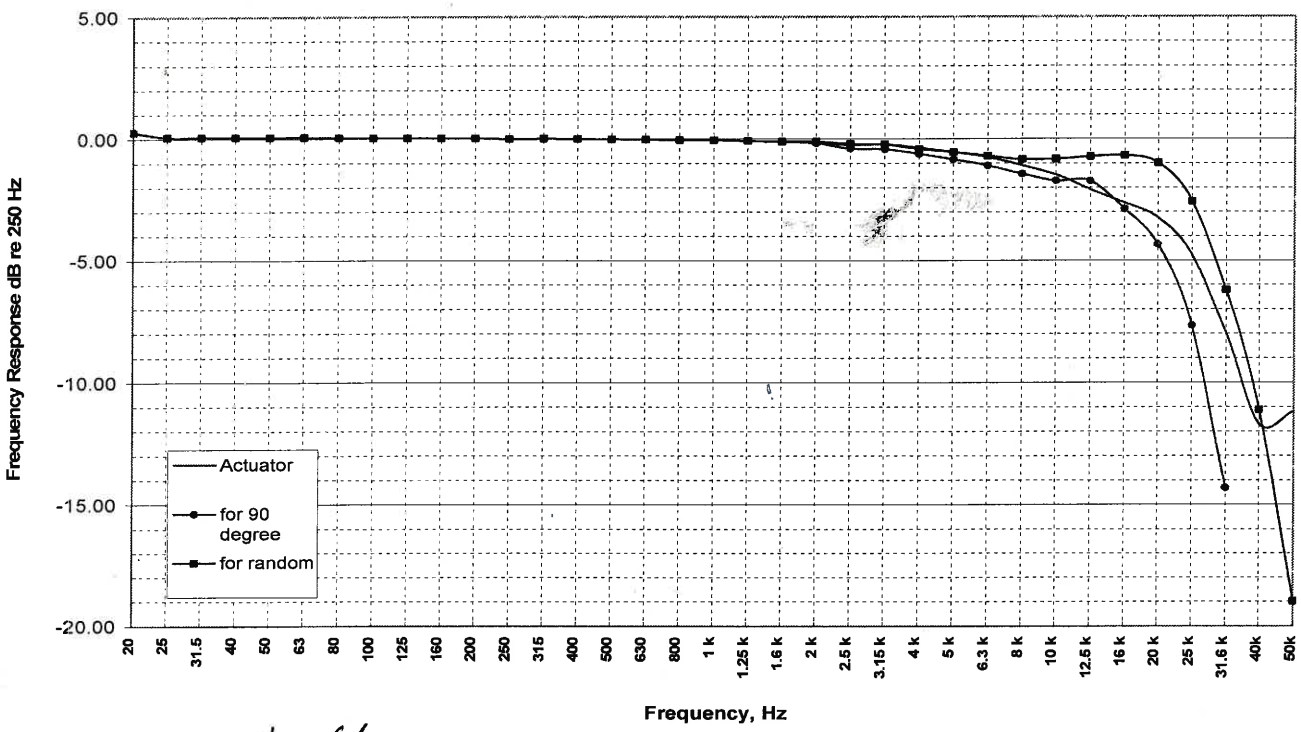
Reference Standards	
Type No.	4134/UA0825
Serial No.	1866523
Calibrated by	DANAK
Cal Date	23 OCT 2014
Due Date	23 OCT 2016

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.064** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.13** dB

Type no.	**2559**
Serial no.	**2029**
With preamplifier type no.	**N/A**
Preamplifier Serial no.	**N/A**
Submitted by	**Parsons**
	Pasadena, CA 91124
Purchase order no.	**Verbal**
Asset no.	**N/A**

Performance Data		
Open circuit sensitivity at 1,013 hPa, 23°C, 50% RH, 251.2 Hz	**-39.11**	dB re 1 V/Pa
	11.08	mV/Pa
Open circuit correction factor K_0	**13.1**	dB
System sensitivity (with preamplifier) at 251.2 Hz	**N/A**	dB re 1 V/Pa
	N/A	mV/Pa
Correction factor K	**N/A**	dB

Microphone Frequency Response Type 2559
S/N 2029 : Measured 20 Jan 2015



Calibration performed by

Harold Lynch, Service Manager

Condition of Test		
Ambient Pressure	**989.61**	hPa
Temperature	**23**	°C
Relative Humidity	**36**	%
Polarization Voltage	**200**	V
Frequency	**251.2**	Hz
Date of Calibration	**20 JAN 2015**	
Re-calibration due on	**20 JAN 2016**	

Odin Metrology, Inc.
3533 Old Conejo Road, Suite 125
Thousand Oaks, CA 91320
Phone: (805) 375-0830; Fax: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.

This calibration is traceable to NIST Test Number: **TN-638/282477, 2012.**
Calibration Procedure: **OM-P-1008-Microphone Rev. 1.2 20130618.**

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **21299-6**

Certificate of Calibration for Larson Davis 1/2" Random Incidence Microphone

This calibration is performed by comparison with measurement reference standard microphone:

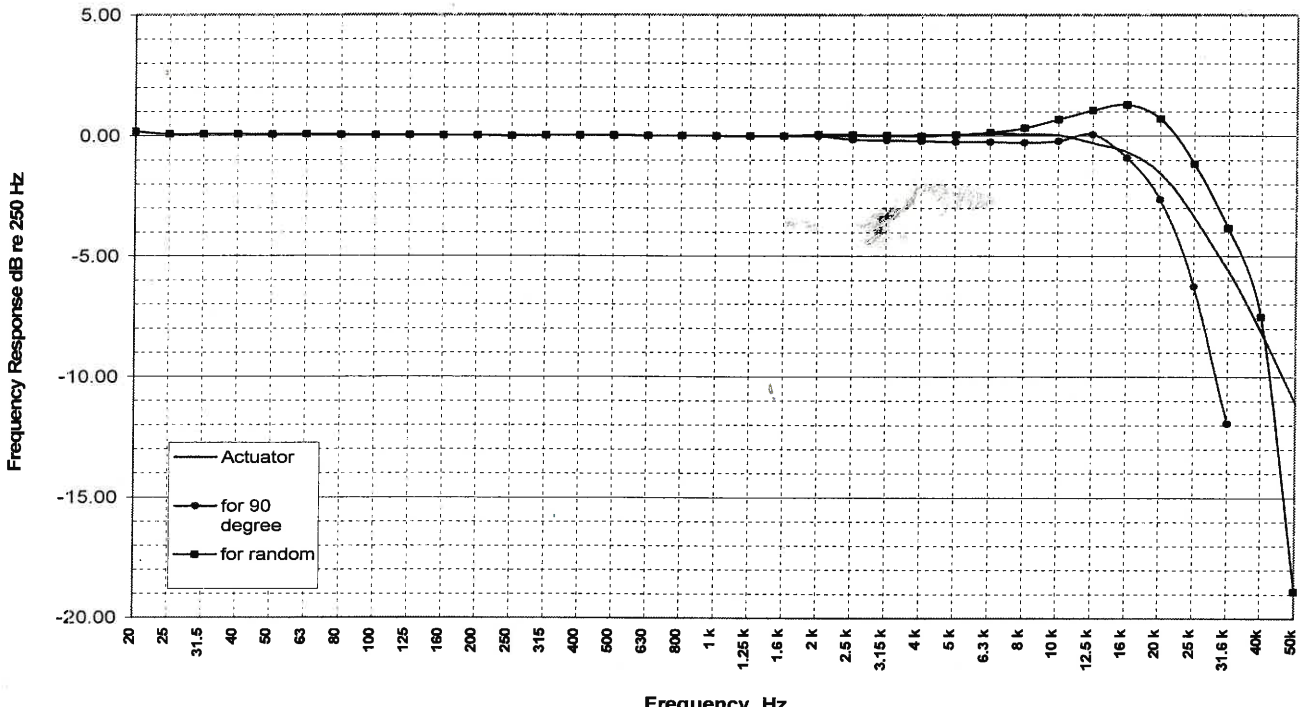
Reference Standards	
Type No.	4134/UA0825
Serial No.	1866523
Calibrated by	DANAK
Cal Date	23 OCT 2014
Due Date	23 OCT 2016

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.064** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.13** dB

Type no.	**2559**
Serial no.	**2141**
With preamplifier type no.	**N/A**
Preamplifier Serial no.	**N/A**
Submitted by	**Parsons**
	Pasadena, CA 91124
Purchase order no.	**Verbal**
Asset no.	**N/A**

Performance Data		
Open circuit sensitivity at 1,013 hPa, 23°C, 50% RH, 251.2 Hz	**-39.65**	dB re 1 V/Pa
	10.42	mV/Pa
Open circuit correction factor K_o	**13.6**	dB
System sensitivity (with preamplifier) at 251.2 Hz	**N/A**	dB re 1 V/Pa
	N/A	mV/Pa
Correction factor K	**N/A**	dB

Microphone Frequency Response Type 2559
S/N 2141 : Measured 20 Jan 2015



Calibration performed by

Harold Lynch, Service Manager

Condition of Test		
Ambient Pressure	**989.61**	hPa
Temperature	**23**	°C
Relative Humidity	**36**	%
Polarization Voltage	**200**	V
Frequency	**251.2**	Hz
Date of Calibration	**20 JAN 2015**	
Re-calibration due on	**20 JAN 2016**	

Odin Metrology, Inc.
3533 Old Conejo Road, Suite 125
Thousand Oaks, CA 91320
Phone: (805) 375-0830; Fax: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.

This calibration is traceable to NIST Test Number: **TN-638/282477, 2012.**
Calibration Procedure: **OM-P-1008-Microphone Rev. 1.2 20130618.**

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

Certificate of Calibration for Larson Davis 1/2" Random Incidence Microphone

This calibration is performed by comparison with measurement reference standard microphone:

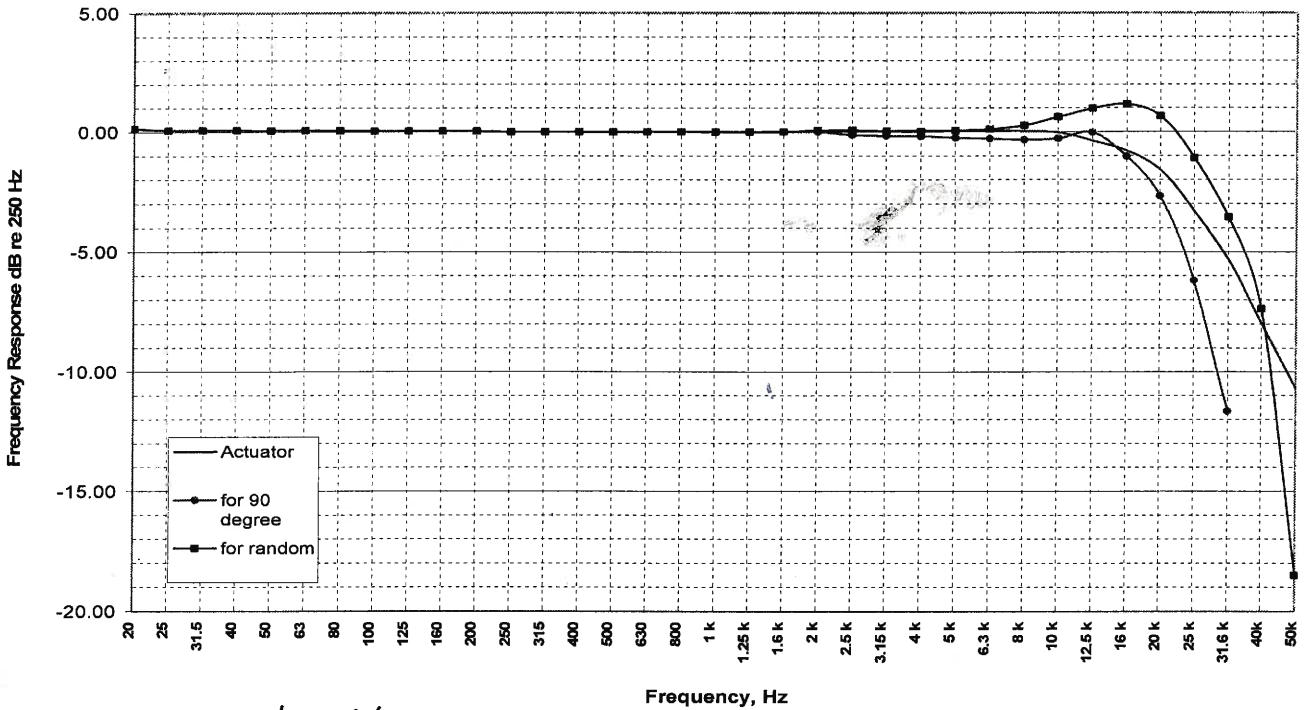
Reference Standards	
Type No.	4134/UA0825
Serial No.	1866523
Calibrated by	DANAK
Cal Date	23 OCT 2014
Due Date	23 OCT 2016

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.064** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.13** dB

Type no.	**2559**
Serial no.	**2206**
With preamplifier type no.	**N/A**
Preamplifier Serial no.	**N/A**
Submitted by	**Parsons**
	Pasadena, CA 91124
Purchase order no.	**Verbal**
Asset no.	**N/A**

Performance Data		
Open circuit sensitivity at 1,013 hPa, 23°C, 50% RH, 251.2 Hz	**-39.67**	dB re 1 V/Pa
	10.39	mV/Pa
Open circuit correction factor K_o	**13.7**	dB
System sensitivity (with preamplifier) at 251.2 Hz	**N/A**	dB re 1 V/Pa
	N/A	mV/Pa
Correction factor K	**N/A**	dB

Microphone Frequency Response Type 2559
S/N 2206 : Measured 20 Jan 2015



Calibration performed by

Harold Lynch, Service Manager

Condition of Test		
Ambient Pressure	**989.61**	hPa
Temperature	**23**	°C
Relative Humidity	**36**	%
Polarization Voltage	**200**	V
Frequency	**251.2**	Hz
Date of Calibration	**20 JAN 2015**	
Re-calibration due on	**20 JAN 2016**	

Odin Metrology, Inc.
3533 Old Conejo Road, Suite 125
Thousand Oaks, CA 91320
Phone: (805) 375-0830; Fax: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.

This calibration is traceable to NIST Test Number: **TN-638/282477, 2012.**
Calibration Procedure: **OM-P-1008-Microphone Rev. 1.2 20130618.**

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **21299-2**

Certificate of Calibration for Larson Davis 1/2" Random Incidence Microphone

This calibration is performed by comparison with measurement reference standard microphone:

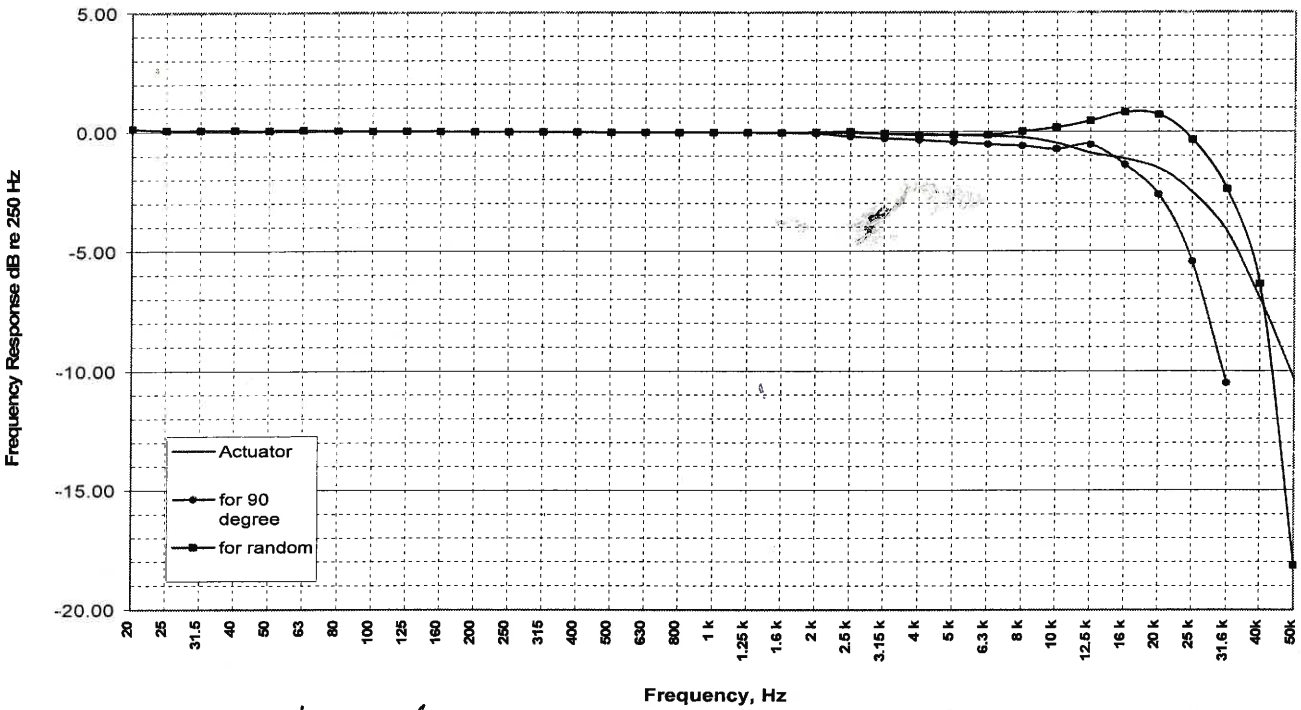
Reference Standards	
Type No.	4134/UA0825
Serial No.	1866523
Calibrated by	DANAK
Cal Date	23 OCT 2014
Due Date	23 OCT 2016

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.064** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.13** dB

Type no.	**2559**
Serial no.	**2313**
With preamplifier type no.	**N/A**
Preamplifier Serial no.	**N/A**
Submitted by	**Parsons**
	Pasadena, CA 91124
Purchase order no.	**Verbal**
Asset no.	**N/A**

Performance Data		
Open circuit sensitivity at 1,013 hPa, 23°C, 50% RH, 251.2 Hz	**-39.30**	dB re 1 V/Pa
	10.84	mV/Pa
Open circuit correction factor K_0	**13.3**	dB
System sensitivity (with preamplifier) at 251.2 Hz	**N/A**	dB re 1 V/Pa
	N/A	mV/Pa
Correction factor K	**N/A**	dB

Microphone Frequency Response Type 2559
S/N 2313 : Measured 20 Jan 2015



Calibration performed by

Harold Lynch, Service Manager

Condition of Test		
Ambient Pressure	**989.61**	hPa
Temperature	**23**	°C
Relative Humidity	**36**	%
Polarization Voltage	**200**	V
Frequency	**251.2**	Hz
Date of Calibration	**20 JAN 2015**	
Re-calibration due on	**20 JAN 2016**	

ODIN METROLOGY, INC.
3533 OLD CONEJO ROAD, SUITE 125
THOUSAND OAKS, CA 91320
PHONE: (805) 375-0830; FAX: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.

This calibration is traceable to NIST Test Number: **TN-638/282477, 2012.**
Calibration Procedure: **OM-P-1008-Microphone Rev. 1.2 20130618.**

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

Certificate of Calibration for Larson Davis 1/2" Random Incidence Microphone

This calibration is performed by comparison with measurement reference standard microphone:

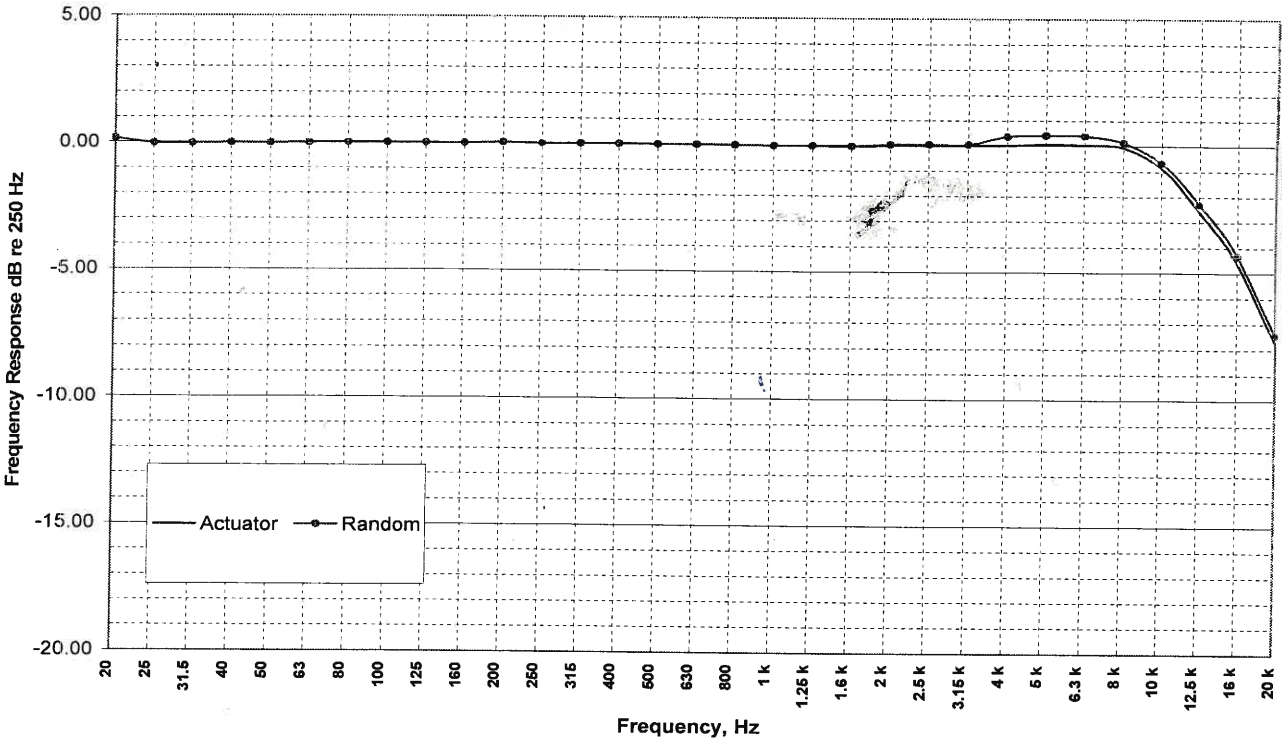
Reference Standards	
Type No.	4134/UA0825
Serial No.	1866523
Calibrated by	DANAK
Cal Date	21 SEP 2012
Due Date	21 SEP 2014

Type no.	**2560**
Serial no.	**2916**
With preamplifier type no.	**N/A**
Preamplifier Serial no.	**N/A**
Submitted by	**Parsons Pasadena, CA 91124**
Purchase order no.	**Letter**
Asset no.	**N/A**

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.064** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.13** dB

Performance Data		
Open circuit sensitivity at 1,013 hPa, 23°C, 50% RH, 251.2 Hz	**-26.80**	dB re 1 V/Pa
	45.69	mV/Pa
Open circuit correction factor K_0	**0.8**	dB
System sensitivity (with preamplifier) at 251.2 Hz	**N/A**	dB re 1 V/Pa
	N/A	mV/Pa
Correction factor K	**N/A**	dB

Microphone Frequency Response Type 2560
S/N 2916 : Measured 22 Jul 2013



Calibration performed by

Torben Ehlert, Quality Assurance Manager

Condition of Test		
Ambient Pressure	**988.37**	hPa
Temperature	**23**	°C
Relative Humidity	**45**	%
Polarization Voltage	**200**	V
Frequency	**251.2**	Hz
Date of Calibration	**22 JUL 2013**	
Re-calibration due on	**22 JUL 2014**	

Odin Metrology, Inc.
3533 Old Conejo Road, Suite 125
Thousand Oaks, CA 91320
Phone: (805) 375-0830; Fax: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.

This calibration is traceable to NIST Test Number: **681/280896-11 D1308.**

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **20928-8**

Certificate of Calibration for Larson Davis 1/2" Random Incidence Microphone

This calibration is performed by comparison with measurement reference standard microphone:

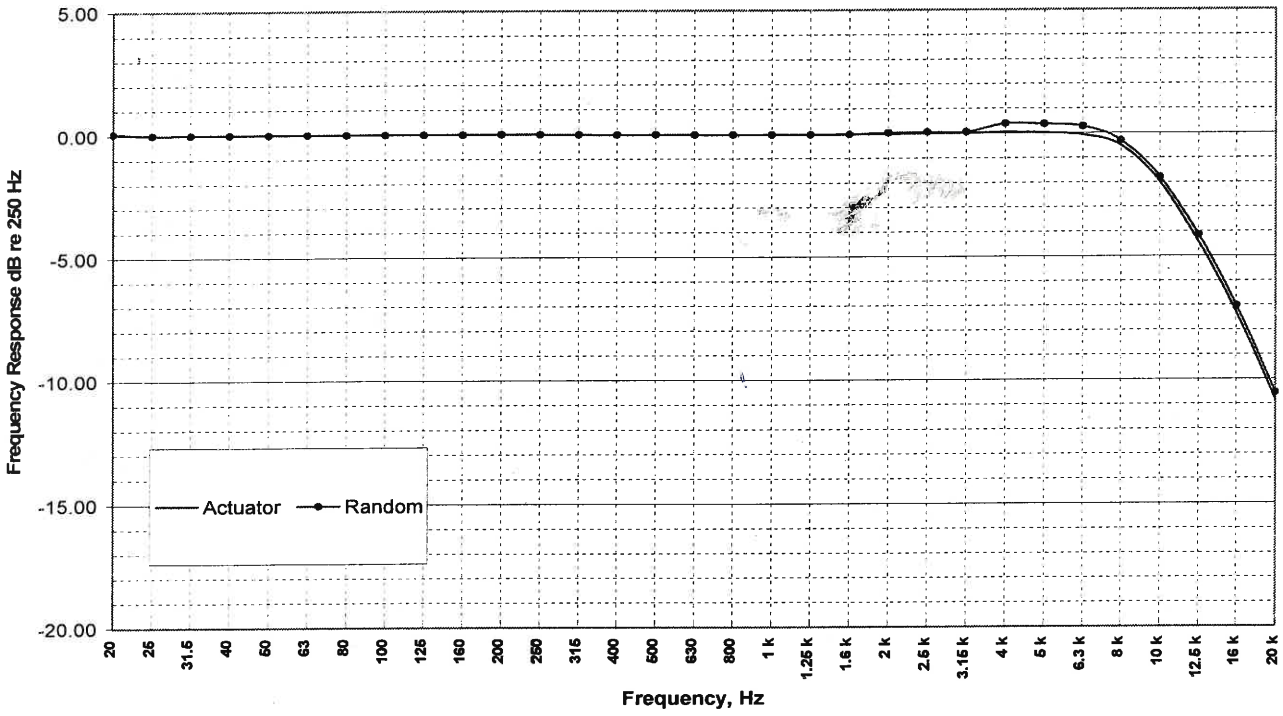
Reference Standards	
Type No.	4134/UA0825
Serial No.	1866524
Calibrated by	DANAK
Cal Date	24 SEP 2013
Due Date	24 SEP 2015

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.064** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.13** dB

Type no.	**2560**
Serial no.	**3155**
With preamplifier type no.	**N/A**
Preamplifier Serial no.	**N/A**
Submitted by	**Parsons**
	Pasadena, CA 91124
Purchase order no.	**Verbal**
Asset no.	**N/A**

Performance Data		
Open circuit sensitivity at 1,013 hPa, 23°C, 50% RH, 251.2 Hz	**-26.07**	dB re 1 V/Pa
	49.69	mV/Pa
Open circuit correction factor K_0	**0.1**	dB
System sensitivity (with preamplifier) at 251.2 Hz	**N/A**	dB re 1 V/Pa
	N/A	mV/Pa
Correction factor K	**N/A**	dB

Microphone Frequency Response Type 2560
S/N 3155 : Measured 28 Jul 2014



Calibration performed by

Torben Ehlert, Quality Assurance Manager

Condition of Test		
Ambient Pressure	**991.73**	hPa
Temperature	**23**	°C
Relative Humidity	**37**	%
Polarization Voltage	**200**	V
Frequency	**251.2**	Hz
Date of Calibration	**28 JUL 2014**	
Re-calibration due on	**28 JUL 2015**	

ODIN METROLOGY, INC.
3533 OLD CONEJO ROAD, SUITE 125
THOUSAND OAKS, CA 91320
PHONE: (805) 375-0830; FAX: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.

This calibration is traceable to NIST Test Number: **TN-638/282477, 2012.**
Calibration Procedure: **OM-P-1008-Microphone Rev. 1.2 20130618.**

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **20928-3**

Certificate of Calibration for Larson Davis 1/2" Random Incidence Microphone

This calibration is performed by comparison with measurement reference standard microphone:

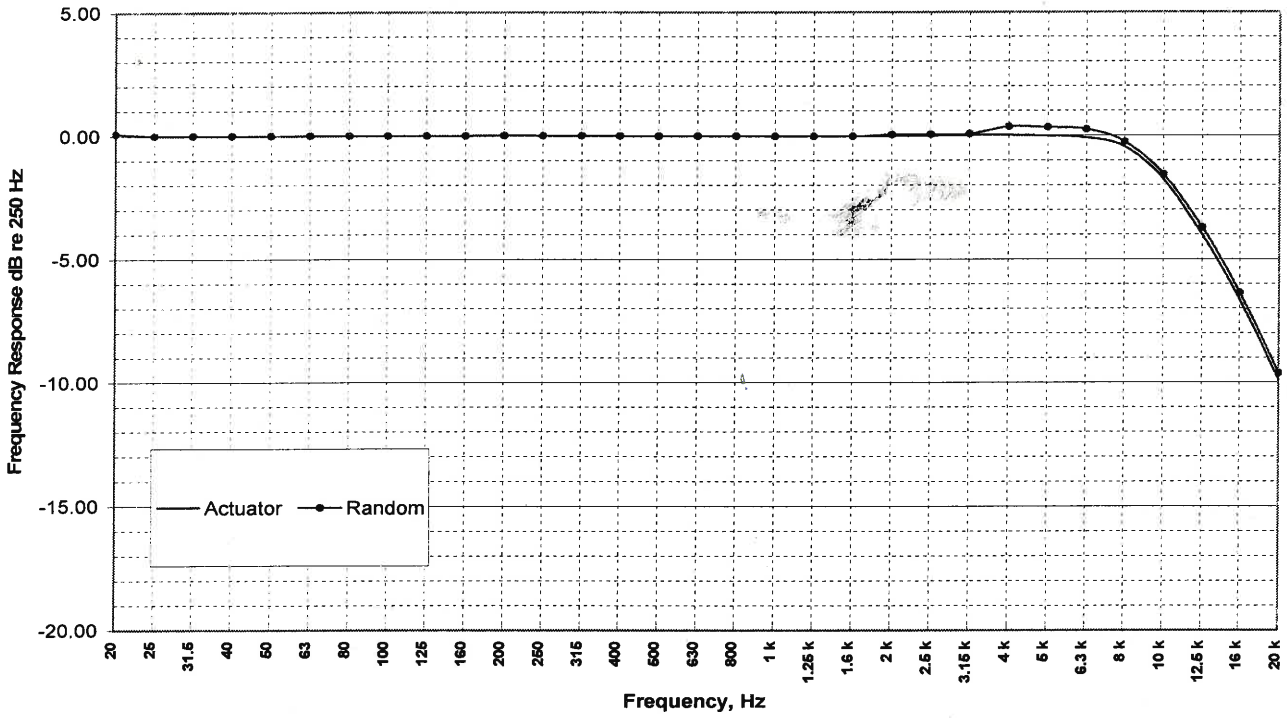
Reference Standards	
Type No.	4134/UA0825
Serial No.	1866524
Calibrated by	DANAK
Cal Date	24 SEP 2013
Due Date	24 SEP 2015

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.064** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.13** dB

Type no.	**2560**
Serial no.	**3159**
With preamplifier type no.	**N/A**
Preamplifier Serial no.	**N/A**
Submitted by	**Parsons**
	Pasadena, CA 91124
Purchase order no.	**Verbal**
Asset no.	**N/A**

Performance Data		
Open circuit sensitivity at 1,013 hPa, 23°C, 50% RH, 251.2 Hz	**-26.43**	dB re 1 V/Pa
	47.72	mV/Pa
Open circuit correction factor K_0	**0.4**	dB
System sensitivity (with preamplifier) at 251.2 Hz	**N/A**	dB re 1 V/Pa
	N/A	mV/Pa
Correction factor K	**N/A**	dB

Microphone Frequency Response Type 2560
S/N 3159 : Measured 28 Jul 2014



Calibration performed by

Torben Ehlert, Quality Assurance Manager

Condition of Test		
Ambient Pressure	**991.73**	hPa
Temperature	**23**	°C
Relative Humidity	**37**	%
Polarization Voltage	**200**	V
Frequency	**251.2**	Hz
Date of Calibration	**28 JUL 2014**	
Re-calibration due on	**28 JUL 2015**	

ODIN METROLOGY, INC.
3533 OLD CONEJO ROAD, SUITE 125
THOUSAND OAKS, CA 91320
PHONE: (805) 375-0830; FAX: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.

This calibration is traceable to NIST Test Number: **TN-638/282477, 2012.**
Calibration Procedure: **OM-P-1008-Microphone Rev. 1.2 20130618.**

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

Certificate of Calibration for Larson Davis 1/2" Random Incidence Microphone

This calibration is performed by comparison with measurement reference standard microphone:

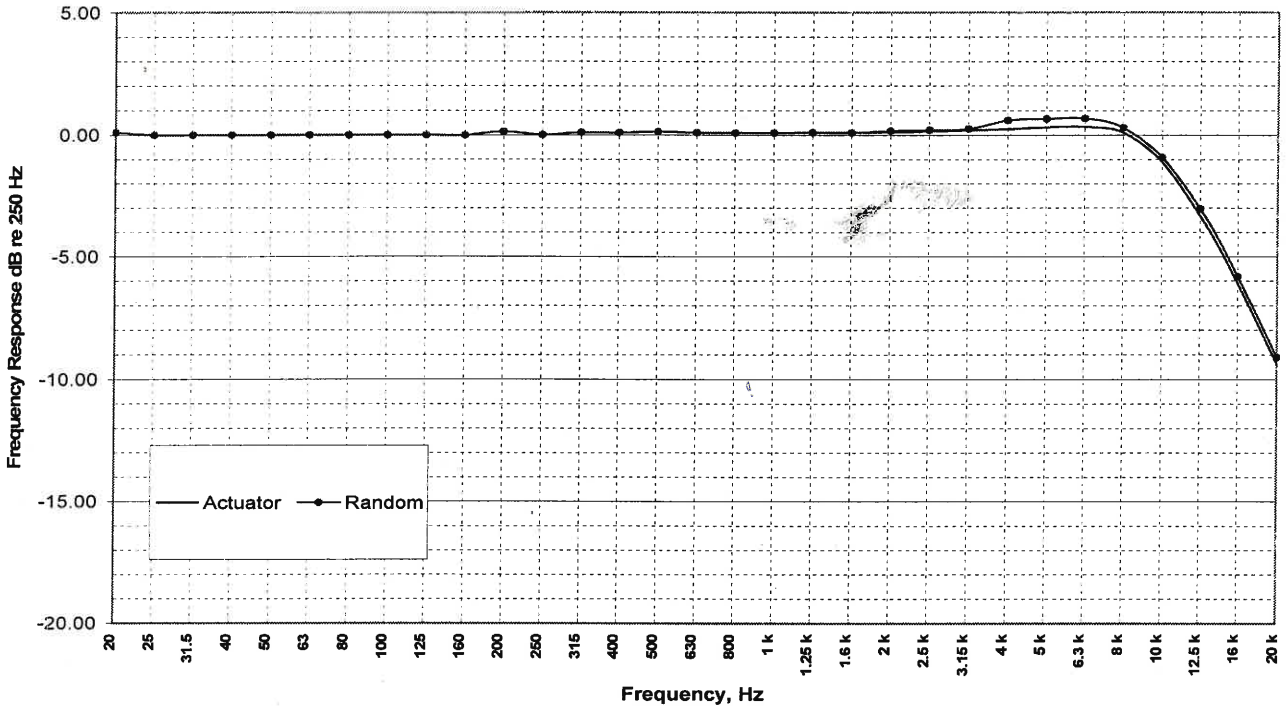
Reference Standards	
Type No.	4134/UA0825
Serial No.	1866524
Calibrated by	DANAK
Cal Date	24 SEP 2013
Due Date	24 SEP 2015

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.064** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.13** dB

Type no.	**2560**
Serial no.	**3378**
With preamplifier type no.	**N/A**
Preamplifier Serial no.	**N/A**
Submitted by	**Parsons**
	Pasadena, CA 91124
Purchase order no.	**Verbal**
Asset no.	**N/A**

Performance Data		
Open circuit sensitivity at 1,013 hPa, 23°C, 50% RH, 251.2 Hz	**-26.12**	dB re 1 V/Pa
	49.43	mV/Pa
Open circuit correction factor K_0	**0.1**	dB
System sensitivity (with preamplifier) at 251.2 Hz	**N/A**	dB re 1 V/Pa
	N/A	mV/Pa
Correction factor K	**N/A**	dB

Microphone Frequency Response Type 2560
S/N 3378 : Measured 28 Jul 2014



Calibration performed by

Torben Ehlert, Quality Assurance Manager

Condition of Test		
Ambient Pressure	**991.73**	hPa
Temperature	**23**	°C
Relative Humidity	**37**	%
Polarization Voltage	**200**	V
Frequency	**251.2**	Hz
Date of Calibration	**28 JUL 2014**	
Re-calibration due on	**28 JUL 2015**	

Odin Metrology, Inc.
3533 Old Conejo Road, Suite 125
Thousand Oaks, CA 91320
Phone: (805) 375-0830; Fax: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.

This calibration is traceable to NIST Test Number: **TN-638/282477, 2012.**
Calibration Procedure: **OM-P-1008-Microphone Rev. 1.2 20130618.**

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

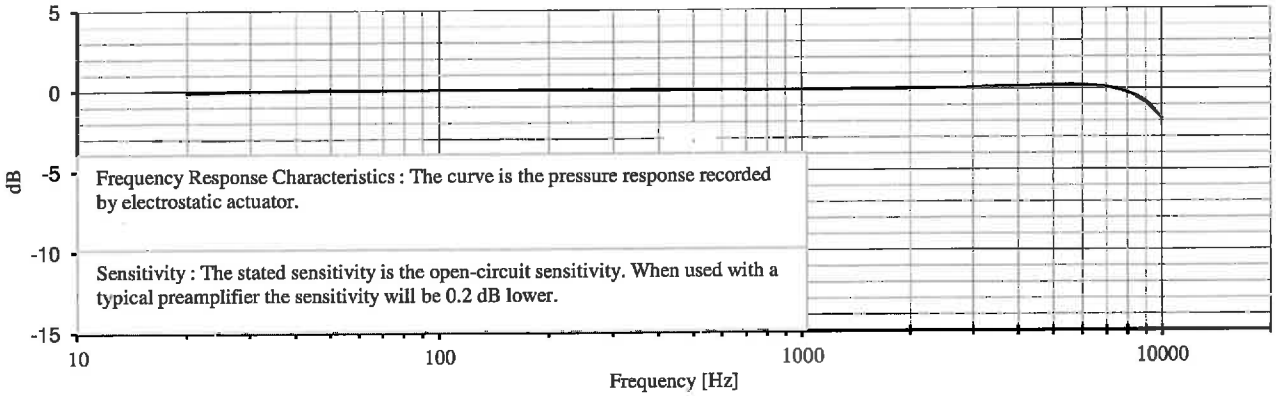
THE MODAL SHOP INC.
A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph : 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~Certificate of Calibration~

Manufacturer:	Larson Davis	**Asset ID:**	
Model Number:	2560	**Customer:**	TMS Rental
Serial Number:	3384	**Calibration Date:**	Aug 22, 2013 15:35:42
Description:	Pressure Microphone	**Due Date:**	

Sensitivity:	**250 Hz**	**1 kHz**			**Temperature:**	73 (23)	°F (°C)
	-25.94	-25.96	dB	1V/Pa	**Humidity:**	48	%
	50.45	50.32	mV/Pa		**Ambient Pressure:**	996.1	mbar
Cal. Results:	In Tolerance				**Polarization Voltage:**	200	VDC



Traceability: The calibration is traceable through 681/280411-11.

Notes: Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB.
Calibrated per procedure PRD-P204.

User Note : As Found / As Left: In Tolerance.

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)
20	-0.14	**630**	-0.02	**4500**	0.17		
25	-0.05	**800**	-0.02	**5000**	0.18		
31.5	-0.03	**1000**	-0.02	**5600**	0.20		
40	-0.01	**1120**	-0.02	**6300**	0.16		
50	0.02	**1250**	-0.02	**7100**	0.04		
63	0.01	**1400**	-0.02	**8000**	-0.25		
80	0.02	**1600**	-0.01	**9000**	-0.83		
100	0.04	**1800**	0.00	**10000**	-1.83		
125	0.03	**2000**	0.02				
160	0.02	**2240**	0.02				
200	0.01	**2500**	0.03				
250	0.00	**2800**	0.05				
315	-0.01	**3150**	0.08				
400	-0.01	**3550**	0.11				
500	-0.01	**4000**	0.14				

ACCREDITED

Technician: Ed Devlin

Approval: Edward A. Devlin

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	77606	9/21/2012	9/21/2013

CALIBRATION CERT 2649.01

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **21299-1**

Certificate of Calibration for GRAS 1/2" Random Incidence Microphone

This calibration is performed by comparison with measurement reference standard microphone:

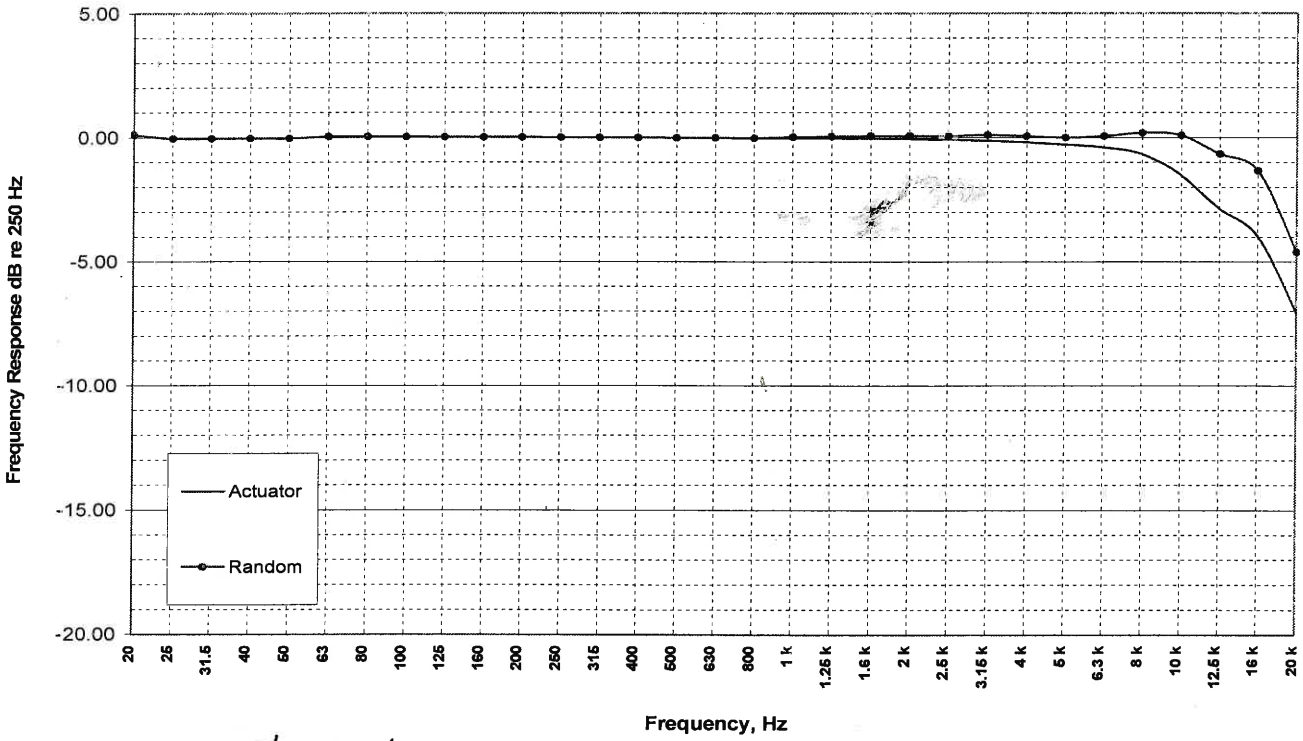
REFERENCE STANDARDS	
Type No.	4134/UA0825
Serial No.	1866523
Calibrated by	DANAK
Cal Date	23 OCT 2014
Due Date	23 OCT 2016

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.064** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.13** dB

Type no.	**40AQ**
Serial no.	**16967**
With preamplifier type no.	**N/A**
Preamplifier Serial no.	**N/A**
Submitted by	**Parsons**
	Pasadena, CA 91124
Purchase order no.	**Verbal**
Asset no.	**N/A**

PERFORMANCE DATA		
Open circuit sensitivity at 1,013 hPa, 23°C, 50% RH, 251.2 Hz	**-27.40**	dB re 1 V/Pa
	42.68	mV/Pa
Open circuit correction factor K_0	**1.4**	dB
System sensitivity (with preamplifier) at 251.2 Hz	**N/A**	dB re 1 V/Pa
	N/A	mV/Pa
Correction factor K	**N/A**	dB

Microphone Frequency Response Type 40AQ
S/N 16967 : Measured 20 Jan 2015



Calibration performed by

Harold Lynch, Service Manager

CONDITION OF TEST		
Ambient Pressure	**989.61**	hPa
Temperature	**23**	°C
Relative Humidity	**36**	%
Polarization Voltage	**0**	V
Frequency	**251.2**	Hz
Date of Calibration	**20 JAN 2015**	
Re-calibration due on	**20 JAN 2016**	

ODIN METROLOGY, INC.
3533 OLD CONEJO ROAD, SUITE 125
THOUSAND OAKS, CA 91320
PHONE: (805) 375-0830; FAX: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.

This calibration is traceable to NIST Test Number: **TN-638/282477, 2012.**
Calibration Procedure: **OM-P-1008-Microphone Rev. 1.2 20130618.**

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **20242-3**

Certificate of Calibration for PCB 1/2" Free-field Microphone

This calibration is performed by comparison with measurement reference standard microphone:

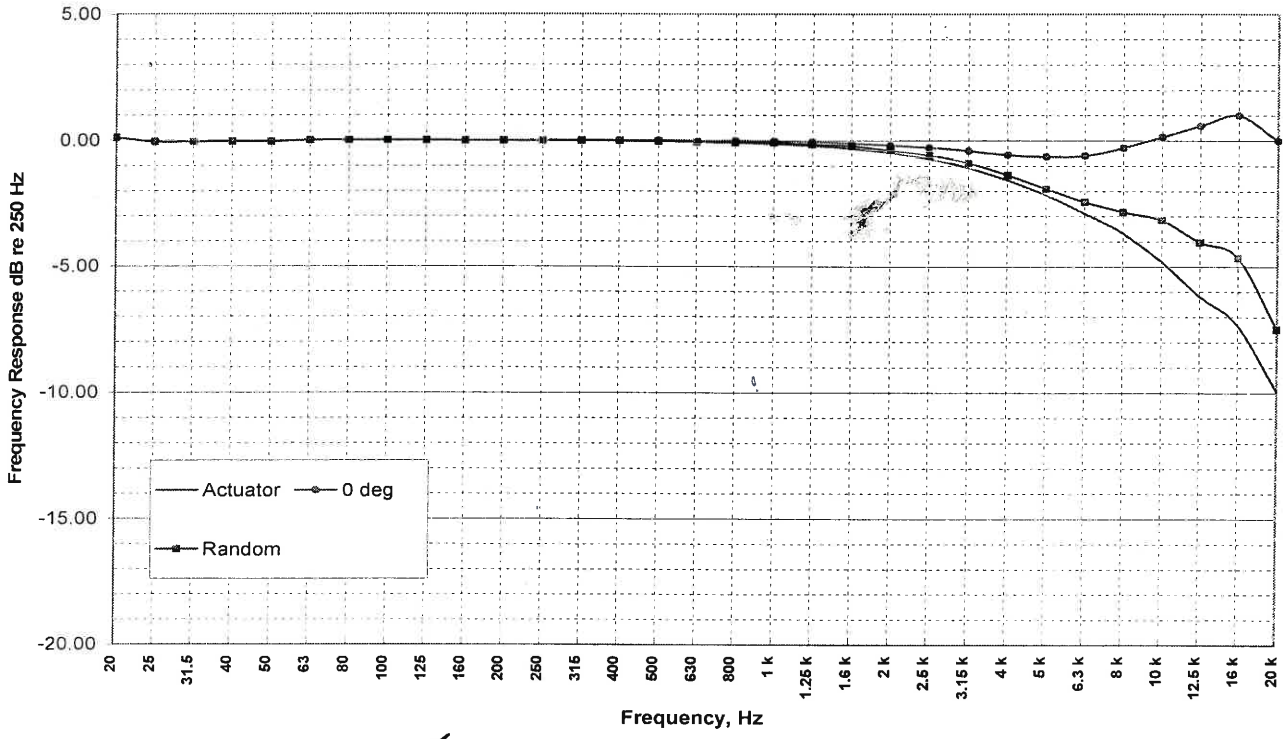
Reference Standards	
Type No.	4134/UA0825
Serial No.	1866523
Calibrated by	DANAK
Cal Date	21 SEP 2012
Due Date	21 SEP 2014

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.064** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.13** dB

Type no.	**377A02**
Serial no.	**52820**
With preamplifier type no.	**N/A**
Serial no.	**N/A**
Submitted by	**Parsons**
	Pasadena, CA 91124
Purchase order no.	**Verbal**
Asset no.	**N/A**

Performance Data		
Open circuit sensitivity at 1,013 mbar, 23°C, 50% RH, 251.2 Hz	**-25.14**	dB re 1 V/Pa
	55.34	mV/Pa
Open circuit correction factor (K_O)	**-0.9**	
System sensitivity (with preamplifier) at 251.2 Hz	**N/A**	dB re 1 V/Pa
	N/A	mV/Pa
System correction factor (K)	**N/A**	

Microphone Frequency Response Type 377A02
S/N 52820 : Measured 24 Sep 2013



Calibration performed by

Torben Ehlert, Quality Assurance Manager

Condition of Test		
Ambient Pressure	**987.23**	hPa
Temperature	**23**	°C
Relative Humidity	**34**	%
Polarization Voltage	**0**	V
Frequency	**251.2**	Hz
Date of Calibration	**24 SEP 2013**	
Re-calibration due on	**24 SEP 2014**	

Odin Metrology, Inc.
3533 Old Conejo Road, Suite 125
Thousand Oaks, CA 91320
Phone: (805) 375-0830; Fax: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.

This calibration is traceable to NIST Test Number: **681/280896-11 D1308.**

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

THE MODAL SHOP INC. A PCB GROUP CO.

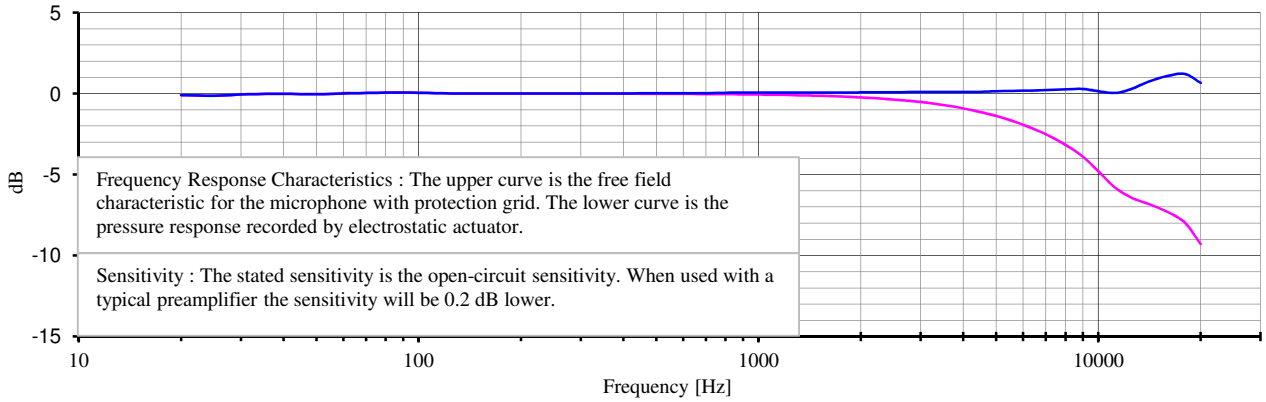
3149 East Kemper Rd.
Cincinnati, OH 45241
Ph : 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~Certificate of Calibration~

Manufacturer:	PCB	**Asset ID:**	48619
Model Number:	377B02	**Customer:**	TMS Rental
Serial Number:	LW132441	**Calibration Date:**	Feb 02, 2015 13:30:13
Description:	Free-Field Microphone	**Due Date:**	

Sensitivity:	**250 Hz**	**1 kHz**		**Temperature:**	74 (23)	°F (°C)
	-25.18	-25.24	dB re. 1V/Pa	**Humidity:**	19	%
	55.11	54.68	mV/Pa	**Ambient Pressure:**	998	mbar

Cal. Results: In Tolerance **Polarization Voltage:** 0 VDC



Traceability: The calibration is traceable through 683/281764-12.

Notes: Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB.
Calibrated per procedure PRD-P204.

User Note : As Found/As Left; In Tolerance

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper	(Hz)	Upper (dB)
20	-0.10	**630**	0.01	**4500**	0.11		
25	-0.13	**800**	0.05	**5000**	0.14		
31.5	-0.05	**1000**	0.06	**5600**	0.17		
40	-0.02	**1120**	0.06	**6300**	0.19		
50	-0.04	**1250**	0.06	**7100**	0.22		
63	0.02	**1400**	0.07	**8000**	0.27		
80	0.06	**1600**	0.06	**9000**	0.29		
100	0.05	**1800**	0.07	**10000**	0.15		
125	0.01	**2000**	0.07	**11200**	0.04		
160	0.01	**2240**	0.08	**12500**	0.28		
200	0.01	**2500**	0.09	**14000**	0.72		
250	0.00	**2800**	0.09	**16000**	1.09		
315	0.01	**3150**	0.10	**18000**	1.21		
400	0.01	**3550**	0.10	**20000**	0.66		
500	0.03	**4000**	0.09				

Technician: Wayne Underwood

Approval:

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	9/15/2014	9/15/2015

ACCREDITED
Calibration Lab
CALIBRATION CERT 2649.01

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A PCB GROUP CO.

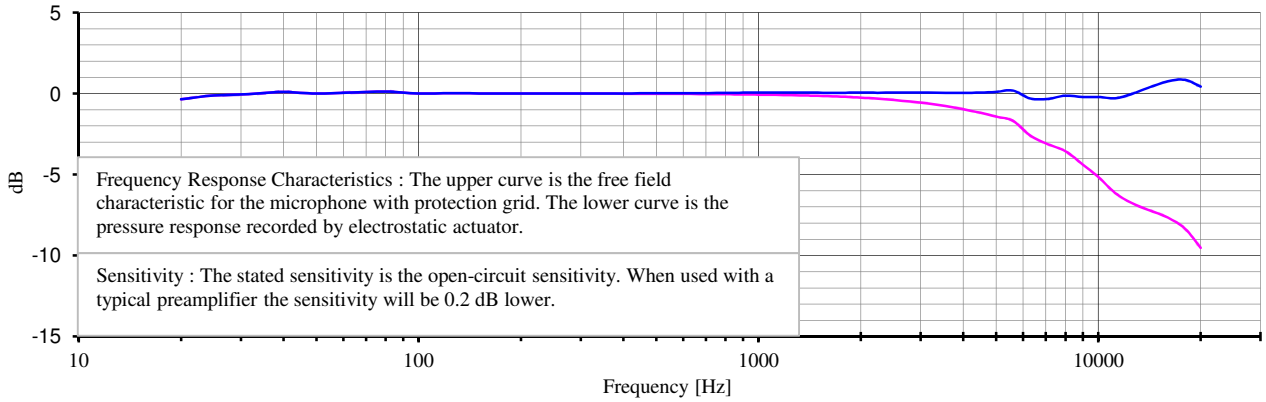
3149 East Kemper Rd.
Cincinnati, OH 45241
Ph : 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~Certificate of Calibration~

Manufacturer:	PCB	**Asset ID:**	49327
Model Number:	377B02	**Customer:**	TMS Rental
Serial Number:	LW138391	**Calibration Date:**	Jan 15, 2015 10:21:19
Description:	Free-Field Microphone	**Due Date:**	

Sensitivity:	**250 Hz**	**1 kHz**		**Temperature:**	73 (23)	°F (°C)
	-25.63	-25.70	dB re. 1V/Pa	**Humidity:**	16	%
	52.28	51.90	mV/Pa	**Ambient Pressure:**	1000.2	mbar

Cal. Results: In Tolerance **Polarization Voltage:** 0 VDC



Traceability: The calibration is traceable through 683/281764-12.

Notes: Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB.
Calibrated per procedure PRD-P204.

User Note : As Found/As Left; In Tolerance

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency	(dB)
20	-0.35	**630**	0.01	**4500**	0.06		
25	-0.12	**800**	0.05	**5000**	0.10		
31.5	-0.04	**1000**	0.05	**5600**	0.19		
40	0.10	**1120**	0.06	**6300**	-0.31		
50	-0.01	**1250**	0.06	**7100**	-0.33		
63	0.05	**1400**	0.06	**8000**	-0.13		
80	0.12	**1600**	0.05	**9000**	-0.21		
100	0.01	**1800**	0.05	**10000**	-0.21		
125	0.03	**2000**	0.06	**11200**	-0.29		
160	0.01	**2240**	0.05	**12500**	-0.04		
200	0.01	**2500**	0.06	**14000**	0.35		
250	0.00	**2800**	0.06	**16000**	0.75		
315	0.01	**3150**	0.06	**18000**	0.85		
400	0.00	**3550**	0.05	**20000**	0.42		
500	0.03	**4000**	0.04				

Technician: Wayne Underwood

Approval: _____

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	9/15/2014	9/15/2015

ACCREDITED
Calibration Lab
CALIBRATION CERT 2649.01

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **20718-5**

Certificate of Calibration for Brüel & Kjær 1/2" Free-field Microphone

This calibration is performed by comparison with measurement reference standard microphone:

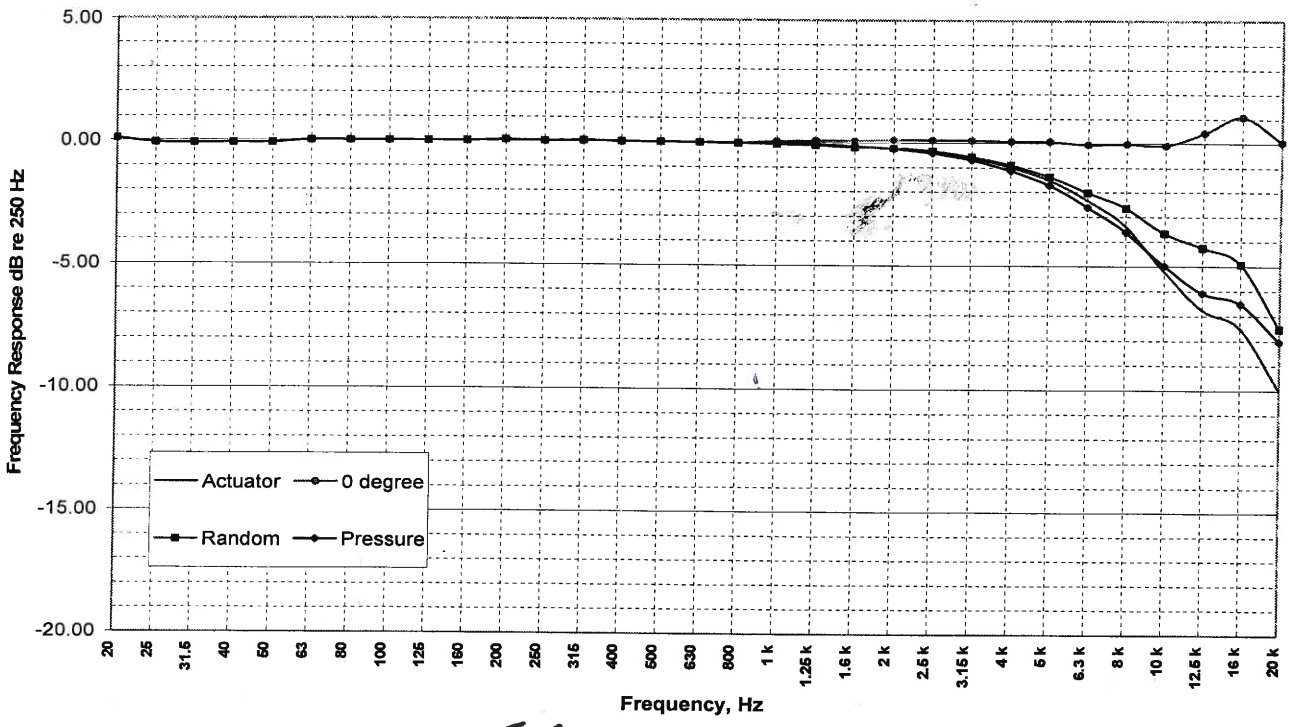
Reference Standards	
Type No.	4134/UA0825
Serial No.	1866524
Calibrated by	DANAK
Cal Date	24 SEP 2013
Due Date	24 SEP 2015

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of reference microphone: ± **0.04** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.064** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.13** dB

Type no.	**4189**
Serial no.	**2663101**
With preamplifier type no.	**N/A**
Preamplifier Serial no.	**N/A**
Submitted by	**Parsons**
	Pasadena, CA 91124
Purchase order no.	**Verbal**
Asset no.	**N/A**

Performance Data		
Open circuit sensitivity at 1,013 hPa, 23°C, 50% RH, 251.2 Hz	**-26.23**	dB re 1 V/Pa
	48.82	mV/Pa
Open circuit correction factor K_o	**0.2**	dB
System sensitivity (with preamplifier) at 251.2 Hz	**N/A**	dB re 1 V/Pa
	N/A	mV/Pa
Correction factor K	**N/A**	dB

Microphone Frequency Response Type 4189
S/N 2663101 : Measured 14 Apr 2014



Calibration performed by

Torben Ehlert, Quality Assurance Manager

Condition of Test		
Ambient Pressure	**990.21**	hPa
Temperature	**23**	°C
Relative Humidity	**34**	%
Polarization Voltage	**0**	V
Frequency	**251.2**	Hz
Date of Calibration	**14 APR 2014**	
Re-calibration due on	**14 APR 2015**	

Odin Metrology, Inc.
3533 Old Conejo Road, Suite 125
Thousand Oaks, CA 91320
Phone: (805) 375-0830; Fax: (805) 375-0405

The calibration data is both "as found" and "as final." At the time of calibration this microphone was found to be **within** the manufacturer's specifications.

This calibration is traceable to NIST Test Number: **TN-638/282477, 2012.**
Calibration Procedure: **OM-P-1008-Microphone Rev. 1.2 20130618.**

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

CERTIFICATE OF CALIBRATION
21299-9
FOR LARSON DAVIS
1/2" MICROPHONE PREAMPLIFIER

Model **PRM828** Serial No. **1629**
ID No. **N/A**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met factory specifications at the points tested according to the Referenced Test Procedure

on **20 JAN 2015** **BY HAROLD LYNCH**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **20 JAN 2016**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	4155	1424163	27 MAR 2014	27 MAR 2015
B&K	1049	1314996	12 JUN 2014	12 JUN 2015
B&K	2636	1423390	05 JAN 2015	05 JAN 2016
B&K	4226	2141942	02 DEC 2014	02 DEC 2015
B&K	4231	1770857	17 SEP 2014	17 SEP 2015
HP	34401A	MY45023668	08 FEB 2014	08 FEB 2015
HP	3458A	2823A07179	09 JUL 2014	09 JUL 2015

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left."

Reference Test Procedure: **ACCT Procedure PRM828 Version 0.0.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**36 %**	**989.91** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed Harold Lynch

ODIN METROLOGY, INC.
CALIBRATION OF SOUND AND VIBRATION INSTRUMENTATION
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PHONE: (805) 375-0830 FAX: (805) 375-0405

CERTIFICATE OF CALIBRATION
20928-2
FOR LARSON DAVIS
1/2" MICROPHONE PREAMPLIFIER

Model **PRM828** Serial No. **1891**
ID No. **N/A**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met factory specifications at the points tested according to the Referenced Test Procedure

on **30 JUL 2014** **BY HAROLD LYNCH**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **30 JUL 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	4155	1424163	27 MAR 2014	27 MAR 2015
B&K	1049	1288946	04 NOV 2013	04 NOV 2014
B&K	2636	1601487	19 MAY 2014	19 MAY 2015
B&K	4226	1774068	17 MAR 2014	17 MAR 2015
B&K	4231	2094472	26 FEB 2014	26 FEB 2015
HP	34401A	US36071531	11 JUN 2014	11 JUN 2015
HP	3458A	2823A17713	16 JUL 2014	16 JUL 2015

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left."

Reference Test Procedure: **ACCT Procedure PRM828 Version 0.0.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**45 %**	**988.11** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed Harold Lynch

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PHONE: (805) 375-0830 FAX: (805) 375-0405

CERTIFICATE OF CALIBRATION
20928-5
FOR LARSON DAVIS
1/2" MICROPHONE PREAMPLIFIER

Model **PRM828** Serial No. **1901**
ID No. **N/A**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met factory specifications at the points tested
according to the Referenced Test Procedure

on **30 JUL 2014** **BY HAROLD LYNCH**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **30 JUL 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	4155	1424163	27 MAR 2014	27 MAR 2015
B&K	1049	1288946	04 NOV 2013	04 NOV 2014
B&K	2636	1601487	19 MAY 2014	19 MAY 2015
B&K	4226	1774068	17 MAR 2014	17 MAR 2015
B&K	4231	2094472	26 FEB 2014	26 FEB 2015
HP	34401A	US36071531	11 JUN 2014	11 JUN 2015
HP	3458A	2823A17713	16 JUL 2014	16 JUL 2015

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left."

Reference Test Procedure: **ACCT Procedure PRM828 Version 0.0.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**45** %	**988.11** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed Harold Lynch

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PHONE: (805) 375-0830 FAX: (805) 375-0405

CERTIFICATE OF CALIBRATION
21299-7
FOR LARSON DAVIS
1/2" MICROPHONE PREAMPLIFIER

Model **PRM828** Serial No. **1938**
ID No. **N/A**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met factory specifications at the points tested according to the Referenced Test Procedure

on **20 JAN 2015** **BY HAROLD LYNCH**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **20 JAN 2016**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	4155	1424163	27 MAR 2014	27 MAR 2015
B&K	1049	1314996	12 JUN 2014	12 JUN 2015
B&K	2636	1423390	05 JAN 2015	05 JAN 2016
B&K	4226	2141942	02 DEC 2014	02 DEC 2015
B&K	4231	1770857	17 SEP 2014	17 SEP 2015
HP	34401A	MY45023668	08 FEB 2014	08 FEB 2015
HP	3458A	2823A07179	09 JUL 2014	09 JUL 2015

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left."

Reference Test Procedure: **ACCT Procedure PRM828 Version 0.0.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**36 %**	**989.91** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed

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CERTIFICATE OF CALIBRATION
20242-5
FOR LARSON DAVIS
1/2" MICROPHONE PREAMPLIFIER

Model **PRM828** Serial No. **2330**
ID No. **N/A**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met factory specifications at the points tested according to the Referenced Test Procedure

on **30 SEP 2013** **BY HAROLD LYNCH**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **30 SEP 2014**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1314996	12 JUN 2013	12 JUN 2014
B&K	2636	1423390	07 JAN 2013	07 JAN 2014
B&K	4226	2141942	29 NOV 2012	29 NOV 2013
B&K	4231	1770857	19 SEP 2013	19 SEP 2014
HP	34401A	MY45023668	29 JAN 2013	29 JAN 2014
HP	3458A	2823A07179	08 JUL 2013	08 JUL 2014

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left."

Reference Test Procedure: **ACCT Procedure PRM828 Version 0.0.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**30** %	**987.81** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed Harold Lynch

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PHONE: (805) 375-0830 FAX: (805) 375-0405

PREAMPLIFIERS

THE MODAL SHOP INC.
A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph : 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~ *Certificate of Conformance* ~

Manufacturer:	Larson Davis	Asset ID:	
Model:	PRM828	Calibration Date:	Sep 25, 2013 13:47:41
Serial Number:	2667	Due Date:	
Description:	Microphone Pre-Amplifier	Technician:	Ed Devlin
Customer:	TMS Rental	Approval:	

Calibration Result:
Frequency Response within ±0.2 dB with 18 pF loading
20.0 Hz - 20000.0 Hz

Temperature: 24 °C (75 °F)
Humidity: 39.8 %
Pressure: 991 mbar

Upon receipt for calibration, the instrument was found to be:
WITHIN the stated tolerance of the manufacturer's specification.

Note: As Found / As Left: In Tolerance.

The subject instrument was tested under operating procedures intended to implement the requirements of ISO 9001, ISO 17025 and ANSI Z540. This document certifies that the instrument met the following specification upon its return to the customer. Unless otherwise noted, the reported value is both "as found" and "as left" data. Results relate only to the items calibrated. This certificate may not be reproduced, except in full, without written permission.

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Response (dB)	Frequency (Hz)	Response (dB)	Frequency (Hz)	Response (dB)	Frequency (Hz)	Response (dB)
20.0	-0.022	**1000.0**	0.030	**7100.0**	0.043		
25.0	-0.013	**1120.0**	0.031	**8000.0**	0.044		
31.5	-0.006	**1250.0**	0.032	**9000.0**	0.044		
40.0	0.000	**1400.0**	0.033	**10000.0**	0.045		
50.0	0.003	**1600.0**	0.034	**11200.0**	0.046		
63.0	0.006	**1800.0**	0.035	**12500.0**	0.046		
80.0	0.010	**2000.0**	0.035	**14000.0**	0.047		
100.0	0.012	**2240.0**	0.036	**16000.0**	0.047		
125.0	0.013	**2500.0**	0.037	**18000.0**	0.048		
160.0	0.017	**2800.0**	0.038	**20000.0**	0.049		
200.0	0.017	**3150.0**	0.038				
250.0	0.020	**3550.0**	0.039				
315.0	0.023	**4000.0**	0.040				
400.0	0.025	**4500.0**	0.041				
500.0	0.026	**5000.0**	0.041				
630.0	0.027	**5600.0**	0.042				
800.0	0.029	**6300.0**	0.043				

CERTIFICATE OF CALIBRATION
20718-9
FOR LARSON DAVIS ½"
MICROPHONE PREAMPLIFIER

Model **PRM900B**

Serial No. **2661**
ID No. **N/A**

Customer: **Parsons**
Pasadena, CA 91124

P.O. No. **Verbal**

was tested and met factory specifications at the points tested
according to the Referenced Test Procedure

on **14 APR 2014**

BY HAROLD LYNCH
Service Manager

As received condition: Within Specification.
Re-calibration due on: **14 APR 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1314996	12 JUN 2013	12 JUN 2014
B&K	2636	1423390	07 JAN 2014	07 JAN 2015
B&K	4226	2141942	02 DEC 2013	02 DEC 2014
B&K	4155	1424163	27 MAR 2014	27 MAR 2015
B&K	4231	1770857	19 SEP 2013	19 SEP 2014
HP	34401A	MY45023668	08 FEB 2014	08 FEB 2015
HP	3458A	2823A07179	08 JUL 2013	08 JUL 2014

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" conditions.

Reference Test Procedure: **ACCT Procedure PRM900B-C Version 1.0.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**34 %**	**990.21** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed:

ODIN METROLOGY, INC.
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3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

CERTIFICATE OF CALIBRATION
20928-9
FOR LARSON DAVIS ½"
MICROPHONE PREAMPLIFIER

Model **900B**

Serial No. **2771**
ID No. **N/A**

Customer: **Parsons**
Pasadena, CA 91124

P.O. No. **Verbal**

was tested and met factory specifications at the points tested
according to the Referenced Test Procedure

on **30 JUL 2014**

BY HAROLD LYNCH
Service Manager

As received condition: Within Specification.
Re-calibration due on: **30 JUL 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	4155	1424163	27 MAR 2014	27 MAR 2015
B&K	1049	1288946	04 NOV 2013	04 NOV 2014
B&K	2636	1601487	19 MAY 2014	19 MAY 2015
B&K	4226	1774068	17 MAR 2014	17 MAR 2015
B&K	4231	2094472	26 FEB 2014	26 FEB 2015
HP	34401A	US36071531	11 JUN 2014	11 JUN 2015
HP	3458A	2823A17713	16 JUL 2014	16 JUL 2015

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" conditions.

Reference Test Procedure: **ACCT Procedure PRM900B-C Version 1.0.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**45 %**	**988.11** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed: Harold Lynch

ODIN METROLOGY, INC.
CALIBRATION OF SOUND AND VIBRATION INSTRUMENTATION
3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

CERTIFICATE OF CALIBRATION
20928-10
FOR LARSON DAVIS ½"
MICROPHONE PREAMPLIFIER

Model **900B**

Serial No. **3095**
ID No. **N/A**

Customer: **Parsons**
Pasadena, CA 91124

P.O. No. **Verbal**

was tested and met factory specifications at the points tested
according to the Referenced Test Procedure

on **30 JUL 2014**

BY HAROLD LYNCH
Service Manager

As received condition: Within Specification.
Re-calibration due on: **30 JUL 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	4155	1424163	27 MAR 2014	27 MAR 2015
B&K	1049	1288946	04 NOV 2013	04 NOV 2014
B&K	2636	1601487	19 MAY 2014	19 MAY 2015
B&K	4226	1774068	17 MAR 2014	17 MAR 2015
B&K	4231	2094472	26 FEB 2014	26 FEB 2015
HP	34401A	US36071531	11 JUN 2014	11 JUN 2015
HP	3458A	2823A17713	16 JUL 2014	16 JUL 2015

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" conditions.

Reference Test Procedure: **ACCT Procedure PRM900B-C Version 1.0.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**45 %**	**988.11** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed:

ODIN METROLOGY, INC.
CALIBRATION OF SOUND AND VIBRATION INSTRUMENTATION
3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

CERTIFICATE OF CALIBRATION
20928-11
FOR LARSON DAVIS ½"
MICROPHONE PREAMPLIFIER

Model **PRM900B**

Serial No. **3200**
ID No. **N/A**

Customer: **Parsons**
Pasadena, CA 91124

P.O. No. **Verbal**

was tested and met factory specifications at the points tested
according to the Referenced Test Procedure

on **30 JUL 2014**

BY HAROLD LYNCH
Service Manager

As received condition: Within Specification.
Re-calibration due on: **30 JUL 2015**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	4155	1424163	27 MAR 2014	27 MAR 2015
B&K	1049	1288946	04 NOV 2013	04 NOV 2014
B&K	2636	1601487	19 MAY 2014	19 MAY 2015
B&K	4226	1774068	17 MAR 2014	17 MAR 2015
B&K	4231	2094472	26 FEB 2014	26 FEB 2015
HP	34401A	US36071531	11 JUN 2014	11 JUN 2015
HP	3458A	2823A17713	16 JUL 2014	16 JUL 2015

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left" conditions.

Reference Test Procedure: **ACCT Procedure PRM900B-C Version 1.0.1.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**45 %**	**988.11** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed: Harold Lynch

ODIN METROLOGY, INC.
CALIBRATION OF SOUND AND VIBRATION INSTRUMENTATION
3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

Model **PRM902**

Customer: **Parsons**
Pasadena, CA 91124 P.O. No. **Verbal**

was tested and met factory specifications at the points tested
according to the Referenced Test Procedure

on **30 SEP 2013** **BY HAROLD LYNCH**
Service Manager

As received condition: Within Specification.
Re-calibration due on: **30 SEP 2014**

Certified References*

Mfg.	Type	Serial No.	Cal Date	Due Date
B&K	1049	1314996	12 JUN 2013	12 JUN 2014
B&K	2636	1423390	07 JAN 2013	07 JAN 2014
B&K	4226	2141942	29 NOV 2012	29 NOV 2013
B&K	4231	1770857	19 SEP 2013	19 SEP 2014
HP	34401A	MY45023668	29 JAN 2013	29 JAN 2014
HP	3458A	2823A07179	08 JUL 2013	08 JUL 2014

Performed in Compliance with ANSI, NCSL Z-540-1, 1994
and ISO 17025, ISO 9001:2008 Certification NQA No. 11252
*References are traceable to NIST (National Institute of Standards and Technology).

Note: For calibration data see enclosed pages.
The data represent both "as found" and "as left."

Reference Test Procedure: **ACCT Procedure PRM902 Version 1.0.0.**

Temperature	Relative Humidity	Barometric Pressure
23°C	**30** %	**987.81** hPa

Note: This calibration report shall not be reproduced, except in full, without written consent by Odin Metrology, Inc.

Signed Harold Lynch

ODIN METROLOGY, INC.
CALIBRATION OF SOUND AND VIBRATION INSTRUMENTATION
3533 OLD CONEJO ROAD, SUITE 125 THOUSAND OAKS CA 91320
PHONE: (805) 375-0830 FAX: (805) 375-0405

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2010-135314

Instrument Model PRMLXT1, Serial Number 015555, was calibrated on 15OCT2010. The instrument meets factory specifications per Procedure D0001.8295.

New Instrument
Date Calibrated: 15OCT2010
Calibration due: 15OCT2011

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Larson Davis	LDSigGn/2239	0942/0106	12 Months	09NOV2010	2009-123746
Agilent Technologies	34401A	MY47024345	12 Months	21SEP2011	4929226

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Temperature: 23 ° Centigrade

Relative Humidity: 29 %

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

This calibration complies with the requirements of ISO 17025 and ANSI Z540. The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

Signed: Shawna Strand
Technician: Shawna Strand

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2000 Certified

ACOUSTICAL CALIBRATORS

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2014-186969

Instrument Model CAL200, Serial Number 11048, was calibrated on 26 Feb 2014. The instrument meets factory specifications per Procedure D0001.8190, IEC 60942:2003.

New Instrument
Date Calibrated: 26 Feb 2014
Calibration due:

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Larson Davis	2900	0661	12 Months	8 Apr 2014	2013-172252
Larson Davis	2559	2506	12 Months	13 Jun 2014	29027
Larson Davis	MTS1000/2201	0111	12 Months	22 Aug 2014	SM082213
Larson Davis	PRM902	0480	12 Months	23 Aug 2014	2013-178669
Hewlett Packard	34401A	3146A10352	12 Months	3 Sep 2014	6214490
PCB	1502C02FJ15PSIA	1429	12 Months	2 Oct 2014	3463562806
Larson Davis	PRM915	0112	12 Months	9 Oct 2014	2013-180644

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Environmental test conditions as shown on calibration report.

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

Signed: Scott Montgomery
Technician: Scott Montgomery

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2008 Certified

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2013-177289

Instrument Model CAL200, Serial Number 10473, was calibrated on 29JUL2013. The instrument meets factory specifications per Procedure D0001.8190, IEC 60942:2003.

New Instrument
Date Calibrated: 29JUL2013
Calibration due:

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Hewlett Packard	34401A	3146A10352	12 Months	28AUG2013	5778699
Larson Davis	PRM902	0480	12 Months	07SEP2013	2012-163567
Larson Davis	MTS1000/2201	0111	12 Months	07SEP2013	SM070912-3
Larson Davis	PRM915	0112	12 Months	08OCT2013	2012-164811
Larson Davis	2559	2504	12 Months	03JAN2014	19648-1
PCB	1502B02FJ15PSIA	1342	12 Months	14JAN2014	3441014716
Larson Davis	2900	0661	12 Months	08APR2014	2013-172252

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Environmental test conditions as shown on calibration report.

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

Signed: Scott Montgomery
Technician: Scott Montgomery

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2008 Certified

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **21299-10**

Certificate of Calibration for Larson Davis Calibrator

This calibration is performed by comparison with measurement reference standard pistonphone:

Type No.	4220	4228
Serial No.	1048473	1504084
Calibrated by	TE	TE
Cal Date	05 NOV 2014	05 NOV 2015
Due Date	05 NOV 2015	05 NOV 2015

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of calibration service for standard pistonphone: ± **0.06** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.08** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.16** dB

This acoustic calibrator has been calibrated using standards with values traceable to the National Institute of Standards and Technology. This calibration is traceable to NIST Test Number **TN-638/282477, 2012**.

CONDITION OF TEST		
Ambient Pressure	**989.91**	hPa
Temperature	**23**	°C
Relative Humidity	**36**	%
Date of Calibration	**20 JAN 2015**	
Re-calibration due on	**20 JAN 2016**	

The calibration of this acoustic calibrator was performed using a test system conforming to the requirements of ANSI/NCSLZ540-1, 1994, ISO 17025, and ISO 9001-2008, Certification NQA No. 11252.

Calibration performed by Harold Lynch

Harold Lynch, Service Manager

Calibrator type **CA250**
Serial no. **2127**
Submitted by **Parsons**
Pasadena, CA 91124
Purchase order no. **Verbal**
Asset no. **N/A**

This calibrator has been found to perform **within** the specifications listed below at the normalized conditions stated.

SPL produced in coupler terminated by a loading volume of a ½" microphone	114 ± 0.2 dB
Frequency	250 Hz ± 1%
Distortion	< 3%
At 1,013 hPa, 20°C, and 65% relative humidity	

PERFORMANCE AS RECEIVED		
Frequency	**251.2**	Hz
SPL	**114.01**	dB
Distortion	**0.7**	%
Battery Voltage	**9.0**	V

Was adjustment performed? **No**
Were batteries replaced? **Yes**

FINAL PERFORMANCE		
Frequency	**251.2**	Hz
SPL	**114.01**	dB
Distortion	**0.7**	%

Note: This calibrator was **within** manufacturer's specifications as received.

ODIN METROLOGY, INC.
3533 OLD CONEJO ROAD, SUITE 125
THOUSAND OAKS, CA 91320
PHONE: (805) 375-0830; FAX: (805) 375-0405

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **20718-8**

Certificate of Calibration for Larson Davis Calibrator

This calibration is performed by comparison with measurement reference standard pistonphone:

Type No.	4220	4228
Serial No.	1048473	1504084
Calibrated by	TE	TE
Cal Date	28 OCT 2013	28 OCT 2013
Due Date	28 OCT 2014	28 OCT 2014

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of calibration service for standard pistonphone: ± **0.06** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.08** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.16** dB

This acoustic calibrator has been calibrated using standards with values traceable to the National Institute of Standards and Technology. This calibration is traceable to NIST Test Number **TN-638/282477, 2012**.

CONDITION OF TEST		
Ambient Pressure	**990.21**	hPa
Temperature	**23**	°C
Relative Humidity	**34**	%
Date of Calibration	**14 APR 2014**	
Re-calibration due on	**14 APR 2015**	

The calibration of this acoustic calibrator was performed using a test system conforming to the requirements of ANSI/NCSLZ540-1, 1994, ISO 17025, and ISO 9001-2008, Certification NQA No. 11252.

Calibration performed by

Harold Lynch, Service Manager

ODIN METROLOGY, INC.
3533 OLD CONEJO ROAD, SUITE 125
THOUSAND OAKS, CA 91320
PHONE: (805) 375-0830; FAX: (805) 375-0405

Calibrator type **CA250**
Serial no. **2480**
Submitted by **Parsons**
Pasadena, CA 91124
Purchase order no. **Verbal**
Asset no. **N/A**

This calibrator has been found to perform **within** the specifications listed below at the normalized conditions stated.

SPL produced in coupler terminated by a loading volume of a ½" microphone	114 ± 0.2 dB
Frequency	250 Hz ± 1%
Distortion	< 3%
At 1,013 hPa, 20°C, and 65% relative humidity	

PERFORMANCE AS RECEIVED		
Frequency	**251.10**	Hz
SPL	**114.02**	dB
Distortion	**0.6**	%
Battery Voltage	**9.0**	V

Was adjustment performed? **No**
Were batteries replaced? **Yes**

FINAL PERFORMANCE		
Frequency	**251.10**	Hz
SPL	**114.02**	dB
Distortion	**0.6**	%

Note: This calibrator was **within** manufacturer's specifications as received.

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

Odin Metrology, Inc.
Calibration of Sound & Vibration Instruments

Certificate Number: **20718-6**

Certificate of Calibration for Brüel & Kjær Sound Level Calibrator

This calibration is performed by comparison with measurement reference standard pistonphones:

Type No.	4220	4228
Serial No.	1048473	1504084
Calibrated by	TE	TE
Cal Date	28 OCT 2013	28 OCT 2013
Due Date	28 OCT 2014	28 OCT 2014

a) Estimated uncertainty of comparison: ± **0.05** dB
b) Estimated uncertainty of calibration service for standard pistonphone: ± **0.06** dB
c) Total uncertainty: $\sqrt{a^2+b^2}$ = ± **0.08** dB
d) Expanded uncertainty (coverage factor k = 2 for 95% confidence level): = ± **0.16** dB

This acoustic calibrator has been calibrated using standards with values traceable to the National Institute of Standards and Technology. This calibration is traceable to NIST Test Number **TN-638/282477, 2012.**

CONDITION OF TEST		
Ambient Pressure	**990.21**	hPa
Temperature	**23**	°C
Relative Humidity	**34**	%
Date of Calibration	**14 APR 2014**	
Re-calibration due on	**14 APR 2015**	

The calibration of this acoustic calibrator was performed using a test system conforming to the requirements of ANSI/NCSLZ540-1, 1994, ISO 17025, and ISO 9001-2008, Certification NQA No. 11252.

Calibration procedure: Brüel & Kjær 4231, **20.2, 20140226.**

Calibration performed by Harold Lynch

Harold Lynch, Service Manager

Calibrator type **4231**
Serial no. **2507137**
Submitted by **Parsons**
Pasadena, CA 91124
Purchase order no. **Verbal**
Asset no. **N/A**

This calibrator has been found to perform **within** the specifications listed below at the normalized conditions stated.

SPL produced in coupler terminated by a loading volume of 1.333 cm^3	94.0 ± 0.2 dB
Level Step	20 ± 0.1 dB
Frequency	1,000 Hz ± 0.1%
Distortion	< 1%
At 1,013 hPa, 20°C, and 65% relative humidity	

PERFORMANCE AS RECEIVED		
Frequency	**1000.0**	Hz
SPL	**94.00**	dB
SPL+20 dB	**114.02**	dB
Distortion	**0.3**	%
Battery Voltage	**1.53**	V

Was repair or adjustment performed? **No**
Were parts replaced? **No**
Were batteries replaced? **No**

FINAL PERFORMANCE		
Frequency	**1000.0**	Hz
SPL	**94.00**	dB
SPL+20 dB	**114.02**	dB
Distortion	**0.3**	%

Note: This calibrator was **within** manufacturer's specifications as received.

ODIN METROLOGY, INC.
3533 OLD CONEJO ROAD, SUITE 125
THOUSAND OAKS, CA 91320
PHONE: (805) 375-0830; FAX: (805) 375-0405

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Appendix F Street Addresses for Modeled Noise Recievers

Table F-1 – Street Addresses for Modeled Receivers – Segment 1

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R1.1	2071 Ramsey Way, Pomona, CA 91767	SFR	2
R1.2/ST56	676 E La Verne Ave, Pomona, CA 91767	SFR	2
R1.3	694 E La Verne Ave, Pomona, CA 91767	SFR	4
R1.4	730 E La Verne Ave, Pomona, CA 91767	SFR	4
R1.5/ST60	766 E La Verne Ave, Pomona, CA 91767	SFR	5
R1.6/ST57	667 E La Verne Ave, Pomona, CA 91767	SFR	2
R1.7	699 E La Verne Ave, Pomona, CA 91767	SFR	5
R1.8	779 E La Verne Ave, Pomona, CA 91767	SFR	4
R1.9/LT27	860 E La Verne Ave, Pomona, CA 91767	SFR	8
R1.10	890 E La Verne Ave, Pomona, CA 91767	SFR	5
R1.11	936 E La Verne Ave, Pomona, CA 91767	SFR	4
R1.12	976 E La Verne Ave, Pomona, CA 91767	SFR	4
R1.13	1000 E La Verne Ave, Pomona, CA 91767	SFR	4
R1.14	1050 E La Verne Ave, Pomona, CA 91767	SFR	4
R1.15	1108 E La Verne Ave, Pomona, CA 91767	SFR	3
R1.16	2129 Crystal Pl, Pomona, CA 91767	SFR	4
R1.17	2108 Crystal Pl, Pomona, CA 91767	SFR	2
R1.18	750 W San Jose Ave, Claremont, CA 91711	MFR	6
R1.19	750 W San Jose Ave, Claremont, CA 91711	MFR	6
R1.20	750 W San Jose Ave, Claremont, CA 91711	MFR	4
R1.21	750 W San Jose Ave, Claremont, CA 91711	MFR	4
R1.22/ST65	Claremont Villas, 690 W San Jose Ave, Claremont, CA 91711	MFR	--
R1.23	Vista Villas Townhomes, 670 W San Jose Ave, Claremont, 91711	MFR	2
R1.24	Vista Villas Townhomes, 670 W San Jose Ave, Claremont, 91712	MFR	2
R1.25	Vista Villas Townhomes, 670 W San Jose Ave, Claremont, 91713	MFR	6
R1.26	Vista Villas Townhomes, 670 W San Jose Ave, Claremont, 91714	MFR	6
R1.27	Vista Villas Townhomes, 670 W San Jose Ave, Claremont, 91715	REC	1
R1.28/ST66	Rancho San Jose Park, 600 W San Jose Ave Claremont CA 91711	REC	1
R1.29	Rancho San Jose Park, 600 W San Jose Ave Claremont CA 91711	REC	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; REC - recreational; COM - commercial.

Table F-1 – Street Addresses for Modeled Receivers – Segment 1 (Cont'd)

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R1.30	Claremont Cottages, 548 W San Jose Ave, Claremont, CA 91711	MFR	4
R1.31	Claremont Cottages, 548 W San Jose Ave, Claremont, CA 91712	MFR	6
R1.32/ST67	Claremont Cottages, 548 W San Jose Ave, Claremont, CA 91713	MFR	2
R1.33	Claremont Cottages, 548 W San Jose Ave, Claremont, CA 91714	MFR	1
R1.34	Claremont Cottages, 548 W San Jose Ave, Claremont, CA 91715	MFR	4
R1.35	Claremont Cottages, 548 W San Jose Ave, Claremont, CA 91716	MFR	6
R1.36	Claremont Cottages, 548 W San Jose Ave, Claremont, CA 91717	MFR	4
R1.37	Claremont Cottages, 548 W San Jose Ave, Claremont, CA 91718	MFR	2
R1.38	Kinder Kountry Daycare, 456 W San Jose Ave, Claremont, CA 91711	REC	1
R1.39	Howard Johnson Express Inn Claremont, 721 S Indian Hill Blvd, Claremont, CA 91711	MOT	8
R1.40	Howard Johnson Express Inn Claremont, 721 S Indian Hill Blvd, Claremont, CA 91711	MOT	8
R1.41/ST68	Howard Johnson Express Inn Claremont, 721 S Indian Hill Blvd, Claremont, CA 91711	MOT	1
R1.42A	Covenant United Methodist Church, 1750 N Towne Ave, Pomona, CA 91767	REC	1
R1.42B	Covenant United Methodist Church, 1750 N Towne Ave, Pomona, CA 91767	REC	1
R1.42/ST55	635 Elaine St, Pomona, CA 91767	SFR	4
R1.43	665 Elaine St, Pomona, CA 91767	SFR	4
R1.44/ST58	689 Elaine St, Pomona, CA 91767	SFR	5
R1.45	731 Elaine St, Pomona, CA 91767	SFR	3
R1.46	755 Elaine St, Pomona, CA 91767	SFR	4
R1.47	786 Briarwood Ln, Pomona, CA 91767	SFR	4
R1.48/ST59	795 Briarwood Ln, Pomona, CA 91767	SFR	1
R1.49	1989 Claremont Pl, Pomona, CA 91767	SFR	2
R1.50/ST61	Pomona Jaycee Park, 2000 N San Antonio Ave, Pomona, CA 91767	REC	1
R1.51	Pomona Jaycee Park, 2000 N San Antonio Ave, Pomona, CA 91768	REC	1
R1.52	Pomona Jaycee Park, 2000 N San Antonio Ave, Pomona, CA 91769	REC	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; REC - recreational; COM - commercial.

Table F-1 – Street Addresses for Modeled Receivers – Segment 1 (Cont'd)

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R1.53	897 Terryview Ave, Pomona, CA 91767	SFR	1
R1.54	917 Terryview Ave, Pomona, CA 91767	SFR	5
R1.55	963 Terryview Ave, Pomona, CA 91767	SFR	4
R1.56/LT28	987 Terryview Ave, Pomona, CA 91767	SFR	4
R1.57	1063 Terryview Ave, Pomona, CA 91767	SFR	5
R1.58	1103 Terryview Ave, Pomona, CA 91767	SFR	4
R1.59	1175 Terryview Ave, Pomona, CA 91767	SFR	1
R1.60/ST63	1187 Terryview Ave, Pomona, CA 91767	SFR	2
R1.61	2055 Wildrose Ave, Pomona, CA 91767	SFR	1
R1.62	2065 Palmgrove Ave, Pomona, CA 91767	SFR	2
R1.63	2072 Palmgrove Ave, Pomona, CA 91767	SFR	2
R1.64	2098 Marigold St, Pomona, CA 91767	SFR	4
R1.65	2075 San Simeon St, Pomona, CA 91767	SFR	1
R1.66/ST64	1188 Terryview Ave, Pomona, CA 91767	SFR	1
R1.67	Claremont Toyota, 601 Auto Center Dr, Claremont, CA 91711	COM	1
R1.68	NORMS Restaurant, 807 S Indian Hill Blvd, Claremont, CA 91711	COM	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; REC - recreational; COM - commercial.

Table F-2 – Street Addresses for Modeled Receivers – Segment 2

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R2.1/ST69	Claremont Lodge, 736 S Indian Hill Blvd, Claremont, CA 91711	MOT	1
R2.2	180 W San Jose Ave, Claremont, CA 91711	SFR	1
R2.3/ST71	120 W San Jose Ave, Claremont, CA 91711	MFR	1
R2.4/LT30	106 Belhaven Pl, Claremont, CA 91711	SFR	3
R2.5	138 Belhaven Pl, Claremont, CA 91711	SFR	3
R2.6	158 Belhaven Pl, Claremont, CA 91711	SFR	2
R2.7/ST75A	City Blessing Church, 735 Mills Ave, Claremont, CA 91711	SCH	1
R2.8	312 E San Jose Ave, Claremont, CA 91711	SFR	3
R2.9	9473 Mills Ave, Montclair, CA 91763	MFR	2
R2.10	9453 Mills Ave, Montclair, CA 91763	MFR	1
R2.11/ST75	4435 Bonnie Brae St # 1-4, Montclair, CA 91763	MFR	1
R2.12	4455 Bonnie Brae St, Montclair, CA 91763	MFR	2
R2.13	4475 Bonnie Brae St, Montclair, CA 91763	MFR	2
R2.14/ST76	4495 Bonnie Brae St, Montclair, CA 91763	MFR	--
R2.15	4531 Bonnie Brae St, Montclair, CA 91763	SFR	5
R2.16	4569 Bonnie Brae St, Montclair, CA 91763	SFR	5
R2.17	4599 Bonnie Brae St, Montclair, CA 91763	SFR	2
R2.18/LT32	9451 Felipe Ave, Montclair, CA 91763	SFR	2
R2.19	9421 Felipe Ave, Montclair, CA 91763	SFR	2
R2.20	9444 Ramona Ave, Montclair, CA 91763	SFR	2
R2.21	9405 Ramona Ave, Montclair, CA 91763	SFR	3
R2.22	9443 Camulos Ave, Montclair, CA 91763	SFR	1
R2.23	Serrano Middle School, 4725 San Jose St, Montclair, CA 91763	SCH	1
R2.24	Serrano Middle School, 4725 San Jose St, Montclair, CA 91763	SCH	1
R2.25	Serrano Middle School, 4725 San Jose St, Montclair, CA 91763	SCH	1
R2.25A	Serrano Middle School, 4725 San Jose St, Montclair, CA 91763	SCH	1
R2.26	9432 Shadowood Dr, Montclair, CA 91763	MFR	2
R2.27	9431 Shadowood Dr, Montclair, CA 91763	MFR	2
R2.28	9424 Round Up Dr, Montclair, CA 91763	MFR	2
R2.29/ST77	9423 Round Up Dr, Montclair, CA 91763	MFR	2
R2.30	9405 Mesa Verde Dr, Montclair, CA 91763	REC	2

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-2 – Street Addresses for Modeled Receivers – Segment 2 (Cont'd)

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R2.31/ST70	Hotel Claremont and Tennis Club, 840 S Indian Hill Blvd, Claremont, CA 91711	REC	1
R2.32	833 Drake Ave, Claremont, CA 91711	SFR	1
R2.33	821 Drake Ave, Claremont, CA 91711	SFR	4
R2.34/LT29	807 Drake Ave, Claremont, CA 91711	SFR	4
R2.35	841 Drake Ave, Claremont, CA 91711	SFR	2
R2.36	814 Drake Ave, Claremont, CA 91711	SFR	2
R2.37	823 S College Ave, Claremont, CA 91711	SFR	2
R2.38/ST72	790 S College Ave, Claremont, CA 91711	SFR	1
R2.39	125 Bryn Mawr Rd, Claremont, CA 91711	SFR	4
R2.40	149 Bryn Mawr Rd, Claremont, CA 91711	SFR	3
R2.41	173 Bryn Mawr Rd, Claremont, CA 91711	SFR	4
R2.42/ST73	201 Bryn Mawr Rd, Claremont, CA 91711	SFR	3
R2.43	215 Bryn Mawr Rd, Claremont, CA 91711	SFR	1
R2.44A	134 Bryn Mawr Rd, Claremont, CA 91711	SFR	7
R2.44B	180 Bryn Mawr Rd, Claremont, CA 91711	SFR	5
R2.44	193 Brown Dr, Claremont, CA 91711	SFR	1
R2.45	4367 Palo Verde St, Montclair, CA 91763	SFR	1
R2.46	9563 Mills Ave, Montclair, CA 91763	SFR	3
R2.47	9539 Pradera Ave, Montclair, CA 91763	SFR	3
R2.48/ST74	9539 Pradera Ave, Montclair, CA 91763	SFR	--
R2.49	4422 Cambridge St, Montclair, CA 91763	SFR	5
R2.50	4462 Cambridge St, Montclair, CA 91763	SFR	6
R2.51/LT31	9512 Camulos Ave, Montclair, CA 91763	SFR	4
R2.52	9511 Camulos Ave, Montclair, CA 91763	SFR	2
R2.53	9529 Ramona Ave, Montclair, CA 91763	SFR	4
R2.54	9529 Camulos Ave, Montclair, CA 91763	SFR	2
R2.55	9548 Camulos Ave, Montclair, CA 91763	SFR	2
R2.56	9547 Camulos Ave, Montclair, CA 91763	SFR	2
R2.57	9511 Helena Ave, Montclair, CA 91763	SFR	2
R2.58	9532 Bolton Ave, Montclair, CA 91763	SFR	4
R2.59/ST78	9511 Bolton Ave, Montclair, CA 91763	SFR	--
R2.60	9511 Bolton Ave, Montclair, CA 91763	SFR	2
R2.61	9532 Tudor Ave, Montclair, CA 91763	SFR	4
R2.62	9514 Surrey Ave, Montclair, CA 91763	SFR	4
R2.63/ST79	4862 Yale St, Montclair, CA 91763	SFR	7
R2.64	9531 Tudor Ave, Montclair, CA 91763	SFR	4
R2.65	4878 Cambridge St, Montclair, CA 91763	SFR	2

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-3 – Street Addresses for Modeled Receivers – Segment 3

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R3.1/ST112	9405 Monte Vista Ave, Montclair, CA 91763	COM	1
R3.2	4959 Palo Verde St, Montclair, CA 91763	MFR	4
R3.3	5029 Palo Verde St, Montclair, CA 91763	MFR	2
R3.4	5099 Palo Verde St, Montclair, CA 91763	MFR	6
R3.5	9414 Carrillo Ave, Montclair, CA 91763	MFR	4
R3.5A	9404 Carrillo Ave, Montclair, CA 91763	MFR	2
R3.6	9444 Carrillo Ave, Montclair, CA 91763	MFR	4
R3.7/ST80	9404 Carrillo Ave, Montclair, CA 91763	--	--

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial.

Table F-4 – Street Addresses for Modeled Receivers – Segment 4

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R4.1	Boomers, 1500 W 7th St, Upland, CA 91786	REC	1
R4.1A	Canyon Club Apartments, 1539 W 7th Street, Upland, CA 91786	MFR	20
R4.1B	Villa Montclair, 5580 Moreno Street, Montclair CA 91763	MH	2
R4.2	Boomers, 1500 W 7th St, Upland, CA 91786	REC	1
R4.3	Boomers, 1500 W 7th St, Upland, CA 91786	REC	1
R4.4	Boomers, 1500 W 7th St, Upland, CA 91786	REC	1
R4.5	Super 8 Motel, 1282 W 7th St Upland, CA 91786	MOT	7
R4.6	9332 Rose Ave, Montclair, CA 92763	SFR	2
R4.7	9312 Rose Ave, Montclair, CA 91763	SFR	2
R4.8	9315 Rose Ave, Montclair, CA 91763	SFR	2
R4.9	5384 San Jose St, Montclair, CA 91763	SFR	2
R4.10	5422 San Jose St, Montclair, CA 91763	SFR	3
R4.11	5446 San Jose St, Montclair, CA 91763	SFR	4
R4.12/ST81	MacArthur Park, Montclair, CA 91763	REC	1
R4.13	5462 Deodar St, Montclair, CA 91763	SFR	3
R4.14	9242 Vernon Ave, Montclair, CA 91763	SFR	1
R4.15	9221 Vernon Ave, Montclair, CA 91763	SFR	3
R4.16	9231 Vernon Ave, Montclair, CA 91763	SFR	3
R4.17	9241 Vernon Ave, Montclair, CA 91763	SFR	3
R4.18/ST82	5554 Caroline St, Montclair, CA 91763	SFR	--
R4.19	5610 Caroline St, Montclair, CA 91763	SFR	6
R4.20	5636 Caroline St, Montclair, CA 91763	SFR	3
R4.21	5686 Caroline St, Montclair, CA 91763	SFR	4
R4.22/ST83	5676 Carolina St, Montclair, CA 92763	SFR	4
R4.23	1553 N. Jasmine Ct, Ontario, CA 91762	SFR	4
R4.24	1553 N. Iris Ct, Ontario, CA 91762	SFR	4
R4.25/LT33	1553 N. Helen Ct, Ontario, CA 91762	SFR	3
R4.26	1555 N. Oaks Ct, Ontario, CA 91762	SFR	3
R4.27	1560 N. Gardenia Ct, Ontario, CA 91762	SFR	3
R4.28/ST84	1552 Fuchsia Ave, Ontario, CA 91762	SFR	2
R4.29	1560 N. Elderberry Ct, Ontario, CA 91762	SFR	5
R4.30/ST85	1558 N. Dahlia Ct, Ontario, CA 91762	SFR	3
R4.31	1546 N. Dahlia Ct, Ontario, CA 91762	SFR	3
R4.32	1535 N. Jasmine Ct, Ontario, CA 91762	SFR	4
R4.33	1546 N. Jasmine Ct, Ontario, CA 91762	SFR	2
R4.34	1546 N. Iris Ct, Ontario, CA 91762	SFR	8
R4.35	1574 N. Gardenia Ct, Ontarion, CA 91762	SFR	6
R4.36	1547 N. Fuchsia Ave, Ontario, CA 91762	SFR	4
R4.37	1548 N. Fuchsia Ave, Ontario, CA 91762	SFR	4
R4.38	1539 N. Dahlia Ct, Ontario, CA 91762	SFR	4
R4.39	1536 N. Dahlia Ct, Ontario, CA 91762	SFR	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; CEM - Cemetery; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-5 – Street Addresses for Modeled Receivers – Segment 5

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R5.1	1080 W 7th St, Upland, CA 91786	MFR	10
R5.2	1040 W 7th St, Upland, CA 91786	MFR	10
R5.3	968 W 7th St, Upland, CA 91786	MFR	10
R5.4	933 Azure Ct, Upland, CA 91786	SFR	2
R5.5	934 Azure Ct, Upland, CA 91786	SFR	2
R5.6/LT34/CAL	928 Azure Ct, Ontario, CA 91786	SFR	3
R5.7	896 Azure Ct, Ontario, CA 91786	SFR	3
R5.8	840 Azure Ct, Ontario, CA 91786	SFR	3
R5.9	808 Azure Ct, Ontario, CA 91786	SFR	3
R5.9A	907 Azure Ct, Ontario, CA 91786	SFR	3
R5.9B	819 Azure Ct, Ontario, CA 91786	SFR	2
R5.10/ST90	754 Azure Ct, Upland, CA 91786	SFR	3
R5.11	686 Azure Ct, Upland, CA 91786	SFR	4
R5.12	572 Azure Ct, Upland, CA 91786	SFR	4
R5.13	548 Azure Ct, Upland, CA 91786	SFR	3
R5.14/ST91	436 S Shasta Wy, Upland, CA 91786	SFR	3
R5.15	430 S Shasta Wy, Upland, CA 91786	SFR	4
R5.16	340 Azure Ct, Upland, CA 91786	SFR	5
R5.17	212 Azure Ct, Upland, CA 91786	SFR	4
R5.17A	655 Azure Ct, Upland, CA 91786	SFR	4
R5.17B	319 Azure Ct, Upland, CA 91786	SFR	1
R5.18	148 W 7th St, Upland, CA 91786	SFR	6
R5.19/ST93	Westwood College, 20 W 7th St., Upland, CA 91786	SCH	1
R5.20/ST87	920 W 6th St, Ontario, CA 91762	SCH	1
R5.21	920 W 6th St, Ontario, CA 91762	SCH	1
R5.21A	Church of Christ, 1550 N Palmetto Ave, Ontario, CA 91762	REC	1
R5.21B	Church of Christ, 1550 N Palmetto Ave, Ontario, CA 91762	REL	1
R5.21C	Wingnuts, 1520 N Mountain Ave #111, Ontario, CA 91762	COM	1
R5.22	1559 N Boulder Ave, Ontario, CA 91762	SFR	2
R5.23	1560 N Boulder Ave, Ontario, CA 91762	SFR	4
R5.24/ST88	1559 Granite Ave, Ontario, CA 91762	--	--
R5.25	1555 N Cypress Ave, Ontario, CA 91762	SFR	4
R5.26	1559 N San Antonio Ave, Ontario, CA 91762	SFR	1
R5.27	1541 N Boulder Ave, Ontario, CA 91762	SFR	2
R5.28	1535 Granite Ave, Ontario, CA 91762	SFR	6
R5.29	1535 N Cypress Ave, Ontario, CA 91762	SFR	5
R5.30	1540 N Cypress Ave, Ontario, CA 91762	SFR	2
R5.31/ST89	1551 N San Antonio Ave, Ontario, CA 91762	SFR	3

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; CEM - Cemetery; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-5 – Street Addresses for Modeled Receivers – Segment 5 (Cont'd)

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R5.32	1553 N Amber Ct, Ontario, CA 91762	SFR	2
R5.33	1557 N Beverly Ct, Ontario, CA 91762	SFR	4
R5.34/LT35/CAL	1555 N Oakland Ct, Ontario, CA 91762	SFR	4
R5.35	1555 Bonita Ct, Ontario, CA 91762	SFR	4
R5.36/ST92	1560 N Bonita Ct, Ontario, CA 91762	SFR	4
R5.37	1539 N Amber Ct, Ontario, CA 91762	SFR	2
R5.38	1543 N Beverly Ct, Ontario, CA 91762	SFR	6
R5.39	1544 N Beverly Ct, Ontario, CA 91762	SFR	4
R5.40	1538 N Oakland Ct, Ontario, CA 91762	SFR	3
R5.41	439 W Caroline Ct, Ontario, CA 91762	SFR	2
R5.42	438 W Caroline Ct, Ontario, CA 91762	SFR	2
R5.43	1551 Kenmore Ct, Ontario, CA 91762	SFR	6
R5.44	308 W Caroline Ct, Ontario, CA 91762	SFR	1
R5.45	234 W Caroline Ct, Ontario, CA 91762	SFR	3
R5.46	212 W Caroline Ct, Ontario, CA 91762	SFR	2
R5.47/ST94	124 W Caroline Ct, Ontario, CA 91762	SFR	2
R5.48	110 W Caroline Ct, Ontario, CA 91762	SFR	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; CEM - Cemetery; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-6 – Street Addresses for Modeled Receivers – Segment 6

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R6.1/ST93A	77 E 7th St, Upland, CA 91786	COM	1
R6.1A	Kingdom Hall of Jehovah's Witness, 150 E 7th St, Upland, CA 91786	REL	1
R6.2/ST96A	265 E 7th St, Upland, CA 91786	SFR	5
R6.2A	Golden Medical Plaza, 360 E 7th Street, Upland, CA 91786	MED	2
R6.3	Oparc Resource Center, 436 S Sultana Ave, Upland, CA 91786	NP	1
R6.4/ST96	479 Richland St, Upland, CA 91786	MFR	--
R6.5	571 Richland St, Upland, CA 91786	MFR	2
R6.6/ST97	650 Richland St, Upland, CA 91786	REC	1
R6.7	455 S Campus Ave, Upland, CA 91786	REC	1
R6.8A	754 Sycamore Ct, Upland, CA 91786	MFR	2
R6.8-1	791 Richland St, Upland, CA 91786	MFR	8
R6.8-2	791 Richland St, Upland, CA 91786	MFR	8
R6.9-1	843 Richland St, Upland, CA 91786	MFR	6
R6.9-2	843 Richland St, Upland, CA 91786	MFR	6
R6.10-1	885 Richland St, Upland, CA 91786	MFR	6
R6.10-2	885 Richland St, Upland, CA 91786	MFR	6
R6.11/LT37	768 Richland St, Upland, CA 91786	MFR	1
R6.11A/ST97A	768 Richland St, Upland, CA 91786	MFR	--
R6.12	1541 N Hope Ave, Ontario, CA 91764	SFR	1
R6.13-2	1540 N Hope Ave, Ontario, CA 91764	MFR	5
R6.14	860 E Deodar St, Ontario, CA 91764	MFR	2
R6.15	902 E Deodar St, Ontario, CA 91764	MFR	2
R6.16/ST100	916 E. Deodar St, Ontario, CA 91764	MFR	5
R6.17	1544 Euclid Ave, Ontario, CA 91764	SFR	3
R6.18	209 E Deodar St, Ontario, CA 91764	SFR	3
R6.19	229 E Deodar St, Ontario, CA 91764	SFR	2
R6.20	1556 N Columbia Ave, Ontario, CA 91764	SFR	1
R6.21	312 E Alvarado St, Ontario, CA 91764	SFR	9
R6.22/LT36	416 Alvarado St, Ontario, CA 91764	SFR	10

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel; MED - medical facility; NP - nonprofit.

Table F-6 – Street Addresses for Modeled Receivers – Segment 6 (Cont'd)

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R6.23	Edison Elementary School, 515 E 6th St, Ontario, CA 91764	SCH	1
R6.24	Edison Elementary School, 515 E 6th St, Ontario, CA 91764	SCH	1
R6.25	Edison Elementary School, 515 E 6th St, Ontario, CA 91764	SCH	1
R6.26	1557 N Pleasant Ave, Ontario, CA 91764	SFR	2
R6.27/ST95	1557 Pleasant Ave, Ontario, CA 91764	SFR	--
R6.28	1555 N Monterey Ave, Ontario, CA 91764	SFR	4
R6.29	1552 N Monterey Ave, Ontario, CA 91764	SFR	2
R6.30/ST98	1549 N Miramonte Ave, Ontario, CA 91764	SFR	--
R6.31	1550 N Miramonte Ave, Ontario, CA 91764	SFR	3
R6.32	1547 N Pleasant Ave, Ontario, CA 91764	SFR	1
R6.33	1544 N Pleasant Ave, Ontario, CA 91764	SFR	2
R6.34	1545 N Miramonte Ave, Ontario, CA 91764	SFR	2
R6.35	1533 N Campus Ave, Ontario, CA 91764	SFR	3
R6.36/ST99A	709 E. Deodar St, Ontario, CA 91764	SFR	4
R6.37	731 E Deodar St, Ontario, CA 91764	SFR	4
R6.38	751 E Deodar St, Ontario, CA 91764	SFR	3
R6.39/ST99	809 E 6th St, Ontario, CA 91764	SFR	2
R6.40	831 E 6th St, Ontario, CA 91764	SFR	2
R6.40A	720 E Deodar St, Ontario, CA 91764	SFR	5

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel; MED - medical facility; NP - nonprofit.

Table F-7 – Street Addresses for Modeled Receivers – Segment 7

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R7.1	Little Learners Preschool, 965 E 6th St, Ontario, CA 91764	SCH	1
R7.2	962 E 6th St, Ontario, CA 91764	SFR	3
R7.3	1004 E 6th St, Ontario, CA 91764	SFR	1
R7.4/LT38	1010 E. 6th St, Ontario, CA 91764	SFR/MFR	4
R7.5	1034 E 6th St, Ontario, CA 91764	REC	1
R7.6	1052 E 6th St, Apt 23 & 24, Ontario, CA 91764	MFR	6
R7.7	1052 E 6th St, Apt 25 & 26, Ontario, CA 91764	MFR	2
R7.8	1052 E 6th St, Apt 27 & 28, Ontario, CA 91764	MFR	2
R7.9	1052 E 6th St, Apt 1 & 2, Ontario, CA 91764	MFR	2
R7.10	1103 E. La Deney Ct, Ontario, CA 91764	MFR	3
R7.11	1401 Virginia Ave, Ontario, CA 91764	MFR	6
R7.12	1402 Virginia Ave, Ontario, CA 91764	MFR	1
R7.13	1336 Virginia Ave, Ontario, CA 91764	MFR	4
R7.14	1314 Virginia Ave, Ontario, CA 91764	MFR	1
R7.15/ST103	1233 E. 5th St, Ontario, CA 91764	MFR	2
R7.16	1306 N. Grove Ave, Ontario, CA 91764	SFR	1
R7.17	1321 E. 5th St, Ontario, CA 91764	SFR	1
R7.18	1512 E. 5th St, Ontario, CA 91764	MH	4
R7.18A	1203 N El Dorado Ave, Ontario, CA 91764	SFR	2
R7.19/ST104	1512 E. 5th St, Ontario, CA 91764	MH	2
R7.20	1512 E. 5th St, Ontario, CA 91764	MH	8
R7.21	1512 E. 5th St, Ontario, CA 91764	MH	3
R7.22	1512 E. 5th St, Ontario, CA 91764	MH	3
R7.23	1512 E. 5th St, Ontario, CA 91764	MH	4
R7.24	1512 E. 5th St, Ontario, CA 91764	MH	2
R7.25	858 E 6th St, Ontario, CA 91764	SFR	2
R7.26	1441 N. Allyn Ave, Ontario, CA 91764	SFR	2
R7.27	1429 N. Orchard Lane, Ontario, CA 91764	SFR	3
R7.28/ST101	1429 N. Orchard Lane, Ontario, CA 91764	SFR	--
R7.29	1417 N. Orchard Lane, Ontario, CA 91764	SFR	4
R7.30	1416 N. Orchard Lane, Ontario, CA 91764	SFR	2
R7.31	1361 N. Council Ave, Ontario, CA 91764	SFR	4
R7.32	1356 N. Council Ave, Ontario, CA 91764	SFR	1
R7.33	1340 N. Holmes Court, Ontario, CA 91764	SFR	2
R7.34/LT39	1336 N. Holmes Court, Ontario, CA 91764	SFR	1
R7.35	1323 N. La Paloma Ave, Ontario, CA 91764	SFR	3
R7.36	1320 N. La Paloma Ave, Ontario, CA 91764	SFR/MFR	6
R7.36A	1117 E 5th St, Ontario, CA 91764	SFR	2
R7.37	1106 E. 5th St, Ontario, CA 91764	SFR	1
R7.38/ST102	1128 E. 5th St, Ontario, CA 91764	SFR	--
R7.39	1128 E. 5th St, Ontario, CA 91764	SFR	2
R7.40	West Coast Inn, 1211 N Grove Ave, Ontario, CA 91764	MOT	2
R7.41	Travelodge, 1150 N Grove Ave, Ontario, CA 91764	REC	1
R7.42	Days Inn, 1405 E 4th St, Ontario, CA 91764	REC	1
R7.43	Days Inn, 1405 E 4th St, Ontario, CA 91764	MOT	2
R7.44	Days Inn, 1405 E 4th St, Ontario, CA 91764	MOT	2

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-8 – Street Addresses for Modeled Receivers – Segment 8

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R8.1	Fire Station, 1530 E 4th St, Ontario, CA 91764	FS	1
R8.2-1	Motel 6, 1560 E 4th St, Ontario, CA 91764	MOT	12
R8.2-2	Motel 6, 1560 E 4th St, Ontario, CA 91764	MOT	12
R8.3/ST106	Motel 6, 1560 E 4th St, Ontario, CA 91764	MOT	1
R8.4	947 N Mariposa Ave, Ontario, CA 91764	SFR	2
R8.5	935 N Mariposa Ave, Ontario, CA 91764	SFR	2
R8.6	1666 E Granada Ct, Ontario, CA 91764	SFR	3
R8.7/LT41/CAL	1702 E Granada Ct, Ontario, CA 91764	SFR	5
R8.8	1728 E Granada Ct, Ontario, CA 91764	SFR	7
R8.9	1780 E Granada Ct, Ontario, CA 91764	SFR	9
R8.10/ST109	1828 E Granada Ct, Ontario, CA 91764	SFR	9
R8.11	1866 E Granada Ct, Ontario, CA 91764	SFR	4
R8.12	1882 E Granada Ct, Ontario, CA 91764	SFR	3
R8.13	1896 E Granada Ct, Ontario, CA 91764	SFR	2
R8.14	1757 E Granada Ct, Ontario, CA 91764	SFR	1
R8.14A	924 N Mariposa Ave, Ontario, CA 91764	SFR	1
R8.14B	1743 E Granada Ct, Ontario, CA 91764	SFR	4
R8.14C	1801 E Granada Ct, Ontario, CA 91764	SFR	8
R8.15	1875 E Granada Ct, Ontario, CA 91764	SFR	2
R8.16	1301 E Fresno St, Ontario, CA 91764	SFR	3
R8.17	1317 E Fresno St, Ontario, CA 91764	SFR	2
R8.18	1339 E Fresno St, Ontario, CA 91764	SFR	4
R8.19/ST107	1415 E Fresno St, Ontario, CA 91764	SFR	5
R8.20	1441 E Fresno St, Ontario, CA 91764	SFR	5
R8.21	1527 E Fresno St, Ontario, CA 91764	SFR	5
R8.22/LT40/CAL	1553 E Fresno St, Ontario, CA 91764	SFR	3
R8.23	1559 E Fresno St, Ontario, CA 91764	SFR	1
R8.24/ST105	1041 N Glenn Ave, Ontario, CA 91764	SFR	2
R8.24A	1056 N El Dorado Ave, Ontario, CA 91764	SFR	2
R8.25	1028 N Glenn Ave, Ontario, CA 91764	SFR	3
R8.26	1006 N Humboldt Ave, Ontario, CA 91764	SFR	2
R8.27	942 N Lake Ave, Ontario, CA 91764	SFR	2
R8.28	928 N Lassen Ave, Ontario, CA 91764	SFR	2
R8.29	1531 East I St, Ontario, CA 91764	SFR	3
R8.29A	854 N Baker Ave, Ontario, CA 91764	SFR	2
R8.30	854 N Madera Ave, Ontario, CA 91764	SFR	1

Notes:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; REC - recreational/park; REL - religious institution; COM - Commercial; FS - Fire Station.

Table F-8 – Street Addresses for Modeled Receivers – Segment 8 (Cont'd)

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R8.31	The Waverly Apt, 1675 East G St, Ontario, CA 91764	REC	1
R8.32-1	The Waverly Apt, 1657 East G St, Ontario, CA 91764	MFR	3
R8.32-2	The Waverly Apt, 1657 East G St, Ontario, CA 91764	MFR	3
R8.33-1	The Waverly Apt, 1655 East G St, Ontario, CA 91764	MFR	2
R8.33-2	The Waverly Apt, 1655 East G St, Ontario, CA 91764	MFR	2
R8.34-1/ST108	The Waverly Apt, 1661 East G St, Ontario, CA 91764	MFR	3
R8.34-2	The Waverly Apt, 1661 East G St, Ontario, CA 91764	MFR	3
R8.35	The Waverly Apt, Pool Area, 1655 East G St, Ontario, CA 91764	REC	1
R8.36-1	The Waverly Apt, 1663 East G St, Ontario, CA 91764	MFR	2
R8.36-2	The Waverly Apt, 1663 East G St, Ontario, CA 91764	MFR	2
R8.37	The Waverly Townhomes, Building II, 1733 East G St, Ontario, CA 91764	MFR	3
R8.38	The Waverly Townhomes, Building FF, 1733 East G St, Ontario, CA 91764	MFR	4
R8.39	The Waverly Townhomes, Building II, 1733 East G St, Ontario, CA 91764	MFR	2
R8.40	The Waverly Townhomes, Pool Area, 1733 East G St, Ontario, CA 91764	REC	1
R8.41	The Waverly Townhomes, Building HH, 1733 East G St, Ontario, CA 91764	MFR	3
R8.42-1	The Waverly Townhomes, Building GG, 1733 East G St, Ontario, CA 91764	MFR	2
R8.42-2	The Waverly Townhomes, Building GG, 1733 East G St, Ontario, CA 91764	MFR	2
R8.43-1	The Waverly Townhomes, Building GG, 1733 East G St, Ontario, CA 91764	MFR	2
R8.43-2	The Waverly Townhomes, Building GG, 1733 East G St, Ontario, CA 91764	MFR	2
R8.44-1	The Waverly Townhomes, Building CC, 1733 East G St, Ontario, CA 91764	MFR	3
R8.44-2	The Waverly Townhomes, Building CC, 1733 East G St, Ontario, CA 91764	MFR	3
R8.45-1	The Waverly Townhomes, Building Z, 1737 East G St, Ontario, CA 91764	MFR	2
R8.45-2	The Waverly Townhomes, Building Z, 1737 East G St, Ontario, CA 91764	MFR	2
R8.46-1	The Waverly Townhomes, Building Z, 1737 East G St, Ontario, CA 91764	MFR	3
R8.46-2	The Waverly Townhomes, Building Z, 1737 East G St, Ontario, CA 91764	MFR	3
R8.47-1	The Waverly Townhomes, Building Y, 1737 East G St, Ontario, CA 91764	MFR	2
R8.47-2	The Waverly Townhomes, Building Y, 1737 East G St, Ontario, CA 91764	MFR	2

Notes:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; REC - recreational/park; REL - religious institution; COM - Commercial; FS - Fire Station.

Table F-8 – Street Addresses for Modeled Receivers – Segment 8 (Cont'd)

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R8.48-1	Ontario Airport Inn, 1801 East G St, Ontario, CA 91764	MOT	12
R8.48-2	Ontario Airport Inn, 1801 East G St, Ontario, CA 91764	MOT	12
R8.48-3	Ontario Airport Inn, 1801 East G St, Ontario, CA 91764	MOT	12
R8.49	Ontario Airport Inn, 1801 East G St, Ontario, CA 91764	MOT	1
R8.50/ST110	Ramada Inn, 1841 East G St, Ontario, CA 91764	MOT	1
R8.50A-1	Ramada Inn, 1841 East G St, Ontario, CA 91764	MOT	3
R8.50A-2	Ramada Inn, 1841 East G St, Ontario, CA 91764	MOT	3
R8.50B-1	Ramada Inn, 1841 East G St, Ontario, CA 91764	MOT	3
R8.50B-2	Ramada Inn, 1841 East G St, Ontario, CA 91764	MOT	3
R8.50C-1	Ramada Inn, 1841 East G St, Ontario, CA 91764	MOT	3
R8.50C-2	Ramada Inn, 1841 East G St, Ontario, CA 91764	MOT	3
R8.51/ST111	Quality Inn, 514 N Vineyard Ave, Ontario, CA 91764	MOT	1

Notes:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; REC - recreational/park; REL - religious institution; COM - Commercial; FS - Fire Station.

Table F-9 – Street Addresses for Modeled Receivers – Segment 9

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS	
			ALT 2	ALT 3
R9.1/LT1	10245 Almond Ave, Fontana, CA 92335	SFR/MFR	4	4
R9.2/ST1	14609 Washington Dr, Fontana, CA 92335	SFR	2	2
R9.3	14610 Washington Dr, Fontana, CA 92335	SFR	1	1
R9.4	14663 Washington Dr, Fontana, CA 92335	SFR	6	9
R9.5/ST2	10287 Redwood Ave, Fontana, CA 92335	SFR	7	--
R9.6	14735 Washington Dr, Fontana, CA 92335	SFR	8	8
R9.7	14770 Washington Dr, Fontana, CA 92335	SFR	4	4
R9.8	14833 Washington Dr, Fontana, CA 92335	SFR	3	3
R9.9	14855 Washington Dr, Fontana, CA 92335	SFR	4	2
R9.10	14875 Washington Dr, Fontana, CA 92335	SFR	2	1
R9.11	14931 Washington Dr, Fontana, CA 92335	SFR/MFR	6	5
R9.12/LT2/CAL	15021 Washington Dr, Fontana, CA 92335	SFR	--	--
R9.13	15021 Washington Dr, Fontana, CA 92335	SFR	2	2
R9.14	15067 Washington Dr, Fontana, CA 92335	SFR	2	1
R9.15	15084 Washington Dr, Fontana, CA 92335	SFR	6	6
R9.16	15114 Washington Dr, Fontana, CA 92335	SFR	4	4
R9.17	15193 Washington Dr, Fontana, CA 92335	SFR/MFR	12	4
R9.17A	10290 Beech Ave, Fontana, CA 92335	SFR	1	--
R9.17B	10298 Elm Ave, Fontana, CA 92335	COM	1	1
R9.18	10298 Catawba Ave, Fontana, CA 92335	COM	1	1
R9.19	14561 Boyle Ave, Fontana, CA 92337	SFR	3	3
R9.20	14592 Boyle Ave, Fontana, CA 92337	SFR	3	3
R9.21	14652 Boyle Ave, Fontana, CA 92337	SFR/MFR	10	10
R9.22/ST3	10388 Redwood Ave, Fontana, CA 92337	SFR	2	2
R9.23/ST3A/CAL	10338 Redwood Ave, Fontana, CA 92337	COM	1	1
R9.25	14730 Boyle Ave, Fontana, CA 92337	SFR	3	3
R9.26	14780 Boyle Ave, Fontana, CA 92337	SFR	3	3
R9.27	10430 Hemlock Ave, Fontana, CA 92337	SFR	1	1
R9.28	10409 Hemlock Ave, Fontana, CA 92337	SFR	1	1
R9.29	15264 Boyle Ave, Fontana, CA 92337	SFR/MFR	3	3
R9.30	10422 Sultana Ave, Fontana, CA 92337	SFR	3	3
R9.31/ST4	10338 Poplar Ave, Fontana, CA 92337	COM	1	1
R9.32	10355 Poplar Ave, Fontana, CA 92337	SFR	1	1
R9.33	15798 Slover Ave, Fontana, CA 92337	SFR	6	6
R9.34	15859 Boyle Ave, Fontana, CA 92337	SFR	5	5
R9.35/LT3	15842 Boyle Ave, Fontana, CA 92337	COM	1	1
R9.36	15862 Boyle Ave, Fontana, CA 92337	SFR	3	3
R9.37	16144 Boyle Ave, Fontana, CA 92337	SFR	3	3
R9.38	16032 Boyle Ave, Fontana, CA 92337	SFR	2	2

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-10 – Street Addresses for Modeled Receivers – Segment 10

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R10.1/ST6	16226 Washington Dr, Fontana, CA 92335	SFR	1
R10.2	16260 Washington Dr, Fontana, CA 92335	SFR	3
R10.3	16296 Washington Dr, Fontana, CA 92335	SFR	1
R10.4	16295 Washington Dr, Fontana, CA 92335	SFR	2
R10.5/LT4/CAL	10241 Oleander Ave, Fontana, CA 92335	SFR	1
R10.6	16353 Balsam Ave, Fontana, CA 92335	SFR	4
R10.7	16364 Washington Dr, Fontana, CA 92335	SFR	5
R10.8	16395 Balsam Ave, Fontana, CA 92335	SFR	5
R10.9	16422 Washington Dr, Fontana, CA 92335	SFR	4
R10.9A	16442 Washington Dr, Fontana, CA 92335	SFR	1
R10.10	16449 Balsam Ave, Fontana, CA 92235	SFR	5
R10.11	16470 Washington Dr, Fontana, CA 92335	SFR	2
R10.12	16546 Washington Dr, Fontana, CA 92335	SFR	1
R10.13	16592 Washington Dr, Fontana, CA 92335	SFR	3
R10.14	Pancho Villas, 10210 Juniper Ave, Fontana, CA 92335	COM	1
R10.15/ST5	16120 Boyle Ave, Fontana, CA 92337	SFR	4
R10.16	16222 Boyle Ave, Fontana, CA 92337	SFR	7
R10.16A/ST7/CAL	16222 Boyle Ave, Fontana, CA 92337	--	--
R10.17	10349 Oleander Ave, Fontana, CA 92337	SFR	7
R10.18	16398 Boyle Ave, Fontana, CA 92337	SFR	3
R10.19	10372 Palm Dr, Fontana, CA 92337	SFR	5
R10.20/LT5/CAL	10350 Palm Dr, Fontana, CA 92337	SFR	4
R10.20A	16645 Boyle Ave, Fontana, CA 92337	SFR	16
R10.21	96666 Boyle Ave, Fontana, CA 92337	COM	1
R10.22	16748 Boyle Ave, Fontana, CA 92337	SFR	2
R10.23	16860 Slover Ave, Fontana, CA 92337	SFR	12
R10.24	16868 Boyle Ave, Fontana, CA 92337	SFR	2

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-11 – Street Addresses for Modeled Receivers – Segment 11

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R11.1	Motel 6, 10195 Sierra Avenue, Fontana, CA 92335	MOT	1
R11.2	Motel 6, 10195 Sierra Avenue, Fontana, CA 92335	MOT	8
R11.2A	Economy Lodge, 17133 Valley Boulevard, Fontana, CA 92335	MOT	4
R11.3	Sierra Mobile Estates 17333 Valley Boulevard, Fontana, CA 92335	MH	6
R11.4/LT6/CAL	Sierra Mobile Estates 17333 Valley Boulevard, Fontana, CA 92335	MH	16
R11.5	Sierra Mobile Estates 17333 Valley Boulevard, Fontana, CA 92335	MH	8
R11.6	Sierra Mobile Estates 17333 Valley Boulevard, Fontana, CA 92335	MH	3
R11.7	Sierra Mobile Estates 17333 Valley Boulevard, Fontana, CA 92335	MH	3
R11.8	Sierra Mobile Estates 17333 Valley Boulevard, Fontana, CA 92335	MH	6
R11.9	Sierra Mobile Estates 17333 Valley Boulevard, Fontana, CA 92335	MH	17
R11.10	Sierra Mobile Estates 17333 Valley Boulevard, Fontana, CA 92335	MH	13
R11.11	Sierra Mobile Estates 17333 Valley Boulevard, Fontana, CA 92335	MH	13
R11.12	Sierra Mobile Estates 17333 Valley Boulevard, Fontana, CA 92335	MH	2
R11.13	17565 Valley Boulevard, Bloomington, CA 92316	COM	1
R11.14/ST9	10230 Alder Avenue, Bloomington, CA 92316	SFR	1
R11.14A	10233 Alder Avenue, Bloomington, CA 92316	SFR	1
R11.15	17831 Taylor Avenue, Bloomington, CA 92316	SFR	1
R11.15A	17897 Taylor Avenue, Bloomington, CA 92316	SFR	5
R11.16	17983 Taylor Avenue, Bloomington, CA 92316	SFR	6
R11.16A	18083 Taylor Avenue, Bloomington, CA 92316	SFR	7
R11.17/ST11	10213 Locust Avenue, Bloomington, CA 92316	SFR	--
R11.18	10213 Locust Avenue, Bloomington, CA 92316	SFR	2
R11.19	10198 Alder Avenue, Bloomington, CA 92316	SFR	5
R11.20	17726 Taylor Avenue, Bloomington, CA 92316	SFR	3
R11.21	17908 Taylor Avenue, Bloomington, CA 92316	SFR	8
R11.22	18056 Taylor Avenue, Bloomington, CA 92316	SFR	6
R.11.23	10187 Locust Avenue, Bloomington, CA 92316	SFR	2
R11.24	Sierra Crossing Apartments 18181 Valley Boulevard, Bloomington, CA 92316	MFR	8
R11.25	Sierra Crossing Apartments 18181 Valley Boulevard, Bloomington, CA 92316	MFR	4
R11.26	Sierra Crossing Apartments 18181 Valley Boulevard, Bloomington, CA 92316	MFR	12
R11.27	Sierra Crossing Apartments 18181 Valley Boulevard, Bloomington, CA 92316	MFR	4

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel, FS - fire station.

Table F-11 – Street Addresses for Modeled Receivers – Segment 11 (Cont'd)

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R11.28/ST12	Bloomington Mobile Home Park 18219 Valley Boulevard Lot #38, Bloomington, CA 92316	MH	3
R11.29	Bloomington Mobile Home Park 18219 Valley Boulevard, Bloomington, CA 92316	MH	3
R11.30	Bloomington Mobile Home Park 18219 Valley Boulevard, Bloomington, CA 92316	MH	3
R11.31	Bloomington Mobile Home Park 18219 Valley Boulevard, Bloomington, CA 92316	MH	3
R11.32	Bloomington Mobile Home Park 18219 Valley Boulevard, Bloomington, CA 92316	MH	3
R11.33	Ayala Park 18317 Valley Boulevard, Bloomington, CA 92316	REC	1
R11.34	Ayala Park 18317 Valley Boulevard, Bloomington, CA 92316	REC	1
R11.34A	Ayala Park 18317 Valley Boulevard, Bloomington, CA 92316	REC	1
R11.35	Idle Wheels Mobile Home Park 18363 Valley Boulevard, Bloomington, CA 92316	MH	6
R11.36	Idle Wheels Mobile Home Park 18363 Valley Boulevard, Bloomington, CA 92316	MH	4
R11.37	Idle Wheels Mobile Home Park 18363 Valley Boulevard, Bloomington, CA 92316	MH	4
R11.38	Idle Wheels Mobile Home Park 18363 Valley Boulevard, Bloomington, CA 92316	MH	7
R11.39	Log Cabin Mobile Home Park 18411 Valley Boulevard, Bloomington, CA 92316	MH	8
R11.40/ST13	Log Cabin Mobile Home Park 18411 Valley Boulevard, Bloomington, CA 92316	MH	3
R11.41	Log Cabin Mobile Home Park 18411 Valley Boulevard, Bloomington, CA 92316	MH	8
R11.42	Log Cabin Mobile Home Park 18411 Valley Boulevard, Bloomington, CA 92316	MH	2
R11.43	18530-18594 Commercial Street, Bloomington, CA 92316	COM	1
R11.44/ST14	10174 Magnolia Street, Bloomington, CA 92316	SFR/FS	2
R11.45	10330 Alder Avenue, Bloomington, CA 92316	SFR	1
R11.46/LT7	10349 Alder Avenue, Bloomington, CA 92316	SFR	2
R11.47	10346 Locust Avenue # 1, Bloomington, CA 92316	SFR	2
R11.48/ST10	10346 Locust Avenue # 1, Bloomington, CA 92316	--	--
R11.49	18298 Slover Avenue, Bloomington, CA 92316	COM	1

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel, FS - fire station.

Table F-12 – Street Addresses for Modeled Receivers – Segment 12

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R12.1/AST15	10166 Church St, Bloomington, CA 92316	SFR	2
R12.2	10153 Church St, Bloomington, CA 92316	SFR	2
R12.3	10162 Vine St, Bloomington, CA 92316	SFR	4
R12.4A	18821 Lynwood St, Bloomington, CA 92316	SFR	1
R12.4B	18845 Lynwood St, Bloomington, CA 92316	SFR	1
R12.4/LT8/CAL	18855 Lynwood St, Bloomington, CA 92316	SFR	4
R12.5	10176 Larch Ave, Bloomington, CA 92316	SFR	1
R12.6	18892 Lynwood St, Bloomington, CA 92316	SFR	2
R12.7	10101-10199 Spruce Ave, Bloomington, CA 92316	COM	1
R12.8	Days Inn Fontana, Rialto 475 W. Valley Blvd, Rialto, CA 92375	MOT	36
R12.9	Days Inn Fontana, Rialto 475 W. Valley Blvd, Rialto, CA 92375	MOT	1
R12.10	379 W Valley Blvd, Rialto, CA 92376	REC	4
R12.11	Bloomington Middle School, 1640 S Lilac Ave, Bloomington, CA 92316	SCH	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-13 – Street Addresses for Modeled Receivers – Segment 13

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R13.1-1	American Inn, 145 E Valley Blvd, Rialto, CA 92376	MOT	18
R13.1-2	American Inn, 145 E Valley Blvd, Rialto, CA 92376	MOT	18
R13.1A	Taco Joe's, 1749 S Riverside Ave, Rialto, CA 92376	COM	1
R13.2-1	Rodeway Inn, 2042 W Valley Blvd., Colton, CA 92324	MOT	15
R13.2-2	Rodeway Inn, 2042 W Valley Blvd., Colton, CA 92324	MOT	15
R13.3	2018 W Valley Blvd, Colton, CA 92324	SFR	3
R13.4/LT9/CAL	2016 W Valley Blvd, Colton, CA 92324	SFR	1
R13.5	2012 W Valley Blvd, Colton, CA 92324	COM	1
R13.6	Sam Snead Golf Course, 1901 W Valley Blvd, Colton, CA 92324	REC	1
R13.7	Sam Snead Golf Course, 1901 W Valley Blvd, Colton, CA 92324	REC	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-14 – Street Addresses for Modeled Receivers – Segment 14

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R14.1/ST119	1313 W Valley Blvd, Colton, CA 92394	COM	1
R14.1A	Slover Mountain High School, 325 Hermosa Ave, Colton, CA 92324	SCH	1
R14.1B	Slover Mountain High School, 325 Hermosa Ave, Colton, CA 92324	SCH	1
R14.2	303 Cypress Avenue, Colton, CA 92394	MFR	2
R14.3/ST16	248 Cypress Avenue, Colton, CA 92394	SFR	1
R14.4	Lido Motel: 1087 W Valley Blvd, Colton, CA 92324	MOT	3
R14.5	Mt. Slover Mobile Home Park, 1015 W Valley Blvd, Colton, CA 92324	MH	5
R14.6/ST17	Mt. Slover Mobile Home Park, 1015 W Valley Blvd, Colton, CA 92324	MH	6
R14.7	Mt. Slover Mobile Home Park, 1015 W Valley Blvd, Colton, CA 92324	MH	3
R14.7A	Mt. Slover Mobile Home Park, 1015 W Valley Blvd, Colton, CA 92324	MH	7
R14.7B	Mt. Slover Mobile Home Park, 1015 W Valley Blvd, Colton, CA 92324	MH	6
R14.8	Mt. Slover Mobile Home Park, 1015 W Valley Blvd, Colton, CA 92324	MH	2
R14.8A	1050 H Street, Colton, CA 92324	SFR	2
R14.8B	259 Grand Ave, Colton, CA 92324	SFR	2
R14.9/LT10	871 Vally Boulevard, Colton, CA 92394	SFR	2
R14.9A/ST17A	871 Vally Boulevard, Colton, CA 92394	SFR	--
R14.10	Sunny Trailer Park, 845 W Valley Blvd, Colton, CA 92324	MH	3
R14.11	Sunny Trailer Park, 845 W Valley Blvd, Colton, CA 92324	MH	3
R14.11A	Sunny Trailer Park, 845 W Valley Blvd, Colton, CA 92324	MH	2
R14.12	Sunny Trailer Park, 845 W Valley Blvd, Colton, CA 92324	MH	2

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; RS - radio station; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-15 – Street Addresses for Modeled Receivers – Segment 15

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R15.1/ST19	155 N 2nd St, Colton, CA 92324	SFR	2
R15.2	109 N 3rd St, Colton, CA 92324	SFR	3
R15.3	734 W Valley Blvd, Colton, CA 92324	SFR	1
R15.4	710 W Valley Blvd, Colton, CA 92324	SFR	2
R15.5	158 N 2nd St, Colton, CA 92324	SFR	4
R15.6	650 W Valley Blvd, Colton, CA 92324	SFR	3
R15.7	559 W J St, Colton, CA 92324	SFR	2
R15.8	105 N 4th St, Colton, CA 92324	SFR	5
R15.9	110 N 4th St, Colton, CA 92324	SFR	4
R15.10/LT12	115 N Pennsylvania Ave, Colton, CA 92324	SFR	4
R15.11	440 W Valley Blvd, Colton, CA 92324	SFR	4
R15.12	130 W Valley Blvd, Colton, CA 92324	COM	1
R15.13/ST18	745 W K St, Colton, CA 92324	SFR	5
R15.14	705 W K St, Colton, CA 92324	SFR	5
R15.15	649 W K St, Colton, CA 92324	SFR	6
R15.16/LT11	523 W K St, Colton, CA 92324	SFR	6
R15.17	503 W K St, Colton, CA 92324	SFR	2
R15.18	146 S 4th St, Colton, CA 92324	SFR	2
R15.19	457 W K St, Colton, CA 92324	SFR	3
R15.20	420 W K St, Colton, CA 92324	SFR	4
R15.21	264 W K St, Colton, CA 92324	SFR	3
R15.22/ST20	192 W K St, Colton, CA 92324	SFR	4
R15.23	153 La Cadena Dr S, Colton, CA 92324	SFR	5

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-16 – Street Addresses for Modeled Receivers – Segment 16

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R16.1	Hampton Inn, 250 N 9th St, Colton, CA 92324	MOT	1
R16.2	441 E Valley Blvd, Colton, CA 92324	SFR	1
R16.3	600 E Valley Blvd, Colton, CA 92324	COM	1
R16.4	655 E Valley Blvd, Colton, CA 92324	SFR	1
R16.5	253 N 12th St, Colton, CA 92324	SFR	4
R16.6	520 E H St, Colton, CA 92324	REL	1
R16.7	554 E H St, Colton, CA 92324	SFR	2
R16.8	584 E H St, Colton, CA 92324	MH	6
R16.9	656 E H St, Colton, CA 92324	SFR	6
R16.10	816 E H St, Colton, CA 92324	SFR	3
R16.11/LT13	832 E H St, Colton, CA 92324	SFR	3
R16.12	840 E H St, Colton, CA 92324	SFR	1
R16.13	854 E H St, Colton, CA 92324	SFR	4
R16.14	868 E H St, Colton, CA 92324	SFR	2
R16.15-1	Colony Inn Motel, 255 N Sperry Dr, Colton, CA 92324	MOT	6
R16.15-2	Colony Inn Motel, 255 N Sperry Dr, Colton, CA 92324	MOT	6
R16.16-1	Colony Inn Motel, 255 N Sperry Dr, Colton, CA 92324	MOT	14
R16.16-2	Colony Inn Motel, 255 N Sperry Dr, Colton, CA 92324	MOT	14
R16.17/ST20A/CAL	Colony Inn Motel, 255 N Sperry Dr, Colton, CA 92324	MOT	1
R16.18	841 E H St, Colton, CA 92324	SFR	8
R16.19	887 E H St, Colton, CA 92324	SFR	3
R16.20-1	Colton Motel, 380 N Sperry Dr, Colton, CA 92324	MOT	4
R16.20-2	Colton Motel, 380 N Sperry Dr, Colton, CA 92324	MOT	4
R16.21	Comfort Inn, 450 N Sperry Dr, Colton, CA 92324	MOT	1
R16.22	148 E K St, Colton, CA 92324	SFR	3
R16.23	295 E L St, Colton, CA 92324	SFR/MFR	14

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-17 – Street Addresses for Modeled Receivers – Segment 17

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R17.1A	Fairfield Inn, 1041 Harriman Pl, San Bernardino, CA 92408	MOT	18
R17.1	Fairfield Inn, 1041 Harriman Pl, San Bernardino, CA 92408	MOT	18
R17.2	1223 Laurelwood Dr, San Bernardino, CA 92408	SFR	1
R17.3	1231 Laurelwood Dr, San Bernardino, CA 92408	SFR	1
R17.4	1241 Laurelwood Dr, San Bernardino, CA 92408	SFR	2
R17.5	1259 Laurelwood Dr, San Bernardino, CA 92408	SFR	2
R17.6	1285 Laurelwood Dr, San Bernardino, CA 92408	SFR	2
R17.7	1305 E Laurelwood Dr, San Bernardino, CA 92408	SFR	2
R17.8	1325 E Laurelwood Dr, San Bernardino, CA 92408	SFR	1
R17.9/ST23	1294 E. Rosewood Dr, San Bernardino, CA	--	--
R17.10	1324 E Laurelwood Dr, San Bernardino, CA 92408	SFR	3
R17.11	1379 Sycamore Ln, San Bernardino, CA 92408	SFR	4
R17.12	1415 Sycamore Ln, San Bernardino, CA 92408	SFR	12
R17.13	1565 Sycamore Ln, San Bernardino, CA 92408	SFR	7
R17.14	1595 Sycamore Ln, San Bernardino, CA 92408	SFR	3
R17.15	1886 Lilac Ct, San Bernardino, CA 92408	SFR	2
R17.16	1894 S Jasmin Ct, Loma Linda, CA 92354	SFR	3
R17.17/LT14	1895 Coloma Ct, San Bernardino, CA 92408	SFR	5
R17.18	1895 Curtis St, Loma Linda, CA 92354	SFR	5
R17.19	1878 Lilac Ct, San Bernardino, CA 92408	SFR	2
R17.20	1878 S Jasmin Ct, Loma Linda, CA 92354	SFR	6
R17.21	1869 Coloma Ct, San Bernardino, CA 92408	SFR	3
R17.22	1876 Shedden Dr, Loma Linda, CA 92354	SFR	3
R17.23	1872 Curtis St, Loma Linda, CA 92354	SFR	4
R17.24	1874 Elm Ave, Loma Linda, CA 92354	SFR	3
R17.25	1965 Coulston St, Apt 61, Loma Linda, CA 92354	MFR	4
R17.26	1965 Coulston St, Apt 52, Loma Linda, CA 92354	MFR	3
R17.27	1965 Coulston St, Apt 50, Loma Linda, CA 92354	MFR	3
R17.28	1965 Coulston St, Apt 23, Loma Linda, CA 92354	MFR	1
R17.29	1965 Coulston St, Loma Linda, CA 92354	MFR	2
R17.30/ST25	1965 Coulston St, Loma Linda, CA 92354	MFR	--
R17.31	1965 Coulston St, Apt 47, Loma Linda, CA 92354	MFR	3
R17.32	1965 Coulston St, Apt 7, Loma Linda, CA 92354	MFR	10
R17.33	24732 Redlands Blvd, Loma Linda, CA 9235	COM	1
R17.33A	24735 Redlands Blvd, Loma Linda, CA 92354	REL	1
R17.34	24818 E. Redlands Blvd, Loma Linda, CA 92354	SFR	1
R17.35/ST21	24818 E. Redlands Blvd, Loma Linda, CA 92354	--	--
R17.36	25072 Redlands Blvd, Loma Linda, CA 92354	COM	1
R17.37/ST121	25160 Redlands Blvd, Loma Linda, CA 923454	COM	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-17 – Street Addresses for Modeled Receivers – Segment 17 (Cont'd)

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R17.38/ST24	Alto Camino Mobile Home Estate, 25526 Redlands Blvd, Loma Linda, CA 92354	MH	4
R17.39	Alto Camino Mobile Home Estate, 25526 Redlands Blvd, Loma Linda, CA 92354	MH	6
R17.40	Alto Camino Mobile Home Estate, 25526 Redlands Blvd, Loma Linda, CA 92354	MH	6
R17.41	Alto Camino Mobile Home Estate, 25526 Redlands Blvd, Loma Linda, CA 92354	MH	1
R17.42	Alto Camino Mobile Home Estate, 25526 Redlands Blvd, Loma Linda, CA 92354	MH	2
R17.43	Alto Camino Mobile Home Estate, 25526 Redlands Blvd, Loma Linda, CA 92354	MH	7
R17.44	Alto Camino Mobile Home Estate, 25526 Redlands Blvd, Loma Linda, CA 92354	MH	6
R17.45	Alto Camino Mobile Home Estate, 25526 Redlands Blvd, Loma Linda, CA 92354	MH	4
R17.46	25626 Rosewood Dr, Loma Linda, CA 92354	SFR	2
R17.47A	25652 Rosewood Dr, Loma Linda, CA 92354	SFR	2
R17.47/LT15	25660 Rosewood Dr, Loma Linda, CA 92354	--	--
R17.48	25685 Rosewood Dr, Loma Linda, CA 92354	SFR	2

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel.

Table F-18 – Street Addresses for Modeled Receivers – Segment 18

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R18.1	Sod Farm, Mountain View Ave, Redlands, CA 92373	COM	1
R18.2	Sod Farm, 2050 W. Redlands Blvd, Redlands, CA 92373	COM	1
R18.3	Splash Kingdom Water Park, 1101 California St, Redlands, CA 92374	REC	1
R18.4	Pharaoh's Water Park, 1101 California St, Redlands, CA 92374	REC	1
R18.5	25864 Business Center Dr, Redlands, CA 92374	COM	1
R18.6/ST26	26232 Redlands Blvd, Redlands, CA 92373	MFR	4
R18.7	26200 Redlands Blvd, Redlands, CA 92373	MFR	12
R18.8	26200 Redlands Blvd, Redlands, CA 92373	MFR	16
R18.9	26200 Redlands Blvd, Redlands, CA 92373	MFR	8
R18.10	26200 Redlands Blvd, Redlands, CA 92373	MFR	8
R18.11	26200 Redlands Blvd, Redlands, CA 92373	MFR	4
R18.12	26200 Redlands Blvd, Redlands, CA 92373	MFR	8
R18.13	26232 Redlands Blvd, Redlands, CA 92373	MFR	4
R18.14	26232 Redlands Blvd, Redlands, CA 92373	MFR	12
R18.15	26232 Redlands Blvd, Redlands, CA 92373	MFR	8
R18.16	26232 Redlands Blvd, Redlands, CA 92373	MFR	8
R18.17	10400 Severn St, Redlands, CA 92374	SFR	3
R18.18/LT16/ST26A/CAL	26326 Tudor Ct, Redlands, CA 92374	SFR	8
R18.19	26380 Tudor Ct, Redlands, CA 92374	SFR	5
R18.20	26454 Redland Blvd, Redlands, CA	MFR	4
R18.21/ST27	26454 Redland Blvd, Redlands, CA	MFR	4
R18.22	26454 Redland Blvd, Redlands, CA	MFR	4
R18.23	1900 W. Redlands Blvd, San Bernandino, CA 92403	COM	1
R18.24/ST28	1901 Orange Tree Ln, Redlands, CA 92374	COM	1
R18.25	89.7 KSGN, 2048 Orange Tree Ln, Redlands, CA 92374	RS	1
R18.26	San Bernardino County Museum, 2024 Orange Tree Ln, Redlands, CA 92374	PI	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; REC - recreational/park; RS - radio station; REL - religious institution; COM - Commercial; MH - mobile home; MOT - motel/hotel; PI - public institute.

Table F-19 – Street Addresses for Modeled Receivers – Segment 18A

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R18A.1A	1701 Orange Tree Lane, Redlands, CA 92374	COM	1
R18A.1	Redlands Day Nursery, 1643 Plum Lane, Redlands, CA 92374	SCH	1
R18A.2	Americas Best Value Inn, 1151 Coulston Avenue, Redlands, CA 92374	MOT	10
R18A.3	Super 8 Redlands, 1160 Coulston Avenue, Redlands, CA 92734	MOT	1
R18A.4/H6	Super 8 Redlands, 1160 Coulston Avenue, Redlands, CA 92734	MOT	8
R18A.5	Super 8 Redlands, 1160 Coulston Avenue, Redlands, CA 92734	MOT	8
R18A.6/ST28A/CAL	Good Nite Inn, 1675 Industrial Park Avenue, Redlands, CA 92374	MOT	--
R18A.7/H18	Good Nite Inn, 1675 Industrial Park Avenue, Redlands, CA 92374	MOT	14
R18A.8	The Old Spaghetti Factory, 1635 Industrial Park Avenue, Redlands, CA 92374	COM	1
R18A.9/H5	County Inn & Suites, 1650 Industrial Park Avenue, Redlands, CA 92374	MOT	36
R18A.10	County Inn & Suites, 1650 Industrial Park Avenue, Redlands, CA 92374	MOT	1
R18A.11	Arrowhead Credit Union, 1580 Indusrtial Park Avenue, Redlands, CA 92734	COM	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - school; COM - Commercial; MOT - motel/hotel.

Table F-20 – Street Addresses for Modeled Receivers – Segment 19

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R19.1	Shakey's Pizza Parlor, 836 W Colton Ave, Redlands, CA 92374	COM	1
R19.2	Dance With Purpose,	COM	1
R19.3	603 W Colton Ave, Redlands, CA 92374	SFR	1
R19.4/ST30A/CAL	503 W Colton Ave, Redlands, CA 92374	SFR	1
R19.5/LT18	319 W Colton Ave, Redlands, CA 92374	MFR	4
R19.5A	719 N Eureka St, Redlands, CA 92374	SFR	2
R19.5B	306 W Colton Ave, Redlands, CA 92374	SFR	4
R19.5C	222 W Colton Ave, Redlands, CA 92374	SFR	5
R19.6/ST31	127 W Colton Ave, Redlands, CA 92374	SFR	5
R19.7	39 W Colton Ave, Redlands, CA 92374	SFR	1
R19.8-1/H7	Comfort Suites, 1230 W Colton Ave, Redlands, CA 92374	MOT	11
R19.8-2/H7	Comfort Suites, 1230 W Colton Ave, Redlands, CA 92374	MOT	14
R19.8-3/H7	Comfort Suites, 1230 W Colton Ave, Redlands, CA 92374	MOT	14
R19.9-1/H8	Motel 6, 1120 W Colton Ave, Redlands, CA 92374	MOT	17
R19.9-2/H8	Motel 6, 1120 W Colton Ave, Redlands, CA 92374	MOT	16
R19.10-1/H9	Ayres Hotel, 1015 W Colton Ave, Redlands, CA 92374	MOT	7
R19.10-2/H9	Ayres Hotel, 1015 W Colton Ave, Redlands, CA 92374	MOT	7
R19.10A	El Burrito, 1095 W Colton Ave, Redlands, CA 92374	COM	1
R19.11/ST29	Orangewood High School, 515 Texas St, Redlands, CA 92374	SCH	1
R19.12	616 Texas St, Redlands, CA 92374	SFR	1
R19.13/LT17/CAL	615 Lawton St, Redlands, CA 92374	SFR	1
R19.14	603 Lawton St, Redlands, CA 92374	SFR	3
R19.14A	518 Lawton St, Redlands, CA 92374	MH	6
R19.15	605 Ruiz St, Redlands, CA 92374	SFR	2
R19.15A	524 Ruiz St, Redlands, CA 92374	SFR	6
R19.16/ST30	604 3rd St, Redlands, CA 92374	SFR	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home; COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

Table F-21 – Street Addresses for Modeled Receivers – Segment 20

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R20.1	203 E Colton Ave, Redlands, CA 92374	SFR	5
R20.1A	804 Herald St, Redlands, CA 92374	SFR	1
R20.2A	Budget Inn Motel, 102 The Terrace, Redlands, CA 92374	MOT	1
R20.2	Stardust Motel, 200 The Terrace, Redlands, CA 92374	MOT	1
R20.3	322 The Terrace Redlands CA 92374	SFR/MFR	7
R20.4/ST32	Park Magnolia Apartments, 416 The Terrace, Redlands, CA 92374	MFR	6
R20.5	Park Magnolia Apartments, 416 The Terrace, Redlands, CA 92374	MFR	4
R20.5A	Park Magnolia Apartments, 416 The Terrace, Redlands, CA 92374	MFR	5
R20.6-1	500 The Terrace, Redlands CA 92374	MFR	2
R20.6-2	500 The Terrace, Redlands CA 92374	MFR	2
R20.7	610 The Terrace, Redlands CA 92374	MFR	5
R20.8	615 11th St, Redlands, CA 92374	SFR	1
R20.9/LT20/CAL	610 11th St, Redlands, CA 92374	SFR	1
R20.10	705 11th St, Redlands, CA 92374	SFR/MFR	4
R20.11	702 11th St, Redlands, CA 92374	SFR	3
R20.12-1	Pebblebrook Apartments, 631 N Church St, Redlands, CA 92374	MFR	4
R20.12-2	Pebblebrook Apartments, 631 N Church St, Redlands, CA 92374	MFR	4
R20.13-1	Pebblebrook Apartments, 631 N Church St, Redlands, CA 92374	MFR	2
R20.13-2	Pebblebrook Apartments, 631 N Church St, Redlands, CA 92374	MFR	2
R20.14-1	Pebblebrook Apartments, 631 N Church St, Redlands, CA 92374	MFR	1
R20.14-2	Pebblebrook Apartments, 631 N Church St, Redlands, CA 92374	MFR	1
R20.15-1	Pebblebrook Apartments, 631 N Church St, Redlands, CA 92374	MFR	2
R20.15-2	Pebblebrook Apartments, 631 N Church St, Redlands, CA 92374	MFR	2
R20.16-1	Pebblebrook Apartments, 631 N Church St, Redlands, CA 92374	MFR	2
R20.16-2	Pebblebrook Apartments, 631 N Church St, Redlands, CA 92374	MFR	2
R20.17-1	Pebblebrook Apartments, 631 N Church St, Redlands, CA 92374	MFR	2
R20.17-2	Pebblebrook Apartments, 631 N Church St, Redlands, CA 92374	MFR	2
R20.18A	Dial of Treatment, 602 Church St, Redlands, CA 92374	REL	1
R20.18	529 Bonita St, Redlands, CA 92374	SFR	2
R20.19	819 Sylvan Blvd, Redlands, CA 92374	SFR/MFR	3
R20.20	835 Sylvan Blvd, Redlands, CA 92374	SFR	2
R20.21	845 Sylvan Blvd, Redlands, CA 92374	SFR	2
R20.22	826 E High Ave, Redlands, CA 92374	SFR	4
R20.23	837 Sylvan Blvd, Redlands, CA 92374	SFR	3

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home; COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

Table F-21 – Street Addresses for Modeled Receivers – Segment 20 (Cont'd)

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R20.24	Sylvan Park, 601 N University St, Redlands, CA 92374	REC	1
R20.25	Sylvan Park, 601 N University St, Redlands, CA 92374	REC	1
R20.26/ST36	Ahrens Child Care Center, 201 North University St, Redlands, CA 92374	SCH	1
R20.27	Catalina Gardens Apartments, 333 North University St, Redlands, CA 92374	MFR	4
R20.28	Catalina Gardens Apartments, 333 North University St, Redlands, CA 92374	MFR	4
R20.29	Catalina Gardens Apartments, 333 North University St, Redlands, CA 92374	MFR	4
R20.30	130 N University St, Redlands, CA 92374	SFR	5
R20.31	1110 E Central Ave, Redlands, CA 92374	MFR	1
R20.32/ST37	1118 Cero Ct, Redlands, CA 92374	MFR	1
R20.33	1123 E Citrus Ave, Redlands, CA 92374	MFR	4
R20.34	1127 E Citrus Ave, Redlands, CA 92374	MFR	4
R20.35	1135 E Citrus Ave, Redlands, CA 92374	MFR	8
R20.36	1114 Cero Ct, Redlands, CA 92374	MFR	8
R20.37	1122 Cero Ct, Redlands, CA 92374	MFR	4
R20.38	1130 Cero Ct, Redlands, CA 92374	MFR	8
R20.39/ST38	1132 E Citrus Ave, Redlands, CA 92374	SFR	3
R20.40	1131 E Cypress Ave, Redlands, CA 92374	SFR	5
R20.41	U.S. Bank, 640 Orange St, Redlands, CA 92374	COM	1
R20.42	211 E High Ave, Redlands, CA 92374	SFR	3
R20.42A	Living Word Fellowship, 200 East High Ave, Redlands, CA 92374	REL	1
R20.43/LT19/CAL	305 E High Ave, Redlands, CA 92374	SFR	4
R20.44	424 E High Ave, Redlands, CA 92374	SFR	1
R20.45	515 11th St, Redlands, CA 92374	SFR	1
R20.46	511 11th St, Redlands, CA 92374	SFR	5
R20.47	610 E Stuart Ave, Redlands, CA 92374	SFR	1
R20.47A	The Blessing Center, 760 East Stuart Ave, Redlands, CA 92374	REL	1
R20.48/ST33	400 Church St, Redlands, CA 92374	MFR	4
R20.49	815 E Central Ave, Redlands, CA 92374	SFR	2
R20.50	835 E Central Ave, Redlands, CA 92374	SFR	4
R20.51	851 E Central Ave, Redlands, CA 92374	SFR/MFR	3

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home; COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

Table F-21 – Street Addresses for Modeled Receivers – Segment 20 (Cont'd)

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R20.52A	Redlands High School, 840 East Citrus Ave, Redlands, CA 92374	SCH	1
R20.52	907 E Central Ave, Redlands, CA 92374	SFR	2
R20.53/ST35/CAL	911 E Central Ave, Redlands, CA 92374	SFR	1
R20.54	920 E Central Ave, Redlands, CA 92374	MFR	4
R20.55	926 E Central Ave, Redlands, CA 92374	MFR	2
R20.56	930 E Central Ave, Redlands, CA 92374	MFR	3
R20.57/LT21	515 University Pl, Redlands, CA 92374	SFR	5
R20.58	531 University Pl, Redlands, CA 92374	SFR	5
R20.59A	Redlands High School, 840 East Citrus Ave, Redlands, CA 92374	SCH	1
R20.59	502 University Pl, Redlands, CA 92374	SFR/MFR	3
R20.60	510 University Pl, Redlands, CA 92374	SFR	4
R20.61	528 University Pl, Redlands, CA 92374	SFR	4

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home; COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.

Table F-22 – Street Addresses for Modeled Receivers – Segment 21

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R21.1	700 Napa Avenue, Redlands, CA 92374	SFR	6
R21.2	714 Napa Avenue, Redlands, CA 92374	SFR	3
R21.3/LT22	730 Mcauliffe Court, Redlands, CA 92374	SFR	4
R21.3A/ST40A/CAL	738 Mcauliffe Court, Redlands, CA 92374	SFR	2
R21.4	748 Mcauliffe Court, Redlands, CA 92374	SFR	2
R21.5	1142 E Cypress Avenue, Redlands, CA 92374	SFR	5
R21.6	719 Napa Avenue, Redlands, CA 92374	SFR	5
R21.6A	720 Napa Avenue, Redlands, CA 92374	SFR	3
R21.7	720 S Grove Street, Redlands, CA 92374	SFR	4
R21.8	1202 E Palm Avenue, Redlands, CA 92374	SFR	2
R21.9	1201 Begonia Court, Redlands, CA 92374	SFR	2
R21.10	1200 Begonia Court, Redlands, CA 92374	SFR	2
R21.11	1201 Cambon Court, Redlands, CA 92374	SFR	2
R21.12	1202 Cambon Court, Redlands, CA 92374	SFR	2
R21.13	1201 Del Haven Court, Redlands, CA 92374	SFR	2
R21.14	1203 E Highland Avenue, Redlands, CA 92374	SFR	4
R21.15	1210 E Palm Avenue, Redlands, CA 92374	SFR	2
R21.16	1209 Begonia Court, Redlands, CA 92374	SFR	2
R21.17	1208 Begonia Court, Redlands, CA 92374	SFR	2
R21.18	1209 Cambon Court, Redlands, CA 92374	SFR	2
R21.19	1210 Cambon Court, Redlands, CA 92374	SFR	2
R21.20	1209 Del Haven Court, Redlands, CA 92374	SFR	2
R21.21	1208 Del Haven Court, Redlands, CA 92374	SFR	4
R21.22	1200 E Highland Avenue, Redlands, CA 92374	MFR	6
R21.23/ST42	1200 E Highland Avenue, Redlands, CA 92374	MFR	1
R21.24	1200 E Highland Avenue, Redlands, CA 92374	MFR	1
R21.25	1200 E Highland Avenue, Redlands, CA 92374	MFR	2
R21.25A	Kingdom Hall of Jehovahs Witnesses 1280 Ford Street, Redlands, CA 92374	REL	1
R21.26	1303 Ford Steet,Redlands, CA 92374	SFR	2
R21.27	1315 Ford Street, Redlands, CA 92374	SFR	3
R21.28	1311 Crestview Road, Redlands, CA 92374	SFR	3
R21.29/ST44/CAL	1400 Ford Street, Redlands, CA 92374	--	--
R21.30	1312 Crestview Road, Redlands, CA 92374	SFR	1
R21.31	1320 Crestview Road, Redlands, CA 92374	SFR	2
R21.32/ST45	Church on The Hill 1445 Ford Street, Redlands, CA 92374	REL	1
R21.33	Church on The Hill 1445 Ford Street, Redlands, CA 92374	REC	1
R21.34	1454 Hampton Road, Redlands, CA 92374	SFR	3
R21.35/LT23/CAL	679 Chaucer Court, Redlands, CA 92374	SFR	2
R21.36	1474 Hampton Road, Redlands, CA 92374	SFR	2
R21.37	693 Bradbury Drive, Redlands, CA 92374	SFR	1
R21.38	681 Bradbury Drive, Redlands, CA 92374	SFR	2

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home; COM - commercial; MOT - motel; REC - recreational; SCH - educational center; REL - religious institution.

Table F-22 – Street Addresses for Modeled Receivers – Segment 21 (Cont'd)

RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R21.39/ST47	Trinity Church, 1551 Reservoir Road, Redlands, CA 92374	REL	1
R21.40	Trinity Church, 1551 Reservoir Road, Redlands, CA 92374	SCH	1
R21.41	Trinity Church, 1551 Reservoir Road, Redlands, CA 92374	SCH	14
R21.42	Trinity Church, 1551 Reservoir Road, Redlands, CA 92374	REC	1
R21.43	775 Devonshire Drive, Redlands, CA 92374	SFR	1
R21.44	816 Concord Lane, Redlands, CA 92374	SFR	1
R21.45/LT25	815 Concord Lane, Redlands, CA 92374	SFR	1
R21.46	812 Lexington Lane, Redlands, CA 92374	SFR	1
R21.47	813 Lexington Lane, Redlands, CA 92374	SFR	1
R21.48	828 Buckingham Drive, Redlands, CA 92374	SFR	1
R21.49/ST49	825 Buckingham Drive, Redlands, CA 92374	SFR	1
R21.50	1647 Reservoir Road, Redlands, CA 92374	SFR	2
R21.51	1060 Ardmore Circle, Redlands, CA 92374	SFR	1
R21.52	1064 Ardmore Circle, Redlands, CA 92374	SFR	3
R21.53	1058 Ardmore Circle, Redlands, CA 92374	MFR	2
R21.54/ST39	1044 Ardmore Circle, Redlands, CA 92374	--	--
R21.55	1044 Ardmore Circle, Redlands, CA 92374	MFR	2
R21.56	1032 Ardmore Circle, Redlands, CA 92374	MFR	1
R21.57	1012 Ardmore Circle, Redlands, CA 92374	MFR	2
R21.58	1000 Ardmore Circle, Redlands, CA 92374	MFR	2
R21.59	972 Ardmore Circle, Redlands, CA 92374	MFR	1
R21.60	1049 E Palm Avenue, Redlands, CA 92374	SFR	2
R21.61	1033 E Palm Avenue, Redlands, CA 92374	SFR	2
R21.62/ST40/CAL	1049 Drive,acena Court, Redlands, CA 92374	SFR	4
R21.63	1057 Evergreen Court, Redlands, CA 92374	SFR	4
R21.64	1048 Evergreen Court, Redlands, CA 92374	SFR	3
R21.65	951 Cimarron Drive, Redlands, CA 92374	SFR	1
R21.66	1011 Cimarron Drive, Redlands, CA 92374	SFR	2
R21.67/ST41	1041 Cimarron Drive, Redlands, CA 92374	SFR	1
R21.68	1042 E Palm Avenue, Redlands, CA 92374	SFR	4
R21.69	1041 Evergreen Court, Redlands, CA 92374	SFR	4
R21.70	931 Cimarron Drive, Redlands, CA 92374	SFR	2
R21.71	1021 Cimarron Drive, Redlands, CA 92374	SFR	2
R21.72	1055 E Highland Avenue, Redlands, CA 92374	SFR	1
R21.73	1045 E Highland Avenue, Redlands, CA 92374	SFR	1
R21.74	1025 W Highland Avenue,Redlands, CA 92373	SFR	2
R21.75/ST43	El Carmelo Retreat House, 926 E Highland Avenue, Redlands, CA 92374	REL	1
R21.76	El Carmelo Retreat House, 926 E Highland Avenue, Redlands, CA 92374	REL	1
R21.77-1	Park Place Apartments, 1460 Marshall Street, Redlands, CA 92374	MFR	1
R21.77-2	Park Place Apartments, 1460 Marshall Street, Redlands, CA 92374	MFR	1
R21.78-1	Park Place Apartments, 1460 Marshall Street, Redlands, CA 92374	MFR	1
R21.78-2	Park Place Apartments, 1460 Marshall Street, Redlands, CA 92374	MFR	1
R21.79-1	Park Place Apartments, 1460 Marshall Street, Redlands, CA 92374	MFR	1
R21.79-2	Park Place Apartments, 1460 Marshall Street, Redlands, CA 92374	MFR	1
R21.80	Park Place Apartments, 1460 Marshall Street, Redlands, CA 92374	MFR	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home; COM - commercial; MOT - motel; REC - recreational; SCH - educational center; REL - religious institution.

Table F-22 – Street Addresses for Modeled Receivers – Segment 21 (Cont'd)

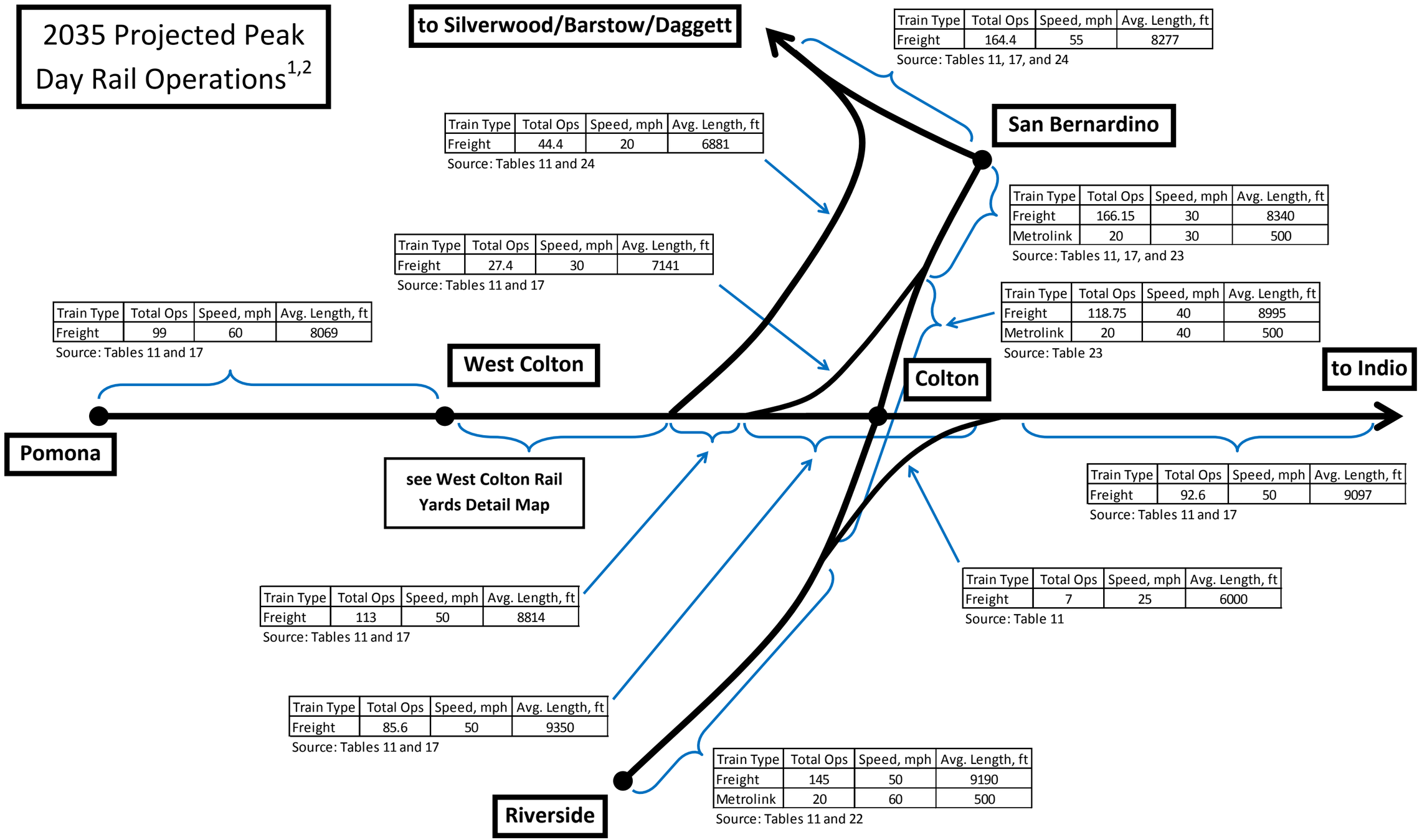
RECEIVER I.D.	ADDRESS or LOCATION	LAND USE [1]	NUMBER of DWELLING UNITS
R21.81	319 Kelisa Circle, Redlands, CA 92373	SFR	1
R21.82/ST46/CAL	1378 Patricia Drive, Redlands, CA 92373	SFR	1
R21.83	1382 Patricia Drive, Redlands, CA 92373	SFR	1
R21.84	1385 Patricia Drive, Redlands, CA 92373	SFR	1
R21.85	1389 Patricia Drive, Redlands, CA 92373	SFR	1
R21.86	449 Golden West Drive, Redlands, CA 92373	SFR	1
R21.87/LT24/CAL	453 Golden West Drive, Redlands, CA 92373	SFR	1
R21.88	457 Golden West Drive, Redlands, CA 92373	SFR	1
R21.89	461 Golden West Drive, Redlands, CA 92373	SFR	1
R21.90	465 Golden West Drive, Redlands, CA 92373	SFR	1
R21.91	503 Golden West Drive, Redlands, CA 92373	SFR	1
R21.92	507 Golden West Drive, Redlands, CA 92373	SFR	1
R21.93	511 Golden West Drive, Redlands, CA 92373	SFR	1
R21.94	515 Golden West Drive, Redlands, CA 92373	SFR	1
R21.95	519 Golden West Drive, Redlands, CA 92373	SFR	1
R21.96	523 Golden West Drive, Redlands, CA 92373	SFR	1
R21.97	527 Golden West Drive, Redlands, CA 92373	SFR	1
R21.98	533 Golden West Drive, Redlands, CA 92373	SFR	1
R21.99/ST50	537 Golden West Drive, Redlands, CA 92373	SFR	1
R21.100	541 Golden West Drive, Redlands, CA 92373	SFR	1

Note:

1 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home; COM - commercial; MOT - motel; REC - recreational; SCH - educational center; REL - religious institution.

Appendix G Train Operation Data

Figure G-1 – Rail Operations



Train Type	Total Ops	Speed, mph	Avg. Length, ft
Freight	164.4	55	8277

Source: Tables 11, 17, and 24

Train Type	Total Ops	Speed, mph	Avg. Length, ft
Freight	44.4	20	6881

Source: Tables 11 and 24

Train Type	Total Ops	Speed, mph	Avg. Length, ft
Freight	166.15	30	8340
Metrolink	20	30	500

Source: Tables 11, 17, and 23

Train Type	Total Ops	Speed, mph	Avg. Length, ft
Freight	27.4	30	7141

Source: Tables 11 and 17

Train Type	Total Ops	Speed, mph	Avg. Length, ft
Freight	118.75	40	8995
Metrolink	20	40	500

Source: Table 23

Train Type	Total Ops	Speed, mph	Avg. Length, ft
Freight	99	60	8069

Source: Tables 11 and 17

Train Type	Total Ops	Speed, mph	Avg. Length, ft
Freight	92.6	50	9097

Source: Tables 11 and 17

Train Type	Total Ops	Speed, mph	Avg. Length, ft
Freight	113	50	8814

Source: Tables 11 and 17

Train Type	Total Ops	Speed, mph	Avg. Length, ft
Freight	7	25	6000

Source: Table 11

Train Type	Total Ops	Speed, mph	Avg. Length, ft
Freight	85.6	50	9350

Source: Tables 11 and 17

Train Type	Total Ops	Speed, mph	Avg. Length, ft
Freight	145	50	9190
Metrolink	20	60	500

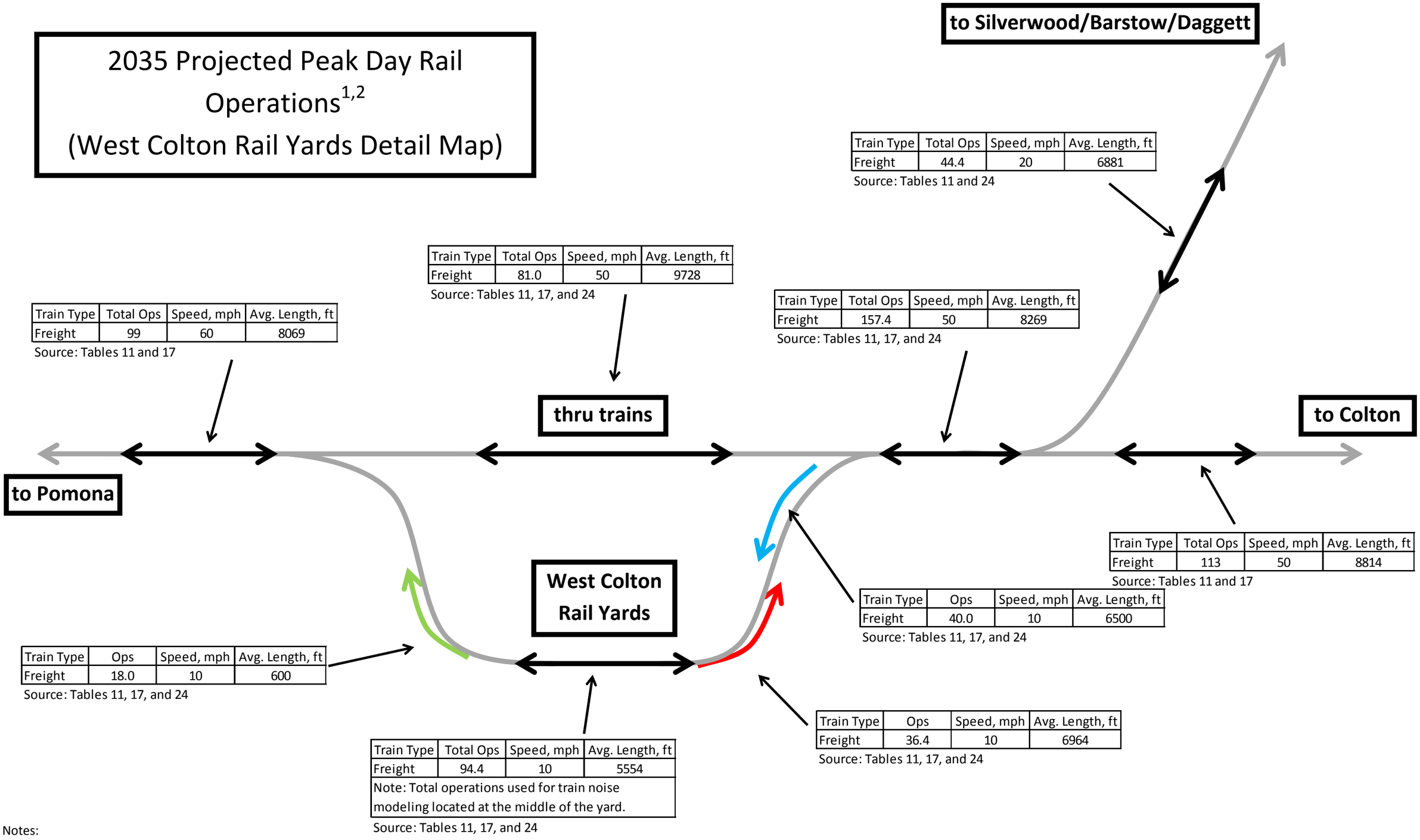
Source: Tables 11 and 22

Notes:

1 – All train operations obtained from the *Regional Rail Simulation Findings Technical Appendix* dated November 2011 authored by Dr. Robert C. Leachman. Speeds are from the *Inland Empire Railroad Main Line Study* dated June 2005.

2 – Amtrak operations were only a maximum of two operations per day along each of the UPRR and BNSF lines. Therefore, they have been considered negligible as compared to freight operations and not included in the peak day rail operation totals.

Figure G-2 – Rail Operations (West Colton Yard)



Notes:

1 – All train operations obtained from the *Regional Rail Simulation Findings Technical Appendix* dated November 2011 authored by Dr. Robert C. Leachman. Speeds are from the *Inland Empire Railroad Main Line Study* dated June 2005.

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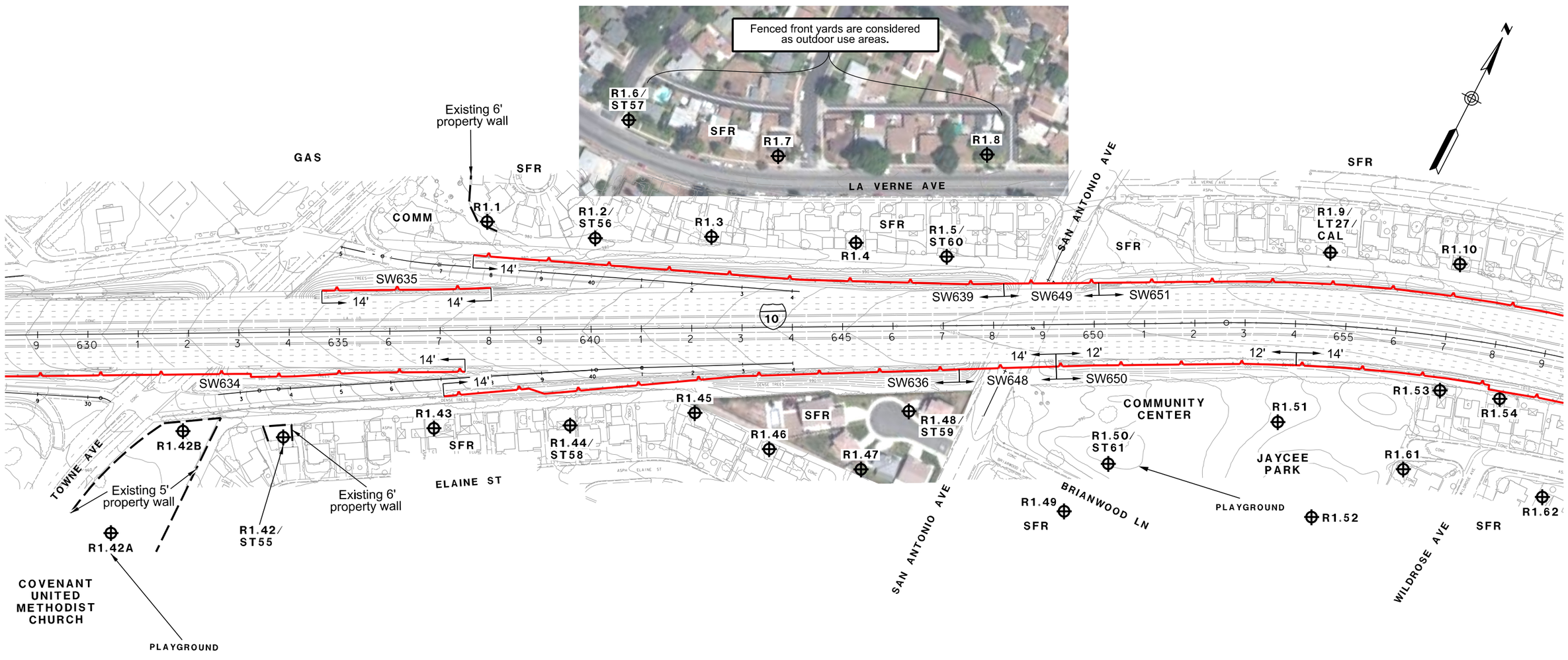
Appendix H Noise Measurement, Modeled Receiver, and Feasible Noise Barrier Locations

Alternative 1 -

No-Build Alternative



LEGEND

- RXX - RECEIVER SITE
- CAL - CALIBRATION SITE
- LT - LONG-TERM MEASUREMENT
- ST - SHORT-TERM MEASUREMENT

- SFR OR S - SINGLE FAMILY RESIDENCE
- MFR OR M - MULTI-FAMILY RESIDENCE
- COMM OR C - COMMERCIAL/NO OUTSIDE ACTIVITIES
- HXX - IN/OUTDOOR MEASUREMENT

- EXISTING PROPERTY WALL
- EXISTING SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

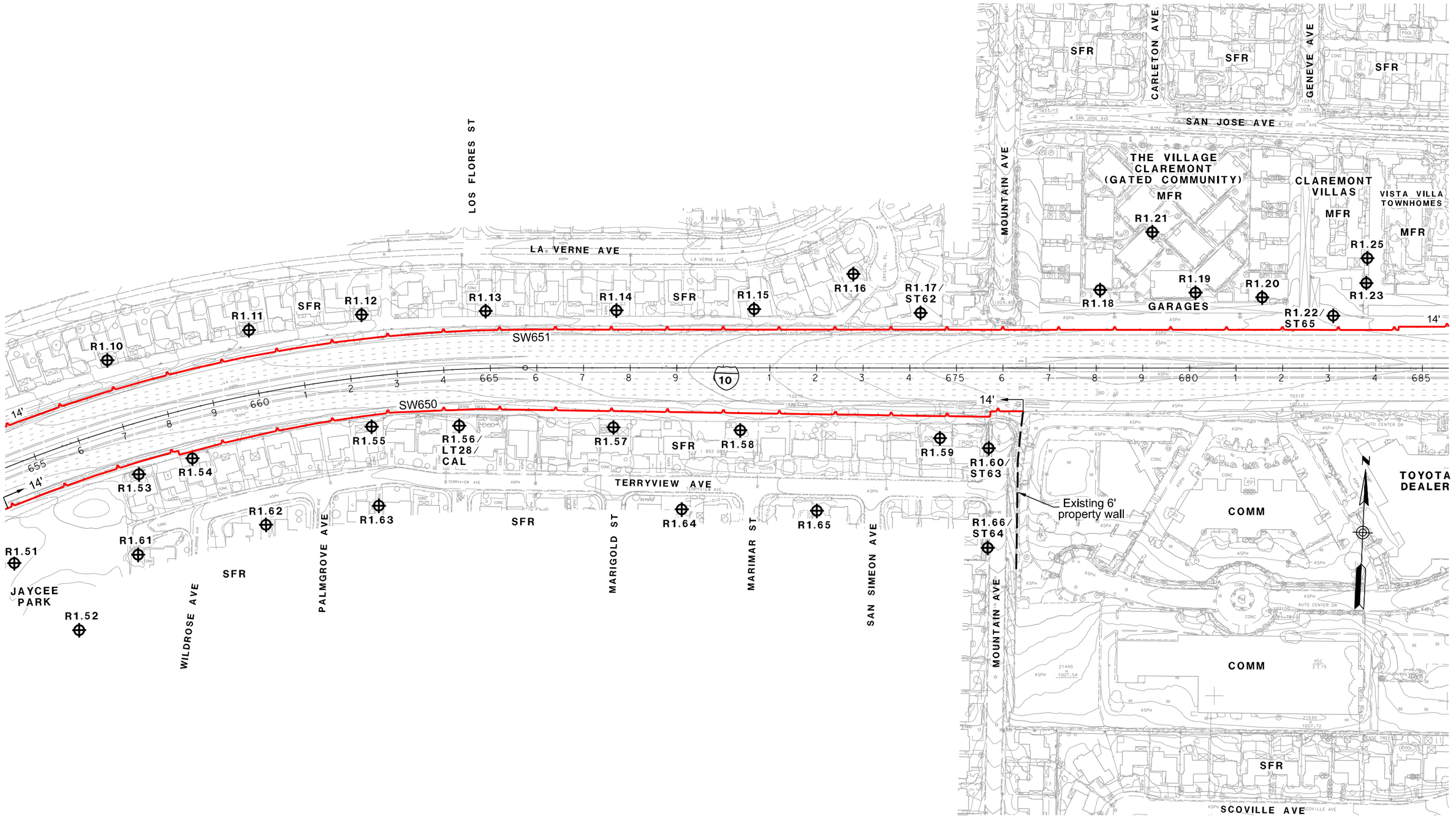
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 1



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1in : 200ft

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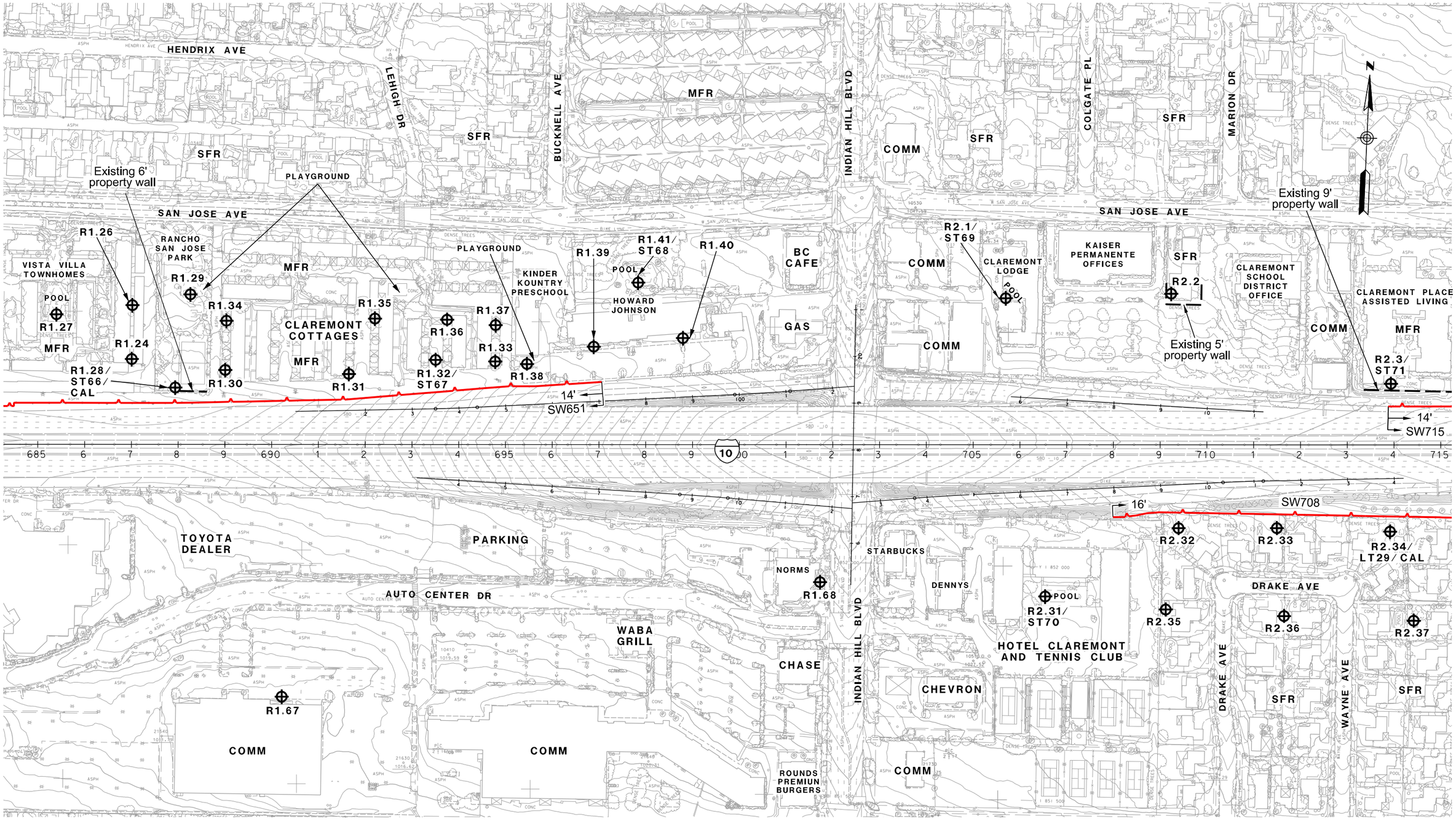
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 2



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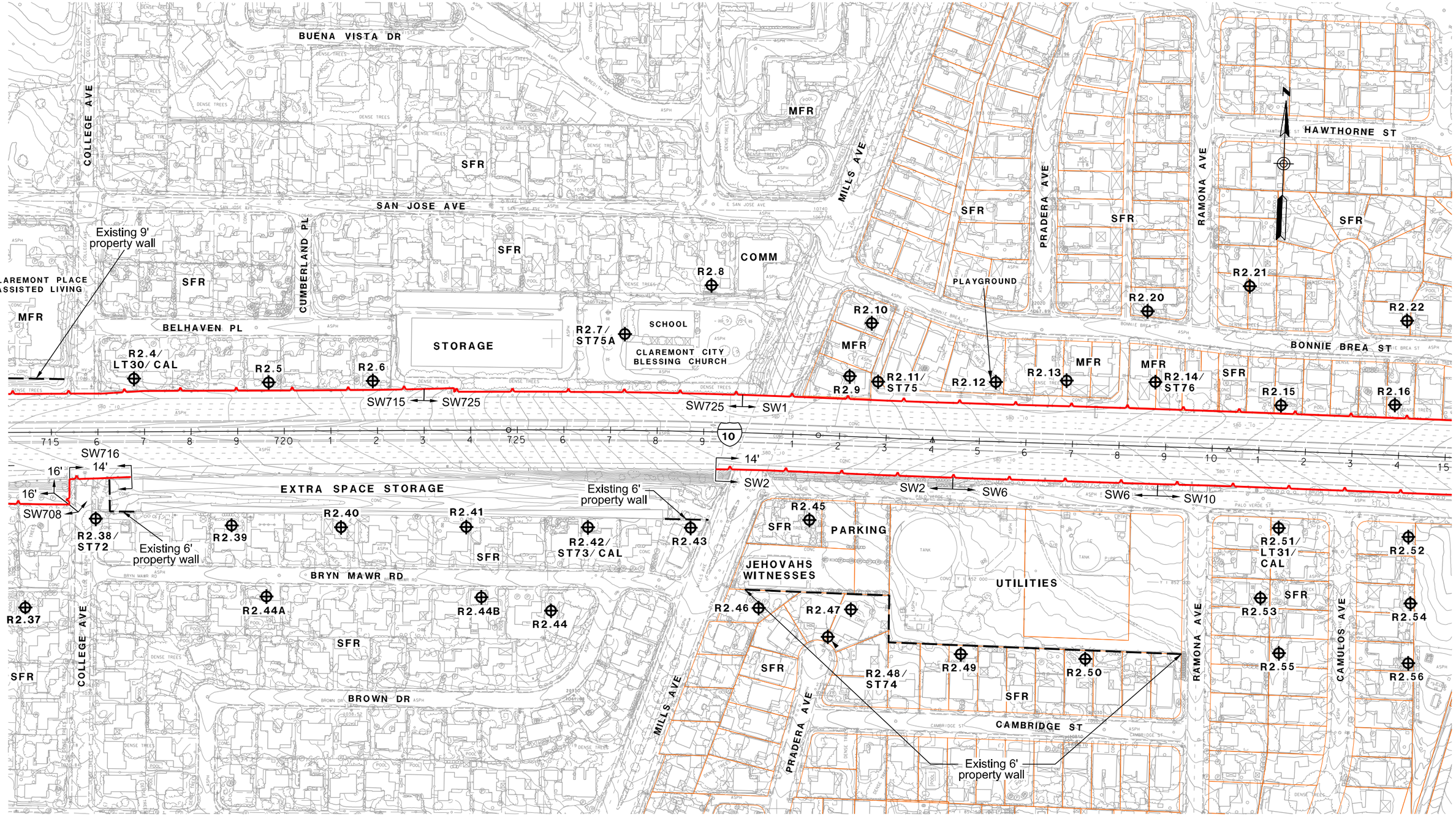
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 3



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1in : 200ft

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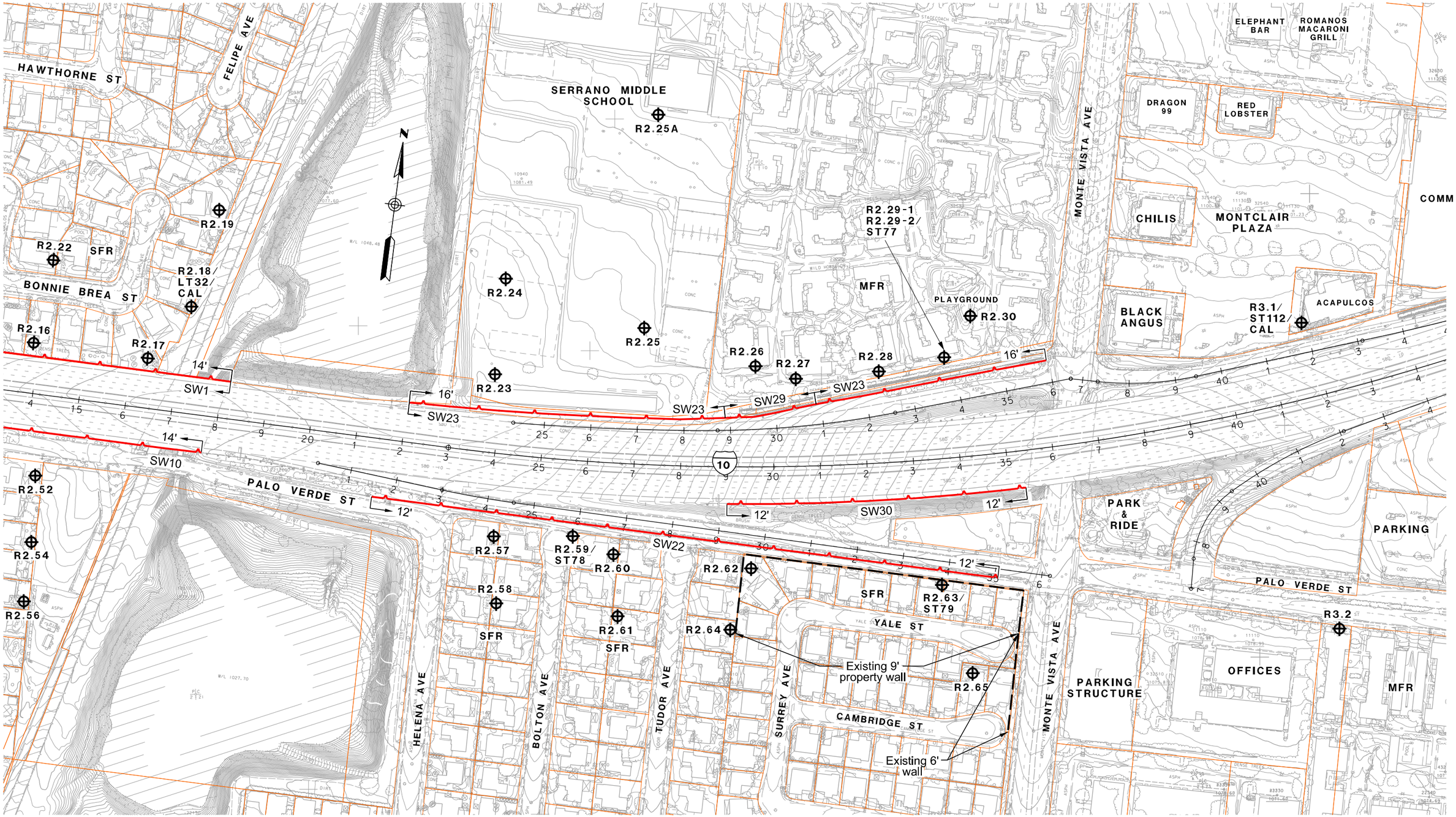
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 4



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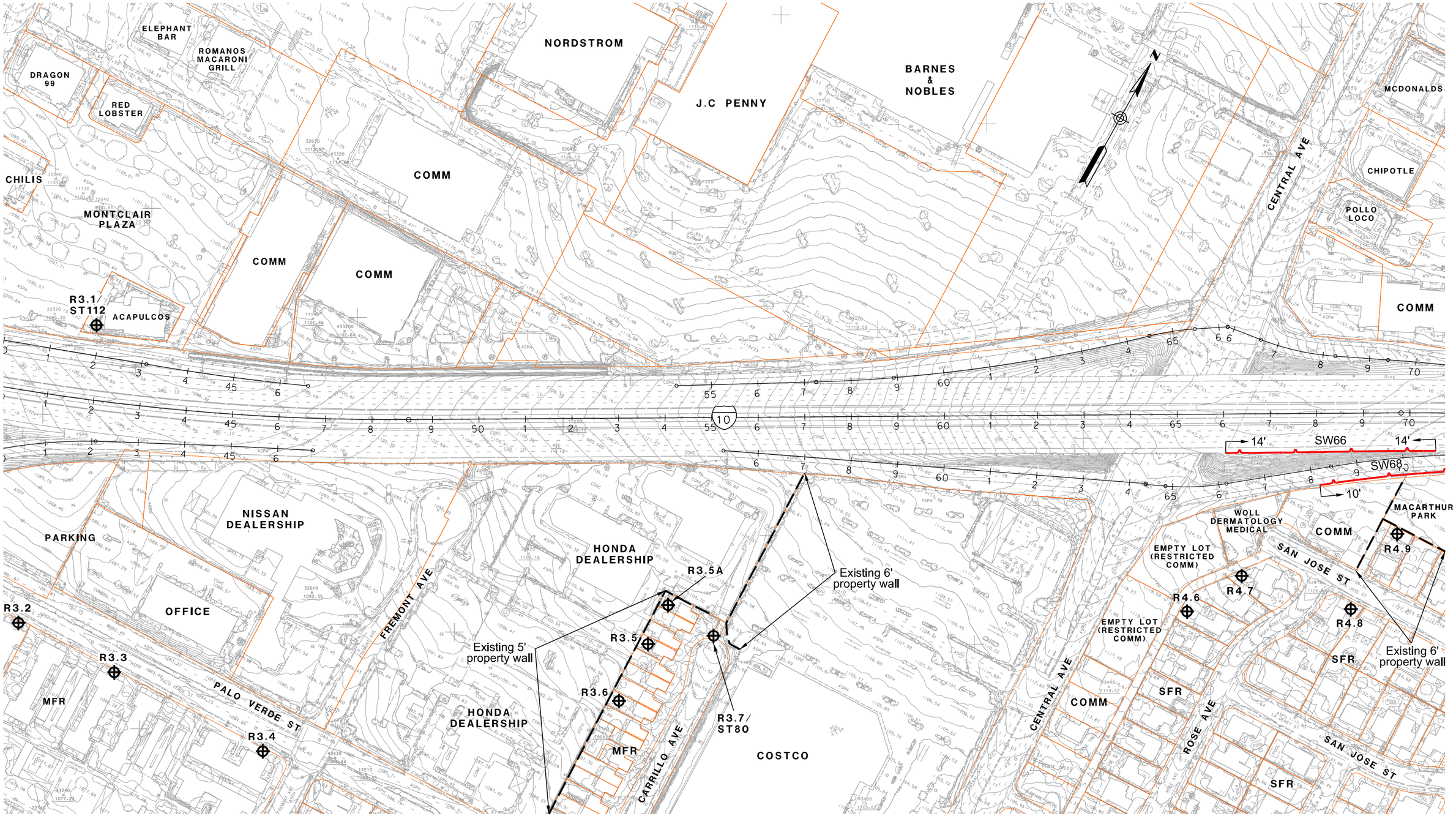
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 5



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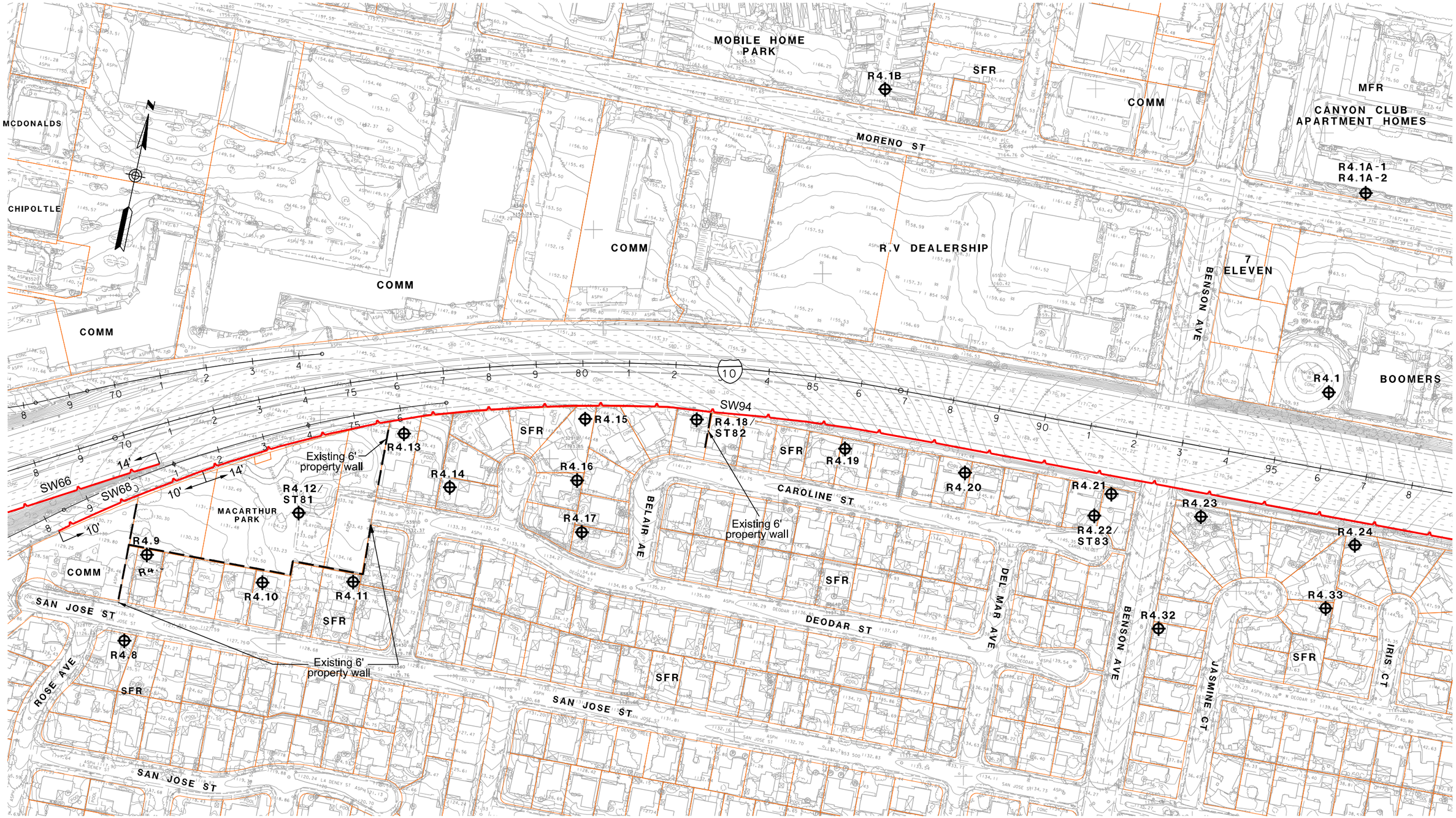
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 6



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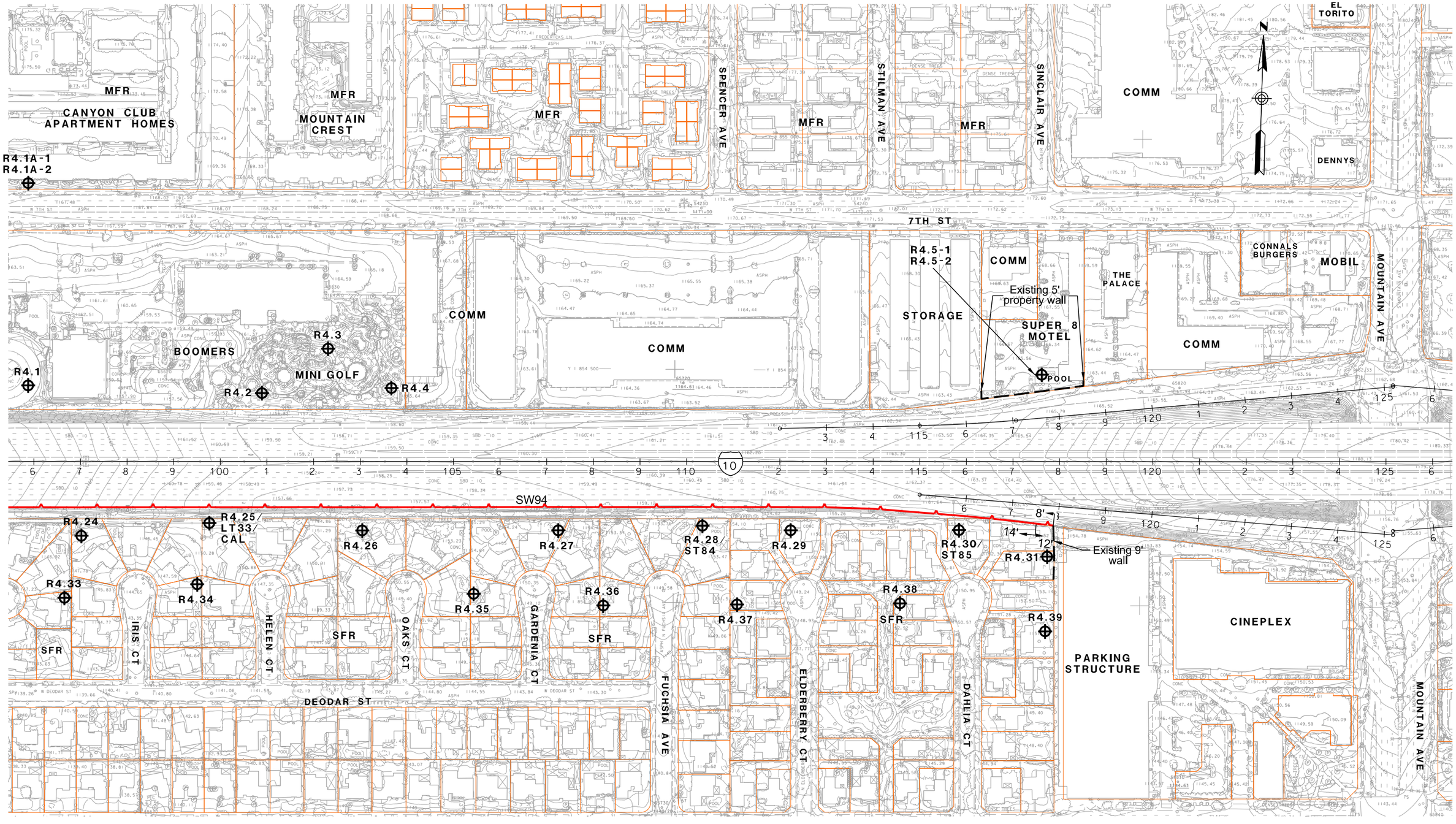
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 7



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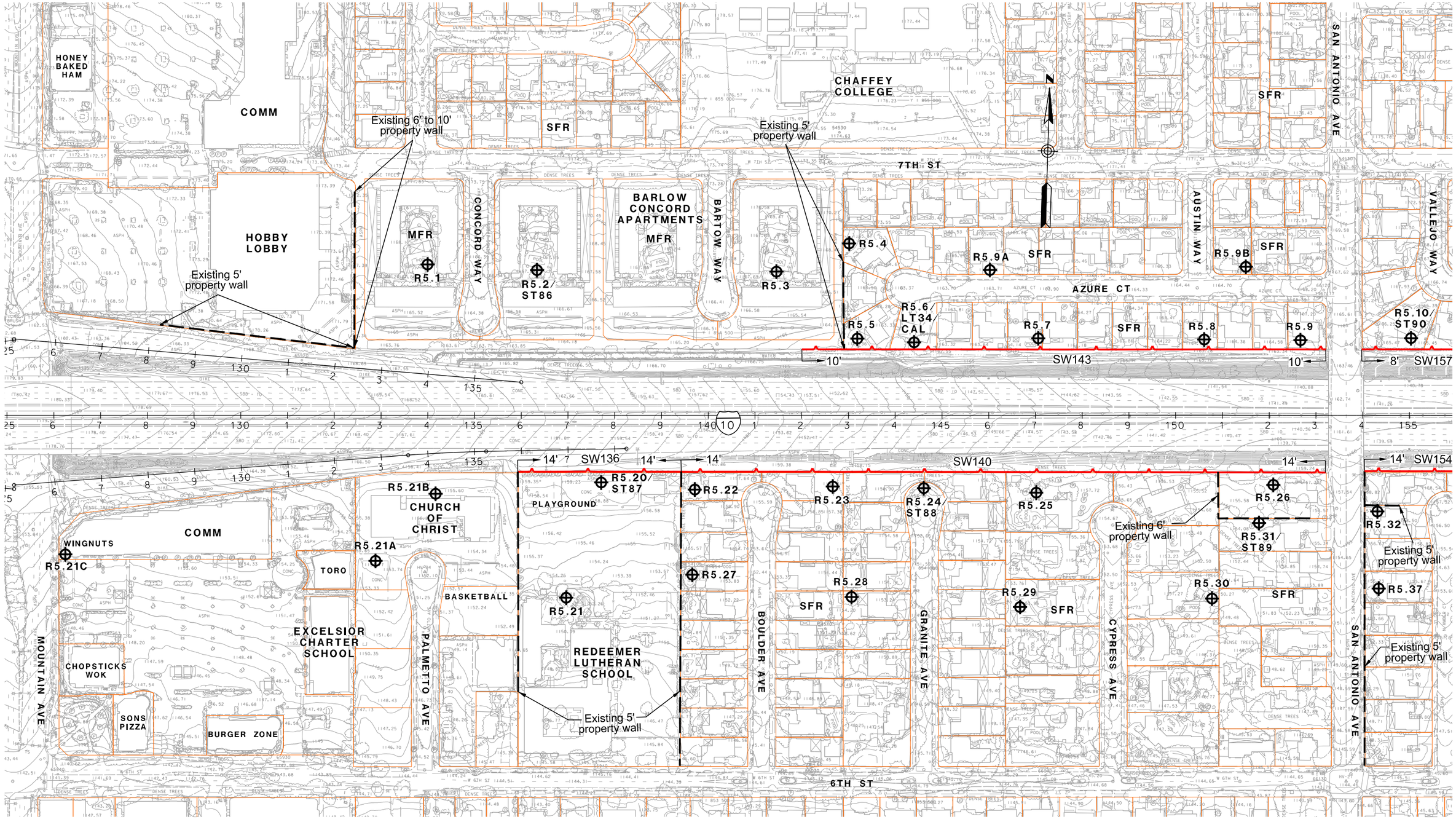
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 8



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1in : 200ft

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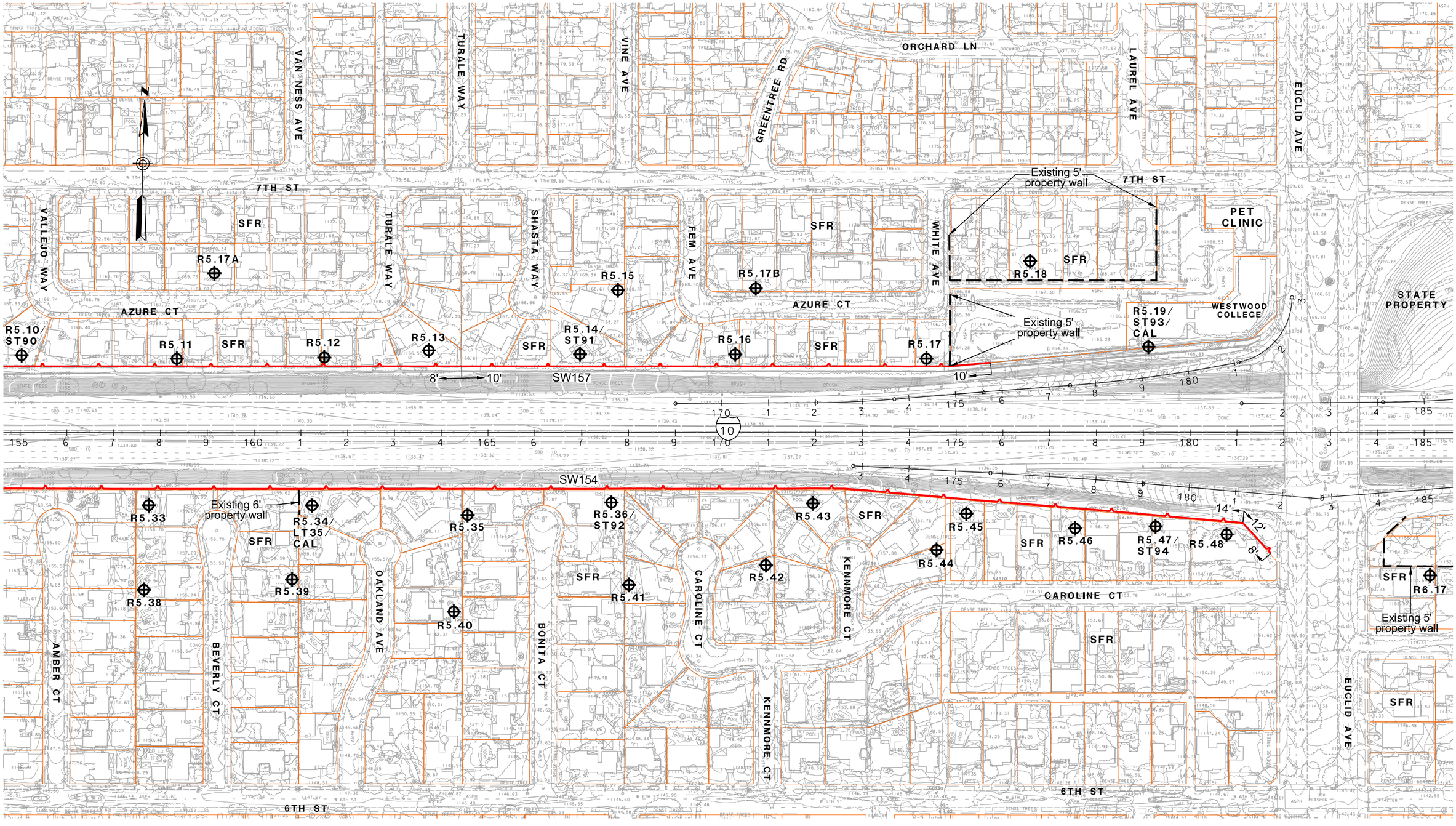
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 9



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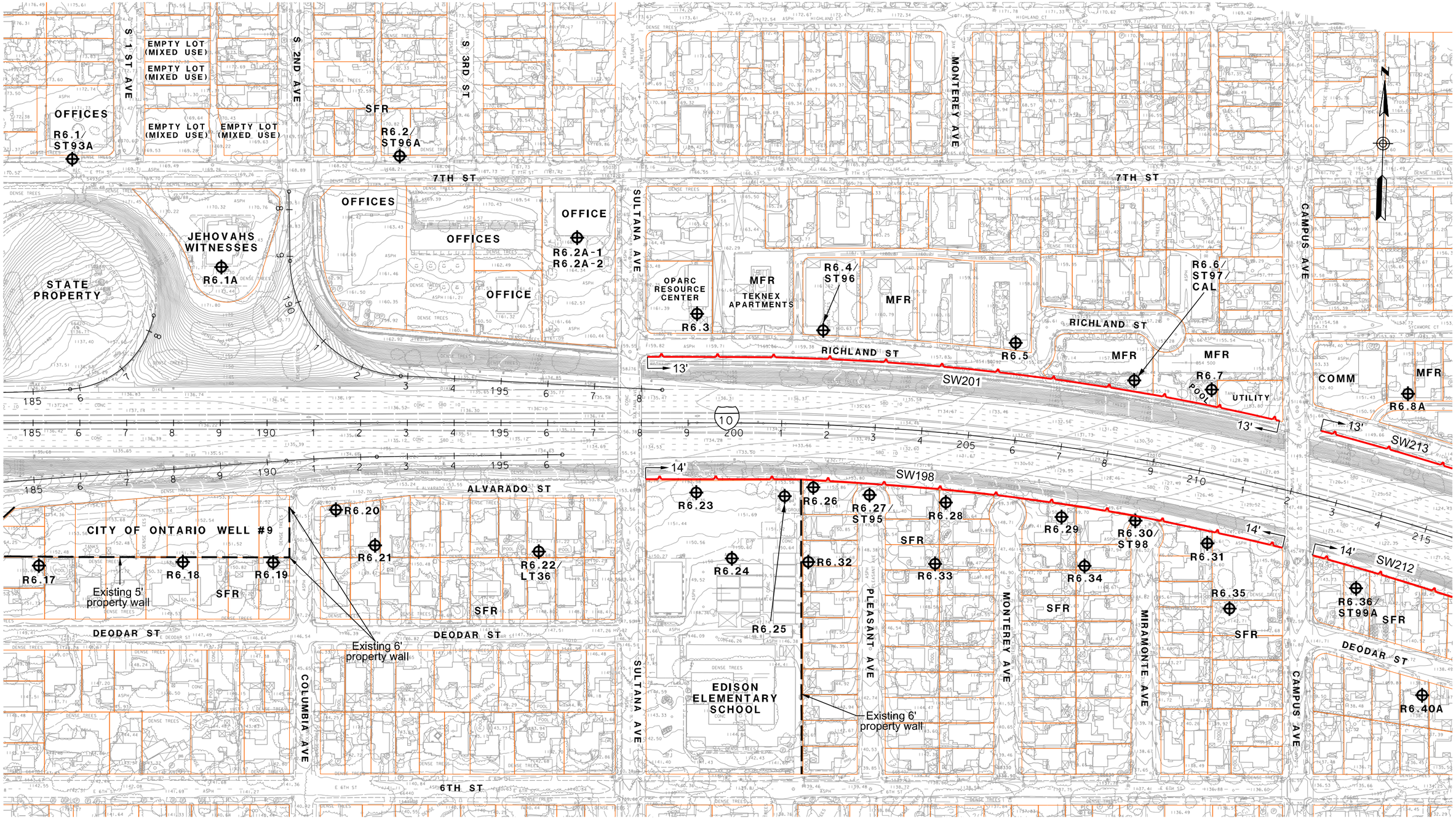
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 10



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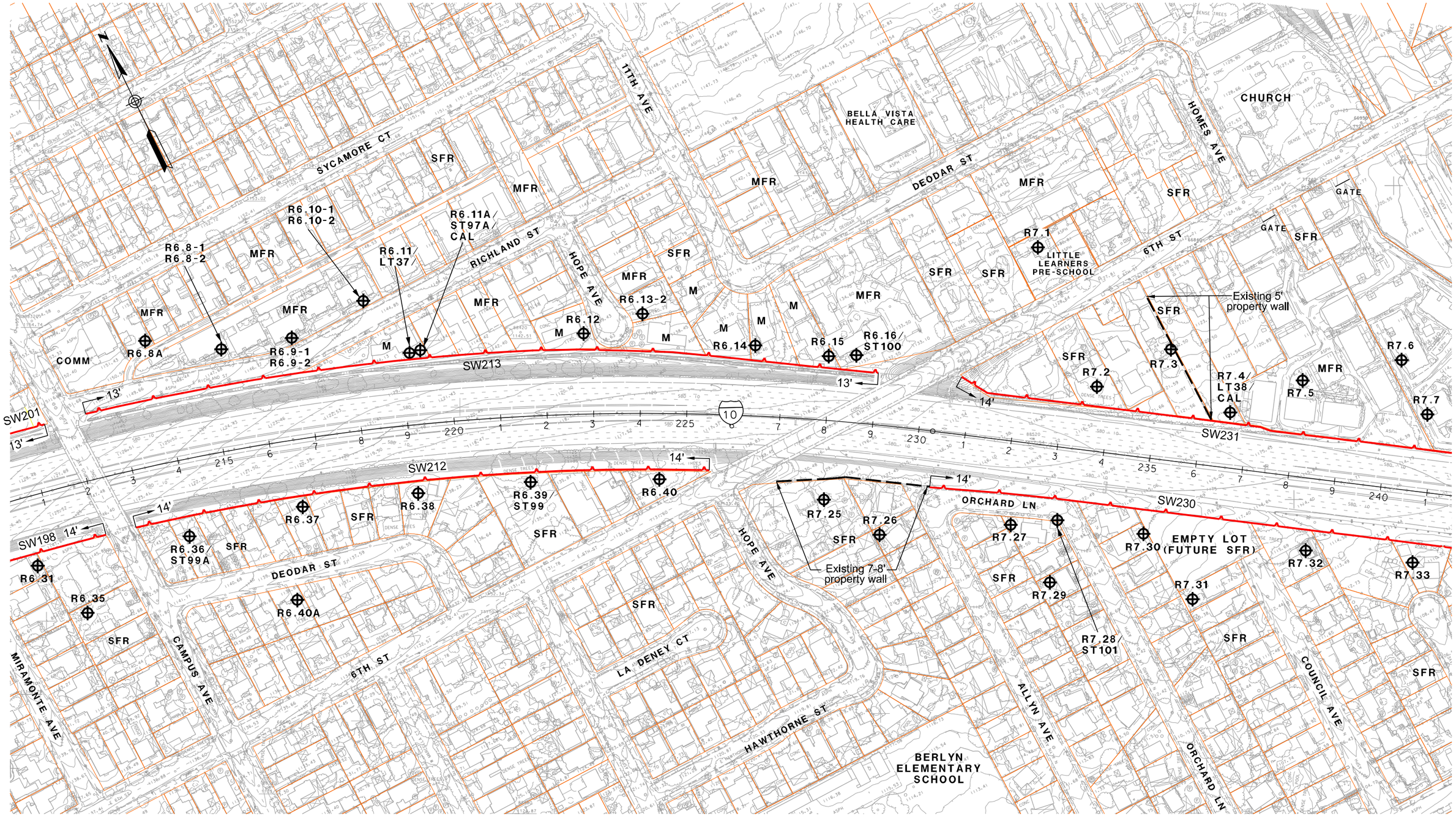
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 11



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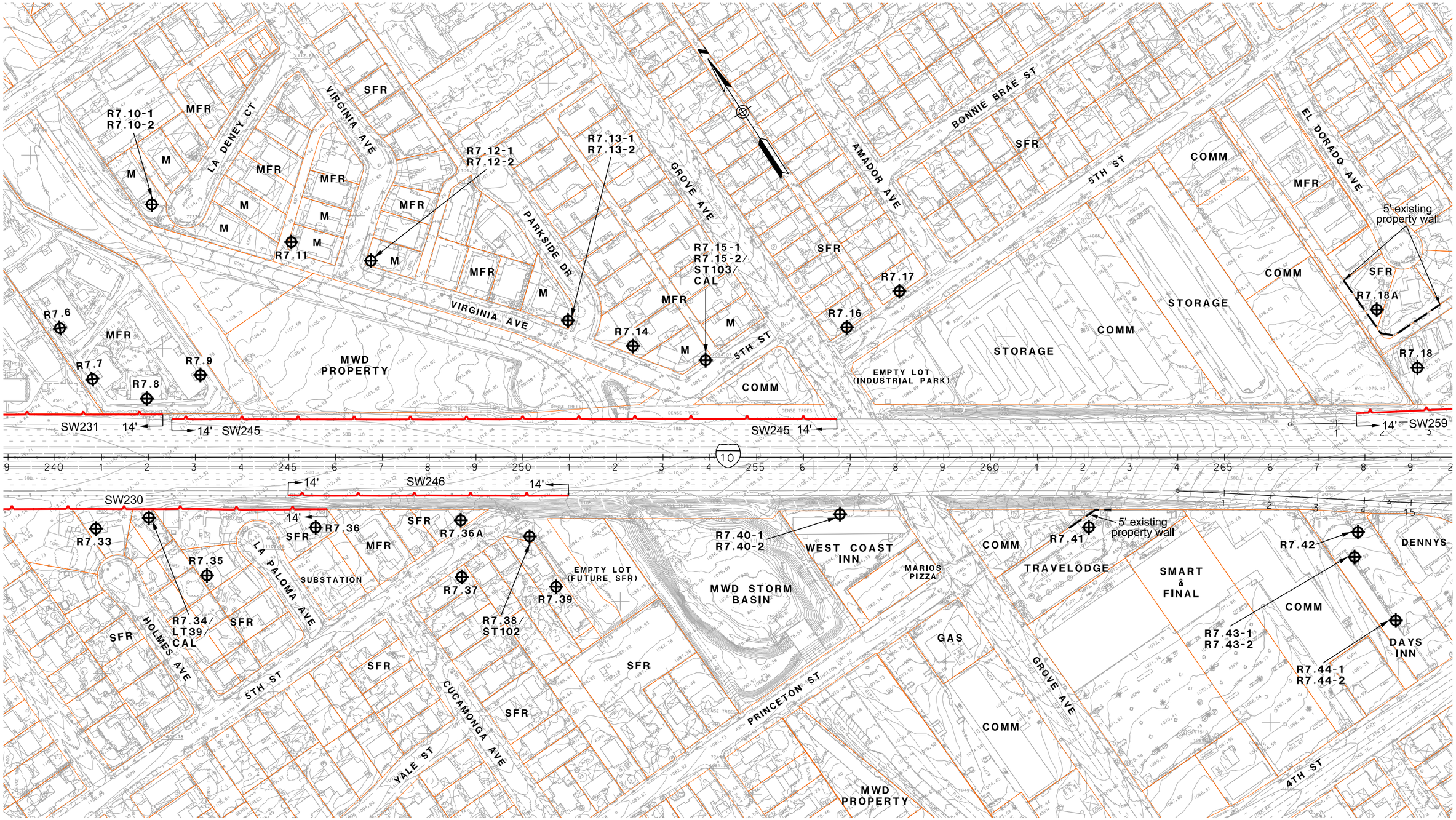
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 12



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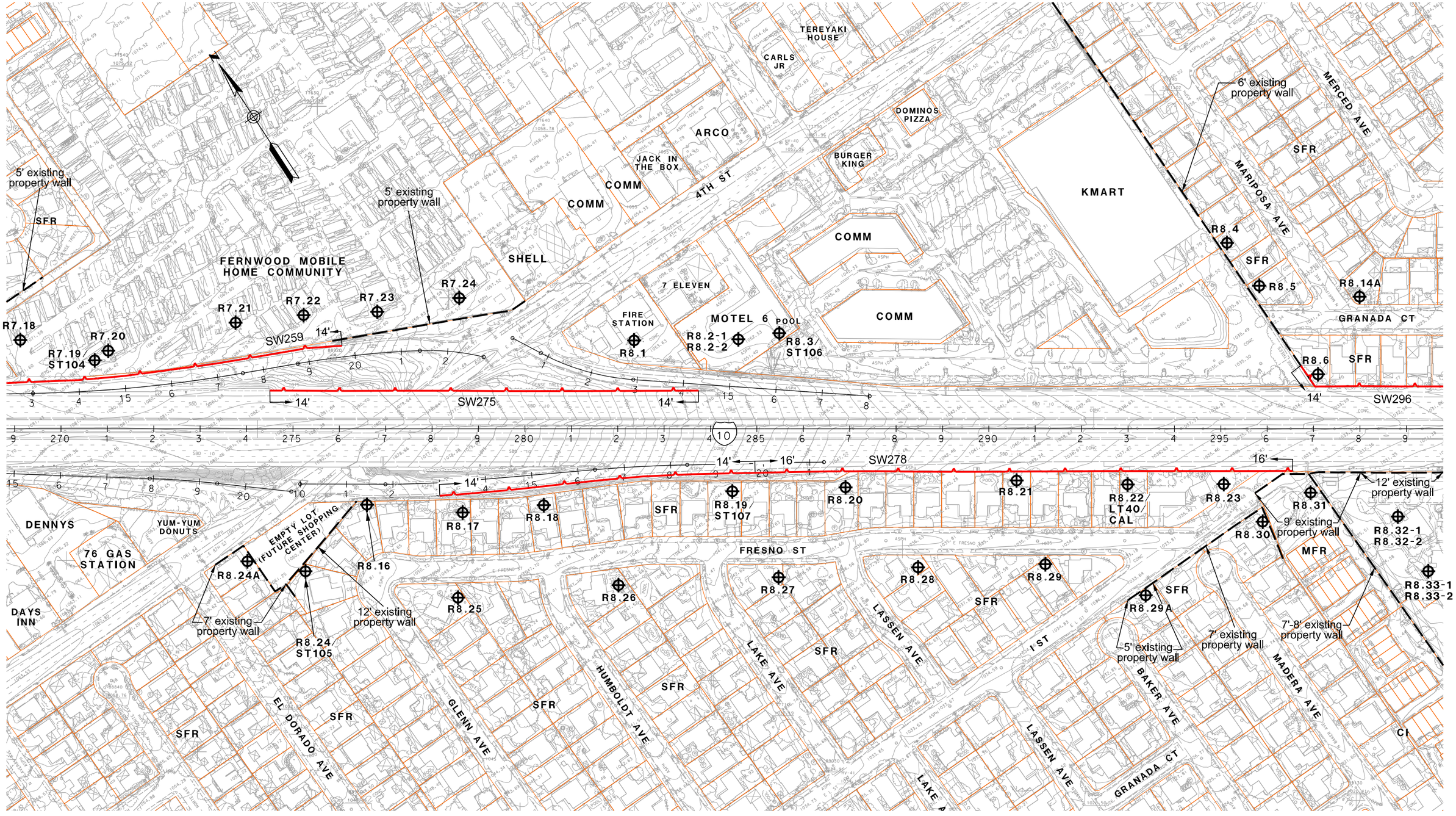
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 13



LEGEND

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- LT - LONG-TERM MEASUREMENT
- ST - SHORT-TERM MEASUREMENT

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- HXX - IN/OUTDOOR MEASUREMENT

- EXISTING PROPERTY WALL
- EXISTING SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

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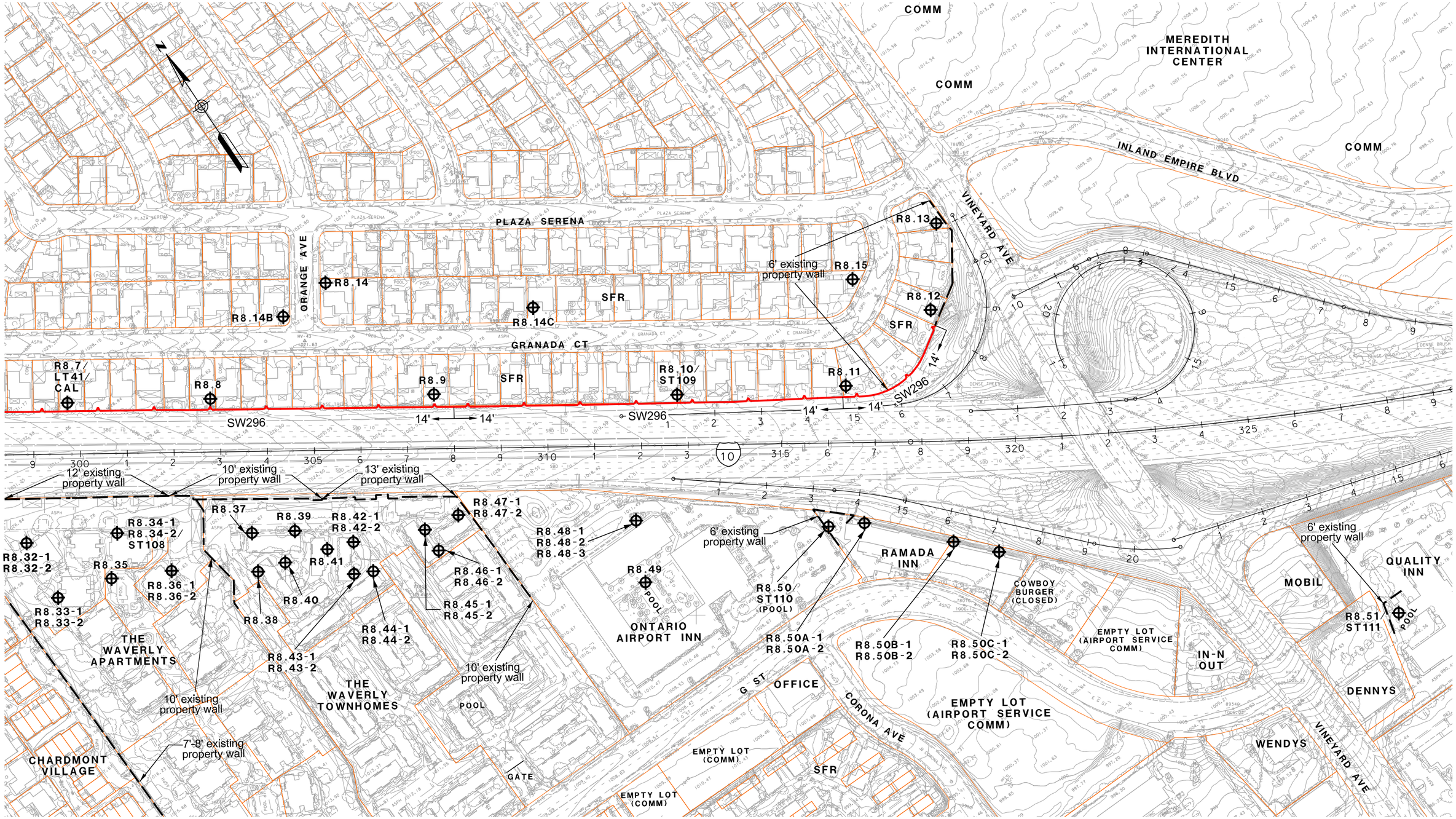
FIGURE 14



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I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

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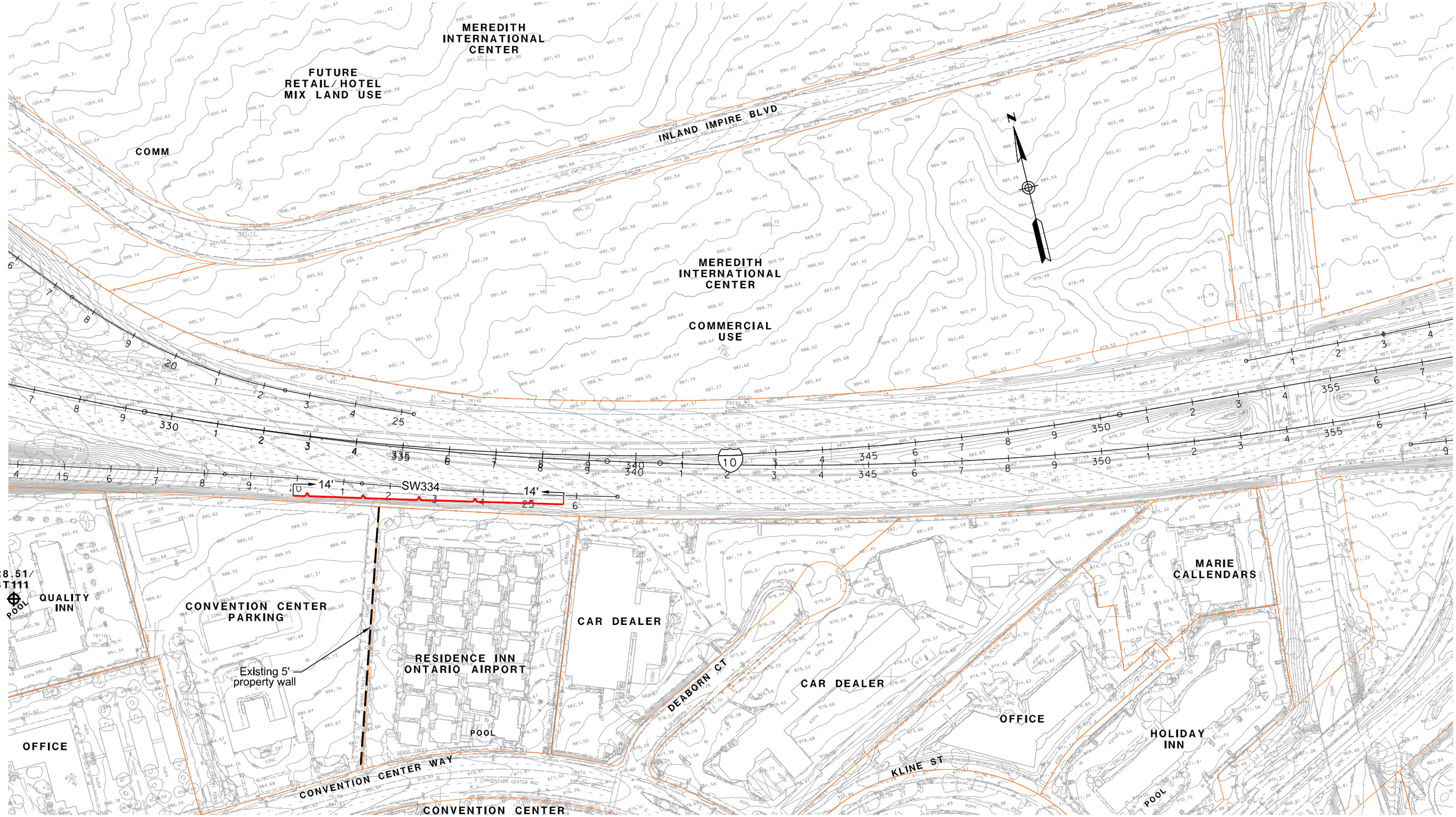
FIGURE 15



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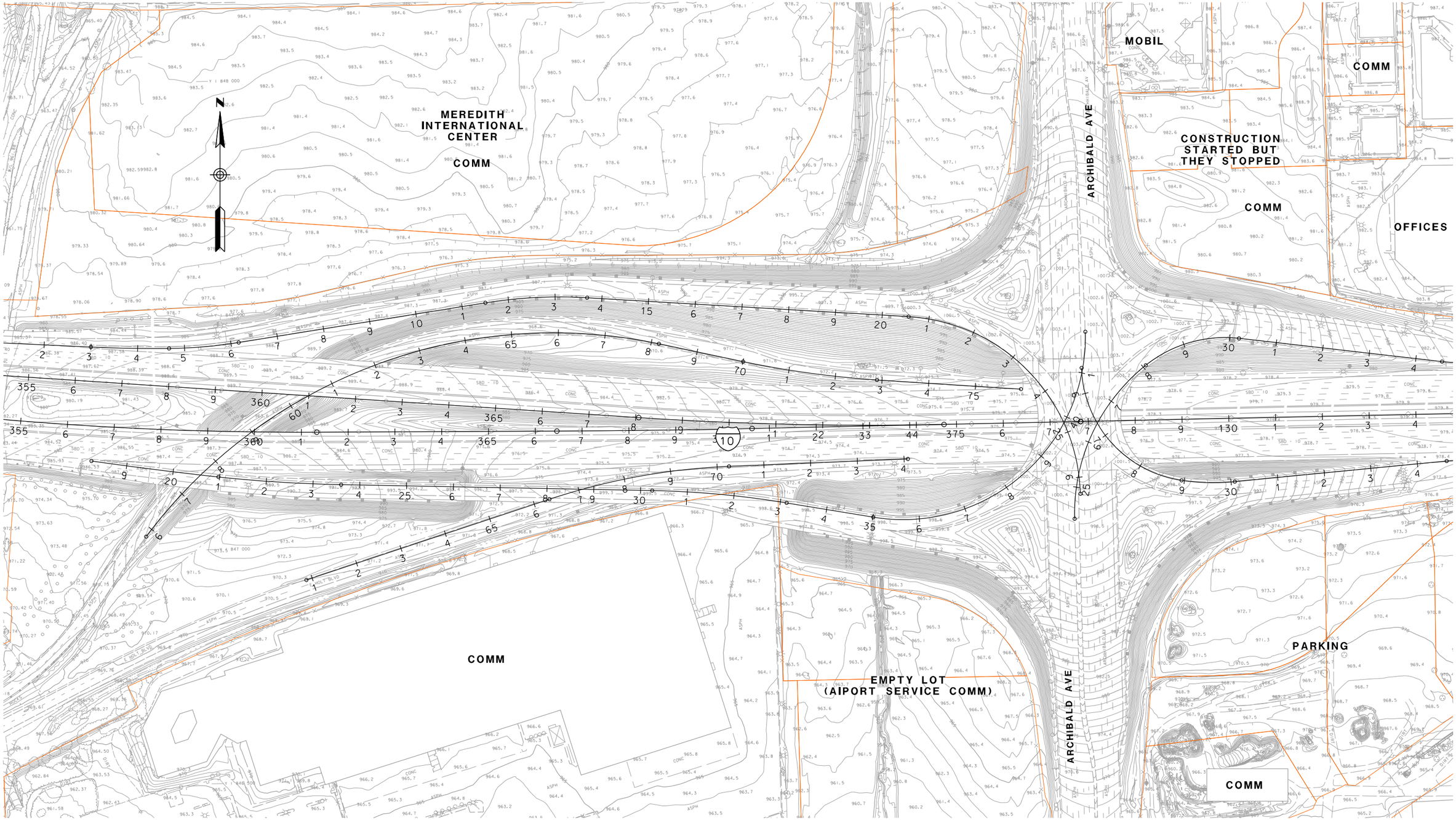
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 16



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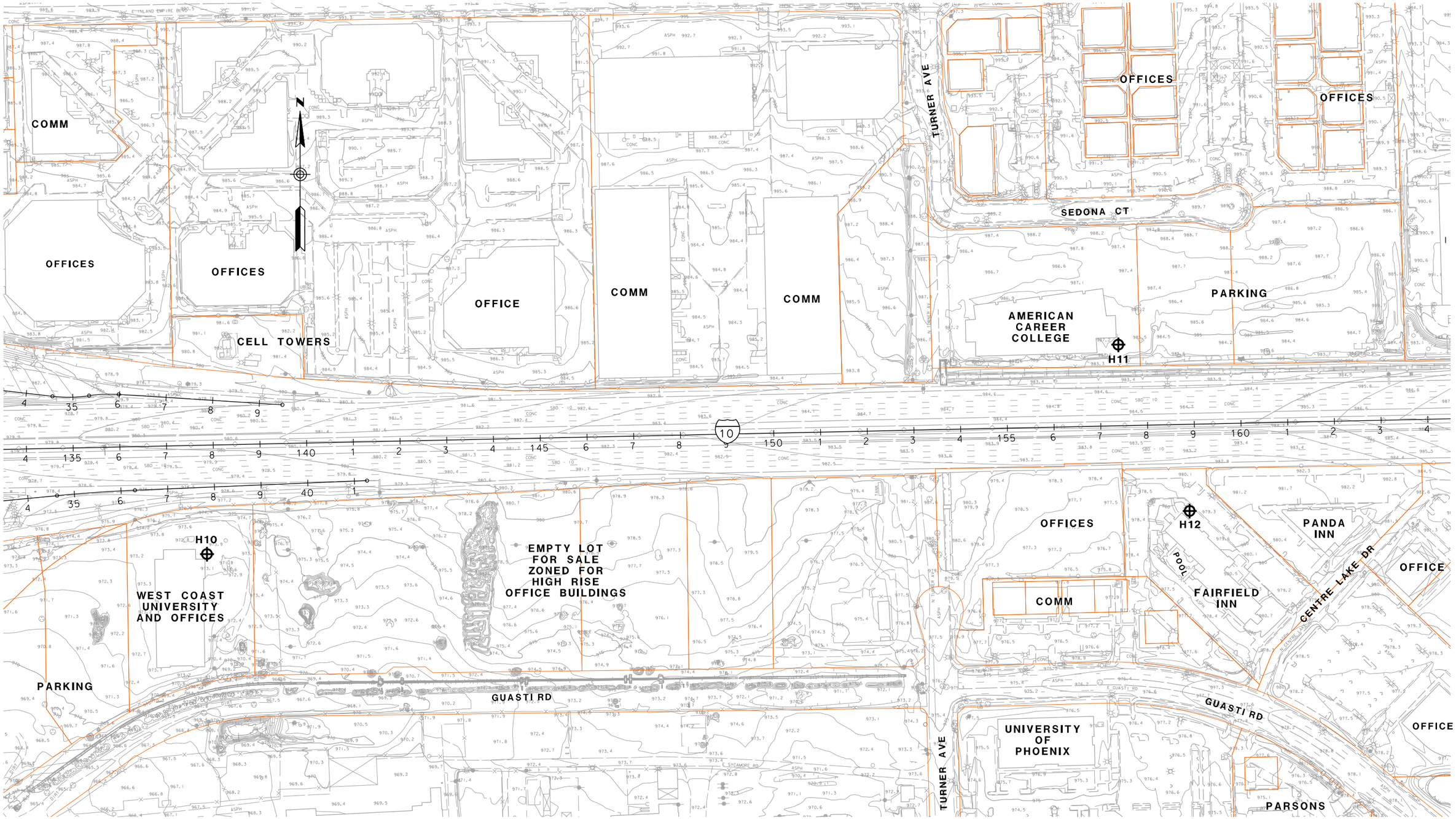
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 17



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I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

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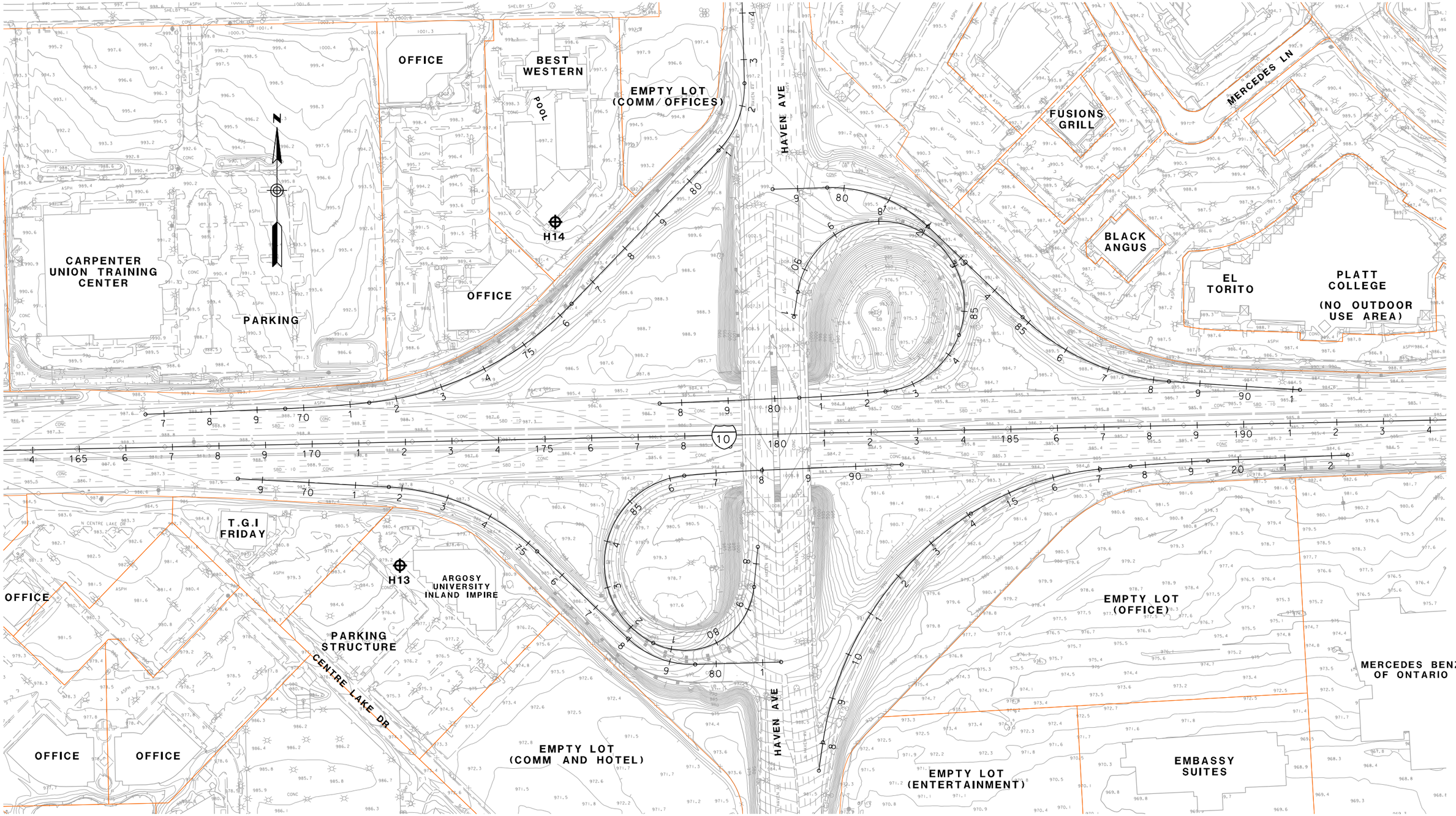
FIGURE 18



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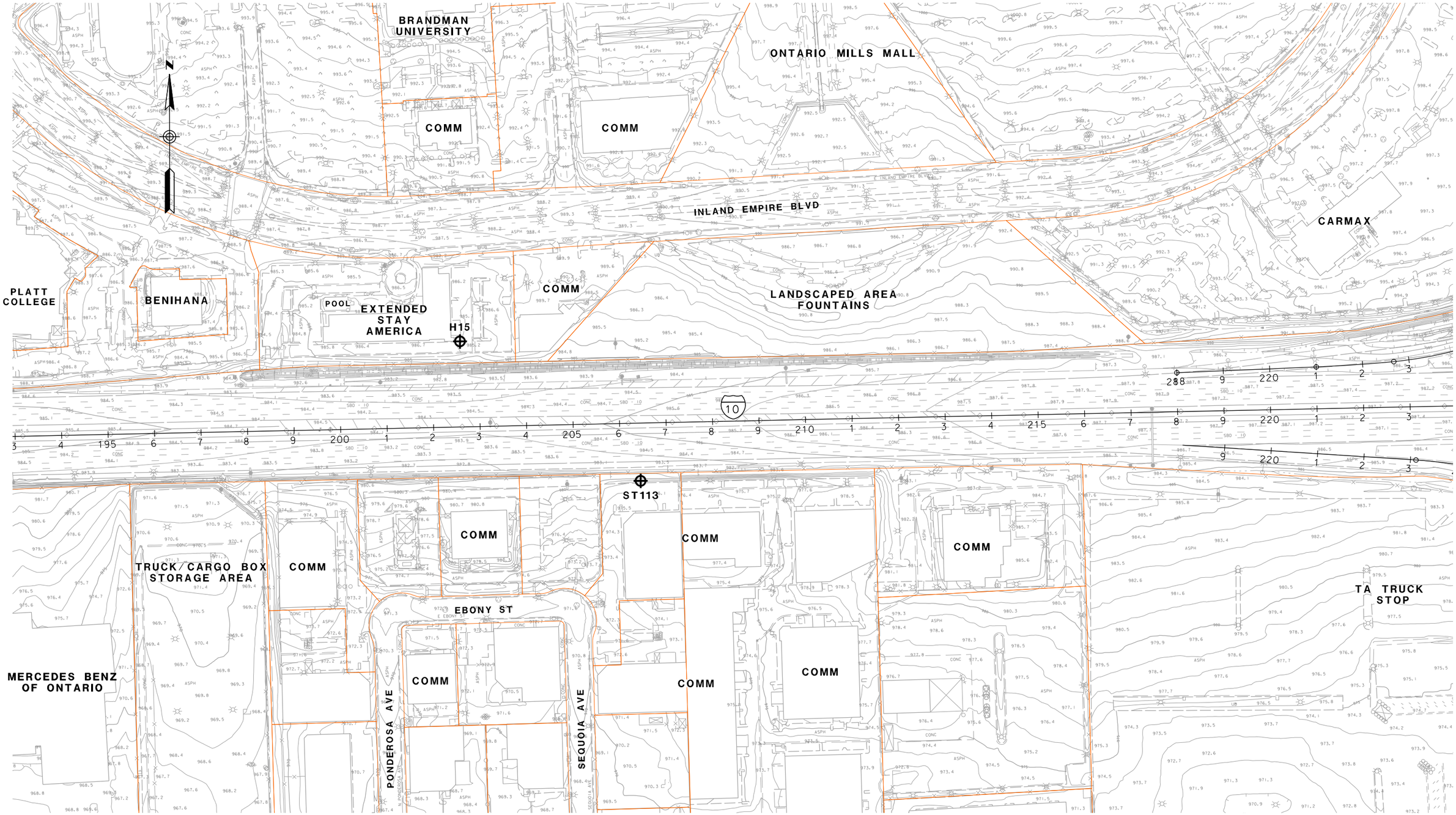
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 19



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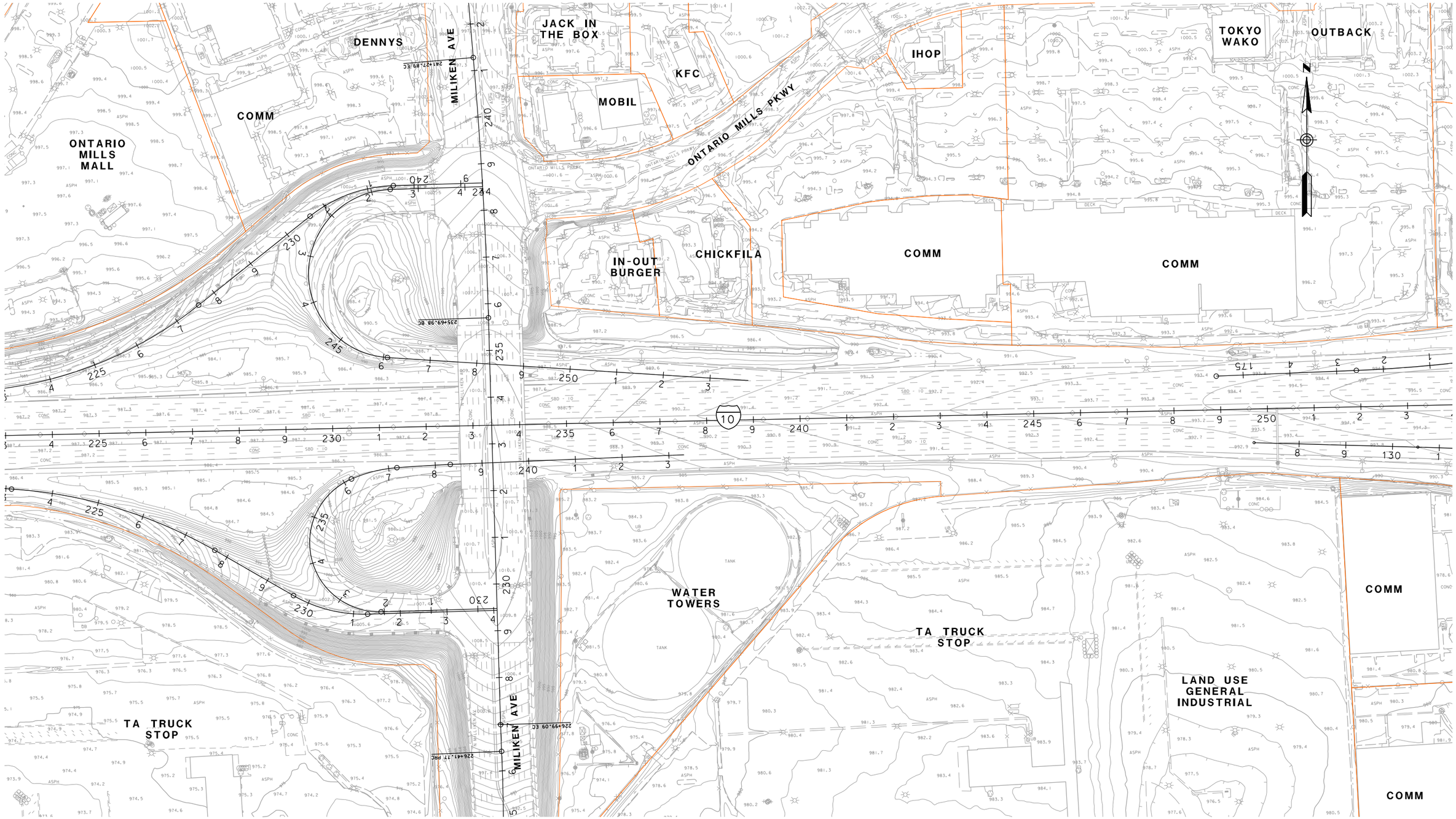
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 20



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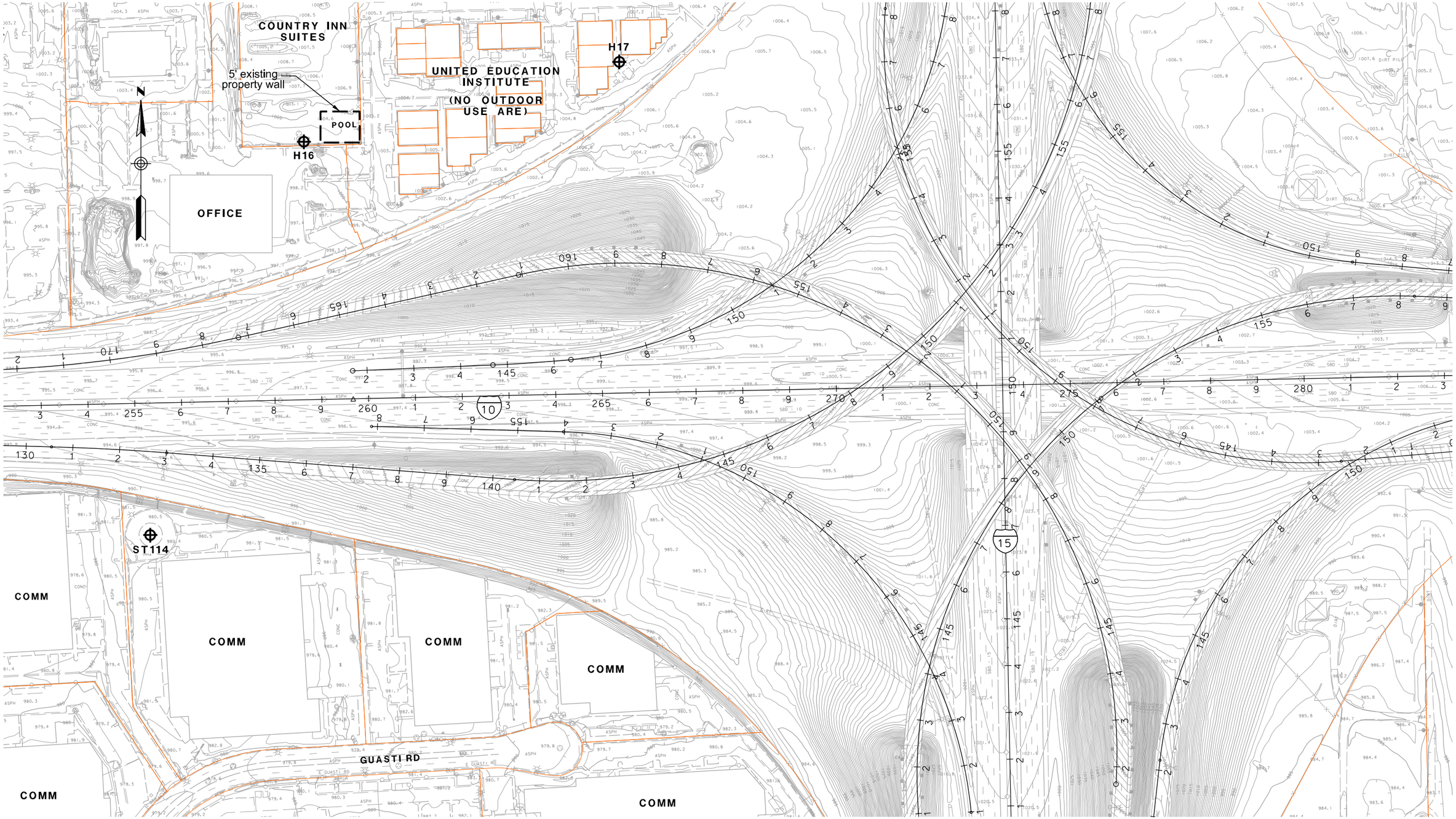
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 21



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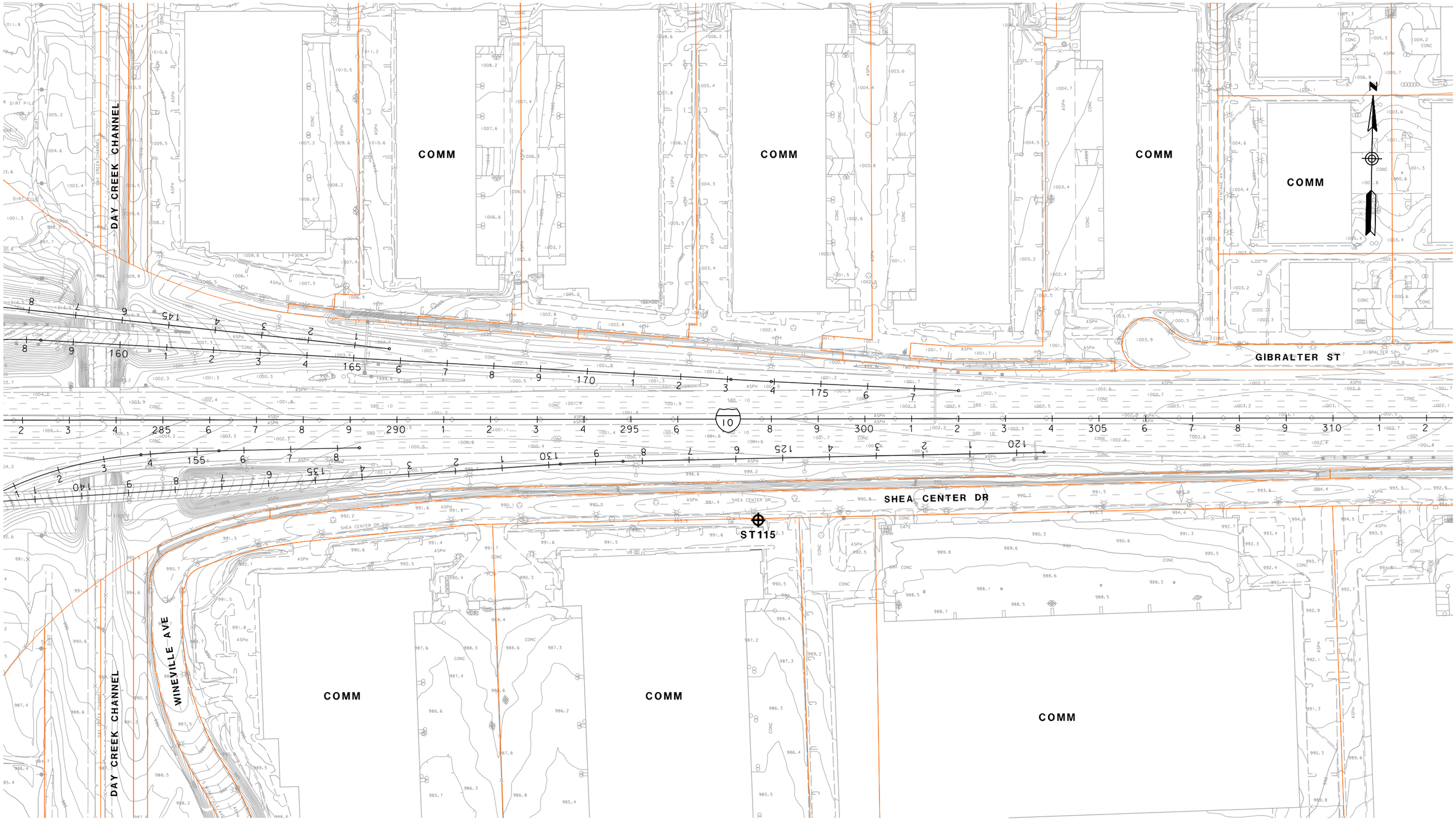
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 22



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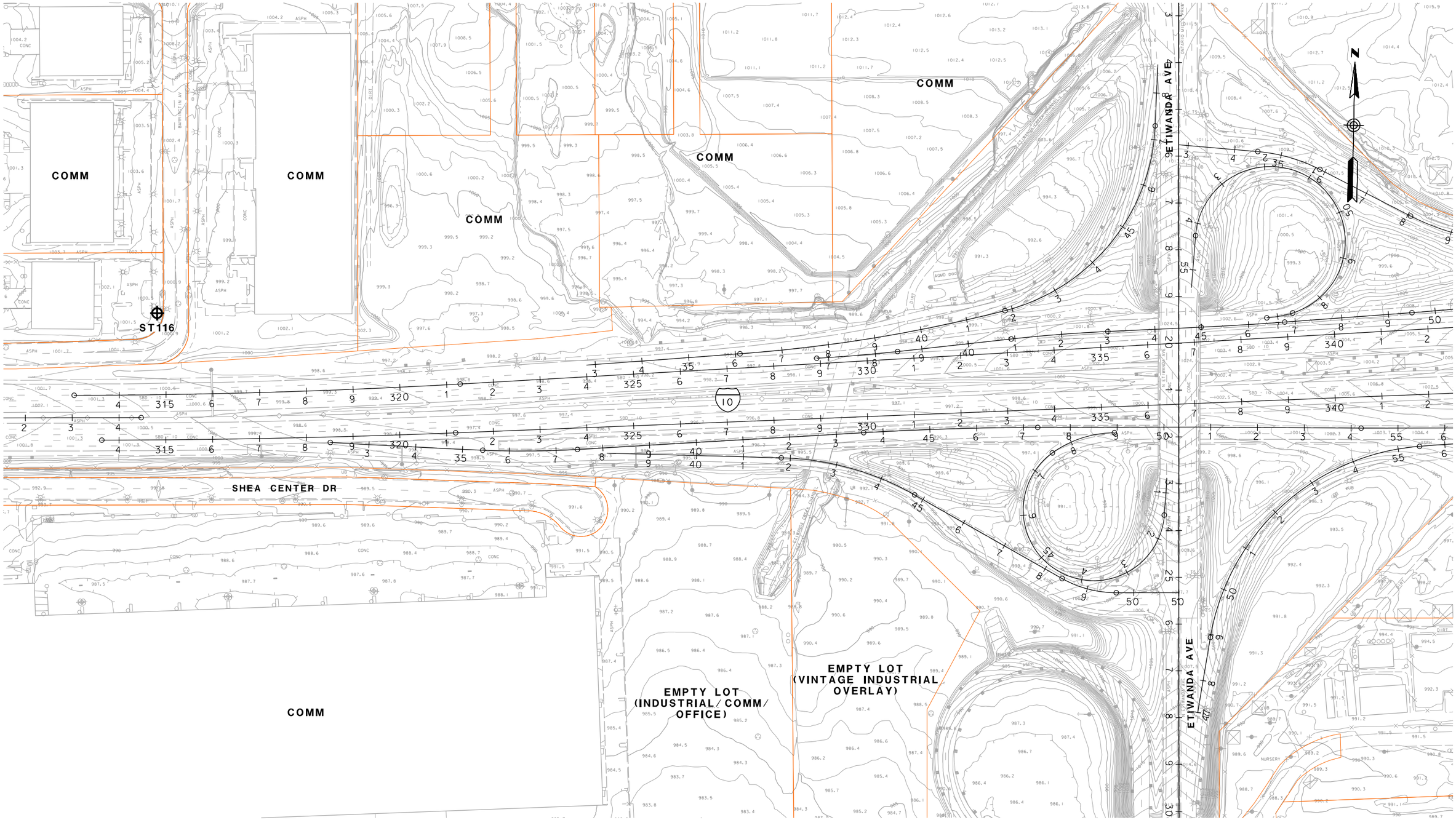
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 23



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1in : 200ft

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I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 24

COMM

COMM

COMM

VALLEY BLVD

ETIWANDA CHANNEL

PRAXAIR SERVICE INC

EMPTY LOT
(GENERAL INDUSTRIAL)

ETIWANDA CHANNEL

LEGEND

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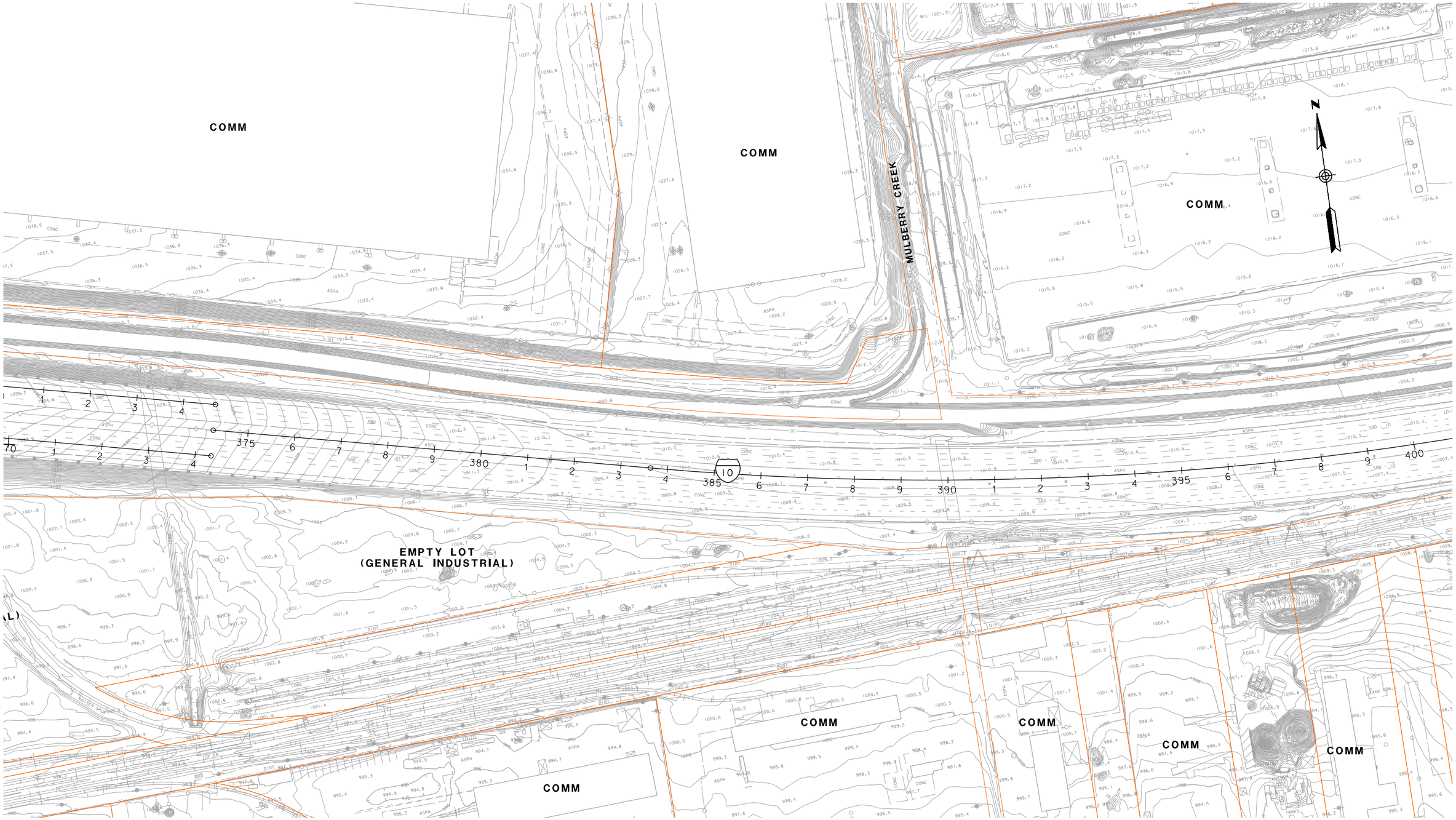
0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 25



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1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 26

LEGEND

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1in : 200ft

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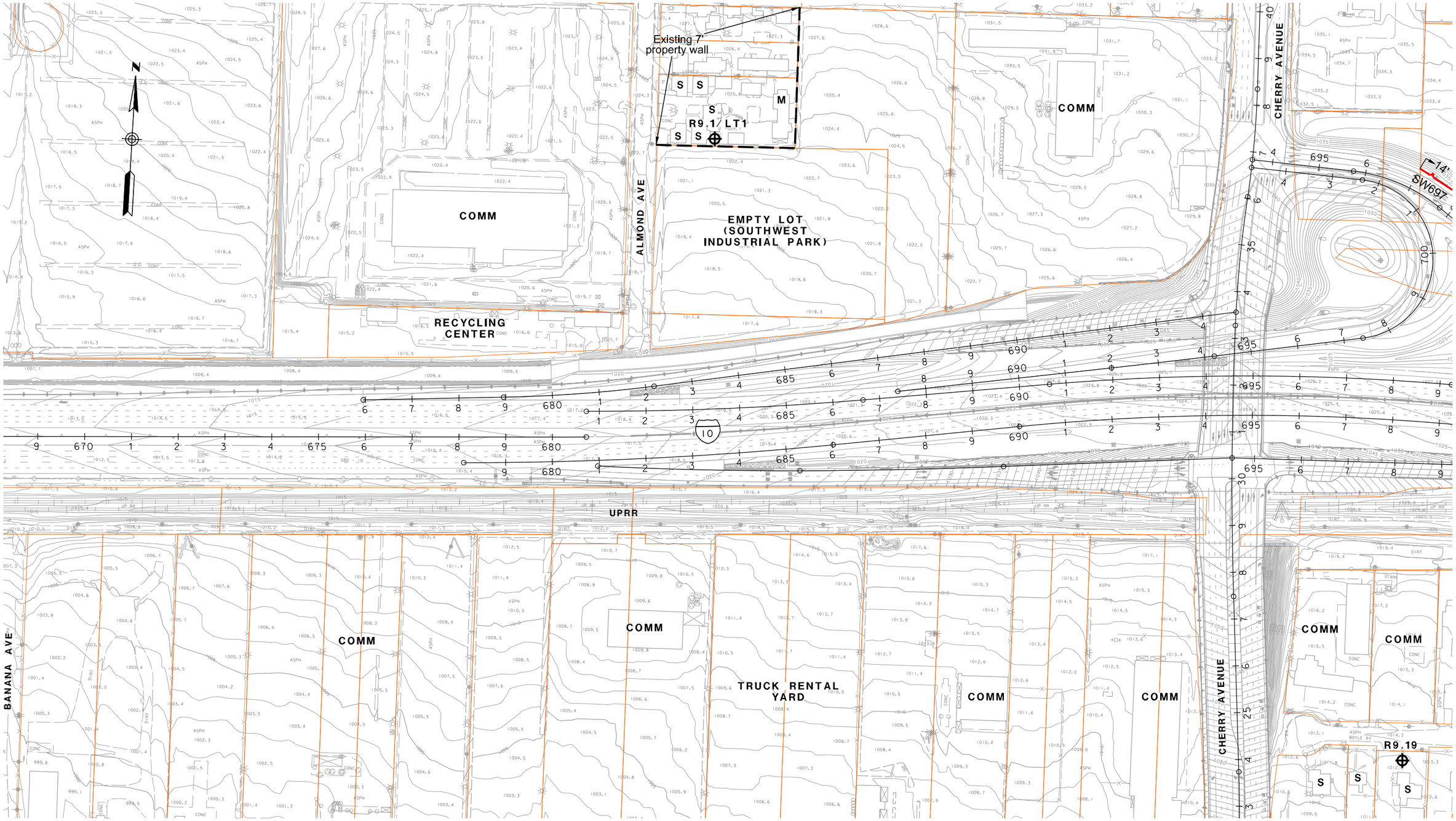
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 27



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1in : 200ft

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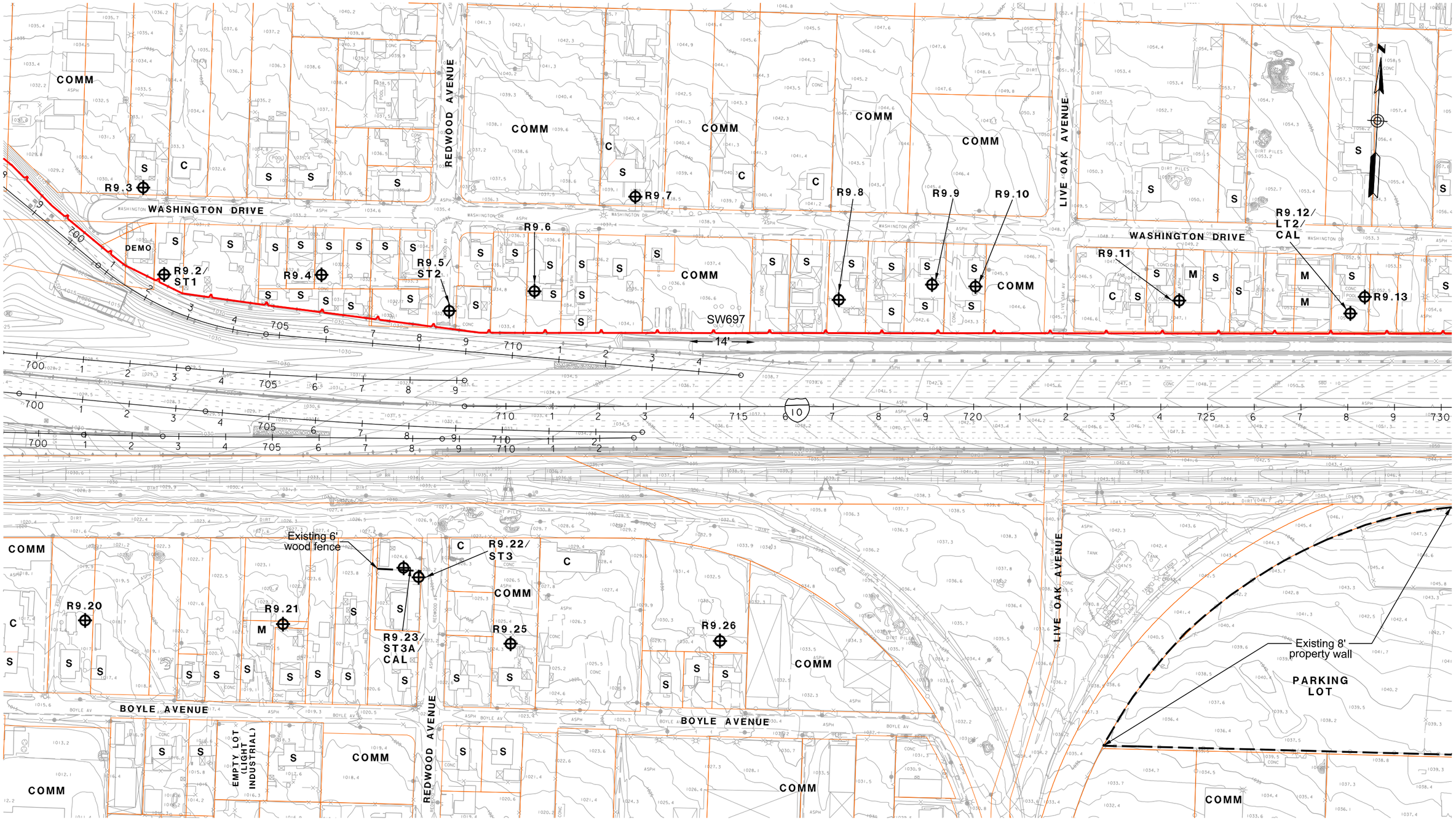
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 28



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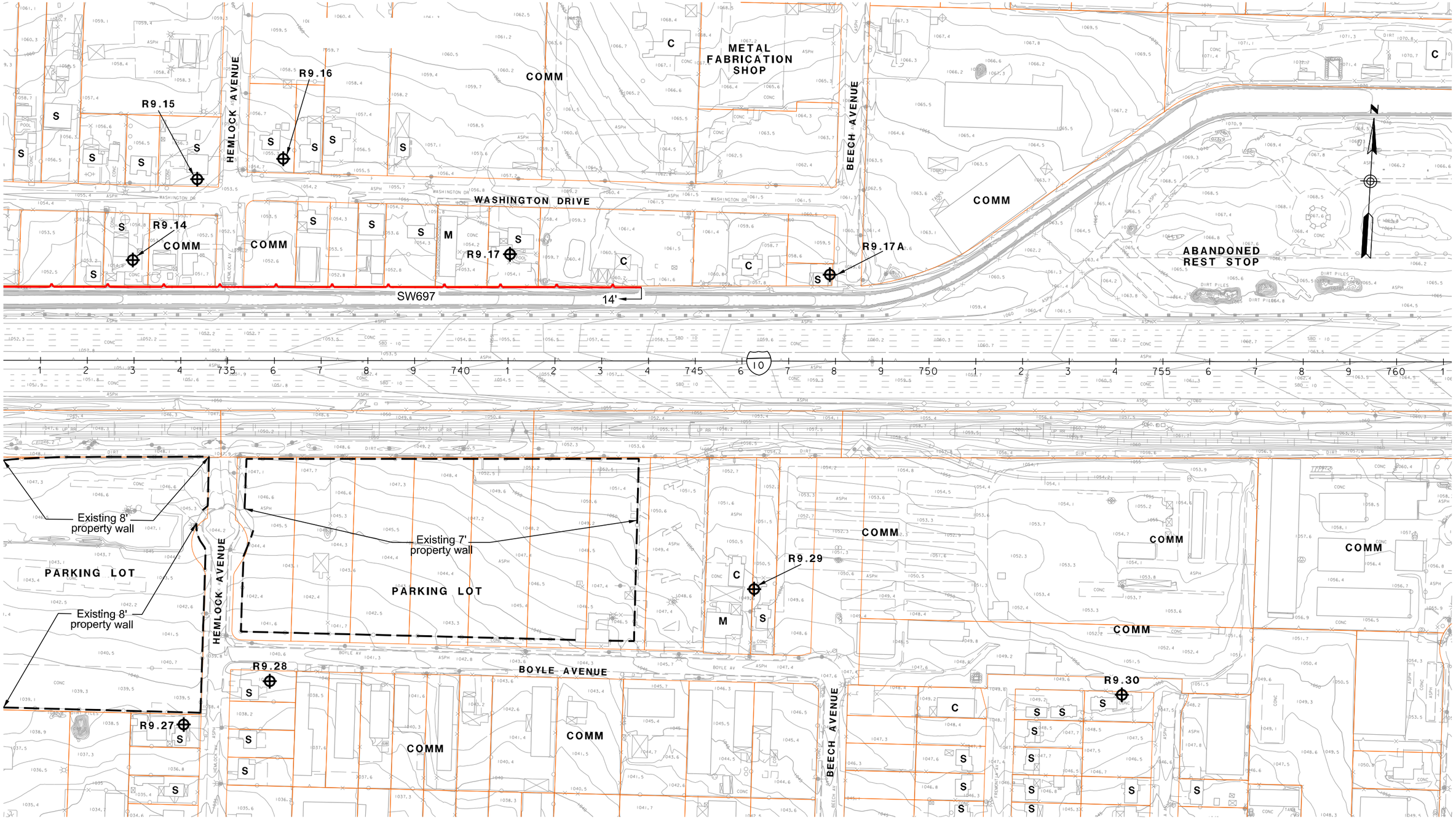
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 29



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I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

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FIGURE 30

ELM AVENUE
COMM
R9.17B
COMM
TRAILER RENTAL
POPLAR AVENUE
STORAGE
FUTURE DMV
COMM
FOR SALE (COMM)
CATAWBA AVENUE
SUNRISE FORD
R9.18
N
765
770
775
780
785
790
10
COMM
R9.31 / ST4
R9.32
S
C
Existing 7' property wall
R9.35 / LT3
R9.36
Existing 7' property wall
R9.37
Existing 7' property wall
BOYLE AVENUE
POPLAR AVENUE
COMM
Existing 8' property wall
R9.33
MH
Existing 5' property wall
R9.34
CATAWBA AVENUE

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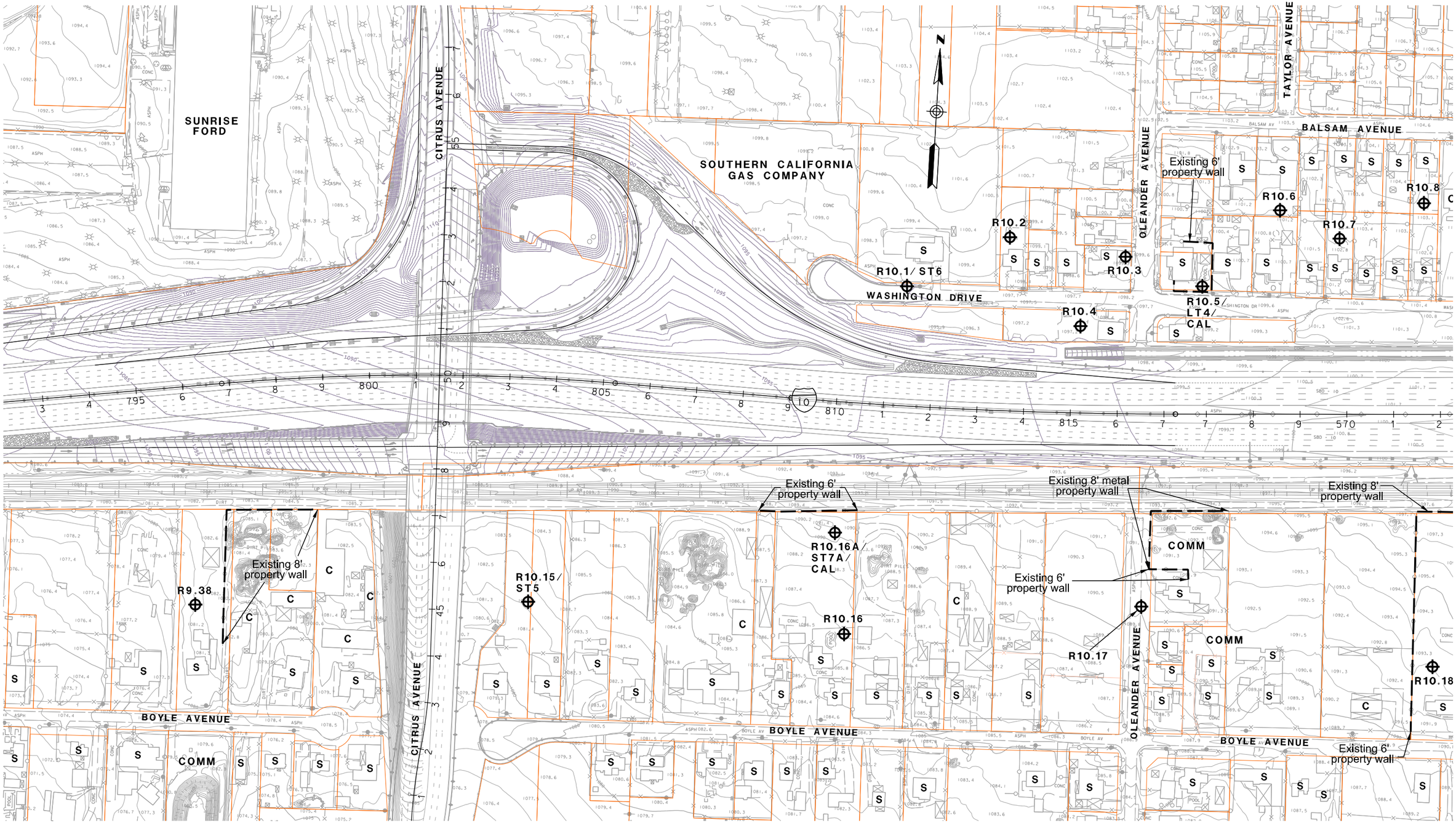
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 31



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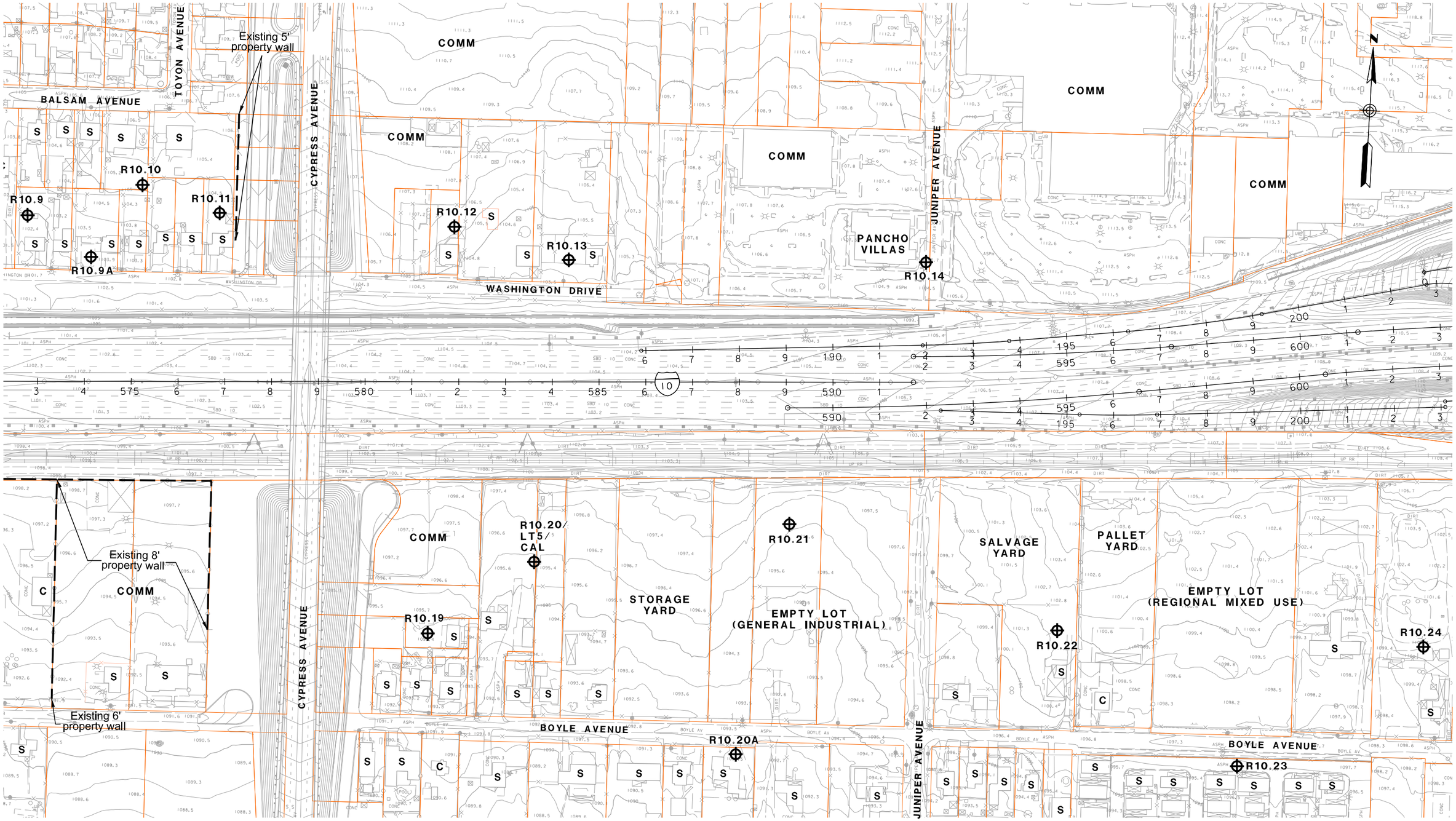
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 32



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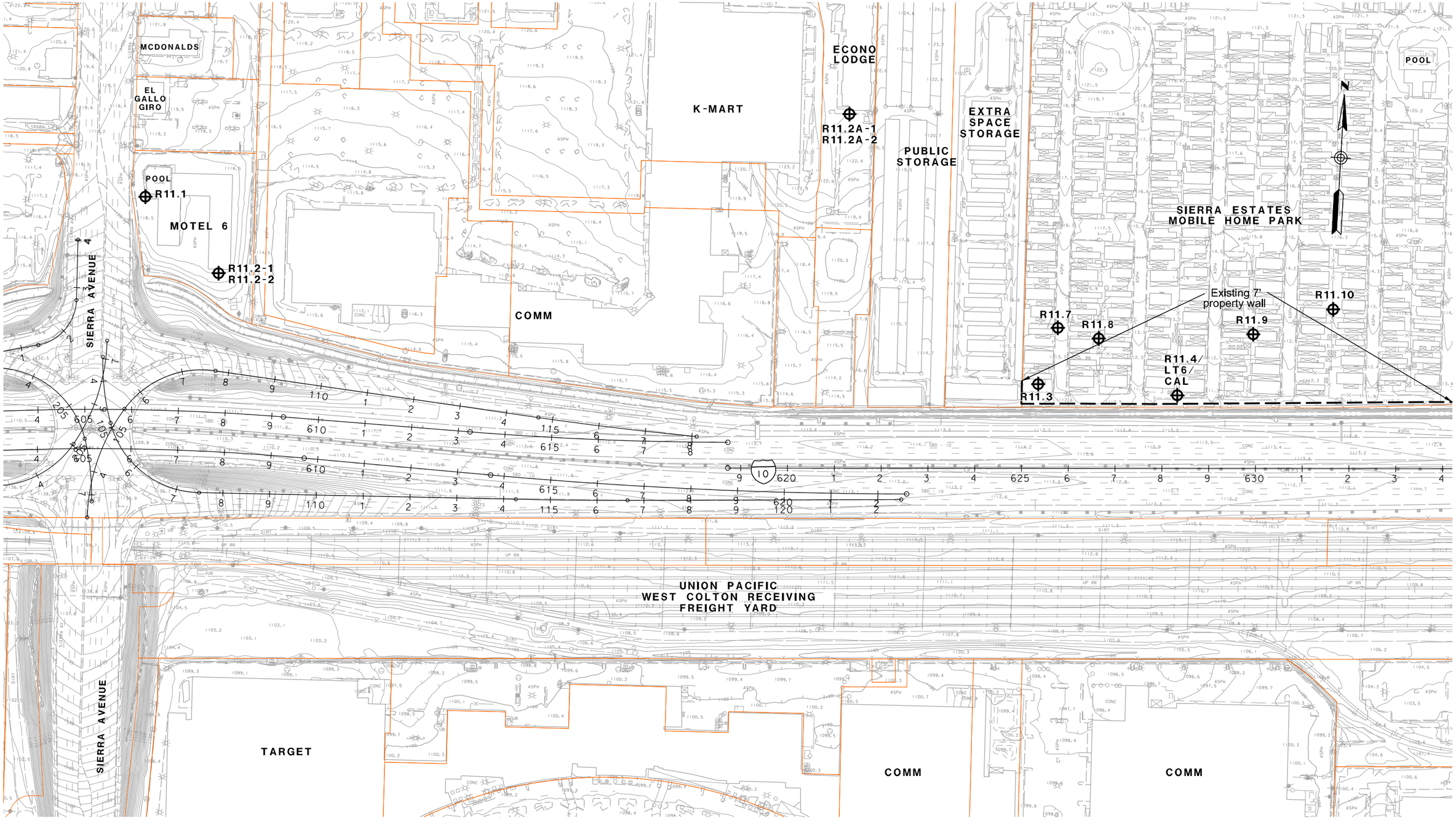
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 33



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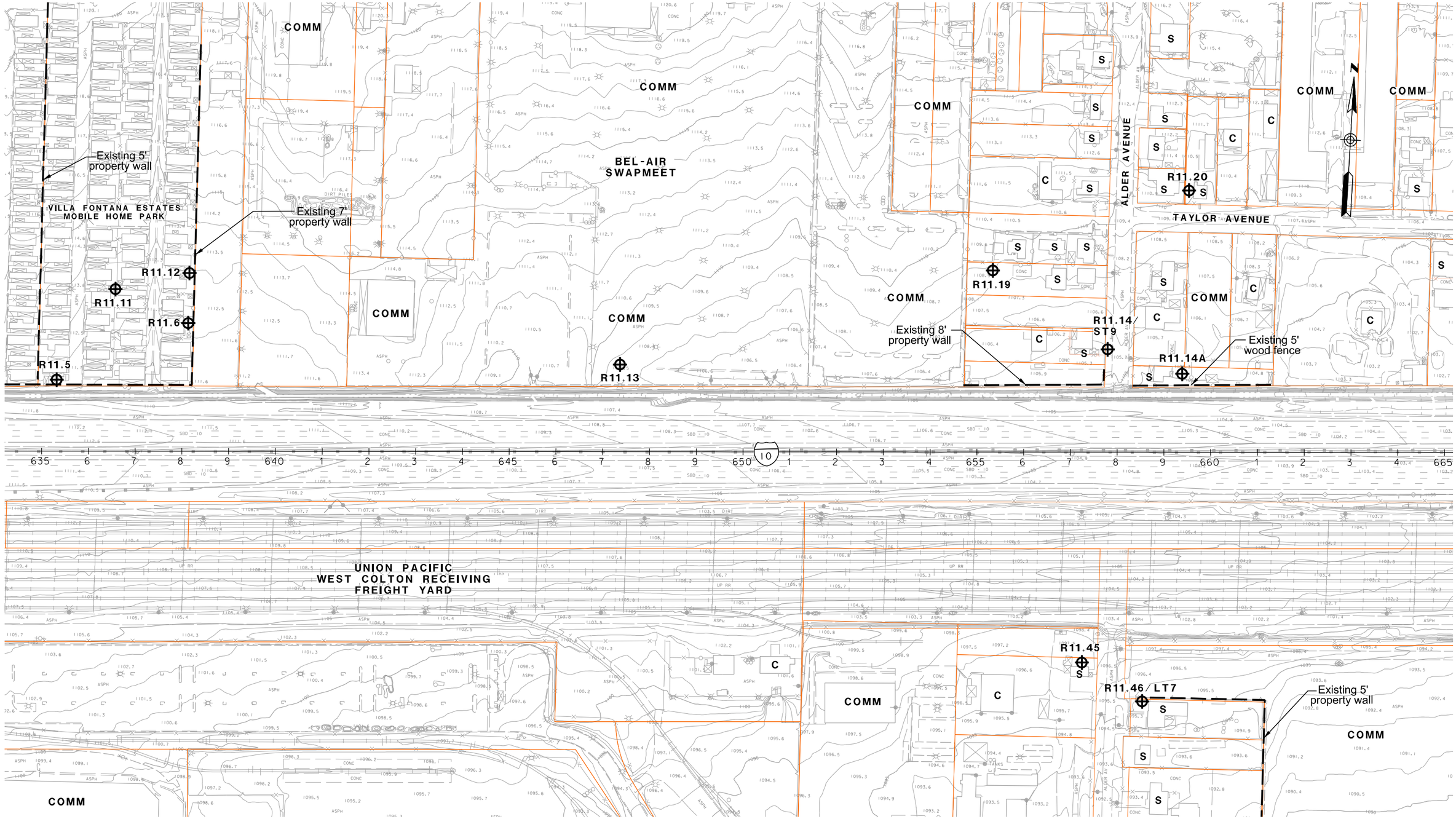
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 34



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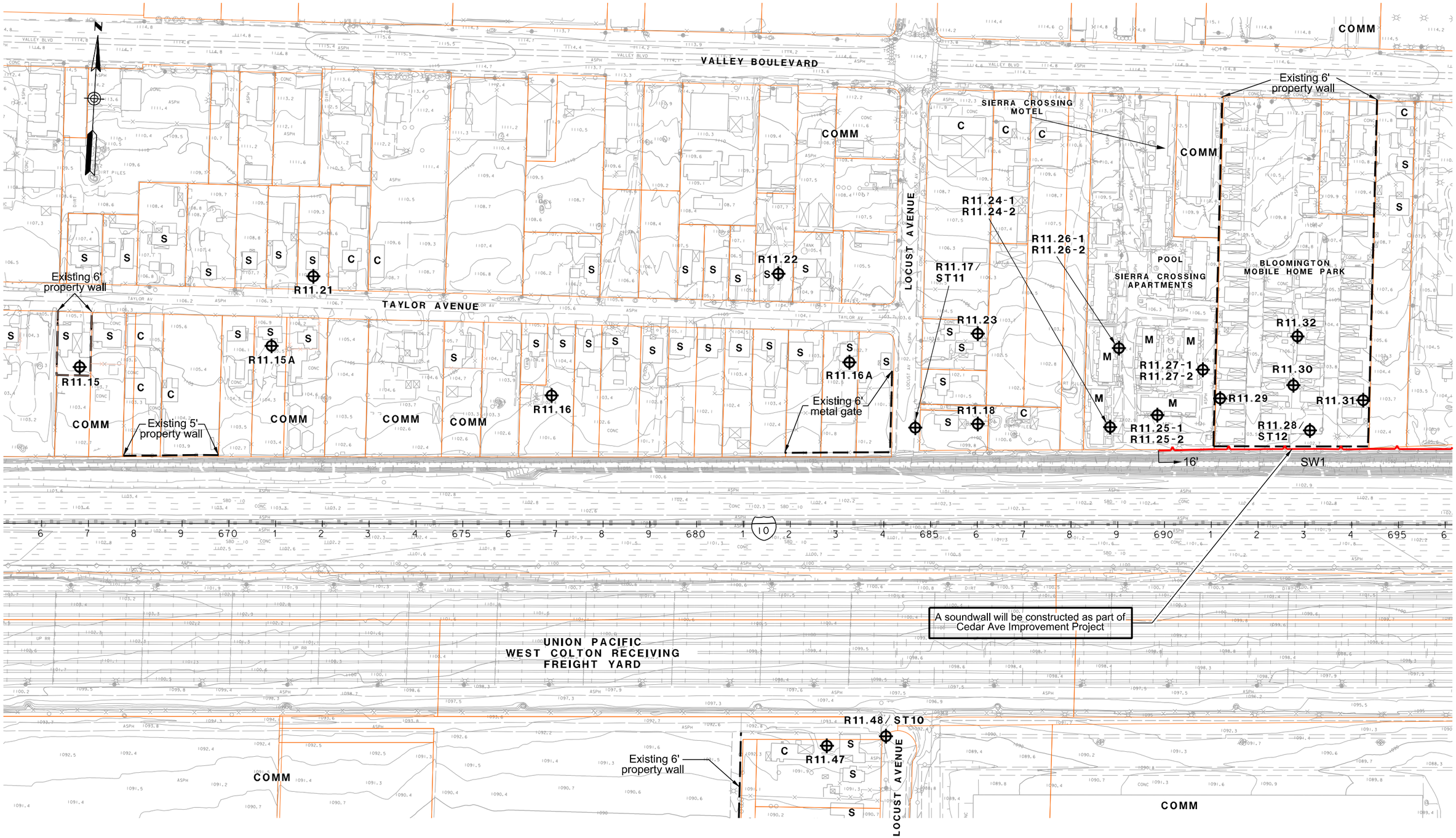
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 35



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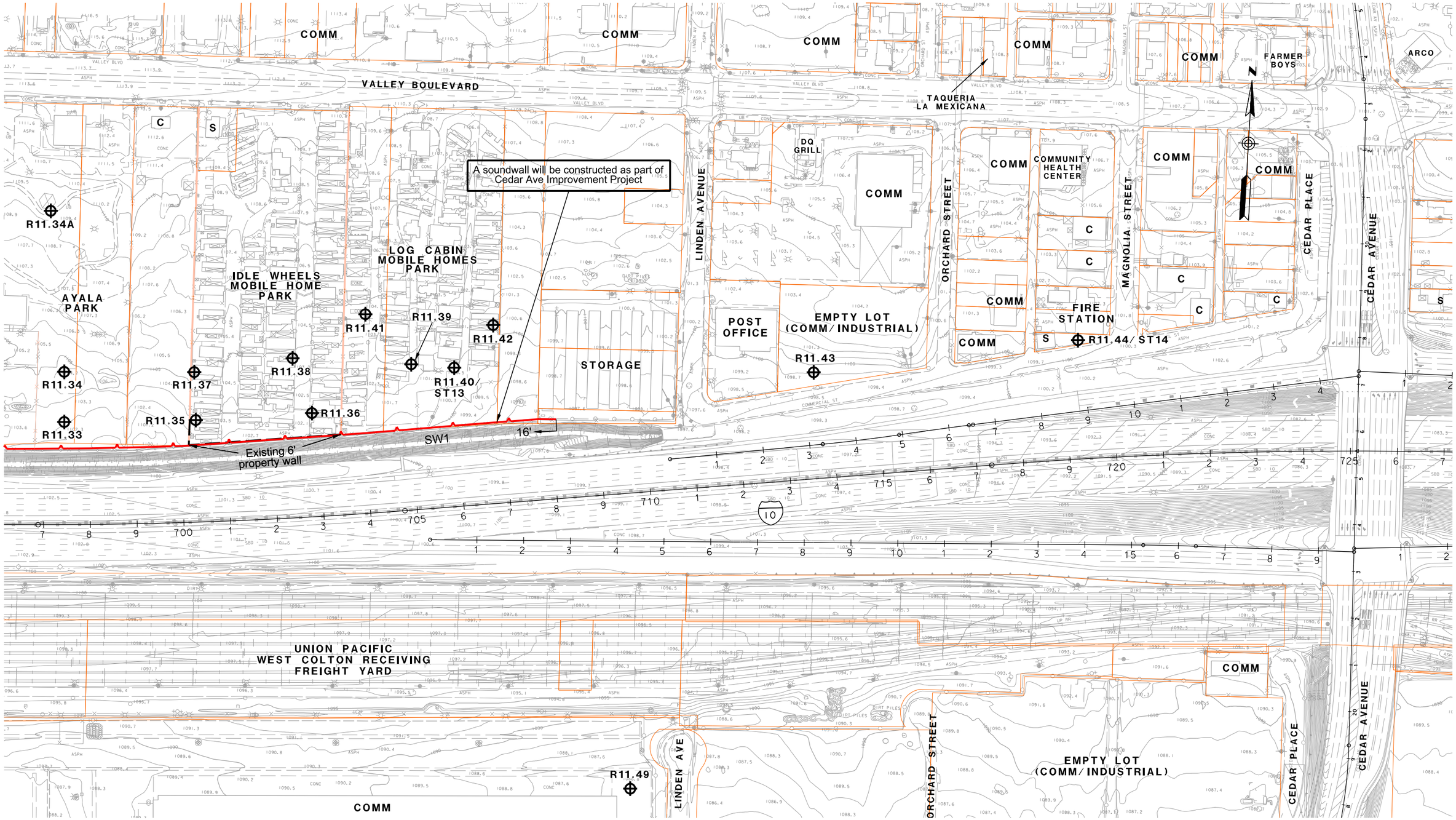
I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 36



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- EXISTING PROPERTY WALL
- EXISTING SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

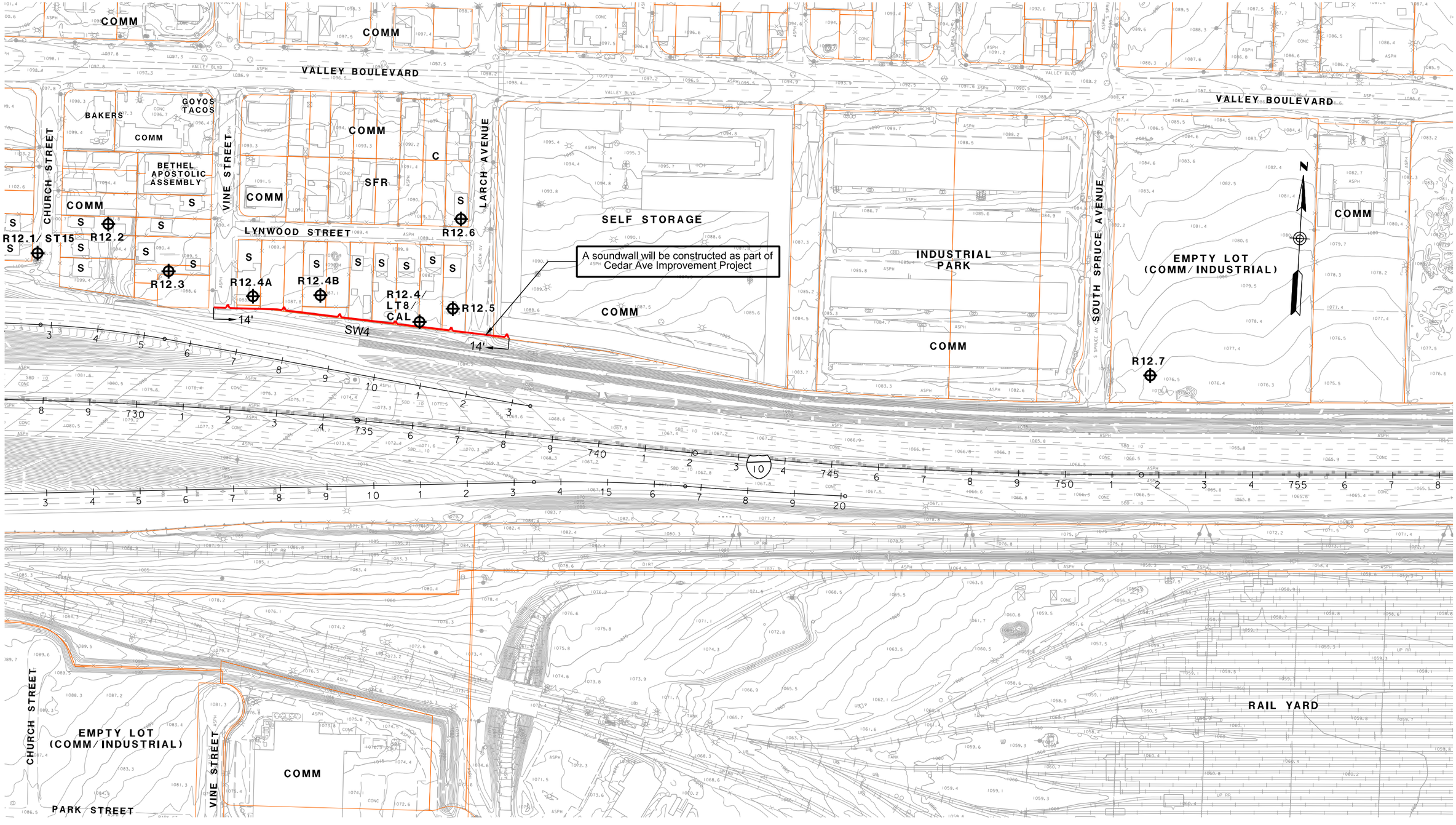
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 37



LEGEND

- RXX - RECEIVER SITE
- CAL - CALIBRATION SITE
- LT - LONG-TERM MEASUREMENT
- ST - SHORT-TERM MEASUREMENT

- SFR OR S - SINGLE FAMILY RESIDENCE
- MFR OR M - MULTI-FAMILY RESIDENCE
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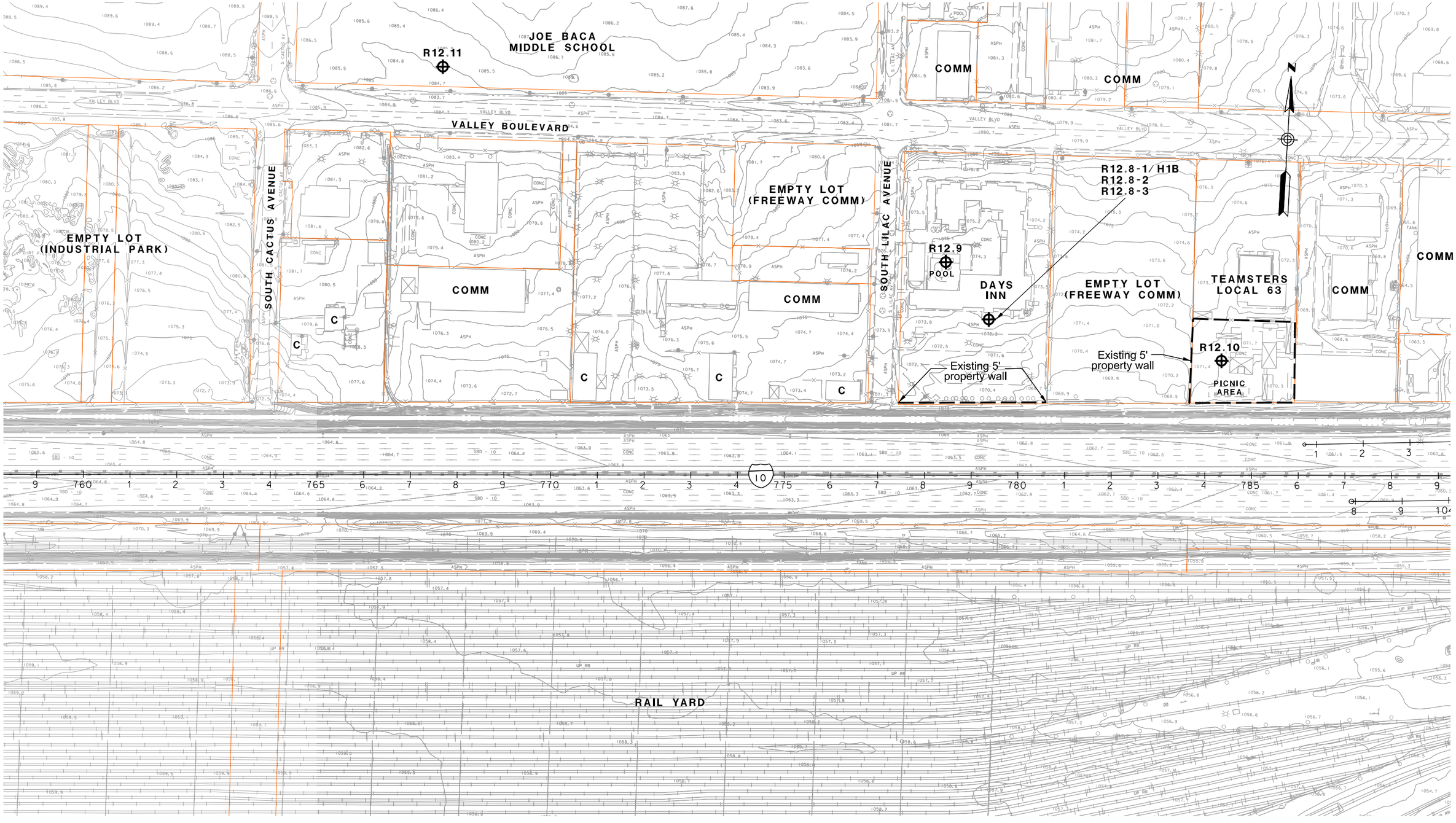
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 38



LEGEND

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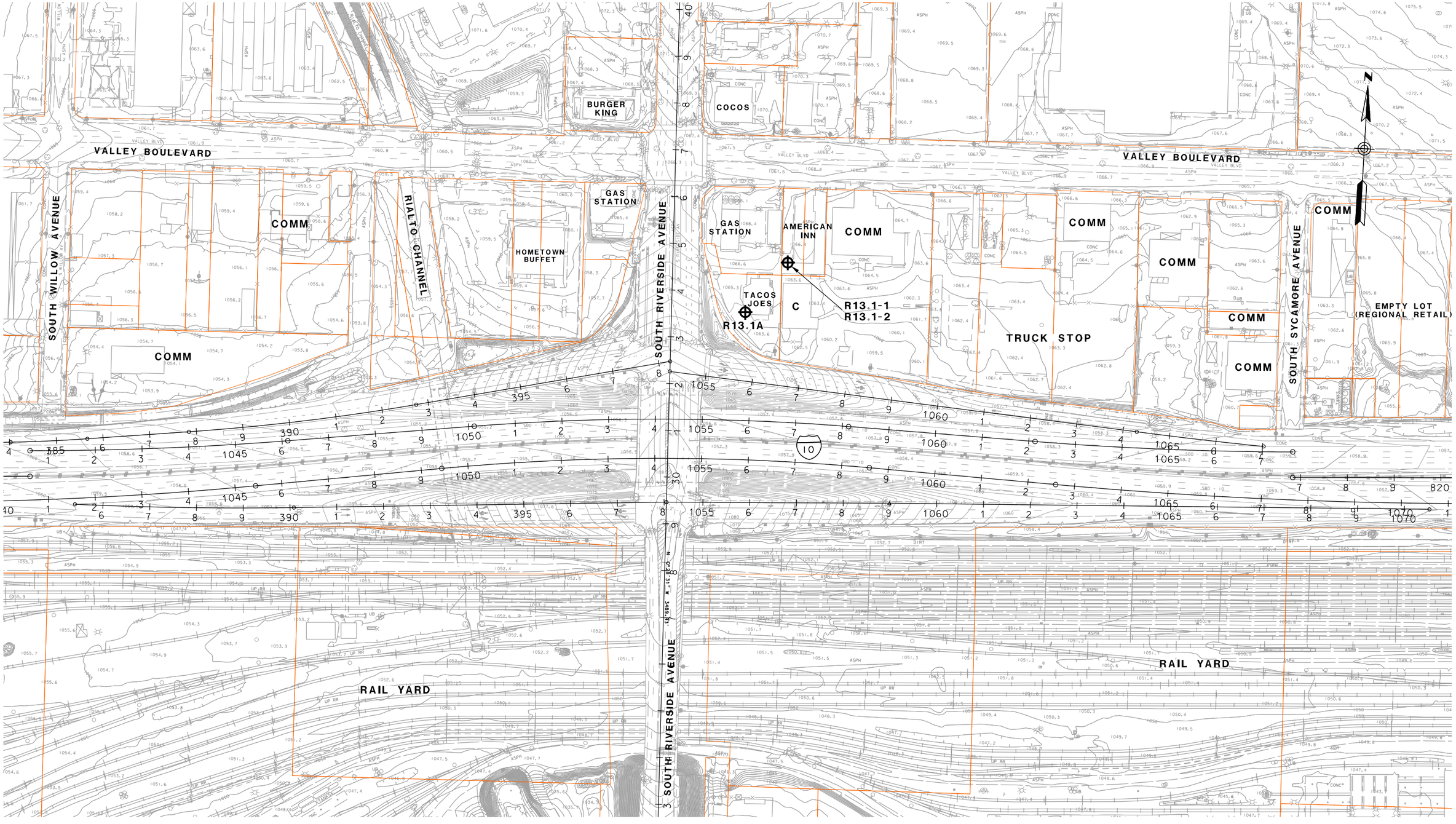
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 39



LEGEND

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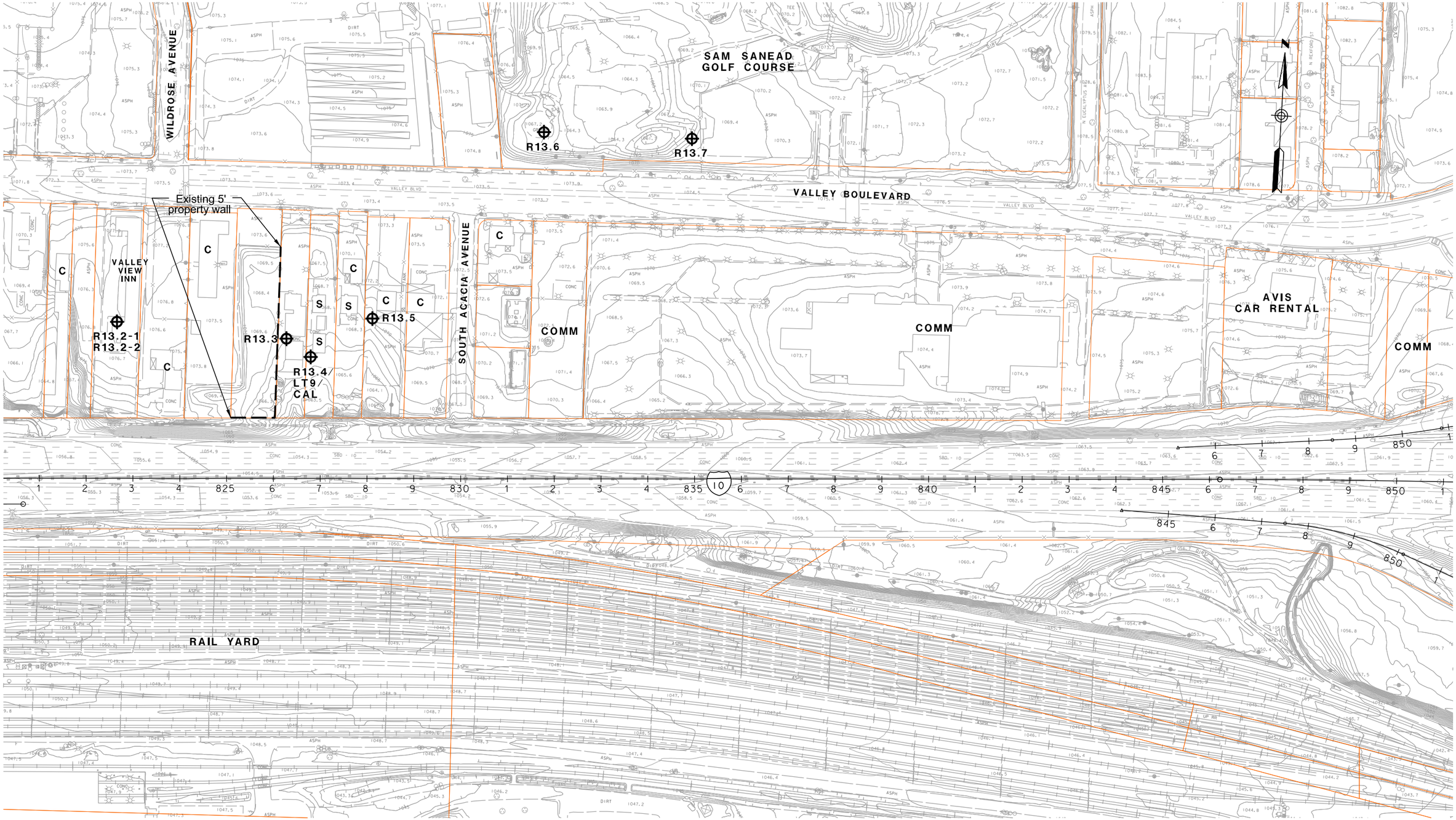
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 40



LEGEND

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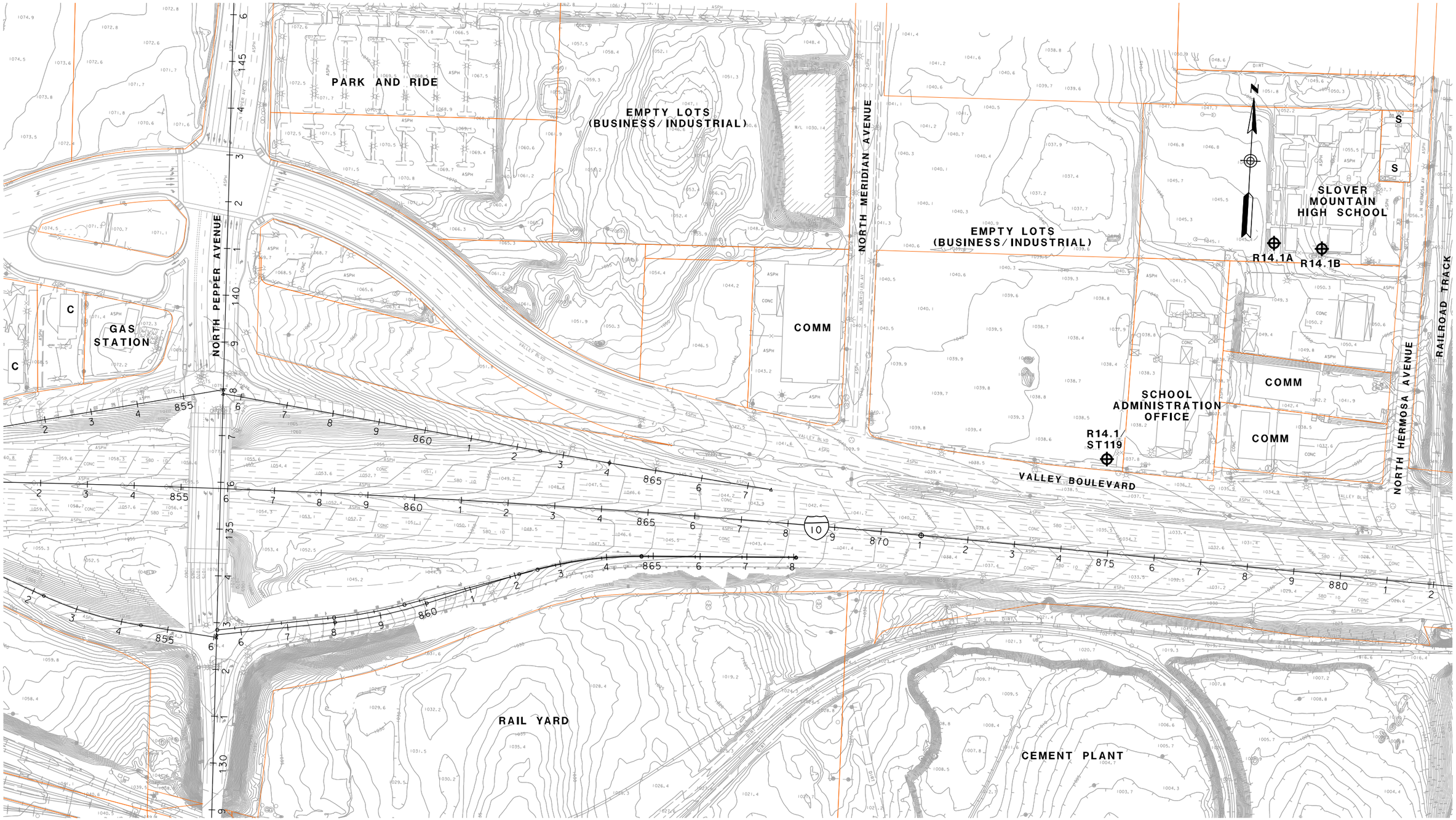
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 41



LEGEND

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- CAL - CALIBRATION SITE
- LT - LONG-TERM MEASUREMENT
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1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 42

LEGEND

- RXX - RECEIVER SITE
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- RETAINING WALL
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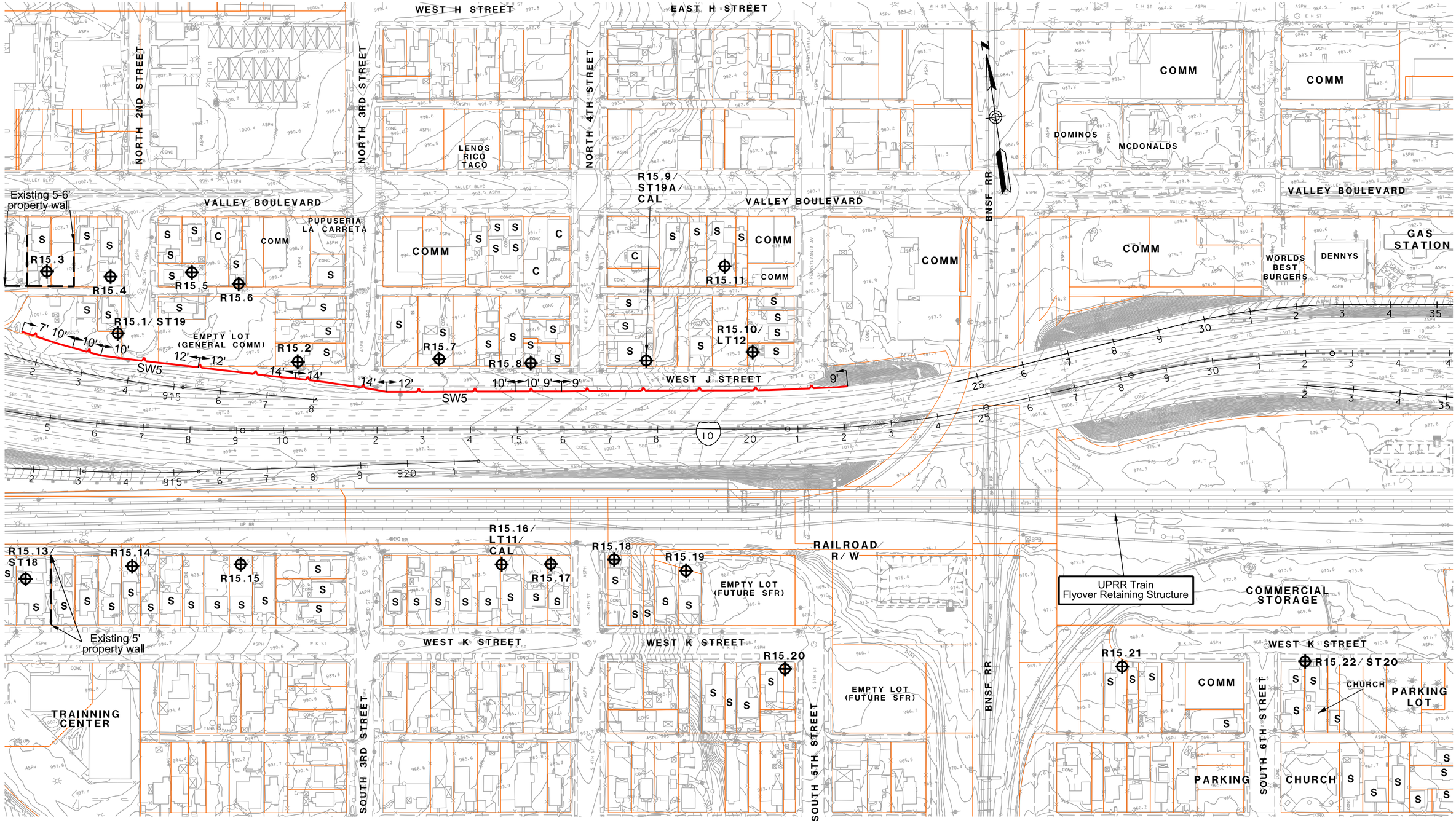
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 43



LEGEND

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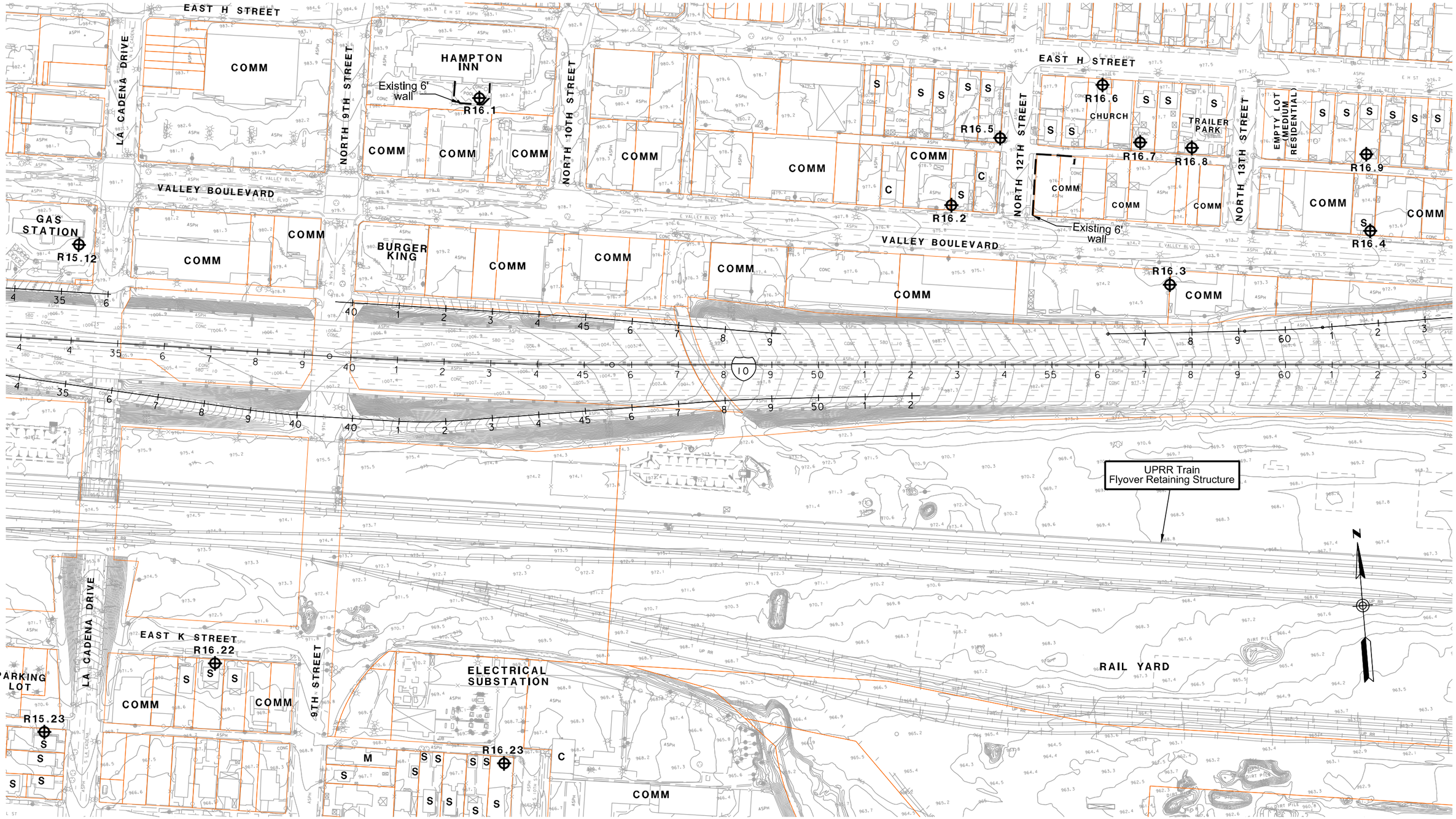
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 44



LEGEND

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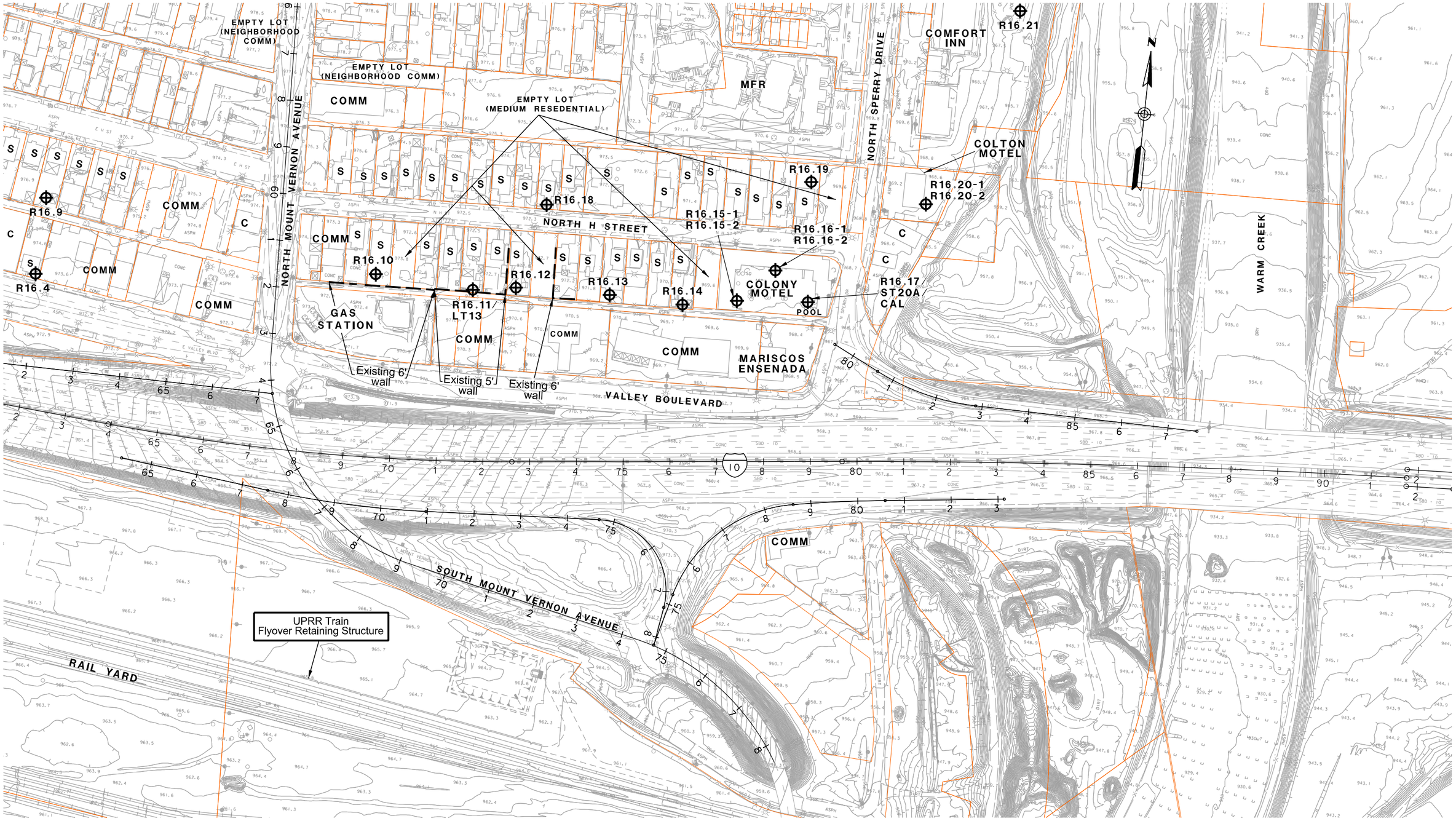
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 45



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- RETAINING WALL
- SAFETY BARRIER

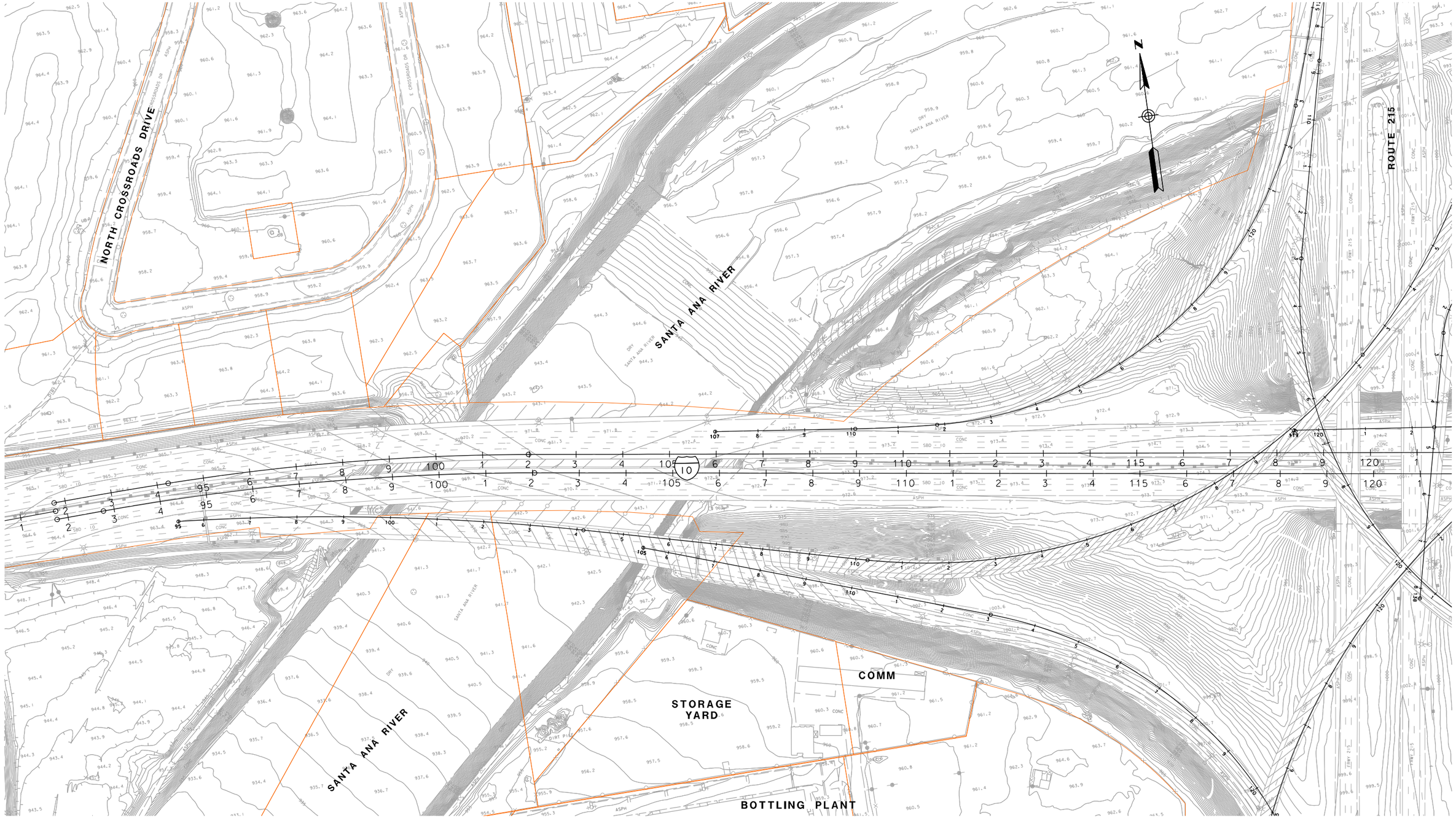
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 46



LEGEND

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- RETAINING WALL
- SAFETY BARRIER

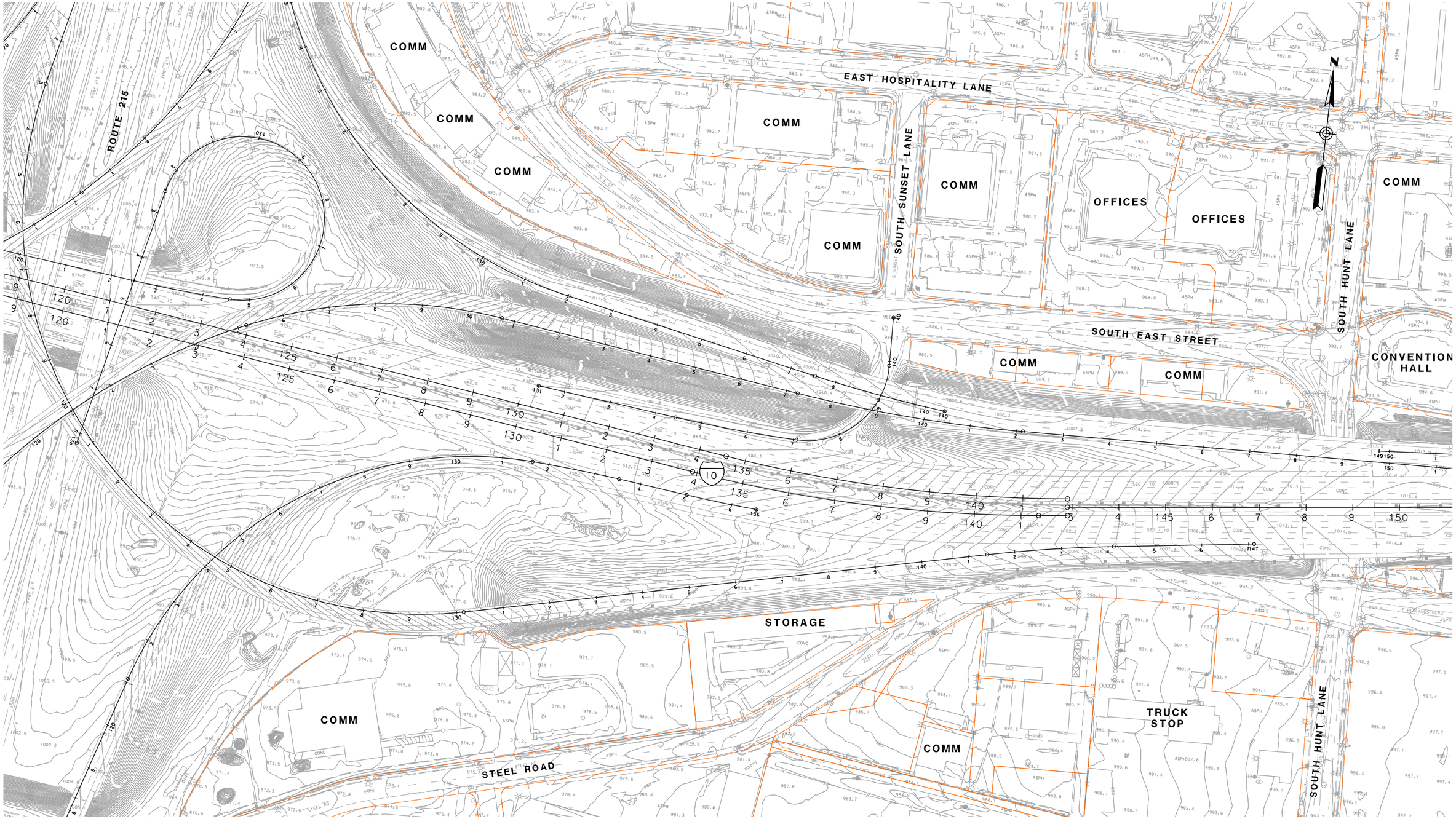
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 47



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- RETAINING WALL
- SAFETY BARRIER

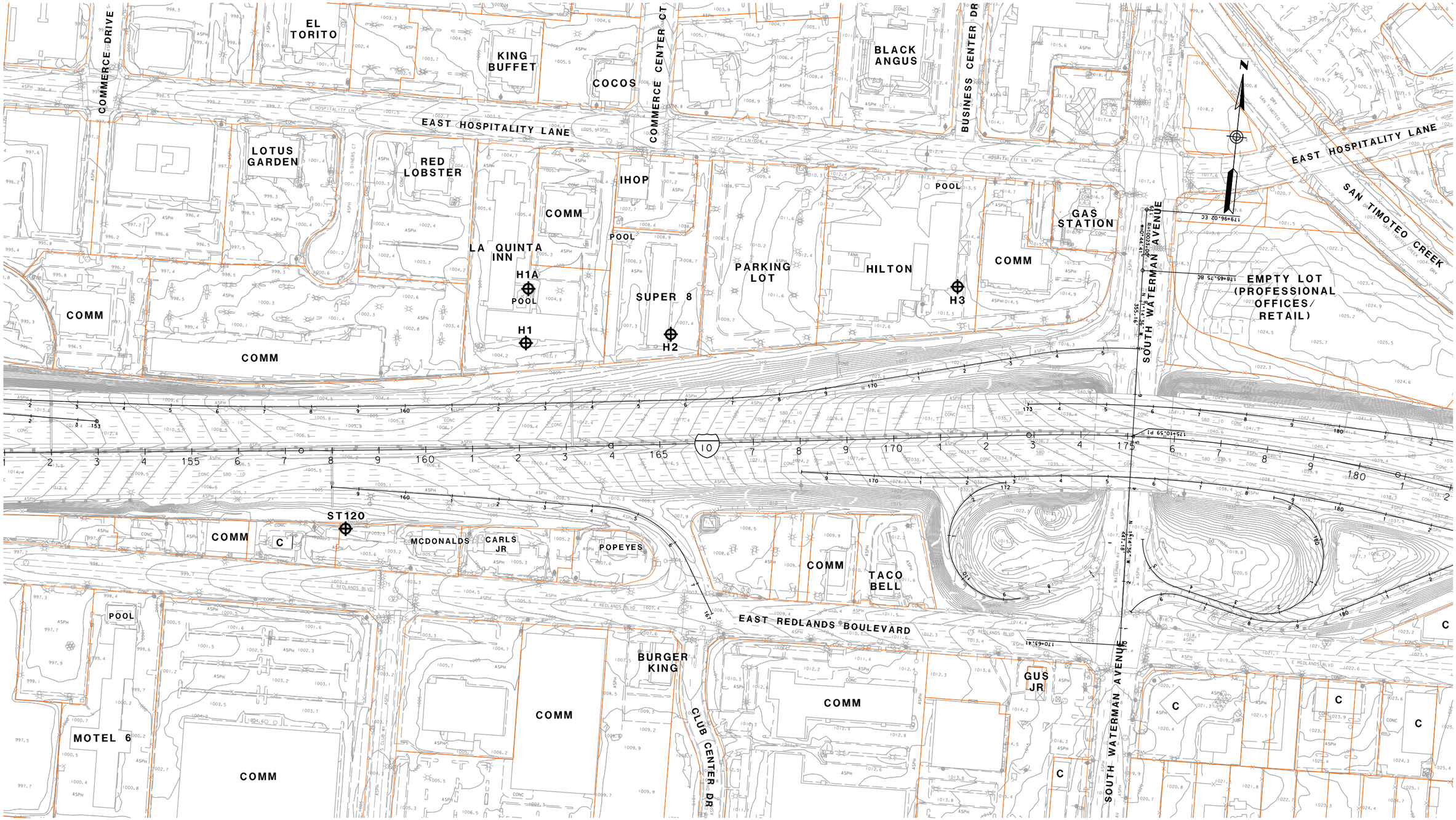
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 48



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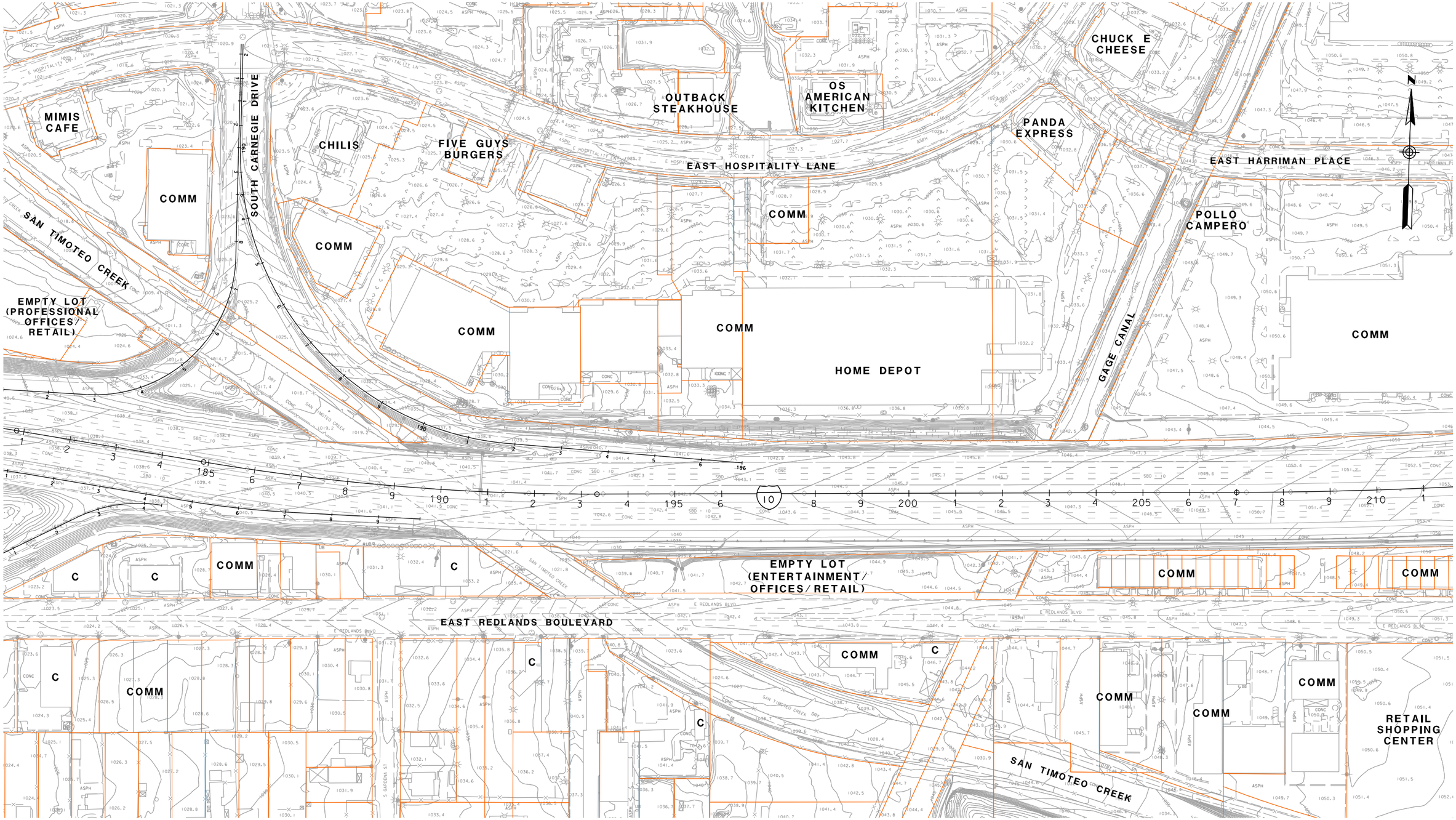
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 49



LEGEND

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- EXISTING SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

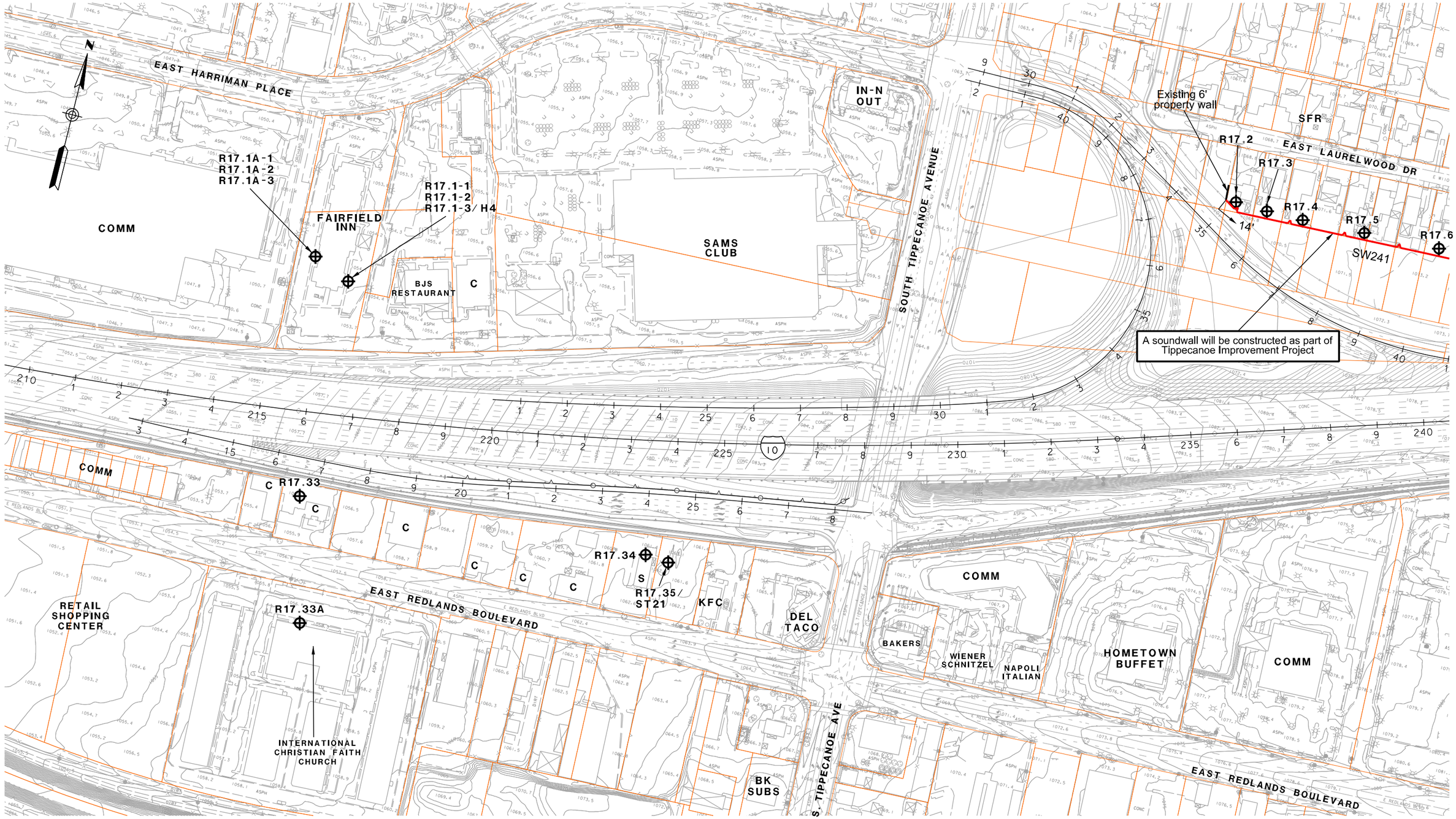
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 50



LEGEND

- RXX - RECEIVER SITE
- CAL - CALIBRATION SITE
- LT - LONG-TERM MEASUREMENT
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- EXISTING SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

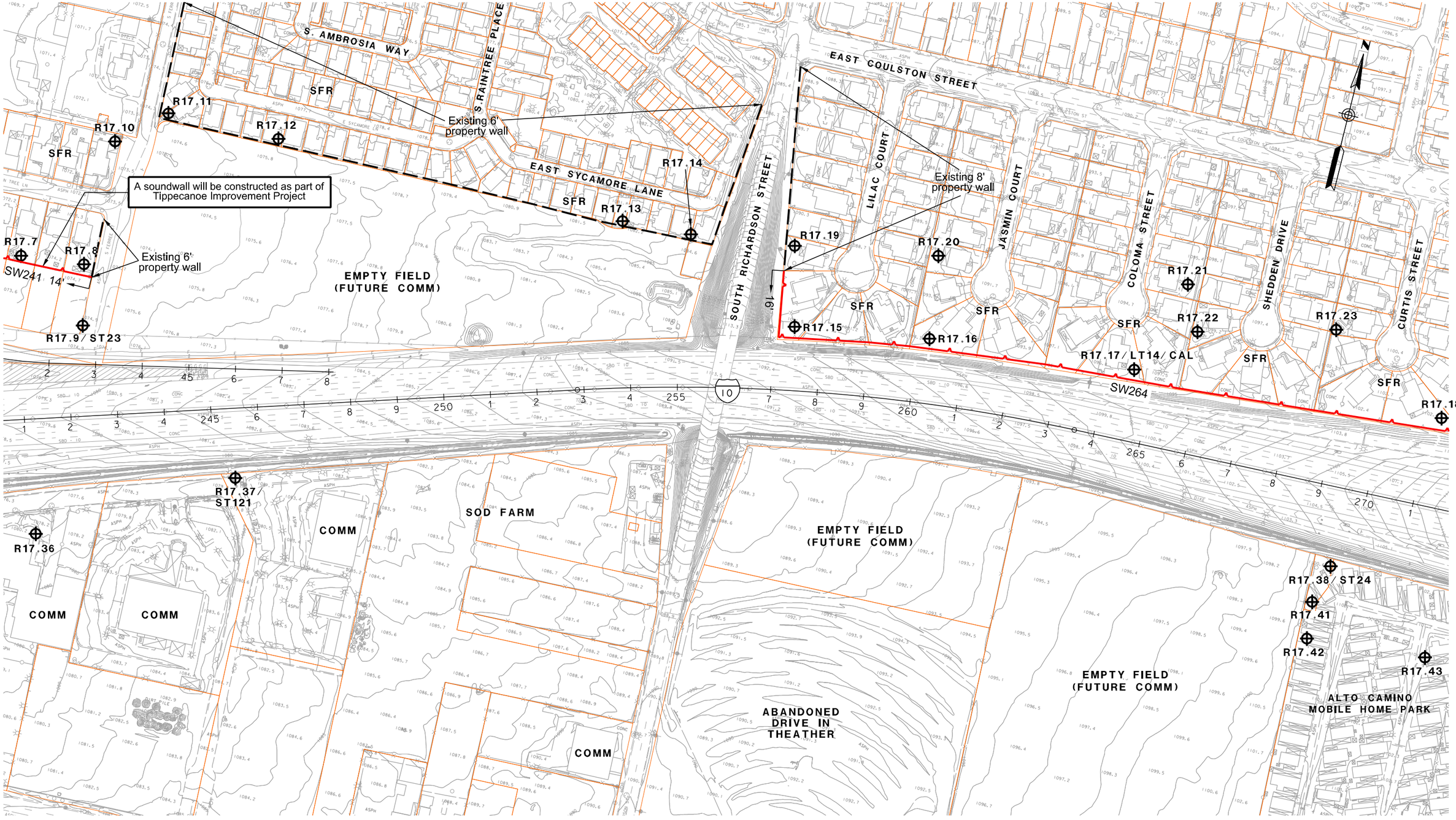
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 51



LEGEND

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- SAFETY BARRIER

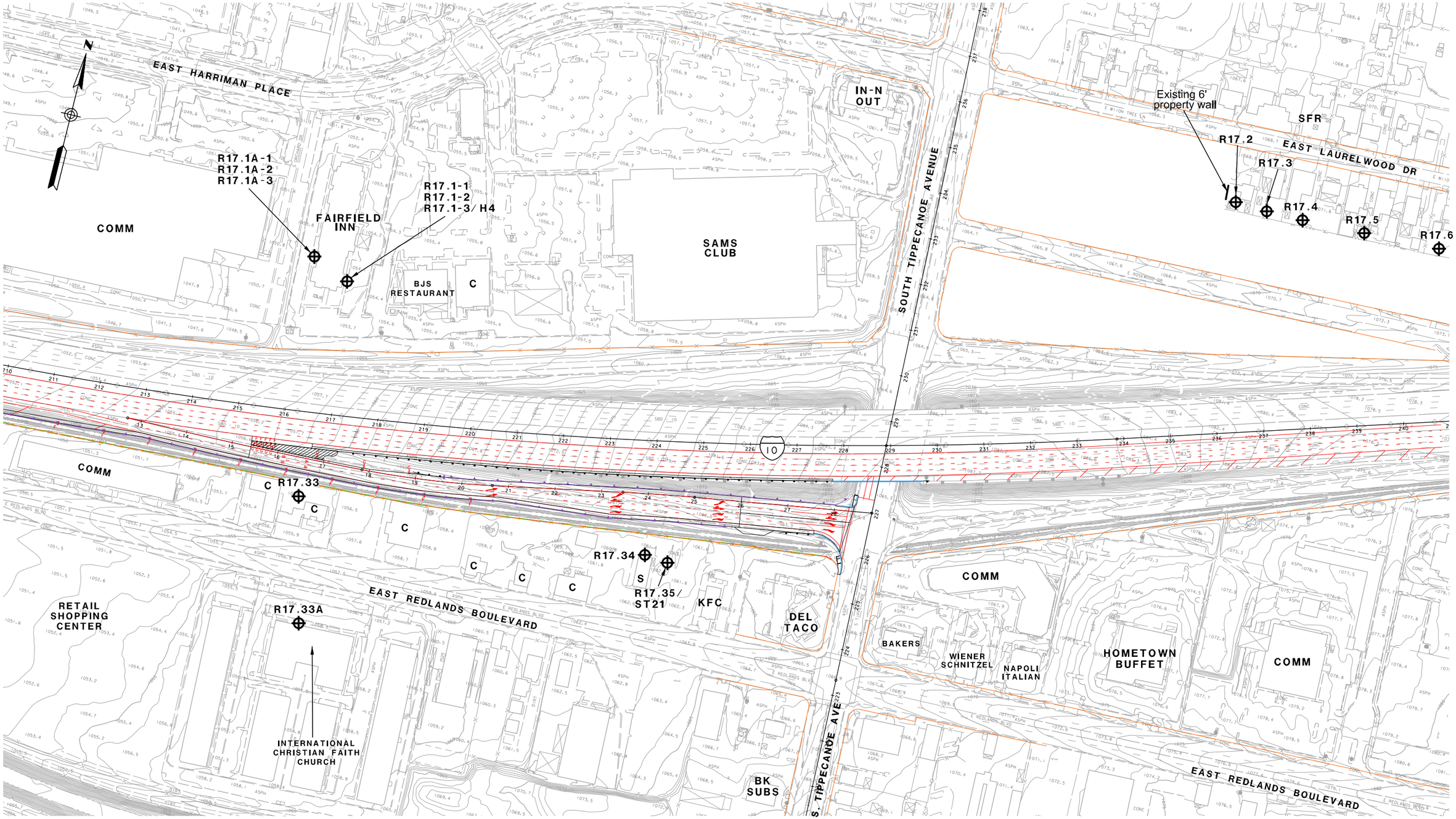
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 52



LEGEND

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- RETAINING WALL
- SAFETY BARRIER

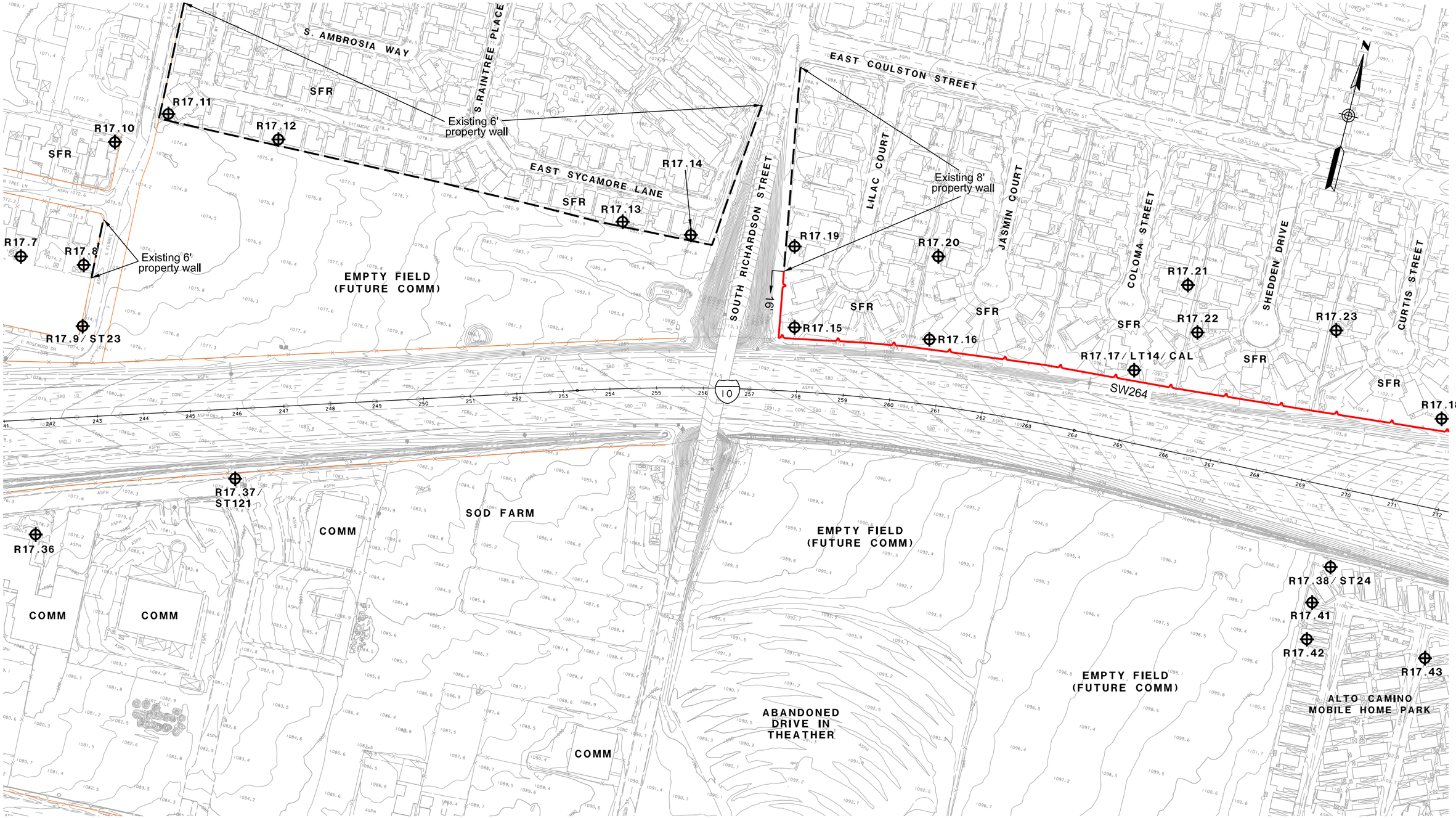
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR EXISTING NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 51A



LEGEND

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- SAFETY BARRIER

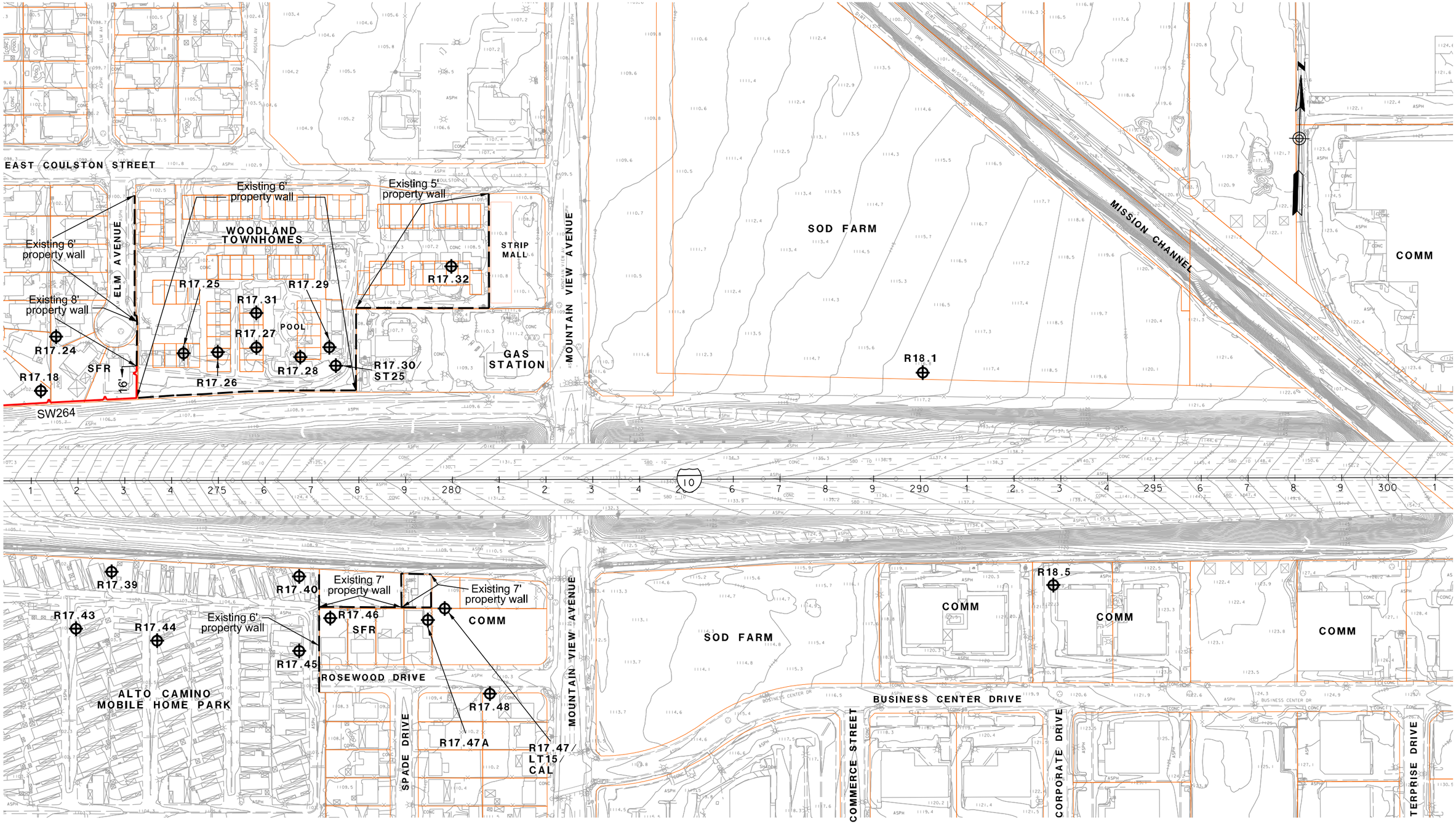
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR EXISTING NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 52A



LEGEND

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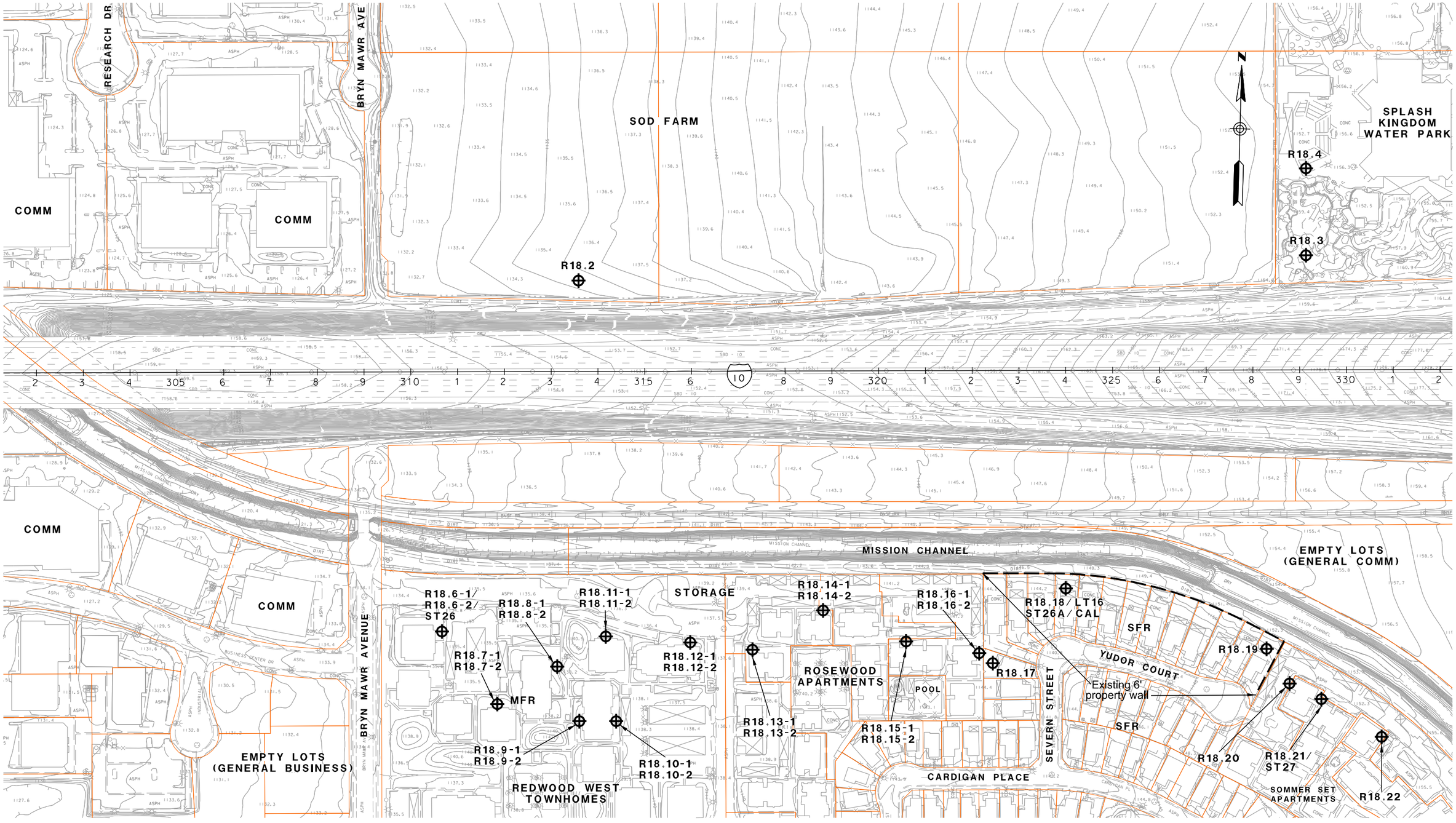
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 53



LEGEND

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1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 54

SPLASH KINGDOM WATER PARK

CALIFORNIA STREET

SAN BERNANDINO COUNTY MUSEUM

R18.26

EDWARS MANSION

MILL CREEK (BBQ & BURGERS)

COMM

RADIO STATION

R18.25

ORANGE TREE LANE

COMM

COMM

COMM

EMPTY LOTS (GENERAL COMM)

COMM

R18.24/ ST28

NEVADA STREET

ORANGE GROVE

EMPTY LOTS (GENERAL COMM)

GAS STATION

CALIFORNIA STREET

EMPTY LOTS (GENERAL COMM)

COMM

COMM

R18.23

U.S POST OFFICE

EMPTY LOT (PUBLIC INSTITUTIONAL)

COMM

NEVADA STREET

LEGEND

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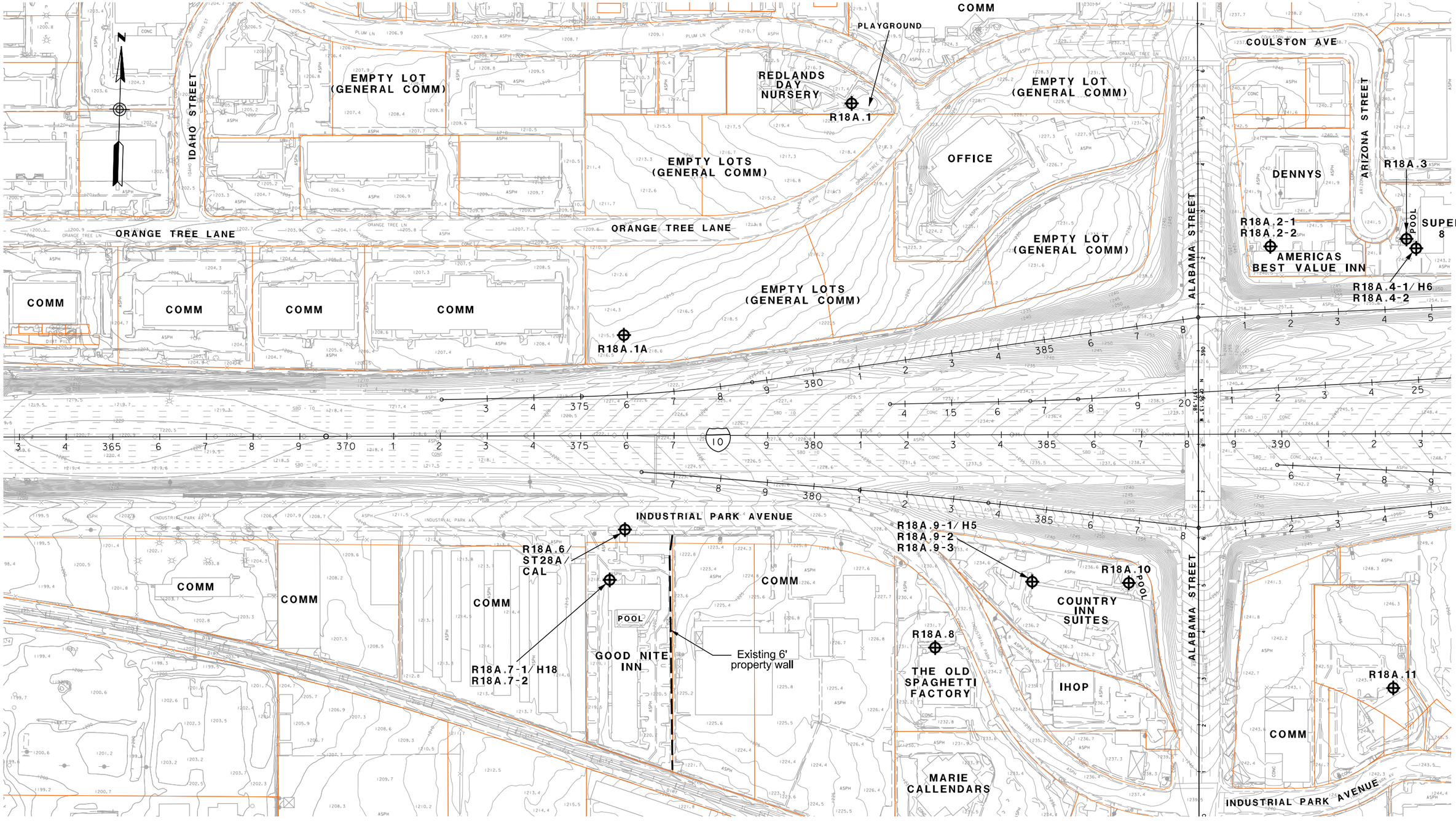
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 55



LEGEND

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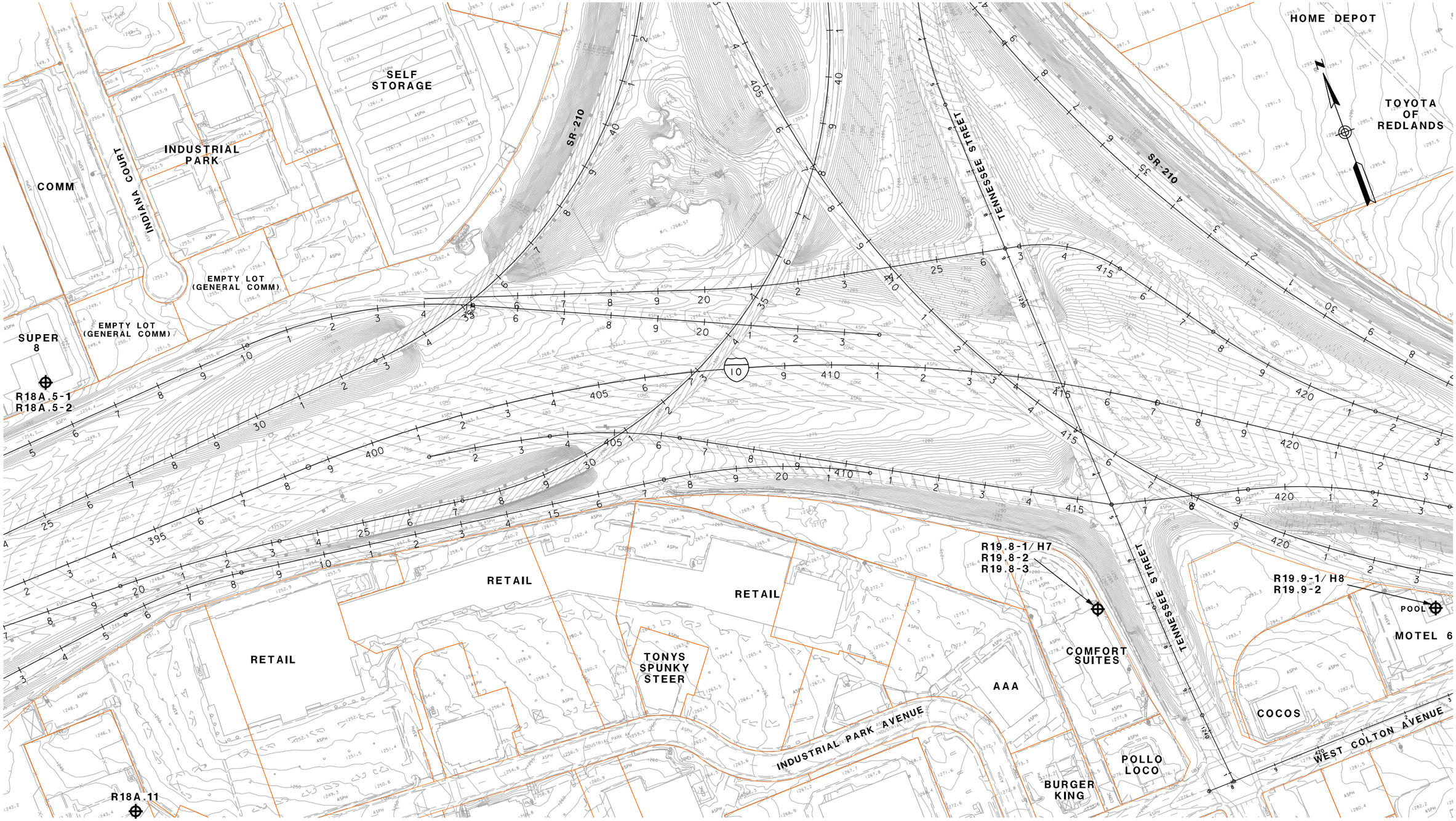
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 56



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- RETAINING WALL
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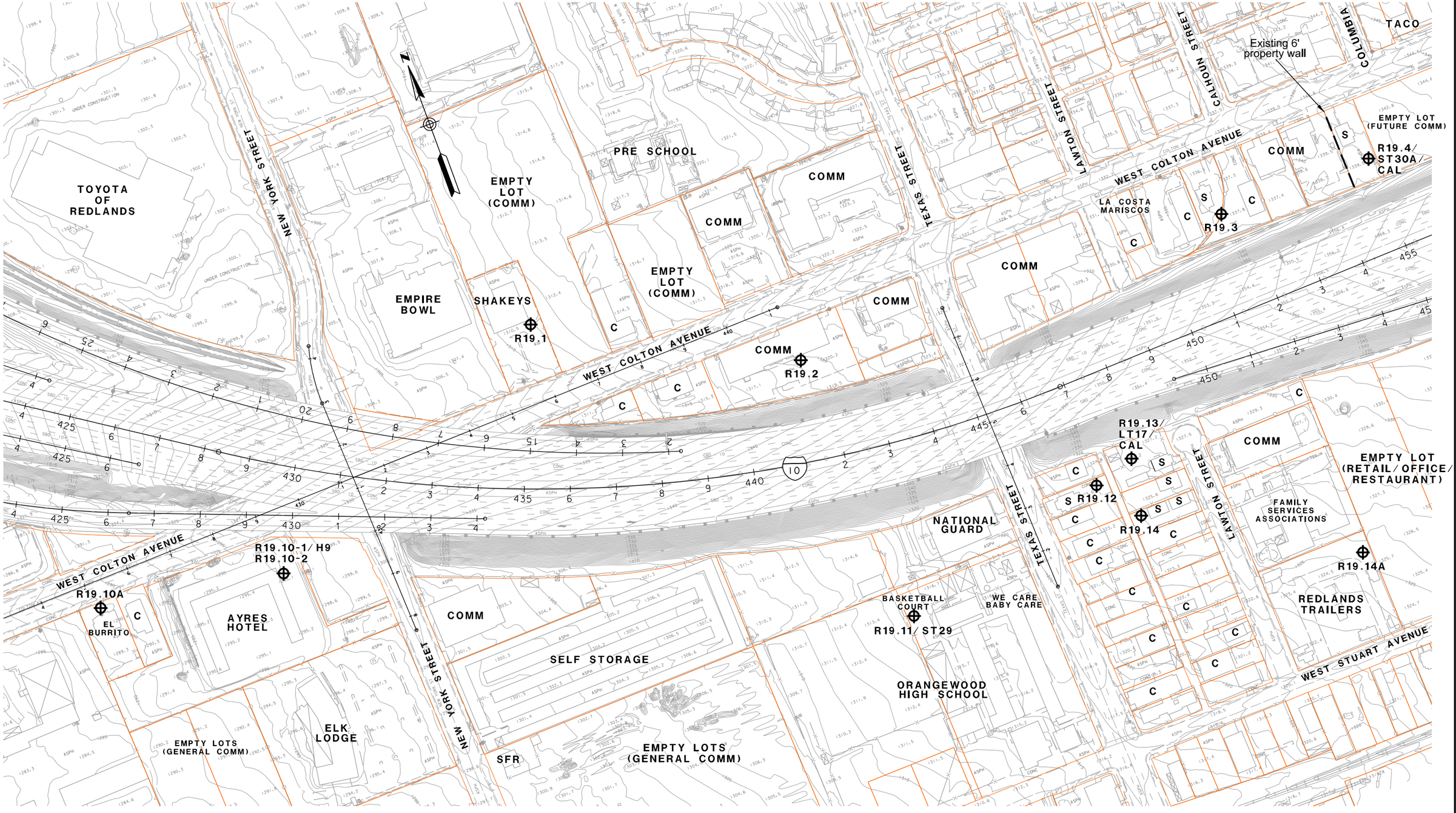
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 57



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- RETAINING WALL
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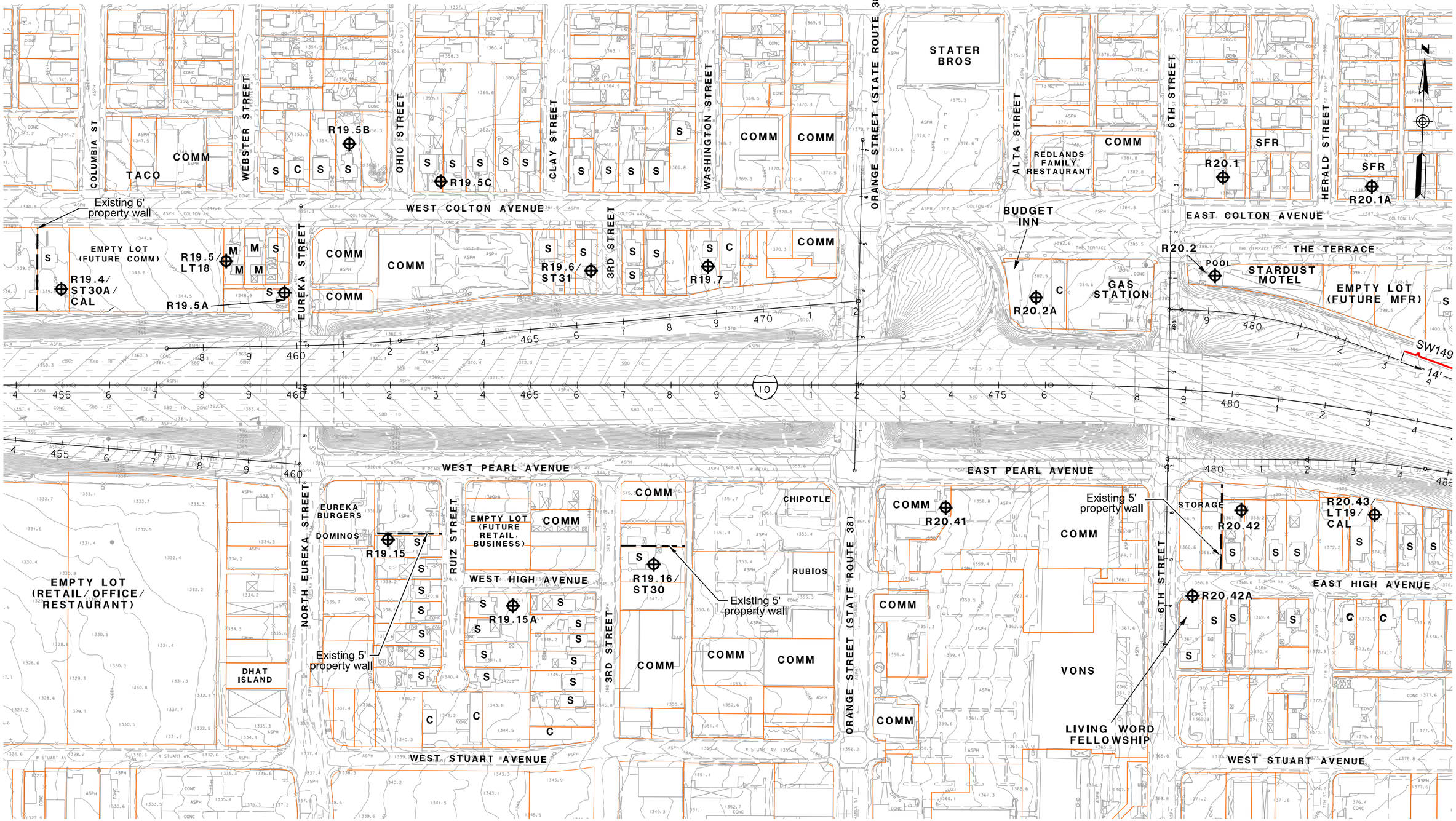
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 58



LEGEND

- RXX - RECEIVER SITE
- CAL - CALIBRATION SITE
- LT - LONG-TERM MEASUREMENT
- ST - SHORT-TERM MEASUREMENT

SFR OR S - SINGLE FAMILY RESIDENCE
MFR OR M - MULTI-FAMILY RESIDENCE
COMM OR C - COMMERCIAL/NO OUTSIDE ACTIVITIES
HXX - IN/OUTDOOR MEASUREMENT

- EXISTING PROPERTY WALL
- EXISTING SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

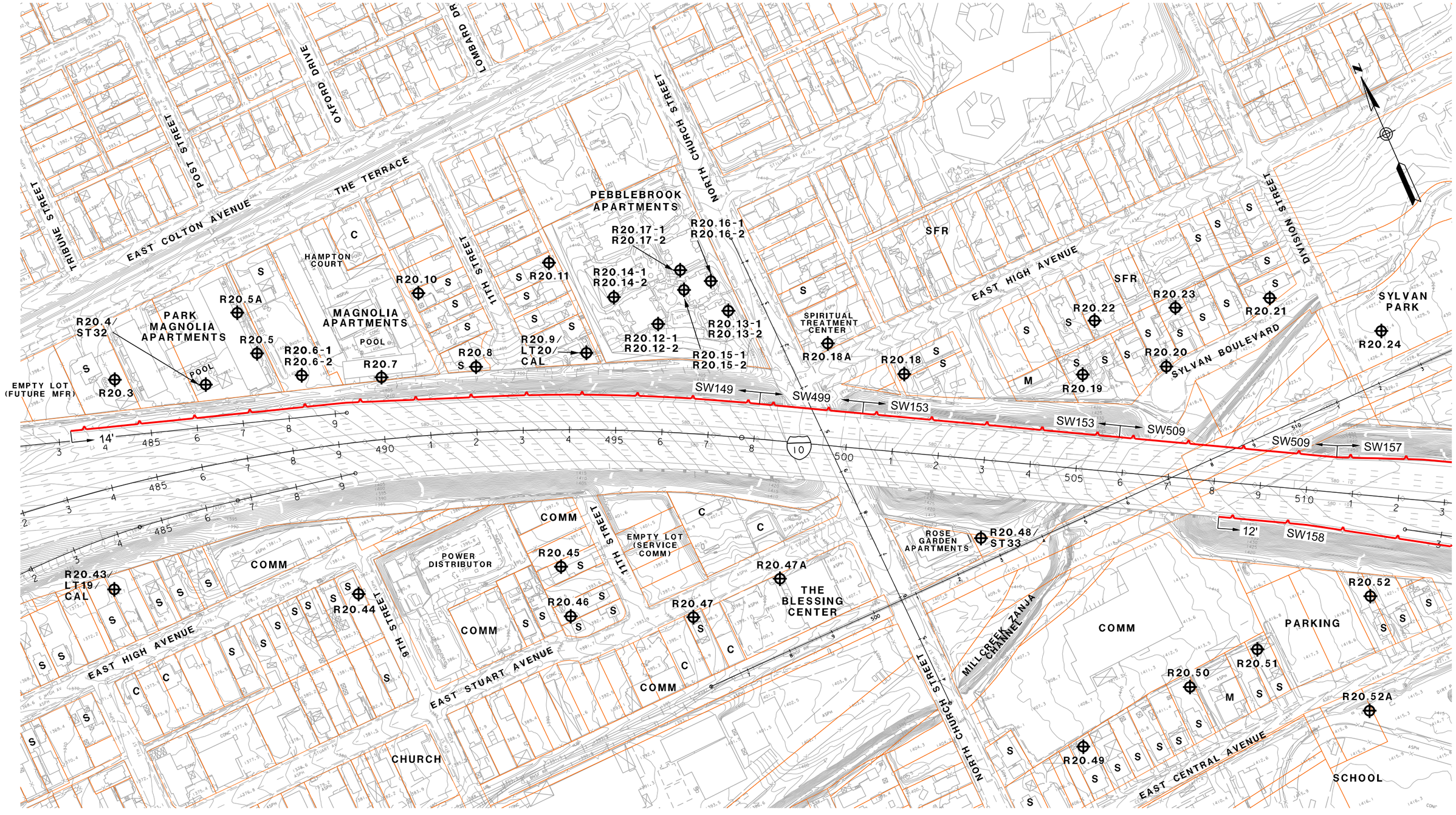
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 59



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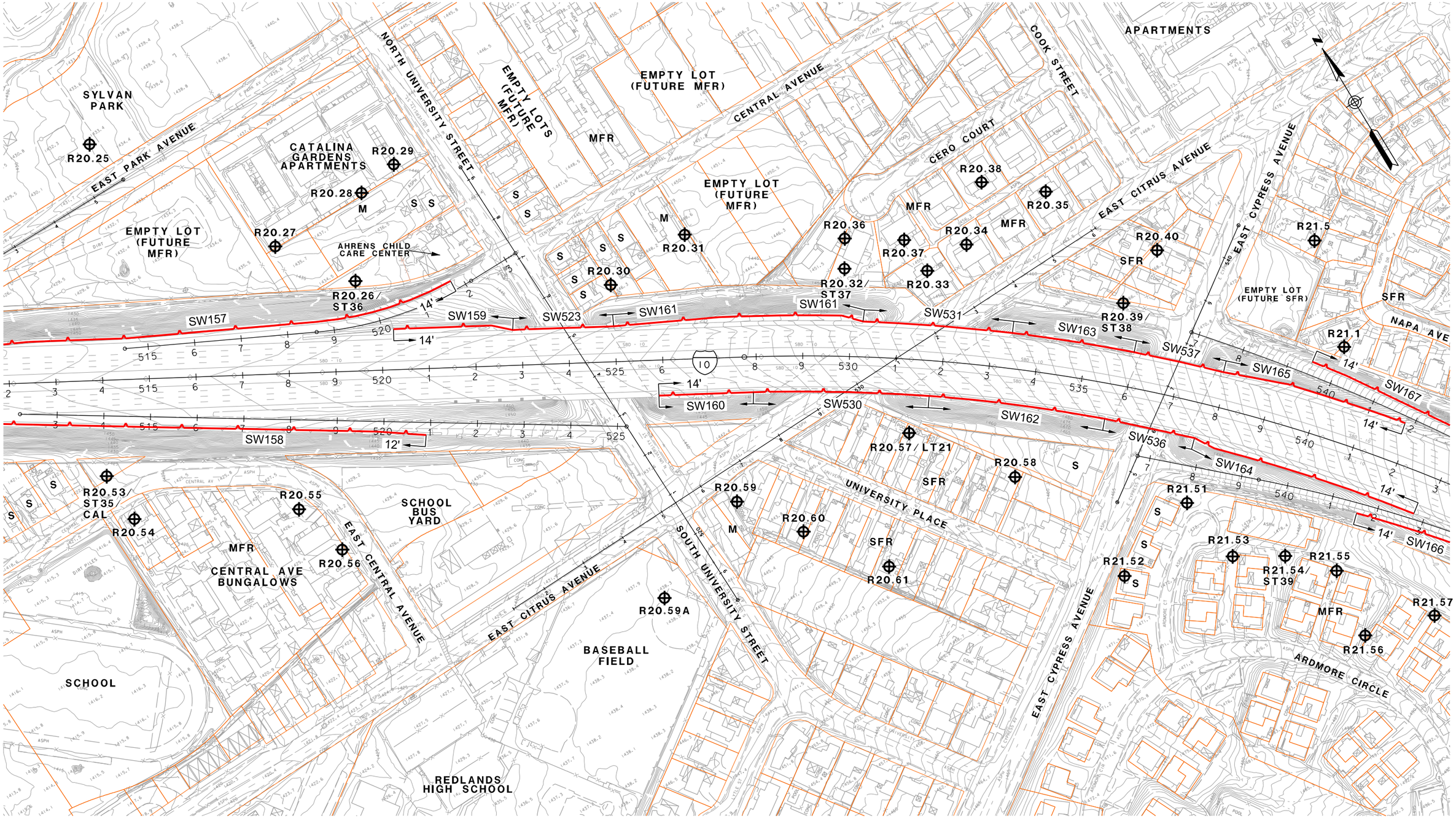
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 60



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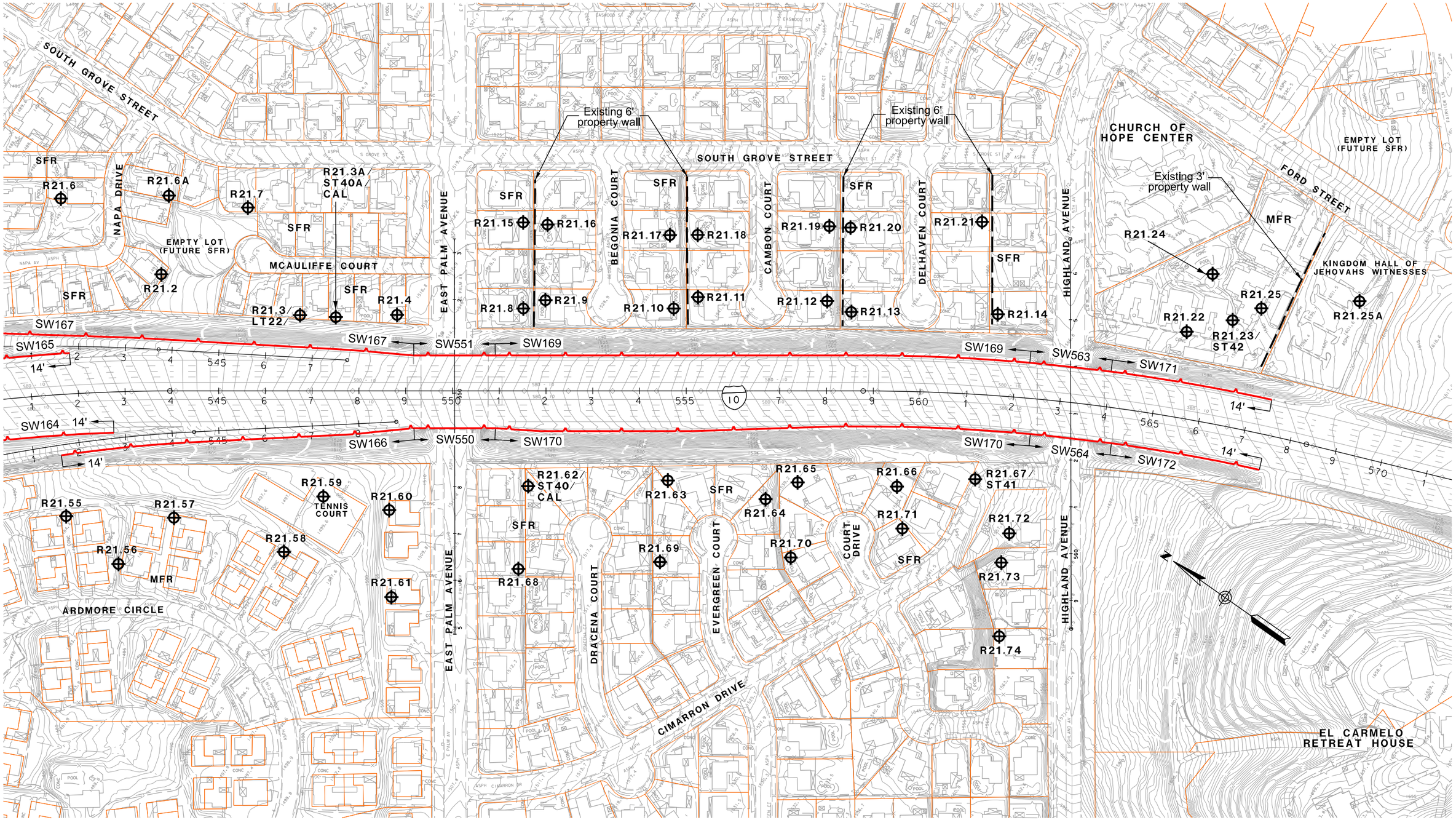
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 61



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1in : 200ft

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I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

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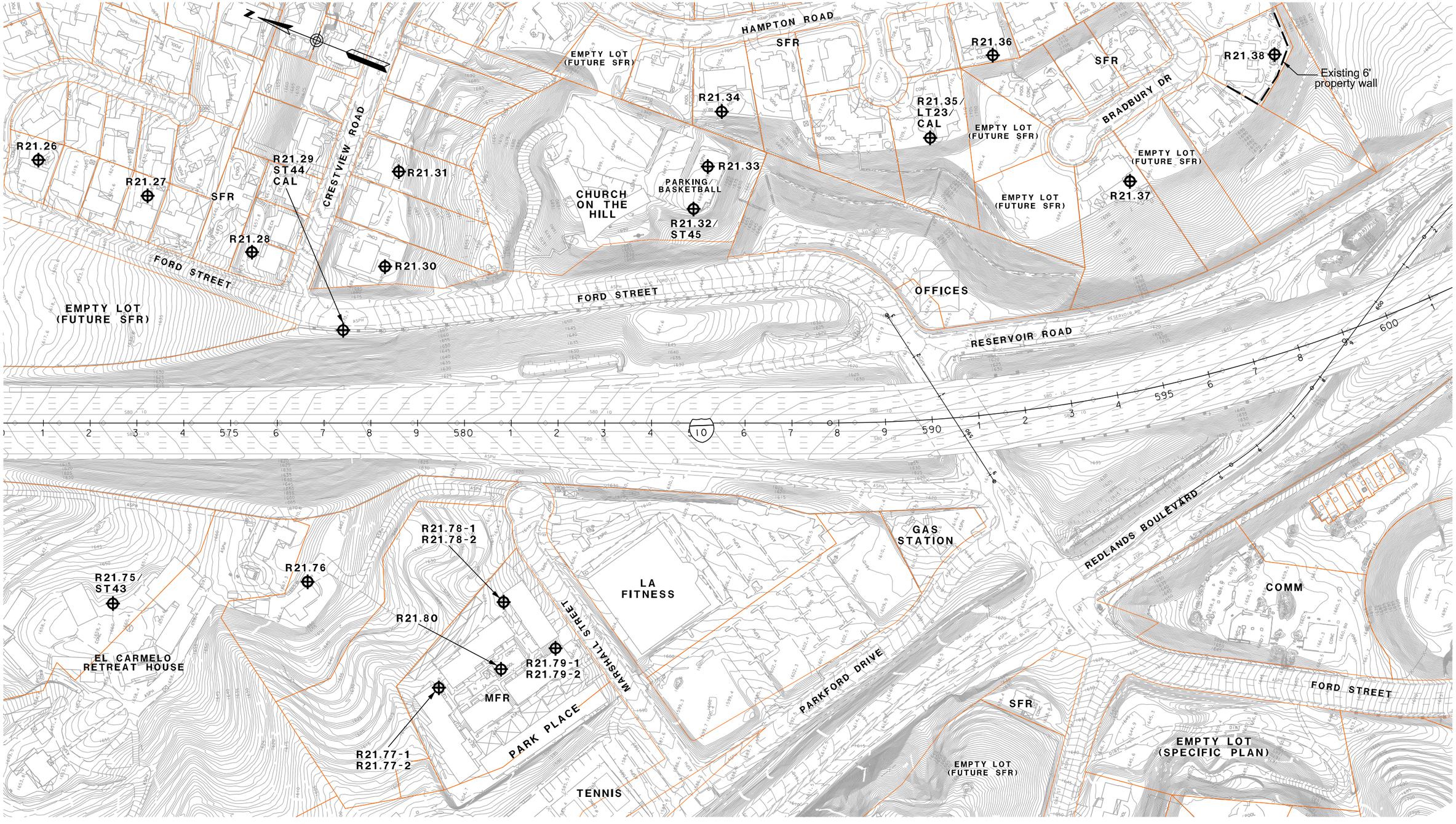
FIGURE 62



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1in : 200ft

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I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

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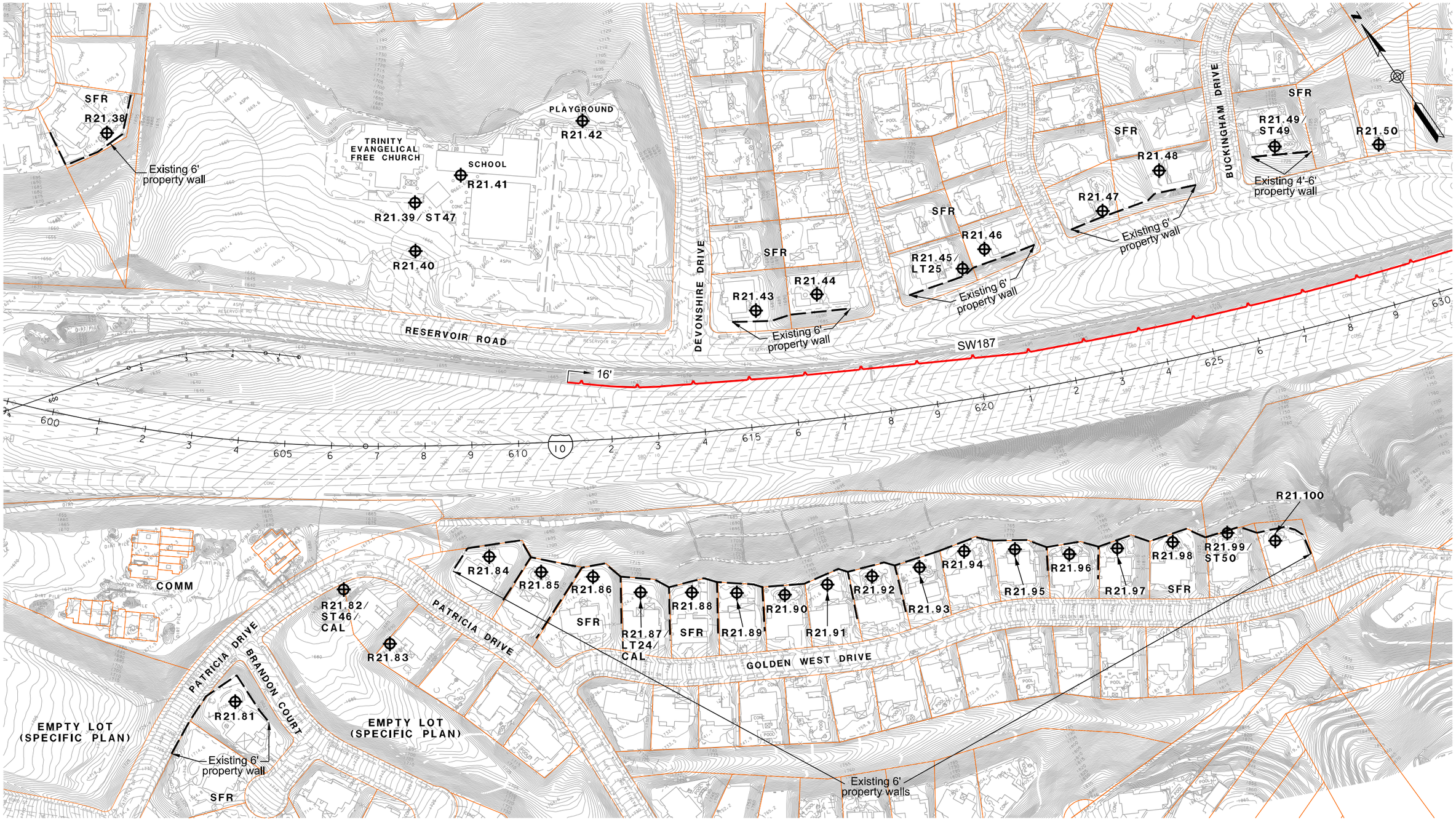
FIGURE 63



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1in : 200ft

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I-10 CORRIDOR ALTERNATIVE 1
NOISE RECEIVER & BARRIER LOCATIONS

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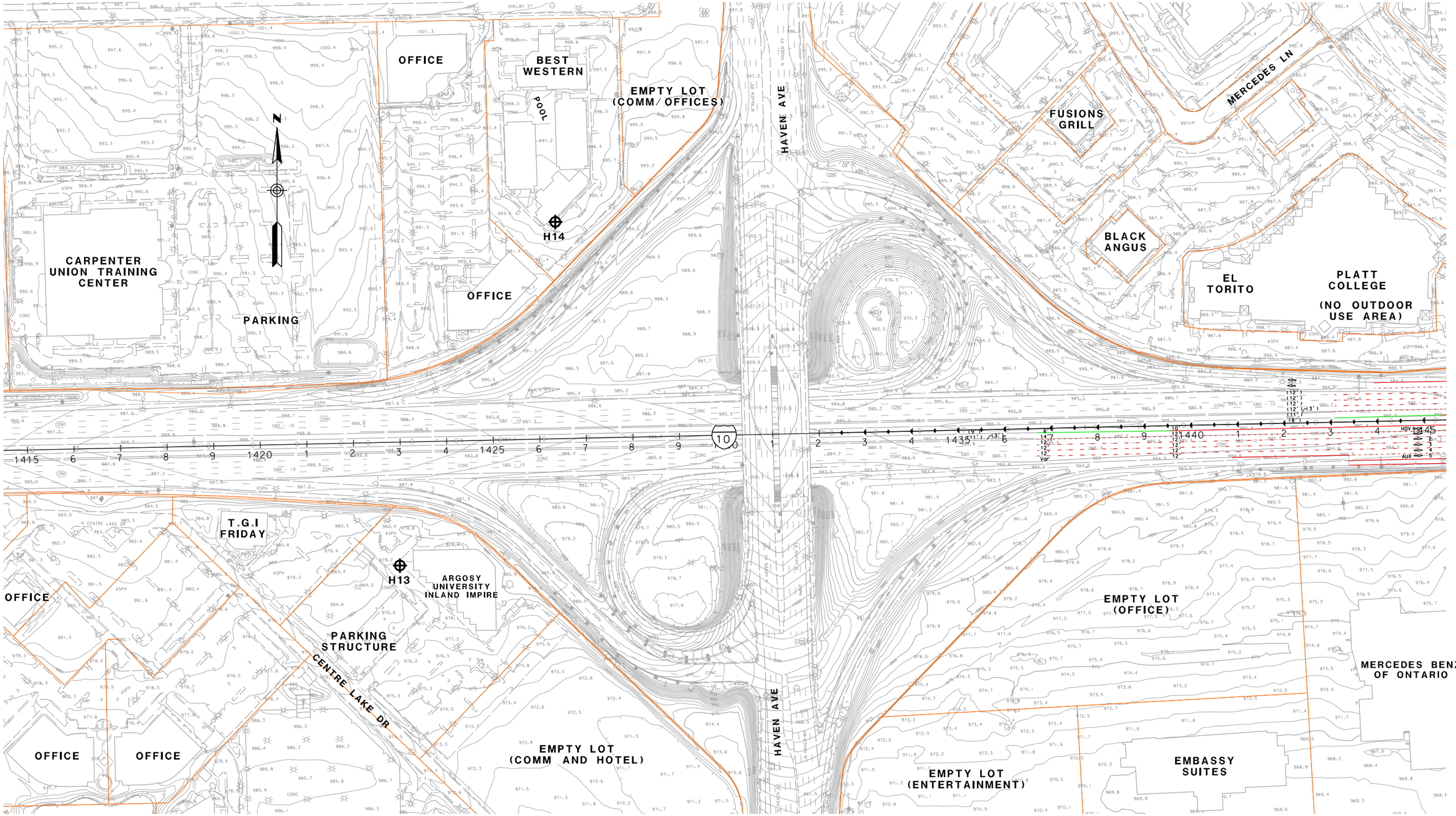
FIGURE 64

Alternative 2 -

One High-Occupancy Vehicle Lane in Each Direction



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- ANALYZED SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

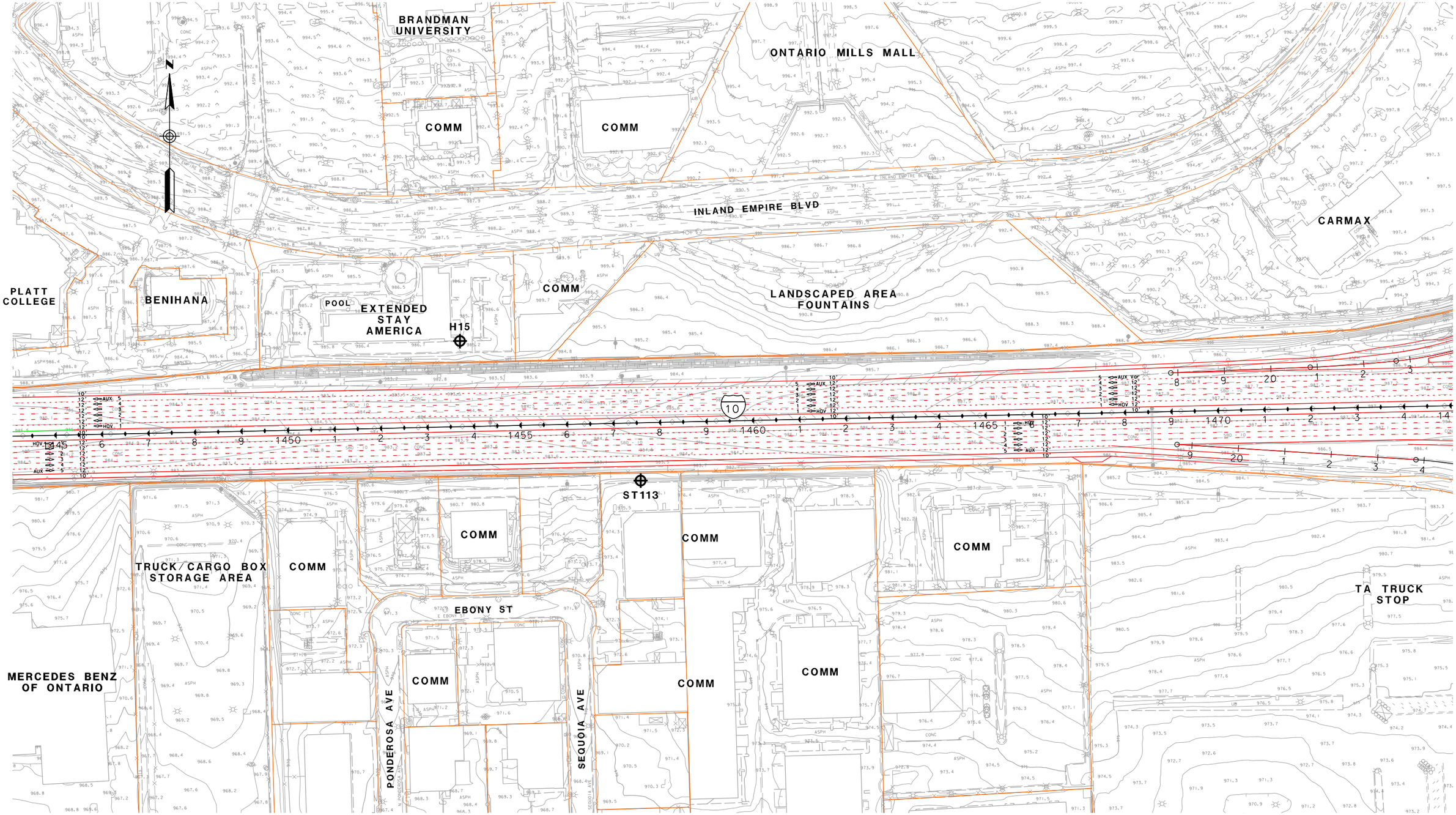
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 65



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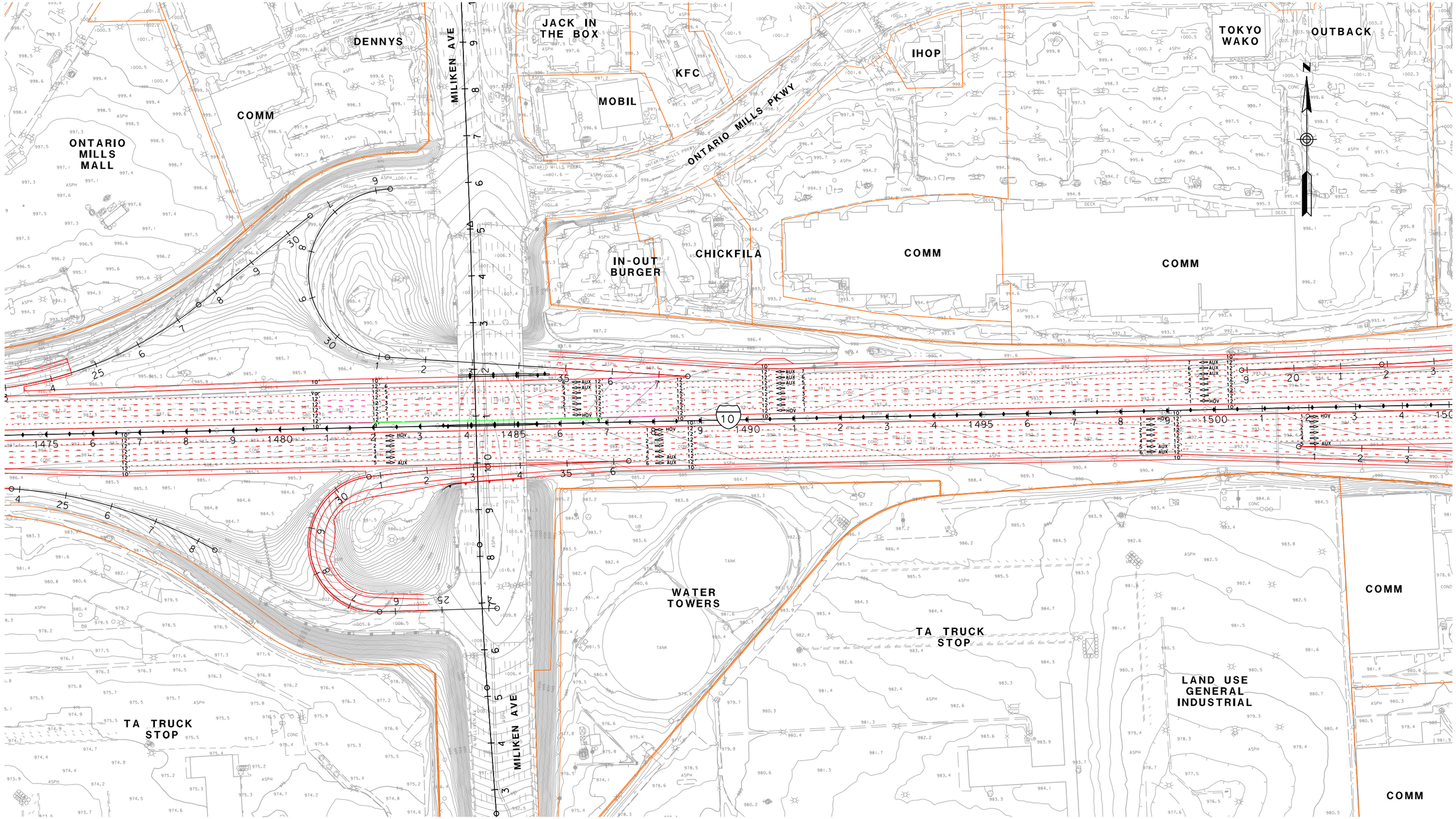
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 66



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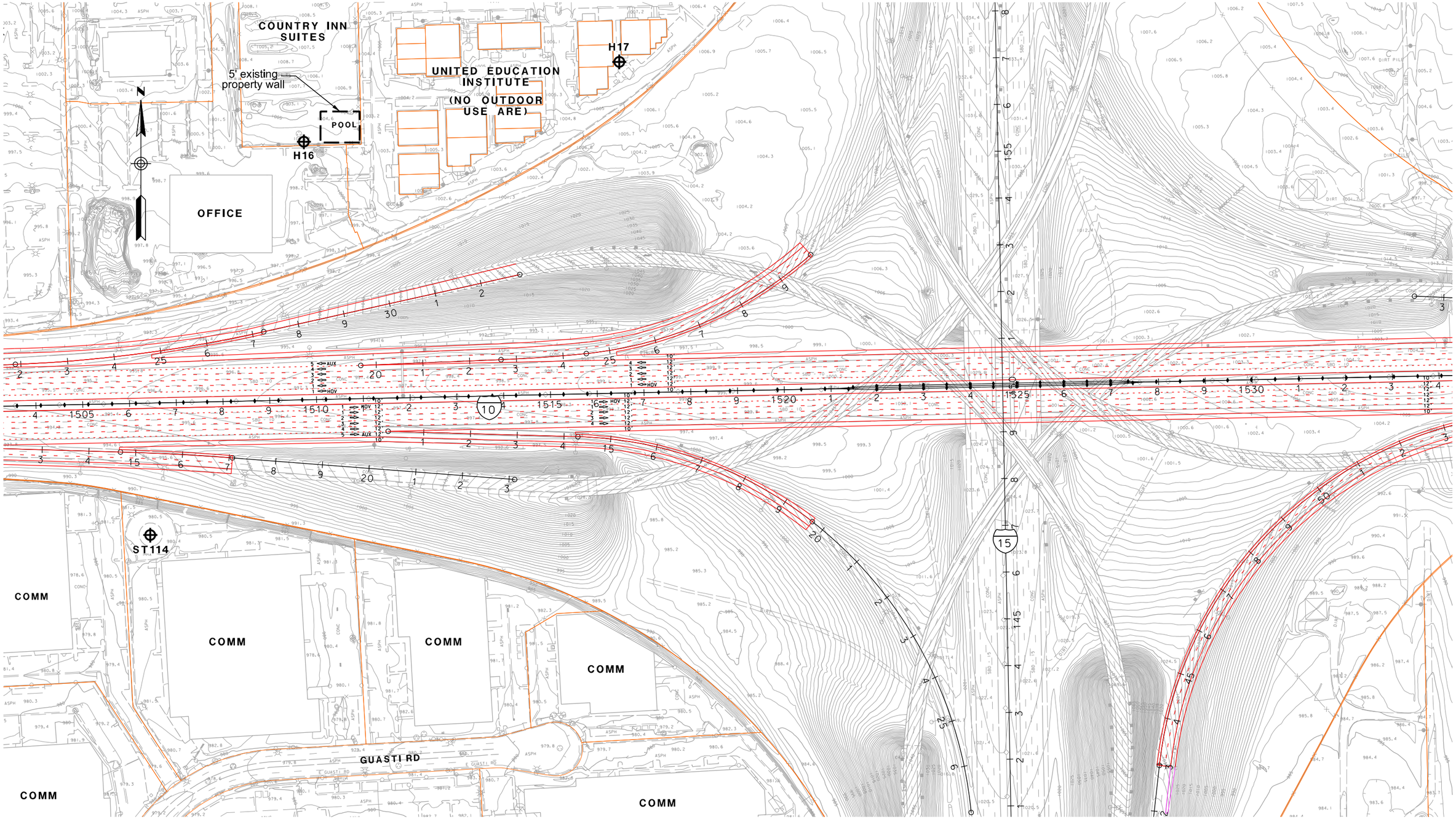
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 67



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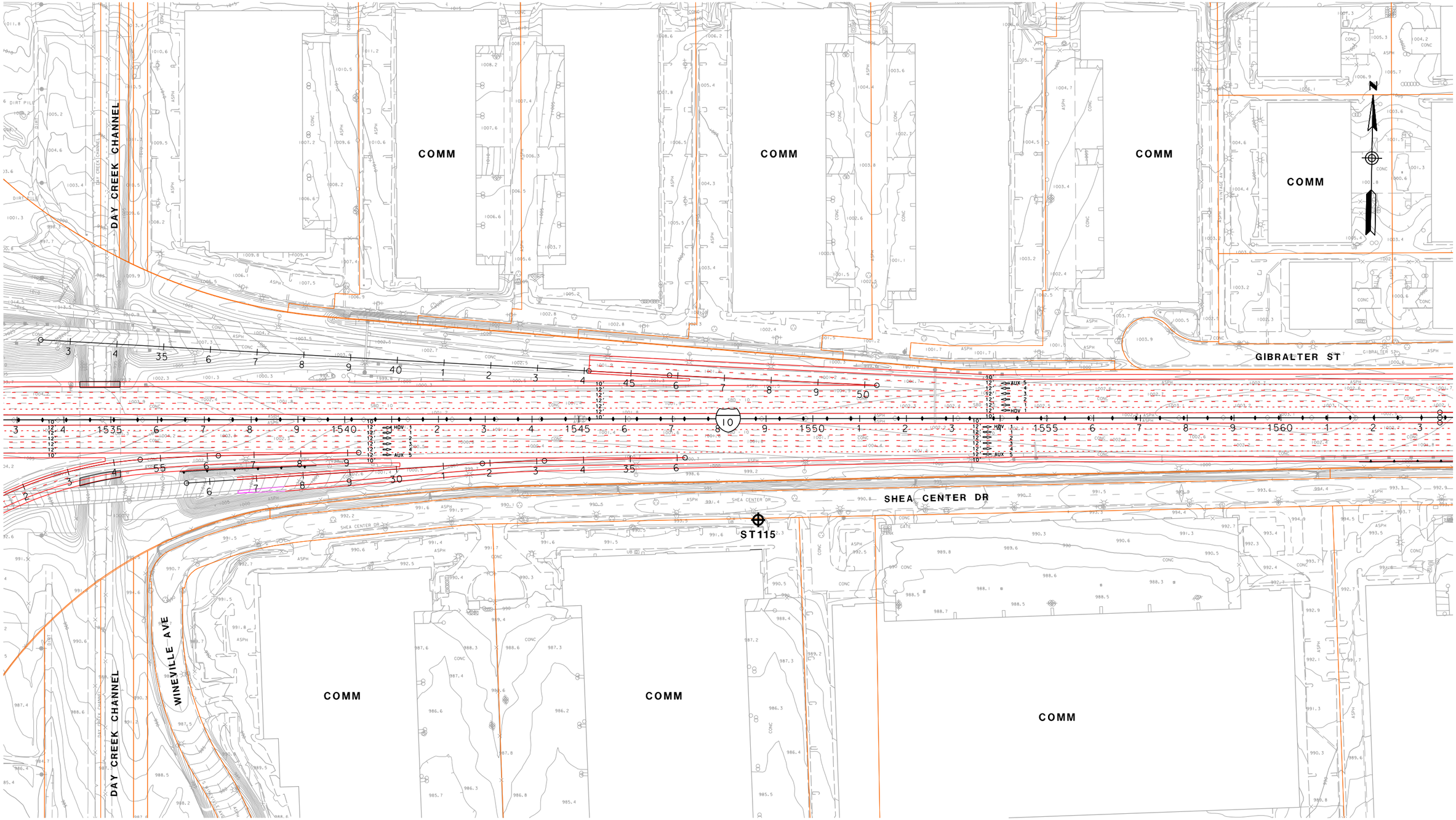
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 68



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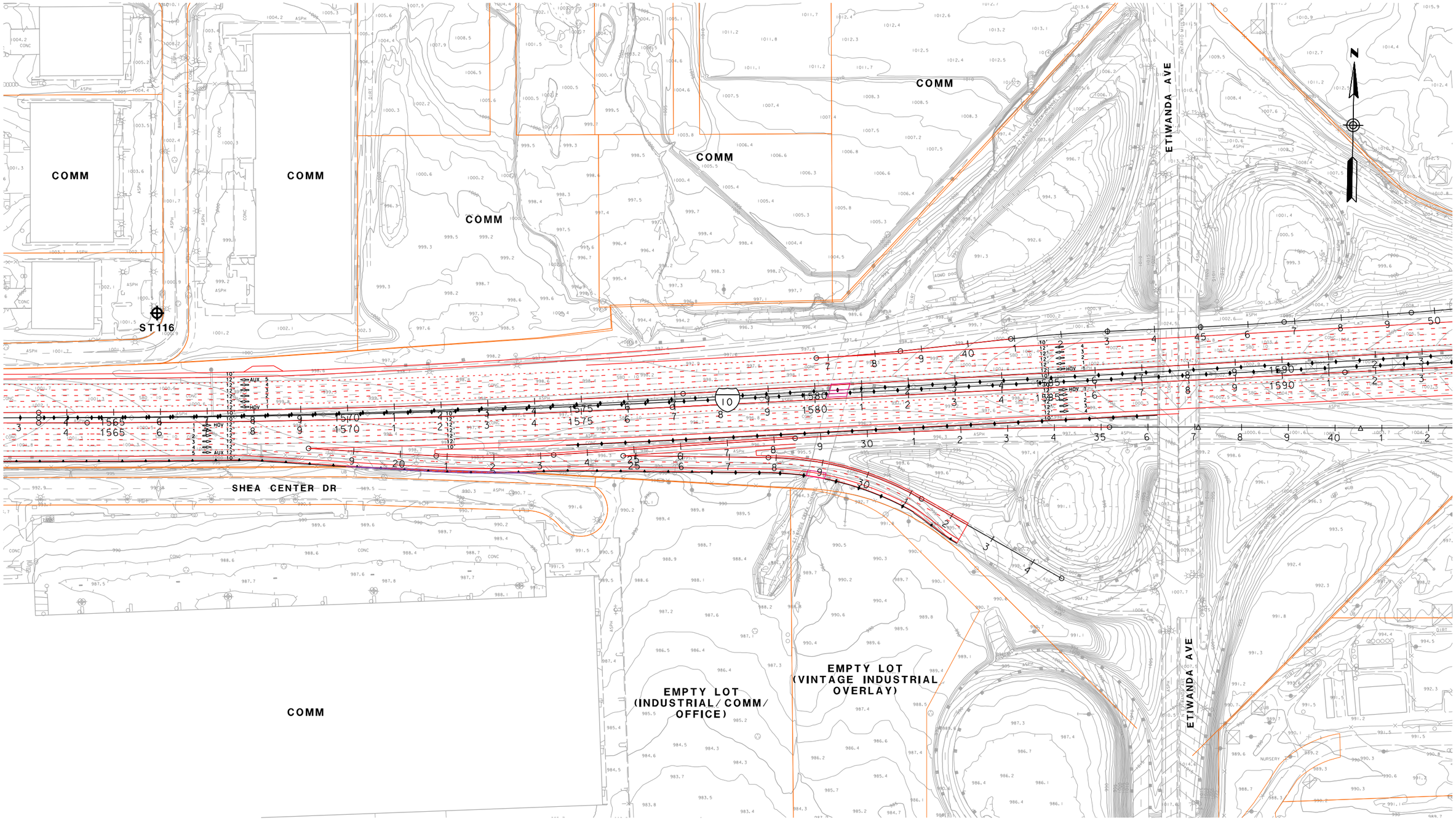
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 69



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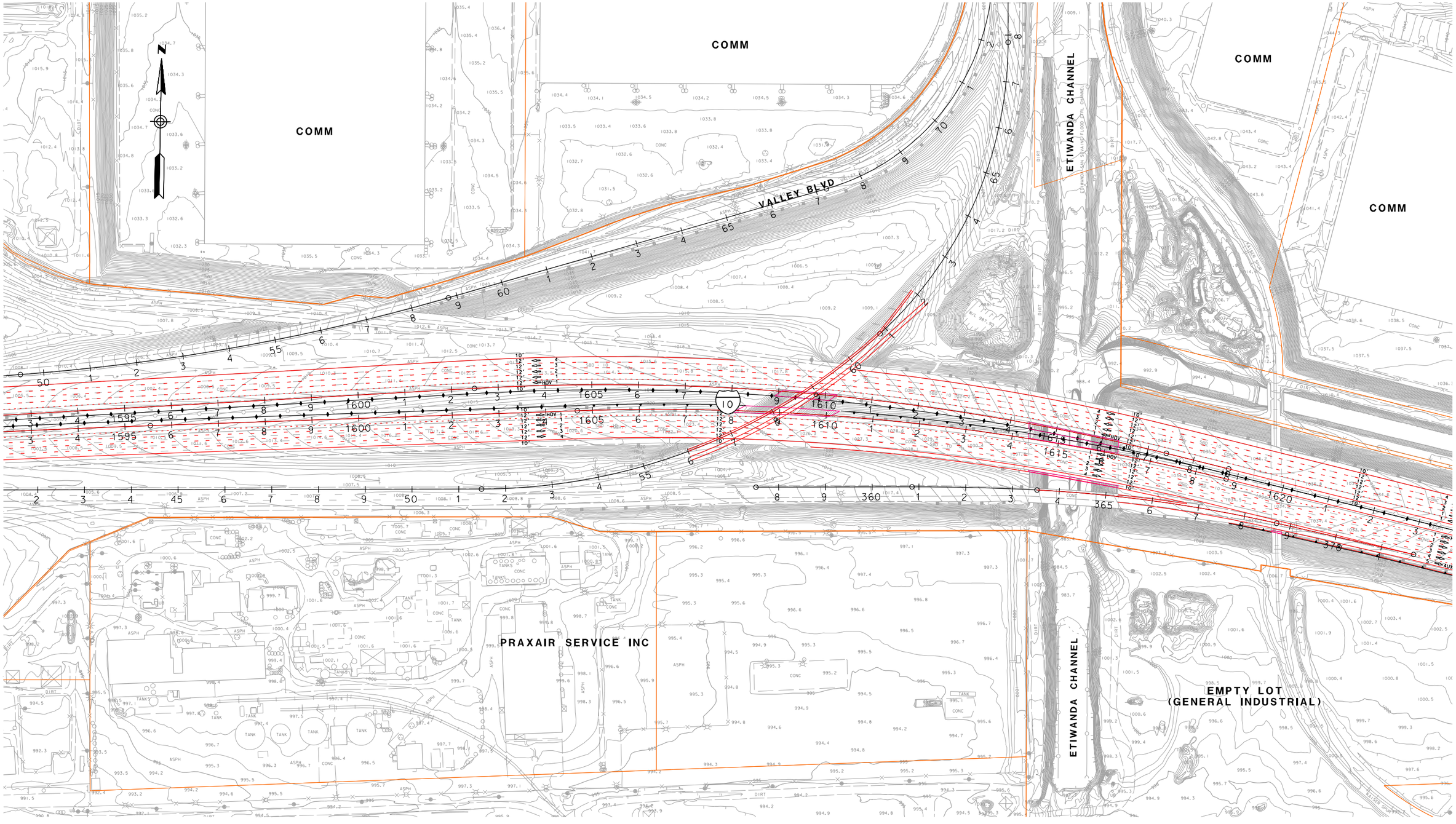
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 70



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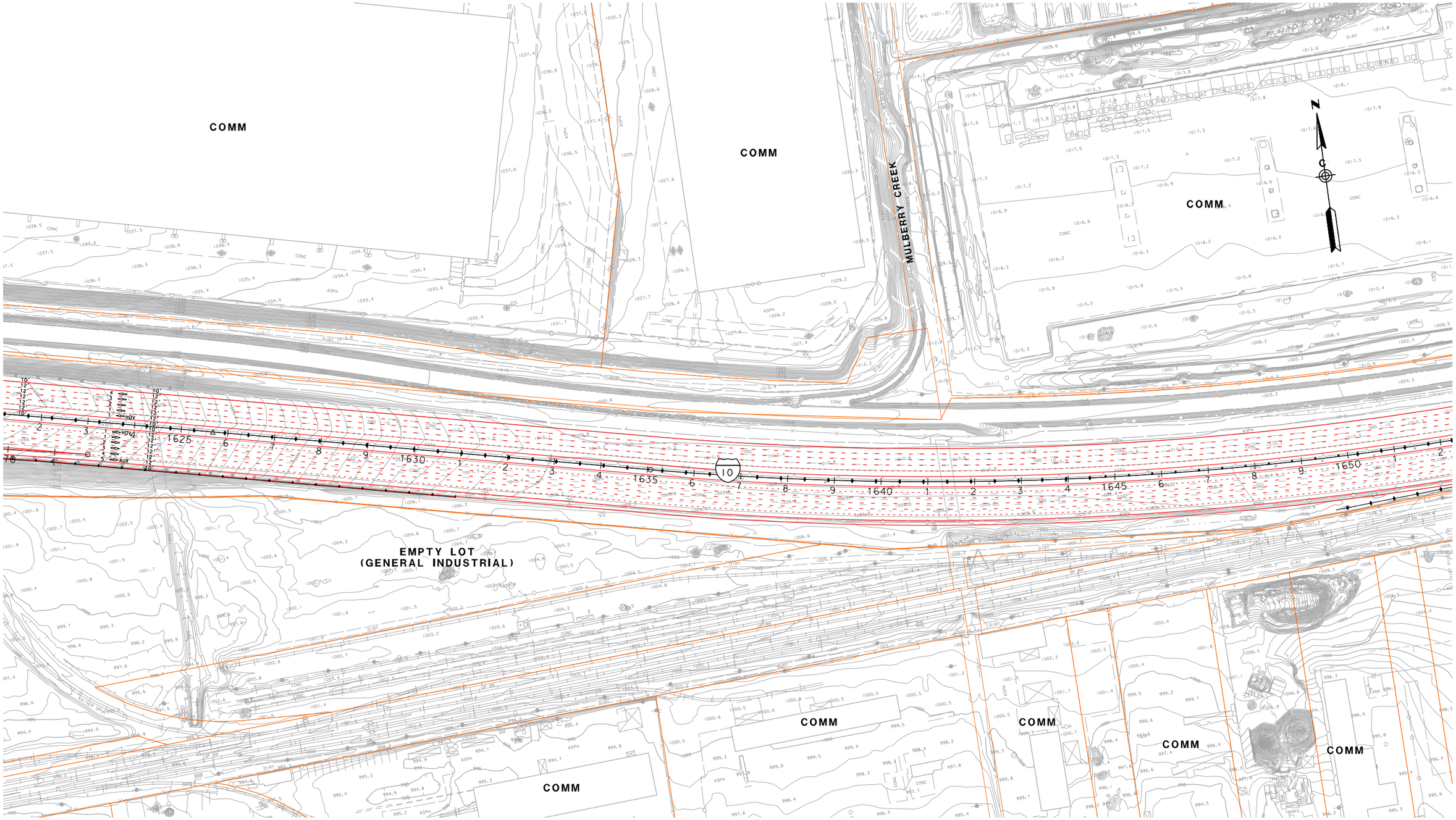
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 71



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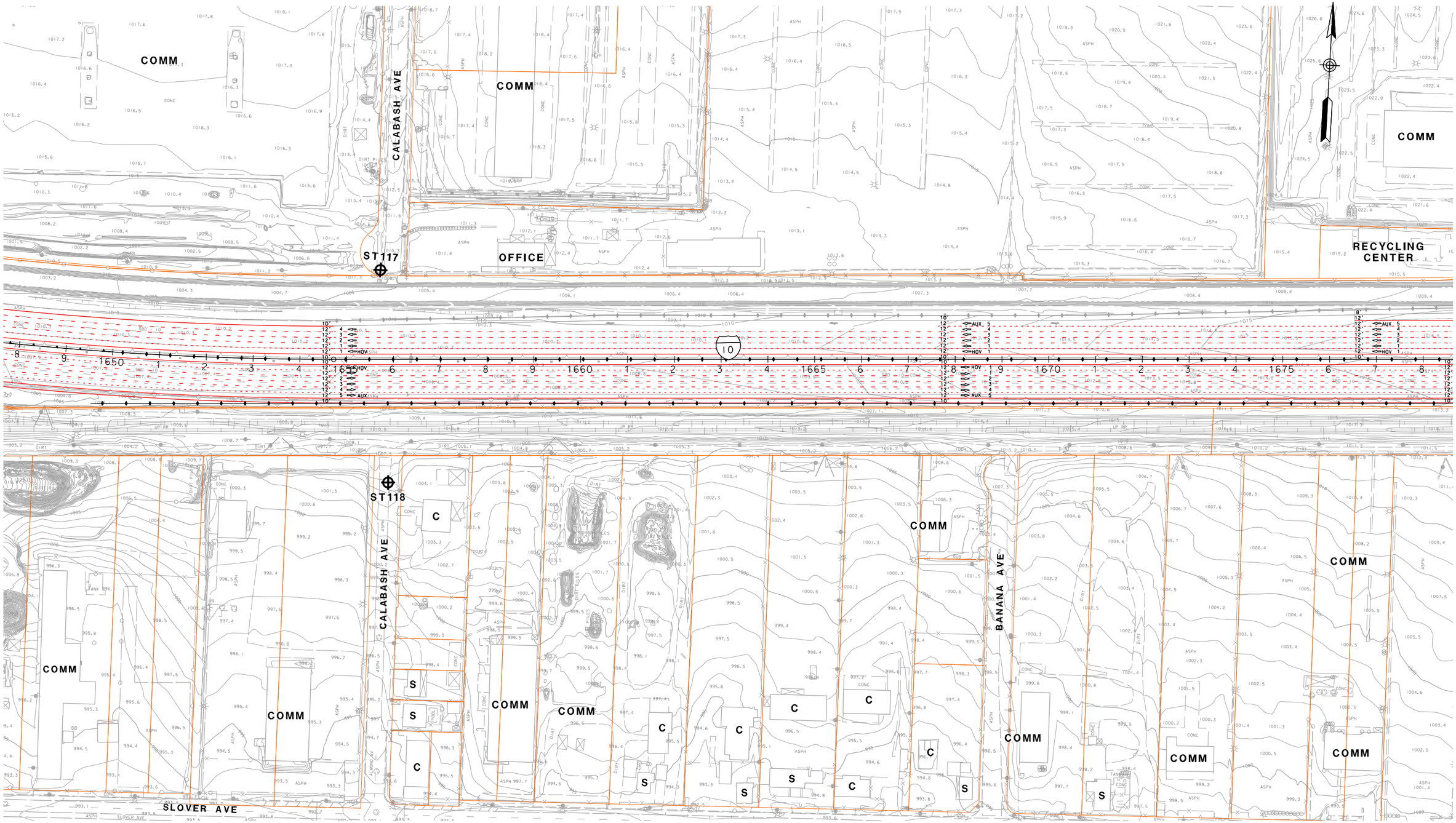
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 72



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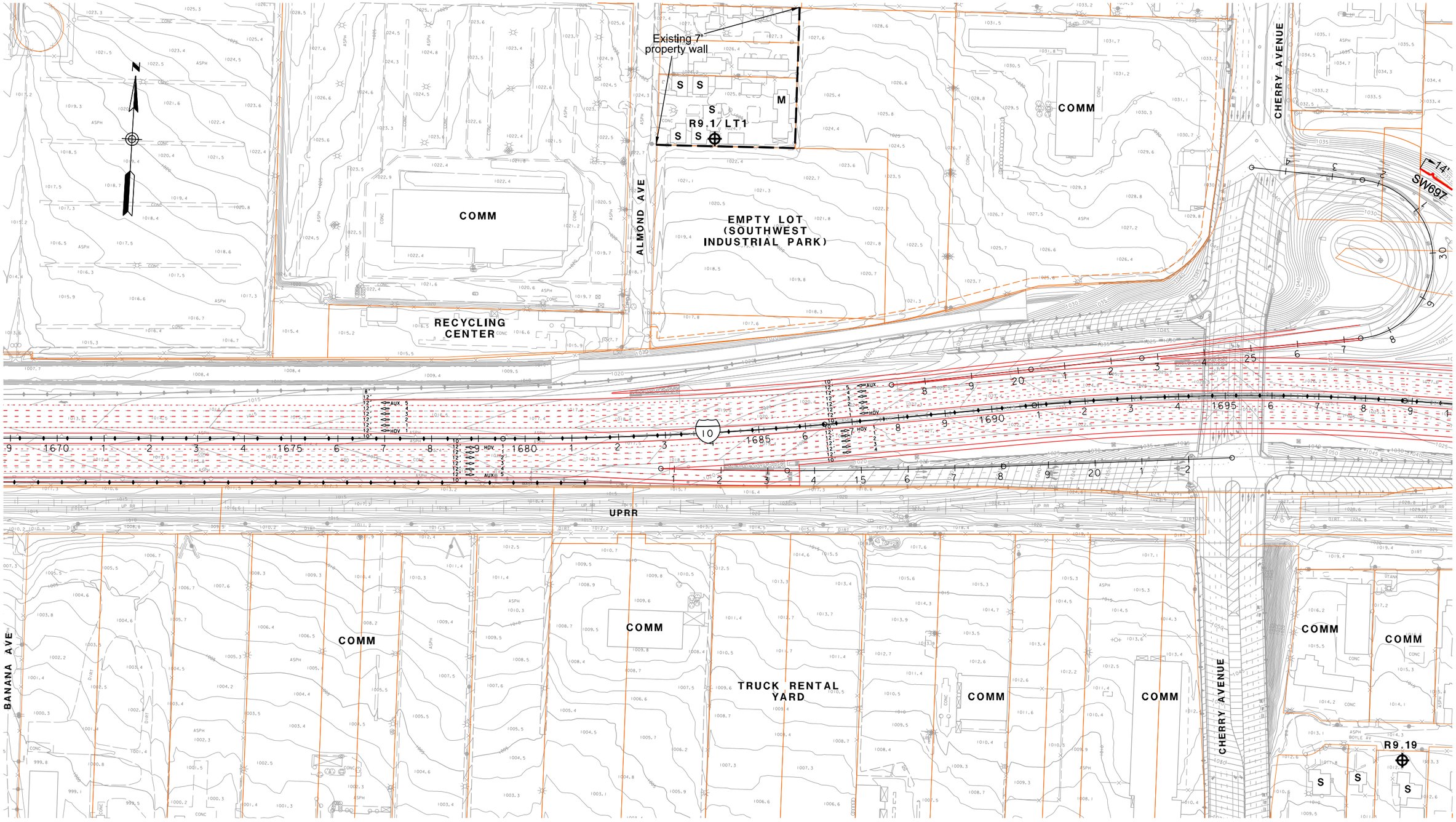
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 73



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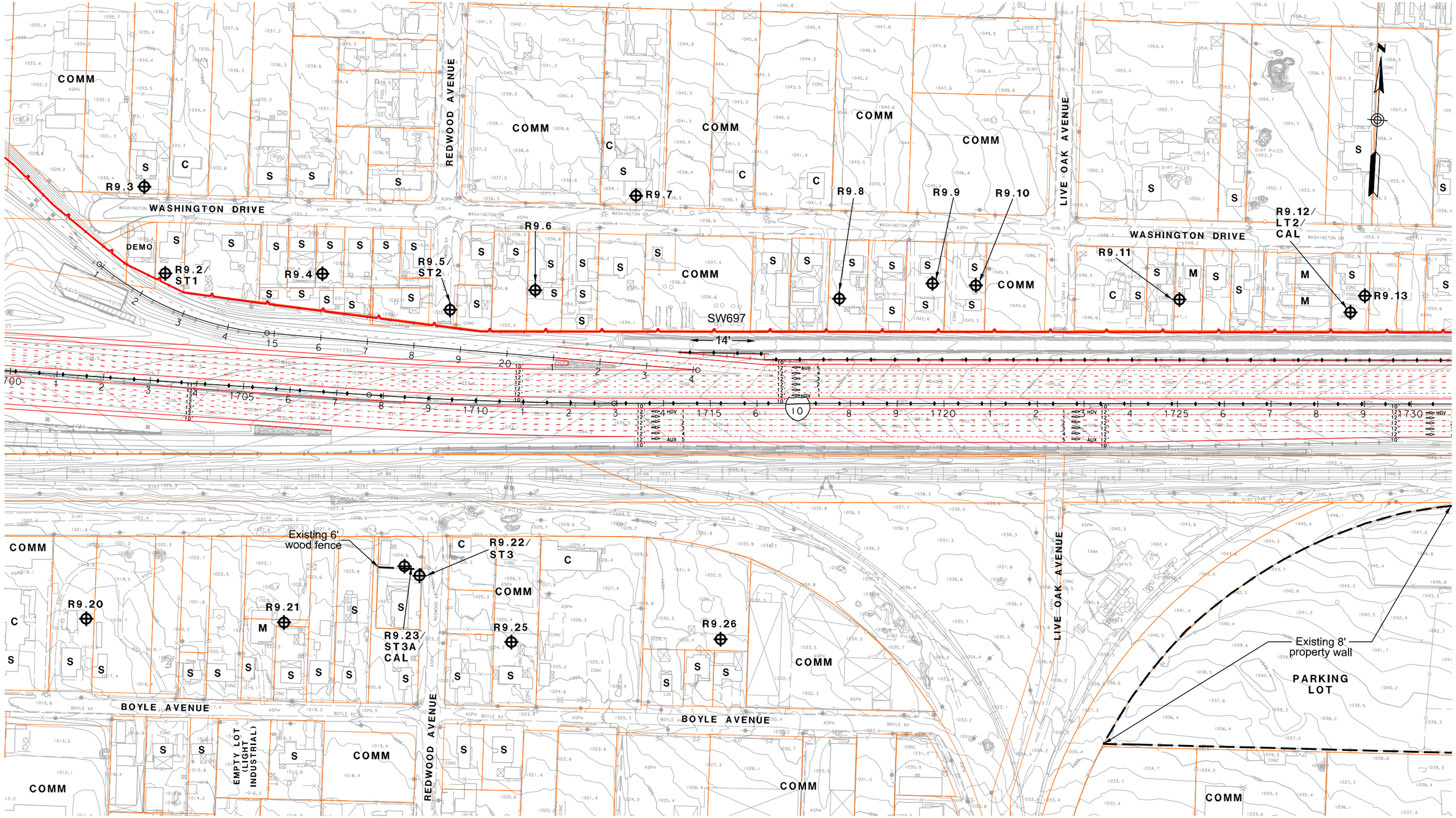
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 74



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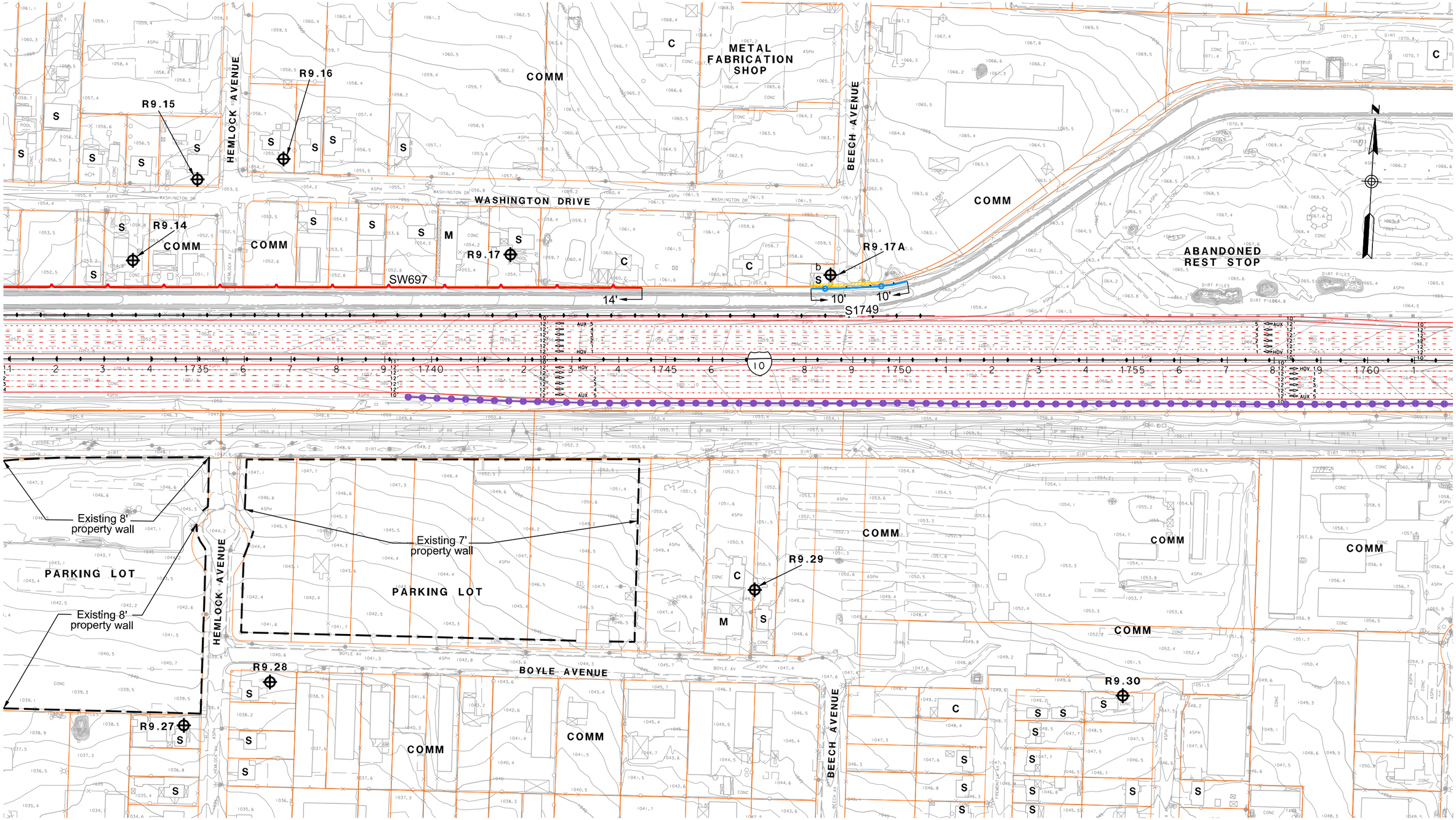
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 75



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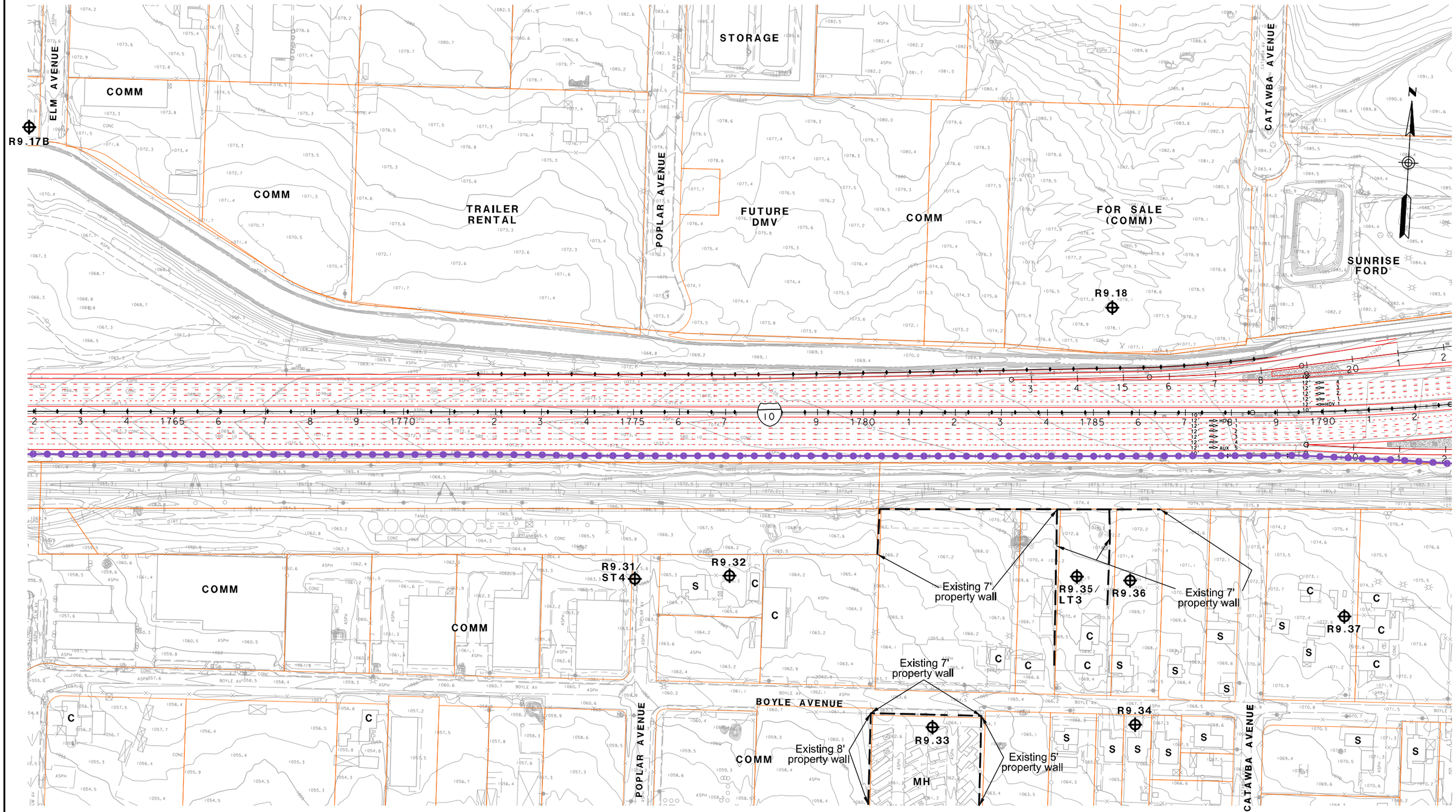
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 76



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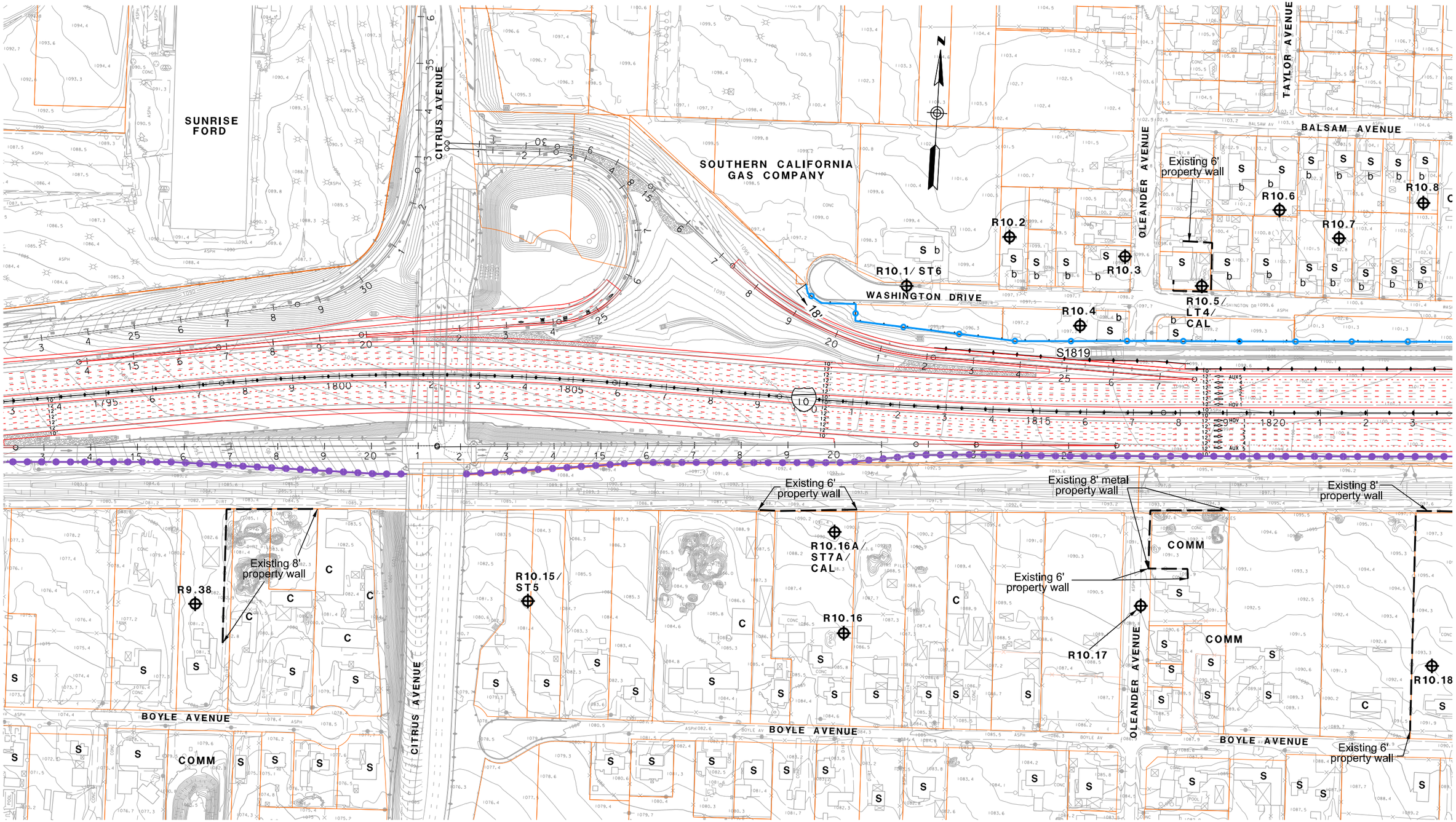
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 77



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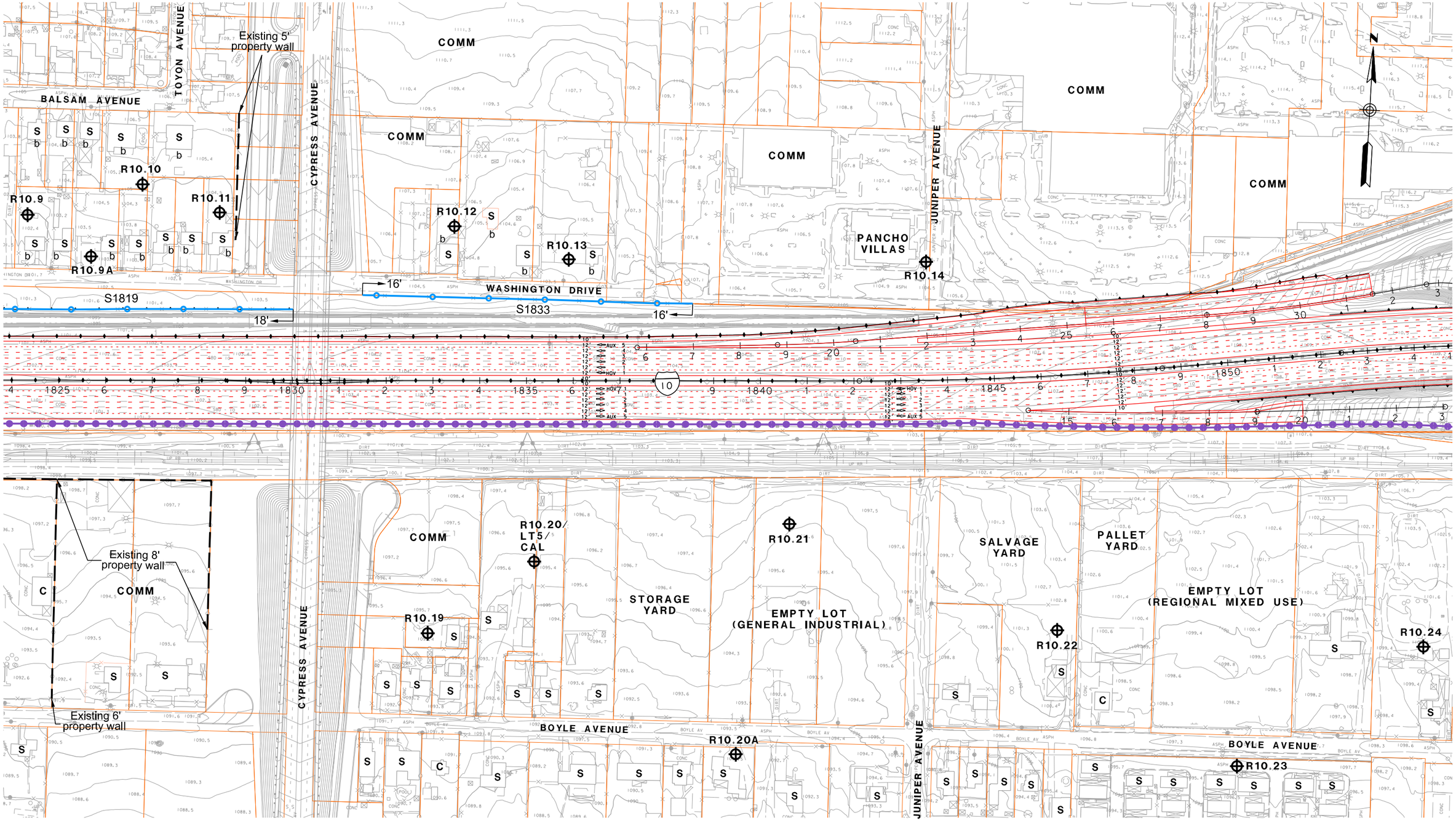
I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 78



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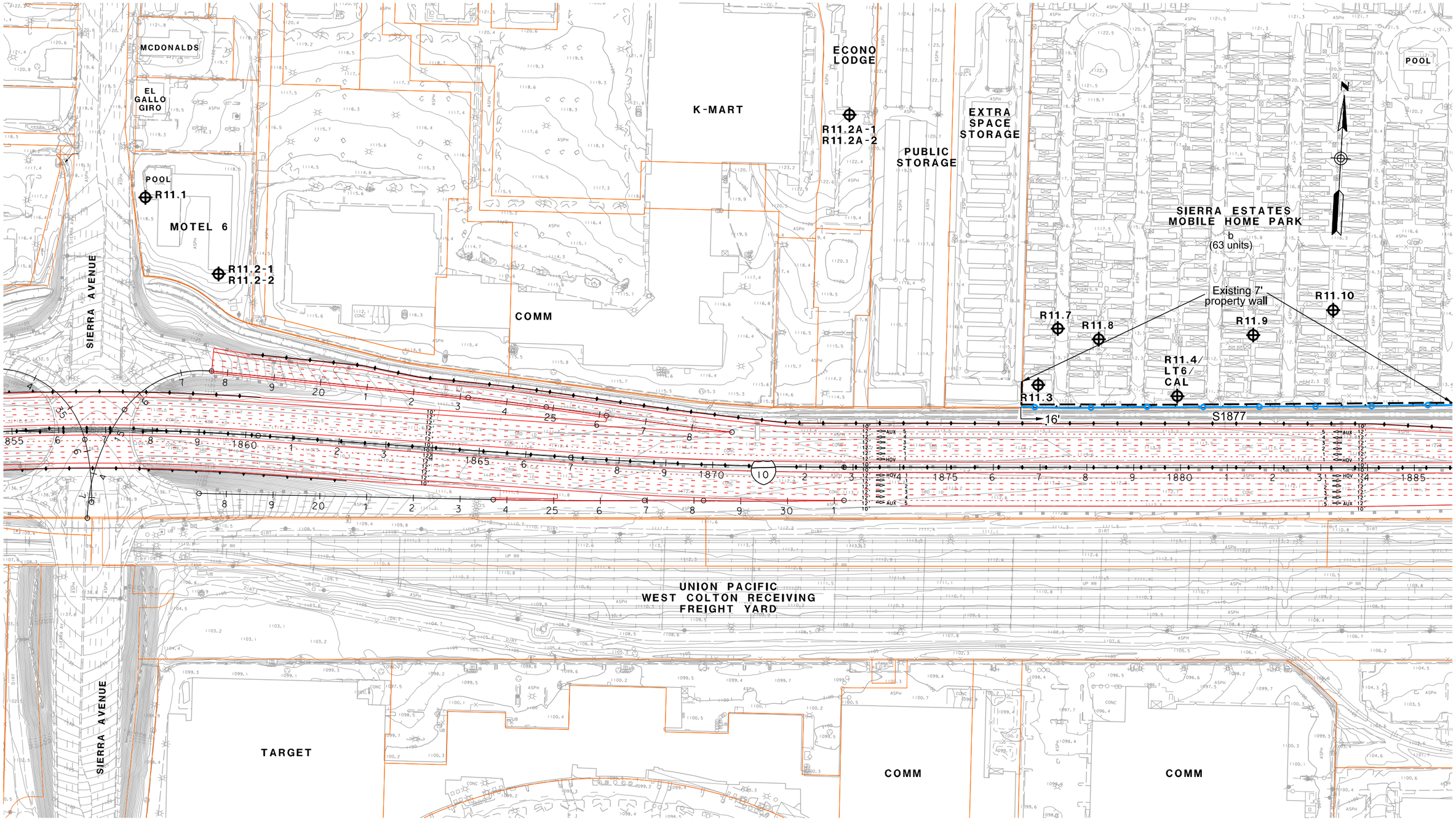
I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 79



LEGEND

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- CAL - CALIBRATION SITE
- LT - LONG-TERM MEASUREMENT
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- SFR OR S - SINGLE FAMILY RESIDENCE
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- EXISTING SOUNDWALL
- PROPOSED SOUNDWALL
- REPLACEMENT IN KIND SOUNDWALL
- ANALYZED SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

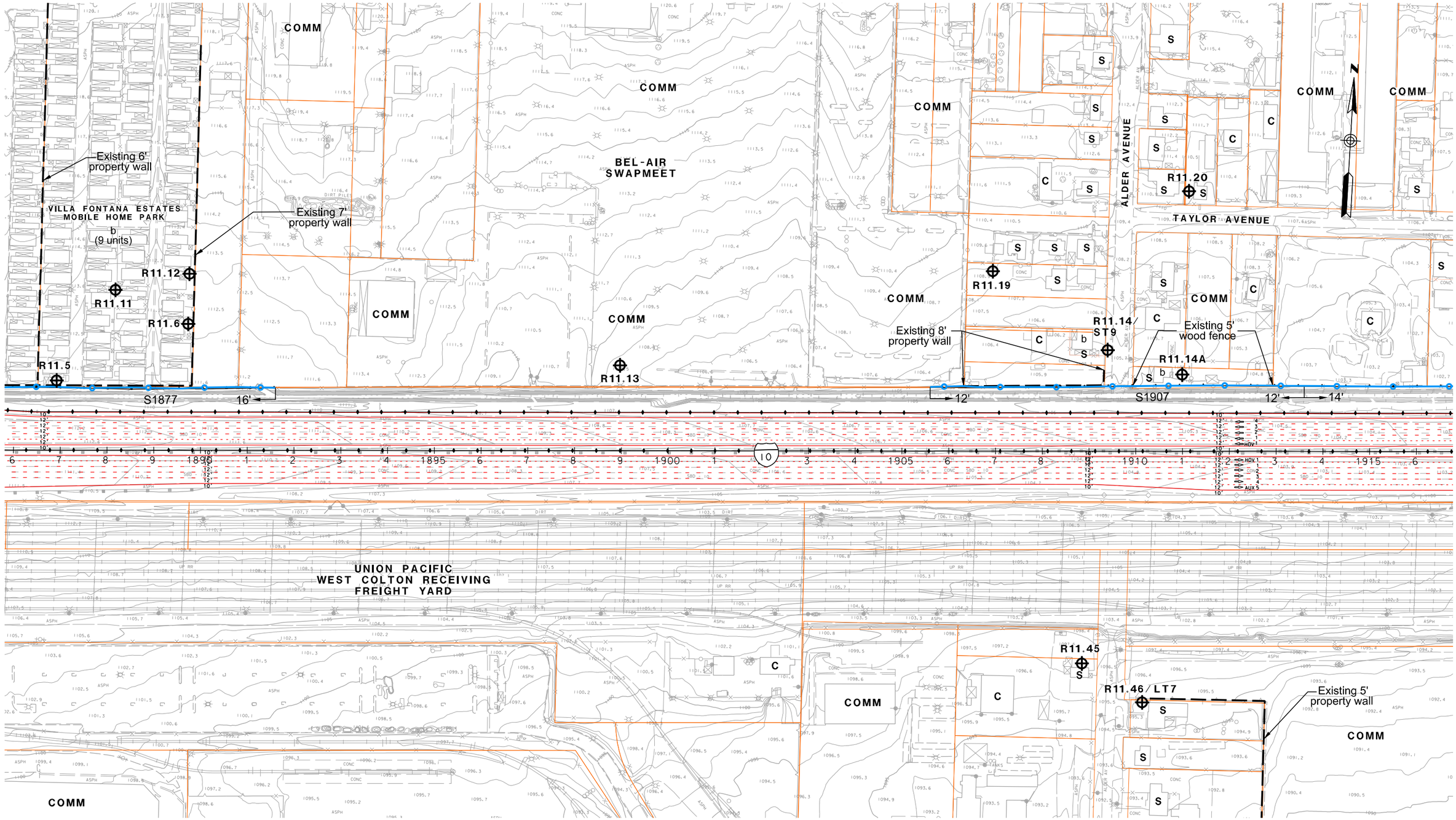
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 80



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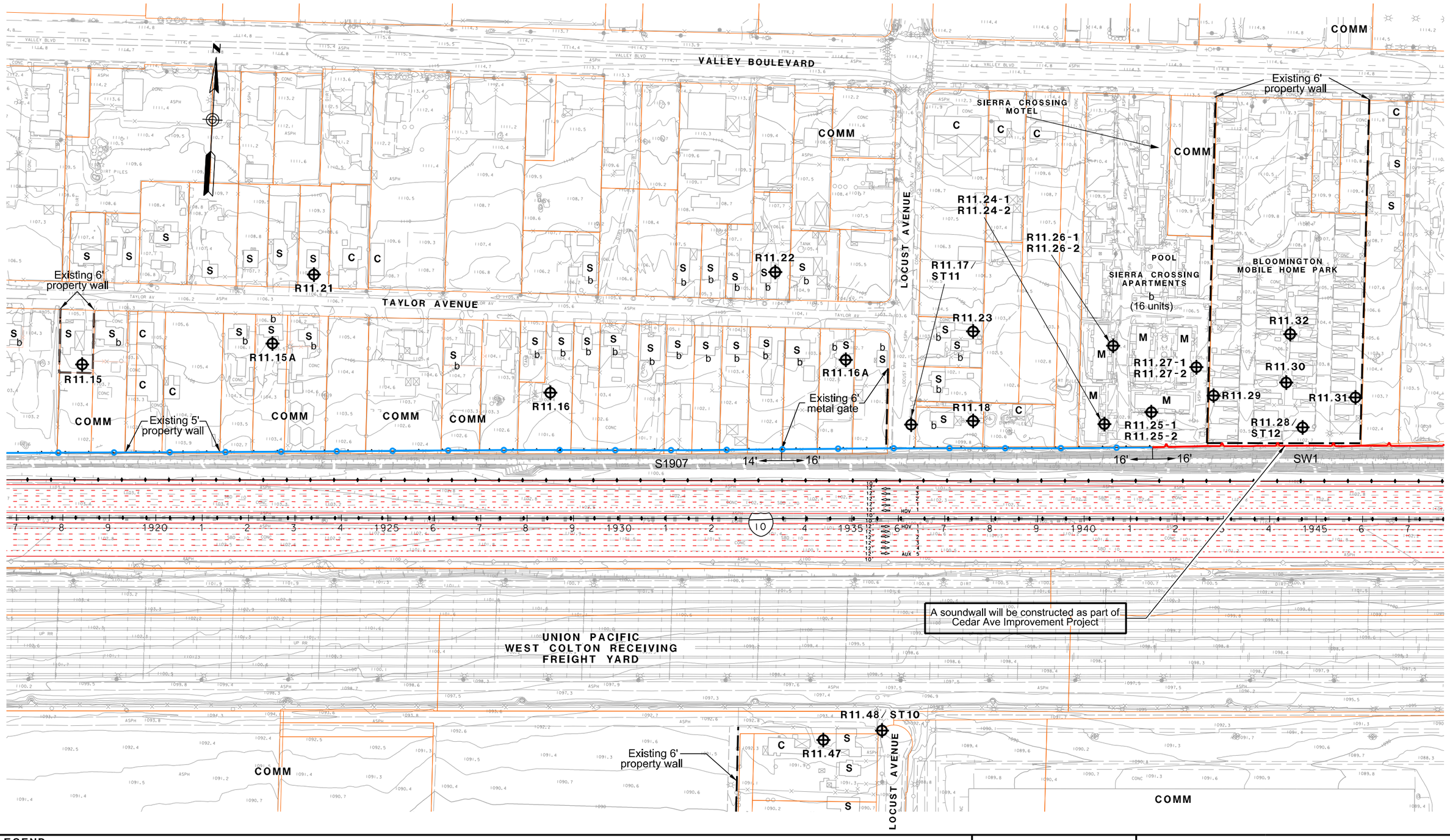
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 81



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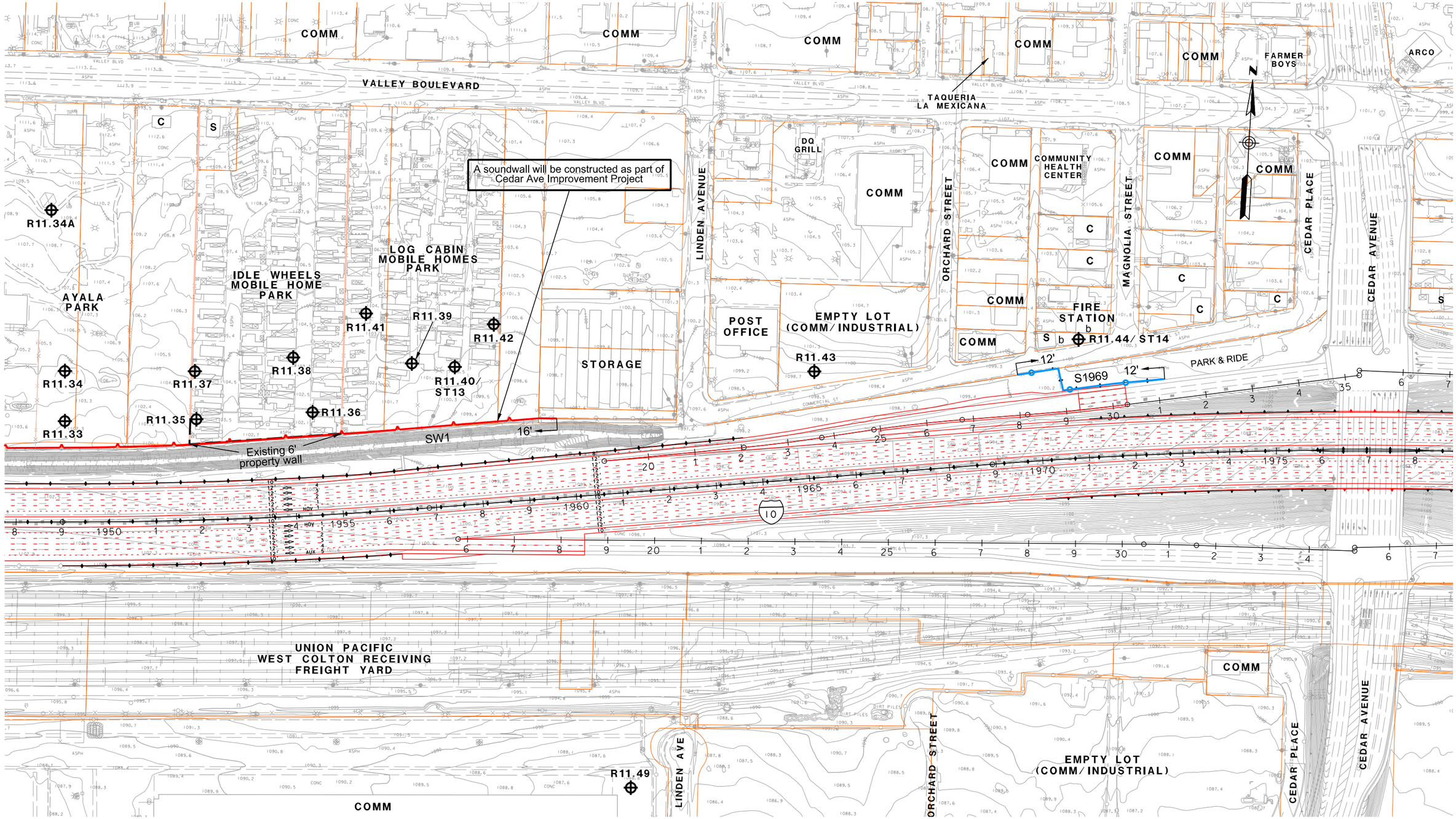
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 82



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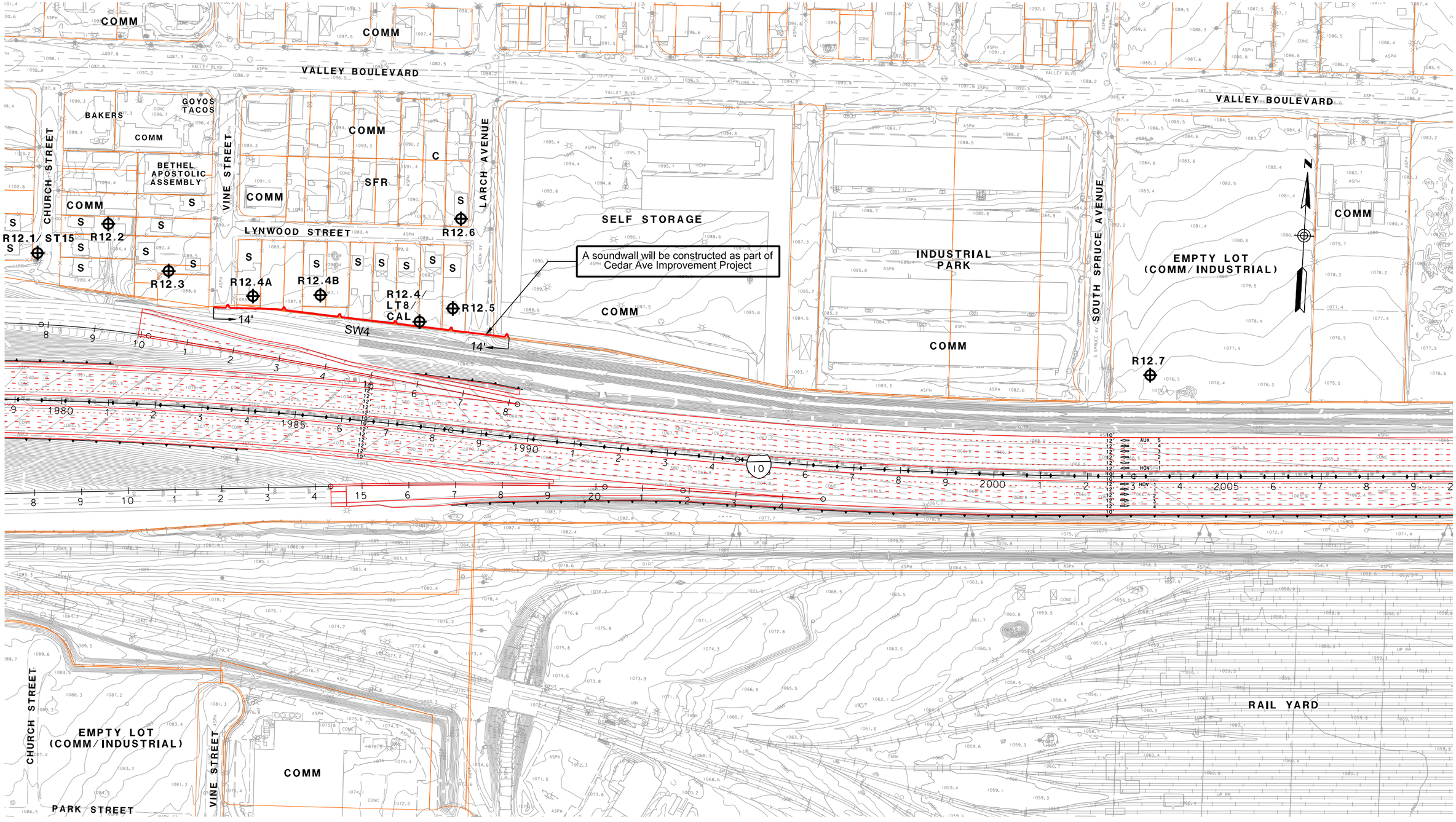
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 83



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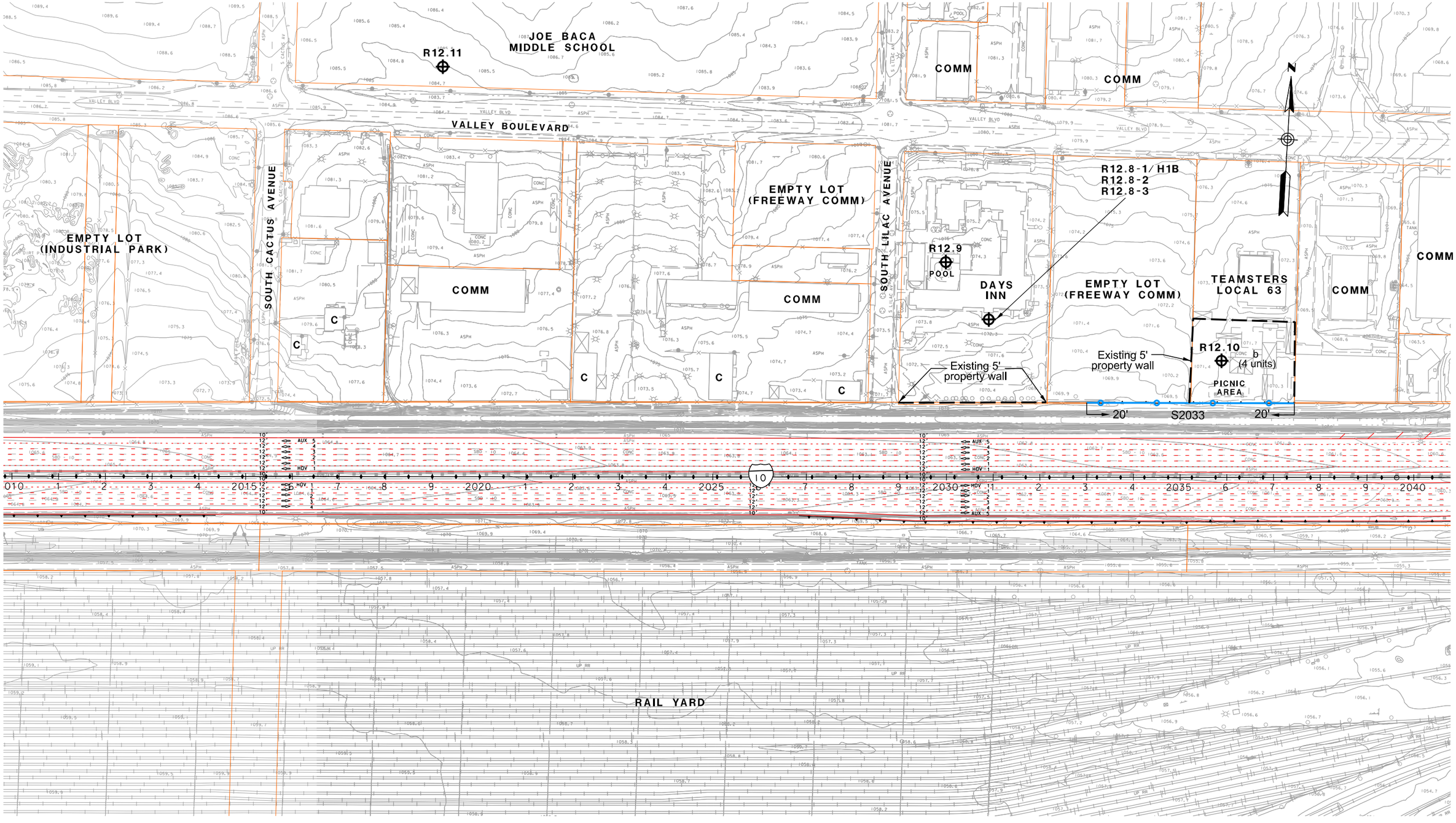
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 84



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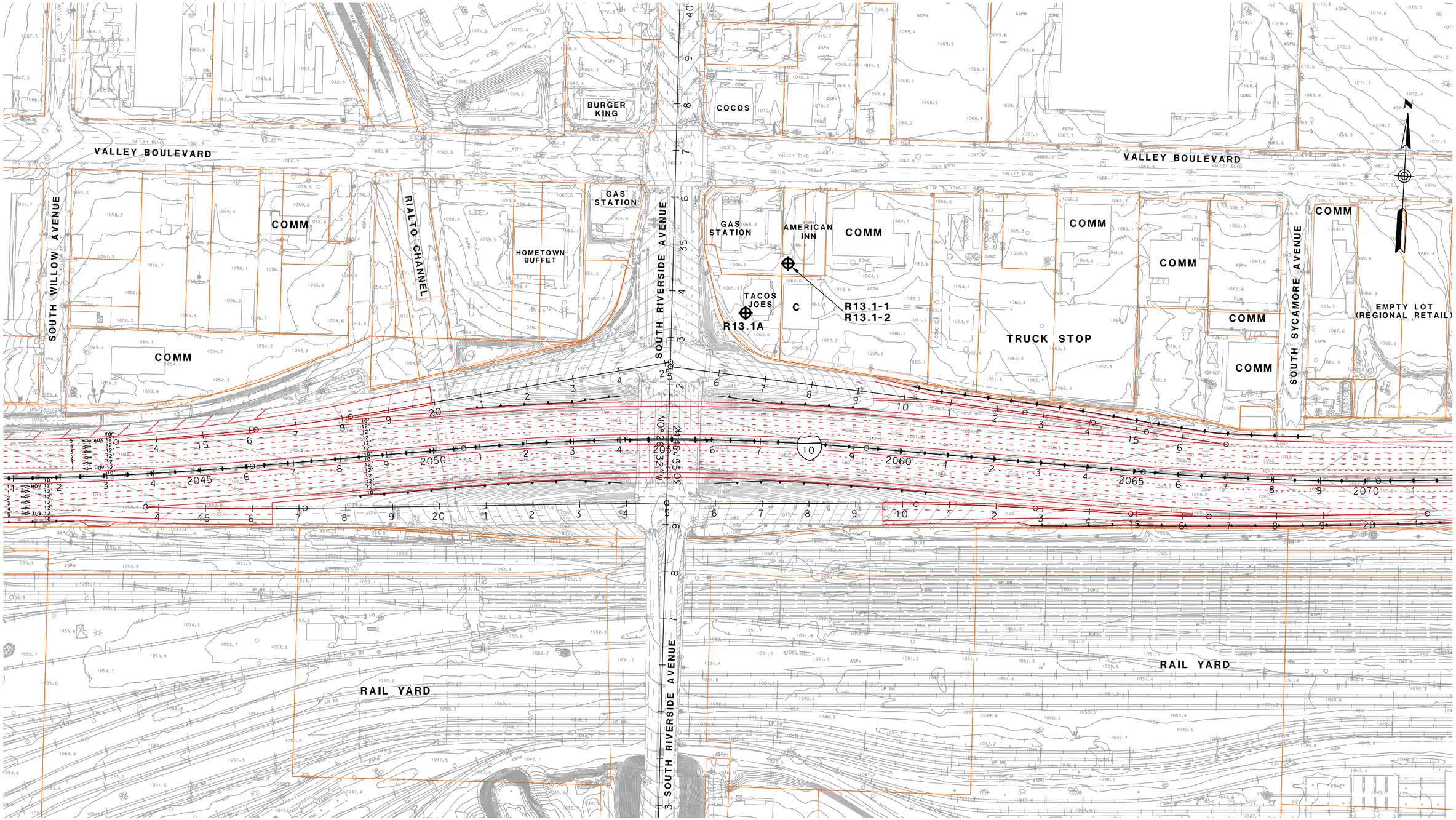
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 85



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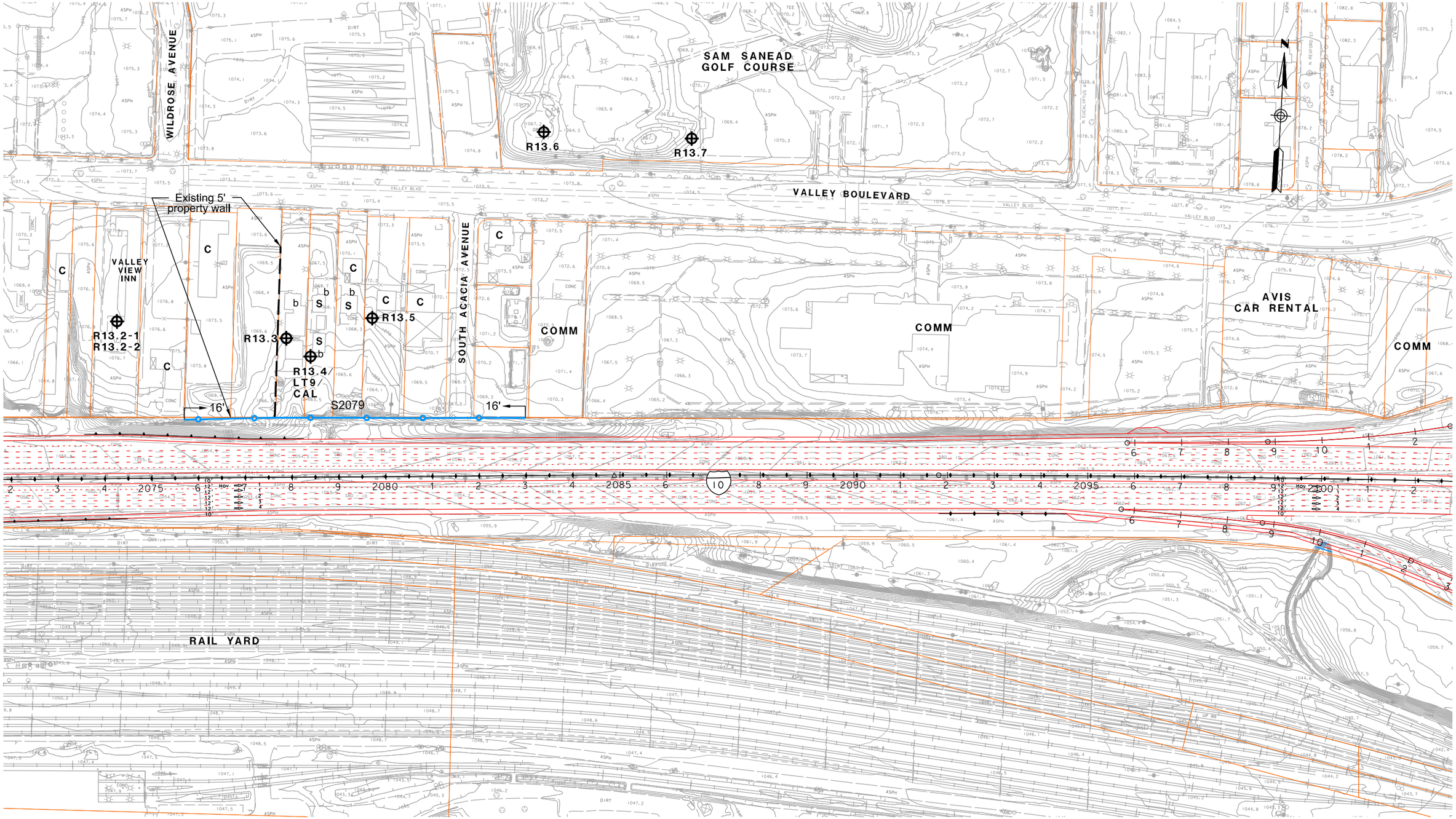
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 86



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1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 87

PARK AND RIDE

EMPTY LOTS (BUSINESS/INDUSTRIAL)

NORTH MERIDIAN AVENUE

EMPTY LOTS (BUSINESS/INDUSTRIAL)

SLOVER MOUNTAIN HIGH SCHOOL

R14.1A

R14.1B

GAS STATION

NORTH PEPPER AVENUE

COMM

SCHOOL ADMINISTRATION OFFICE

COMM

R14.1/ ST119

VALLEY BOULEVARD

HERMOSA AVENUE

RAILROAD TRACK

RAIL YARD

CEMENT PLANT

LEGEND

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1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 88

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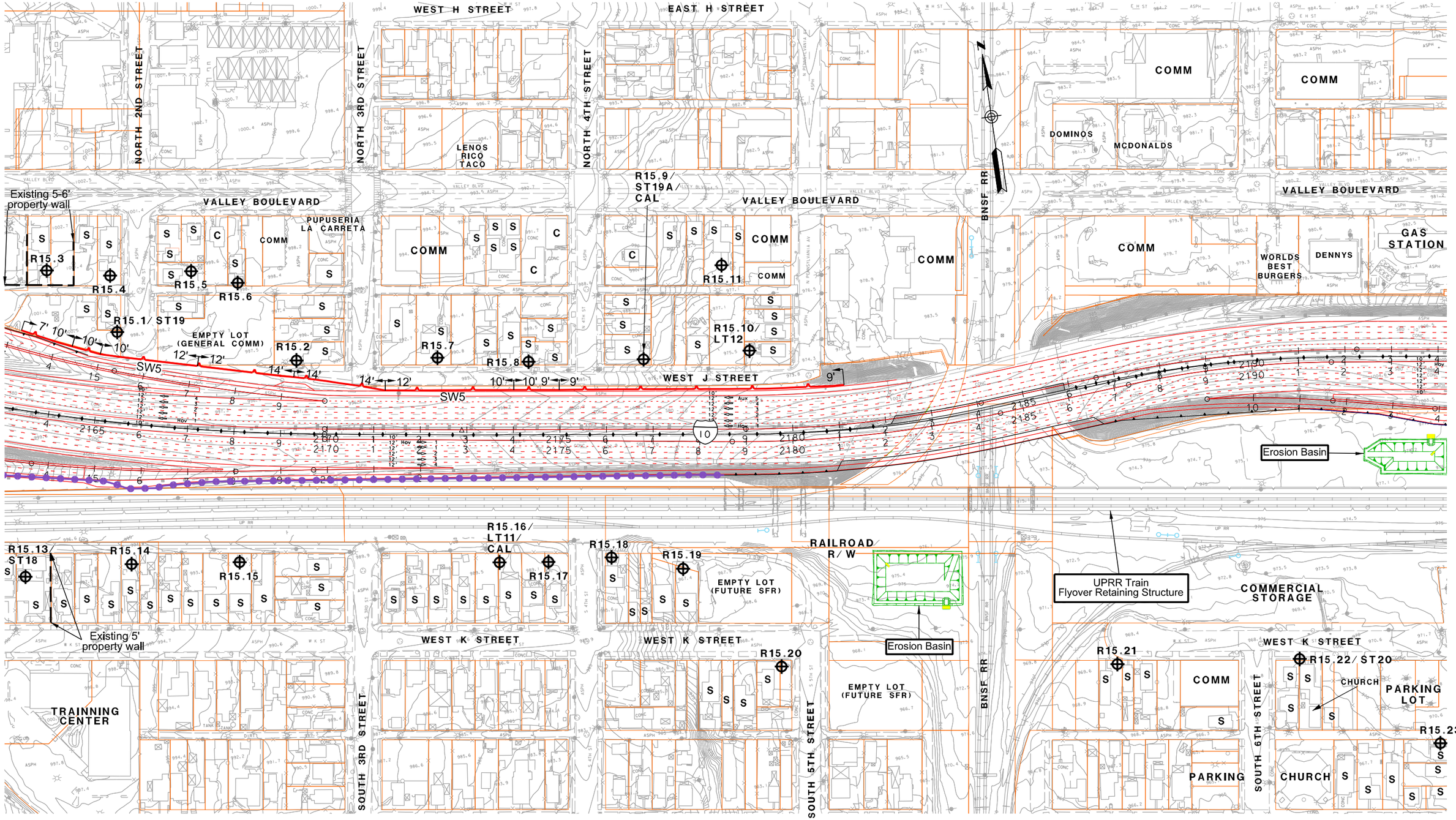
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 89



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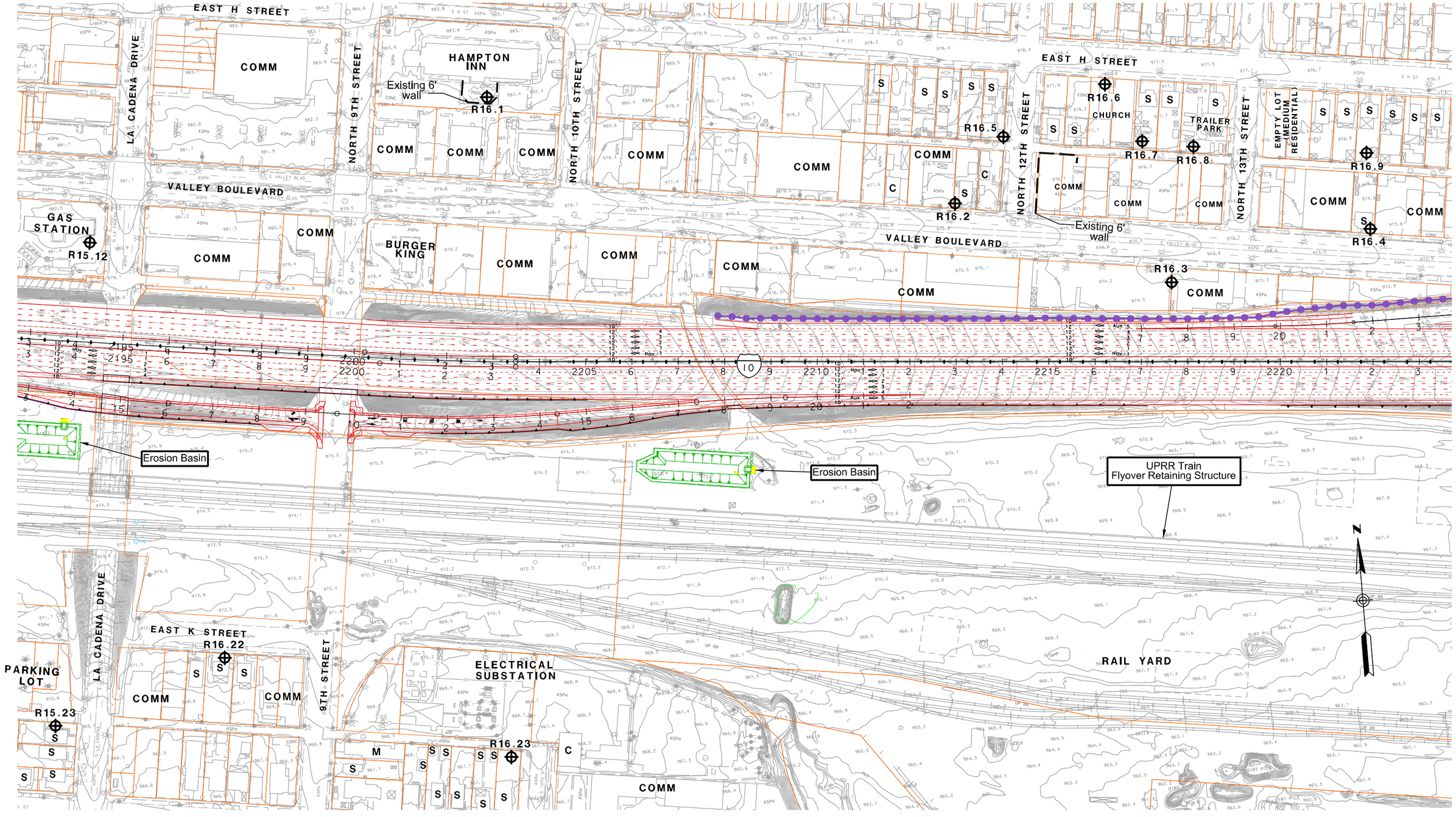
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 90



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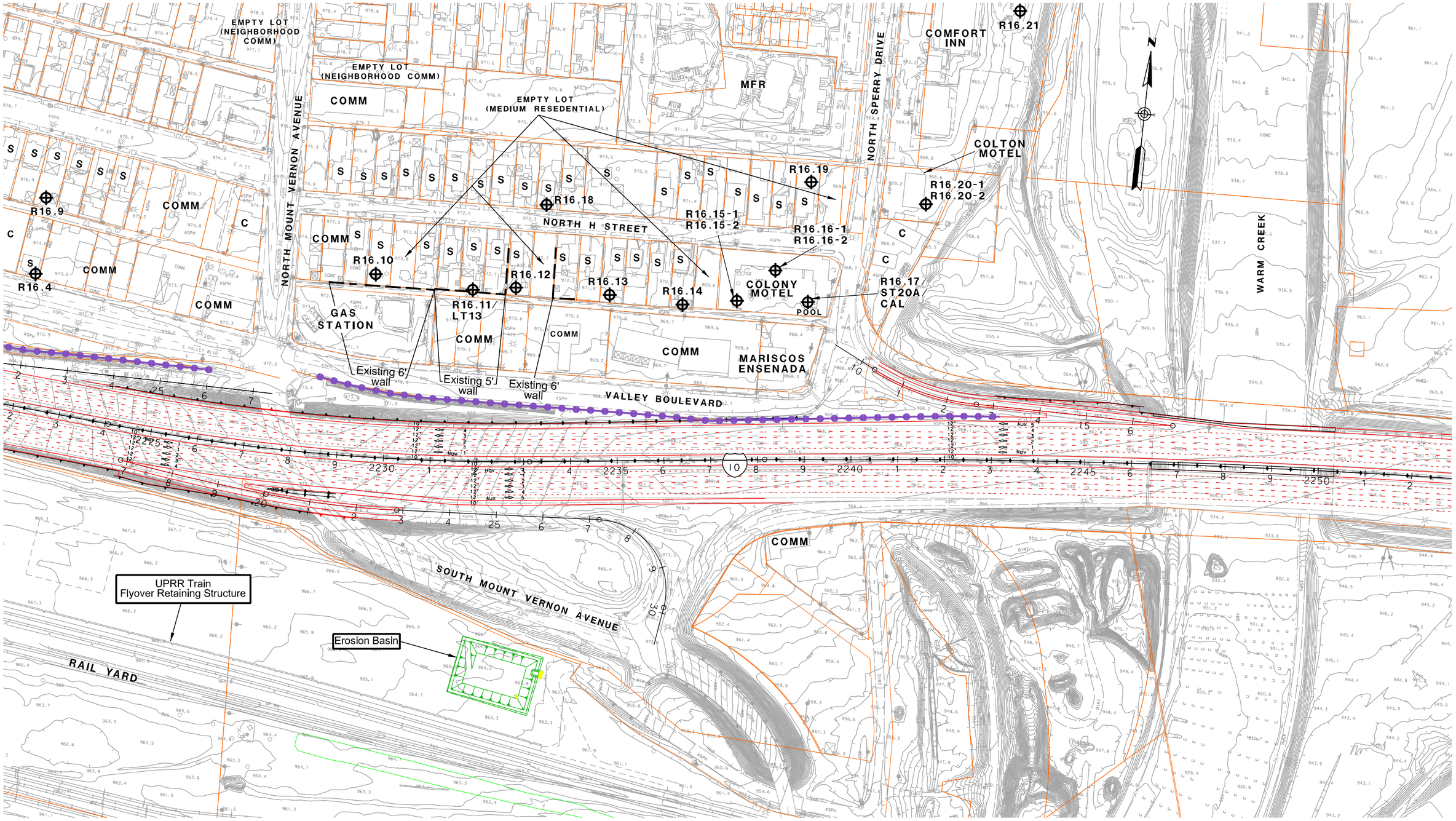
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 91



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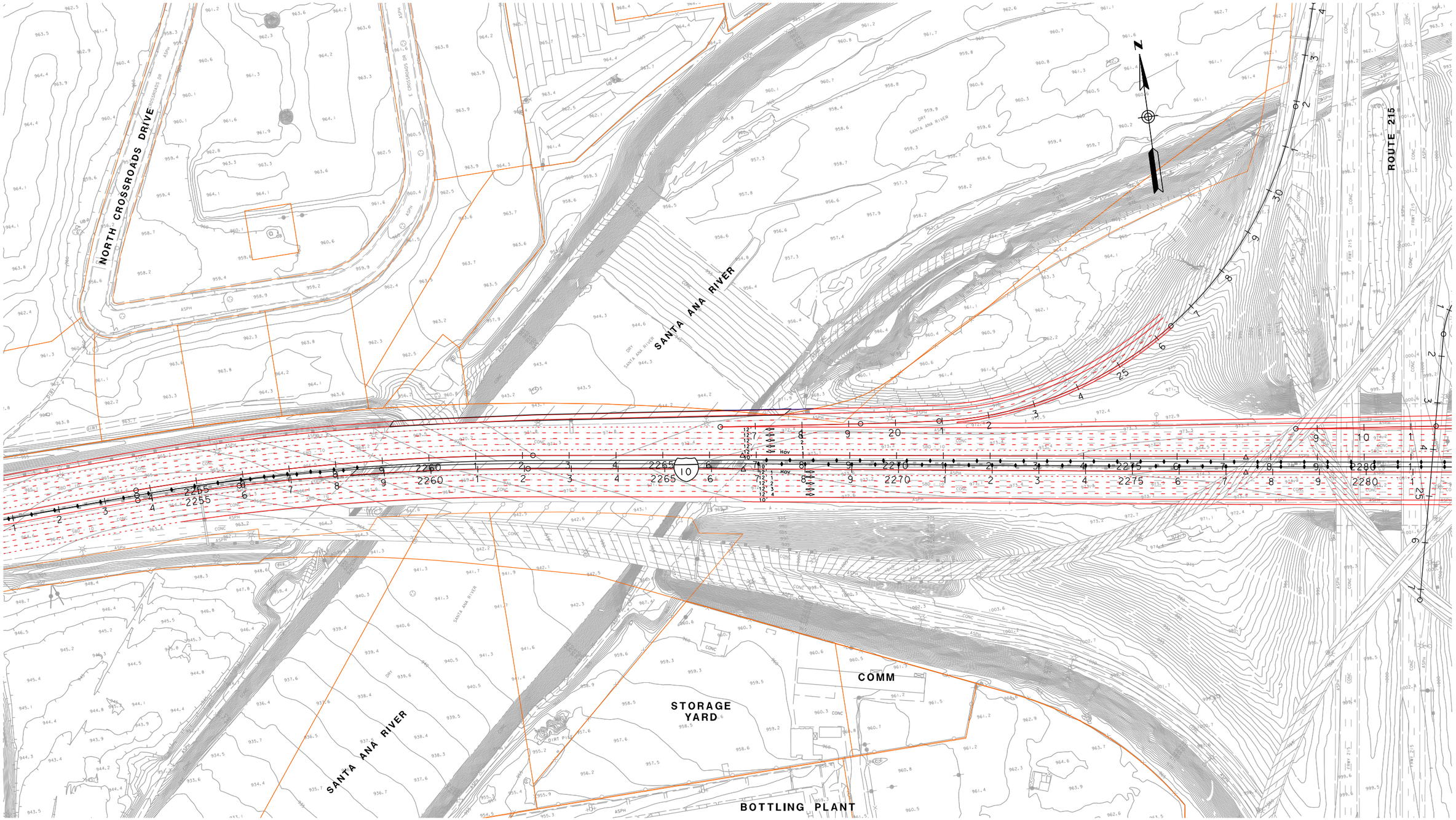
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 92



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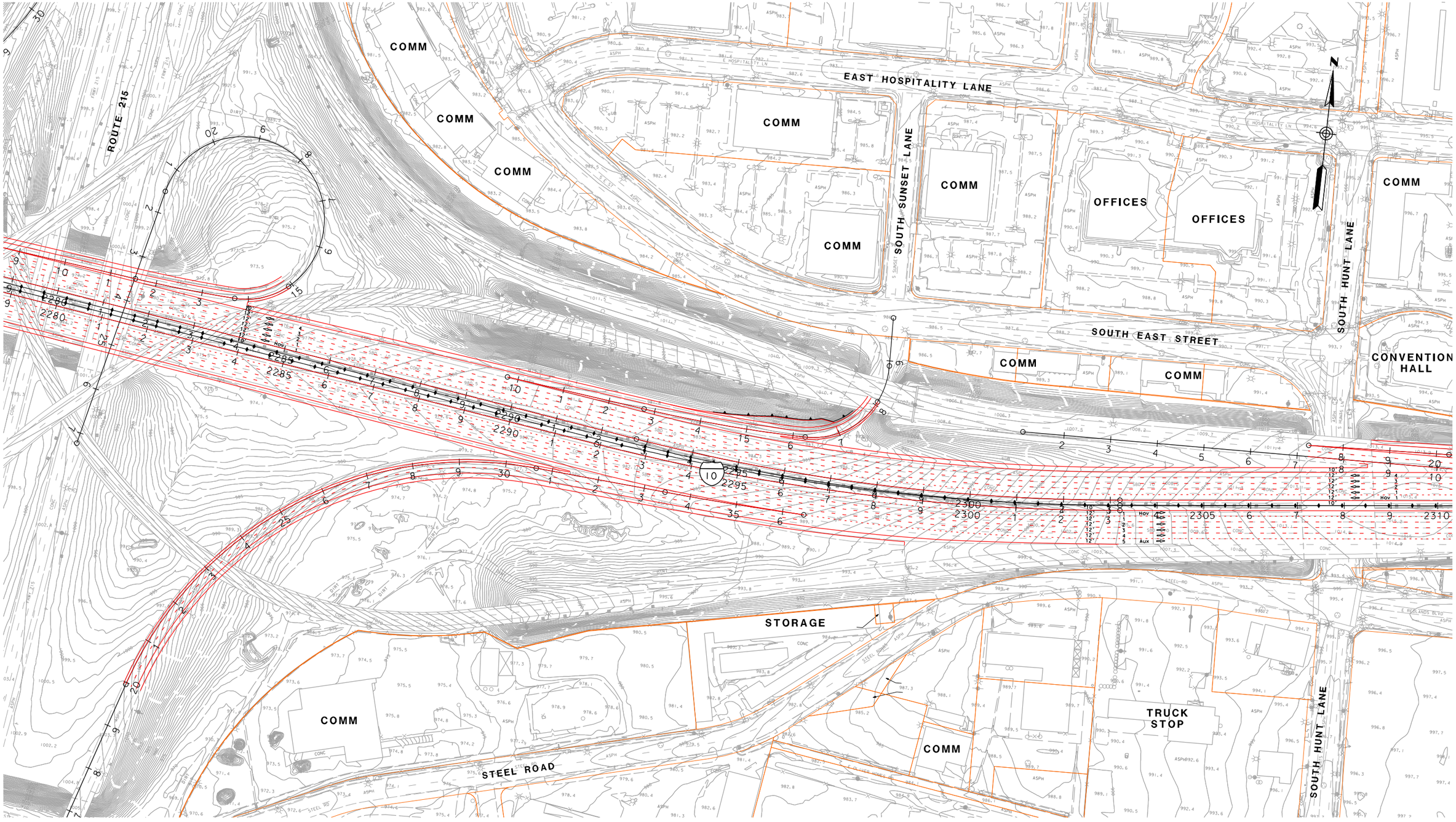
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 93



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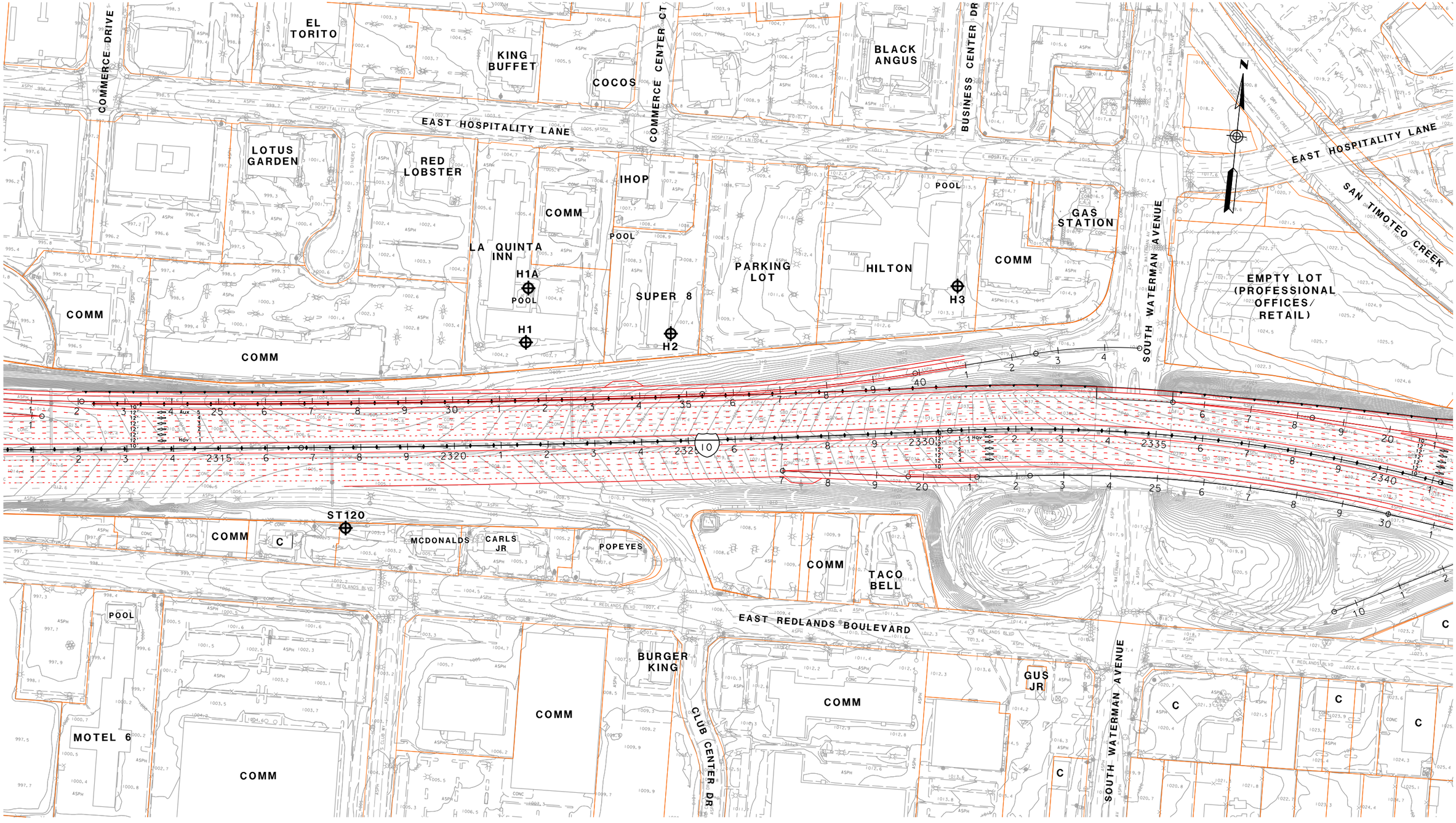
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 94



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1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 95

MIMIS CAFE
CHILIS
FIVE GUYS BURGERS
OUTBACK STEAKHOUSE
OS AMERICAN KITCHEN
CHUCK E CHEESE
PANDA EXPRESS
POLLO CAMPERO
COMM
SOUTH CARNEGIE DRIVE
EAST HOSPITALITY LANE
EAST HARRIMAN PLACE
SAN TIMOTEO CREEK
EMPTY LOT (PROFESSIONAL OFFICES RETAIL)
HOME DEPOT
GAGE CANAL
EMPTY LOT (ENTERTAINMENT/ OFFICES/RETAIL)
EAST REDLANDS BOULEVARD
RETAIL SHOPPING CENTER
C

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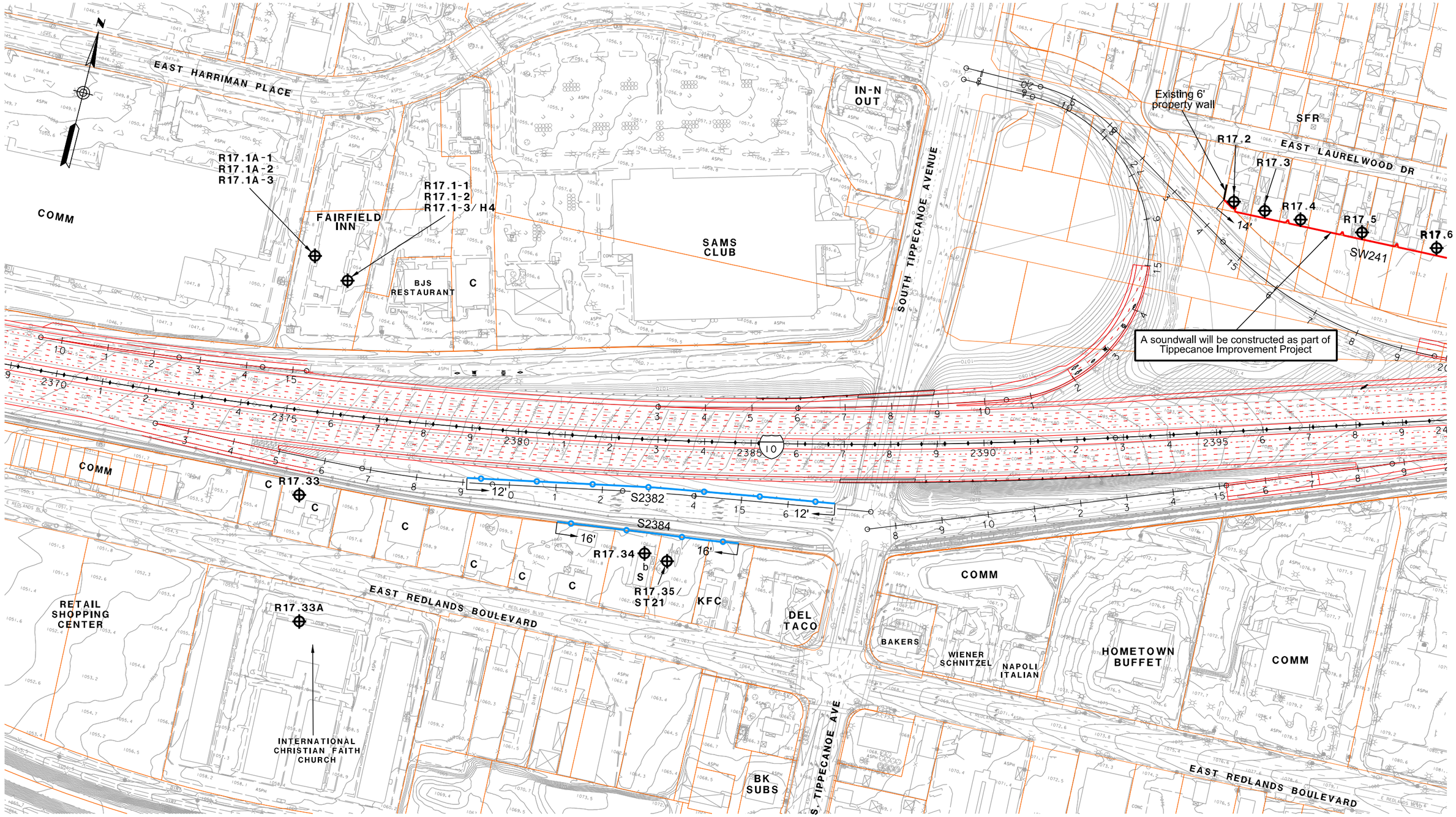
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 96



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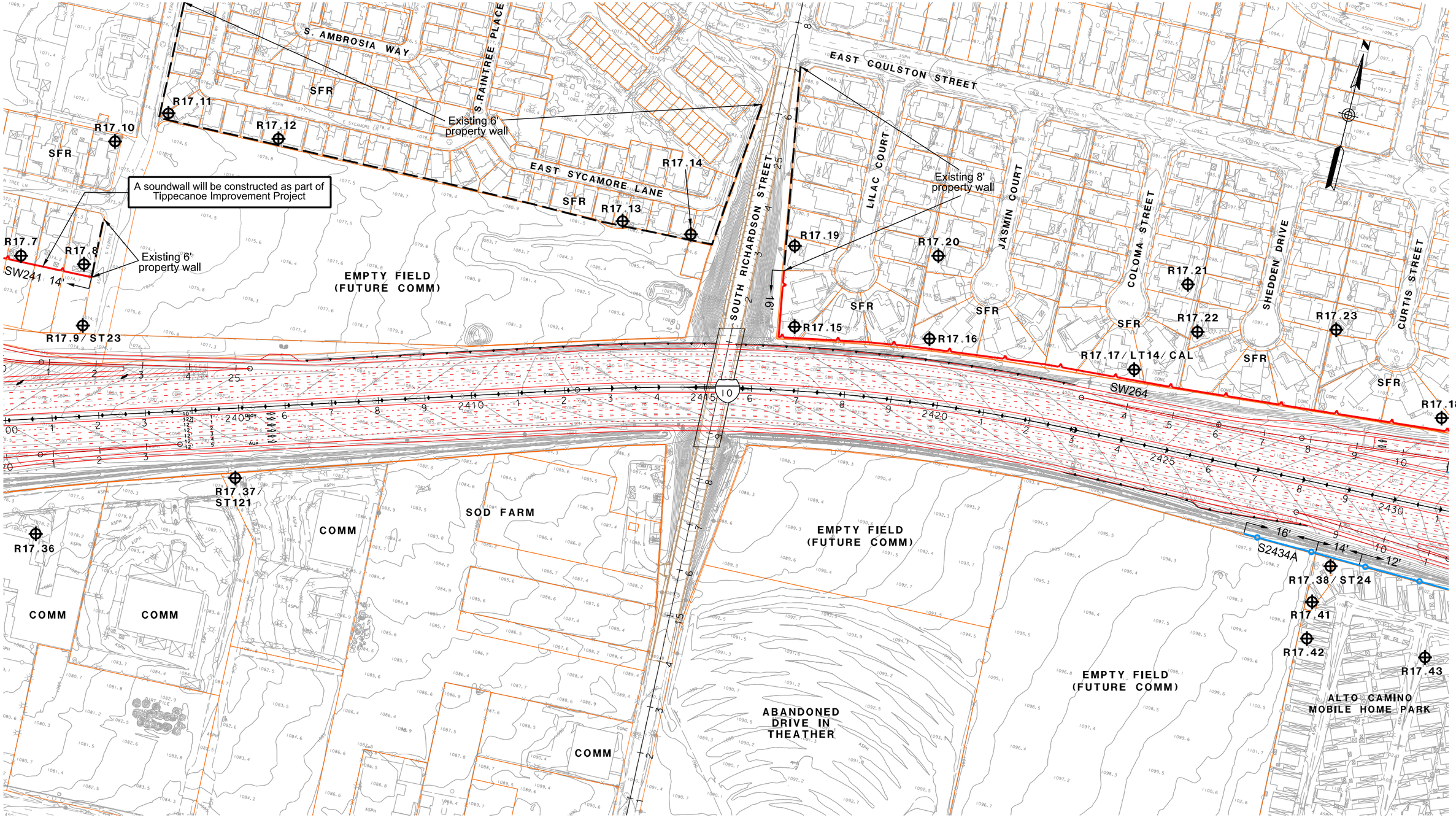
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 97



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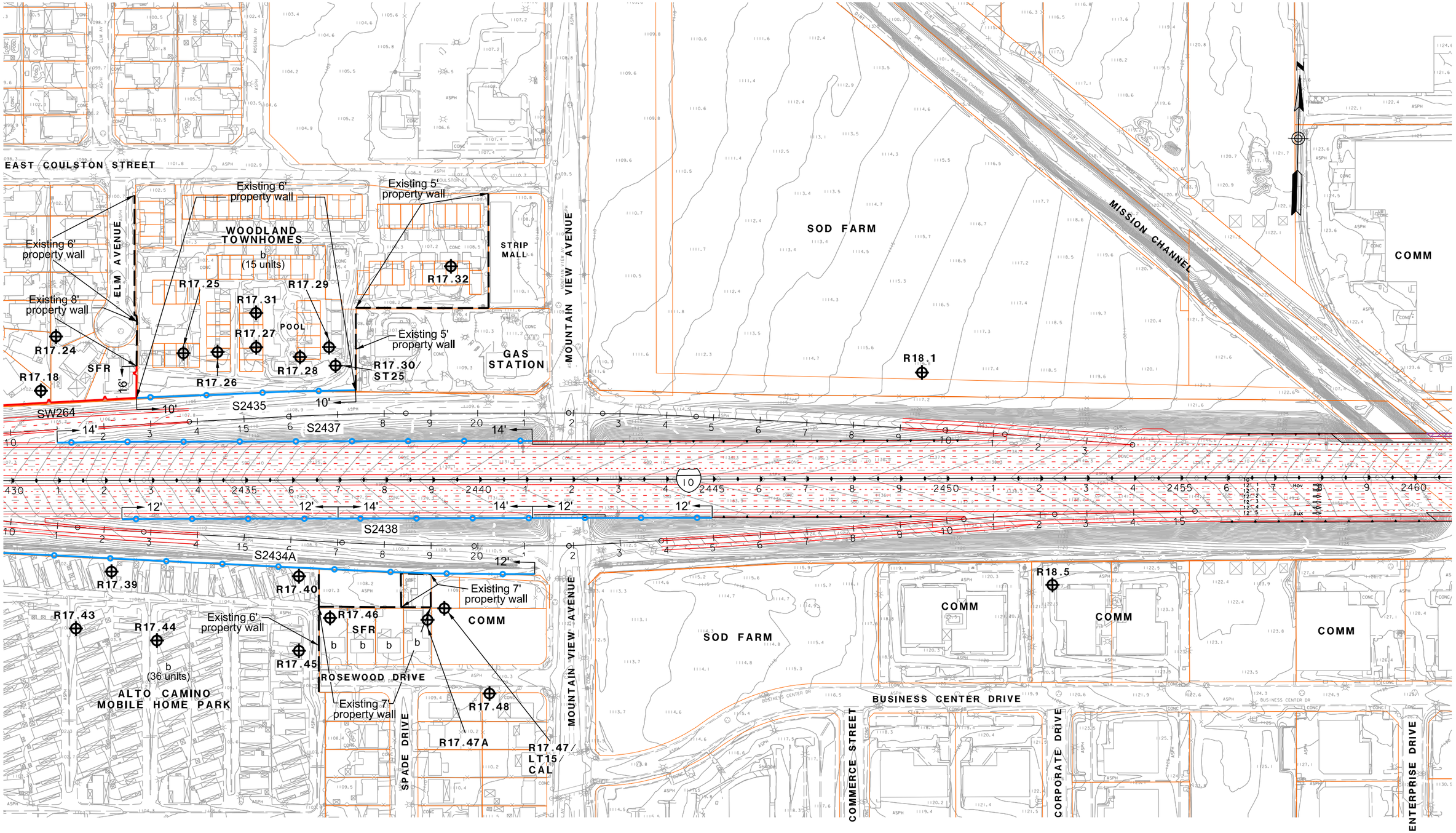
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NOISE RECEIVER & BARRIER LOCATIONS (OPTION 1)

JUNE 10, 2015

FIGURE 98-1



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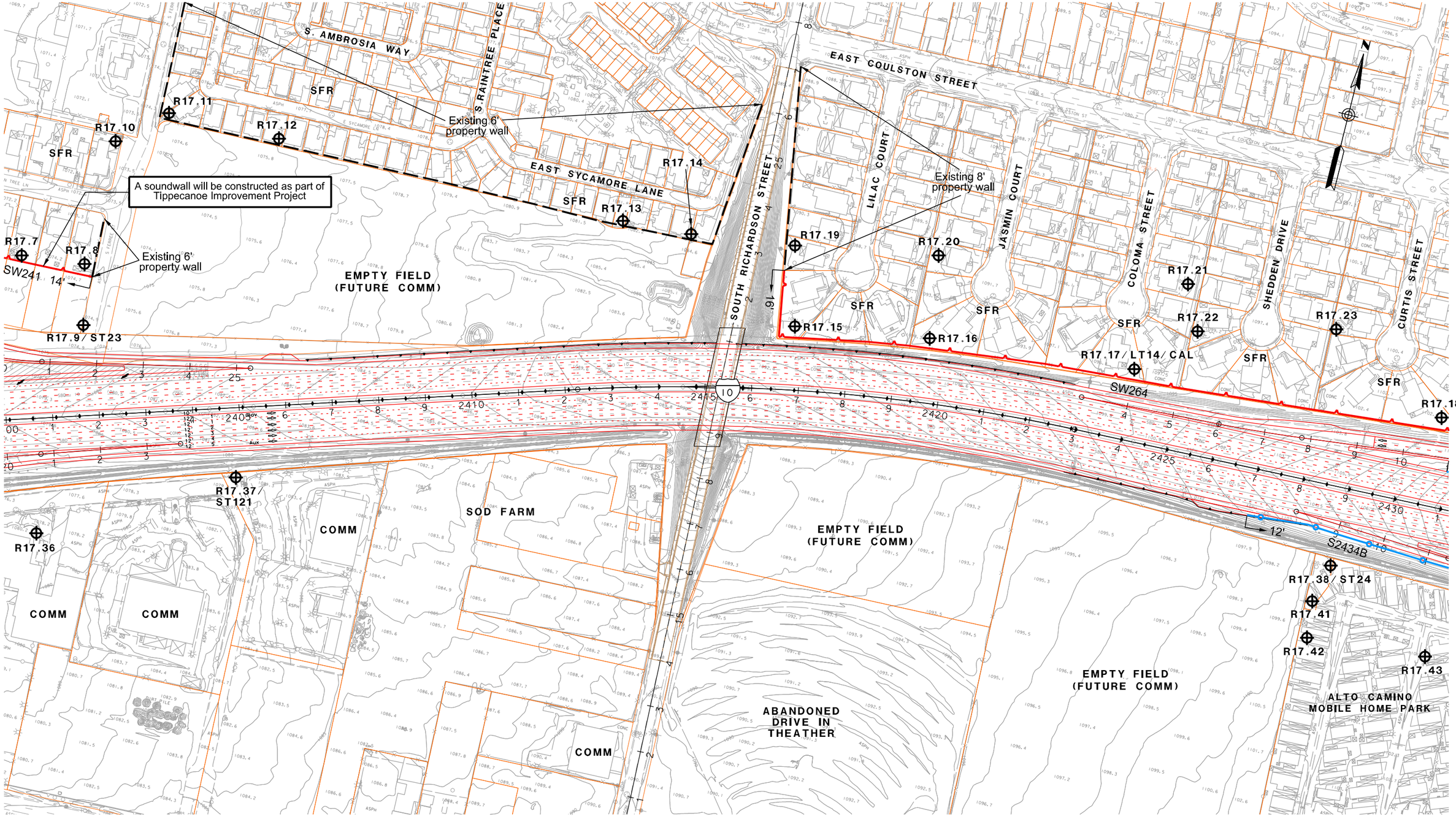
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS
(OPTION 1)

JUNE 10, 2015

FIGURE 99-1



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- REPLACEMENT IN KIND SOUNDWALL
- ANALYZED SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

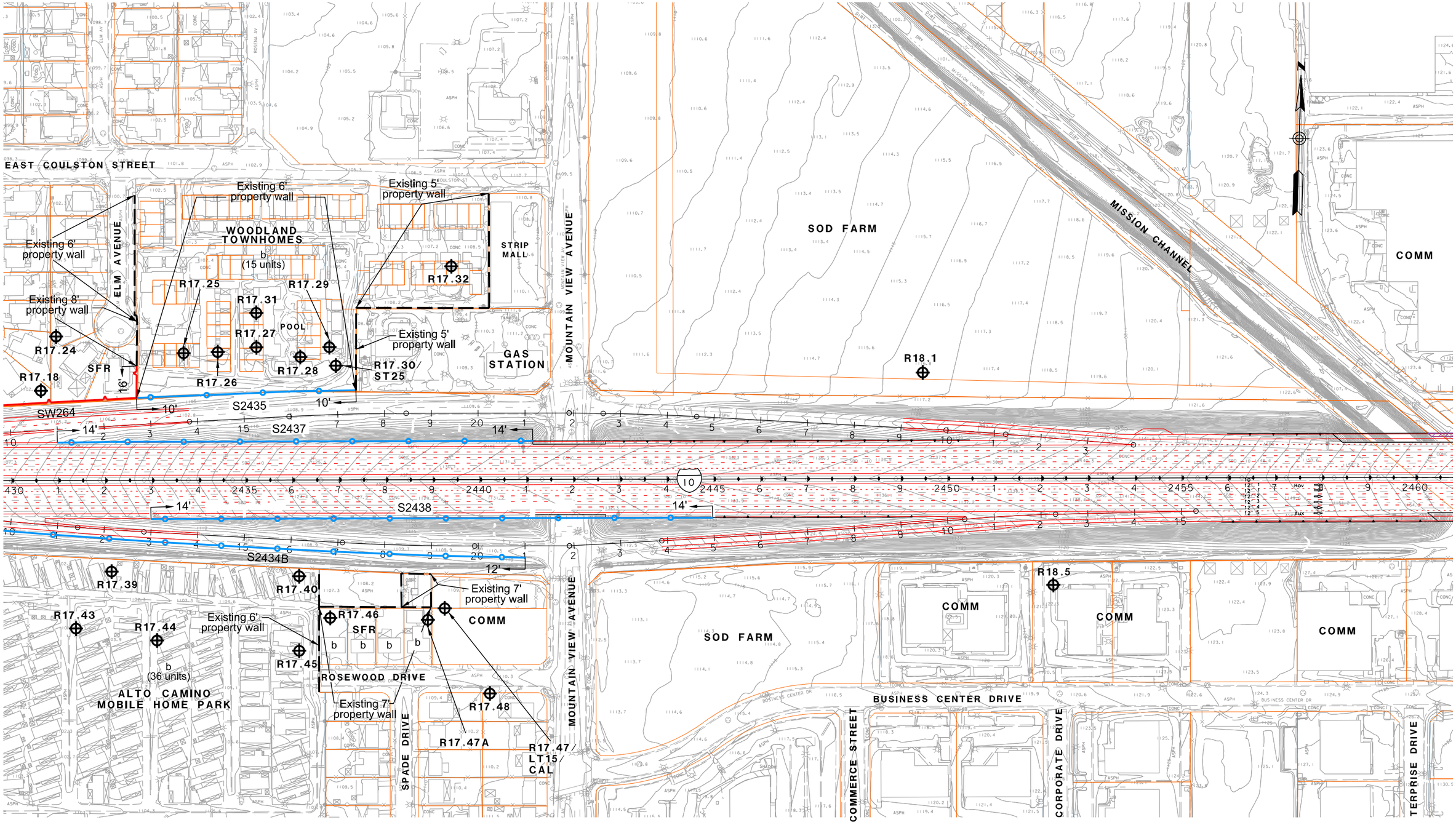
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NOISE RECEIVER & BARRIER LOCATIONS (OPTION 2)

JUNE 10, 2015

FIGURE 98-2



LEGEND

- RXX - RECEIVER SITE
- CAL - CALIBRATION SITE
- LT - LONG-TERM MEASUREMENT
- ST - SHORT-TERM MEASUREMENT

- SFR OR S - SINGLE FAMILY RESIDENCE
- MFR OR M - MULTI-FAMILY RESIDENCE
- COMM OR C - COMMERCIAL/NO OUTDOOR USE AREA
- b - BENEFITED RESIDENCE
- HXX - IN/OUTDOOR MEASUREMENT

- EXISTING PROPERTY WALL
- EXISTING SOUNDWALL
- PROPOSED SOUNDWALL
- REPLACEMENT IN KIND SOUNDWALL
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- RETAINING WALL
- SAFETY BARRIER

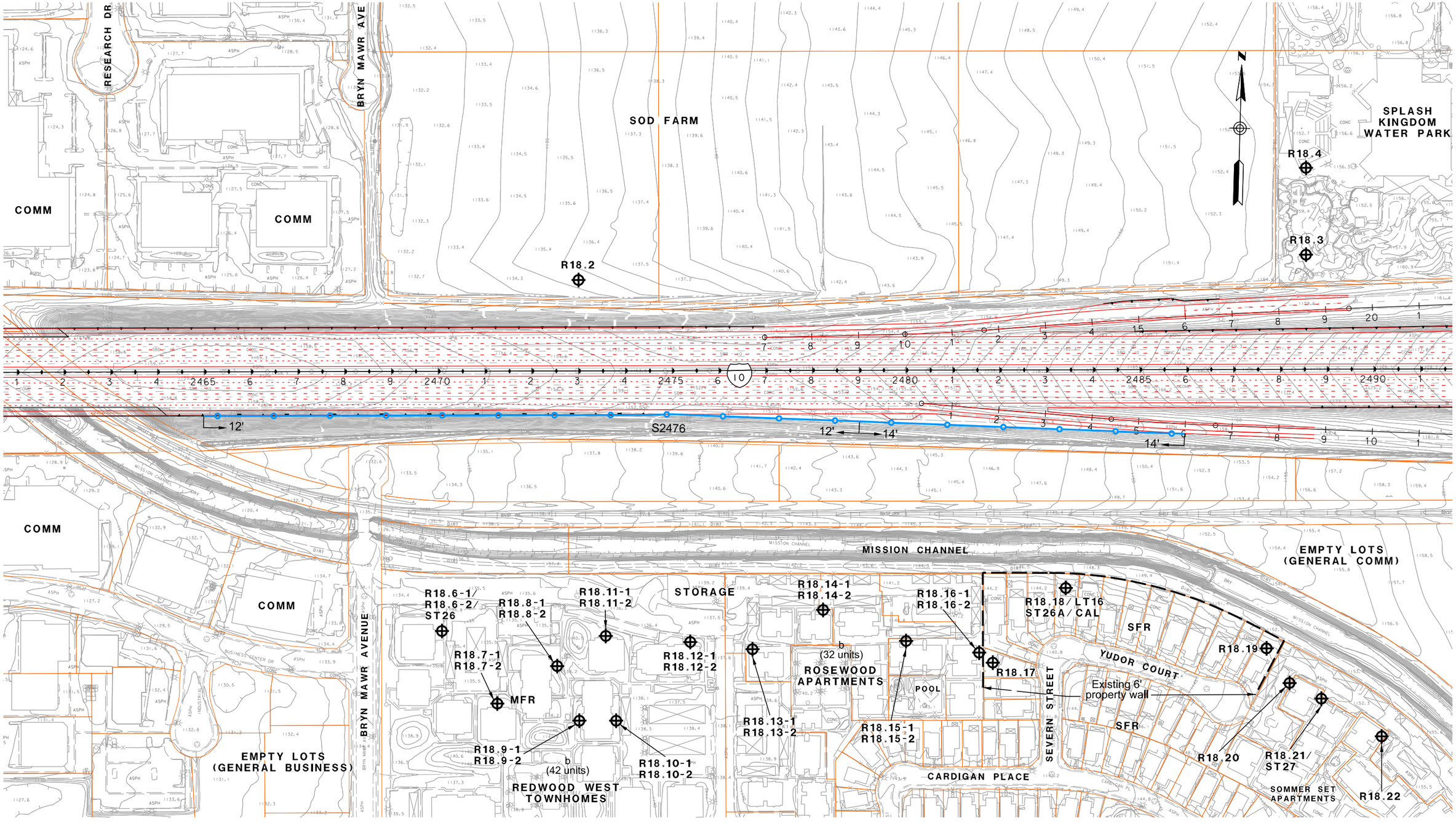
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS
(OPTION 2)

JUNE 10, 2015

FIGURE 99-2



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- SAFETY BARRIER

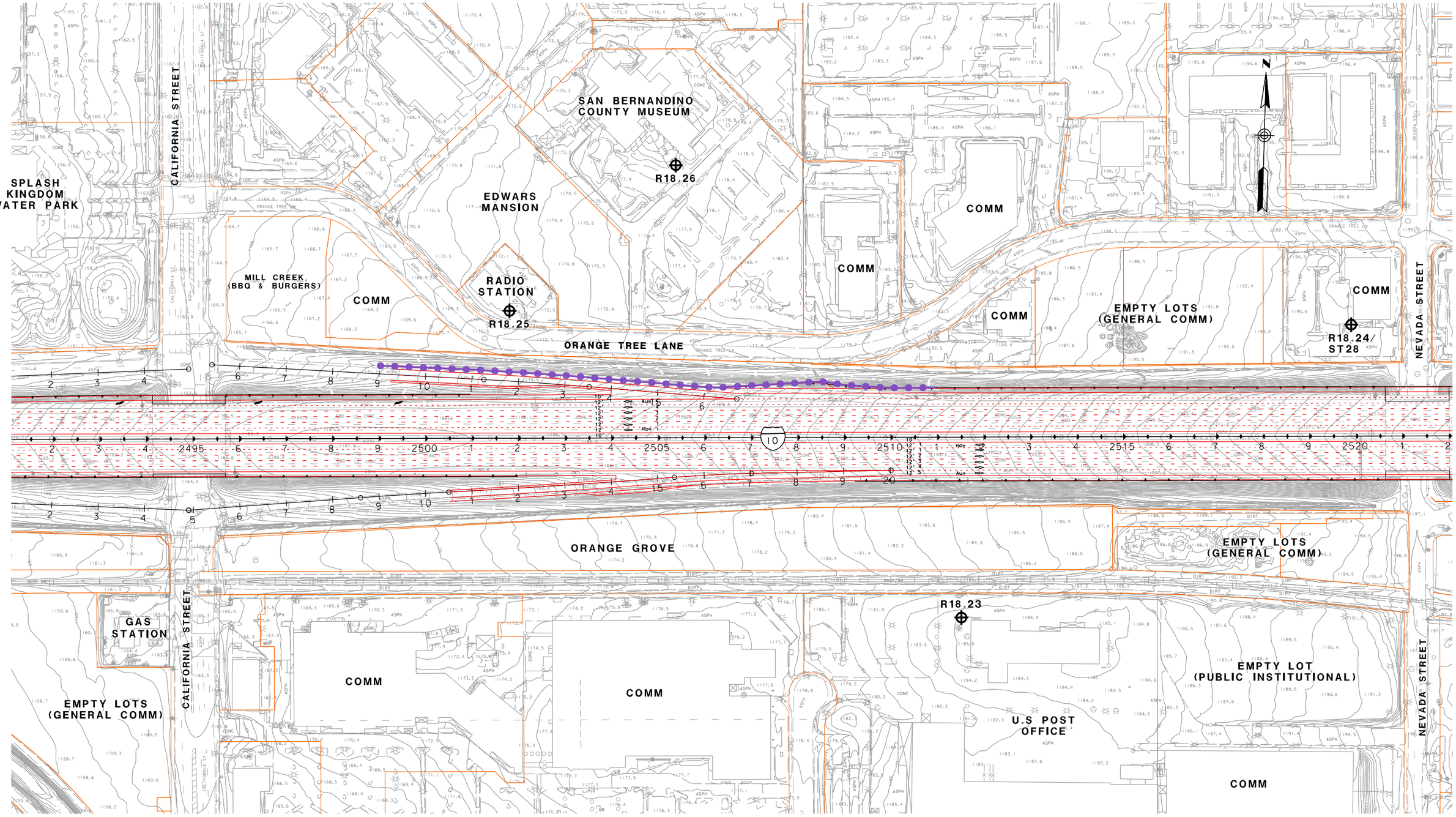
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 100



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- RETAINING WALL
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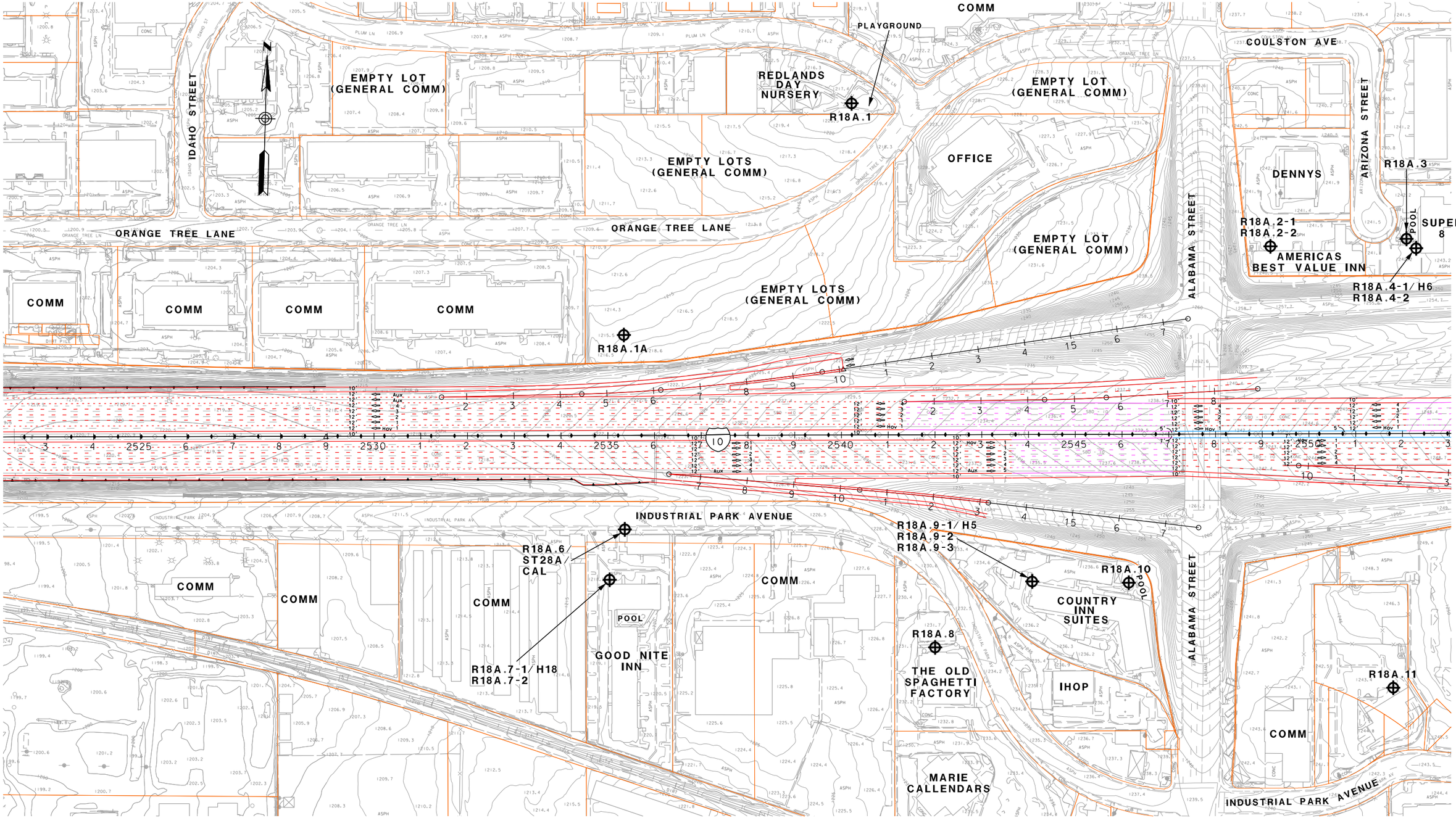
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 101



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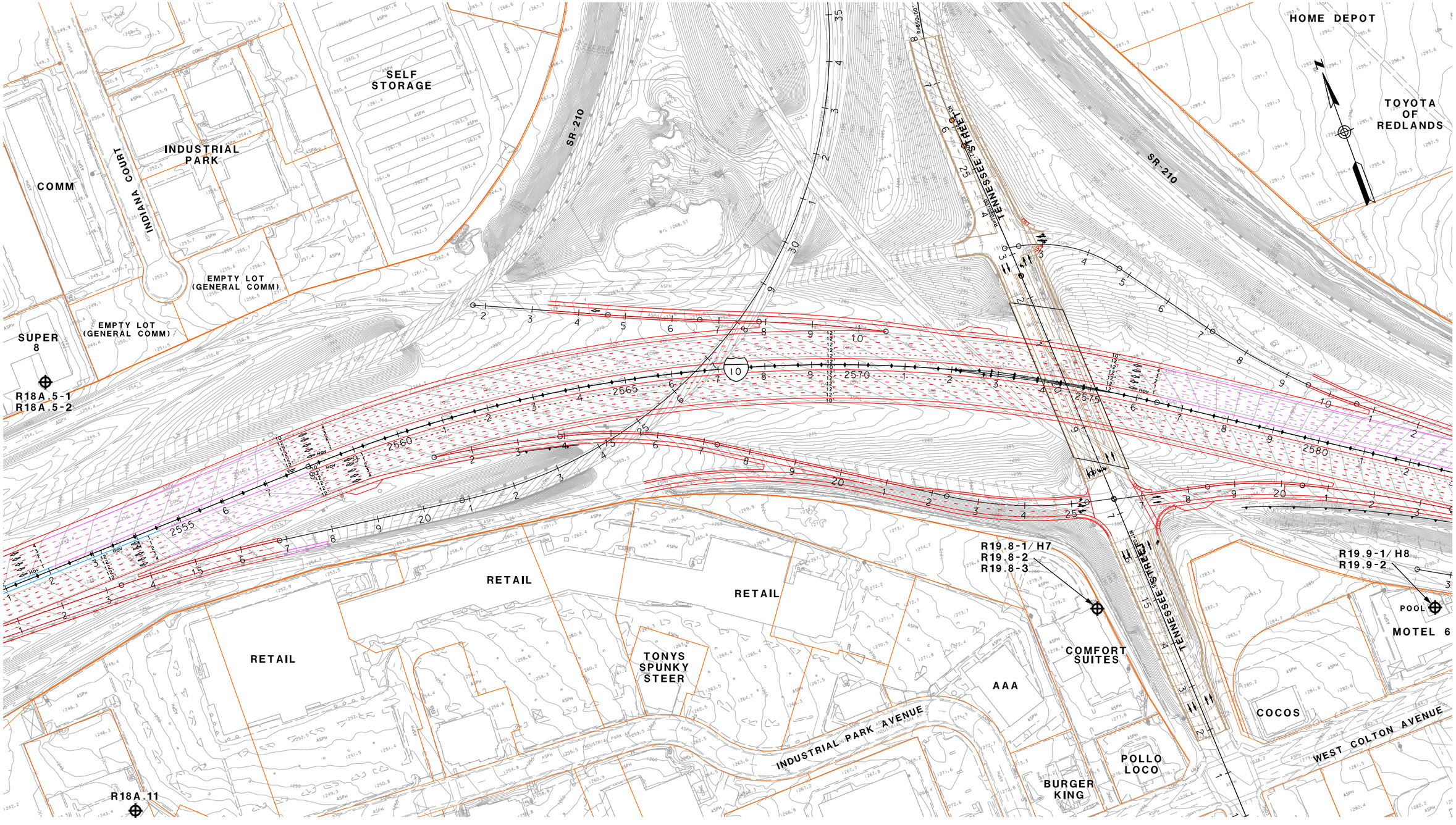
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 101A



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- RETAINING WALL
- SAFETY BARRIER

1in : 200ft

0 ft 100ft 200ft 300ft

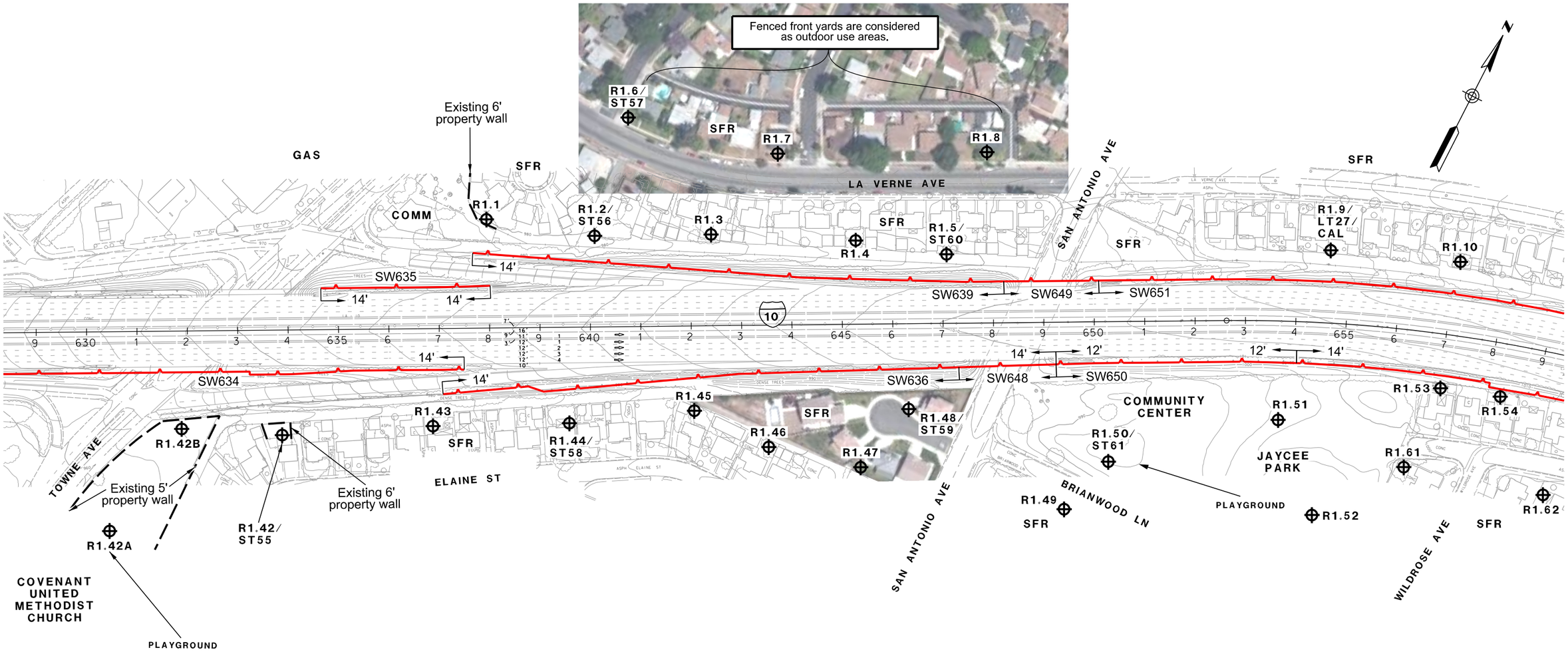
I-10 CORRIDOR ALTERNATIVE 2
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 101B

Alternative 3 -

Two Express Lanes in Each Direction



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- RETAINING WALL
- SAFETY BARRIER
- DRAINAGE RETAINING WALL

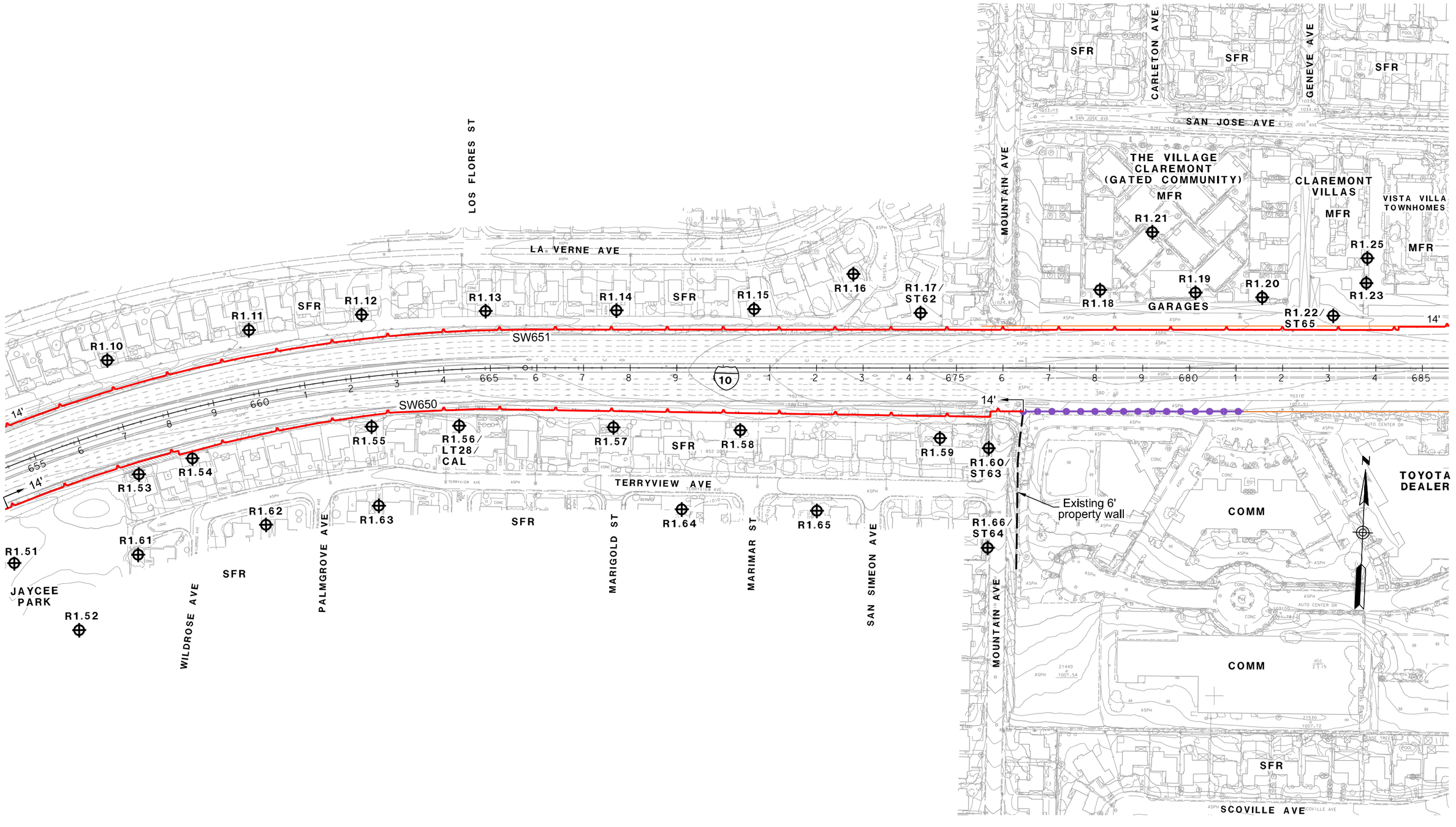
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 102



LEGEND

RXX - RECEIVER SITE	SFR OR S - SINGLE FAMILY RESIDENCE	- EXISTING PROPERTY WALL	- ANALYZED SOUNDWALL
CAL - CALIBRATION SITE	MFR OR M - MULTI-FAMILY RESIDENCE	- EXISTING SOUNDWALL	- RETAINING WALL
LT - LONG-TERM MEASUREMENT	COMM OR C - COMMERCIAL/NO OUTDOOR USE AREA	- PROPOSED SOUNDWALL	- SAFETY BARRIER
ST - SHORT-TERM MEASUREMENT	b - BENEFITED RESIDENCE	- REPLACEMENT IN KIND SOUNDWALL	- DRAINAGE RETAINING WALL
	HXX - IN/OUTDOOR MEASUREMENT		

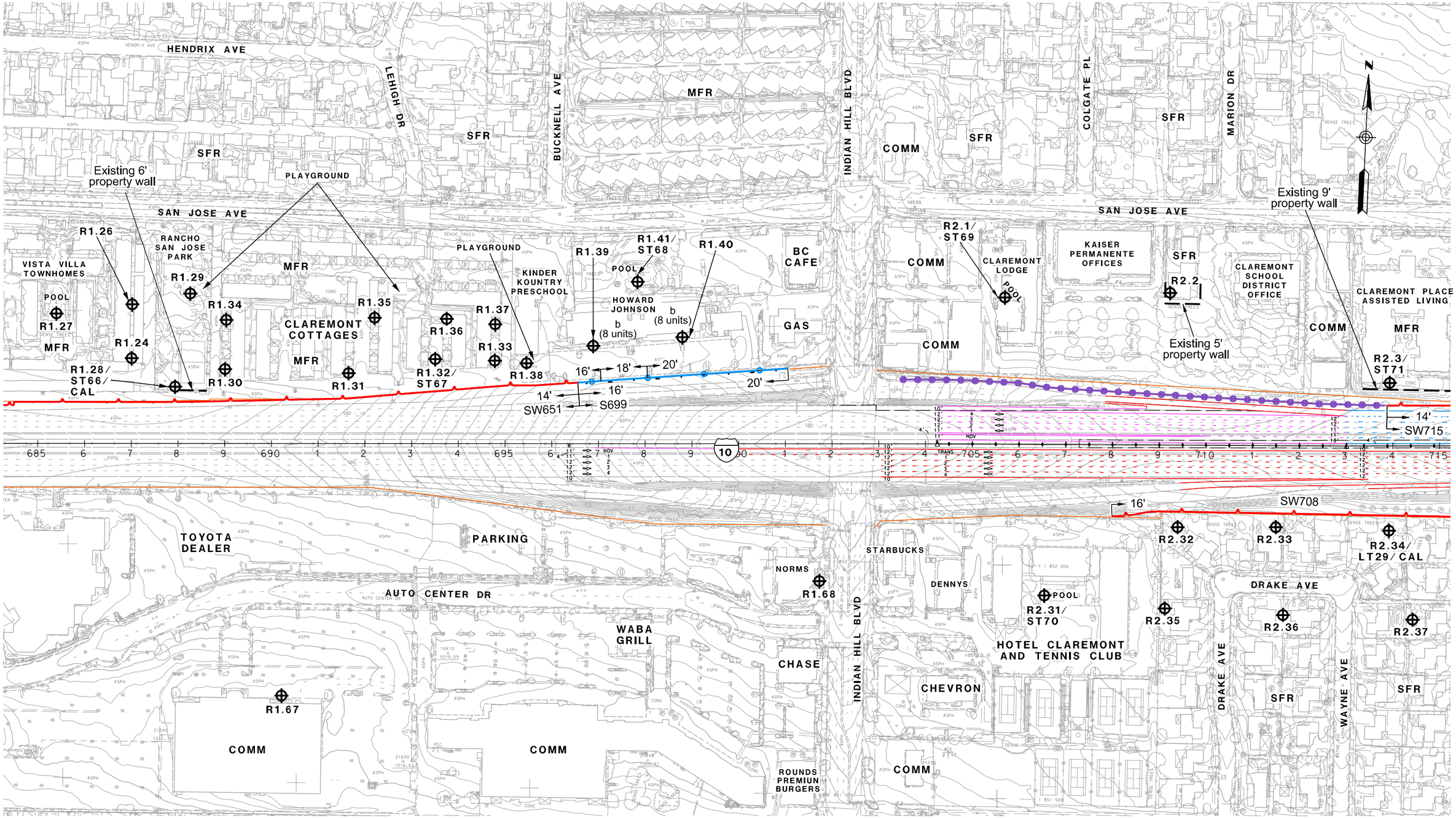
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 103



LEGEND

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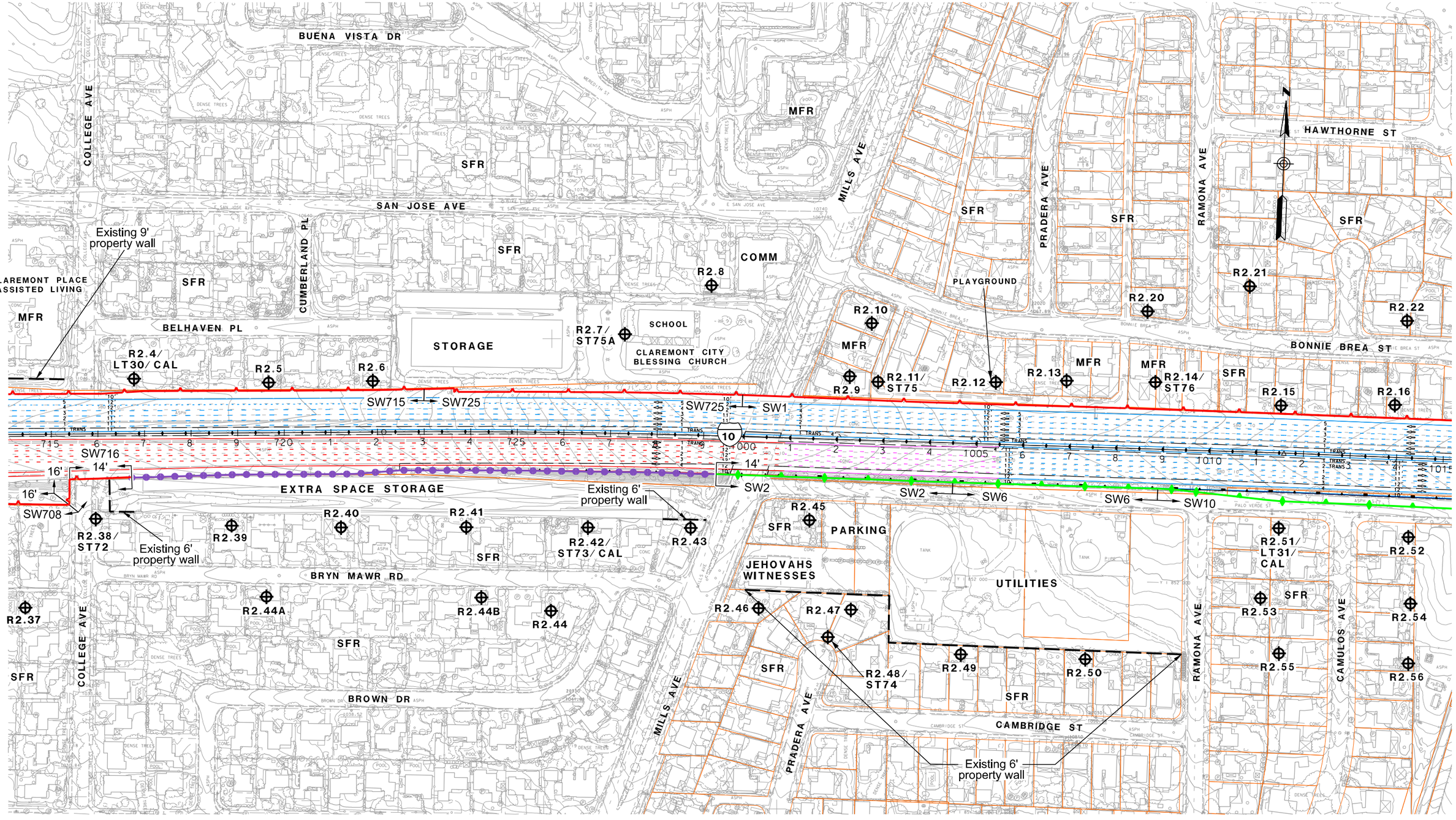
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 104



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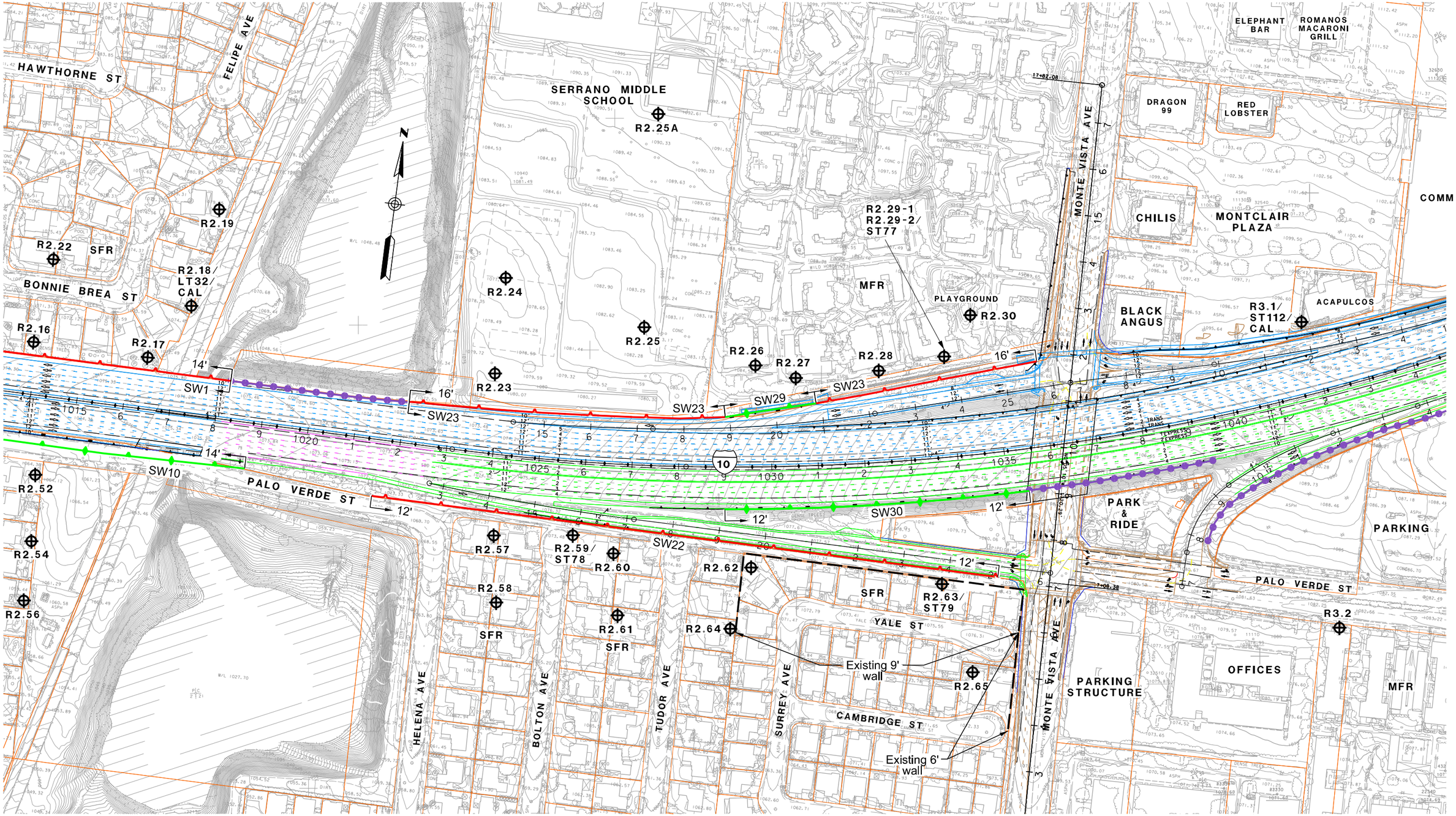
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 105



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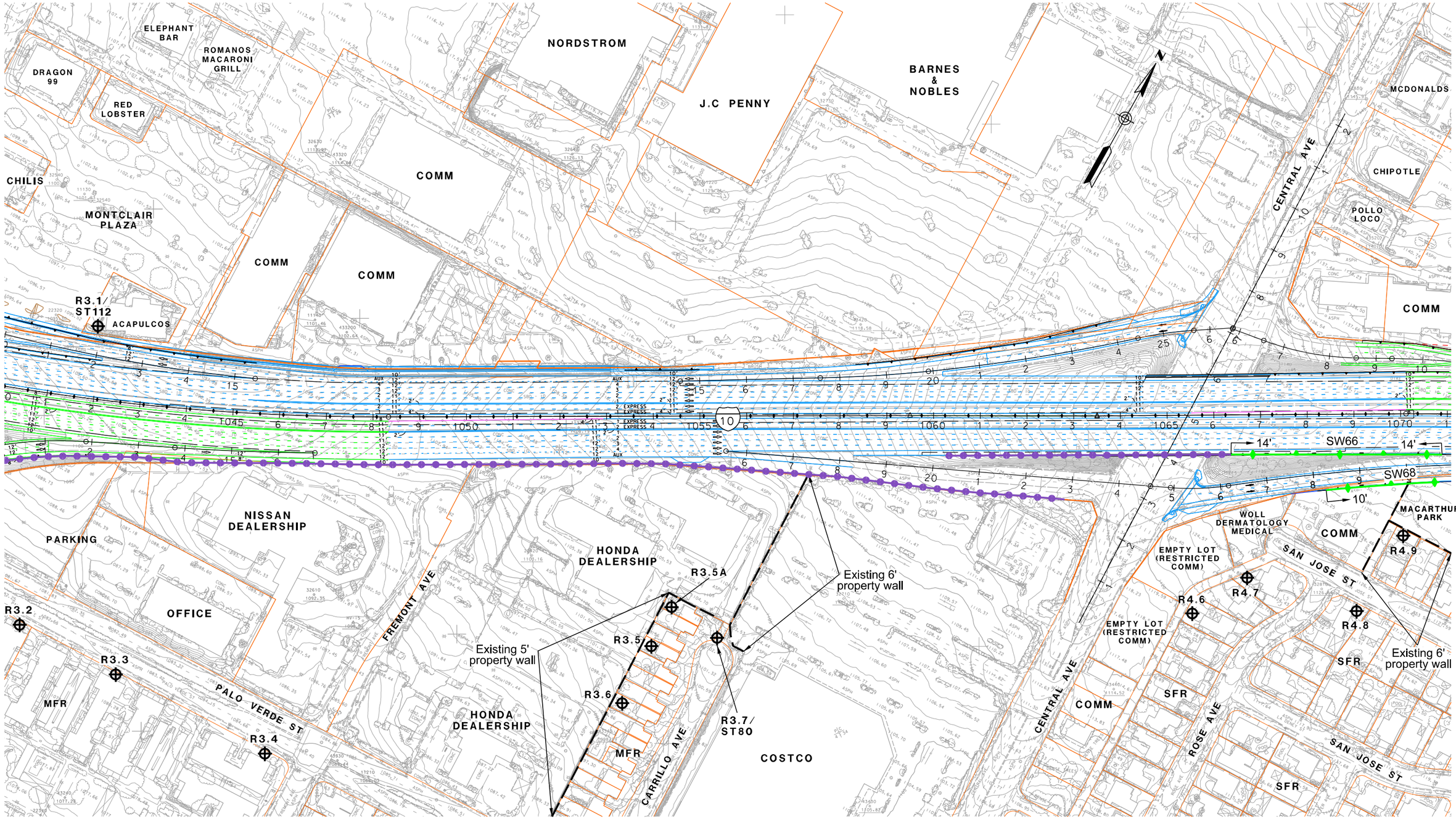
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 106



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- DRAINAGE RETAINING WALL

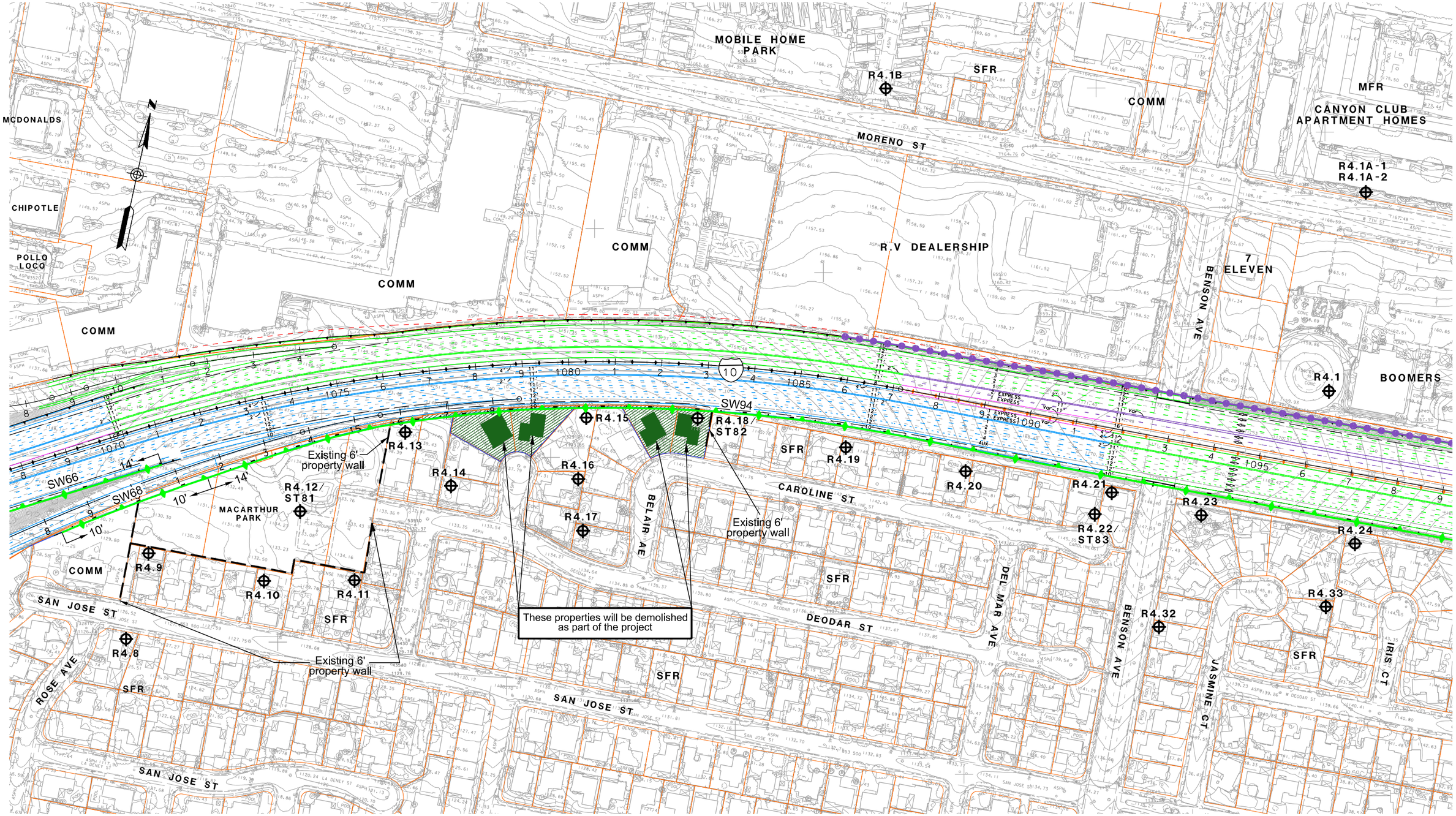
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 107



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- DRAINAGE RETAINING WALL

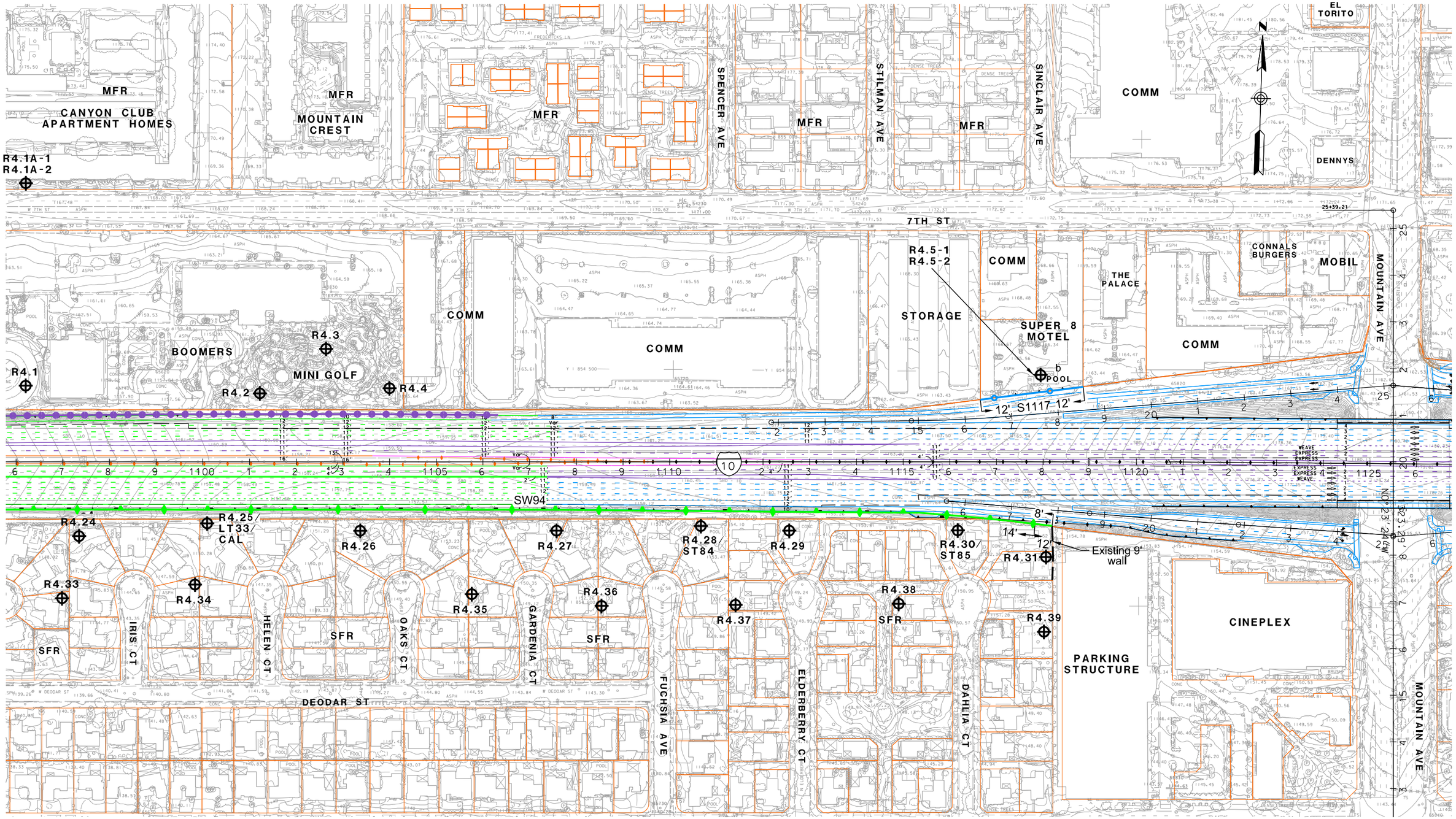
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 108



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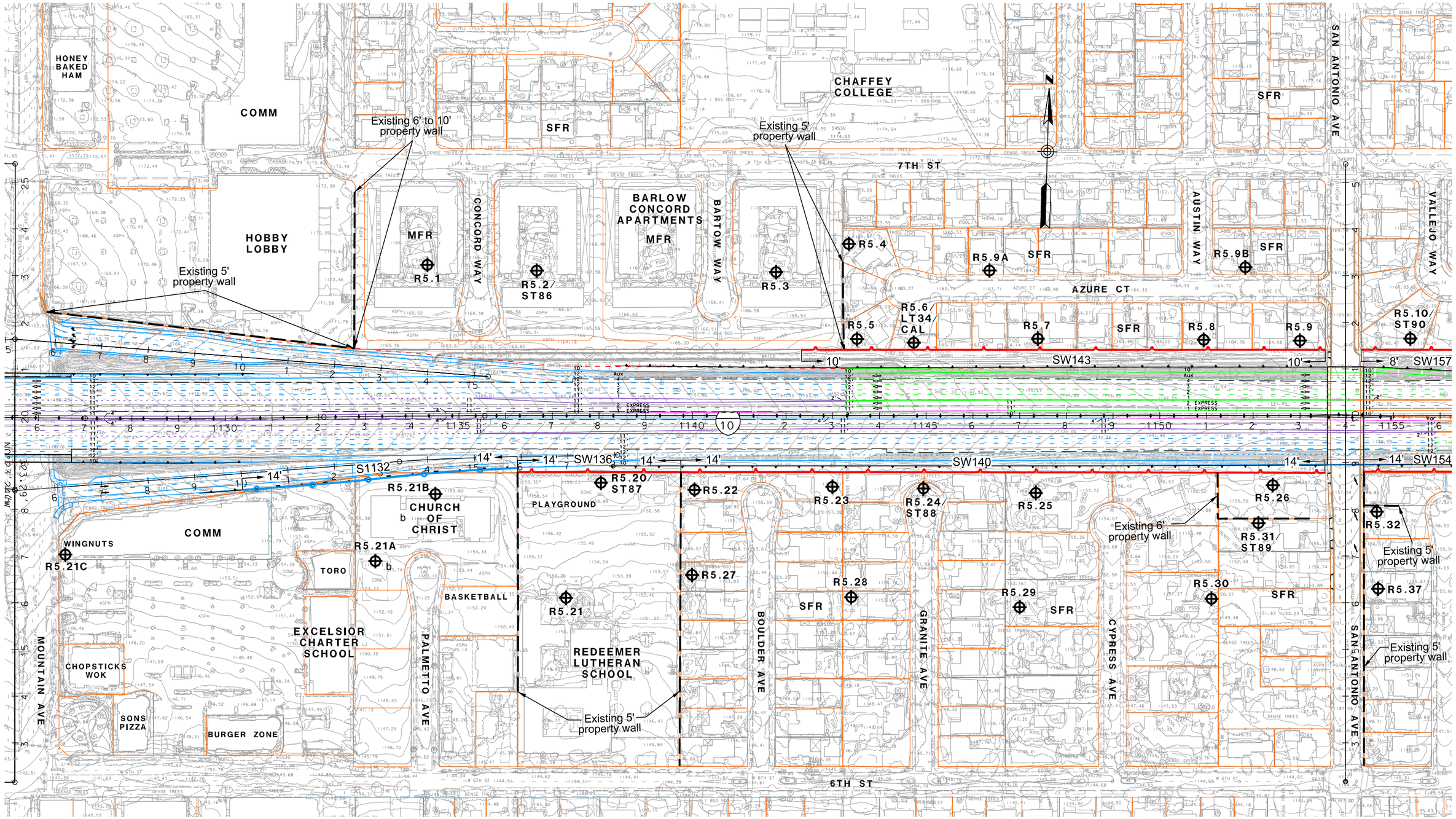
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 109



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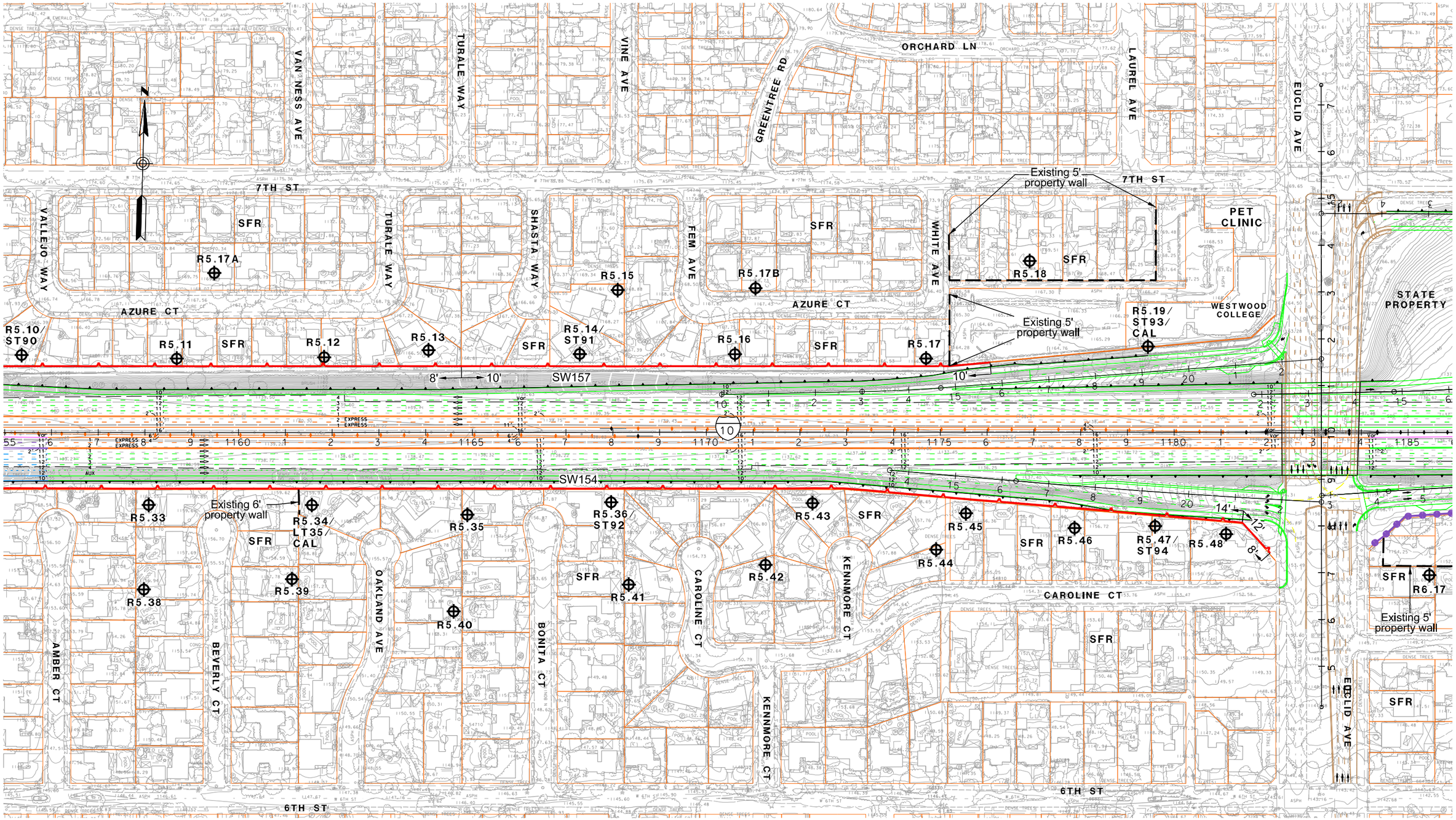
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 110



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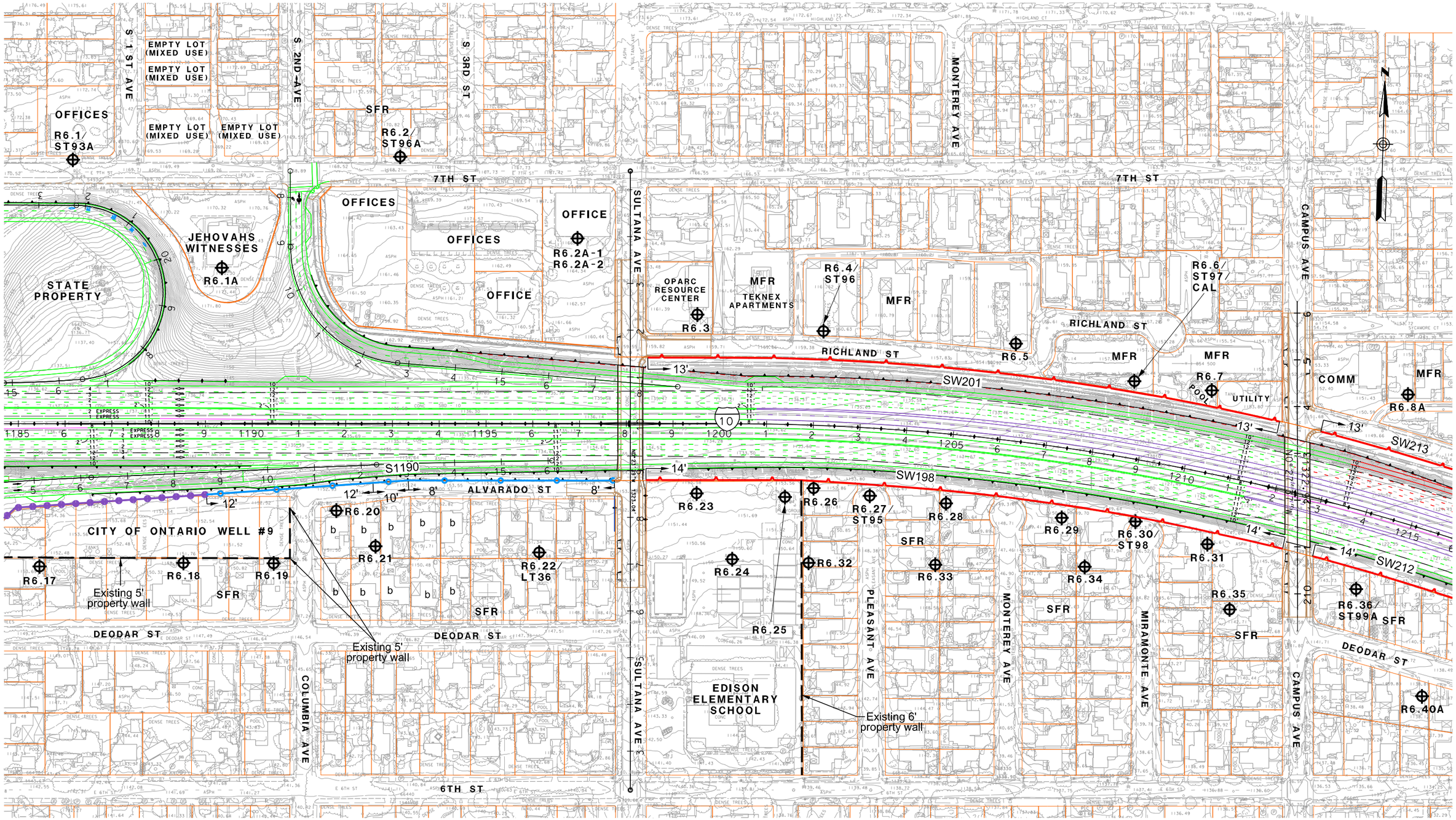
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 111



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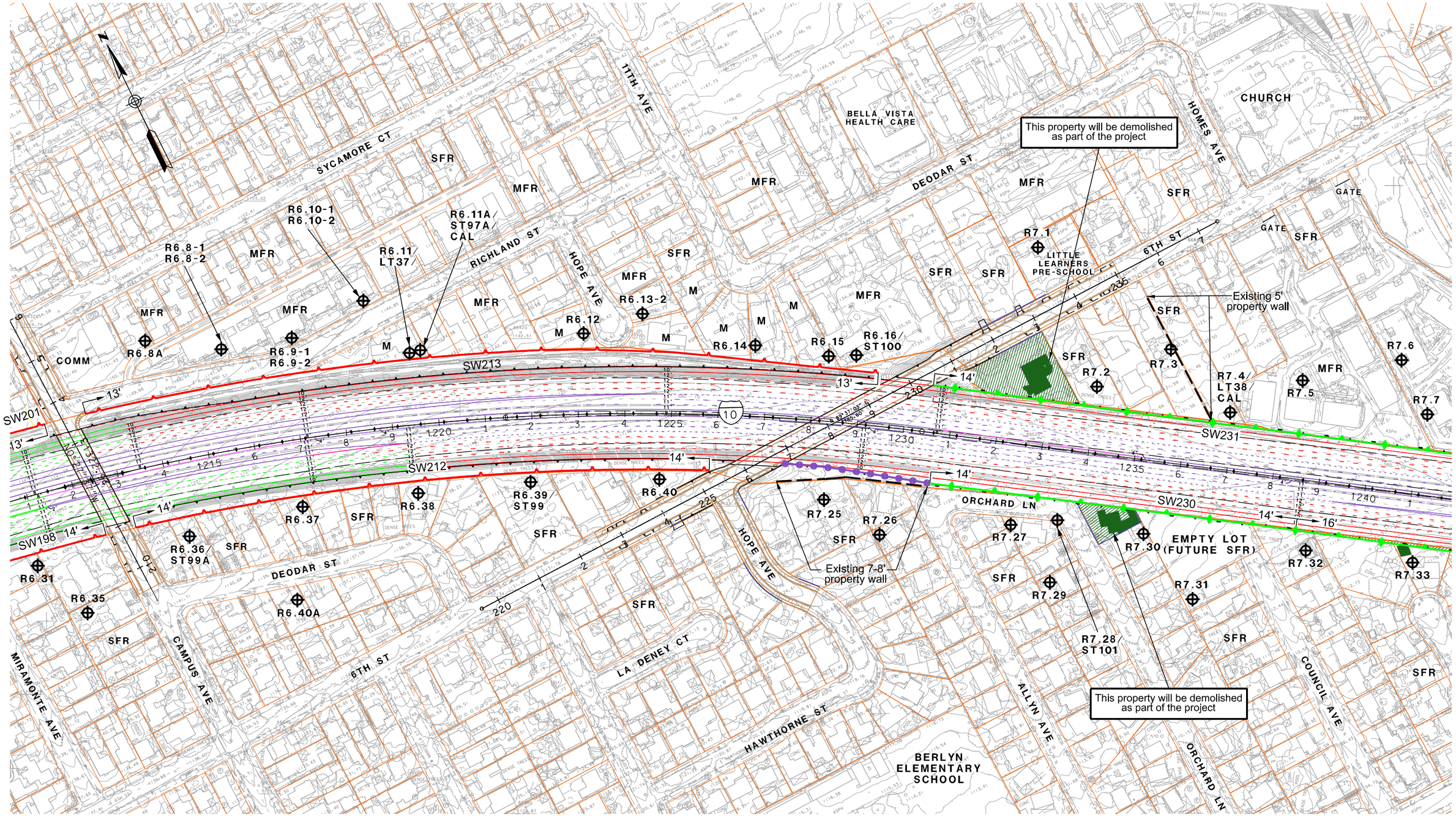
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 112



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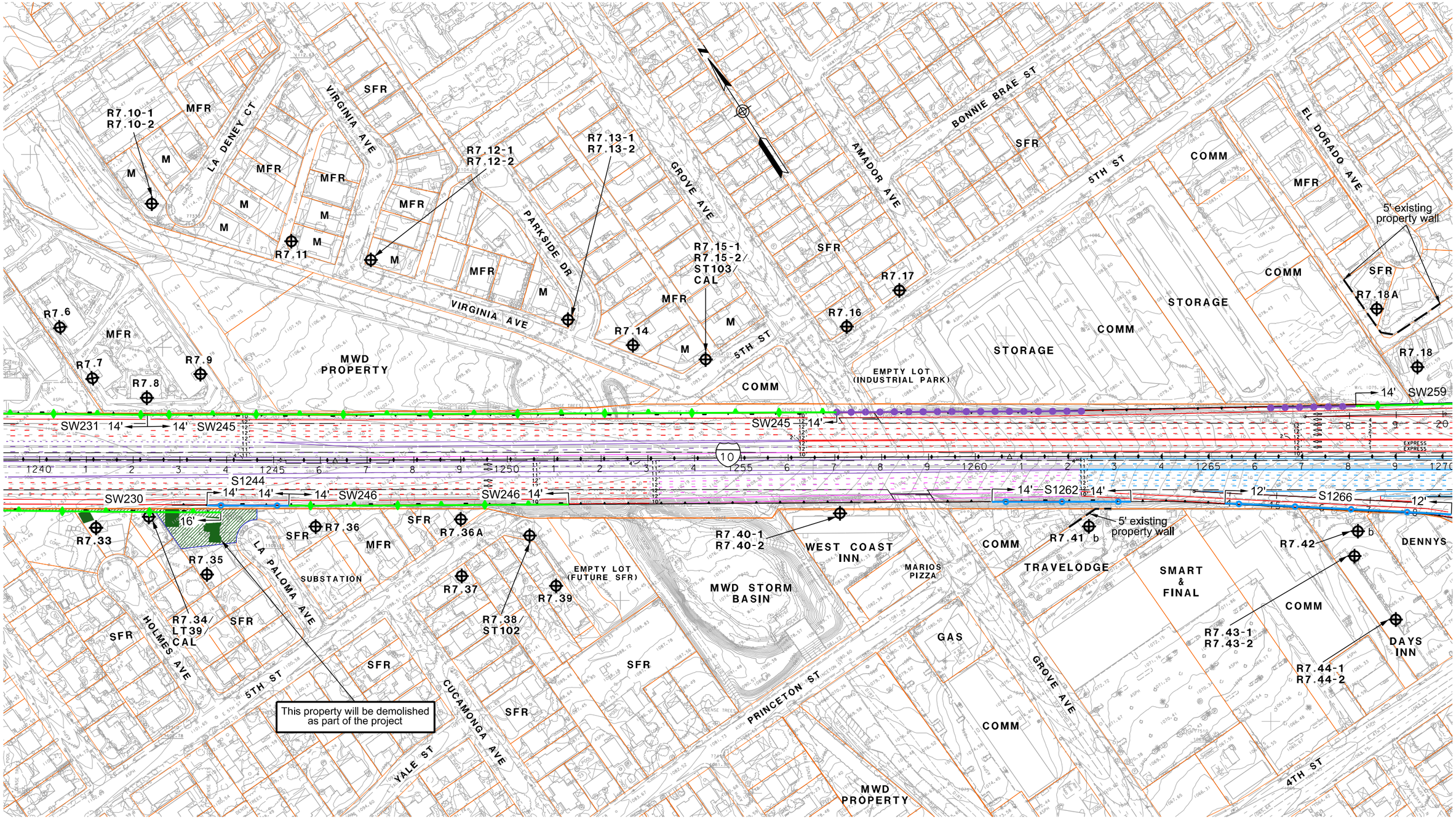
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 113



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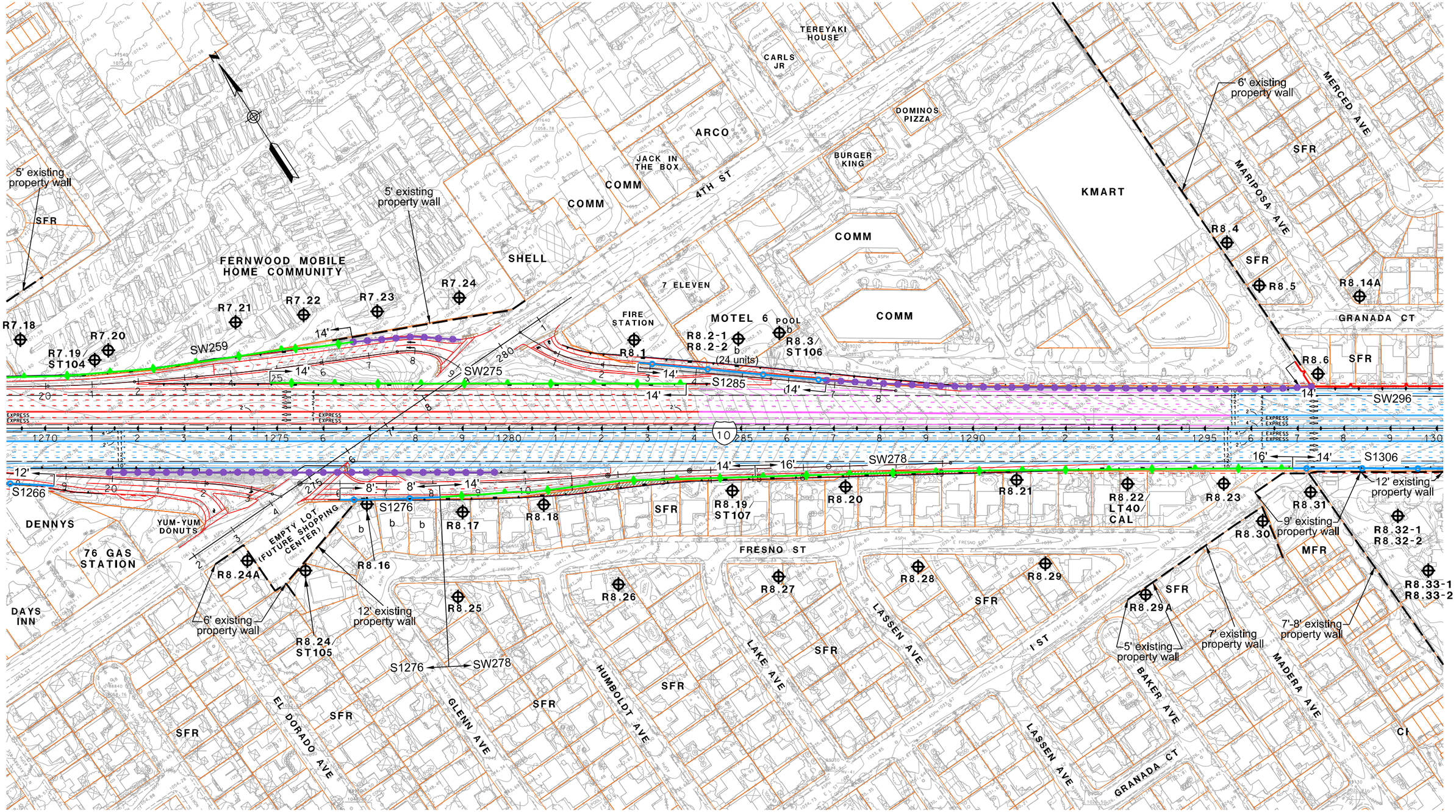
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 114



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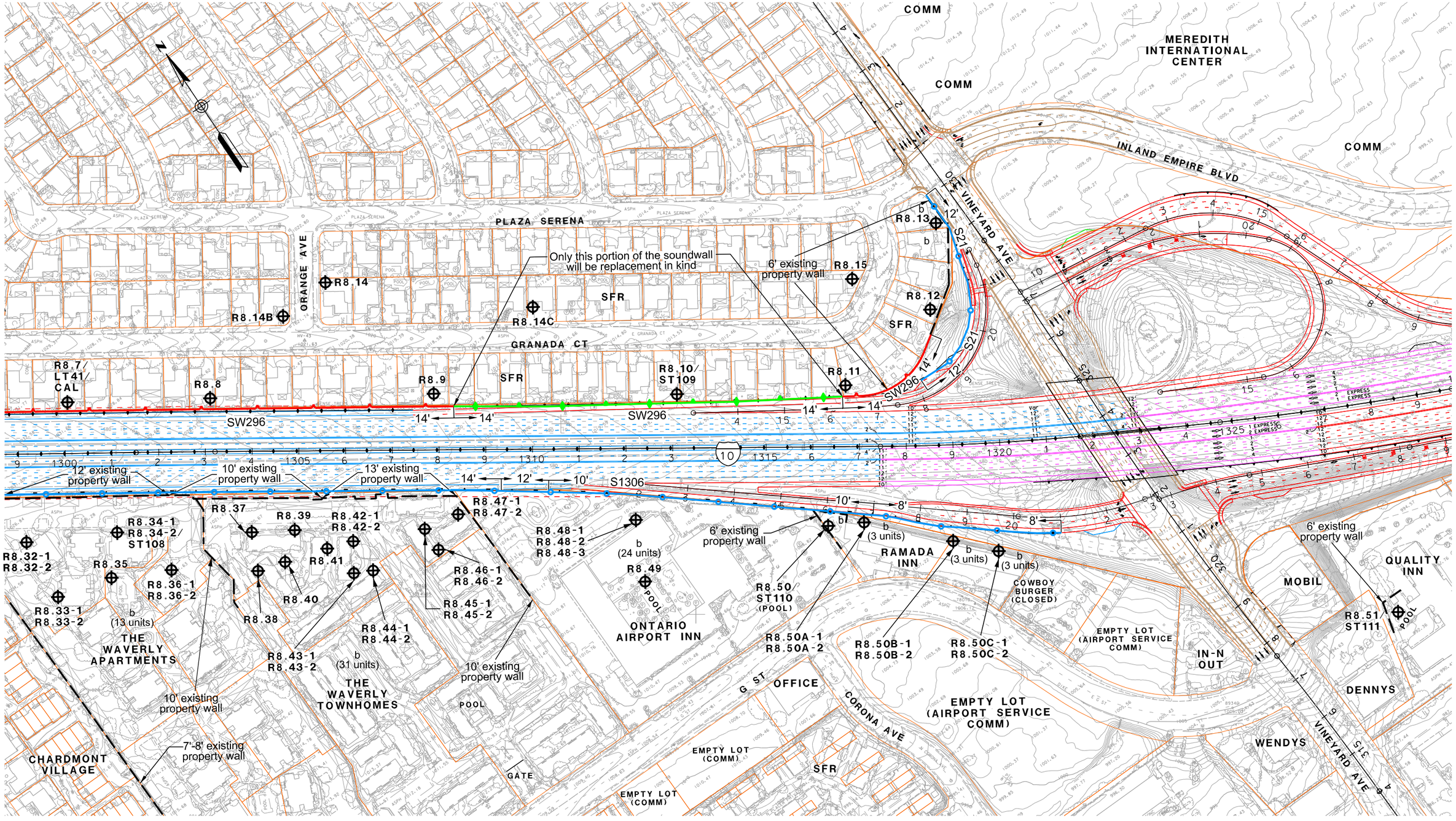
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 115



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I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 116

MEREDITH INTERNATIONAL CENTER

FUTURE RETAIL/HOTEL MIX LAND USE

COMM

INLAND IMPIRE BLVD

MEREDITH INTERNATIONAL CENTER

COMMERCIAL USE

10

14'

SW334

14'

R8,51/ ST111

QUALITY INN

POOL

CONVENTION CENTER PARKING

Existing 5' property wall

RESIDENCE INN ONTARIO AIRPORT

POOL

CAR DEALER

DEABORN CT

CAR DEALER

OFFICE

MARIE CALLENDARS

OFFICE

HOLIDAY INN

POOL

KLINE ST

CONVENTION CENTER WAY

CONVENTION CENTER

LEGEND

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- CAL - CALIBRATION SITE
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- EXISTING PROPERTY WALL
- EXISTING SOUNDWALL
- PROPOSED SOUNDWALL
- REPLACEMENT IN KIND SOUNDWALL
- ANALYZED SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER
- DRAINAGE RETAINING WALL

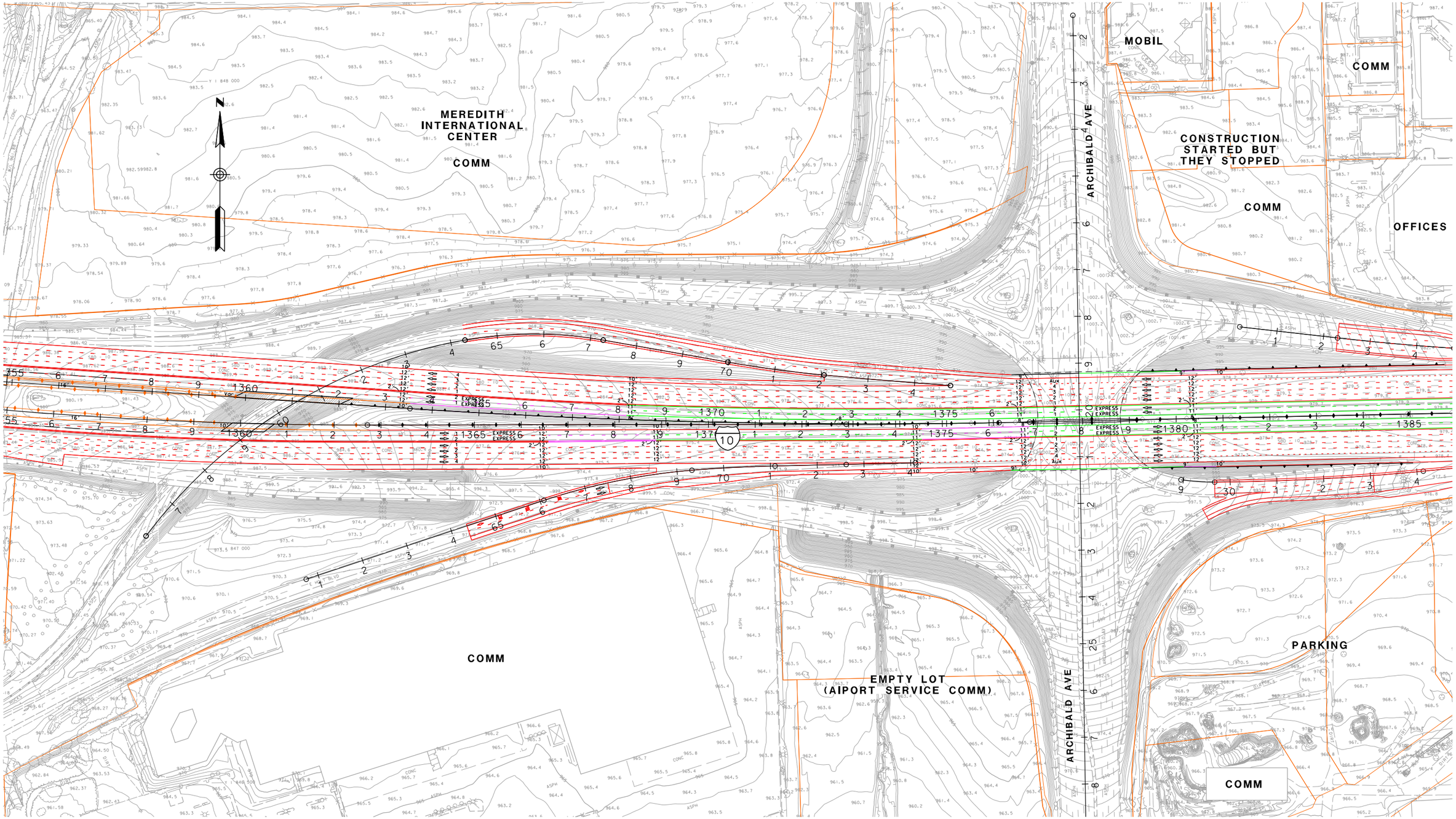
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 117



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JUNE 10, 2015

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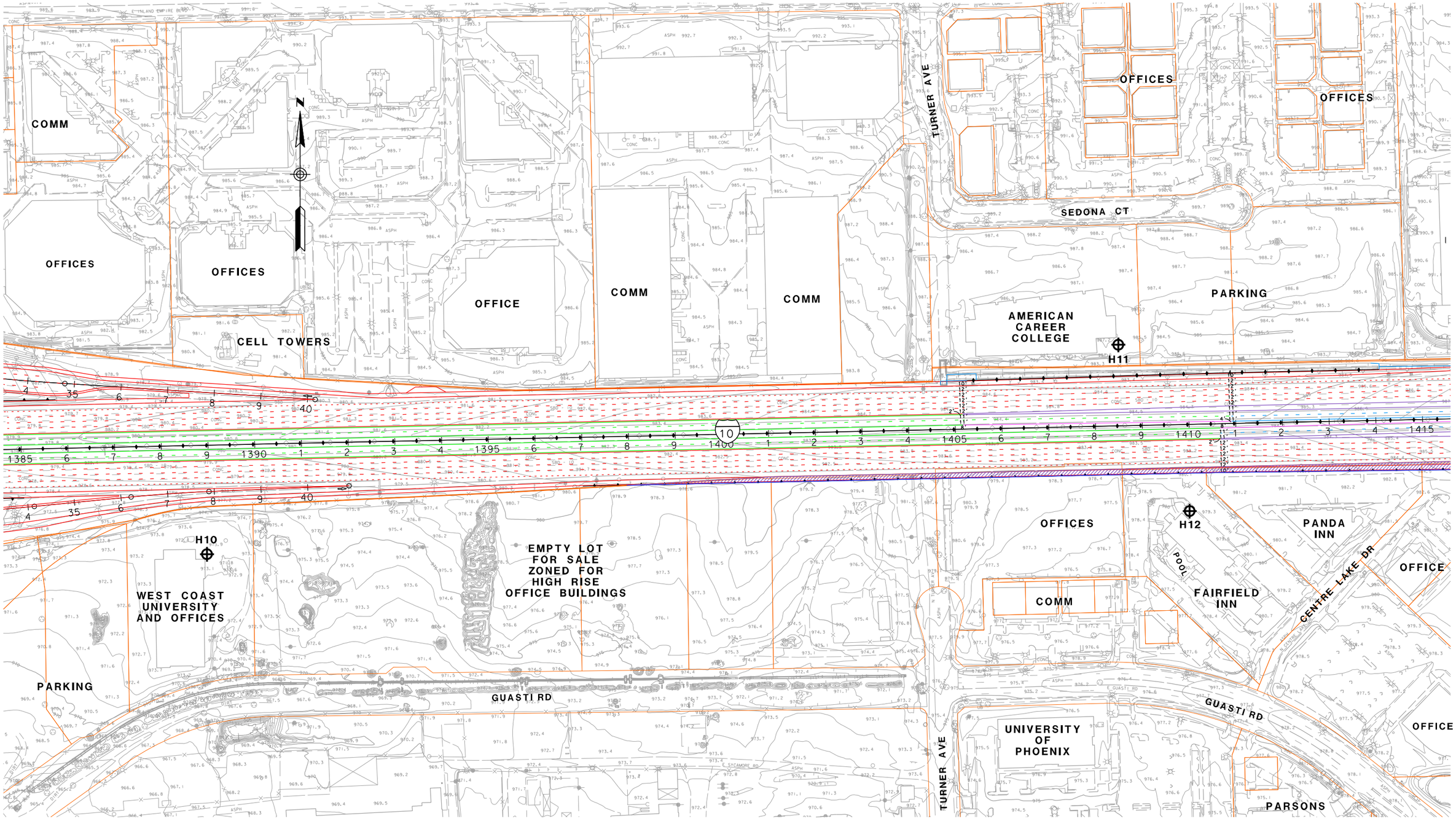

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NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

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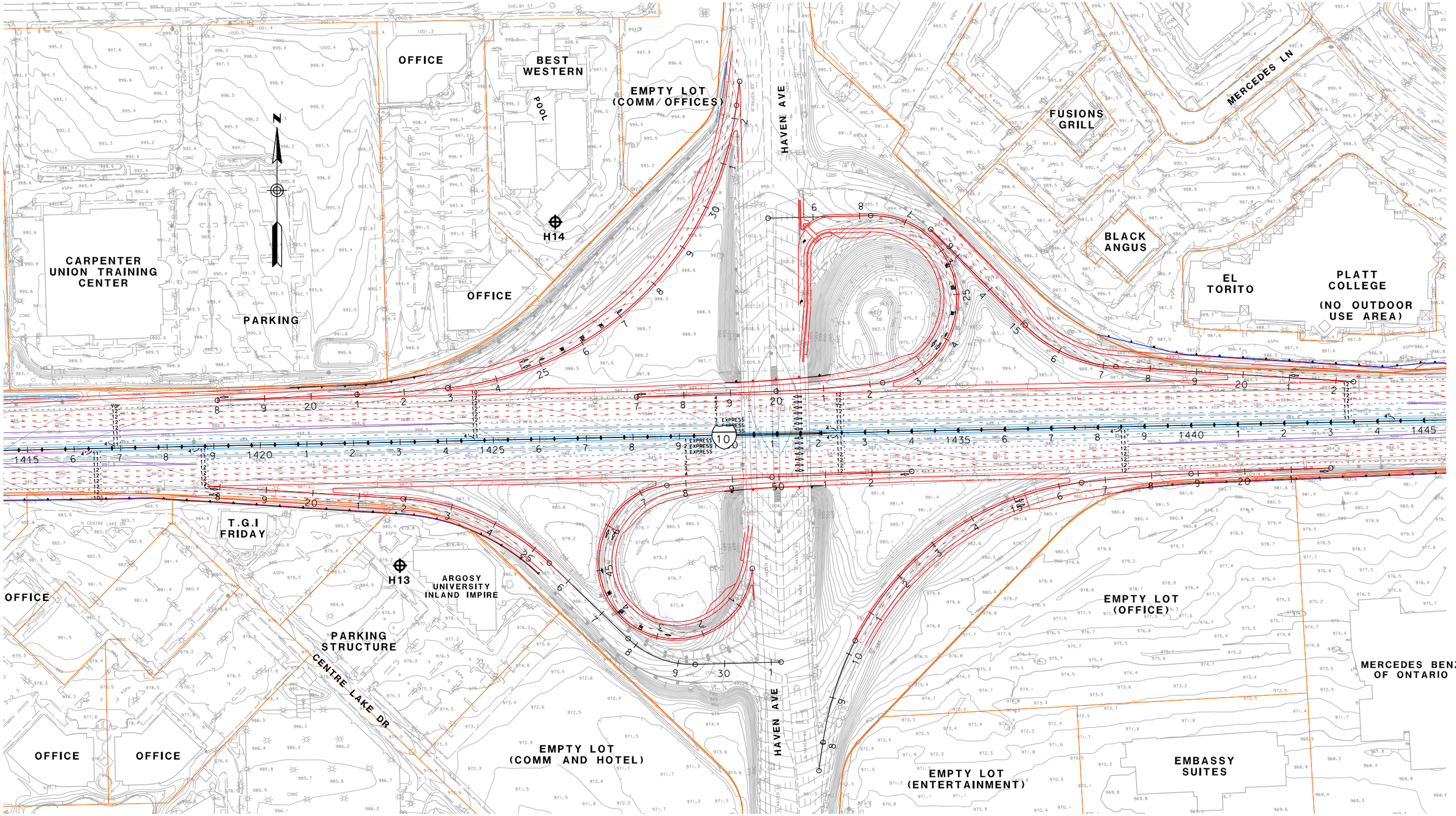

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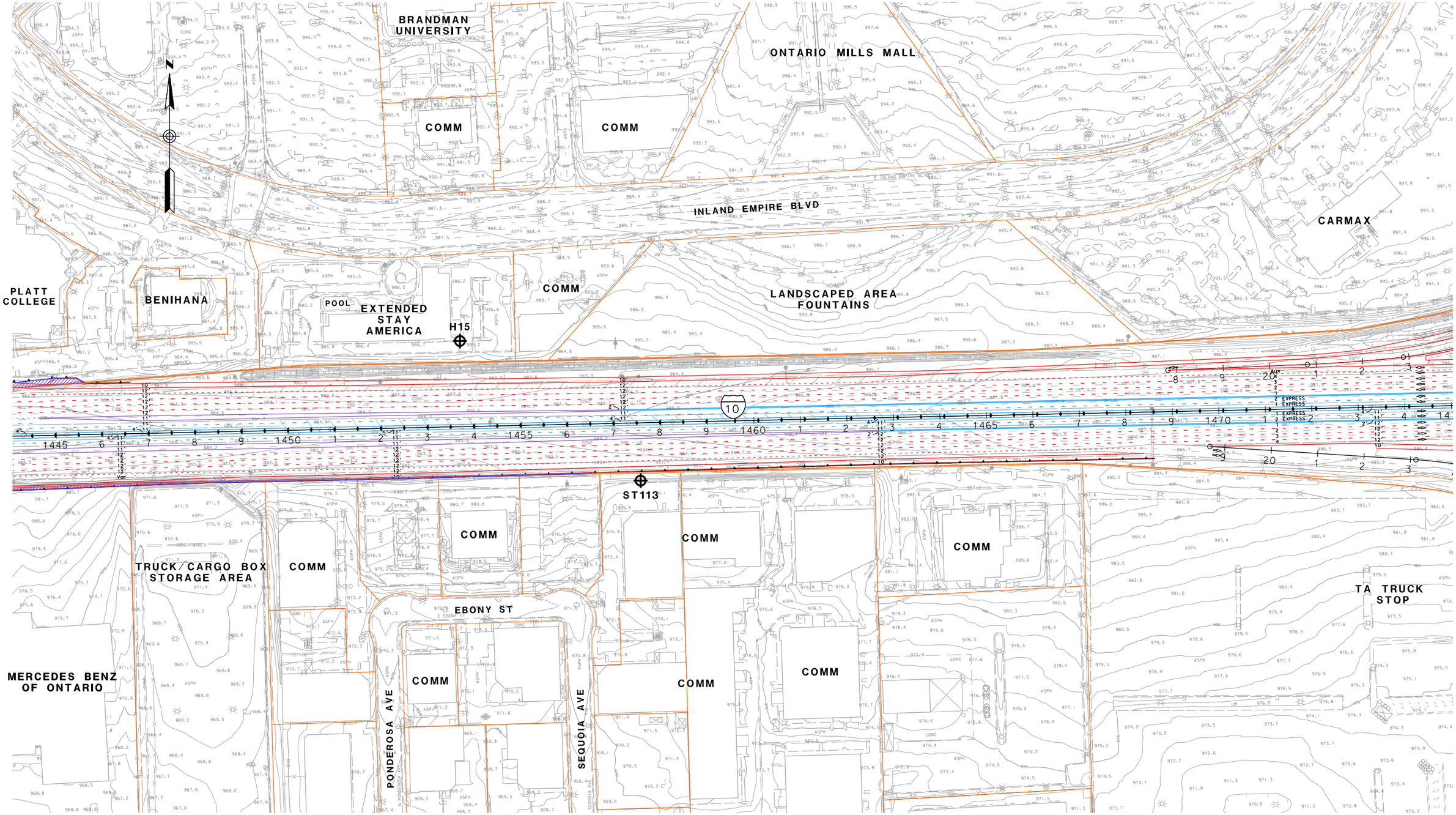
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 120



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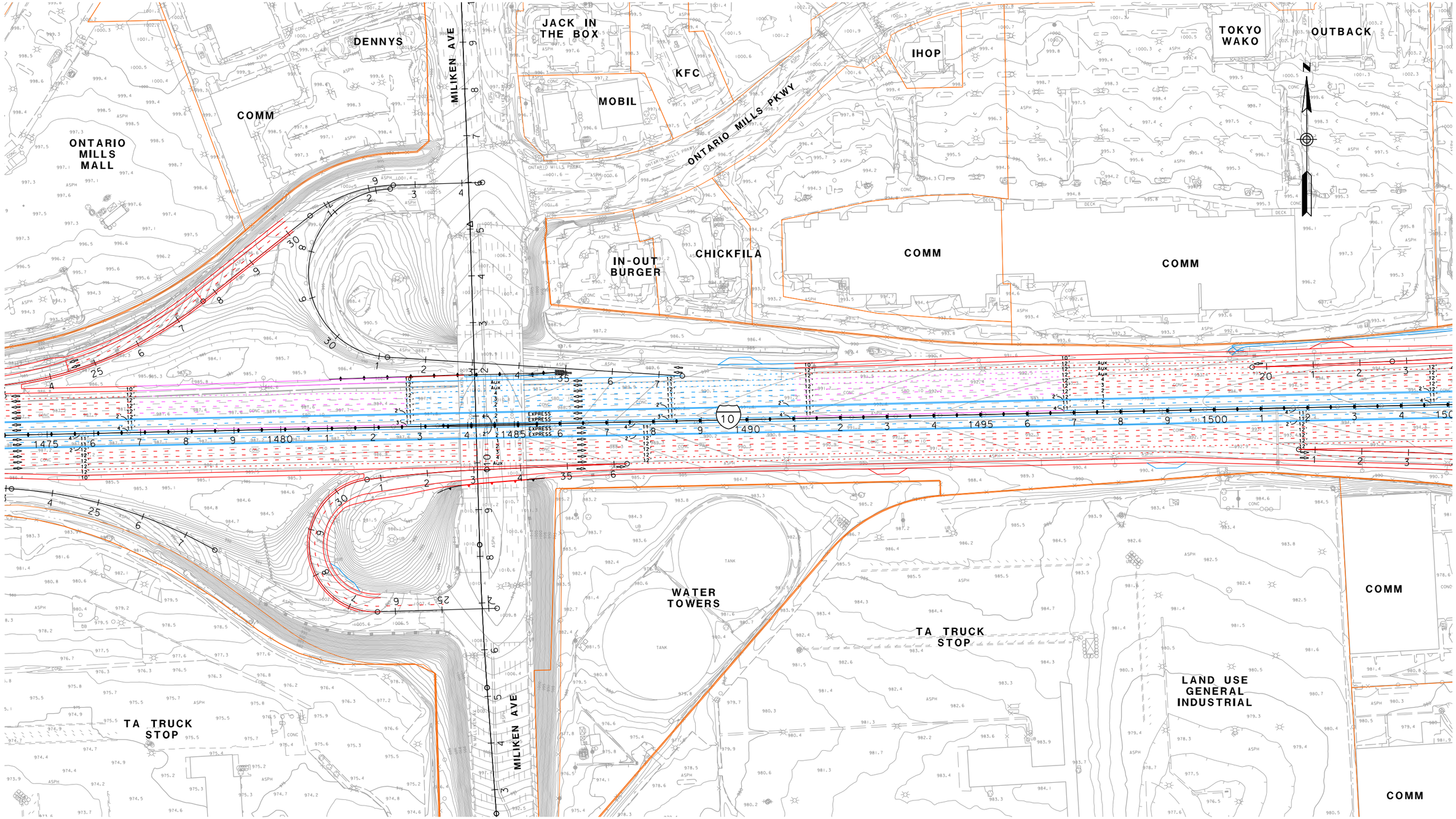
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 121



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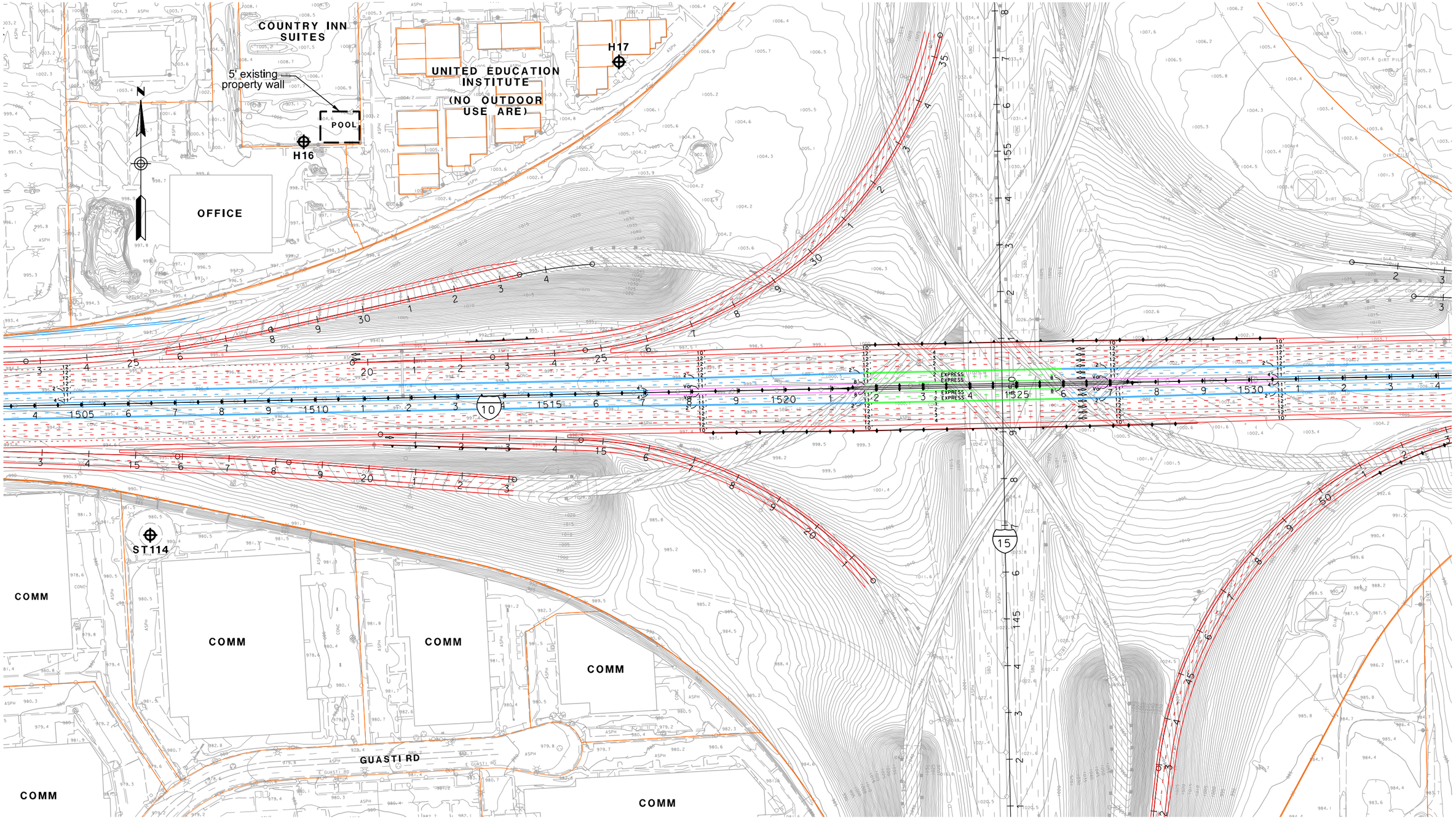
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 122



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I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

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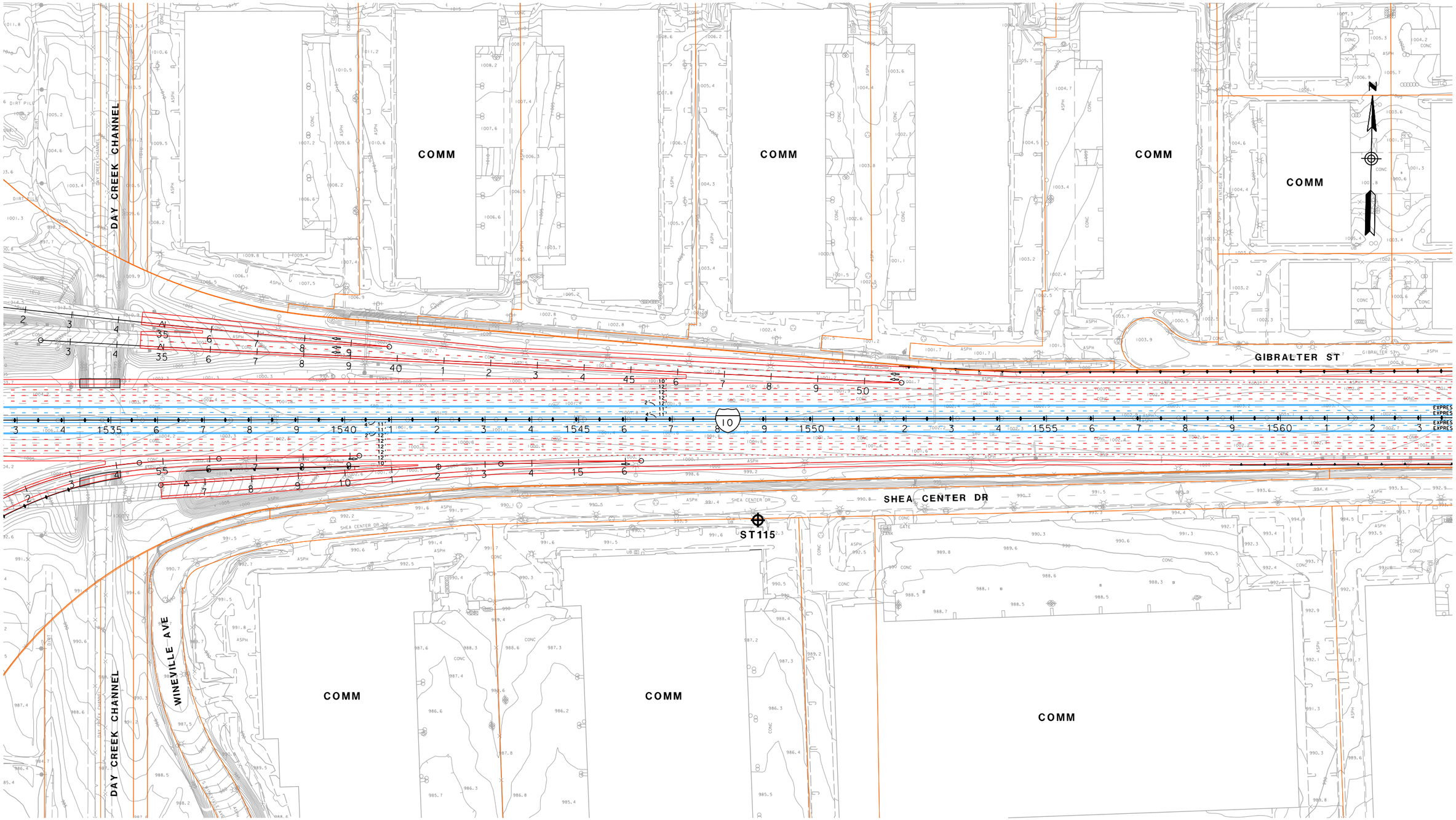

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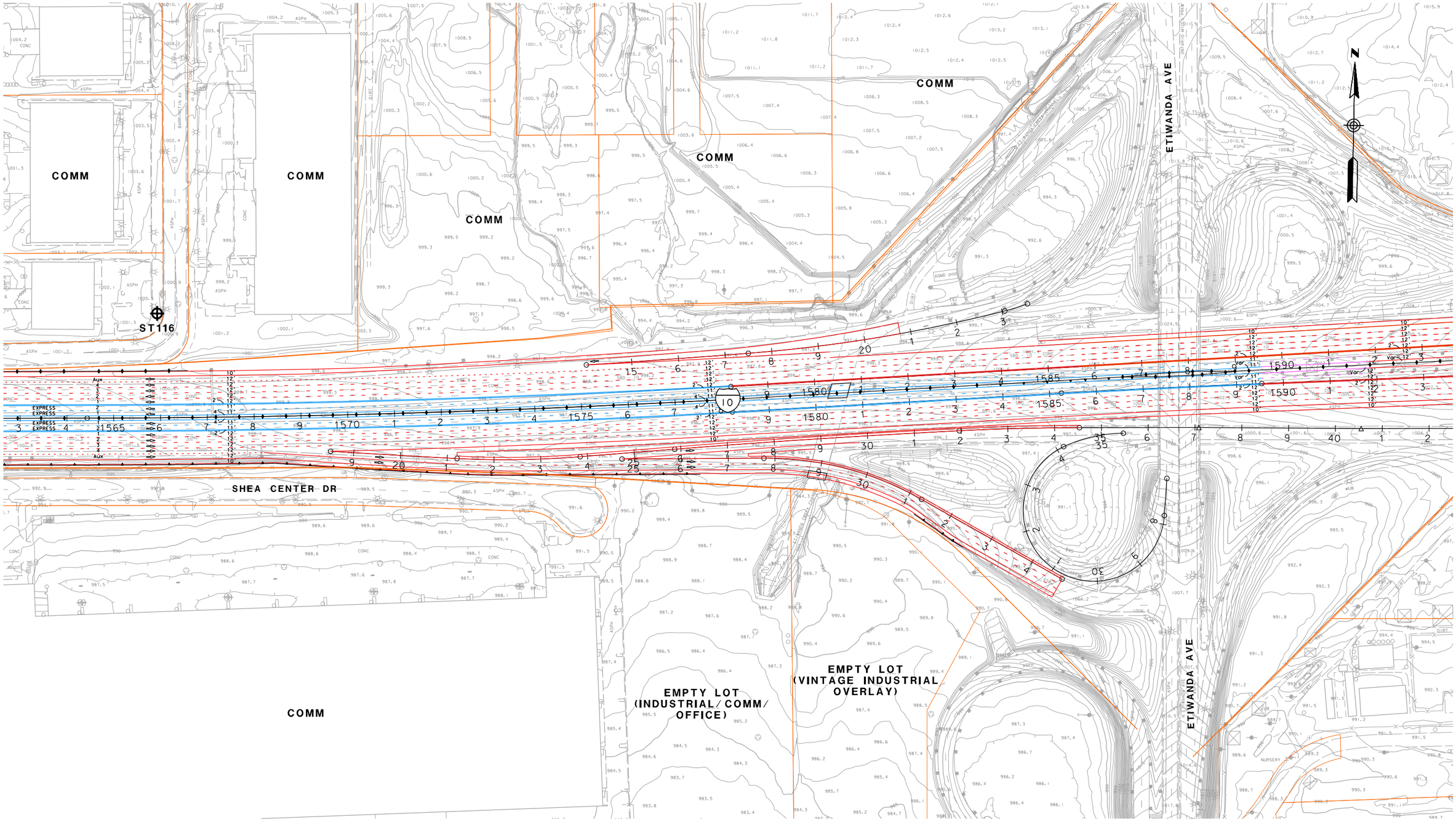
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 124



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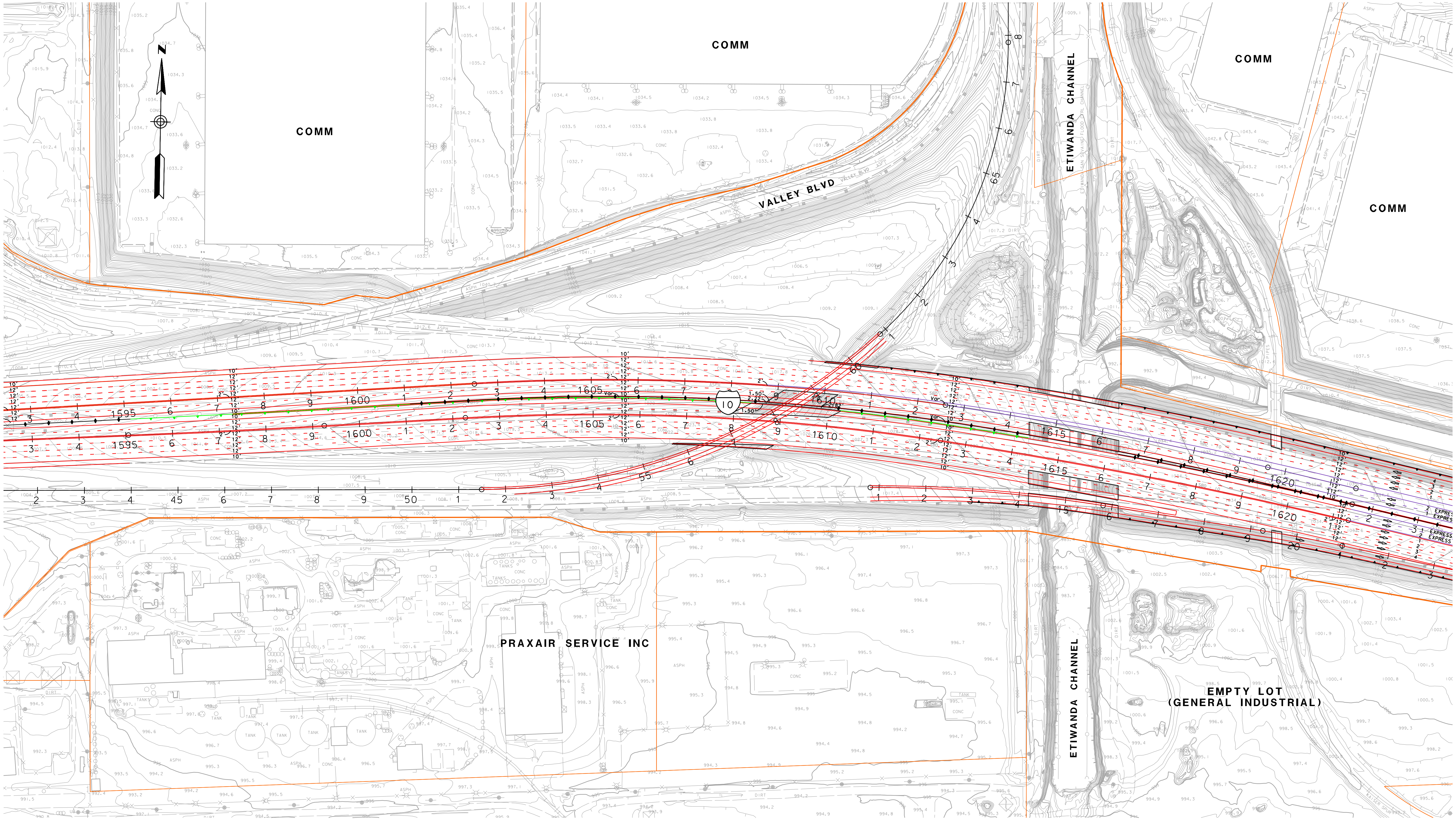
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 125



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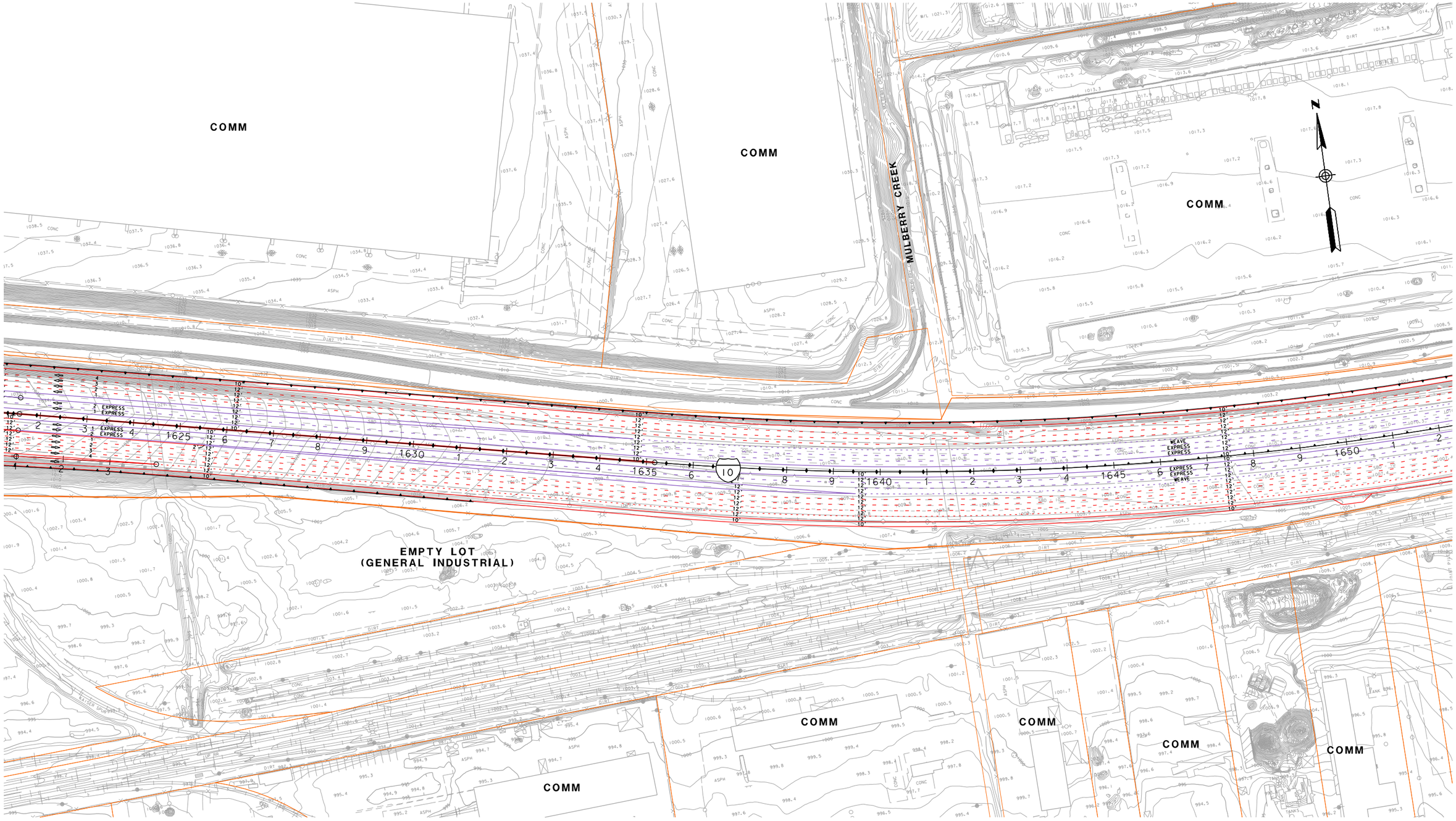
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 126



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1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 127

These properties will be demolished as part of the project

COMM

CALABASH AVE

OFFICE

RECYCLING CENTER

ST117

ST118

BANANA AVE

SLOVER AVE

10

LEGEND

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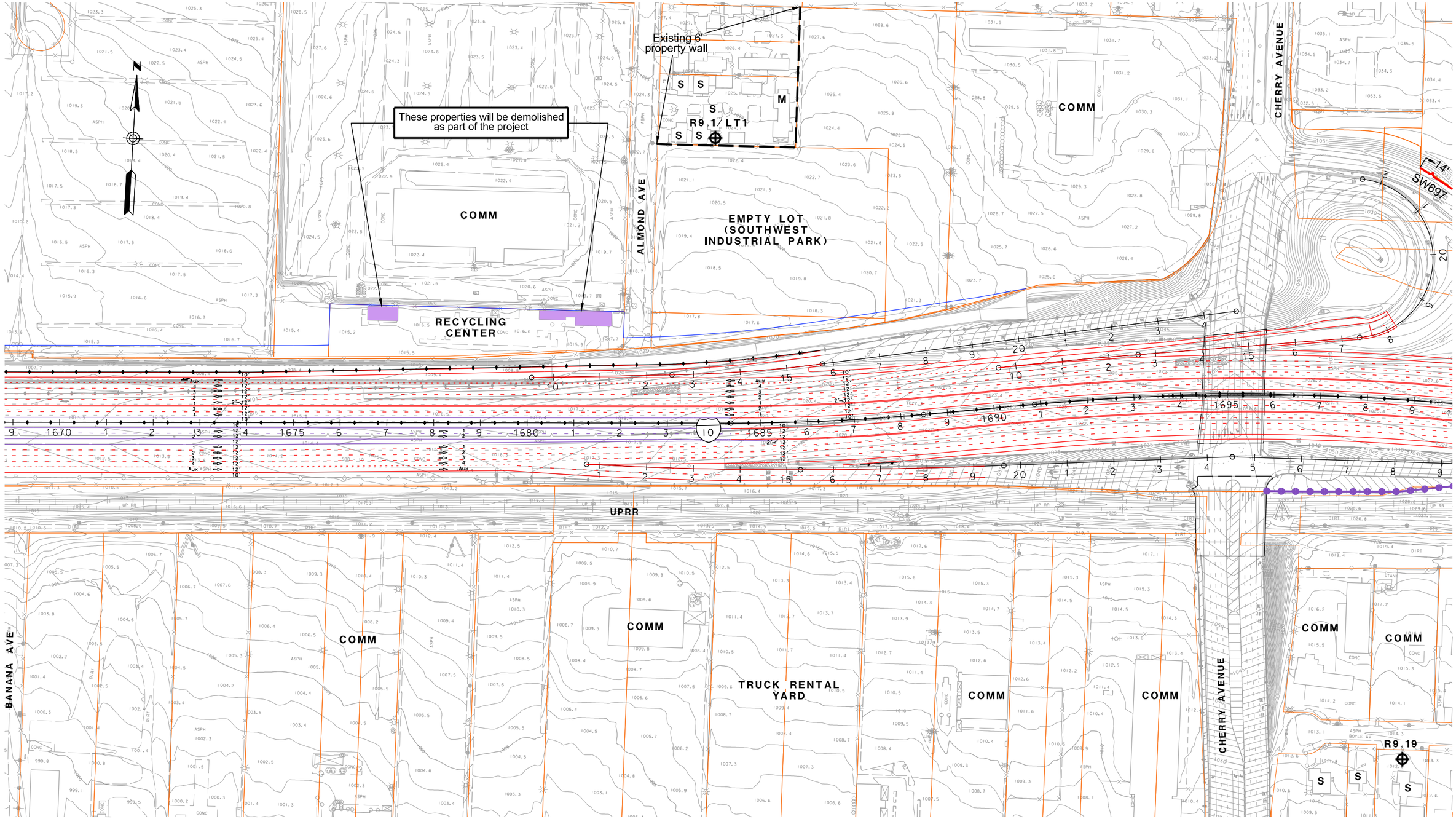
0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 128



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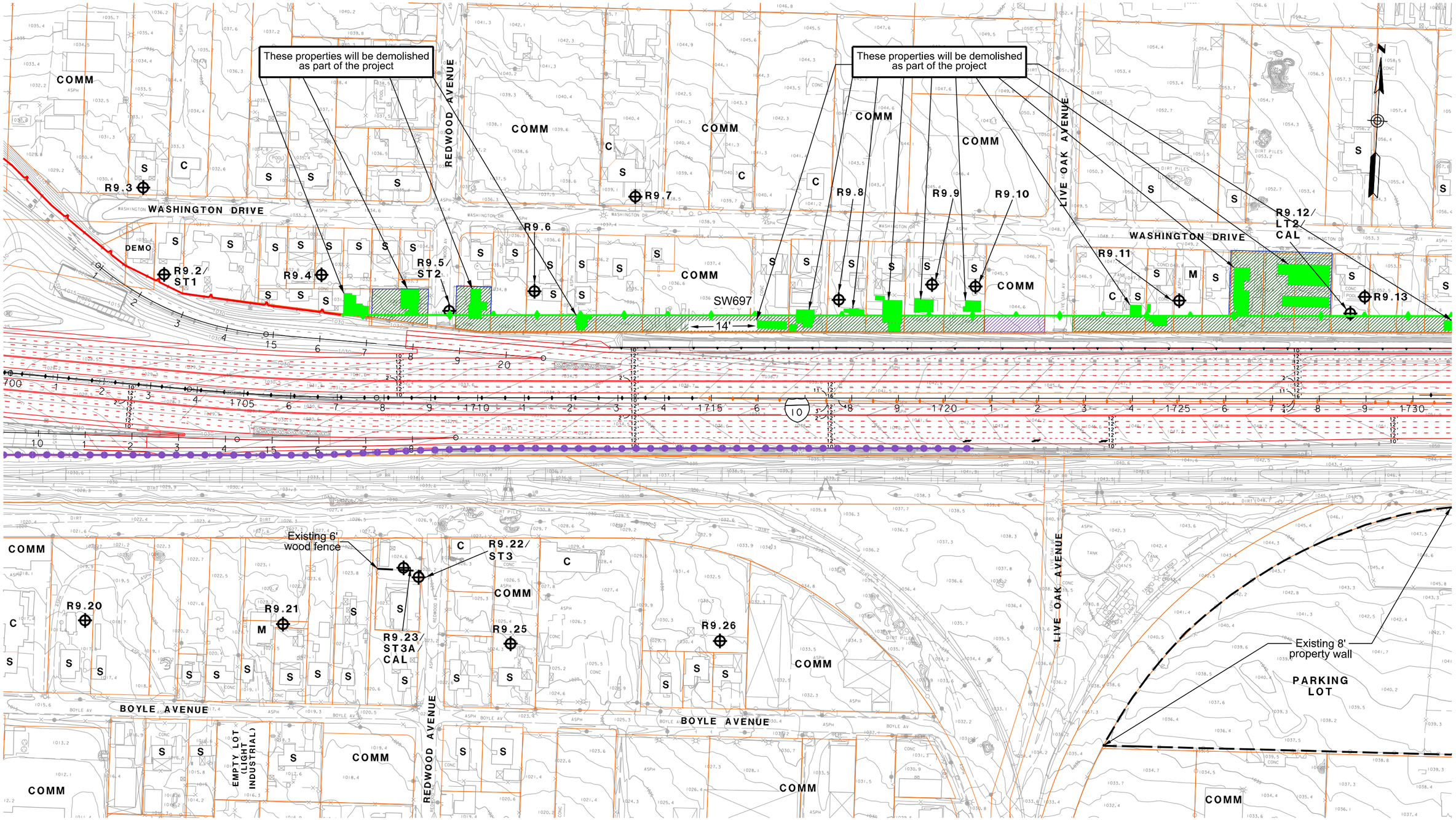
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 129



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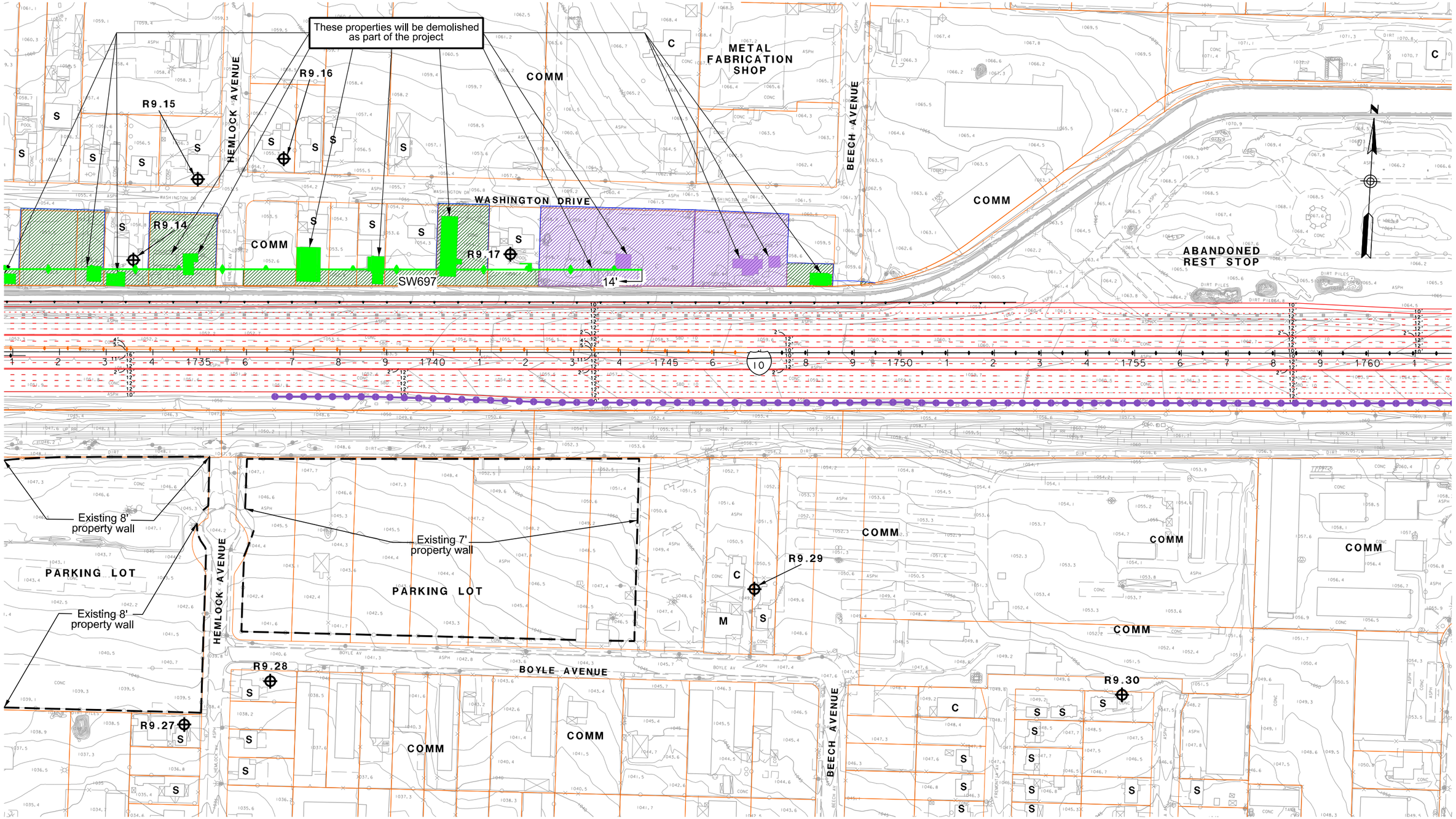
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 130



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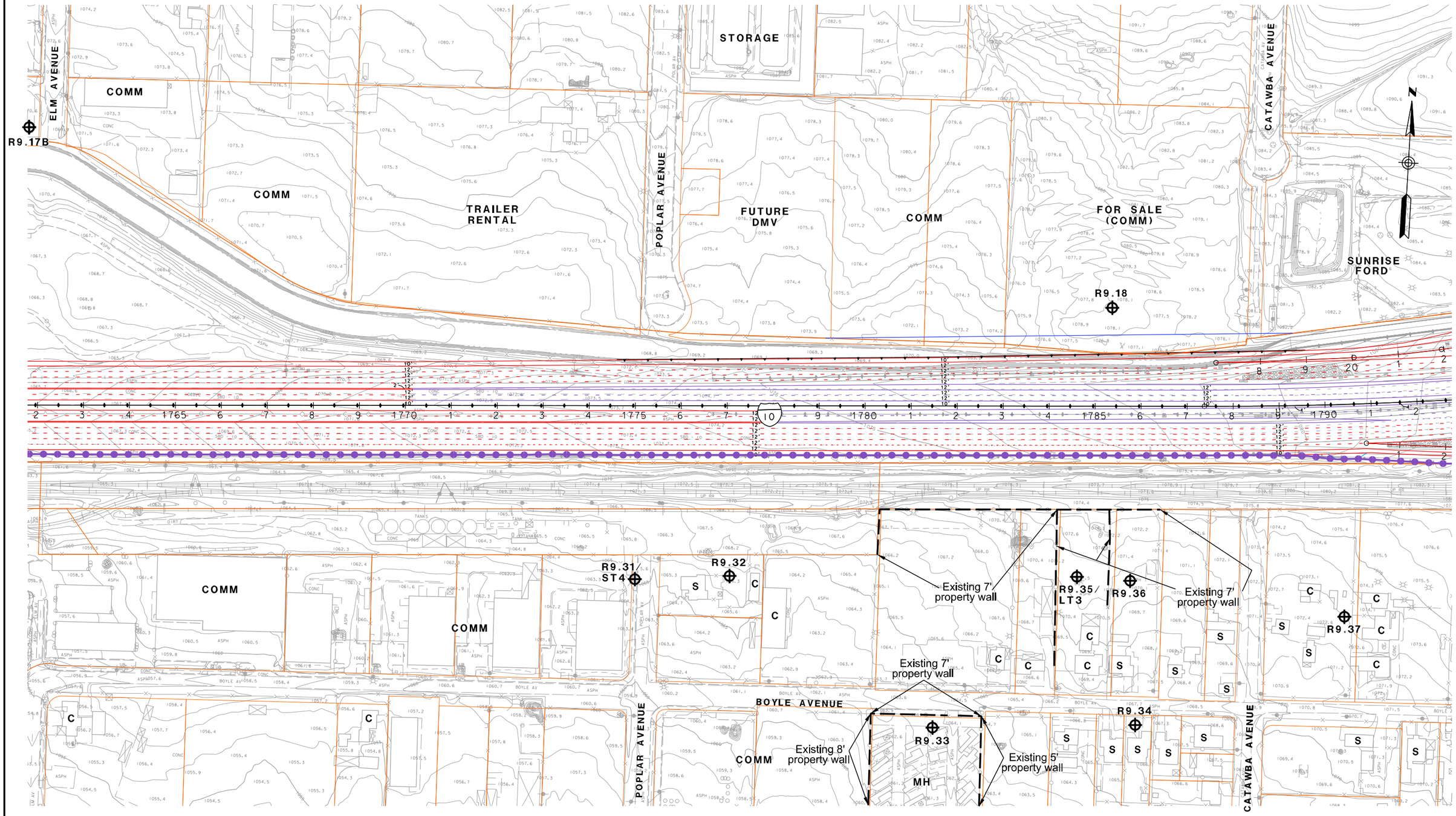
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 131



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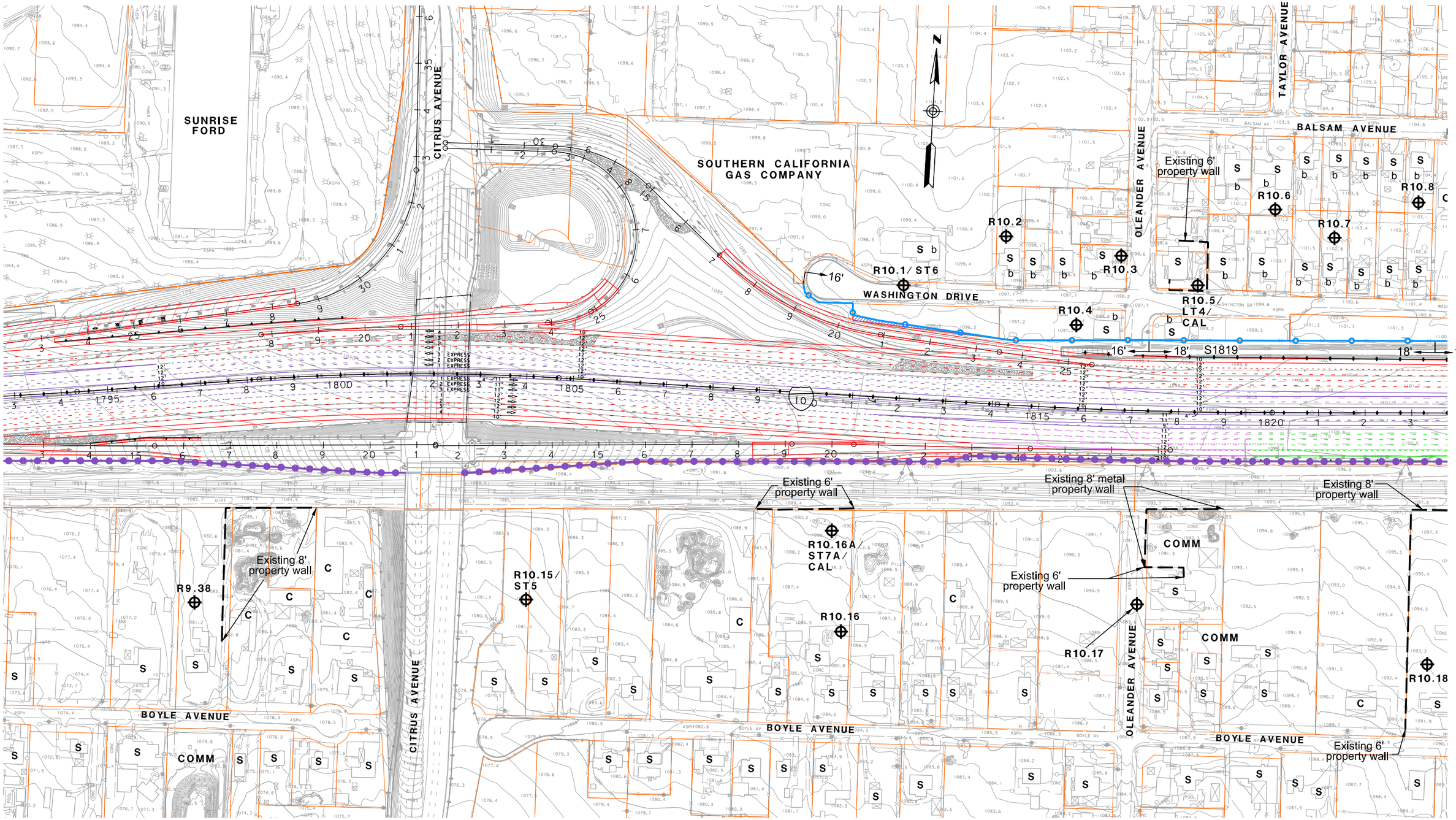
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 132



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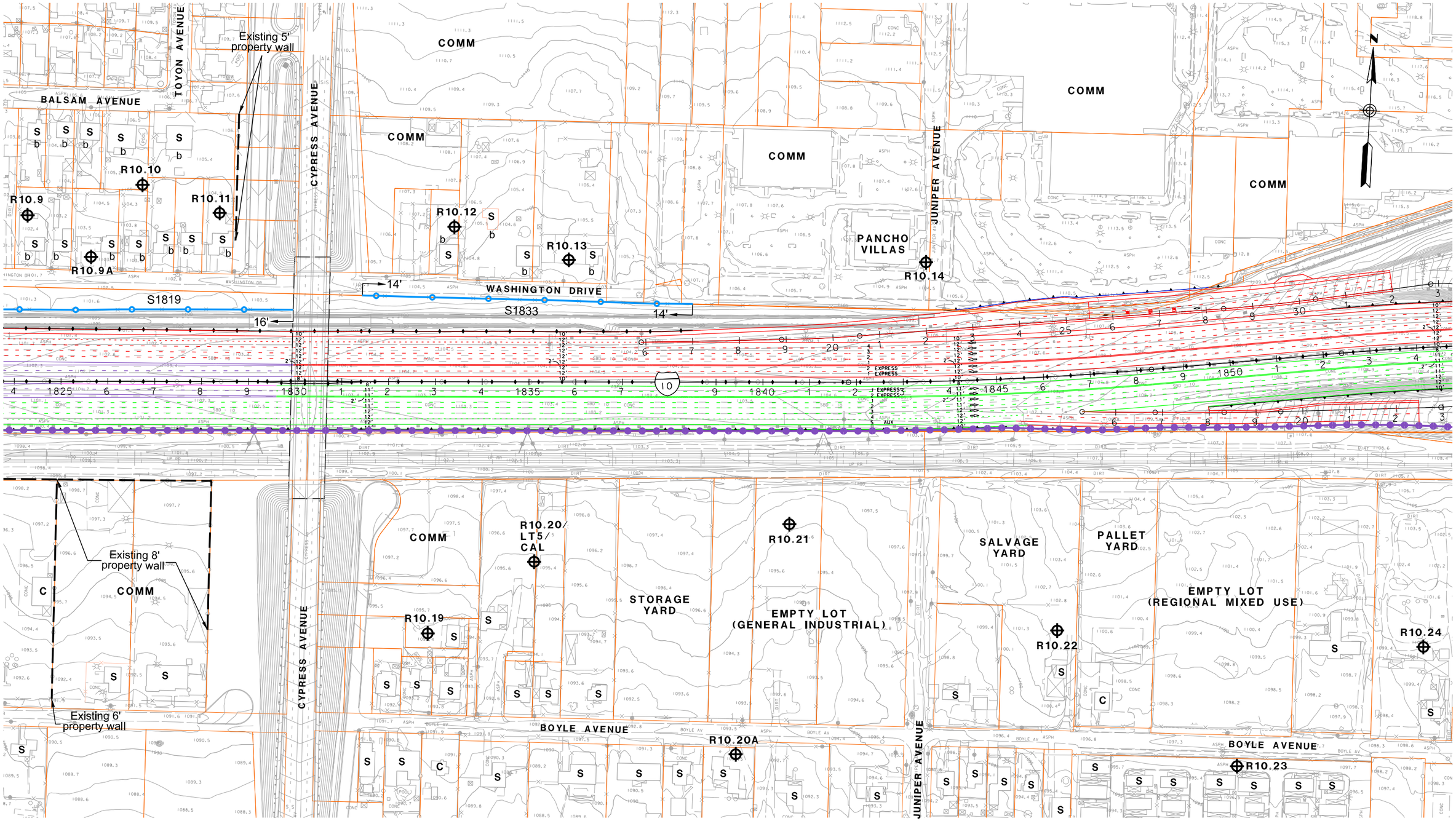
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 133



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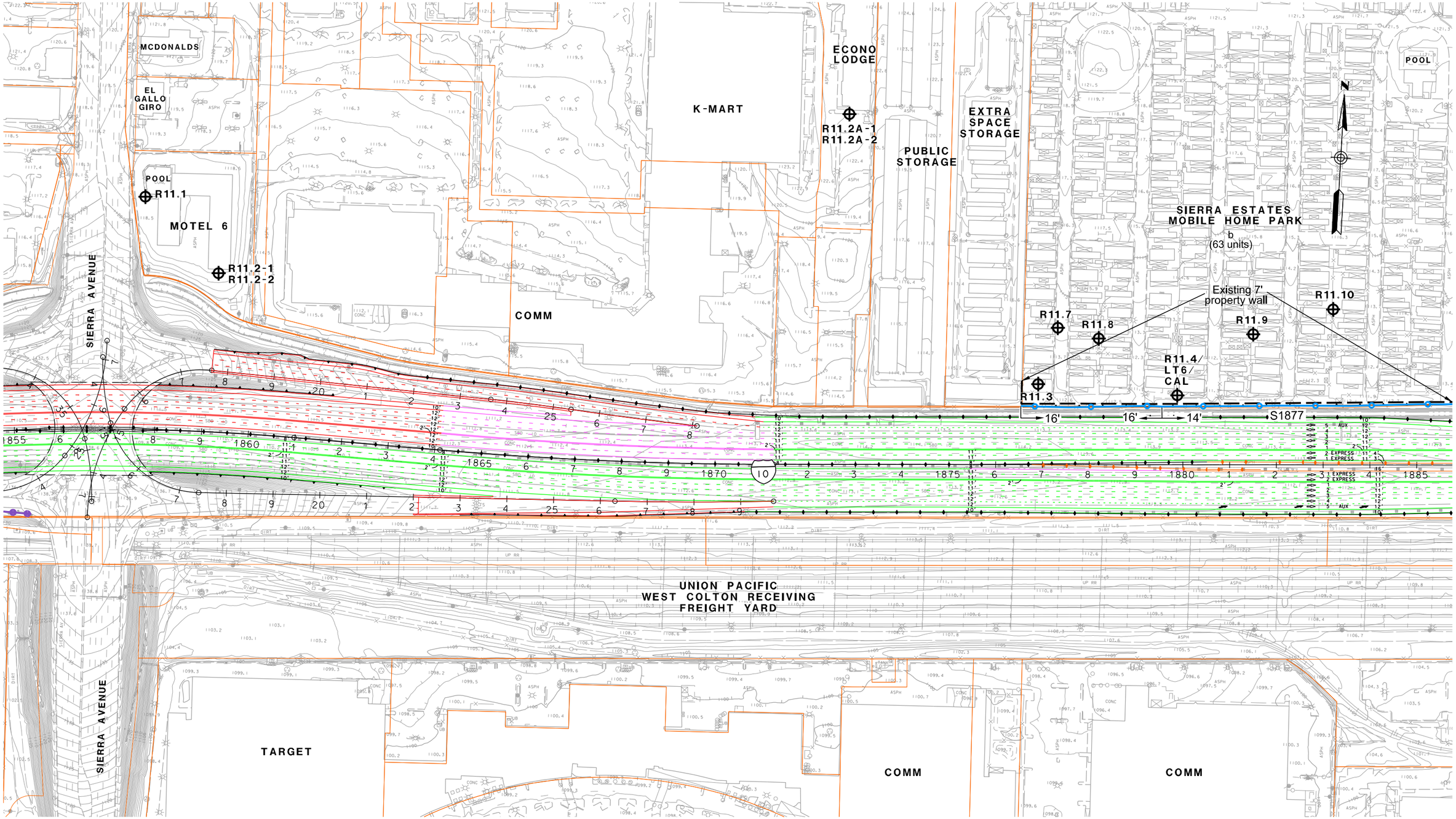
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 134



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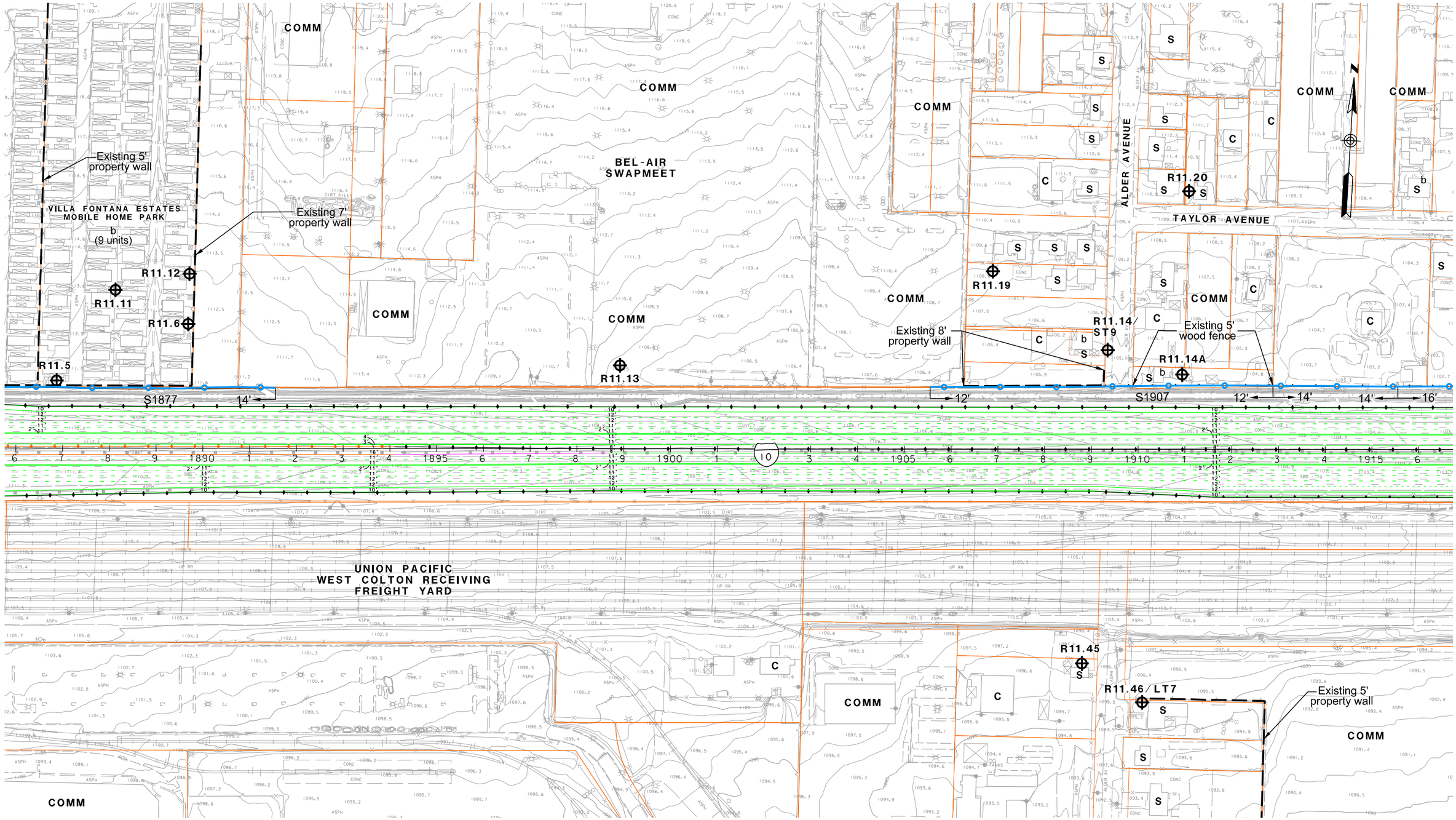
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 135



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I-10 CORRIDOR ALTERNATIVE 3
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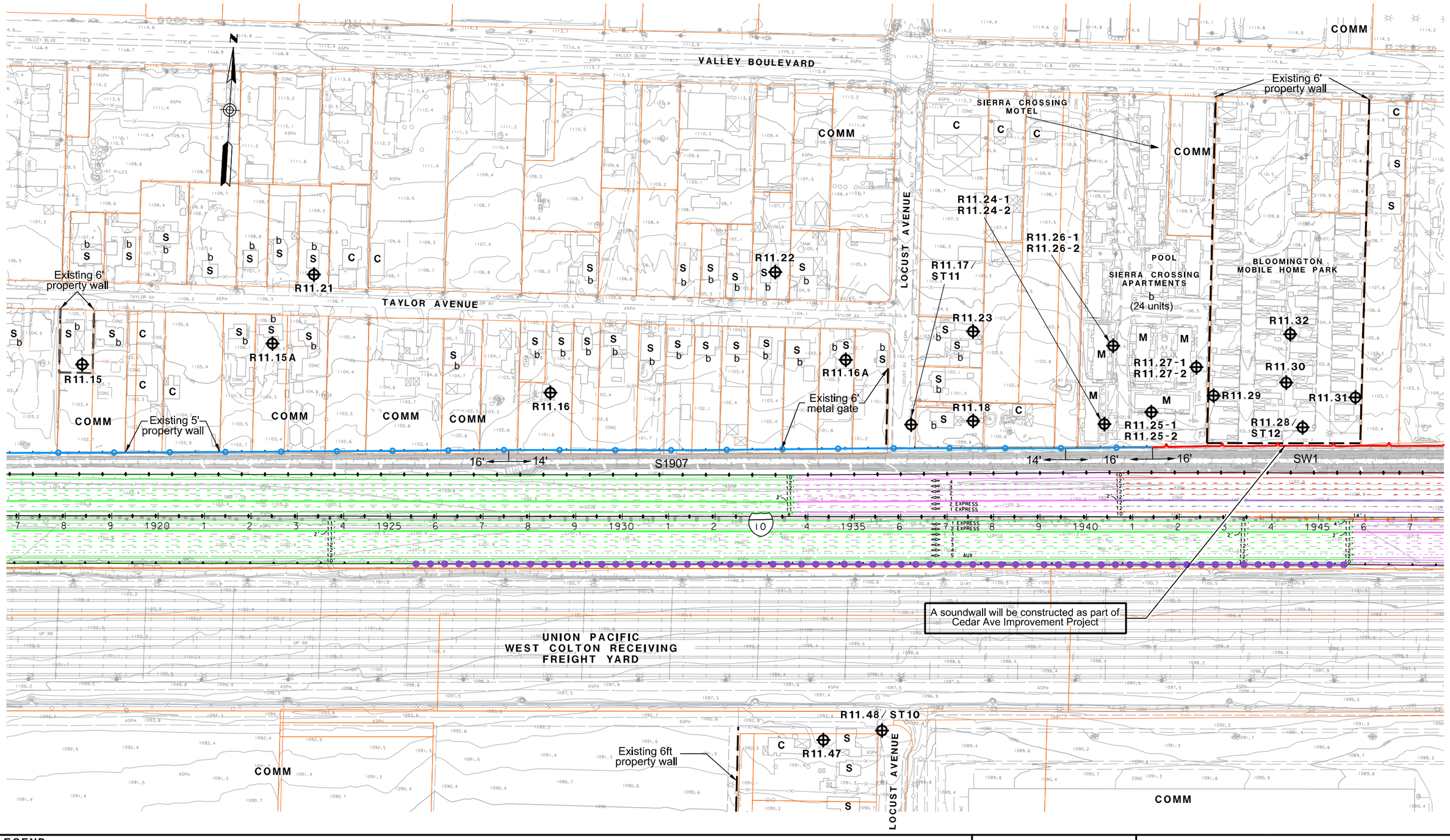
JUNE 10, 2015

FIGURE 136



LEGEND

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- ANALYZED SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER
- DRAINAGE RETAINING WALL

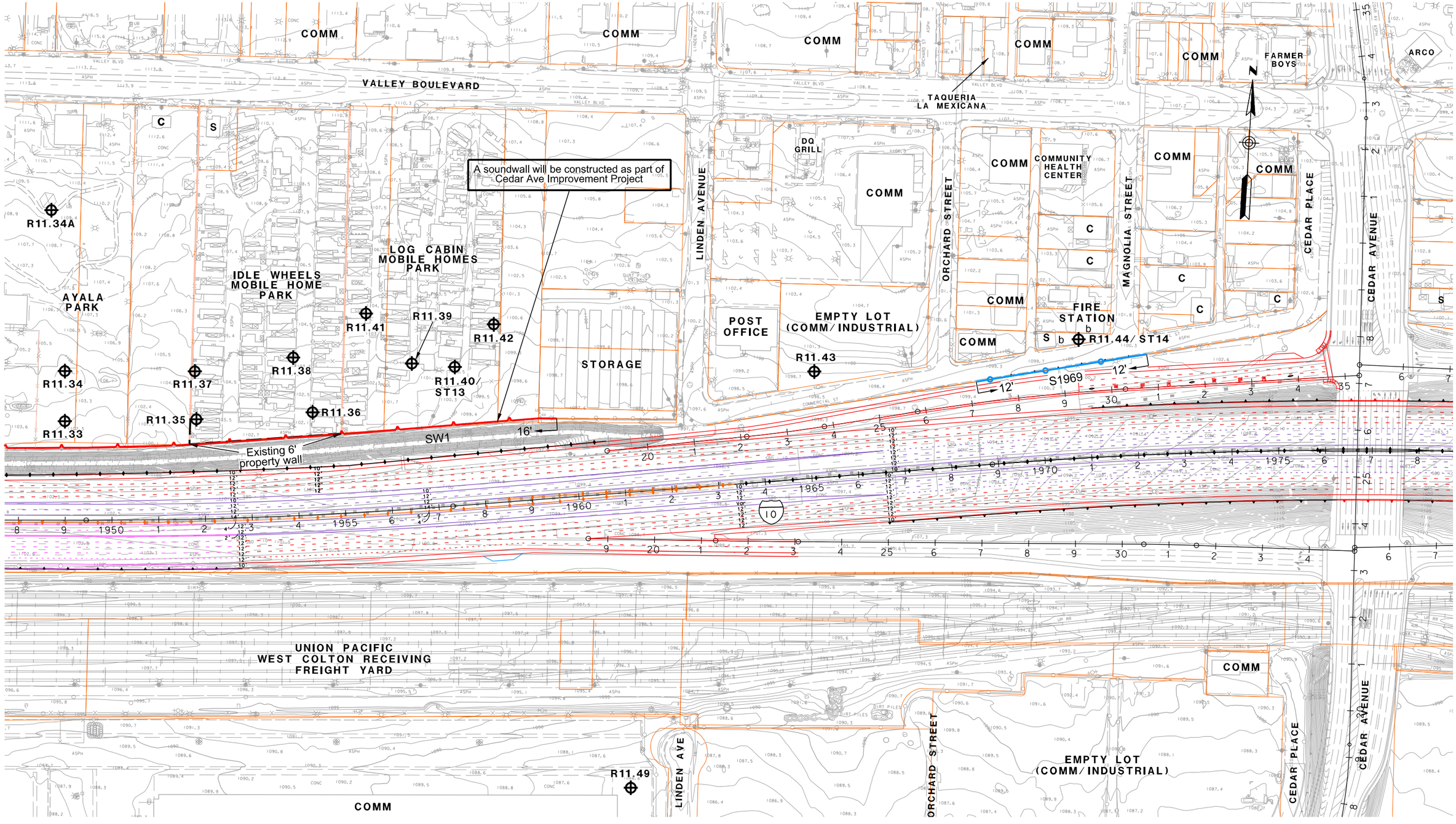
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 137



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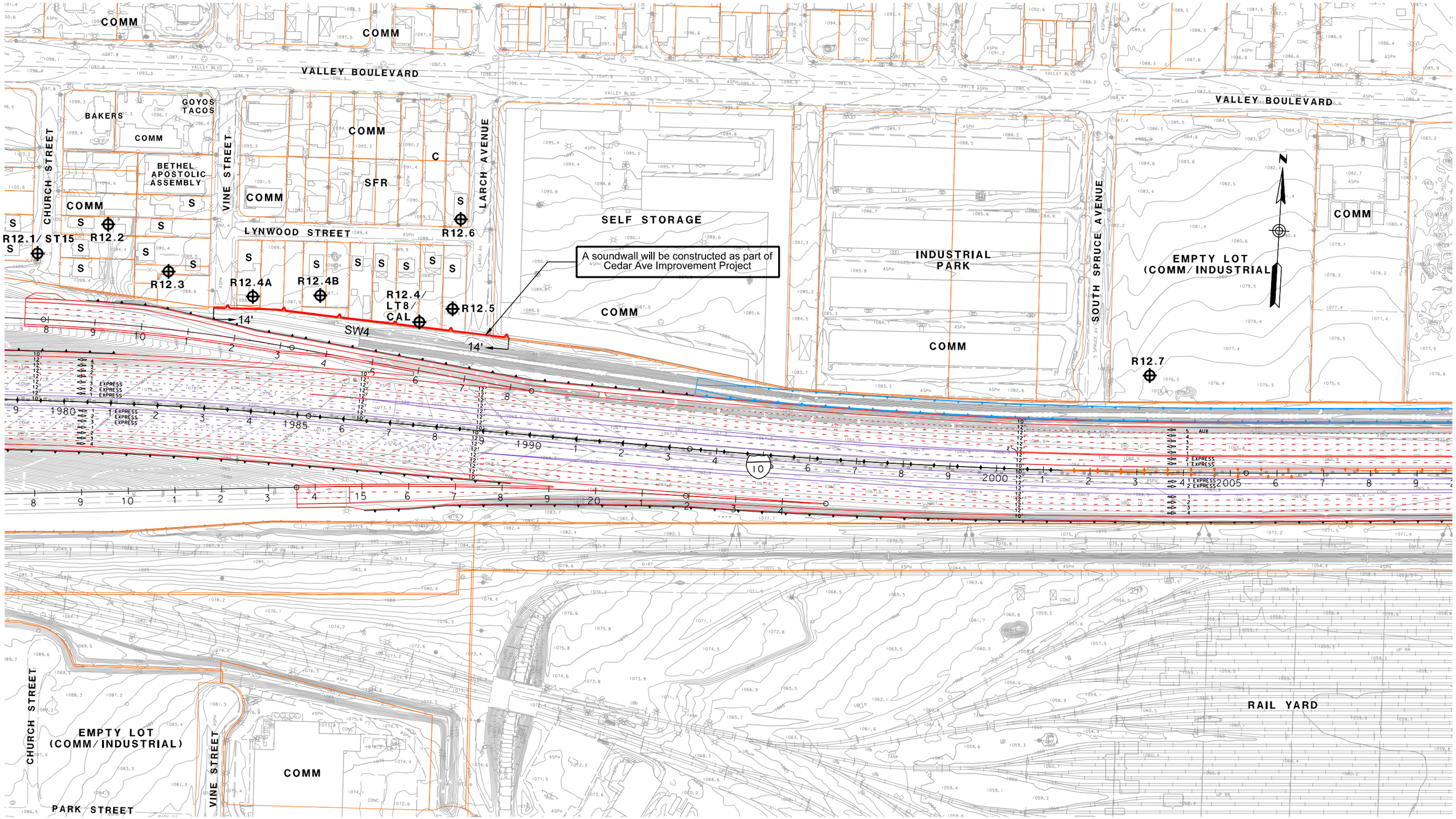
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 138



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I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

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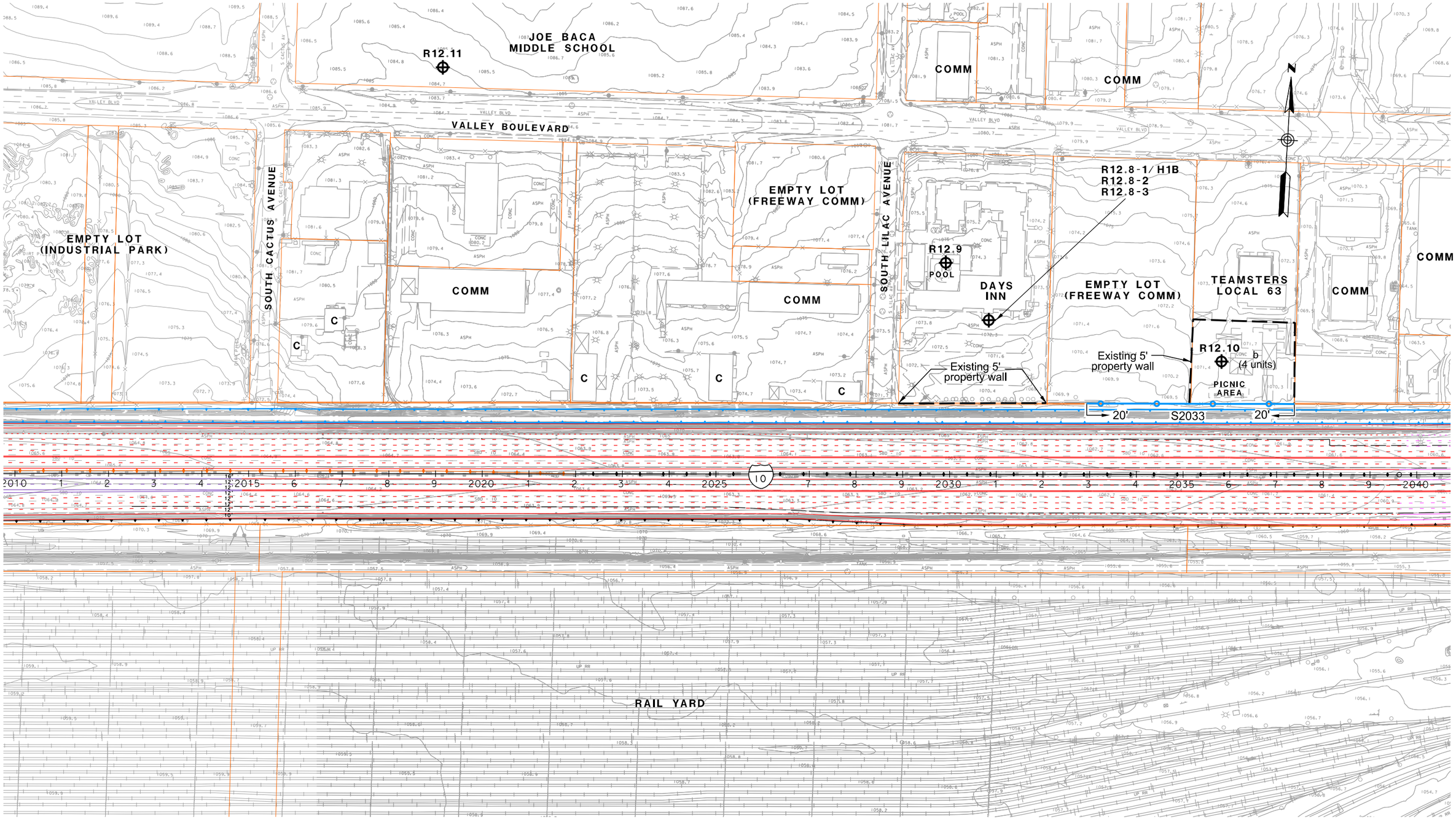

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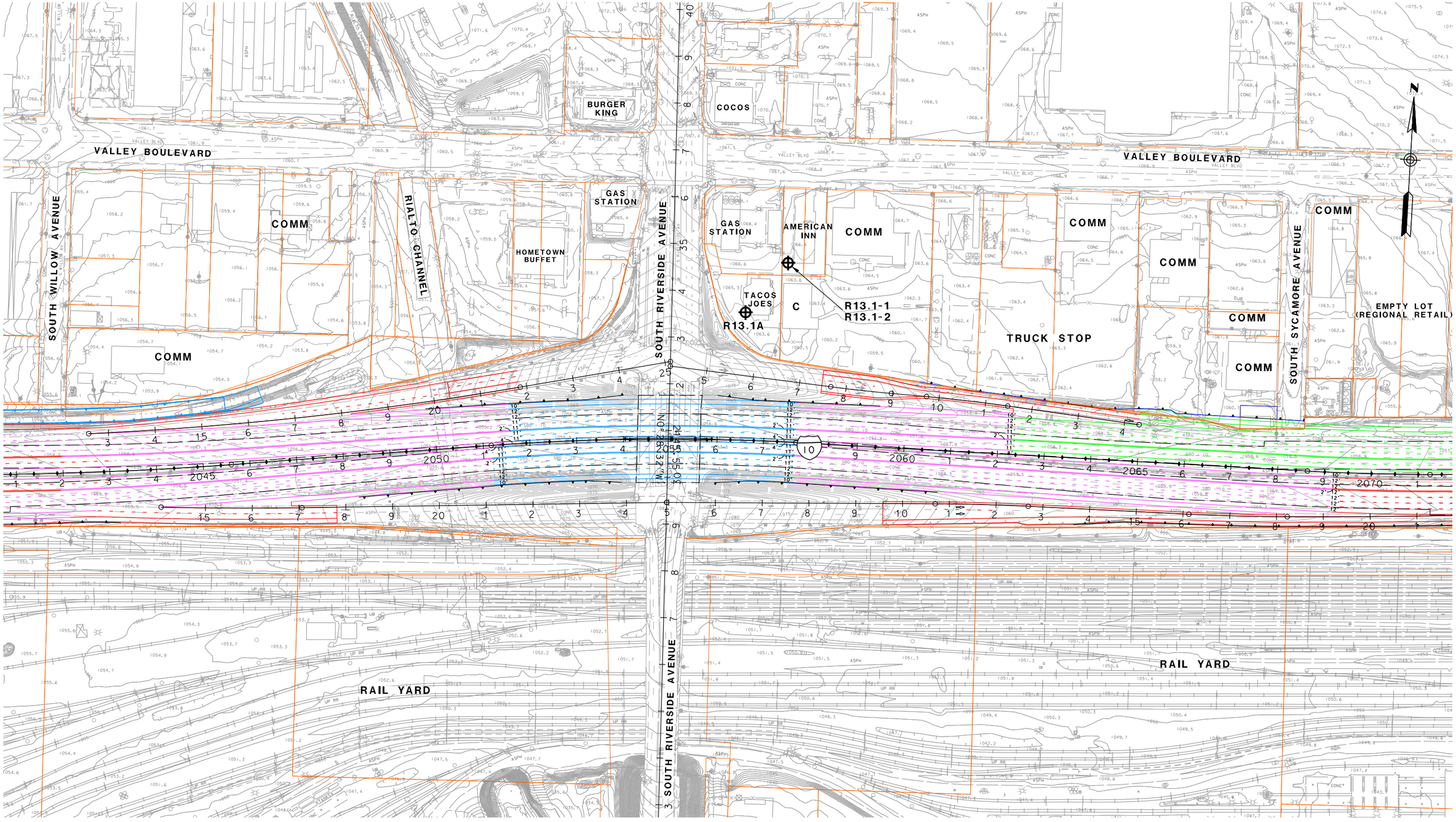
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 140



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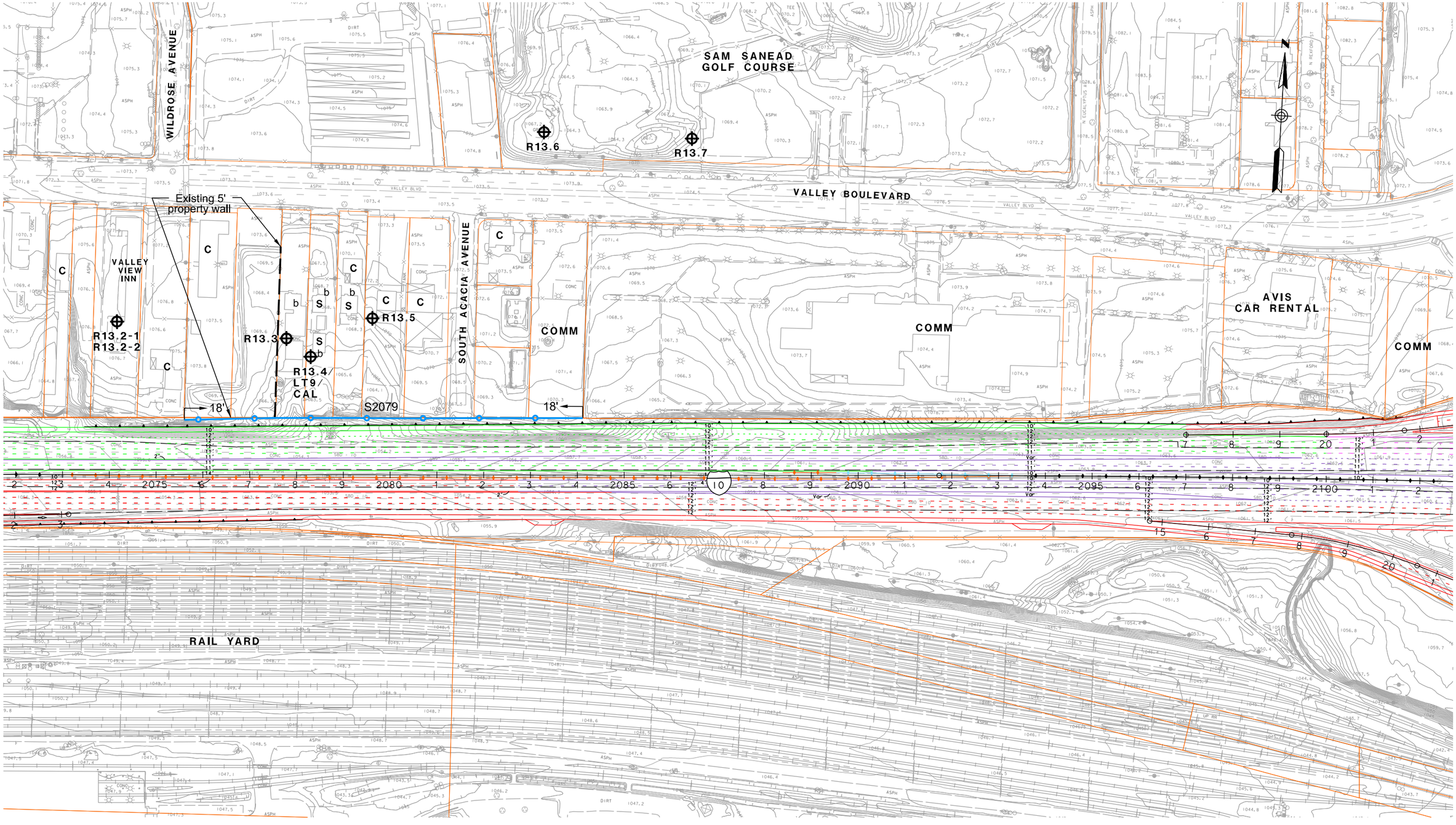
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 141



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1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 142

PARK AND RIDE

EMPTY LOTS (BUSINESS/INDUSTRIAL)

NORTH MERIDIAN AVENUE

EMPTY LOTS (BUSINESS/INDUSTRIAL)

SLOVER MOUNTAIN HIGH SCHOOL

R14.1A

R14.1B

NORTH PEPPER AVENUE

GAS STATION

COMM

SCHOOL ADMINISTRATION OFFICE

COMM

COMM

R14.1/ ST119

VALLEY BOULEVARD

HERMOSA AVENUE

RAILROAD TRACK

RAIL YARD

CEMENT PLANT

LEGEND

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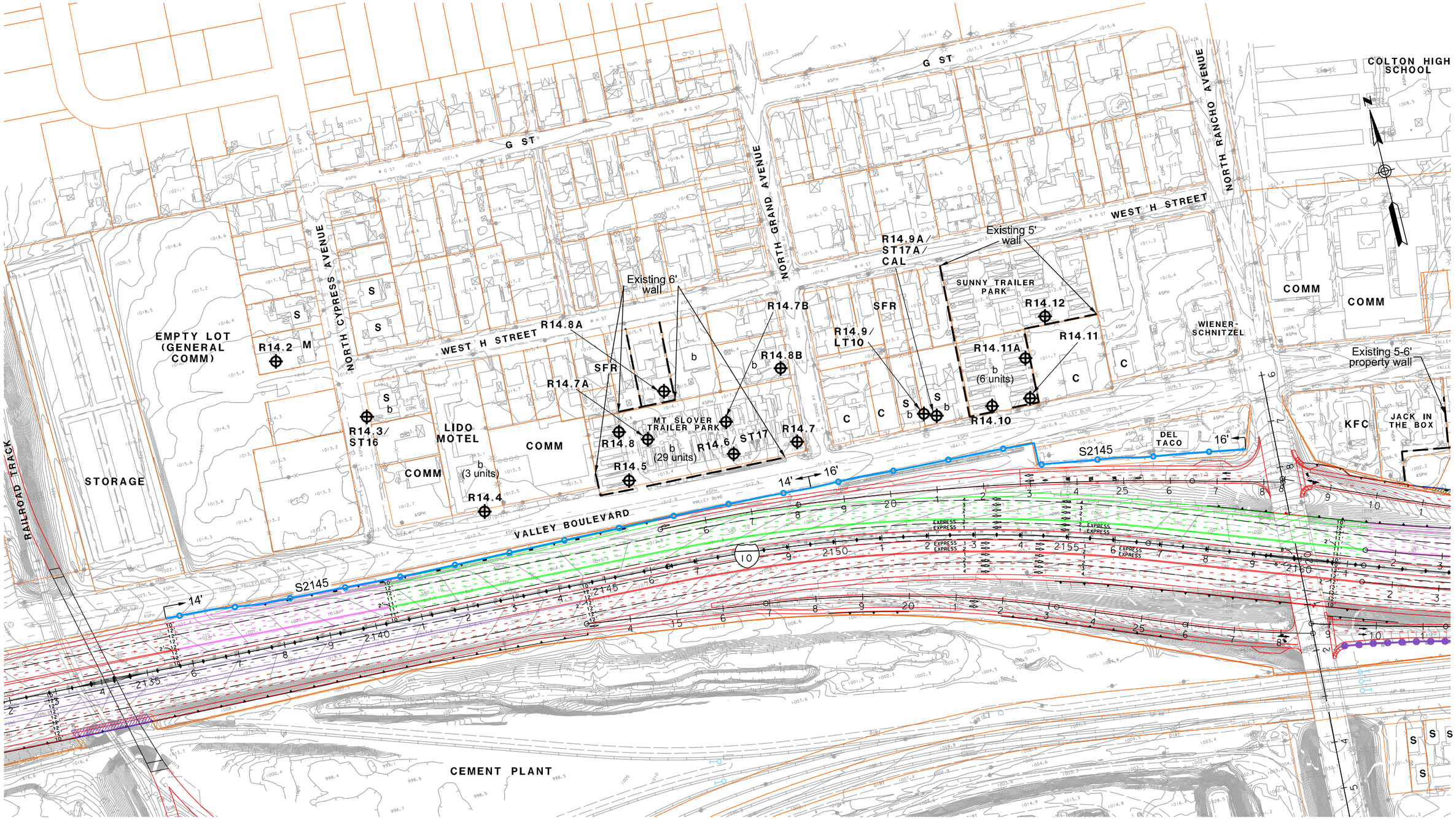
0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 143



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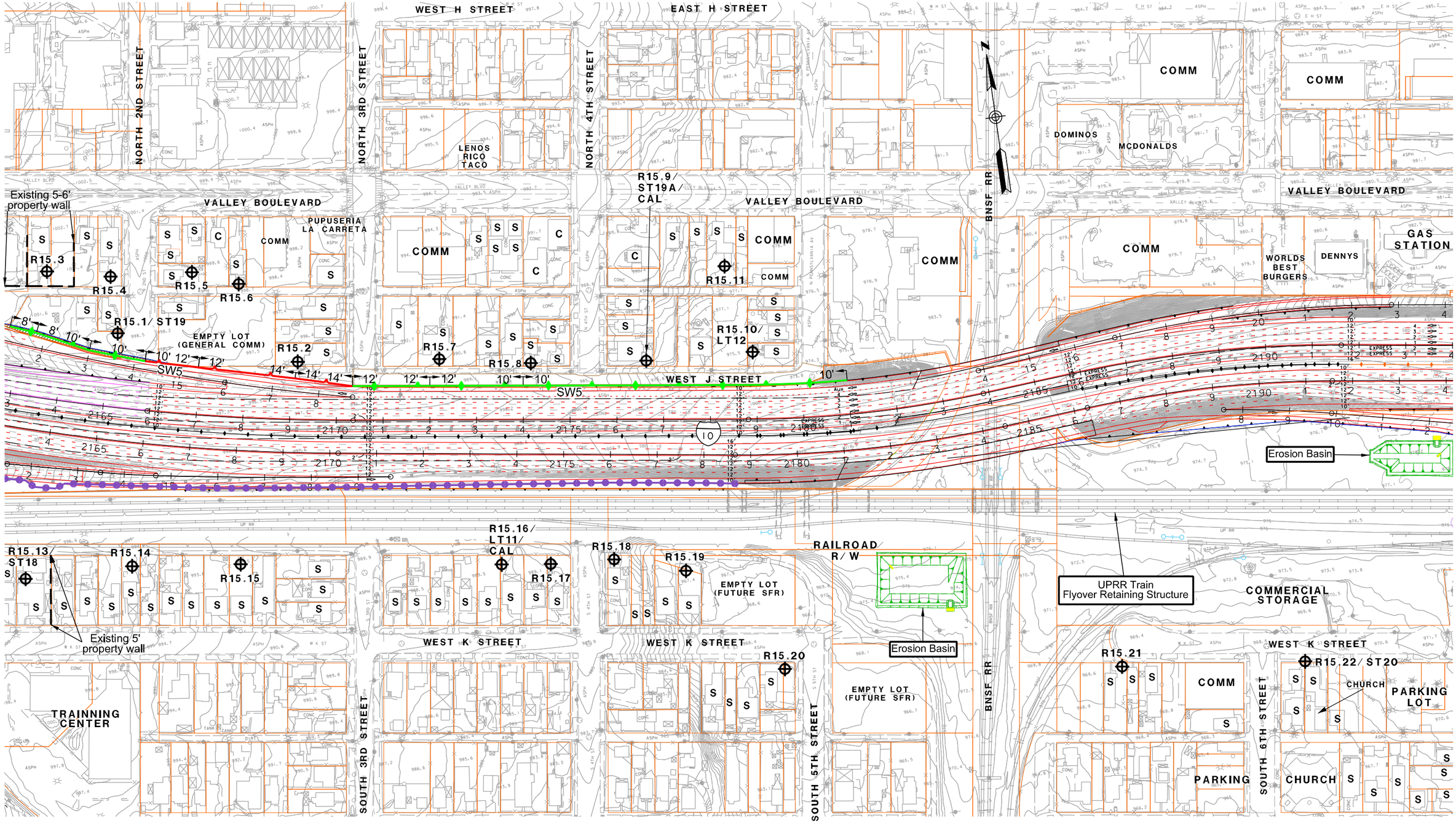
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 144



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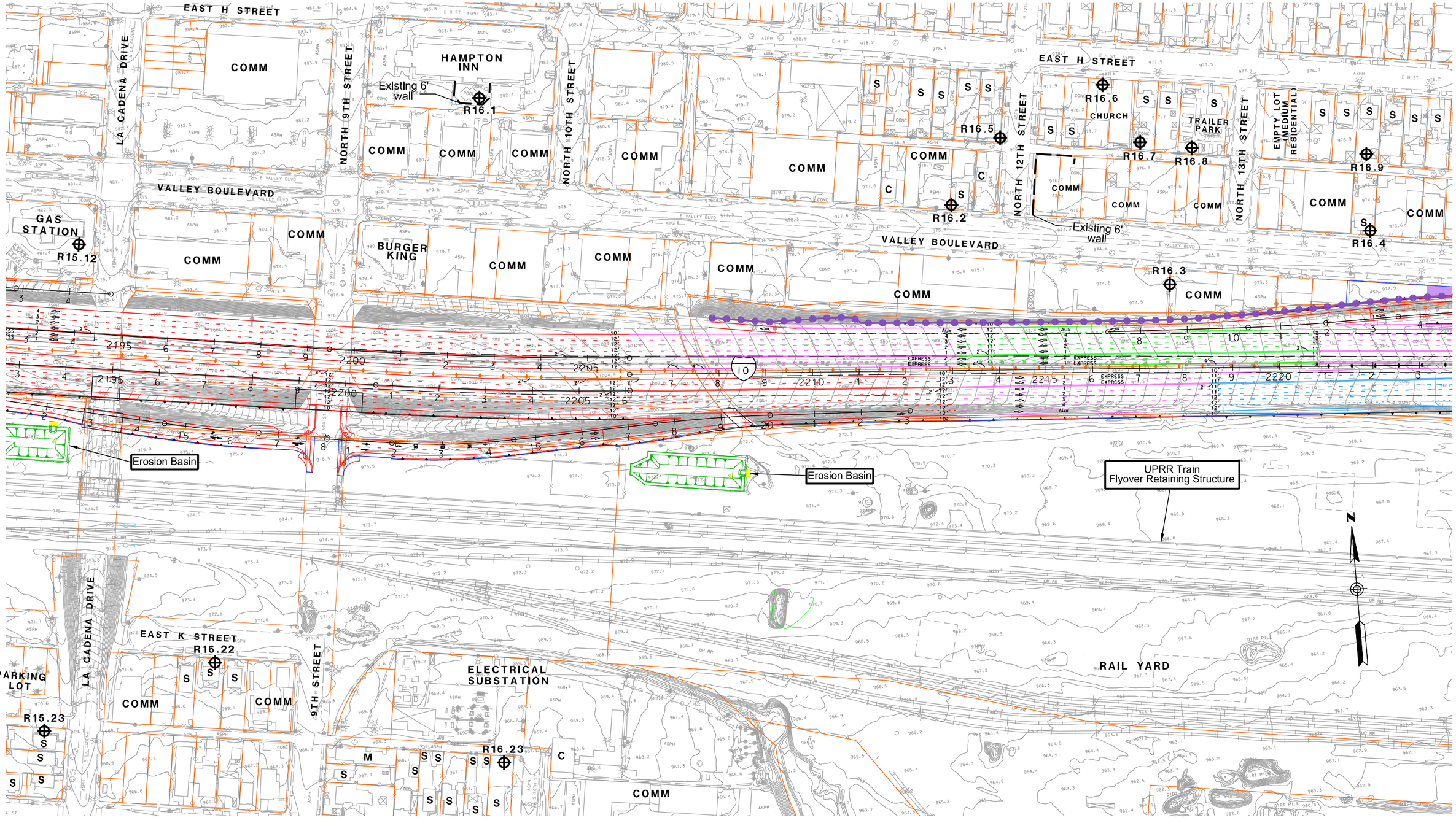
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 145



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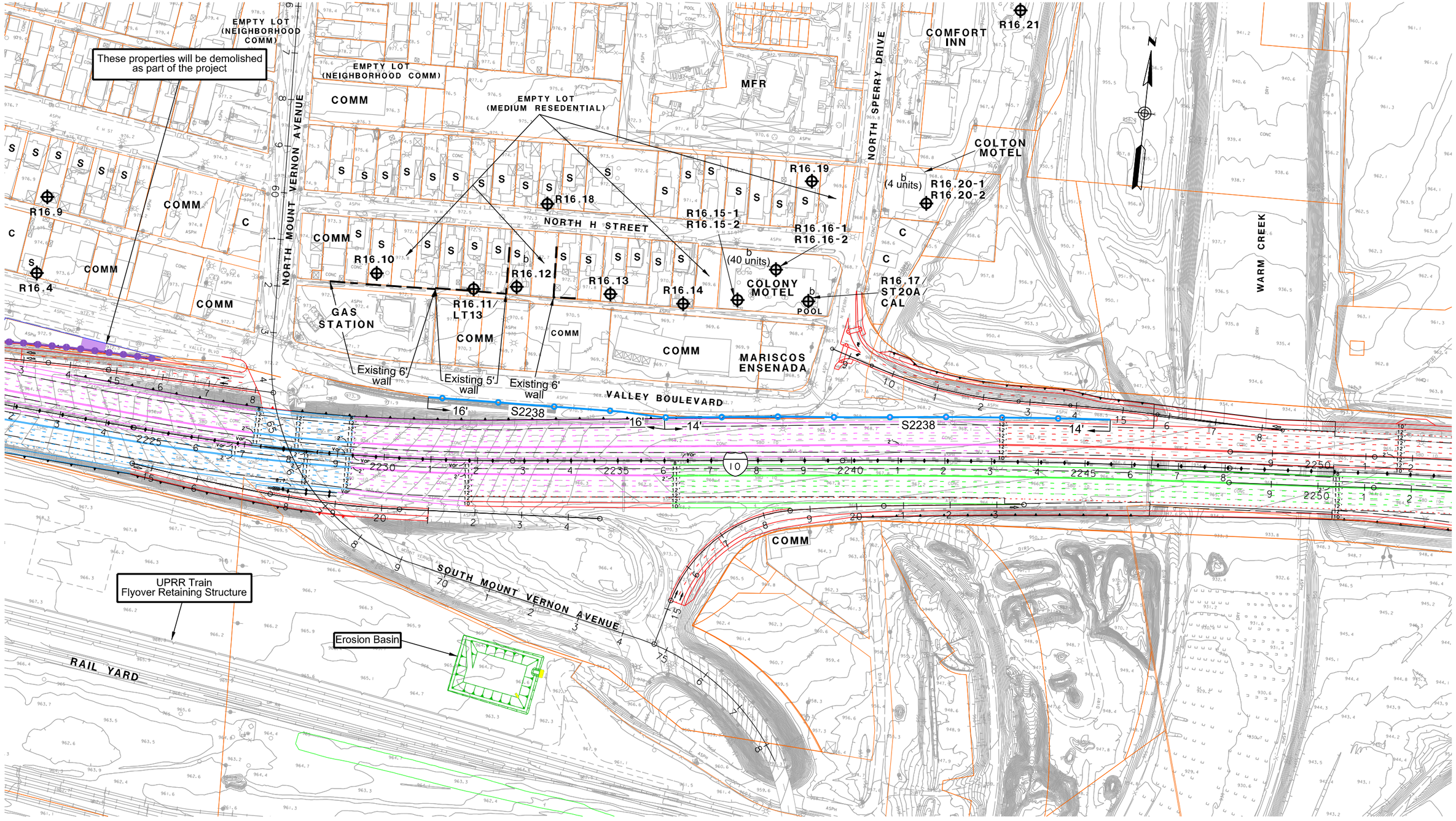
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 146



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I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

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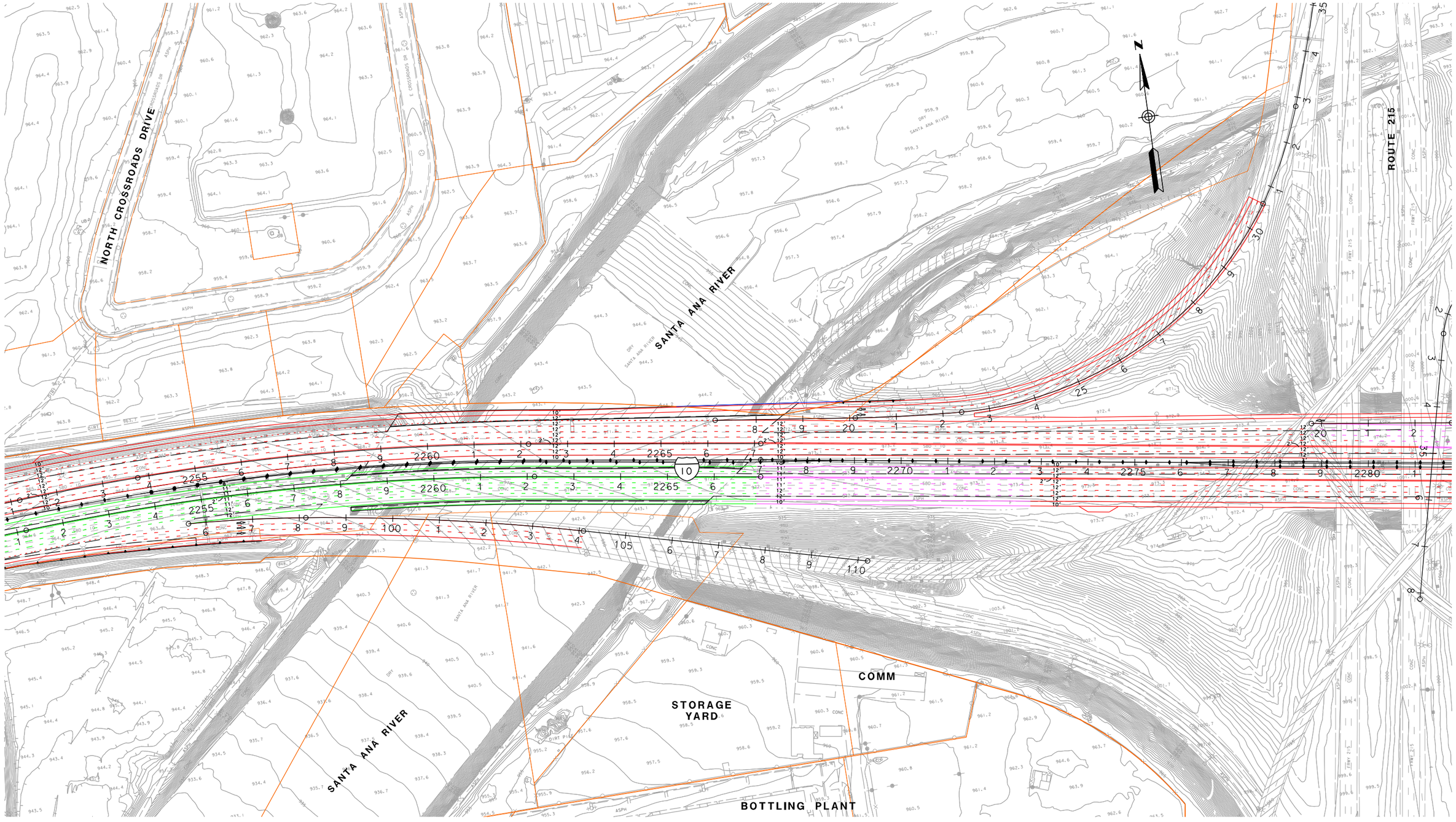

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1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

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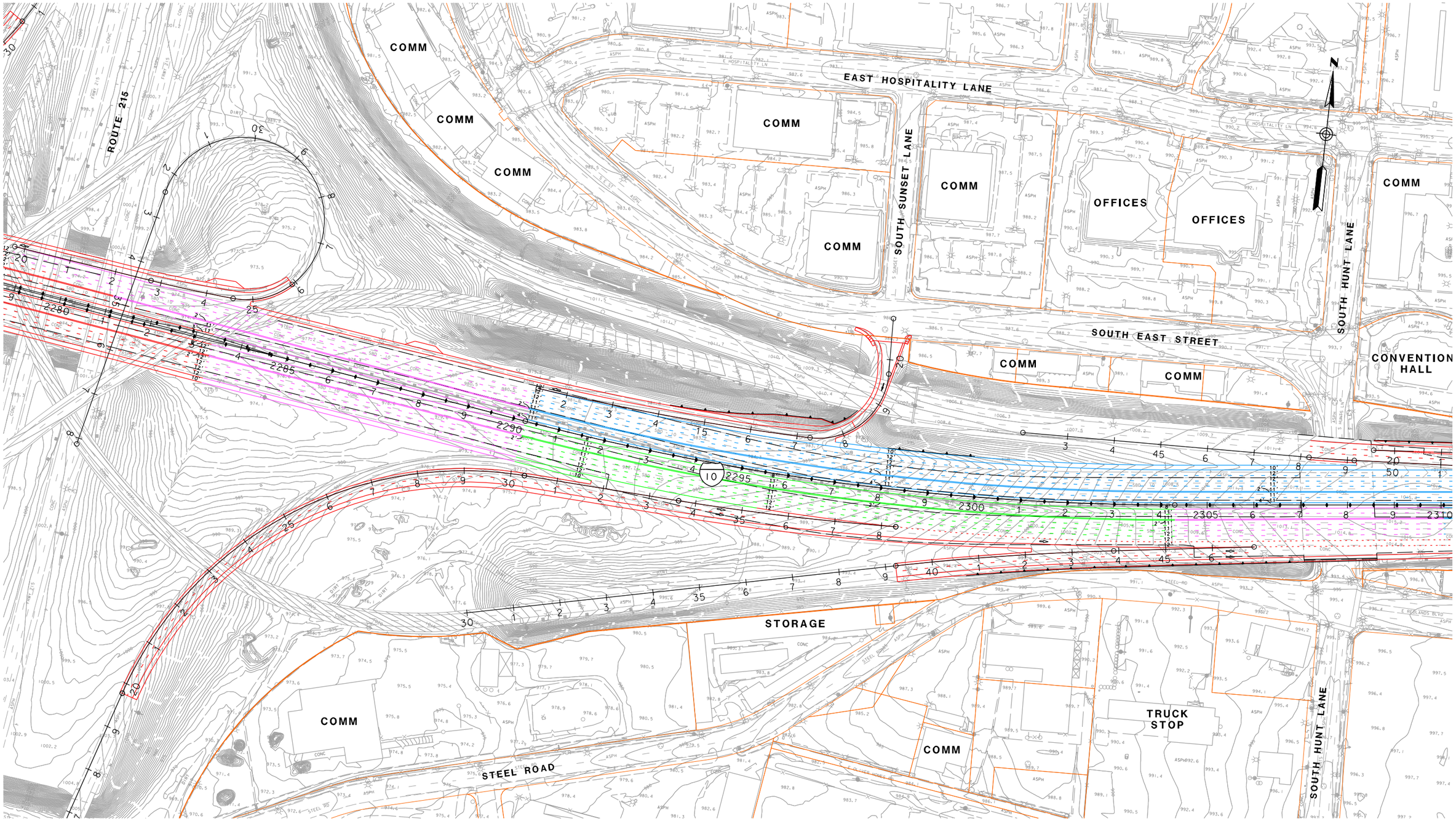

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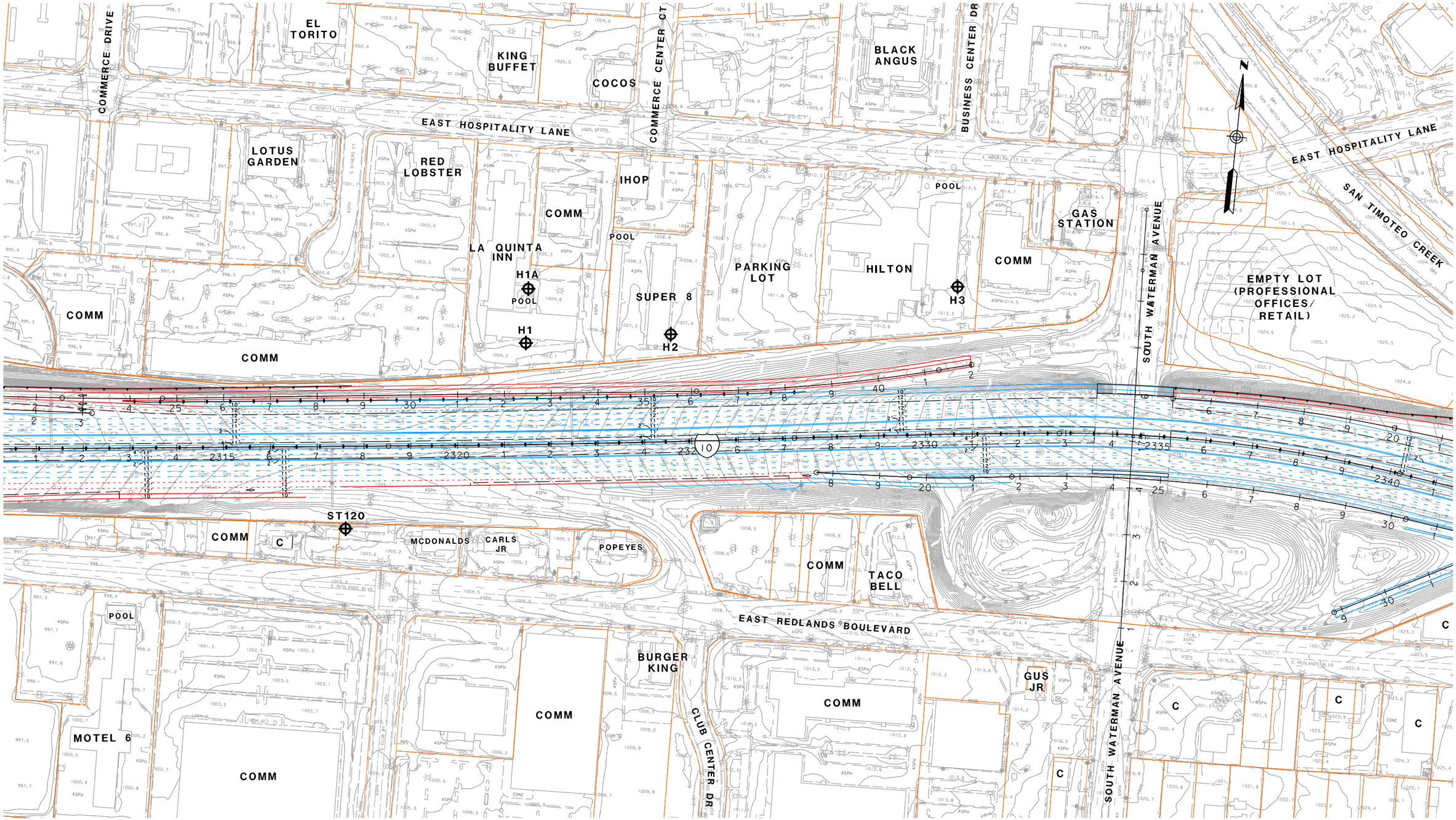
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 149



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1in : 200ft

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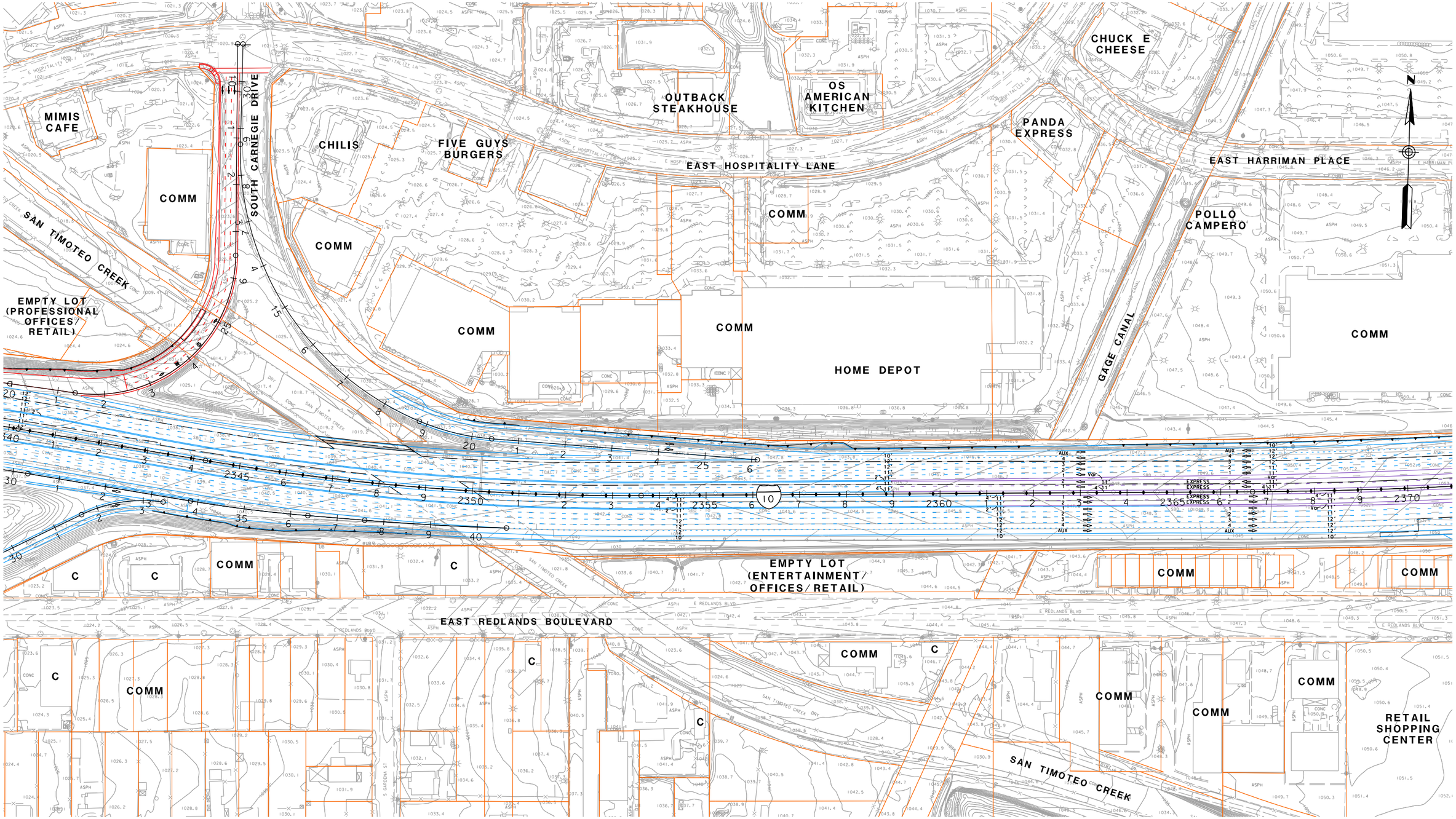
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 150



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1in : 200ft

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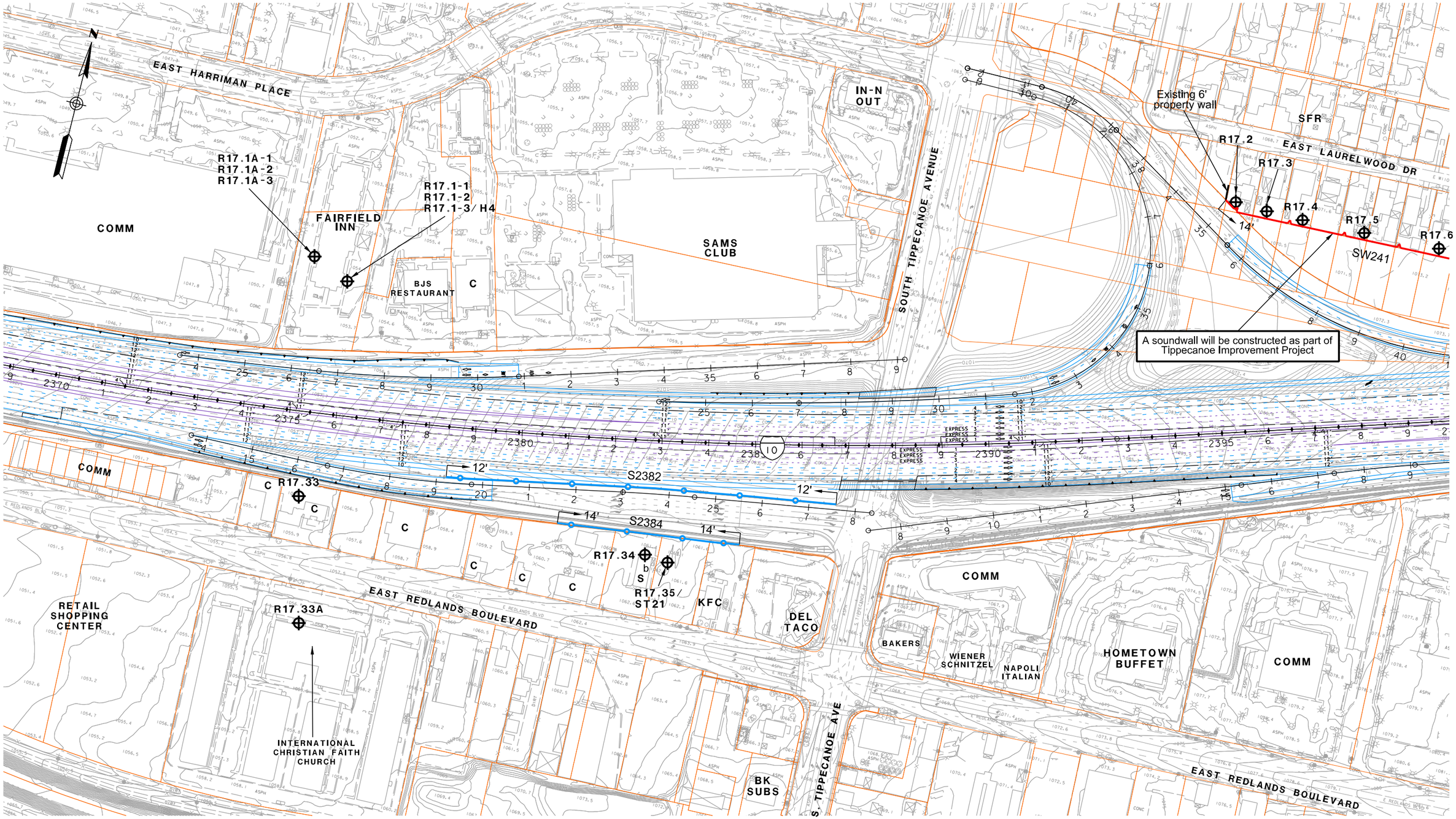
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 151



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1in : 200ft

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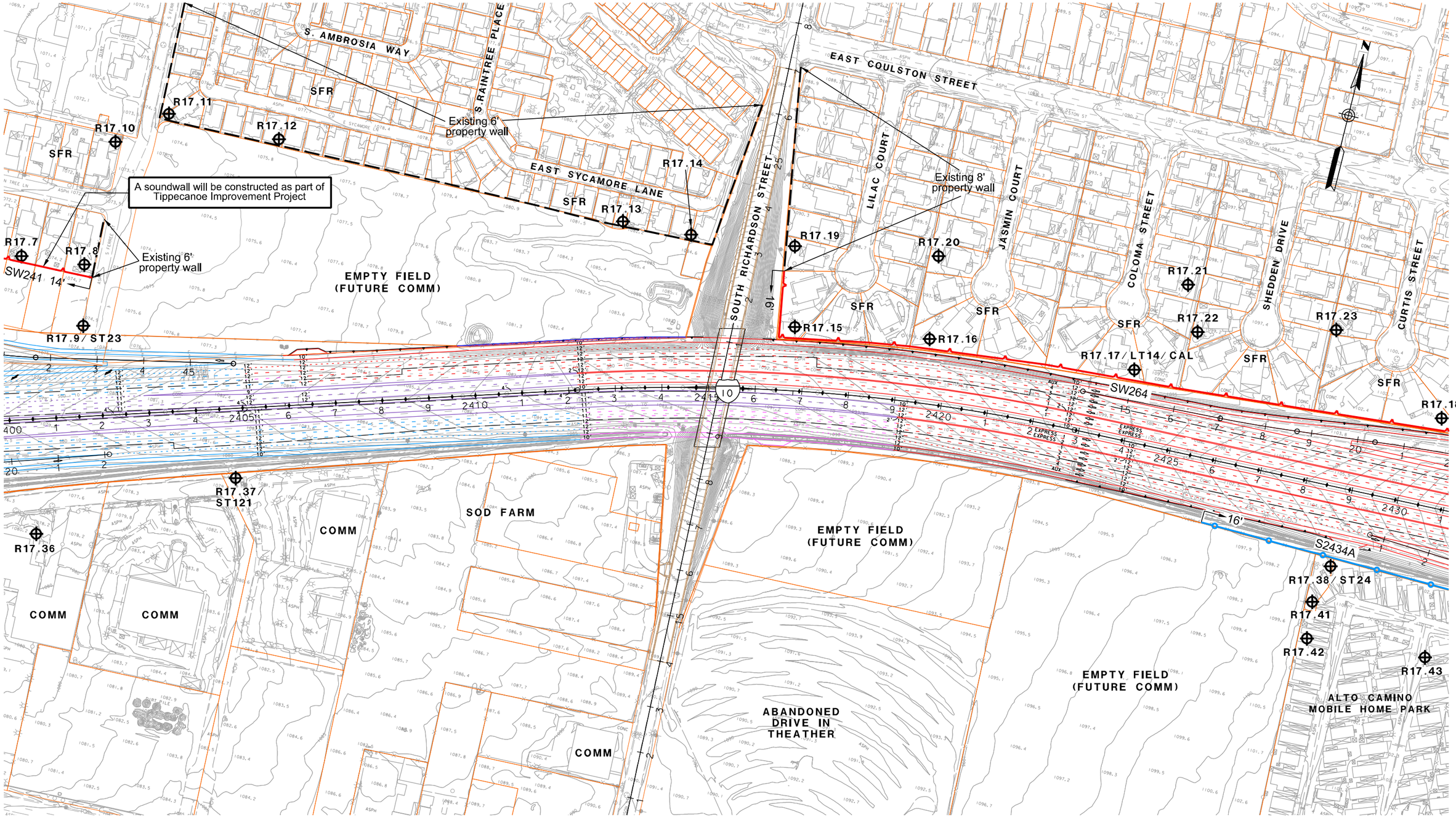
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 152



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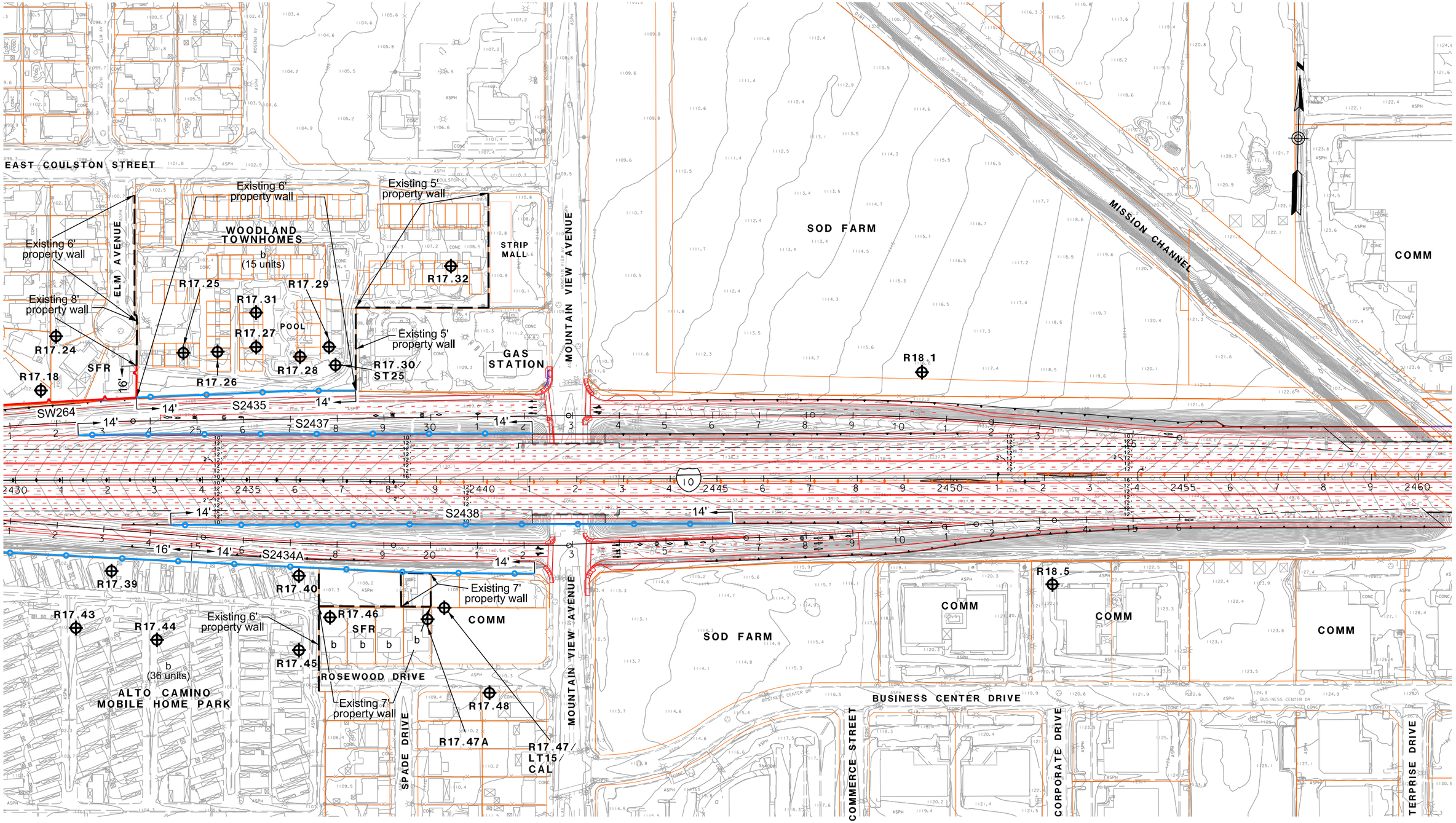
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3 NOISE RECEIVER & BARRIER LOCATIONS (OPTION 1)

JUNE 10, 2015

FIGURE 153-1



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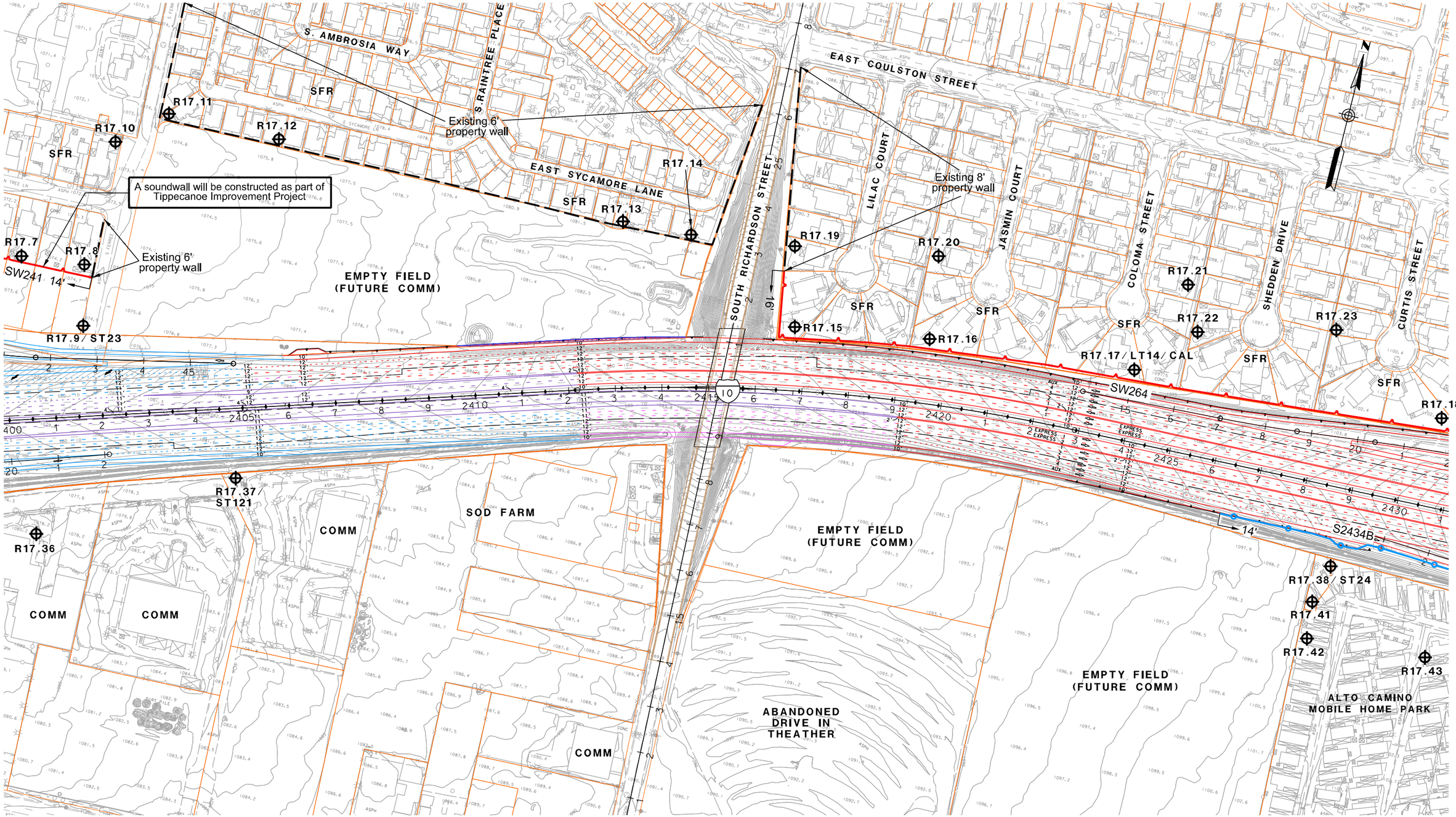
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3 NOISE RECEIVER & BARRIER LOCATIONS (OPTION 1)

JUNE 10, 2015

FIGURE 154-1



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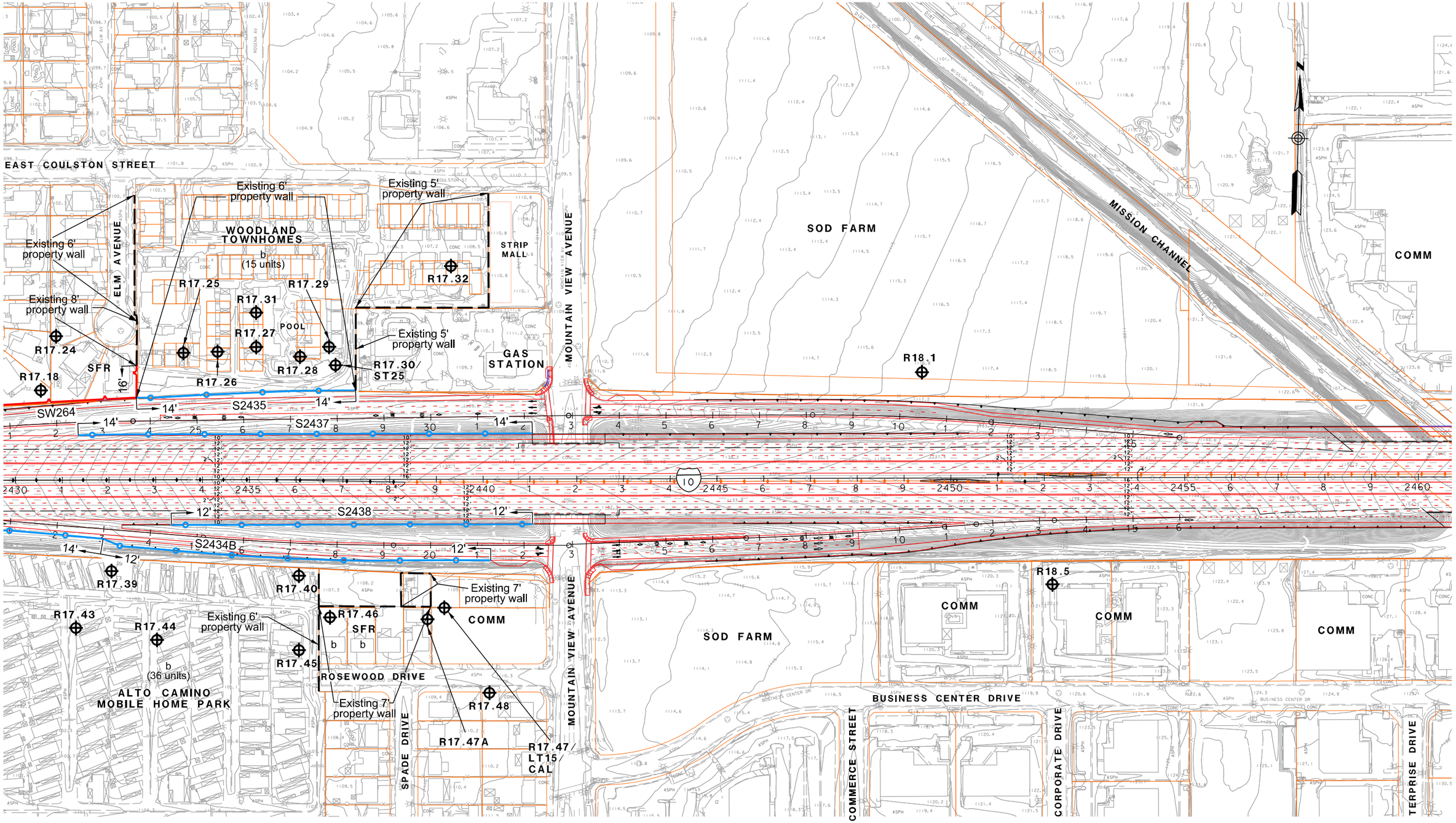
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3 NOISE RECEIVER & BARRIER LOCATIONS (OPTION 2)

JUNE 10, 2015

FIGURE 153-2



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- SAFETY BARRIER
- DRAINAGE RETAINING WALL

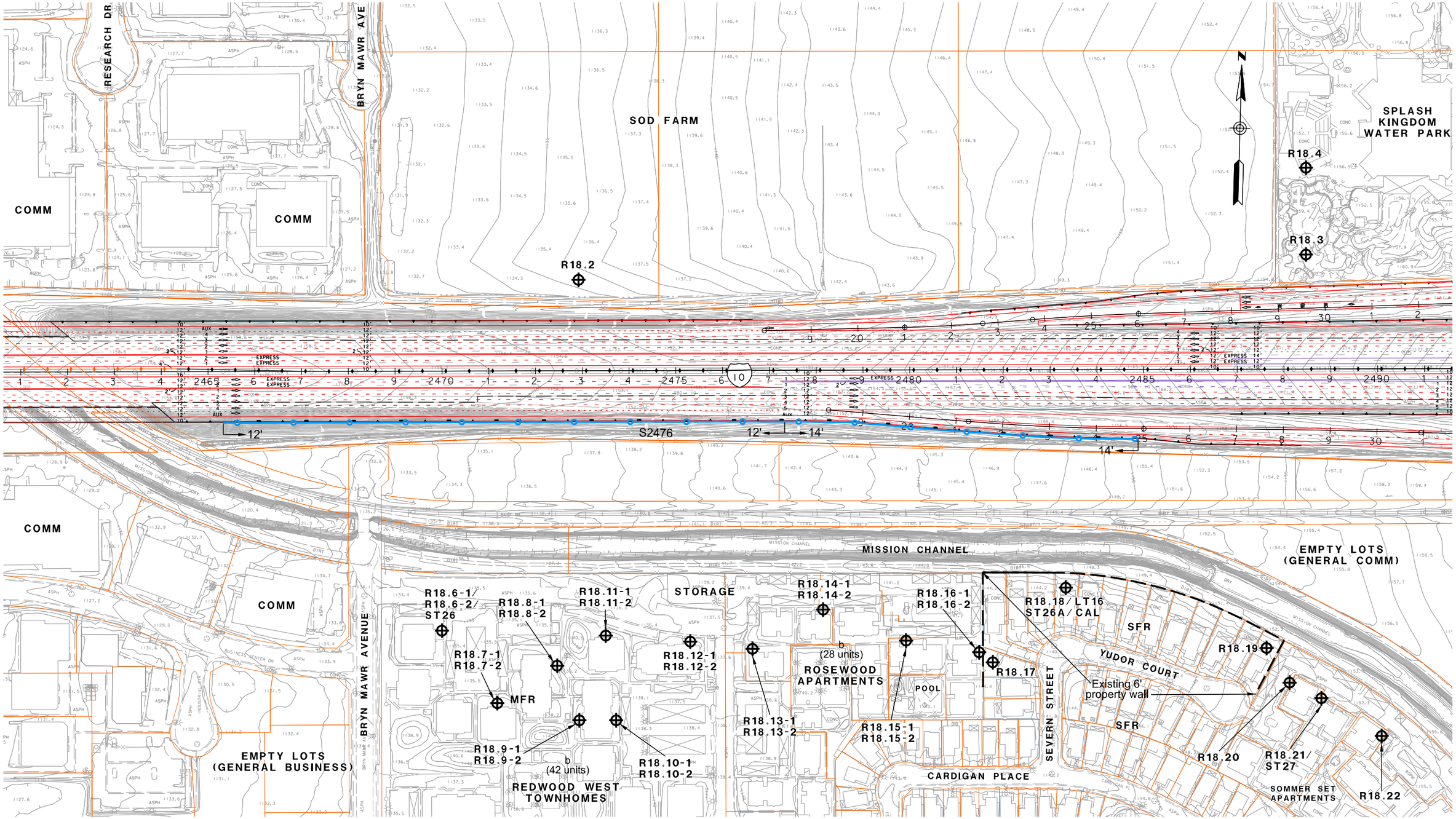
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS
(OPTION 2)

JUNE 10, 2015

FIGURE 154-2



LEGEND

- ⊕RXX - RECEIVER SITE
- ⊕CAL - CALIBRATION SITE
- ⊕LT - LONG-TERM MEASUREMENT
- ⊕ST - SHORT-TERM MEASUREMENT

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- MFR OR M - MULTI-FAMILY RESIDENCE
- COMM OR C - COMMERCIAL/NO OUTDOOR USE AREA
- b - BENEFITED RESIDENCE
- ⊕HXX - IN/OUTDOOR MEASUREMENT

- EXISTING PROPERTY WALL
- EXISTING SOUNDWALL
- PROPOSED SOUNDWALL
- REPLACEMENT IN KIND SOUNDWALL
- ANALYZED SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER
- DRAINAGE RETAINING WALL

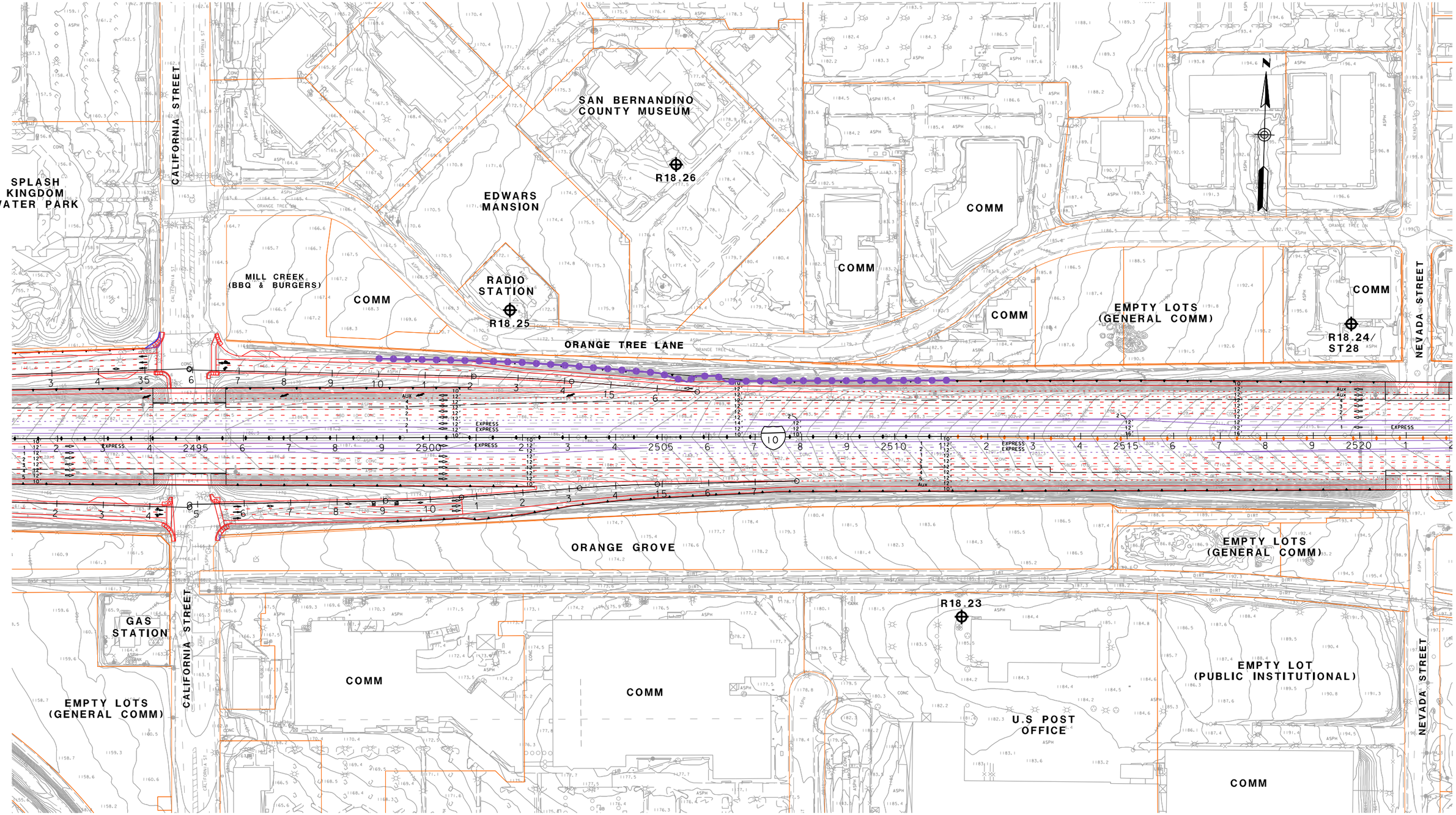
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 155



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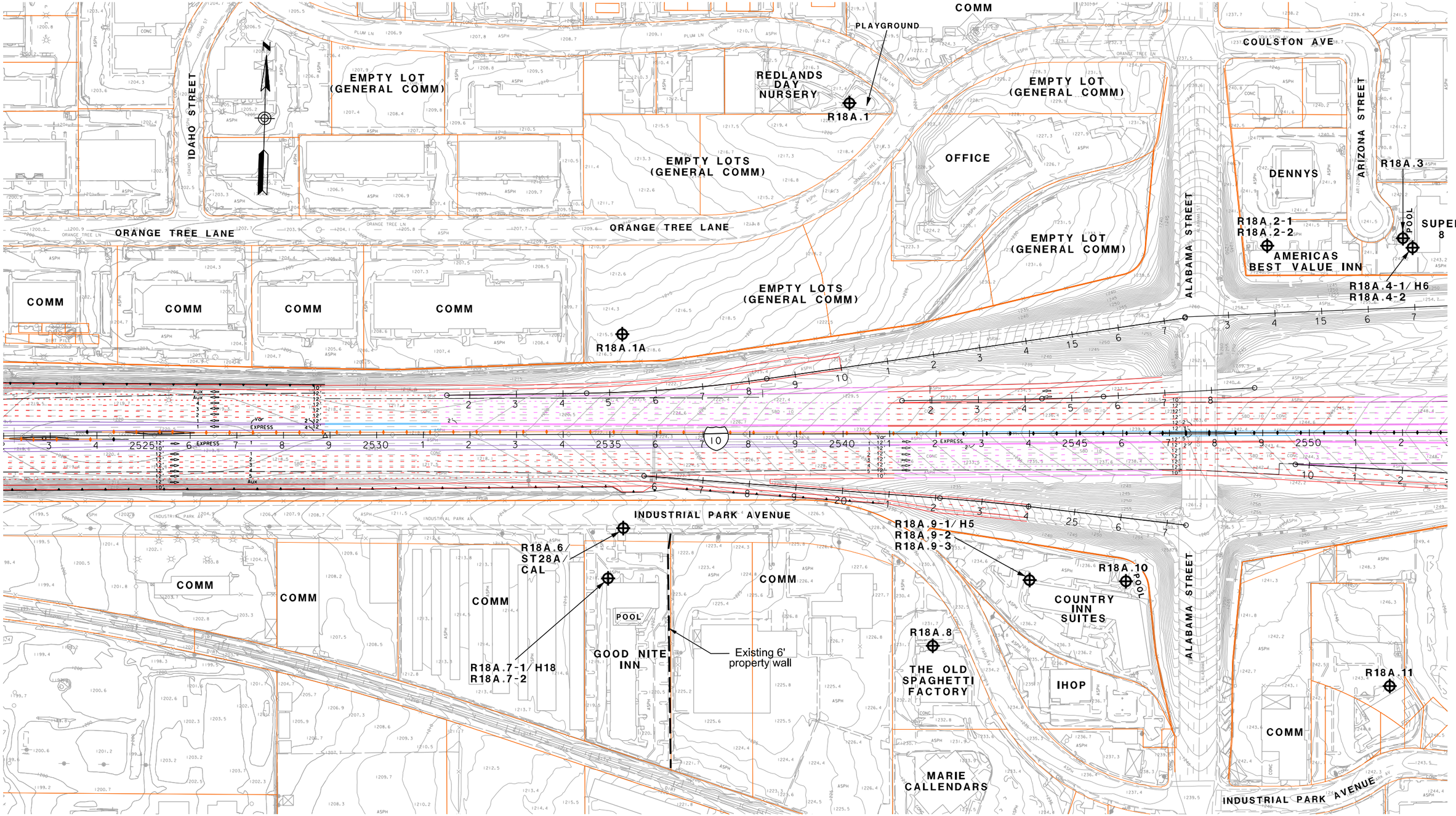
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 156



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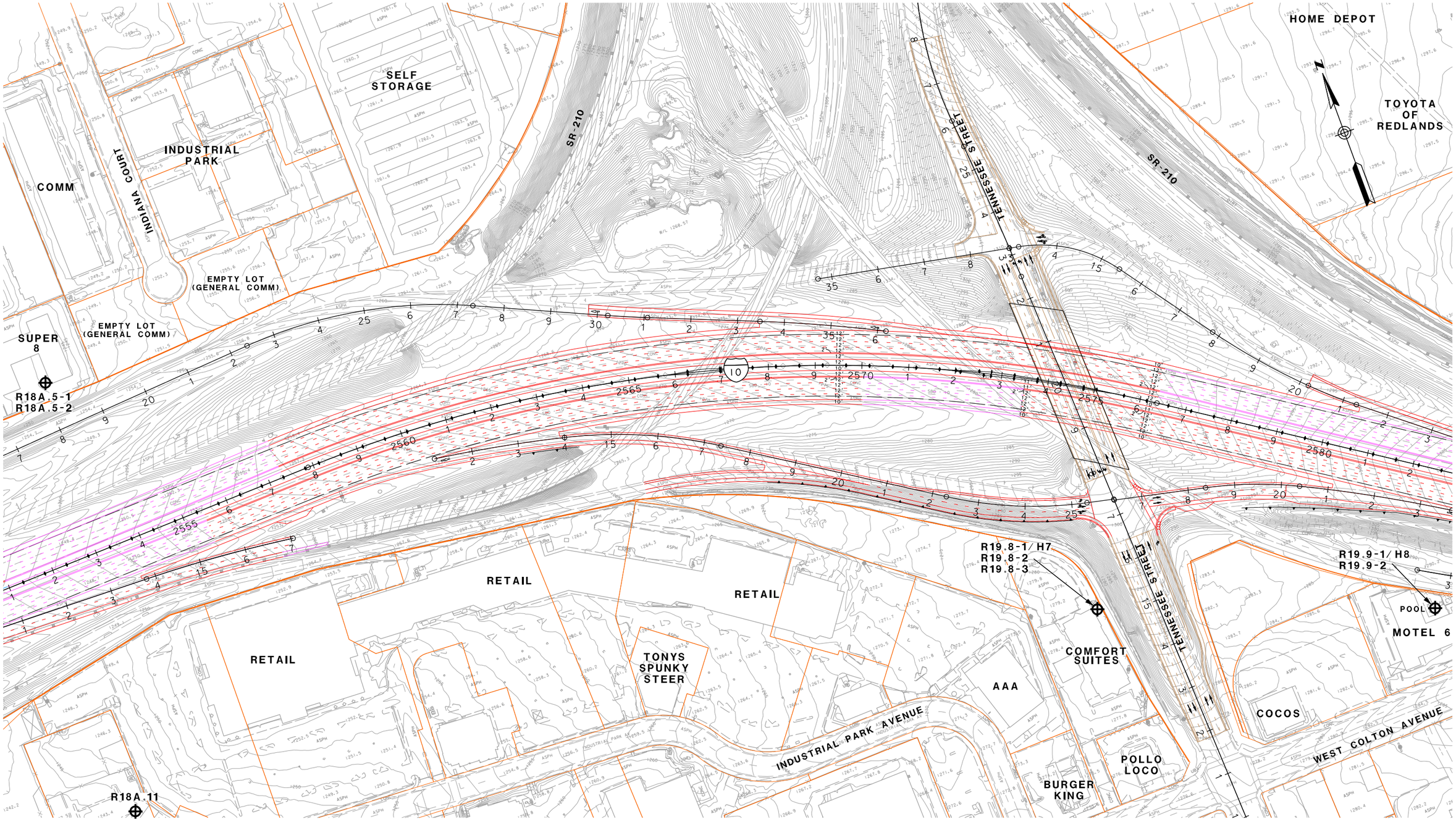
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 157



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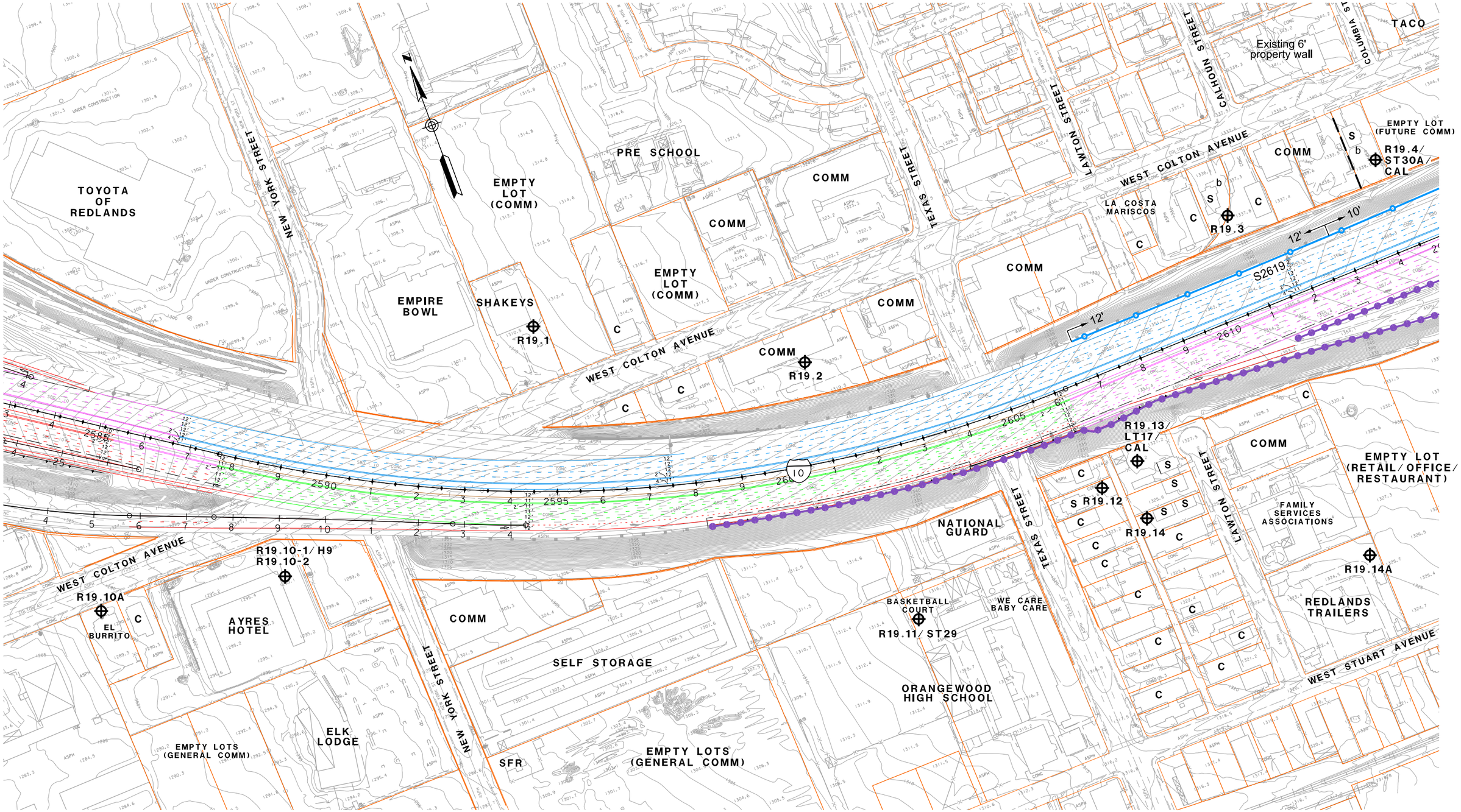
I-10 CORRIDOR ALTERNATIVE 3
NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 158



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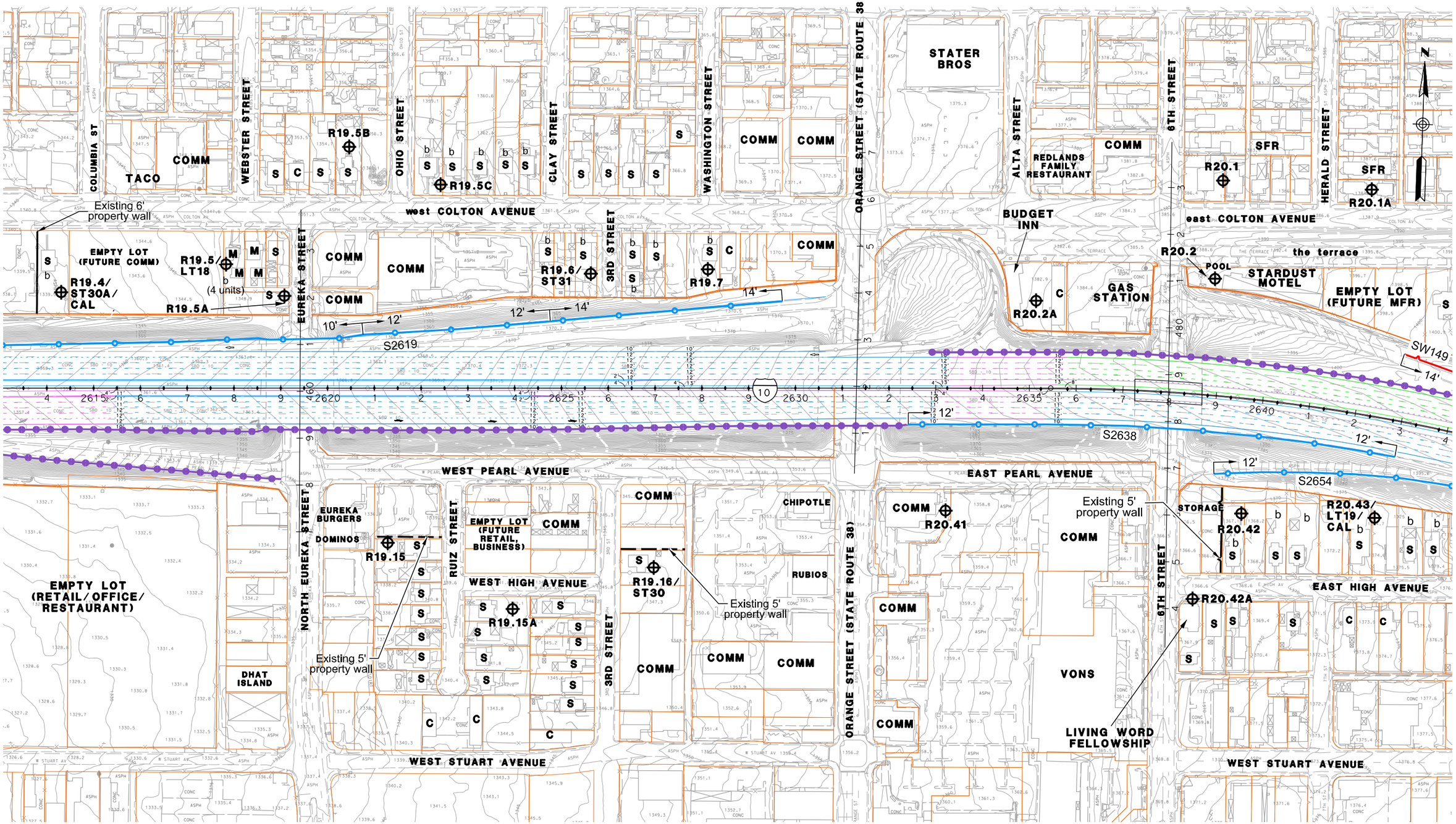
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVES 2 AND 3 NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 159



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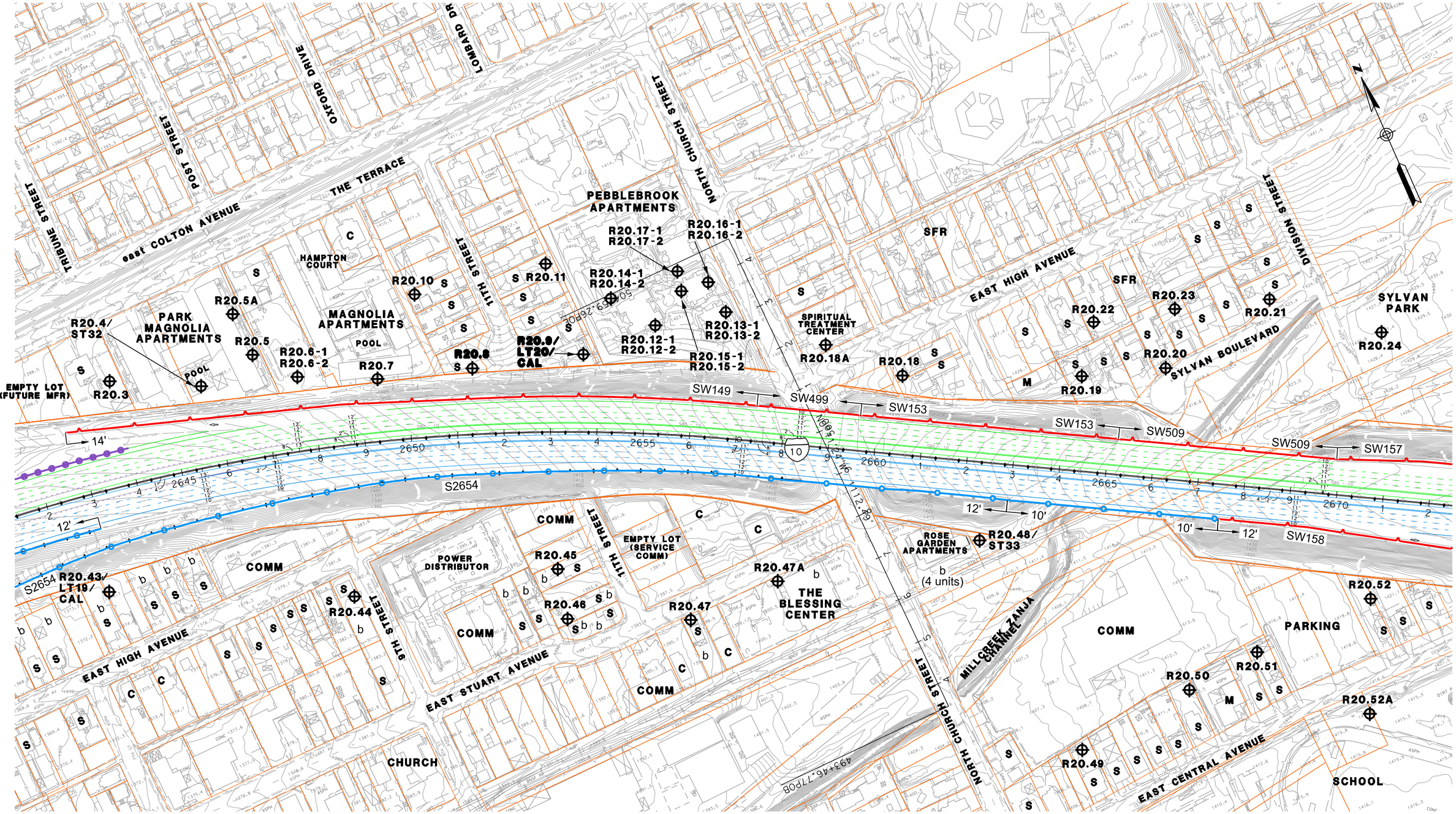
I-10 CORRIDOR ALTERNATIVES 2 AND 3 NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 160



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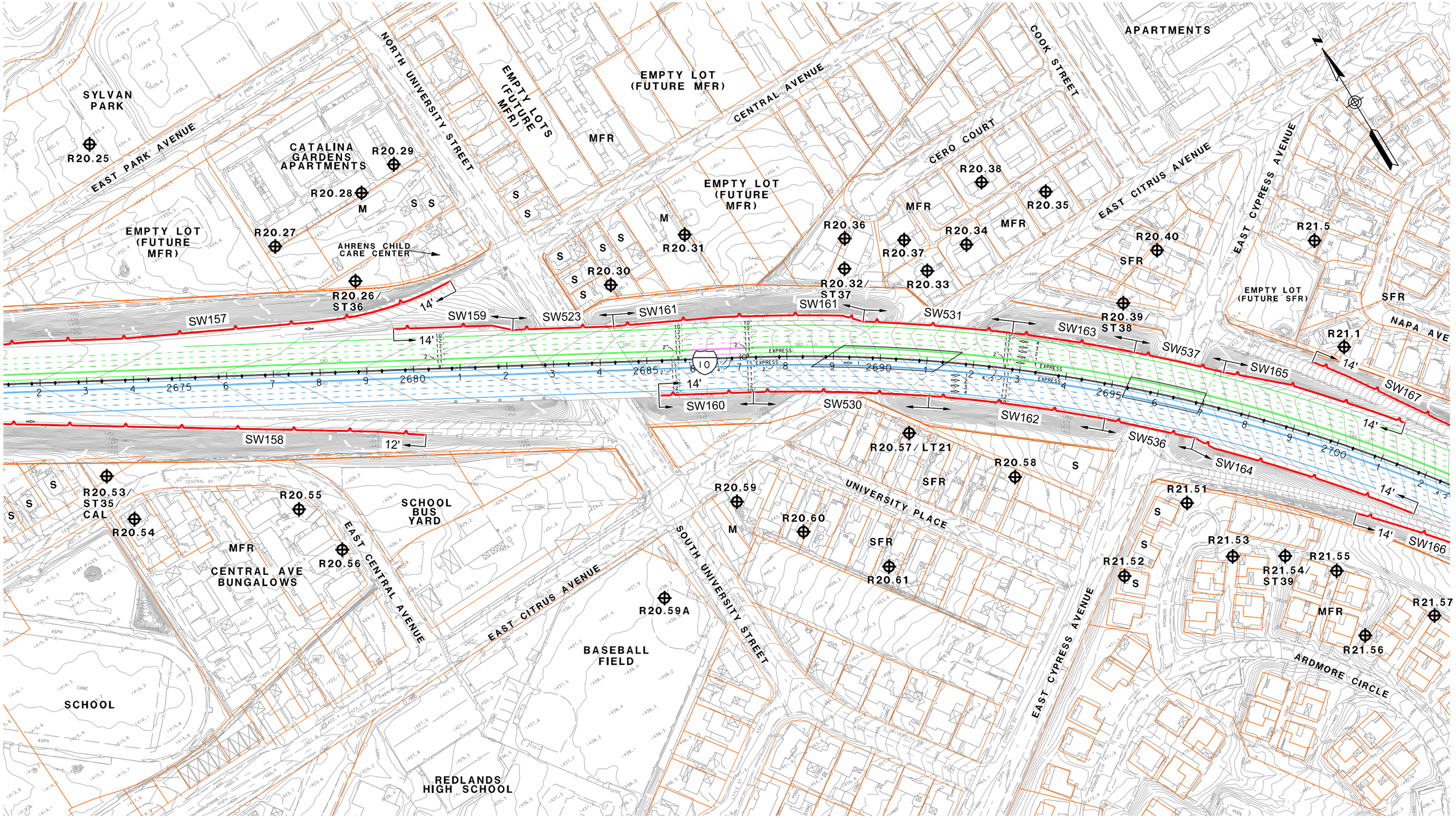
I-10 CORRIDOR ALTERNATIVES 2 AND 3 NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 161



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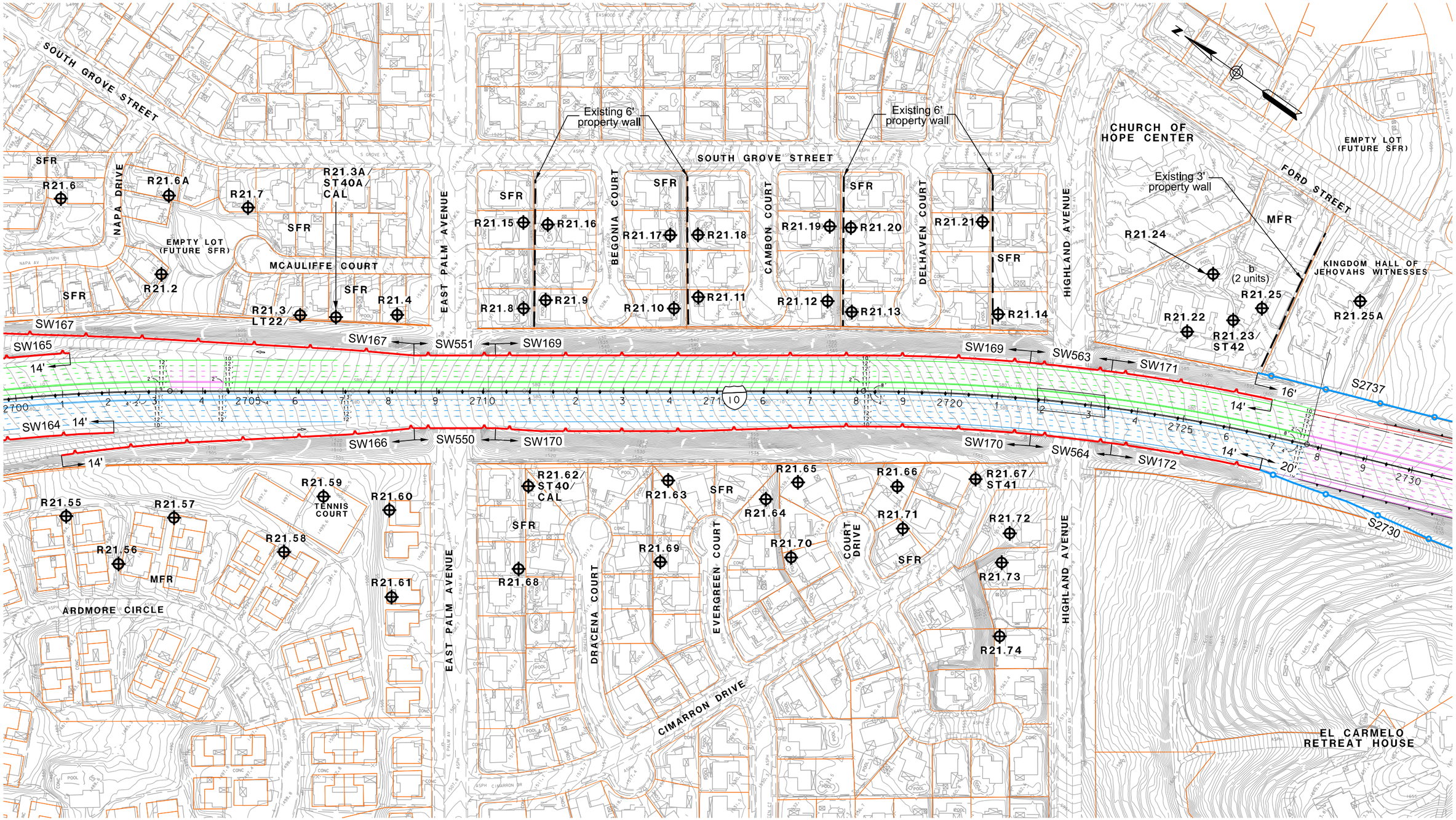
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVES 2 AND 3 NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 162



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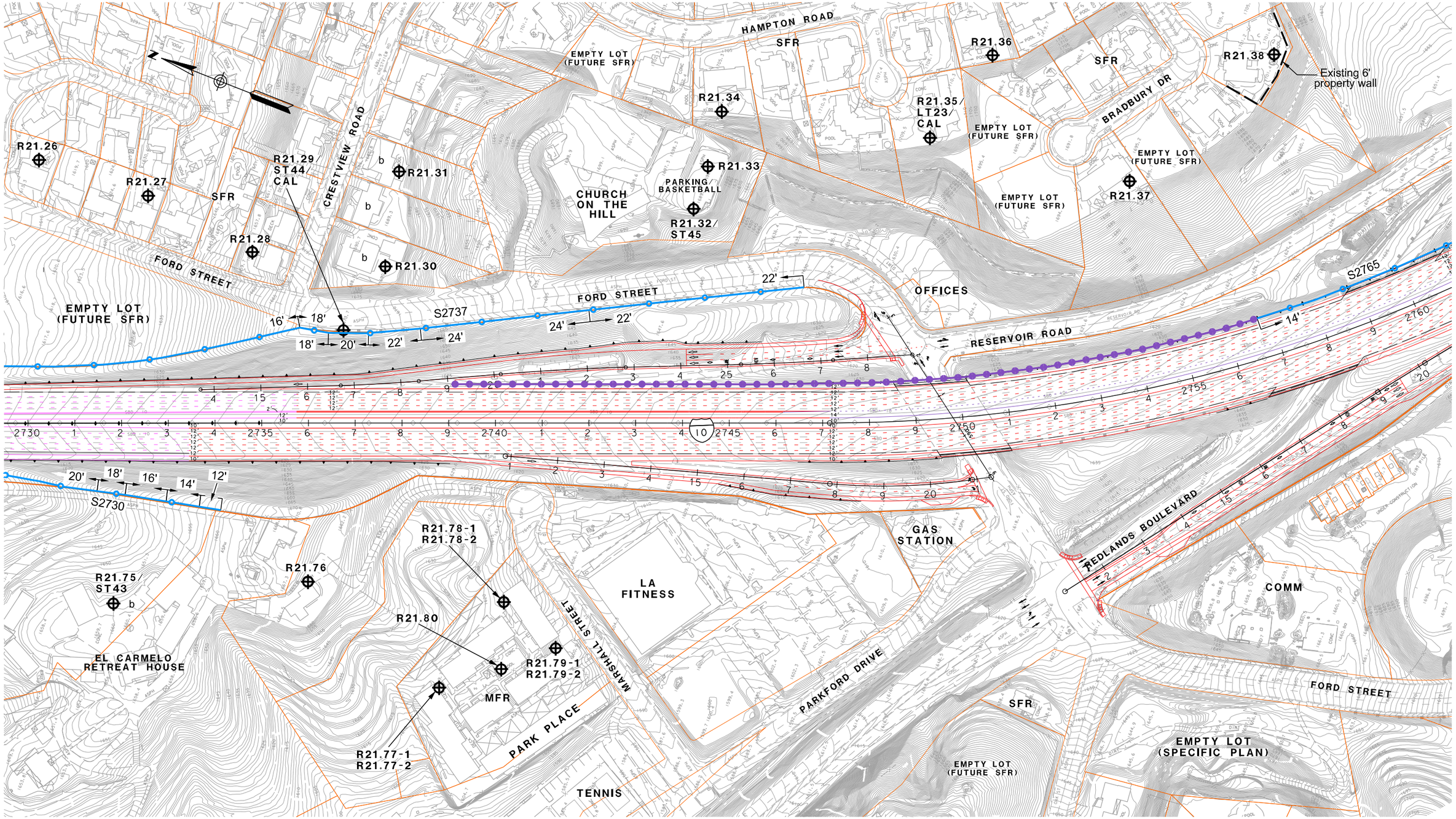
I-10 CORRIDOR ALTERNATIVES 2 AND 3 NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 163



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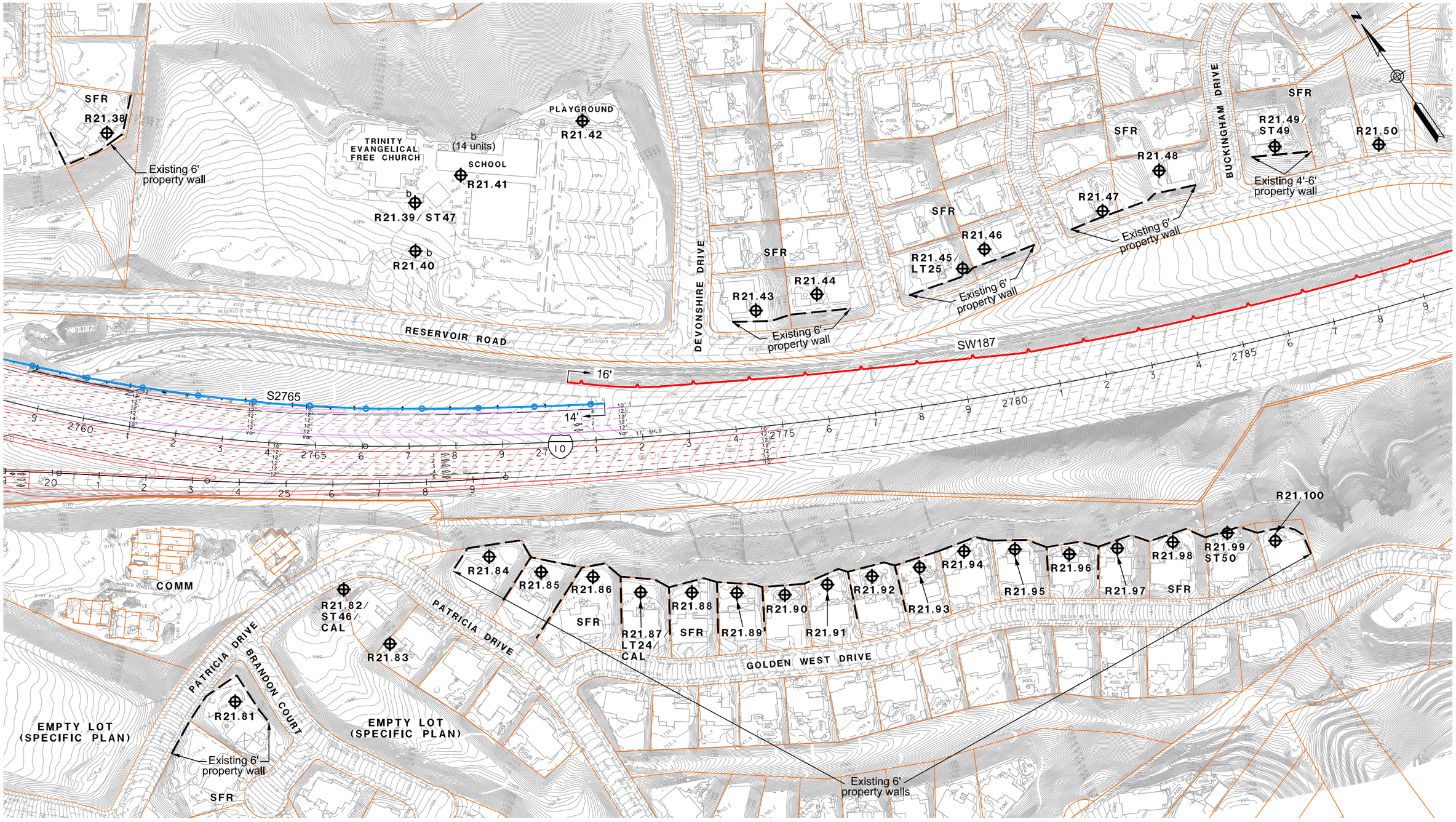
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVES 2 AND 3 NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 164



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- RETAINING WALL
- SAFETY BARRIER

1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVES 2 AND 3 NOISE RECEIVER & BARRIER LOCATIONS

JUNE 10, 2015

FIGURE 165

Appendix I Predicted Future Noise Levels at Isolated Hotels, Motels, and Schools

Table I-1 – Predicted Future Noise Levels at Isolated Hotels, Motels, and Schools – Alternative 3

Site No.	Segment	Name, Street Address, City	Measured Noise Levels, Leq(h), dBA Interior / Exterior	Interior / Exterior Insertion Loss, dB	Distance to Freeway, Feet	Freeway Elevation Relative to Receiver	Similar Receiver	Design Year Build Exterior Noise Level, Leq(h), dBA	Design Year Build Interior Noise Level, Leq(h), dBA	Activity Category and (NAC)	Impact Type
H1	23	La Quinta Inn – Room #143 205 E Hospitality Lane, San Bernardino, CA	43 / 73	30	130	At Grade	R18.2	70	40	D (52)	None
H2	23	Super 8 – Room #112 225 E Hospitality Lane, San Bernardino, CA	42 / 68	26	140	Elevated	R12.7	73	47	D (52)	None
H3	23	Hilton – Room #123 285 E Hospitality Lane, San Bernardino, CA	37 / 65	28	225	Elevated	R18.5	71	43	D (52)	None
H5	18A	Country Inn – Room #111 and Pool Area 1650 Industrial Park Avenue Redlands, CA	39 / 64	25	230	At Grade	R11.2	67	42	D (52) E (72)	None None
H6	18A	Super 8 – Room #134 and Pool Area 1160 Arizona Street, Redlands, CA	68 / 91	23	325	At Grade	R9.22	66	43	D (52) E (72)	None None
H10	22	West Coast University 2855 E Guasti Rd, Ontario, CA	NA[1]	30 [2]	140	Elevated	R11.43	77	47	D (52)	None
H11	22	American Career College 3130 Sedona Ct, Ontario, CA	NA[1]	30 [2]	80	At Grade	R11.14A	77	47	D (52)	None
H12	22	Fairfield Inn - Room #143 3201 Centre Lake Drive, Ontario, CA	58 / 90	32	95	At Grade	R9.18	76	44	D (52)	None
H13	22	Argosy University Inland Empire 3401 Centre Lake Drive, Ontario, CA	NA[1]	30 [2]	180	Elevated	R15.3	65	35	D (52)	None
H14	22	Best Western Plus - Room #132 3400 Shelby Street, Ontario, CA	59 / 94	35	365	Depressed	R9.21	65	30	D (52)	None
H15	22	Extended Stay America 3990 Inland Empire Bvd, Ontario, CA	NA[1]	30 [2]	90	At Grade	R11.13	77	47	D (52)	None
H16	22	Country Inn – Conference Room 4674 Ontario Mills Parkway, Ontario, CA	52 / 94	42	455	Depressed	R9.20	63	21	D (52) E (72)	None None
H17	22	UEI College 4730 Ontario Mills Parkway, Ontario, CA	64 / 96	32	630	Depressed	R9.19	61	29	D (52)	None
H18	18A	Good Nite Inn - Room#112 1650 Industrial Park Ave, Redlands, CA	74 / 94	20	210	At Grade	R11.16	74	54	D (52)	A/E[3]

Notes:

1 - Permission was not granted by establishment to conduct noise measurement.

2 - A 30 dB insertion loss has been assumed for these establishments based on building structure and window types.

3 - This site is predicted to approach or exceed the impact threshold which has warrented TNM analysis of this area.

Appendix J Computer Noise Modeling Files (CD-ROM)

Appendix K Letters From Property Owners

Berg, Gregory

From: Gregg Borman [gborman@apexparksgroup.com]
Sent: Wednesday, June 03, 2015 7:11 PM
To: Berg, Gregory
Cc: 'Gregg Borman'; Gregory J Haller; 'Doug Honey'
Subject: Upland Boomers Noise Abatement Wall

Dear Mr. Berg,

Please use this e-mail, as notification from the operators of the Boomer's Amusement Park located at 1500 W 7th Street, Upland, CA 91786, that we do not want any Noise Abatement Walls erected on the freeway adjacent to our property.

Should you need anything further, please notify me at this e-mail address. gborman@apexparksgroup.com.

Regards,

Gregg

Gregg Borman
SVP-Operations
Apex Parks Group
27061 Aliso Creek Road, Suite 100
Aliso Viejo, CA 92656

Office: 949.680.4512

Cell: 949.870.2133

CONFIDENTIALITY NOTE: This email, and any attachment to it, may contains attorney-client privileged and/or confidential business information intended only for the use of the intended recipient of this email. If you are not the intended recipient, you are hereby notified that reading, using, or disseminating this email, or any attachment to it, is strictly prohibited. If you have received this email in error, please immediately notify the sender by return email and then delete the original and any copies of this email, and any attachments to it, from your system. Thank you.

Splash Kingdom WATERPARK
REDLANDS, CA

May 19, 2015

To whom it may concern:

Concerning possible traffic noise abatement consideration in the form of a sound wall for the property located at 1101 N California Street, Redlands, CA 92374. Splash Kingdom Waterpark requests that a sound wall not be constructed along Interstate 10 because a sound wall would obstruct the view to the park from travelers on the freeway.

Sincerely,

Dave Simon
Vice President/General Manager