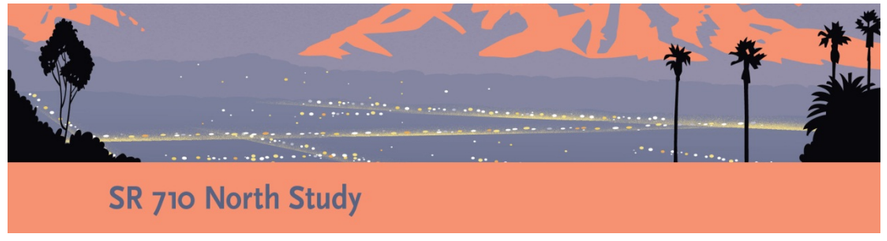

Noise Study Report

Vol. II – Figures

State Route 710 North Study

County of Los Angeles

07-LA-710 (SR 710)

E.A. 187900

EFIS 0700000191

October 2014

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

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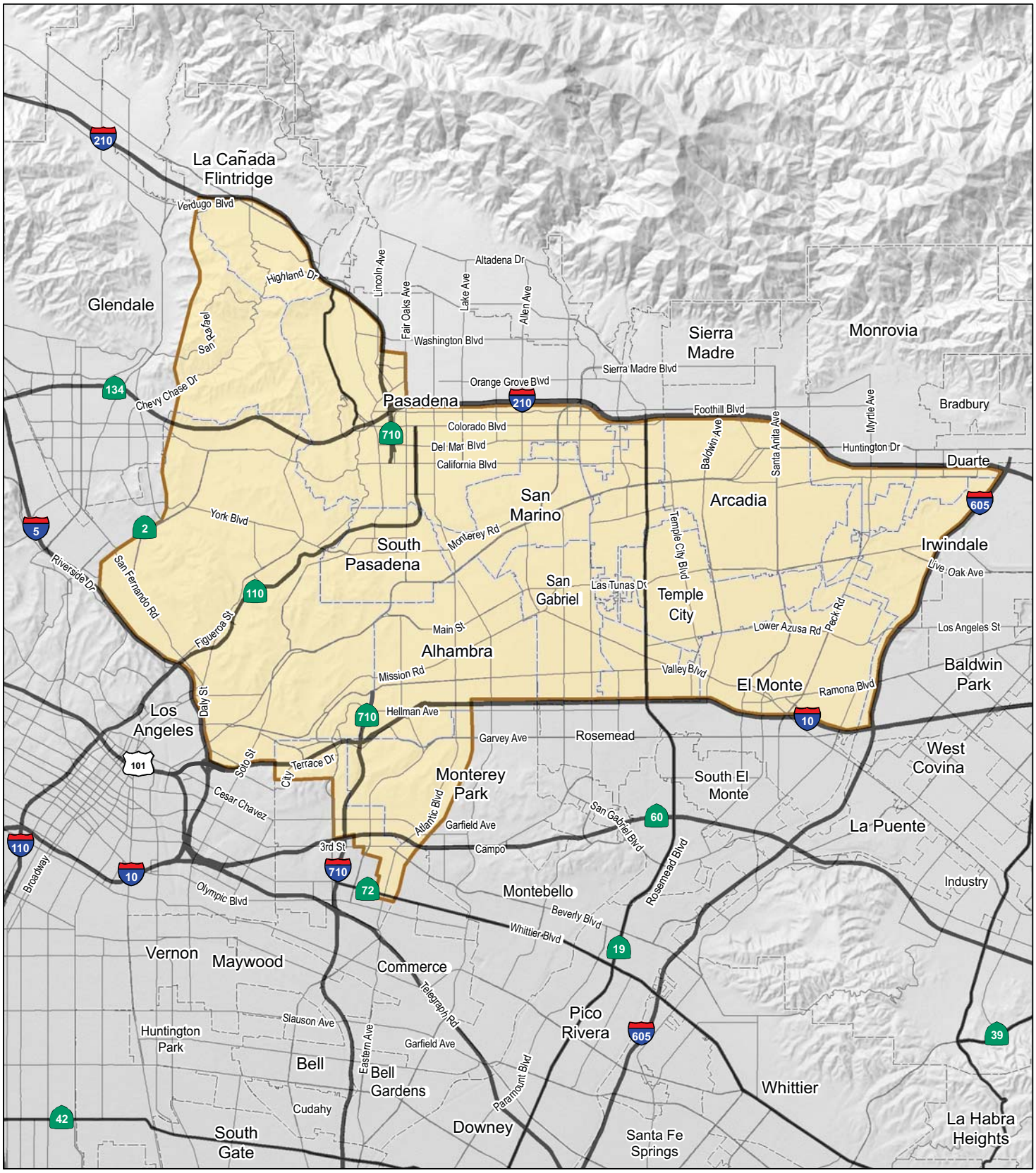

LEGEND

SR 710 North Study Area

FIGURE 1-1

N

0 1.25 2.5

MILES

SOURCE: ESRI (2008); LSA (2013)

I:\CHM1105\G\P&N\Project Location.cdr (10/27/14)

SR 710 North Study

Project Location

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

SR 710 North – No Build Alternative (DRAFT)
2035 Programmed Projects

- 1AL04-LAF3125
- 1C0401
- 1HL08D01-LA0G138
- 1HL08D01-LA0G139
- 1TR0404
- 1TR0705
- 1TR1011
- 7120010
- High Speed Rail
- LA000357
- LA000358
- LA000548
- LA01342
- LA0B408
- LA0B7234
- LA0B875
- LA0C8012
- LA0C8046
- LA0C8054
- LA0C8055
- LA0C8063
- LA0C8064
- LA0C8087
- LA0D198
- LA0D31
- LA0D328
- LA0D441
- LA0D442
- LA0F003
- LA0F021
- LA0F098
- LA0G626
- LA29202W
- LA29212XY
- LA960018
- LA996425
- LAE0039
- LAE2515
- LAE2517
- LAE3085
- LAF1197
- LAF1455
- UT101
- Rail

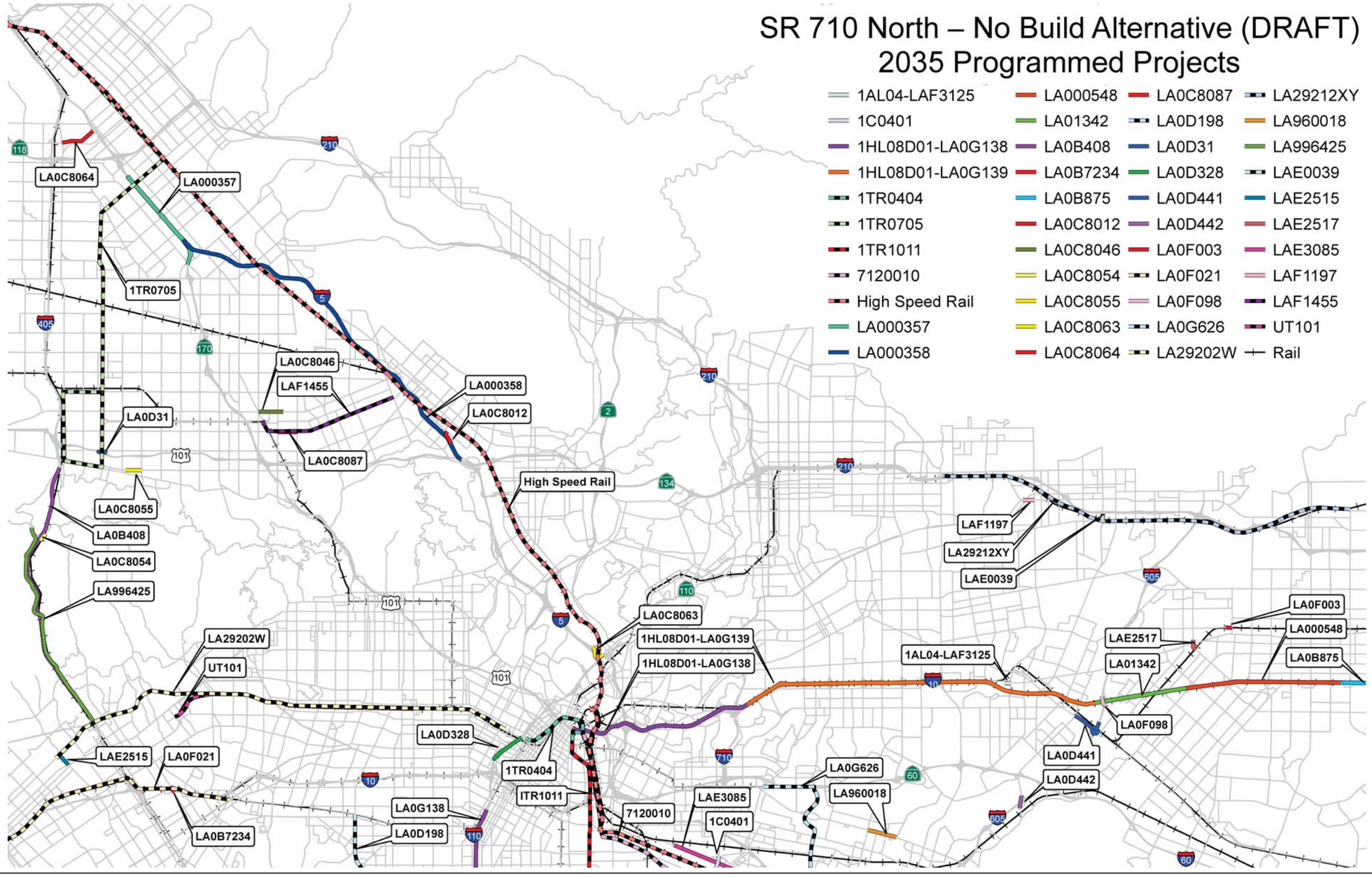

FIGURE 1-2

NOT TO SCALE

SOURCE: CH2M HILL (2013)

I:\CHM1105\G\No Build Alt.cdr (10/27/14)

SR 710 North Study

No Build Alternative

07-LA-710 (SR 710)
EA 187900
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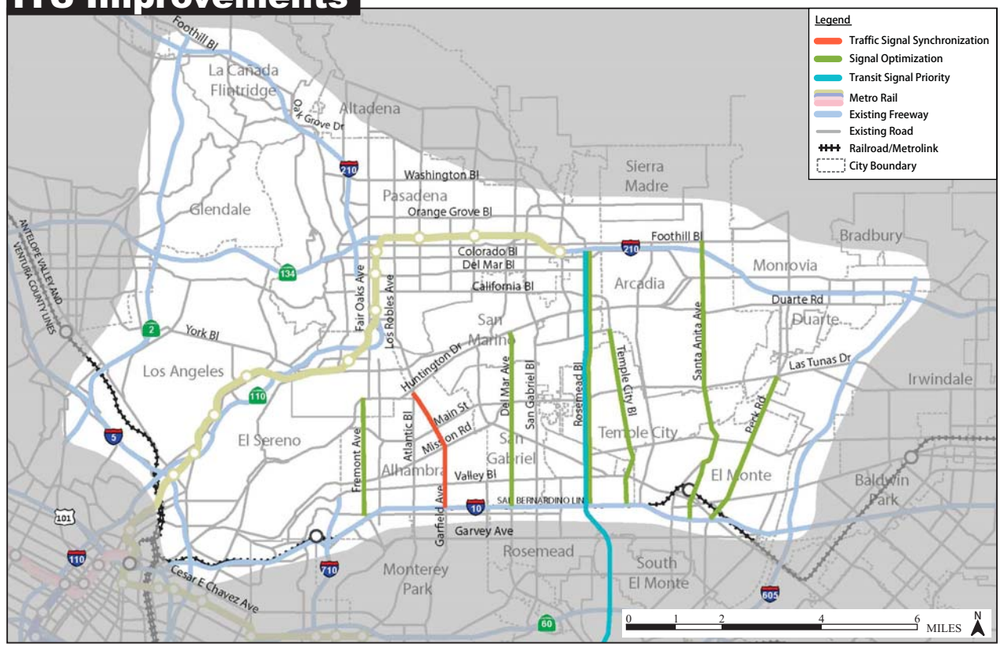
ITS Improvements



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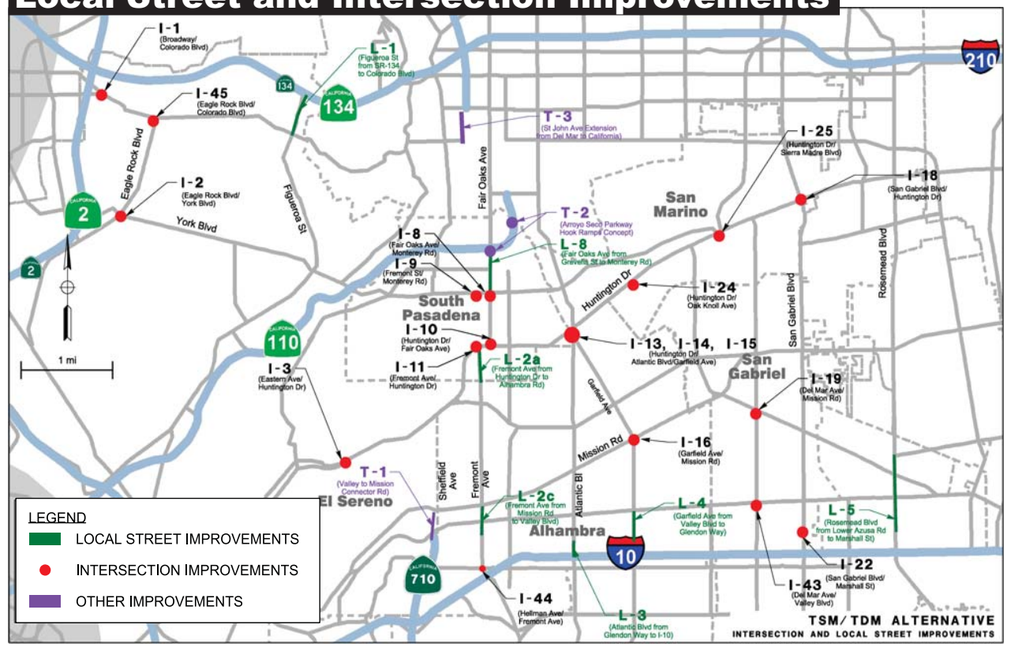

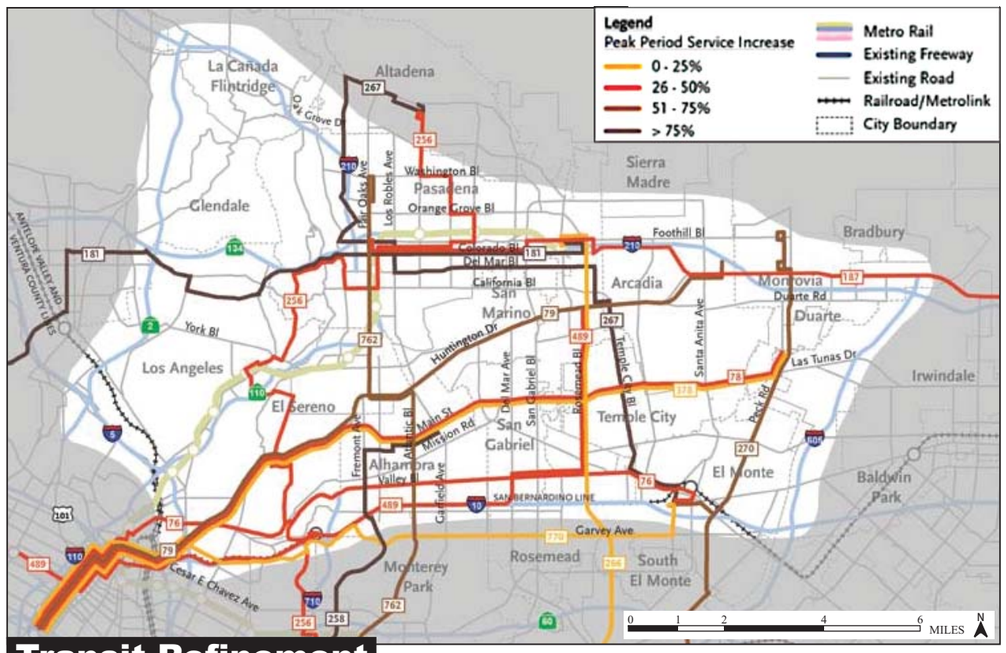

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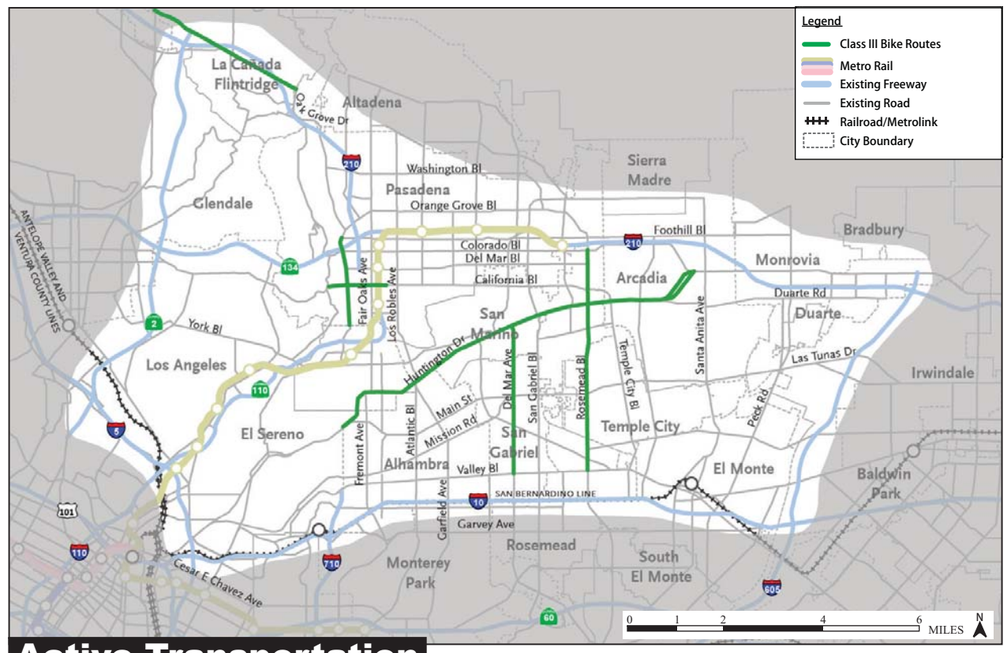

Active Transportation

FIGURE 1-3

SR 710 North Study
TSM/TDM Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

SOURCE: CH2M HILL (2013)
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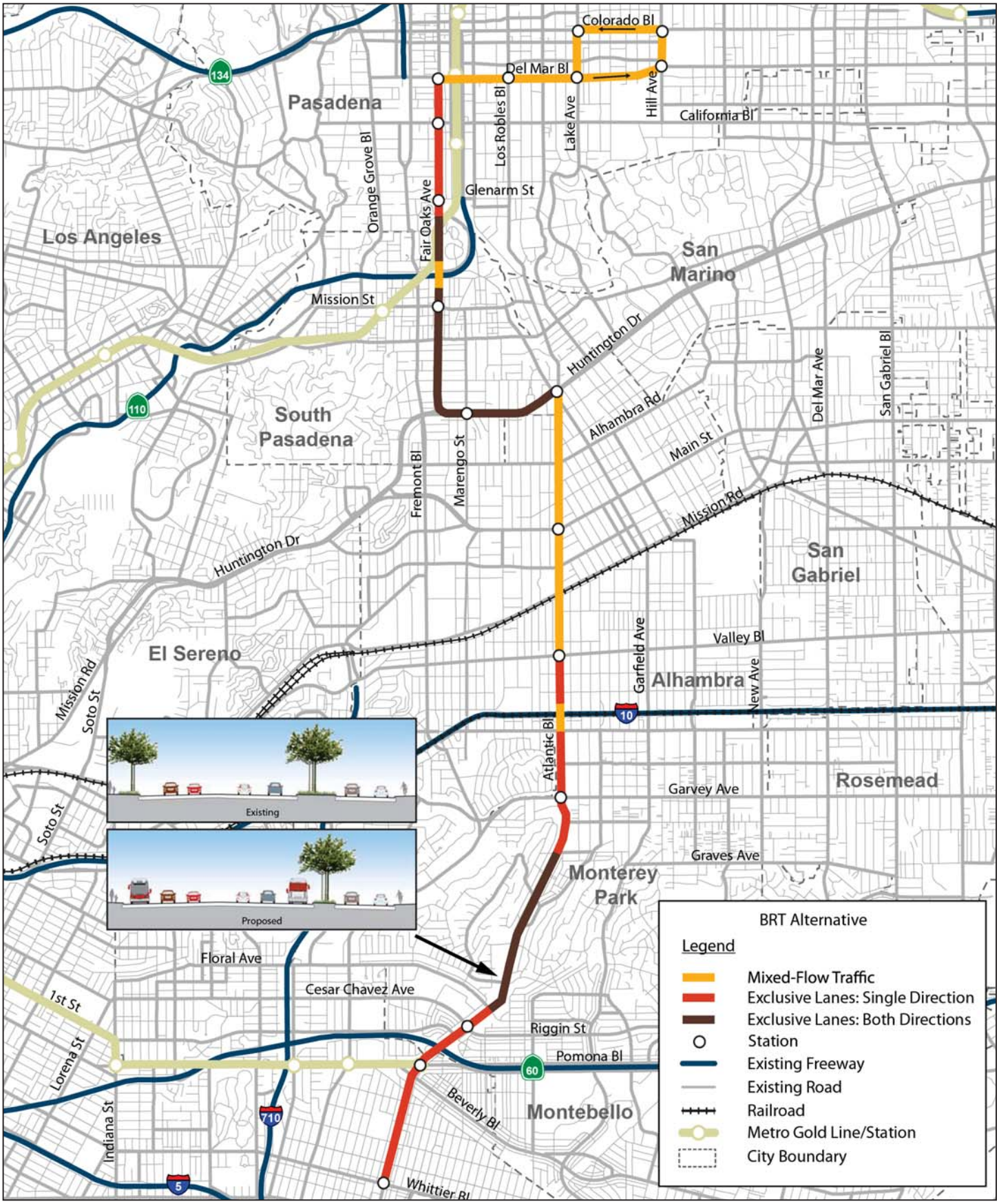

FIGURE 1-4

N

0 .5 1.0

MILES

SOURCE: CH2M HILL (2013)

I:\CHM1105\G\BRT Alternative.cdr (10/27/14)

SR 710 North Study

BRT Alternative

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

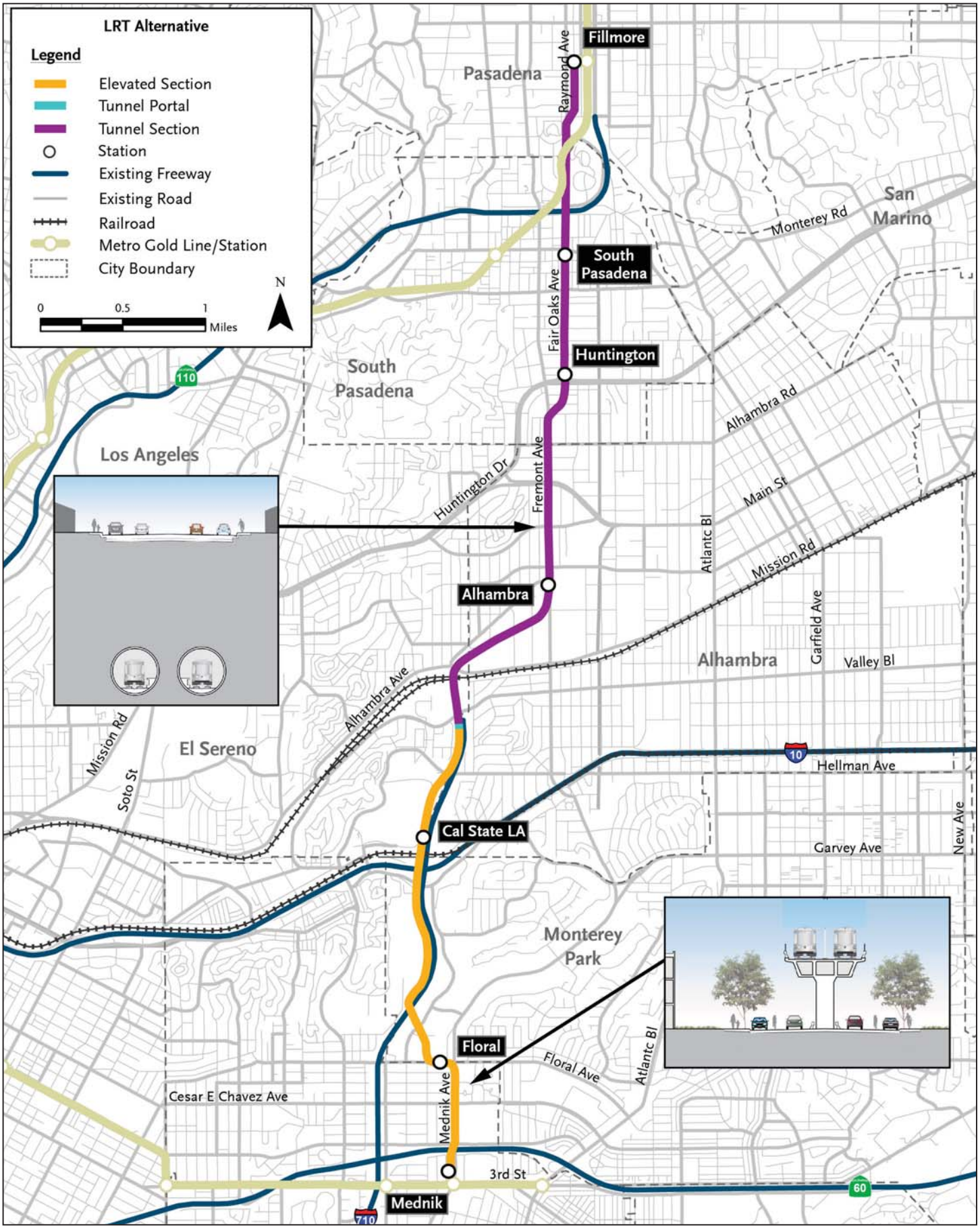

FIGURE 1-5

SR 710 North Study
LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

N

0 .5 1
MILES

SOURCE: AECOM (2013)

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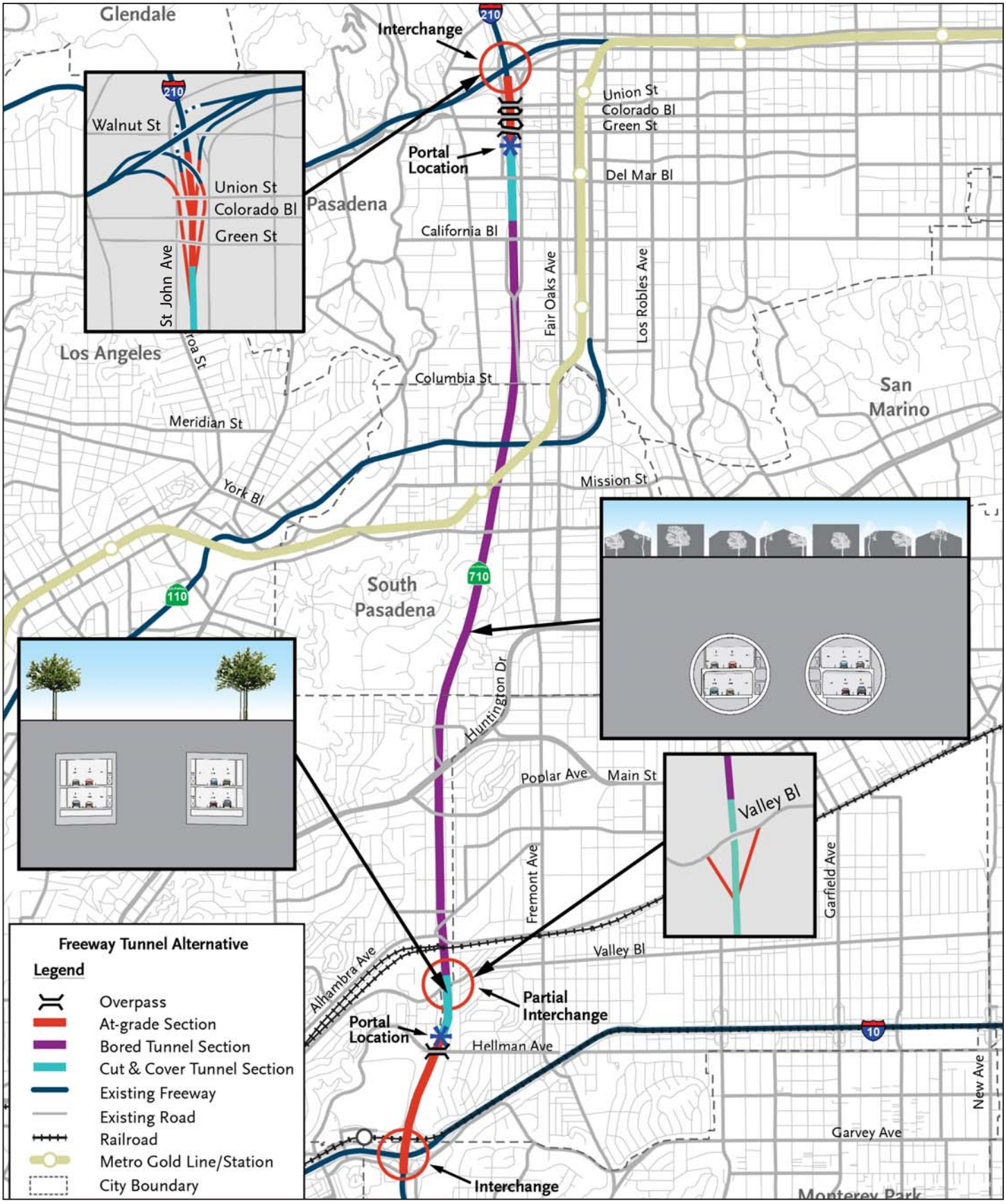

FIGURE 1-6

SR 710 North Study
Freeway Tunnel Alternative
Single and Dual Bore
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

N

0 .38 .75
MILES

SOURCE: CH2M HILL (2013)

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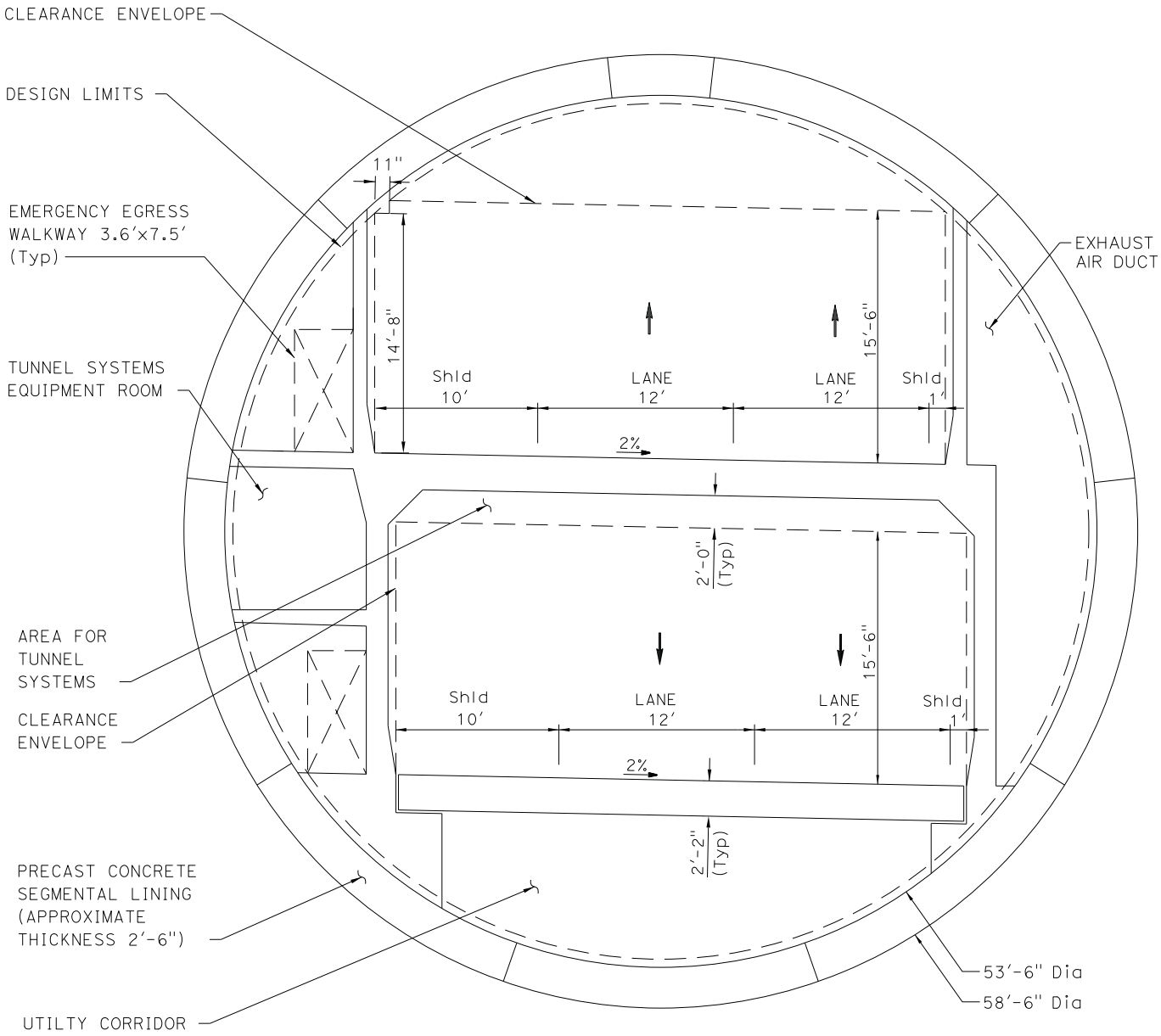
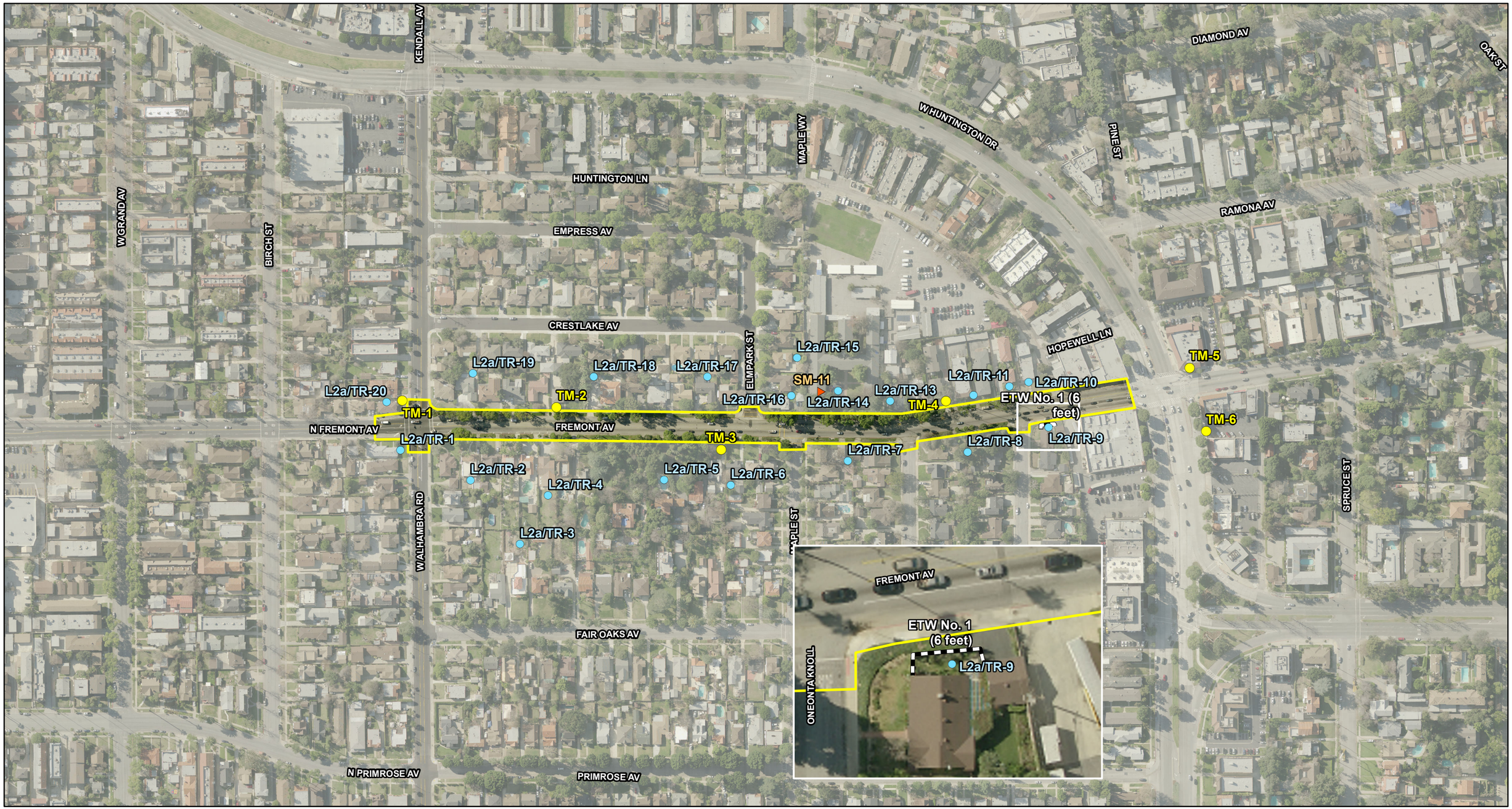


FIGURE 1-7

SR 710 North Study
Freeway Tunnel Alternative
Single Bore Cross Section
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

SOURCE: CH2M HILL (2014)

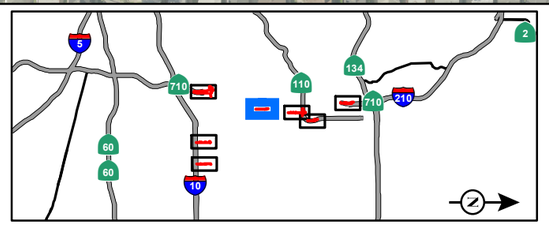
I:\CHM1105\G\Single Bore Cross Section.cdr (10/27/14)



LEGEND

- TSM/TDM Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-1
Page 1 of 9

SR 710 North Study

Noise Measurement and Receptor Locations – TSM/TDM Alternative - L-2a

07-LA-710 (SR 710)
EA 187900
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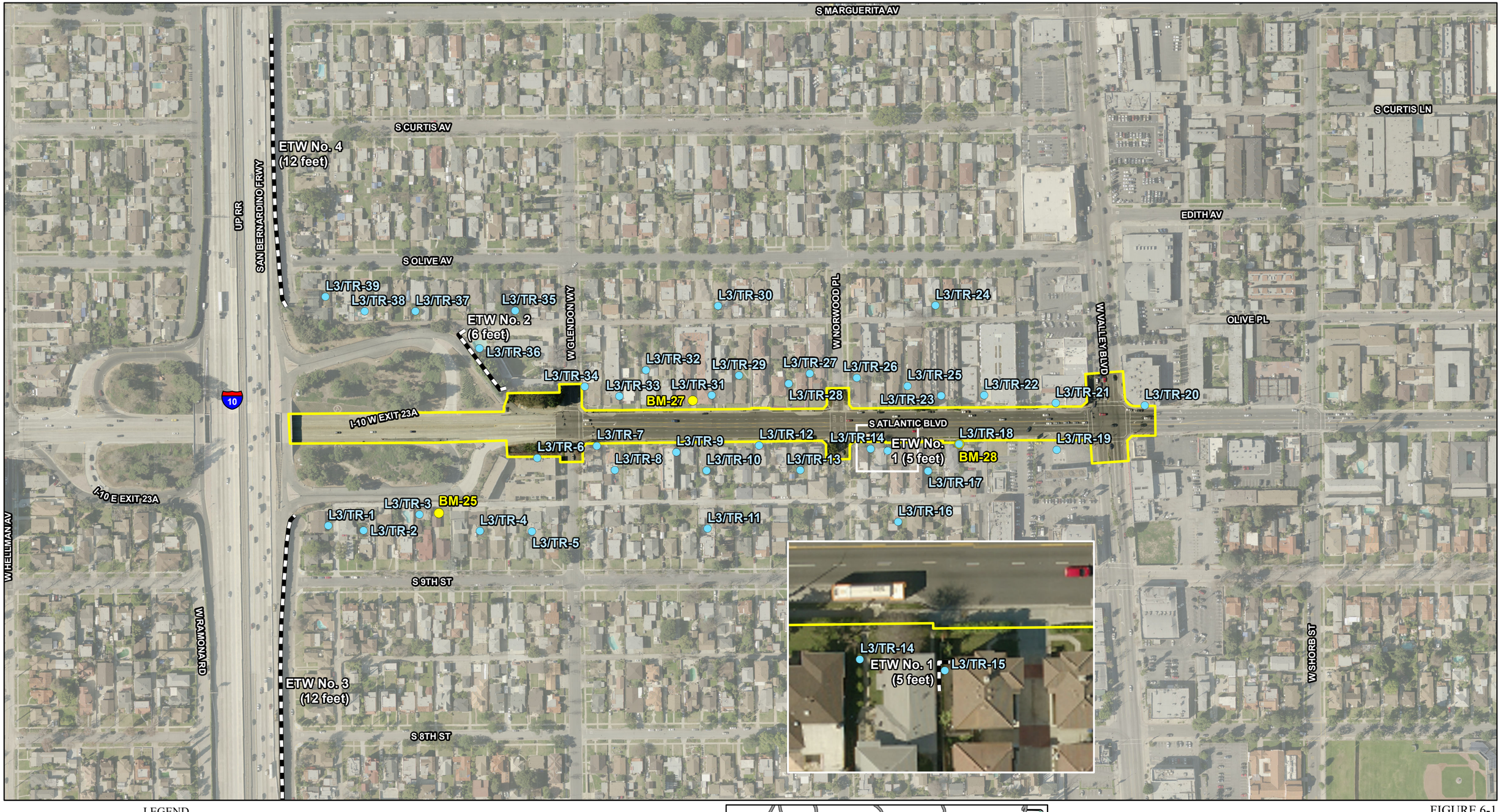

LEGEND

- TSM/TDM Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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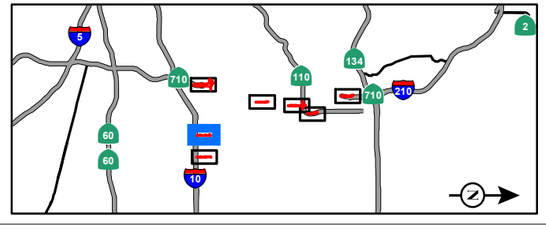

FIGURE 6-1
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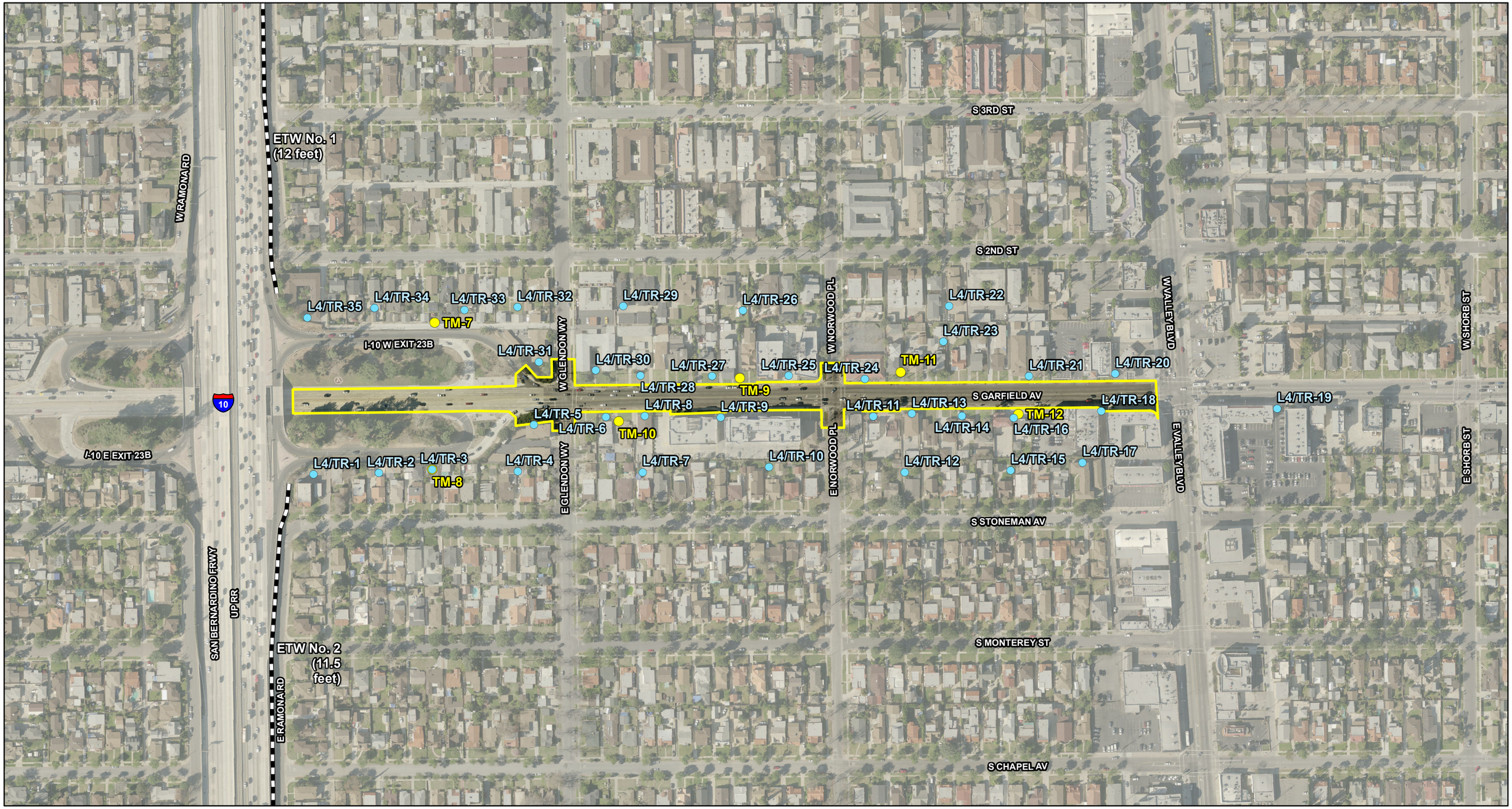
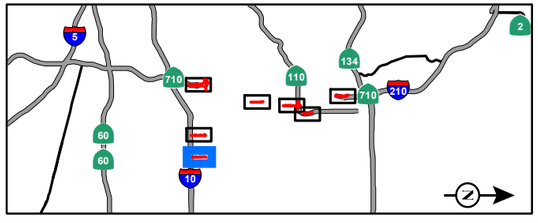
SR 710 North Study
Noise Measurement and Receptor Locations – TSM/TDM Alternative - L-3
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- TSM/TDM Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-1
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SR 710 North Study

Noise Measurement and Receptor Locations – TSM/TDM Alternative - L-4

07-LA-710 (SR 710)
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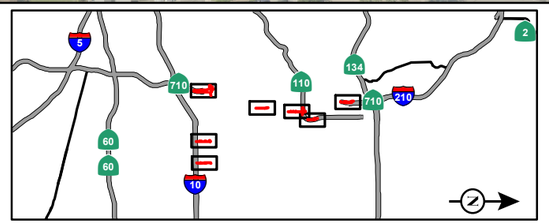
LEGEND

- TSM/TDM Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-1
Page 4 of 9

SR 710 North Study
Noise Measurement and Receptor Locations – TSM/TDM Alternative - L-5

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- TSM/TDM Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET

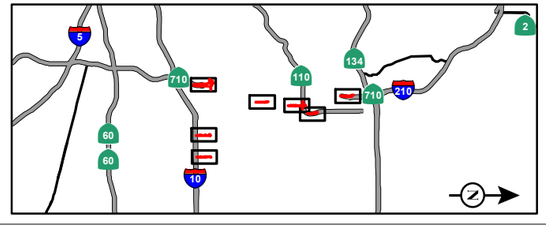

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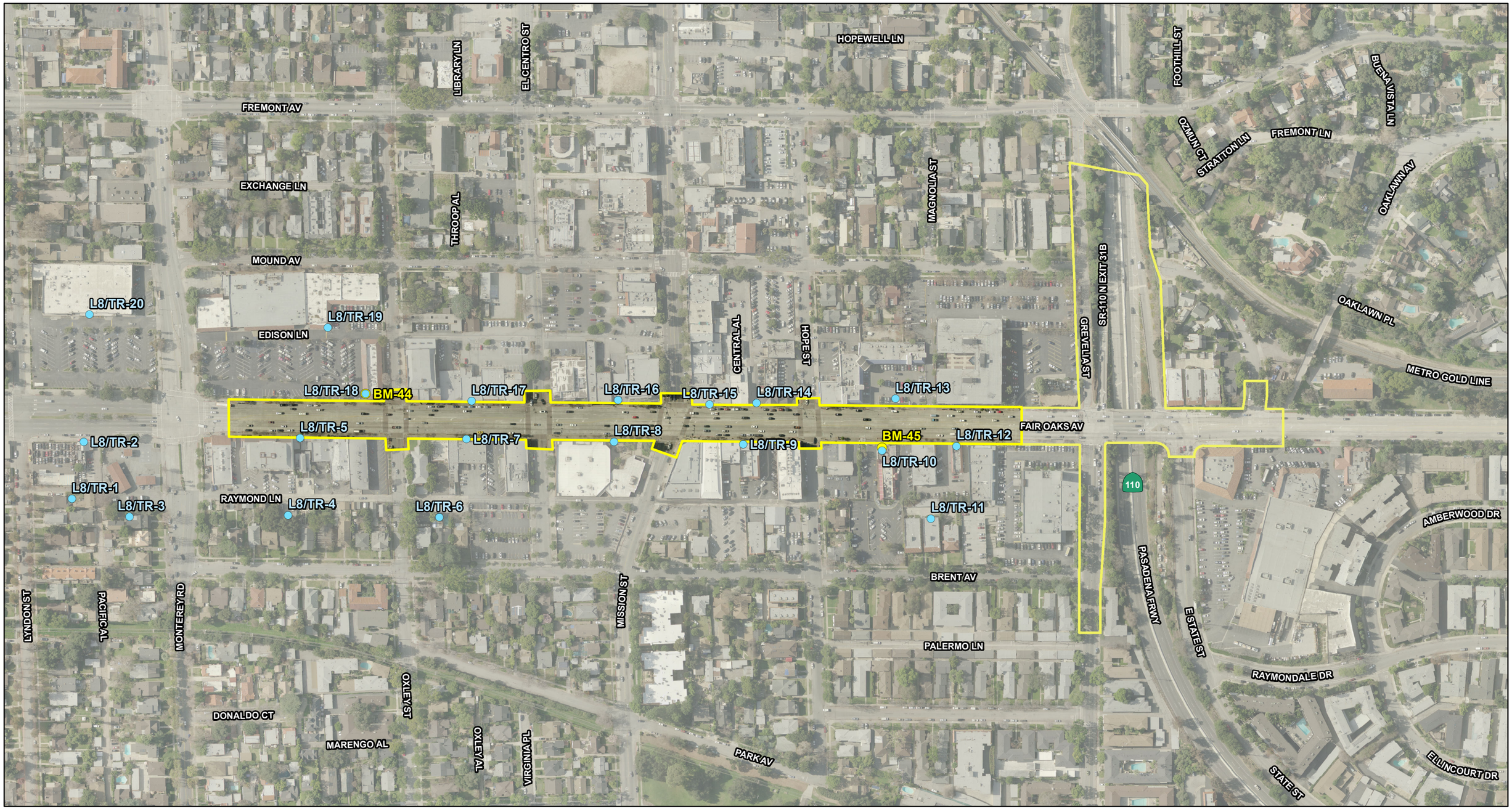
FIGURE 6-1
Page 5 of 9

SR 710 North Study
Noise Measurement and Receptor Locations – TSM/TDM Alternative - L-5

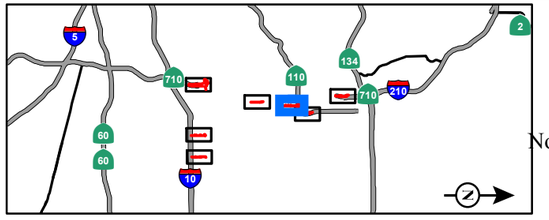
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- TSM/TDM Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-1
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SR 710 North Study

Noise Measurement and Receptor Locations – TSM/TDM Alternative - L-8/T-2

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- TSM/TDM Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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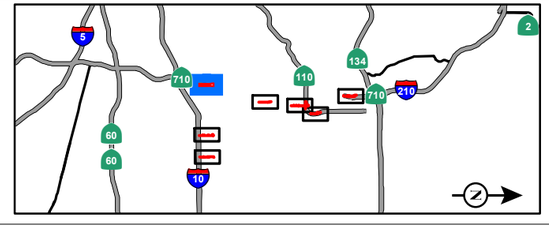

FIGURE 6-1
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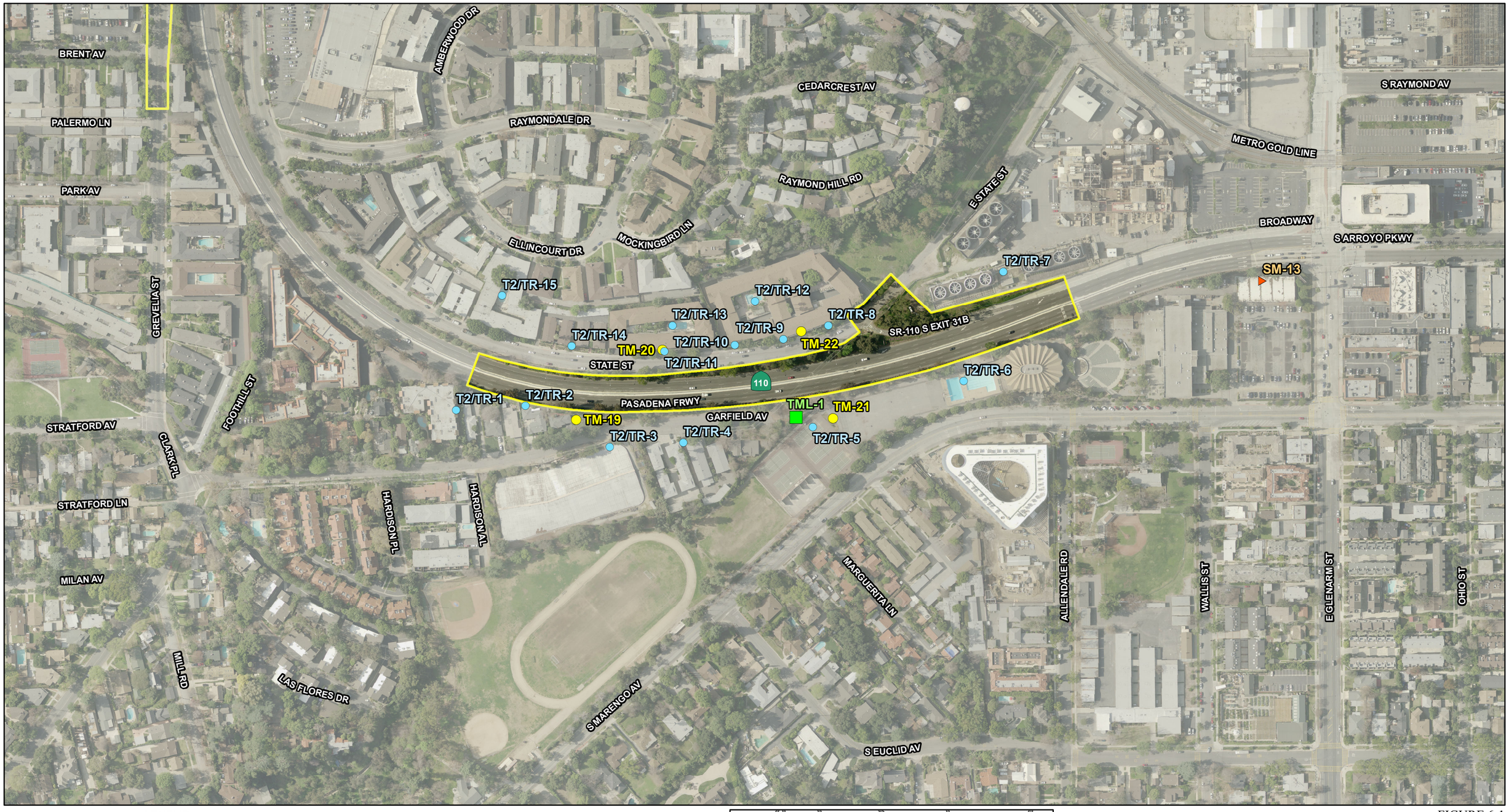
SR 710 North Study

Noise Measurement and Receptor Locations – TSM/TDM Alternative - T-1

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- TSM/TDM Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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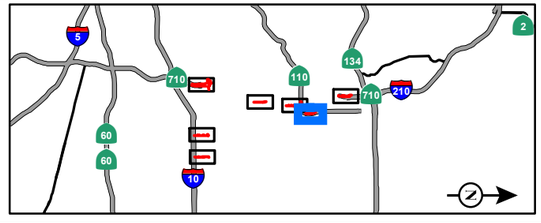

FIGURE 6-1
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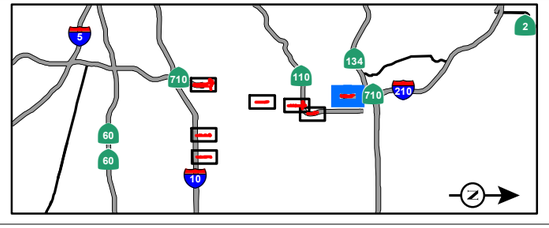
SR 710 North Study
Noise Measurement and Receptor Locations – TSM/TDM Alternative - T-2
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- TSM/TDM Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (TML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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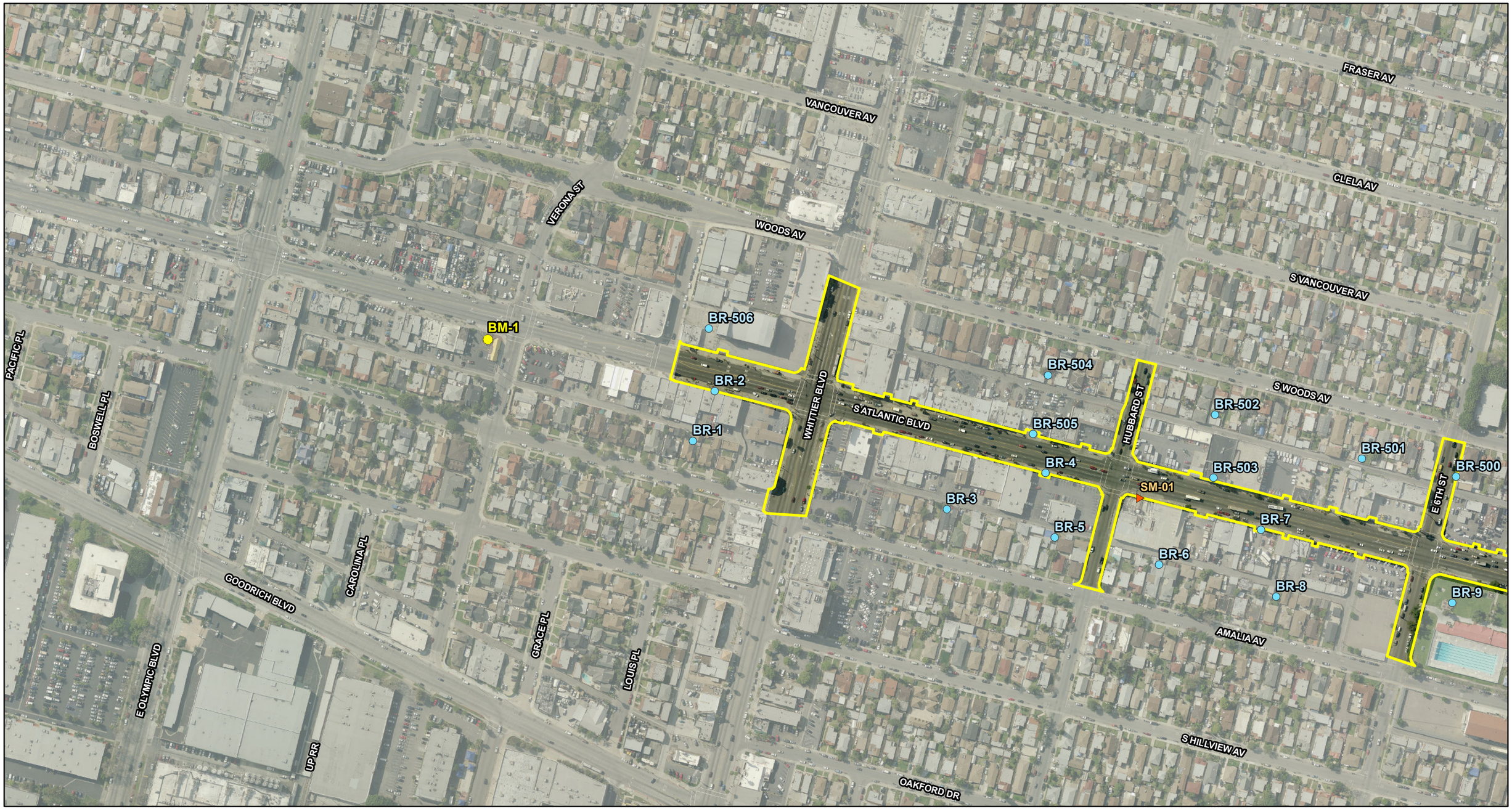
FIGURE 6-1

SR 710 North Study

Noise Measurement and Receptor Locations – TSM/TDM Alternative - T-3

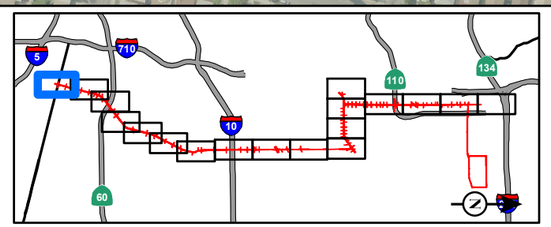
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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FIGURE 6-2

SR 710 North Study

Noise Measurement and Receptor Locations – BRT Alternative

07-LA-710 (SR 710)
EA 187900
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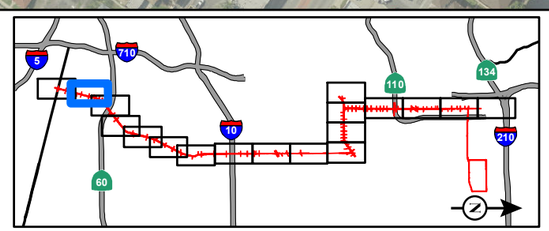
LEGEND

- BRT Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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FIGURE 6-2
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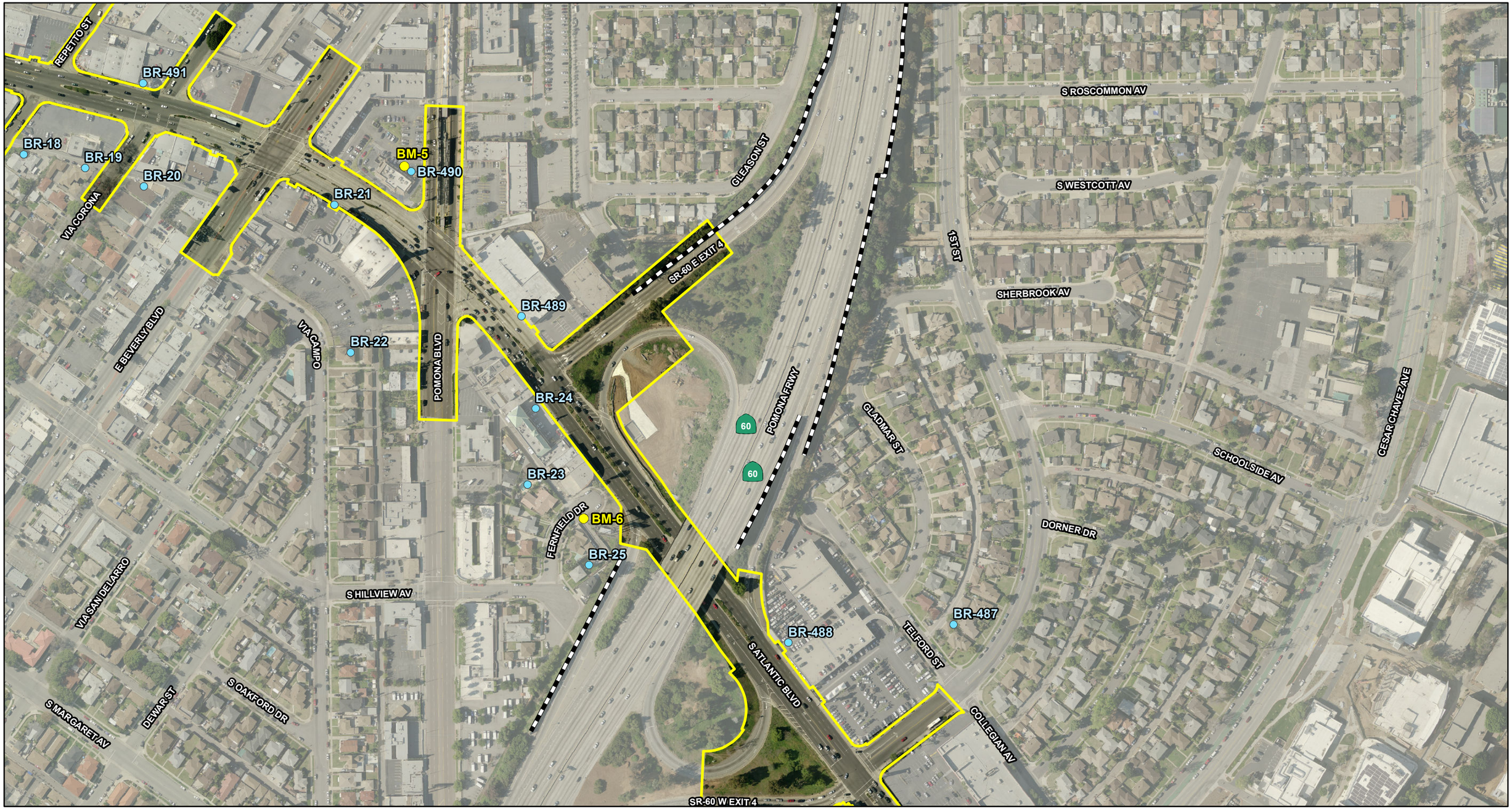
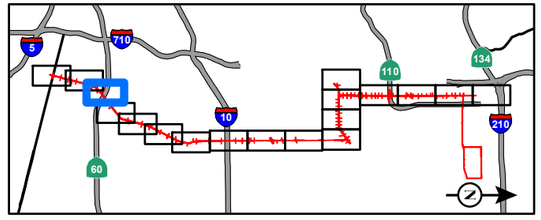
SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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FIGURE 6-2
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SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- BRT Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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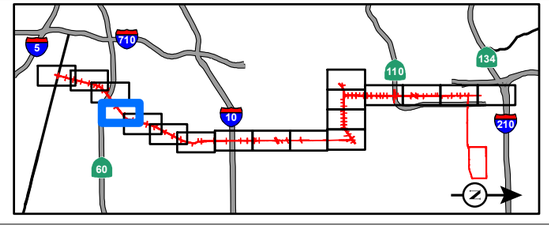

FIGURE 6-2
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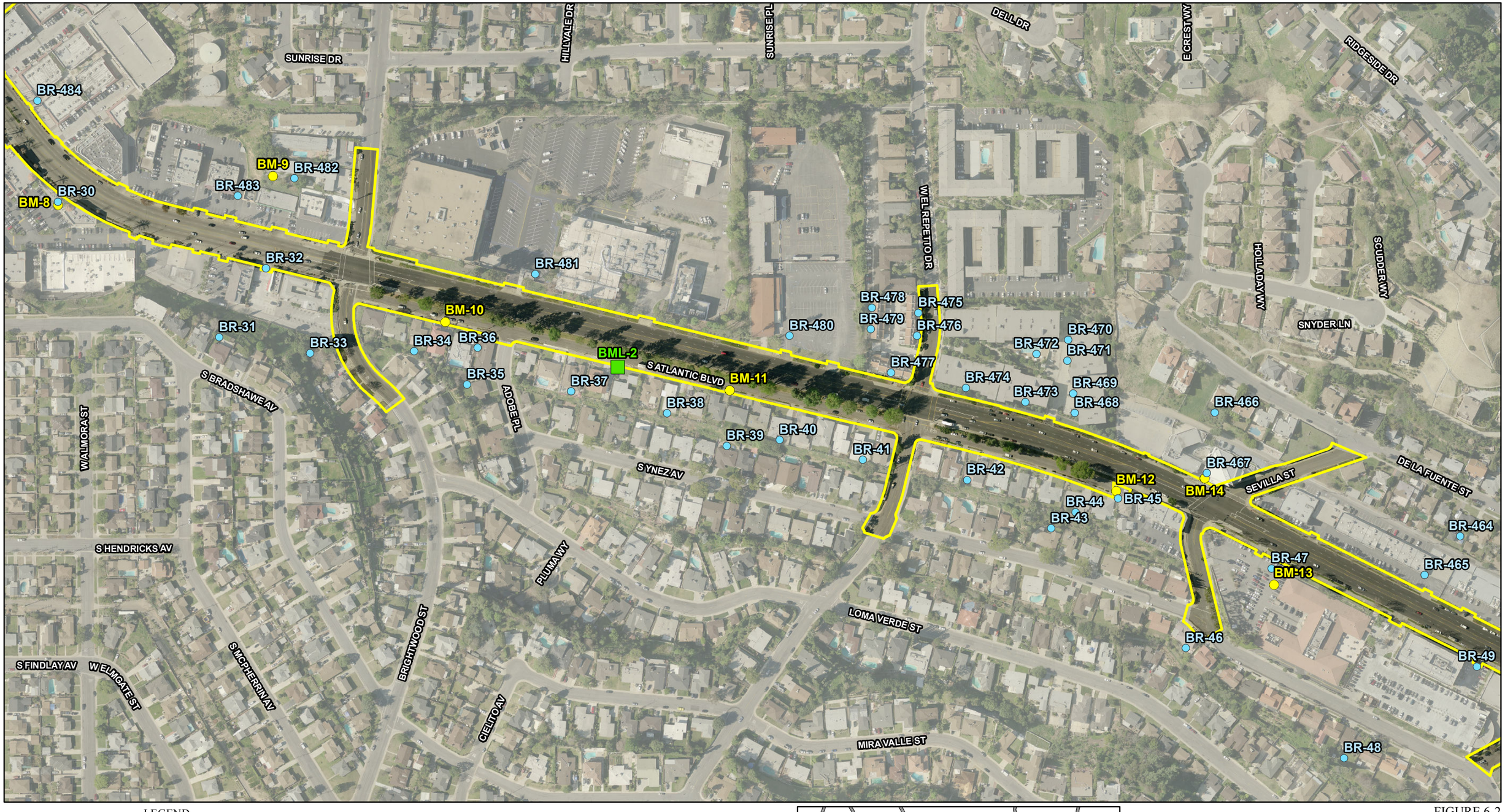
SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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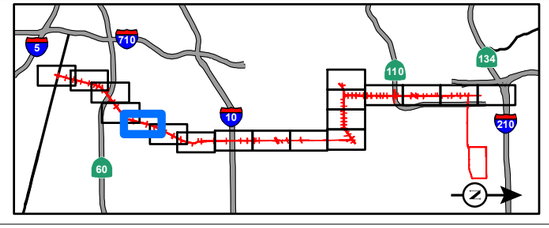

FIGURE 6-2
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SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- BRT Alternative
- Existing Walls
- Modeled Receptor Locations
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- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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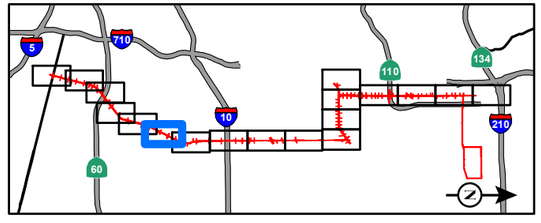
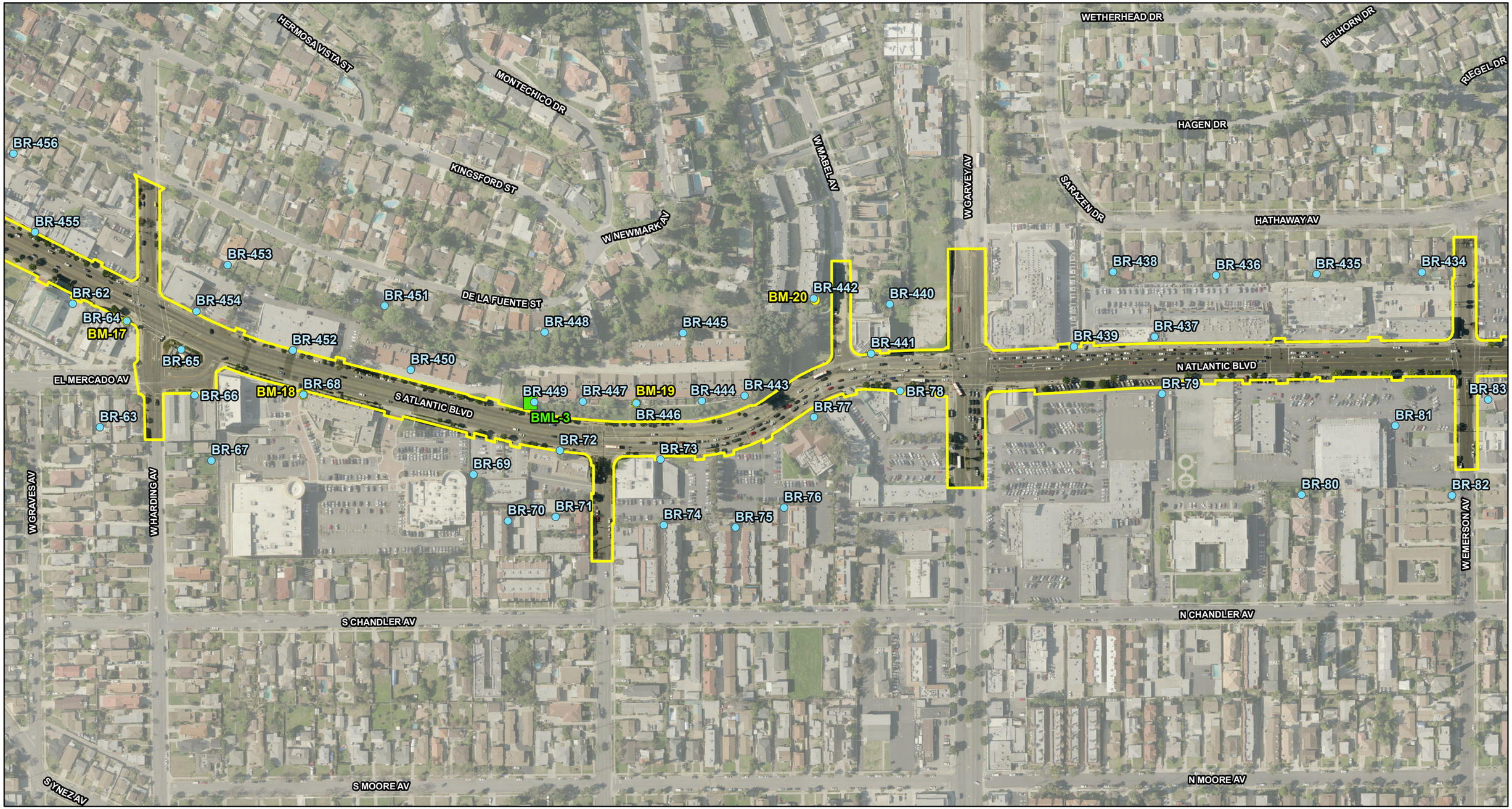


FIGURE 6-2

SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Alternative
- Existing Walls
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- Short-term Measurement Locations
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0 125 250
FEET

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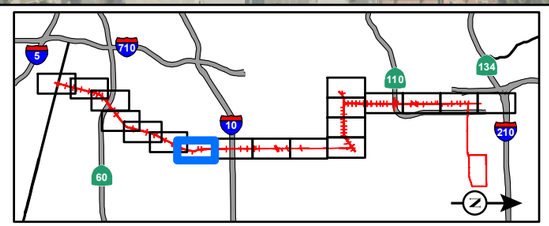

FIGURE 6-2
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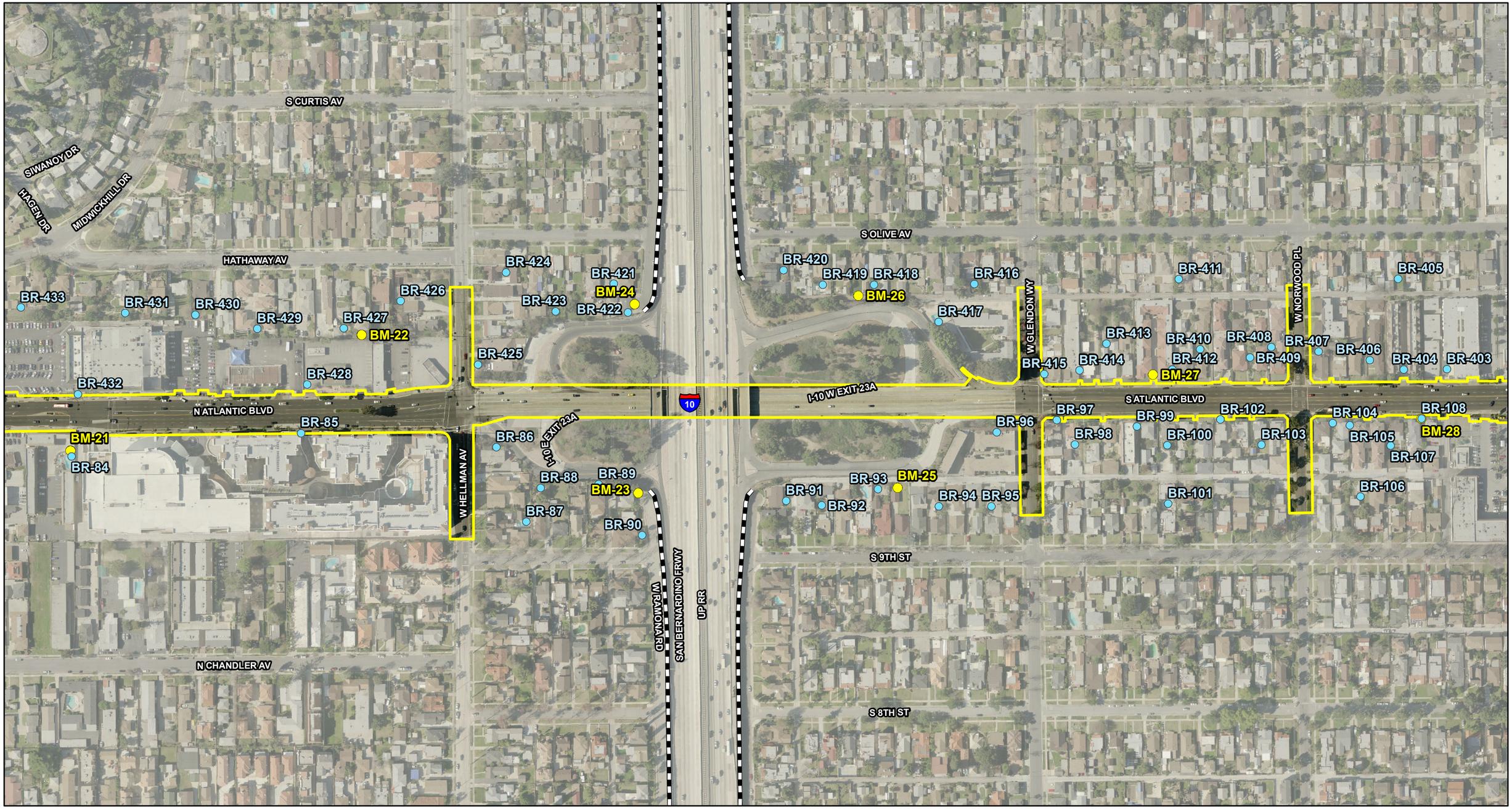
SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
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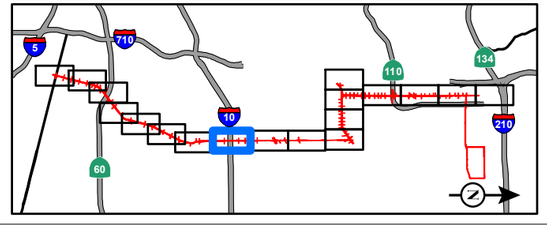
0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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FIGURE 6-2
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SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
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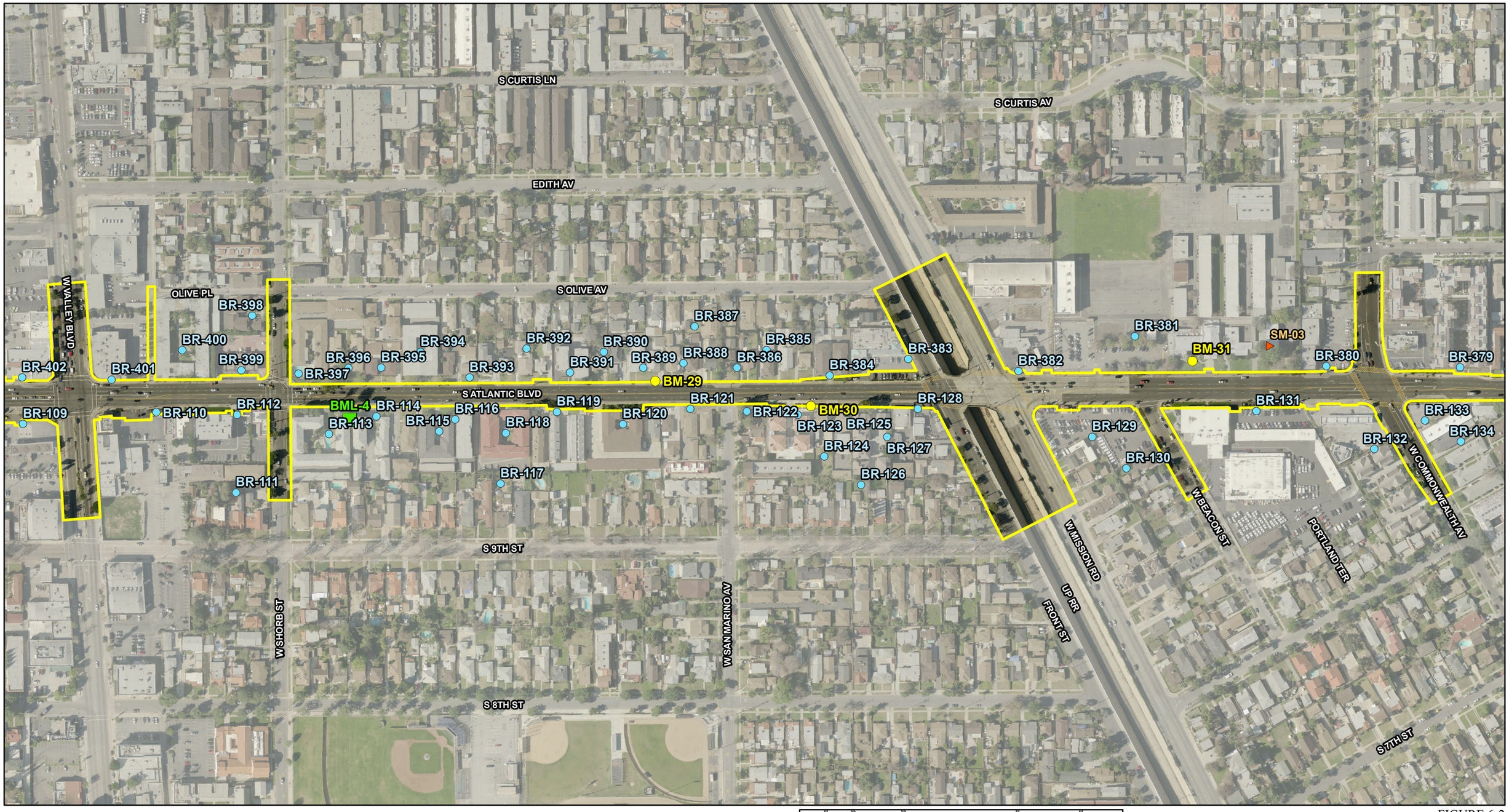

LEGEND

- BRT Alternative
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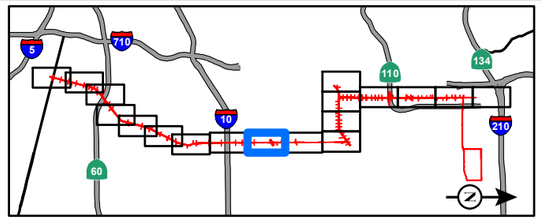
0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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FIGURE 6-2
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SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
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S CURTIS AV
N CURTIS AV
S OLIVE AV
N OLIVE AV
SAINT CHARLES TER
W WOODWARD AV
W ALHAMBRA RD
S ATLANTIC BLVD
N ATLANTIC BLVD
W MAIN ST
WASHINGTON ST
IRVING ST
HOWARD ST
N 5TH ST
N 4TH ST
N 3RD ST
N 2ND ST
N 1ST ST
S 6TH ST
S 5TH ST
S 4TH ST
W COMMONWEALTH AV
W GRAND AV

BR-135 BM-32 BR-136 BR-137 BR-138 BR-139 BR-140 BR-141 BR-142 BR-143 BR-144 BR-145 BR-146 BR-147 BR-148 BM-34 BR-149 BR-150 BR-151 BR-152 BR-153 BR-154 BR-155 BR-156 BR-157 BR-158 BR-159
BR-377 BR-378 BR-376 BR-375 BR-374 BR-373 BR-372 BR-371 BR-370 BR-369 BM-33 BR-365 BR-367 BR-366 BR-368 BR-364 BR-361 BR-362 BR-363 BR-360 BR-359 BR-358 BR-357 BR-356 BR-355 BM-35 BR-353 BR-352 BR-351 BR-350 BR-349 BR-348 BR-354

LEGEND

- BRT Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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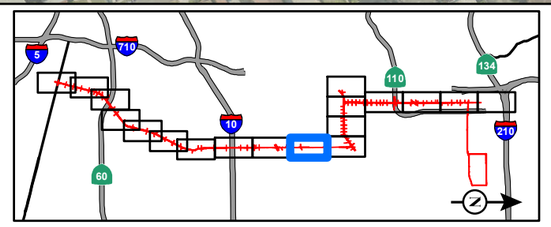

FIGURE 6-2
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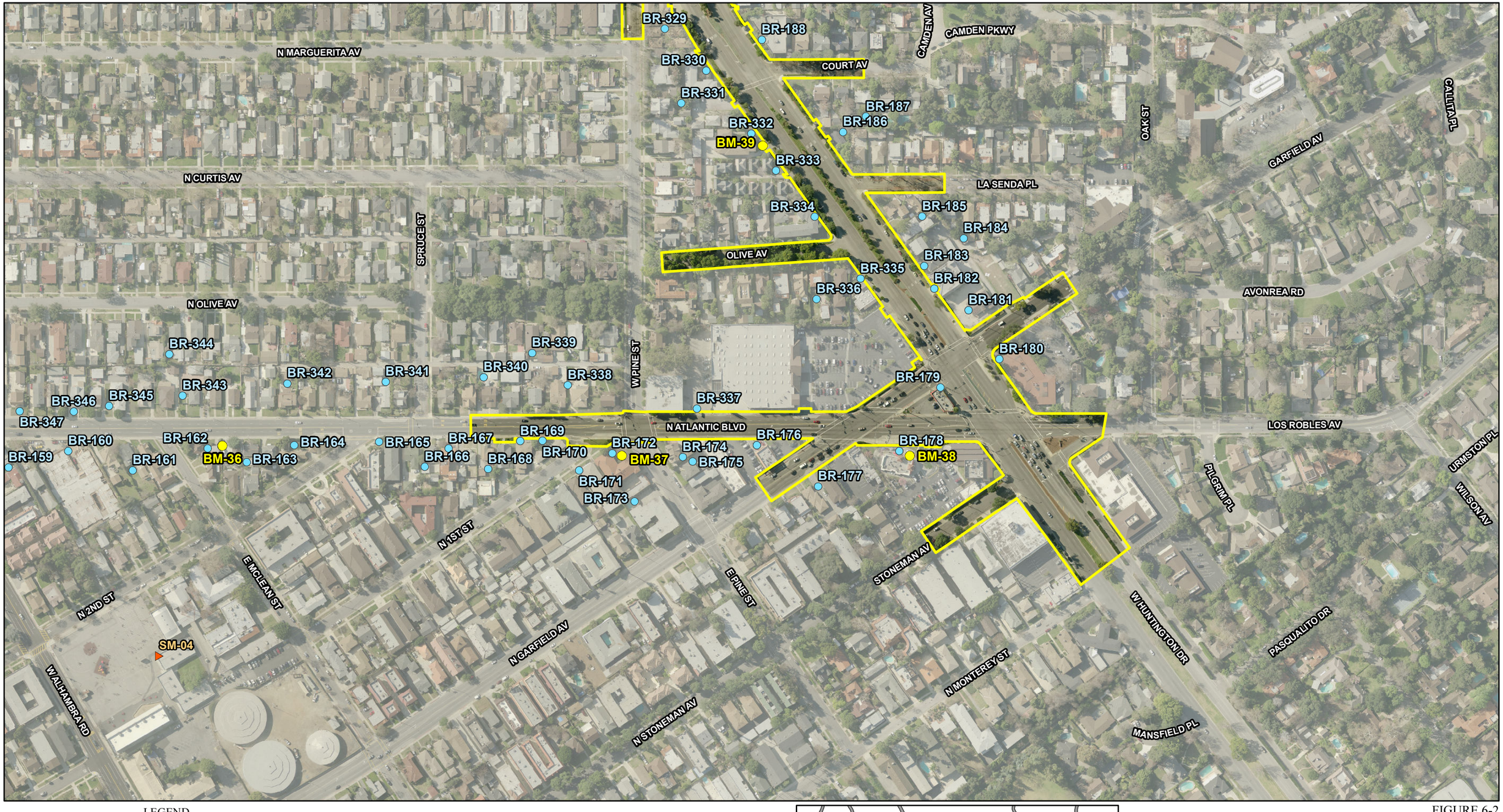
SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Alternative
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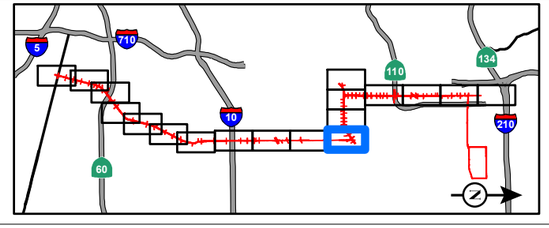

FIGURE 6-2
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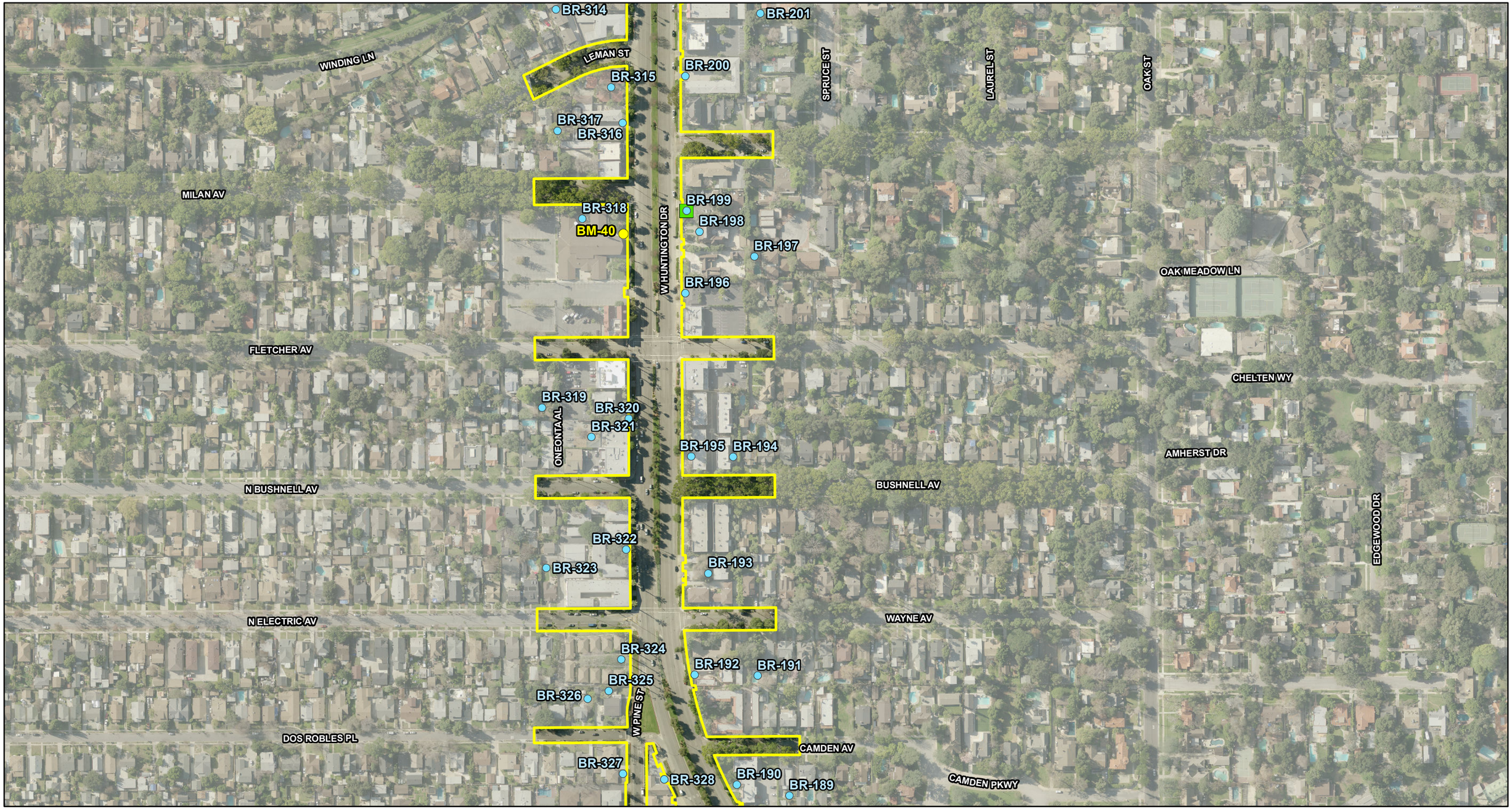
SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Alternative
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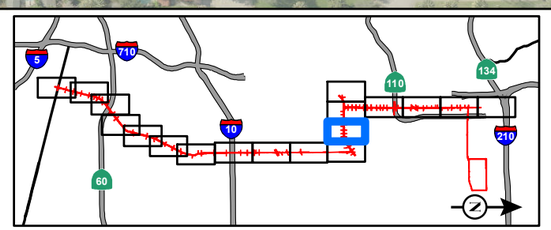
0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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FIGURE 6-2
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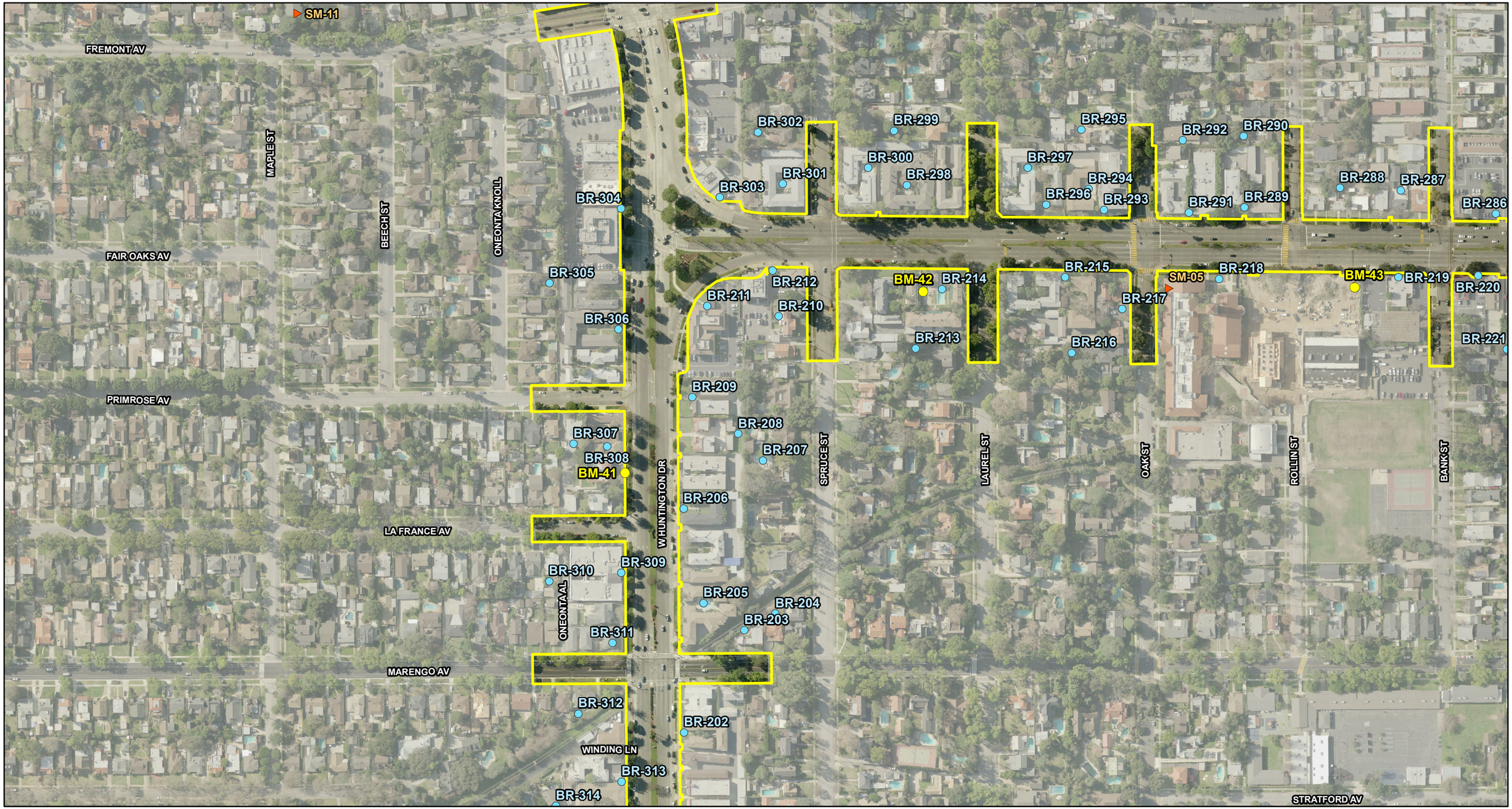
SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Alternative
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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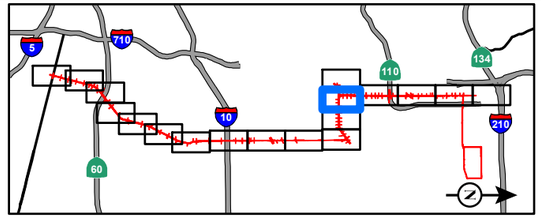

FIGURE 6-2
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SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- BRT Alternative
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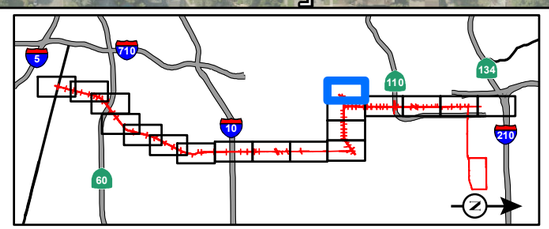

FIGURE 6-2

SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
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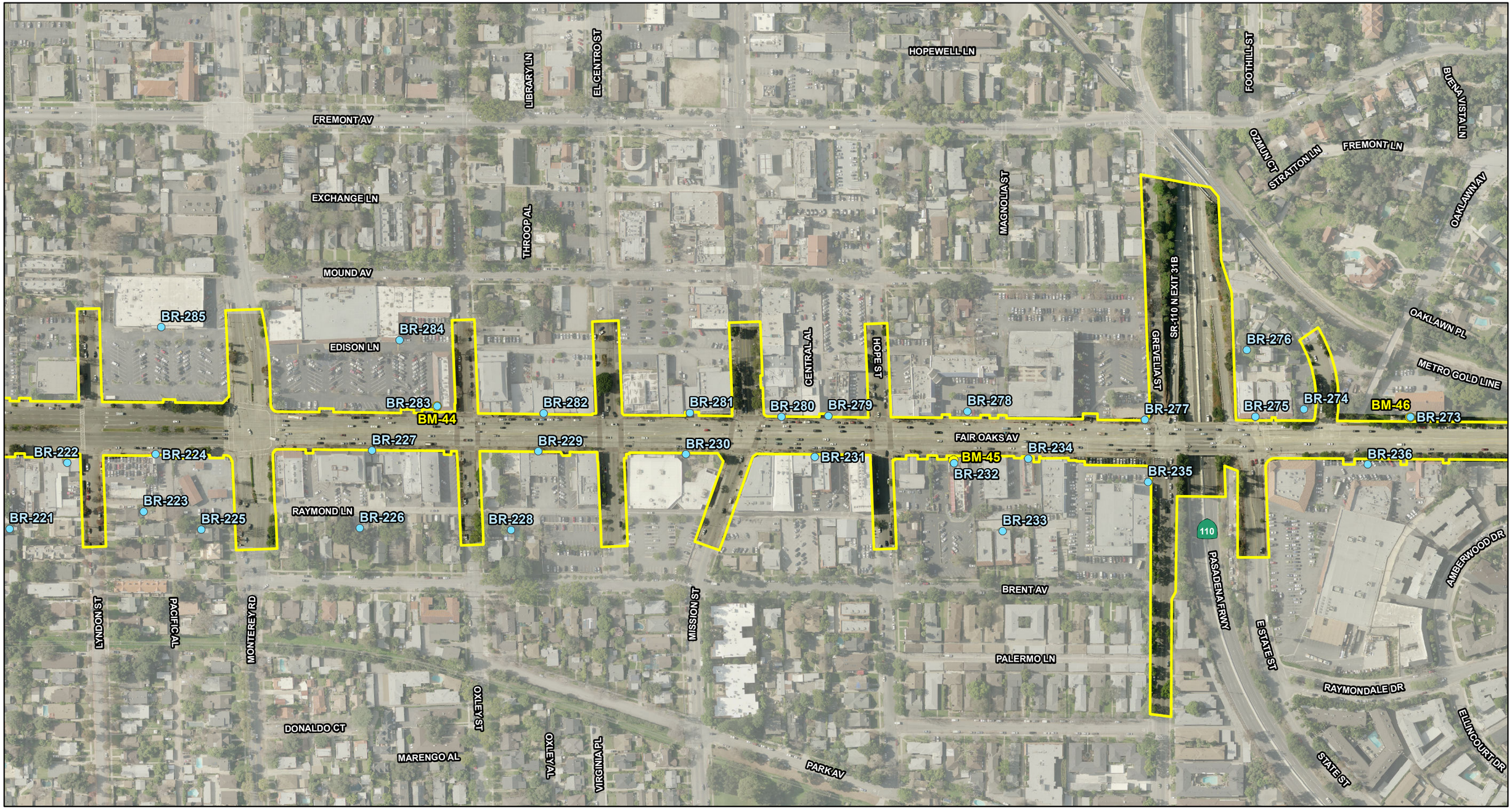
EFIS 0700000191



LEGEND

- BRT Alternative
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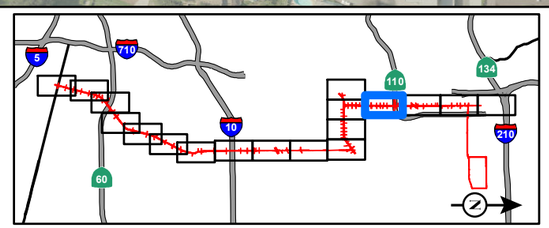
0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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FIGURE 6-2
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SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- BRT Alternative
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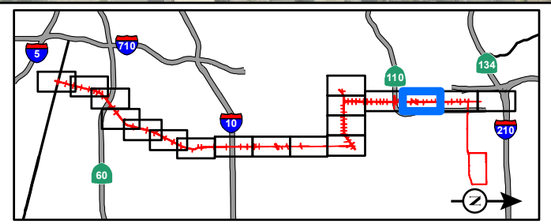
0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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FIGURE 6-2
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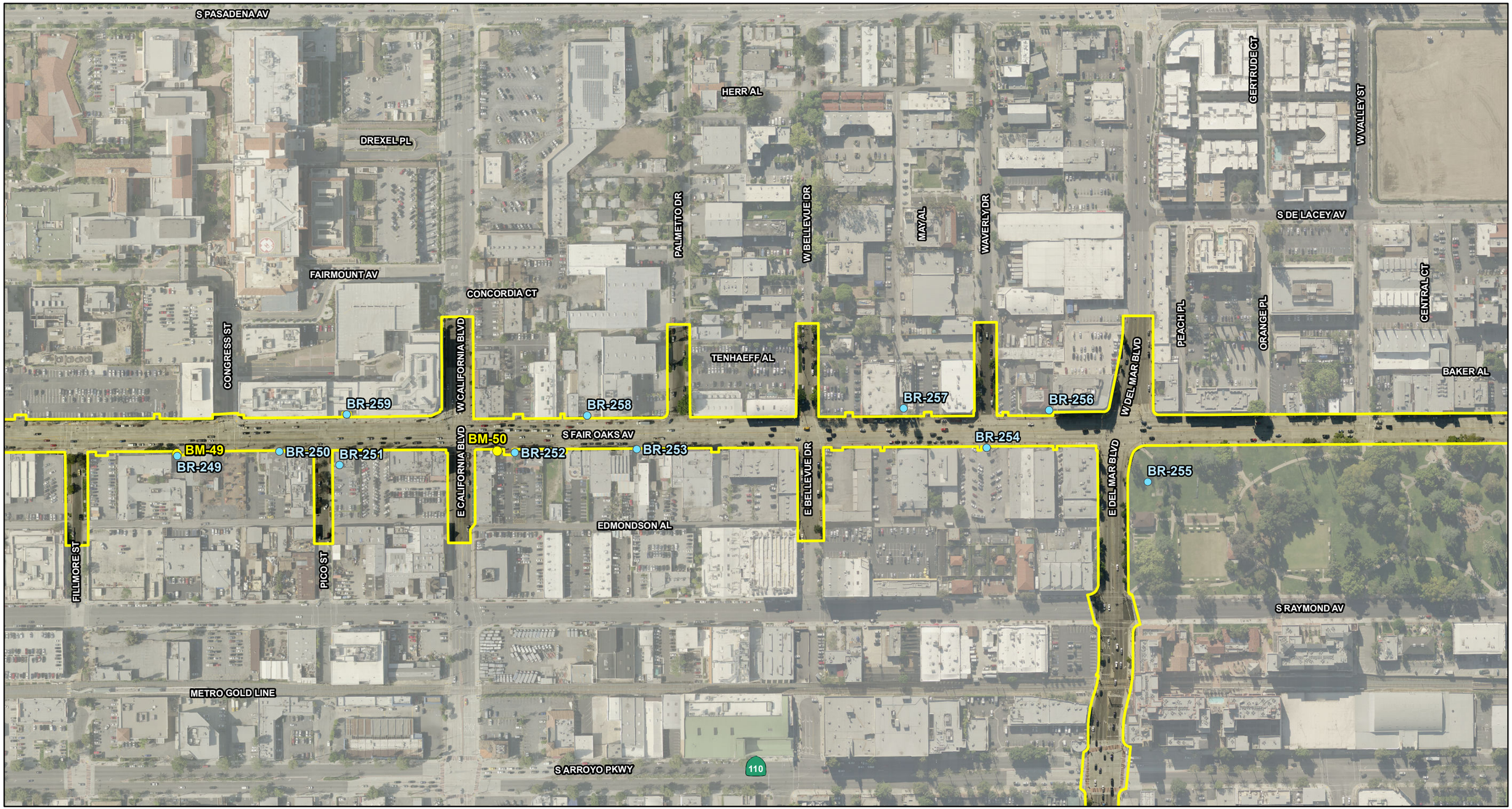
SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Alternative
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- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET

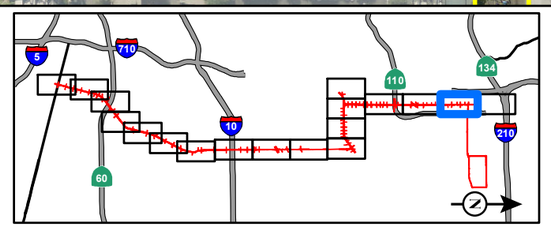

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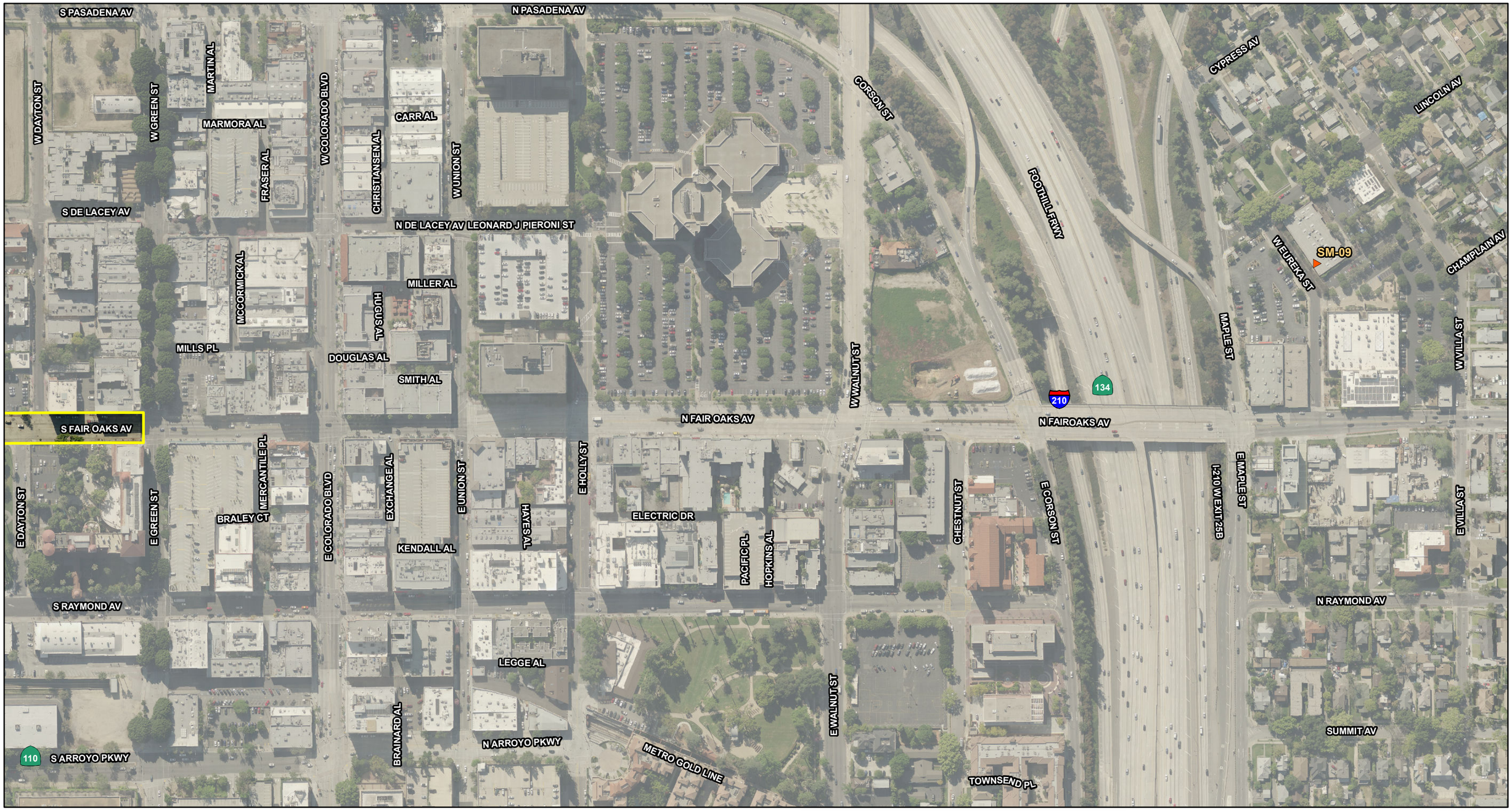
FIGURE 6-2
Page 17 of 18

SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Alternative
- Existing Walls
- Modeled Receptor Locations
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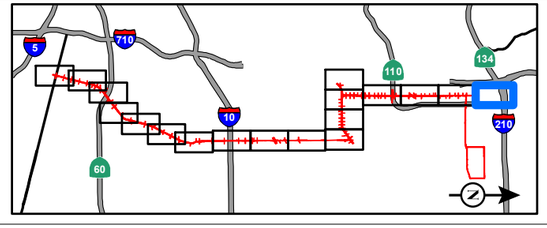
- Long-term, 24-hour, Measurement Locations (BML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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FIGURE 6-2
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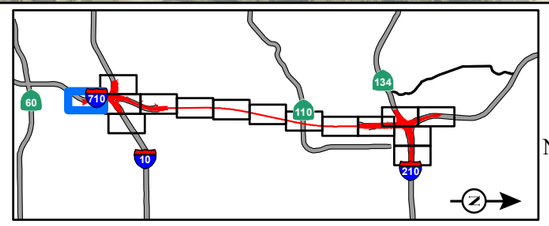
SR 710 North Study
Noise Measurement and Receptor Locations – BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

MCBRIDE AV
FR-58
FR-57
FM-25
I-710 N EXIT 22
FR-4
LONG BEACH FRWY
I-710 N EXIT 21
710
FR-2
FR-3
FM-2
CASUDA CANYON DR
FR-1
CORPORATE CENTER DR
FM-1
EFtW No. 1 (6 feet)
S CALIENTE ST
DAVIDSON DR
MONTEREY PASS RD

LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 6-3
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SR 710 North Study

Noise Measurement and Receptor Locations – Freeway Tunnel Alternative

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

N EASTERN AV
W RAMONA BLVD
ROGERS ST
HELEN DR
N STEELE AV
HAYES ST
CITY TERRACE DR
SHOR PL
TARZON ST
VOLNEY DR
ROLLINS DR
FM-26
SHERIFF RD
CENTRE PLAZA DR
FR-56
I-10 E EXIT 21
SAN BERNARDINO FRWY
I-10 W EXIT 21
UP RR
STATE UNIVERSITY DR
CIRCLE DR
CAMPUS RD
LANSDOWNE AV
BARNETT WY
O'SULLIVAN DR
BARNETT RD
PAS RANCHO CASTILLA

LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 6-3
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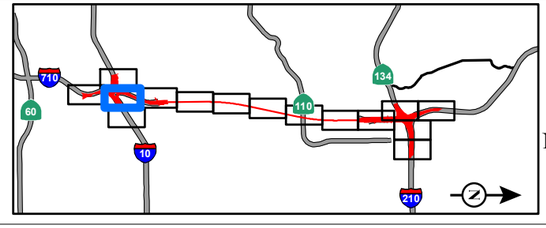
SR 710 North Study
Noise Measurement and Receptor Locations – Freeway Tunnel Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 6-3
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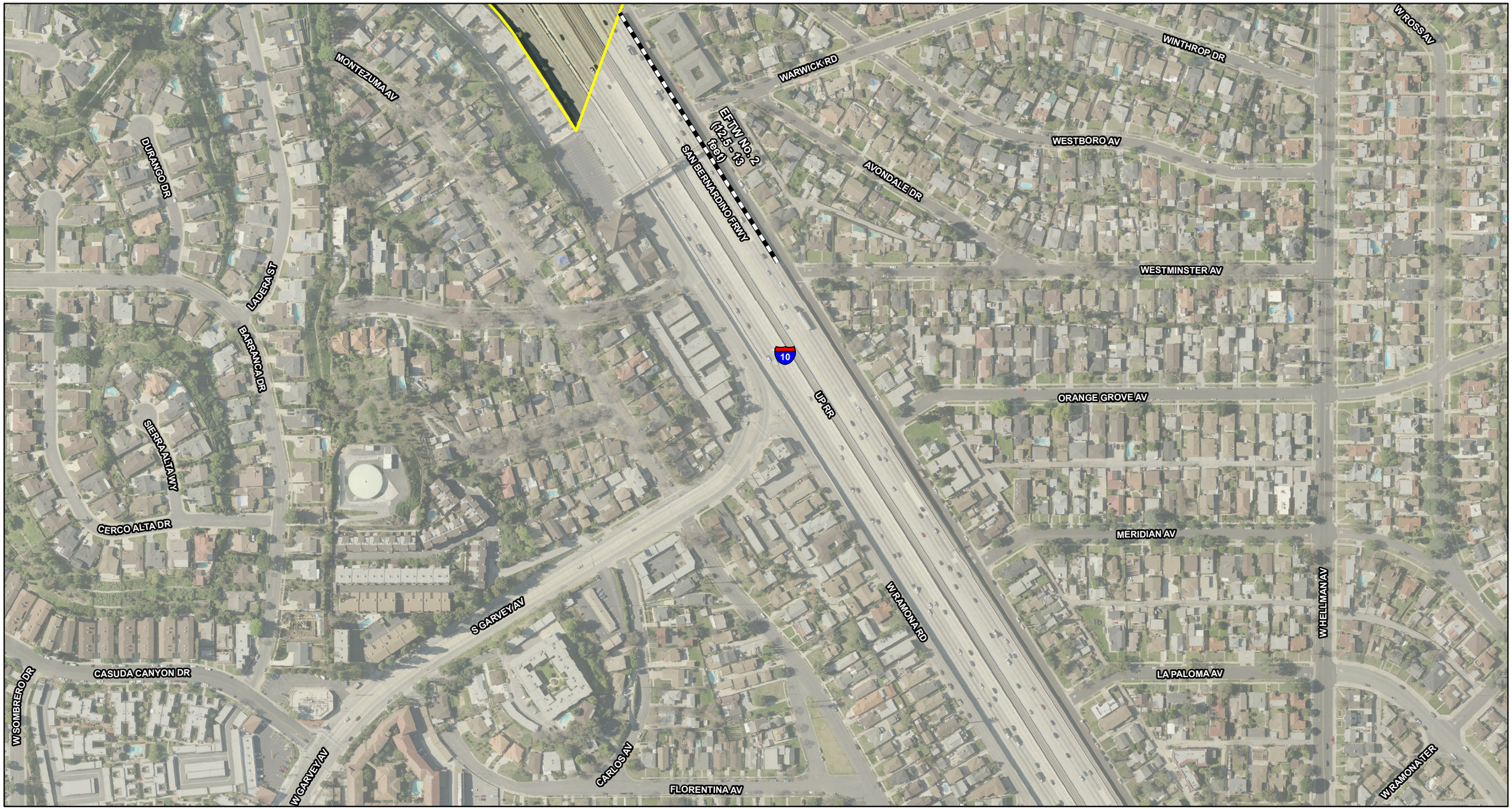
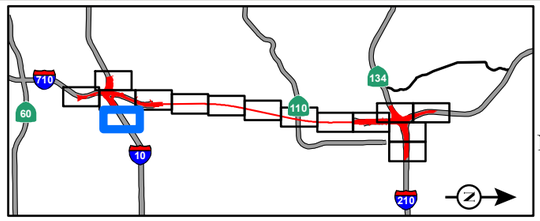
SR 710 North Study
Noise Measurement and Receptor Locations – Freeway Tunnel Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 6-3
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SR 710 North Study
Noise Measurement and Receptor Locations – Freeway Tunnel Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- Freeway Tunnel Alternative
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FEET

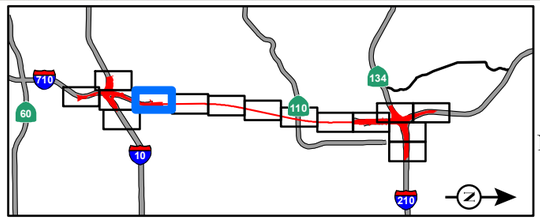

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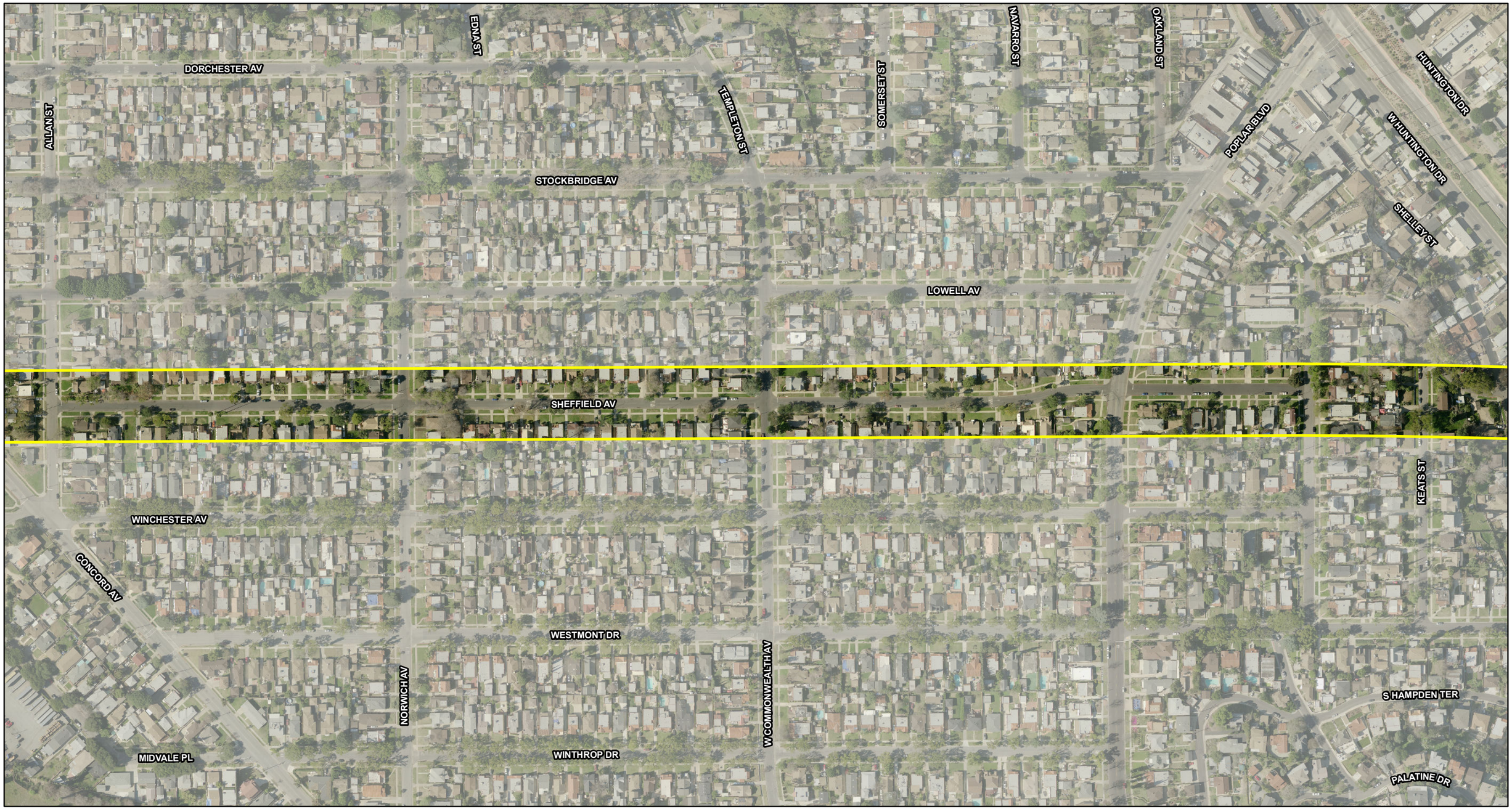
FIGURE 6-3
Sheet 5 of 15

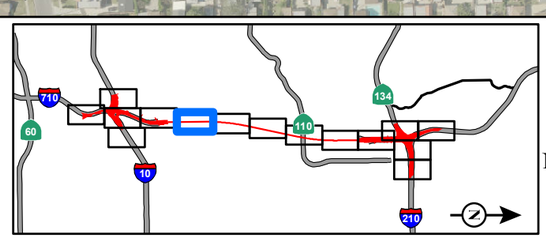
SR 710 North Study
Noise Measurement and Receptor Locations – Freeway Tunnel Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 6-3
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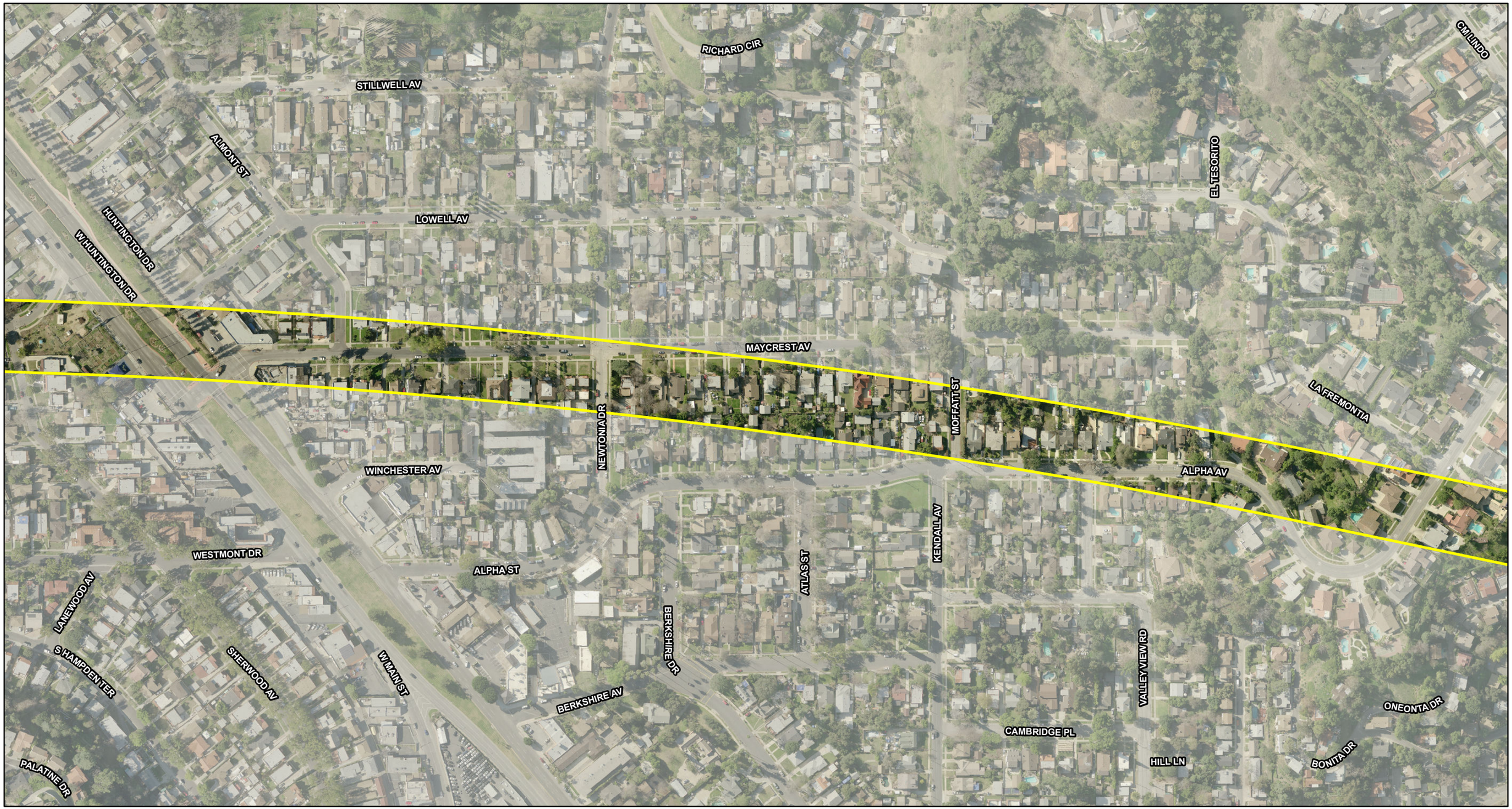
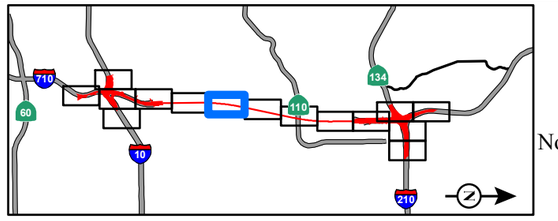
SR 710 North Study
Noise Measurement and Receptor Locations – Freeway Tunnel Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 6-3
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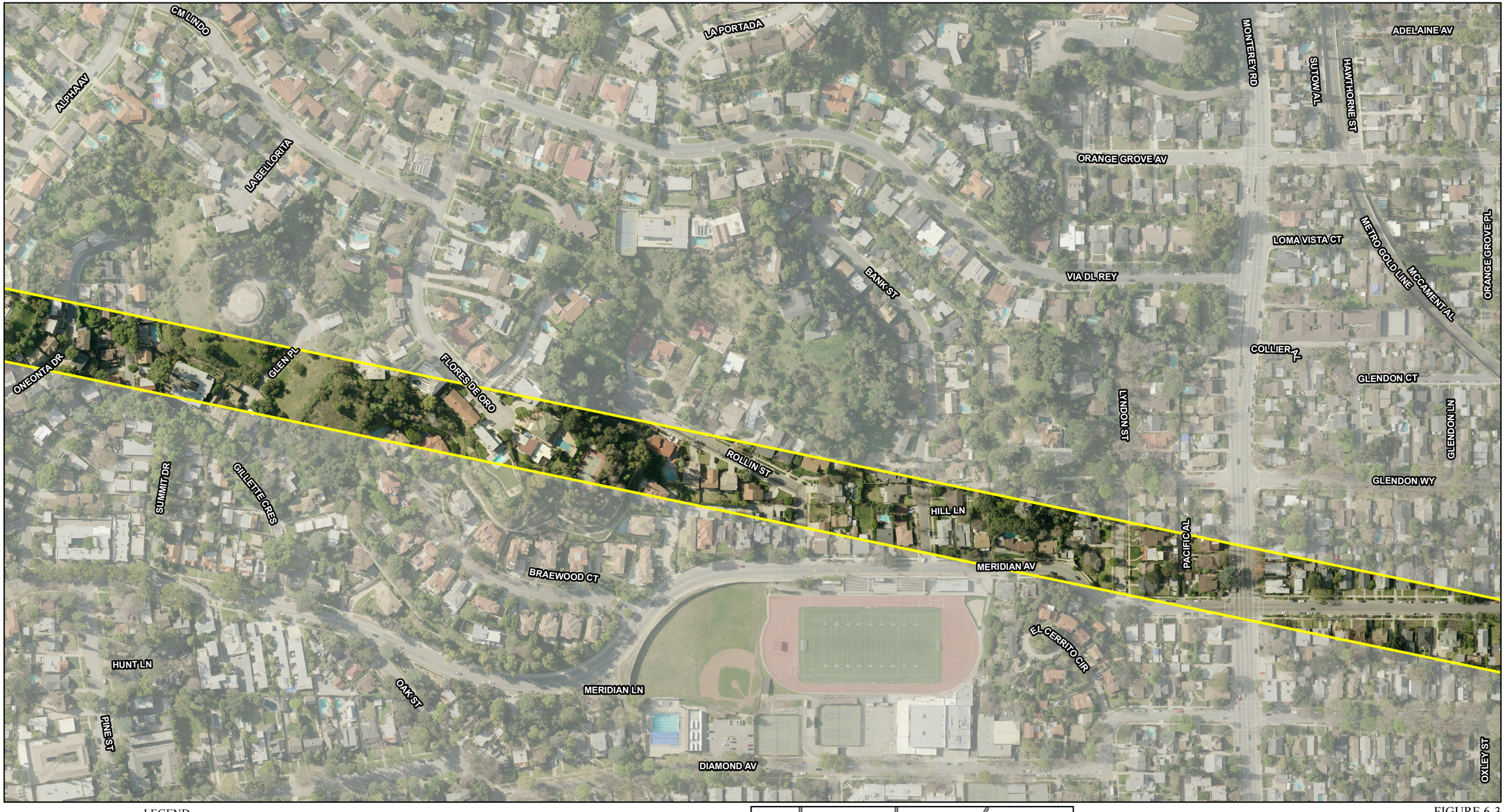
SR 710 North Study

Noise Measurement and Receptor Locations – Freeway Tunnel Alternative

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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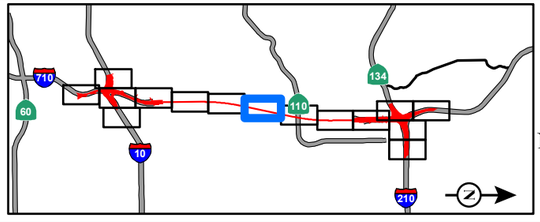
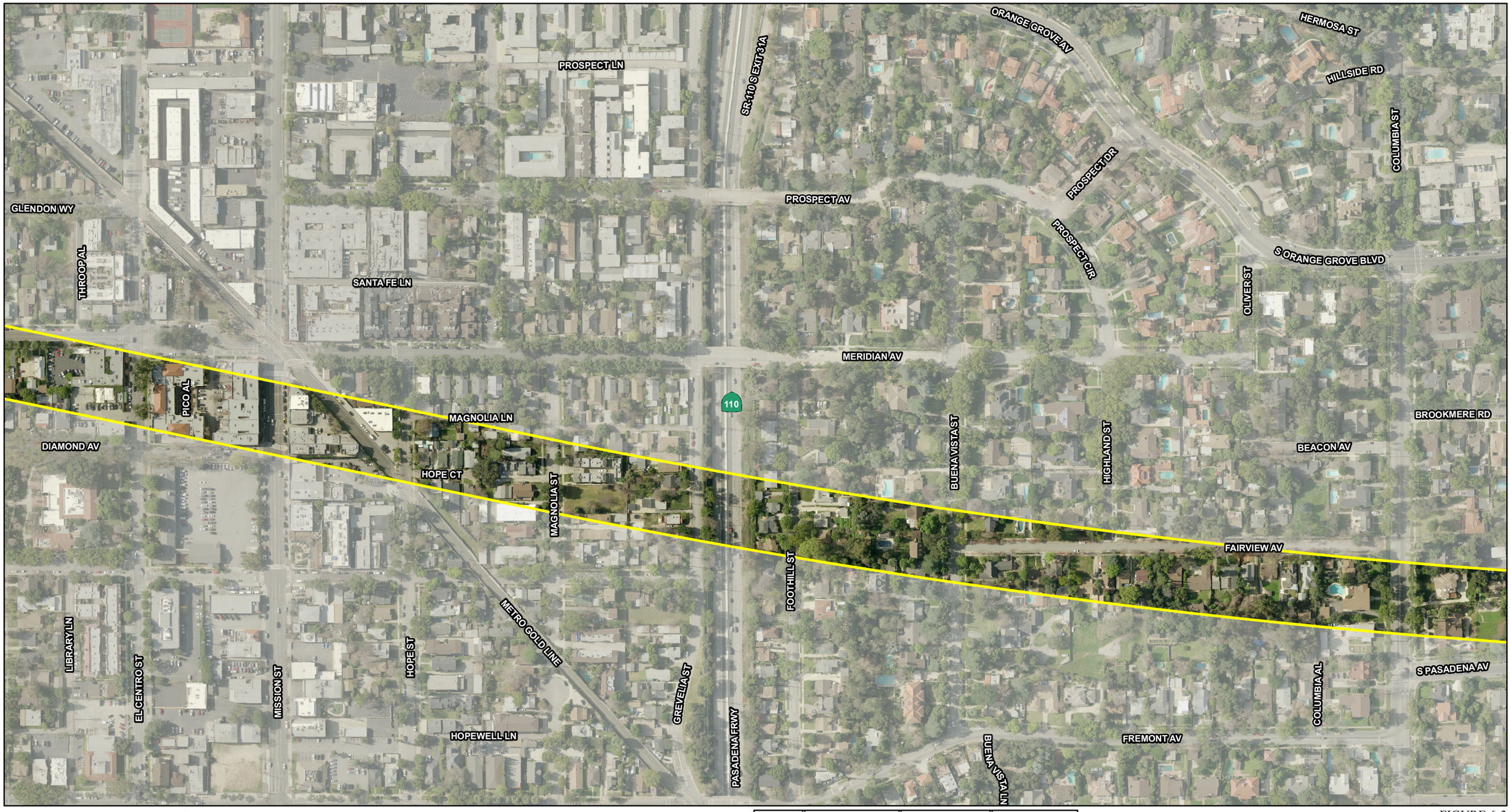


FIGURE 6-3
Sheet 8 of 15

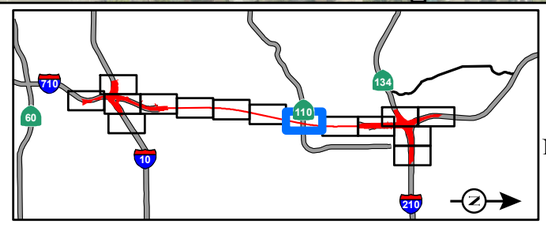
SR 710 North Study
Noise Measurement and Receptor Locations – Freeway Tunnel Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 6-3
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SR 710 North Study
Noise Measurement and Receptor Locations – Freeway Tunnel Alternative
07-LA-710 (SR 710)
EA 187900
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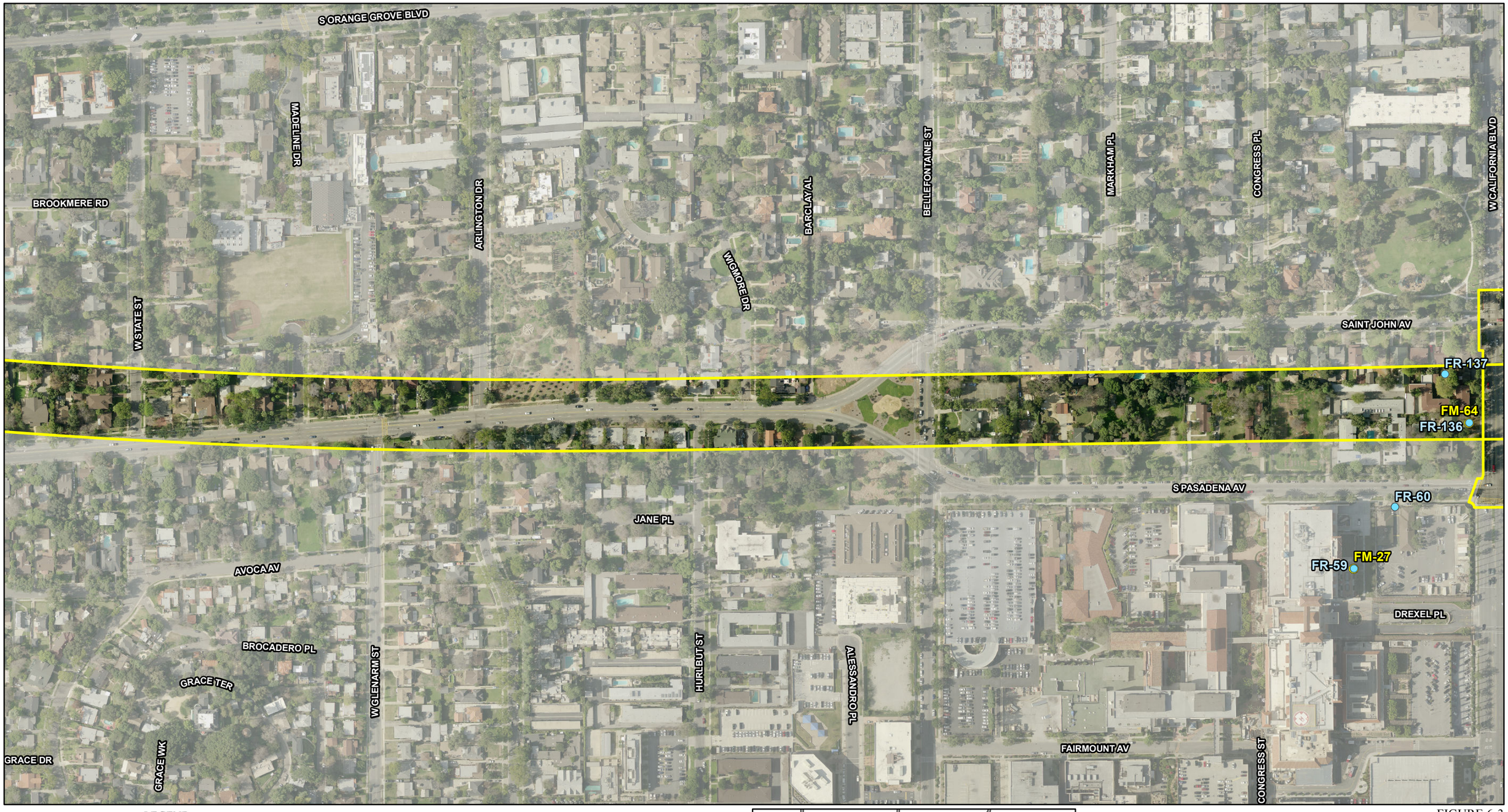
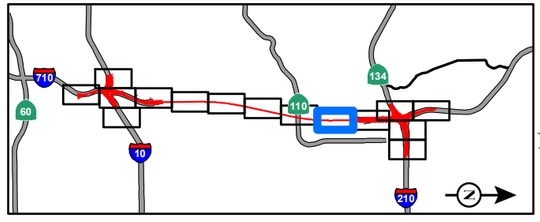


LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 6-3
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SR 710 North Study
Noise Measurement and Receptor Locations – Freeway Tunnel Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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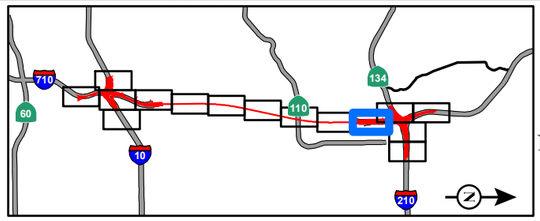

FIGURE 6-3
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SR 710 North Study

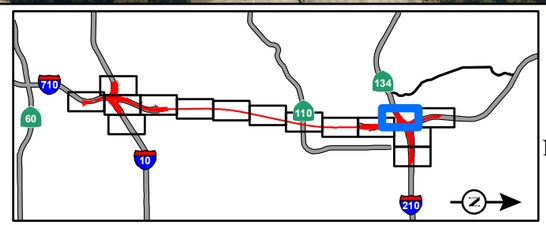
Noise Measurement and Receptor Locations – Freeway Tunnel Alternative

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 6-3
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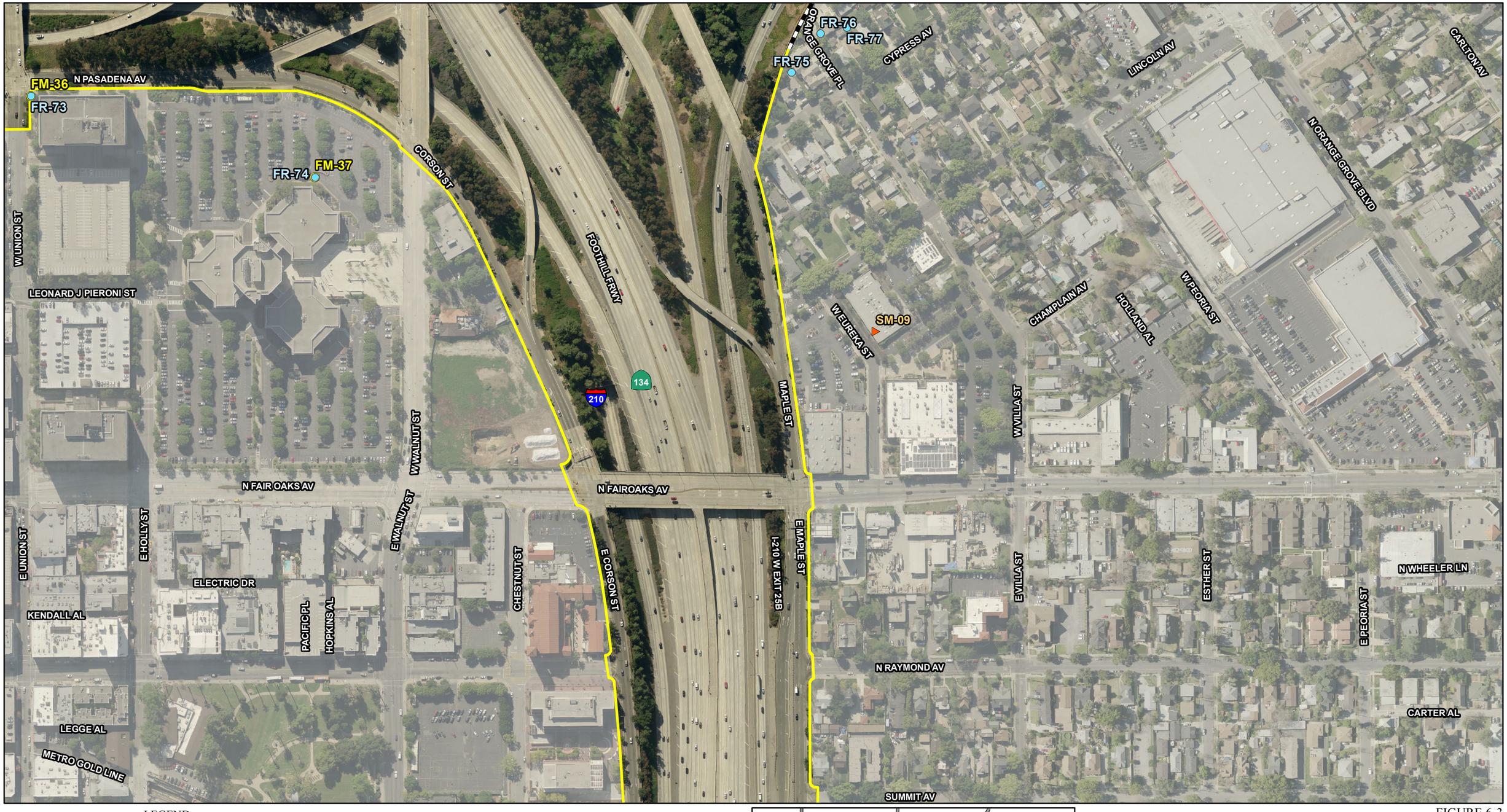
SR 710 North Study

Noise Measurement and Receptor Locations – Freeway Tunnel Alternative

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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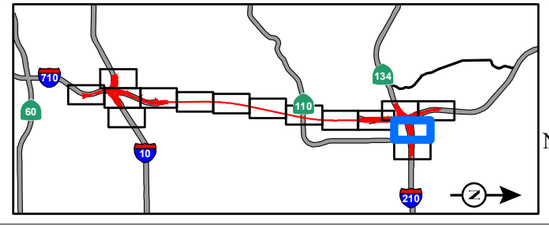

FIGURE 6-3
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SR 710 North Study
Noise Measurement and Receptor Locations – Freeway Tunnel Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

N ARROYO PKWY
E UNION ST
E HOLLY ST
CHESTNUT ST
TOWNSEND PL
I-210 W EXIT 25B
E VILLA ST
MICHENER AL
134
N MARENGO AV
RAMONA ST
NINDE PL
PEARL PL
COTTAGE PL
PARKE ST
METRO GOLD LINE
FOOTHILL FRWY
210
N GARFIELD AV
GARFIELD AV
THURGOOD MARSHALL ST
E WALNUT ST
E CORSON ST
E MAPLE ST
N EUCLID AV
REINWAY CT
MC GREW AL
N LOS ROBLES AV
FORD PL

LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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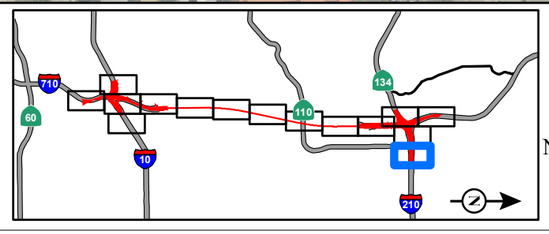

FIGURE 6-3
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SR 710 North Study
Noise Measurement and Receptor Locations – Freeway Tunnel Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

ROSEMONT AV
PROSPECT CRES
PROSPECT BLVD
HICKORY LN
N PASADENA AV
WINONA WY
WINONA AV
CYPRESS WY
SECO ST
BLAKE ST
LA MESA PL
FOREST AV
MANZANITA AV
ROSEWALK WY
RIDGEWOOD LN
ROSEWOOD LN
LONGWOOD LN
MAYVIEW LN
I-210 E EXIT 25B
I-210 E EXIT 24
I-210 W EXIT 24
CYPRESS AV
FOOTHILL FRWY
BANBURY AL
GLEN AV
MENTONE AV
LINCOLN AV
CHAPMAN AV
BARTHE DR
CLINTON ST
CARLTON AV
BROOKS AV
W MOUNTAIN ST
SUNSET AV
N ORANGE GROVE BLVD

FR-101
FR-100
FM-46
FR-99
FM-45
FR-103
FR-107
FR-106
FR-102
FM-48
FM-47
FR-109
FR-105
FR-104
FR-108
FM-49
FR-110
EFTW No. 11 (5 - 10 feet)
EFTW No. 9 (6 feet)
EFTW No. 10 (6.3 feet)
FM-44
FR-97
FM-43
FR-94
FR-96
FR-92
FR-91
FR-93
FR-95
FR-98
FM-42
FR-90
FR-89
SM-10
FR-88
FR-85
FM-41
FR-87
FR-86
EFTW No. 8 (6.5 feet)
FM-40
FR-84
FR-83

LEGEND

- Freeway Tunnel Alternative
- Existing Walls
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 6-3
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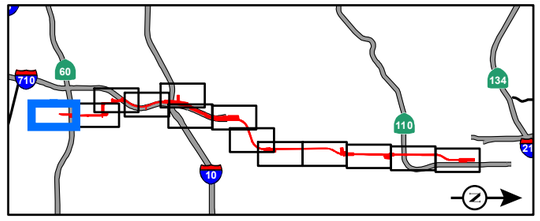
SR 710 North Study
Noise Measurement and Receptor Locations – Freeway Tunnel Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- LRT Alternative
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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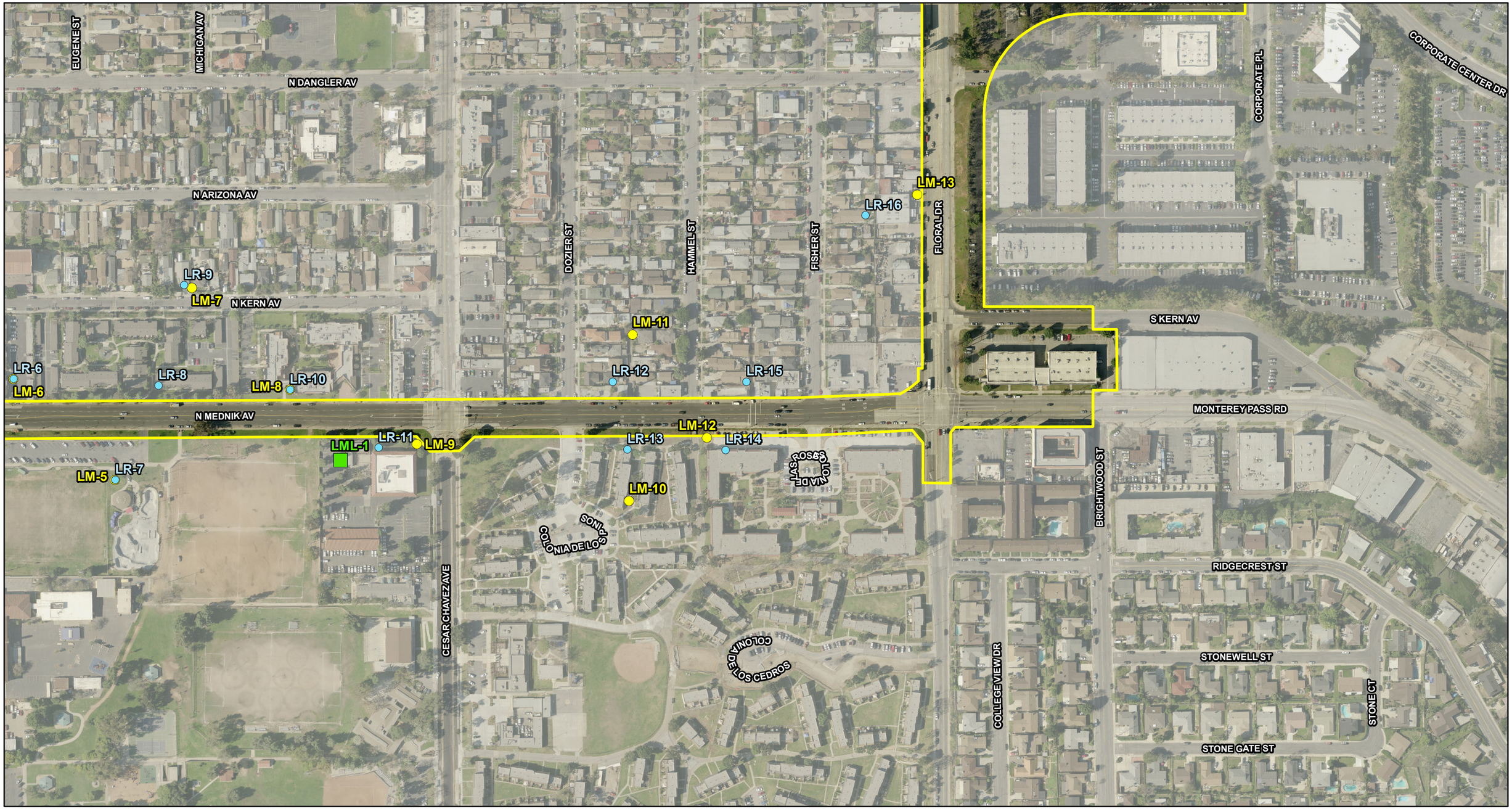
FIGURE 6-4
Page 1 of 13

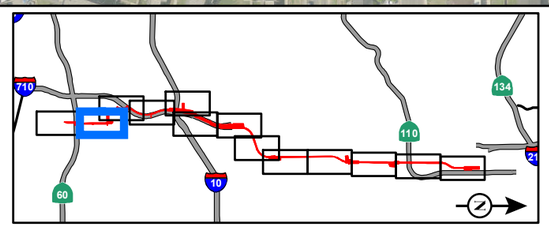
SR 710 North Study
Noise Measurement and Receptor Locations – LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- LRT Alternative
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-4
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SR 710 North Study
Noise Measurement and Receptor Locations – LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- LRT Alternative
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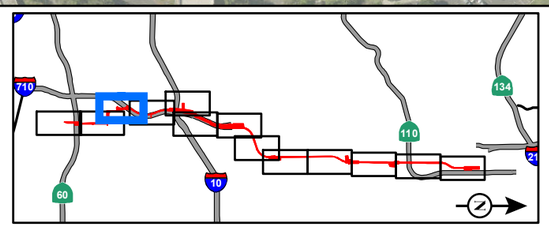
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-4
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SR 710 North Study
Noise Measurement and Receptor Locations – LRT Alternative
07-LA-710 (SR 710)
EA 187900
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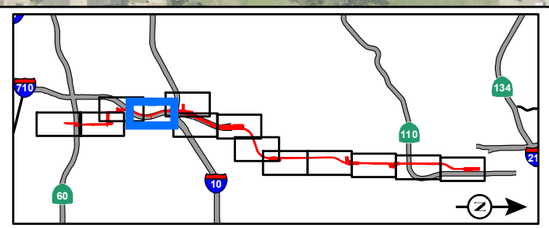
LEGEND

- LRT Alternative
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-4
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SR 710 North Study
Noise Measurement and Receptor Locations – LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- LRT Alternative
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
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0 125 250
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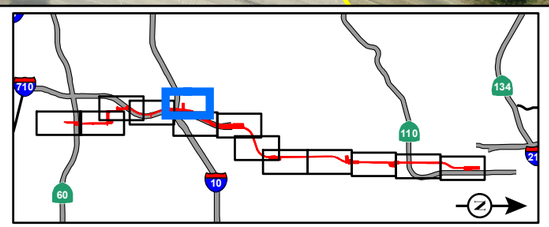

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-4
Page 5 of 13

SR 710 North Study
Noise Measurement and Receptor Locations – LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- LRT Alternative
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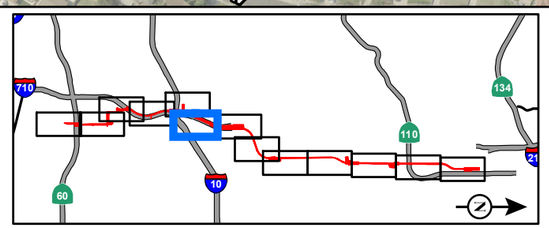
0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-4
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SR 710 North Study

Noise Measurement and Receptor Locations – LRT Alternative

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LILLYVALE AV
DORCHESTER AV
BOHLIG RD
DOBBS ST
ALLAN ST
STOCKBRIDGE AV
VANDALIA AV
ALHAMBRA AV
LOWELL AV
HIGHBURY AV
VALLEY BLVD
LR-26
CONCORD AV
W MISSION RD
710
LONG BEACH FRWY
SHEFFIELD AV
LR-24
710
LR-25
WINCHESTER AV
WESTMONT DR
UP RR
CABRILLO AV
W VALLEY BLVD
W NORWOOD PL
PARKVIEW DR
FRONT ST
MILTON AV
GLENAVEN AV
GLEN VIEW DR
PYRENEES DR
WESTMINSTER AV
MIDVALE PL

LEGEND

- LRT Alternative
- Modeled Receptor Locations
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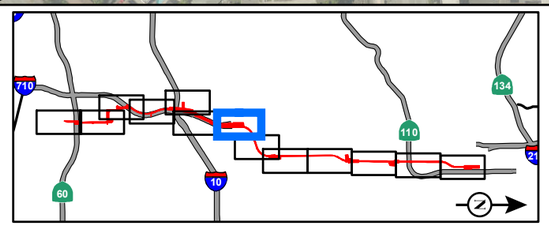
0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-4

SR 710 North Study
Noise Measurement and Receptor Locations – LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

W NORWOOD PL
GRAND VIEW DR
W VALLEY BLVD
W SHORB ST
FRONT ST
W MISSION RD
UP RR
WESTMINISTER AV
NORWICH AV
WESTBORO AV
W COMMONWEALTH AV
WESTMINSTER AV
CONCORD AV
S ORANGE GROVE AV
S MERIDIAN AV
MIMOSA ST
S FREMONT AV
ORANGE ST

LEGEND

- LRT Alternative
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

0 125 250
FEET

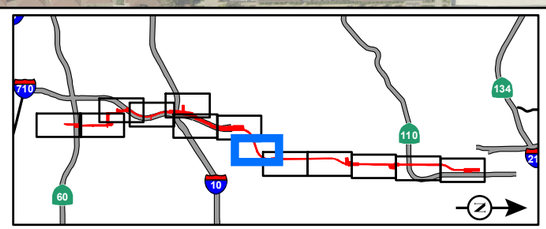

FIGURE 6-4
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SR 710 North Study
Noise Measurement and Receptor Locations – LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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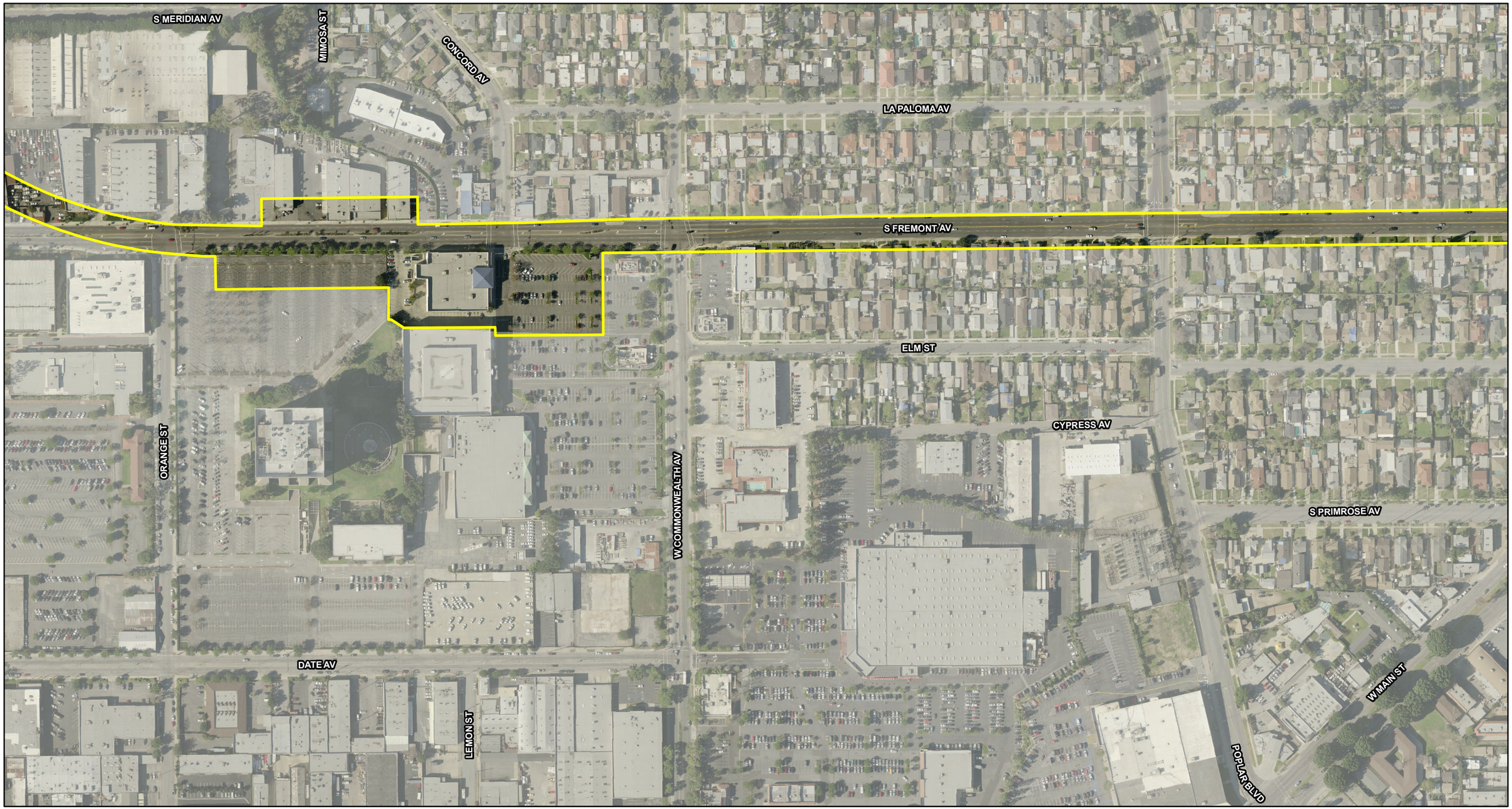
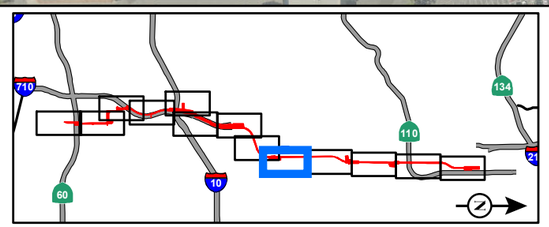


LEGEND

- LRT Alternative
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-4
Page 9 of 13

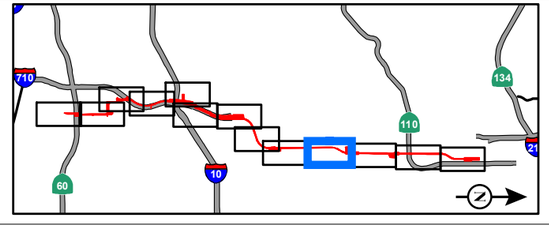
SR 710 North Study
Noise Measurement and Receptor Locations – LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

EMPRESS AV
HUNTINGTON LN
RAMONA AV
PINE ST
LA PALOMA AV
CRESTLAKE AV
HOPEWELL LN
ELMPARK ST
SM-11
S FREMONT AV
N FREMONT AV
FREMONT AV
ELM ST
W GRAND AV
BIRCH ST
W ALHAMBRA RD
MAPLE ST
BEECH ST
ONEONTA KNOLL
FAIR OAKS AV
W MAIN ST
N PRIMROSE AV
PRIMROSE AV
LARCH ST
ONEONTA AL
CEDAR ST
W HUNTINGTON DR
LA FRANCE AV

LEGEND

- LRT Alternative
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-4
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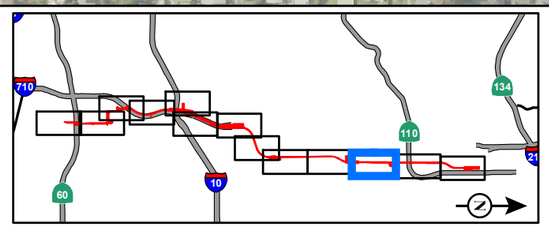
SR 710 North Study
Noise Measurement and Receptor Locations – LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

FREMONT AV
EXCHANGE LN
THROOP AL
EL CENTRO ST
MOUND AV
EDISON LN
FAIR OAKS AV
SM-05
RAYMOND LN
BRENT AV
MISSION ST
SPRUCE ST
LAUREL ST
OAK ST
ROLLIN ST
BANK ST
LYNDON ST
PACIFIC AL
MONTEREY RD
OXLEY ST
PARK AV
DONALDO CT
MARENGO AL
OXLEY AL
VIRGINIA PL
MARENGO AV

LEGEND

- LRT Alternative
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-4
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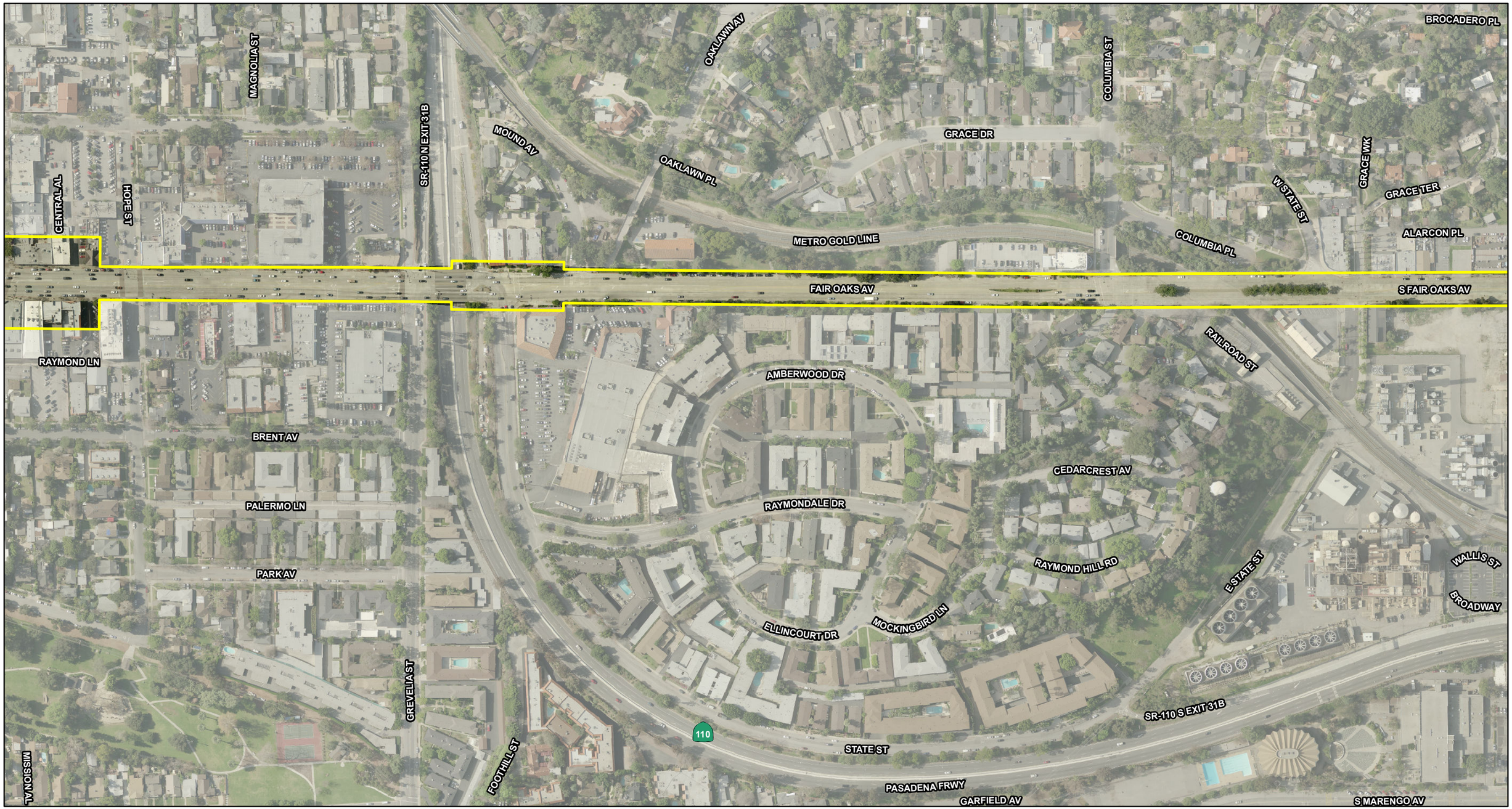
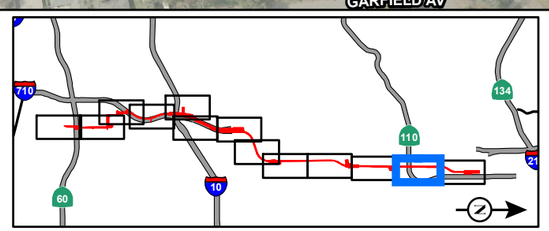
SR 710 North Study
Noise Measurement and Receptor Locations – LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- LRT Alternative
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 6-4
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SR 710 North Study
Noise Measurement and Receptor Locations – LRT Alternative

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

BROCADERO PL
W GLENARM ST
ARLINGTON DR
HURLBUT ST
ALESSANDRO PL
BELLEFONTAINE ST
FAIRMOUNT AV
CONGRESS ST
CONCORDIA CT
W CALIFORNIA BLVD
PALMETTO DR
TENHAEFF AL
ALARCON PL
S FAIR OAKS AV
E CALIFORNIA BLVD
EDMONDSON AL
FILLMORE ST
PICO ST
S RAYMOND AV
METRO GOLD LINE
BROADWAY
PASADENA FRWY
110
S ARROYO PKWY
SM-13
E GLENARM ST
WEBSTER AL
PICHER AL
S MARENGO AV
OHIO ST
ALPINE ST
PLEASANT ST

LEGEND

- LRT Alternative
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- School Measurement Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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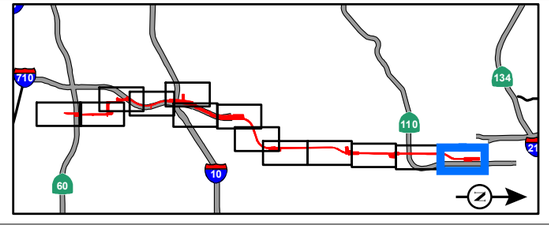
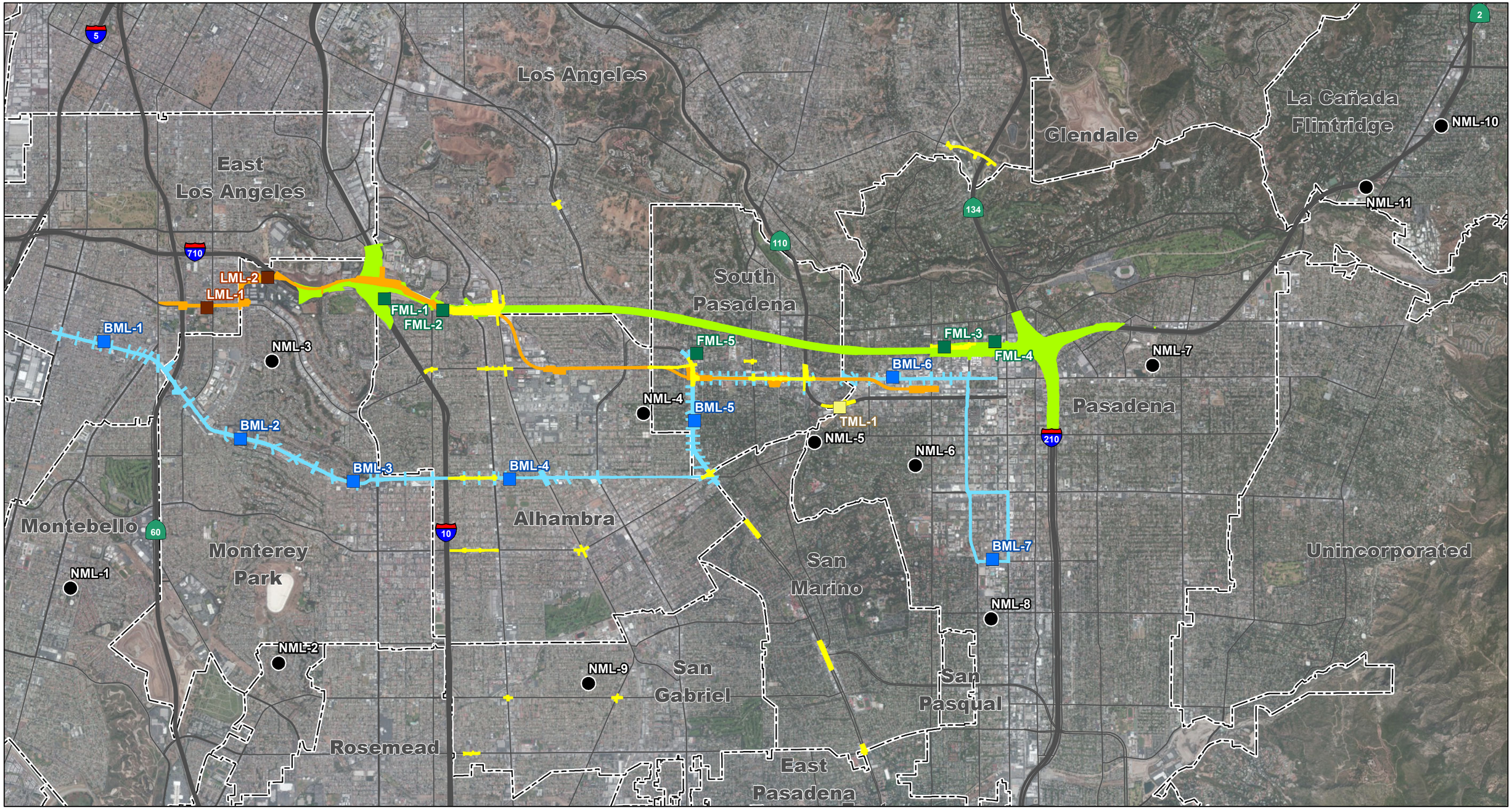


FIGURE 6-4
Page 13 of 13

SR 710 North Study
Noise Measurement and Receptor Locations – LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Neighborhood Noise Measurement Locations (NML)
- Long-term, 24-hour, Measurement Locations (BML)
- Long-term, 24-hour, Measurement Locations (LRL)
- Long-term, 24-hour, Measurement Locations (FML)
- Long-term, 24-hour, Measurement Locations (TML)
- TSM/TDM Alternative Alignment
- BRT Alternative Alignment
- LRT Alternative Alignment
- Freeway Tunnel Alternative Alignment

0 2250 4500
FEET

SOURCE: ESRI (2013); CH2M Hill (2014)

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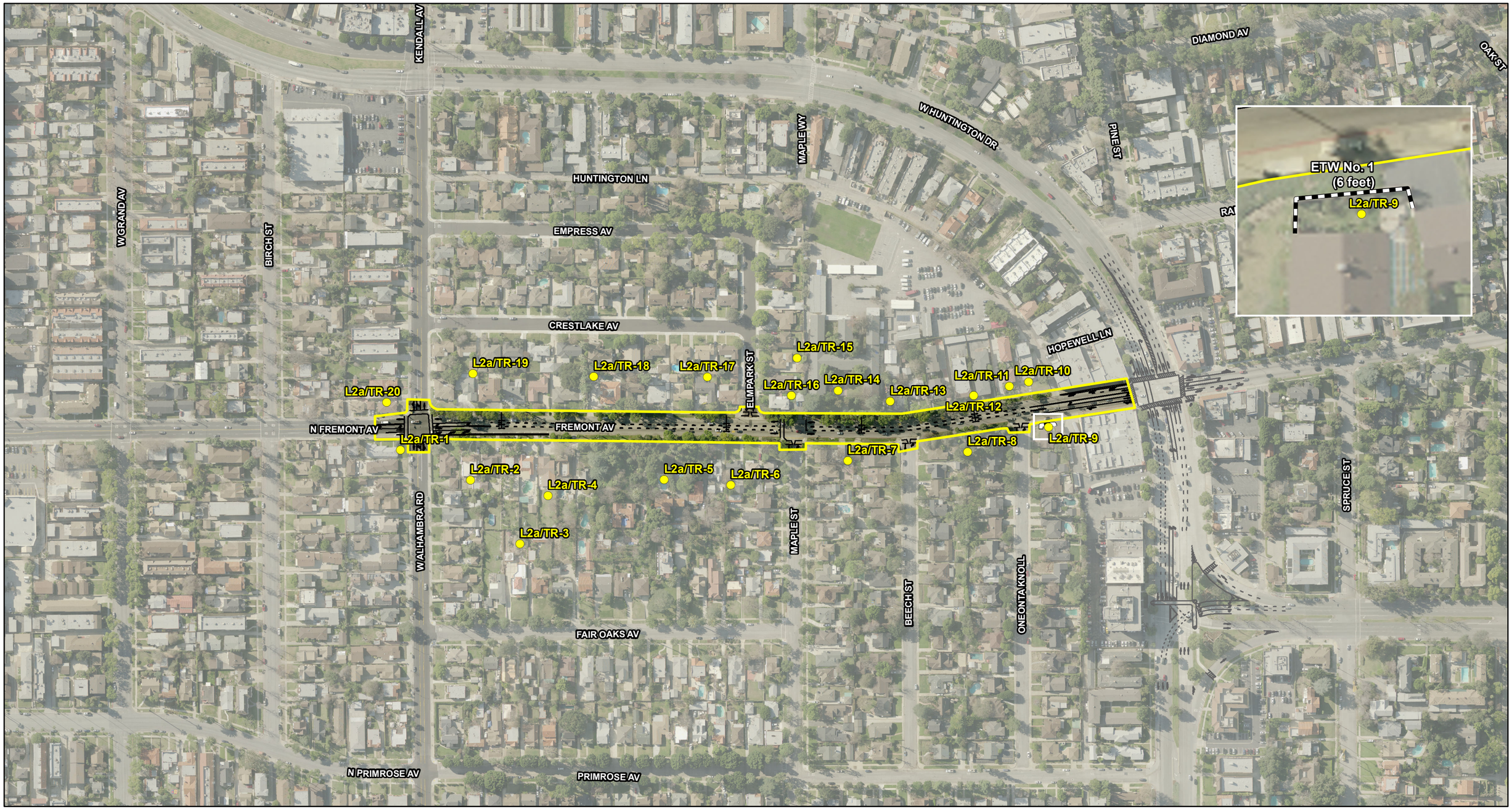
FIGURE 6-5

SR 710 North Study

Long Term Noise Measurement Locations

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_TSMTDM_ProposedBarriers.mxd (10/28/2014)

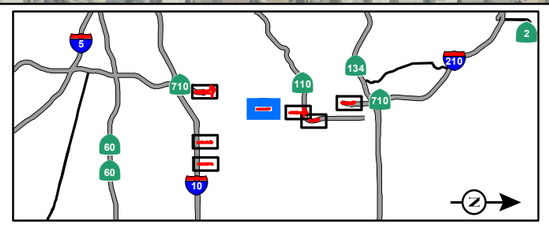
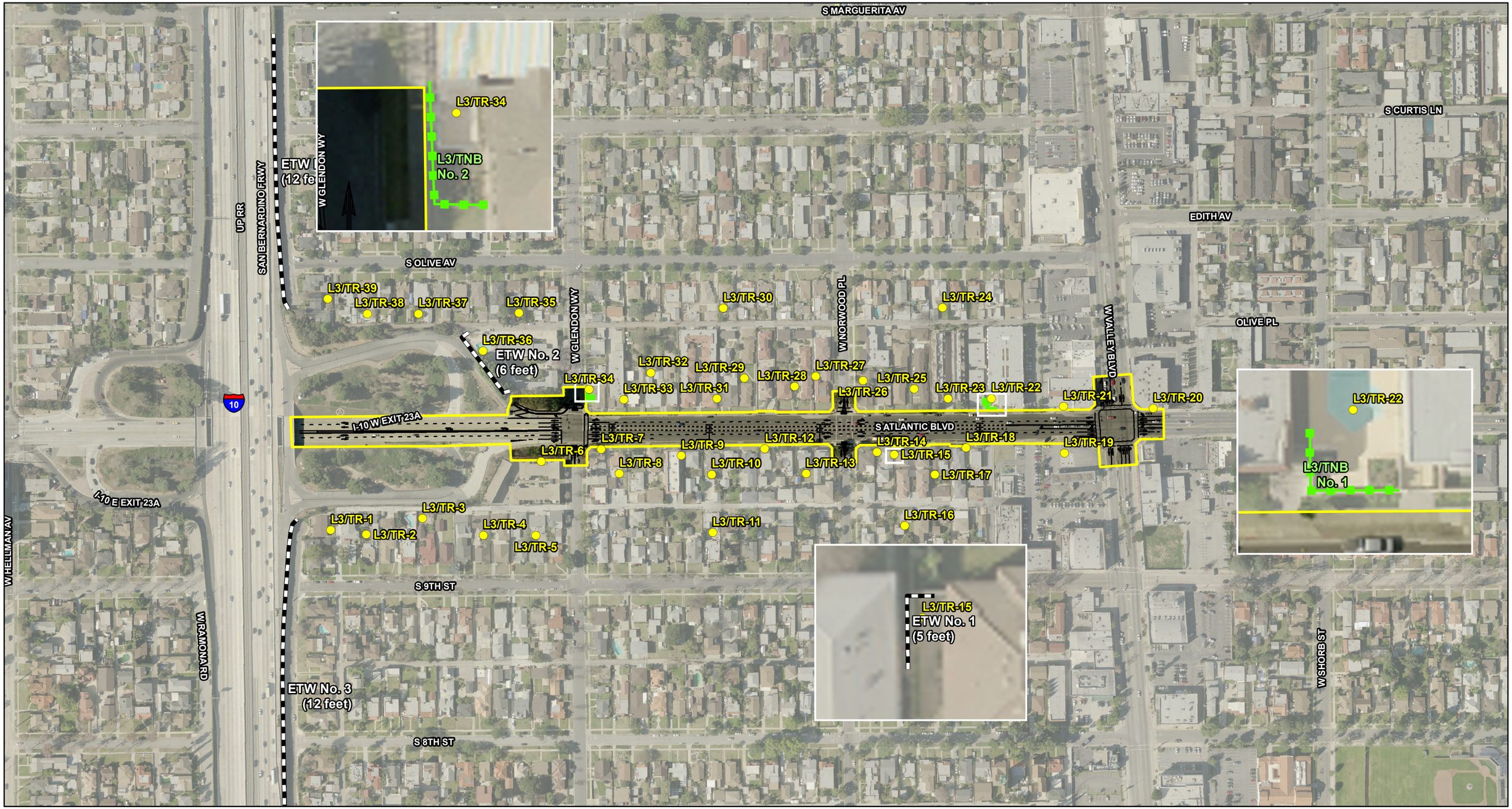


FIGURE 7-1
Page 1 of 9

SR 710 North Study

Modeled Noise Barriers for the TSM/TDM Alternative – L-2a

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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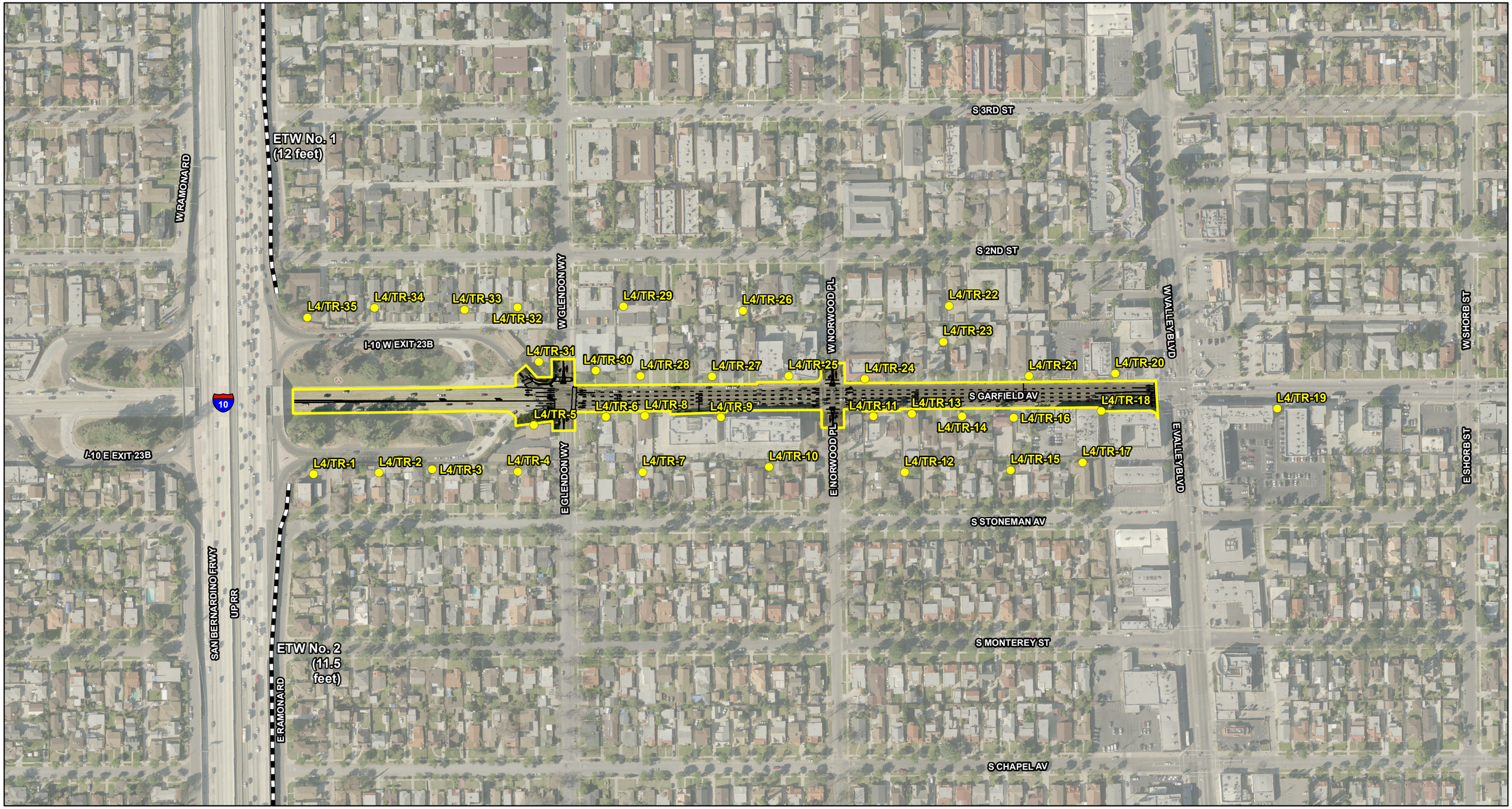
FIGURE 7-1
Page 2 of 9

SR 710 North Study

Modeled Noise Barriers for the TSM/TDM Alternative – L-3

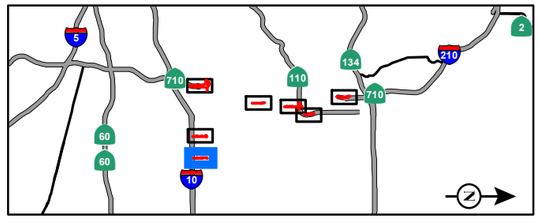
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 7-1
Page 3 of 9

SR 710 North Study

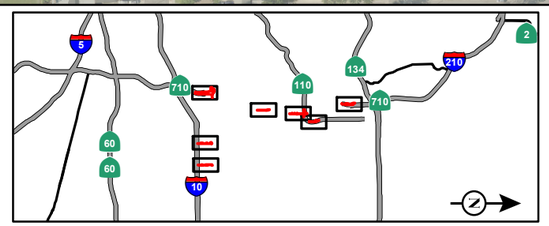
Modeled Noise Barriers for the TSM/TDM Alternative – L-4

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 7-1
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SR 710 North Study

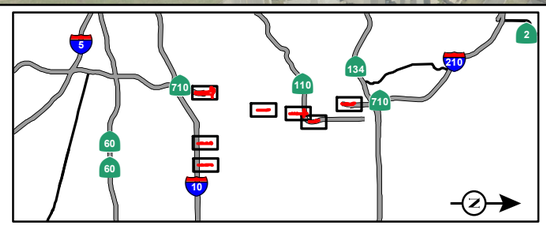
Modeled Noise Barriers for the TSM/TDM Alternative – L-5

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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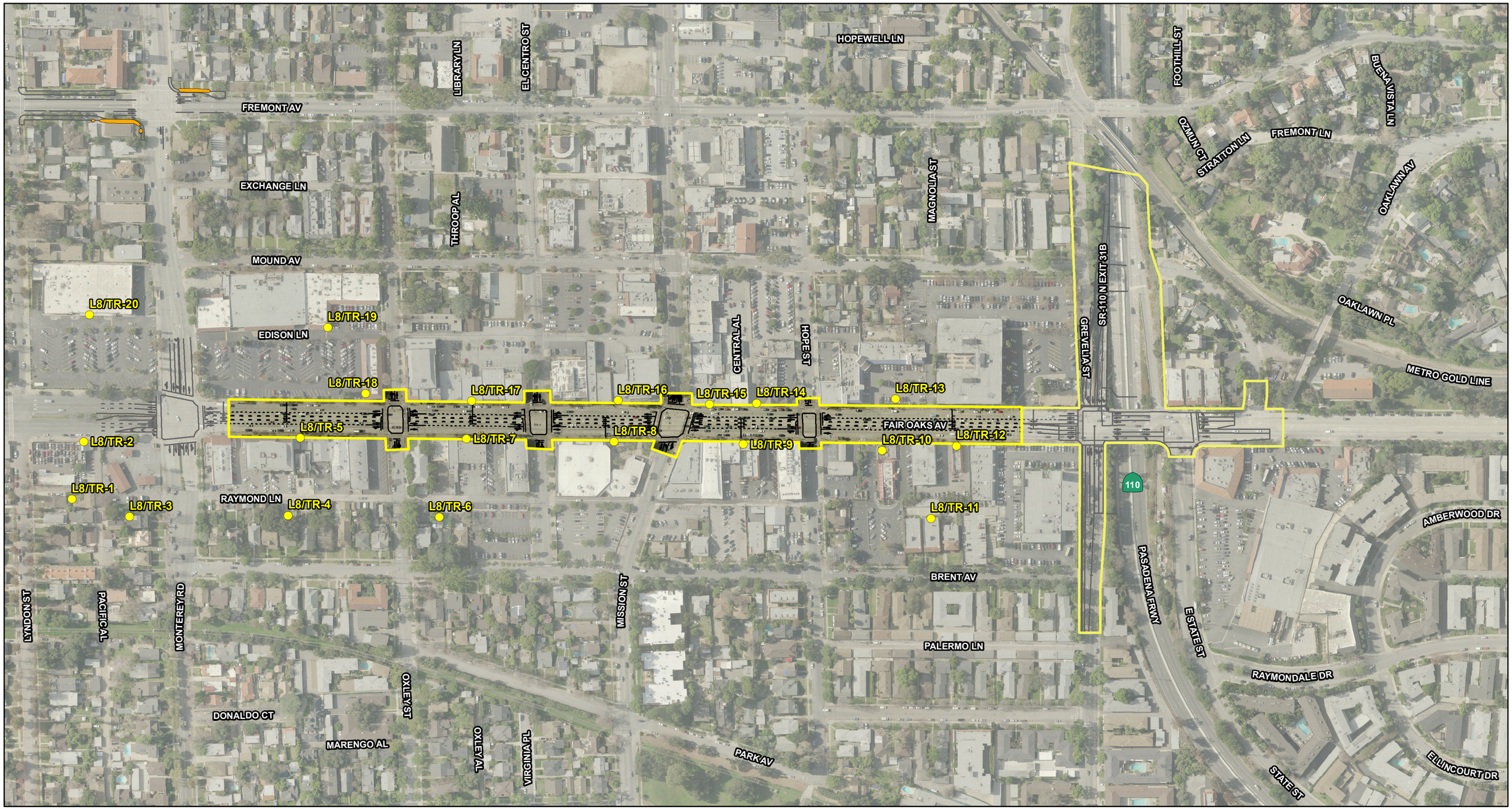
FIGURE 7-1
Page 5 of 9

SR 710 North Study

Modeled Noise Barriers for the TSM/TDM Alternative – L-5

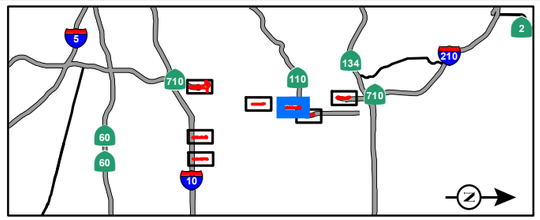
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 7-1
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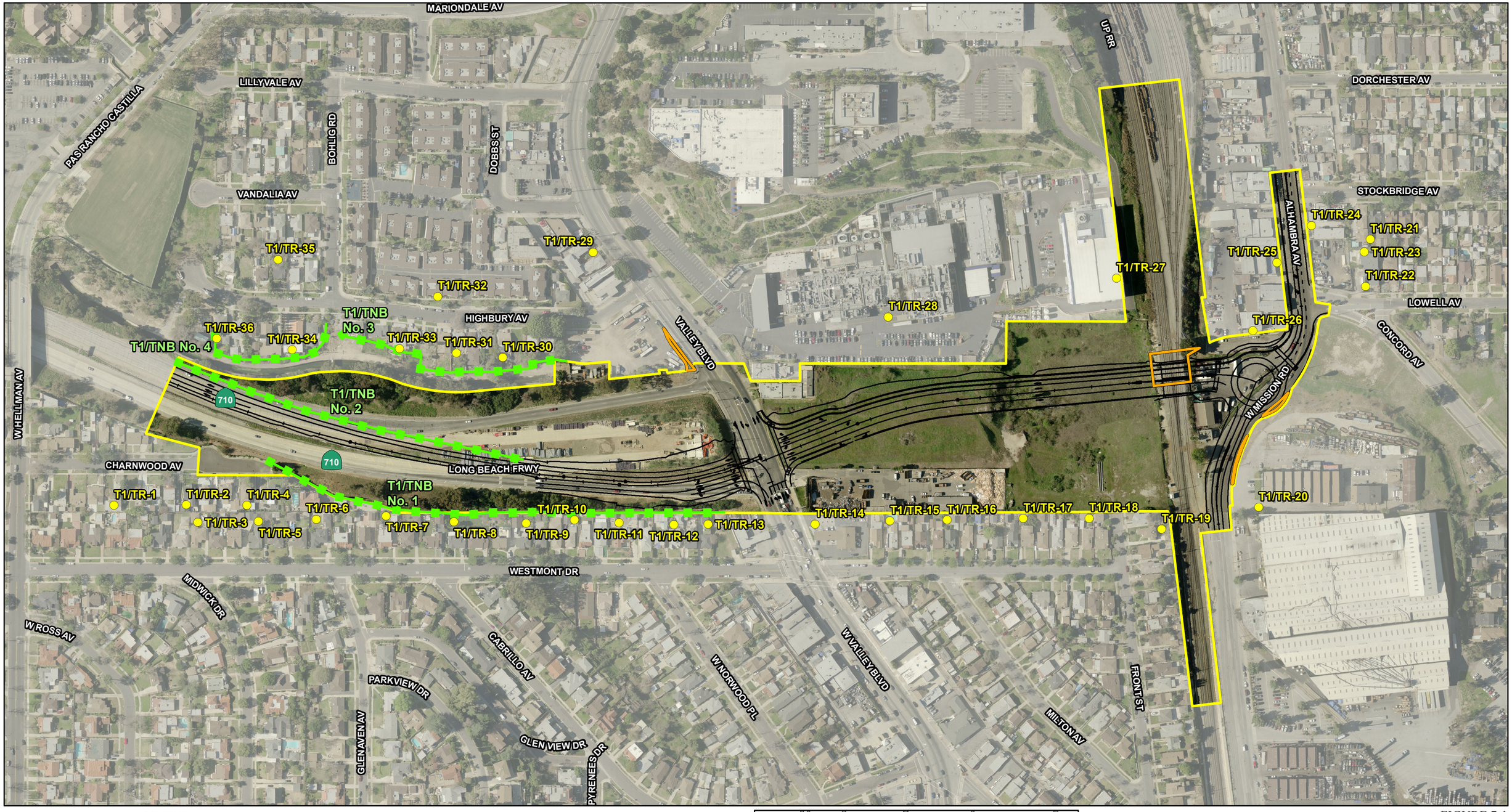
SR 710 North Study

Modeled Noise Barriers for the TSM/TDM Alternative – L-8/T-2

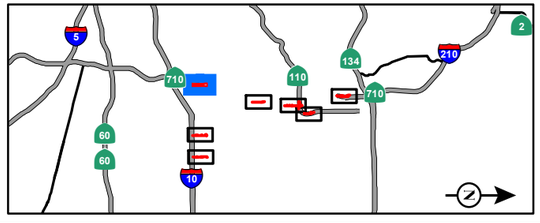
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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FIGURE 7-1
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SR 710 North Study

Modeled Noise Barriers for the TSM/TDM Alternative – T-1

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

BRENT AV
PALERMO LN
PARK AV
GREVELIA ST
FOOTHILL ST
STRATFORD AV
CLARK PL
STRATFORD LN
MILAN AV
MILL RD
LAS FLORES DR
AMBERWOOD DR
RAYMONDALE DR
ELLINCOURT DR
MOCKINGBIRD LN
CEDARCREST AV
RAYMOND HILL RD
HARDISON PL
HARDISON AL
S MARENGO AV
MARGUERITA LN
S EUCLID AV
ALLENDALE RD
WALLIS ST
E GLENARM ST
OHIO ST
E STATE ST
METRO GOLD LINE
S RAYMOND AV
BROADWAY
S ARROYO PKWY
SR-110 S EXIT 31B
STATE ST
PASADENA FRWY
GARFIELD AV
110
T2/TR-1
T2/TR-2
T2/TR-3
T2/TR-4
T2/TR-5
T2/TR-6
T2/TR-7
T2/TR-8
T2/TR-9
T2/TR-10
T2/TR-11
T2/TR-12
T2/TR-13
T2/TR-14
T2/TR-15
T2/TNB No. 1
T2/TNB No. 2

LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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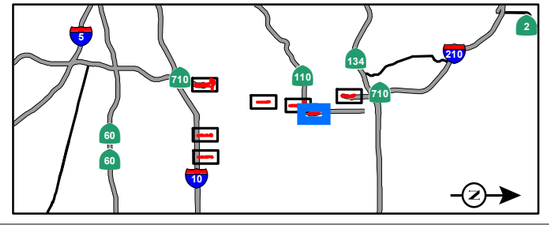

FIGURE 7-1
Page 8 of 9

SR 710 North Study

Modeled Noise Barriers for the TSM/TDM Alternative – T-2

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
- Proposed Right-of-Way
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); AECOM (2013); CH2M Hill (2014)

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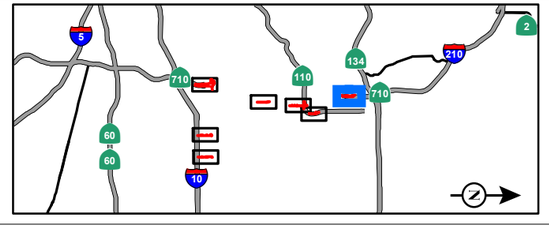
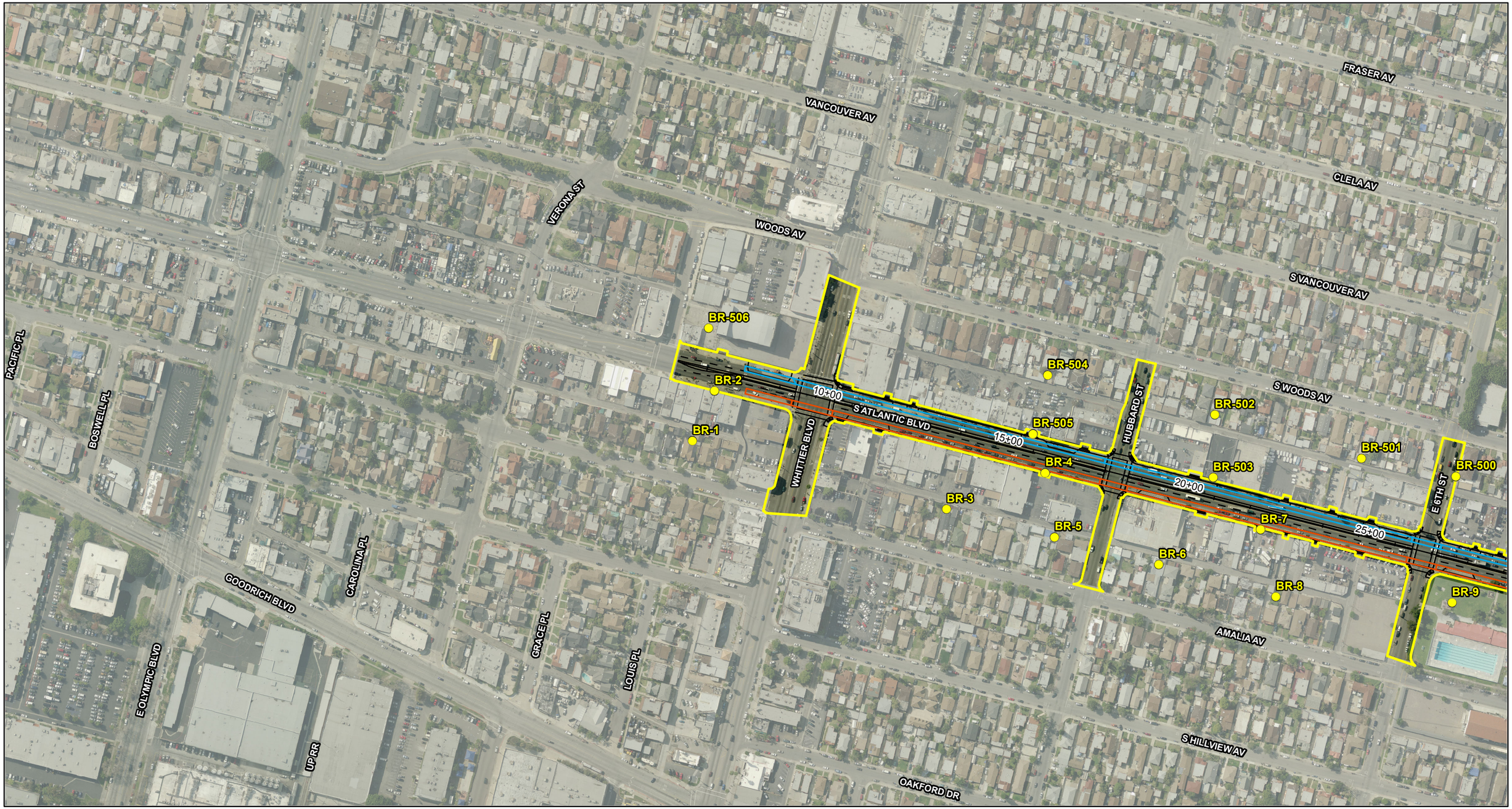


FIGURE 7-1
Page 9 of 9

SR 710 North Study

Modeled Noise Barriers for the TSM/TDM Alternative – T-3

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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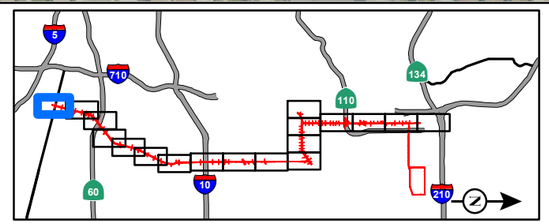

FIGURE 7-2
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SR 710 North Study

Modeled Noise Barriers for the BRT Alternative

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

FRASER AV
S LA VERNE AV
CLELA AV
S VANCOUVER AV
S WOODS AV
ESCUELA ST
E 3RD ST
GLEASON ST
TELFORD ST
E 6TH ST
HASTING ST
EAGLE ST
E 4TH ST
REPETTO ST
AMALIA AV
S HILLVIEW AV
OAKFORD DR
VIA CORONA
VIA CAMPO
E BEVERLY BLVD
POMONA BLVD
S BLEAKWOOD AV
S ROSCOMMON AV
S WESTCOTT AV
S ATLANTIC BLVD
25+00
30+00
35+00
40+00
45+00
50+00
55+00
60+00
BR-501
BR-500
BR-498
BR-499
BR-497
BR-495
BR-9
BR-10
BR-494
BR-496
BR-492
BR-11
BR-12
BR-13
BR-493
BR-16
BR-491
BR-14
BR-15
BR-17
BR-18
BR-19
BR-20
BR-21
BR-490
BR-489
Ex-Bus 1 (14 feet)
SR-60 E EXIT 4

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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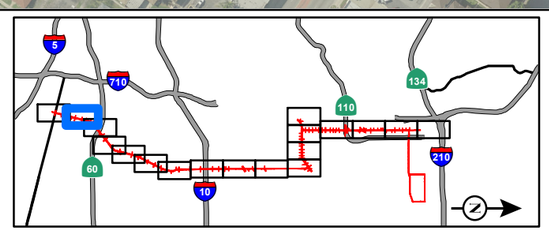

FIGURE 7-2
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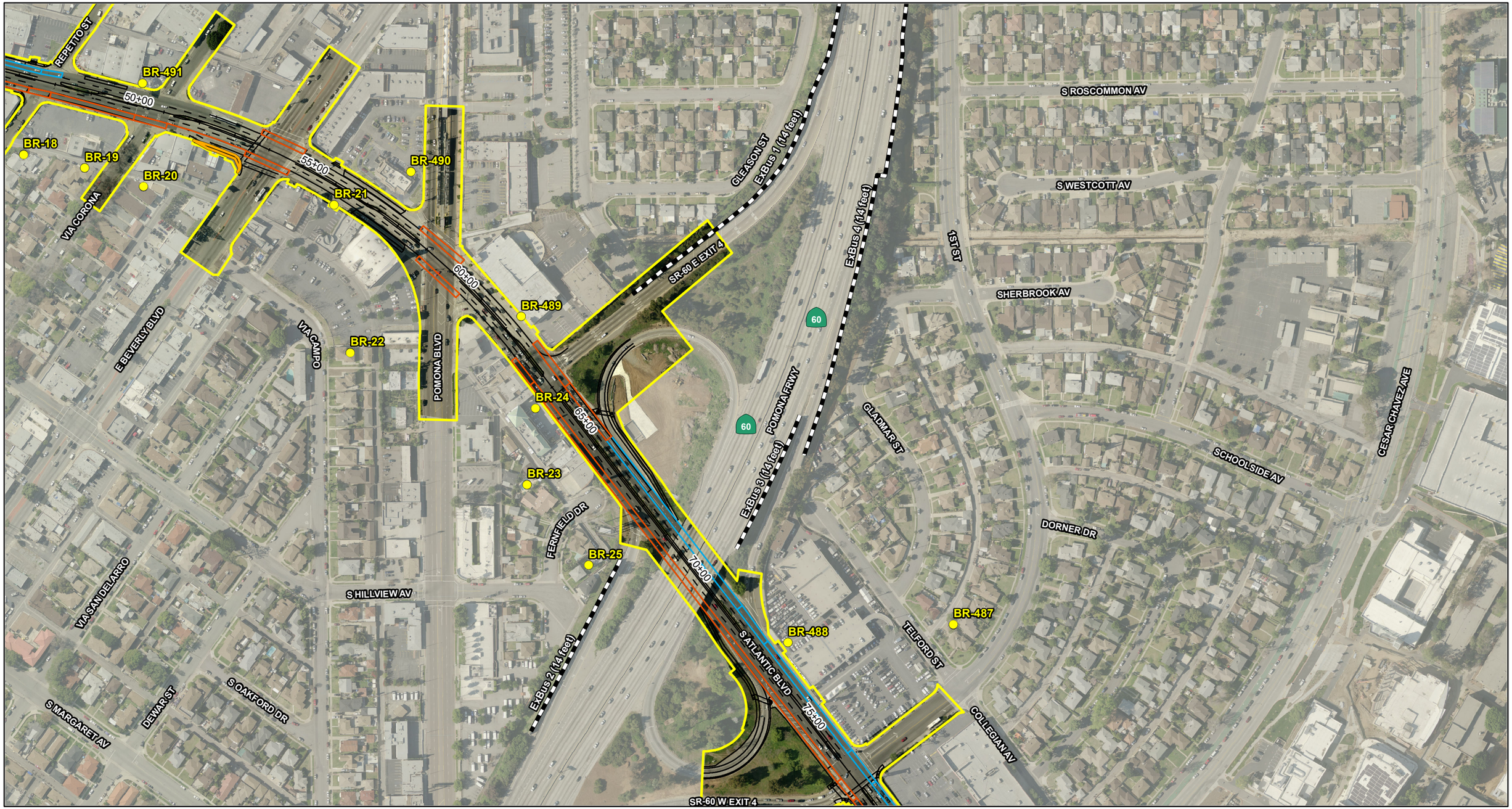
SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometries
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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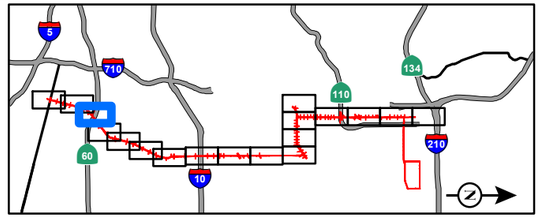

FIGURE 7-2
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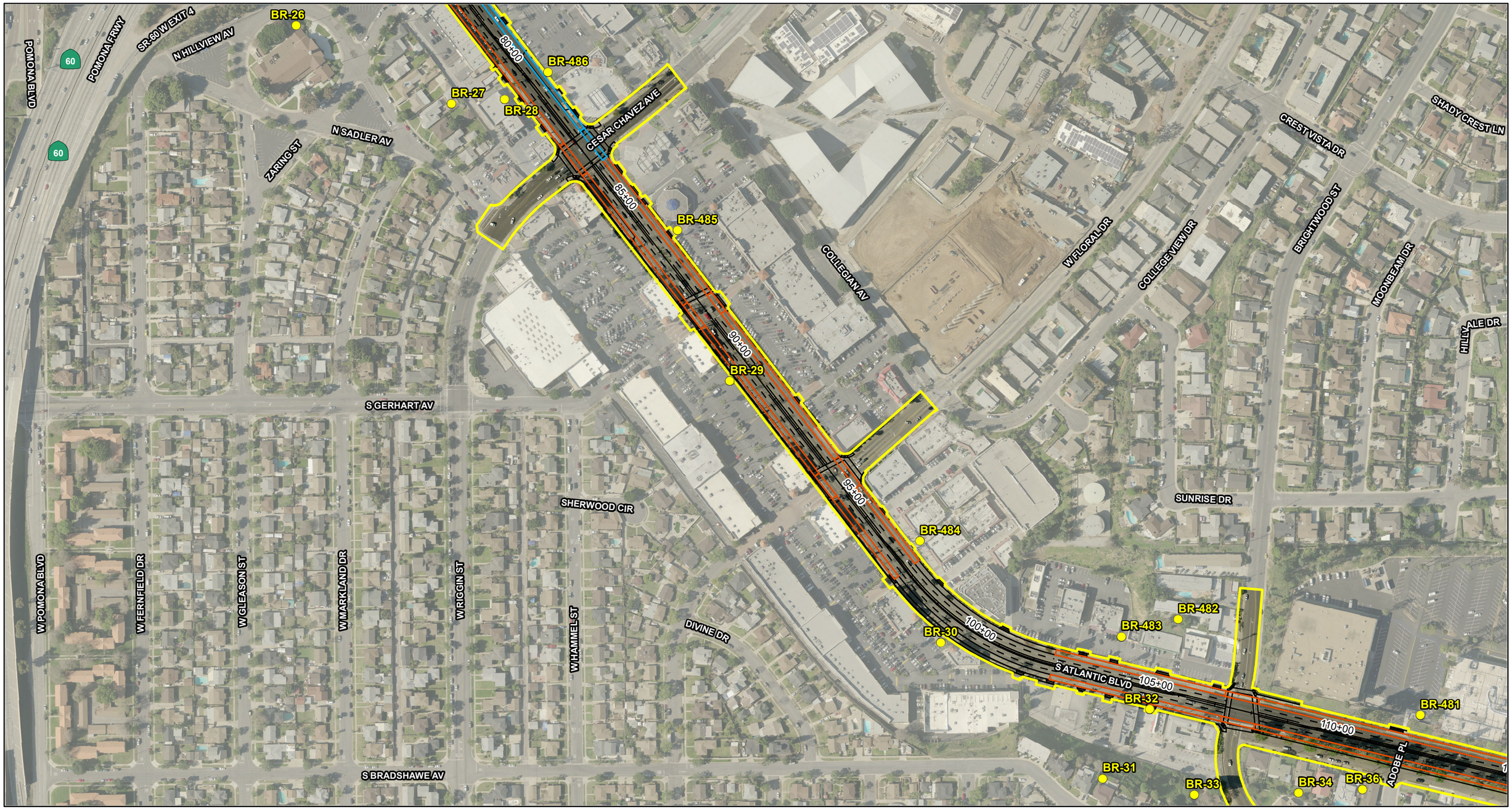
SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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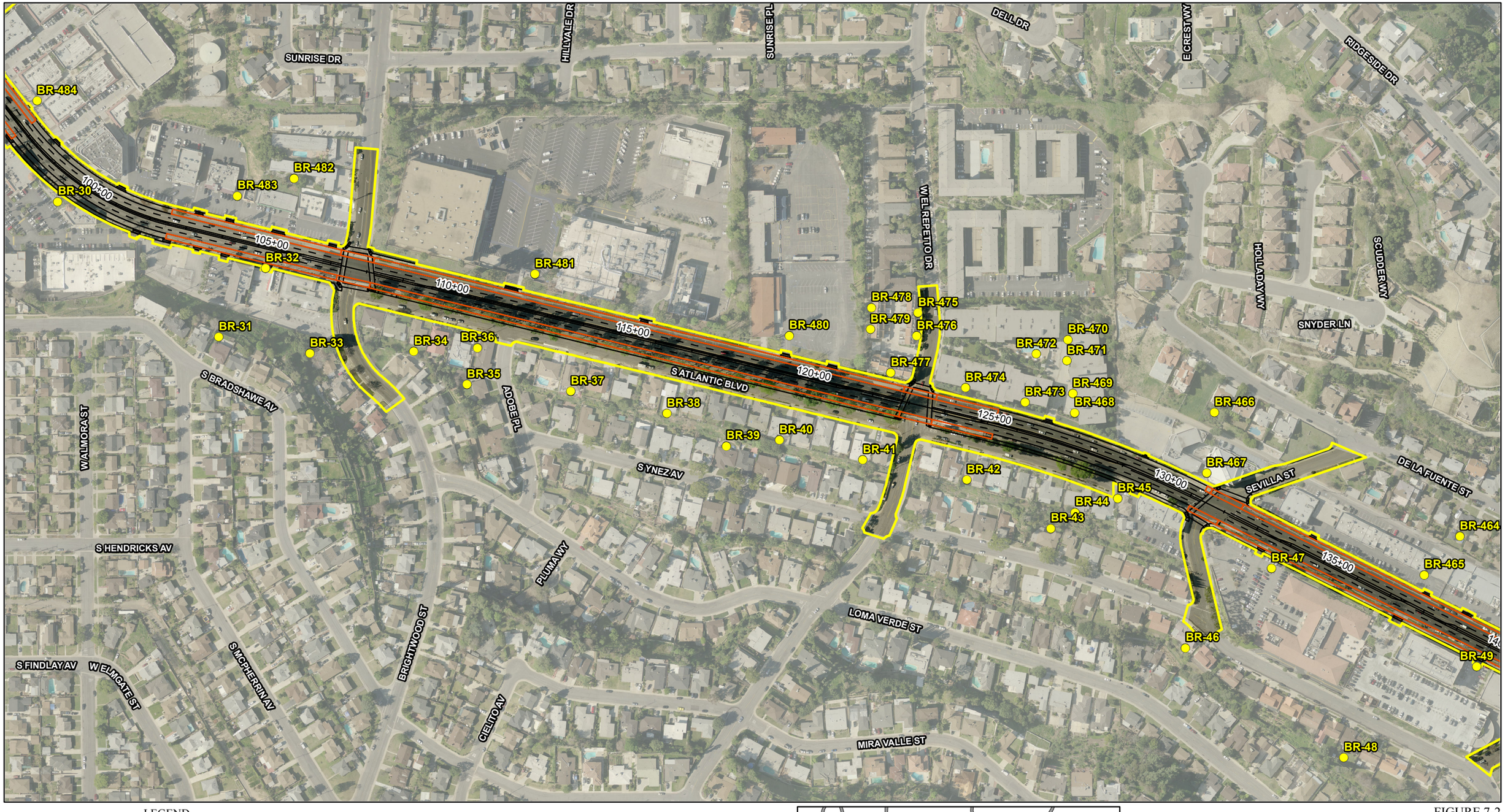
FIGURE 7-2

SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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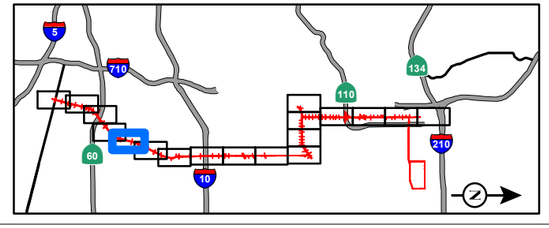

FIGURE 7-2
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SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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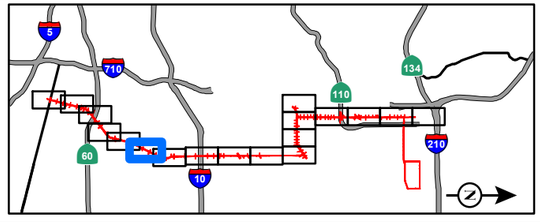

FIGURE 7-2
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SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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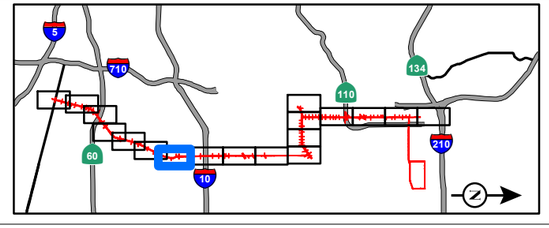

FIGURE 7-2
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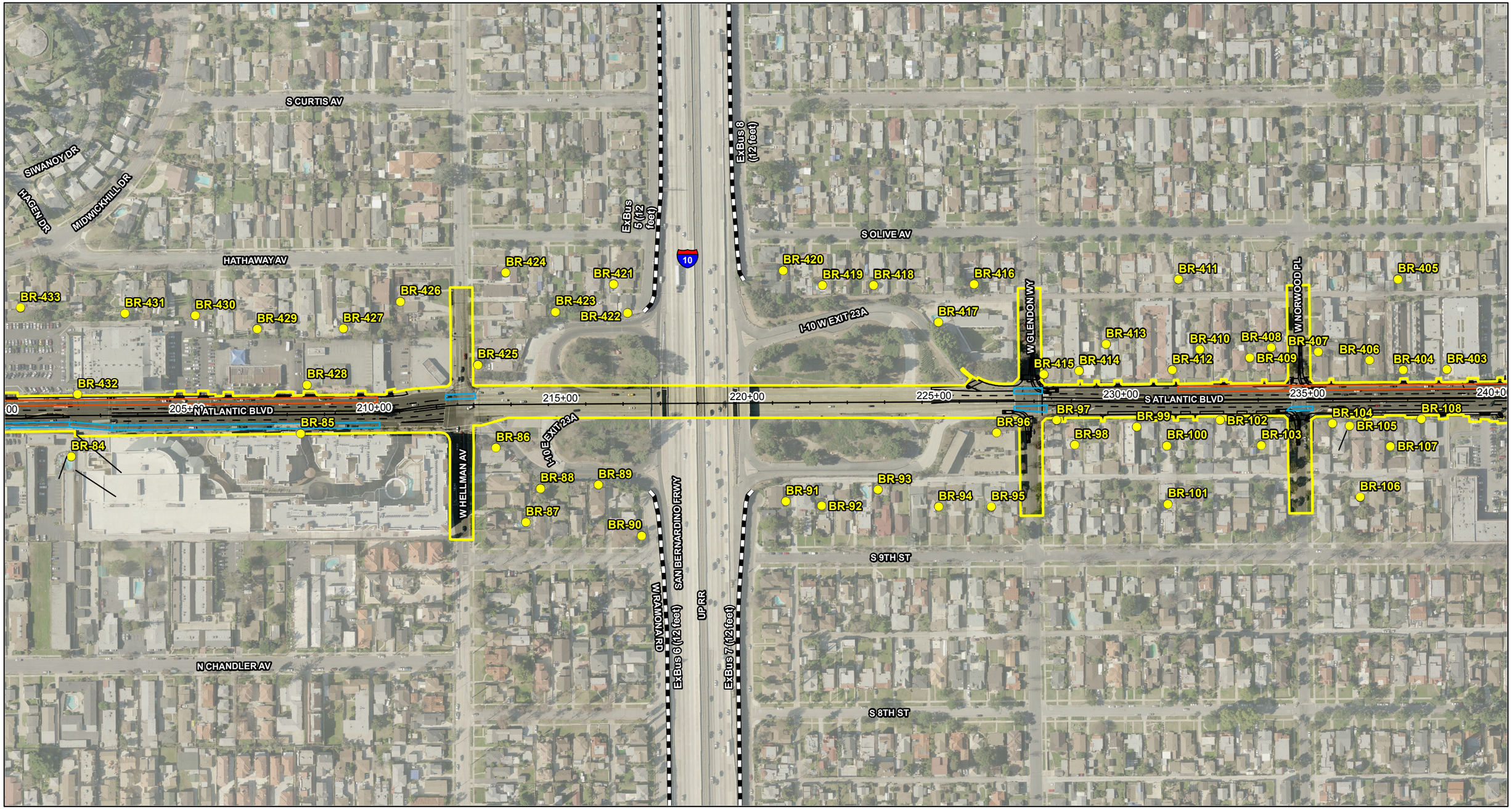
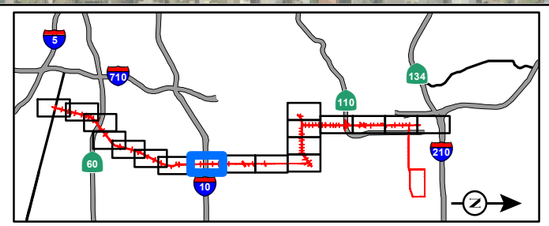
SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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FIGURE 7-2
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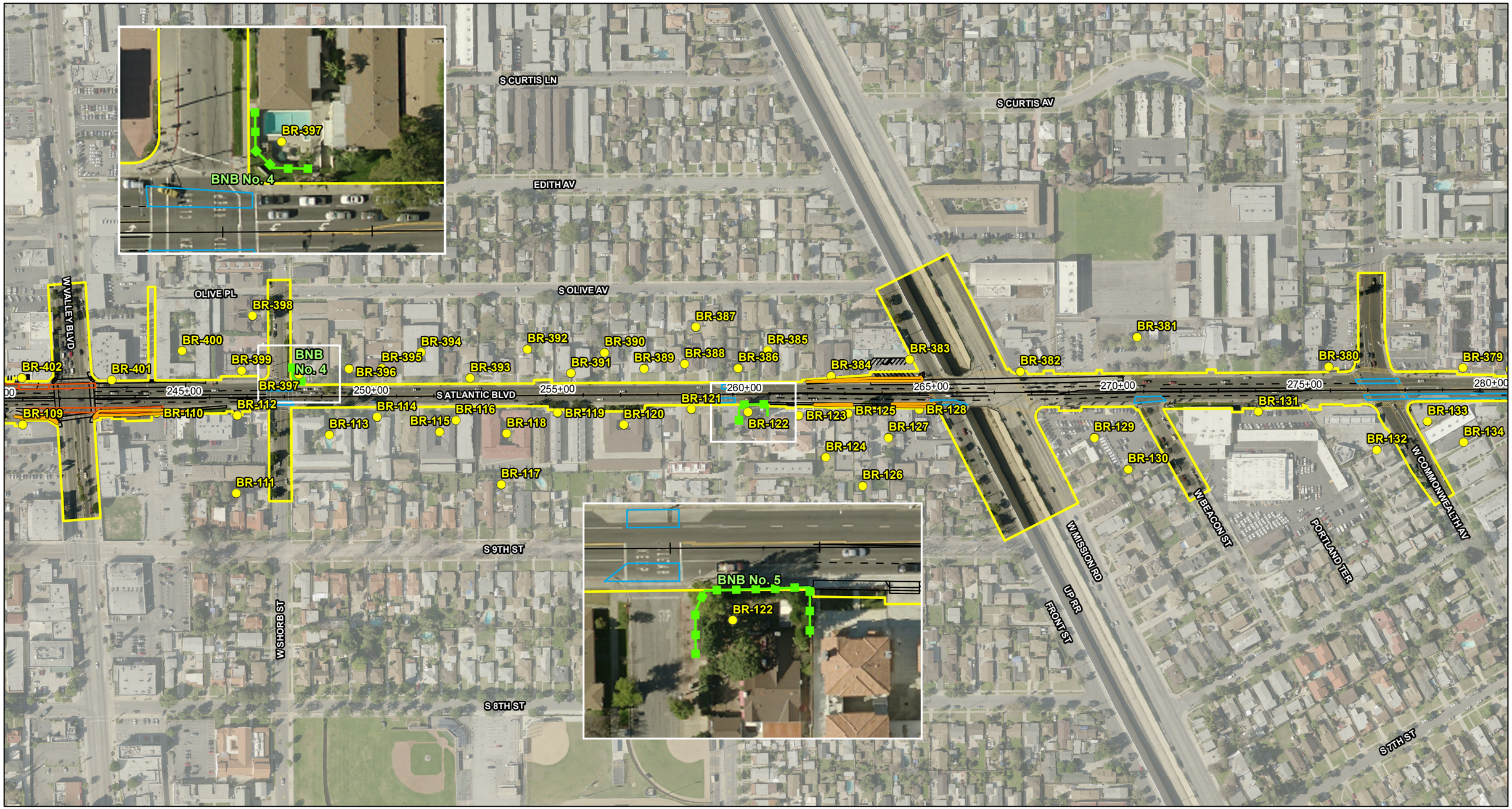
SR 710 North Study

Modeled Noise Barriers for the BRT Alternative

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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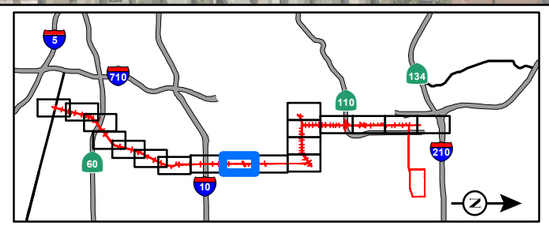

FIGURE 7-2
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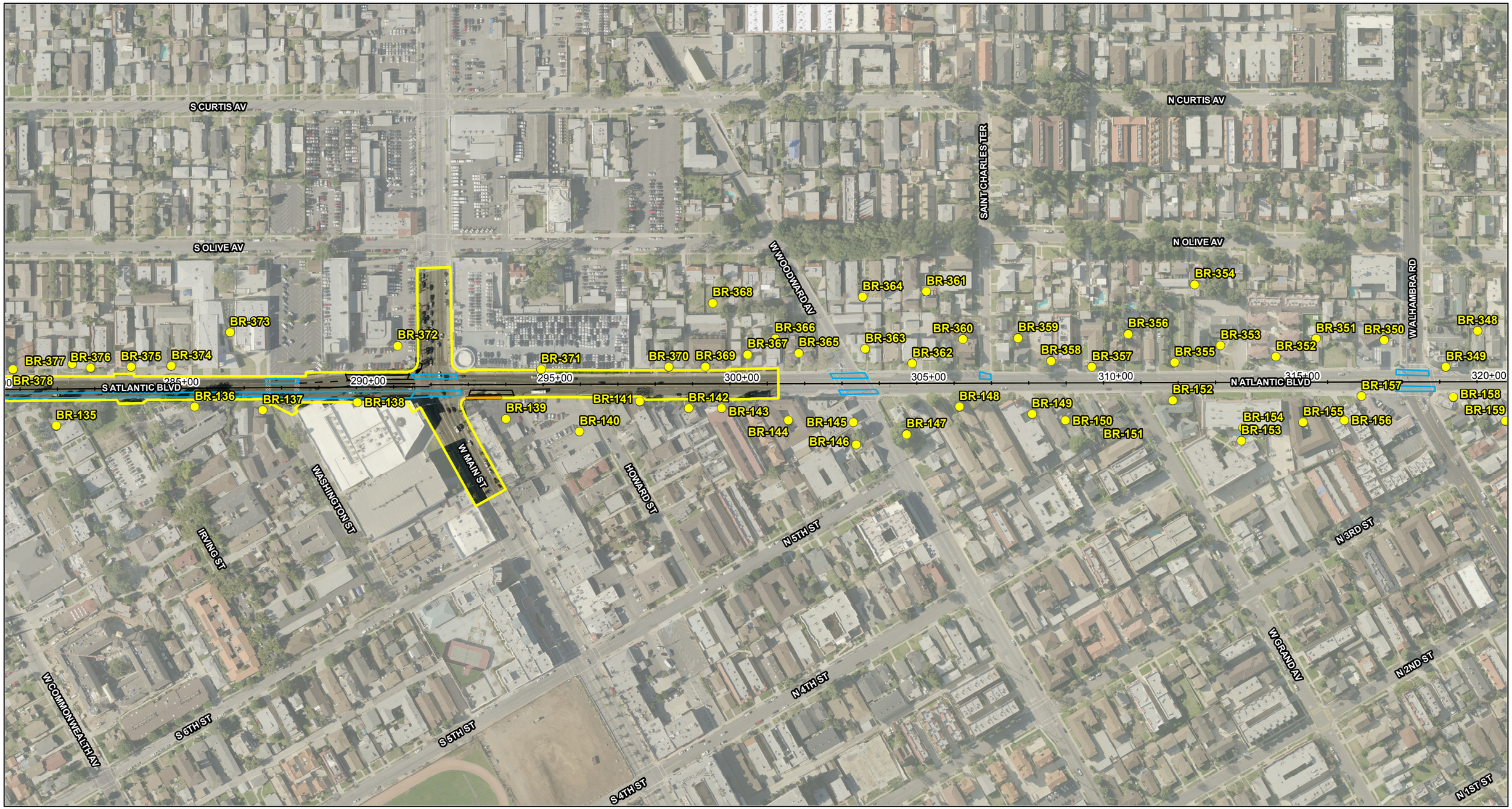
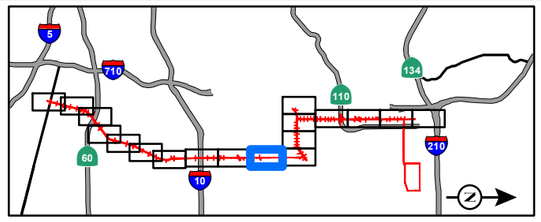
SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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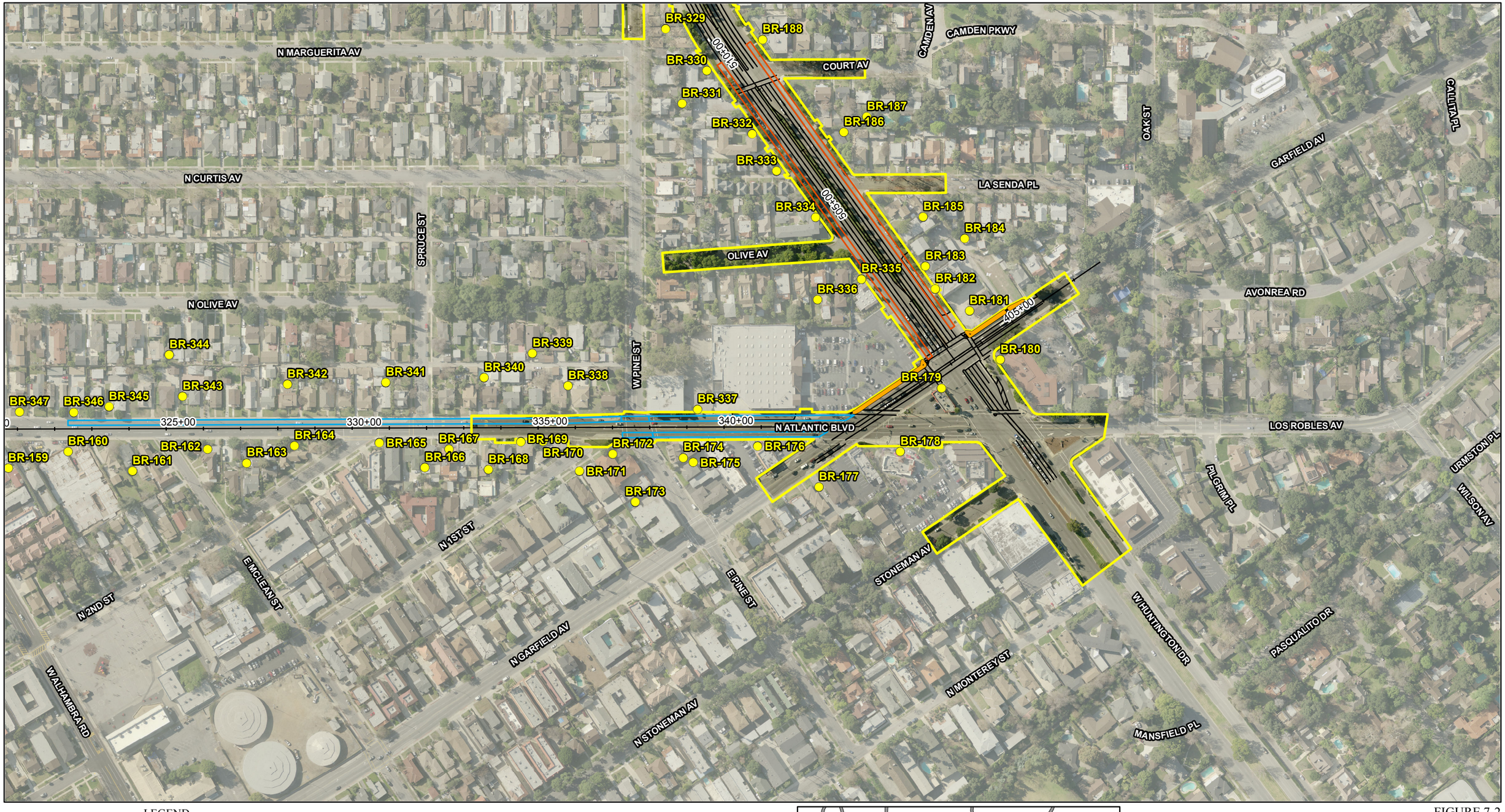
FIGURE 7-2

SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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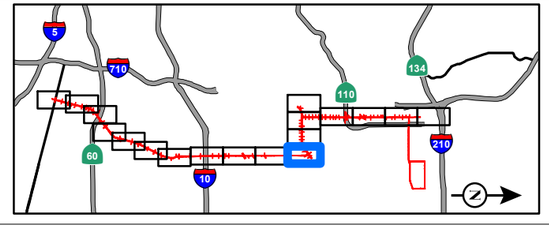

FIGURE 7-2
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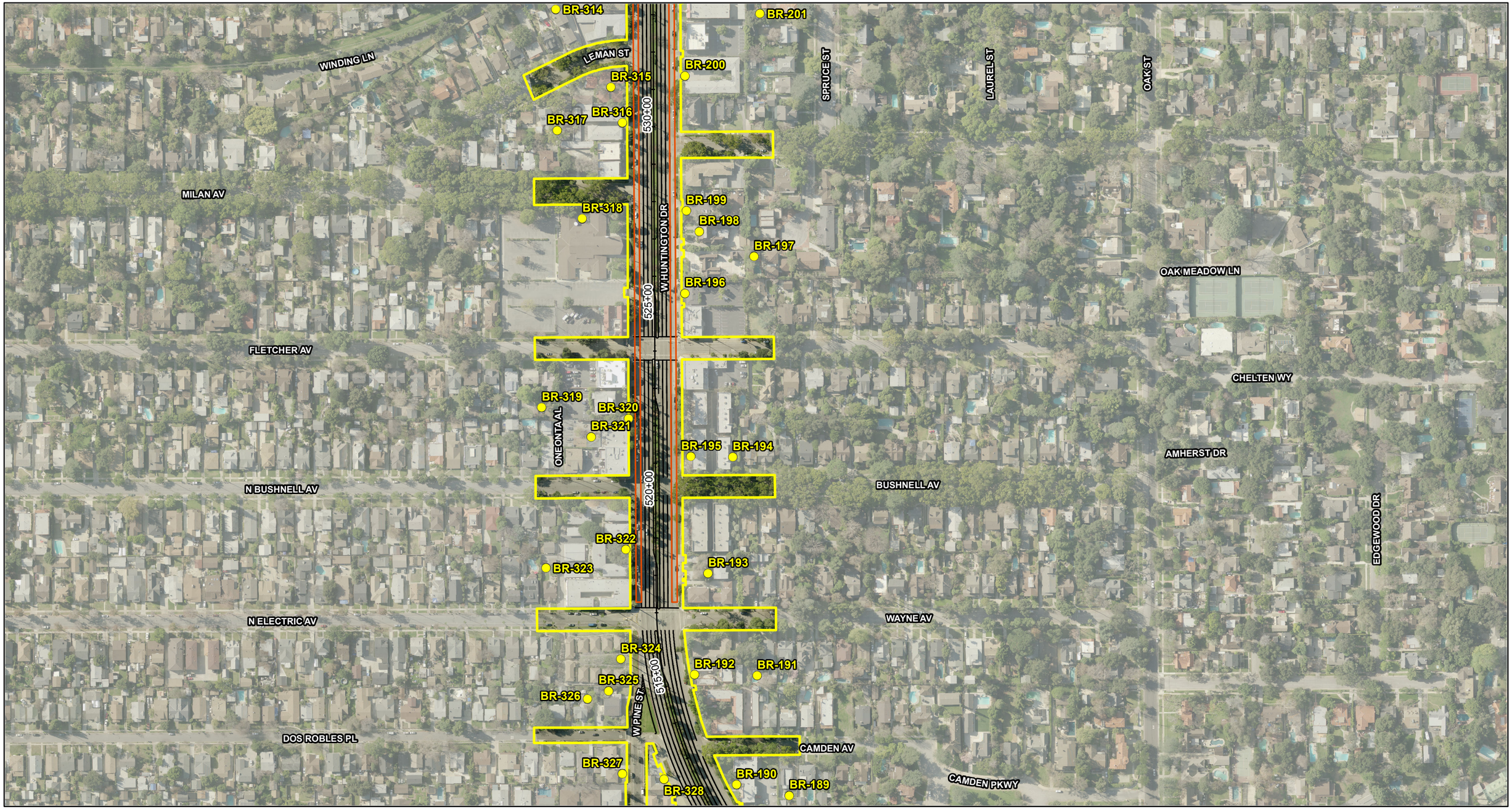
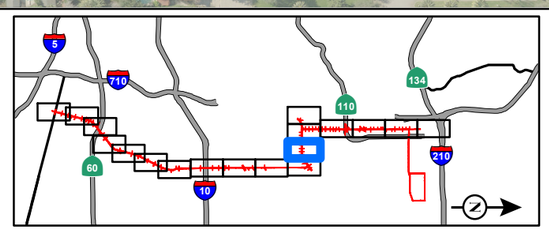
SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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FIGURE 7-2
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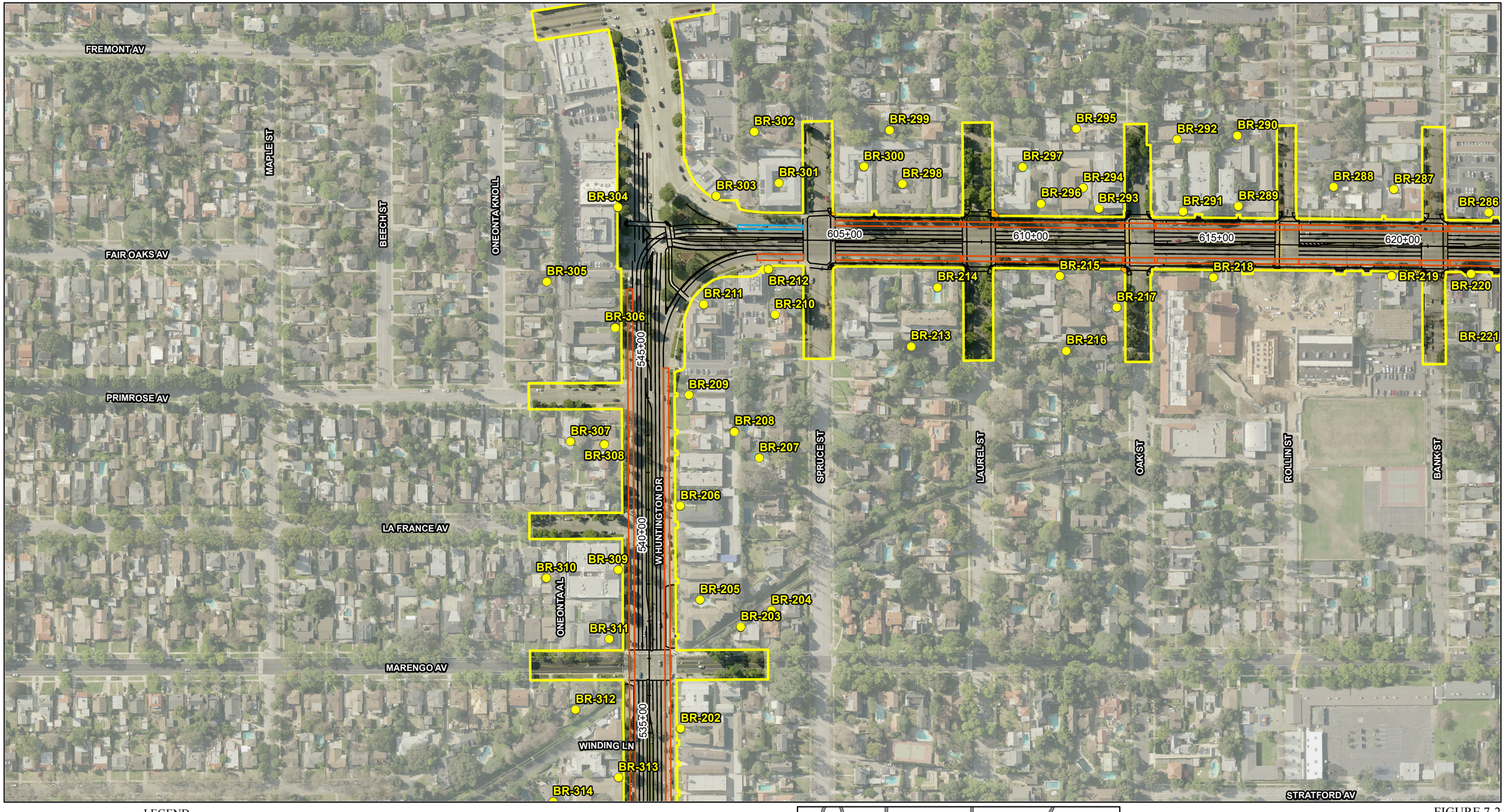
SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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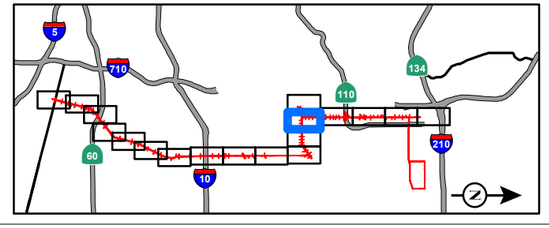

FIGURE 7-2
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SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

ALPHA AV
BERKSHIRE AV
VALLEY VIEW RD
GLEN PL
FLORES DE ORO
BANK ST
ROLLIN ST
SUMMIT DR
GILLETTE CRES
ONEONTA DR
HILL LN
CAMBRIDGE PL
BONITA DR
WOLFORD LN
BRAEWOOD CT
HUNT LN
MERIDIAN AV
MERIDIAN LN
MAPLE ST
DIAMOND AV
BEECH ST
W HUNTINGTON DR
PINE ST
SPRUCE ST
RAMONA AV
MAPLE WY
HUNTINGTON LN
EMPRESS AV
ELMPARK ST
OAK ST
CRESTLAKE AV
HOPEWELL LN
FREMONT AV
LAUREL ST
EXCHANGE LN

LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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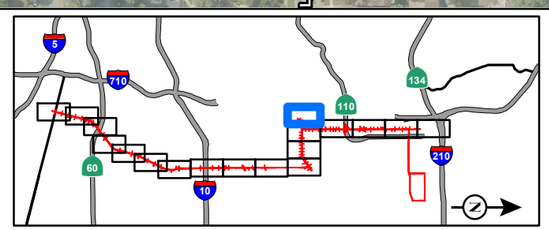
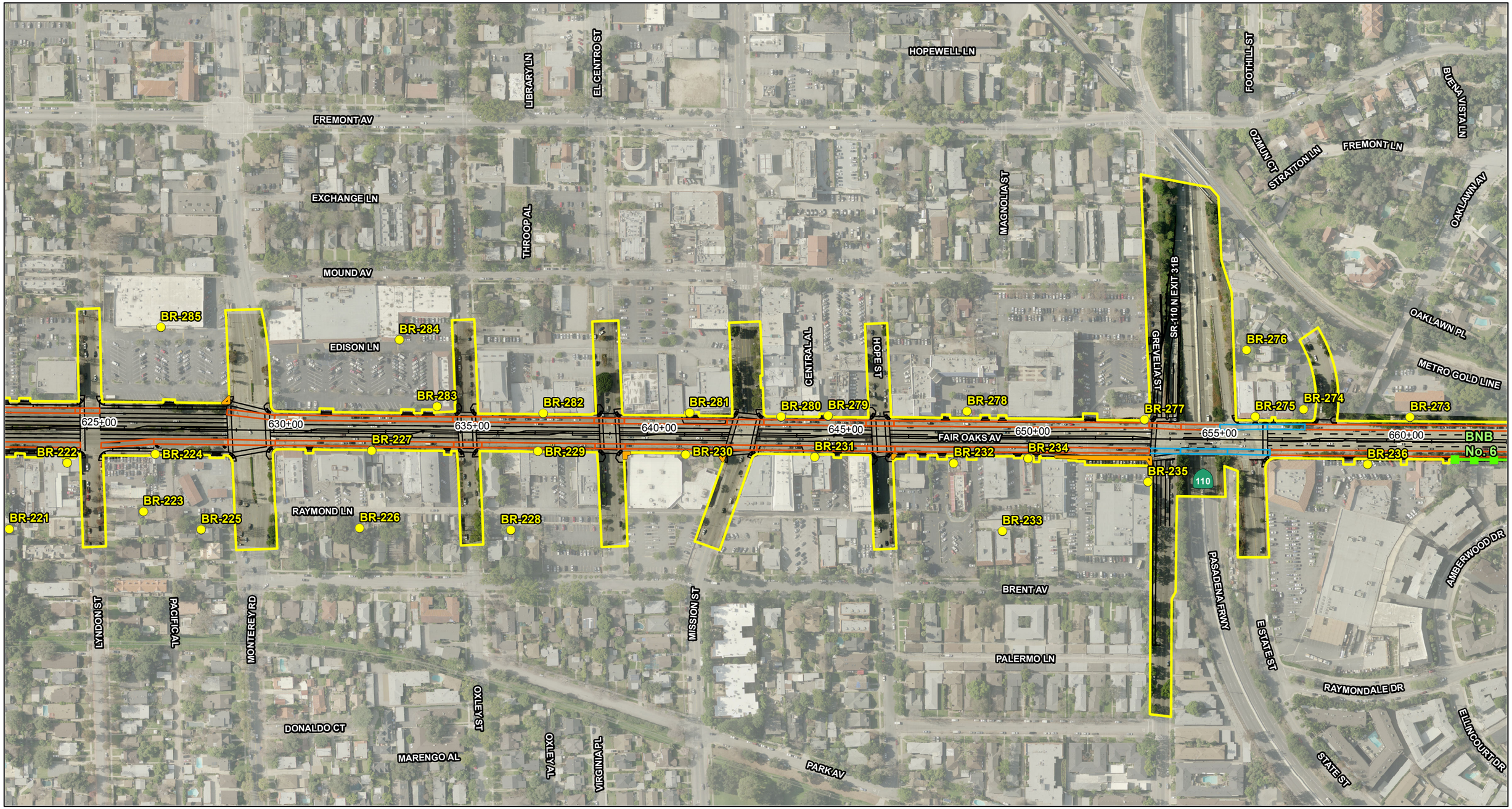


FIGURE 7-2

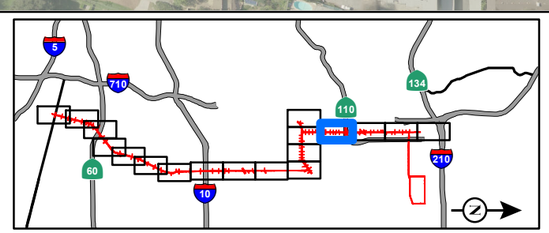
SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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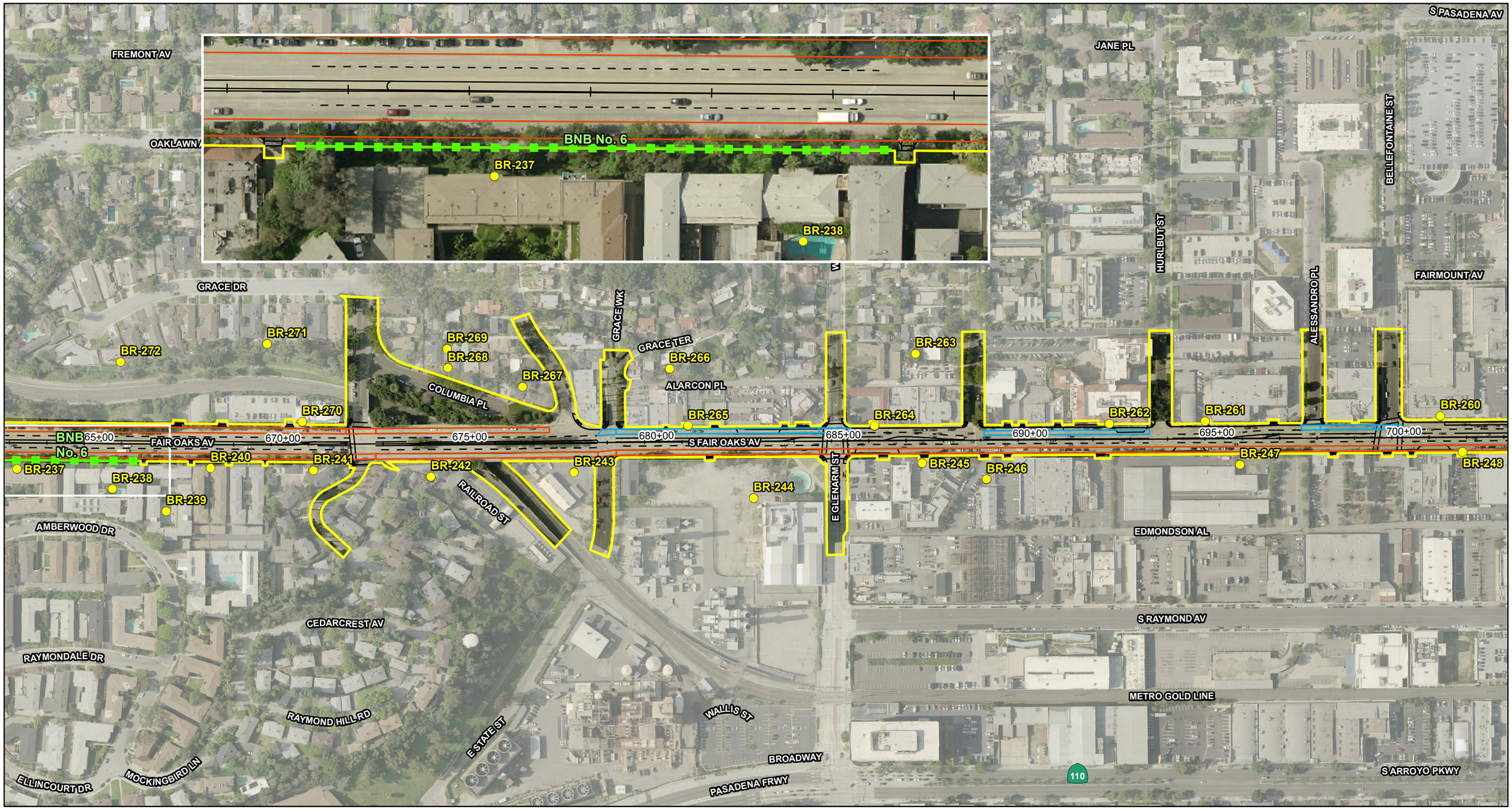
FIGURE 7-2
Page 15 of 18

SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometries
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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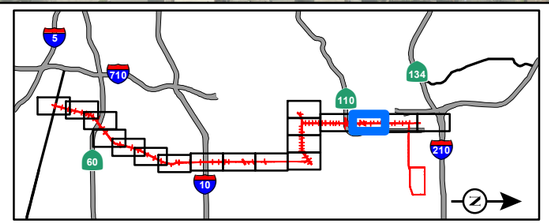

FIGURE 7-2
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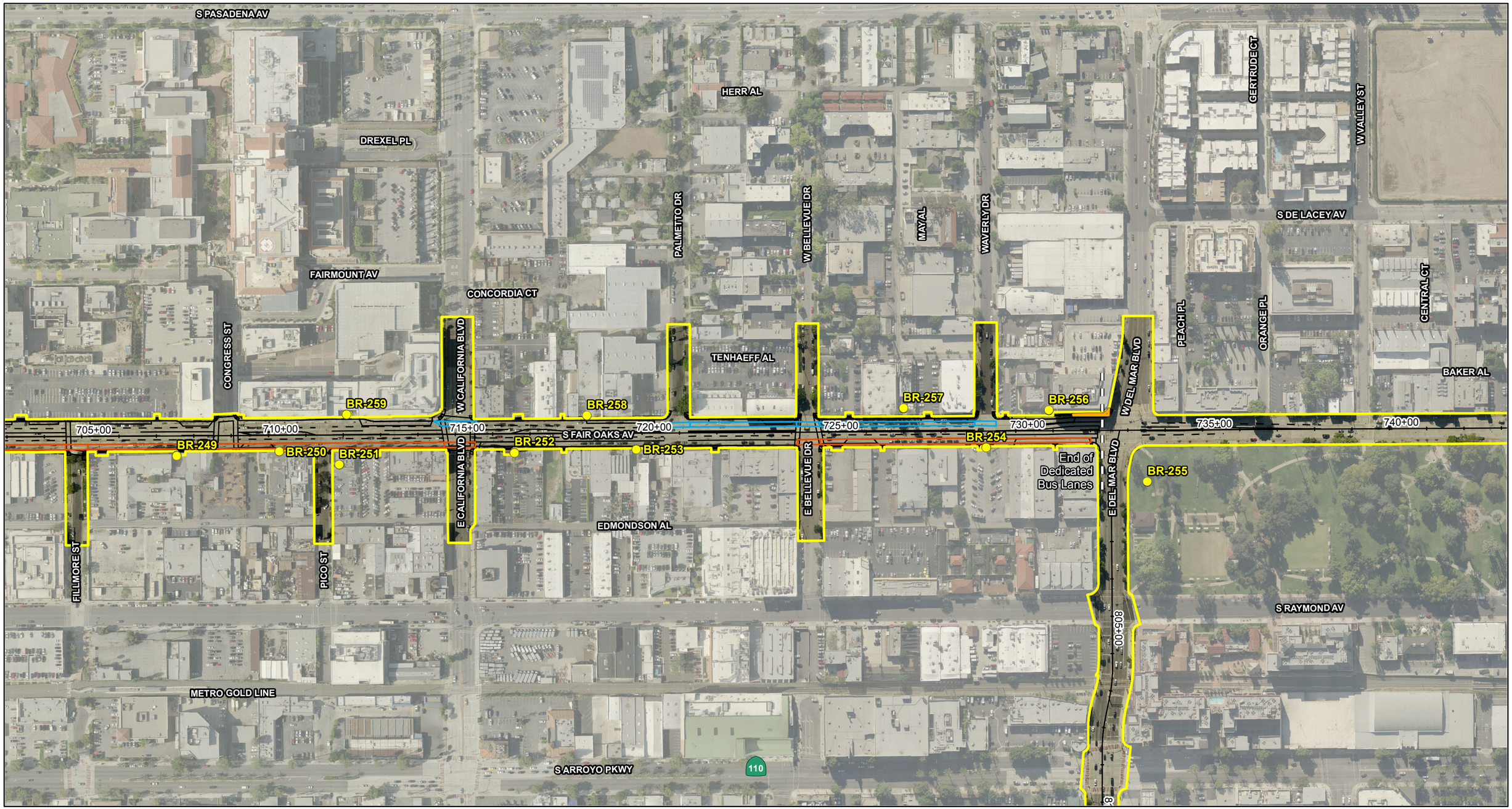
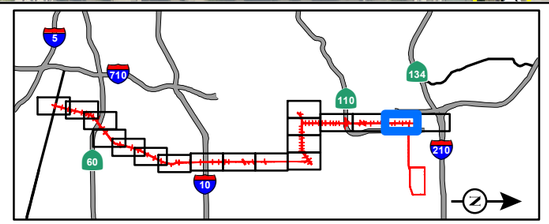
SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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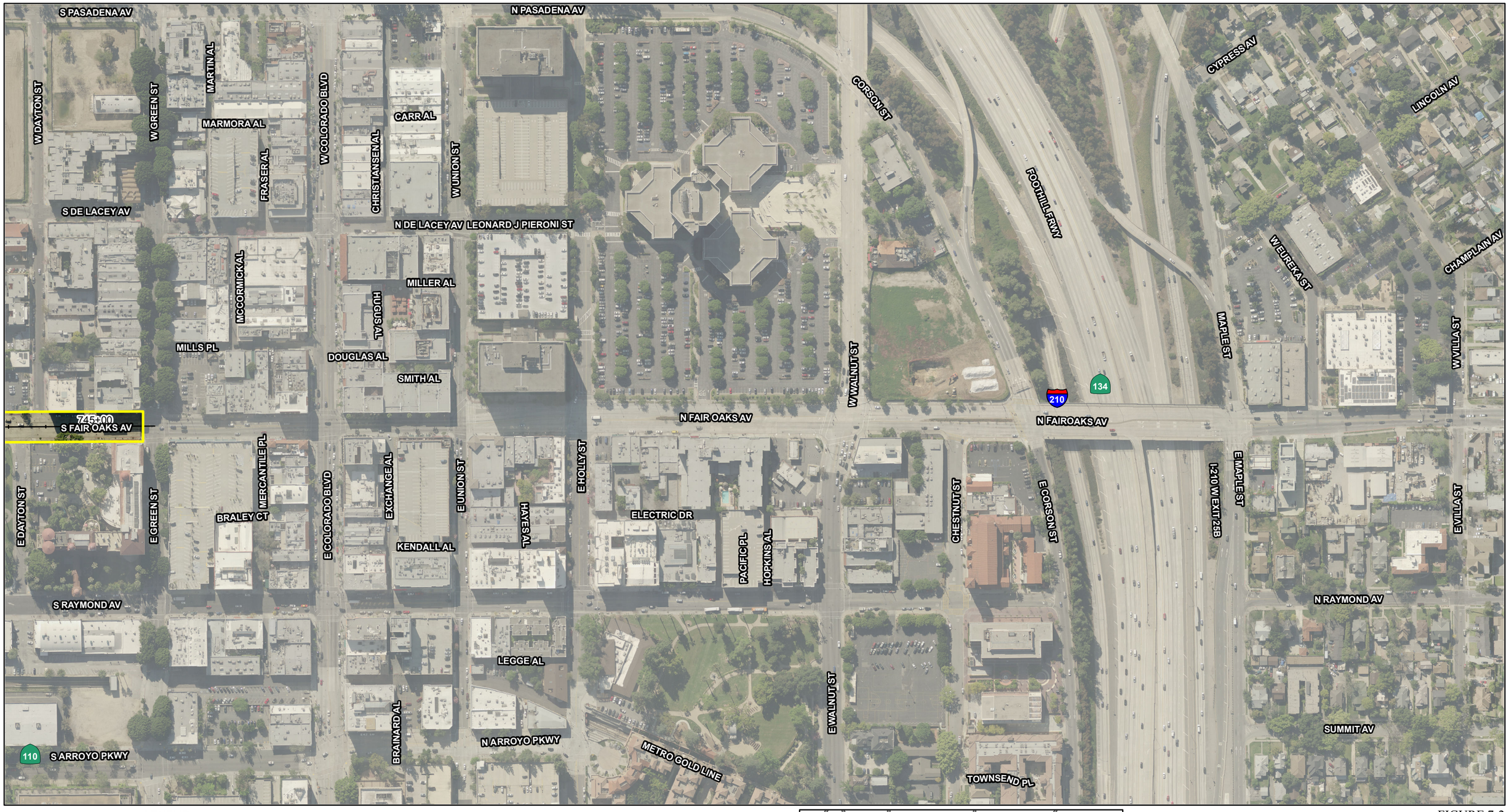
FIGURE 7-2

SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2013)

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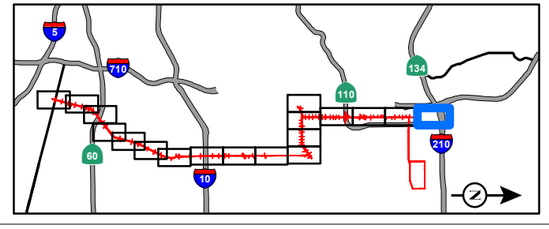

FIGURE 7-2
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SR 710 North Study
Modeled Noise Barriers for the BRT Alternative
07-LA-710 (SR 710)
EA 187900
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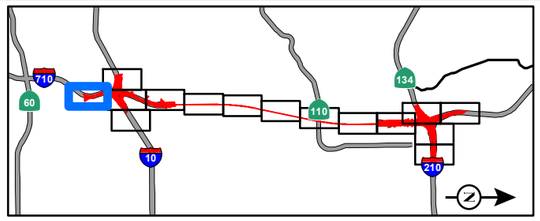
LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 7-3
Sheet 1 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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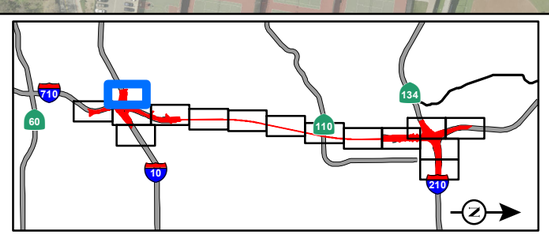
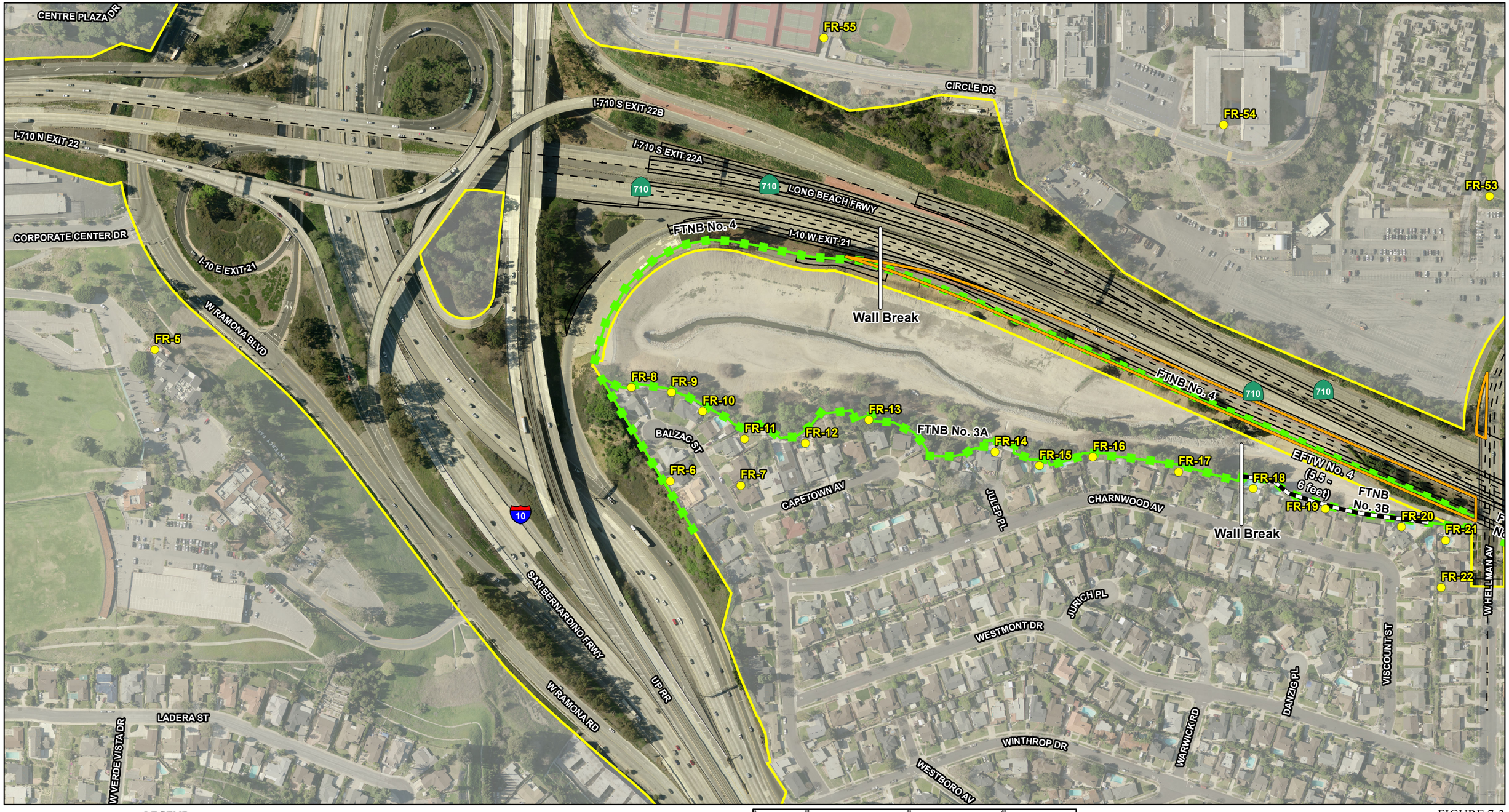


FIGURE 7-3
Sheet 2 of 15

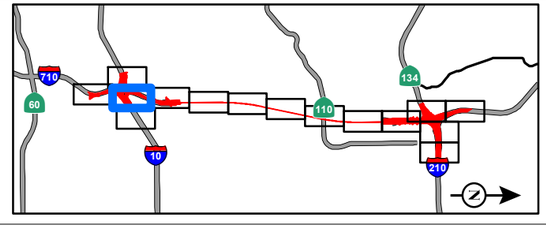
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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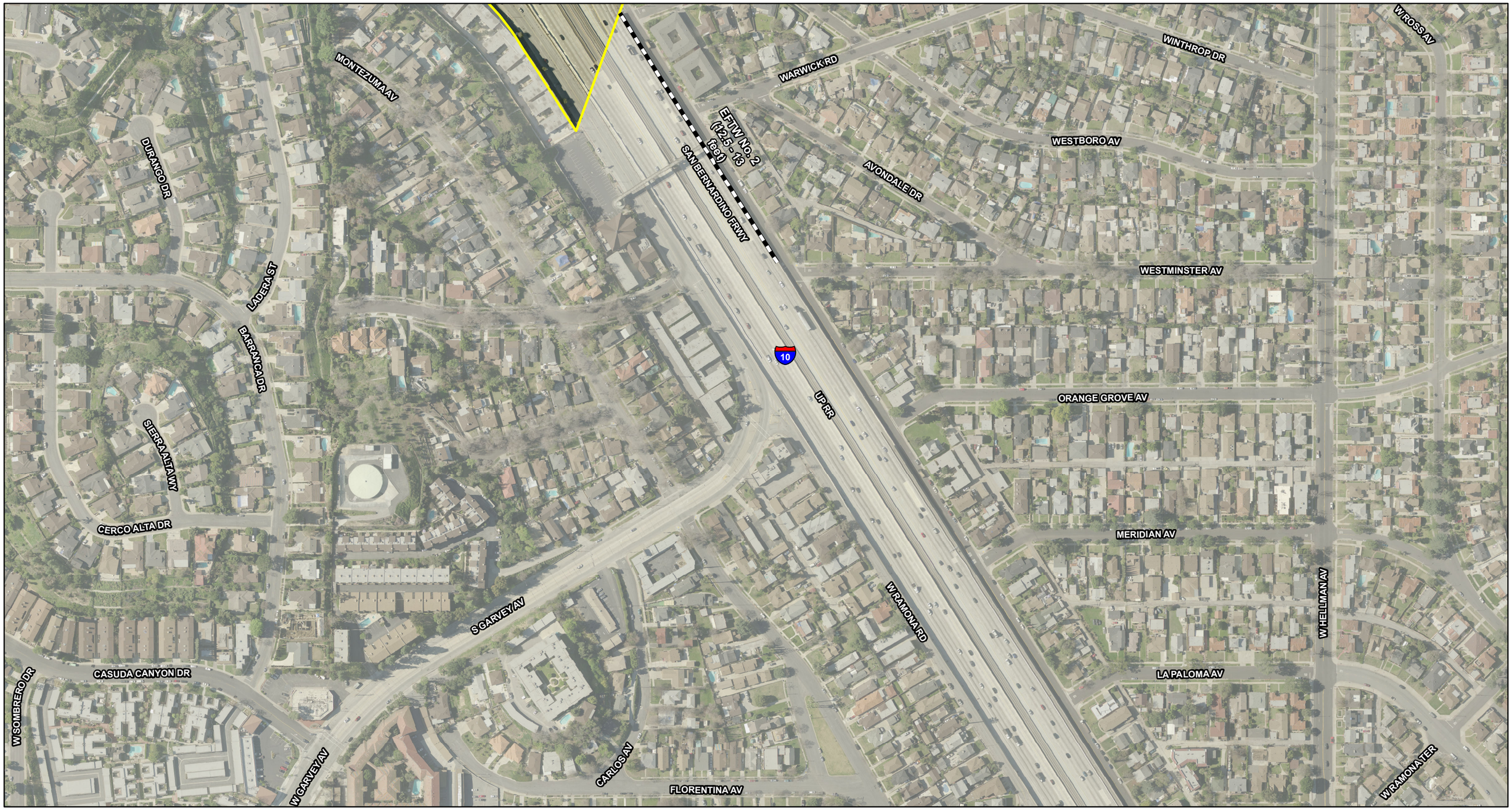
FIGURE 7-3
Sheet 3 of 15

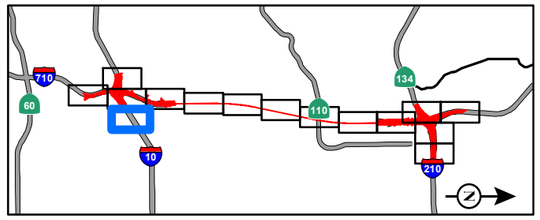
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_FWYTunnel_ProposedBarriers_SingleBore.mxd (10/28/2014)

FIGURE 7-3
Sheet 4 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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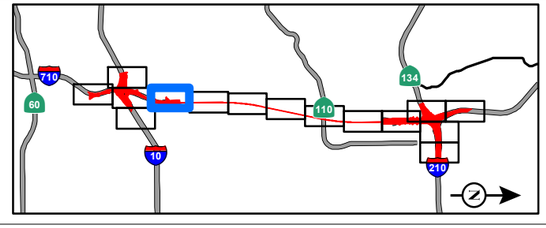
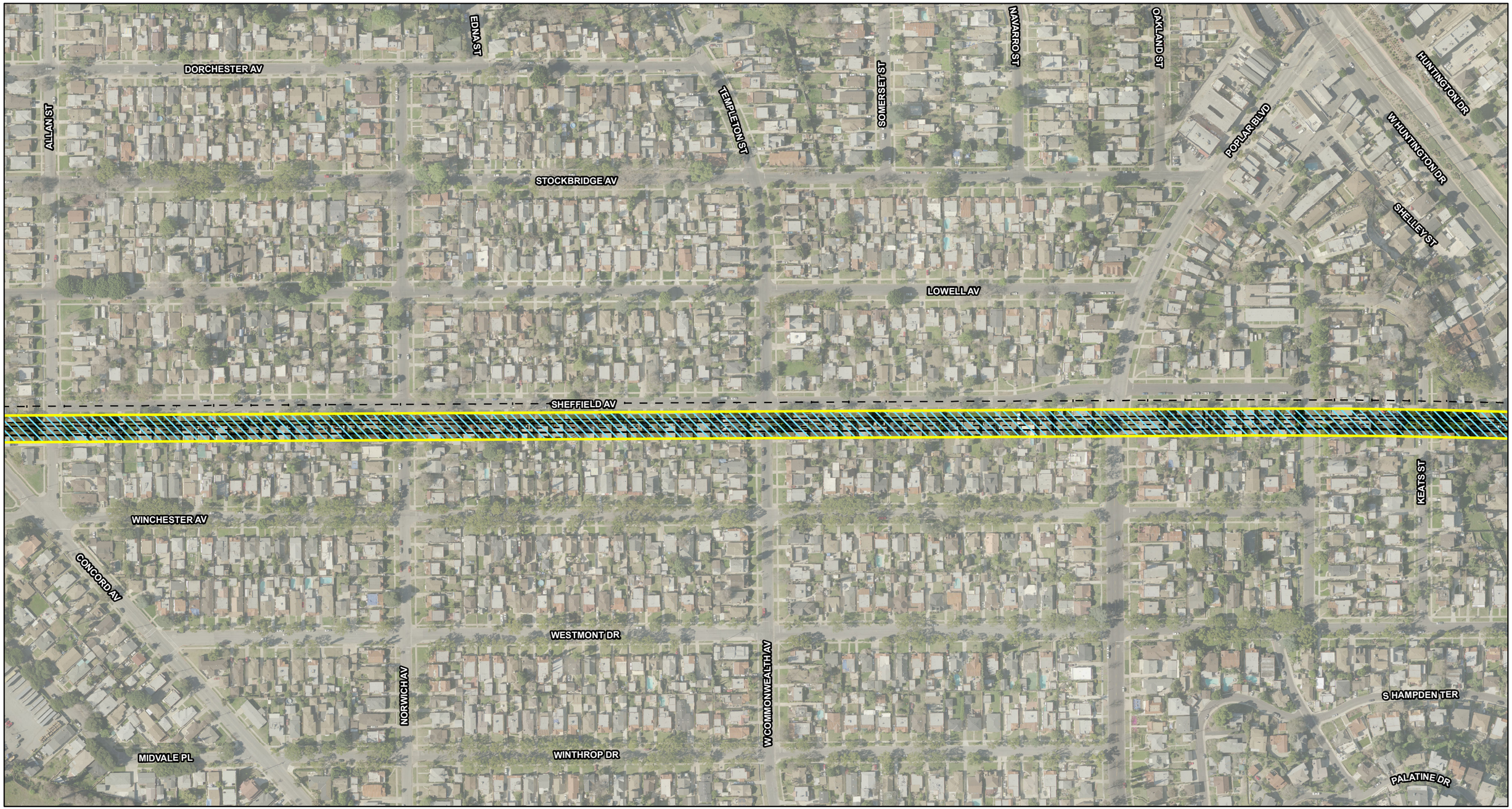


FIGURE 7-3
Sheet 5 of 15

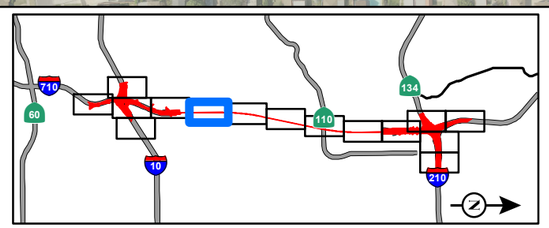
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

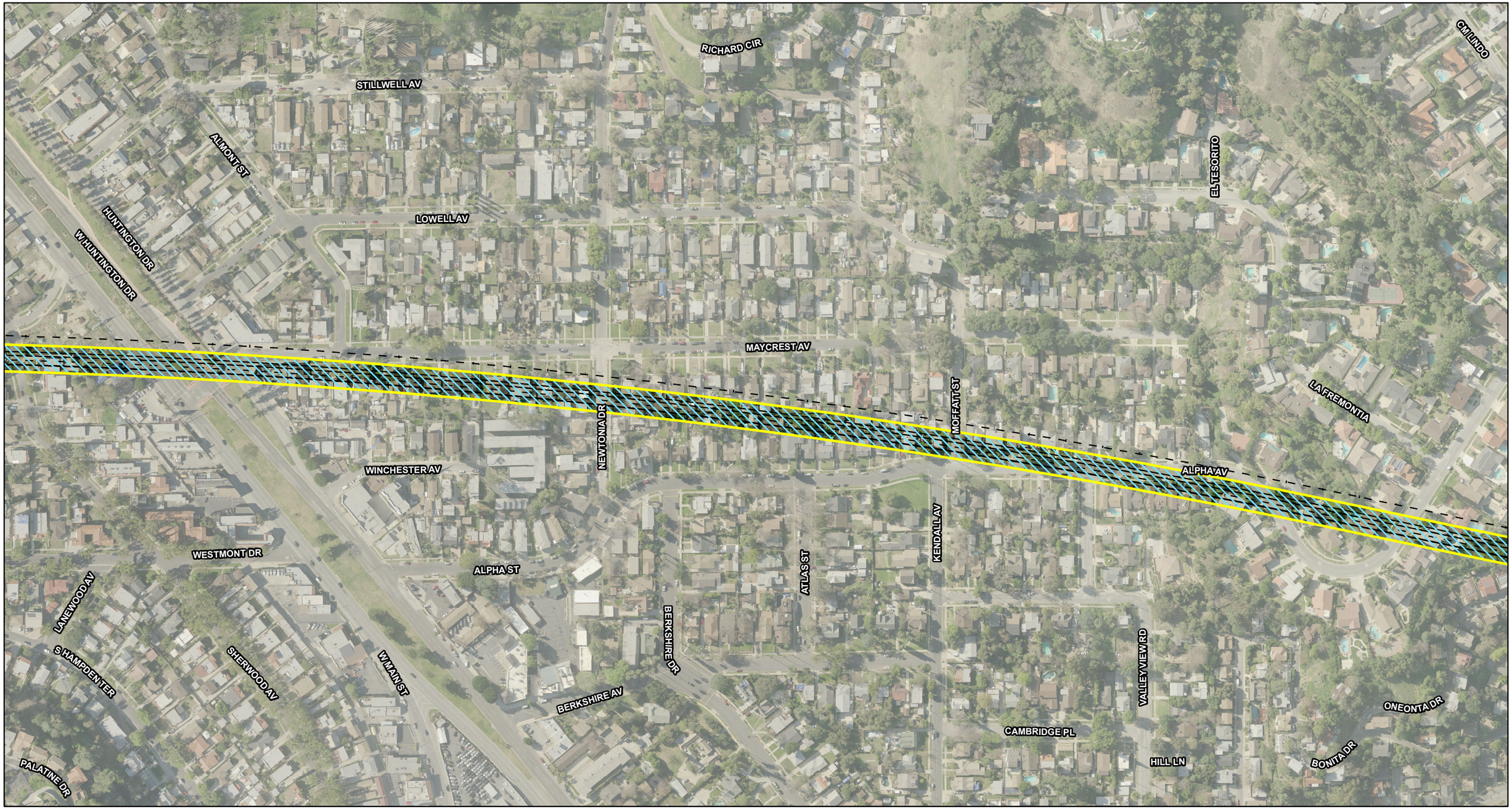


SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_FWYTunnel_ProposedBarriers_SingleBore.mxd (10/28/2014)

FIGURE 7-3
Sheet 6 of 15

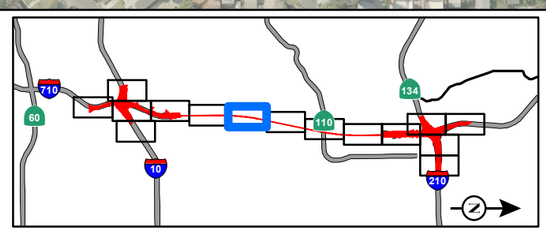
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

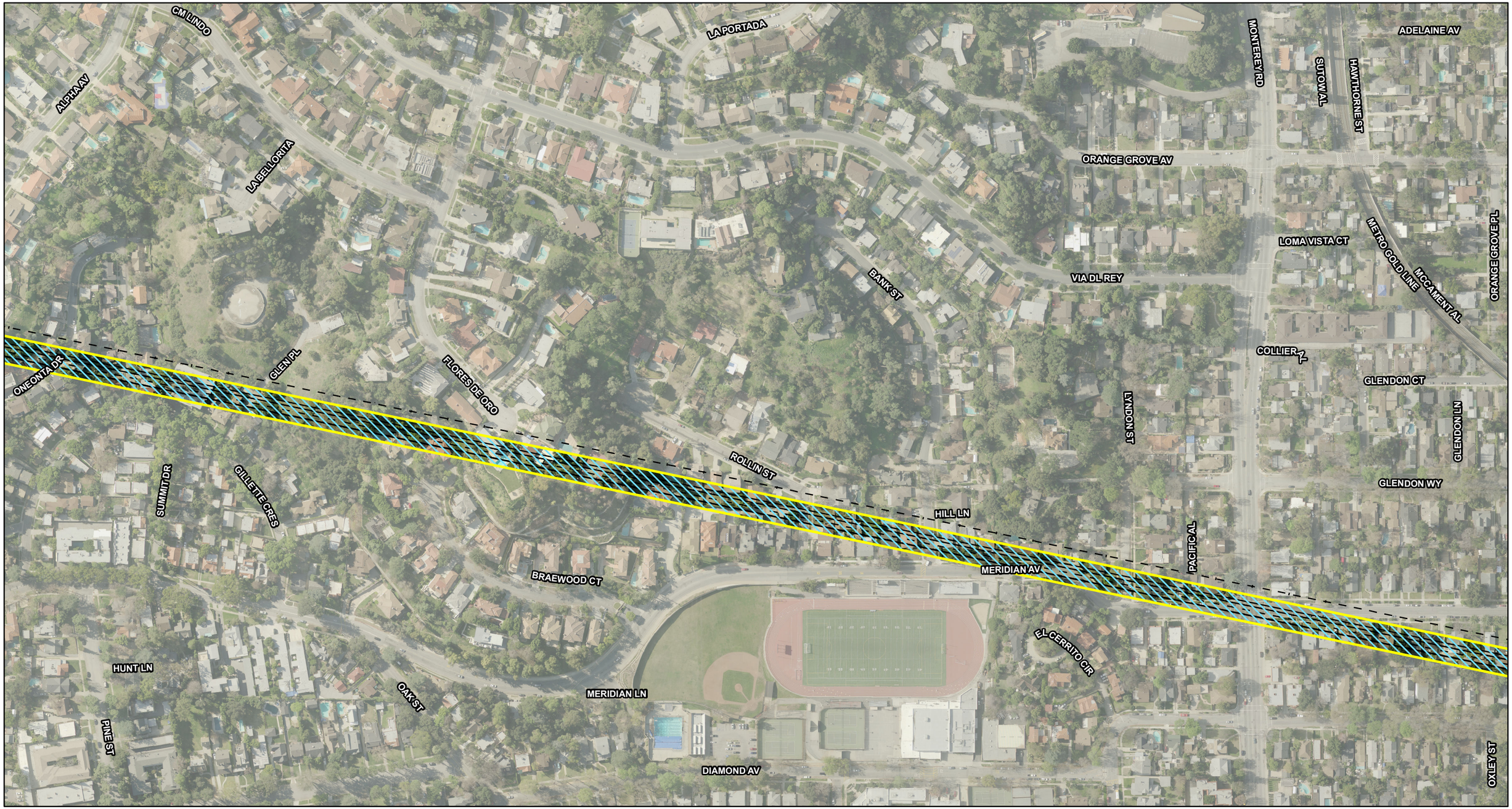


SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_FWYTunnel_ProposedBarriers_SingleBore.mxd (10/28/2014)

FIGURE 7-3
Sheet 7 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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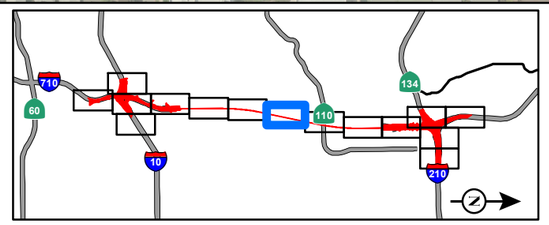
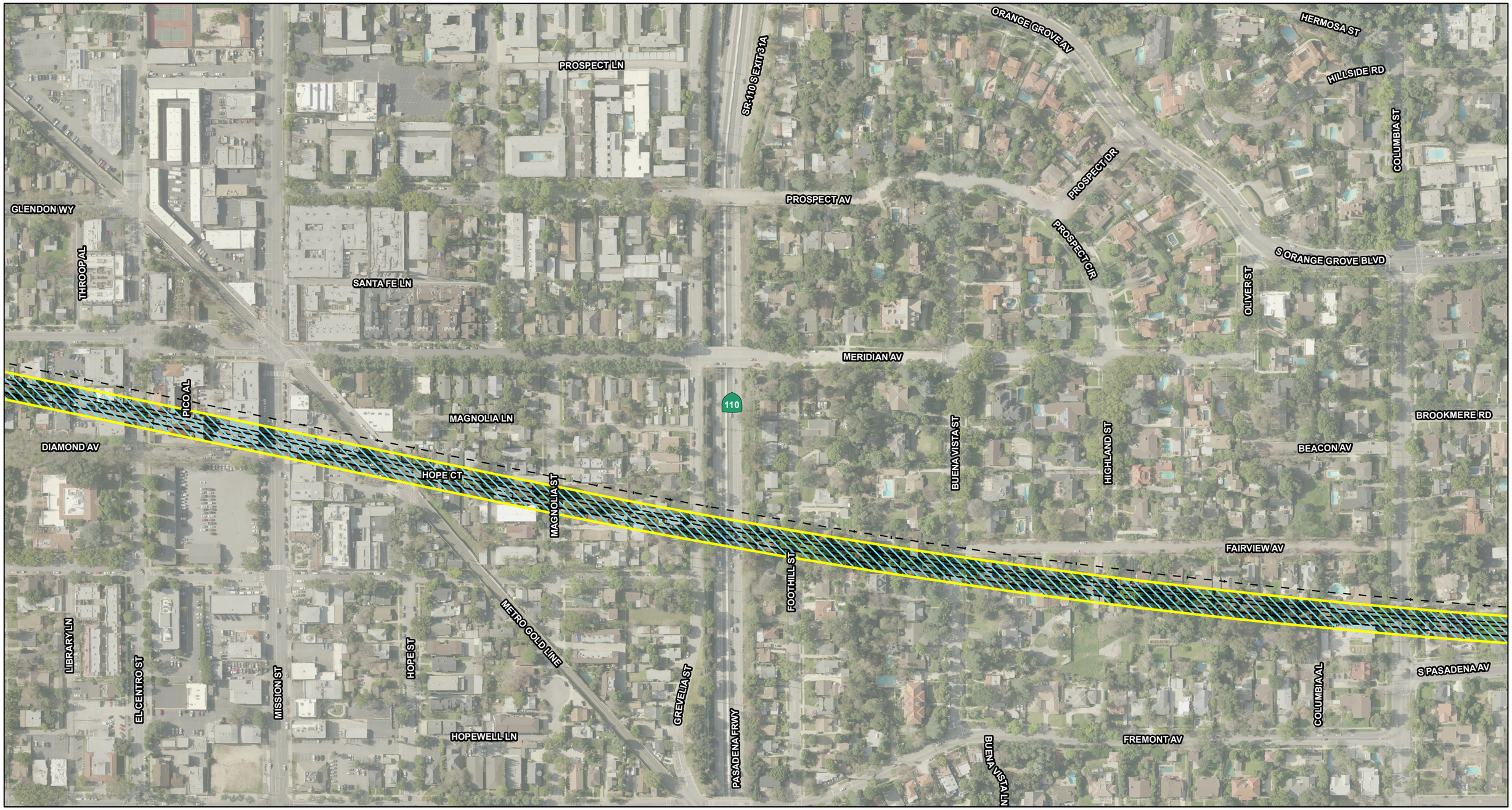


FIGURE 7-3
Sheet 8 of 15

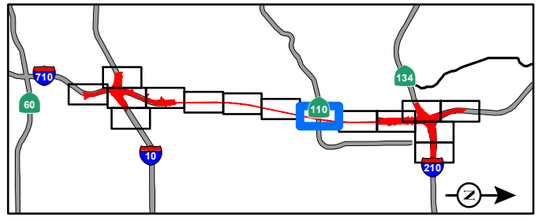
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

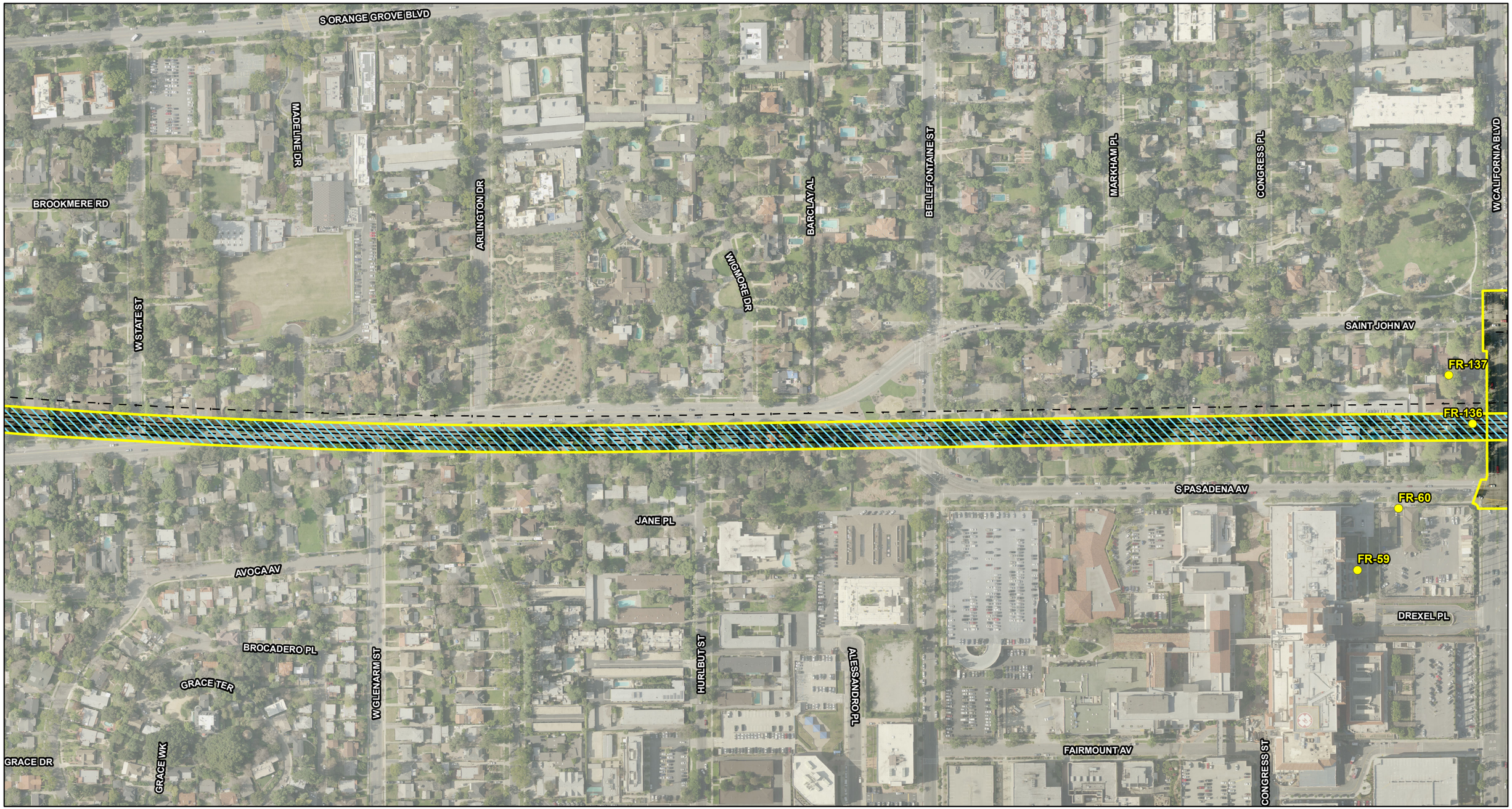


SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_FWYTunnel_ProposedBarriers_SingleBore.mxd (10/28/2014)

FIGURE 7-3
Sheet 9 of 15

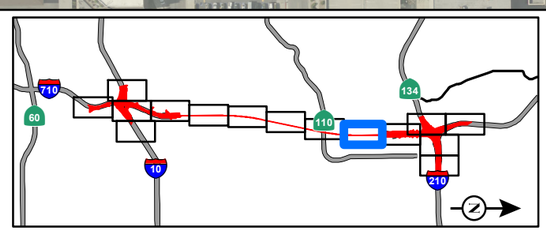
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_FWYTunnel_ProposedBarriers_SingleBore.mxd (10/28/2014)

FIGURE 7-3
Sheet 10 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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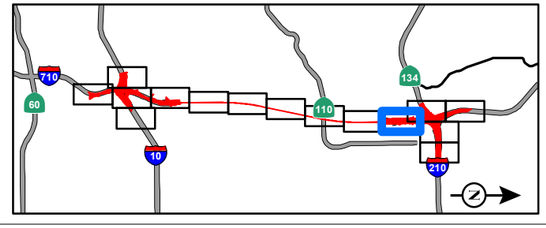

FIGURE 7-3
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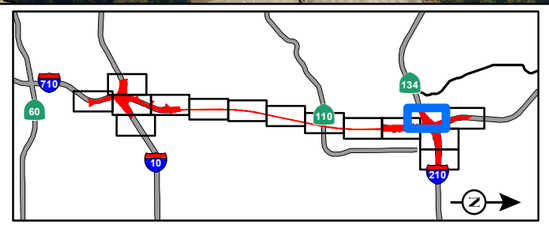
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

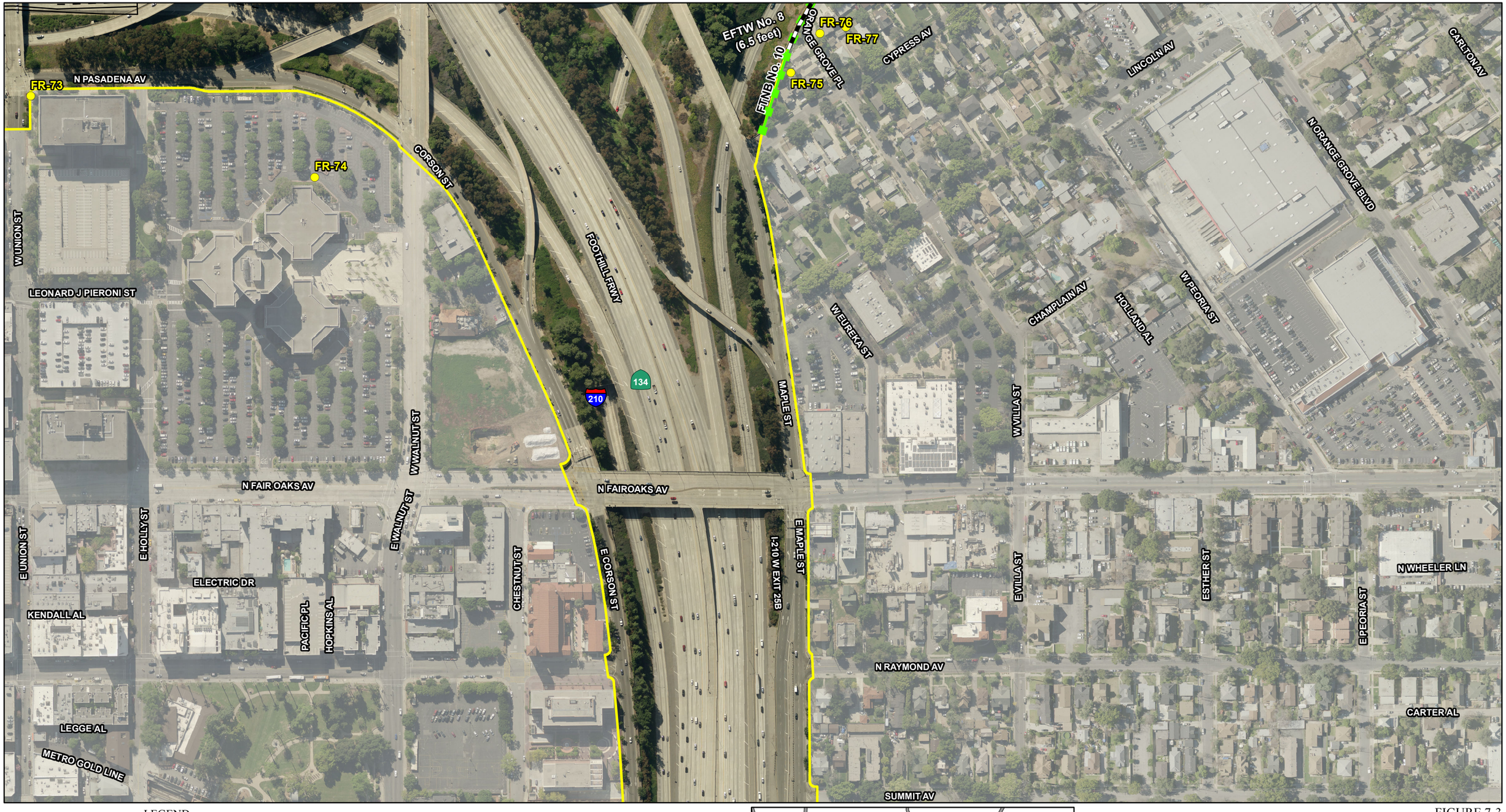


SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_FWYTunnel_ProposedBarriers_SingleBore.mxd (10/28/2014)

FIGURE 7-3
Sheet 12 of 15

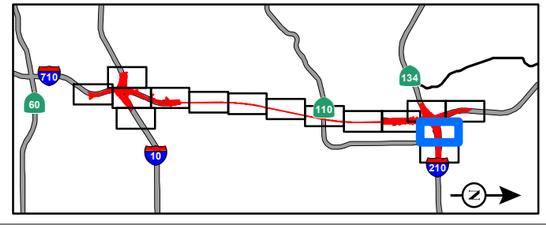
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_FWYTunnel_ProposedBarriers_SingleBore.mxd (10/28/2014)

FIGURE 7-3
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SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

N ARROYO PKWY
E UNION ST
E HOLLY ST
CHESTNUT ST
TOWNSEND PL
I-210 W EXIT 25B
E VILLA ST
MICHENER AL
134
N MARENGO AV
NINDE PL
RAMONA ST
METRO GOLD LINE
FOOTHILL FRWY
PEARL PL
COTTAGE PL
PARKE ST
210
N GARFIELD AV
GARFIELD AV
THURGOOD MARSHALL ST
E WALNUT ST
E CORSON ST
E MAPLE ST
N EUCLID AV
REINWAY CT
MC GREW AL
N LOS ROBLES AV
FORD PL

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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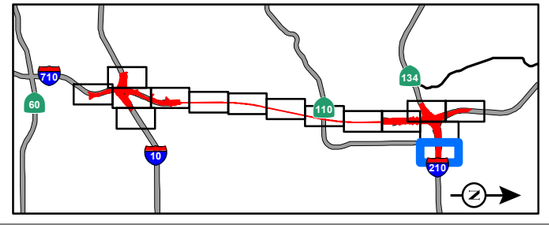

FIGURE 7-3
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SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

ROSEMONT AV
PROSPECT CRES
PROSPECT BLVD
HICKORY LN
N PASADENA AV
SECO ST
LA MESA PL
FOREST AV
BLAKE ST
WINONA WY
WINONA AV
CYPRESS WY
MANZANITA AV
ROSEWALK WY
RIDGEWOOD LN
ROSEWOOD LN
LONGWOOD LN
MAYVIEW LN
I-210 E EXIT 24
I-210 E EXIT 25B
I-210 W EXIT 24
CYPRESS AV
FOOTHILL FRWY
BANBURY AL
GLEN AV
MENTONE AV
LINCOLN AV
CHAPMAN AV
BARTHE DR
CLINTON ST
BROOKS AV
W MOUNTAIN ST
SUNSET AV
CARLTON AV
N ORANGE GROVE BLVD

FR-83
FR-84
FR-85
FR-86
FR-87
FR-88
FR-89
FR-90
FR-91
FR-92
FR-93
FR-94
FR-95
FR-96
FR-97
FR-98
FR-99
FR-100
FR-101
FR-102
FR-103
FR-104
FR-105
FR-106
FR-107
FR-108
FR-109
FR-110

FTNB No. 10
FTNB No. 11
EFTW No. 9 (6 feet)
FTNB No. 12
EFTW No. 10 (6.3 feet)
FTNB No. 13A
EFTW No. 11 (5 - 10 feet)
FTNB No. 13B
Wall Break

710
210

LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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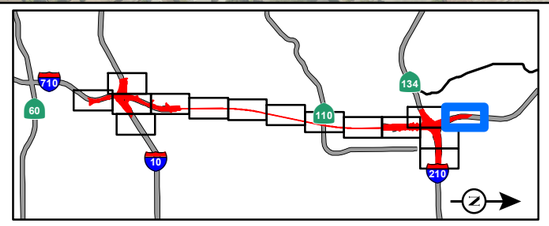


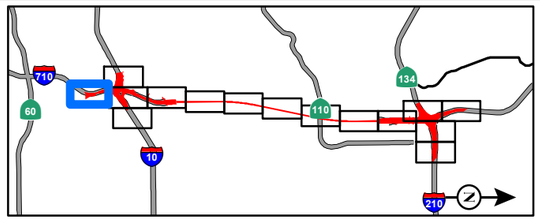
FIGURE 7-3
Sheet 15 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Single Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_FWYTunnel_ProposedBarriers_DualBore.mxd (10/28/2014)

FIGURE 7-4
Sheet 1 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

N EASTERN AV
W RAMONA BLVD
ROGERS ST
HELEN DR
N STEELE AV
HAYES ST
CITY TERRACE DR
SHOSHONE PL
TARZON ST
VOLNEY DR
ROLLINS DR
SHERIFF RD
CENTRE PLAZA DR
FR-56
I-10 E EXIT 21
SAN BERNARDINO FRWY
I-10 W EXIT 21
UP RR
STATE UNIVERSITY DR
CIRCLE DR
CAMPUS RD
LANSDOWNE AV
BARNETT WY
O'SULLIVAN DR
BARNETT RD
PAS RANCHO CASTILLA

LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_FWYTunnel_ProposedBarriers_DualBore.mxd (10/28/2014)

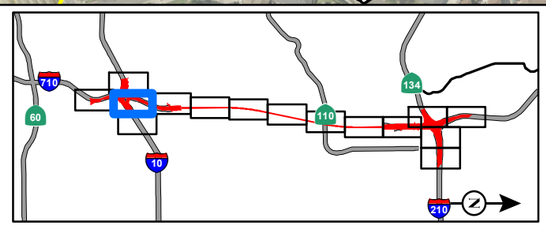
FIGURE 7-4
Sheet 2 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

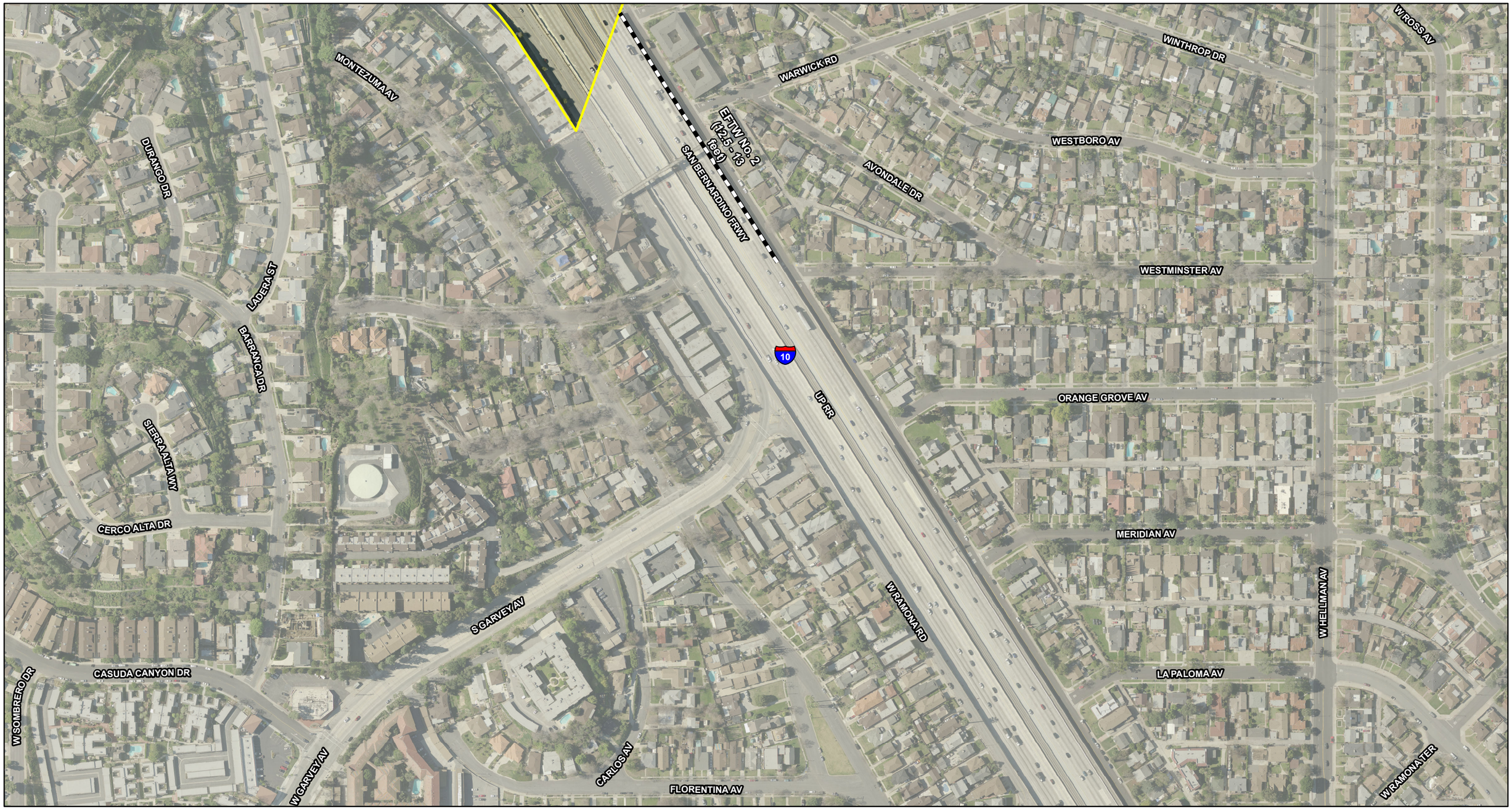


SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_FWYTunnel_ProposedBarriers_DualBore.mxd (10/28/2014)

FIGURE 7-4
Sheet 3 of 15

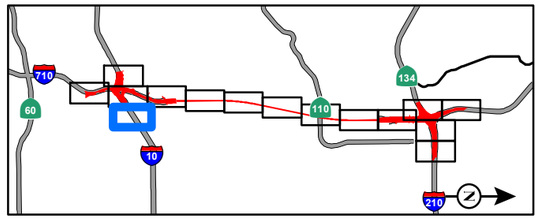
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_FWYTunnel_ProposedBarriers_DualBore.mxd (10/28/2014)

FIGURE 7-4
Sheet 4 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

WARWICK AV
MARIONDALE AV
UP RR
DOBBS ST
COLLEGE SQUARE DR
COVINA ST
MARTIN ST
LILLYVALE AV
PAS RANCHO CASTILLA
BOHLIG RD
DORCHESTER AV
VANDALIA AV
STOCKBRIDGE AV
ALHAMBRA AV
FR-52
FR-46
HIGHBURY AV
LOWELL AV
FR-51
FR-50
FR-49
FR-48
FR-47
FTNB No. 8
FTNB No. 6D
FTNB No. 7
2
VALLEY BLVD
15
CONCORD AV
W MISSION RD
FR-24
FR-26
FR-25
710
CHARNWOOD AV
LONG BEACH FRWY
FTNB No. 5
FR-23
FR-27
FR-28
FR-30
FR-29
FR-31
FR-32
FR-33
FR-34
FR-35
FR-36
FR-37
FR-38
FR-39
FR-40
FR-41
FR-42
FR-43
FR-44
FR-45
20
WESTMONT DR
MIDWICK DR
GLENAVEN AV
CABRILLO AV
W NORWOOD PL
W VALLEY BLVD
MILTON AV
FRONT ST
MIDVALE PL
W ROSS AV
GLEN VIEW DR

LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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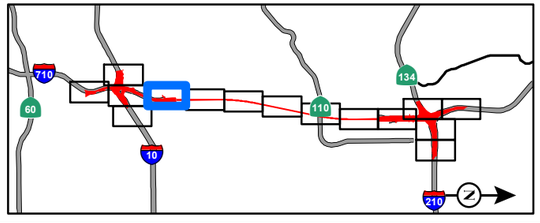
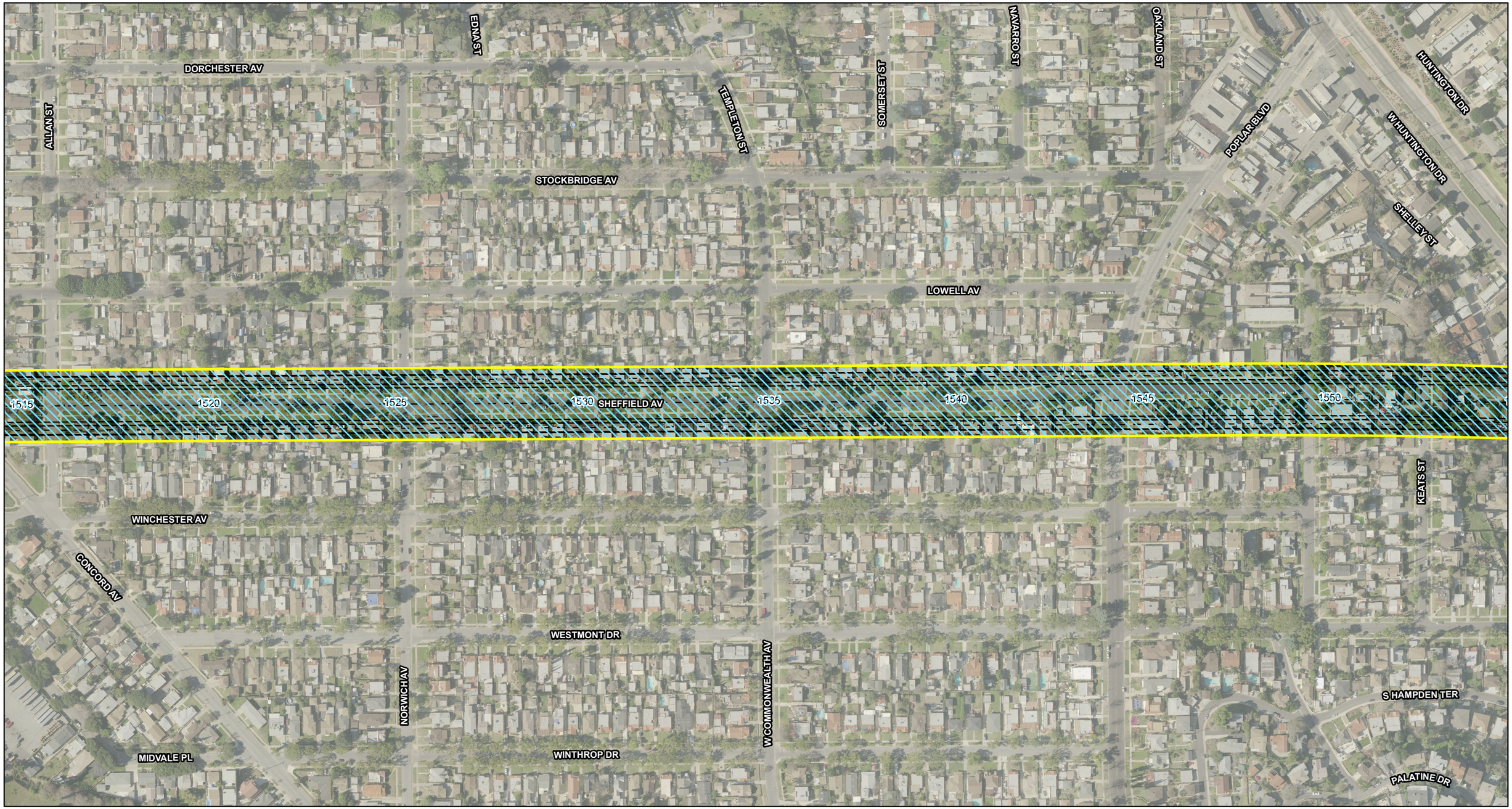


FIGURE 7-4
Sheet 5 of 15

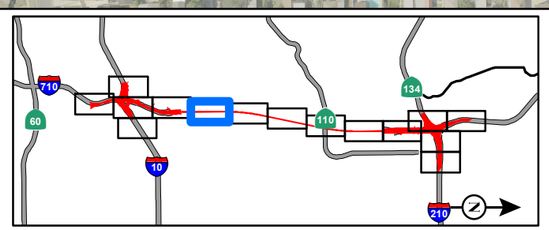
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

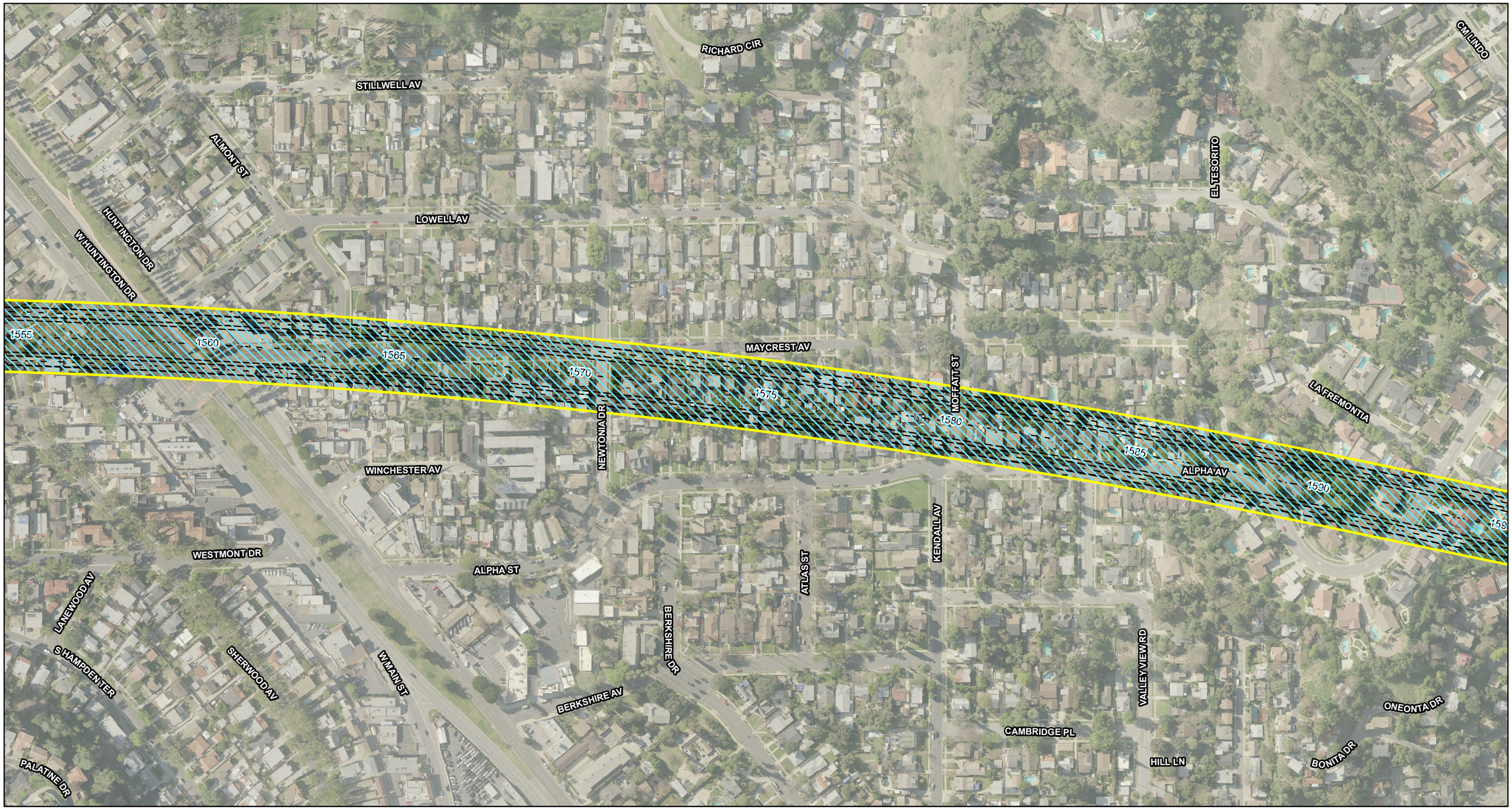


SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

I:\CHM1105\GIS\MXD\NSR\NoiseMonitoring_FWYTunnel_ProposedBarriers_DualBore.mxd (10/28/2014)

FIGURE 7-4
Sheet 6 of 15

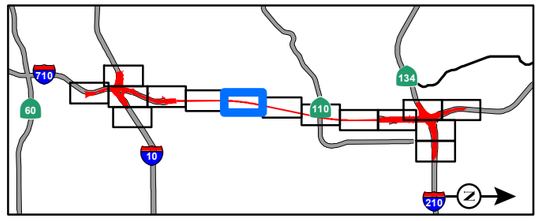
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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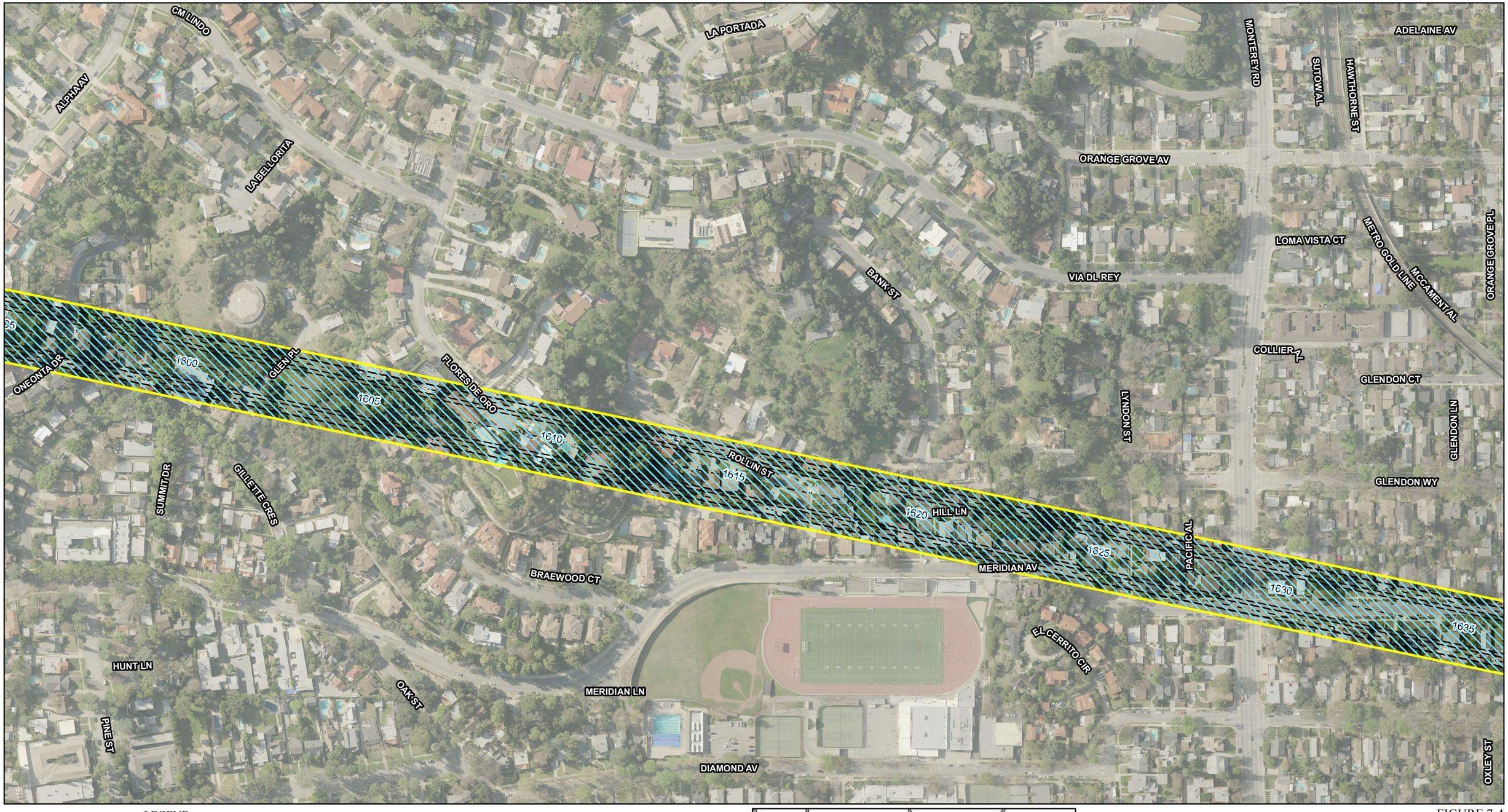
FIGURE 7-4
Sheet 7 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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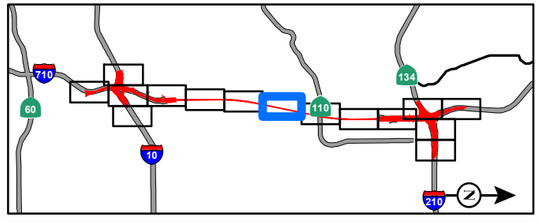

FIGURE 7-4
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SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
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EFIS 0700000191

LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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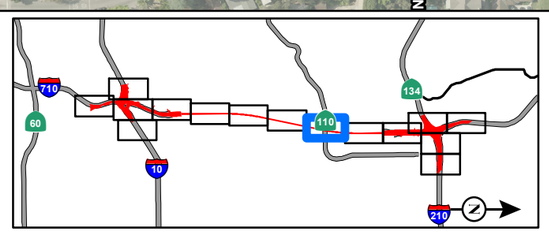

FIGURE 7-4
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SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

S ORANGE GROVE BLVD
MADELINE DR
ARLINGTON DR
BARCLAY AL
BELLEFONTAINE ST
MARKHAM PL
CONGRESS PL
W CALIFORNIA BLVD
BROOKMERE RD
W STATE ST
WIGMORE DR
SAINT JOHN AV
1680
1685
1690
1695
1700
1705
1710
1715
FR-137
FR-136
S PASADENA AV
FR-60
FR-59
DREXEL PL
JANE PL
AVOCA AV
BROCADERO PL
GRACE TER
W GLENARM ST
HURLBUT ST
ALESSANDRO PL
GRACE DR
GRACE WK
FAIRMOUNT AV
CONGRESS ST

LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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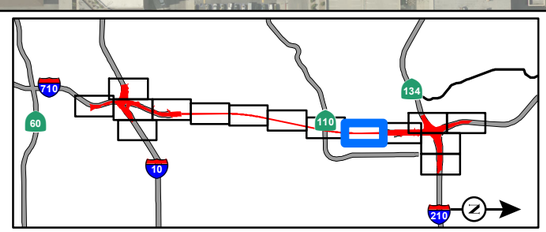

FIGURE 7-4
Sheet 10 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
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LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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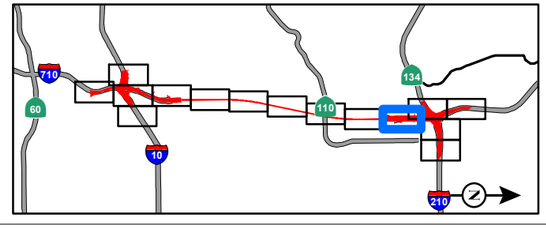

FIGURE 7-4
Sheet 11 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
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S GRAND AV
W HOLLY ST
SR-134 E EXIT 13A
KENSINGTON PL
ARROYO TER
SCOTT PL
BELLMORE WY
WESTMORELAND PL
N ORANGE GROVE BLVD
DEL ROSA DR
S ORANGE GROVE BLVD
SR-134 E EXIT 13B
VENTURA FRWY
W WALNUT ST
PROSPECT SQ
ROSEMONT AV
PROSPECT BLVD
W GREEN ST
W COLORADO BLVD
SR-134 W EXIT 13A
134
FR-112
EFTW No. 12 (5.5 feet)
FTNB No. 13B
FR-117
FTNB No. 15
FR-116
FR-114
EFTW No. 13 (6 feet)
FR-113
N PASADENA AV
FTNB No. 14
FR-115
TERRACE DR
FR-118
FR-122
I-210 E EXIT 25B
I-210 E EXIT 25A
MAPLE ST
FOOTHILL FRWY
210
FTNB No. 10
FR-121
FR-120
FR-119
SAINT JOHN AV
UNION ST
710
FR-80
FR-82
FR-81
EFTW No. 8 (6.5 feet)
ORANGE GROVE PL
FR-79
FR-78
LONG BEACH FRWY
745
750
755
760
765
770
775
780
1745
1750
1755
1760
1765
1770
1775
1780
20

LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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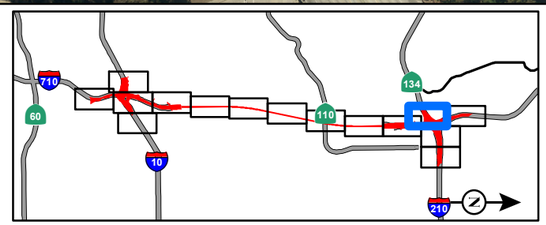
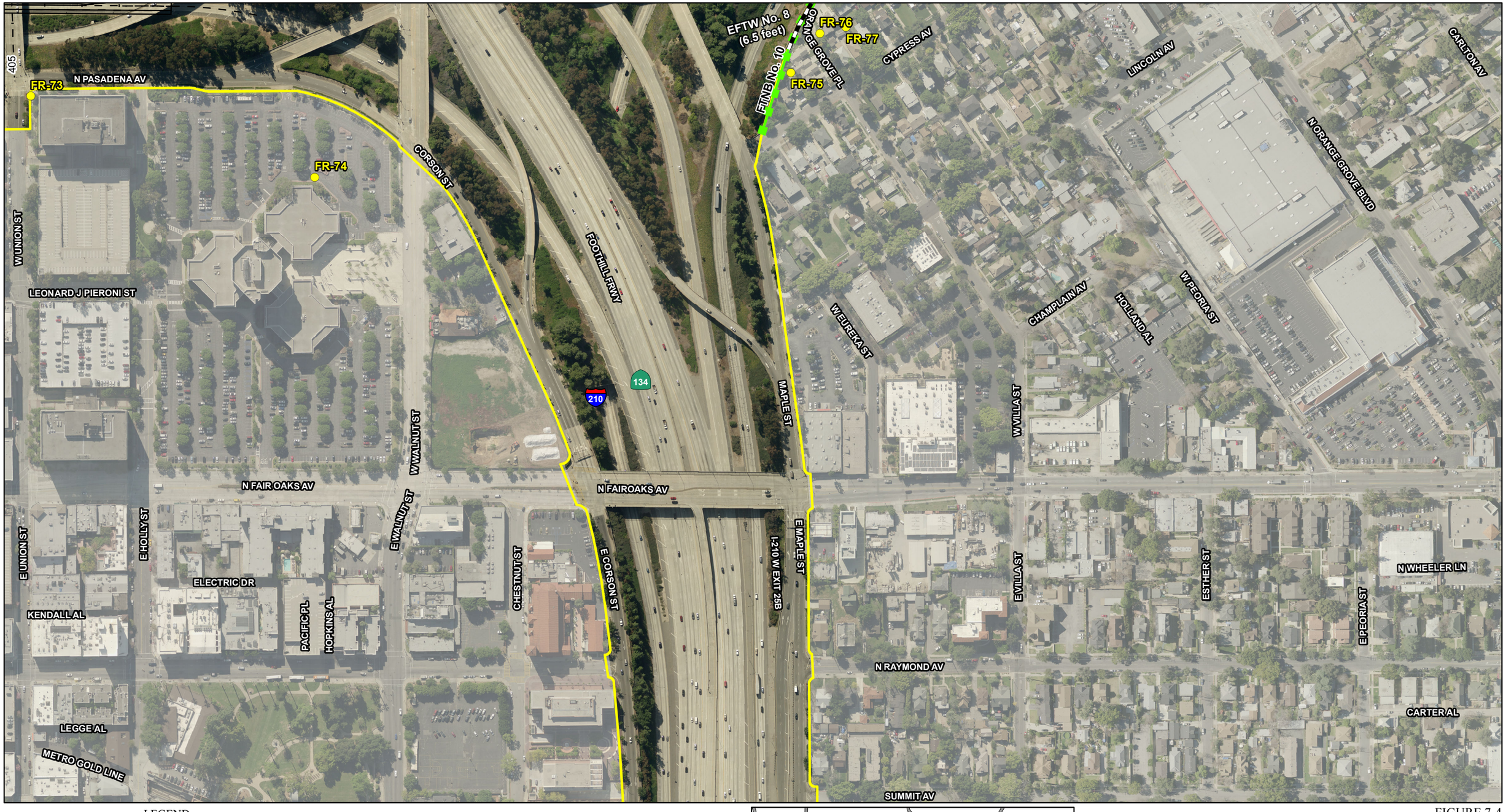


FIGURE 7-4
Sheet 12 of 15

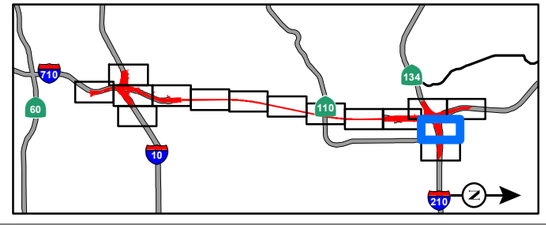
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 7-4
Sheet 13 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
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LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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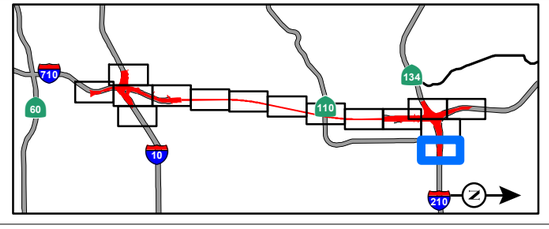

FIGURE 7-4
Sheet 14 of 15

SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
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LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- Tunnel Segment
- Dual Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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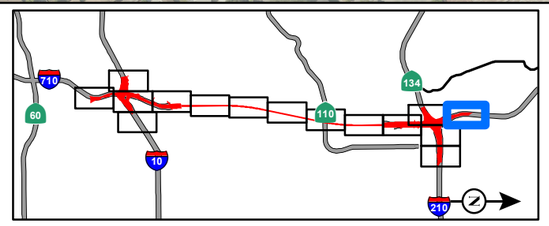
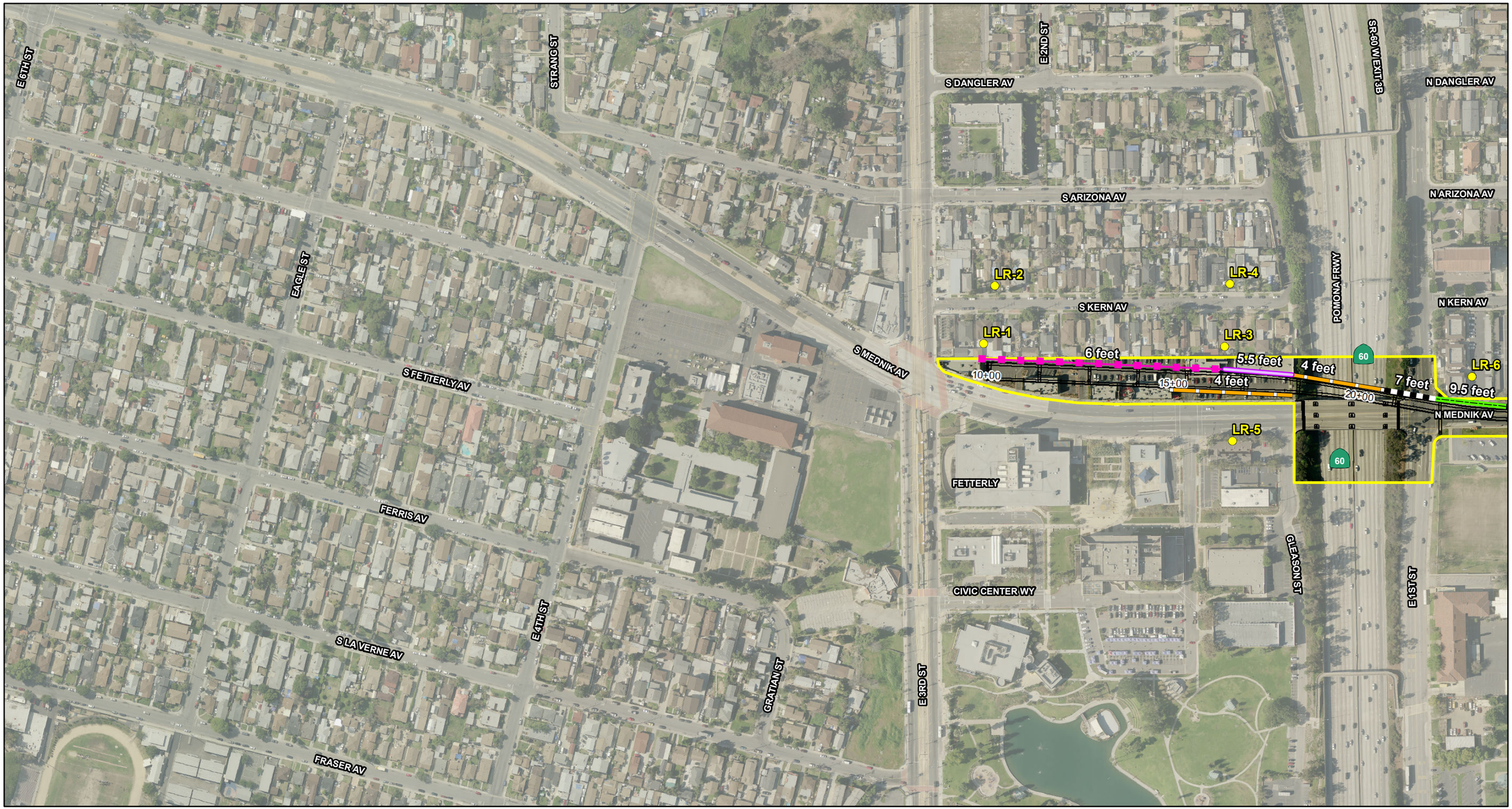


FIGURE 7-4
Sheet 15 of 15

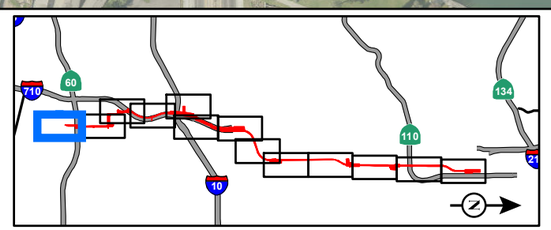
SR 710 North Study
Modeled Noise Barriers for the Freeway Alternative - Dual Bore Barrier Design
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
- Modeled Noise Barriers: 7 feet
- Modeled Noise Barriers: 9.5 feet
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 7-5
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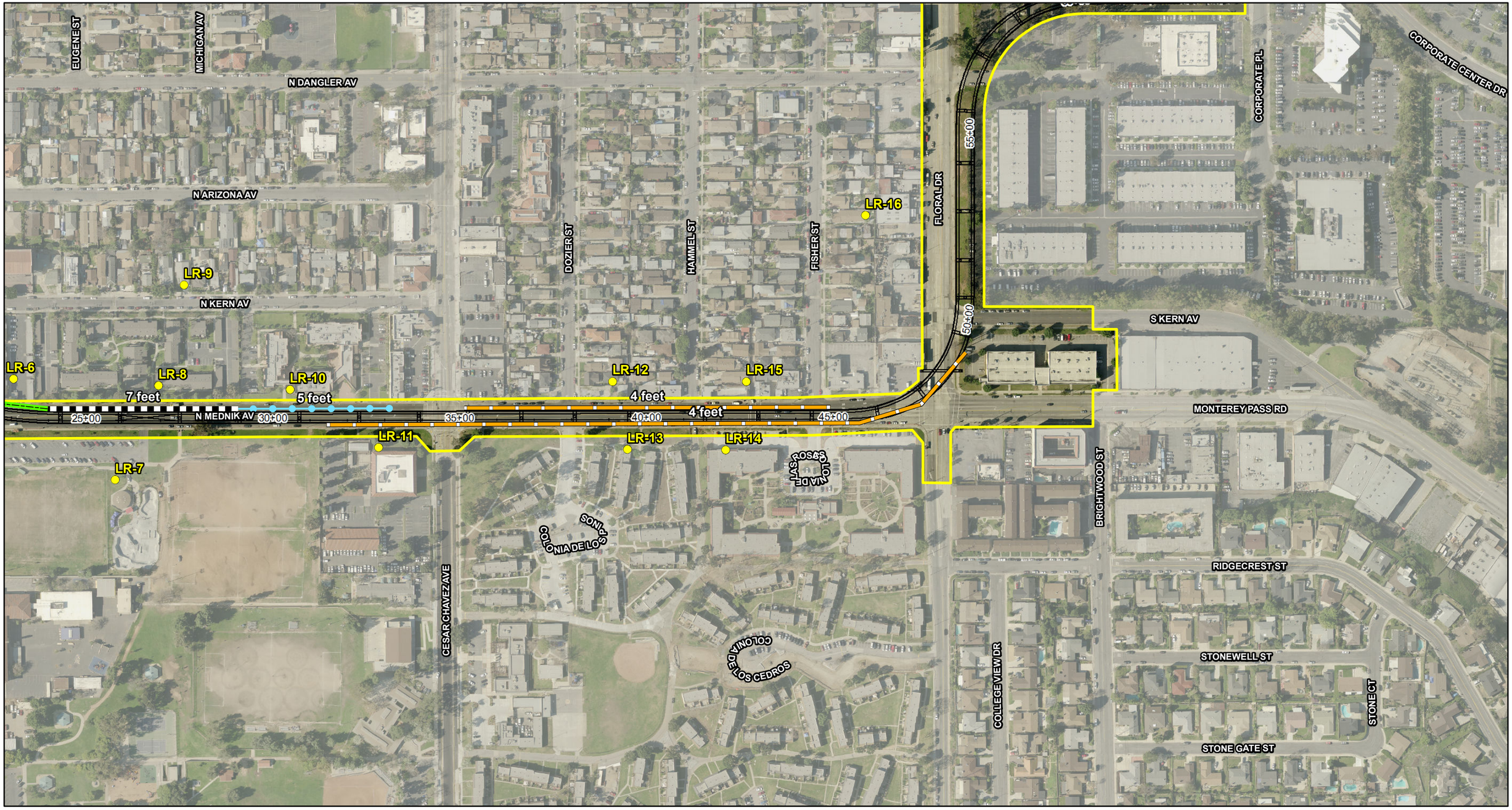
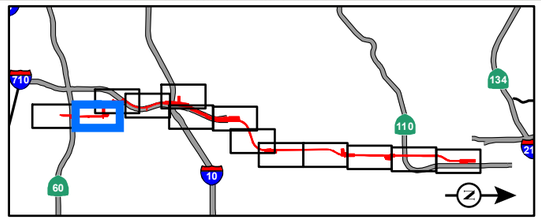
SR 710 North Study
Modeled Noise Barriers for the LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
- Modeled Noise Barriers: 7 feet
- Modeled Noise Barriers: 9.5 feet
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 7-5
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SR 710 North Study
Modeled Noise Barriers for the LRT Alternative
07-LA-710 (SR 710)
EA 187900
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LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
- Modeled Noise Barriers: 7 feet
- Modeled Noise Barriers: 9.5 feet
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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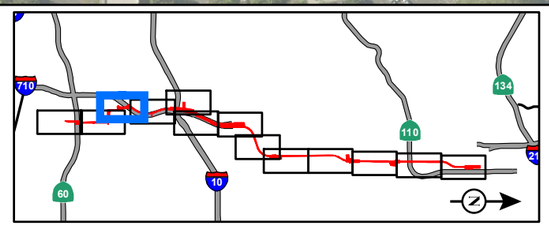

FIGURE 7-5

SR 710 North Study

Modeled Noise Barriers for the LRT Alternative

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
- Modeled Noise Barriers: 7 feet
- Modeled Noise Barriers: 9.5 feet
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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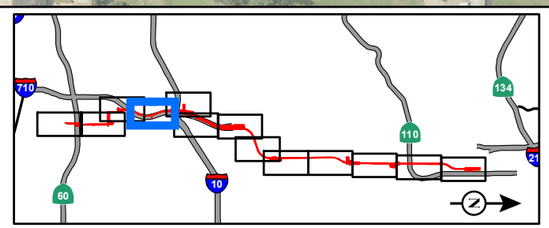


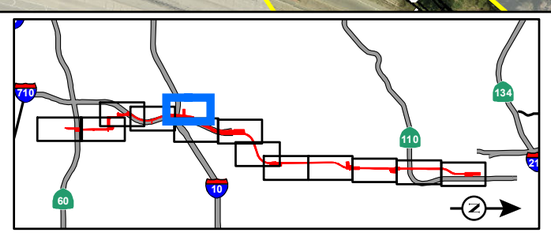
FIGURE 7-5

SR 710 North Study
Modeled Noise Barriers for the LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
- Modeled Noise Barriers: 7 feet
- Modeled Noise Barriers: 9.5 feet
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 7-5
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SR 710 North Study
Modeled Noise Barriers for the LRT Alternative
07-LA-710 (SR 710)
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LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
- Modeled Noise Barriers: 7 feet
- Modeled Noise Barriers: 9.5 feet
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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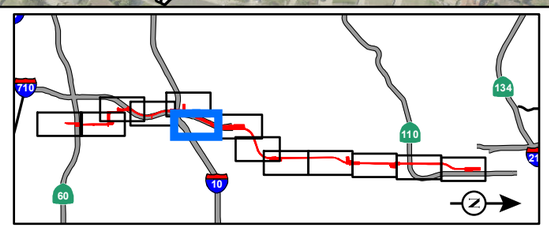

FIGURE 7-5

SR 710 North Study
Modeled Noise Barriers for the LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

LILLYVALE AV
DORCHESTER AV
BOHLIG RD
DOBBS ST
ALLAN ST
VANDALIA AV
STOCKBRIDGE AV
ALHAMBRA AV
HIGHBURY AV
LOWELL AV
VALLEY BLVD
LR-26
CONCORD AV
W MISSION RD
710
LONG BEACH FRWY
SHEFFIELD AV
LR-24
165+00
170+00
175+00
180+00
185+00
LR-25
WINCHESTER AV
190+00
WESTMONT DR
UP RR
CABRILLO AV
W VALLEY BLVD
W NORWOOD PL
195+00
PARKVIEW DR
FRONT ST
MILTON AV
GLEN VIEW DR
GLENAVEN AV
PYRENEES DR
WESTMINSTER AV
MIDVALE PL

LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
- Modeled Noise Barriers: 7 feet
- Modeled Noise Barriers: 9.5 feet
- Modeled Receptor Locations

0 125 250
FEET

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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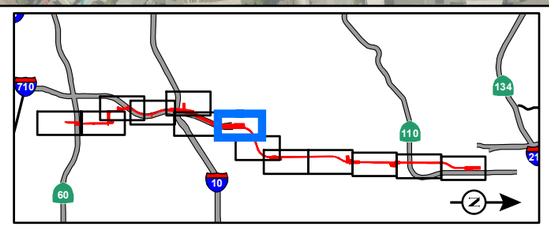
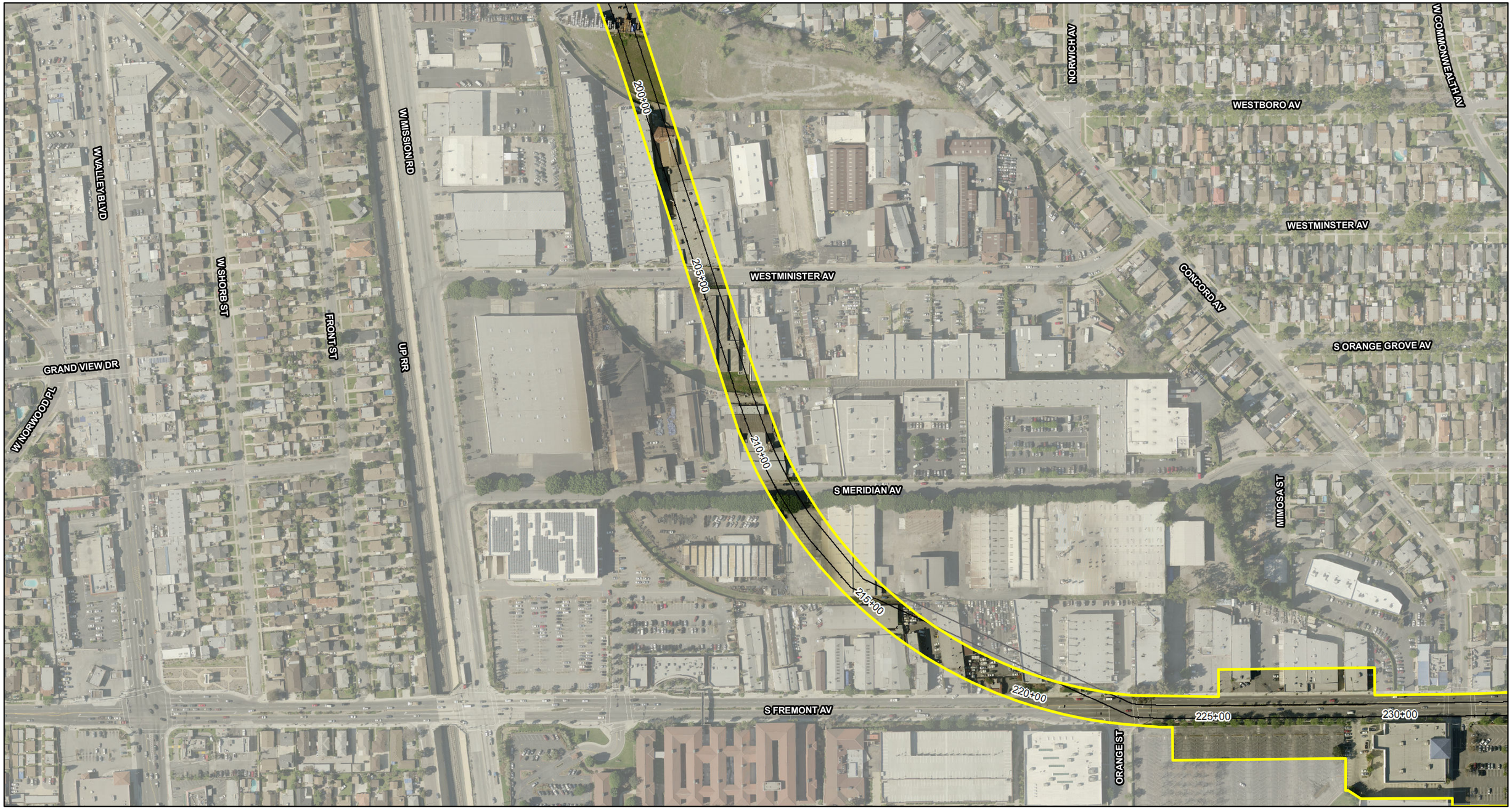


FIGURE 7-5

SR 710 North Study
Modeled Noise Barriers for the LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
- Modeled Noise Barriers: 7 feet
- Modeled Noise Barriers: 9.5 feet
- Modeled Receptor Locations

0 125 250
FEET

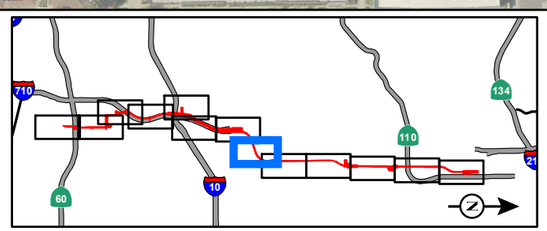


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FIGURE 7-5
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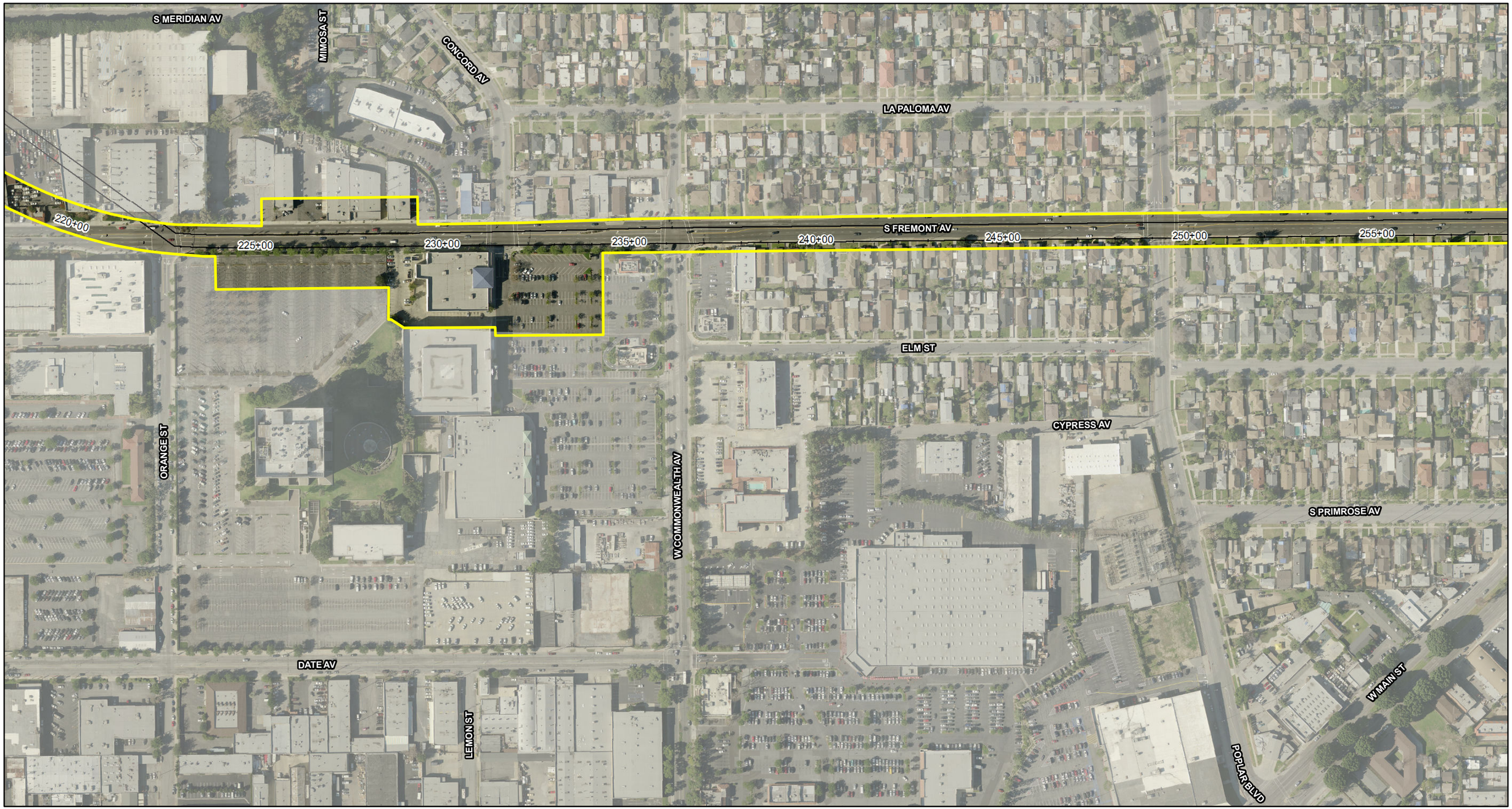
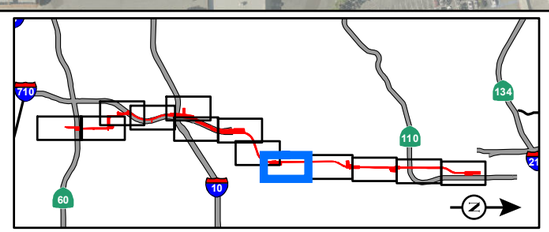
SR 710 North Study
Modeled Noise Barriers for the LRT Alternative
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191



LEGEND

- LRT Geometrics
- LRT Alternative
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
- Modeled Noise Barriers: 7 feet
- Modeled Noise Barriers: 9.5 feet
- Modeled Receptor Locations

0 125 250
FEET



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 7-5
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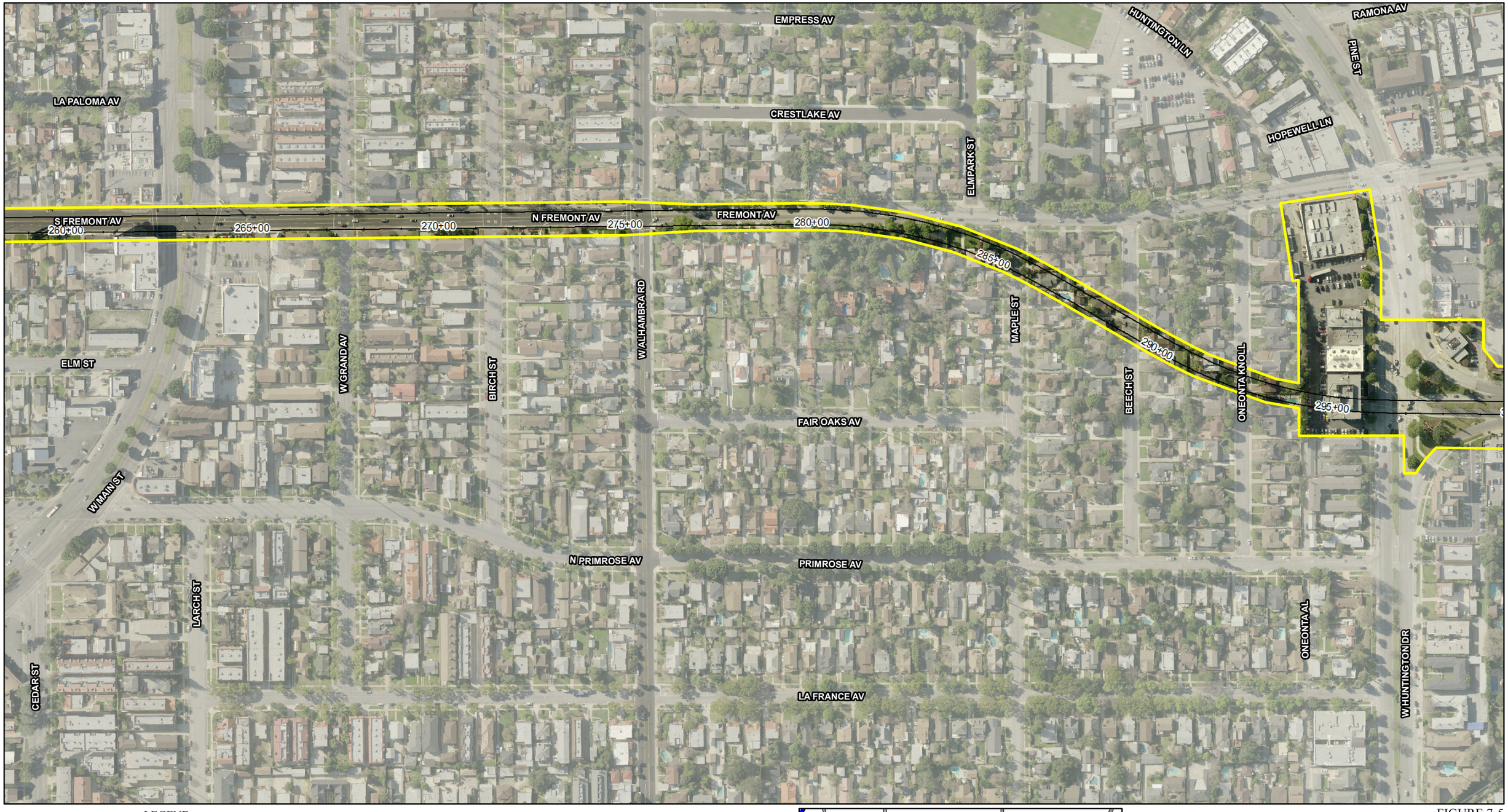
EFIS 0700000191



LEGEND

- LRT Geometrics
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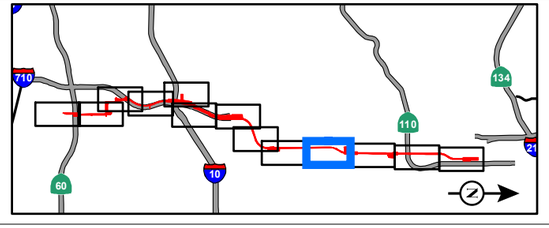

FIGURE 7-5
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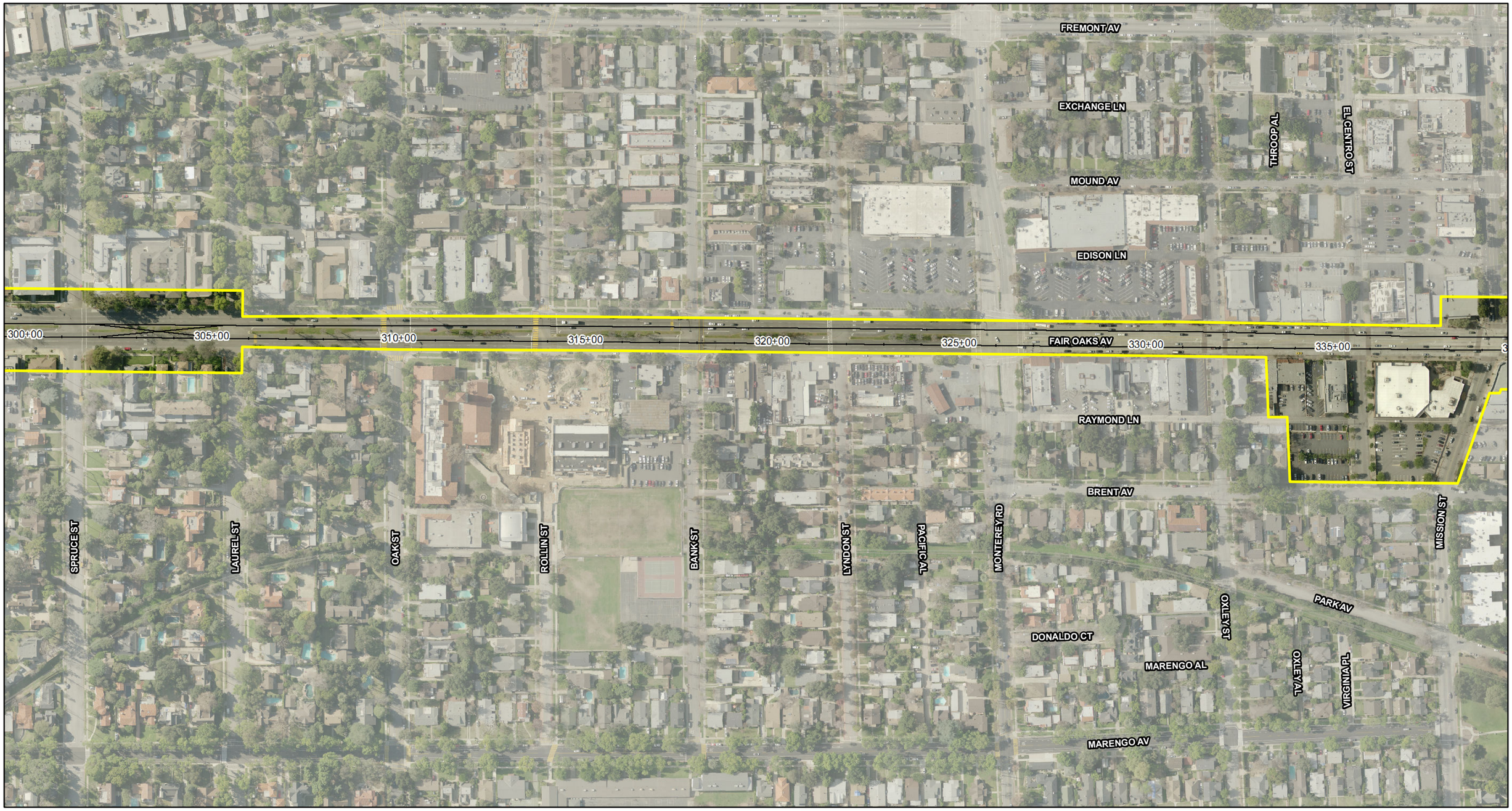

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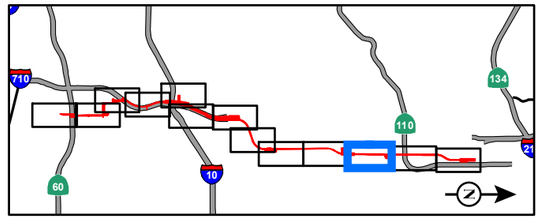

FIGURE 7-5
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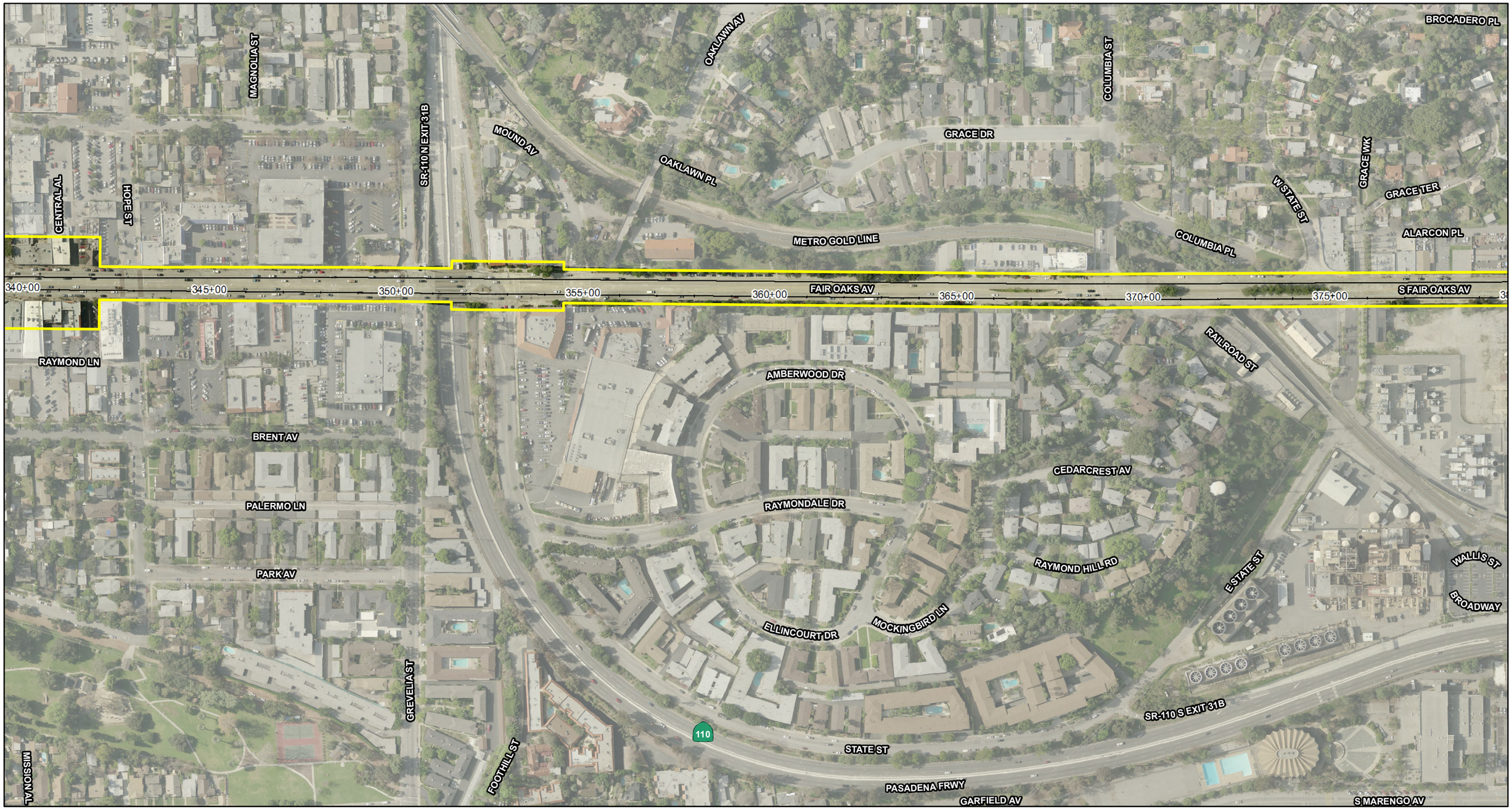

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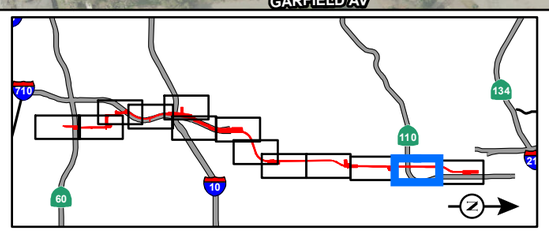

SOURCE: Thomas Brothers (2011); LARIAC (12/2010); CH2M Hill (2014)

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FIGURE 7-5
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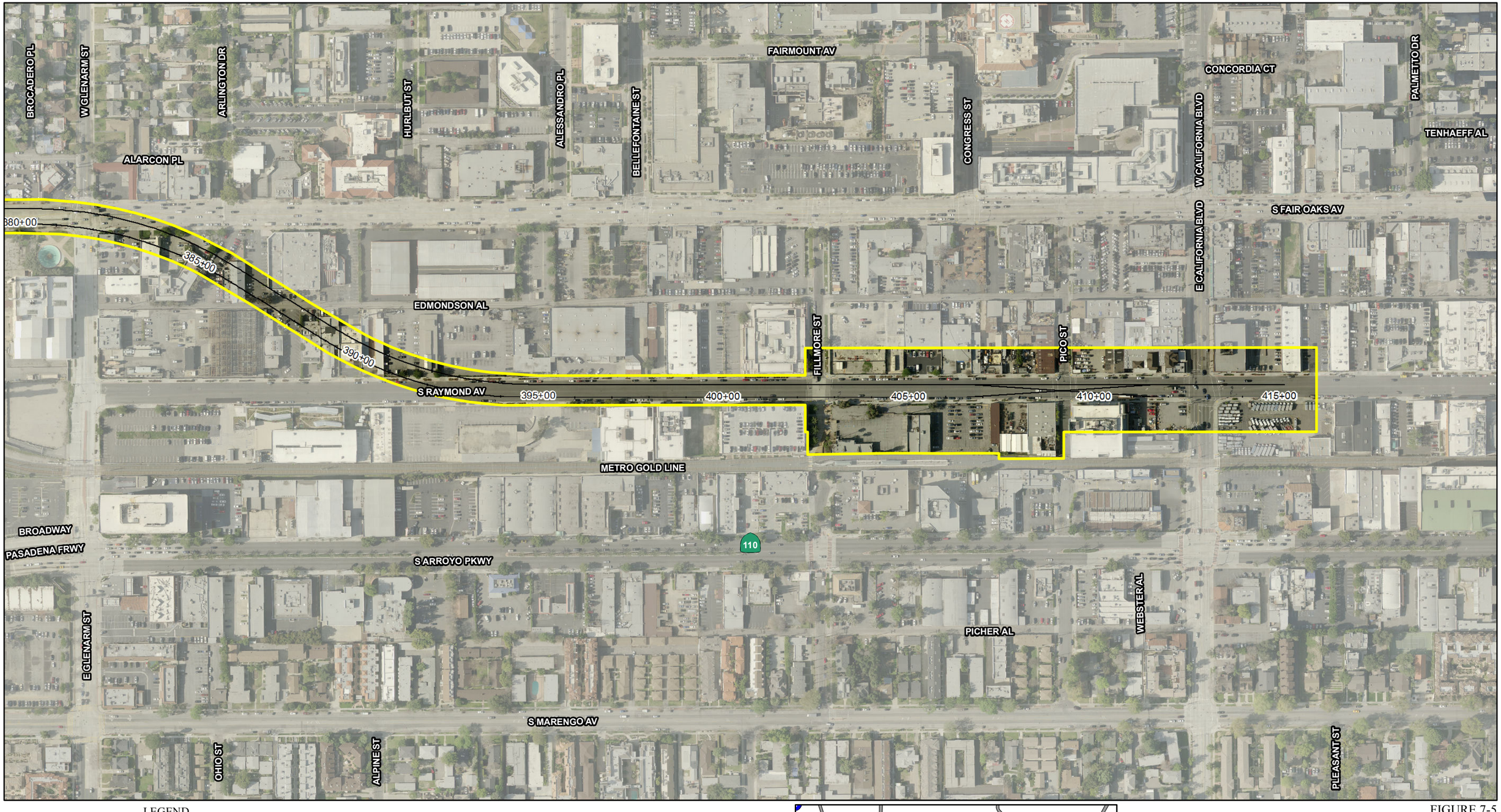

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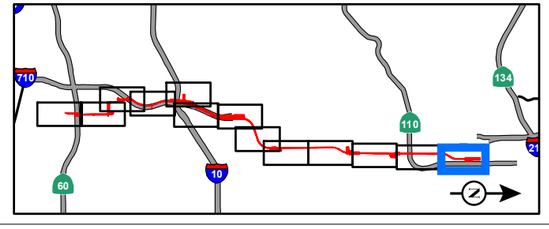

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