Appendix L Noise

L1: Existing and Future Noise Levels

L2: NSR Analysis Areas, Noise Monitoring, and Analysis Positions

L3: Alternative 2 Reasonableness Analysis Summary and Recommended Soundwall Locations

L4: Alternative 3 Reasonableness Analysis Summary and Recommended Soundwall Locations

L1: Existing and Future Noise Levels

Table B-1 – Predicted Future Noise Levels and Barrier Analysis – Segment 9 - Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 9.1 [W]	--	SFR/MFR	4	59 [M,LT1]	60	61	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.2 [W]	SW697[X] Shoulder	SFR	2	61 [M,ST1]	62	63	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.3 [W]		SFR	1	62 [E]	63	63	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											16 feet			18 feet			20 feet			22 feet			24 feet		
R 9.4 [W]	SW697[X] R/W	SFR	6	64 [E]	65	65	1	0	B (67)	NONE	65	0	*0*	64	1	*0*	63	2	*0*	62	3	*0*	62	3	*0*
R 9.5 [W,8]		SFR	7	64 [M,ST2]	65	66	1	1	B (67)	A/E	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*	62	4	*0*
R 9.6 [W]		SFR	8	65 [E]	66	66	1	0	B (67)	A/E	66	0	*0*	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R 9.7 [W,7]		SFR	4	62 [E]	63	64	1	1	B (67)	NONE	63	1	*0*	62	2	*0*	62	2	*0*	61	3	*0*	61	3	*0*
R 9.8 [W]		SFR	3	65 [E]	66	67	1	1	B (67)	A/E	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*	63	4	*0*
R 9.9 [W]		SFR	4	64 [E]	65	66	1	1	B (67)	A/E	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*	62	4	*0*
R 9.10 [W]		SFR	2	65 [E]	66	67	1	1	B (67)	A/E	66	1	*0*	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*
R 9.11 [W]		SFR/MFR	6	67 [E]	66	66	-1	0	B (67)	A/E	66	0	*0*	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*
R 9.12 [W,9]		SFR	--	67 [M,LT2,CAL]	66	67	-1	1	B (67)	A/E	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*	63	4	*0*
R 9.13 [W]		SFR	2	67 [E]	66	67	-1	1	B (67)	A/E	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*	63	4	*0*
R 9.14 [W]		SFR	2	67 [E]	66	67	-1	1	B (67)	A/E	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*	63	4	*0*
R 9.15 [W,7]		SFR	6	65 [E]	64	65	-1	1	B (67)	NONE	64	1	*0*	64	1	*0*	63	2	*0*	63	2	*0*	62	3	*0*
R 9.16 [W,7]		SFR	4	65 [E]	64	64	-1	0	B (67)	NONE	63	1	*0*	63	1	*0*	62	2	*0*	62	2	*0*	61	3	*0*
R 9.17 [W]		SFR/MFR	12	68 [E]	67	67	-1	0	B (67)	A/E	66	1	*0*	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take in Alternative 3.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-1 – Predicted Future Noise Levels and Barrier Analysis – Segment 9 - Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 9.17A	S1749[P] R/W	SFR	1	76 [E]	75	74	-1	-1	B (67)	A/E	68 [T]	6	*1*	**66** [R]	**8**	*1*	65	9	*1*	64	10	*1*	64	10	*1*
R 9.17B	--	COM	1	65 [E]	64	65	-1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.18		COM	1	75 [E]	74	74	-1	0	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take in Alternative 3.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-1 – Predicted Future Noise Levels and Barrier Analysis – Segment 9 - Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Traffic + Train Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year Train Noise Level Leq(h), dBA[1]	Design Year No Build Traffic Noise Level Leq(h), dBA[1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year Build Traffic Noise Level Leq(h), dBA[1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year No Build Traffic + Train Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
															Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 9.19 [B,7]	--	SFR	3	62 [E]	61	60	63	60	63	1	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.20 [B]		SFR	3	65 [E]	64	61	66	62	66	1	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.21		SFR/MFR	10	66 [E]	64	63	67	64	67	1	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.22 [W]		SFR	2	65 [M,ST3]	62	64	66	65	66	1	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.23 [B]		COM	1	69 [M,ST3A,CAL]	67	64	69	65	69	0	1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.25 [B]		SFR	3	65 [E]	63	62	66	63	66	1	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.26 [B]		SFR	3	65 [E]	63	63	66	64	67	1	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.27 [W]	--	SFR	1	58 [E]	55	58	59	58	60	1	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.28 [W]		SFR	1	60 [E]	56	60	61	61	62	1	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.29	Shoulder	SFR/MFR	3	67 [E]	64	66	68	67	68	1	1	0	B (67)	A/E	67	1	*0*	67	1	*0*	66	2	*0*	66	2	*0*	-- [10]	--	--
R 9.30		SFR	3	63 [E]	60	61	64	62	64	1	1	0	B (67)	NONE	64	0	*0*	63	1	*0*	63	1	*0*	62	2	*0*	-- [10]	--	--
R 9.31 [8]		COM	1	70 [M,ST4]	68	68	71	69	71	1	1	0	E (72)	NONE	70	1	*0*	70	1	*0*	69	2	*0*	69	2	*0*	-- [10]	--	--
R 9.32		SFR	1	69 [E]	67	68	70	68	71	1	0	1	B (67)	A/E	70	1	*0*	70	1	*0*	69	2	*0*	69	2	*0*	-- [10]	--	--
R 9.33 [W,7]		MH	6	62 [E]	56	59	61	60	62	-1	1	1	B (67)	NONE	61	1	*0*	61	1	*0*	60	2	*0*	60	2	*0*	-- [10]	--	--
R 9.34 [W,7]		SFR	5	63 [E]	56	61	62	62	63	-1	1	1	B (67)	NONE	62	1	*0*	62	1	*0*	61	2	*0*	60	3	*0*	-- [10]	--	--
R 9.35 [W]		COM	1	68 [M,LT3]	62	65	67	66	68	-1	1	1	E (72)	NONE	67	1	*0*	67	1	*0*	65	3	*0*	65	3	*0*	-- [10]	--	--
R 9.36 [W]		SFR	3	68 [E]	62	65	67	66	67	-1	1	0	B (67)	A/E	67	0	*0*	66	1	*0*	65	2	*0*	65	2	*0*	-- [10]	--	--
R 9.37		SFR	3	69 [E]	65	64	68	65	68	-1	1	0	B (67)	NONE	68	0	*0*	67	1	*0*	67	1	*0*	66	2	*0*	-- [10]	--	--
R 9.38 [W]		SFR	2	68 [E]	66	62	67	62	67	-1	0	0	B (67)	NONE	67	0	*0*	67	0	*0*	67	0	*0*	67	0	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
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3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
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13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-2 – Predicted Future Noise Levels and Barrier Analysis – Segment 10 - Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)																	
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet			18 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 10.1	S1819[P] R/W	SFR	1	75 [M,ST6]	73	74	-2	1	B (67)	A/E	71	3	*0*	68	6	*1*	67 [T]	7	*1*	66	8	*1*	65	9	*1*	**65 [R,5]**	**9**	*1*
R 10.2 [B]		SFR	3	70 [E]	68	70	-2	2	B (67)	A/E	68	2	*0*	67	3	*0*	66 [T]	4	*0*	66	4	*0*	65	5	*3*	**65 [R,5]**	**5**	*3*
R 10.3 [B]		SFR	1	70 [E]	69	69	-1	0	B (67)	A/E	67	2	*0*	66	3	*0*	65 [T]	4	*0*	65	4	*0*	64	5	*1*	**64 [R,5]**	**5**	*1*
R 10.4 [B]		SFR	2	75 [E]	74	76	-1	2	B (67)	A/E	69	7	*2*	68 [T]	8	*2*	67	9	*2*	65	11	*2*	65	11	*2*	**64 [R,5]**	**12**	*2*
R 10.5 [B,W]		SFR	1	68 [M,LT4,CAL]	67	66	-1	-1	B (67)	A/E	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*	63	3	*0*	63	3	*0*
R 10.6 [B,7]		SFR	4	70 [E]	69	67	-1	-2	B (67)	A/E	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*	63	4	*0*	**62 [R]**	**5**	*4*
R 10.7 [B]		SFR	5	72 [E]	71	69	-1	-2	B (67)	A/E	67	2	*0*	66	3	*0*	64	5	*5*	63	6	*5*	62	7	*5*	**62 [R,5]**	**7**	*5*
R 10.8 [B,7]		SFR	5	70 [E]	69	67	-1	-2	B (67)	A/E	66	1	*0*	65	2	*0*	63 [T]	4	*0*	63	4	*0*	62	5	*5*	**62 [R,5]**	**5**	*5*
R 10.9 [B]		SFR	4	73 [E]	72	70	-1	-2	B (67)	A/E	68	2	*0*	67	3	*0*	65 [T]	5	*4*	65	5	*4*	64	6	*4*	**64 [R,5]**	**6**	*4*
R 10.9A		SFR	1	76 [E]	75	73	-1	-2	B (67)	A/E	70	3	*0*	69	4	*0*	67 [T]	6	*1*	66	7	*1*	65	8	*1*	**64 [R,5]**	**9**	*1*
R 10.10 [B,7]		SFR	5	67 [E]	66	65	-1	-1	B (67)	NONE	64	1	*0*	64	1	*0*	63	2	*0*	61	4	*0*	61	4	*0*	**60 [R]**	**5**	*5*
R 10.11 [B,W]		SFR	2	65 [E]	64	64	-1	0	B (67)	NONE	63	1	*0*	63	1	*0*	62	2	*0*	60	4	*0*	60	4	*0*	**59 [R]**	**5**	*2*
R 10.12 [B]	S1883[P] R/W	SFR	1	71 [E]	70	69	-1	-1	B (67)	A/E	67	2	*0*	66	3	*0*	65 [T]	4	*0*	65	4	*0*	**64 [R]**	**5**	*1*	64	5	*1*
R 10.13		SFR	3	76 [E]	75	73	-1	-2	B (67)	A/E	70	3	*0*	68 [T]	5	*3*	67	6	*3*	67	6	*3*	**66 [R]**	**7**	*3*	66	7	*3*
R 10.14	--	COM	1	75 [E]	74	74	-1	0	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
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13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-2 – Predicted Future Noise Levels and Barrier Analysis – Segment 10 - Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Traffic + Train Noise Level Leq(h), dBA[1,3]	Design Year Train Noise Level Leq(h), dBA[1]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]: Design Year No Build Traffic Noise Level Leq(h), dBA[1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year Build Traffic Noise Level Leq(h), dBA[1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year No Build Traffic + Train Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR): 8 feet			10 feet			12 feet			14 feet			16 feet		
															Train + Traffic Noise Leq(h)	I.L.	NBR	Train + Traffic Noise Leq(h)	I.L.	NBR	Train + Traffic Noise Leq(h)	I.L.	NBR	Train + Traffic Noise Leq(h)	I.L.	NBR	Train + Traffic Noise Leq(h)	I.L.	NBR
R 10.15		SFR	4	66 [M,ST5]	66	60	67	61	67	1	1	0	B (67)	NONE	67	0	0	67	0	0	67	0	0	67	0	0	-- [10]	--	--
R 10.16		SFR	7	67 [E]	64	65	68	66	68	1	1	0	B (67)	A/E	67	1	0	67	1	0	66 [T]	2	0	66	2	0	-- [10]	--	--
R 10.16A [8]	Shoulder	--	--	69 [M,ST7,CAL]	72	69	74	70	74	--	1	0	--	--	73	1	0	73	1	0	73	1	0	73	1	0	-- [10]	--	--
R 10.17 [W]		SFR	7	70 [E]	66	67	70	68	70	0	1	0	B (67)	A/E	68	2	0	68	2	0	67 [T]	3	0	67	3	0	-- [10]	--	--
R 10.18		SFR	3	64 [E]	58	63	64	64	65	0	1	1	B (67)	NONE	64	1	0	64	1	0	62	3	0	62	3	0	-- [10]	--	--
R 10.19		SFR	5	66 [E]	63	64	66	65	67	0	1	1	B (67)	NONE	66	1	0	65	2	0	65	2	0	64	3	0	-- [10]	--	--
R 10.20		SFR	4	70 [M,LT5,CAL]	66	67	70	69	71	0	2	1	B (67)	A/E	69	2	0	69	2	0	68 [T]	3	0	68	3	0	-- [10]	--	--
R 10.20A [7]		SFR	16	63 [E]	60	60	63	61	63	0	1	0	B (67)	NONE	62	1	0	62	1	0	62	1	0	61	2	0	-- [10]	--	--
R 10.21	Shoulder	COM	1	72 [E]	69	68	72	68	72	0	0	0	E (72)	NONE	71	1	0	71	1	0	70	2	0	70	2	0	-- [10]	--	--
R 10.22		SFR	2	67 [E]	63	65	67	66	68	0	1	1	B (67)	A/E	66	2	0	66	2	0	65 [T]	3	0	65	3	0	-- [10]	--	--
R 10.23 [7]		SFR	12	62 [E]	59	58	62	59	62	0	1	0	B (67)	NONE	62	0	0	61	1	0	61	1	0	61	1	0	-- [10]	--	--
R 10.24		SFR	2	65 [E]	63	60	65	61	65	0	1	0	B (67)	NONE	64	1	0	64	1	0	64	1	0	64	1	0	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-3 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 11.1 B	--	MOT	1	67 E	67	68	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-1	--	MOT	--	67 E	67	66	0	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-1 int	--	MOT	4	42 E	42	41	0	-1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-2	--	MOT	--	71 E	71	71	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-2 Int	--	MOT	4	46 E	46	46	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-1	--	MOT	--	60 E	60	59	0	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-1 Int	--	MOT	2	35 E	35	34	0	-1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-2	--	MOT	--	64 E	64	64	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-2 Int	--	MOT	2	39 E	39	39	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.3 W	S1877[P] R/W	MH	6	72 E	72	72	0	0	B (67)	A/E	71	1	*0*	70	2	*0*	69 T	3	*0*	68	4	*0*	**67 R**	**5**	*6*
R 11.4 W	S1877[P] R/W	MH	16	74 M,LT6,CAL	74	74	0	0	B (67)	A/E	73	1	*0*	70 T	4	*0*	69	5	*16*	67	7	*16*	**67 R,5**	**7**	*16*
R 11.5 W	S1877[P] R/W	MH	8	72 E	72	71	0	-1	B (67)	A/E	71	0	*0*	69 T	2	*0*	67	4	*0*	66	5	*8*	**65 R,5**	**6**	*8*
R 11.6 B,W	S1877[P] R/W	MH	3	68 E	68	68	0	0	B (67)	A/E	67	1	*0*	66 T	2	*0*	64	4	*0*	63	5	*3*	**62 R,5**	**6**	*3*
R 11.7 B,W,7	S1877[P] R/W	MH	3	68 E	68	68	0	0	B (67)	A/E	67	1	*0*	67	1	*0*	65 T	3	*0*	64	4	*0*	**63 R**	**5**	*3*
R 11.8 B,W,7	S1877[P] R/W	MH	6	70 E	70	70	0	0	B (67)	A/E	69	1	*0*	69	1	*0*	67 T	3	*0*	66	4	*0*	66	4	*0*
R 11.9 B,W,7	S1877[P] R/W	MH	17	70 E	70	70	0	0	B (67)	A/E	68	2	*0*	67	3	*0*	65 T	5	*17*	64	6	*17*	**64 R,5**	**6**	*17*
R 11.10 B,W,7	S1877[P] R/W	MH	13	68 E	68	68	0	0	B (67)	A/E	67	1	*0*	66	2	*0*	64 T	4	*0*	64	4	*0*	**63 R**	**5**	*13*
R 11.11 B,W,7	S1877[P] R/W	MH	13	67 E	67	67	0	0	B (67)	A/E	66	1	*0*	66	1	*0*	64 T	3	*0*	64	3	*0*	63	4	*0*
R 11.12 B,W,7	S1877[P] R/W	MH	2	65 E	65	65	0	0	B (67)	NONE	64	1	*0*	64	1	*0*	63 T	2	*0*	62	3	*0*	61	4	*0*
R 11.13	--	COM	1	78 E	78	75	0	-3	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-3 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 11.14 W	S1907[P] R/W	SFR	1	71 M,ST9	74	72	3	-2	B (67)	A/E	70	2	*0*	68 T	4	*0*	**67 R**	**5**	***1***	67	5	*1*	67	5	*1*
R 11.14A W		SFR	1	73 E	76	75	3	-1	B (67)	A/E	70 T	5	*1*	69	6	*1*	**68 R,5**	**7**	***1***	67	8	*1*	65	10	*1*
R 11.15 W		SFR	1	62 E	65	65	3	0	B (67)	NONE	64	1	*0*	64	1	*0*	62	3	*0*	61	4	*0*	60	5	*1*
R 11.15A		SFR	5	68 E	71	70	3	-1	B (67)	A/E	68	2	*0*	68	2	*0*	66 T	4	*0*	**65 R**	**5**	***5***	64	6	*5*
R 11.16		SFR	6	72 E	75	73	3	-2	B (67)	A/E	70	3	*0*	68	5	*6*	67 T	6	*6*	**66 R,5**	**7**	***6***	65	8	*6*
R 11.16A W		SFR	7	66 E	70	69	4	-1	B (67)	A/E	68	1	*0*	67	2	*0*	65 T	4	*0*	65	4	*0*	**64 R**	**5**	***7***
R 11.17 B,8		SFR	--	73 M,ST11	77	74	4	-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.18 B		SFR	2	71 E	75	72	4	-3	B (67)	A/E	69	3	*0*	67 T	5	*2*	66	6	*2*	65	7	*2*	**65 R,5**	**7**	***2***
R 11.19 B,W		SFR	5	66 E	69	68	3	-1	B (67)	A/E	68	0	*0*	68	0	*0*	68	0	*0*	68	0	*0*	67	1	*0*
R 11.20 B,7		SFR	3	62 E	65	65	3	0	B (67)	NONE	64	1	*0*	64	1	*0*	64	1	*0*	63	2	*0*	63	2	*0*
R 11.21 B,7		SFR	8	64 E	67	66	3	-1	B (67)	A/E	65	1	*0*	65	1	*0*	64 T	2	*0*	62	4	*0*	62	4	*0*
R 11.22 B,7		SFR	6	62 E	66	66	4	0	B (67)	A/E	64	2	*0*	64	2	*0*	62 T	4	*0*	**61 R**	**5**	***6***	60	6	*6*
R 11.23 B,7		SFR	2	65 E	69	68	4	-1	B (67)	A/E	66	2	*0*	66	2	*0*	64 T	4	*0*	63	5	*2*	**62 R,5**	**6**	***2***
R 11.24-1 B		MFR	4	73 E	77	73	4	-4	B (67)	A/E	70	3	*0*	67 T	6	*4*	67	6	*4*	65	8	*4*	**65 R,5**	**8**	***4***
R 11.24-2 B,6		MFR	4	74 E	77	77	3	0	B (67)	A/E	77	0	*0*	77	0	*0*	76	1	*0*	74	3	*0*	**70 R,T**	**7**	***4***
R 11.25-1 B,W		MFR	2	73 E	74	71	1	-3	B (67)	A/E	69	2	*0*	68 T	3	*0*	67	4	*0*	66	5	*2*	**65 R,5**	**6**	***2***
R 11.25-2 B,W,6		MFR	2	73 E	75	74	2	-1	B (67)	A/E	74	0	*0*	74	0	*0*	74	0	*0*	72	2	*0*	70	4	*0*
R 11.26-1 B,7		MFR	6	63 E	67	66	4	-1	B (67)	A/E	63	3	*0*	63	3	*0*	61 T	5	*6*	61	5	*6*	**60 R,5**	**6**	***6***
R 11.26-2 B,W,6,7		MFR	6	66 E	69	67	3	-2	B (67)	A/E	67	0	*0*	66	1	*0*	65	2	*0*	64	3	*0*	63	4	*0*
R 11.27-1 B,W,7	--	MFR	2	63 E	61	63	-2	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.27-2 B,W,6,7		MFR	2	69 E	65	65	-4	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-3 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 11.28 W	SW1[X]	MH	3	72 M,ST12	65	66	-7	1	B (67)	A/E	-- T	--	--	65	1	0	64	2	0	64	2	0	63	3	0
R 11.29 B,W,7		MH	3	70 E	64	64	-6	0	B (67)	NONE	--	--	--	64 T	0	0	63	1	0	63	1	0	63	1	0
R 11.30 B,W,7		MH	3	69 E	64	65	-5	1	B (67)	NONE	--	--	--	64 T	1	0	64	1	0	63	2	0	63	2	0
R 11.31 B,W,7		MH	3	70 E	65	65	-5	0	B (67)	NONE	--	--	--	65 T	0	0	64	1	0	64	1	0	63	2	0
R 11.32 B,W,7		MH	3	67 E	61	62	-6	1	B (67)	NONE	--	--	--	62 T	0	0	61	1	0	61	1	0	60	2	0
R 11.33 W		REC	1	77 E	65	66	-12	1	C (67)	A/E	--	--	--	65 T	1	0	64	2	0	63	3	0	63	3	0
R 11.34 W		REC	1	73 E	64	65	-9	1	C (67)	NONE	--	--	--	64	1	0	63	2	0	63	2	0	62	3	0
R 11.34A W		REC	1	63 E	59	61	-4	2	C (67)	NONE	--	--	--	60	1	0	60	1	0	60	1	0	60	1	0
R 11.35 B,W		MH	6	75 E	65	66	-10	1	B (67)	A/E	--	--	--	65 T	1	0	64	2	0	64	2	0	63	3	0
R 11.36 B,W,7		MH	4	71 E	64	65	-7	1	B (67)	NONE	-- T	--	--	64	1	0	63	2	0	63	2	0	62	3	0
R 11.37 B,W		MH	4	72 E	63	64	-9	1	B (67)	NONE	--	--	--	63	1	0	63 T	1	0	62	2	0	62	2	0
R 11.38 B,W,7		MH	7	69 E	63	63	-6	0	B (67)	NONE	--	--	--	63 T	0	0	62	1	0	61	2	0	61	2	0
R 11.39 B,W		MH	8	71 E	64	65	-7	1	B (67)	NONE	--	--	--	64 T	1	0	64	1	0	63	2	0	63	2	0
R 11.40 B,W		MH	3	72 M,ST13	65	65	-7	0	B (67)	NONE	--	--	--	64	1	0	64 T	1	0	63	2	0	63	2	0
R 11.41 B,W,7		MH	8	66 E	62	62	-4	0	B (67)	NONE	--	--	--	62	0	0	61 T	1	0	61	1	0	60	2	0
R 11.42 B,W,7		MH	2	68 E	62	62	-6	0	B (67)	NONE	--	--	--	62	0	0	61 T	1	0	60	2	0	60	2	0
R 11.43	--	COM	1	71 E	75	76	4	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 11.44	S1969[P] R/W and Shoulder	SFR/FS	2	67 M,ST14	71	74	4	3	B (67)	A/E	69	5	2	68	6	2	**67 R,T**	**7**	2	67	7	2	67	7	2

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-3 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Traffic + Train Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
															8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year Train Noise Level Leq(h), dBA[1]	Design Year No Build Traffic Noise Level Leq(h), dBA[1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year Build Traffic Noise Level L eq(h), dBA[1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year No Build Traffic + Train Noise Level Minus Existing Conditions Leq(h), dBA[1,14]	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA[1]	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(H), dBA[1,12]	Activity Category (NAC)	Impact Type[4,13]	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 11.45		SFR	1	64 [E]	68	64	69	65	70	5	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.46	W	SFR	2	63 [M,LT7]	66	63	68	63	68	5	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.47	W	SFR	2	64 [E]	67	65	69	65	69	5	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.48	W,8	--	--	65 [M,ST10]	68	65	70	66	70	5	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.49	--	COM	1	63 [E]	65	64	68	65	68	5	1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Noise Level Leq(h), dBA".
14 - Noise measurements LT7 and ST10 were conducted when train cars were parked on tracks reducing the existing traffic and train noise levels.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-4 – Predicted Future Noise Levels and Barrier Analysis – Segment 12 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 12.1 K	--	SFR	2	62 M,ST15	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.2 K		SFR	2	60 E	60	61	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.3 K		SFR	4	63 E	63	65	0	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.4A K	--	SFR	1	67 E	59	59	-8	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.4B K		SFR	1	67 E	59	59	-8	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.4 K		SFR	4	70 M,LT8,CAL	57	57	-13	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.5 K		SFR	1	67 E	59	60	-8	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.6 B,K,7		SFR	2	59 E	55	55	-4	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.7	--	COM	1	70 E	71	72	1	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-1 W,8	--	MOT	--	66 E,H1B	67	67	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-1 W,Int		MOT	12	44 E	45	45	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-2 W,6		MOT	--	71 E	72	73	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-2 W,Int,6		MOT	12	49 E	50	51	1	1	D (52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-3 W		MOT	--	73 E	74	74	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-3 W,Int,12		MOT	12	51 E	52	52	1	0	D (52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.9 B,W		MOT	1	53 E	54	55	1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.10 W	S2033 R/W	REC	4	66 E	67	68	1	1	C (67)	A/E	62 T	6	*4*	62	6	*4*	**61 R**	**7**	***4***	61	7	*4*	60	8	*4*
R 12.11 B	--	SCH	1	56 E	57	57	1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
K - A calibration factor of -4 dB is applied for this receiver and adjacent receivers with similar geographic features.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Insertion losses obtained from interior versus exterior noise measurements have been been applied to exterior noise levels to determine interior noise levels: R12.8-1/H1B - Days Inn: 22 dB reduction.

Table B-5 – Predicted Future Noise Levels and Barrier Analysis – Segment 13 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	10 feet			12 feet			14 feet			16 feet			18 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R13.1-1 [B]	--	MOT	--	63 [E]	64	64	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1-1 [Int]		MOT	18	38 [E]	39	39	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1-2 [B,6]		MOT	--	65 [E]	66	67	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1-2 [Int,6]		MOT	18	40 [E]	41	42	1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1A		COM	1	67 [E]	68	68	1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-1 [B]	--	MOT	--	65 [E]	66	68	1	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-1 [Int]		MOT	15	40 [E]	41	43	1	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-2 [B,6]		MOT	--	69 [E]	70	70	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-2 [Int,6]		MOT	15	44 [E]	45	45	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.3	S2079[P] R/W	SFR	3	66 [E]	67	69	1	2	B (67)	A/E	66	3	*0*	65	4	*0*	64 [T]	5	*3*	**63** [R,5]	**6**	*3*	63	6	*3*
R13.4		SFR	1	68 [M,ST16A/LT9,CAL]	69	71	1	2	B (67)	A/E	68	3	*0*	66	5	*1*	65 [T]	6	*1*	**64** [R]	**7**	*1*	63	8	*1*
R13.5		COM	1	65 [E]	66	67	1	1	E (72)	NONE	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*	63	4	*0*
R13.6	--	REC	1	58 [E]	59	60	1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.7		REC	1	58 [E]	59	60	1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-6 – Predicted Future Noise Levels and Barrier Analysis – Segment 14 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 14.1	--	COM	1	72 M,ST119	76	77	4	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.3	S2145 R/W	SFR	1	67 M,ST16	67	68	0	1	B (67)	A/E	66	2	*0*	65	3	*0*	65	3	*0*	64	4	*0*	**63 R,T**	**5**	***1***
R 14.4		MOT	--	75 E	77	76	2	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.4 Int		MOT	3	55 E	57	56	2	-1	D (52)	A/E	54	2	*0*	53	3	*0*	52	4	*0*	51 T	5	*3*	**51 R**	**5**	***3***
R 14.5 W		MH	5	71 E	73	73	2	0	B (67)	A/E	70	3	*0*	71	2	*0*	69 T	4	*0*	68	5	*5*	**68 R,5**	**5**	***5***
R 14.6 W		MH	6	71 M,ST17	73	73	2	0	B (67)	A/E	71	2	*0*	70	3	*0*	69	4	*0*	68 T	5	*6*	67	6	*6*
R 14.7		MH	3	73 E	75	76	2	1	B (67)	A/E	72	4	*0*	70	6	*3*	70 T	6	*3*	69	7	*3*	69	7	*3*
R 14.7A B,W,7		MH	7	67 E	69	69	2	0	B (67)	A/E	68	1	*0*	67	2	*0*	65 T	4	*0*	64	5	*7*	**64 R,5**	**5**	***7***
R 14.7B B,W,7		MH	6	69 E	71	71	2	0	B (67)	A/E	69	2	*0*	68	3	*0*	66 T	5	*6*	65	6	*6*	65	6	*6*
R 14.8 B,W,7		MH	2	65 E	67	67	2	0	B (67)	A/E	65	2	*0*	64	3	*0*	63 T	4	*0*	62	5	*2*	**62 R,5**	**5**	***2***
R 14.8A		SFR	2	59	61	62	2	1	B (67)	NONE	61	1	*0*	60	2	*0*	59	3	*0*	59	3	*0*	59	3	*0*
R 14.8B		SFR	2	65	67	68	2	1	B (67)	A/E	65	3	*0*	65 T	3	*0*	64	4	*0*	63	5	*2*	62	6	*2*
R 14.9		SFR	2	71 M,LT10	73	74	2	1	B (67)	A/E	70	4	*0*	70	4	*0*	69 T	5	*2*	69	5	*2*	69	5	*2*
R 14.9A		SFR	--	72 M,ST17A/CAL	74	75	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.10 W		MH	3	68 E	70	71	2	1	B (67)	A/E	69	2	*0*	68	3	*0*	68 T	3	*0*	67	4	*0*	67	4	*0*
R 14.11 W		MH	3	68 E	70	71	2	1	B (67)	A/E	69	2	*0*	68	3	*0*	67 T	4	*0*	67	4	*0*	67	4	*0*
R 14.11A B,W,7		MH	2	62 E	64	64	2	0	B (67)	NONE	63	1	*0*	62	2	*0*	61	3	*0*	61	3	*0*	60	4	*0*
R 14.12 B,W,7		MH	2	61 E	63	63	2	0	B (67)	NONE	62	1	*0*	61	2	*0*	61	2	*0*	60	3	*0*	60	3	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 20 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-6 – Predicted Future Noise Levels and Barrier Analysis – Segment 14 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)											
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 14.1	--	COM	1	72 M,ST119	76	77	4	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--
R 14.3	S2145 R/W	SFR	1	67 M,ST16	67	68	0	1	B (67)	A/E	63	5	*1*	62	6	*1*	62	6	*1*	62	6	*1*
R 14.4		MOT	--	75 E	77	76	2	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.4 Int		MOT	3	55 E	57	56	2	-1	D (52)	A/E	51	5	*3*	50	6	*3*	50	6	*3*	50	6	*3*
R 14.5 W		MH	5	71 E	73	73	2	0	B (67)	A/E	67	6	*5*	67	6	*5*	66	7	*5*	66	7	*5*
R 14.6 W		MH	6	71 M,ST17	73	73	2	0	B (67)	A/E	67	6	*6*	**66 R,5**	**7**	***6***	66	7	*6*	65	8	*6*
R 14.7		MH	3	73 E	75	76	2	1	B (67)	A/E	69	7	*3*	**69 R,5**	**7**	***3***	69	7	*3*	68	8	*3*
R 14.7A B,W,7		MH	7	67 E	69	69	2	0	B (67)	A/E	63	6	*7*	63	6	*7*	62	7	*7*	62	7	*7*
R 14.7B B,W,7		MH	6	69 E	71	71	2	0	B (67)	A/E	64	7	*6*	**63 R,5**	**8**	***6***	63	8	*6*	63	8	*6*
R 14.8 B,W,7		MH	2	65 E	67	67	2	0	B (67)	A/E	62	5	*2*	61	6	*2*	61	6	*2*	60	7	*2*
R 14.8A		SFR	2	59	61	62	2	1	B (67)	NONE	59	3	*0*	59	3	*0*	59	3	*0*	58	4	*0*
R 14.8B		SFR	2	65	67	68	2	1	B (67)	A/E	61	7	*2*	61	7	*2*	**60 R,5**	**8**	***2***	60	8	*2*
R 14.9		SFR	2	71 M,LT10	73	74	2	1	B (67)	A/E	69	5	*2*	68	6	*2*	**68 R,5**	**6**	***2***	68	6	*2*
R 14.9A		SFR	--	72 M,ST17A/CAL	74	75	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.10 W		MH	3	68 E	70	71	2	1	B (67)	A/E	67	4	*0*	67	4	*0*	**66 R**	**5**	***3***	66	5	*3*
R 14.11 W		MH	3	68 E	70	71	2	1	B (67)	A/E	66	5	*3*	66	5	*3*	**66 R,5**	**5**	***3***	66	5	*3*
R 14.11A B,W,7		MH	2	62 E	64	64	2	0	B (67)	NONE	60	4	*0*	59	5	*2*	**59 R,5**	**5**	***2***	59	5	*2*
R 14.12 B,W,7		MH	2	61 E	63	63	2	0	B (67)	NONE	60	3	*0*	59	4	*0*	59	4	*0*	59	4	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 20 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-6 – Predicted Future Noise Levels and Barrier Analysis – Segment 14 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Traffic Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year Train Noise Level Leq(h), dBA[1]	Design Year No Build Traffic Noise Level Leq(h), dBA[1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year Build Traffic Noise Level Leq(h), dBA[1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year No Build Traffic Noise Level Minus Existing Conditions Leq(h), dBA[1]	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA[1]	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(H), dBA[1,12]	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
															Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 14.1A		SCH	1	62 [E]	56	62	63	63	64	0	1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.1B	--	SCH	1	63 [E]	58	63	64	64	65	0	1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.2		MFR	2	64 [E]	46	64	64	65	65	0	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Noise Level Leq(h), dBA".
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 20 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-7 – Predicted Future Noise Levels and Barrier Analysis – Segment 15 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 15.1 W	SW5[X] R/W	SFR	2	68 M,ST19	68	69	0	1	B (67)	A/E	--	--	--	--	--	--	68	1	0	67	2	0	66 T	3	0
R 15.2 W		SFR	3	68 E	68	68	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	68 T	0	0	67	1	0
R 15.3 W		SFR	1	66 E	66	66	0	0	B (67)	A/E	--	--	--	--	--	--	66	0	0	65	1	0	65 T	1	0
R 15.4 B,W,7		SFR	2	65 E	65	66	0	1	B (67)	A/E	--	--	--	--	--	--	65	1	0	64	2	0	64	2	0
R 15.5 B,W,7		SFR	4	65 E	65	65	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	64	1	0	64	1	0
R 15.6 W		SFR	3	66 E	66	66	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	65	1	0	64	2	0
											18 feet			20 feet			22 feet			24 feet			--		
R 15.1 W	SW5[X] R/W	SFR	2	68 M,ST19	68	69	0	1	B (67)	A/E	65	4	0	65	4	0	64	5	2	64	5	2	--	--	--
R 15.2 W		SFR	3	68 E	68	68	0	0	B (67)	A/E	66	2	0	66	2	0	65	3	0	65	3	0	--	--	--
R 15.3 W		SFR	1	66 E	66	66	0	0	B (67)	A/E	64	2	0	64	2	0	64	2	0	64	2	0	--	--	--
R 15.4 B,W,7		SFR	2	65 E	65	66	0	1	B (67)	A/E	63 T	3	0	63	3	0	63	3	0	63	3	0	--	--	--
R 15.5 B,W,7		SFR	4	65 E	65	65	0	0	B (67)	NONE	63	2	0	63	2	0	64	1	0	64	1	0	--	--	--
R 15.6 W		SFR	3	66 E	66	66	0	0	B (67)	A/E	64 T	2	0	63	3	0	63	3	0	63	3	0	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take in Alternative 3.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-7 – Predicted Future Noise Levels and Barrier Analysis – Segment 15 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 15.7 [W]	SW5[X] Shoulder	SFR	2	69 [E]	67	68	-2	1	B (67)	A/E	--	--	--	--	--	--	67 [T]	1	0	66	2	0	-- [10]	--	--
R 15.8 [W]		SFR	5	69 [E]	67	67	-2	0	B (67)	A/E	--	--	--	67 [T]	0	0	66	1	0	66	1	0	-- [10]	--	--
R 15.9 [W]		SFR	4	69 [M,ST19A,CAL]	67	67	-2	0	B (67)	A/E	-- [T]	--	--	66	1	0	66	1	0	65	2	0	-- [10]	--	--
R 15.10 [B,W]		SFR	4	67 [M,LT12]	65	65	-2	0	B (67)	NONE	--	--	--	65	0	0	65	0	0	64	1	0	-- [10]	--	--
R 15.11 [B,W,7]		SFR	4	68 [E]	66	66	-2	0	B (67)	A/E	--	--	--	65	1	0	64 [T]	2	0	64	2	0	-- [10]	--	--
R 15.12	--	COM	1	75 [E]	73	74	-2	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take in Alternative 3.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-7 – Predicted Future Noise Levels and Barrier Analysis – Segment 15 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Traffic Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
															8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year Train Noise Level Leq(h), dBA[1]	Design Year No Build Traffic Noise Level Leq(h), dBA[1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year Build Traffic Noise Level Leq(h), dBA[1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year No Build Traffic Noise Level Minus Existing Conditions Leq(h), dBA[14]	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 15.13	Shoulder	SFR	5	60 [M,ST18]	64	60	65	61	65	0	1	0	B (67)	NONE	65	0	*0*	65	0	*0*	65	0	*0*	65	0	*0*	-- [10]	--	--
R 15.14		SFR	5	66 [E]	70	66	71	67	71	0	1	0	B (67)	A/E	71	0	*0*	71	0	*0*	71 [T]	0	*0*	70	1	*0*	-- [10]	--	--
R 15.15		SFR	6	69 [E]	70	66	71	67	72	-3	1	1	B (67)	A/E	71	1	*0*	71	1	*0*	71 [T]	1	*0*	71	1	*0*	-- [10]	--	--
R 15.16		SFR	6	66 [M,LT11,CAL]	68	63	69	65	70	-3	2	1	B (67)	NONE	69	1	*0*	69	1	*0*	69	1	*0*	69	1	*0*	-- [10]	--	--
R 15.17		SFR	2	66 [E]	68	63	69	65	69	-3	2	0	B (67)	NONE	69	0	*0*	69	0	*0*	69	0	*0*	69	0	*0*	-- [10]	--	--
R 15.18		SFR	2	65 [E]	68	62	69	64	69	-3	2	0	B (67)	NONE	69	0	*0*	69	0	*0*	68	1	*0*	68	1	*0*	-- [10]	--	--
R 15.19		SFR	3	66 [E]	66	63	68	63	68	-3	0	0	B (67)	NONE	68	0	*0*	67	1	*0*	67	1	*0*	67	1	*0*	-- [10]	--	--
R 15.20	--	SFR	4	62 [E]	64	64	67	63	66	2	-1	-1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 15.21		SFR	3	57 [E]	66	59	66	60	67	2	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 15.22		SFR	4	55 [M,ST20]	62	57	63	58	63	2	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 15.23		SFR	5	56 [E]	60	58	62	58	62	2	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."
14 - Existing Conditions do not include train noise for ST18 and ST20; however there is potential train noise included in noise measurement LT11.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-8 – Predicted Future Noise Levels and Barrier Analysis – Segment 16 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 16.1 [B,W]	--	MOT	1	61 [E]	62	62	1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 16.2 [B]	Shoulder	SFR	1	69 [E]	70	70	1	0	B (67)	A/E	69	1	*0*	68	2	*0*	67 [T]	3	*0*	67	3	*0*	-- [10]	--	--
R 16.3 [B]		COM	1	75 [E]	76	76	1	0	E (72)	A/E	71	5	*1*	69	7	*1*	68	8	*1*	67 [T]	9	*1*	-- [10]	--	--
R 16.4 [B]		SFR	1	70 [E]	71	72	1	1	B (67)	A/E	69	3	*0*	68	4	*0*	68	4	*0*	67 [T]	5	*1*	-- [10]	--	--
R 16.5 [B,W,7]		SFR	4	65 [E]	66	65	1	-1	B (67)	NONE	64	1	*0*	64	1	*0*	62	3	*0*	62	3	*0*	-- [10]	--	--
R 16.6 [B,W]		REL	1	63 [E]	64	63	1	-1	--	--	62	1	*0*	62	1	*0*	60	3	*0*	59	4	*0*	-- [10]	--	--
R 16.7 [B,7]		SFR	2	61 [E]	62	63	1	1	B (67)	NONE	62	1	*0*	61	2	*0*	60	3	*0*	59	4	*0*	-- [10]	--	--
R 16.8 [B,7]		MH	6	65 [E]	66	65	1	-1	B (67)	NONE	63	2	*0*	63	2	*0*	62	3	*0*	60	5	*6*	-- [10]	--	--
R 16.9 [B,7]		SFR	6	62 [E]	63	63	1	0	B (67)	NONE	61	2	*0*	61	2	*0*	60	3	*0*	60	3	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take in Alternative 3.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-8 – Predicted Future Noise Levels and Barrier Analysis – Segment 16 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 16.10 [W,B]	R/W & Shoulder	SFR	3	63 [E]	64	65	1	1	B (67)	NONE	65	0	*0*	65	0	*0*	65	0	*0*	65	0	*0*	65	0	*0*
R 16.11 [W,B]		SFR	3	61 [M,LT13]	62	63	1	1	B (67)	NONE	62	1	*0*	62	1	*0*	61	2	*0*	61	2	*0*	61	2	*0*
R 16.12 [B]		SFR	1	66 [E]	67	67	1	0	B (67)	A/E	65	2	*0*	64	3	*0*	64	3	*0*	63 [T]	4	*0*	63	4	*0*
R 16.13 [B]		SFR	4	65 [E]	66	66	1	0	B (67)	A/E	65	1	*0*	64	2	*0*	63	3	*0*	62 [T]	4	*0*	62	4	*0*
R 16.14 [B]		SFR	2	62 [E]	63	64	1	1	B (67)	NONE	63	1	*0*	63	1	*0*	62	2	*0*	62	2	*0*	62	2	*0*
R 16.15-1		MOT	--	67 [E]	67	68	0	1	--	--	65	3	--	65	3	--	64	4	--	63	5	--	-- [10]	--	--
R 16.15-1 [Int,B]		MOT	6	42 [E]	42	43	0	1	D (52)	NONE	40	3	*0*	40	3	*0*	39	4	*0*	38	5	*6*	-- [10]	--	--
R 16.15-2		MOT	--	71 [E]	71	71	0	0	--	--	69	2	--	68	3	--	68	3	--	66	5	--	-- [10]	--	--
R 16.15-2 [Int,B,6]		MOT	6	46 [E]	46	46	0	0	D (52)	NONE	44	2	*0*	43	3	*0*	43	3	*0*	41	5	*6*	-- [10]	--	--
R 16.16-1		MOT	--	67 [E]	67	67	0	0	--	--	65	2	--	64	3	--	63	4	--	62	5	--	-- [10]	--	--
R 16.16-1 [Int,B]		MOT	14	42 [E]	42	42	0	0	D (52)	NONE	40	2	*0*	39	3	*0*	38	4	*0*	37	5	*14*	-- [10]	--	--
R 16.16-2		MOT	--	71 [E]	71	71	0	0	--	--	69	2	--	68	3	--	68	3	--	67	4	--	-- [10]	--	--
R 16.16-2 [Int,B,6]		MOT	14	46 [E]	46	46	0	0	D (52)	NONE	44	2	*0*	43	3	*0*	43	3	*0*	42	4	*0*	-- [10]	--	--
R 16.17 [B,W]		MOT	1	70 [M,ST20A,CAL]	70	70	0	0	E (72)	NONE	67	3	*0*	66	4	*0*	65	5	*1*	64	6	*1*	-- [10]	--	--
R 16.18 [B,7]		SFR	8	61 [E]	62	63	1	1	B (67)	NONE	62	1	*0*	61	2	*0*	61	2	*0*	60	3	*0*	-- [10]	--	--
R 16.19 [B,7]		SFR	3	63 [E]	64	65	1	1	B (67)	NONE	63	2	*0*	63	2	*0*	63	2	*0*	62	3	*0*	-- [10]	--	--
R 16.20-1		MOT	--	66 [E]	66	67	0	1	--	--	65	2	--	65	2	--	65	2	--	64	3	--	-- [10]	--	--
R 16.20-1 [Int,B]		MOT	4	41 [E]	41	42	0	1	D (52)	NONE	40	2	*0*	40	2	*0*	40	2	*0*	39	3	*0*	-- [10]	--	--
R 16.20-2		MOT	--	69 [E]	69	69	0	0	--	--	67	2	--	67	2	--	67	2	--	66	3	--	-- [10]	--	--
R 16.20-2 [Int,B,6]		MOT	4	44 [E]	44	44	0	0	D (52)	NONE	42	2	*0*	42	2	*0*	42	2	*0*	41	3	*0*	-- [10]	--	--
R 16.21 [B]		MOT	1	61 [E]	61	61	0	0	E (72)	NONE	60	1	*0*	60	1	*0*	60	1	*0*	60	1	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-8 – Predicted Future Noise Levels and Barrier Analysis – Segment 16 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Traffic Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
															8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year Train Noise Level Leq(h), dBA[1]	Design Year No Build Traffic Noise Level Leq(h), dBA[1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year Build Traffic Noise Level Leq(h), dBA[1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year No Build Traffic Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 16.22	--	SFR	3	55 [E]	61	57	63	58	63	2	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 16.23		SFR/MFR	14	56 [E]	60	58	62	59	62	2	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - $L_{eq(h)}$ are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R17. 1A-1	--	MOT	--	67 C	67	69	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-1 Int		MOT	6	39 C	39	41	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-2 6		MOT	--	70 C	70	72	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-2 Int,6		MOT	6	42 C	42	44	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-3 12		MOT	--	71 C	71	72	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-3 Int,12		MOT	6	43 C	43	44	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-1		MOT	--	70 C	70	72	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-1 Int		MOT	6	42 C	42	44	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-2 6		MOT	--	73 C	73	74	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-2 Int,6		MOT	6	45 C	45	46	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-3 12		MOT	--	74 C	74	75	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-3 Int,12		MOT	6	46 C	46	47	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. A 28 dB reduction has been applied to exterior noise levels based on building noise reduction measurements conducted for this site.

Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 2 [13]	SW241[X] Property Line	SFR	1	66 [C]	58	59	-8	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 3 [13]		SFR	1	67 [C]	58	59	-9	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 4 [13]		SFR	2	67 [C]	58	59	-9	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 5 [13]		SFR	2	68 [C]	58	59	-10	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 6 [13]		SFR	2	68 [C]	59	60	-9	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 7 [13]		SFR	2	69 [C]	59	60	-10	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 8 [13]		SFR	1	69 [C]	61	63	-8	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 9 [9]	--	--	--	74 [M,ST23]	74	77	0	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 10 [B,7]	--	SFR	3	62 [C]	62	64	0	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 11 [W]	--	SFR	4	59 [C]	59	60	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 12 [W]		SFR	12	60 [C]	60	62	0	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 13 [W]		SFR	7	61 [C]	61	61	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 14 [W]		SFR	3	62 [C]	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
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B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R17. 15 [W]	SW264[X] Property Line	SFR	2	65 [E]	64	66	-1	2	B (67)	A/E	--	--	--	65	1	*0*	64	2	*0*	63	3	*0*	62	4	*0*
R17. 16 [W]		SFR	3	65 [E]	64	66	-1	2	B (67)	A/E	--	--	--	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R17. 17 [W]		SFR	5	66 [M,LT14,CAL]	65	66	-1	1	B (67)	A/E	--	--	--	65	1	*0*	65	1	*0*	64	2	*0*	63	3	*0*
R17. 18 [W]		SFR	6	65 [E]	64	67	-1	3	B (67)	A/E	--	--	--	66	1	*0*	66	1	*0*	65	2	*0*	65	2	*0*
R17. 19 [B,W,7]		SFR	2	63 [E]	62	62	-1	0	B (67)	NONE	--	--	--	62	0	*0*	62	0	*0*	61	1	*0*	61	1	*0*
R17. 20 [B,W,7]		SFR	6	63 [E]	62	64	-1	2	B (67)	NONE	--	--	--	63	1	*0*	63	1	*0*	63	1	*0*	62	2	*0*
R17. 21 [B,W,7]		SFR	3	64 [E]	63	64	-1	1	B (67)	NONE	--	--	--	64	0	*0*	63	1	*0*	63	1	*0*	62	2	*0*
R17. 22 [B,W,7]		SFR	3	65 [E]	64	65	-1	1	B (67)	NONE	--	--	--	64	1	*0*	63	2	*0*	63	2	*0*	62	3	*0*
R17. 23 [B,W,7]		SFR	4	63 [E]	62	63	-1	1	B (67)	NONE	--	--	--	63	0	*0*	62	1	*0*	62	1	*0*	61	2	*0*
R17. 24 [B,W,7]		SFR	3	66 [E]	65	68	-1	3	B (67)	A/E	--	--	--	67	1	*0*	67	1	*0*	67	1	*0*	67	1	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
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Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R17. 18 [W]	S2435[P] R/W and S2437[P] Shoulder	SFR	5	65 [E]	64	67	-1	3	B (67)	A/E	65	2	*0*	65	2	*0*	64	3	*0*	64	3	*0*	64	3	*0*
R17. 24 [B,W,7]		SFR	3	66 [E]	65	68	-1	3	B (67)	A/E	65	3	*0*	65	3	*0*	64	4	*0*	64	4	*0*	64	4	*0*
R17. 25 [B,W]		MFR	4	68 [E]	66	66	-2	0	B (67)	A/E	64	2	*0*	62 [T]	4	*0*	61	5	*4*	**61 [R,5]**	**5**	***4***	60	6	*4*
R17. 26 [W]		MFR	3	70 [E]	68	68	-2	0	B (67)	A/E	66	2	*0*	64 [T]	4	*0*	63	5	*3*	**62 [R,5]**	**6**	***3***	62	6	*3*
R17. 27 [B,W]		MFR	3	68 [E]	66	66	-2	0	B (67)	A/E	63	3	*0*	61 [T]	5	*3*	60	6	*3*	**59 [R]**	**7**	***3***	59	7	*3*
R17. 28 [B,W]		MFR	1	61 [E]	59	60	-2	1	B (67)	NONE	59	1	*0*	59 [T]	1	*0*	58	2	*0*	58	2	*0*	58	2	*0*
R17. 29 [B,W]		MFR	2	68 [E]	66	66	-2	0	B (67)	A/E	64	2	*0*	62 [T]	4	*0*	62	4	*0*	**61 [R]**	**5**	***2***	61	5	*2*
R17. 30 [W,8]		MFR	--	70 [M,ST25]	68	68	-2	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 31 [B,W,7]		MFR	3	60 [E]	58	58	-2	0	B (67)	NONE	55	3	*0*	55	3	*0*	53	5	*3*	**52 [R,5]**	**6**	***3***	52	6	*3*
R17. 32 [B,W]	--	MFR	10	59 [E]	57	57	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
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8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
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10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
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Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R17. 33A	--	REL	--	68 C	68	69	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 33A Int		REL	1	43 C	43	44	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 33	--	COM	1	75 C	75	76	0	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 34	S2384[P] R/W and S2382[P] Shoulder	SFR	1	69 C	69	70	0	1	B (67)	A/E	68	2	*0*	67	3	*0*	66 T	4	*0*	65	5	*1*	**63 R**	**7**	***1***
R17. 35 8		--	--	66 M,ST21	67	69	1	2	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 36	--	COM	1	74 C	74	76	0	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 37		COM	1	77 M,ST121	79	80	2	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

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2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
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T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. A 25 dB reduction has been applied to exterior noise levels.

Table B-9 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 38	S2434A[P] R/W and S2438[P] Shoulder Option 1	MH	4	75 [M,ST24]	77	78	2	1	B (67)	A/E	71	7	*4*	70 [T]	8	*4*	68	10	*4*	**67 [R,5]**	**11**	***4***	67	11	*4*
R17. 39		MH	6	71 [E]	73	75	2	2	B (67)	A/E	72	3	*0*	71 [T]	4	*0*	**70 [R]**	**5**	***6***	70	5	*6*	70	5	*6*
R17. 40		MH	6	68 [E]	70	71	2	1	B (67)	A/E	68	3	*0*	65 [T]	6	*6*	**64 [R]**	**7**	***6***	64	7	*6*	63	8	*6*
R17. 41 [B,7]		MH	1	71 [E]	73	74	2	1	B (67)	A/E	71	3	*0*	70	4	*0*	68	6	*1*	67	7	*1*	**67 [R,5]**	**7**	***1***
R17. 42 [B,7]		MH	2	68 [E]	70	71	2	1	B (67)	A/E	69	2	*0*	68	3	*0*	67	4	*0*	67	4	*0*	**66 [R]**	**5**	***2***
R17. 43 [B,7]		MH	7	68 [E]	70	72	2	2	B (67)	A/E	70	2	*0*	69	3	*0*	**67 [R]**	**5**	***7***	67	5	*7*	66	6	*7*
R17. 44 [B,7]		MH	6	67 [E]	69	71	2	2	B (67)	A/E	68	3	*0*	68	3	*0*	**66 [R]**	**5**	***6***	66	5	*6*	65	6	*6*
R17. 45 [B,7]		MH	4	66 [E]	68	69	2	1	B (67)	A/E	66	3	*0*	66	3	*0*	**64 [R]**	**5**	***4***	63	6	*4*	63	6	*4*
R17. 46 [W]		SFR	2	65 [E]	66	68	1	2	B (67)	A/E	66	2	*0*	64 [T]	4	*0*	**63 [R]**	**5**	***2***	63	5	*2*	62	6	*2*
R17. 47A [W]		SFR	2	66 [E]	67	68	1	1	B (67)	A/E	67	1	*0*	65 [T]	3	*0*	64	4	*0*	**63 [R]**	**5**	***2***	63	5	*2*
R17. 47 [9]		--	--	68 [M,LT15,CAL]	69	69	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 48		SFR	2	67 [E]	68	68	1	0	B (67)	A/E	67	1	*0*	67 [T]	1	*0*	66	2	*0*	65	3	*0*	65	3	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
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Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R17. 38		MH	4	75 [M,ST24]	77	78	2	1	B (67)	A/E	72	6	*4*	69 [T]	9	*4*	**68** [R,5]	**10**	***4***	68	10	*4*	-- [10]	--	--
R17. 39		MH	6	71 [E]	73	75	2	2	B (67)	A/E	70	5	*6*	69 [T]	6	*6*	**67** [R,5]	**8**	***6***	66	9	*6*	-- [10]	--	--
R17. 40		MH	6	68 [E]	70	71	2	1	B (67)	A/E	68	3	*0*	66 [T]	5	*6*	64	7	*6*	**64** [R,5]	**7**	***6***	-- [10]	--	--
R17. 41 [B,7]	S2434B[P] and S2438[P] Shoulder Option 2	MH	1	71 [E]	73	74	2	1	B (67)	A/E	69	5	*1*	69	5	*1*	**67** [R,5]	**7**	***1***	67	7	*1*	-- [10]	--	--
R17. 42 [B,7]		MH	2	68 [E]	70	71	2	1	B (67)	A/E	67	4	*0*	67	4	*0*	**66** [R]	**5**	***2***	66	5	*2*	-- [10]	--	--
R17. 43 [B,7]		MH	7	68 [E]	70	72	2	2	B (67)	A/E	68	4	*0*	67	5	*7*	**65** [R,5]	**7**	***7***	64	8	*7*	-- [10]	--	--
R17. 44 [B,7]		MH	6	67 [E]	69	71	2	2	B (67)	A/E	67	4	*0*	66	5	*6*	**64** [R,5]	**7**	***6***	64	7	*6*	-- [10]	--	--
R17. 45 [B,7]		MH	4	66 [E]	68	69	2	1	B (67)	A/E	66	3	*0*	66	3	*0*	63	6	*4*	**63** [R,5]	**6**	***4***	-- [10]	--	--
R17. 46 [W]		SFR	2	65 [E]	66	68	1	2	B (67)	A/E	66	2	*0*	64 [T]	4	*0*	63	5	*2*	**63** [R,5]	**5**	***2***	-- [10]	--	--
R17. 47A [W]		SFR	2	66 [E]	67	68	1	1	B (67)	A/E	67	1	*0*	65 [T]	3	*0*	64	4	*0*	**63** [R]	**5**	***2***	-- [10]	--	--
R17. 47 [9]		--	--	68 [M,LT15,CAL]	69	69	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R17. 48		SFR	2	67 [E]	68	68	1	0	B (67)	A/E	67	1	*0*	67 [T]	1	*0*	66	2	*0*	65	3	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
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7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-10 – Predicted Future Noise Levels and Barrier Analysis – Segment 18 – Alternative 2

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA1						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R18. 1	--	COM	1	72 [E]	70	70	-2	0	F	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 2		COM	1	72 [E]	70	70	-2	0	F	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 3	--	REC	1	73 [E]	71	71	-2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 4		REC	1	70 [E]	68	68	-2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 5	--	COM	1	70 [E]	70	71	0	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 6-1	S2476[P] Shoulder	MFR	2	66 [M,ST26]	66	67	0	1	B (67)	A/E	64	3	*0*	63	4	*0*	**62** [R,T]	**5**	***2***	61	6	*2*	-- [10]	--	--
R18. 6-2 [6]		MFR	2	69 [E]	69	69	0	0	B (67)	A/E	64	5	*2*	64	5	*2*	**62** [R,T,5]	**7**	***2***	61	8	*2*	-- [10]	--	--
R18. 7-1		MFR	6	65 [E]	65	64	0	-1	B (67)	NONE	61	3	*0*	61	3	*0*	**59** [R,T]	**5**	***6***	58	6	*6*	-- [10]	--	--
R18. 7-2 [6]		MFR	6	67 [E]	67	66	0	-1	B (67)	A/E	63	3	*0*	62	4	*0*	62	4	*0*	61	5	*6*	-- [10]	--	--
R18. 8-1		MFR	8	65 [E]	65	65	0	0	B (67)	NONE	62	3	*0*	61	4	*0*	**59** [R,T]	**6**	***8***	58	7	*8*	-- [10]	--	--
R18. 8-2 [6]		MFR	8	68 [E]	68	67	0	-1	B (67)	A/E	63	4	*0*	62	5	*8*	**60** [R,T,5]	**7**	***8***	59	8	*8*	-- [10]	--	--
R18. 9-1 [7]		MFR	4	62 [E]	62	61	0	-1	B (67)	NONE	58	3	*0*	58	3	*0*	**56** [R,T]	**5**	***4***	55	6	*4*	-- [10]	--	--
R18. 9-2 [6,7]		MFR	4	64 [E]	64	63	0	-1	B (67)	NONE	60	3	*0*	60	3	*0*	59	4	*0*	58	5	*4*	-- [10]	--	--
R18. 10-1 [7]		MFR	4	60 [E]	60	61	0	1	B (67)	NONE	59	2	*0*	58	3	*0*	57	4	*0*	56	5	*4*	-- [10]	--	--
R18. 10-2 [6,7]		MFR	4	63 [E]	63	63	0	0	B (67)	NONE	61	2	*0*	60	3	*0*	59	4	*0*	59	4	*0*	-- [10]	--	--
R18. 11-1		MFR	2	67 [E]	67	68	0	1	B (67)	A/E	65	3	*0*	64	4	*0*	**63** [R,T]	**5**	***2***	62	6	*2*	-- [10]	--	--
R18. 11-2 [6]		MFR	2	70 [E]	70	70	0	0	B (67)	A/E	66	4	*0*	65	5	*2*	**64** [R,T,5]	**6**	***2***	63	7	*2*	-- [10]	--	--
R18. 12-1		MFR	4	67 [E]	67	68	0	1	B (67)	A/E	64	4	*0*	64	4	*0*	**62** [R,T]	**6**	***4***	62	6	*4*	-- [10]	--	--
R18. 12-2 [6]		MFR	4	70 [E]	70	70	0	0	B (67)	A/E	66	4	*0*	65	5	*4*	**63** [R,T,5]	**7**	***4***	62	8	*4*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; RS - radio station; PI - public institute.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-10 – Predicted Future Noise Levels and Barrier Analysis – Segment 18 – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA1						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18. 13-1 [7]	S2476[P] Shoulder	MFR	2	66 [E]	66	66	0	0	B (67)	A/E	62	4	0	62	4	0	**60** [R,T]	**6**	**2**	60	6	2	-- [10]	--	--
R18. 13-2 [6,7]		MFR	2	68 [E]	68	68	0	0	B (67)	A/E	64	4	0	63	5	2	**62** [R,T,5]	**6**	**2**	61	7	2	-- [10]	--	--
R18. 14-1		MFR	6	68 [E]	68	69	0	1	B (67)	A/E	65	4	0	65	4	0	**63** [R,T]	**6**	**6**	63	6	6	-- [10]	--	--
R18. 14-2 [6]		MFR	6	71 [E]	71	72	0	1	B (67)	A/E	67	5	6	66	6	6	**65** [R,T,5]	**7**	**6**	64	8	6	-- [10]	--	--
R18. 15-1		MFR	4	67 [E]	67	67	0	0	B (67)	A/E	65	2	0	64	3	0	63 [T]	4	0	**62** [R]	**5**	**4**	-- [10]	--	--
R18. 15-2 [6]		MFR	4	69 [E]	69	70	0	1	B (67)	A/E	66	4	0	65	5	4	64 [T]	6	4	**64** [R,5]	**6**	**4**	-- [10]	--	--
R18. 16-1		MFR	4	62 [E]	62	64	0	2	B (67)	NONE	60	4	0	60	4	0	59 [T]	5	4	**58** [R,5]	**6**	**4**	-- [10]	--	--
R18. 16-2 [6]		MFR	4	67 [E]	67	69	0	2	B (67)	A/E	66	3	0	65	4	0	64 [T]	5	4	**64** [R,5]	**5**	**4**	-- [10]	--	--
R18. 17 [B,W,7]		SFR	3	62 [E]	62	63	0	1	B (67)	NONE	61	2	0	61	2	0	60	3	0	60	3	0	-- [10]	--	--
R18. 18 [W]		SFR	8	62 [M,LT16,ST26A,CAL]	62	63	0	1	B (67)	NONE	62	1	0	61	2	0	61	2	0	60	3	0	-- [10]	--	--
R18. 19 [W]		SFR	5	63 [E]	63	63	0	0	B (67)	NONE	63	0	0	63	0	0	62	1	0	62	1	0	-- [10]	--	--
R18. 20	--	MFR	4	64 [E]	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 21		MFR	4	63 [M,ST27]	63	64	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 22		MFR	4	64 [E]	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 23	--	COM	1	68 [E]	68	68	0	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 24	--	COM	1	72 [M,ST28]	70	69	-2	-1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 25	Shoulder	RS	--	73 [E]	71	72	-2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 25 [Int]		RS	1	48 [E]	46	47	-2	1	D (52)	NONE	44	3	0	43	4	0	42	5	1	41	6	1	-- [10]	--	--
R18. 26		PI	1	67 [E]	65	66	-2	1	C (67)	A/E	63	3	0	62	4	0	62	4	0	61	5	1	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; RS - radio station; PI - public institute.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates that no barrier was analuzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-11 – Predicted Future Noise Levels and Barrier Analysis – Segment 18A – Alternative 2

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R18A. 1A	--	COM	1	74 C	74	77	0	3	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 1	--	SCH	1	62 C	62	64	0	2	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-1	--	MOT	--	62 C	62	62	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-1 Int		MOT	5	37 C	37	37	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-2 6		MOT	--	65 C	66	66	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-2 6,Int		MOT	5	40 C	41	41	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 3	--	MOT	1	61 C	61	62	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-1		MOT	--	61 C,H6	61	62	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-1 Int		MOT	4	38 C	38	39	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-2 6		MOT	--	67 C	68	69	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-2 6,Int		MOT	4	44 C	45	46	1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-1		MOT	--	63 C	63	63	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-1 Int		MOT	4	40 C	40	40	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-2 6		MOT	--	70 C	70	71	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-2 6,Int		MOT	4	47 C	47	48	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; PI - public institute.

3 - M - Measured noise level; STxx or LTxx - measurement site number; C - calculated existing noise level; CAL - model calibration site; Hxx - indoor/outdoor measurement; E - estimated from No Build noise level and measurement sites.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of a calibration location.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels of Americas Best Value Inn based o building construction; a 23, 20, and 25 dB reduction has been applied to exterior noise levels of Super 8, Good Nite Inn, and Country Inn Suites, respectively, based on building noise reduction measurements conducted at these sites.

Table B-11 – Predicted Future Noise Levels and Barrier Analysis – Segment 18A – Alternative 2 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18A. 6 [8]		MOT	-	76 [C,ST28A,CAL]	76	76	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-1 [B,W]		MOT	--	70 [C,H18]	70	70	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-1 [B,Int,W]	--	MOT	7	50 [C]	50	50	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-2 [B,6]		MOT	--	73 [C]	73	73	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-2 [B,6,Int]		MOT	7	53 [C]	53	53	0	0	D (52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 8	--	COM	1	65 [C]	66	67	1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-1		MOT	--	67 [C,H5]	67	68	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-1 [Int]		MOT	12	42 [C]	42	43	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-2 [6]		MOT	--	71 [C]	71	72	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-2 [6,Int]	--	MOT	12	46 [C]	46	47	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-3 [12]		MOT	--	74 [C]	74	75	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-3 [12,Int]		MOT	12	49 [C]	49	50	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 10		MOT	1	64 [C]	64	65	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 11	--	COM	1	63 [C]	63	64	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; PI - public institute; RS - radio station.

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4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

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9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels of Americas Best Value Inn based o building construction; a 23, 20, and 25 dB reduction has been applied to exterior noise levels of Super 8, Good Nite Inn, and Country Inn Suites, respectively, based on building noise reduction measurements conducted at these sites.

Table B-12 – Predicted Future Noise Levels and Barrier Analysis – Segment 1 – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 1.1 W,K	SW639 / Shoulder	SFR	2	61 E	61	61	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.2 W,K		SFR	2	60 M,ST56	60	60	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.3 W,K		SFR	4	60 E	60	60	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.4 W,K		SFR	4	62 E	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.5 W,K		SFR	5	62 M,ST60	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.6 W,B,7,K		SFR	2	63 E	63	63	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.7 W,B,7,K		SFR	5	62 E	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.8 W,B,7,K		SFR	4	62 E	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.9 W,K	SW651 / Shoulder	SFR	8	62 M,LT27,CAL	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.10 W,K		SFR	5	62 E	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.11 W,K		SFR	4	63 E	62	62	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.12 W,K		SFR	4	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.13 W,K		SFR	4	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.14 W,K		SFR	4	65 E	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.15 W,K		SFR	3	65 E	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.16 W,K		SFR	4	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.17 W,K		SFR	2	66 M,ST62	65	65	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; SCH - educational center; REC - recreational; COM - commercial.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
K - A calibration factor of -3 dB is applied for this receiver and adjacent receivers with similar geographic

Table B-12 – Predicted Future Noise Levels and Barrier Analysis – Segment 1 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 1.18 W,B	SW651 / Shoulder	MFR	6	67 E	67	67	0	0	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 1.19 W,B		MFR	6	67 E	67	67	0	0	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 1.20 W,B		MFR	4	67 E	67	67	0	0	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 1.21 W,B,7		MFR	4	60 E	60	60	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.22 W,8		MFR	--	68 M,ST65	68	68	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.23 W,B		MFR	2	65 E	65	65	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.24 W,B		MFR	2	66 E	65	65	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.25 W,B		MFR	6	62 E	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.26 W,B		MFR	6	61 E	60	61	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.27 W,B		REC	1	65 E	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.28 W		REC	1	71 M,ST66,CAL	70	70	-1	0	C (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 1.29 W,B		REC	1	64 E	63	63	-1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; SCH - educational center; REC - recreational; COM - commercial.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-12 – Predicted Future Noise Levels and Barrier Analysis – Segment 1 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 1.30 W	SW651 / Shoulder	MFR	4	68 E	67	67	-1	0	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 1.31 W		MFR	6	69 E	68	68	-1	0	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 1.32 W		MFR	2	66 M,ST67	65	65	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.33 W		MFR	1	66 E	65	65	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.34 W,B		MFR	4	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.35 W,B		MFR	6	62 E	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.36 W,B		MFR	4	62 E	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.37 W,B		MFR	2	62 E	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											14 feet			16 feet			18 feet			20 feet			22 feet		
R 1.38 W	S699 / Shoulder	REC	1	68 E	67	67	-1	0	C (67)	A/E	66	1	*0*	66	1	*0*	66	1	*0*	66	1	*0*	66	1	*0*
R 1.39 W		MOT	8	72 E	71	71	-1	0	E (72)	NONE	66	5	*8*	**66 R**	**5**	*8*	65	6	*8*	65	6	*8*	65	6	*8*
R 1.40 W		MOT	8	73 E	72	72	-1	0	E (72)	A/E	67	5	*8*	66	6	*8*	66	6	*8*	**65 R**	**7**	*8*	65	7	*8*
R 1.41 B,7		MOT	1	61 M,ST68	61	61	0	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; SCH - educational center; REC - recreational; COM - commercial.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-12 – Predicted Future Noise Levels and Barrier Analysis – Segment 1 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 1.42A W	--	REC	1	59 E	62	62	3	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.42B W		REC	1	61 E	64	64	3	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.42 W		SFR	4	62 M,ST55	65	65	3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.43 W		SFR	4	62 E	65	65	3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.44 W	SW636 / Shoulder	SFR	5	64 M,ST58	62	62	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.45 W		SFR	3	65 E	63	63	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.46 W		SFR	4	64 E	62	62	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.47 W,B,7		SFR	4	60 E	58	58	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.48 W		SFR	1	63 M,ST59	62	62	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.49 W	SW650 / Shoulder	SFR	2	63 E	62	62	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.50 W		REC	1	64 M,ST61	63	64	-1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.51 W		REC	1	66 E	65	65	-1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.52 W		REC	1	63 E	62	62	-1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; SCH - educational center; REC - recreational; COM - commercial.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-12 – Predicted Future Noise Levels and Barrier Analysis – Segment 1 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											14 feet			16 feet			18 feet			20 feet			22 feet		
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 1.53 W	SW650 / R/W	SFR	1	65 E	66	66	1	0	B (67)	A/E	-- T	--	--	66	0	*0*	66	0	*0*	66	0	*0*	66	0	*0*
R 1.54 W		SFR	5	65 E	66	66	1	0	B (67)	A/E	-- T	--	--	66	0	*0*	66	0	*0*	65	1	*0*	65	1	*0*
R 1.55 W		SFR	4	66 E	67	68	1	1	B (67)	A/E	-- T	--	--	67	1	*0*	66	2	*0*	65	3	*0*	65	3	*0*
R 1.56 W		SFR	4	66 M,LT28,CAL	67	67	1	0	B (67)	A/E	-- T	--	--	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*
R 1.57 W		SFR	5	66 E	67	67	1	0	B (67)	A/E	-- T	--	--	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*
R 1.58 W		SFR	4	66 E	67	67	1	0	B (67)	A/E	-- T	--	--	66	1	*0*	66	1	*0*	65	2	*0*	64	3	*0*
R 1.61 W,B,7		SFR	1	65 E	64	64	-1	0	B (67)	NONE	--	--	--	64	0	*0*	64	0	*0*	63	1	*0*	63	1	*0*
R 1.62 W,B,7		SFR	2	65 E	64	64	-1	0	B (67)	NONE	--	--	--	64	0	*0*	63	1	*0*	63	1	*0*	62	2	*0*
R 1.63 W,B,7		SFR	1	64 E	63	63	-1	0	B (67)	NONE	--	--	--	63	0	*0*	63	0	*0*	62	1	*0*	62	1	*0*
R 1.64 W,B,7		SFR	2	64 E	63	63	-1	0	B (67)	NONE	--	--	--	62	1	*0*	62	1	*0*	62	1	*0*	61	2	*0*
R 1.65 W,B,7		SFR	2	64 E	63	63	-1	0	B (67)	NONE	--	--	--	62	1	*0*	62	1	*0*	61	2	*0*	61	2	*0*
R 1.59 W	R/W	SFR	4	68 E	68	68	0	0	B (67)	A/E	66 T	2	*0*	66	2	*0*	65	3	*0*	65	3	*0*	64	4	*0*
R 1.60 W		SFR	1	69 M,ST63	69	69	0	0	B (67)	A/E	66 T	3	*0*	66	3	*0*	65	4	*0*	65	4	*0*	64	5	*1*
R 1.66 W,B,7		SFR	1	62 M,ST64	63	63	1	0	B (67)	NONE	60	3	*0*	60	3	*0*	59	4	*0*	59	4	*0*	58	5	*1*
R 1.67	--	COM	1	66 E	65	65	-1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 1.68		COM	1	68 E	67	67	-1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MOT - motel; SCH - educational center; REC - recreational; COM - commercial.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Because the shoulder width is less than 15 feet, per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-13 – Predicted Future Noise Levels and Barrier Analysis – Segment 2 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 2.1 [B]	Shoulder	MOT	1	64 [M,ST69]	63	63	-1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.2 [W]		SFR	1	73 [E]	72	73	-1	1	B (67)	A/E	70	3	*0*	70	3	*0*	68	5	*1*	67 [T]	6	*1*	-- [10]	--	--
R 2.3 [W]		MFR	1	71 [M,ST71]	71	71	0	0	B (67)	A/E	69	2	*0*	68	3	*0*	67 [T]	4	*0*	65	6	*1*	-- [10]	--	--
R 2.4 [W]	SW715[X] / Shoulder	SFR	3	69 [M,LT30,CAL]	69	69	0	0	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.5 [W]		SFR	3	68 [E]	68	68	0	0	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.6 [W]		SFR	2	67 [E]	67	67	0	0	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.7 [W]	SW725[X] / Shoulder	SCH	1	62 [M,ST75A]	63	63	1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.8 [W,B]		SFR	3	61 [E]	62	63	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.9 [W,B]	SW1[X] / Shoulder	MFR	2	66 [E]	65	64	-1	-1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.10 [W,B,7]		MFR	1	64 [E]	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.11 [W,B]		MFR	1	67 [M,ST75]	66	66	-1	0	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.12 [W]		MFR	2	69 [E]	68	68	-1	0	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.13 [W]		MFR	2	70 [E]	69	69	-1	0	B (67)	A/E	--	--	--	--	--	--	-- [T]	--	--	--	--	--	-- [10]	--	--
R 2.14 [W]		MFR	--	70 [M,ST76]	69	69	-1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.15 [W]		SFR	5	70 [E]	69	68	-1	-1	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.16 [W]		SFR	5	70 [E]	69	69	-1	0	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-13 – Predicted Future Noise Levels and Barrier Analysis – Segment 2 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 2.17 W	Shoulder	SFR	2	69 E	70	69	1	-1	B (67)	A/E	69	0	*0*	68 T	1	*0*	68	1	*0*	68	1	*0*	-- 10	--	--
R 2.18 W		SFR	2	69 M,LT32,CAL	70	71	1	1	B (67)	A/E	68	3	*0*	68	3	*0*	66 T	5	*2*	66	5	*2*	-- 10	--	--
R 2.19 W		SFR	2	67 E	68	68	1	0	B (67)	A/E	66	2	*0*	66	2	*0*	65 T	3	*0*	64	4	*0*	-- 10	--	--
R 2.20 W,B,7	SW1[X] / Shoulder	SFR	2	63 E	64	64	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.21 W,B,7		SFR	3	59 E	60	61	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.22 W,B,7		SFR	1	61 E	62	62	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.23 W	Shoulder	SCH	1	70 E	71	71	1	0	C (67)	A/E	70	1	*0*	70	1	*0*	69	2	*0*	69 T	2	*0*	-- 10	--	--
R 2.24 W		SCH	1	66 E	67	68	1	1	C (67)	A/E	66	2	*0*	66	2	*0*	65	3	*0*	65 T	3	*0*	-- 10	--	--
R 2.25 W		SCH	1	65 E	66	67	1	1	C (67)	A/E	67	0	*0*	66	1	*0*	66	1	*0*	66 T	1	*0*	-- 10	--	--
R 2.25A W		SCH	1	62 E	63	64	1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.26 W,6	SW29[D] & SW23[X] / Shoulder	MFR	2	73 E	70	71	-3	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.27 W,6		MFR	2	73 E	70	71	-3	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.28 W,6		MFR	2	71 E	68	68	-3	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.29-1 W		--	--	68 M,ST77	65	66	-3	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.29-2 W,6		MFR	2	71 E	68	68	-3	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.30 W		REC	2	67 E	64	64	-3	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

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2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-13 – Predicted Future Noise Levels and Barrier Analysis – Segment 2 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]														
											Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 2.31 [B]	--	REC	1	62 [M,ST70]	62	62	0	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											14 feet			16 feet			18 feet			20 feet			22 feet		
R 2.32 [W]	SW708[X] & SW716[X] / Shoulder	SFR	1	65 [E]	67	67	2	0	B (67)	A/E	--	--	--	--	--	--	67	0	*0*	66	1	*0*	65	2	*0*
R 2.33 [W]		SFR	4	65 [E]	67	67	2	0	B (67)	A/E	--	--	--	--	--	--	66	1	*0*	65	2	*0*	65	2	*0*
R 2.34 [W]		SFR	4	64 [M,LT29,CAL]	66	67	2	1	B (67)	A/E	--	--	--	--	--	--	66	1	*0*	65	2	*0*	65	2	*0*
R 2.35 [W,B,7]		SFR	2	63 [E]	65	66	2	1	B (67)	A/E	--	--	--	--	--	--	64	2	*0*	64	2	*0*	63	3	*0*
R 2.36 [W,B,7]		SFR	2	64 [E]	66	66	2	0	B (67)	A/E	--	--	--	--	--	--	66	0	*0*	65	1	*0*	65	1	*0*
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 2.37 [W,B,7]	Shoulder	SFR	2	65 [E]	67	68	2	1	B (67)	A/E	66	2	*0*	66	2	*0*	65 [T]	3	*0*	64	4	*0*	64	4	*0*
R 2.38 [B]		SFR	1	67 [M,ST72]	68	69	1	1	B (67)	A/E	68	1	*0*	67 [T]	2	*0*	66	3	*0*	66	3	*0*	66	3	*0*
R 2.39 [B,K]		SFR	4	64 [E]	66	67	2	1	B (67)	A/E	66	1	*0*	64 [T]	3	*0*	62	5	*4*	61	6	*4*	61	6	*4*
R 2.40 [B,K]		SFR	3	63 [E]	65	66	2	1	B (67)	A/E	65	1	*0*	63 [T]	3	*0*	62	4	*0*	61	5	*3*	60	6	*3*
R 2.41 [B,K]		SFR	4	62 [E]	64	64	2	0	B (67)	NONE	63	1	*0*	62	2	*0*	60	4	*0*	61	3	*0*	--	--	--
R 2.42 [B,K]		SFR	3	63 [M,ST73]	65	66	2	1	B (67)	A/E	65	1	*0*	62	4	*0*	61 [T]	5	*3*	61	5	*3*	-- [10]	--	--
R 2.43 [K]		SFR	1	63 [E]	65	66	2	1	B (67)	A/E	65	1	*0*	61 [T]	5	*1*	60	6	*1*	60	6	*1*	-- [10]	--	--
R 2.44A [B,7]		SFR	7	63 [E]	65	65	2	0	B (67)	NONE	64	1	*0*	63	2	*0*	62	3	*0*	60	5	*7*	60	5	*7*
R 2.44B [B,7]		SFR	5	62 [E]	64	65	2	1	B (67)	NONE	63	2	*0*	63	2	*0*	61	4	*0*	60	5	*5*	--	--	--
R 2.44 [B,7]		SFR	1	64 [E]	66	66	2	0	B (67)	A/E	65	1	*0*	65 [T]	1	*0*	63	3	*0*	62	4	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
K - A calibration factor of -5 dB is applied for this receiver and adjacent receivers with similar geographic features.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-13 – Predicted Future Noise Levels and Barrier Analysis – Segment 2 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location[11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 2.45 B	SW2[D] / Shoulder	SFR	1	65 [E]	67	67	2	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.46 W,B		SFR	3	63 [E]	64	65	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.47 W		SFR	3	62 [E]	63	64	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.48 W,B,8		--	--	56 [M,ST74]	57	58	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.49 W	SW6[D] / Shoulder	SFR	5	59 [E]	60	62	1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.50 W		SFR	6	59 [E]	60	60	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.51 W	SW10[D] / Shoulder	SFR	4	65 [M,LT31,CAL]	65	65	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.52 W		SFR	2	68 [E]	68	67	0	-1	B (67)	A/E	--	--	--	-- [T]	--	--	--	--	--	--	--	--	-- [10]	--	--
R 2.53 W,B,7		SFR	4	64 [E]	64	64	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.54 W,B,7		SFR	2	66 [E]	66	65	0	-1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.55 W,B,7		SFR	2	61 [E]	61	62	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.56 W,B,7		SFR	2	64 [E]	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.57 W	SW22[X] & SW30[D] / R/W & Shoulder	SFR	2	65 [E]	67	68	2	1	B (67)	A/E	--	--	--	-- [T]	--	--	68	0	*0*	67	1	*0*	66	2	*0*
R 2.58 W,B,7		SFR	4	65 [E]	67	67	2	0	B (67)	A/E	--	--	--	-- [T]	--	--	67	0	*0*	66	1	*0*	66	1	*0*
R 2.59 W,8		--	--	66 [M,ST78]	68	69	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 2.60 W		SFR	2	66 [E]	68	69	2	1	B (67)	A/E	--	--	--	-- [T]	--	--	68	1	*0*	67	2	*0*	66	3	*0*
R 2.61 W,B,7		SFR	4	63 [E]	65	66	2	1	B (67)	A/E	--	--	--	-- [T]	--	--	65	1	*0*	63	3	*0*	62	4	*0*
R 2.62 W		SFR	4	58 [E]	62	63	4	1	B (67)	NONE	--	--	--	--	--	--	61	2	*0*	60	3	*0*	59	4	*0*
R 2.63 W		SFR	7	57 [M,ST79]	61	61	4	0	B (67)	NONE	--	--	--	--	--	--	61	0	*0*	60	1	*0*	60	1	*0*
R 2.64 W,B,7		SFR	4	59 [E]	63	64	4	1	B (67)	NONE	--	--	--	--	--	--	61	3	*0*	60	4	*0*	60	4	*0*
R 2.65 W,B,7		SFR	2	61 [E]	65	64	4	-1	B (67)	NONE	--	--	--	--	--	--	64	0	*0*	63	1	*0*	63	1	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-14 – Predicted Future Noise Levels and Barrier Analysis – Segment 3 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 3.1	--	COM	1	75 M,ST112,CAL	78	80	3	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 3.2	Shoulder[12]	MFR	4	70 E	70	70	0	0	B (67)	A/E	69	1	*0*	68	2	*0*	67	3	*0*	67	3	*0*	-- [10]	--	--
R 3.3 B		MFR	2	69 E	69	69	0	0	B (67)	A/E	67	2	*0*	67	2	*0*	66	3	*0*	66	3	*0*	-- [10]	--	--
R 3.4 B		MFR	6	67 E	67	68	0	1	B (67)	A/E	67	1	*0*	66	2	*0*	66	2	*0*	65	3	*0*	-- [10]	--	--
R 3.5 B	Shoulder	MFR	4	65 E	65	65	0	0	B (67)	NONE	64	1	*0*	63	2	*0*	62	3	*0*	61	4	*0*	-- [10]	--	--
R 3.5A B		MFR	2	64 E	64	65	0	1	B (67)	NONE	63	2	*0*	63	2	*0*	62	3	*0*	60	5	*2*	-- [10]	--	--
R 3.6 B,W		MFR	4	66 E	66	66	0	0	B (67)	A/E	64	2	*0*	64	2	*0*	62	4	*0*	61	5	*4*	-- [10]	--	--
R 3.7 B,W,8		--	--	63 M,ST80	63	64	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Noise barrier at this location is not able to meet reasonableness desgin goal due to traffic modeled on Palo Verde Street.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-15 – Predicted Future Noise Levels and Barrier Analysis – Segment 4 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 4.1A-1 [B]	Shoulder	MFR	10	67 [E]	69	69	2	0	B (67)	A/E	68	1	*0*	68	1	*0*	67	2	*0*	67	2	*0*	-- [10]	--	--
R 4.1A-2 [B,6]		MFR	10	68 [E]	70	70	2	0	B (67)	A/E	69	1	*0*	69	1	*0*	68	2	*0*	68	2	*0*	-- [10]	--	--
R 4.1A-1 [B,*]	--	MFR	10	67 [E]	69	65	2	-4	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 41.A-2 [B,6,*]		MFR	10	68 [E]	70	68	2	-2	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.1B [B]	--	MH	2	61 [E]	63	64	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.1	--	REC	1	73 [E]	75	75	2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.2		REC	1	78 [E]	80	82	2	2	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.3		REC	1	70 [E]	72	73	2	1	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.4		REC	1	78 [E]	80	81	2	1	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.5-1 [W]	S1117[P] R/W	MOT	1	76 [E]	78	79	2	1	E (72)	A/E	76	3	*0*	74	5	*1*	**71** [R,T]	**8**	***1***	70	9	*1*	69	10	*1*
R 4.5-1 [Int,W]		MOT	3	51 [E]	53	54	2	1	D (52)	A/E	51	3	*0*	49	5	*3*	**46** [R,T]	**8**	***3***	45	9	*3*	44	10	*3*
R 4.5-2 [W,6]		MOT	--	77 [E]	79	80	2	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 4.5-2 [Int,W]		MOT	3	52 [E]	54	55	2	1	D (52)	A/E	55	0	*0*	55	0	*0*	55	0	*0*	54	1	*0*	51	4	*0*
R 4.6 [W]	SW66[D] Shoulder	SFR	2	67 [E]	69	69	2	0	B (67)	A/E	68	1	*0*	68	1	*0*	67	2	*0*	67	2	*0*	-- [10]	--	--
R 4.7 [W]		SFR	2	66 [E]	68	69	2	1	B (67)	A/E	68	1	*0*	67	2	*0*	67	2	*0*	67	2	*0*	-- [10]	--	--
R 4.8 [B,W,7]	SW66[D] Shoulder and SW68[D] Shoulder	SFR	2	63 [E]	65	65	2	0	B (67)	NONE	64	1	*0*	64	1	*0*	63	2	*0*	63	2	*0*	-- [10]	--	--
R 4.9 [W]		SFR	2	64 [E]	66	66	2	0	B (67)	A/E	65	1	*0*	65	1	*0*	64	2	*0*	64	2	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home SCH - educational center; COM - commercial; MOT - motel; REC - recreational
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.
* - Alt 3 noise levels without local traffic.

Table B-15 – Predicted Future Noise Levels and Barrier Analysis – Segment 4 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 4.10 [W]	SW94[D] Shoulder	SFR	3	62 [E]	64	64	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.11 [W]		SFR	4	59 [E]	61	62	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.12 [W]		REC	1	64 [M,ST81]	66	66	2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.13 [W]		SFR	3	66 [E]	68	69	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.14 [B,W,7]		SFR	1	61 [E]	63	66	2	3	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.15 [W]		SFR	3	66 [E]	68	69	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.16 [B,W,7]		SFR	3	63 [E]	65	66	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.17 [B,W,7]		SFR	3	60 [E]	62	65	2	3	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.18 [W,9]		--	--	64 [M,ST82]	66	68	2	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.19 [W]		SFR	6	64 [E]	66	67	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.20 [W]		SFR	3	63 [E]	65	66	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.21 [W]		SFR	4	62 [E]	64	65	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.22 [B,W,8]		SFR	4	59 [M,ST83]	61	62	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.23 [W]		SFR	4	63 [E]	65	65	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.24 [W]		SFR	4	63 [E]	65	66	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home SCH - educational center; COM - commercial; MOT - motel; REC - recreational
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.
* - Alt 3 noise levels without local traffic.

Table B-15 – Predicted Future Noise Levels and Barrier Analysis – Segment 4 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 4.25 W	SW94[D] Shoulder	SFR	3	66 M,LT33,CAL	67	68	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.26 W		SFR	3	67 E	68	68	1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.27 W		SFR	3	65 E	67	68	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.28 W		SFR	2	65 M,ST84	67	68	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.29 W		SFR	5	64 E	66	67	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.30 B,W,7		SFR	3	66 M,ST85	66	67	0	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.31 B,W,7		SFR	3	66 E	66	66	0	0	B (67)	A/E	66	0	*0*	65	1	*0*	64	2	*0*	63	3	*0*	-- [10]	--	--
R 4.32 B,W,7		SFR	4	61 E	63	63	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.33 B,W,7		SFR	2	61 E	63	63	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.34 B,W,7		SFR	8	63 E	64	64	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.35 B,W,7		SFR	6	62 E	64	64	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.36 B,W,7		SFR	4	60 E	62	63	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.37 B,W,7		SFR	4	60 E	62	63	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.38 B,W,7		SFR	4	63 E	63	64	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 4.39 B,W,7		SFR	1	63 E	63	64	0	1	B (67)	NONE	63	1	*0*	62	2	*0*	61	3	*0*	60	4	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home SCH - educational center; COM - commercial; MOT - motel; REC - recreational
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.
* - Alt 3 noise levels without local traffic.

Table B-16 – Predicted Future Noise Levels and Barrier Analysis – Segment 5 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 5.1 B	--	MFR	10	65 E	64	65	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.2 B	--	MFR	10	63 M,ST86	62	62	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.3 B	--	MFR	10	65 E	64	65	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											12 feet			14 feet			16 feet			18 feet			20 feet		
R 5.4 B,W,7	SW143[X] R/W	SFR	2	58 E	58	59	0	1	B (67)	NONE	59	0	0	58	1	0	58	1	0	57	2	0	57	2	0
R 5.5 W		SFR	2	69 E	69	70	0	1	B (67)	A/E	69	1	0	68	2	0	68	2	0	67	3	0	67	3	0
R 5.6 W		SFR	3	69 M,LT34,CAL	69	69	0	0	B (67)	A/E	68	1	0	67	2	0	66	3	0	65	4	0	64	5	3
R 5.7 W		SFR	3	69 E	69	69	0	0	B (67)	A/E	68	1	0	67	2	0	66	3	0	65	4	0	65	4	0
R 5.8 W		SFR	3	68 E	68	68	0	0	B (67)	A/E	67	1	0	66	2	0	65	3	0	65	3	0	65	3	0
R 5.9 W		SFR	3	70 E	70	71	0	1	B (67)	A/E	70	1	0	69	2	0	68	3	0	68	3	0	68	3	0
R 5.9A B,W,7		SFR	3	63 E	63	63	0	0	B (67)	NONE	63	0	0	62	1	0	62	1	0	61	2	0	61	2	0
R 5.9B B,W,7		SFR	2	62 E	62	62	0	0	B (67)	NONE	62	0	0	62	0	0	61	1	0	62	0	0	61	1	0
R 5.10 W	SW157[X] R/W	SFR	3	68 M,ST90	69	69	1	0	B (67)	A/E	68	1	0	67	2	0	67	2	0	67	2	0	66	3	0
R 5.11 W		SFR	4	67 E	68	69	1	1	B (67)	A/E	66	3	0	65	4	0	65	4	0	64	5	4	63	6	4
R 5.12 W		SFR	4	67 E	68	69	1	1	B (67)	A/E	67	2	0	66	3	0	65	4	0	64	5	4	64	5	4
R 5.13 W		SFR	3	66 E	67	68	1	1	B (67)	A/E	66	2	0	66	2	0	65	3	0	65	3	0	64	4	0
R 5.14 W		SFR	3	66 M,ST91	67	68	1	1	B (67)	A/E	67	1	0	66	2	0	65	3	0	65	3	0	64	4	0
R 5.15 W,7		SFR	4	59 E	60	62	1	2	B (67)	NONE	62	0	0	62	0	0	61	1	0	61	1	0	61	1	0
R 5.16 W		SFR	5	65 E	66	67	1	1	B (67)	A/E	66	1	0	65	2	0	64	3	0	64	3	0	63	4	0
R 5.17 W		SFR	4	66 E	67	68	1	1	B (67)	A/E	67	1	0	66	2	0	65	3	0	64	4	0	63	5	4
R 5.17A B,W,7		SFR	4	60 E	61	62	1	1	B (67)	NONE	61	1	0	61	1	0	61	1	0	61	1	0	61	1	0
R 5.17B B,W,7		SFR	1	59 E	60	61	1	1	B (67)	NONE	61	0	0	61	0	0	61	0	0	61	0	0	60	1	0

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 30 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.
K - A calibration factor of -2 dB is applied for this receiver and adjacent receivers with similar geographic features.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-16 – Predicted Future Noise Levels and Barrier Analysis – Segment 5 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 5.18 W	--	SFR	6	60 E	61	62	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.19		SCH	--	72 M,ST93,CAL	73	78	1	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.19 Int		SCH	1	42	43	48	1	5	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.20 W	SW136[X] R/W	SCH	1	68 M,ST87	68	69	0	1	C (67)	A/E	69	0	0	68	1	0	67	2	0	67	2	0	66	3	0
R 5.21 B,W		SCH	1	63 E	63	64	0	1	C (67)	NONE	64	0	0	63	1	0	63	1	0	63	1	0	63	1	0
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 5.21A B	S1132[P] Shoulder	REC	1	68 E	68	68	0	0	C (67)	A/E	67	1	0	65	3	0	64	4	0	**63** R,T	**5**	***1***	-- 10	--	--
R 5.21B		REL	--	73 E	73	73	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.21B Int		REL	1	43 E	43	43	0	0	D (52)	NONE	38 T	5	1	38	5	1	37	6	1	**36** R,5	**7**	***1***	-- 10	--	--
R 5.21C		COM	1	75 E	75	75	0	0	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											16 feet			18 feet			20 feet			22 feet			24 feet		
R 5.22 W	SW140[X] R/W	SFR	2	67 E	68	69	1	1	B (67)	A/E	69	0	0	69	0	0	69	0	0	69	0	0	68	1	0
R 5.23 W		SFR	4	65 E	66	67	1	1	B (67)	A/E	66	1	0	65	2	0	65	2	0	64	3	0	63	4	0
R 5.24 W,8		--	--	64 M,ST88	65	66	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 5.25 W		SFR	4	65 E	66	67	1	1	B (67)	A/E	66	1	0	66	1	0	65	2	0	65	2	0	64	3	0
R 5.26 W		SFR	1	63 E	66	67	3	1	B (67)	A/E	66	1	0	66	1	0	65	2	0	65	2	0	64	3	0
R 5.27 B,W,7		SFR	2	61 E	62	62	1	0	B (67)	NONE	62	0	0	62	0	0	62	0	0	62	0	0	62	0	0
R 5.28 B,W,7		SFR	6	58 E	59	60	1	1	B (67)	NONE	60	0	0	60	0	0	60	0	0	59	1	0	59	1	0
R 5.29 B,W,7		SFR	5	58 E	59	60	1	1	B (67)	NONE	60	0	0	59	1	0	59	1	0	59	1	0	59	1	0
R 5.30 B,W,7		SFR	2	57 E	58	59	1	1	B (67)	NONE	59	0	0	59	0	0	58	1	0	58	1	0	58	1	0
R 5.31 B,W,7		SFR	3	57 M,ST89	60	61	3	1	B (67)	NONE	62	-1	0	62	-1	0	62	-1	0	61	0	0	61	0	0

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 30 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-16 – Predicted Future Noise Levels and Barrier Analysis – Segment 5 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 5.32 W,7	SW154[X] R/W	SFR	2	59 E	62	64	3	2	B (67)	NONE	64	0	*0*	64	0	*0*	64	0	*0*	64	0	*0*	64	0	*0*
R 5.33 W		SFR	4	61 E	64	65	3	1	B (67)	NONE	64	1	*0*	64	1	*0*	63	2	*0*	63	2	*0*	63	2	*0*
R 5.34 W		SFR	4	62 M,LT35,CAL	65	66	3	1	B (67)	A/E	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R 5.35 W		SFR	4	61 E	64	64	3	0	B (67)	NONE	64	0	*0*	63	1	*0*	63	1	*0*	62	2	*0*	62	2	*0*
R 5.36 W		SFR	4	62 M,ST92	65	66	3	1	B (67)	A/E	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R 5.37 B,W,7		SFR	2	54 E	57	58	3	1	B (67)	NONE	58	0	*0*	58	0	*0*	58	0	*0*	58	0	*0*	58	0	*0*
R 5.38 B,W,7		SFR	6	54 E	57	58	3	1	B (67)	NONE	58	0	*0*	58	0	*0*	58	0	*0*	57	1	*0*	57	1	*0*
R 5.39 B,W,7		SFR	4	56 E	59	59	3	0	B (67)	NONE	59	0	*0*	59	0	*0*	59	0	*0*	58	1	*0*	58	1	*0*
R 5.40 B,W,7		SFR	3	54 E	57	58	3	1	B (67)	NONE	58	0	*0*	58	0	*0*	57	1	*0*	57	1	*0*	57	1	*0*
R 5.41 B,W,7		SFR	2	55 E	58	58	3	0	B (67)	NONE	58	0	*0*	58	0	*0*	57	1	*0*	57	1	*0*	57	1	*0*
R 5.42 B,W,7		SFR	2	57 E	60	61	3	1	B (67)	NONE	61	0	*0*	60	1	*0*	60	1	*0*	60	1	*0*	59	2	*0*
R 5.43 W		SFR	6	62 E	65	66	3	1	B (67)	A/E	65	1	*0*	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*
R 5.44 W,7		SFR	1	60 E	62	63	2	1	B (67)	NONE	62	1	*0*	62	1	*0*	61	2	*0*	61	2	*0*	61	2	*0*
R 5.45 W		SFR	3	63 E	65	66	2	1	B (67)	A/E	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*	62	4	*0*
R 5.46 W		SFR	2	62 E	64	65	2	1	B (67)	NONE	64	1	*0*	64	1	*0*	63	2	*0*	63	2	*0*	62	3	*0*
R 5.47 W		SFR	2	62 M,ST94	64	65	2	1	B (67)	NONE	65	0	*0*	64	1	*0*	63	2	*0*	63	2	*0*	62	3	*0*
R 5.48 W		SFR	1	64 E	66	66	2	0	B (67)	A/E	66	0	*0*	65	1	*0*	65	1	*0*	64	2	*0*	64	2	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 30 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-17 – Predicted Future Noise Levels and Barrier Analysis – Segment 6 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	14 feet			16 feet			18 feet			20 feet			22 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R6.1 [8]	--	COM	1	68 [M,ST93A]	73	74	5	1	E (72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.1A		--	--	66	71	71	5	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.1A [Int]		REL	1	41	46	46	5	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.2-1 [12]		SFR	5	67 [M,ST96A]	69	69	2	0	B (67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.2A-1		--	2	59	61	62	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.2A-1 [Int]		MED	1	34	36	37	2	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.2A-2		--		64	66	67	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.2A-2 [Int,6]		MED	1	39	41	42	2	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R6.3 [W]	SW201[X] R/W	NP	1	67 [E]	66	67	-1	1	C (67)	A/E	-- [T]	--	--	67	0	*0*	66	1	*0*	66	1	*0*	66	1	*0*
R6.4 [W]		MFR	--	66 [M,ST96]	65	66	-1	1	B (67)	A/E	-- [T]	--	--	65	1	*0*	65	1	*0*	64	2	*0*	64	2	*0*
R6.5 [W]		MFR	2	66 [E]	65	66	-1	1	B (67)	A/E	-- [T]	--	--	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*
R6.6 [W]		REC	1	68 [M,ST97/CAL]	67	68	-1	1	B (67)	A/E	-- [T]	--	--	66	2	*0*	65	3	*0*	64	4	*0*	63	5	*1*
R6.7 [W]		REC	1	67 [E]	66	68	-1	2	B (67)	A/E	-- [T]	--	--	66	2	*0*	66	2	*0*	65	3	*0*	65	3	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MED - medical facility; NP - nonprofit; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Noise impact is due to local street traffic noise; therefore, noise abatement was not considred .

B - Includes the benefit of an existing building or building row.

K - A calibration factor of +3 dB is applied for this receiver and adjacent receivers with similar geographic features

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 40 dB reduction has been applied to exterior noise levels of the Kingdom Hall of Jehovah's Witness based on buildings having no windows; a 25 dB reduction has been applied to the Golden Medical Plaza based on building construction.

Table B-17 – Predicted Future Noise Levels and Barrier Analysis – Segment 6 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	14 feet			16 feet			18 feet			20 feet			22 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R6.8A [W]	SW213[X] R/W	MFR	2	64 [E]	63	64	-1	1	B (67)	NONE	--	--	--	63	1	*0*	63	1	*0*	63	1	*0*	63	1	*0*
R6.8-1 [W]		MFR	8	66 [E]	65	65	-1	0	B (67)	NONE	--	--	--	65	0	*0*	64	1	*0*	64	1	*0*	63	2	*0*
R6.8-2 [W,6]		MFR	8	69 [E]	68	69	-1	1	B (67)	A/E	--	--	--	67	2	*0*	66	3	*0*	66	3	*0*	65	4	*0*
R6.9-1 [W]		MFR	6	65 [E]	64	65	-1	1	B (67)	NONE	--	--	--	64	1	*0*	64	1	*0*	63	2	*0*	63	2	*0*
R6.9-2 [W,6]		MFR	6	68 [E]	67	68	-1	1	B (67)	A/E	--	--	--	66	2	*0*	65	3	*0*	64	4	*0*	64	4	*0*
R6.10-1 [W,7]		MFR	6	63 [E]	62	63	-1	1	B (67)	NONE	--	--	--	62	1	*0*	62	1	*0*	61	2	*0*	61	2	*0*
R6.10-2 [W,7,6]		MFR	6	66 [E]	65	65	-1	0	B (67)	NONE	--	--	--	64	1	*0*	64	1	*0*	63	2	*0*	62	3	*0*
R6.11 [W,K]		MFR	1	69 [M,LT37]	68	69	-1	1	B (67)	A/E	-- [T]	--	--	68	1	*0*	67	2	*0*	67	2	*0*	66	3	*0*
R6.11A [W,K]		MFR	--	69 [M,ST97A,CAL]	68	69	-1	1	B (67)	A/E	-- [T]	--	--	68	1	*0*	67	2	*0*	67	2	*0*	66	3	*0*
R6.12 [W,K]		SFR	1	70 [E]	69	70	-1	1	B (67)	A/E	-- [T]	--	--	69	1	*0*	68	2	*0*	67	3	*0*	67	3	*0*
R6.13-2 [W,B,K]		MFR	5	70 [E]	69	70	-1	1	B (67)	A/E	-- [T]	--	--	68	2	*0*	67	3	*0*	67	3	*0*	66	4	*0*
R6.14 [W,B]		MFR	2	68 [E]	67	68	-1	1	B (67)	A/E	-- [T]	--	--	67	1	*0*	66	2	*0*	65	3	*0*	65	3	*0*
R6.15 [W]		MFR	2	68 [E]	67	68	-1	1	B (67)	A/E	-- [T]	--	--	67	1	*0*	66	2	*0*	66	2	*0*	65	3	*0*
R6.16 [W]		MFR	5	69 [M,ST100]	68	69	-1	1	B (67)	A/E	-- [T]	--	--	69	0	*0*	68	1	*0*	68	1	*0*	67	2	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MED - medical facility; NP - nonprofit; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Noise impact is due to local street traffic noise; therefore noise abatement was not considred .

B - Includes the benefit of an existing building or building row.

K - A calibration factor of +3 dB is applied for this receiver and adjacent receivers with similar geographic features

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 40 dB reduction has been applied to exterior noise levels of the Kingdom Hall of Jehovah's Witness based on buildings having no windows; a 25 dB reduction has been applied to the Golden Medical Plaza based on building construction.

Table B-17 – Predicted Future Noise Levels and Barrier Analysis – Segment 6 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R6.17	R/W	SFR	3	64 [E]	65	67	1	2	B (67)	A/E	65 [T]	2	*0*	65	2	*0*	64	3	*0*	64	3	*0*	64	3	*0*
R6.18		SFR	3	62 [E]	63	63	1	0	B (67)	NONE	62	1	*0*	63 [T]	0	*0*	62	1	*0*	62	1	*0*	62	1	*0*
R6.19	S1190[P] R/W	SFR	2	61 [E]	62	62	1	0	B (67)	NONE	62	0	*0*	62	0	*0*	62	0	*0*	62	0	*0*	61	1	*0*
R6.20		SFR	1	71 [E]	72	73	1	1	B (67)	A/E	68 [T]	5	*1*	67	6	*1*	**66** [R]	**7**	***1***	66	7	*1*	65	8	*1*
R6.21 [B]		SFR	9	61 [E]	62	62	1	0	B (67)	NONE	58 [T]	4	*0*	57	5	*9*	**57** [R,5]	**5**	***9***	57	5	*9*	57	5	*9*
R6.22 [B]		SFR	10	60 [M,LT36]	61	62	1	1	B (67)	NONE	58 [T]	4	*0*	58	4	*0*	57	5	*10*	57	5	*10*	57	5	*10*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MED - medical facility; NP - nonprofit; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Noise impact is due to local street traffic noise; therefore noise abatement was not considred .

B - Includes the benefit of an existing building or building row.

K - A calibration factor of +3 dB is applied for this receiver and adjacent receivers with similar geographic features

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 40 dB reduction has been applied to exterior noise levels of the Kingdom Hall of Jehovah's Witness based on buildings having no windows; a 25 dB reduction has been applied to the Golden Medical Plaza based on building construction.

Table B-17 – Predicted Future Noise Levels and Barrier Analysis – Segment 6 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	14 feet			16 feet			18 feet			20 feet			22 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R6.23 [W]	SW198[x] R/W	SCH	1	67 [E]	67	69	0	2	C (67)	A/E	-- [T]	--	--	68	1	*0*	68	1	*0*	68	1	*0*	67	2	*0*
R6.24 [W]		SCH	1	61 [E]	61	63	0	2	C (67)	NONE	-- [T]	--	--	63	0	*0*	63	0	*0*	62	1	*0*	62	1	*0*
R6.25 [W]		SCH	1	65 [E]	65	66	0	1	C (67)	A/E	-- [T]	--	--	65	1	*0*	65	1	*0*	64	2	*0*	64	2	*0*
R6.26 [W]		SFR	2	65 [E]	65	66	0	1	B (67)	A/E	-- [T]	--	--	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R6.27 [W,8]		SFR	--	65 [M,ST95]	65	66	0	1	B (67)	A/E	-- [T]	--	--	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R6.28 [W,B]		SFR	4	65 [E]	65	66	0	1	B (67)	A/E	-- [T]	--	--	64	2	*0*	64	2	*0*	63	3	*0*	62	4	*0*
R6.29 [W]		SFR	2	66 [E]	66	66	0	0	B (67)	A/E	-- [T]	--	--	66	0	*0*	65	1	*0*	64	2	*0*	63	3	*0*
R6.30 [W,8]		SFR	--	65 [M,ST98]	65	66	0	1	B (67)	A/E	-- [T]	--	--	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*
R6.31 [W,B]		SFR	3	66 [E]	66	66	0	0	B (67)	A/E	-- [T]	--	--	66	0	*0*	65	1	*0*	64	2	*0*	64	2	*0*
R6.32 [W,B,7]		SFR	1	59 [E]	59	60	0	1	B (67)	NONE	-- [T]	--	--	60	0	*0*	59	1	*0*	59	1	*0*	59	1	*0*
R6.33 [W,B,7]		SFR	2	59 [E]	59	60	0	1	B (67)	NONE	-- [T]	--	--	59	1	*0*	59	1	*0*	58	2	*0*	58	2	*0*
R6.34 [W,B,7]		SFR	2	60 [E]	60	61	0	1	B (67)	NONE	-- [T]	--	--	61	0	*0*	60	1	*0*	60	1	*0*	59	2	*0*
R6.35 [W,7]		SFR	3	59 [E]	59	60	0	1	B (67)	NONE	-- [T]	--	--	60	0	*0*	60	0	*0*	60	0	*0*	60	0	*0*
R6.36 [W]	SW212[x]	SFR	4	67 [M,ST99A]	65	66	-2	1	B (67)	A/E	-- [T]	--	--	66	0	*0*	65	1	*0*	65	1	*0*	65	1	*0*
R6.37 [W]		SFR	4	68 [E]	66	67	-2	1	B (67)	A/E	-- [T]	--	--	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*
R6.38 [W]		SFR	3	68 [E]	66	67	-2	1	B (67)	A/E	-- [T]	--	--	66	1	*0*	65	2	*0*	64	3	*0*	64	3	*0*
R6.39 [W]		SFR	2	69 [M,ST99]	66	67	-3	1	B (67)	A/E	-- [T]	--	--	66	1	*0*	66	1	*0*	65	2	*0*	65	2	*0*
R6.40 [W]		SFR	2	69 [E]	66	67	-3	1	B (67)	A/E	-- [T]	--	--	67	0	*0*	66	1	*0*	66	1	*0*	65	2	*0*
R6.40A [B,W,7]		SFR	5	62 [E]	59	60	-3	1	B (67)	NONE	-- [T]	--	--	60	0	*0*	60	0	*0*	59	1	*0*	59	1	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MED - medical facility; NP - nonprofit; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

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11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Noise impact is due to local street traffic noise; therefore, noise abatement was not considred .

B - Includes the benefit of an existing building or building row.

K - A calibration factor of +3 dB is applied for this receiver and adjacent receivers with similar geographic features

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 40 dB reduction has been applied to exterior noise levels of the Kingdom Hall of Jehovah's Witness based on buildings having no windows; a 25 dB reduction has been applied to the Golden Medical Plaza based on building construction.

Table B-18 – Predicted Future Noise Levels and Barrier Analysis – Segment 7 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 7.1 [7,B,W]	--	SCH	1	56 [E]	57	57	1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 7.2 [W]	SW231[D] R/W	SFR	3	66 [E]	67	68	1	1	B (67)	A/E	67	1	*0*	66	2	*0*	66	2	*0*	65	3	*0*	65	3	*0*
R 7.3 [W]		SFR	1	62 [E]	63	64	1	1	B (67)	NONE	63	1	*0*	62	2	*0*	62	2	*0*	62	2	*0*	61	3	*0*
R 7.4 [W]		SFR/MFR	4	67 [M,LT38,CAL]	68	68	1	0	B (67)	A/E	67	1	*0*	66	2	*0*	65	3	*0*	64	4	*0*	64	4	*0*
R 7.5 [B,W]		REC	1	62 [E]	63	63	1	0	C (67)	NONE	62	1	*0*	62	1	*0*	61	2	*0*	60	3	*0*	59	4	*0*
R 7.6 [7,B,W]		MFR	6	61 [E]	62	62	1	0	B (67)	NONE	61	1	*0*	61	1	*0*	60	2	*0*	60	2	*0*	60	2	*0*
R 7.7 [W]		MFR	2	65 [E]	66	66	1	0	B (67)	A/E	65	1	*0*	64	2	*0*	63	3	*0*	63	3	*0*	62	4	*0*
R 7.8 [W]		MFR	2	69 [E]	70	70	1	0	B (67)	A/E	69	1	*0*	69	1	*0*	69	1	*0*	68	2	*0*	68	2	*0*
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 7.9 [B,W]	SW245[D] Shoulder	MFR	2	63 [E]	64	64	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.10-1 [7,B,W]		MFR	2	61 [E]	61	61	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.10-2 [6,7,B,W]		MFR	1	62 [E]	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.11 [W]		MFR	6	62 [E]	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.12 [W]		MFR	1	63 [E]	63	63	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.13-1 [W]		MFR	1	65 [E]	65	65	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.13-2 [6,W]		MFR	3	66 [E]	66	66	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.14 [W]		MFR	1	65 [E]	65	65	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.15-1 [W]		MFR	1	66 [M,ST103,CAL]	66	66	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.15-2 [6,W]		MFR	1	68 [E]	68	68	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-18 – Predicted Future Noise Levels and Barrier Analysis – Segment 7 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 7.16	Shoulder	SFR	1	69 [E]	69	70	0	1	B (67)	A/E	69	1	0	66	4	0	66	4	0	66	4	0	-- [10]	--	--
R 7.17 [7,B]	Shoulder	SFR	1	68 [E]	68	69	0	1	B (67)	A/E	68	1	0	67	2	0	65	4	0	65	4	0	-- [10]	--	--
R 7.18 [W]	Shoulder	MH	4	68 [E]	68	69	0	1	B (67)	A/E	68	1	0	67	2	0	67	2	0	67	2	0	-- [10]	--	--
R 7.18A [B,W]	Shoulder	SFR	2	69	69	69	0	0	B (67)	A/E	68	1	0	68	1	0	67	2	0	67	2	0	-- [10]	--	--
R 7.19 [W]	SW259[D] Shoulder	MH	2	66 [M,ST104]	66	66	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.20 [W]	SW259[D] Shoulder	MH	8	66 [E]	66	66	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.21 [W]	SW259[D] Shoulder	MH	3	64 [E]	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.22 [W]	SW259[D] Shoulder	MH	3	66 [E]	66	65	0	-1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.23 [W]	Ramp Shoulder & SW275[D] Shoulder	MH	4	68 [E]	68	67	0	-1	B (67)	A/E	67	0	0	66	1	0	65	2	0	65	2	0	-- [10]	--	--
R 7.24 [W]	Ramp Shoulder & SW275[D] Shoulder	MH	2	67 [E]	67	68	0	1	B (67)	A/E	68	0	0	68	0	0	67	1	0	67	1	0	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-18 – Predicted Future Noise Levels and Barrier Analysis – Segment 7 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 7.25 [W]	R/W	SFR	2	68 [E]	68	68	0	0	B (67)	A/E	65	3	*0*	65	3	*0*	64	4	*0*	64	4	*0*	64	4	*0*
R 7.26 [7,B,W]	R/W	SFR	2	66 [E]	66	66	0	0	B (67)	A/E	63	3	*0*	63	3	*0*	62	4	*0*	62	4	*0*	62	4	*0*
R 7.27 [W]	SW230[D] R/W	SFR	3	66 [E]	66	67	0	1	B (67)	A/E	66	1	*0*	66	1	*0*	65	2	*0*	65	2	*0*	64	3	*0*
R 7.28 [8,W]	SW230[D] R/W	SFR	--	67 [M,ST101]	67	68	0	1	B (67)	A/E	67	1	*0*	66	2	*0*	66	2	*0*	65	3	*0*	65	3	*0*
R 7.29 [7,B,W]	SW230[D] R/W	SFR	4	62 [E]	62	62	0	0	B (67)	NONE	62	0	*0*	61	1	*0*	61	1	*0*	61	1	*0*	60	2	*0*
R 7.30 [B,W]	SW230[D] R/W	SFR	2	67 [E]	67	68	0	1	B (67)	A/E	67	1	*0*	66	2	*0*	66	2	*0*	65	3	*0*	65	3	*0*
R 7.31 [W]	SW230[D] R/W	SFR	4	65 [E]	65	65	0	0	B (67)	NONE	64	1	*0*	64	1	*0*	63	2	*0*	62	3	*0*	62	3	*0*
R 7.32 [W]	SW230[D] R/W	SFR	1	67 [E]	67	68	0	1	B (67)	A/E	67	1	*0*	67	1	*0*	66	2	*0*	65	3	*0*	65	3	*0*
R 7.33 [W]	SW230[D] R/W	SFR	2	67 [E]	67	67	0	0	B (67)	A/E	67	0	*0*	66	1	*0*	66	1	*0*	65	2	*0*	65	2	*0*
R 7.34 [W]	SW230[D] R/W	SFR	1	67 [M,LT39,CAL]	67	66	0	-1	B (67)	A/E	66	0	*0*	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 7.35 [7,B,W]	S1244 Shoulder [P]	SFR	3	66 [E]	66	65	0	-1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
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R - The minimum height to meet feasibility requirements and design goal.
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Table B-18 – Predicted Future Noise Levels and Barrier Analysis – Segment 7 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 7.36 [W]	SW246[D] Shoulder	SFR/MFR	6	67 [E]	67	68	0	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.36A		SFR	2	67	67	67	0	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.37 [7,B,W]		SFR	1	66 [E]	67	67	1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.38 [8,W]		SFR	--	67 [M,ST102]	68	68	1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.39 [7,B,W]		SFR	2	67 [E]	68	69	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.40-1	--	MOT	--	68 [E]	69	69	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.40-1 [Int]		MOT	1	43 [E]	44	44	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.40-2 [6]		MOT	--	74 [E]	75	73	1	-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.40-2 [6,Int]		MOT	1	49 [E]	50	48	1	-2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.41 [W]	S1262 Shoulder [P]	MOT	1	71 [E]	72	73	1	1	E (72)	A/E	68 [T]	5	*1*	67	6	*1*	67	6	*1*	**66** [R]	**7**	*1*	-- [10]	--	--
R 7.42	S1266[P] Shoulder	MOT	1	72 [E]	73	75	1	2	E (72)	A/E	70 [T]	5	*1*	69	6	*1*	**68** [R]	**7**	*1*	68	7	*1*	-- [10]	--	--
R 7.43-1		MOT	--	70 [E]	71	72	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.43-1 [Int]		MOT	1	45 [E]	46	47	1	1	D (52)	NONE	44	3	*0*	42 [T]	5	*1*	**41** [R,5]	**6**	*1*	40	7	*1*	-- [10]	--	--
R 7.43-2 [6]		MOT	--	75 [E]	76	77	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.43-2 [6,Int]		MOT	1	50 [E]	51	52	1	1	D (52)	A/E	48	4	*0*	47	5	*1*	**45** [R]	**7**	*1*	44	8	*1*	-- [10]	--	--
R 7.44-1		MOT	--	67 [E]	68	69	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.44-1 [Int]		MOT	1	42 [E]	43	44	1	1	D (52)	NONE	43	1	*0*	43	1	*0*	42	2	*0*	42	2	*0*	-- [10]	--	--
R 7.44-2 [6]		MOT	--	70 [E]	71	73	1	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 7.44-2 [6,Int]		MOT	1	45 [E]	46	48	1	2	D (52)	NONE	46	2	*0*	46	2	*0*	45	3	*0*	45	3	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; COM - commercial; MOT - motel; REC - recreational
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
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5 - Barrier height needed to meet requirements at adjacent receiver(s).
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W - Includes the benefit of an existing soundwall or property wall.

Table B-19 – Predicted Future Noise Levels and Barrier Analysis – Segment 8 – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R8.1 [W]	S1285[P] & SW275[D] Shoulder	FS	--	69 [E]	71	70	2	-1	F (--)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.1 [W,Int]		FS	1	44 [E]	46	45	2	-1	D (52)	NONE	43	2	*0*	43	2	*0*	42	3	*0*	42	3	*0*	-- [10]	--	--
R8.2-1		MOT	--	75 [E]	77	76	2	-1	--	--	--	--	--	--	--	--	--	--	--	**--**	**--**	--	--	--	--
R8.2-1 [Int]		MOT	12	50 [E]	52	51	2	-1	D (52)	A/E	48	3	*0*	46	5	*12*	45 [T]	6	*12*	**44 [R]**	**7**	*12*	-- [10]	--	--
R8.2-2		MOT	--	76 [E]	78	79	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.2-2 [Int]		MOT	12	51 [E]	53	54	2	1	D (52)	A/E	52	2	*0*	51	3	*0*	50	4	*0*	**48 [R]**	**6**	*12*	-- [10]	--	--
R8.3		MOT	1	75 [M,ST106]	77	77	2	0	E (72)	A/E	74	3	*0*	74	3	*0*	72	5	*1*	**72 [R,T,5]**	**5**	*1*	-- [10]	--	--
R8.4 [W,B,7]	Shoulder	SFR	2	63 [E]	65	66	2	1	B (67)	A/E	66	0	*0*	65	1	*0*	64	2	*0*	64	2	*0*	-- [10]	--	--
R8.5 [W,B,7]		SFR	2	65 [E]	67	67	2	0	B (67)	A/E	66	1	*0*	66	1	*0*	64	3	*0*	64	3	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; FS - fire station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

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Table B-19 – Predicted Future Noise Levels and Barrier Analysis – Segment 8 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	14 feet			16 feet			18 feet			20 feet			22 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R8.6 [W]	SW296[D] R/W / Shoulder	SFR	3	66 [E]	68	69	2	1	B (67)	A/E	--	--	--	68	1	*0*	67	2	*0*	66	3	*0*	65	4	*0*
R8.7 [W]		SFR	5	68 [M,LT41,CAL]	69	70	1	1	B (67)	A/E	--	--	--	69	1	*0*	68	2	*0*	67	3	*0*	66	4	*0*
R8.8 [W]		SFR	7	67 [E]	69	70	2	1	B (67)	A/E	--	--	--	69	1	*0*	68	2	*0*	67	3	*0*	66	4	*0*
R8.9 [W]		SFR	9	66 [E]	68	69	2	1	B (67)	A/E	--	--	--	69	0	*0*	68	1	*0*	67	2	*0*	67	2	*0*
R8.10 [W]		SFR	9	66 [M,ST109]	69	69	3	0	B (67)	A/E	--	--	--	69	0	*0*	69	0	*0*	69	0	*0*	69	0	*0*
R8.11 [W]		SFR	4	66 [E]	69	69	3	0	B (67)	A/E	--	--	--	69	0	*0*	68	1	*0*	67	2	*0*	67	2	*0*
R8.14 [W,B,7]		SFR	1	59 [E]	61	62	2	1	B (67)	NONE	--	--	--	61	1	*0*	61	1	*0*	60	2	*0*	60	2	*0*
R8.14A [W,B,7]		SFR	1	64 [E]	66	67	2	1	B (67)	A/E	--	--	--	67	0	*0*	66	1	*0*	66	1	*0*	66	1	*0*
R8.14B [W,B,7]		SFR	4	62 [E]	64	64	2	0	B (67)	NONE	--	--	--	64	0	*0*	63	1	*0*	63	1	*0*	62	2	*0*
R8.14C [W,B,7]		SFR	8	63 [E]	65	65	2	0	B (67)	NONE	--	--	--	65	0	*0*	64	1	*0*	64	1	*0*	64	1	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; FS - fire station.

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Table B-19 – Predicted Future Noise Levels and Barrier Analysis – Segment 8 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R8.12 [W]	S21[P] Shoulder	SFR	3	66 [E]	69	69	3	0	B (67)	A/E	67	2	*0*	66	3	*0*	66	3	*0*	65	4	*0*	--	--	--
R8.13 [W,B,7]		SFR	2	67 [E]	70	71	3	1	B (67)	A/E	66	5	*2*	65	6	*2*	**64** [R,T]	**7**	*2*	63	8	*2*	--	--	--
R8.15 [W,B,7]		SFR	2	62 [E]	65	65	3	0	B (67)	NONE	65	0	*0*	65	0	*0*	64	1	*0*	64	1	*0*	--	--	--
R8.16	S1276[P] Shoulder	SFR	3	71 [E]	74	74	3	0	B (67)	A/E	**66** [R,T]	**8**	*3*	64	10	*3*	63	11	*3*	62	12	*3*	-- [10]	--	--
R8.17 [W]	Shoulder	SFR	2	64 [E]	67	66	3	-1	B (67)	A/E	63	3	*0*	63	3	*0*	62	4	*0*	62	4	*0*	-- [10]	--	--
R8.24 [W,B]		SFR	2	59 [M,ST105]	62	63	3	1	B (67)	NONE	62	1	*0*	60	3	*0*	59	4	*0*	59	4	*0*	-- [10]	--	--
R8.24 A[W]		SFR	2	66 [E]	69	70	3	1	B (67)	A/E	69	1	*0*	68	2	*0*	67	3	*0*	67	3	*0*	-- [10]	--	--
R8.25 [W,B,7]		SFR	3	64 [E]	67	68	3	1	B (67)	A/E	67	1	*0*	65	3	*0*	65	3	*0*	64	4	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; FS - fire station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-19 – Predicted Future Noise Levels and Barrier Analysis – Segment 8 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R8.18 [W]	SW278[D] Shoulder	SFR	4	62 [E]	64	64	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.19 [W]		SFR	5	64 [M,ST107]	66	67	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.20 [W]		SFR	5	64 [E]	66	67	2	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.21 [W]		SFR	5	67 [E]	68	69	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.22 [W]		SFR	3	67 [M,LT40,CAL]	68	69	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.23 [W]		SFR	1	68 [E]	69	70	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.26 [W,B,7]		SFR	2	63 [E]	65	65	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.27 [W,B,7]		SFR	2	62 [E]	64	65	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.28 [W,B,7]		SFR	2	62 [E]	64	65	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.29 [W,B,7]		SFR	3	64 [E]	65	65	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.29 A[W,B,7]		SFR	2	63 [E]	64	65	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R8.30 [W,7]		SFR	1	64 [E]	65	66	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; FS - fire station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

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T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-19 – Predicted Future Noise Levels and Barrier Analysis – Segment 8 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R8.31 W	S1306P Shoulder	REC	1	67 E	68	69	1	1	B (67)	A/E	69	0	0	67	2	0	67	2	0	67	2	0	-- 10	--	--
R8.32-1 W		MFR	3	70 E	71	72	1	1	B (67)	A/E	71	1	0	69 T	3	0	67	5	3	**66 R**	**6**	3	-- 10	--	--
R8.32-2 W,6		MFR	3	73 E	74	75	1	1	B (67)	A/E	74	1	0	73	2	0	70	5	3	**69 R**	**6**	3	-- 10	--	--
R8.33-1 W,B,7		MFR	2	64 E	65	65	1	0	B (67)	NONE	65	0	0	65	0	0	63	2	0	62	3	0	-- 10	--	--
R8.33-2 W,B,6,7		MFR	2	66 E	67	68	1	1	B (67)	A/E	67	1	0	67	1	0	66	2	0	64	4	0	-- 10	--	--
R8.34-1 W		MFR	3	69 M,ST108	70	71	1	1	B (67)	A/E	71	0	0	69	2	0	69	2	0	68	3	0	-- 10	--	--
R8.34-2 W,6		MFR	3	74 E	75	76	1	1	B (67)	A/E	76	0	0	75	1	0	72	4	0	**70 R**	**6**	3	-- 10	--	--
R8.35 W,B,7		REC	1	63 E	64	65	1	1	B (67)	NONE	64	1	0	64	1	0	63	2	0	61	4	0	-- 10	--	--
R8.36-1 W,B,7		MFR	2	67 E	68	69	1	1	B (67)	A/E	68	1	0	68	1	0	65 T	4	0	**64 R**	**5**	2	-- 10	--	--
R8.36-2 W,B,6,7		MFR	2	70 E	71	72	1	1	B (67)	A/E	71	1	0	70	2	0	67	5	2	**66 R**	**6**	2	-- 10	--	--
R8.37 W		MFR	3	71 E	72	73	1	1	B (67)	A/E	72	1	0	69 T	4	0	68	5	3	**67 R**	**6**	3	-- 10	--	--
R8.38 W,B,7		MFR	4	62 E	63	64	1	1	B (67)	NONE	64	0	0	64	0	0	62	2	0	61	3	0	-- 10	--	--
R8.39 W		MFR	2	71 E	72	73	1	1	B (67)	A/E	72	1	0	70 T	3	0	68	5	2	**67 R**	**6**	2	-- 10	--	--
R8.40 W,B,7		REC	1	63 E	64	65	1	1	B (67)	NONE	64	1	0	64	1	0	62	3	0	61	4	0	-- 10	--	--
R8.41 W,B		MFR	3	66 E	67	68	1	1	B (67)	A/E	67	1	0	67 T	1	0	63	5	3	**62 R**	**6**	3	-- 10	--	--
R8.42-1 W,B		MFR	2	67 E	68	69	1	1	B (67)	A/E	68	1	0	68 T	1	0	65	4	0	**64 R**	**5**	2	-- 10	--	--
R8.42-2 W,B,6		MFR	2	71 E	72	73	1	1	B (67)	A/E	72	1	0	72	1	0	68	5	2	**67 R**	**6**	2	-- 10	--	--
R8.43-1 W,B,7		MFR	2	64 E	65	66	1	1	B (67)	A/E	65	1	0	65	1	0	63 T	3	0	**61 R**	**5**	2	-- 10	--	--
R8.43-2 W,B,6,7		MFR	2	66 E	67	68	1	1	B (67)	A/E	67	1	0	67	1	0	65	3	0	**63 R**	**5**	2	-- 10	--	--
R8.44-1 W,B,7		MFR	3	65 E	66	67	1	1	B (67)	A/E	66	1	0	66	1	0	63 T	4	0	**62 R**	**5**	3	-- 10	--	--
R8.44-2 W,B,6,7		MFR	3	67 E	68	69	1	1	B (67)	A/E	68	1	0	68	1	0	65	4	0	**64 R**	**5**	3	-- 10	--	--
R8.45-1 W,B		MFR	2	65 E	66	67	1	1	B (67)	A/E	65	2	0	64	3	0	64	3	0	64	3	0	-- 10	--	--
R8.45-2 W,B,6		MFR	2	70 E	71	72	1	1	B (67)	A/E	70	2	0	70	2	0	67 T	5	2	**66 R**	**6**	2	-- 10	--	--
R8.46-1 W,B,7		MFR	3	64 E	65	66	1	1	B (67)	A/E	65	1	0	64	2	0	63	3	0	63	3	0	-- 10	--	--
R8.46-2 W,B,6,7		MFR	3	70 E	71	72	1	1	B (67)	A/E	69	3	0	68	4	0	67	5	3	**67 R**	**5**	3	-- 10	--	--
R8.47-1 W,B		MFR	2	66 E	67	67	1	0	B (67)	A/E	66	1	0	64 T	3	0	62	5	2	**62 R**	**5**	2	-- 10	--	--
R8.47-2 W,B,6		MFR	2	77 E	78	79	1	1	B (67)	A/E	77	2	0	75	4	0	71 T	8	2	**69 R**	**10**	2	-- 10	--	--

Notes:

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2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; FS - fire station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.

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Table B-19 – Predicted Future Noise Levels and Barrier Analysis – Segment 8 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R8.48-1	S1306[P] Shoulder	MOT	--	80 [E]	80	76	0	-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.48-1 [Int]		MOT	12	55 [E]	55	51	0	-4	D (52)	A/E	46	5	*12*	**44** [R]	**7**	*12*	43 [T]	8	*12*	42	9	*12*	-- [10]	--	--
R8.48-2		MOT	--	80 [E]	80	81	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.48-2 [Int]		MOT	12	55 [E]	55	56	0	1	D (52)	A/E	53	3	*0*	**51** [R]	**5**	*12*	47	9	*12*	45	11	*12*	-- [10]	--	--
R8.48-3		MOT	--	81 [E]	81	82	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.48-3 [Int]		MOT	12	56 [E]	56	57	0	1	D (52)	A/E	57	0	*0*	56	1	*0*	55	2	*0*	54	3	*0*	-- [10]	--	--
R8.49 [B]		MOT	1	65 [E]	65	65	0	0	E (72)	NONE	63	2	*0*	63	2	*0*	62	3	*0*	61	4	*0*	-- [10]	--	--
R8.50 [B]		MOT	1	75 [M,ST110]	75	74	0	-1	E (72)	A/E	69	5	*1*	**68** [R,T]	**6**	*1*	67	7	*1*	66	8	*1*	-- [10]	--	--
R8.50 A-1		MOT	--	77 [E]	77	71	0	-6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.50 A-1[Int]		MOT	3	52 [E]	52	46	0	-6	D (52)	NONE	43	3	*0*	42	4	*0*	41	5	*3*	40	6	*3*	-- [10]	--	--
R8.50 A-2		MOT	--	80 [E]	80	81	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.50 A-2[Int]		MOT	3	55 [E]	55	56	0	1	D (52)	A/E	53	3	*0*	**49** [R]	**7**	*3*	45	11	*3*	44	12	*3*	-- [10]	--	--
R8.50 B-1		MOT	--	73 [E]	73	68	0	-5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.50 B-1[Int]		MOT	3	48 [E]	48	43	0	-5	D (52)	NONE	40	3	*0*	40	3	*0*	39	4	*0*	38	5	*3*	-- [10]	--	--
R8.50 B-2		MOT	--	77 [E]	77	78	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.50 B-2[Int]		MOT	3	52 [E]	52	53	0	1	D (52)	A/E	**45** [R]	**8**	*3*	43	10	*3*	42	11	*3*	41	12	*3*	-- [10]	--	--
R8.50 C-1		MOT	--	70 [E]	70	66	0	-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.50 C-1[Int]		MOT	3	45 [E]	45	41	0	-4	D (52)	NONE	39	2	*0*	38	3	*0*	38	3	*0*	37	4	*0*	-- [10]	--	--
R8.50 C-2		MOT	--	76 [E]	76	75	0	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R8.50 C-2[Int]		MOT	3	51 [E]	51	50	0	-1	D (52)	NONE	**44** [R]	**6**	*3*	42	8	*3*	41	9	*3*	40	10	*3*	-- [10]	--	--
R8.51 [B]	--	MOT	1	57 [M,ST111]	61	62	4	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

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2 - Land Use: SFR - single-family residence; MFR - multi-family residence; SCH - educational center; REC - recreational; COM - commercial; MOT - motel; FS - fire station.

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R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-20 – Predicted Future Noise Levels and Barrier Analysis – Segment 9 – Alternative 3

Receiver I.D.	Barrier I.D. and Location[11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]														
											Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 9.1 W	--	SFR/MFR	4	59 M,LT1	60	62	1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.2 W	SW697[X] Shoulder	SFR	2	61 M,ST1	62	64	1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.3 W		SFR	1	62 E	63	64	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											16 feet			18 feet			20 feet			22 feet			24 feet		
R 9.4 W	SW697[D] R/W	SFR	9	64 E	65	67	1	2	B (67)	A/E	66	1	0	65	2	0	64	3	0	63	4	0	63	4	0
R 9.5 W,9		SFR	--	64 M,ST2	65	--	1	--	B (67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.6 W		SFR	8	65 E	66	67	1	1	B (67)	A/E	66	1	0	65	2	0	65	2	0	64	3	0	64	3	0
R 9.7 W,7		SFR	4	62 E	63	65	1	2	B (67)	NONE	64	1	0	64	1	0	63	2	0	63	2	0	62	3	0
R 9.8 W		SFR	3	65 E	66	67	1	1	B (67)	A/E	66	1	0	65	2	0	64	3	0	64	3	0	63	4	0
R 9.9 W		SFR	2	64 E	65	67	1	2	B (67)	A/E	66	1	0	65	2	0	64	3	0	64	3	0	63	4	0
R 9.10 W		SFR	1	65 E	66	67	1	1	B (67)	A/E	66	1	0	65	2	0	65	2	0	64	3	0	63	4	0
R 9.11 W		SFR/MFR	5	67 E	66	66	-1	0	B (67)	A/E	66	0	0	65	1	0	64	2	0	63	3	0	63	3	0
R 9.12 W,9		SFR	--	67 M,LT2,CAL	66	--	-1	--	B (67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.13 W		SFR	2	67 E	66	66	-1	0	B (67)	A/E	65	1	0	65	1	0	64	2	0	63	3	0	63	3	0
R 9.14 W		SFR	1	67 E	66	66	-1	0	B (67)	A/E	65	1	0	64	2	0	64	2	0	63	3	0	62	4	0
R 9.15 W,7		SFR	6	65 E	64	65	-1	1	B (67)	NONE	65	0	0	64	1	0	64	1	0	63	2	0	63	2	0
R 9.16 W,7		SFR	4	65 E	64	65	-1	1	B (67)	NONE	65	0	0	64	1	0	63	2	0	63	2	0	63	2	0
R 9.17 W		SFR/MFR	4	68 E	67	67	-1	0	B (67)	A/E	66	1	0	65	2	0	65	2	0	64	3	0	64	3	0
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 9.17B	--	COM	1	65 E	64	68	-1	4	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.18		COM	1	75 E	74	76	-1	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-20 – Predicted Future Noise Levels and Barrier Analysis – Segment 9 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Traffic + Train Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year Train Noise Level Leq(h), dBA[1]	Design Year No Build Traffic Noise Level Leq(h), dBA[1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year Build Traffic Noise Level Leq(h), dBA[1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year No Build Traffic + Train Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
															Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 9.19 [B,7]	--	SFR	3	62 [E]	61	60	63	61	64	1	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.20 [B]		SFR	3	65 [E]	64	61	66	63	67	1	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.21		SFR/MFR	10	66 [E]	64	63	67	65	67	1	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.22 [W]	Shoulder	SFR	2	65 [M,ST3]	62	64	66	66	67	1	2	1	B (67)	A/E	67	0	*0*	66	1	*0*	65	2	*0*	64	3	*0*	-- [10]	--	--
R 9.23 [B]	--	COM	1	69 [M,ST3A,CAL]	67	64	69	66	70	0	2	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.25 [B]		SFR	3	65 [E]	63	62	66	63	66	1	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.26 [B]		SFR	3	65 [E]	63	63	66	65	67	1	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.27 [W]	--	SFR	1	58 [E]	55	58	59	59	60	1	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.28 [W]		SFR	1	60 [E]	56	60	61	61	62	1	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 9.29	Shoulder	SFR/MFR	3	67 [E]	64	66	68	67	69	1	1	1	B (67)	A/E	67	2	*0*	67	2	*0*	66	3	*0*	66	3	*0*	-- [10]	--	--
R 9.30		SFR	3	63 [E]	60	61	64	62	64	1	1	0	B (67)	NONE	64	0	*0*	64	0	*0*	63	1	*0*	62	2	*0*	-- [10]	--	--
R 9.31 [8]		COM	1	70 [M,ST4]	68	68	71	69	72	1	1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 9.32		SFR	1	69 [E]	67	68	70	69	71	1	1	1	B (67)	A/E	70	1	*0*	70	1	*0*	69	2	*0*	69	2	*0*	-- [10]	--	--
R 9.33 [W,7]		MH	6	62 [E]	56	59	61	60	62	-1	1	1	B (67)	NONE	61	1	*0*	61	1	*0*	60	2	*0*	60	2	*0*	-- [10]	--	--
R 9.34 [W,7]		SFR	5	63 [E]	56	61	62	62	63	-1	1	1	B (67)	NONE	63	0	*0*	62	1	*0*	61	2	*0*	61	2	*0*	-- [10]	--	--
R 9.35 [W]		COM	1	68 [M,LT3]	62	65	67	67	68	-1	2	1	E (72)	NONE	67	1	*0*	67	1	*0*	66	2	*0*	65	3	*0*	-- [10]	--	--
R 9.36 [W]		SFR	3	68 [E]	62	65	67	66	68	-1	1	1	B (67)	A/E	67	1	*0*	67	1	*0*	65	3	*0*	65	3	*0*	-- [10]	--	--
R 9.37		SFR	3	69 [E]	65	64	68	66	68	-1	2	0	B (67)	A/E	68	0	*0*	68	0	*0*	67	1	*0*	67	1	*0*	-- [10]	--	--
R 9.38 [W]		SFR	2	68 [E]	66	62	67	63	68	-1	1	1	B (67)	NONE	67	1	*0*	67	1	*0*	67	1	*0*	67	1	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

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Table B-21 – Predicted Future Noise Levels and Barrier Analysis – Segment 10 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)																	
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet			18 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 10.1	S1819[P] R/W	SFR	1	75 [M,ST6]	73	76	-2	3	B (67)	A/E	72	4	*0*	70	6	*1*	69 [T]	7	*1*	68	8	*1*	**67 [R,5]**	**9**	*1*	66	10	*1*
R 10.2 [B]		SFR	3	70 [E]	68	71	-2	3	B (67)	A/E	69	2	*0*	68	3	*0*	66 [T]	5	*3*	65	6	*3*	**64 [R,5]**	**7**	*3*	64	7	*3*
R 10.3 [B]		SFR	1	70 [E]	69	70	-1	1	B (67)	A/E	68	2	*0*	67	3	*0*	65 [T]	5	*1*	65	5	*1*	**64 [R,5]**	**6**	*1*	63	7	*1*
R 10.4 [B]		SFR	2	75 [E]	74	79	-1	5	B (67)	A/E	72	7	*2*	69	10	*2*	68 [T]	11	*2*	67	12	*2*	**66 [R,5]**	**13**	*2*	65	14	*2*
R 10.5 [B,W]		SFR	1	68 [M,LT4,CAL]	67	67	-1	0	B (67)	A/E	66	1	*0*	65	2	*0*	64	3	*0*	63	4	*0*	63	4	*0*	63	4	*0*
R 10.6 [B,7]		SFR	4	70 [E]	69	68	-1	-1	B (67)	A/E	67	1	*0*	67	1	*0*	65	3	*0*	65	3	*0*	64	4	*0*	**63 [R]**	**5**	*4*
R 10.7 [B]		SFR	5	72 [E]	71	70	-1	-1	B (67)	A/E	68	2	*0*	67	3	*0*	65	5	*5*	64	6	*5*	63	7	*5*	**62 [R,5]**	**8**	*5*
R 10.8 [B,7]		SFR	5	70 [E]	69	68	-1	-1	B (67)	A/E	66	2	*0*	66	2	*0*	64 [T]	4	*0*	63	5	*5*	62	6	*5*	**62 [R,5]**	**6**	*5*
R 10.9 [B]		SFR	4	73 [E]	72	71	-1	-1	B (67)	A/E	69	2	*0*	68	3	*0*	66 [T]	5	*4*	66	5	*4*	**65 [R,5]**	**6**	*4*	64	7	*4*
R 10.9A		SFR	1	76 [E]	75	74	-1	-1	B (67)	A/E	71	3	*0*	70	4	*0*	68 [T]	6	*1*	67	7	*1*	**66 [R,5]**	**8**	*1*	65	9	*1*
R 10.10 [B,7]		SFR	5	67 [E]	66	66	-1	0	B (67)	A/E	65	1	*0*	65	1	*0*	63	3	*0*	62	4	*0*	**61 [R]**	**5**	*5*	61	5	*5*
R 10.11 [B,W]		SFR	2	65 [E]	64	65	-1	1	B (67)	NONE	64	1	*0*	63	2	*0*	62	3	*0*	61	4	*0*	**60 [R]**	**5**	*2*	60	5	*2*
R 10.12 [B]	S1883[P] R/W	SFR	1	71 [E]	70	70	-1	0	B (67)	A/E	68	2	*0*	67	3	*0*	66 [T]	4	*0*	**65 [R]**	**5**	*1*	65	5	*1*	65	5	*1*
R 10.13		SFR	3	76 [E]	75	74	-1	-1	B (67)	A/E	71	3	*0*	69	5	*3*	68 [T]	6	*3*	**67 [R]**	**7**	*3*	67	7	*3*	66	8	*3*
R 10.14	--	COM	1	75 [E]	74	76	-1	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
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10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
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Table B-21 – Predicted Future Noise Levels and Barrier Analysis – Segment 10 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Traffic + Train Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
					Design Year Train Noise Level Leq(h), dBA[1]	Design Year No Build Traffic Noise Level Leq(h), dBA[1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year Build Traffic Noise Level Leq(h), dBA[1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year No Build Traffic + Train Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
															Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 10.15		SFR	4	66 [M,ST5]	66	60	67	61	67	1	1	0	B (67)	NONE	67	0	*0*	67 [T]	0	*0*	67	0	*0*	67	0	*0*	-- [10]	--	--
R 10.16		SFR	7	67 [E]	64	65	68	65	68	1	0	0	B (67)	NONE	67	1	*0*	67	1	*0*	66 [T]	2	*0*	66	2	*0*	-- [10]	--	--
R 10.16A [8]	Shoulder	--	--	67 [M,ST7,CAL]	72	69	74	69	74	--	0	0	--	--	74	0	*0*	73	1	*0*	73	1	*0*	73	1	*0*	-- [10]	--	--
R 10.17 [W]		SFR	7	70 [E]	66	67	70	67	69	0	0	-1	B (67)	A/E	69	0	*0*	69	0	*0*	68	1	*0*	67 [T]	2	*0*	-- [10]	--	--
R 10.18		SFR	3	64 [E]	58	63	64	64	65	0	1	1	B (67)	NONE	64	1	*0*	64	1	*0*	63 [T]	2	*0*	62	3	*0*	-- [10]	--	--
R 10.19		SFR	5	66 [E]	63	64	66	64	67	0	0	1	B (67)	NONE	66	1	*0*	66	1	*0*	65 [T]	2	*0*	65	2	*0*	-- [10]	--	--
R 10.20		SFR	4	70 [M,LT5,CAL]	66	67	70	67	70	0	0	0	B (67)	A/E	70	0	*0*	69	1	*0*	68 [T]	2	*0*	68	2	*0*	-- [10]	--	--
R 10.20A [7]		SFR	16	63 [E]	60	60	63	61	63	0	1	0	B (67)	NONE	63	0	*0*	63	0	*0*	62 [T]	1	*0*	62	1	*0*	-- [10]	--	--
R 10.21	Shoulder	COM	1	72 [E]	69	68	72	68	72	0	0	0	E (72)	NONE	72	0	*0*	71	1	*0*	71 [T]	1	*0*	70	2	*0*	-- [10]	--	--
R 10.22		SFR	2	67 [E]	63	65	67	65	67	0	0	0	B (67)	NONE	66	1	*0*	66	1	*0*	65 [T]	2	*0*	65	2	*0*	-- [10]	--	--
R 10.23 [7]		SFR	12	62 [E]	59	58	62	59	62	0	1	0	B (67)	NONE	62	0	*0*	62	0	*0*	61 [T]	1	*0*	61	1	*0*	-- [10]	--	--
R 10.24		SFR	2	65 [E]	63	60	65	61	65	0	1	0	B (67)	NONE	65	0	*0*	65	0	*0*	64 [T]	1	*0*	64	1	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-22 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
											8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 11.1 [B]	--	MOT	1	67 [E]	67	68	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-1		MOT	--	67 [E]	67	67	0	0	E (72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-1 [int]		MOT	4	42 [E]	42	42	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-2		MOT	--	71 [E]	71	72	0	1	E (72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2-2 [Int]		MOT	4	46 [E]	46	47	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-1		MOT	--	60 [E]	60	61	0	1	E (72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-1 [Int]		MOT	2	35 [E]	35	36	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-2		MOT	--	64 [E]	64	65	0	1	E (72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.2A-2 [Int]		MOT	2	39 [E]	39	40	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.3 [W]	S1877[p] R/W	MH	6	72 [E]	72	73	0	1	B (67)	A/E	73	0	*0*	71	2	*0*	69 [T]	4	*0*	69	4	*0*	**68 [R]**	**5**	***6***
R 11.4 [W]		MH	16	74 [M,LT6.CAL]	74	75	0	1	B (67)	A/E	74	1	*0*	71 [T]	4	*0*	70	5	*16*	**68 [R]**	**7**	*16*	67	8	*16*
R 11.5 [W]		MH	8	72 [E]	72	73	0	1	B (67)	A/E	72	1	*0*	70 [T]	3	*0*	68	5	*8*	**67 [R,5]**	**6**	*8*	66	7	*8*
R 11.6 [B,W]		MH	3	68 [E]	68	69	0	1	B (67)	A/E	68	1	*0*	67 [T]	2	*0*	65	4	*0*	**64 [R]**	**5**	*3*	63	6	*3*
R 11.7 [B,W,7]		MH	3	68 [E]	68	69	0	1	B (67)	A/E	68	1	*0*	67	2	*0*	65 [T]	4	*0*	64	5	*3*	**63 [R,5]**	**6**	*3*
R 11.8 [B,W,7]		MH	6	70 [E]	70	71	0	1	B (67)	A/E	70	1	*0*	69	2	*0*	68 [T]	3	*0*	67	4	*0*	**66 [R]**	**5**	*6*
R 11.9 [B,W,7]		MH	17	70 [E]	70	70	0	0	B (67)	A/E	69	1	*0*	68	2	*0*	66 [T]	4	*0*	**65 [R]**	**5**	*17*	65	5	*17*
R 11.10 [B,W,7]		MH	13	68 [E]	68	69	0	1	B (67)	A/E	67	2	*0*	66	3	*0*	65 [T]	4	*0*	**64 [R]**	**5**	*13*	63	6	*13*
R 11.11 [B,W,7]		MH	13	67 [E]	67	68	0	1	B (67)	A/E	67	1	*0*	66	2	*0*	65 [T]	3	*0*	64	4	*0*	64	4	*0*
R 11.12 [B,W,7]		MH	2	65 [E]	65	66	0	1	B (67)	A/E	65	1	*0*	65	1	*0*	63 [T]	3	*0*	62	4	*0*	62	4	*0*
R 11.13	--	COM	1	78 [E]	78	77	0	-1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-22 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 11.14 W	S1907[P] R/W	SFR	1	71 M,ST9	74	73	3	-1	B (67)	A/E	71	2	0	70 T	3	0	**68 R**	**5**	***1***	68	5	1	68	5	1
R 11.14A W		SFR	1	73 E	76	77	3	1	B (67)	A/E	72 T	5	1	70	7	1	**69 R,5**	**8**	***1***	68	9	1	66	11	1
R 11.15 W		SFR	1	62 E	65	66	3	1	B (67)	A/E	65	1	0	64	2	0	63	3	0	62	4	0	**61 R**	**5**	***1***
R 11.15A		SFR	5	68 E	71	71	3	0	B (67)	A/E	69	2	0	68	3	0	66 T	5	5	65	6	5	**65 R,5**	**6**	***5***
R 11.16		SFR	6	72 E	75	74	3	-1	B (67)	A/E	71	3	0	69	5	6	67 T	7	6	**67 R,5**	**7**	***6***	66	8	6
R 11.16A W		SFR	7	66 E	70	70	4	0	B (67)	A/E	69	1	0	68	2	0	66 T	4	0	**65 R**	**5**	***7***	64	6	7
R 11.17 B,8		SFR	--	73 M,ST11	77	75	4	-2	--	--	71	--	--	69	--	--	68	--	--	67	--	--	67	--	--
R 11.18 B		SFR	2	71 E	75	74	4	-1	B (67)	A/E	70	4	0	68 T	6	2	67	7	2	**66 R,5**	**8**	***2***	66	8	2
R 11.19 B,W		SFR	5	66 E	69	69	3	0	B (67)	A/E	69	0	0	69	0	0	68	1	0	68	1	0	67	2	0
R 11.20 B,7		SFR	3	62 E	65	66	3	1	B (67)	A/E	65	1	0	65	1	0	65	1	0	64	2	0	63	3	0
R 11.21 B,7		SFR	8	64 E	67	67	3	0	B (67)	A/E	66	1	0	66	1	0	65 T	2	0	63	4	0	**62 R**	**5**	***8***
R 11.22 B,7		SFR	6	62 E	66	66	4	0	B (67)	A/E	65	1	0	65	1	0	63 T	3	0	**61 R**	**5**	***6***	61	5	6
R 11.23 B,7		SFR	2	65 E	69	69	4	0	B (67)	A/E	67	2	0	66	3	0	65 T	4	0	**64 R**	**5**	***2***	63	6	2
R 11.24-1 B		MFR	4	73 E	77	75	4	-2	B (67)	A/E	71	4	0	69 T	6	4	68	7	4	66	9	4	**66 R,5**	**9**	***4***
R 11.24-2 B,6		MFR	4	74 E	77	78	3	1	B (67)	A/E	78	0	0	78	0	0	77	1	0	74	4	0	**71 R,5**	**7**	***4***
R 11.25-1 B,W		MFR	2	73 E	74	72	1	-2	B (67)	A/E	70	2	0	69 T	3	0	67	5	2	67	5	2	**66 R,5**	**6**	***2***
R 11.25-2 B,W,6		MFR	2	73 E	75	75	2	0	B (67)	A/E	75	0	0	75	0	0	74	1	0	72	3	0	**70 R,T**	**5**	***2***
R 11.26-1 B,7		MFR	6	63 E	67	66	4	-1	B (67)	A/E	64	2	0	64	2	0	62 T	4	0	61	5	6	**61 R,5**	**5**	***6***
R 11.26-2 B,W,6,7		MFR	6	66 E	69	68	3	-1	B (67)	A/E	67	1	0	66	2	0	65	3	0	65	3	0	**63 R,T**	**5**	***6***
R 11.27-1 B,W,7	--	MFR	2	63 E	61	63	-2	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.27-2 B,W,6,7		MFR	2	69 E	65	66	-4	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-22 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 11.28 W	SW1[X]	MH	3	72 M,ST12	65	67	-7	2	B (67)	A/E	-- T	--	--	66	1	*0*	66	1	*0*	65	2	*0*	64	3	*0*
R 11.29 B,W,7		MH	3	71 E	64	65	-7	1	B (67)	NONE	--	--	--	65 T	0	*0*	64	1	*0*	64	1	*0*	63	2	*0*
R 11.30 B,W,7		MH	3	71 E	64	65	-7	1	B (67)	NONE	--	--	--	64 T	1	*0*	64	1	*0*	64	1	*0*	63	2	*0*
R 11.31 B,W,7		MH	3	72 E	65	67	-7	2	B (67)	A/E	--	--	--	66 T	1	*0*	66	1	*0*	66	1	*0*	65	2	*0*
R 11.32 B,W,7		MH	3	68 E	61	63	-7	2	B (67)	NONE	--	--	--	62 T	1	*0*	62	1	*0*	61	2	*0*	61	2	*0*
R 11.33 W		REC	1	72 E	65	66	-7	1	C (67)	A/E	--	--	--	66 T	0	*0*	65	1	*0*	64	2	*0*	64	2	*0*
R 11.34 W		REC	1	71 E	64	65	-7	1	C (67)	NONE	--	--	--	64	1	*0*	64 T	1	*0*	63	2	*0*	63	2	*0*
R 11.34A W		REC	1	66 E	59	61	-7	2	C (67)	NONE	--	--	--	61	0	*0*	61	0	*0*	60	1	*0*	60	1	*0*
R 11.35 B,W		MH	6	72 E	65	66	-7	1	B (67)	A/E	--	--	--	66 T	0	*0*	65	1	*0*	64	2	*0*	64	2	*0*
R 11.36 B,W,7		MH	4	71 E	64	66	-7	2	B (67)	A/E	-- T	--	--	65	1	*0*	64	2	*0*	64	2	*0*	63	3	*0*
R 11.37 B,W		MH	4	70 E	63	65	-7	2	B (67)	NONE	--	--	--	64	1	*0*	63 T	2	*0*	63	2	*0*	63	2	*0*
R 11.38 B,W,7		MH	7	70 E	63	64	-7	1	B (67)	NONE	--	--	--	63 T	1	*0*	62	2	*0*	62	2	*0*	61	3	*0*
R 11.39 B,W		MH	8	71 E	64	65	-7	1	B (67)	NONE	--	--	--	65 T	0	*0*	65	0	*0*	64	1	*0*	64	1	*0*
R 11.40 B,W		MH	3	72 M,ST13	65	65	-7	0	B (67)	NONE	--	--	--	65	0	*0*	65 T	0	*0*	64	1	*0*	64	1	*0*
R 11.41 B,W,7		MH	8	69 E	62	63	-7	1	B (67)	NONE	--	--	--	62	1	*0*	61 T	2	*0*	61	2	*0*	60	3	*0*
R 11.42 B,W,7		MH	2	69 E	62	63	-7	1	B (67)	NONE	--	--	--	62	1	*0*	61 T	2	*0*	61	2	*0*	60	3	*0*
R 11.43	--	COM	1	71 E	75	77	4	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 11.44	S1969[P] R/W and Shoulder	SFR/FS	2	67 M,ST14	71	74	4	3	B (67)	A/E	69	5	*2*	68	6	*2*	**67 R,T**	**7**	*2*	66	8	*2*	66	8	*2*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
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Table B-22 – Predicted Future Noise Levels and Barrier Analysis – Segment 11 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location[11]	Land Use[2]	Number of Dwelling Units	Existing Traffic + Train Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)													
															8 feet			10 feet			12 feet			14 feet			16 feet	
					Design Year Train Noise Level Leq(h), dBA[1]	Design Year No Build Traffic Noise Level Leq(h), dBA[1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year Build Traffic Noise Level Leq(h), dBA[1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year No Build Traffic + Train Noise Level Minus Existing Conditions Leq(h), dBA[1,14]	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Level Leq(H), dBA[1,12]	Activity Category (NAC)	Impact Type[4,13]	Traffic + Train Noise Leq(h)	I.L.	*NBR*	Traffic + Train Noise Leq(h)	I.L.	*NBR*	Traffic + Train Noise Leq(h)	I.L.	*NBR*	Traffic + Train Noise Leq(h)	I.L.	*NBR*	Traffic + Train Noise Leq(h)	I.L.
R 11.45	--	SFR	1	64 [E]	68	64	69	65	70	5	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.46 [W]		SFR	2	63 [M,LT7]	66	63	68	64	68	5	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.47 [W]	Shoulder	SFR	2	64 [E]	67	65	69	66	70	5	1	1	B (67)	A/E	69	1	*0*	69	1	*0*	69 [T]	1	*0*	68	2	*0*	68	2
R 11.48 [W,8]	--	--	--	65 [M,ST10]	68	65	70	66	70	5	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 11.49		COM	1	63 [E]	65	64	68	66	69	5	2	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; FS - fire station; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Noise Level Leq(h), dBA".
14 - Noise measurements LT7 and ST10 were conducted when train cars were parked on tracks reducing the existing traffic and train noise levels.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-23 – Predicted Future Noise Levels and Barrier Analysis – Segment 12 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 12.1 [K]	--	SFR	2	62 [M,ST15]	62	62	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.2 [K]		SFR	2	60 [E]	60	61	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.3 [K]		SFR	4	63 [E]	63	64	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.4A [K]	--	SFR	1	67 [E]	59	61	-8	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.4B [K]		SFR	1	67 [E]	59	60	-8	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.4 [K]		SFR	4	70 [M,LT8,CAL]	57	59	-13	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.5 [K]		SFR	1	67 [E]	59	61	-8	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.6 [B,K,7]		SFR	2	59 [E]	55	56	-4	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.7	--	COM	1	70 [E]	71	73	1	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-1 [W,8]	--	MOT	--	66 [E,H1B]	67	70	1	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-1 [W,Int]		MOT	12	44 [E]	45	48	1	3	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-2 [W,6]		MOT	--	71 [E]	72	75	1	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-2 [W,Int,6]		MOT	12	49 [E]	50	53	1	3	D (52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-3 [W,12]		MOT	--	73 [E]	74	76	1	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.8-3 [W,Int,12]		MOT	12	51 [E]	52	54	1	2	D (52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.9 [B,W]		MOT	1	53 [E]	54	56	1	2	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 12.10 [W]	S2033 R/W	REC	4	66 [E]	67	69	1	2	C (67)	A/E	63 [T]	6	*4*	63	6	*4*	**62 [R]**	**7**	***4***	62	7	*4*	61	8	*4*
R 12.11 [B]	--	SCH	1	56 [E]	57	59	1	2	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home SCH - educational center; COM - commercial; MOT - motel; REC - recreational
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
K - A calibration factor of -4 dB is applied for this receiver and adjacent receivers with similar geographic features.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Insertion losses obtained from interior versus exterior noise measurements have been been applied to exterior noise levels to determine interior noise levels: R12.8-1/H1B - Days Inn: 22 dB reduction.

Table B-24 – Predicted Future Noise Levels and Barrier Analysis – Segment 13 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	12 feet			14 feet			16 feet			18 feet			20 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R13.1-1 [B]	--	MOT	--	63 [E]	64	65	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1-1 [Int]		MOT	18	38 [E]	39	40	1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1-2 [B,6]		MOT	--	65 [E]	66	67	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1-2 [Int,6]		MOT	18	40 [E]	41	42	1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.1A		COM	1	67 [E]	68	69	1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-1 [B]	--	MOT	--	65 [E]	66	68	1	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-1 [Int]		MOT	15	40 [E]	41	43	1	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-2 [B,6]		MOT	--	69 [E]	70	71	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.2-2 [Int,6]		MOT	15	44 [E]	45	46	1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.3	S2079[P] R/W	SFR	3	66 [E]	67	70	1	3	B (67)	A/E	66	4	*0*	65 [T]	5	*3*	65	5	*3*	**64** [R,5]	**6**	*3*	64	6	*3*
R13.4		SFR	1	68 [M,ST16A/LT9,CAL]	69	71	1	2	B (67)	A/E	67	4	*0*	66 [T]	5	*1*	65	6	*1*	**64** [R]	**7**	*1*	64	7	*1*
R13.5		COM	1	65 [E]	66	69	1	3	E (72)	NONE	66	3	*0*	65	4	*0*	65	4	*0*	65	4	*0*	64	5	*1*
R13.6	--	REC	1	58 [E]	59	62	1	3	C (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R13.7		REC	1	58 [E]	59	61	1	2	C (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-25 – Predicted Future Noise Levels and Barrier Analysis – Segment 14 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq (h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq (h), dBA[1]	Design Year Build Noise Level Leq (h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 14.1	--	COM	1	72 M,ST119	76	78	4	2	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.3		SFR	1	67 M,ST16	67	68	0	1	B (67)	A/E	66	2	*0*	65	3	*0*	64 T	4	*0*	**63 R**	**5**	***1***	-- 10	--	--
R 14.4		MOT	--	75 E	77	76	2	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.4 Int		MOT	3	55 E	57	56	2	-1	D (52)	A/E	53	3	*0*	53	3	*0*	51 T	5	*3*	**51 R,5**	**5**	***3***	-- 10	--	--
R 14.5 W		MH	5	71 E	73	75	2	2	B (67)	A/E	71	4	*0*	71	4	*0*	69 T	6	*5*	**69 R,5**	**6**	***5***	-- 10	--	--
R 14.6 W		MH	6	71 M,ST17	73	74	2	1	B (67)	A/E	71	3	*0*	71	3	*0*	70 T	4	*0*	**68 R**	**6**	***6***	-- 10	--	--
R 14.7		MH	3	73 E	75	77	2	2	B (67)	A/E	72	5	*3*	71	6	*3*	70 T	7	*3*	70	7	*3*	**69 R,5**	**8**	***3***
R 14.7A B,W,7		MH	7	67 E	69	70	2	1	B (67)	A/E	68	2	*0*	67	3	*0*	65 T	5	*7*	**65 R,5**	**5**	***7***	-- 10	--	--
R 14.7B B,W,7	S2145 Shoulder and R/W	MH	6	69 E	71	72	2	1	B (67)	A/E	69	3	*0*	69	3	*0*	67 T	5	*6*	**66 R,5**	**6**	***6***	-- 10	--	--
R 14.8 B,W,7		MH	2	65 E	67	68	2	1	B (67)	A/E	66	2	*0*	65	3	*0*	63 T	5	*2*	**63 R,5**	**5**	***2***	-- 10	--	--
R 14.8A		SFR	2	59	61	62	2	1	B (67)	NONE	61	1	*0*	60	2	*0*	60 T	2	*0*	59	3	*0*	-- 10	--	--
R 14.8B		SFR	2	65	67	68	2	1	B (67)	A/E	66	2	*0*	65	3	*0*	64 T	4	*0*	63	5	*2*	**63 R,5**	**5**	***2***
R 14.9		SFR	2	71 M,LT10	73	75	2	2	B (67)	A/E	71	4	*0*	70	5	*2*	70 T	5	*2*	70	5	*2*	**69 R,5**	**6**	***2***
R 14.9A		SFR	--	72 M,ST17A,CAL	74	76	2	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**--**	**--**	--
R 14.10 W		MH	3	68 E	70	72	2	2	B (67)	A/E	69	3	*0*	69	3	*0*	68	4	*0*	68	4	*0*	**67 R,T**	**5**	***3***
R 14.11 W		MH	3	68 E	70	72	2	2	B (67)	A/E	69	3	*0*	68	4	*0*	68	4	*0*	67	5	*3*	**67 R,T,5**	**5**	***3***
R 14.11A B,W,7		MH	2	62 E	64	65	2	1	B (67)	NONE	63	2	*0*	62	3	*0*	62	3	*0*	61	4	*0*	61	4	*0*
R 14.12 B,W,7		MH	2	61 E	63	64	2	1	B (67)	NONE	62	2	*0*	62	2	*0*	61	3	*0*	61	3	*0*	60	4	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 20 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-25 – Predicted Future Noise Levels and Barrier Analysis – Segment 14 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Traffic Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year Train Noise Level Leq(h), dBA[1]	Design Year No Build Traffic Noise Level Leq(h), dBA[1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year Build Traffic Noise Level Leq(h), dBA[1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year No Build Traffic Noise Level Minus Existing Conditions Leq(h), dBA[1]	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA[1]	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(H), dBA[1,12]	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
															Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 14.1A		SCH	1	62 [E]	56	62	63	64	65	0	2	2	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.1B	--	SCH	1	63	58	63	64	65	66	0	2	2	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 14.2		MFR	2	64 [E]	46	64	64	65	65	0	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Noise Level Leq(h), dBA".
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-26 – Predicted Future Noise Levels and Barrier Analysis – Segment 15 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 15.1 W	SW5[D] Shoulder & R/W	SFR	2	68 M,ST19	68	68	0	0	B (67)	A/E	--	--	--	--	--	--	68 T	0	*0*	67	1	*0*	66	2	*0*
R 15.2 W		SFR	3	68 E	68	69	0	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	69 T	0	*0*	68	1	*0*
R 15.3 W		SFR	1	66 E	66	65	0	-1	B (67)	NONE	--	--	--	--	--	--	65	0	*0*	64	1	*0*	64	1	*0*
R 15.4 B,W,7		SFR	2	65 E	65	66	0	1	B (67)	A/E	--	--	--	--	--	--	65 T	1	*0*	65	1	*0*	64	2	*0*
R 15.5 B,W,7		SFR	4	65 E	65	66	0	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	65 T	1	*0*	64	2	*0*
R 15.6 W		SFR	3	66 E	66	67	0	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	66 T	1	*0*	65	2	*0*
											18 feet			20 feet			22 feet			24 feet			--		
R 15.1 W	SW5[D] Shoulder & R/W	SFR	2	68 M,ST19	68	68	0	0	B (67)	A/E	66	2	*0*	66	2	*0*	66	2	*0*	66	2	*0*	--	--	--
R 15.2 W		SFR	3	68 E	68	69	0	1	B (67)	A/E	67	2	*0*	67	2	*0*	66	3	*0*	66	3	*0*	--	--	--
R 15.3 W		SFR	1	66 E	66	65	0	-1	B (67)	NONE	64	1	*0*	64	1	*0*	64	1	*0*	64	1	*0*	--	--	--
R 15.4 B,W,7		SFR	2	65 E	65	66	0	1	B (67)	A/E	64	2	*0*	64	2	*0*	64	2	*0*	63	3	*0*	--	--	--
R 15.5 B,W,7		SFR	4	65 E	65	66	0	1	B (67)	A/E	64	2	*0*	64	2	*0*	64	2	*0*	64	2	*0*	--	--	--
R 15.6 W		SFR	3	66 E	66	67	0	1	B (67)	A/E	65	2	*0*	64	3	*0*	64	3	*0*	64	3	*0*	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take in Alternative 3.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-26 – Predicted Future Noise Levels and Barrier Analysis – Segment 15 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 15.7 W	SW5[D] Shoulder	SFR	2	69 E	67	68	-2	1	B (67)	A/E	--	--	--	--	--	--	68 T	0	*0*	67	1	*0*	-- 10	--	--
R 15.8 W		SFR	5	69 E	67	68	-2	1	B (67)	A/E	--	--	--	-- T	--	--	67	1	*0*	67	1	*0*	-- 10	--	--
R 15.9 W		SFR	4	69 M,ST19A,CAL	67	67	-2	0	B (67)	A/E	-- T	--	--	--	--	--	66	1	*0*	66	1	*0*	-- 10	--	--
R 15.10 B,W		SFR	4	67 M,LT12	65	65	-2	0	B (67)	NONE	--	--	--	--	--	--	65	0	*0*	65	0	*0*	-- 10	--	--
R 15.11 B,W,7		SFR	4	68 E	66	65	-2	-1	B (67)	NONE	--	--	--	--	--	--	65	0	*0*	64	1	*0*	-- 10	--	--
R 15.12	--	COM	1	75 E	73	74	-2	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take in Alternative 3.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-26 – Predicted Future Noise Levels and Barrier Analysis – Segment 15 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Traffic Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
															8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year Train Noise Level Leq(h), dBA[1]	Design Year No Build Traffic Noise Level Leq(h), dBA[1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year Build Traffic Noise Level Leq(h), dBA[1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year No Build Traffic Noise Level Minus Existing Conditions Leq(h), dBA[14]	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 15.13	Shoulder	SFR	5	60 [M,ST18]	64	60	65	61	66	0	1	1	B (67)	NONE	65	1	*0*	65	1	*0*	65	1	*0*	65	1	*0*	-- [10]	--	--
R 15.14		SFR	5	66 [E]	70	66	71	67	72	0	1	1	B (67)	A/E	71	1	*0*	71	1	*0*	71 [T]	1	*0*	71	1	*0*	-- [10]	--	--
R 15.15		SFR	6	69 [E]	70	66	71	68	72	-3	2	1	B (67)	A/E	72	0	*0*	71	1	*0*	71 [T]	1	*0*	71	1	*0*	-- [10]	--	--
R 15.16		SFR	6	66 [M,LT11,CAL]	68	63	69	66	70	-3	3	1	B (67)	A/E	70	0	*0*	69	1	*0*	69	1	*0*	69	1	*0*	-- [10]	--	--
R 15.17		SFR	2	66 [E]	68	63	69	66	70	-3	3	1	B (67)	A/E	70	0	*0*	69	1	*0*	69	1	*0*	69	1	*0*	-- [10]	--	--
R 15.18		SFR	2	65 [E]	68	62	69	64	69	-3	2	0	B (67)	NONE	69	0	*0*	69	0	*0*	68	1	*0*	68	1	*0*	-- [10]	--	--
R 15.19		SFR	3	66 [E]	66	63	68	64	68	-3	1	0	B (67)	NONE	68	0	*0*	68	0	*0*	67	1	*0*	67	1	*0*	-- [10]	--	--
R 15.20	--	SFR	4	62 [E]	64	64	67	63	66	2	-1	-1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 15.21		SFR	3	57 [E]	66	59	66	61	67	2	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 15.22		SFR	4	55 [M,ST20]	62	57	63	59	64	2	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 15.23		SFR	5	56 [E]	60	58	62	60	63	2	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."
14 - Existing Conditions do not include train noise for ST18 and ST20; however there is potential train noise included in noise measurement LT11.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-27 – Predicted Future Noise Levels and Barrier Analysis – Segment 16 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA [1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA [1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA [1]	Design Year Build Noise Level Leq(h), dBA [1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 16.1 B,W	--	MOT	1	61 E	62	63	1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 16.2 B	Shoulder	SFR	1	69 E	70	70	1	0	B (67)	A/E	68	2	0	68	2	0	67 T	3	0	67	3	0	-- 10	--	--
R 16.3 B		COM	1	75 E	76	77	1	1	E (72)	A/E	71	6	1	70	7	1	68 T	9	1	67	10	1	-- 10	--	--
R 16.4 B		SFR	1	70 E	71	72	1	1	B (67)	A/E	69	3	0	68	4	0	68	4	0	67 T	5	1	-- 10	--	--
R 16.5 B,W,7		SFR	4	65 E	66	66	1	0	B (67)	A/E	64	2	0	64	2	0	63 T	3	0	62	4	0	-- 10	--	--
R 16.6 B,W		REL	1	63 E	64	64	1	0	--	--	63	1	0	62	2	0	61 T	3	0	60	4	0	-- 10	--	--
R 16.7 B,7		SFR	2	61 E	62	63	1	1	B (67)	NONE	62	1	0	62	1	0	61	2	0	60	3	0	-- 10	--	--
R 16.8 B,7		MH	6	65 E	66	67	1	1	B (67)	A/E	64	3	0	63	4	0	63	4	0	61 T	6	6	-- 10	--	--
R 16.9 B,7		SFR	6	62 E	63	64	1	1	B (67)	NONE	62	2	0	61	3	0	61	3	0	61	3	0	-- 10	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take in Alternative 3.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-27 – Predicted Future Noise Levels and Barrier Analysis – Segment 16 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4,13]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 16.10 W,B	S2238[P] R/W & Shoulder	SFR	3	63 [E]	64	66	1	2	B (67)	A/E	65	1	*0*	65	1	*0*	65	1	*0*	65 [T]	1	*0*	65	1	*0*
R 16.11 W,B		SFR	3	61 [M,LT13]	62	64	1	2	B (67)	NONE	63	1	*0*	62	2	*0*	62	2	*0*	62	2	*0*	62	2	*0*
R 16.12 B		SFR	1	66 [E]	67	68	1	1	B (67)	A/E	66	2	*0*	65	3	*0*	64 [T]	4	*0*	64	4	*0*	**63** [R]	**5**	*1*
R 16.13 B		SFR	4	65 [E]	66	67	1	1	B (67)	A/E	65	2	*0*	64	3	*0*	63 [T]	4	*0*	63	4	*0*	63	4	*0*
R 16.14 B		SFR	2	62 [E]	63	65	1	2	B (67)	NONE	63	2	*0*	63	2	*0*	62	3	*0*	61	4	*0*	61	4	*0*
R 16.15-1		MOT	--	67 [E]	67	68	0	1	--	--	65	3	--	64	4	--	63	5	--	62	6	--	-- [10]	--	--
R 16.15-1 Int,B		MOT	6	42 [E]	42	43	0	1	D (52)	NONE	40	3	*0*	39	4	*0*	38	5	*6*	**37** [R,5]	**6**	*6*	-- [10]	--	--
R 16.15-2		MOT	--	71 [E]	71	72	0	1	--	--	69	3	--	68	4	--	67	5	--	65	7	--	-- [10]	--	--
R 16.15-2 Int,B,6		MOT	6	46 [E]	46	47	0	1	D (52)	NONE	44	3	*0*	43	4	*0*	42	5	*6*	**40** [R]	**7**	*6*	-- [10]	--	--
R 16.16-1		MOT	--	67 [E]	67	67	0	0	--	--	65	2	--	64	3	--	63	4	--	62	5	--	-- [10]	--	--
R 16.16-1 Int,B		MOT	14	42 [E]	42	42	0	0	D (52)	NONE	40	2	*0*	39	3	*0*	38	4	*0*	**37** [R]	**5**	*14*	-- [10]	--	--
R 16.16-2		MOT	--	71 [E]	71	72	0	1	--	--	68	4	--	68	4	--	67	5	--	65	7	--	-- [10]	--	--
R 16.16-2 Int,B,6		MOT	14	46 [E]	46	47	0	1	D (52)	NONE	43	4	*0*	43	4	*0*	42	5	*14*	**40** [R,5]	**7**	*14*	-- [10]	--	--
R 16.17 B,W		MOT	1	70 [M,ST20A,CAL]	70	71	0	1	E (72)	A/E	67	4	*0*	67	4	*0*	66 [T]	5	*1*	**64** [R]	**7**	*1*	-- [10]	--	--
R 16.18 B,7		SFR	8	61 [E]	62	63	1	1	B (67)	NONE	62	1	*0*	61	2	*0*	61	2	*0*	60	3	*0*	-- [10]	--	--
R 16.19 B,7		SFR	3	63 [E]	64	65	1	1	B (67)	NONE	63	2	*0*	63	2	*0*	62	3	*0*	61	4	*0*	-- [10]	--	--
R 16.20-1		MOT	--	66 [E]	66	67	0	1	--	--	65	2	--	64	3	--	64	3	--	63	4	--	-- [10]	--	--
R 16.20-1 Int,B		MOT	4	41 [E]	41	42	0	1	D (52)	NONE	40	2	*0*	39	3	*0*	39	3	*0*	38	4	*0*	-- [10]	--	--
R 16.20-2		MOT	--	69 [E]	69	70	0	1	--	--	67	3	--	67	3	--	66	4	--	65	5	--	-- [10]	--	--
R 16.20-2 Int,B,6		MOT	4	44 [E]	44	45	0	1	D (52)	NONE	42	3	*0*	42	3	*0*	41	4	*0*	**40** [R]	**5**	*4*	-- [10]	--	--
R 16.21 B		MOT	1	61 [E]	61	61	0	0	E (72)	NONE	61	0	*0*	60	1	*0*	60	1	*0*	60	1	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.

12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix.*

13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-27 – Predicted Future Noise Levels and Barrier Analysis – Segment 16 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Traffic Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]										Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
															8 feet			10 feet			12 feet			14 feet			16 feet		
					Design Year Train Noise Level Leq(h), dBA[1]	Design Year No Build Traffic Noise Level Leq(h), dBA[1]	Design Year No Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year Build Traffic Noise Level Leq(h), dBA[1,13]	Design Year Build Traffic + Train Noise Level Leq(h), dBA[1,12]	Design Year No Build Traffic Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Traffic Noise Level Minus No Build Conditions Leq(h), dBA	Design Year Build Traffic + Train Noise Level Minus No Build Traffic + Train Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4,13]	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*	Train + Traffic Noise Leq(h)	I.L.	*NBR*
R 16.22	--	SFR	3	55 [E]	61	57	63	60	63	2	3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 16.23		SFR/MFR	14	56 [E]	60	58	62	61	63	2	3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; MED - medical facility; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Year 2035 train noise levels were calculated from the *Regional Rail Simulation Findings Technical Appendix*.
13 - When train noise levels are provided, noise impacts are based on noise levels from the column labeled "Design Year Build Traffic Noise Level Leq(h), dBA."
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3

Receiver I.D.	Barrier I.D. and Location [11]	Land Use [2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type [4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 1A-1	--	MOT	--	67 C	67	66	0	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-1 Int		MOT	6	39 C	39	38	0	-1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-2 6		MOT	--	70 C	70	71	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-2 Int,6		MOT	6	42 C	42	43	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-3 12		MOT	--	71 C	71	73	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1A-3 Int,12		MOT	6	43 C	43	45	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-1		MOT	--	70 C	70	71	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-1 Int		MOT	6	42 C	42	43	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-2 6		MOT	--	73 C	73	75	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-2 Int,6		MOT	6	45 C	45	47	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-3 12		MOT	--	74 C	74	76	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 1-3 Int,12		MOT	6	46 C	46	48	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. A 28 dB reduction has been applied to exterior noise levels based on building noise reduction measurements conducted for this site.

Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 2 [13]	SW241[X] Property Line	SFR	1	66 [C]	58	59	-8	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 3 [13]		SFR	1	67 [C]	58	59	-9	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 4 [13]		SFR	2	67 [C]	58	60	-9	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 5 [13]		SFR	2	68 [C]	58	60	-10	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 6 [13]		SFR	2	68 [C]	59	61	-9	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 7 [13]		SFR	2	69 [C]	59	61	-10	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 8 [13]		SFR	1	69 [C]	61	64	-8	3	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 9 [9]	--	--	--	74 [M,ST23]	74	78	0	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 10 [B,7]	--	SFR	3	62 [C]	62	65	0	3	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 11 [W]	--	SFR	4	59 [C]	59	61	0	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 12 [W]		SFR	12	60 [C]	60	62	0	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 13 [W]		SFR	7	61 [C]	61	62	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 14 [W]		SFR	3	62 [C]	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 15 W	SW264[X] Property Line	SFR	2	65 E	64	67	-1	3	B (67)	A/E	--	--	--	66	1	0	65	2	0	64	3	0	63	4	0
R17. 16 W		SFR	3	65 E	64	67	-1	3	B (67)	A/E	--	--	--	66	1	0	65	2	0	64	3	0	63	4	0
R17. 17 W		SFR	5	66 M,LT14,CAL	65	67	-1	2	B (67)	A/E	--	--	--	66	1	0	65	2	0	65	2	0	64	3	0
R17. 18 W		SFR	6	65 E	64	65	-1	1	B (67)	NONE	--	--	--	65	0	0	64	1	0	63	2	0	63	2	0
R17. 19 B,W,7		SFR	2	63 E	62	61	-1	-1	B (67)	NONE	--	--	--	61	0	0	60	1	0	60	1	0	59	2	0
R17. 20 B,W,7		SFR	6	63 E	62	63	-1	1	B (67)	NONE	--	--	--	62	1	0	61	2	0	61	2	0	60	3	0
R17. 21 B,W,7		SFR	3	64 E	63	64	-1	1	B (67)	NONE	--	--	--	63	1	0	62	2	0	61	3	0	61	3	0
R17. 22 B,W,7		SFR	3	65 E	64	66	-1	2	B (67)	A/E	--	--	--	65	1	0	64	2	0	63	3	0	63	3	0
R17. 23 B,W,7		SFR	4	63 E	62	64	-1	2	B (67)	NONE	--	--	--	63	1	0	62	2	0	62	2	0	61	3	0
R17. 24 B,W,7		SFR	3	66 E	65	67	-1	2	B (67)	A/E	--	--	--	66	1	0	66	1	0	66	1	0	65	2	0

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R17. 18 [W]	S2435[P] R/W and S2437[P] Shoulder	SFR	5	65 [E]	64	65	-1	1	B (67)	NONE	65	0	*0*	65	0	*0*	65	0	*0*	65	0	*0*	65	0	*0*
R17. 24 [B,W,7]		SFR	3	66 [E]	65	67	-1	2	B (67)	A/E	66	1	*0*	65	2	*0*	65	2	*0*	65	2	*0*	65	2	*0*
R17. 25 [B,W]		MFR	4	68 [E]	66	67	-2	1	B (67)	A/E	65	2	*0*	63 [T]	4	*0*	62	5	*4*	**61 [R,5]**	**6**	***4***	60	7	*4*
R17. 26 [W]		MFR	3	70 [E]	68	69	-2	1	B (67)	A/E	67	2	*0*	65 [T]	4	*0*	63	6	*3*	**62 [R]**	**7**	***3***	61	8	*3*
R17. 27 [B,W]		MFR	3	68 [E]	66	66	-2	0	B (67)	A/E	64	2	*0*	62 [T]	4	*0*	60	6	*3*	**60 [R,5]**	**6**	***3***	59	7	*3*
R17. 28 [B,W]		MFR	1	61 [E]	59	60	-2	1	B (67)	NONE	59	1	*0*	59 [T]	1	*0*	59	1	*0*	59	1	*0*	59	1	*0*
R17. 29 [B,W]		MFR	2	68 [E]	66	66	-2	0	B (67)	A/E	65	1	*0*	63 [T]	3	*0*	62	4	*0*	**61 [R]**	**5**	***2***	61	5	*2*
R17. 30 [W,8]		MFR	--	70 [M,ST25]	68	69	-2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 31 [B,W,7]		MFR	3	60 [E]	58	59	-2	1	B (67)	NONE	56	3	*0*	56	3	*0*	54	5	*3*	**53 [R,5]**	**6**	***3***	53	6	*3*
R17. 32 [B,W]	--	MFR	10	59 [E]	57	58	-2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 33A	--	REL	--	68 C	68	70	0	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 33A Int		REL	1	43 C	43	45	0	2	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 33	--	COM	1	75 C	75	74	0	-1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 34	S2384P R/W and S2382P	SFR	1	69 C	69	71	0	2	B (67)	A/E	67	4	*0*	66	5	*1*	65 T	6	*1*	**63 R**	**8**	***1***	61	10	*1*
R17. 35 [8]		--	--	66 M,ST21	67	70	1	3	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 36	--	COM	1	74 C	74	77	0	3	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 37		COM	1	77 M,ST121	79	82	2	3	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. A 25 dB reduction has been applied to exterior noise levels.

Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 38	S2434A[P] R/W and S2438[P] Shoulder Option 1	MH	4	75 [M,ST24]	77	77	2	0	B (67)	A/E	72	5	*4*	70 [T]	7	*4*	69	8	*4*	68	9	*4*	**67 [R,5]**	**10**	***4***
R17. 39		MH	6	71 [E]	73	76	2	3	B (67)	A/E	73	3	*0*	71 [T]	5	*6*	70	6	*6*	69	7	*6*	**69 [R,5]**	**7**	***6***
R17. 40		MH	6	68 [E]	70	71	2	1	B (67)	A/E	68	3	*0*	66 [T]	5	*6*	65	6	*6*	**65 [R,5]**	**6**	***6***	65	6	*6*
R17. 41 [B,7]		MH	1	71 [E]	73	74	2	1	B (67)	A/E	72	2	*0*	71	3	*0*	70	4	*0*	68	6	*1*	**68 [R,5]**	**6**	***1***
R17. 42 [B,7]		MH	2	68 [E]	70	71	2	1	B (67)	A/E	70	1	*0*	69	2	*0*	68	3	*0*	67	4	*0*	**66 [R]**	**5**	***2***
R17. 43 [B,7]		MH	7	68 [E]	70	73	2	3	B (67)	A/E	71	2	*0*	69	4	*0*	68	5	*7*	67	6	*7*	**66 [R,5]**	**7**	***7***
R17. 44 [B,7]		MH	6	67 [E]	69	71	2	2	B (67)	A/E	69	2	*0*	69	2	*0*	67	4	*0*	67	4	*0*	**66 [R]**	**5**	***6***
R17. 45 [B,7]		MH	4	66 [E]	68	69	2	1	B (67)	A/E	67	2	*0*	67	2	*0*	65	4	*0*	**64 [R]**	**5**	***4***	64	5	*4*
R17. 46 [W]		SFR	2	65 [E]	66	69	1	3	B (67)	A/E	67	2	*0*	65 [T]	4	*0*	64	5	*2*	**63 [R,5]**	**6**	***2***	63	6	*2*
R17. 47A [W]		SFR	2	66 [E]	67	68	1	1	B (67)	A/E	68	0	*0*	65 [T]	3	*0*	64	4	*0*	**63 [R]**	**5**	***2***	63	5	*2*
R17. 47		--	--	68 [M,LT15,CAL]	69	70	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R17. 48		SFR	2	67 [E]	68	69	1	1	B (67)	A/E	67	2	*0*	67 [T]	2	*0*	66	3	*0*	66	3	*0*	66	3	*0*

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-28 – Predicted Future Noise Levels and Barrier Analysis – Segment 17 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location [11]	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R17. 38	S2434B[P] and S2438[P] Shoulder Option 2	MH	4	75 [M,ST24]	77	77	2	0	B (67)	A/E	72	5	*4*	71 [T]	6	*4*	70	7	*4*	**69 [R,5]**	**8**	***4***	-- [10]	--	--
R17. 39		MH	6	71 [E]	73	76	2	3	B (67)	A/E	71	5	*6*	69 [T]	7	*6*	**67 [R,5]**	**9**	***6***	66	10	*6*	-- [10]	--	--
R17. 40		MH	6	68 [E]	70	71	2	1	B (67)	A/E	67	4	*0*	64 [T]	7	*6*	**62 [R,5]**	**9**	***6***	61	10	*6*	-- [10]	--	--
R17. 41 [B,7]		MH	1	71 [E]	73	74	2	1	B (67)	A/E	70	4	*0*	69	5	*1*	68	6	*1*	**67 [R,5]**	**7**	***1***	-- [10]	--	--
R17. 42 [B,7]		MH	2	68 [E]	70	71	2	1	B (67)	A/E	68	3	*0*	68	3	*0*	67	4	*0*	**66 [R]**	**5**	***2***	-- [10]	--	--
R17. 43 [B,7]		MH	7	68 [E]	70	73	2	3	B (67)	A/E	69	4	*0*	68	5	*7*	66	7	*7*	**65 [R,5]**	**8**	***7***	-- [10]	--	--
R17. 44 [B,7]		MH	6	67 [E]	69	71	2	2	B (67)	A/E	68	3	*0*	67	4	*0*	**66 [R]**	**5**	***6***	65	6	*6*	-- [10]	--	--
R17. 45 [B,7]		MH	4	66 [E]	68	69	2	1	B (67)	A/E	67	2	*0*	66	3	*0*	**64 [R]**	**5**	***4***	63	6	*4*	-- [10]	--	--
R17. 46 [W]		SFR	2	65 [E]	66	69	1	3	B (67)	A/E	67	2	*0*	65 [T]	4	*0*	**64 [R]**	**5**	***2***	63	6	*2*	-- [10]	--	--
R17. 47A [W]		SFR	2	66 [E]	67	68	1	1	B (67)	A/E	68	0	*0*	65 [T]	3	*0*	64	4	*0*	64	4	*0*	-- [10]	--	--
R17. 47 [9]		--	--	68 [M,LT15,CAL]	69	70	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R17. 48		SFR	2	67 [E]	68	69	1	1	B (67)	A/E	67	2	*0*	67 [T]	2	*0*	66	3	*0*	66	3	*0*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; COM - commercial; SCH - educational center; REC - recreational; MOT - motel; REL - religious Institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; C - calculated existing noise level; CAL - model calibration site; INT - interior noise level.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
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10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
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12 - Third story receiver.
13 - A soundwall that was constructed as part of the Tippecanoe Ave Improvement project is included for No Build and Build scenarios, but Existing noise levels are without this soundwall.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-29 – Predicted Future Noise Levels and Barrier Analysis – Segment 18 – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA1						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R18. 1	--	COM	1	72 E	70	68	-2	-2	F	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 2		COM	1	72 E	70	70	-2	0	F	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 3	--	REC	1	73 E	71	71	-2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 4		REC	1	70 E	68	68	-2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 5	--	COM	1	70 E	70	71	0	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 6-1	S2476[P] Shoulder	MFR	2	66 M,ST26	66	67	0	1	B (67)	A/E	65	2	*0*	64	3	*0*	**62** R,T	**5**	***2***	62	5	*2*	-- 10	--	--
R18. 6-2 6		MFR	2	69 E	69	68	0	-1	B (67)	A/E	65	3	*0*	64	4	*0*	**63** R,T	**5**	***2***	62	6	*2*	-- 10	--	--
R18. 7-1		MFR	6	65 E	65	65	0	0	B (67)	NONE	62	3	*0*	61	4	*0*	**60** R,T	**5**	***6***	59	6	*6*	-- 10	--	--
R18. 7-2 6		MFR	6	67 E	67	66	0	-1	B (67)	A/E	64	2	*0*	63	3	*0*	62	4	*0*	61	5	*6*	-- 10	--	--
R18. 8-1		MFR	8	65 E	65	66	0	1	B (67)	A/E	62	4	*0*	62	4	*0*	**60** R,T	**6**	***8***	59	7	*8*	-- 10	--	--
R18. 8-2 6		MFR	8	68 E	68	67	0	-1	B (67)	A/E	63	4	*0*	62	5	*8*	**60** R,T,5	**7**	***8***	60	7	*8*	-- 10	--	--
R18. 9-1 7		MFR	4	62 E	62	62	0	0	B (67)	NONE	59	3	*0*	59	3	*0*	**57** R,T	**5**	***4***	56	6	*4*	-- 10	--	--
R18. 9-2 6,7		MFR	4	64 E	64	63	0	-1	B (67)	NONE	61	2	*0*	60	3	*0*	59	4	*0*	59	4	*0*	-- 10	--	--
R18. 10-1 7		MFR	4	60 E	60	61	0	1	B (67)	NONE	59	2	*0*	59	2	*0*	58	3	*0*	57	4	*0*	-- 10	--	--
R18. 10-2 6,7		MFR	4	63 E	63	63	0	0	B (67)	NONE	62	1	*0*	61	2	*0*	60	3	*0*	60	3	*0*	-- 10	--	--
R18. 11-1		MFR	2	67 E	67	68	0	1	B (67)	A/E	65	3	*0*	65	3	*0*	**63** R,T	**5**	***2***	63	5	*2*	-- 10	--	--
R18. 11-2 6		MFR	2	70 E	70	70	0	0	B (67)	A/E	67	3	*0*	66	4	*0*	**64** R,T	**6**	***2***	64	6	*2*	-- 10	--	--
R18. 12-1		MFR	4	67 E	67	68	0	1	B (67)	A/E	65	3	*0*	65	3	*0*	**63** R,T	**5**	***4***	62	6	*4*	-- 10	--	--
R18. 12-2 6		MFR	4	70 E	70	69	0	-1	B (67)	A/E	66	3	*0*	66	3	*0*	**64** R,T	**5**	***4***	63	6	*4*	-- 10	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; PI - public institute.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - indoor/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates thatn o barrier was analyzed in front of the corresponding receivers.
B - Includes the benefit of an existing building or building row.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-29 – Predicted Future Noise Levels and Barrier Analysis – Segment 18 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA1						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18. 13-1 [7]	S2476[P] Shoulder	MFR	2	66 [E]	66	66	0	0	B (67)	A/E	63	3	0	63	3	0	**61** [R,T]	**5**	***2***	60	6	*2*	-- [10]	--	--
R18. 13-2 [6,7]		MFR	2	68 [E]	68	67	0	-1	B (67)	A/E	64	3	0	64	3	0	**62** [R,T]	**5**	***2***	62	5	*2*	-- [10]	--	--
R18. 14-1		MFR	6	68 [E]	68	69	0	1	B (67)	A/E	66	3	0	66	3	0	64 [T]	5	*6*	**64** [R,5]	**5**	***6***	-- [10]	--	--
R18. 14-2 [6]		MFR	6	71 [E]	71	71	0	0	B (67)	A/E	68	3	0	67	4	0	66 [T]	5	*6*	**65** [R,5]	**6**	***6***	-- [10]	--	--
R18. 15-1		MFR	4	67 [E]	67	68	0	1	B (67)	A/E	65	3	0	65	3	0	64 [T]	4	0	**63** [R]	**5**	***4***	-- [10]	--	--
R18. 15-2 [6]		MFR	4	69 [E]	69	70	0	1	B (67)	A/E	68	2	0	66	4	0	65 [T]	5	*4*	**65** [R,5]	**5**	***4***	-- [10]	--	--
R18. 16-1		MFR	4	62 [E]	62	64	0	2	B (67)	NONE	62	2	0	61	3	0	60 [T]	4	0	**59** [R]	**5**	***4***	-- [10]	--	--
R18. 16-2 [6]		MFR	4	67 [E]	67	69	0	2	B (67)	A/E	67	2	0	66	3	0	65	4	0	65	4	0	-- [10]	--	--
R18. 17 [B,W,7]		SFR	3	62 [E]	62	64	0	2	B (67)	NONE	62	2	0	62	2	0	61	3	0	60	4	0	-- [10]	--	--
R18. 18 [W]		SFR	8	62 [M,LT16,ST26A,CAL]	62	63	0	1	B (67)	NONE	63	0	0	62	1	0	61	2	0	61	2	0	-- [10]	--	--
R18. 19 [W]		SFR	5	63 [E]	63	64	0	1	B (67)	NONE	63	1	0	63	1	0	63	1	0	62	2	0	-- [10]	--	--
R18. 20		MFR	4	64 [E]	64	65	0	1	B (67)	NONE	65	0	0	65	0	0	65	0	0	64	1	0	-- [10]	--	--
R18. 21		MFR	4	63 [M,ST27]	63	64	0	1	B (67)	NONE	64	0	0	64	0	0	64	0	0	64	0	0	-- [10]	--	--
R18. 22		MFR	4	64 [E]	64	66	0	2	B (67)	A/E	66	0	0	65	1	0	65	1	0	65	1	0	-- [10]	--	--
R18. 23	--	COM	1	68 [E]	68	69	0	1	E(72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 24	--	COM	1	72 [M,ST28]	70	70	-2	0	E(72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 25	Shoulder	RS	--	73 [E]	71	70	-2	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18. 25 [Int]		RS	1	48 [E]	46	45	-2	-1	D(52)	NONE	42	3	0	41	4	0	41	4	0	40	5	*1*	-- [10]	--	--
R18. 26		PI	1	67 [E]	65	67	-2	2	C(67)	A/E	64	3	0	64	3	0	63	4	0	62	5	*1*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; PI - public institute; RS - radio station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - indoor/outdoor measurement.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates thatn o barrier was analyzed in front of the corresponding receivers.

B - Includes the benefit of an existing building or building row.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Table B-30 – Predicted Future Noise Levels and Barrier Analysis – Segment 18A – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18A. 1A	--	COM	1	74 C	74	77	0	3	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 1	--	SCH	1	62 C	62	64	0	2	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-1	--	MOT	--	62 C	62	62	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-1 Int		MOT	5	37 C	37	37	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-2 6		MOT	--	65 C	66	66	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 2-2 6,Int		MOT	5	40 C	41	41	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 3	--	MOT	1	61 C	61	63	0	2	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-1		MOT	--	61 C,H6	61	62	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-1 Int		MOT	4	38 C	38	39	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-2 6		MOT	--	67 C	68	68	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 4-2 6,Int		MOT	4	44 C	45	45	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-1		MOT	--	63 C	63	64	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-1 Int		MOT	4	40 C	40	41	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-2 6		MOT	--	70 C	70	71	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 5-2 6,Int		MOT	4	47 C	47	48	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; PI - public institute.
3 - M - Measured noise level; STxx or LTxx - measurement site number; C - calculated existing noise level; CAL - model calibration site; Hxx - indoor/outdoor measurement; E - estimated from No Build noise level and measurement sites.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of a calibration location.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels of Travelodge based on building construction; a 23, 20, and 25 dB reduction has been applied to exterior noise levels of Super 8, Good Nite Inn, and Country Inn Suites, respectively, based on building noise reduction measurements conducted at these sites.

Table B-30 – Predicted Future Noise Levels and Barrier Analysis – Segment 18A – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Corridor Project Future Worst Hour Noise Levels -- Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R18A. 6 [8]		MOT	-	76 [C,ST28A,CAL]	76	76	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-1 [B,W]		MOT	--	70 [C,H18]	70	69	0	-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-1 [B,Int,W]	--	MOT	7	50 [C]	50	49	0	-1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-2 [B,6]		MOT	--	73 [C]	73	74	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 7-2 [B,6,Int]		MOT	7	53 [C]	53	54	0	1	D (52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 8	--	COM	1	65 [C]	66	65	1	-1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-1		MOT	--	67 [C,H5]	67	67	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-1 [Int]		MOT	12	42 [C]	42	42	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-2 [6]		MOT	--	71 [C]	71	71	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-2 [6,Int]	--	MOT	12	46 [C]	46	46	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-3 [12]		MOT	--	74 [C]	74	75	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 9-3 [12,Int]		MOT	12	49 [C]	49	50	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 10		MOT	1	64 [C]	64	64	0	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R18A. 11	--	COM	1	63 [C]	63	64	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.

2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH - mobile home; SCH - educational center; COM - commercial; MOT - motel; REC - recreational; MED - medical facility; REL - religious institution; PI - public institute; RS - radio station.

3 - M - Measured noise level; STxx or LTxx - measurement site number; C - calculated existing noise level; CAL - model calibration site; Hxx - indoor/outdoor measurement; E - estimated from No Build noise level and measurement sites.

4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.

5 - Barrier height needed to meet requirements at adjacent receiver(s).

6 - Second story receiver.

7 - Non first row residences.

8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of a calibration location.

9 - This noise measurement site will be a take and was chosen for monitoring purposes only.

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

11 - Barrier Type: P - proposed; X - existing; D - replacement in kind. If a location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" idicates that no barrier was analyzed in front of the corresponding receivers.

12 - Third story receiver.

B - Includes the benefit of an existing building or building row.

R - The minimum height to meet feasibility requirements and design goal.

T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.

W - Includes the benefit of an existing soundwall or property wall.

Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels of Travelodge based on building construction; a 23, 20, and 25 dB reduction has been applied to exterior noise levels of Super 8, Good Nite Inn, and Country Inn Suites, respectively, based on building noise reduction measurements conducted at these sites.

Table B-31 – Predicted Future Noise Levels and Barrier Analysis – Segment 19 – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 19.1	--	COM	1	72 [E]	71	72	-1	1	E (72)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.2		COM	1	72 [E]	71	71	-1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.3	S2619[P] / Shoulder	SFR	1	72 [E]	71	71	-1	0	B (67)	A/E	67	4	*0*	67 [T]	4	*0*	**66** [R]	**5**	*1*	66	5	*1*	-- [10]	--	--
R 19.4		SFR	1	71 [M,ST30A,CAL]	70	70	-1	0	B (67)	A/E	66	4	*0*	**65** [R,T]	**5**	*1*	65	5	*1*	64	6	*1*	-- [10]	--	--
R 19.5 [B]		MFR	4	67 [M,LT18]	68	69	1	1	B (67)	A/E	65	4	*0*	**64** [R,T]	**5**	*4*	63	6	*4*	63	6	*4*	-- [10]	--	--
R 19.5A		SFR	2	70 [E]	71	72	1	1	B (67)	A/E	69	3	*0*	69	3	*0*	69	3	*0*	69	3	*0*	-- [10]	--	--
R 19.5B [B,7]		SFR	4	61 [E]	62	63	1	1	B (67)	NONE	62	1	*0*	61	2	*0*	60	3	*0*	60	3	*0*	-- [10]	--	--
R 19.5C [B,7]		SFR	5	68 [E]	69	70	1	1	B (67)	A/E	66	4	*0*	66	4	*0*	**65** [R,T]	**5**	*5*	64	6	*5*	-- [10]	--	--
R 19.6 [B]		SFR	5	69 [M,ST31]	69	70	0	1	B (67)	A/E	66	4	*0*	65	5	*5*	64 [T]	6	*5*	**64** [R,5]	**6**	*5*	-- [10]	--	--
R 19.7		SFR	1	72 [E]	72	73	0	1	B (67)	A/E	69	4	*0*	68	5	*1*	67 [T]	6	*1*	**66** [R]	**7**	*1*	-- [10]	--	--
R 19.8-1	--	MOT	1	64 [C]	64	64	0	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.8-1 [Int]		MOT	10	38 [C]	38	38	0	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.8-2 [6]		MOT	--	67 [C]	68	68	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.8-2 [Int,6]		MOT	14	41 [C]	42	42	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.8-3 [12]		MOT	--	70 [C]	71	71	1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.8-3 [Int,12]		MOT	14	44 [C]	45	45	1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.9-1		MOT	1	64 [C]	64	65	0	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.9-1 [Int]		MOT	16	41 [C]	41	42	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.9-2 [6]		MOT	--	66 [C]	67	68	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.9-2 [Int,6]		MOT	16	43 [C]	44	45	1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Insertion losses obtained from interior versus exterior noise measurements have been been applied to exterior noise levels to determine interior noise levels: R19.8/H7 - Comfort Suites: 26 dB reduction; R19.9/H8 - Motel 6: 23 dB reduction; R19.10/H9 - Ayres Hotel: 27 dB reduction.

Table B-31 – Predicted Future Noise Levels and Barrier Analysis – Segment 19 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 19.10-1	--	MOT	--	65 [C]	65	66	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.10-1 [Int]		MOT	7	38 [C]	38	39	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.10-2 [6]		MOT	--	67 [C]	67	68	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.10-2 [Int,6]		MOT	7	40 [C]	40	41	0	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.10A		COM	1	66 [C]	67	67	1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.11 [B]	Shoulder	SCH	1	63 [M,ST29]	65	65	2	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 19.12 [B]		SFR	1	65 [E]	67	66	2	-1	B (67)	A/E	64	2	*0*	63 [T]	3	*0*	63	3	*0*	62	4	*0*	-- [10]	--	--
R 19.13		SFR	1	67 [M,LT17]	69	67	2	-2	B (67)	A/E	64	3	*0*	64 [T]	3	*0*	63	4	*0*	62	5	*1*	-- [10]	--	--
R 19.14 [B]		SFR	3	65 [E]	67	67	2	0	B (67)	A/E	63	4	*0*	63 [T]	4	*0*	62	5	*3*	62	5	*3*	-- [10]	--	--
R 19.14A		MH	6	63 [E]	65	66	2	1	B (67)	A/E	63	3	*0*	61	5	*6*	60 [T]	6	*6*	60	6	*6*	-- [10]	--	--
R 19.15 [W,B]	Shoulder	SFR	2	66 [E]	66	67	0	1	B (67)	A/E	65	2	*0*	64 [T]	3	*0*	63	4	*0*	63	4	*0*	-- [10]	--	--
R 19.15A		SFR	6	67 [E]	67	67	0	0	B (67)	A/E	65	2	*0*	63 [T]	4	*0*	62	5	*6*	61	6	*6*	-- [10]	--	--
R 19.16 [W]		SFR	1	67 [M,ST30]	67	68	0	1	B (67)	A/E	66	2	*0*	64 [T]	4	*0*	63	5	*1*	63	5	*1*	-- [10]	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Insertion losses obtained from interior versus exterior noise measurements have been been applied to exterior noise levels to determine interior noise levels: R19.8/H7 - Comfort Suites: 26 dB reduction; R19.9/H8 - Motel 6: 23 dB reduction; R19.10/H9 - Ayres Hotel: 27 dB reduction.

Table B-32 – Predicted Future Noise Levels and Barrier Analysis – Segment 20 – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 20.1 B,7,K	Shoulder	SFR	5	71 E	70	70	-1	0	B (67)	A/E	69	1	0	69	1	0	69 T	1	0	69	1	0	-- 10	--	--
R 20.1A B,7,K		SFR	1	69 E	68	68	-1	0	B (67)	A/E	67	1	0	67	1	0	67 T	1	0	67	1	0	-- 10	--	--
R 20.2A B,K		MOT	--	73 E	72	72	-1	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.2A B,Int,K		MOT	1	48 E	47	47	-1	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.2 B,K		MOT	1	75 E	74	75	-1	1	E (72)	A/E	72	3	0	72 T	3	0	71	4	0	71	4	0	-- 10	--	--
R 20.3 W,K	SW149[X] / Shoulder	SFR/MFR	7	72 E	71	71	-1	0	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 20.4 W,K		MFR	6	69 M,ST32	68	69	-1	1	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 20.5 B,W,K		MFR	4	61 E	60	61	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.5A B,W,K		MFR	5	60 E	59	59	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.6-1 W,K		MFR	2	69 E	68	68	-1	0	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 20.6-2 W,6,K		MFR	2	71 E	70	71	-1	1	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--
R 20.7 W,K		MFR	5	68 E	68	68	0	0	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.8 W,K		SFR	1	66 E	66	67	0	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.9 W,K		SFR	1	65 M,LT20,CAL	65	66	0	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.10 B,W,7,K		SFR/MFR	4	63 E	63	64	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.11 B,W,7,K		SFR	3	63 E	63	63	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
K - Modeled traffic noise levels for this analysis area calibrated to within 1 dB of measured levels. However, due to unknown reasons, future predicted traffic noise levels were much lower than existing levels. Therefore, an adjustment factor of +3 dB was applied to these receivers to account for this anomaly.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-32 – Predicted Future Noise Levels and Barrier Analysis – Segment 20 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 20.12-1 B,W,K	SW149[X] SW499[X] / Shoulder	MFR	4	64 E	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.12-2 B,W,6,K		MFR	4	65 E	65	66	0	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.13-1 B,W,K		MFR	2	64 E	64	64	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.13-2 B,W,6,K		MFR	2	65 E	65	65	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.14-1 B,W,K		MFR	1	60 E	60	61	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.14-2 B,W,6,K		MFR	1	63 E	63	64	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.15-1 B,W,7,K		MFR	2	59 E	59	60	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.15-2 B,W,6,7,K		MFR	2	61 E	61	62	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.16-1 B,W,7,K		MFR	2	63 E	63	63	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.16-2 B,W,6,7,K		MFR	2	64 E	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.17-1 B,W,7,K		MFR	2	60 E	60	61	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.17-2 B,W,6,7,K		MFR	2	64 E	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.18A W,K	SW499[X] SW153[X] SW509[X] / Shoulder	REL	1	67 E	67	68	0	1	C (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.18 W,K		SFR	2	67 E	67	68	0	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.19 W,K		SFR/MFR	3	65 E	65	66	0	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.20 W,K		SFR	2	64 E	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.21 W,K		SFR	2	62 E	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.22 B,W,7,K		SFR	4	64 E	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.23 B,W,K		SFR	3	62 E	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
K - Modeled traffic noise levels for this analysis area calibrated to within 1 dB of measured levels. However, due to unknown reasons, future predicted traffic noise levels were much lower than existing levels. Therefore, an adjustment factor of +3 dB was applied to these receivers to account for this anomaly.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-32 – Predicted Future Noise Levels and Barrier Analysis – Segment 20 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 20.24 W,K	SW153[X] SW509[X] SW157[X] SW159[X] / Shoulder	REC	1	64 E	63	64	-1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.25 W,K		REC	1	63 E	62	63	-1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.26 W,K		SCH	1	64 M,ST36	63	64	-1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.27 W,K		MFR	4	65 E	64	65	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.28 W,K		MFR	4	61 E	60	61	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.29 W,K		MFR	4	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.30 B,W,K	SW523[X] SW161[X] SW531[X] SW163[X] SW537[X] / Shoulder	SFR	5	63 E	65	66	2	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.31 W,K		MFR	1	64 E	66	67	2	1	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.32 W,K		MFR	1	65 M,ST37	67	67	2	0	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.33 B,W,K		MFR	4	60 E	62	63	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.34 B,W,K		MFR	4	59 E	61	62	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.35 B,W,K		MFR	8	57 E	59	60	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.36 B,W,K		MFR	8	61 E	63	63	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.37 B,W,7,K		MFR	4	62 E	64	65	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.38 B,W,7,K		MFR	8	61 E	63	64	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.39 W,K		SFR	3	67 M,ST38	68	68	1	0	B (67)	A/E	--	--	--	-- T	--	--	--	--	--	--	--	--	-- 10	--	--
R 20.40 B,W,7,K		SFR	5	66 E	67	67	1	0	B (67)	A/E	--	--	--	--	--	--	-- T	--	--	--	--	--	-- 10	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
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Table B-32 – Predicted Future Noise Levels and Barrier Analysis – Segment 20 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 20.41		COM	1	70 [E]	70	71	0	1	E (72)	NONE	70	1	*0*	69	2	*0*	69	2	*0*	69	2	*0*	--	--	--
R 20.42		SFR	3	69 [E]	69	70	0	1	B (67)	A/E	68	2	*0*	65	5	*3*	**65** [R,T,5]	**5**	*3*	64	6	*3*	-- [10]	--	--
R 20.42A		REL	--	69 [E]	69	69	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.42A [Int]		REL	1	44 [E]	44	44	0	0	D (52)	NONE	42	2	*0*	42	2	*0*	40	4	*0*	40	4	*0*	--	--	--
R 20.43		SFR	4	69 [M,LT19,CAL]	69	70	0	1	B (67)	A/E	66	4	*0*	64	6	*4*	**63** [R,T]	**7**	*4*	62	8	*4*	-- [10]	--	--
R 20.44 [B]	S2638[P]	SFR	1	69 [E]	68	68	-1	0	B (67)	A/E	66	2	*0*	64	4	*0*	**63** [R,T]	**5**	*1*	62	6	*1*	-- [10]	--	--
R 20.45	S2654[P] /	SFR	1	70 [E]	69	70	-1	1	B (67)	A/E	67	3	*0*	65	5	*1*	**64** [R,T,5]	**6**	*1*	63	7	*1*	-- [10]	--	--
R 20.46	Shoulder	SFR	5	69 [E]	68	68	-1	0	B (67)	A/E	66	2	*0*	64	4	*0*	**63** [R,T]	**5**	*5*	62	6	*5*	-- [10]	--	--
R 20.47		SFR	1	68 [E]	67	68	-1	1	B (67)	A/E	66	2	*0*	65	3	*0*	**63** [R,T]	**5**	*1*	62	6	*1*	-- [10]	--	--
R 20.47A		REL	--	69 [E]	68	69	-1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.47A [Int]		REL	1	44 [E]	43	44	-1	1	D (52)	NONE	42	2	*0*	40	4	*0*	39	5	*1*	38	6	*1*	--	--	--
R 20.48		MFR	4	70 [M,ST33]	69	70	-1	1	B (67)	A/E	65 [T]	5	*4*	**64** [R,5]	**6**	*4*	64	6	*4*	63	7	*4*	-- [10]	--	--
R 20.49 [B,7]		SFR	2	63 [E]	62	63	-1	1	B (67)	NONE	63	0	*0*	63	0	*0*	62	1	*0*	62	1	*0*	--	--	--
R 20.50 [B,W,7]	SW158[X] /	SFR	4	61 [E]	60	62	-1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.51 [W]	Shoulder	SFR/MFR	3	63 [E]	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
K - Modeled traffic noise levels for this analysis area calibrated to within 1 dB of measured levels. However, due to unknown reasons, future predicted traffic noise levels were much lower than existing levels. Therefore, an adjustment factor of +3 dB was applied to these receivers to account for this anomaly.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-32 – Predicted Future Noise Levels and Barrier Analysis – Segment 20 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 20.52A [W,7]	SW158[X] / Shoulder	SCH	1	61 [E]	61	62	0	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.52 [W]		SFR	2	63 [E]	63	63	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.53 [W]		SFR	1	62 [M,ST35,CAL]	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.54 [W]		MFR	4	62 [E]	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.55 [W]		MFR	2	62 [E]	62	63	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.56 [W]		MFR	3	64 [E]	64	64	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.57 [W]	SW158[X] SW530[X] SW162[X] SW536[X] / Shoulder	SFR	5	64 [M,LT21]	65	66	1	1	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- [10]	--	--
R 20.58 [W]		SFR	5	63 [E]	64	65	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.59A [W]		SCH	1	66 [E]	67	67	1	0	C (67)	A/E	66	1	*0*	66	1	*0*	66	1	*0*	65	2	*0*	-- [10]	--	--
R 20.59 [W]		SFR/MFR	3	67 [E]	68	69	1	1	B (67)	A/E	68	1	*0*	68	1	*0*	68	1	*0*	68	1	*0*	-- [10]	--	--
R 20.60 [B,W,7]		SFR	4	61 [E]	62	63	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 20.61 [B,W,7]		SFR	4	62 [E]	63	64	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
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4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
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R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 21.1 W	SW165[X] SW167[X] SW551[X] / Shoulder	SFR	6	66 E	63	64	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.2 W		SFR	3	63 E	60	61	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.3 W		SFR	4	66 M,LT22	63	64	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.3A W		SFR	2	66 M,ST40A,CAL	63	64	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.4 W		SFR	2	67 E	64	65	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.5 W,7		SFR	5	65 E	62	62	-3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.6 W,B,7		SFR	5	64 E	61	61	-3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.6A W,7		SFR	3	63 E	60	61	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.7 W,B,7		SFR	4	63 E	60	61	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.8 W	SW167[X] SW551[X] SW169[X] SW563[X] / Shoulder	SFR	2	65 E	62	63	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.9 W		SFR	2	67 E	64	65	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.10 W		SFR	2	64 E	61	62	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.11 W		SFR	2	65 E	62	63	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.12 W		SFR	2	63 E	60	61	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.13 W		SFR	2	65 E	62	63	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.14 W		SFR	4	67 E	64	64	-3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.15 W,7		SFR	2	61 E	58	60	-3	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.16 W,7		SFR	2	63 E	60	61	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.17 W,7		SFR	2	61 E	58	59	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.18 W,7		SFR	2	64 E	61	62	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.19 W,7		SFR	2	61 E	58	58	-3	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.20 W,7		SFR	2	63 E	60	61	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.21 W,7		SFR	4	60 E	57	58	-3	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

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R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 21.22 W,6	SW563[X]	MFR	6	70 E	66	67	-4	1	B (67)	A/E	66	1	*0*	66	1	*0*	66	1	*0*	66	1	*0*	66	1	*0*
R 21.23 W	SW171[X] /	MFR	1	67 M,ST42	63	64	-4	1	B (67)	NONE	63	1	*0*	63	1	*0*	62	2	*0*	62	2	*0*	62	2	*0*
R 21.24 W,B	Shoulder	MFR	1	59 E	55	56	-4	1	B (67)	NONE	55	1	*0*	55	1	*0*	55	1	*0*	54	2	*0*	54	2	*0*
R 21.25 W,6		MFR	2	73 E	69	69	-4	0	B (67)	A/E	**64** R,T	**5**	*2*	64	5	*2*	63	6	*2*	63	6	*2*	63	6	*2*
R 21.25A		REL	--	65 E	65	66	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.25A Int		REL	1	25 E	25	26	0	1	D (52)	NONE	23	3	*0*	22	4	*0*	22	4	*0*	22	4	*0*	21	5	*1*
R 21.26 B,K		SFR	2	58 E	58	59	0	1	B (67)	NONE	58	1	*0*	58	1	*0*	58	1	*0*	58	1	*0*	58	1	*0*
R 21.27 B,K	S2737[P] /	SFR	3	57 E	57	58	0	1	B (67)	NONE	56	2	*0*	56	2	*0*	56	2	*0*	56	2	*0*	56	2	*0*
R 21.28 K	RW	SFR	3	69 E	69	70	0	1	B (67)	A/E	68	2	*0*	68	2	*0*	67	3	*0*	67	3	*0*	67	3	*0*
R 21.29 8,K		--	--	81 M,ST44,CAL	81	82	0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.30 K		SFR	1	73 E	73	74	0	1	B (67)	A/E	70	4	*0*	69	5	*1*	68	6	*1*	68	6	*1*	**67** R	**7**	*1*
R 21.31 7,K		SFR	2	67 E	67	68	0	1	B (67)	A/E	65	3	*0*	64	4	*0*	63	5	*2*	63	5	*2*	**63** R,5	**5**	*2*
											8 feet			10 feet			12 feet			14 feet			16 feet		
R 21.32		REL	--	74 M,ST45	73	74	-1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.32		REL	1	49 E	48	49	-1	1	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.33		REL	1	68 E	67	68	-1	1	C (67)	A/E	67	1	*0*	66	2	*0*	66	2	*0*	65	3	*0*	-- 10	--	--
R 21.34 7		SFR	3	67 E	68	69	1	1	B (67)	A/E	68	1	*0*	67	2	*0*	67	2	*0*	66	3	*0*	-- 10	--	--
R 21.35	Shoulder	SFR	2	70 M.,LT23	71	71	1	0	B (67)	A/E	70	1	*0*	70	1	*0*	69	2	*0*	69	2	*0*	-- 10	--	--
R 21.36 B,7		SFR	2	58 E	59	60	1	1	B (67)	NONE	59	1	*0*	59	1	*0*	59	1	*0*	59	1	*0*	--	--	--
R 21.37		SFR	1	72 E	73	74	1	1	B (67)	A/E	73	1	*0*	72	2	*0*	72	2	*0*	71	3	*0*	-- 10	--	--
R 21.38 W		SFR	2	61 E	62	63	1	1	B (67)	NONE	62	1	*0*	61	2	*0*	61	2	*0*	61	2	*0*	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
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12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 40 dB reduction has been applied to exterior noise levels of the Kingdom Hall of Jehovah's Witnesses based on buildings having no windows.
K - A calibration factor of +3 dB is applied to this receiver and adjacent receivers with similar geographic features.

Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 21.39	S2765[P] / Shoulder	REL	1	67 [M,ST47]	69	70	2	1	C (67)	A/E	66	4	*0*	65	5	*1*	64	6	*1*	**63** [R,T]	**7**	*1*	-- [10]	--	--
R 21.40		REC	1	69 [E]	71	71	2	0	C (67)	A/E	67	4	*0*	67	4	*0*	65 [T]	6	*1*	**64** [R,5]	**7**	*1*	-- [10]	--	--
R 21.41		SCH	--	65 [E]	67	67	2	0	--	--	64	3	--	63	4	--	62	5	--	60	7	--	--	--	--
R 21.41 [Int]		SCH	14	40 [E]	42	42	2	0	D (52)	NONE	34	8	*14*	33	9	*14*	33	9	*14*	32	10	*14*	--	--	--
R 21.42 [W,B]		REC	1	58 [E]	60	60	2	0	C (67)	NONE	59	1	*0*	58	2	*0*	58	2	*0*	57	3	*0*	--	--	--
R 21.43 [W]	SW187[X] / Shoulder	SFR	1	65 [E]	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.44 [W]		SFR	1	65 [E]	64	65	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.45 [W]		SFR	1	63 [M,LT25]	62	62	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.46 [W]		SFR	1	62 [E]	61	62	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.47 [W]		SFR	1	59 [E]	58	59	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.48 [W]		SFR	1	59 [E]	60	61	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.49 [W]		SFR	1	60 [M,ST49]	61	61	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.50 [W]		SFR	2	62 [E]	63	63	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
6 - Second story receiver.
7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.
Int - Interior noise criteria has been used for this receiver because there are no outdoor use areas. An assumed 25 dB reduction has been applied to exterior noise levels based on buildings having single pane windows.

Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 21.51 W	SW536[X] SW164[X] SW166[X] SW550[X] / Shoulder	SFR	1	68 E	67	67	-1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	-- 10	--	--
R 21.52 W,7		SFR	3	66 E	65	65	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.53 W		MFR	2	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.54 W		--	--	64 M,ST39	63	64	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.55 W		MFR	2	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.56 W,B,7		MFR	1	58 E	57	58	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.57 W		MFR	2	62 E	61	62	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.58 W		MFR	2	61 E	60	61	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.59 W		MFR	1	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.60 W		SFR	2	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

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2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
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4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
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10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.
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Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R 21.61 W,B,7	SW550[X] SW170[X] SW564[X] SW172[X] / Shoulder	SFR	2	60 E	59	61	-1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.62 W		SFR	4	62 M,ST40,CAL	63	64	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.63 W		SFR	4	61 E	62	63	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.64 W		SFR	3	59 E	60	61	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.65 W		SFR	1	64 E	62	63	-2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.66 W		SFR	2	64 E	62	62	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.67 W		SFR	1	65 M,ST41	63	63	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.68 W,B,7		SFR	4	56 E	57	58	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.69 W,B,7		SFR	4	58 E	59	60	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.70 W,B,7		SFR	2	62 E	60	60	-2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.71 W,B,7		SFR	2	62 E	60	61	-2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.72 W		SFR	1	64 E	62	63	-2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.73 W,7		SFR	1	62 E	60	61	-2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.74 W,B,7		SFR	2	61 E	59	60	-2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
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7 - Non first row residences.
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Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	16 feet			18 feet			20 feet			22 feet			24 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 21.75	S2730[P] / RW	REL	1	64 [M,ST43]	64	66	0	2	C (67)	A/E	61	5	*1*	60 [T]	6	*1*	**59** [R]	**7**	*1*	59	7	*1*	59	7	*1*
R 21.76	R/W	REL	1	67 [E]	67	68	0	1	C (67)	A/E	67	1	*0*	67	1	*0*	67	1	*0*	66	2	*0*	66	2	*0*
											8 feet			**10 feet**			**12 feet**			**14 feet**			**16 feet**		
R 21.77-1 [B]	--	MFR	1	51 [E]	51	52	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.77-2 [B,6]		MFR	1	56 [E]	56	56	0	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.78-1 [B]		MFR	1	60 [E]	60	62	0	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.78-2 [B,6]		MFR	1	64 [E]	64	65	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.79-1 [B]		MFR	1	56 [E]	56	57	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.79-2 [B,6]		MFR	1	59 [E]	59	60	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.80 [B]		MFR	1	56 [E]	56	57	0	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1 - Leq(h) are A-weighted, peak hour noise levels in decibels.
2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
3 - M - Measured noise level; STxx or LTxx - measurement site number; E - estimated from No Build noise level and measurement sites; CAL - model calibration site; Hxx - in/outdoor measurement.
4 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
5 - Barrier height needed to meet requirements at adjacent receiver(s).
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9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
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Table B-33 – Predicted Future Noise Levels and Barrier Analysis – Segment 21 – Alternative 3 (Cont'd)

Receiver I.D.	Barrier I.D. and Location	Land Use[2]	Number of Dwelling Units	Existing Noise Level Leq(h), dBA[1,3]	I-10 Express Lanes Project Future Worst Hour Noise Levels - Leq(h), dBA[1]						Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)														
					Design Year No Build Noise Level Leq(h), dBA[1]	Design Year Build Noise Level Leq(h), dBA[1]	Design Year No Build Noise Level Minus Existing Conditions Leq(h), dBA	Design Year Build Noise Level Minus No Build Conditions Leq(h), dBA	Activity Category (NAC)	Impact Type[4]	8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*	Leq(h)	I.L.	*NBR*
R 21.81 W,B	--	SFR	1	59 E	58	58	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.82		SFR	1	69 M,ST46,CAL	68	68	-1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.83 B		SFR	1	63 E	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.84 W		SFR	1	65 E	64	65	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.85 W		SFR	1	65 E	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.86 W		SFR	1	65 E	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.87 W		SFR	1	63 M,LT24,CAL	62	63	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.88 W		SFR	1	64 E	63	64	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.89 W		SFR	1	65 E	64	64	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.90 W		SFR	1	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.91 W		SFR	1	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.92 W		SFR	1	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.93 W		SFR	1	63 E	62	62	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.94 W		SFR	1	64 E	63	63	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.95 W		SFR	1	62 E	61	62	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.96 W		SFR	1	60 E	59	60	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.97 W		SFR	1	61 E	60	61	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.98 W		SFR	1	62 E	61	61	-1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.99 W		SFR	1	69 M,ST50	68	68	-1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 21.100 W		SFR	1	65 E	64	65	-1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

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2 - Land Use: SFR - single-family residence; MFR - multi-family residence; MH mobile home COM - commercial; MOT - motel; REC - recreational; SCH - educational center; MED - medical facility; REL - religious institution.
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7 - Non first row residences.
8 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is representative of nearby outdoor use areas.
9 - This noise measurement site will be a take and was chosen for monitoring purposes only.
10 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet when located 15 feet or less from edge of traveled way.
11 - Barrier Type: P - proposed; X - existing; D - replacement in kind; If a Location is provided and there is no Barrier I.D., a soundwall was analyzed at this location but did not meet the feasibility and/or design goal requirements. "--" indicates that no barrier was analyzed in front of the corresponding receivers.
12 - Third story receiver.
B - Includes the benefit of an existing building or building row.
R - The minimum height to meet feasibility requirements and design goal.
T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
W - Includes the benefit of an existing soundwall or property wall.

L2: NSR Analysis Areas, Noise Monitoring, and Analysis Positions

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

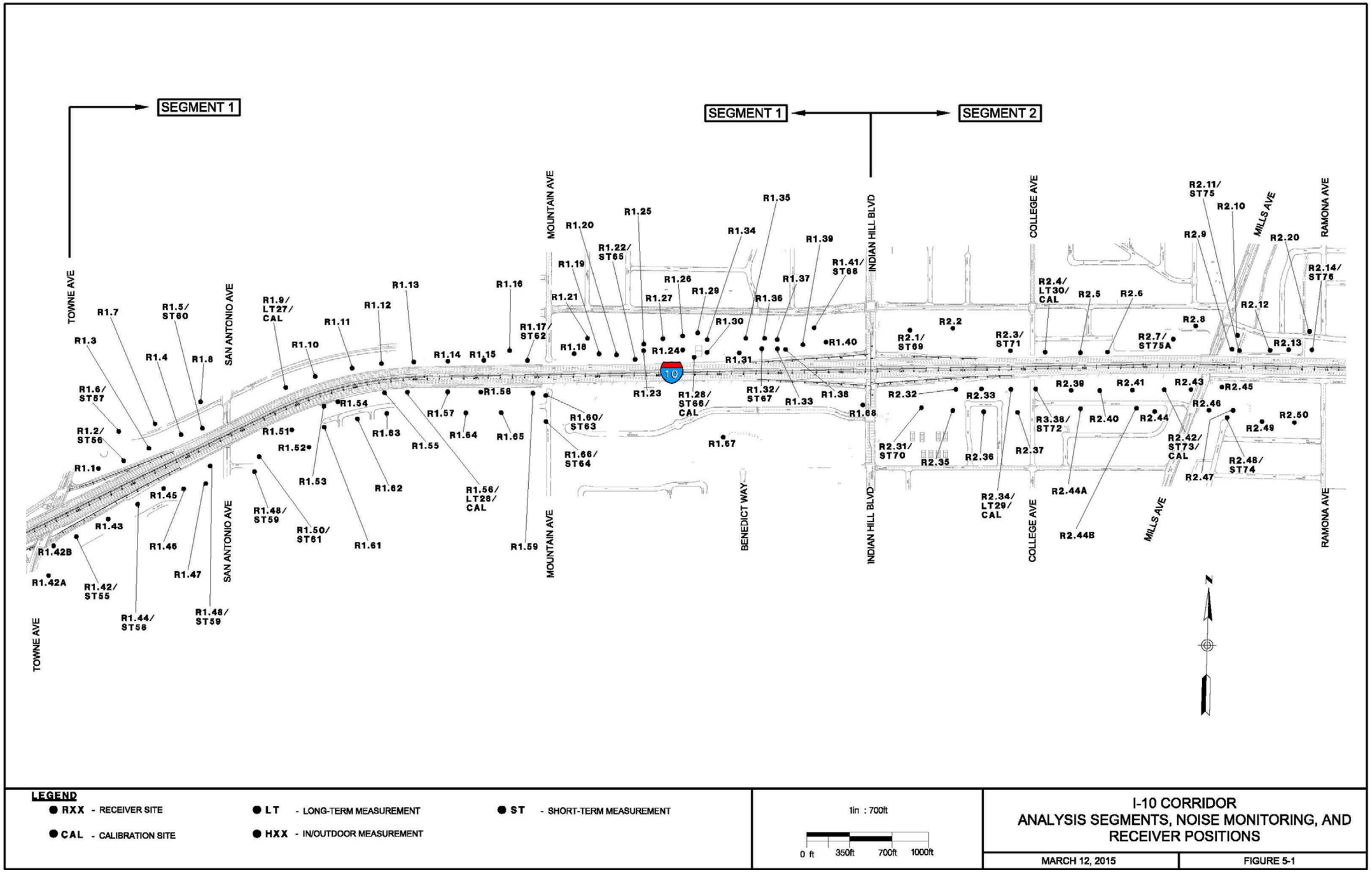
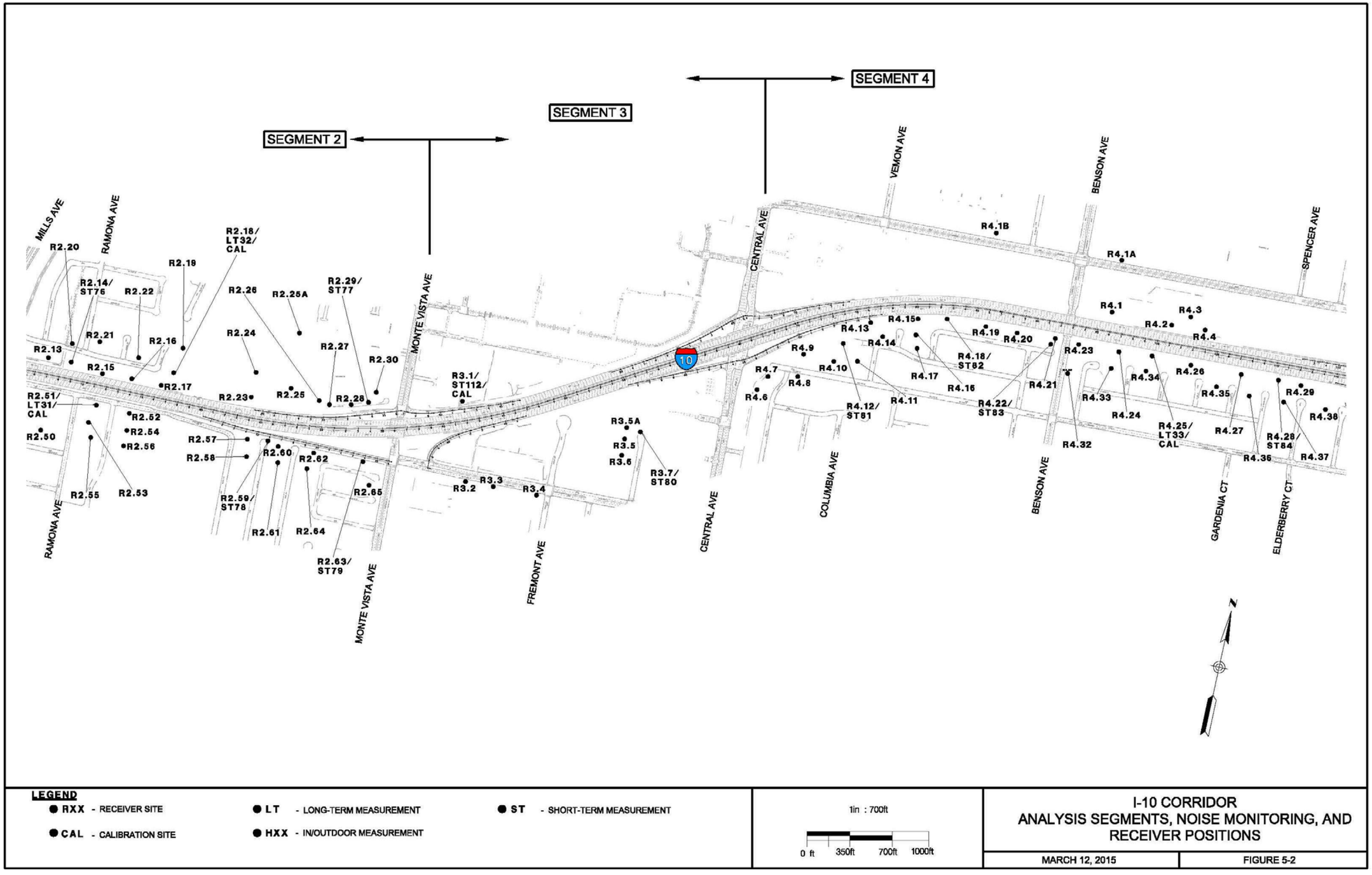


Figure 5-2. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 2 to 4



LEGEND

- ● RXX - RECEIVER SITE
- ● CAL - CALIBRATION SITE
- ● LT - LONG-TERM MEASUREMENT
- ● HXX - IN/OUTDOOR MEASUREMENT
- ● ST - SHORT-TERM MEASUREMENT

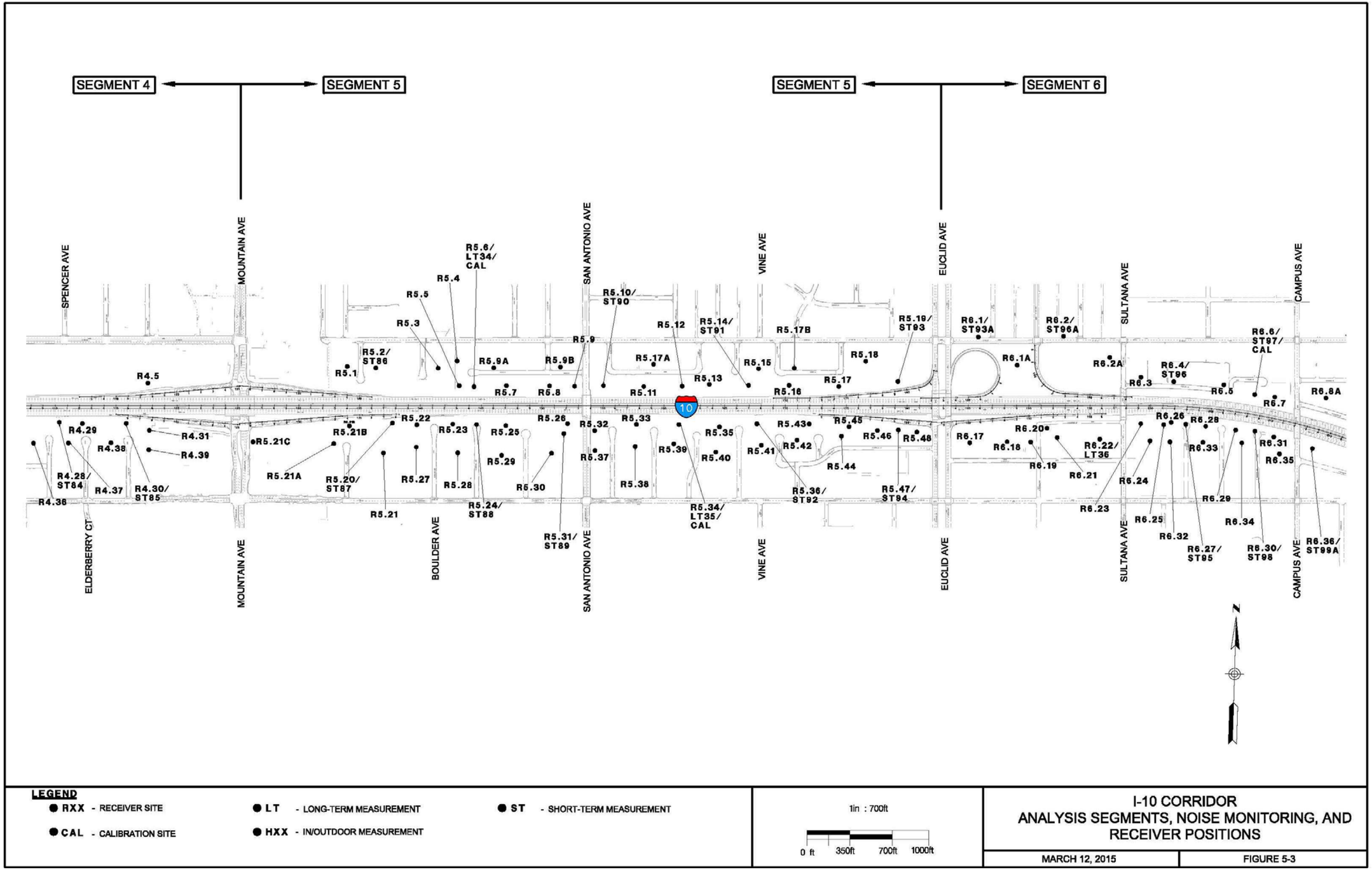
1in : 700ft

0 ft 350ft 700ft 1000ft

I-10 CORRIDOR
ANALYSIS SEGMENTS, NOISE MONITORING, AND RECEIVER POSITIONS

MARCH 12, 2015 | FIGURE 5-2

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



LEGEND

- RXX - RECEIVER SITE
- CAL - CALIBRATION SITE
- LT - LONG-TERM MEASUREMENT
- HXX - IN/OUTDOOR MEASUREMENT
- ST - SHORT-TERM MEASUREMENT

1in : 700ft

0 ft 350ft 700ft 1000ft

I-10 CORRIDOR
ANALYSIS SEGMENTS, NOISE MONITORING, AND RECEIVER POSITIONS

MARCH 12, 2015 | FIGURE 5-3

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

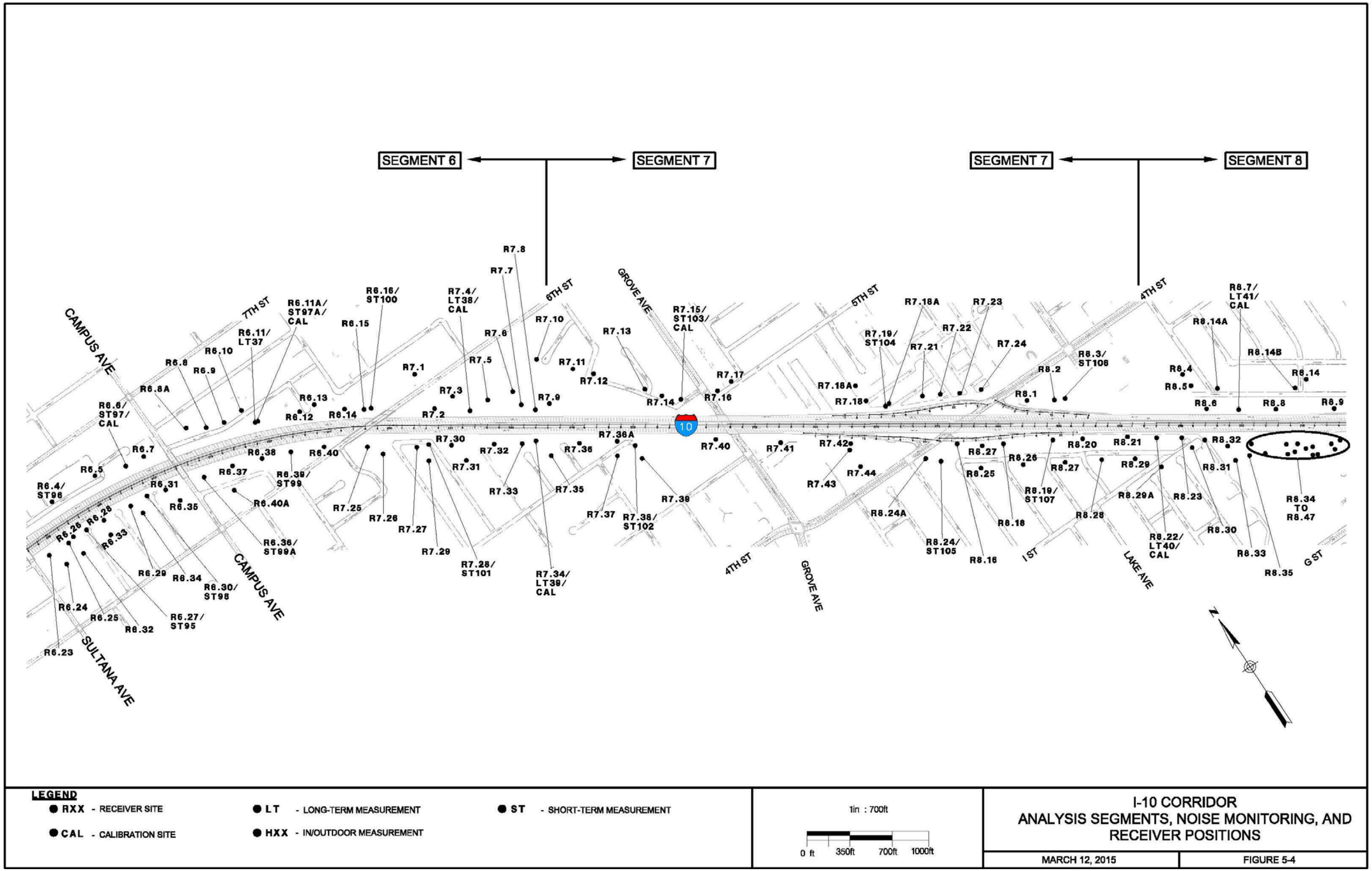


Figure 5-5. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 8 and 22

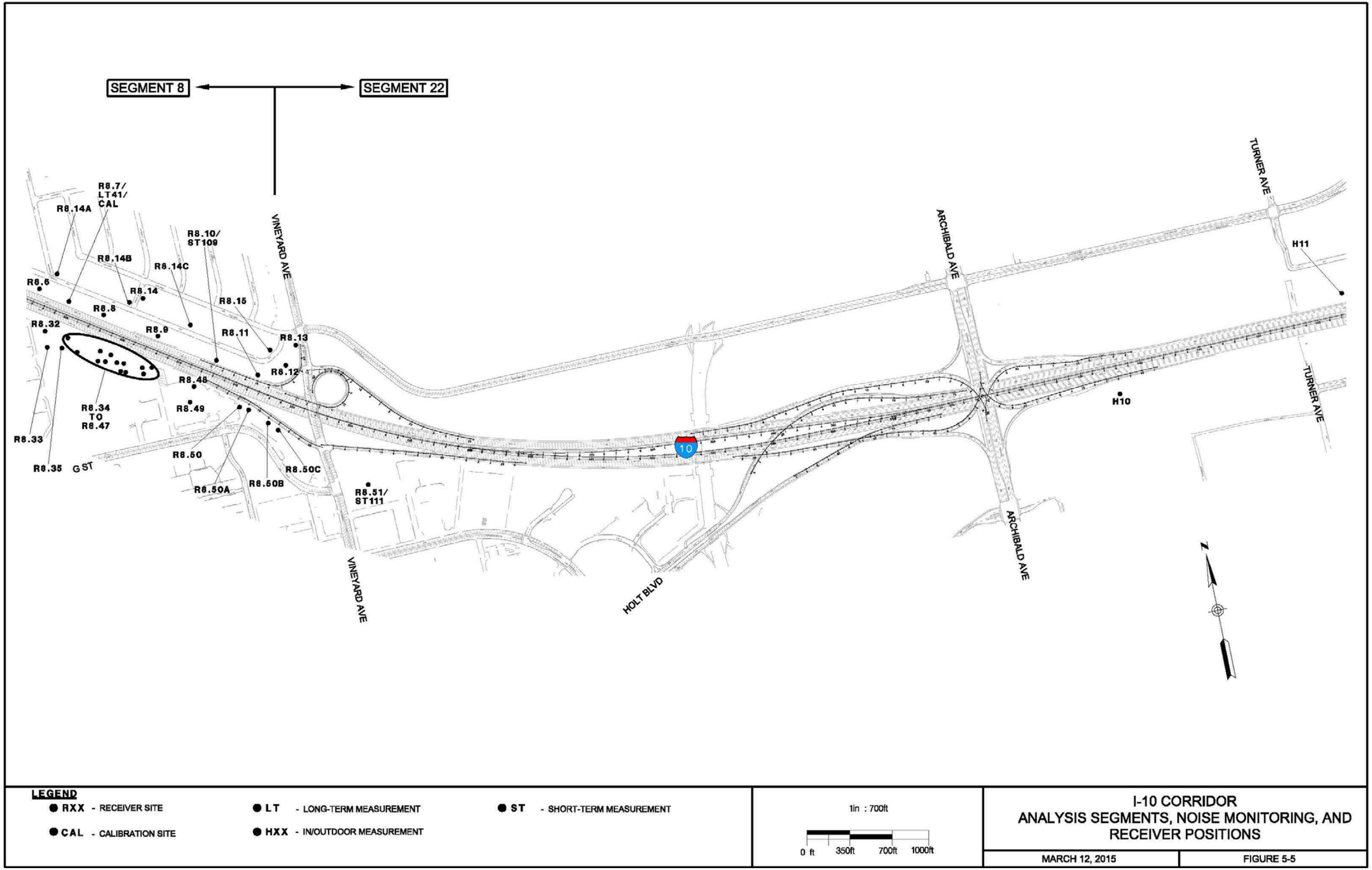


Figure 5-6. Analysis Areas, Noise Monitoring, and Analysis Positions – Segment 22

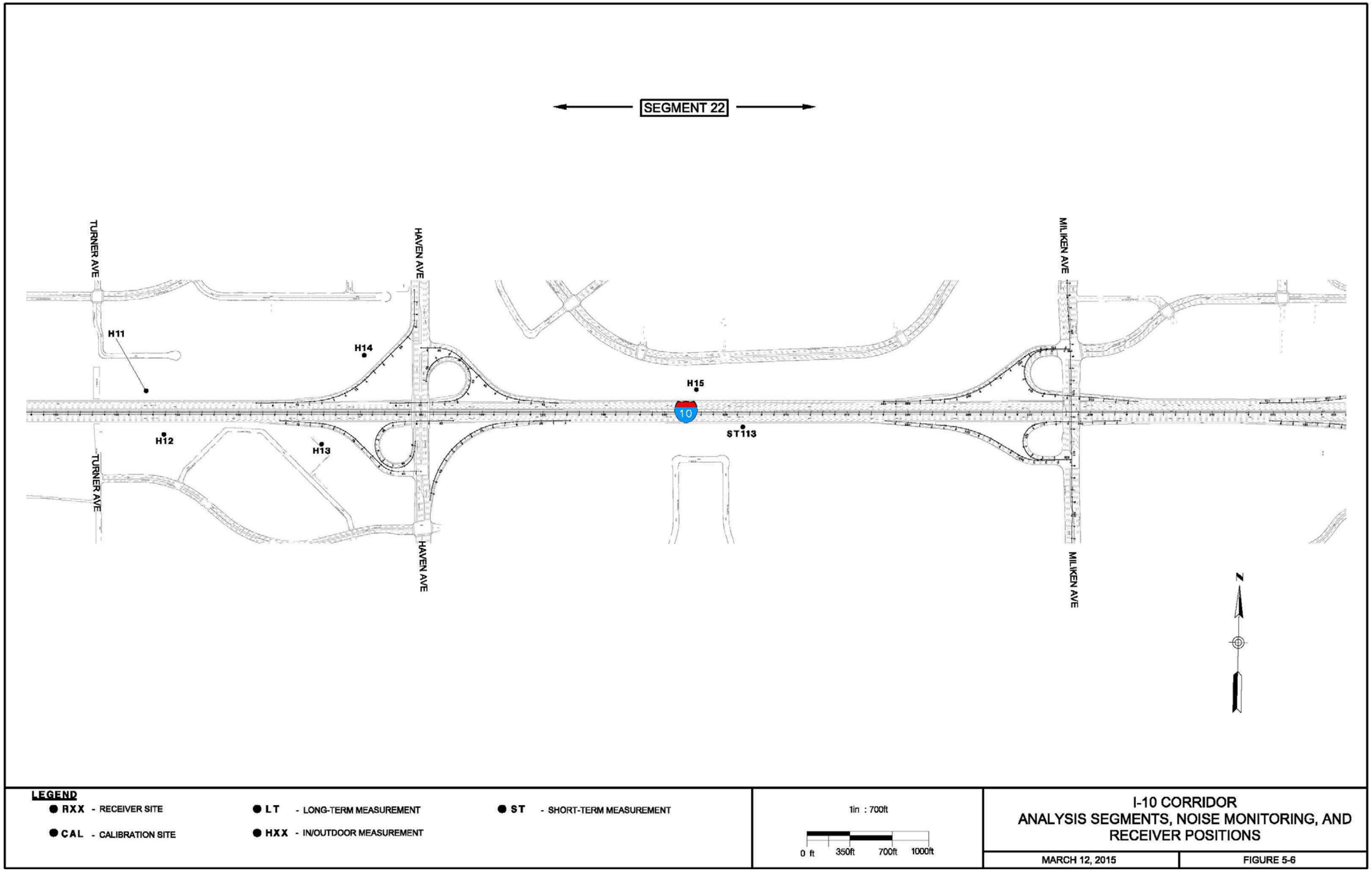


Figure 5-7. Analysis Areas, Noise Monitoring, and Analysis Positions – Segment 22

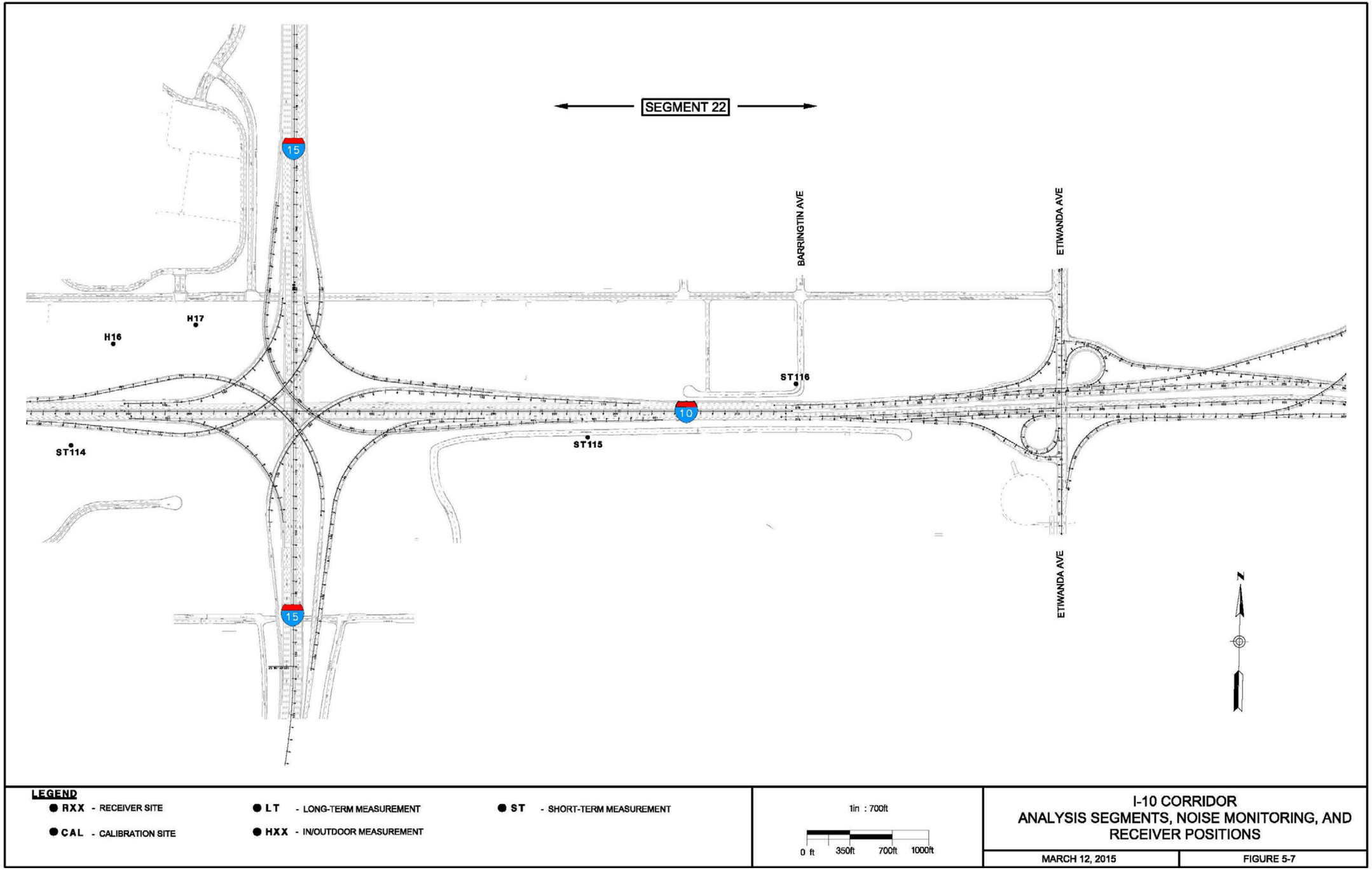


Figure 5-8. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 22 and 9

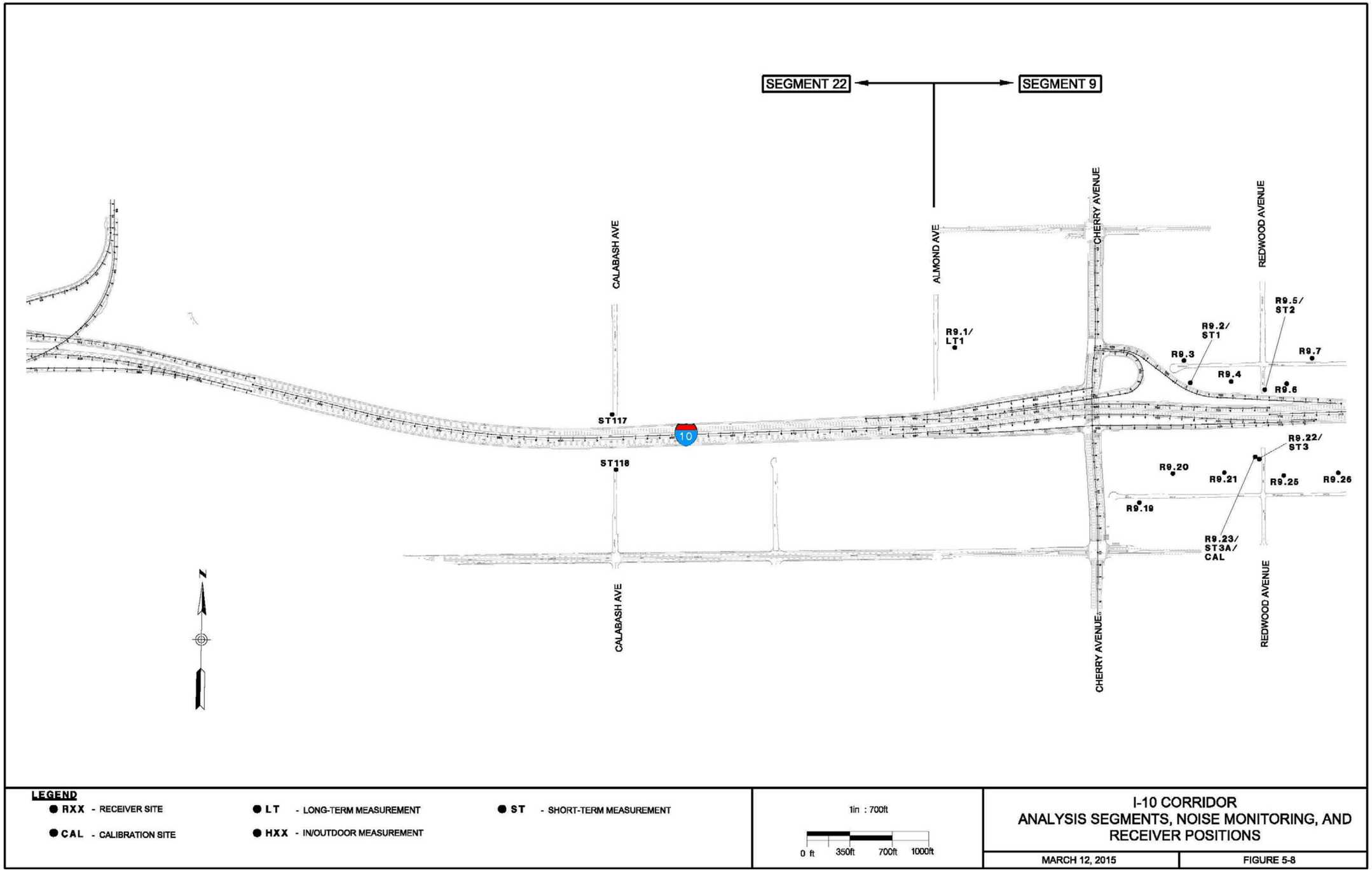


Figure 5-9. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 9 and 10

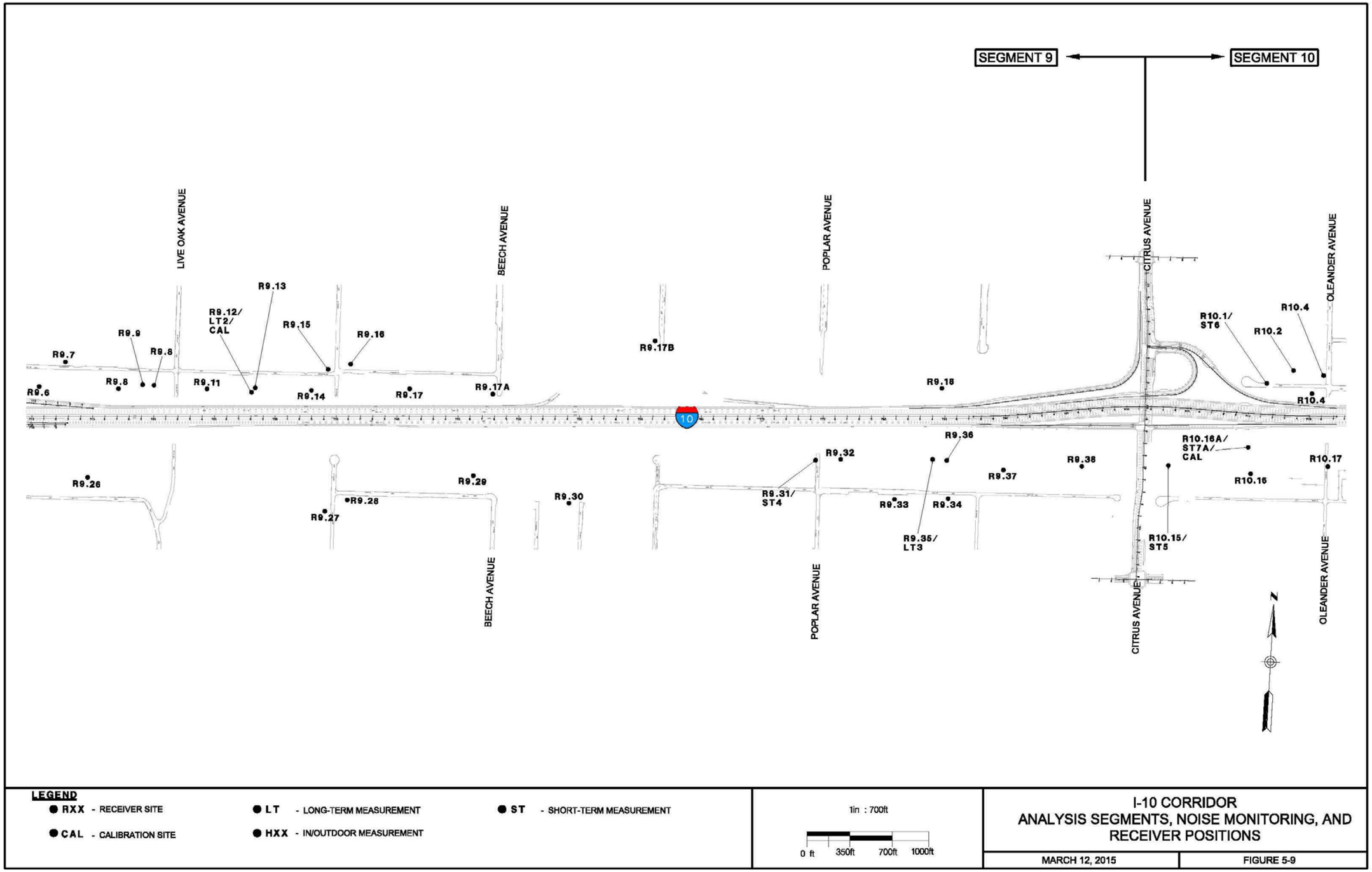


Figure 5-10. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 10 and 11

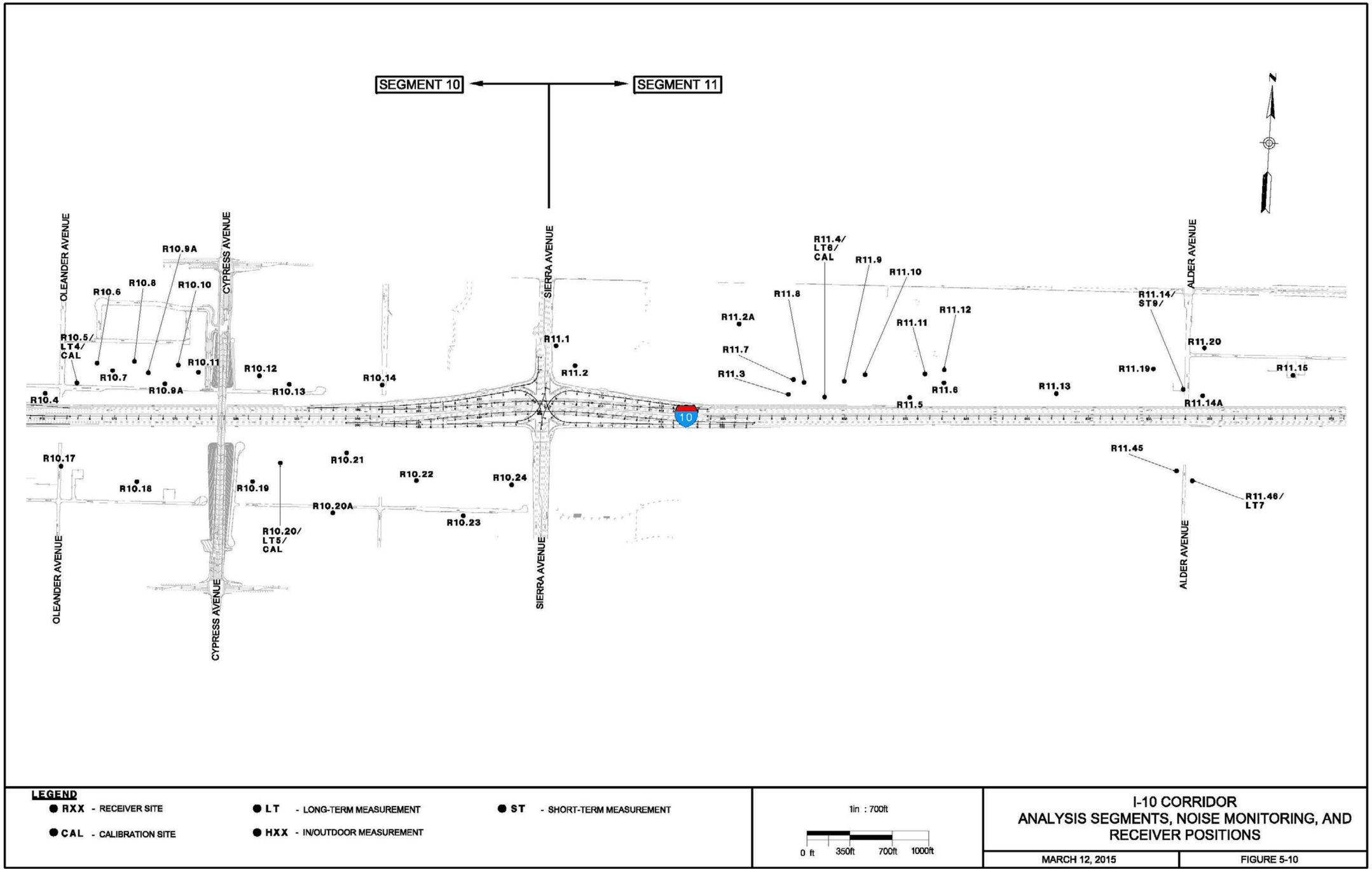


Figure 5-11. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 11 and 12

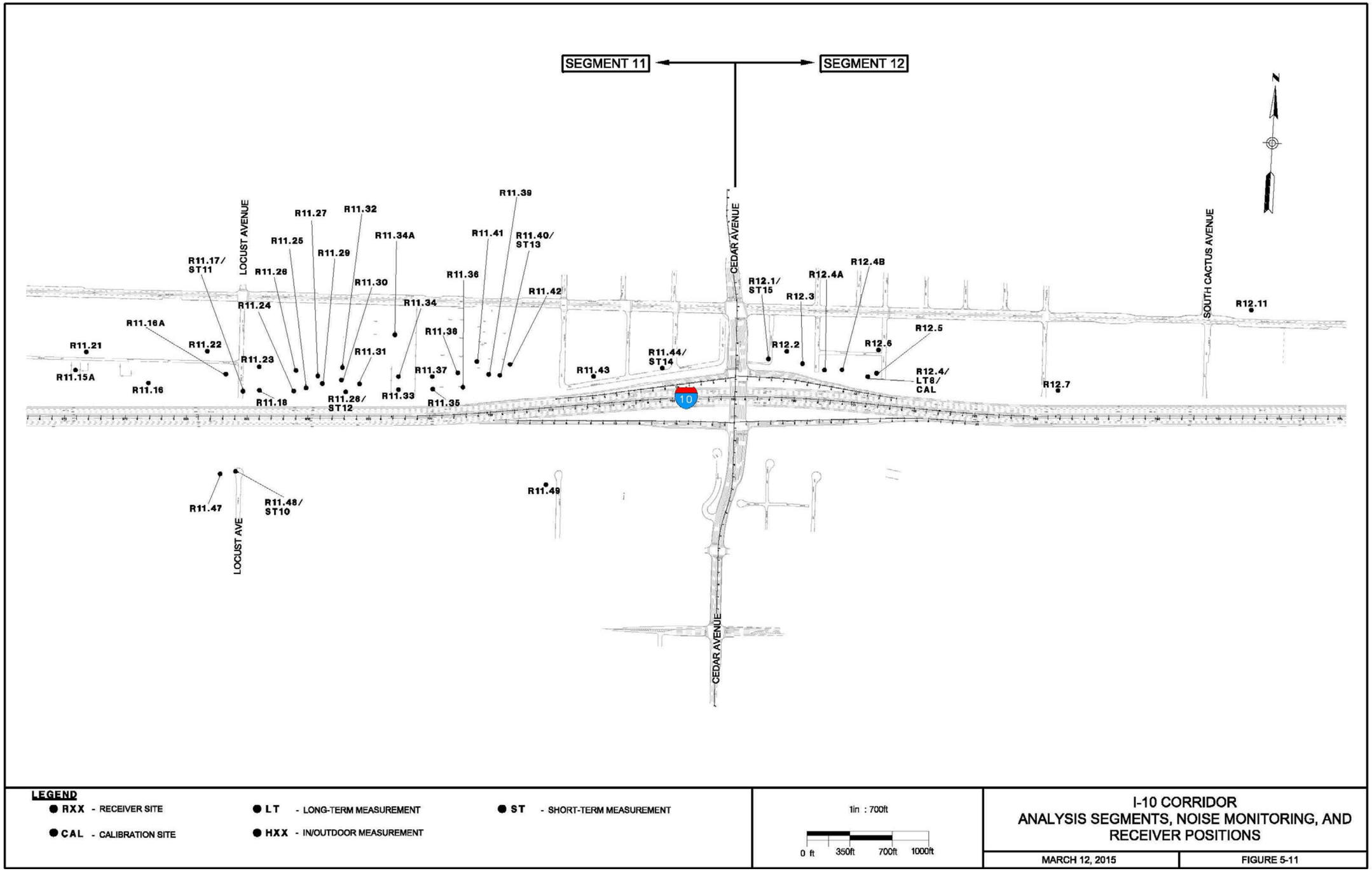


Figure 5-12. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 12 to 14

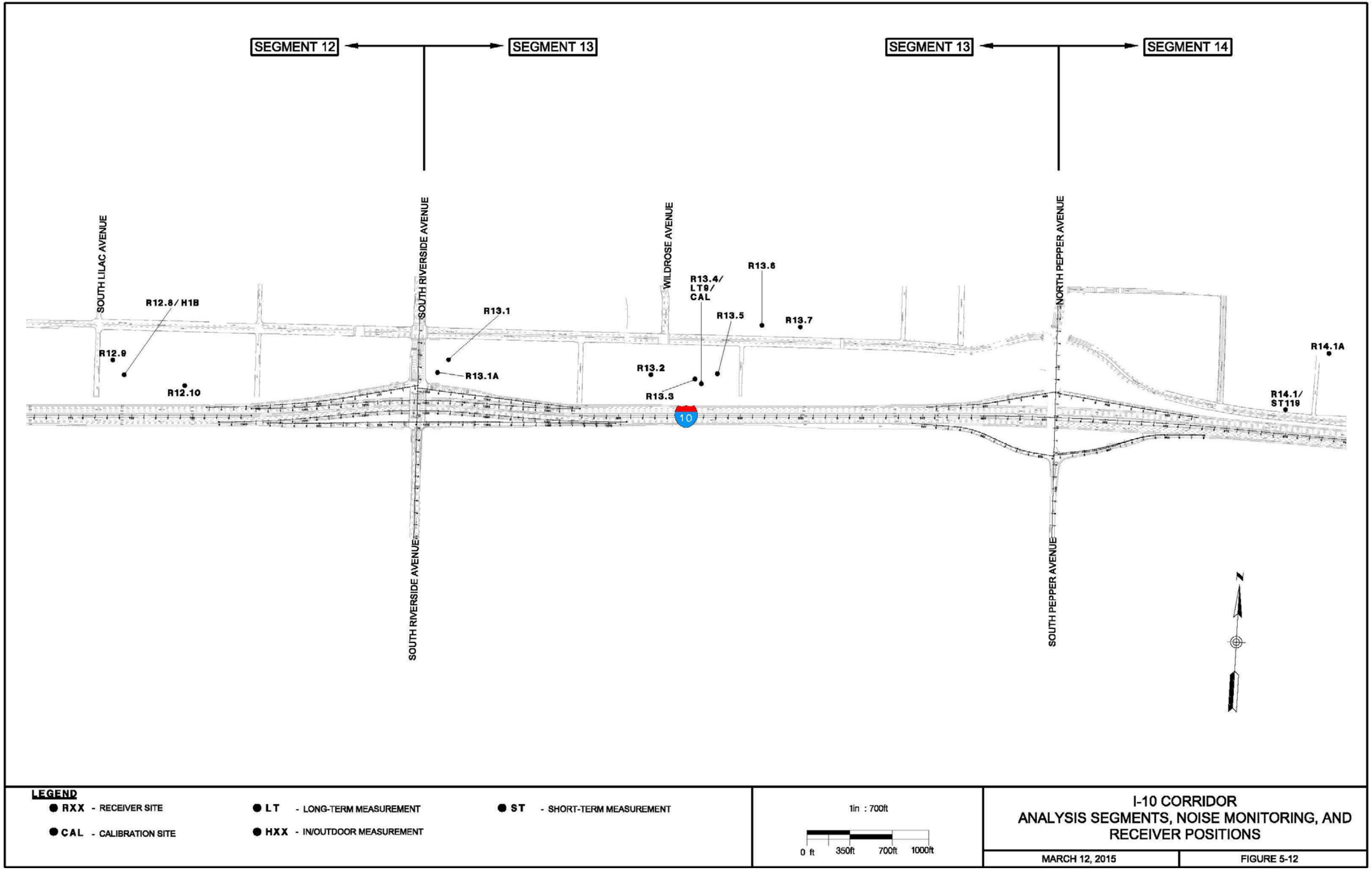


Figure 5-13. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 14 to 16

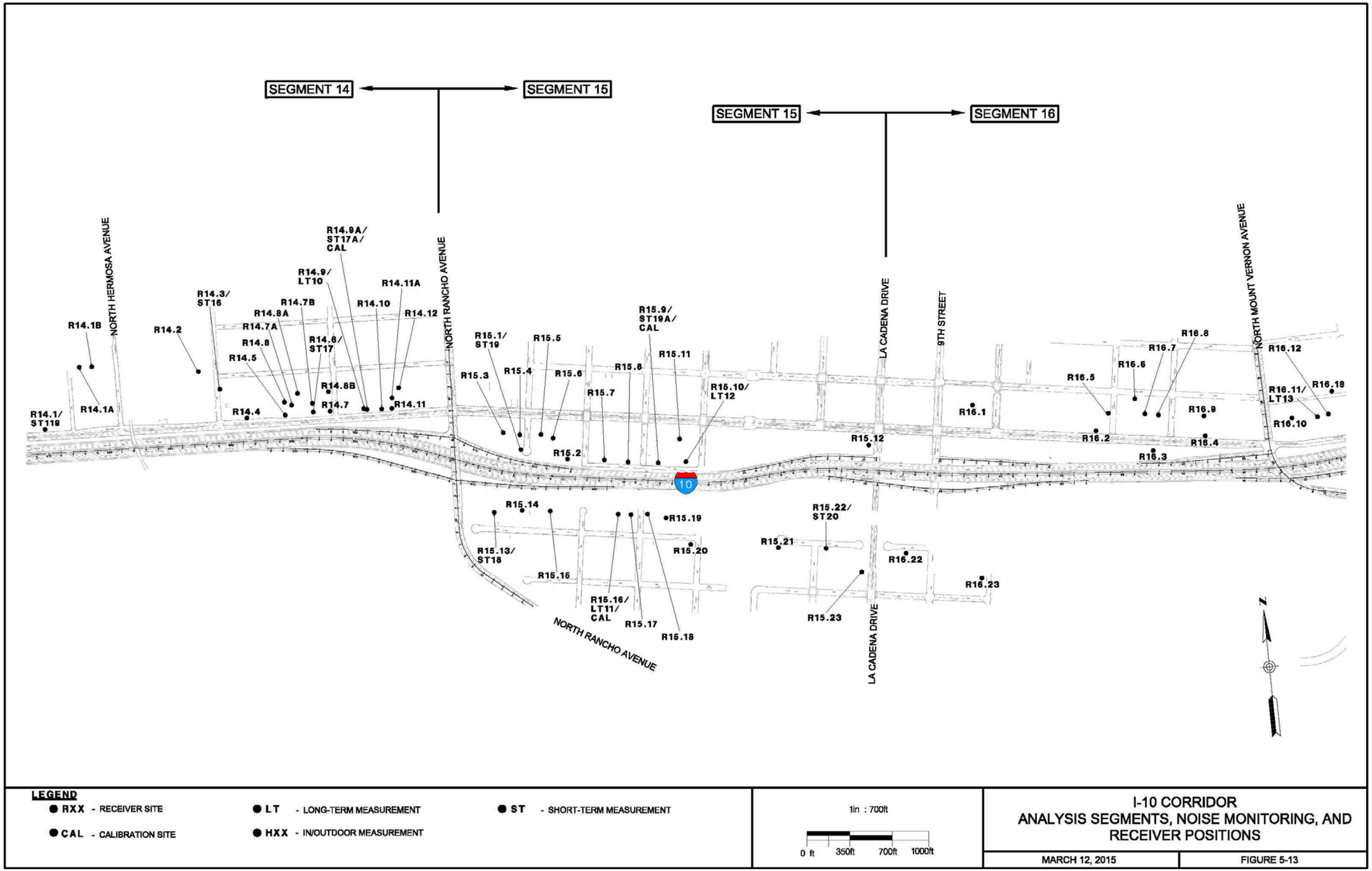


Figure 5-14. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 16 and 23

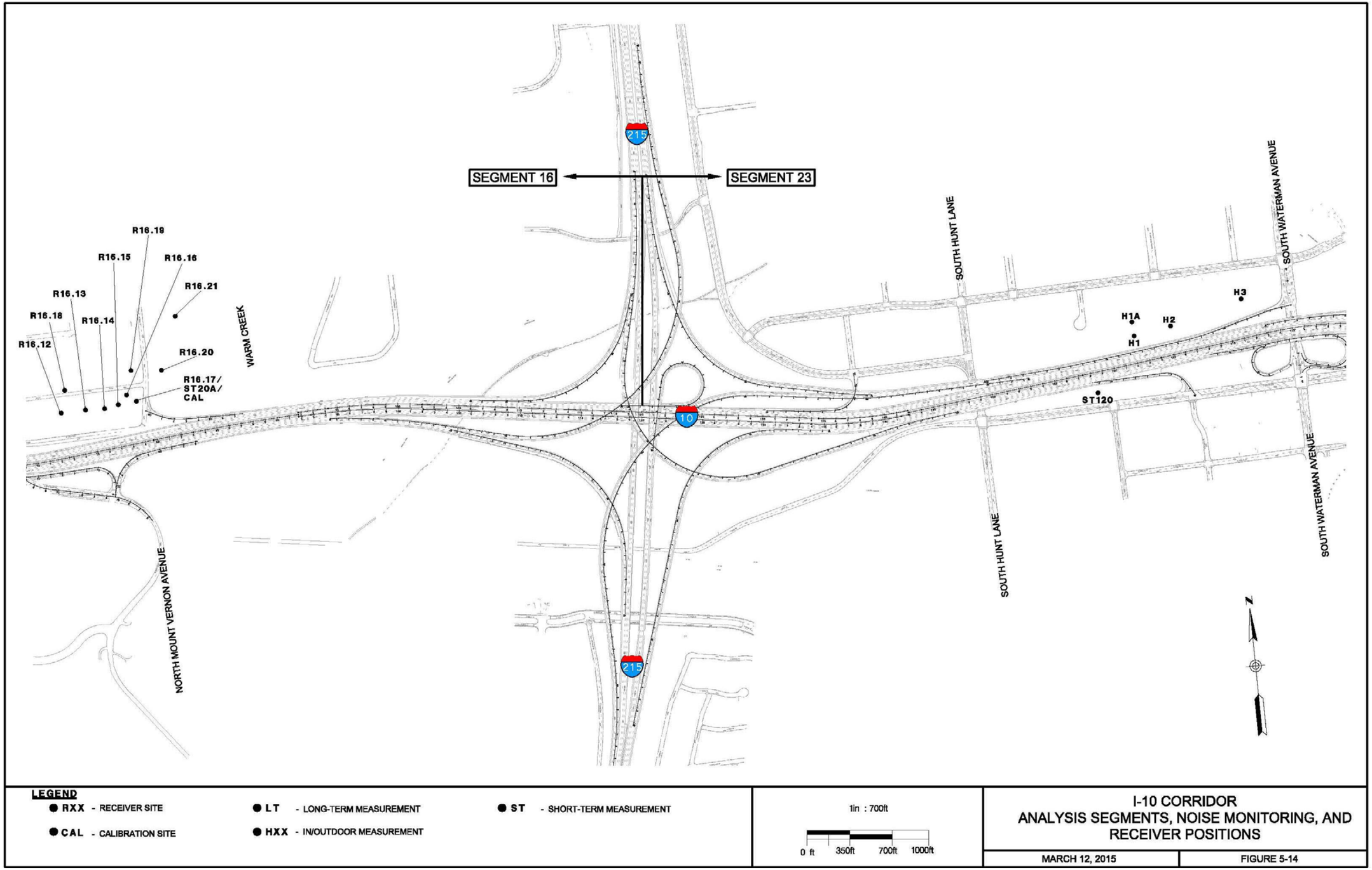


Figure 5-15. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 23 and 17

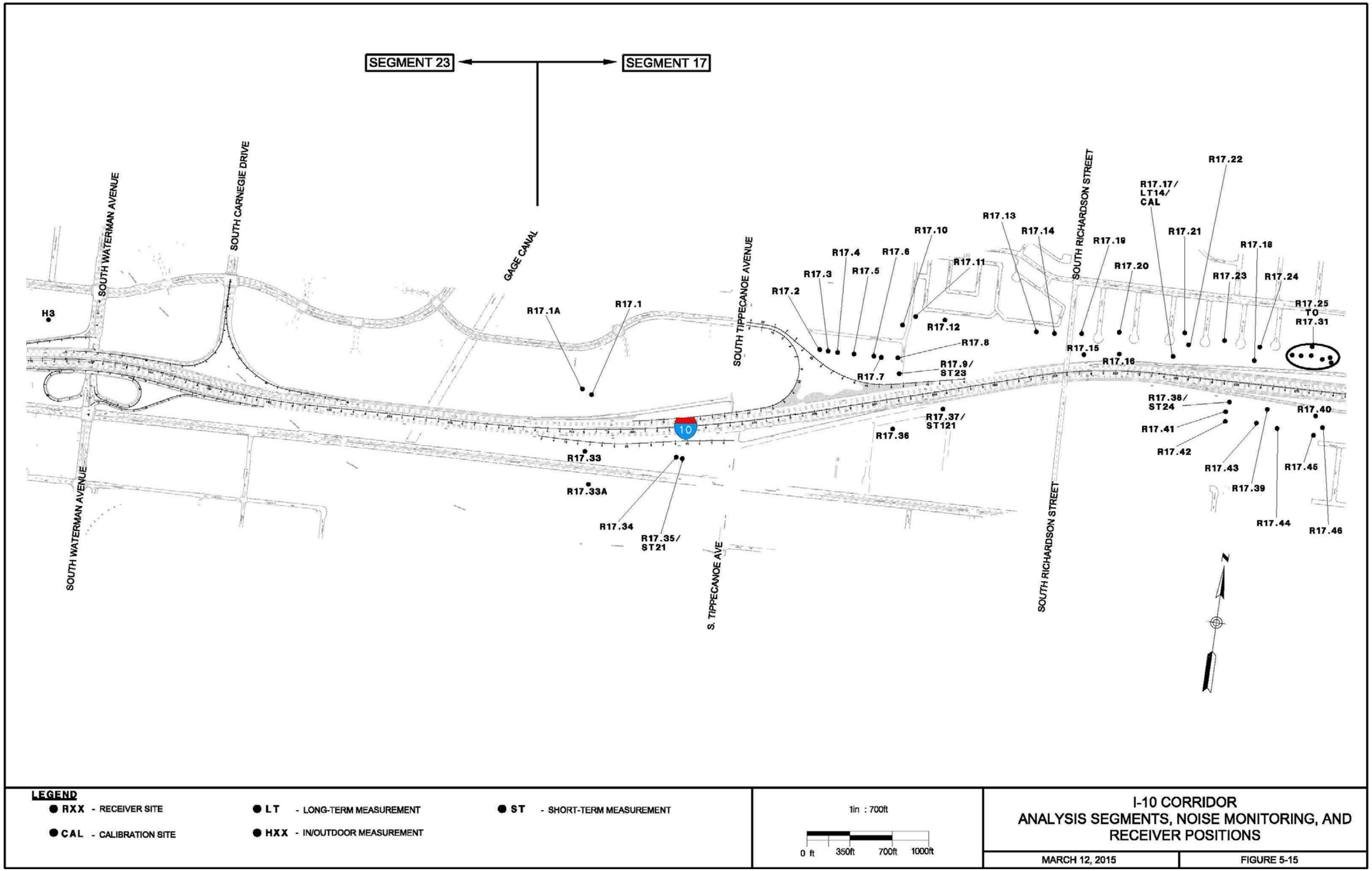


Figure 5-16. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 17 to 18A

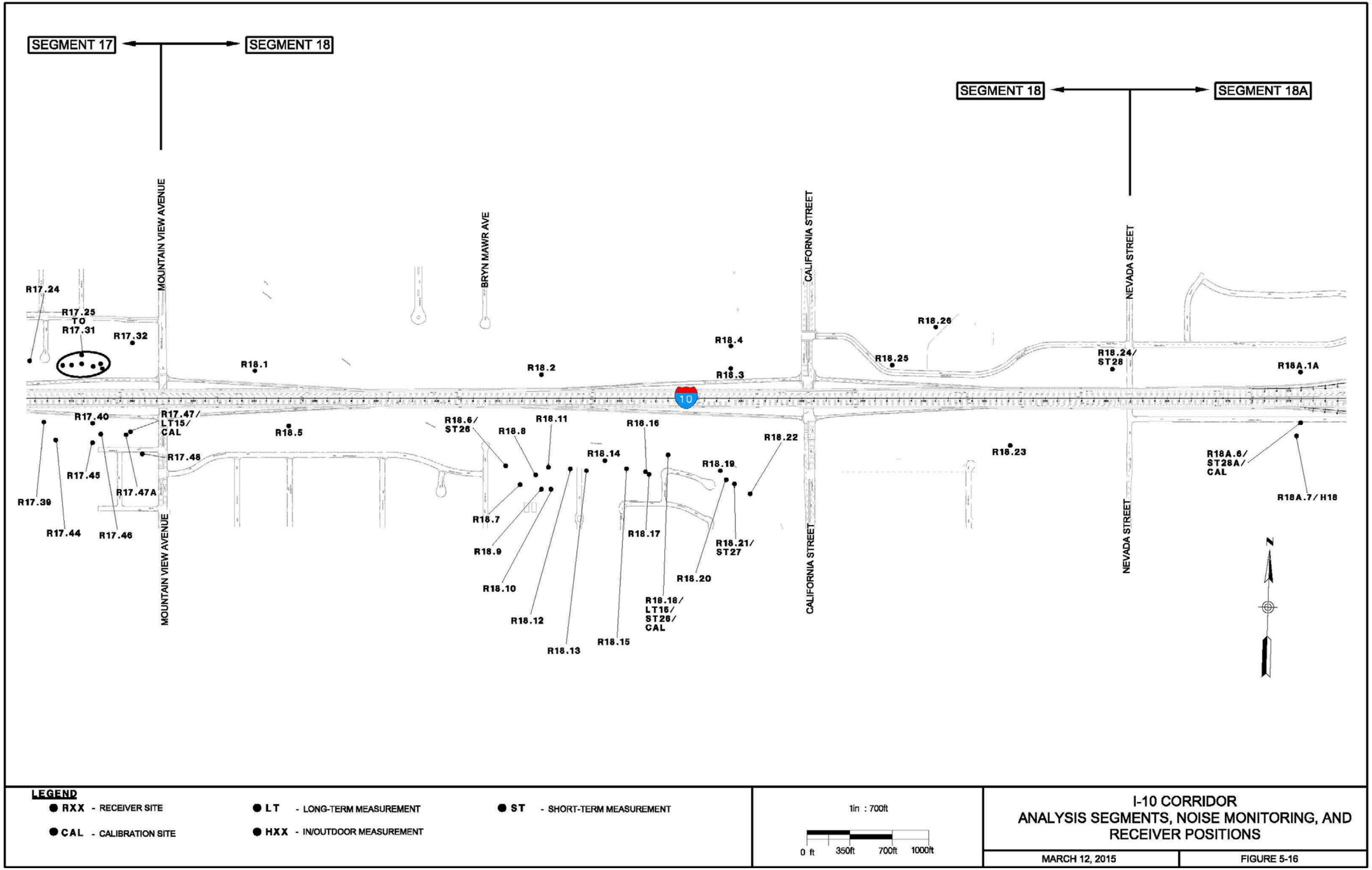


Figure 5-17. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 18A to 20

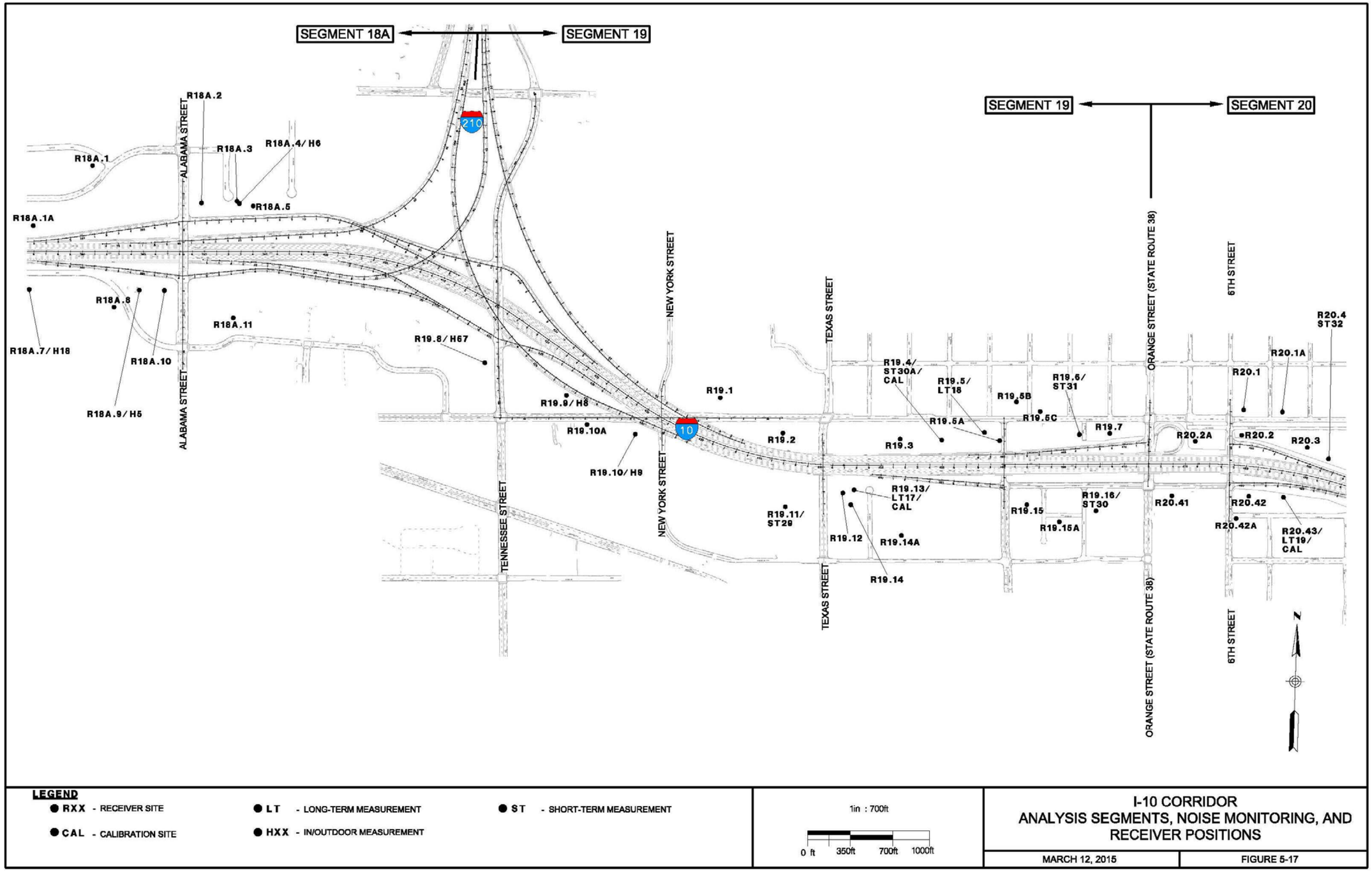


Figure 5-18. Analysis Areas, Noise Monitoring, and Analysis Positions – Segments 20 and 21

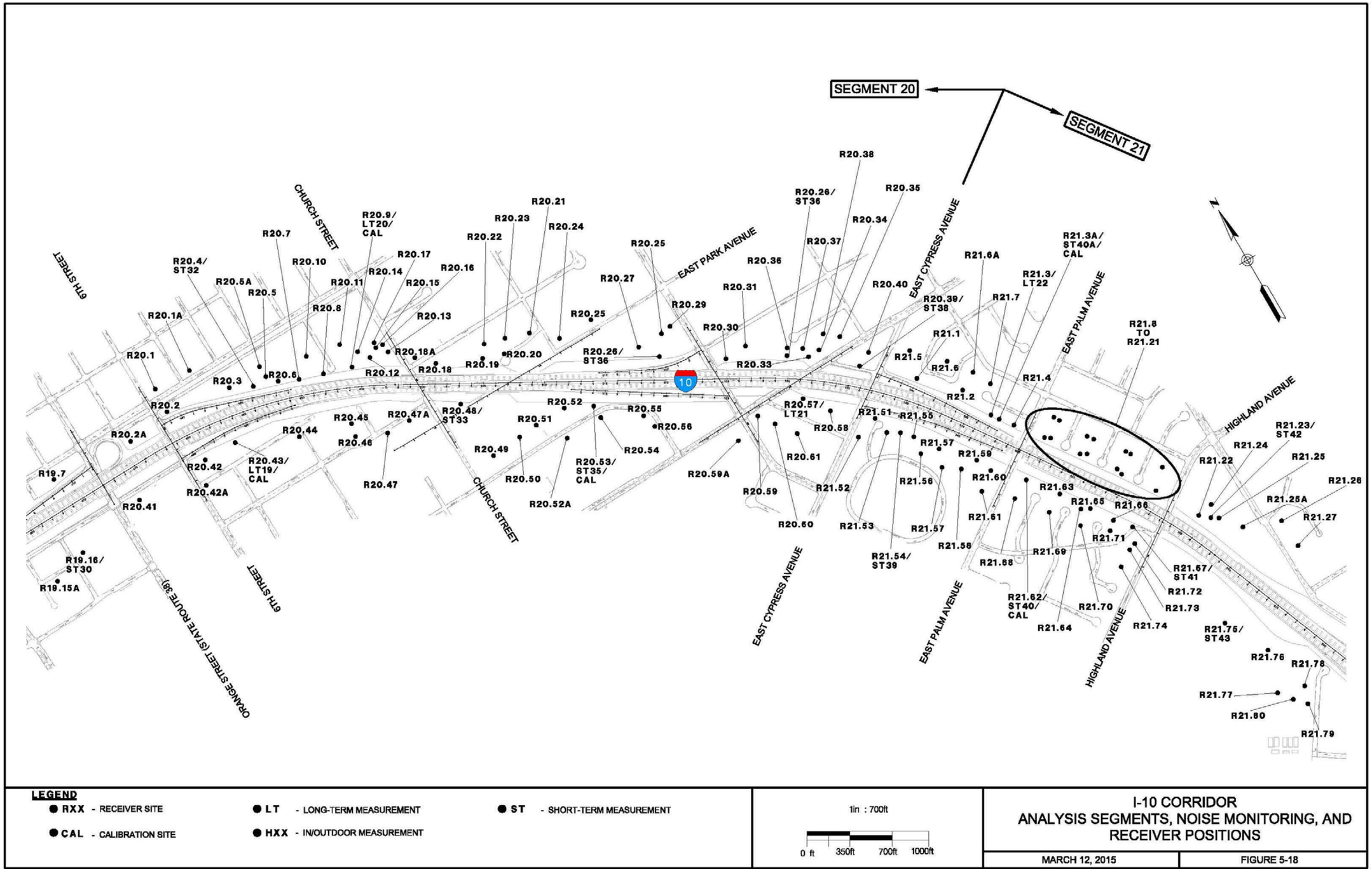
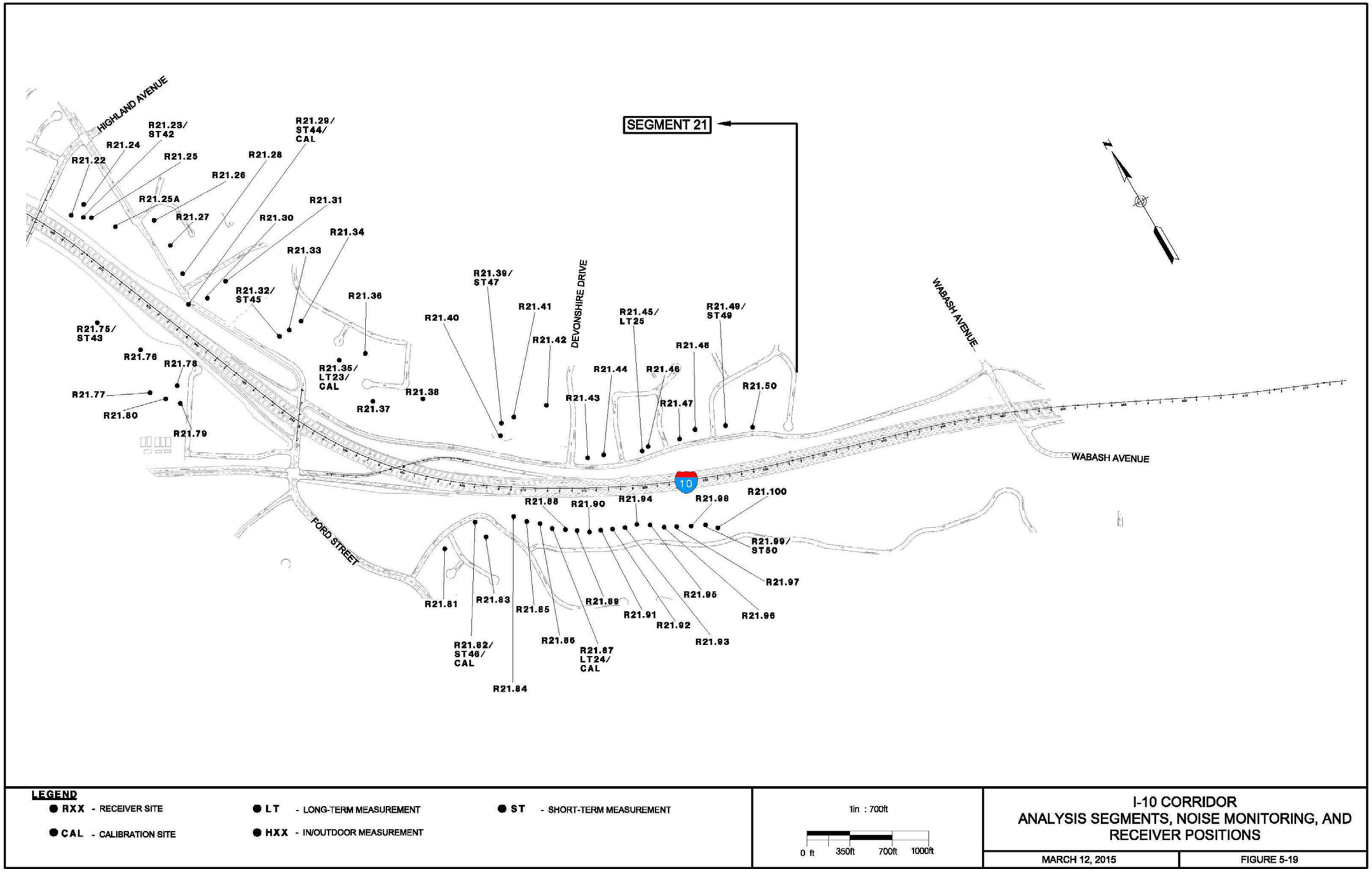


Figure 5-19. Analysis Areas, Noise Monitoring, and Analysis Positions – Segment 21

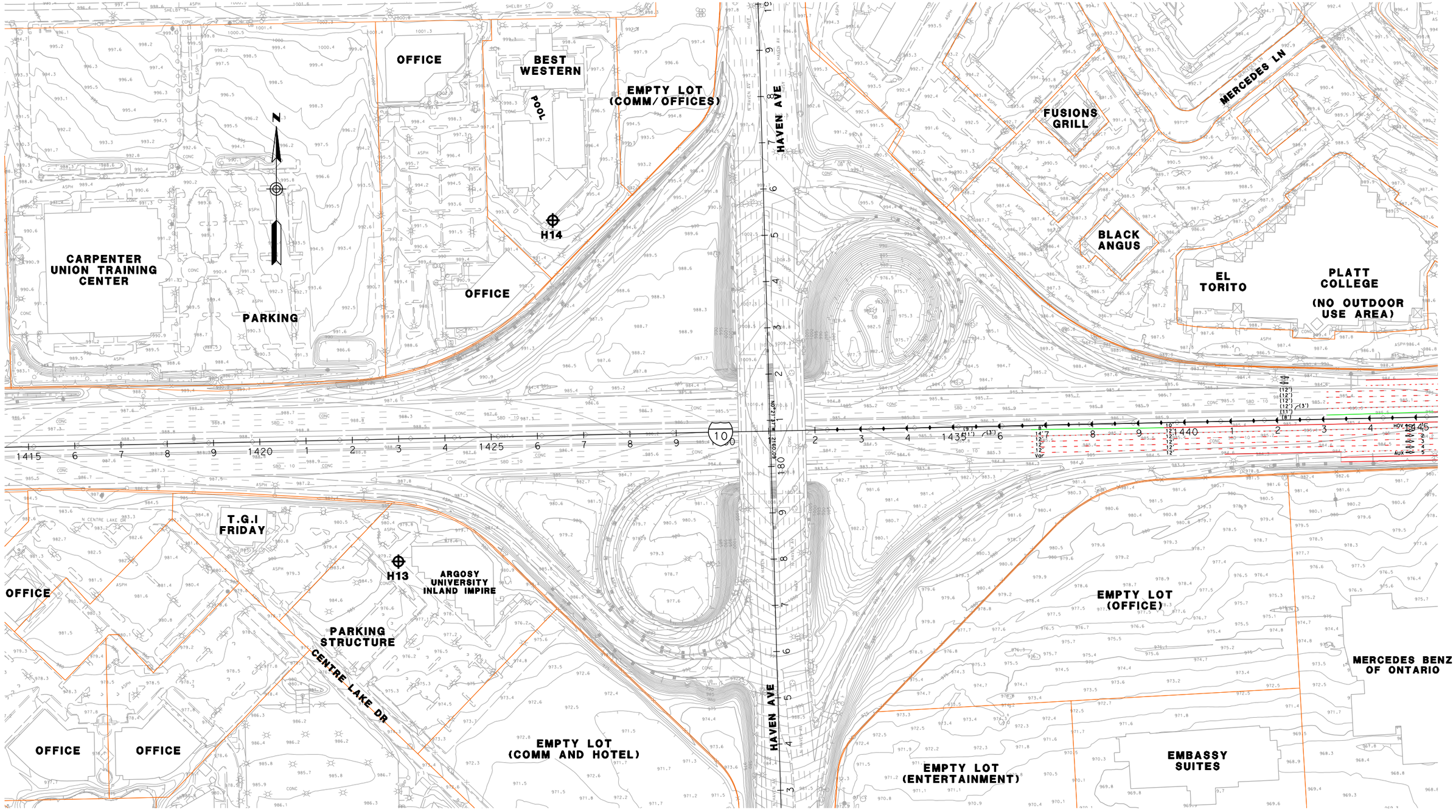


L3: Alternative 2 Reasonableness Analysis Summary and Recommended Soundwall Locations

TABLE 1 – Noise Abatement Information (Alternative 2)

Barrier	Height (feet)	Acoustically Feasible?	Number of Benefited Residences	Total Reasonable Allowance	Masonry Estimated Construction Cost	Cost Less than Allowance	Preliminary Noise Abatement Decision
S1749	10	Yes	1	$71,000	$65,550	Yes	Reasonable
S1819	18	Yes	33	$2,343,000	$1,068,000	Yes	Reasonable
S1833	16	Yes	4	$284,000	$336,100	No	Not Reasonable
S1877	16	Yes	66	$4,686,000	$688,300	Yes	Reasonable
S1907	12- 14- 16	Yes	46	$3,266,000	$1,679,000	Yes	Reasonable
S1969	12	Yes	2	$142,000	$97,840	Yes	Reasonable
S2033	20	Yes	4	$284,000	$268,900	Yes	Reasonable
S2079	16	Yes	4	$284,000	$428,300	No	Not Reasonable
S2145	16- 20- 22	Yes	45	$3,195,000	$1,131,000	Yes	Reasonable
S2382	12	Yes	1	$71,000	$452,500	No	Not Reasonable
S2384	16						
S2434A	12- 14- 16	Yes	40	$2,840,000	$909,100	Yes	Reasonable
S2438	14						
S2434B	12	Yes	40	$2,840,000	$757,000	Yes	Reasonable
S2438	14						
S2435	10	Yes	15	$1,065,000	$380,800	Yes	Reasonable
S2437	14						
S2476	14	Yes	88	$6,248,000	$663,200	Yes	Reasonable
S2619	10- 12- 14	Yes	17	$1,207,000	$1,284,000	Yes*	Reasonable*
S2638A	12	Yes	20	$1,420,000	$2,013,900	No	Not Reasonable
S2654A	10- 12						
S2638B	12	Yes	11	$781,000	$808,800	Yes*	Reasonable*
S2654B	12						
S2730	12- 14- 16- 18- 20	Yes	1	$71,000	$386,100	No	Not Reasonable
S2737	16- 18- 20- 22- 24	Yes	5	$355,000	$1,118,000	No	Not Reasonable
S2765	14	Yes	16	$1,136,000	$557,900	Yes	Reasonable

*Although estimated construction cost is greater than total reasonable allowance, the difference is within 10% of the allowance; therefore, the cost is considered less than the allowance.



LEGEND

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- MFR OR M - MULTI-FAMILY RESIDENCE
- COMM OR C - COMMERCIAL/NO OUTDOOR USE AREA
- b - BENEFITED RESIDENCE
- HXX - IN/OUTDOOR MEASUREMENT

- EXISTING PROPERTY WALL
- EXISTING SOUNDWALL
- PROPOSED SOUNDWALL
- REPLACEMENT IN KIND SOUNDWALL
- NON-REASONABLE SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

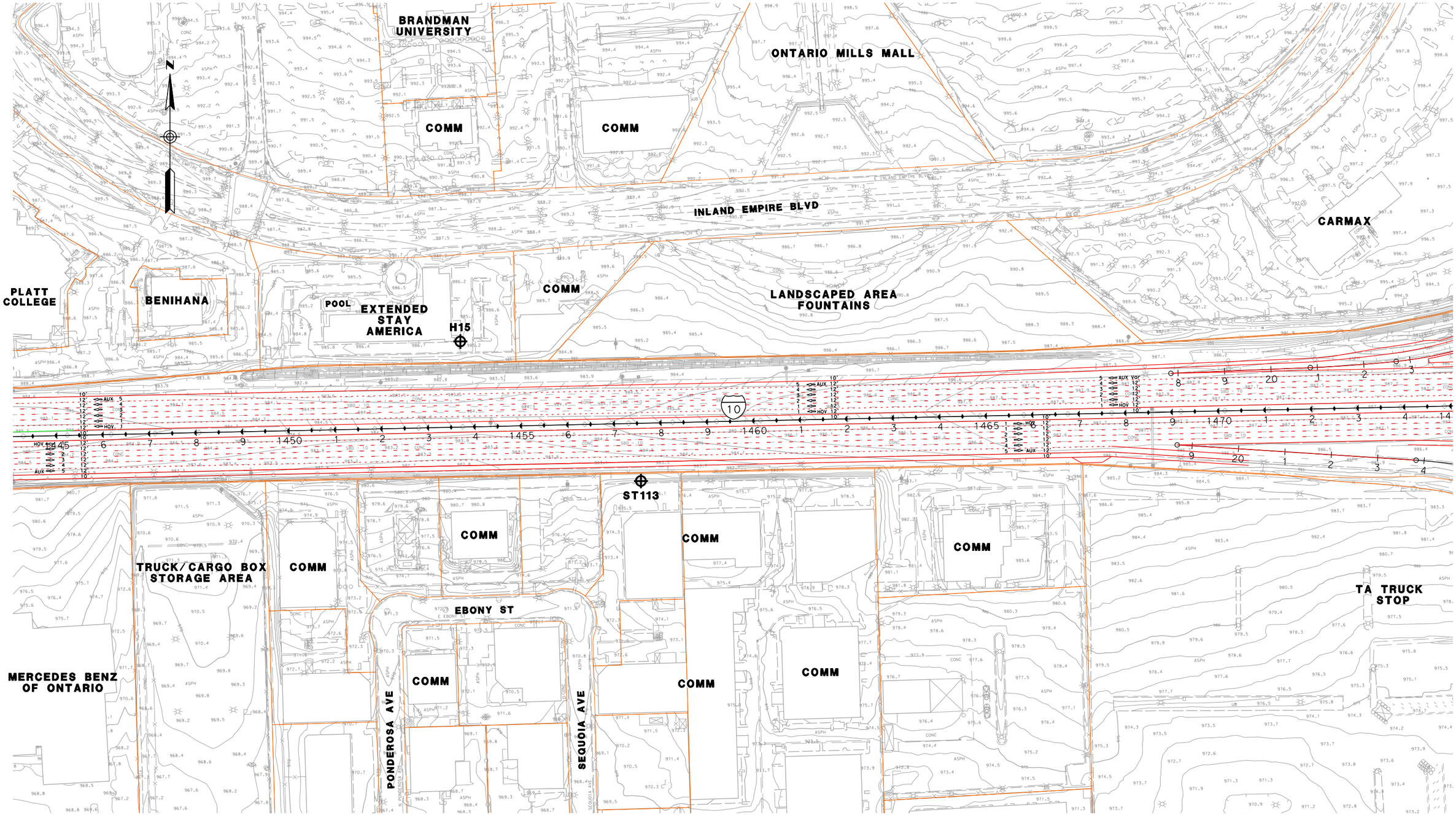
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 65



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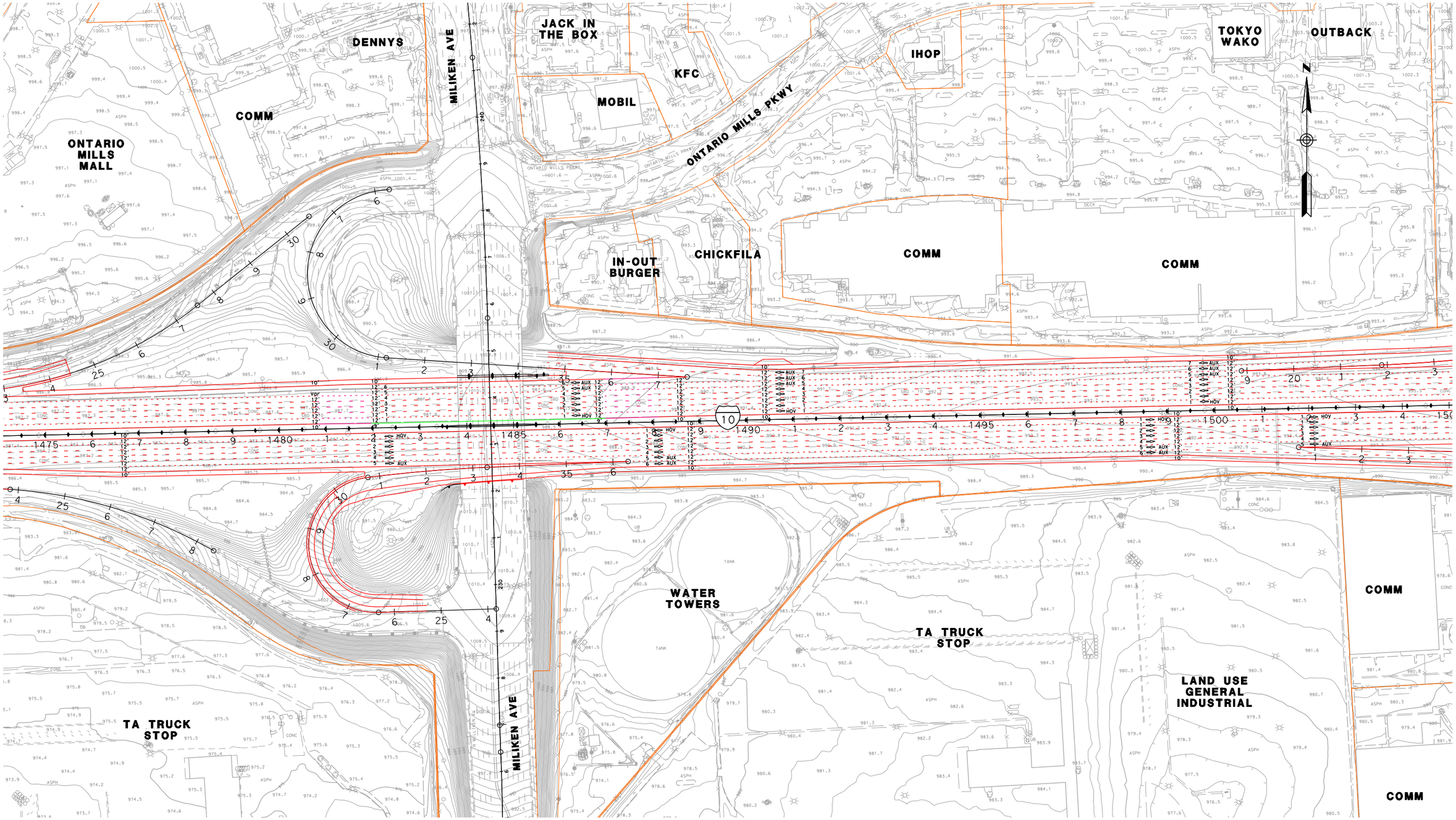
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 66



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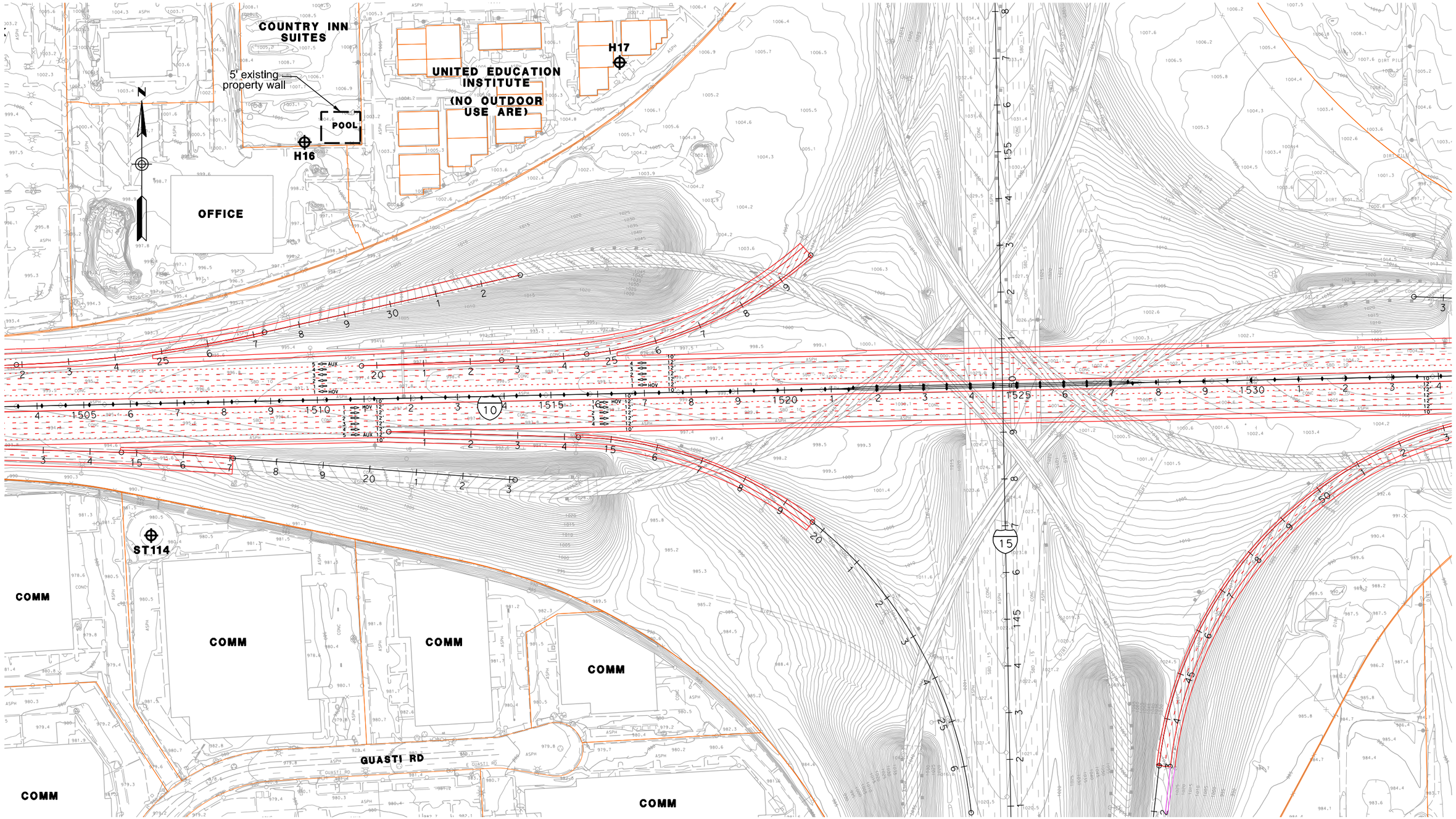
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 67



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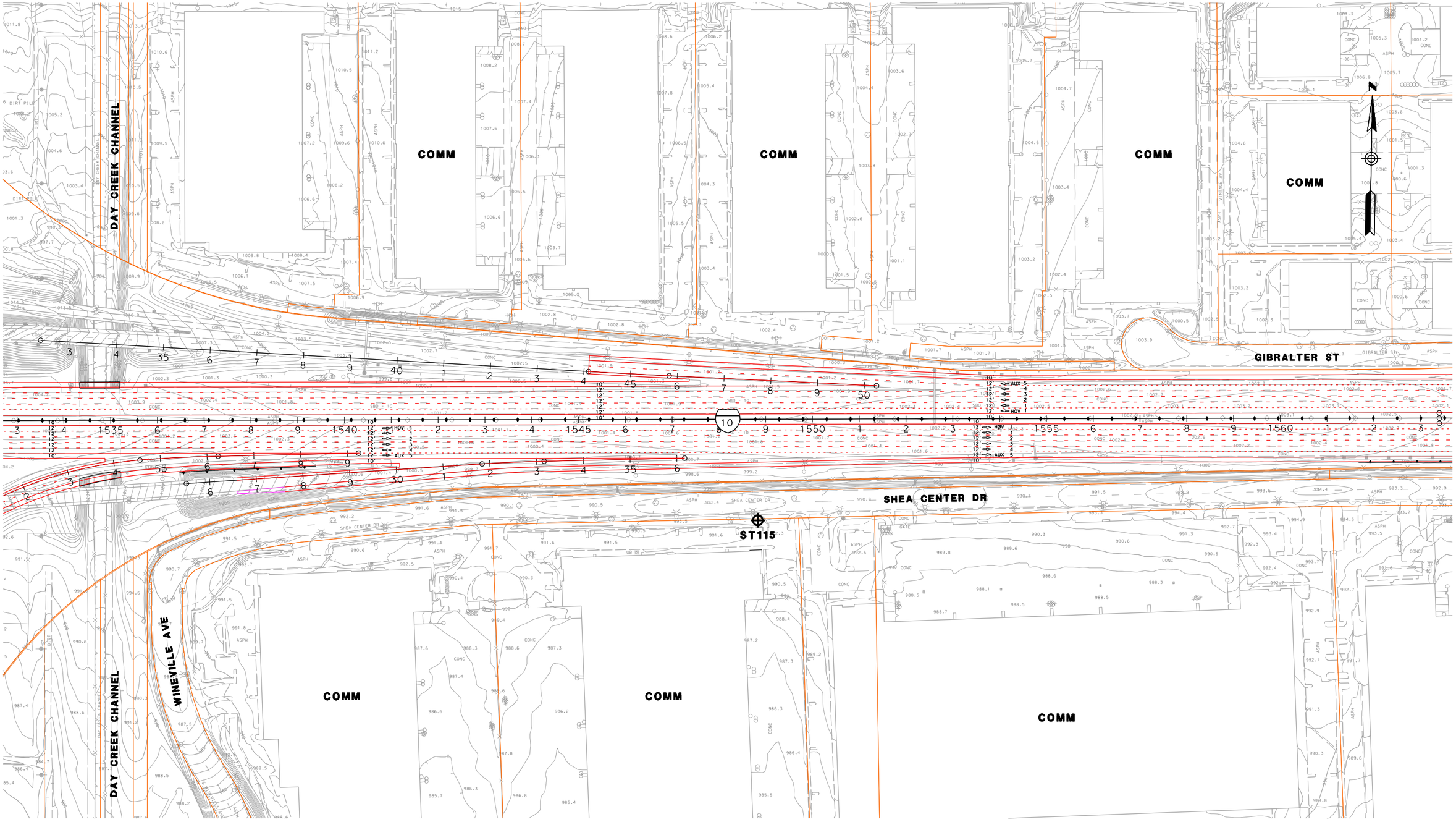
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 68



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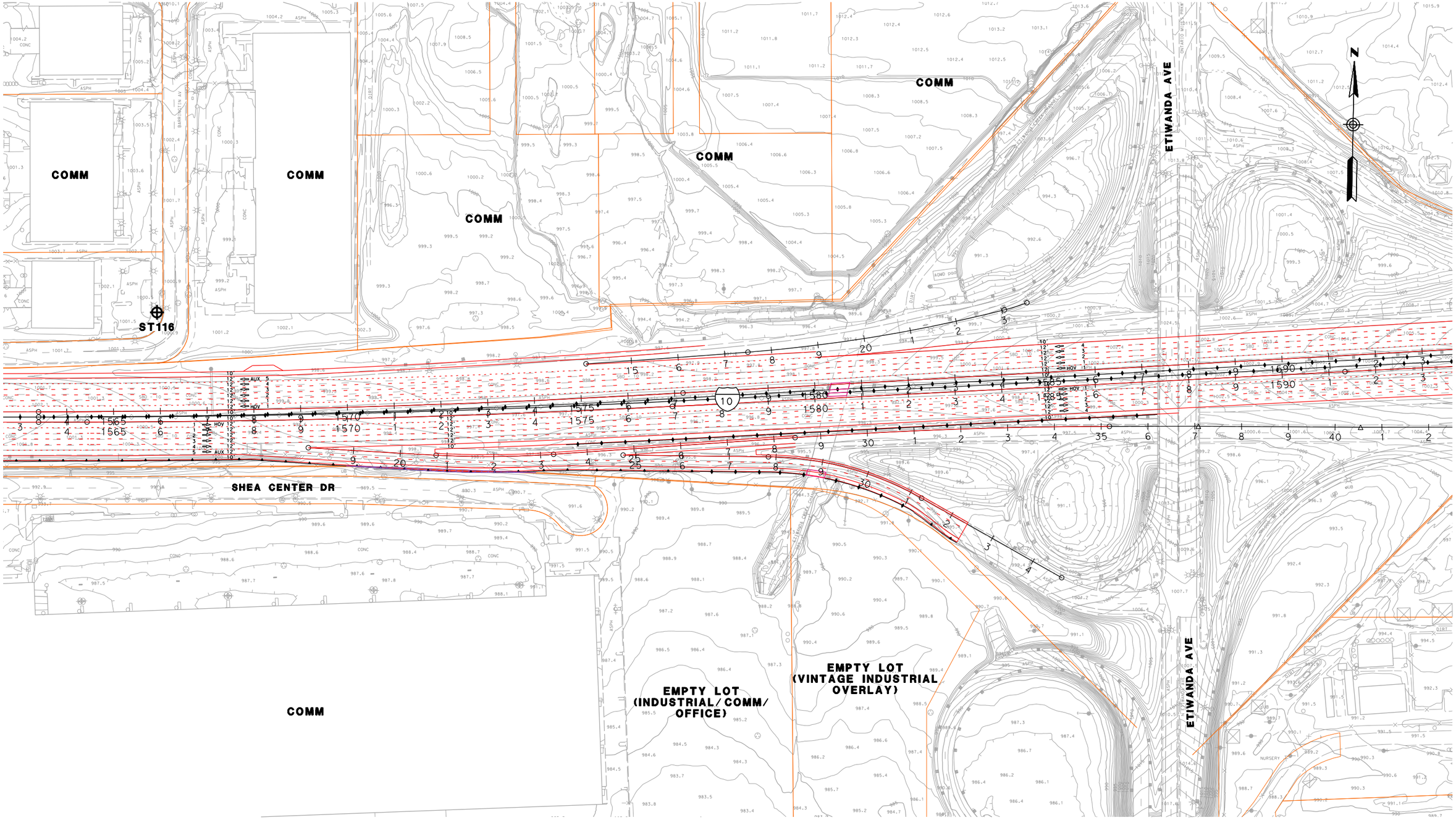
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 69



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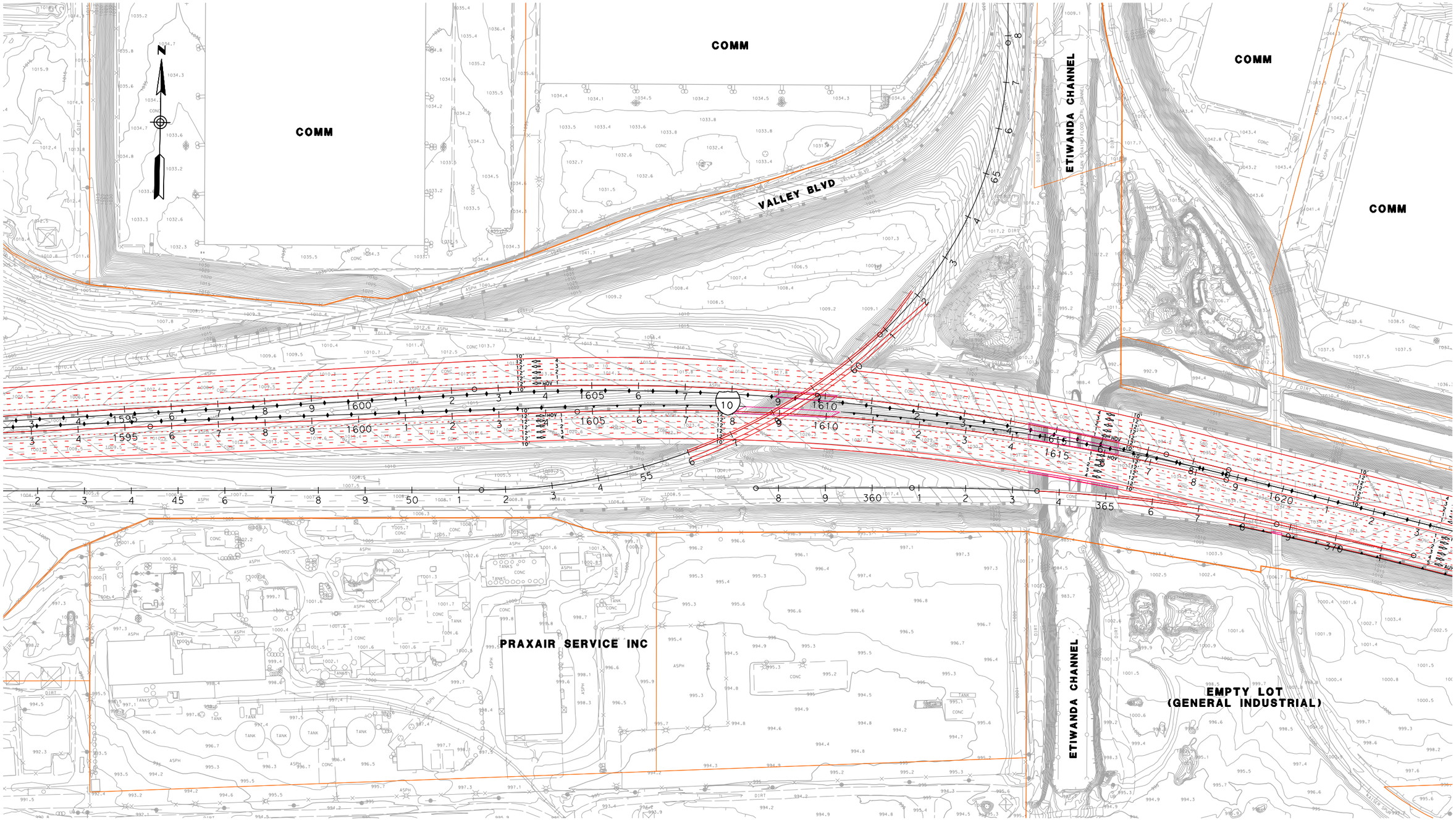
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 70



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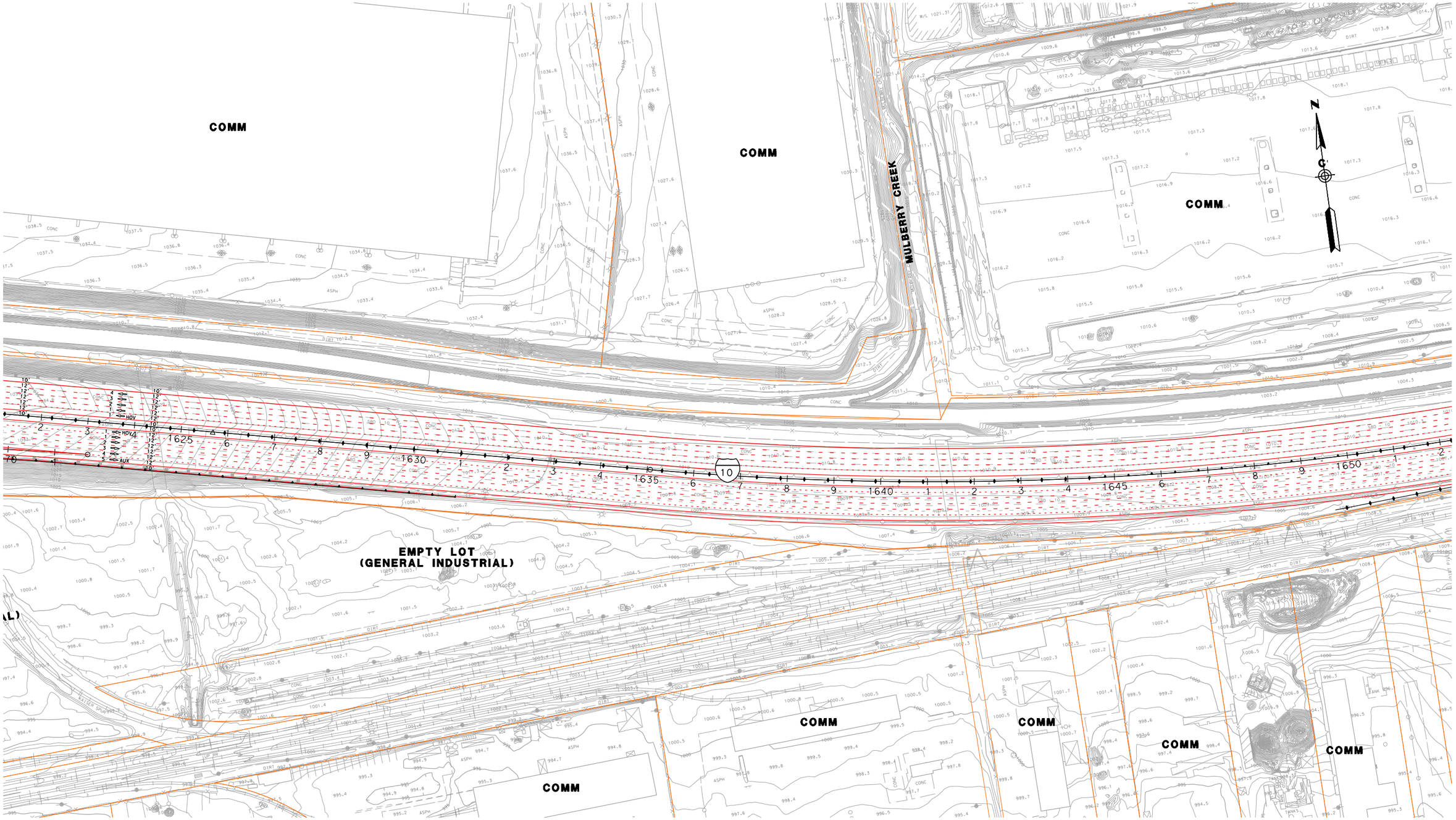
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 71



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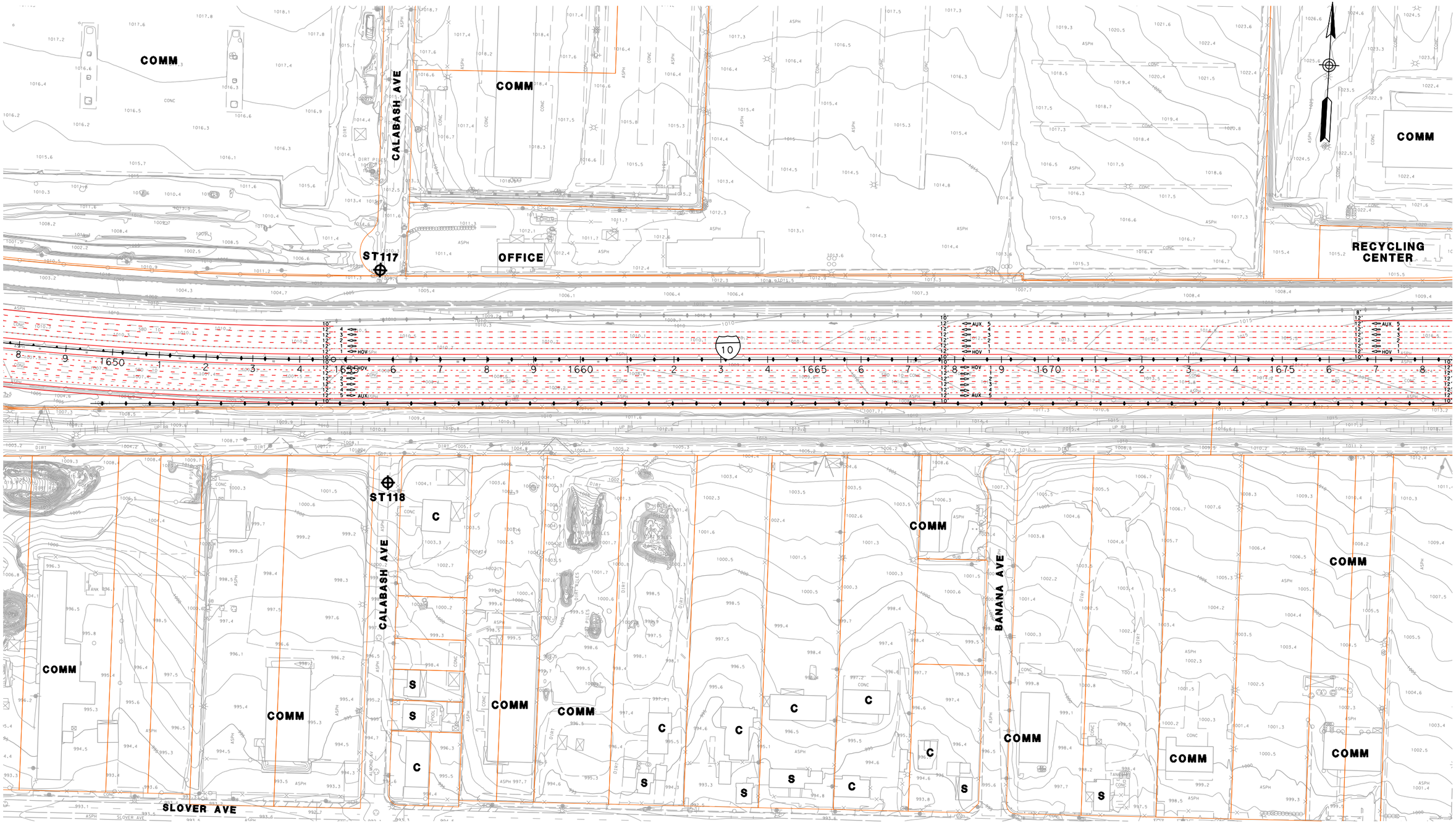
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 72



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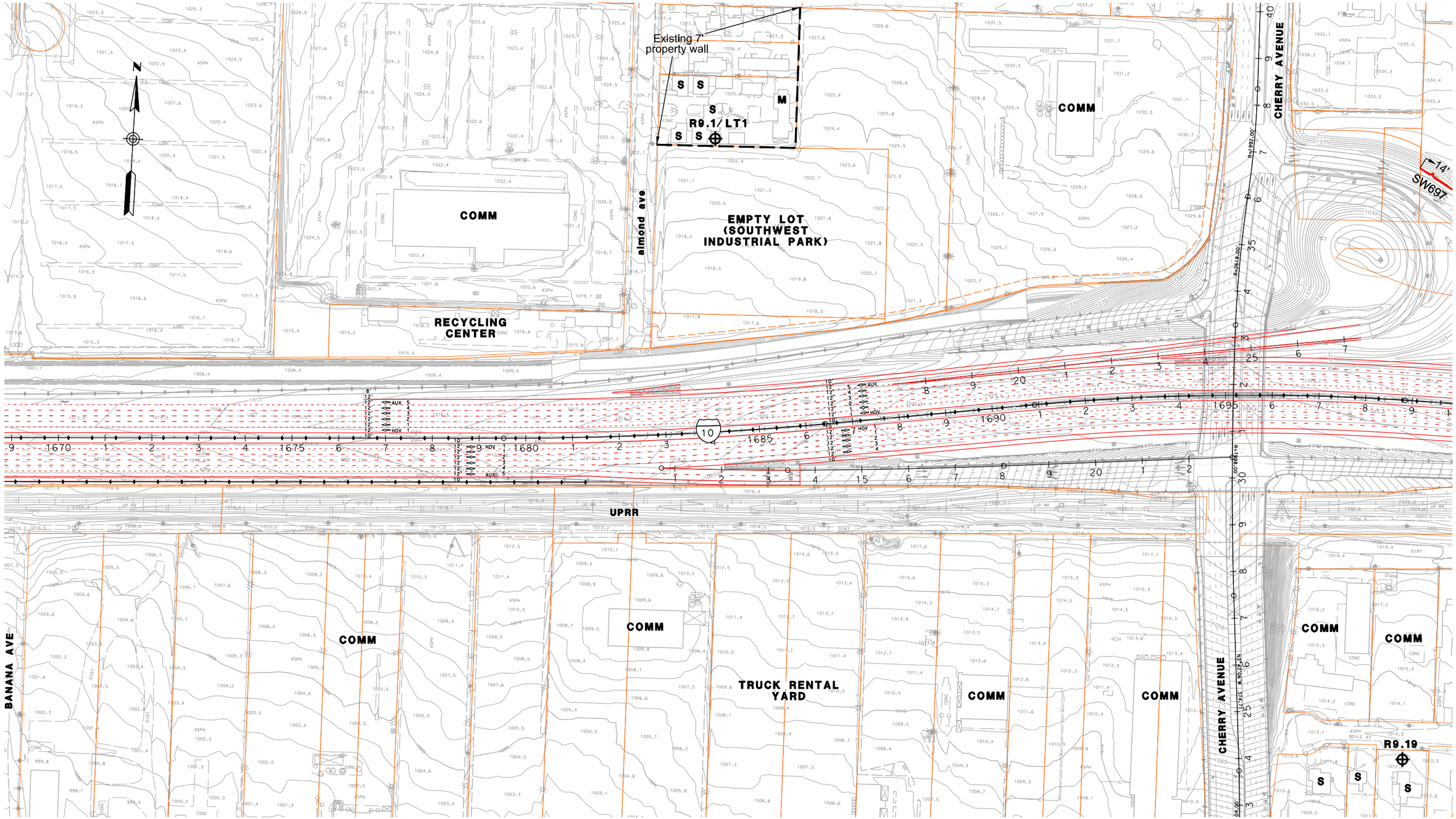
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 73



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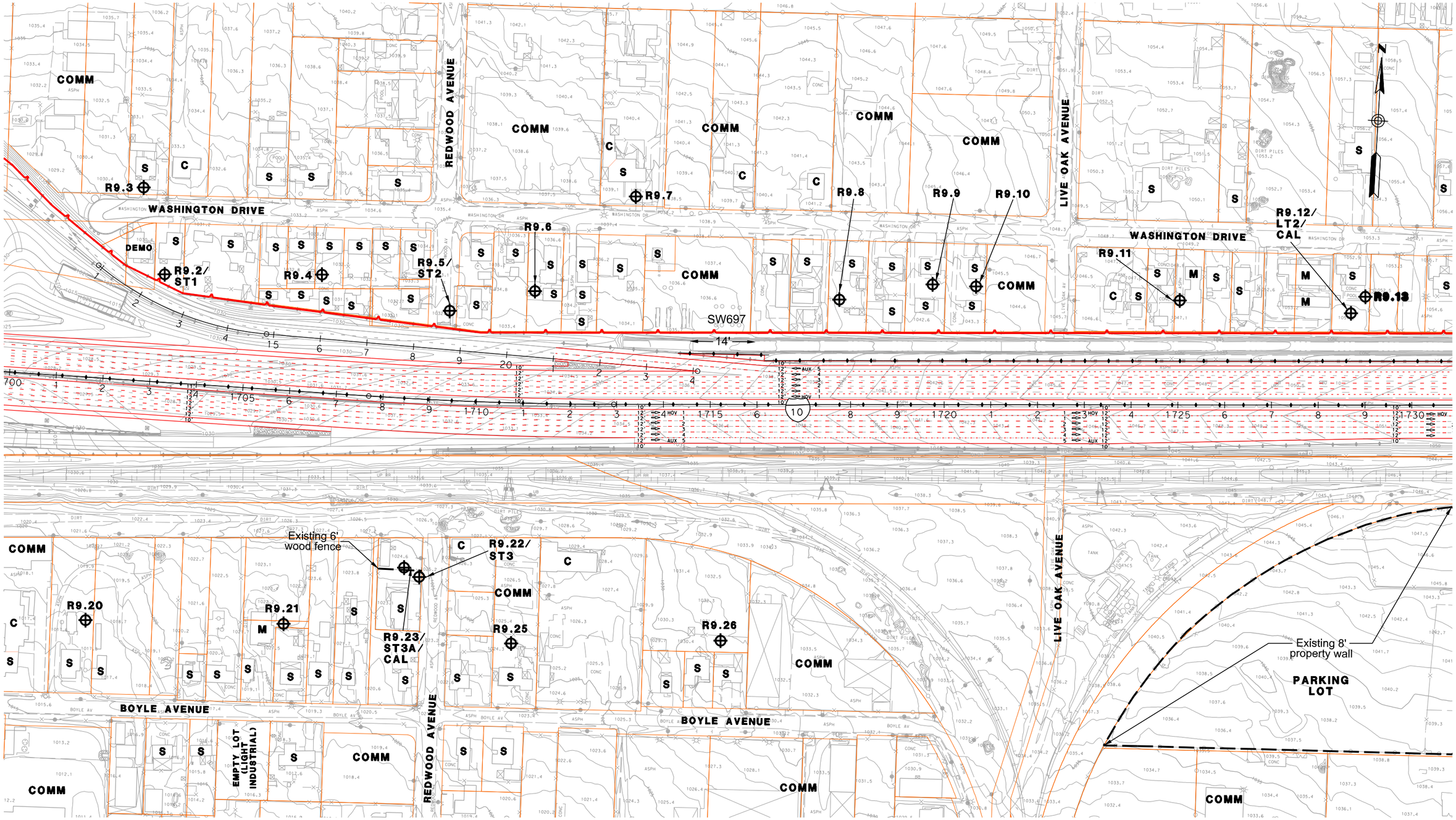
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 74



LEGEND

- RXX - RECEIVER SITE
- CAL - CALIBRATION SITE
- LT - LONG-TERM MEASUREMENT
- ST - SHORT-TERM MEASUREMENT
- SFR OR S - SINGLE FAMILY RESIDENCE
- MFR OR M - MULTI-FAMILY RESIDENCE
- COMM OR C - COMMERCIAL/NO OUTDOOR USE AREA
- b - BENEFITED RESIDENCE
- HXX - IN/OUTDOOR MEASUREMENT
- EXISTING PROPERTY WALL
- EXISTING SOUNDWALL
- PROPOSED SOUNDWALL
- REPLACEMENT IN KIND SOUNDWALL
- NON-REASONABLE SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

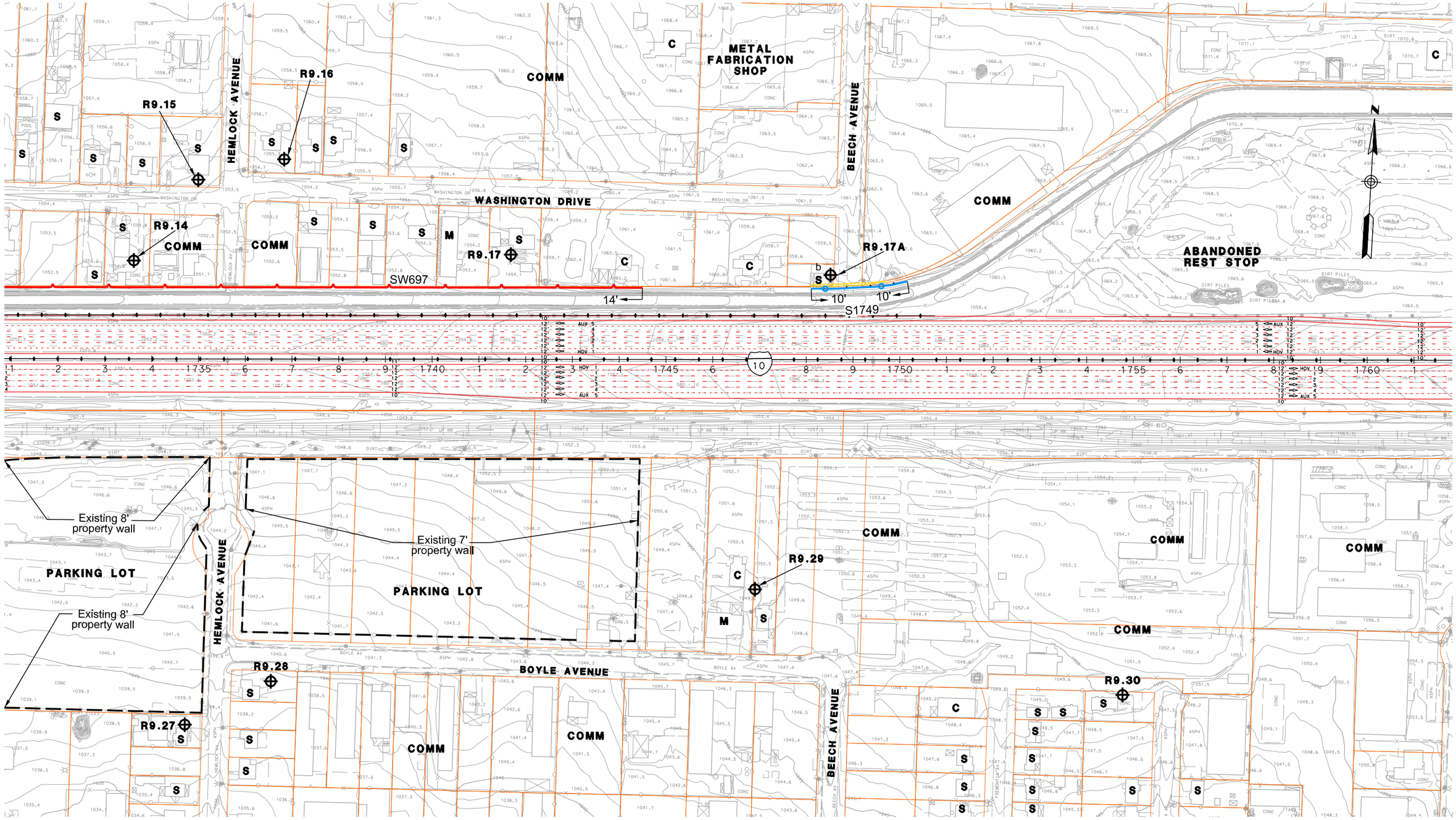
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 75



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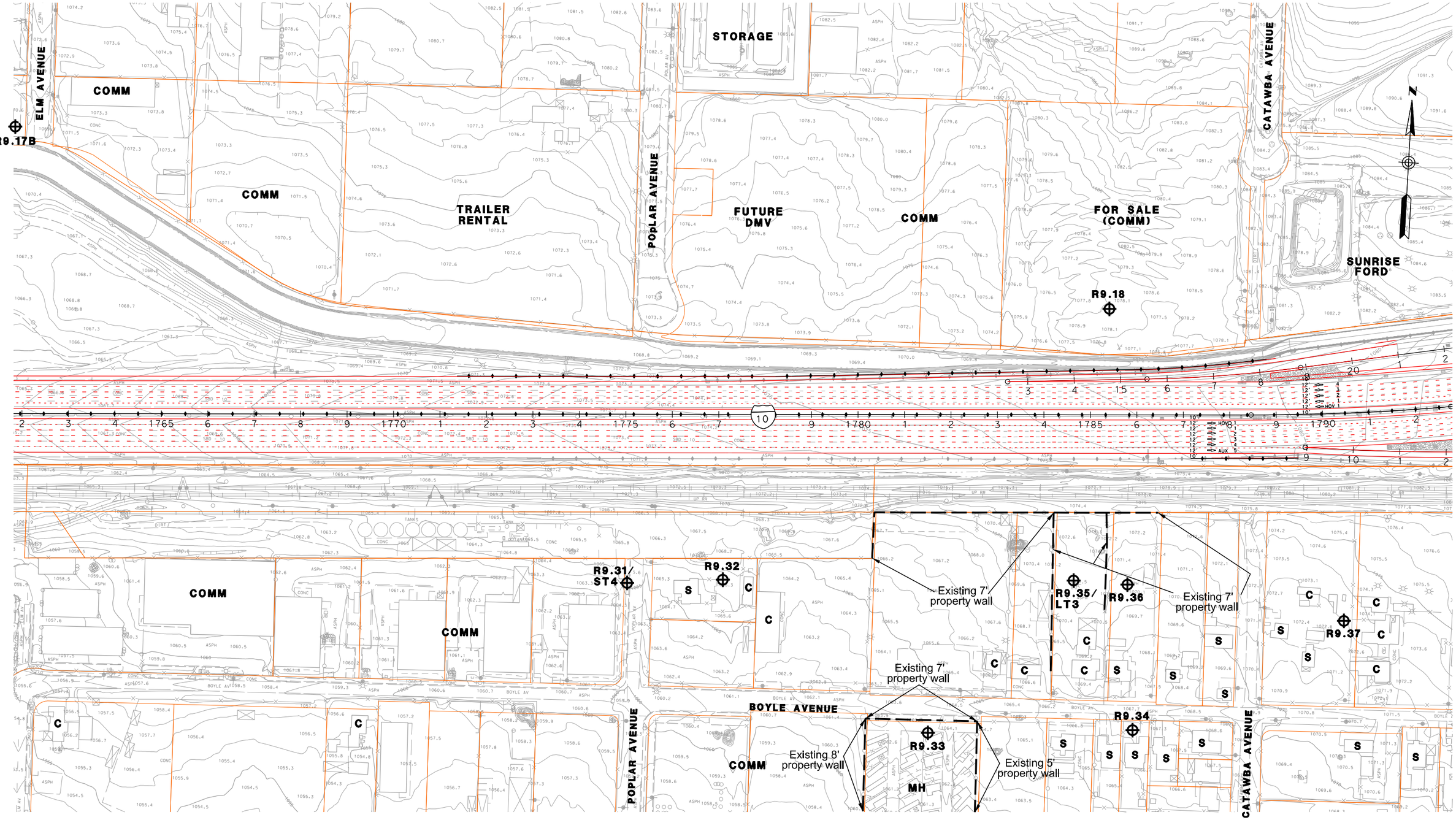
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 76



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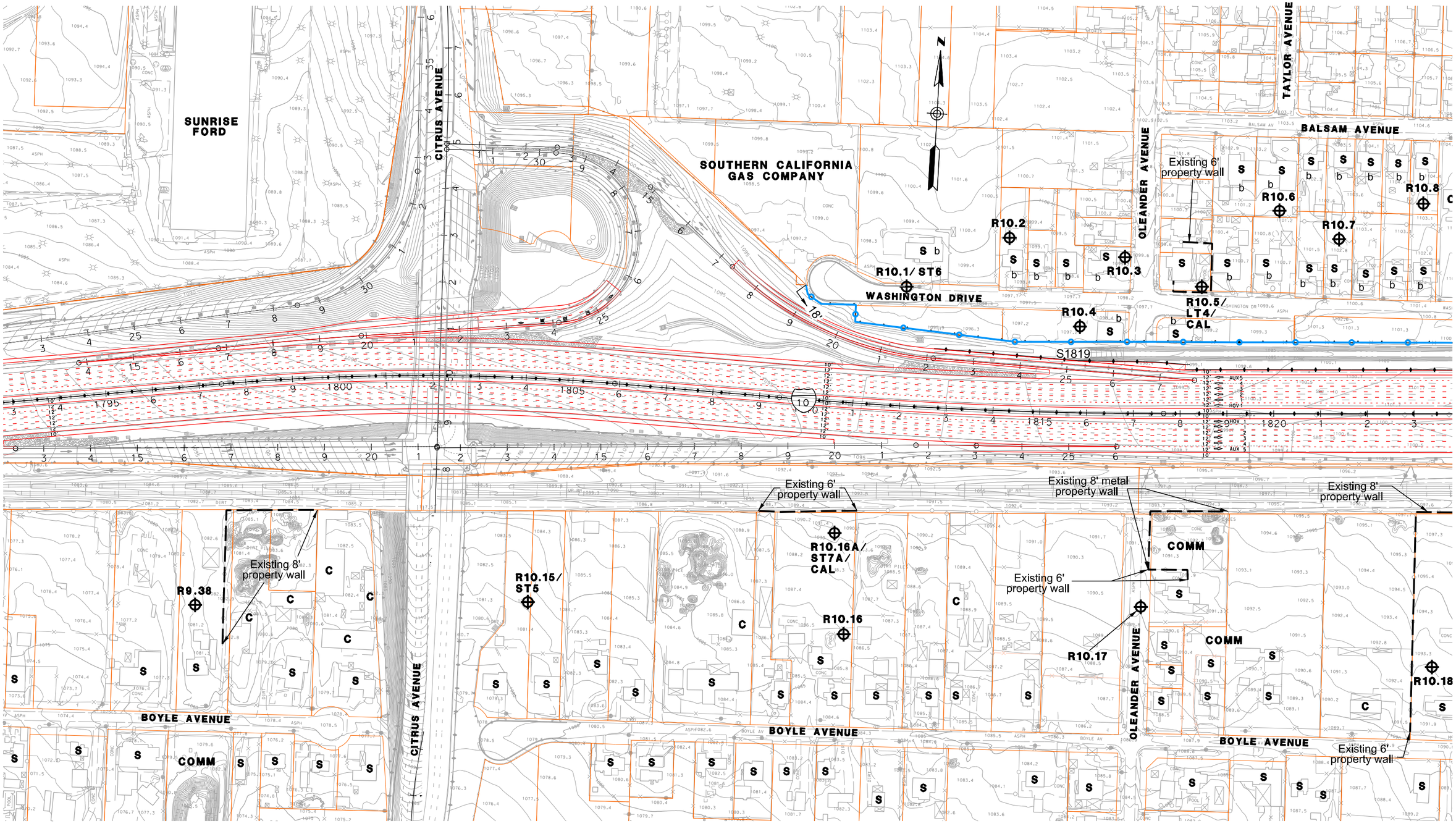
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 77



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I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

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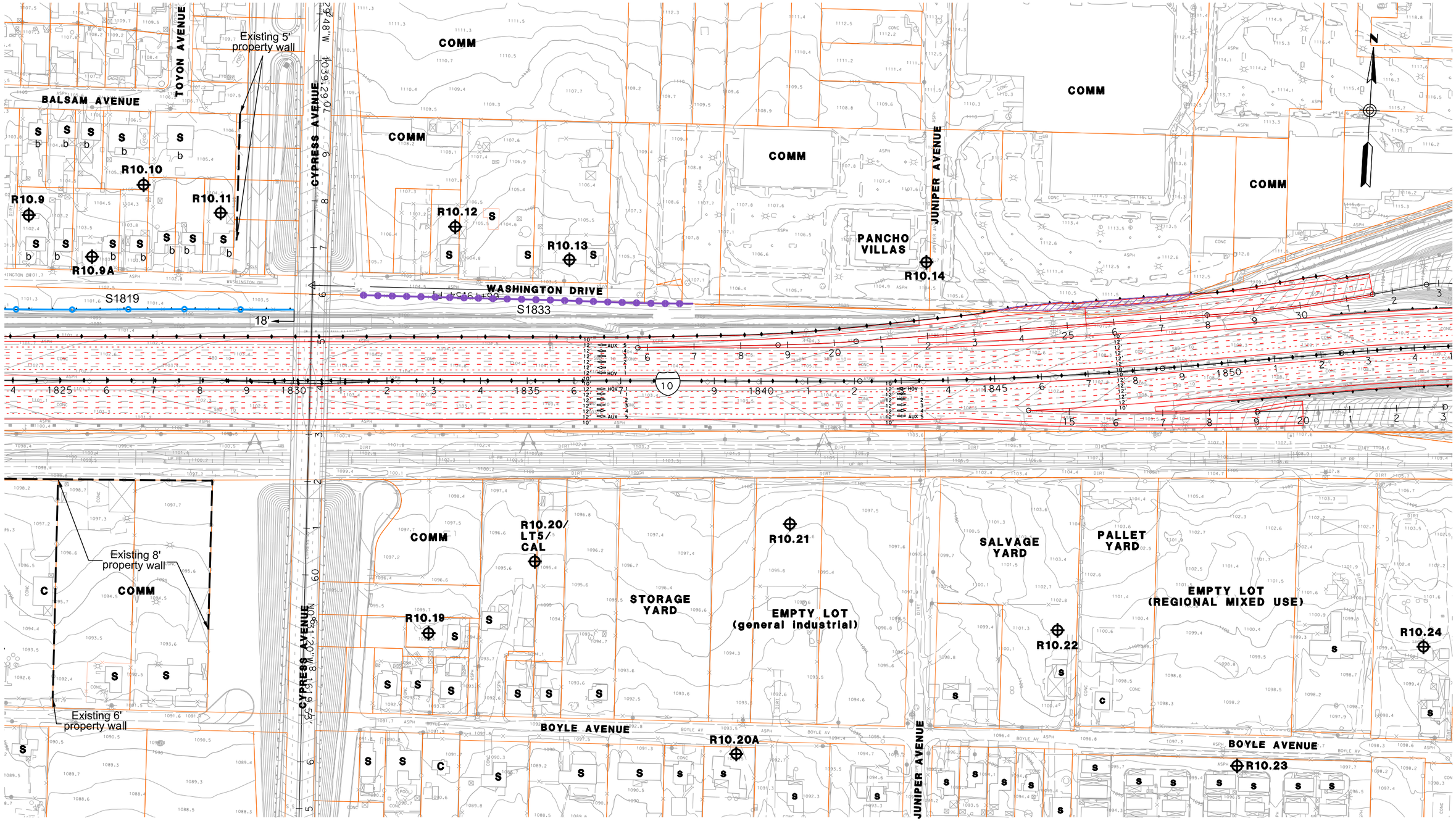

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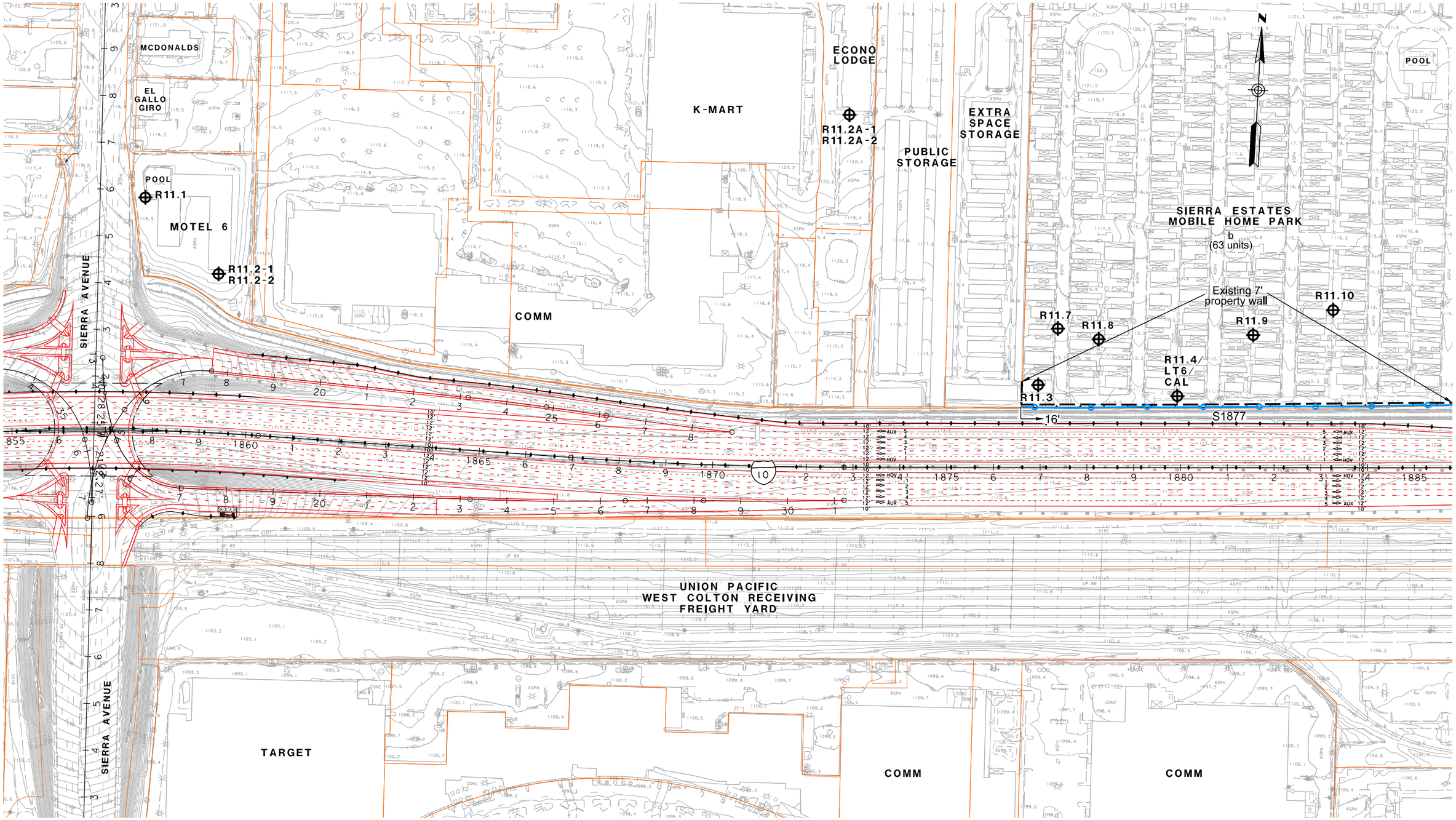
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 79



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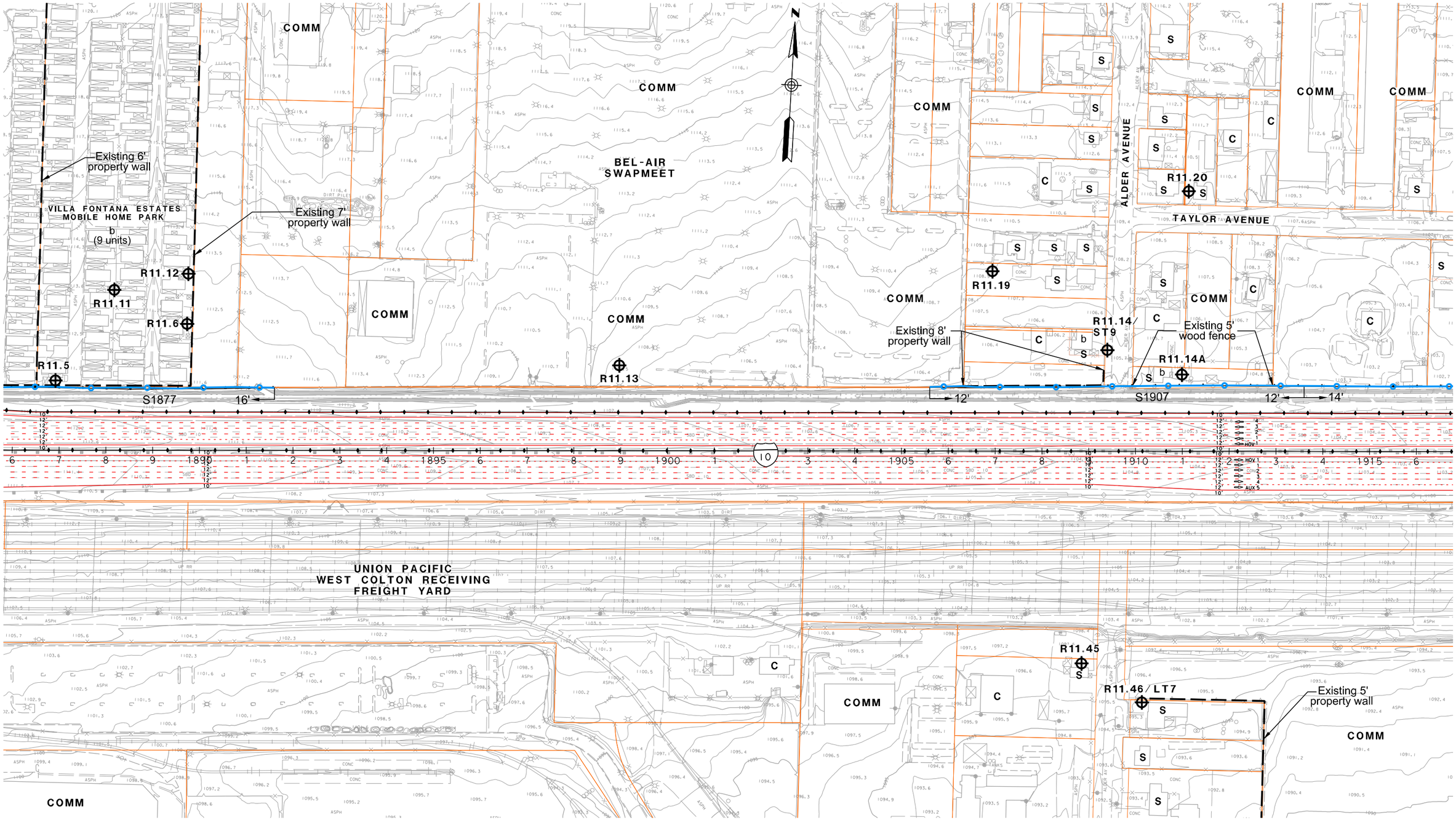
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

AUGUST 12, 2015

FIGURE 80



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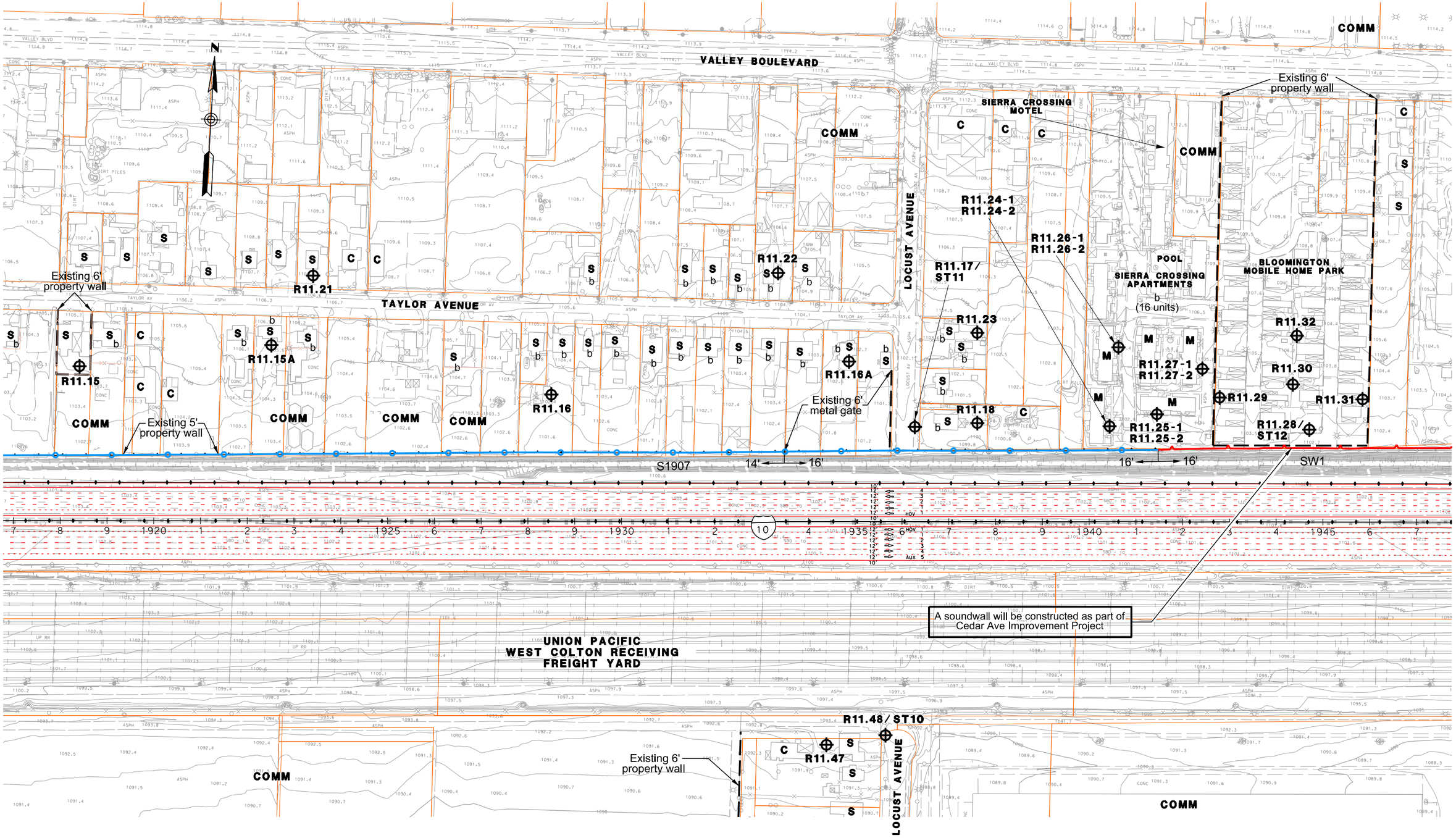
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

AUGUST 12, 2015

FIGURE 81



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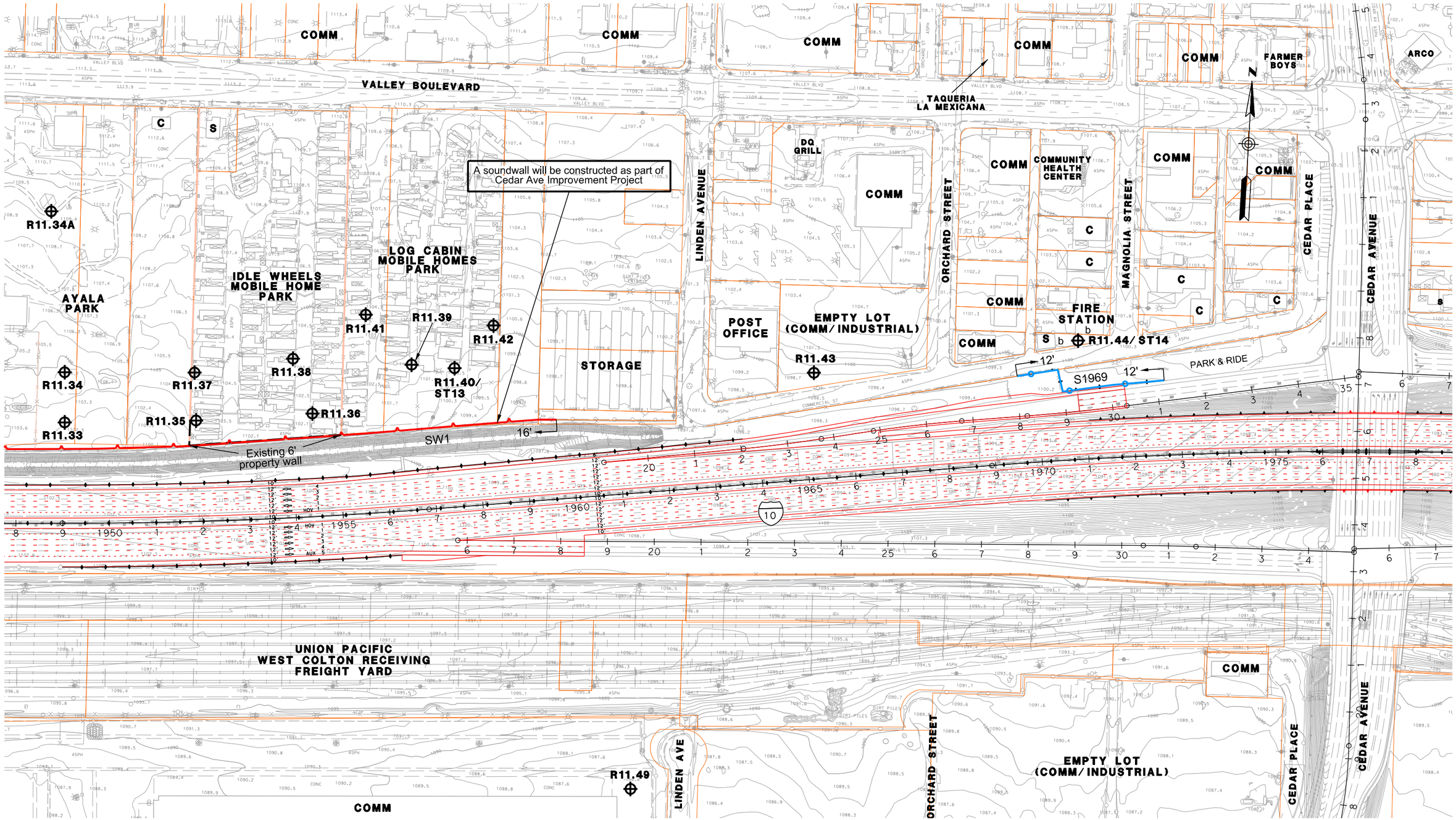
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 82



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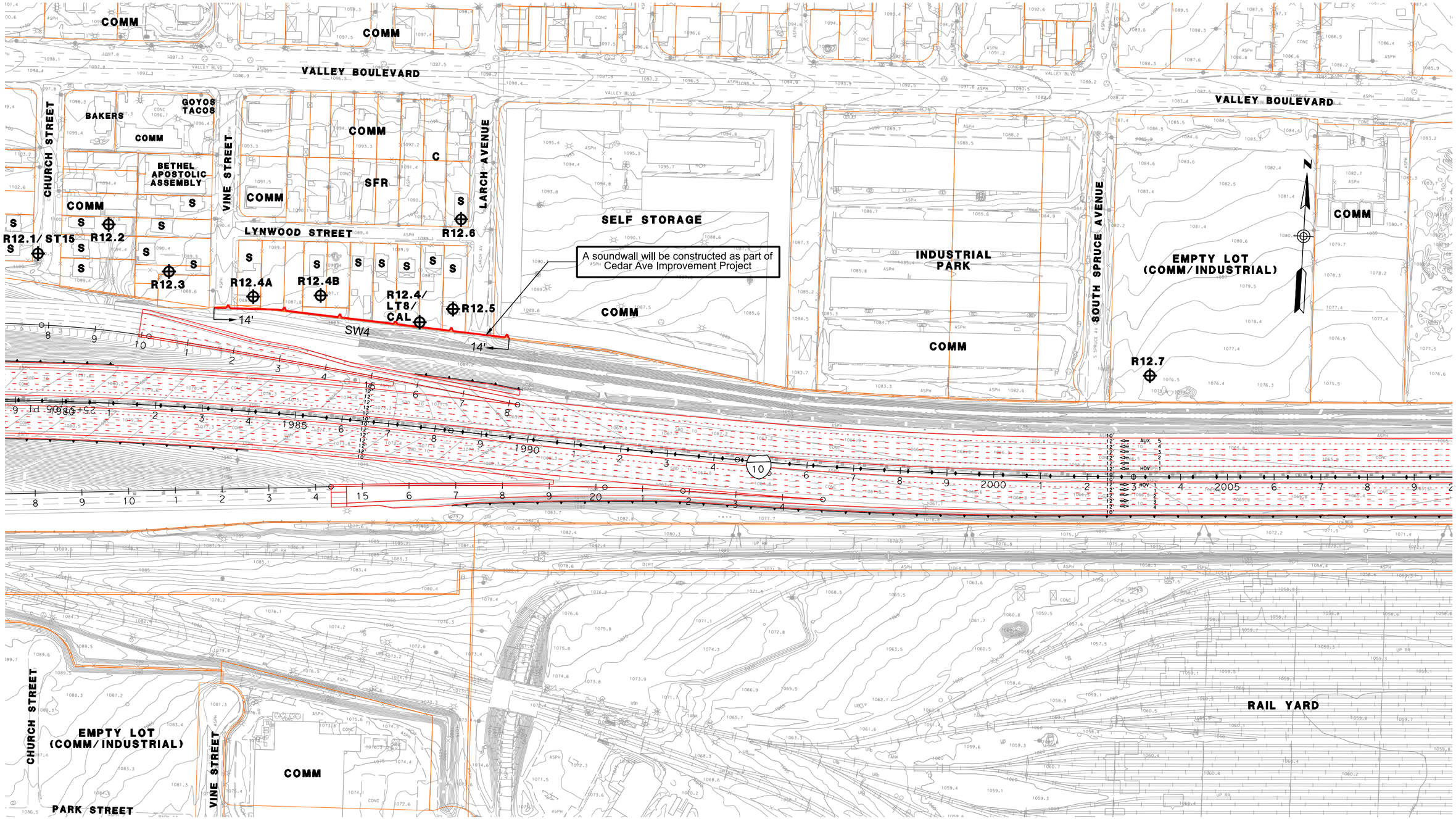
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 83



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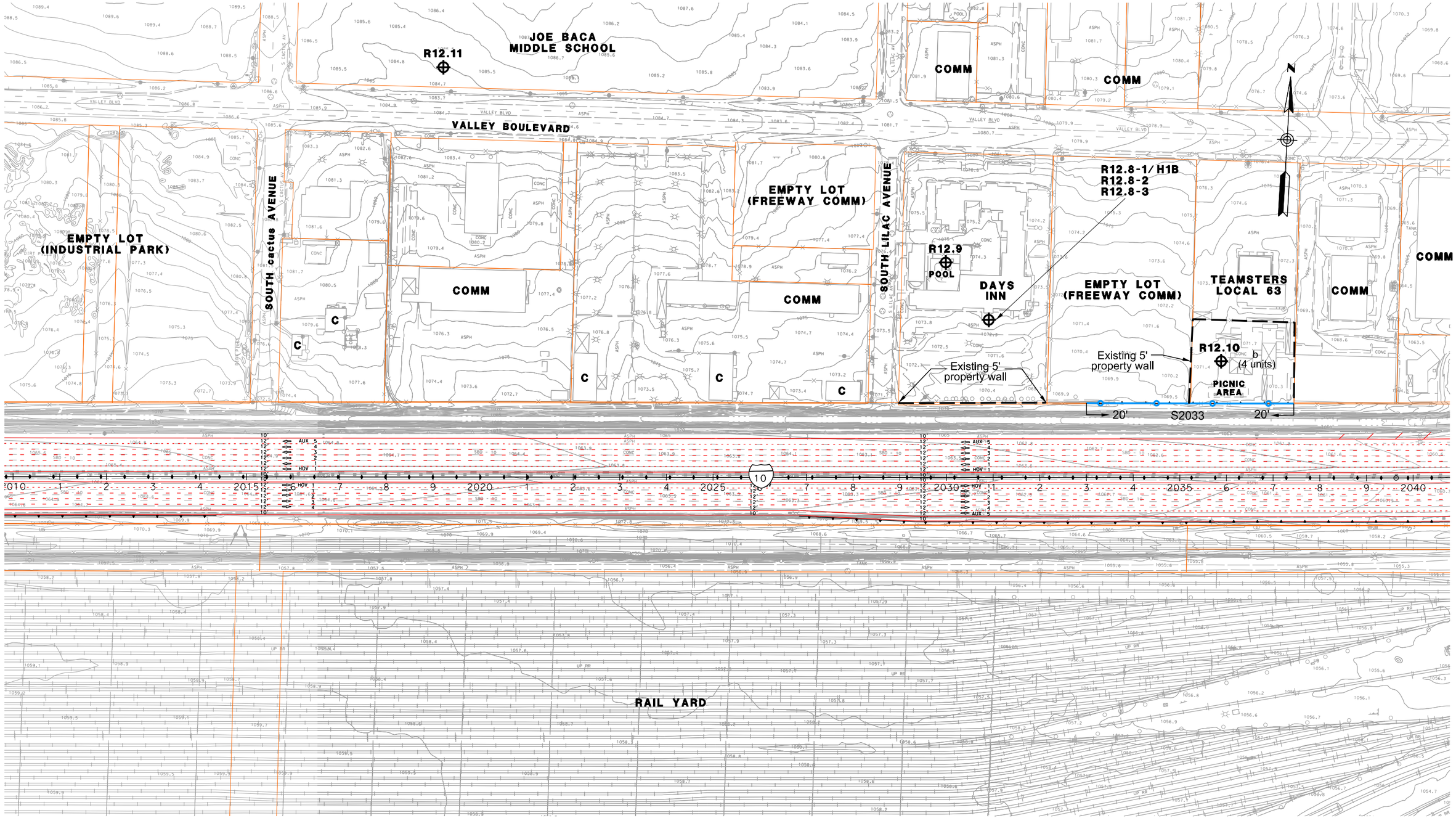
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 84



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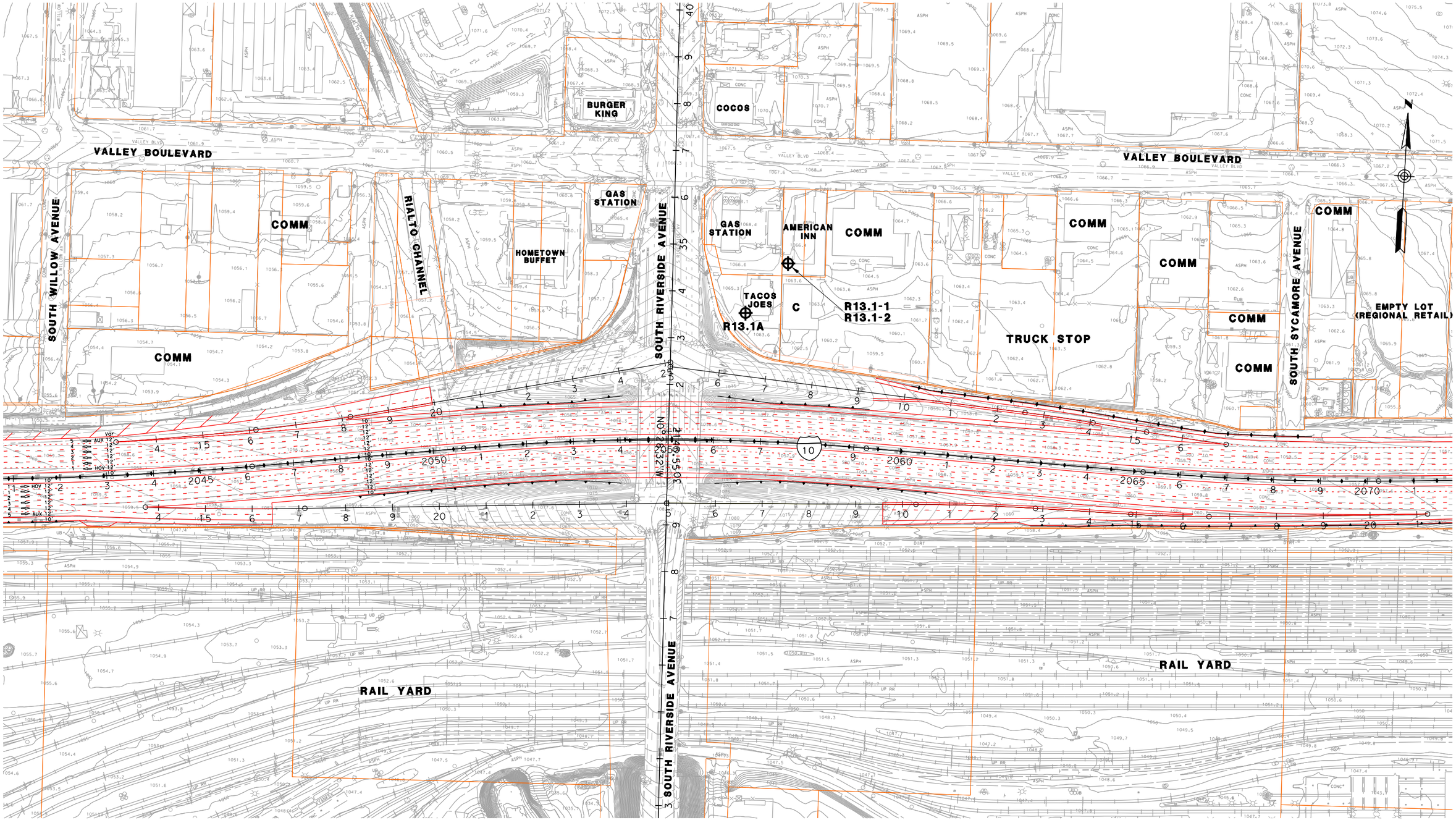
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 85



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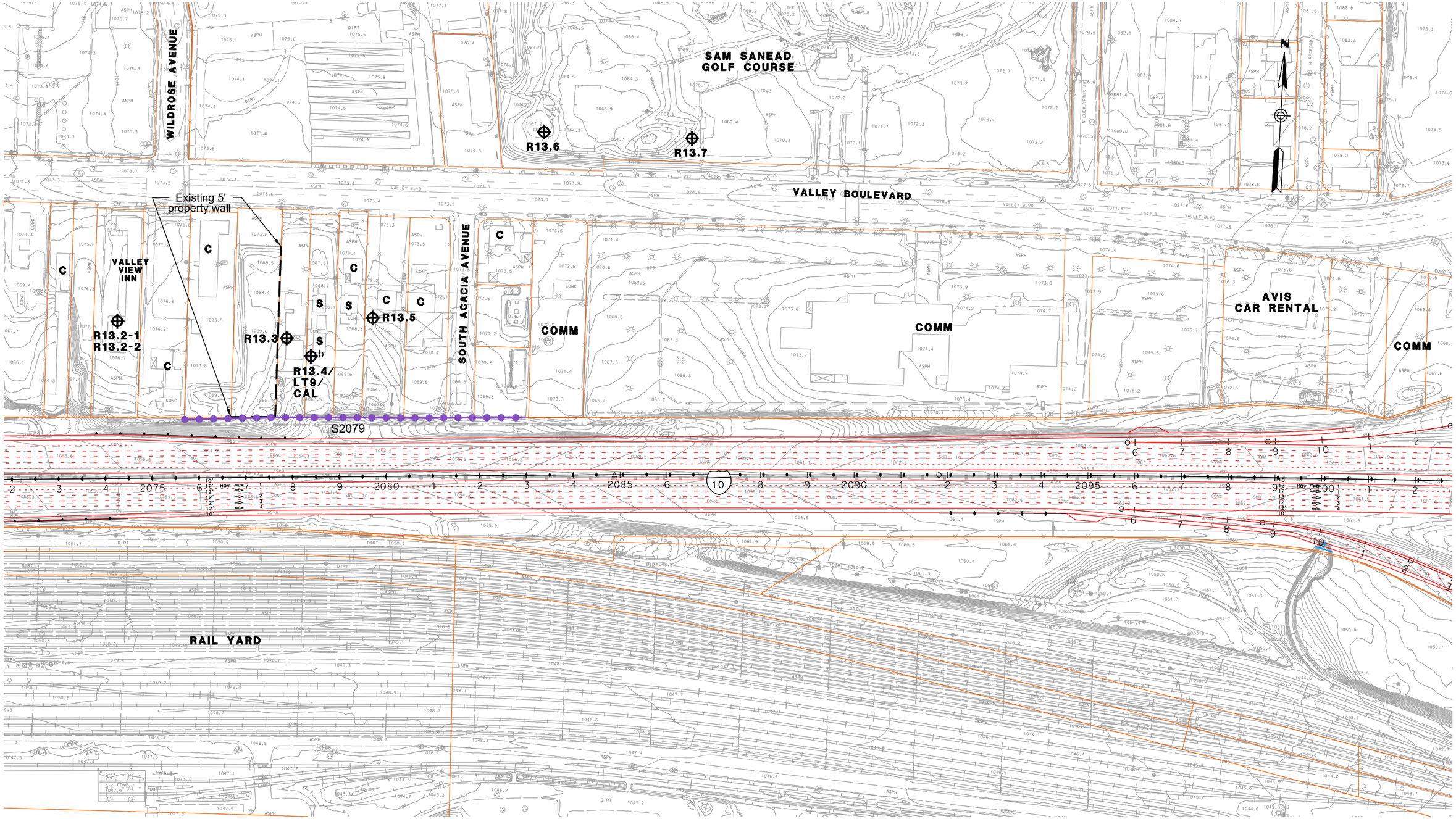
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 86



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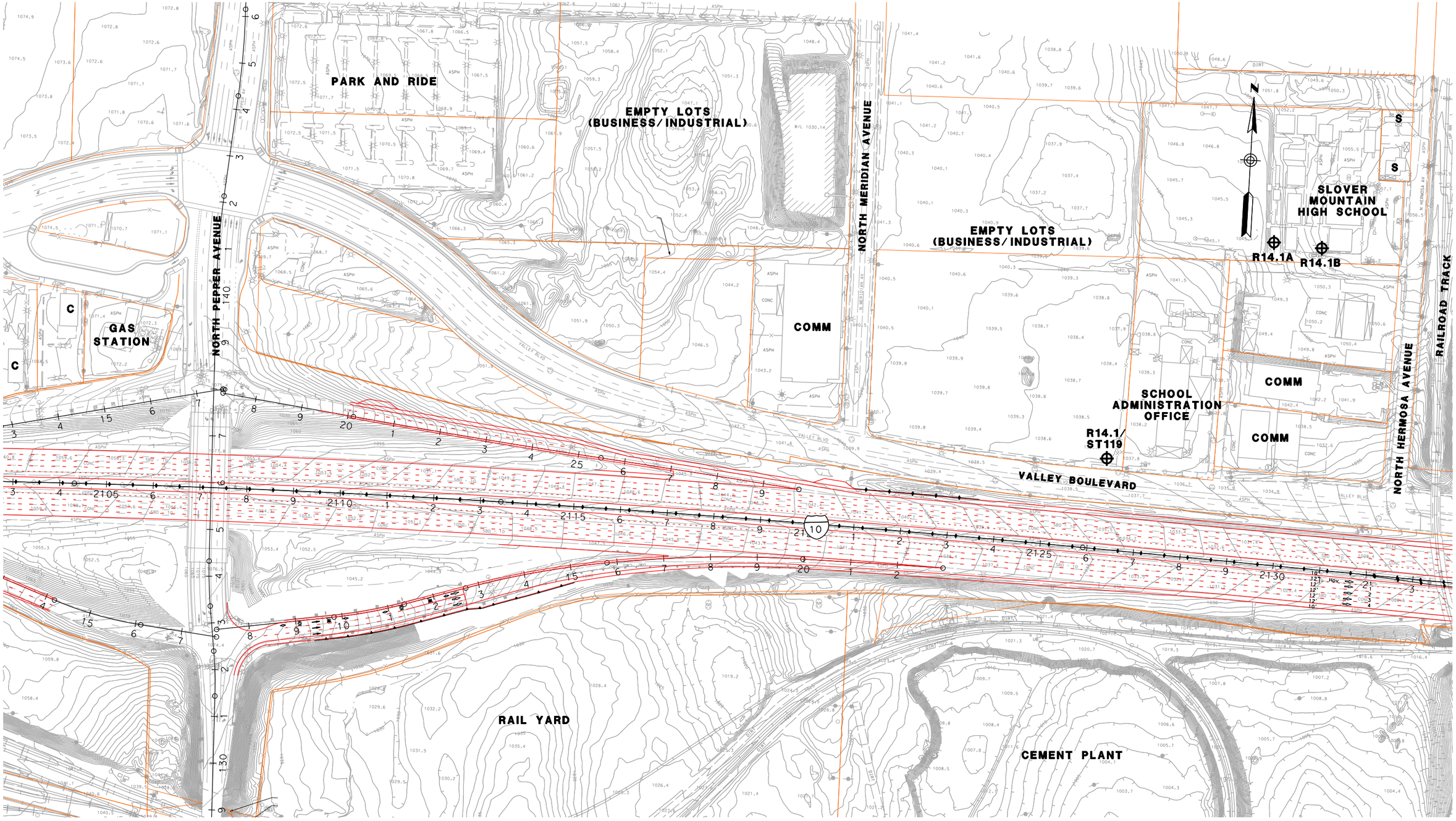
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 87



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I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 88

LEGEND

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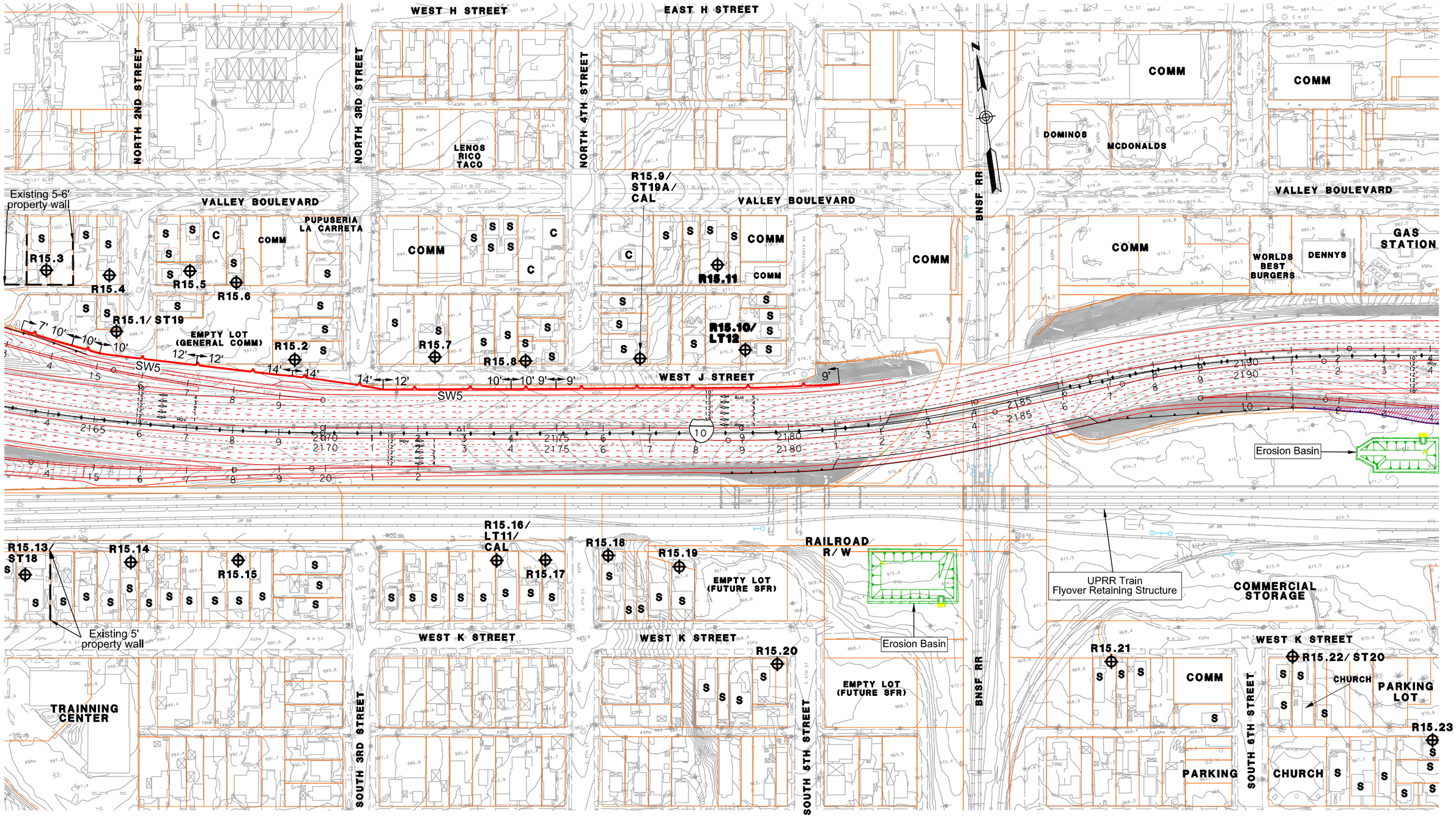
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 89



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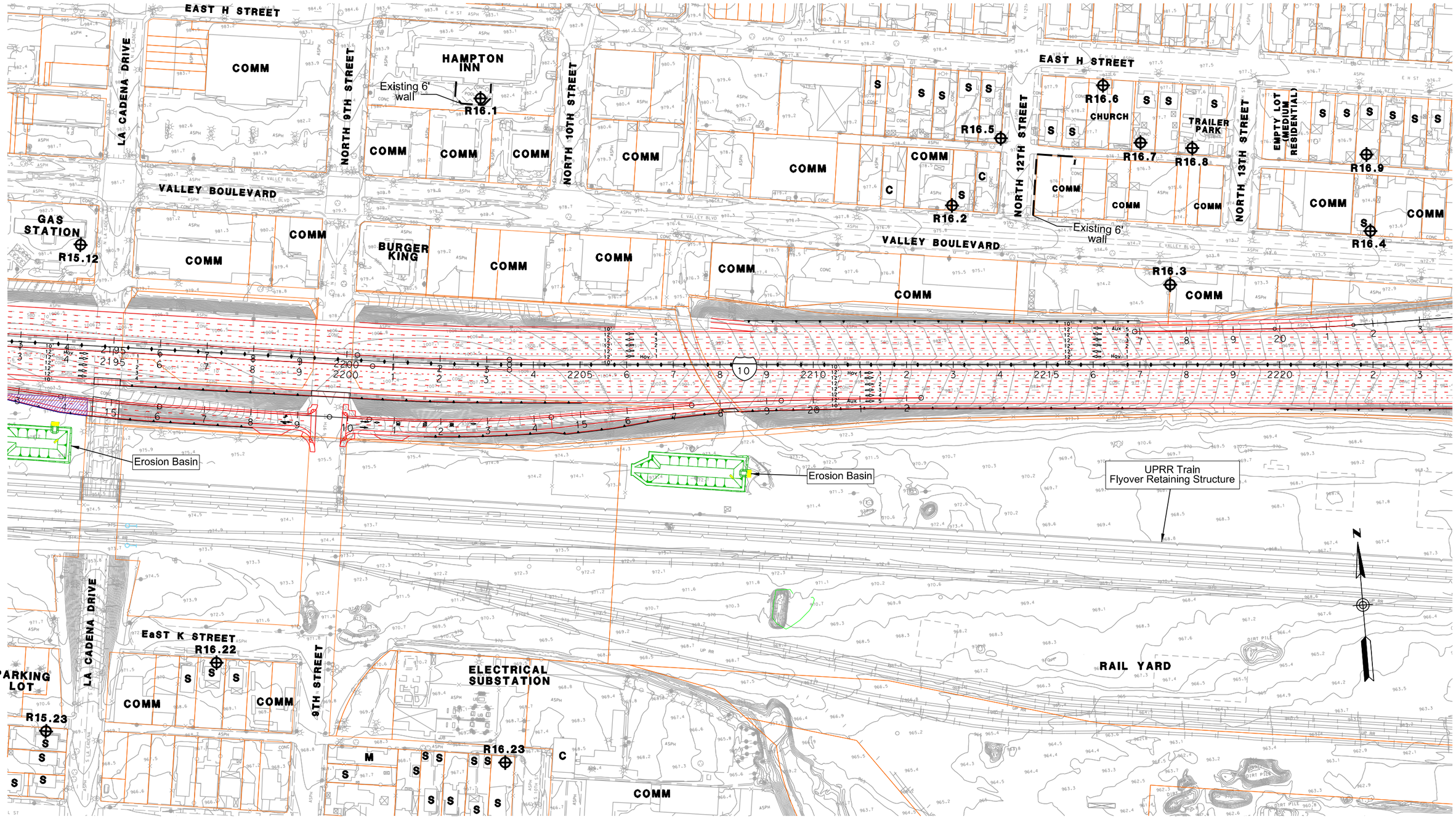
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 90



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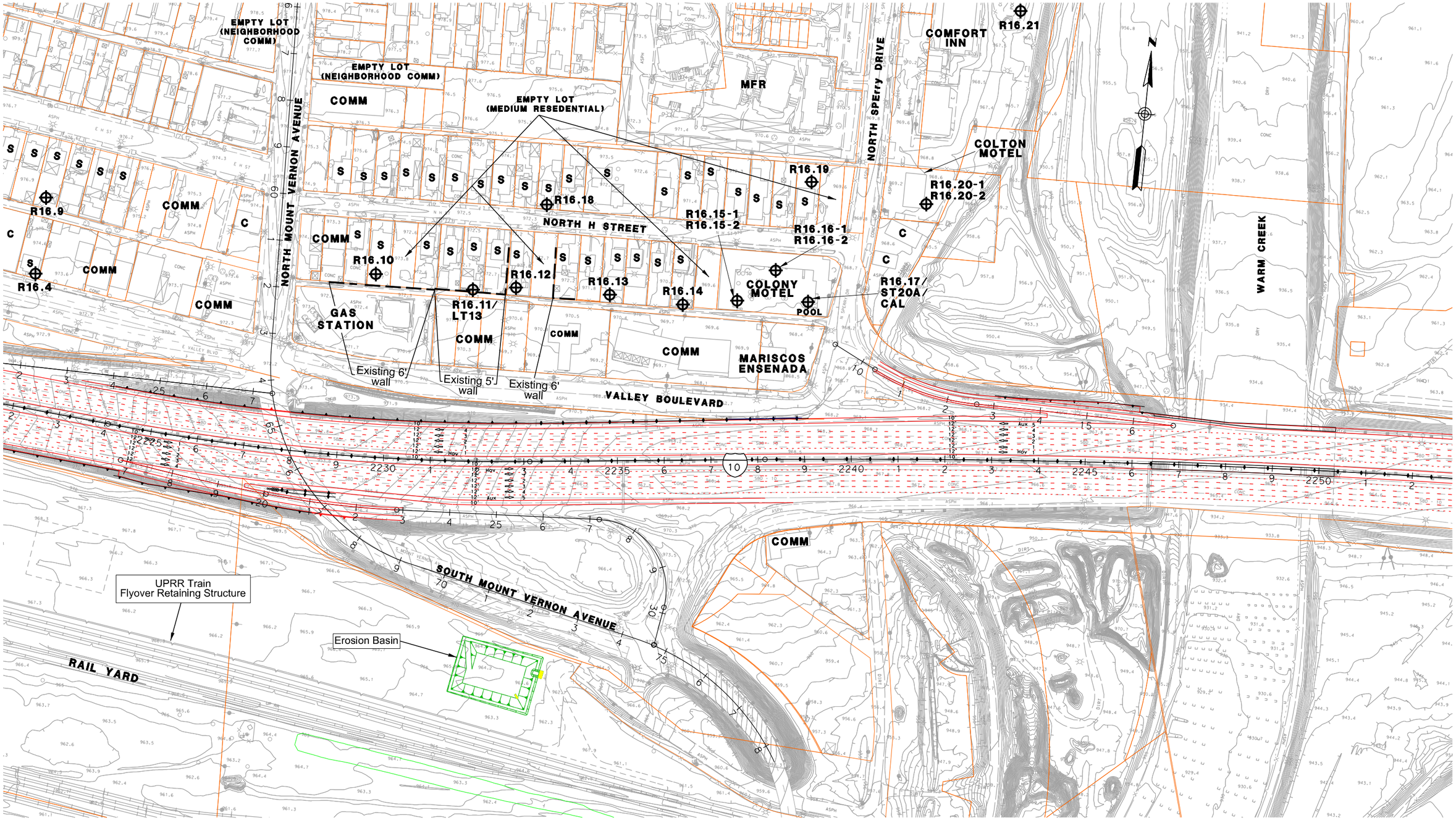
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 91



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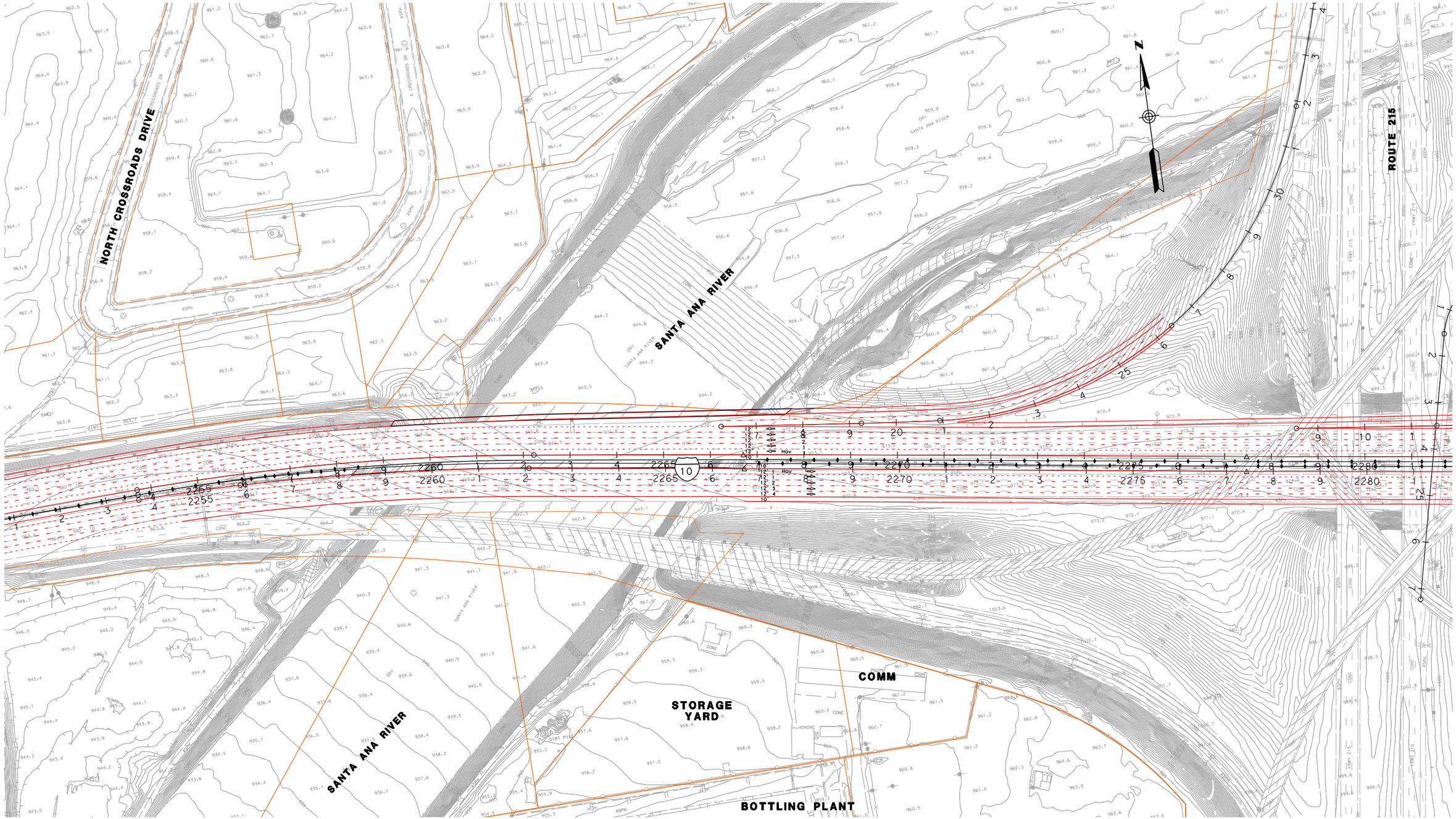
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 92



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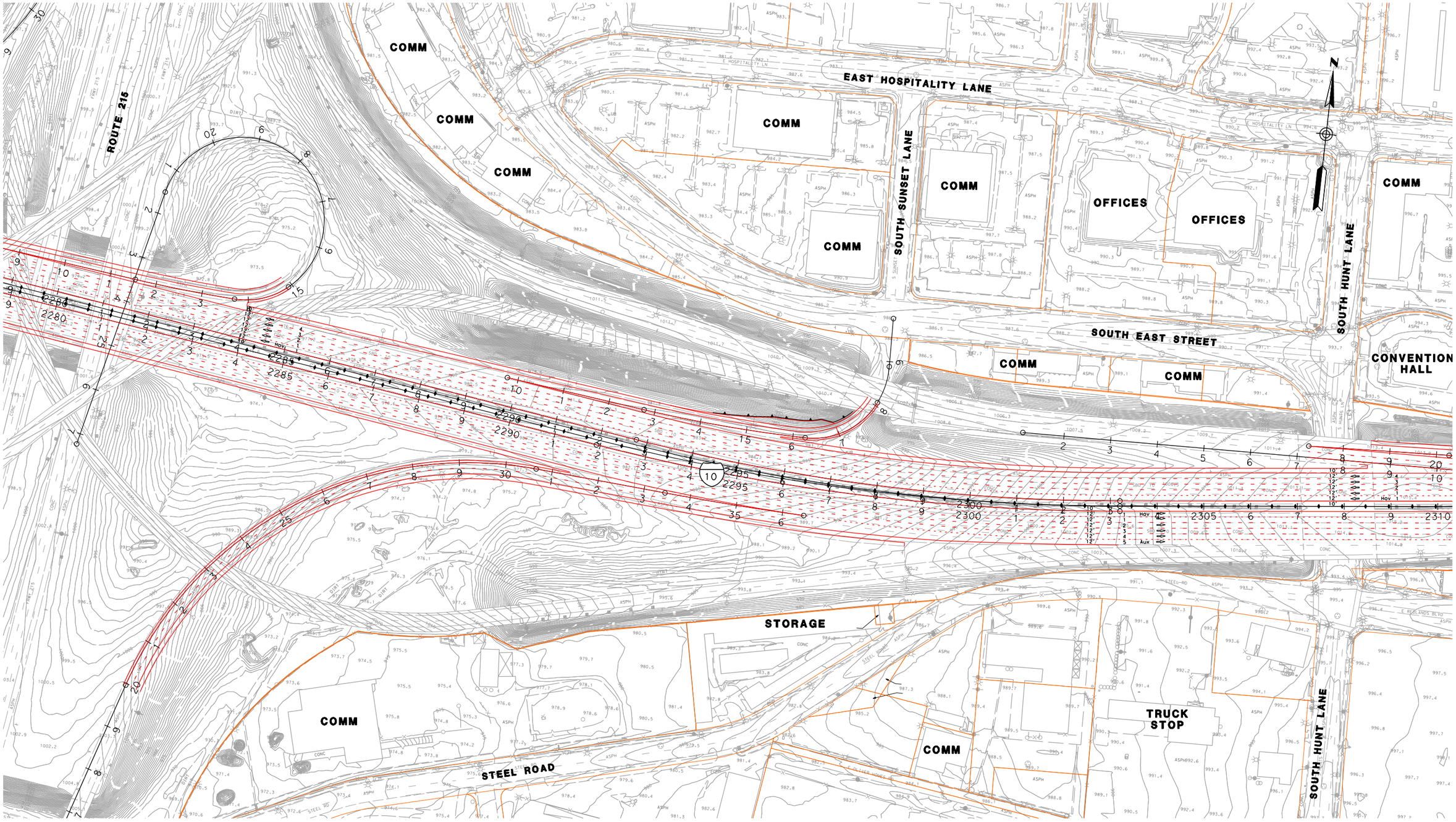
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 93



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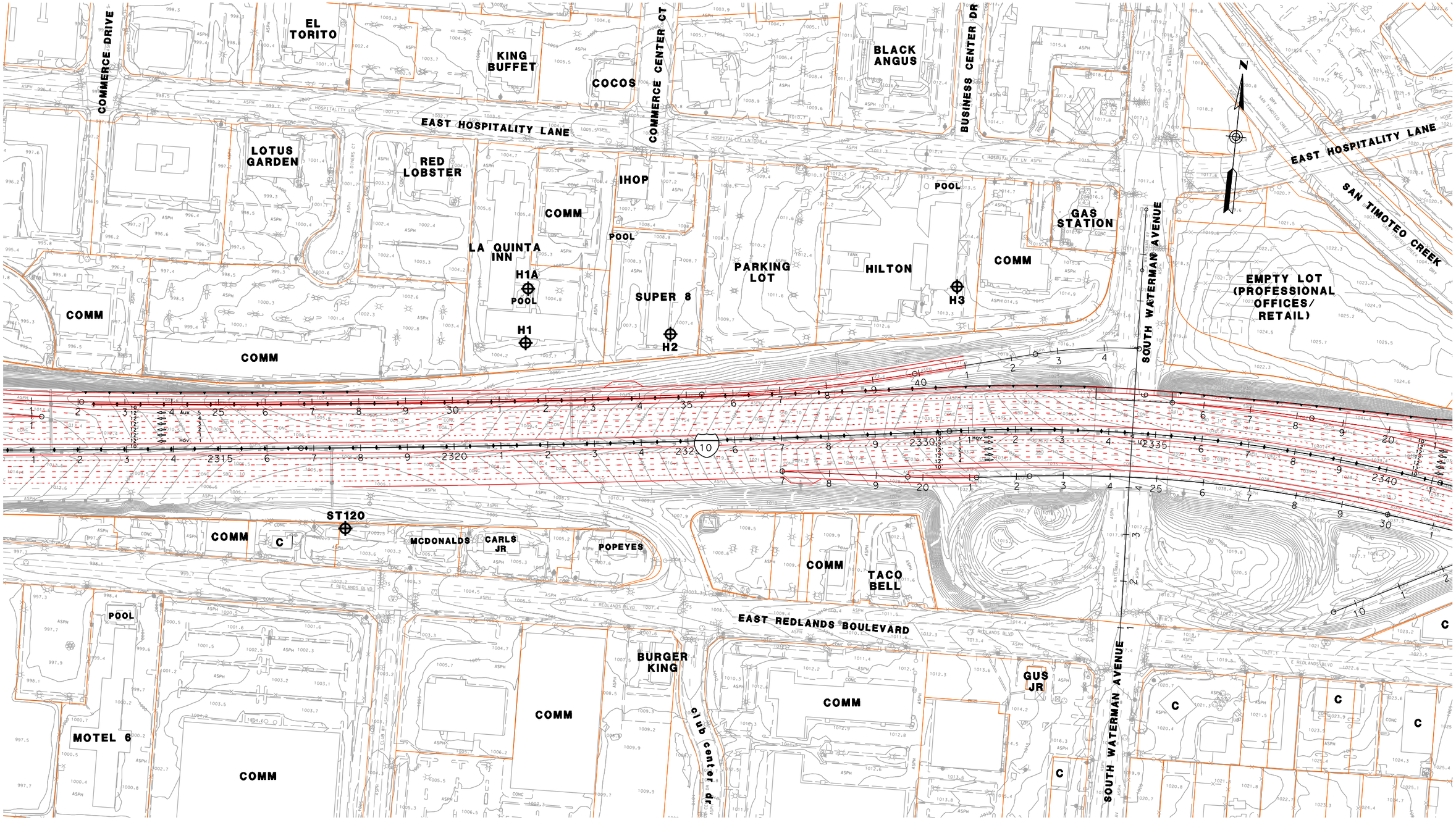
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 94



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1in : 200ft

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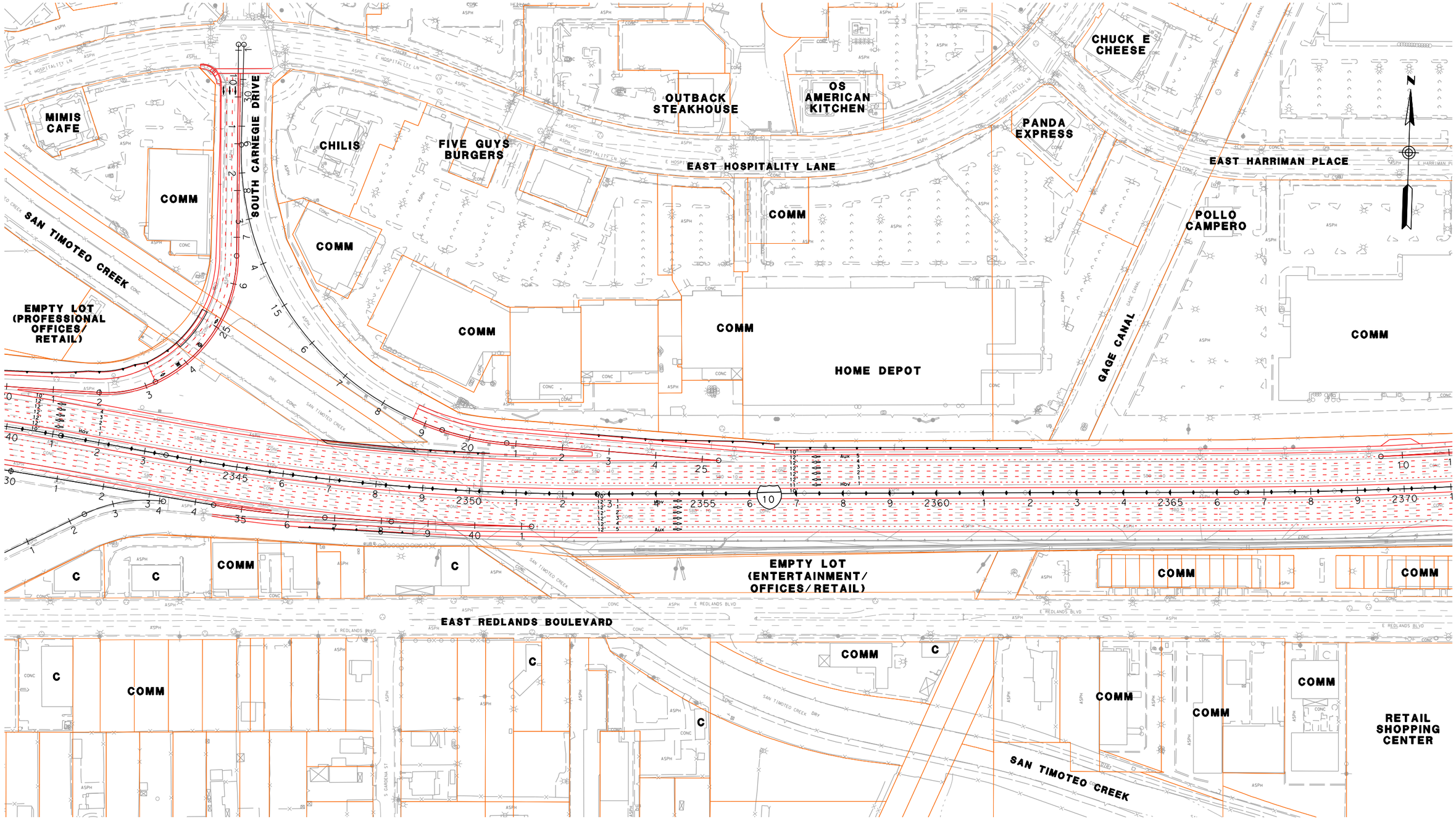
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 95



LEGEND

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- CAL - CALIBRATION SITE
- LT - LONG-TERM MEASUREMENT
- ST - SHORT-TERM MEASUREMENT

- SFR OR S - SINGLE FAMILY RESIDENCE
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- REPLACEMENT IN KIND SOUNDWALL
- NON-REASONABLE SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

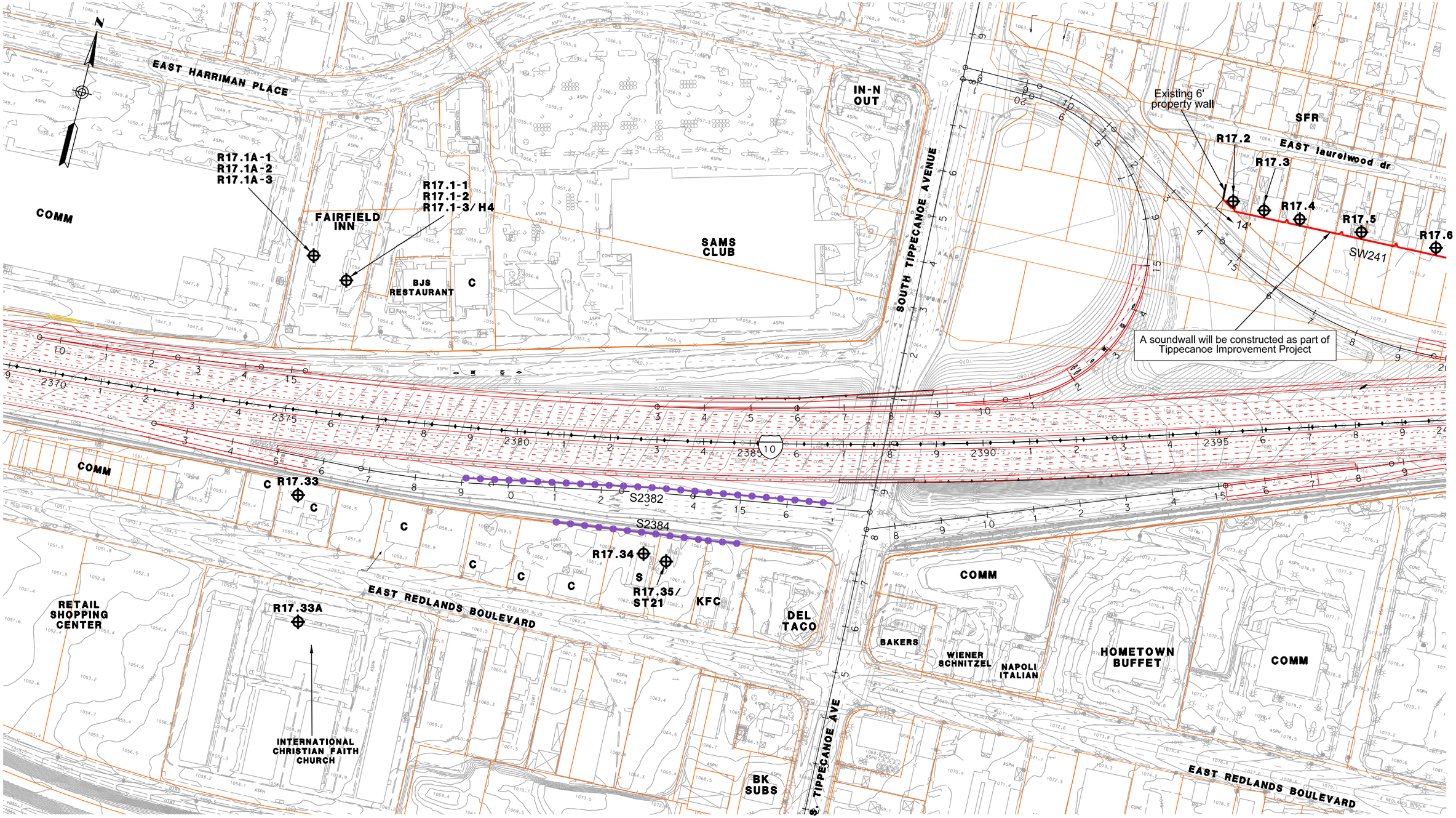
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 96



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1in : 200ft

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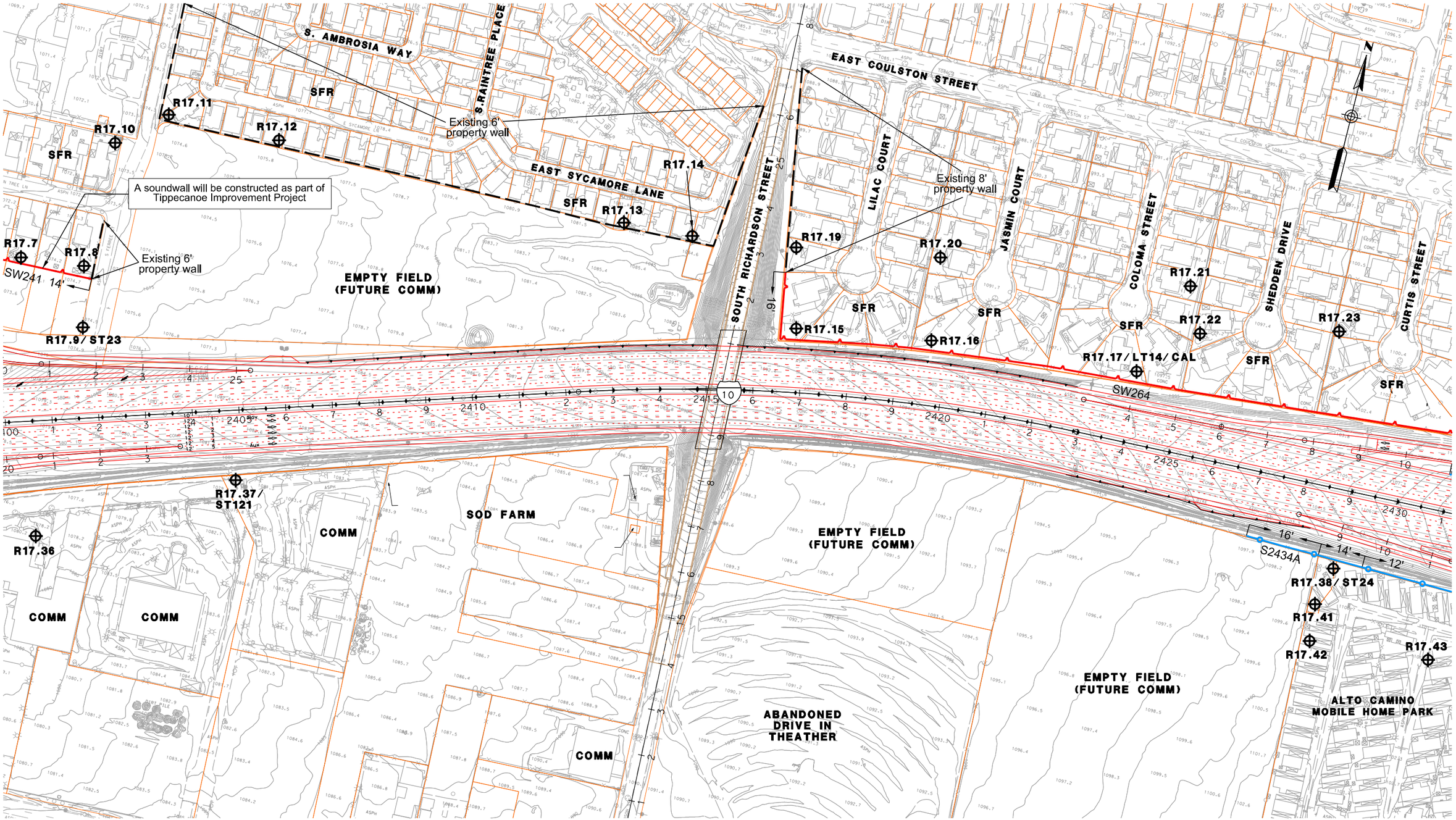
I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 97



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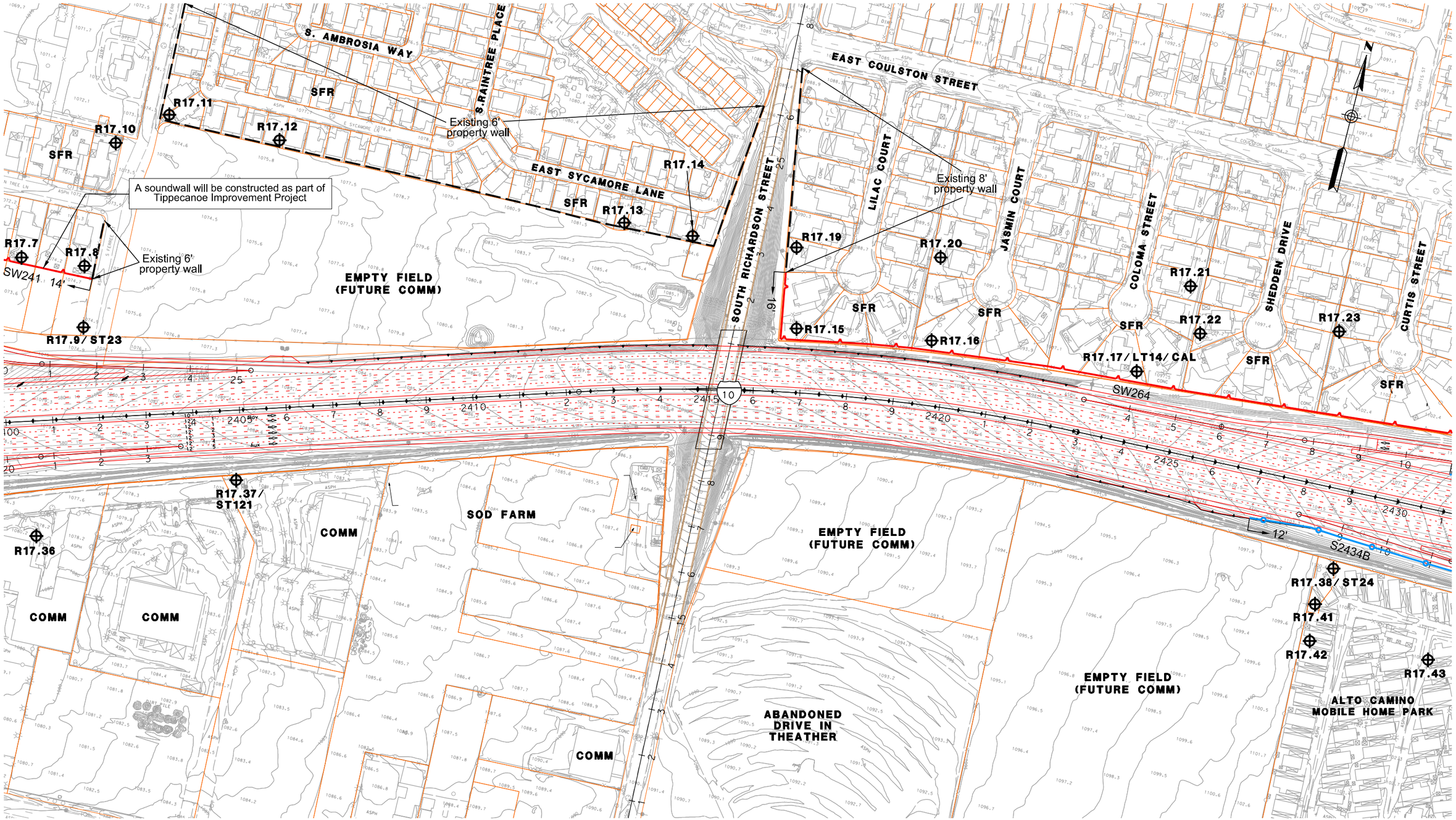
I-10 CORRIDOR ALTERNATIVE 2
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS
(OPTION 1)

JULY 1, 2015

FIGURE 98-1



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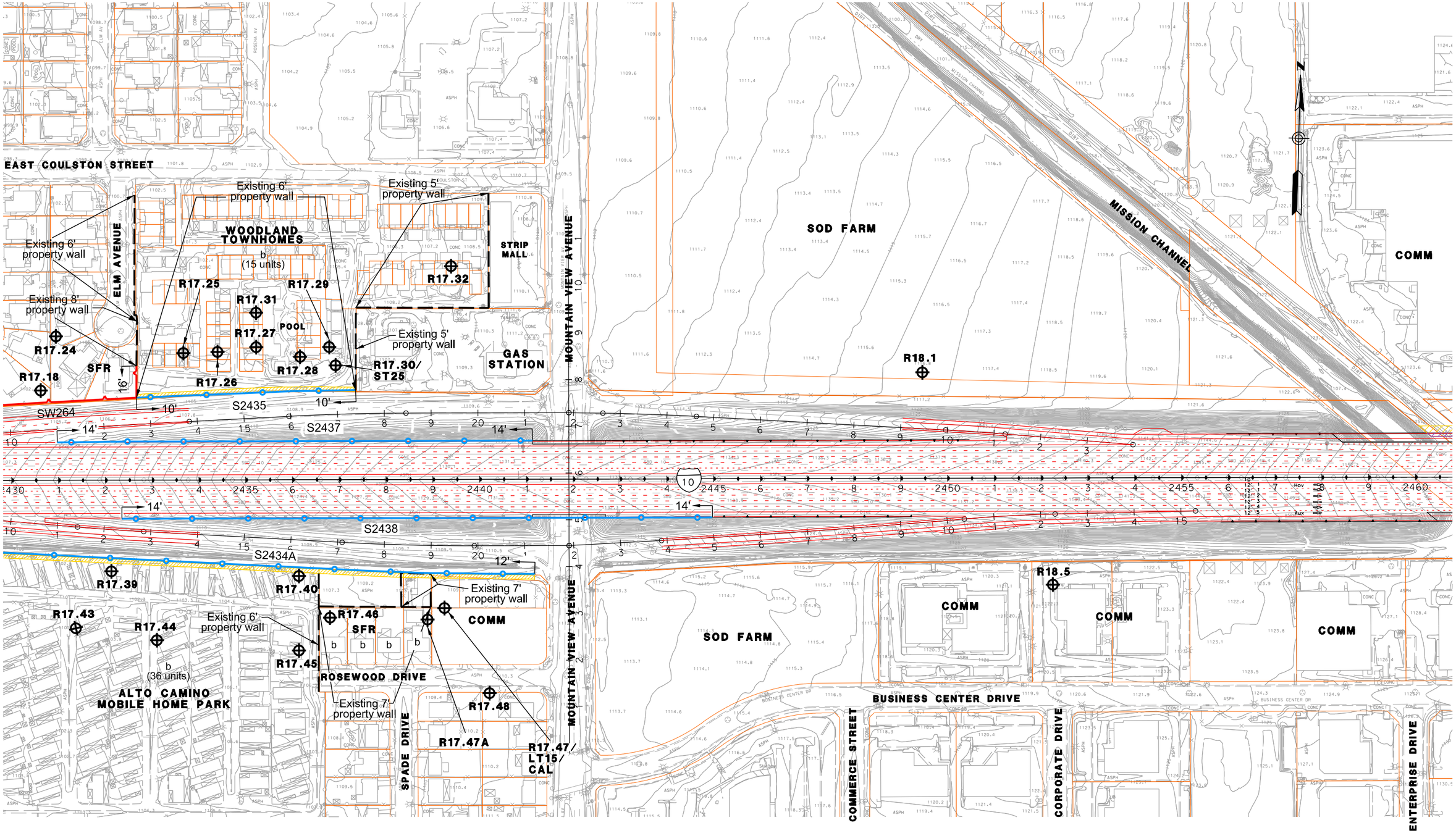
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS
(OPTION 2)

JULY 1, 2015

FIGURE 98-2



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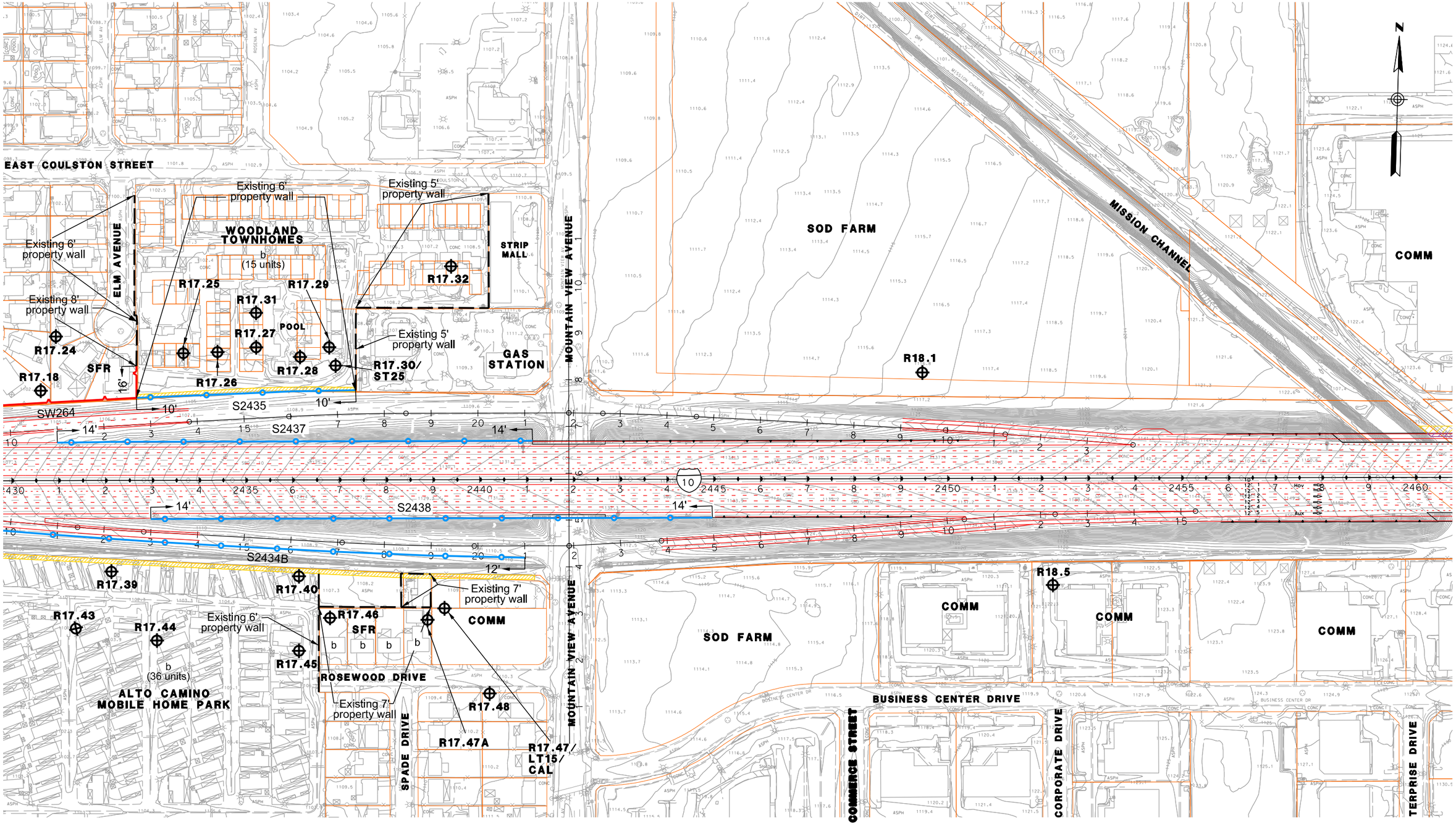
I-10 CORRIDOR ALTERNATIVE 2
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS
(OPTION 1)

JULY 1, 2015

FIGURE 99-1



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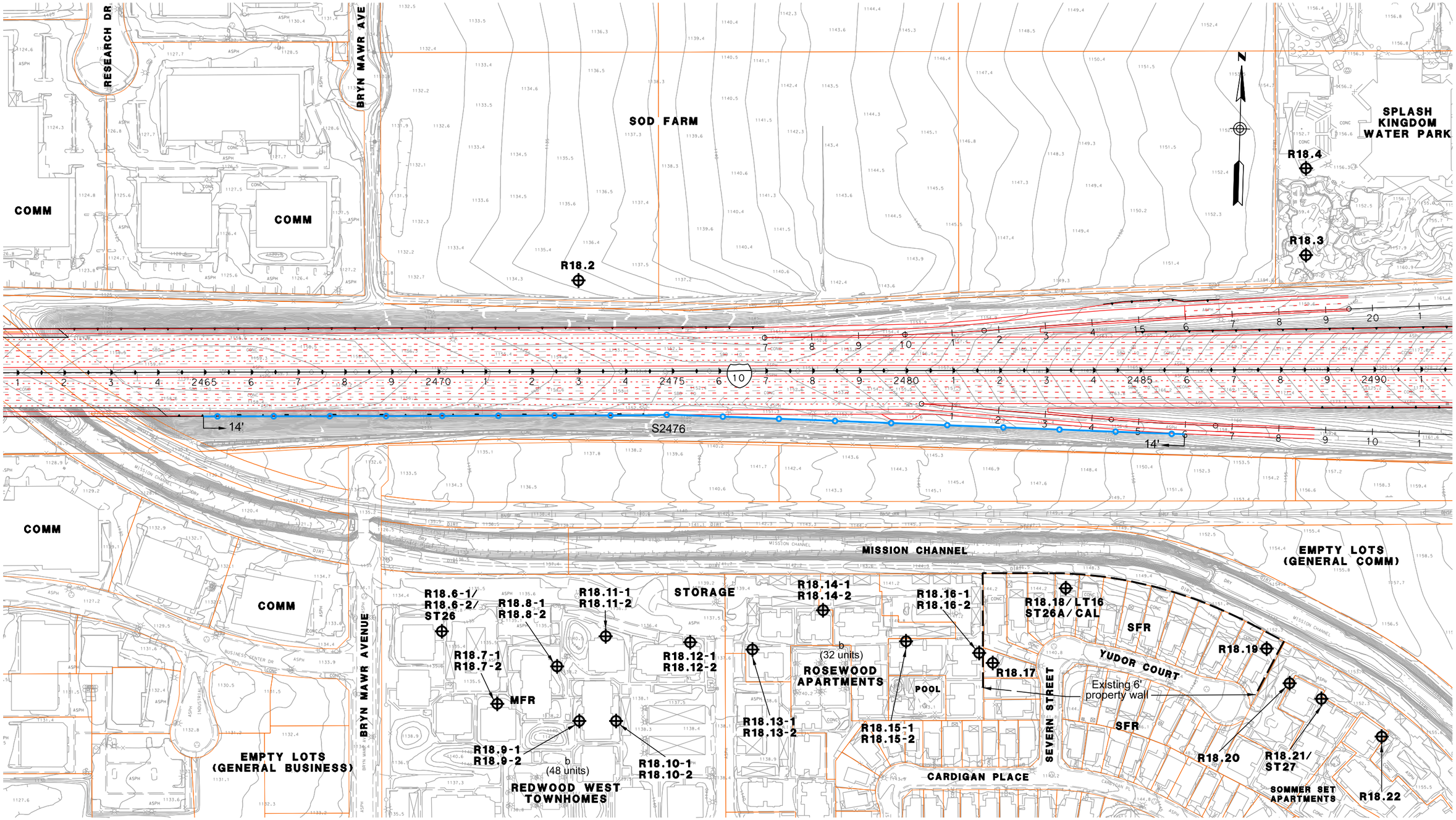
I-10 CORRIDOR ALTERNATIVE 2
NADR RECOMMENDED BARRIER
HEIGHTS & LOCATIONS
(OPTION 2)

JULY 1, 2015

figure 99-2



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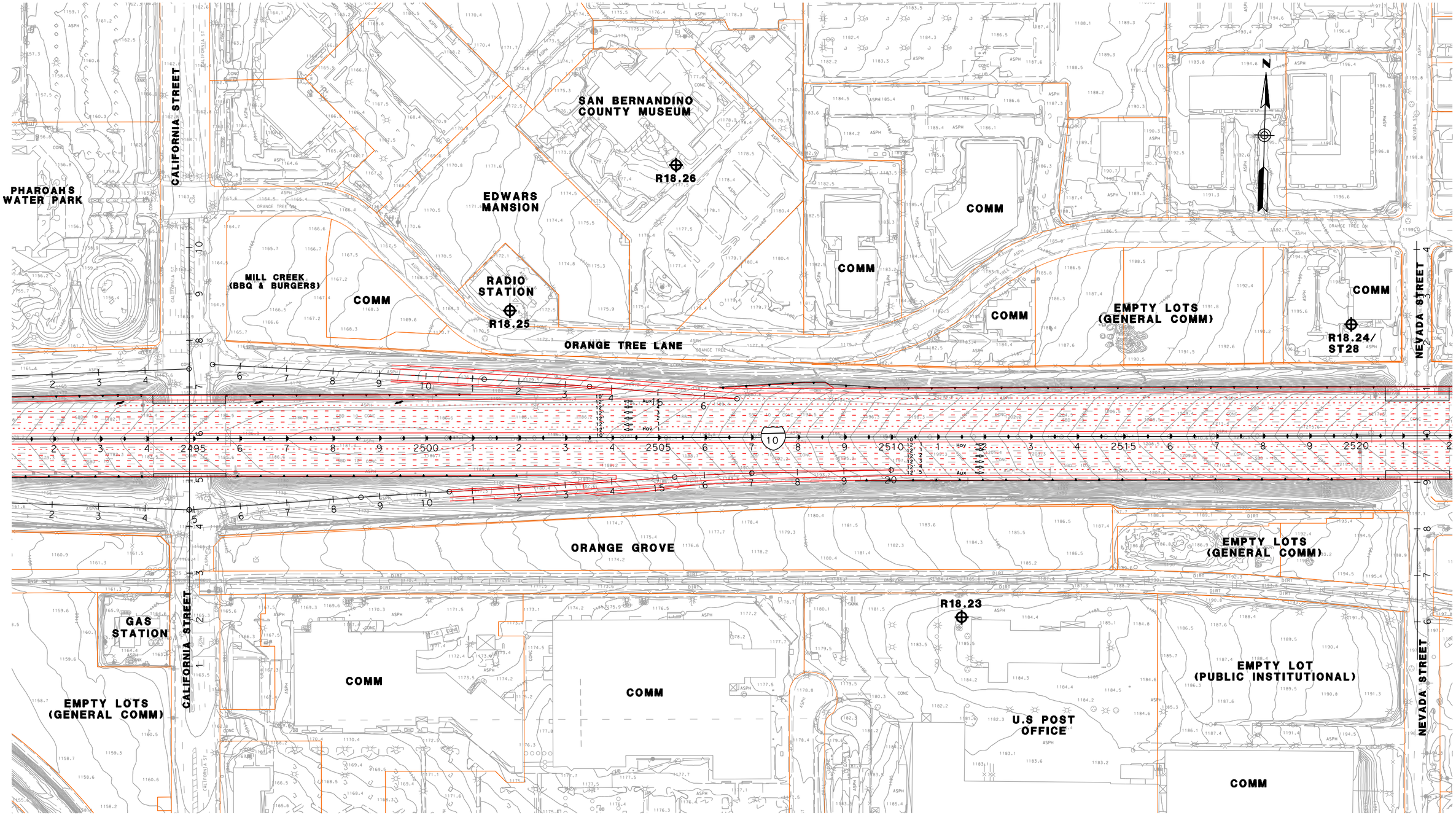
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 100



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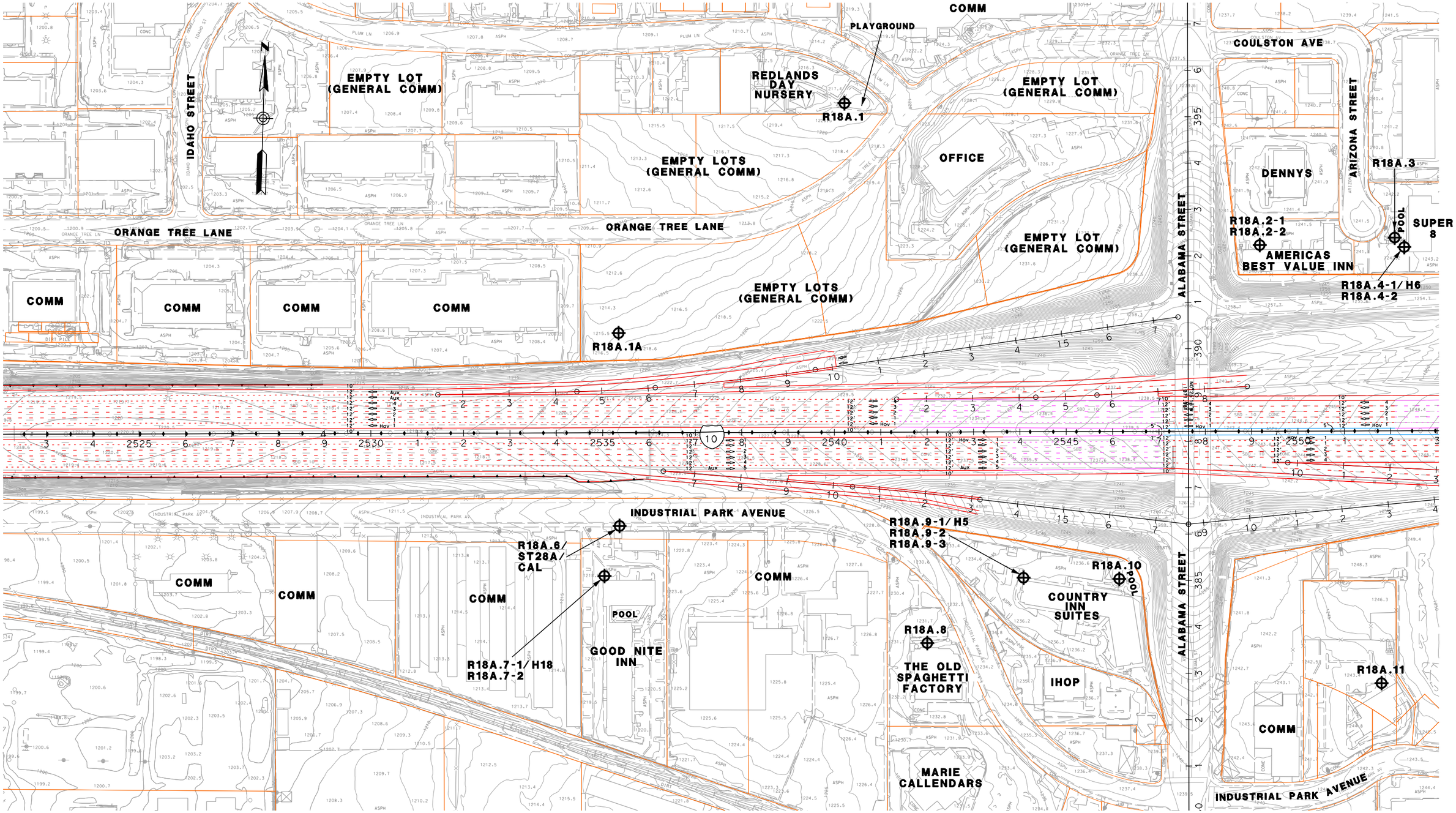
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 101



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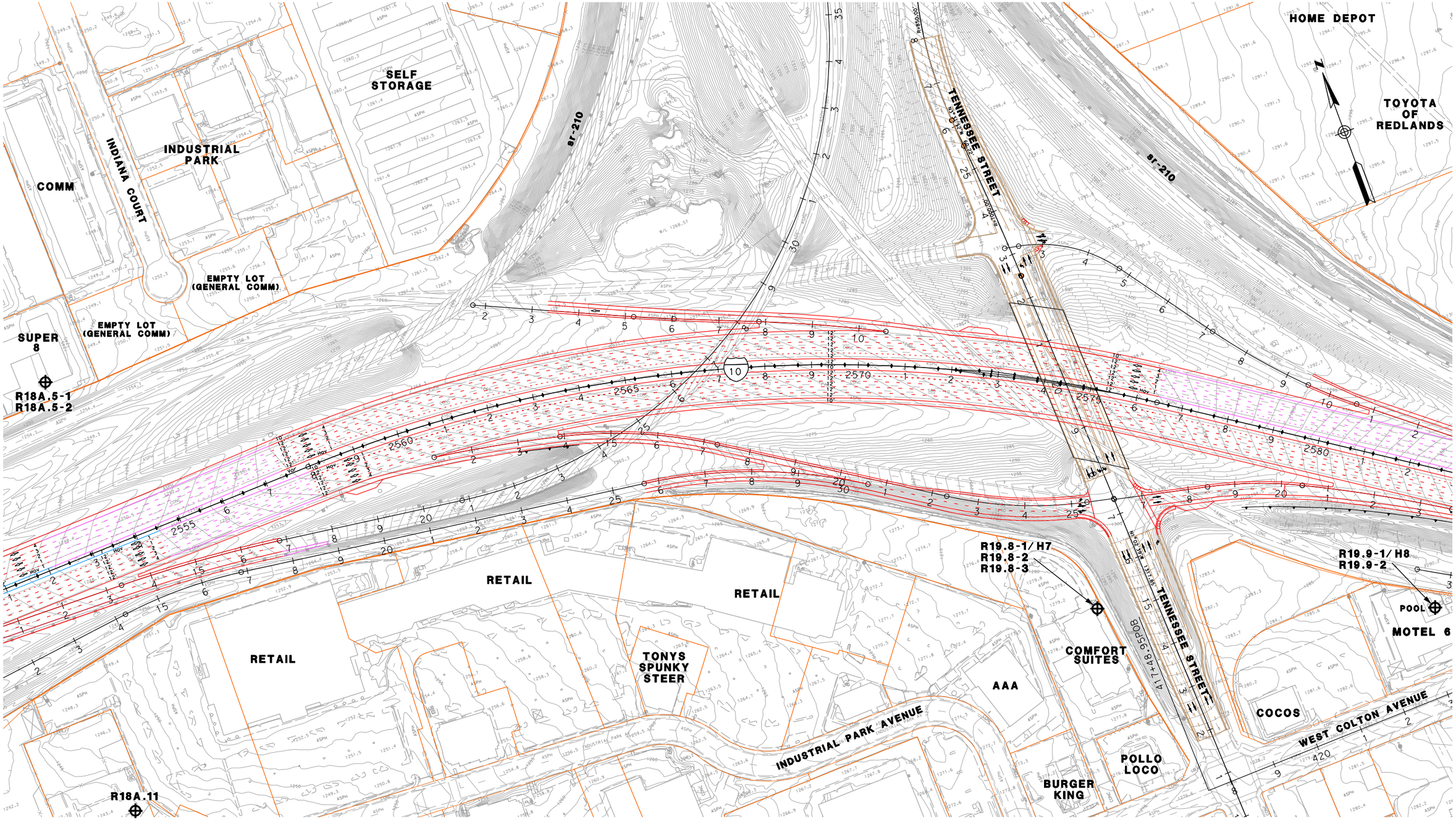
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 101A



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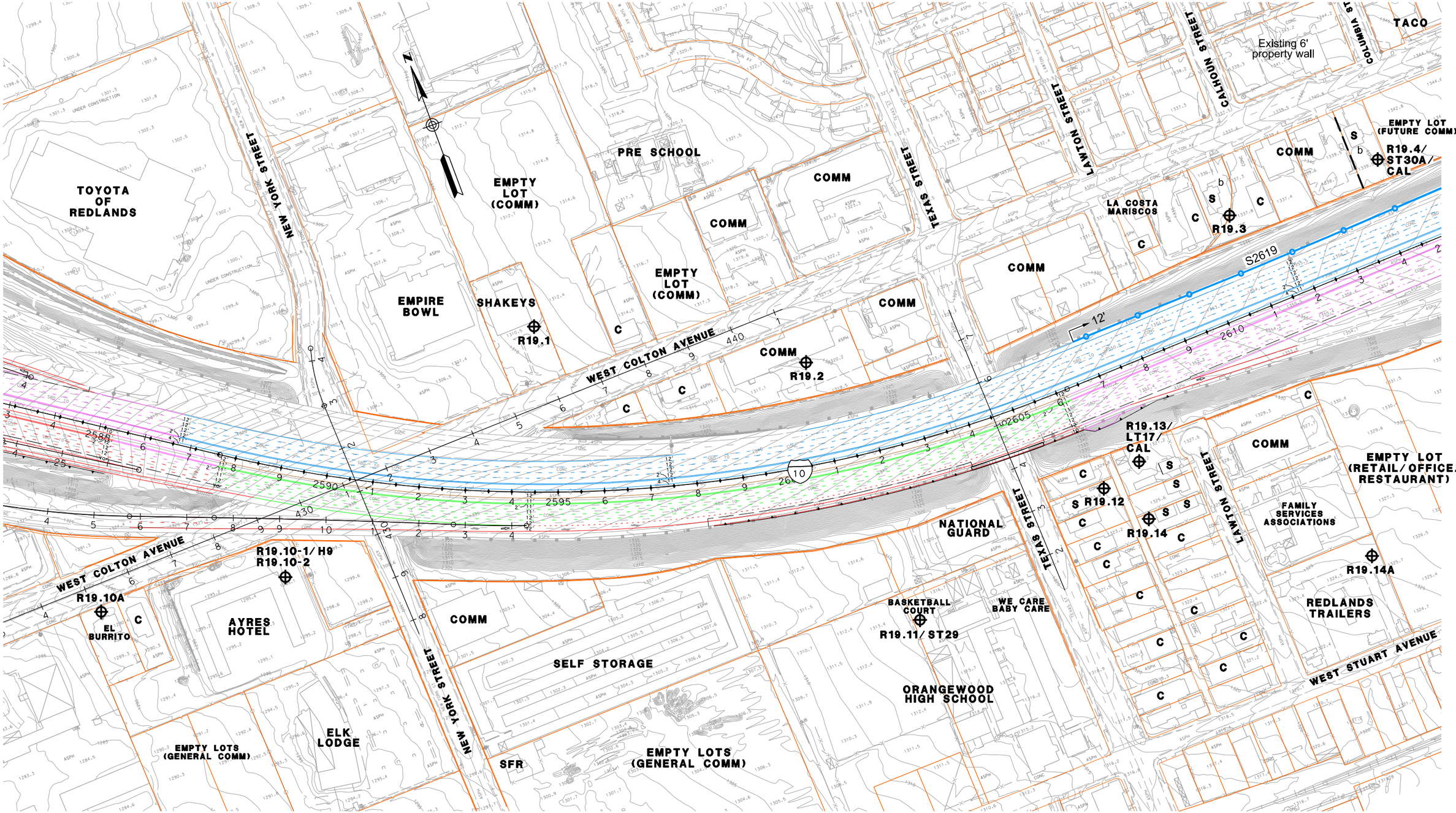
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 2
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 101B



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- SAFETY BARRIER

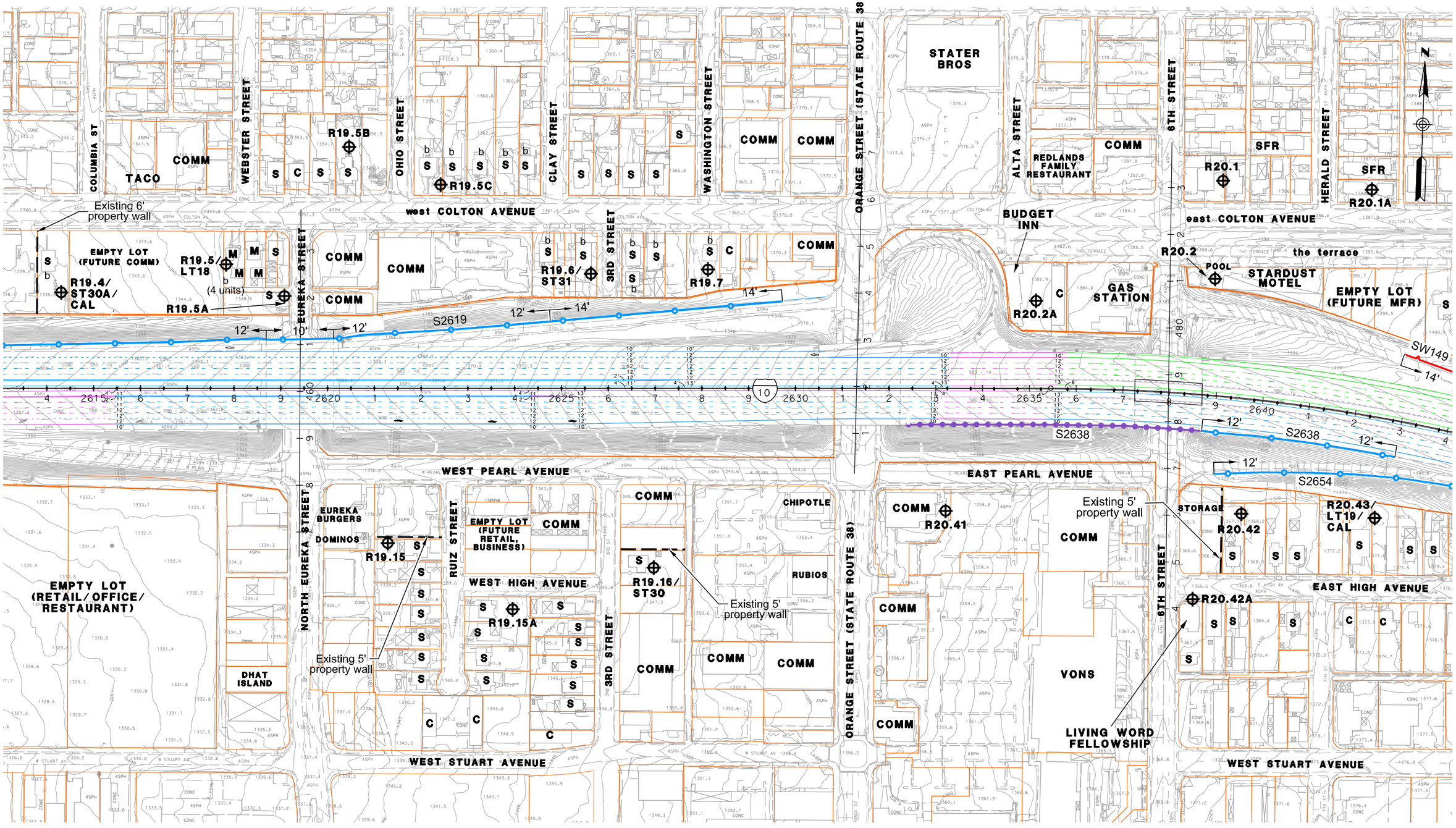
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVES 2 AND 3
NADR RECOMMENDED BARRIER
HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 159



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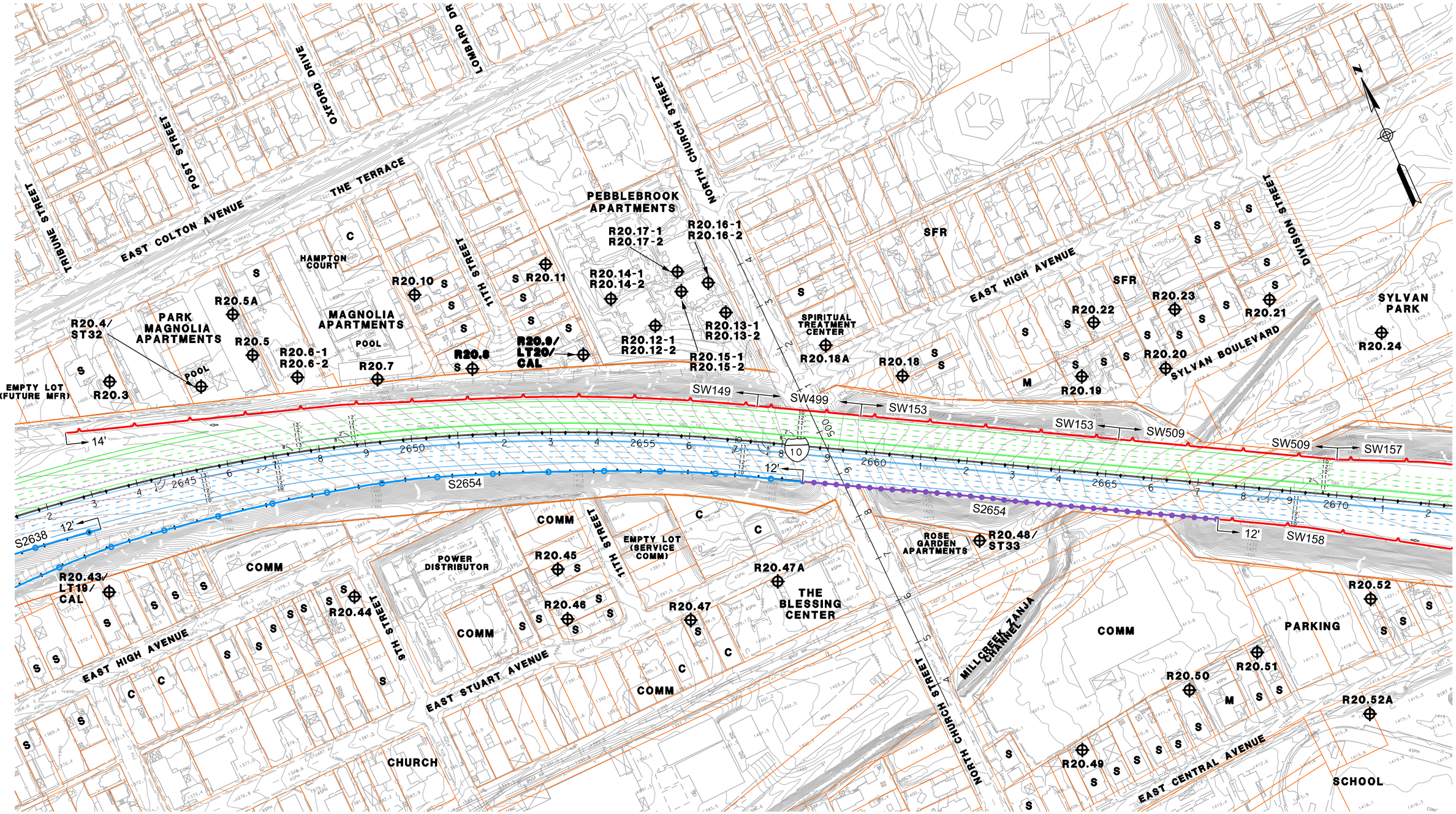
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVES 2 AND 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 160



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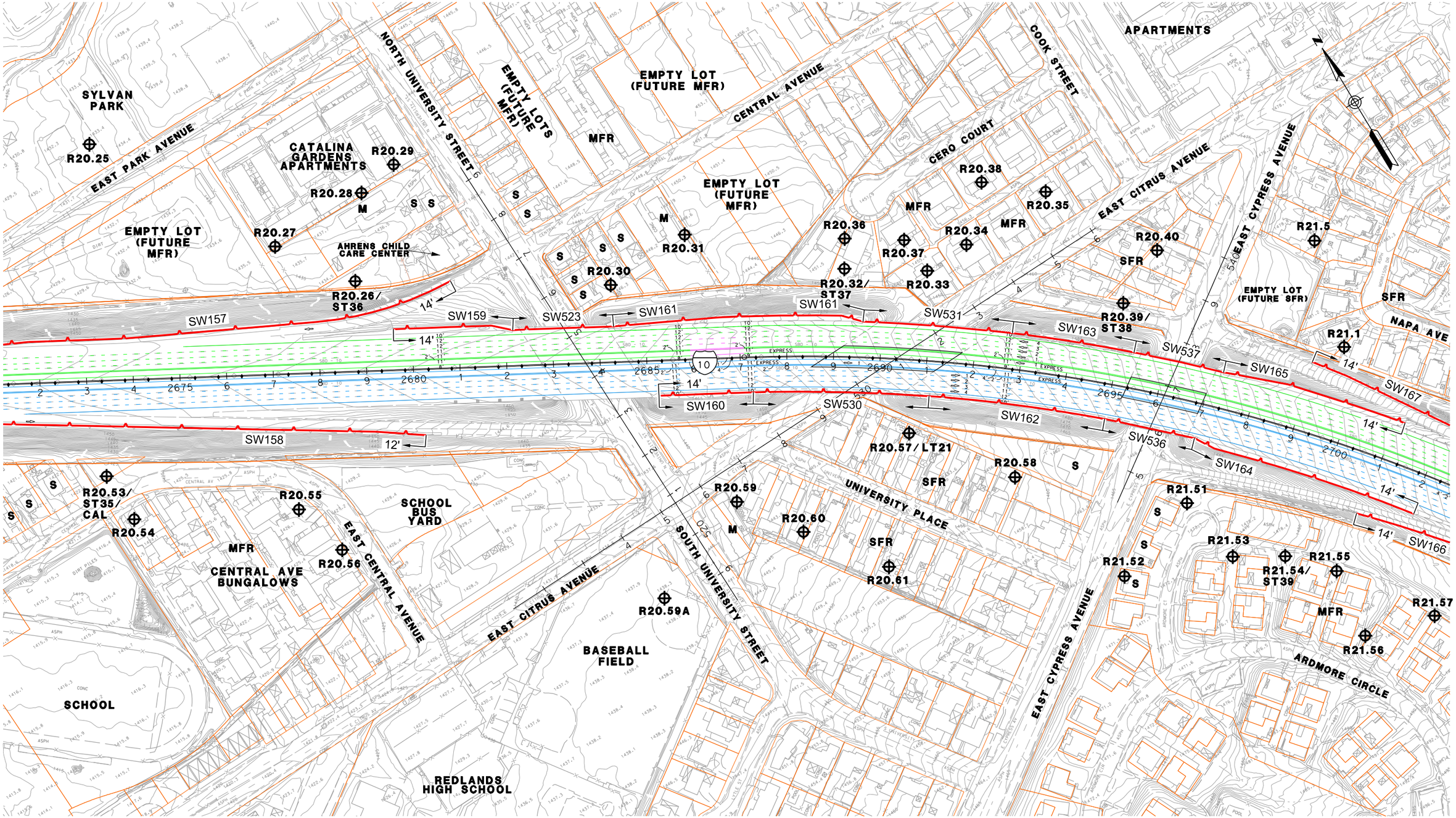
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVES 2 AND 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 161



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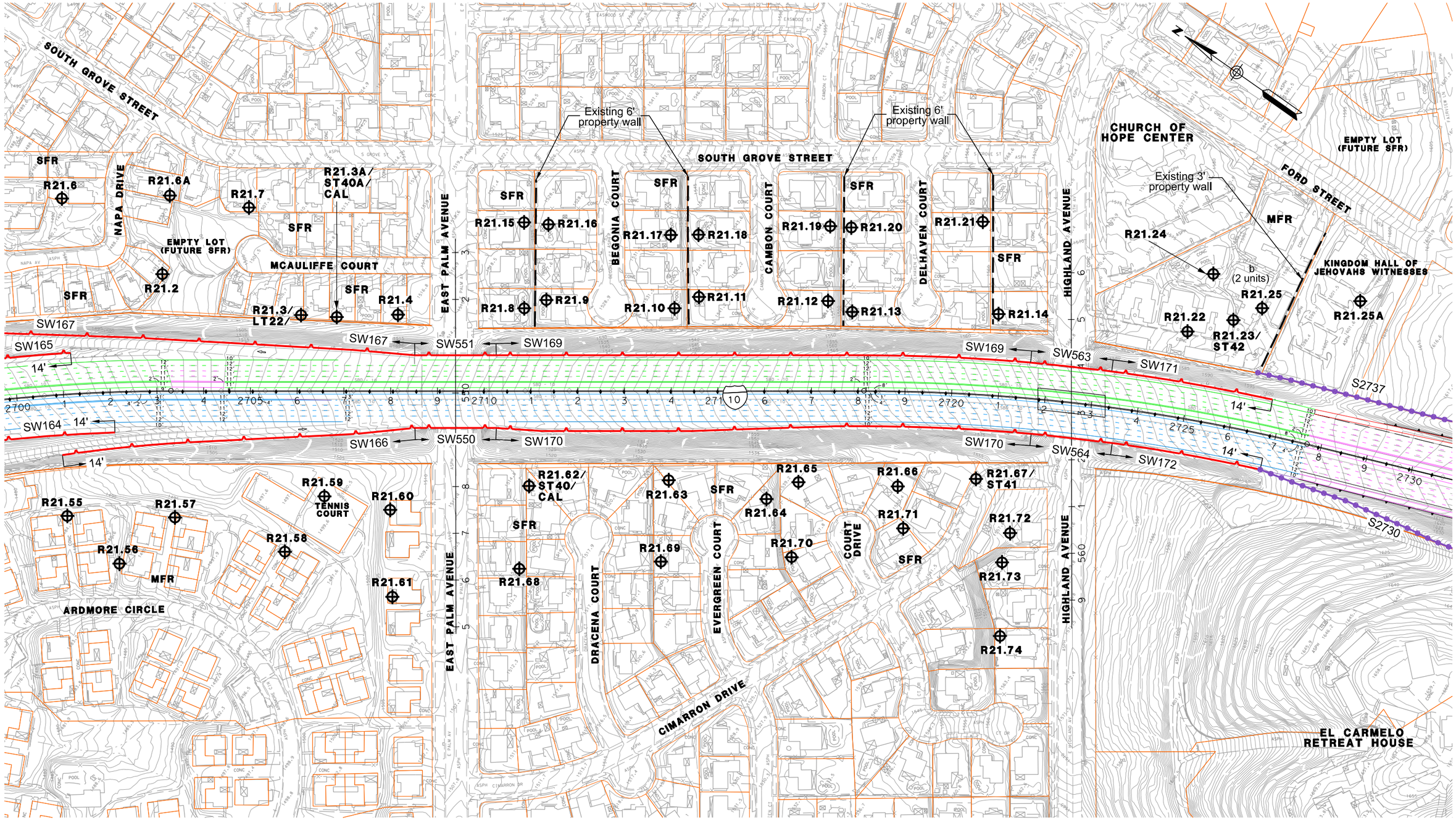
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVES 2 AND 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 162



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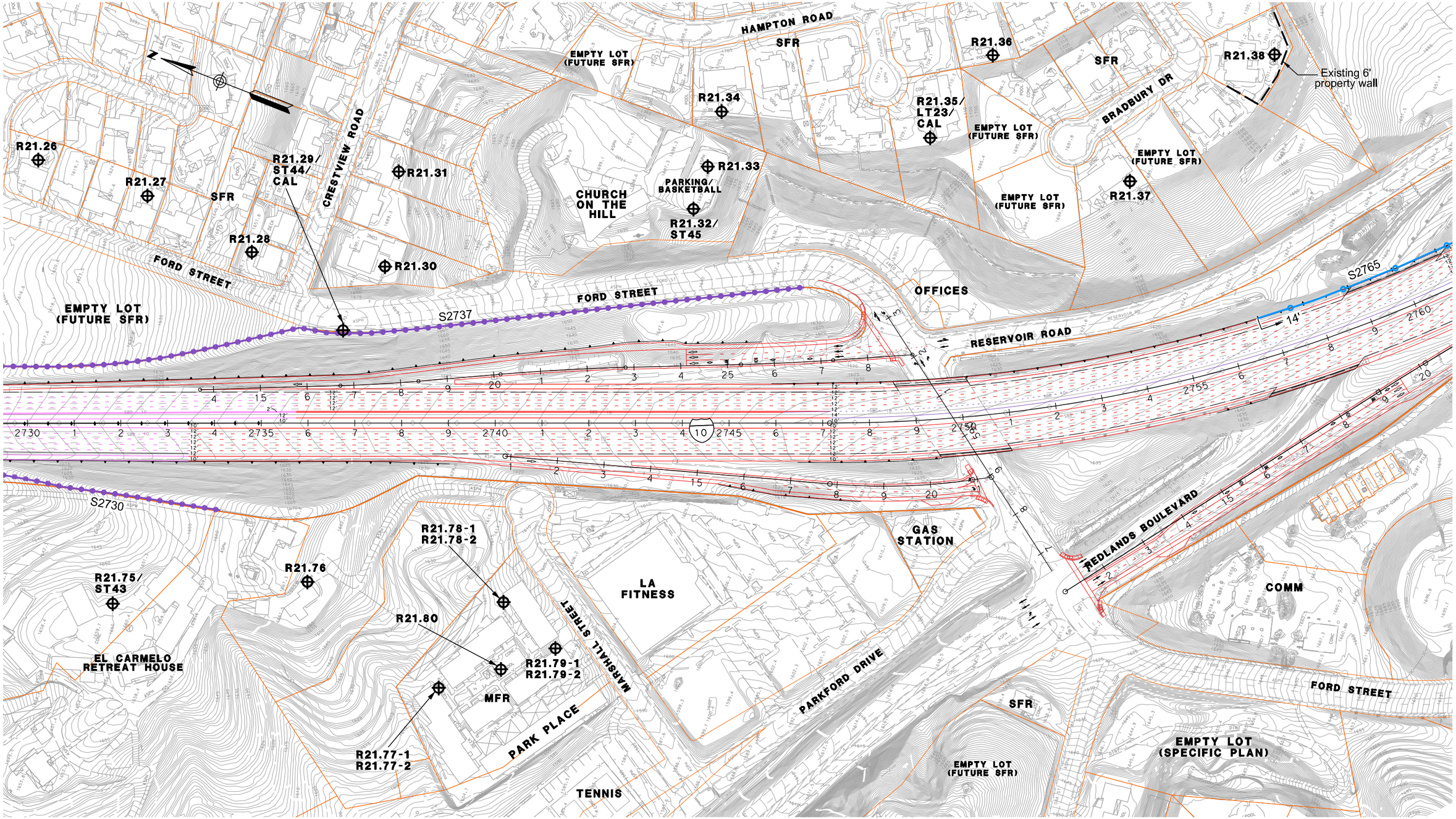
I-10 CORRIDOR ALTERNATIVES 2 AND 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 163



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1in : 200ft

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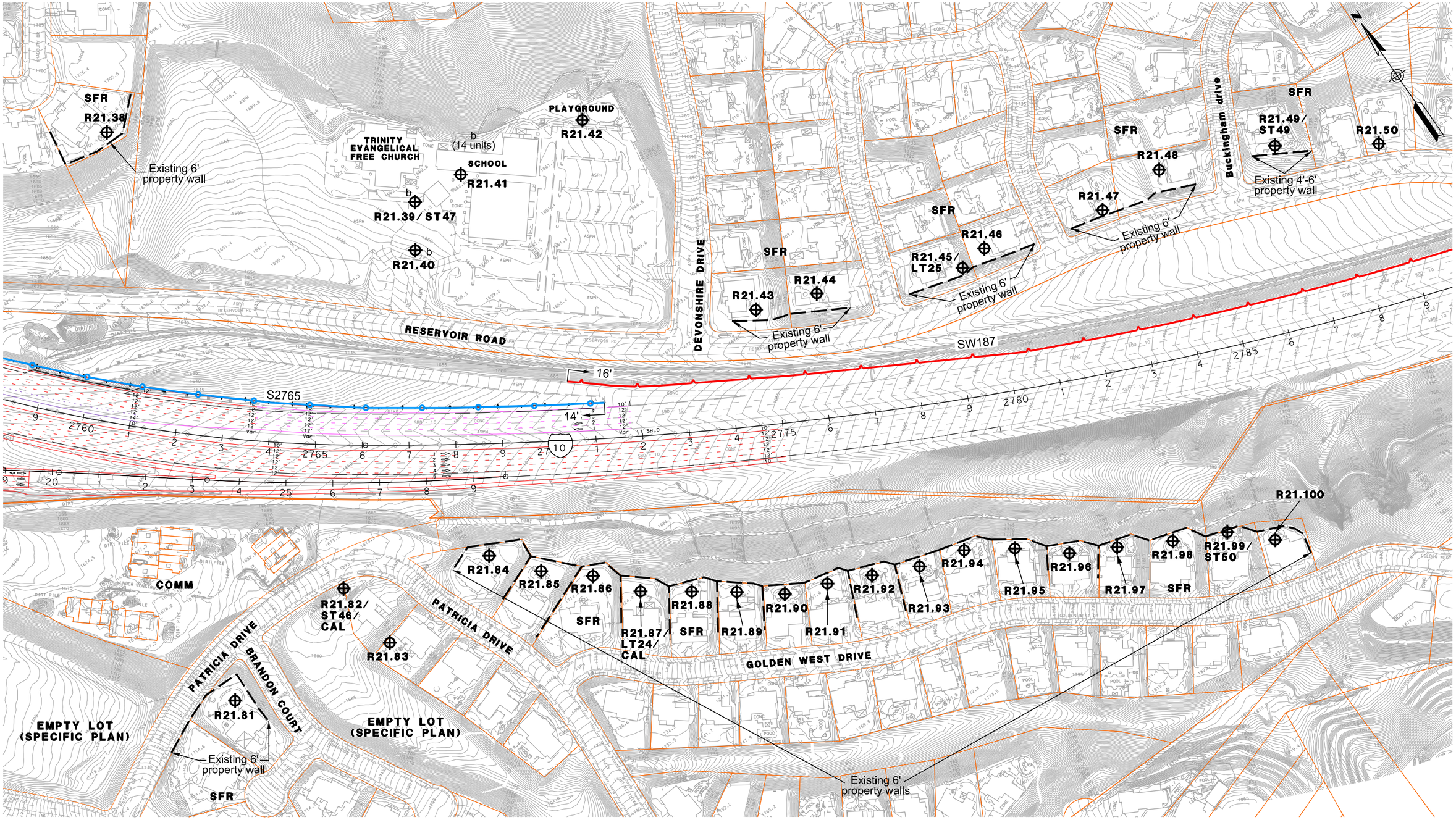
I-10 CORRIDOR ALTERNATIVES 2 AND 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 164



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1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVES 2 AND 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 165

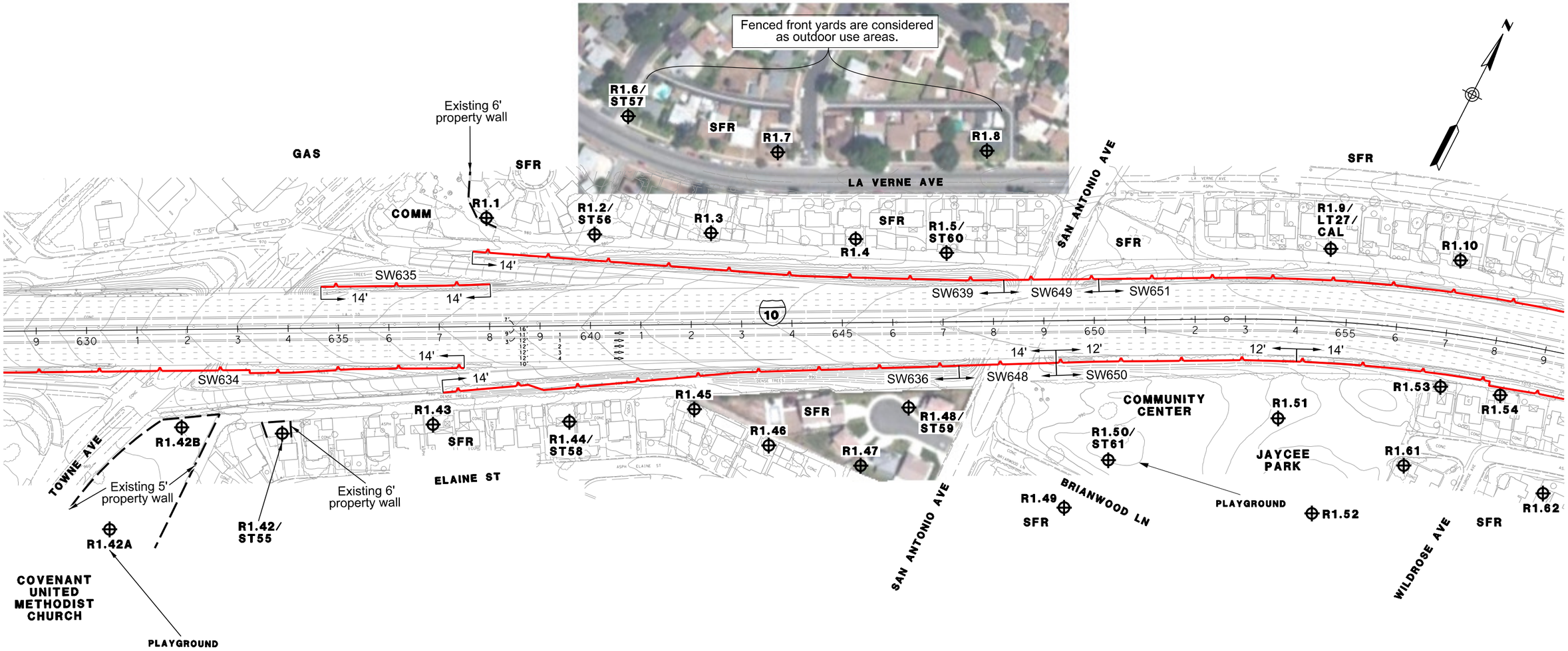
L4: Alternative 3 Reasonableness Analysis Summary and Recommended Soundwall Locations

TABLE 2 – Noise Abatement Information (Alternative 3)

Barrier	Height (feet)	Acoustically Feasible?	Number of Benefited Residences	Total Reasonable Allowance	Masonry Estimated Construction Cost	Cost Less than Allowance	Preliminary Noise Abatement Decision
S699	16- 18- 20	Yes	16	$1,136,000	$406,100	Yes	Reasonable
SW2	14	No	N/A	N/A	N/A	N/A	Replace in-kind
SW6	14	No	N/A	N/A	N/A	N/A	Replace in-kind
SW10	14	No	N/A	N/A	N/A	N/A	Replace in-kind
SW29	16	No	N/A	N/A	N/A	N/A	Replace in-kind
SW30	12	No	N/A	N/A	N/A	N/A	Replace in-kind
SW66	14	No	N/A	N/A	N/A	N/A	Replace in-kind
SW68	10	No	N/A	N/A	N/A	N/A	Replace in-kind
SW94	8- 14	No	N/A	N/A	N/A	N/A	Replace in-kind
S1117	12	Yes	4	$284,000	$101,200	Yes	Reasonable
S1132	14	Yes	2	$142,000	$132,600	Yes	Reasonable
S1190	12	Yes	20	$1,420,000	$326,800	Yes	Reasonable
SW230	14- 16	No	N/A	N/A	N/A	N/A	Replace in-kind
S1244	14	N/A	0	N/A	N/A	N/A	Reasonable
SW246	14	No	N/A	N/A	N/A	N/A	Replace in-kind
SW231	14	No	N/A	N/A	N/A	N/A	Replace in-kind
SW245	14	No	N/A	N/A	N/A	N/A	Replace in-kind
S1262	14	Yes	1	$71,000	$67,400	Yes	Reasonable
S1266	12	Yes	3	$213,000	$90,940	Yes	Reasonable
SW259	14	No	N/A	N/A	N/A	N/A	Replace in-kind
SW275	14	No	N/A	N/A	N/A	N/A	Replace in-kind
S1285	14	Yes	25	$1,775,000	$91,830	Yes	Reasonable
S21	12	Yes	2	$142,000	$167,400	No	Not Reasonable
S1276	10	Yes	3	$213,000	$24,990	Yes	Reasonable
SW278	14- 16	No	N/A	N/A	N/A	N/A	Replace in-kind
S1306	8- 10- 12- 14	Yes	84	$5,964,000	$638,100	Yes	Reasonable
SW296	14	No	N/A	N/A	N/A	N/A	Replace in-kind
SW334	14	No	N/A	N/A	N/A	N/A	Replace in-kind
SW697	14	No	N/A	N/A	N/A	N/A	Replace in-kind
S1819	16- 18	Yes	33	$2,343,000	$999,100	Yes	Reasonable
S1833	14	Yes	4	$284,000	$308,000	Yes*	Reasonable*
S1877	14- 16	Yes	72	$5,112,000	$635,800	Yes	Reasonable
S1907	16	Yes	63	$4,473,000	$1,707,000	Yes	Reasonable
S1969	12	Yes	2	$142,000	$132,400	Yes	Reasonable
S2033	20	Yes	4	$284,000	$268,900	Yes	Reasonable
S2079	18	Yes	4	$284,000	$525,500	No	Not Reasonable
S2145	14- 16	Yes	43	$3,053,000	$772,800	Yes	Reasonable
SW5	8- 10- 12	No	N/A	N/A	N/A	N/A	Replace in-kind
S2238	14- 16	Yes	46	$3,266,000	$601,700	Yes	Reasonable
S2382	12	Yes	1	$71,000	$466,000	No	Not Reasonable
S2384	14						
S2434A	14- 16	Yes	40	$2,840,000	$1,010,200	Yes	Reasonable

Barrier	Height (feet)	Acoustically Feasible?	Number of Benefited Residences	Total Reasonable Allowance	Masonry Estimated Construction Cost	Cost Less than Allowance	Preliminary Noise Abatement Decision
S2438	14						
S2434B	12- 14	Yes	38	$2,698,000	$759,800	Yes	Reasonable
S2438	12						
S2435	14	Yes	15	$1,065,000	$331,900	Yes	Reasonable
S2437	14						
S2476	14	Yes	76	$5,396,000	$437,200	Yes	Reasonable
S2619	10- 12- 14	Yes	17	$1,207,000	$1,284,000	Yes*	Reasonable*
S2638A	12-	Yes	20	$1,420,000	$2,013,900	No	Not Reasonable
S2654A	10- 12						
S2638B	12	Yes	11	$781,000	$808,800	Yes*	Reasonable*
S2654B	12						
S2730	12- 14- 16- 18- 20	Yes	1	$71,000	$386,100	No	Not Reasonable
S2737	16- 18- 20- 22- 24	Yes	5	$355,000	$1,118,000	No	Not Reasonable
S2765	14	Yes	16	$1,136,000	$557,900	Yes	Reasonable

*Although estimated construction cost is greater than total reasonable allowance, the difference is within 10% of the allowance; therefore, the cost is considered less than the allowance.



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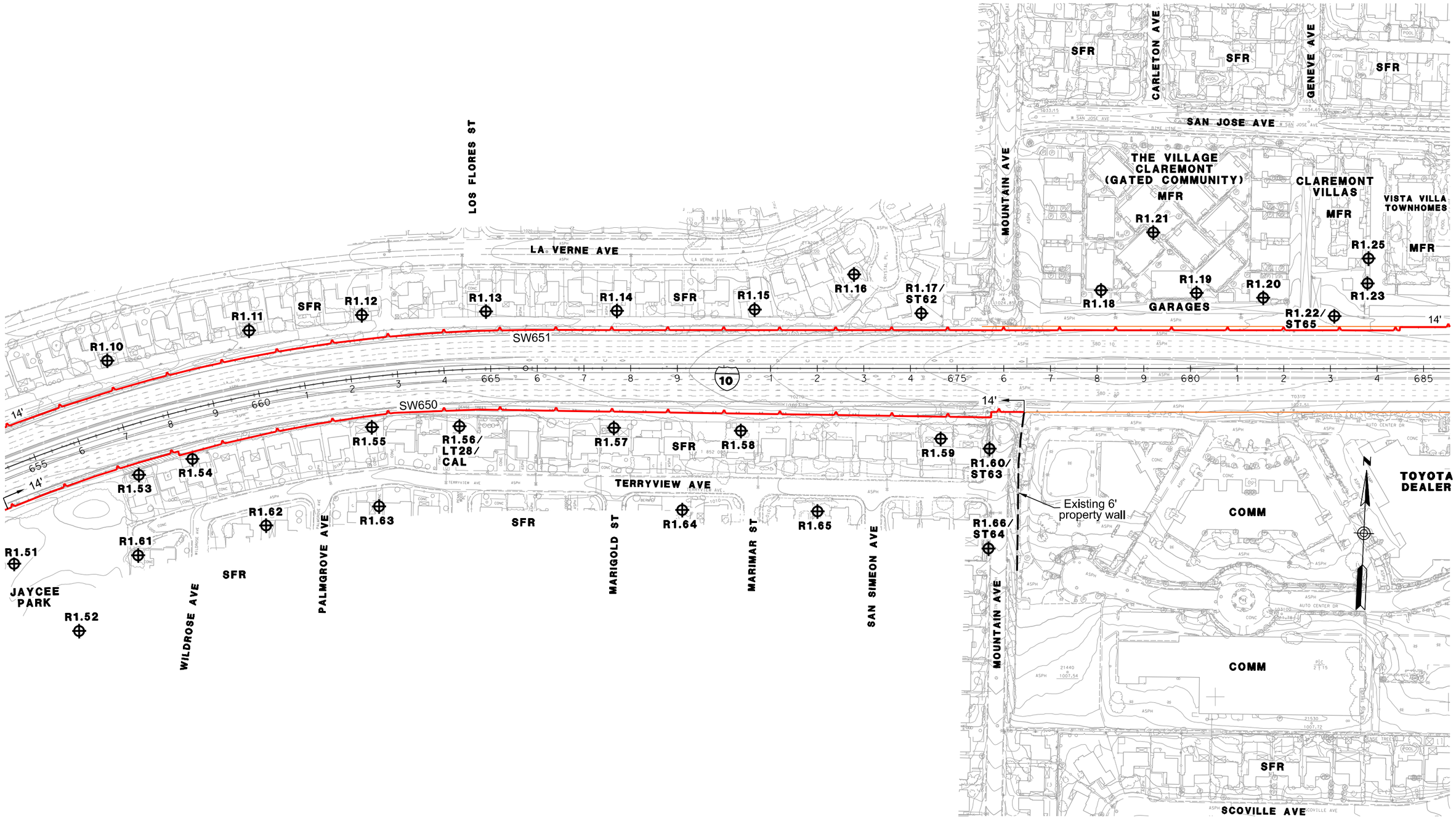
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 102



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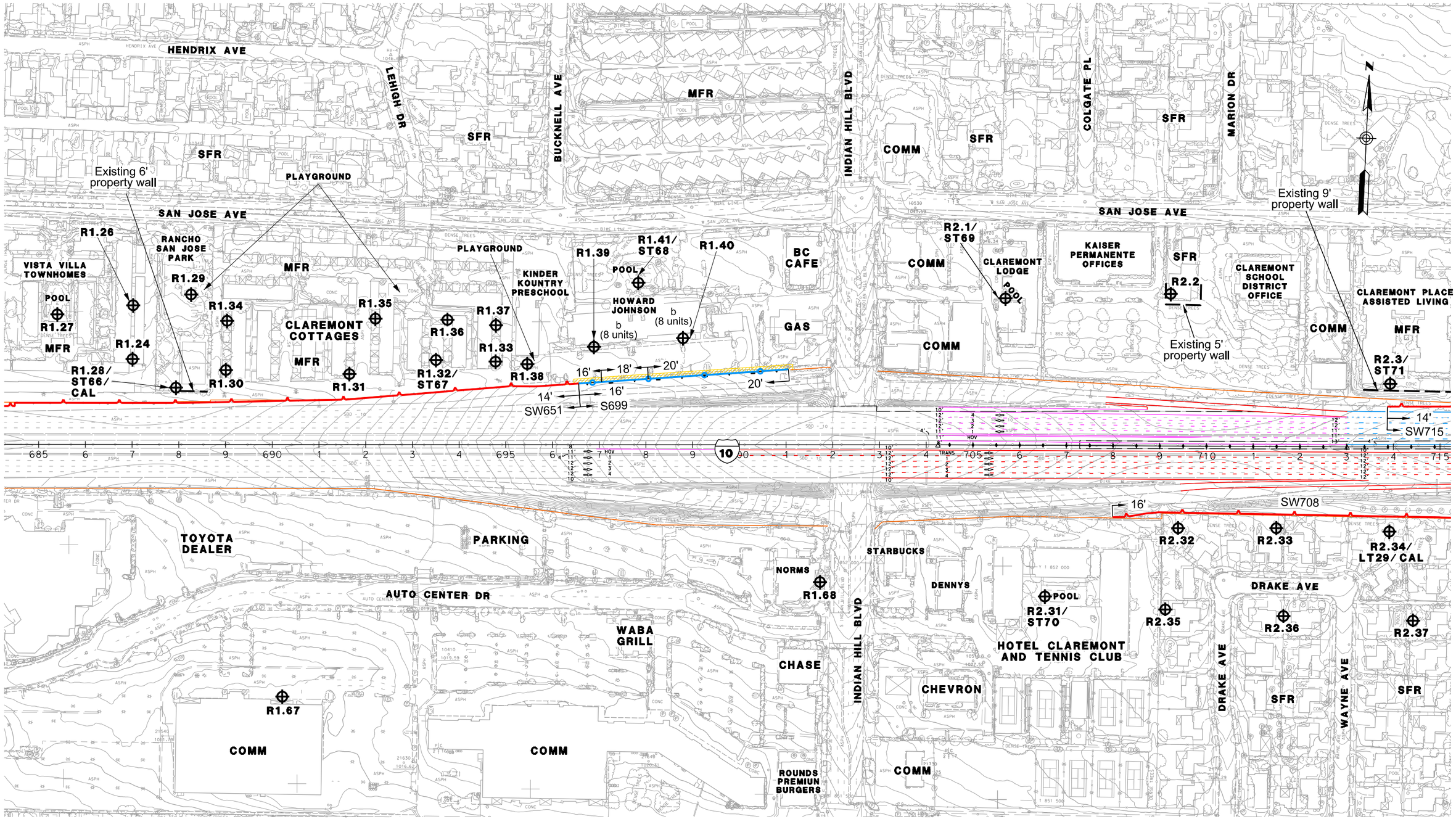
JULY 1, 2015

FIGURE 103



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JULY 1, 2015

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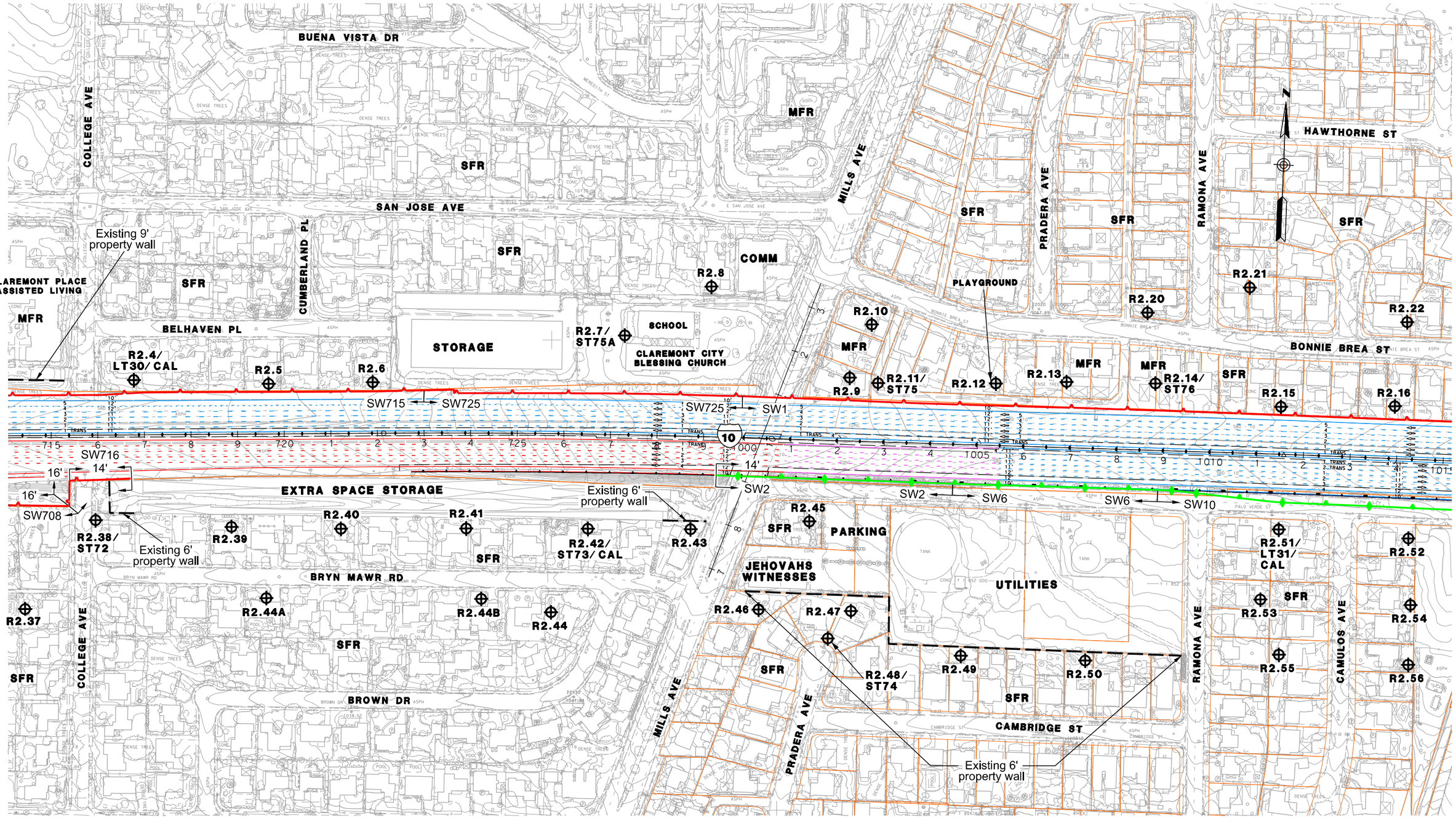

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JULY 1, 2015

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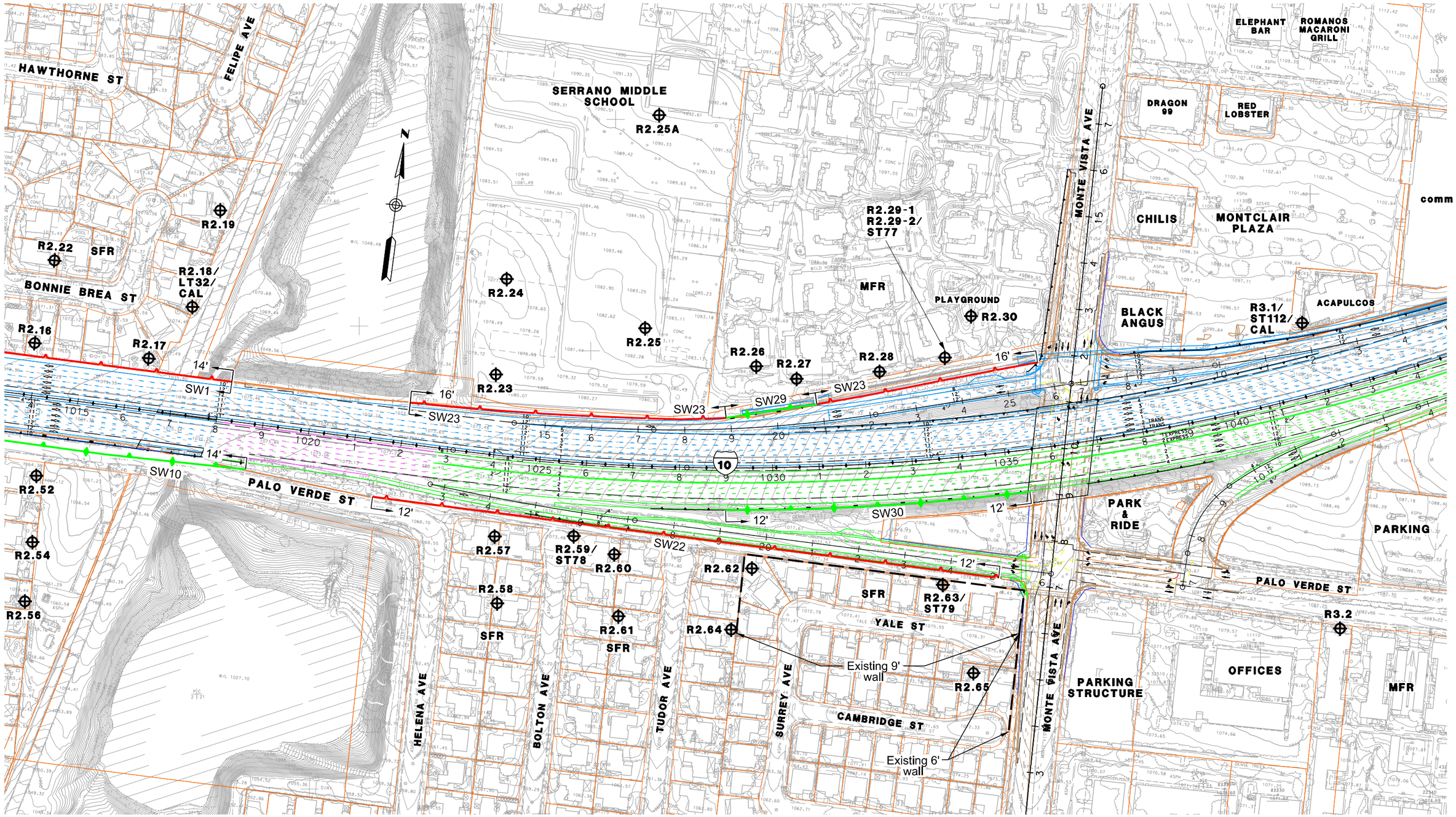

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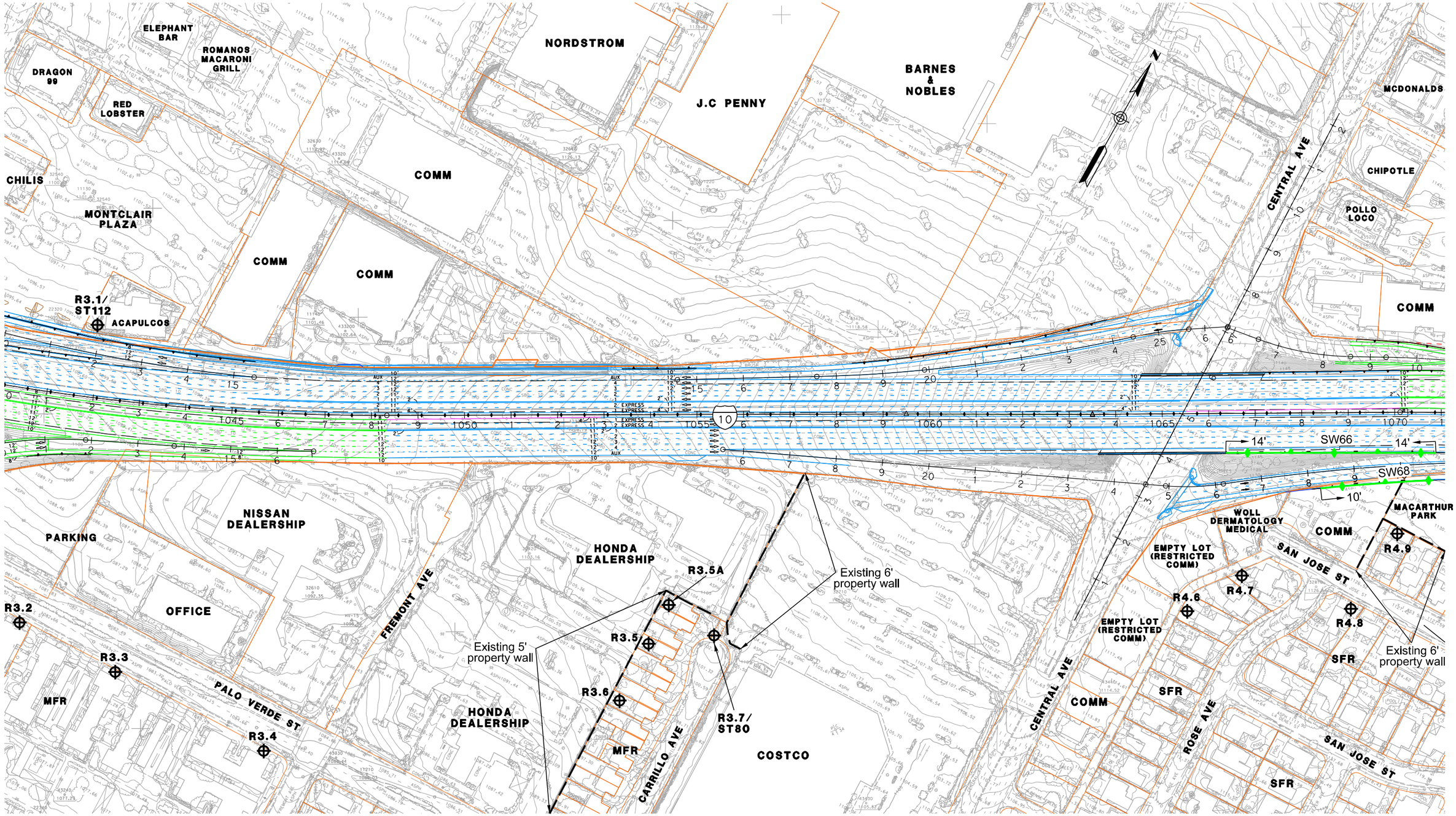
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 106



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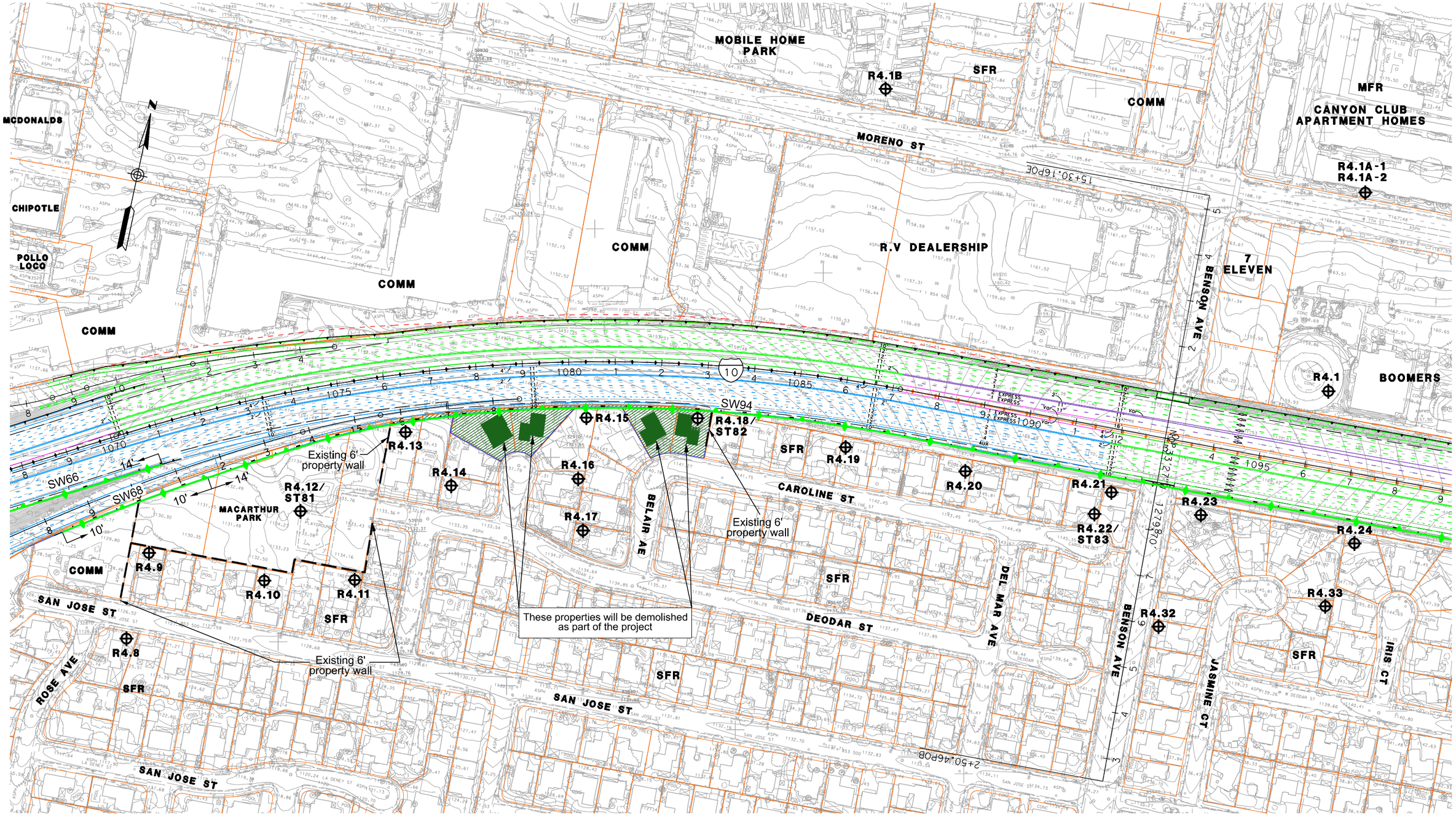
I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 107



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I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

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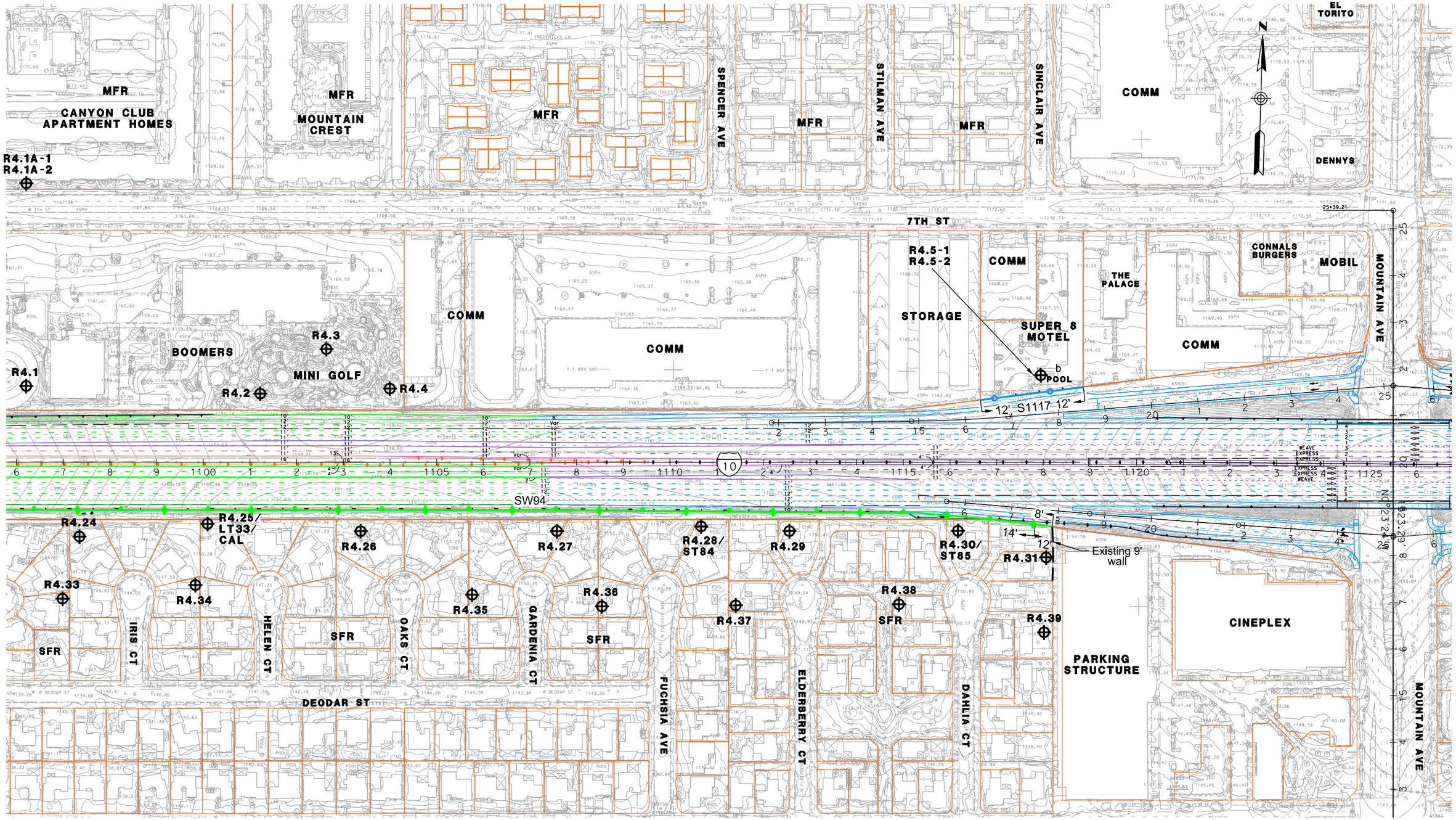

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JULY 1, 2015

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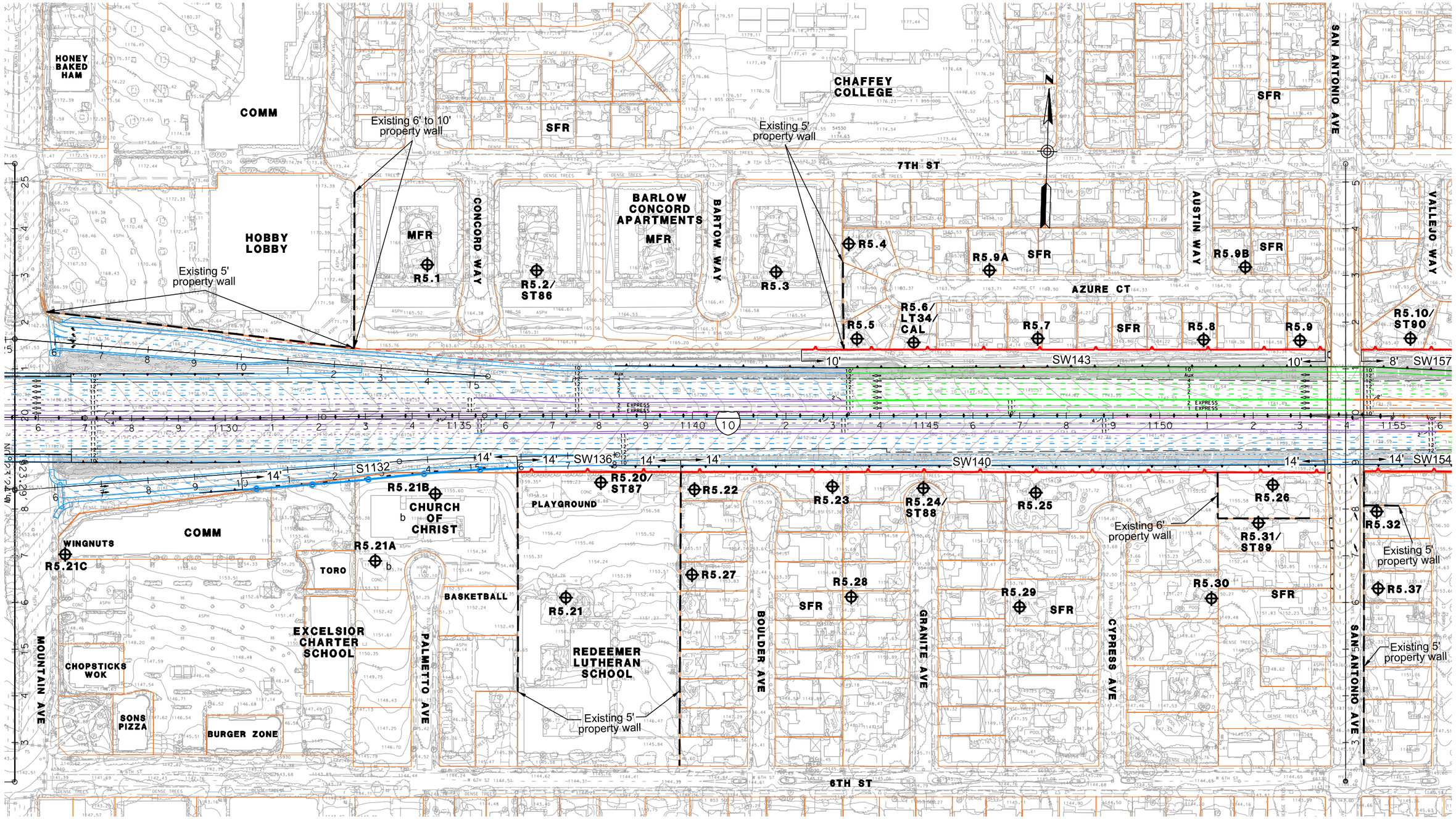

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JULY 1, 2015

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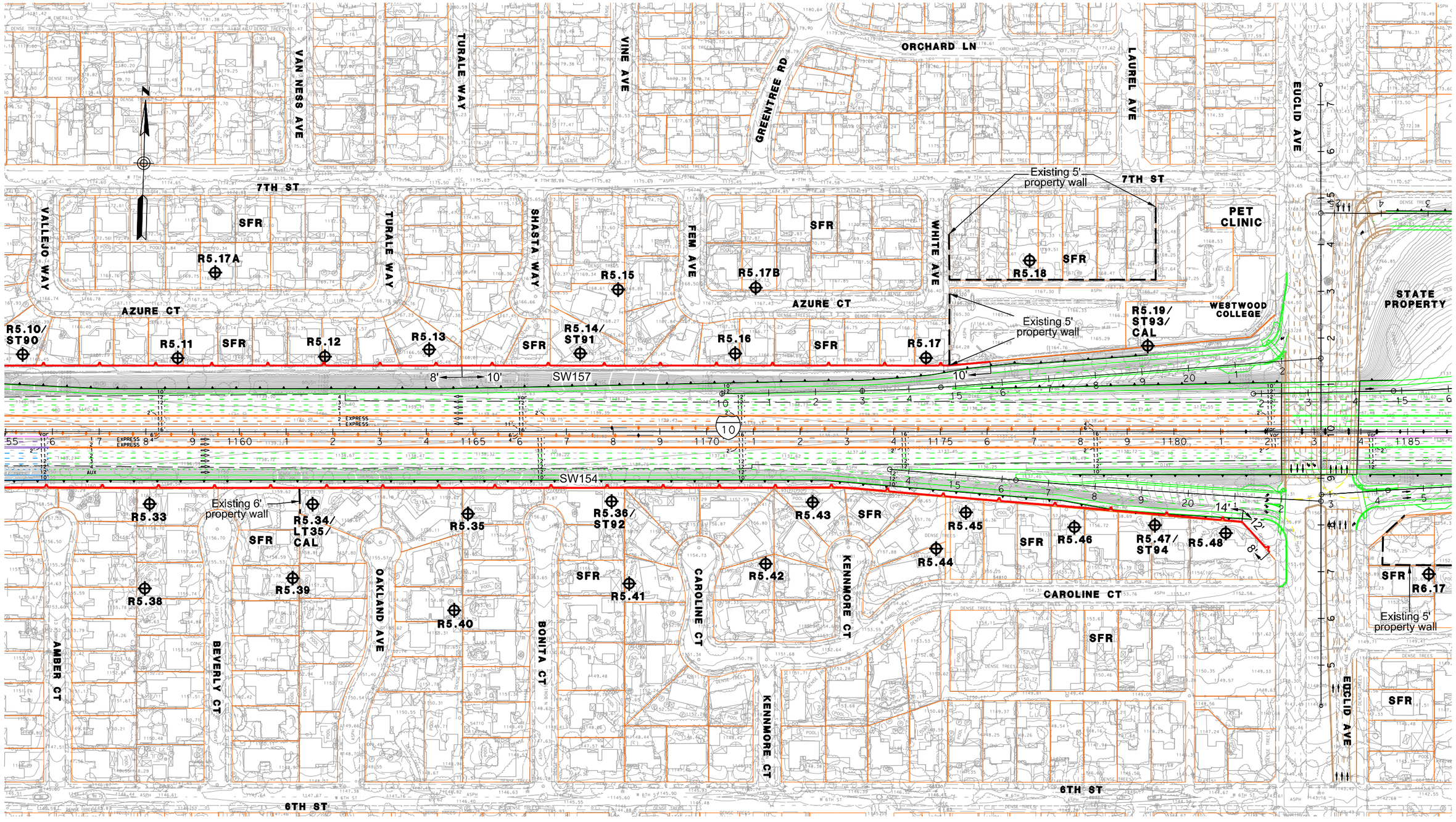

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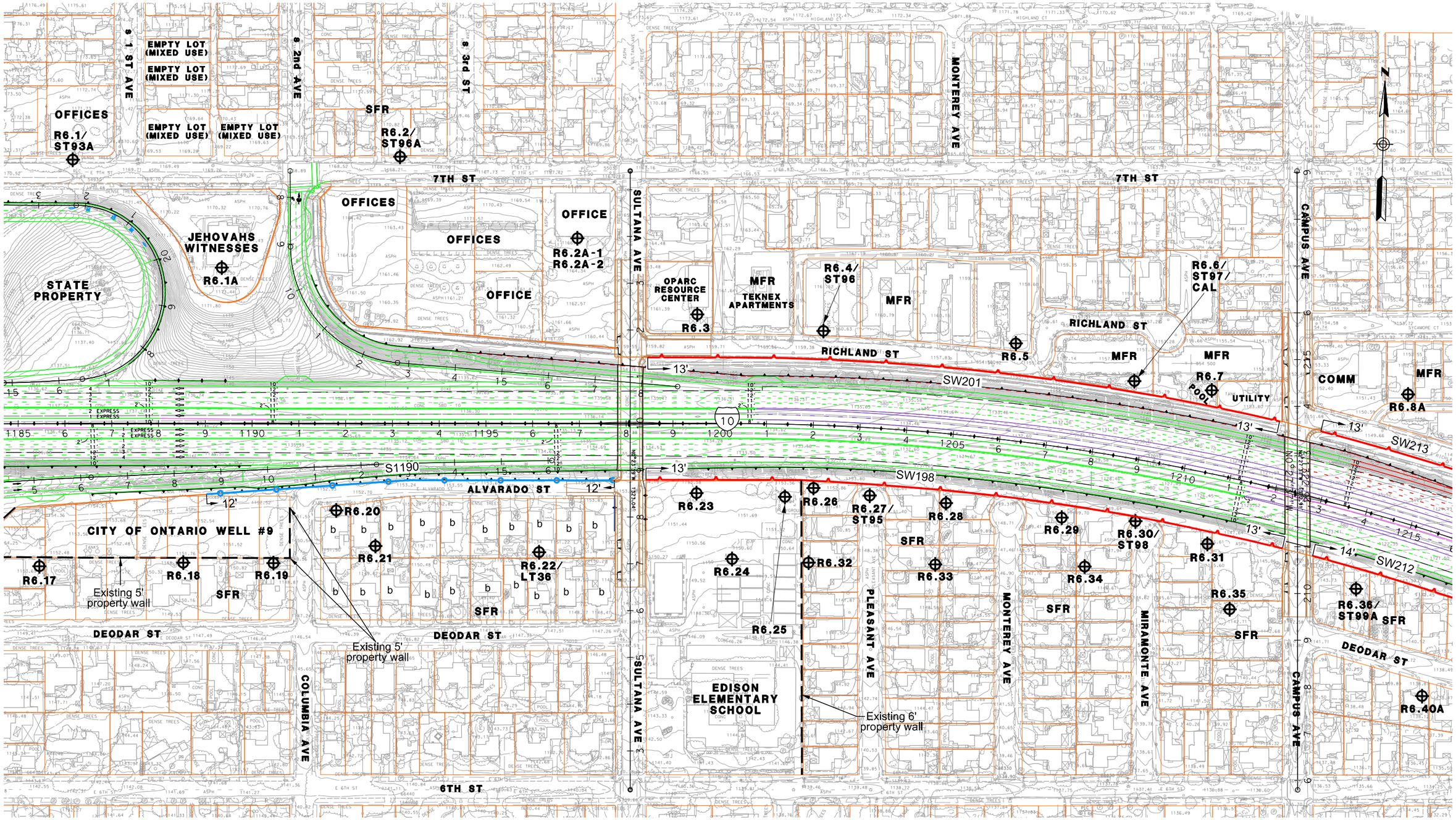
JULY 1, 2015

FIGURE 111



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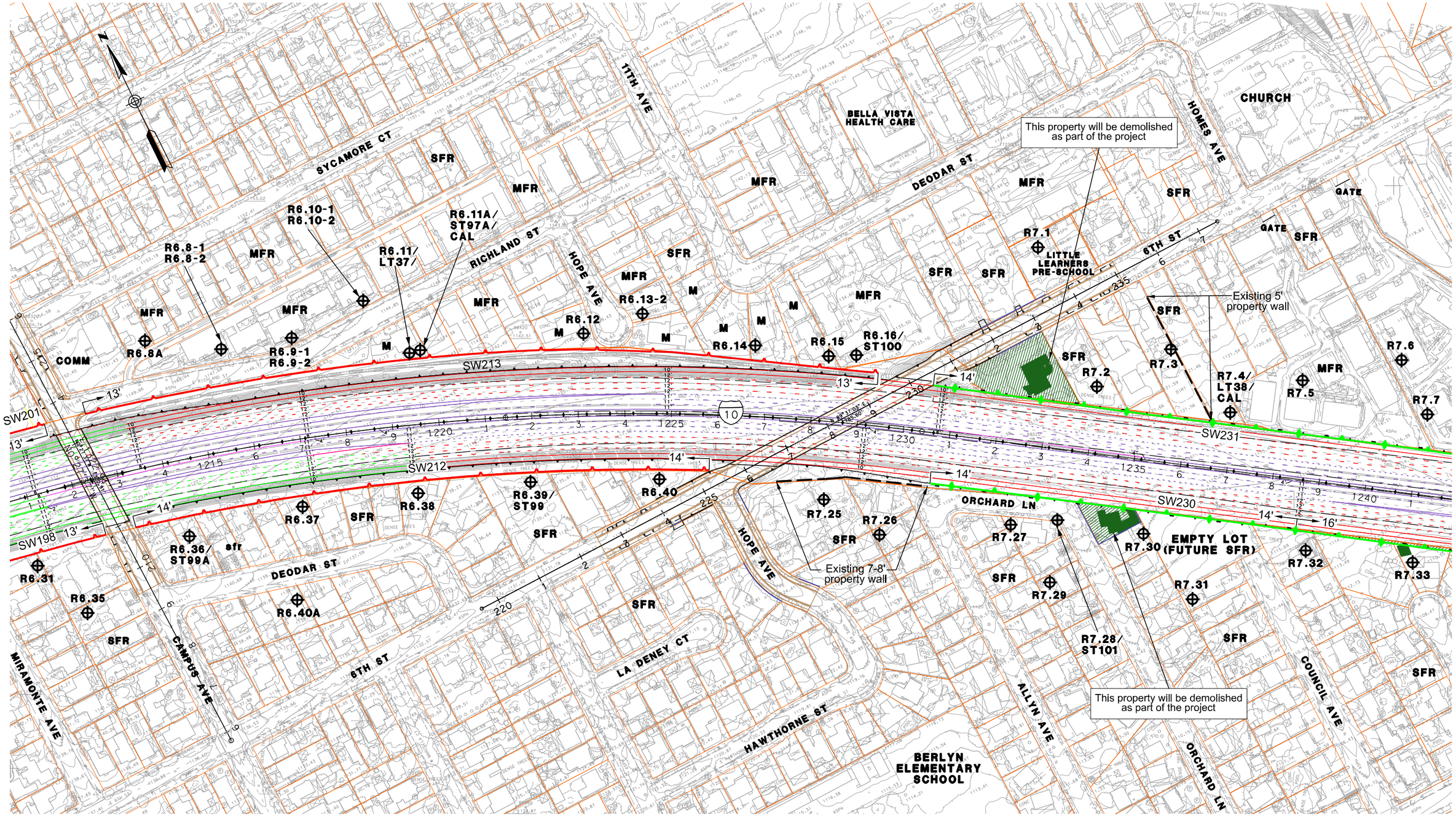
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 112



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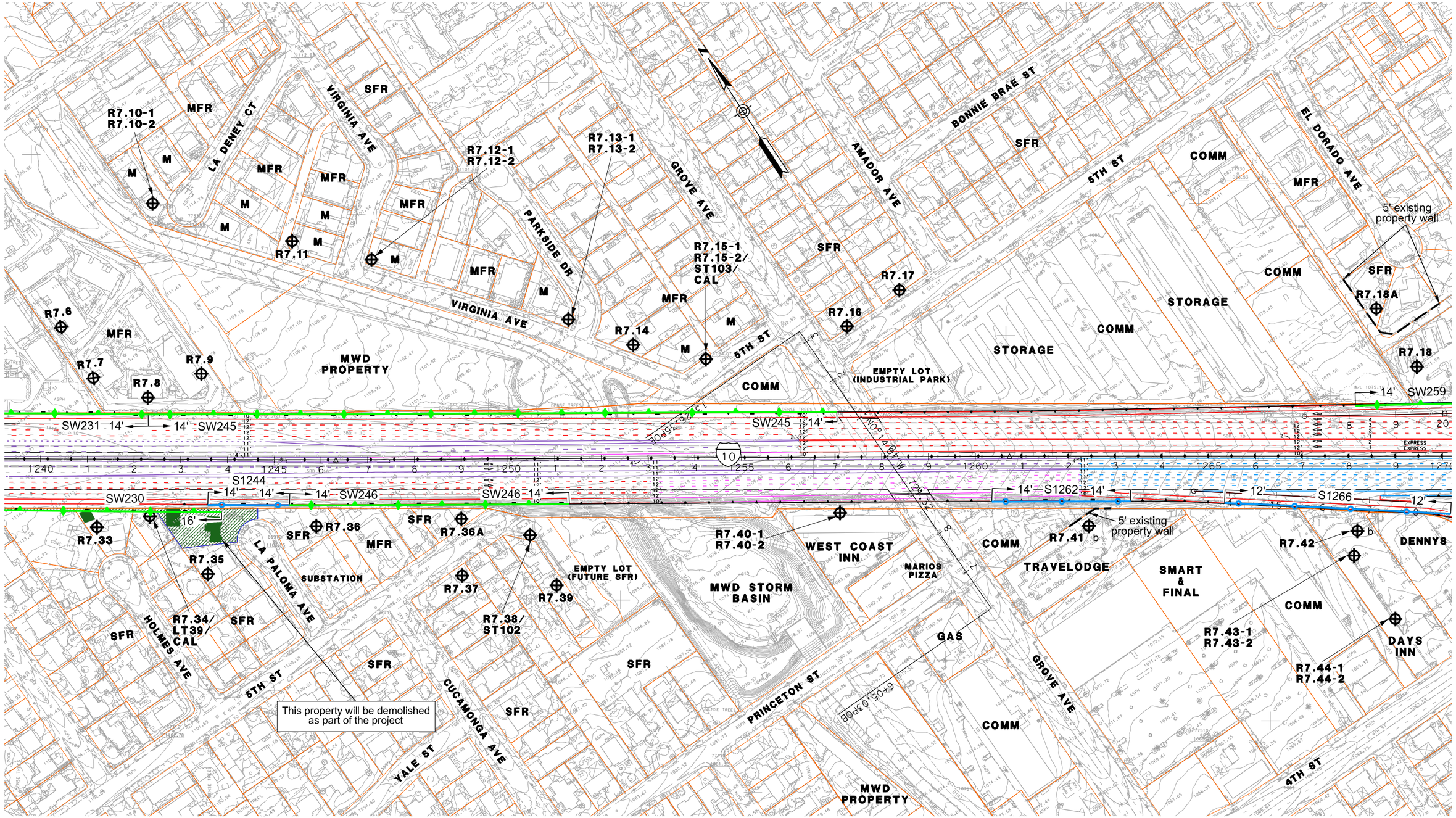
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 113



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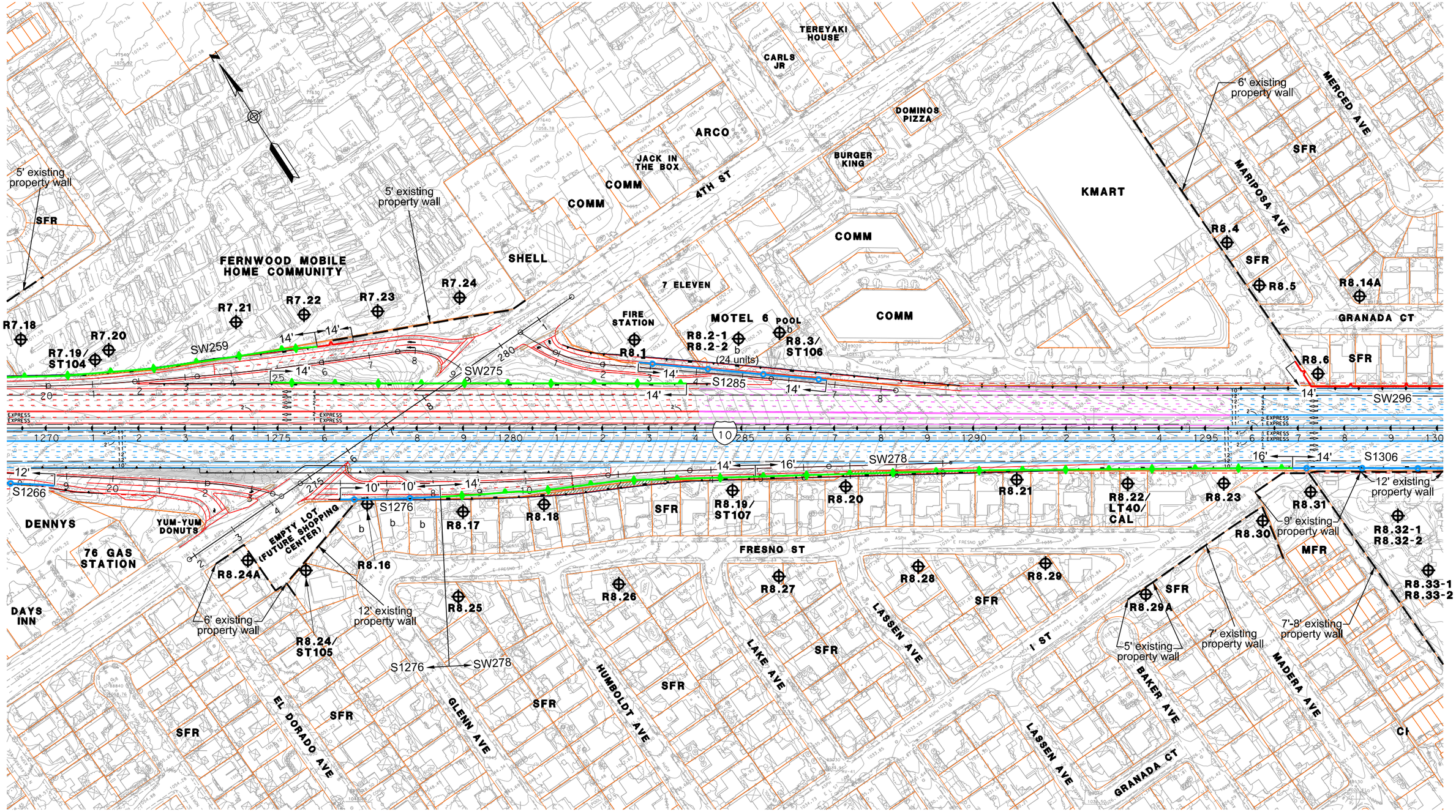
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 114



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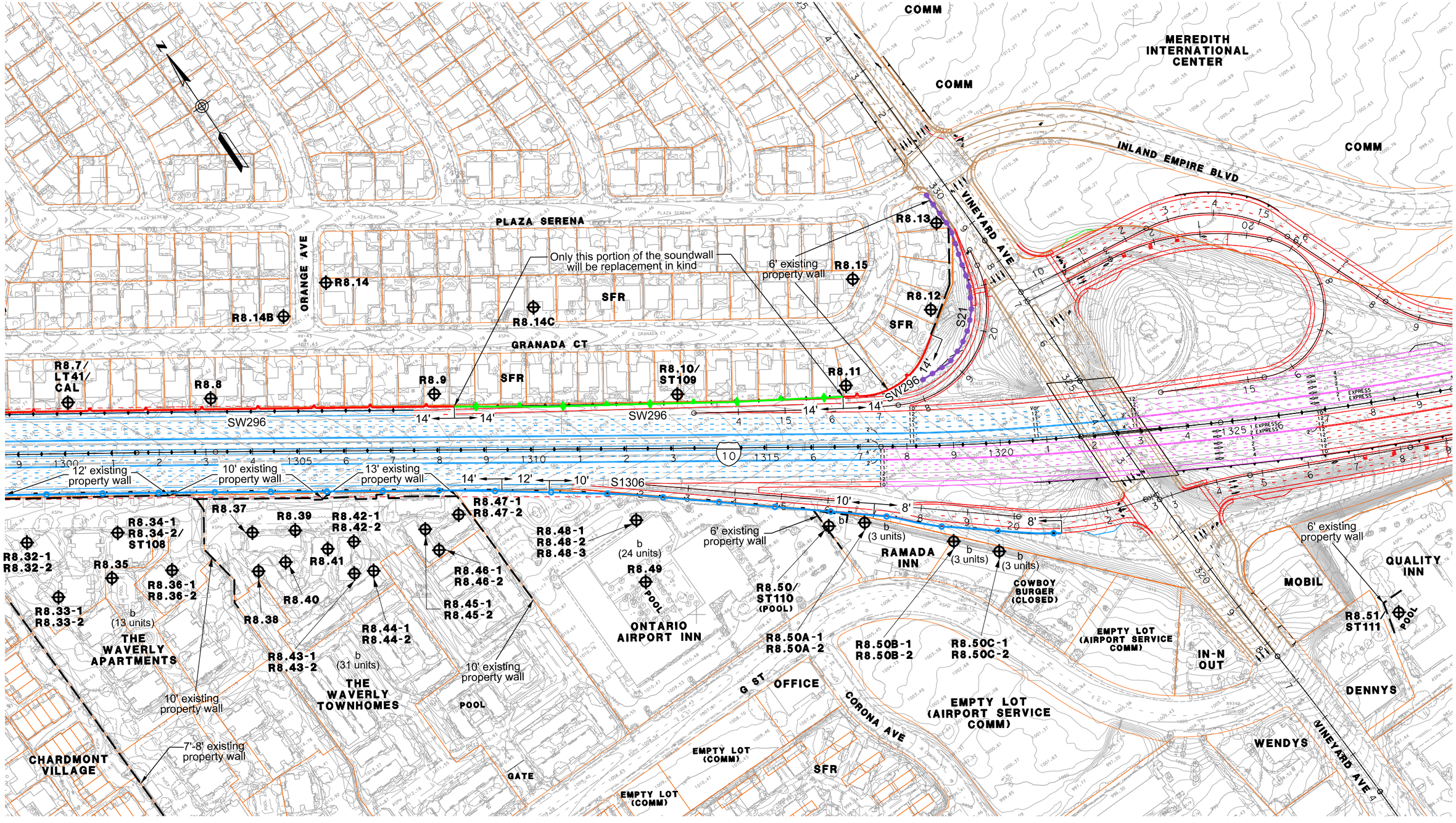
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 115



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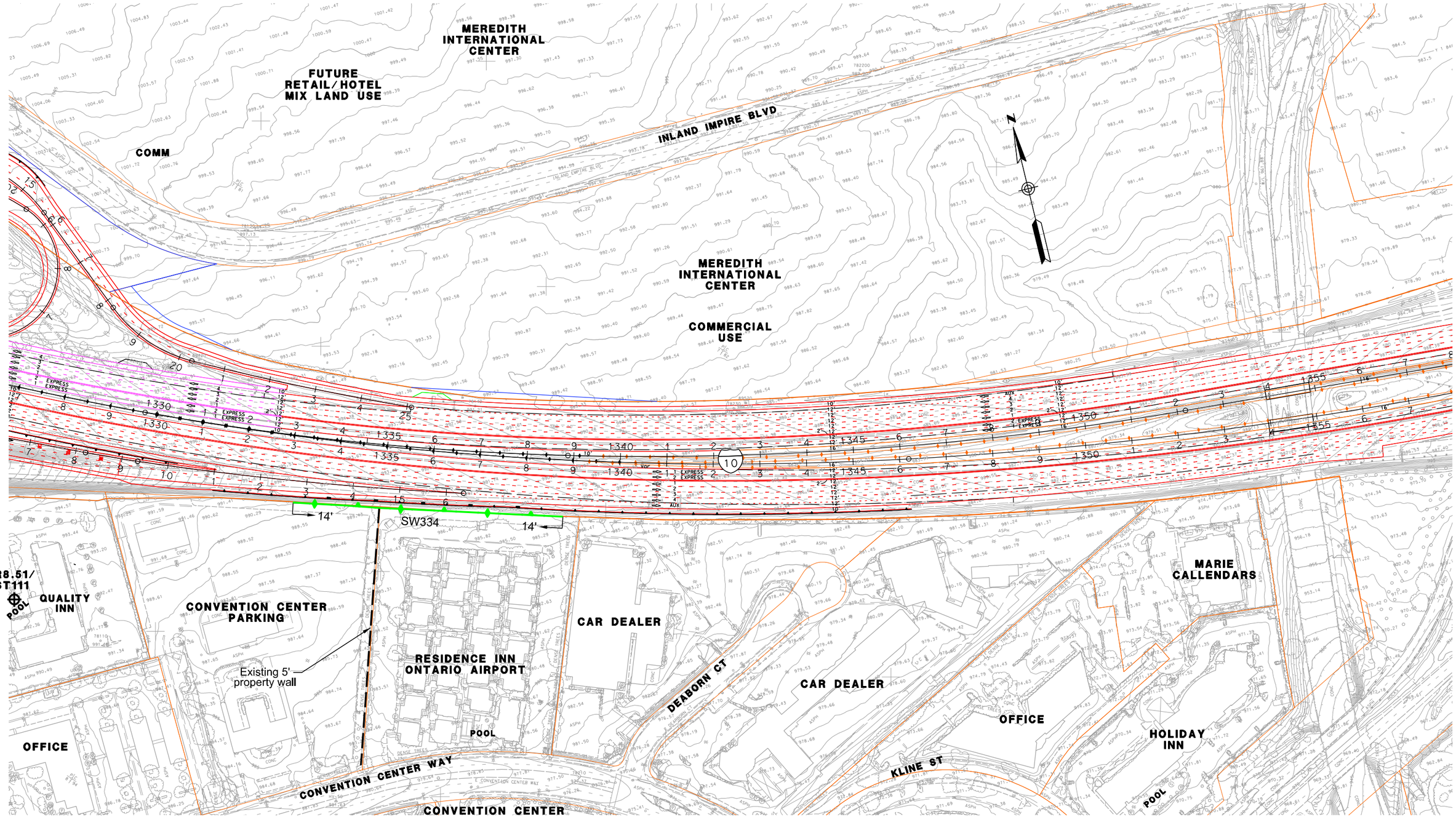
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 116



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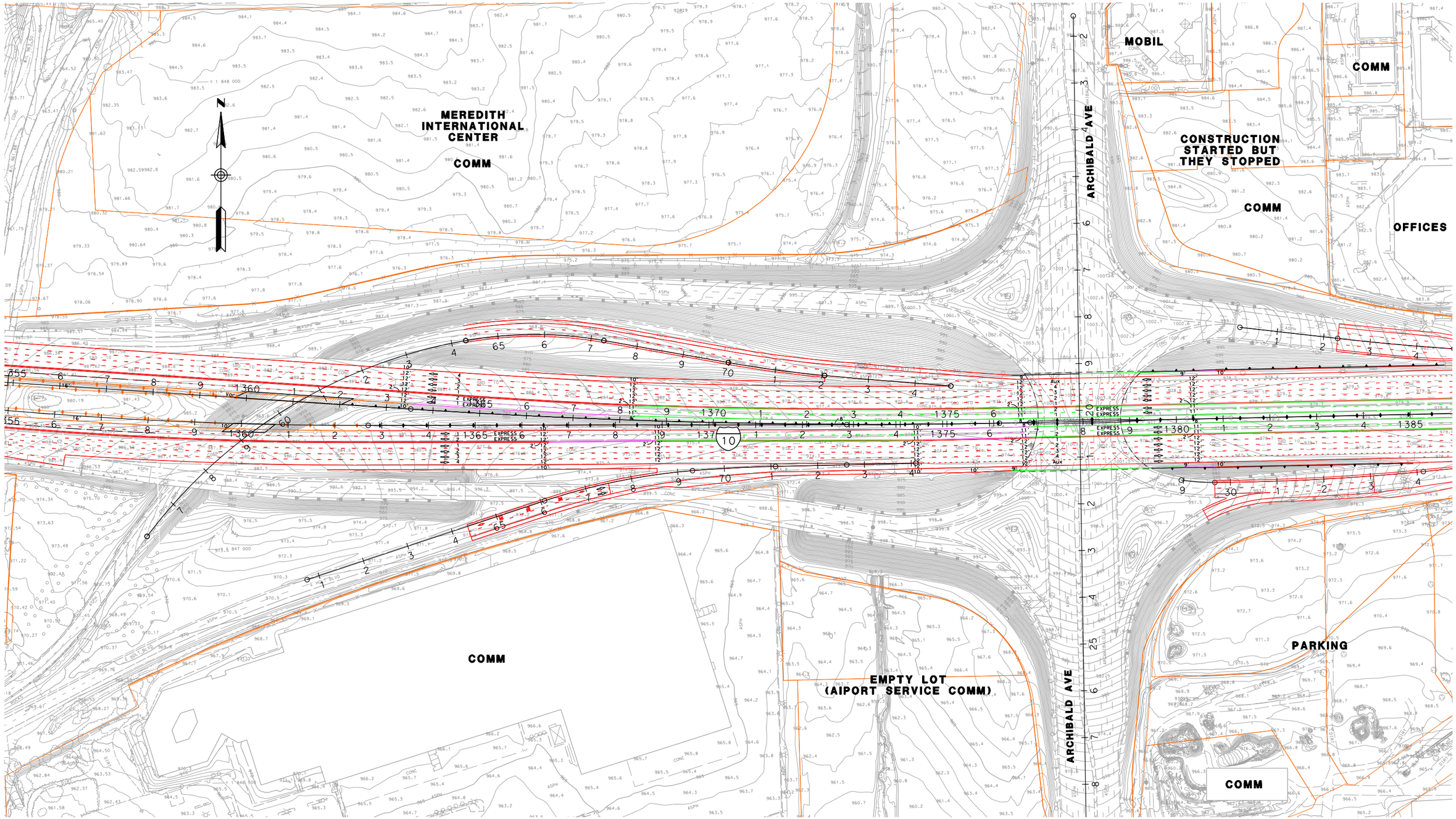
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 117



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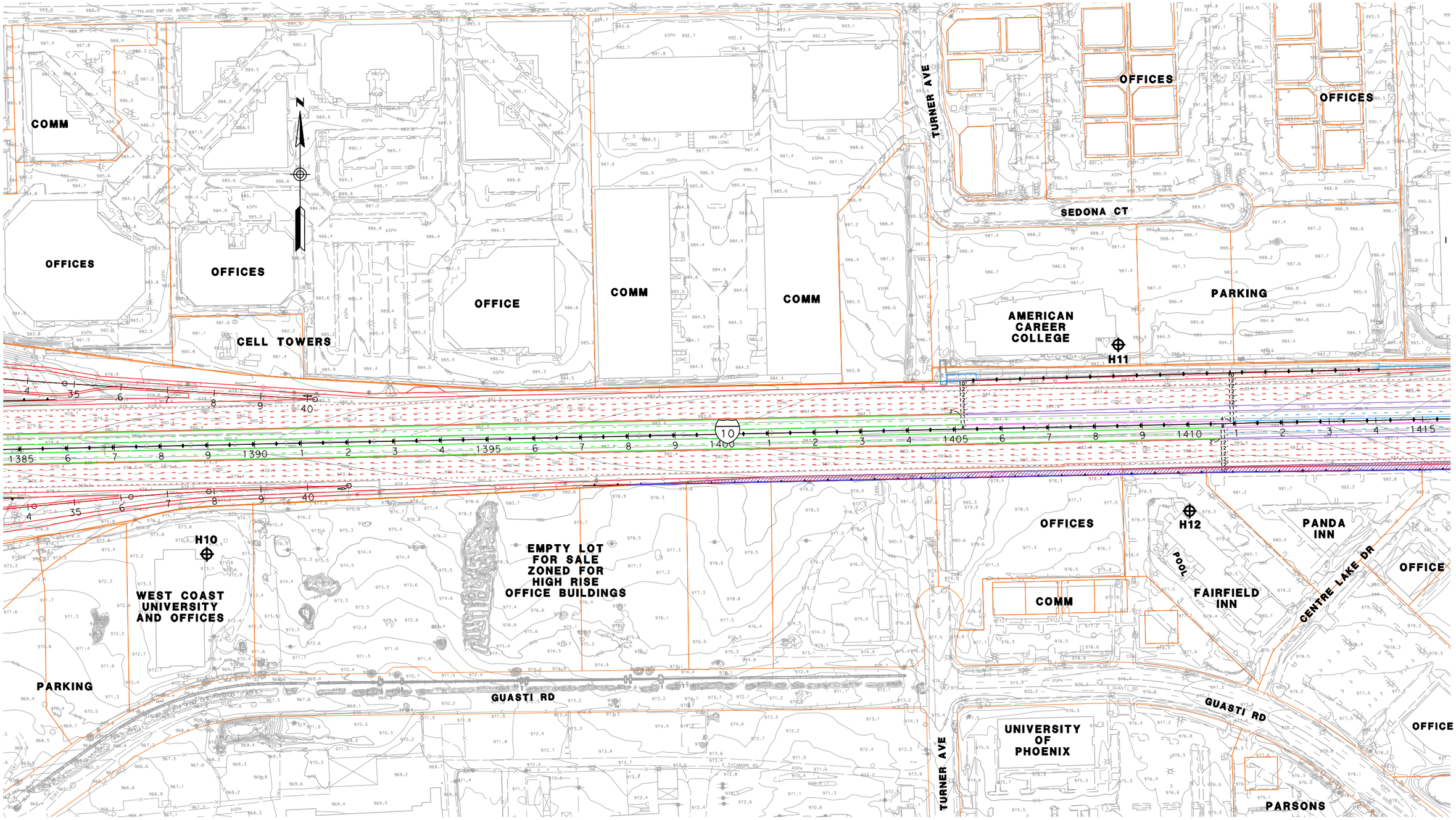
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 118



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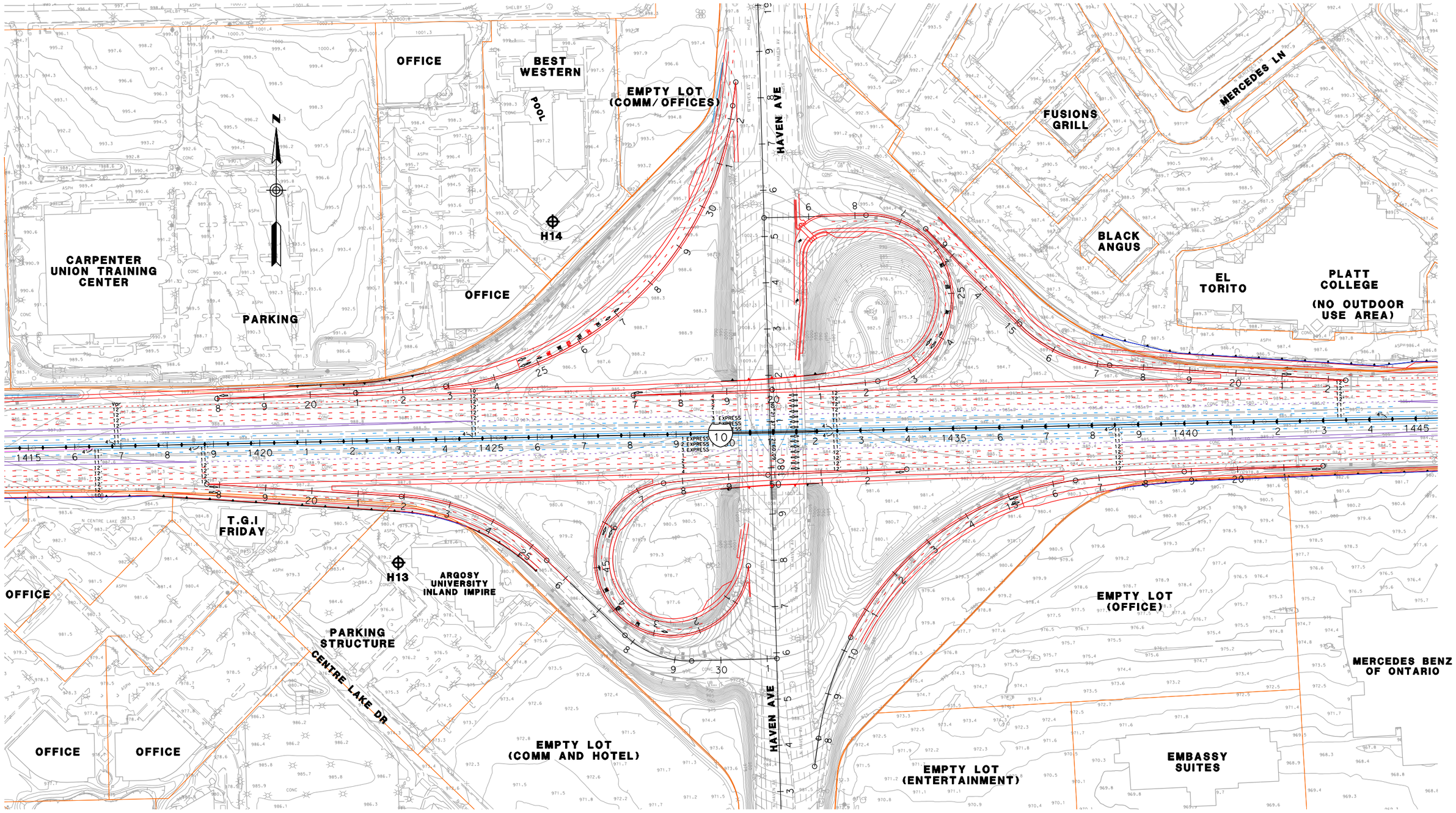
I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 119



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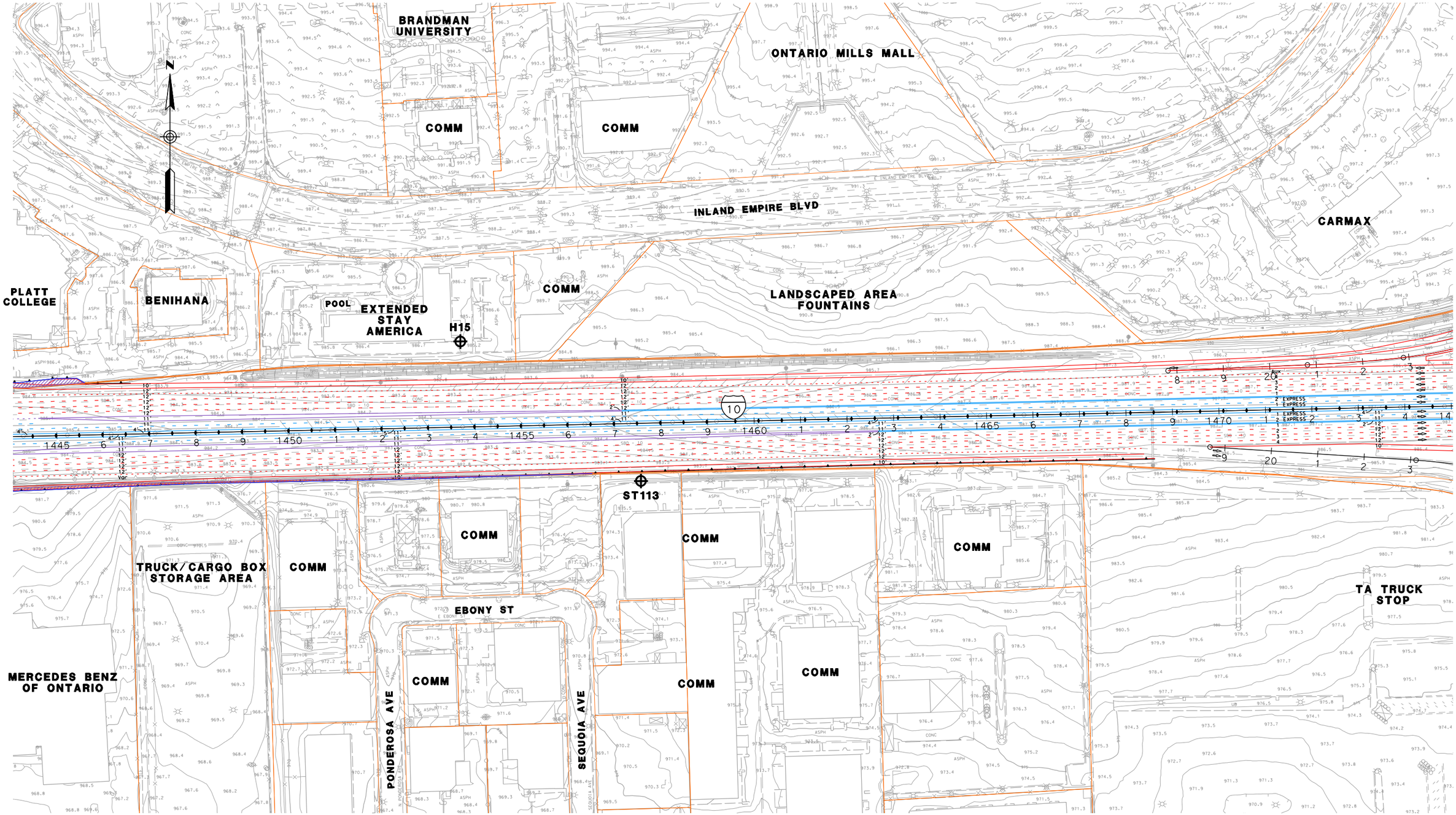
JULY 1, 2015

FIGURE 120



LEGEND

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- CAL - CALIBRATION SITE
- LT - LONG-TERM MEASUREMENT
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- SFR OR S - SINGLE FAMILY RESIDENCE
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- EXISTING PROPERTY WALL
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- PROPOSED SOUNDWALL
- REPLACEMENT IN KIND SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER
- DRAINAGE RETAINING WALL
- NON-REASONABLE SOUNDWALL

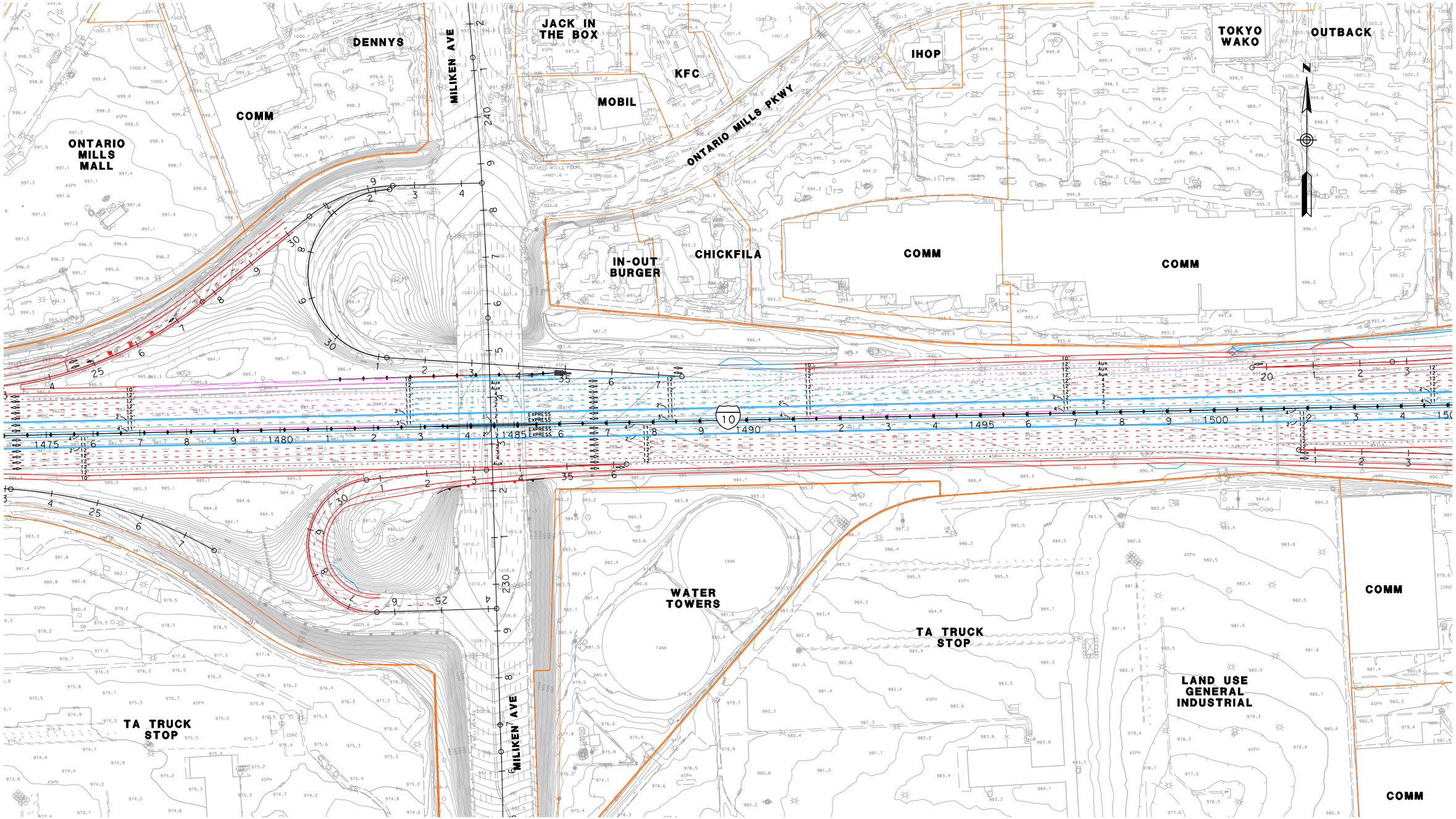
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 121



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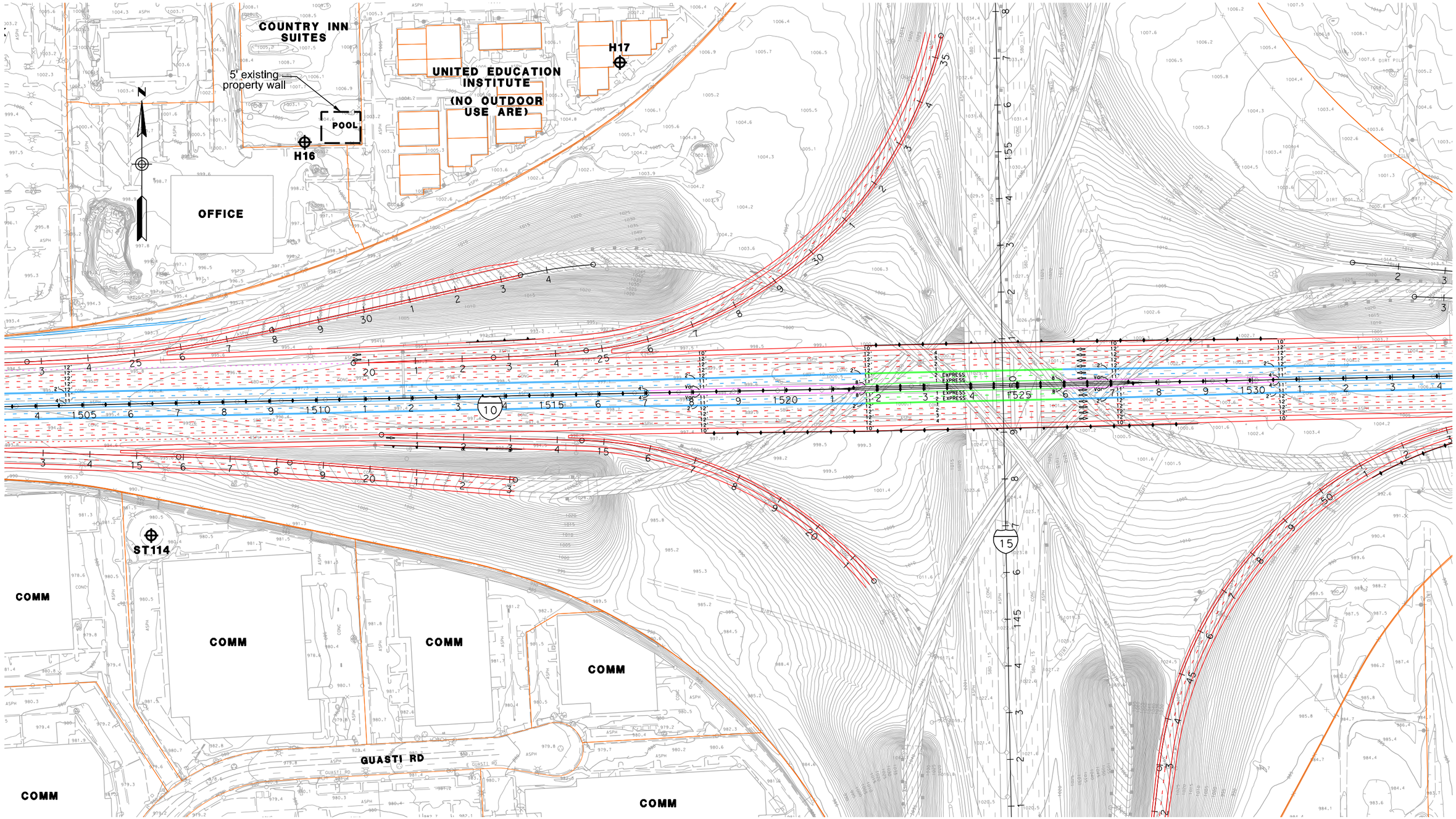
I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 122



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I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

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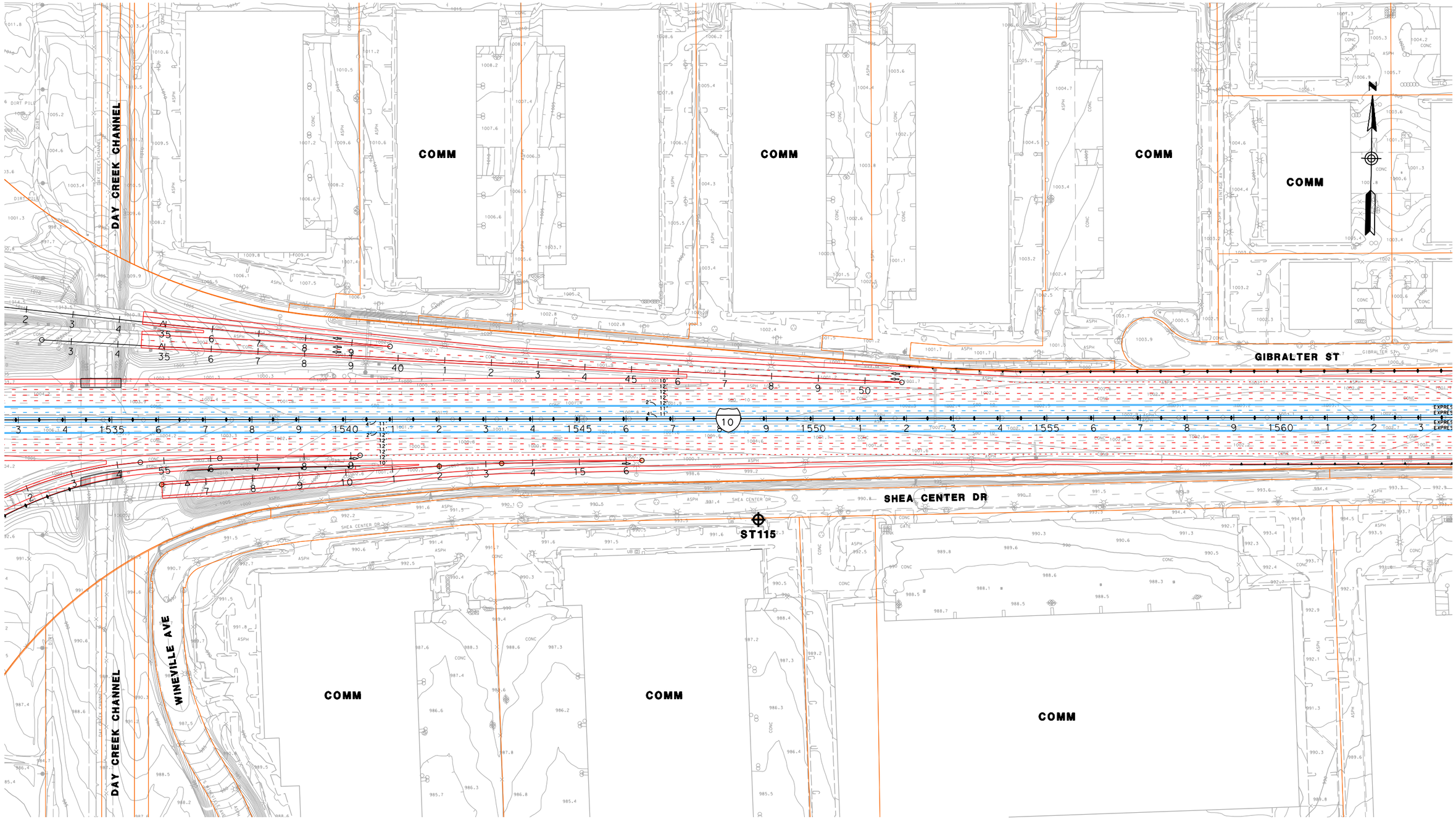

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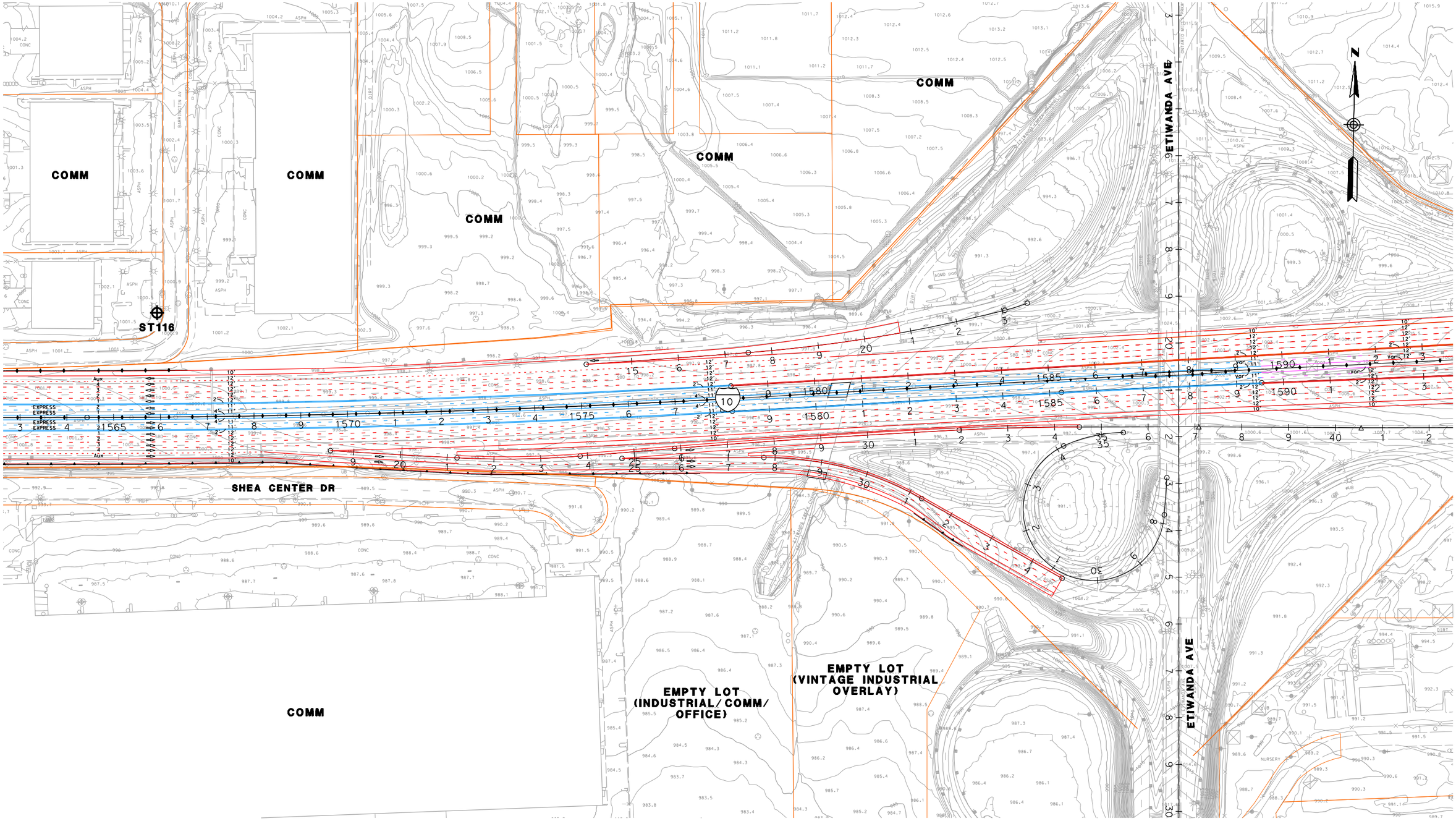
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 124



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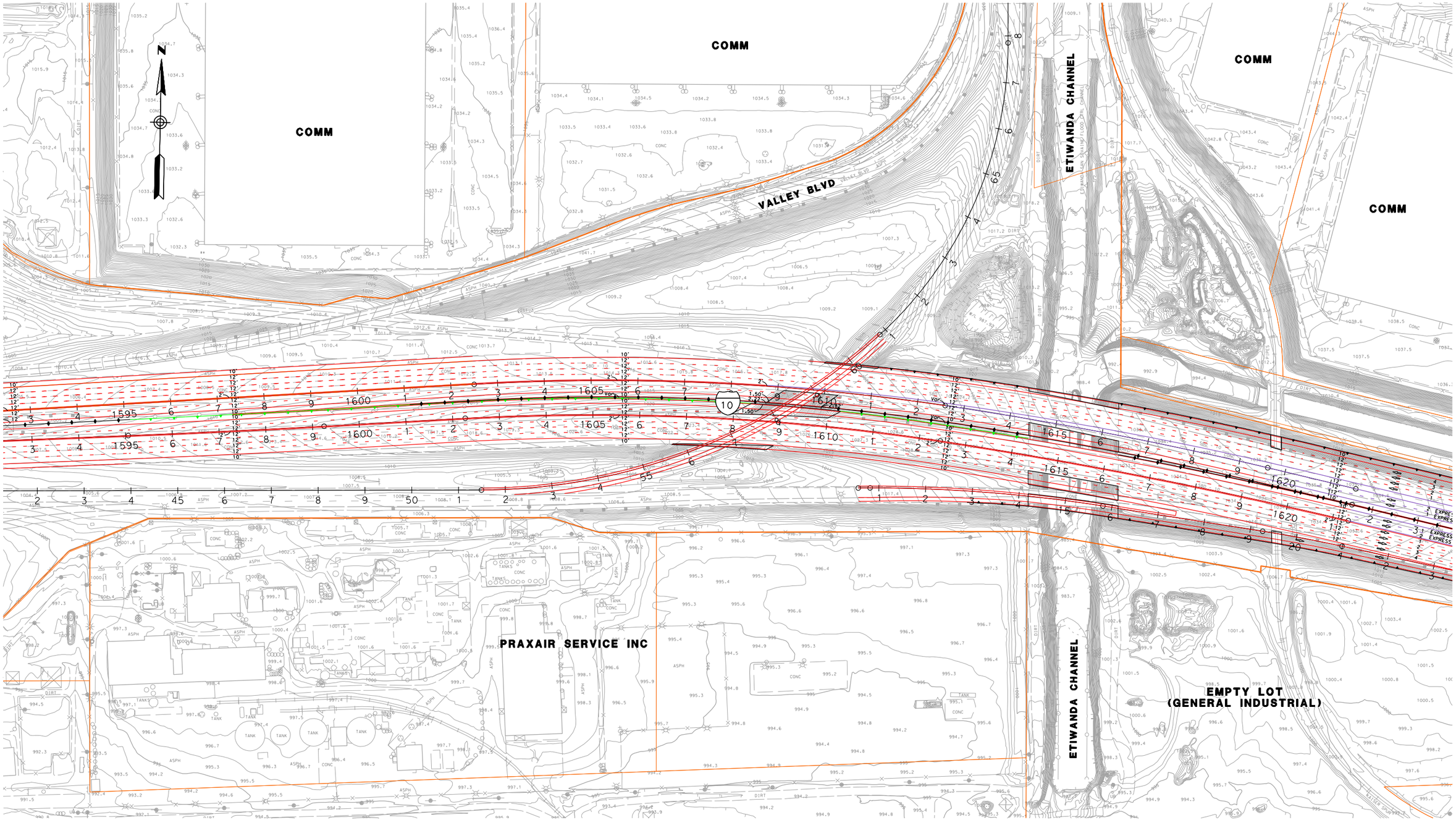
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 125



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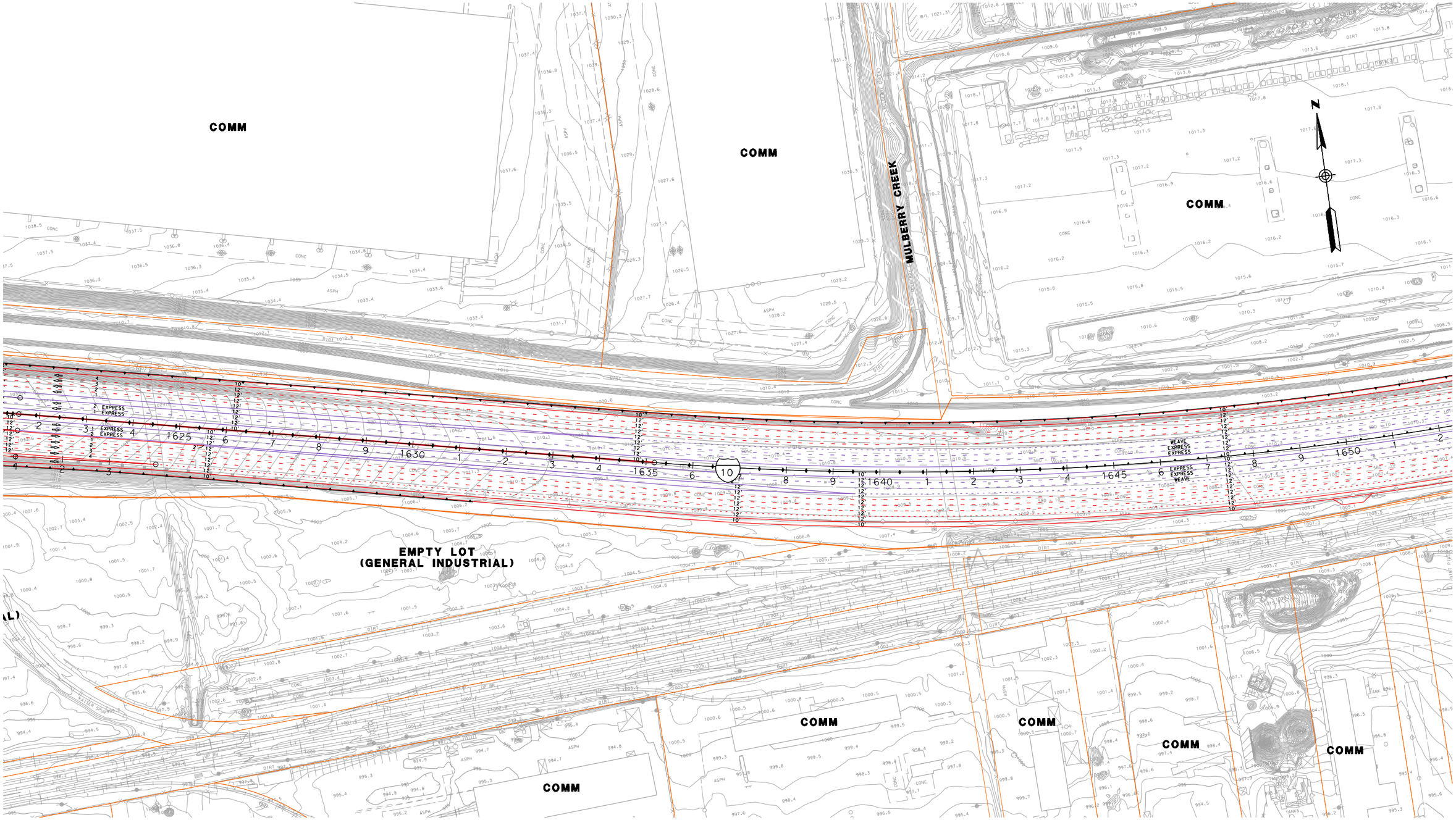
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 126



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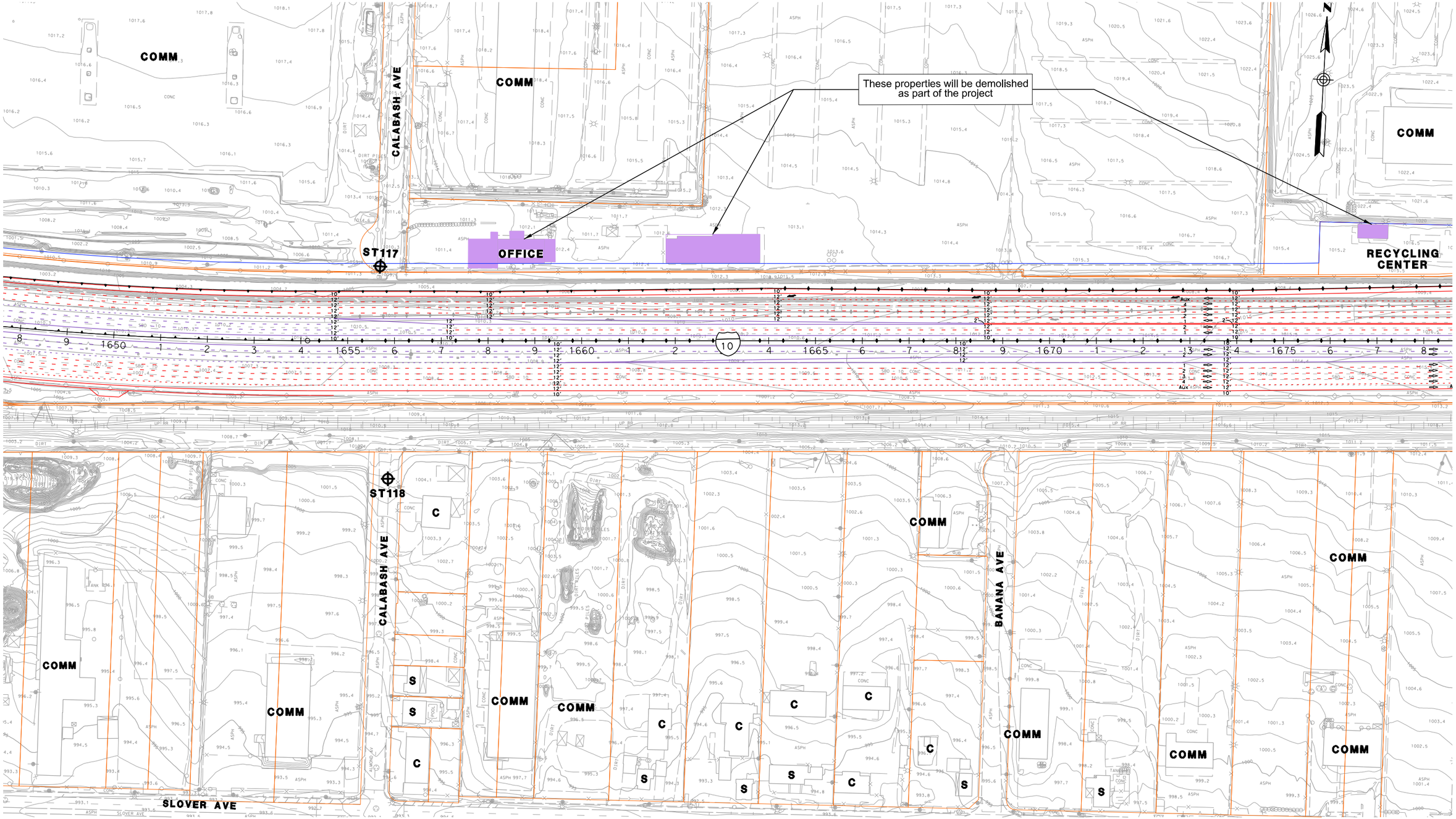
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 127



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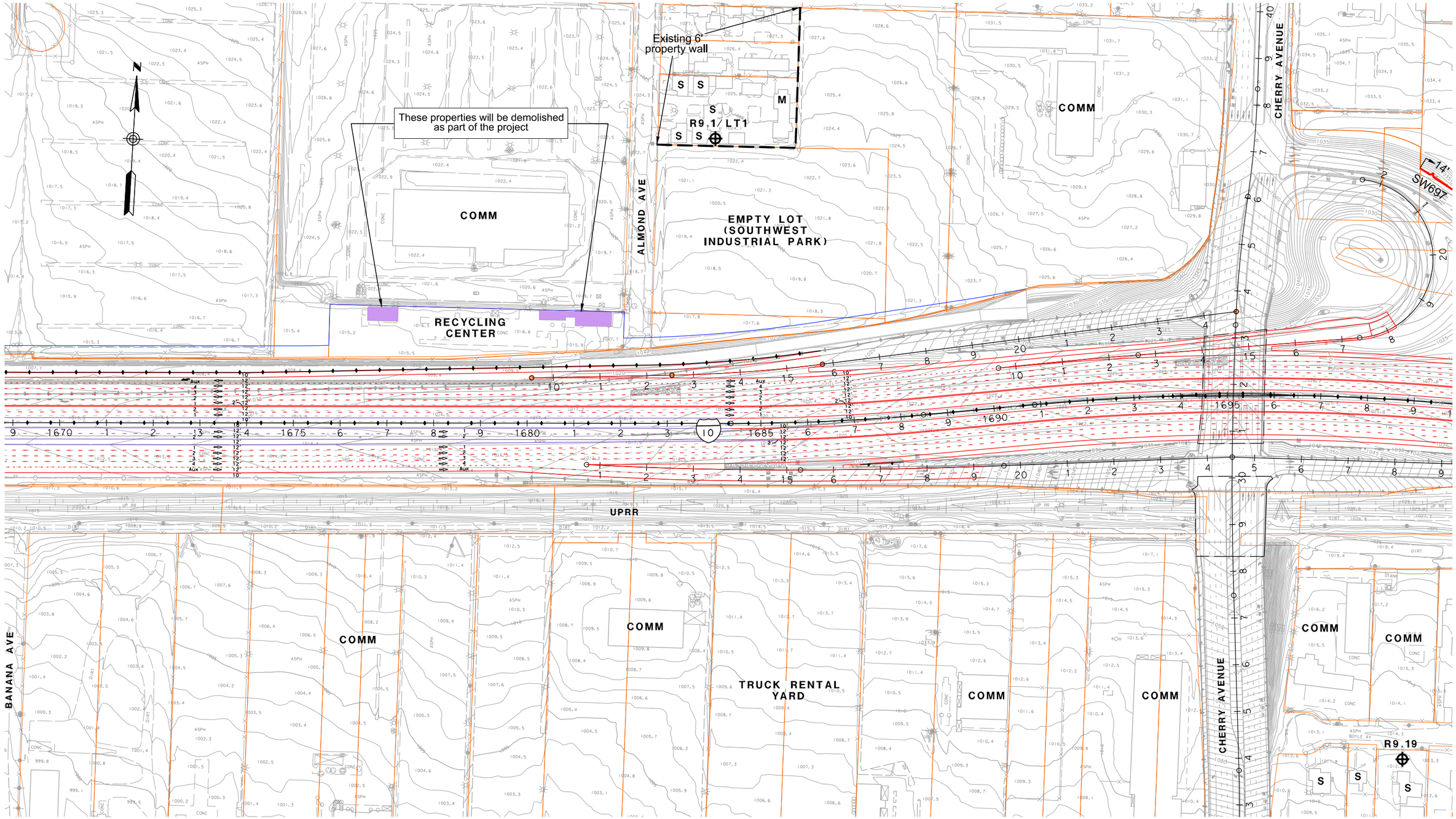
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 128



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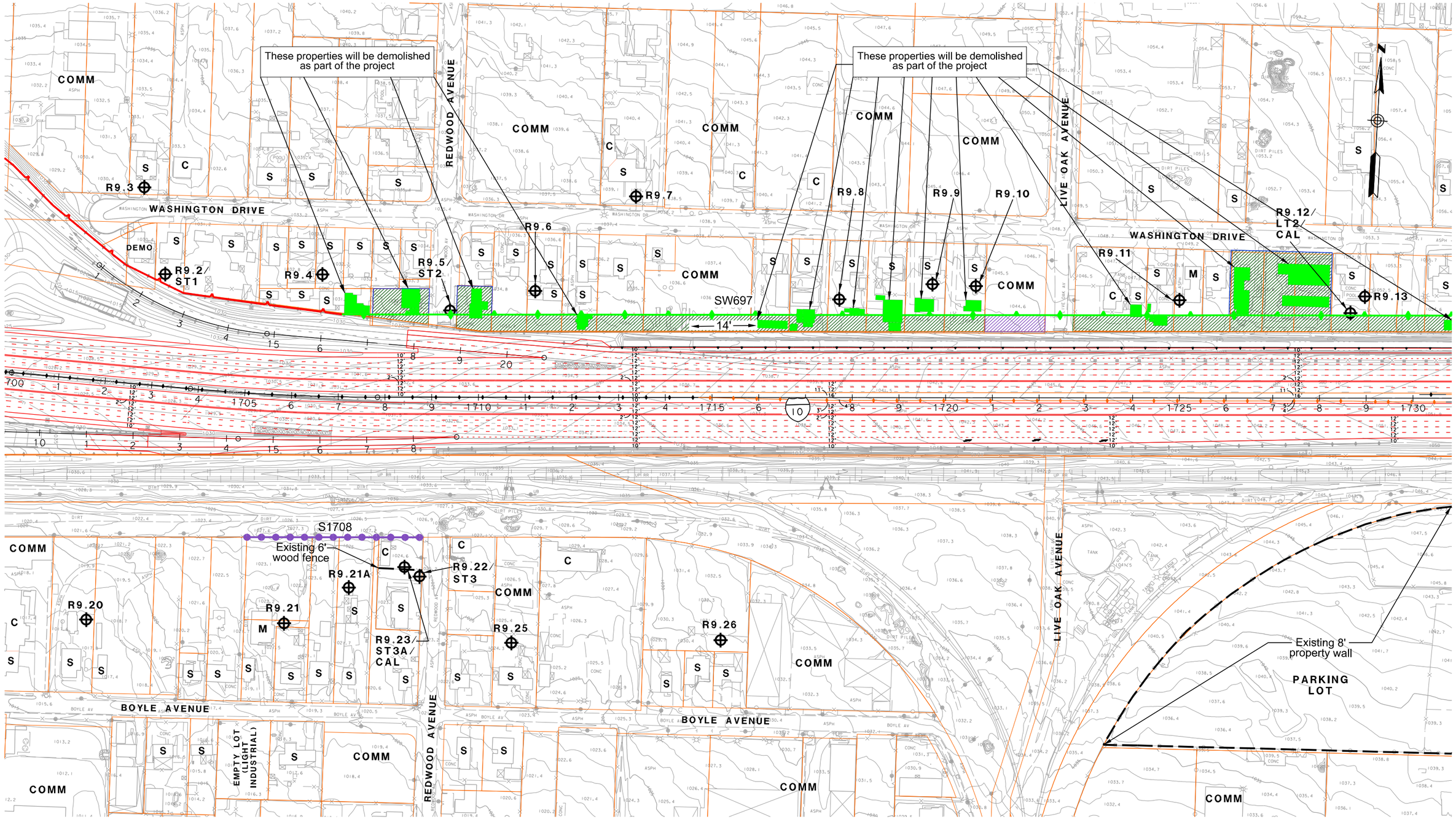
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

AUGUST 12, 2015

FIGURE 129



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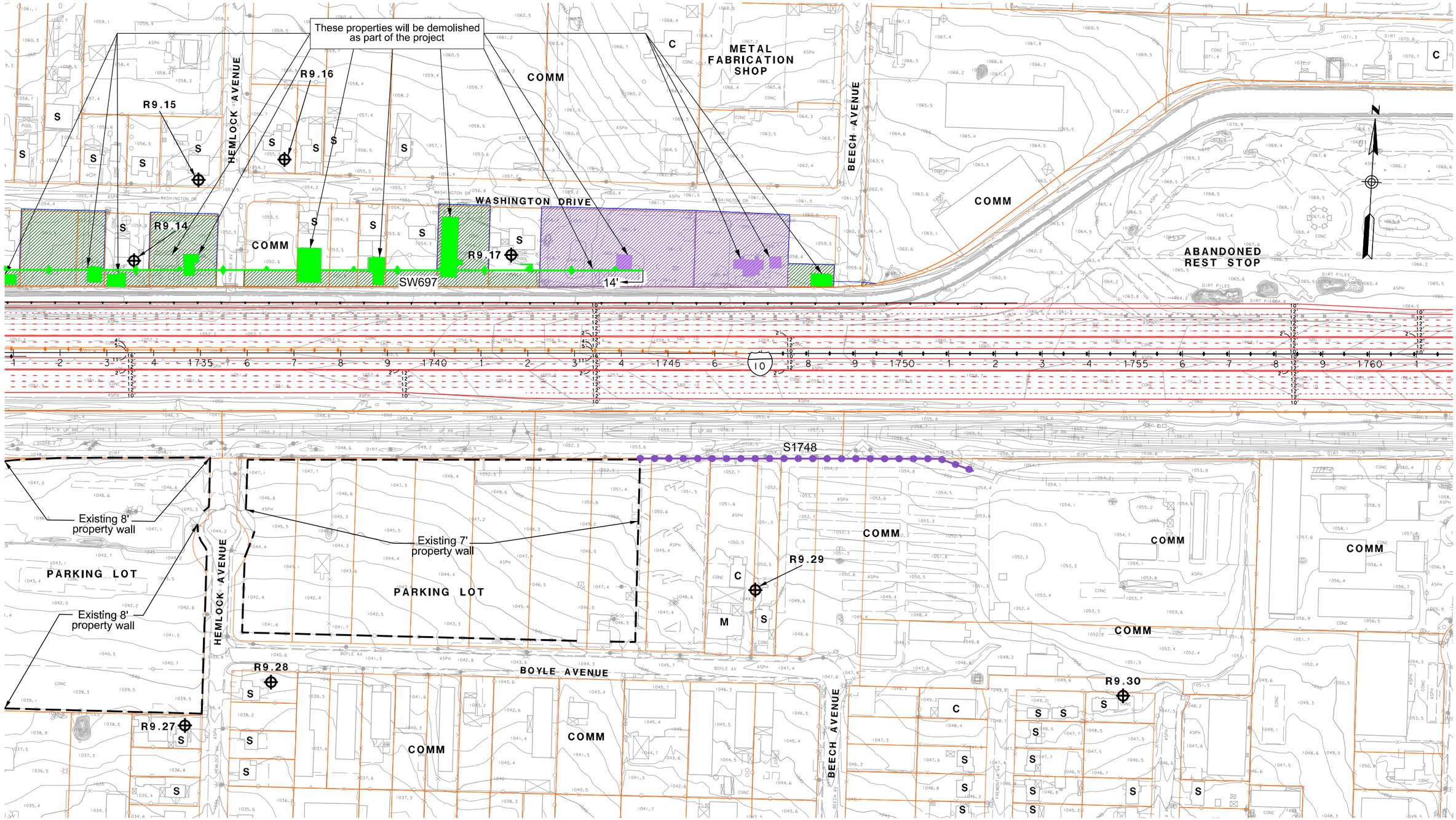
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

AUGUST 12, 2015

FIGURE 130



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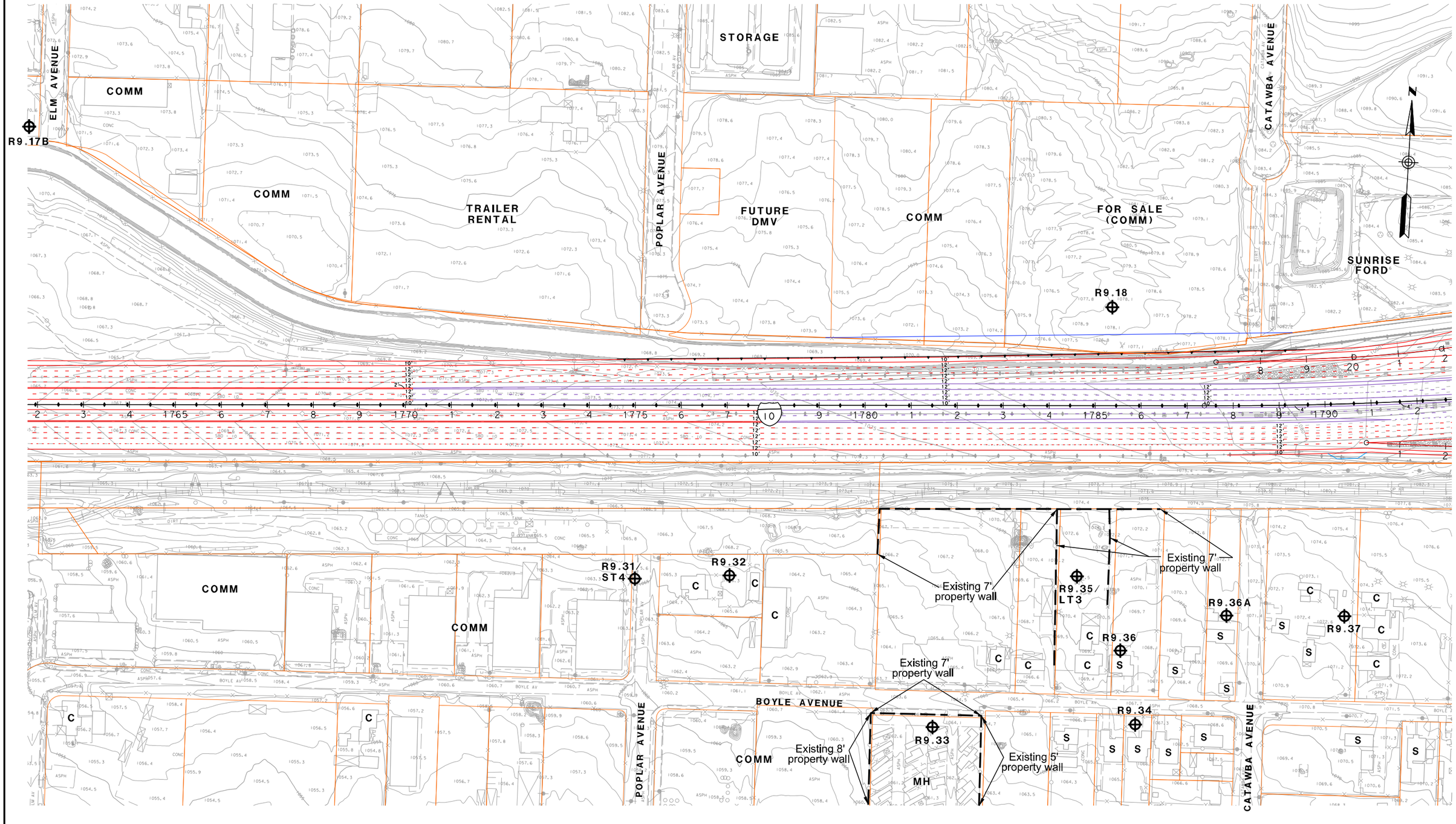
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

AUGUST 12, 2015

FIGURE 131



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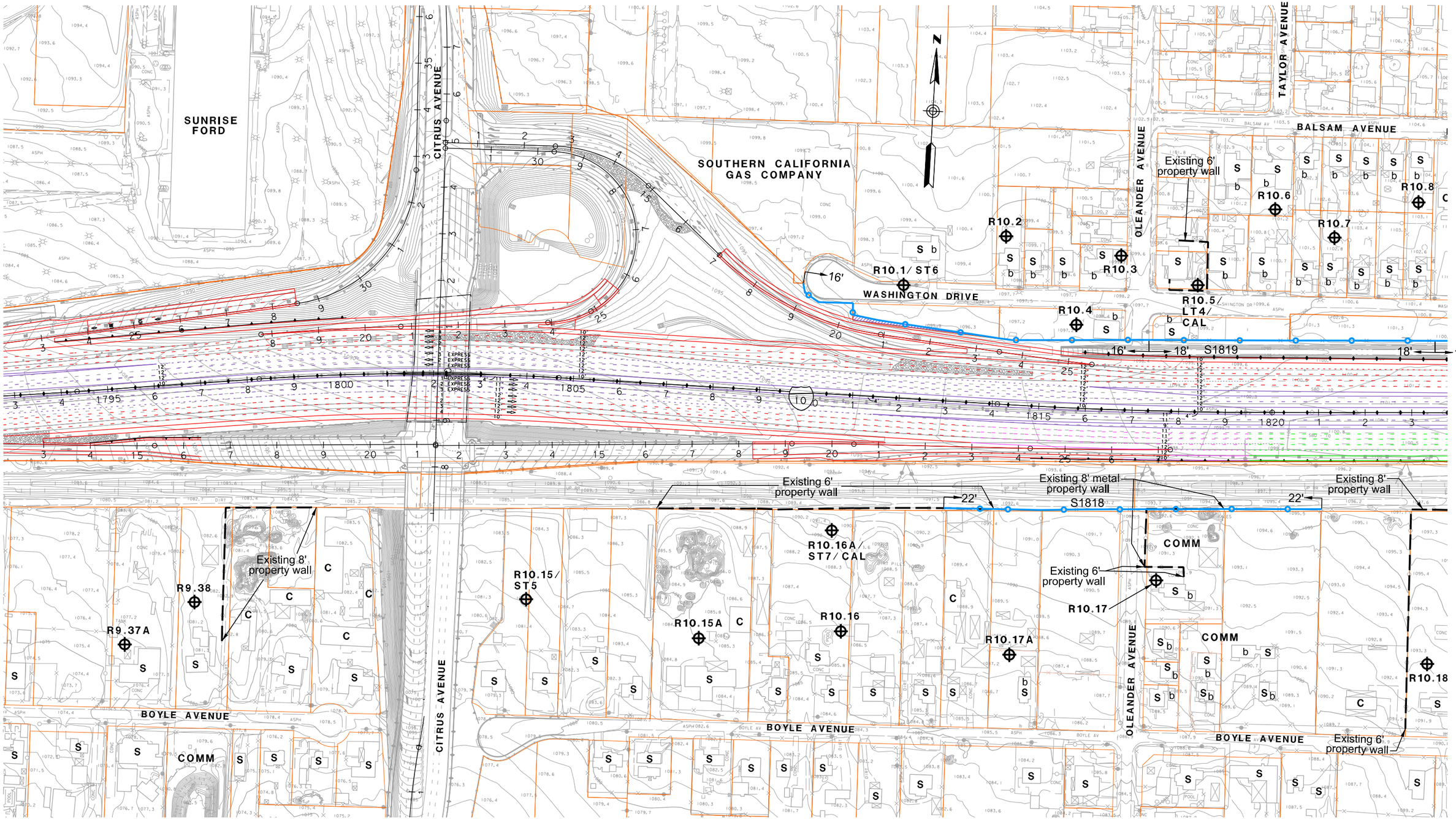
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

AUGUST 12, 2015

FIGURE 132



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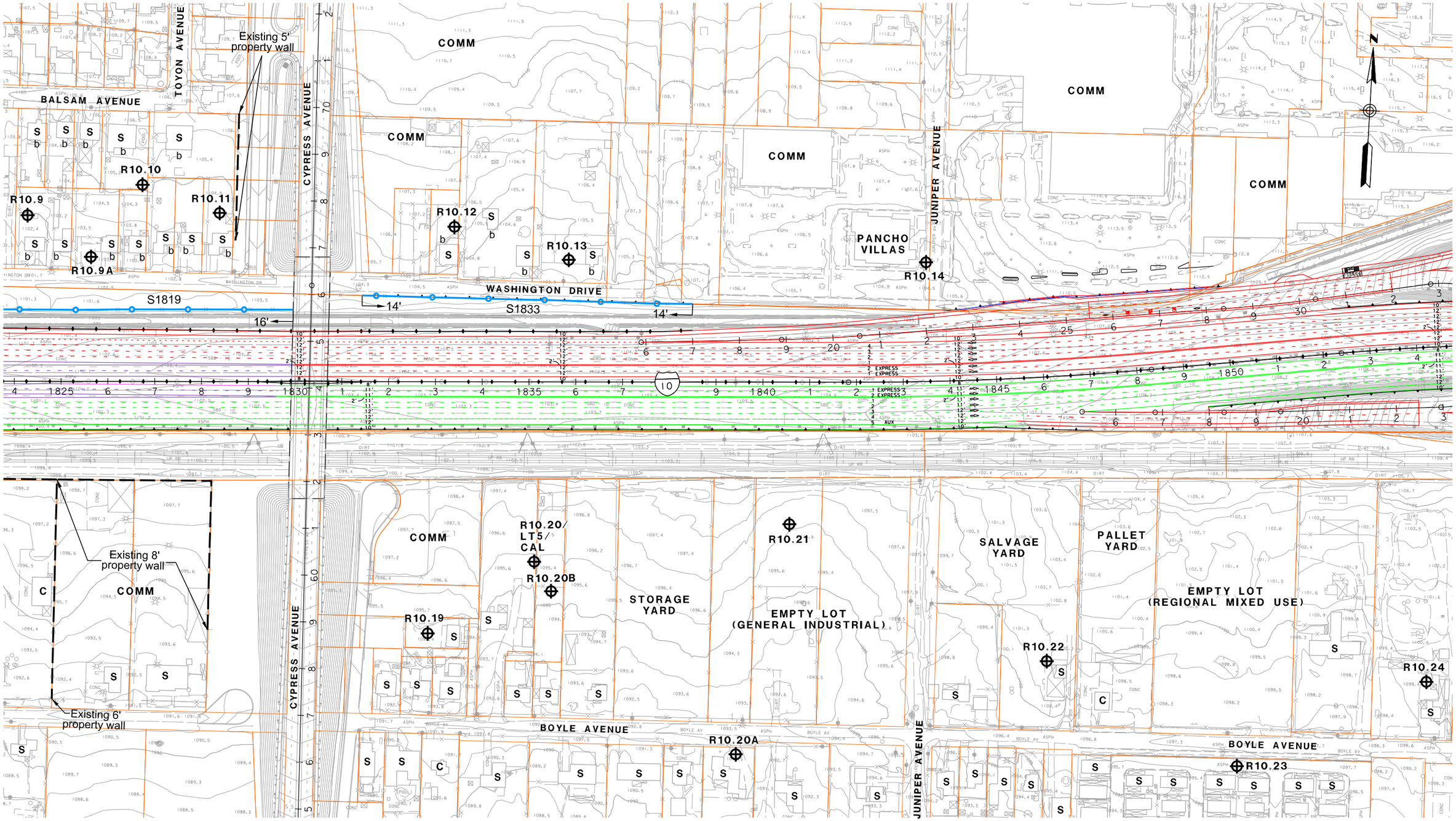
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

AUGUST 12, 2015

FIGURE 133



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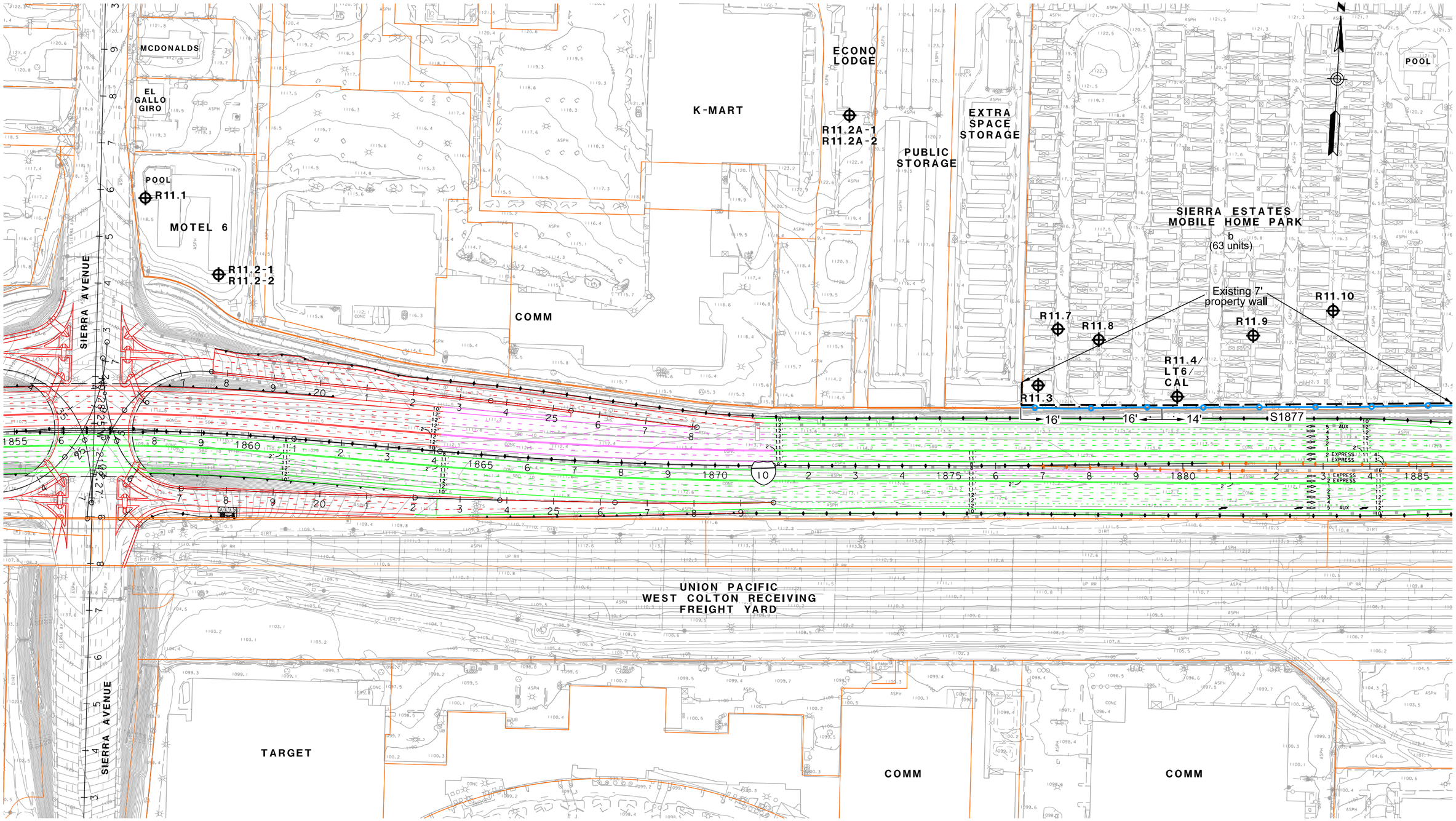
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

AUGUST 12, 2015

FIGURE 134



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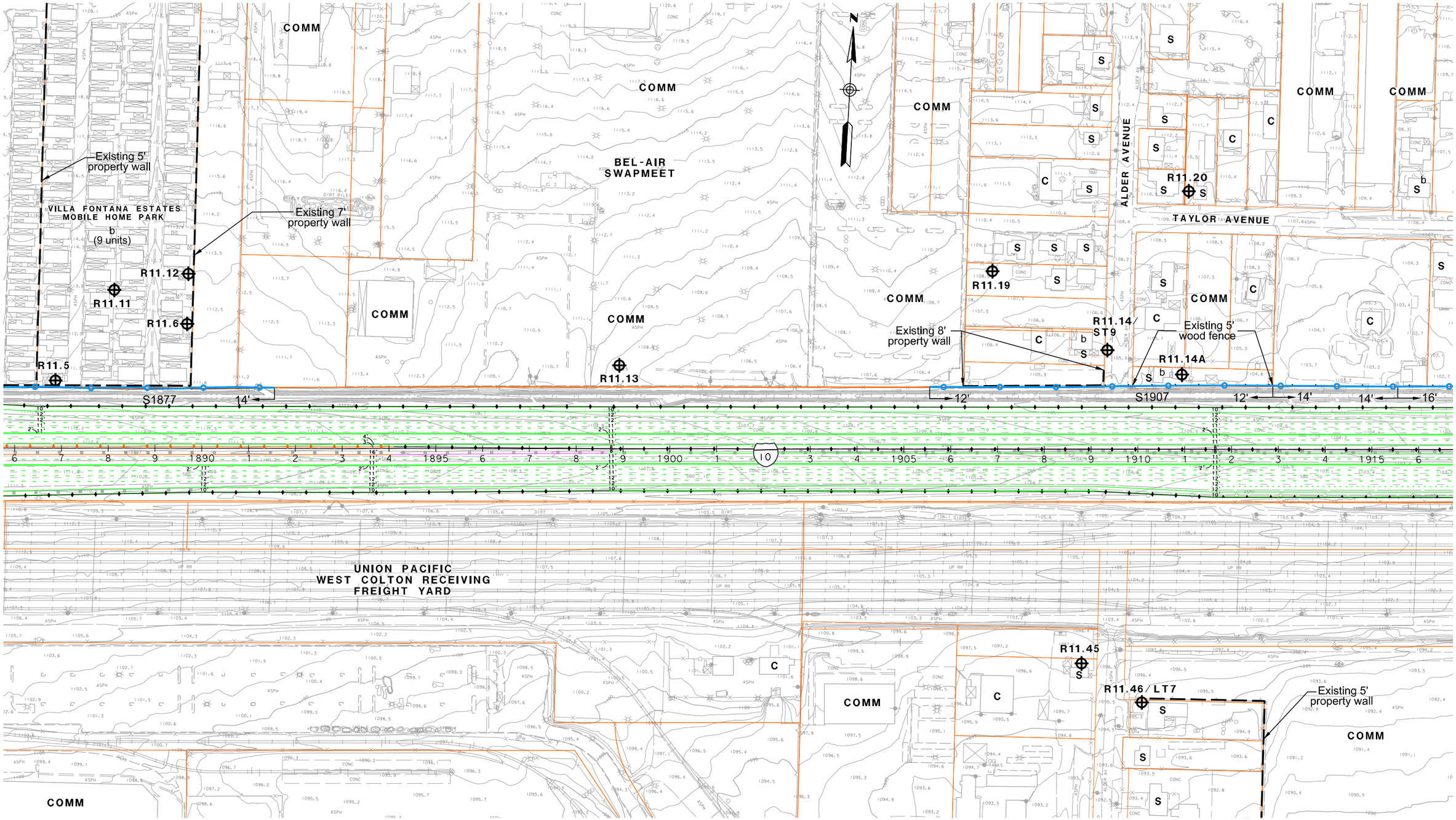
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

AUGUST 12, 2015

FIGURE 135



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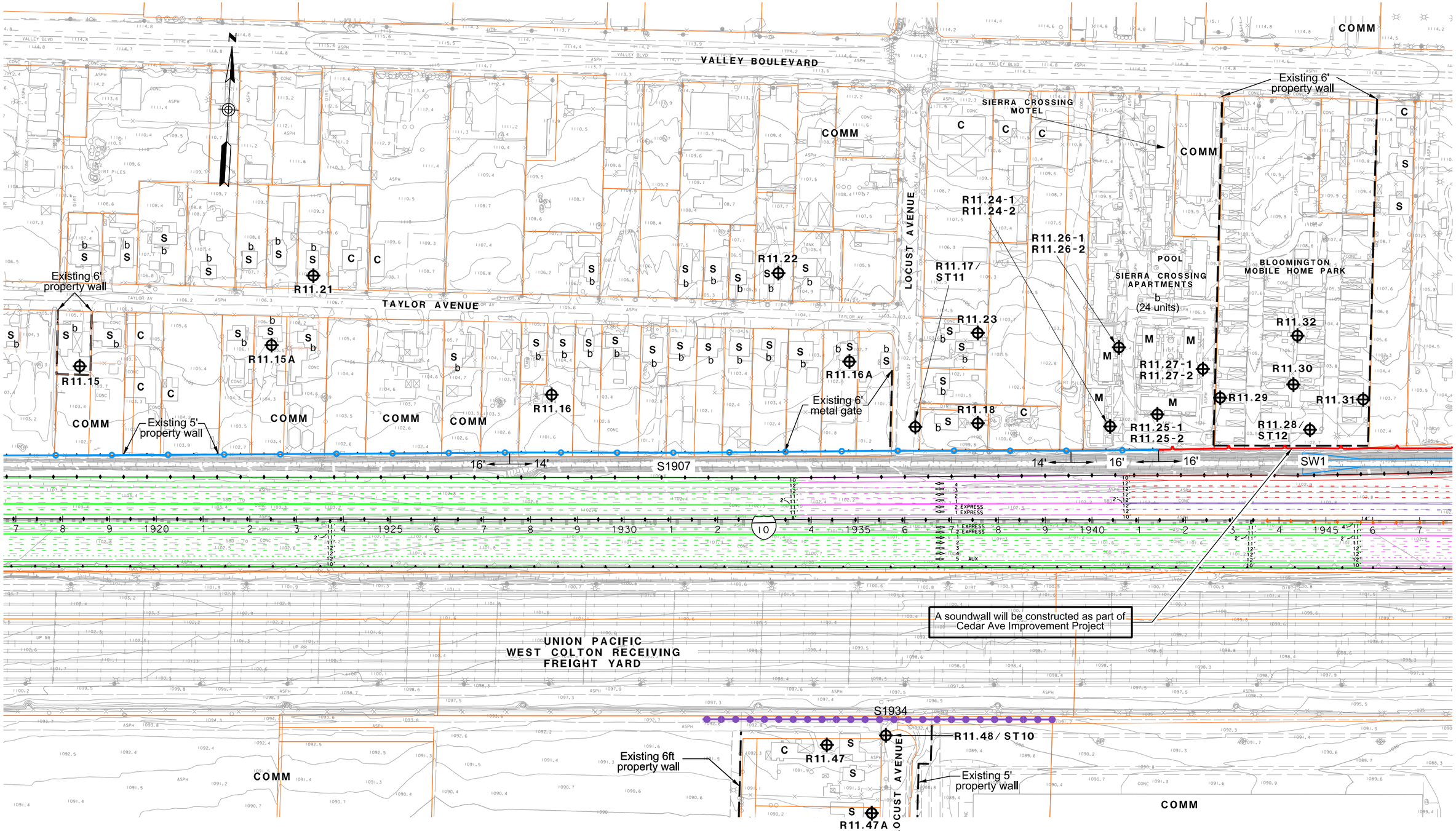
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

AUGUST 12, 2015

FIGURE 136



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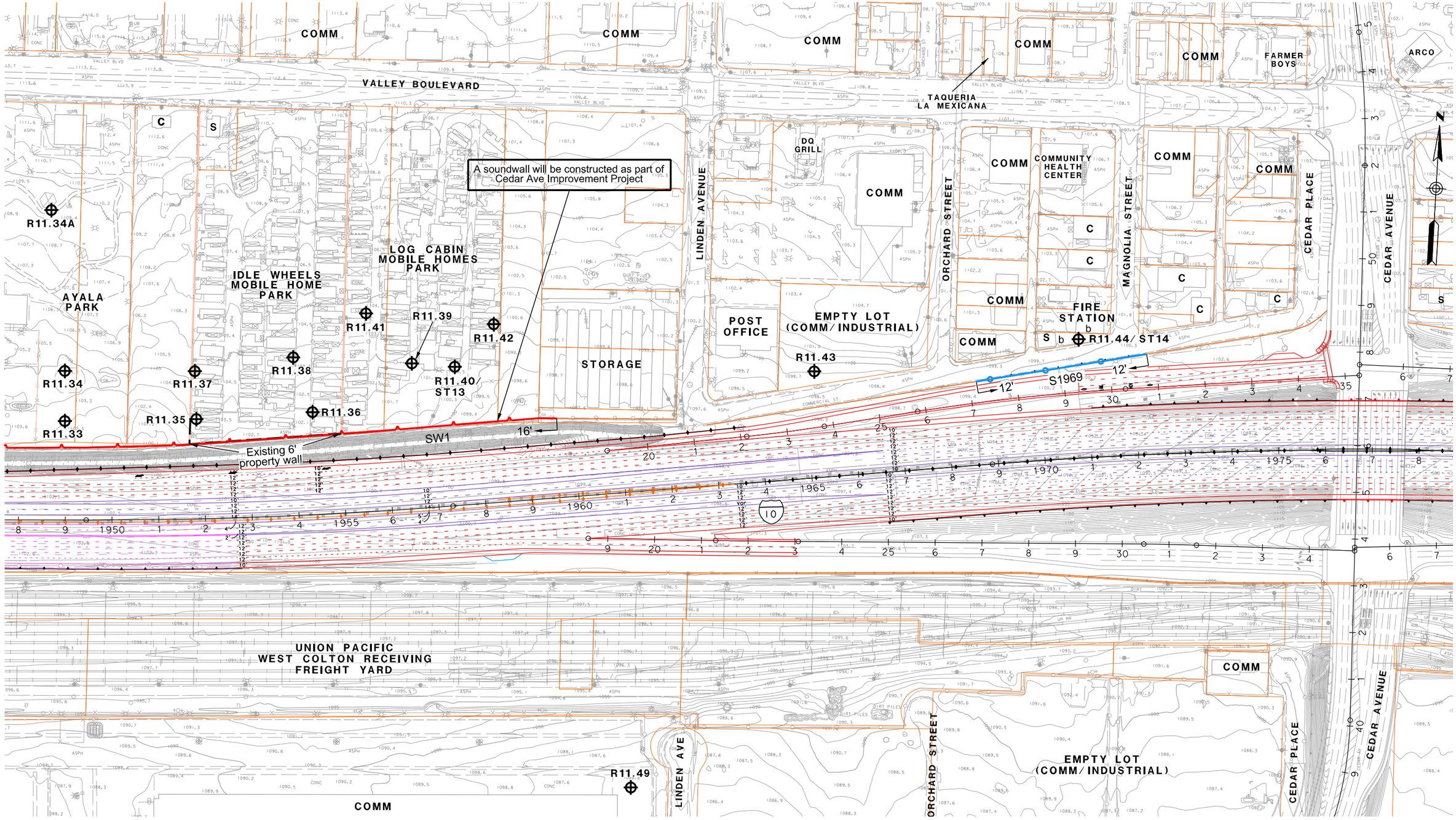
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

AUGUST 12, 2015

FIGURE 137



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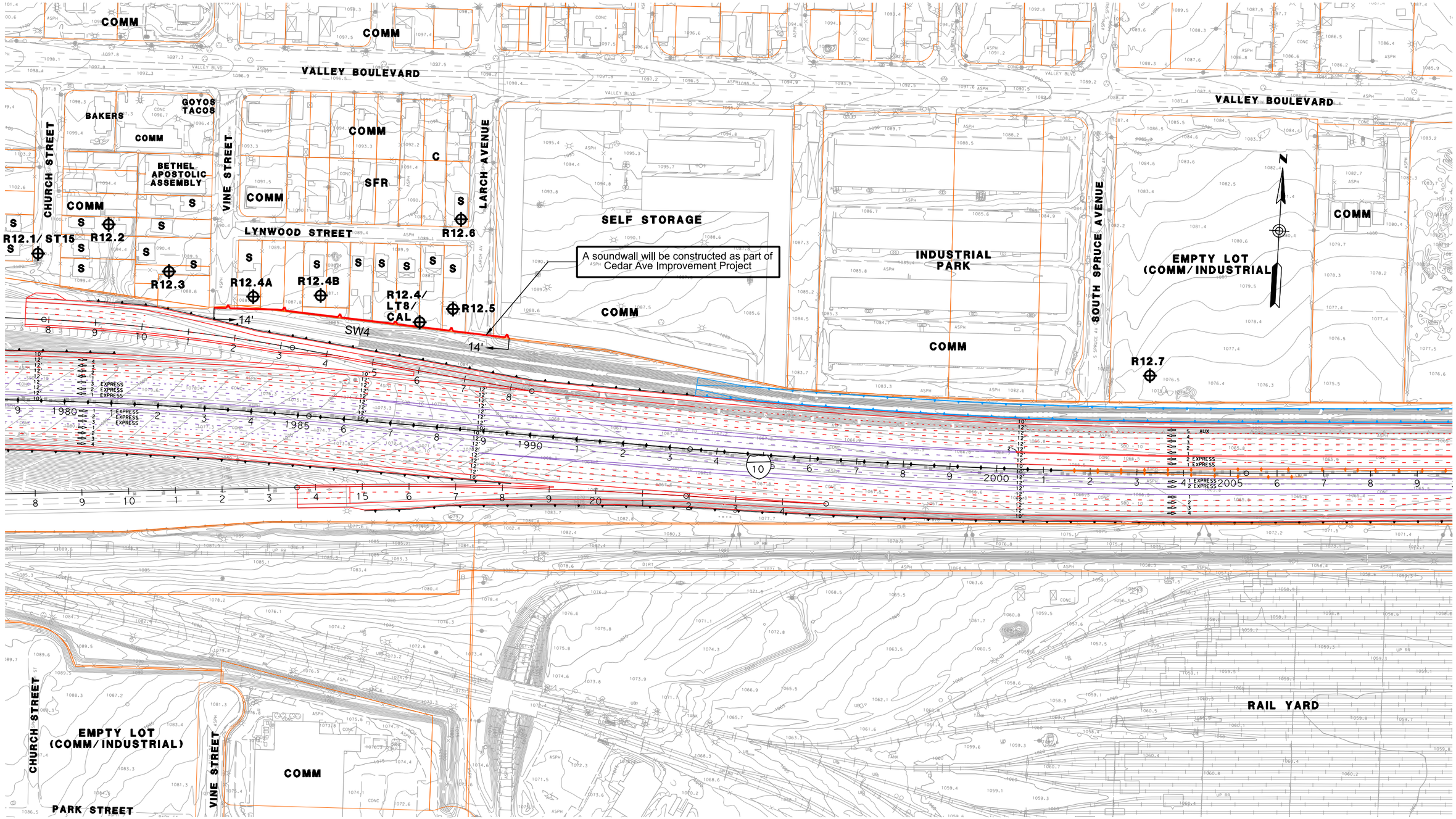
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

AUGUST 12, 2015

FIGURE 138



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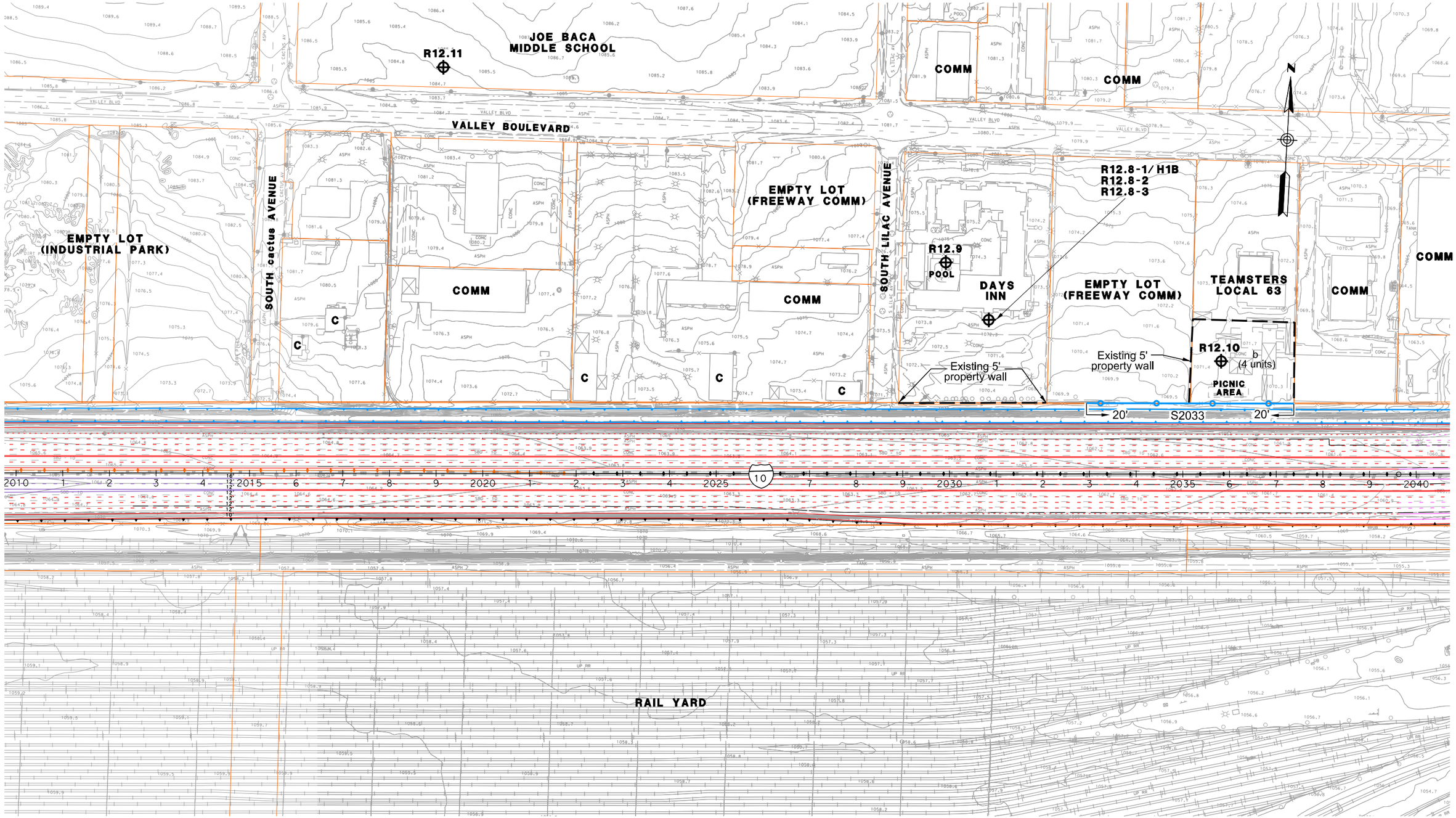
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 139



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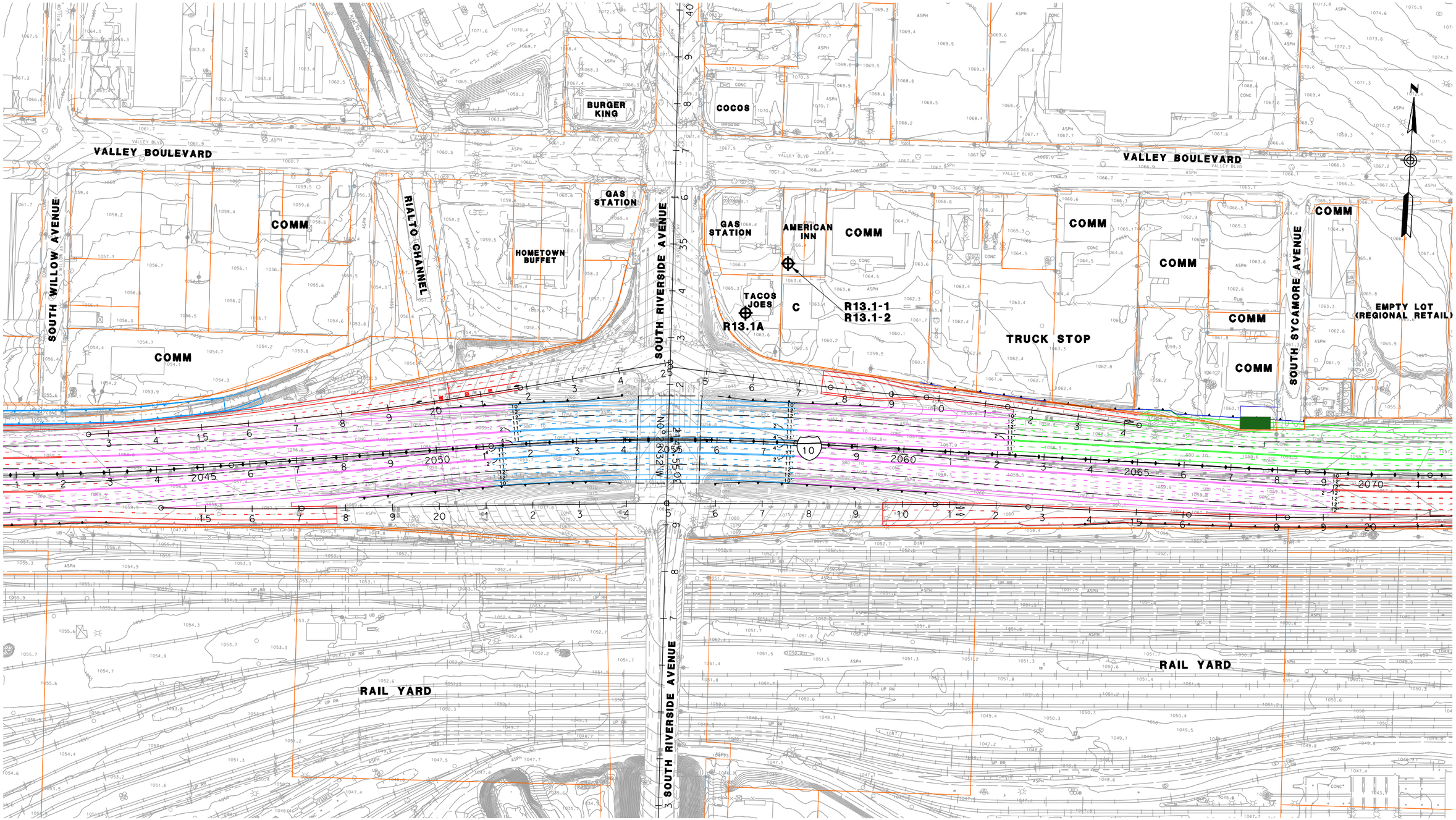
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 140



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- LT - LONG-TERM MEASUREMENT
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- SFR OR S - SINGLE FAMILY RESIDENCE
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- COMM OR C - COMMERCIAL/NO OUTDOOR USE AREA
- b - BENEFITED RESIDENCE
- HXX - IN/OUTDOOR MEASUREMENT
- EXISTING PROPERTY WALL
- EXISTING SOUNDWALL
- PROPOSED SOUNDWALL
- REPLACEMENT IN KIND SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER
- DRAINAGE RETAINING WALL
- NON-REASONABLE SOUNDWALL

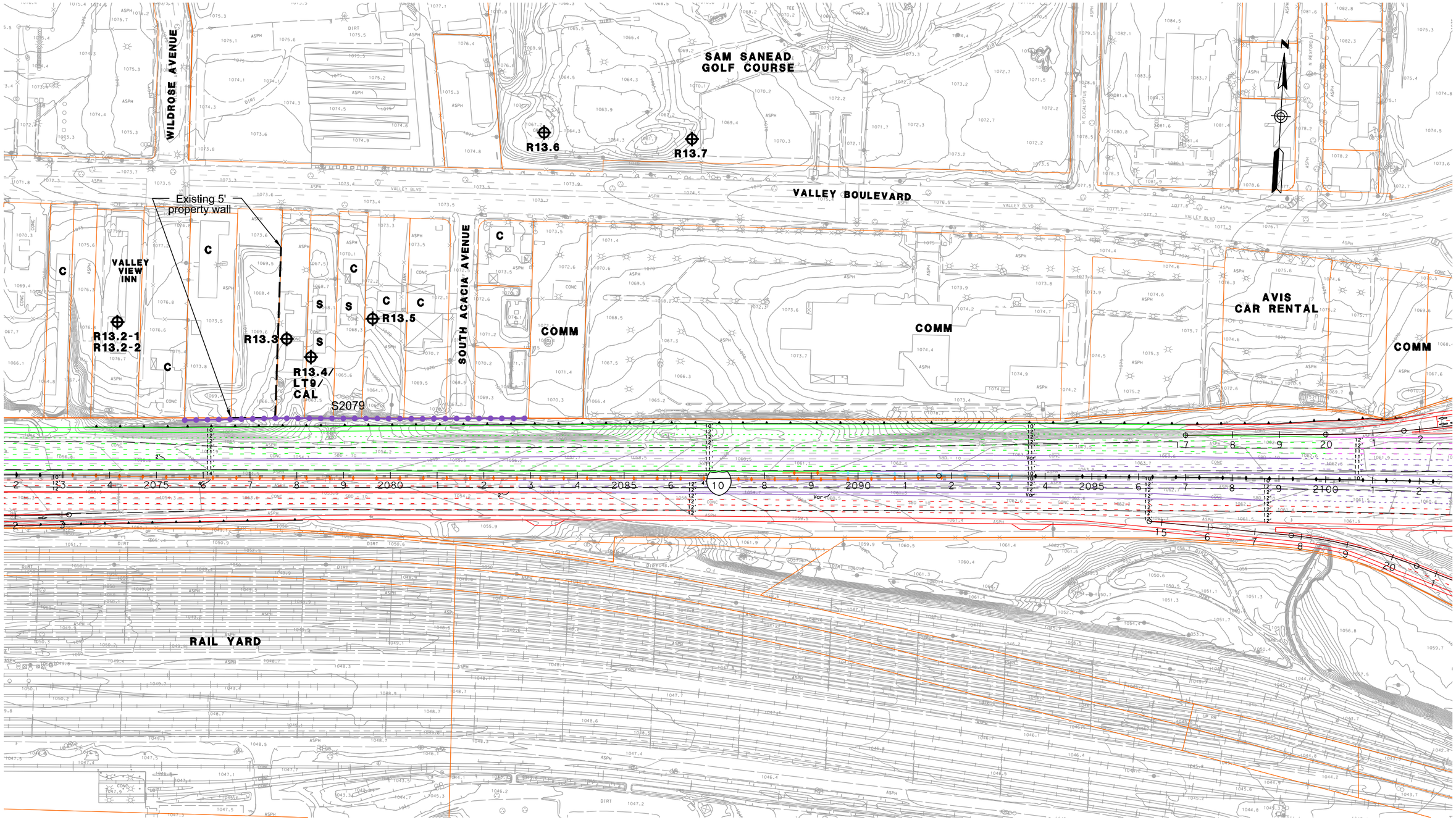
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 141



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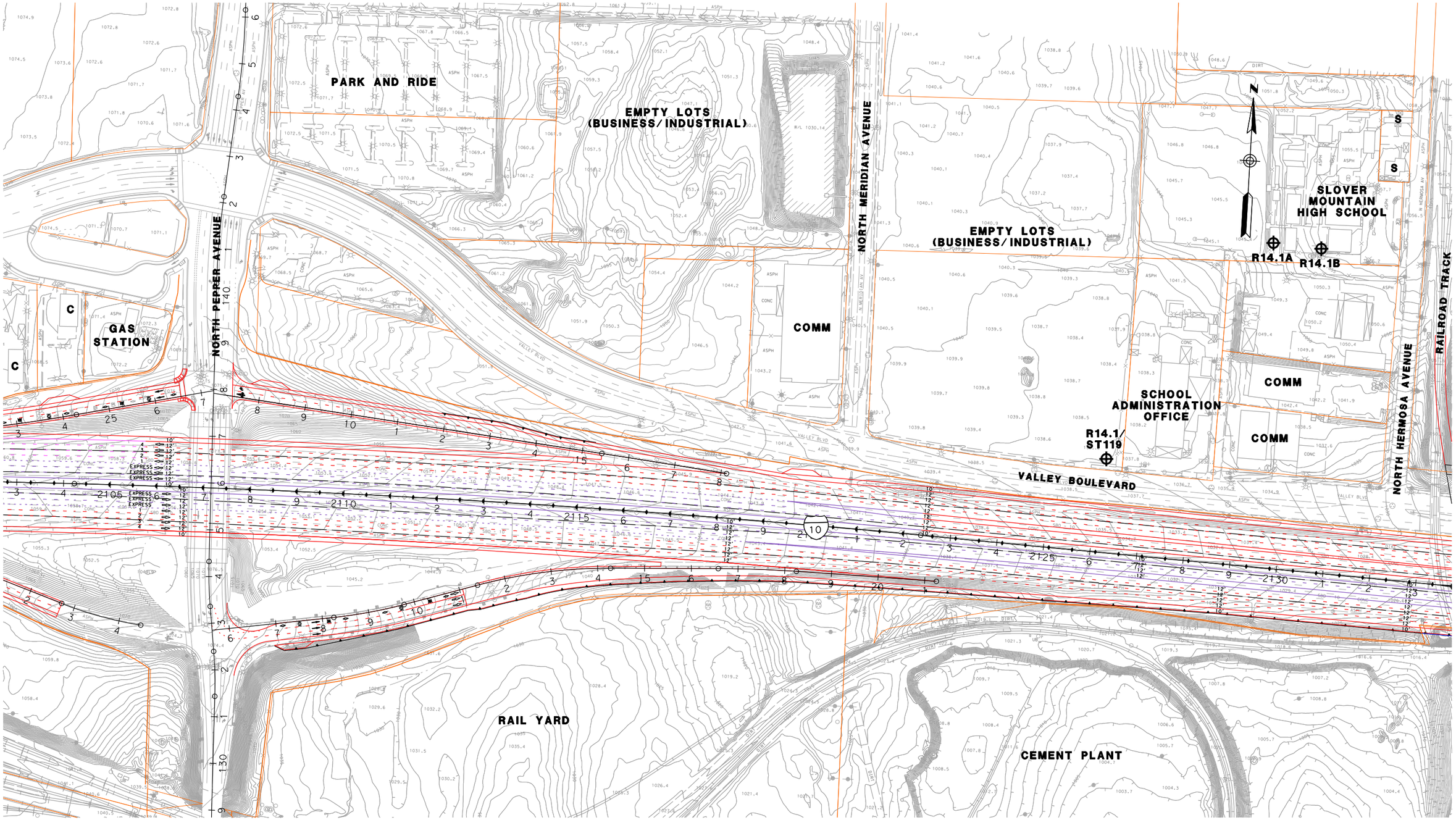
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 142



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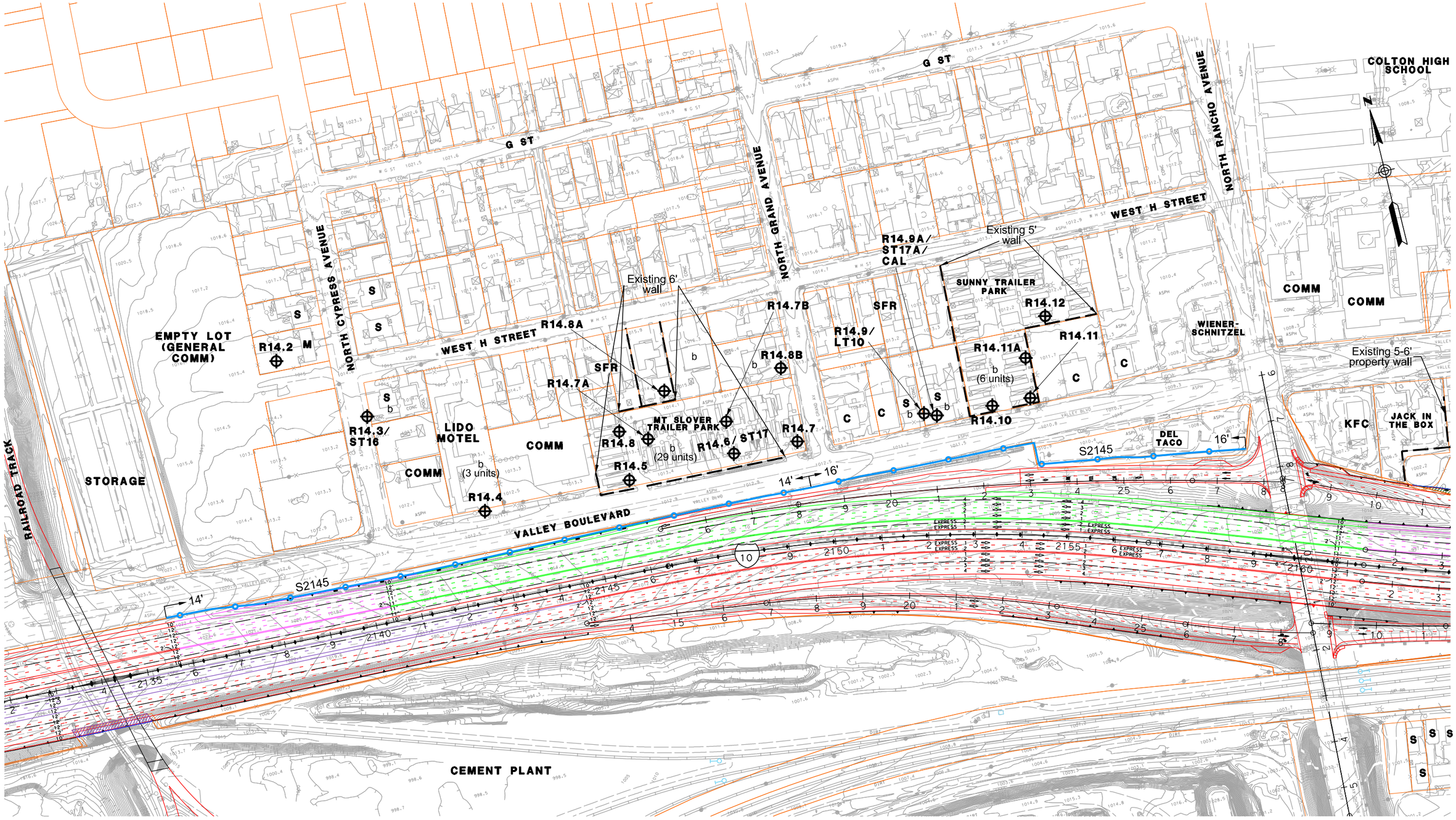
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 143



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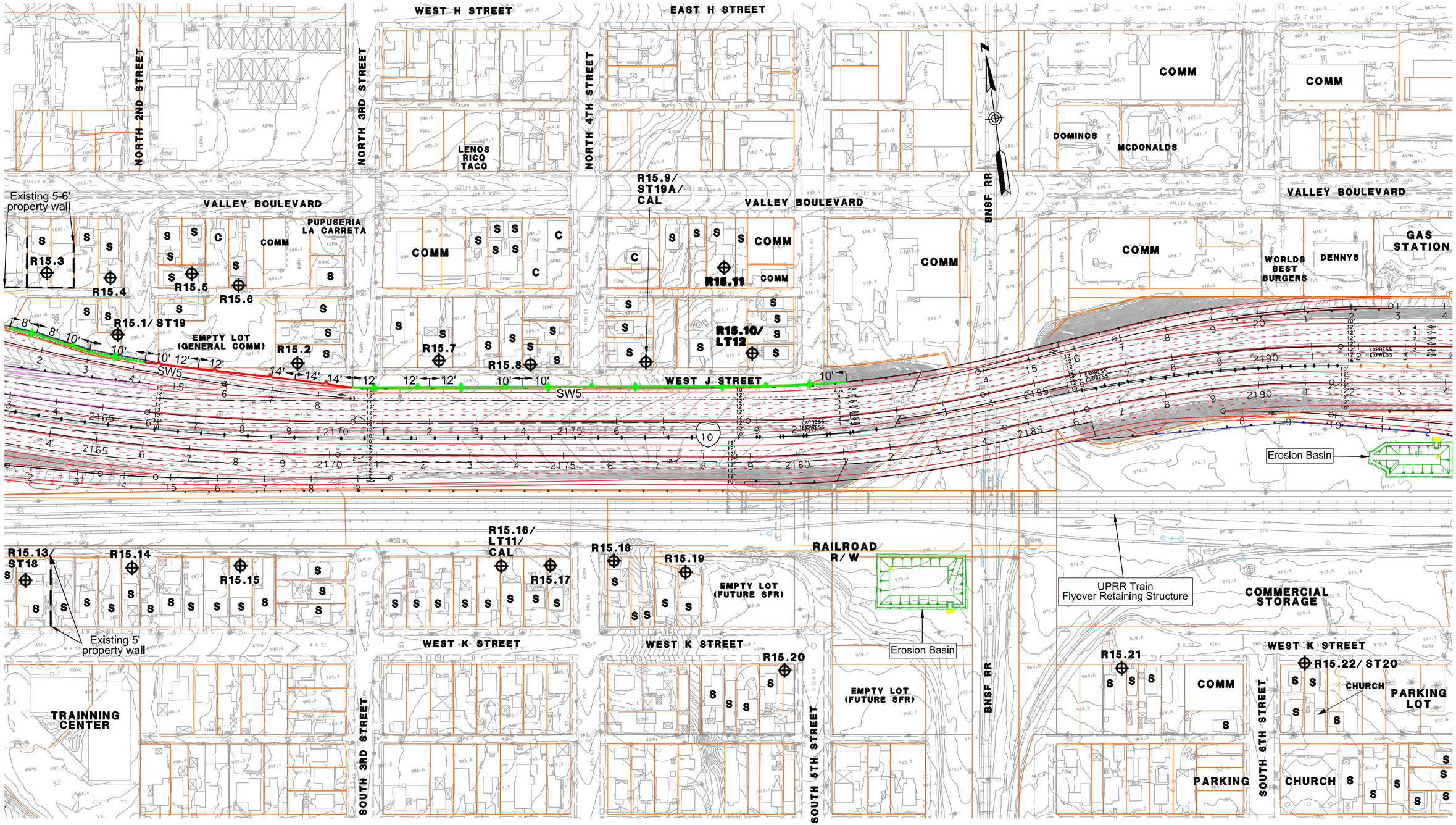
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 144



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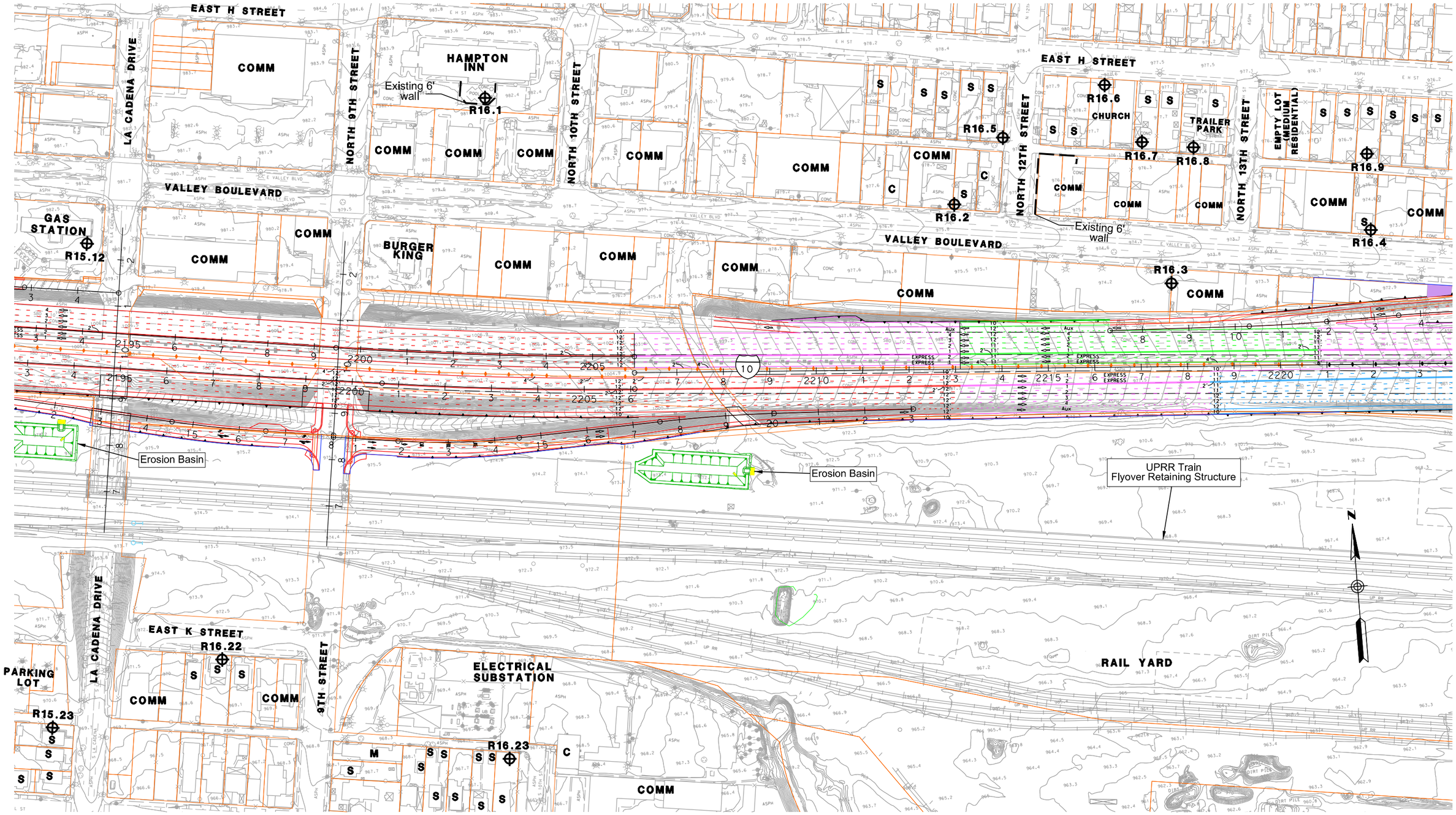
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 145



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I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

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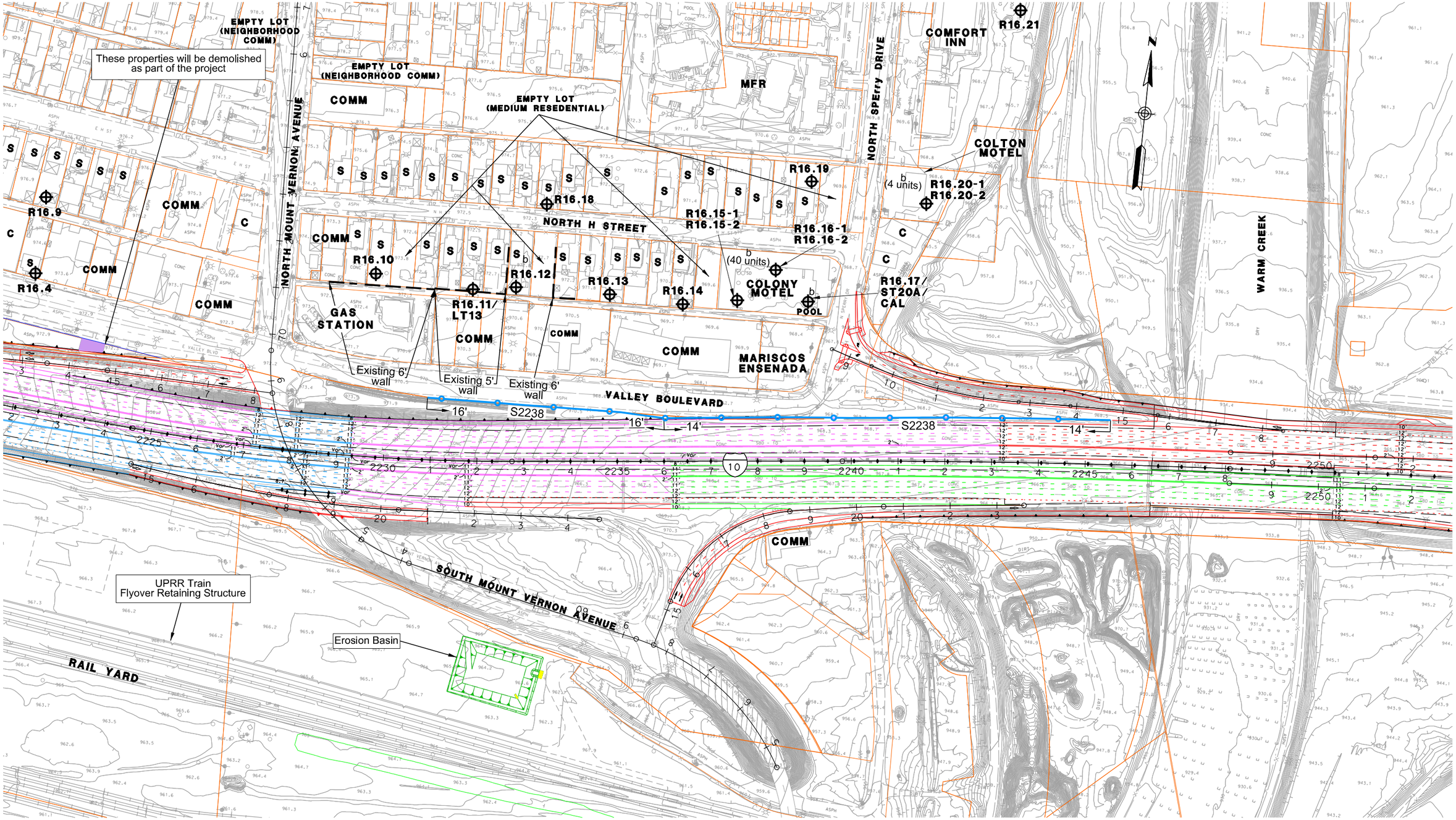

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I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

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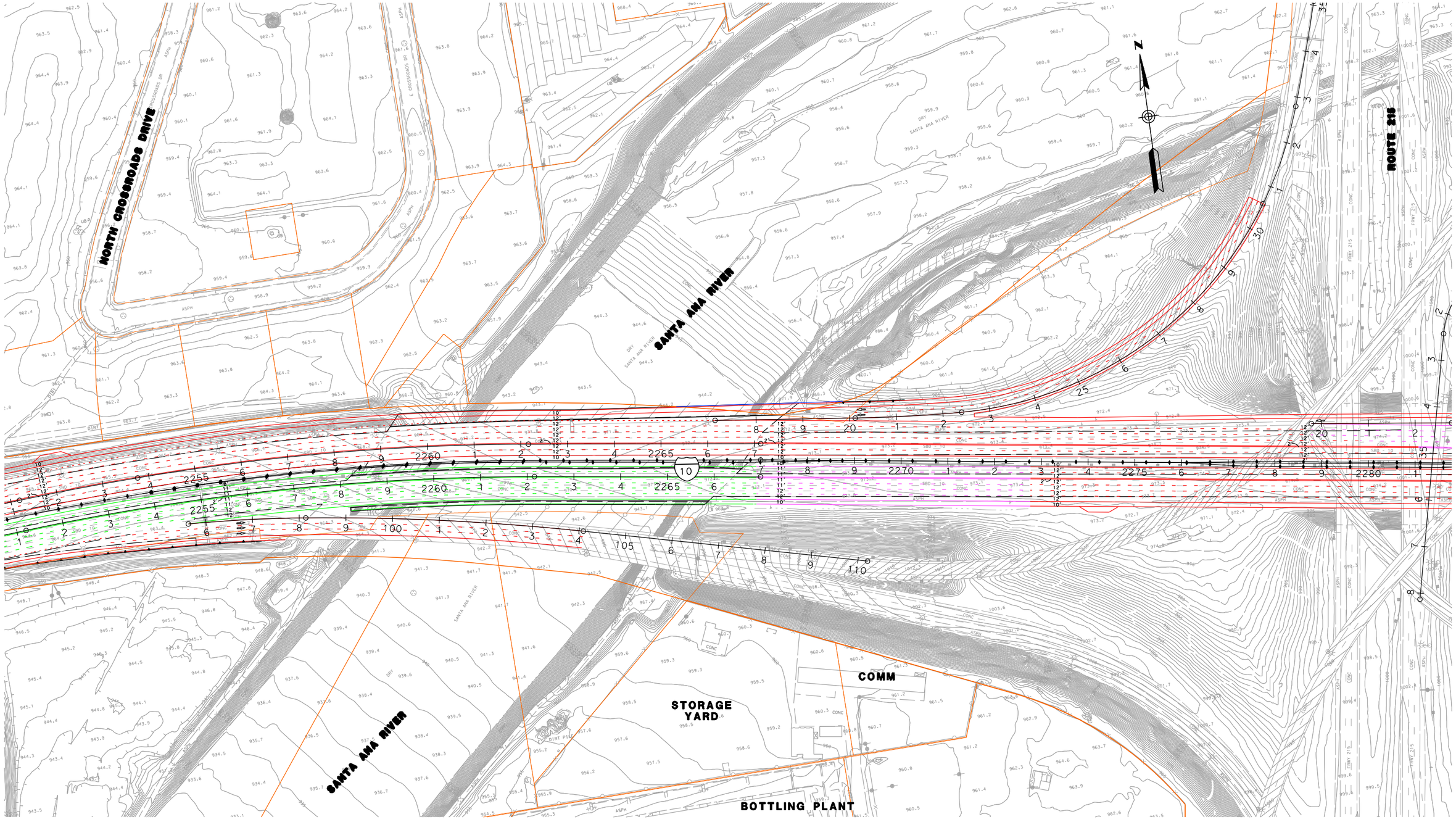

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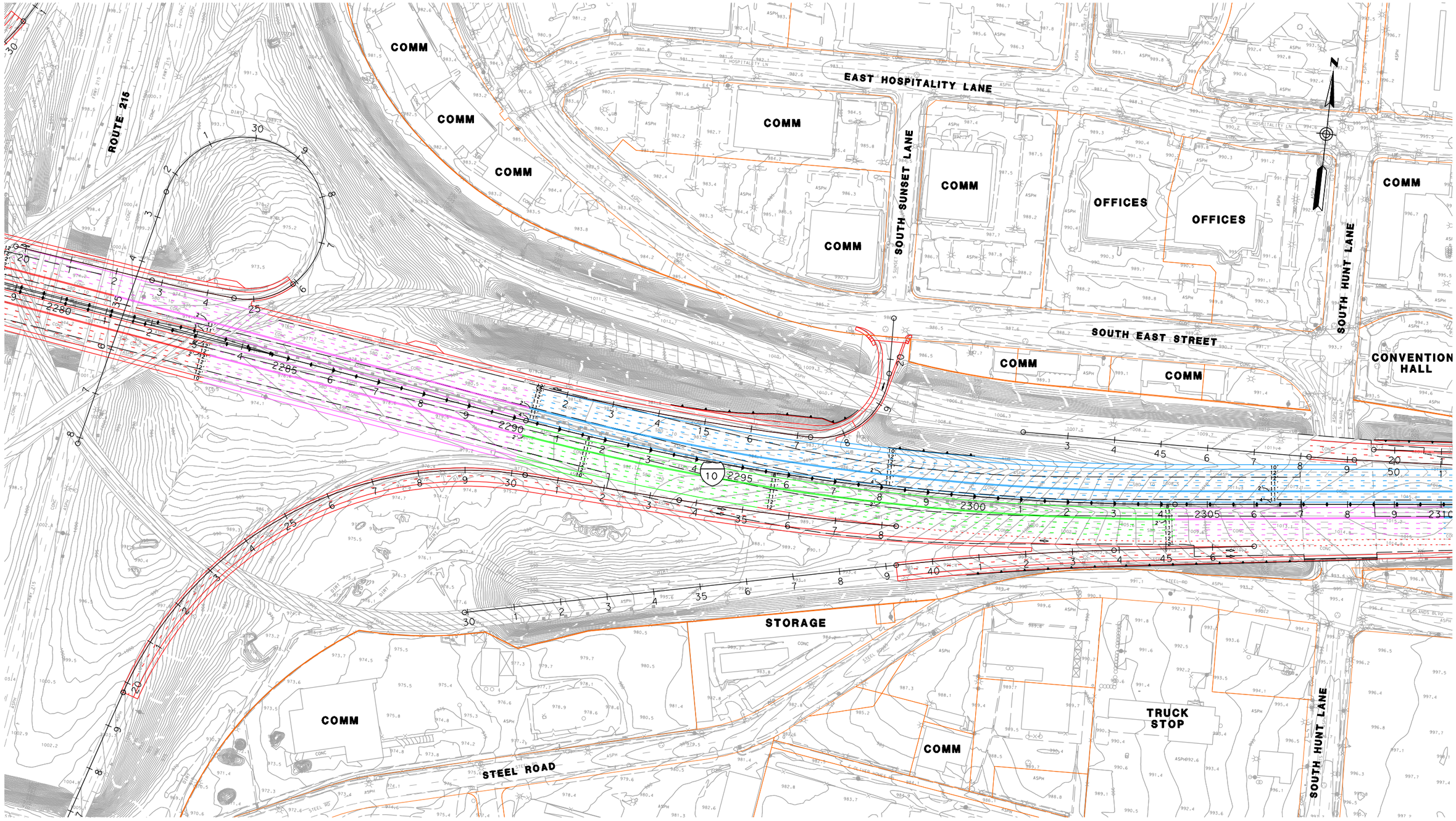
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 148



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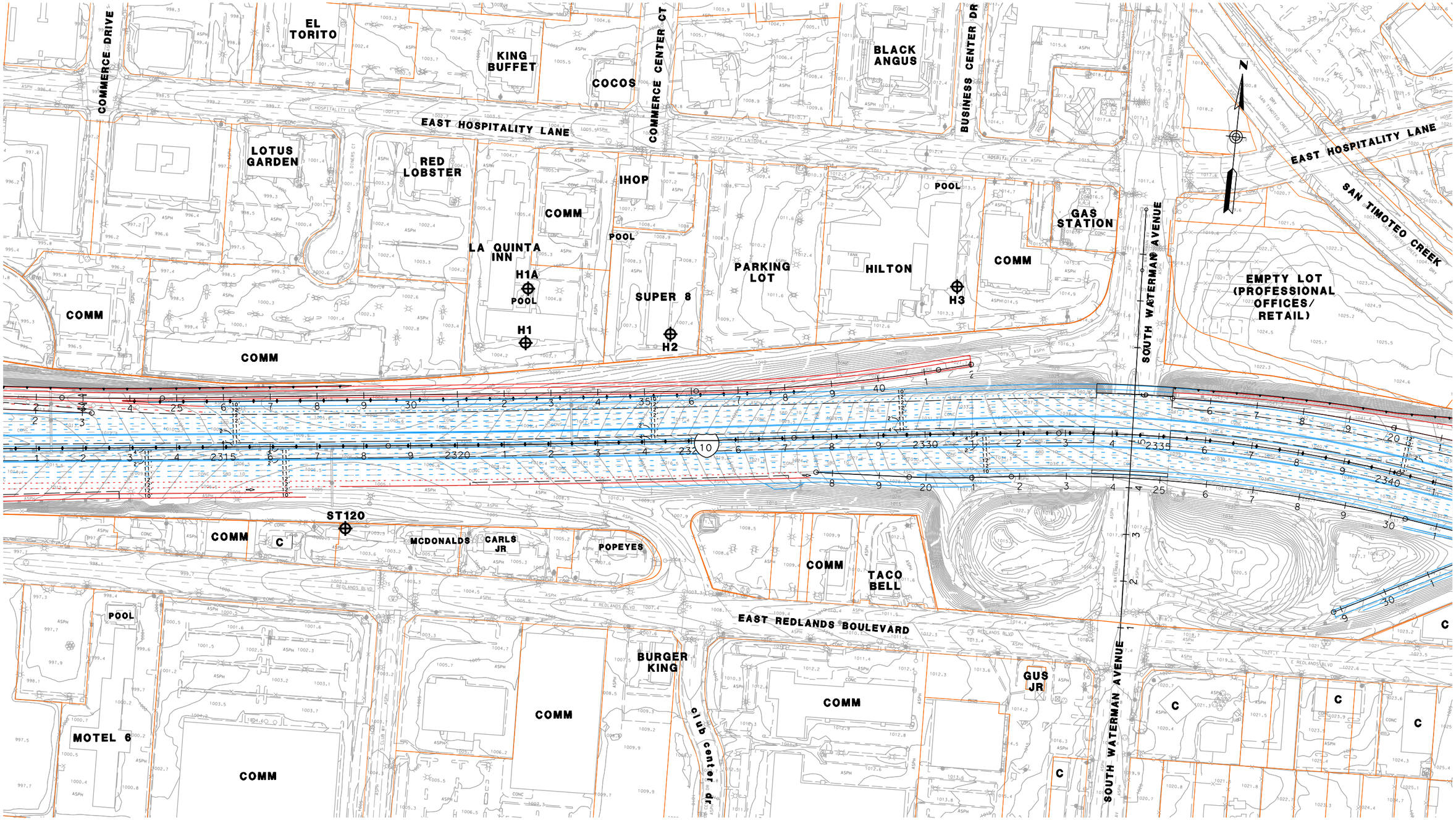
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 149



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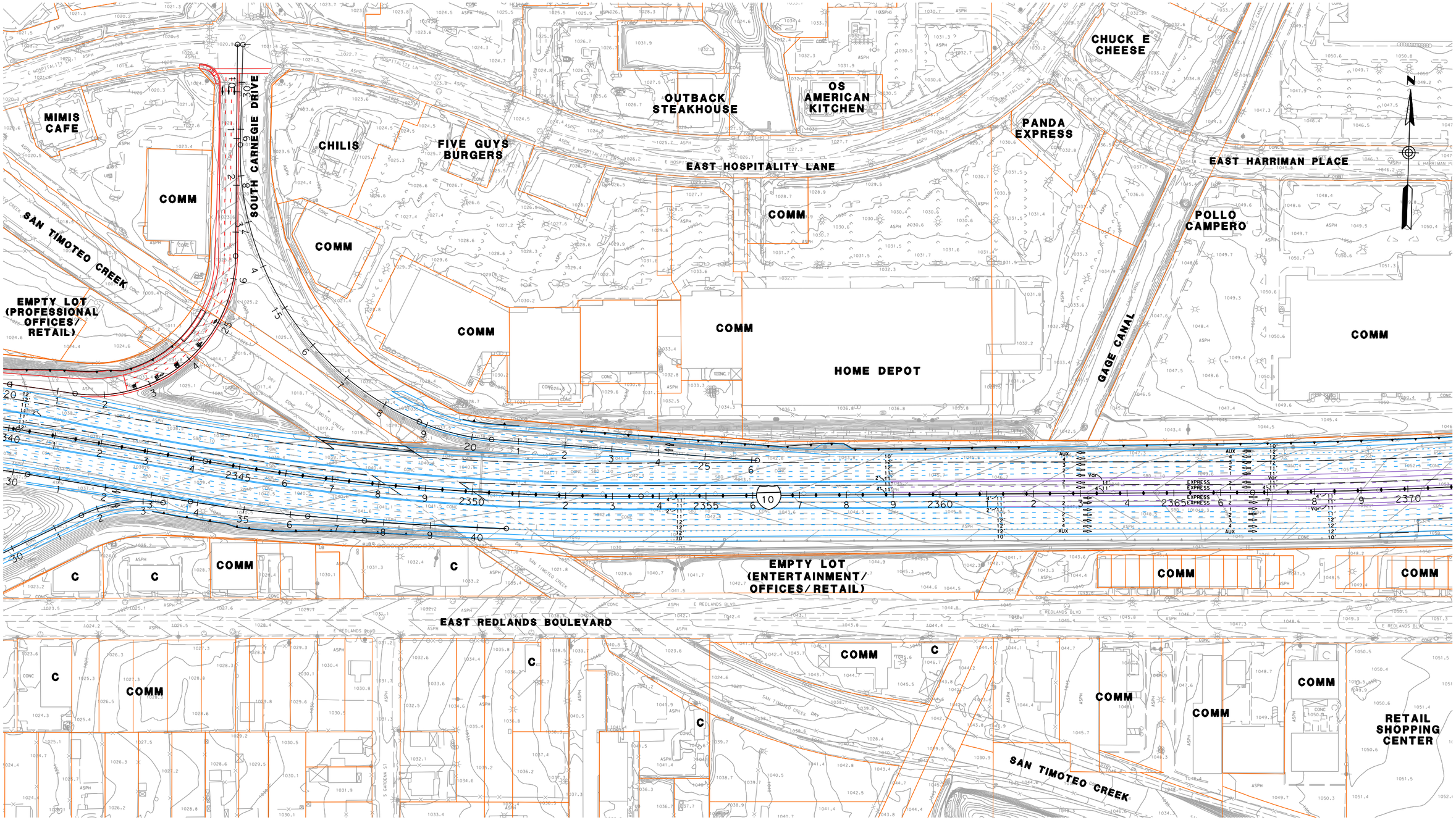
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 150



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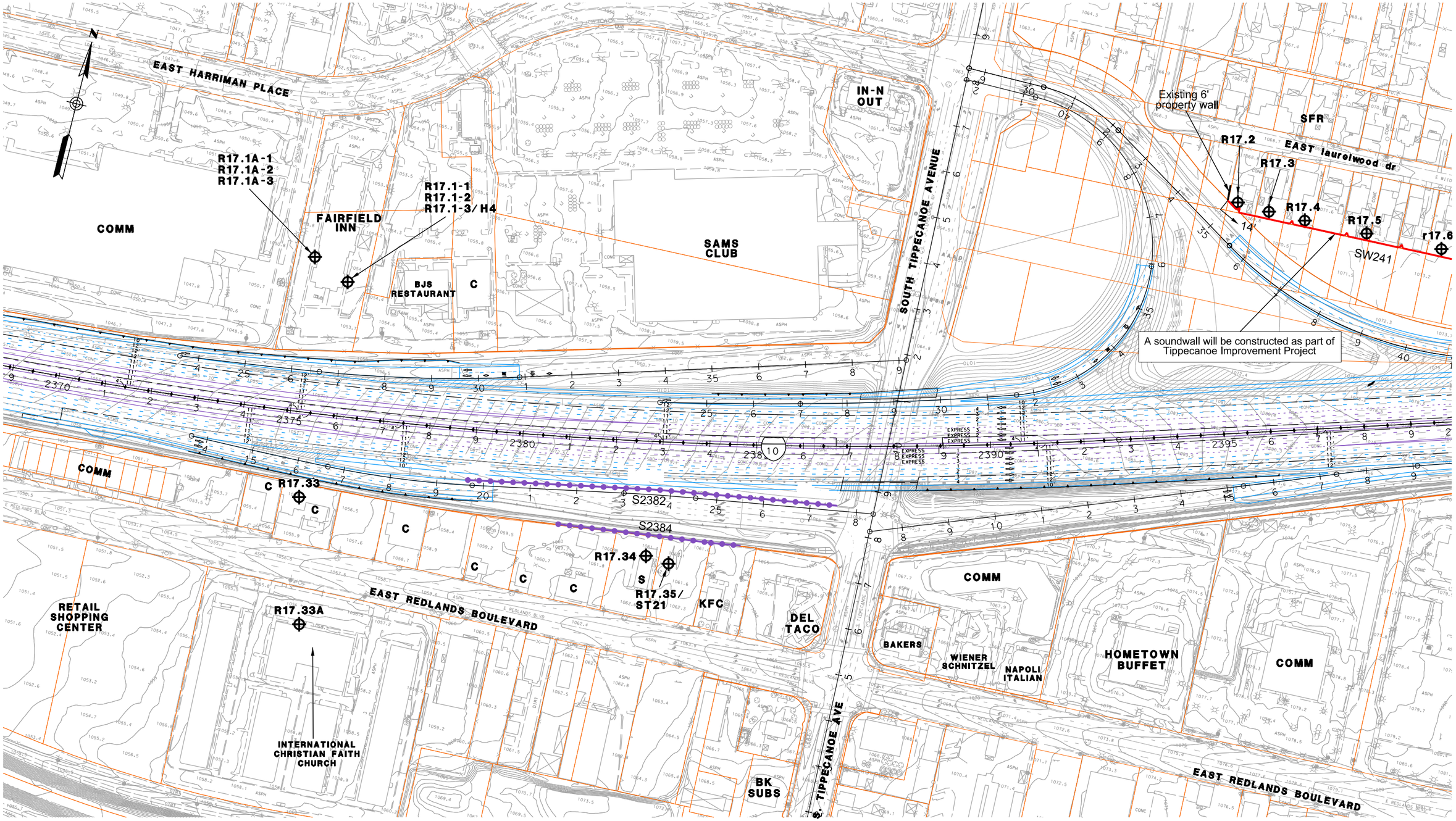
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 151



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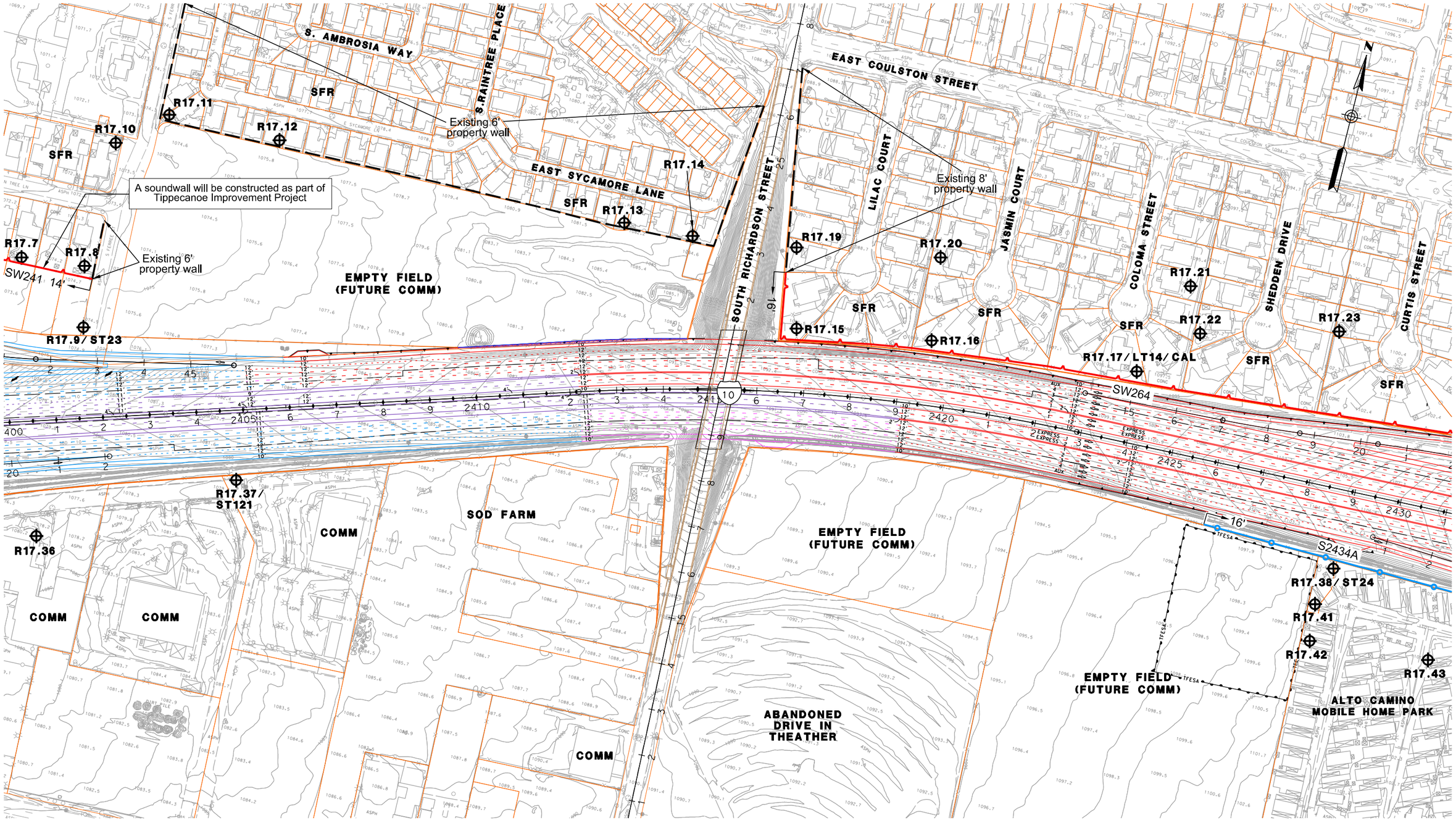
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 152



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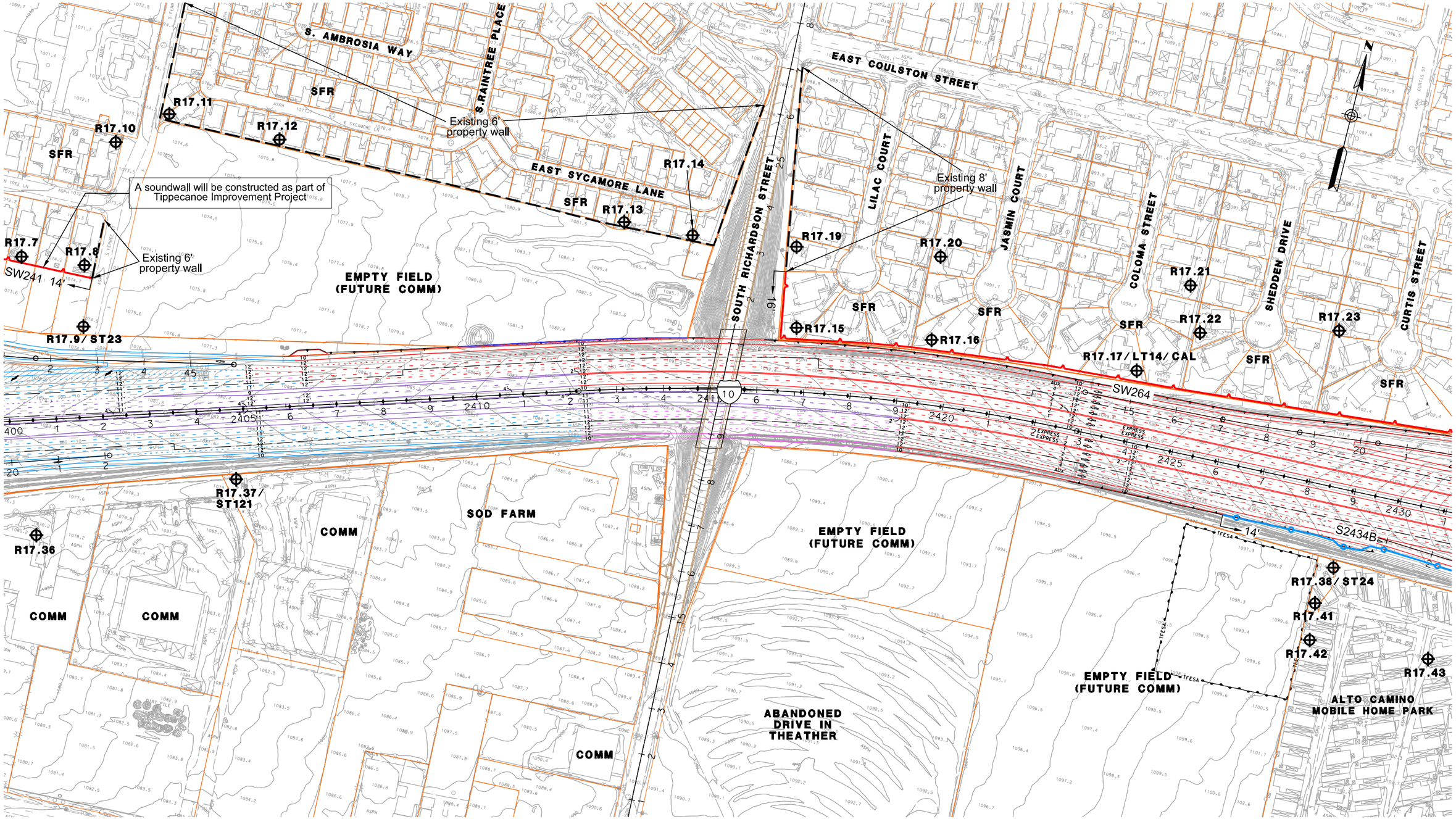
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS
(OPTION 1)

JULY 1, 2015

FIGURE 153-1



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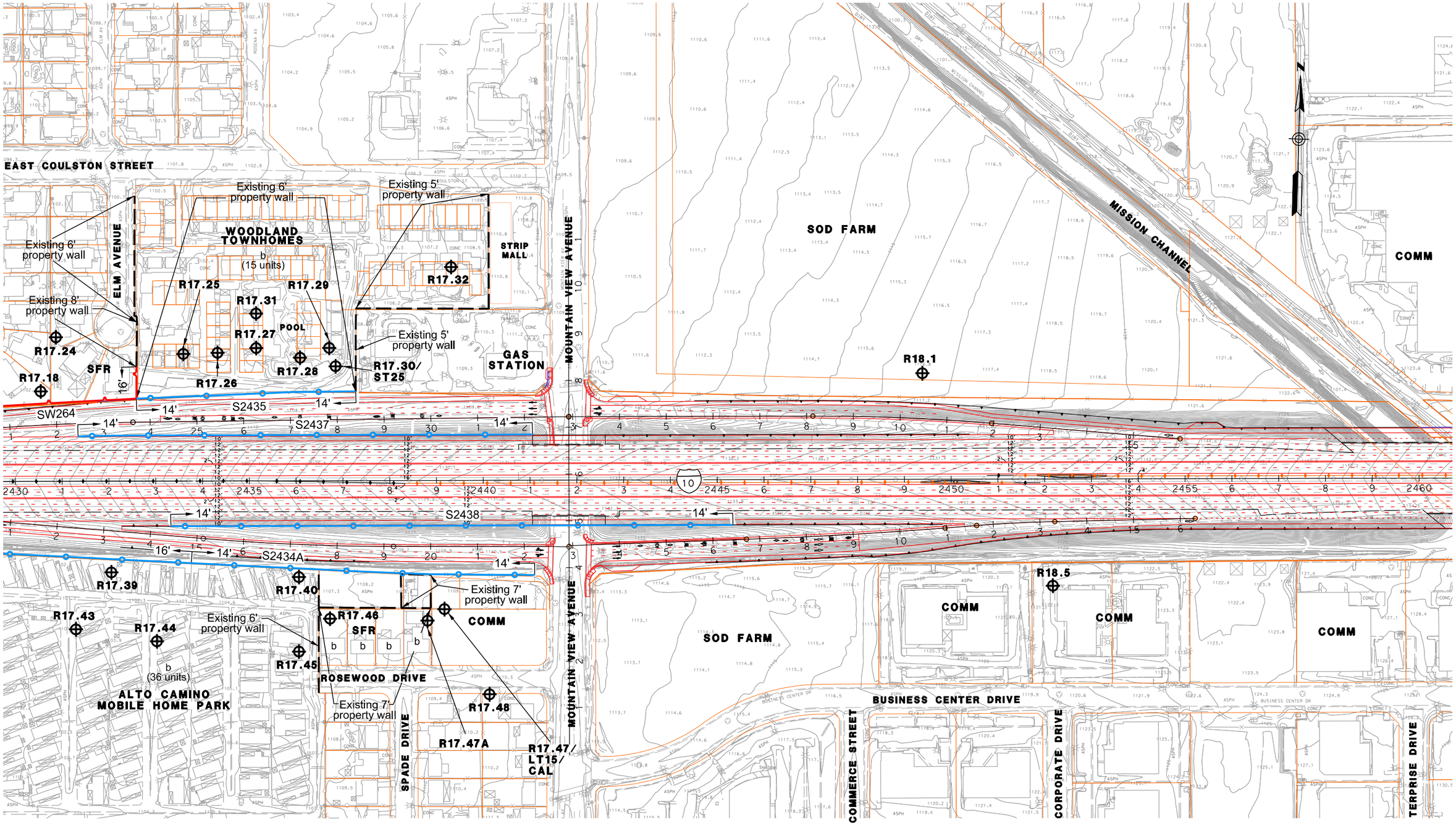
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS
(OPTION 2)

JULY 1, 2015

FIGURE 153-2



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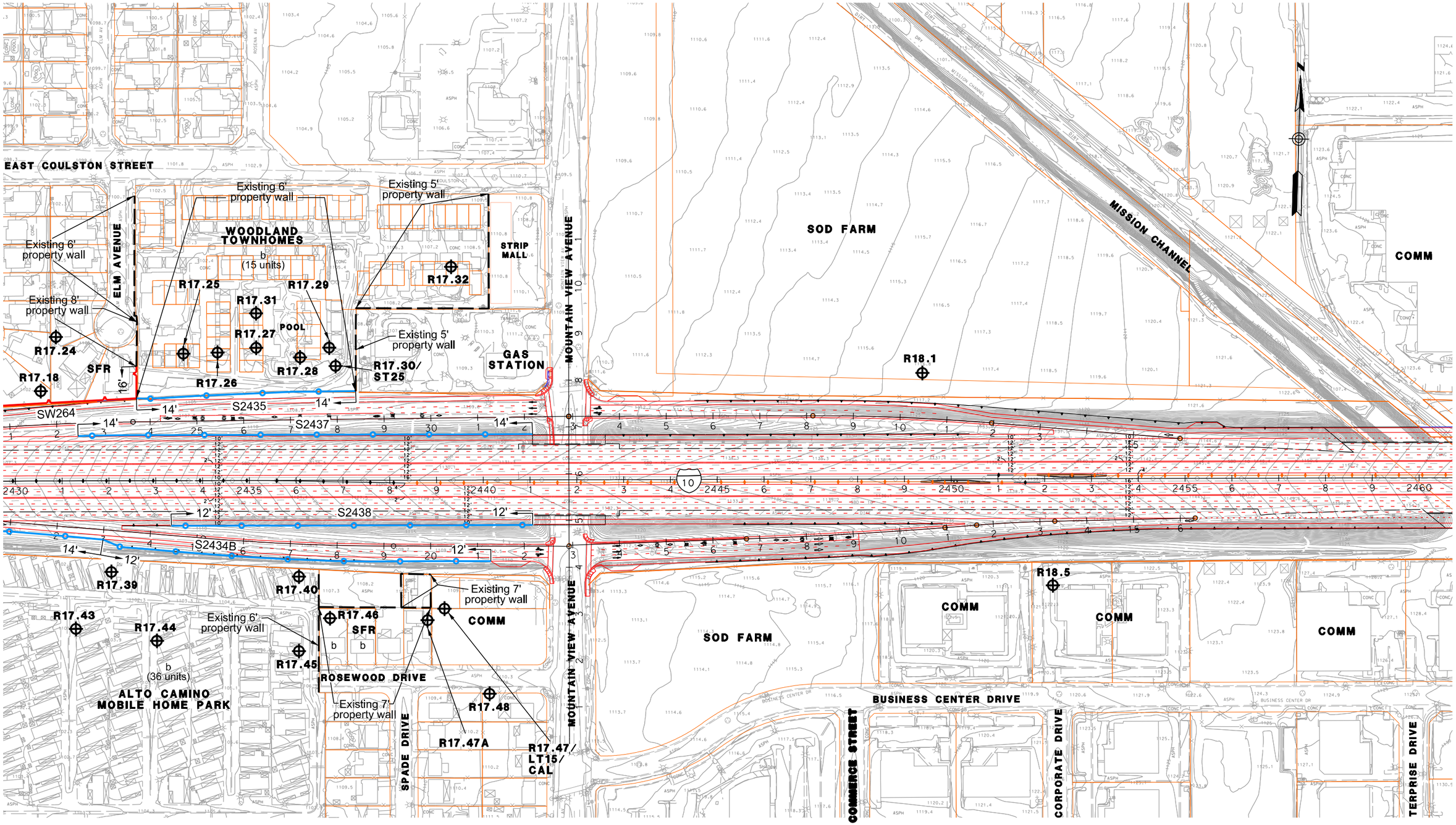
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER
HEIGHTS & LOCATIONS
(OPTION 1)

JULY 1, 2015

FIGURE 154-1



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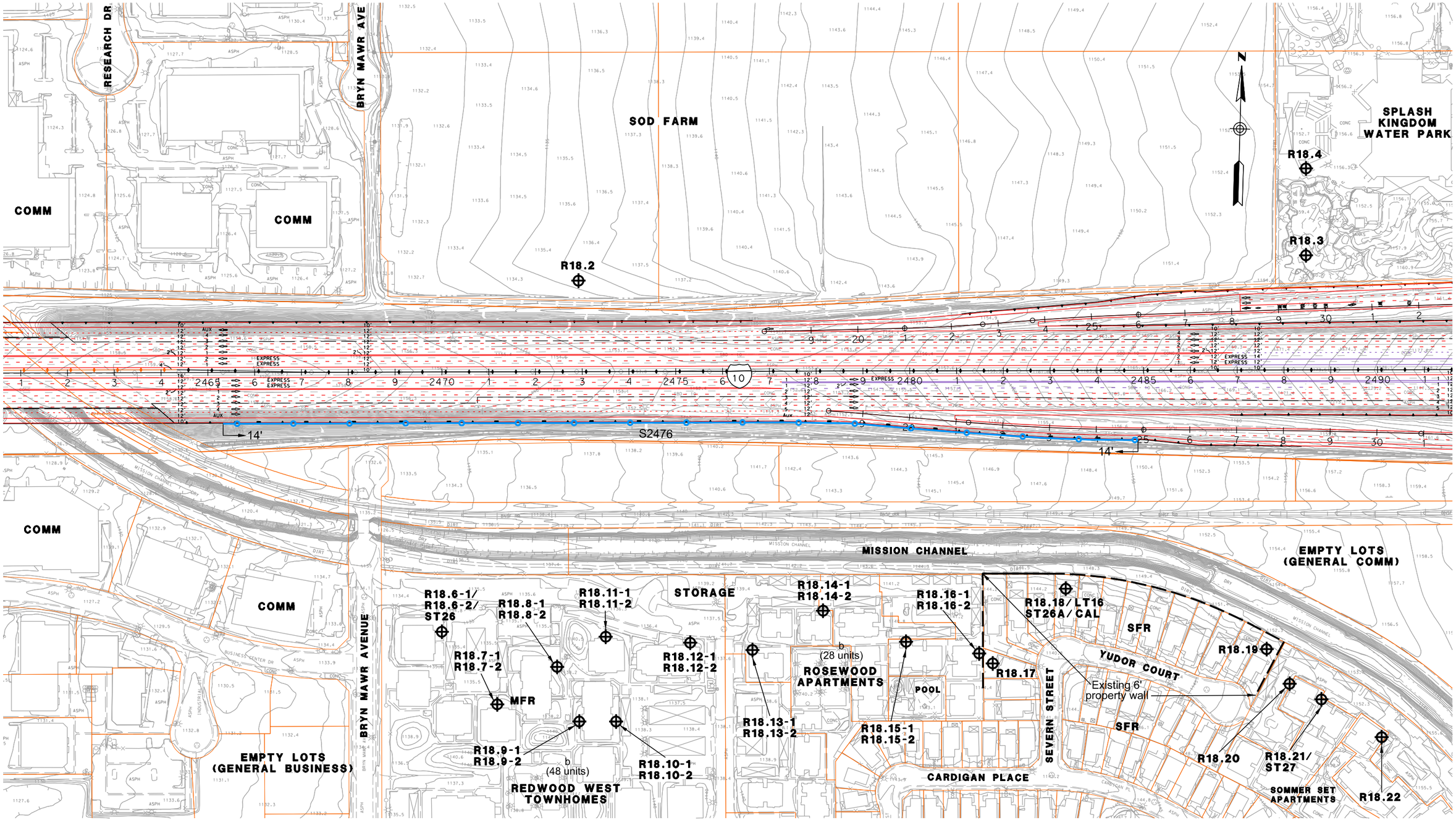
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS
(OPTION 2)

JULY 1, 2015

FIGURE 154-2



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1in : 200ft

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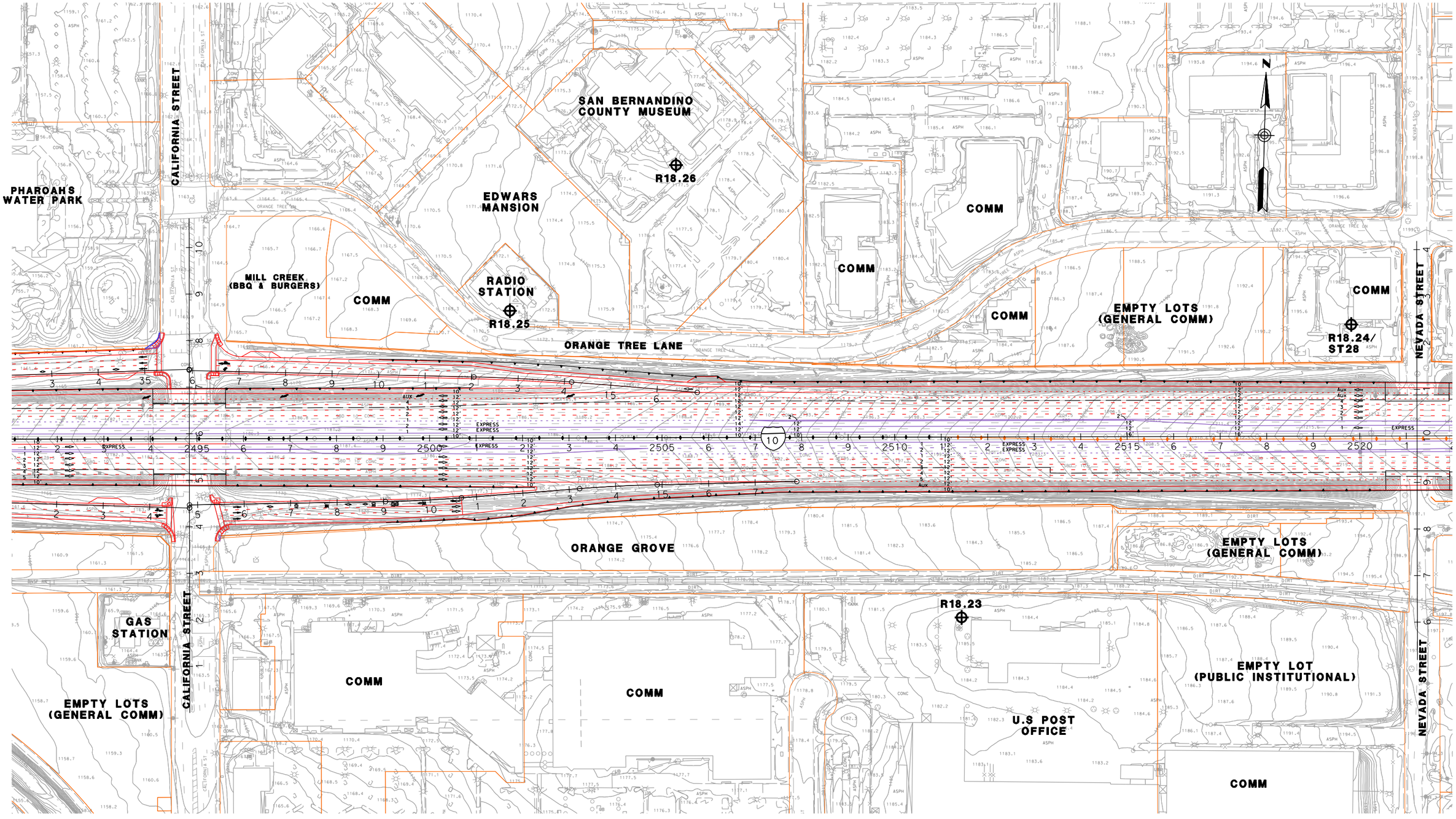
I-10 CORRIDOR ALTERNATIVE 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 155



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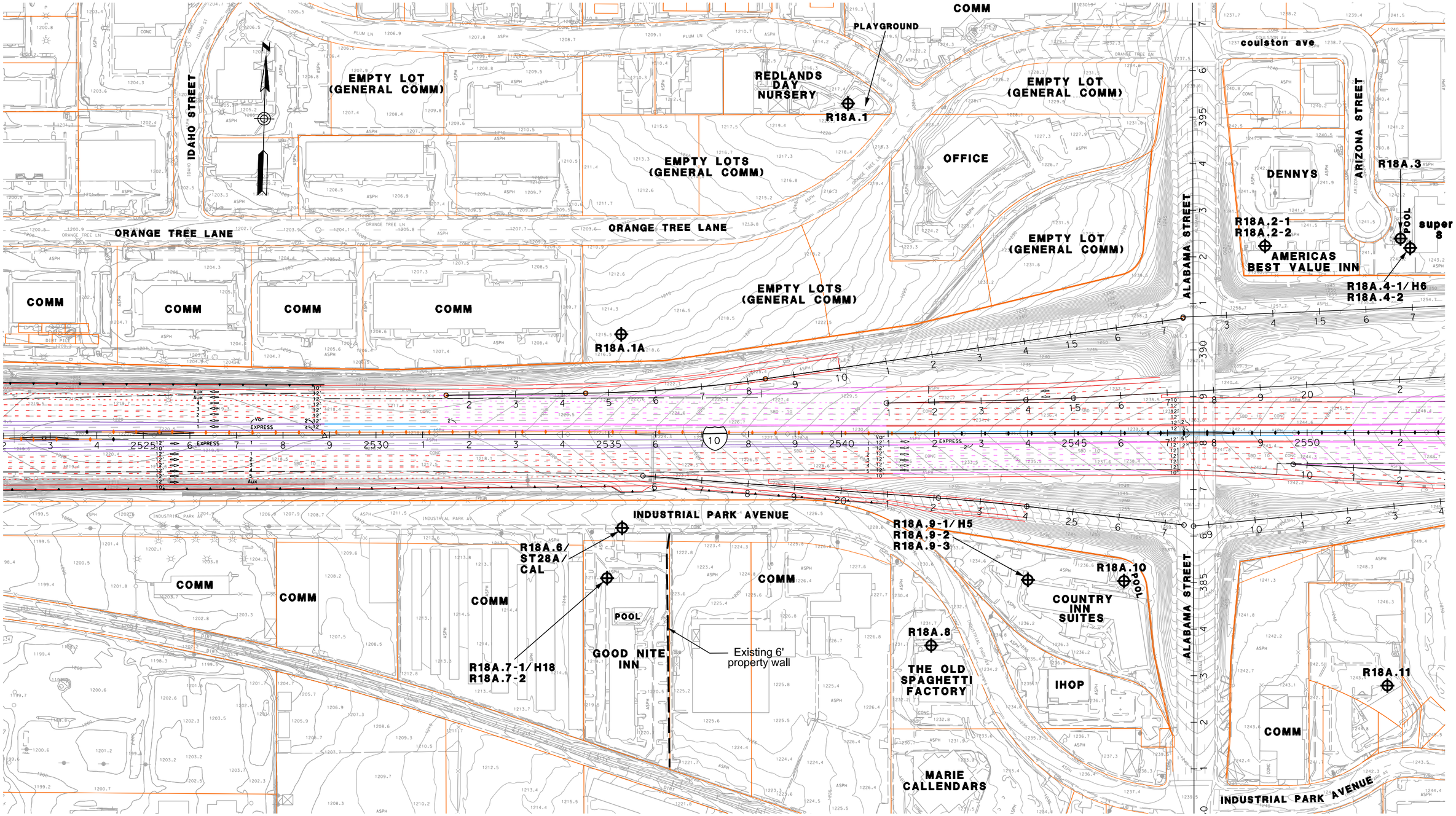
0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 156



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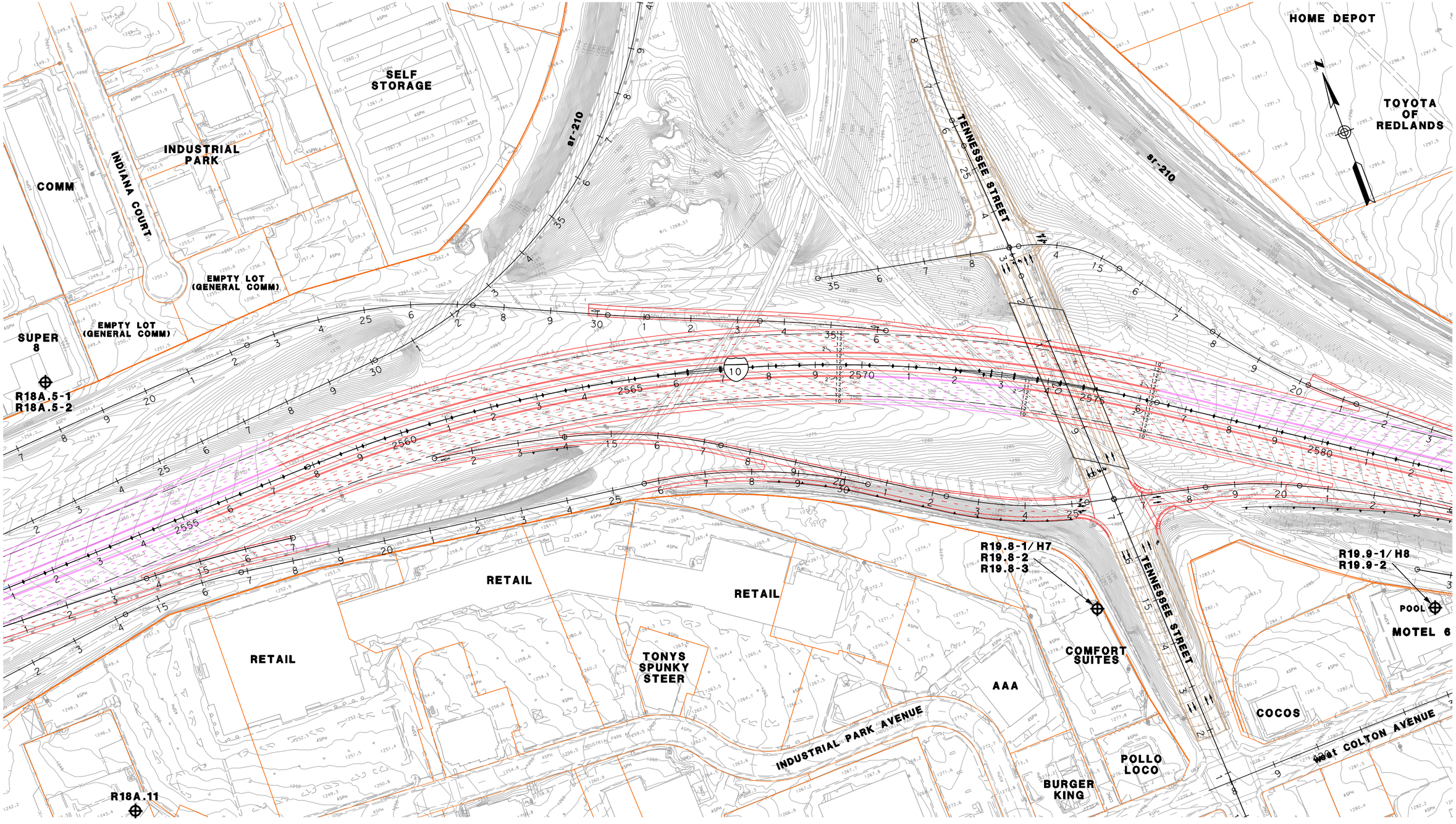
I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 157



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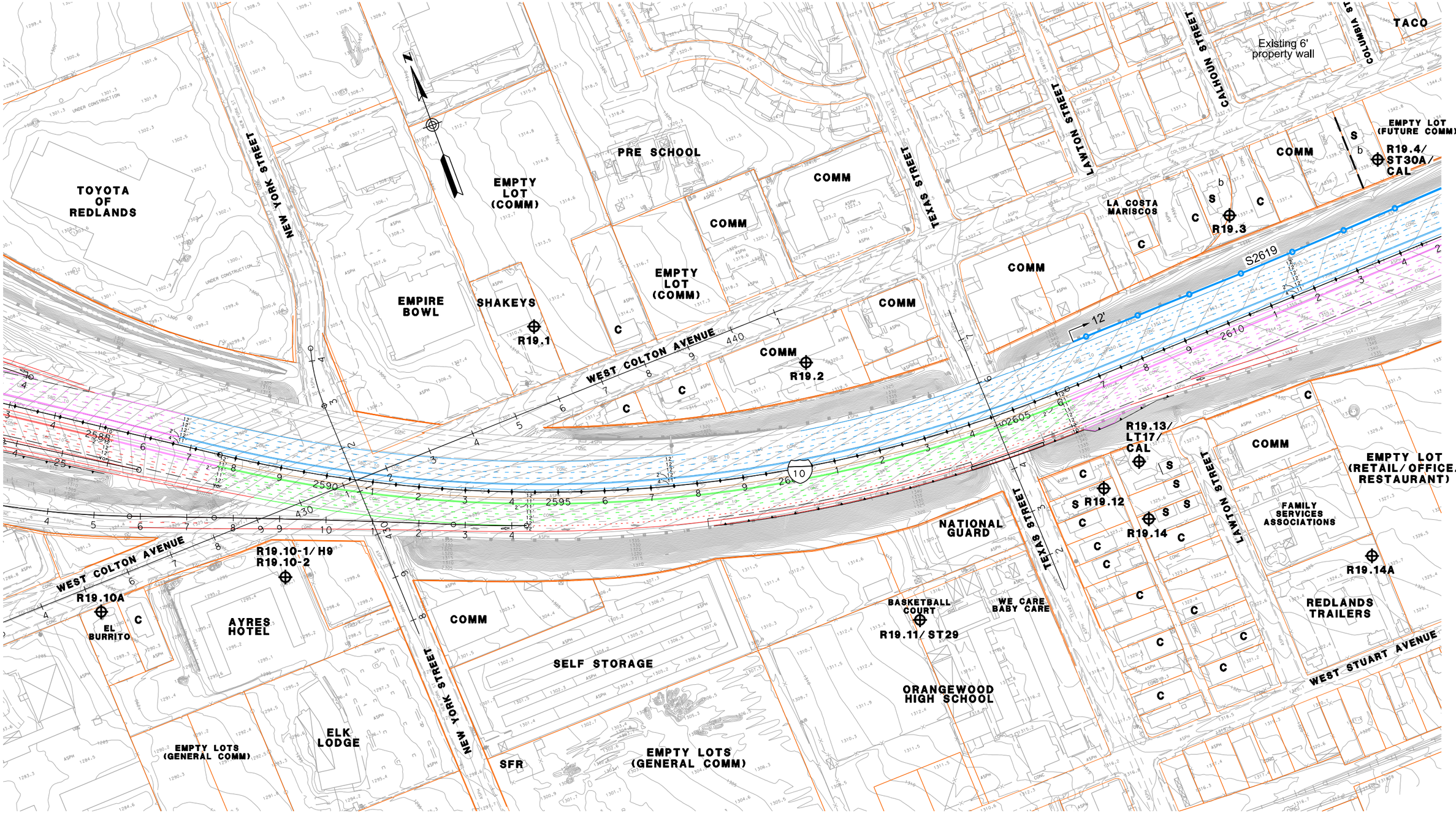
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVE 3
NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 158



LEGEND

- RXX - RECEIVER SITE
- CAL - CALIBRATION SITE
- LT - LONG-TERM MEASUREMENT
- ST - SHORT-TERM MEASUREMENT

- SFR OR S - SINGLE FAMILY RESIDENCE
- MFR OR M - MULTI-FAMILY RESIDENCE
- COMM OR C - COMMERCIAL/NO OUTSIDE ACTIVITIES
- b - BENEFITED RESIDENCE
- HXX - IN/OUTDOOR MEASUREMENT

- EXISTING PROPERTY WALL
- EXISTING SOUNDWALL
- PROPOSED SOUNDWALL
- REPLACEMENT IN KIND SOUNDWALL
- NON-REASONABLE SOUNDWALL
- RETAINING WALL
- SAFETY BARRIER

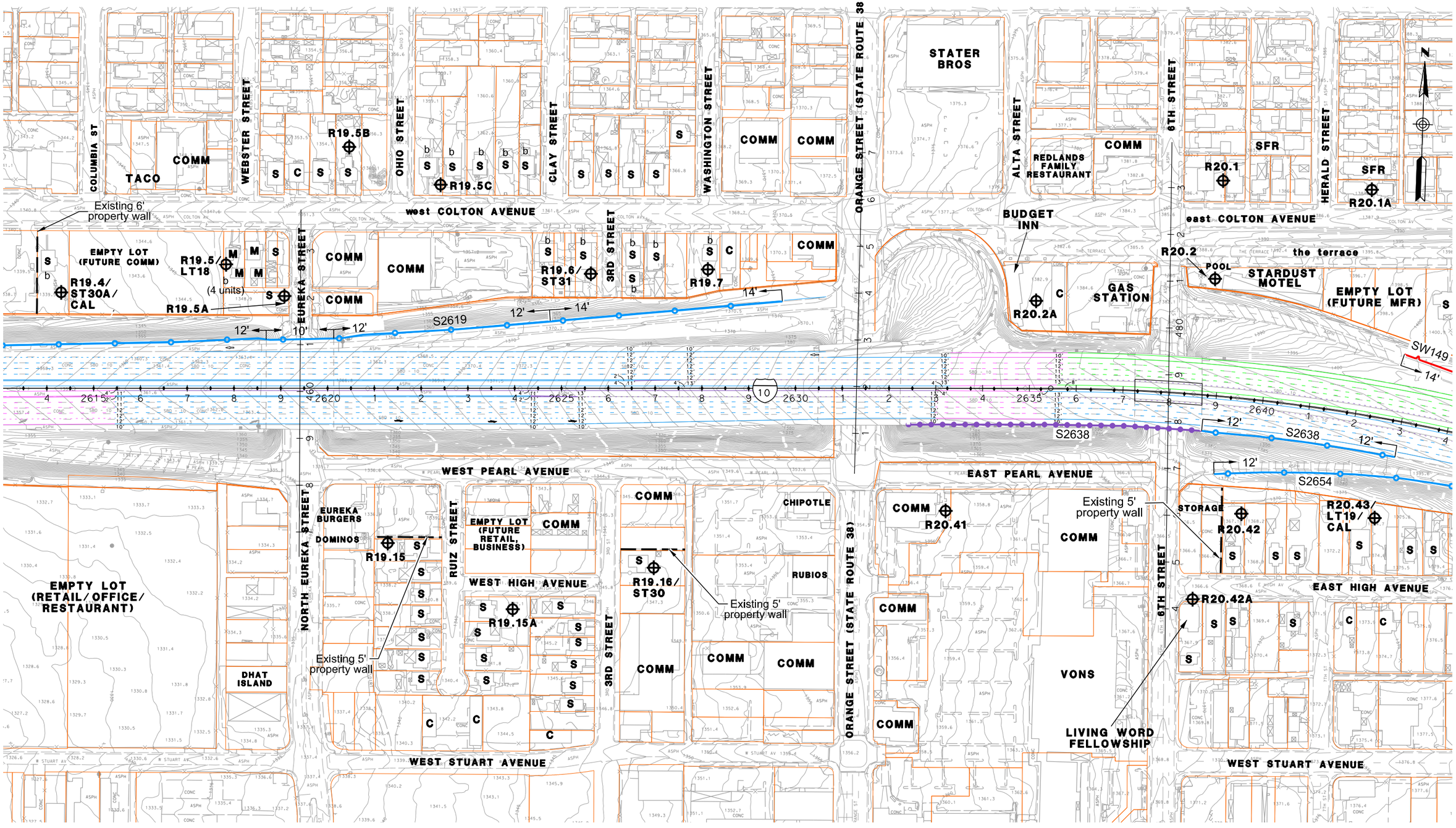
1in : 200ft

0 ft 100ft 200ft 300ft

I-10 CORRIDOR ALTERNATIVES 2 AND 3
NADR RECOMMENDED BARRIER
HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 159



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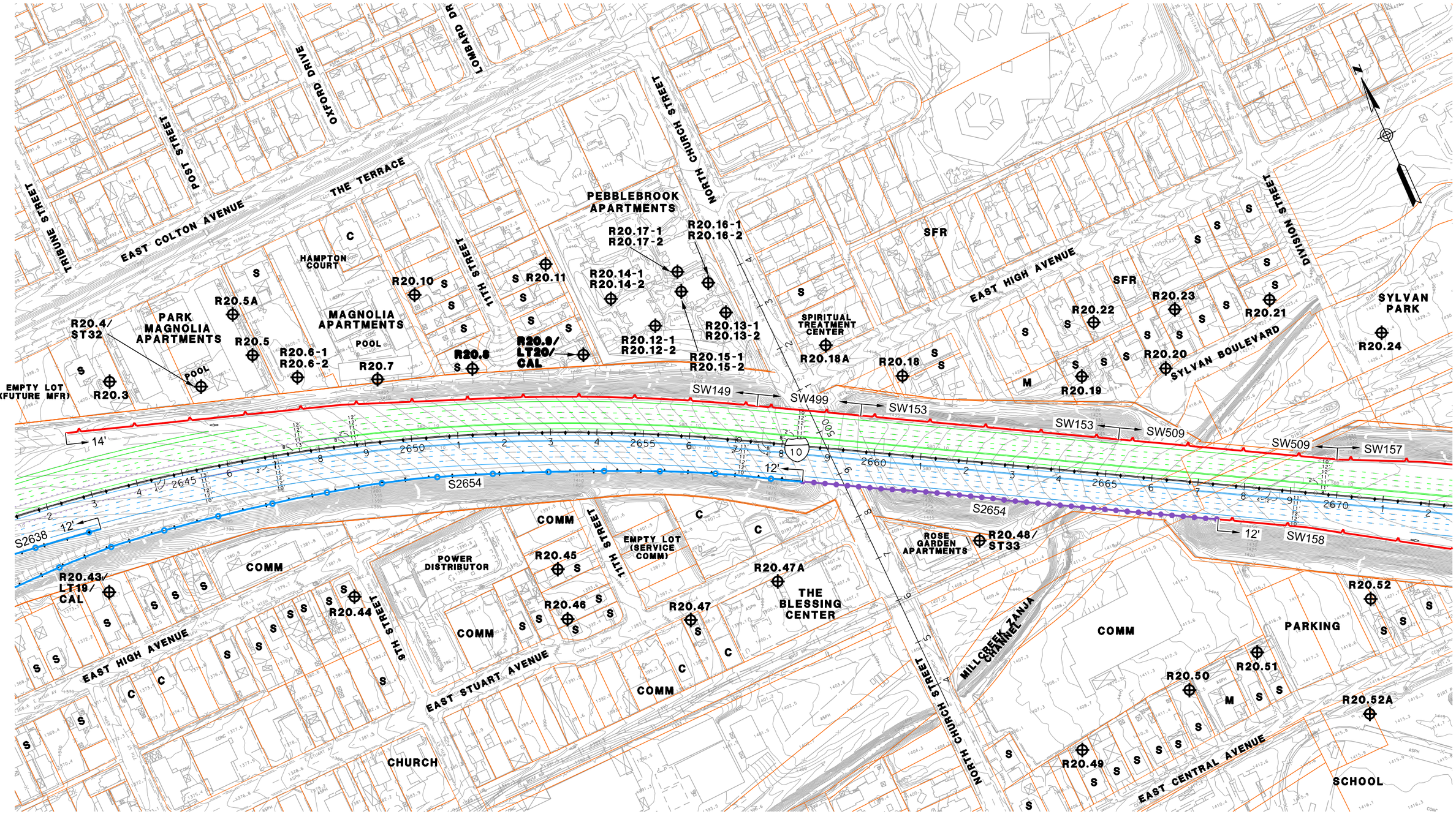
I-10 CORRIDOR ALTERNATIVES 2 AND 3 NADR RECOMMENDED BARRIER HEIGHTS & LOCATIONS

JULY 1, 2015

FIGURE 160



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JULY 1, 2015

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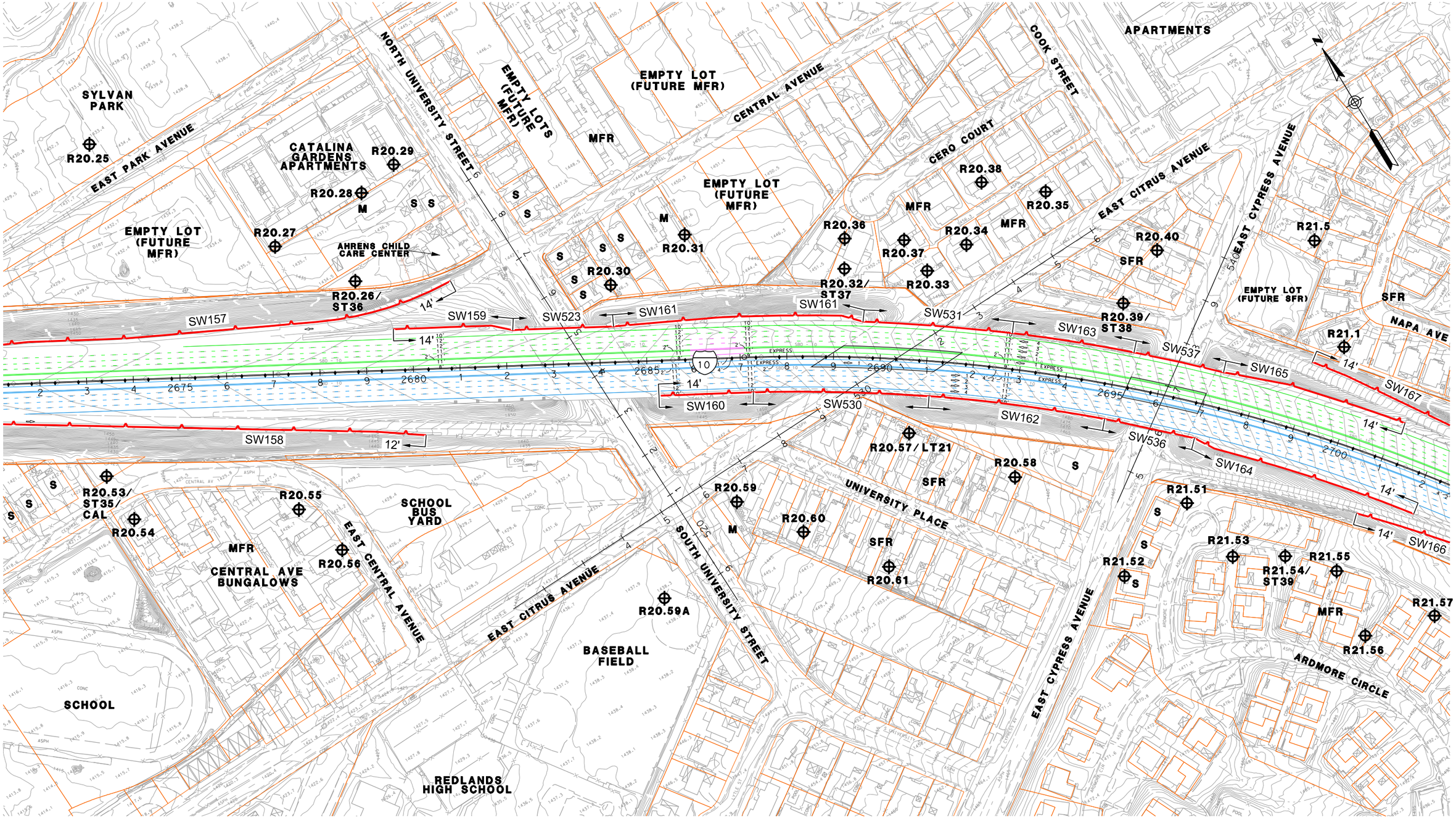

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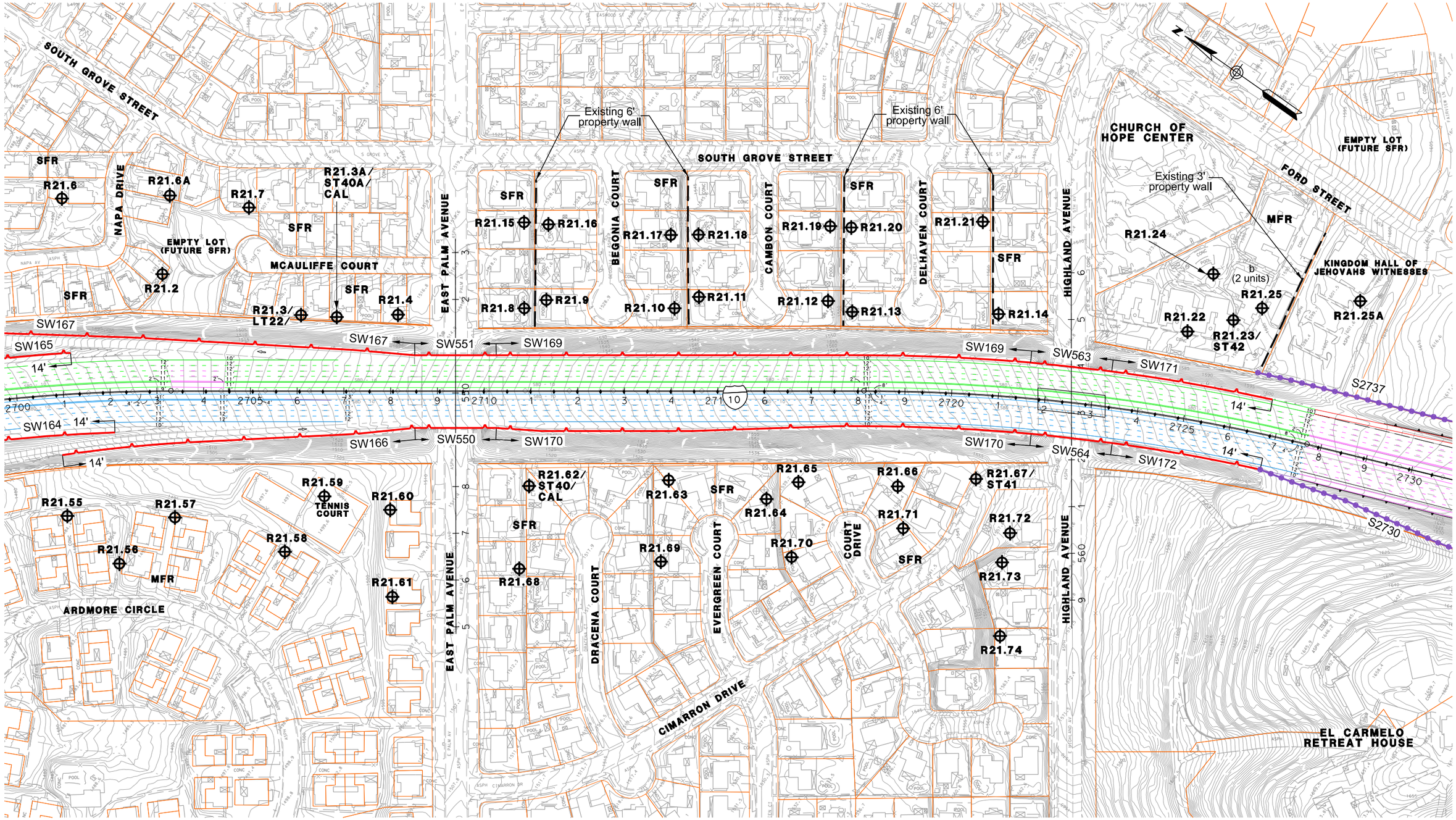
JULY 1, 2015

FIGURE 162



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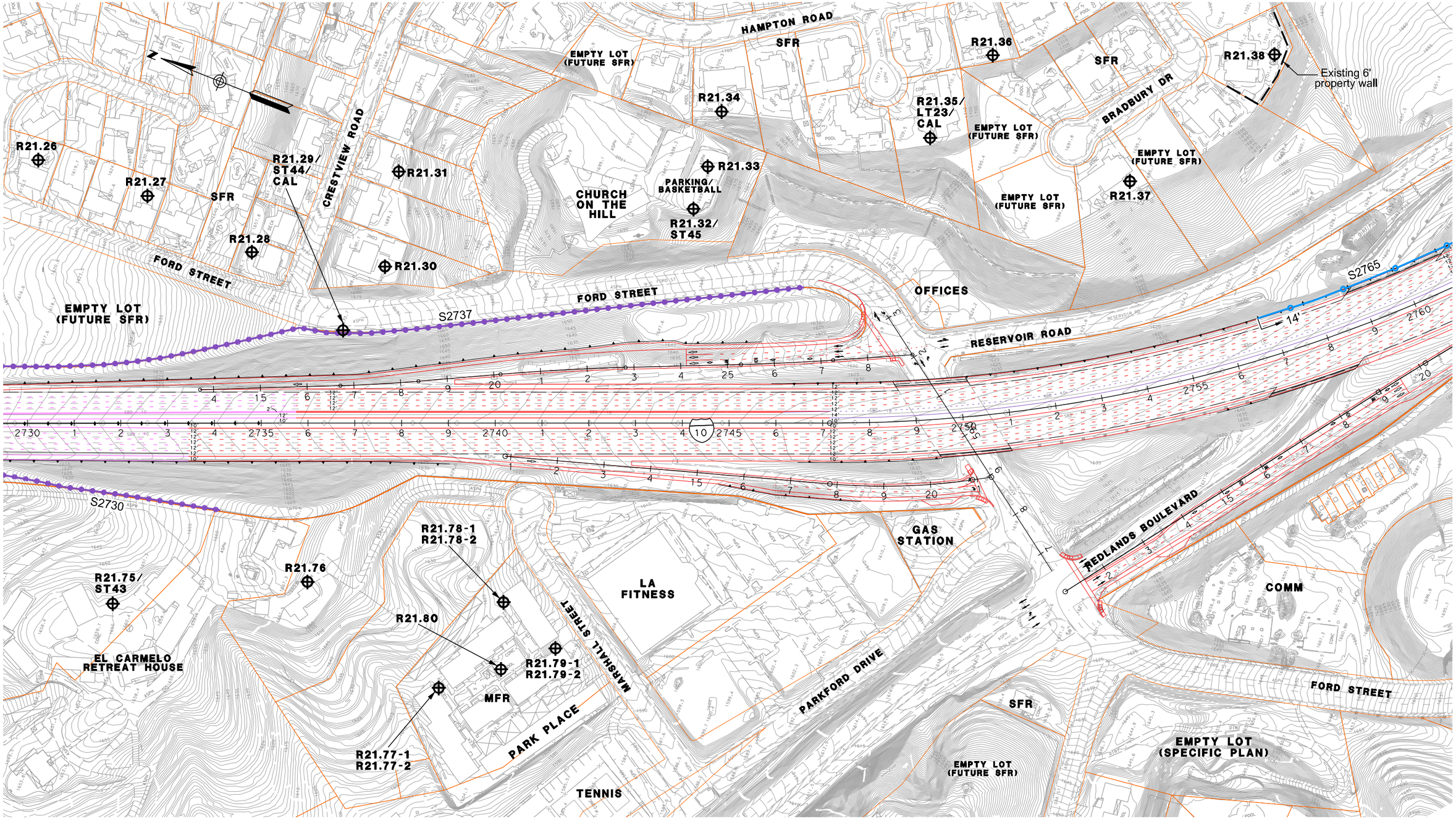
JULY 1, 2015

FIGURE 163



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JULY 1, 2015

FIGURE 164

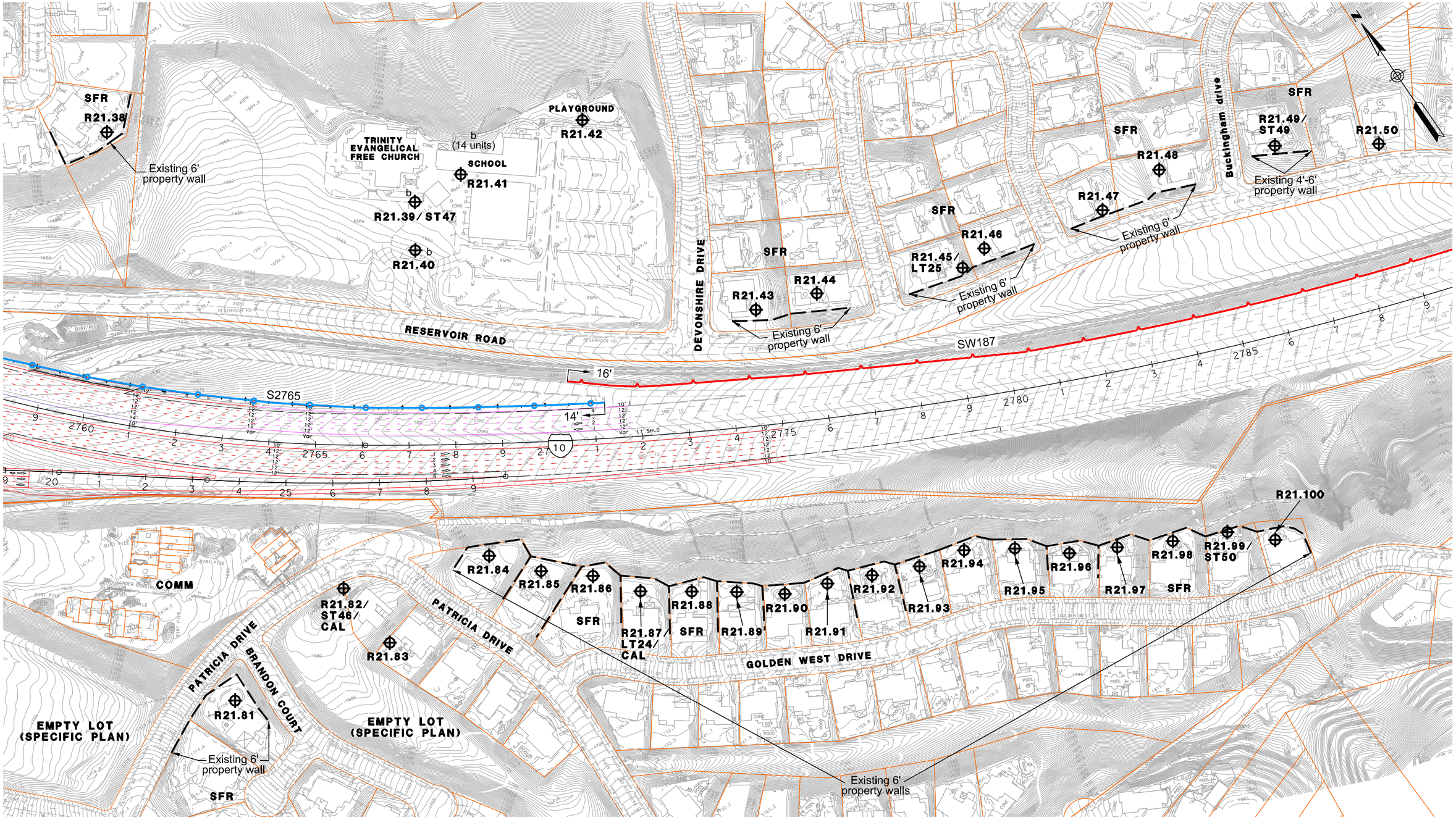

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FIGURE 165