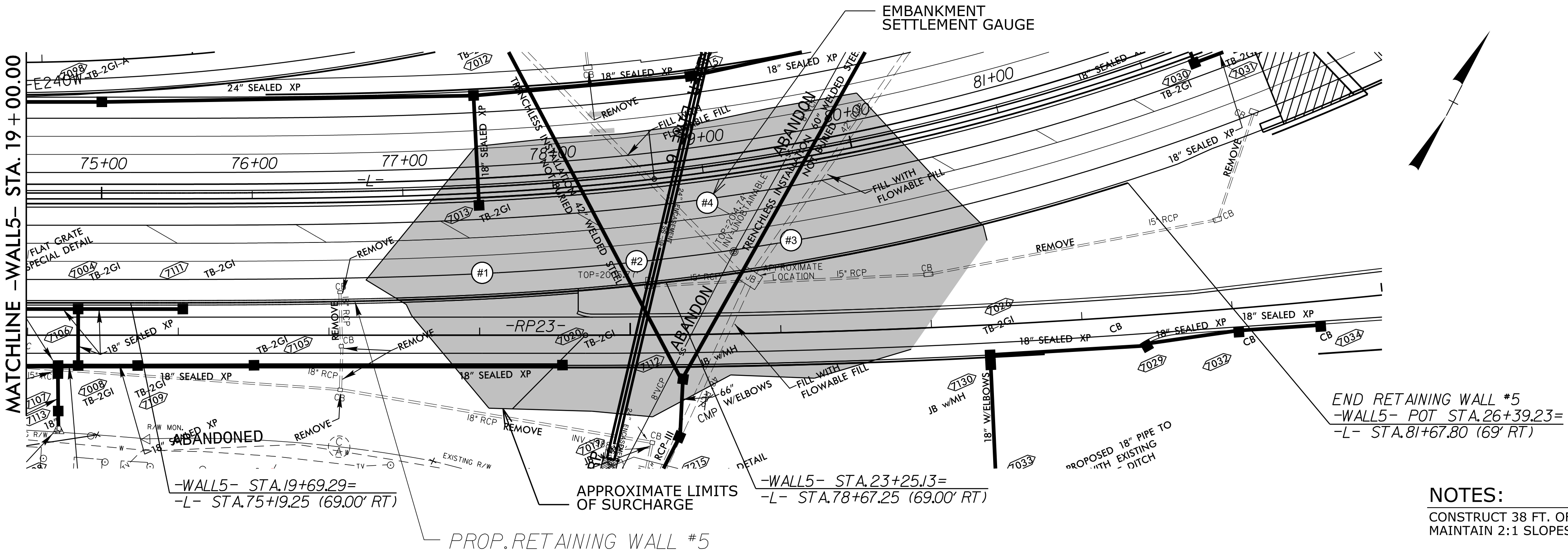


RETAINING WALLS #3 AND #5 SURCHARGE DETAIL SHEET



GEOTECHNICAL
ENGINEER

Signed by:
Mohammad A. Mulla, P.E.
8/7/2026

SIGNATURE

DATE

SIGNATURE

DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ESTIMATED SURCHARGE QUANTITIES (CUBIC YARDS)	
BORROW EXCAVATION	37,630
UNCLASSIFIED EXCAVATION	37,630
EMBANKMENT SETTLEMENT GAUGES	4

- APPROXIMATE LIMITS OF SURCHARGE
- #

SETTLEMENT GAUGE

NOTES:

CONSTRUCT 38 FT. OF SURCHARGE WITH COMMON BORROW FROM -L- +/- STA. 77+50 TO 80+11. MAINTAIN 2:1 SLOPES ON ALL SIDES WITH WIDTH OF TOP OF EMBANKMENT TYING INTO EXISTING SLOPE

OBSERVE A FOUR MONTH WAITING PERIOD AFTER CONSTRUCTING THE SURCHARGE

SETTLEMENT GAUGES SHALL BE INSTALLED ON THE EXISTING GROUND OR AS DIRECTED BY THE ENGINEER

FOR SURCHARGE AND SETTLEMENT GAUGES, SEE SECTION 235 OF THE STANDARD SPECIFICATIONS AND ROADWAY STANDARD DRAWING 235.01

BORROW EXCAVATION INCLUDES SURCHARGE AND ADDITIONAL MATERIAL FOR MAINTAINING SURCHARGE ELEVATION

UNCLASSIFIED EXCAVATION INCLUDES REMOVING SURCHARGE, ADDITIONAL MATERIAL, AND EXCAVATION FOR INSTALLING LIGHTWEIGHT AGGREGATE FOR MSE RETAINING WALLS 3 AND 5

MONITORING EXISTING AND NEW UTILITIES DURING SURCHARGE CONSTRUCTION AND WAITING PERIOD IS CRITICAL TO PREVENT SERVICE DISRUPTIONS AND STRUCTURAL DAMAGE

THE SURCHARGE IS LOCATED ABOVE THE PROPOSED PATH OF A BORE AND JACK OPERATION. THEREFORE, THE SURCHARGE MUST BE REMOVED BEFORE THE BORING AND CASING INSTALLATION BEGINS

EXISTING SEWER ENCASEMENT SHOULD NOT BE GROUTED UNTIL AFTER COMPLETION OF THE WAITING PERIOD

CONSTRUCTION SEQUENCES:

- 1) INSTALL FOUR SETTLEMENT PLATES TO MONITOR SURCHARGE SETTLEMENT IN ACCORDANCE WITH NCDOT STANDARD 235.01 AT APPROXIMATE LOCATIONS SHOWN BELOW.
- 2) PLACE SURCHARGE FILL TO LIMITS SHOWN ON PLANS.
- 3) MONITOR SETTLEMENT UNTIL AN ACCEPTABLE RATE IS OBSERVED, OPERATION ENGINEER WILL RELEASE THE REMOVAL OF THE SURCHARGE AT THIS TIME. PROVIDE SETTLEMENT READING TO THE OPERATION ENGINEER ON A BIWEEKLY BASIS.
- 4) REMOVE THE SURCHARGE TO INSTALL THE LIGHTWEIGHT AGGREGATE FOR THE RETAINING WALLS.
- 5) GROUT THE EXISTING SEWER LINE AFTER COMPLETION OF THE WAITING PERIOD. SEE UTILITY PLANS.

EMBANKMENT SETTLEMENT GAUGE LOCATIONS:		
SETTLEMENT GAUGE NUMBER	APPROXIMATE STATION -L-	APPROXIMATE OFFSET (FEET)
GAUGE #1	77+50	53 RT
GAUGE #2	78+50	53 RT
GAUGE #3	79+50	53 RT
GAUGE #4	79+00	20 RT

PROJECT NO.: I-2513AC

BUNCOMBE COUNTY

+/- -L- 77+50 TO -L- 80+11

SHEET 1 OF 3 WALL IDS RW-3 & 5

PREPARED BY: S. V. HUDSON, P.G.	DATE: 02/26
REVIEWED BY: M. A. MULLA, P.E.	DATE: 02/26

Prepared in the Office of:

ECS SOUTHEAST, LLC
1812 CENTER PARK DRIVE, SUITE D
CHARLOTTE, NC 28217
(704) 525-5152 [PHONE]
(704) 357-0023 [FAX]
NC REGISTERED
ENGINEERING
FIRM # F-1519

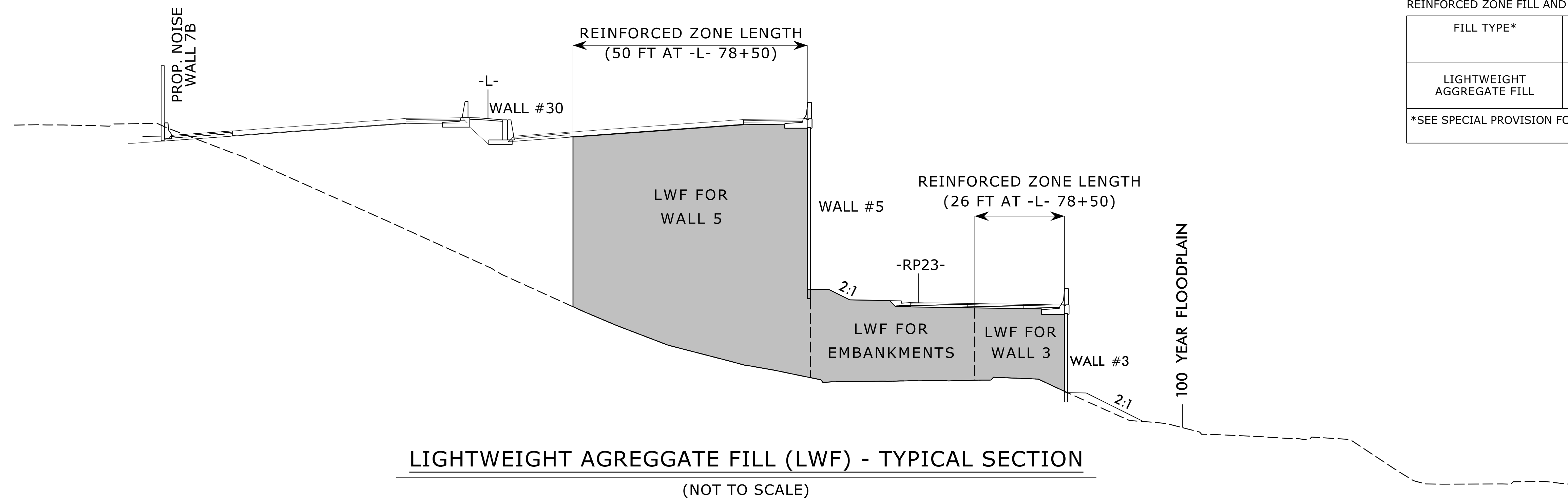
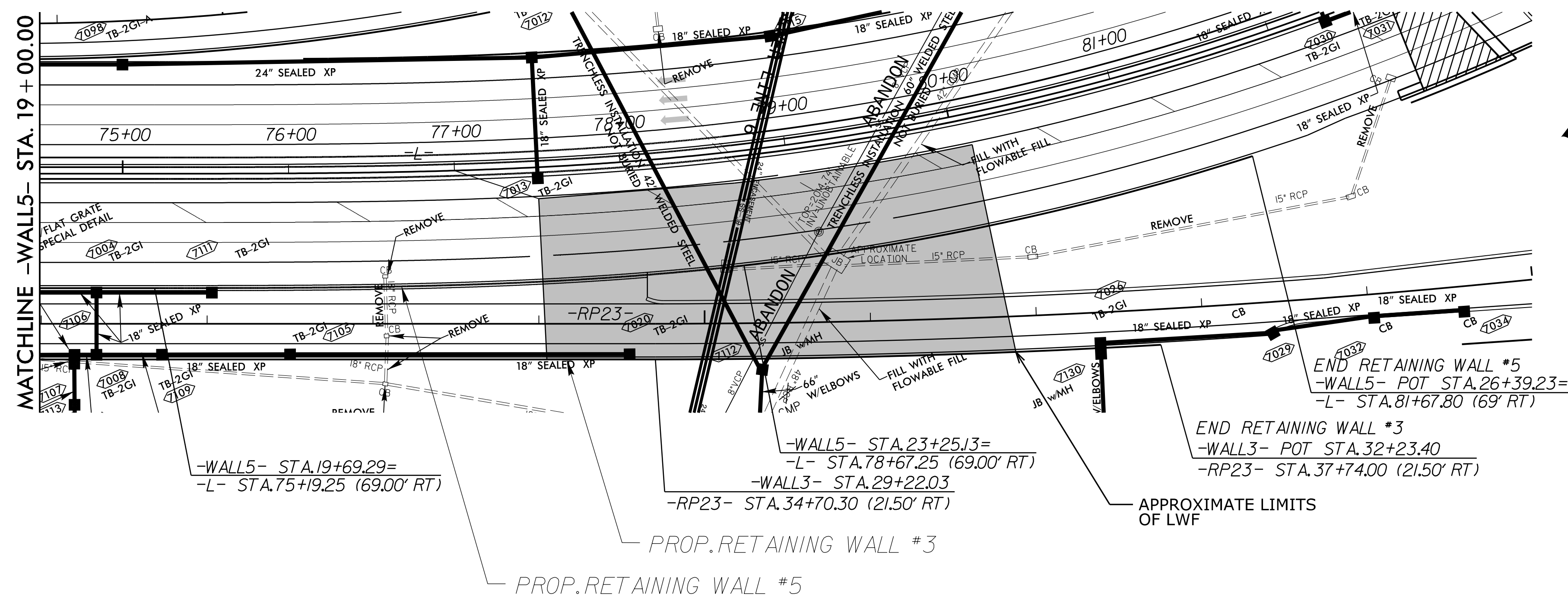
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL
ENGINEERING UNIT

REVISIONS						SHEET NO. 2G-5
NO.	BY	DATE	NO.	BY	DATE	
-	-	-	3	-	-	
-	-	-	4	-	-	

SURCHARGE DETAILS
FOR RETAINING WALL
NO. 3 AND NO. 5

RETAINING WALLS #3 AND #5 LIGHTWEIGHT AGGREGATE FILL DETAIL SHEET



GEOTECHNICAL
ENGINEER



Signed by:

8/7/2026

Mohammed A. Mulla, PE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ESTIMATED LIGHTWEIGHT AGGREGATE FILL (LWF) QUANTITY

*FOR EMBANKMENTS

LWF VOLUME (CUBIC YARDS)	10,000
GEOTEXTILE, TYPE 2 (SQUARE YARDS)	2,000

*QUANTITIES ABOVE ARE FOR EMBANKMENT MATERIALS IN-BETWEEN WALLS 3 AND 5 ONLY. LWF AND CORRESPONDING GEOTEXTILE FOR WALLS 3 AND 5 SHOULD BE INCORPORATED IN THEIR RESPECTIVE WALL PAY ITEMS (SEE ANTICIPATED WALL STATIONING BELOW).

APPROXIMATE LIMITS LWF

NOTES:

LIGHTWEIGHT AGGREGATE FILL (LWF) SHOULD BE USED FOR REINFORCED ZONE AGGREGATE FOR RETAINING WALLS NO.3 AND NO.5 FROM -L- STA 77+50 TO 80+11 (WALL NO. 3 STA. 28+57 TO 31+40 / -RP- STA 34+07.41 TO 36+90.48 AND WALL NO.5 STA. 22+03 TO 24+75). ADDITIONALLY, THE EMBANKMENT MATERIAL BETWEEN WALLS NO.3 AND NO. 5 SHOULD ALSO UTILIZE LWF AT THE AFOREMENTIONED STATIONS (SEE TYPICAL SECTION).

REINFORCED ZONE FILL AND EMBANKMENT PARAMETERS:

FILL TYPE*	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (ϕ) DEGREES	COHESION (c) PSF
LIGHTWEIGHT AGGREGATE FILL	65	40	0

*SEE SPECIAL PROVISION FOR LIGHTWEIGHT AGGREGATE FILL MATERIAL REQUIREMENTS.

PROJECT NO.: I-2513AC

BUNCOMBE COUNTY

+/- -L- 77+50 TO -L- 80+11

SHEET 3 OF 3 WALL IDS RW-3 & 5

LIGHTWEIGHT AGGREGATE FILL (LWF)
DETAILS FOR RETAINING WALL
NO. 3 AND NO.5

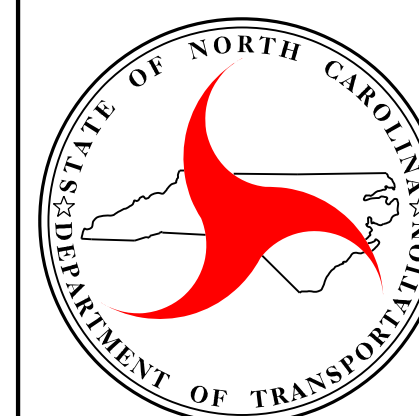
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
	-	-	3	-	-
			4		

SHEET
NO.
363

Prepared in the Office of:



ECS SOUTHEAST, LLC
1812 CENTER PARK DRIVE, SUITE D
CHARLOTTE, NC 28217
(704) 525-5152 [PHONE]
(704) 357-0023 [FAX]
NC REGISTERED
ENGINEERING
FIRM # F-1519

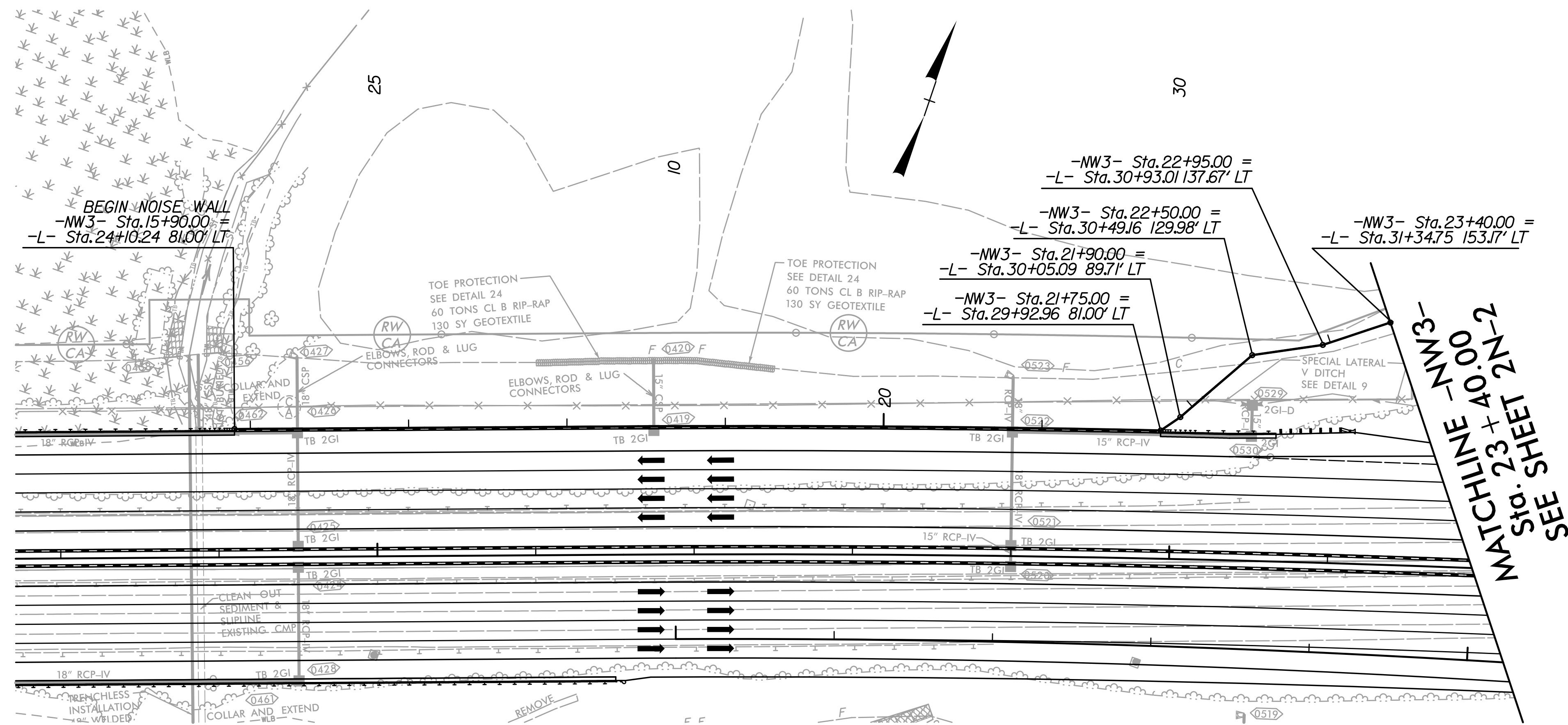


NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

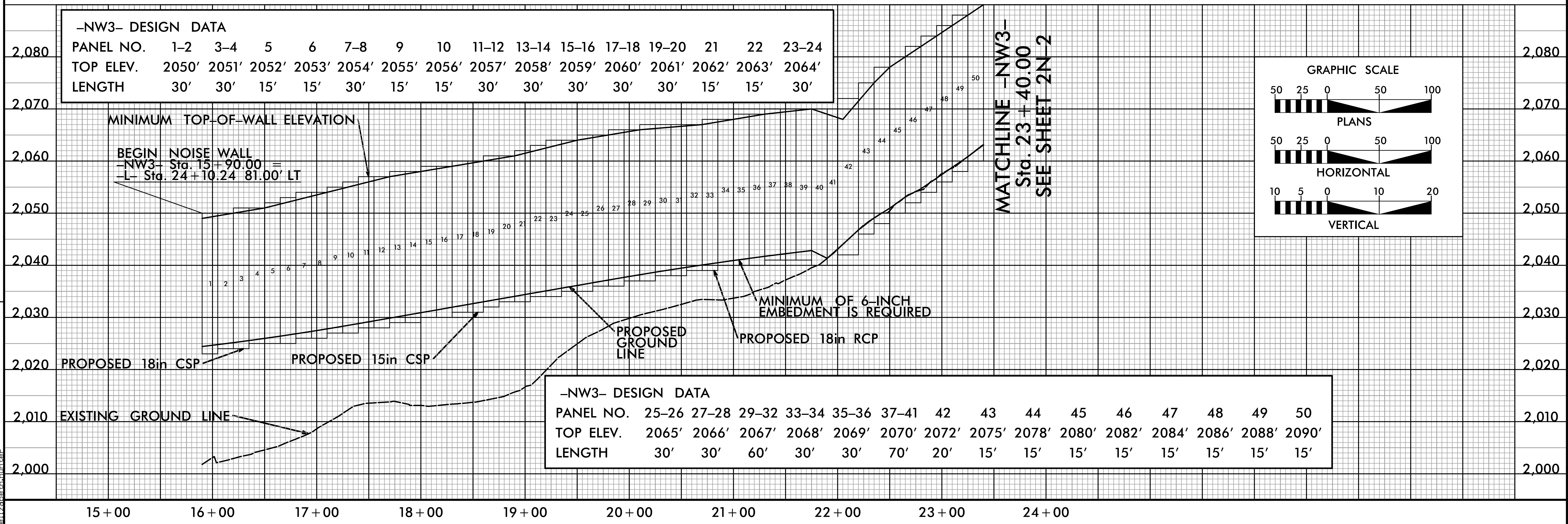
GEOTECHNICAL
ENGINEERING UNIT

PREPARED BY: E. A. MCINTOSH, P.E.	DATE: 07/26
REVIEWED BY: M. A. MULLA, P.E.	DATE: 07/26

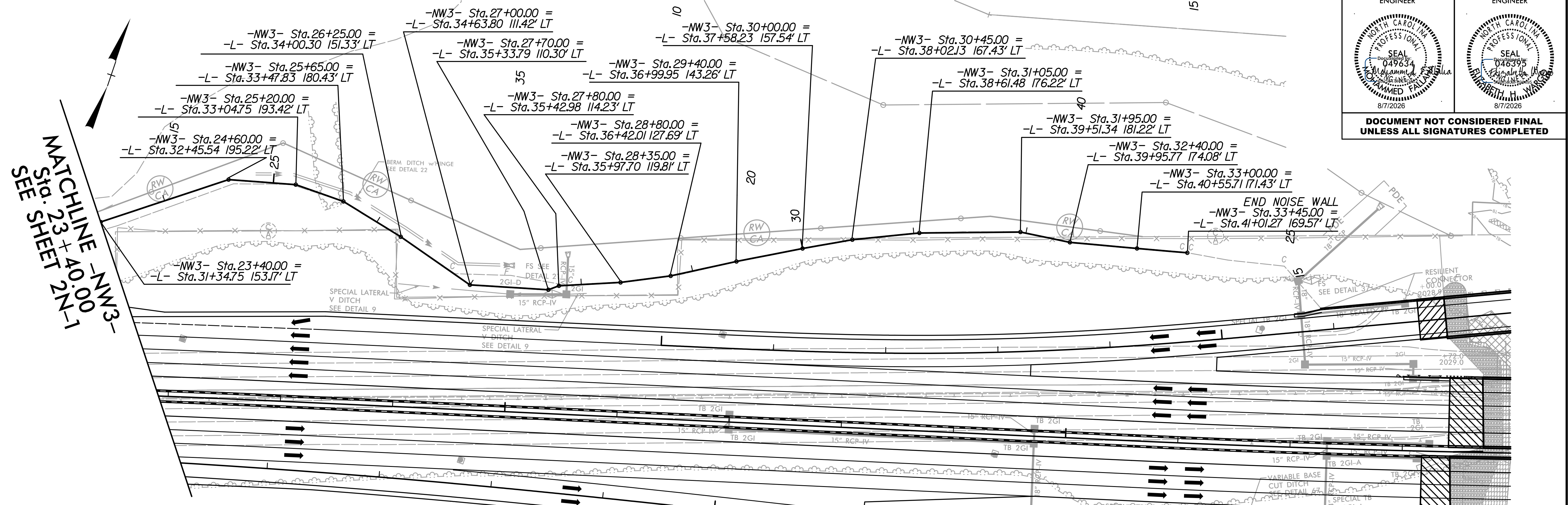
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1-253AC		2N-1	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		TRAFFIC NOISE ENGINEER	
8/7/2026		8/7/2026	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



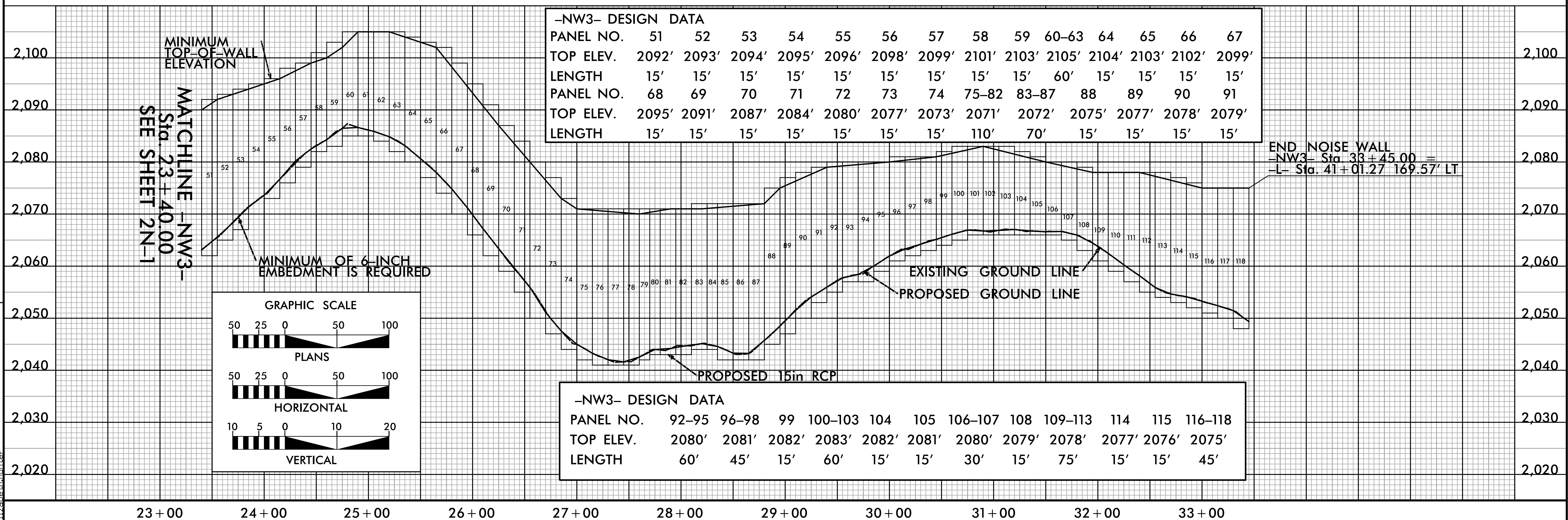
– TOP OF WALL ELEVATION SHALL NOT BE CHANGED WITHOUT PRIOR COORDINATION WITH THE NCDOT TRAFFIC NOISE AND AIR QUALITY GROUP



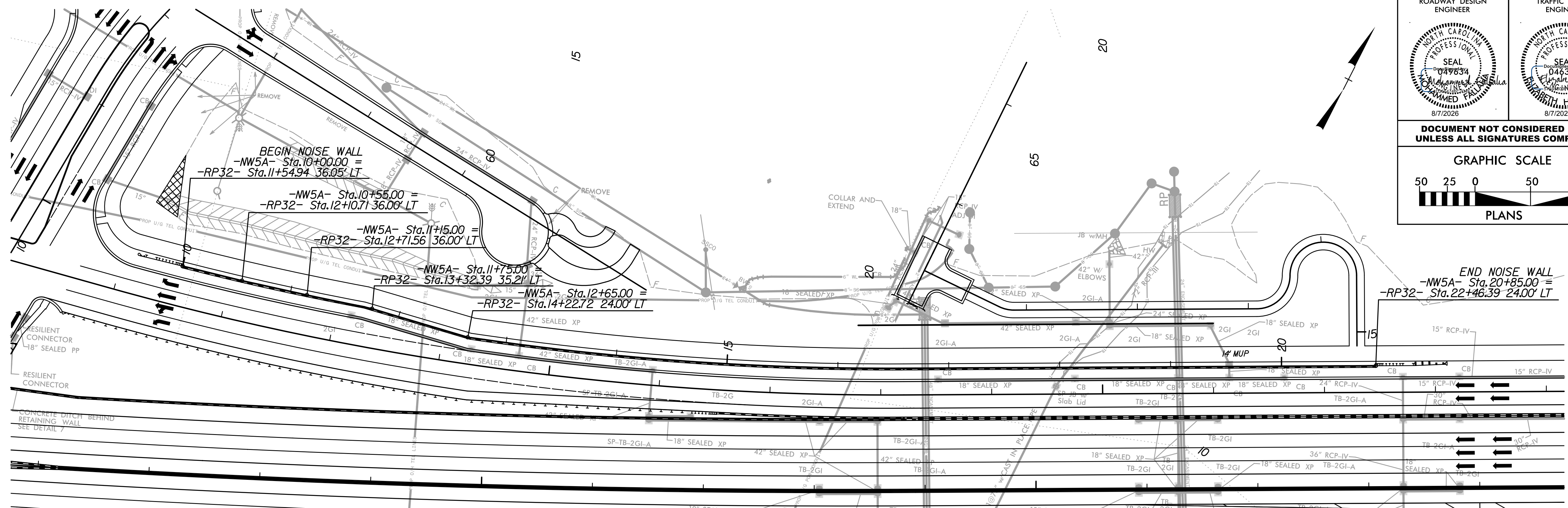
NOISE WALL -NW3- STA 23+40.00 TO -NW3- STA 33+45.00



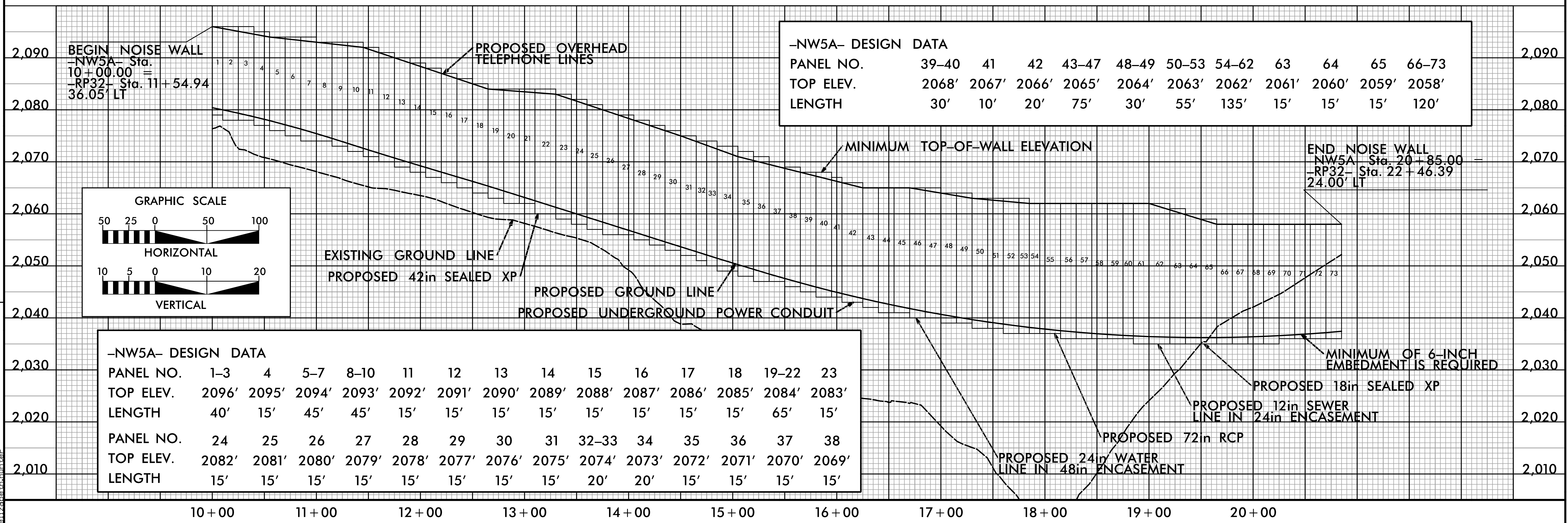
– TOP OF WALL ELEVATION SHALL NOT BE CHANGED WITHOUT PRIOR COORDINATION WITH THE NCDOT TRAFFIC NOISE AND AIR QUALITY GROUP



NOISE WALL -NW5A- STA 10+00.00 TO -NW5A- STA 20+85.00



— TOP OF WALL ELEVATION SHALL NOT BE CHANGED WITHOUT PRIOR COORDINATION WITH THE NCDOT TRAFFIC NOISE AND AIR QUALITY GROUP

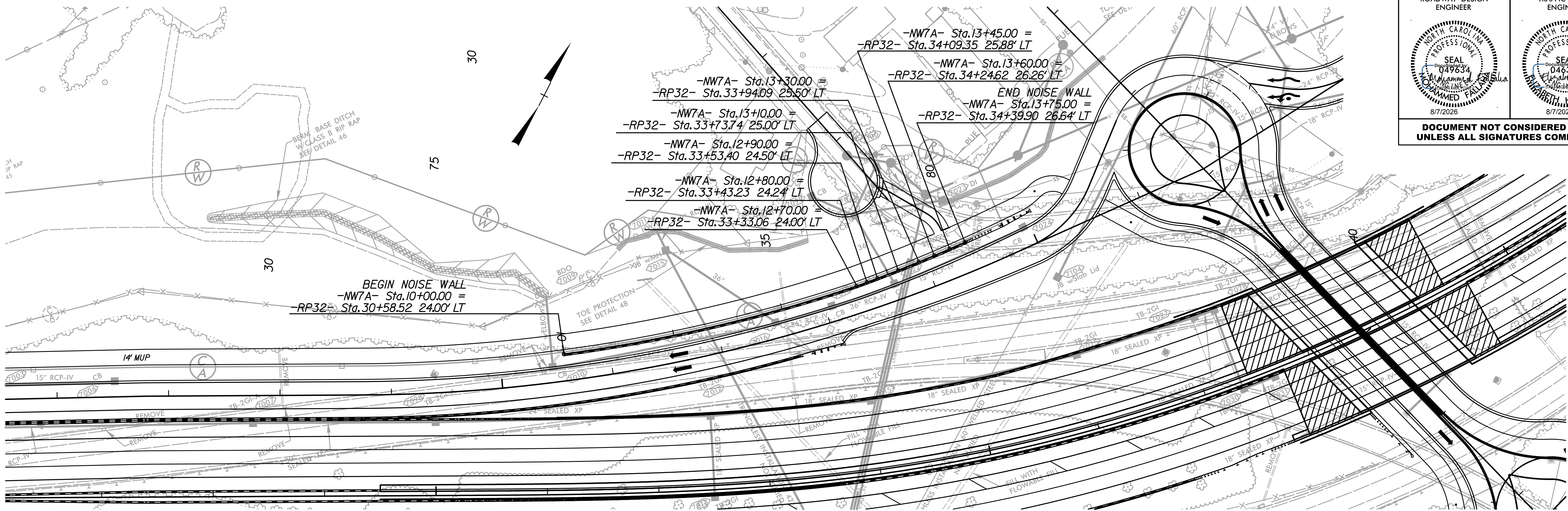


8/17/99

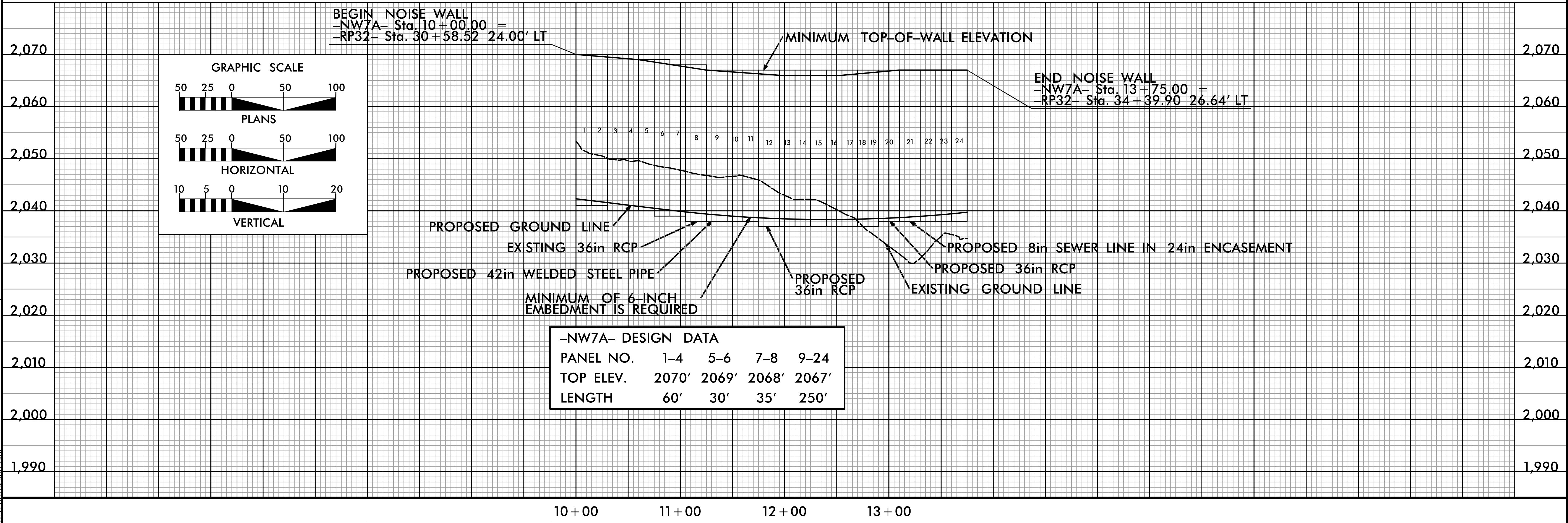
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sizebathunter

REVISIONS

NOISE WALL -NW7A- STA 10+00.00 TO -NW7A- STA 13+75.00



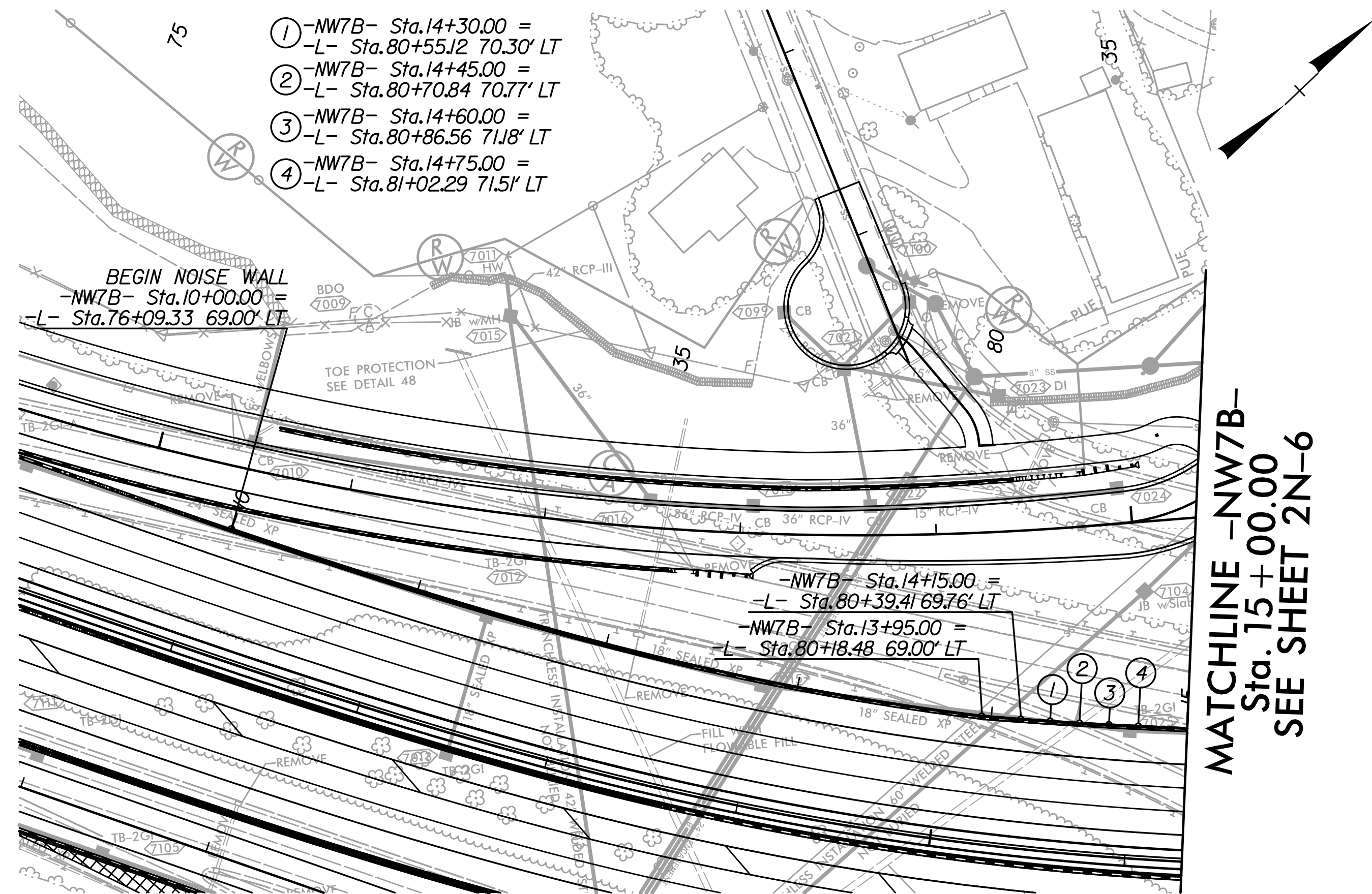
- TOP OF WALL ELEVATION SHALL NOT BE CHANGED WITHOUT PRIOR COORDINATION WITH THE NCDOT TRAFFIC NOISE AND AIR QUALITY GROUP



REVISIONS

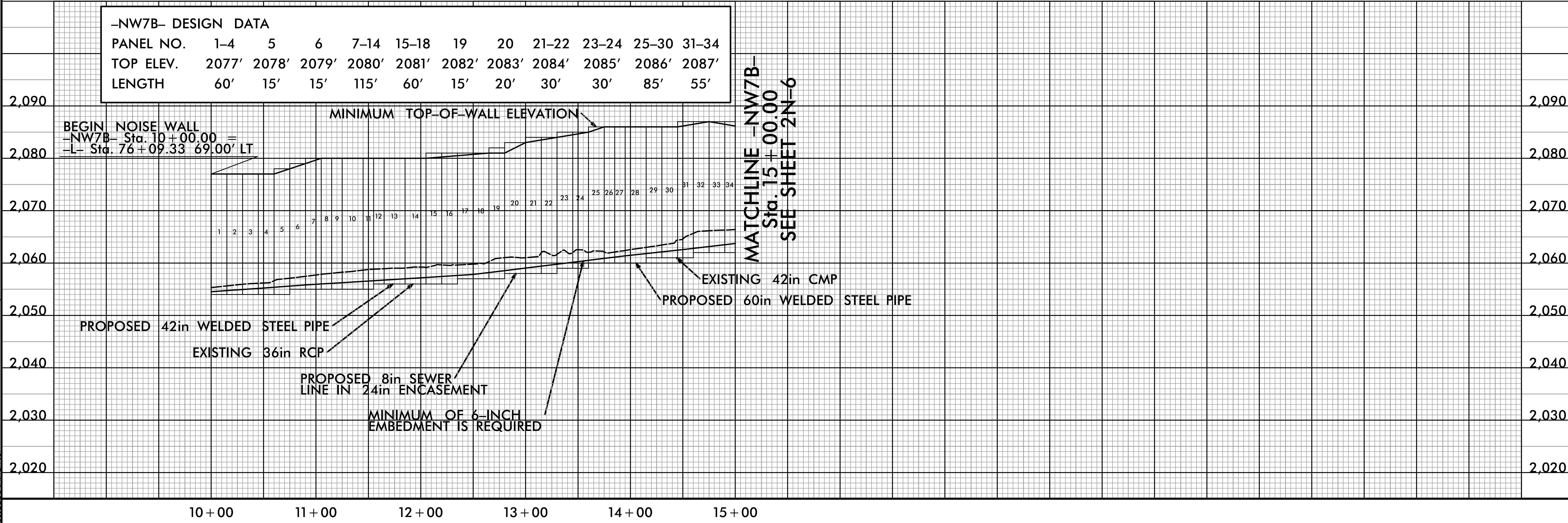
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NOISE WALL -NW7B- STA 10+00.00 TO -NW7B- STA 15+00.00



- TOP OF WALL ELEVATION SHALL NOT BE CHANGED WITHOUT PRIOR COORDINATION WITH THE NCDOT TRAFFIC NOISE AND AIR QUALITY GROUP

-NW7B- DESIGN DATA											
PANEL NO.	1-4	5	6	7-14	15-18	19	20	21-22	23-24	25-30	31-34
TOP ELEV.	2077'	2078'	2079'	2080'	2081'	2082'	2083'	2084'	2085'	2086'	2087'
LENGTH	60'	15'	15'	115'	60'	15'	20'	30'	30'	85'	55'



PROJECT REFERENCE NO.
1-2513AC

SHEET NO.
2N-5

RW SHEET NO.

ROADWAY DESIGN ENGINEER

TRAFFIC NOISE ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALE

PLANS

GRAPHIC SCALE

HORIZONTAL

VERTICAL

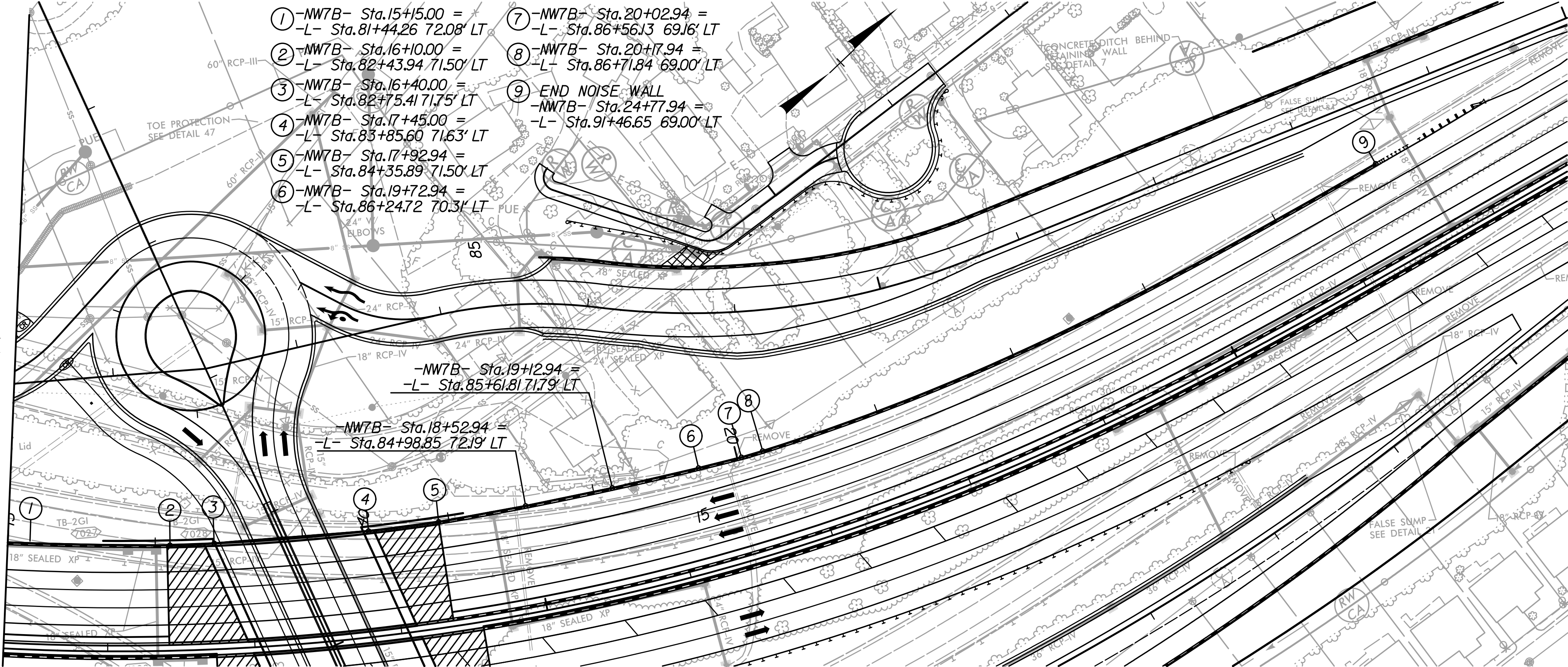
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REVISIONS

NOISE WALL –NW7B– STA 15+00.00 TO –NW7B– STA 24+77.94

MATCHLINE –NW7B–
Sta. 15+00.00
SEE SHEET 2N-5



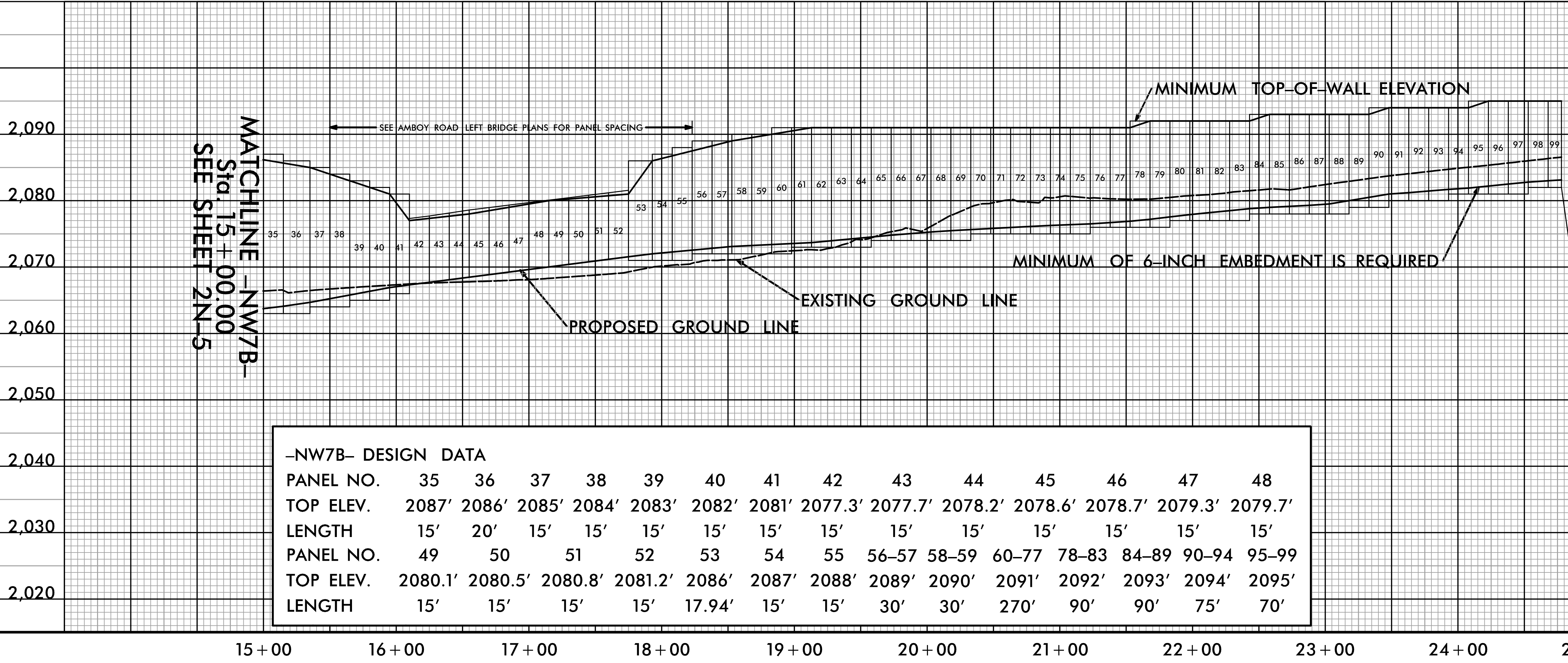
- ① –NW7B– Sta.15+15.00 =
–L– Sta.81+44.26 72.08' LT
- ② –NW7B– Sta.16+10.00 =
–L– Sta.82+43.94 71.50' LT
- ③ –NW7B– Sta.16+40.00 =
–L– Sta.82+75.41 71.75' LT
- ④ –NW7B– Sta.17+45.00 =
–L– Sta.83+85.60 71.63' LT
- ⑤ –NW7B– Sta.17+92.94 =
–L– Sta.84+35.89 71.50' LT
- ⑥ –NW7B– Sta.19+72.94 =
–L– Sta.86+24.72 70.31' LT
- ⑦ –NW7B– Sta.20+02.94 =
–L– Sta.86+56.13 69.16' LT
- ⑧ –NW7B– Sta.20+17.94 =
–L– Sta.86+71.84 69.00' LT
- ⑨ END NOISE WALL
–NW7B– Sta.24+77.94 =
–L– Sta.91+46.65 69.00' LT

–NW7B– Sta.19+12.94 =
–L– Sta.85+61.81 71.79' LT

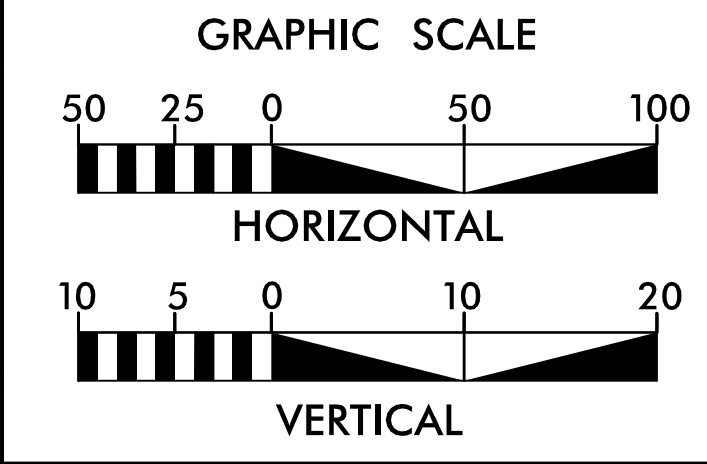
NW7B– Sta.18+52.94 =
–L– Sta.84+98.85 72.19' LT

- NOISE WALL PANELS NORTH OF THE BRIDGE (PANELS 56–99) SHALL FEATURE ABSORPTIVE MATERIAL
- TOP OF WALL ELEVATION SHALL NOT BE CHANGED WITHOUT PRIOR COORDINATION WITH THE NCDOT TRAFFIC NOISE AND AIR QUALITY GROUP

MATCHLINE –NW7B–
Sta. 15+00.00
SEE SHEET 2N-5



–NW7B– DESIGN DATA															
PANEL NO.	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
TOP ELEV.	2087'	2086'	2085'	2084'	2083'	2082'	2081'	2077.3'	2077.7'	2078.2'	2078.6'	2078.7'	2079.3'	2079.7'	
LENGTH	15'	20'	15'	15'	15'	15'	15'	15'	15'	15'	15'	15'	15'	15'	
PANEL NO.	49	50		51	52	53	54	55	56–57	58–59	60–77	78–83	84–89	90–94	95–99
TOP ELEV.	2080.1'	2080.5'		2080.8'	2081.2'	2086'	2087'	2088'	2089'	2090'	2091'	2092'	2093'	2094'	2095'
LENGTH	15'	15'		15'	15'	17.94'	15'	15'	30'	30'	270'	90'	90'	75'	70'



END NOISE WALL
–NW7B– Sta. 24+77.94 =
–L– Sta. 91+46.65 69.00' LT

8/17/99

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sizebathunter

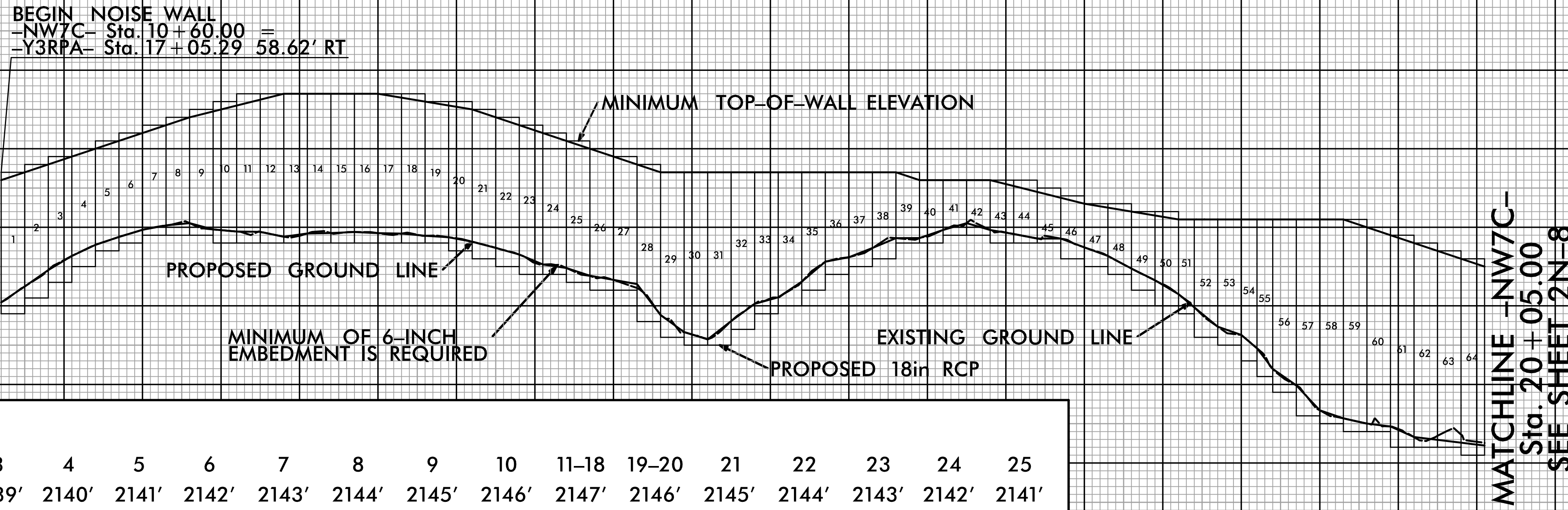
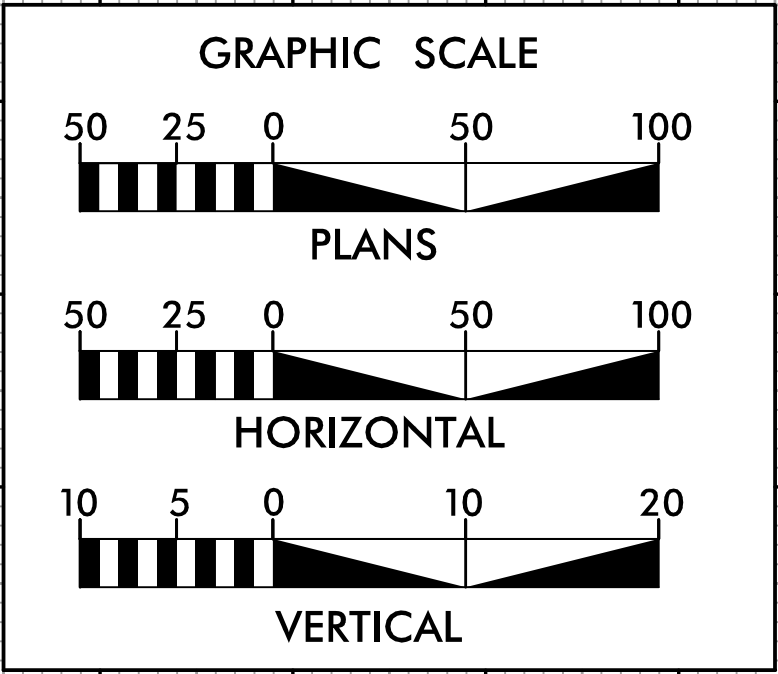
REVISIONS

NOISE WALL –NW7C– STA 10+60.00 TO –NW7C– STA 20+05.00



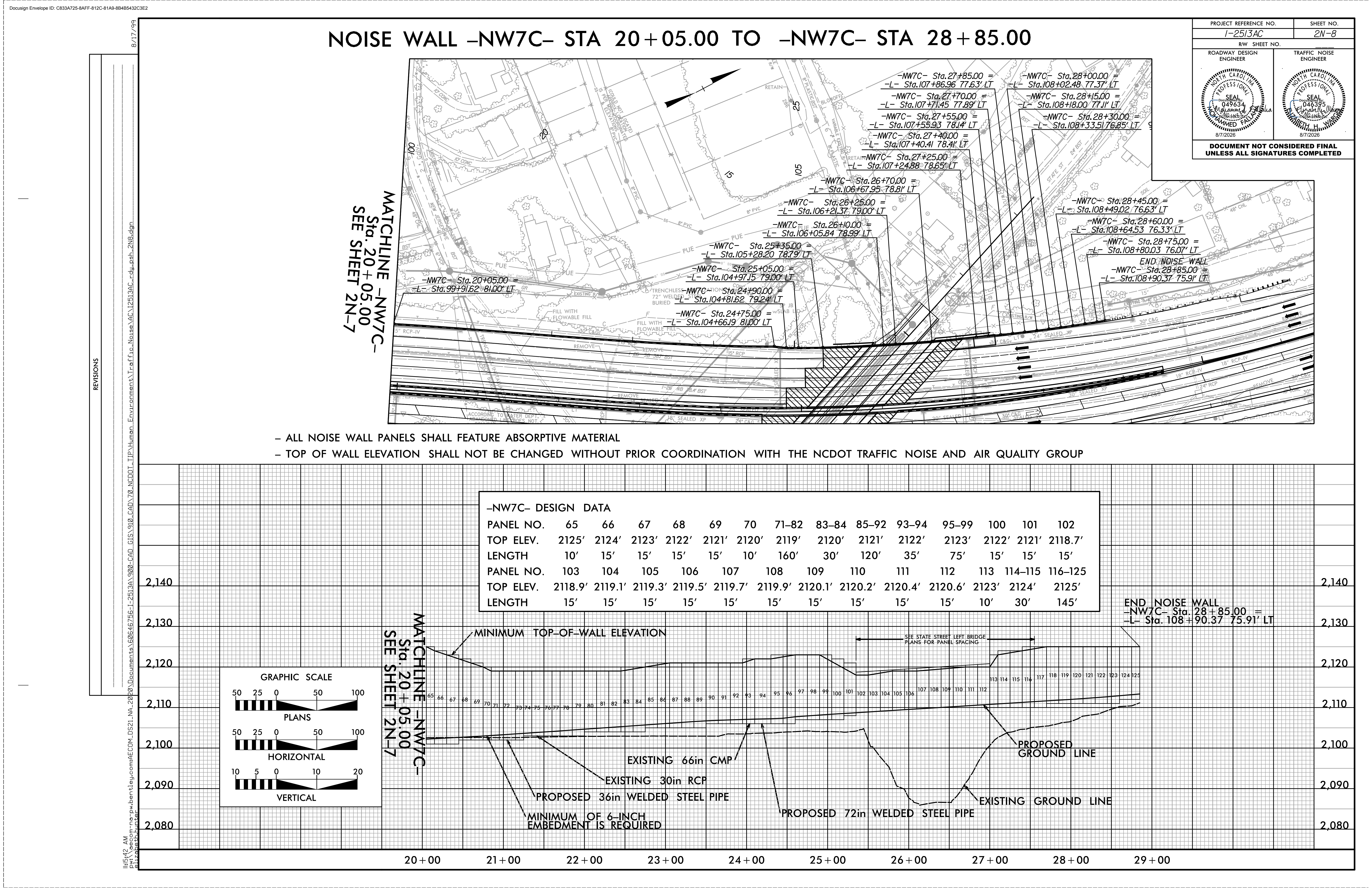
MATCHLINE –NW7C–
Sta. 20+05.00
SEE SHEET 2N-8

- ALL NOISE WALL PANELS SHALL FEATURE ABSORPTIVE MATERIAL
- TOP OF WALL ELEVATION SHALL NOT BE CHANGED WITHOUT PRIOR COORDINATION WITH THE NCDOT TRAFFIC NOISE AND AIR QUALITY GROUP



MATCHLINE –NW7C–
Sta. 20+05.00
SEE SHEET 2N-8

–NW7C– DESIGN DATA																	
PANEL NO.	1	2	3	4	5	6	7	8	9	10	11–18	19–20	21	22	23	24	25
TOP ELEV.	2137'	2138'	2139'	2140'	2141'	2142'	2143'	2144'	2145'	2146'	2147'	2146'	2145'	2144'	2143'	2142'	2141'
LENGTH	15'	15'	15'	15'	15'	15'	15'	15'	15'	15'	120'	30'	15'	15'	15'	15'	15'
PANEL NO.	26	27	28	29–39	40–44	45	46	47–48	49–50	51–59	60	61	62	63	64		
TOP ELEV.	2140'	2139'	2138'	2137'	2136'	2135'	2134'	2133'	2132'	2131'	2130'	2129'	2128'	2127'	2126'		
LENGTH	15'	15'	15'	165'	75'	15'	15'	30'	30'	120'	15'	15'	15'	15'	15'		



8/17/99

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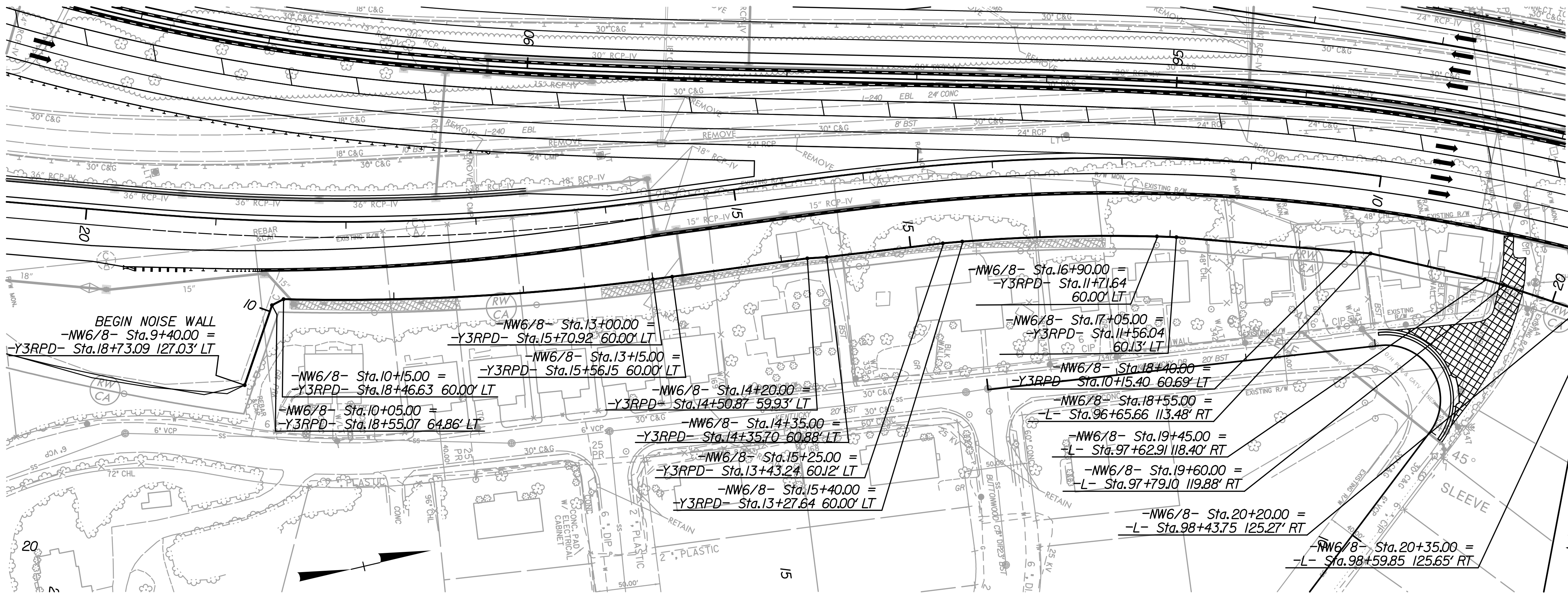
sizebathunter

8/17/99

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sizebathunter

REVISIONS

NOISE WALL -NW6/8- STA 9+40.00 TO -NW6/8- STA 20+35.00



PROJECT REFERENCE NO.
I-2513AC

SHEET NO.
2N-9

RW SHEET NO.

ROADWAY DESIGN ENGINEER

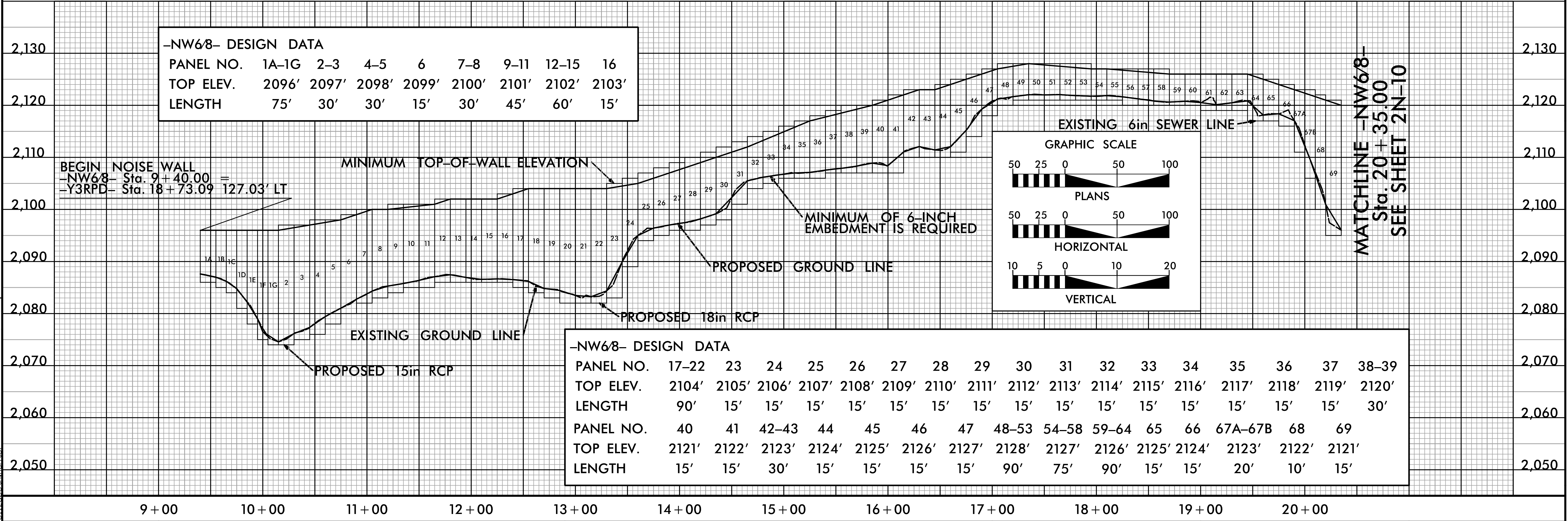
TRAFFIC NOISE ENGINEER

SEAL
049634
M. H. W. H. W. H. W.
8/7/2026

SEAL
049635
M. H. W. H. W. H. W.
8/7/2026

DOCUMENT NOT CONSIDERED FINAL
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- ALL NOISE WALL PANELS SHALL FEATURE ABSORPTIVE MATERIAL
- TOP OF WALL ELEVATION SHALL NOT BE CHANGED WITHOUT PRIOR COORDINATION WITH THE NCDOT TRAFFIC NOISE AND AIR QUALITY GROUP



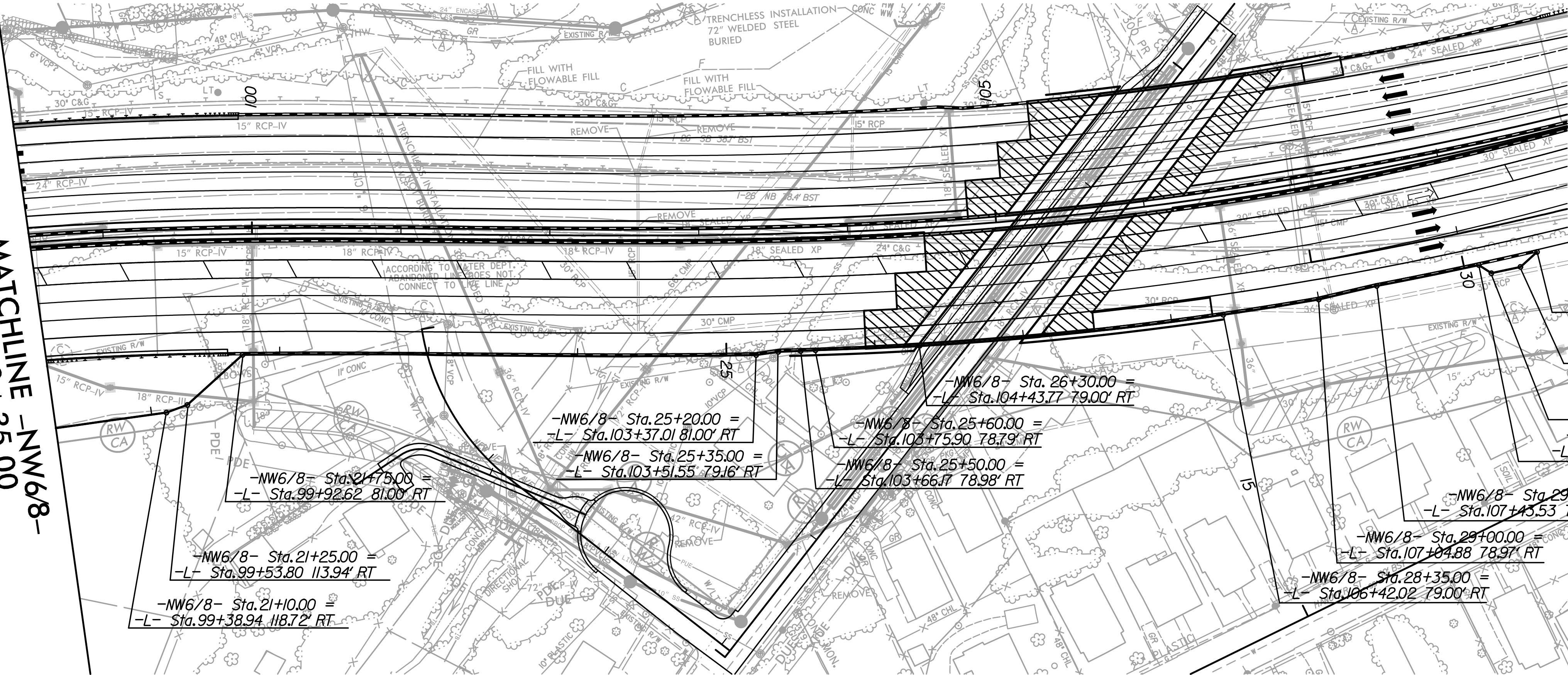
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REVISIONS

NOISE WALL -NW6/8- STA 20+35.00 TO -NW6/8- STA 30+55.00

MATCHLINE -NW6/8-
Sta. 20+35.00
SEE SHEET 2N-9



PROJECT REFERENCE NO.
I-2513AC

SHEET NO.
2N-10

RW SHEET NO.

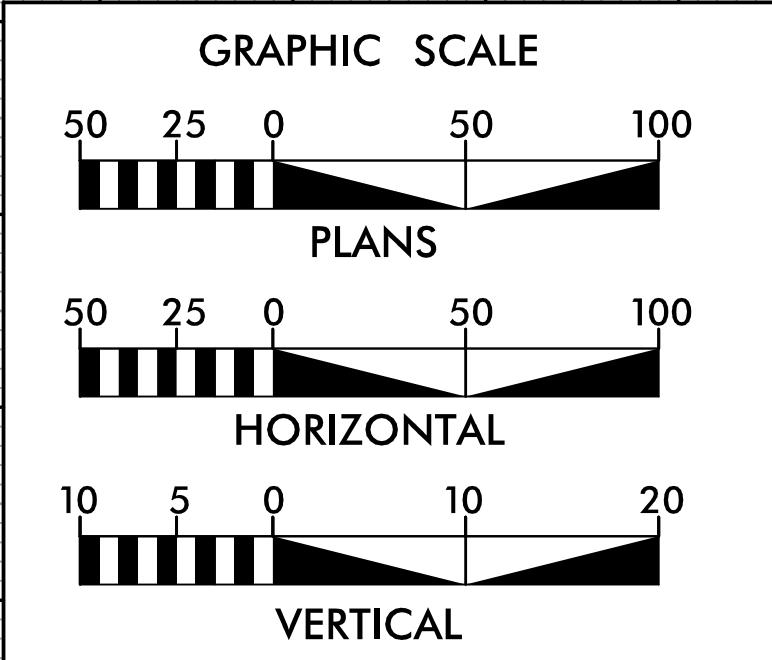
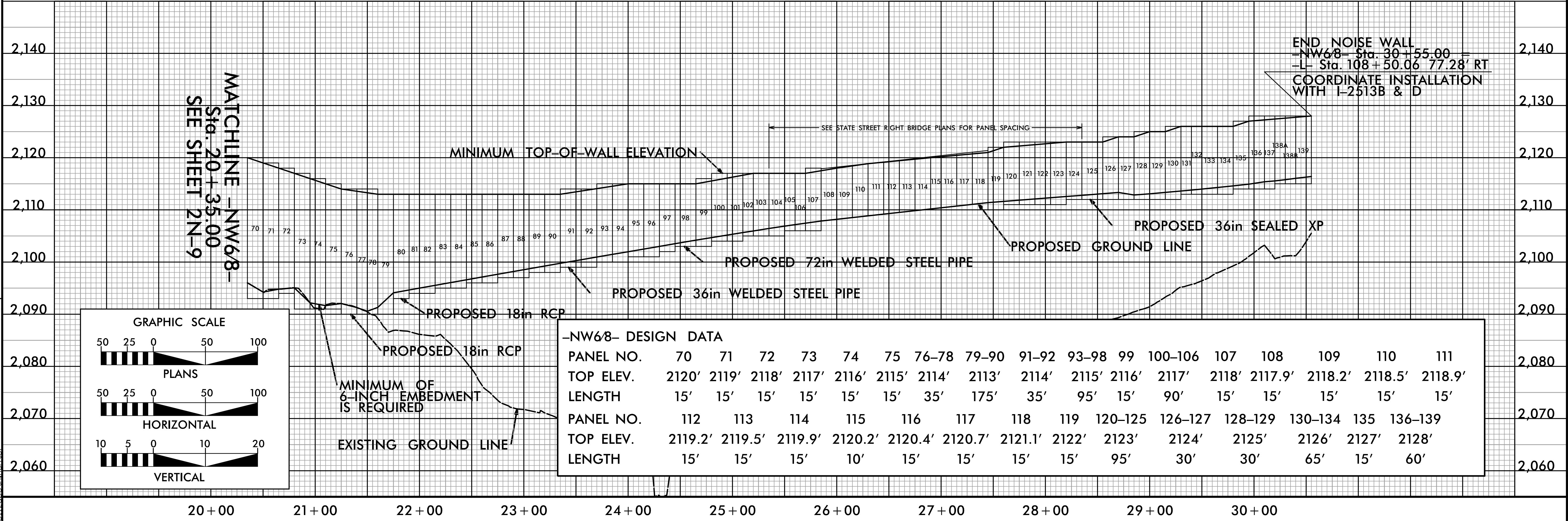
ROADWAY DESIGN ENGINEER

TRAFFIC NOISE ENGINEER

SEAL
049634
8/17/2026

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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12/06/07

COMPUTED BY: SR	DATE: 03/31/26
CHECKED BY: MF	DATE: 09/01/26

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
1-2513AC	3B-1

SUMMARY OF CONCRETE BARRIER
IN LINEAR FEET

SURVEY LINE	STATION	STATION	LOCATION LTRTCL	MEDIAN HAZARD PROTECTION	TYPE – T1	TYPE – T2	PRECAST REINFORCED SINGLE FACED		DOUBLE FACE SINGLE SLOPE	CONC. BARRIER RAIL W/MOMENT SLAB (LF) (RDWY. PAY ITEM)	CONCRETE BARRIER TRANSITION SECTION		
							PRECAST REINFORCED SINGLE FACED	PRECAST REINFORCED, SINGLE FACED SINGLE SLOPE			SINGLE FACE SINGLE SLOPE TO TYPE I SINGLE SLOPE	PRECAST REINFORCED CB TO SINGLE SLOPE CB	F-SHAPE CB TO PRECAST REINFORCED CB
L	15 + 48.48	15 + 77.60	LT (I-240 WB)							30			
L	15 + 61.55	15 + 85.00	LT (I-240 WB)				24						
L	15 + 68.71	15 + 85.00	RT (I-240 EB)				17						
L	15 + 85.00	16 + 00.00	LT (I-240 WB)									1	
L	15 + 85.00	16 + 00.00	RT (I-240 EB)									1	
L	15 + 83.17	16 + 14.02	RT (I-240 EB)							30			
L	16 + 00.00	43 + 42.25	CL	2,742									
L	24 + 10.24	29 + 92.96	LT (I-240 WB)				585						
L	47 + 69.00	49 + 00.00	CL	131									
L	49 + 00.00	51 + 40.00	CL									1	
L	47 + 68.99	60 + 03.61	RT (I-240 EB)				1,241						
L	51 + 40.00	53 + 13.56	CL						174				
L	53 + 13.56	54 + 13.56	CL									1	
L	54 + 13.56	55 + 18.67	CL	105									
L	55 + 18.67	56 + 18.67	CL									1	
L	53 + 86.04	63 + 81.00	LT (I-240 WB)				990						
L	56 + 18.67	70 + 00.00	CL						1,382				
L	60 + 03.61	64 + 00.00	RT (I-240 EB)			400							
L	63 + 81.00	64 + 75.00	LT (I-240 WB)			94							
L	64 + 00.00	65 + 25.00	RT (I-240 EB)		125								
L	64 + 75.00	66 + 25.00	LT (I-240 WB)		150								
L	65 + 25.00	65 + 90.00	RT (I-240 EB)			65							
L	66 + 25.00	68 + 25.00	LT (I-240 WB)			200							
L	68 + 25.00	72 + 75.00	LT (I-240 WB)		450								
L	70 + 00.00	72 + 40.00	CL									1	
L	72 + 40.00	74 + 50.00	CL	210									
L	72 + 75.00	74 + 05.46	LT (I-240 WB)			131							
L	74 + 50.00	82 + 73.88	RT (I-240 EB)					826					
L	75 + 00.00	82 + 20.08	LT (I-240 WB)				697						
L	82 + 20.08	82 + 41.92	LT (I-240 WB)										1
L	84 + 35.91	84 + 57.75	LT (I-240 WB)										1
L	84 + 57.75	91 + 46.65	LT (I-240 WB)				665						
L	84 + 55.41	104 + 51.25	RT (I-240 EB)					1,996					
L	88 + 19.08	98 + 54.64	RT (I-240 EB)				1,042						
L	99 + 91.62	105 + 06.86	LT (I-240 WB)				510						
L	105 + 06.86	105 + 28.42	LT (I-240 WB)										1
L	99 + 82.38	103 + 88.45	RT (I-240 EB)				409						
L	103 + 88.45	104 + 08.68	RT (I-240 EB)										1
L	106 + 35.06	106 + 55.21	RT (I-240 EB)										1
L	106 + 55.21	108 + 50.07	RT (I-240 EB)				202						
L	106 + 18.68	109 + 50.00	RT (I-240 EB)					332					
L	107 + 48.18	107 + 69.73	LT (I-240 WB)										1
L	107 + 69.73	108 + 90.36	LT (I-240 WB)				117						
L	109 + 50.00	111 + 00.00	CL			150							
L	111 + 00.00	115 + 50.00	CL		450								
L	115 + 44.82	118 + 19.44	RT (I-240 EB)				274						
RP32	11 + 51.83	22 + 45.14	LT				1,087						
RP32	28 + 45.00	32 + 66.50	RT				427						
RP32	30 + 58.52	34 + 40.91	LT				376						
RP23	12 + 05.00	13 + 29.02	RT				130						
RP23	22 + 39.07	34 + 65.49	LT				1,227						
Y3	23 + 12.29	26 + 79.84	LT				378						
Y3RPA	14 + 10.19	22 + 25.00	LT				803						
TOTAL:				3,188	1,175	1,040	11,202	3,154	1,556	60	4	2	6
SAY:				3,190	1,180	1,040	11,210	3,160	1,560	60	4	2	6
				SAY: 14,370						SAY: 12			

SUMMARY OF SHOULDER BERM GUTTER
IN LINEAR FEET

SURVEY LINE	STATION	STATION	LOCATION LTRTCL	LENGTH
L	13+90.51	15+82.89	RT	187.40
L	18+24.10	24+10.24	LT	592.94
L	16+13.99	26+50.00	RT	1,022.20
L	29+92.96	30+65.35	LT	72.88
L	39+62.96	43+17.39	RT	356.04
L	42+99.89	43+41.12	LT	41.18
L	47+69.29	49+39.73	LT	169.72
L	98+25.42	99+91.62	LT	172.26
L	98+54.63	99+82.38	RT	123.61
Y2A	12+97.70	13+88.45	LT	97.98
RP23	16+02.00	18+65.00	RT	260.81
Y2RPB	15+66.00	15+90.00	LT	24.21
Y2RPB	21+59.00	25+09.70	LT	349.98
Y2RPC	22+71.98	25+92.00	LT	319.45
Y2RPC	31+00.00	31+86.32	LT	86.95
TOTAL:				3,878
SAY:				3,880

SUMMARY OF EXPRESSWAY GUTTER
IN LINEAR FEET

SURVEY LINE	STATION	STATION	LOCATION LTRTCL	LENGTH
Y3RPA	17+00.00	22+30.00	LT	541
Y3RPD	16+60.00	21+59.31	RT	496
L	93+99.40	98+25.00	LT	444
L	118+19.55	121+20.28	RT	300
TY6RPC	10+00.00	14+00.00	RT	396
Y2A	13+88.46	14+38.02	LT	65
TOTAL:				2,242
SAY:				2,250

SUMMARY OF REMOVABLE STEEL BOLLARDS
NOTE: PLACE REMOVABLE STEEL BOLLARD IN CENTER OF SHARED-USE PATH

SURVEY LINE	STATION	LOCATION LTRTCL	NO. OF BOLLARDS
Y2	18+11	LT	1
MUP1	10+69	CL	1
MUP2	10+36	CL	1
RP32	35+16	LT	1
RP32	35+84	RT	1
RP23	40+76	LT	1
RP23	40+71	RT	1
Y3	24+20	RT	1
Y3	25+53	RT	1
Y3B	11+20	LT	1
Y2B	14+75	RT	1
TOTAL:			11
SAY:			11

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COMPUTED BY: SR	DATE: 10/22/25
CHECKED BY: MF	DATE: 07/28/26

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
1-25/3AC	3B-2

SUMMARY OF ASPHALT PAVEMENT REMOVAL

IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD ²
Y2	15 + 21	16 + 04	RT	147.84
Y2	16 + 18	16 + 52	RT	120.60
Y2	18 + 92	19 + 57	LT	63.73
Y2	22 + 27	27 + 50	CL	4,148.79
Y2A	13 + 31	17 + 80	CL	800.08
Y2B	17 + 11	17 + 65	LT	357.12
Y2RPB	26 + 22	28 + 16	LT	498.21
Y2C	11 + 50	12 + 30	CL	281.33
RP32	15 + 44	19 + 03	CL	1,273.81
RP23	30 + 00	39 + 61	RT	1,576.67
Y3	25 + 19	26 + 89	RT	411.70
Y3	30 + 00	30 + 93	CL	258.65
Y3A	11 + 00	12 + 00	CL	223.54
Y3B	10 + 41	11 + 23	CL	205.96
MUP2	10 + 19	10 + 71	CL	113.22
L	81 + 96	88 + 17	LT	1,462.53
Y12	13 + 03	14 + 01	LT	398.71
TY6RPC	14 + 49	24 + 50	CL	539.80
DETOUR PAVEMENT REMOVAL				54,160
TOTAL:				67,042
SAY:				67,050

WOVEN WIRE FENCE
SUMMARY

NOTE: WOVEN WIRE FENCE WITHOUT BARBED WIRE ON TOP

STATION	STATION	LOCATION LT/RT	FABRIC L.F.	4" POSTS	5" POSTS
-L-					
15 + 49.69	40 + 60.00	LT	2,682	166	46
43 + 28.72	43 + 34.01	LT	57	2	4
47 + 72.76	55 + 04.25	LT	725	48	7
66 + 18.36	77 + 02.81	LT	1,126	70	19
68 + 06.89	76 + 16.29	LT	809	51	13
80 + 55.78	93 + 00.00	LT	1,273	74	31
104 + 35.00	105 + 90.31	LT	237	11	10
106 + 69.20	117 + 23.93	LT	1,096	68	19
16 + 24.29	28 + 30.00	RT	1,284	76	28
29 + 18.00	29 + 57.80	RT	42	1	4
30 + 31.70	42 + 82.00	RT	1,299	84	16
47 + 58.66	52 + 05.25	RT	511	31	10
56 + 75.00	60 + 30.00	RT	375	23	7
67 + 94.00	72 + 87.40	RT	611	35	16
85 + 92.58	104 + 42.69	RT	2,405	150	40
105 + 11.86	113 + 78.43	RT	1,093	66	22
-Y3-					
18 + 88.00	24 + 37.50	RT	561	36	7
27 + 81.29	31 + 90.02	LT	409	25	7
		TOTAL:	16,593	1,019	306
		SAY:	16,600	1,020	310

SUMMARY OF CONCRETE PAVEMENT REMOVAL

IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD ²
L	16 + 00	38 + 50	LT	10,098.10
L	16 + 00	38 + 50	RT	11,099.84
L	43 + 45	43 + 92	LT	128.13
L	43 + 45	44 + 28	RT	238.89
L	51 + 01	55 + 89	CL	1,012.09
L	52 + 00	104 + 84	CL	21,042.68
L	52 + 00	63 + 00	CL	4,453.65
L	53 + 50	56 + 00	LT	513.45
L	57 + 25	64 + 00	RT	1,394.69
L	59 + 03	63 + 13	LT	792.00
L	67 + 00	102 + 50	CL	14,035.48
L	79 + 61	83 + 04	CL	605.36
L	104 + 83	105 + 35	LT	132.65
L	106 + 11	110 + 00	RT	773.80
L	106 + 25	121 + 20	CL	6,280.68
L	106 + 65	107 + 04	LT	84.03
L	110 + 50	116 + 50	LT	2,686.43
Y3	16 + 71	19 + 50	CL	564.17
Y13	10 + 00	10 + 73	RT	206.66
Y15	21 + 41	22 + 49	LT	312.69
TOTAL:				76,454
SAY:				76,460

SUMMARY OF ASPHALT PAVEMENT BREAKING

IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD ²
Y2	16 + 50	19 + 50	CL	2,675.92
Y2B	15 + 00	21 + 00	CL	1,659.02
Y2B	19 + 09	19 + 70	LT	949.50
Y2C	11 + 02	11 + 50	CL	197.42
RP32	10 + 42	13 + 46	CL	1,539.34
RP32	33 + 83	36 + 44	CL	607.26
Y3	26 + 47	30 + 00	RT	1,741.97
Y3A	12 + 00	14 + 74	CL	646.69
TOTAL:				10,017
SAY:				10,020

SUMMARY OF CONCRETE PAVEMENT BREAKING

IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD ²
L	38 + 50	44 + 28	LT	4,827.67
L	47 + 32	53 + 50	LT	4,438.92
L	63 + 00	67 + 00	LT	2,045.26
L	64 + 00	89 + 00	RT	10,726.74
L	101 + 50	105 + 27	LT	2,551.71
L	110 + 00	112 + 50	LT	514.52
Y3	19 + 50	26 + 48	CL	1,408.17
TOTAL:				26,513
SAY:				26,520

SUMMARY OF 4" SHOULDER DRAINS

LINE	LOCATION	BEGIN STA.	END STA.	SHOULDER DRAIN PIPE (LF)	SHOULDER DRAINS (LF)	OUTLET PIPE (LF)	CONC PADS (EA)	OUTLET LOCATIONS
-Y2RPB-	LT Outside Shoulder (Westbound)	14 + 90.00	22 + 00.00	710	710	200	3	22 + 00 (2GI 0423), 24 + 50 (2GI 0426), 26 + 70 (2GI 0419), 29 + 00 (2GI 0522), 30 + 50 (PAD), Y2RPB 11 + 00 (PAD), Y2RPB 14 + 90 (PAD)
-L-	LT Outside Shoulder (Westbound)	41 + 40.00	43 + 40.00	200	200			42 + 12 (2GI 6130), 42 + 50 (2GI 6129)
-L-	LT Outside Shoulder (Westbound)	47 + 70.00	82 + 40.00	3,470	3,470			47 + 70 (2GI 6059), 48 + 10 (2GI 6060), 51 + 50 (2GI 6034), 57 + 00 (2GI 6201), 58 + 40 (2GI 6202), 60 + 40 (2GI 6212), 63 + 00 (2GI 6213), 65 + 90 (2GI 6238), 66 + 25 (2GI 6246), 66 + 75 (2GI 6252), 70 + 00 (2GI 7097), 73 + 35 (2GI 7007), 75 + 00 (2GI 7098), 77 + 45 (2GI 7012), 81 + 00 (2GI 7025), 82 + 10 (7027), 82 + 40 (2GI 7028)
-L-	LT Outside Shoulder (Westbound)	84 + 75.00	93 + 17.00	842	842	108	1	84 + 75 (2GI 7062), 90 + 00 (PAD), 91 + 75 (2GI 7087)
-L-	LT Outside Shoulder (Westbound)	100 + 96.00	104 + 75.00	379	379	68	2	100 + 96 (PAD), 102 + 00 (PAD)
-L-	LT Outside Shoulder (Westbound)	107 + 15.00	108 + 00.00	85	85			107 + 15 (2GI 0830)
-L-	LT Median Shoulder (Westbound)	16 + 00.00	43 + 50.00	2,750	2,750			18 + 00 (2GI 0445), 18 + 88 (2GI 0446), 19 + 40 (2GI 0449), 22 + 00 (2GI 0422), 24 + 50 (2GI 0425), 29 + 00 (2GI 0521), 37 + 00 (2GI 0502), 39 + 75 (2GI 0504), 42 + 32 (2GI 6117), 43 + 50 (2GI 6116)
-L-	LT Median Shoulder (Westbound)	47 + 70.00	75 + 19.00	2,749	2,749			47 + 70 (2GI 6058), 51 + 50 (2GI 6033), 63 + 10 (2GI 6214), 63 + 60 (2GI 6220), 65 + 90 (2GI 6239), 66 + 28 (2GI 6247), 66 + 70 (2GI 6253), 68 + 35 (2GI 6261), 68 + 80 (2GI 6269)
-L-	LT Median Shoulder (Westbound)	91 + 75.00	101 + 42.00	967	967			91 + 75 (2GI 7098), 93 + 50 (2GI 7103), 95 + 80 (2GI 7093), 98 + 00 (2GI 7095)
-L-	RT Median Shoulder (Eastbound)	18 + 75.00	43 + 00.00	2,425	2,425			18 + 88 (2GI 0446), 19 + 40 (2GI 0448), 22 + 00 (2GI 0423), 24 + 50 (2GI 0424), 29 + 00 (2GI 0520), 37 + 00 (2GI 0503), 39 + 70 (2GI 0505), 42 + 35 (2GI 6119), 43 + 00 (2GI 6118)
-L-	RT Median Shoulder (Eastbound)	47 + 70.00	82 + 65.00	3,495	3,495			47 + 70 (2GI 6057), 51 + 50 (2GI 6032), 63 + 05 (2GI 6215), 63 + 50 (2GI 6221), 65 + 90 (2GI 6240), 66 + 35 (2GI 6248), 66 + 65 (2GI 6254), 68 + 80 (2GI 6270), 77 + 50 (2GI 7013), 82 + 65 (2GI 7031)
-L-	RT Median Shoulder (Eastbound)	84 + 75.00	93 + 17.00	842	842			84 + 75 (2GI 7063), 89 + 00 (2GI 7076), 89 + 73 (2GI 7072), 90 + 50 (2GI 7101)
-L-	RT Median Shoulder (Eastbound)	101 + 65.00	104 + 00.00	235	235			101 + 65 (2GI 0811)
-L-	RT Median Shoulder (Eastbound)	106 + 50.00	108 + 00.00	150	150			106 + 50 (2GI 0826), 107 + 15 (2GI 0832)
-Y2RPC-	RT Outside Shoulder (Eastbound)	16 + 00.00	24 + 13.00	813	813	148	2	17 + 00 (2GI 0437), 17 + 50 (2GI 0439), 18 + 88 (2GI 0431), 20 + 25 (2GI 0432), 22 + 00 (2GI 0429), 24 + 50 (2GI 0428), 27 + 50 (PAD), 30 + 50 (PAD), Y2RPC 18 + 60 (2GI 0509), Y2RPC 22 + 35 (2GI 0511)
-L-	RT Outside Shoulder (Eastbound)	41 + 00.00	43 + 00.00	200	200			43 + 00 (2GI 6121)
-L-	RT Outside Shoulder (Eastbound)	47 + 70.00	75 + 50.00	2,780	2,780			47 + 70 (2GI 6056), 51 + 50 (2GI 6031), 55 + 30 (2GI 6200), 59 + 50 (2GI 6204), 63 + 10 (2GI 6216), 65 + 50 (2GI 6234), 65 + 90 (2GI 6241), 66 + 25 (2GI 6249), 66 + 70 (2GI 6255), 68 + 70 (2GI 6271), NEED TO TIE IN WITH INLET 74 + 00 (2GI 7110)
-Y3RPD-	RT Outside Shoulder (Eastbound)	14 + 70.00	101 + 42.00	8,672	8,672	16	1	Y3RPD 14 + 70 (2GI 7089), Y3RPD 13 + 90 (2GI 7090), Y3RPD 11 + 50 (PAD), 98 + 00 (2GI 7096), 100 + 00 (2GI 0806)
TOTAL:				31,764	31,764	540	9	
SAY:				31,770	31,770	540	10	

BLACK VINYL COATED
CHAIN LINK FENCE, 48" FABRIC

LOCATION	FABRIC L.F.	LINE POSTS	TERMINAL POSTS
MSE RETAINING WALL #1	686	57	4
MSE RETAINING WALL #2	990	83	4
MSE RETAINING WALL #4	320	26	2
MSE RETAINING WALL #7	275	23	2
MSE RETAINING WALL #9	205	17	6
SOIL NAIL RETAINING WALL #10	305	25	2
SOIL NAIL RETAINING WALL #11	580	48	4
SOIL NAIL RETAINING WALL #13	130	11	2
SOIL NAIL RETAINING WALL #14	378	31	2
SOIL NAIL RETAINING WALL #15	1,260	105	4
SOIL NAIL RETAINING WALL #16	1,042	87	4
CIP GRAVITY RETAINING WALL #27	20	1	2
SOLDIER PILE RETAINING WALL #6	427	36	4
SOLDIER PILE RETAINING WALL #21	106	9	2
TOTAL:	6,724	560	44
SAY:	6,730	570	50

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Mohamed Fallah

12/06/07

COMPUTED BY: SH	DATE: 3/13/2026
CHECKED BY: MF	DATE: 8/27/2026

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
1-25/3AC	3B-3

GUARDRAIL SUMMARY (SHEET 1 OF 2)

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS										IMPACT ATTENUATOR		REMOVE & RESET EXISTING GUARDRAIL	REMOVE EXISTING GUARDRAIL	WOOD RUB RAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	TYPE III	B-77	GREU, TL-3	GREU, TL-2	CAT-1	TES	AT-1					G				
-L-	14 + 29.63	15 + 48.46	LT	125				15 + 48.46	VAR	VAR						1												SPI 8-33, SPI 8-40		
-L-	15 + 08.34	15 + 61.64	LT	62.5				15 + 61.64	VAR	VAR						1												SPI 8-33, SPI 8-40		
-L-	13 + 55.39	15 + 68.74	RT	225			15 + 68.74		VAR	VAR						2												SPI 8-33, SPI 8-40		
-L-	13 + 77.72	15 + 83.17	RT	200			15 + 83.17		VAR	VAR						1												SPI 8-33, SPI 8-40		
-L-	15 + 77.60	24 + 10.24	LT	825			15 + 77.60		14	14						2												SPI 8-33, SPI 8-40		
-L-	16 + 14.06	26 + 56.25	RT	1,037.5			20 + 00.00		14	14						1			1									SPI 8-33, SPI 8-40		
-L-	29 + 92.96	31 + 14.98	LT	125			29 + 92.96		14	14						1	1											SPI 8-33, SPI 8-40		
-L-	39 + 63.21	43 + 34.62	RT	375			39 + 42.23		VAR	VAR	198.22		4			1									1			SPI 8-33, SPI 8-40		
-Y2RPC-	22 + 71.93	26 + 06.97	LT	337.5			24 + 13.06		VAR	VAR	170.44		1.5			1												SPI 8-33, SPI 8-40		
-Y2RPC-	24 + 54.67	26 + 07.03	RT	162.5			24 + 54.67		VAR	VAR	79.99		1.5			1	1											SPI 8-33, SPI 8-40		
-Y2RPC-	30 + 85.03	36 + 15.78	LT	537.5				30 + 85.03	VAR	VAR						1			1									SPI 8-33, SPI 8-40		
-Y2RPC-	30 + 84.97	31 + 38.94	RT	62.5				30 + 84.97	4	4						1			1									SPI 8-33, SPI 8-40		
-L-	42 + 93.48	43 + 60.43	LT	75				43 + 60.43								1			1									SPI 8-33, SPI 8-40		
-L-	47 + 54.05	49 + 90.00	LT	237.5			47 + 54.05		12	12	50		1			1	1											SPI 8-33, SPI 8-40		
-Y2RPB-	21 + 59.00	25 + 60.00	LT	400			21 + 59.00		VAR	VAR	377.11		8			1	1											SPI 8-33, SPI 8-40		
-Y2RPB-	21 + 44.00	22 + 91.83	RT	150			21 + 44.00		VAR	VAR	125		3.5			1	1											SPI 8-33, SPI 8-40		
-Y2-	21 + 21.87	21 + 91.73	RT	75	50.38		21 + 95.00		VAR	VAR					1						1							SPI 8-33, SPI 8-40		
-Y2-	23 + 48.56	24 + 01.00	LT	50	69.69		24 + 02.03		VAR	VAR					1				1									SPI 8-33, SPI 8-40		
-Y2A-	13 + 35.15	14 + 38.02	LT	50	75.20		14 + 38.02		6	6						1		1										SPI 8-33, SPI 8-40		
-Y2A-	16 + 07.97	18 + 74.44	RT	262.5														1										SPI 8-33, SPI 8-40		
-Y2A-	17 + 25.00	17 + 89.34	LT	62.5					6	6						1		1										SPI 8-33, SPI 8-40		
-RP32-	10 + 60.80	16 + 52.77	RT	600					8	8						1			1									SPI 8-33, SPI 8-40		
-RP32-	11 + 12.72	11 + 54.94	LT	50				11 + 52.06	VAR	VAR						1			1									SPI 8-33, SPI 8-40		
-RP32-	22 + 46.39	23 + 10.74	LT	62.5												1		1									12.5	SPI 8-33, SPI 8-40		
-RP32-	34 + 40.91	35 + 05.78	LT	62.5												1		1									12.5	SPI 8-33, SPI 8-40		
-RP23-	11 + 32.44	12 + 05.00	RT	75												1		1										SPI 8-33, SPI 8-40		
-RP23-	13 + 29.02	18 + 65.00	RT	537.5			13 + 49.79		8	8						2												SPI 8-33, SPI 8-40		
-RP23-	37 + 74.00	40 + 45.00	RT	275					8	8						1			1									SPI 8-33, SPI 8-40		
-RP23-	40 + 36.16	40 + 68.88	RT	37.5																2								SPI 8-33		
-Y9-	10 + 00.69	10 + 00.69	RTLTL	37.5																								SPI 8-33		
-L-	81 + 67.80	82 + 59.50	RT	100			82 + 59.50		VAR	VAR						2												SPI 8-33, SPI 8-40		
-Y3-	15 + 55.27	16 + 09.42	RT	62.5												1			1									SPI 8-33, SPI 8-40		
-Y3-	17 + 24.00	23 + 16.41	RT	512.5	99.4													1	1								578	SPI 8-33, SPI 8-40		
-L-	91 + 46.65	92 + 32.08	LT	87.5				87 + 91.61	VAR	VAR						1	1											SPI 8-33, SPI 8-40		
-L-	85 + 50.30	89 + 75.17	RT	450			85 + 50.30		VAR	VAR						1			1									SPI 8-33, SPI 8-40		
-Y3RPD-	18 + 63.84	19 + 68.00	LT	112.5			18 + 63.84		14	14						1	1											SPI 8-33, SPI 8-40		
-L-	98 + 54.64	99 + 82.38	RT	125			98 + 22.91	99 + 82.38	14	14						2												SPI 8-33, SPI 8-40		
-Y3RPA-	10 + 00.00	14 + 10.19	LT	412.5			98 + 25.00	99 + 91.62	14	14						1												SPI 8-33, SPI 8-40		
-L-	97 + 94.08	99 + 91.63	LT	212.5					14	14						1												SPI 8-33, SPI 8-40		
-L-	108 + 90.34	111 + 31.55	LT	237.5			109 + 25.00		VAR	VAR						1	1											SPI 8-33, SPI 8-40		
-L-	115 + 50.31	120 + 22.44	RT	475			115 + 50.31		14	14						1								1				SPI 8-33, SPI 8-40		
-L-	115 + 50.31	117 + 48.10	LT	200												1												SPI 8-33, SPI 8-40		
-Y3A-	12 + 70.53	15 + 00.88	LT	125	123.25													1	1									SPI 8-33, SPI 8-40		
-DW11-	10 + 39.52	11 + 84.67	RT	150	22.27				VAR	VAR									1									SPI 8-33, SPI 8-40		
-Y11-	10 + 46.96	11 + 30.00	RT	25	</																									

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

PROJECT REFERENCE NO.	SHEET NO.
1-2513AC	3B-4

GUARDRAIL SUMMARY (SHEET 2 OF 2)

[illegible]

12/06/07

COMPUTED BY: JC	DATE: 3/31/26
CHECKED BY: MF	DATE: 8/20/26

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
1-2513AC	3B-5

SUMMARY OF EARTHWORK
IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	UNDERCUT	EMBANK. + %	BORROW	WASTE
SUMMARY 1: PHASE I, STEPS 1-2						
-L- 15 + 11	-L- 43 + 66	234,027	2,923	24,062		212,888
-L- 47 + 50	-L- 76 + 00	92,714	2,893	19,804		75,803
-L- 80 + 50	-L- 81 + 50	16	42	6		52
-L- 83 + 00	-L- 105 + 00	29,786	1,130	2,298		28,618
-Y2- 12 + 35	-Y2- 17 + 53	7,444	94	313		7,225
-Y2- 18 + 24	-Y2- 19 + 12		71	2,323	2,323	71
-Y2- 25 + 19	-Y2- 29 + 50	3,432	229	892		2,769
-Y2C- 11 + 00	-Y2C- 13 + 15	411		764	353	
-Y2RPB- 21 + 57	-Y2RPB- 27 + 55	78	597	64,754	64,676	597
-Y8- 15 + 50	-Y8- 19 + 50	1,766		660		1,106
-Y10- 12 + 00	-Y10- 12 + 50	35		192	157	
-Y14- 12 + 00	-Y14- 15 + 00	617		84		533
SUBTOTAL:		370,326	7,979	116,152	67,509	329,662
SUMMARY 2: PHASE I, STEPS 3-4						
-L- 13 + 49	-L- 31 + 85	25,013	2,040	14,433		12,621
-L- 48 + 50	-L- 53 + 00	14,211	552	712		14,051
-Y2- 17 + 53	-Y2- 18 + 40			1,510	1,510	
-Y2- 21 + 13	-Y2- 21 + 50		22	1,249	1,249	22
-Y2- 23 + 50	-Y2- 25 + 56	4,172	139	1,843		2,468
-Y2B- 15 + 00	-Y2B- 21 + 18	889		7,829	6,940	
SUBTOTAL:		44,285		27,576	9,699	29,161
SUMMARY 3: PHASE I, STEP 4A						
-L- 32 + 00	-L- 40 + 00	123	429	797	674	429
SUBTOTAL:		123	429	797	674	429
SUMMARY 4: PHASE I, STEP 4B						
-Y2- 19 + 30	-Y2- 20 + 70		122	6,294	6,294	122
-Y2A- 13 + 70	-Y2A- 18 + 46	1,195		12,457	12,457	
-Y2RPB- 27 + 55	-Y2RPB- 28 + 09		7	4,110	4,110	7
SUBTOTAL:		1,195	129	22,861	21,666	129
SUMMARY 5: PHASE I, STEP 5						
-L- 60 + 65	-L- 64 + 03	746	196	7		935
-Y2- 12 + 35	-Y2- 14 + 82	47	47	78	31	47
-Y2- 16 + 82	-Y2- 18 + 50		46	1,388	1,388	46
-Y2- 20 + 70	-Y2- 21 + 13		29	1,532	1,532	29
SUBTOTAL:		793	318	3,005	2,951	1,057
SUMMARY 6: PHASE I, STEP 6						
-Y2- 14 + 04	-Y2- 16 + 81	3	53	256	253	53
-Y2A- 10 + 20	-Y2A- 13 + 70	2,730		70		2,660
-Y2A- 17 + 00	-Y2A- 19 + 07	55		105	50	
-Y2B- 11 + 50	-Y2B- 17 + 00	1,218		8,194	6,976	
-Y3B- 10 + 21	-Y3B- 11 + 23	21		210	189	
SUBTOTAL:		4,027	53	8,835	7,468	2,713
SUMMARY 7: PHASE II, STEPS 1-2						
-L- 60 + 00	-L- 79 + 00	2,400	3,458	18,639	16,239	3,458
-L- 92 + 00	-L- 106 + 50	51,848	1,658	51,369		2,137
-Y3- 16 + 79	-Y3- 22 + 50	162	968	8,127	7,965	968
-Y3A- 12 + 20	-Y3A- 15 + 00	40		4,261	4,221	
-Y3RPD- 15 + 09	-Y3RPD- 21 + 47	10,850	1,450	3,674		8,626
-RP23- 12 + 41	-RP23- 15 + 99	22,075		1		22,074
-RP23- 36 + 14	-RP23- 39 + 92	237		13,394	13,157	
SURCHARGE PLACEMENT (SHEET 2G-5 & 2G-6)				37,630	37,630	
SURCHARGE REMOVAL (SHEET 2G-5 & 2G-6)		32,722				32,722
SUBTOTAL:		120,334	7,534	137,095	79,212	69,985
SUMMARY 8: PHASE II, STEPS 3-4						
-Y3- 16 + 47	-Y3- 31 + 51	5,970	968	25,870	19,900	968
-Y3A- 11 + 00	-Y3A- 15 + 00	1		1,753	1,752	
-RP23- 11 + 15	-RP23- 12 + 41	4,872		1		4,871
-RAB2- 10 + 50	-RAB2- 13 + 00	1,182	600	16,039	14,857	600
SUBTOTAL:		12,025	1,568	43,663	36,509	6,439
SUMMARY 9: PHASE III, STEP 1						
-L- 53 + 00	-L- 72 + 50	17,034	2,340	19,654	2,620	2,340
-L- 73 + 00	-L- 91 + 76	24,755	2,377	153,169	128,414	2,377
-L- 107 + 00	-L- 121 + 20	20,287	1,522	3,158		18,651
-Y3- 14 + 96	-Y3- 16 + 68	4,391		1,040		3,351
-TY6RPC- 10 + 00	-TY6RPC- 14 + 55	10,702		3		10,699
SUBTOTAL:		77,169	6,239	177,024	131,034	37,418

STATION	STATION	UNCL. EXCAV.	UNDERCUT	EMBANK. + %	BORROW	WASTE
SUMMARY 10: PHASE III, STEP 2A						
-L- 110 + 50	-L- 121 + 20	5,832	558	504		5,886
SUBTOTAL:		5,832	558	504		5,886
SUMMARY 11: PHASE III, STEP 2B						
-L- 110 + 50	-L- 121 + 20	1,188	391	30		1,549
SUBTOTAL:		1,188	391	30		1,549
SUMMARY 12: PHASE III, STEP 2C						
-L- 110 + 80	-L- 116 + 50	471	149			620
SUBTOTAL:		471	149			620
SUMMARY 13: PHASE III, STEP 2D						
-L- 110 + 80	-L- 116 + 50	3,156	267	92		3,331
SUBTOTAL:		3,156	267	92		3,331
SUMMARY 14: PHASE III, STEP 3						
-L- 107 + 00	-L- 113 + 85	1,534	579	15,359	13,825	579
SUBTOTAL:		1,534	579	15,359	13,825	579
SUMMARY 15: PHASE III, STEP 4						
-L- 15 + 00	-L- 23 + 50	74	433	262	188	433
-L- 64 + 00	-L- 70 + 00	32	206	619	587	206
-L- 92 + 00	-L- 110 + 50	1,221	423	3,781	2,560	423
SUBTOTAL:		1,327	1,062	4,662	3,335	1,062
SUMMARY 16: PHASE IV, STEPS 1-2						
-L- 13 + 60	-L- 43 + 50	994	3,637	16,450	15,456	3,637
-L- 47 + 50	-L- 65 + 50	2,096	2,809	43,339	41,243	2,809
-L- 66 + 00	-L- 83 + 00	52,699	4,191	18,333		38,557
-L- 84 + 00	-L- 111 + 00	17,695	5,229	39,833	22,138	5,229
-Y2RPB- 15 + 11	-Y2RPB- 16 + 61		523	1,228	1,228	523
-Y3- 13 + 50	-Y3- 15 + 00	15,157	215			15,372
-Y3RPA- 15 + 55	-Y3RPA- 23 + 16	64,623	1,450	40		66,033
-RAB1- 10 + 50	-RAB1- 12 + 50	229	350	19,411	19,182	350
-RP32- 11 + 01	-RP32- 13 + 47	52		4,738	4,686	
-RP32- 30 + 85	-RP32- 34 + 97	13,259		6,841		6,418
SUBTOTAL:		166,804	18,404	150,213	103,933	138,928
SUMMARY 17: PHASE IV, STEP 3						
-L- 32 + 93	-L- 39 + 66	63	546	1,654	1,591	546
-Y2RPB- 15 + 11	-Y2RPB- 16 + 78	655	73	780	125	73
SUBTOTAL:		718	619	2,434	1,716	619
SUMMARY 18: PHASE IV, STEP 4						
-L- 61 + 50	-L- 70 + 00	23	580	6,920	6,897	580
SUBTOTAL:		23	580	6,920	6,897	580
SUMMARY 19: PHASE IV, STEP 6						
-L- 13 + 60	-L- 21 + 50	1,456	947	31		2,372
SUBTOTAL:		1,456	947	31		2,372
SUMMARY TOTALS:		812,786	50,558	717,253	486,428	632,519
LOSS DUE TO CLEARING & GRUBBING		-5,500				-5,500
MATERIAL FOR SHOULDER CONSTRUCTION				10,281	10,281	
ADDITIONAL UNDERCUT			3,100	575	575	3,100
ROCK WASTE TO REPLACE BORROW					-14,640	-14,640
ADJUST FOR ROCK SWELL				-4,392		-4,392
ELIMINATE EARTH SHRINKAGE FACTOR SINCE MATERIAL IS NOW ROCK				-2,855	-2,855	
WASTE IN LIEU OF BORROW					-258,160	-258,160
PROJECT TOTAL:		807,286	53,658	720,862	217,237	357,319
EST. 5% TO REPLACE TOPSOIL ON BORROW PIT					10,862	
GRAND TOTAL:						
SAY:		807,290			228,100	

EST. DDE = 8,550 CY
UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN TOP 3 FT OF EMBANKMENT OR BACKFILL FROM -L- 29+75 TO 34+75 (20,200 CY)

NOTE:

Earthwork quantities are calculated by the roadway designer.
These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.
Suitable waste may be stockpiled and used to construct the embankment in a later phase of construction.

9/9/2026 12:51:30 PM du_03B-1.dgn
Mohammed Fallaha

USRAL6464D4

COMPUTED BY: AECOM CHECKED BY: AECOM										DATE: 08/05/2026 DATE: 0805/2026										NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS																														PROJECT NO. I-2513AC SHEET NO. 3D-10									
Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".																																																		SECTION 1 / AECOM									
LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)																																																											
LINE & STATION		OFFSET		STRUCTURE NUMBER		TOP ELEVATION		INVERT ELEVATION		INVERT ELEVATION		MINIMUM REQUIRED SLOPE		Side Drain Pipe (RCP, CSP, CAAP, HDPE, PVC, or PP PIPE)										C. S. PIPE				R. C. PIPE CLASS IV				Sealed Polypr opylen e Pipe (SEALE D PP)		Sealed Cross Pipe (SEALED XP)		QUANTITIES FOR DRAINAGE STRUCTURES				FRAME, GRATES, AND HOOD STD. 840.03		CONCRETE TRANSITIONAL SECTION		DRAINAGE STRUCTURES										PIPE REMOVAL		REMARKS			
														15 18 24 30 DO NOT USE RCP DO NOT USE CSP DO NOT USE CAAP DO NOT USE HDPE DO NOT USE PVC DO NOT USE PP PIPE										15 18 24 30 48 .064 .064 .064 .079 .109				12 15 18 24 30 36 																															

