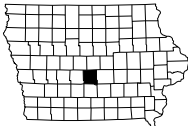


POLK COUNTY

PCC PAVEMENT-GRADE AND NEW
IM-NHS-080-4(085)138--03-77

LETTING DATE
Dec 16 2025



INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 17	Roadway Typical Sections and Details
B.18 - 19	Detour/Interim Typical Sections and Details
B.20	Roadway Design Details
C Sheets	Mainline Plan and Profile Sheets
C.1	Project Description
C.1	Estimated Project Quantities
C.2 - 4	Estimate Reference Information
C.5	Standard Road Plans
C.5	Index of Tabulations
C.6	General Notes
C.6 - 18	Tabulations
CS Sheets	Soils Tabulations
CS.1 - 3	Soils Tabulations
D Sheets	Mainline Plan and Profile Sheets
D.1	Plan & Profile Legend & Symbol Information Sheet
D.2 - 3	I-80 Eastbound Mainline
D.4 - 21	I-80 Mainline
E Sheets	Side Road Plan and Profile Sheets
E.1	Four Mile Creek - Gay Lea Wilson Trail
E.2	38th Street
F Sheets	Detour or Temporary Pavement Sheets
F.1	Detour DET01_RAMPDINT
F.2	Detour DET02_RAMPDINT
F.3 - 6	Detour DET03_ML080
G Sheets	Survey Sheets
G.1 - 4	Survey Control Points, Reference Ties & Bench Marks
G.5 - 6	Horizontal Control Alignment Geometry
G.7 - 14	Mainline and Ramp Geometrics
G.15 - 18	Side Road Geometrics
H Sheets	Right-of-Way Sheets
H.1 - 11	Right of Way Design Information
HE.1	Right of Way Design Information - NE 38th Street
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan
J.2 - 3	Staging Notes and Tabulation of Special Events
J.4	Traffic Control & Staging Legend & Symbol Info. Sheet
J.5 - 12	Staging Overview
J.13 - 56	Staging and Traffic Control Sheets
J.57 - 62	Construction Access Routes
J.63 - 68	Detour Route Sheets
J.69 - 70	Trail Closures and Sign Details
K Sheets	Interchange Sheets
K.1 - 2	Ramp D Plan & Profile Sheets
K.3 - 6	Interim Ramp D Plan & Profile Sheets
K.7 - 8	Ramp H Plan & Profile Sheets
L Sheets	Geometric, Staking and Jointing Sheets
L.1	Jointing and Geometrics Legend and Information Sheet
L.2 - 24	Geometric & Staking I-80
L.25 - 26	Geometric & Staking 38th St
L.27 - 49	Jointing I-80



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

INTERSTATE ROAD SYSTEM POLK COUNTY PCC PAVEMENT-GRADE AND NEW

Northeast I-35/235 Interchange to W of US 65 Interchange (EB)

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



For Project Location Map
Refer to Sheet A.2

INTERSTATE 235 DESIGN DATA URBAN			
2024	AADT	84,005	V.P.D.
2044	AADT	114,723	V.P.D.
2044	DHV	11,851	V.P.H.
TRUCKS		8	%
Total			
Design ESALS		203,655,400	

INTERSTATE 35 DESIGN DATA URBAN			
2024	AADT	100,660	V.P.D.
2044	AADT	137,506	V.P.D.
2044	DHV	14,204	V.P.H.
TRUCKS		11	%
Total			
Design ESALS		203,655,400	

INTERSTATE 80 DESIGN DATA URBAN			
2024	AADT	96,051	V.P.D.
2044	AADT	123,760	V.P.D.
2044	DHV	12,784	V.P.H.
TRUCKS		17	%
Total			
Design ESALS		203,655,400	

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.1	Benett J. Batenhorst	Primary Signature Block
CS.1	Brian T. Havens	Geotech. Signature Block
J.1	Nicholas A.C. Johnson	Traffic Signature Block

REVISIONS

TOTAL

662

PROJECT IDENTIFICATION NUMBER

10-77-035-010-05

PROJECT NUMBER

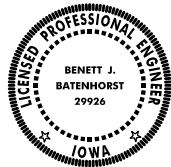
IM-NHS-080-4(085)138--03-77

R.O.W. PROJECT NUMBER

IMN-080-4(092)138--0E-77

INDEX OF SHEETS	
No.	DESCRIPTION
M Sheets	Storm Sewer Sheets
M.1	Storm Sewer Tabulations
M.2	Storm Legend & Symbol Information Sheet
M.3 - 10	Storm Sewer Plan and Profile Sheets
Q Sheets	Soil Sheets
Q.1	Soils Legend and Symbol Information Sheet
Q.2 - 27	Soils Plan and Profile Sheets
QR.1	Borrow Site Plan
R Sheets	Erosion Control Sheets
RC.1 - 2	Pollution Prevention Plan
RC.2 - 6	Sediment Control Quantities Tabulations
RR.1	Legend and Symbols Information Sheet
RR.2 - 11	Drainage Basins
RR.12 - 21	Erosion Control Plan Sheets
T Sheets	Earthwork Quantity Sheets
T.1A - 1D	Earthwork Quantity Templates
T.2 - 21	Earthwork Quantity Tabulations
U Sheets	500 Series, Mod.Stds. and Detail Sheets
U.1 - 9	Clearing and Grubbing
U.10 - 19	Fencing
U.20 - 33	Removals
U.34 - 36	Special Grading Details
U.37	Temporary Drainage Detail
U.38 - 39	Corporate Woods Drive Pavement Marking Details
U.40	Subdrain Details
U.41 - 44	Road Design Details and Modified Standard Road Plans
V Sheets	Bridge and Culvert Situation Plans
V.1	Retaining Wall Construction Notes
V.2	NE 29th St Temporary Retaining Wall Detail
V.3	Temporary Wall Detail
V.4	Culvert Plat Plans
VW Sheets	Pipe Culvert Cross Sections
VW.1 - 3	Pipe Culvert Cross Sections
W Sheets	Mainline Cross Sections
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 176	Mainline and Detour Widening Cross Sections
X Sheets	Side Road Cross Sections
X.1 - 6	Fourmile Creek - Gay Lea Wilson Trail Cross Sections
X.7 - 28	38th Street Cross Sections
Y Sheets	Ramp Cross Sections
Y.1 - 12	Detour Cross Sections
Y.13 - 36	Ramp D Ultimate Cross Sections
Y.37 - 81	Ramp D Interim Cross Sections
Y.82 - 89	Ramp H Cross Sections

ROADWAY DESIGN



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature

Benett J. Batenhorst

Printed or Typed Name

My license renewal date is December 31, 20 26

10-6-2025

Date

Pages or sheets covered by this seal: A.1-2,B.1-20,C.1-18,D.1-21,E.1-2,F.1-6,G.1-18,J.2-62,K.1-8,L.1-49,M.1-10,QR.1,RC.1-6,RR.1-21,T.1A-21,U.1-44,V.1-4,VW.1-3,W.1-176,X.1-28,Y.1-89

FILE NO.

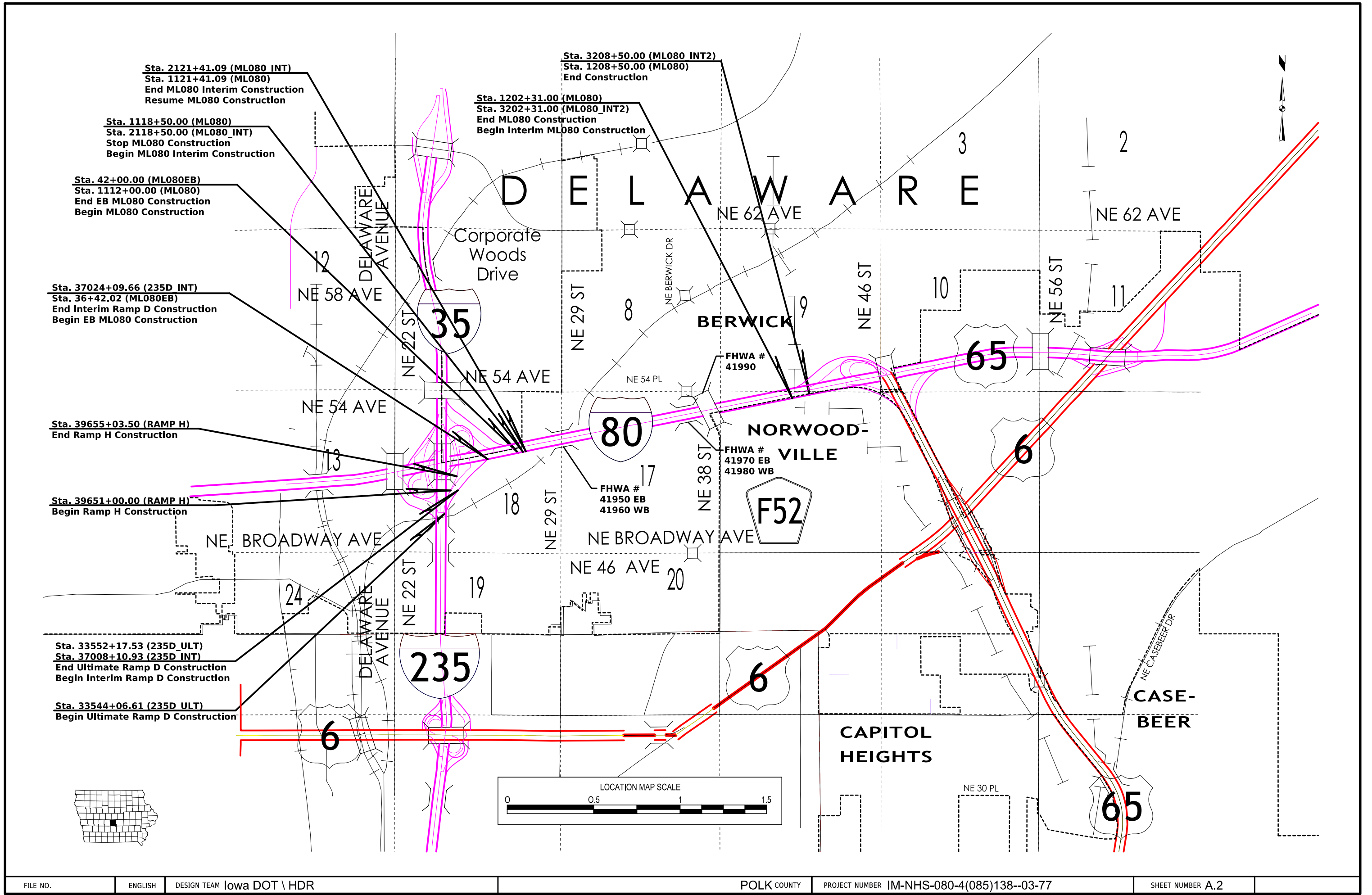
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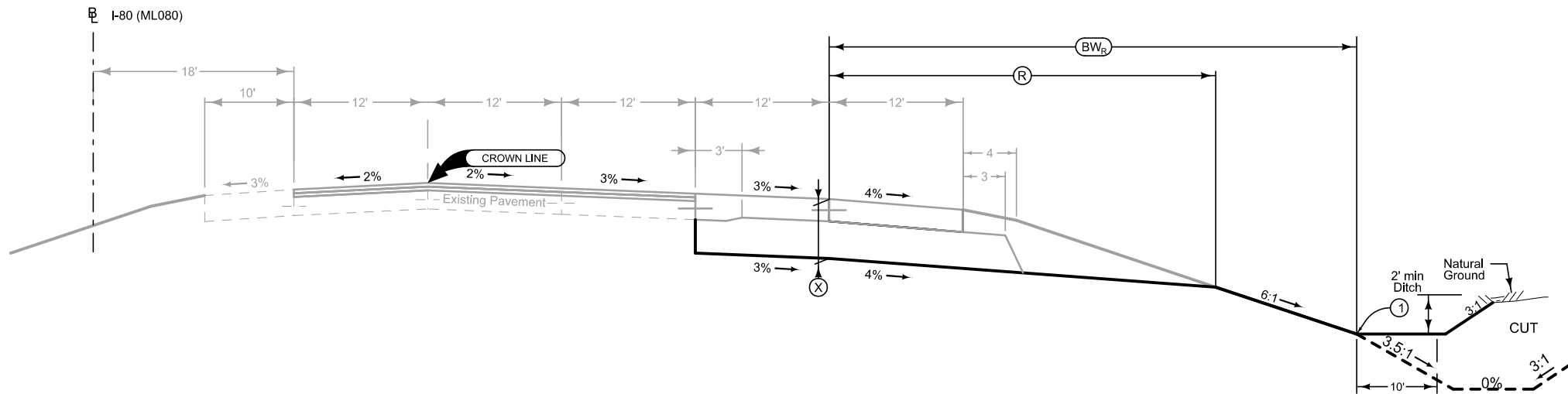
DESIGN TEAM Iowa DOT \ HDR

POLK COUNTY

PROJECT NUMBER IM-NHS-080-4(085)138--03-77

SHEET NUMBER A.1





Mainline Overlay and PCC Full Depth Widening

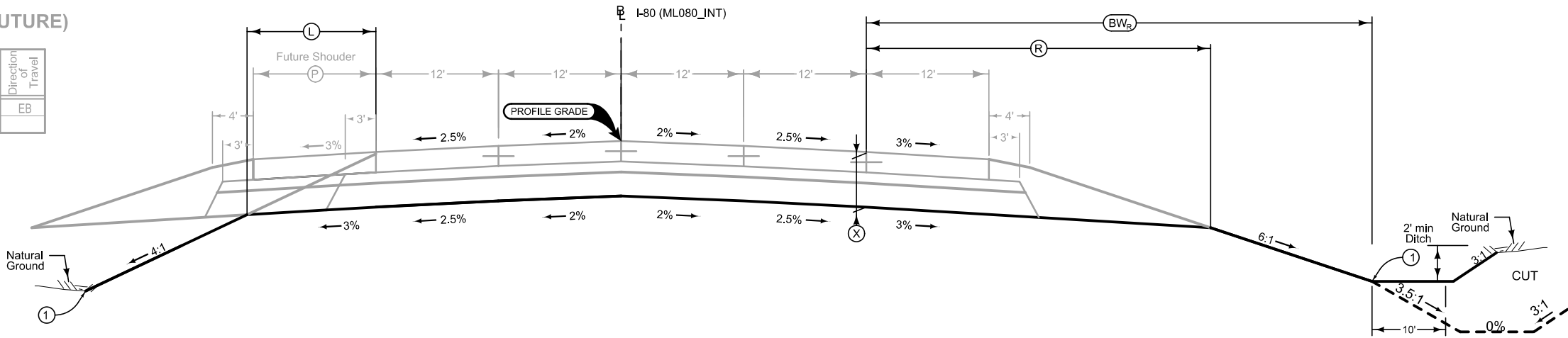
DIMENSIONS			LOCATION		
(X)	(R)	(BW _R)	STATION TO STATION		ROAD IDENTIFICATION
Inches	Feet	Feet			
23.5	29.56	34	1112+00.00	1118+50.00	ML080

See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

GRADING
EASTBOUND I-80
(ML080)

Full Depth PCC Shoulder (FUTURE)

(P)	STATION TO STATION		Direction of Travel
Feet			
12	2118+50.00	2121+41.09	EB



Mainline PCC Full Depth

DIMENSIONS				LOCATION		
(L)	(X)	(R)	(BW _R)	STATION TO STATION		ROAD IDENTIFICATION
Feet	Inches	Feet	Feet			
16.55	29.5	33.51 - 31.93	34	2118+50.00	2119+25.00	ML080_INT
16.55	29.5	31.93	34	2119+25.00	2121+41.09	ML080_INT

See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

GRADING
EASTBOUND I-80
(ML080_INT)

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

① Refer to project plan and cross sections for specific location of foreslope change.

Full Depth PCC Median (FUTURE)

MW Feet	L Feet	STATION TO STATION		Direction of Travel
10	18	1121+41.09	1130+07.95	EB
10	18	1133+80.00	1172+18.61	EB
10	18	1175+62.74	1177+25.00	EB
10 - 6	18 - 15	1177+25.00	1181+25.00	EB

Full Depth PCC Shoulder (FUTURE)

P Feet	STATION TO STATION		Direction of Travel
13	1121+41.09	1130+07.95	EB
13	1133+80.00	1172+18.61	EB
13	1175+62.74	1177+25.00	EB
13 - 12	1177+25.00	1181+25.00	EB

Mainline PCC Full Depth

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(ML080)	EB	1121+41.09	1130+07.95
(ML080)	EB	1133+80.00	1172+18.61
(ML080)	EB	1175+62.74	1181+25.00

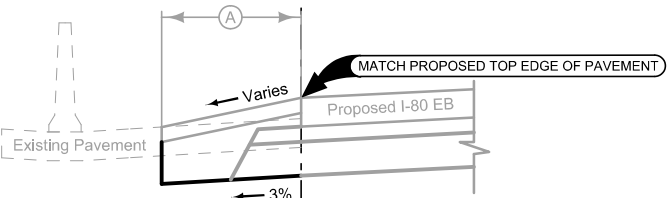
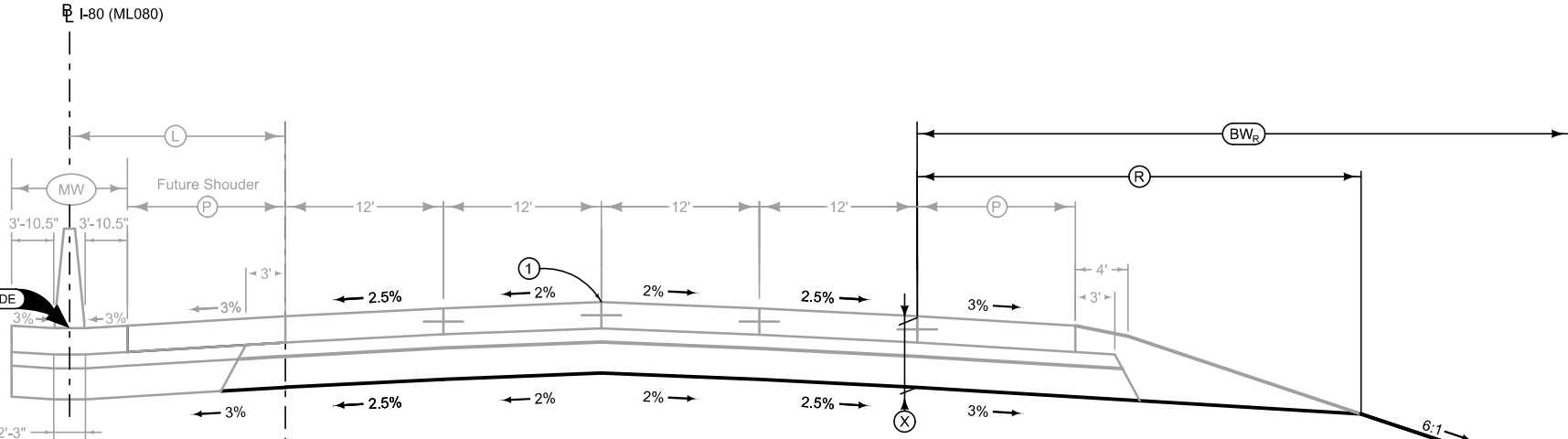
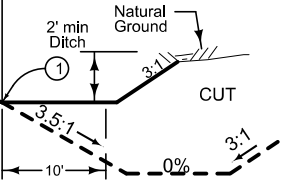
HMA Detour - DET03_ML080

A Feet	STATION TO STATION		Direction of Travel
6	1121+41.09	1128+25.00	EB
13	1128+25.00	1130+07.95	EB
12	1133+80.00	1138+00.00	EB
6	1138+00.00	1163+00.00	EB
12	1163+00.00	1172+18.61	EB
12	1175+62.74	1181+25.00	EB

DETOUR
DET03_ML080

Full Depth PCC Shoulder

DIMENSIONS				LOCATION		
P Feet	X Inches	R Feet	BWR Feet	STATION TO STATION		ROAD IDENTIFICATION
12	29.5	31.93 - 34.12	34	1121+41.09	1128+21.23	ML080
15.74	29.5	34.12 - 34.90	34	1128+21.23	1128+49.01	ML080
15.74 - 13.61	29.5	34.90 - 33.53	34	1128+49.01	1129+02.13	ML080
13.61	29.5	33.53	34	1129+02.13	1129+70.45	ML080
13.61	29.5	33.53 - 32.83	34	1129+70.45	1130+07.95	ML080
12	29.5	31.23 - 31.93	34	1133+80.00	1134+17.50	ML080
12	29.5	31.93 - 33.51	34	1134+17.50	1138+17.50	ML080
12	29.5	33.51	34	1138+17.50	1168+18.61	ML080
12	29.5	33.51 - 35.41	34	1168+18.61	1170+25.59	ML080
15.74	29.5	35.41 - 35.21	34	1170+25.59	1170+53.36	ML080
15.74 - 13.61	29.5	35.21 - 33.95	34	1170+53.36	1171+06.49	ML080
13.61	29.5	33.95 - 33.84	34	1171+06.49	1172+18.61	ML080
12	29.5	30.18 - 33.84	34	1175+62.74	1176+00.25	ML080
12	29.5	33.84	34	1176+00.25	1176+39.31	ML080
12	29.5	33.84 - 33.51	34	1176+39.31	1177+25.00	ML080
12	29.5	33.51 - 31.93	34	1177+25.00	1181+25.00	ML080



Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

See L Sheets for Crown Line Transitions.

1 Refer to project plan and cross sections for specific location of foreslope change.

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

GRADING
EASTBOUND I-80
(ML080)

Full Depth PCC Median (FUTURE)

MW Feet	L Feet	STATION TO STATION		Direction of Travel
6	15	1181+25.00	1202+31.00	EB

Full Depth PCC Shoulder (FUTURE)

P Feet	STATION TO STATION		Direction of Travel
12	1181+25.00	1202+31.00	EB

Full Depth PCC Shoulder

DIMENSIONS				LOCATION		
P Feet	X Inches	R Feet	BW _R Feet	STATION TO STATION		ROAD IDENTIFICATION
12	29.5	33.51	34	1181+25.00	1186+01.20	ML080
12	29.5	33.51 - 38.33	34	1186+01.20	1186+19.56	ML080
13.61	29.5	38.33 - 40.51	N/A	1186+19.56	1186+47.66	ML080
19 - 17.5	29.5	40.51 - 39.01	N/A	1186+47.66	1186+85.16	ML080
17.5	29.5	39.01	N/A	1186+85.16	1187+51.14	ML080
17.5 - 15	29.5	39.01 - 36.51	N/A	1187+51.14	1187+88.69	ML080
15	29.5	36.51 - 35.42	N/A	1187+88.69	1188+56.06	ML080
12	29.5	35.42 - 24.45	N/A	1188+56.06	1189+00.00	ML080

Full Depth PCC Shoulder

DIMENSIONS				LOCATION		
P Feet	X Inches	R Feet	BW _R Feet	STATION TO STATION		ROAD IDENTIFICATION
12	29.5	24.45 - 22.93	N/A	1189+00.00	1192+00.00	ML080
12	29.5	22.93 - 24.99	N/A	1192+00.00	1202+31.00	ML080

Mainline PCC Full Depth

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(ML080)	EB	1181+25.00	1202+31.00

HMA Detour - DET03_ML080

A Feet	STATION TO STATION		Direction of Travel
12	1181+25.00	1184+00.00	EB
8	1184+00.00	1202+31.00	EB

DETOUR
DET03_ML080

See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

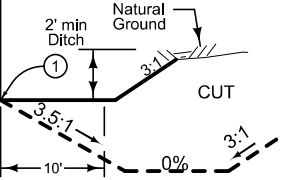
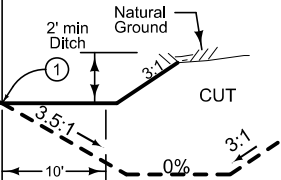
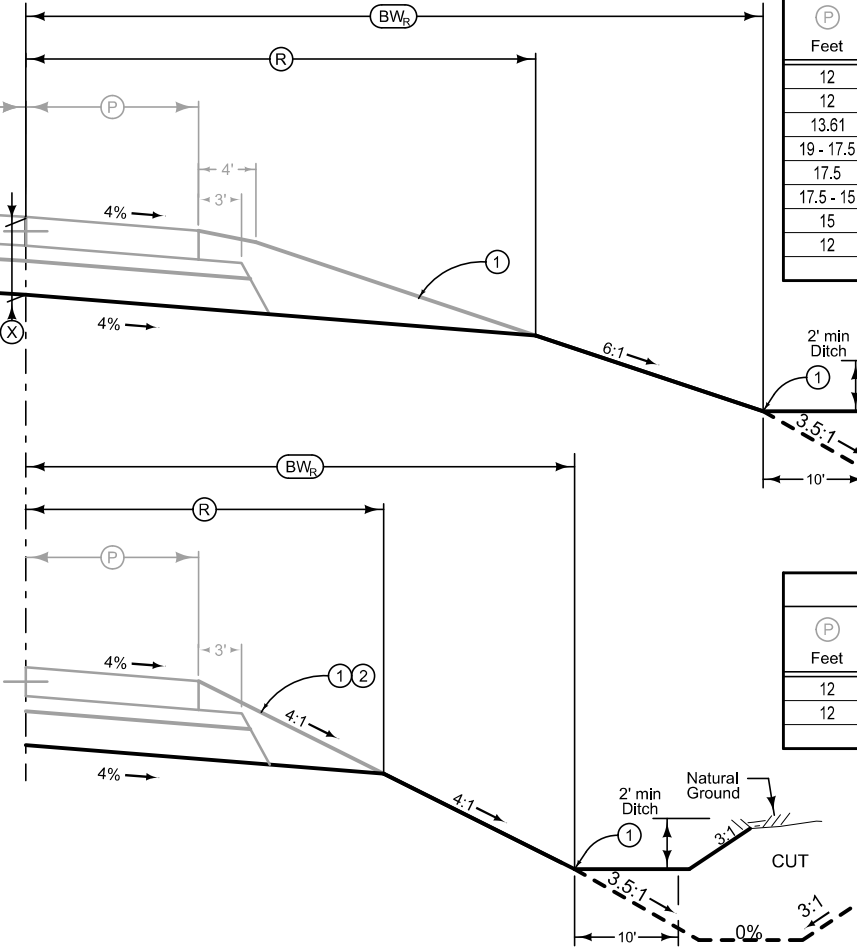
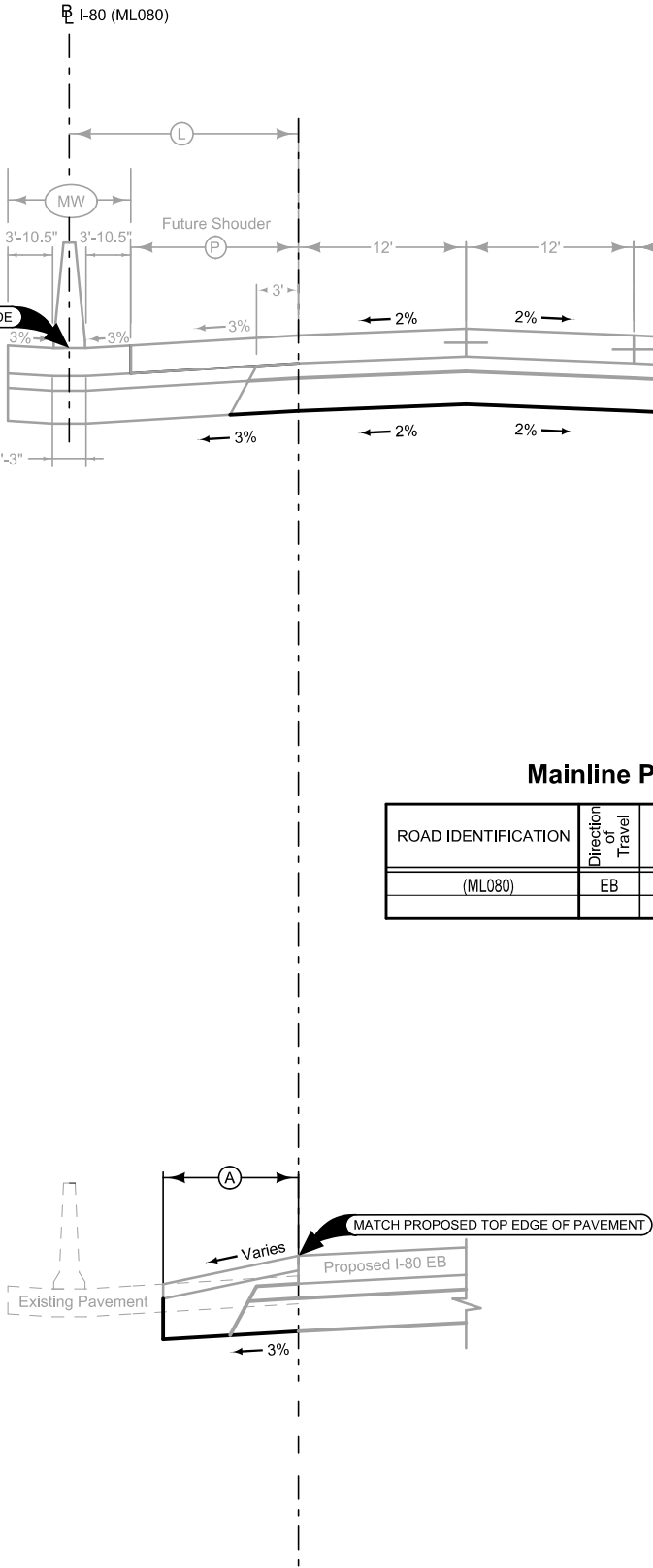
GRADING
EASTBOUND I-80
(ML080)

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

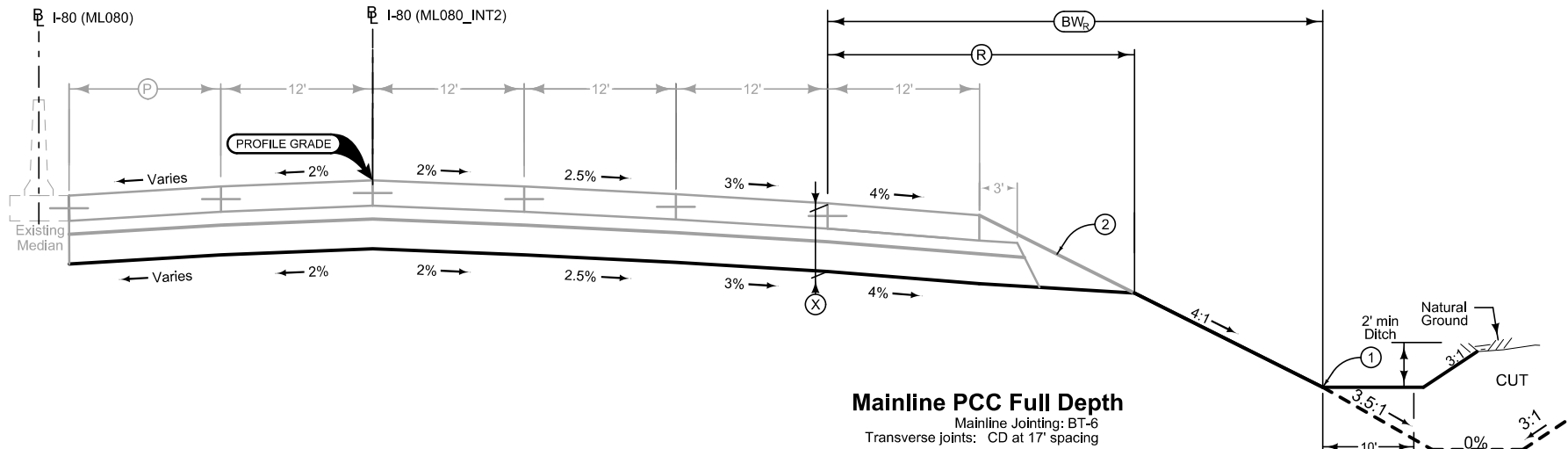
See L Sheets for Crown Line Transitions.

- ① Refer to project plan and cross sections for specific location of foreslope change.
- ② Refer to project plan and cross sections for specific location of foreslope change for guardrail blister.



Full Depth PCC Shoulder

(P) Feet	STATION TO STATION		Direction of Travel
12	3202+31.00	3202+73.00	EB
10	3202+73.00	3204+11.90	EB
12	3204+11.90	3207+85.90	EB



Mainline PCC Full Depth

Mainline Jointing: BT-6
Transverse joints: CD at 17' spacing

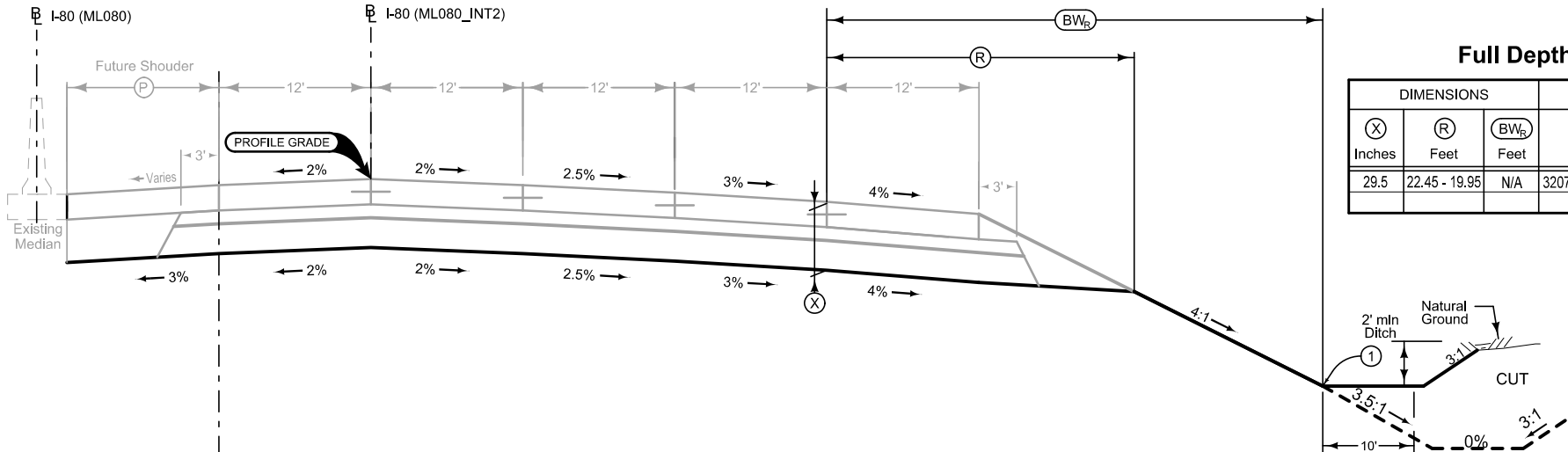
ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(ML080_INT2)	EB	3202+31.00	3207+85.90

Full Depth PCC Shoulder

DIMENSIONS			LOCATION		
(X) Inches	(R) Feet	(BW) Feet	STATION TO STATION		ROAD IDENTIFICATION
29.5	22.22 - 23.16	N/A	3202+31.00	3203+17.50	ML080_INT2
29.5	23.16 - 22.22	N/A	3203+17.50	3203+25.00	ML080_INT2
29.5	22.22 - 23.71	N/A	3203+25.00	3207+50.00	ML080_INT2
29.5	23.71 - 22.45	N/A	3207+50.00	3207+85.90	ML080_INT2

Full Depth PCC Shoulder (FUTURE)

(P) Feet	STATION TO STATION		Direction of Travel
12	3207+85.90	3207+99.91	EB
11.75	3208+00.00	3208+50.00	



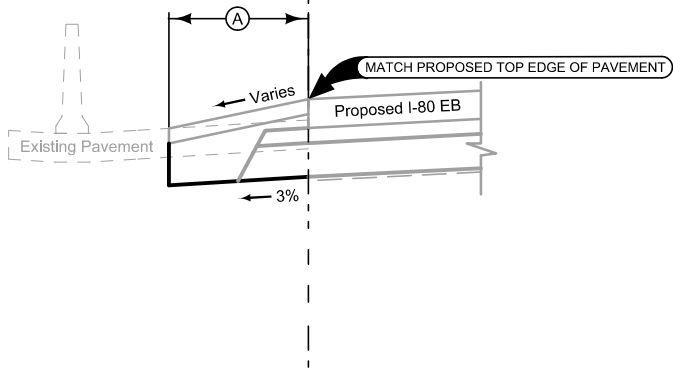
Full Depth PCC Shoulder

DIMENSIONS			LOCATION		
(X) Inches	(R) Feet	(BW) Feet	STATION TO STATION		ROAD IDENTIFICATION
29.5	22.45 - 19.95	N/A	3207+85.90	3208+50.00	ML080_INT2

HMA Detour - DET03_ML080

(A) Feet	STATION TO STATION		Direction of Travel
8	3207+85.90	3208+50.00	EB

DETOUR
DET03_ML080



Mainline PCC Full Depth

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(ML080_INT2)	EB	3207+85.90	3208+50.00

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

See L Sheets for Crown Line Transitions.

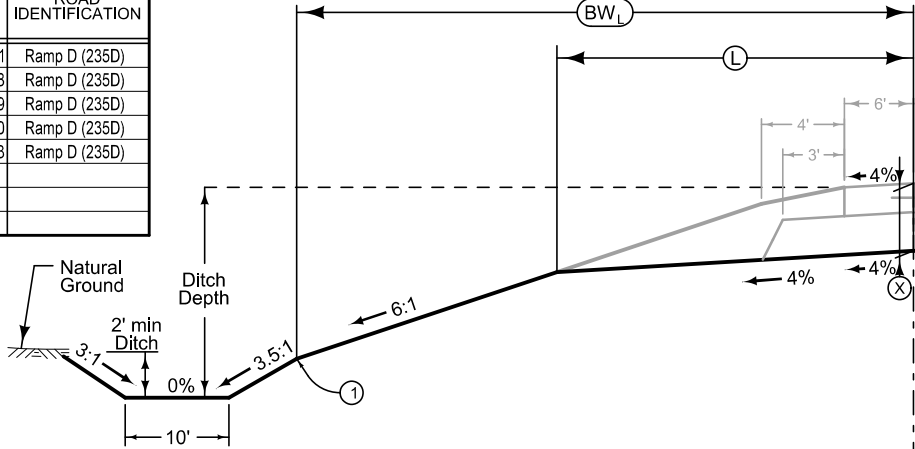
- ① Refer to project plan and cross sections for specific location of foreslope change.
- ② Refer to project plan and cross sections for specific location of foreslope change for guardrail blister.

See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

GRADING
EASTBOUND I-80
(ML080_INT2)

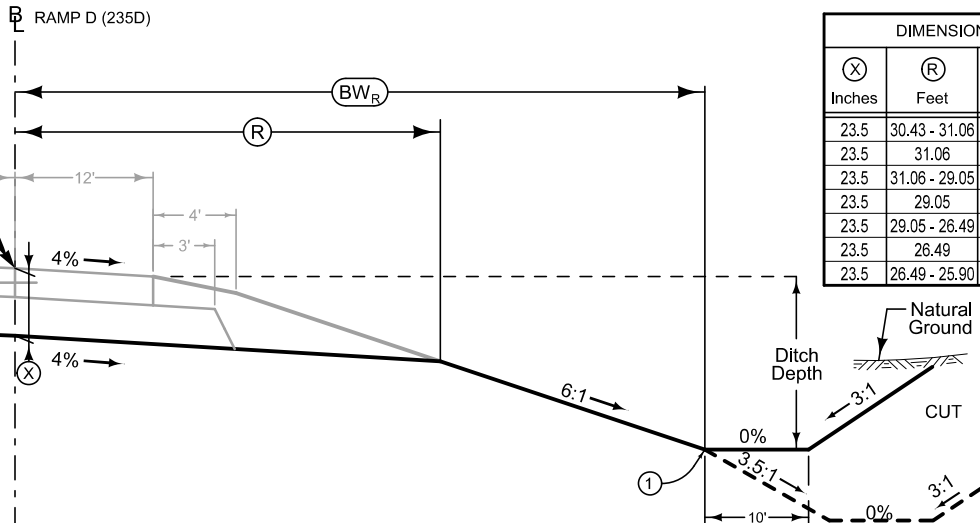
Full Depth PCC Shoulder

DIMENSIONS			LOCATION		
(X)	(L)	(BW _L)	STATION TO STATION		ROAD IDENTIFICATION
Inches	Feet	Feet			
23.5	11.67 - 11.62	N/A	33544+06.61	33544+21.01	Ramp D (235D)
23.5	11.62 - 11.64	N/A	33544+21.01	33544+30.88	Ramp D (235D)
23.5	11.64 - 11.43	N/A	33544+30.88	33544+53.09	Ramp D (235D)
23.5	11.43 - 11.55	N/A	33544+53.09	33545+64.80	Ramp D (235D)
23.5	N/A	N/A	33551+55.36	33552+17.53	Ramp D (235D)



Full Depth PCC Shoulder

DIMENSIONS			LOCATION		
(X)	(R)	(BW _R)	STATION TO STATION		ROAD IDENTIFICATION
Inches	Feet	Feet			
23.5	30.43 - 31.06	22	33544+06.61	33544+21.01	Ramp D (235D)
23.5	31.06	22	33544+21.01	33545+25.00	Ramp D (235D)
23.5	31.06 - 29.05	22	33545+25.00	33545+75.00	Ramp D (235D)
23.5	29.05	22	33545+75.00	33546+25.00	Ramp D (235D)
23.5	29.05 - 26.49	22	33546+25.00	33547+25.00	Ramp D (235D)
23.5	26.49	22	33547+25.00	33551+55.36	Ramp D (235D)
23.5	26.49 - 25.90	22	33551+55.36	33552+17.53	Ramp D (235D)



Ramp D Full Depth PCC

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
Ramp D (235D)	NB	33544+06.61	33551+92.33

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

(1) Refer to project plan and cross sections for specific location of foreslope change.

Auxiliary Lane with Full Depth PCC Shoulder

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(AL) Feet	(P) Feet	(X) Inches	(L) Feet	(BW _L) Feet
Ramp D (235D)	NB	33545+64.80	33545+94.42	0-2	6-4	23.5	11.55 - 9.55	N/A
Ramp D (235D)	NB	33545+94.42	33547+66.99	2 - 13.54	4	23.5	9.55	N/A
Ramp D (235D)	NB	33547+66.99	33547+67.00	13.54	4	23.5	9.55 - 31.97	N/A
Ramp D (235D)	NB	33547+67.00	33548+40.39	13.54 - 18.45	4	23.5	31.97	N/A

Auxiliary Lane with Full Depth PCC Shoulder

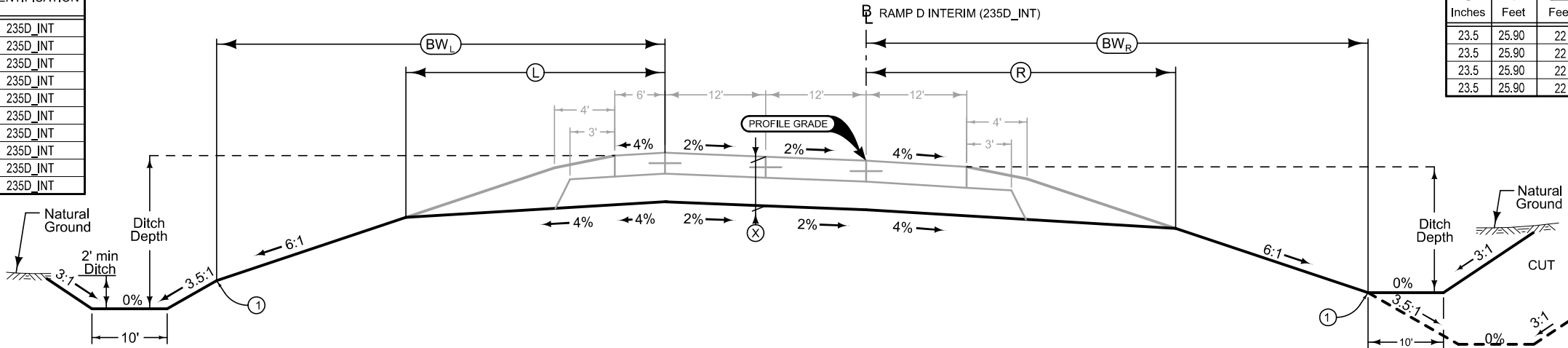
ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(AL) Feet	(G) Feet	(P) Feet	(X) Inches	(L) Feet	(BW _L) Feet
Ramp D (235D)	NB	33548+40.39	33548+64.89	18.45 - 20.12	2.45 - 4.11	4	23.5	31.97 - 20.28	N/A
Ramp D (235D)	NB	33548+64.89	33551+11.52	20.12 - 37.09	4.12 - 21.09	4	23.5	20.28	N/A
Ramp D (235D)	NB	33551+11.52	33551+55.36	37.09 - 40	21.09 - 24.0	4	23.5	20.28 - 16.91	N/A

See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

GRADING
RAMP D
(235D)

Full Depth PCC Shoulder

DIMENSIONS			LOCATION		
(X)	(L)	(BW _L)	STATION TO STATION		ROAD IDENTIFICATION
Inches	Feet	Feet			
23.5	11.68 - 11.86	N/A	37008+10.93	37008+64.93	235D_INT
23.5	11.86 - 11.81	N/A	37008+64.93	37009+10.76	235D_INT
23.5	11.81 - 11.38	N/A	37009+10.76	37009+56.00	235D_INT
23.5	11.38 - 13.06	N/A	37009+56.00	37010+60.14	235D_INT
23.5	13.06 - 18.27	N/A	37010+60.14	37011+10.14	235D_INT
23.5	18.27 - 23.56	N/A	37011+10.14	37011+50.00	235D_INT
23.5	23.56	N/A	37011+50.00	37015+63.41	235D_INT
23.5	23.56 - 23.13	N/A	37015+63.41	37015+75.00	235D_INT
23.5	23.13 - 26.16	N/A	37015+75.00	37015+85.50	235D_INT
23.5	26.16 - 14.35	N/A	37015+85.50	37017+93.81	235D_INT



Ramp D Full Depth PCC

Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 17' spacing.
Longitudinal joint: L-2 or BT-2

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(235D_INT)	NB	37008+10.93	37017+93.81

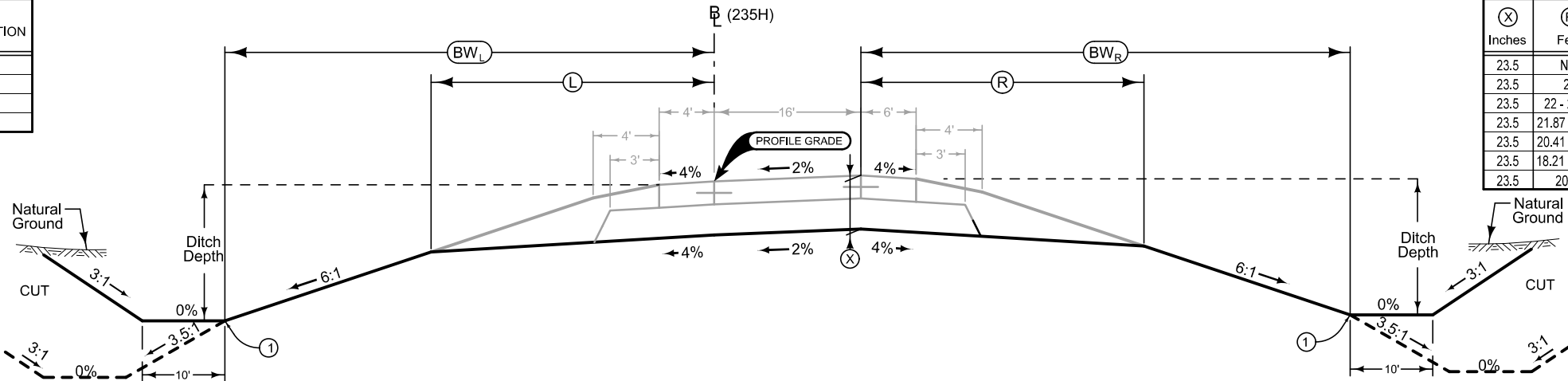
Full Depth PCC Shoulder

DIMENSIONS			LOCATION		
(X)	(R)	(BW _R)	STATION TO STATION		ROAD IDENTIFICATION
Inches	Feet	Feet			
23.5	25.90	22	37008+10.93	37008+64.93	235D_INT
23.5	25.90	22	37008+64.93	37010+60.14	235D_INT
23.5	25.90	22	37010+60.14	37011+10.14	235D_INT
23.5	25.90	22	37011+10.14	37017+93.81	235D_INT

GRADING
RAMP D INTERIM
(235D_INT)

Full Depth PCC Shoulder

DIMENSIONS			LOCATION		
(X)	(L)	(BW _L)	STATION TO STATION		ROAD IDENTIFICATION
Inches	Feet	Feet			
23.5	17.52 - 17.13	N/A	39651+00.00	39652+54.44	235H
23.5	17.13 - 29.16	N/A	39652+54.44	39652+94.56	235H
23.5	29.16 - 21.99	N/A	39652+94.56	39653+72.76	235H
23.5	21.99 - 11.42	N/A	39653+72.76	39654+63.68	235H



Ramp H Full Depth PCC

Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 12' spacing.
Longitudinal joint: L-2 or BT-2

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
RAMP H (235H)	NB	39651+00.00	39654+63.68

Full Depth PCC Shoulder

DIMENSIONS			LOCATION		
(X)	(R)	(BW _R)	STATION TO STATION		ROAD IDENTIFICATION
Inches	Feet	Feet			
23.5	N/A	N/A	39651+00.00	39652+00.00	235H
23.5	22	N/A	39652+00.00	39652+51.35	235H
23.5	22 - 21.87	22	39652+51.35	39652+54.44	235H
23.5	21.87 - 20.41	22	39652+54.44	39652+94.56	235H
23.5	20.41 - 18.21	22	39652+94.56	39653+72.76	235H
23.5	18.21 - 20.29	22	39653+72.76	39654+63.68	235H
23.5	20.29	22	39654+63.68	39655+03.51	235H

GRADING
RAMP H
(235H)

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

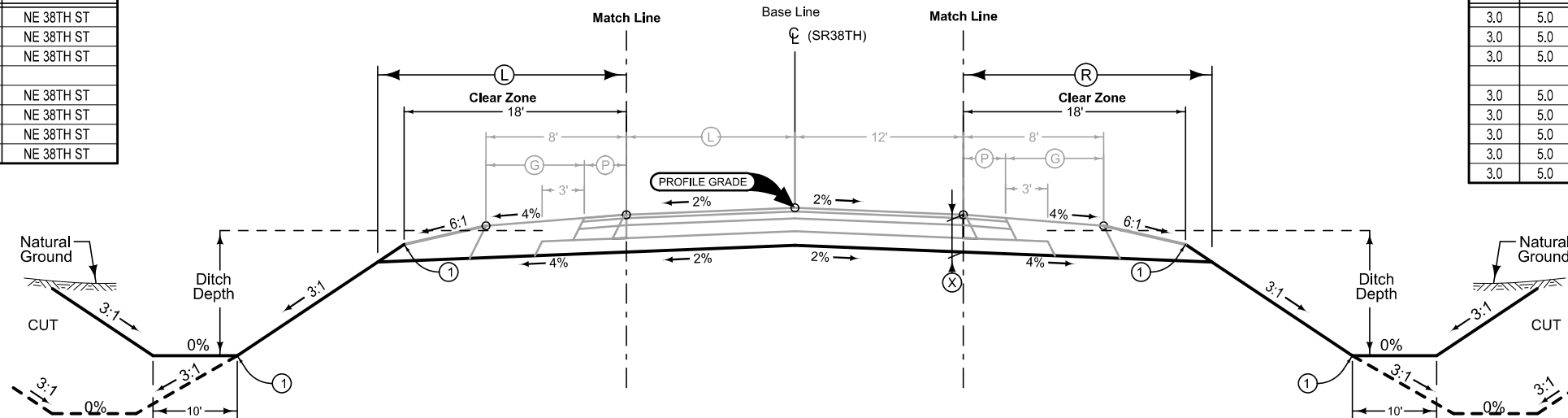
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

(1) Refer to project plan and cross sections for specific location of foreslope change.

Combination Shoulder

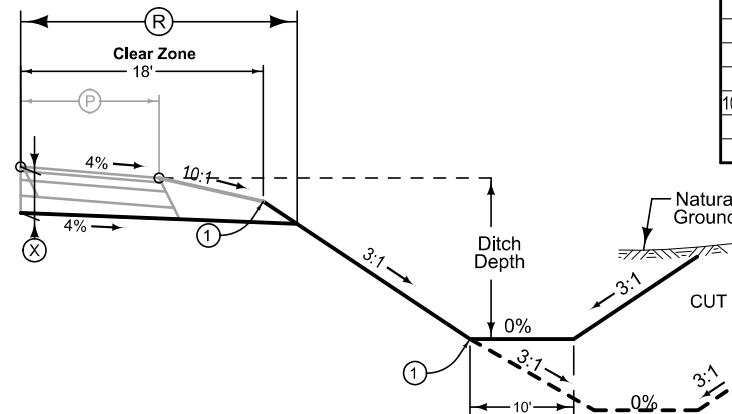
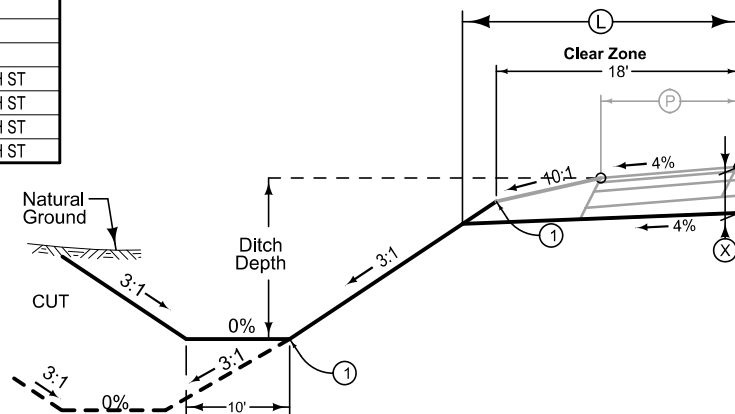
DIMENSIONS				LOCATION		
(P) Feet	(G) Feet	(X) Inches	(R) Feet	STATION TO STATION		ROAD IDENTIFICATION
3.0	5.0	17	12.83 - 18.51	2146+50.00	2147+00.00	NE 38TH ST
3.0	5.0	17	18.51	2147+00.00	2148+63.18	NE 38TH ST
3.0	5.0	17	18.51 - 21.60	2148+63.18	2149+00.73	NE 38TH ST
3.0	5.0	17	20.99 - 20.08	2154+54.18	2154+64.97	NE 38TH ST
3.0	5.0	17	20.08 - 17.64	2154+64.97	2154+98.24	NE 38TH ST
3.0	5.0	17	17.64 - 18.10	2154+98.24	2155+13.78	NE 38TH ST
3.0	5.0	17	18.10	2155+13.78	2157+43.67	NE 38TH ST
3.0	5.0	17	18.10 - 19.20	2157+43.67	2158+00.00	NE 38TH ST



Paved Shoulder at Guardrail

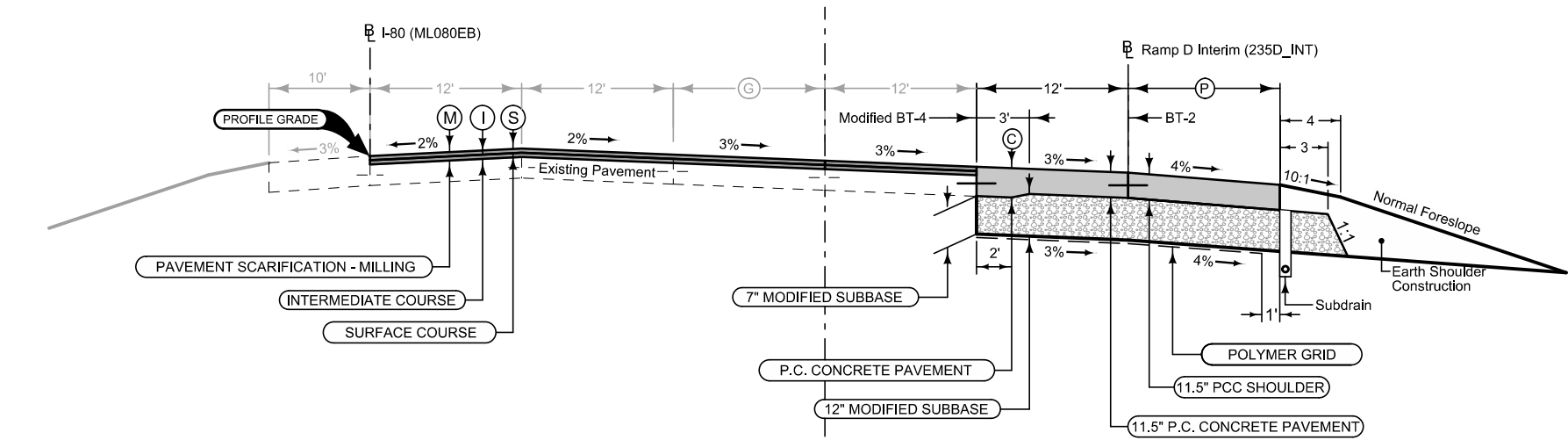
DIMENSIONS			LOCATION		
(P) Feet	(X) Inches	(R) Feet	STATION TO STATION		ROAD IDENTIFICATION
12.0	17	21.60 - 21.37	2149+00.73	2149+23.83	NE 38TH ST
12.0-10.7	17	21.37 - 18.31	2149+23.83	2149+54.99	NE 38TH ST
10.7	17	18.31 - 18.20	2149+54.99	2149+64.55	NE 38TH ST
		BRIDGE APPROACH PAVEMENT			
		BRIDGE APPROACH PAVEMENT			
10.7-12.0	17	18.20 - 20.99	2154+01.16	2154+32.32	NE 38TH ST
12.0	17	20.99	2154+32.32	2154+54.18	NE 38TH ST

STATION TO STATION			<div> <div>2H</div> <div>MODIFIED</div> </div>
			<div> <div>Ⓘ</div> <div>Feet</div> </div>
2146+50.00	2147+00.00	11	12
2147+00.00	2149+64.55	12	
BRIDGE APPROACH PAVEMENT			
BRIDGE APPROACH PAVEMENT			
2154+01.16	2158+00.00	12	



See Plan & Profile sheets
and cross sections for
additional details of
ditches and backslopes.

GRADING NE 38TH STREET



I-80 Eastbound Mainline Overlay

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(M) Inches	(S) Inches	(I) Inches	(G) Inches
(ML080EB)	EB	30+09.19	36+42.02	3	1.5	1.5	29.3 - 0

Ramp D Interim Overlay and PCC Full Depth Widening

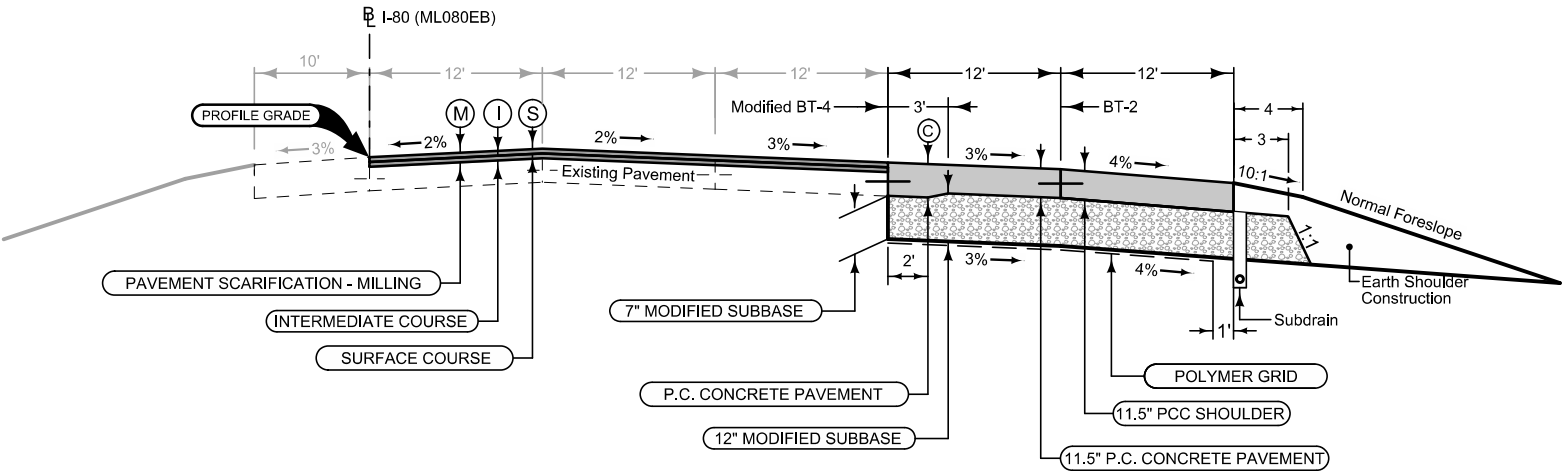
Longitudinal joint: Modified BT-4
Shoulder Jointing: BT-2
Transverse joints: CD at 17' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(M) Inches	(S) Inches	(I) Inches	(C) Inches	(P) Feet
(235D_INT)	EB	37017+93.81	37024+09.66	3	1.5	1.5	16.5	12

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

PAVING
EASTBOUND I-80/RAMP D INTERIM
(ML080EB) / (235D_INT)



Mainline Overlay and PCC Full Depth Widening

Mainline Jointing: Modified BT-4
Transverse joints: CD at 17' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(M) Inches	(S) Inches	(I) Inches	(C) Inches
(ML080EB)	EB	36+42.02	42+00.00	3	1.5	1.5	16.5

Full Depth PCC Shoulder

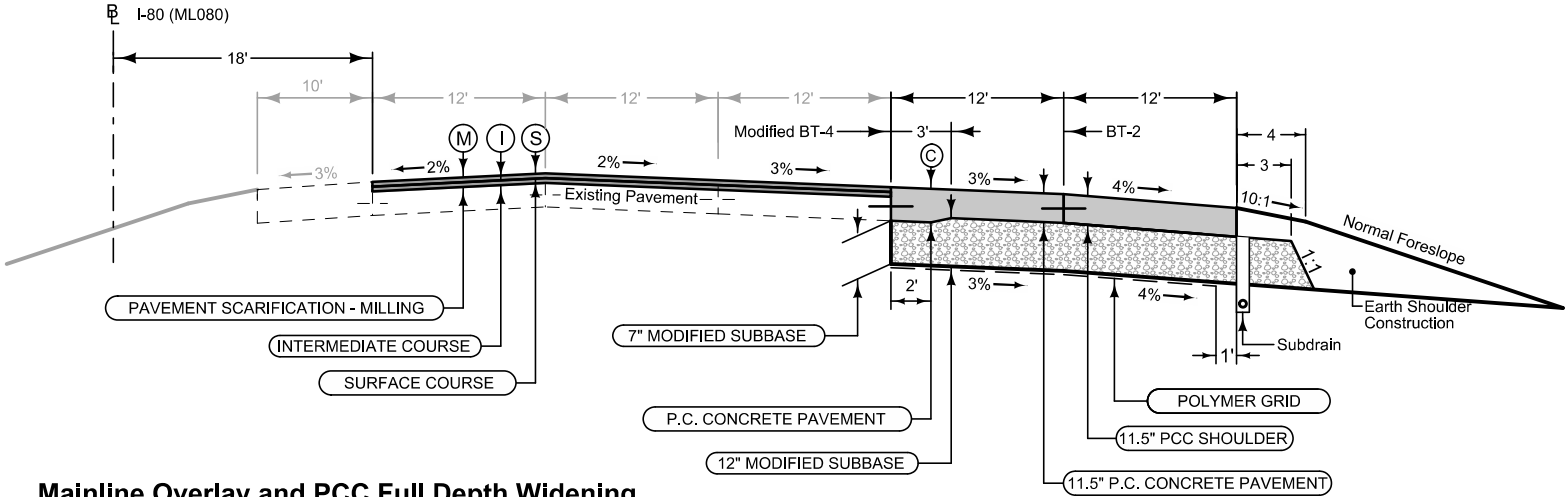
Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

STATION TO STATION		Direction of Travel
36+42.02	42+00.00	EB

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

PAVING
EASTBOUND I-80
(ML080EB)



Mainline Overlay and PCC Full Depth Widening

Mainline Jointing: Modified BT-4
Transverse joints: CD at 17' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(M) Inches	(S) Inches	(I) Inches	(C) Inches
(ML080)	EB	1112+00.00	1118+50.00	3	1.5	1.5	16.5

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

STATION TO STATION		Direction of Travel
1112+00.00	1118+50.00	EB

See Tab 100-24 or 100-25 for pavement quantities.

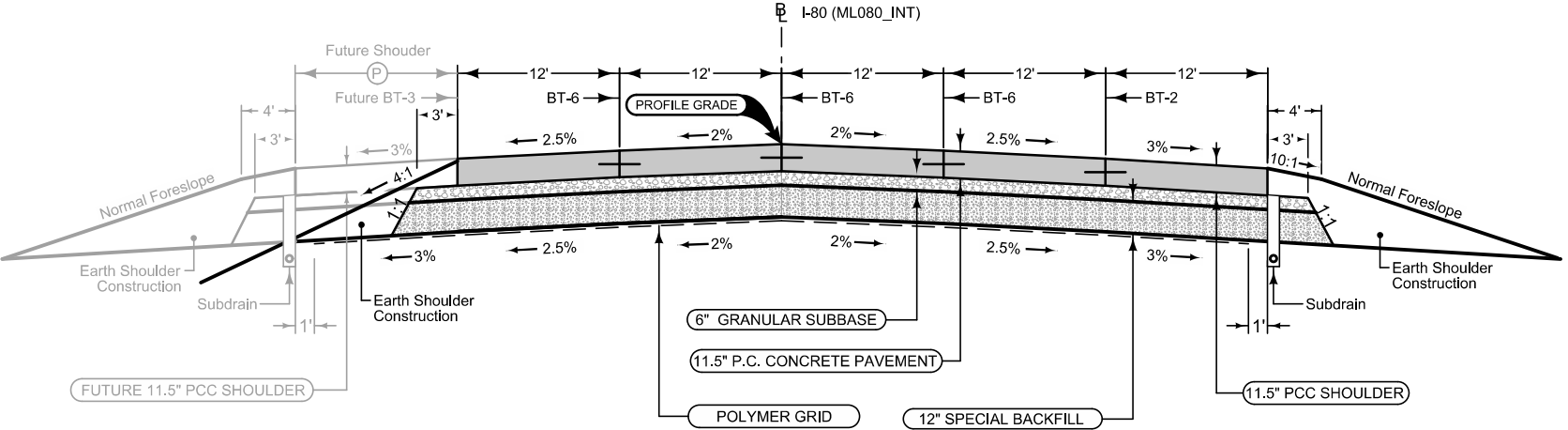
See Tab 112-9 for shoulder quantities.

**PAVING
EASTBOUND I-80
(ML080)**

Full Depth PCC Shoulder (FUTURE)

Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

(P) Feet	STATION TO STATION		Direction of Travel
12	2118+50.00	2121+41.09	EB



Mainline PCC Full Depth

Mainline Jointing: BT-6
Transverse joints: CD at 17' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(ML080_INT)	EB	2118+50.00	2121+41.09

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

STATION TO STATION		Direction of Travel
2118+50.00	2121+41.09	EB

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

**PAVING
EASTBOUND I-80
(ML080_INT)**

Full Depth PCC Median (FUTURE)

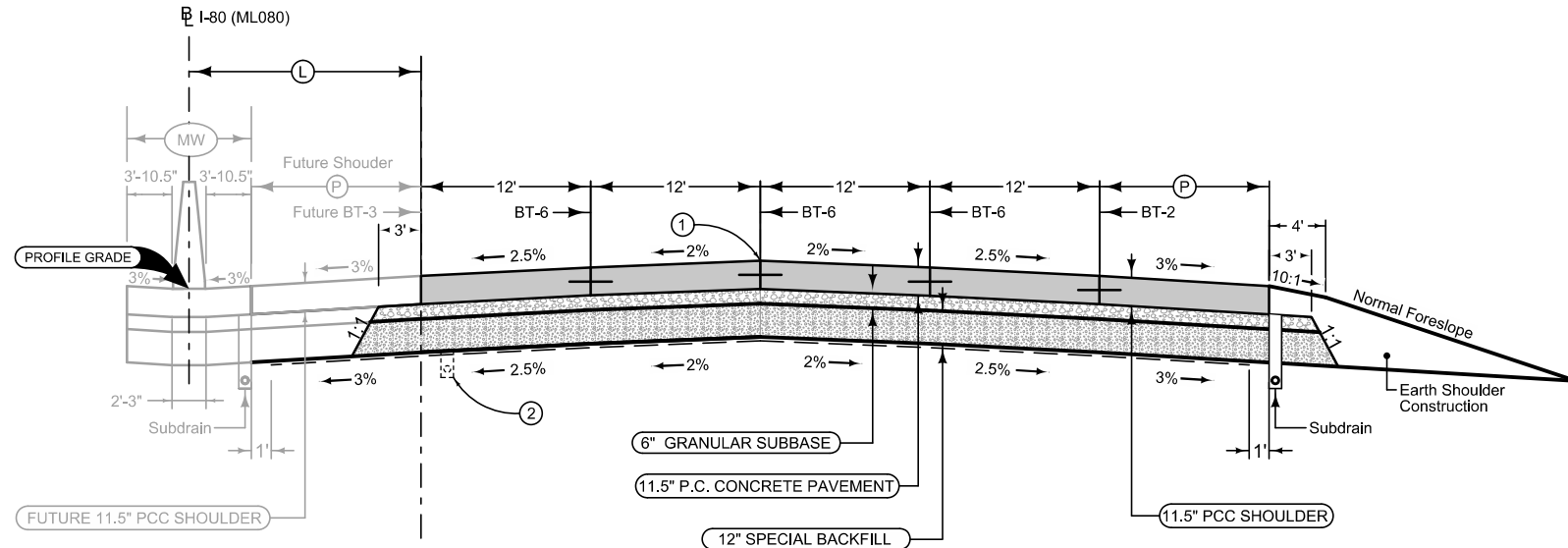
Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

MW Feet	L Feet	STATION TO STATION		Direction of Travel
10	18	1121+41.09	1130+07.95	EB
10	18	1133+80.00	1172+18.61	EB
10	18	1175+62.74	1177+25.00	EB
10 - 6	18 - 15	1177+25.00	1181+25.00	EB

Full Depth PCC Shoulder (FUTURE)

Shoulder Jointing:
Longitudinal joint: BT-3
Transverse joints: CD at 17' spacing

P Feet	STATION TO STATION		Direction of Travel
13	1121+41.09	1130+07.95	EB
13	1133+80.00	1172+18.61	EB
13	1175+62.74	1177+25.00	EB
13 - 12	1177+25.00	1181+25.00	EB



Mainline PCC Full Depth

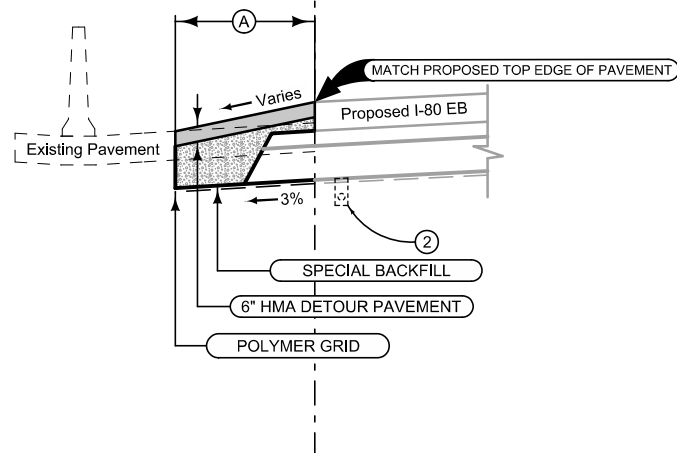
Mainline Jointing: BT-6
Transverse joints: CD at 17' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(ML080)	EB	1121+41.09	1130+07.95
(ML080)	EB	1133+80.00	1172+18.61
(ML080)	EB	1175+62.74	1181+25.00

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

P Feet	STATION TO STATION		Direction of Travel
12	1121+41.09	1128+21.23	EB
15.74	1128+21.23	1128+49.01	EB
15.74 - 13.61	1128+49.01	1129+02.13	EB
13.61	1129+02.13	1130+07.95	EB
12	1133+80.00	1170+25.59	EB
15.74	1170+25.59	1170+53.36	EB
15.74 - 13.61	1170+53.36	1171+06.49	EB
13.61	1171+06.49	1172+18.61	EB
12	1175+62.74	1181+25.00	EB



HMA Detour - DET03_ML080

A Feet	STATION TO STATION		Direction of Travel
6	1121+41.09	1128+25.00	EB
13	1128+25.00	1130+07.95	EB
12	1133+80.00	1138+00.00	EB
6	1138+00.00	1163+00.00	EB
12	1163+00.00	1172+18.61	EB
12	1175+62.74	1181+25.00	EB

DETOUR
DET03_ML080

See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

PAVING
EASTBOUND I-80
(ML080)

- ① Refer to project plan L sheets and cross sections for Crown Shift Locations.
② Do not disturb existing subdrain located 36" below existing pavement.

Full Depth PCC Median (FUTURE)

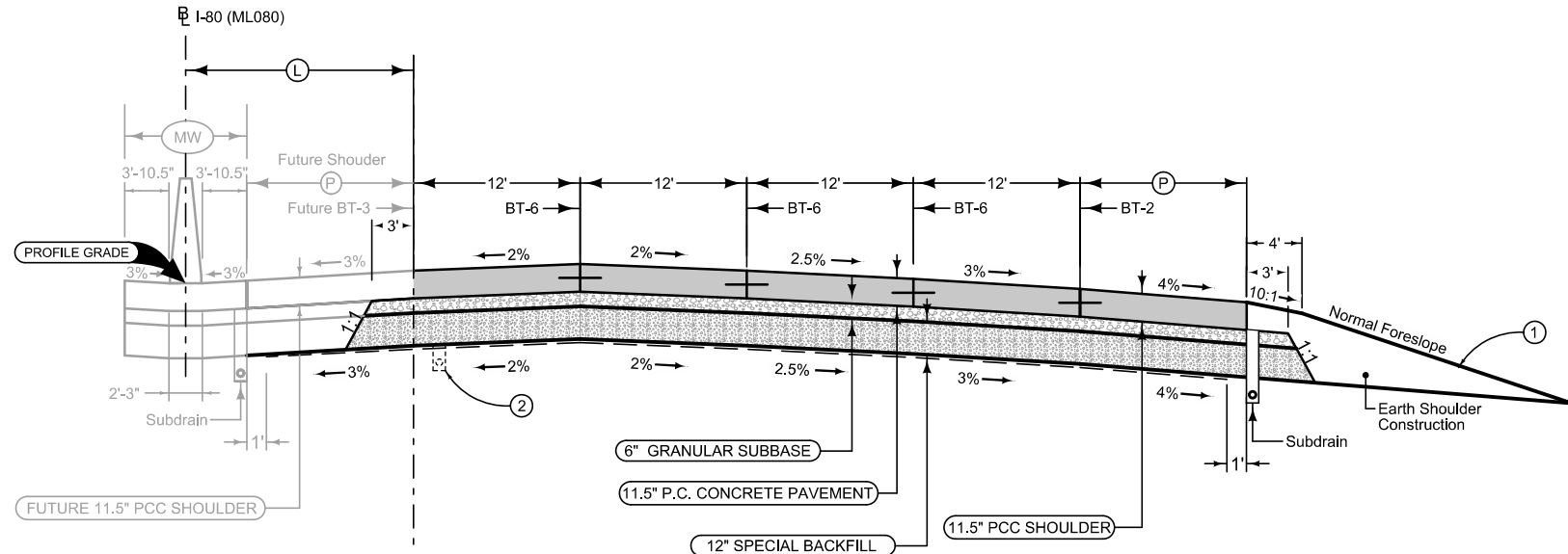
Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

MW Feet	L Feet	STATION TO STATION		Direction of Travel
6	15	1181+25.00	1202+31.00	EB

Full Depth PCC Shoulder (FUTURE)

Shoulder Jointing:
Longitudinal joint: BT-3
Transverse joints: CD at 17' spacing

P Feet	STATION TO STATION		Direction of Travel
12	1181+25.00	1202+31.00	EB



Mainline PCC Full Depth

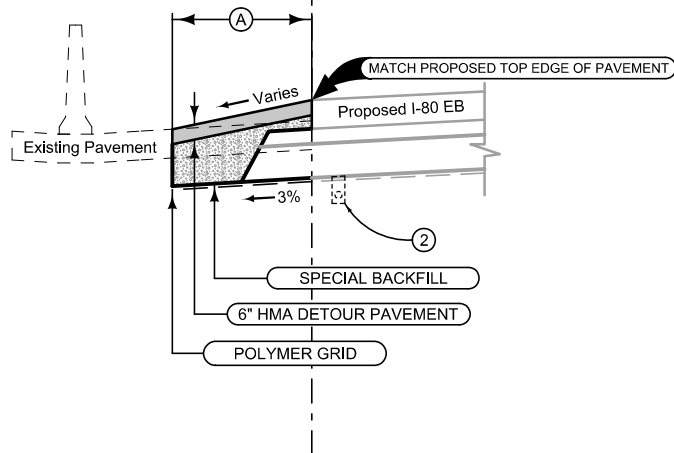
Mainline Jointing: BT-6
Transverse joints: CD at 17' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(ML080)	EB	1181+25.00	1202+31.00

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

P Feet	STATION TO STATION		Direction of Travel
12	1181+25.00	1186+19.56	EB
13.61	1186+19.56	1186+47.66	EB
19 - 17.5	1186+47.66	1186+85.16	EB
17.5	1186+85.16	1187+51.14	EB
17.5 - 15	1187+51.14	1187+88.69	EB
15	1187+88.69	1188+56.06	EB
12	1188+56.06	1202+31.00	EB



HMA Detour - DET03_ML080

A Feet	STATION TO STATION		Direction of Travel
12	1181+25.00	1184+00.00	EB
8	1184+00.00	1202+31.00	EB

DETOUR
DET03_ML080

See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

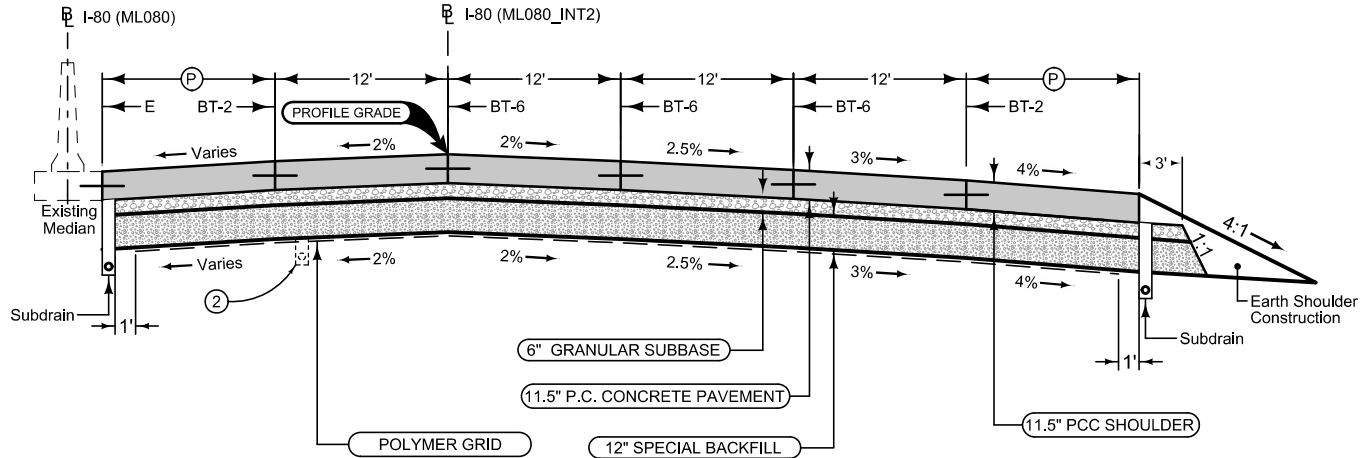
PAVING
EASTBOUND I-80
(ML080)

- ① Refer to project plan and cross sections for specific location of foreslope change.
② Do not disturb existing subdrain located 36" below existing pavement.

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

(P) Feet	STATION TO STATION		Direction of Travel
12	3202+31.00	3202+73.00	EB
10	3202+73.00	3204+11.90	EB
12	3204+11.90	3207+85.90	EB



Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

(P) Feet	STATION TO STATION		Direction of Travel
12	3202+31.00	3207+85.90	EB

Mainline PCC Full Depth

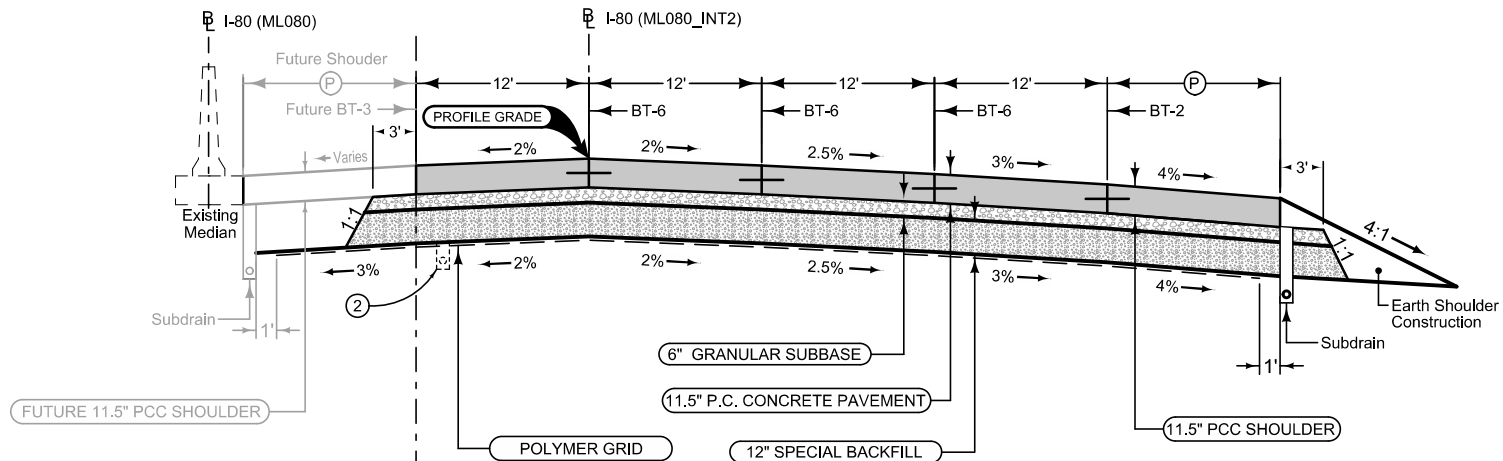
Mainline Jointing: BT-6
Transverse joints: CD at 17' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(ML080_INT2)	EB	3202+31.00	3207+85.90

Full Depth PCC Shoulder (FUTURE)

Shoulder Jointing:
Longitudinal joint: BT-3
Transverse joints: CD at 17' spacing

(P) Feet	STATION TO STATION		Direction of Travel
12	3207+85.90	3207+99.91	EB
11.75	3208+00.00	3208+50.00	



Full Depth PCC Shoulder

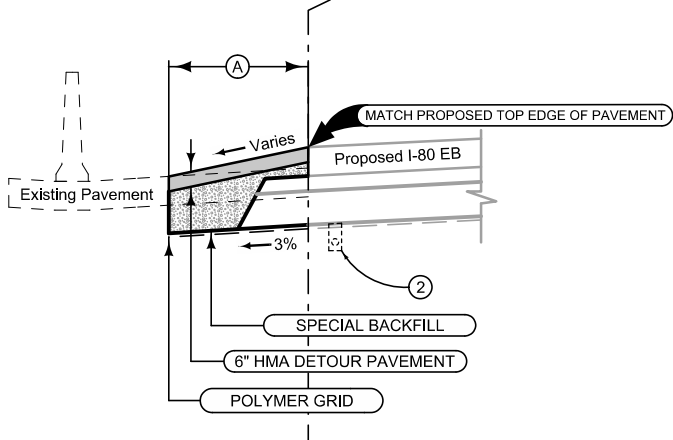
Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

(P) Feet	STATION TO STATION		Direction of Travel
12	3207+85.90	3208+50.00	EB

HMA Detour - DET03_ML080

(A) Feet	STATION TO STATION		Direction of Travel
8	3207+85.90	3208+50.00	EB

DETOUR
DET03_ML080



Mainline PCC Full Depth

Mainline Jointing: BT-6
Transverse joints: CD at 17' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(ML080_INT2)	EB	3207+85.90	3208+50.00

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

PAVING
EASTBOUND I-80
(ML080_INT2)

② Do not disturb existing subdrain located 36" below existing pavement.

Full Depth PCC Shoulder

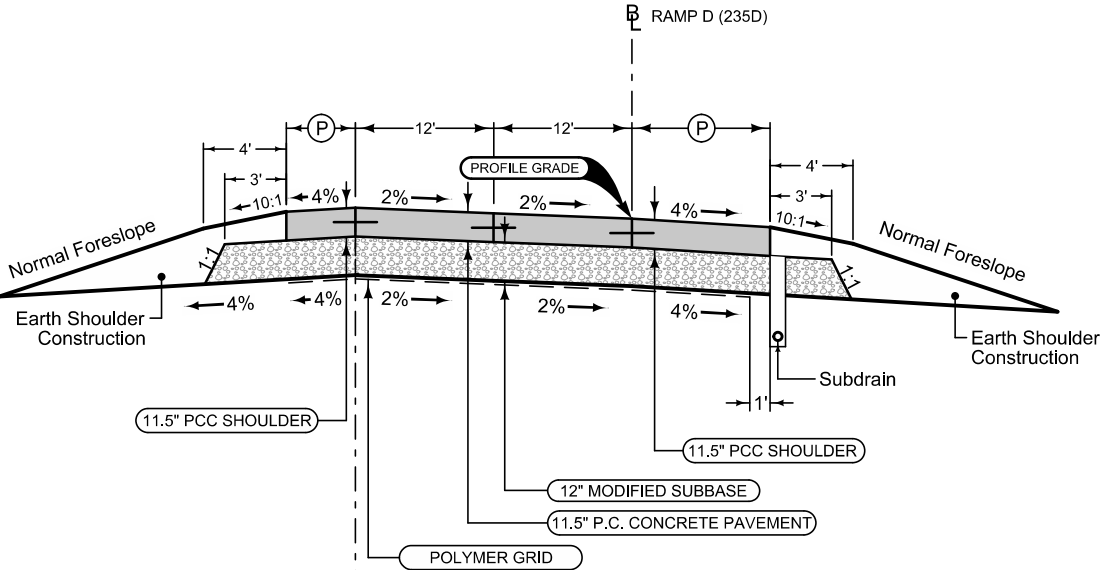
Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(P) Feet
Ramp D (235D)	NB	33544+06.61	33545+63.25	6
Ramp D (235D)	NB	33551+55.36	33552+17.53	6

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(P) Feet
Ramp D (235D)	NB	33544+06.61	33552+17.53	12

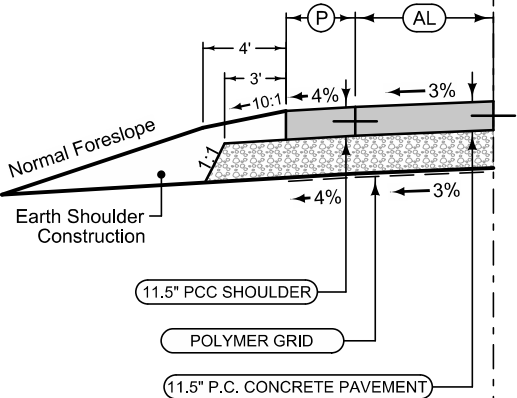


Ramp D Full Depth PCC

Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 17' spacing.
Longitudinal joint: L-2 or BT-2

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
Ramp D (235D)	NB	33544+06.61	33551+92.33

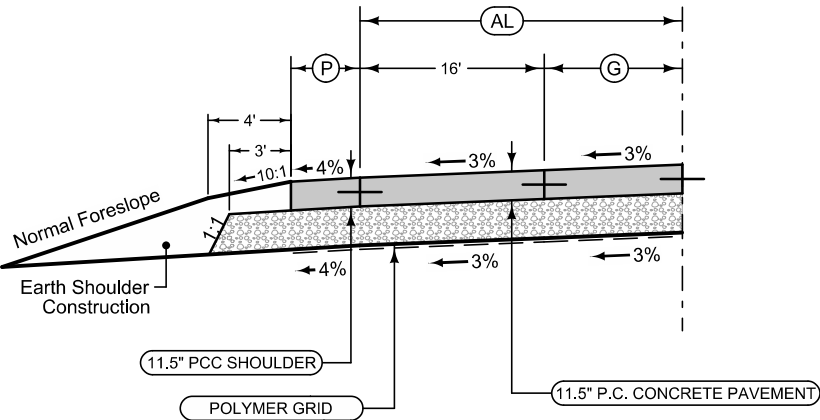


Auxiliary Lane with Full Depth PCC Shoulder

Longitudinal joint: L-2 or BT-2
Transverse joint: Match Mainline

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(AL) Feet	(P) Feet
Ramp D (235D)	NB	33545+63.25	33545+93.86	0-2	6-4
Ramp D (235D)	NB	33545+93.86	33548+40.39	2-18.4	4

Refer to U-Sheets for Gore Details



Auxiliary Lane with Full Depth PCC Shoulder

Longitudinal joint: L-2 or BT-2
Transverse joint: Match Mainline

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(AL) Feet	(G) Feet	(P) Feet
Ramp D (235D)	NB	33548+40.39	33551+55.36	18.4 - 40	2.4 - 24	4

Refer to U-Sheets for Gore Details

See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

PAVING RAMP D (235D)

Full Depth PCC Shoulder

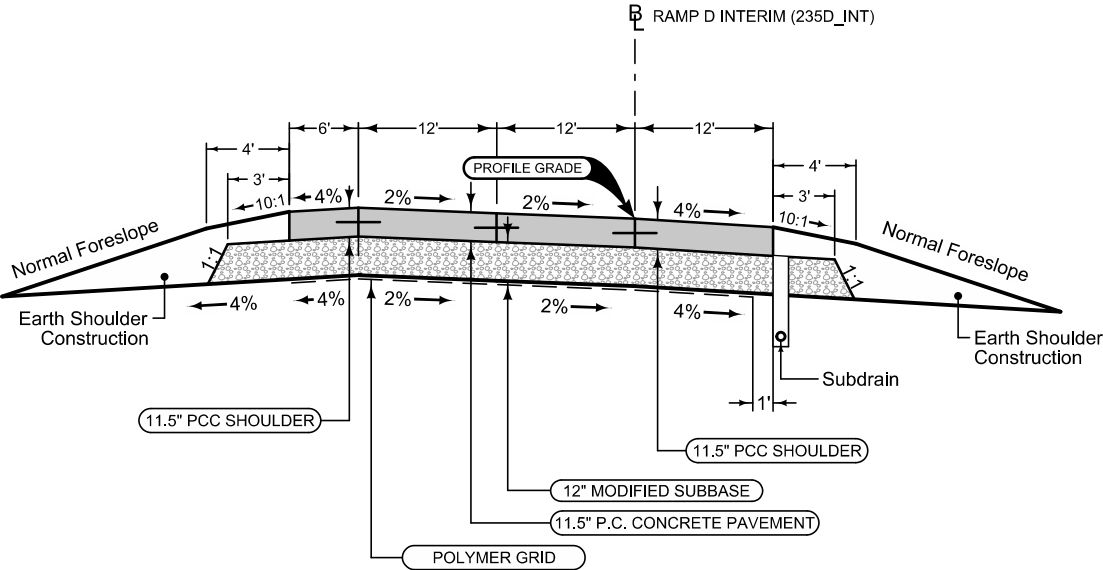
Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(235D_INT)	NB	37008+10.93	37017+93.81

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 17' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(235D_INT)	NB	37008+10.93	37017+93.81



Ramp D Full Depth PCC

Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 17' spacing.
Longitudinal joint: L-2 or BT-2

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
(235D_INT)	NB	37008+10.93	37017+93.81

PAVING
RAMP D INTERIM
(235D_INT)

Full Depth PCC Shoulder

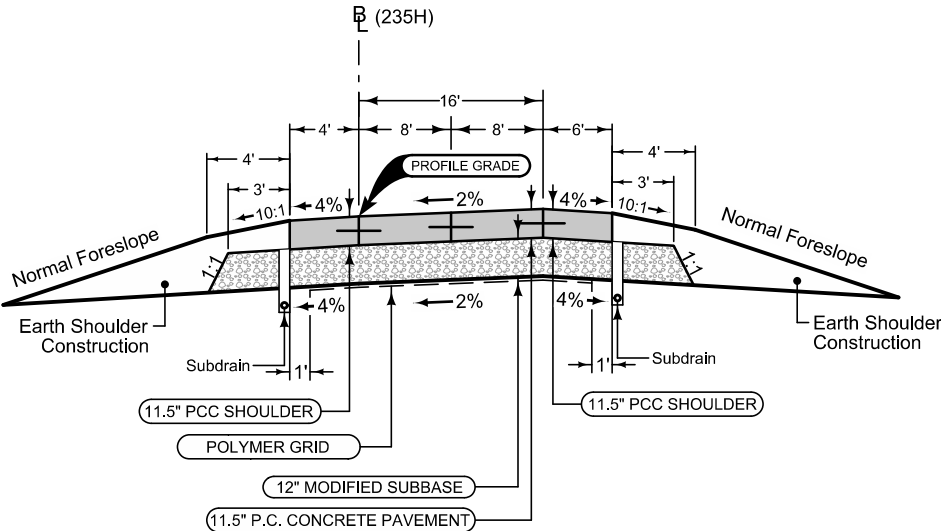
Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 15' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
RAMP H (235H)	NB	39651+00.00	39654+63.68

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or BT-2
Transverse joints: CD at 15' spacing

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
RAMP H (235H)	NB	39651+00.00	39655+03.51



Ramp H Full Depth PCC

Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joint: L-2 or BT-2

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION
RAMP H (235H)	NB	39651+00.00	39654+63.68

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

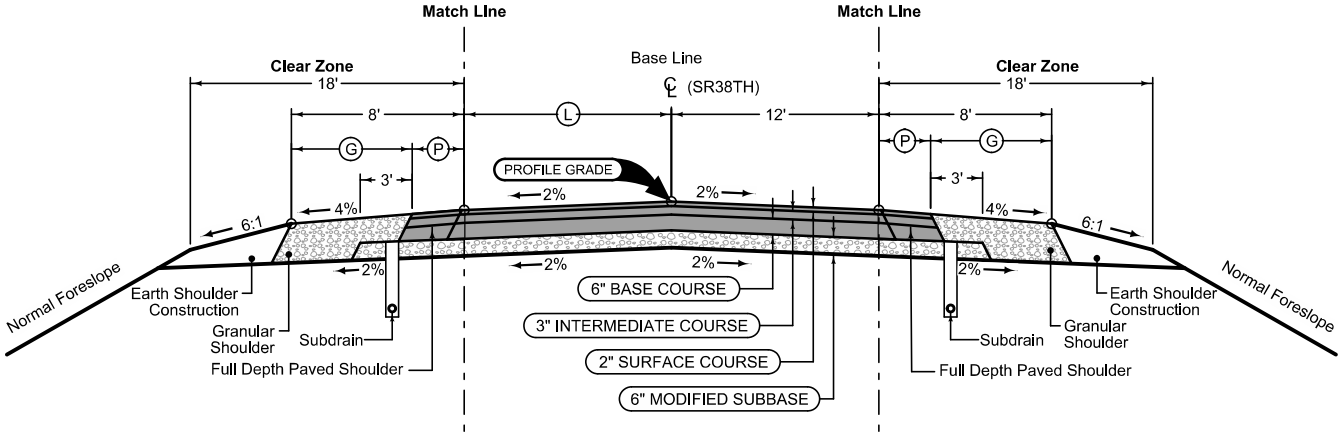
PAVING
RAMP H
(235H)

Combination Shoulder

2_C_ MODIFIED				
Direction of Travel	BEGIN STATION	END STATION	(P) Feet	(G) Feet
SB	2146+50.00	2147+00.00	0 - 3.0	0 - 5.0
SB	2147+00.00	2149+11.53	3.0	5.0
SB	2154+64.97	2158+00.00	3.0	5.0

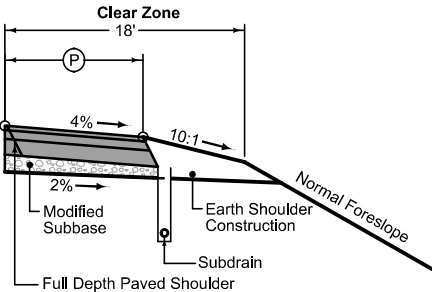
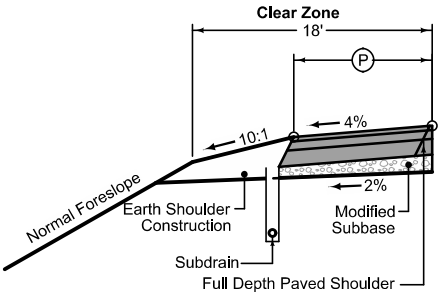
Paved Shoulder at Guardrail

4_P_Guard_ MODIFIED			
Direction of Travel	BEGIN STATION	END STATION	(P) Feet
SB	2149+11.53	2149+33.37	12.0
SB	2149+33.37	2149+64.55	12.0 - 10.7
BRIDGE APPROACH PAVEMENT			
BRIDGE APPROACH PAVEMENT			
SB	2154+01.16	2154+08.85	10.7
SB	2154+08.85	2154+41.28	10.7 - 12.0
SB	2154+41.28	2154+64.97	12.0



2 LANE PAVING

2H_ MODIFIED		
STATION TO STATION		(P) Feet
2146+50.00	2147+00.00	11 - 12
2147+00.00	2149+64.55	12
BRIDGE APPROACH PAVEMENT		
BRIDGE APPROACH PAVEMENT		
2154+01.16	2158+00.00	12



Combination Shoulder

2_C_ MODIFIED				
Direction of Travel	BEGIN STATION	END STATION	(P) Feet	(G) Feet
NB	2146+50.00	2149+00.73	3.0	5.0
NB	2154+54.18	2158+00.00	3.0	5.0

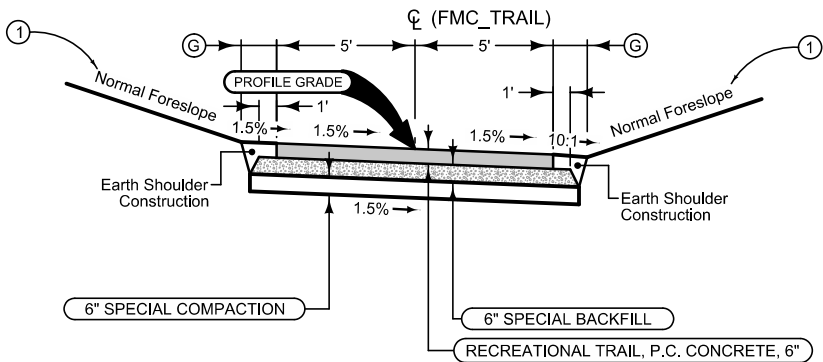
Paved Shoulder at Guardrail

4_P_Guard_ MODIFIED			
Direction of Travel	BEGIN STATION	END STATION	(P) Feet
SB	2149+00.73	2149+23.83	12.0
SB	2149+23.83	2149+54.99	12.0 - 10.7
SB	2149+54.99	2149+64.55	10.7
BRIDGE APPROACH PAVEMENT			
BRIDGE APPROACH PAVEMENT			
SB	2154+01.16	2154+32.32	10.7 - 12.0
SB	2154+32.32	2154+54.18	12.0

FUTURE PAVING
NE 38TH STREET
(FOR INFORMATION ONLY)

Earth Shoulder

BEGIN STATION	END STATION	Ⓒ Feet
301+70.00	303+00.00	2 (MIN)



Earth Shoulder

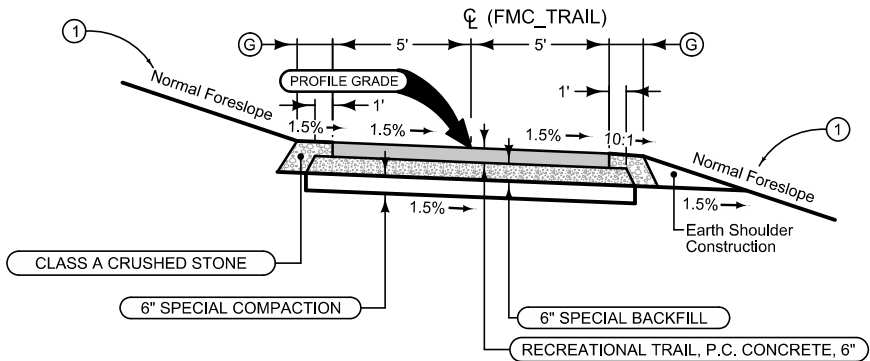
BEGIN STATION	END STATION	Ⓒ Feet
301+70.00	303+00.00	2 (MIN)

Trail Jointing:
Transverse joints: C at 10' spacing.

ROAD IDENTIFICATION	BEGIN STATION	END STATION
FOUR MILE CREEK	301+70.00	303+00.00
GAY LEA WILSON TRAIL		

Granular Shoulder

BEGIN STATION	END STATION	Ⓒ Feet
303+00.00	304+40.00	2 (MIN)



Granular Shoulder

BEGIN STATION	END STATION	Ⓒ Feet
303+00.00	304+40.00	2 (MIN)

Trail Jointing:
Transverse joints: C at 10' spacing.

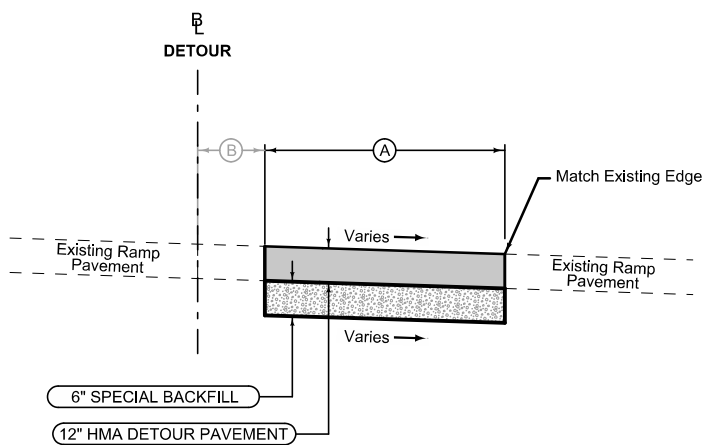
ROAD IDENTIFICATION	BEGIN STATION	END STATION
FOUR MILE CREEK	303+00.00	304+40.00
GAY LEA WILSON TRAIL (FMC_TRAIL)		

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

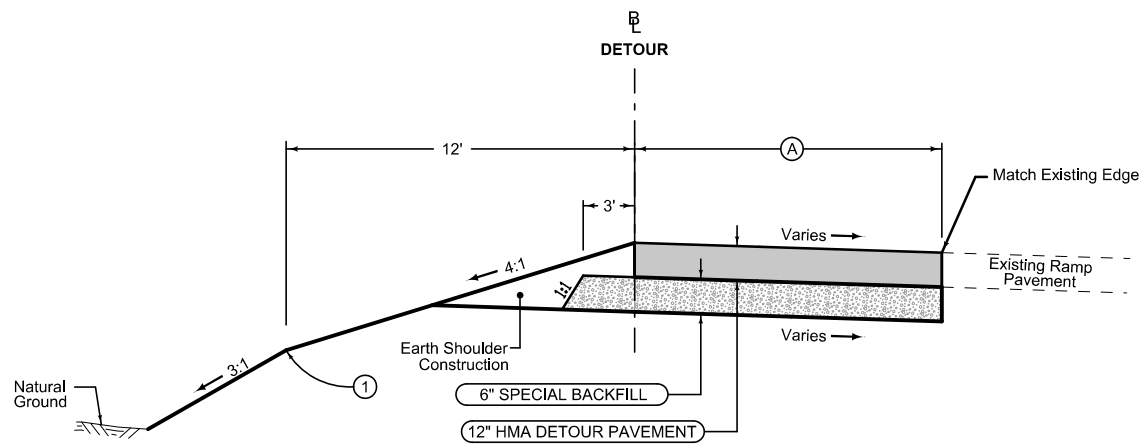
① Refer to project plan and cross sections for specific location of foreslope change.

PAVING
FOURMILE CREEK
GAY LEA WILSON TRAIL



BEGIN STATION	END STATION	(A) Feet	(B) Feet	
399+99.46	400+56.45	17 - 22.2	5.32 - 0	(DET01_RAMPDINT)
Refer to F Sheets for Slope and Geometric Layout				

Section shown in the direction of traffic.



BEGIN STATION	END STATION	(A) Feet	
400+56.45	406+64.21	22.2 - 2.73	(DET01_RAMPDINT)
406+64.21	406+81.02	2.73 - 2.67	(DET01_RAMPDINT)
500+00.00	506+18.60	2.7 - 13.94	(DET02_RAMPDINT)
506+18.60	509+06.61	13.94 - 11.8	(DET02_RAMPDINT)
Refer to F Sheets for Slope and Geometric Layout			

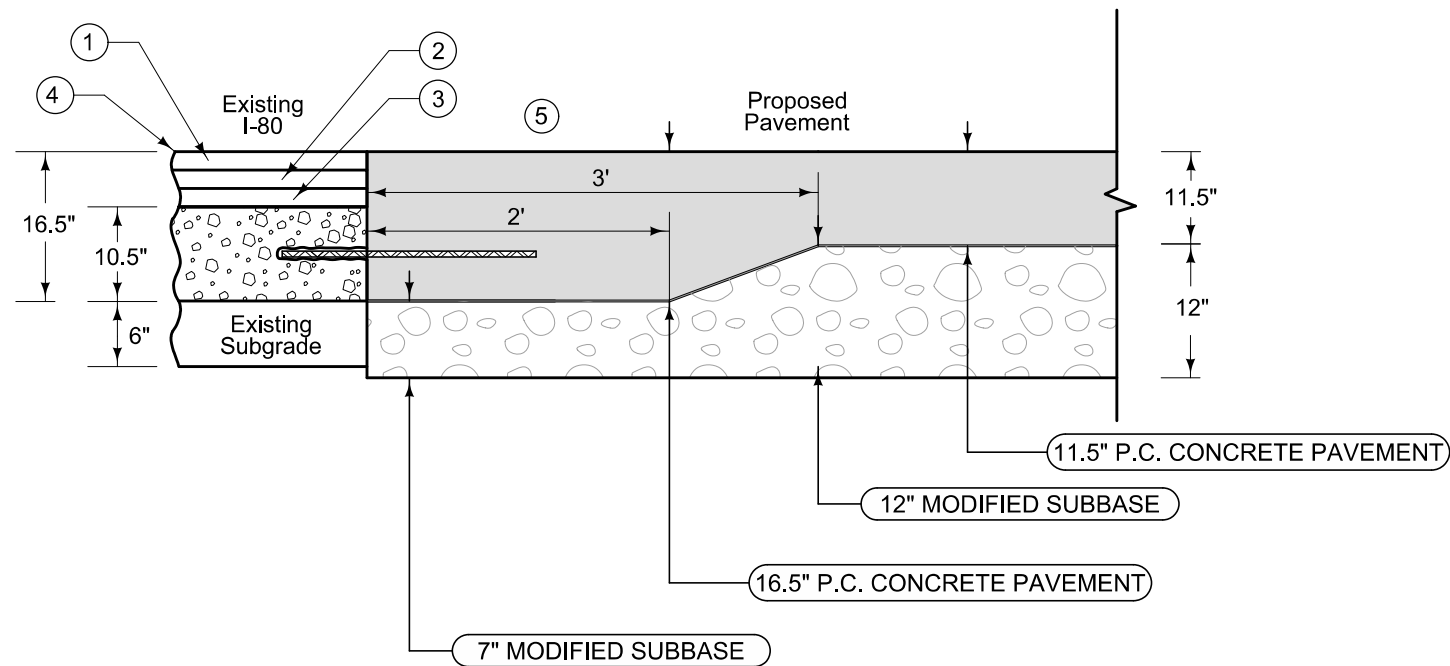
Section shown in the direction of traffic.

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

① Refer to project plan and cross sections for specific location of foreslope change.

PAVING
(DET01_RAMPDINT)
(DET02_RAMPDINT)



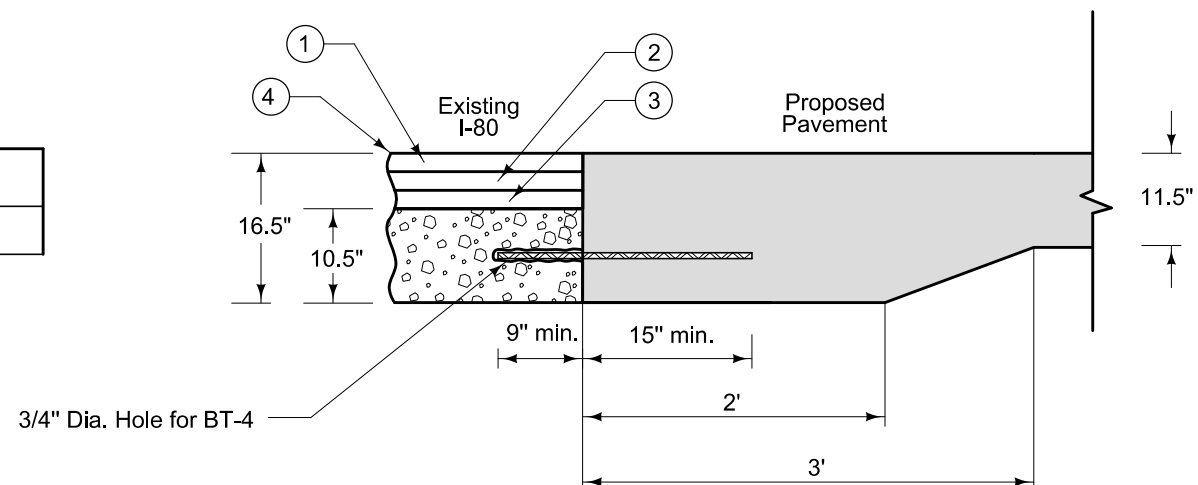
THICKENED PCC PAVEMENT EDGE DETAIL

- ① Existing 2" Surface HMA
- ② Existing 2" Intermediate HMA
- ③ Existing 2" Intermediate HMA
- ④ Proposed 3" Mill and Proposed 1.5" Intermediate HMA and Proposed 1.5" Surface HMA to occur is Stage 3 after the construction of the Proposed PCC Widening
- ⑤ Thickened Edge is Incidental to STANDARD OR SLIP-FORM PCC PAVEMENT, QM-C, CLASS 3I DURABILITY, 11.5 IN. Bid Item.

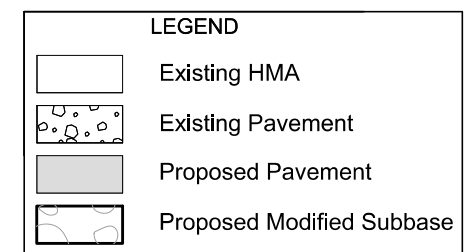
'BT'
ABUTTING PAVEMENT JOINT - RIGID TIE (Drilled)

Ⓣ	Joint	Bars	Bar Length and Spacing
≥ 8"	'BT-4'	#5	24" Long at 15" Centers

Apply Thickened PCC Edge Modified BT-4 joint to all pavement adjacent to existing I-80 pavement. Refer to Jointing L sheets for location and additional details.

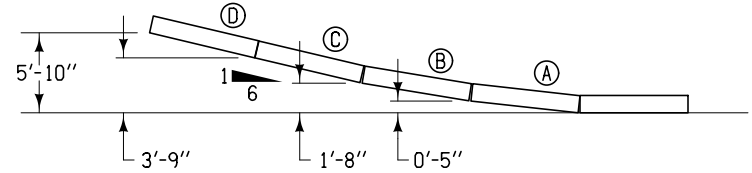


MODIFIED BT-4 JOINT DETAIL



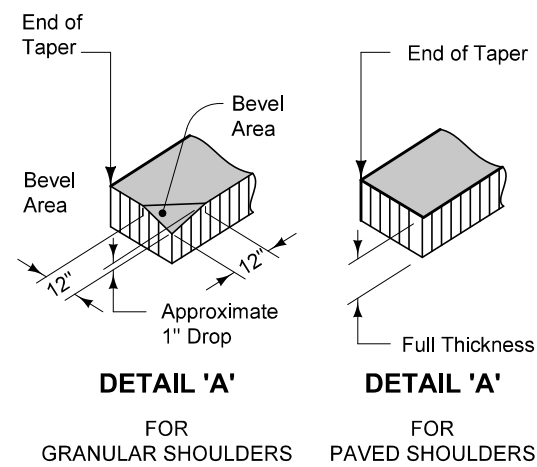
RAMP D INTERIM (235D_INT)
ML080 EB (ML080EB)
ML080 (ML080)
HMA OVERLAY & WIDENING TYPICAL

8210
MODIFIED

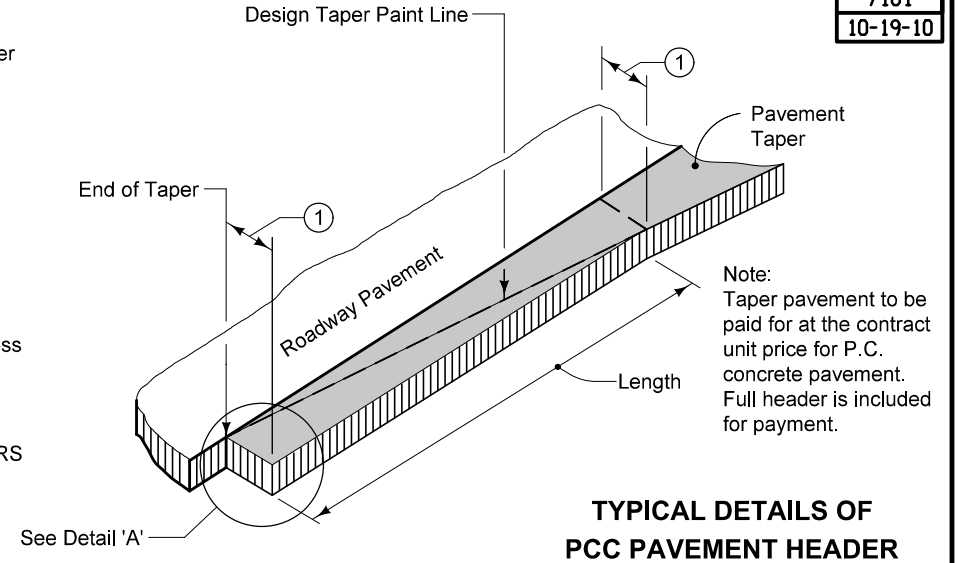


BARRIER OFFSETS FOR FLARE SECTIONS

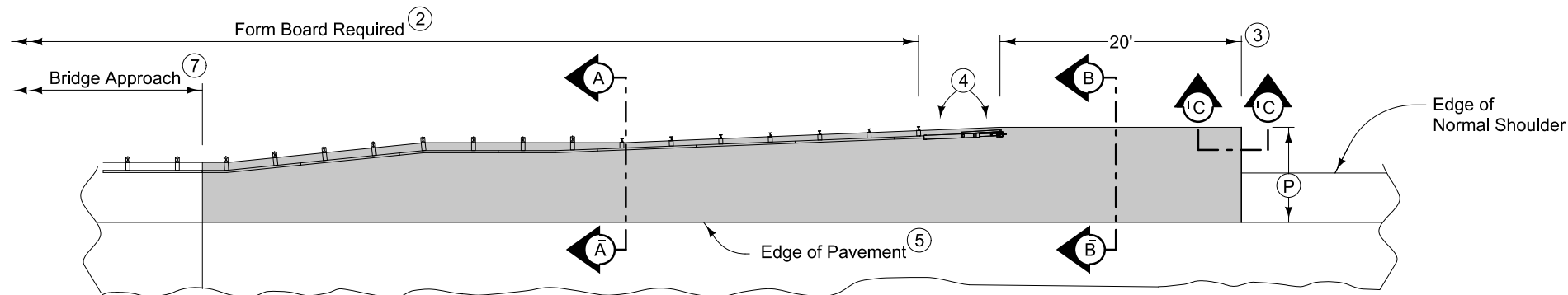
7101
10-19-10



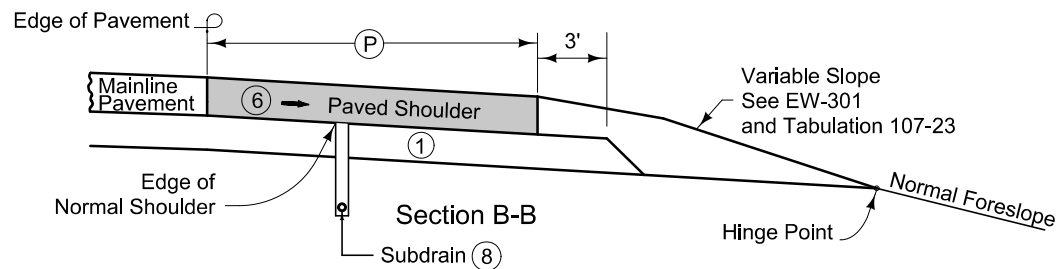
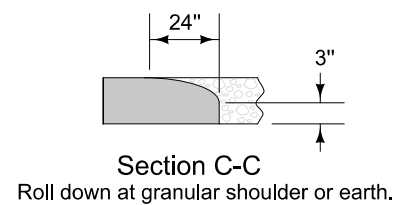
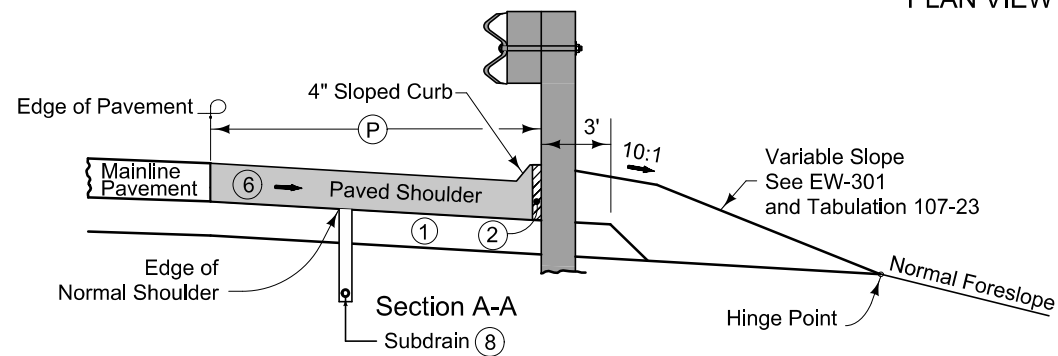
- ① Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).



TYPICAL DETAILS OF PCC PAVEMENT HEADER



PLAN VIEW



PAVED SHOULDER AT GUARDRAIL

Match full depth paved shoulder thickness and jointing.
Refer to L Sheets for Jointing.
Refer to Shoulder tabulation (112-9) for quantities.

Match mainline pavement joint spacing. Place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

- ① Match full depth paved shoulder subgrade treatment.
- ② When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ③ Continue paved shoulder 20' beyond the center of first post.
- ④ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ⑤ 'BT' (per PV-101) joint for PCC shoulder.
- ⑥ Match adjacent shoulder slope. Refer to L Sheets for Staking and Grading Information.
- ⑦ Refer to U Sheets for details of bridge approach to be constructed by bridge contractor.
- ⑧ Refer to CS sheets for subdrain locations and quantities.

7158
MODIFIED

100-10	100-10
10-18-05	10-18-05
	<p align="center">PROJECT DESCRIPTION</p>
	<p>This project is for the grading and paving of Eastbound I-80 lanes from the Northeast Mix Master Interchange to US 65.</p>

ESTIMATED PROJECT QUANTITIES (1 DIVISION PROJECT)					
Item No.	Item Code	Item	Unit	Total	As Built Qty.
1	2101-0850001	CLEARING AND GRUBBING	ACRE	37.8	
2	2102-0425071	SPECIAL BACKFILL	CY	24696.1	
3	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	155037	
4	2102-2710090	EXCAVATION, CLASS 10, WASTE	CY	4570	
5	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS	CY	50	
6	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	35192	
7	2107-0875100	COMPACTION WITH MOISTURE CONTROL	CY	119234	
8	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN	CY	1273	
9	2111-8174100	GRANULAR SUBBASE	SY	62362.4	
10	2113-0001100	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID	SY	77354.6	
11	2115-0100000	MODIFIED SUBBASE	CY	5951.1	
12	2122-5190115	PAVED SHOULDER, P.C. CONCRETE, 11.5 IN.	SY	18286.6	
13	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	169.5	
14	2214-5145150	PAVEMENT SCARIFICATION	SY	7904.8	
15	2301-1004115	STANDARD OR SLIP-FORM PCC PAVEMENT, QM-C, CLASS 3I DURABILITY, 11.5 IN.	SY	53441.7	
16	2301-7000110	PAYMENT ADJUSTMENT I/D FOR PCC PAVEMENT THICKNESS (BY SCHEDULE)	EACH	62526.8	
17	2303-1052500	HMA VERY HIGH TRAFFIC, INTERMEDIATE COURSE 1/2 IN. MIX	TON	644.9	
18	2303-1053502	HMA VERY HIGH TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, FRICTION L-2	TON	644.9	
19	2303-1258285	ASPHALT BINDER, PG 58-28V, VERY HIGH TRAFFIC	TON	77.8	
20	2304-0100000	DETOUR PAVEMENT	SY	9371.8	
21	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	61	
22	2317-7000110	PAYMENT ADJUSTMENT I/D FOR PCC PAVEMENT SMOOTHNESS (BY SCHEDULE)	EACH	40081.3	
23	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS	1	
24	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS	1	
25	2401-6745830	REMOVAL OF P.C. CONCRETE MEDIAN BARRIER	LF	541	
26	2402-0425040	FLOODED BACKFILL	CY	2469.83	
27	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	4175.9	
28	2416-0100018	APRONS, CONCRETE, 18 IN. DIA.	EACH	5	
29	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH	4	
30	2416-0100030	APRONS, CONCRETE, 30 IN. DIA.	EACH	2	
31	2416-0100048	APRONS, CONCRETE, 48 IN. DIA.	EACH	3	
32	2416-0100060	APRONS, CONCRETE, 60 IN. DIA.	EACH	1	
33	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN DIA.	LF	28	
34	2416-1180030	CULVERT, CONCRETE ROADWAY PIPE, 30 IN DIA.	LF	228	
35	2416-1180048	CULVERT, CONCRETE ROADWAY PIPE, 48 IN DIA.	LF	208	
36	2416-1180060	CULVERT, CONCRETE ROADWAY PIPE, 60 IN DIA.	LF	90	
37	2417-0225030	APRONS, METAL, 30 IN. DIA.	EACH	1	
38	2432-0000500	GRANULAR BACKFILL, MSE WALL	CY	1507	
39	2501-8400172	TEMPORARY SHORING	LS	1	
40	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	LF	14919.4	
41	2502-8215112	SUBDRAIN, CORRUGATED METAL PIPE, 12 IN. DIA.	LF	126	
42	2502-8215406	SUBDRAIN, CORRUGATED METAL PIPE, PERFORATED, 6 IN. DIA.	LF	905	
43	2502-8221306	SUBDRAIN OUTLET, DR-306	EACH	64	
44	2503-0114218	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 18 IN.	LF	190	
45	2503-0114224	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 24 IN.	LF	130	
46	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.	LF	138	
47	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	2666	
48	2505-4008130	REMOVAL OF CABLE GUARDRAIL	LF	265	
49	2505-4008300	STEEL BEAM GUARDRAIL	LF	625	
50	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201	EACH	4	
51	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	4	
52	2505-4021020	STEEL BEAM GUARDRAIL END ANCHOR, W-BEAM	EACH	1	
53	2505-4021720	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-205	EACH	5	
54	2505-6000111	HIGH TENSION CABLE GUARDRAIL	LF	560	
55	2505-6000121	HIGH TENSION CABLE GUARDRAIL, END ANCHOR	EACH	6	
56	2505-6000131	HIGH TENSION CABLE GUARDRAIL, SPARE PARTS KIT	EACH	6	
57	2507-3250005	ENGINEERING FABRIC	SY	785.2	
58	2507-6800061	REVTMENT, CLASS E	TON	617.1	
59	2510-6745850	REMOVAL OF PAVEMENT	SY	66175.3	
60	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES	EACH	3	
61	2511-0300000	REMOVAL OF RECREATIONAL TRAIL	SY	468.6	
62	2511-0302600	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN.	SY	300	
63	2511-0310100	SPECIAL COMPACTION OF SUBGRADE FOR RECREATIONAL TRAIL	STA	2.7	
64	2519-1002072	FENCE, CHAIN LINK, 72 IN. HEIGHT	LF	13571	
65	2519-2000010	FENCE, CHANNEL CROSSING, TYPE A	LF	30	
66	2519-4200110	REMOVAL OF FENCE, BARBED WIRE	LF	12000	
67	2520-3350015	FIELD OFFICE	EACH	1	
68	2526-8285000	CONSTRUCTION SURVEY	LS	1	
69	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED	EACH	3	
70	2527-9263181	PAVEMENT MARKINGS REMOVED	STA	699.16	
71	2527-9263209	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	1153.87	
72	2527-9263212	PAINTED PAVEMENT MARKINGS, HIGH-BUILD WATERBORNE	STA	10.73	
73	2527-9263216	PAINTED PAVEMENT MARKINGS, MULTI-COMPONENT LIQUID	STA	155.96	
74	2528-2518000	SAFETY CLOSURE	EACH	9	

[illegible]

FILE NO.	ENGLISH	DESIGN TEAM	Iowa DOT\HDR	POLK COUNTY	PROJECT NUMBER	IM-NHS-080-4(085)138--03-77	SHEET NUMBER	C.1
9/23/2025	9:56:24 AM	TTHEULEN	c:\pwworking\central01\d4844592\SH7_77080085_C01.xlsm					

ESTIMATE REFERENCE INFORMATION			100-4A 10-29-02
Item No.	Item Code	Description	
1	2101-0850001	CLEARING AND GRUBBING Refer to Tab 110-17 in C sheets and U sheets. -	
2	2102-0425071	SPECIAL BACKFILL Refer to the Typical Sections on B Sheets and Tabs 100-24, 112-9, and 113-1A in C Sheets. -	
3	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW Refer to T Sheets. Includes approximately 35,884 CY of Borrow needed from project stockpile. Refer to QR.1 sheet for location of stockpile site to be used for borrow for this project. The specific location for material used for this project will be as directed by the Engineer. Overhaul will not be measured or paid for, but shall be considered incidental to roadway excavation. See CS-Sheets for settlement plate locations. -	
4	2102-2710090	EXCAVATION, CLASS 10, WASTE Refer to T Sheets. Includes 4,570 CY of excess cut from Stage 3. Contractor may haul the Class 10 excess to the stockpile site located on the QR Sheet. -	
5	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS Refer to Tab 103-7 in CS Sheets. Dispose of excess material according to Article 1106.07 of the current specifications. -	
6	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD Refer to Tab 103-7 and 103-10 in CS Sheets, and the T sheets. Includes 40% shrinkage. Includes 1,215 CY which is to be used as fill on the foreslopes by increasing the local topsoil depth as necessary to offset Class 10 need. -	
7	2107-0875100	COMPACTION WITH MOISTURE CONTROL Refer to Tab 103-6 in CS Sheets, and the T Sheets. The quantity shown on the contract documents is determined by the template fill volume. Shrinkage will not be included in the moisture control quantity. -	
8	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN Refer to Tab 104-5C in CS Sheets. -	
9	2111-8174100	GRANULAR SUBBASE Refer to Typical Sections in B Sheets and Tab 100-24 and Tab 112-9 in C Sheets. -	
10	2113-0001100	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID Refer to Typical Sections in B Sheets. Includes approximately 77,354.6 CY for roadway polymer grid. Material may be placed 12" shy of the edge of pavement to avoid interference with subdrain excavator. Estimated quantity does not include material required for 2' overlap at seams. -	
11	2115-0100000	MODIFIED SUBBASE Refer to Typical Sections in B Sheets and Tab 100-24 and Tab 112-9 in C Sheets. -	
12	2122-5190115	PAVED SHOULDER, P.C. CONCRETE, 11.5 IN. Refer to Typical Sections in B Sheets and Tab 112-9 in C Sheets. -	
13	2123-7450000	SHOULDER CONSTRUCTION, EARTH Refer to Typical Sections in B Sheets and Tabs 112-9 and 113-1A in C sheets. Volumes listed in C Sheet tabulations include topsoil. No payment for overhaul allowed for this material. -	
14	2214-5145150	PAVEMENT SCARIFICATION Refer to Typical Sections in B Sheets and Tab 100-25 in C Sheets. -	
15	2301-1004115	STANDARD OR SLIP-FORM PCC PAVEMENT, QM-C, CLASS 3I DURABILITY, 11.5 IN. Refer to Typical Sections in B Sheets, and Tab 100-24 in C Sheets. Thickened edge incidental to bid item. Refer to DS-23077 for Quality Management Concrete (QM-C). -	
16	2301-7000110	PAYMENT ADJUSTMENT I/D FOR PCC PAVEMENT THICKNESS (BY SCHEDULE) This item is intended for mainline pavement along I-80. -	
17	2303-1052500	HMA VERY HIGH TRAFFIC, INTERMEDIATE COURSE 1/2 IN. MIX	
18	2303-1053502	HMA VERY HIGH TRAFFIC, SURFACE COURSE, 1/2 IN. MIX, FRICTION L-2	
19	2303-1258285	ASPHALT BINDER, PG 58-28V, VERY HIGH TRAFFIC Item is for I-80 Eastbound, Ramp D Interim gore and I-80 Mainline overlay. Refer to Typical Sections in B Sheets and Tab 100-25 in C Sheets. -	
20	2304-0100000	DETOUR PAVEMENT Refer to F Sheets, J Sheets, Typicals Sections in B Sheets, and Tab 112-9 in C Sheets. Utilize for detour pavement (DET01 and DET02) prior to traffic shifts. Includes 2,399.3 SY of 12" HMA Detour Pavement total for DET01 and DET02. Includes 6,972.5 SY of 6" HMA Detour Pavement total for DET03. -	
21	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE Refer to Typical Sections in B Sheets and Tab 113-1A in C Sheets. Refer to E sheets for location and details. -	
22	2317-7000110	PAYMENT ADJUSTMENT I/D FOR PCC PAVEMENT SMOOTHNESS (BY SCHEDULE) This item is intended for mainline pavement along I-80. -	

ESTIMATE REFERENCE INFORMATION			100-4A 10-29-02
Item No.	Item Code	Description	
23	2401-6745625	REMOVAL OF EXISTING BRIDGE Refer to Tab 110-2 in C Sheets. Refer to U Sheets for location. 38th St Partial Bridge Removal: Includes removal of south abutment, south concrete slope protection and removal of remaining south pier down to 4 ft below existing grade, to become property of the Contractor & hauled away. Existing 38th street bridge deck/girders removed by (Others). -	
24	2401-6745650	REMOVAL OF EXISTING STRUCTURES Refer to Tab 110-2 in C Sheets. Refer to U Sheets for locations. -	
25	2401-6745830	REMOVAL OF P.C. CONCRETE MEDIAN BARRIER Refer to Removal Plan Sheets in U Sheets and Tab 110-1 in C Sheets for locations. Method of Measurement: Linear Feet of P.C. Concrete Barrier removed. Basis of Payment: The Contractor shall be paid the contract unit price per linear feet of P.C. Concrete Median Barrier removed. The payment includes furnishing all material, equipment, and labor and for performance of all work necessary for removal from the project. -	
26	2402-0425040	FLOODED BACKFILL Refer to Tab. 104-3 in C Sheets. -	
27	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT Refer to Tab. 104-3 in C Sheets. -	
28	2416-0100018	APRONS, CONCRETE, 18 IN. DIA.	
29	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	
30	2416-0100030	APRONS, CONCRETE, 30 IN. DIA.	
31	2416-0100048	APRONS, CONCRETE, 48 IN. DIA.	
32	2416-0100060	APRONS, CONCRETE, 60 IN. DIA. Refer to Tab. 104-3 in C Sheets, M Sheets, V Sheets, and VW Sheets for locations and details. Refer to Tab. 104-5B in M Sheets for locations and details. -	
33	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN DIA.	
34	2416-1180030	CULVERT, CONCRETE ROADWAY PIPE, 30 IN DIA.	
35	2416-1180048	CULVERT, CONCRETE ROADWAY PIPE, 48 IN DIA.	
36	2416-1180060	CULVERT, CONCRETE ROADWAY PIPE, 60 IN DIA. Refer to Tab. 104-3 in C Sheets, M Sheets, V Sheets, and VW Sheets for locations and details. -	
37	2417-0225030	APRONS, METAL, 30 IN. DIA. Refer to Tab. 104-3 in C Sheets and E Sheets for locations and details. -	
38	2432-0000500	GRANULAR BACKFILL, MSE WALL Refer to earthwork quantities in T Sheets and retaining walls in V sheets for location and details. Granular Backfill material placed with wall construction shall mee the requirements of Iowa DOT Specification 2432. -	
39	2501-8400172	TEMPORARY SHORING Refer to J and M Sheets for temporary shoring locations. Shoring included for grading & paving adjacent to traffic including work on storm sewer construction. Method of Measurement: Lump Sum Basis of Payment: Full compensation for cost of design, furnishing, installing and removal. All material used for shoring, except as noted to remain, shall remain the property of the Contractor. Shoring is to be removed only after backfilling has been completed. In addition to the requirements noted above, Article 1107.07 of the Standard Specifications still applies. Refer to J Sheets for temporary shoring that is to remain and become property of Iowa DOT for bridge construction. -	
40	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA. Refer to Tab 104-9 in CS Sheets. -	
41	2502-8215112	SUBDRAIN, CORRUGATED METAL PIPE, 12 IN. DIA. Item is for temporary drain pipes constructed during Stage 2. Refer to U Sheets and Tab 104-3 in C Sheets. -	
42	2502-8215406	SUBDRAIN, CORRUGATED METAL PIPE, PERFORATED, 6 IN. DIA. Refer to Tab 104-9 on CS Sheets and U sheet for details.	
43	2502-8221306	SUBDRAIN OUTLET, DR-306 Refer to Tab 104-9 on CS Sheets. Refer to U sheet for details. -	
44	2503-0114218	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 18 IN.	
45	2503-0114224	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 24 IN. Refer to Tab 104-5B in M Sheets for locations and details. -	
46	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN. Refer to Tab 110-14 in the C Sheets and U Sheet for locations and details. -	
47	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL Refer to Tab 110-7A in C Sheets. Refer to Removal Plan Sheets in U Sheets. -	
48	2505-4008130	REMOVAL OF CABLE GUARDRAIL Refer to Tab 110-7B in C Sheets. Refer to Removal Plan Sheets in U Sheets. -	

ESTIMATE REFERENCE INFORMATION			100-4A 10-29-02
Item No.	Item Code	Description	
49	2505-4008300	STEEL BEAM GUARDRAIL	
50	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201	
51	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	
52	2505-4021020	STEEL BEAM GUARDRAIL END ANCHOR, W-BEAM	
53	2505-4021720	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-205	
		Refer to Tab 108-8A and Tab 108-8C in C Sheets.	
		-	
54	2505-6000111	HIGH TENSION CABLE GUARDRAIL	
55	2505-6000121	HIGH TENSION CABLE GUARDRAIL, END ANCHOR	
56	2505-6000131	HIGH TENSION CABLE GUARDRAIL, SPARE PARTS KIT	
		Refer to Tab 108-9A in C Sheets.	
		-	
57	2507-3250005	ENGINEERING FABRIC	
58	2507-6800061	REVTMENT, CLASS E	
		Refer to Tab 100-23 in C Sheets, M Sheets, V Sheets, and VW Sheets for locations.	
		-	
59	2510-6745850	REMOVAL OF PAVEMENT	
		Refer to Removal Plan Sheets in U Sheets and Tab 110-1 in C Sheets for locations.	
		-	
60	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES	
		Refer to Tab 110-15 in the C sheets.	
		-	
61	2511-0300000	REMOVAL OF RECREATIONAL TRAIL	
		Refer to Tab 110-5 in C sheets and U sheets. Includes an estimated 39.4 LF of full depth saw cut.	
		-	
62	2511-0302600	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN.	
63	2511-0310100	SPECIAL COMPACTION OF SUBGRADE FOR RECREATIONAL TRAIL	
		Refer to Typical Sections in B Sheets and Tab 113-1A in C Sheets.	
		Refer to E sheets for location and details.	
		-	
64	2519-1002072	FENCE, CHAIN LINK, 72 IN. HEIGHT	
65	2519-2000010	FENCE, CHANNEL CROSSING, TYPE A	
		Refer to Tab 100-7 in C sheets and U sheets.	
		-	
66	2519-4200110	REMOVAL OF FENCE, BARBED WIRE	
		Refer to Tab 100-8 in C Sheets and U Sheets.	
		-	
67	2520-3350015	FIELD OFFICE	
		Field Office item is intended for all Tied Projects.	
		-	
68	2526-8285000	CONSTRUCTION SURVEY	
		Includes construction survey needs for tied Signing project IM-080-4(086)138--13-77 and tied ITS Project IM-080-4(100)138--25-77.	
		-	
69	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED	
		Refer to Tab 108-29 in C Sheets.	
		-	
70	2527-9263180	PAVEMENT MARKINGS REMOVED	
		Refer to J Sheets and Tab 108-22 in C Sheets. High pressure water blasting shall be used to remove.	
		-	
71	2527-9263209	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	
		Refer to Tab 108-22 in C Sheets and J Sheets.	
		Total quantity includes tabulated quantities plus a 5% allowance.	
		-	
72	2527-9263212	PAINTED PAVEMENT MARKINGS, HIGH-BUILD WATERBORNE	
		Refer to Tab 108-22 in C Sheets and J Sheets. Refer to U Sheets for details and locations.	
		Total quantity includes tabulated quantities plus a 5% allowance.	
		-	
73	2527-9263216	PAINTED PAVEMENT MARKINGS, MULTI-COMPONENT LIQUID	
		Refer to Tab 108-22 in C Sheets and J Sheets.	
		Total quantity includes tabulated quantities plus a 5% allowance.	
		-	
74	2528-2518000	SAFETY CLOSURE	
		Refer to Tab 108-13A in C Sheets. Includes 4 locations that will remain at the end of the project and become property of the Iowa DOT.	
		-	
75	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE	
		Refer to J Sheets and Tab 108-33 in C Sheets. Includes an estimated 2,112.5 LF of anchored TBR.	
		Includes 4,475 LF of contractor placed TBR that will remain in place and become property of the Iowa DOT at completion of project.	
		Approximately 22,050 LF of existing TBR placed as part of the IM-NHS-080-4(80)138--03-77 project to become property of the contractor to be maintained during the IM-NHS-080-4(085)138--03-77 project.	
		Approximately 1,912.5 LF of this existing TBR will be moved and used as proposed TBR in Stage 2.	
		The remaining 20,137.5 LF of this existing TBR will become property of Iowa DOT at completion of project and is not included in Tab 108-33.	
		TBR quantities are measured using the linear foot length of TBR needed as shown in the J Sheets.	
		This quantity is measured and rounded up to the nearest 12.5' increment.	
		This linear length does not account for gaps between TBR segments.	
		-	
76	2528-8445110	TRAFFIC CONTROL	
		Refer to Traffic Control Plan in J Sheets.	
		Traffic Control for the Detour and Closure of 38th Street to remain in place and become property of the Iowa DOT.	
FILE NO.			
ENGLISH			
DESIGN TEAM			
Iowa DOT\HDR			

ESTIMATE REFERENCE INFORMATION			100-4A 10-29-02
Item No.	Item Code	Description	
77	2528-9290050	-	
		PORTABLE DYNAMIC MESSAGE SIGN (PDMS)	
		Refer to Traffic Control Plan, Staging Plans and Detours on J Sheets.	
		-	
78	2533-4980005	MOBILIZATION	
		-	
79	2548-0000250	DIAMOND GROUND SHOULDER RUMBLE STRIPS, PCC SURFACE	
		Refer to Tab 112-10 in C Sheets for details and locations.	
		Refer to DS-23060 for Diamond Grinding Rumble Strips.	
		-	
80	2551-0000110	TEMP CRASH CUSHION	
		Refer to Traffic Control Plans on J Sheets and Tab 108-30 on C Sheets.	
		Includes 4 contractor placed temporary crash cushions that are to be removed in later stages as noted in Tab 108-30.	
		Contractor to maintain 4 existing temporary crash cushions from the previous IM-NHS-080-4(80)138--03-77 Project. Contractor to remove 3 of these existing temporary crash cushions in later stages and are included in bid item. Contractor to maintain 1 of these existing temporary crash cushions and is to become property of Iowa DOT at completion of project and is not included in bid item.	
		-	
81	2551-0000130	TEMP CRASH CUSHION, SEVERE USE (SU)	
		Refer to Traffic Control Plans on J Sheets and Tab 108-30 on C Sheets.	
		Includes 2 Contractor placed temporary crash cushions, severe use (SU) that will remain in place and become property of the Iowa DOT at completion of Project.	
		Contractor to maintain 2 existing temporary crash cushions, severe use (SU) from the previous IM-NHS-080-4(80)138--03-77 Project. Contractor to remove 1 of these existing temporary crash cushions, severe use (SU) in a later stage and is included in bid item. Contractor to maintain 1 of these existing temporary crash cushions, severe use (SU) and is to become property of Iowa DOT at completion of Project and is not included in bid item.	
		-	
82	2599-9999005	SUBDRAIN OUTLET, DR-306, MODIFIED	
		Refer to Tab 104-9 in CS Sheets and Modified DR-306 Detail in U Sheets.	
		Method of Measurement: Use Standard Specification 2502.	
		Basis of Payment: Use Standard Specification 2502.	
		-	
83	2599-9999014	CONTRACTOR DESIGNED TEMPORARY WALL	
		Item is for the contractor designed temporary wall along I-80 east of 29th Street.	
		Refer to retaining walls in V Sheets for details and location.	
		Includes 2,408.4 SF for the Temporary Wall (RW_3010_TEMP_WALL).	
		-	
		Refer to Tab. 104-5C in C Sheets and V Sheets for subdrain location. Includes an estimated 300 LF of 4 inch plastic subdrain and 1 EACH subdrain outlets (DR-306).	
		Subdrain and subdrain outlet are incidental to retaining wall construction.	
		-	
		Method of Measurement:	
		The Engineer will measure the area of the wall in square feet, from measurements of the front face of the wall in place. The height will be measured from the top of the existing grade at the planned wall location to the top of the wall.	
		-	
		Basis of Payment:	
		For the number of square feet of wall constructed, the Contractor will be paid the contract unit price per square foot. This payment is full compensation for furnishing and erecting the wall including the design, foundation preparation, subdrains and other associate components according to the contract documents.	
		-	
84	2601-2634100	MULCHING	
		Refer to RC Sheets details.	
		Mulching per Article 2601.03, E, 2.	
		Anchor mulch into the soil using mulch anchoring equipment with a minimum of two passes.	
		Included for areas requiring reshaping and seedbed preparation. Mulch shall be Certified Noxious Weed Seed Free Mulch as certified by the Iowa Crop Improvement Association or adjacent states Crop Improvement Associations.	
		Mulch Rate: 1 1/2 tons of dry cereal straw or native grass straw per acre.	
		-	
85	2601-2636043	SEEDING AND FERTILIZING (RURAL)	
		Areas designated as rural shall be seeded and fertilized per Article 2601.03, C, 3.	
		Verify specific locations with Engineer prior to seeding.	
		-	
86	2601-2636060	SALT TOLERANT SEEDING	
		Refer to RC Sheets and EC-502 for details.	
		All areas eight feet adjacent to the outside shoulder shall be seeded and fertilized per Article 2601.03, C, 9.	
		All seed and fertilizer for shall be applied with ground driven equipment.	
		No broadcast seeding will be allowed. Full seedbed preparation will be required.	
		-	
87	2601-2638352	SLOPE PROTECTION, WOOD EXCELSIOR MAT	
		Refer to Standard Road Plan EC-103. Refer to Tab. 100-22 in RC Sheets for locations.	
		Full seedbed preparation shall be required prior to seeding and fertilizing under the wood excelsior mat.	
		Mat in areas designated by the engineer.	
		-	
88	2601-2640350	SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT	
		Refer to Standard Road Plan EC-101. Refer to Tab. 100-22 in RC Sheets for locations.	
		Full seedbed preparation shall be required prior to seeding and fertilizing under the wood excelsior mat.	
		Mat in areas designated by the engineer.	
		-	
POLK COUNTY			
PROJECT NUMBER			
IM-NHS-080-4(085)138--03-77			
SHEET NUMBER			
C.3			

ESTIMATE REFERENCE INFORMATION

[illegible]

102-5 04-18-17																					
EXISTING PAVEMENT																					
No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks
	County	Route	Dir. of Travel	Begin Ref. Loc. Sign	End Ref. Loc. Sign				Type	Depth	Type	Depth	Type	Depth	Type	Depth	Source	Type	Durability Class	Type	
	77	I-80	2	137.81	138.56	2022	M	MPIN-080-1(171)121--0N-77	PCC											PCC patching	
			2			2021	M	MPIN-080-1(714)121--0N-77												PCC patching	
			2			2021	S	MPIN-080-1(715)137--0N-77													
			2			2020	M	MPIN-080-1(173)121--0N-77												PCC patching, HMA partial-depth p	
			2			2019	M	MPIN-080-1(712)121--0N-77												PCC patching	
			2			2018	M	IMN-080-4(60)122--0E-77	PCC											PCC patching, HMA partial-depth, lo	
			2			2017	M	IMN-080-4(53)122--0E-77	PCC	12										PCC Patching	
			2			2009		IM-035-3(180)87--13-77	HMA	2	HMA	2	HMA	2	MIL	2	AMES MINE	C.LST.			
			2			1994		IM-80-5(145)137--13-77	PCC	12.5	GSB	6					AMES MINE	C.LST.	I		
	77	I-80	2	138.56	141.51	2022	M	MPIN-080-1(717)121--0N-77	PCC											PCC patching	
			2			2021	M	MPIN-080-1(714)121--0N-77												PCC patching	
			2			2021	S	MPIN-080-1(715)137--0N-77													
			2			2020	M	MPIN-080-1(713)121--0N-77												PCC patching, HMA partial-depth p	
			2			2019	M	MPIN-080-1(712)121--0N-77												PCC patching	
			2			2018	M	IMN-080-4(60)122--0E-77	PCC											PCC patching, HMA partial depth, lo	
			2			2017	M	IMN-080-4(53)122--0E-77	PCC	12										PCC PATCHING	
			2			2015	O	IM-080-5(275)142--13-77	PCC	12	GSB	6	SBF	12							
			2			2009		IMX-080-5(280)138--02-77	HMA	2	HMA	2					AMES MINE	C.LST.			
			2			1994		IM-80-5(145)137--13-77	PCC	12.5	GSB	6					AMES MINE	C.LST.	I		

[illegible]

REMOVAL OF EXISTING STRUCTURES		
Location	Description	Remarks
1117+75.84, RT (ML080)	RCB Headwall Removal	(1) Remove headwall and 4 LF of box culvert
1174+42.82, RT (ML080)	Culvert Removal	(1) Remove 63' LF of 60" RCP south of Four Mile Creek bridge
1181+77, RT (ML080)	Culvert Removal	(1) Remove 159 LF of 30" RCP under 38th St bridge berm
1206+00, RT (ML080)	Culvert Removal (Partial)	(1) Remove 18 LF of 24" RCP left side of Sage St
2147+88.90 (SR38TH)	Culvert Removal	(1) Remove 146 LF of 48" RCP under 38th St
1181+70, RT (ML080)	38th St Partial Bridge Removal	(2)
	(1) LS Bid Item: Removal of Existing Structures	
	(2) LS Bid Item: Removal of Existing Bridge	

281-1
10-18-16

SECTION 404 PERMIT AND CONDITIONS

Construct this project according to the requirements of U.S. Army Corps of Engineers Nationwide, Permit No. 14. A copy of this permit is available from the Iowa DOT website (<http://www.envpermits.iowadot.gov/>). The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

		262-5 10-18-05
UTILITIES		
(POINT 25 PROJECT)		
This is a POINT 25 project and is subject to the provisions of IAC 761-115.25.		

<div style="text-align: right;">282-3 04-17-18</div> <div style="text-align: center; font-weight: bold; font-size: 1.2em;"> TEMPORARY STREAM CROSSING, CAUSEWAY, OR EQUIPMENT PAD </div>	
<p>Standard Road Plan EW-401 is listed in Tabulation 105-4; however, it is included for information purposes only since it is an option. No quantities associated with constructing EW-401 are included in any bid items.</p>	

SANITARY OR STORM SEWER ABANDONMENT OR REMOVAL						
* Not a bid item						
Location/Description	Sanitary or Storm Sewer	Abandonment, Plug Only or Abandonment, Plug and Fill or Removal	Length of Pipe		Fill Material*	Remarks
			≤ 36 inch diameter	> 36 inch diameter	Flowable Mortar or CLSM	
			LF	LF	CY	
Sta 1134+30 (ML080)	Storm Sewer	Removal	80			
Sta 1166+99 (ML080)	Storm Sewer	Removal	18			Partial removal. See M and U Sheets for Details.
Sta 1172+66 (ML080)	Storm Sewer	Removal	40			
		Total:	138			

FILE NO.	ENGLISH	DESIGN TEAM	Iowa DOT\HDR	POLK COUNTY	PROJECT NUMBER	IM-NHS-080-4(085)138--03-77	SHEET NUMBER	C.6
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<div style="text-align: right;">110-1 04-16-13</div> <h2 style="text-align: center;">REMOVAL OF PAVEMENT</h2> <p style="text-align: center;">Refer to Tabulation 102-5</p>						
* Not a Bid Item						
Begin Station	End Station	Side	Pavement Type	Area	Saw Cut*	Remarks
				SY	LF	
Stage 1						
33544+06.62	33550+66.66	LT	HMA/PCC	413.5	687.8	
37008+95.71	37017+93.82	LT	HMA/PCC	547.5	919.0	
Stage 2						
33544+06.61	1131+14.32	RT	HMA/PCC	12795.4	4754.7	
1133+85.16	1173+06.37	RT	HMA/PCC	23066.9	3880.7	
1174+80.14	1208+50.00	RT	HMA/PCC	21051.8	3417.2	
2416+50.00	2150+58.21	BOTH	HMA/PCC	1039.1	25.1	38THST
2153+75.00	2158+00.00	BOTH	HMA/PCC	1262.4	27.7	38THST
1129+92.95	1131+12.32	RT	Conc Barrier			120' Conc Barrier Removal at 29th St - West Approach
1130+05.32	1130+65.70	LT	Conc Barrier			61' Conc Barrier Removal at 29th St - West Approach
1133+96.35	1134+99.76	RT	Conc Barrier			104' Conc Barrier Removal at 29th St - East Approach
1172+08.61	1173+06.37	RT	Conc Barrier			98' Conc Barrier Rmvl at Fourmile Creek - West Approach
1174+97.26	1175+72.74	RT	Conc Barrier			76' Conc Barrier Rmvl at Fourmile Creek - East Approach
1181+14.29	1181+95.46	RT	Conc Barrier			82' Conc Barrier Removal near 38th St South Abutment
Stage 3						
33544+06.47	37017+93.87	LT	HMA/PCC	5998.7		
Bid Item Totals						
Pavement Removal			66175.3			
P.C. Concrete Median Barrier Removal			541			

110-7A

04-17-12

REMOVAL OF STEEL BEAM GUARDRAIL

① Lane(s) to which the installation is adjacent.

② Includes length of End Terminals and End Anchors.

Location				Removal of Guardrail
No.	① Direction of Traffic	Station to Station	Side	
				② LF
1	EB	1110+91.00	1130+96.00	2005.0
2	EB	1170+54.00	1172+83.00	229.0
3	EB	1180+60.00	1181+16.00	56.0
4	SB	39652+92.00	39655+12.00	220.0
5	NB	39653+77.00	39655+33.00	156.0
			Total:	2666.0

<div style="text-align: right;"> 110-5 10-20-15 </div> <div style="text-align: center;"> SIDEWALK REMOVAL </div>				
* Not a bid item				
Begin Station	End Station	Area	Saw Cut*	Remarks
		SY	LF	
301+70.00	304+40.00	468.6	39.4	Exist. FMC Trail

100-08
04-17-18

REMOVAL OF FENCE						
Removal of Field Fence is incidental to Clearing and Grubbing.						
Location				Type	Length	Remarks
From		To				
Station	Offset	Station	Offset			
33543+74.51	15.64	33544+46.39	144.17	Barbed Wire	146.0	
33544+46.39	144.17	1119+73.70	198.53	Barbed Wire	3580.0	
1120+46.93	198.47	1130+70.25	199.52	Barbed Wire	1023.0	
1130+70.25	199.52	1131+01.45	65.61	Barbed Wire	138.0	
1133+90.65	64.36	1132+12.67	249.81	Barbed Wire	257.0	
1132+12.67	249.81	1157+27.88	217.76	Barbed Wire	2516.0	
1175+48.19	173.75	1180+71.83	172.25	Barbed Wire	524.0	
1182+53.56	154.7	1220+66.01	113.62	Barbed Wire	3816.0	
				Total:	12000.0	

[illegible]

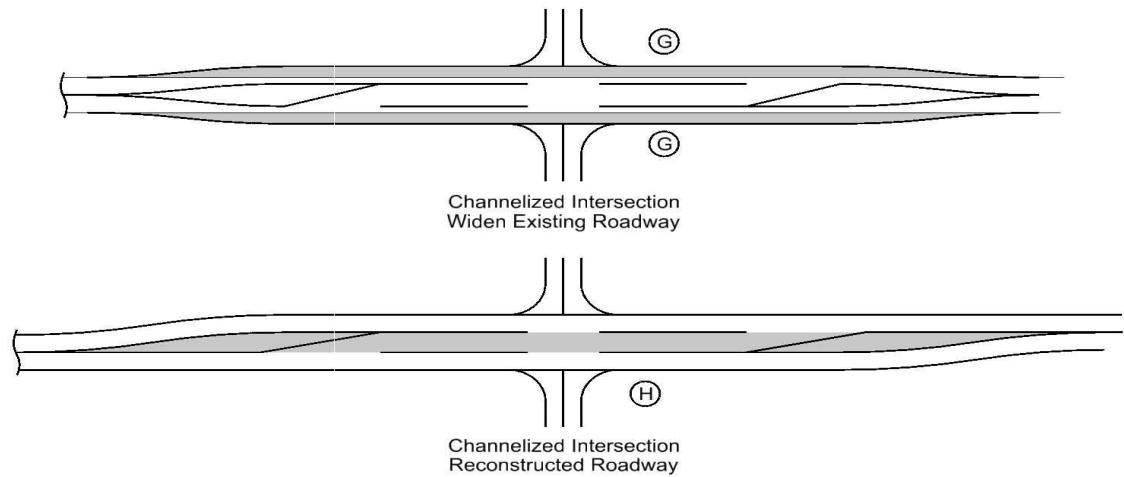
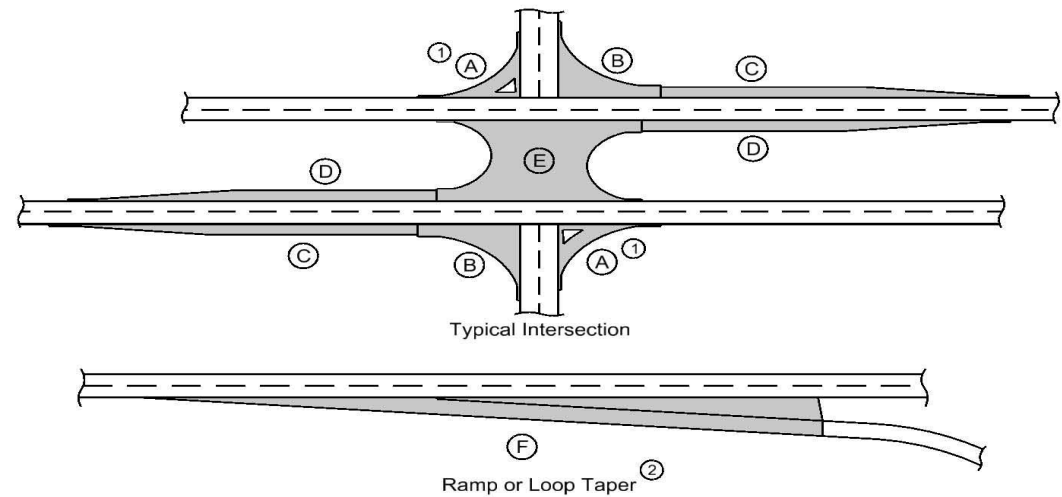
108-33 10-15-19								
TEMPORARY BARRIER RAIL								
Possible Standard: BA-401 Possible Detail: 560-7								
* Not a bid item. Anchorage requirements are based on TBR locations shown in the plans. TBR alignments that vary from what is shown in the plans may result in additional TBR sections requiring anchorage.								
No.	Station to Station		Length	(Select One)		Anchored* (Y/N)	Modular Glare Screen System (Y/N)	Remarks
			LF	Concrete BA-401	Steel 560-7			
	Stage 2							
1	2042+58.92	2044+08.92	150.0	X		No		ML235
2	33544+07.63	33551+41.06	737.5	X		Yes		235D_ULT
3	33551+41.06	33552+17.53	87.5	X		Yes		235D_ULT
4	37008+10.96	37011+44.27	337.5	X		Yes		235D_INT
5	37011+44.27	37015+34.39	400.0	X		Yes		235D_INT
6	37015+34.39	37017+93.81	262.5	X		Yes		235D_INT
7	37017+93.81	37018+31.47	37.5	X		No		235D_INT
8	37018+31.47	37023+65.70	537.5	X		No		235D_INT
9	37023+65.70	37024+09.66	50.0	X		No		235D_INT
10	36+42.02	39+86.92	350.0	X		No		ML080 EB
11	39+86.92	41+96.65	212.5	X		No		ML080 EB
12	1111+96.65	1116+33.89	437.5	X		No		ML080, (3)
13	1116+33.89	1118+49.48	225.0	X		No		ML080, (3)
14	1129+53.83	1130+40.72	87.5	X		Yes		ML080, (1)
15	1130+40.72	1130+90.72	50.0	X		Yes		ML080, (1)
16	1145+46.25	1146+96.25	150.0	X		No		ML080, (1) (4)
17	1146+96.25	1148+96.25	200.0	X		No		ML080, (1)
18	1148+96.25	1150+46.25	150.0	X		No		ML080, (1)
19	1179+50.00	1182+75.00	325.0	X		No		ML080, (2)
20	1182+75.00	1183+49.63	75.0	X		No		ML080, (2)
21	1202+75.25	1204+25.25	150.0	X		No		ML080, (5)
22	1204+25.25	1206+25.25	200.0	X		No		ML080, (6)
23	1206+25.25	1207+75.25	150.0	X		No		ML080, (6)
24	1207+99.91	1209+61.24	187.5	X		No		ML080, (7)
25	1207+75.25	1212+21.14	450.0	X		No		ML080, (1) (6)
26	1212+21.14	1215+00.00	287.5	X		No		ML080, (1)
	Stage 3							
27	2042+33.87	2044+07.16	175.0	X		No		ML235
28	33544+06.61	33552+17.51	812.5	X		No		ML235D_ULT
29	37008+10.93	37017+93.65	987.5	X		No		ML235D_INT
30	1114+84.38	1116+28.38	150.0	X		No		ML080, (1)
31	1116+28.38	1117+43.61	125.0	X		No		ML080, (1)
32	1127+78.36	1129+25.00	162.5	X		No		ML080, (1)
33	1129+25.00	1138+00.00	875.0	X		No		ML080, (1)
34	1171+25.69	1172+25.00	100.0	X		No		ML080, (1)
35	1172+25.00	1176+00.00	375.0	X		No		ML080, (1)
36	1203+50.09	1204+77.75	137.5	X		No		ML080, (1)
37	1204+77.75	1207+53.72	275.0	X		No		ML080, (1)
38	1207+53.72	1207+75.25	25.0	X		No		ML080, (1)
39	1207+84.70	1210+12.64	237.5	X		No		ML080, (1)
40	1210+12.64	1215+00.00	487.5	X		No		ML080, (1)
	Stage 4							
41	1120+55.72	1121+65.85	112.5	X		Yes		ML080, (1)
42	1121+65.85	1122+00.00	37.5	X		Yes		ML080, (1)
	Total:		11362.5					
NOTES:								
(1)	TBR to remain in place and become property of Iowa DOT.							
(2)	Place TBR only prior to 38th North Berm grading construction. Remove TBR once grading operation is complete.							
(3)	STA 1115+50 to STA 1122+00: Approximately 650 LF of existing TBR from previous (80) project to be moved and used as proposed (85) TBR.							
(4)	STA 1145+46 to STA 1145+70: Approximately 25 LF of existing TBR from previous (80) project to be moved and used as proposed (85) TBR.							
(5)	STA 1202+75 to STA 1204+28: Approximately 150 LF of existing TBR from previous (80) project to be moved and used as proposed (85) TBR.							
(6)	STA 1203+50 to STA 1207+63: Approximately 412.5 LF of existing TBR from previous (80) project to be moved and used as proposed (85) TBR.							
(7)	STA 1208+00 to STA 1214+65: Approximately 675 LF of existing TBR from previous (80) project to be moved and used as proposed (85) TBR.							

108-13A 08-01-08			
SAFETY CLOSURES			
Refer to Section 2518 of the Standard Specifications			
Station	Closure Type		Remarks
	Road Qty.	Hazard Qty.	
2146+33.01	1		(SR38TH), (1)
2150+33.78	1		(SR38TH), (1)
2154+00.00	1		(SR38TH), (1)
2158+46.40	1		(SR38TH), (1)
1209+00.00	1		(ML080), (2)
301+45.35		1	Stage 2 FMC_Trail
307+12.10		1	Stage 2 FMC_Trail
19+58.22		1	Stage 2 C. Valley Trail
13+91.03		1	Stage 2 C. Valley Trail
Total:	9		
Note:	(1) Existing Safety Closure. Contractor to Maintain. To become property of Iowa DOT after project completion.		
	(2) Maintain Existing Safety Closure. Remove in Stage 2.		

108-30 04-16-13																				
CRASH CUSHIONS																				
* Bid Item																				
① Lane(s) to which the installation is adjacent.																				
② Complete this section when using the Temporary Crash Cushion bid item and Earthwork is needed for Sand Barrel placement. Refer to BA-500																				
No.	① Direction of Traffic	Location Station	Side	Obstacle Width	Crash Cushion (Select One)*					Sand Barrel Details ②					Earthwork*		Spare Parts Kit (Select One)*		Obstacle Description	Remarks
					Temporary	Temporary Redirective	Temporary Severe Use	Permanent	Permanent Severe Use	V	W	X	Y	Z	Excavation Class 10	Embankment in Place	Permanent	Permanent Severe Use		
										Length	Length	Length	Length	Length						
				FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT		
		Stage 1																		
1	WB	1105+06.50	M	1.88	1														Existing TBR	(ML080), (8)
2	EB	1115+48.75	M	1.88	1														Existing TBR	(ML080), (3)
3	EB	1121+64.00	M	1.88	1														Existing Median Barrier	(ML080), (4)
4	WB	1145+70.00	M	1.88			1												Existing TBR	(ML080), (5)
5	WB	1207+62.85	M	1.88	1														Existing TBR	(ML080), (6)
6	WB	1213+00.00	O	1.88			1												Existing TBR	(ML080), (7)
		Stage 2																		
7	NB	2042+58.92	O	1.88	1					8.00	24.25	13.25	11.25	41.84	(2)				Begin of TBR on ex. I-235 NB	(ML235) Remove in Stage 3
8	WB	1183+49.63	O	1.88	1					3.50	24.25	8.80	6.80	49.42					End of TBR on I-80 WB at 38th	(ML080) Remove in Stage 2
9	WB	1203+50.09	M	1.88	1					9.00	24.25	14.25	12.25	45.57					End of TBR on I-80 WB	(ML080) Remove in Stage 3
		Stage 3																		
10	EB	1127+78.36	M	1.88			1												Begin of TBR on ex. I-80 EB	(ML080), (1)
11	EB	1171+25.69	M	1.88			1												Begin of TBR on I-80 EB	(ML080), (1)
12	NB	2402+33.87	O	1.88	1														Begin of TBR on ex. I-235 NB	(ML235) Remove in Stage 4
				TOTAL:	8	0	4	0	0											
		BID ITEM TOTAL:			7	0	3	0	0											
(1) Crash Cushion to remain in place and become property of the DOT.										(5) Maintain Existing Severe-Use Stage 1. Remove in Stage 2.										
(2) Included in T Sheets.										(6) Maintain Existing Temporary Crash Cushion Stages 1. Remove in Stage 2.										
(3) Maintain Existing Temporary Crash Cushion Stages 1. Remove in Stage 2.										(7) Maintain Existing Severe-Use Stage 1-4. To become property of Iowa DOT. Not included as a bid item.										
(4) Maintain Existing Temporary Crash Cushion Stages 1. Remove in Stage 4.										(8) Maintain Existing Temporary Crash Cushion Stages 1-4. To become property of Iowa DOT. Not included as a bid item.										

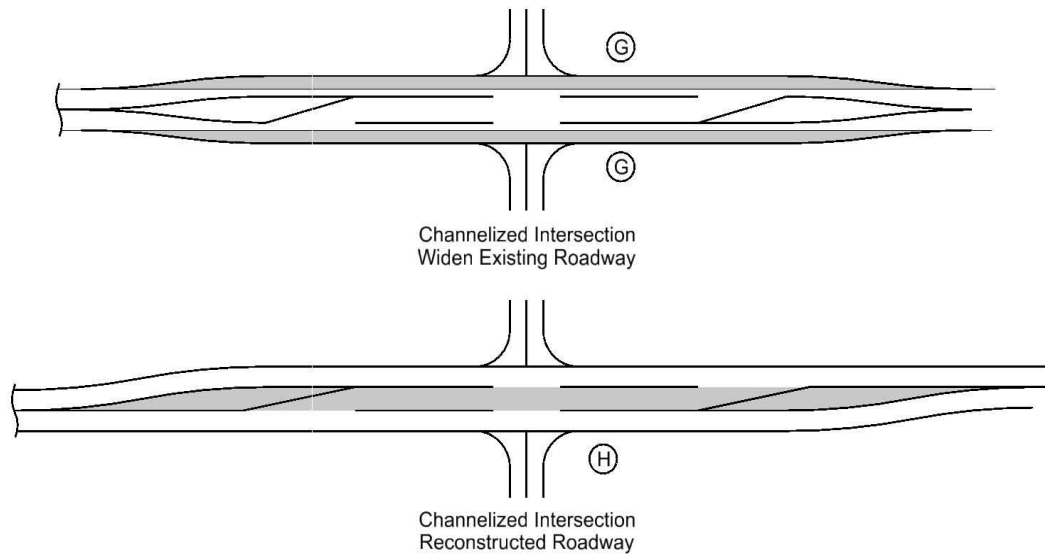
FENCING																				100-7 10-16-12
* Bid Item																				
Refer to MI-101, MI-102, MI-103, MI-104, 510-3, and 510-5																				
Location				Side	Chain Link				Deer				Field				Channel Crossing		Remarks	
From		To			Fence		Gate		Fence Length*	Brace Panels*	Gate		Fence Length*	Brace Panels*	Gate		Length*	Type		
Station	Offset	Station	Offset		Length*	Type	No.*	Type			No.*	Type			No.*	Type				Length*
					LF		EACH		LF	EACH	EACH		LF	EACH	EACH		LF			
33543+84.35	13.7	33543+69.54	150.3	RT	137.4	72 IN.														
33543+69.54	150.3	33543+83.19	196.5	RT	48.2	72 IN.														
33543+83.19	196.5	33548+12.21	175.4	RT	378.2	72 IN.														
33548+12.21	175.4	37009+89.15	132.5	RT	539.7	72 IN.														
37009+89.15	132.5	37013+43.35	195.7	RT	344.4	72 IN.														
37013+43.35	195.7	37015+98.00	554.2	RT	423.7	72 IN.														
37015+98.00	554.2	1109+94.26	667.2	RT	801.1	72 IN.														
1109+94.26	667.2	1117+48.65	451.6	RT	784.3	72 IN.														
1117+48.65	451.6	1121+04.70	348.3	RT	370.7	72 IN.														
1121+41.09	266.0	1122+50.00	266.0	RT	108.9	72 IN.														
1122+50.00	266.0	1124+50.00	209.0	RT	208.0	72 IN.														
1124+50.00	209.0	1130+69.76	209.0	RT	619.8	72 IN.														
1130+69.76	209.0	1130+69.76	79.6	RT	129.4	72 IN.														
1133+03.81	79.6	1132+10.66	249.0	RT	193.3	72 IN.														
1132+10.66	249.0	1144+78.41	249.0	RT	1267.8	72 IN.														
1144+78.41	249.0	1158+23.92	216.0	RT	1345.9	72 IN.														
1158+23.92	216.0	1169+98.91	179.0	RT	1175.6	72 IN.														
1169+98.91	179.0	1171+67.24	219.0	RT	173.0	72 IN.														
1171+67.24	219.0	1172+81.20	79.6	RT	180.1	72 IN.														
1174+77.71	79.6	1175+09.00	127.4	RT	57.1	72 IN.														
1175+09.00	127.4	1175+25.00	152.5	RT												30.0	A			
1175+25.00	152.5	1175+39.57	174.5	RT	25.8	72 IN.														
1175+39.57	174.0	1180+54.17	174.0	RT	514.6	72 IN.														
1183+35.76	149.0	1188+67.28	149.0	RT	531.5	72 IN.														
1188+67.28	149.0	1189+12.57	111.0	RT	59.1	72 IN.														
1189+12.57	111.0	1220+66.01	111.0	RT	3153.4	72 IN.														
				Total	13571.0										Total:	30.0				

PCC PAVEMENT



- ① Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.
- ② Refer to PV-410, PV-411, PV-412, and PV-414.
- ③ Quantity includes Pavement Header.

[illegible]



- Calculations assume a surface course unit weight (lbs/cf) of 145, an intermediate course unit weight (lbs/cf) of 145, a base course unit weight (lbs/cf) of 145, and a special backfill unit weight (lbs/cf) of 140.

SIDEWALKS

Back of Curb

Face of Sidewalk

A

B

S

113-1A
Modified

SHOULDERS																										112-9 Modified
<div>① Lane(s) to which the shoulder is adjacent. ② See Typ. 7156, 7157, or 7158. ③ Bid Item. ④ Applies only for Paved Shoulders constructed on project with existing granular shoulders. ⑤ Bid Item. Typ. 7156, 7157, or 7158. ⑥ Does not include shrink.</div>																										
Calculations assume a HMA unit weight (lbs/cf) of 0, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/cf) of 140.																										
Location					Quantities																			Remarks		
Road Identification	① Direction Of Traffic	Station to Station		Side	<div>P</div>	<div>P_{SG}</div>	<div>G</div>	<div>L</div>	<div>Class 13</div> <div>④</div> <div>Excavation</div>	Hot Mix Asphalt		Binder	Paved Shoulder	Detour Pavement	Reinforced Paved Shoulder	Special Backfill				Modified Subbase	Granular Subbase		Earth Shoulder Construction Alternates			
					Width	Width	Width	Length							HMA Alternate		PCC Alternate									
					FT	FT ②	FT	FT	CY ③	TON	TON/STA	TONS	SY ③	SY ③	SY ③	CY ③	TON	CY ③	TON	CY ③	TON	STA ③	HMA CY ⑥		PCC CY ⑥	
ML080EB	EB	36+42.02	42+00.00	RT	12.0			558.0					731.3							316.1			5.6	372.0		
ML080	EB	1112+00.00	1118+50.00	RT	12.0			650.0					866.7							373.2			6.5	385.2		
ML080 INT 1	EB	2118+50.00	2121+41.09	RT	12.0			291.1					388.1					172.504	326.032			493.219	3.0	248.0		
ML080	EB	1121+41.09	1130+07.95	RT	12.0			866.9					1155.9					513.719	970.928			1468.947	8.7	674.3		
ML080	EB	1128+21.23	1128+49.01	RT	3.8			27.8					11.7					8.031	15.179			21.739	0.3	25.7		
ML080	EB	1128+49.01	1129+02.13	RT	.8 to 1.6			53.1					15.9					13.177	24.904			35.075	0.6	41.3		
ML080	EB	1129+02.13	1130+07.95	RT	1.6			105.8					18.8					21.944	41.474			57.006	1.1	82.3		
ML080	EB	1133+80.00	1172+18.61	RT	12.0			3838.6					5118.1					2274.726	4299.232			6504.261	38.4	3127.7		
ML080	EB	1170+25.59	1170+53.36	RT	3.8			27.8					11.7					8.031	15.179			21.739	0.3	21.6		
ML080	EB	1170+53.36	1171+06.49	RT	.8 to 1.6			53.1					15.9					13.177	24.904			35.075	0.6	43.3		
ML080	EB	1171+06.49	1172+18.61	RT	1.6			112.1					19.9					23.250	43.943			60.381	1.2	91.3		
ML080	EB	1175+62.74	1202+31.00	RT	12.0			2668.3					3557.7					1581.215	2988.496			4521.253	26.7	1680.0		
ML080	EB	1186+19.56	1186+47.66	RT	7.0			28.1					21.9					11.448	21.637			32.047	0.3	23.9		
ML080	EB	1186+47.66	1186+85.16	RT	7 to 5.5			37.5					26.0					14.236	26.906			39.542	0.4	33.3		
ML080	EB	1186+85.16	1187+51.14	RT	5.5			66.0					40.3					23.222	43.890			64.133	0.7	58.7		
ML080	EB	1187+51.14	1187+88.69	RT	5.5 to 3			37.6					17.8					11.489	21.714			31.378	0.4	33.4		
ML080	EB	1187+88.69	1188+56.06	RT	3.0			67.4					22.5					17.474	33.026			46.839	0.7	69.9		
ML080 INT 2	EB	3202+31.00	3208+50.00	RT	12.0			619.0					825.3					366.815	693.280			1048.828	6.2	229.3		
ML080 INT 2	EB	3202+31.00	3202+73.00	LT	12.0			42.0					56.0					18.667	35.280			56.000				
ML080 INT 2	EB	3202+73.00	3204+11.90	LT	10.0			138.9					154.3					51.444	97.230			154.300				
ML080 INT 2	EB	3204+11.90	3207+85.90	LT	12.0			374.0					498.7					166.222	314.160			498.700				
RAMP D ULT	EB	33544+06.61	33552+17.53	RT	12.0			810.9					1077.0							464.2			8.2	480.5		
RAMP D ULT	EB	33551+55.35	33552+17.53	LT	6.0			62.2					42.2							22.2			0.7	6.9		
RAMP D INT	EB	37008+10.93	37024+09.66	RT	12.0			1598.7					2127.0							916.3			16.0	1006.6		
RAMP D INT	EB	37008+10.93	37017+93.91	LT	6.0			983.0					659.1							347.2			9.9	291.3		
RAMP D/H GORE	NB/EB	33544+06.61	33545+64.80	LT	6.0			158.2					107.4							56.4			1.6	29.3		
RAMP D/H GORE	NB/EB	33545+64.80	33545+93.85	LT	6 to 4			29.1					16.3							9.3			0.3	6.5		
RAMP D/H GORE	NB/EB	33545+93.85	33551+54.34	LT	4.0			560.5					250.8							156.3			5.7	207.6		
RAMP H	NB	39651+00.00	39654+63.84	LT	4.0			363.8					161.5							101.0			3.7	161.7		
RAMP H	NB	39651+00.00	39655+03.50	RT	6.0			403.5					270.8							142.6			4.1	134.5		
DET03 (ML080)	EB	1121+41.09	1128+25.00	LT	6.0			683.9						455.9			152.000	287.280								
DET03 (ML080)	EB	1128+25.00	1130+07.95	LT	13.0			182.9						264.2			108.400	204.876								
DET03 (ML080)	EB	1133+80.00	1138+00.00	LT	12.0			420.0						560.0			217.800	411.642								
DET03 (ML080)	EB	1138+00.00	1163+00.00	LT	6.0			2500.0						1666.7			555.600	1050.084								
DET03 (ML080)	EB	1163+00.00	1172+18.61	LT	12.0			918.6						1224.8			612.400	1157.436								
DET03 (ML080)	EB	1175+62.74	1184+00.00	LT	12.0			837.3						1116.4			558.200	1054.998								
DET03 (ML080)	EB	1184+00.00	1202+31.00	LT	8.0			1831.0						1627.6			678.200	1281.798								
DET03 (ML080)	EB	1207+85.90	1208+50.00	LT	8.0			64.1						57.0			23.800	44.982								
DET01 (RAMP D ULT	NB/EB	400+00.00	406+81.02	LT	VAR.			681.0						1266.5			240.900	455.301					4.6	25.2		
DET02 (RAMP D INT	NB/EB	500+00.00	509+06.53	LT	VAR.			906.5						1132.8			218.700	413.343					9.0	100.7		
												Total:	18286.6	9371.8			3366.000		5310.790		2904.8	15190.500		165.5		

DIAMOND GROUND RUMBLE STRIPS													112-10 Modified
* Calculated at 18" width for Shoulder.													
Refer to DS-23060													
Location													
Road Identification	Station to Station		Shoulder Pavement Type	Rumble Strip Type (Centerline, Rt or Lt Shoulder)	Ⓛ IN	Installation Length		Fog Seal* (Milled Rumble Strip)	Effective Shoulder Width			Remarks	
						PCC	HMA		PCC Paved	HMA Paved	Granular\ Earth		
						STA	STA		FT	FT	FT		
ML080 EB	36+42.02	42+00.00	PCC	Right Shoulder	12"	5.58			12.0			STAGE 4	
ML080	1112+00.00	1118+50.00	PCC	Right Shoulder	12"	6.50			12.0				
ML080 INT 1	2118+50.00	2121+41.09	PCC	Right Shoulder	12"	2.91			12.0				
ML080	1121+41.09	1130+12.00	PCC	Right Shoulder	12"	8.71			12.0				
ML080	1133+60.00	1172+24.00	PCC	Right Shoulder	12"	38.64			12.0				
ML080	1175+35.00	1202+31.00	PCC	Right Shoulder	12"	26.96			12.0				
ML080 INT 2	3202+31.00	3208+50.00	PCC	Right Shoulder	12"	6.19			12.0				
RAMP D ULT	33544+26.00	33551+54.00	PCC	Left Shoulder	12"	7.28			6.0				
RAMP D ULT	33551+55.36	33552+17.53	PCC	Left Shoulder	12"	0.62			6.0				
RAMP D INT	37008+10.93	37024+09.66	PCC	Right Shoulder	12"	15.99			6.0			STAGE 4	
RAMP D ULT	33544+35.00	33552+17.53	PCC	Right Shoulder	12"	7.83			12.0			STAGE 4	
RAMP D INT	37008+10.93	37017+93.81	PCC	Left Shoulder	12"	9.83			12.0				
RAMP H	39651+00.00	39654+64.00	PCC	Left Shoulder	12"	3.64			4.0				
RAMP H	39651+00.00	39654+84.00	PCC	Right Shoulder	12"	3.84			6.0				
				Totals	PCC								
				PCC Shoulders	12"	144.52							

108-8A
10-16-18

STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION

Possible Standards: BA-200, BA-201, BA-202, BA-205, BA-206, BA-210, BA-211, BA-221, BA-225, BA-250, BA-260, LS-625, LS-626, LS-630, LS-635, SI-172, SI-173 and SI-211.

① Lane(s) to which the obstacle is adjacent.

② Not a bid item. Incidental to guardrail installation.

Location			Layout Lengths				Long-Span System		Delineators and Object Markers ②				Bid Items										Remarks									
No.	① Direction of Traffic	② Side O = Outside M = Median	Station	Offset	BA-250, BA-260, LS-630, or LS-635				SI-211	Delineator SI-172	Object Marker SI-173			Bolted End Anchor	Post Adapter	Steel Beam Guardrail	BA-250 or LS-630				BA-260 or LS-635											
					VT1	VF					VT2	ET	Type 1				Type 2	Type 3		Barrier Transition Section	End Terminal				Barrier Transition Section	End Terminal Tangent						
																		White	OM2-2		OM3-L	OM3-R		BA-201			BA-205	BA-206	LS-625	LS-626	BA-221	BA-225
				FT	LF	LF	LF	LF	BA-211		STATION	TYPE	TYPE	White	EACH	EACH	EACH	EACH	BA-202	EACH	BA-210	EACH	BA-200	LF	EACH	EACH	EACH	EACH	EACH	EACH		
1	EB	O	1130+66.00	12.6	178.125			47.7				3				1	A	1		137.5	1	1										
2	EB	O	1172+70.50	12.6	178.125			47.7				3				1	A	1		137.5	1	1										
3	SB	LT	39655+13.00	5.4	165.625			47.7				3			1		A	1		125.0	1	1										
4	NB	RT	39655+32.00	6.8	115.625			47.7				3				1	A	1		75.0	1	1										
																		Total:	4		475.0	4	4									

108-8C

04-19-16

STEEL BEAM GUARDRAIL FOR SIDE OBSTACLE (ONE-WAY PROTECTION)

Possible Standards: BA-200, BA-203, BA-205, BA-206, BA-210, BA-211, BA-252, LS-625, LS 626, LS-632, SI-172, SI-173, and SI-211.

① Lane(s) to which the obstacle is adjacent.

No.	Direction of Traffic	Location		Station	O _L	D _O	Layout Lengths BA-252 or LS-632						Long-Span System		Delineators and Object Markers				Bid Items						Remarks	
		① Side					Approach Side (A)				Trailing Side (T)				SI-211	Delineator SI-172	Object Marker SI-173			Steel Beam Guardrail	W-Beam End Anchor	End Terminal		Post Adapter		
							ET	VT2 _A	VF _A	VT1 _A	VT1 _T	EA	Type 1	Type 2			Type 3		Standard			Count	BA-210			
		FT	FT				LF	LF	LF	LF	LF	LF	STATION	TYPE	TYPE	White EACH	OM2-2 EACH	OM3-L EACH	OM3-R EACH	BA-200 LF	BA-203 EACH		EACH	EACH		
1	EB	O	1188+00.00	3.00	13.80	47.7	62.50	37.50	12.50	43.75	9.375			5			1	1	150.0	1	BA-205	1				

108-9A 04-20-10										
① Lane(s) to which the installation is adjacent.										
HIGH TENSION CABLE GUARDRAIL										
Refer to BA-351.										
Location				Dimensions			Bid Items			Remarks
No.	Direction of Traffic	Station	Side	Offset D ₀	Approach C _A	Obstacle C ₀	Trailing C _T	Protection Length (C _A +C ₀ +C _T)	End Anchor	
				FT	FT	FT	FT	FT	No.	
1	EB	1200+57.50	O	14.0	230.0	30.0		260.0	2	
2	NB	33547+37.73	RT	15.0	150.0	20.0		170.0	2	
3	NB	33547+83.21	LT	12.0	110.0	20.0		130.0	2	
							Total:	560.0	6	

104-5C

10-17-17

LIST OF SUBDRAIN WORK

Possible Standards: DR-121, DR-201, DR-203, DR-301, DR-302, DR-303, DR-305 and DR-306. Possible Detail: 500-10.

* Not a bid item

Location			Pipe			Aprons		Outlets				Connected Pipe Joints*	Trench Drain	Granular Material	Porous Backfill*	Class "A" Crushed Stone*	Remarks			
No.	Station to Station		Type of Installation	Concrete, C.M.P., or Plastic	Dia.	Length	DR-201	DR-203	500-10	DR-305								DR-306		
										Type	No.									
			DR-301, DR-302, DR-303		IN	LF	No.	No.	No.	Type <td>No.</td> <td>No.</td> <td>DR-121</td> <td></td> <td>Blanket</td> <td></td> <td>CY</td> <td></td> <td>CY</td> <td></td>	No.	No.	DR-121		Blanket		CY		CY	
1	301132+70.00	301134+05.00	Temporary Wall	Plastic	4.0	300				A	1									(RW_3010_TEMP_WALL) - Refer to V Sheets
			Note:	Subdrains and Outlets are incidental to the retaining wall construction.																

* Not a bid item

(1) Diameter or equivalent diameter

② UNCL = Unclassified Pipe

CMP = Corrugated Metal Pipe

RCP = Reinforced Concrete Pipe

LCP = Arch or Elliptical Low Clearance Pipe

SARC = Steel Arch Pipe

ROCK EROSION CONTROL

Refer to EC-301 and Detail 570-8

PAVEMENT MARKING SYMBOLS AND LEGENDS

Refer to PM-111

FILE NO.	ENGLISH	DESIGN TEAM	Iowa DOT\HDR	POLK COUNTY	PROJECT NUMBER	IM-NHS-080-4(085)138--03-77	SHEET NUMBER	C.15
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PAVEMENT MARKING LINE TYPES

See PM-110

*BCY4/BCY6 - Place on the same side of the roadway to match existing markings near the project.
**NPY4/NPY6 - For estimating purposes only. No Passing Zone Lines will be located in the field.

***MNY6 - Factor of 1.00 as value includes number of 6-inch passes to cover median nose area.

BLW6: Broken Lane Line (White) @ 0.25 RLW6: Ramp Edge Line Right (White) @ 1.00 RLY6: Ramp Edge Line Left (Yellow) @ 1.00 ELW6: Edge Line Right (White) @ 1.00 ELY6: Edge Line Left (Yellow) @ 1.00
CHW10: Channelizing Line (White) @ 1.67 CHY10: Channelizing Line (Yellow) @ 1.67 LDW10: Lane Drop (White) @ 0.42 DLW6: Dotted Line (White) @ 0.33

Location				Length by Line Type (Unfactored)																			Remarks
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			BLW6	RLW6	RLY6	ELW6	ELY6	CHW10	CHY10	LDW10	DLW6							
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
Stage 2																							
ML235	2032+58.63	2036+41.52		Waterborne/Solvent Paint			X				3.83												
	2036+16.46	2044+08.97		Waterborne/Solvent Paint		X							7.93										
	2036+41.52	2043+49.79		Waterborne/Solvent Paint			X						7.08										
	2038+94.64	2044+09.82		Waterborne/Solvent Paint	X								5.15										
	2043+49.79	2044+08.56		Waterborne/Solvent Paint			X			0.65													
235D ULT	33544+06.50	33550+50.50		Waterborne/Solvent Paint	X				6.44		6.44												
	33544+06.52	33550+50.50		Waterborne/Solvent Paint		X																	
	33544+06.90	33552+17.53		Waterborne/Solvent Paint			X			8.11													
	33551+40.82	33552+17.53		Waterborne/Solvent Paint		X										0.77							
235D INT	37008+11.03	37008+95.84		Waterborne/Solvent Paint		X										0.85							
	37008+11.02	37020+69.40		Waterborne/Solvent Paint			X			12.58													
	37008+95.84	37017+93.83		Waterborne/Solvent Paint	X						8.98												
	37017+93.83	37023+65.69		Waterborne/Solvent Paint	X								5.72										
	37020+69.40	37023+65.69		Waterborne/Solvent Paint			X						2.96										
ML080 EB	29+93.89	32+94.10		Waterborne/Solvent Paint	X							3.00											
	29+93.93	32+94.14		Waterborne/Solvent Paint		X			3.00														
	29+93.96	39+87.18		Waterborne/Solvent Paint		X							9.93										
	32+94.10	39+87.55		Waterborne/Solvent Paint	X									6.93									
	32+94.14	39+87.36		Waterborne/Solvent Paint		X							6.93										
	35+96.82	39+87.18		Waterborne/Solvent Paint		X							3.90										
	35+96.87	39+86.99		Waterborne/Solvent Paint			X						3.90										
ML080 ML	1109+87.41	1111+76.62		Waterborne/Solvent Paint	X									1.89									
	1109+87.52	1111+76.73		Waterborne/Solvent Paint		X							1.89										
	1109+87.63	1111+76.84		Waterborne/Solvent Paint			X						1.89										
	1109+85.77	1111+76.96		Waterborne/Solvent Paint			X						1.91										
	1111+76.62	1120+77.27		Waterborne/Solvent Paint	X									9.01									
	1111+76.73	1120+77.27		Waterborne/Solvent Paint		X							9.01										
	1111+76.84	1120+77.27		Waterborne/Solvent Paint		X							9.00										
	1111+76.96	1120+77.27		Waterborne/Solvent Paint			X						9.00										
	1120+77.27	1123+77.27		Waterborne/Solvent Paint	X									3.00									
	1120+77.27	1123+77.27		Waterborne/Solvent Paint		X							3.00										
	1120+77.27	1123+77.27		Waterborne/Solvent Paint			X						3.00										
	1120+77.27	1123+77.27		Waterborne/Solvent Paint			X						3.00										
	1123+77.27	1186+79.93		Waterborne/Solvent Paint	X						63.03												
	1123+77.27	1126+83.03		Waterborne/Solvent Paint		X			3.06														
	1123+77.27	1126+83.03		Waterborne/Solvent Paint		X			3.06														
	1123+77.27	1186+79.93		Waterborne/Solvent Paint			X				63.03												
	1186+79.93	1191+49.93		Waterborne/Solvent Paint	X									4.70									
	1186+79.93	1191+49.93		Waterborne/Solvent Paint		X							4.70										
	1186+79.93	1191+49.93		Waterborne/Solvent Paint			X						4.70										
	1191+49.93	1203+40.55		Waterborne/Solvent Paint	X							11.91											
	1191+49.93	1203+40.55		Waterborne/Solvent Paint		X			11.91														
	1191+49.93	1203+40.55		Waterborne/Solvent Paint			X				11.91												
	1203+40.55	1207+53.72		Waterborne/Solvent Paint	X									4.13									
	1203+40.55	1207+53.72		Waterborne/Solvent Paint		X							4.13										
	1203+40.55	1207+53.72		Waterborne/Solvent Paint			X						4.13										
	1203+40.55	1207+53.72		Waterborne/Solvent Paint			X							9.30									
	1207+53.72	1216+83.58		Waterborne/Solvent Paint	X								9.38										
	1207+53.72	1216+91.48		Waterborne/Solvent Paint		X							9.46										
	1207+53.72	1216+99.29		Waterborne/Solvent Paint			X						9.53										
	1207+53.72	1217+07.00		Waterborne/Solvent Paint			X							3.23									
	1216+83.58	1220+07.00		Waterborne/Solvent Paint	X																		
	1216+91.48	1220+07.00		Waterborne/Solvent Paint		X							3.16										
	1216+99.29	1220+07.00		Waterborne/Solvent Paint			X						3.08										
	1217+07.00	1218+27.00		Waterborne/Solvent Paint			X						1.20										
	1217+07.00	1224+06.52		Waterborne/Solvent Paint		X										7.00							
Stage 3																							
ML235 EB	2032+58.69	2036+18.43		Waterborne/Solvent Paint		X							3.60										
	2032+58.69	2044+06.84		Waterborne/Solvent Paint		X							11.48										
	2038+75.50	2044+05.95		Waterborne/Solvent Paint			X				5.30												
235D ULT	33544+06.61	33552+17.53		Waterborne/Solvent Paint	X					8.11													
	33544+06.61	33552+17.53		Waterborne/Solvent Paint			X		8.11														
235D INT	37008+10.93	37017+93.81		Waterborne/Solvent Paint	X					9.83													
	37008+10.93	37024+09.65		Waterborne/Solvent Paint			X		15.99														
	37017+93.81	37024+09.65		Waterborne/Solvent Paint	X								6.16										
ML080 EB	29+93.89	39+75.71		Waterborne/Solvent Paint	X					9.82													
	29+93.93	39+75.35		Waterborne/Solvent Paint		X			9.81														
	29+93.96	30+09.27		Waterborne/Solvent Paint			X					0.15											
	30+09.27	40+50.82		Waterborne/Solvent Paint			X						10.42										
	36+42.02	40+50.82		Waterborne/Solvent Paint	X								4.09										
	36+42.02	40+50.66		Waterborne/Solvent Paint			X		4.09														
ML080	1109+76.04	1205+50.00		Waterborne/Solvent Paint	X							95.74											

***MNY6 - Factor of 1.00 as value includes number of 6-inch passes to cover median nose area.

BLW6: Broken Lane Line (White) @ 0.25	RLW6: Ramp Edge Line Right (White) @ 1.0
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BLW6: Broken Lane Line (White) @ 0.25

RLW6: Ramp Edge Line Right (White) @ 1.0

RLY6: Ramp Edge Line Left (Yellow) @ 1.00

ELW6: Edge Line Right (White) @ 1.00

ELY6: Edge Line Left (Yellow) @ 1.00

CHW10: Channelizing Line (White) @ 1.67

CHY10: Channelizing Line (Yellow) @ 1.67

LDW10: Lane Drop (White) @ 0.42

DLW6: Dotted Line (White) @ 0.33

FILE NO.	ENGLISH	DESIGN TEAM	Iowa DOT\HDR	POLK	COUNTY	PROJECT NUMBER	IM-NHS-080-4(085)138--03-77	SHEET NUMBER	C.17
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***MNY6 - Factor of 1.00 as value includes number of 6-inch passes to cover median nose area.

BLW6: Broken Lane Line (White) @ 0.25
CHW10: Channelizing Line (White) @ 1.67

RLW6: Ramp Edge Line Right (White) @ 1.00
CHY10: Channelizing Line (Yellow) @ 1.67

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RLY6: Ramp Edge Line Left (Yellow) @ 1.00
LDW10: Lane Drop (White) @ 0.42
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ELW6: Edge Line Right (White) @ 1.00
DLW6: Dotted Line (White) @ 0.33

ELY6: Edge Line Left (Yellow) @ 1.00

FILE NO.	ENGLISH	DESIGN TEAM	Iowa DOT\HDR	POLK	COUNTY	PROJECT NUMBER	IM-NHS-080-4(085)138--03-77	SHEET NUMBER	C.18
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LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

* Not a bid item. Bridge berm quantities assume a trench depth of 24 inches.

Location					Longitudinal Subdrain (DR-303)							Subdrain Outlet		Porous* Backfill	Class "A"* Crushed Stone	Remarks
Line No.	Road or Lane Identification	Station to Station	Side	Depth	Shoulder		CMP		Bridge Berm (EW-203 or EW-204)			DR-303, DR-305 or DR-306				
				<div>D</div>	Size	Length	Size	Length	Standard Road Plan and Type		Size	Length	Station			
				IN	IN	FT	IN	FT	IN	FT	IN	FT		CY	CY	
1	RAMPD ULT	33544+06.61	33548+75.00	RT	42.0	4.0	528.4						33544+06.61	DR-306	48.9	
2	RAMPD ULT	33548+75.00	33551+55.00	RT	42.0	4.0	340.0						33548+75.00	DR-306	31.5	
													33551+55.00	DR-306		
3	RAMPD_INT	37007+50.00	37012+50.00	RT	42.0	4.0	560.0						37007+50.00	DR-306	51.9	
4	RAMPD_INT	37012+50.00	37014+20.00	RT	42.0	4.0	230.0						37012+50.00	DR-306	21.3	
5	RAMPD_INT	37014+30.00	37017+90.00	RT	42.0	4.0	420.0						37014+20.00	DR-306		
6	RAMPD_INT	37017+90.00	37022+20.00	RT	42.0	4.0	490.0						37014+30.00	DR-306	38.9	
													37017+90.00	DR-306		
													37017+90.00	DR-306	45.4	
													37022+20.00	DR-306		
7	ML080EB	34+60.00	39+60.00	RT	42.0	4.0	560.0						34+60.00	DR-306	51.9	
8	ML080EB	39+60.00	44+60.00	RT	42.0	4.0	560.0						39+60.00	DR-306	51.9	
													39+60.00	DR-306		
													44+60.00	DR-306		
9	ML080	1114+60.00	1118+50.00	RT	42.0	4.0	450.0						1114+60.00	DR-306	41.7	
10	ML080	1118+60.00	1122+60.00	RT	42.0	4.0	460.0						1118+50.00	DR-306		
													1118+60.00	DR-306	42.6	
11	ML080	1122+60.00	1126+60.00	RT	42.0	4.0	460.0						1122+60.00	DR-306		
													1122+60.00	DR-306	42.6	
12	ML080	1126+60.00	1130+08.00	RT	42.0	4.0	408.0						1126+60.00	DR-306		
													1126+60.00	DR-306	37.8	
13	ML080	1133+80.00	1138+80.00	RT	42.0	4.0	560.0						1130+08.00	DR-306		
													1133+80.00	DR-306	51.9	
14	ML080	1138+80.00	1143+80.00	RT	42.0	4.0	560.0						1138+80.00	DR-306		
													1138+80.00	DR-306	51.9	
15	ML080	1143+80.00	1148+80.00	RT	42.0	4.0	560.0						1143+80.00	DR-306		
													1143+80.00	DR-306	51.9	
16	ML080	1148+80.00	1153+80.00	RT	42.0	4.0	560.0						1148+80.00	DR-306		
													1148+80.00	DR-306	51.9	
17	ML080	1153+80.00	1158+80.00	RT	42.0	4.0	560.0						1153+80.00	DR-306		
													1153+80.00	DR-306	51.9	
18	ML080	1158+80.00	1162+95.00	RT	42.0	4.0	475.0						1158+80.00	DR-306		
													1162+95.00	DR-306	44.0	
19	ML080	1163+05.00	1166+95.00	RT	42.0	4.0	450.0						1163+05.00	DR-306		
													1163+05.00	DR-306	41.7	
20	ML080	1167+25.00	1171+45.00	RT	42.0	4.0	480.0						1166+95.00	DR-306		
													1167+25.00	DR-306	44.4	
21	ML080	1171+55.00	1172+18.00	RT	42.0	4.0	123.0						1171+45.00	DR-306		
													1171+55.00	DR-306	11.4	
22	ML080	1175+63.00	1179+93.00	RT	36.0	4.0	490.0						1172+18.00	DR-306		
													1175+63.00	DR-306	37.8	
23	ML080	1180+03.00	1185+00.00	RT	30.0	4.0	557.0						1179+93.00	DR-306		
													1180+03.00	DR-306	34.4	
24	ML080	1185+00.00	1188+75.00	RT	30.0	4.0	435.0						1185+00.00	DR-306		
													1185+00.00	DR-306	26.9	
25	ML080	1188+75.00	1192+75.00	RT	30.0	4.0	460.0						1188+75.00	DR-306		
													1188+75.00	DR-306	28.4	
26	ML080	1192+75.00	1196+75.00	RT	30.0	4.0	460.0						1192+75.00	DR-306		
													1192+75.00	DR-306	28.4	SEE NOTE 4, REFER TO U SHEETS FOR LAYOUT DEALIS.
27	ML080	1196+75.00	1201+00.00	RT	30.0	4.0	485.0						1196+75.00	DR-306		
													1196+75.00	DR-306	29.9	SEE NOTE 4, REFER TO U SHEETS FOR LAYOUT DEALIS.
28	ML080	1201+00.00	1203+50.00	RT	30.0	4.0	310.0						1201+00.00	DR-306		
													1201+00.00	DR-306	19.1	SEE NOTE 4. REFER TO U SHEETS FOR LAYOUT DEALIS. AVOID GUARDRAIL POSTS.
29	ML080	1203+50.00	1206+00.00	RT	30.0	4.0	310.0						1203+50.00	DR-306		
													1203+50.00	DR-306	19.1	SEE NOTE 4. REFER TO U SHEETS FOR LAYOUT DEALIS. AVOID GUARDRAIL POSTS.
30	ML080	1206+00.00	1208+50.00	RT	30.0	4.0	310.0						1206+00.00	DR-306		
													1206+00.00	DR-306	19.1	SEE NOTE 4, REFER TO U SHEETS FOR LAYOUT DEALIS.
31	ML080	1202+75.00	1205+35.00	MED	24.0	4.0	320.0	6.0	230.0				1208+50.00	DR-306		
								6.0	225.0				1202+75.00	DR-306 MOD	14.8	SEE NOTE 4, REFER TO MODIFIED DR-306 IN THE U SHEETS FOR DEALIS.
32	ML080	1205+35.00	1207+80.00	MED	24.0	4.0	305.0	6.0	225.0				1205+35.00	DR-306 MOD		
								6.0	225.0				1205+35.00	DR-306 MOD	14.1	SEE NOTE 4, REFER TO MODIFIED DR-306 IN THE U SHEETS FOR DEALIS.
													1207+80.00	DR-306 MOD		SEE NOTE 4, REFER TO MODIFIED DR-306 IN THE U SHEETS FOR DEALIS.
33	235H	39651+00.00	39653+00.00	RT	24.0	4.0	260.0						39651+00.00	DR-306	12.0	
34	235H	39651+00.00	39654+63.00	LT	24.0	4.0	423.0						39653+00.00	DR-306		
													39651+00.00	DR-306	19.6	
													39654+63.00	DR-306		
Totals							14919.4		905.0					DR-306 = 64 DR-306 MOD = 4	1211.0	

Refer to Soils Sheets

* Not a bid item. Bridge berm quantities assume a trench depth of 24 inches.

FILE NO.	ENGLISH	DESIGN TEAM	Iowa DOT\HDR	POLK	COUNTY	PROJECT NUMBER	IM-NHS-080-4(085)138--03-77	SHEET NUMBER	CS.3
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SURVEY SYMBOLS

	Interstate Highway Symbol		Septic Tank
	U.S. Highway Symbol		Cistern
	Iowa Highway Symbol		L.P. Gas Tank (No Footing)
	County Road Highway Symbol		Underground Storage Tank
	Evergreen Tree		Latrine
	Deciduous Tree		Satellite TV Dish
	Fruit Tree		Water Hook Up
	Shrub (Bushes)		Radio Tower
	Timber		Tower Anchor
	Hedge		Guardrail (Beam or Cable)
	Stump		Guard Post (one or two)
	Swamp		Guard Post (over two)
	Rock Outcrop		Filler Pipe
	Broken Concrete		Gas Valve
	Revetment (Rip Rap)		Water Valve
	Cemetery		Speed Limit Sign
	Grave		Mile Marker Post
	Cave		Sign
	Sink Hole		Traffic Signal Control Box
	Board Fence		Rail Road Signal Control Box
	Chain Link or Security Fence		Telephone Switch Box
	Wire Fence		Electric Box
	Terrace		
	Earth Dam or Dike (Existing)		
	Tile Outlet		
	Edge of Water		
	Existing Drainage		
	Right of Way Rail or Lot Corner		
	Concrete Monument		
	Well		
	Windmill		
	Beehive Intake		
	Existing Intake		
	Existing Utility Access (Manhole)		
	Fire Hydrant		
	Water Hydrant (Rural)		

UTILITY LEGEND

This is a POINT 25 Project and is subject to the provisions of IAC 761-115.25.

	Mid American Energy - Electric Distribution and Gas
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	Mid American Energy - Electric Transmission
	Iowa D. O. T. - Lighting and Fiber Optic
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	515-323-6227 - Mark.VanDyke@dot.iowa.us
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	Des Moines, Iowa 50321
	515-323-6227
	cschumacher@dmww.com
	Mediacom - Facilities
	Jerry Broughton
	845-587-2521
	jbroughton@mediacomcc.com
	Des Moines Metropolitan Wastewater Reclamation Authority - Sanitary
	Dillon Hain
	3000 Vandalia Road
	Des Moines, Iowa 50317
	(515) 323-8135 M: (712) 363-5785
	dmmwra.org

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING	Design Color No.	
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(80)	Proposed Pavement Shading
Orange	(6)	Proposed Granular Shading
Orange	(70)	Proposed Shoulder Granular Shading
Gray, Light	(80)	Proposed Shoulder Paved Full Depth Shading
Green, Dark	(232)	Proposed HMA Shading
Gray, Dark	(128)	Proposed Bridge Approach Pavement Shading
Brown, Light	(236)	Grading Shading
Orange, Light	(134)	Proposed Granular Entrance Shading
Yellow	(220)	Proposed Paved Entrance Shading
Tan	(8)	Proposed Sidewalk/Trail Shading
Blue, Light	(230)	Proposed Sidewalk/Trail Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Green, Light	(225)	Existing Pavement Shading
Red	(3)	Proposed Structure Shading
Red	(3)	Delineates Restricted Areas

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(10)	Existing Ground Line Profile
Blue	(1)	Proposed Profile and Annotation
Magenta	(5)	Existing Utilities
Blue, Light	(230)	Proposed Ditch Grades, Left
Black	(0)	Proposed Ditch Grades, Median
Rust	(14)	Proposed Ditch Grades, Right

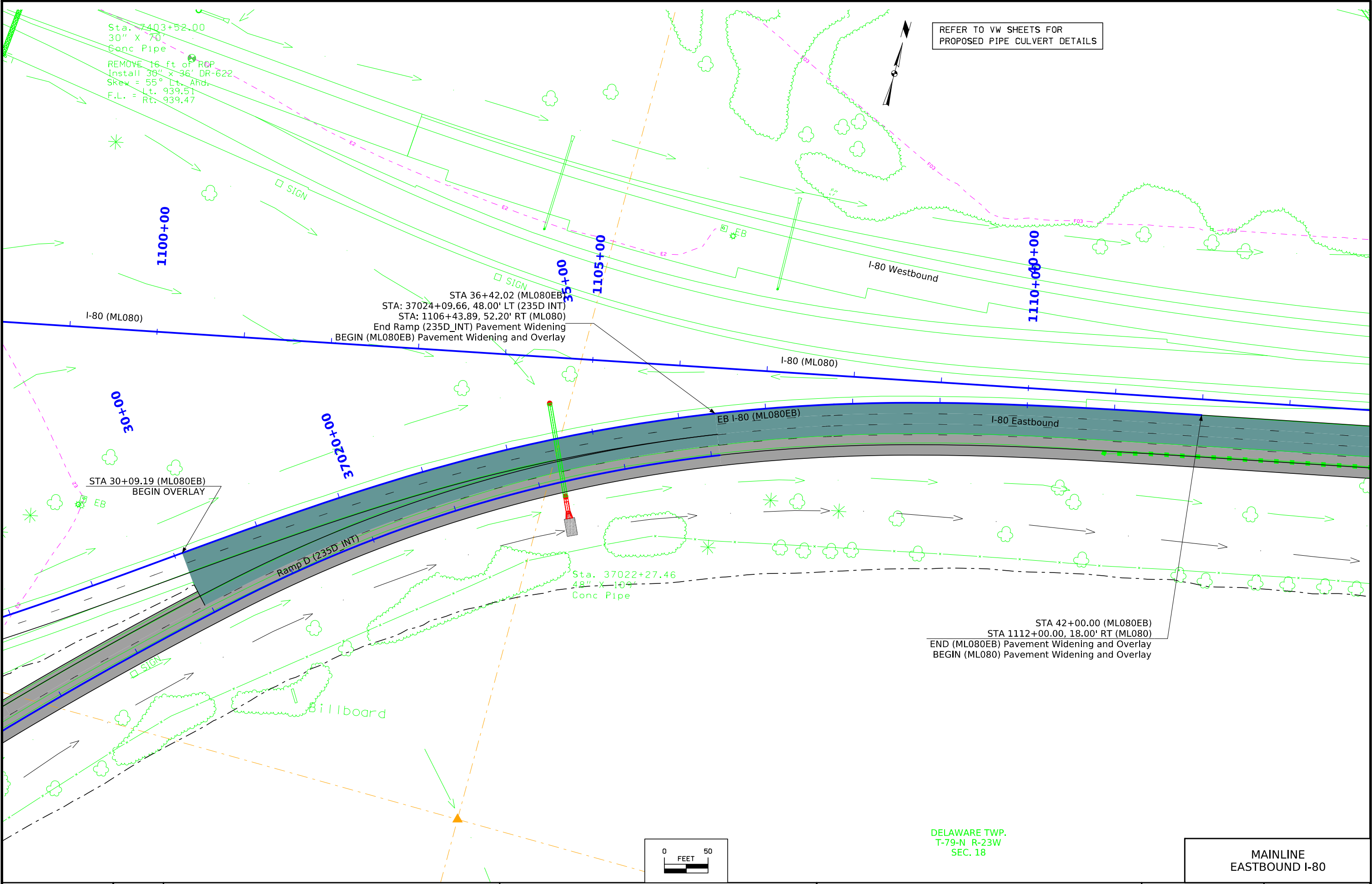
	Reference Point
	Station
	Survey Line
	Section Corner
	Ground Line Intercept
	Saw Cut
	Guardrail
	Trench Drain
	HighTension Cable Guardrail
	Sheet Pile
	Pavement Removal
	Clearing & Grubbing Area
	Future Intakes
	Future Storm Sewer
	Proposed Storm Sewer
	Proposed Intakes
	Proposed Culvert

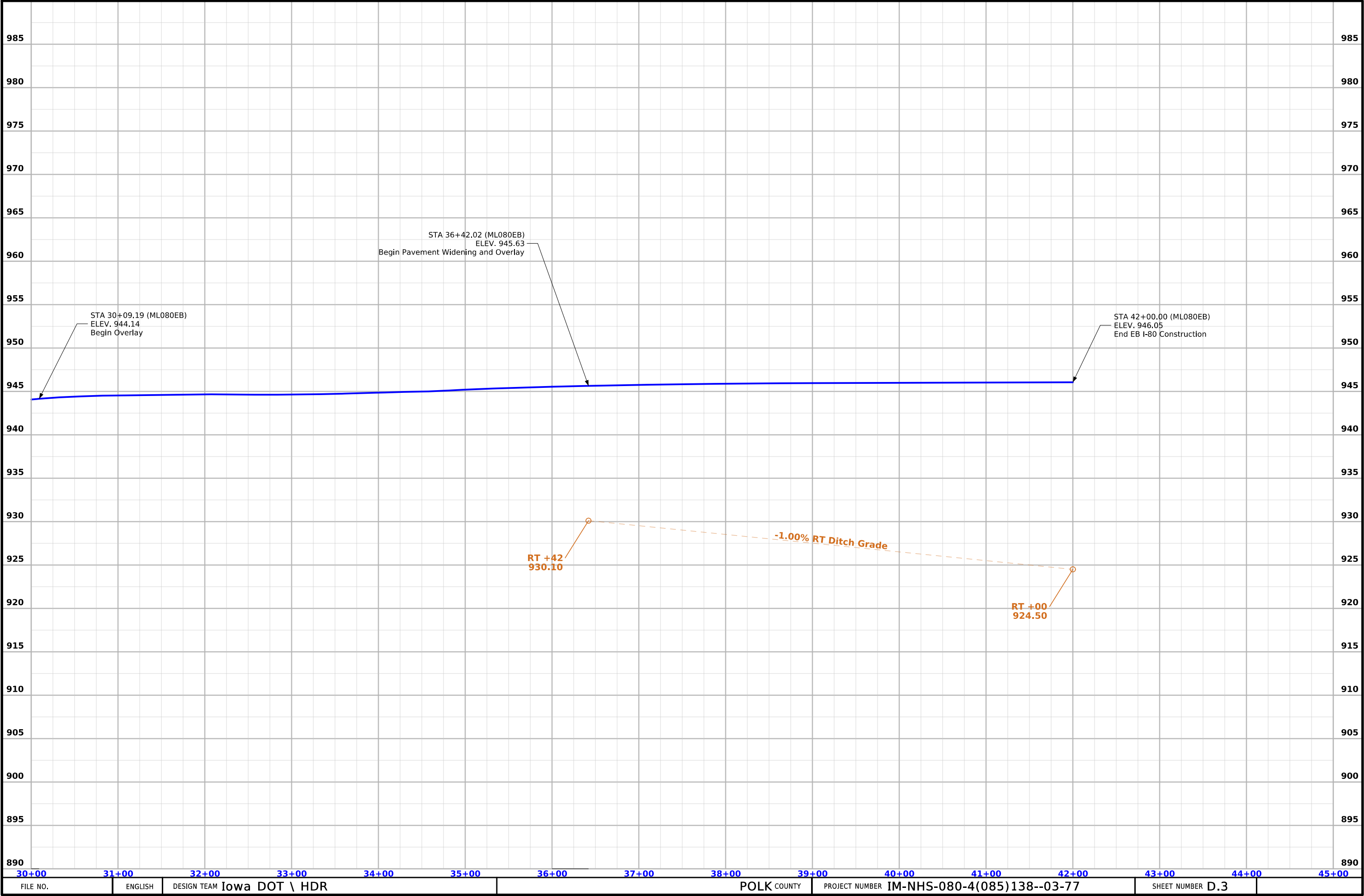
RIGHT-OF-WAY LEGEND

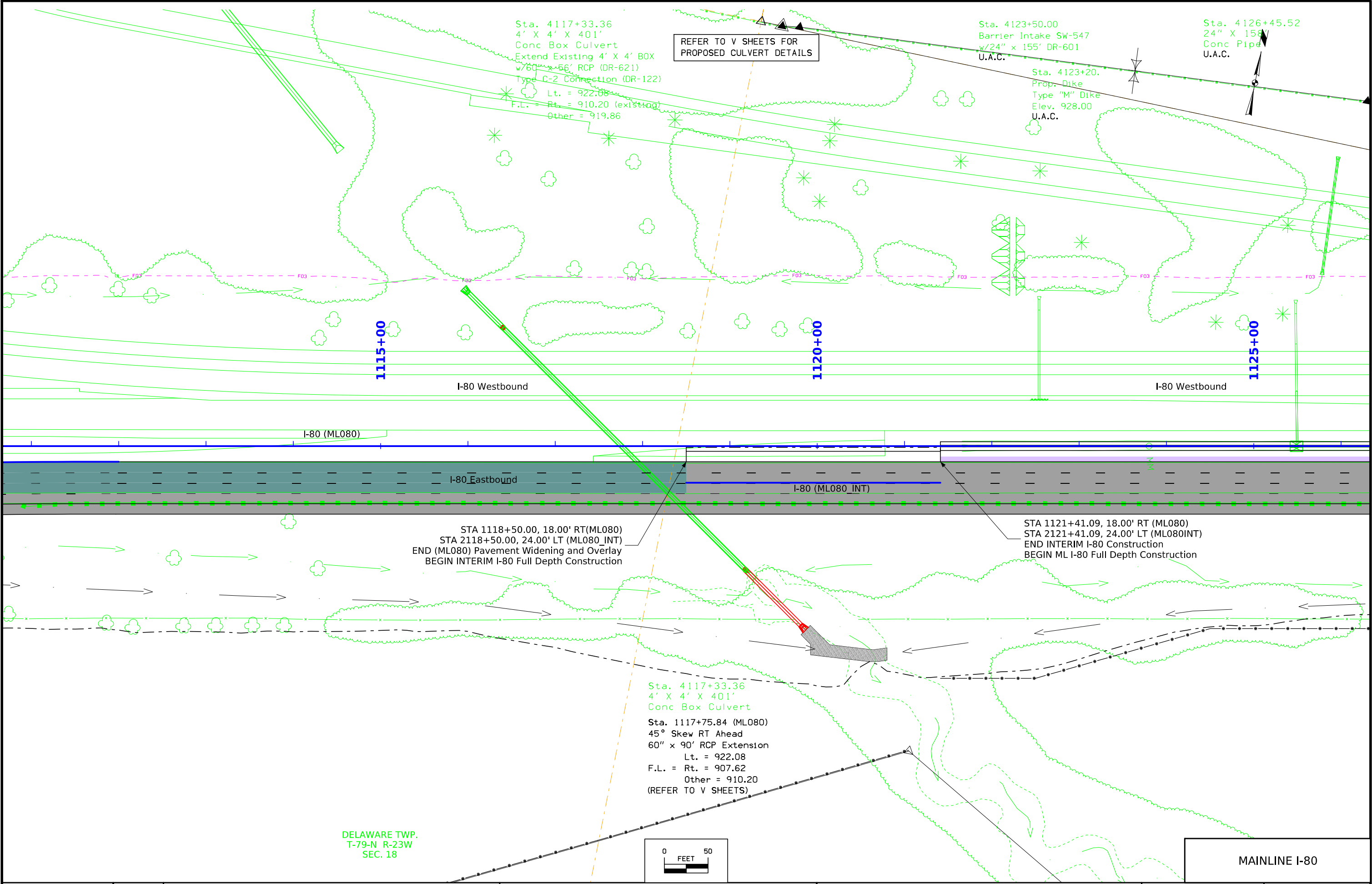
	Proposed Right-of-Way
	Existing Right of Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Easement (Temporary)
	Easement
	Access Control
	Property Line

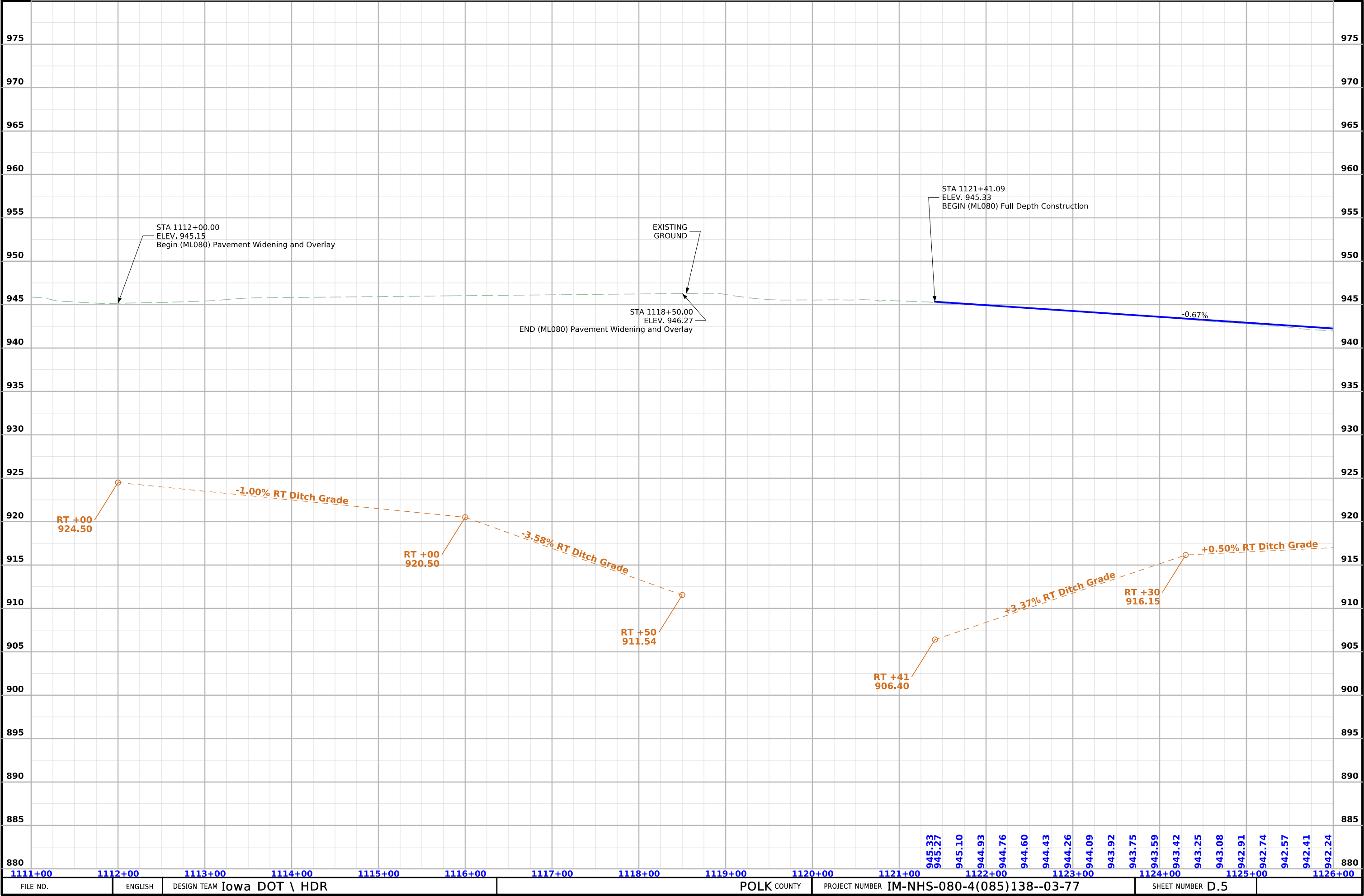
PLAN AND PROFILE
LEGEND AND SYMBOL
INFORMATION SHEET

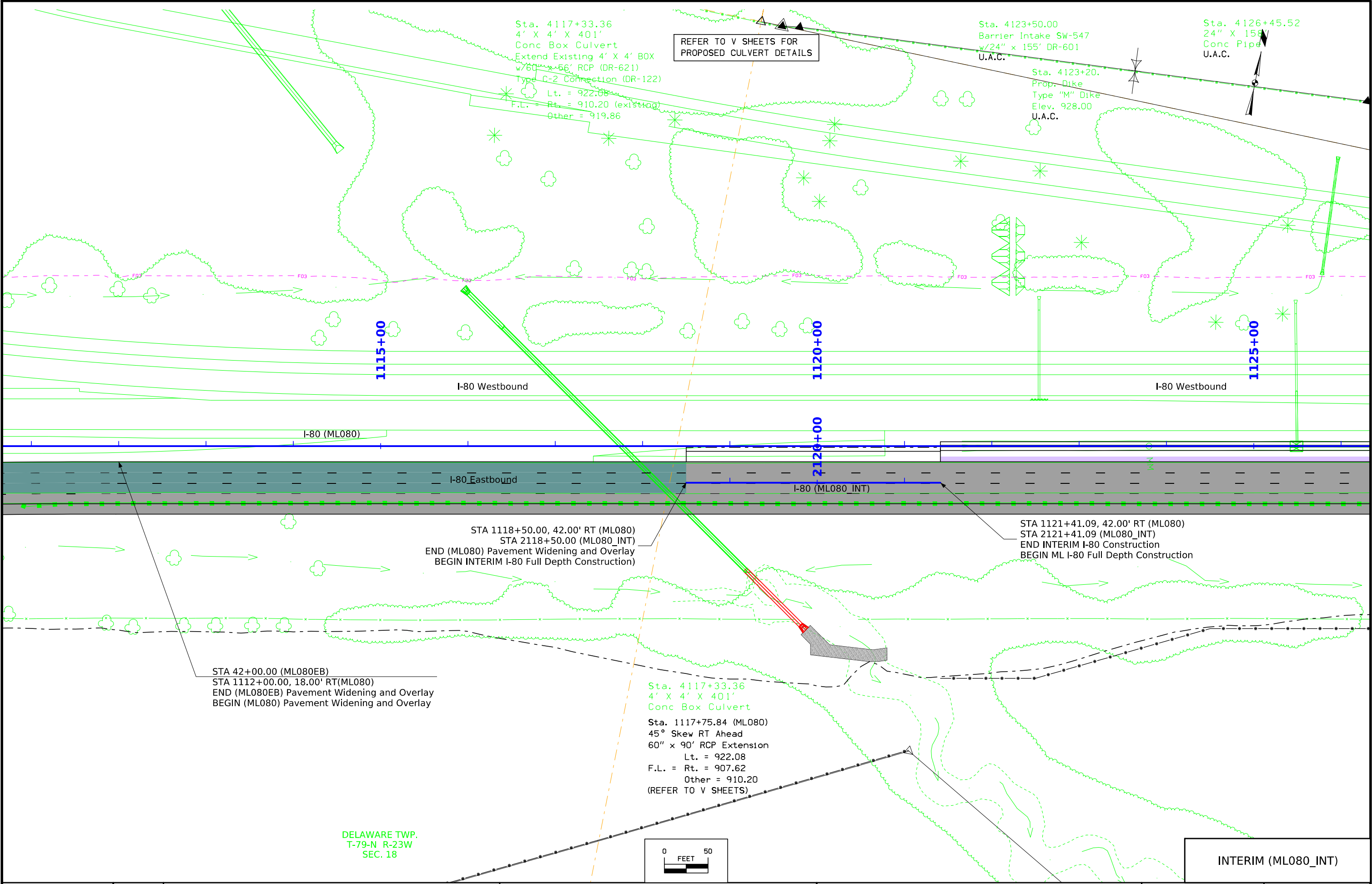
(COVERS SHEET SERIES D, E, F, & K)



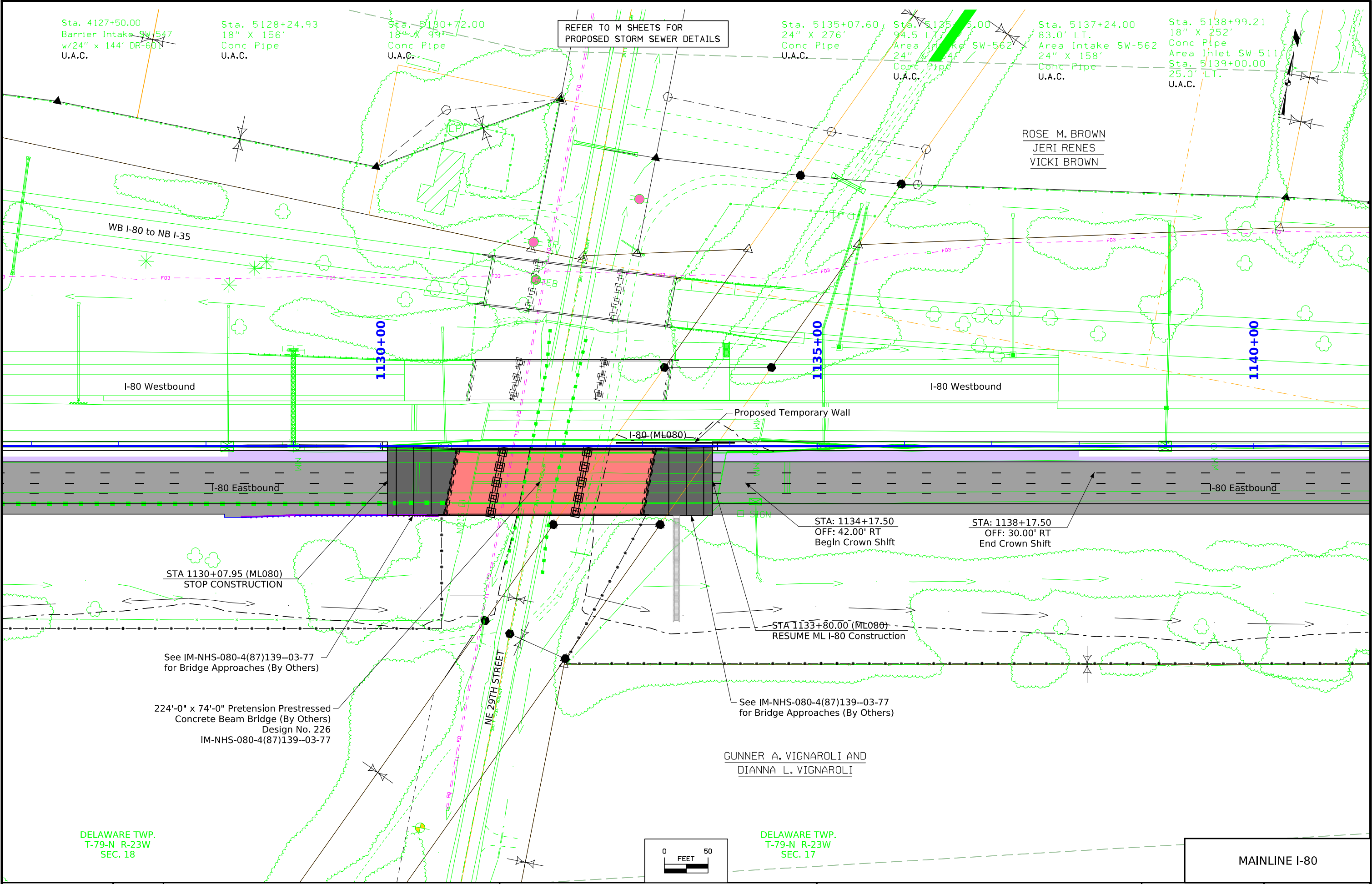


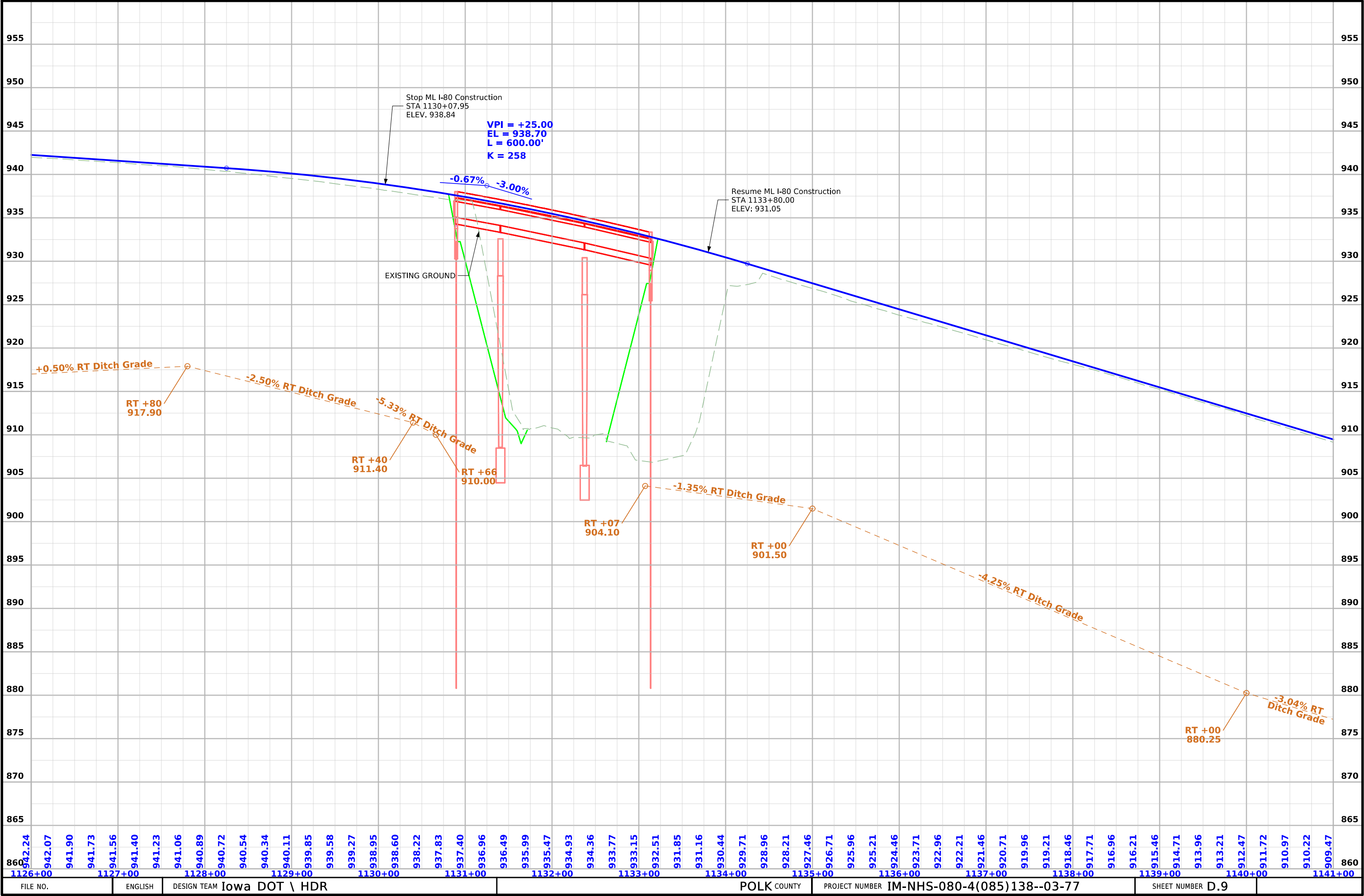


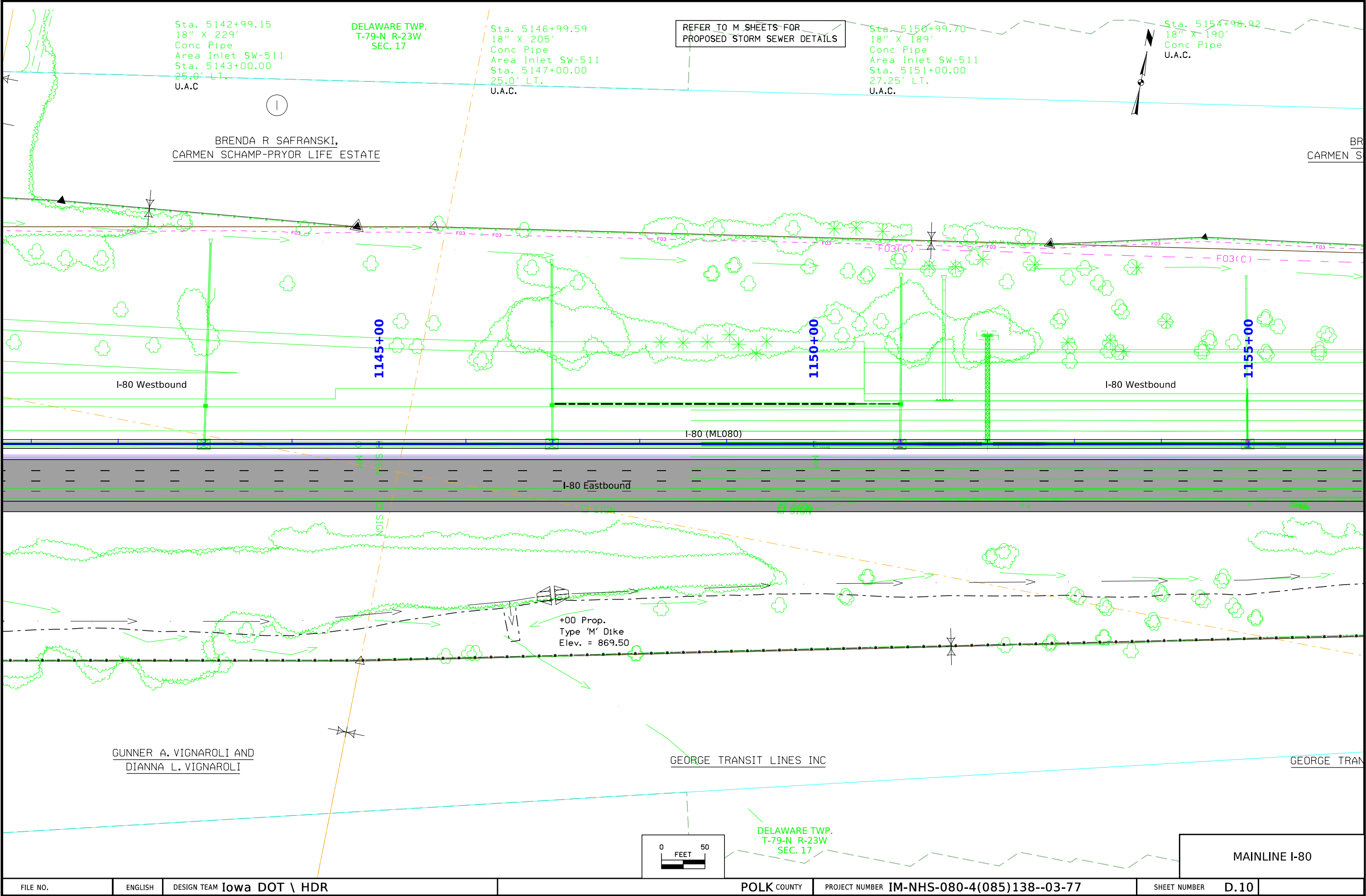


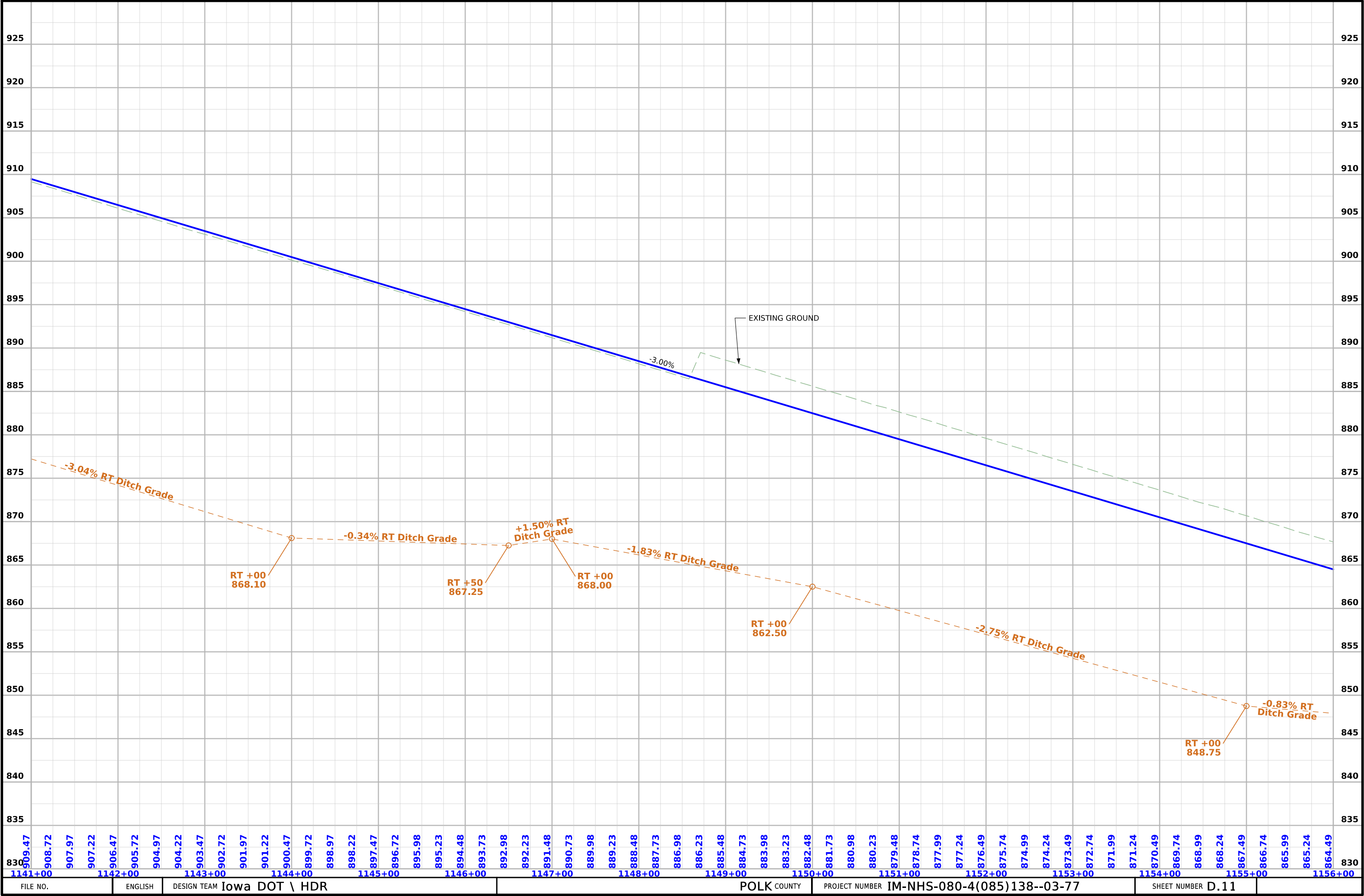


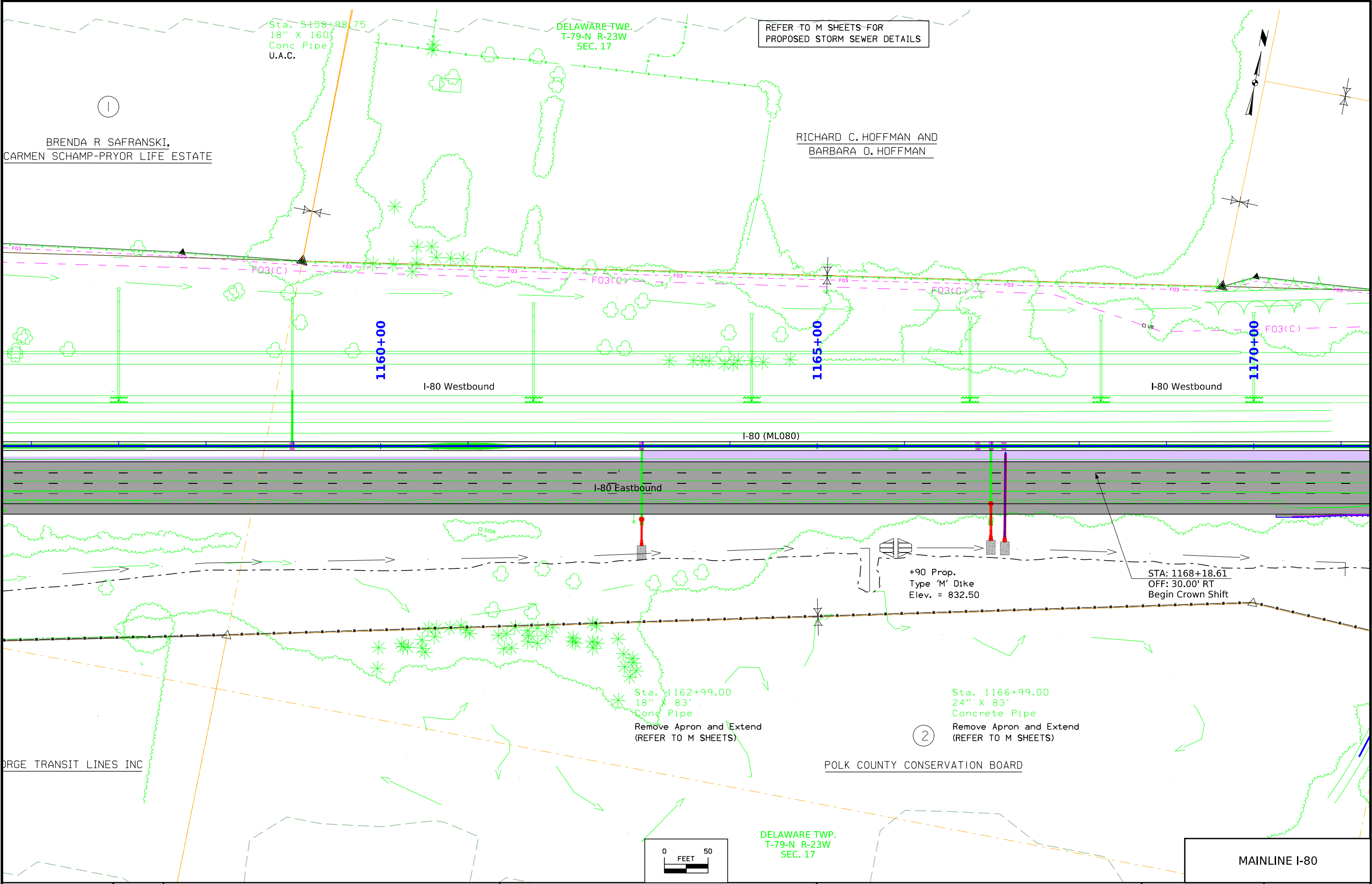


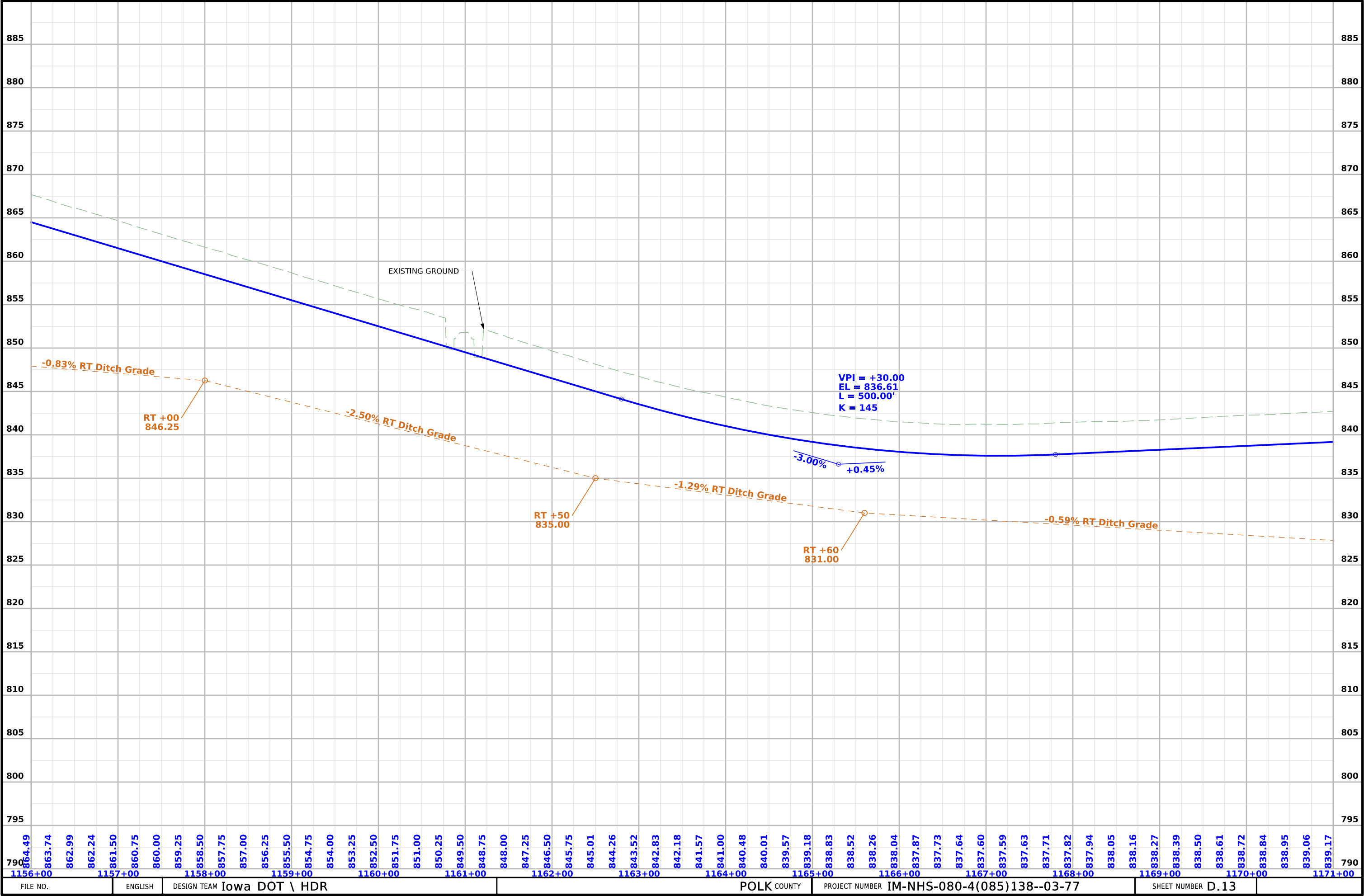


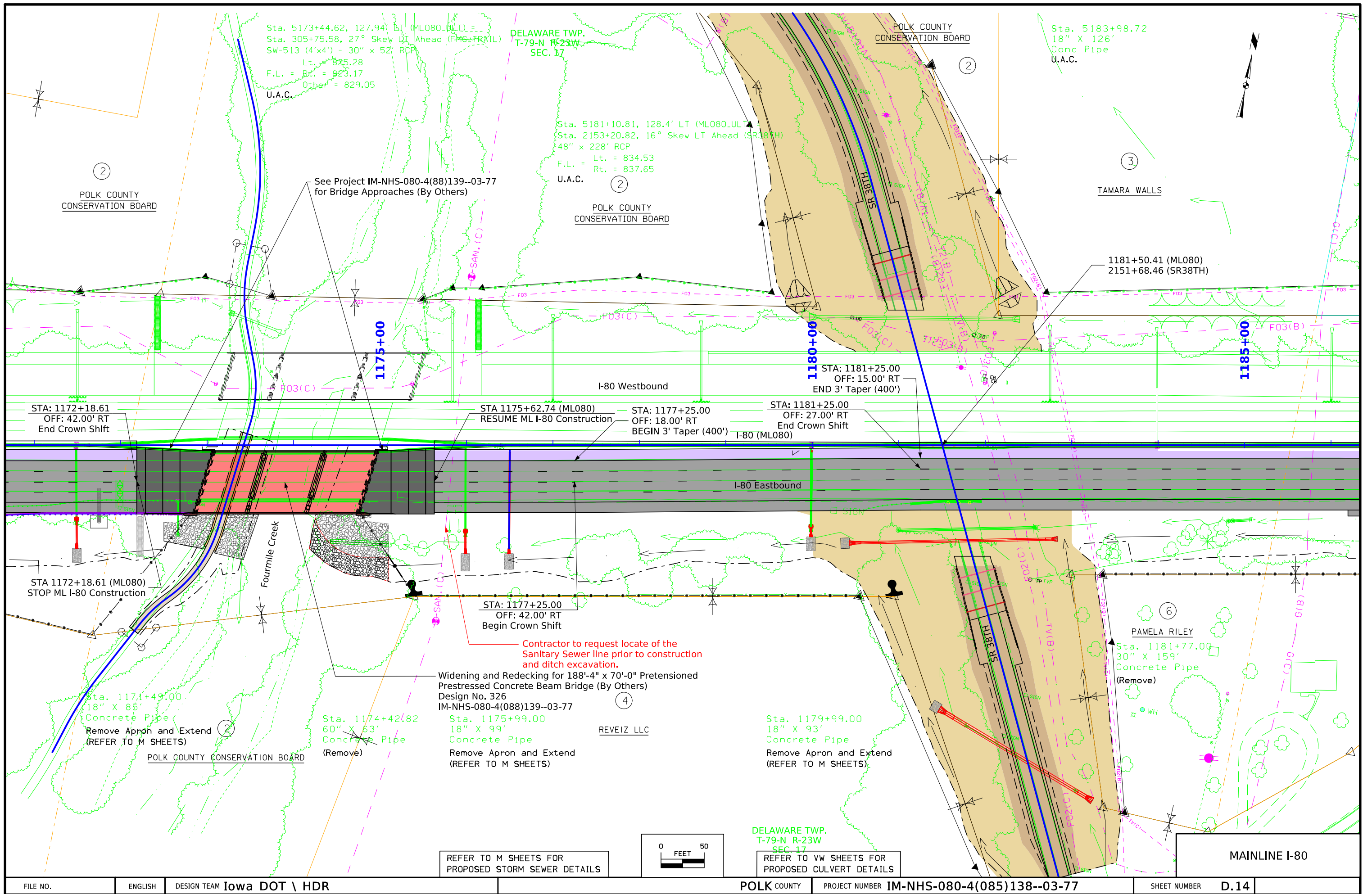


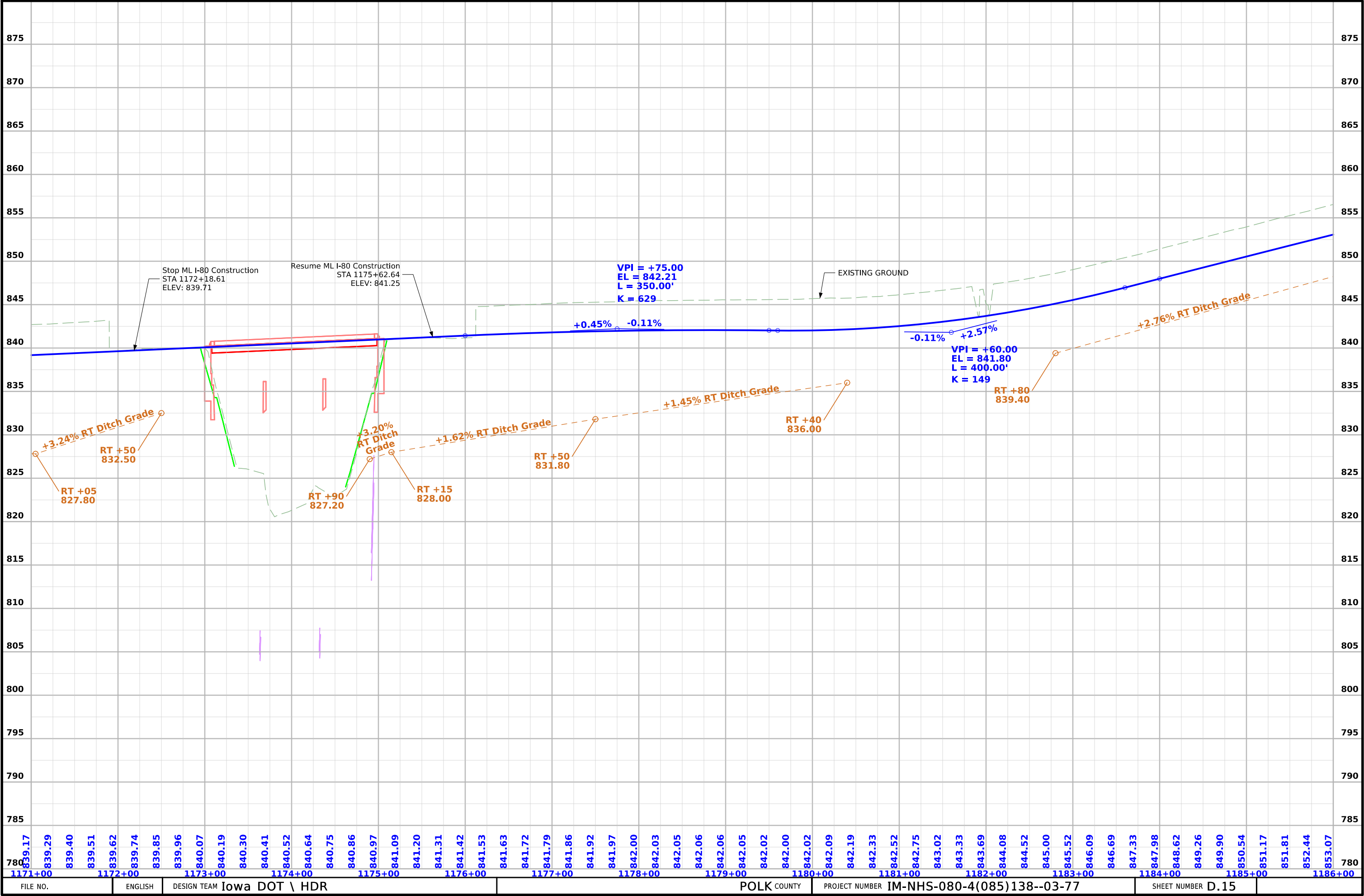


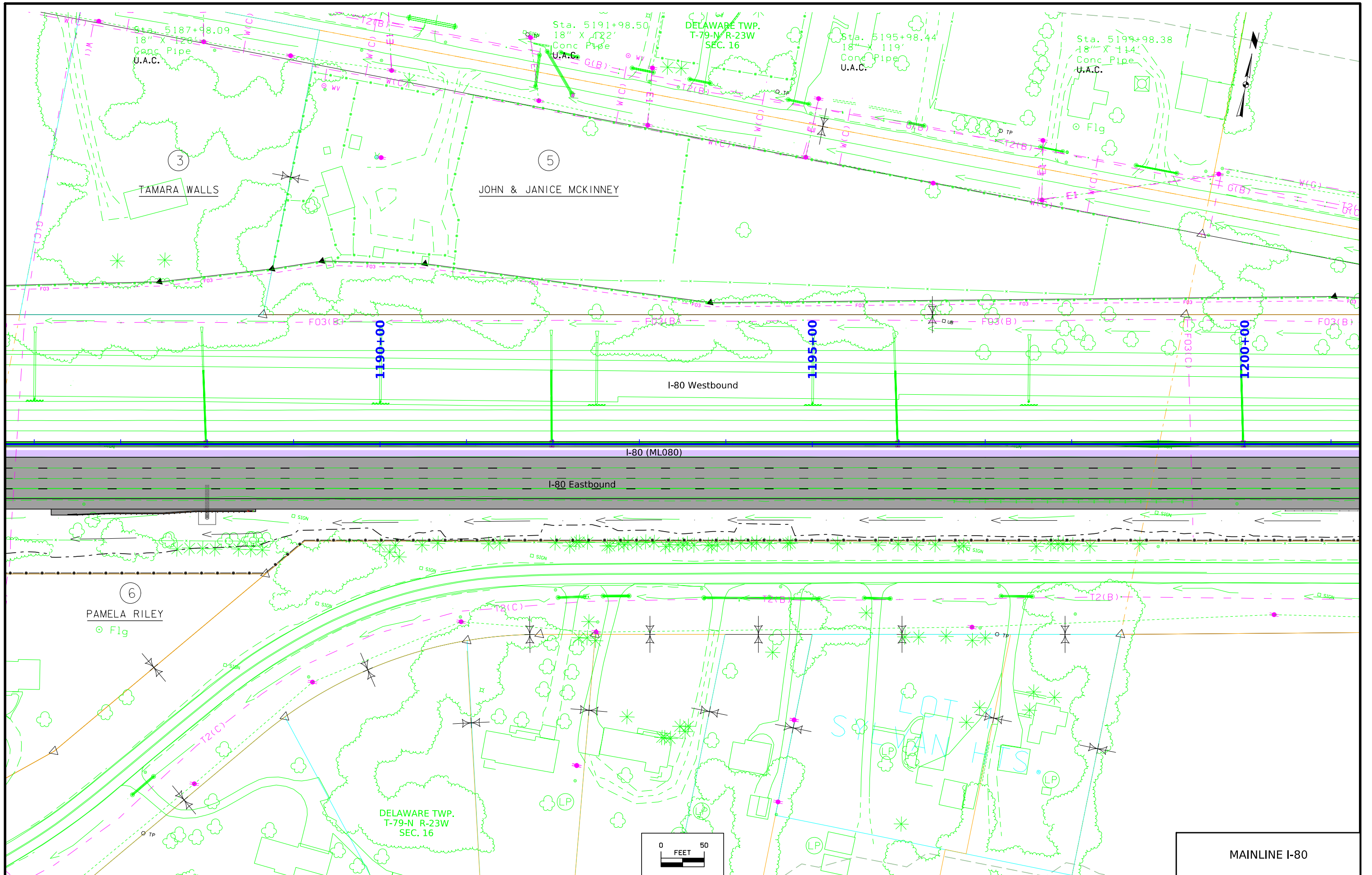


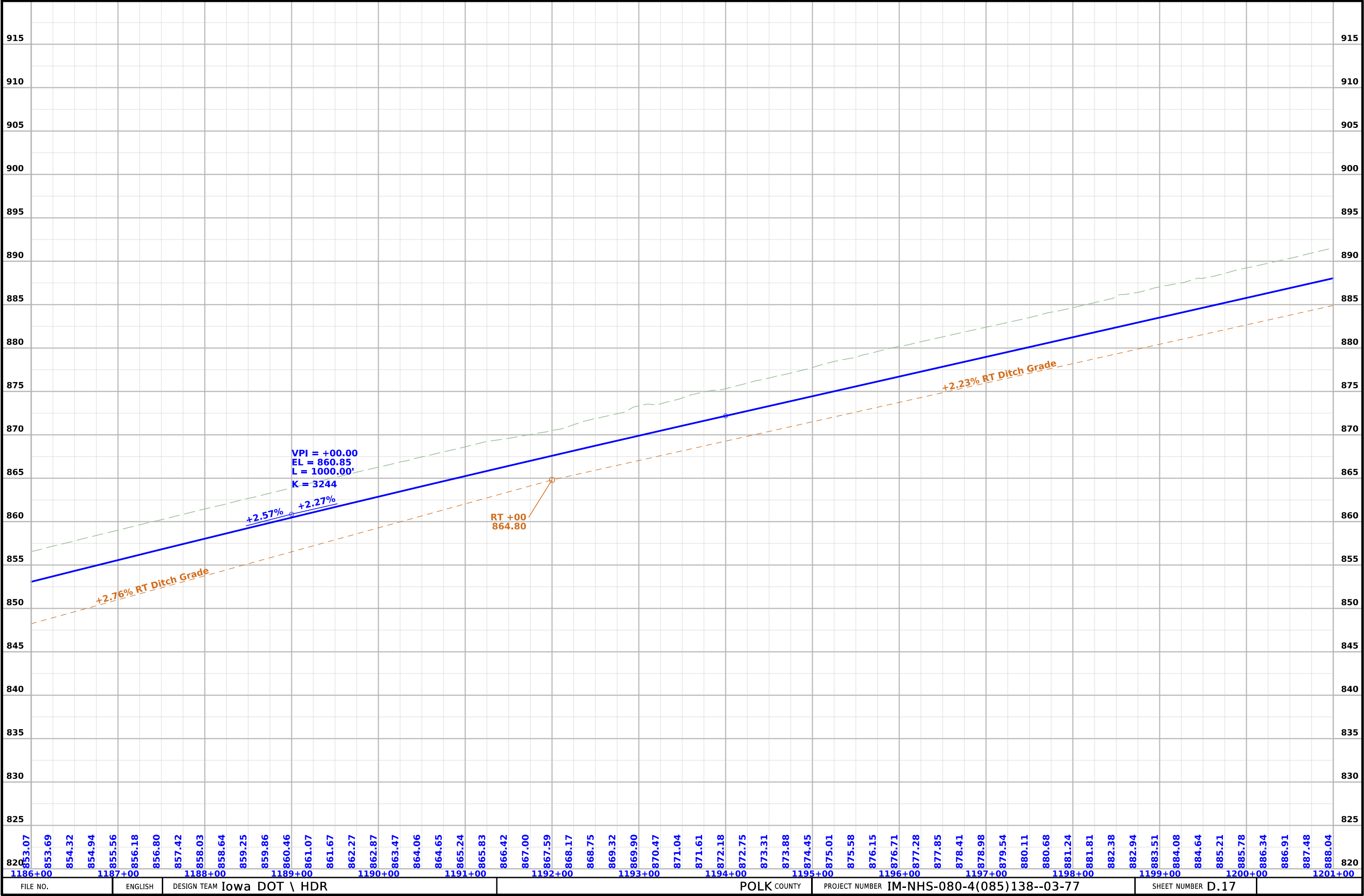


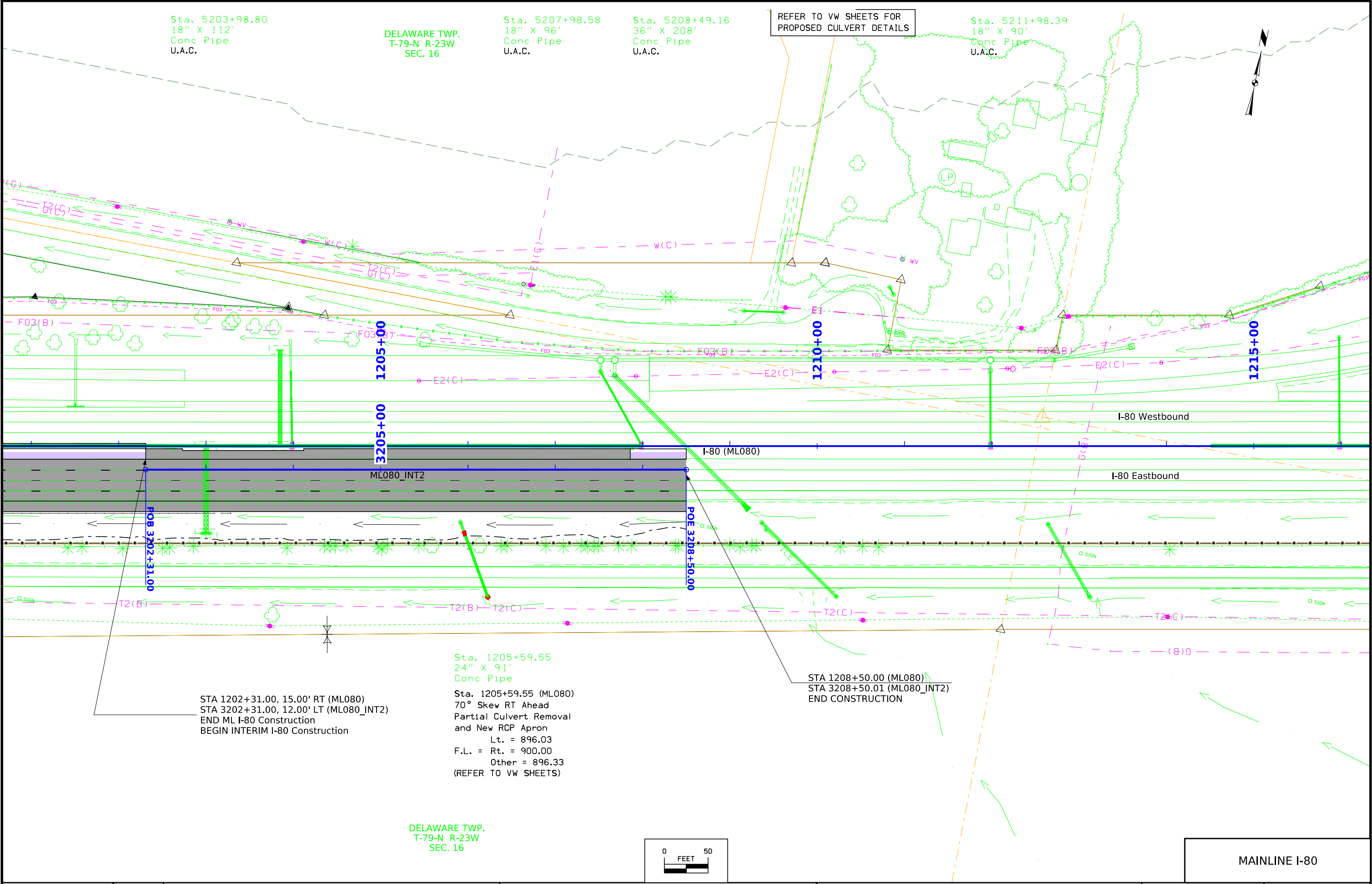


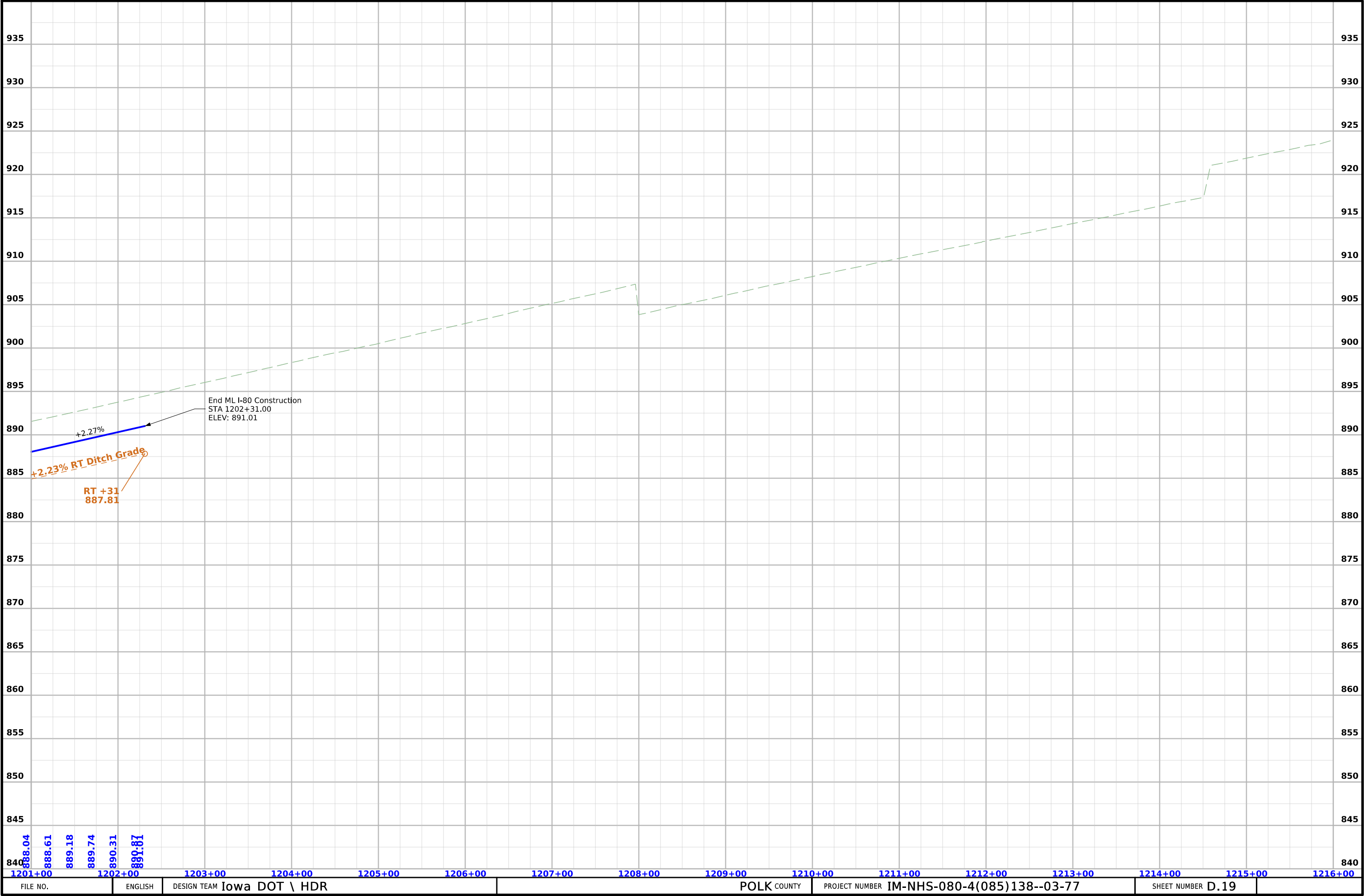


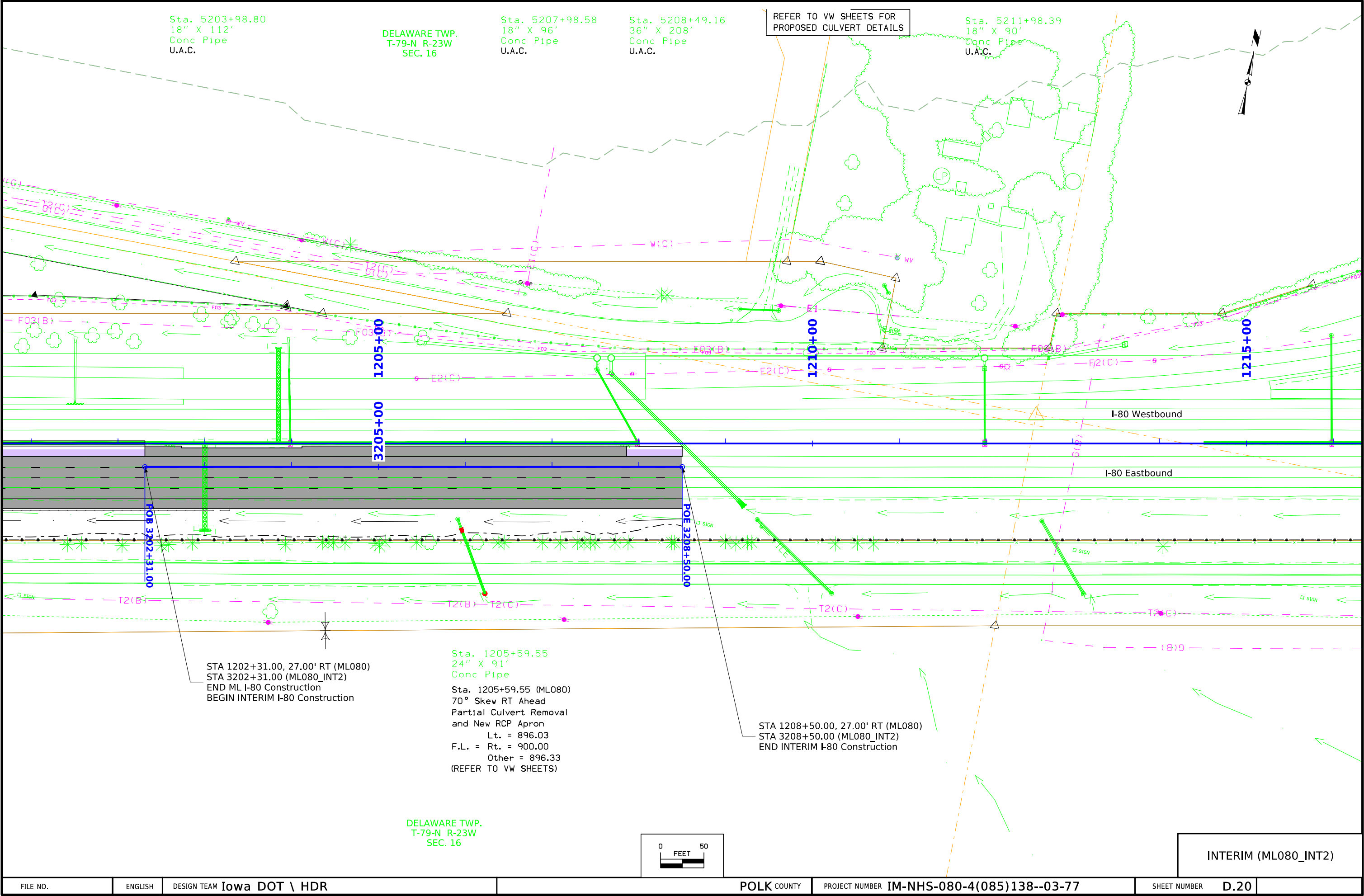


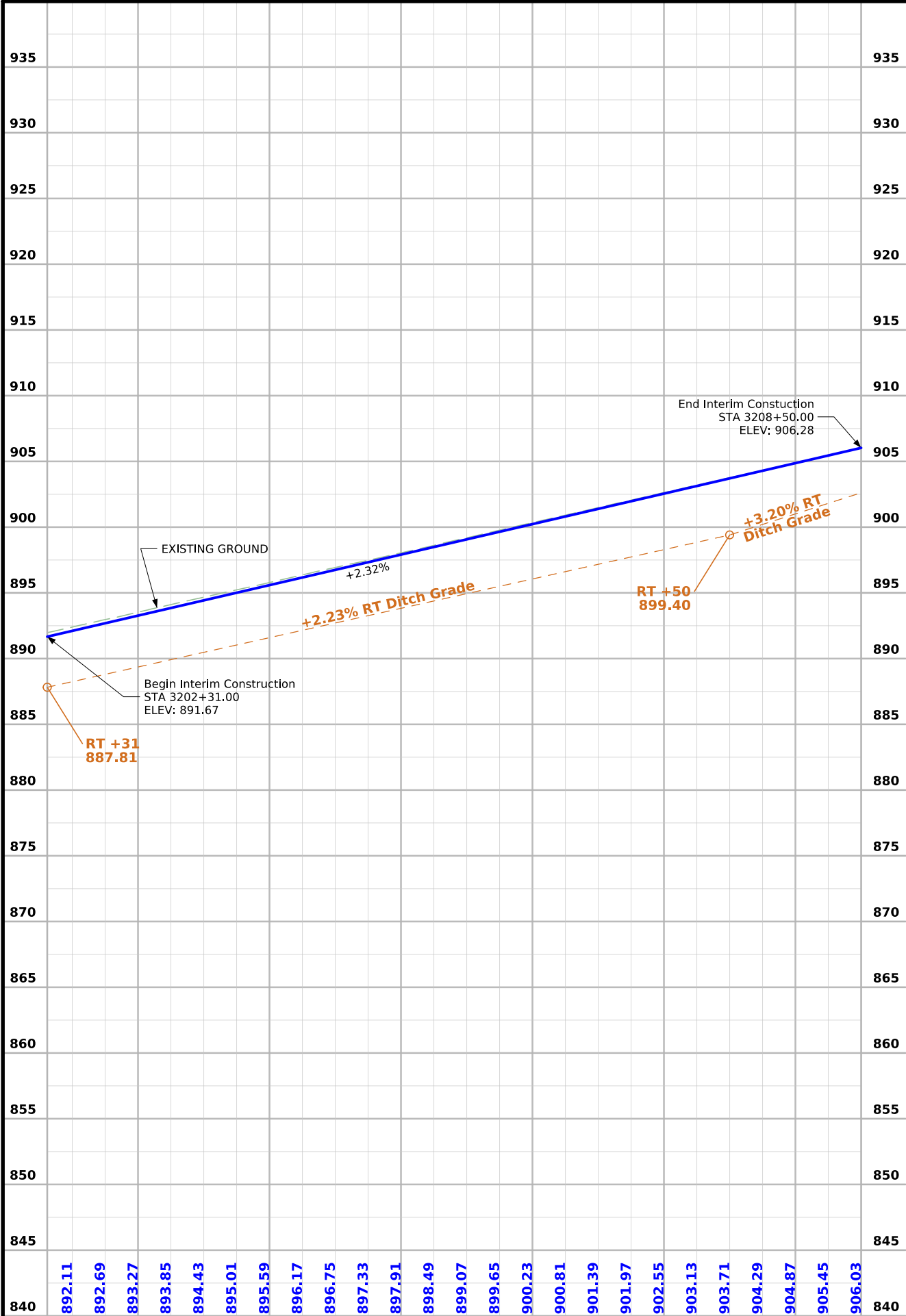


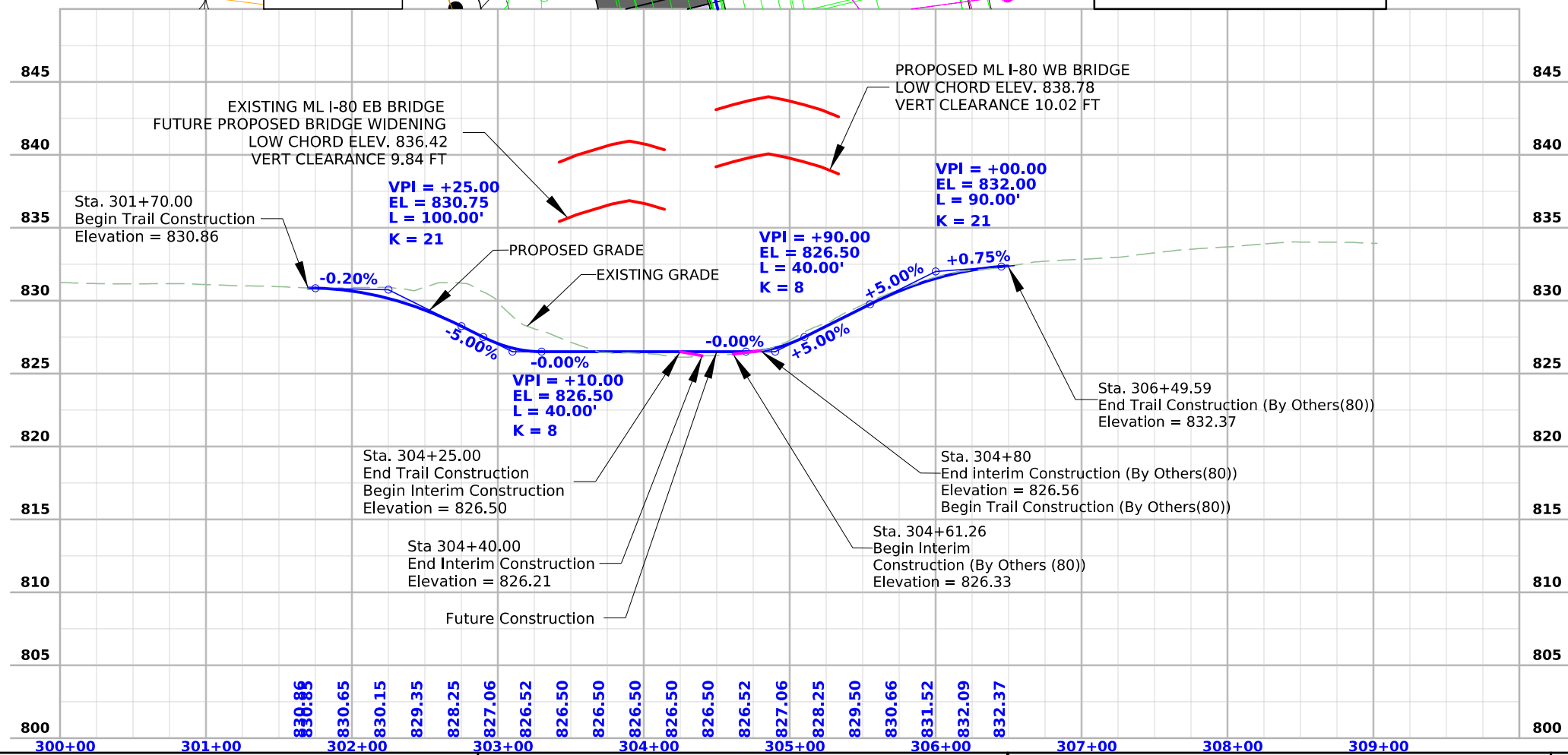
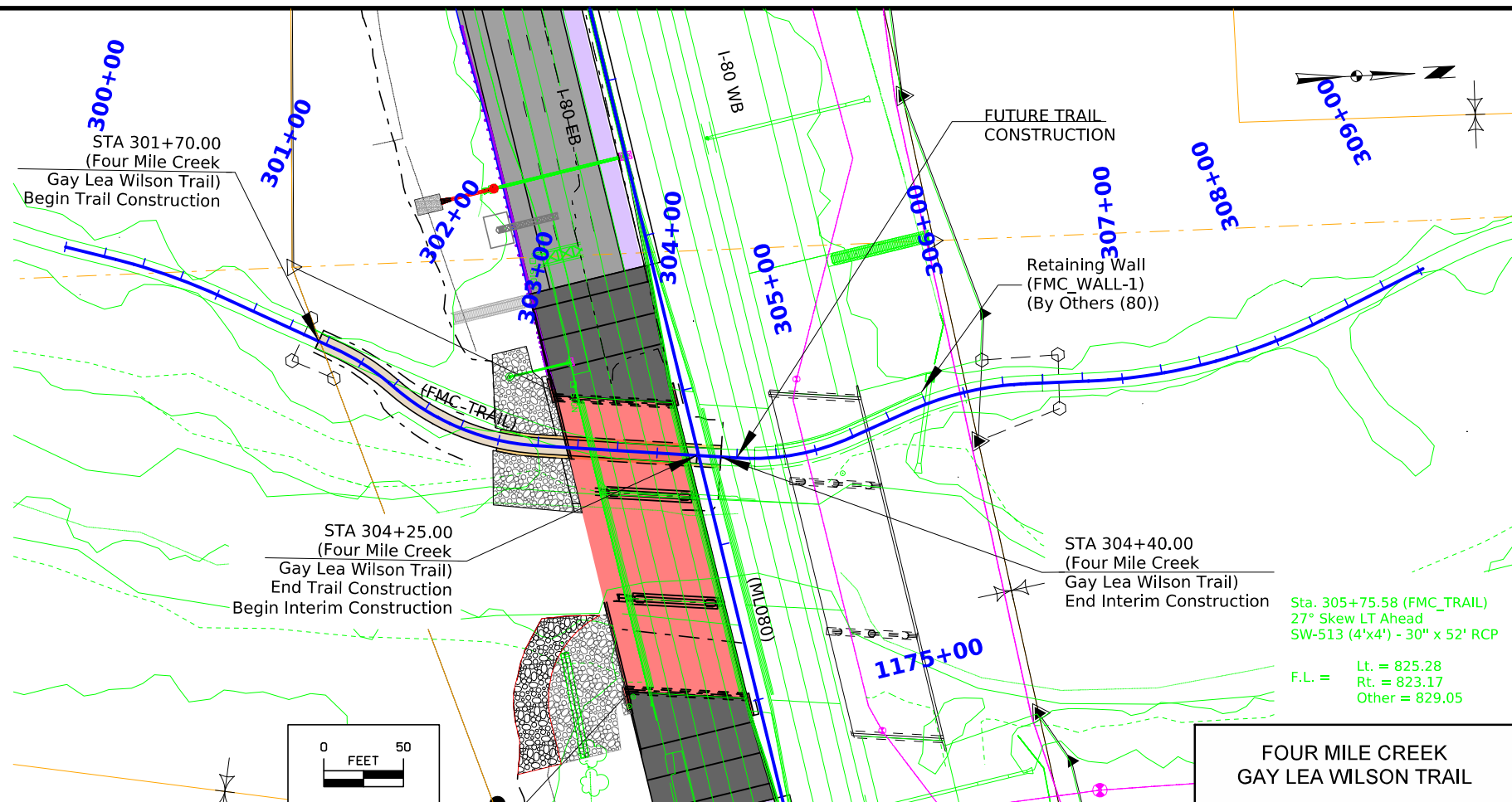


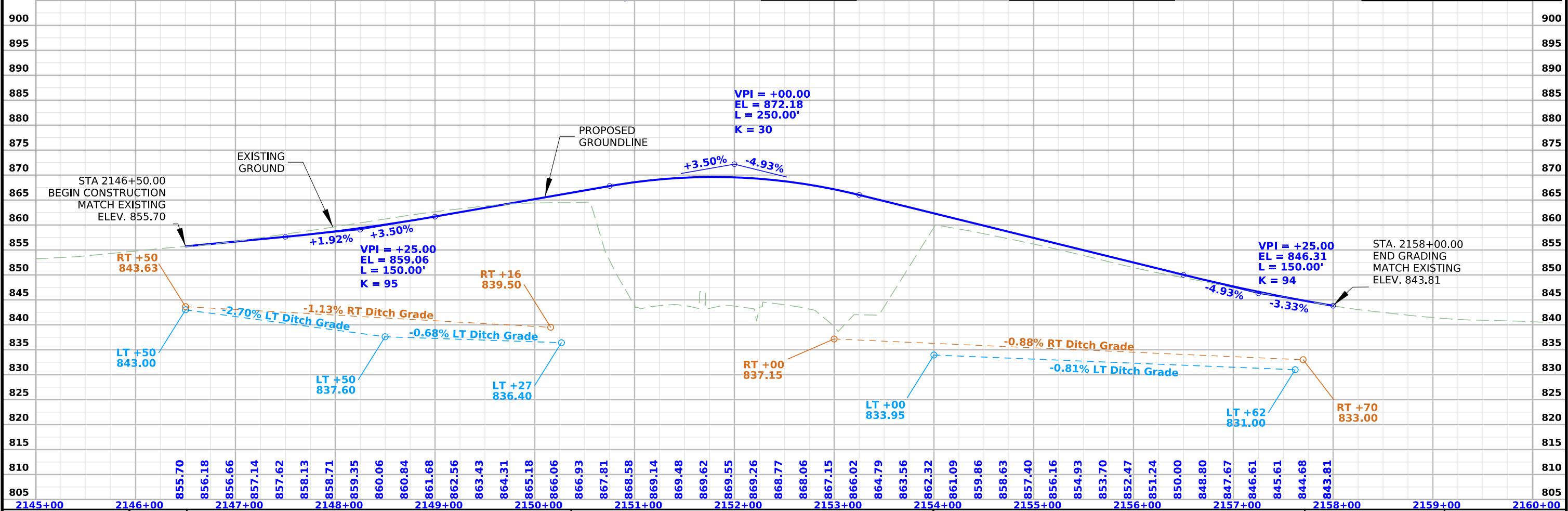
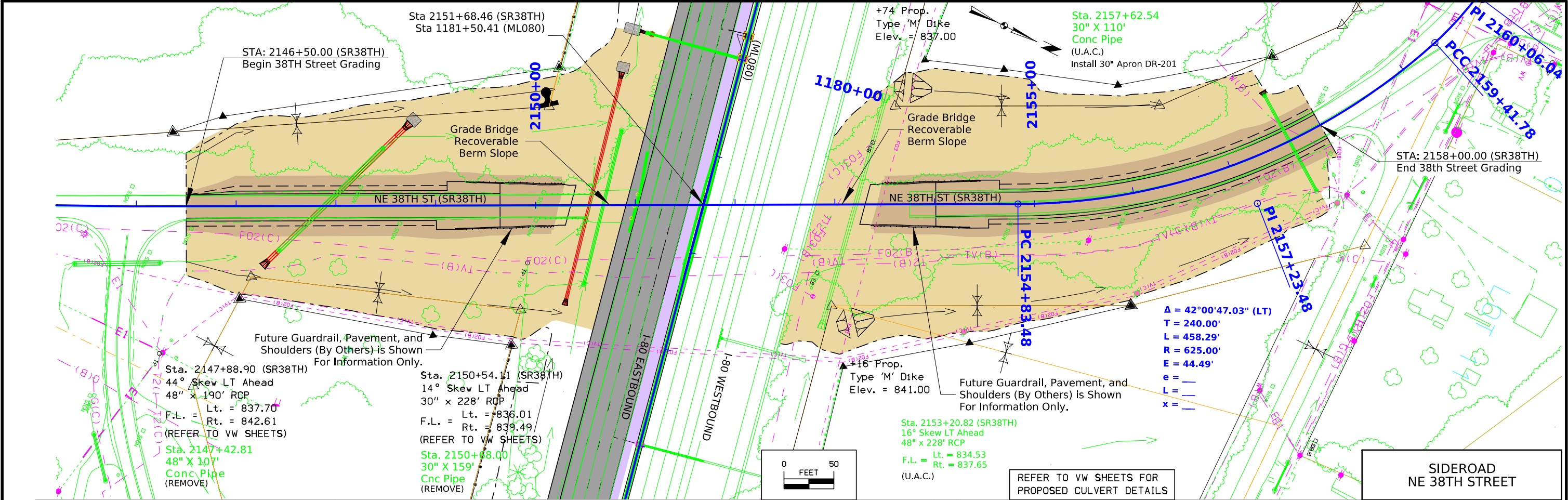




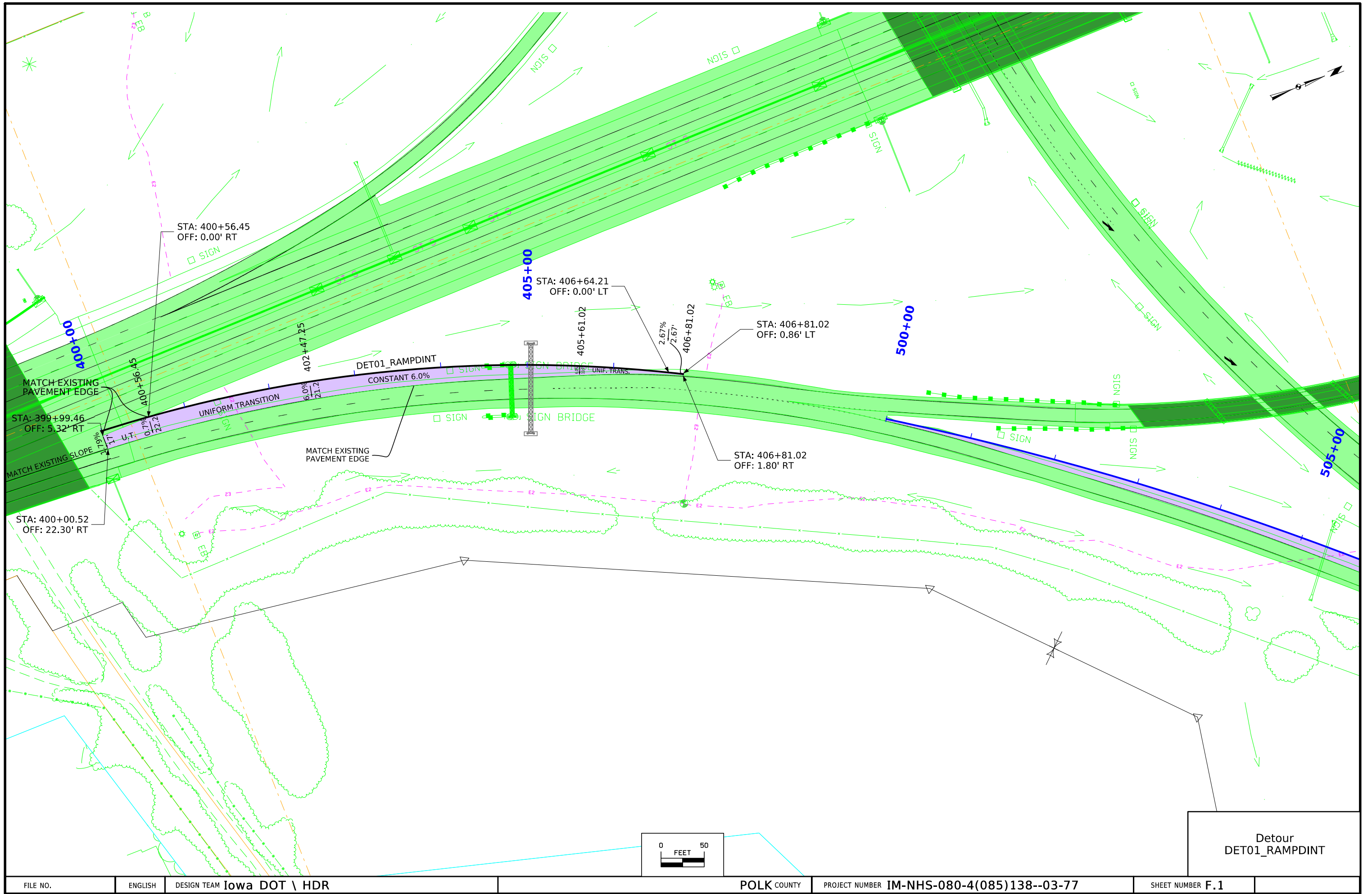


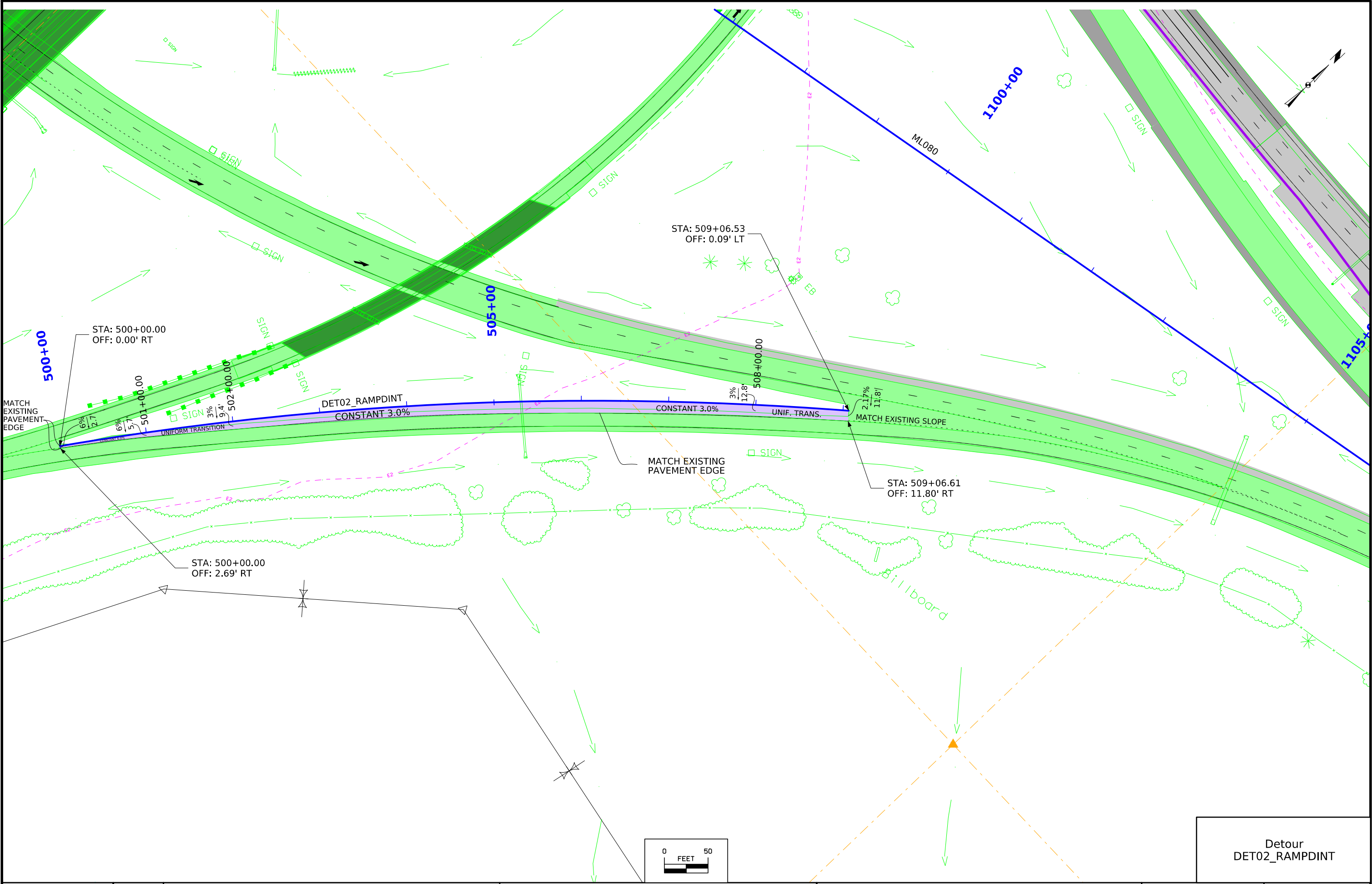




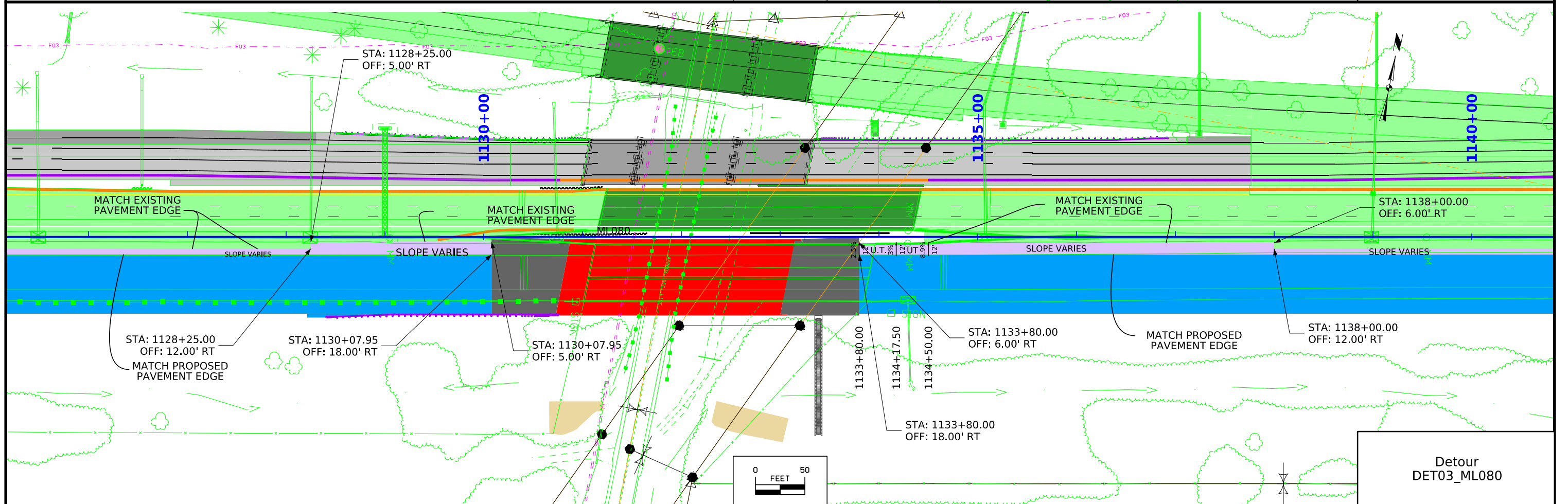
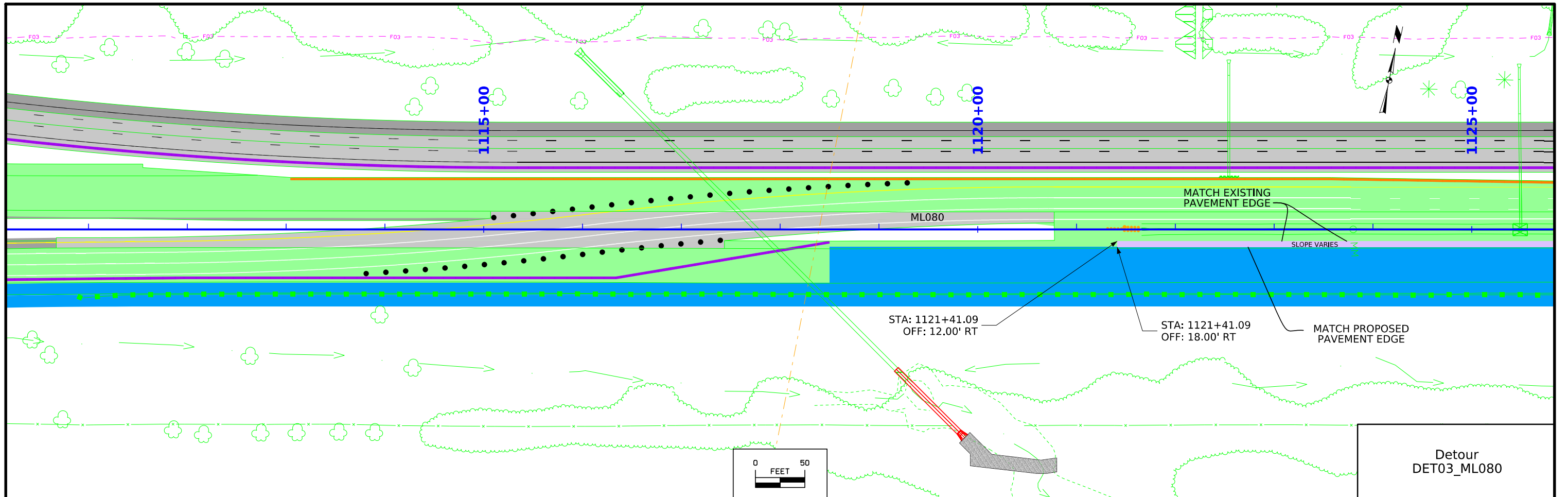


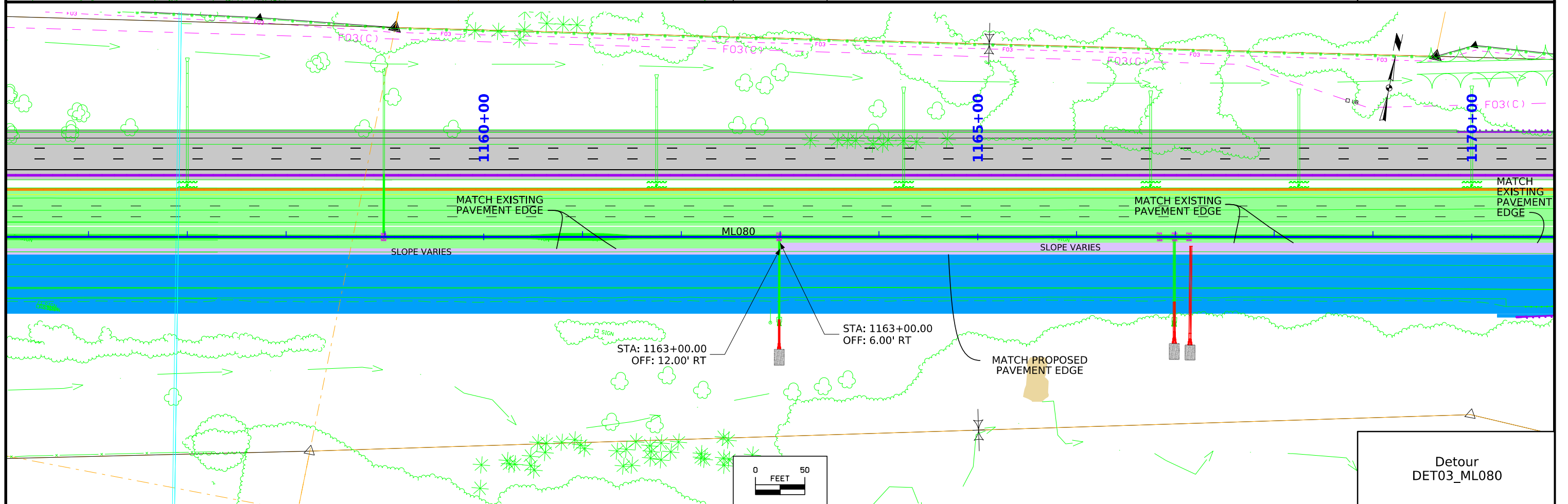
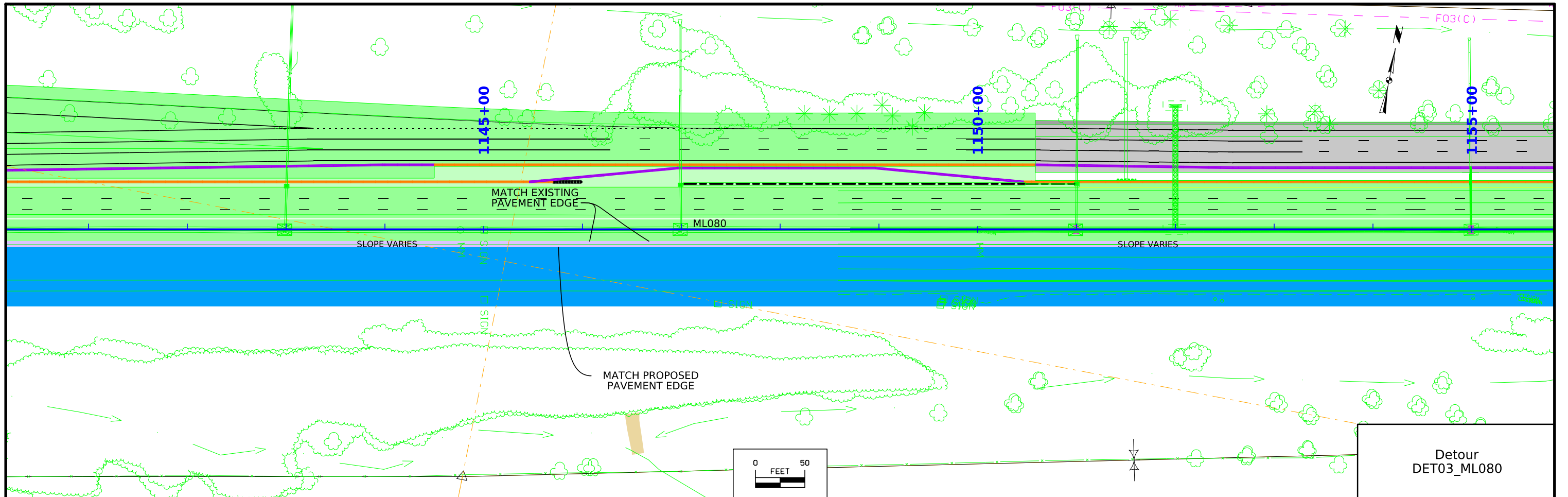
FILE NO.	ENGLISH	DESIGN TEAM	Iowa DOT \ HDR	POLK COUNTY	PROJECT NUMBER	IM-NHS-080-4(085)138--03-77	SHEET NUMBER	E.2
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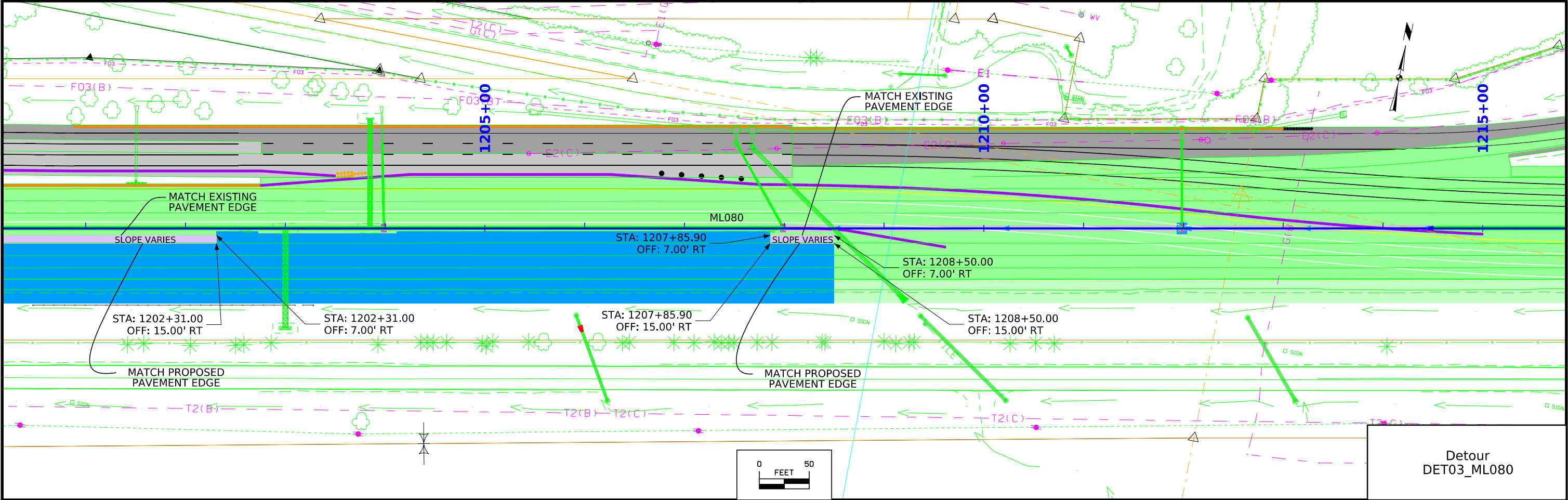




Detour
DET02_RAMPDINT







Survey Information

Polk County
IM-035-4(158)87--0E-77
Northeast Mix Master – I80 Des Moines, IA
I-80 from NEMM to US 65, Stage 5
PIN 10-77-035-010

Party Personnel

Jody Budde - PLS
Wes Shimp – PLS
Dave Overman – Party Chief
Aaron Paulsen - Party Chief
Logan Hook - Party Chief
Katerina Wyatt - Party Chief
Jason Flaherty - Assistant Party Chief

Date(s) of Survey

Begin Date 01/22/2020
End Date 05/29/2020

General Information

Measurement units for this survey are US survey feet. This survey is for the preliminary design for the section of I-80 just east of the I-80/I-35/I-235 interchange on the northeast side of Des Moines to the I-80/US 65 Interchange near Altoona, Iowa. Project datum and control information is provided by Design Survey Office. This project is a Partial DTM with Photo control. This survey request was for the I-80 corridor only, along with some side road areas adjacent to I-80. Project horizontal datum is NAD83(2011) Iowa State Plane South zone, with local project scale factor adjustment for ground coordinates based on a continuation of a legacy project.

Vertical Control

Vertical datum for this survey is relative to NAVD88(Geoid12B). This survey consisted of setting and observing 3 new FENO 1-meter rod monuments using minimum 2hr initial static observations along with data from 3 Iowa RTN CORS sites: Des Moines (IADM), Ames (IAAM), and Newton (IANT).

Additionally, three local existing FENO monuments established prior by the Iowa DOT with published NAVD88 elevations were observed and used that are located in proximity to the I-80 corridor project area:

FENO 26 has published Elv of: 886.70 usft
Survey Elv = 886.70 usft

FENO 100 has published Elv of: 904.54 usft
Survey Elv = 904.54 usft

FENO 101 has published Elv of: 932.94 usft
Survey Elv = 932.94 usft

The final vertical adjustment results show standard deviations were less than 0.04 ft. at 95% confidence level (2 sigma) for the new FENO monuments.

Horizontal Control

Project horizontal datum is NAD83(2011) Iowa State Plane South zone, US Survey Feet, with local project scale factor adjustment for ground coordinates. Point 30 is the project Grid/Ground origin point for this survey with details:

Point Name	Grid/Ground Northing	Grid/Ground Easting	Elevation
Point30	609616.47	1618959.90	945.43

Grid to Ground Project Scalar: 1.000062537

This survey control is relative to IaRTN reference stations. IaRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00. Coordinates were determined by observing each mark for 120 minutes minimum for the primary observation. Additionally, independent 3-minute control point RTK observations using the Iowa RTN were also observed on a separate day as QA/QC check points of the static adjusted points.

The horizontal standard deviation of these adjusted observations was less than 0.03 ft. at 95% confidence level (2 sigma).

Alignment Information

The mainline horizontal alignment for this survey is a retrace of As-built Plans No. I-IG-80-4(2)142. This alignment is an extension from a previous phase of the project to meet the new project limits for Stage 5. Survey stationing was equated to the plan PI at STA 1181+53.00 and extended ahead through the survey. The sideroad horizontal alignments for this survey are a retrace of As-built Plans No. I-IG-80-4(2)142, BRM-FM-2820(3)--5Q-77, and F-500-1(2)--20-77.

Survey stationing relates to as built plan stationing as follows:

POT STA 1181+53.00 As-built Plans Project No. I-IG-80-4(2)142
Survey POT STA 1181+51.88

POT STA 1214+28.05 As-built Plans Project No. I-IG-80-4(2)142
Survey POT STA 1214+27.31

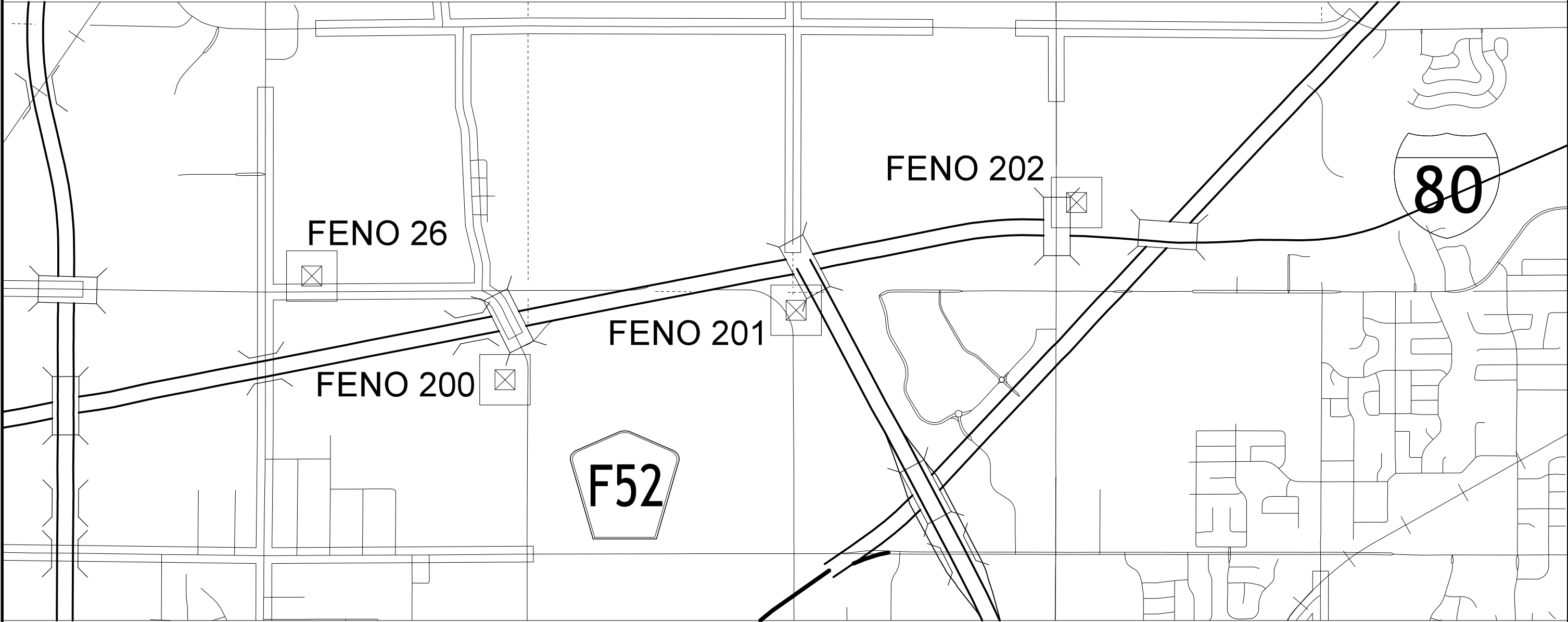
POT STA 1239+54.26 As-built Plans Project No. I-IG-80-4(2)142
Survey POT STA 1239+52.69

Project Control -FENO monuments are also Bench Marks

Points may be recovered by using IaRTN positioning device

Name	Ground Northing (USft)	Ground Easting (USft)		
26	604283.735	1624489.54	886.7	
100	601242.32	1613129.09	904.54	
101	612281.88	1619265.53	932.94	
FENO200	602872.23	1628931.66	851.56	Feno Monument
FENO201	604250.2	1633818.53	951.47	Feno. Monument
FENO202	605718.69	1639601.06	987.16	Feno. Monument

PROJECT CONTROL POINT LOCATION MAP



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00
VERT. DATUM: NAVD88

Survey Information

County: Polk
PIN: 10-77-035-010-03
Project Number: IM-035-3(194)87--13-77
Location: I-35/80/235 Interchange NE Of Des Moines(Stage 3A)
Type of Work: Grading
Project Directory: 7703501010
This Index covers SAP's 0742.2, 0742.3 and 0742.4

General Information

Measurement units for this survey are US survey feet. This survey is for phase 3 of the NE Mixmaster ramp reconstruction. This survey uses the same coordinate system as the Delaware Ave. IM-035-4(161)87--13-77 and 54th. Ave. IM-035-4(160)87--13-77 Surveys. Phase 3 surveying was accomplished by an IDOT design survey crew and 2 consulting firms. IDOT surveyed project control, mainline alignments, culvert surveys, utility survey, photo control survey and selected ground features. R.E.Y. Consultants surveyed mainline pavement and interchange ramps using mobile LiDAR. Snyder and Associates surveyed railroads. Aerial survey will also be used to create a project surface and to add other topographic features.

IDOT Design Party Personnel

John Dewey- Party Chief
Robert Mingus- Party Chief
Myron Fox- Assistant Party Chief

IDOT Date(s) of Survey

Begin Date 04/2014
End Date 09/2014

R.E.Y Engineers, Inc.
Contract No. 801AH; WO7

Date(s) of R.E.Y. Survey
June-July 2014

Snyder and Associates
Contract No. 433AF; WO 5

Date(s) of R.E.Y. Survey
Oct. 2014

Project Control Information

GPS Control from previous surveys were used as follows:
GPS PROJECT : Sap 323 & 324 STP-69-4(65)--2c-77 (2000 Survey)
STATE PLANE COORDINATE ZONE 1402 (IOWA SOUTH LAMBERT)
STATE PLANE COORDINATES HELD AT POINT G030
AVERAGE PROJECT LATITUDE = 41 40 12.05576
RESULTING RADIUS = 6363663.482 (METERS)
MEAN PROJECT ELEVATION = 285.000 (METERS)
SEA LEVEL FACTOR = 0.999955216
AVERAGE PROJECT SCALE FACTOR = 0.999982250
COMBINED FACTOR (GRID) = 0.999937467
1 / GRID = 1.000062537
VERTICAL DATUM = NAVD 88 <> HORIZONTAL DATUM = NAD 83 (1996)

GPS Control point G024 coordinates from previous surveys were used and the following points were re-observed and adjusted: G013, G025, G026 and G027. G010, G011, G029 and G030 were searched for but not found. It is presumed reconstruction has obliterated those points. Point G128 from an I-235 survey was re- observed and adjusted. Points G128 and G026 are FENO monuments. All other points are 5/8" Rebar. Two FENO monuments were added. These are points 100 and 101.
It is intended that the control included in the re-observation will be the primary control used for future survey work. The FENO monuments designated as 26,100,101 and 128 to the north, south, east and west of the interchange are constructed to hold horizontal and vertical position reasonably well. The other rebar can be used but should be verified first relative to the FENO monuments. It is anticipated additional temporary marks in the interchange will be needed at various stages as the project progresses. Those temporary marks will be established as needed relative to this control.

Alignment Information

Mainline Alignment (I-80)

The I 80 alignment is relative to the control in the metric as-built plans IM-35-3(116)85--13-77 computed from a 1994 metric I 80 survey alignment. Metric alignment points were scaled and translated to this survey coordinate system. No rotation was required. Sta 2000+00.00 was assigned to the PC of the metric I 80 curve west of the Delaware Ave. Bridge. Stationing was run ahead without station equation to the end of the alignment at the mixmaster interchange central intersection point.

This Mainline survey relates to the mainline plan stationing as follows:

CP Sta. 1024+84.88, 97.35' Lt this survey (English)
=CP Sta. 312+34.97, 29.67m Lt Project # IM-35-3(116)85—13-77 (Metric)

POT Sta. 1075+46.01, 0.04' Lt this survey (English)
=POT Sta. 327+77.59, 0.010m Lt Project # IM-35-3(116)85—13-77 (Metric)

POT Sta. 1181+51.81 this survey (English)
=POT Sta. 1181+53.0 Project # IM-80-5(145)137--13-77 (English)

Mainline Alignment (I-35)

From 2001/2002 I-35 Realignment, Project # IM-35-4(101)—13-77
The mainline alignment for this survey is a retrace of Project # IM-35-4(101)—13-77. The mainline alignment was created in centerline of median. Stationing was obtained at PI Sta. 2001+60.36 and carried ahead to PI Sta. 3100+53.44 without equation. The following PI points were used to create this CL alignment.

PI 2001+60.36 Project # IM-35-4(101)88—13-77 (not found or set)
PI 3100+53.44 Project # IM-35-4(101)88—13-77 (not found or set)

This Mainline survey relates to the mainline plan stationing as follows:

PI Sta. 2001+60.36 this survey
=PI Sta. 2001+60.36 Project # IM-35-4(101)88—13-77

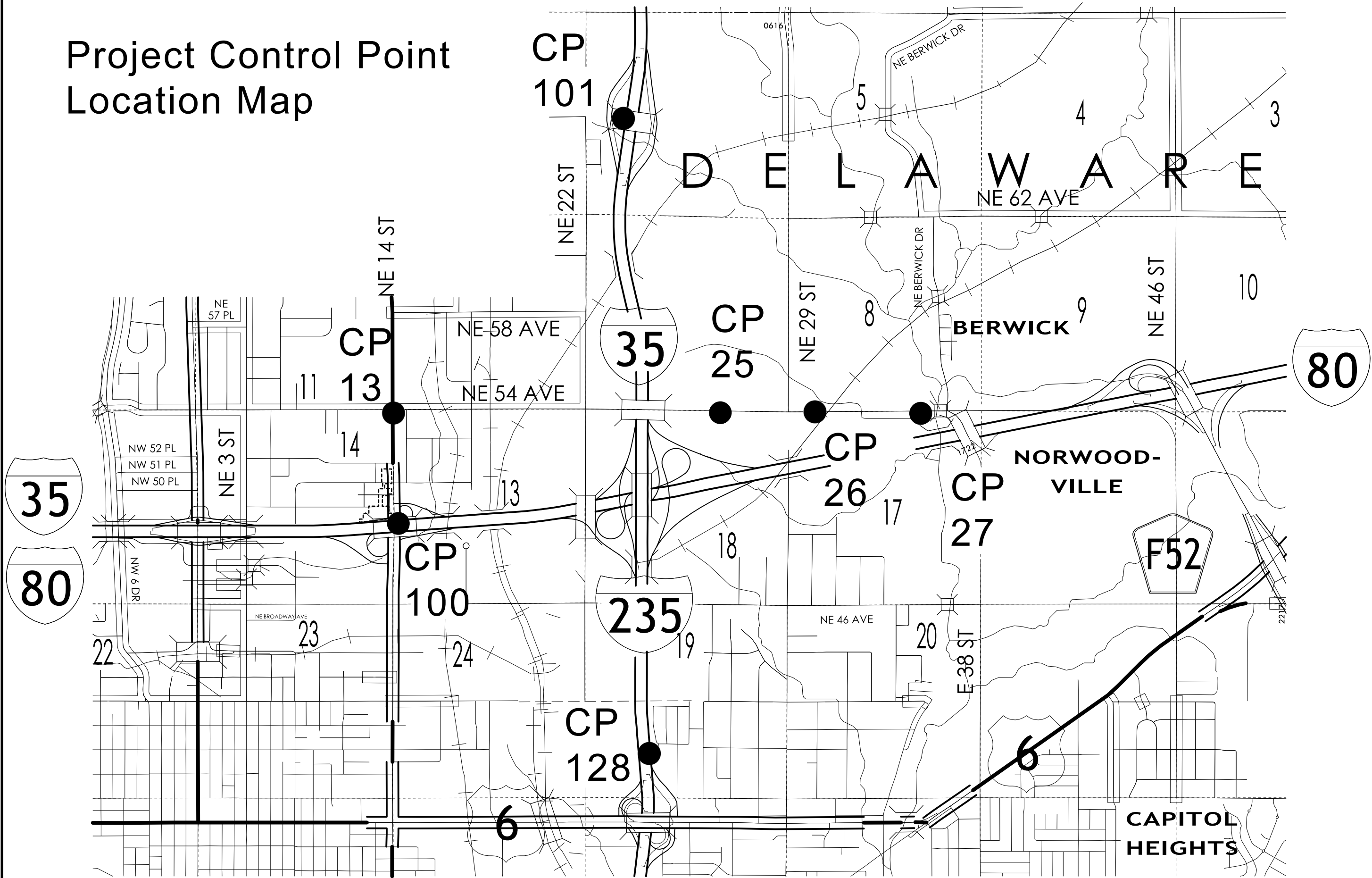
PI Sta. 2100+53.74 this survey
=PI Sta. 3100+53.44 Project # IM-35-4(101)88—13-77

Project Control -FENO monuments are also Bench Marks

Points may be recovered by using IaRTN positioning device

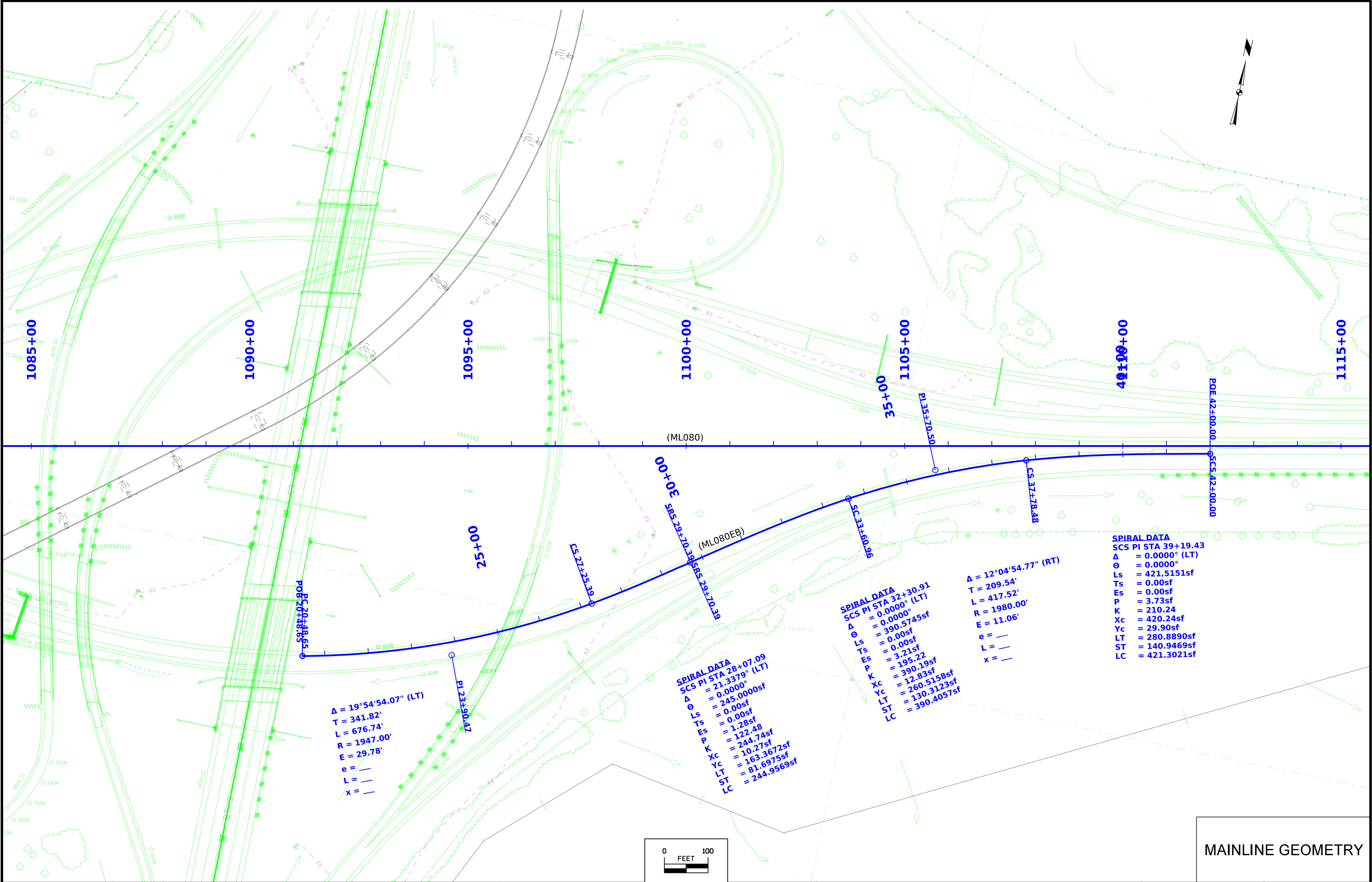
Name	Ground Northing (USft)	Ground Easting (USft)		
13	604251.756	1612997.613		
25	604260.796	1621907.741	939.609	
26	604283.735	1624489.54	886.7	
27	604243.29	1627372.639	838.959	
100	601242.316	1613129.094	904.541	Feno. Monument
101	612281.879	1619265.525	932.935	Feno. Monument
128	594971.978	1619970.2	933.868	Feno. Monument between top backslope and ROW fence in east ROW

Project Control Point Location Map

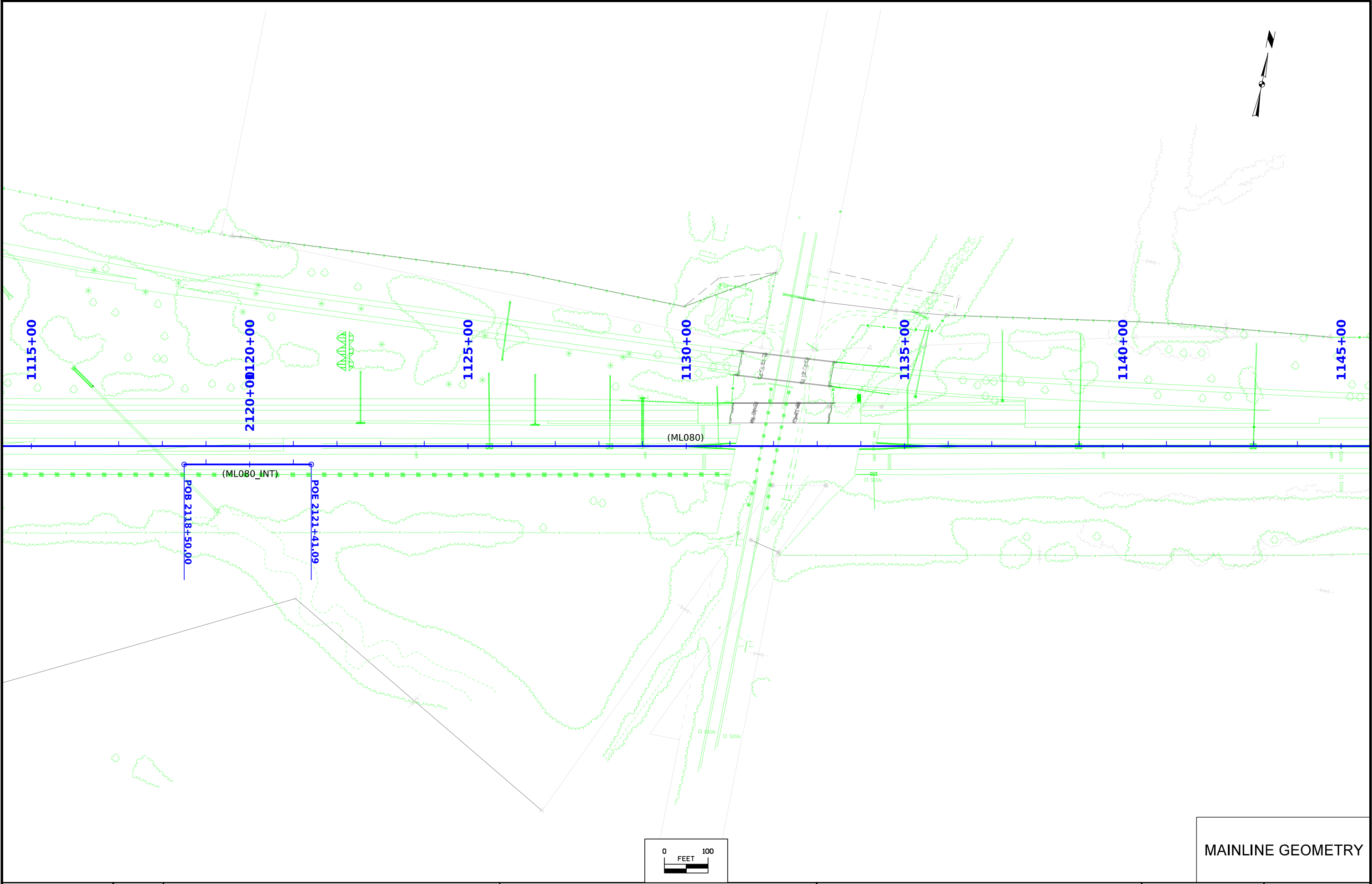


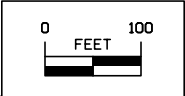
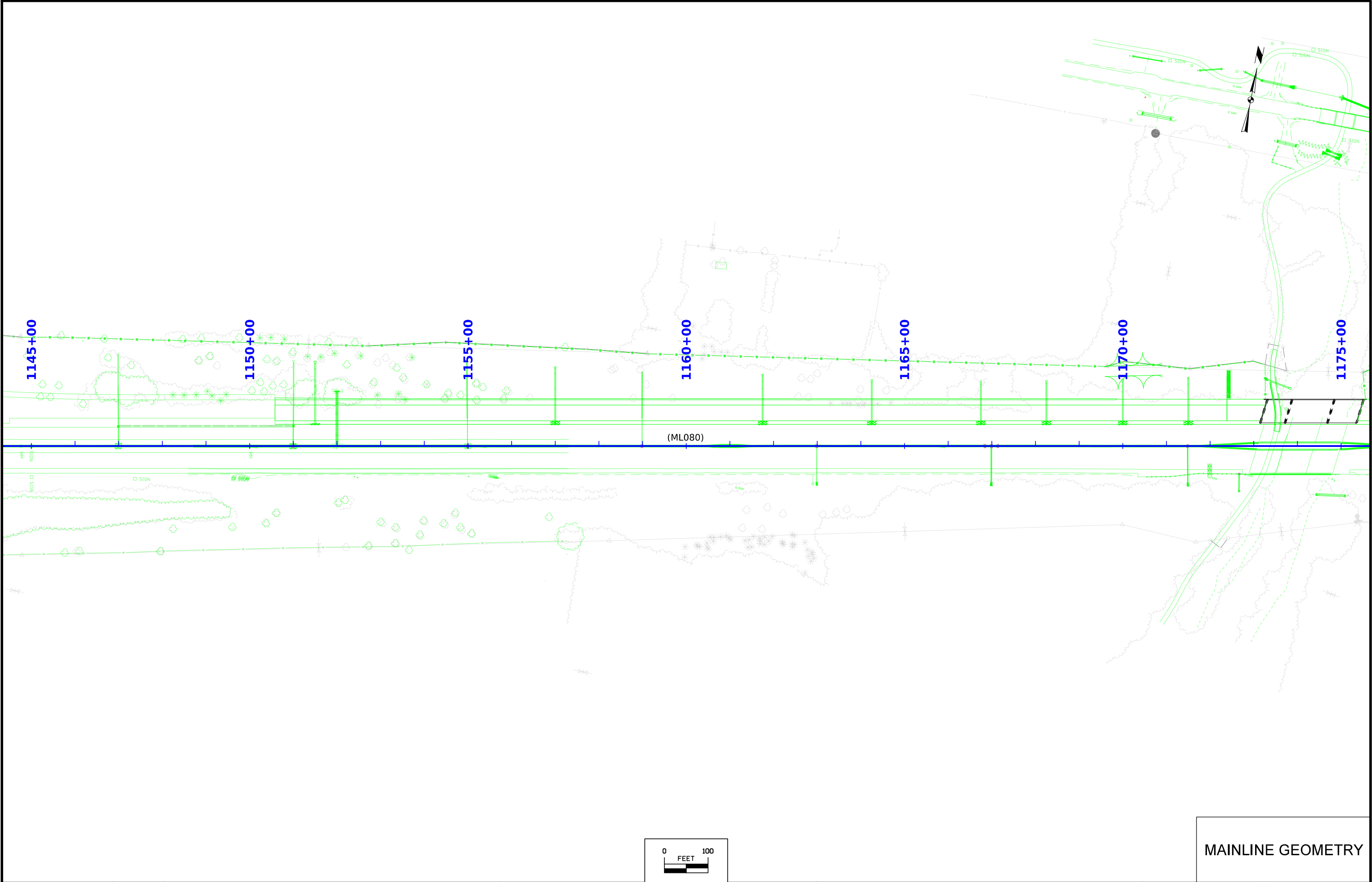
ALIGNMENT COORDINATES																			
Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
1	ML080	1024+84.88	601145.79	1613164.17															
2	ML080							1058+28.34	601384.75	1616499.08	1064+81.99	601431.47	1617151.06	1071+34.02	601556.86	1617792.56			
3	ML080	1241+76.59	604826.05	1634518.64															
4	ML080 INT	2118+50	602420.28	1622429.02															
5	ML080 INT	2121+41.09	602476.12	1622714.70															
6	ML080 INT2	3202+31	604042.69	1630651.50															
7	ML080 INT2	3208+50	604161.43	1631259.00															
8	ML080EB							20+48.65	601465.70	1619834.83	23+90.47	601533.17	1620169.92	27+25.39	601710.74	1620462.00			
9	ML080EB				27+25.39	601710.74	1620462.00				28+07.09	601753.18	1620531.81				29+70.39	601846.66	
10	ML080EB				29+70.39	601846.66	1620665.79				32+30.91	601995.73	1620879.44				33+60.96	602059.41	
11	ML080EB							33+60.96	602059.41	1620993.13	35+70.5	602161.80	1621175.95	37+78.48	602223.66	1621376.15			
12	ML080EB				37+78.48	602223.66	1621376.15				39+19.43	602265.27	1621510.81				42+00.00	602319.15	
13	ML235	1949+59.42	590888.03	1619611.10															
14	ML235							1973+48.82	593260.91	1619891.57	1976+35.85	593545.95	1619925.27	1979+20.97	593832.02	1619901.74			
15	ML235							1999+18.25	595822.57	1619738.02	2001+63.13	596066.63	1619717.95	2004+07.71	596311.51	1619718.77			
16	ML235							2091+68.42	605072.17	1619748.25	2100+53.74	605957.48	1619751.23	2109+31.19	606820.01	1619551.67			
17	ML235							2120+36.81	607897.17	1619302.45	2133+30.72	609157.79	1619010.79	2145+94.73	610438.20	1619197.30			
18	ML235							2175+76.86	613389.19	1619627.15	2181+89.48	613995.41	1619715.45	2187+99.48	614607.95	1619706.03			
19	ML235	2221+71.45	617979.53	1619654.15															
20	235H	39651+00.00	601045.03	1620021.78															
21	235H							39653+34.76	601249.44	1620137.22	39658+35.08	601685.10	1620383.24	39662+91.48	602174.59	1620279.66			
22	235H	39664+22.29	602302.56	1620252.58															
23	235H	39667+23.19	602596.94	1620190.29															
24	235H							39667+52.75	602625.86	1620184.17	39667+88.70	602661.04	1620176.73	39668+24.62	602696.69	1620172.07			
25	235H							39668+24.62	602696.69	1620172.07	39675+29.26	603395.37	1620080.68	39674+68.26	602931.38	1620610.98			
26	235H							39674+68.26	602931.38	1620610.98	39681+73.68	602466.86	1621141.87	39681+12.08	602465.19	1620436.45			
27	235H	39683+73.06	602464.57	1620175.47															
28	235D ULT							33544+06.61	600310.04	1619835.10	33549+83.45	600884.98	1619881.96	33555+07.99	601280.37	1620301.97			
29	235D ULT							33555+07.99	601280.37	1620301.97	33561+66.39	601731.67	1620781.37	33568+09.58	601977.92	1621391.98			
30	235D INT	37008+10.93	601062.11	1620111.02															
31	235D INT							37010+73.54	601275.74	1620263.74	37013+06.43	601465.21	1620399.17	37015+38.40	601631.50	1620562.23			
32	235D INT							37015+38.40	601631.50	1620562.23	37016+84.98	601736.16	1620664.86	37018+31.47	601833.91	1620774.10			
33	235D INT							37018+31.47	601833.91	1620774.10	37021+23.75	602028.82	1620991.90	37024+09.66	602134.14	1621264.55			
34	DET01 RAMPDINT							400+00	600313.63	1619789.74	403+45.78	600658.30	1619817.42	406+81.02	600960.56	1619985.35			
35	DET02 RAMPDINT							500+00	601157.91	1620122.89	503+23.36	601424.72	1620305.58	506+45.000	601654.85	1620532.73			
36	DET02 RAMPDINT							506+45.00	601654.85	1620532.73	507+75.82	601747.95	1620624.63	509+06.53	601834.58	1620722.66			
37	SR29TH	38800+00.00	602279.20	1623735.62															
38	SR29TH	38808+85.14	603164.34	1623735.41															
39	RW 3010 TEMP WALL	301132+50.00	602733.98	1623794.19															
40	RW 3010 TEMP WALL	301134+50.00	602772.35	1623990.48															
41	FMC TRAIL	300+00.00	603124.02	1627662.18															
42	FMC TRAIL							300+32.44	603155.09	1627671.49	300+66.85	603188.06	1627681.36	301+01.06	603218.67	1627697.07			
43	FMC TRAIL							301+80.76	603289.58	1627733.45	302+01.20	603307.77	1627742.78	302+21.39	603322.80	1627756.63			
44	FMC TRAIL							302+28.49	603328.02	1627761.45	302+78.06	603364.45	1627795.05	303+24.24	603413.74	1627800.32			
45	FMC TRAIL							304+51.35	603540.14	1627813.85	304+88.55	603577.12	1627817.81	305+24.28	603611.67	1627804.02			
46	FMC TRAIL							305+62.70	603647.36	1627789.79	306+01.45	603683.35	1627775.43	306+39.26	603722.11	1627775.56			
47	FMC TRAIL							306+78.37	603761.22	1627775.68	307+56.87	603839.72	1627775.94	308+32.95	603911.20	1627743.49			
48	FMC TRAIL	309+02.45	603974.48	1627714.76															
49	SR38TH	2139+87.91	602574.98	1628993.17															
50	SR38TH							2141+82.24	602769.31	1628991.99	2142+80.98	602868.05	1628991.39	2143+76.63	602957.46	1628949.51			
51	SR38TH	2145+93.72	603154.05	1628857.42															
52	SR38TH							2154+83.48	603952.92	1628465.66	2157+23.48	604168.41	1628359.99	2159+41.78	604257.78	1628137.26			
53	SR38TH							2159+41.78	604257.78	1628137.26	2160+06.04	604281.71	1628077.62	2160+68.66	604281.15	1628013.36			
54	SR38TH	2164+11.47	604278.13	1627670.57															

101-17 04-19-11																
SPIRAL OR CIRCULAR CURVE DATA																
Name	Location	ΔSCS	Horizontal Alignment Data												Remarks	
			Spiral Data								Curve Data					
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R		E
T1900xt	ML080										6.961	653.646	1305.684	10747.467	19.859	
T1900xt	ML080EB										19.915	341.820	676.743	1947.000	29.778	
T1900xt	ML080EB			245			244.74	10.27	163.37	81.70						
T1900xt	ML080EB			390.57			390.19	12.83	260.52	130.31						
T1900xt	ML080EB										12.082	209.537	417.520	1980.000	11.056	
T1900xt	ML080EB			421.52			420.24	29.90	280.89	140.95						
T1900xt	ML235										11.443	287.029	572.149	2864.790	14.343	
T1900xt	ML235										4.895	244.881	489.463	5729.579	5.231	
T1900xt	ML235										13.220	885.313	1762.764	7639.985	51.124	
T1900xt	ML235										21.315	1293.920	2557.926	6875.986	120.685	
T1900xt	ML235										9.169	612.616	1222.615	7639.985	24.522	
T1900xt	235H										41.402	500.325	956.725	1324.000	91.380	
T1900xt	235H										4.496	35.96	71.88	916	.71	
T1900xt	235H										138.637	704.64	643.63	266	487.17	
T1900xt	235H										138.679	705.43	705.43	266	487.91	
T1900xt	235D ULT										42.070	576.845	1101.385	1500.000	107.094	
T1900xt	235D ULT										21.307	658.399	1301.587	3500.000	61.389	
T1900xt	235D INT										8.878	232.895	464.858	3000.000	9.026	
T1900xt	235D INT										3.738	146.587	293.070	4492.000	2.391	
T1900xt	235D INT										20.705	292.283	578.190	1600.000	26.478	
T1900xt	DET01_RAMPDINT										24.464	345.777	681.015	1595.000	37.050	
T1900xt	DET02_RAMPDINT										10.226	323.359	645.001	3614.000	14.437	
T1900xt	DET02_RAMPDINT										3.908	130.816	261.530	3834.000	2.231	
T1900xt	FMC_TRAIL										10.486	34.411	68.629	375.000	1.575	
T1900xt	FMC_TRAIL										15.521	20.442	40.634	150.000	1.387	
T1900xt	FMC_TRAIL										36.571	49.566	95.744	150.000	7.977	
T1900xt	FMC_TRAIL										27.856	37.199	72.927	150.000	4.544	
T1900xt	FMC_TRAIL										21.933	38.754	76.560	200.000	3.720	
T1900xt	FMC_TRAIL										24.603	78.502	154.585	360.000	8.460	
T1900xt	SR38TH										24.751	98.736	194.392	450.000	10.705	
T1900xt	SR38TH										42.013	239.997	458.291	625.000	44.495	
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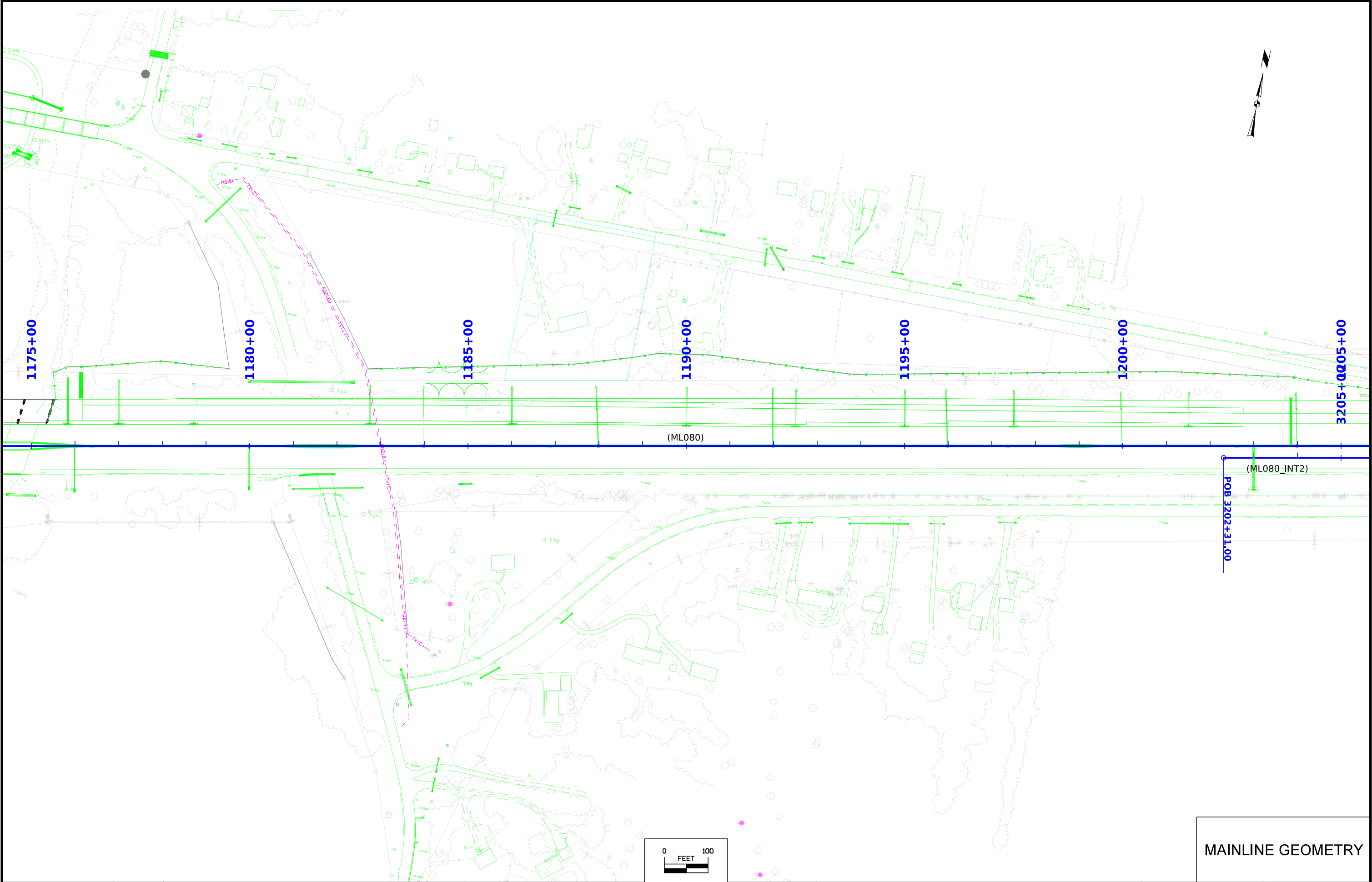
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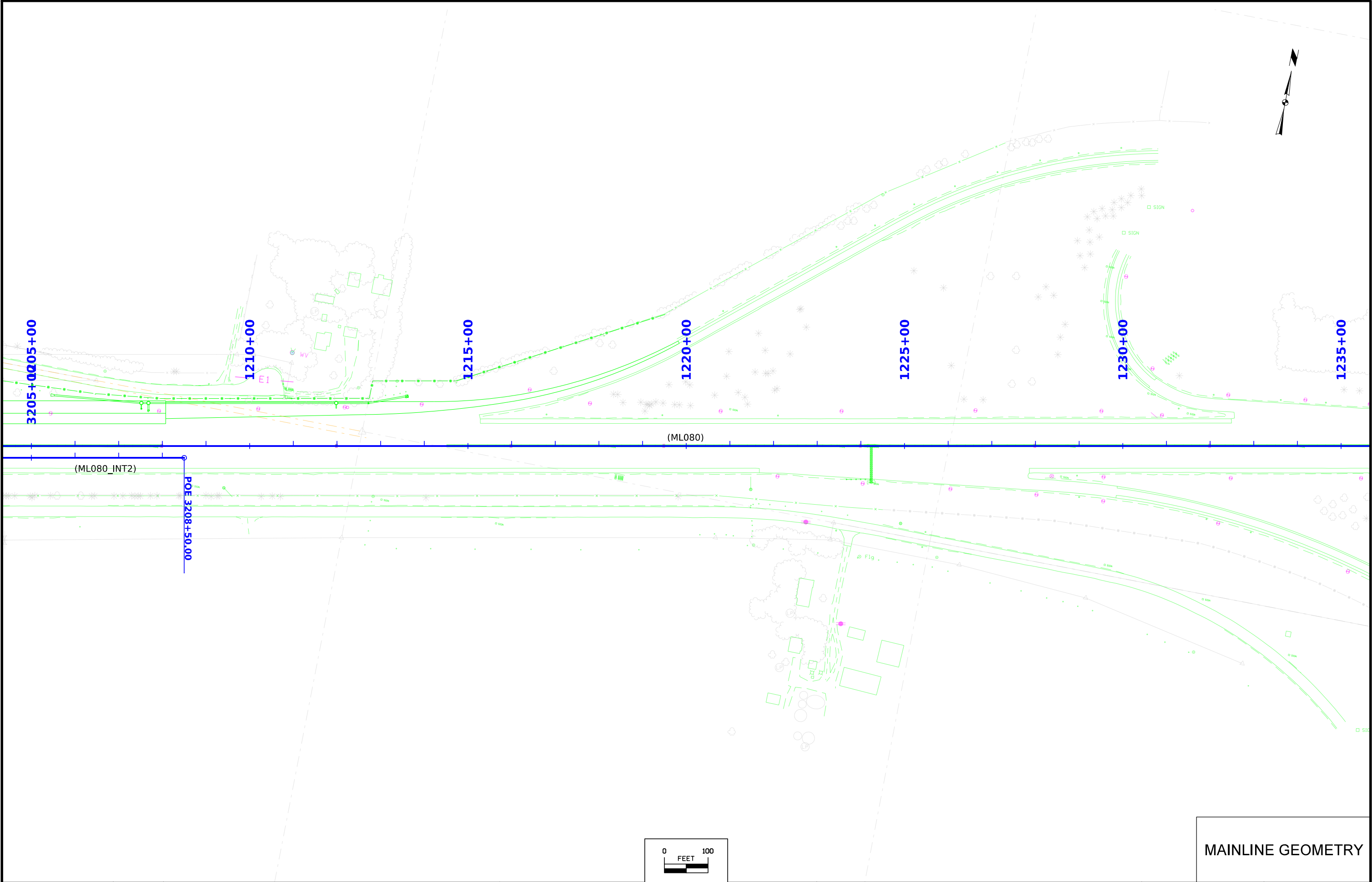




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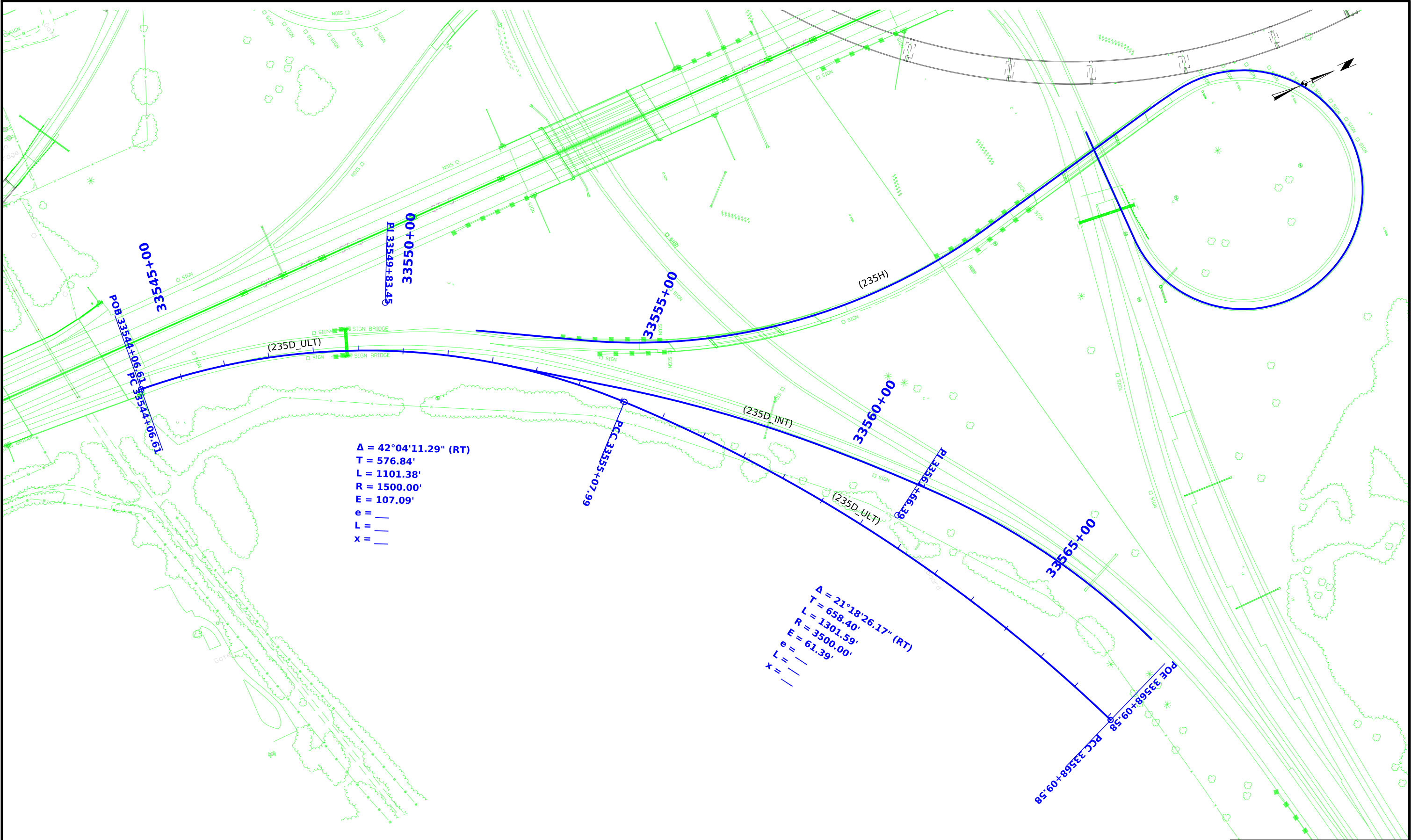
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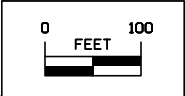
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FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT \ HDR	POLK COUNTY	PROJECT NUMBER IM-NHS-080-4(085)138--03-77	SHEET NUMBER G.11
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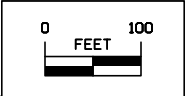
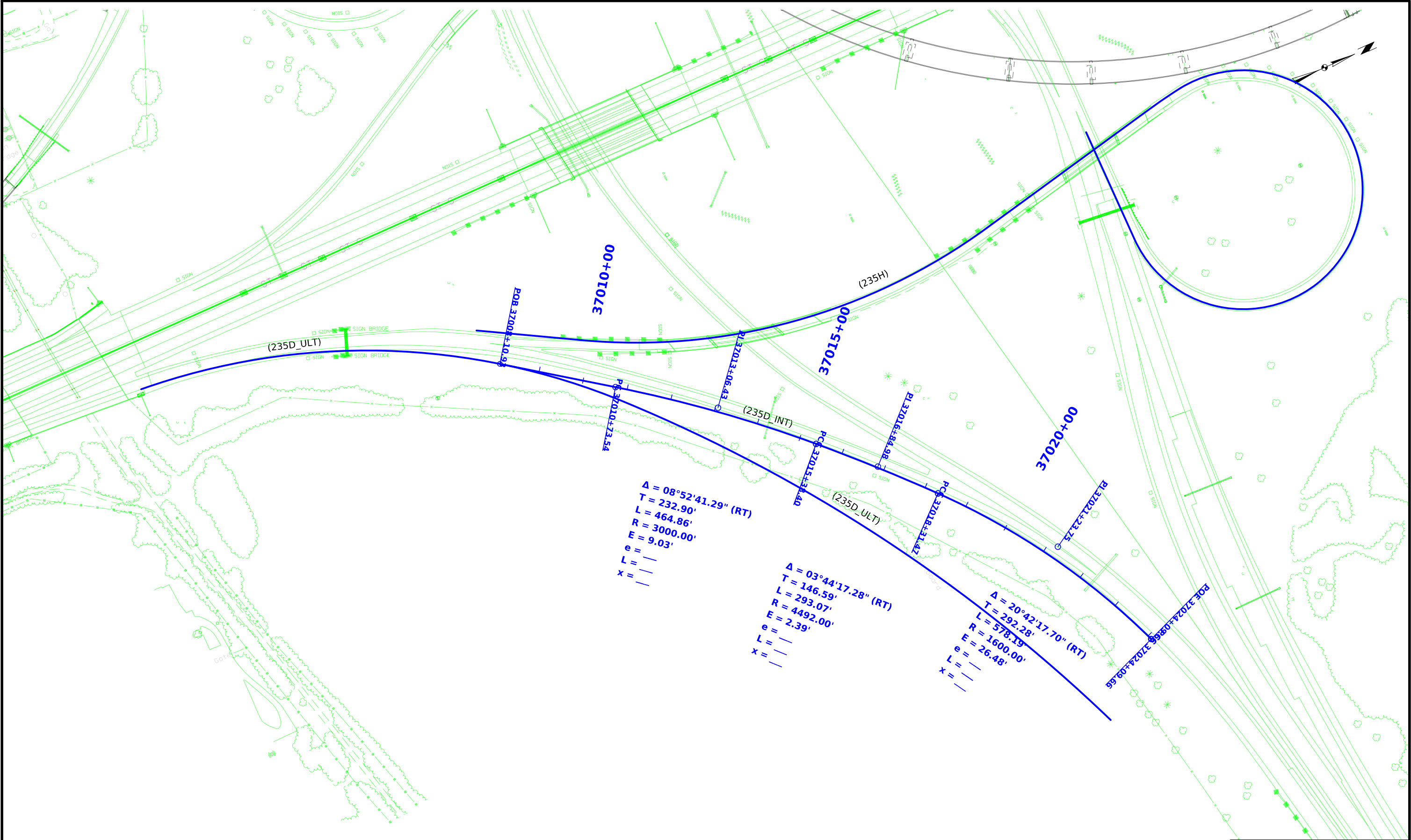


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 $L = 1101.38'$
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 $E = 107.09'$
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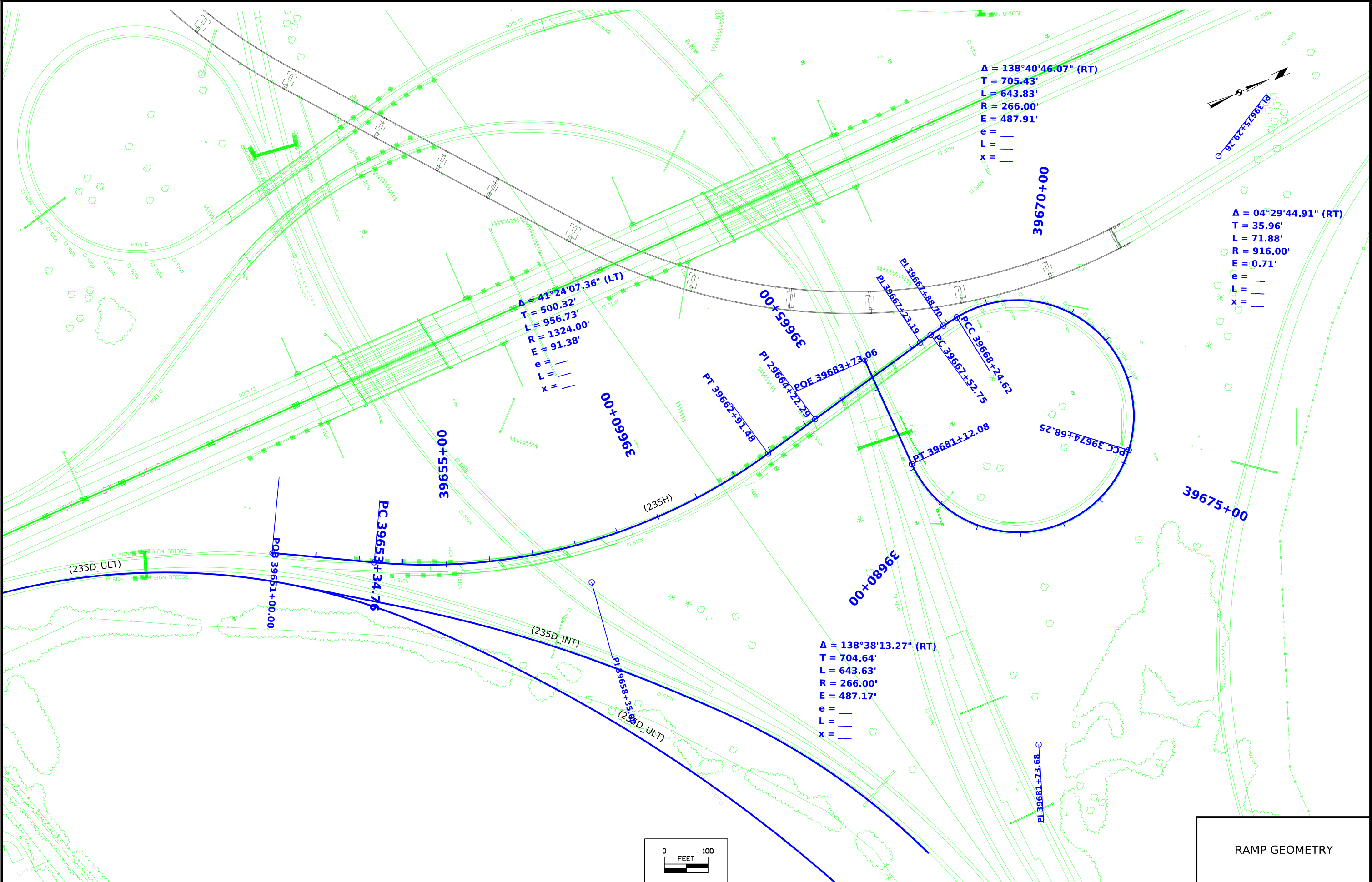
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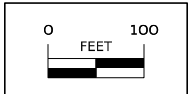
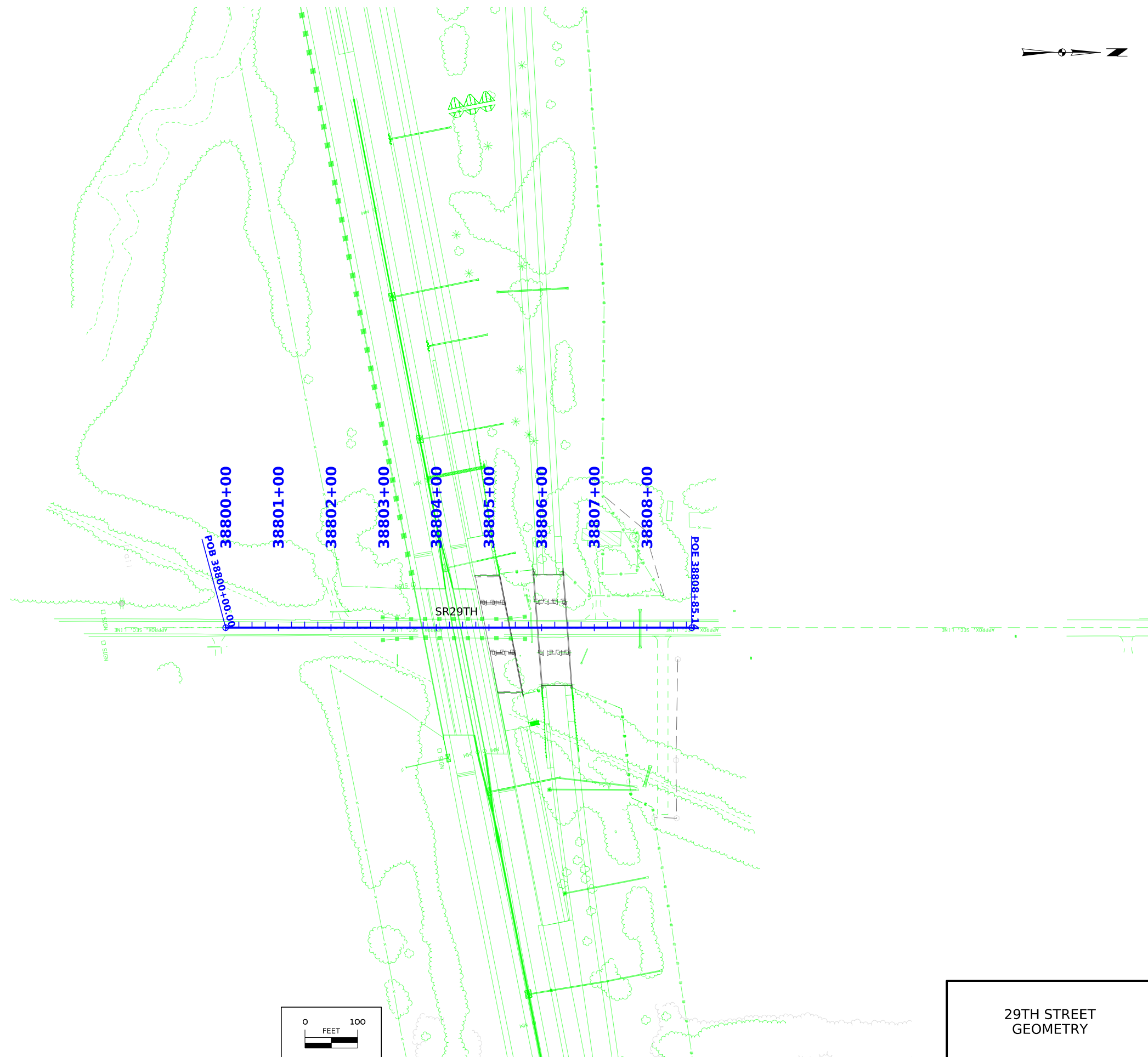
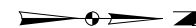
RAMP GEOMETRY



RAMP GEOMETRY

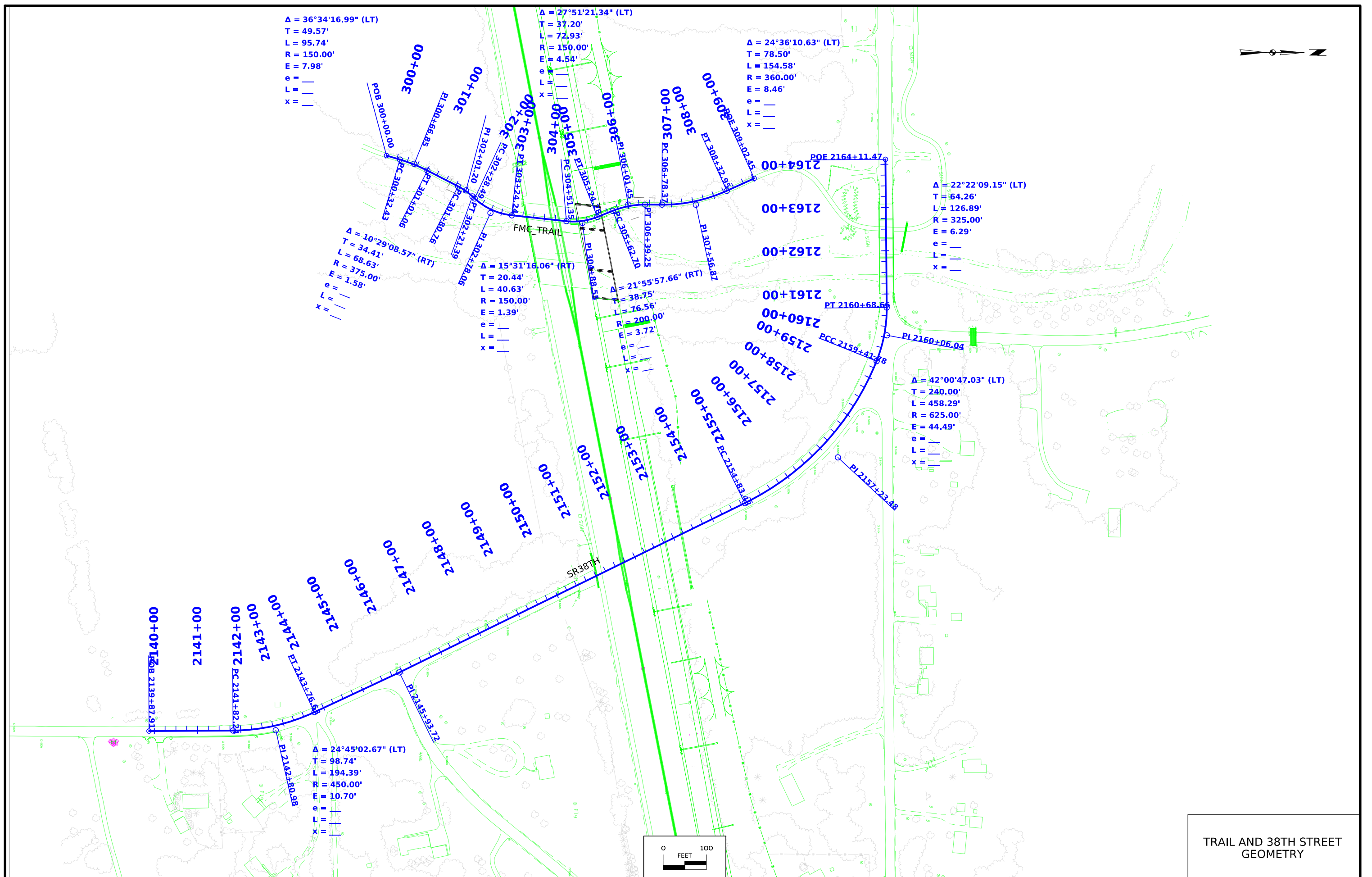


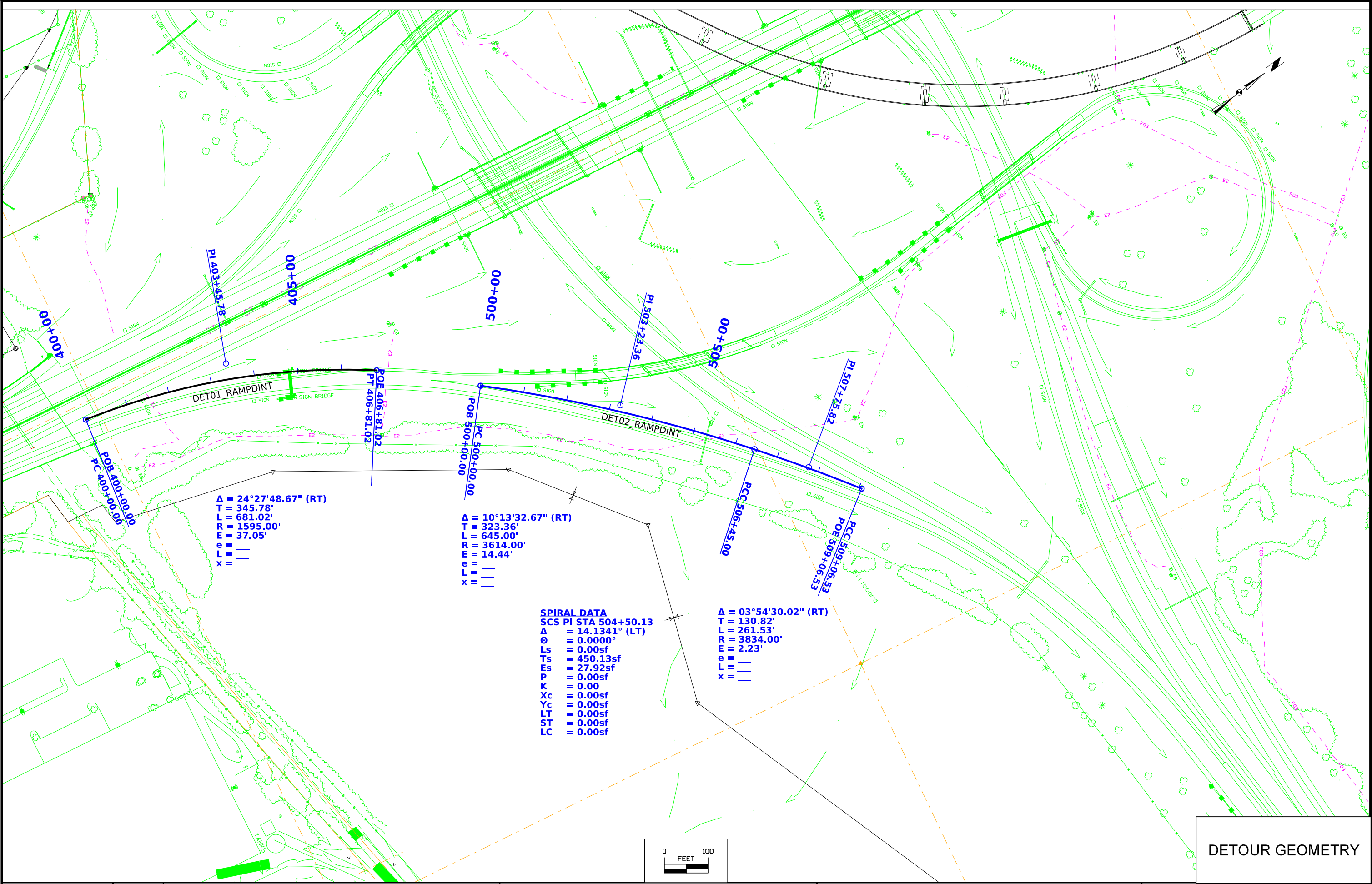
RAMP GEOMETRY



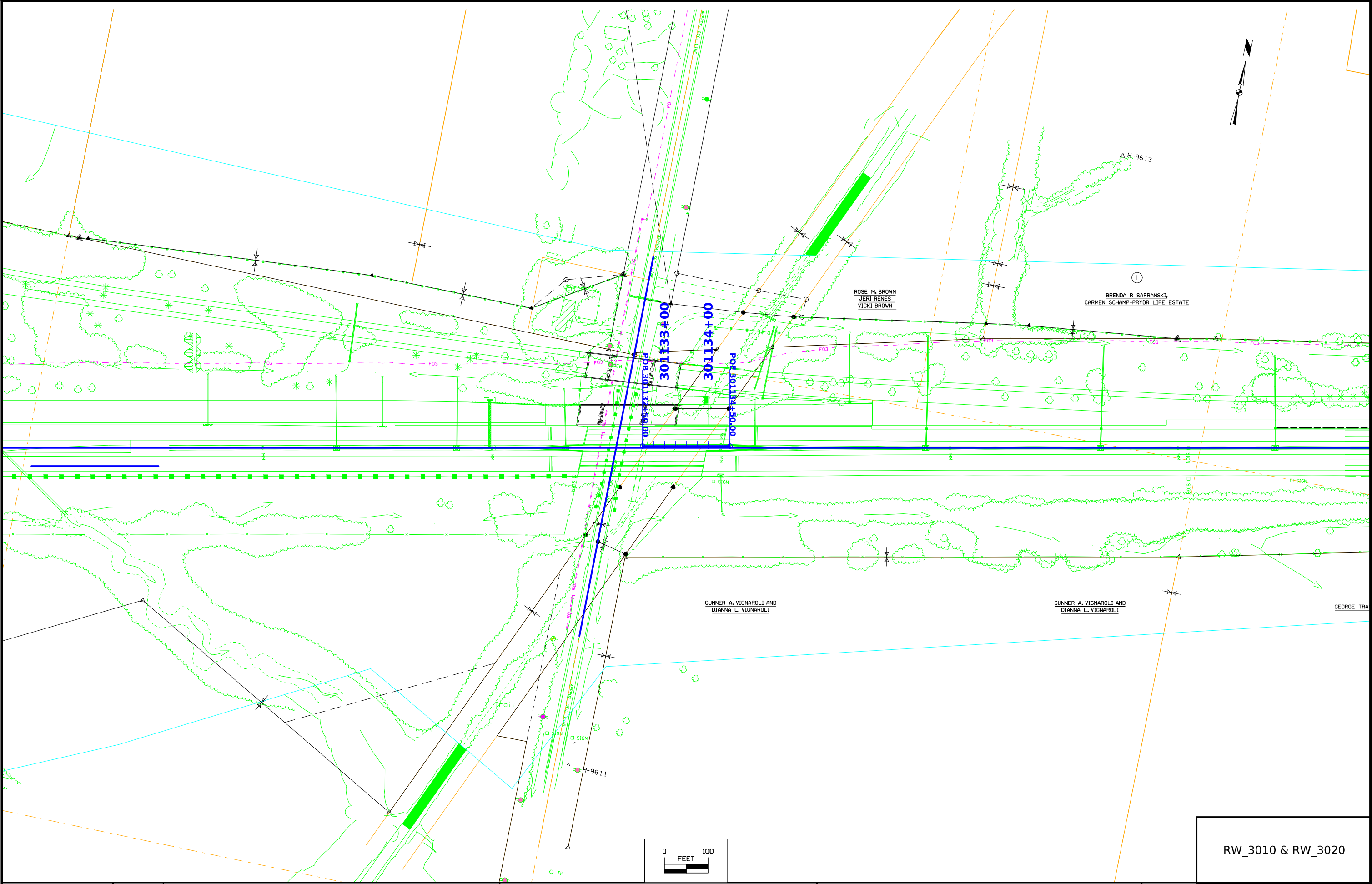
29TH STREET
GEOMETRY

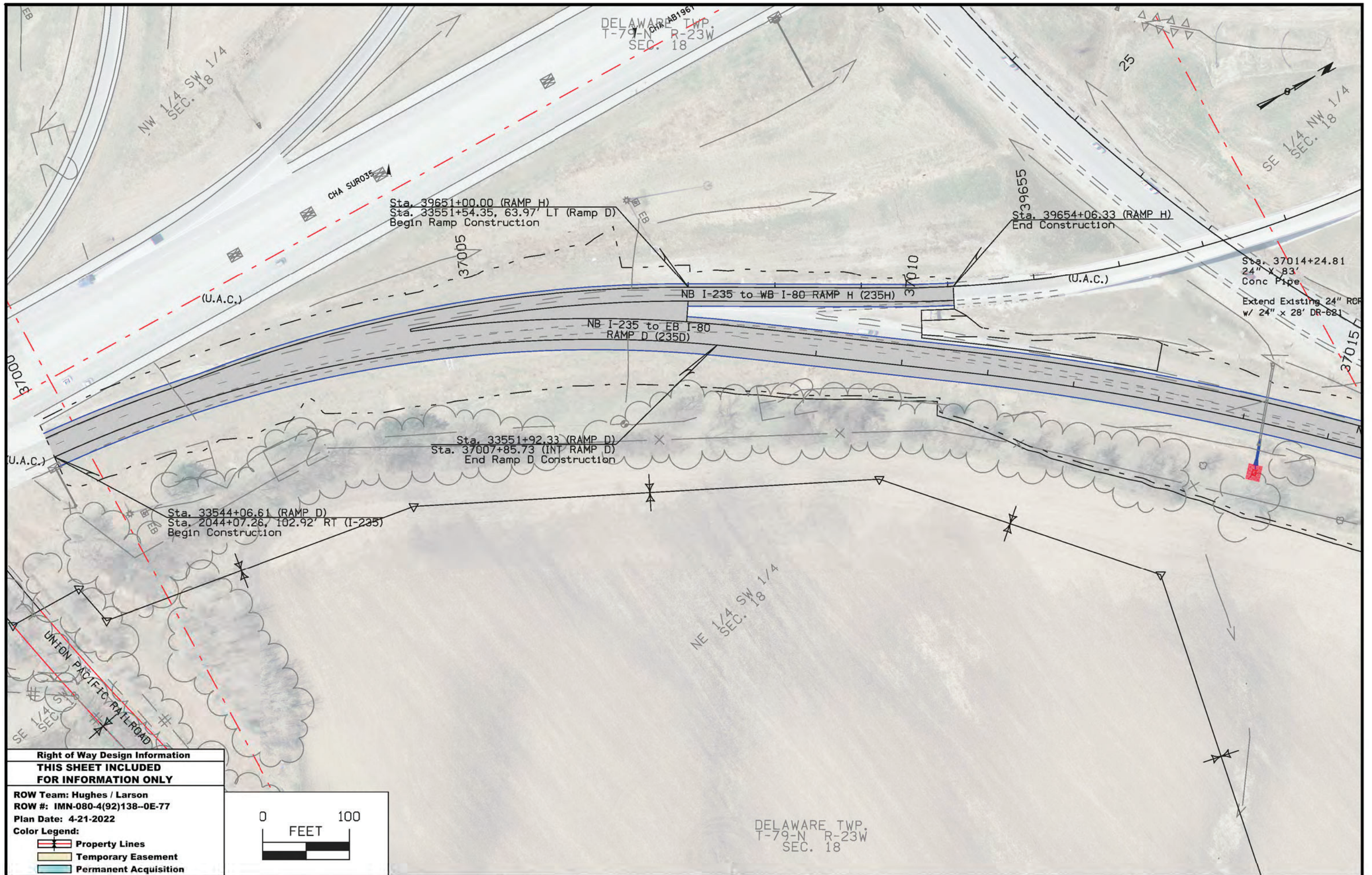
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DETOUR GEOMETRY





Right of Way Design Information

THIS SHEET INCLUDED

FOR INFORMATION ONLY

ROW Team: Hughes / Larson

ROW #: IMN-080-4(92)138-0E-77

Plan Date: 4-21-2022

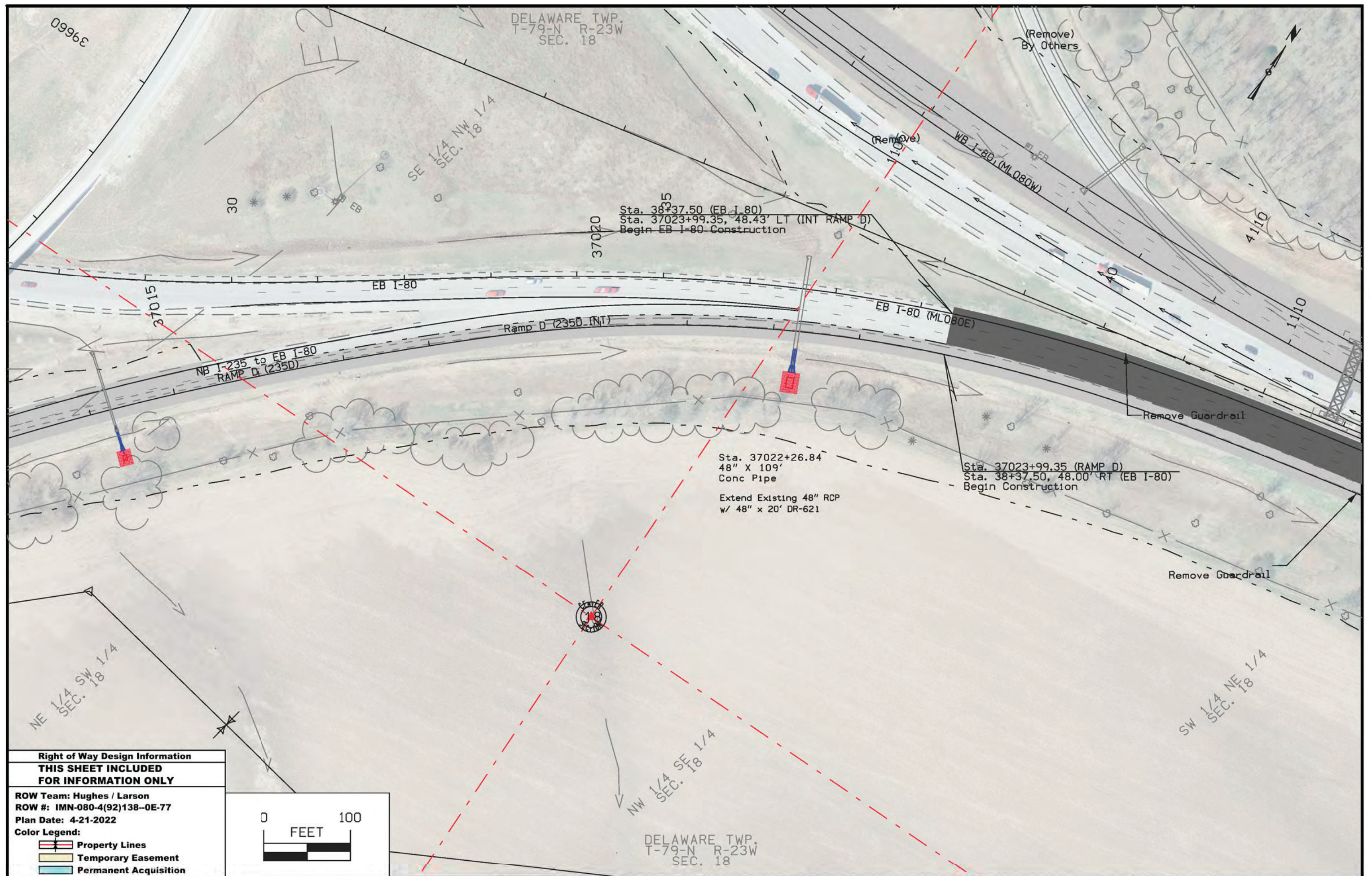
Color Legend:

Property Lines

Temporary Easement

Permanent Acquisition





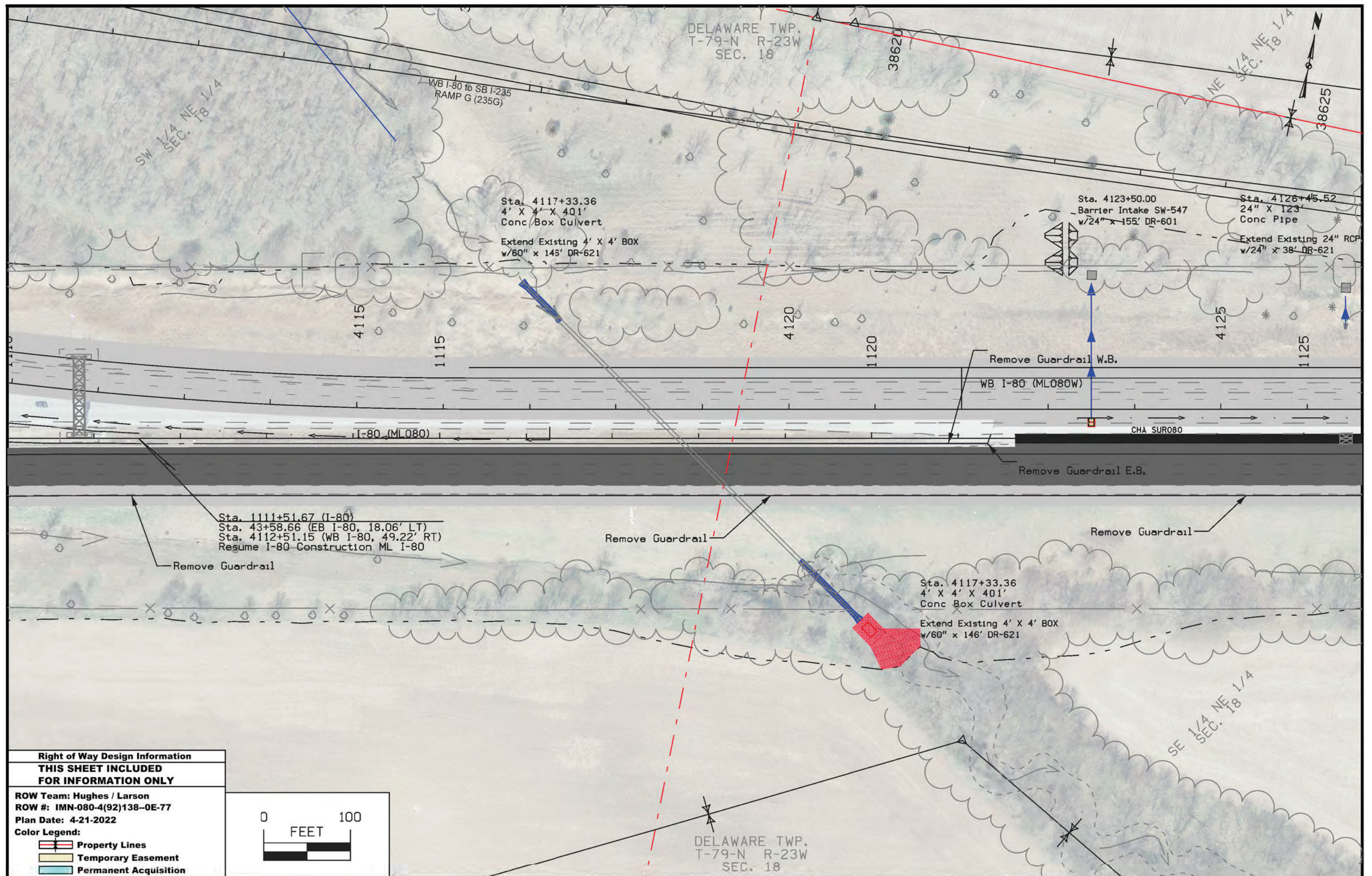
Right of Way Design Information
THIS SHEET INCLUDED
FOR INFORMATION ONLY

ROW Team: Hughes / Larson
ROW #: IMN-080-4(92)138-0E-77
Plan Date: 4-21-2022

Color Legend:

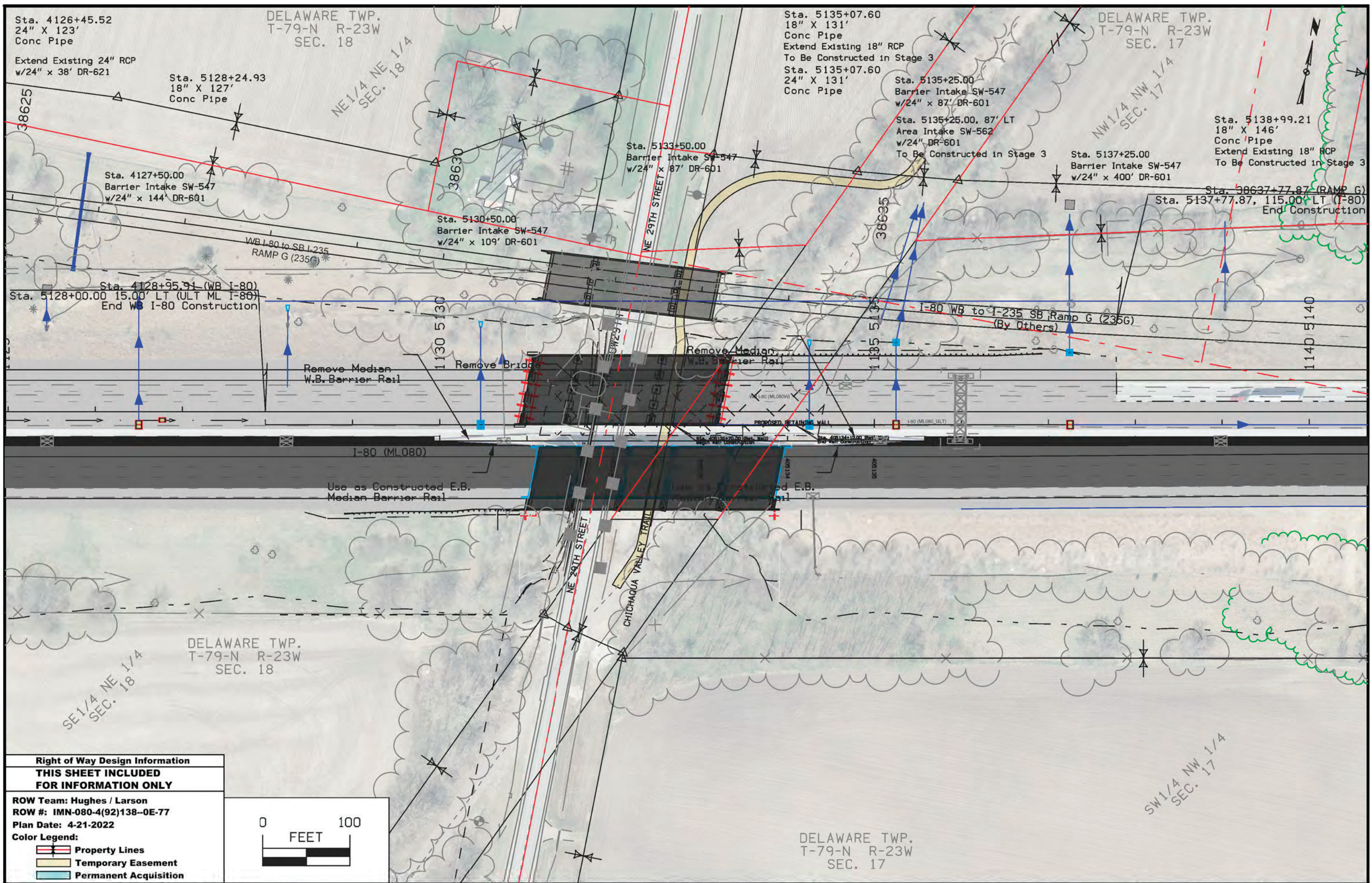
- Property Lines
- Temporary Easement
- Permanent Acquisition



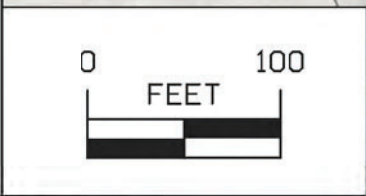


Right of Way Design Information			
THIS SHEET INCLUDED			
FOR INFORMATION ONLY			
ROW Team: Hughes / Larson			
ROW #: IMN-080-4(92)138-0E-77			
Plan Date: 4-21-2022			
Color Legend:			
	Property Lines		
	Temporary Easement		
	Permanent Acquisition		





Right of Way Design Information	
THIS SHEET INCLUDED	
FOR INFORMATION ONLY	
ROW Team: Hughes / Larson	
ROW #: IMN-080-4(92)138-0E-77	
Plan Date: 4-21-2022	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



Right of Way Design Information

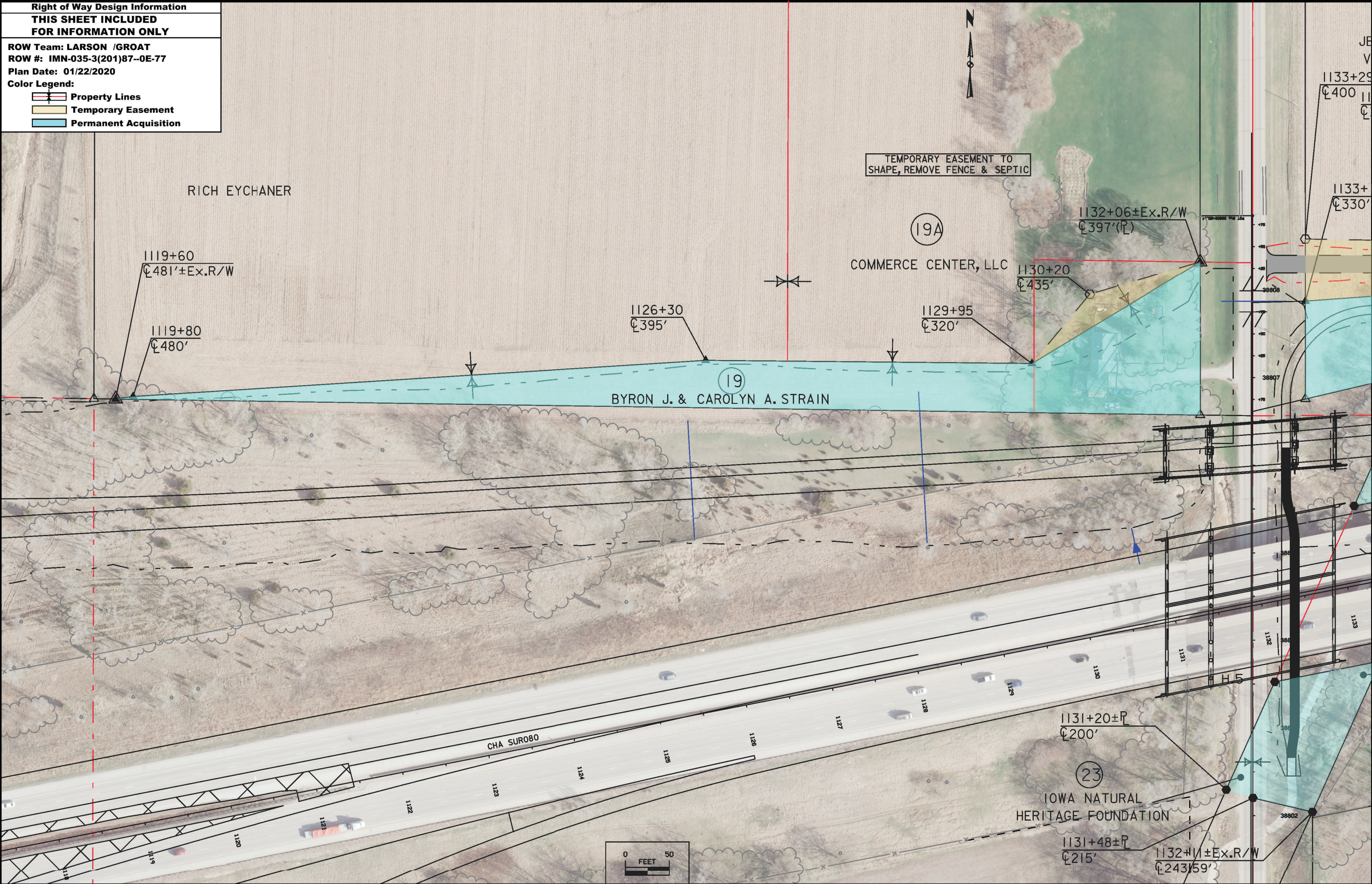
THIS SHEET INCLUDED
FOR INFORMATION ONLY

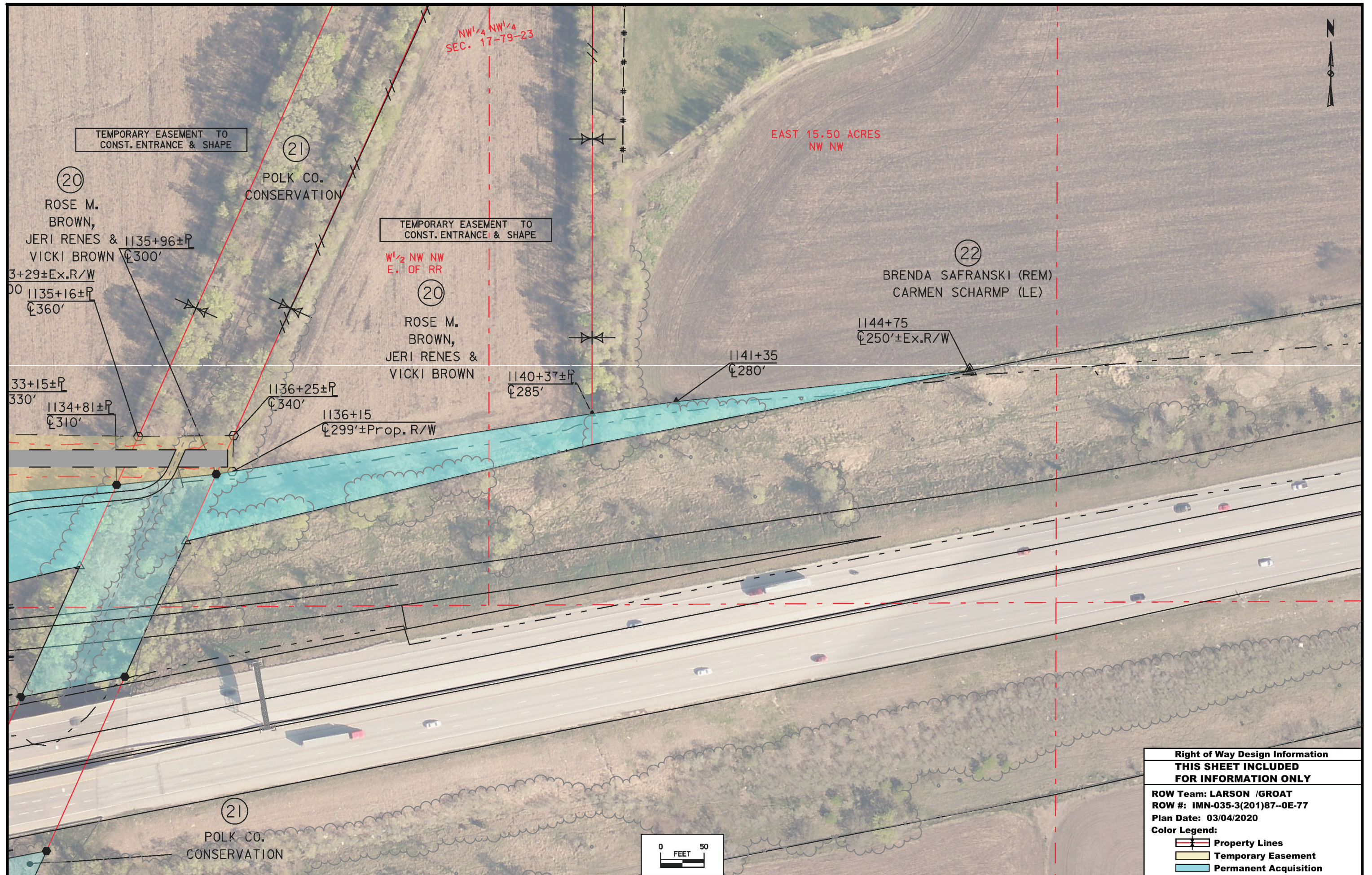
ROW Team: LARSON /GROAT
ROW #: IMN-035-3(201)87-0E-77
Plan Date: 01/22/2020
Color Legend:

Property Lines

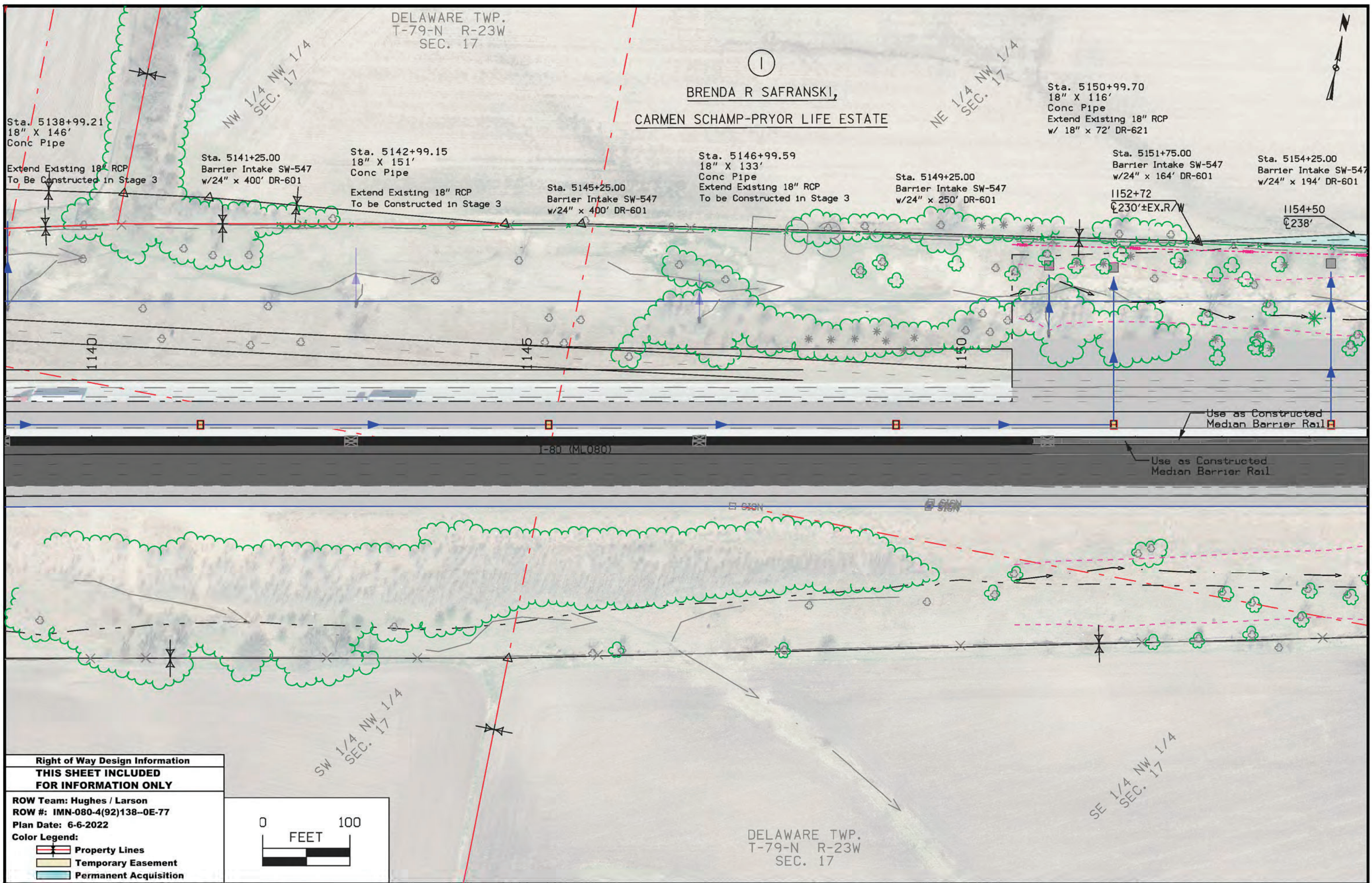
Temporary Easement

Permanent Acquisition





Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: LARSON /GROAT	
ROW #: IMN-035-3(201)87-0E-77	
Plan Date: 03/04/2020	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



Right of Way Design Information

THIS SHEET INCLUDED
FOR INFORMATION ONLY

ROW Team: Hughes / Larson

ROW #: IMN-080-4(92)138-0E-77

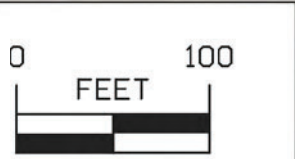
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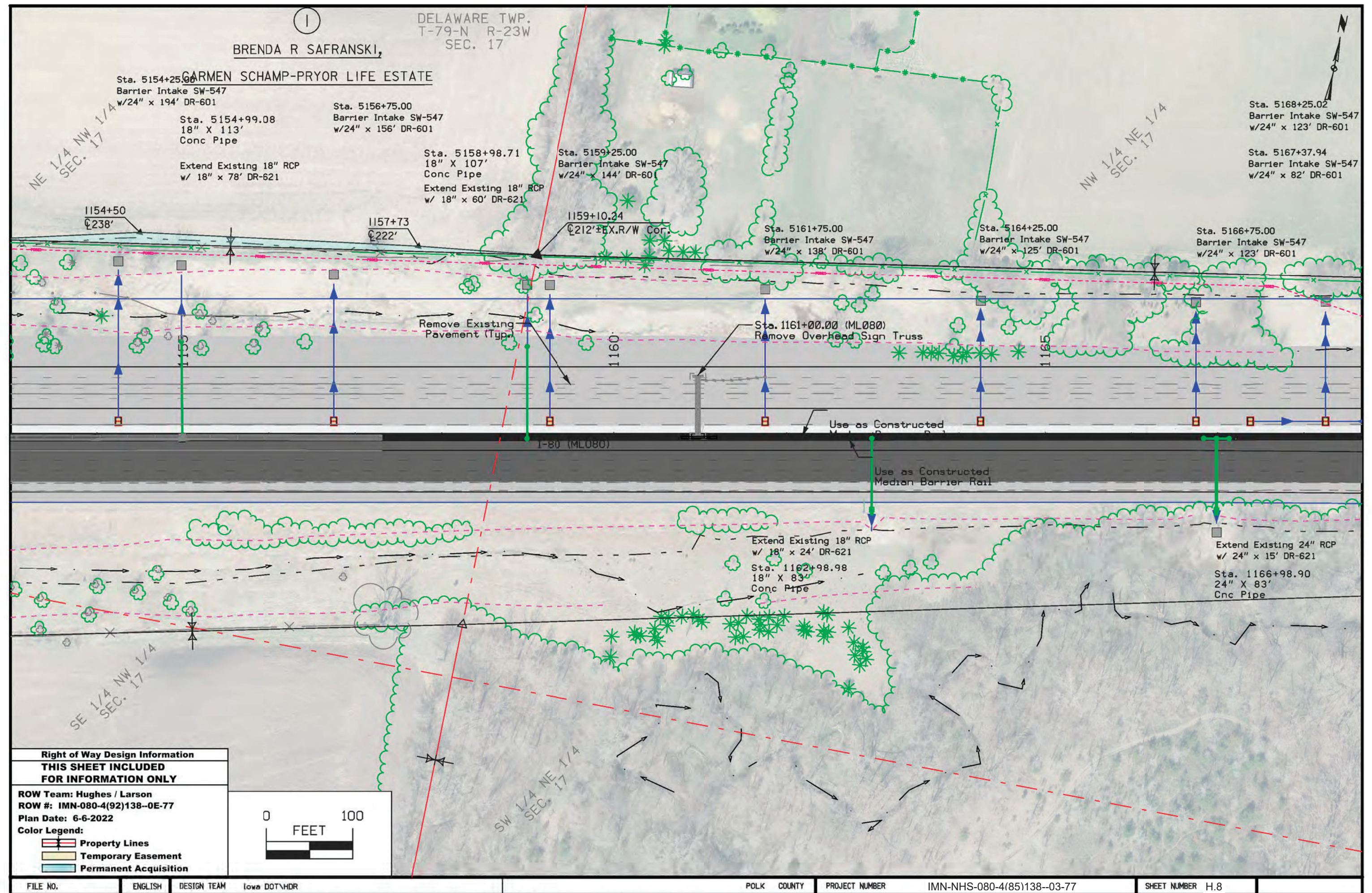
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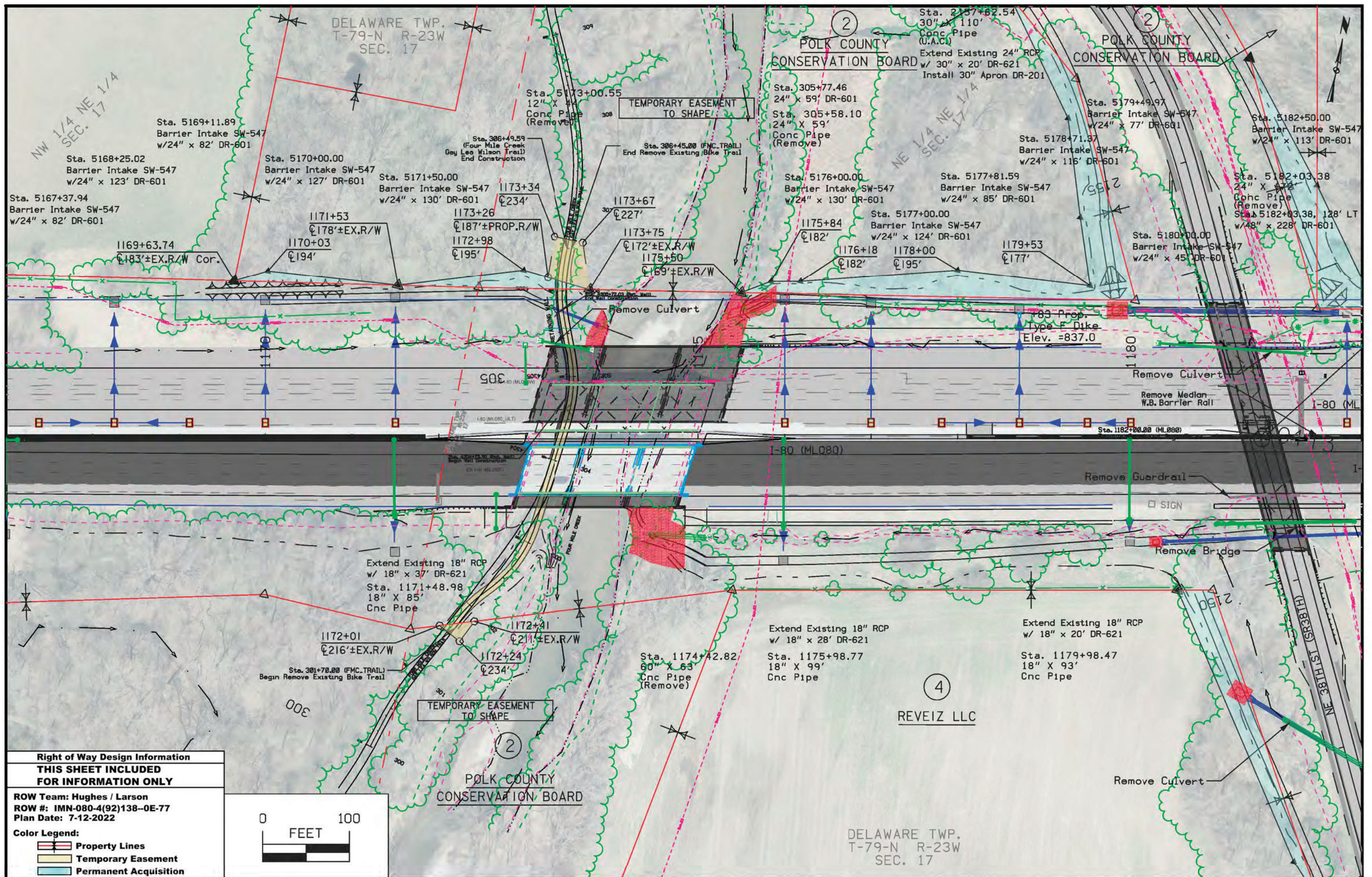
Property Lines

Temporary Easement

Permanent Acquisition

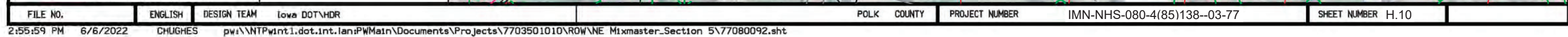


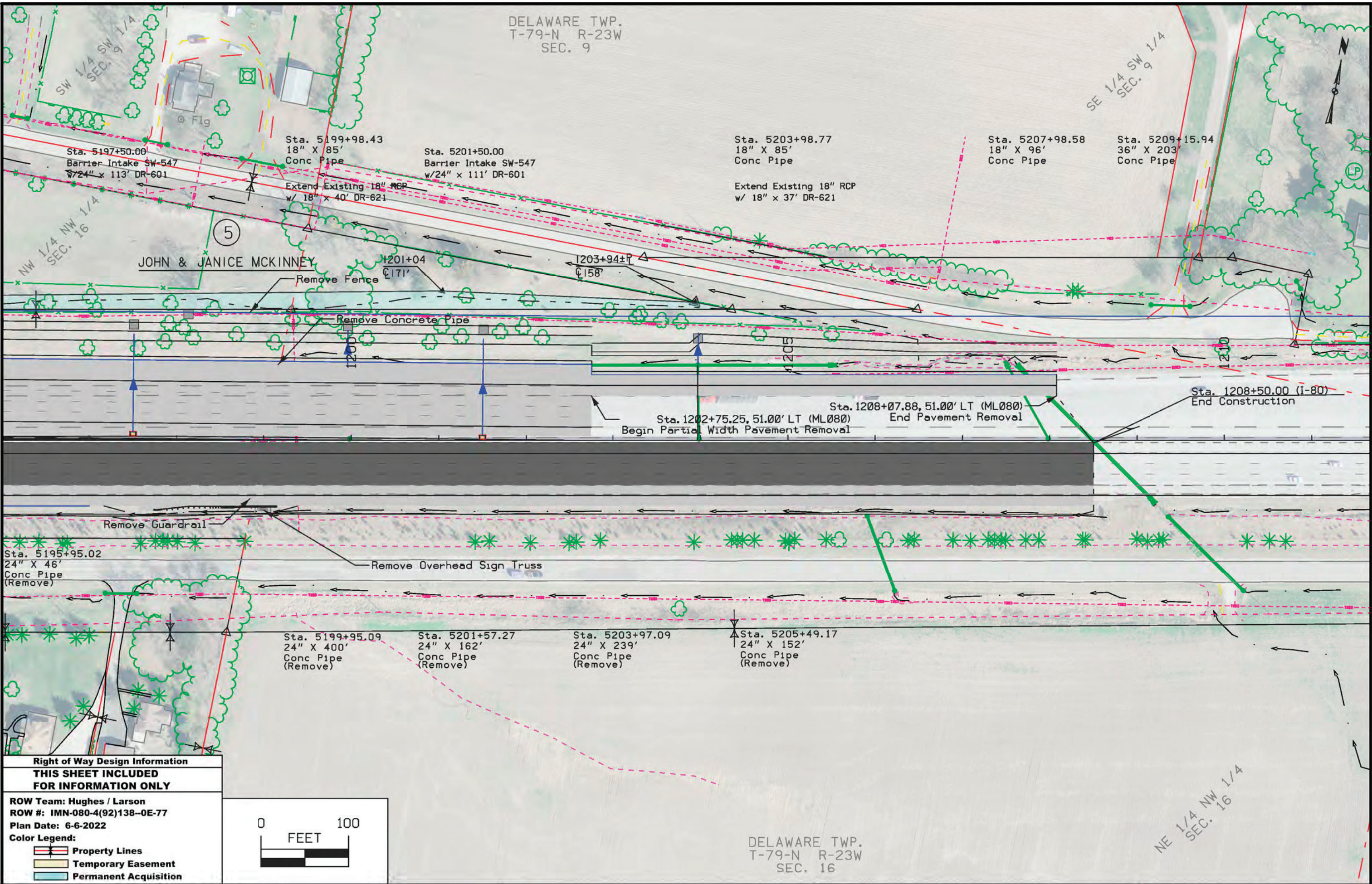




Right of Way Design Information	
THIS SHEET INCLUDED	
FOR INFORMATION ONLY	
ROW Team: Hughes / Larson	
ROW #: IMN-080-4(92)138-0E-77	
Plan Date: 7-12-2022	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition







Right of Way Design Information
THIS SHEET INCLUDED
FOR INFORMATION ONLY

ROW Team: Hughes / Larson
ROW #: IMN-080-4(92)138-0E-77
Plan Date: 6-6-2022

Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition



NE 1/4 NE 1/4
SEC. 17

Extend Existing 18" RCP
w/ 18" x 20' DR-621

Sta. 1179+98.47
18" X 93'
Cnc Pipe

POLK COUNTY
CONSERVATION BOARD

Sta. 5176+00.00
Barrier Intake SW-547
w/24" x 130' DR-601

Sta. 5177+00.00
Barrier Intake SW-547
w/24" x 124' DR-601

Sta. 5177+81.59
Barrier Intake SW-547
w/24" x 85' DR-601

Sta. 5178+71.37
Barrier Intake SW-547
w/24" x 116' DR-601

47 Sta. 2+57+62.54
30" x 110'
Conc Pipe

2154+70
 135'
 Sta. 2158+00.00
 End Construction

Extend Existing 24" R
w/ 30" x 20' DR-621

$$\frac{2157 + 90}{\text{C84' } \pm \text{R}}$$

Sta. 5179+49.97
Barrier Intake SW-547
w/24" x 77' DR-601

+83 Prop. Type F Dike
Elev. =837.0 Sta. 5180+00.00
Barrier Intake S
Remove Culvert w/24" x 45' DR-6

Sta. 5182+03.38
24" X 172'
Conc Pipe

Sta. 5182+03.38, 128
w/48" x 228' DR-601

Sta. 5182+50.00
Barrier Intake SW-547
w/24" x 113' DR-601

POLK COUNTY
CONSERVATION BOARD

Extend Existing 30" RCP
w/ 30" x 10' DR-621
Sta. 2157+67.45
30" x 110'
Conc Pipe

Sta. 5183+98.93
18" X 95'
Conc Pipe
move Fence
Extend Existing 18"
w/ 18" x 46' DR-621
Sta. 37022+26.84
48" X 109'
Conc Pipe

Extend Existing 48" RCP
w/ 48" x 48' DR-621

 **Property Lines**
 **Temporary Easement**
 **Permanent Acquisition**

Sta. 51
24" X
Conc P
(Remove

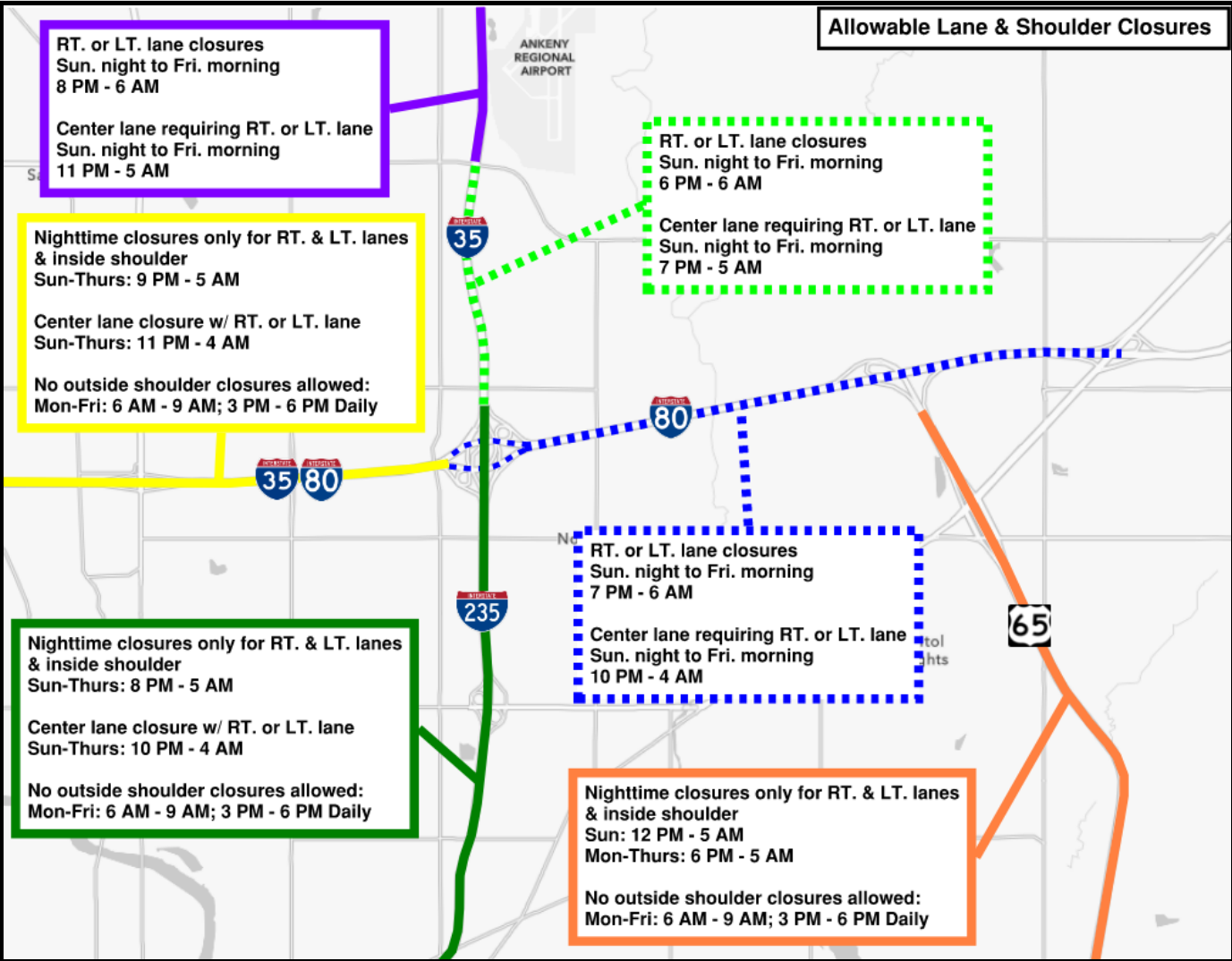
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511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
			None Expected									

<div>TRAFFIC CONTROL PLAN</div> <div><div><div>1. All I-80, I-35, and I-235 lanes and associated ramps and local roadways shall be maintained at all times except as provided for in the following. The provided closure times are applicable only to the (85) construction project area. Large venue entertainment events in the Des Moines metro and surrounding area - including but not limited to concerts, the Iowa State Fair, Iowa state high school championships, and Iowa State University or Iowa University home football games - will generate traffic volumes exceeding lane closure thresholds. Therefore, noted closure times or dates may be adjusted by the Engineer due to heavy traffic.</div><div>2. The Contractor shall submit any requests for closures or traffic control plan modifications to the Engineer for review and approval 2 weeks prior to any changes being made. Traffic control for closures / detours not shown in the plans will be the responsibility of the Contractor to provide to the Engineer for review and approval.</div><div>A. Lane closures will be permitted as shown in the figure to the right.</div><div>B. Nighttime full closures of an interstate segment will be permitted in accordance with the detour layouts outlined in the plans. Full closures will be allowed daily Sunday night thru Friday morning as listed below.<div><div>a. System interchange ramps upon approval: 10 PM to 5 AM</div><div>b. Mainline segments upon approval: 11 PM to 5 AM</div><div>c. 20-minute rolling closures following standard road plan TC-451 upon approval: 12 AM to 4 AM</div><div>d. Weekend closures may be allowed upon review and approval by the Engineer.</div></div></div><div>C. Nighttime full closures of NE 29th St. will be permitted for bridge demo and bridge girder sets and shall be in accordance with the detour layouts in the plans. Closures will be allowed daily Sunday night thru Friday morning from 10 PM to 5 AM.<div>a. Weekend closures may be allowed upon review and approval by the Engineer.</div></div><div>D. The Contractor shall notify the City of Ankeny Traffic Engineer, Leslie Hart (515-963-3548), at least two weeks prior to the multi-day full closure of the I-235 EB to I-80 WB Loop Ramp H, as shown in Stage 3, so the City can modify signal timings at Corporate Woods Dr. The Contractor shall coordinate with the City of Ankeny prior to closing and reopening the Loop Ramp H.</div><div>E. Flagging operations on NE 29th St. will be permitted following standard road plan TC-213 except weekdays from 6 AM to 9 AM and 3 PM to 6 PM, unless otherwise approved by the Engineer.</div><div>F. A shoulder closure is required for work performed within 15 feet of the traveled way. Shoulders shall remain open and clear of obstructions when there is no active construction.<div><div>a. Shoulder closures on interstate mainline will be permitted as shown in the figure to the right</div><div>b. Shoulder closures on system interchange ramps will be allowed except weekdays from 6 AM to 9 AM and 3 PM to 6 PM, unless otherwise approved by the Engineer.</div></div></div><div>G. Contractor shall review traffic control devices with the Engineer prior to the start of the winter season (November 15) and make changes to accommodate winter operations (November 15 to March 15).</div><div>H. Lane closures shall not begin on a curve wherever possible. If a lane closure must begin on a curve, the Contractor must review the traffic control plan with the Engineer 1 week prior to the closure, as additional traffic control may be needed.</div><div>3. Portable dynamic message signs (PDMS) shall be deployed in advance of any closure as outlined in the plans. All PDMS units shall be furnished, maintained and removed by the Contractor. The Contractor shall coordinate with the Engineer to determine appropriate locations.</div><div>4. All PDMS shall be connected to the Statewide Traffic Management Center (TMC), at least 1 week before the PDMS is first activated. The Contractor must provide the TMC with necessary PDMS connection information. The TMC will develop and post all messages.</div><div>5. The Contractor shall provide notification to the TMC (515-237-3300) immediately prior to deployment and upon removal of lane closures. If a planned lane closure does not occur at the scheduled time the Contractor shall immediately contact the TMC.</div><div>6. Contractor access locations have been identified in the construction access route sheets. The traffic control plans for the use of the Contractor access locations will be the responsibility of the Contractor and subject to the allowable closure times. The Contractor must submit the traffic control plan for each access to the Engineer 2 weeks prior to use for review and approval.</div><div>7. Construction area ingress and egress locations from interstate segments or system interchange ramps must have a minimum paved acceleration length of 1,000 feet and deceleration length of 400 feet, parallel to the traveled lanes if being used by large trucks.</div><div>A. Access directly off of I-80 and I-35 mainline requires a lane closure, subject to the allowable lane closure times.</div></div></div>											
--	--	--	--	--	--	--	--	--	--	--	--



TRAFFIC DESIGN	
	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.
	<div>Signature: <i>Nicholas A.C. Johnson</i> Date: 10/1/2025</div>
	<div>Nicholas A.C. Johnson</div> <div>Printed or Typed Name</div>
	<div>My license renewal date is December 31, 20 26</div>
	Pages or sheets covered by this seal: J.1, J.63-J.70










TABULATION OF SPECIAL EVENTS

[illegible]

CROSS SECTION VIEW COLOR LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Med	(237)	Future Proposed Pavement Shading

CROSS SECTION VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS

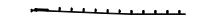


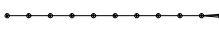


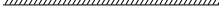


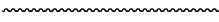











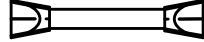


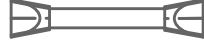






	Pavement Removal		Proposed Granular Shoulder
	Proposed Granular Subbase		Temporary Shoulder
	Proposed Special Backfill		Existing Shoulder Strengthening
	Temporary Barrier Rail		Permanent Barrier Rail
			Channelizing Device

PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Magenta	(5)	Pavement Marking Call Outs
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Yellow	(4)	Pavement Markings, Yellow
Off White	(254)	Pavement Markings, White
Violet	(15)	Temporary barrier rail, Unpinned
Flush Orange	(228)	Temporary barrier rail, Pinned

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Proposed Granular Surface Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Light	(236)	Proposed Grading Limits Shading
Pink, Dark	(13)	Proposed MSE or CIP Wall Shading
Red	(3)	Proposed Bridge Shading and Sign Trusses
Black w/Gray, Light Fill	(0,48)	Previously Constructed Structure

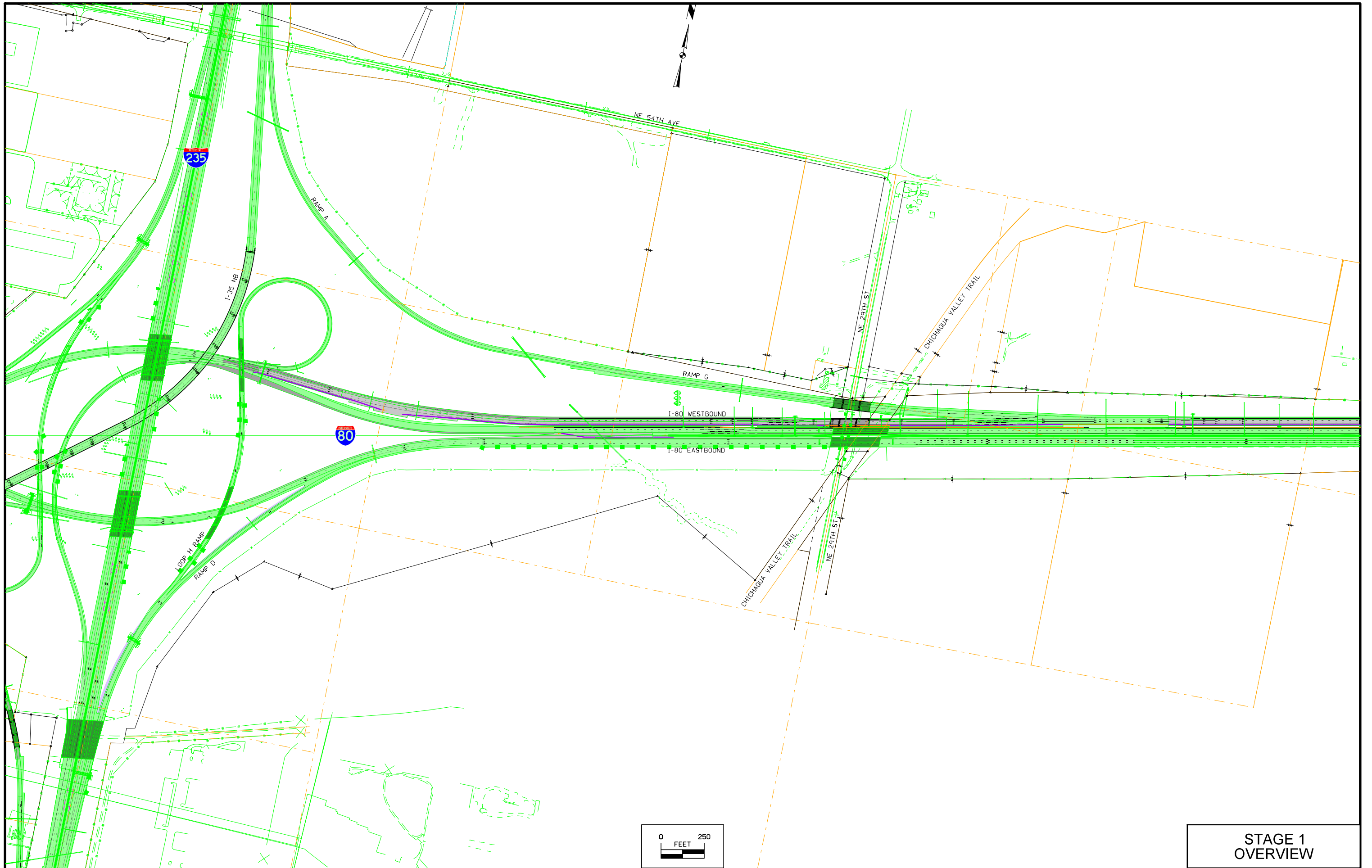
PLAN VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS

	Guardrail		Channelizing Device		Crash Cushion (Temp or Perm)
	HighTension Cable Guardrail		Drum		Traffic Signal
	Saw Cut		Temporary Lane Separator		Flagger
	Sheet Pile		Tubular Marker		Temporary Floodlighting
	Future Intakes		Channelizer Marker		Traffic Sign
	Proposed Intakes		Concrete Barrier Marker		Type III Barricade
	Previously Constructed Intakes		Delineator		Type A Warning Light
	Proposed Culvert		Temporary Barrier Rail		Direction of Traffic
	Previously Constructed Culvert		Pavement Removal		Safety Closure
	Proposed Storm Sewer (Direction of Pipe Flow)		Sand Barrel Layout		Lane Identification
	Previously Constructed Storm Sewer (Direction of Pipe Flow)				

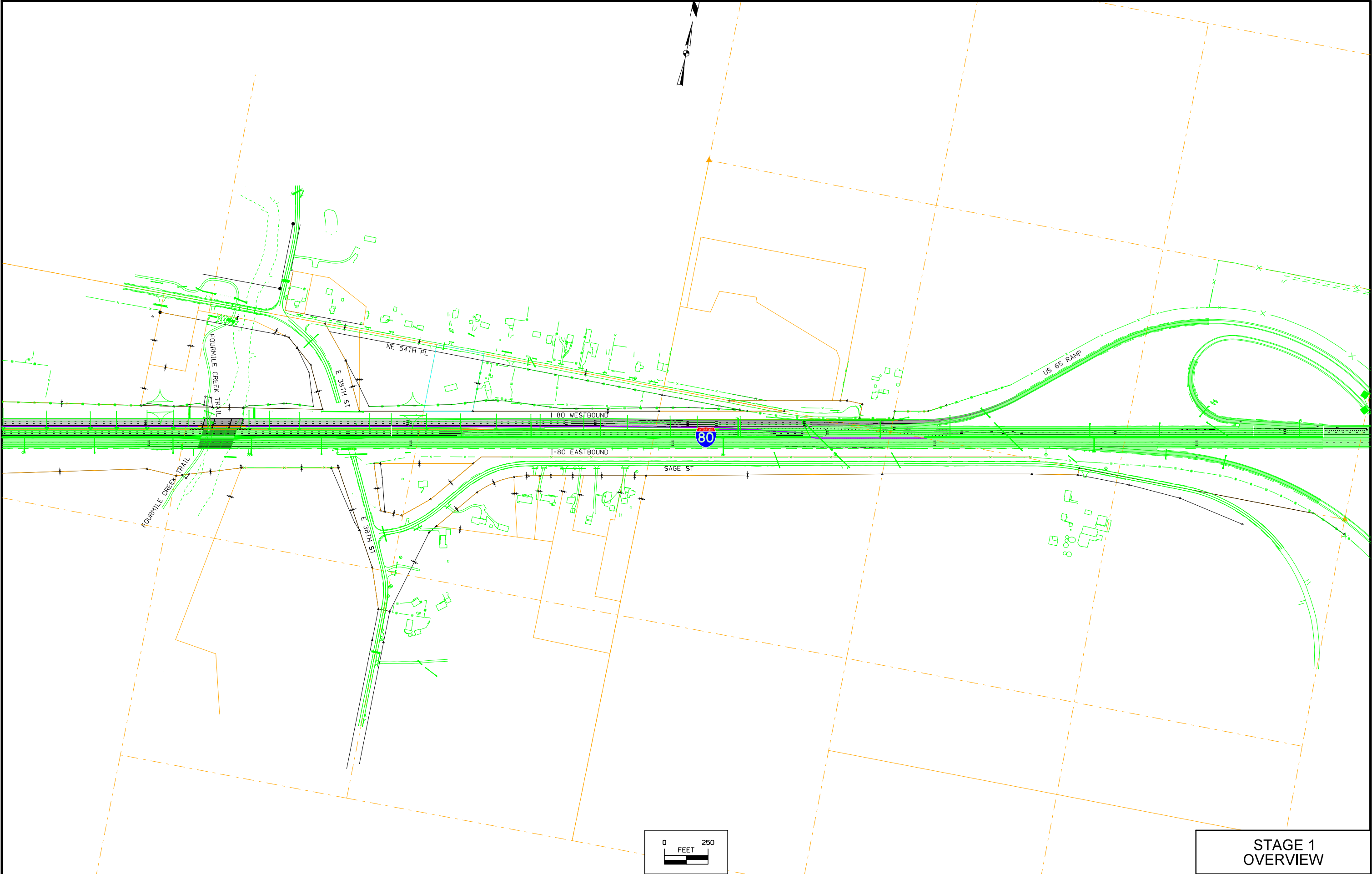
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

TRAFFIC CONTROL
AND
STAGING
LEGEND AND SYMBOL
INFORMATION SHEET

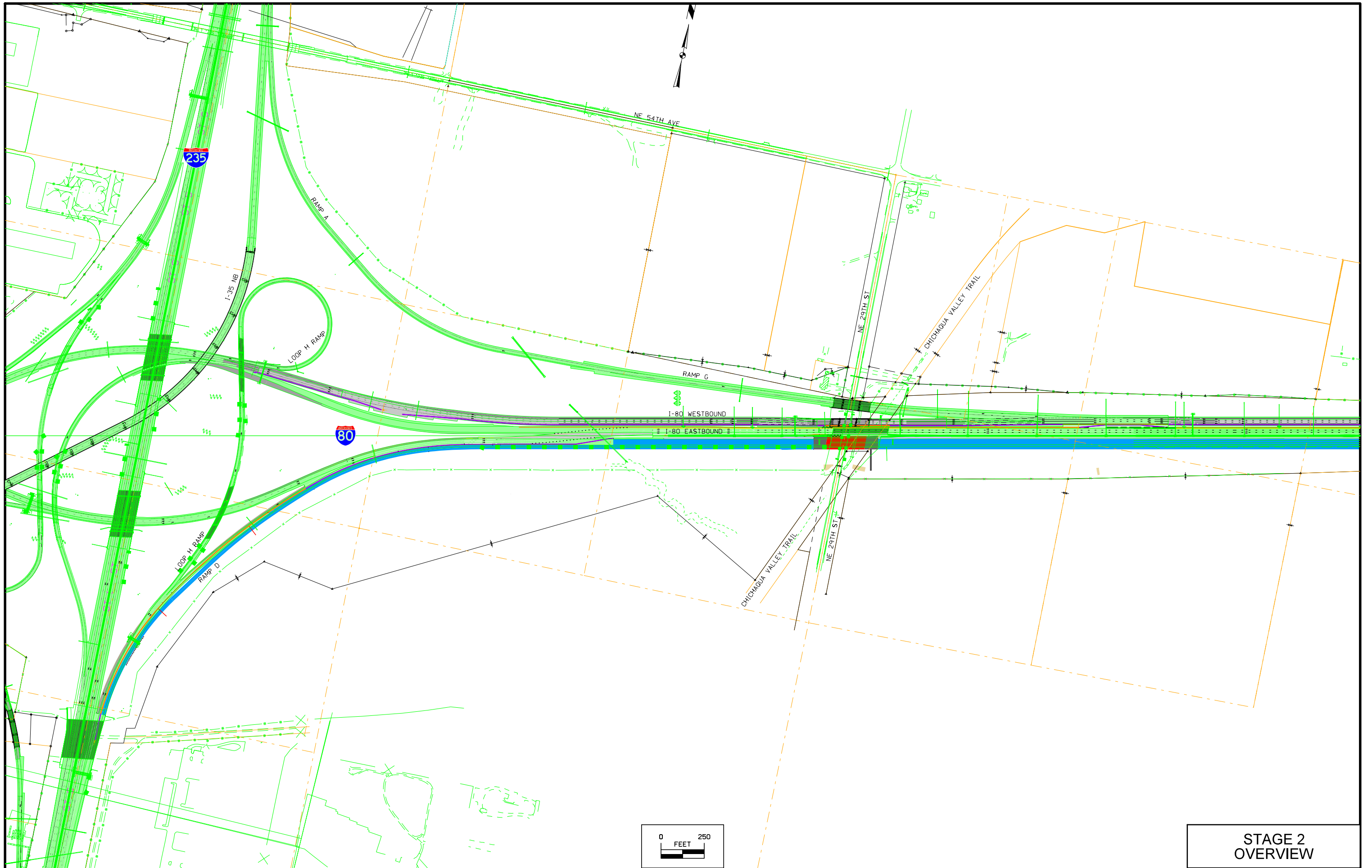
(COVERS SHEET SERIES J)

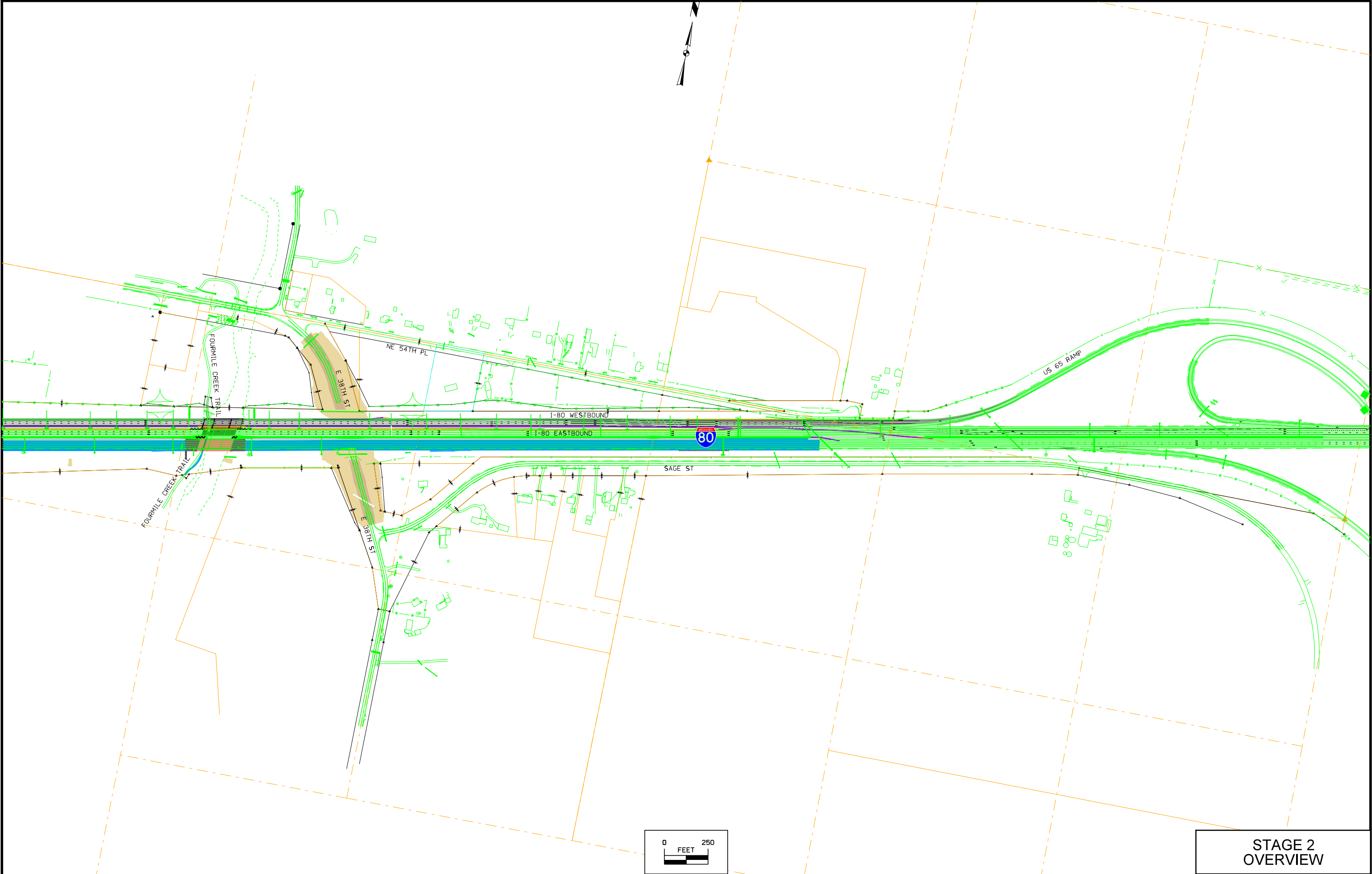


STAGE 1
OVERVIEW

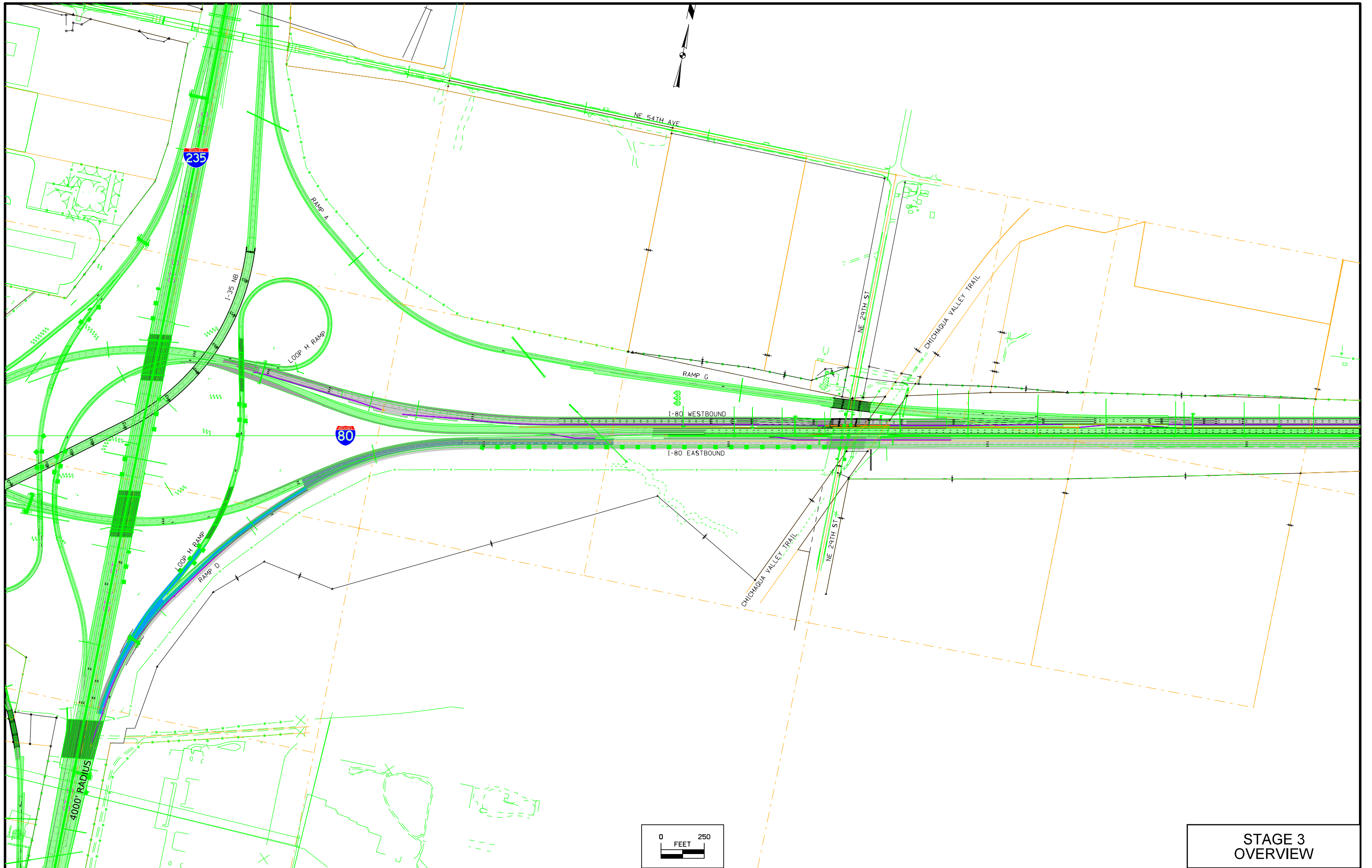


STAGE 1
OVERVIEW

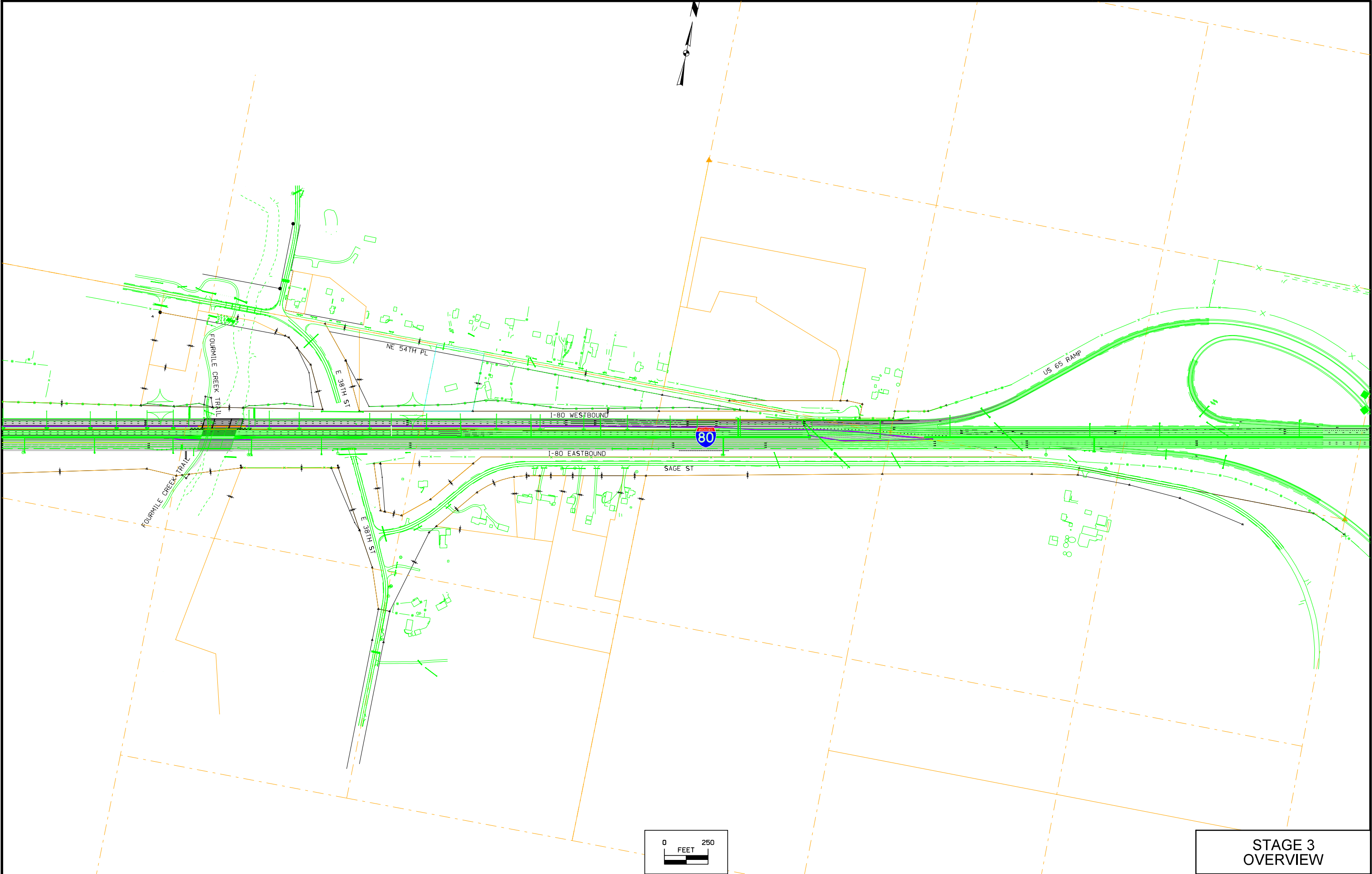




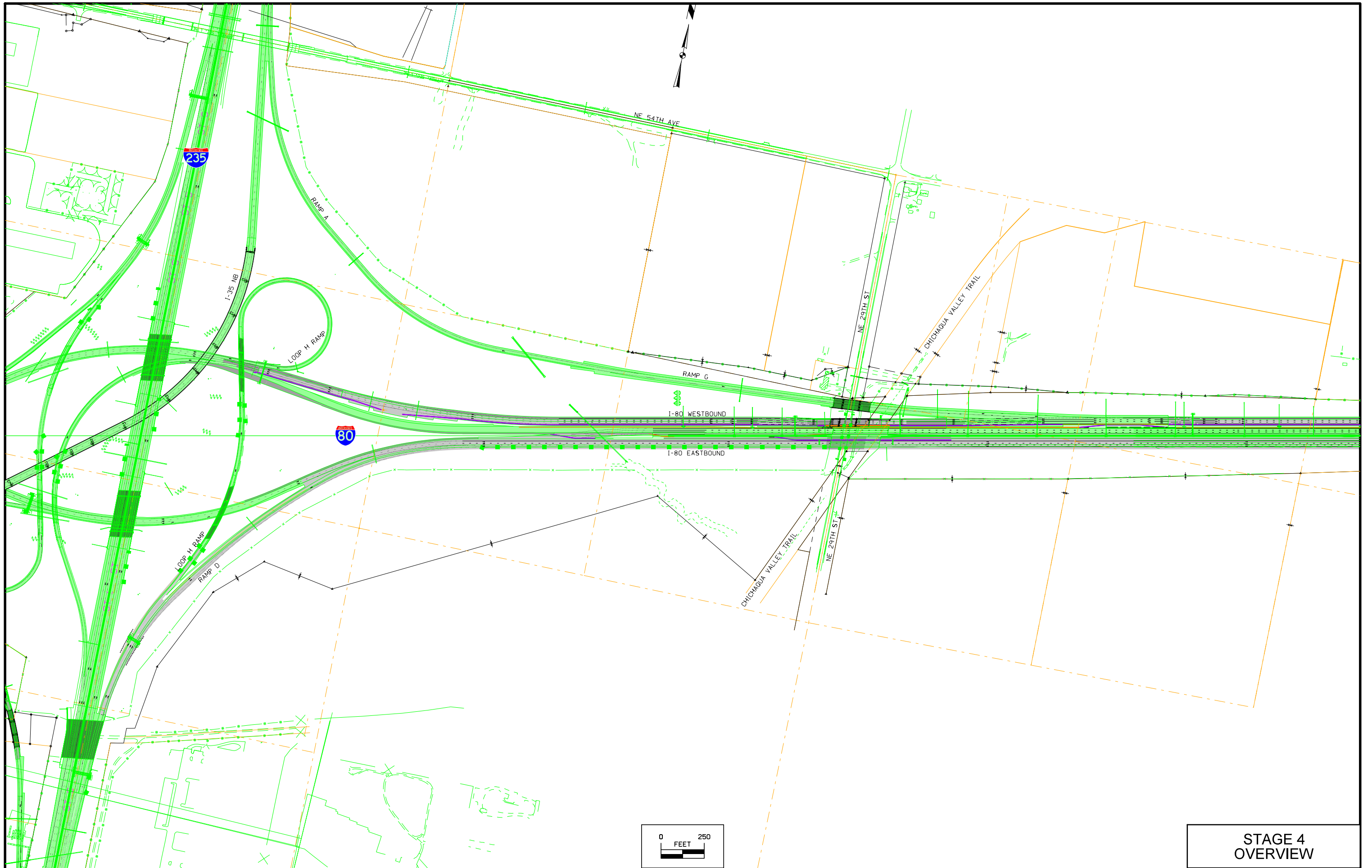
STAGE 2
OVERVIEW



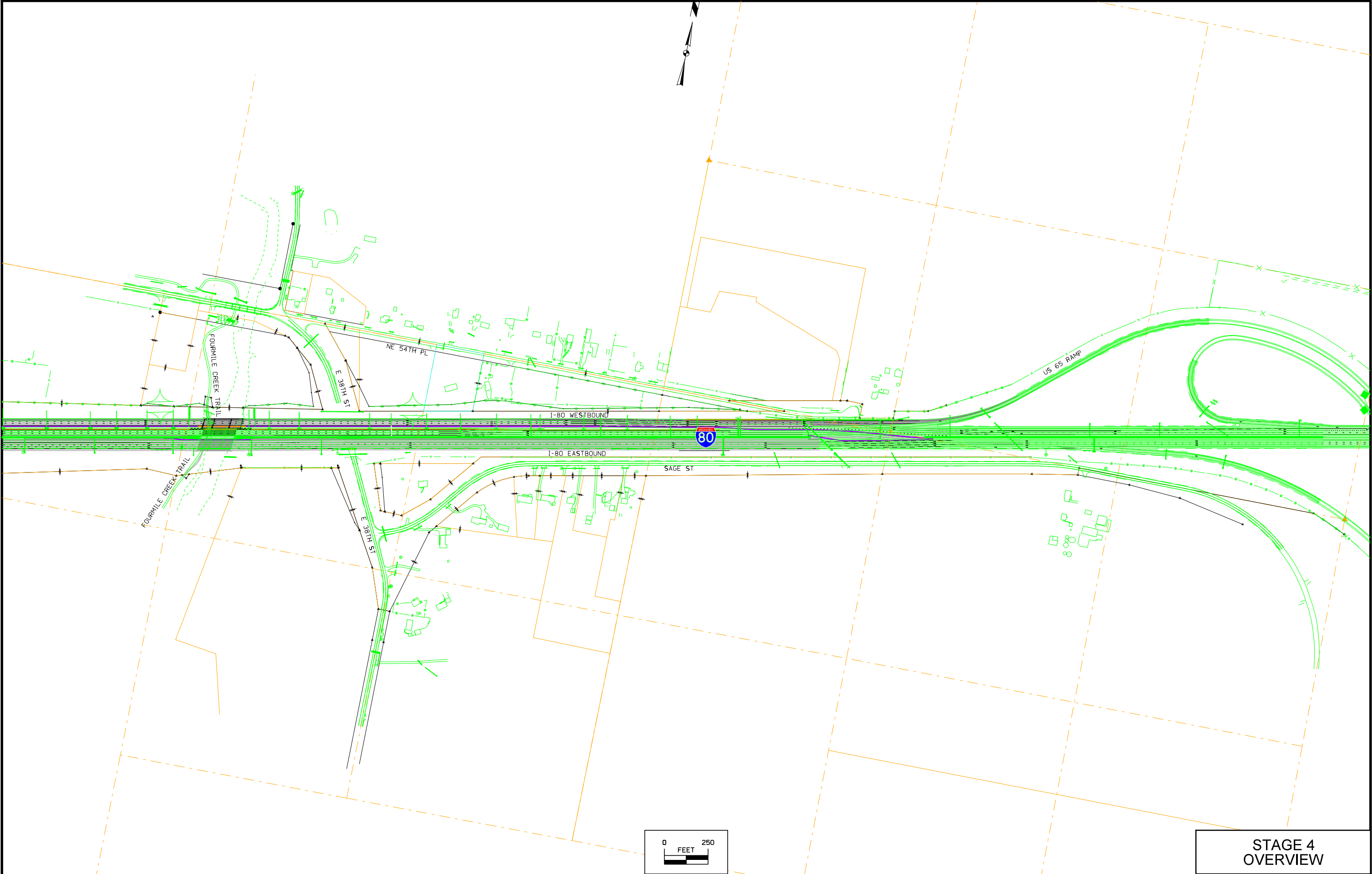
STAGE 3
OVERVIEW



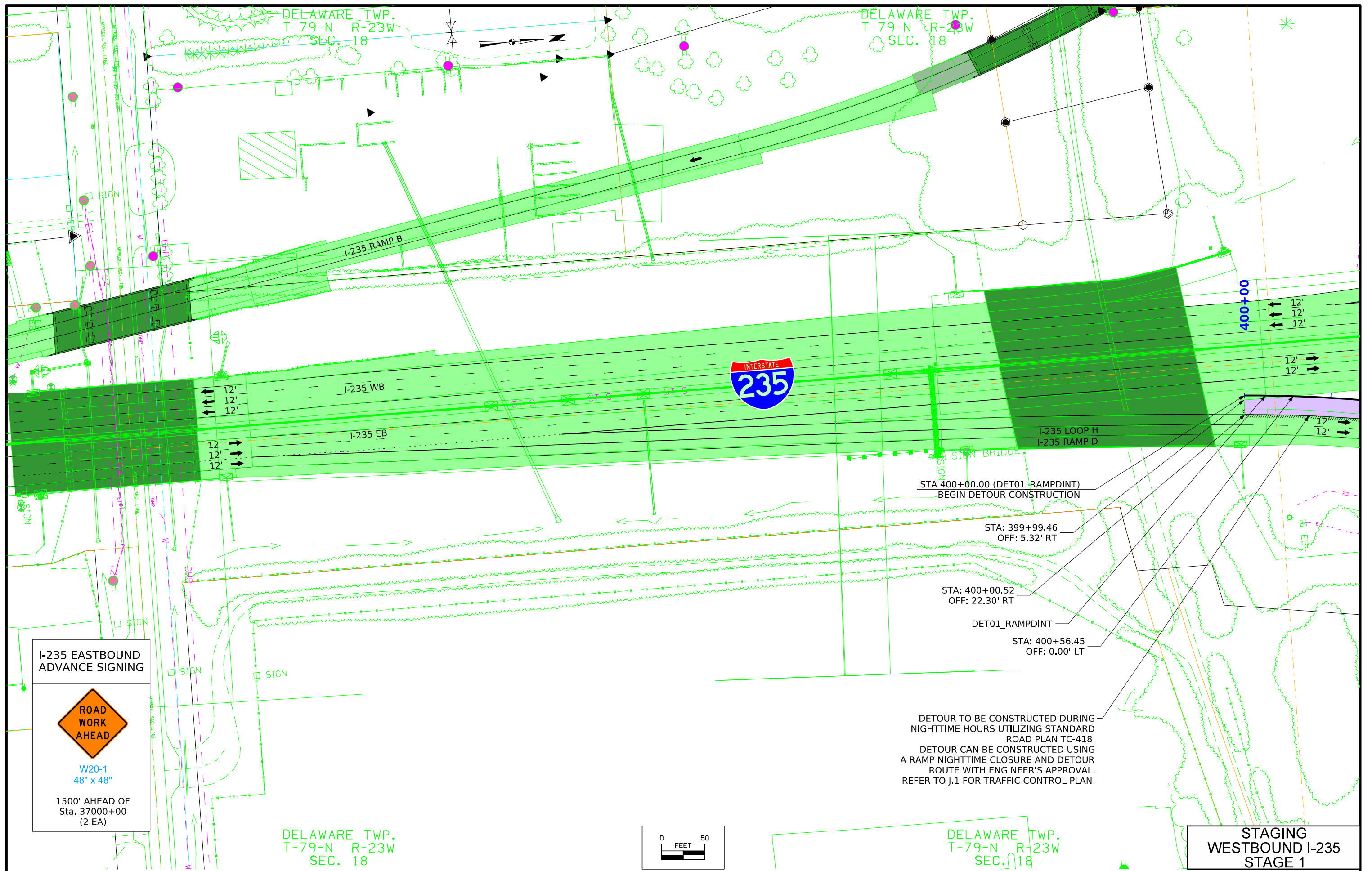
STAGE 3
OVERVIEW

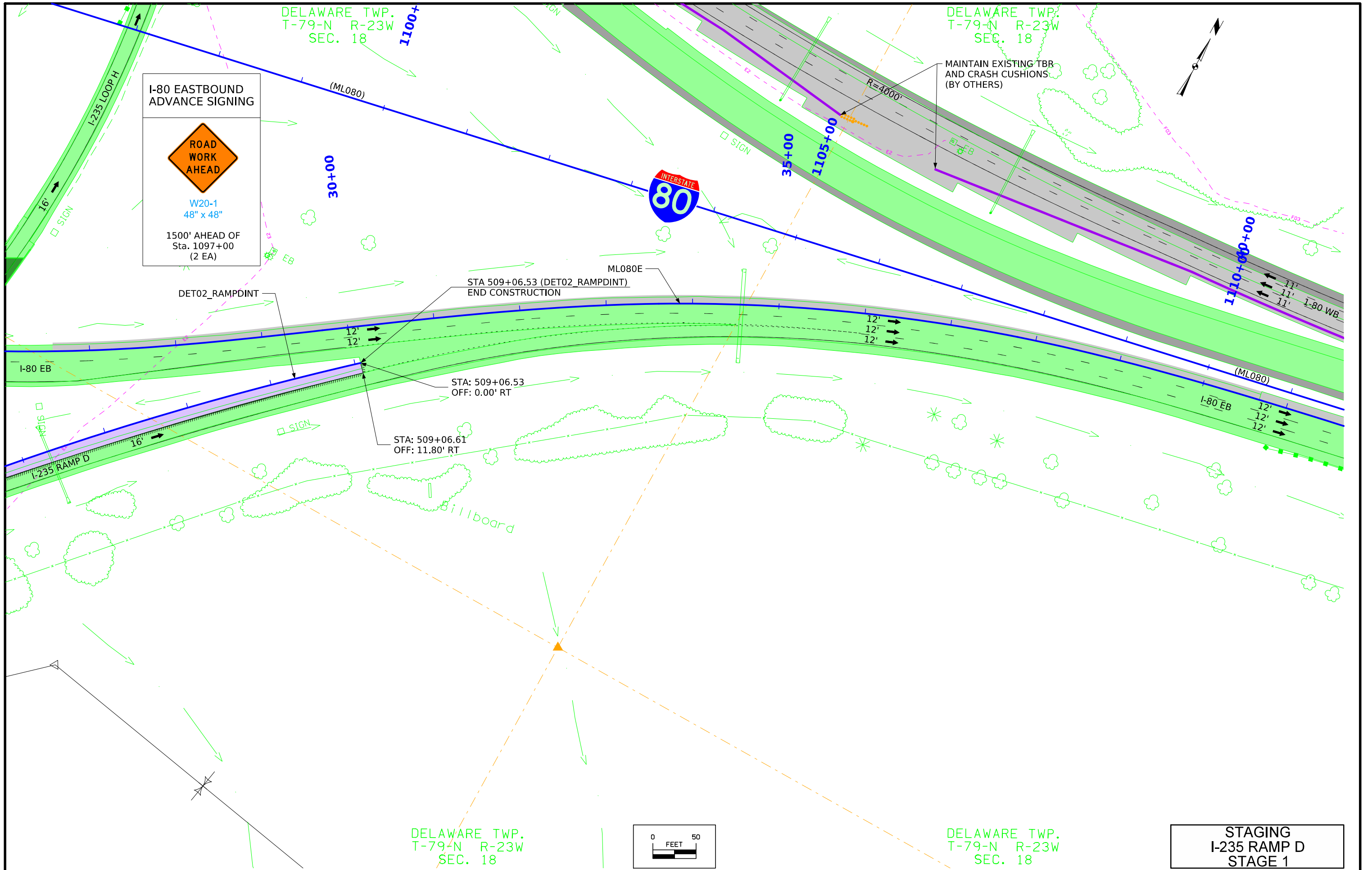


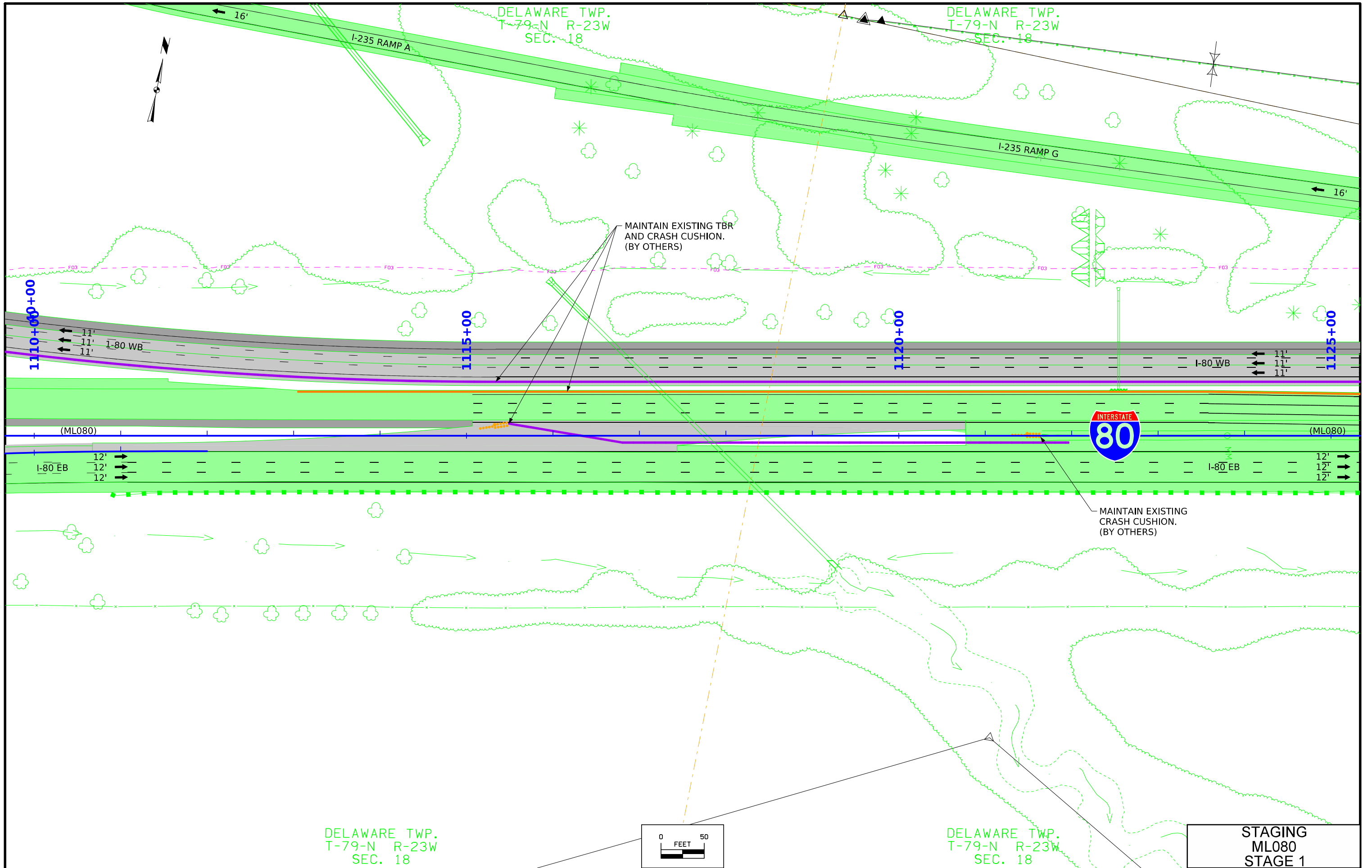
STAGE 4
OVERVIEW

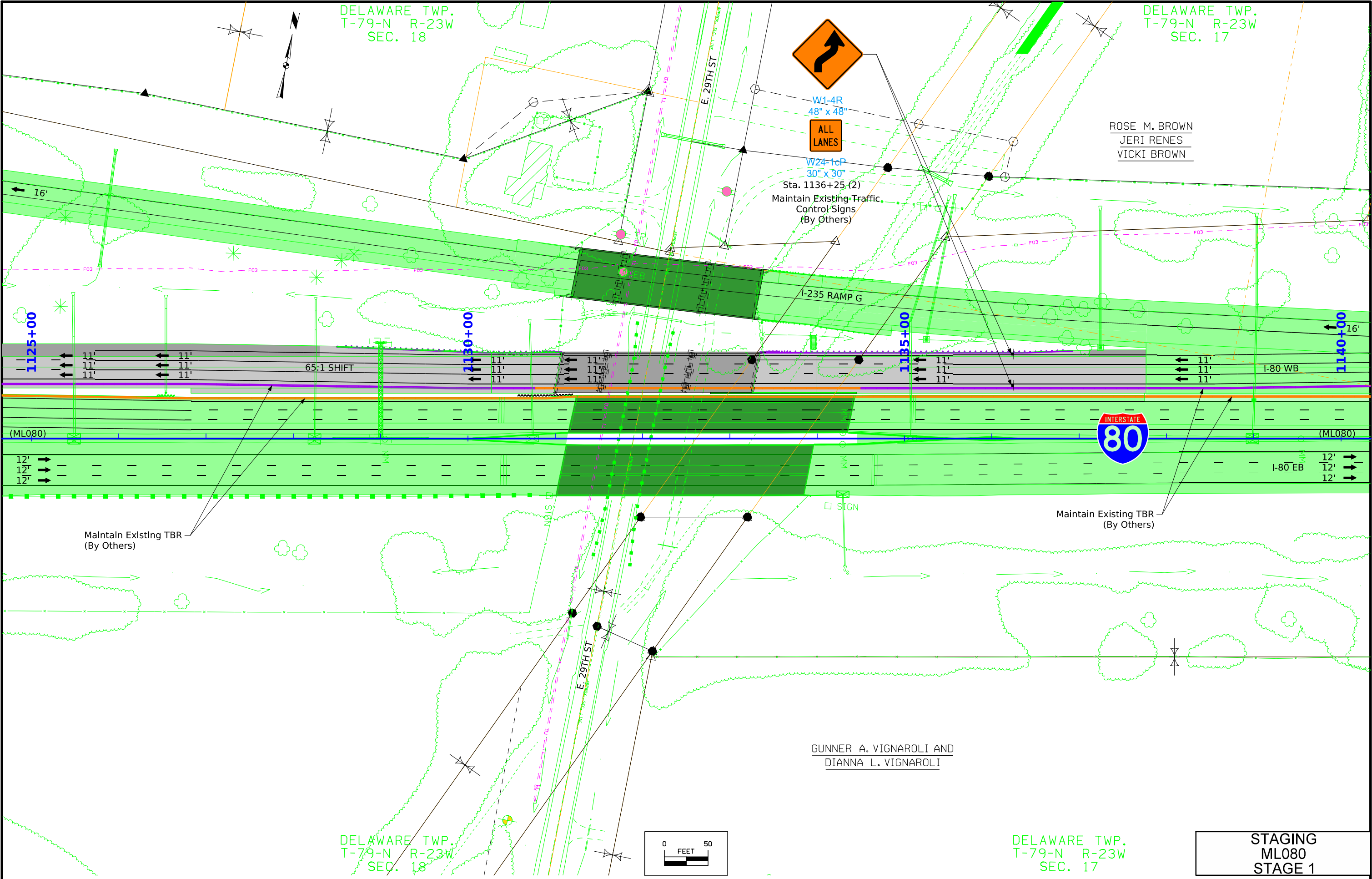


STAGE 4
OVERVIEW









DELAWARE TWP.
T-79-N R-23W
SEC. 17

DELAWARE TWP.
T-79-N R-23W
SEC. 17

BRENDA R SAFRANSKI,
CARMEN SCHAMP-PRYOR LIFE ESTATE

MAINTAIN EXISTING TBR
AND CRASH CUSHION.
(BY OTHERS)



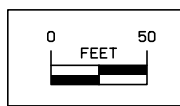
GUNNER A. VIGNAROLI AND
DIANNA L. VIGNAROLI

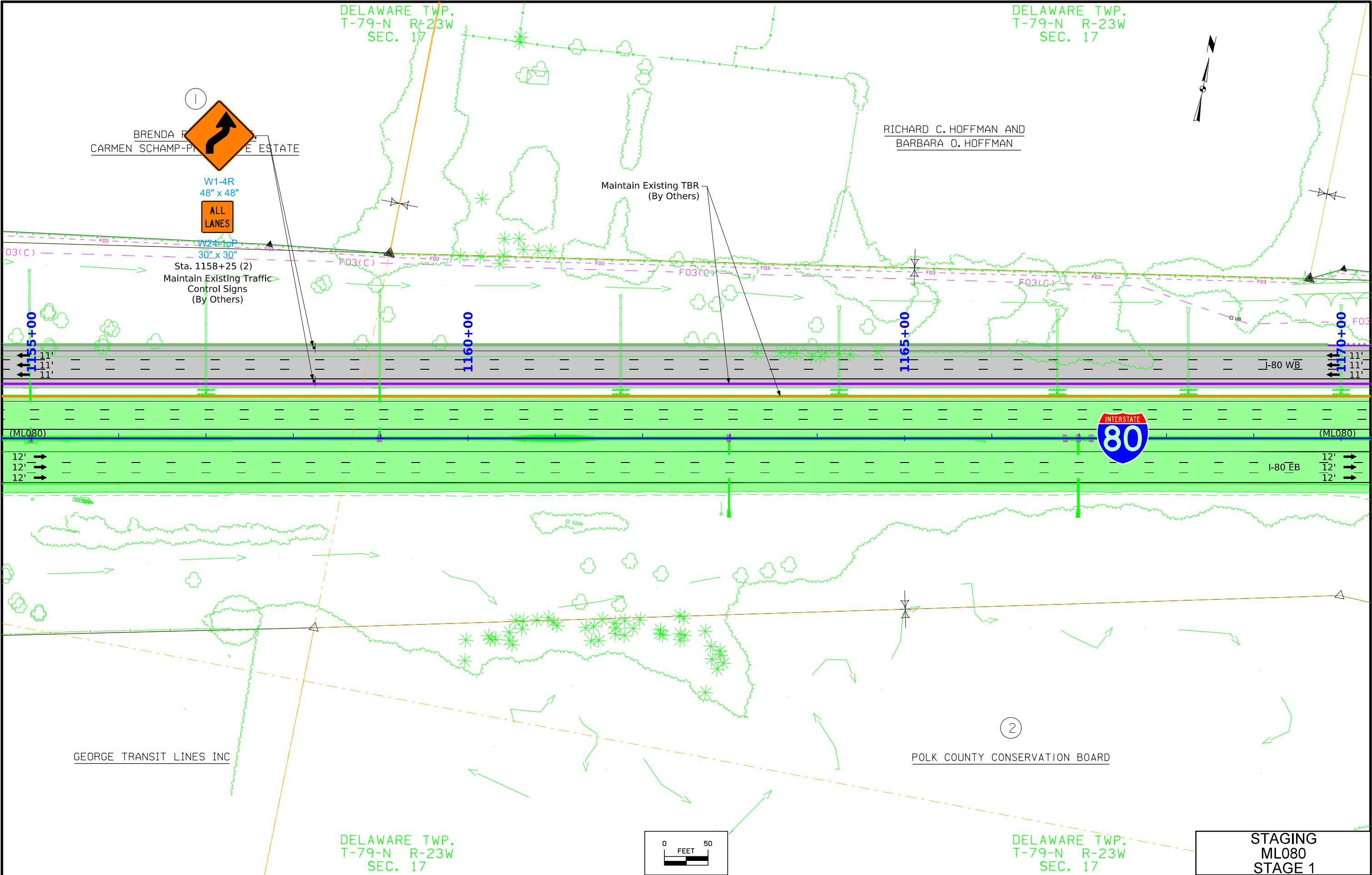
GEORGE TRANSIT LINES INC

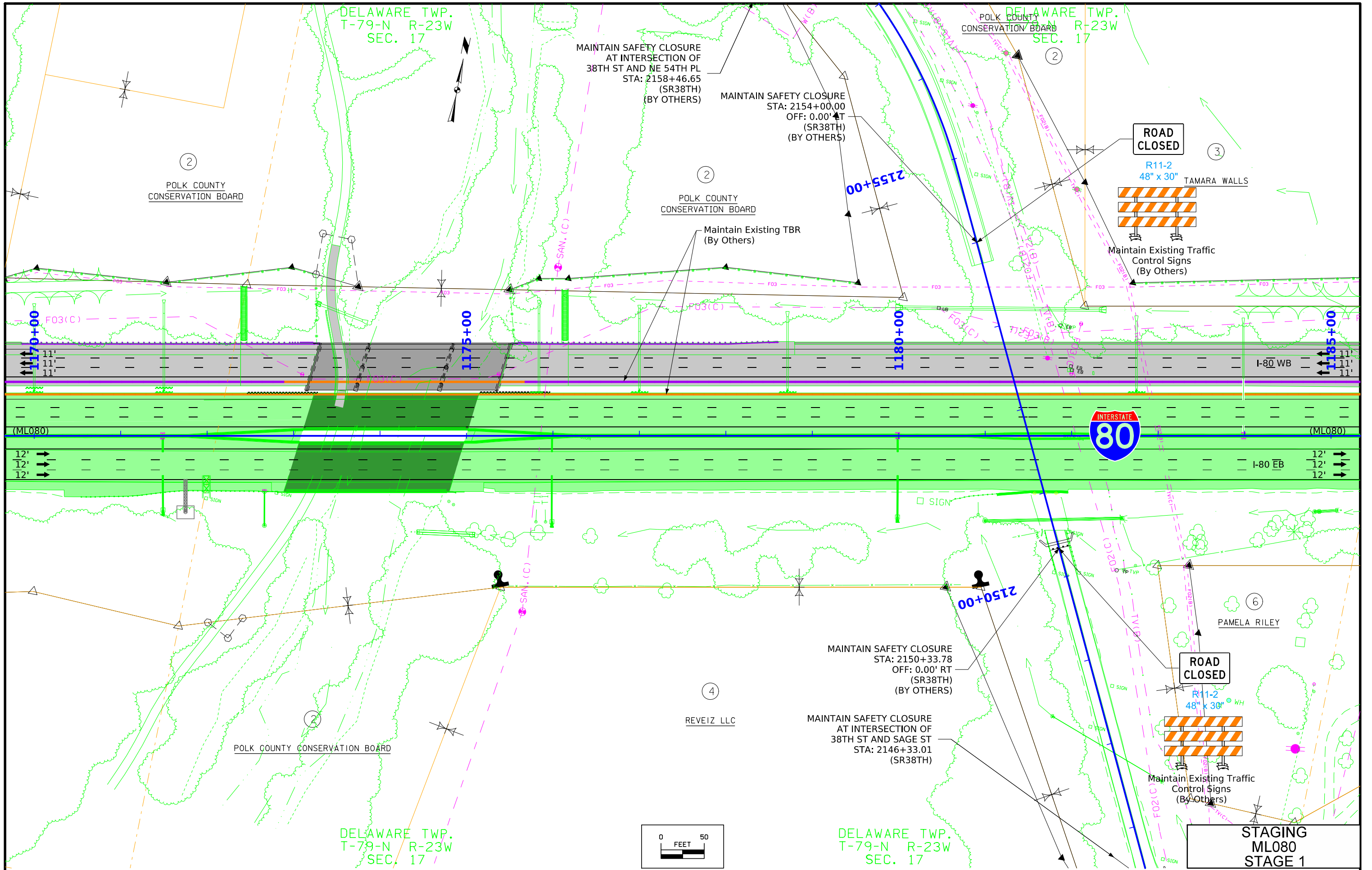
DELAWARE TWP.
T-79-N R-23W
SEC. 17

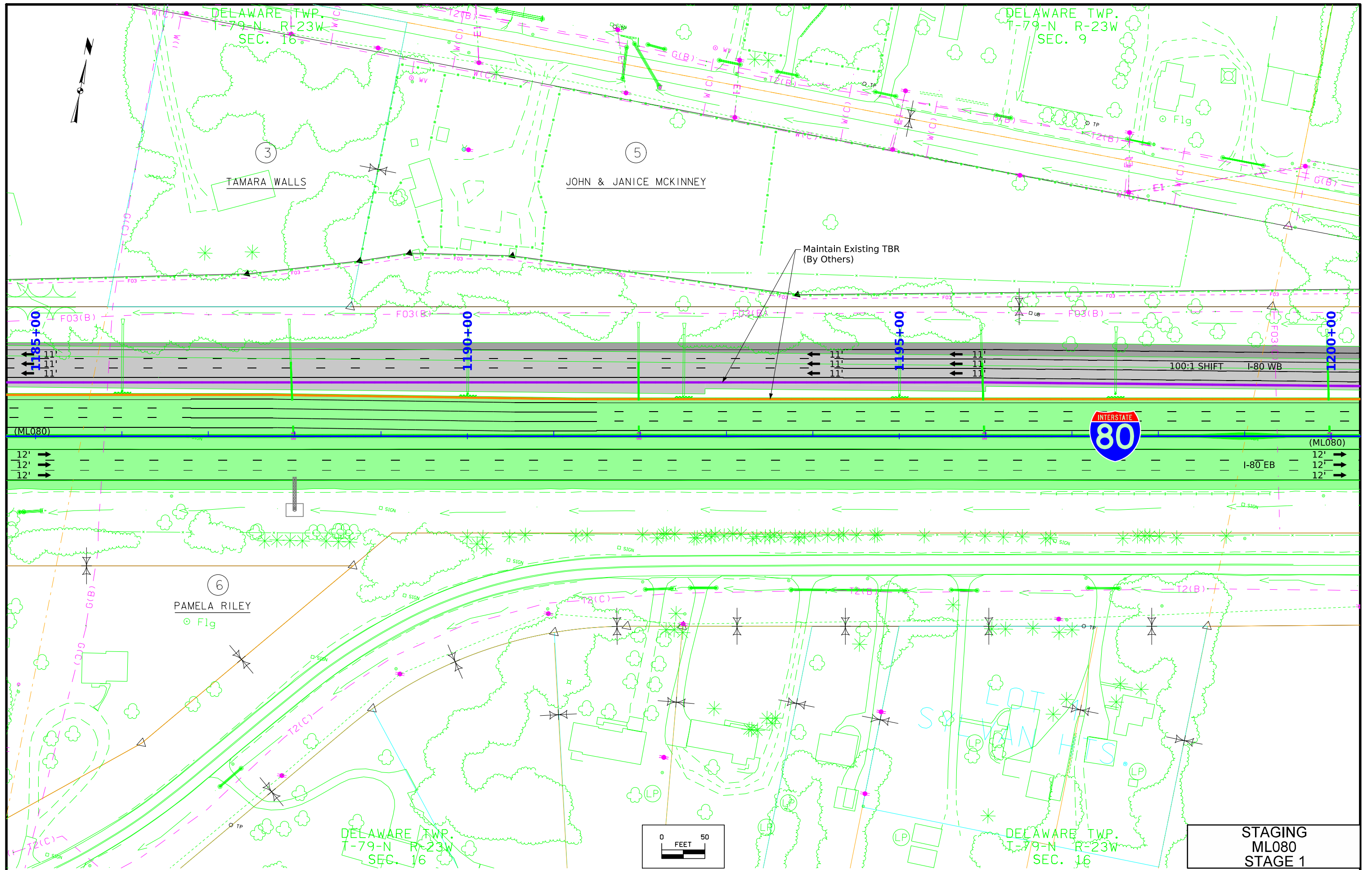
DELAWARE TWP.
T-79-N R-23W
SEC. 17

STAGING
ML080
STAGE 1

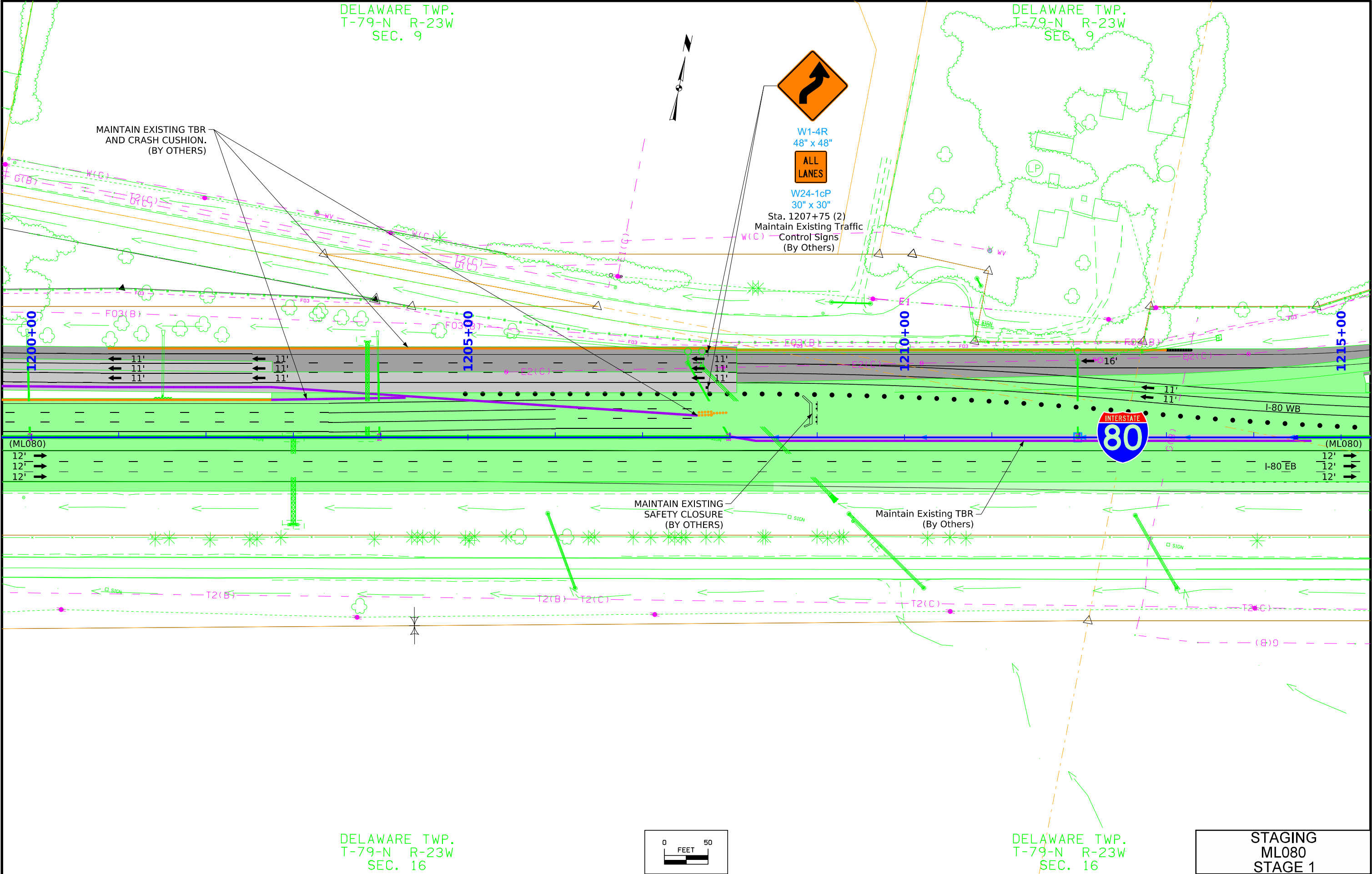


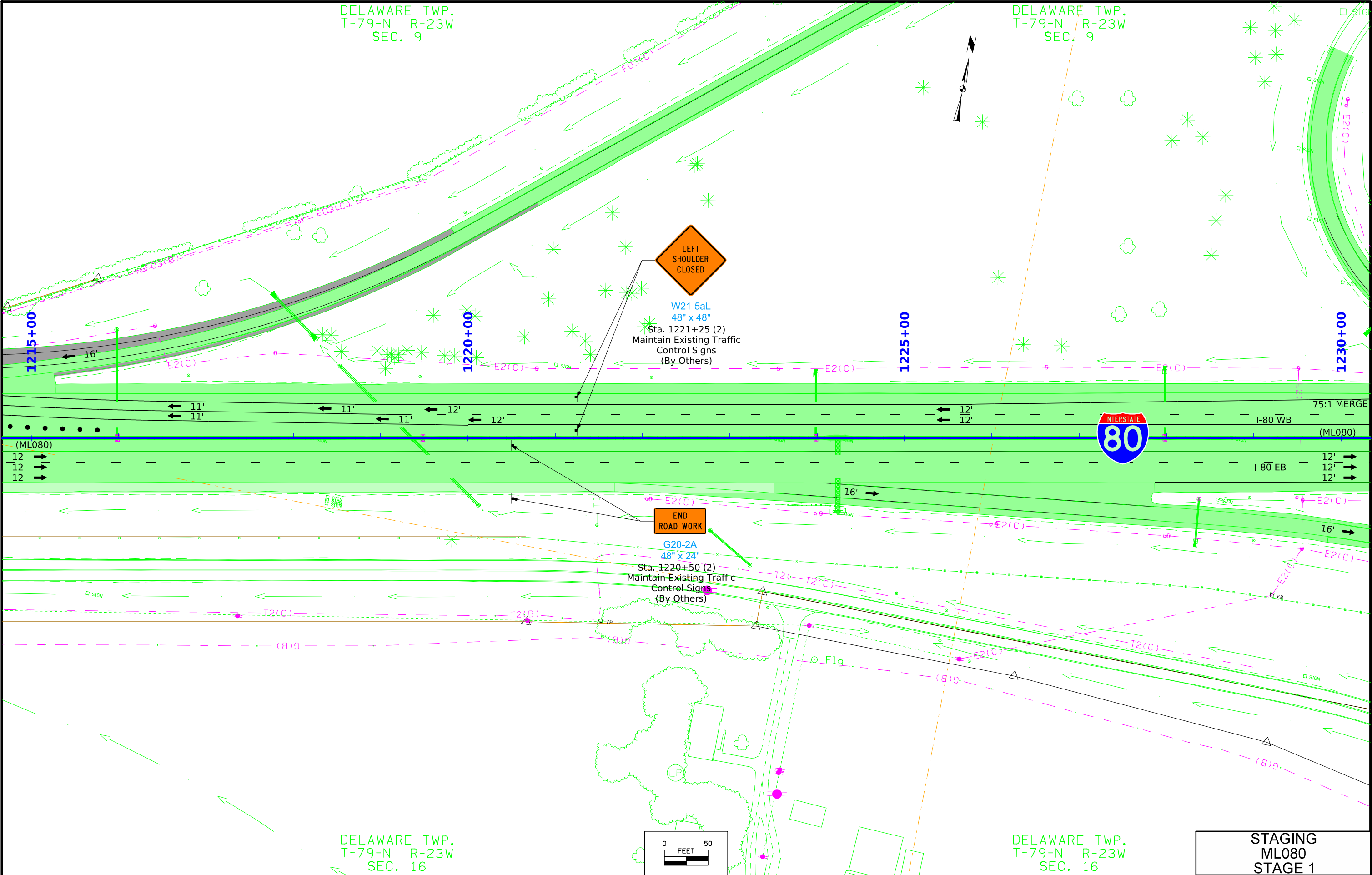


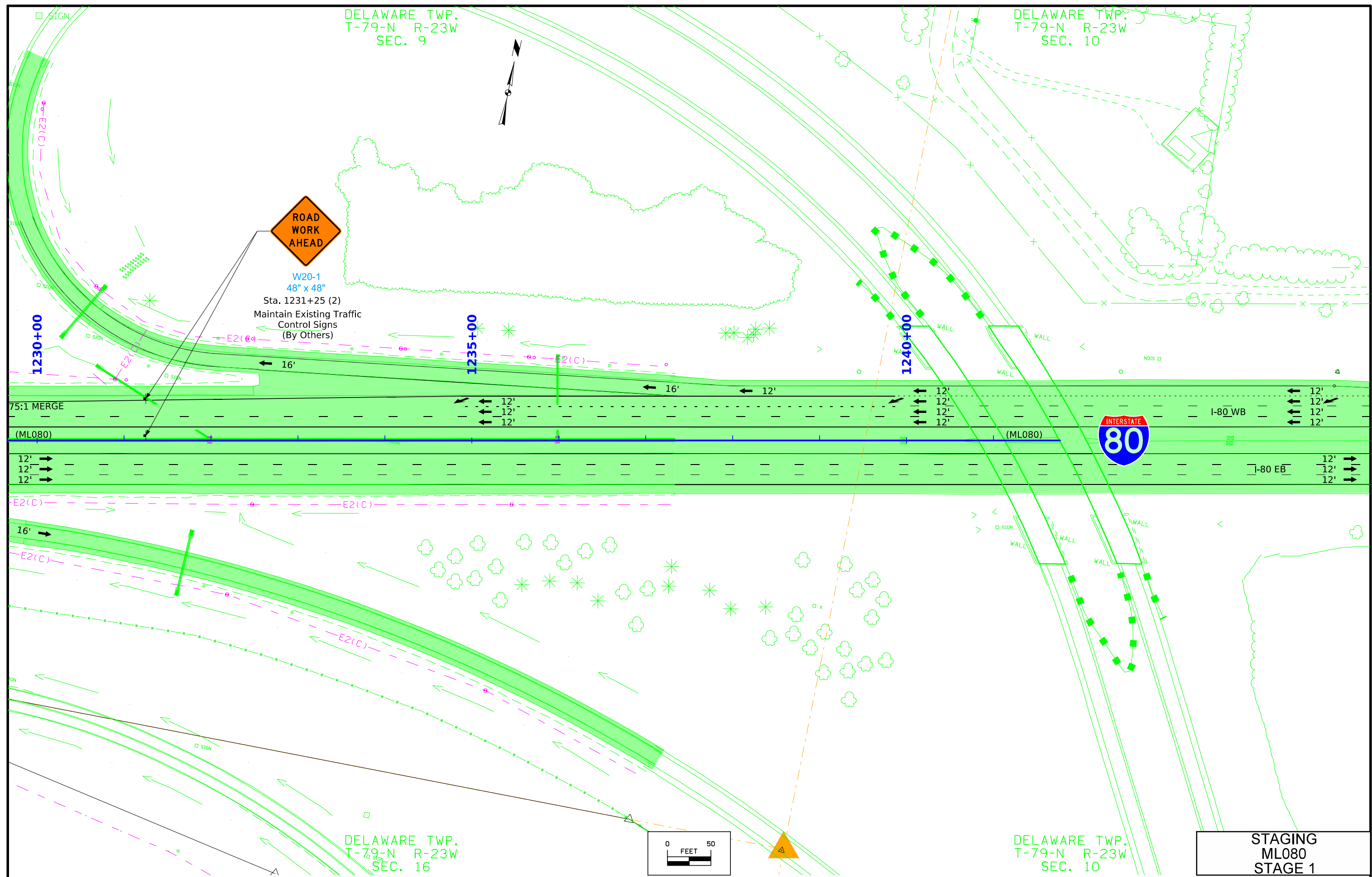


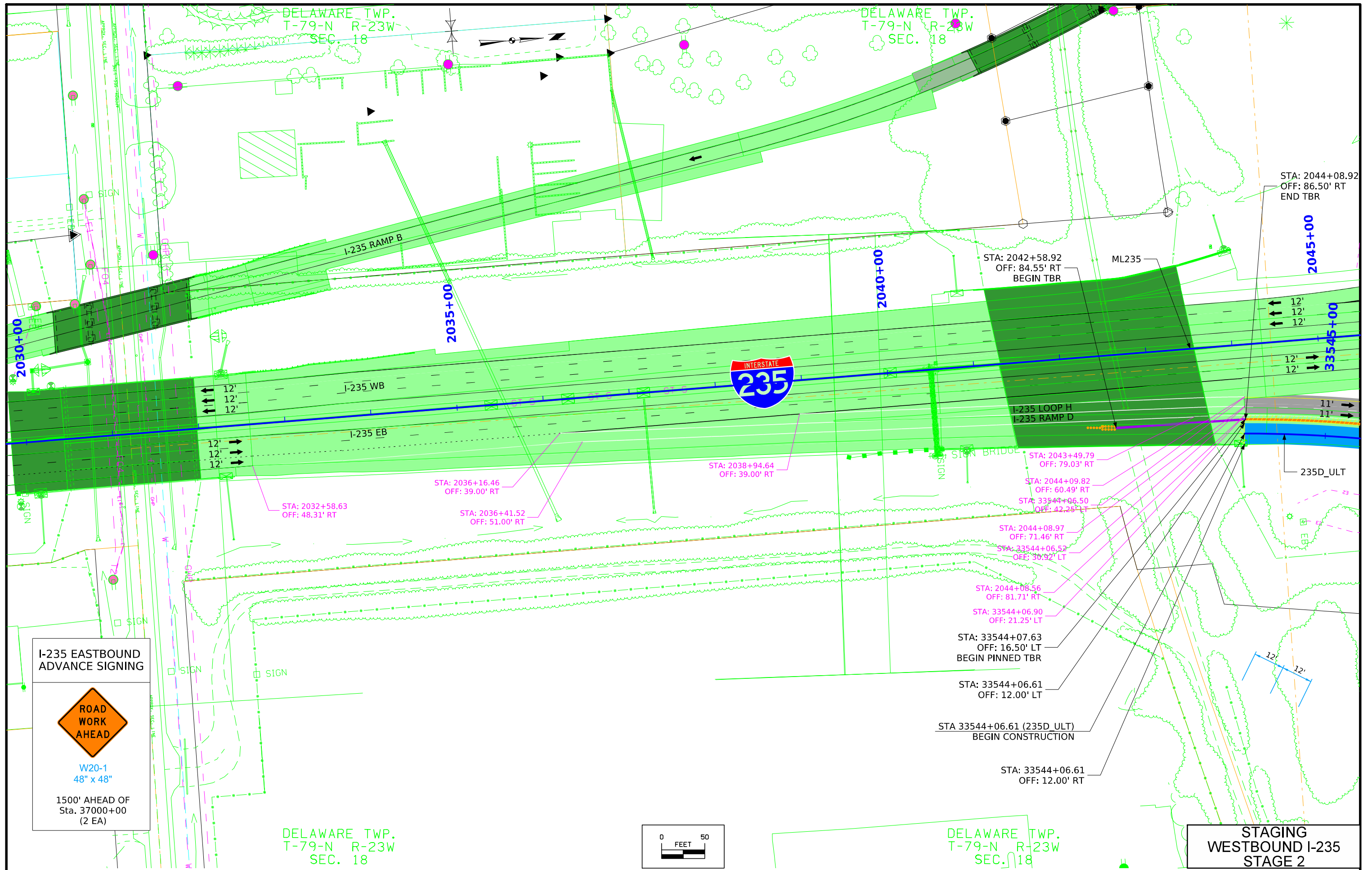


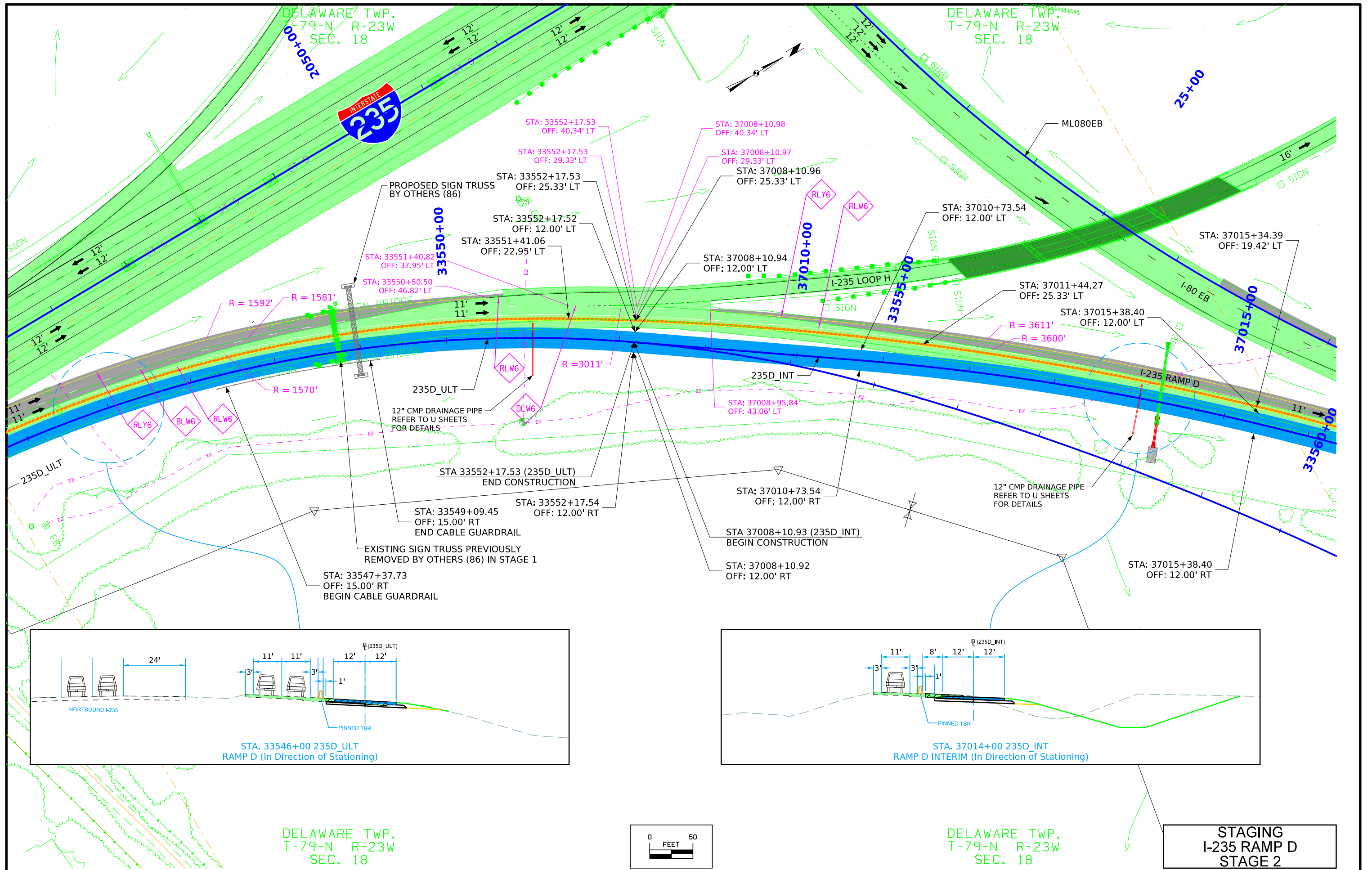
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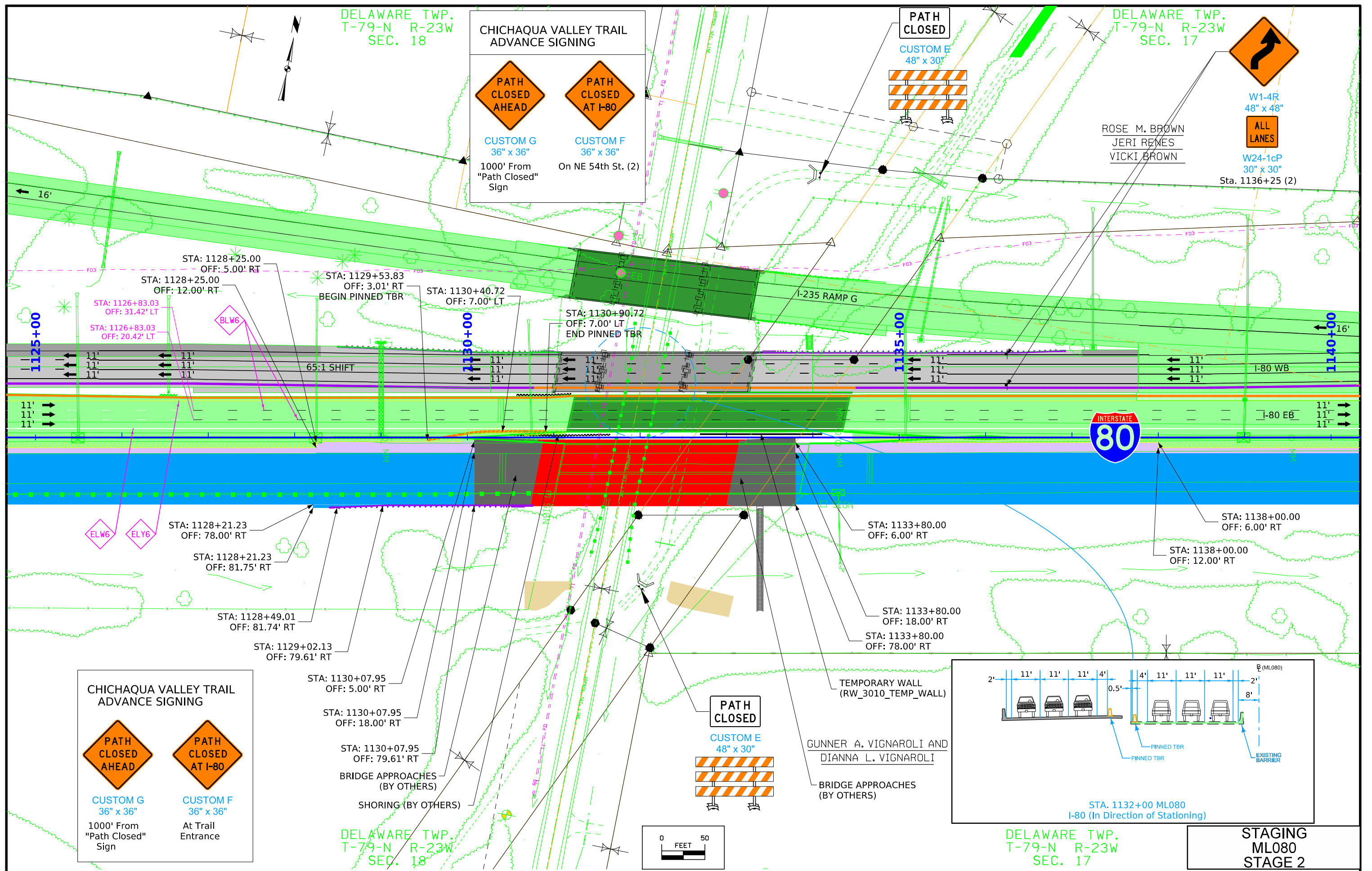












DELAWARE TWP.
T-79-N R-23W
SEC. 17

DELAWARE TWP.
T-79-N R-23W
SEC. 17

BRENDA R SAFRANSKI,
CARMEN SCHAMP-PRYOR LIFE ESTATE

REMOVE ATTENUATOR AND
PORTION OF PINNED TBR

STA: 1145+46.25
OFF: 48.00' LT
BEGIN TBR

STA: 1146+96.25
OFF: 62.00' LT

STA: 1148+96.25
OFF: 62.00' LT

STA: 1150+46.25
OFF: 48.00' LT
END TBR

I-235 RAMP G

70:1 SHIFT

200' SHIFT

I-80 WB

I-80 EB

(ML080)



W11-30
48" x 48"

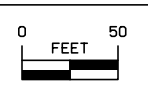
500 FT

G20-2A
48" x 24"

Sta. 1141+50 (1)

DELAWARE TWP.
T-79-N R-23W
SEC. 17

GEORGE TRANSIT LINES INC



DELAWARE TWP.
T-79-N R-23W
SEC. 17

STAGING
ML080
STAGE 2

FILE NO.

ENGLISH

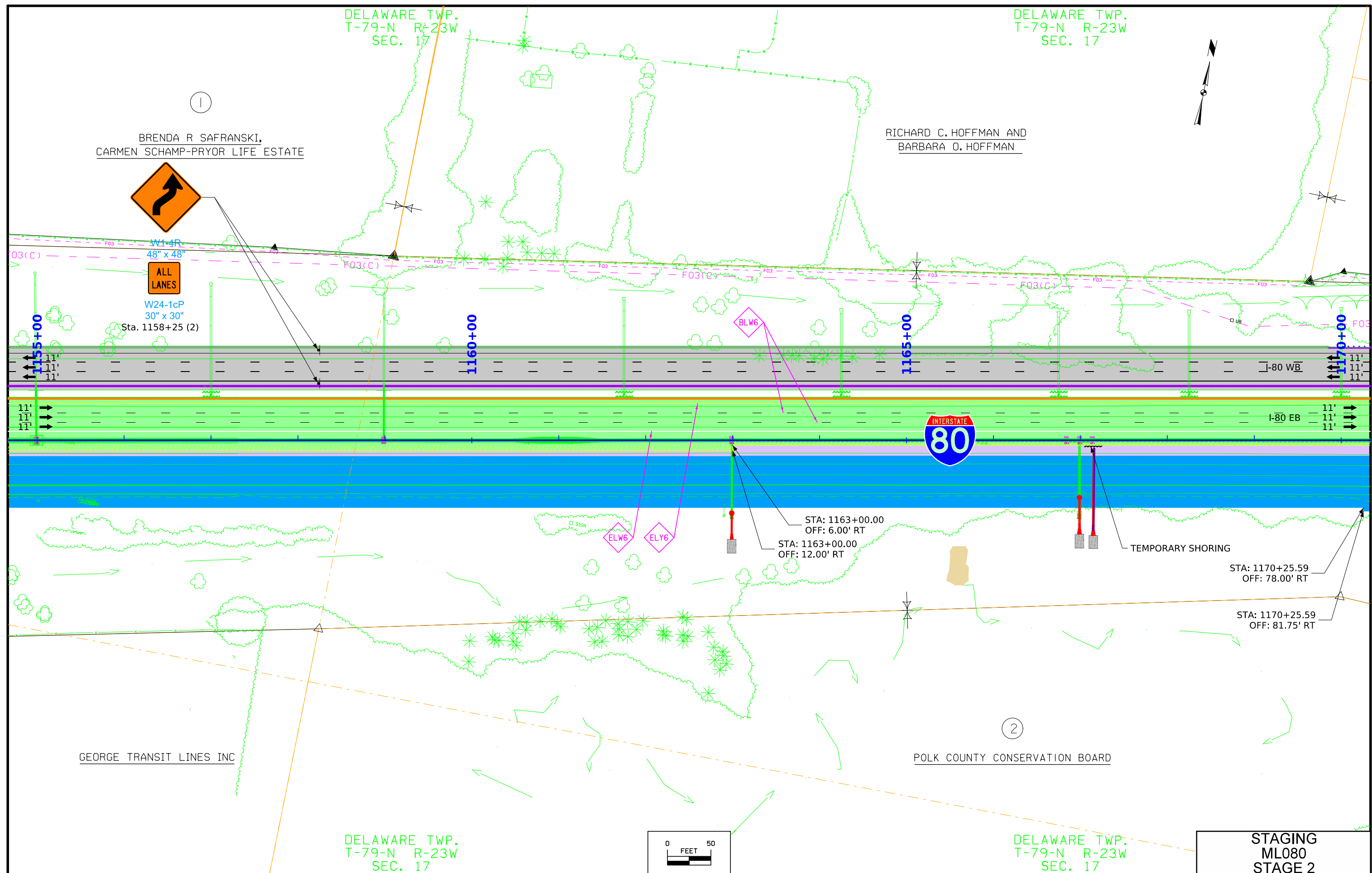
DESIGN TEAM Iowa DOT \ HDR

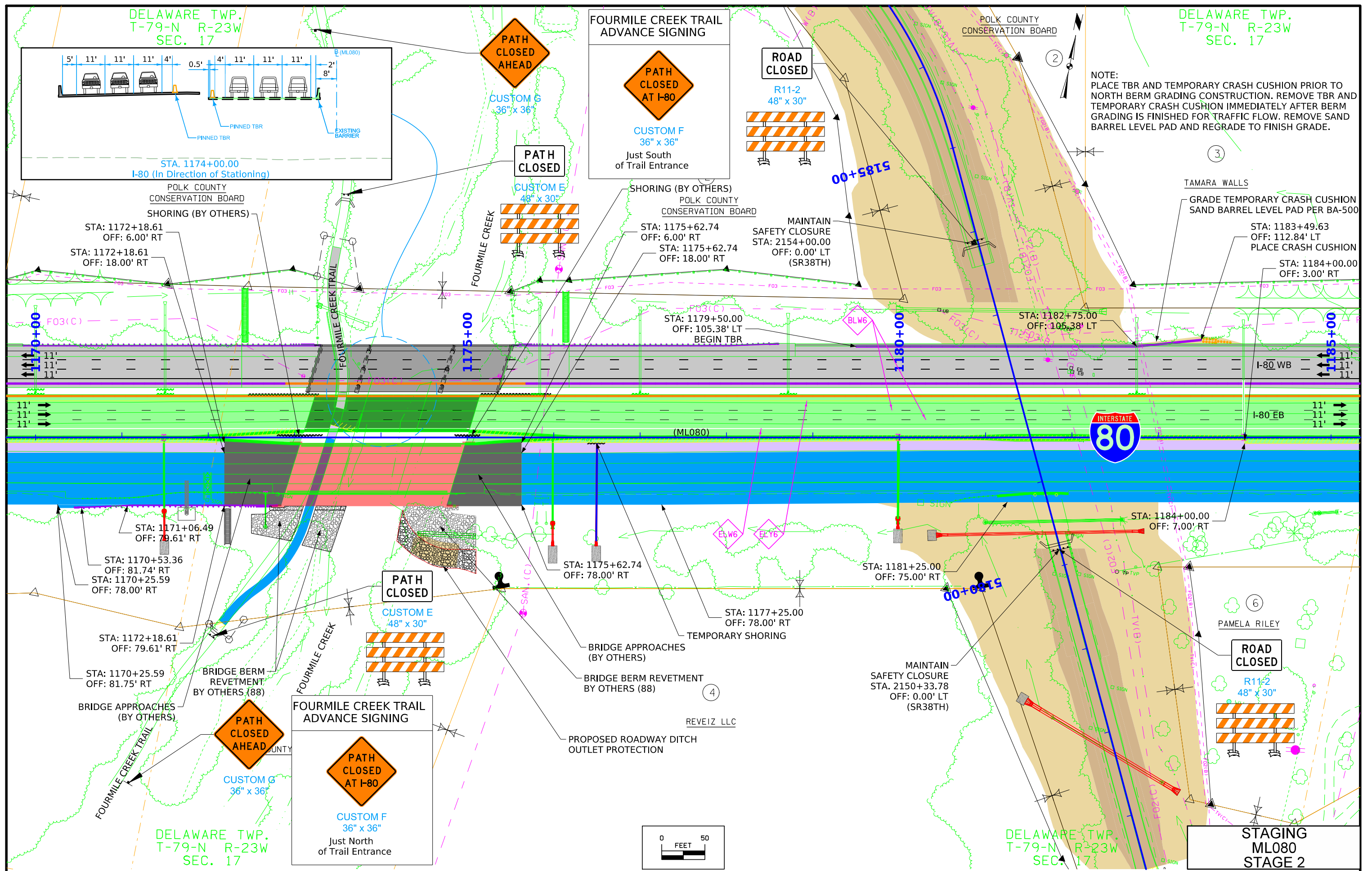
POLK COUNTY

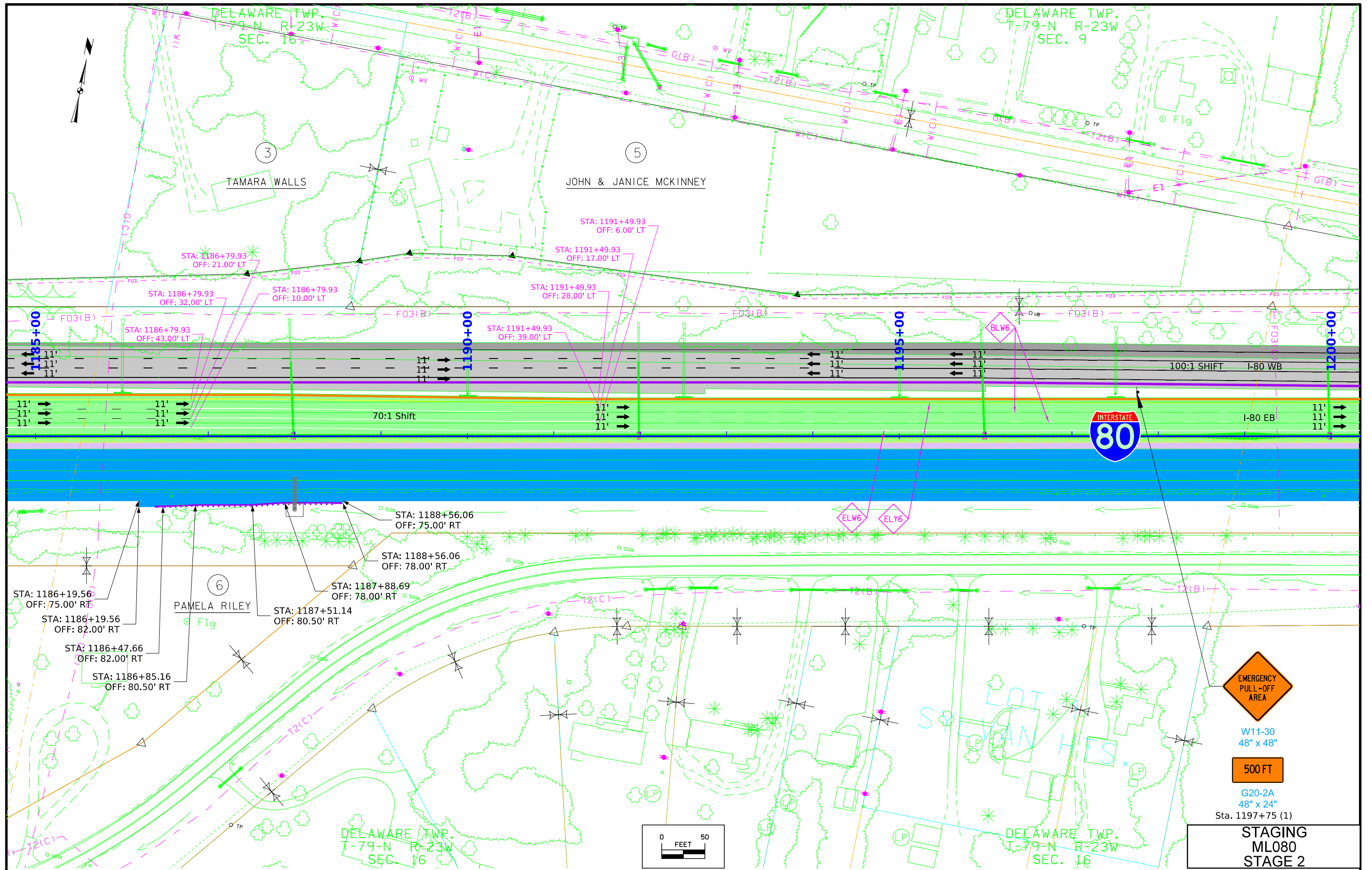
PROJECT NUMBER IM-NHS-080-4(085)138--03-77

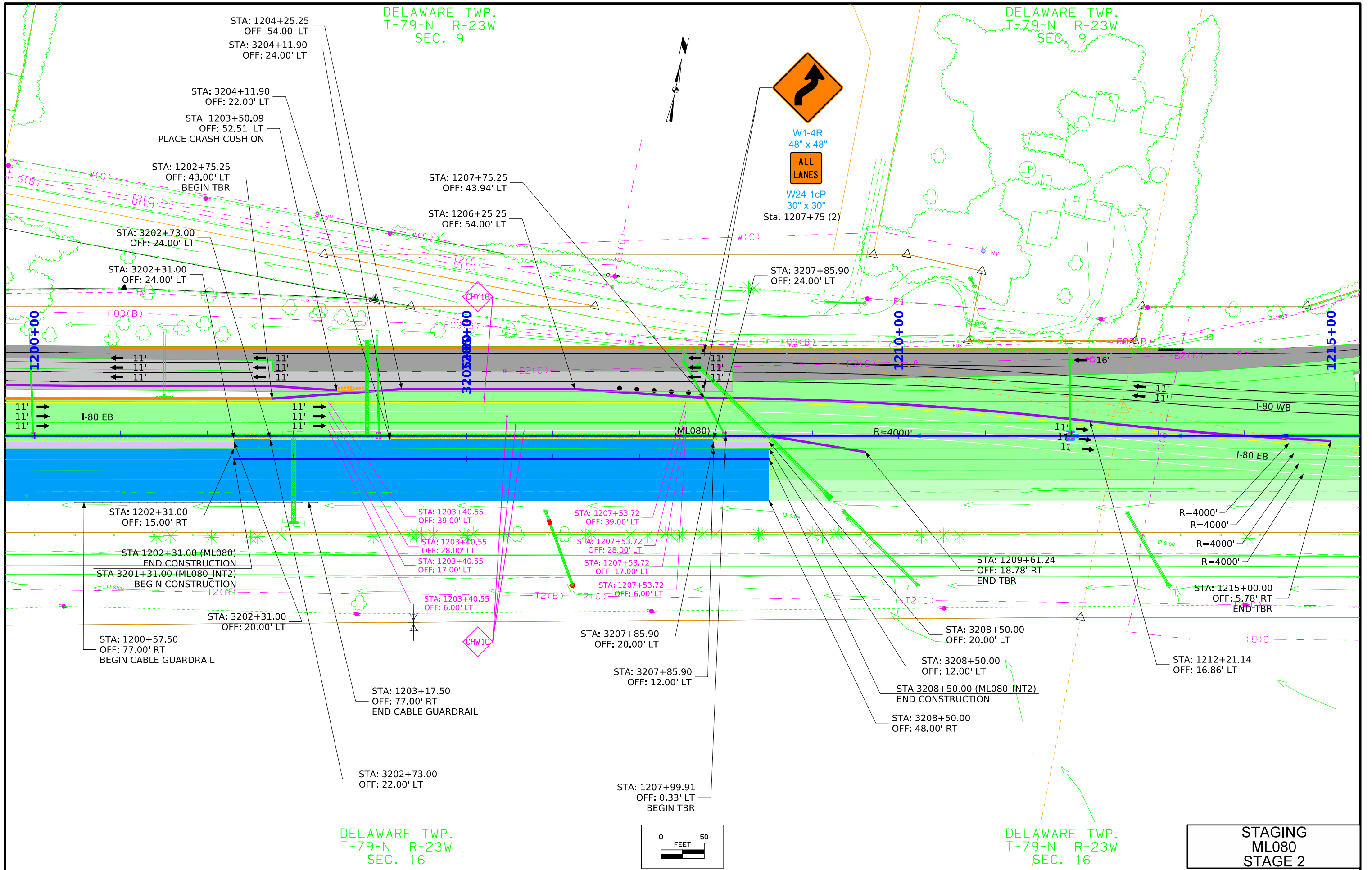
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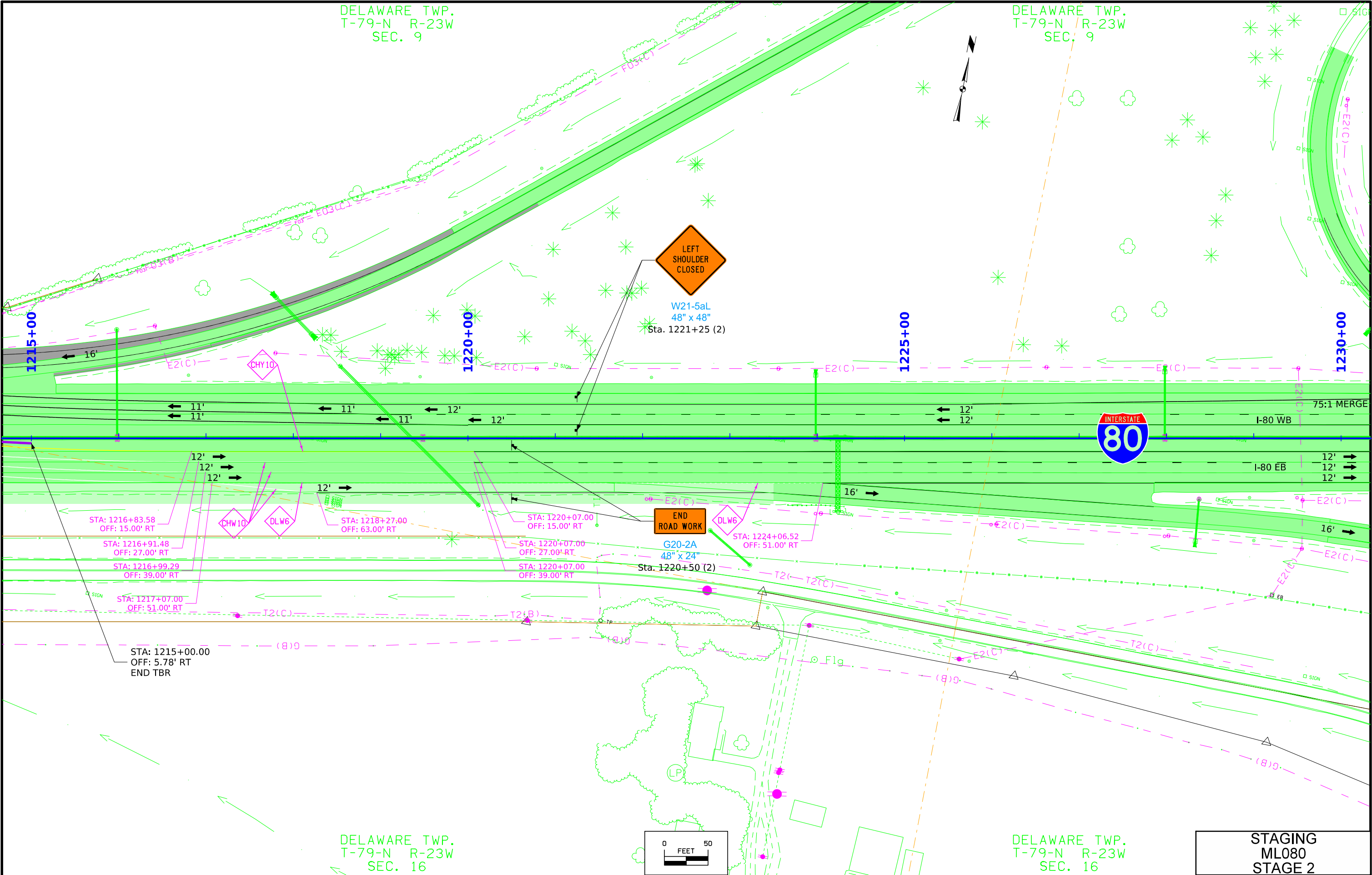
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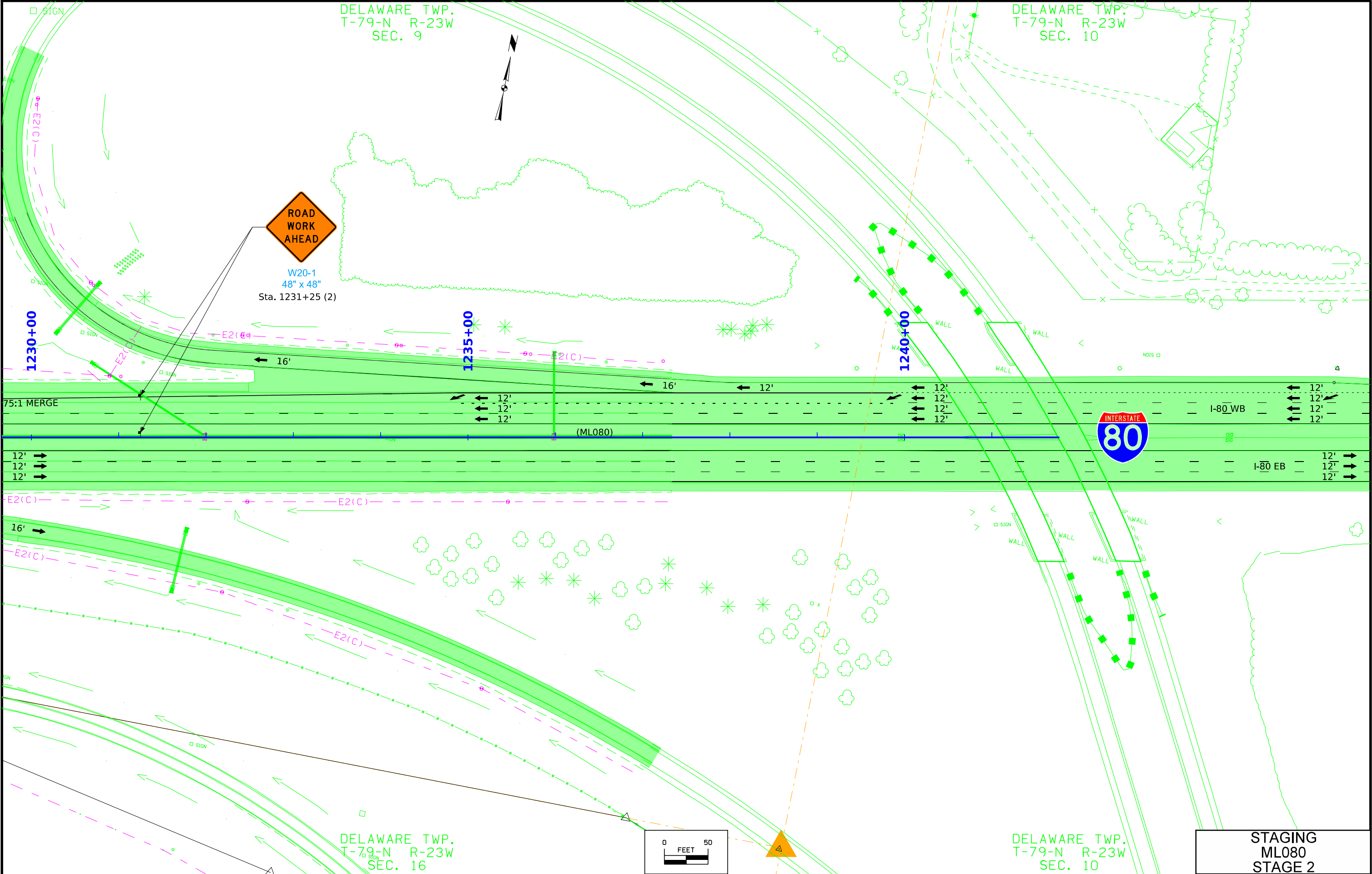


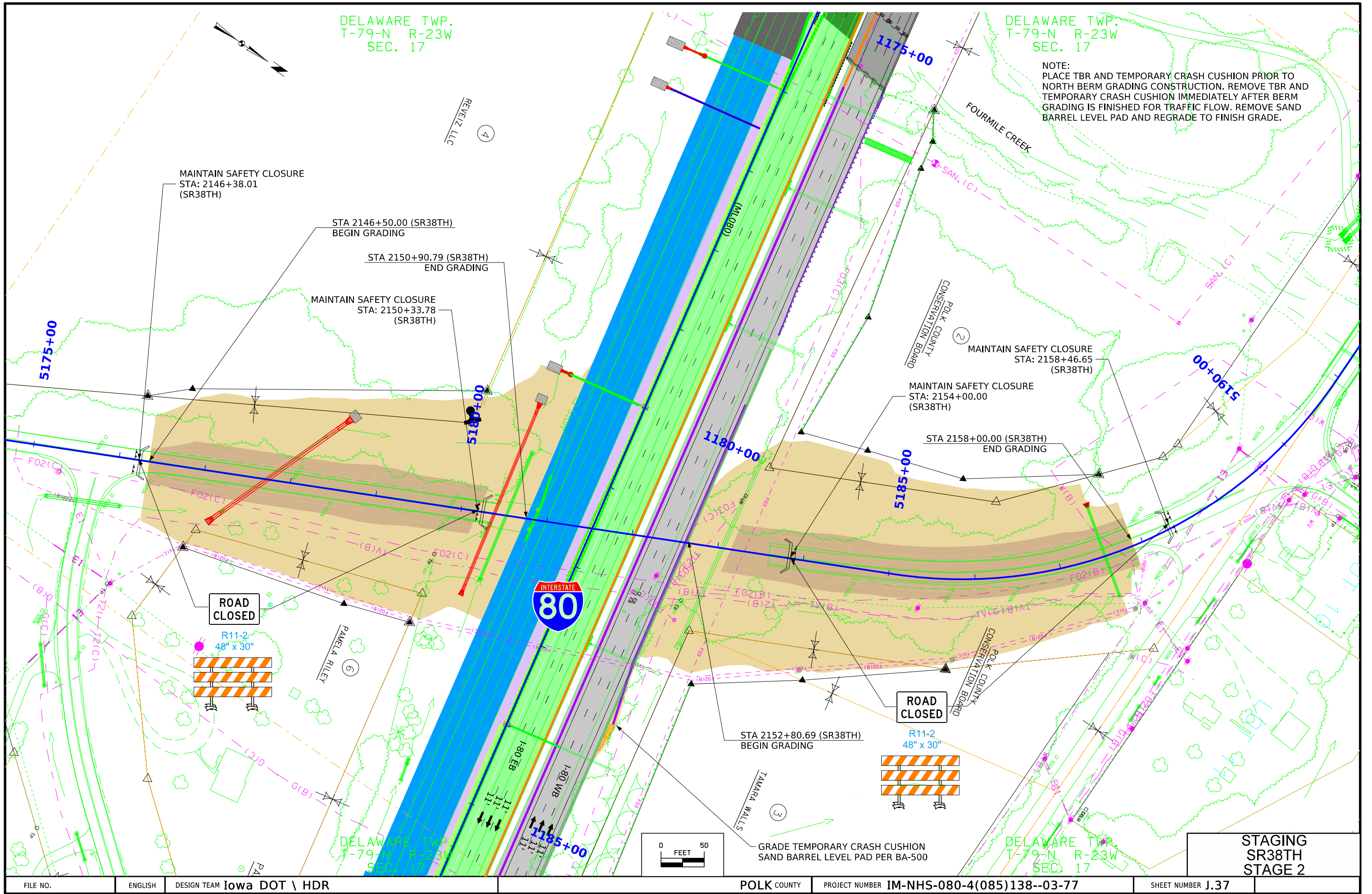


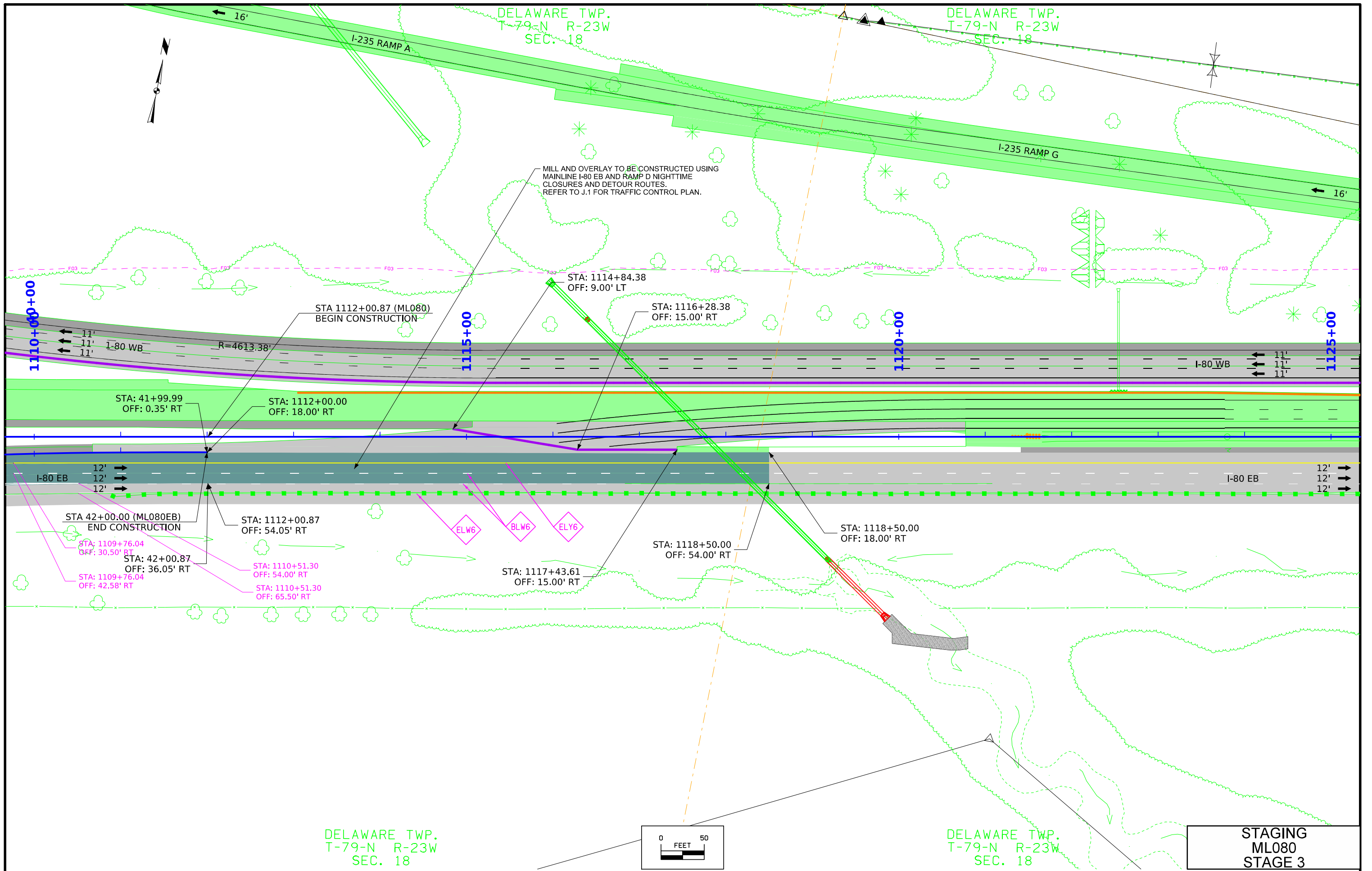


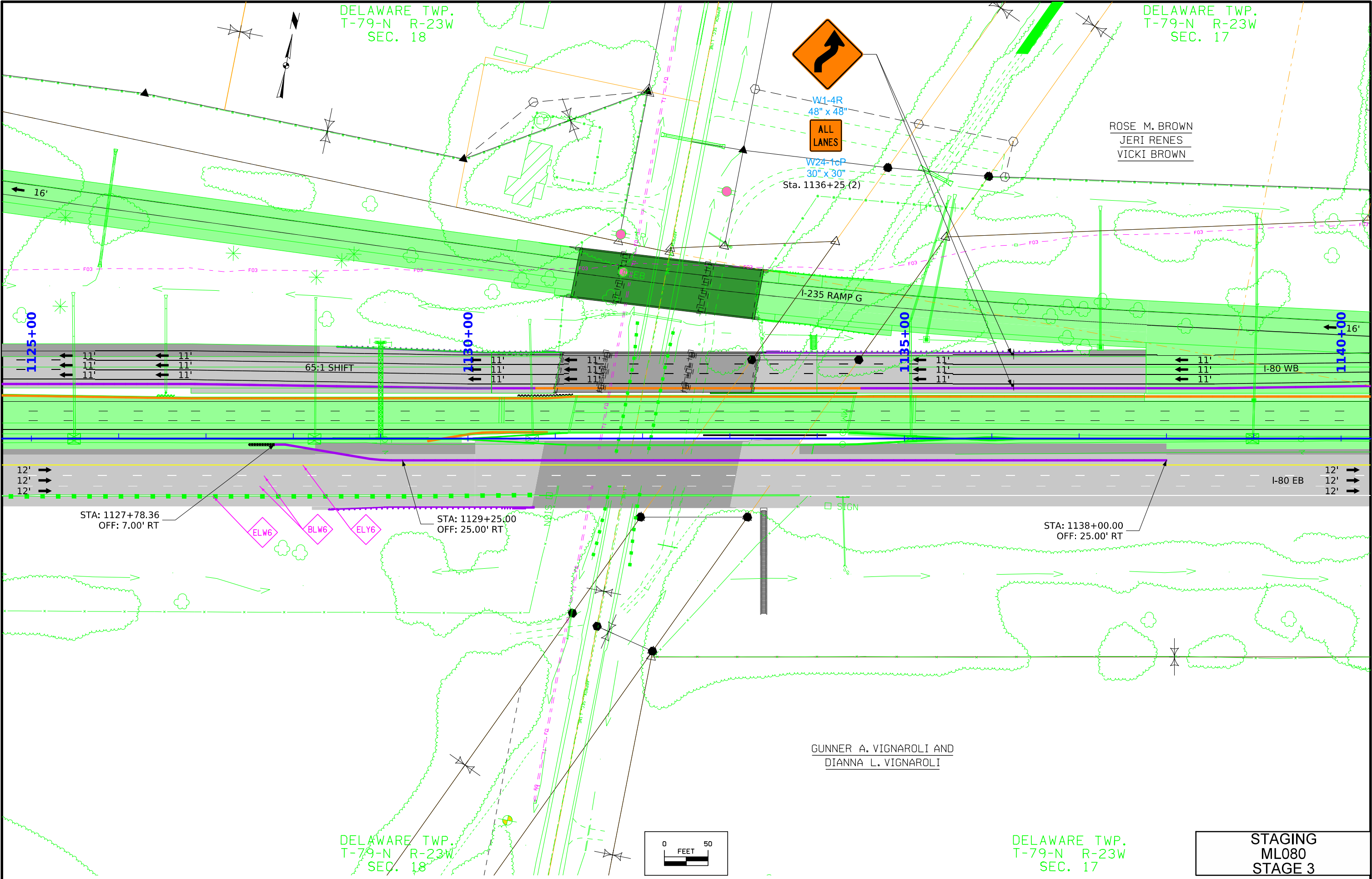












DELAWARE TWP.
T-79-N R-23W
SEC. 17

DELAWARE TWP.
T-79-N R-23W
SEC. 17

BRENDA R SAFRANSKI,
CARMEN SCHAMP-PRYOR LIFE ESTATE

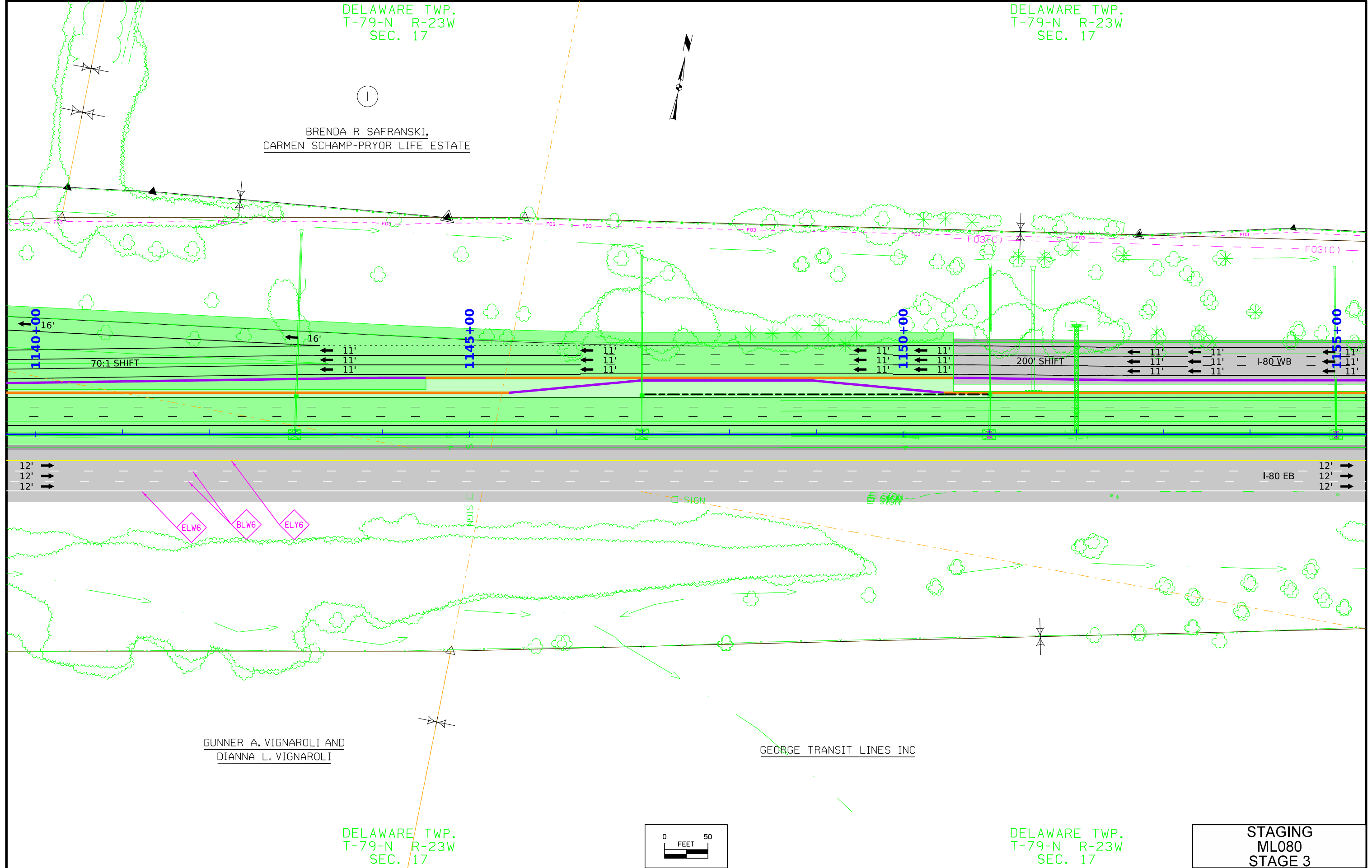
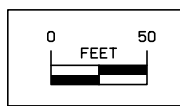
GUNNER A. VIGNAROLI AND
DIANNA L. VIGNAROLI

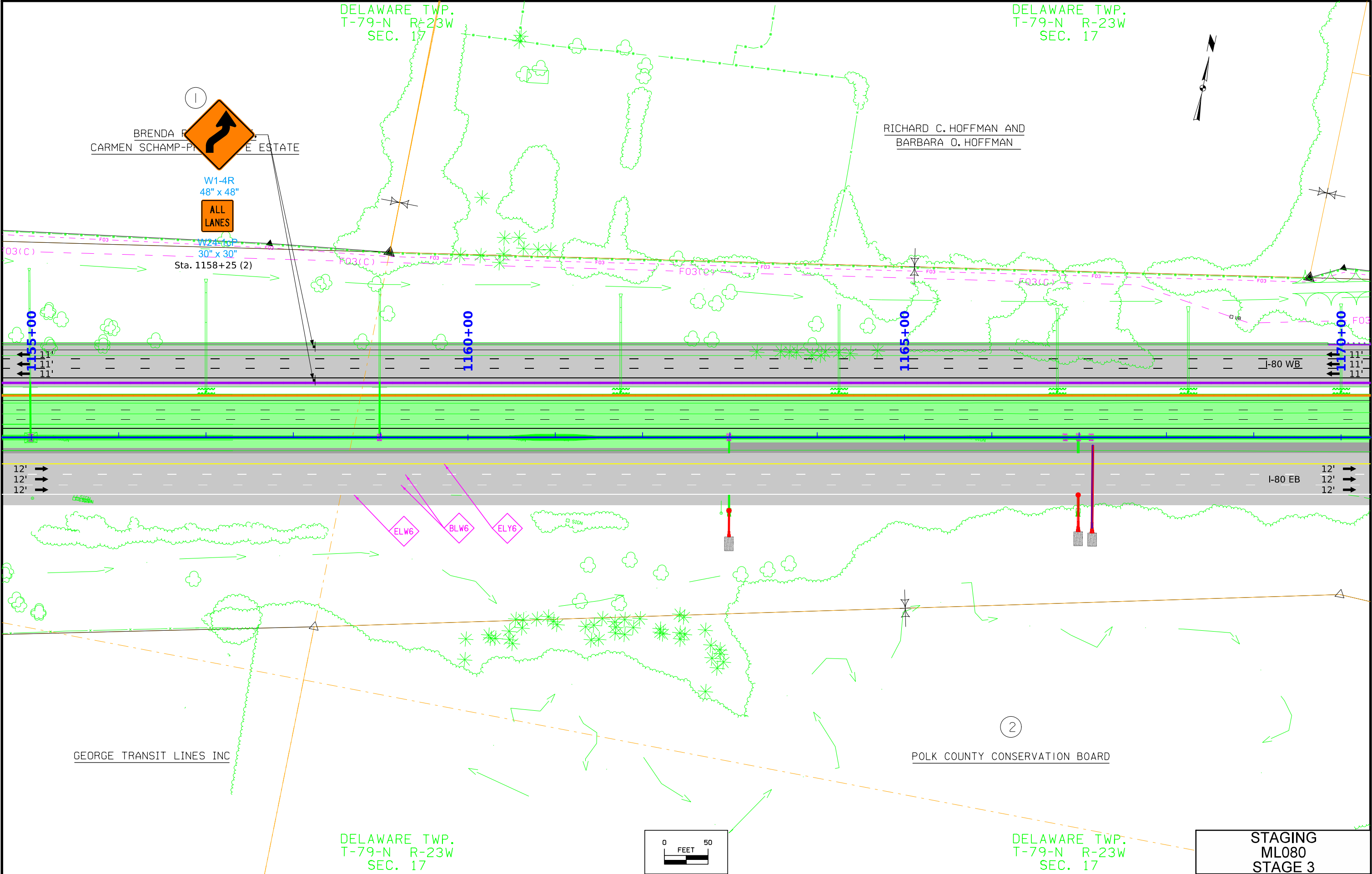
GEORGE TRANSIT LINES INC

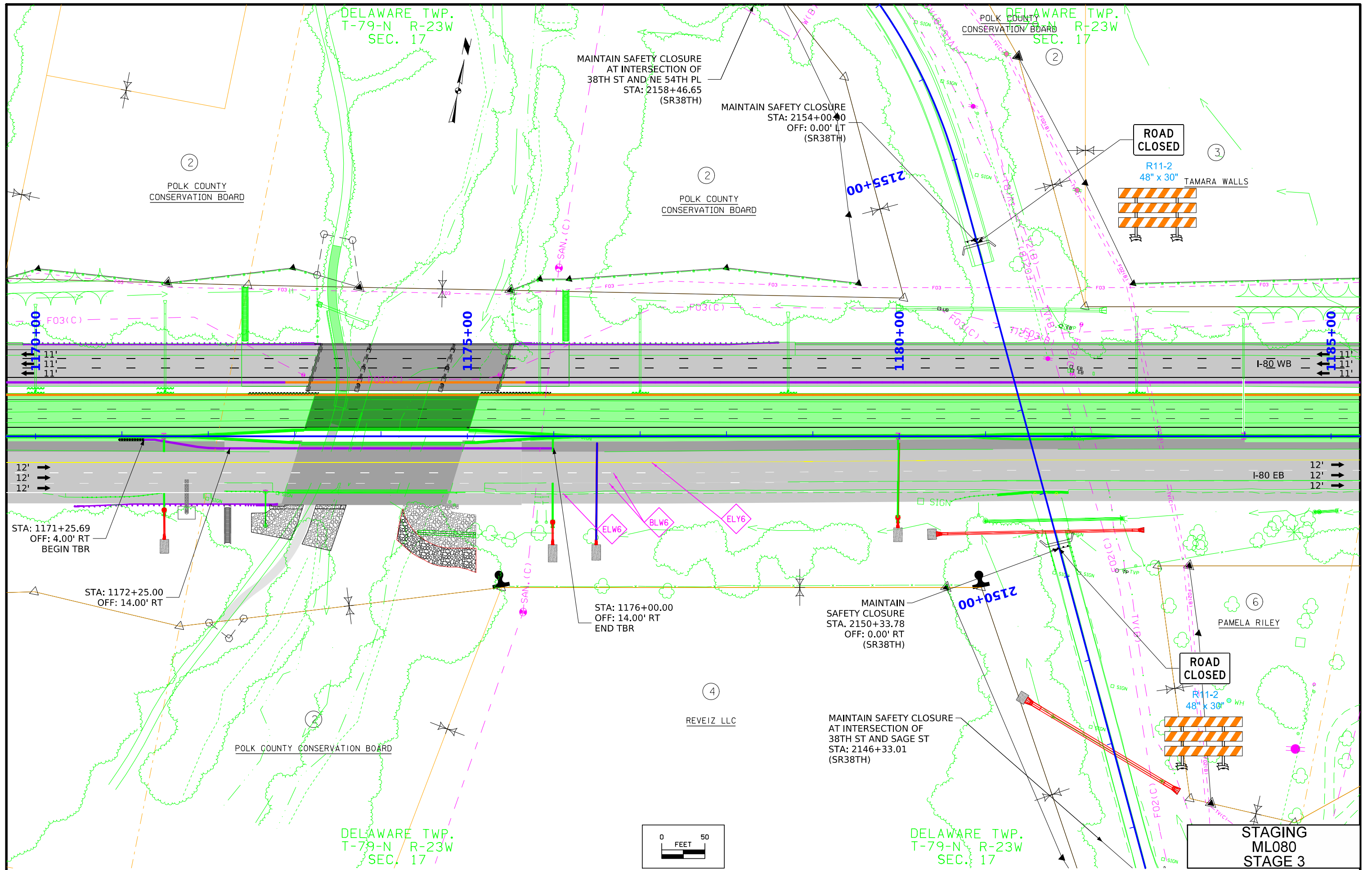
DELAWARE TWP.
T-79-N R-23W
SEC. 17

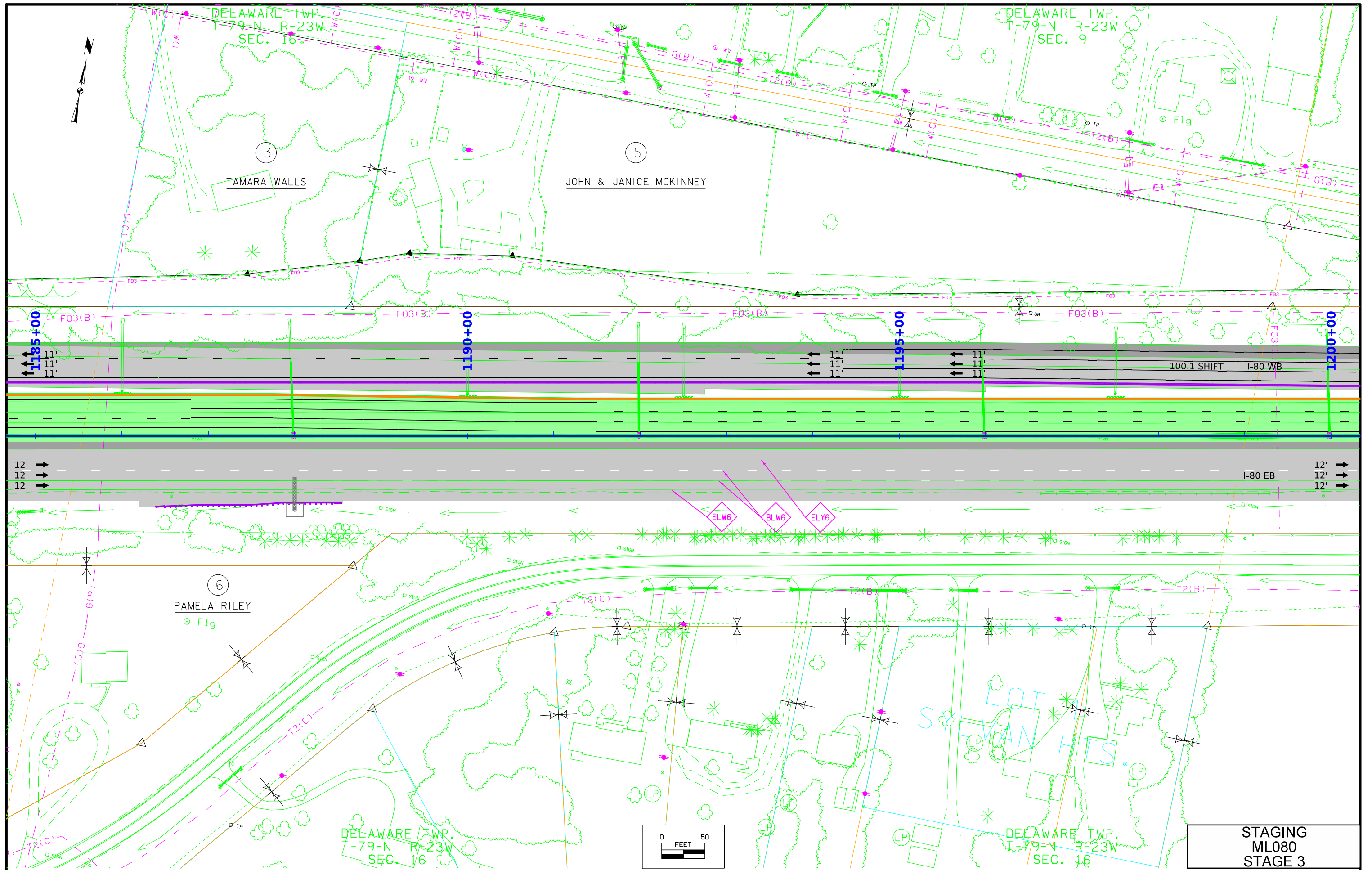
DELAWARE TWP.
T-79-N R-23W
SEC. 17

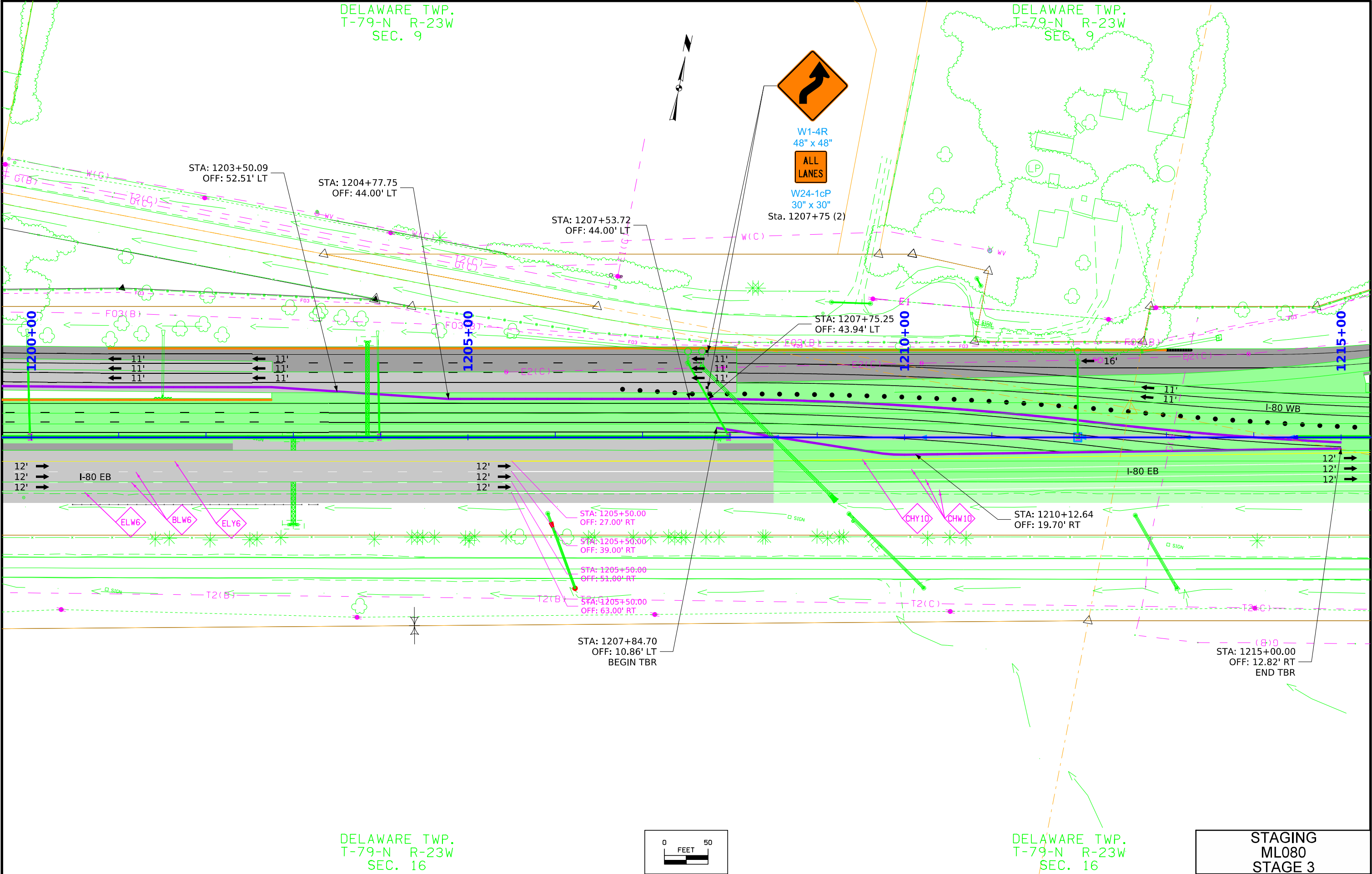
STAGING
ML080
STAGE 3

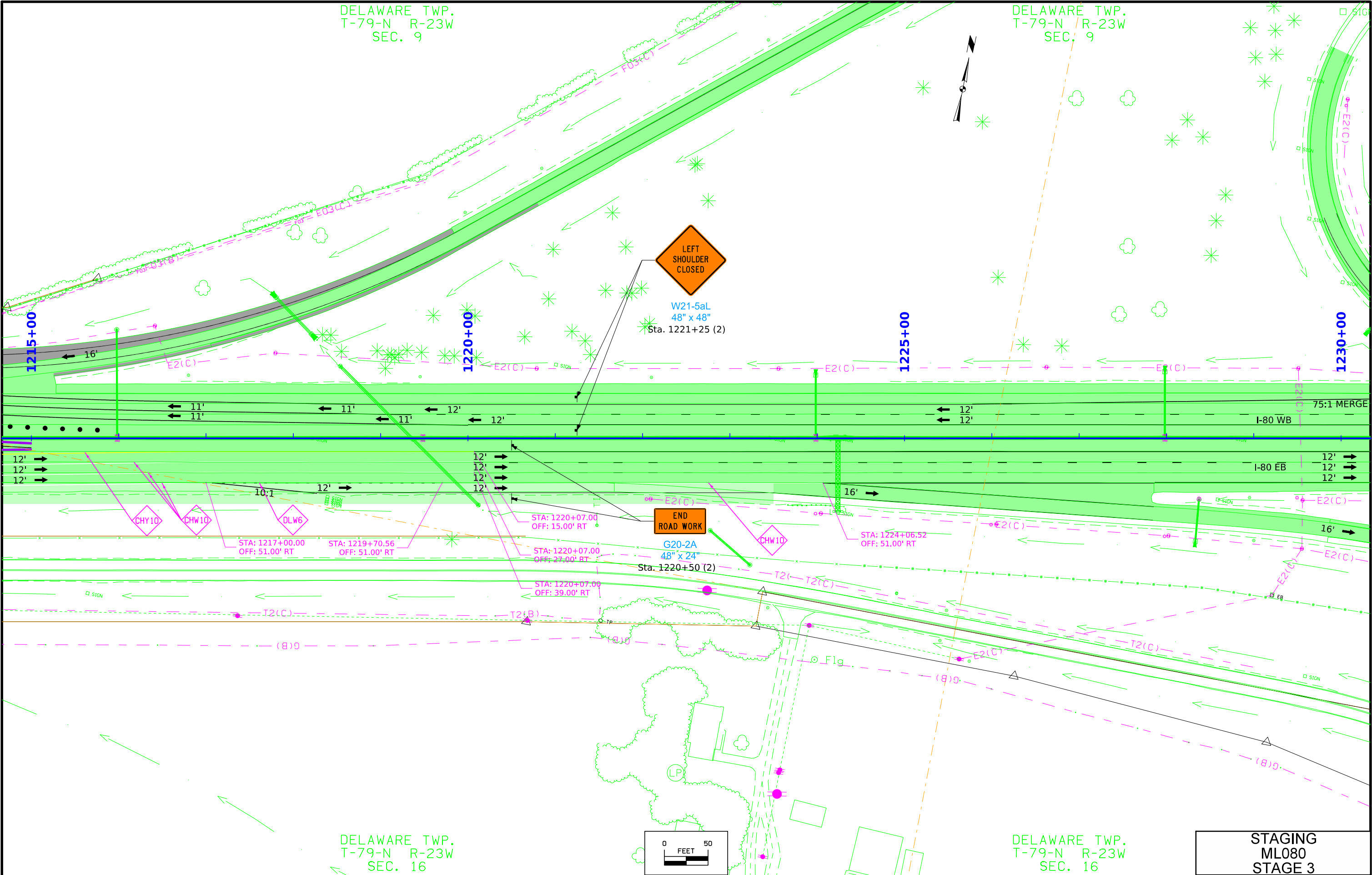


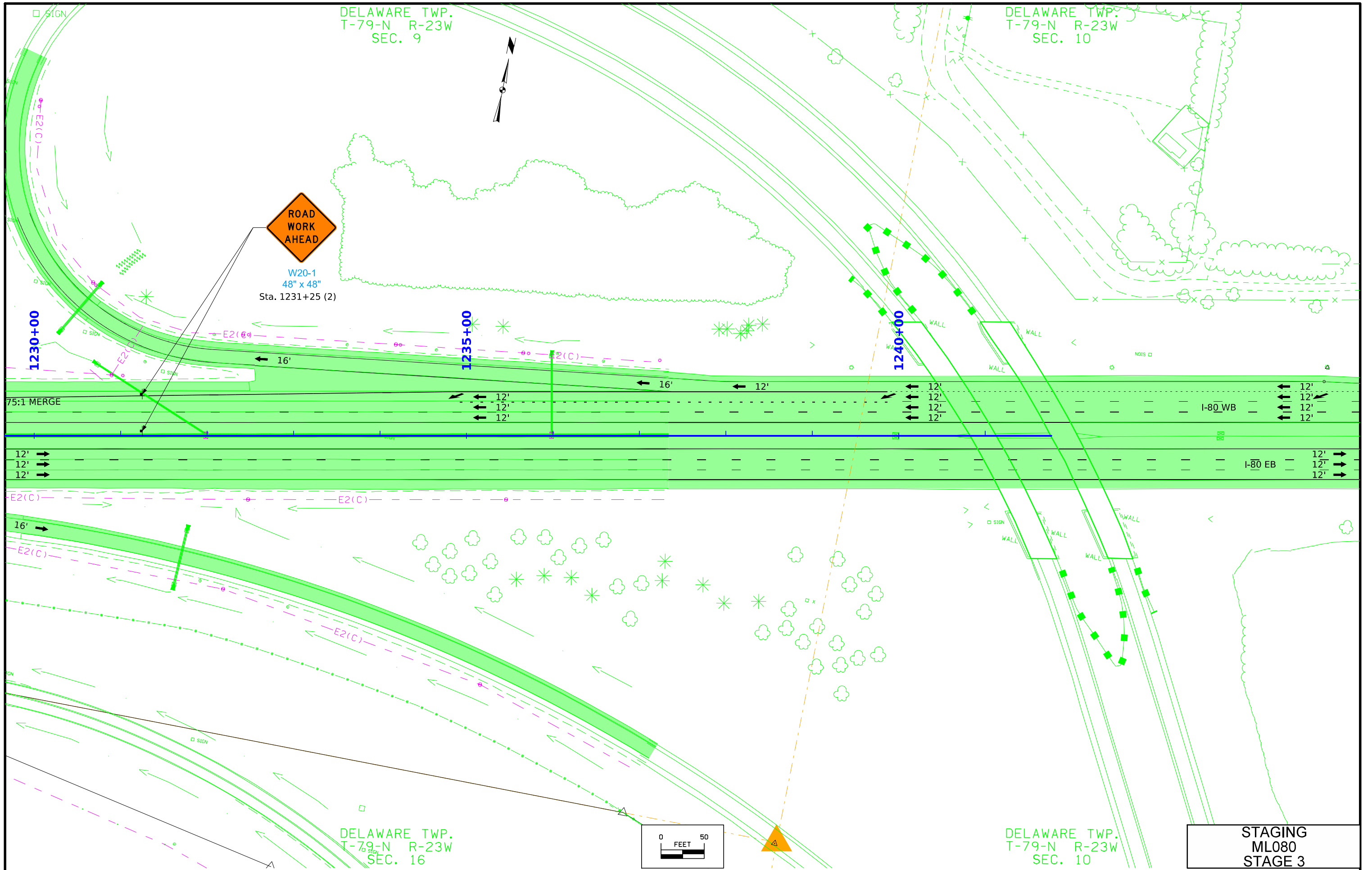


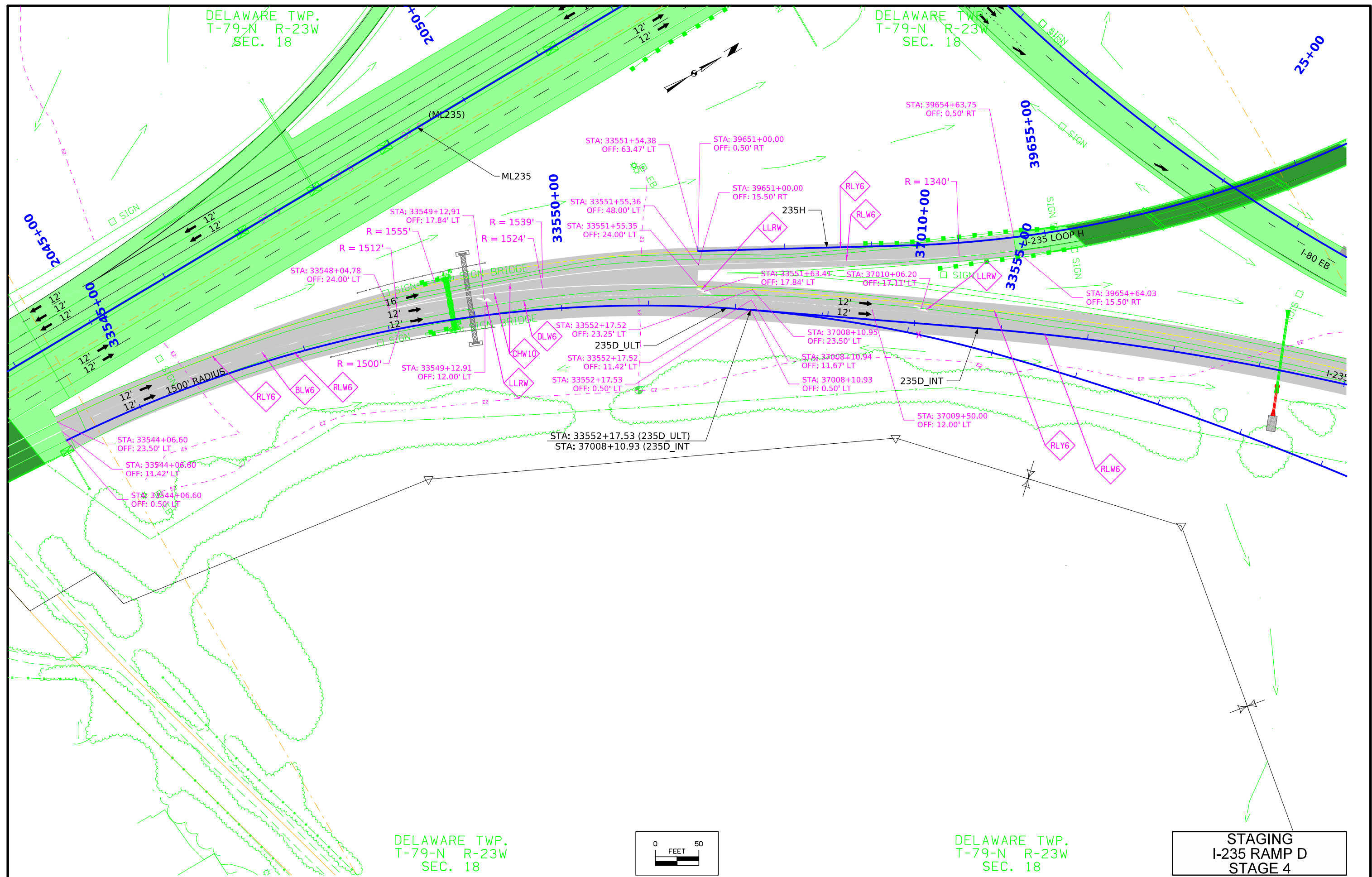


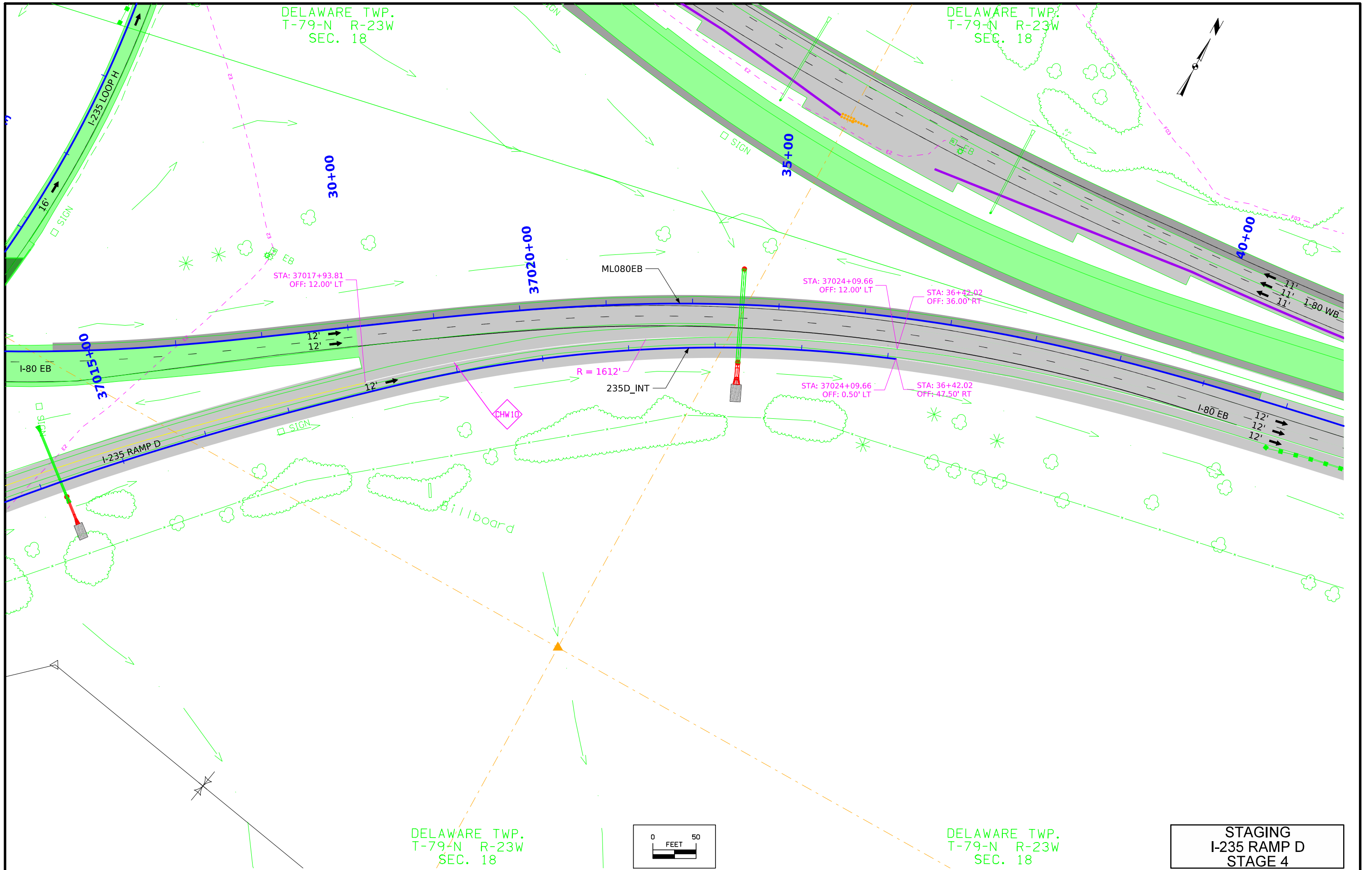


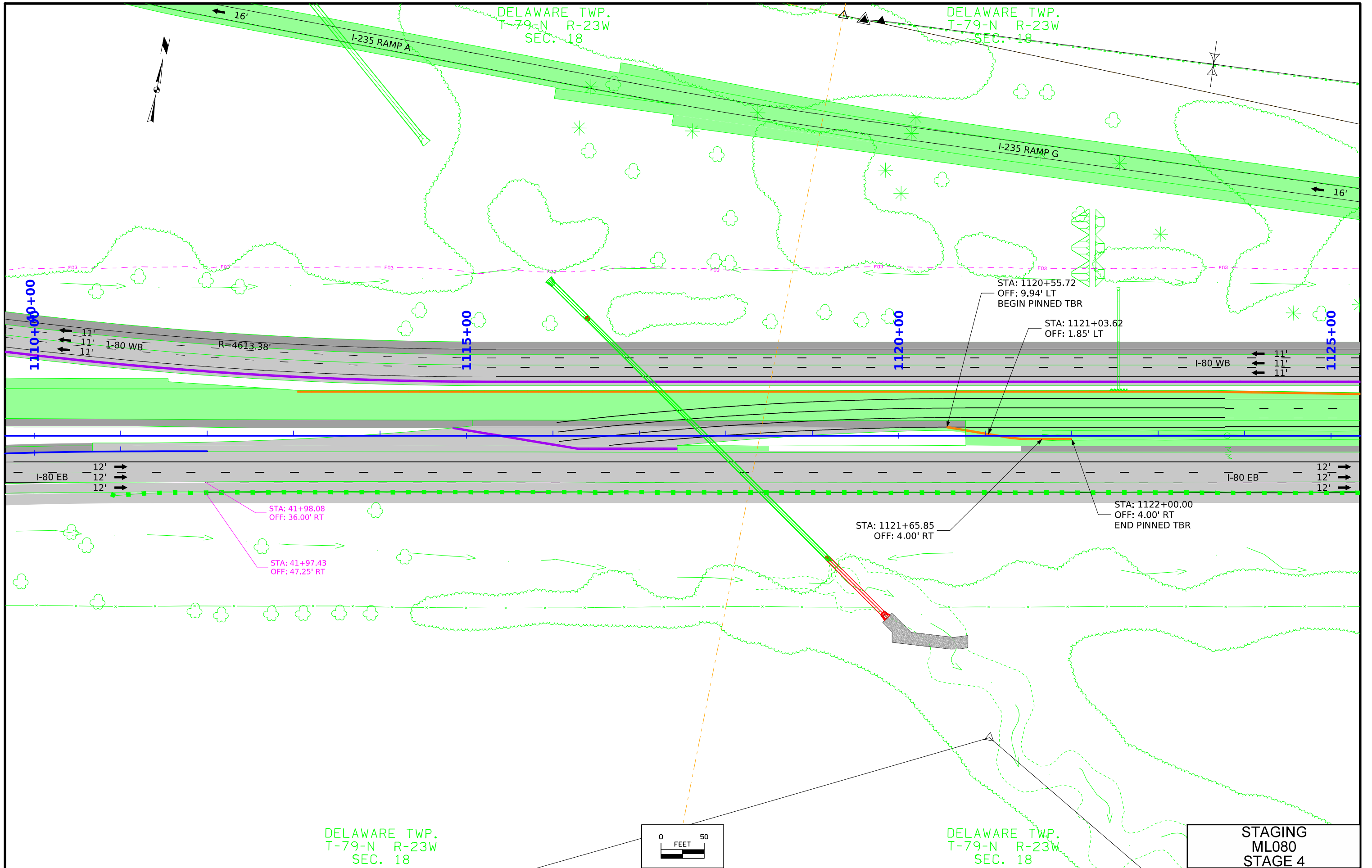




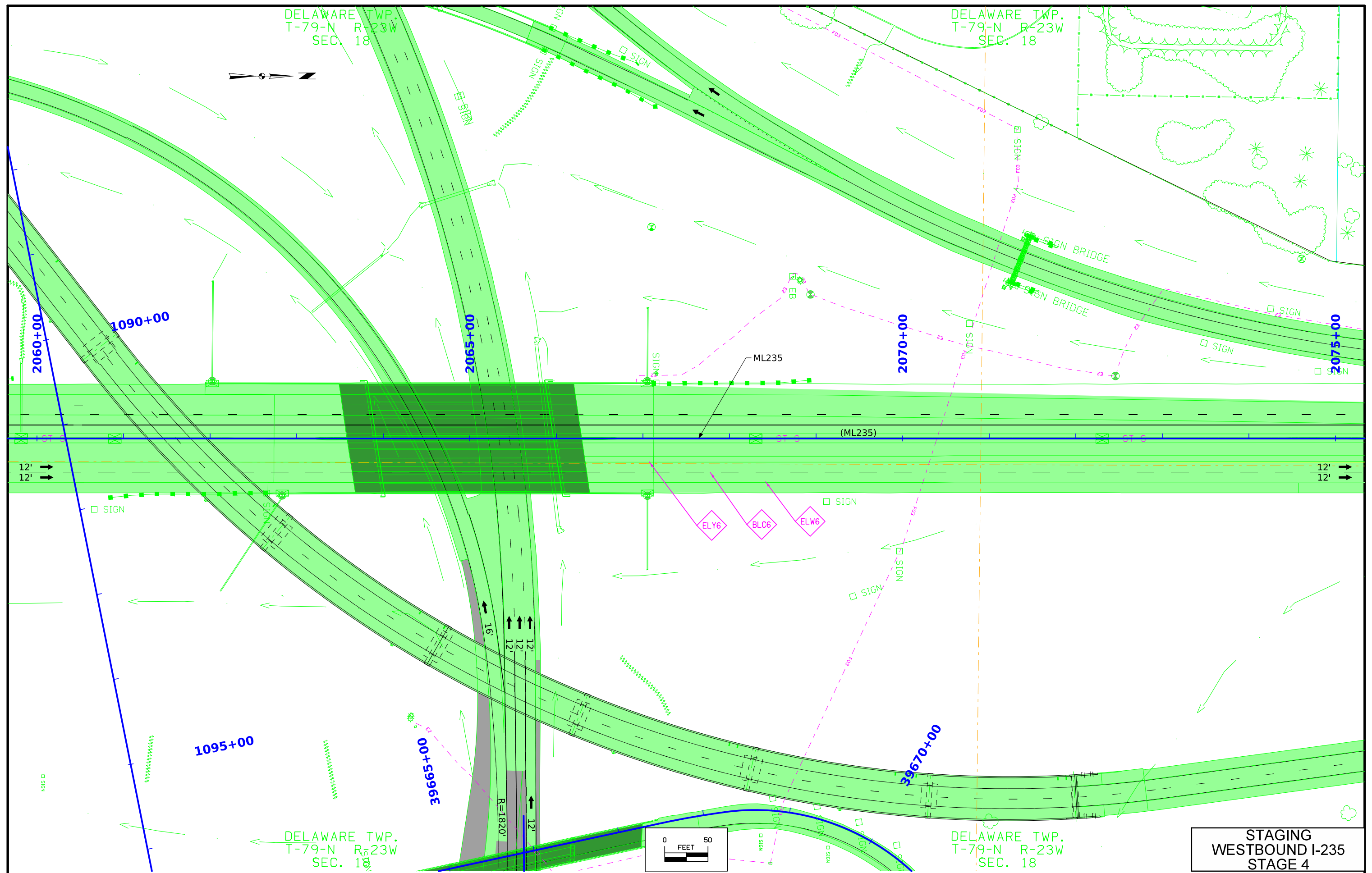




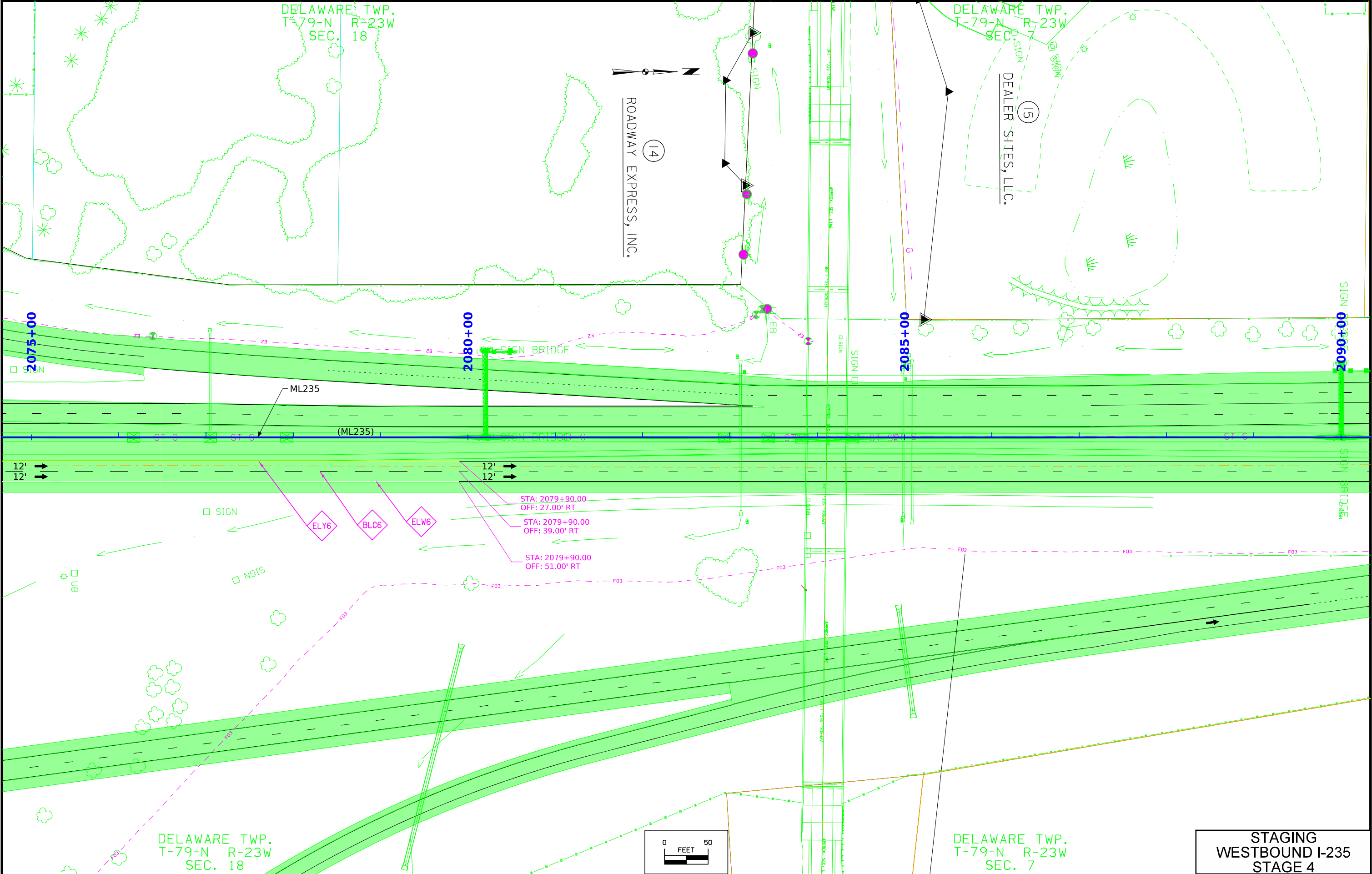


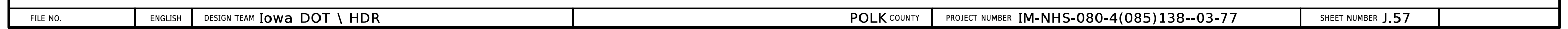


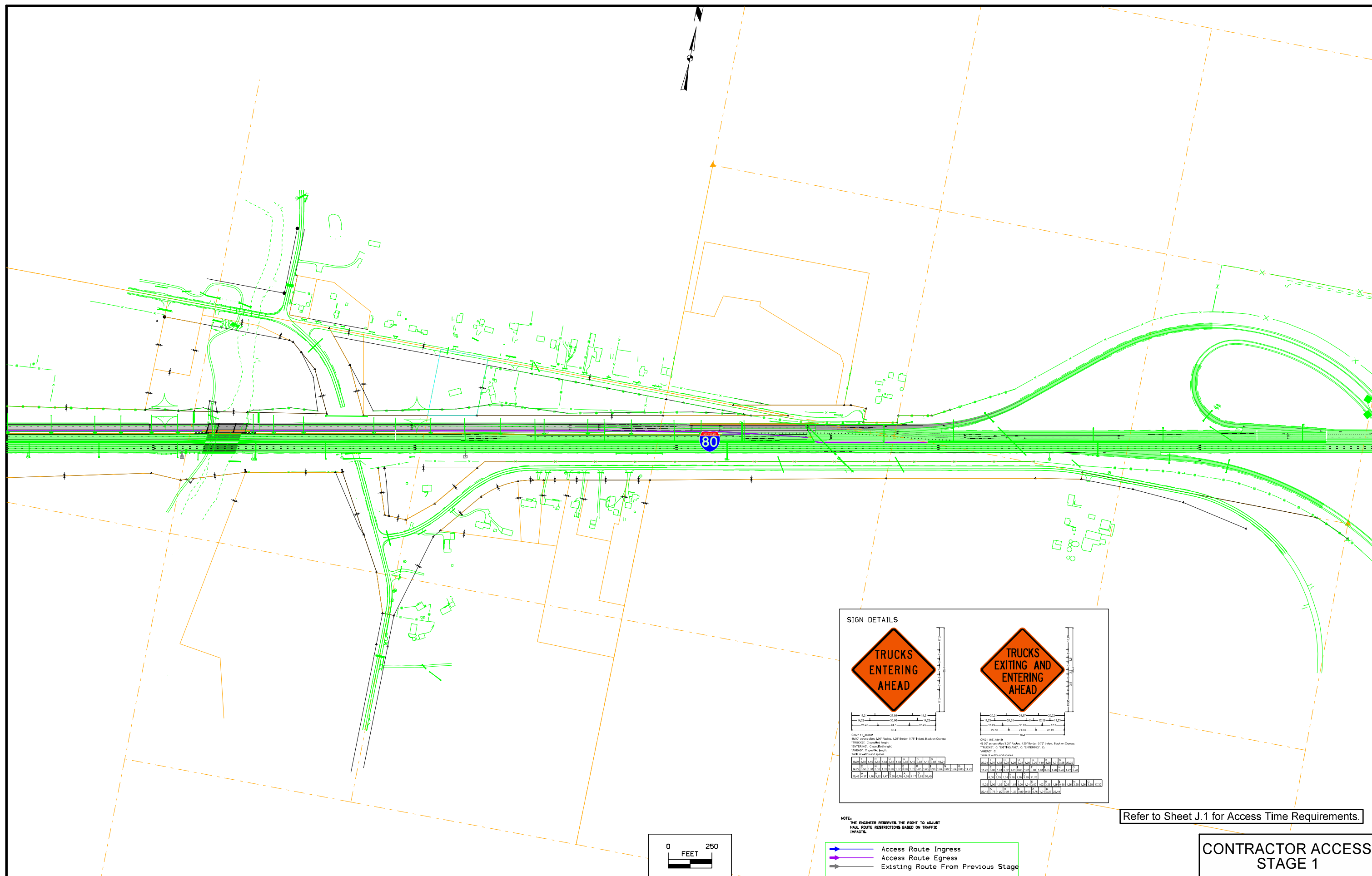
FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT \ HDR	POLK COUNTY	PROJECT NUMBER IM-NHS-080-4(085)138--03-77	SHEET NUMBER J.52
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STAGING WESTBOUND I-235 STAGE 4







Refer to Sheet J.1 for Access Time Requirements.

CONTRACTOR ACCESS
STAGE 1

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT \ HDR
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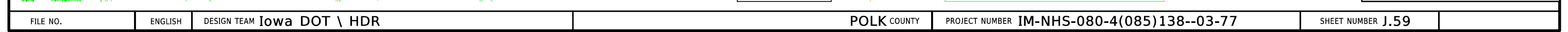
POLK COUNTY

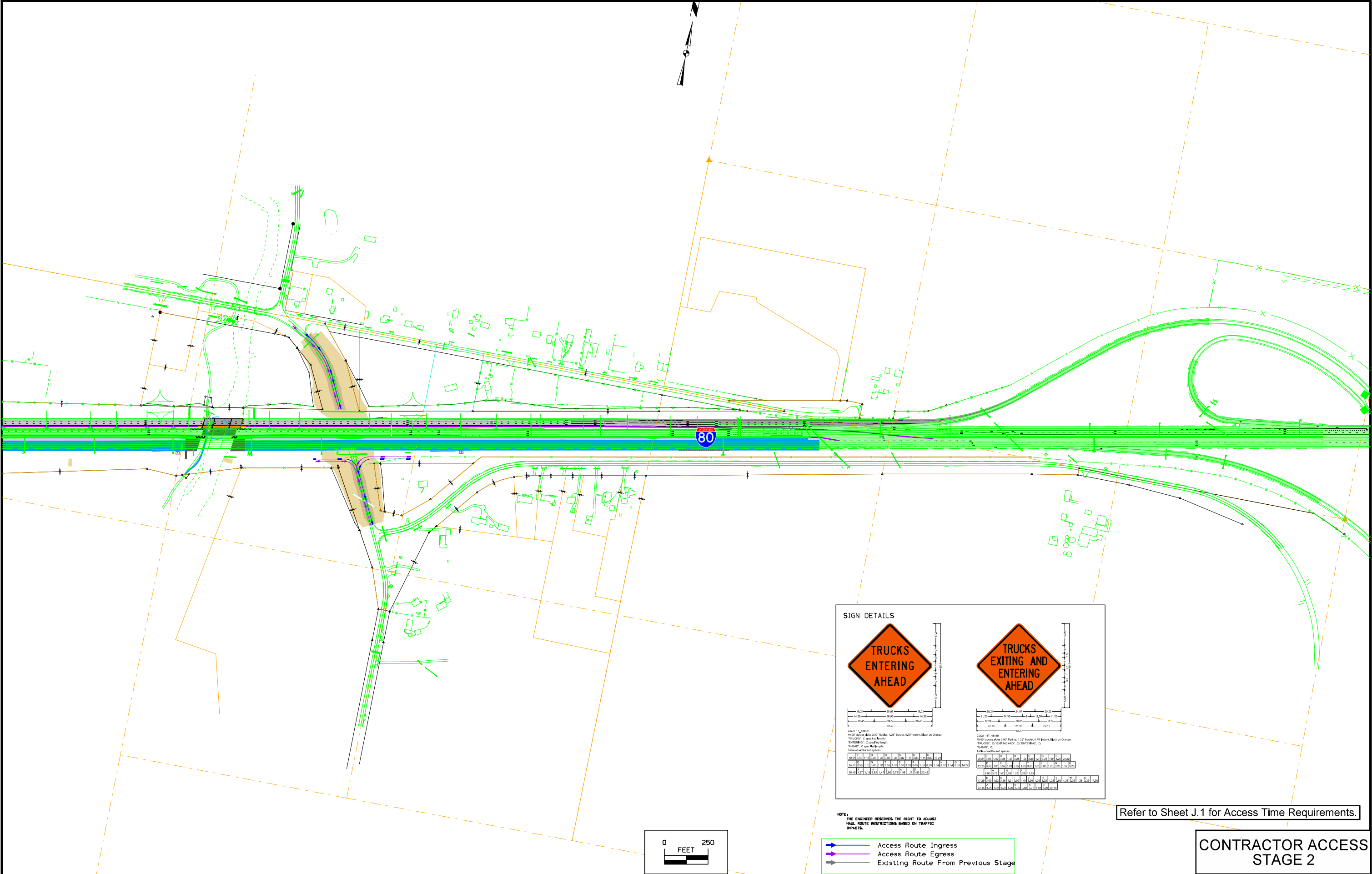
PROJECT NUMBER **IM-NHS-080-4(085)138--03-77**

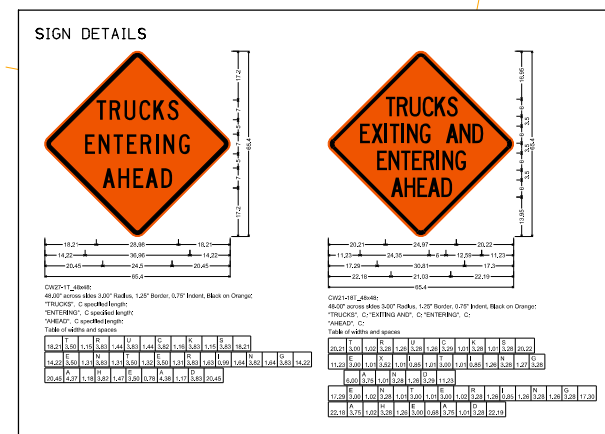
SHEET NUMBER J.58

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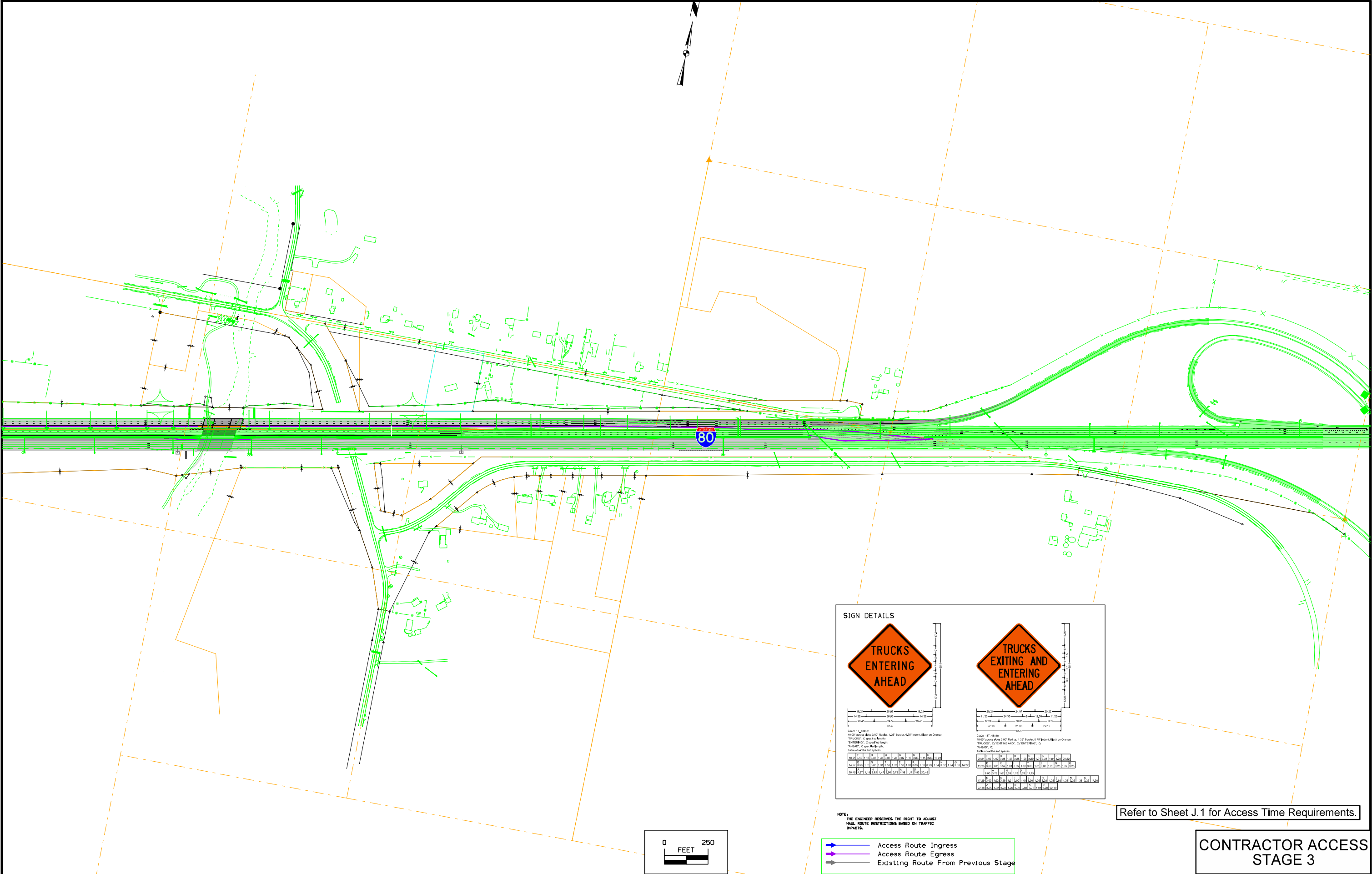
- ➡ Access Route Ingress
- ➡ Access Route Egress
- ➡ Existing Route From Previous Stage

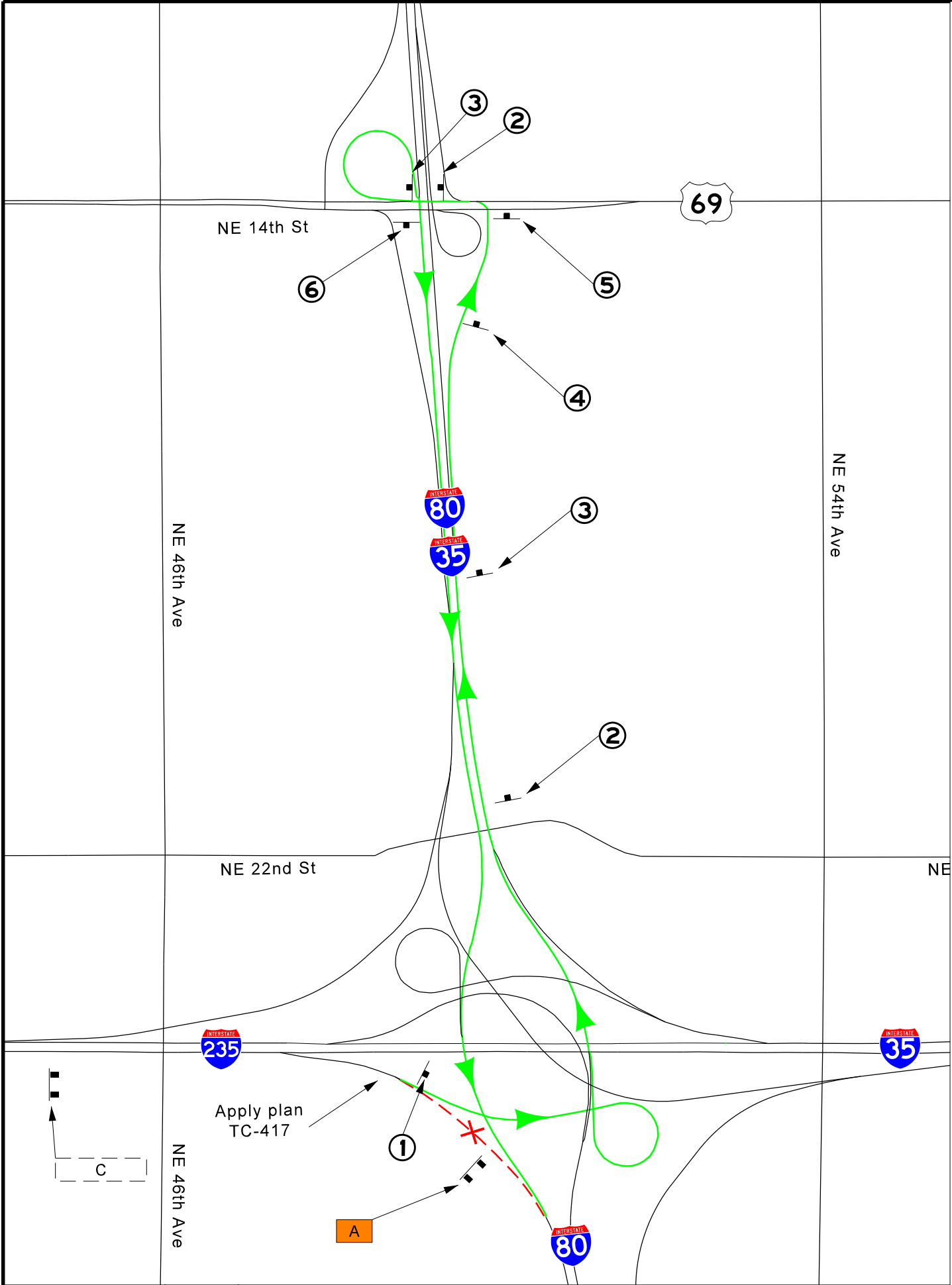






CONTRACTOR ACCESS
STAGE 3





Advanced Messages

3 Days Prior

A EXIT 137-A CLOSING * ** TO ***

Day of Closure

A EXIT 137-A CLOSING TONIGHT * ** TO ***

*Day of Closure (i.e. THURSDAY)
**Start time of Closure (XX PM TO)
***End time of Closure (X AM)

Detour Messages

I-80 EAST RAMP EXIT 137-A CLOSED I-80 EAST DETOUR USE I-80 WEST EXIT 137-B

Contractor PDMS

Existing Iowa DOT Overhead DMS

*DISTANCES ARE NOT TO SCALE

Sign Size

①

DETOUR

M4-8

EAST

M3-2

80

M1-1

↑

M6-3

②

DETOUR

M4-8

EAST

M3-2

80

M1-1

↗

M5-2R

③

DETOUR

M4-8

EAST

M3-2

80

M1-1

↗

M6-2R

④

DETOUR

M4-8

EAST

M3-2

80

M1-1

↙

M5-1L

⑤

DETOUR

M4-8

EAST

M3-2

80

M1-1

←

M6-1L

Sign Size

⑥

END

M4-8B

DETOUR

M4-8

EAST

M3-2

80

M1-1

-- X -- Closure

→ Detour

Notes

1. All sign locations are approximate and may be adjusted to fit final conditions.
2. Permanent dynamic message signs upstream of the closure, not shown in the plans, to be used by Iowa DOT Traffic Management Center (TMC) during the closure.
3. All portable dynamic message signs (PDMS) shall be connected to the TMC. The contractor to provide the TMC with necessary PDMS connection info. The TMC will post all messages.

I-235 EASTBOUND TO I-80 EASTBOUND RAMP (EXIT 137-A) DETOUR

FILE NO.

ENGLISH

DESIGN TEAM

Iowa DOT \ HDR

POLK COUNTY

PROJECT NUMBER

IM-NHS-080-4(085)138--03-77

SHEET NUMBER

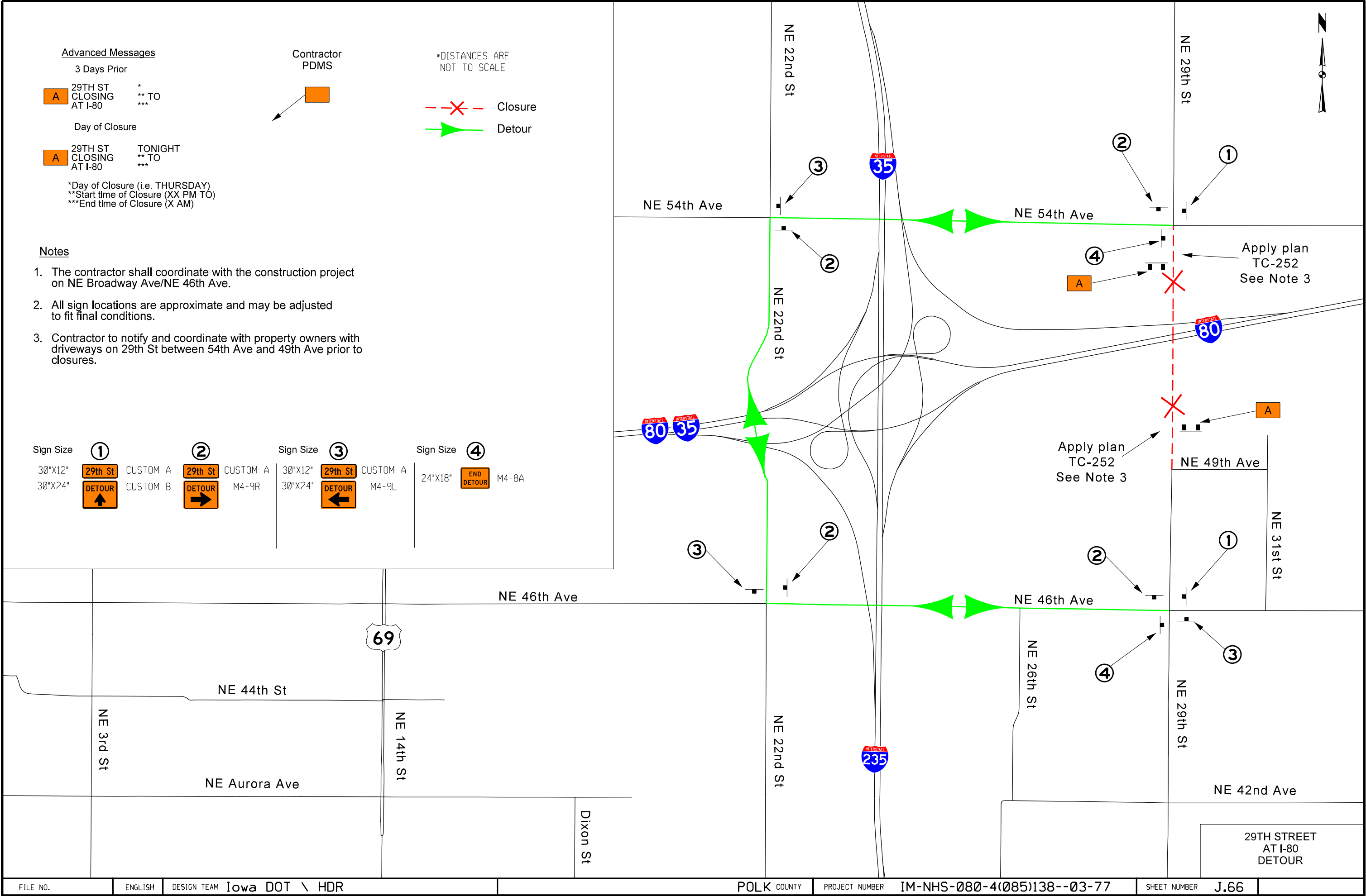
J.64

10:23:53 AM 8/15/2025

NJOHNSON

pw://HDR_US_Central_01/3047/10211286/NEMM.Stage5_Detours_85.sht





Notes

- 1. Contractor to maintain existing traffic control devices in place for the existing NE 38th Street bridge closure.
- 2. The contractor shall coordinate with the construction project on NE Broadway Ave/NE 46th Ave.
- 3. All sign locations are approximate and may be adjusted to fit final conditions.
- 4. Traffic control for the 38th Street closure and detour to become property of Iowa DOT at project completion.

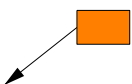
Advanced Messages

7 Days Prior

A BRIDGE CLOSING AT I-80 ** FOR ***

*Day of Closure (i.e. TUESDAY)
**Date of Closure (i.e. 4/15 FOR)
***Duration of Closure (i.e. 3 YEARS)

Contractor PDMS



Sign Size ①
30"x12"
38th St
CUSTOM C

Sign Size ②
30"x24"
DETOUR
CUSTOM B

③
DETOUR
M4-9R

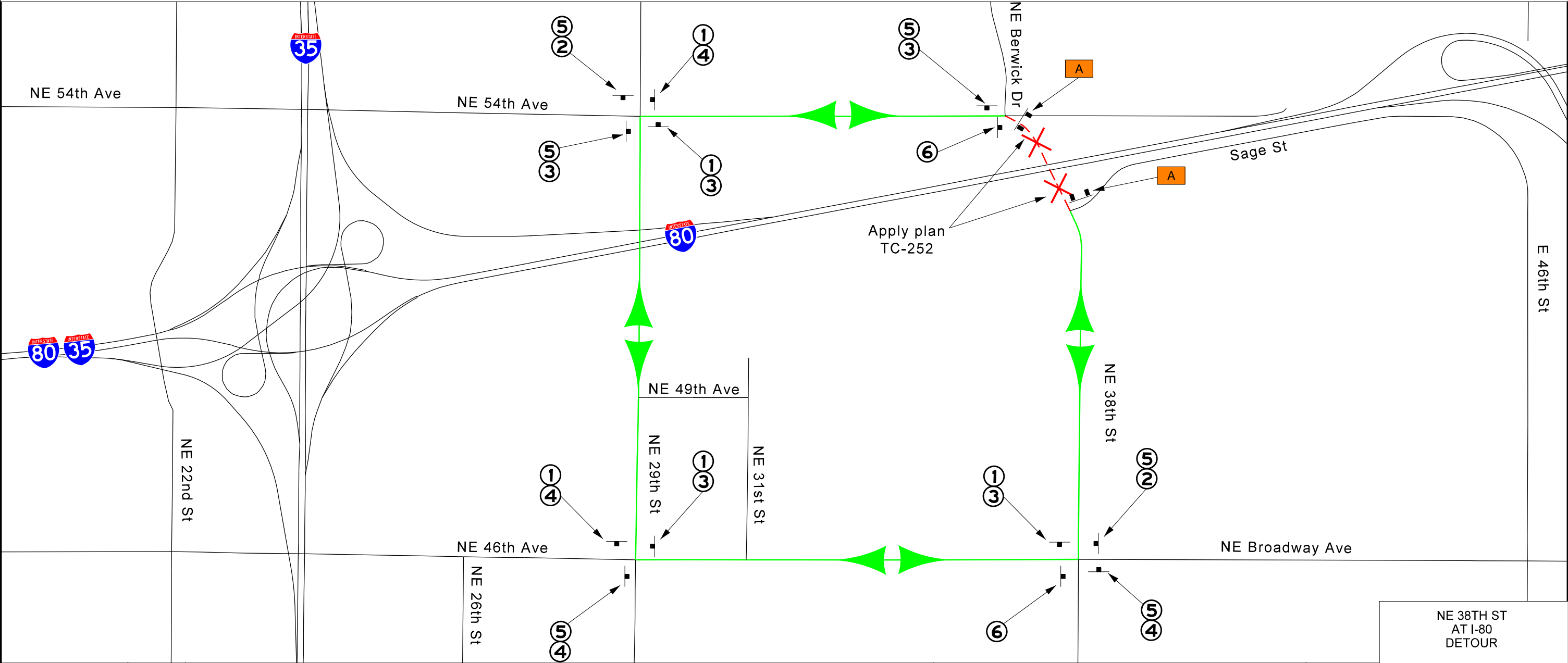
④
DETOUR
M4-9L

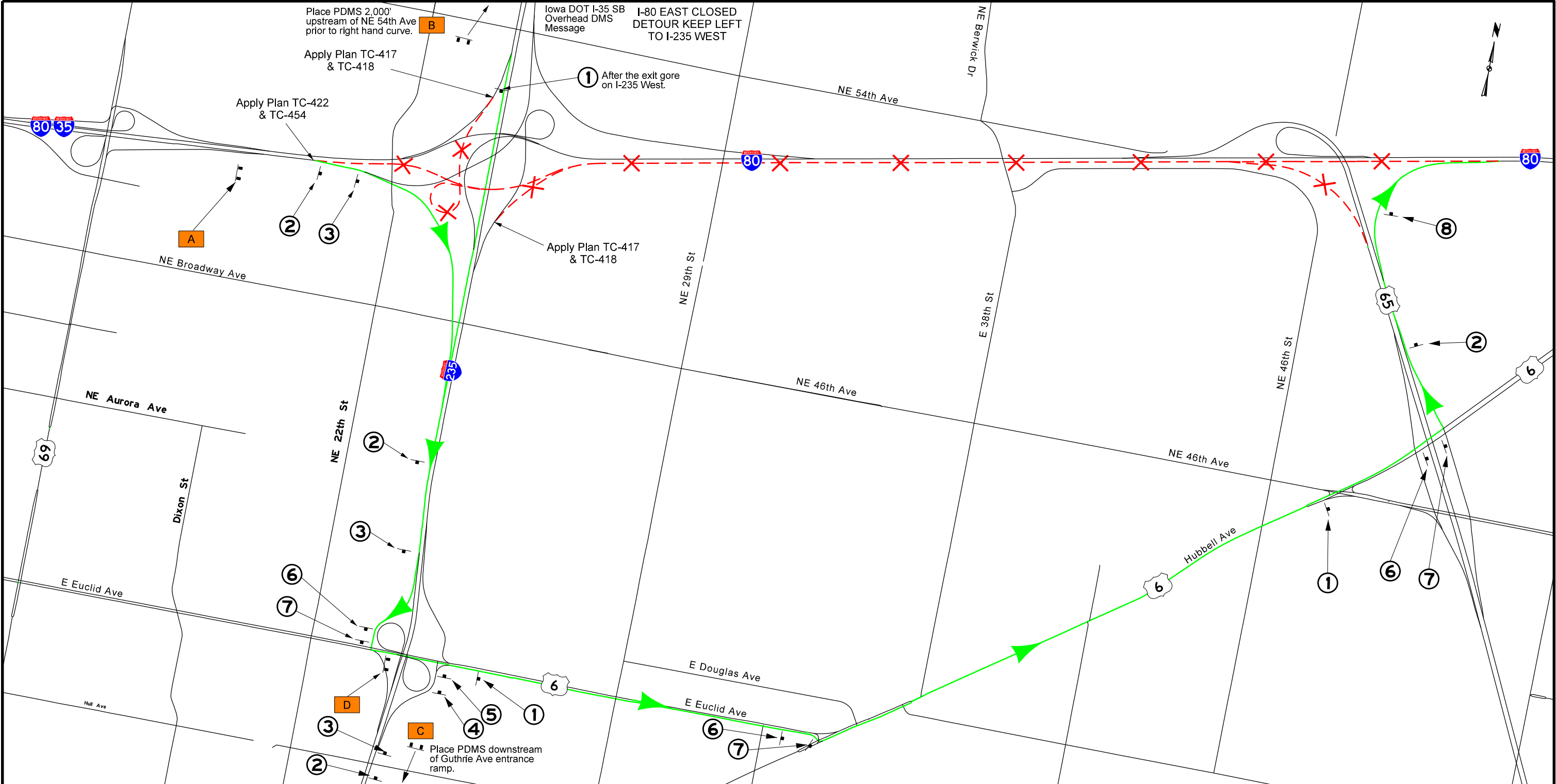
Sign Size ⑤
60"x36"
**NE 38TH ST
CLOSED AT I-80
FOLLOW DETOUR**
CUSTOM D

Sign Size ⑥
24"x18"
**END
DETOUR**
M4-8A

--X-- Closure
--> Detour

*DISTANCES ARE NOT TO SCALE





Advanced Messages

3 Days Prior

Coordinate with the TMC to provide advnaced warning messages on existing Iowa DOT DMS boards.

Contractor PDMS

Detour Messages

A	I-80 EAST CLOSED	DETOUR USE 235 WEST
B	I-80 EAST CLOSED	80 EAST DETOUR KEEP LFT
C	I-80 EAST CLOSED	DETOUR USE US-6 EXIT 12
D	I-80 EAST CLOSED	80 EAST DETOUR STRAIGHT

Notes

- All sign locations are approximate and may be adjusted to fit final conditions.
- Permanent dynamic message signs upstream of the closures, not shown in the plans, to be used by Iowa DOT Traffic Management Center (TMC) during the closure.
- All portable dynamic message signs (PDMS) shall be connected to the TMC. The contractor to provide the TMC with necessary PDMS connection info. The TMC will post all messages.
- Contractor to close all movements to closed interstate segment following MUTCD standards.

Size

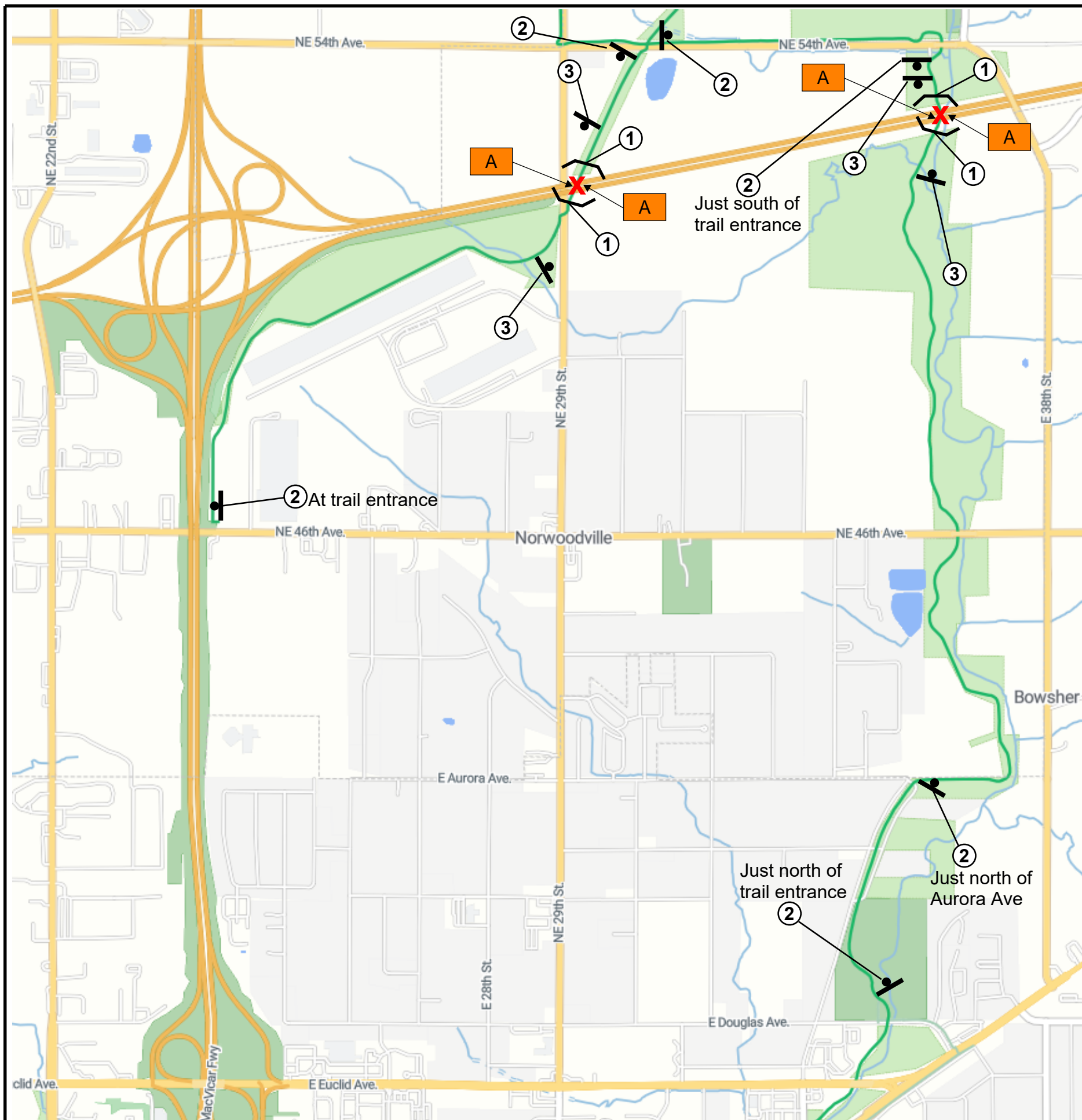
30"x15"	M4-8	M4-8	M4-8	M4-8	M4-8	M4-8	M4-8	M4-8B
36"x18"	M3-2	M3-2	M3-2	M3-2	M3-2	M3-2	M3-2	M4-8
36"x36"	M1-1	M1-1	M1-1	M1-1	M1-1	M1-1	M1-1	M3-2
30"x21"	M6-3	M5-2R	M6-2R	M5-1R	M6-1R	M5-1L	M6-1L	M1-1

--X-- Closure
--> Detour

Size

24"x12"	M4-8B
30"x15"	M4-8
36"x18"	M3-2
36"x36"	M1-1

I-80 EASTBOUND MAINLINE EAST OF I-35 DETOUR



Signs

1

PATH
CLOSED

CUSTOM E
48"x30"

2

PATH
CLOSED
AT I-80

CUSTOM F
36"x36"

3

PATH
CLOSED
AHEAD

CUSTOM G
36"x36"

Advanced Messages

7 Days Prior

A

PATH
CLOSING
AT I-80

*
** FOR

*Day of Closure (i.e. THURSDAY)
**Date of Closure (i.e. 9/19 FOR)
***Duration of Closure (i.e. 8 MONTHS)

Contractor
PDMS

Trail

Closure

Safety Closure

Notes:

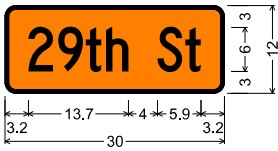
1. Place PATH CLOSED AHEAD signs 400' to 500' upstream of the closure points.

2. All signs shall be installed following Iowa DOT and MUTCD standards.

3. Do not block the path with PDMS placement.

TRAIL CLOSURES

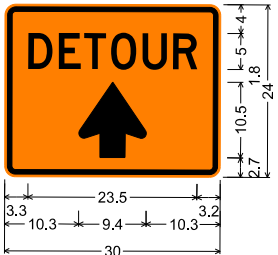
CUSTOM A



D3-1(2)_VARx12;
1.5" Radius, 0.5" Border, Black on Orange;
"29th", C 2K; "St", C 2K;
Table of letter and object lefts

2	9	t	h	S	t
3.2	7.3	11.1	13.8	20.9	24.7

CUSTOM B

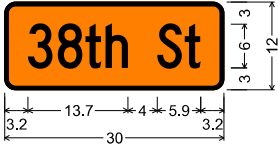


M4-9S_30x24;
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
"DETOUR", D 75% spacing;
Arrow M4-9;
Table of distances between letter and object lefts

	D	E	T	O	U	R	
3.3	4.2	3.5	3.8	4.4	4.2	3.4	3.2

10.3	↑	9.4	10.3
------	---	-----	------

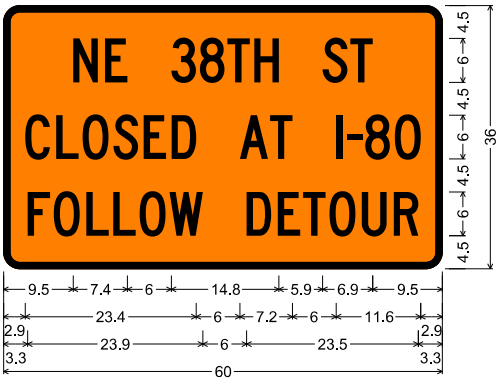
CUSTOM C



D3-1(2)_VARx12;
1.5" Radius, 0.5" Border, Black on Orange;
"38th", C 2K; "St", C 2K;
Table of letter and object lefts

3	8	t	h	S	t
3.2	7.3	11.1	13.8	20.9	24.7

CUSTOM D



2.3" Radius, 0.9" Border, Black on Orange;
"NE 38TH ST", C 2K 75% spacing;
"CLOSED AT I-80", C 2K 75% spacing;
"FOLLOW DETOUR", C 2K 75% spacing;
Table of letter and object lefts

N	E	3	8	T	H	S	T
9.5	13.9	22.9	26.8	30.6	34.3	43.6	47.4

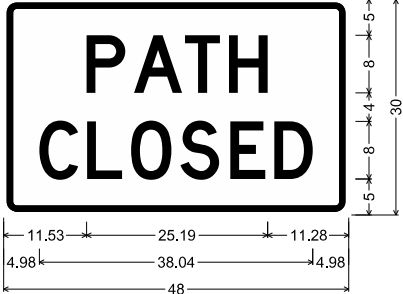
C	L	O	S	E	D	A	T
2.9	7.2	10.8	15.0	19.1	23.0	32.3	36.4

I	-	8	D
45.5	47.0	49.5	53.5

F	O	L	L	O	W
3.3	6.9	11.3	15.0	18.6	22.7

D	E	T	O	U	R
33.2	37.5	41.0	44.6	49.0	53.4

CUSTOM E

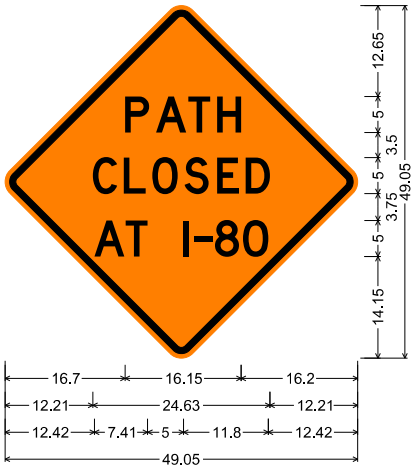


R11-2c PATH CLOSED;
1.88" Radius, 0.75" Border, 0.50" Indent, Black on White;
"PATH", D 82% spacing;
"CLOSED", D 83% spacing;
Table of letter and object lefts

P	A	T	H
11.53	18.14	25.24	31.34

C	L	O	S	E	D
4.98	11.60	17.72	24.59	31.52	37.64

CUSTOM F



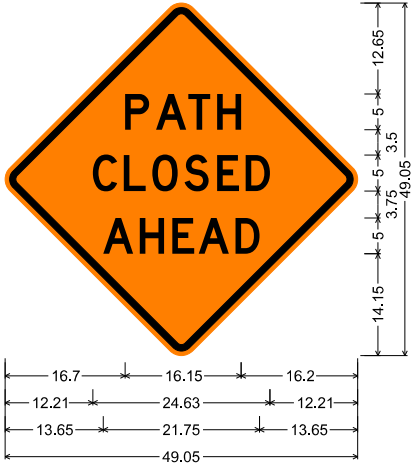
w20-3 Path Custom;
36.00" across sides 2.25" Radius, 0.88" Border, 0.63" Indent, Black on Orange;
"PATH", D 101% spacing;
"CLOSED", D 100% spacing;
"AT I-80", D 60% spacing;
Table of letter and object lefts

P	A	T	H
16.70	21.00	25.50	29.49

C	L	O	S	E	D
12.21	16.51	20.50	24.95	29.49	33.48

A	T	I	-	8	O
12.42	16.79	24.83	26.32	29.19	33.11

CUSTOM G



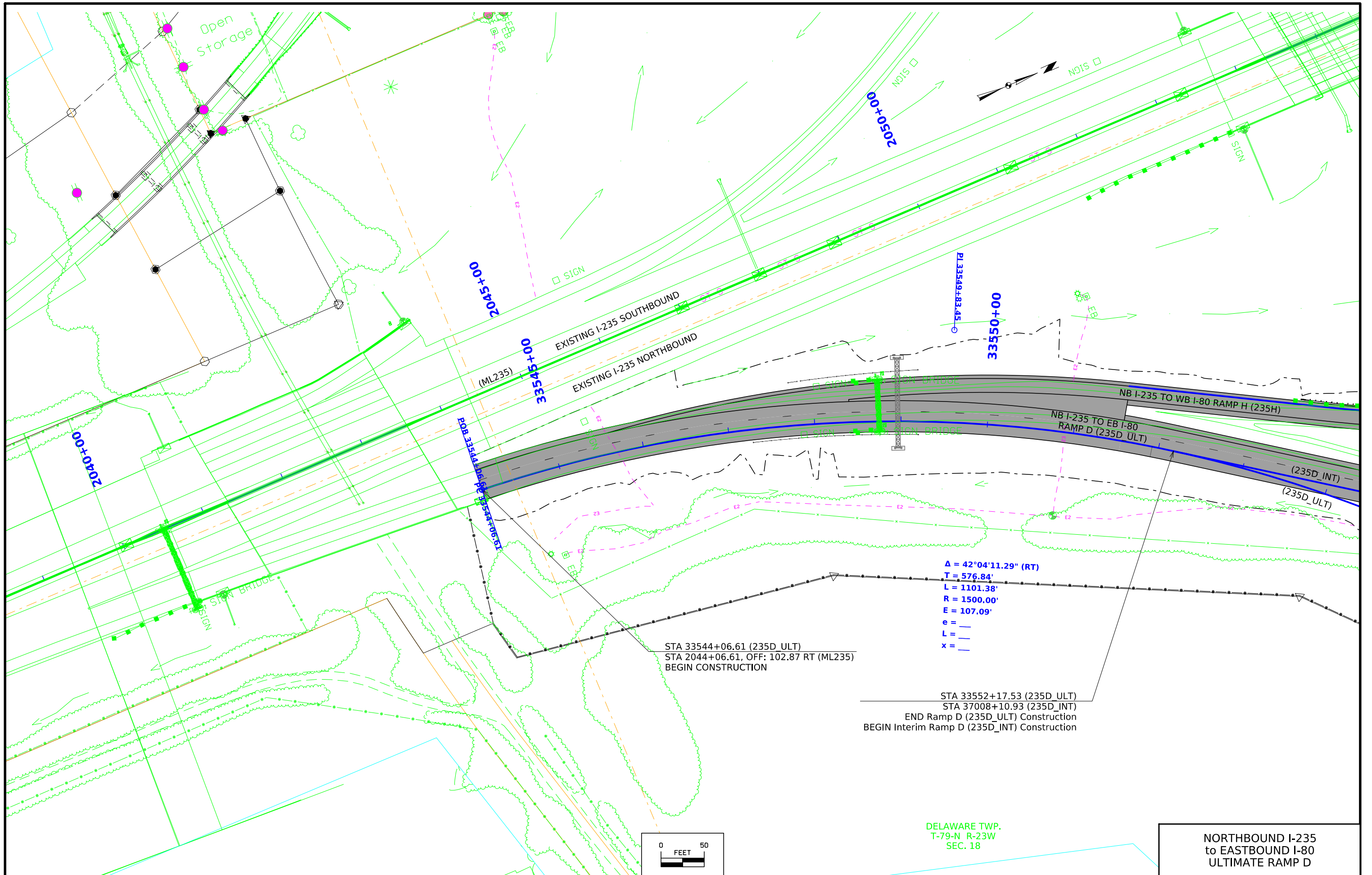
w20-3a PATH CLOSED AHEAD;
36.00" across sides 2.25" Radius, 0.88" Border, 0.63" Indent, Black on Orange;
"PATH", D 101% spacing;
"CLOSED", D 100% spacing;
"AHEAD", D 99% spacing;
Table of letter and object lefts

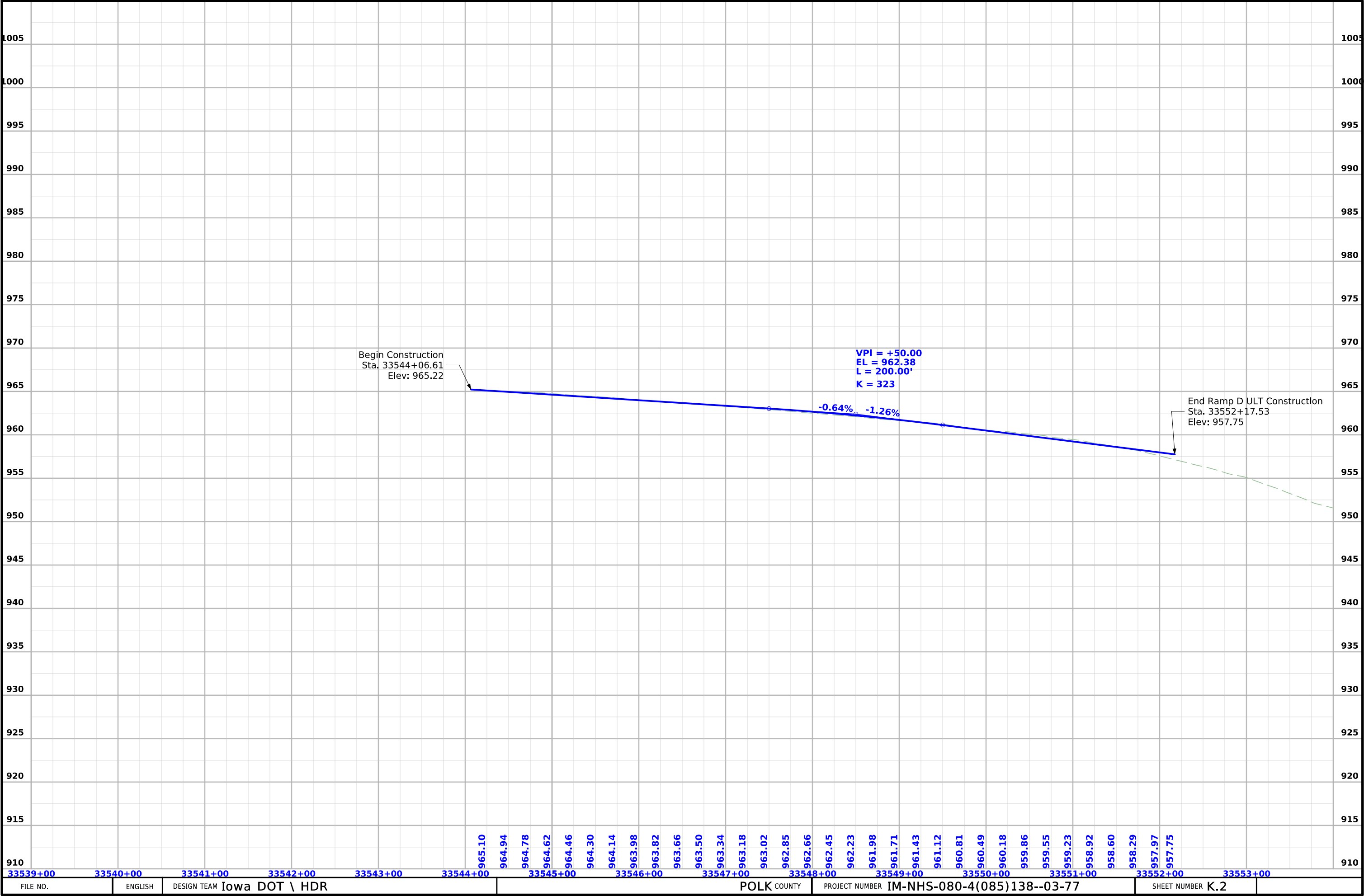
P	A	T	H
16.70	21.00	25.50	29.49

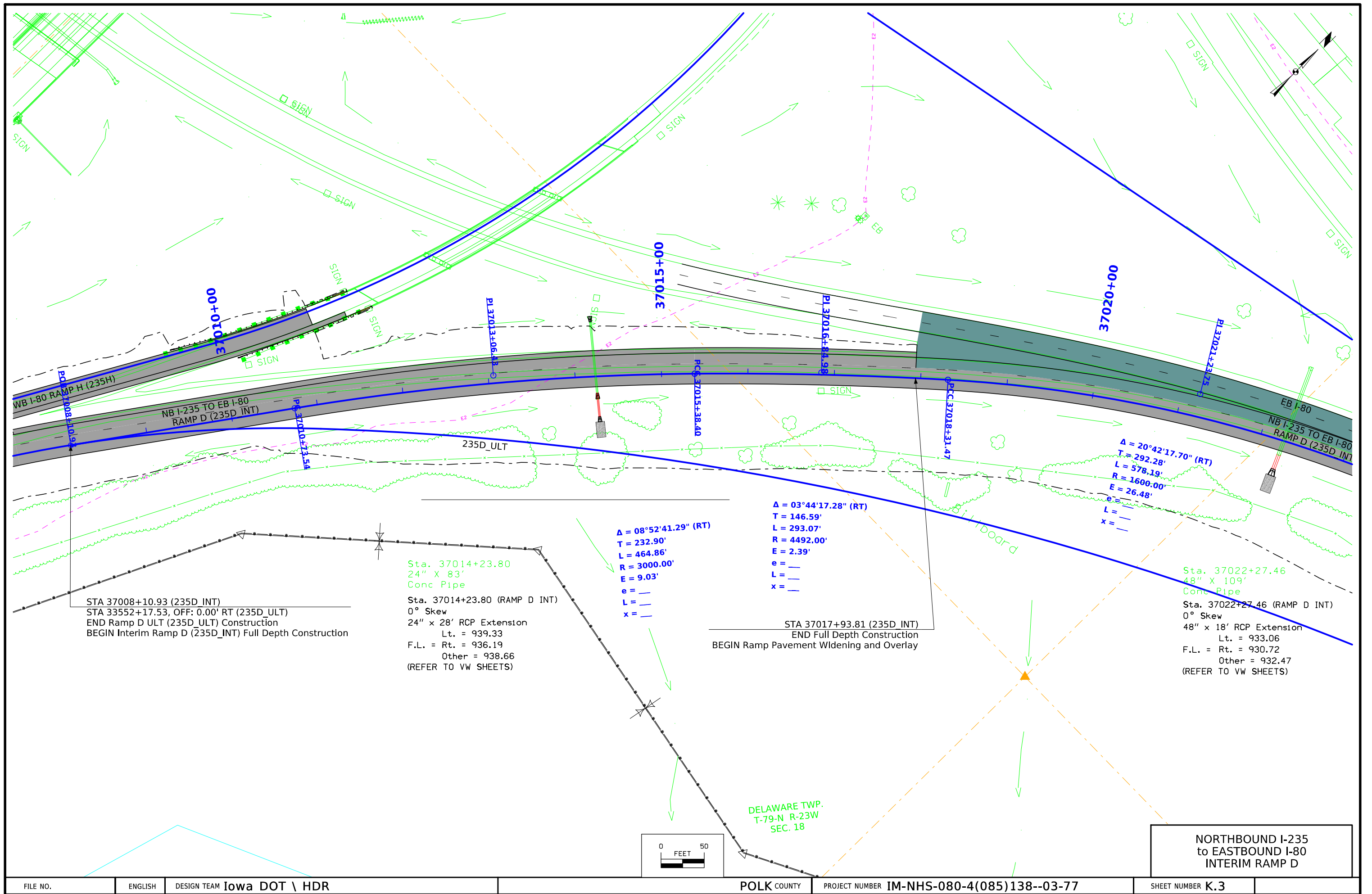
C	L	O	S	E	D
12.21	16.51	20.50	24.95	29.49	33.48

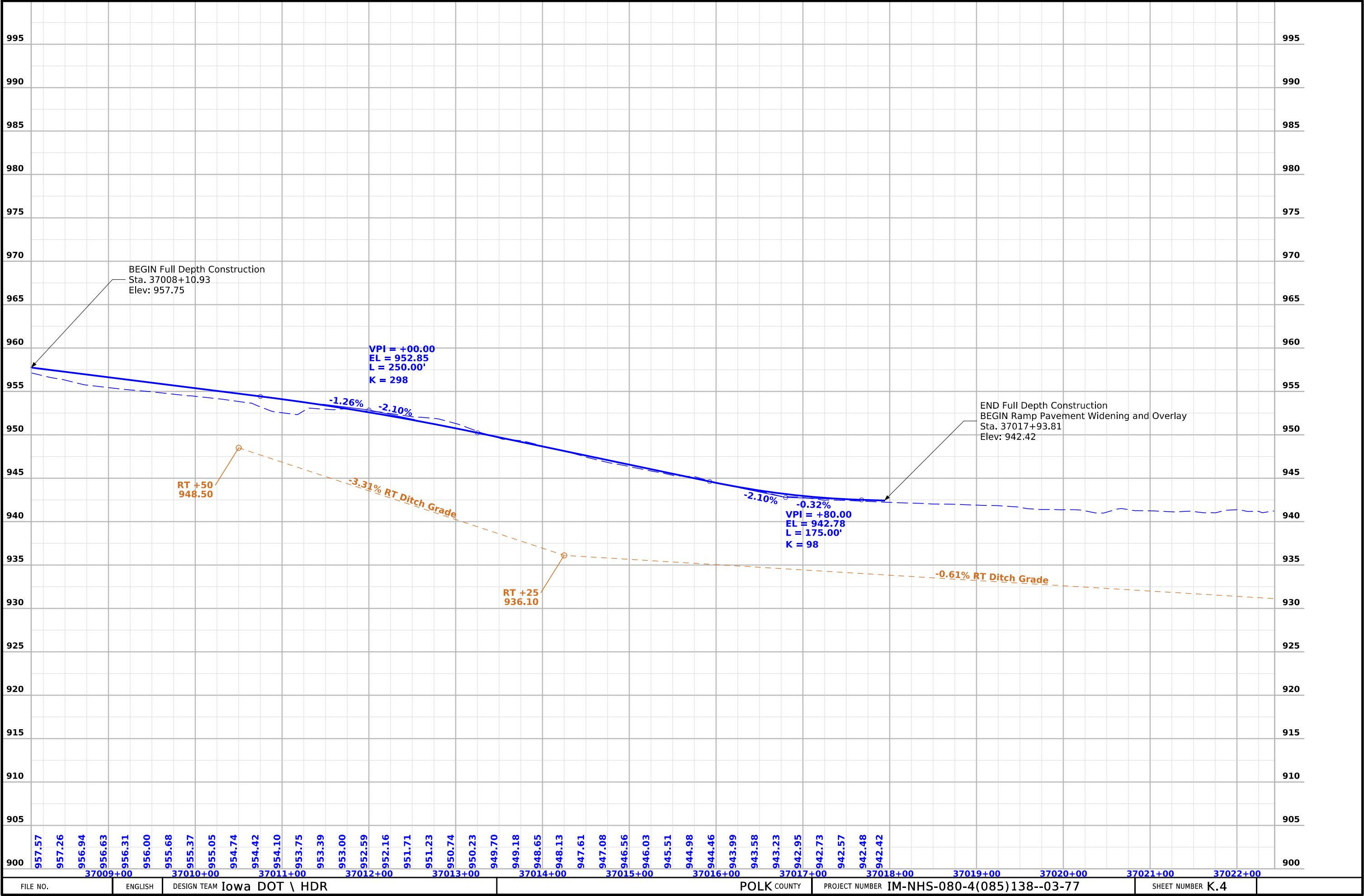
A	H	E	A	D
13.65	18.75	23.27	26.93	32.04

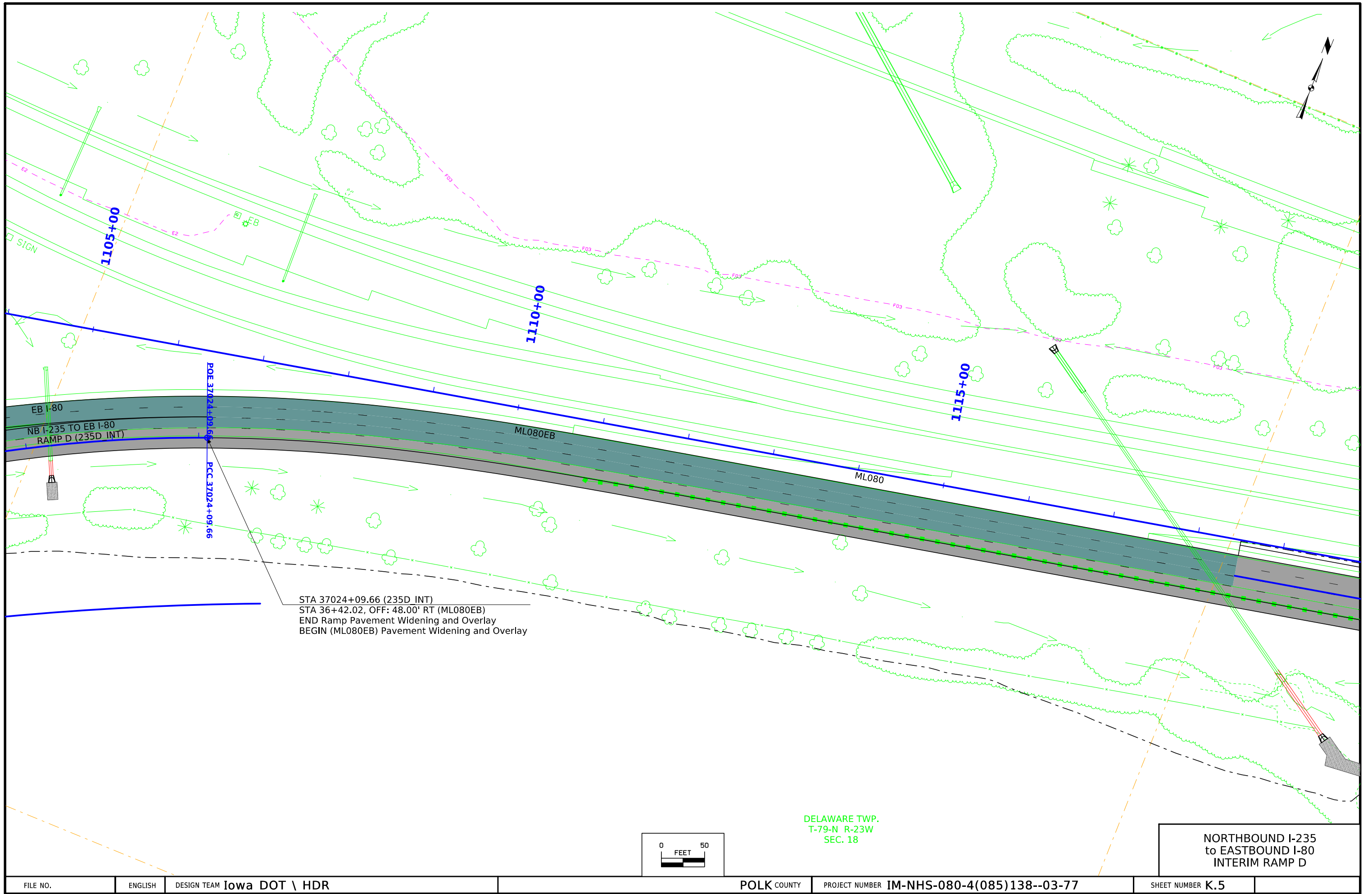
SIGN DETAILS

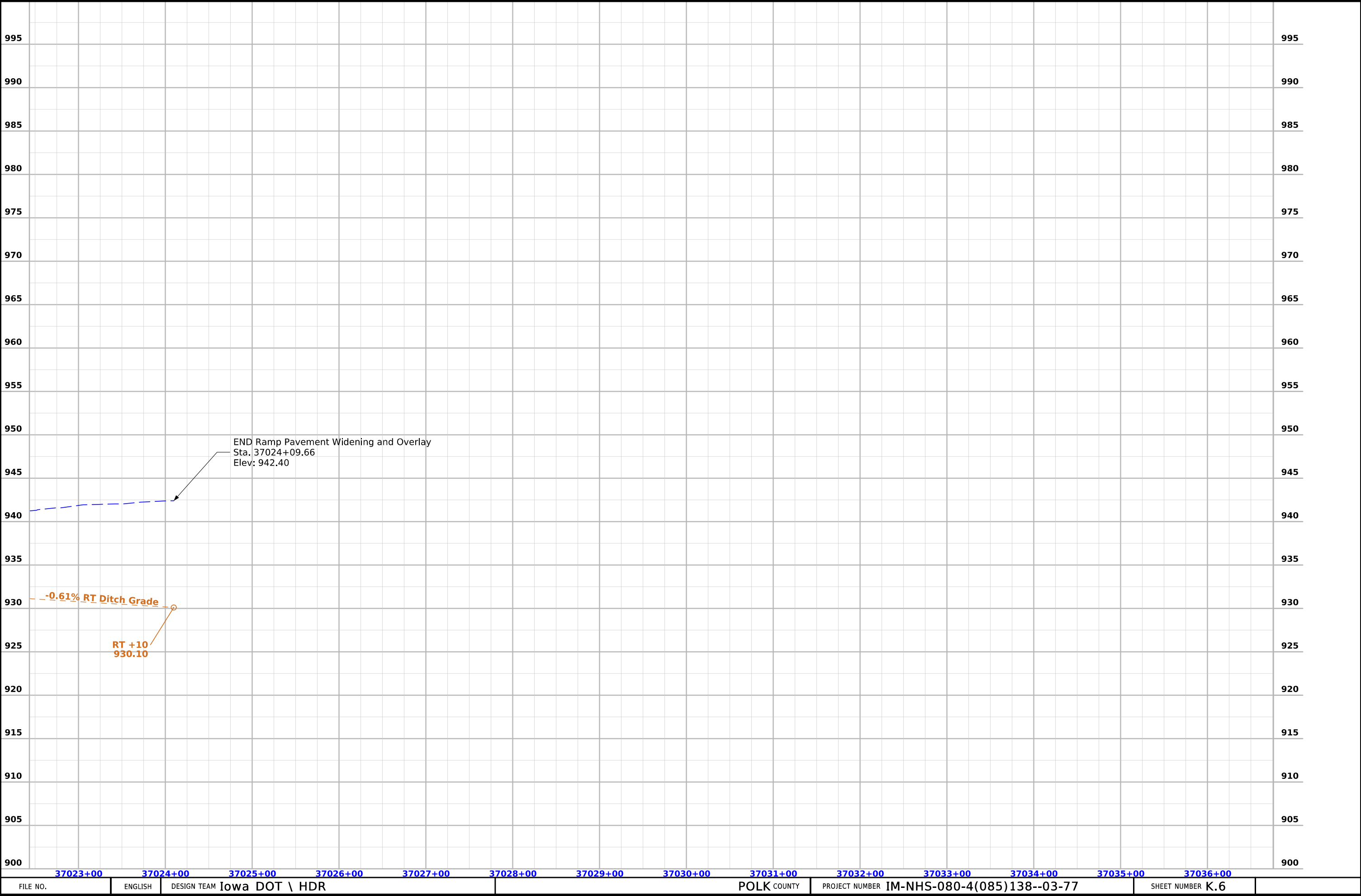


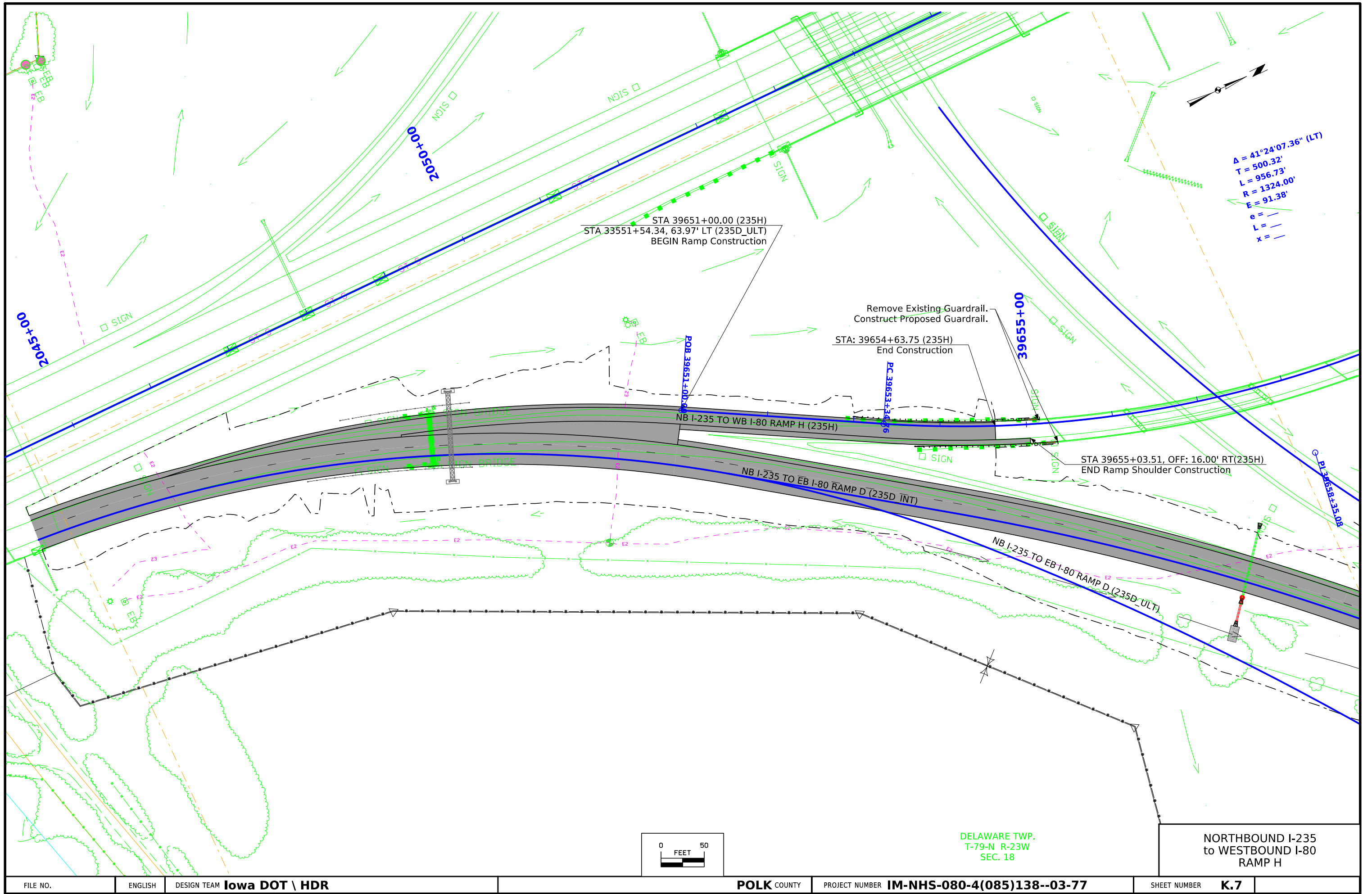


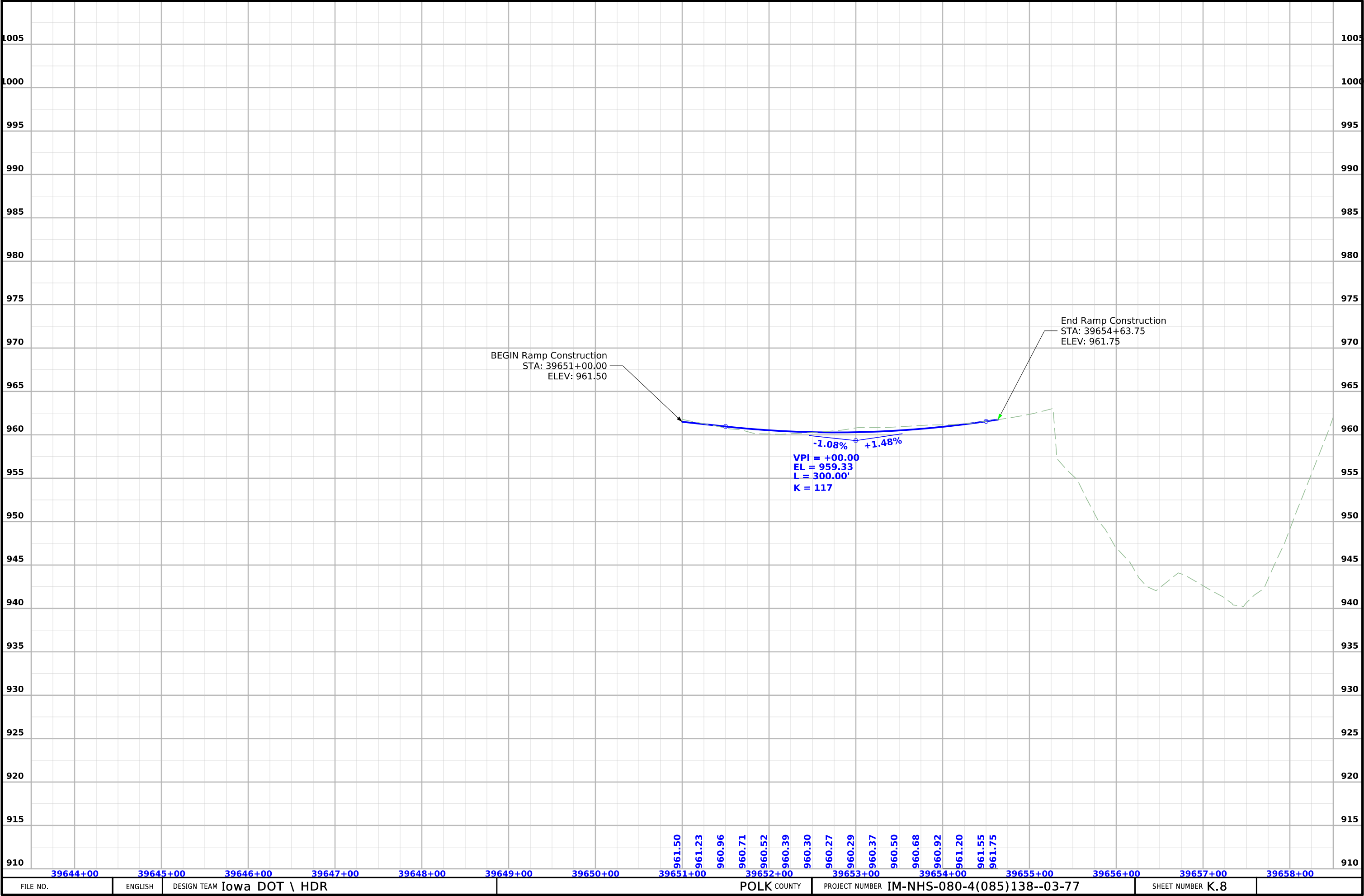












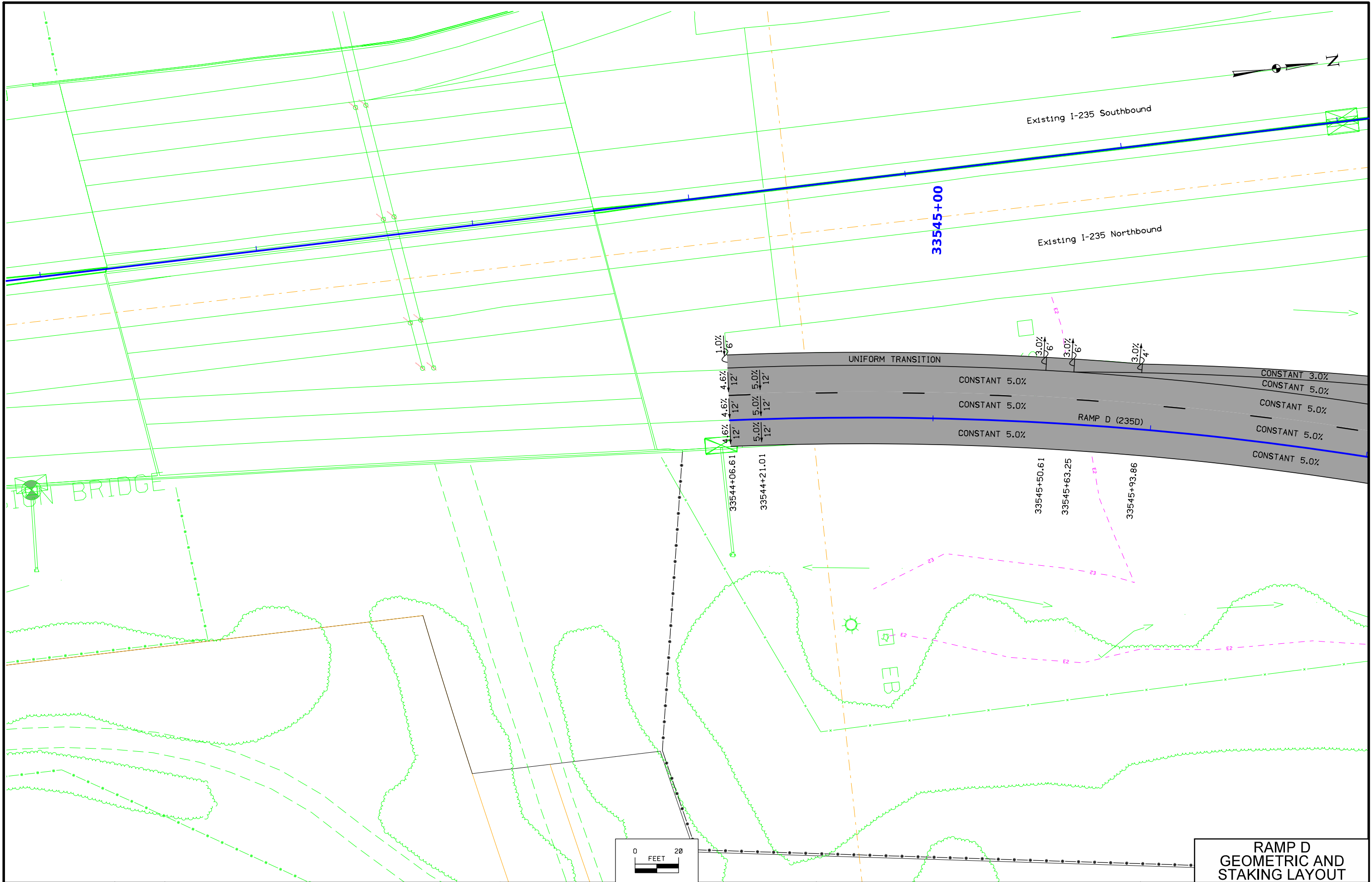
PLAN VIEW COLOR LEGEND OF JOINTING SHEETS		
Design Color No.		Feature
(1)	<div></div>	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
(55)	<div></div>	B Joint
(71)	<div></div>	C Joint
(77)	<div></div>	CD Joint
(76)	<div></div>	CT Joint
(76)	<div></div>	DW Joint
(76)	<div></div>	HT Joint
(77)	<div></div>	RD Joint
(76)	<div></div>	RT Joint
(130)	<div></div>	CF-1 Joint
(130)	<div></div>	CF-2 Joint
(130)	<div></div>	CF-3 Joint
(130)	<div></div>	CF-4 Joint
(72)	<div></div>	E Joint
(142)	<div></div>	ED Joint
(142)	<div></div>	EE Joint
(142)	<div></div>	EF Joint
(72)	<div></div>	ES Joint
(64)	<div></div>	BT-1 Joint
(64)	<div></div>	BT-2 Joint
(128)	<div></div>	BT-3 Joint
(128)	<div></div>	BT-4 Joint
(128)	<div></div>	BT-5 Joint
(79)	<div></div>	K Joint
(70)	<div></div>	KS-1 Joint
(70)	<div></div>	KS-2 Joint
(143)	<div></div>	KT-1 Joint
(143)	<div></div>	KT-2 Joint
(143)	<div></div>	KT-3 Joint
(138)	<div></div>	L-1 Joint
(138)	<div></div>	L-2 Joint
(138)	<div></div>	L-3 Joint

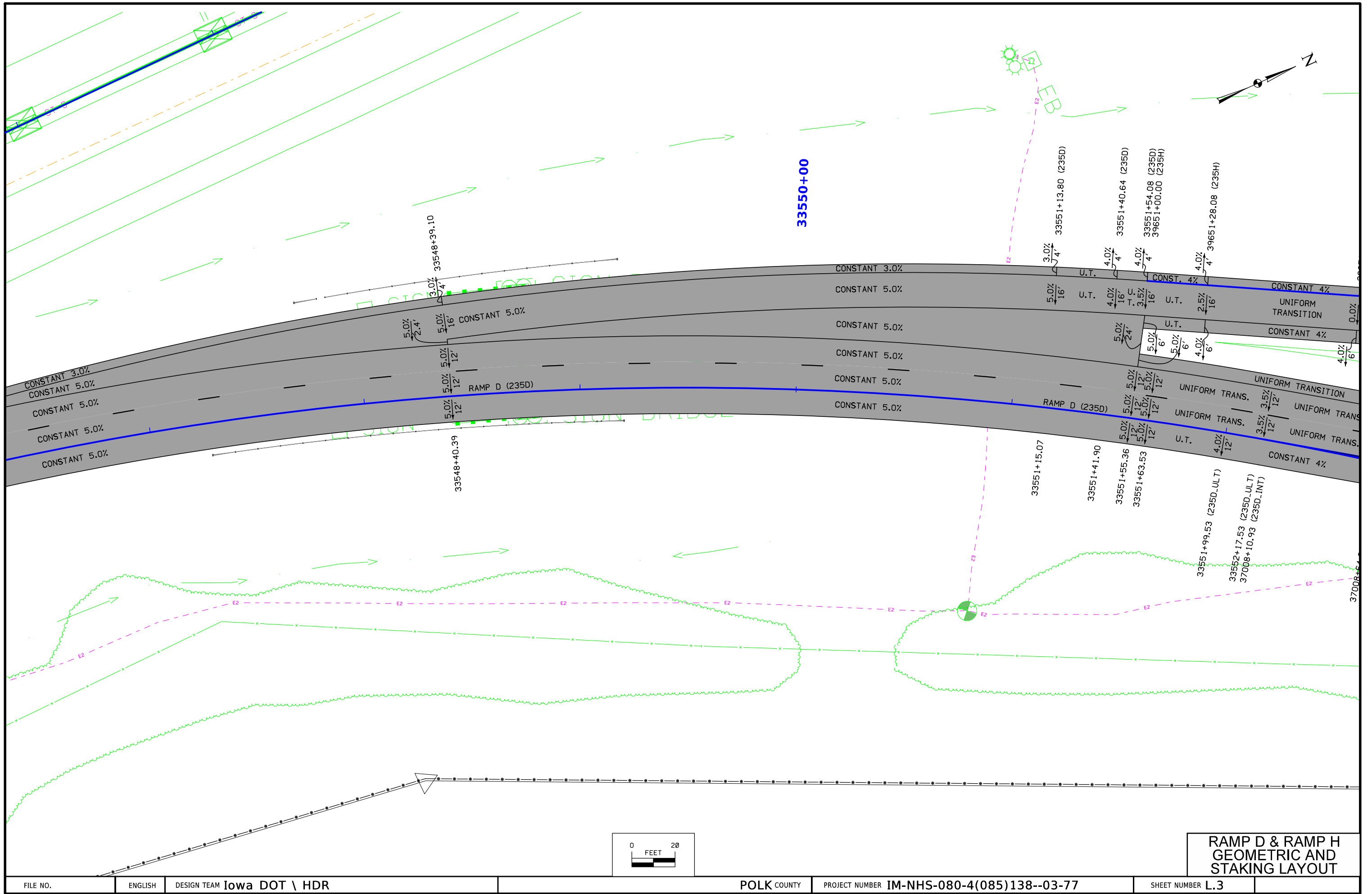
JOINTING NOTES:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise,
If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Typical 7101 for details of paved header.
Refer to Typicals 7154A and 7154B for paved shoulder details.

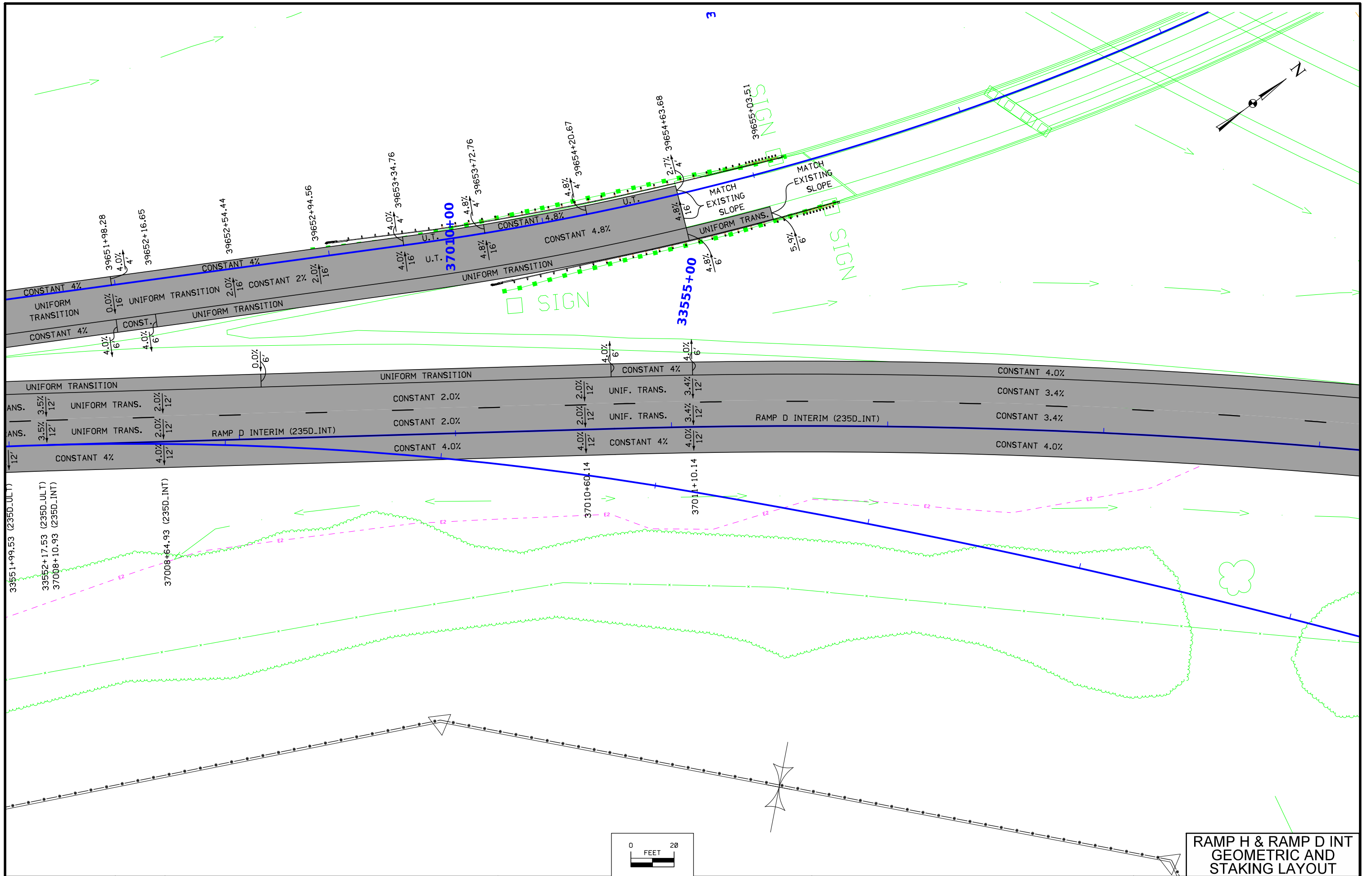
GEOMETRICS AND STAKING NOTES:
Refer to Appropriate Standard Road Plans for Additional Information.
Refer to G Sheets for Horizontal Alignment Information.

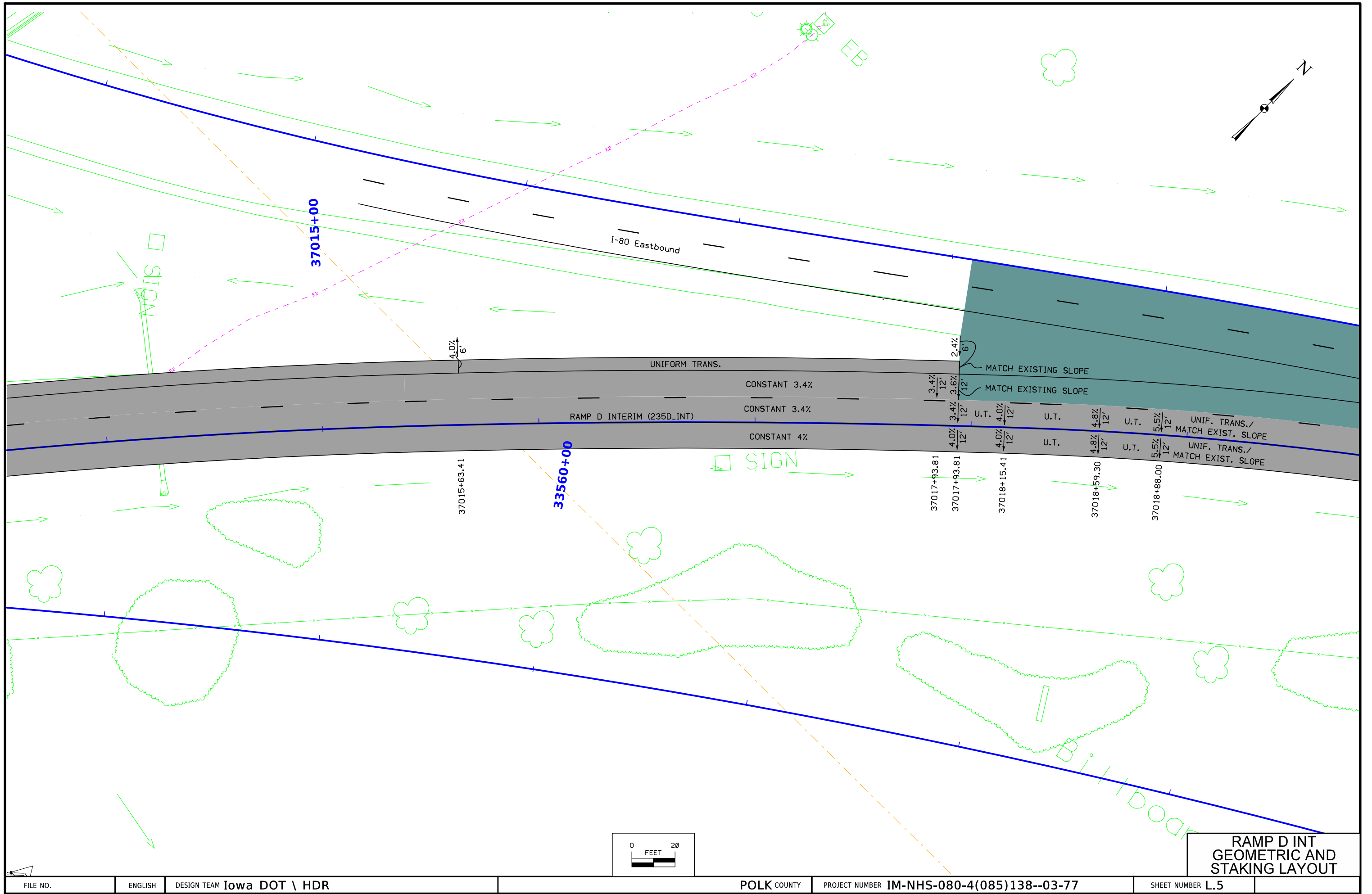
JOINTING AND GEOMETRICS
LEGEND AND INFORMATION SHEET

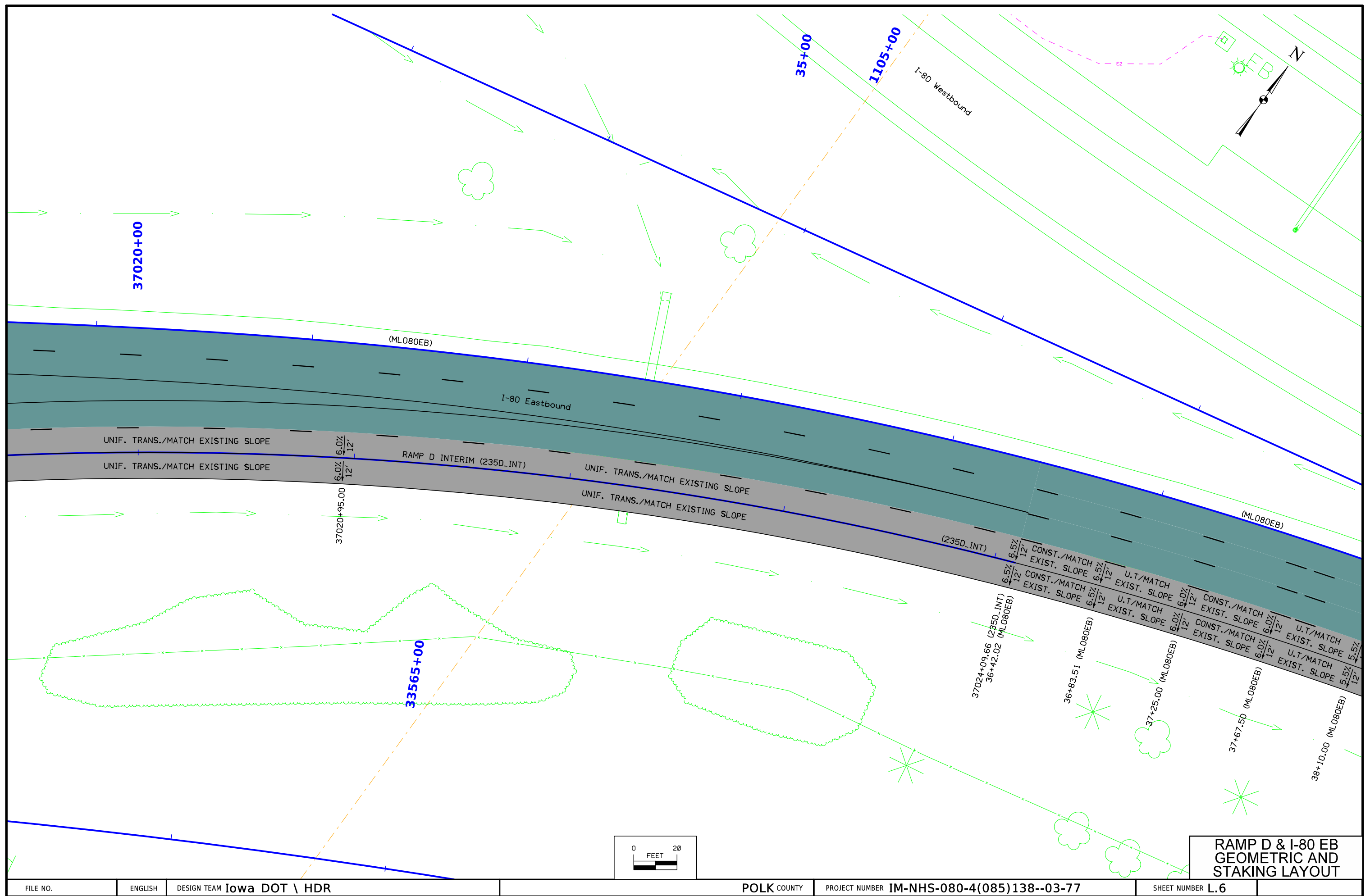
(COVERS SHEET SERIES L)

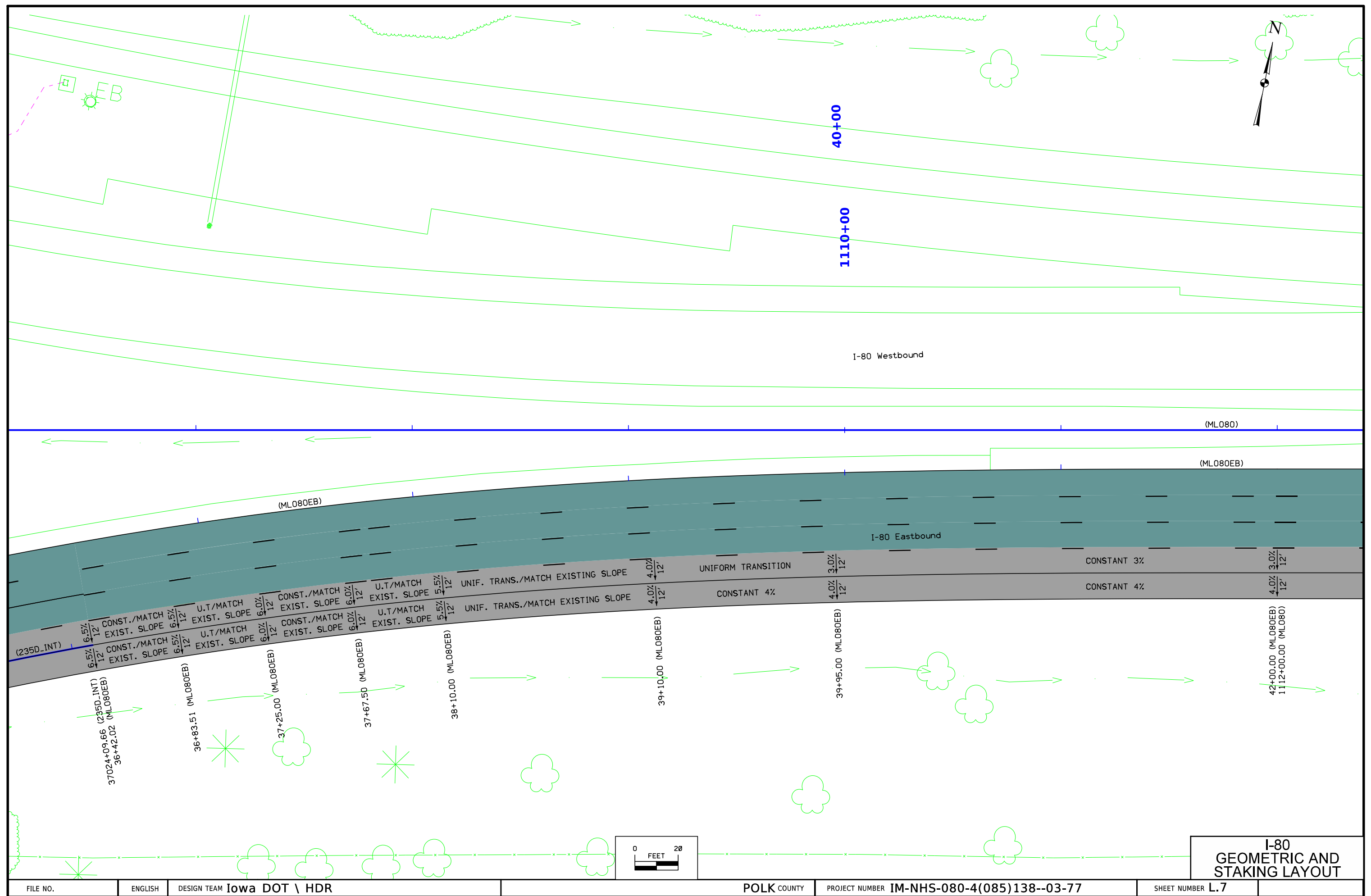


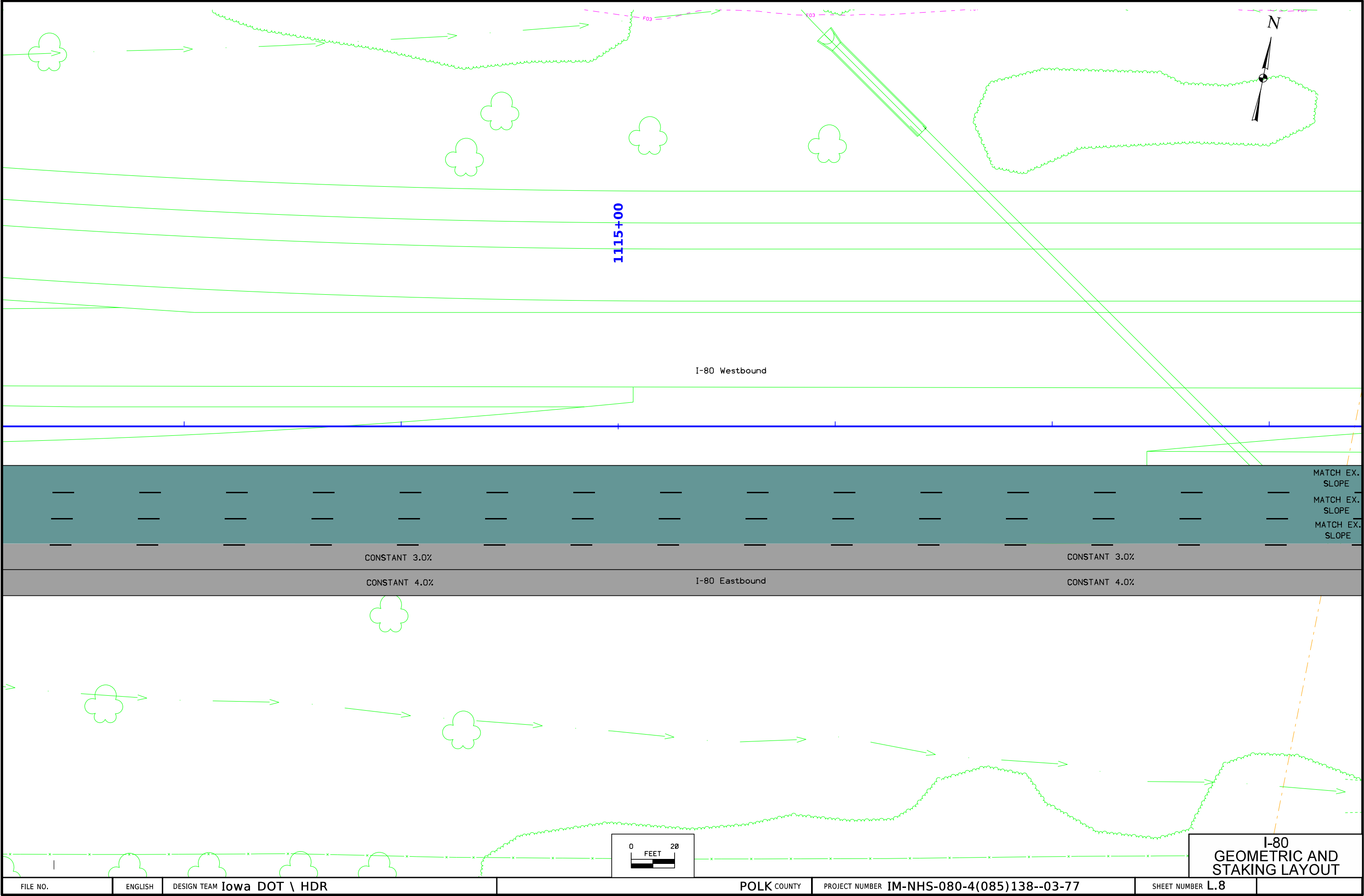


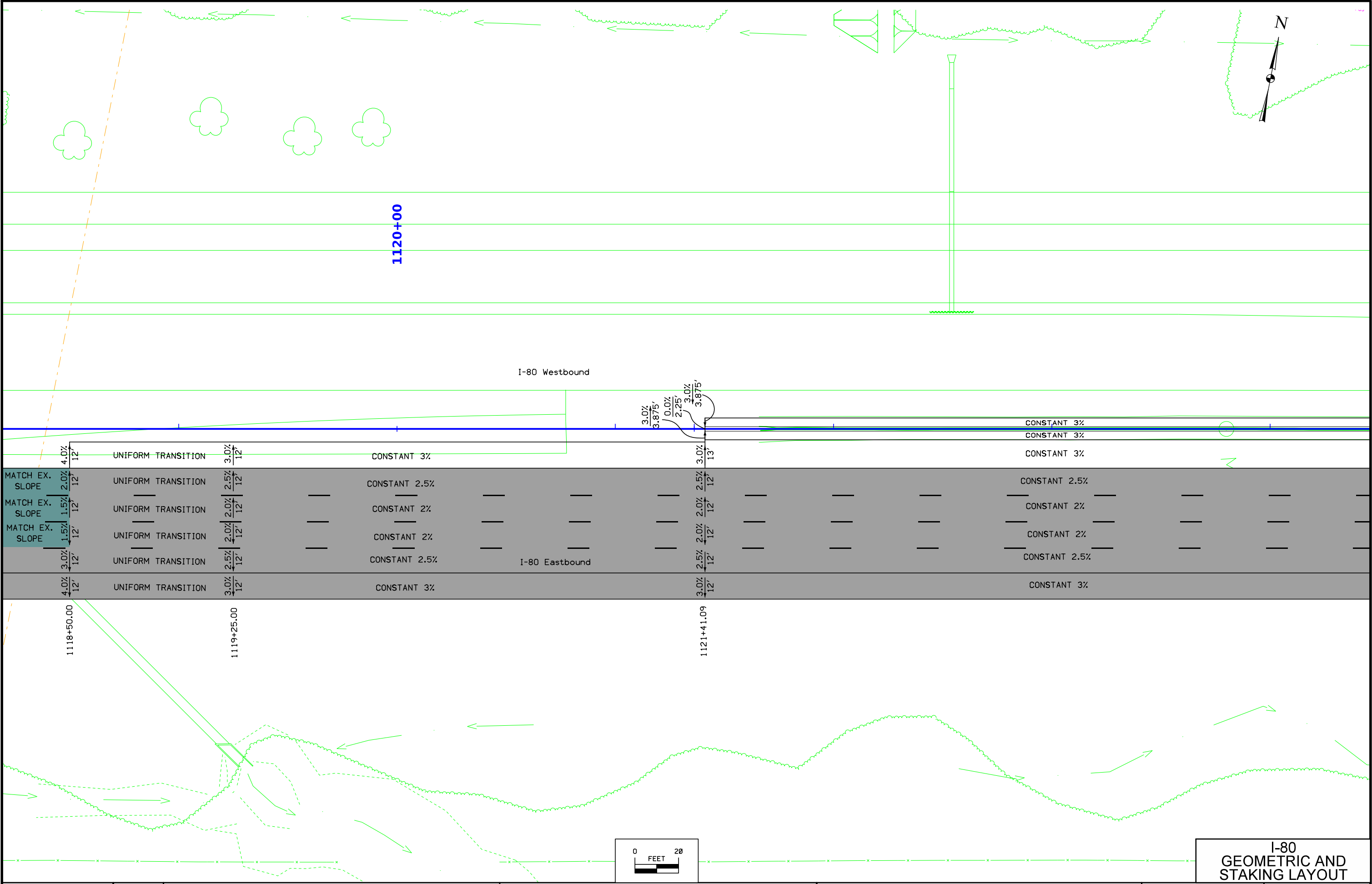


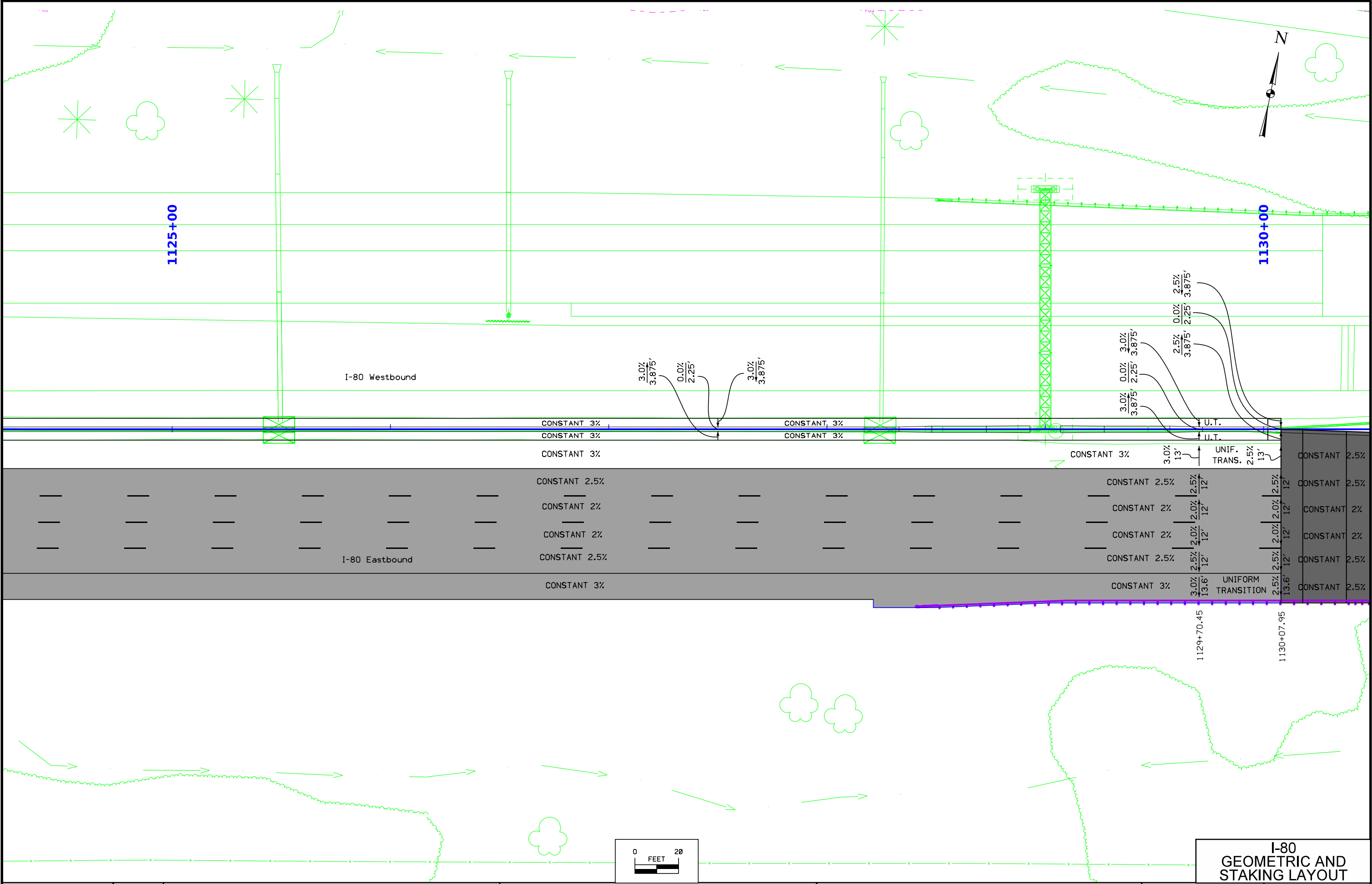


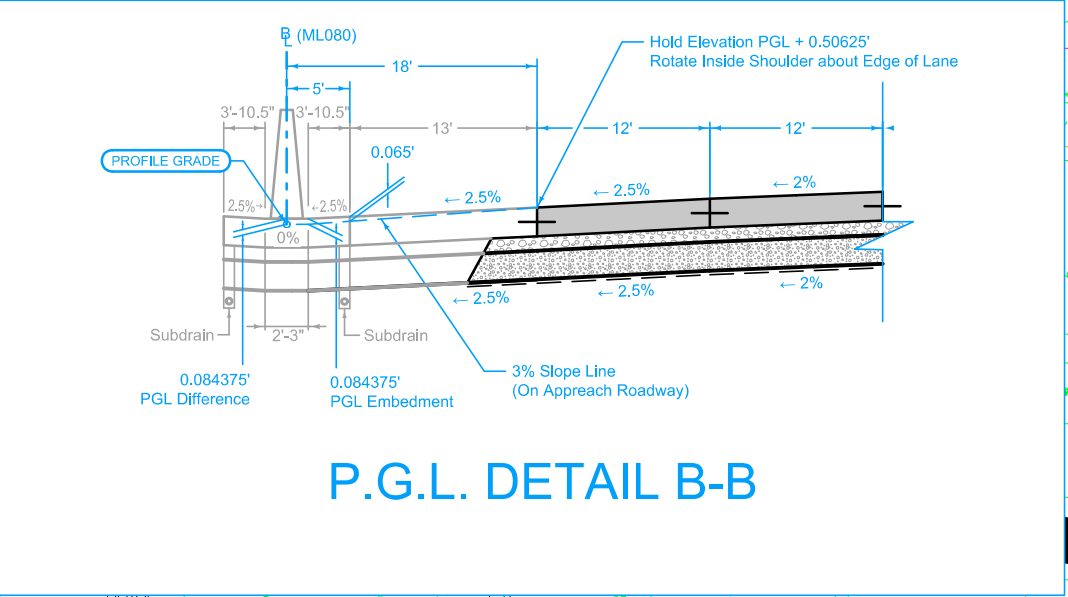
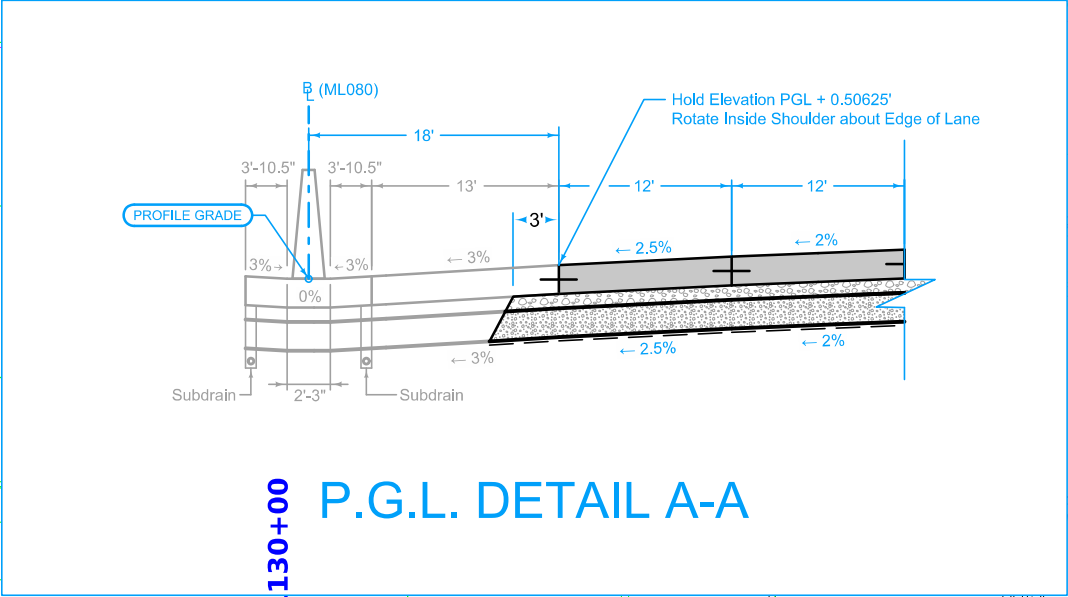
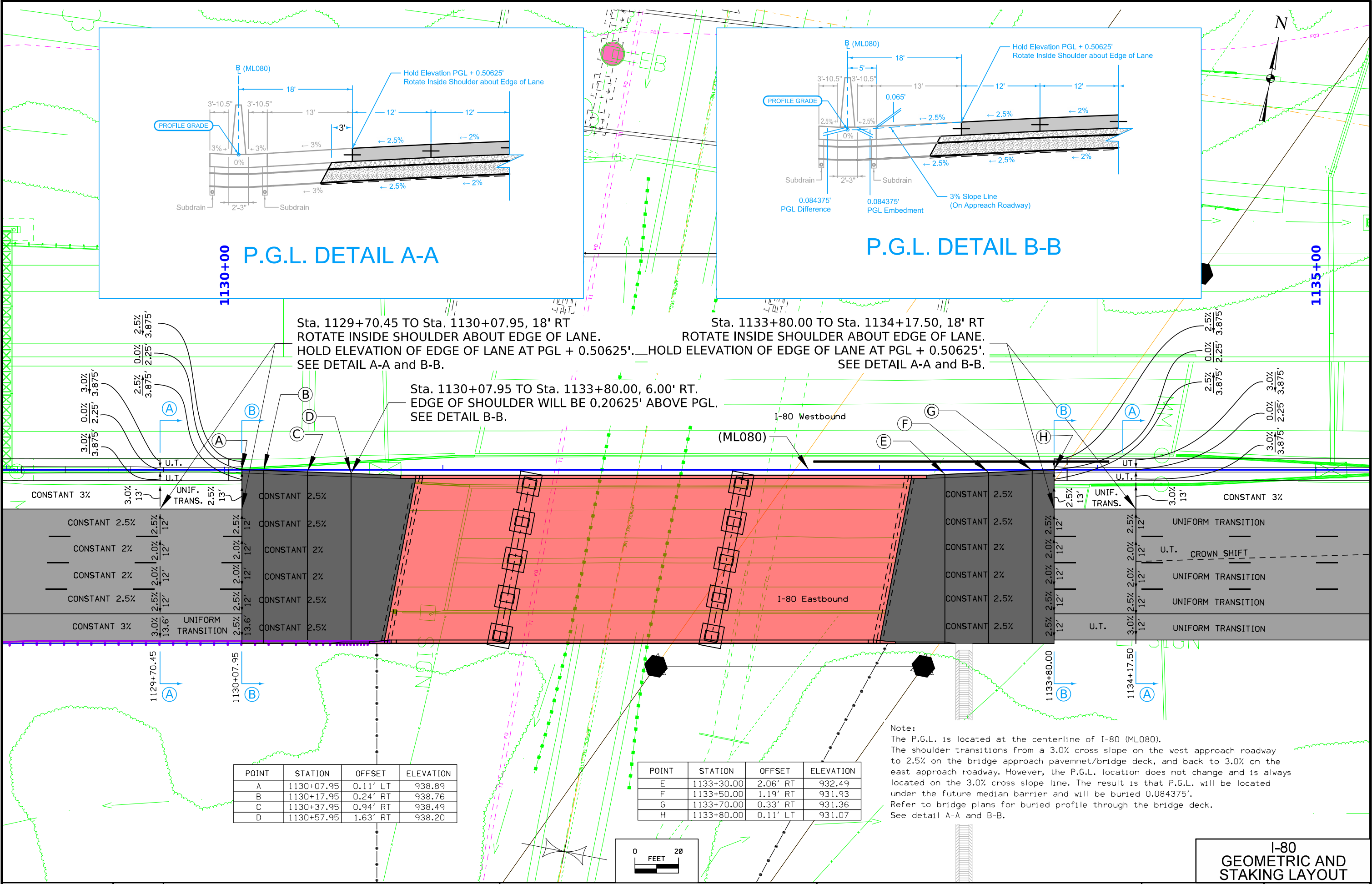












Sta. 1129+70.45 TO Sta. 1130+07.95, 18' RT
ROTATE INSIDE SHOULDER ABOUT EDGE OF LANE.
HOLD ELEVATION OF EDGE OF LANE AT PGL + 0.50625'. SEE DETAIL A-A and B-B.

Sta. 1133+80.00 TO Sta. 1134+17.50, 18' RT
ROTATE INSIDE SHOULDER ABOUT EDGE OF LANE.
HOLD ELEVATION OF EDGE OF LANE AT PGL + 0.50625'. SEE DETAIL A-A and B-B.

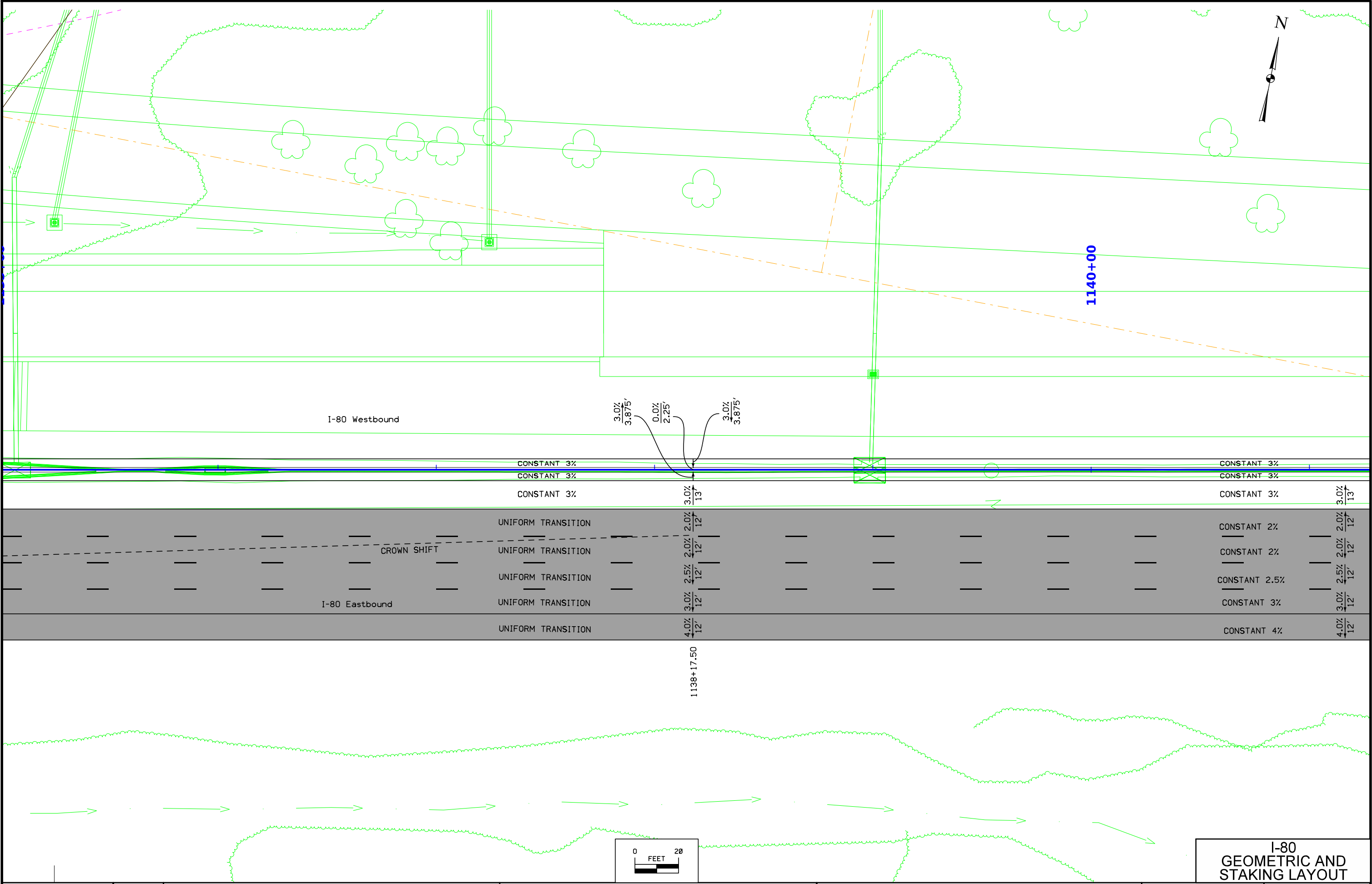
Sta. 1130+07.95 TO Sta. 1133+80.00, 6.00' RT.
EDGE OF SHOULDER WILL BE 0.20625' ABOVE PGL.
SEE DETAIL B-B.

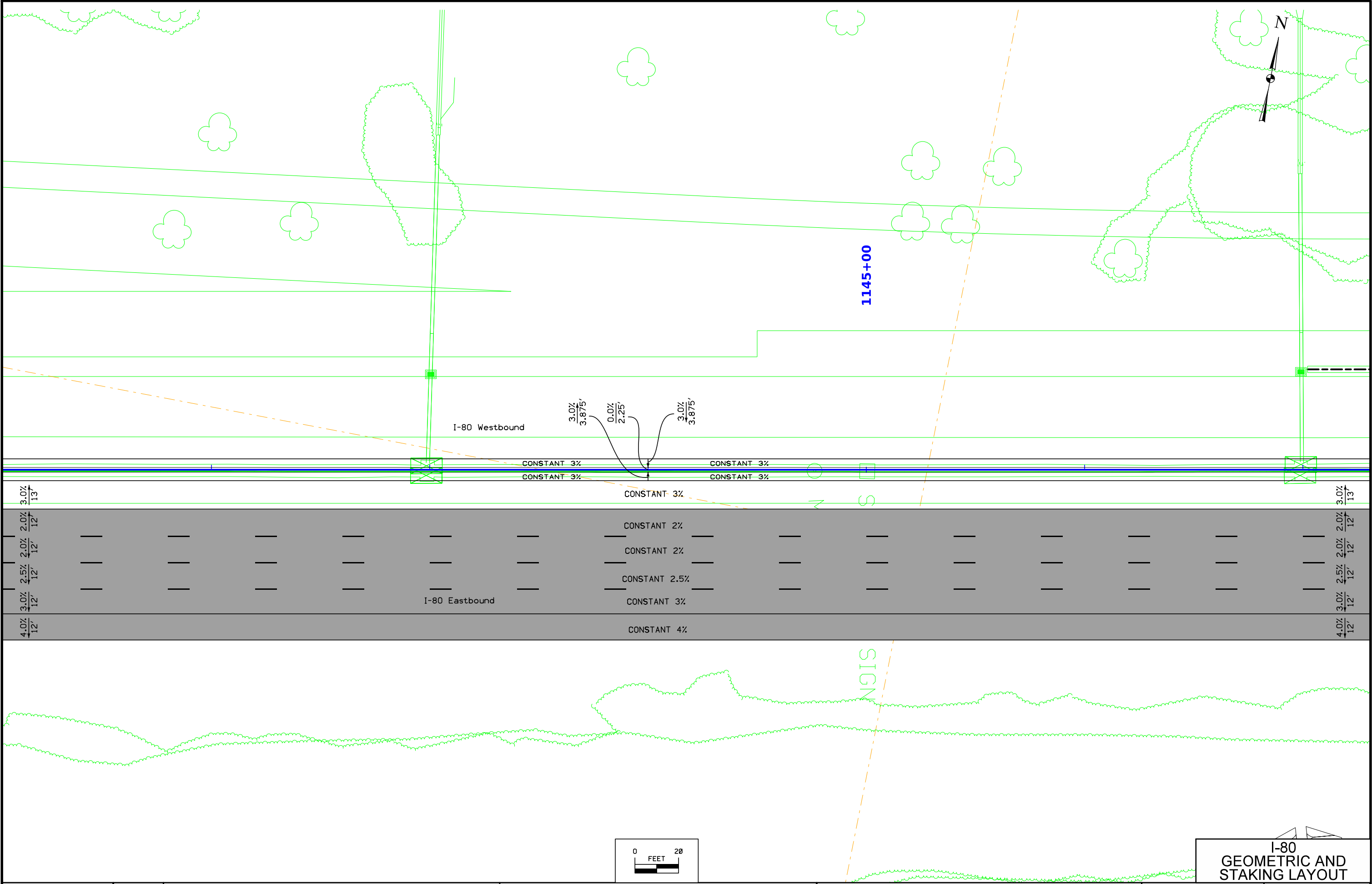
POINT	STATION	OFFSET	ELEVATION
A	1130+07.95	0.11' LT	938.89
B	1130+17.95	0.24' RT	938.76
C	1130+37.95	0.94' RT	938.49
D	1130+57.95	1.63' RT	938.20

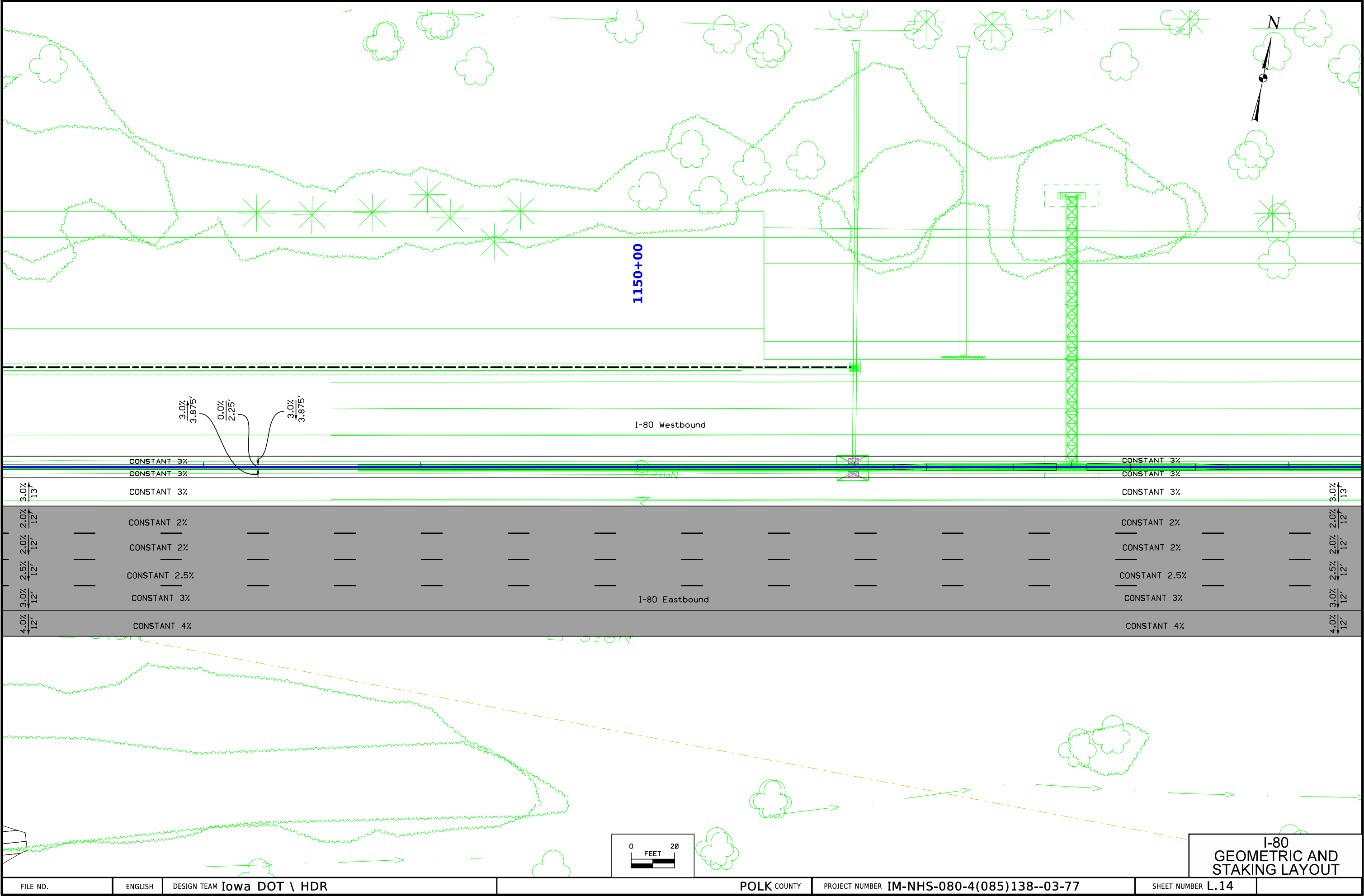
POINT	STATION	OFFSET	ELEVATION
E	1133+30.00	2.06' RT	932.49
F	1133+50.00	1.19' RT	931.93
G	1133+70.00	0.33' RT	931.36
H	1133+80.00	0.11' LT	931.07

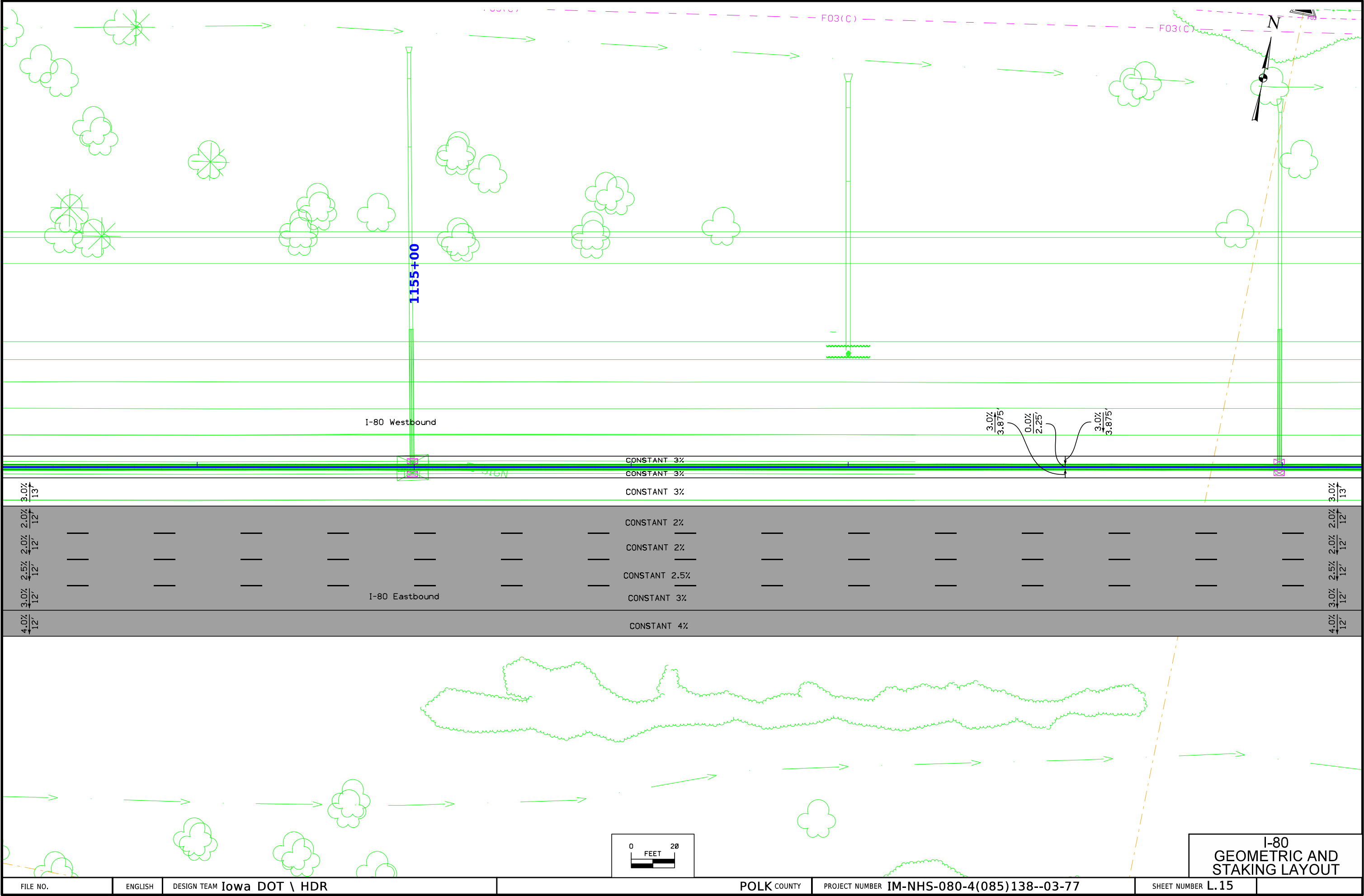
Note:
The P.G.L. is located at the centerline of I-80 (ML080).
The shoulder transitions from a 3.0% cross slope on the west approach roadway to 2.5% on the bridge approach pavement/bridge deck, and back to 3.0% on the east approach roadway. However, the P.G.L. location does not change and is always located on the 3.0% cross slope line. The result is that P.G.L. will be located under the future median barrier and will be buried 0.084375'. Refer to bridge plans for buried profile through the bridge deck. See detail A-A and B-B.

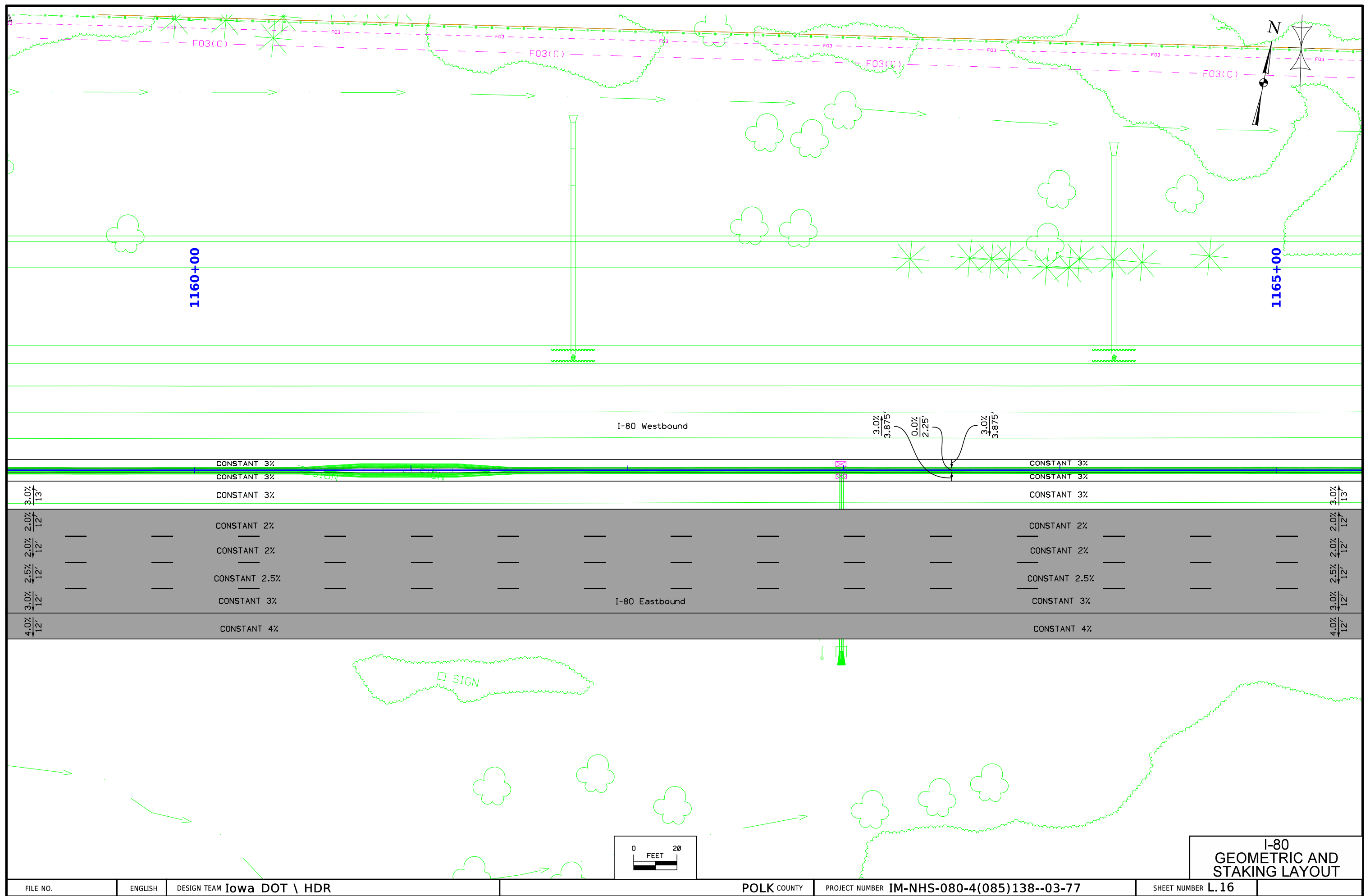
I-80
GEOMETRIC AND
STAKING LAYOUT

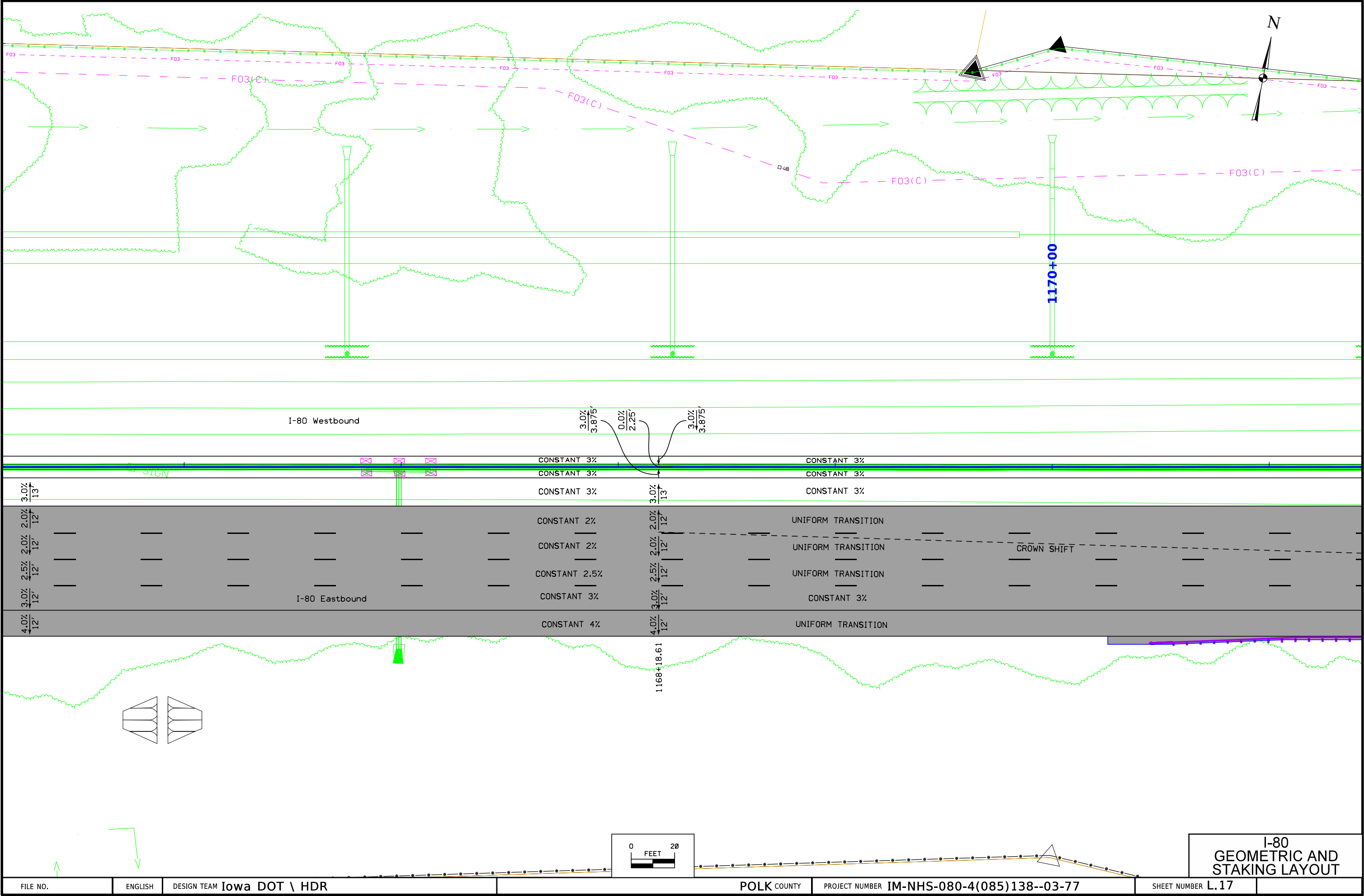


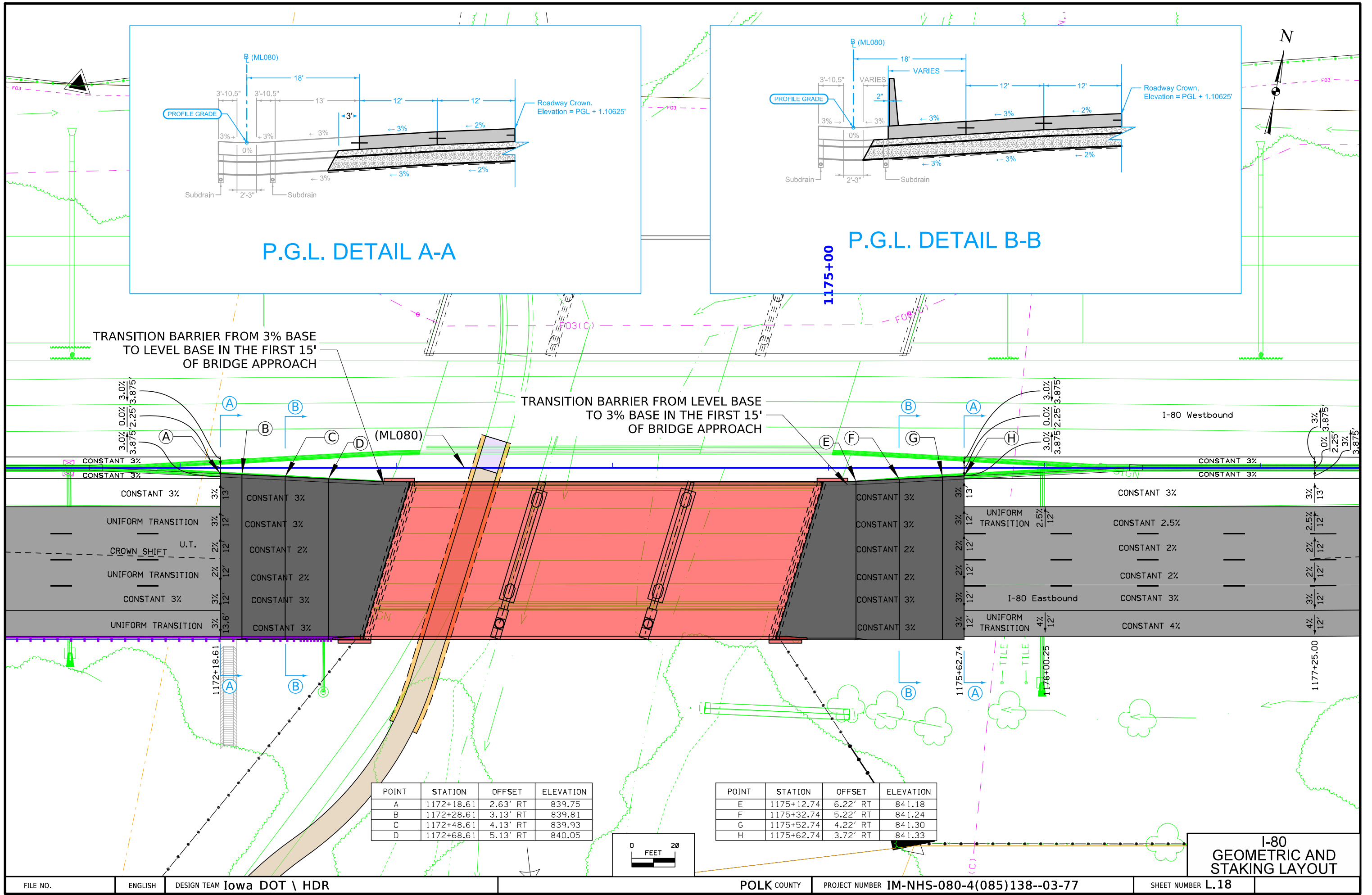


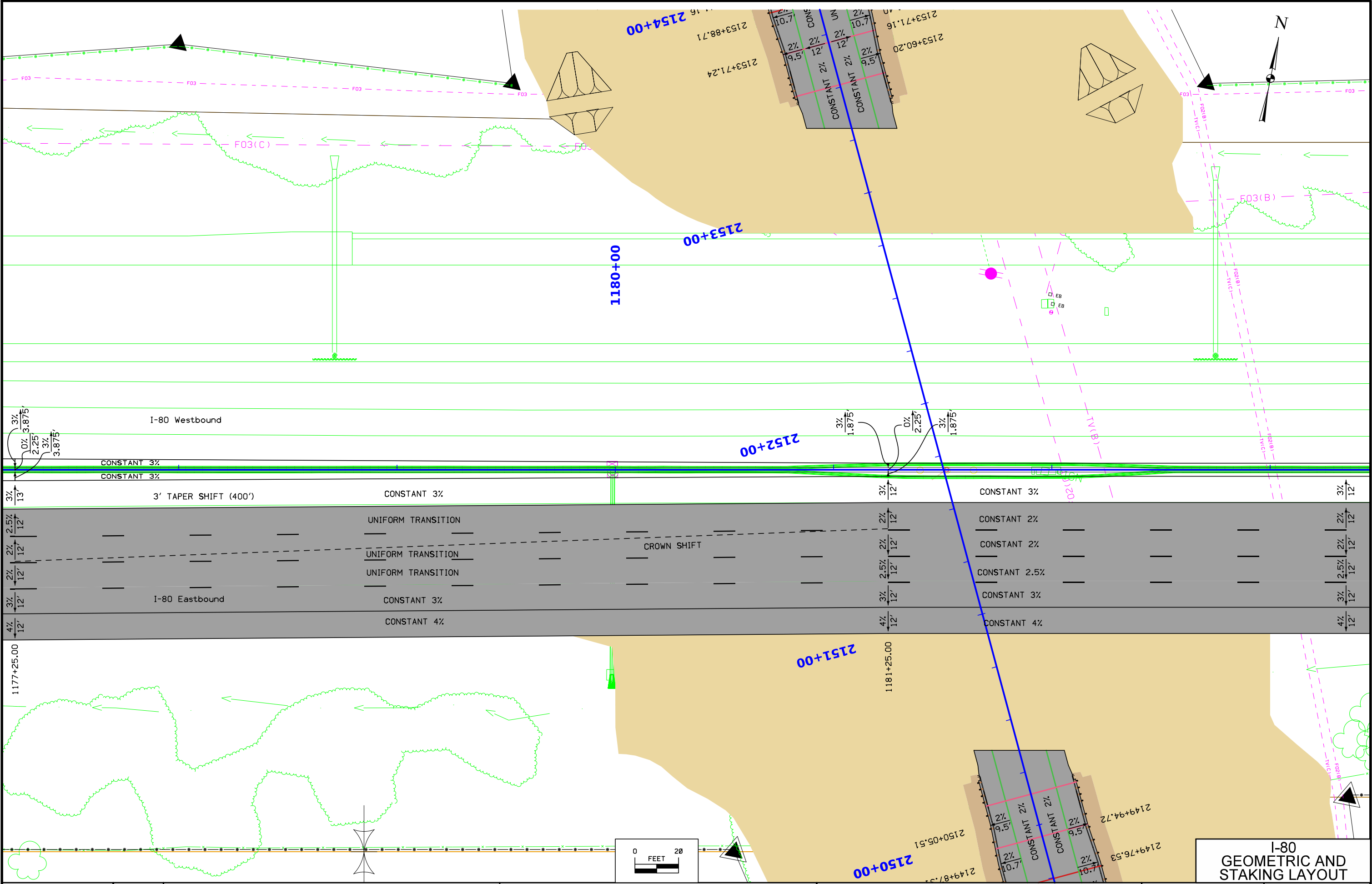


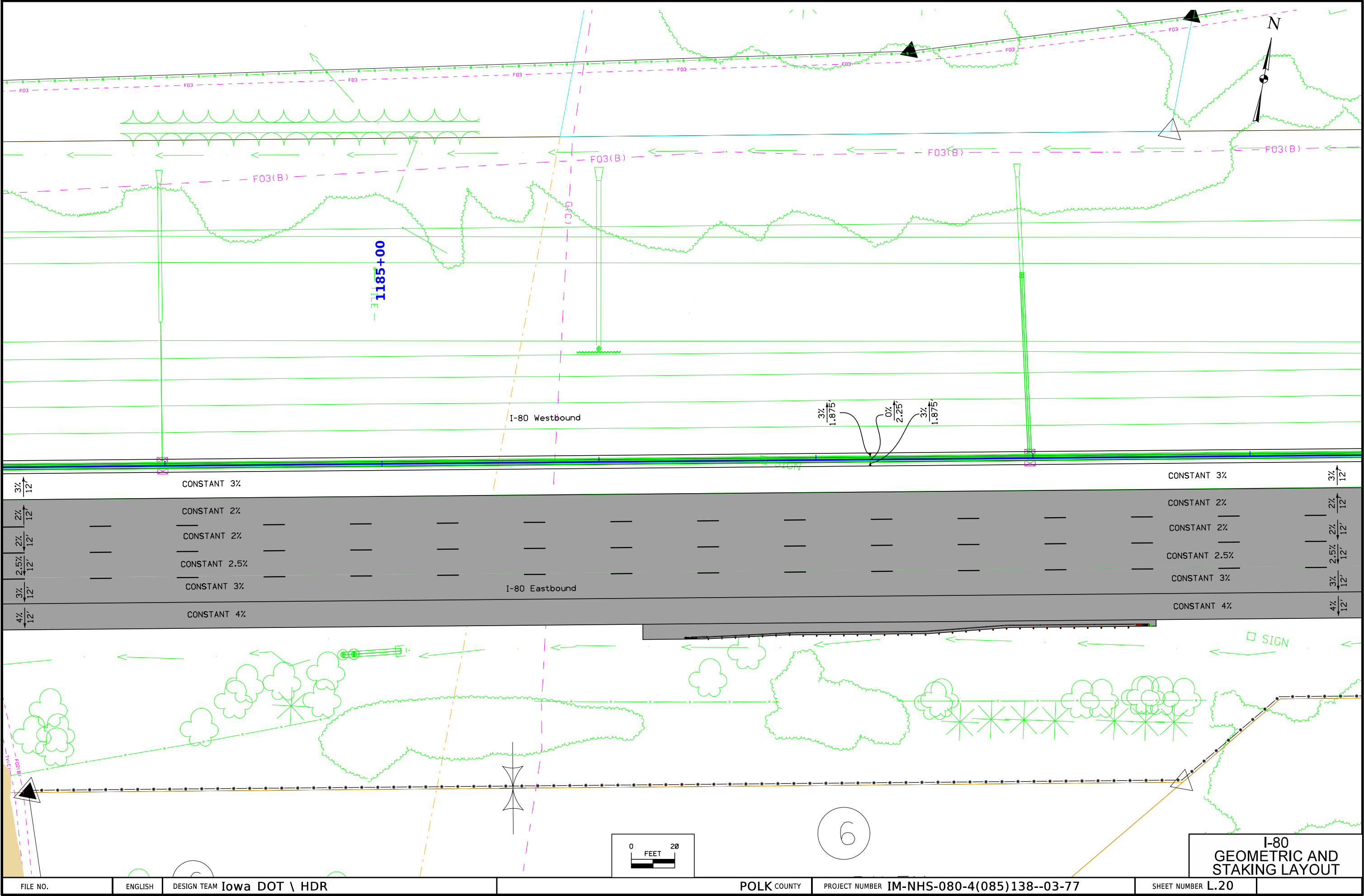


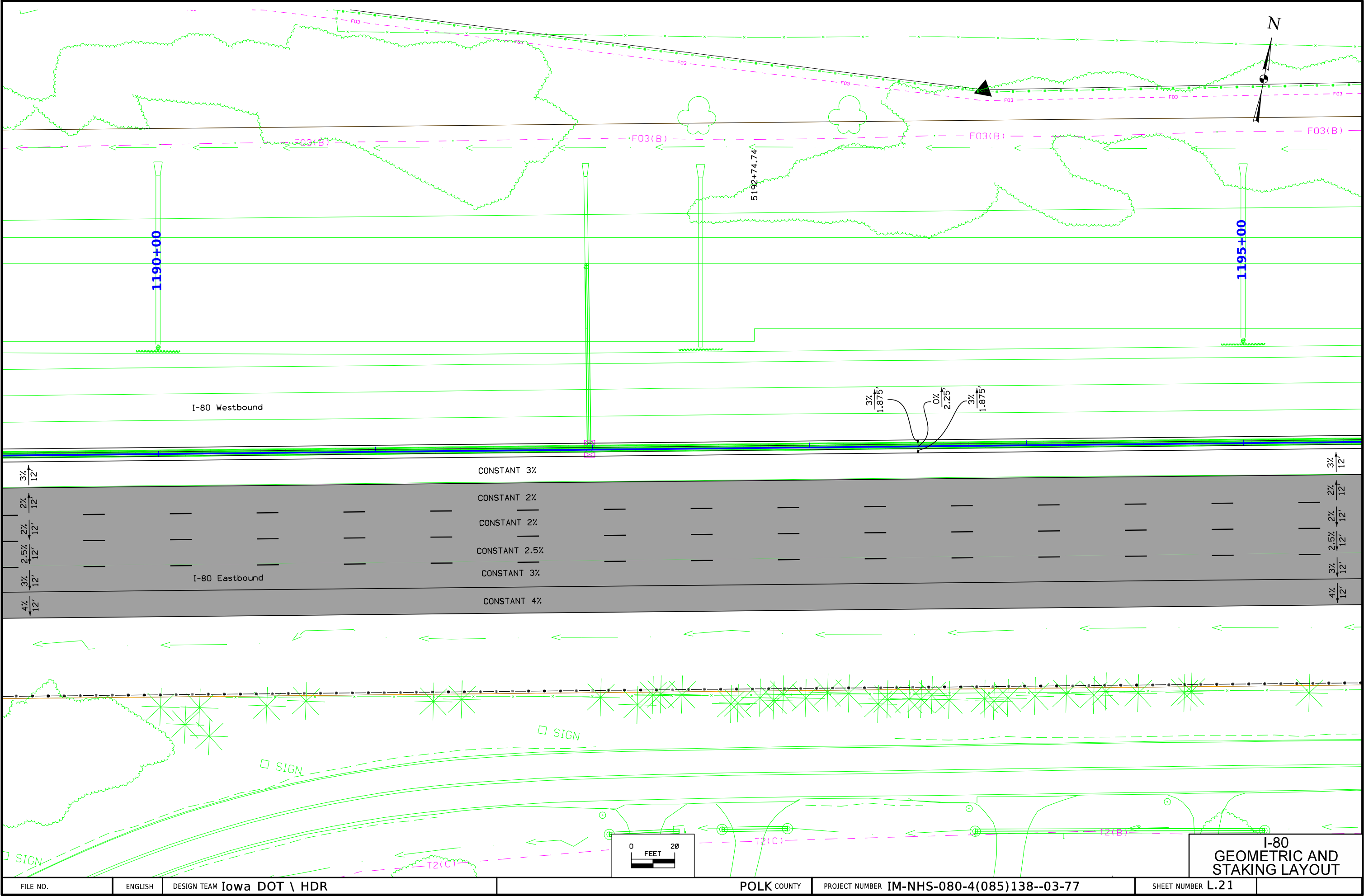


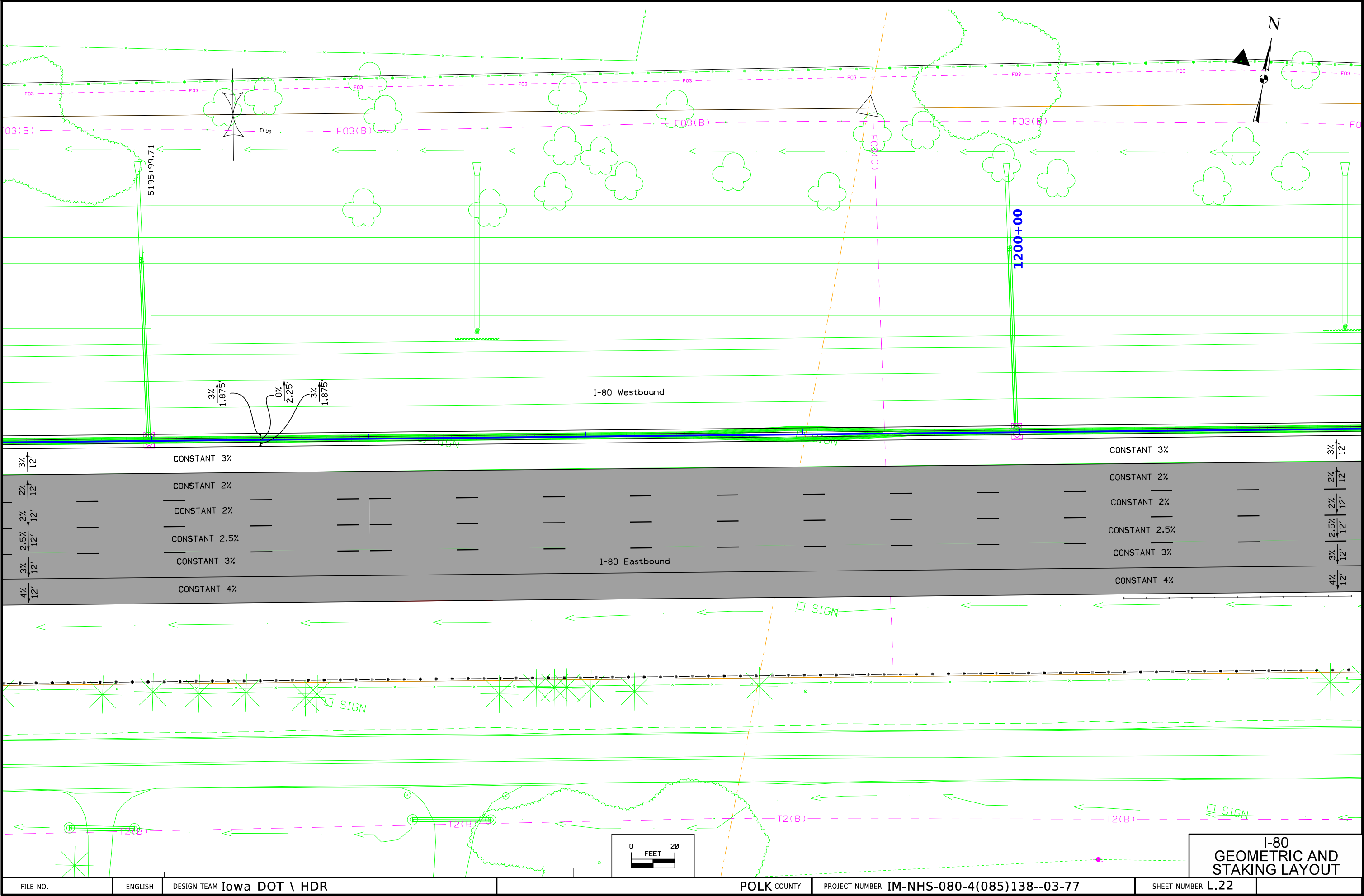


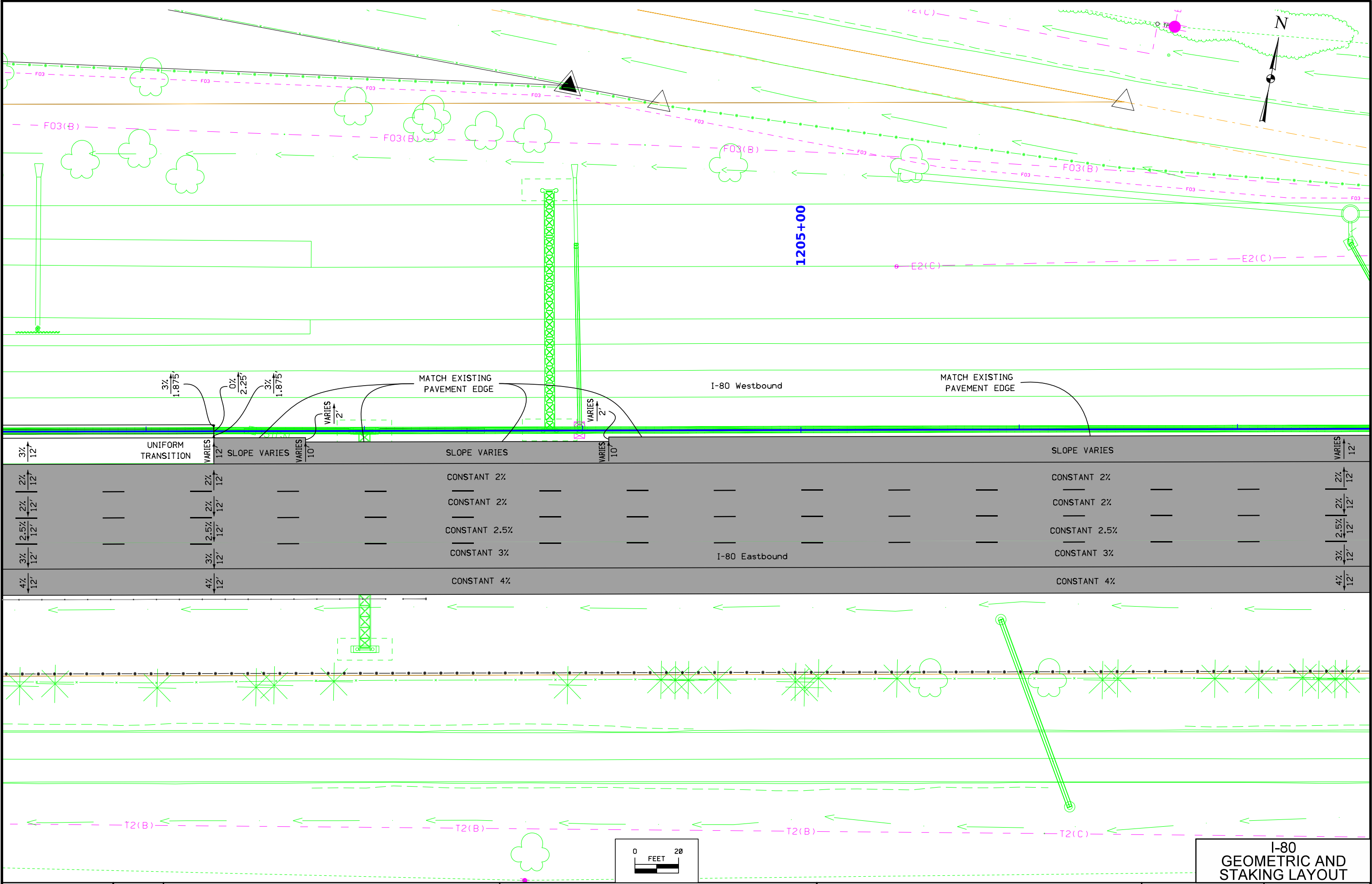


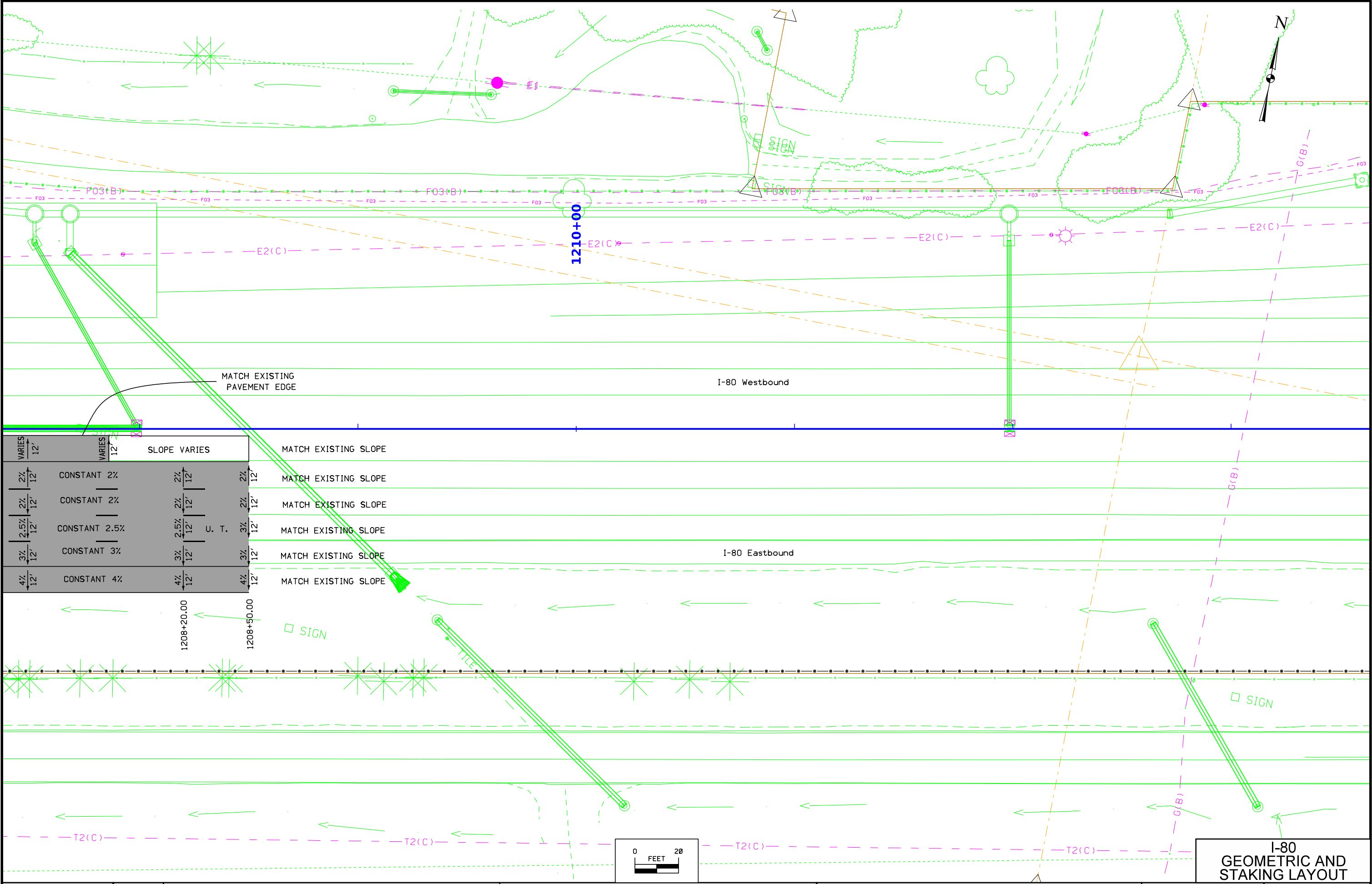






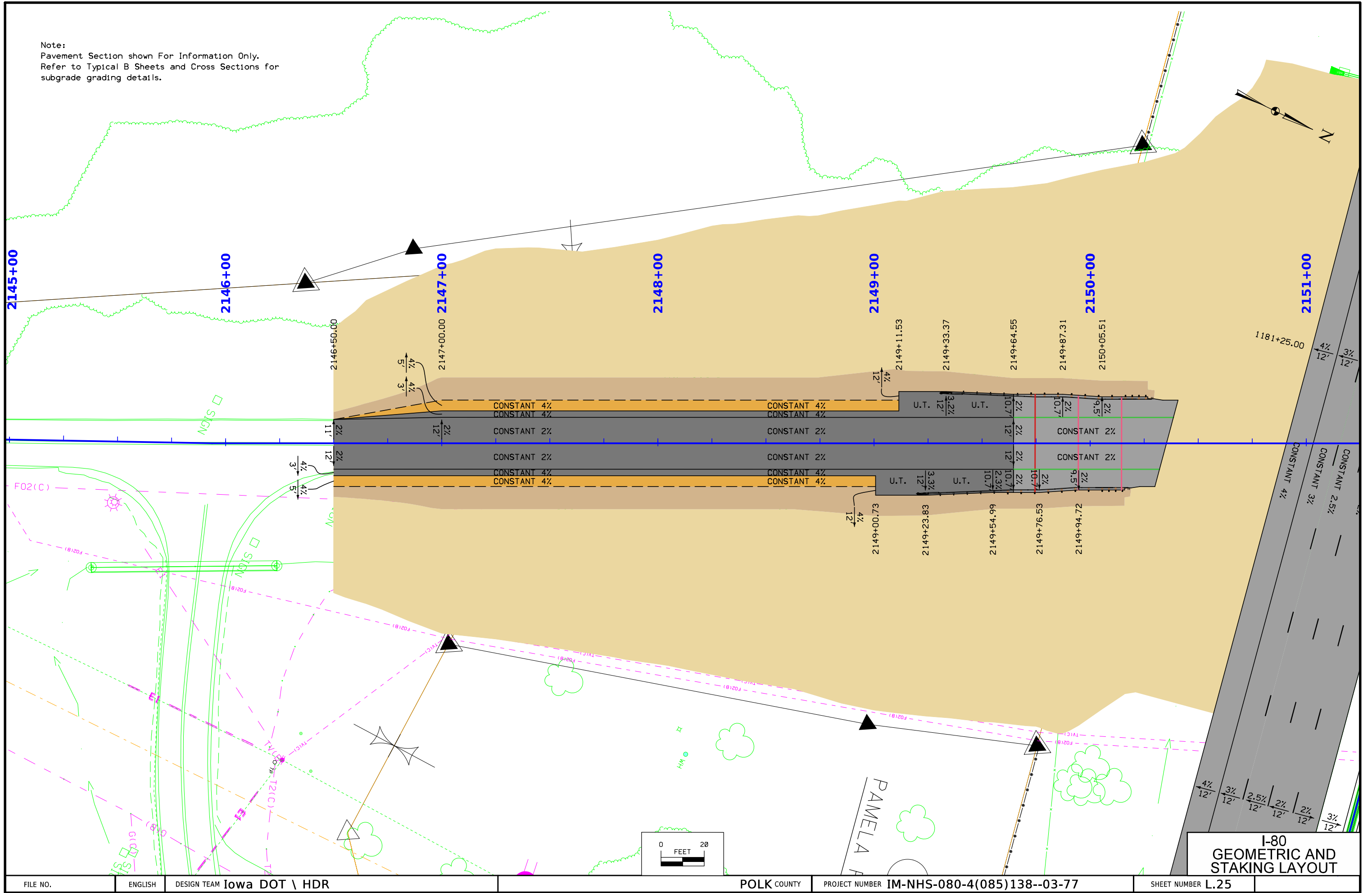




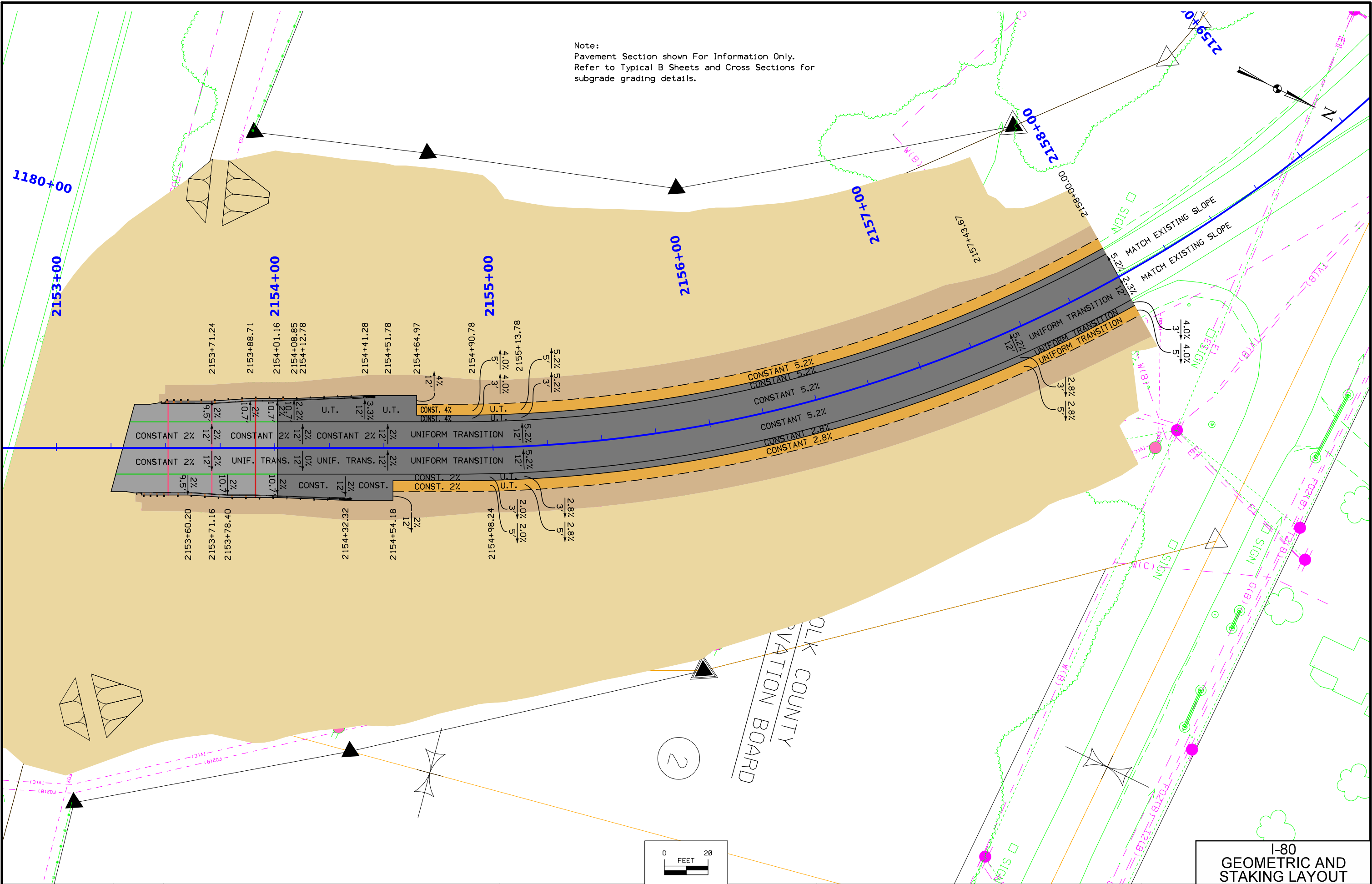


VARIES 12'	VARIES 12'	SLOPE VARIES		MATCH EXISTING SLOPE
2% 12'	CONSTANT 2%	2% 12'	2% 12'	MATCH EXISTING SLOPE
2% 12'	CONSTANT 2%	2% 12'	2% 12'	MATCH EXISTING SLOPE
2.5% 12'	CONSTANT 2.5%	2.5% 12'	U. T.	MATCH EXISTING SLOPE
3% 12'	CONSTANT 3%	3% 12'	3% 12'	MATCH EXISTING SLOPE
4% 12'	CONSTANT 4%	4% 12'	4% 12'	MATCH EXISTING SLOPE

Note:
Pavement Section shown For Information Only.
Refer to Typical B Sheets and Cross Sections for
subgrade grading details.

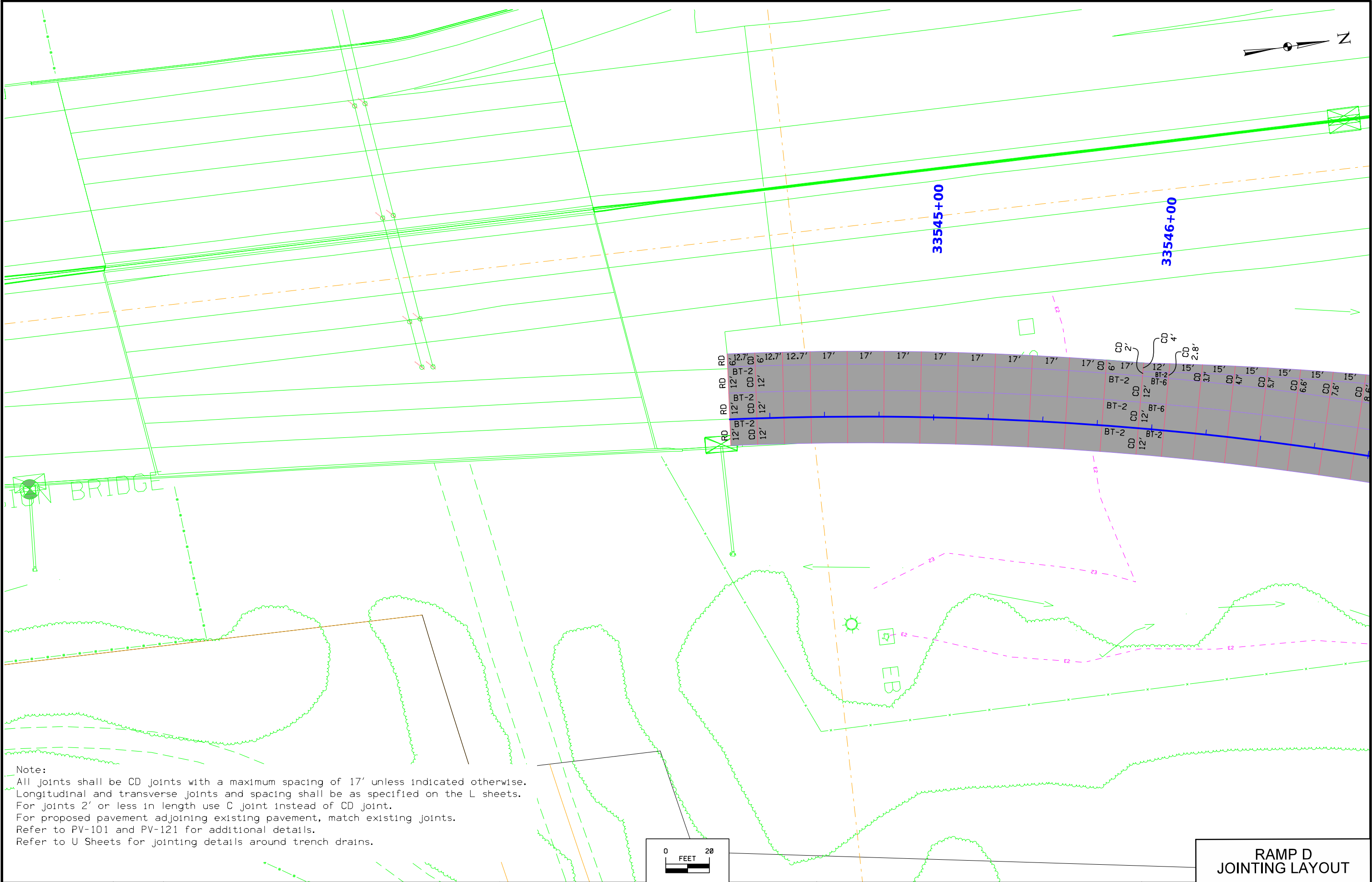


Note:
Pavement Section shown For Information Only.
Refer to Typical B Sheets and Cross Sections for
subgrade grading details.

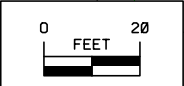


POLK COUNTY
AVIATION BOARD

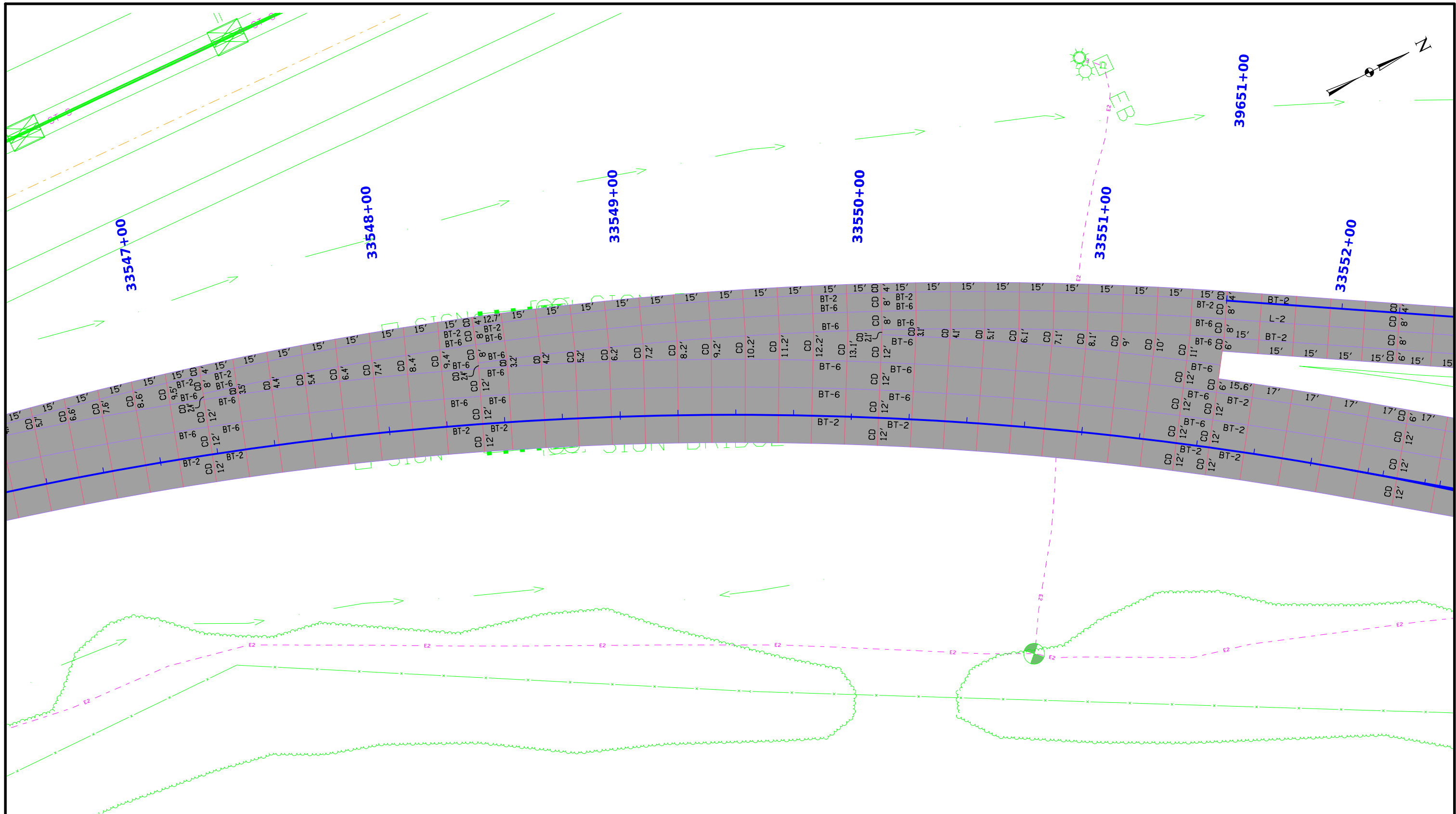
I-80
GEOMETRIC AND
STAKING LAYOUT



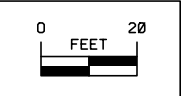
Note:
All joints shall be CD joints with a maximum spacing of 17' unless indicated otherwise.
Longitudinal and transverse joints and spacing shall be as specified on the L sheets.
For joints 2' or less in length use C joint instead of CD joint.
For proposed pavement adjoining existing pavement, match existing joints.
Refer to PV-101 and PV-121 for additional details.
Refer to U Sheets for jointing details around trench drains.



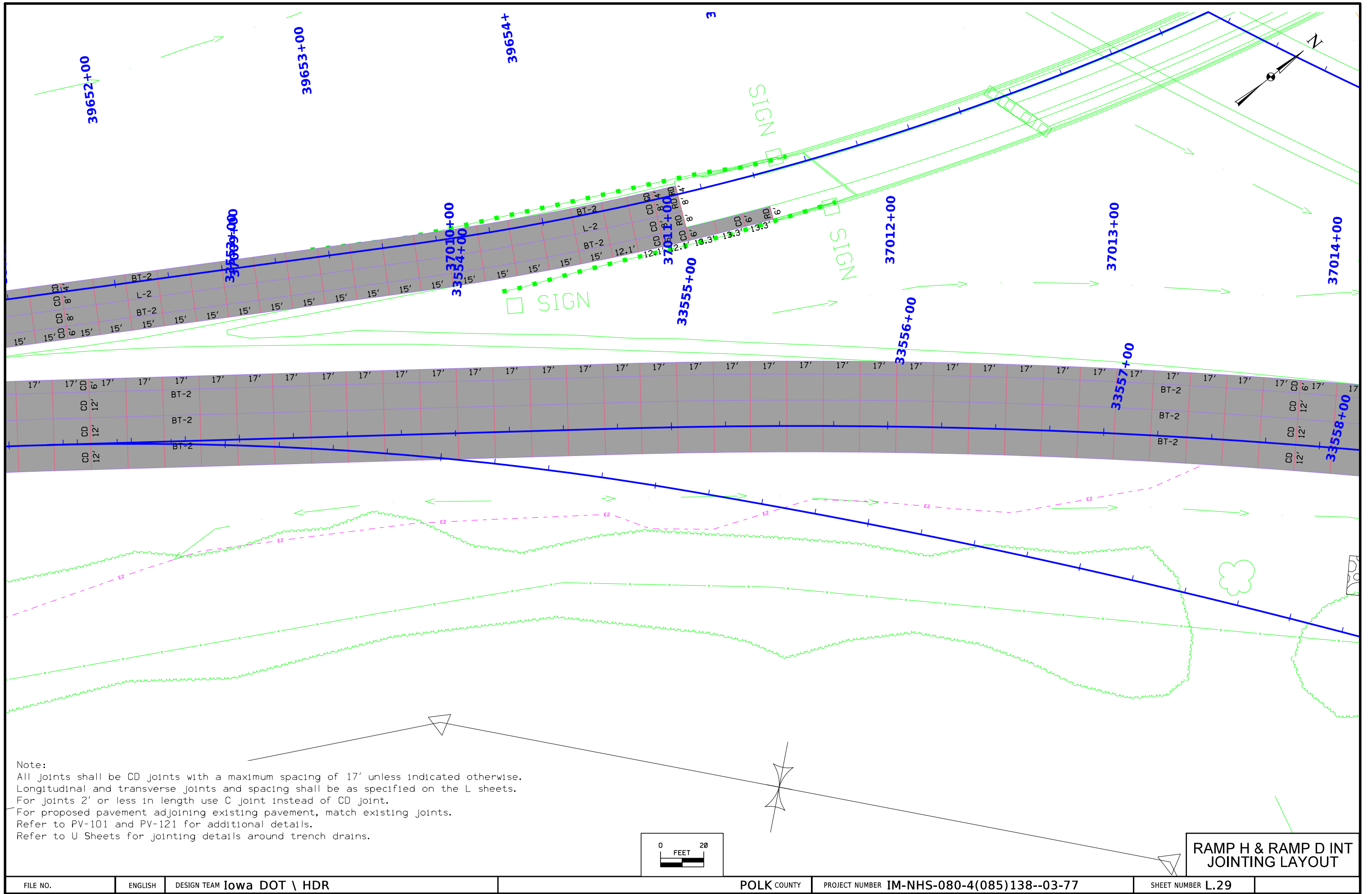
RAMP D
JOINTING LAYOUT

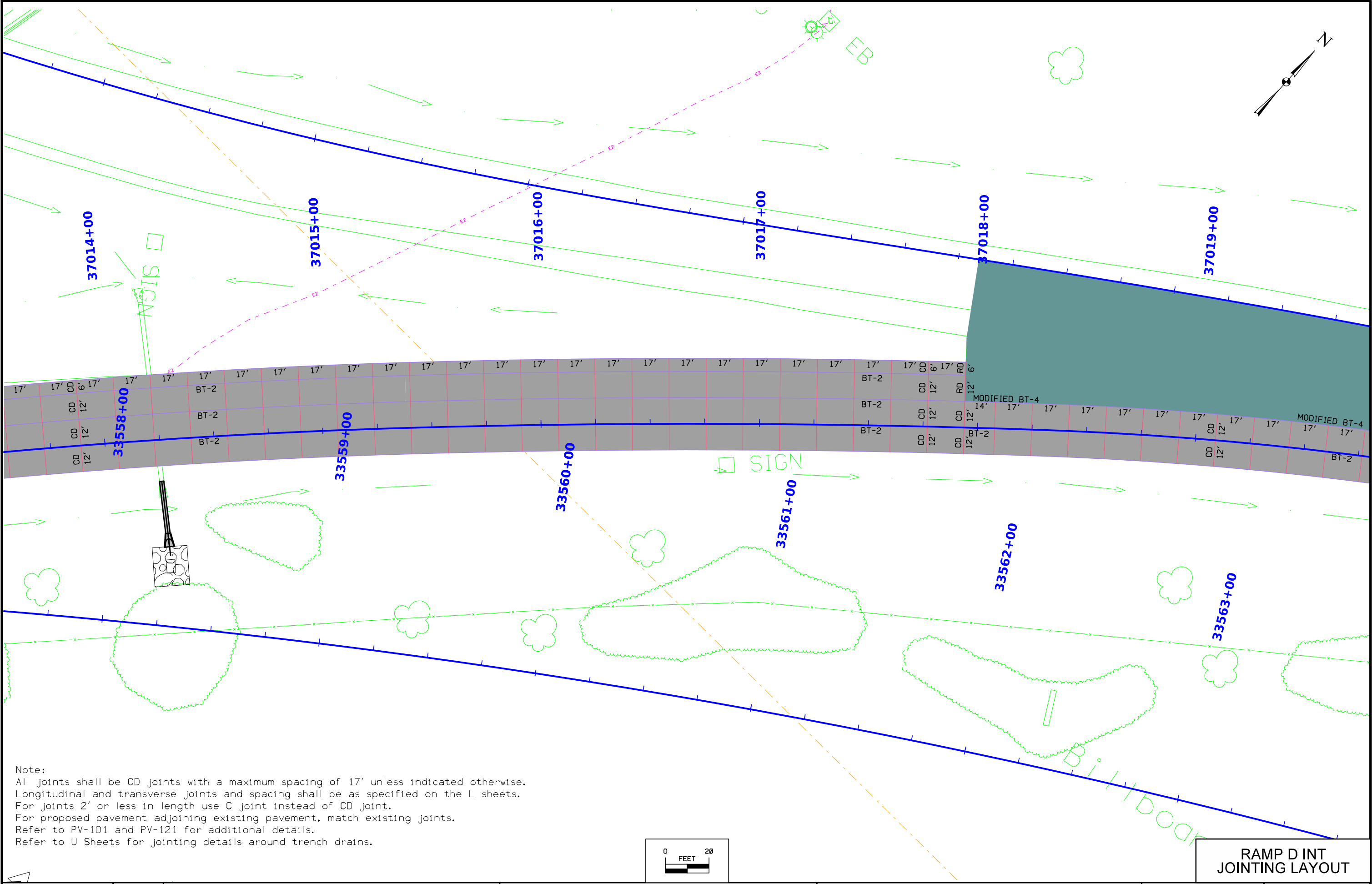


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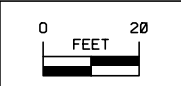


**RAMP D & RAMP H
JOINTING LAYOUT**

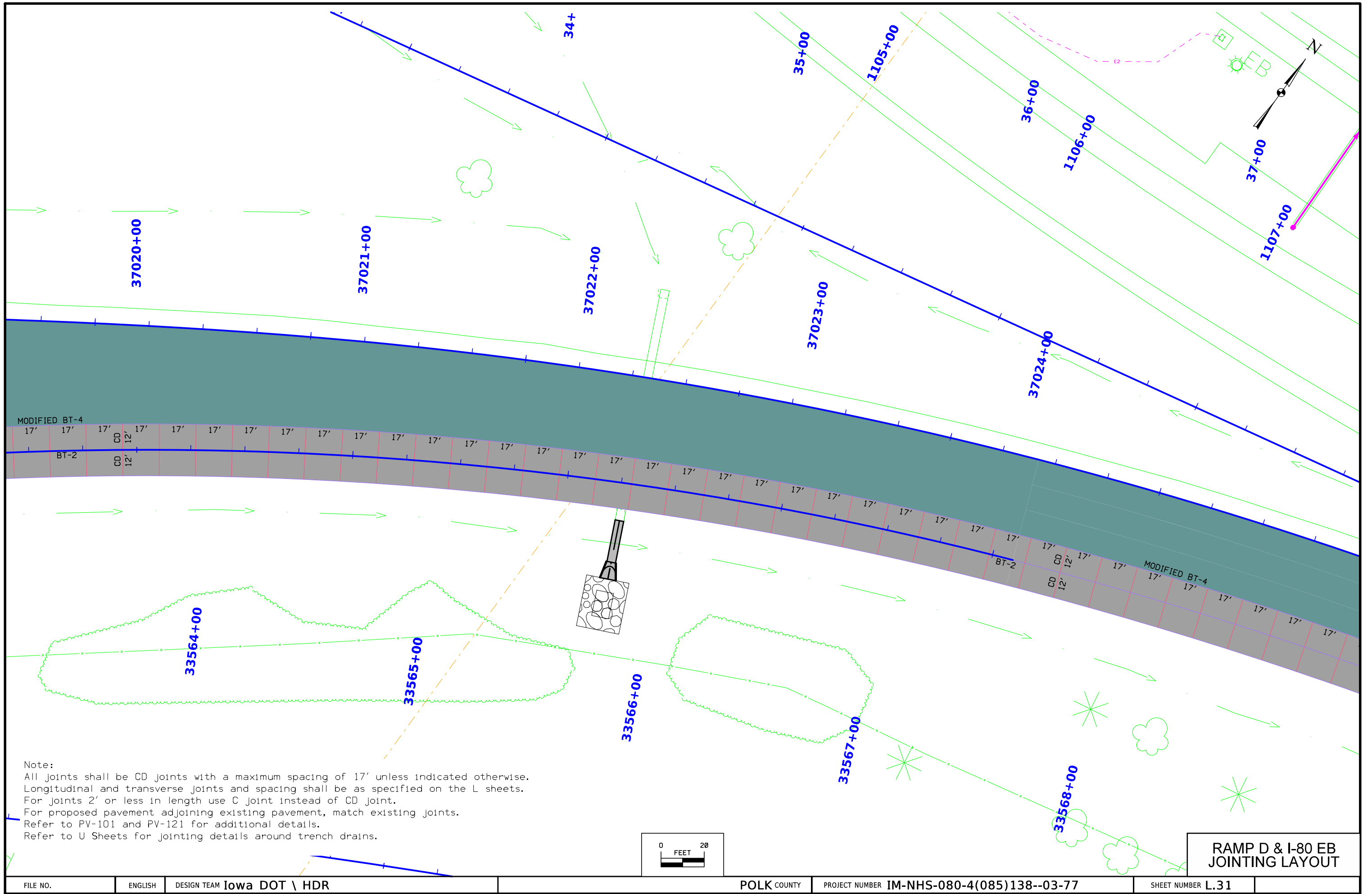


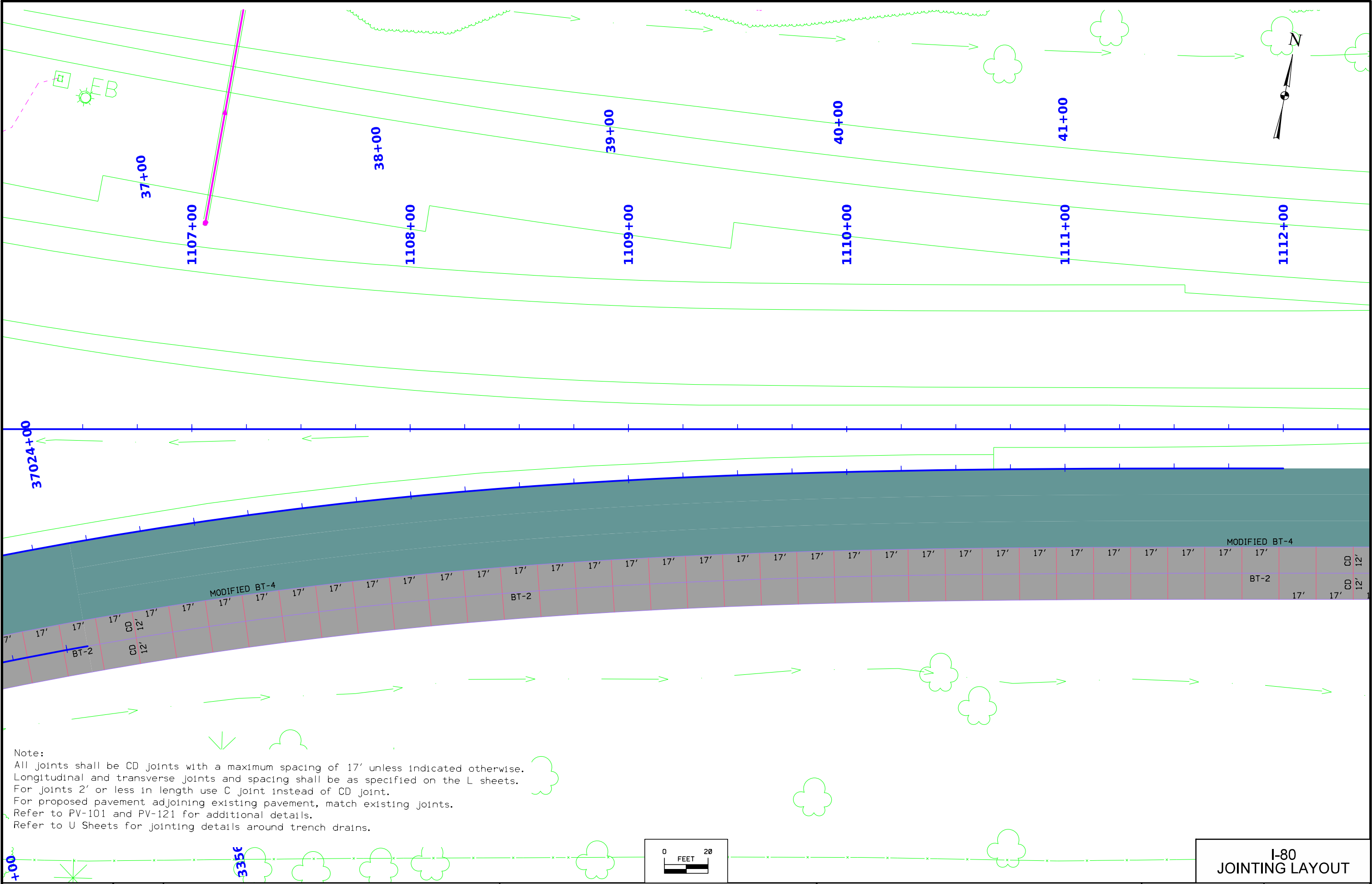


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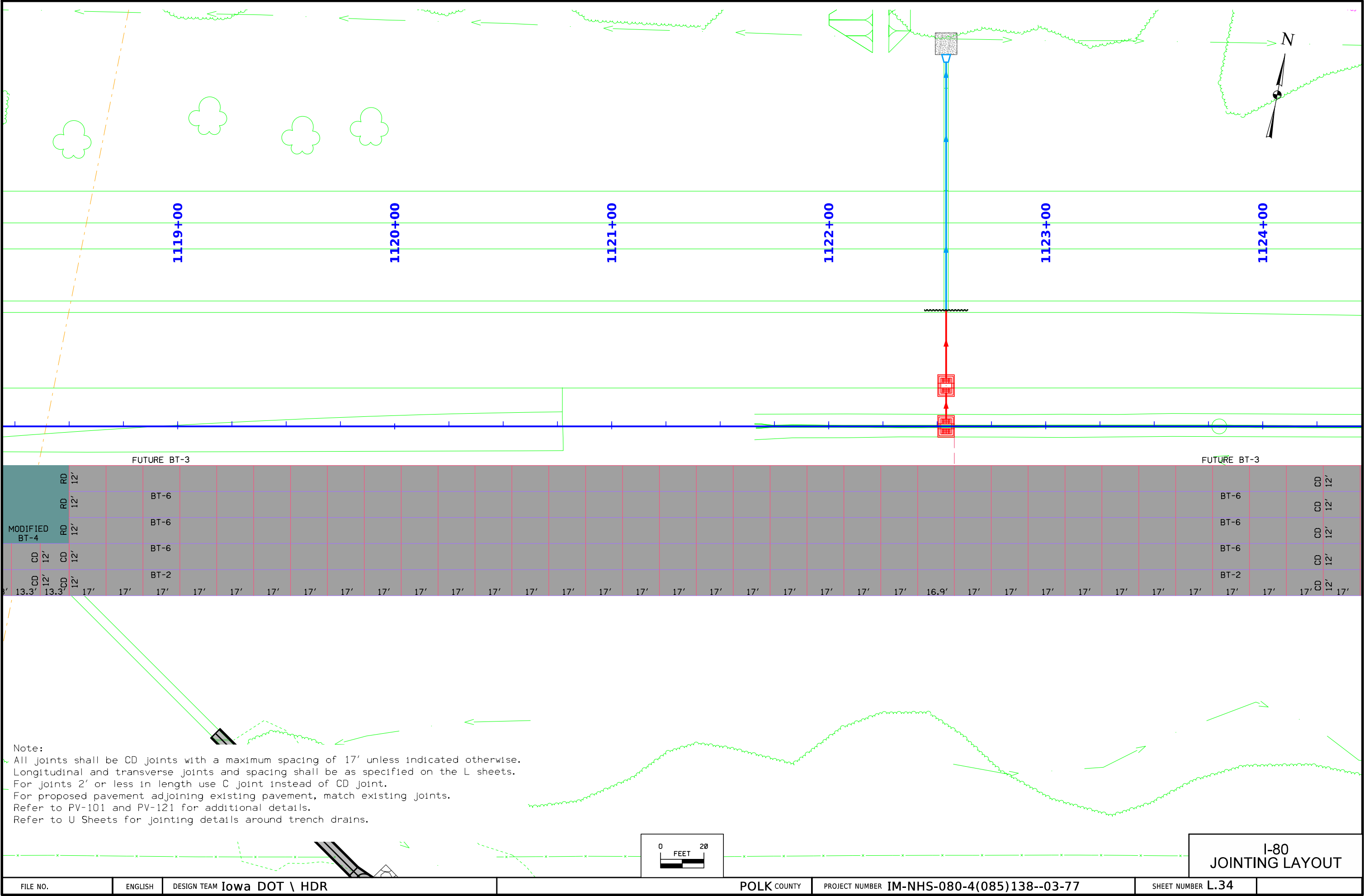


RAMP D INT
JOINTING LAYOUT



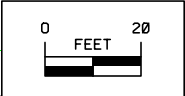


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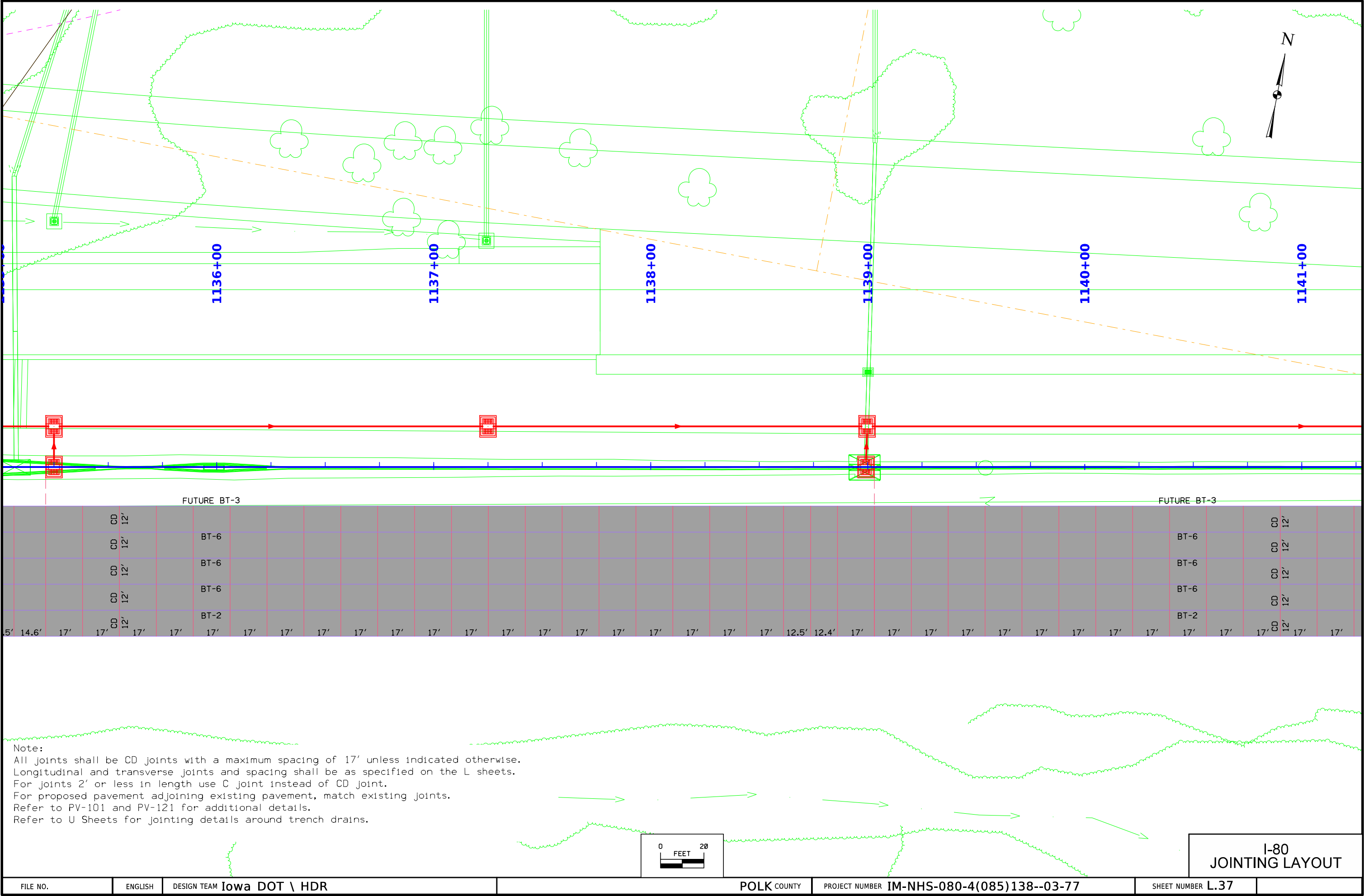


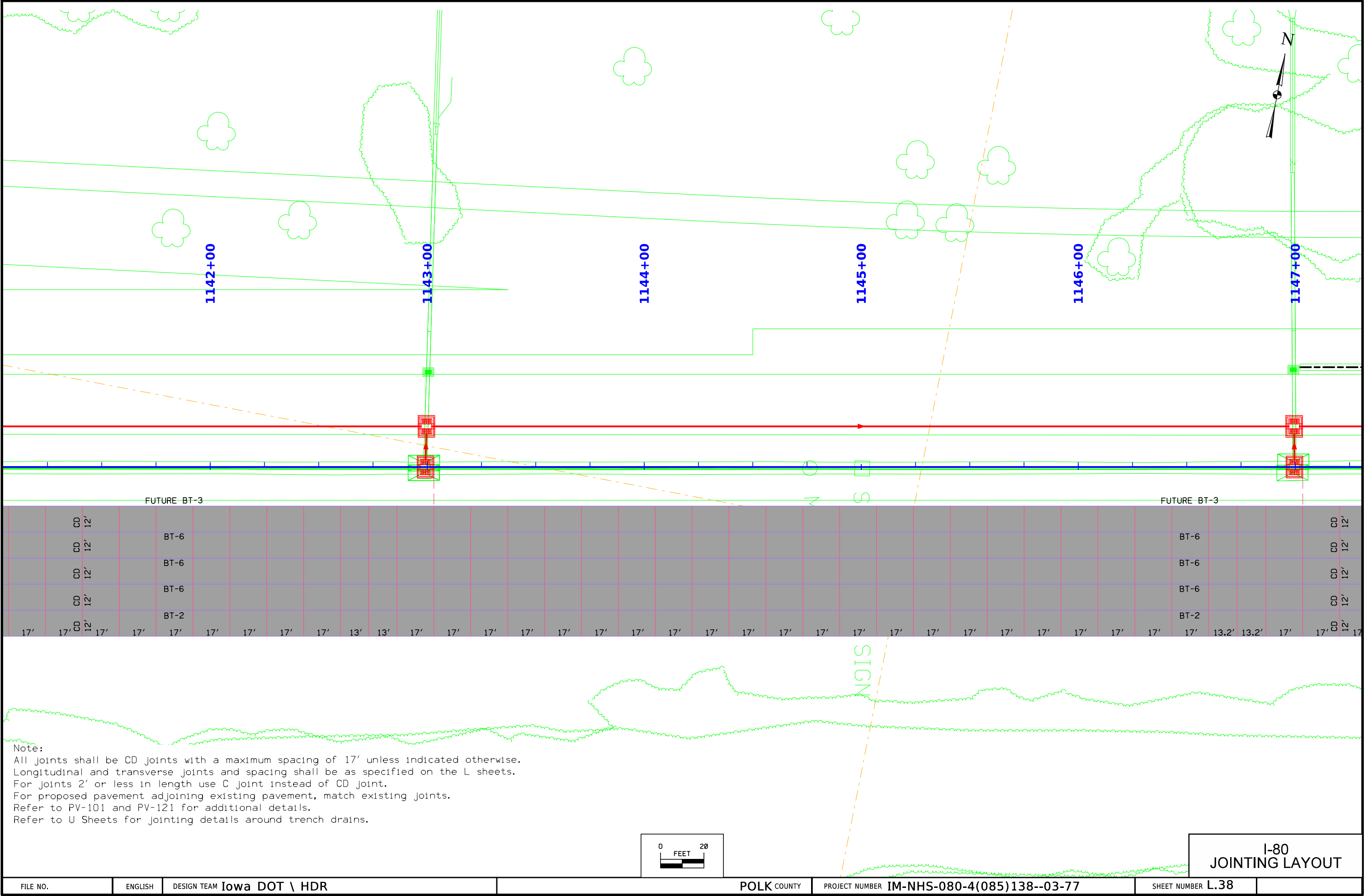
FUTURE BT-3																	FUTURE BT-3																
MODIFIED BT-4	RD	RD	CD	CD																								CD	CD	BT-6			
	12'	12'	12'	12'																								12'	12'	BT-6			
	12'	12'	12'	12'																								12'	12'	BT-6			
	12'	12'	12'	12'																								12'	12'	BT-6			
	12'	12'	12'	12'																								12'	12'	BT-2			
13.3'	13.3'	12'	12'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	16.9'	17'	17'	17'	17'	17'	17'	17'	17'	17'

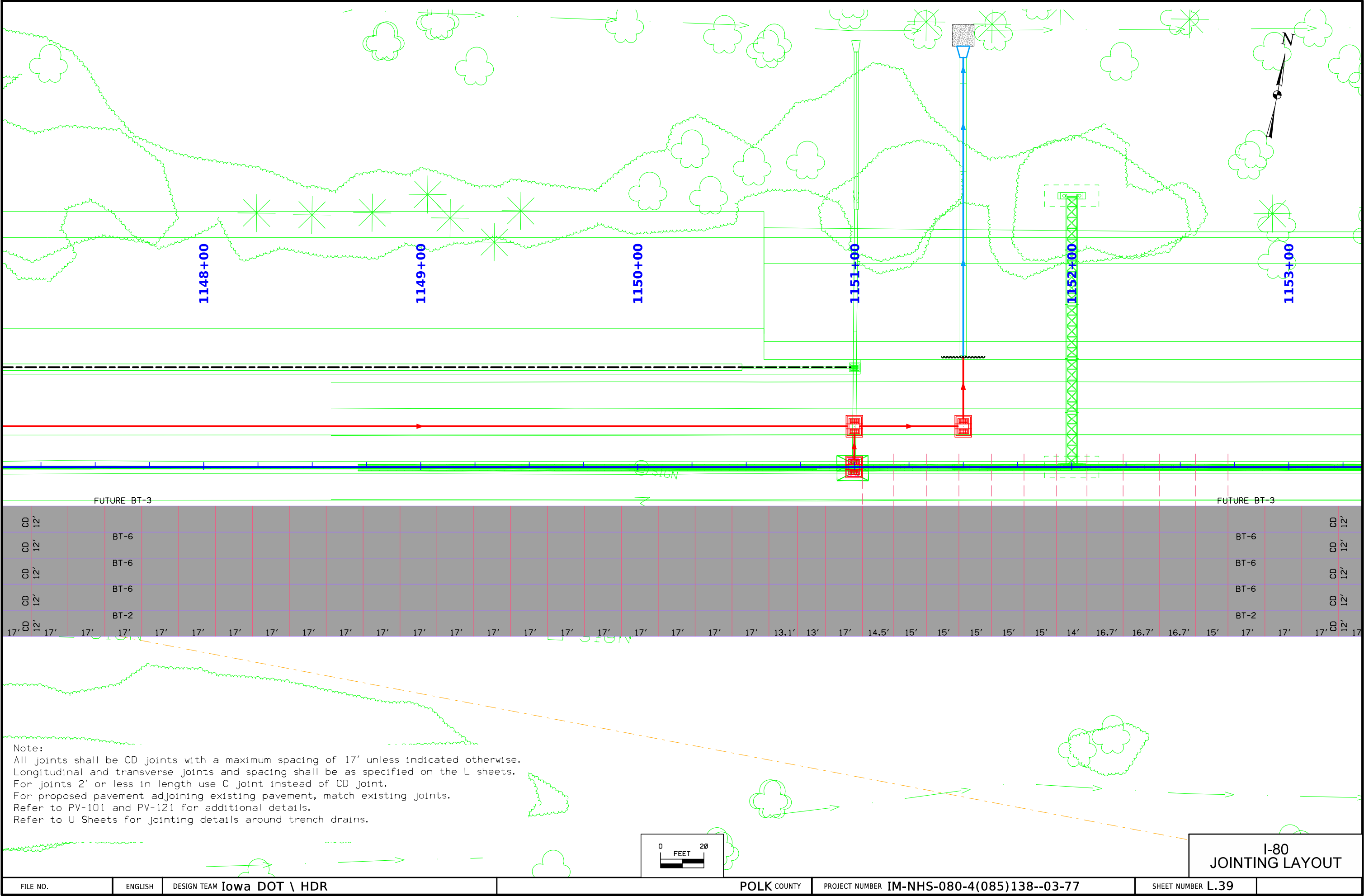
Note:
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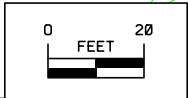
I-80
JOINTING LAYOUT



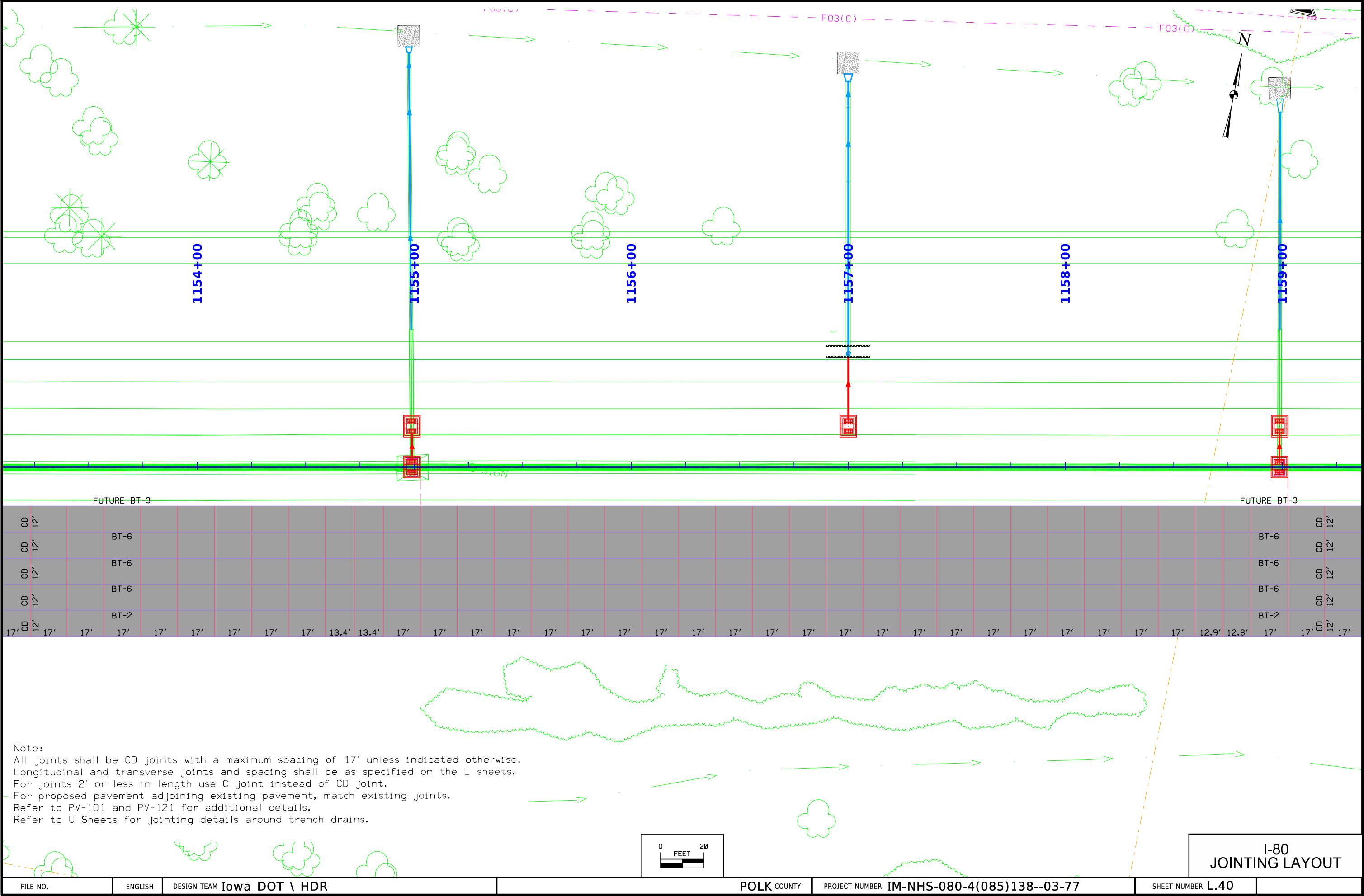




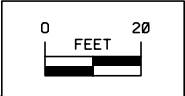
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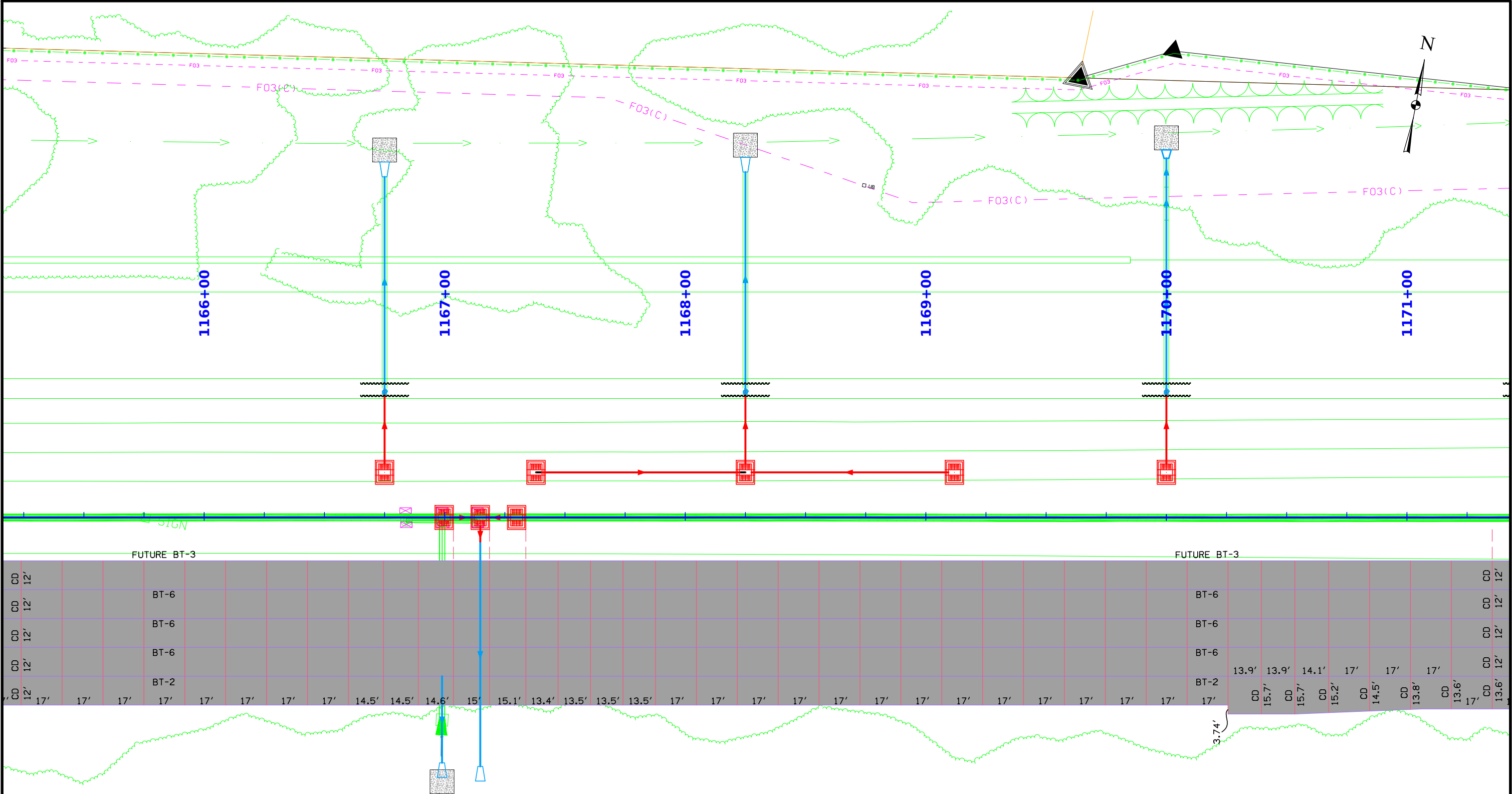
I-80
JOINTING LAYOUT



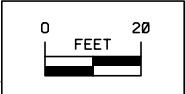
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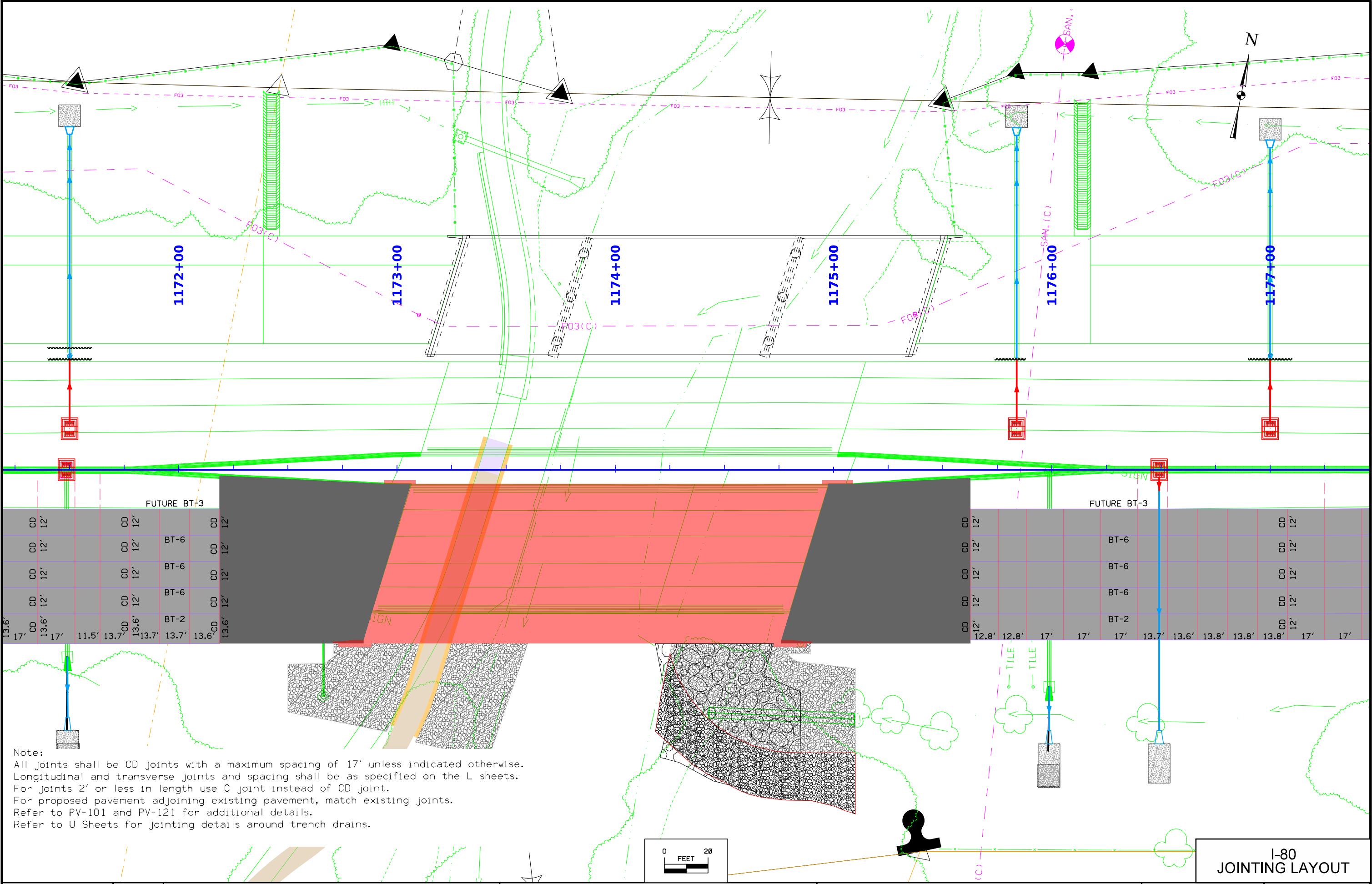
I-80
JOINTING LAYOUT



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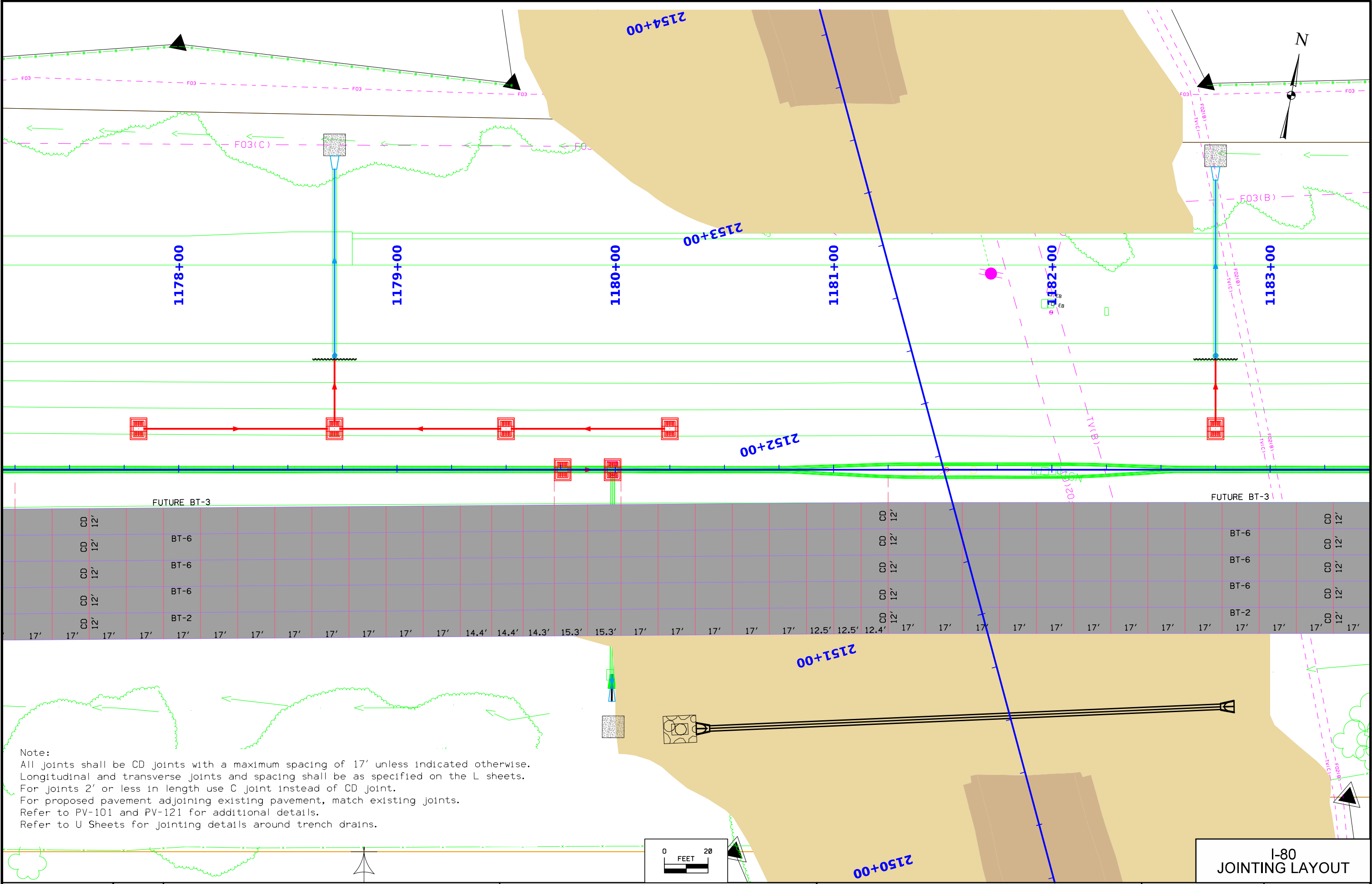


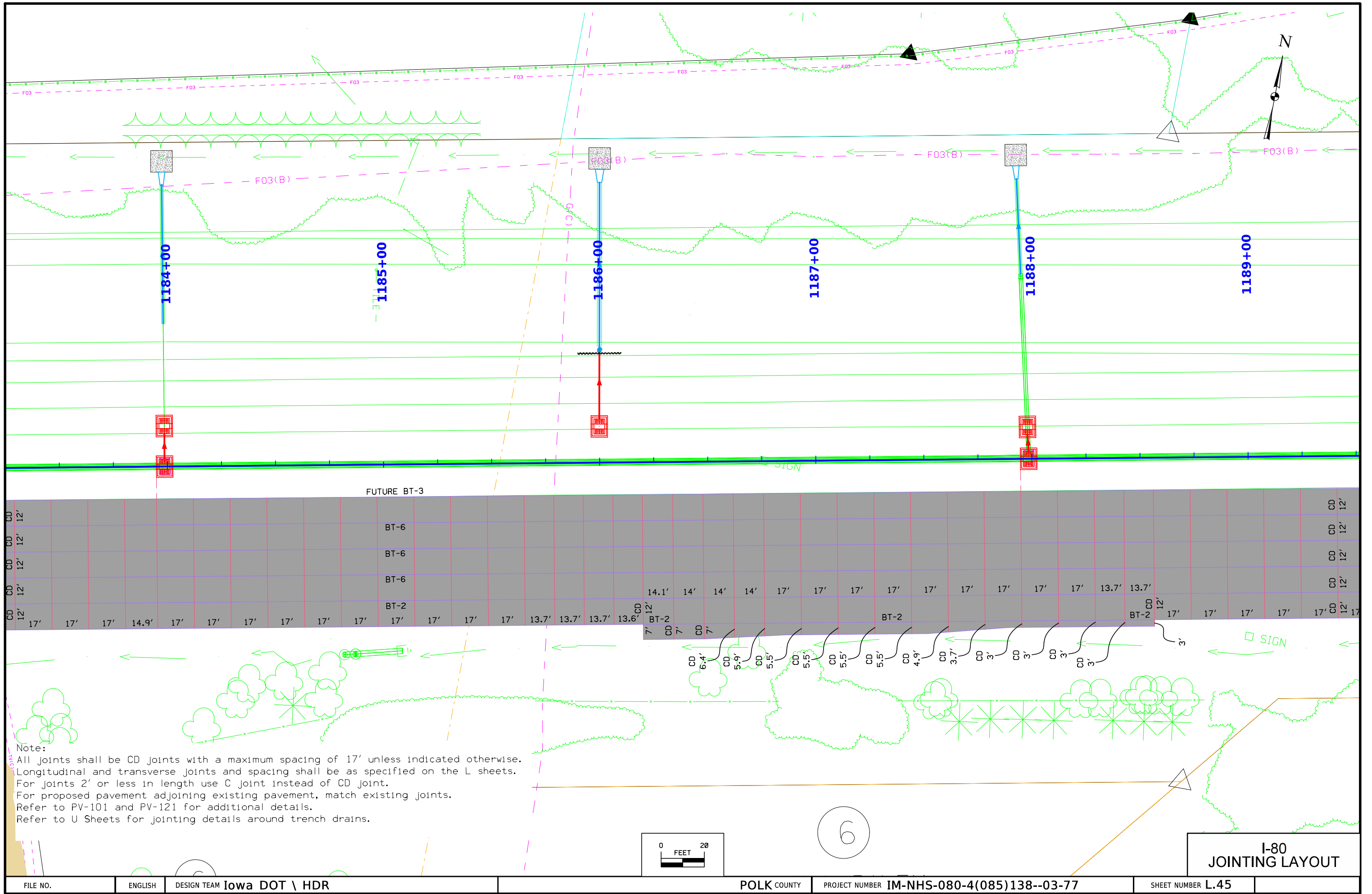
I-80
JOINTING LAYOUT



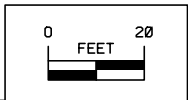
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I-80
JOINTING LAYOUT



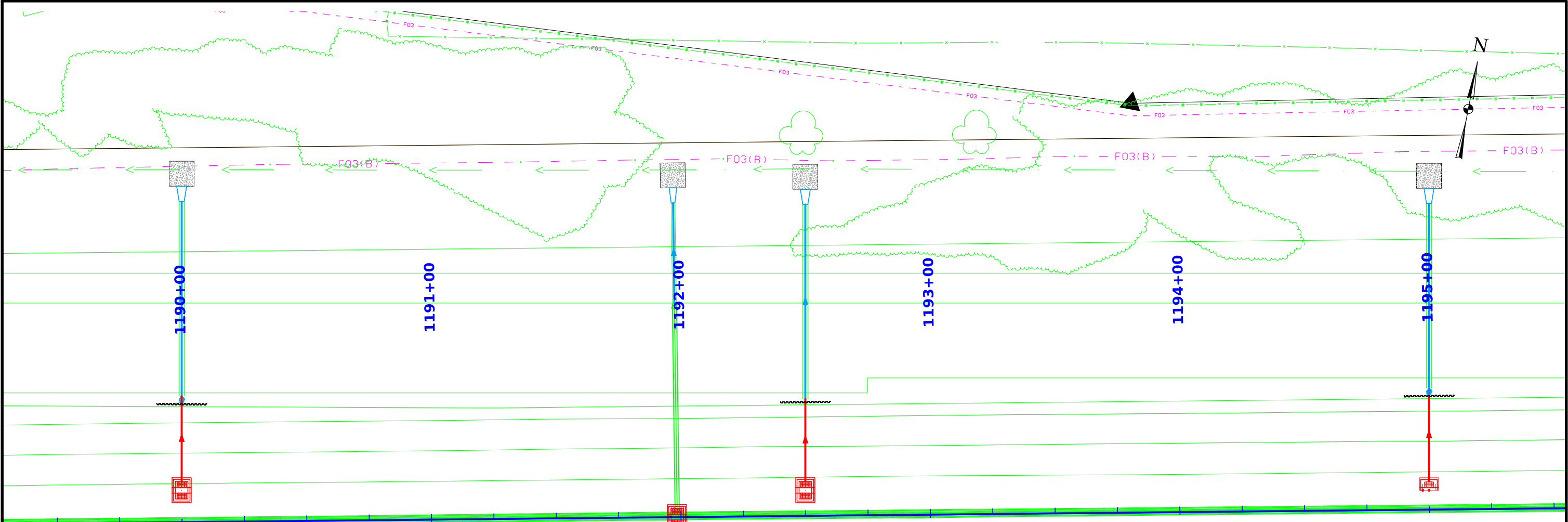


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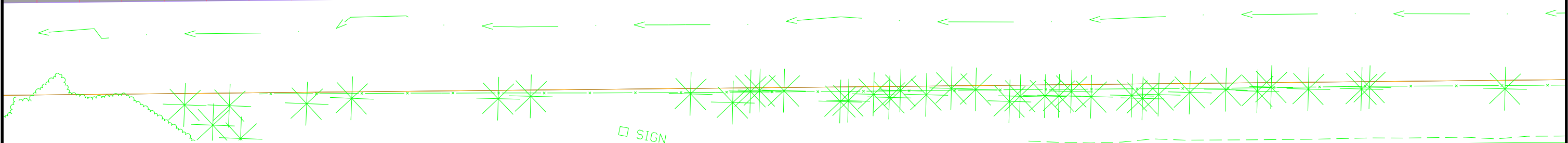


6

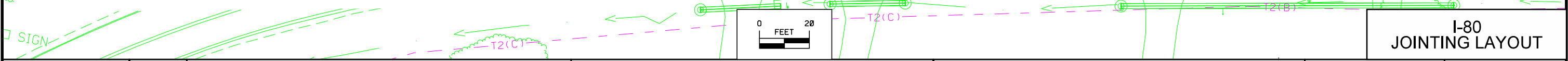
I-80
JOINTING LAYOUT

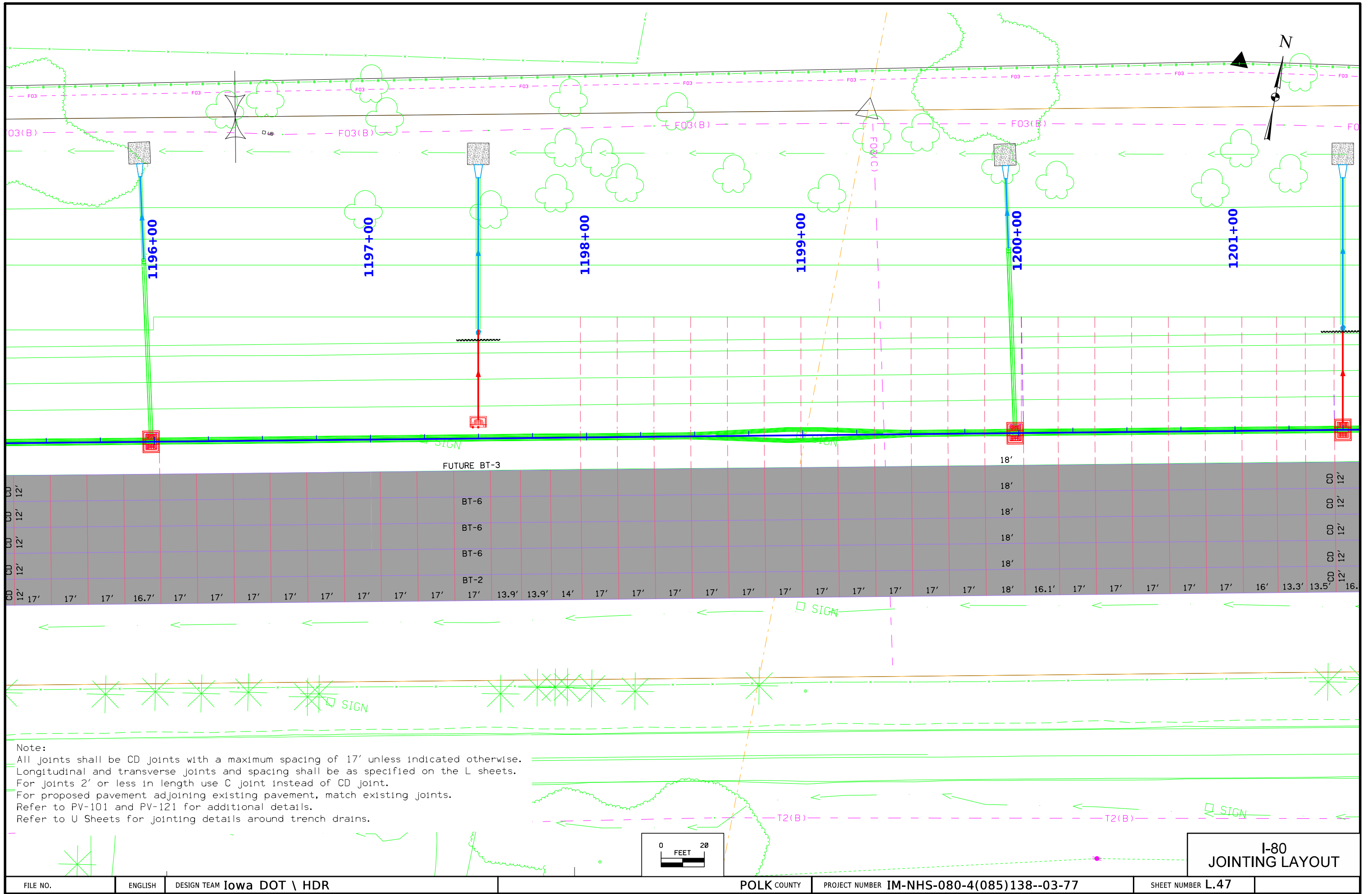


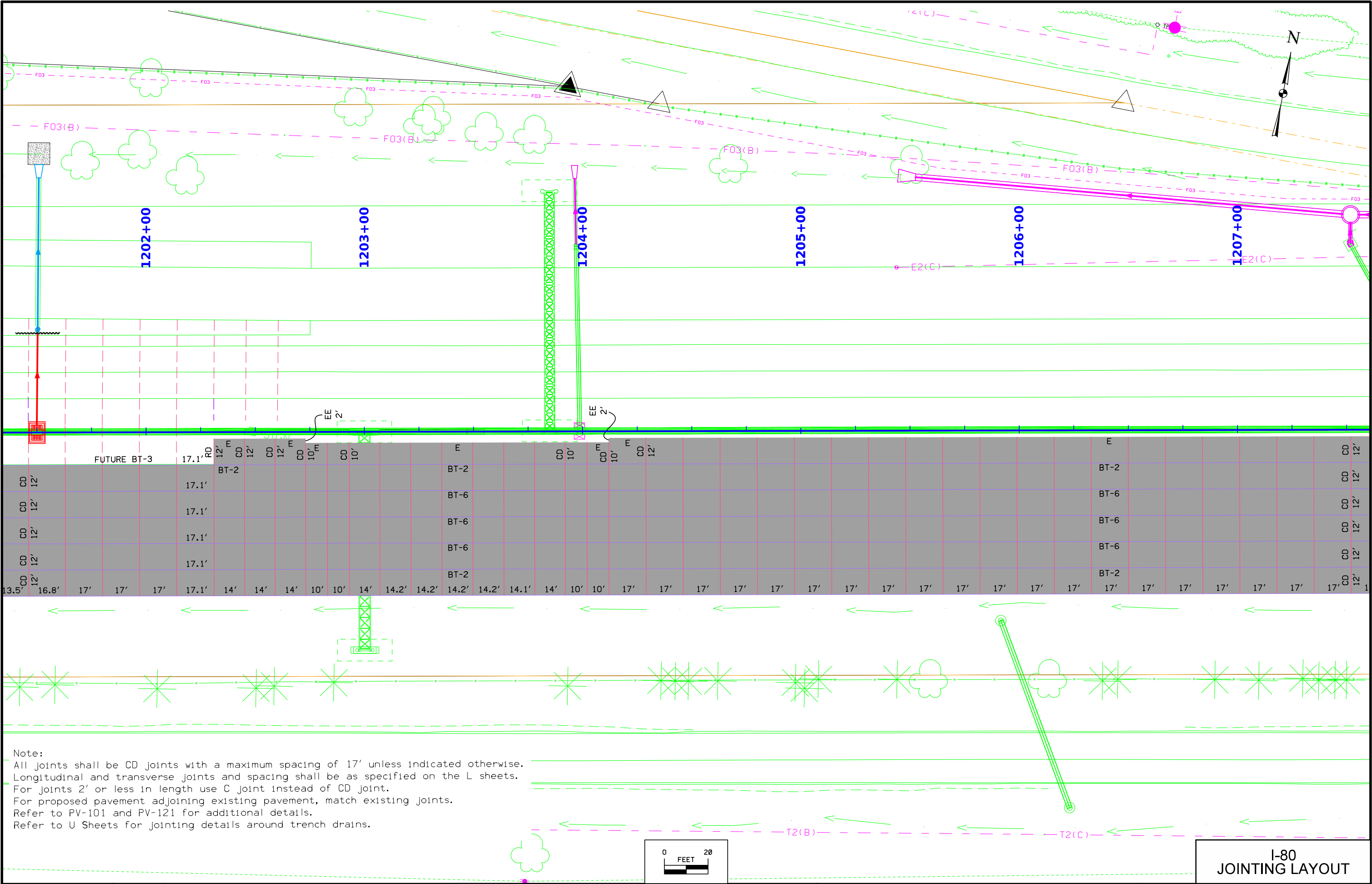
FUTURE BT-3																																			
CD	12'																															CD	12'		
CD	12'	BT-6																														CD	12'		
CD	12'	BT-6																														CD	12'		
CD	12'	BT-6																														CD	12'		
CD	12'	BT-2	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	15.6'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	CD	12'	17'

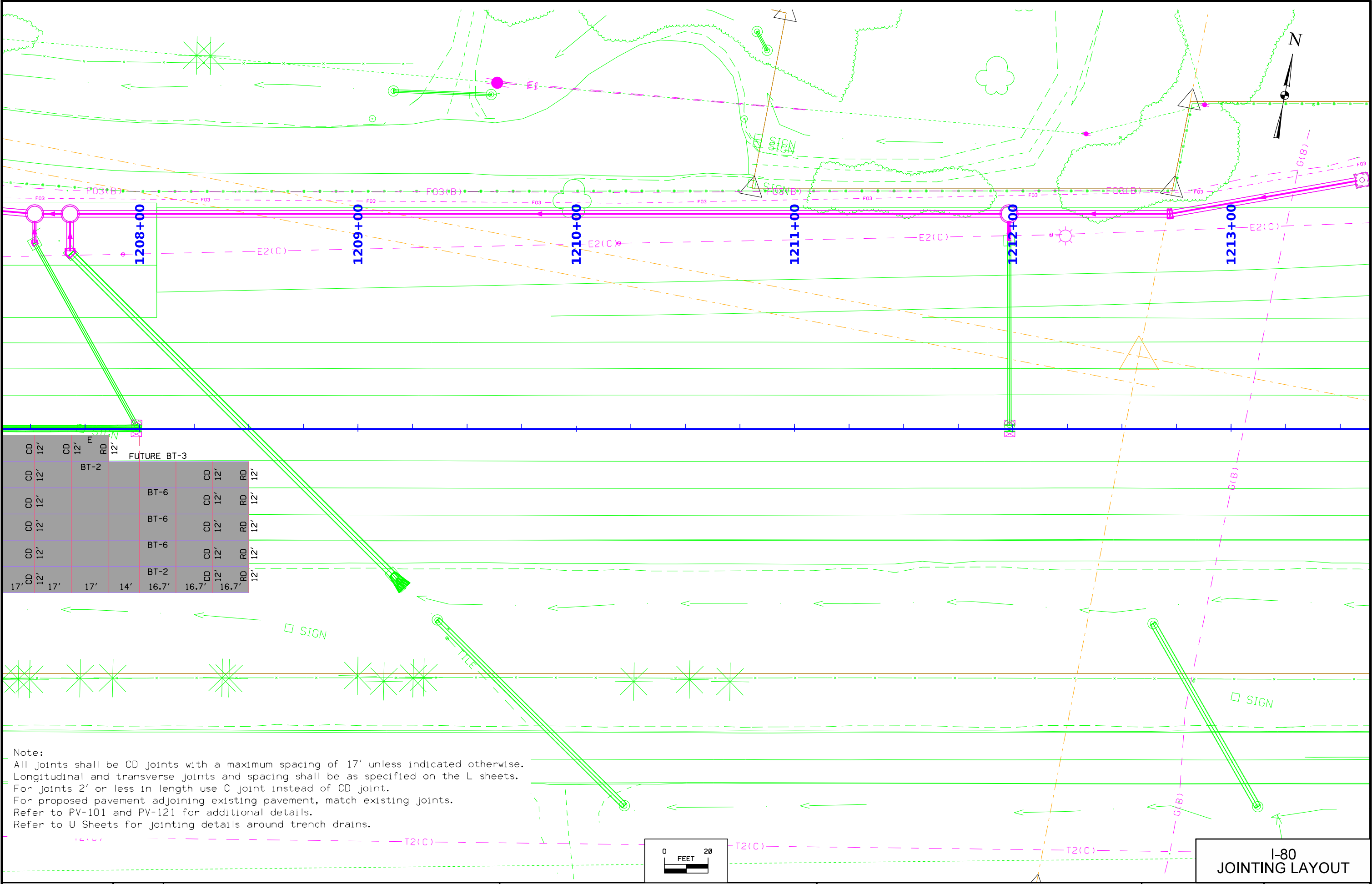


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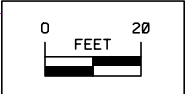






CD	12'	CD	12'	RD	12'	FUTURE BT-3			
CD	12'	BT-2					CD	12'	RD
CD	12'				BT-6		CD	12'	RD
CD	12'				BT-6		CD	12'	RD
CD	12'				BT-6		CD	12'	RD
CD	12'				BT-2		CD	12'	RD
17'	CD	12'	17'	17'	14'	16.7'	16.7'	16.7'	RD

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



I-80
JOINTING LAYOUT







Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional 2 ft length is added to each side of the Design Length to account for estimated length to center of structures.

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\HDR	POLK COUNTY	PROJECT NUMBER IM-NHS-080-4(085)138--03-77	SHEET NUMBER M.1	
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PLAN VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK		Design Color No.	
Green, Light	(2)		Existing Topographic Features, Utilities, and Labels
Blue	(1)		Alignment, Stationing, Tic Marks, and Alignment Annotation
Blue, Light	(230)		Proposed Storm Sewer
Red	(3)		Future Storm Sewer
SHADING		Design Color No.	
Gray, Light	(80)		Proposed Pavement Shading
Gray, Dark	(128)		Proposed Bridge Approach Shading
Red	(3)		Proposed Bridge Shading
Purple, Light	(9)		Detour Pavement Shading


PROFILE VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK	Design	Color	No.	
Gray, Dark	(80)			Future Roadway Construction
Black	(1)			Proposed Roadway Construction
Blue, Light	(230)			Proposed Pipes and Intakes
Red	(3)			Future Proposed Pipes and Intakes
Green, Light	(2)			Existing Pipes and Intakes
Green	(10)			Existing Ground

PLAN VIEW LINE STYLE LEGEND OF STORM SEWER SHEETS

 Future Storm Sewer (Direction of Pipe Flow)
 Proposed Storm Sewer (Direction of Pipe Flow)
 Plug and Abandon Existing Pipe or Structure
 Removal of Existing Pipe or Structure
 Previously Constructed Pipe or Structure

PROFILE VIEW LINE STYLE LEGEND OF STORM SEWER SHEETS



Legend

- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Clearing & Grubbing Area
- Pavement Removal
- Sheet Pile
- Future Intakes
- Proposed Intakes
- Proposed Culvert

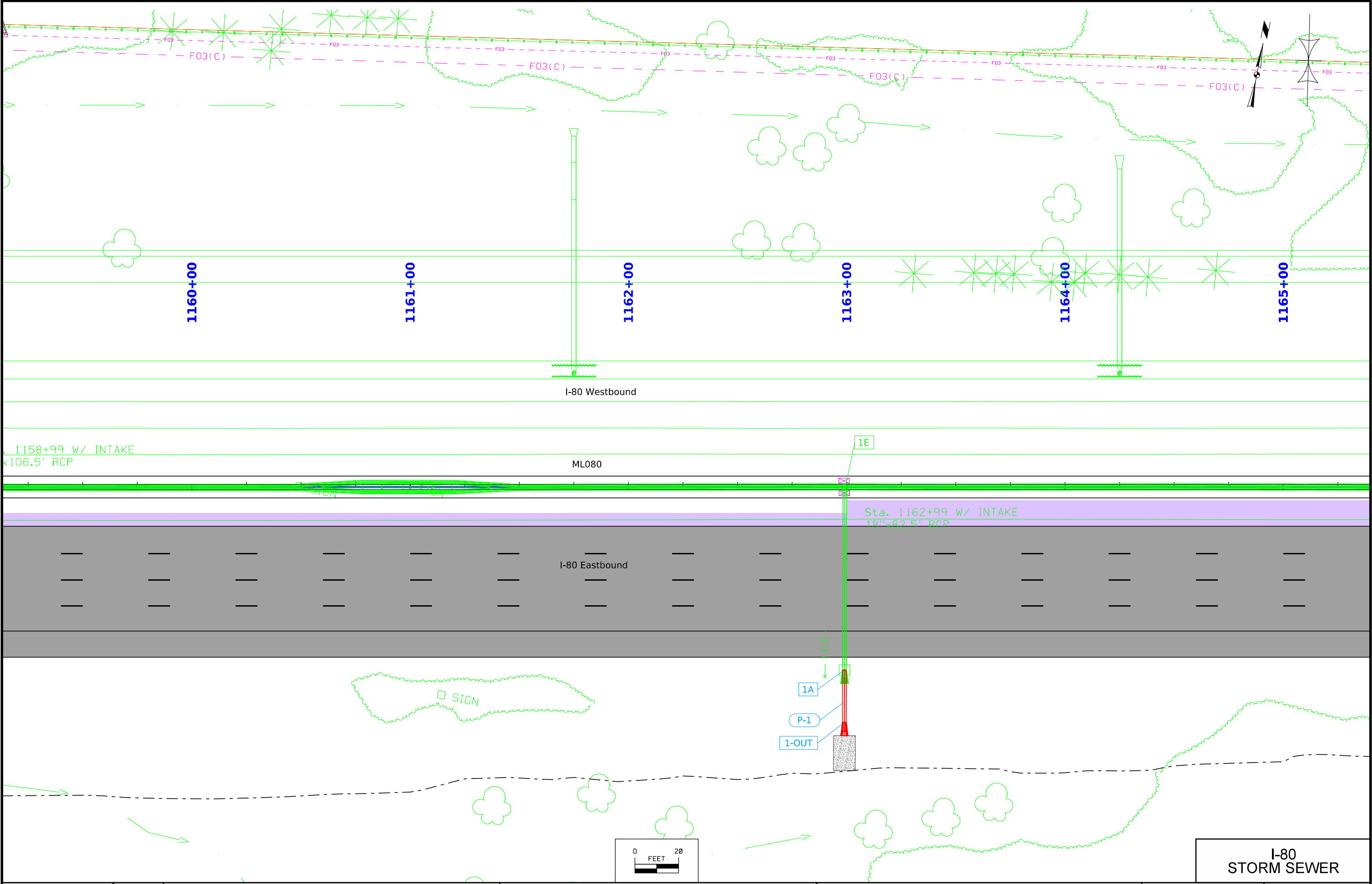
RIGHT-OF-WAY LEGEND

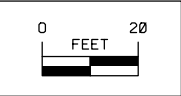
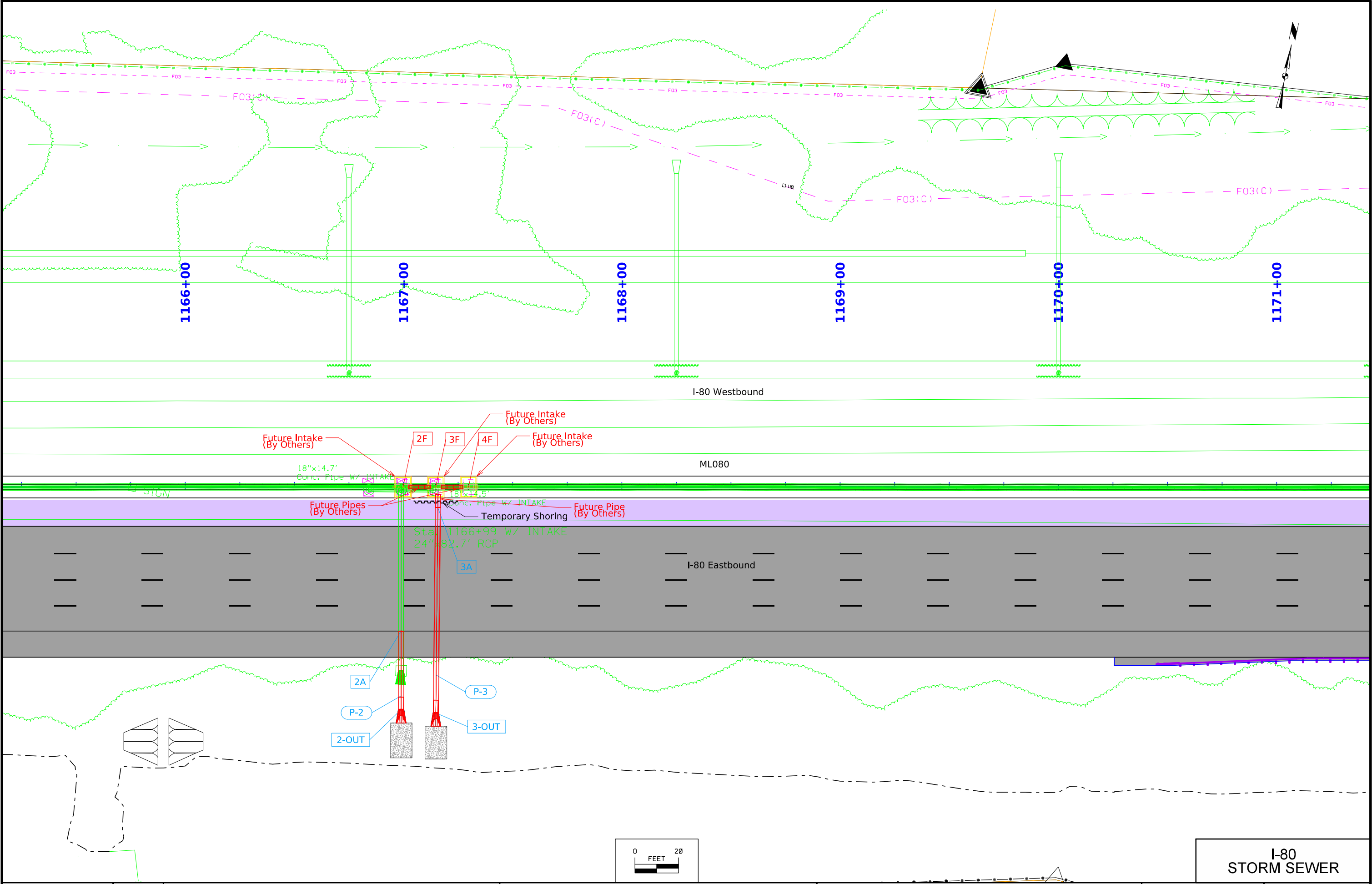
- Proposed Right-of-Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Borrow
- Easement (Temporary)
- Easement
- Excess
- A/C Access Control

STORM SEWER LEGEND AND SYMBOL INFORMATION SHEET

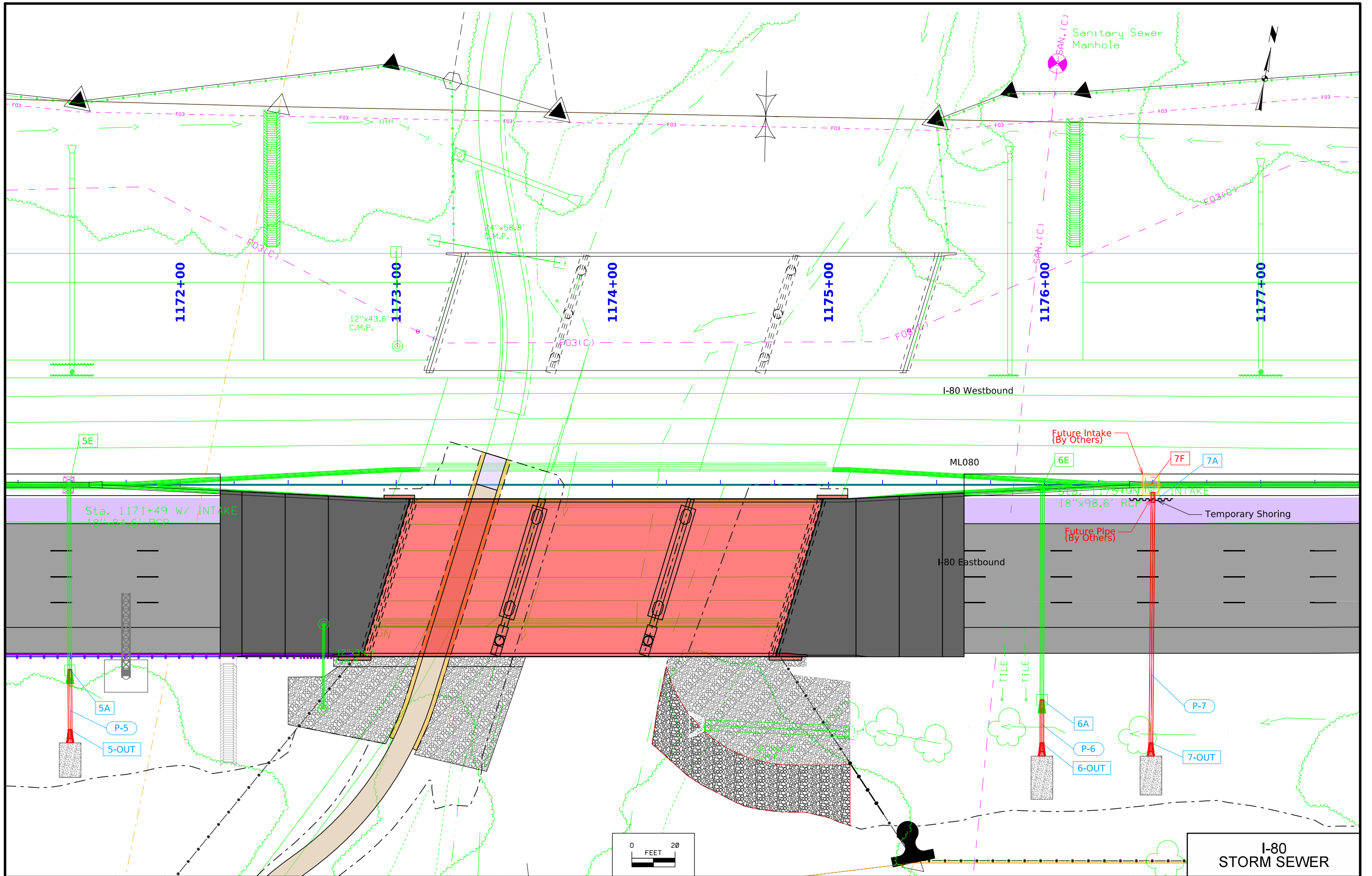
(COVERS SHEET SERIES M)

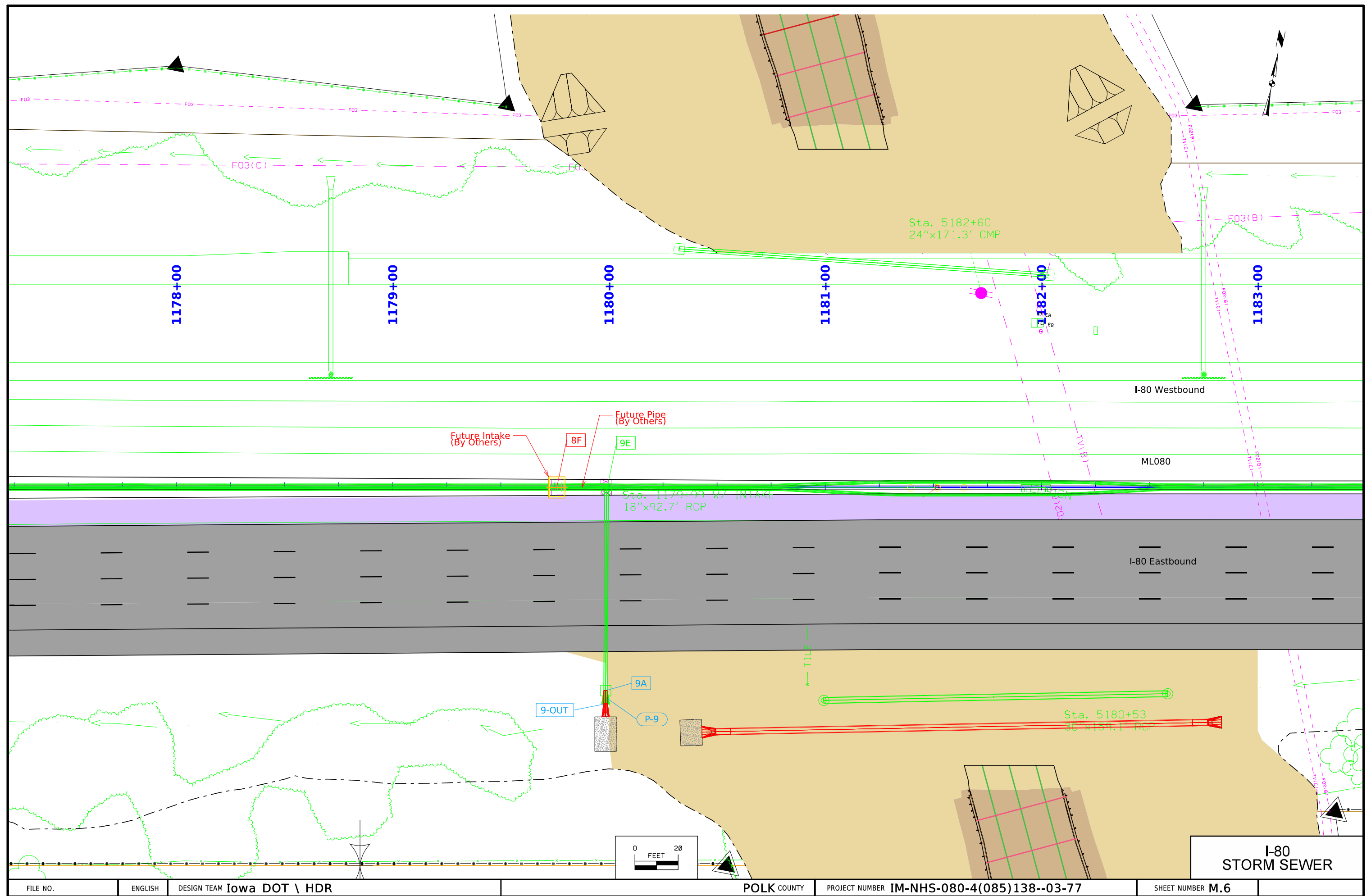
FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT \ HDR	POLK COUNTY	PROJECT NUMBER IM-NHS-080-4(085)138--03-77	SHEET NUMBER M.2	
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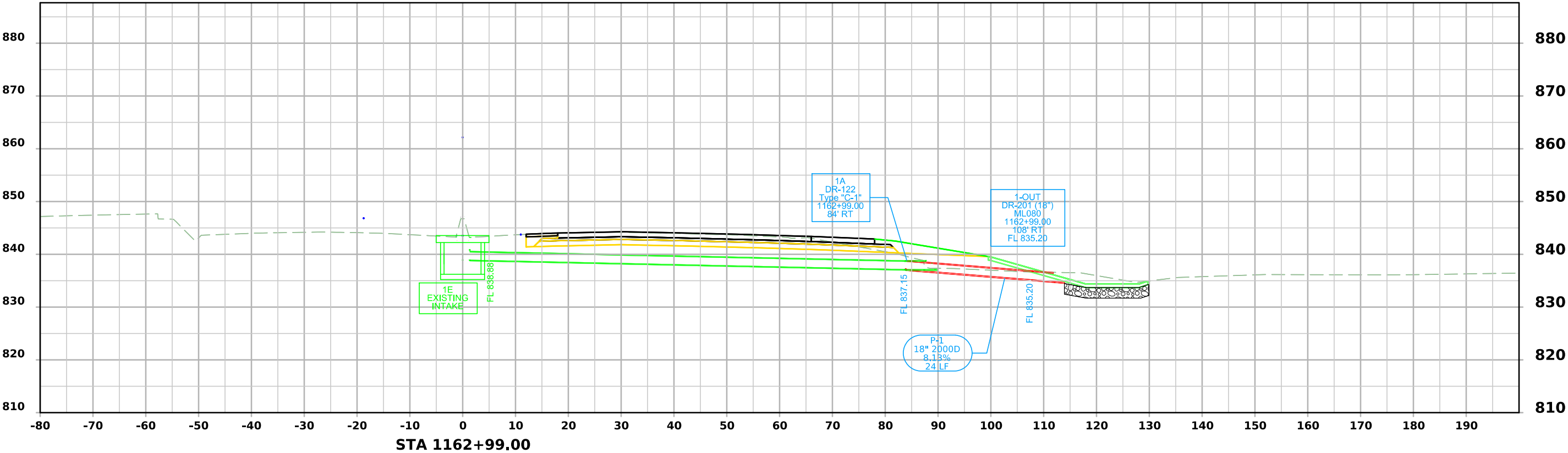
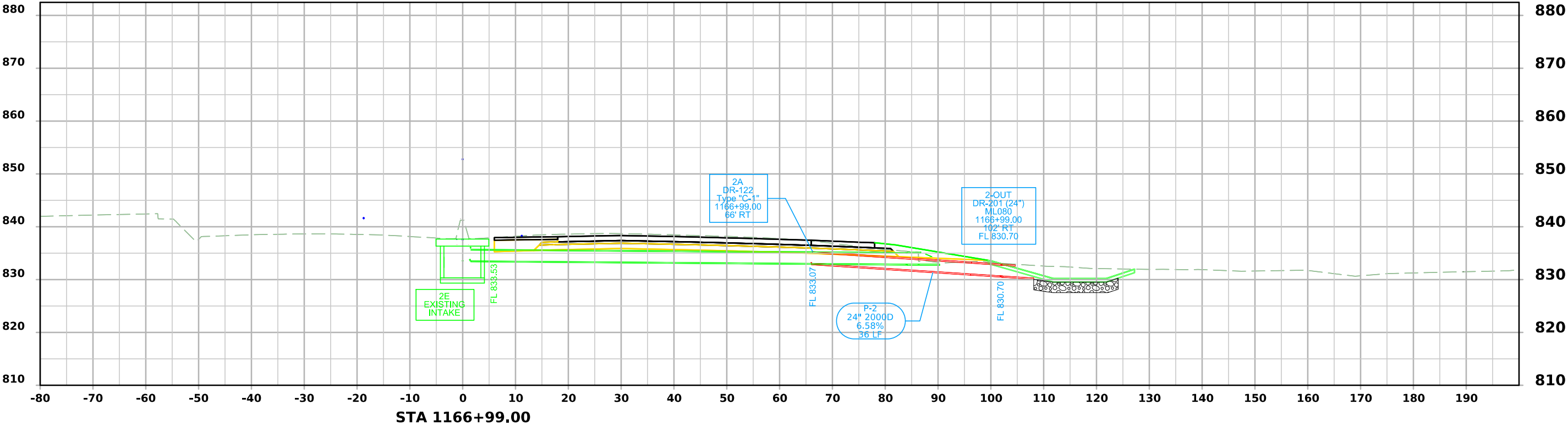


I-80
STORM SEWER

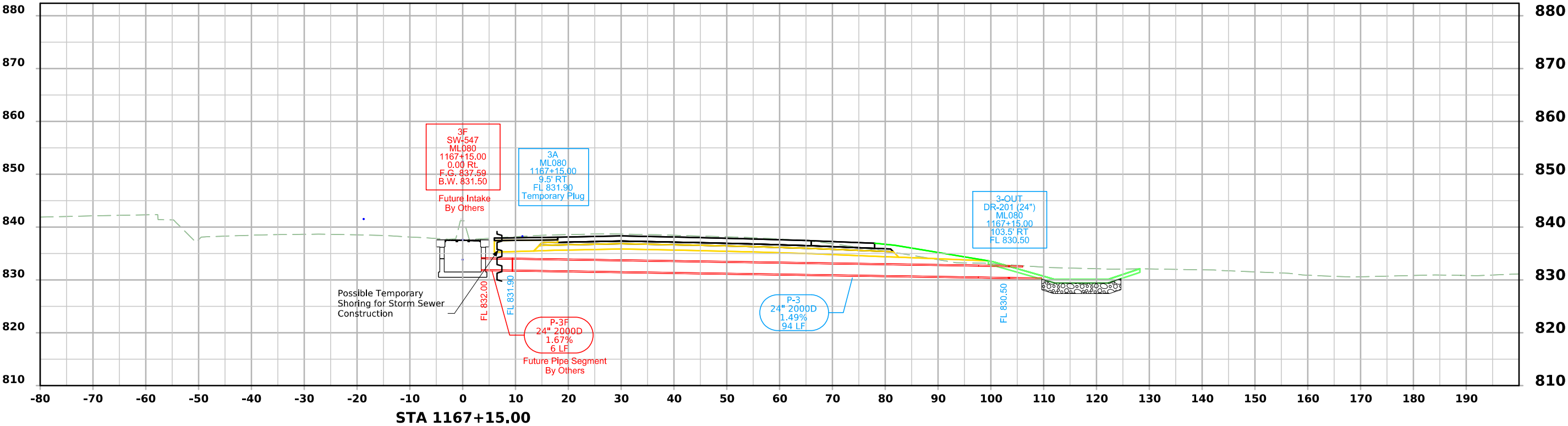
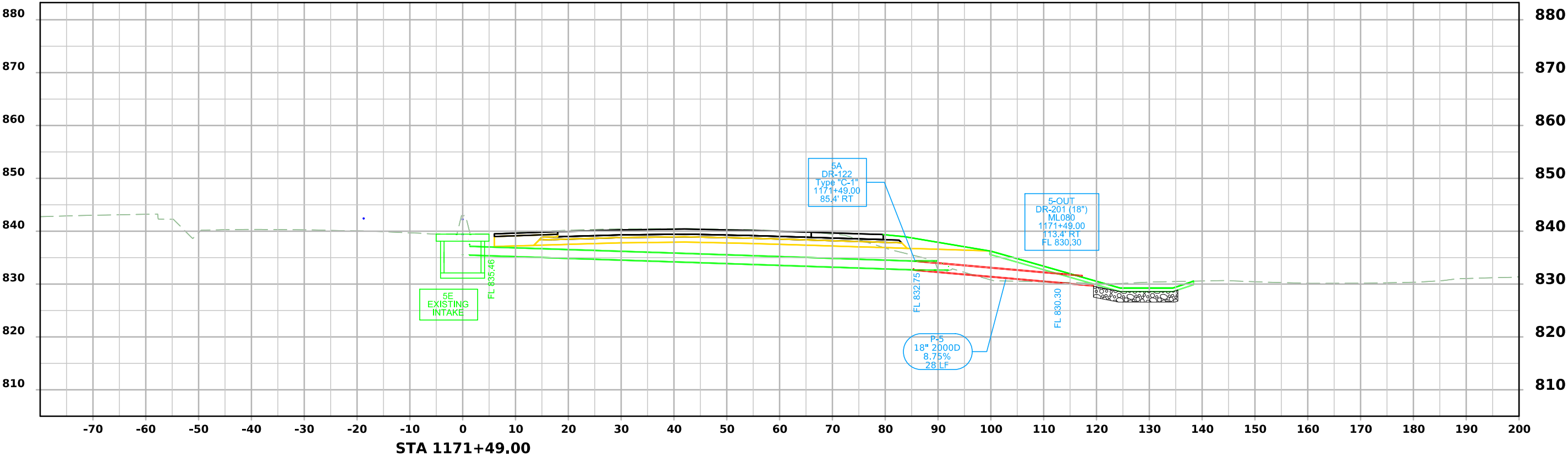




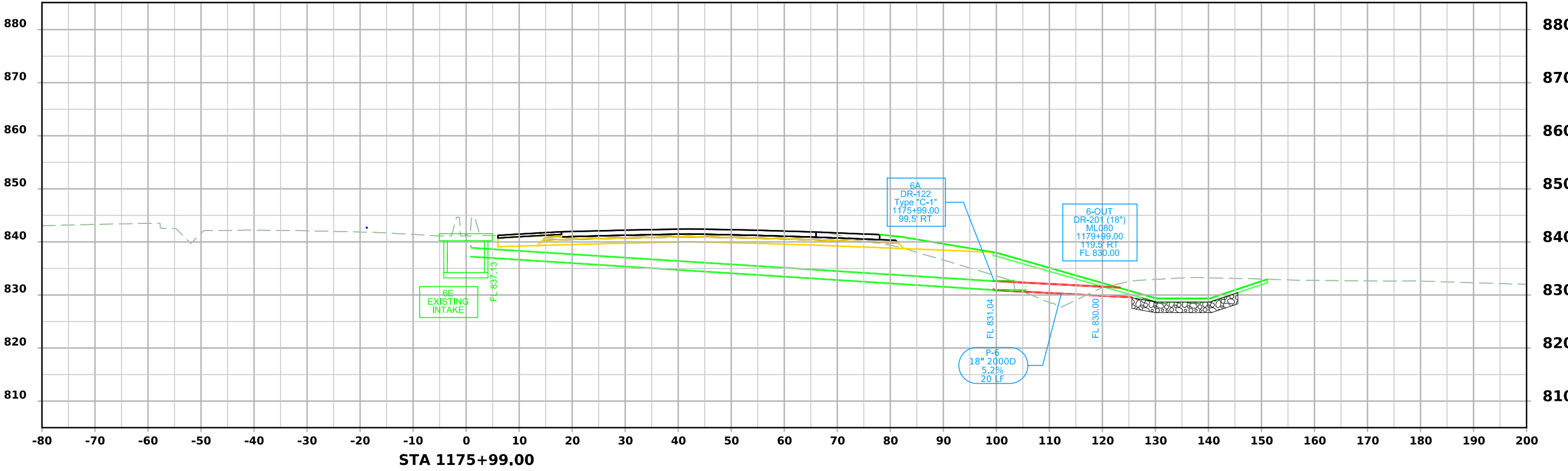
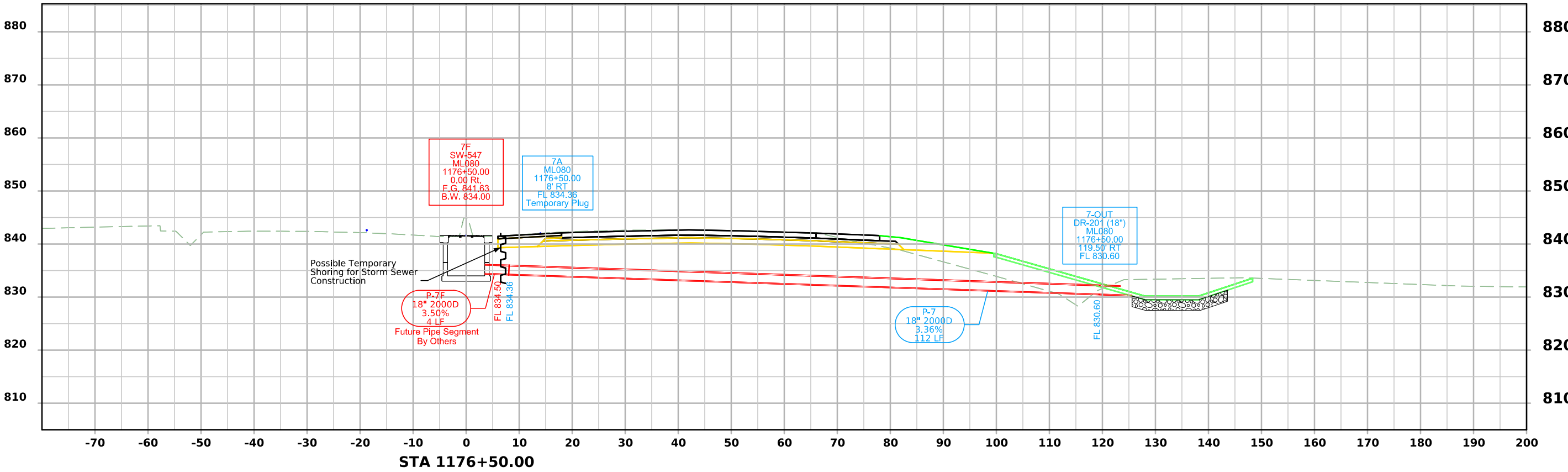
ML I-80



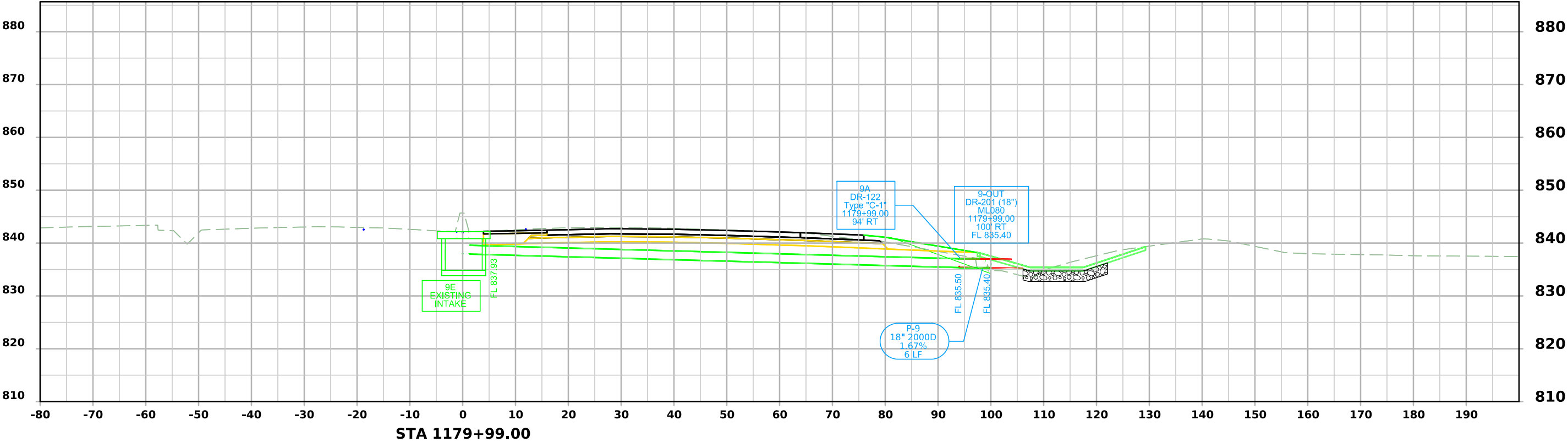
ML I-80



ML I-80



ML I-80



SURVEY SYMBOLS	
	Interstate Highway Symbol
	U.S. Highway Symbol
	Iowa Highway Symbol
	County Road Highway Symbol
	Evergreen Tree
	Deciduous Tree
	Fruit Tree
	Shrub (Bushes)
	Timber
	Hedge
	Stump
	Swamp
	Rock Outcrop
	Broken Concrete
	Revetment (Rip Rap)
	Cemetery
	Grave
	Cave
	Sink Hole
	Board Fence
	Chain Link or Security Fence
	Wire Fence
	Terrace
	Earth Dam or Dike (Existing)
	Tile Outlet
	Edge of Water
	Existing Drainage
	Right of Way Rail or Lot Corner
	Concrete Monument
	Well
	Windmill
	Beehive Intake
	Existing Intake
	Existing Utility Access (Manhole)
	Fire Hydrant
	Water Hydrant (Rural)
	Septic Tank
	Cistern
	L.P. Gas Tank (No Footing)
	Underground Storage Tank
	Latrine
	Satellite TV Dish
	Water Hook Up
	Radio Tower
	Tower Anchor
	Guardrail (Beam or Cable)
	Guard Post (one or two)
	Guard Post (over two)
	Filler Pipe
	Gas Valve
	Water Valve
	Speed Limit Sign
	Mile Marker Post
	Sign
	Traffic Signal Control Box
	Rail Road Signal Control Box
	Telephone Switch Box
	Electric Box

PLAN VIEW COLOR LEGEND OF SOILS SHEETS			
LINEWORK	Design Color No.		
Green	(2)		Existing Topographic Features and Labels
Purple (Halo)	(15)		Backslope Drains
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
SHADING	Design Color No.		
Brown, Light	(236)		Core Out

PROFILE VIEW COLOR LEGEND OF SOILS SHEETS			
LINEWORK	Design Color No.		
Blue	(1)		Proposed Alignment, Stationing, and Alignment Annotation
Green	(2)		Existing Ground Line Profile
Green, Med	(2)		Topsoil
Green, Med	(2)		Slope Dressing Only
Orange	(6)		Loam
Aqua (Cyan)	(7)		Class 10
Brown, Med	(4)		Sand
Red	(3)		Unsuitable A
Pink, Dark	(13)		Unsuitable B
Pink	(11)		Unsuitable C
Red	(3)		Shale
Red	(3)		Waste
Gray, Light	(48)		Broken and Weathered Rock
Gray, Med	(80)		Rock
Gray, V.Dark	(128)		Boulders

PATTERN AND SYMBOL LEGEND OF SOILS SHEETS			
	Drill		Dig/Core
	Water		Settlement Plate
	Dry		
	Sample		
	Plugged		
	Moisture		
	Shelby		Treatment
	Blow Count		Sand Blanket
	Dens. Core		Soil Remediation Area
			Select Soil
			Select Sand
			Slope Dressing Only
			Date(s) Drilled <u>July 2021 - Nov. 2023</u>
			Broken and Weathered Rock
			Rock
			Sandstone
			Unsuitable A
			Unsuitable B
			Unsuitable C
			Sandy Soil
			Boulders
			Shale

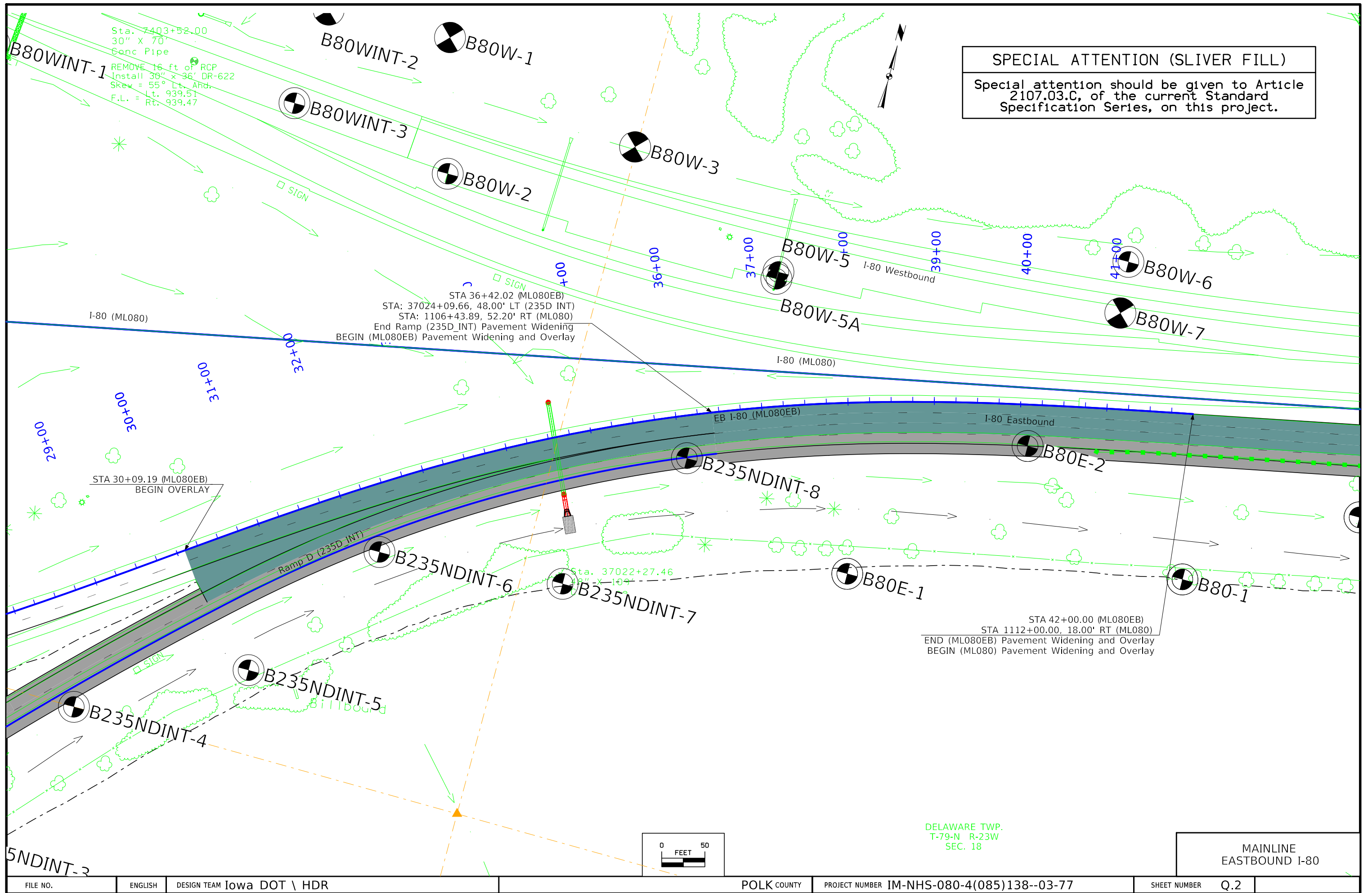
	Reference Point
	Station
	Survey Line
	Section Corner
	Ground Line Intercept
	Saw Cut
	Guardrail
	Clearing & Grubbing Area
	Pavement Removal

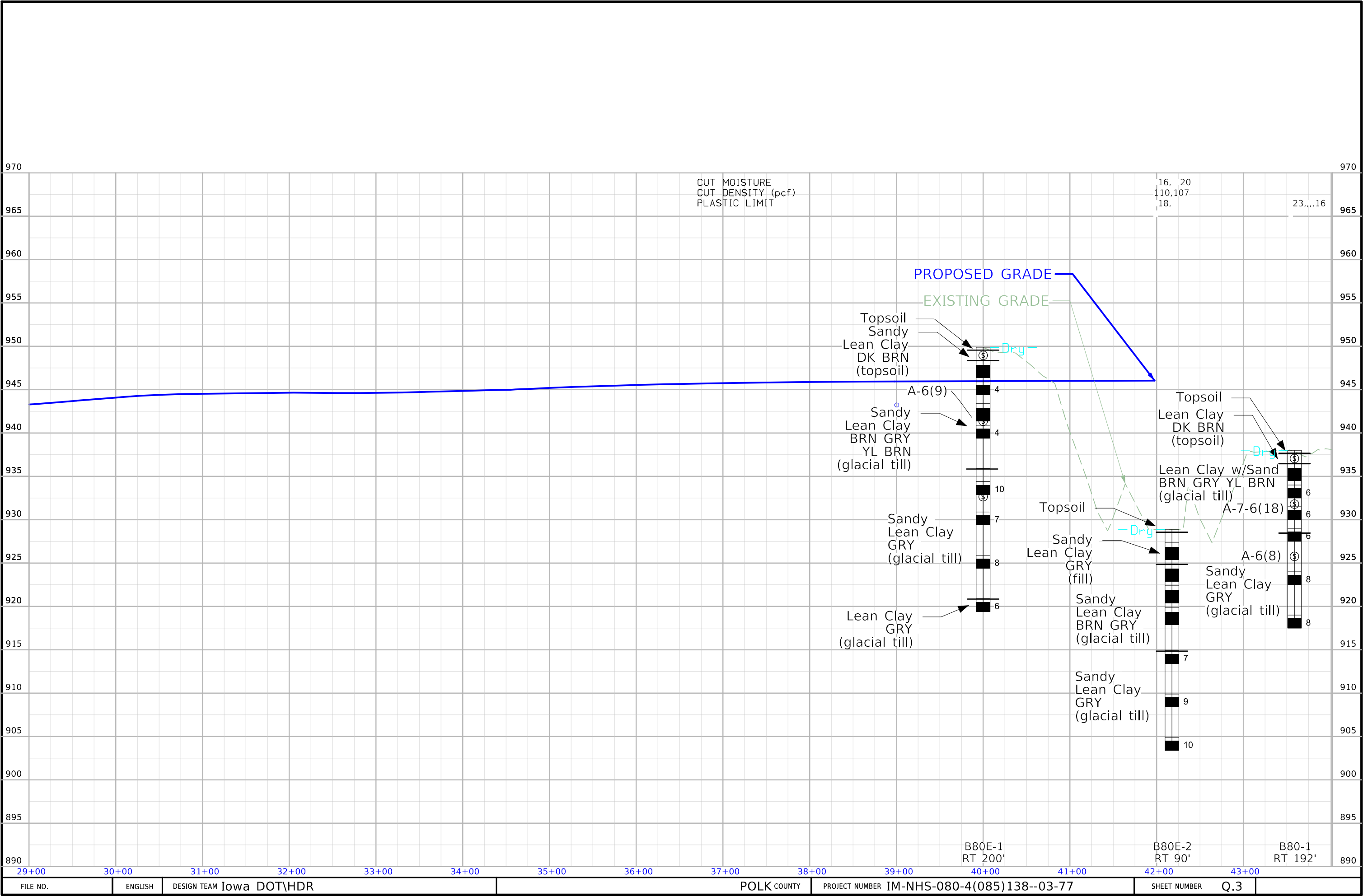
RIGHT-OF-WAY LEGEND	
	Proposed Right-of-Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Borrow
	Easement (Temporary)
	Easement
	Excess
	Access Control

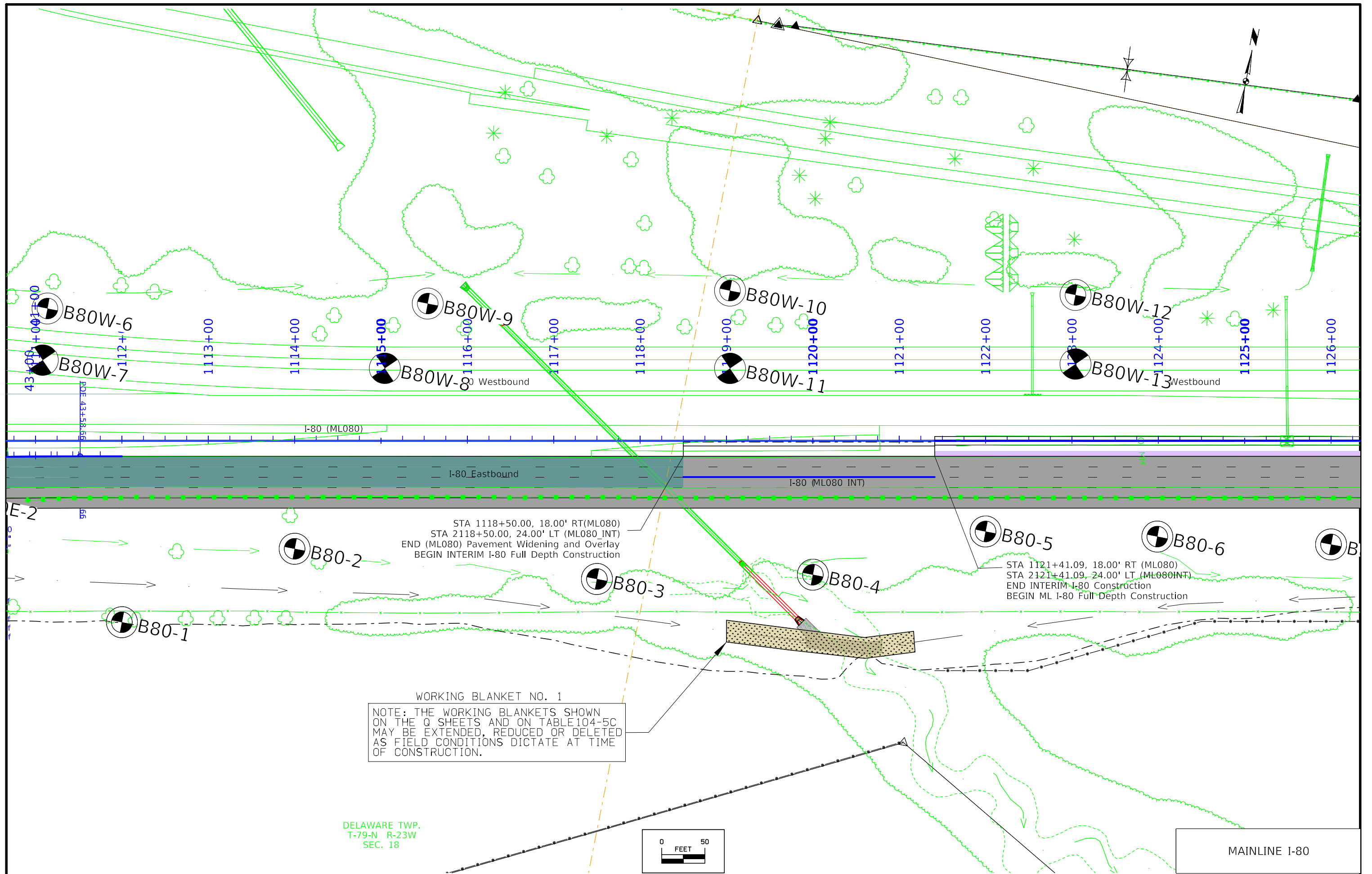
NOTE: Sounding and test boring data shown in the plans were accumulated for designing and estimating purposes. Their appearance on the plans does not constitute a guarantee of conditions that will be encountered. Details and notes shown elsewhere shall be used for roadway and structure construction.

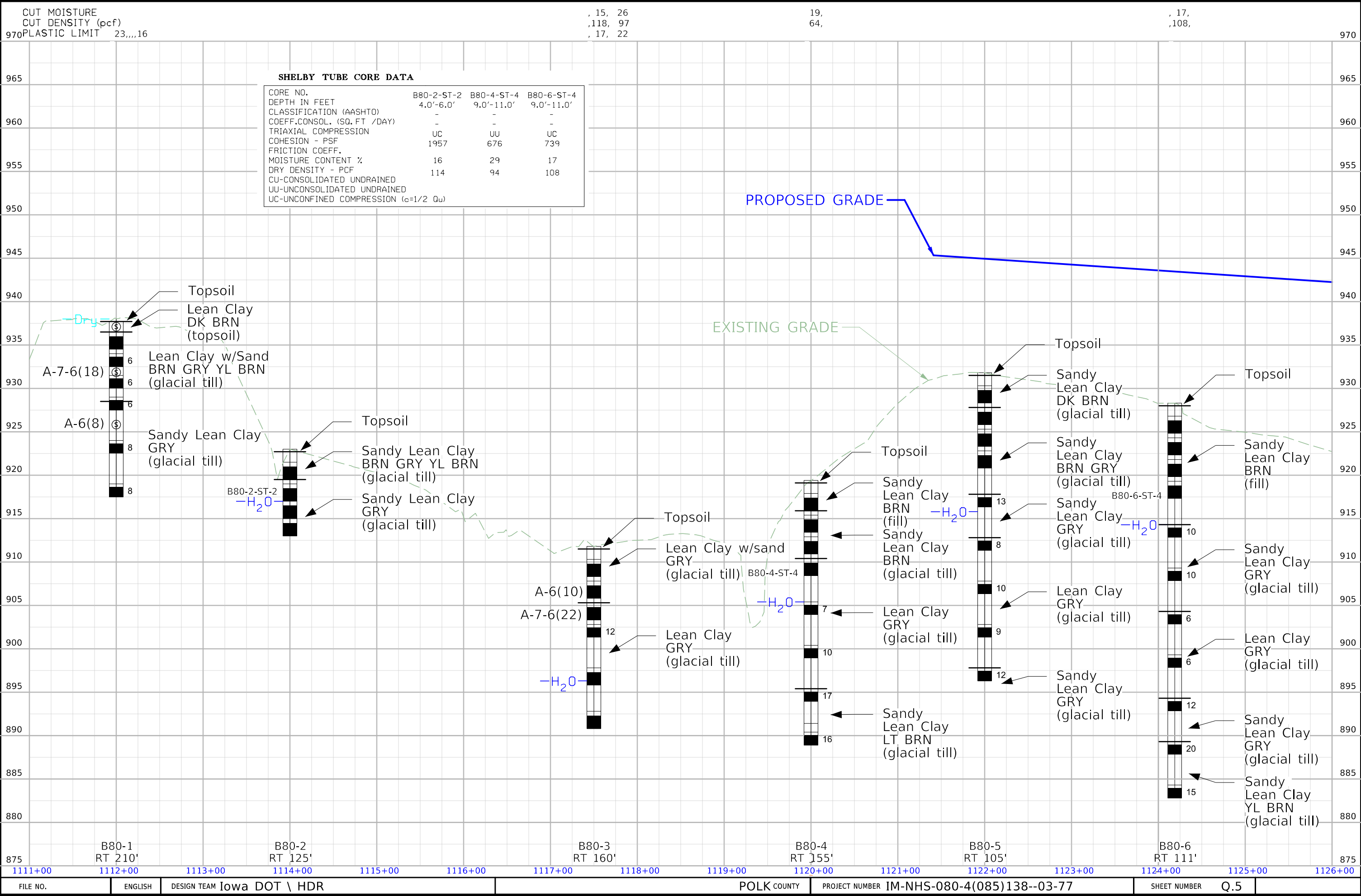
SOILS LEGEND AND SYMBOL INFORMATION SHEET

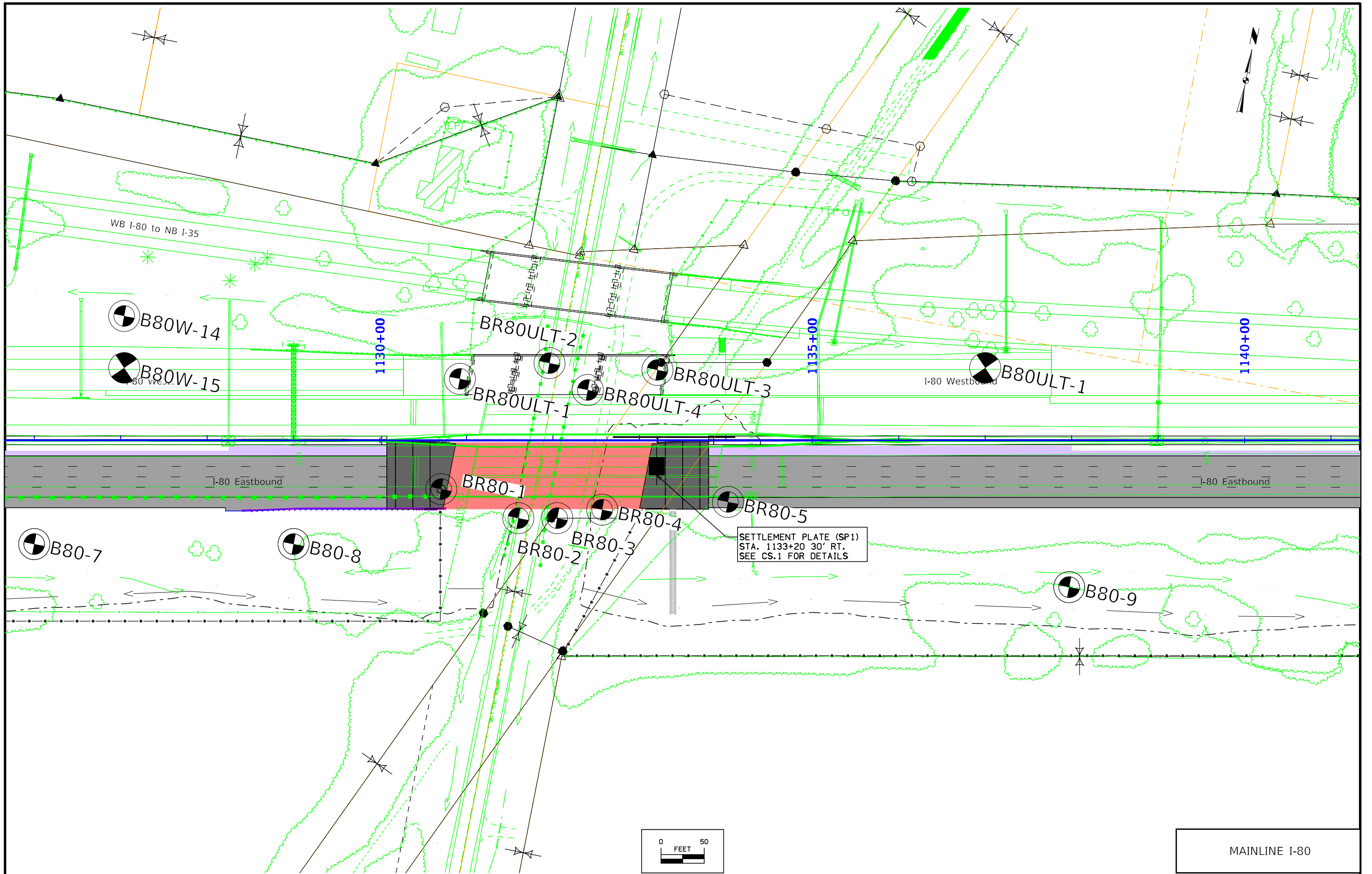
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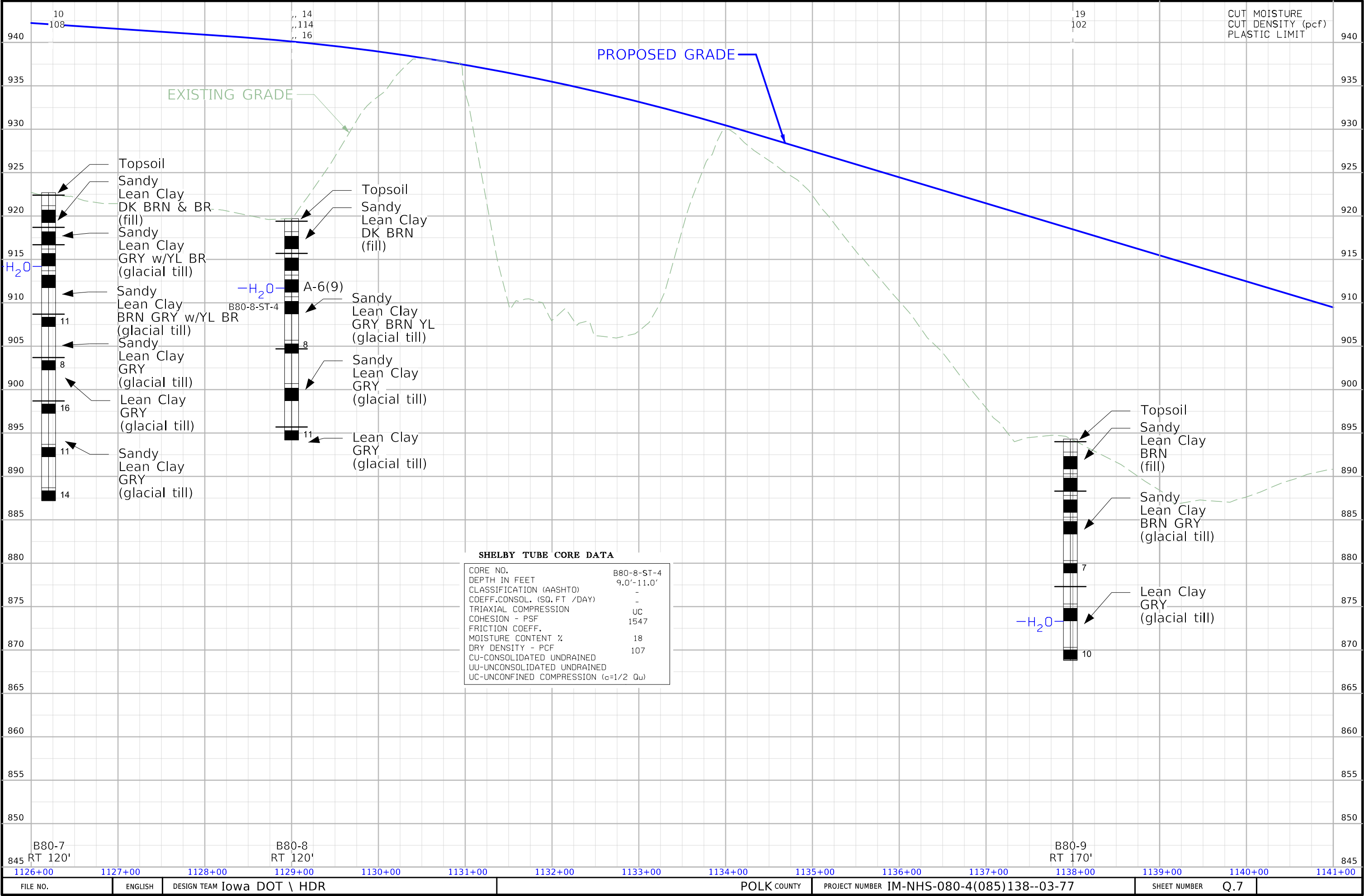


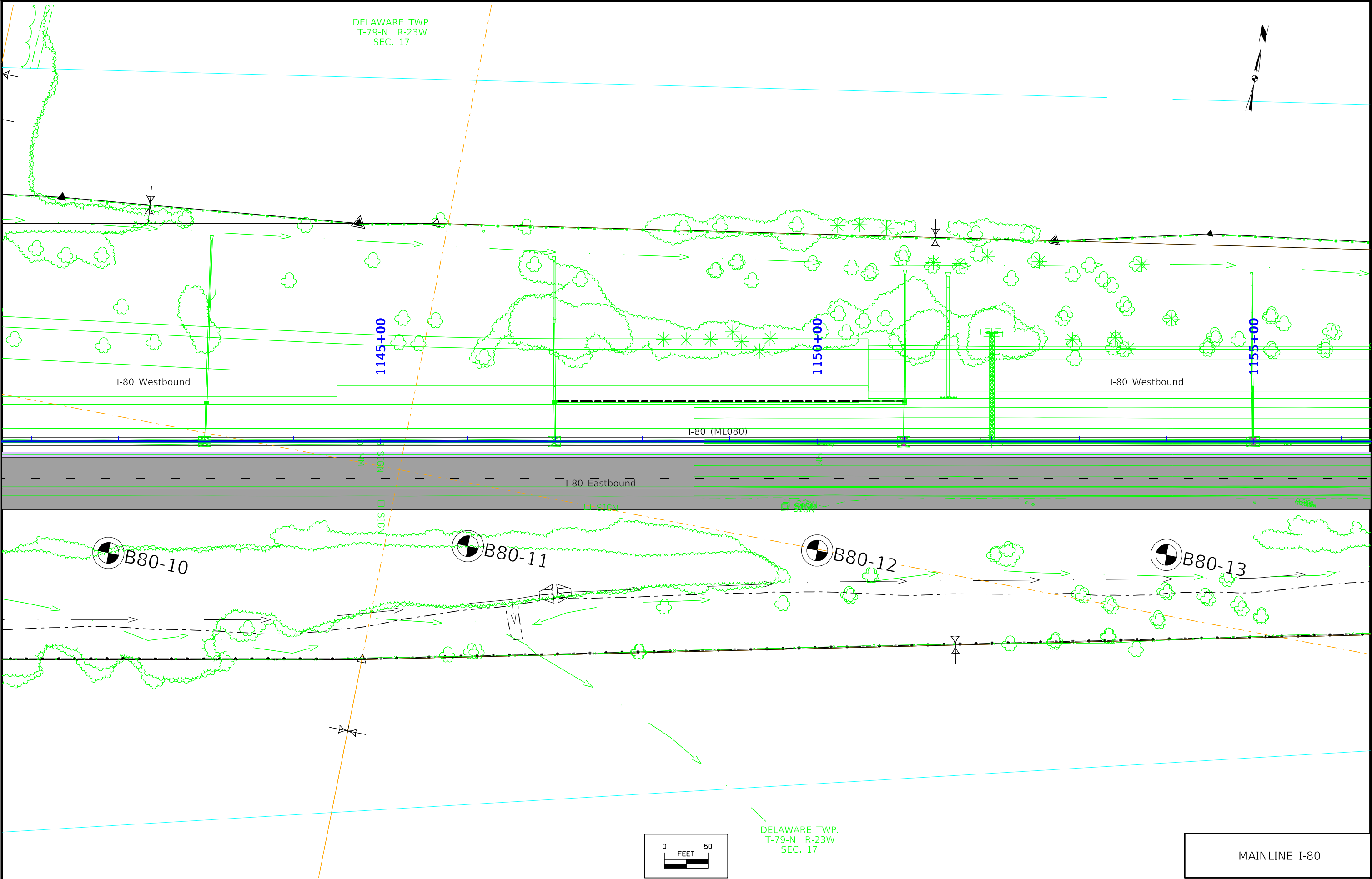


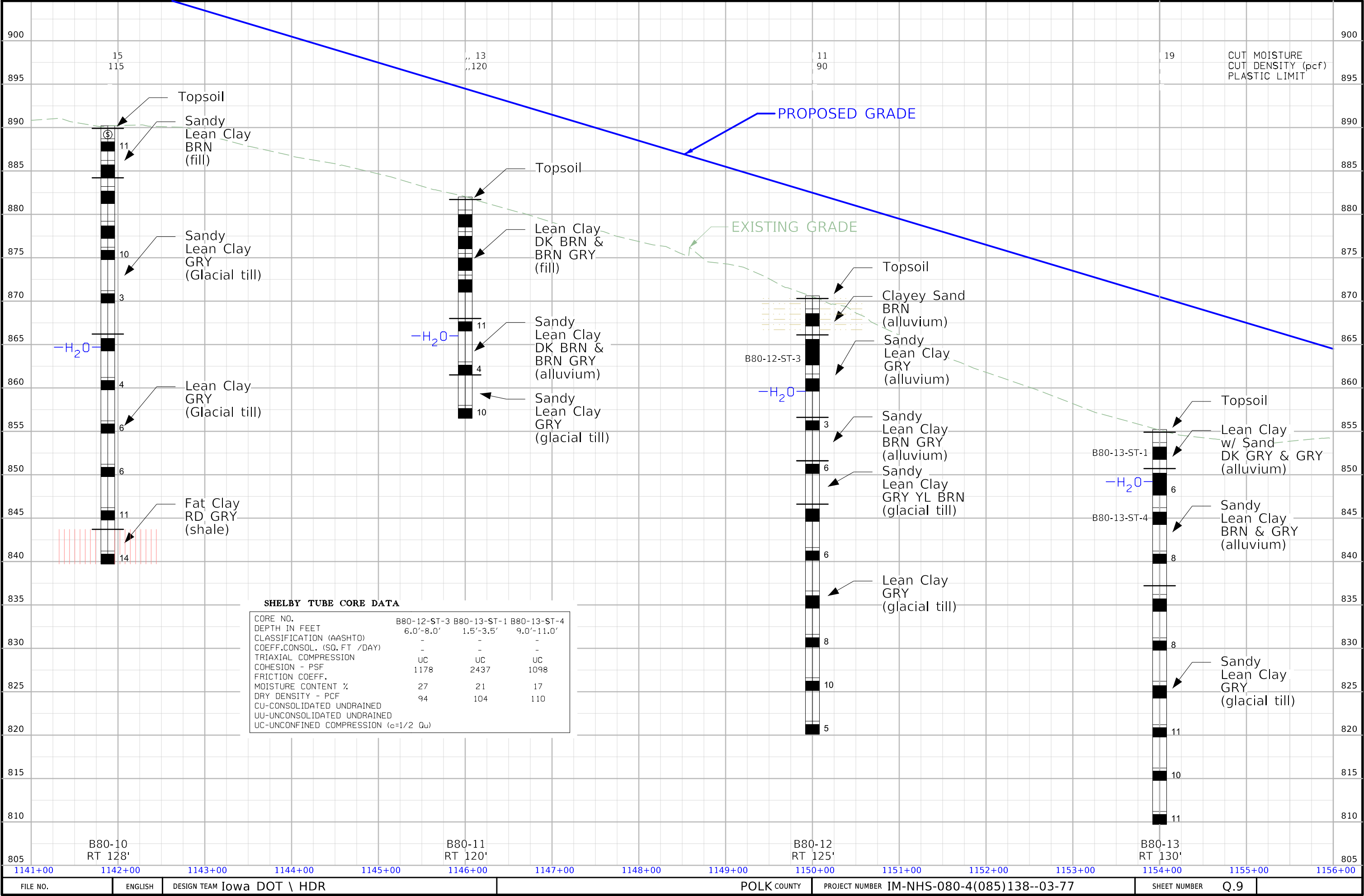


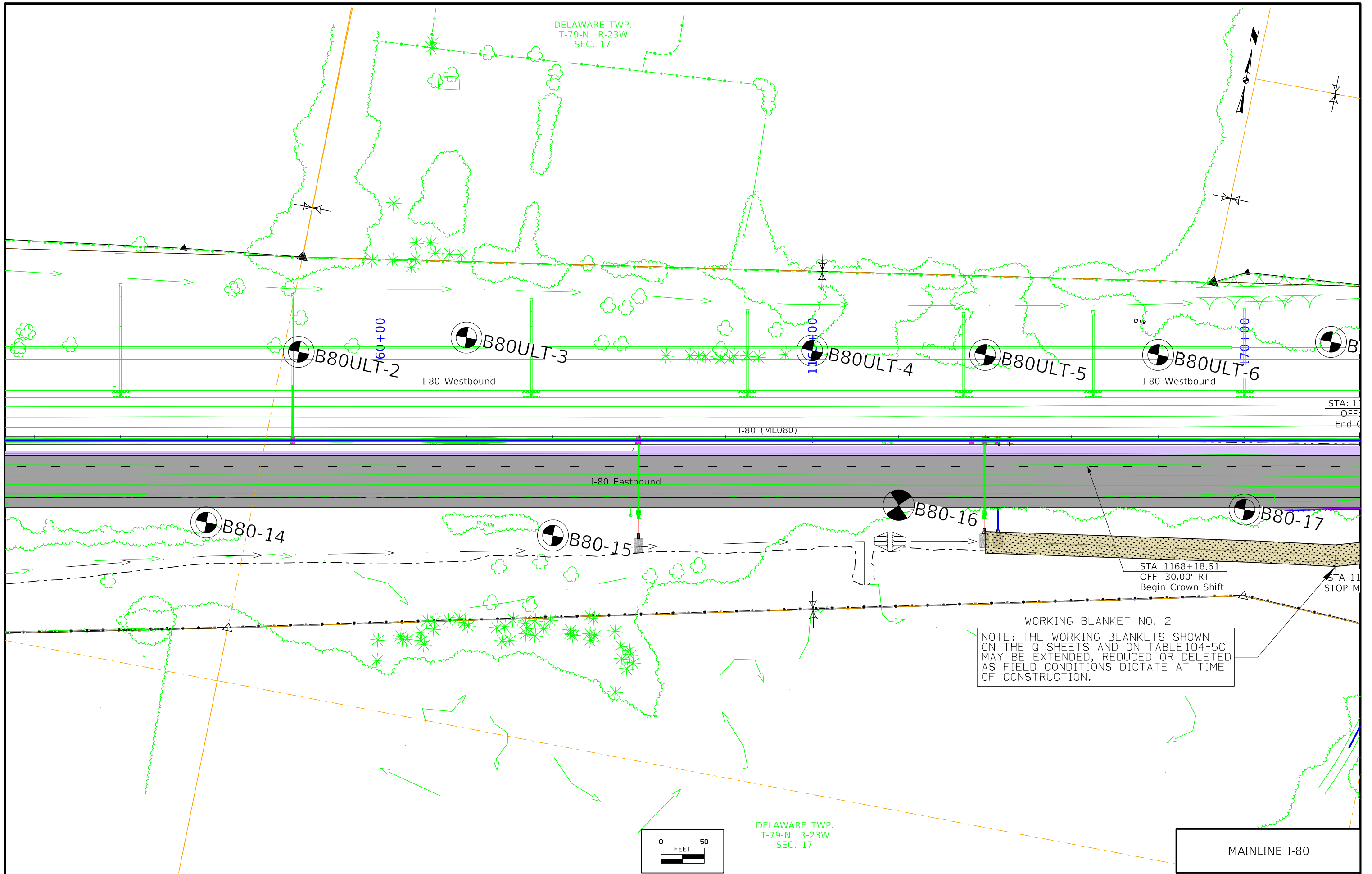






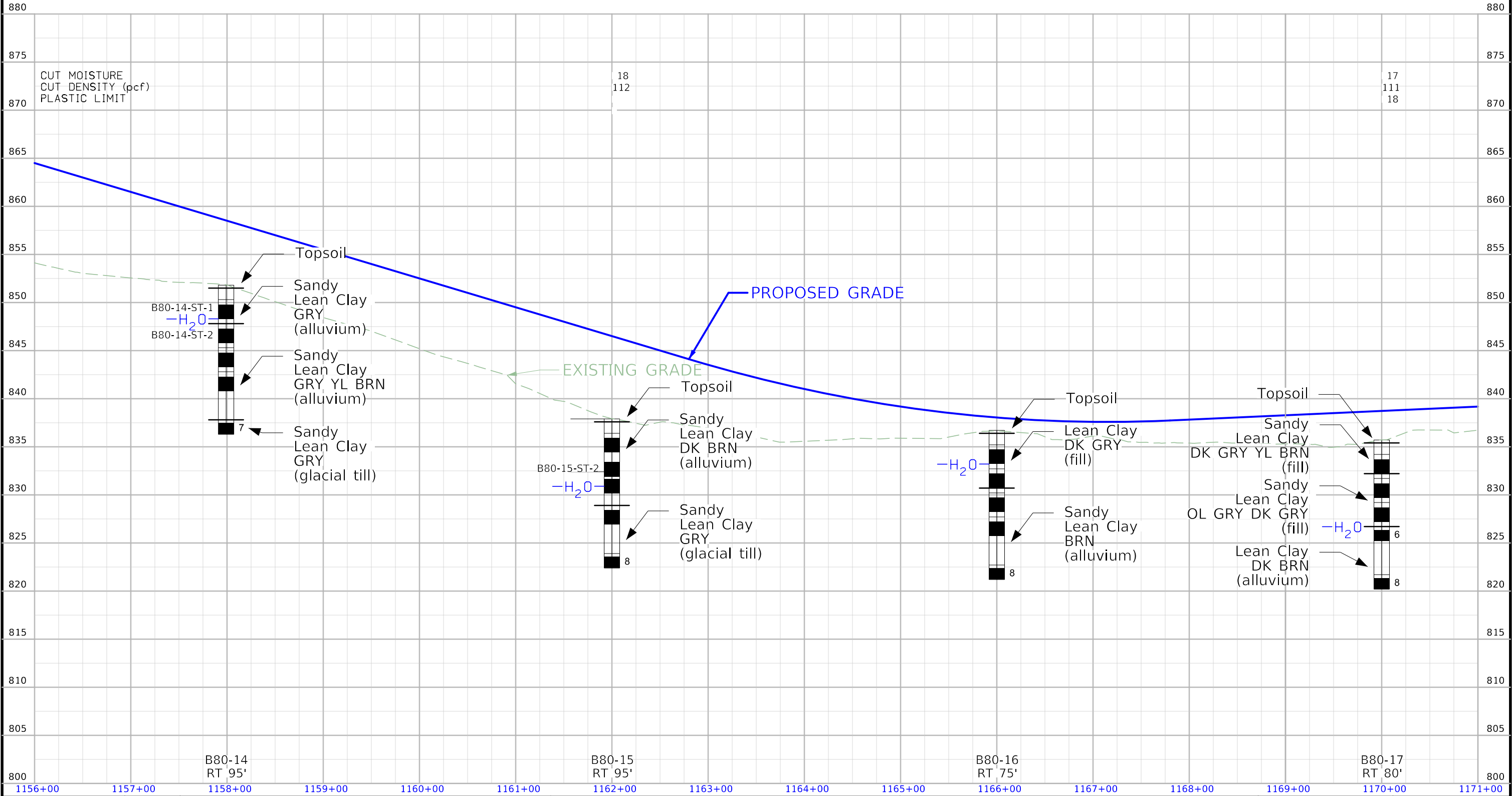


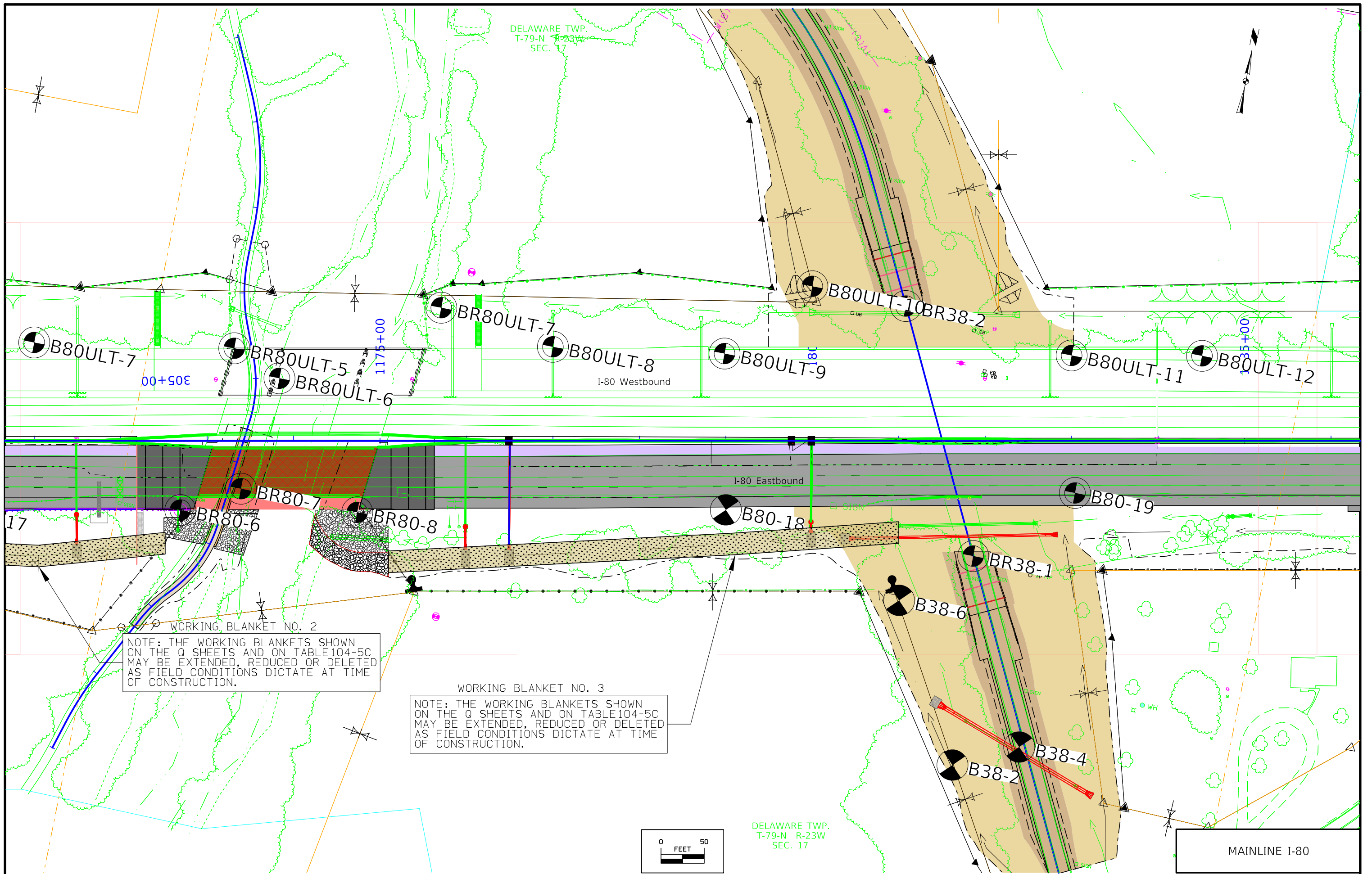


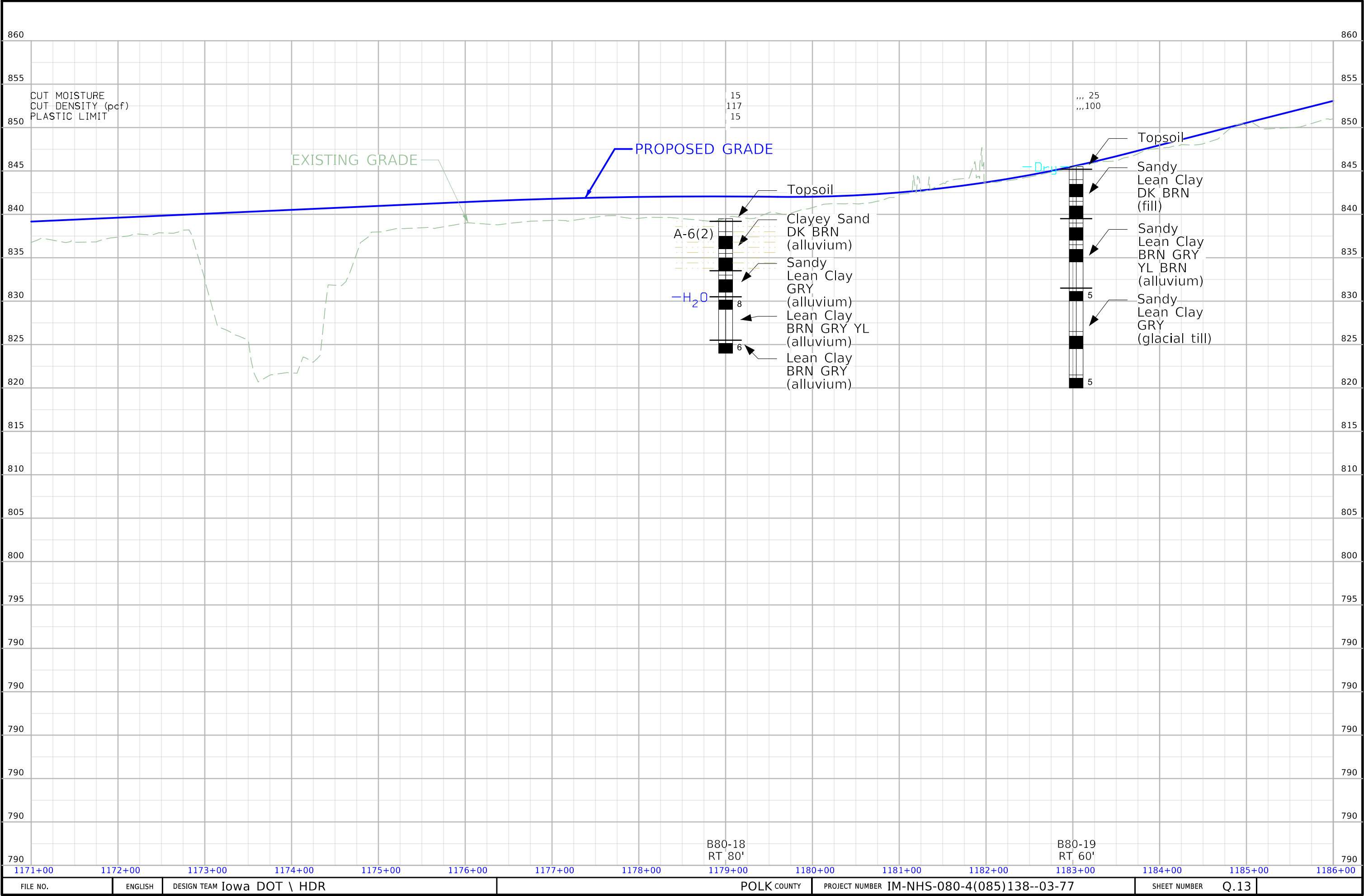


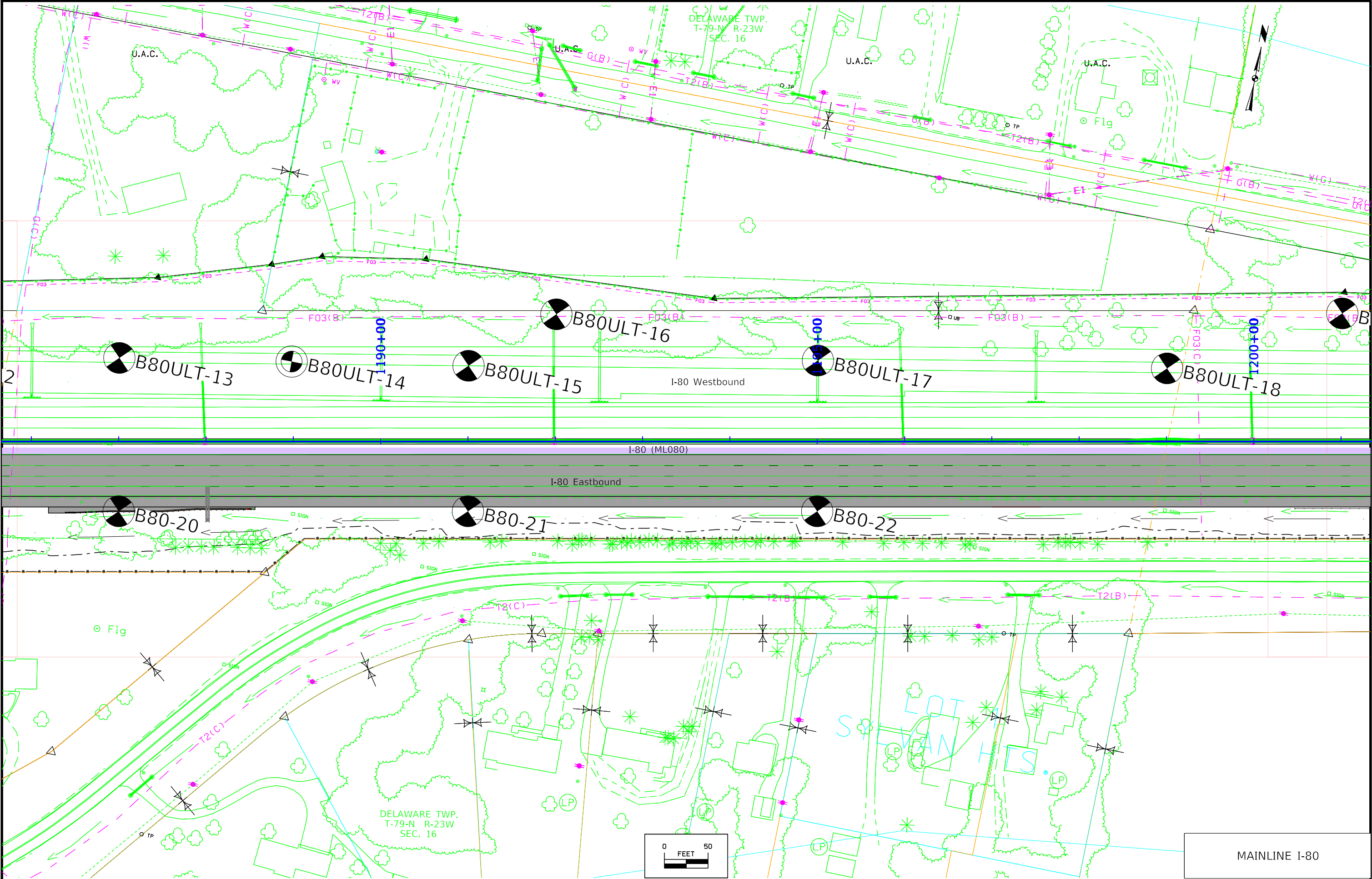
SHELBY TUBE CORE DATA

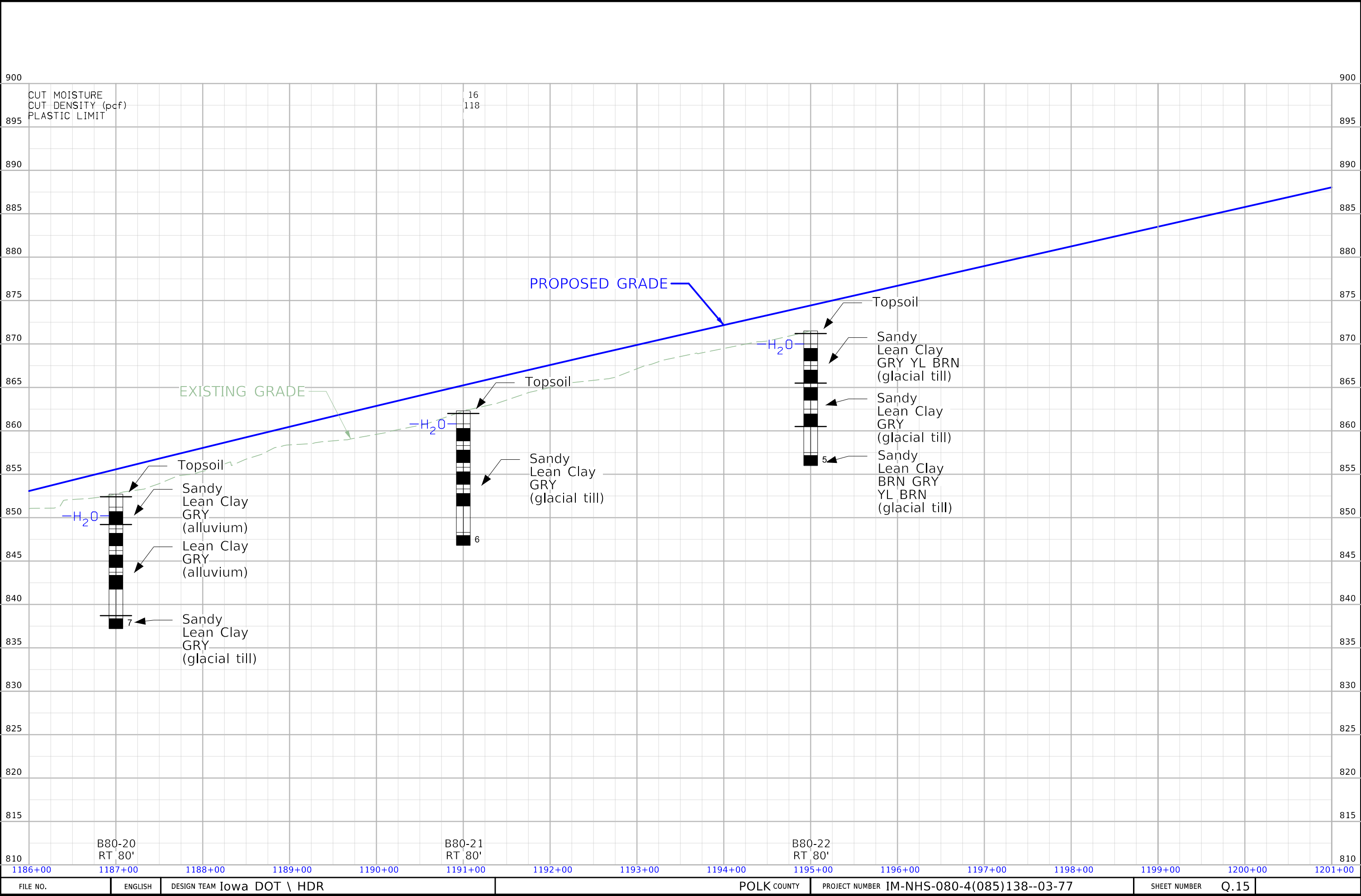
CORE NO.	B80-14-ST-1	B80-14-ST-2	B80-15-ST-2
DEPTH IN FEET	1.5'-3.5'	4.0'-6.0'	4.5'-6.5'
CLASSIFICATION (AASHTO)	-	-	-
COEFF.CONSO. (SQ. FT /DAY)	-	-	-
TRIAXIAL COMPRESSION	UC	UU	UC
COHESION - PSF	1481	1263	1154
FRICTION COEFF.			
MOISTURE CONTENT %	32	23	17
DRY DENSITY - PCF	88	108	111
CU-CONSOLIDATED UNDRAINED			
UU-UNCONSOLIDATED UNDRAINED			
UC-UNCONFINED COMPRESSION (c=1/2 Qu)			

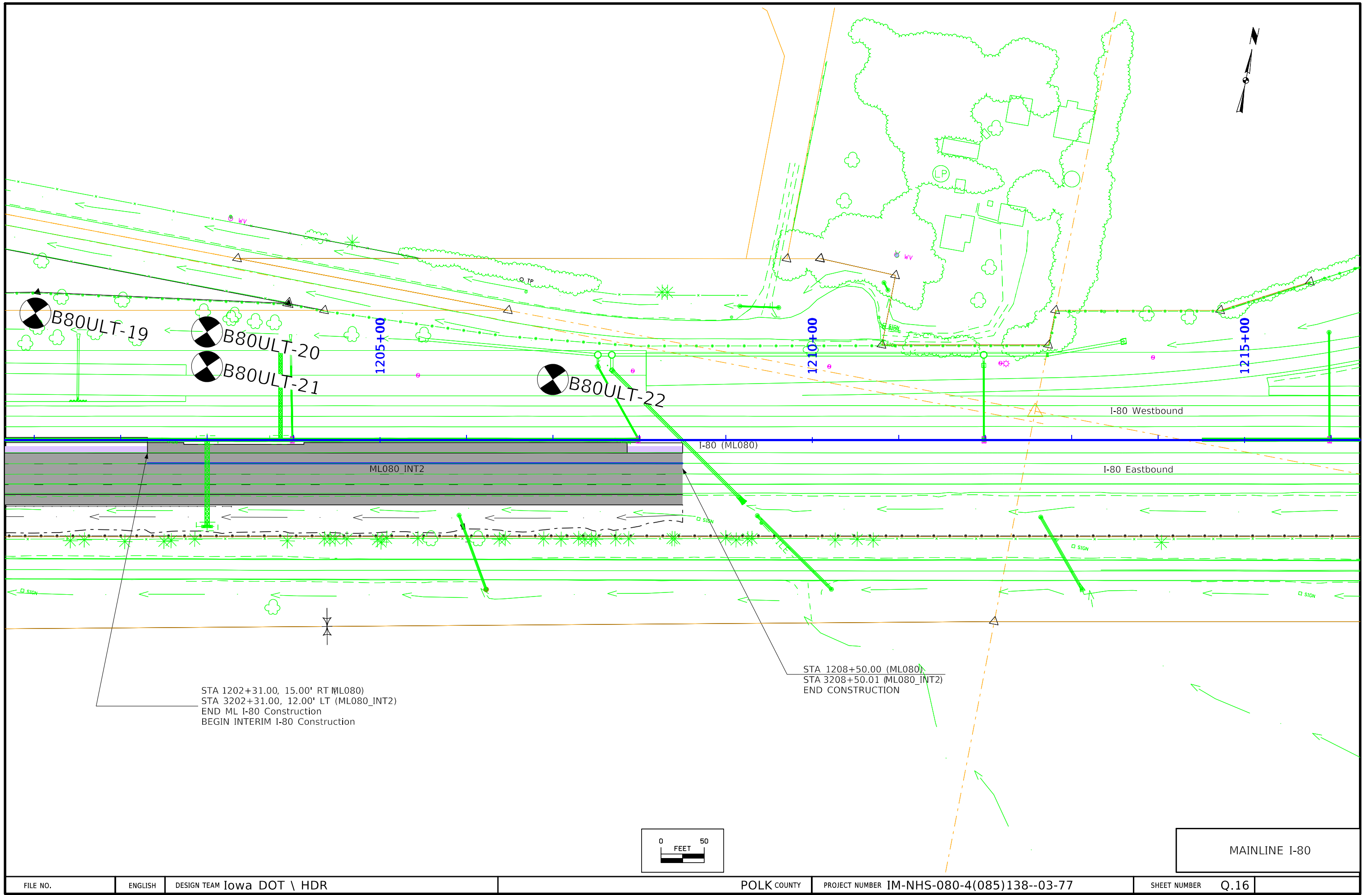


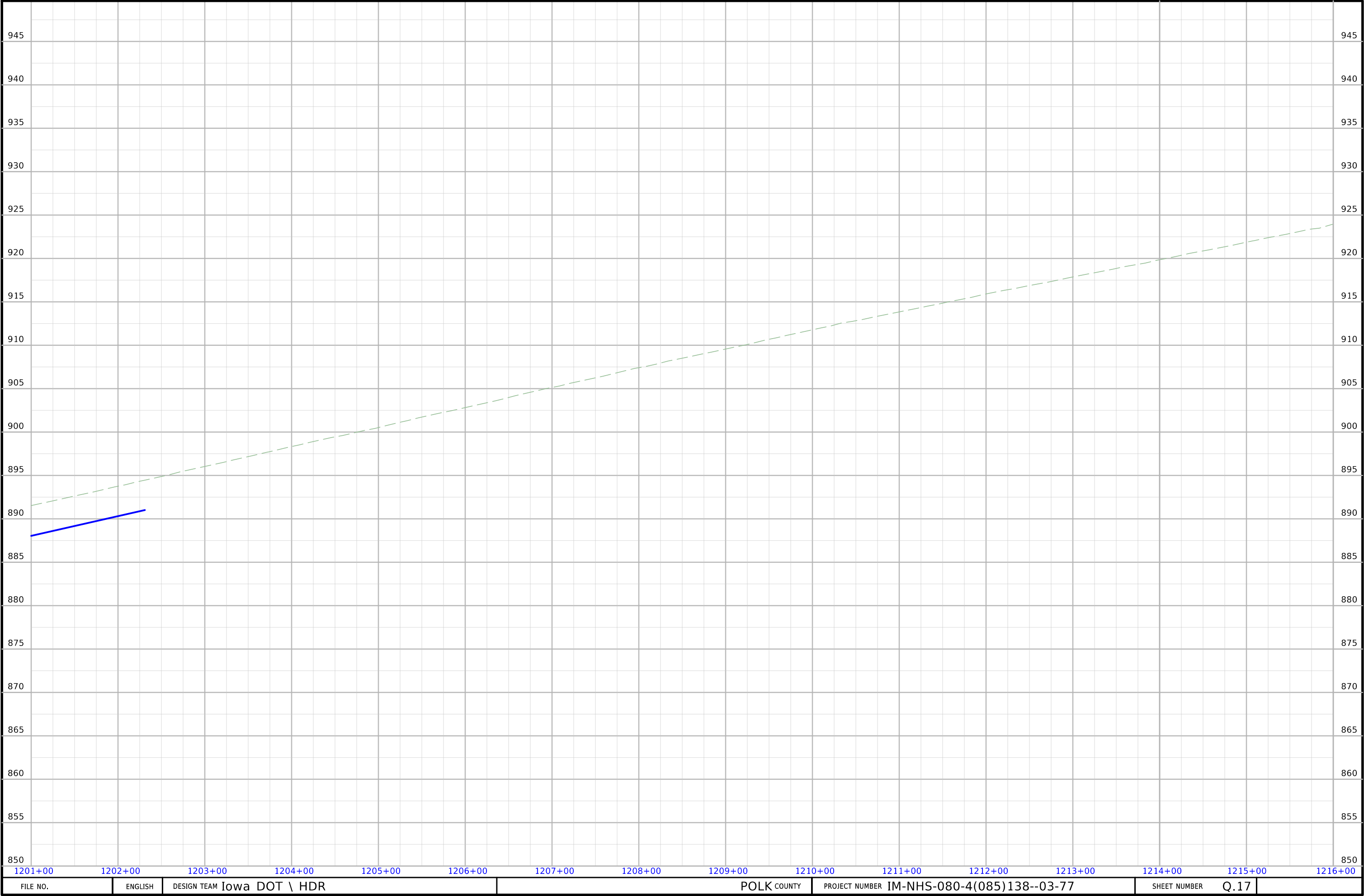


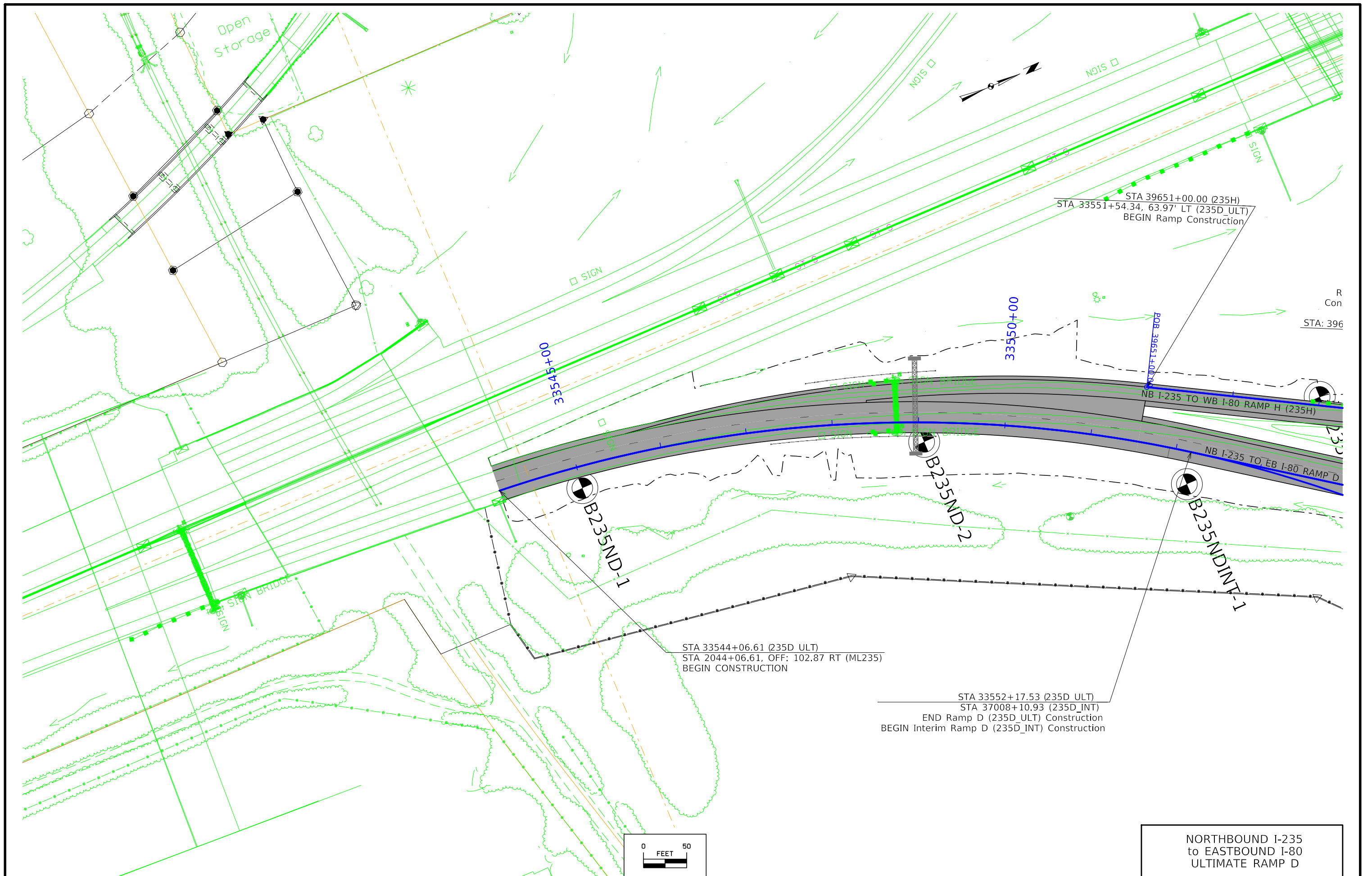


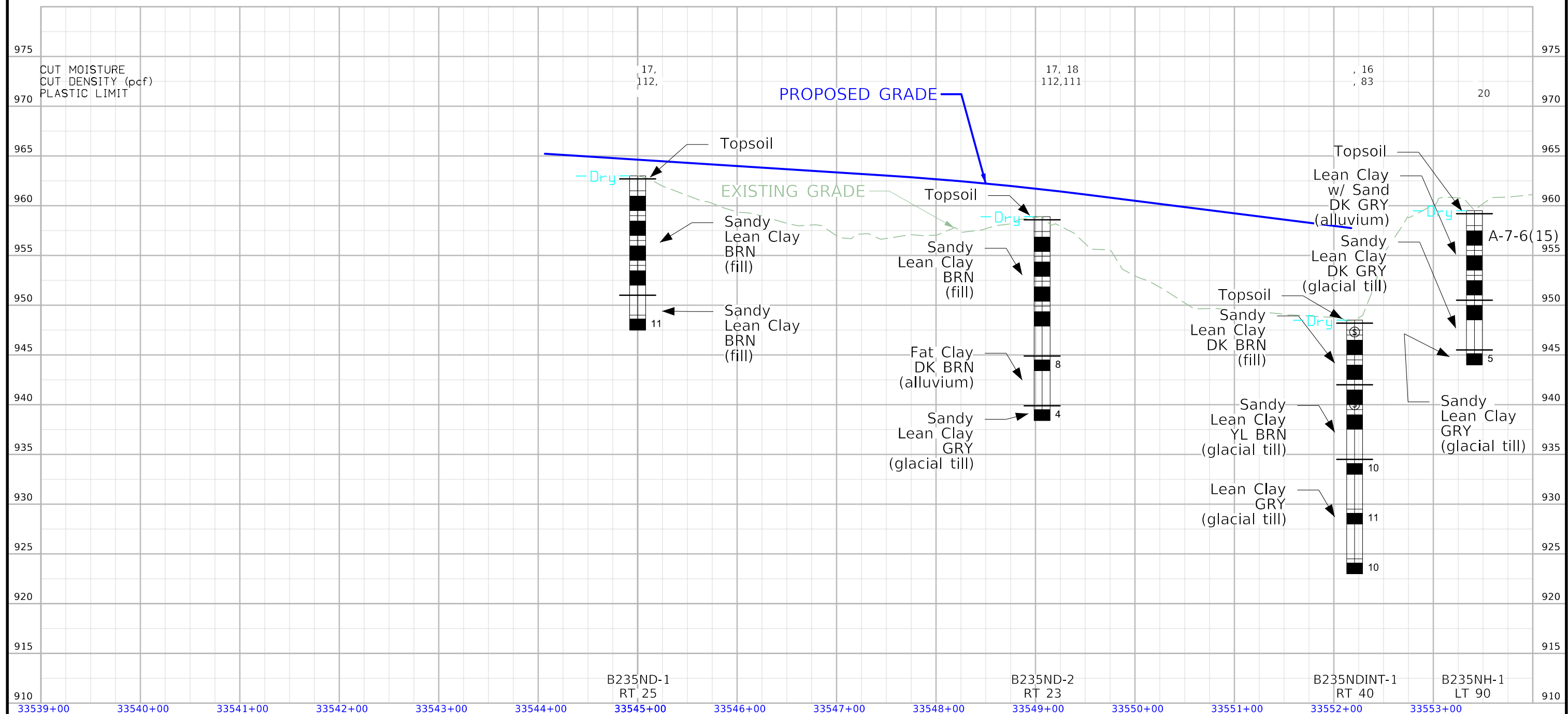




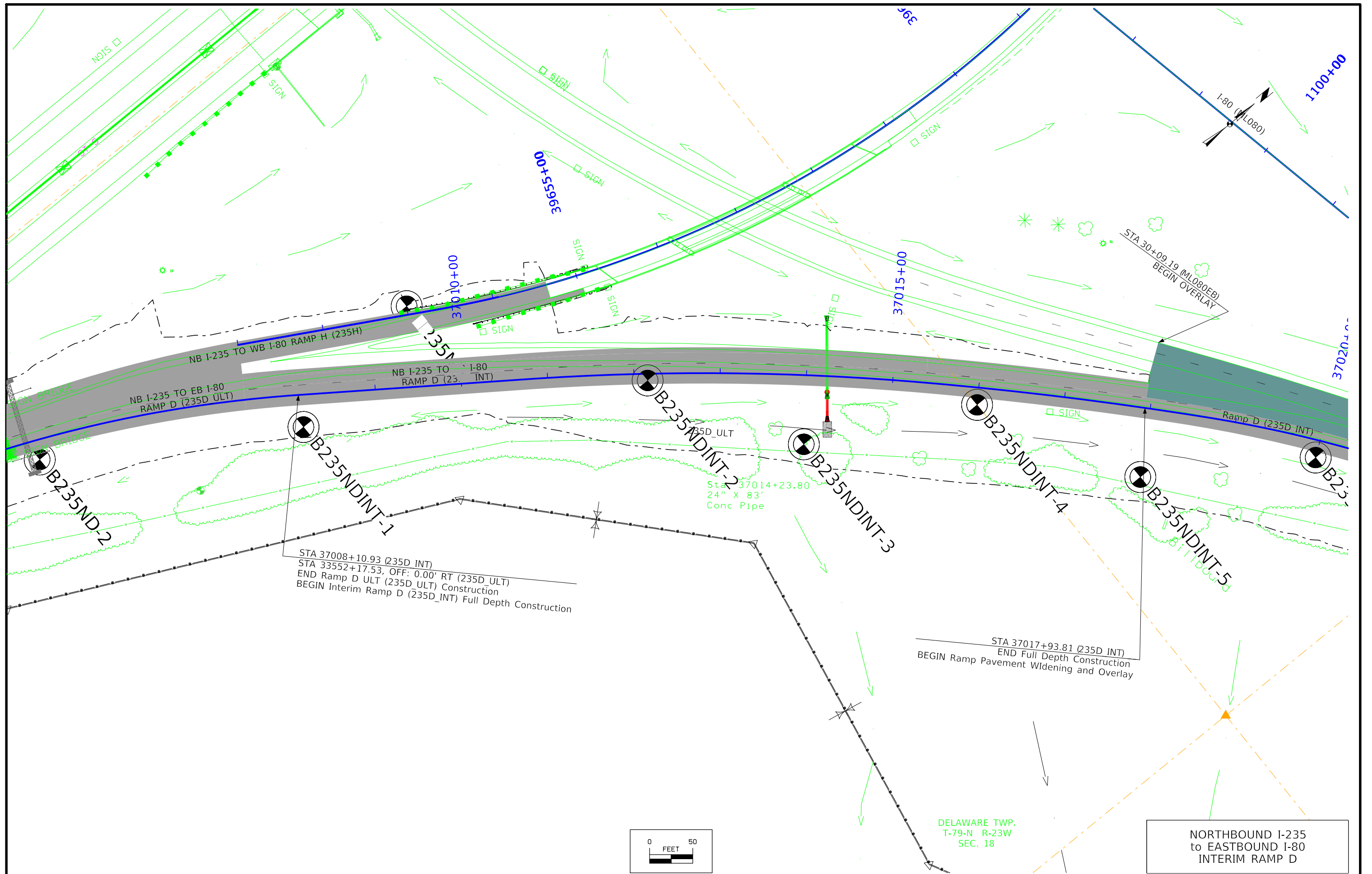






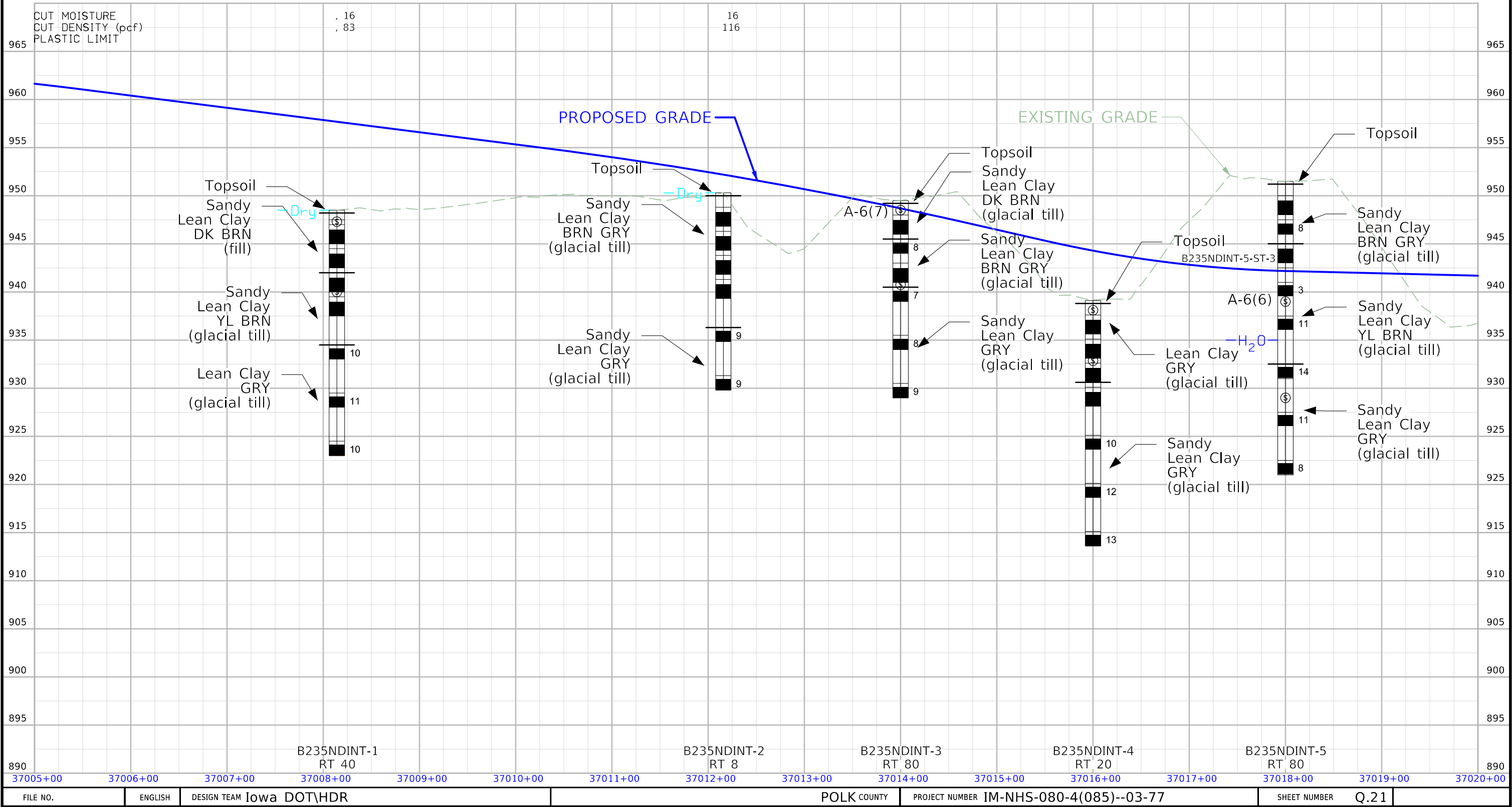


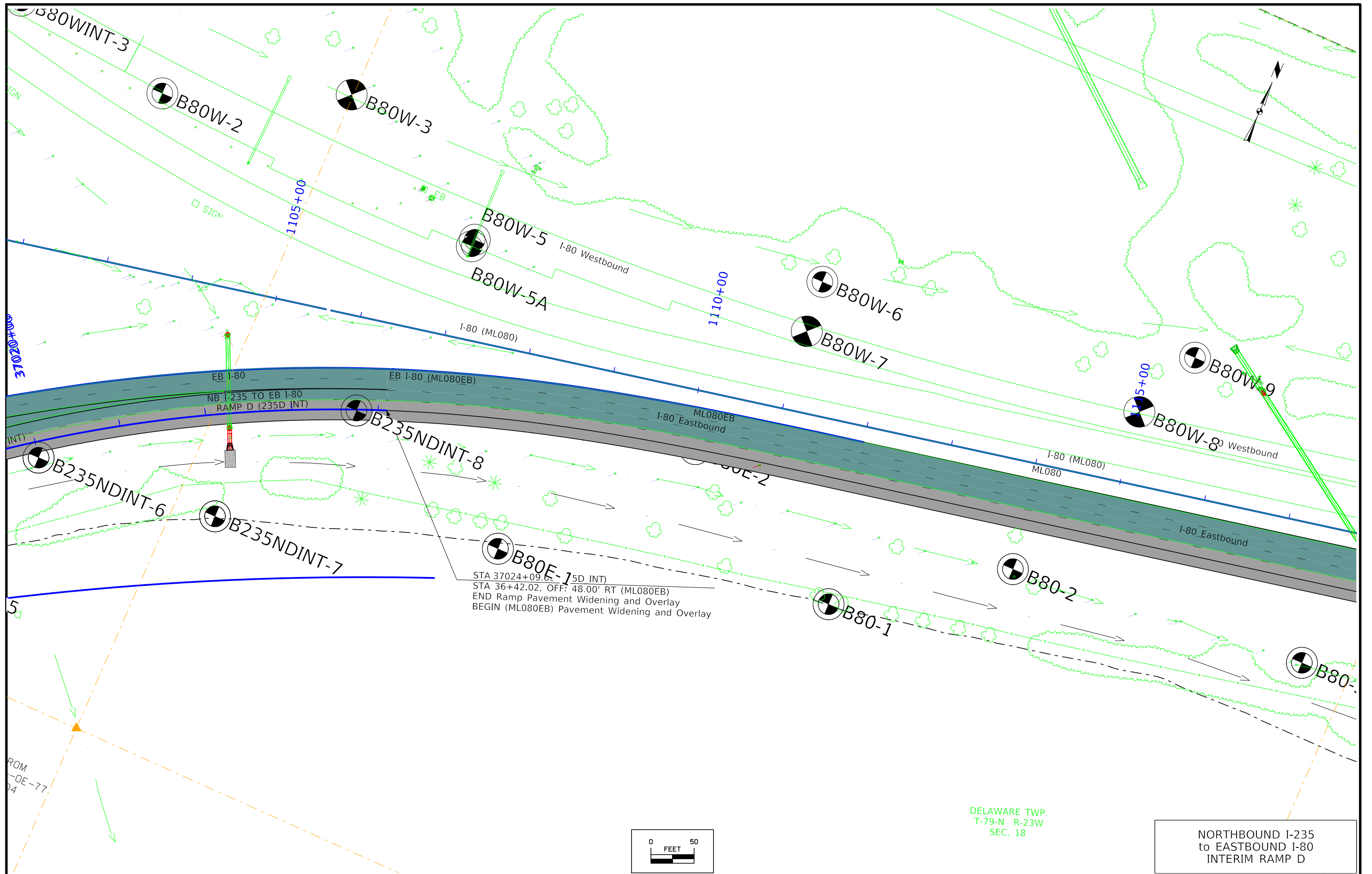
FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\HDR	POLK COUNTY	PROJECT NUMBER IM-NHS-080-4(085)--03-77	SHEET NUMBER Q.19
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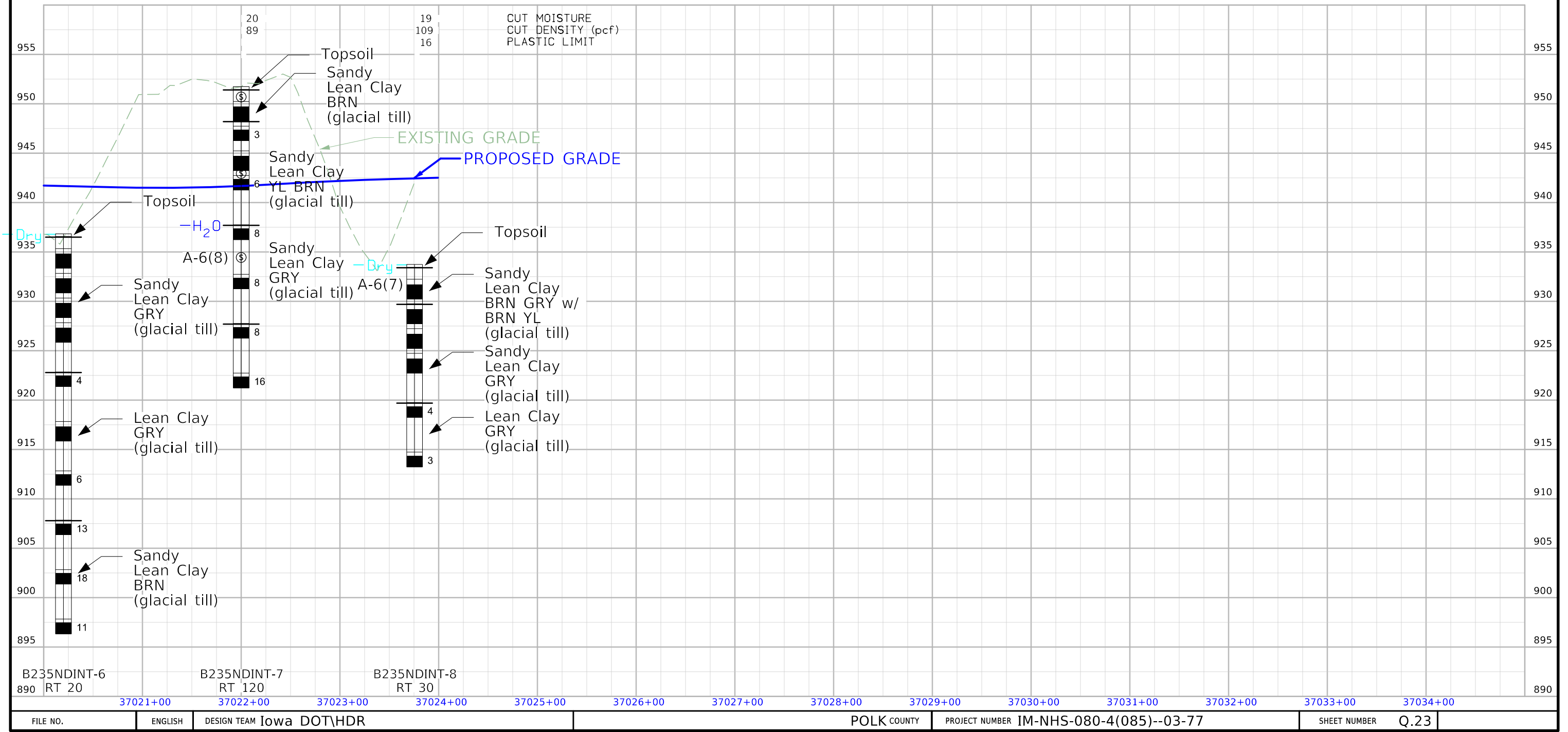


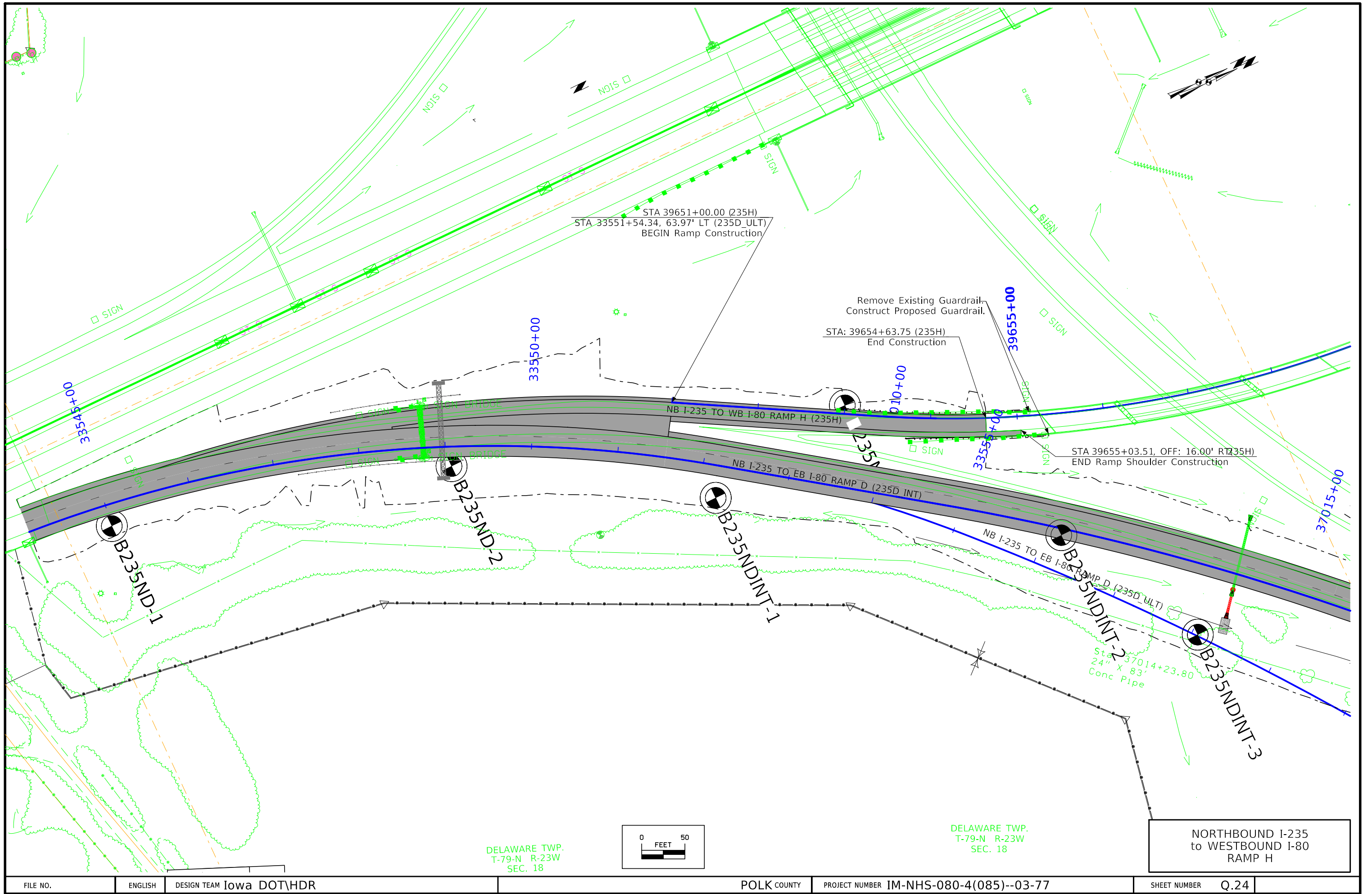
SHELBY TUBE CORE DATA

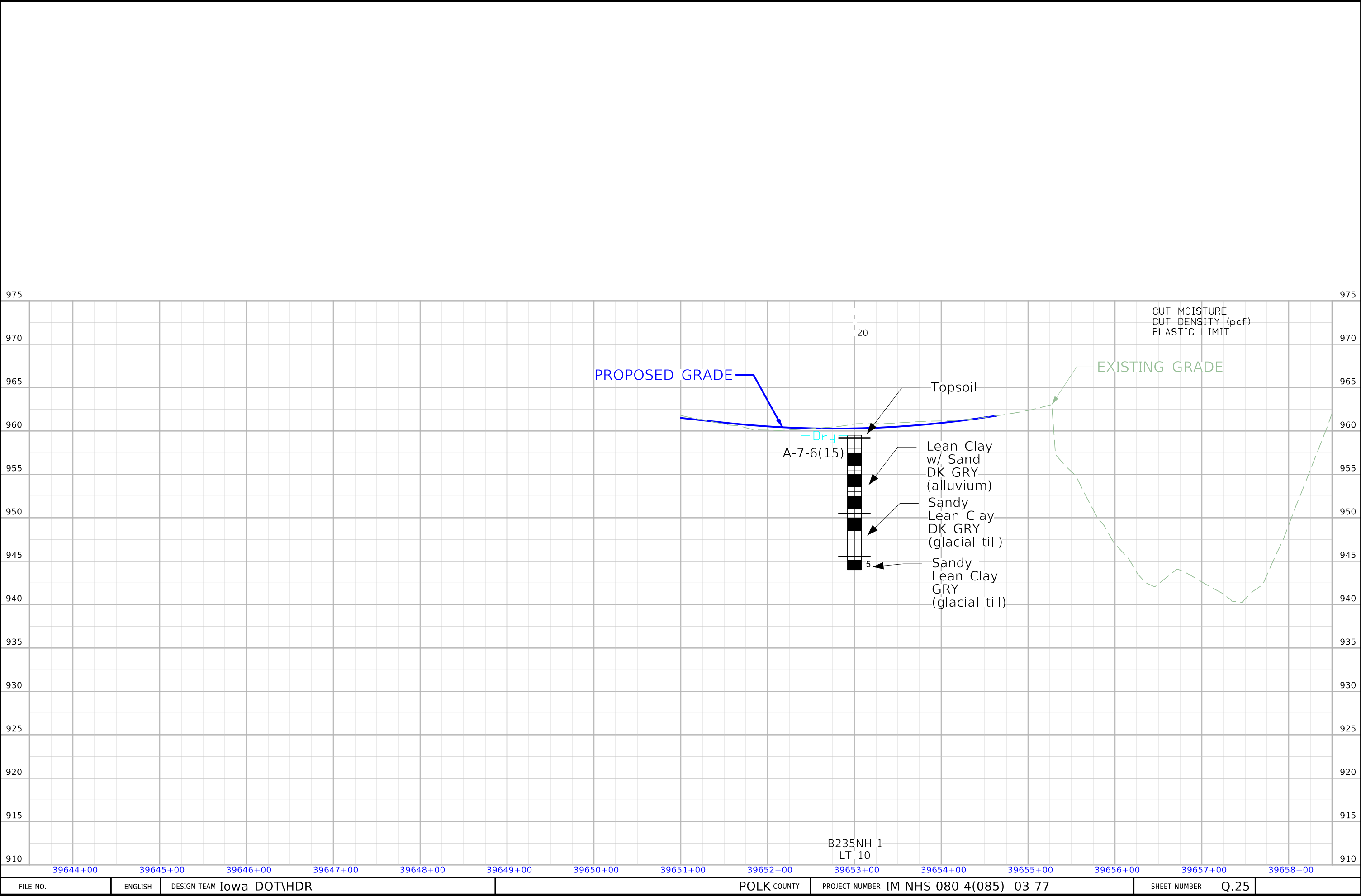
CORE NO.	B235NDINT-5-ST-3
DEPTH IN FEET	6.5'-8.5'
CLASSIFICATION (AASHTO)	-
COEFF.CONSO. (SQ. FT /DAY)	-
TRIAXIAL COMPRESSION	UC
COHESION - PSF	1062
FRICTION COEFF.	
MOISTURE CONTENT %	20
DRY DENSITY - PCF	101
CU-CONSOLIDATED UNDRAINED	
UU-UNCONSOLIDATED UNDRAINED	
UC-UNCONFINED COMPRESSION ($c=1/2 Q_u$)	

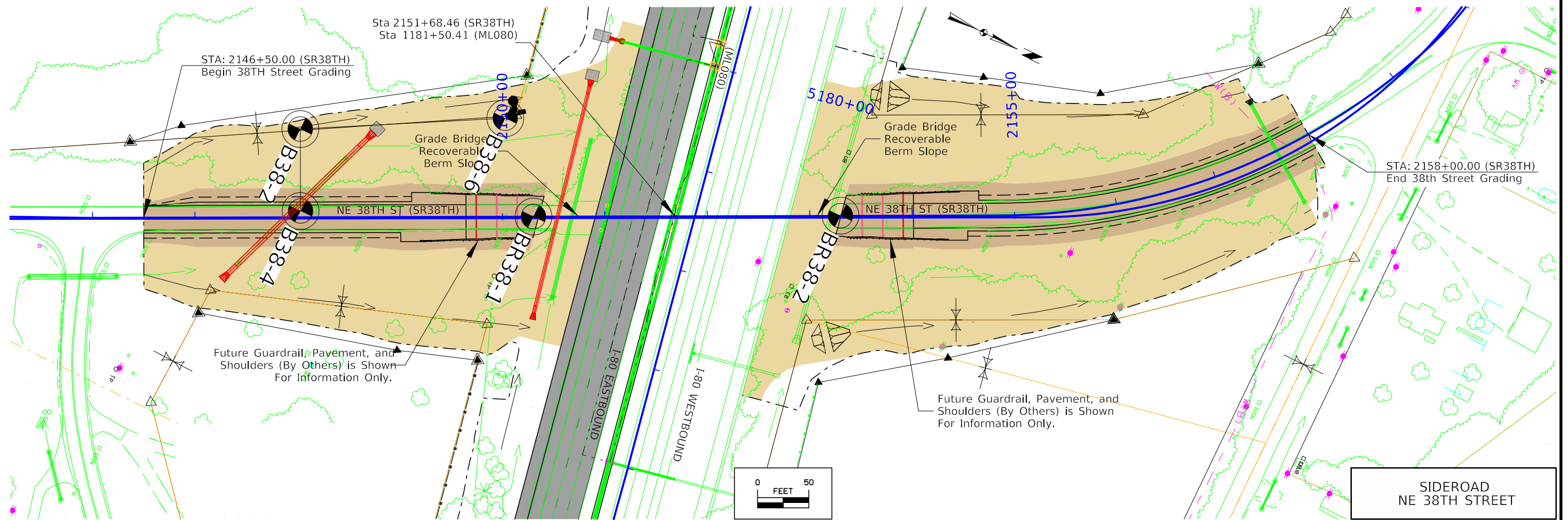


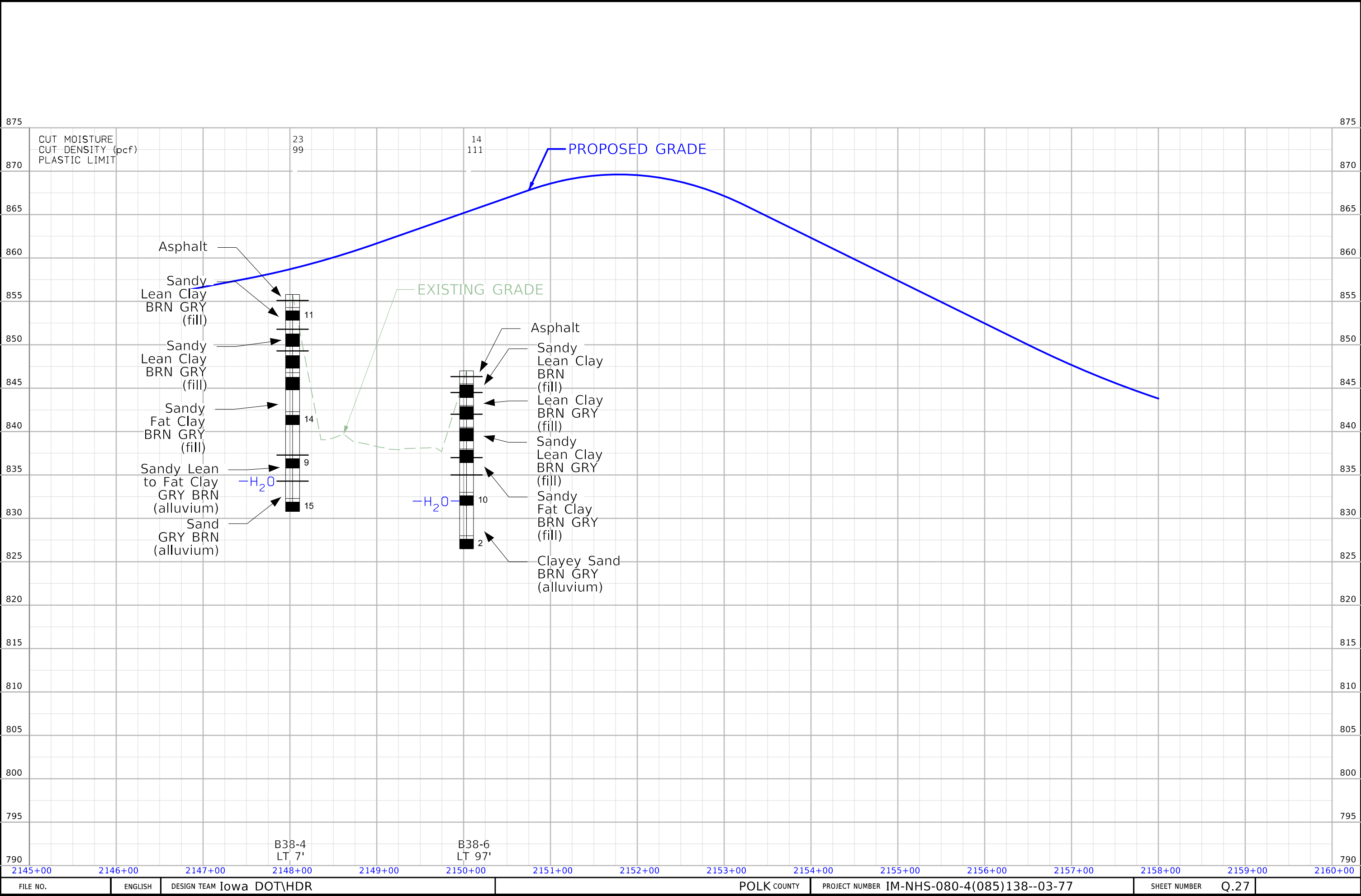














BORROW		
MATERIAL	AVAILABLE CU. YDS	REQUIRED CU. YDS
CLASS 10	68,634	35,884
TOTAL	68,634	35,884

USE TC-273 FOR CONSTRUCTION SIGNING ON NE 54TH AVE.
THE SPECIFIC LOCATION FOR MATERIAL USED FOR THIS PROJECT WILL BE AS DIRECTED BY ENGINEER
PLACEMENT LOCATION FOR TOPSOIL, STRIP AND STOCKPILE, AS DIRECTED BY ENGINEER

MAINTAIN EXISTING SILT
BASINS AND SILT FENCE
FOR DITCH CHECKS.

BORROW
SITE

75' SPACING (TYP)

65' SPACING

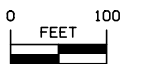
75' SPACING (TYP)

I-235 RAMP G

I-80 WESTBOUND

I-80 EASTBOUND

BORROW
SITE



110-12
10-20-20

The Contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

- A. Inspections shall be made jointly by the Contractor and the Contracting Authority's inspector at least once every seven calendar days. Storm water site inspections will include:
 1. Date of the inspection.
 2. Summary of the scope of the inspection.
 3. Name and qualifications of the personnel making the inspection.
 5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
 6. Major observations related to the implementation of the PPP.
 7. Identification of corrective actions required to maintain or modify erosion and sediment control measures.
- B. Include storm water site inspection reports in the Amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

This includes subsurface drains (i.e. longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of headwalls or blocks, Class A stone, erosion stone or other appropriate materials. This also includes uncontaminated groundwater from dewatering operations, which will be controlled as discussed in Section III of the PPP.

Silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

- A. Base PPP - Initial Pollution Prevention Plan.
- B. Amended PPP - Base PPP amended during construction. May include Plan Revisions or Contract Modifications for new items, storm water site inspection reports, fieldbook entries made by the inspector, amended PPP site map by the Contractor, ECIP, NOI, co-permittee certifications, and Subcontractor Request Forms. Items amending the PPP are stored electronically and are readily available upon request.
- C. Fieldbook Entries - This contains the inspector's daily diary and bid item postings.
- D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).
- E. Signature Authority - Representative authorized to sign various storm water documents.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature

Printed or Typed Name

Signature

281-3
10-17-17

In addition to storm water detention, the following storm water best management practices are used in this project:
Undisturbed foreslopes and ditches will act as vegetated buffers.
Temporary sediment control devices such as silt fence or perimeter and slope sediment control devices are placed downstream of disturbed areas in ditches where drainage leaves the ROW and at roadway culverts.

100-17
04-20-10

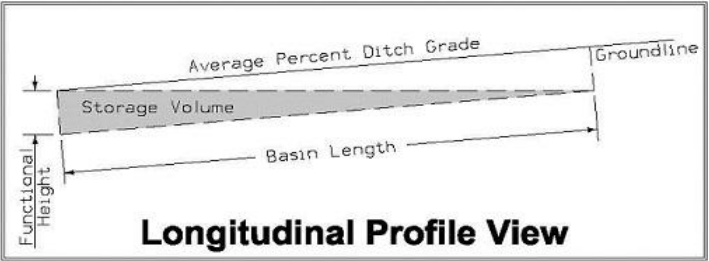
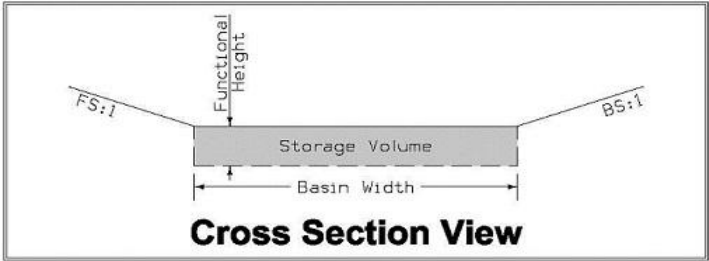
Location			Length	Remarks
Begin Station	End Station	Side		
33544+06.00	33546+31.00	RT	220.0	Basin 1
33544+06.00	33546+55.00	RT	240.0	Basin 1
33546+12.00	33548+52.00	RT	240.0	Basin 2
33546+55.00	33549+02.00	RT	240.0	Basin 2
33548+52.00	33550+93.00	RT	240.0	Basin 2
33549+02.00	33551+50.00	RT	240.0	Basin 2
33550+90.00	33553+34.00	RT	240.0	Basin 3
33551+50.00	33553+95.00	RT	240.0	Basin 3
37009+06.00	37011+25.00	RT	220.0	Basin 3
37009+65.00	37011+84.00	RT	220.0	Basin 3
33547+77.00	33549+87.00	LT	220.0	Basin 4
33549+70.00	33551+77.00	LT	220.0	Basin 4
33551+60.00	37009+65.00	LT	220.0	Basin 4
37009+65.00	37011+94.00	LT	240.0	Basin 4
37008+19.00	37010+38.00	LT	220.0	Basin 5
37010+19.00	37012+36.00	LT	220.0	Basin 5
37011+08.00	37013+28.00	RT	220.0	Basin 5
37011+65.00	37013+88.00	RT	220.0	Basin 5
37012+17.00	37014+33.00	LT	220.0	Basin 5
37013+69.00	37015+94.00	RT	220.0	Basin 5
37014+33.00	37016+50.00	LT	220.0	Basin 5
37015+75.00	37017+98.00	RT	220.0	Basin 5
37016+31.00	37017+99.00	LT	220.0	Basin 5
37017+98.00	37020+48.00	RT	240.0	Basin 5
37020+48.00	37023+00.00	RT	240.0	Basin 5
35+32.00	37+88.00	RT	240.0	Basin 5
37+88.00	40+39.00	RT	240.0	Basin 5
40+39.00	1112+78.00	RT	220.0	Basin 5
1110+06.00	1112+24.00	RT	220.0	Basin 5
1110+42.00	1112+78.00	RT	240.0	Basin 5
1112+06.00	1114+24.00	RT	220.0	Basin 5
1114+06.00	1116+24.00	RT	220.0	Basin 5
1116+12.00	1118+24.00	RT	220.0	Basin 5
1118+23.00	1120+58.00	RT	240.0	Basin 5
1120+58.00	1122+93.00	RT	240.0	Basin 5
1122+93.00	1125+12.00	RT	220.0	Basin 5
1124+93.00	1127+11.00	RT	220.0	Basin 5
1128+00.00	1130+18.00	RT	220.0	Basin 6
38803+12.00	38804+60.00	RT	150.0	Basin 7
1132+89.00	1134+37.00	LT	150.0	Basin 7
1133+60.00	1135+78.00	RT	220.0	Basin 7
1135+60.00	1137+78.00	RT	220.0	Basin 7
1137+60.00	1139+78.00	RT	220.0	Basin 7
1139+60.00	1141+78.00	RT	220.0	Basin 7
1141+60.00	1143+78.00	RT	220.0	Basin 7
1143+60.00	1145+78.00	RT	220.0	Basin 7
1145+60.00	1147+75.00	RT	220.0	Basin 7
1146+48.00	1146+88.00	RT	40.0	Basin 7
1147+57.00	1149+75.00	RT	220.0	Basin 8
1149+57.00	1151+75.00	RT	220.0	Basin 8
1151+57.00	1153+75.00	RT	220.0	Basin 8
1153+57.00	1155+75.00	RT	220.0	Basin 8
1155+57.00	1157+75.00	RT	220.0	Basin 8
1157+57.00	1159+75.00	RT	220.0	Basin 8
1159+57.00	1161+75.00	RT	220.0	Basin 8
1161+57.00	1163+75.00	RT	220.0	Basin 8
1163+57.00	1165+75.00	RT	220.0	Basin 8
1165+56.00	1167+75.00	RT	220.0	Basin 9
1167+56.00	1169+75.00	RT	220.0	Basin 9
1169+75.00				

100-17
04-20-10

Location			Length	Remarks
Begin Station	End Station	Side	LF	
1191+74.00	1193+92.00	RT	220.0	Basin 10
1193+74.00	1195+92.00	RT	220.0	Basin 10
1195+74.00	1197+92.00	RT	220.0	Basin 10
1197+74.00	1199+92.00	RT	220.0	Basin 10
1199+74.00	1202+12.00	RT	240.0	Basin 10
1202+12.00	1204+49.00	RT	220.0	Basin 10
1204+49.00	1206+86.00	RT	240.0	Basin 10
1206+86.00	1209+25.00	RT	240.0	Basin 10
2146+60.00	2148+78.00	RT	220.0	Basin 10
2146+89.00	2149+07.00	LT	220.0	Basin 10
2148+60.00	2150+08.00	RT	150.0	Basin 10
2148+87.00	2150+35.00	LT	150.0	Basin 10
2153+40.00	2154+89.00	LT	150.0	Basin 11
2153+49.00	2154+96.00	RT	150.0	Basin 11
2154+70.00	2156+32.00	LT	150.0	Basin 11
2154+79.00	2156+15.00	RT	150.0	Basin 11
2155+97.00	2157+35.00	RT	150.0	Basin 11
2156+11.00	2157+73.00	LT	150.0	Basin 11
1179+87.00	1181+35.00	LT	150.0	Basin 12
1180+10.00	1182+07.00	LT	200.0	Basin 12
1181+17.00	1182+64.00	LT	150.0	Basin 12
1110+33.00	1116+68.00	LT	3231.0	Borrow site
	Subtotal		23041.0	
	25% Allowance		5760.3	
	Silt Fence Bid Item Total		28801.3	
	Maint. of Silt Fence (10%)		2880.1	
	Removal of Silt Fence (100%)		28801.3	

SILT BASINS

Possible Standard: EW-403

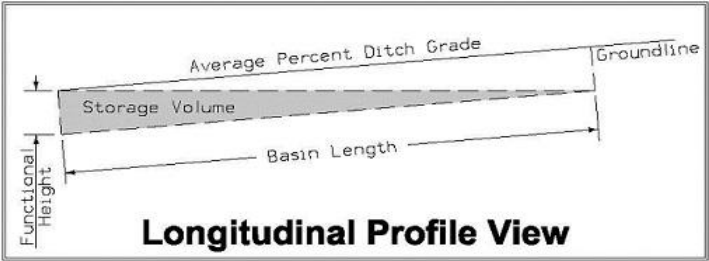
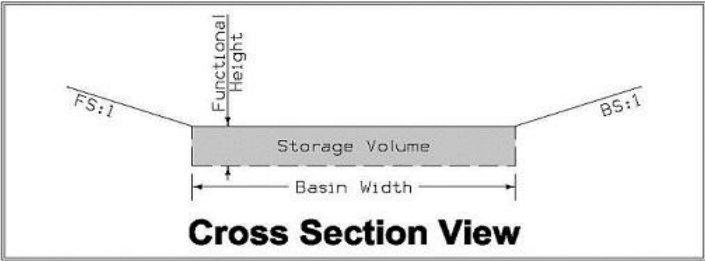


* The functional height used in the volume equation is 95% of effective height. Effective height is 3 feet as shown in EW-403.
* Volume equation: $(0.5 * \text{Length} * (\text{Width} * \text{Height} + \text{Width} * (\text{Height} - \text{Length} * \text{Avg} \% \text{Slope})))$

Basin No.	Location		Bid Items		Stormwater Storage Volume Summary					Remarks
	Station	Side	Installation	Removal	Basin Width	Basin Length	Height	Avg. % Slope	Volume*	
			EACH	EACH	FT	FT	FT		CF	
1	33544+70.00	RT	1	1	10.0	50.0	2.85	0.5%	1362.5	
2	33547+20.00	RT	1	1	10.0	50.0	2.85	0.5%	1362.5	
2	33548+40.00	RT	1	1	10.0	50.0	2.85	0.5%	1362.5	
2	33549+75.00	RT	1	1	10.0	50.0	2.85	0.5%	1362.5	
3	33551+65.00	RT	1	1	10.0	50.0	2.85	1.3%	1262.5	
3	37008+50.00	RT	1	1	10.0	50.0	2.85	0.5%	1362.5	
3	37009+70.00	RT	1	1	10.0	50.0	2.85	1.3%	1262.5	
5	37011+65.00	LT	1	1	10.0	50.0	2.85	3.8%	950.0	
5	37012+65.00	LT	1	1	10.0	50.0	2.85	3.8%	950.0	
5	37013+65.00	LT	1	1	10.0	50.0	2.85	3.8%	950.0	
5	37011+65.00	RT	1	1	10.0	50.0	2.85	3.3%	1012.5	
5	37012+65.00	RT	1	1	10.0	50.0	2.85	3.3%	1012.5	
5	37013+65.00	RT	1	1	10.0	50.0	2.85	3.3%	1012.5	
5	37014+65.00	RT	1	1	10.0	50.0	2.85	0.6%	1350.0	
5	37022+65.00	RT	1	1	10.0	50.0	2.85	0.6%	1350.0	
5	1116+50.00	RT	1	1	10.0	50.0	2.85	3.6%	975.0	
5	1117+50.00	RT	1	1	10.0	50.0	2.85	3.6%	975.0	
5	1118+50.00	RT	1	1	10.0	50.0	2.85	3.6%	975.0	
5	1119+50.00	RT	1	1	10.0	50.0	2.85	3.6%	975.0	
5	1121+35.00	RT	1	1	10.0	50.0	2.85	3.4%	1000.0	
5	1122+35.00	RT	1	1	10.0	50.0	2.85	3.4%	1000.0	
5	1123+35.00	RT	1	1	10.0	50.0	2.85	3.4%	1000.0	
5	1124+35.00	RT	1	1	10.0	50.0	2.85	3.4%	1000.0	
5	1125+35.00	RT	1	1	10.0	50.0	2.85	0.5%	1362.5	
6	1128+15.00	RT	1	1	10.0	50.0	2.85	2.5%	1112.5	
6	1129+00.00	RT	1	1	10.0	50.0	2.85	2.5%	1112.5	
6	1129+85.00	RT	1	1	10.0	50.0	2.85	2.5%	1112.5	
6	38803+00.00	LT	1	1	10.0	50.0	2.85	0.5%	1362.5	
6	38804+00.00	LT	1	1	10.0	50.0	2.85	0.5%	1362.5	
7	1133+50.00	RT	1	1	10.0	50.0	2.85	1.4%	1250.0	
7	1134+50.00	RT	1	1	10.0	50.0	2.85	1.4%	1250.0	
7	1135+60.00	RT	1	1	10.0	50.0	2.85	4.2%	900.0	
7	1136+60.00	RT	1	1	10.0	50.0	2.85	4.2%	900.0	
7	1137+60.00	RT	1	1	10.0	50.0	2.85	4.2%	900.0	
7	1138+60.00	RT	1	1	10.0	50.0	2.85	4.2%	900.0	
7	1139+60.00	RT	1	1	10.0	50.0	2.85	4.2%	900.0	
7	1140+60.00	RT	1	1	10.0	50.0	2.85	3.0%	1050.0	
7	1141+60.00	RT	1	1	10.0	50.0	2.85	3.0%	1050.0	
7	1142+60.00	RT	1	1	10.0	50.0	2.85	3.0%	1050.0	
7	1143+60.00	RT	1	1	10.0	50.0	2.85	3.0%	1050.0	
7	1144+60.00	RT	1	1	10.0	50.0	2.85	0.3%	1387.5	
7	1145+60.00	RT	1	1	10.0	50.0	2.85	0.3%	1387.5	
7	1146+50.00	RT	1	1	10.0	50.0	2.85	1.0%	1300.0	
8	1153+40.00	RT	1	1	10.0	50.0	2.85	2.8%	1075.0	
8	1154+40.00	RT	1	1	10.0	50.0	2.85	2.8%	1075.0	
8	1158+60.00	RT	1	1	10.0	50.0	2.85	2.5%	1112.5	
8	1159+60.00	RT	1	1	10.0	50.0	2.85	2.5%	1112.5	
8	1160+60.00	RT	1	1	10.0	50.0	2.85	2.5%	1112.5	
8	1161+60.00	RT	1	1	10.0	50.0	2.85	2.5%	1112.5	
8	1162+60.00	RT	1	1	10.0	50.0	2.85	2.5%	1112.5	
8	1163+60.00	RT	1	1	10.0	50.0	2.85	1.3%	1258.8	
8	1164+60.00	RT	1	1	10.0	50.0	2.85	1.3%	1258.8	
8	1165+60.00	RT	1	1	10.0	50.0	2.85	0.5%	1362.5	
9	1166+40.00	RT	1	1	10.0	50.0	2.85	0.6%	1350.0	
9	1167+40.00	RT	1	1	10.0	50.0	2.85	0.6%	1350.0	
9	1168+40.00	RT	1	1	10.0	50.0	2.85	0.6%	1350.0	
9	1169+40.00	RT	1	1	10.0	50.0	2.85	0.6%	1350.0	
9	1170+40.00	RT	1	1	10.0	50.0	2.85	0.6%	1350.0	
9	1171+65.00	RT	1	1	10.0	50.0	2.85	3.2%	1025.0	

SILT BASINS

Possible Standard: EW-403

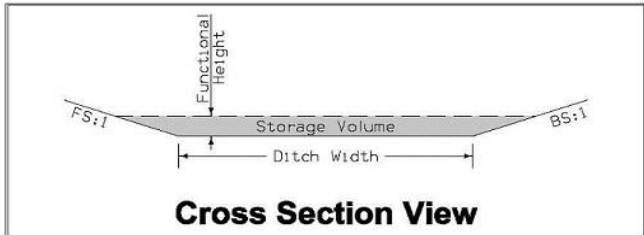


* The functional height used in the volume equation is 95% of effective height. Effective height is 3 feet as shown in EW-403.
* Volume equation: $(0.5 * \text{Length} * (\text{Width} * \text{Height} + \text{Width} * (\text{Height} - \text{Length} * \text{Avg} \% \text{Slope})))$

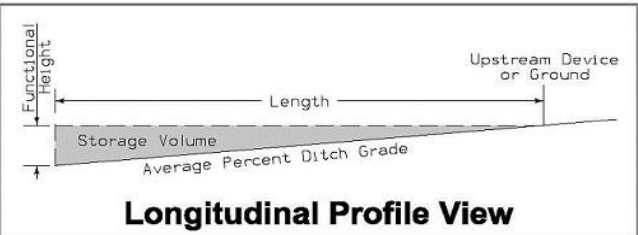
Basin No.	Location		Bid Items		Stormwater Storage Volume Summary					Remarks
	Station	Side	Installation	Removal	Basin Width	Basin Length	Height	Avg. % Slope	Volume*	
			EACH	EACH	FT	FT	FT		CF	
10	1175+65.00	RT	1	1	10.0	50.0	2.85	1.6%	1225.0	
10	1176+65.00	RT	1	1	10.0	50.0	2.85	1.6%	1225.0	
10	1177+65.00	RT	1	1	10.0	50.0	2.85	1.5%	1237.5	
10	1178+65.00	RT	1	1	10.0	50.0	2.85	1.5%	1237.5	
10	1179+65.00	RT	1	1	10.0	50.0	2.85	1.5%	1237.5	
10	1180+65.00	RT	1	1	10.0	50.0	2.85	1.5%	1237.5	
10	1183+85.00	RT	1	1	10.0	50.0	2.85	2.7%	1087.5	
10	1184+85.00	RT	1	1	10.0	50.0	2.85	2.7%	1087.5	
10	1185+85.00	RT	1	1	10.0	50.0	2.85	2.7%	1087.5	
10	1186+85.00	RT	1	1	10.0	50.0	2.85	2.7%	1087.5	
10	1187+85.00	RT	1	1	10.0	50.0	2.85	2.7%	1087.5	
10	1188+85.00	RT	1	1	10.0	50.0	2.85	2.7%	1087.5	
10	2149+20.00	RT	1	1	10.0	50.0	2.85	1.1%	1287.5	
10	2149+60.00	LT	1	1	10.0	50.0	2.85	0.7%	1337.5	
11	2156+90.00	LT	1	1	10.0	50.0	2.85	0.8%	1325.0	
11	2156+90.00	RT	1	1	10.0	50.0	2.85	0.9%	1312.5	
Borrow	1113+60.00	LT	34	34	10.0	50.0	2.85			
Subtotal			109	109						
100% Allowance			109							
Bid Item Totals			218	109						

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



Longitudinal Profile View

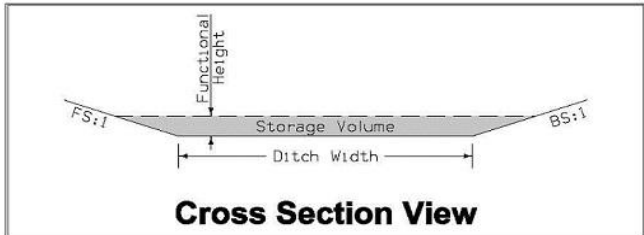
* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.

* Volume equation: $[0.5 * \text{Spacing} * (0.5 * H^2 * FS + DW * H + 0.5 * H^2 * BS)]$

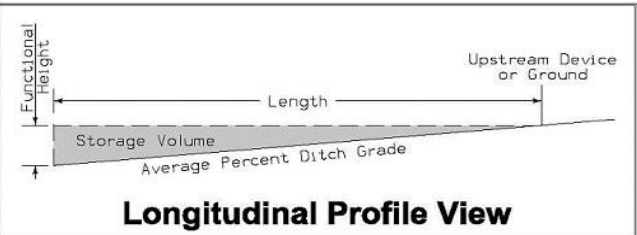
Basin No.	Type	Location		Bid Items			Stormwater Storage Volume Summary					Remarks
		Station	Side	Installation	Maintenance	Removal	Foreslope	Backslope	Ditch Width	Avg.% Slope	Volume*	
				LF	LF	LF	FS:1	BS:1	FT	Ditch Grade	CF	
4	1	33550+45.00	LT	18.0	1.8	18.0	3.0	3.5	5.0	4.5%	220.1	
4	1	33551+15.00	LT	24.0	2.4	24.0	3.0	4.0	10.0	1.8%	740.4	
4	1	33551+80.00	LT	26.0	2.6	26.0	4.0	4.0	10.0	1.8%	774.2	
4	1	37008+45.00	LT	26.0	2.6	26.0	4.0	4.0	10.0	1.8%	774.2	
4	1	37009+15.00	LT	26.0	2.6	26.0	4.0	4.0	10.0	1.8%	774.2	
4	1	37009+85.00	LT	26.0	2.6	26.0	4.0	4.0	10.0	1.8%	774.2	
4	1	37010+55.00	LT	26.0	2.6	26.0	4.0	4.0	10.0	1.8%	774.2	
5	1	37010+10.00	LT	23.0	2.3	23.0	3.5	3.0	10.0	3.0%	482.3	
5	1	37010+60.00	LT	23.0	2.3	23.0	3.5	3.0	10.0	3.0%	482.3	
5	1	37011+05.00	LT	23.0	2.3	23.0	3.5	3.0	10.0	3.0%	482.3	
5	1	37011+55.00	LT	23.0	2.3	23.0	3.5	3.0	10.0	3.0%	482.3	
5	1	37011+55.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.3%	434.1	
5	1	37014+40.00	LT	23.0	2.3	23.0	3.5	3.0	10.0	1.2%	964.6	
5	1	37015+40.00	LT	23.0	2.3	23.0	3.5	3.0	10.0	1.2%	964.6	
5	1	37016+40.00	LT	23.0	2.3	23.0	3.5	3.0	10.0	1.2%	964.6	
5	1	37014+65.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.6%	1495.1	
5	1	37016+20.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.6%	1495.1	
5	1	37017+75.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.6%	1495.1	
5	1	37019+35.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.6%	1495.1	
5	1	37020+95.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.6%	1495.1	
5	1	37022+55.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.6%	1495.1	
5	1	36+50.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.6%	1495.1	
5	1	38+15.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.0%	1495.1	
5	1	39+80.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.0%	1495.1	
5	1	41+35.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.0%	1495.1	
5	1	1112+90.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.0%	1495.1	
5	1	1114+45.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.0%	1495.1	
5	1	1116+00.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.0%	1495.1	
5	1	1120+10.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.6%	385.8	
5	1	1120+80.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.4%	434.1	
5	1	1121+65.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.4%	434.1	
5	1	1122+65.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.4%	434.1	
5	1	1123+65.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.4%	434.1	
5	1	1124+65.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.5%	3038.5	
6	1	1128+80.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	2.5%	578.8	
6	1	1129+70.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	2.5%	578.8	
6	1	1130+60.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	2.5%	578.8	
6	1	38802+40.00	LT	17.0	1.7	17.0	3.0	3.0	5.0	0.5%	1909.8	
7	1	1134+00.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.4%	964.6	
7	1	1135+00.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.4%	964.6	
7	1	1138+35.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	4.3%	337.6	
7	1	1139+35.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	4.3%	337.6	
7	1	1140+35.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.0%	482.3	
7	1	1141+35.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.0%	482.3	
7	1	1142+35.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.0%	482.3	
7	1	1143+25.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.0%	482.3	
7	1	1146+40.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.4%	3038.5	
8	1	1147+75.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.8%	723.4	
8	1	1148+50.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.8%	723.4	
8	1	1149+25.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.8%	723.4	
8	1	1150+00.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.8%	723.4	
8	1	1156+45.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.8%	1495.1	
8	1	1158+00.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.8%	1495.1	
8	1	1163+40.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.3%	964.6	
8	1	1164+40.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.3%	964.6	
8	1	1165+40.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.3%	964.6	
9	1	1167+00.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.6%	1012.8	
9	1	1168+00.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.6%	964.6	
9	1	1169+00.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.6%	964.6	
9	1	1170+00.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.6%	964.6	
9	1	1171+00.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	0.6%	964.6	
9	1	1171+15.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.2%	434.1	

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



Cross Section View



Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.

* Volume equation: $[0.5 * \text{Spacing} * (0.5 * H^2 * FS + DW * H + 0.5 * H^2 * BS)]$

Basin No.	Type	Location		Bid Items			Stormwater Storage Volume Summary					Remarks
		Station	Side	Installation	Maintenance	Removal	Foreslope	Backslope	Ditch Width	Avg.% Slope	Volume*	
				LF	LF	LF	FS:1	BS:1	FT	Ditch Grade	CF	
9	1	1171+75.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.2%	434.1	
9	1	1172+20.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	3.2%	434.1	
10	1	1174+90.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.6%	723.4	
10	1	1175+90.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.6%	723.4	
10	1	1176+90.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.5%	964.6	
10	1	1177+90.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.5%	964.6	
10	1	1178+90.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.5%	964.6	
10	1	1179+90.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	1.5%	964.6	
10	1	1183+30.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	2.7%	482.3	
10	1	1184+30.00	RT	23.0	2.3	23.0	3.5	3.0	10.0	2.7%	482.3	
10	1	1185+30.00	RT	28.0	2.8	28.0	6.0	3.0	10.0	2.7%	538.7	
10	1	1186+30.00	RT	28.0	2.8	28.0	6.0	3.0	10.0	2.7%	538.7	
10	1	1187+30.00	RT	28.0	2.8	28.0	6.0	3.0	10.0	2.7%	538.7	
10	1	1188+30.00	RT	28.0	2.8	28.0	6.0	3.0	10.0	2.7%	538.7	
10	1	1189+00.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.7%	493.6	
10	1	1189+50.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.7%	493.6	
10	1	1190+00.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.7%	493.6	
10	1	1190+50.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.7%	493.6	
10	1	1191+00.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.7%	493.6	
10	1	1191+50.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.7%	493.6	
10	1	1192+00.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.7%	493.6	
10	1	1193+20.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	1194+40.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	1195+60.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	1196+80.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	1198+00.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	1199+20.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	1200+40.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	1201+60.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	1202+80.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	1204+00.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	1205+20.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	1206+40.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	1207+60.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	2.2%	592.3	
10	1	2147+10.00	LT	24.0	2.4	24.0	4.0	3.0	10.0	2.7%	493.6	
10	1	2147+60.00	LT	24.0	2.4	24.0	4.0	3.0	10.0	2.7%	493.6	
10	1	2148+10.00	LT	24.0	2.4	24.0	4.0	3.0	10.0	2.7%	493.6	
10	1	2148+60.00	LT	24.0	2.4	24.0	4.0	3.0	10.0	2.7%	493.6	
10	1	2150+15.00	LT	24.0	2.4	24.0	4.0	3.0	10.0	0.7%	1530.1	
10	1	2147+75.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	1.1%	987.1	
10	1	2148+75.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	1.1%	987.1	
10	1	2149+75.00	RT	24.0	2.4	24.0	4.0	3.0	10.0	1.1%	987.1	
11	1	2154+80.00	RT	22.0	2.2	22.0	3.0	3.0	10.0	0.9%	1460.2	
11	1	2156+15.00	RT	22.0	2.2	22.0	3.0	3.0	10.0	0.9%	1460.2	
11	1	2157+50.00	RT	22.0	2.2	22.0	3.0	3.0	10.0	0.9%	1460.2	
11	1	2155+70.00	LT	22.0	2.2	22.0	3.0	3.0	10.0	0.8%	1460.2	
11	1	2157+50.00	LT	22.0	2.2	22.0	3.0	3.0	10.0	0.8%	1460.2	
12	1	1180+10.00	LT	21.0	2.1	21.0	4.0	4.0	5.0	1.3%	696.5	
12	1	1181+10.00	LT	21.0	2.1	21.0	4.0	4.0	5.0	1.3%	696.5	
12	1	1182+10.00	LT	21.0	2.1	21.0	4.0	4.0	5.0	1.3%	696.5	

Drainage Basin Location

Summary of Stormwater Storage

PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES

FILE NO.

ENGLISH

DESIGN TEAM **Iowa DOT / HDR**

POLK COUNTY

PROJECT NUMBER

IM-NHS-080-4(085)138--03-77

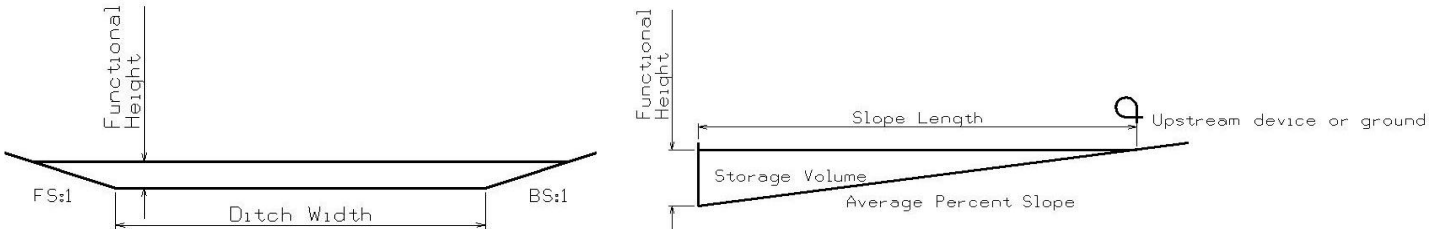
SHEET NUMBER

RC.5

100-32
10-16-18

ROCK CHECK DAM

Possible Standard: EC-302



* The functional height used in the volume equation is 90% of effective height. Effective height is 2 feet as shown in EC-302.

* Volume equation: $[0.5 \cdot \text{Spacing} \cdot (0.5 \cdot H^2 \cdot FS + DW \cdot H + 0.5 \cdot H^2 \cdot BS)]$

[illegible]

100-22
04-21-15






ROLLED EROSION CONTROL




Refer to EC-101, EC-103, and EC-104.









[illegible]








FILE NO.	ENGLISH	DESIGN TEAM	Iowa DOT / HDR		POLK	COUNTY	PROJECT NUMBER	IM-NHS-080-4(085)138--03-77	SHEET NUMBER	RC.6
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LINE STYLE LEGEND OF LANDSCAPE SHEETS	
LINESTYLE	Design Element
-----	Living Snow Fence Single Row
-----	Living Snow Fence Double Row
-----	Mechanical Edge

















CELL LEGEND OF LANDSCAPE SHEETS		
CELL	Design Element	Plant Diameter
	Clearing	
	Proposed Shrub	6 FT
	Proposed Understory Tree	12 FT
	Proposed Conifer Tree	18 FT
	Proposed Overstory Tree	30 FT

PATTERN LEGEND OF LANDSCAPE SHEETS	
	Brush Clearing
	Clearing & Grubbing
	Spray Area

LINE STYLE LEGEND OF EROSION CONTROL SHEETS	
LINESTYLE	Design Element
	Silt Fence
	Perimeter and Slope Sediment Control Device (9")
	Perimeter and Slope Sediment Control Device (12")
	Perimeter and Slope Sediment Control Device (20")
	Open-Throat Curb Intake Sediment Filter
	Concentrated Flow
	Rock Check and Rock Check Dam
	Sheet Flow

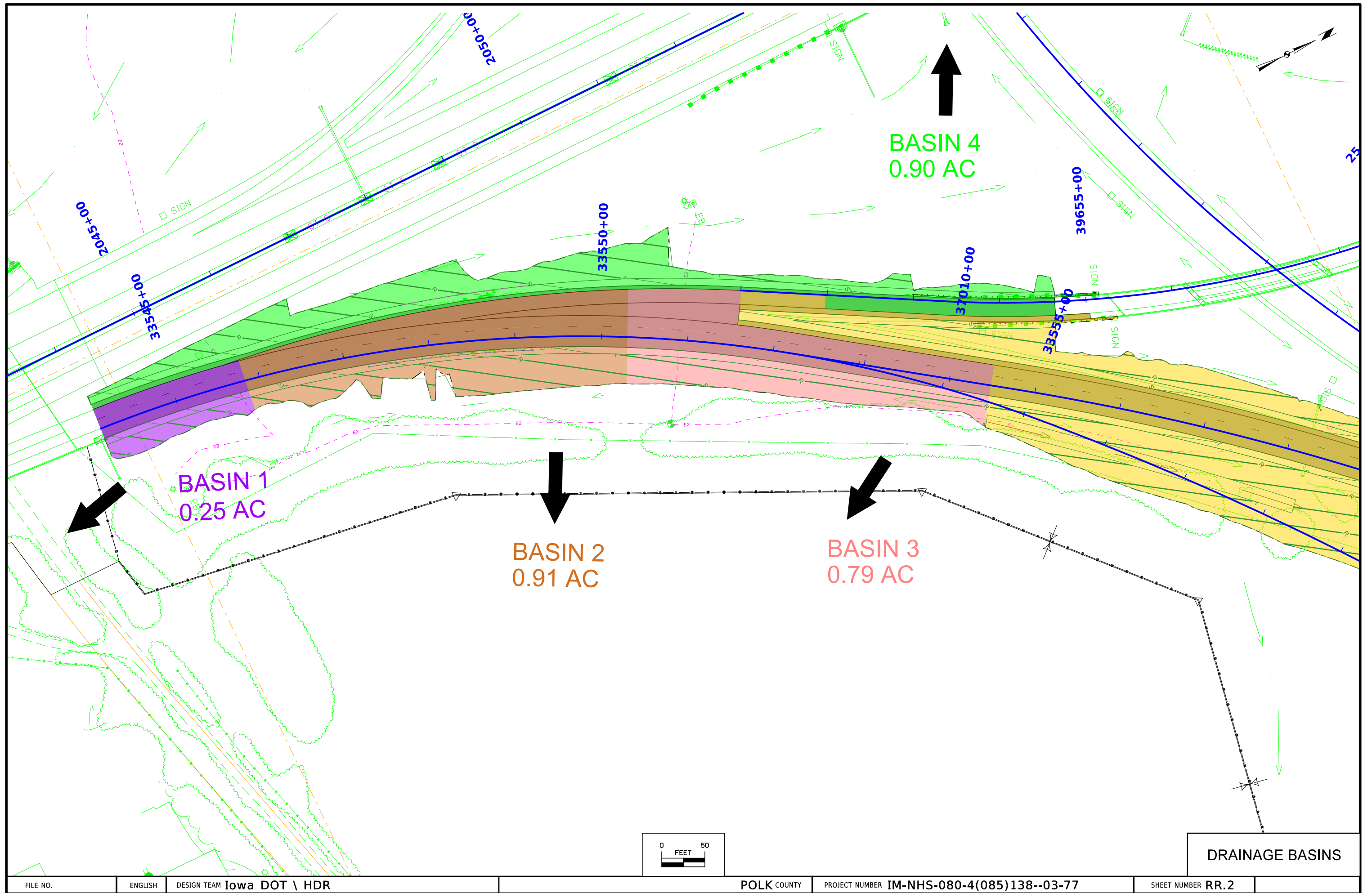
CELL LEGEND OF EROSION CONTROL SHEETS	
CELL	Design Element
	Temporary Sediment Control basin
	Erosion Control for Circular Intake or Manhole Well
	Erosion Control for Rectangular Intake or Manhole Well
	Grate Intake Sediment Filter Bag
	Silt Basin
	Silt Fence Tail
	Stormwater Drainage Basin Discharge Point

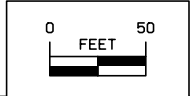
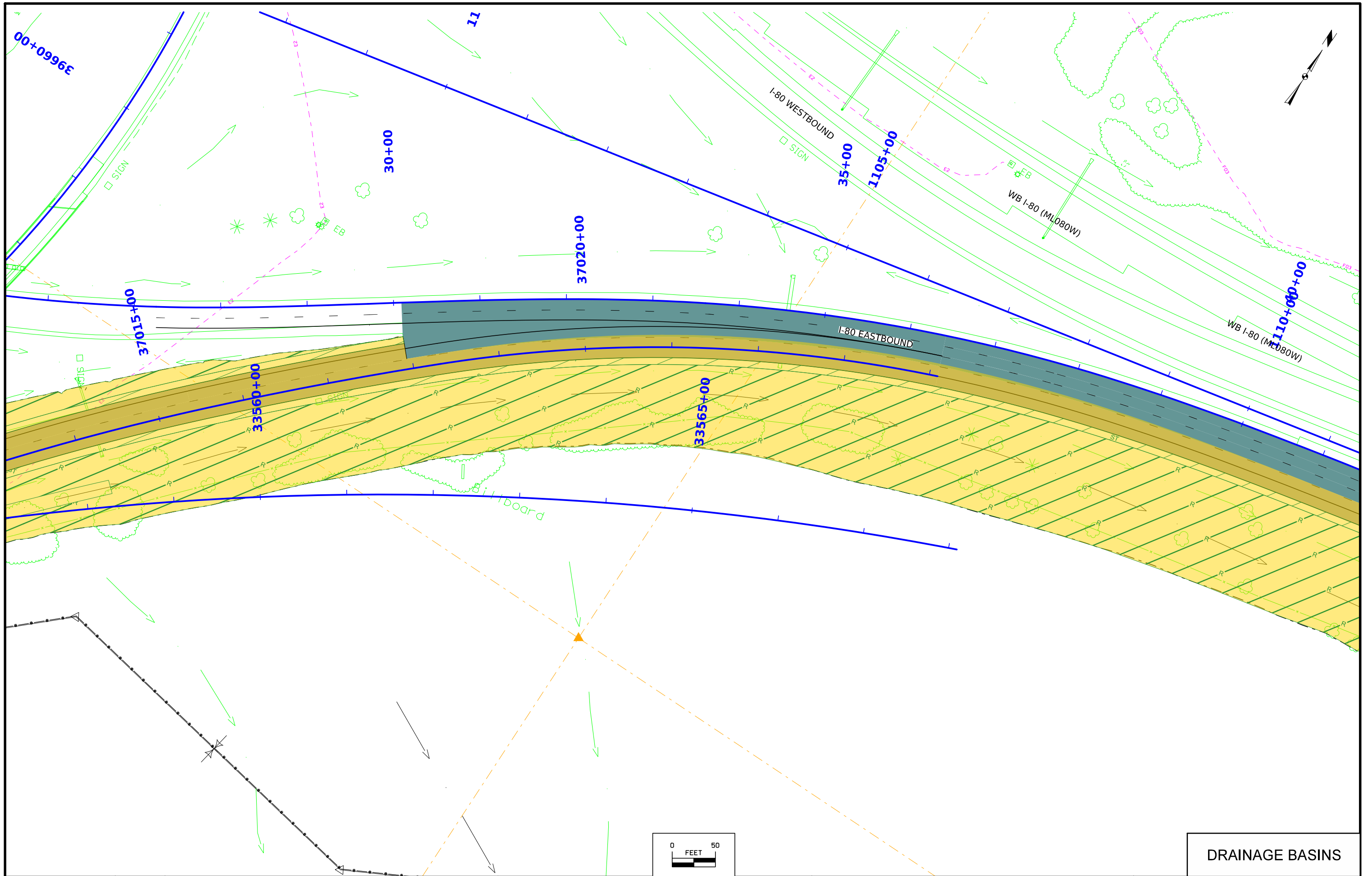
PLAN VIEW COLOR LEGEND OF EROSION CONTROL SHEETS				
LINEWORK	Design Color No.			
Green	(2)		Existing Topographic Features and Labels	
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation	
Magenta	(5)		Existing Utilities	
Black	(0)		Permanent Erosion Control Features	
Blaze Orange	(222)		Temporary Erosion Control Features	
SHADING	Design Color No.		Transparency	
Citron	(234)		Mulching, All Types	50%
Light Brown	(238)		Special Ditch Control, Wood Excelsior Mat	0%
Grass Green	(233)		8FT Mow Strip	50%
Red	(3)		Delineates Restricted Areas	0%

PATTERN LEGEND OF EROSION CONTROL SHEETS	
	Seeding and Fertilizing
	Seeding and Fertilizing (Rural)
	Seeding and Fertilizing (Urban)
	Native Grass Seeding
	Salt Tolerant Seeding
	Wetland Grass Seeding
	Wildflower Seeding
	Sodding
	Turf Reinforcement Mat Type 1
	Turf Reinforcement Mat Type 2
	Turf Reinforcement Mat Type 3
	Turf Reinforcement Mat Type 4
	Slope Protection, Wood Excelsior Mat
	Transition Mat
	Rock Features, Permanent
	Rock Features, Temporary

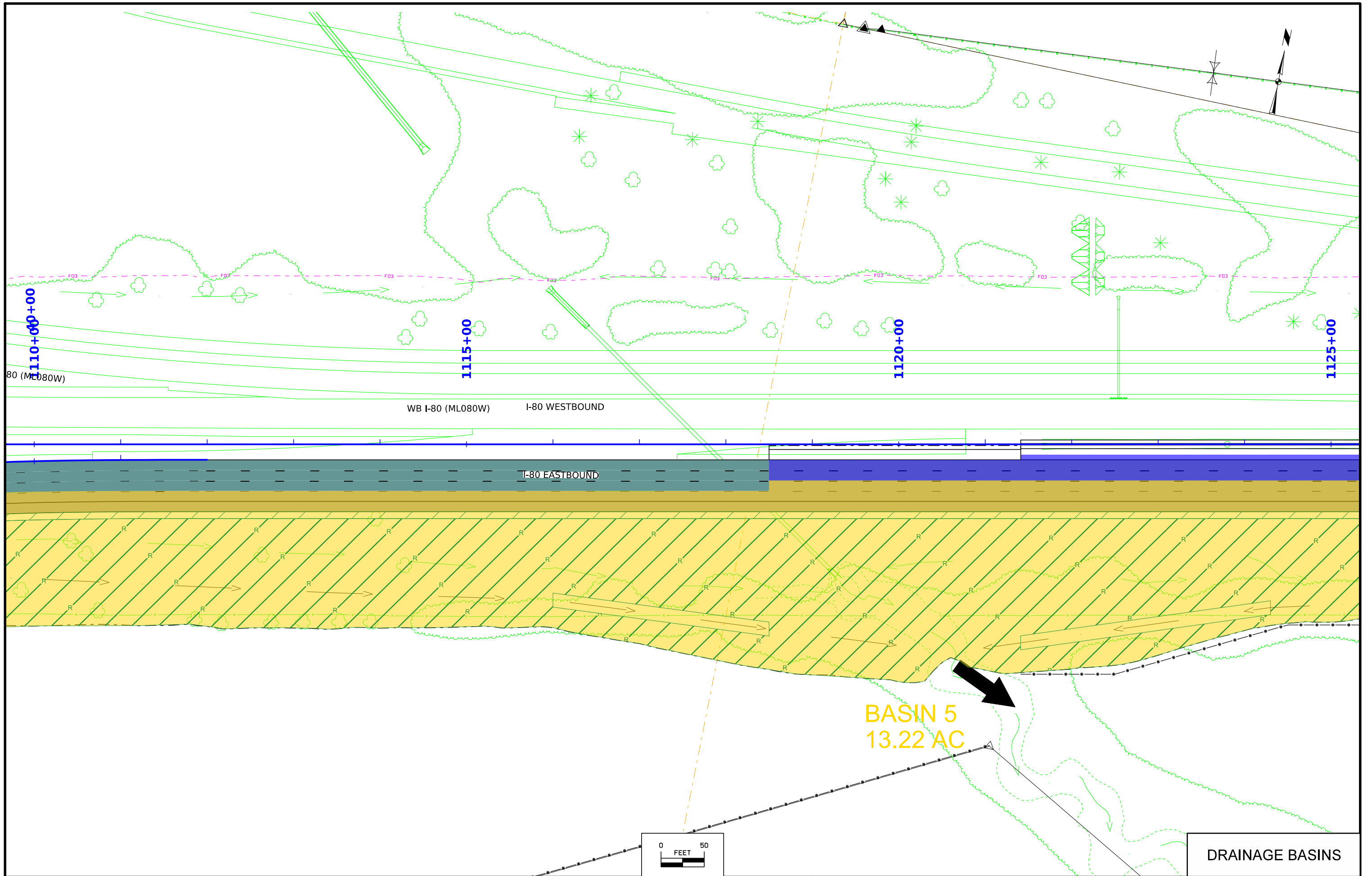
EROSION CONTROL
LEGEND AND SYMBOL
INFORMATION SHEET

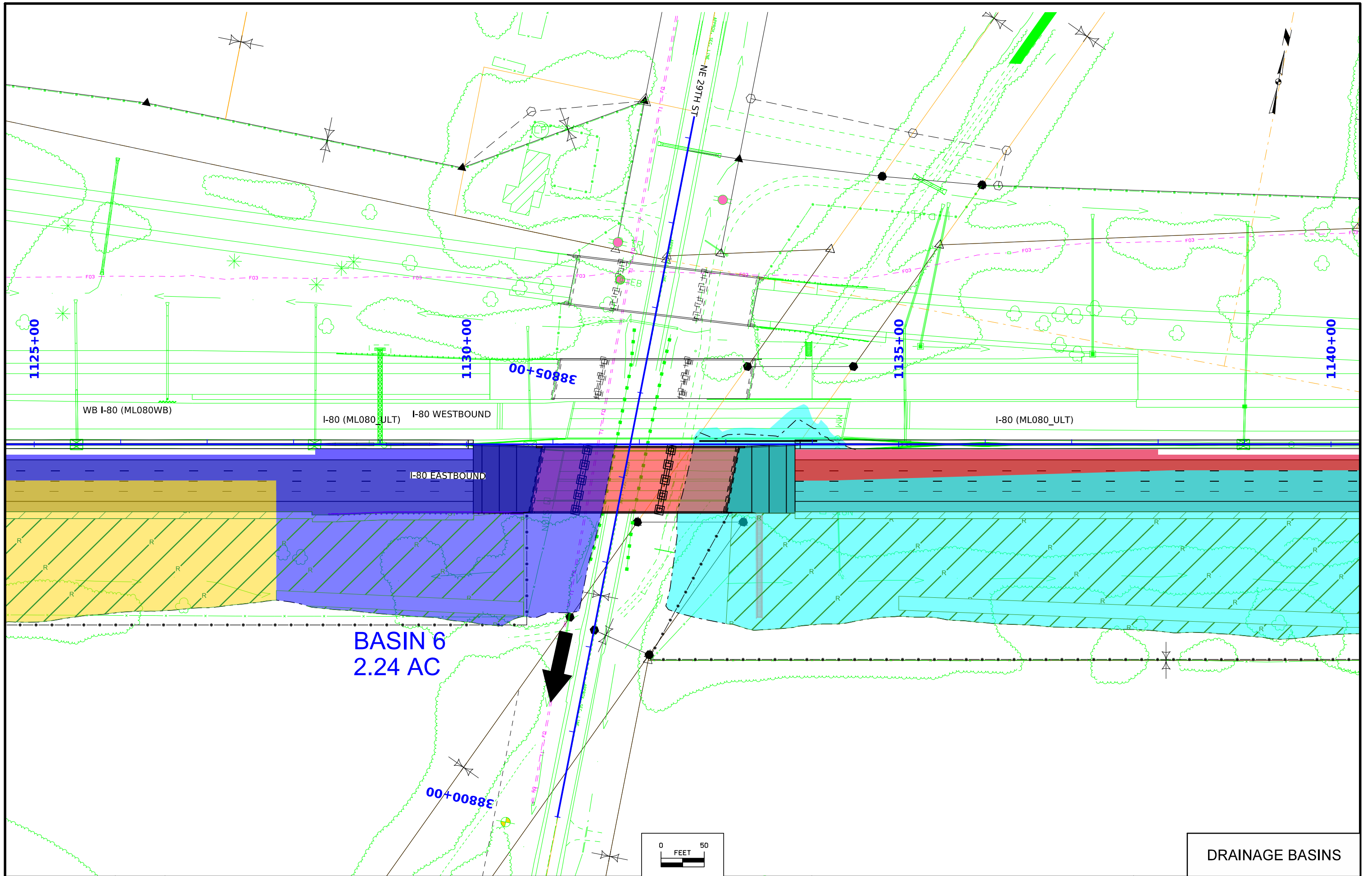
(COVERS SHEET SERIES R)

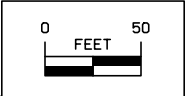
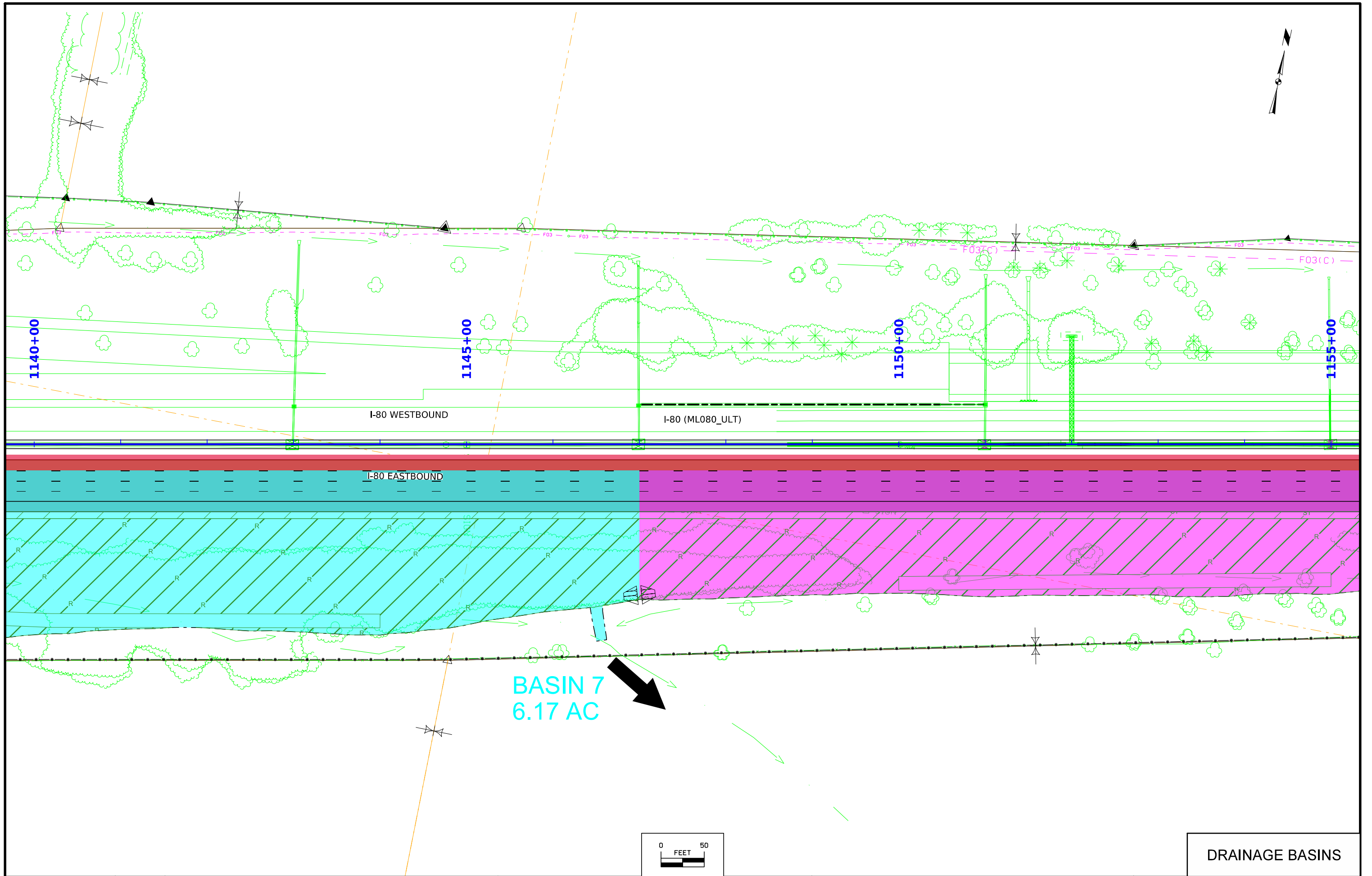




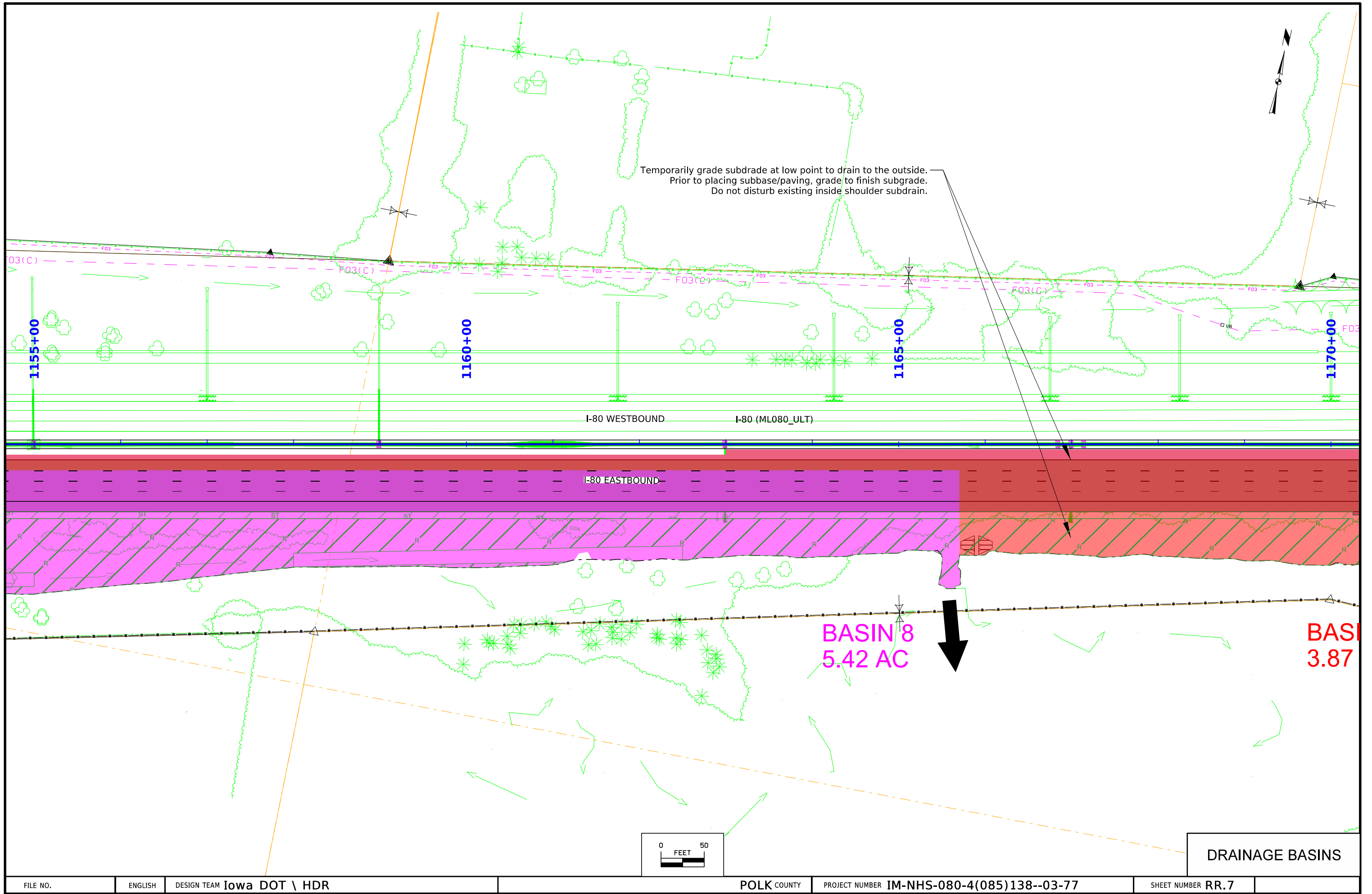
DRAINAGE BASINS

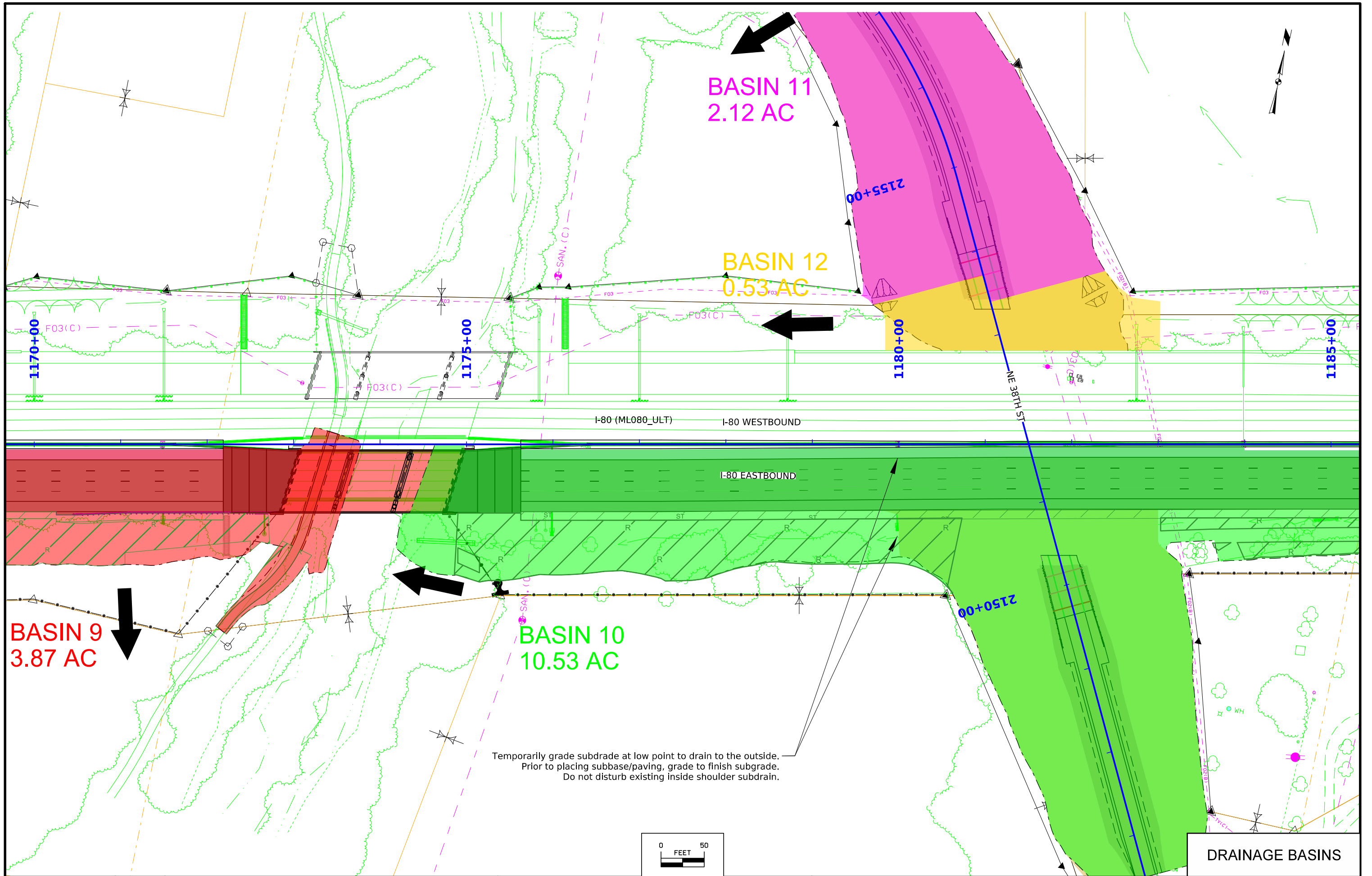


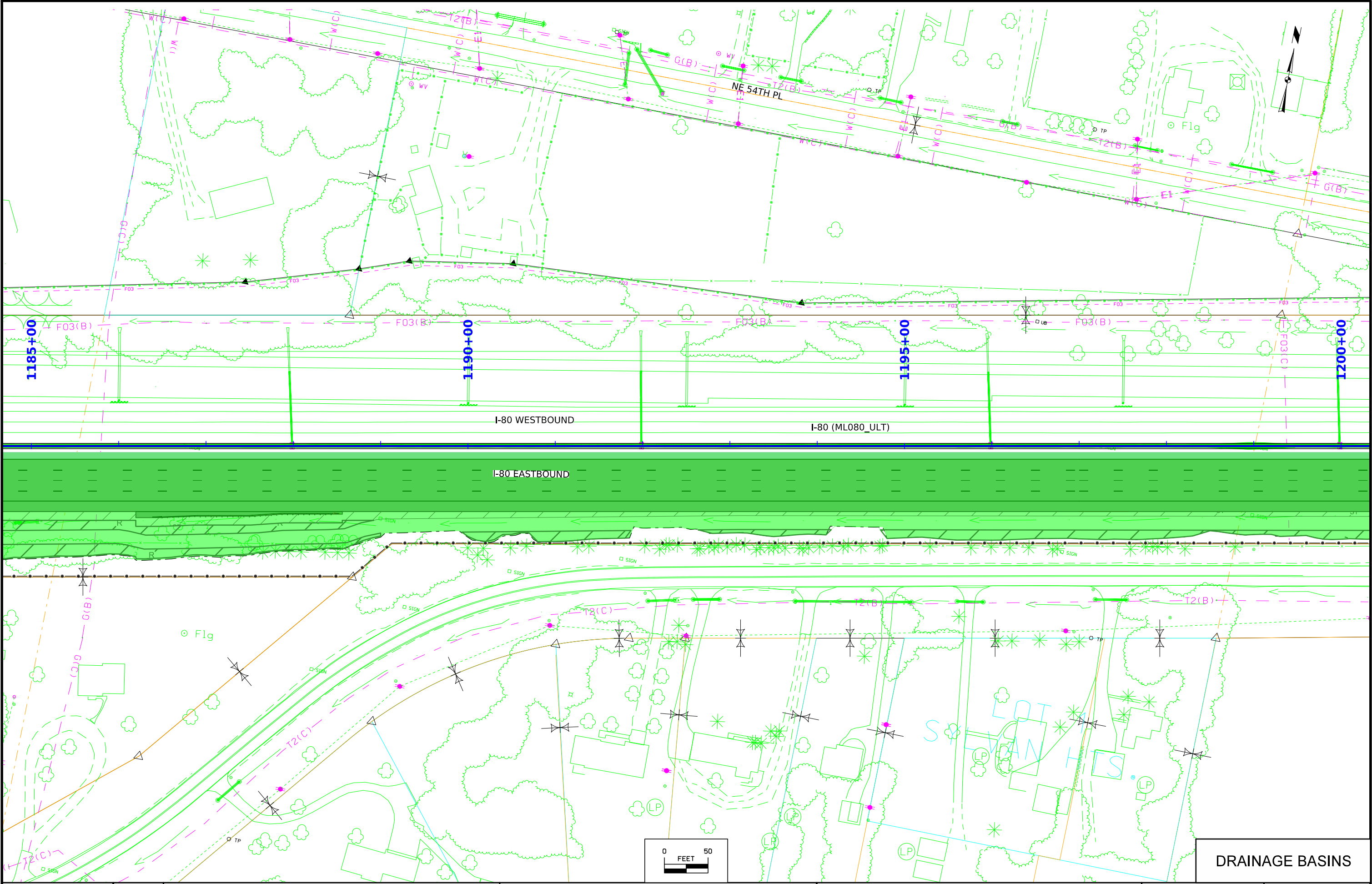


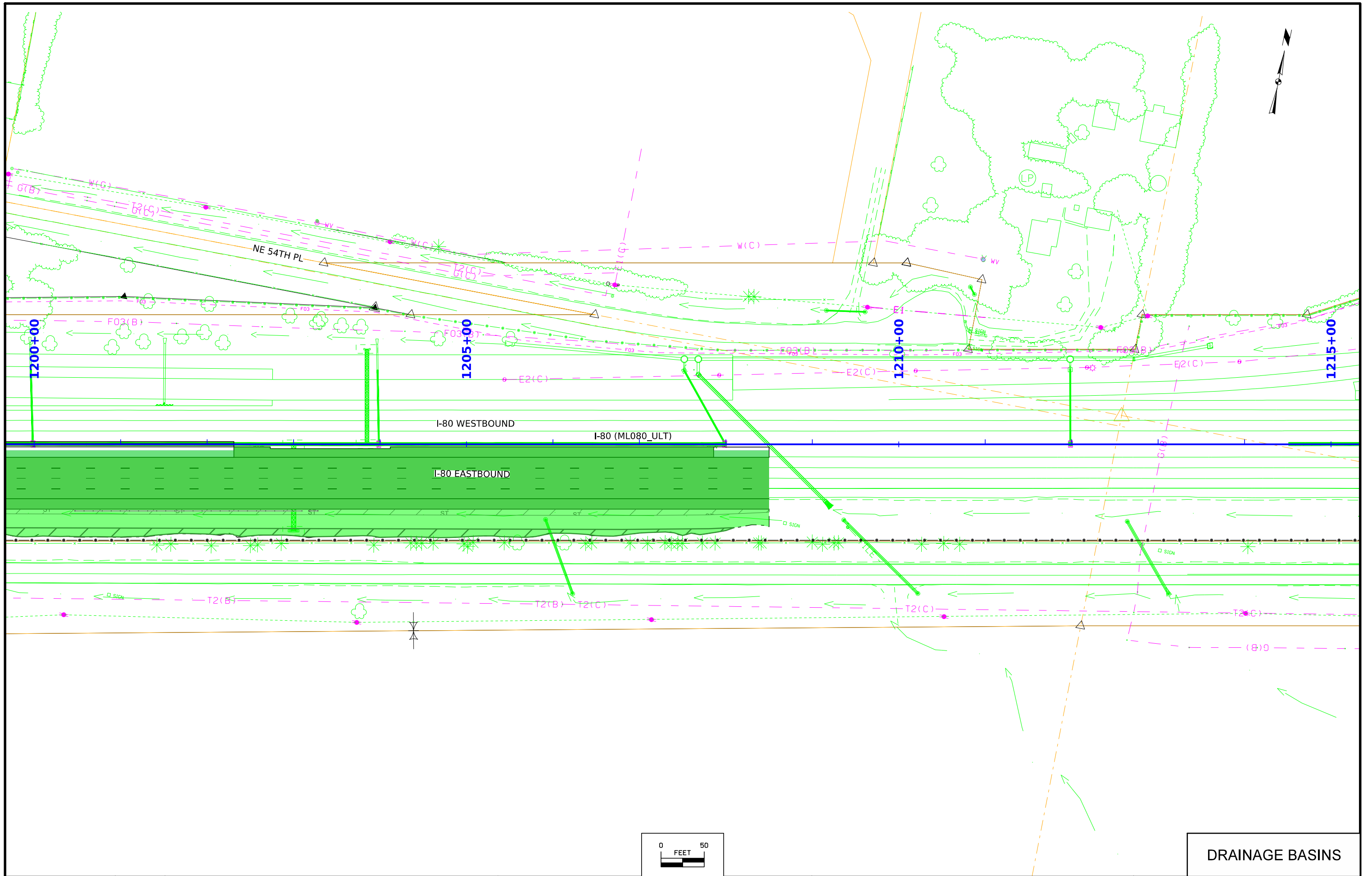


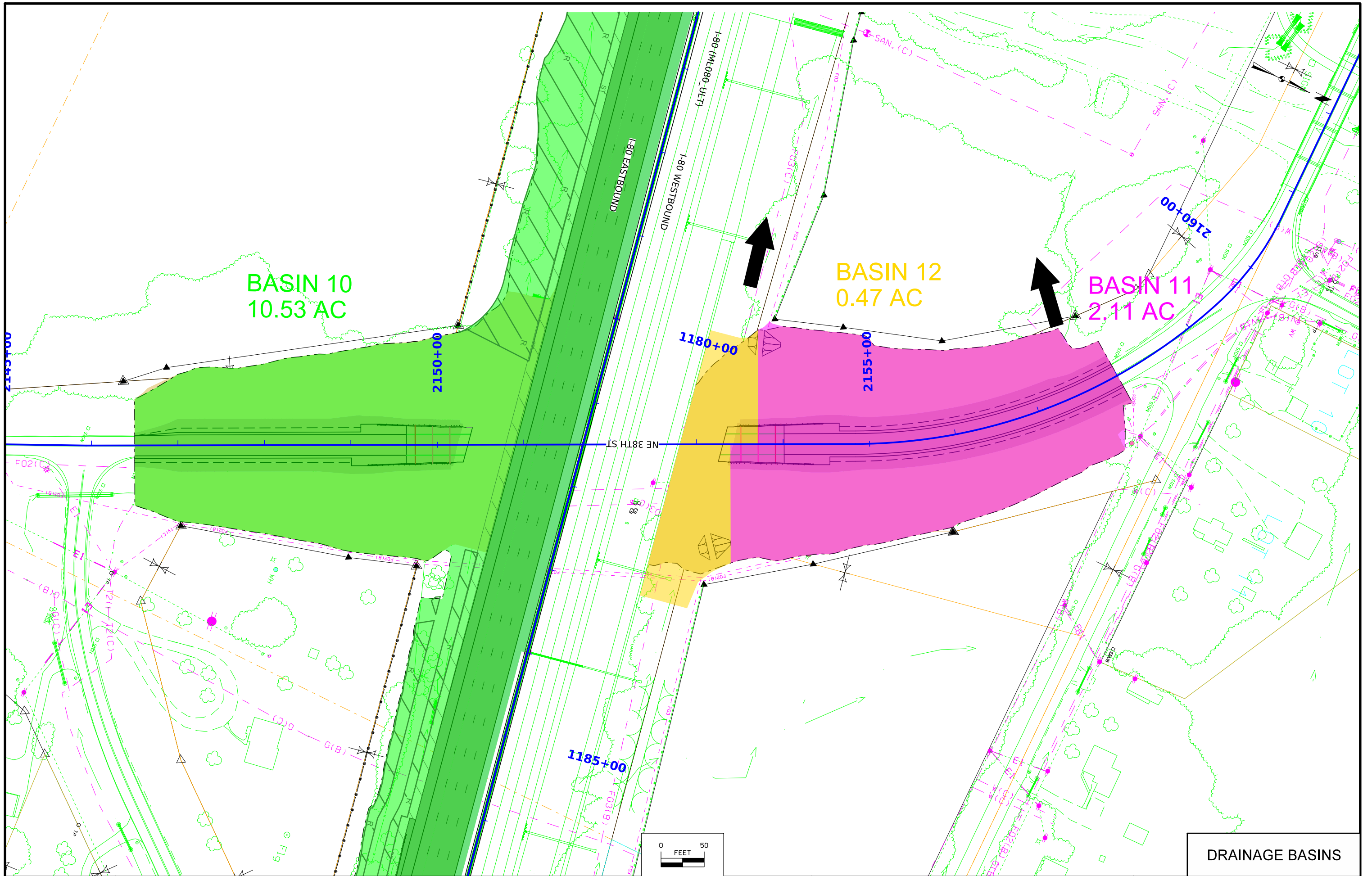
DRAINAGE BASINS

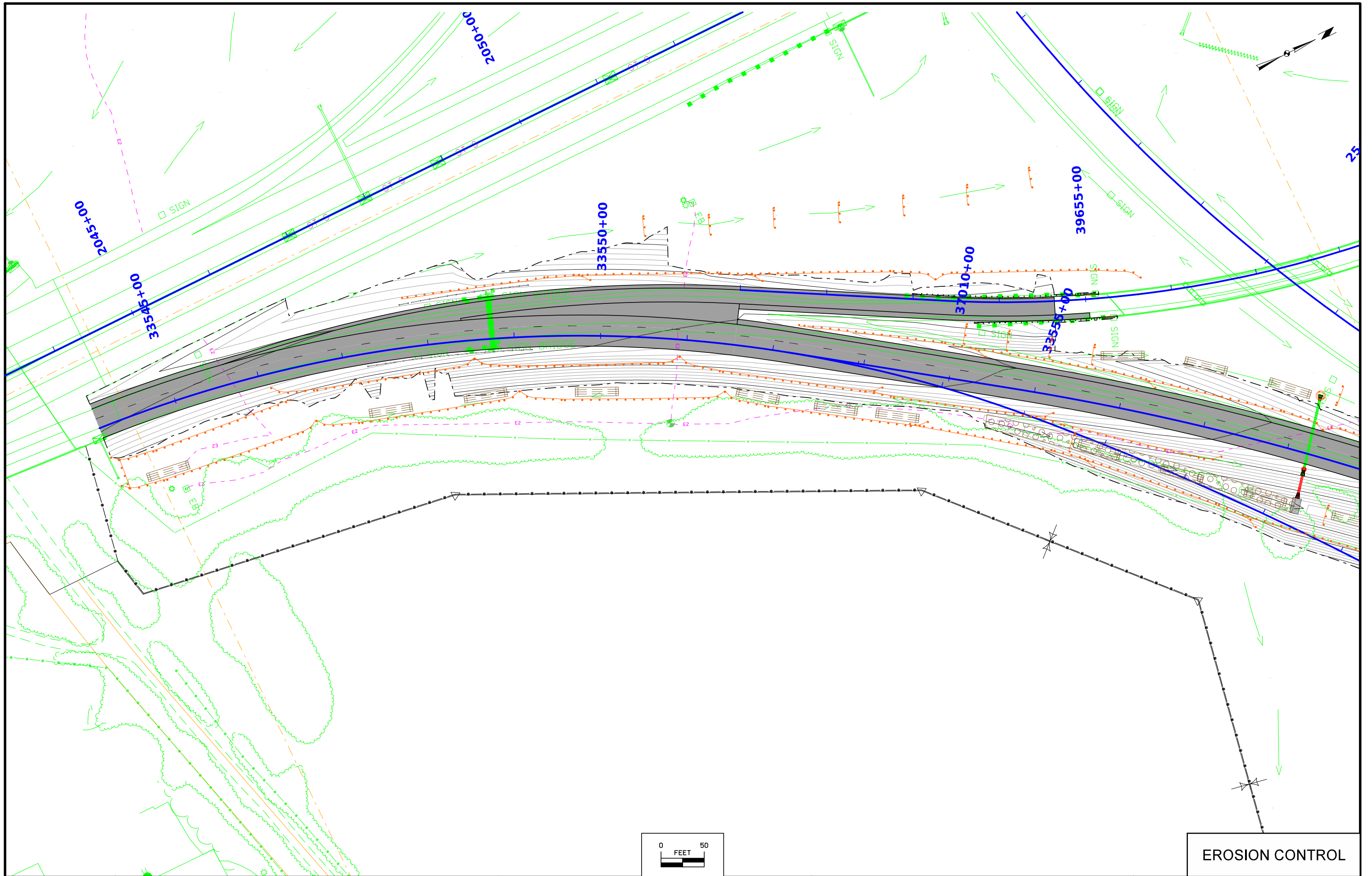


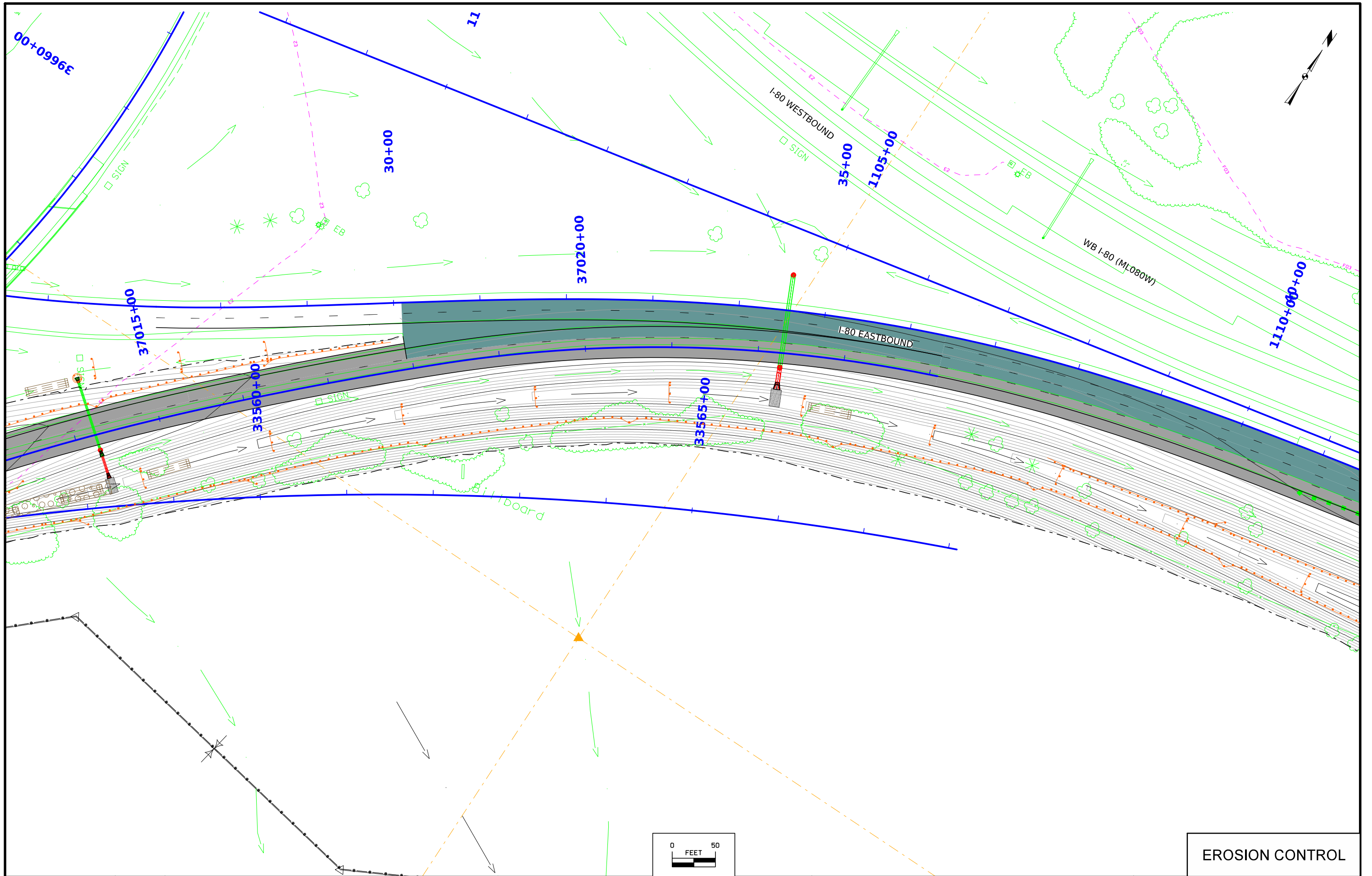


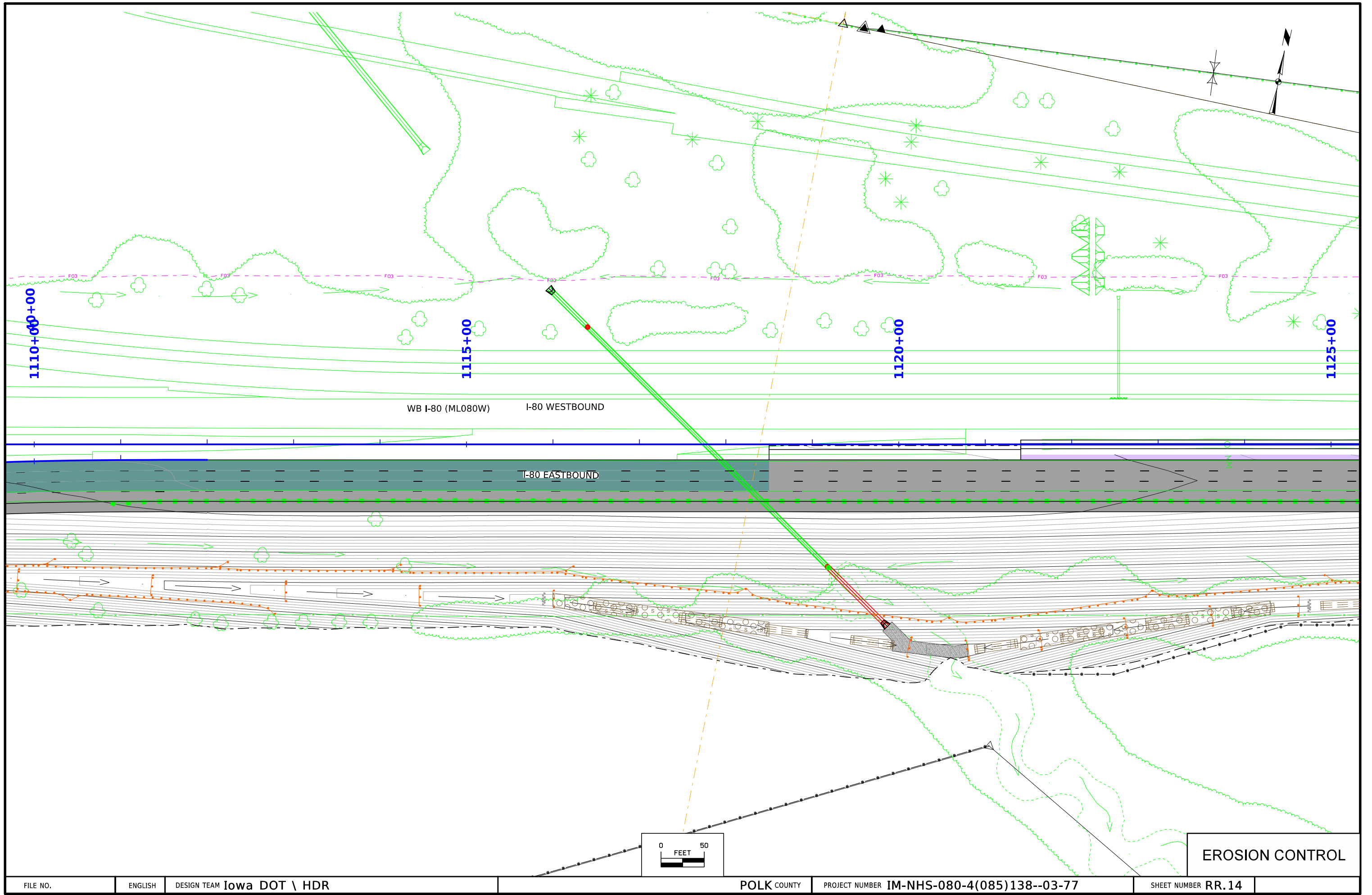


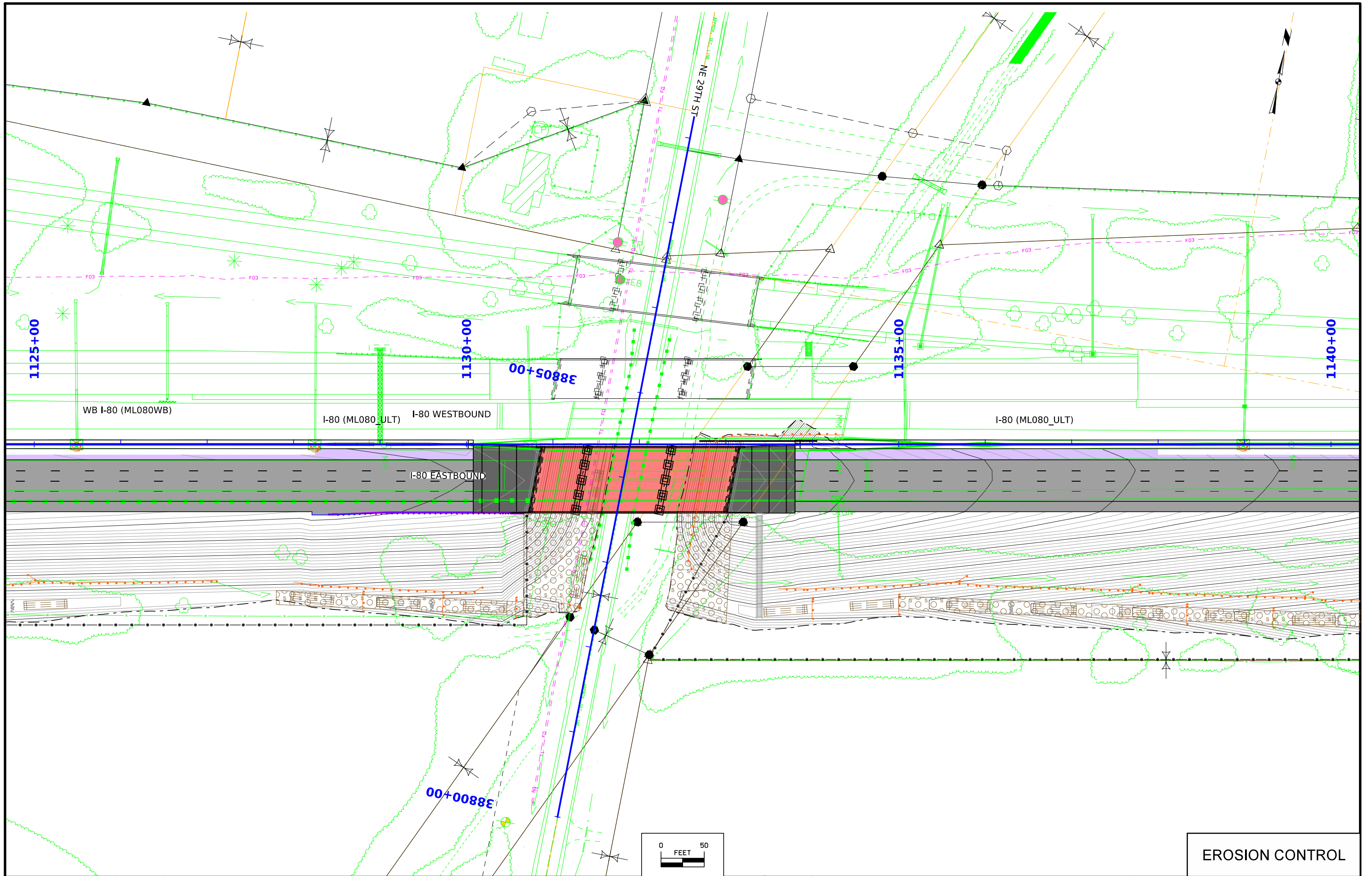




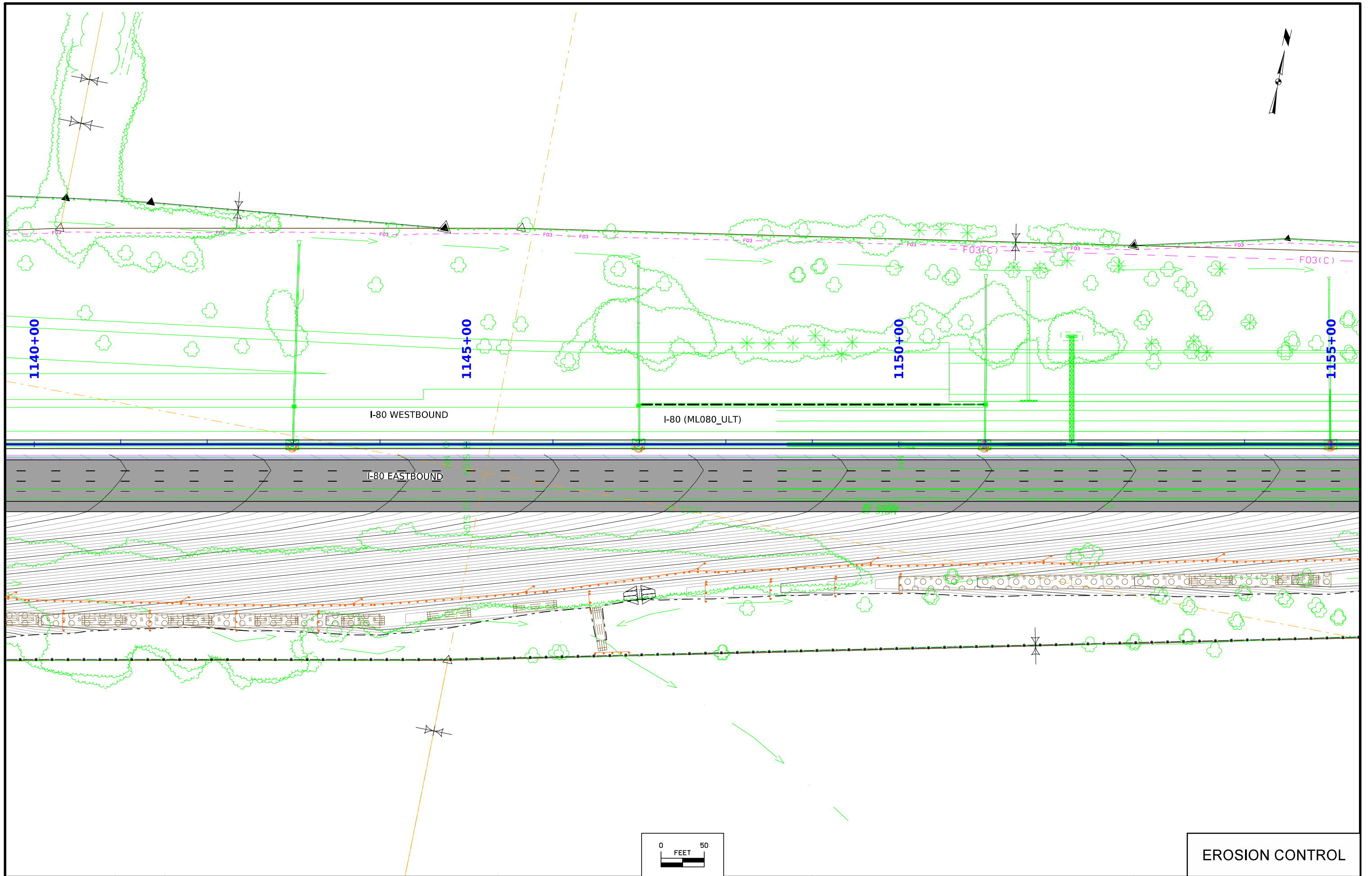


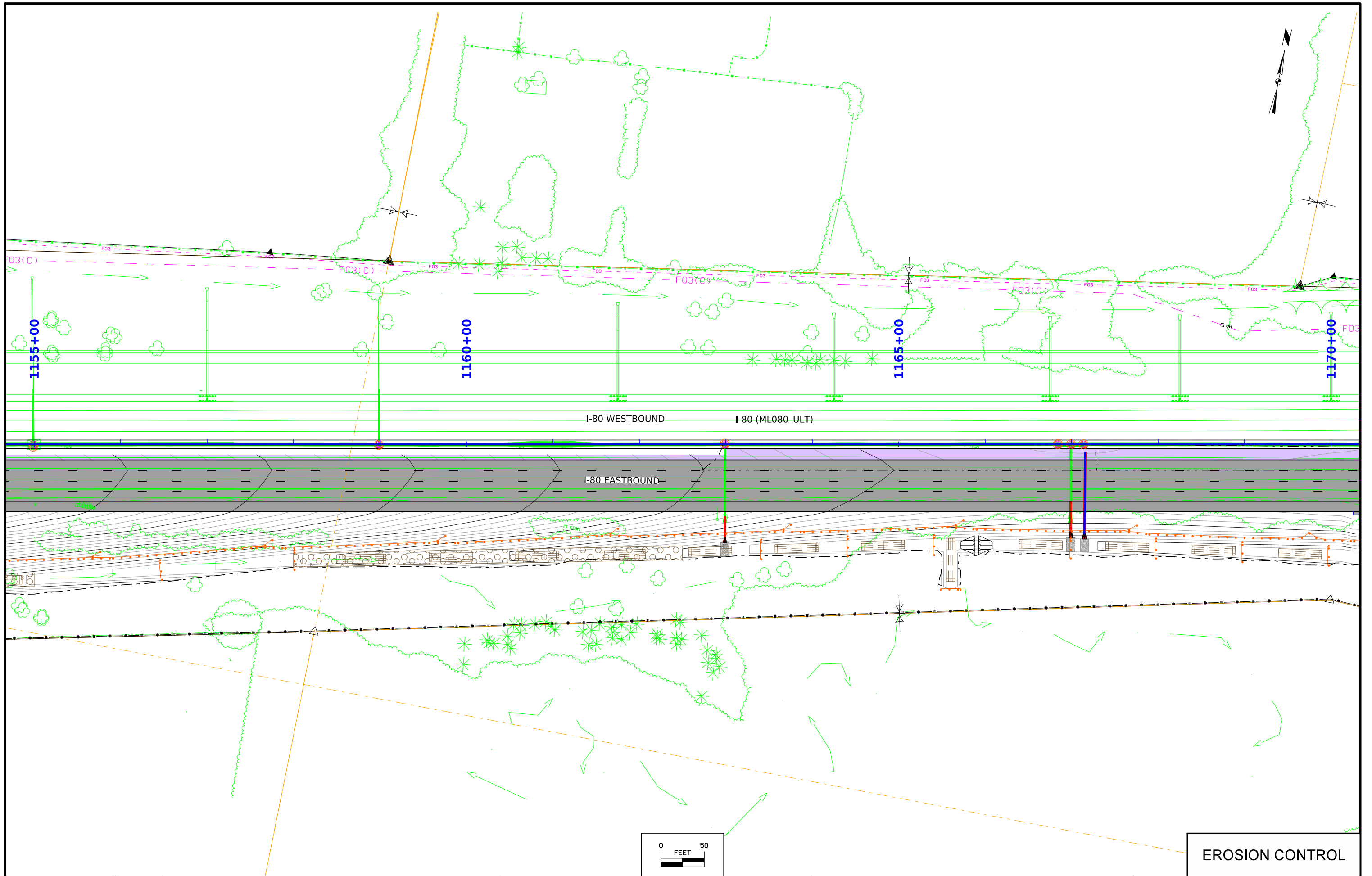


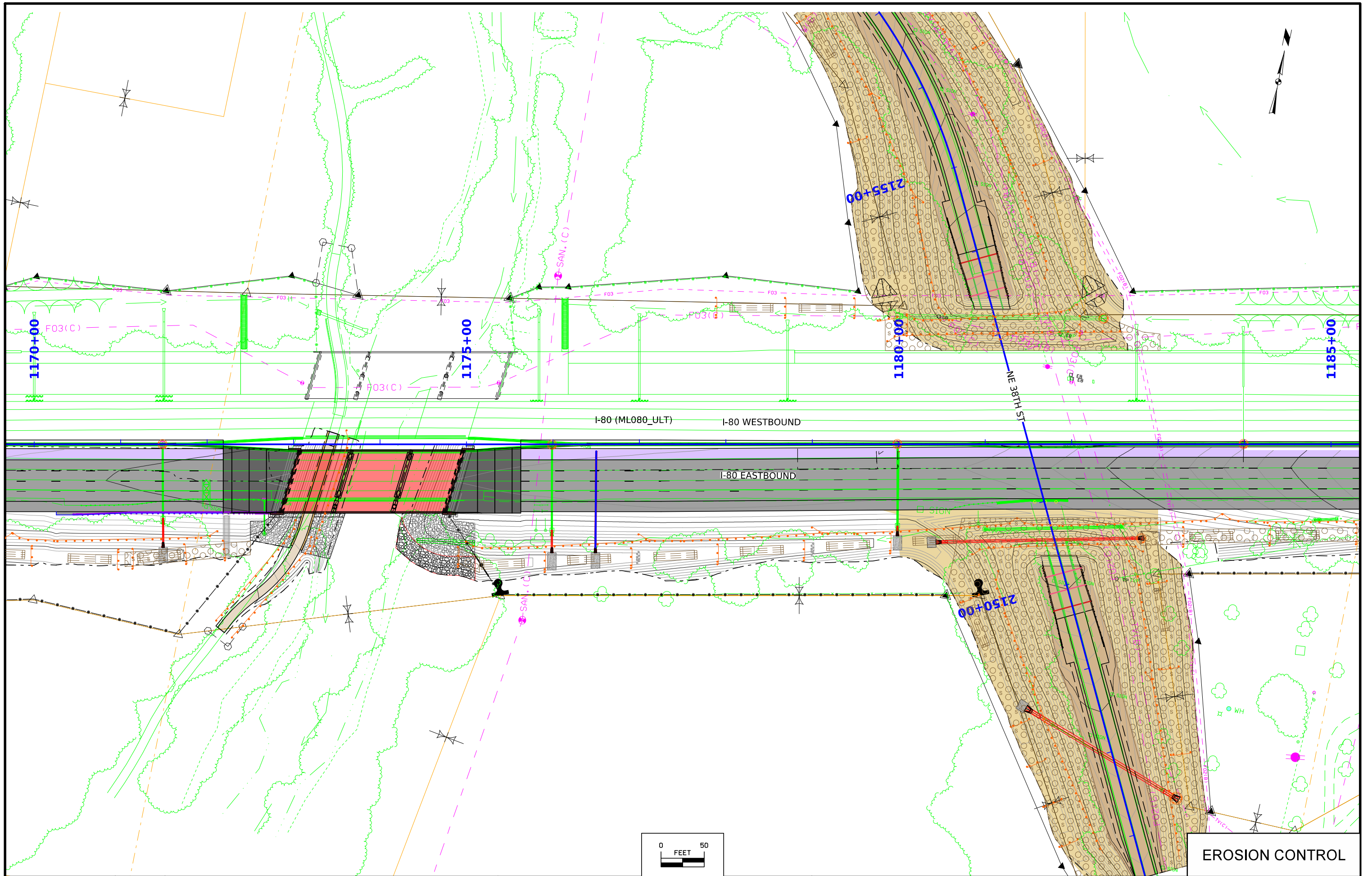




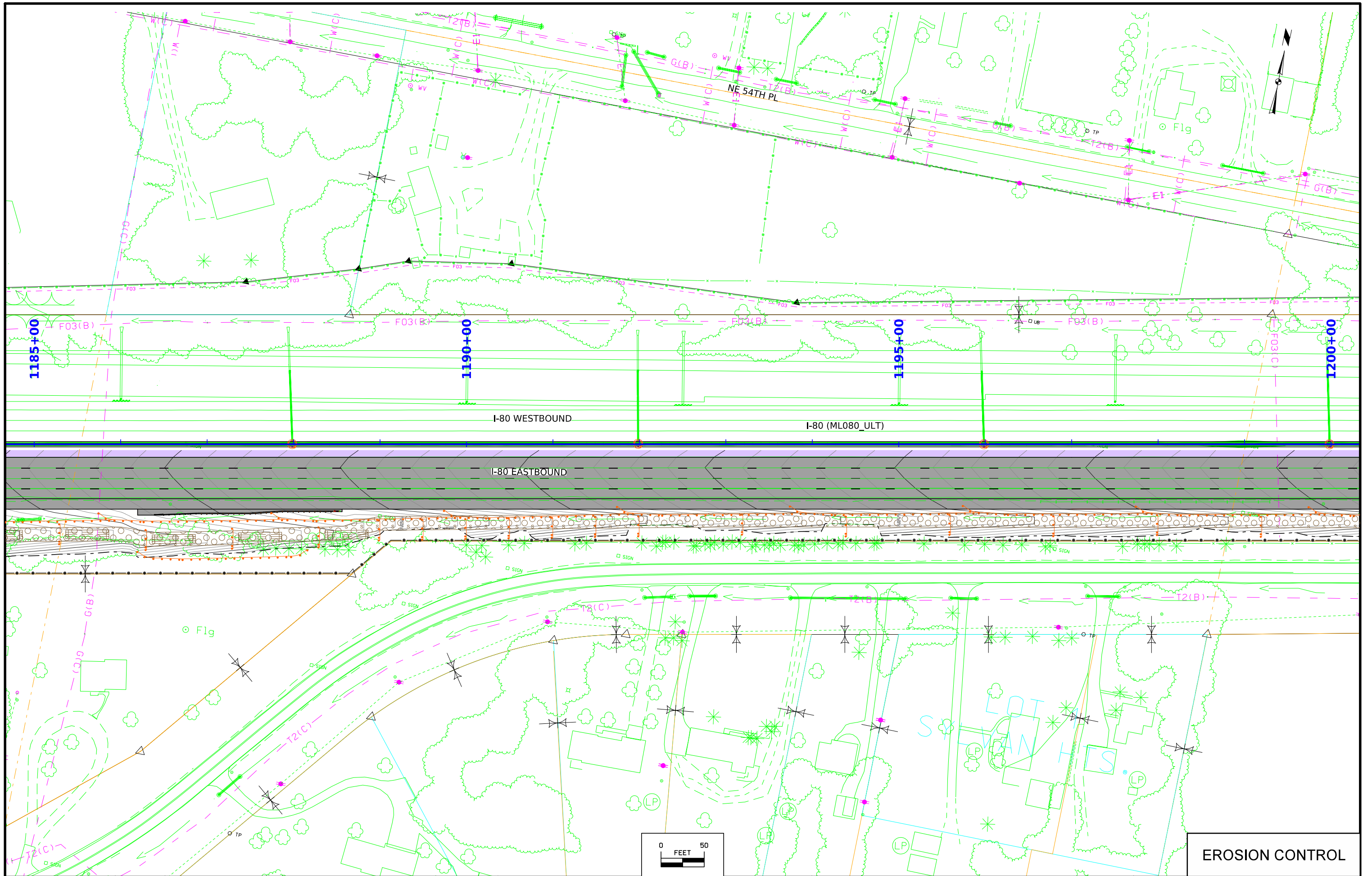
EROSION CONTROL



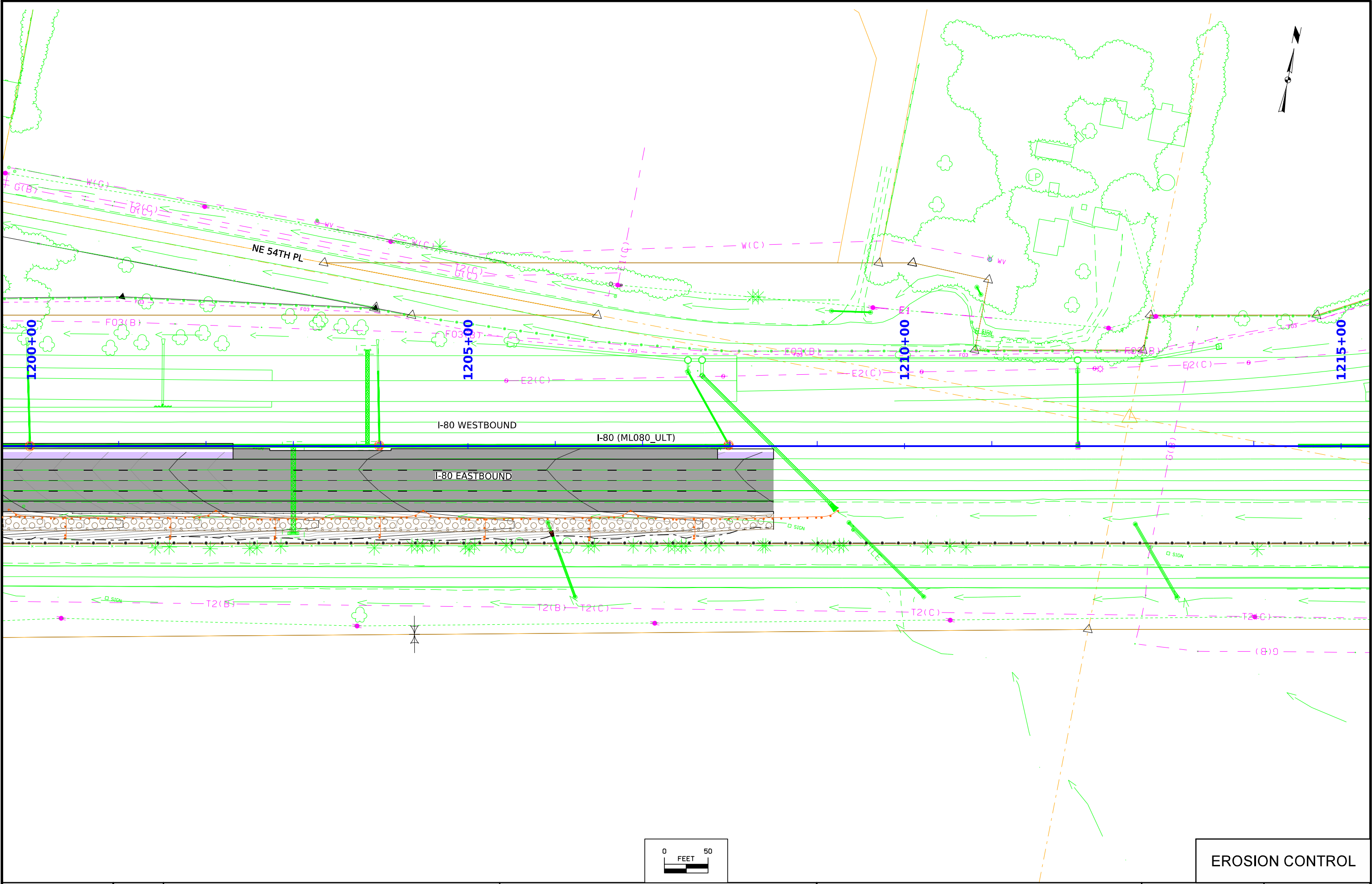




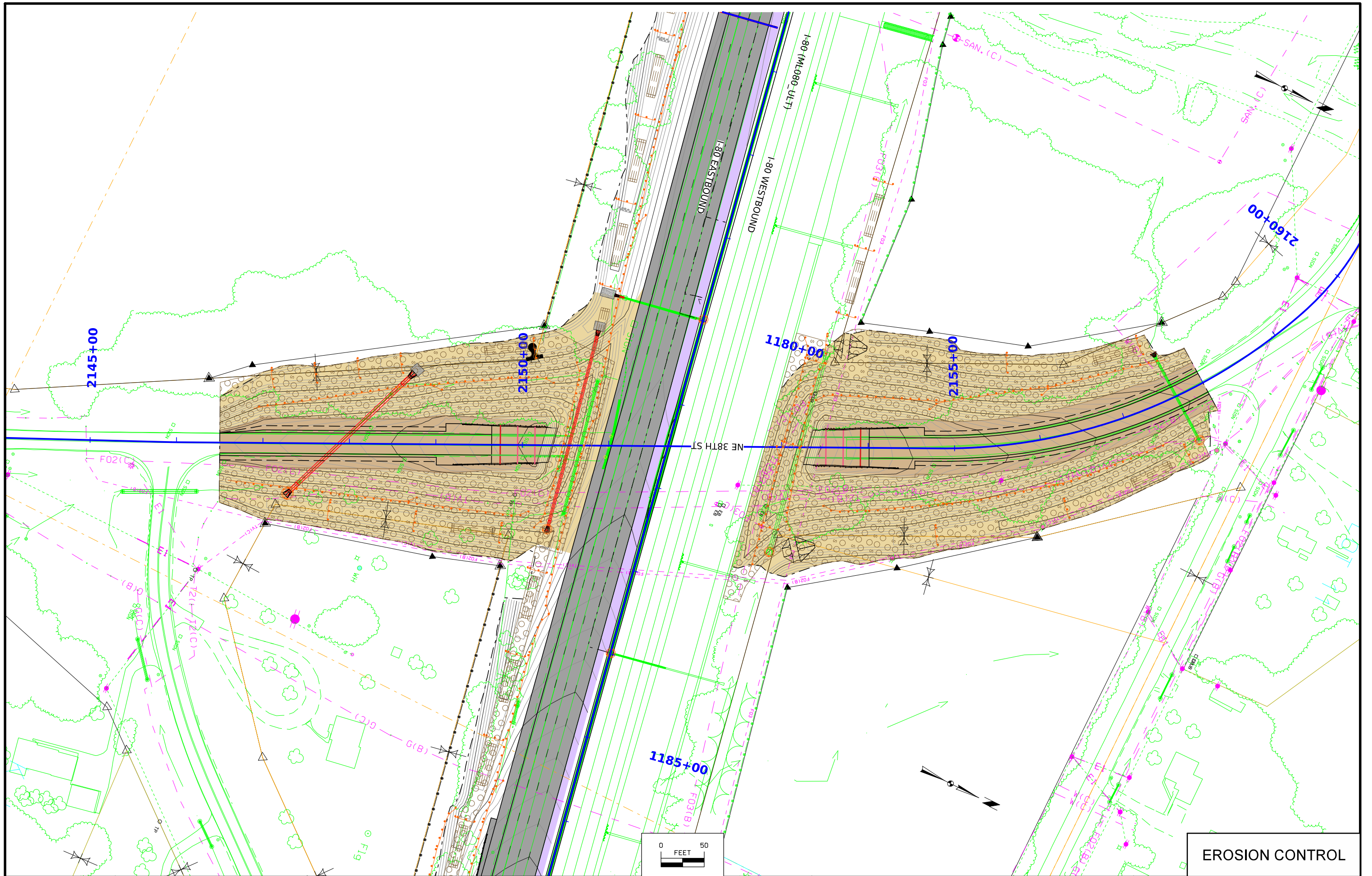
EROSION CONTROL



EROSION CONTROL



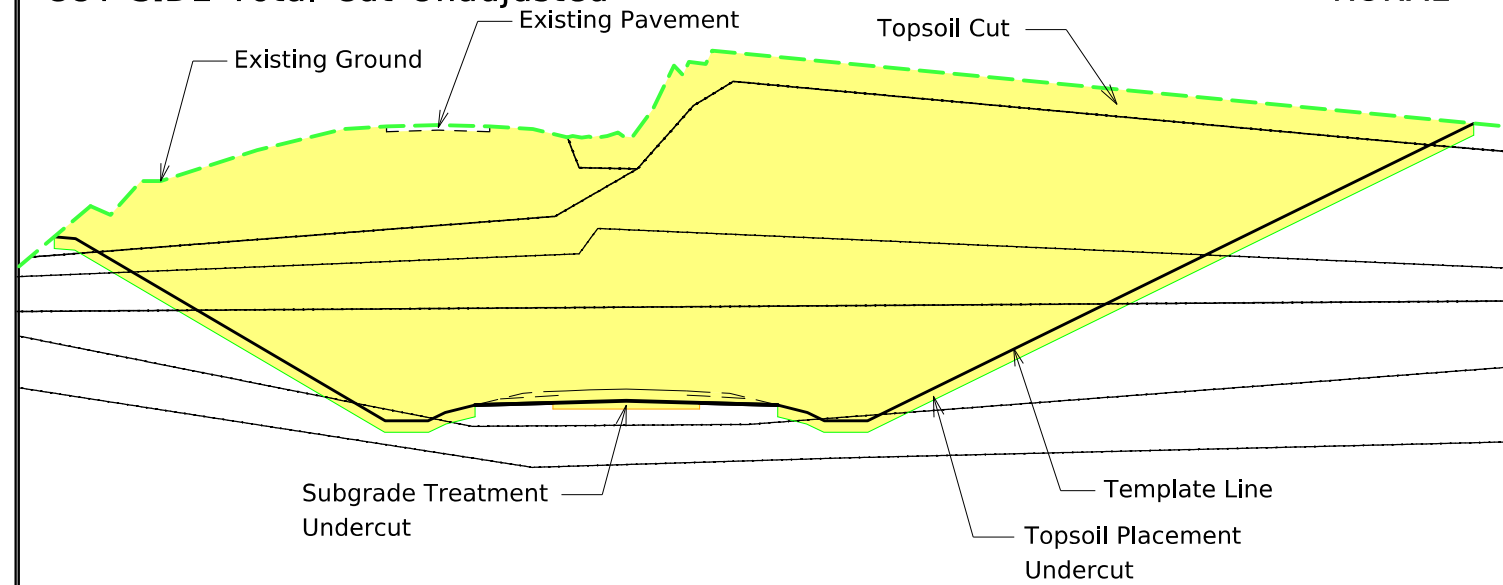
FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT \ HDR	POLK COUNTY	PROJECT NUMBER IM-NHS-080-4(085)138--03-77	SHEET NUMBER RR.20
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EROSION CONTROL

CUT SIDE Total Cut Unadjusted

RURAL

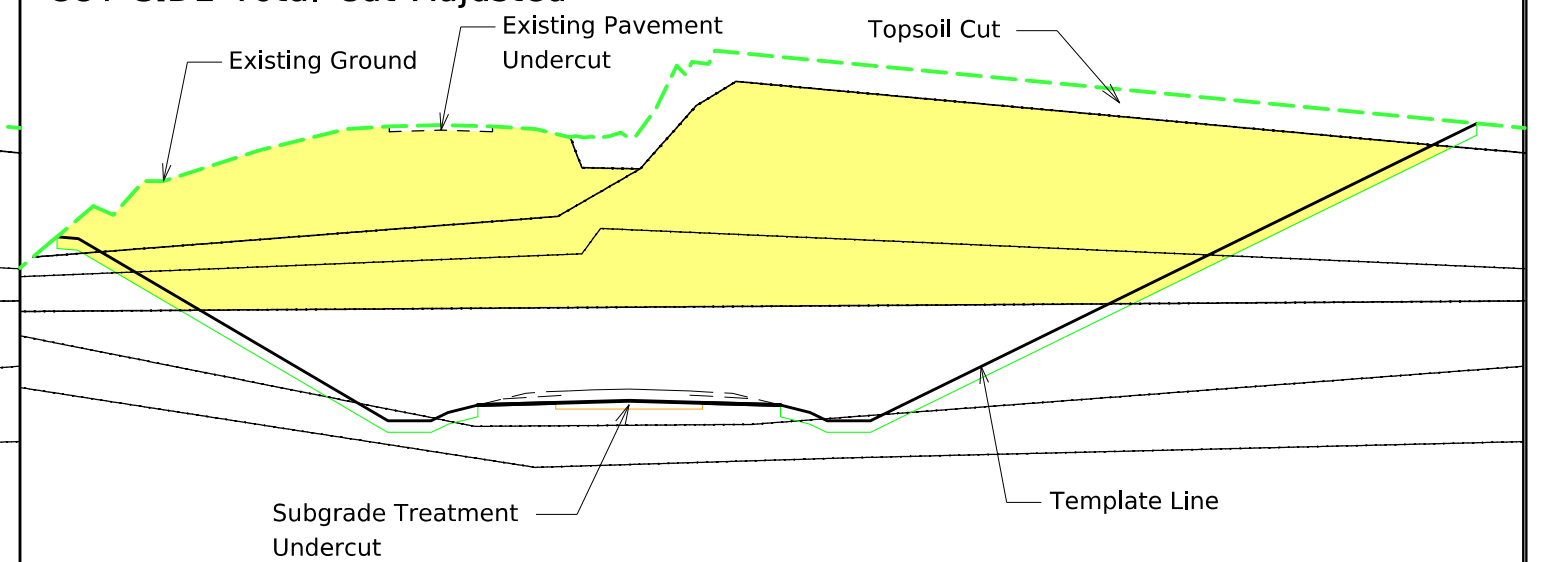


Notes:

1. "Total Cut Unadjusted" Column includes all cut values in the Station Range based on Typical, Topsoil and Subgrade Treatment needs.
2. "Total Cut Unadjusted" does not include and Existing Pavement values inside or outside the cut template as shown on cross sections.
3. Tabulated Plowing and Shaping operations are included in the "Total Cut Unadjusted" values.

CUT	SIDE	Total	Cut	Adjusted
D	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
D	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
E	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
E	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
F	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
F	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
G	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
G	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
H	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
H	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
I	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
I	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
J	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
J	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
K	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
K	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
L	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
L	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
M	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
M	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
N	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
N	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
O	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
O	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00

RURAL

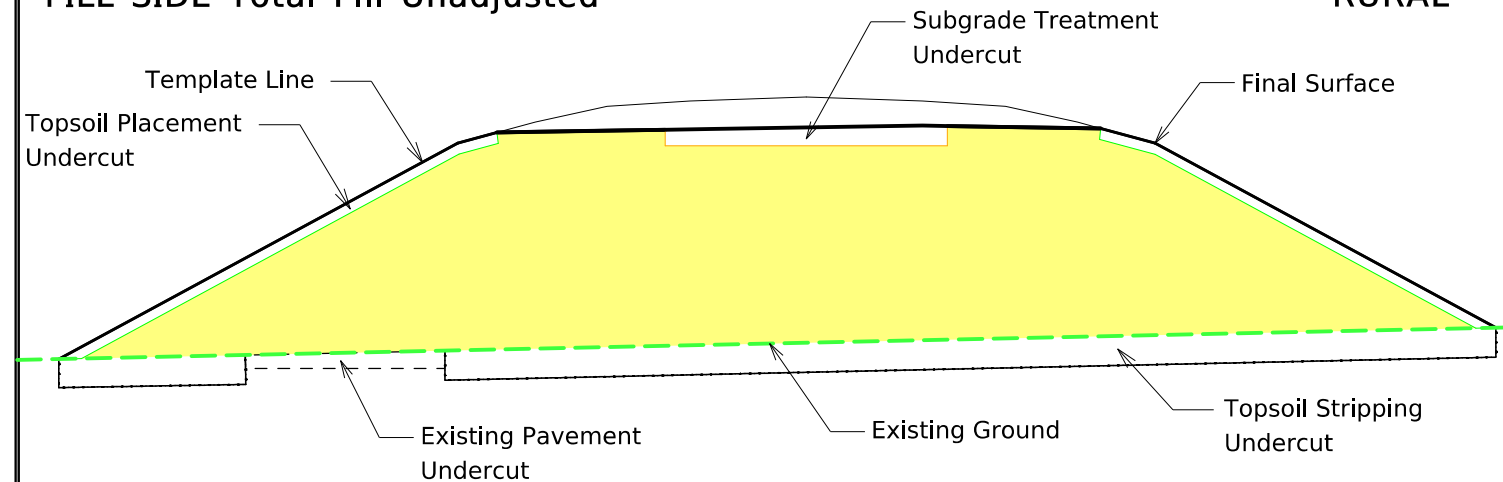


Notes:

1. "Total Cut Adjusted" Column includes all cut values usable as Class 10 material.
2. "Total Cut Adjusted" does not include and Existing Pavement , Existing Topsoil, or material to be wasted.

FILL SIDE Total Fill Unadjusted

RURAL

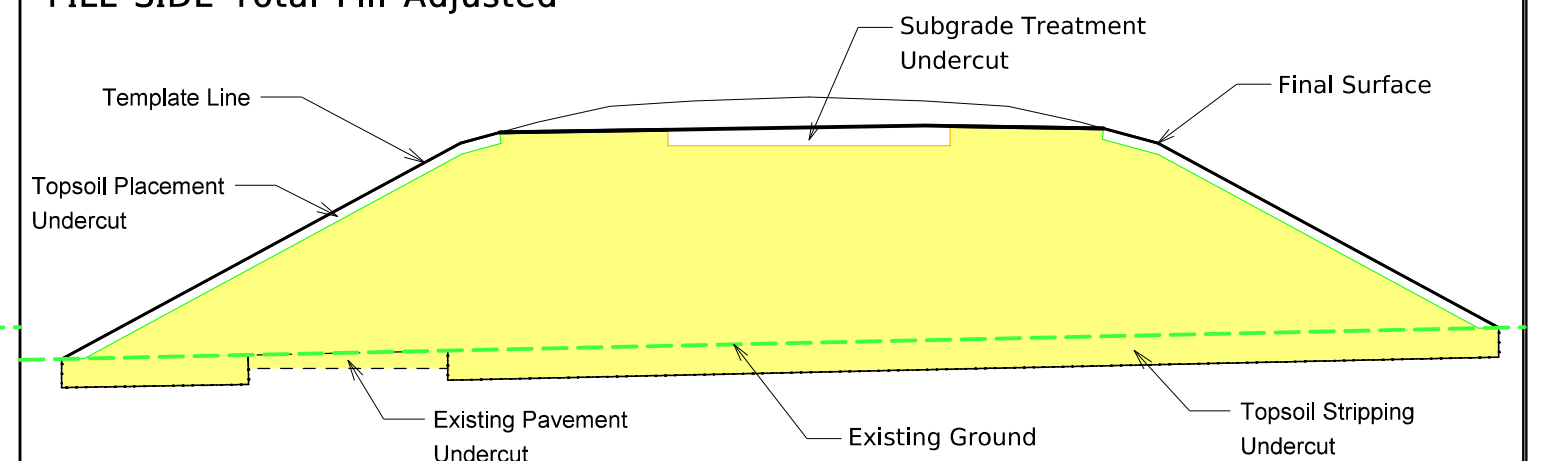


Notes:

1. "Total Fill Unadjusted" Column includes all Class 10, 12, and 13 fill. This excludes the topsoil, subgrade treatment, subbase, new pavement, and shoulder fill needs in that station range.
2. "Total Fill Unadjusted" Column does not include adjustments for additional fill from cuts such as existing pavement removed, plowing and shaping operations, entrances, dikes, or topsoil stripping.

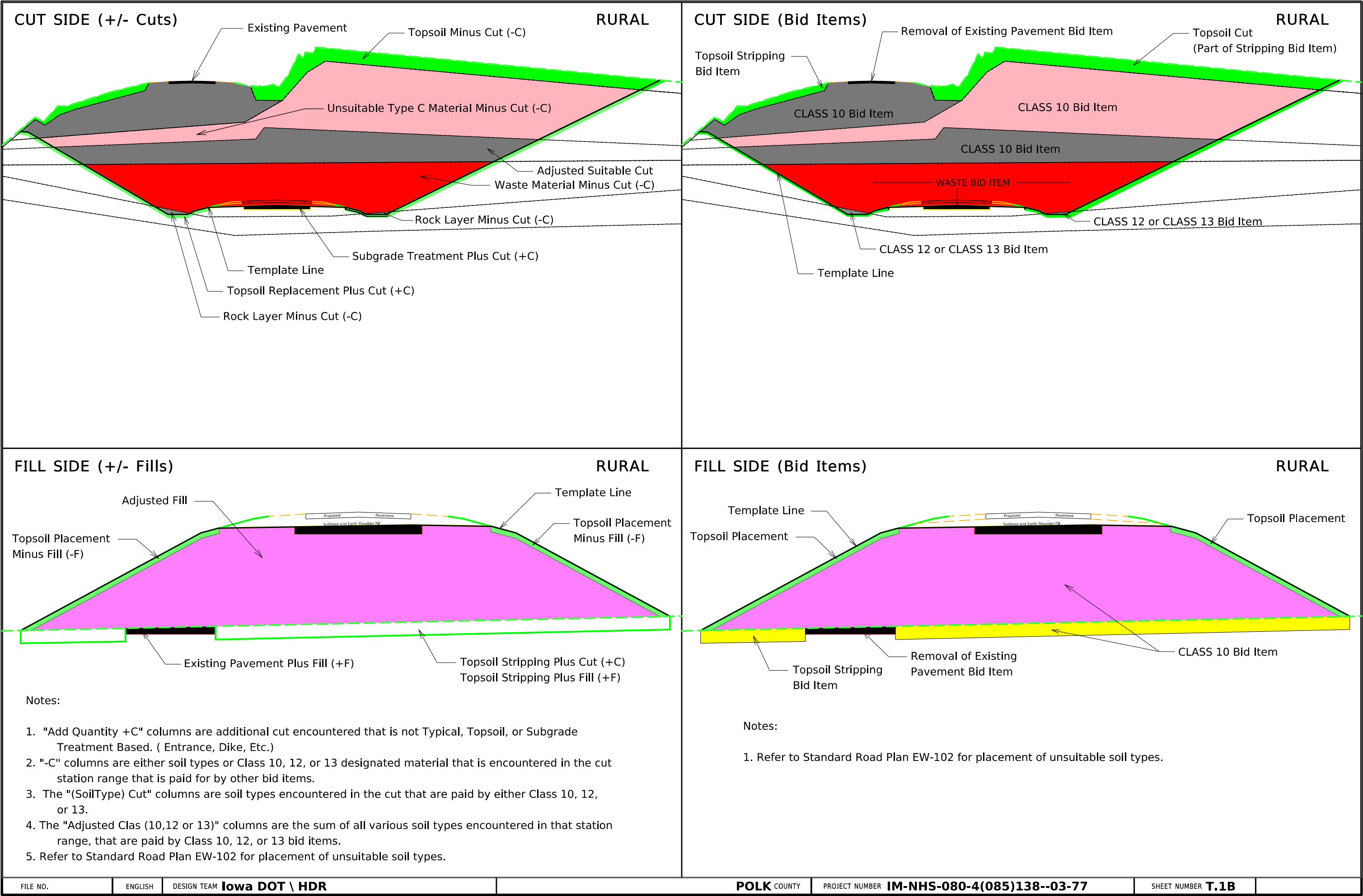
	FILL	SIDE	Total	Fill	Adjusted
1	1	1	2	1	1
2	1	1	2	1	1
3	1	1	2	1	1
4	1	1	2	1	1
5	1	1	2	1	1
6	1	1	2	1	1
7	1	1	2	1	1
8	1	1	2	1	1
9	1	1	2	1	1
10	1	1	2	1	1
11	1	1	2	1	1
12	1	1	2	1	1
13	1	1	2	1	1
14	1	1	2	1	1
15	1	1	2	1	1
16	1	1	2	1	1
17	1	1	2	1	1
18	1	1	2	1	1
19	1	1	2	1	1
20	1	1	2	1	1
21	1	1	2	1	1
22	1	1	2	1	1
23	1	1	2	1	1
24	1	1	2	1	1
25	1	1	2	1	1
26	1	1	2	1	1
27	1	1	2	1	1
28	1	1	2	1	1
29	1	1	2	1	1
30	1	1	2	1	1
31	1	1	2	1	1
32	1	1	2	1	1
33	1	1	2	1	1
34	1	1	2	1	1
35	1	1	2	1	1
36	1	1	2	1	1
37	1	1	2	1	1
38	1	1	2	1	1
39	1	1	2	1	1
40	1	1	2	1	1
41	1	1	2	1	1
42	1	1	2	1	1
43	1	1	2	1	1
44	1	1	2	1	1
45	1	1	2	1	1
46	1	1	2	1	1
47	1	1	2	1	1
48	1	1	2	1	1
49	1	1	2	1	1
50	1	1	2	1	1
51	1	1	2	1	1
52	1	1	2	1	1
53	1	1	2	1	1
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61	1	1	2	1	1
62	1	1	2	1	1
63	1	1	2	1	1
64	1	1	2	1	1
65	1	1	2	1	1
66	1	1	2	1	1
67	1	1	2	1	1
68	1	1	2	1	1
69	1	1	2	1	1
70	1	1	2	1	1
71	1	1	2	1	1
72	1	1	2	1	1
73	1	1	2	1	1
74	1	1	2	1	1
75	1	1	2	1	1
76	1	1	2	1	1
77	1	1	2	1	1
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80	1	1	2	1	1
81	1	1	2	1	1</

RURAL



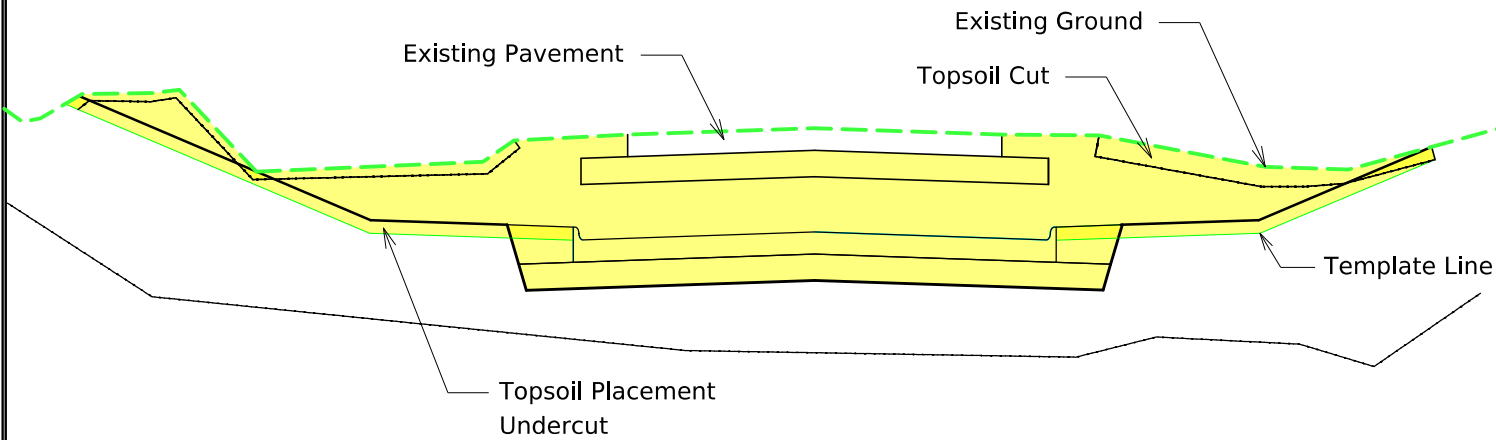
Notes:

1. "Total Fill Adjusted" Column includes all Class 10, 12, and 13 fill and adjustments for additional fill from cuts such as existing pavement, plowing and shaping operations, entrances, dikes, and topsoil stripping.
2. The available area to place unsuitable materials in the T Sheet tabulation does not include the undercut values from the topsoil stripping, existing pavement, or plowing and shaping



CUT SIDE Total Cut Unadjusted

URBAN

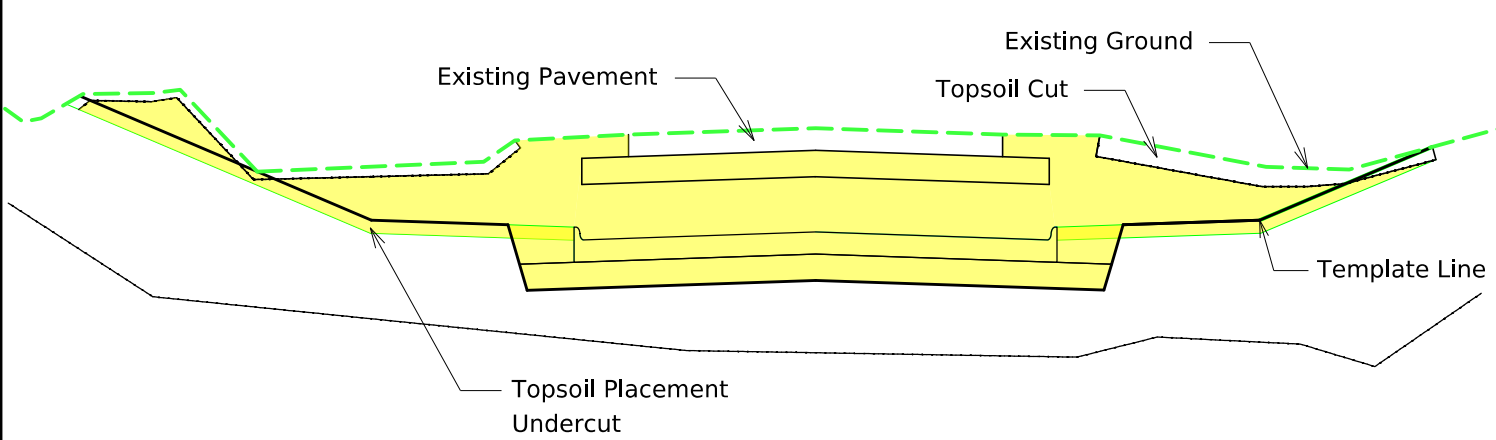


Notes:

- 1. "Total Cut Unadjusted" Column includes all cut values in the Station Range based on Typical, Topsoil and Subgrade Treatment needs.
- 2. "Total Cut Unadjusted" does not include and Existing Pavement values inside or outside the cut template as shown on cross sections.
- 3. Tabulated Plowing and Shaping operations are included in the "Total Cut Unadjusted" values.

CUT SIDE Total Cut Adjusted

URBAN

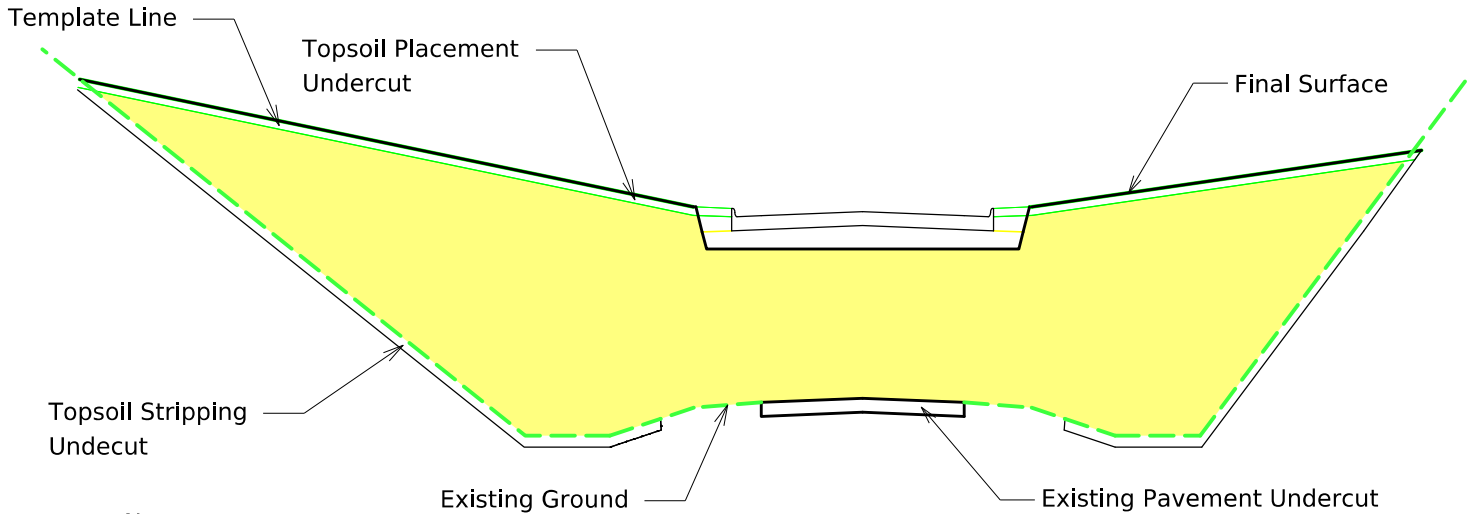


Notes:

- 1. "Total Cut Adjusted" Column includes all cut values usable as Class 10 material.
- 2. "Total Cut Adjusted" does not include and Existing Pavement , Existing Topsoil, or material to be wasted.

FILL SIDE Total Fill Unadjusted

URBAN

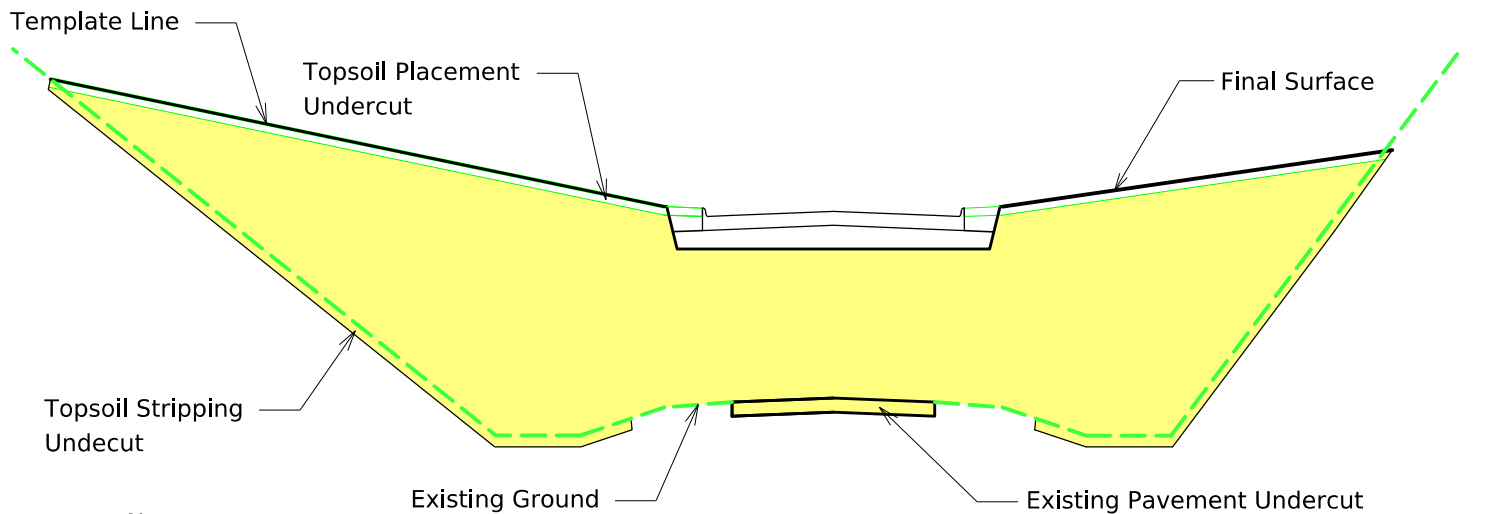


Notes:

- 1. "Total Fill Unadjusted" Column includes all Class 10, 12, and 13 fill. This excludes the topsoil, subgrade treatment, subbase, new pavement, and shoulder fill needs in that station range.
- 2. "Total Fill Unadjusted" Column does not include adjustments for additional fill from cuts such as existing pavement removed, plowing and shaping operations, entrances, dikes, or topsoil stripping.

FILL SIDE Total Fill Adjusted

URBAN

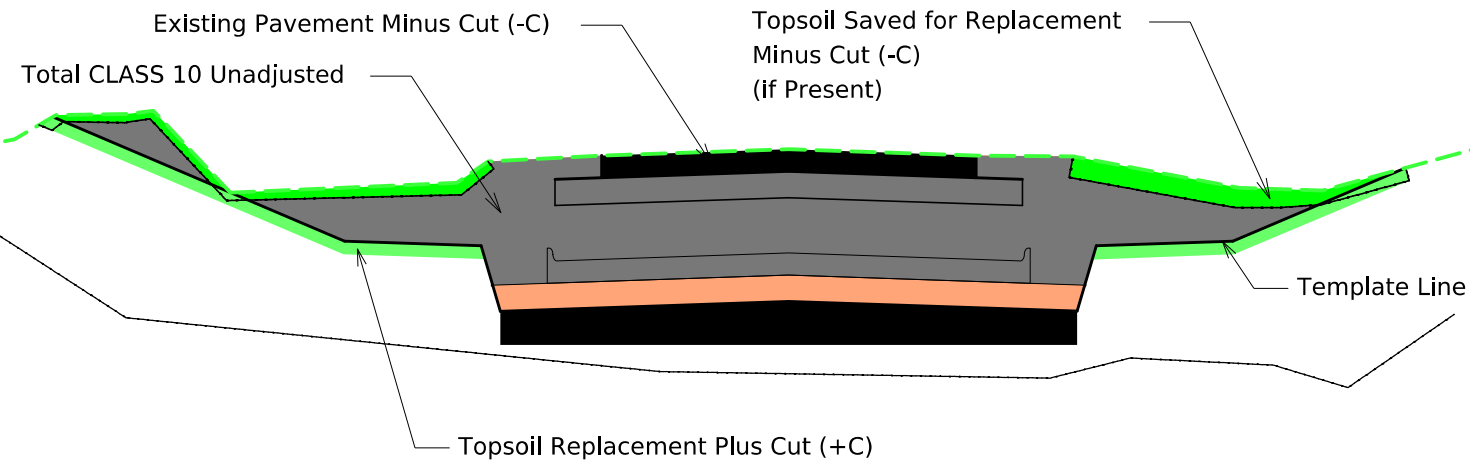


Notes:

- 1. "Total Fill Adjusted" Column includes all Class 10, 12, and 13 fill and adjustments for additional fill from cuts such as existing pavement, plowing and shaping operations, entrances, dikes, and topsoil stripping.
- 2. The available area to place unsuitable materials in the T Sheet tabulation does not include the undercut values from the topsoil stripping, existing pavement, or plowing and shaping.

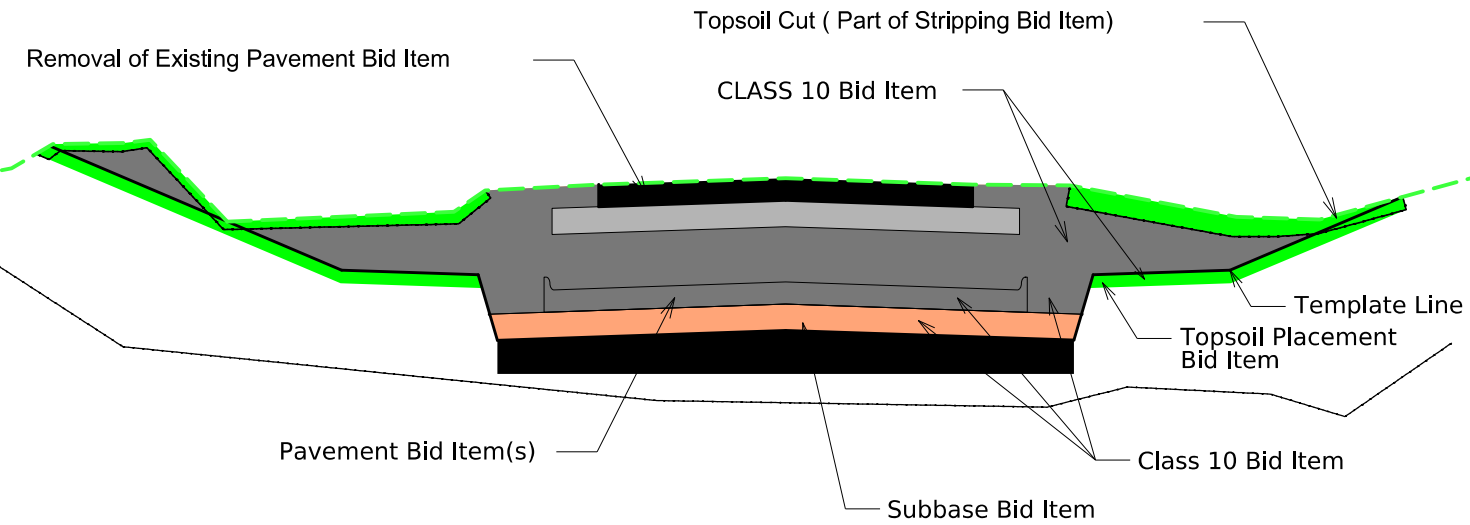
CUT SIDE (+/- Cuts)

URBAN



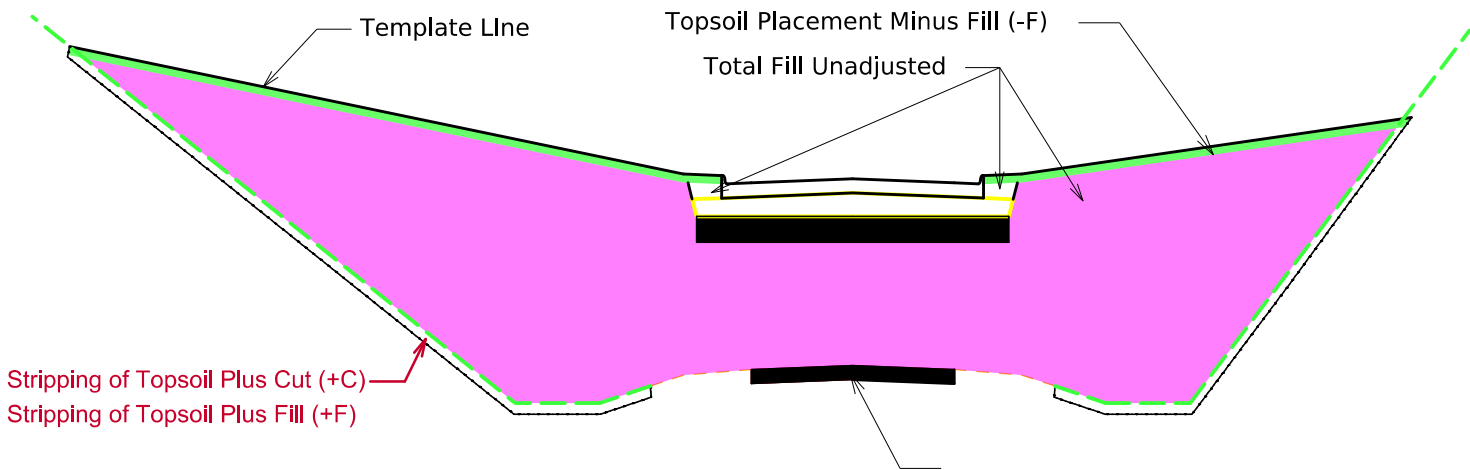
CUT SIDE (Bid Items)

URBAN



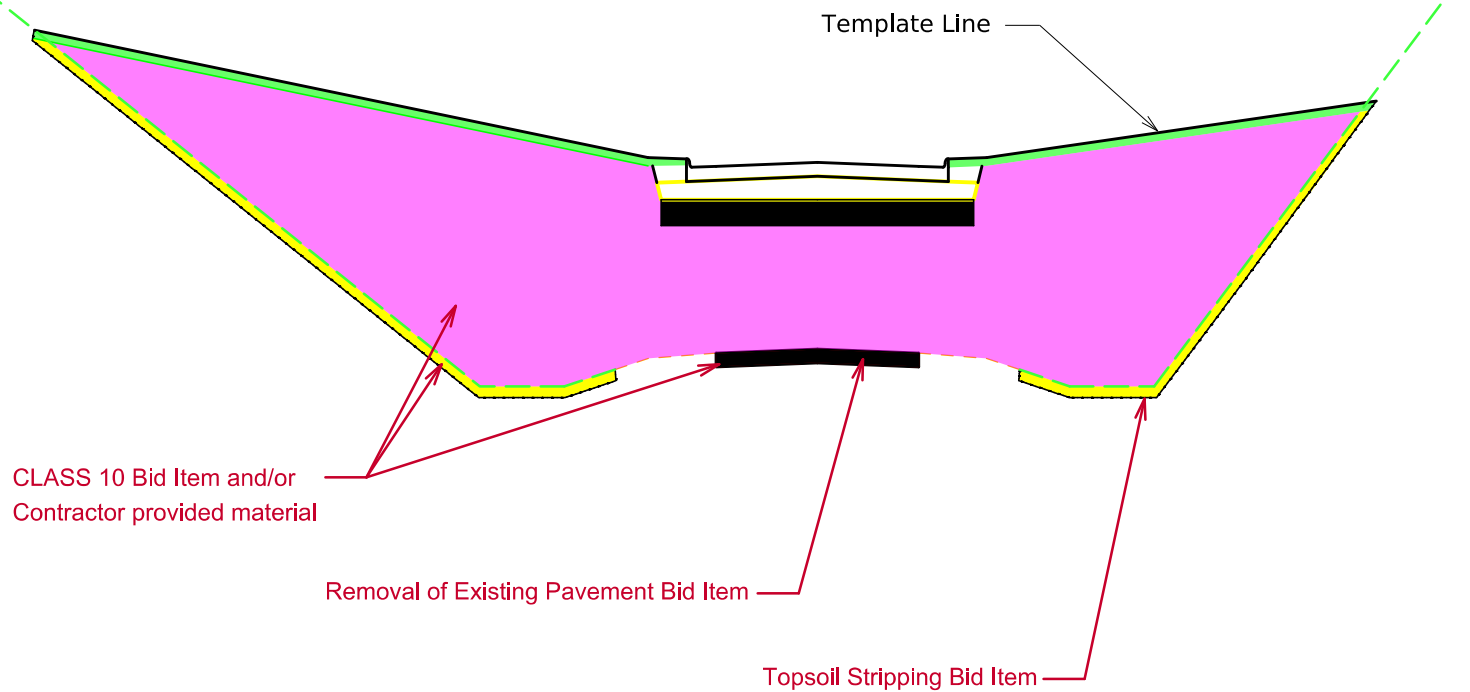
FILL SIDE (+/- Fills)

URBAN



FILL SIDE (Bid Items)

URBAN



Notes:

1. "Manually Calculated Cut Adjustments +C" columns are additional cut encountered that is not Typical, Topsoil, or Subgrade Treatment Based. (Entrance, Dike, Etc.)
2. "-C" columns are either soil types or Class 10, 12, or 13 designated material that is encountered in the cut station range that is paid for by other bid items.
3. The "(SoilType) Cut" columns are soil types encountered in the cut that are paid by either Class 10, 12 or 13.
4. The "Adjusted Clas (10,12 or 13)" columns are the sum of all various soil types encountered in that station range, that are paid by Class 10, 12, or 13 bid items.

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut					Fill				Checks (EW-102)		Topsoil											
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume							
STAGE 1																							
STG1 DET01																							
400+00.00	24	16	3	4	16	0	0	0	16	0	0	3	0	0	3	0							
400+25.00	27	11	7	9	11	0	0	0	11	0	0	7	0	0	7	0							
400+50.00	30	12	9	8	12	0	0	0	12	0	0	9	0	0	9	0							
400+75.00	29	11	10	8	11	1	1	1	10	0	0	10	0	0	10	0							
401+00.00	28	10	10	7	10	1	1	2	8	0	0	10	0	0	11	0							
401+25.00	25	7	11	7	7	3	3	4	2	0	0	11	0	0	11	0							
401+50.00	23	4	12	8	4	7	7	9	-5	0	0	12	0	0	12	0							
401+75.00	23	3	13	8	3	8	8	11	-8	0	0	13	0	1	12	0							
402+00.00	23	2	14	7	2	11	11	15	-13	0	0	14	2	2	12	0							
402+25.00	25	2	15	7	2	16	16	21	-19	0	0	15	3	5	11	0							
402+50.00	25	2	16	7	2	19	19	25	-23	0	0	16	5	7	10	0							
402+75.00	26	2	17	7	2	20	20	26	-25	0	0	17	5	8	9	0							
403+00.00	26	2	17	8	2	22	22	29	-27	0	0	17	6	8	9	0							
403+25.00	21	1	14	6	1	18	18	23	-22	0	0	14	5	7	7	0							
403+45.78	4	0	3	1	0	3	3	5	-4	0	0	3	1	1	1	0							
403+50.00	25	2	16	7	2	19	19	24	-23	0	0	16	5	7	8	0							
403+75.00	24	2	15	7	2	16	16	21	-19	0	0	15	5	7	8	0							
404+00.00	23	2	15	7	2	12	12	15	-13	0	0	15	4	6	8	0							
404+25.00	22	3	13	7	3	6	6	8	-5	0	0	13	3	4	9	0							
404+50.00	21	3	12	6	3	4	4	5	-2	0	0	12	2	3	9	0							
404+75.00	21	3	12	6	3	5	5	6	-3	0	0	12	3	4	8	0							
405+00.00	20	3	12	5	3	6	6	8	-6	0	0	12	4	5	7	0							
405+25.00	19	2	12	5	2	8	8	10	-8	0	0	12	4	6	6	0							
405+50.00	17	2	10	5	2	7	7	9	-7	0	0	10	4	5	5	0							
405+75.00	14	2	7	5	2	4	4	5	-3	0	0	7	2	3	5	0							
406+00.00	11	2	3	6	2	1	1	2	0	0	0	3	0	1	3	0							
406+25.00	7	1	0	6	1	2	2	2	-1	0	0	0	0	0	0	0							
406+50.00	8	3	0	5	3	3	3	4	-2	0	0	0	0	0	0	0							
406+75.00	2	1	0	2	1	0	0	1	0	0	0	0	0	0	0	0							
406+81.02																							
STG1 DET01 Totals:	593	114	298	181	114	223	223	291	-177	0	0	298	64	90	209	0							

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
4-21-15

Station	Cut					Fill				Checks (EW-102)		Topsoil											
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume							
STG1 DET02																							
500+00.00	10	3	2	6	3	1	1	1	2	0	0	2	0	0	2	0							
500+25.00	12	1	3	8	1	1	1	1	0	0	0	2	0	0	3	0							
500+50.00	12	2	2	8	2	1	1	1	1	0	0	2	0	0	2	0							
500+75.00	12	2	2	7	2	1	1	1	2	0	0	2	0	0	3	0							
501+00.00	14	3	4	7	3	1	1	1	2	0	0	4	0	0	4	0							
501+25.00	15	3	5	7	3	1	1	1	2	0	0	5	0	0	5	0							
501+50.00	16	4	5	8	4	0	0	1	3	0	0	5	0	0	5	0							
501+75.00	17	5	5	8	5	1	1	1	4	0	0	5	0	0	5	0							
502+00.00	18	4	6	7	4	2	2	2	2	0	0	6	1	1	5	0							
502+25.00	19	4	8	7	4	4	4	5	-2	0	0	8	2	3	5	0							
502+50.00	21	4	10	7	4	6	6	8	-4	0	0	10	4	6	4	0							
503+00.00	22	4	11	8	4	6	6	8	-4	0	0	11	5	7	4	0							
503+23.36	22	4	11	7	4	4	4	6	-2	0	0	11	5	7	4	0							
503+25.00	2	0	1	1	0	0	0	1	0	0	0	1	0	1	0	0							
503+50.00	25	5	13	8	5	7	7	9	-4	0	0	13	6	9	4	0							
503+75.00	27	4	15	8	4	11	11	14	-10	0	0	15	8	12	3	0							
504+00.00	30	4	18	8	4	15	15	20	-16	0	0	18	12	16	2	0							
504+25.00	32	4	20	8	4	16	16	21	-17	0	0	20	14	19	2	0							
504+50.00	33	5	21	7	5	17	17	22	-17	0	0	21	14	19	2	0							
504+75.00	34	5	22	7	5	15	15	19	-14	0	0	22	14	20	2	0							
505+00.00	35	6	22	7	6	15	15	20	-14	0	0	22	15	20	2	0							
505+25.00	33	5	21	7	5	22	22	28	-23	0	0	21	13	19	2	0							
505+50.00	30	4	19	7	4	26	26	34	-30	0	0	19	12	16	3	0							
505+75.00	30	4	19	7	4	27	27	35	-31	0	0	19	11	15	4	0							
506+00.00	30	4	18	7	4	25	25	33	-28	0	0	18	11	15	4	0							
506+25.00	30	5	19	7	5	25	25	33	-28	0	0	19	11	15	4	0							
506+45.00	24	3	15	5	3	19	19	25	-22	0	0	15	9	12	3	0							
506+50.00	6	1	4	1	1	4	4	6	-5	0	0	4	2	3	1	0							
506+75.00	27	4	17	6	4	21	21	27	-23	0	0	17	9	13	5	0							
507+00.00	25	3	16	6	3	19	19	25	-22	0	0	16	7	10	5	0							
507+25.00	23	3	14	6	3	17	17	22	-18	0	0	14	6	8	6	0							
507+50.00	21	3	12	6	3	14	14	18	-15	0	0	12	4	6	7	0							
507+75.00	18	3	10	5	3	11	11	14	-11	0	0	10	2	4	7	0							
507+75.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
507+75.82	16	3	8	5	3	6	6	8	-5	0	0	8	1	1	7	0							
508+00.00	17	3	9	5	3	4	4	6	-2	0	0	9	0	0	8	0							
508+25.00	18	4	9	5	4	3	3	4	-1	0	0	9	0	0	9	0							
508+50.00	19	5	9	6	5	2	2	2	3	0	0	9	0	0	9	0							
508+75.00	21	7	8	6	7	1	1	1	6	0	0	8	0	0	8	0							
509+00.00	6	3	1	2	3	0	0	0	3	0	0	1	0	0	1	0							
509+06.53																							
STG1 DET02 Totals:	824	143	433	249	143	371	371	484	-342	0	0	433	198	278	158	0							

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
4-21-15

Station	Cut					Fill				Checks (EW-102)		Topsoil											
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume							
STAGE 2																							
STG2_ML080EB																							
36+42.02	285	251	28	7	251	42	42	55	196	0	0	28	21	29	-2	0							
36+50.00	872	764	87	21	764	135	135	175	589	0	0	87	66	92	-5	0							
36+75.00	882	773	87	21	773	137	137	178	595	0	0	87	66	93	-6	0							
37+00.00	926	817	88	21	817	141	141	184	633	0	0	88	68	95	-6	0							
37+25.00	955	845	89	21	845	148	148	193	653	0	0	89	68	96	-7	0							
37+50.00	989	879	89	21	879	157	157	204	675	0	0	89	68	96	-7	0							
37+75.00	140	125	12	3	125	23	23	29	95	0	0	12	10	13	-1	0							
37+78.49	852	757	77	18	757	144	144	188	570	0	0	77	59	83	-6	0							
38+00.00	971	862	89	21	862	178	178	231	631	0	0	89	69	96	-8	0							
38+25.00	944	835	88	21	835	189	189	246	589	0	0	88	69	97	-8	0							
38+50.00	897	788	88	21	788	196	196	255	534	0	0	88	69	97	-9	0							
38+75.00	853	744	88	21	744	211	211	275	469	0	0	88	69	97	-9	0							
39+00.00	819	710	88	21	710	240	240	312	398	0	0	88	69	97	-9	0							
39+25.00	792	683	88	21	683	255	255	332	351	0	0	88	69	97	-9	0							
39+50.00	770	661	88	21	661	272	272	354	307	0	0	88	69	97	-9	0							
39+75.00	750	640	88	21	640	290	290	377	263	0	0	88	70	98	-10	0							
40+00.00	729	618	88	22	618	300	300	390	229	0	0	88	70	98	-10	0							
40+25.00	713	603	88	22	603	309	309	402	202	0	0	88	70	98	-10	0							
40+50.00	704	594	88	22	594	317	317	412	182	0	0	88	70	98	-10	0							
40+75.00	701	591	87	23	591	321	321	417	174	0	0	87	70	98	-11	0							
41+00.00	686	576	88	22	576	332	332	432	144	0	0	88	71	99	-11	0							
41+25.00	653	542	88	22	542	358	358	465	77	0	0	88	71	99	-11	0							
41+50.00	621	511	88	22	511	380	380	494	17	0	0	88	70	99	-11	0							
41+75.00	609	499	88	22	499	393	393	511	-12	0	0	88	71	99	-11	0							
41+99.99																							
STG2_ML080EB																							
Totals:	18,113	15,669	1,965	479	15,669	5,466	5,466	7,107	8,563	0	0	1,965	1,541	2,159	-195	0							

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut					Fill				Checks (EW-102)		Topsoil											
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume							
STG2 ML080 OV/WID																							
1111+51.57	581	478	82	21	478	356	356	464	15	0	0	82	0	0	82	0							
1111+75.00	609	499	88	22	499	391	391	509	-9	0	0	88	36	50	38	0							
1112+00.00	624	512	90	22	512	408	408	531	-19	0	0	90	72	101	-12	0							
1112+25.00	633	521	90	22	521	423	423	550	-29	0	0	90	73	102	-12	0							
1112+50.00	623	512	90	21	512	438	438	570	-58	0	0	90	73	102	-12	0							
1112+75.00	622	511	90	21	511	458	458	596	-85	0	0	90	73	102	-11	0							
1113+00.00	629	517	91	21	517	465	465	604	-87	0	0	91	73	102	-12	0							
1113+25.00	635	523	91	21	523	479	479	623	-100	0	0	91	73	102	-12	0							
1113+50.00	619	507	90	21	507	495	495	643	-136	0	0	90	73	102	-12	0							
1113+75.00	580	469	90	21	469	504	504	655	-187	0	0	90	72	102	-12	0							
1114+00.00	540	429	90	21	429	522	522	679	-250	0	0	90	73	102	-12	0							
1114+25.00	502	391	90	21	391	547	547	711	-320	0	0	90	72	101	-11	0							
1114+50.00	472	361	90	21	361	573	573	746	-385	0	0	90	72	101	-11	0							
1114+75.00	436	325	90	21	325	597	597	776	-451	0	0	90	72	101	-11	0							
1115+00.00	397	287	89	21	287	616	616	801	-514	0	0	89	72	100	-11	0							
1115+25.00	377	266	90	21	266	640	640	832	-565	0	0	90	72	101	-11	0							
1115+50.00	355	244	90	21	244	666	666	866	-622	0	0	90	72	101	-11	0							
1115+75.00	346	235	90	21	235	691	691	899	-663	0	0	90	72	101	-11	0							
1116+00.00	375	262	92	21	262	709	709	922	-660	0	0	92	74	104	-12	0							
1116+25.00	408	292	95	21	292	724	724	941	-650	0	0	95	77	108	-14	0							
1116+75.00	432	313	97	21	313	752	752	977	-664	0	0	97	80	112	-15	0							
1117+00.00	449	328	100	21	328	784	784	1,020	-691	0	0	100	83	116	-16	0							
1117+25.00	476	351	103	21	351	826	826	1,074	-723	0	0	103	86	120	-17	0							
1117+50.00	511	383	106	21	383	872	872	1,134	-751	0	0	106	89	125	-18	0							
1117+75.00	542	410	110	21	410	901	901	1,171	-760	0	0	110	92	129	-20	0							
1118+00.00	574	439	113	22	439	923	923	1,200	-760	0	0	113	95	134	-21	0							
1118+25.00	632	494	116	22	494	956	956	1,243	-749	0	0	116	99	138	-22	0							
1118+50.00	692	552	118	22	552	988	988	1,285	-733	0	0	118	101	142	-23	0							
STG2 ML080 OV/WID Totals:	14,675	11,416	2,662	597	11,416	17,706	17,706	23,019	-11,605	0	0	2,662	2,071	2,901	-240	0							

Refer to Standard Road Plans EW-101 and EW-102.

107-28
04-21-15

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

[illegible]

Refer to Standard Road Plans EW-101 and EW-102.																						107-28 04-21-15	
TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS																							
Station	Cut					Fill				Checks (EW-102)		Topsoil											
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume							
STG2 ML080																							
1121+41.09	200	134	43	24	134	58	58	76	58	0	0	43	18	25	18	0							
1121+50.00	976	790	119	67	790	317	317	412	377	0	0	119	101	141	-22	0							
1121+75.00	1,048	861	119	67	861	312	312	406	456	0	0	119	100	141	-22	0							
1122+00.00	1,118	932	118	67	932	321	321	417	515	0	0	118	100	140	-21	0							
1122+25.00	1,126	941	117	67	941	333	333	433	509	0	0	117	99	138	-21	0							
1122+50.00	1,041	858	115	67	858	343	343	446	412	0	0	115	96	135	-20	0							
1122+75.00	920	741	112	67	741	328	328	427	315	0	0	112	93	130	-18	0							
1123+00.00	793	619	107	67	619	323	323	420	199	0	0	107	88	124	-17	0							
1123+25.00	690	521	102	67	521	350	350	455	66	0	0	102	84	117	-15	0							
1123+50.00	606	441	98	67	441	376	376	489	-48	0	0	98	79	111	-13	0							
1123+75.00	515	354	94	67	354	397	397	517	-163	0	0	94	75	105	-11	0							
1124+00.00	433	276	90	67	276	423	423	550	-274	0	0	90	71	100	-10	0							
1124+25.00	385	230	88	67	230	448	448	583	-353	0	0	88	69	96	-9	0							
1124+50.00	356	202	86	68	202	472	472	613	-411	0	0	86	67	94	-8	0							
1124+75.00	337	184	86	67	184	490	490	638	-454	0	0	86	67	94	-8	0							
1125+00.00	316	164	85	67	164	499	499	649	-485	0	0	85	66	93	-8	0							
1125+25.00	293	143	83	67	143	503	503	654	-512	0	0	83	64	90	-7	0							
1125+50.00	276	128	81	67	128	513	513	667	-539	0	0	81	62	87	-6	0							
1125+75.00	263	116	80	67	116	532	532	692	-576	0	0	80	61	85	-5	0							
1126+00.00	252	107	78	67	107	545	545	709	-603	0	0	78	59	83	-5	0							
1126+25.00	250	105	78	67	105	549	549	714	-610	0	0	78	59	83	-5	0							
1126+50.00	247	102	77	67	102	548	548	713	-610	0	0	77	58	81	-4	0							
1126+75.00	238	95	76	67	95	547	547	711	-617	0	0	76	57	80	-4	0							
1127+00.00	228	86	75	67	86	551	551	717	-631	0	0	75	56	78	-3	0							
1127+25.00	217	77	73	67	77	552	552	718	-641	0	0	73	54	76	-3	0							
1127+50.00	207	69	71	67	69	557	557	724	-655	0	0	71	52	73	-2	0							
1127+75.00	204	65	71	67	65	562	562	731	-666	0	0	71	52	73	-2	0							
1128+00.00	217	72	74	72	72	586	586	762	-690	0	0	74	54	75	-2	0							
1128+25.00	231	79	76	76	79	615	615	800	-721	0	0	76	55	78	-1	0							
1128+50.00	235	81	78	76	81	613	613	797	-715	0	0	78	57	80	-2	0							
1128+75.00	242	87	79	76	87	602	602	783	-696	0	0	79	59	82	-3	0							
1129+00.00	252	96	81	76	96	595	595	774	-678	0	0	81	60	85	-4	0							
1129+25.00	262	104	82	76	104	573	573	746	-641	0	0	82	62	86	-5	0							
1129+50.00	273	114	83	76	114	537	537	698	-584	0	0	83	63	88	-5	0							
1129+75.00	302	136	85	81	136	511	511	665	-529	0	0	85	65	91	-6	0							
1130+00.00	342	168	87	87	168	501	501	651	-483	0	0	87	67	94	-7	0							
1130+25.00	372	197	87	88	197	461	461	599	-403	0	0	87	68	96	-9	0							
1130+50.00	452	281	83	87	281	285	285	371	-89	0	0	83	71	99	-16	0							
1130+75.00	848	684	78	87	684	74	74	96	587	0	0	78	71	99	-22	0							
1131+00.00	1,065	949	71	44	949	10	10	14	936	0	0	71	69	97	-25	0							
1131+25.00	575	530	45	0	530	13	13	17	513	0	0	45	41	58	-13	0							
1131+50.00	99	87	12	0	87	2	2	3	84	0	0	12	7	10	2	0							
1131+75.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
1132+00.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
1132+25.00	80	40	39	0	40	115	115																

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS																						107-28 04-21-15
Refer to Standard Road Plans EW-101 and EW-102.																						
Station	Cut					Fill				Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume						
1137+50.00	365	201	91	73	201	387	387	504	-302	0	0	91	71	100	-8	0						
1137+75.00	370	209	92	69	209	393	393	511	-303	0	0	92	72	101	-8	0						
1138+00.00	374	216	93	65	216	404	404	526	-310	0	0	93	73	102	-9	0						
1138+25.00	370	211	94	65	211	409	409	531	-320	0	0	94	73	103	-9	0						
1138+50.00	363	204	94	65	204	416	416	541	-337	0	0	94	74	103	-9	0						
1138+75.00	366	206	96	64	206	425	425	553	-347	0	0	96	75	105	-9	0						
1139+00.00	371	210	97	64	210	439	439	571	-361	0	0	97	76	107	-10	0						
1139+25.00	375	212	98	64	212	462	462	601	-389	0	0	98	77	109	-10	0						
1139+50.00	344	182	98	64	182	496	496	646	-464	0	0	98	77	108	-10	0						
1139+75.00	301	140	96	64	140	521	521	678	-538	0	0	96	76	106	-10	0						
1140+00.00	278	119	95	64	119	514	514	668	-549	0	0	95	74	104	-9	0						
1140+25.00	262	103	95	64	103	496	496	645	-542	0	0	95	74	103	-9	0						
1140+50.00	246	88	94	64	88	472	472	614	-525	0	0	94	73	102	-8	0						
1140+75.00	234	77	92	64	77	435	435	566	-489	0	0	92	71	100	-8	0						
1141+00.00	229	73	92	64	73	397	397	517	-444	0	0	92	71	99	-7	0						
1141+25.00	225	70	91	64	70	361	361	469	-399	0	0	91	70	99	-7	0						
1141+50.00	221	66	91	64	66	329	329	428	-362	0	0	91	70	98	-7	0						
1141+75.00	224	69	91	64	69	291	291	379	-309	0	0	91	70	98	-7	0						
1142+00.00	235	79	92	64	79	237	237	309	-230	0	0	92	71	99	-7	0						
1142+25.00	246	89	92	64	89	200	200	260	-171	0	0	92	72	100	-8	0						
1142+50.00	261	104	93	64	104	172	172	224	-120	0	0	93	72	101	-8	0						
1142+75.00	272	114	93	64	114	154	154	200	-86	0	0	93	72	101	-8	0						
1143+00.00	280	122	94	64	122	156	156	203	-81	0	0	94	73	102	-9	0						
1143+25.00	291	132	95	64	132	159	159	207	-75	0	0	95	74	104	-9	0						
1143+50.00	311	151	95	64	151	151	151	197	-45	0	0	95	75	105	-9	0						
1143+75.00	338	178	96	64	178	144	144	187	-9	0	0	96	75	105	-9	0						
1144+00.00	346	186	95	64	186	144	144	188	-2	0	0	95	74	104	-9	0						
1144+25.00	341	184	93	64	184	139	139	180	3	0	0	93	73	102	-8	0						
1144+50.00	341	185	92	64	185	132	132	172	13	0	0	92	71	100	-8	0						
1144+75.00	331	177	90	64	177	126	126	164	13	0	0	90	69	97	-7	0						
1145+00.00	312	160	87	64	160	121	121	158	3	0	0	87	66	93	-6	0						
1145+25.00	301	152	84	64	152	120	120	156	-4	0	0	84	63	89	-5	0						
1145+50.00	295	149	82	64	149	120	120	156	-7	0	0	82	61	86	-4	0						
1145+75.00	288	144	80	64	144	117	117	153	-9	0	0	80	59	83	-3	0						
1146+00.00	281	139	78	64	139	116	116	152	-12	0	0	78	57	80	-2	0						
1146+25.00	291	150	77	64	150	115	115	149	1	0	0	77	56	78	-2	0						
1146+50.00	288	149	74	64	149	110	110	143	6	0	0	74	54	75	-1	0						
1146+75.00	264	128	72	64	128	106	106	138	-10	0	0	72	51	71	1	0						
1147+00.00	259	124	71	64	124	105	105	136	-13	0	0	71	50	70	1	0						
1147+25.00	268	133	71	64	133	99	99	129	4	0	0	71	50	70	1	0						
1147+50.00	267	132	70	65	132	96	96	124	8	0	0	70	49	69	1	0						
1147+75.00	253	119	70	64	119	98	98	127	-9	0	0	70	49	69	1	0						
1148+00.00	247	113	69	64	113	103	103	133	-20	0	0	69	48	68	2	0						
1148+25.00	246	114	68	64	114	104	104	136	-22	0	0	68	48	67	2	0						
1148+50.00	243	111	68	64	111	101	101	131	-20	0	0	68	47									

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS																						107-28 04-21-15
Refer to Standard Road Plans EW-101 and EW-102.																						
Station	Cut					Fill				Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume						
1154+50.00	260	129	66	65	129	180	180	234	-105	0	0	66	45	64	3	0						
1154+75.00	265	134	67	64	134	186	186	242	-108	0	0	67	46	64	3	0						
1155+00.00	263	133	66	64	133	178	178	231	-98	0	0	66	45	63	3	0						
1155+25.00	256	128	64	64	128	157	157	205	-77	0	0	64	43	61	4	0						
1155+50.00	249	122	63	64	122	138	138	180	-58	0	0	63	42	58	5	0						
1155+75.00	241	116	61	64	116	125	125	162	-47	0	0	61	40	56	5	0						
1156+00.00	232	108	60	64	108	124	124	161	-53	0	0	60	39	54	6	0						
1156+25.00	224	101	59	64	101	131	131	170	-69	0	0	59	38	53	6	0						
1156+50.00	215	94	57	64	94	131	131	171	-77	0	0	57	36	50	7	0						
1156+75.00	207	87	55	64	87	128	128	166	-79	0	0	55	34	48	8	0						
1157+00.00	199	81	53	64	81	125	125	162	-81	0	0	53	32	45	8	0						
1157+25.00	192	76	52	64	76	121	121	158	-82	0	0	52	31	43	9	0						
1157+50.00	187	73	50	64	73	114	114	148	-75	0	0	50	29	40	10	0						
1157+75.00	183	71	49	64	71	105	105	136	-66	0	0	49	27	38	11	0						
1158+00.00	182	71	48	63	71	98	98	128	-58	0	0	48	26	37	11	0						
1158+25.00	184	73	48	63	73	94	94	122	-49	0	0	48	26	37	11	0						
1158+50.00	185	74	48	63	74	91	91	118	-44	0	0	48	26	37	11	0						
1158+75.00	187	76	48	63	76	86	86	112	-35	0	0	48	26	37	11	0						
1159+00.00	194	83	47	64	83	77	77	100	-17	0	0	47	26	36	11	0						
1159+25.00	202	91	47	64	91	68	68	88	3	0	0	47	26	36	11	0						
1159+50.00	210	99	48	63	99	63	63	82	17	0	0	48	26	37	11	0						
1159+75.00	217	106	48	63	106	61	61	79	27	0	0	48	27	37	11	0						
1160+00.00	223	112	48	63	112	59	59	77	35	0	0	48	27	37	11	0						
1160+25.00	223	112	48	63	112	57	57	75	38	0	0	48	26	37	11	0						
1160+50.00	217	107	47	63	107	61	61	79	28	0	0	47	26	36	11	0						
1160+75.00	201	91	47	63	91	61	61	80	12	0	0	47	25	35	11	0						
1161+00.00	178	71	44	63	71	77	77	100	-30	0	0	44	13	18	27	0						
1161+25.00	167	61	43	63	61	87	87	113	-52	0	0	43	11	15	28	0						
1161+50.00	165	60	43	63	60	77	77	100	-40	0	0	43	21	29	14	0						
1161+75.00	166	60	43	63	60	77	77	101	-41	0	0	43	21	30	13	0						
1162+00.00	166	60	43	63	60	77	77	100	-40	0	0	43	21	29	13	0						
1162+25.00	170	64	42	63	64	68	68	89	-25	0	0	42	21	29	13	0						
1162+50.00	174	69	42	63	69	57	57	75	-6	0	0	42	20	29	13	0						
1162+75.00	185	77	41	67	77	56	56	73	4	0	0	41	19	27	14	0						
1163+00.00	138	57	29	52	57	42	42	54	3	0	0	29	13	19	11	0						
1163+18.26	50	20	11	19	20	15	15	20	1	0	0	11	5	7	4	0						
1163+25.00	190	80	40	70	80	53	53	69	11	0	0	40	18	25	15	0						
1163+50.00	201	90	40	70	90	47	47	62	28	0	0	40	18	26	15	0						
1163+75.00	211	99	41	71	99	42	42	55	44	0	0	41	19	27	14	0						
1164+00.00	217	106	41	71	106	38	38	49	57	0	0	41	19	26	14	0						
1164+25.00	215	105	40	71	105	34	34	45	60	0	0	40	18	25	15	0						
1164+50.00	209	100	39	70	100	32	32	42	58	0	0	39	17	23	16	0						
1164+75.00	208	99	38	70	99	29	29	37	62	0	0	38	16	22	16	0						
1165+00.00	207	100	37	70	100	27	27	35	65	0	0	37	15	21	16	0						
1165+25.00	215	106	38	70	106	30	30	39	67	0	0	38	15	21	17	0						
1165+50.00	220	111	39	70	111	33	33	44	67	0	0	39	17	23	16	0						
1165+75.00	216	106	40	70																		

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS																						107-28 04-21-15
Refer to Standard Road Plans EW-101 and EW-102.																						
Station	Cut					Fill				Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume						
1171+00.00	216	93	43	80	93	134	134	174	-81	0	0	43	25	35	8	0						
1171+25.00	216	95	43	77	95	124	124	161	-66	0	0	43	24	34	9	0						
1171+50.00	209	91	43	74	91	114	114	149	-57	0	0	43	23	32	12	0						
1171+75.00	201	86	42	73	86	98	98	128	-41	0	0	42	20	28	13	0						
1172+00.00	212	94	41	77	94	78	78	102	-8	0	0	41	20	28	14	0						
1172+25.00	211	89	39	83	89	64	64	83	6	0	0	39	11	16	23	0						
1172+50.00	180	73	22	85	73	30	30	39	34	0	0	22	1	1	20	0						
1172+75.00	133	68	4	61	68	0	0	0	68	0	0	4	0	0	4	0						
1173+00.00	64	47	0	17	47	0	0	0	47	0	0	0	0	0	0	0						
1173+25.00	14	14	0	0	14	0	0	0	14	0	0	0	0	0	0	0						
1173+50.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
1173+75.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
1174+00.00	7	0	7	0	0	0	0	0	0	0	0	7	0	0	7	0						
1174+25.00	114	88	27	0	88	0	0	0	88	0	0	27	0	0	27	0						
1174+50.00	196	154	42	0	154	25	25	33	122	0	0	42	0	0	42	0						
1174+75.00	255	170	49	37	170	59	59	76	94	0	0	49	19	26	22	0						
1175+00.00	310	177	54	79	177	117	117	152	26	0	0	54	37	52	2	0						
1175+25.00	286	146	55	84	146	163	163	213	-66	0	0	55	36	50	5	0						
1175+50.00	270	137	54	79	137	154	154	200	-63	0	0	54	35	49	5	0						
1175+75.00	263	137	52	74	137	143	143	186	-49	0	0	52	33	46	6	0						
1176+00.00	272	146	52	75	146	134	134	174	-29	0	0	52	32	45	7	0						
1176+25.00	263	138	51	74	138	127	127	165	-27	0	0	51	31	43	8	0						
1176+50.00	250	127	50	73	127	121	121	157	-31	0	0	50	30	42	8	0						
1176+75.00	266	143	50	73	143	116	116	150	-8	0	0	50	30	42	8	0						
1177+00.00	311	186	53	73	186	114	114	149	37	0	0	53	33	46	7	0						
1177+25.00	346	218	56	72	218	113	113	147	71	0	0	56	35	49	6	0						
1177+50.00	351	222	56	73	222	111	111	144	78	0	0	56	35	49	7	0						
1177+75.00	315	190	53	73	190	105	105	136	53	0	0	53	32	45	8	0						
1178+00.00	266	145	48	73	145	96	96	125	20	0	0	48	27	38	10	0						
1178+25.00	231	113	45	73	113	86	86	112	1	0	0	45	24	33	12	0						
1178+50.00	215	98	44	73	98	79	79	103	-5	0	0	44	22	31	13	0						
1178+75.00	224	106	45	74	106	70	70	92	14	0	0	45	23	32	12	0						
1179+00.00	233	114	45	74	114	63	63	83	32	0	0	45	24	33	12	0						
1179+25.00	229	110	45	74	110	50	50	65	46	0	0	45	23	33	12	0						
1179+50.00	89	42	18	29	42	14	14	18	23	0	0	18	9	13	5	0						
1179+60.00	131	60	27	44	60	25	25	33	28	0	0	27	17	25	3	0						
1179+75.00	194	94	26	74	94	25	25	33	62	0	0	26	18	25	1	0						
1180+00.00	172	91	7	74	91	0	0	1	90	0	0	7	1	1	6	0						
1180+25.00	174	92	7	74	92	0	0	0	92	0	0	7	0	1	6	0						
1180+50.00	175	93	7	74	93	0	0	0	93	0	0	7	0	0	6	0						
1180+75.00	178	97	7	75	97	0	0	0	97	0	0	7	0	0	6	0						
1181+00.00	184	101	5	78	101	0	0	0	101	0	0	5	0	1	5	0						
1181+25.00	192	108	4	80	108	0	0	0	108	0	0	4	0	1	4	0						
1181+50.00	201	121	2	79	121	0	0	0	121	0	0	2	0	1	2	0						
1181+75.00	201	121	3	76	121	0	0	0	121	0	0	3	0	0	3	0						
1182+00.00	190	109	6	75	109	0	0	0	109	0	0	6	0	0	6	0						
1182+25.00	179	98	6	75	98	0	0	0	98	0	0	6	0	0	6	0						
1182+50.00	173	92	6	75	92	0	0	0	92	0	0	6	0	0	6	0						

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
4-21-15

Station	Cut					Fill				Checks (EW-102)		Topsoil											
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume							
1187+75.00	248	145	33	70	145	1	1	1	144	0	0	33	13	18	15	0							
1188+00.00	235	133	33	69	133	1	1	1	132	0	0	33	12	17	16	0							
1188+25.00	227	126	32	69	126	2	2	2	124	0	0	32	12	16	16	0							
1188+50.00	214	115	30	69	115	2	2	3	112	0	0	30	12	17	13	0							
1188+75.00	194	101	24	70	101	1	1	1	100	0	0	24	10	14	10	0							
1189+00.00	182	92	20	69	92	0	0	0	92	0	0	20	7	9	11	0							
1189+25.00	175	85	20	69	85	1	1	2	84	0	0	20	6	9	11	0							
1189+50.00	170	82	19	70	82	3	3	4	77	0	0	19	6	8	11	0							
1189+75.00	172	82	21	70	82	4	4	6	76	0	0	21	8	11	10	0							
1190+00.00	178	84	25	70	84	5	5	7	77	0	0	25	12	17	8	0							
1190+25.00	178	84	24	69	84	6	6	7	77	0	0	24	12	17	8	0							
1190+50.00	179	86	23	69	86	5	5	7	80	0	0	23	11	16	8	0							
1190+75.00	190	95	26	69	95	3	3	4	91	0	0	26	13	19	7	0							
1191+00.00	189	93	27	69	93	5	5	6	87	0	0	27	14	20	7	0							
1191+25.00	181	86	26	69	86	5	5	7	80	0	0	26	13	19	7	0							
1191+50.00	181	87	25	69	87	4	4	5	82	0	0	25	13	18	7	0							
1191+75.00	175	84	21	69	84	4	4	5	79	0	0	21	9	13	8	0							
1192+00.00	169	82	17	70	82	3	3	4	78	0	0	17	6	8	10	0							
1192+25.00	168	81	18	69	81	4	4	6	76	0	0	18	6	8	10	0							
1192+50.00	168	79	19	69	79	7	7	10	70	0	0	19	8	11	9	0							
1192+75.00	171	81	21	69	81	9	9	11	69	0	0	21	9	13	8	0							
1193+00.00	173	83	21	69	83	10	10	13	70	0	0	21	9	13	8	0							
1193+25.00	177	85	23	69	85	11	11	15	70	0	0	23	11	15	8	0							
1193+50.00	178	85	23	69	85	11	11	14	71	0	0	23	11	15	8	0							
1193+75.00	176	84	22	69	84	8	8	10	74	0	0	22	10	14	8	0							
1194+00.00	172	84	19	69	84	4	4	5	79	0	0	19	7	10	9	0							
1194+25.00	168	82	16	70	82	2	2	3	80	0	0	16	4	6	10	0							
1194+50.00	169	82	17	70	82	2	2	3	79	0	0	17	5	6	10	0							
1194+75.00	174	84	20	70	84	3	3	4	79	0	0	20	8	12	9	0							
1195+00.00	180	86	24	69	86	4	4	5	81	0	0	24	12	17	7	0							
1195+25.00	183	89	25	69	89	3	3	4	85	0	0	25	13	18	7	0							
1195+50.00	185	89	26	69	89	4	4	6	84	0	0	26	14	19	7	0							
1195+75.00	185	90	26	70	90	5	5	6	84	0	0	26	14	20	7	0							
1196+00.00	184	88	26	70	88	5	5	7	82	0	0	26	14	19	7	0							
1196+25.00	183	88	25	70	88	5	5	6	82	0	0	25	13	18	7	0							
1196+50.00	182	88	25	70	88	6	6	8	80	0	0	25	13	18	7	0							
1196+75.00	179	85	25	70	85	7	7	10	75	0	0	25	13	18	7	0							
1197+00.00	180	85	25	70	85	6	6	8	78	0	0	25	13	18	7	0							
1197+25.00	179	84	25	70	84	8	8	10	73	0	0	25	13	19	7	0							
1197+50.00	180	85	25	70	85	8	8	11	74	0	0	25	13	19	7	0							
1197+75.00	182	87	25	70	87	5	5	7	80	0	0	25	13	18	7	0							
1198+00.00	180	86	24	70	86	4	4	5	81	0	0	24	12	17	8	0							
1198+25.00	174	83	21	70	83	5	5	6	77	0	0	21	9	13	9	0							
1198+50.00	178	89	20	70	89	3	3	4	84	0	0	20	8	11	9	0							
1198+75.00	191	99	22	70	99	0	0	0	99	0	0	22	9	13	9	0							
1199+00.00	196	103	23	70	103	0	0	0	103	0	0	23	10	14	8	0							
1199+25.00	192	100	23	70	100	0	0	0	99	0	0	23	11	15	8	0							
1199+50.00	189	95	24	70	95	1	1	1	95	0	0	24	12	16	8	0							
1199+75.00	189	95	25	70	95	1	1	1	93	0	0	25	13	18	7	0							
1200+00.00	193	98	25	70	98	0	0	1	98	0	0	25	13	18	7	0							
1200+25.00	198	103	26	69	103	0	0	0	103	0	0	26	13	18	8	0							
1200+50.00	202	107	26	70	107	0	0	0	107	0	0	26	13	18	8	0							
1200+75.00	206	110	26	70	110	0	0	0	110	0	0	26	13	18	8	0							
1201+00.00	203	108	26	70	108	0	0	0	108	0	0	26	13	18	8	0							
1201+25.00	194	100	25	70	100	1	1	1	99	0	0	25	12	17	8	0							
1201+50.00	190	96	24	70	96	0	0	1	96	0	0	24	11	15	9	0							
1201+75.00	193	100	24	70	100	0	0	0	100	0	0	24	11	15	9	0							
1202+00.00	195	102	23	70	102	0	0	0	102	0	0	23	10	15	9	0							
1202+25.00	34	12	6	17	12	0	0	0	12	0	0	6	1	2	4	0							
1202+31.00																							
STG2 ML080																							
Totals:	83,337	44,864	17,302	21,172	44,864	55,376	55,376	72,004	-27,140	0	0	17,302	11,546	16,180	1,130	1,507							

Refer to Standard Road Plans EW-101 and EW-102.

107-28
4-21-15

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut					Fill				Checks (EW-102)		Topsoil											
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume							
STG2 ML080 INT2																							
3202+31.00	157	82	19	57	82	0	0	0	82	0	0	19	10	14	5	0							
3202+50.00	206	108	25	73	108	0	0	0	108	0	0	25	13	18	7	0							
3202+75.00	205	108	25	72	108	0	0	0	108	0	0	25	13	18	7	0							
3203+00.00	210	112	25	72	112	0	0	0	112	0	0	25	13	18	7	0							
3203+25.00	211	114	25	72	114	0	0	0	114	0	0	25	13	19	7	0							
3203+50.00	204	107	25	72	107	1	1	1	106	0	0	25	13	18	7	0							
3203+75.00	208	110	25	72	110	1	1	1	109	0	0	25	13	19	7	0							
3204+00.00	221	122	26	73	122	0	0	1	121	0	0	26	14	19	7	0							
3204+25.00	222	121	26	75	121	0	0	1	121	0	0	26	13	19	7	0							
3204+50.00	220	119	26	75	119	0	0	1	119	0	0	26	14	19	7	0							
3204+75.00	213	113	26	75	113	1	1	1	112	0	0	26	13	19	7	0							
3205+00.00	210	110	25	75	110	0	0	1	109	0	0	25	13	18	8	0							
3205+25.00	219	119	25	75	119	0	0	0	119	0	0	25	13	18	8	0							
3205+50.00	219	119	26	75	119	0	0	0	119	0	0	26	13	19	7	0							
3205+75.00	208	109	25	75	109	0	0	0	109	0	0	25	12	17	8	0							
3206+00.00	200	102	23	75	102	0	0	0	103	0	0	23	10	15	9	0							
3206+25.00	199	101	24	75	101	0	0	0	100	0	0	24	11	16	8	0							
3206+50.00	199	99	25	75	99	1	1	2	98	0	0	25	12	17	8	0							
3206+75.00	192	93	24	75	93	2	2	3	90	0	0	24	11	16	8	0							
3207+00.00	183	86	23	75	86	3	3	5	82	0	0	23	10	14	9	0							
3207+25.00	183	85	23	75	85	4	4	6	79	0	0	23	10	15	9	0							
3207+50.00	181	83	24	75	83	5	5	7	76	0	0	24	11	16	8	0							
3207+75.00	168	74	22	72	74	6	6	8	66	0	0	22	10	14	8	0							
3208+00.00	155	66	19	70	66	5	5	7	60	0	0	19	8	11	9	0							
3208+25.00	157	69	18	70	69	3	3	3	66	0	0	18	7	10	8	0							
3208+50.00																							
STG2 ML080 INT2 Totals:	4,951	2,532	600	1,820	2,532	35	35	47	2,486	0	0	600	294	413	189	0							

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
4-21-15

[illegible]

Refer to Standard Road Plans EW-101 and EW-102.																						107-28 04-21-15	
TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS																							
Station	Cut					Fill				Checks (EW-102)		Topsoil											
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume							
STG2 RampD INT																							
37008+10.93	39	13	23	3	13	68	68	88	-75	0	0	23	8	12	11	0							
37008+25.00	69	24	41	4	24	116	116	151	-127	0	0	41	14	20	21	0							
37008+50.00	67	23	41	4	23	118	118	153	-131	0	0	41	14	19	22	0							
37008+75.00	67	22	40	4	22	122	122	158	-136	0	0	40	13	18	22	0							
37009+00.00	65	22	39	5	22	117	117	153	-131	0	0	39	12	17	22	0							
37009+25.00	64	21	37	5	21	106	106	138	-117	0	0	37	10	14	23	0							
37009+50.00	63	22	35	6	22	92	92	119	-97	0	0	35	9	12	23	0							
37009+75.00	65	25	34	6	25	77	77	100	-76	0	0	34	8	11	23	0							
37010+00.00	67	27	33	7	27	68	68	89	-62	0	0	33	4	5	28	0							
37010+25.00	77	33	36	8	33	59	59	77	-45	0	0	36	7	10	26	0							
37010+50.00	89	43	38	8	43	47	47	62	-19	0	0	38	15	21	18	0							
37010+73.54	6	3	2	1	3	3	3	4	-1	0	0	2	1	1	1	0							
37010+75.00	117	64	43	10	64	49	49	63	1	0	0	43	19	27	17	0							
37011+00.00	151	94	46	11	94	45	45	59	36	0	0	46	23	32	14	0							
37011+25.00	121	57	49	14	57	21	21	27	30	0	0	49	12	17	32	0							
37011+50.00	165	97	52	15	97	22	22	28	69	0	0	52	16	23	30	0							
37011+75.00	283	214	55	14	214	48	48	63	151	0	0	55	34	47	8	0							
37012+00.00	313	242	57	14	242	56	56	73	170	0	0	57	37	51	6	0							
37012+25.00	333	260	59	14	260	61	61	79	181	0	0	59	38	54	5	0							
37012+50.00	354	280	59	15	280	62	62	81	199	0	0	59	40	55	4	0							
37012+75.00	369	294	60	15	294	64	64	84	210	0	0	60	40	56	3	0							
37013+00.00	96	77	15	4	77	17	17	23	54	0	0	15	11	15	1	0							
37013+06.43	287	230	45	12	230	54	54	70	160	0	0	45	31	44	1	0							
37013+25.00	411	334	61	16	334	82	82	106	227	0	0	61	43	60	1	0							
37013+50.00	445	366	62	17	366	90	90	117	250	0	0	62	45	62	0	0							
37013+75.00	484	403	64	17	403	94	94	123	281	0	0	64	47	65	-1	0							
37014+00.00	541	457	66	17	457	93	93	121	336	0	0	66	49	69	-2	0							
37014+25.00	582	497	68	17	497	90	90	118	380	0	0	68	50	71	-3	0							
37014+50.00	601	517	68	17	517	90	90	117	400	0	0	68	51	71	-3	0							
37014+75.00	626	541	68	17	541	86	86	112	430	0	0	68	51	72	-4	0							
37015+00.00	662	576	69	17	576	80	80	104	472	0	0	69	52	73	-4	0							
37015+25.00	372	326	37	9	326	40	40	52	274	0	0	37	28	39	-3	0							
37015+38.40	325	285	32	8	285	33	33	43	242	0	0	32	24	34	-2	0							
37015+50.00	700	614	69	17	614	63	63	82	531	0	0	69	53	74	-5	0							
37015+75.00	706	622	66	17	622	55	55	71	551	0	0	66	53	74	-8	0							
37016+00.00	712	629	66	17	629	49	49	64	565	0	0	66	53	74	-8	0							
37016+25.00	706	621	69	17	621	43	43	57	565	0	0	69	52	73	-4	0							
37016+50.00	701	616	68	17	616	42	42	55	561	0	0	68	52	73	-4	0							
37016+75.00	282	248	27	7	248	17	17	22	226	0	0	27	21	29	-2	0							
37016+84.98	427	375	41	10	375	25	25	33	342	0	0	41	31	44	-3	0							
37017+00.00	710	624	68	17	624	43	43	56	568	0	0	68	52	73	-5	0							
37017+25.00	715	629	68	17	629	45	45	59	571	0	0	68	52	73	-5	0							
37017+50.00	721	636	68	17	636	45	45	58	578	0	0	68	52	73	-5	0							
37017+75.00	719	629	68	22	629	44	44	57	572	0	0	68	51	72	-4	0							
37018+00.00	718	623	67	27	623	42	42	55	568	0	0	67	51	71	-4	0							
37018+25.00	185	161	17	7	161	10	10	14	147	0	0	17	13	18	-1	0							
37018+31.47	524	454	50	20	454	30	30	39	416	0	0	50	38	53	-3								

Refer to Standard Road Plans EW-101 and EW-102.

107-28
4-21-15

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

[illegible]

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
4-21-15

[illegible]

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut					Fill				Checks (EW-102)		Topsoil											
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume							
STG3 RampD INT																							
37008+10.93	44	29	0	15	29	0	0	0	29	0	0	0	5	8	-8	0							
37008+25.00	71	51	0	20	51	0	0	0	51	0	0	0	3	4	-4	0							
37008+50.00	65	50	0	15	50	0	0	0	50	0	0	0	1	1	-1	0							
37008+75.00	71	54	0	18	54	0	0	0	54	0	0	0	2	3	-3	0							
37009+00.00	77	56	0	20	56	0	0	0	57	0	0	0	4	6	-6	0							
37009+25.00	83	60	0	22	60	0	0	0	60	0	0	0	6	8	-8	0							
37009+50.00	89	65	0	24	65	0	0	0	65	0	0	0	7	10	-10	0							
37009+75.00	95	69	2	24	69	1	1	1	68	0	0	2	9	12	-11	0							
37010+00.00	101	74	4	23	74	3	3	3	71	0	0	4	10	14	-11	0							
37010+25.00	107	78	6	23	78	6	6	8	70	0	0	6	12	17	-11	0							
37010+50.00	105	76	8	21	76	12	12	16	60	0	0	8	13	18	-10	0							
37010+73.54	7	5	1	1	5	1	1	1	4	0	0	1	1	1	-1	0							
37010+75.00	116	82	12	22	82	15	15	20	62	0	0	12	16	22	-10	0							
37011+00.00	120	86	9	26	86	7	7	9	77	0	0	9	10	15	-6	0							
37011+25.00	123	92	5	25	92	0	0	0	92	0	0	5	2	3	2	0							
37011+50.00	129	101	7	22	101	0	0	0	101	0	0	7	3	4	3	0							
37011+75.00	142	110	11	21	110	5	5	6	104	0	0	11	8	12	-1	0							
37012+00.00	150	115	13	21	115	5	5	7	109	0	0	13	10	15	-1	0							
37012+25.00	149	115	13	21	115	0	0	0	115	0	0	13	9	13	-1	0							
37012+50.00	147	112	14	21	112	0	0	0	111	0	0	14	10	15	-1	0							
37012+75.00	141	105	15	21	105	0	0	0	105	0	0	15	11	16	-1	0							
37013+00.00	35	26	4	5	26	0	0	0	26	0	0	4	3	4	0	0							
37013+06.43	98	72	11	16	72	0	0	0	72	0	0	11	8	11	0	0							
37013+25.00	124	89	14	21	89	0	0	0	90	0	0	14	10	13	1	0							
37013+50.00	116	82	13	21	82	0	0	0	82	0	0	13	9	12	1	0							
37013+75.00	108	75	12	21	75	0	0	0	75	0	0	12	7	10	2	0							
37014+00.00	99	69	10	21	69	0	0	0	69	0	0	10	5	7	3	0							
37014+25.00	94	63	10	21	63	0	0	0	63	0	0	10	5	6	3	0							
37014+50.00	91	59	11	21	59	0	0	0	60	0	0	11	6	8	3	0							
37014+75.00	86	55	10	21	55	0	0	0	55	0	0	10	5	7	4	0							
37015+00.00	82	51	10	21	51	0	0	0	51	0	0	10	4	6	4	0							
37015+25.00	42	26	5	11	26	0	0	0	26	0	0	5	2	3	2	0							
37015+38.40	36	22	4	10	22	0	0	0	22	0	0	4	2	3	2	0							
37015+50.00	75	45	9	21	45	0	0	0	45	0	0	9	4	5	4	0							
37015+75.00	69	42	7	21	42	0	0	0	41	0	0	7	2	3	5	0							
37016+00.00	65	39	5	21	39	0	0	0	39	0	0	5	0	0	5	0							
37016+25.00	63	38	5	21	38	0	0	0	37	0	0	5	0	0	5	0							
37016+50.00	59	34	4	21	34	0	0	0	34	0	0	4	0	0	4	0							
37016+75.00	22	13	1	8	13	0	0	0	13	0	0	1	0	0	1	0							
37016+84.98	32	18	1	13	18	0	0	0	18	0	0	1	0	0	1	0							
37017+00.00	49	27	2	21	27	0	0	0	26	0	0	2	0	0	2	0							
37017+25.00	45	23	1	21	23	0	0	0	23	0	0	1	0	0	1	0							
37017+50.00	43	21	1	21	21	0	0	0	21	0	0	1	0	0	1	0							
37017+75.00	19	8	0	11	8	0	0	0	8	0	0	0	0	0	0	0							
37017+93.81	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0							
37018+00.00																							
STG3 RampD INT																							
Totals:	3,685	2,580	272	835	2,580	57	57	75	2,507	0	0	272	224	315	-43	0							
	</																						

Refer to Standard Road Plans EW-101 and EW-102.

107-28
4-21-15

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

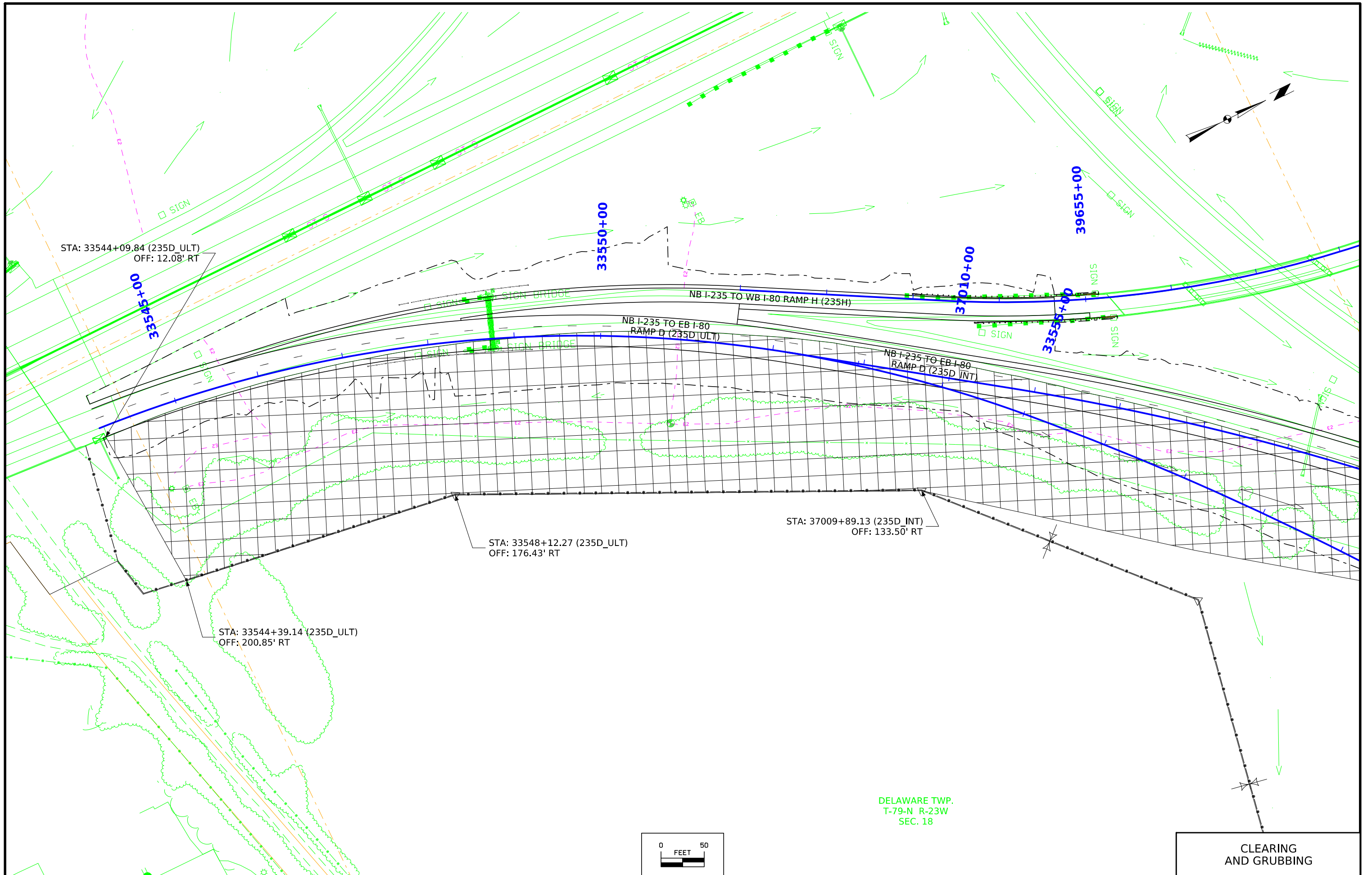
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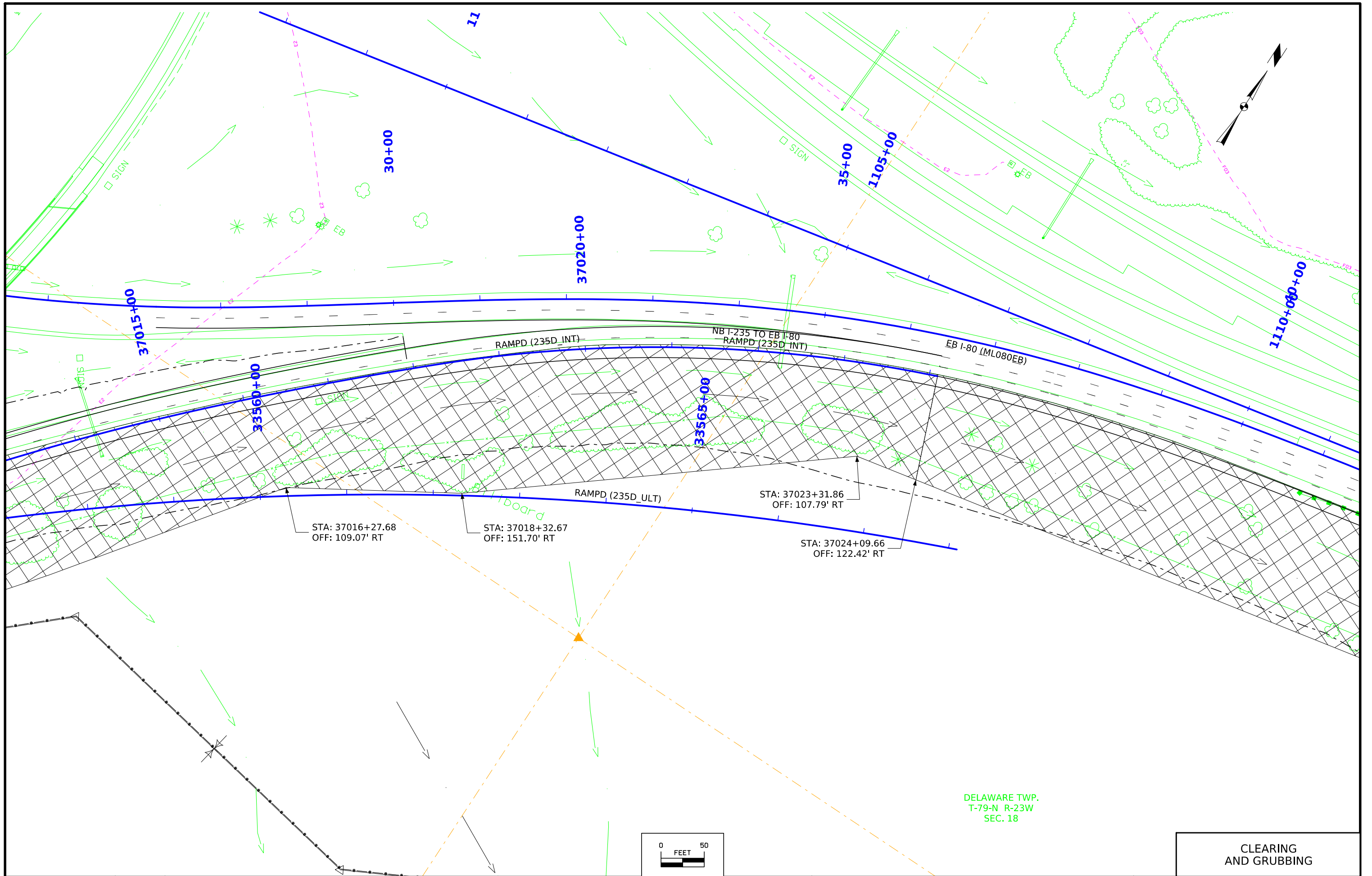
Refer to Standard Road Plans EW-101 and EW-102.

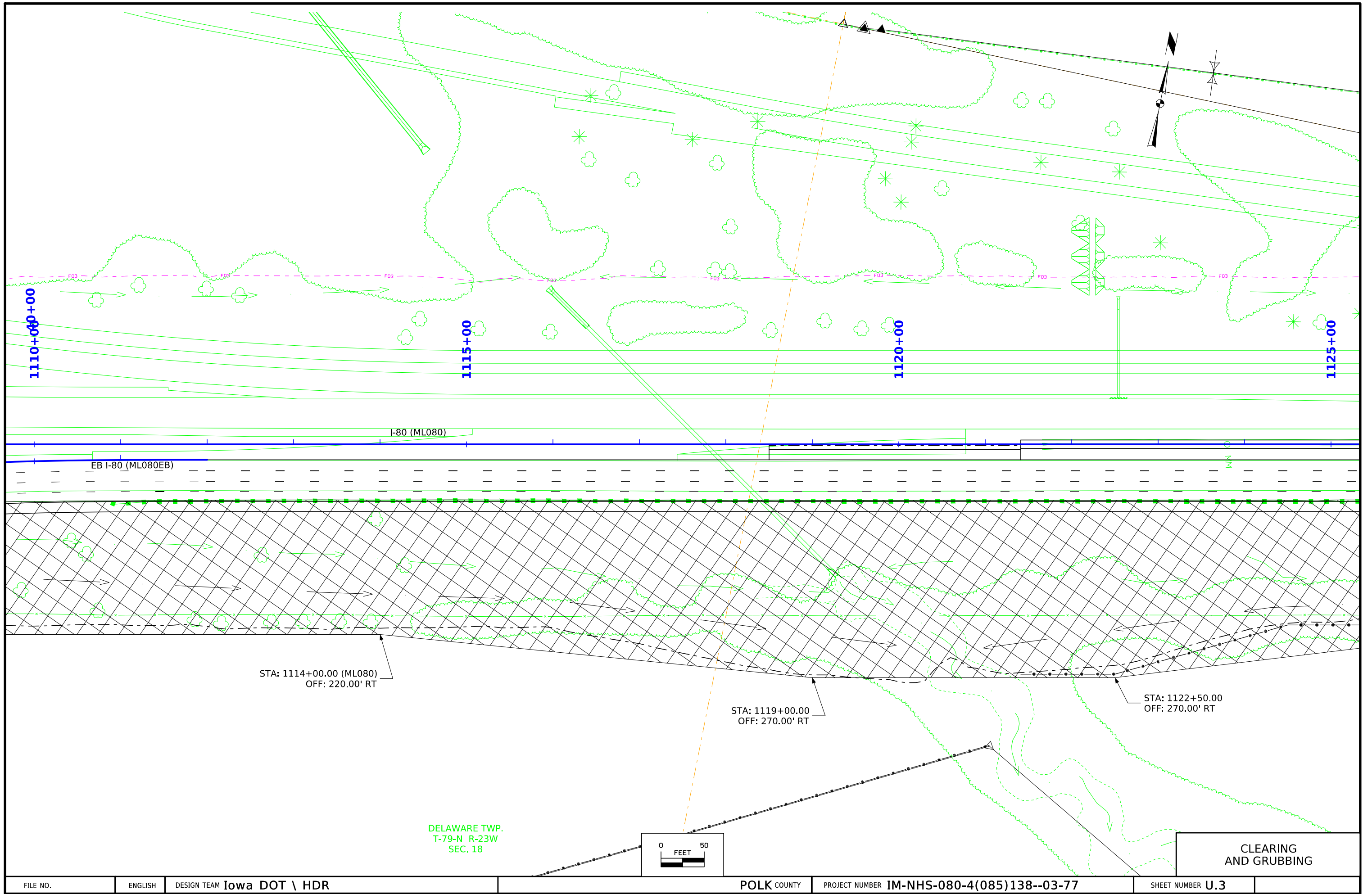
TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

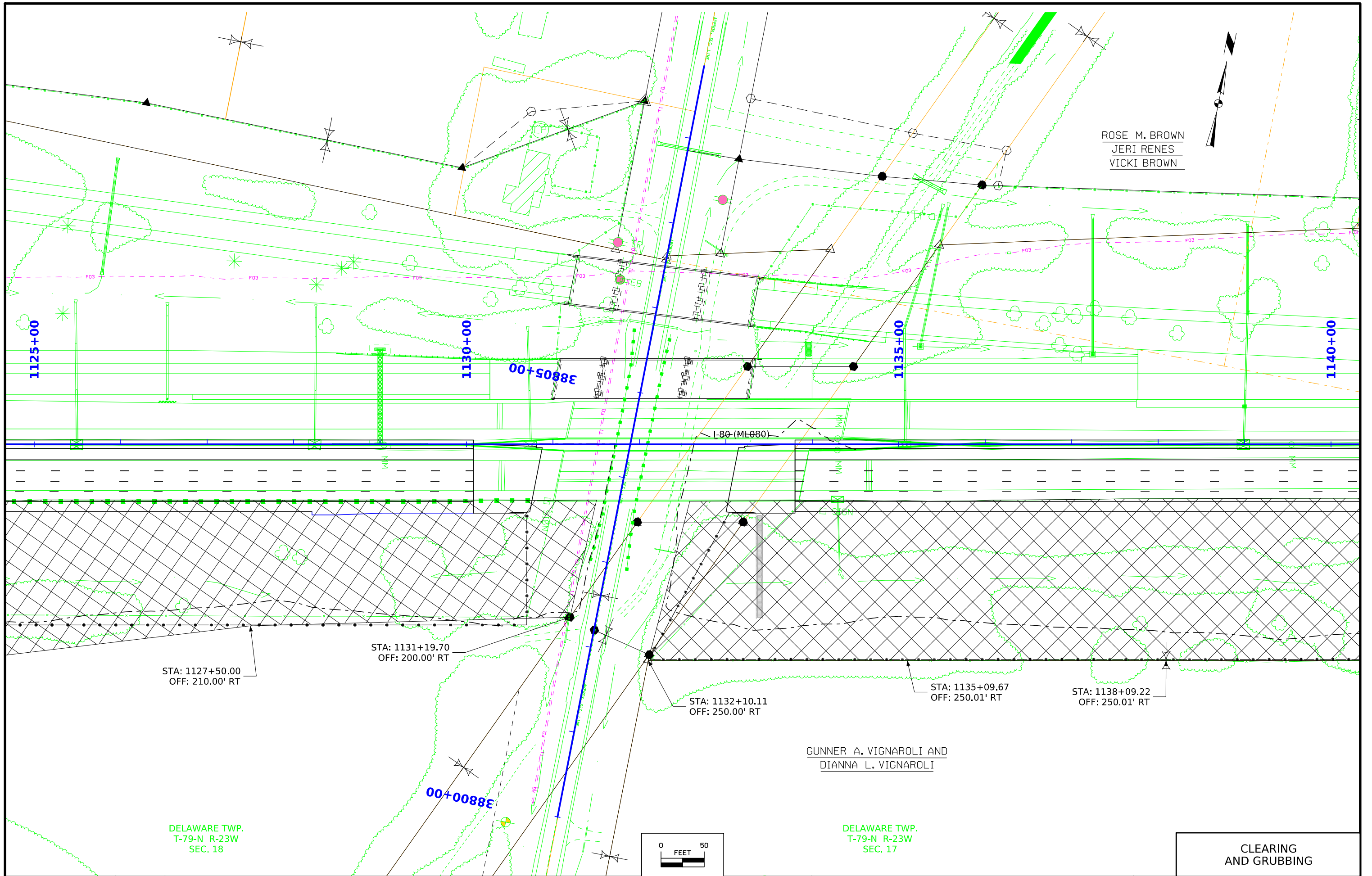
107-28
04-21-15

Station	Cut					Fill				Checks (EW-102)		Topsoil											
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink	MSE Wall Granular Backfill Volume							
Summary:																							
STAGE 1																							
STG1_DET01	593	115	298	181	115	223	223	291	-178	0	0	298	64	91	210	0							
STG1_DET02	824	143	433	249	143	371	371	484	-342	0	0	433	198	278	158	0							
STAGE 1																							
Subtotals:	1,417	258	731	430	258	594	594	775	-520	0	0	731	262	369	368	0							
STAGE 2																							
STG2_ML080EB	18,113	15,669	1,966	479	15,669	5,466	5,466	7,107	8,563	0	0	1,966	1,542	2,160	-196	0							
STG2_ML080_OV/WID	14,675	11,416	2,662	597	11,416	17,706	17,706	23,019	-11,605	0	0	2,662	2,071	2,901	-240	0							
STG2_ML080_INT	8,533	6,314	1,428	792	6,314	10,475	10,475	13,618	-7,305	0	0	1,428	1,213	1,699	-271	0							
STG2_ML080	83,337	44,864	17,302	21,172	44,864	55,376	55,376	72,004	-27,140	0	0	17,302	11,546	16,180	1,130	1,507							
STG2_ML080_INT2	4,951	2,532	600	1,820	2,532	35	35	47	2,486	0	0	600	294	413	189	0							
STG2_SR38th	12,766	7,750	4,471	546	7,750	23,923	23,923	31,101	-23,355	0	0	4,471	3,873	5,424	-955	0							
STG2_RampD_ULT	2,638	998	913	728	998	1,063	1,063	1,383	-386	0	0	913	408	573	343	0							
STG2_RampD_INT	33,498	28,425	4,017	1,057	28,425	4,243	4,243	5,520	22,907	0	0	4,017	2,699	3,782	234	0							
STG2_FMC Trail	720	531	116	74	531	46	46	61	471	0	0	116	0	0	117	0							
STAGE 2																							
Subtotals:	179,231	118,499	33,475	27,265	118,499	118,333	118,333	153,860	-35,364	0	0	33,475	23,646	33,132	351	0							
STAGE 3																							
STG3_RampD_ULT	3,374	1,791	472	1,112	1,791	203	203	265	1,528	0	0	472	118	166	308	0							
STG3_RampD_INT	3,685	2,580	272	835	2,580	57	57	75	2,507	0	0	272	224	315	-43	0							
STG3_RampH	1,303	595	242	467	595	47	47	62	535	0	0	242	8	12	231	0							
STAGE 3																							
Subtotals:	8,362	4,966	986	2,414	4,966	307	307	402	4,570	0	0	986	350	493	496	1,507							
Project Totals:	189,010	123,723	35,192	30,109	123,723	119,234	119,234	155,037	-31,314	0	0	35,192	24,258	33,994	1,215	1,507							
	Excavation, Class 10, Roadway and Borrow					Compaction With Moisture Control							Topsoil, Strip, Salvage And Spread				Granular Backfill, MSE Wall						
		Stage 1	775	[8]			Stage 1	594	[7]				Stage 1	731	[12]		Stage 1	0	[16]				
		Stage 2	153,860	[8]			Stage 2	118,333	[7]				Stage 2	33,475	[12]		Stage 2	0	[16]				
		Stage 3	402	[8]			Stage 3	307	[7]				Stage 3	986	[12]		Stage 3	1,507	[16]				
		TOTAL:	155,037				TOTAL:	119,234					TOTAL:	35,192			TOTAL:	1,507					
	Excavation, Class 10 Waste					Borrow Need from Project Stockpile																	
		Stage 1	0	[9] = [5] - [8]		(Note 1)	Stage 1	-520	[9]														
		Stage 2	0	[9] = [5] - [8]		(Note 1)	Stage 2	-35,364	[9]														
		Stage 3	4,570	[9] = [5] - [8]		(Note 1)	Stage 3	0	[9]														
		TOTAL:	4,570				TOTAL:	-35,884															
																					</		









ROSE M. BROWN
JERI RENES
VICKI BROWN

GUNNER A. VIGNAROLI AND
DIANNA L. VIGNAROLI

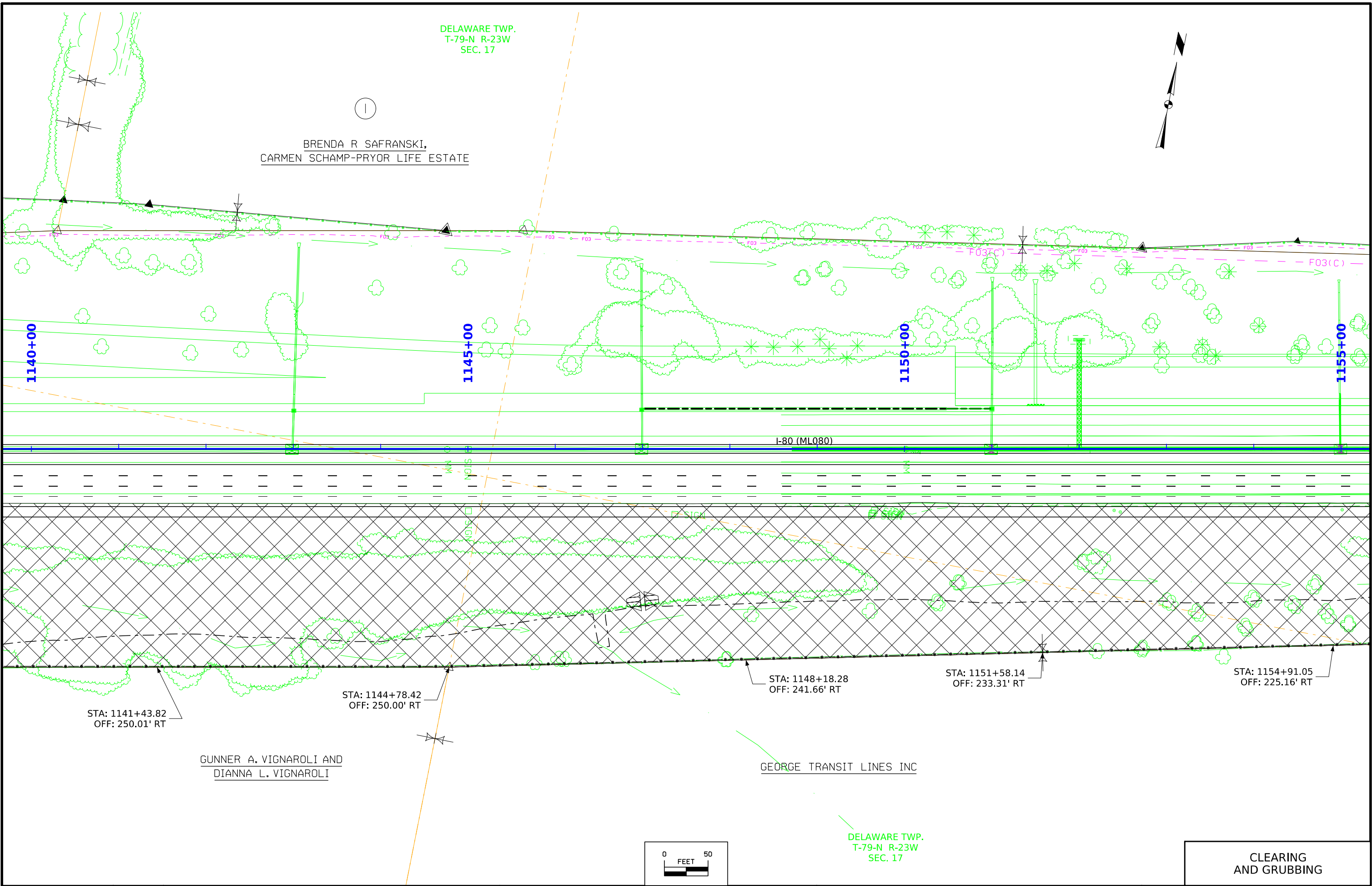
DELAWARE TWP.
T-79-N R-23W
SEC. 18

DELAWARE TWP.
T-79-N R-23W
SEC. 17

CLEARING
AND GRUBBING

DELAWARE TWP.
T-79-N R-23W
SEC. 17

BREND A R SAFRANSKI,
CARMEN SCHAMP-PRYOR LIFE ESTATE

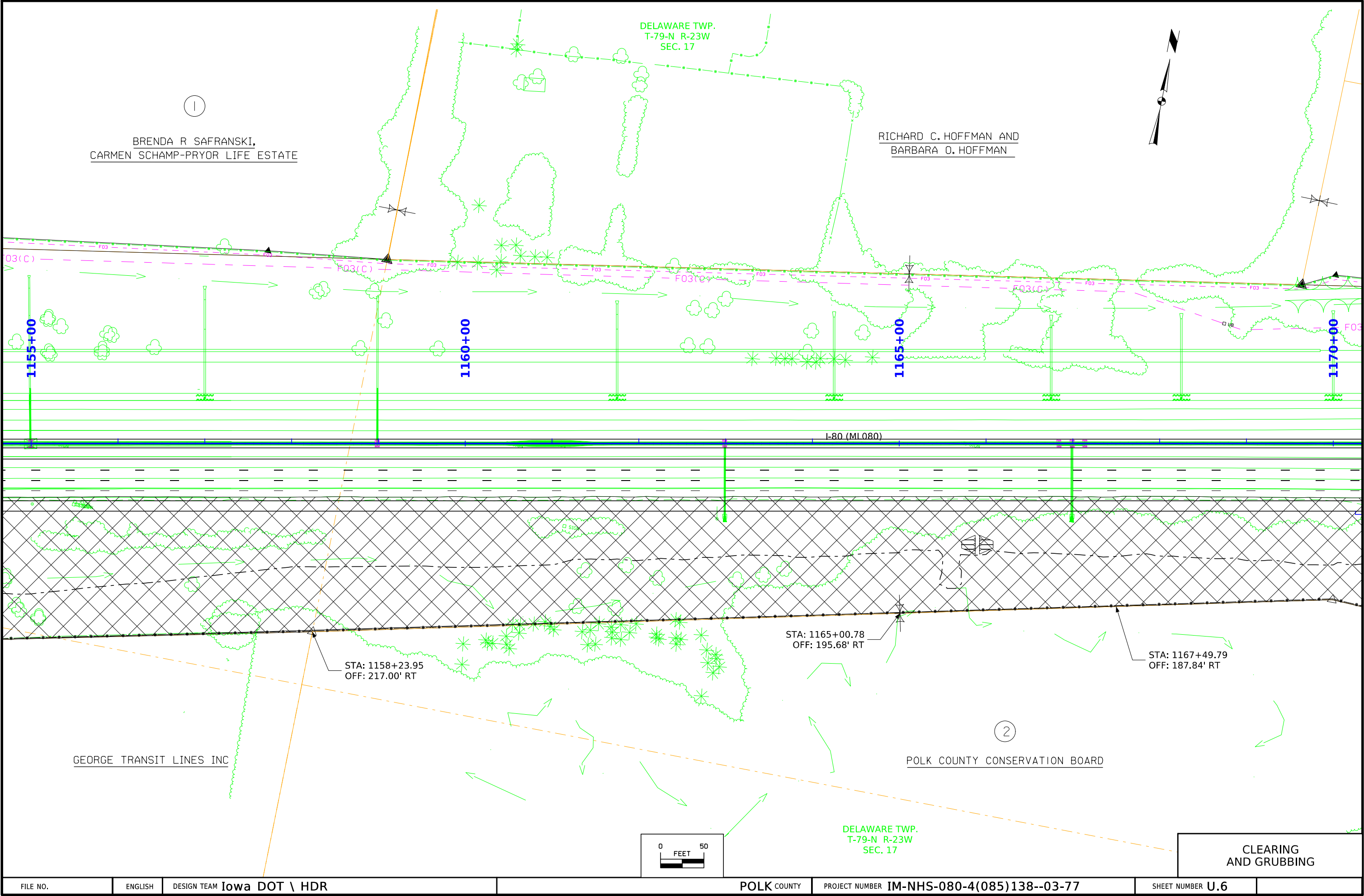


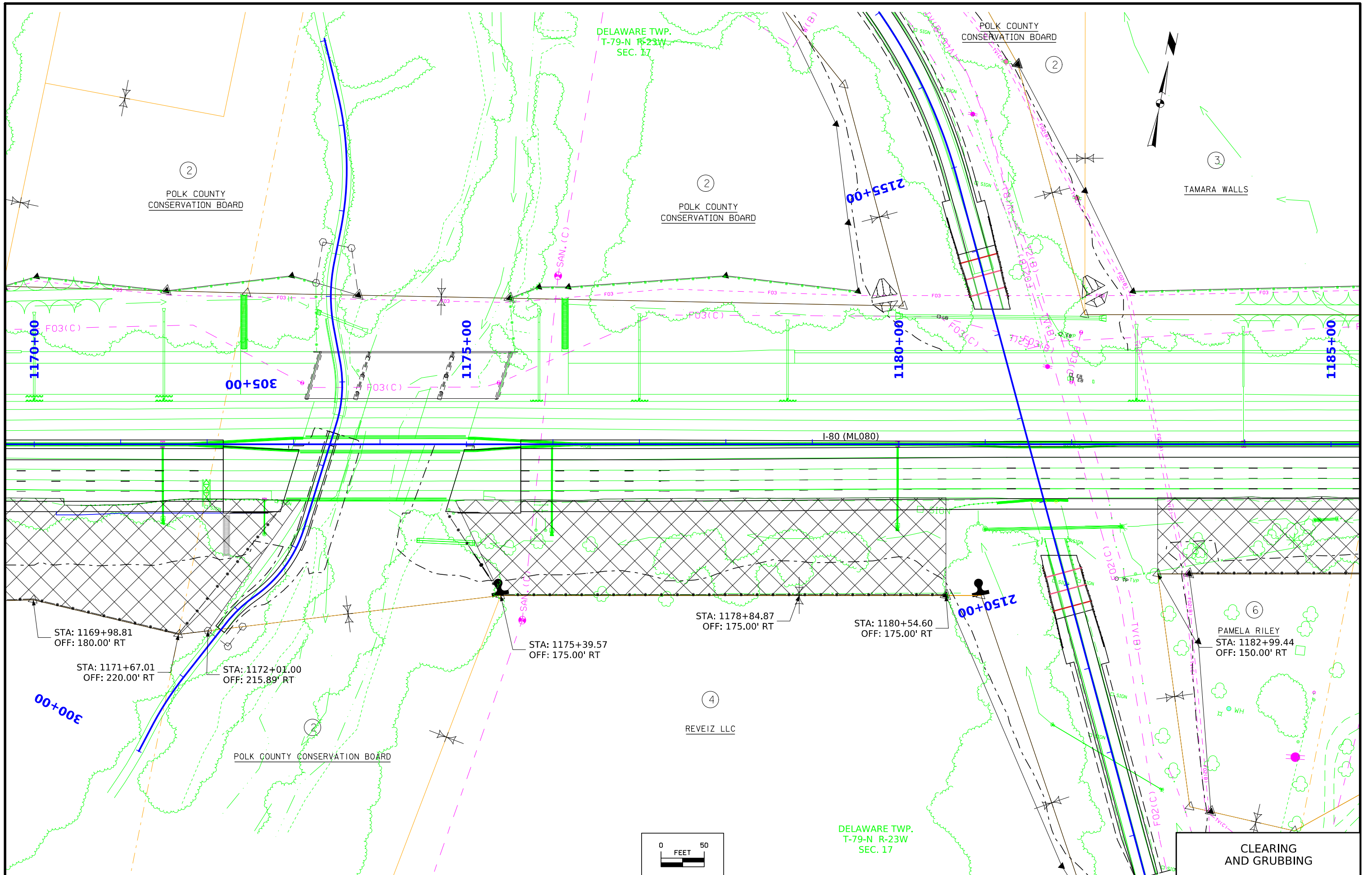
GUNNER A. VIGNAROLI AND
DIANNA L. VIGNAROLI

GEORGE TRANSIT LINES INC

DELAWARE TWP.
T-79-N R-23W
SEC. 17

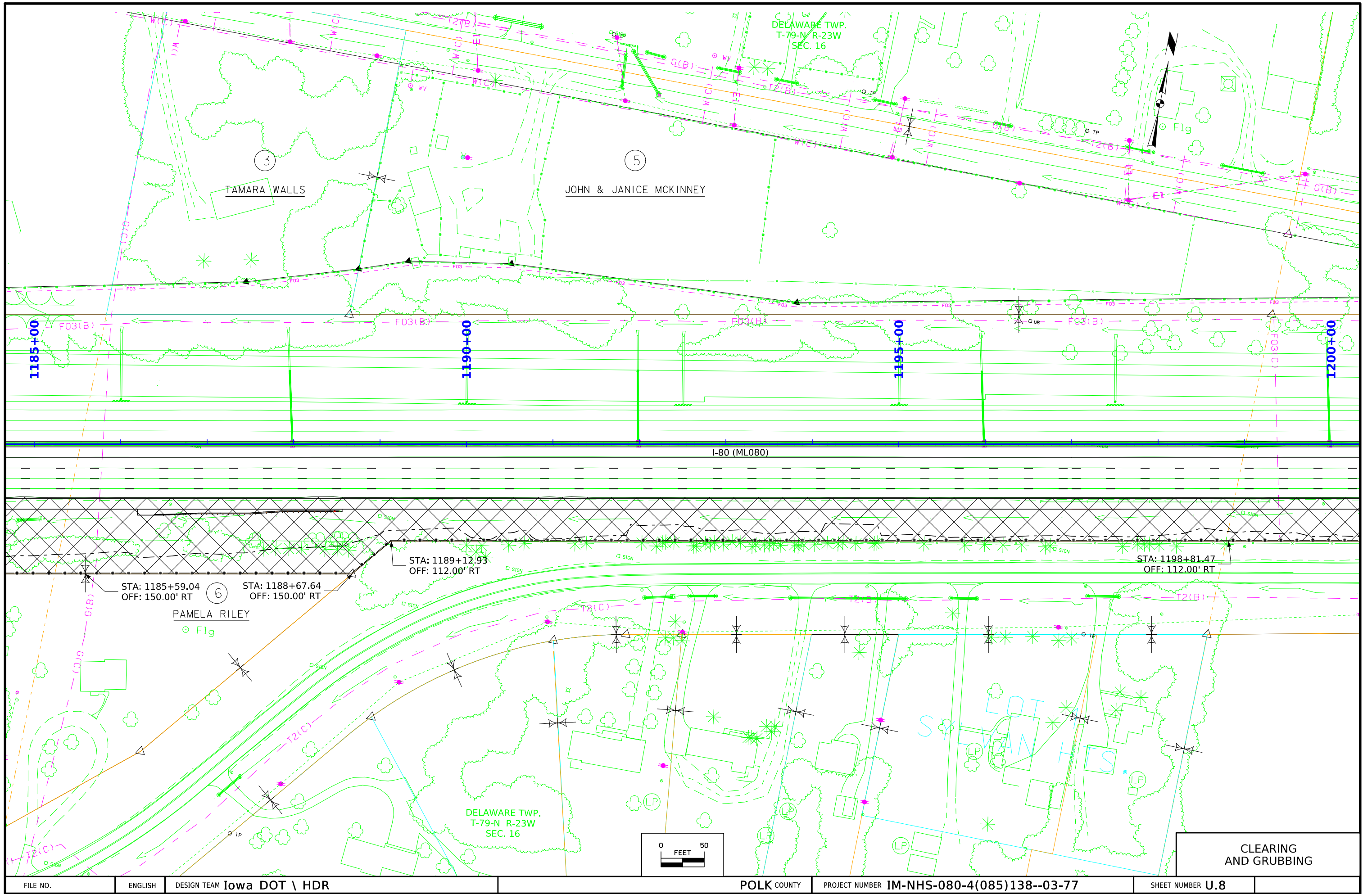
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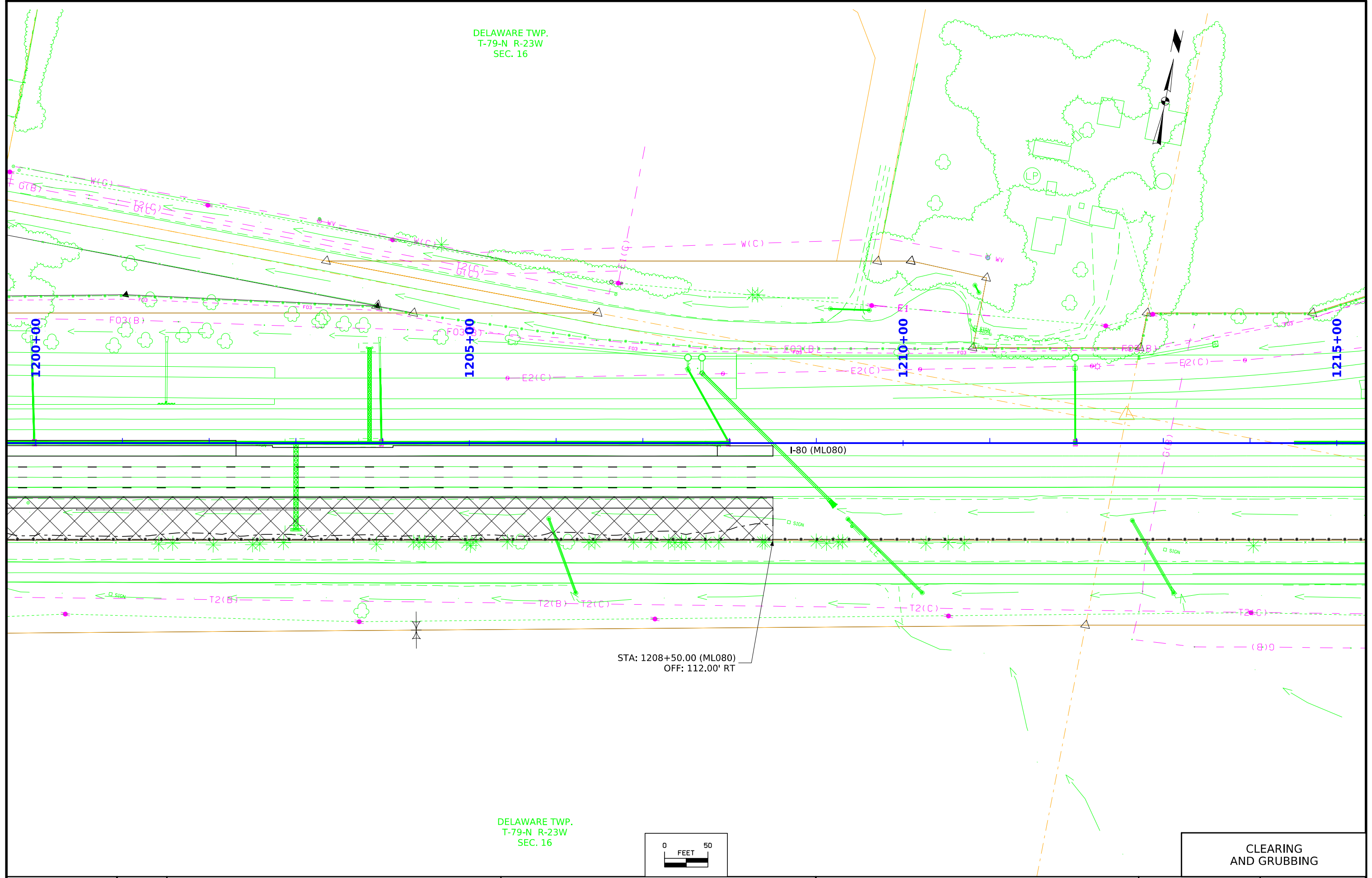




FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT \ HDR	POLK COUNTY	PROJECT NUMBER IM-NHS-080-4(085)138--03-77	SHEET NUMBER U.7
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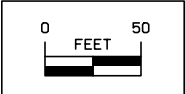




DELAWARE TWP.
T-79-N R-23W
SEC. 16

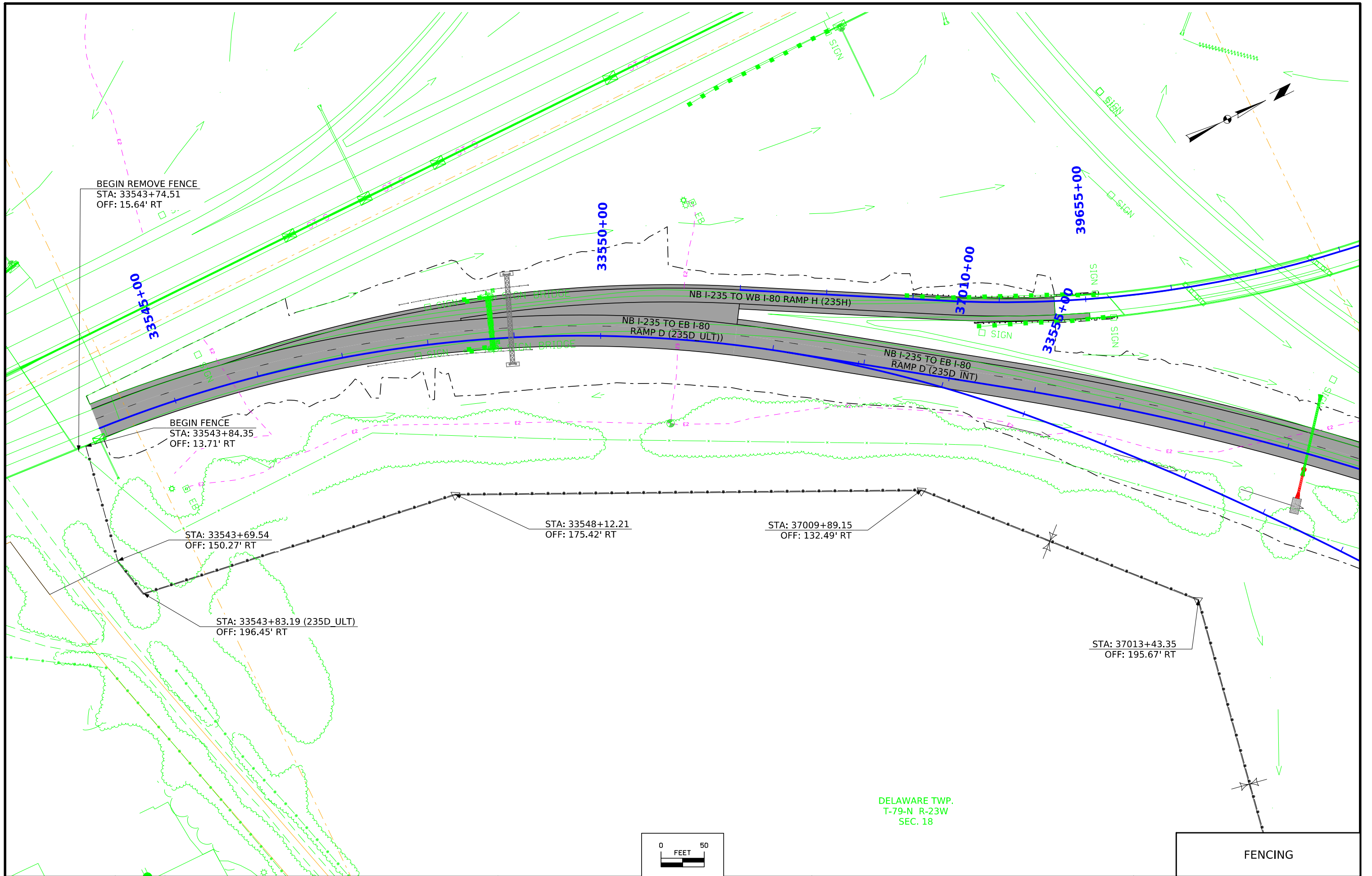
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T-79-N R-23W
SEC. 16

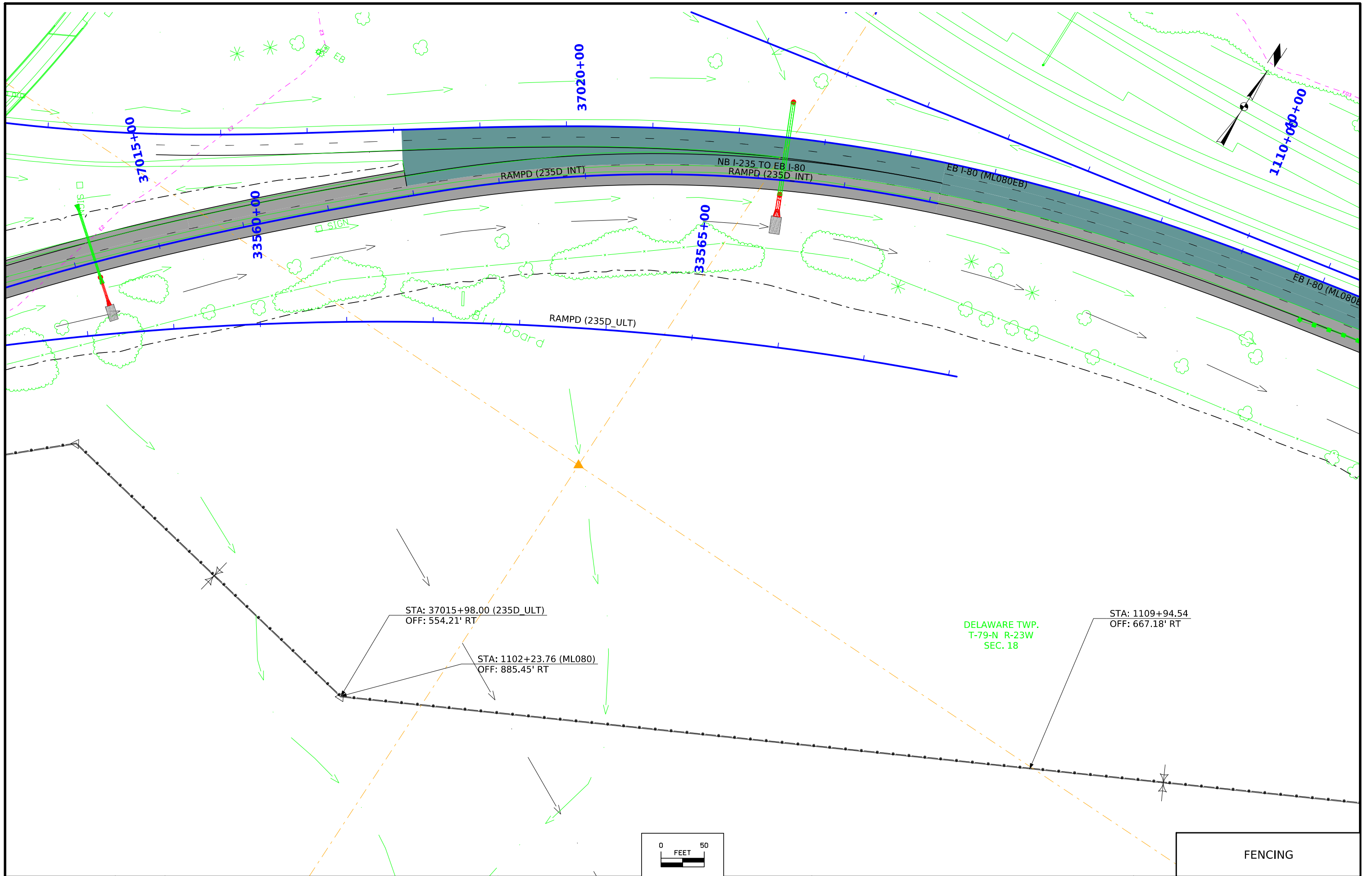
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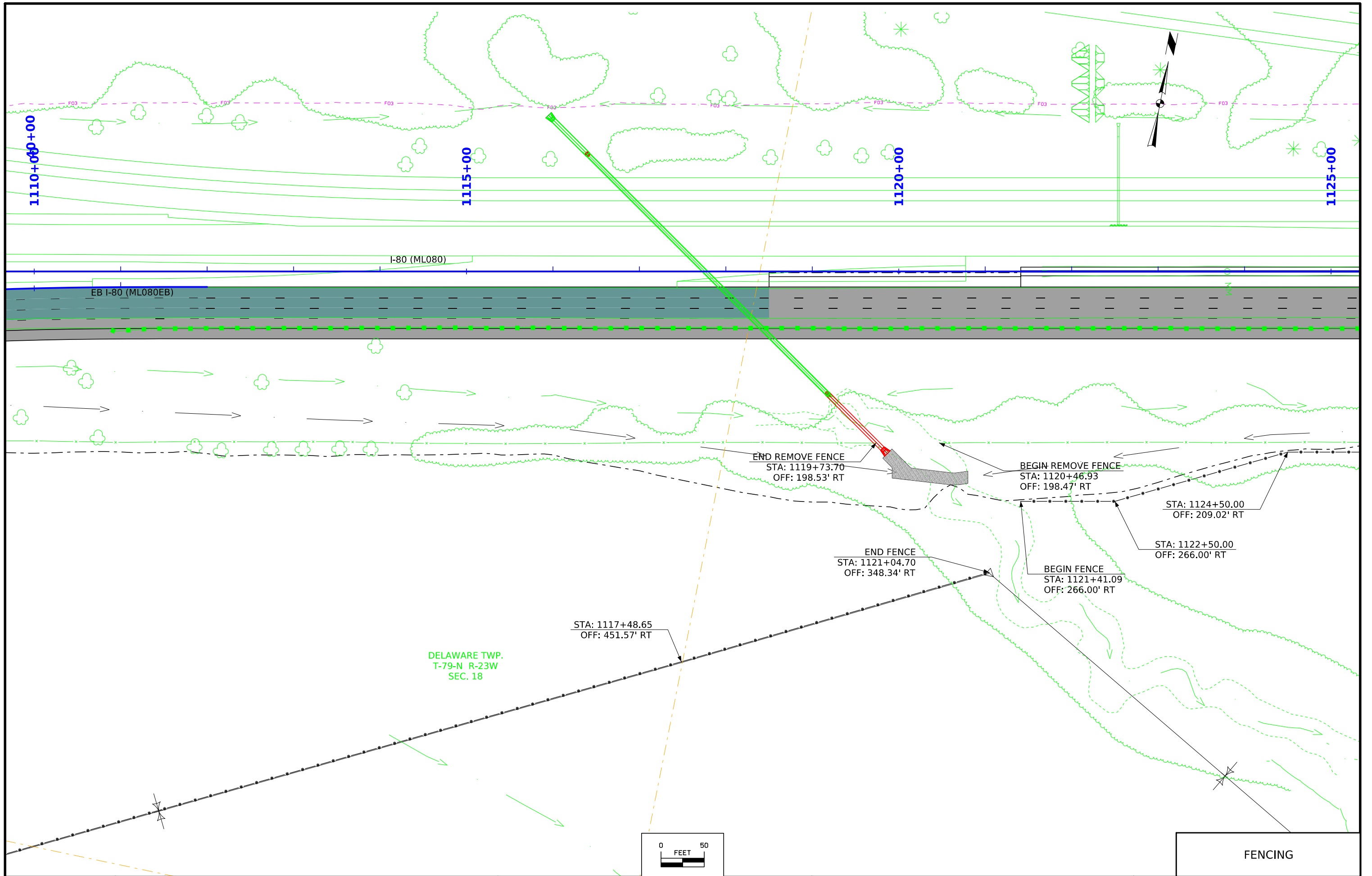


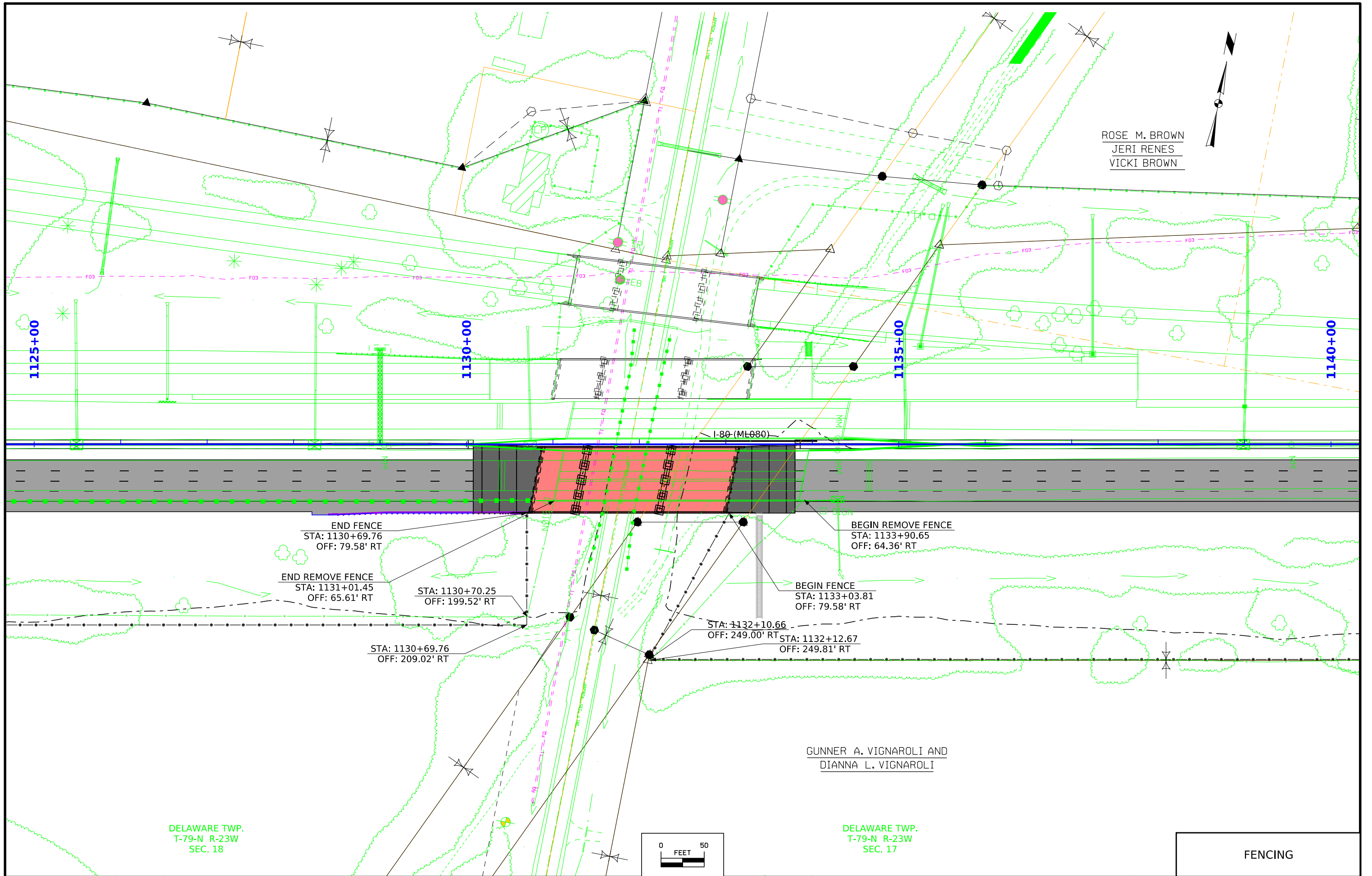
CLEARING
AND GRUBBING

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT \ HDR	POLK COUNTY	PROJECT NUMBER IM-NHS-080-4(085)138--03-77	SHEET NUMBER U.9
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DELAWARE TWP.
T-79-N R-23W
SEC. 17

BRENDA R SAFRANSKI,
CARMEN SCHAMP-PRYOR LIFE ESTATE



1140+00

1145+00

1150+00

1155+00

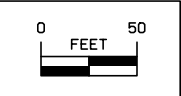
I-80 (ML080)

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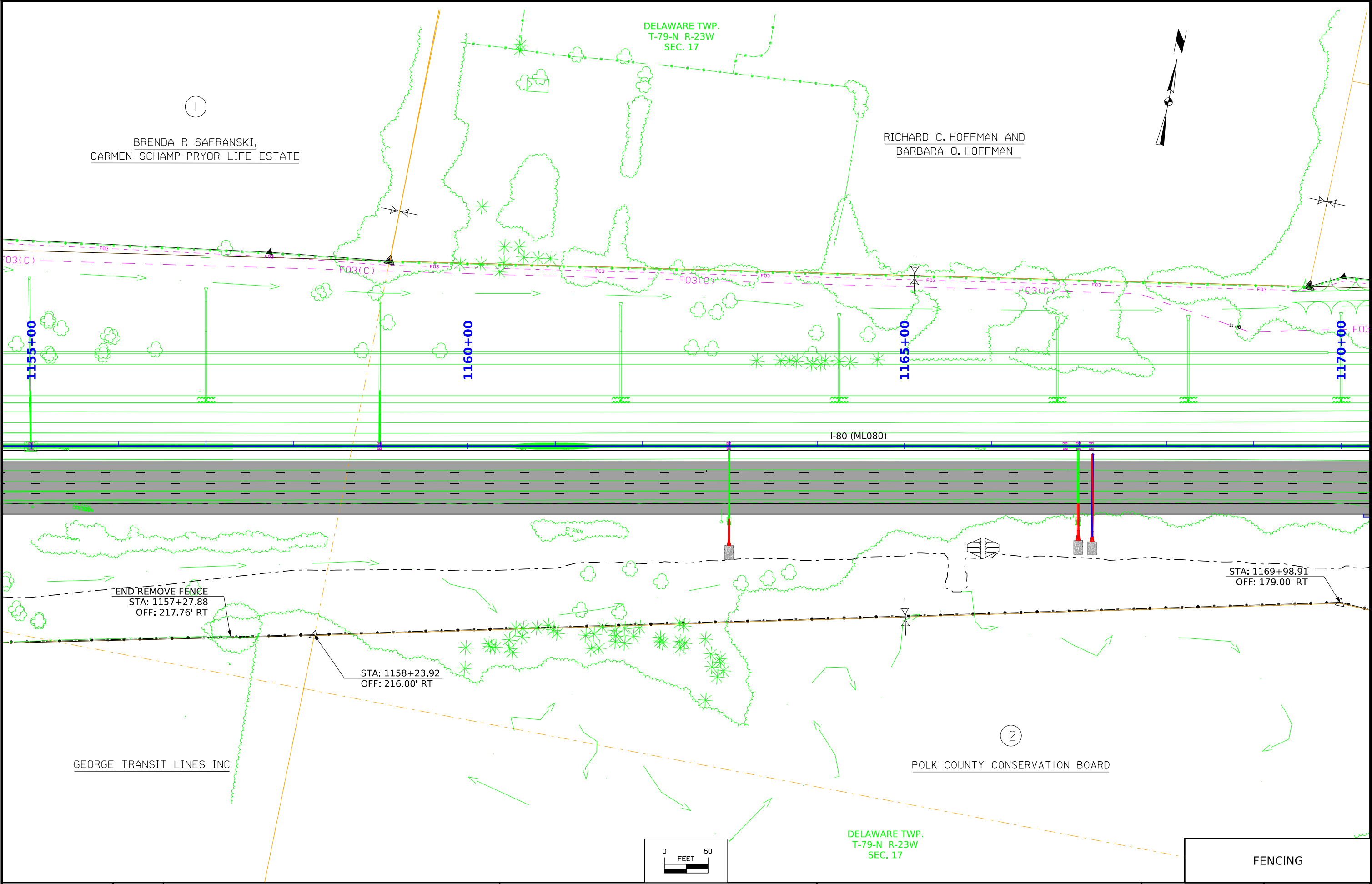
GUNNER A. VIGNAROLI AND
DIANNA L. VIGNAROLI

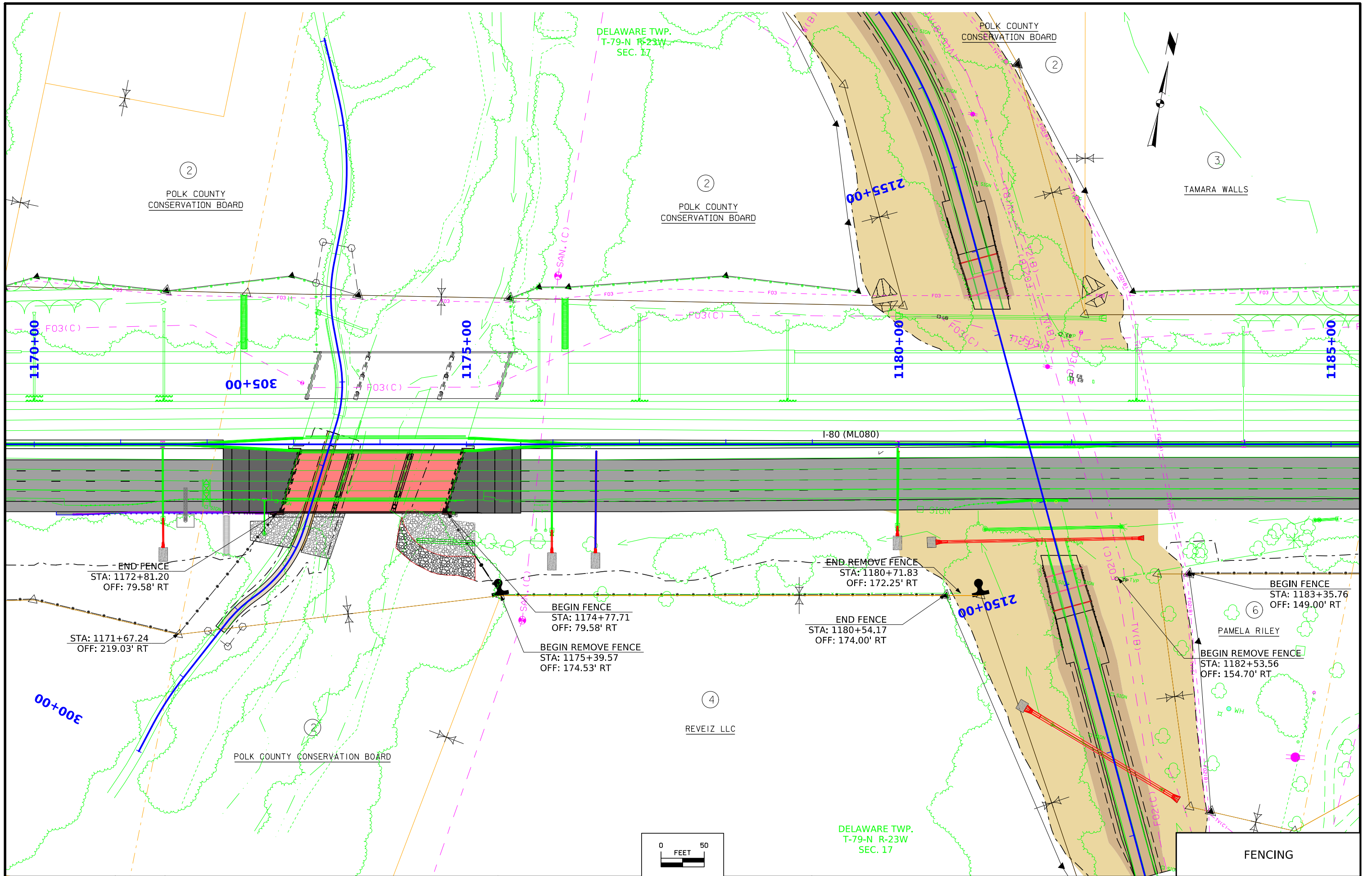
GEORGE TRANSIT LINES INC

DELAWARE TWP.
T-79-N R-23W
SEC. 17

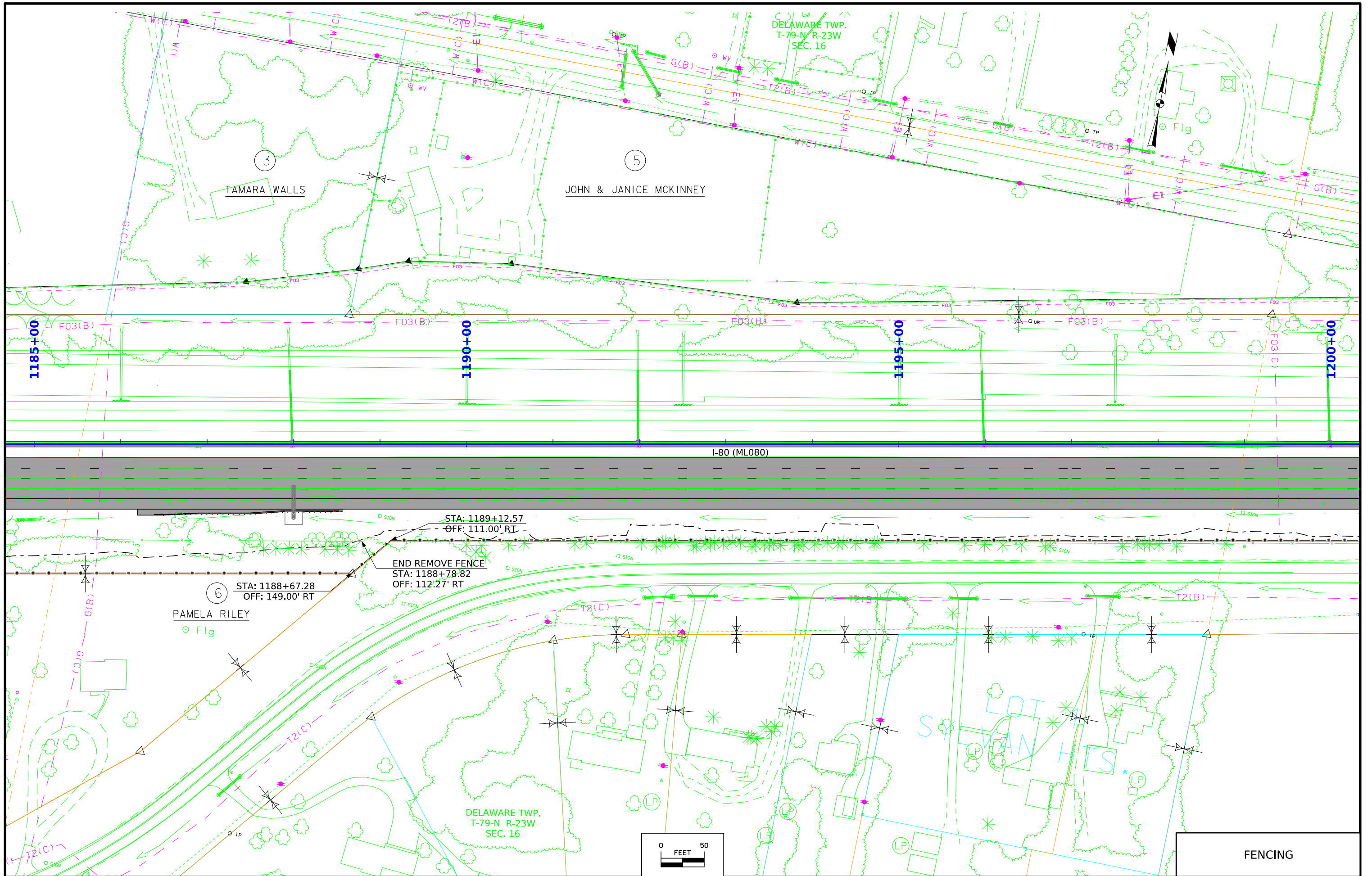


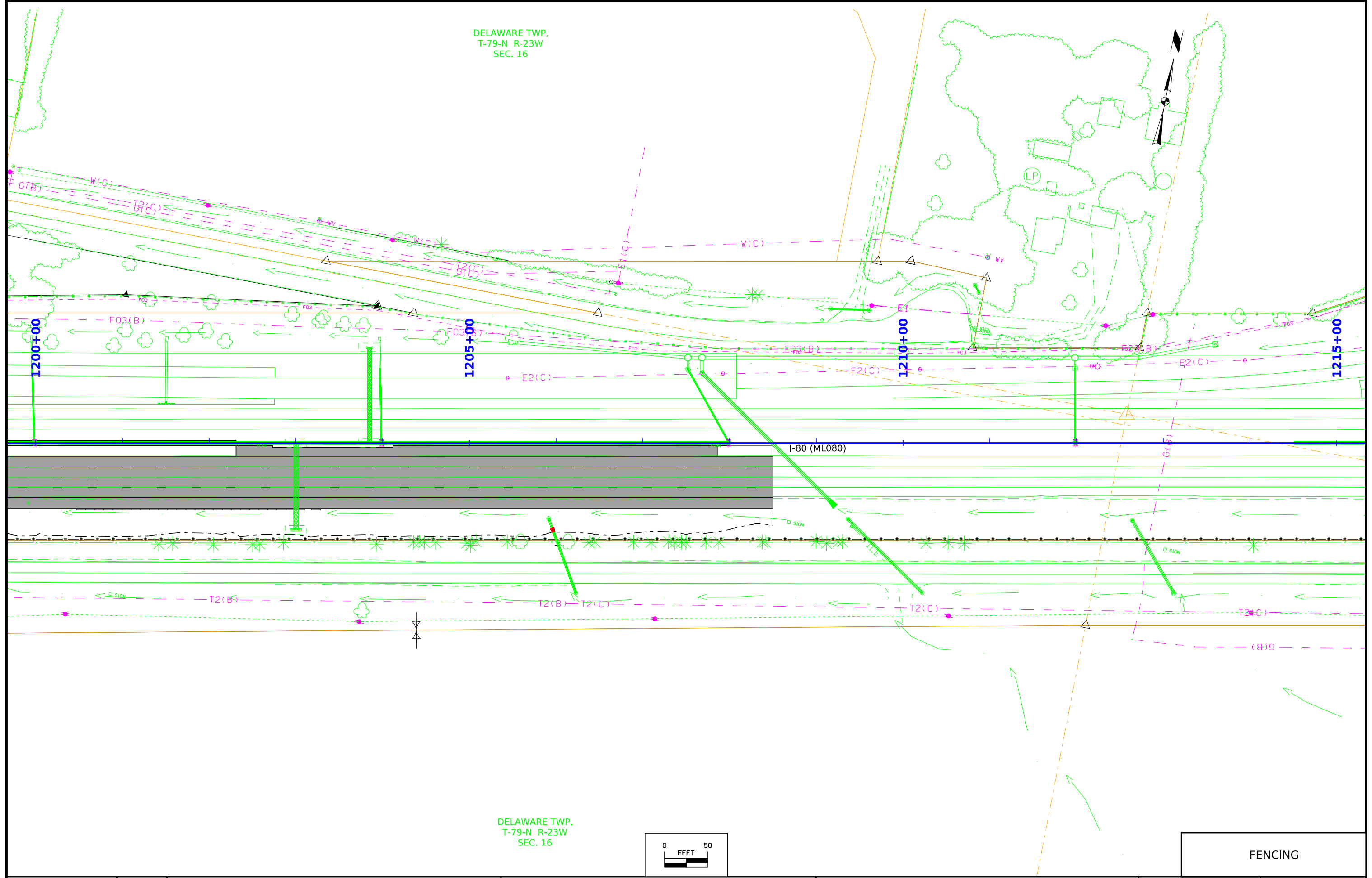
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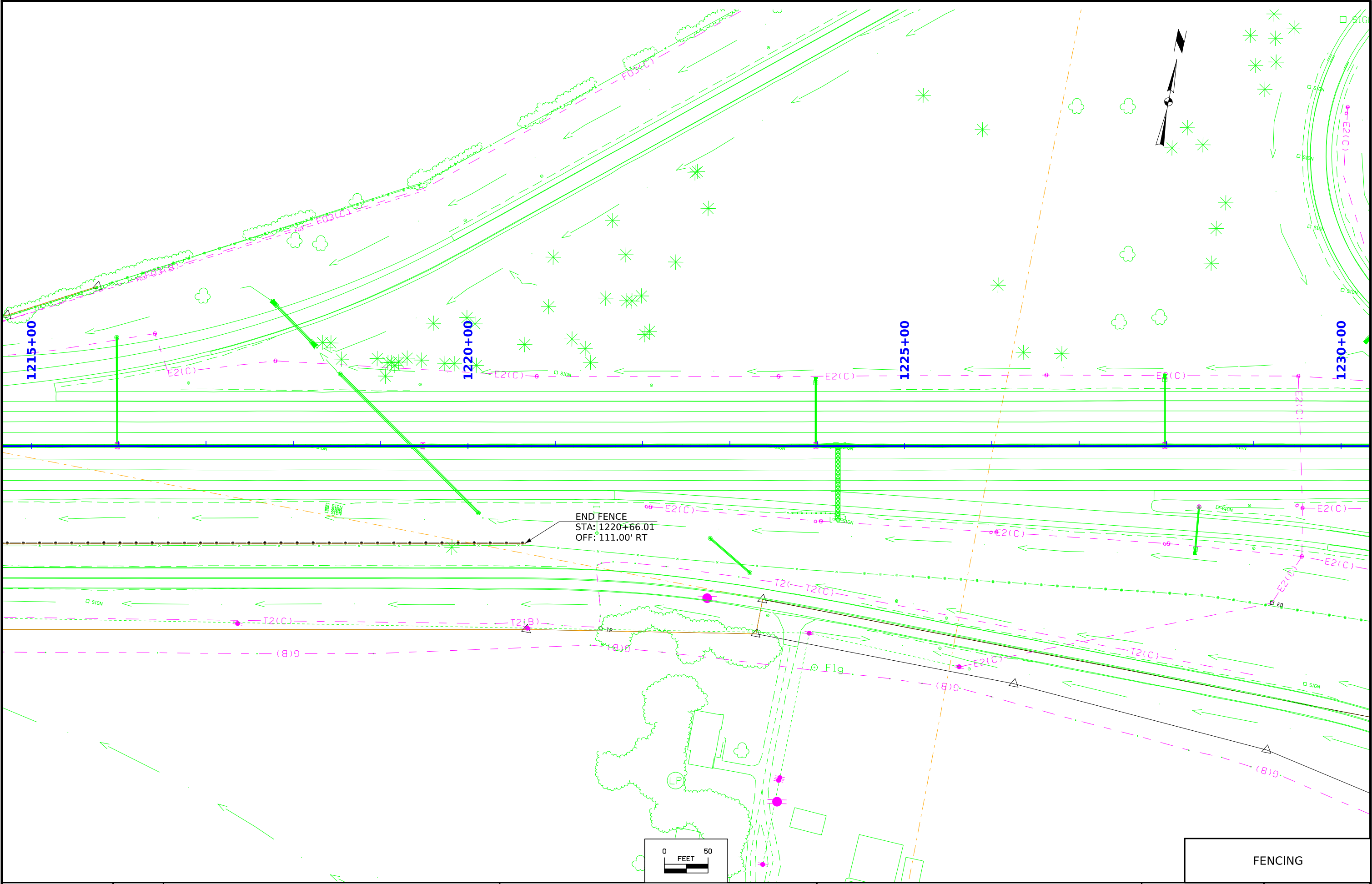


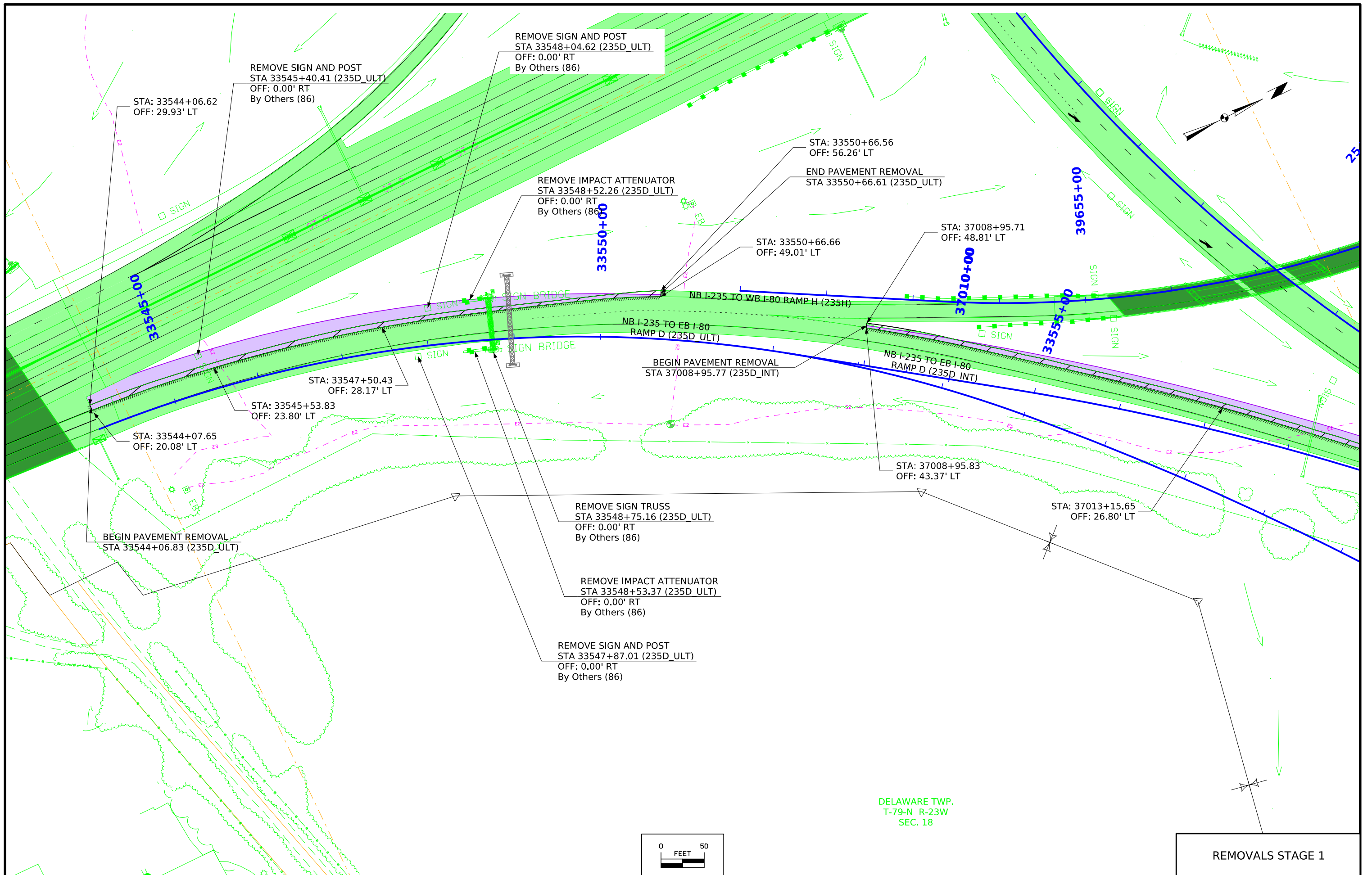


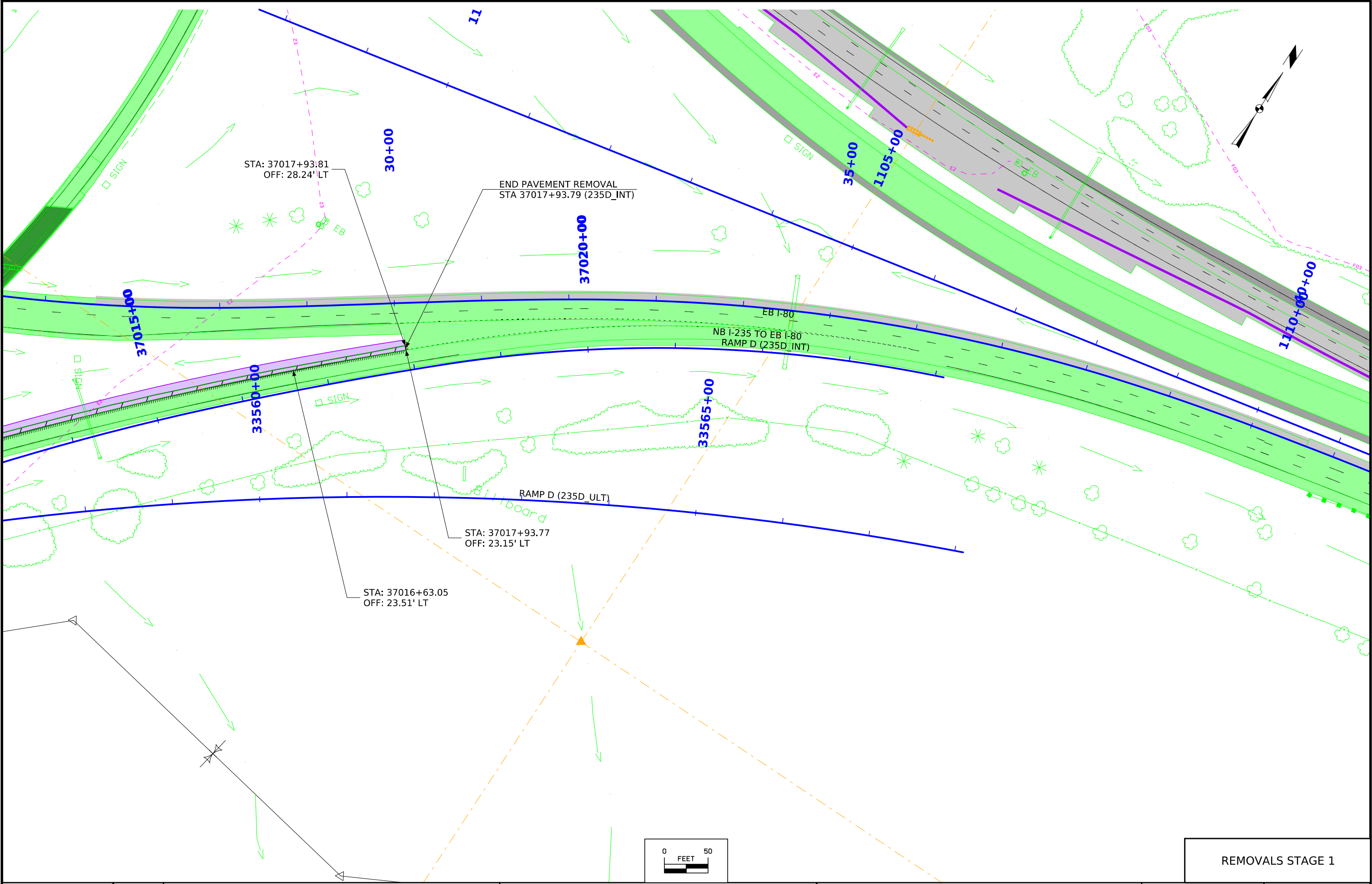
FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT \ HDR	POLK COUNTY	PROJECT NUMBER IM-NHS-080-4(085)138--03-77	SHEET NUMBER U.16
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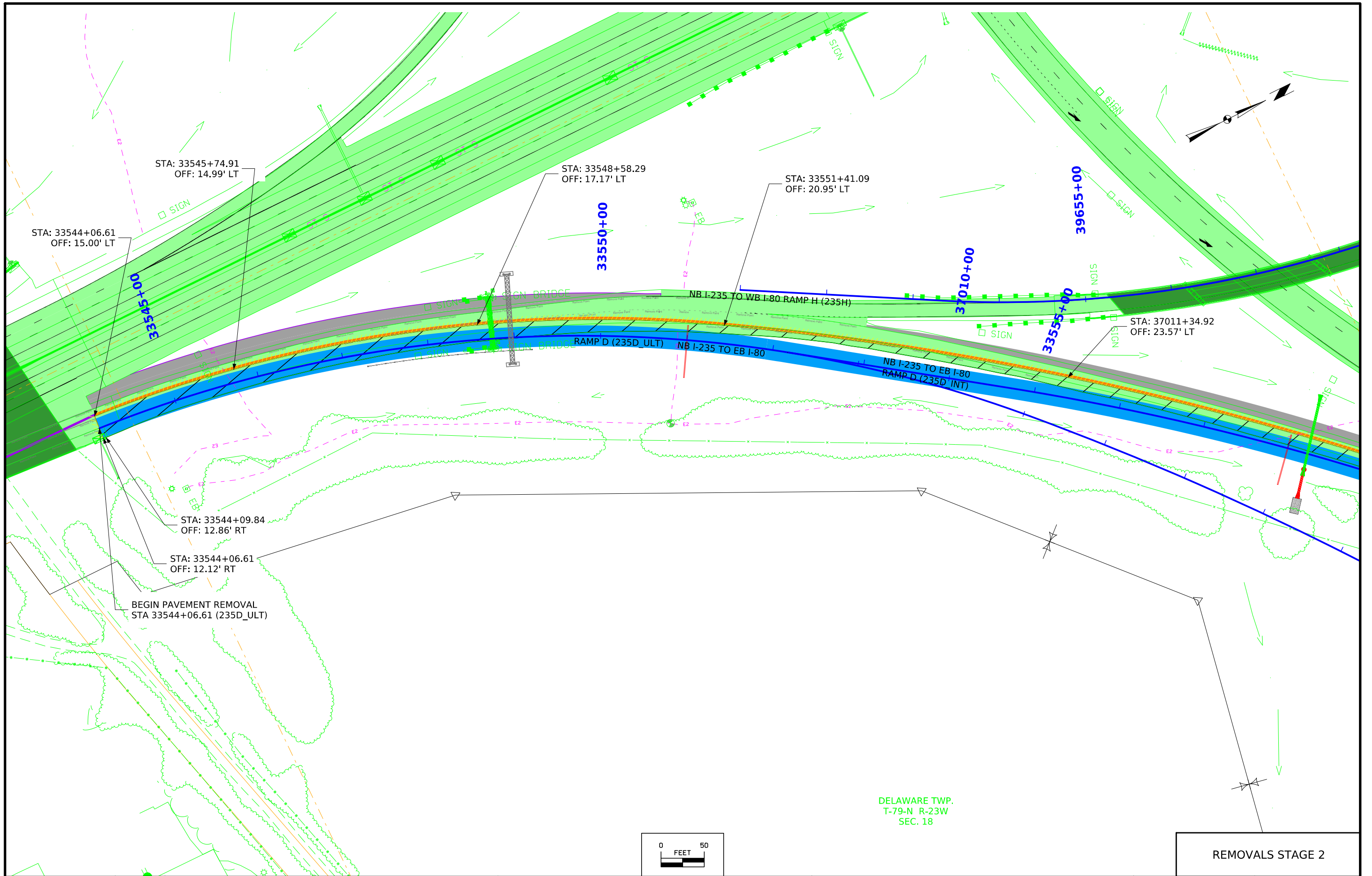


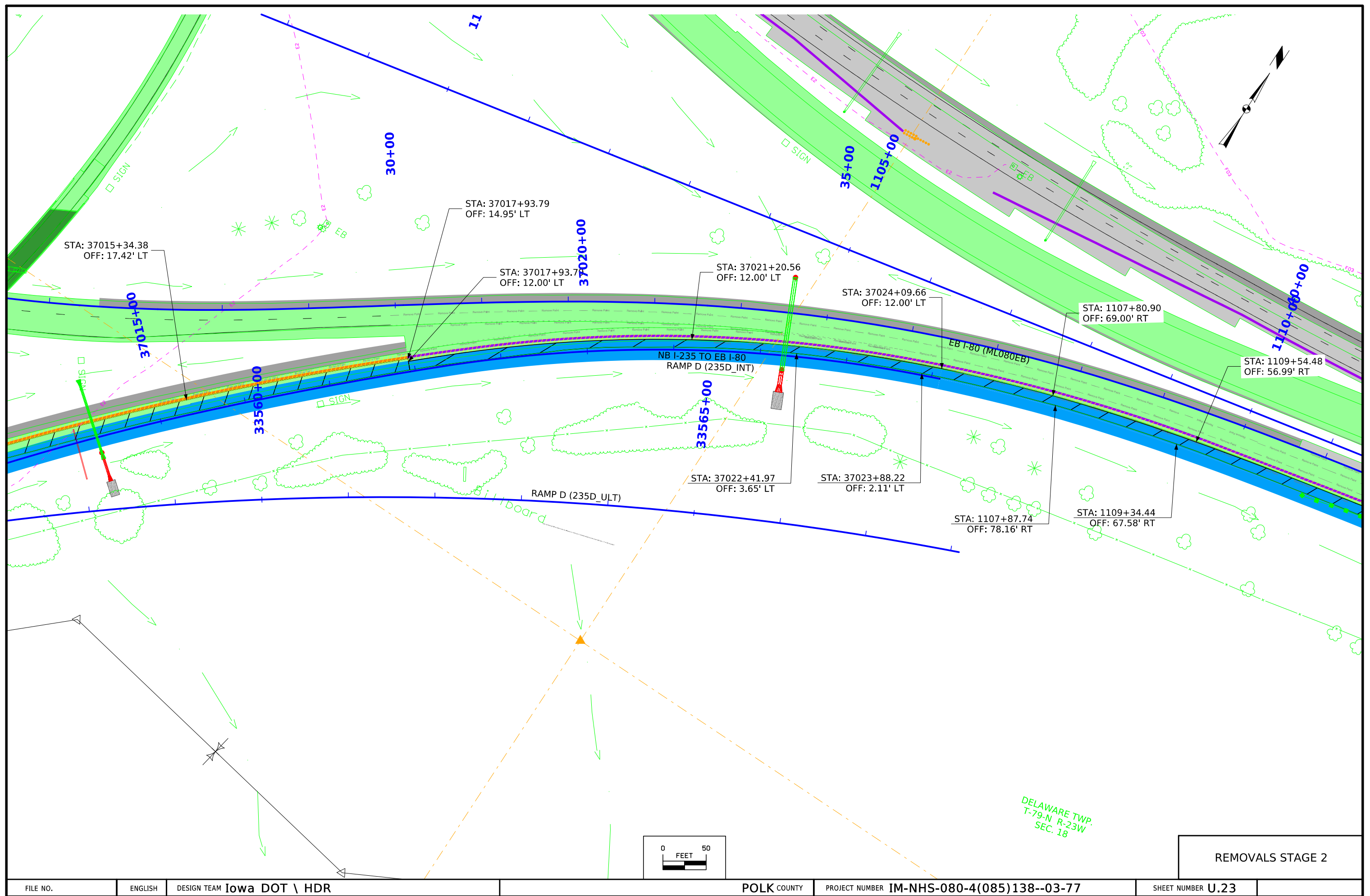


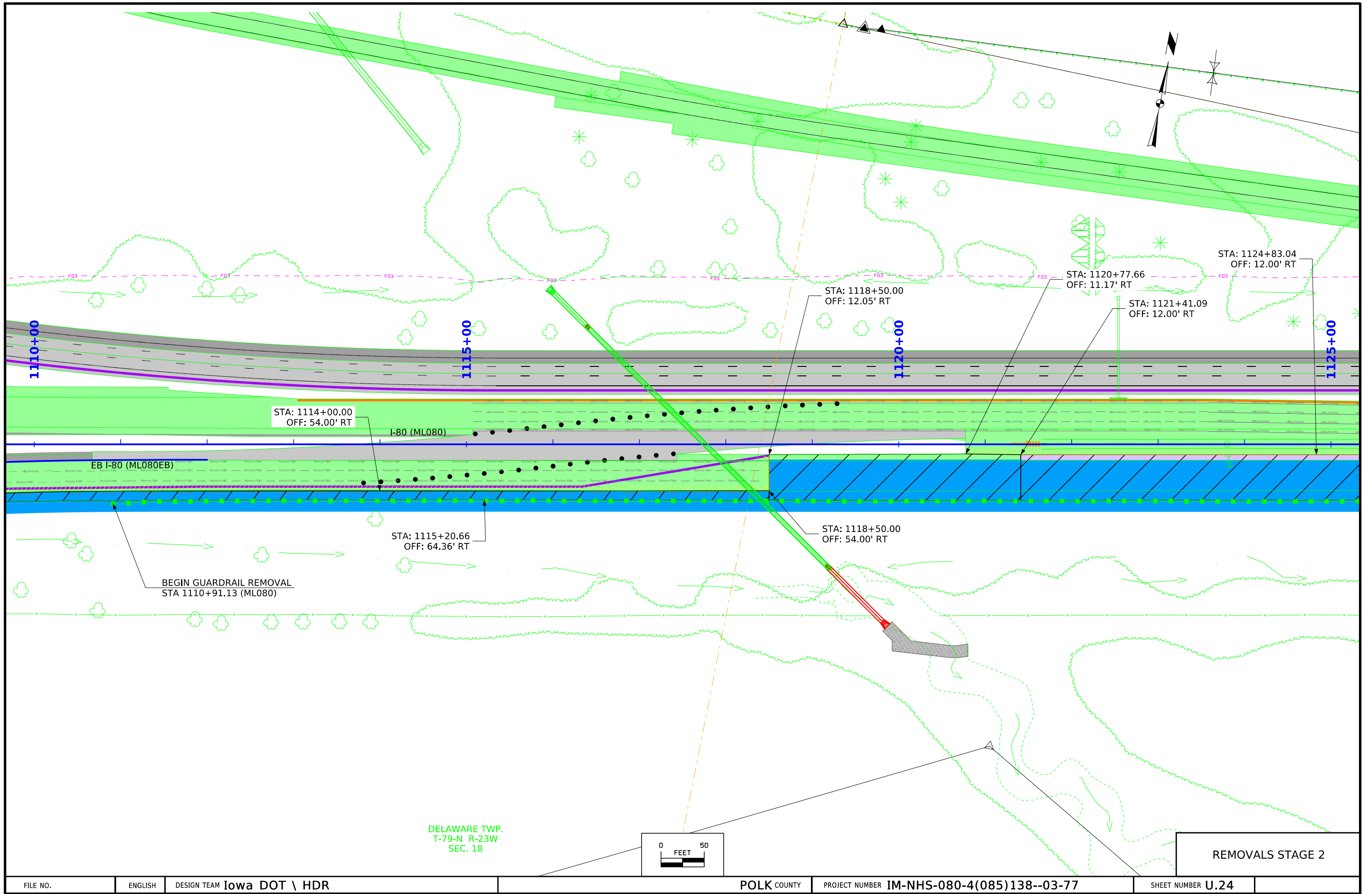


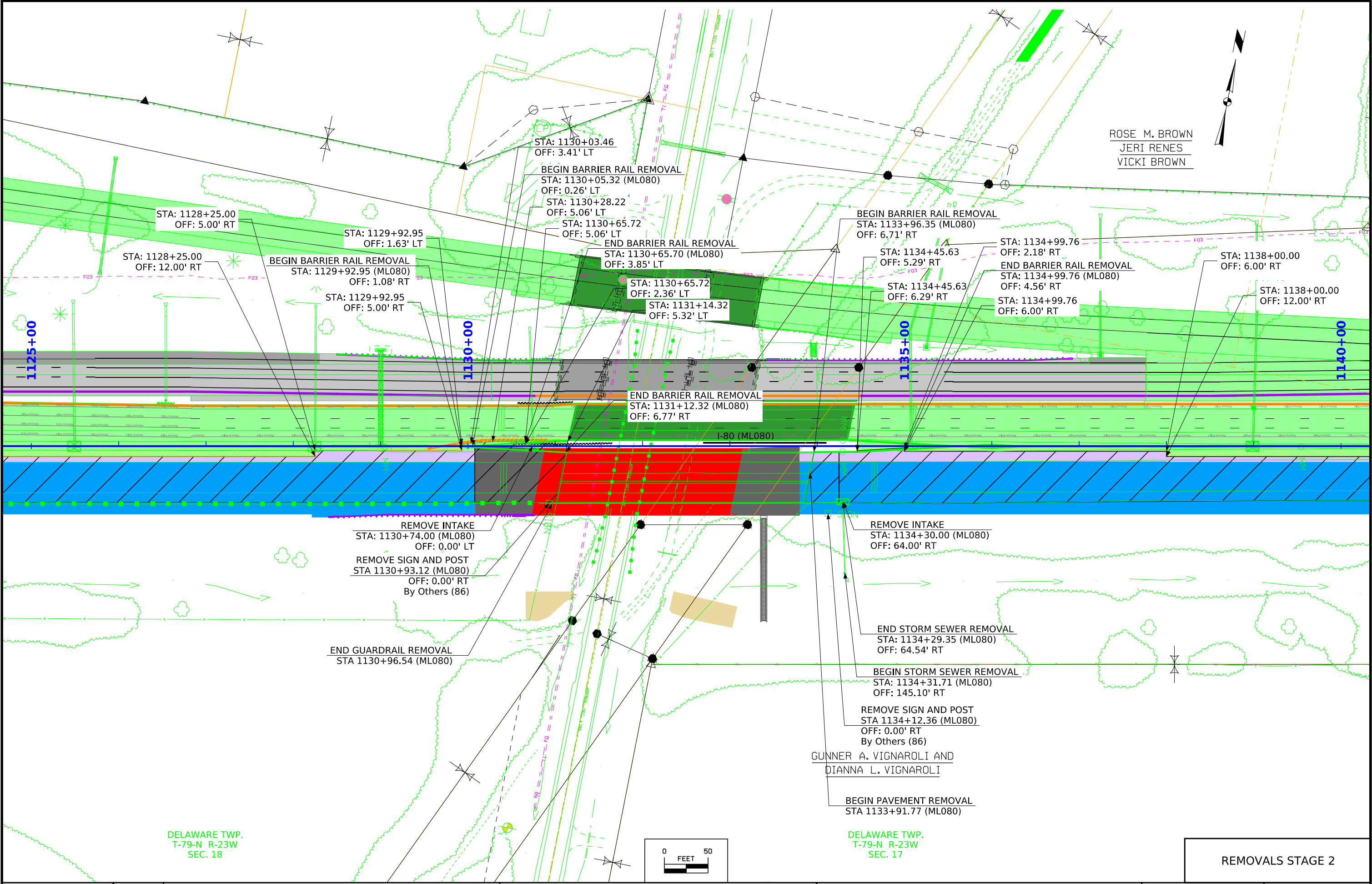


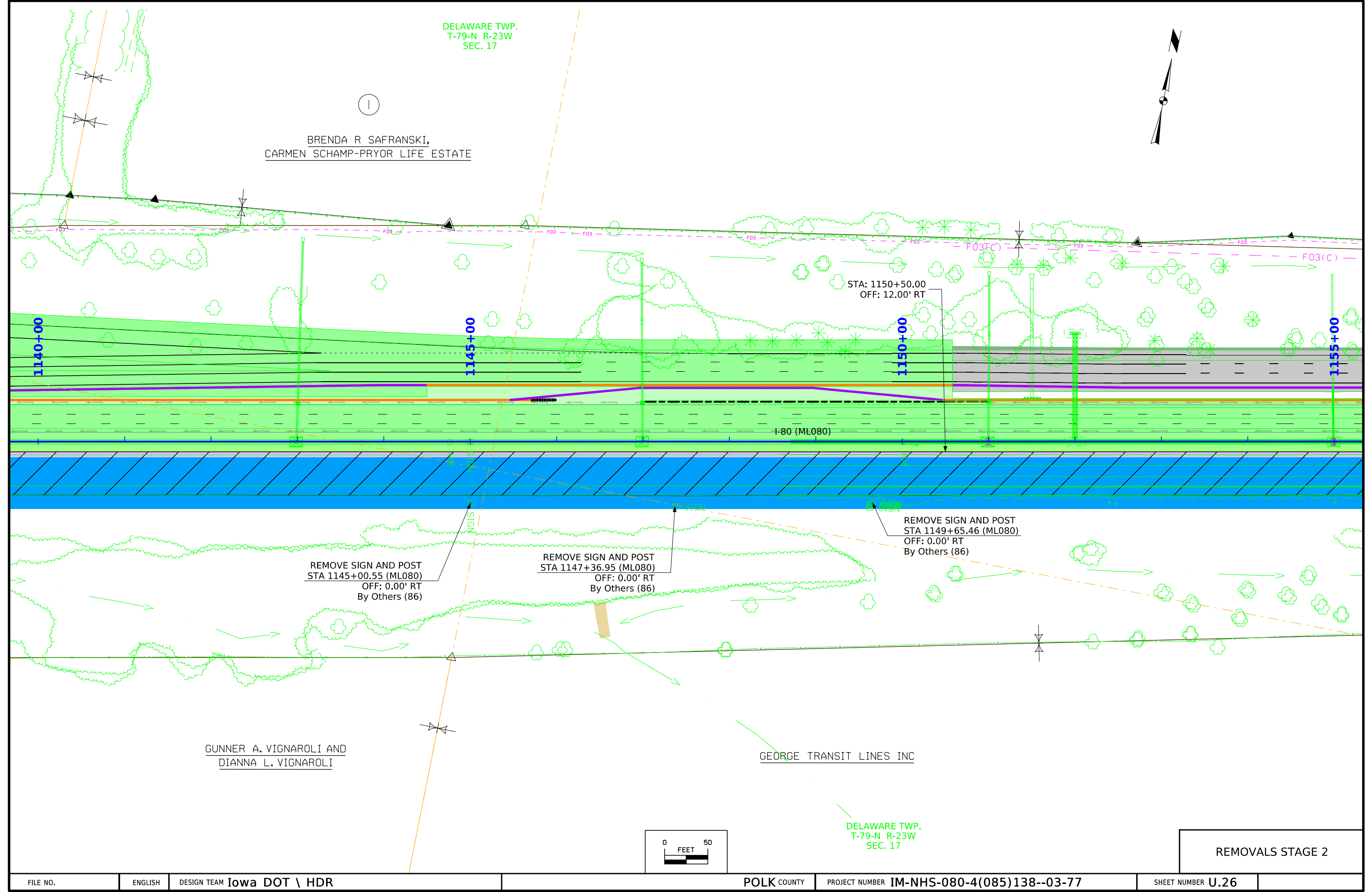


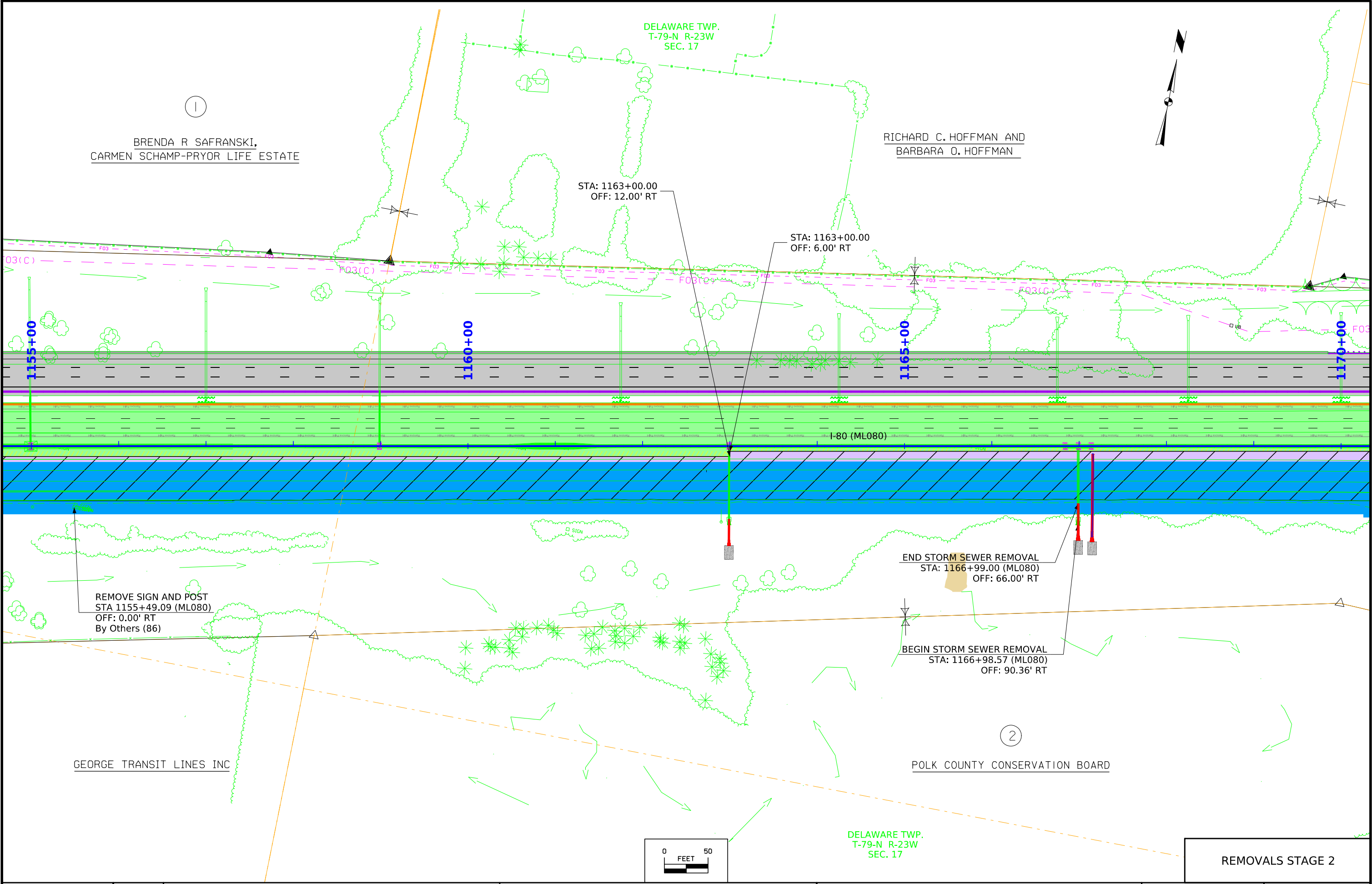


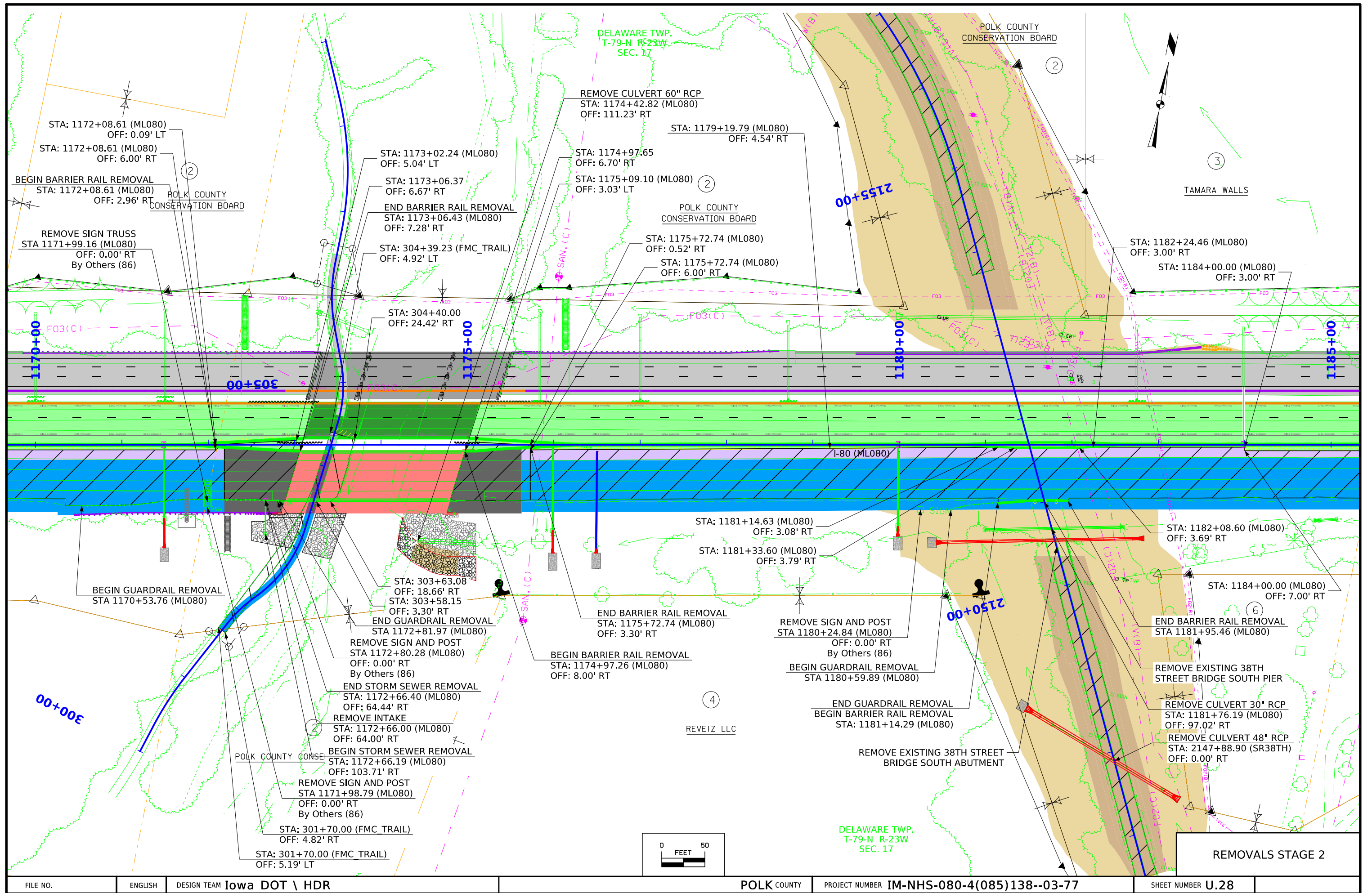


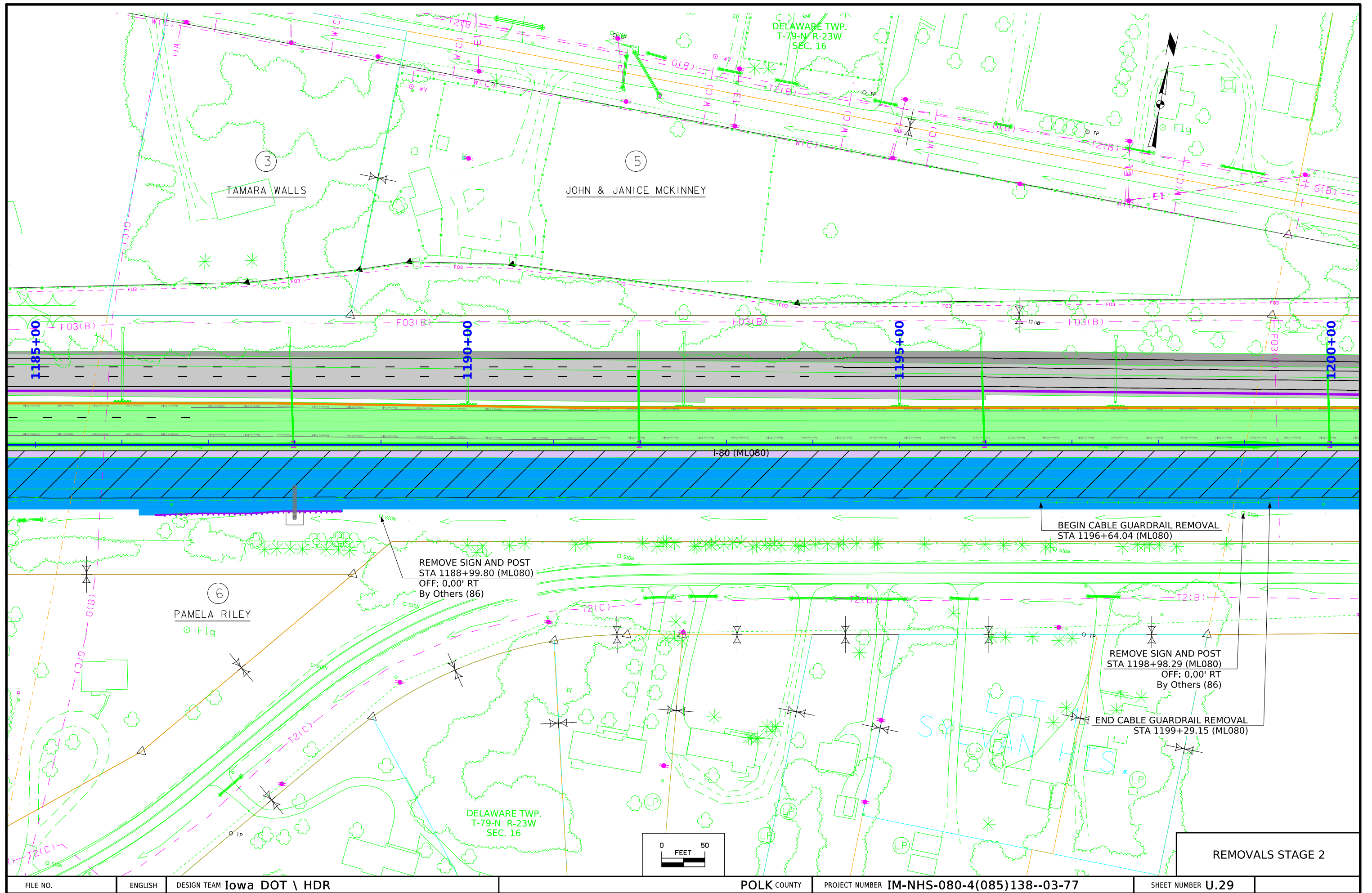


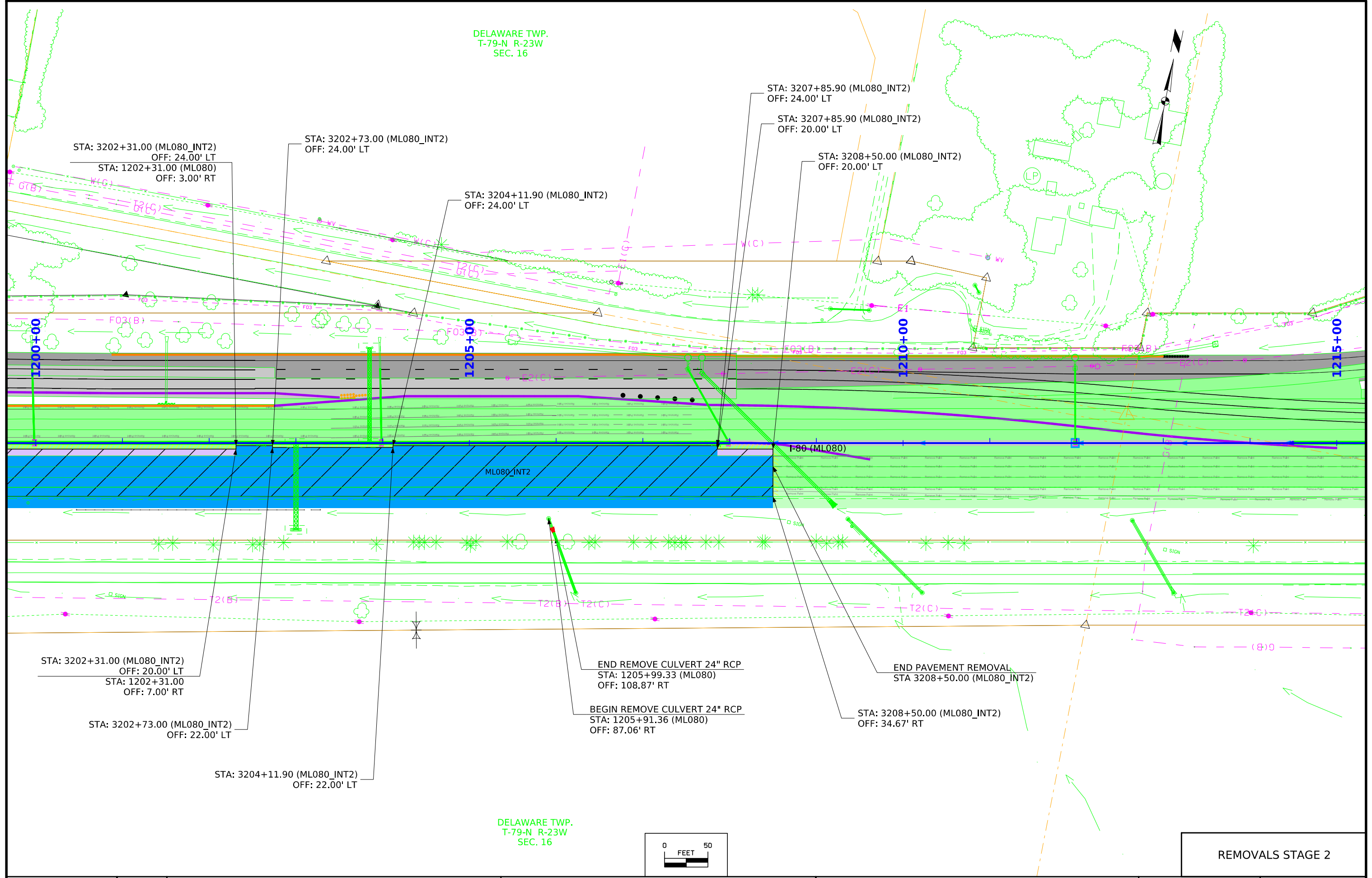


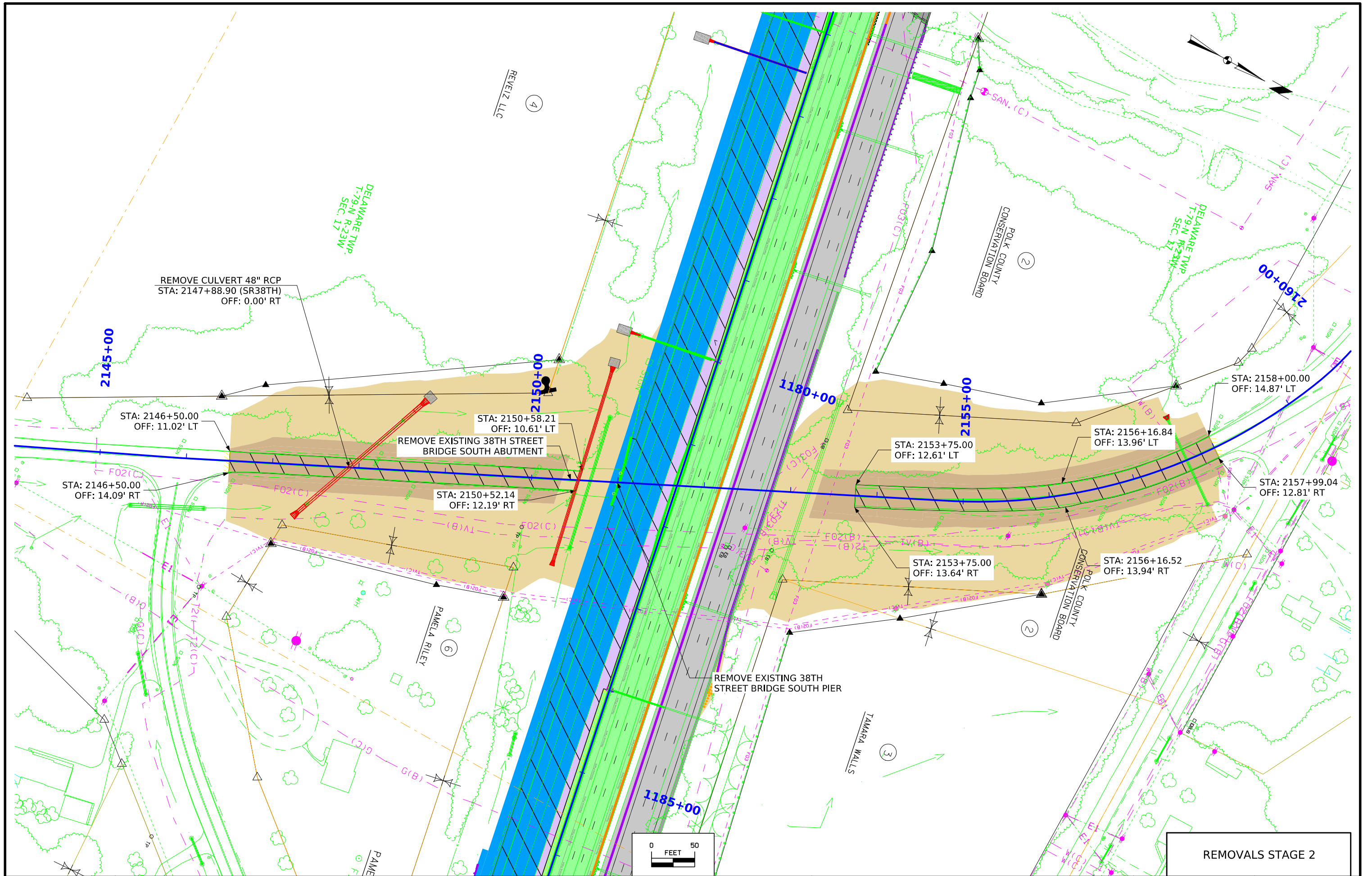


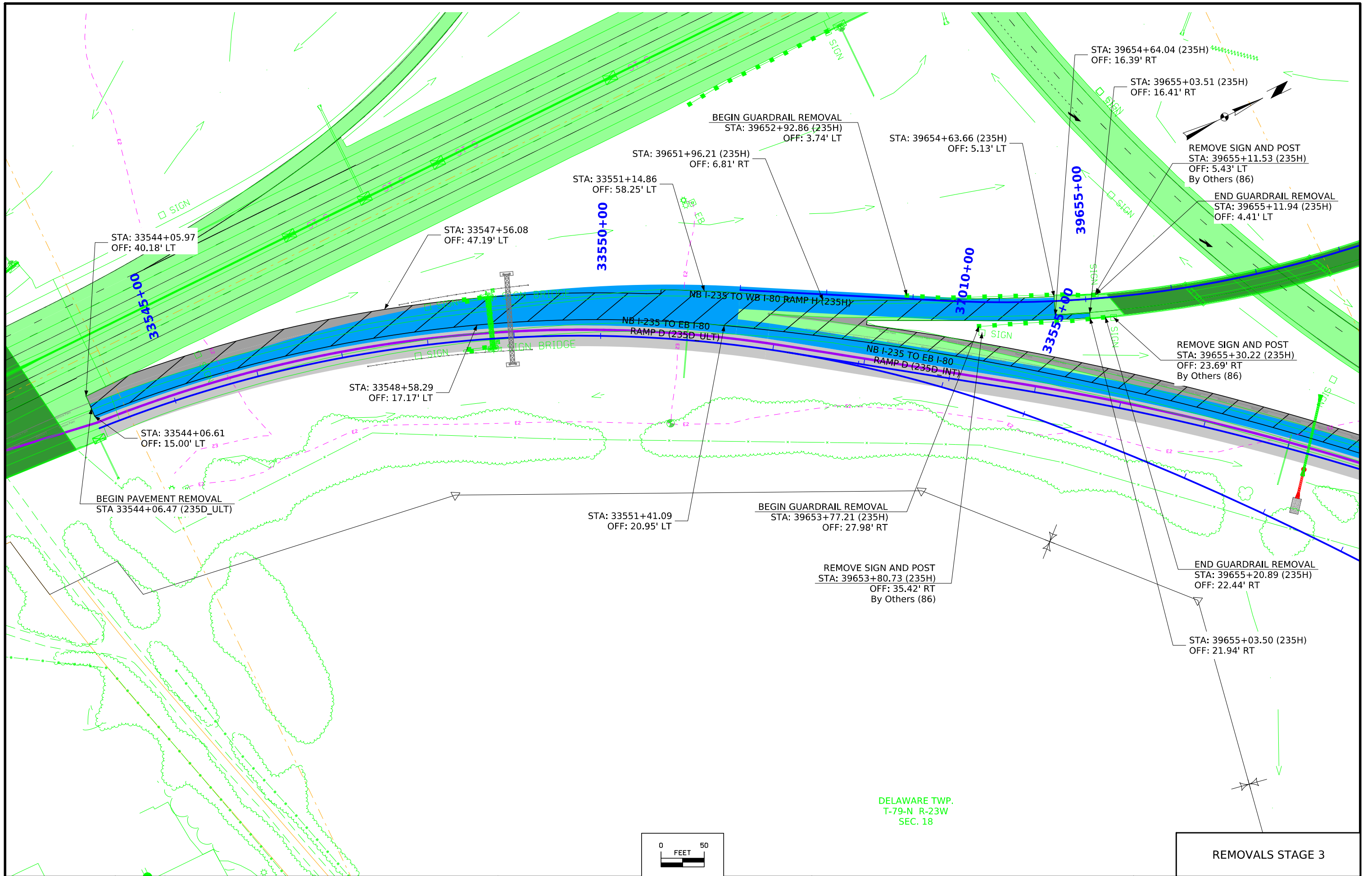


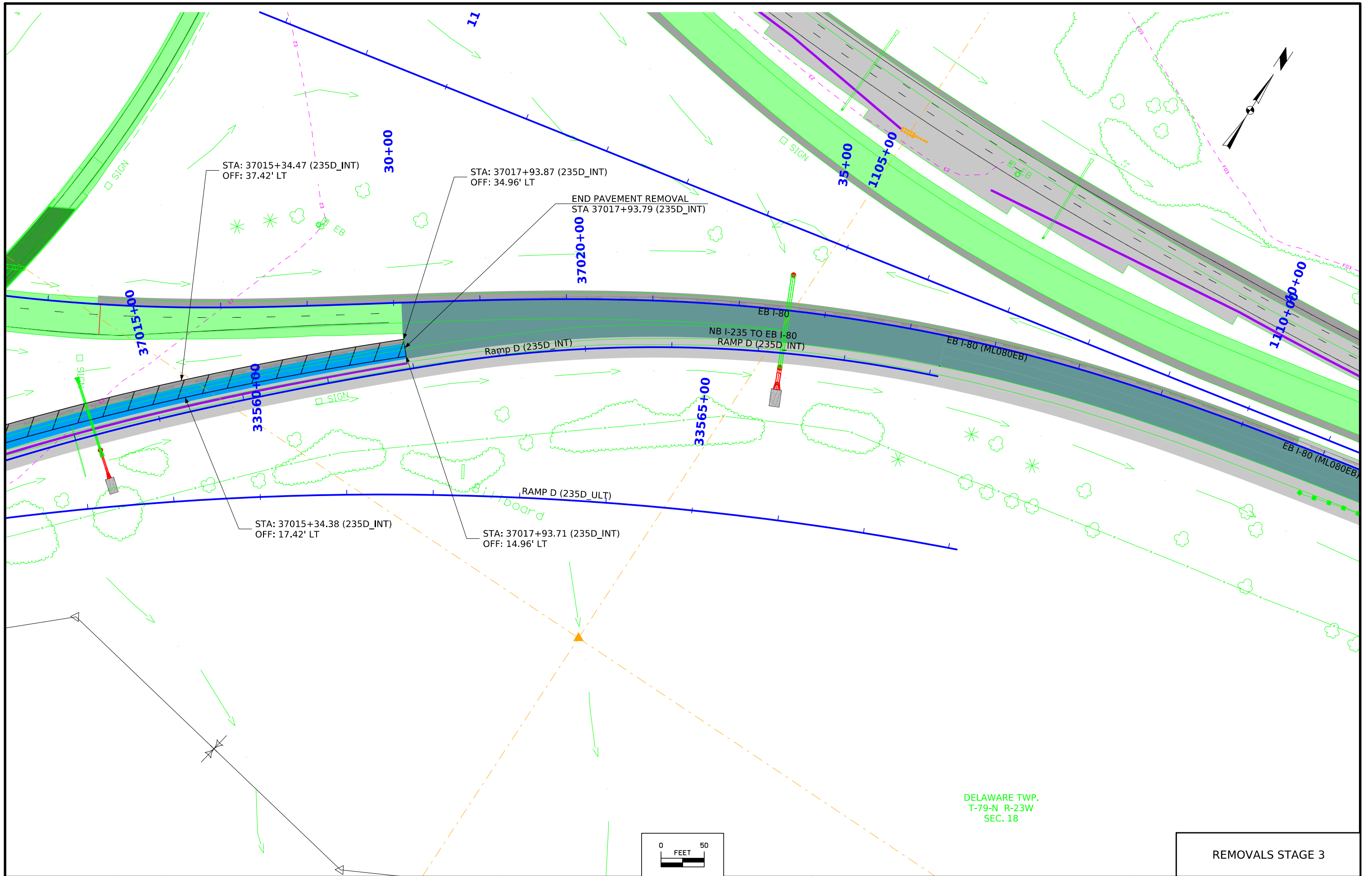


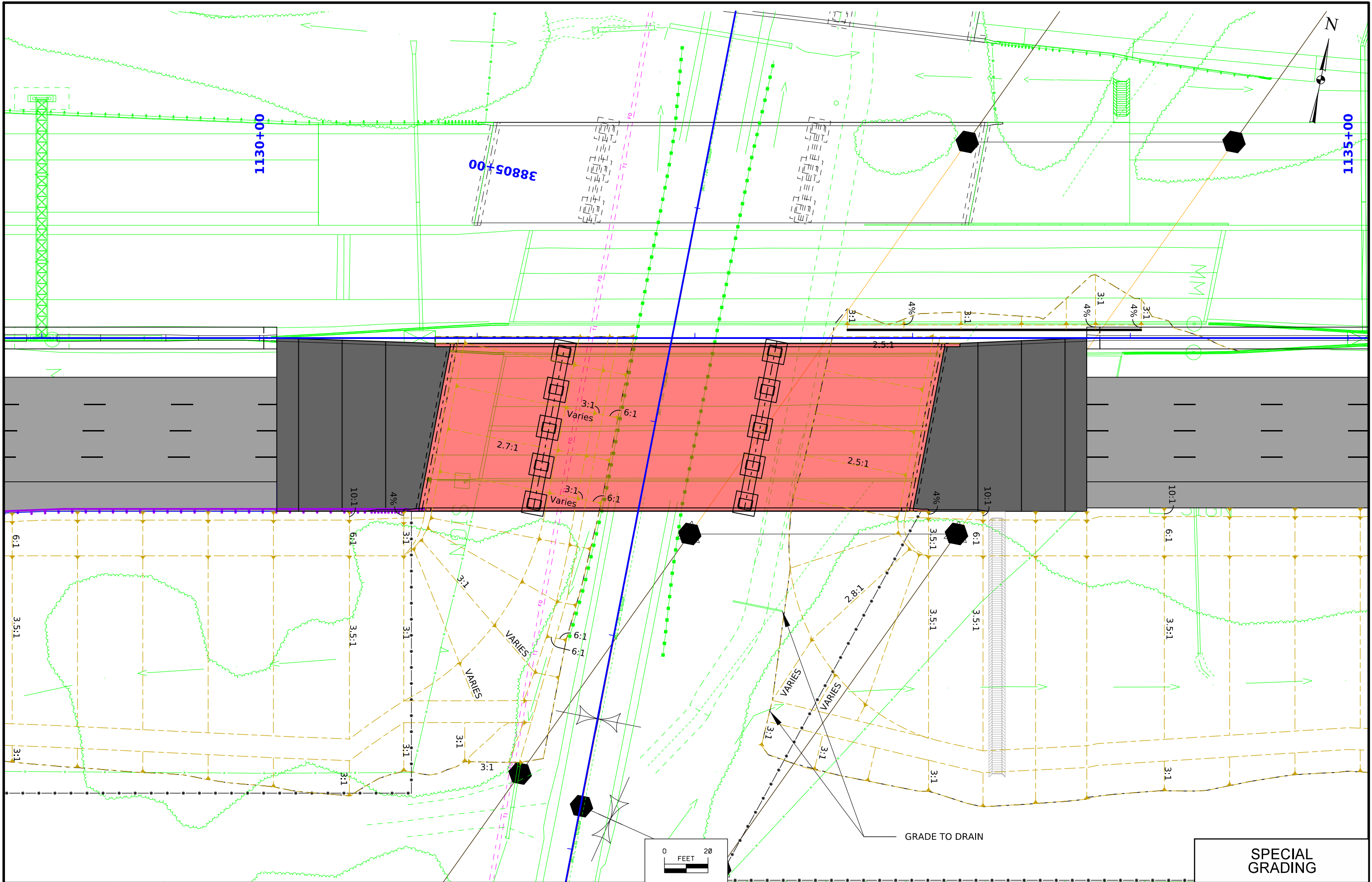


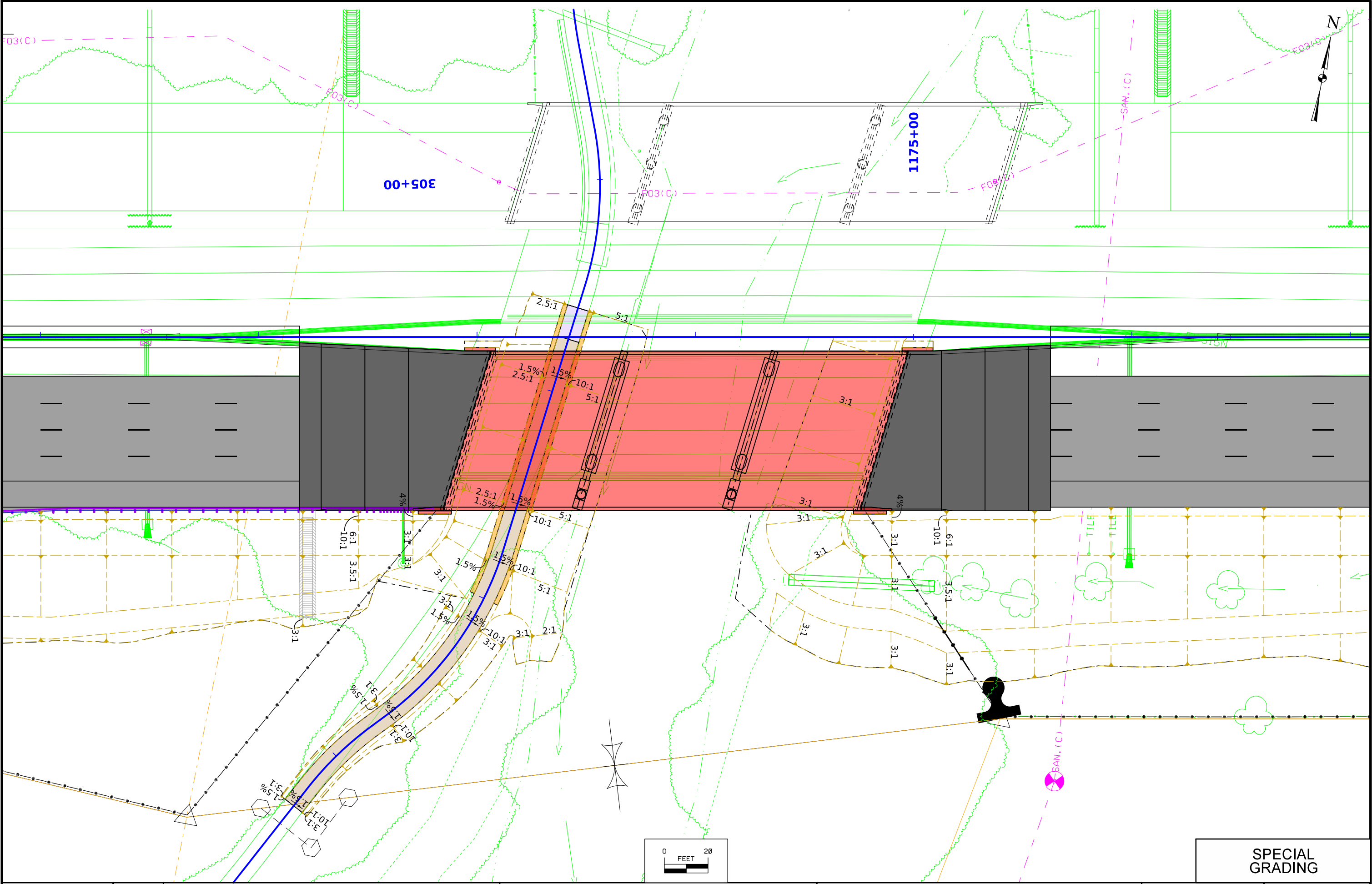


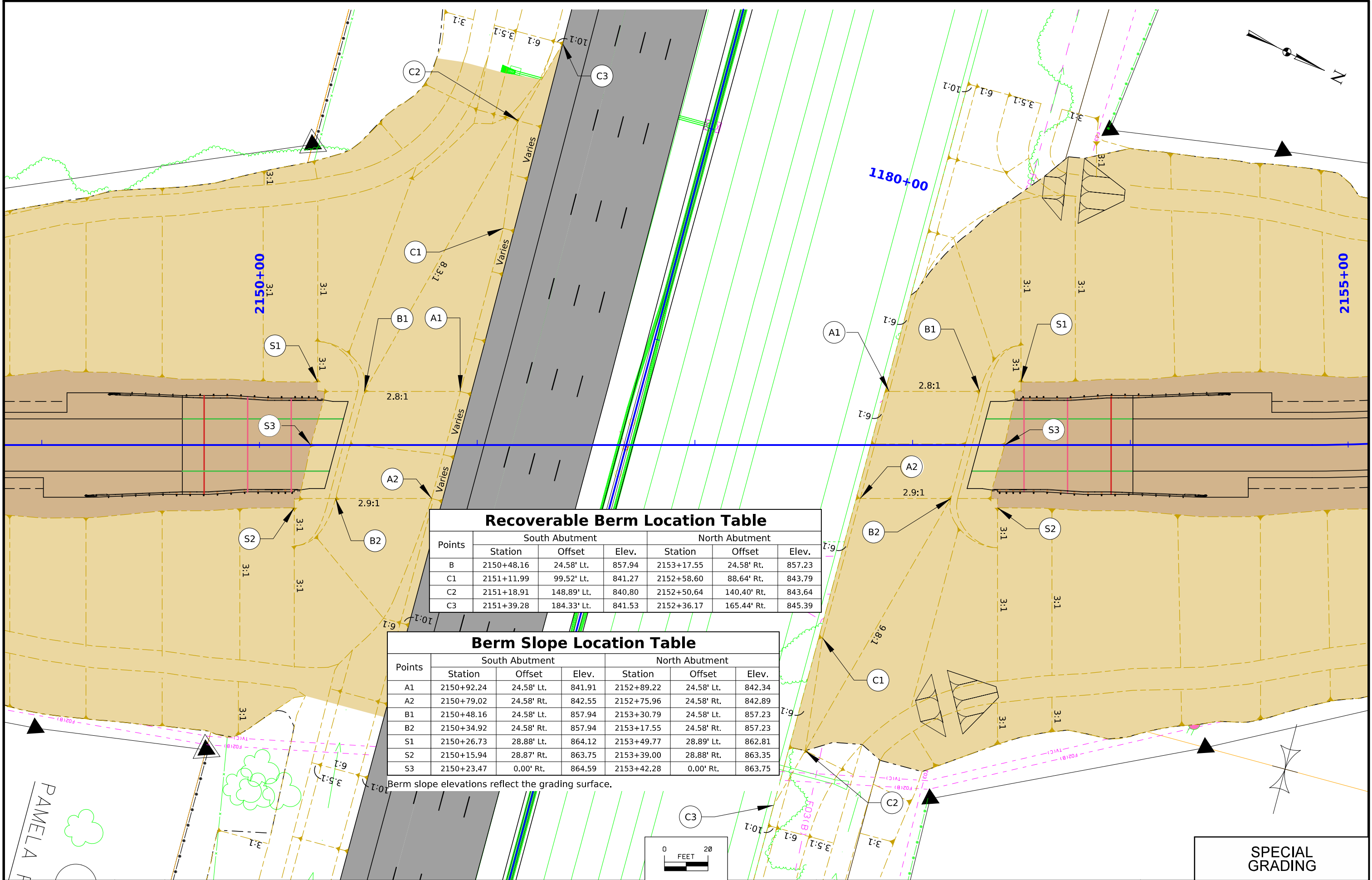








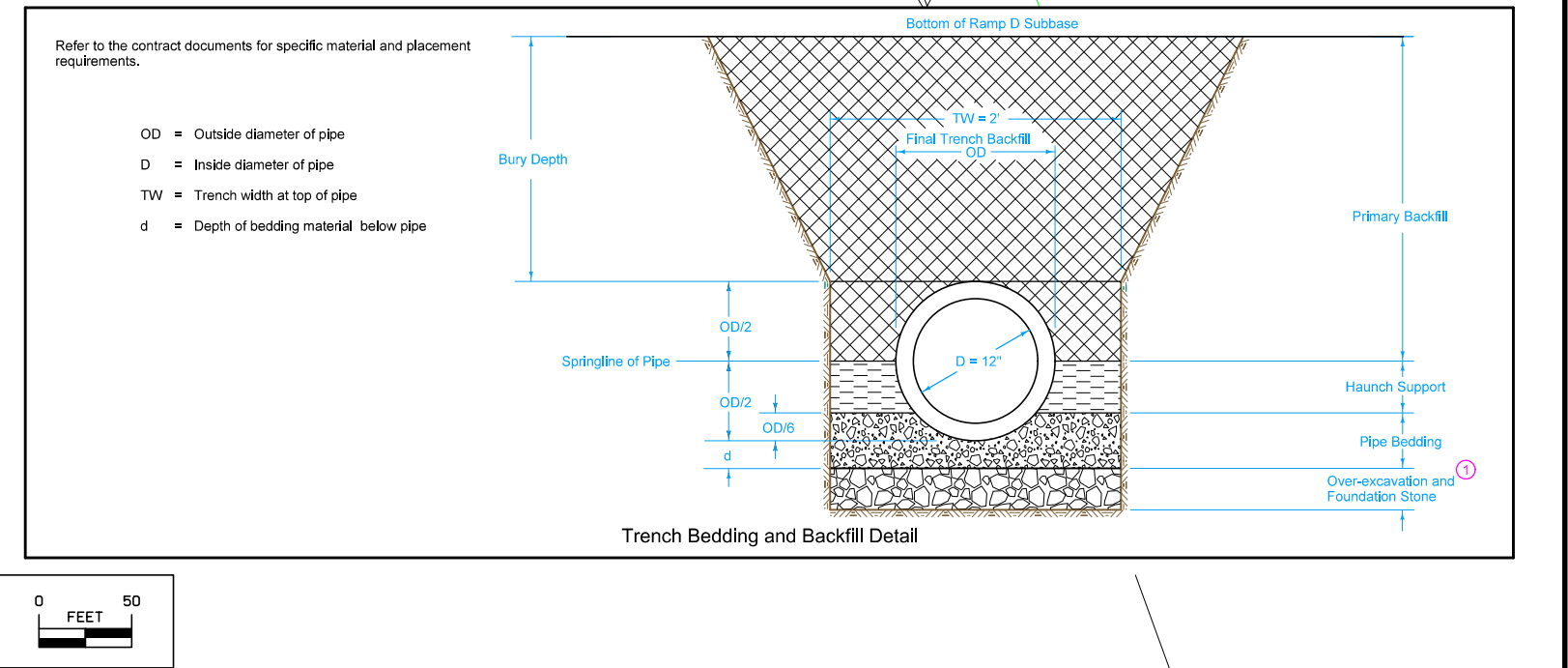
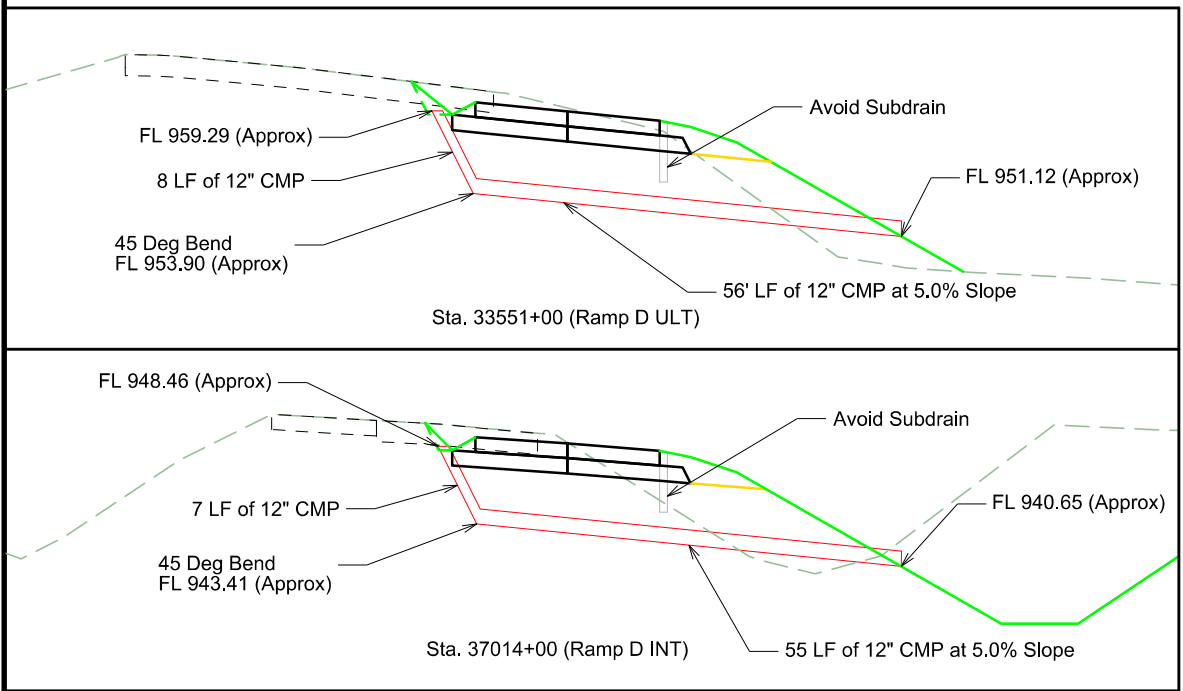
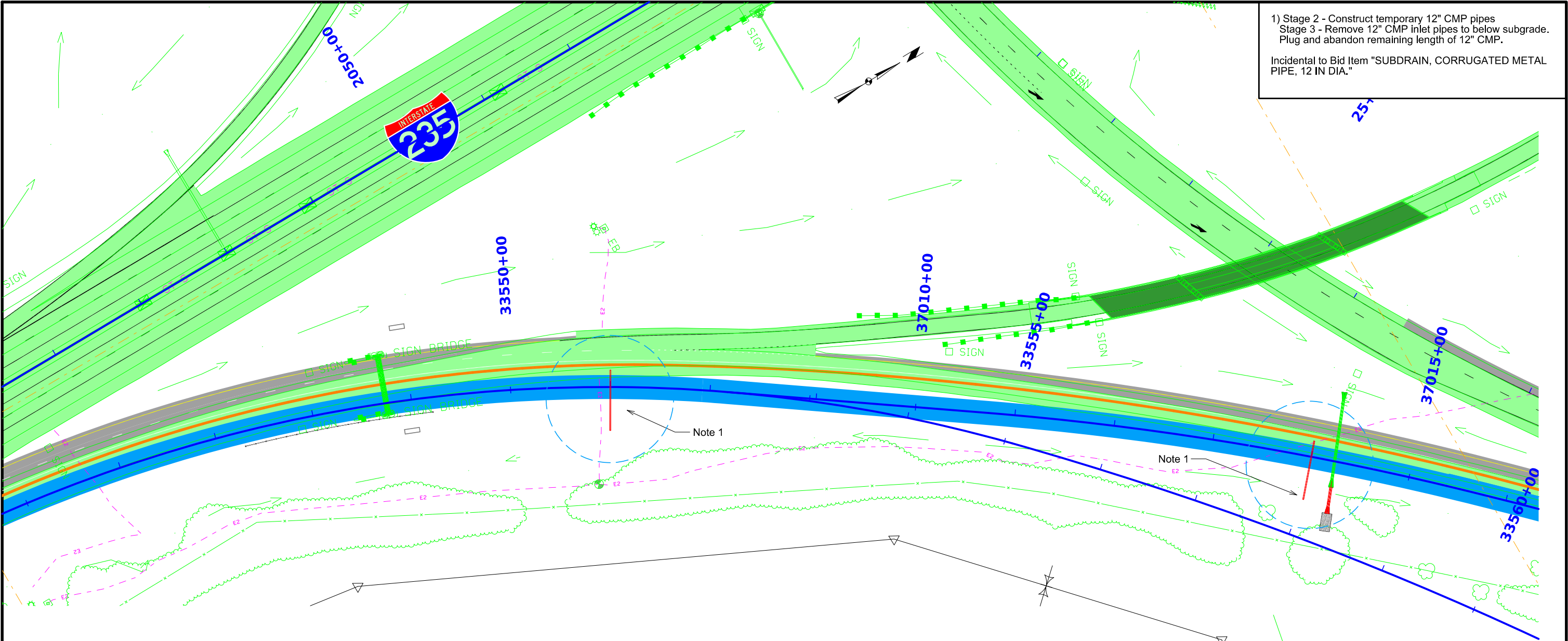


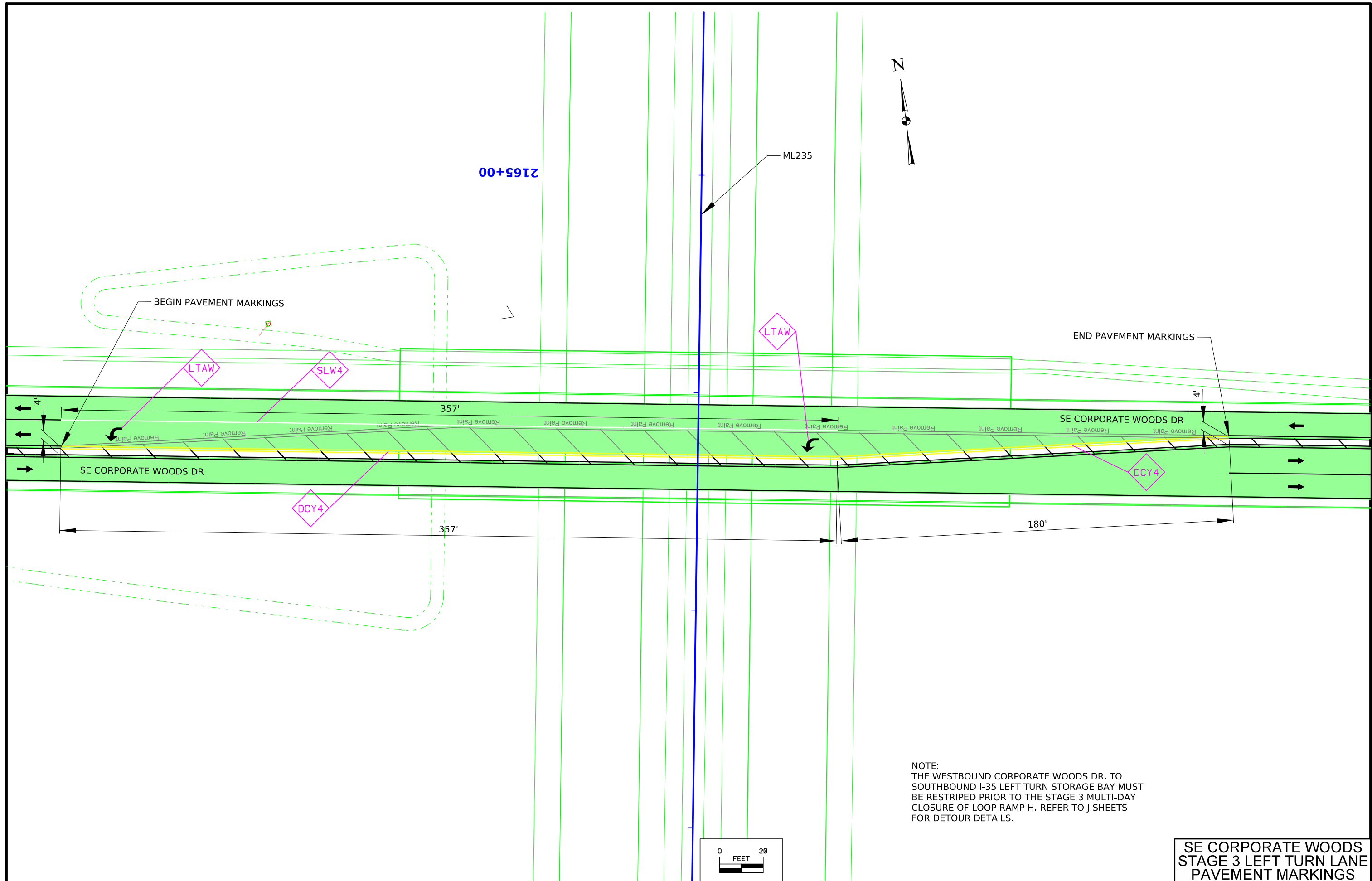


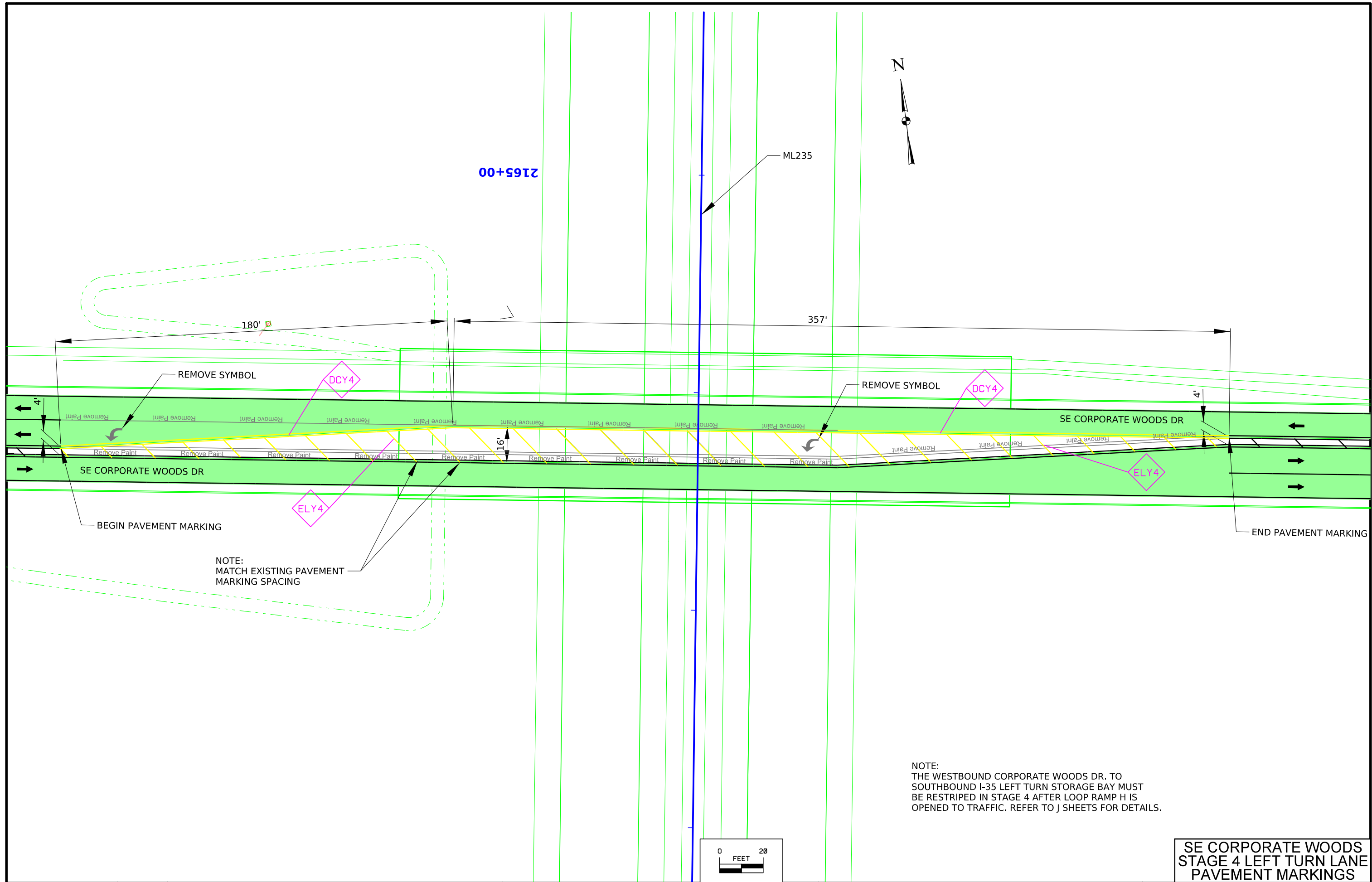
Recoverable Berm Location Table						
Points	South Abutment			North Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
B	2150+48.16	24.58' Lt.	857.94	2153+17.55	24.58' Rt.	857.23
C1	2151+11.99	99.52' Lt.	841.27	2152+58.60	88.64' Rt.	843.79
C2	2151+18.91	148.89' Lt.	840.80	2152+50.64	140.40' Rt.	843.64
C3	2151+39.28	184.33' Lt.	841.53	2152+36.17	165.44' Rt.	845.39

Berm Slope Location Table						
Points	South Abutment			North Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	2150+92.24	24.58' Lt.	841.91	2152+89.22	24.58' Lt.	842.34
A2	2150+79.02	24.58' Rt.	842.55	2152+75.96	24.58' Rt.	842.89
B1	2150+48.16	24.58' Lt.	857.94	2153+30.79	24.58' Lt.	857.23
B2	2150+34.92	24.58' Rt.	857.94	2153+17.55	24.58' Rt.	857.23
S1	2150+26.73	28.88' Lt.	864.12	2153+49.77	28.89' Lt.	862.81
S2	2150+15.94	28.87' Rt.	863.75	2153+39.00	28.88' Rt.	863.35
S3	2150+23.47	0.00' Rt.	864.59	2153+42.28	0.00' Rt.	863.75

Berm slope elevations reflect the grading surface.



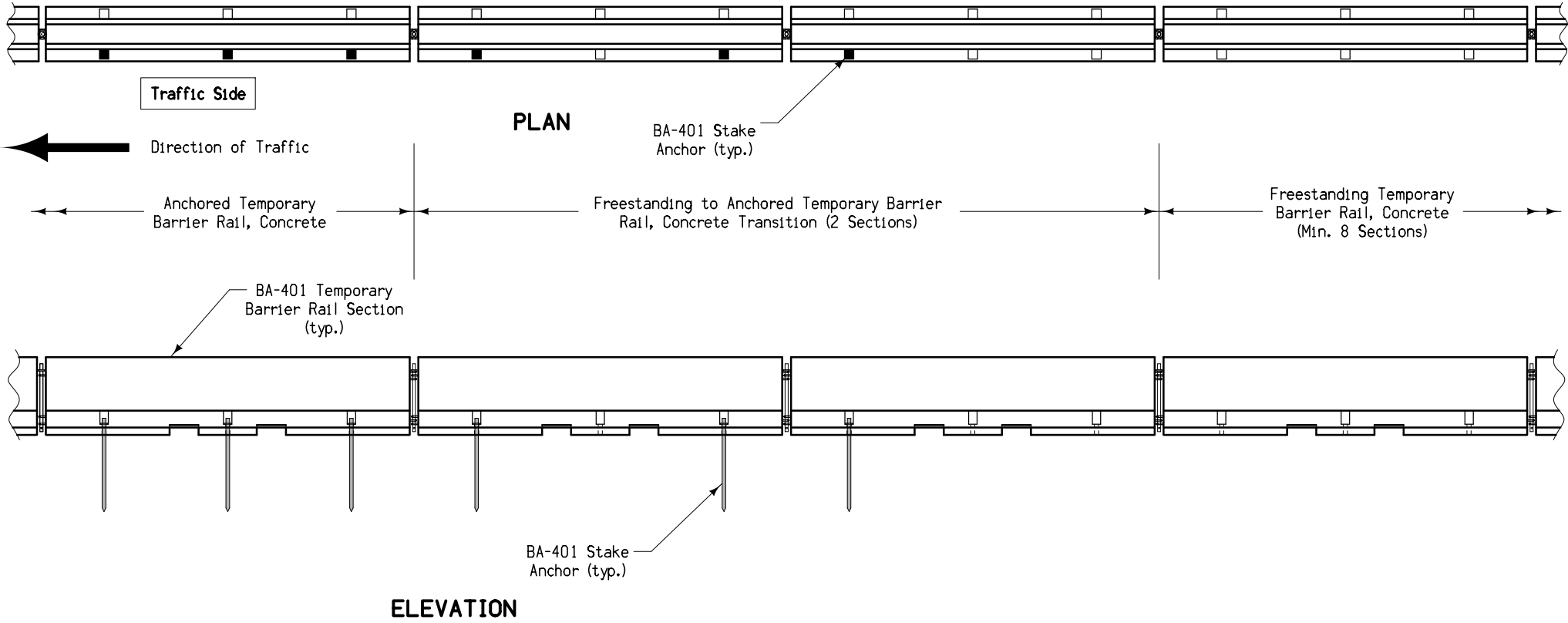




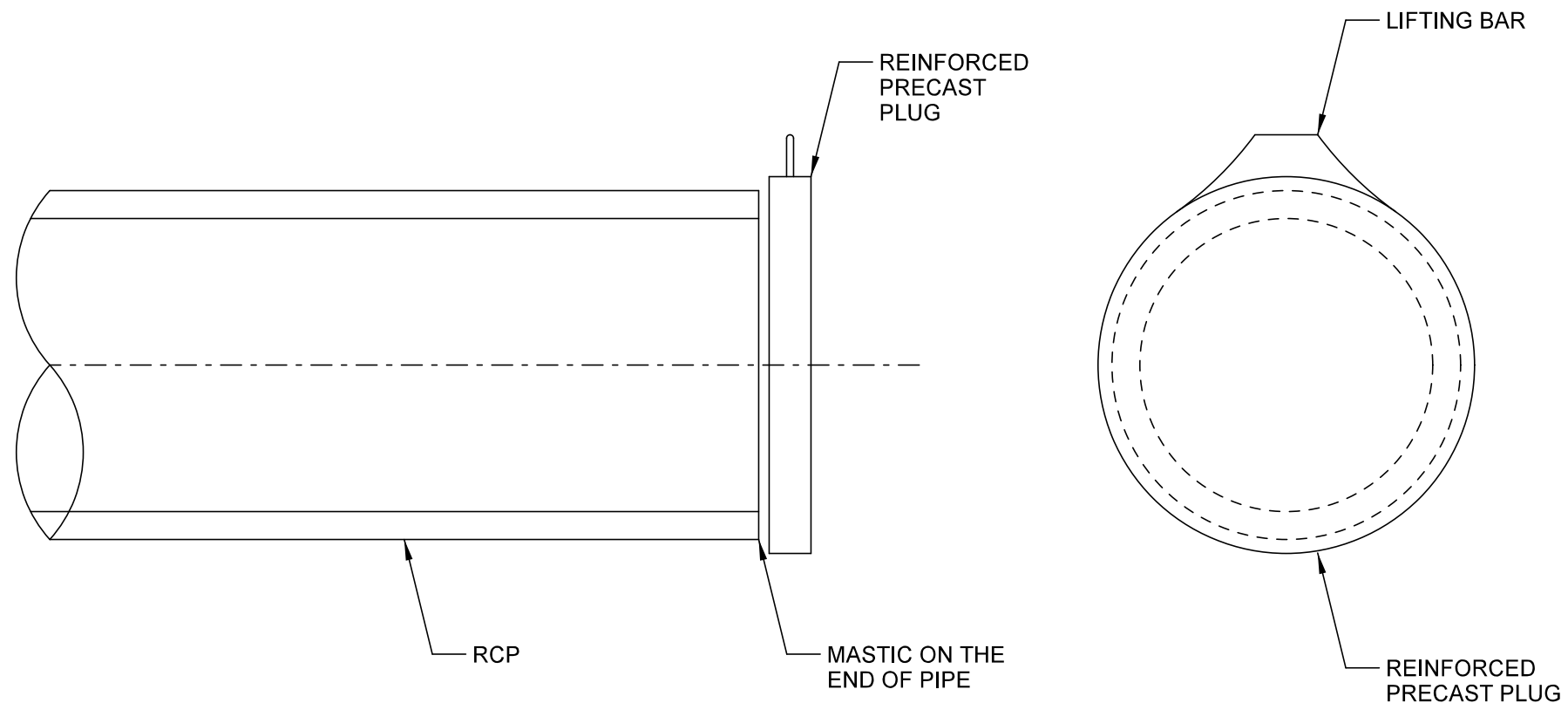
NOTE:
THE WESTBOUND CORPORATE WOODS DR. TO
SOUTHBOUND I-35 LEFT TURN STORAGE BAY MUST
BE RESTRIPE IN STAGE 4 AFTER LOOP RAMP H IS
OPENED TO TRAFFIC. REFER TO J SHEETS FOR DETAILS.

SE CORPORATE WOODS
STAGE 4 LEFT TURN LANE
PAVEMENT MARKINGS

Freestanding to Anchored Temporary Barrier Rail
Connection Shall be Considered Incidental
to the Temporary Barrier Rail, Concrete Item.



**Freestanding to Anchored
Temporary Barrier Rail
Connection**

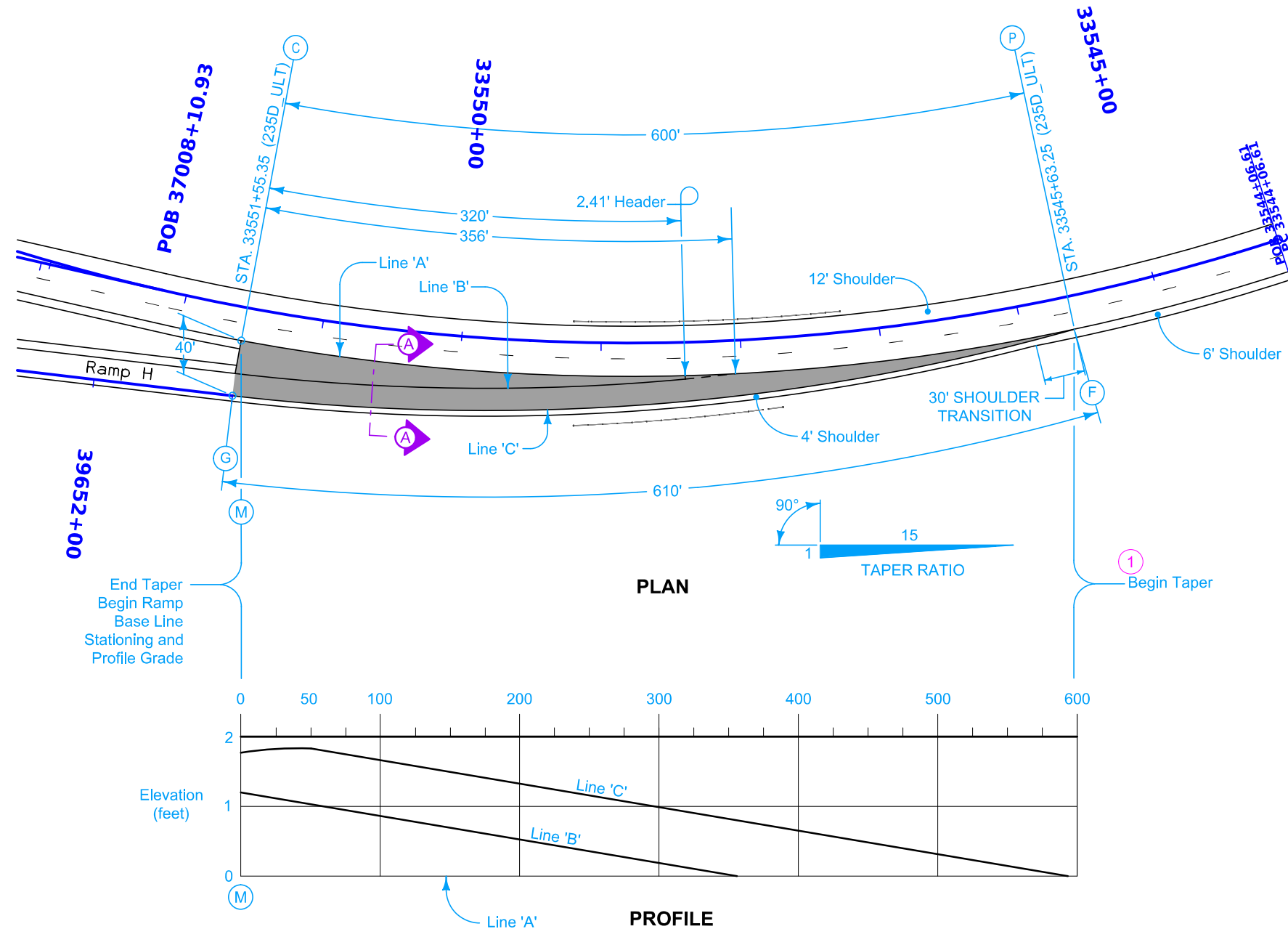


NOTE:

PLUG SHALL BE DESIGNED FOR AN
EQUIVALENT FLUID PRESSURE OF 3,000 PSF.

Installation and Removal of
Temporary Plug is Incidental
to Pipe Construcion

Temporary Pipe Plug
Detail



Refer to detail project plans for mainline and ramp alignment and grade data.

Construct ramp exit pavement the same thickness as mainline pavement.

Ramp exit pavement shown by shaded area is 1382 square yards.

For jointing layout, see Standard Road Plan PV-411.

This design is based on 60 mph design speed at e max = 6%.

- 1 For header construction details at the beginning of taper see Typical 7101.
- 2 Construct subbase for ramp exit pavement the same thickness as mainline subbase.

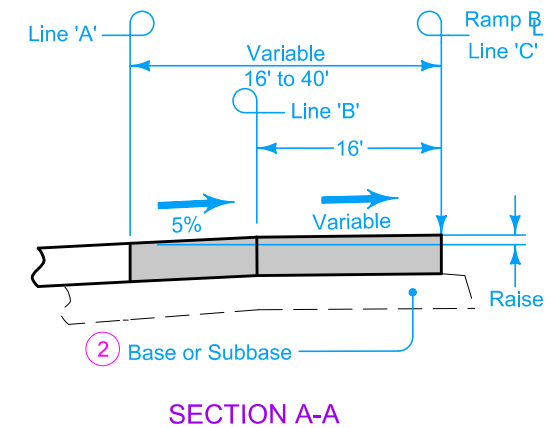
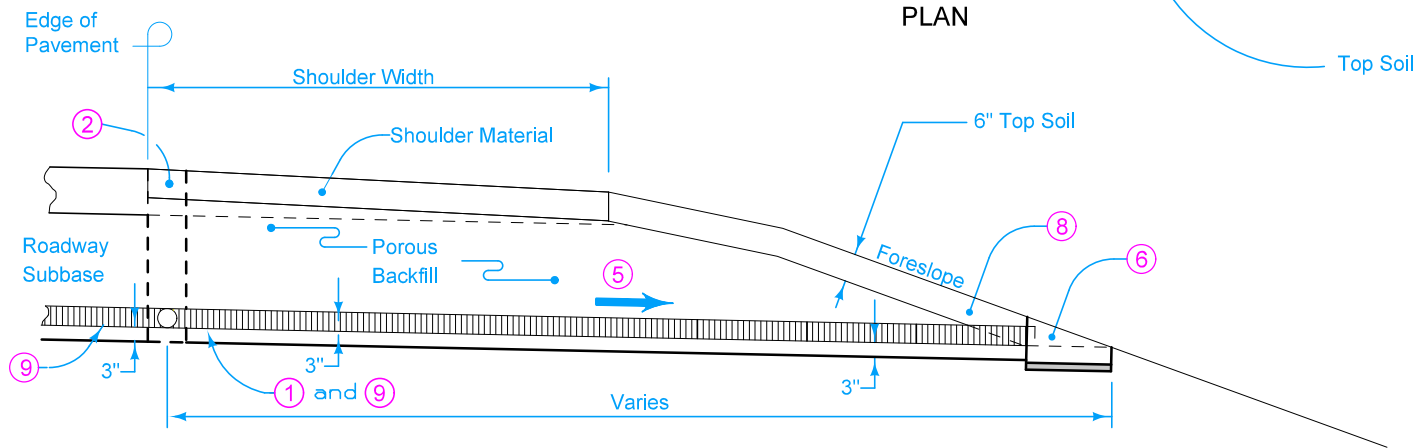
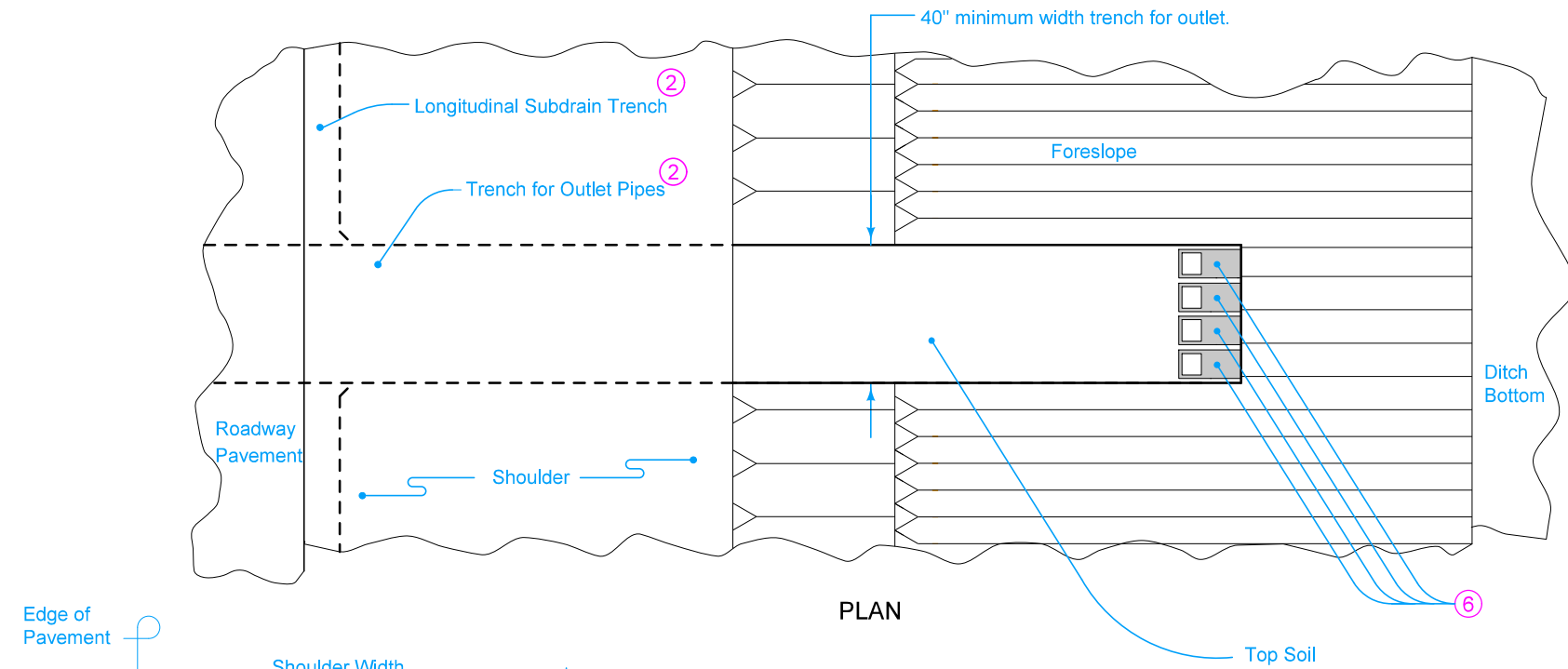
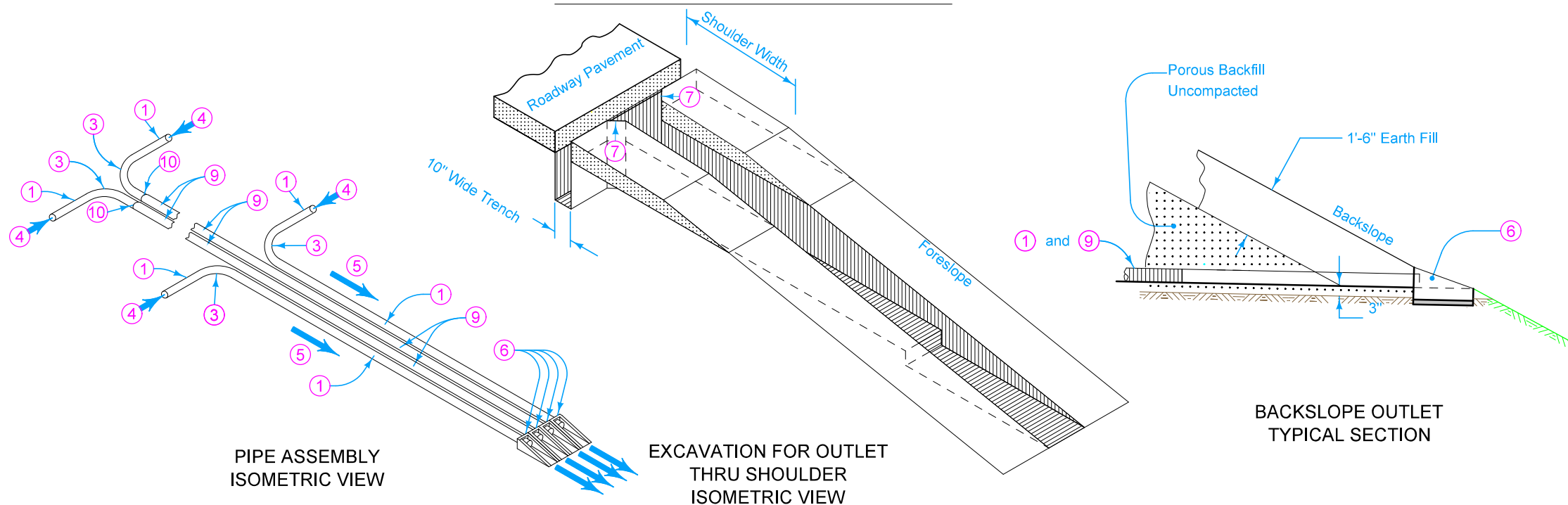


TABLE OF OFFSETS AND DROPS FOR 16' RAMP TAPER																											
DISTANCE FROM POINT C ALONG LINE 'A' (Ft.)		0	25	50	75	100	125	150	175	200	225	250	275	300	325	350	356	375	400	425	450	475	500	525	550	575	600
From Line 'A' To Line 'B'	OFFSET (Ft.)	24.00	22.31	20.62	18.93	17.24	15.54	13.85	12.16	10.48	8.79	7.11	5.43	3.75	2.08	0.41	0										
	SLOPE (%)	Constant 5.0% Slope																									
	RAISE (Ft.)	1.20	1.12	1.03	0.95	0.86	0.78	0.69	0.61	0.52	0.44	0.36	0.27	0.19	0.10	0.02	0										
From Line 'B' To Line 'C'	OFFSET (Ft.)	Constant 16' Offset																									
	SLOPE (%)	3.5	4.42	Constant 5.0% Slope																							
	RAISE (Ft.)	0.57	0.71	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80										
From Line 'A' To Line 'C'	OFFSET (Ft.)																	14.78	13.13	11.47	9.83	8.19	6.55	4.93	3.31	1.70	0
	SLOPE (%)																	Constant 5.0% Slope									
	RAISE (Ft.)	1.77	1.82	1.83	1.75	1.66	1.58	1.50	1.41	1.33	1.25	1.16	1.07	0.99	0.90	0.82	0.80	0.74	0.66	0.47	0.49	0.41	0.33	0.25	0.17	0.09	0

ML235 NB
RAMP H - EXIT



TYPICAL SECTION
LONGITUDINAL AND TRANSVERSE OUTLETS



Extend subdrain 3 inches minimum (6 inches maximum) into precast subdrain headwall. Connect using one of the following methods:
-Grouted connection using a non-shrink grout complying with Materials I.M. 491.13
-Gasketed connection approved by the Engineer.

Shape adjacent slope to match slope of precast subdrain headwall.

- ① Perforated Subdrain (Polyethylene Corrugated Tubing).
- ② On projects where existing shoulder material is removed, replace the shoulder material according to Article 2502.03, C of the Standard Specifications.
- ③ 'Y' or 'T' connection will not be allowed. Place subdrain on 1 foot minimum radius.
- ④ Direction of flow.
- ⑤ 12 inch minimum drop in elevation between far-side longitudinal subdrain and outlet.
- ⑥ Precast concrete headwall.
- ⑦ Bevel the trench to provide a minimum of 3 inches of porous backfill surrounding all portions of subdrain pipe.
- ⑧ Place Top Soil over outlet and carefully compact to avoid damaging outlet pipe.
- ⑨ Perforated Subdrain (Corrugated Metal Pipe)
- ⑩ The pipes should be coupled in one of the two following ways: (1) Use an inside fit reducer coupler (coupler must be inserted a minimum of 12 inches into C.M.P.); or (2) insert 12 inches of the polyethylene subdrain pipe into the corrugated metal outlet pipe, then fully seal the entire opening with grout.

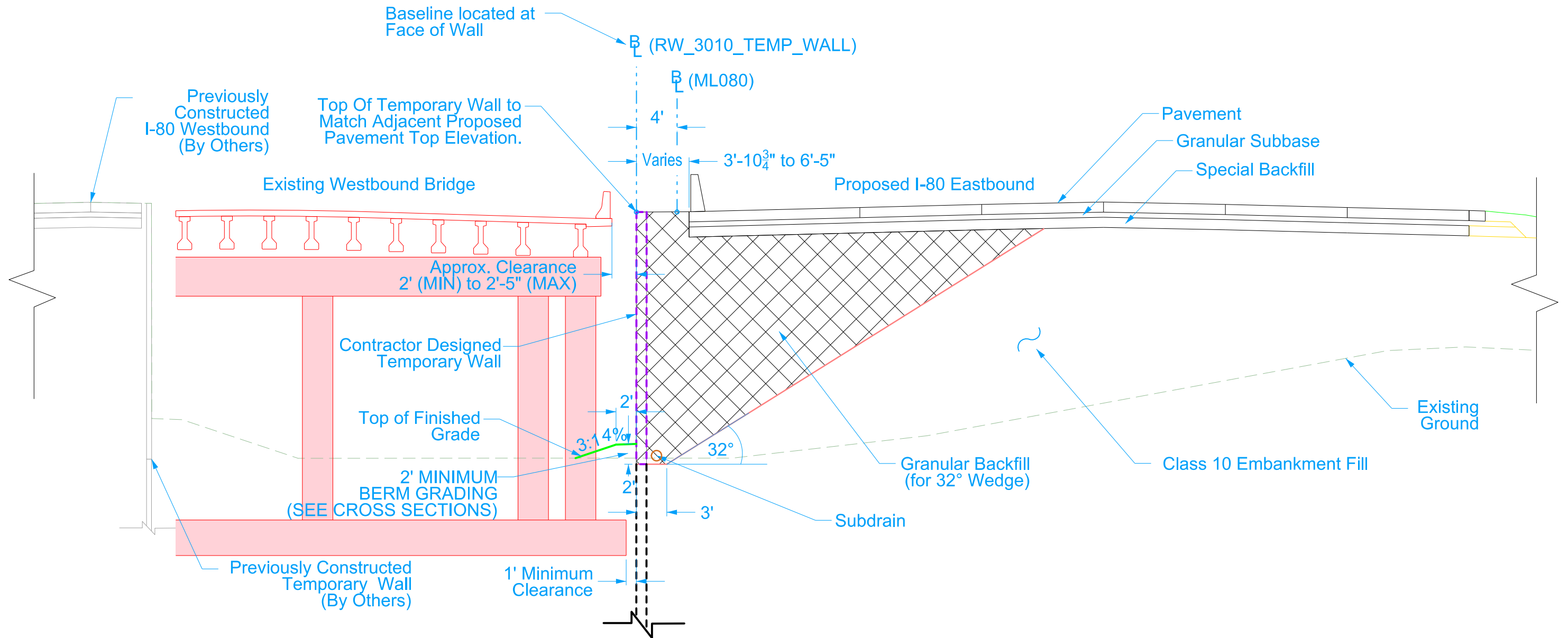
Possible Contract Item:
Subdrain Outlet, DR-306

Possible Tabulation:
104-5C
104-9

MODIFIED STANDARD ROAD PLAN	REVISION	
	2	10-10-24
DR-306		
SHEET 1 of 1		
REVISIONS: 4 outlets and CMP		
APPROVED BY DESIGN METHODS ENGINEER		
PRECAST CONCRETE HEADWALL FOR SUBDRAIN OUTLETS		

Temporary Wall Construction Notes (RW_3010_TEMP_WALL)	
<p>(1) The retaining wall will be temporary and will be infilled to the north during a separate construction package in approximately one year after initial installation. Temporary wall will remain in place and become property of Iowa DOT.</p> <p>(2) The wall shall not be a mechanically stabilized earth (MSE) wall, regardless of facing type. Acceptable systems include flexible wall systems such as sheet pile, soldier pile and lagging, or other systems approved by the Engineer.</p> <p>(3) The wall design shall comply with Iowa DOT and AASHTO design standards for temporary structures.</p> <p>(4) The wall shall be designed to withstand a minimum 250 psf surcharge load to account for traffic live loads. The contractor may design the wall to a higher surcharge to accommodate their means and methods. The design surcharge shall be indicated on the working drawings.</p> <p>(5) Maximum lateral deflections of the wall face shall be less than 1 inch at any point along the wall height.</p> <p>(6) The wall and its components shall be designed to accommodate differential settlements during and after construction. The contractor shall note during the (80) construction package, a nearby temporary wall settled nonuniformly potentially related to soils of higher compressibility at specific location(s).</p> <p>(7) See Q Sheets for soil types and geotechnical information. The contractor is responsible for reviewing and incorporating this data into the design.</p> <p>(8) Subdrains are required in the wall system and shall outlet in a way where they will continue to function after the wall is infilled to the north in a later construction package.</p> <p>(9) Working drawings and calculations shall be submitted for the temporary wall. Submittal requirements for working drawings and calculations shall be in accordance with Article 1105.03 of the Standard Specifications for Highway and Bridge Construction of the Iowa Department of Transportation.</p> <p>(10) The contractor shall submit design computations and working drawings at the same time a minimum of 4 weeks prior to construction for review. Submittals shall include a letter and be uploaded via Doc Express at https://docexpress.com in accordance with Section 1113 of the Standard Specifications.</p> <p>(11) Prepare the site per Section 2107.03.C.</p> <p>(12) For estimating purposes only, the following assumptions were used:</p> <p class="margin-left: 40px;">(a) The quantities of granular backfill material and/or the excavation behind the wall were calculated based on the average end area between cross sections.</p> <p class="margin-left: 40px;">(b) The average end area was computed with the estimated wall heights and temporary excavation slope.</p> <p class="margin-left: 40px;">(c) Quantities may be adjusted if the required backfill zone configuration is different than assumed.</p>	<p>(13) Method of Measurement:</p> <p class="margin-left: 40px;">(a) The Engineer will measure the area of the wall in square feet, from measurements of the front face of the wall in place. The height will be measured from the top of the existing grade at the planned wall location to the top of the wall.</p> <p class="margin-left: 40px;">(b) The quantity of Granular Backfill Material that is placed behind the wall will be measured in cubic yards.</p> <p class="margin-left: 40px;">(c) Excavation for preparing for construction of the wall will be classed and measured according to Section 2102.</p> <p>(14) Basis of Payment:</p> <p class="margin-left: 40px;">(a) For the number of square feet of wall constructed, the Contractor will be paid the contract unit price per square foot. This payment is full compensation for furnishing and erecting the wall including the design, foundation preparation, subdrains and other associate components according to the contract documents.</p> <p class="margin-left: 40px;">(b) For Contractor furnished Granular Backfill Material placed in the temporary excavation zone behind the wall as shown in the contract documents, the Contractor will be paid for the quantity of material furnished, hauled, placed, and compacted for the contract unit price per cubic yard up to the contract quantity.</p> <p class="margin-left: 40px;">(c) For the quantity of each class of excavation required to prepare for construction of the wall, the Contractor will be paid as provided in Article 2102.05, A, 1. This will normally be included for payment with other excavation required by the contract documents.</p>

Temporary Wall Section



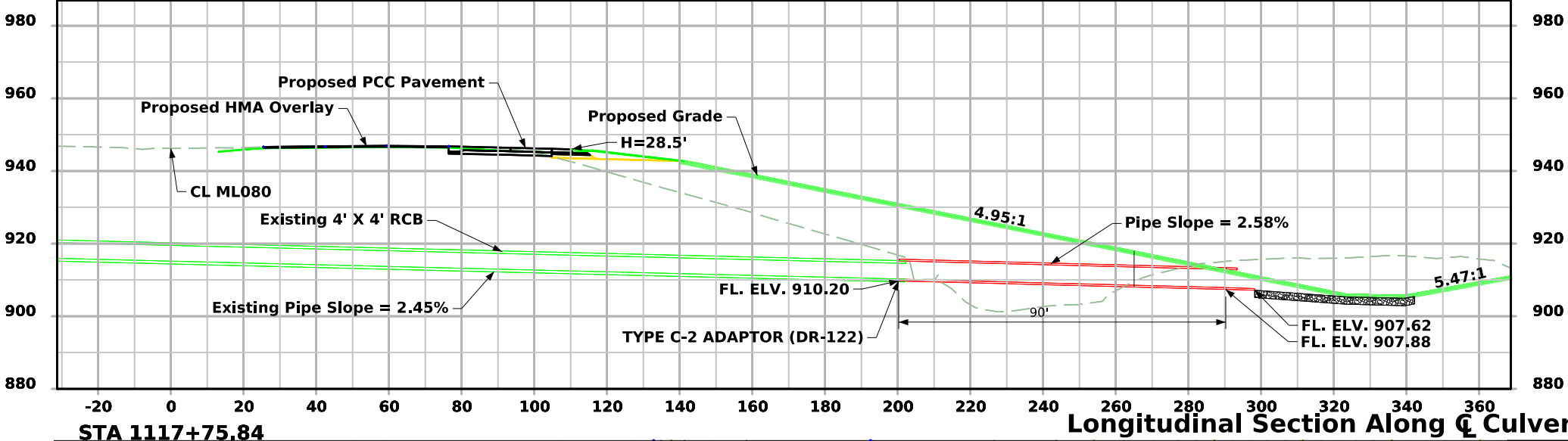
NOTES

Refer to Q Sheets for additional details.

Class 10 Excavation included on T Sheets.

Granular Backfill must meet Specification 2432.

Control Point: BENCH MARK NO.:FENO 26, N 604283.375, E 1624489.54, ELEV 886.7



Utilities Note:

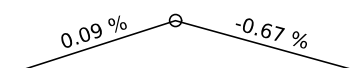
Utilities shown on this sheet are for information only. See Road Design sheets for utility information.

General Utility Symbols:

E - Electric Line
G - Gas Line
SAN. - Sanitary Sewer
T - Telephone Line
W - Water Line
FO - Fiber Optic Line
GHP - Gas High Pressure
ST S - Storm Sewer
TV - TV
⊗ - Power Poles

Hydraulic Data

Drainage Area = 94.5 Acres
 $Q_{50} = 142$ cfs
HW Elev. = 927.69



VPI Sta. = 1120+30.00 VC = 278'
VPI Elev. = 947.12

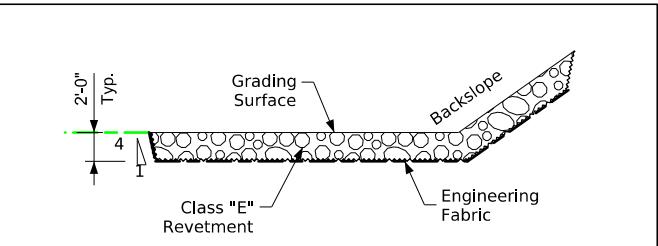
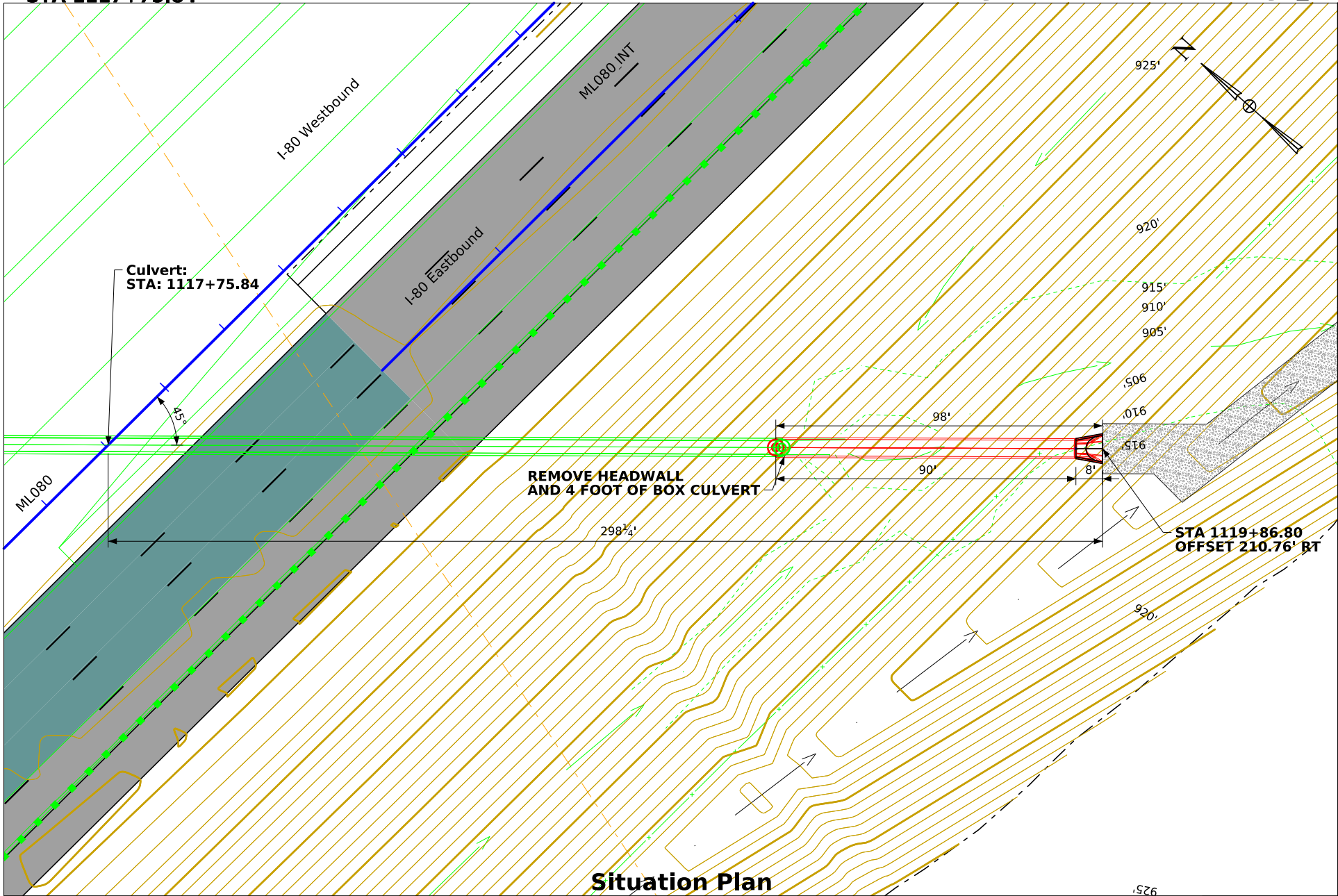
Proposed Profile Grade ML80

Traffic Estimate

2020 AADT	75700 V.P.D.
2050 AADT	130100 V.P.D.
20XX DHV	10790 V.P.H.
TRUCKS	17 %
Total	--
Design ESALS	--

Note:
1. Revetment included at outlet location due to velocities.

2. Drainage must be maintained throughout construction.



Typical Channel Protection

Estimated Revetment Quantities Included With Road Plans

Location	Revetment Class "E" (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Inlet			
Outlet	170.9	204.4	
Totals	170.9	204.4	

Excavation quantity calculated from grading surface. Excavation quantity is for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans.
Quantities shown for information only. See Road Sheets.

Location

Interstate 80
Des Moines
T-79 N R-23 W
Section 18
Delaware Township
Polk County
Latitude 41°39'11.29" N
Longitude 93°33'55.36" W

Sta. 1117+75.84
Install 60" x 90' RCP
Skew 45° RT Ahead
Length LT 0'
Length RT 90'
F.L. RT 907.88

Design For 45° (RT Ahead)
60 in. X 90 ft (RIGHT)
REINFORCED CONC. PIPE EXTENSION

STA. 1117+75.84 (ML080) Turn-in Date: December 16, 2025

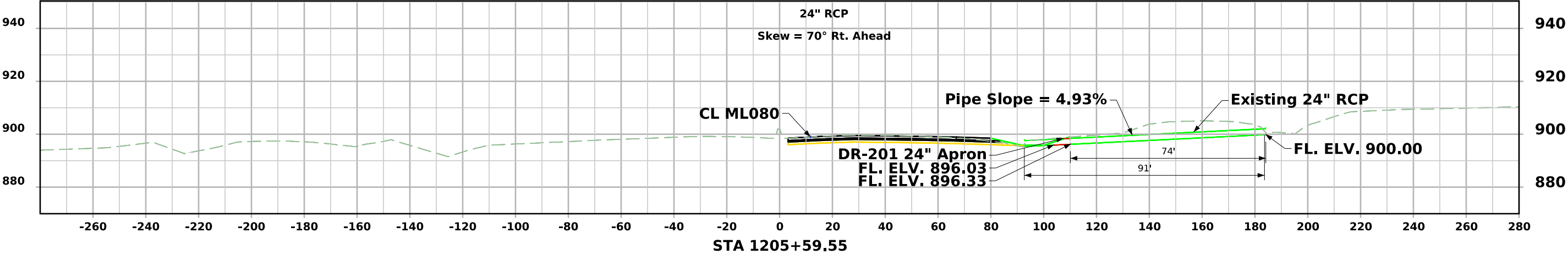
Polk County

IOWA DEPARTMENT OF TRANSPORTATION

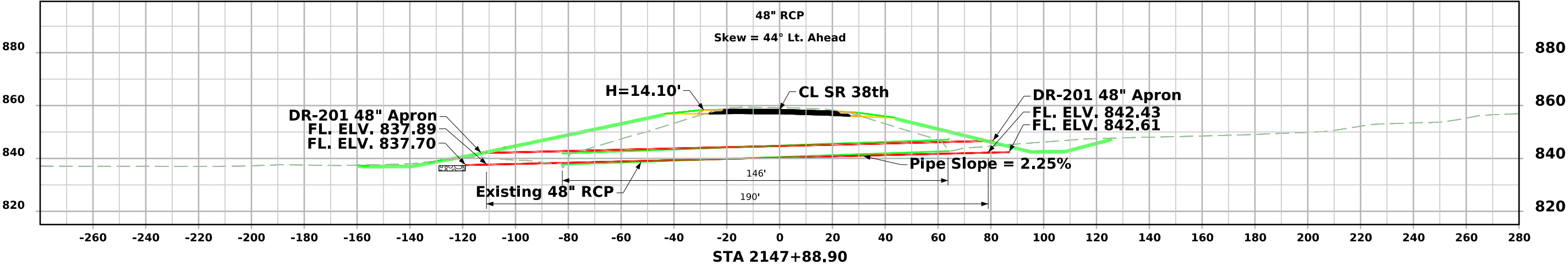
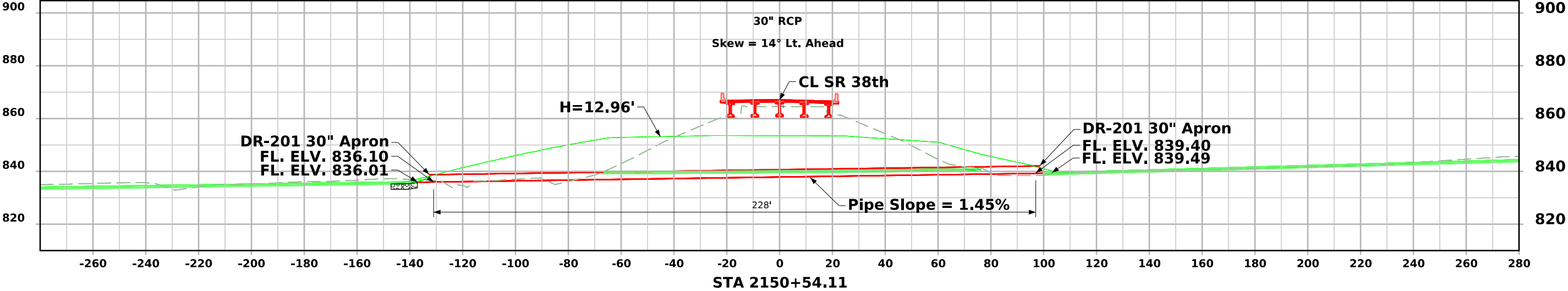
Design No. Design # Design Sheet No. 1 of 1 FHWA/Asset

FILE NO.	ENGLISH	DESIGN TEAM	Iowa DOT \ HDR	POLK COUNTY	PROJECT NUMBER	IM-NHS-080-4(085)138--03-77	SHEET NUMBER	V.4
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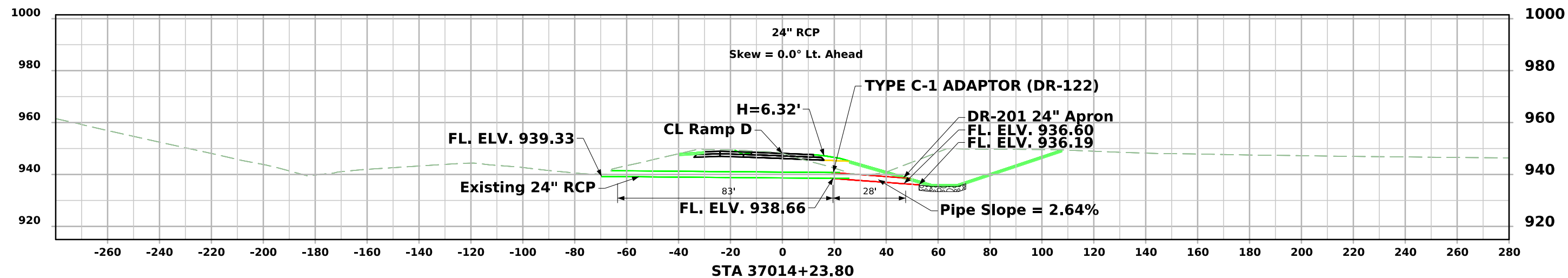
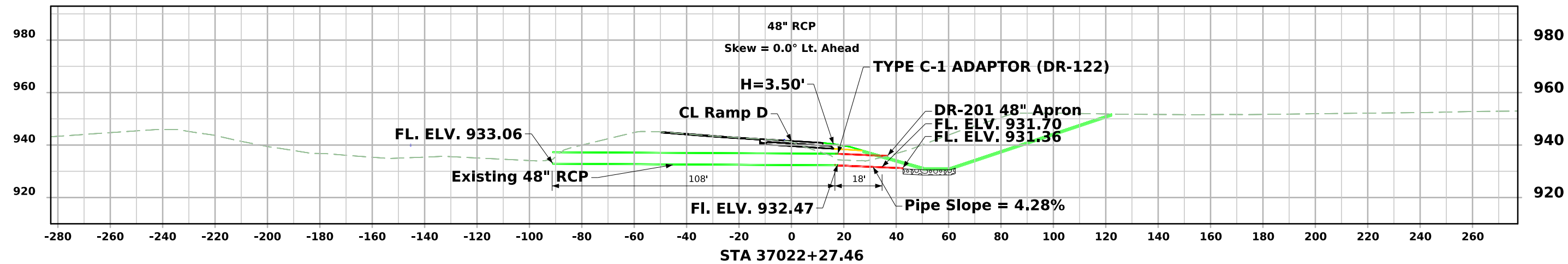
ML I-80
































































SR - 38th Street



ML I-80 - Ramp D



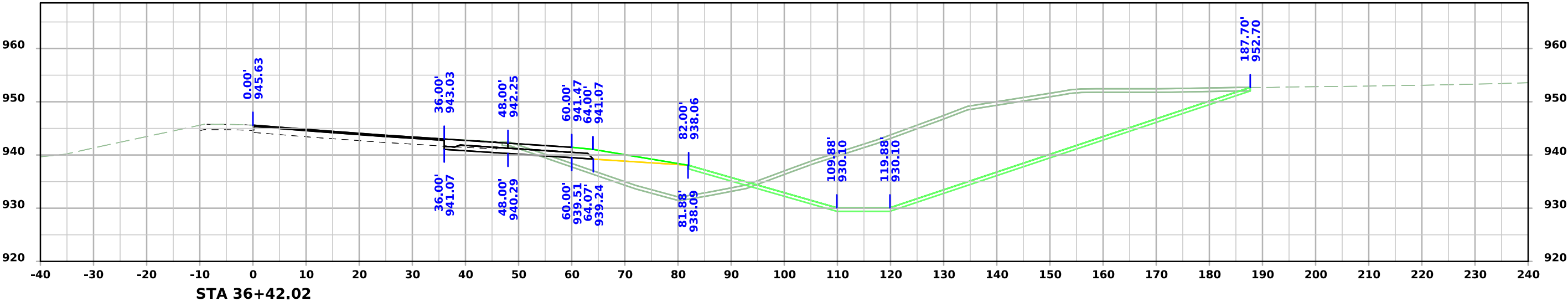
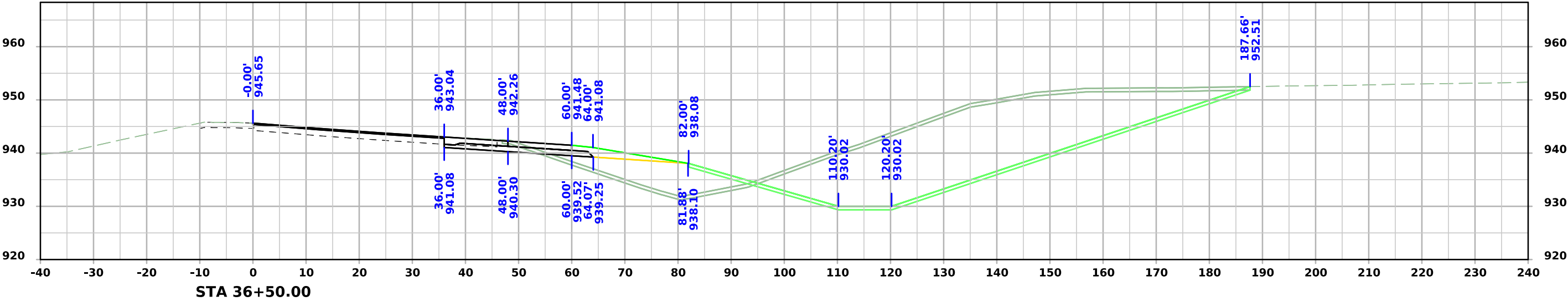
CROSS SECTION VIEW COLOR LEGEND			
Design Color No.	Feature	Design Color No.	Feature
Aggregate		Structural	
(64)	 Choke Stone	(112)	 Noise Wall
(42)	 Engineering Fabric	(112)	 Noise Wall Footing
(8)	 Flooded Backfill	(112)	 Retaining Wall Back
(92)	 Macadam Stone	(112)	 Retaining Wall Back Excavate
(20)	 Modified	(112)	 Retaining Wall Face
(12)	 Plowing Shaping	(112)	 Retaining Wall Front Excavate
(14)	 Porous Backfill	(112)	 Retaining Wall Front Footing
(8)	 Revetment Class A	(112)	 Retaining Wall MSE Gutter
(6)	 Revetment Class B	(112)	 Retaining Wall Reinforced Earth
(62)	 Revetment Class C	Grading	
(188)	 Revetment Class D	(8)	 Behind Curb Cut
(28)	 Revetment Class E	(6)	 Granular
(12)	 Shoulder Special Backfill	(13)	 Granular Back Fill
(12)	 Special Backfill	(48)	 Rock Undercut
(20)	 Subbase	(8)	 Shoulder Earth Fill
(20)	 Subbase Lower	(2)	 Side Slopes
(20)	 Subbase Upper	(226)	 Side Slopes Dressing
(118)	 Subgrade Treatment	Substrata	
Asphalt		(128)	 Boulder Substrata
(207)	 HMA Base Course	(48)	 Broken Weathered Substrata
(207)	 HMA Interim Course	(3)	 Core Out Substrata
(207)	 HMA Surface Course	(203)	 Existing Pavement Substrata
Concrete		(6)	 Loam Substrata
(0)	 Barrier Concrete	(80)	 Rock Substrata
(0)	 Barrier Concrete Footing	(4)	 Select Sand Substrata
(0)	 Curb Gutter	(3)	 Shale Substrata
(48)	 Flowable Mortar	(10)	 Topsoil Substrata
(0)	 Median Concrete	Unsuitable / Waste	
(0)	 PCC Pavement	(3)	 Unsuitable Type A
(0)	 Sidewalk	(13)	 Unsuitable Type B
Shoulder		(11)	 Unsuitable Type C
(209)	 Shoulder HMA	(3)	 Waste
(0)	 Shoulder PCC		
(6)	 Shoulder Granular		
Existing			
(0)	 Existing Pavement		

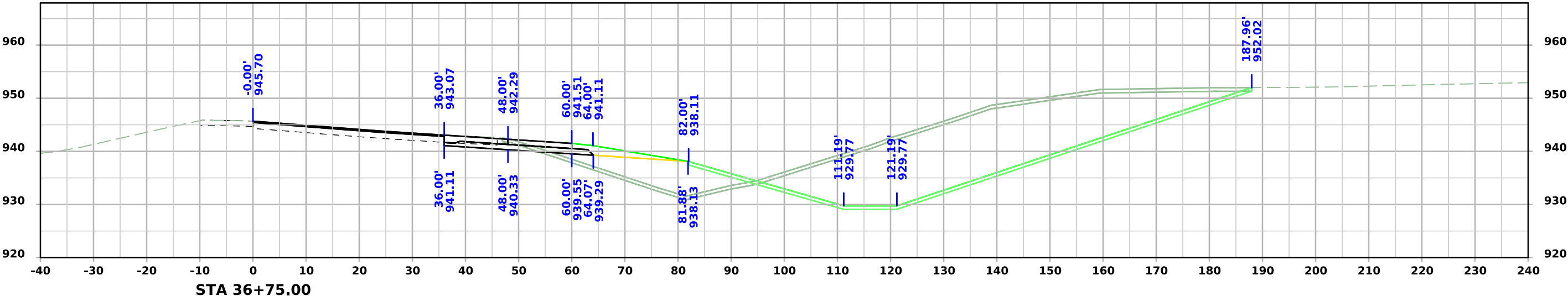
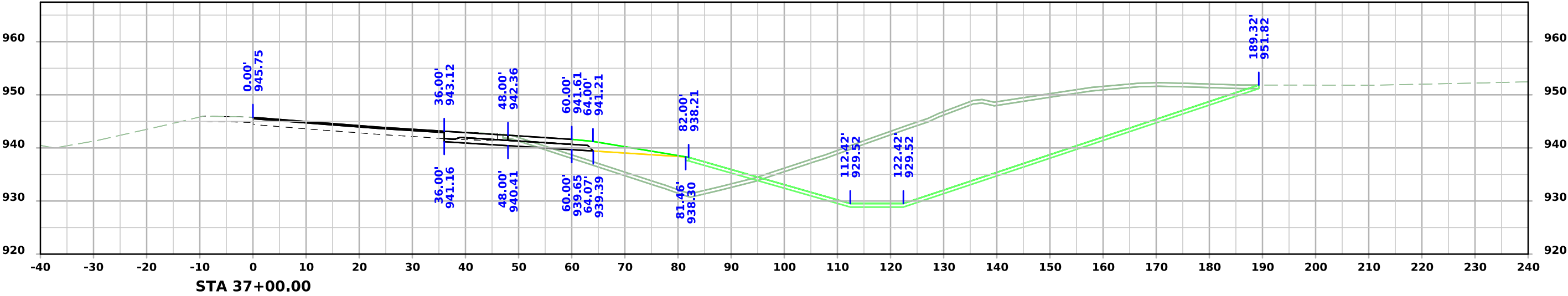
NOTES:

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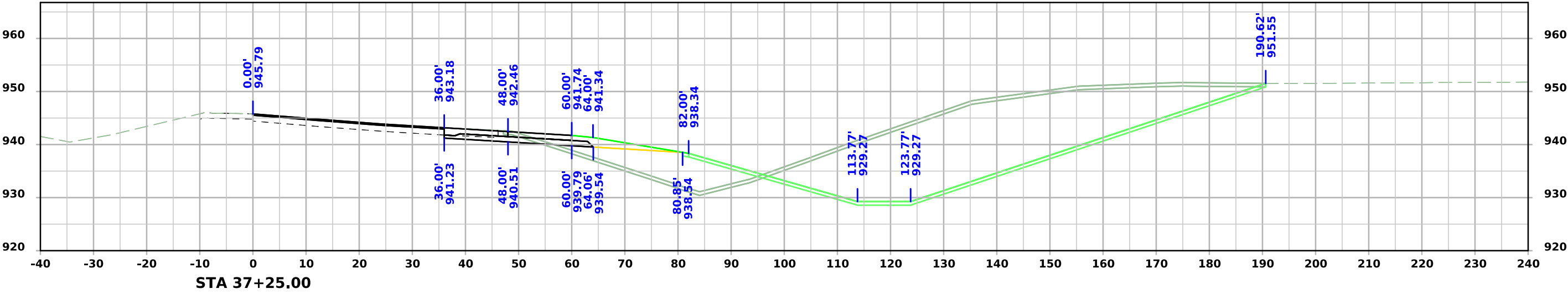
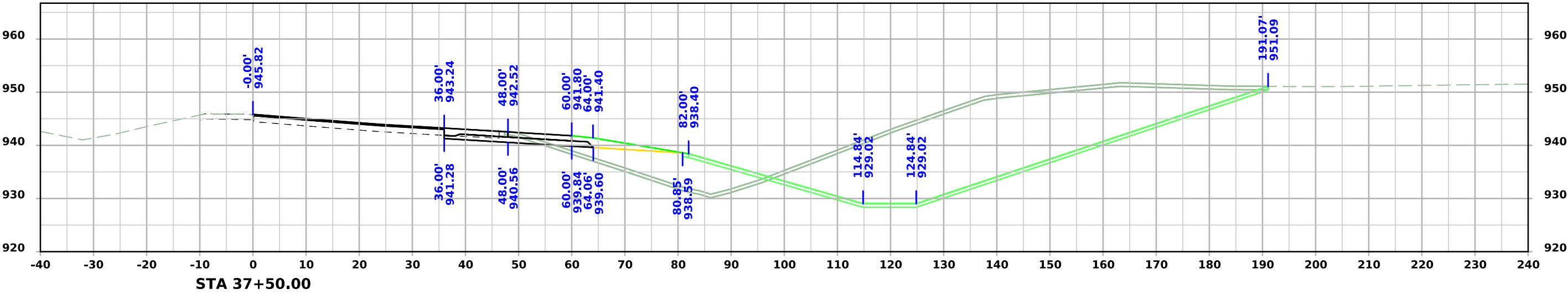
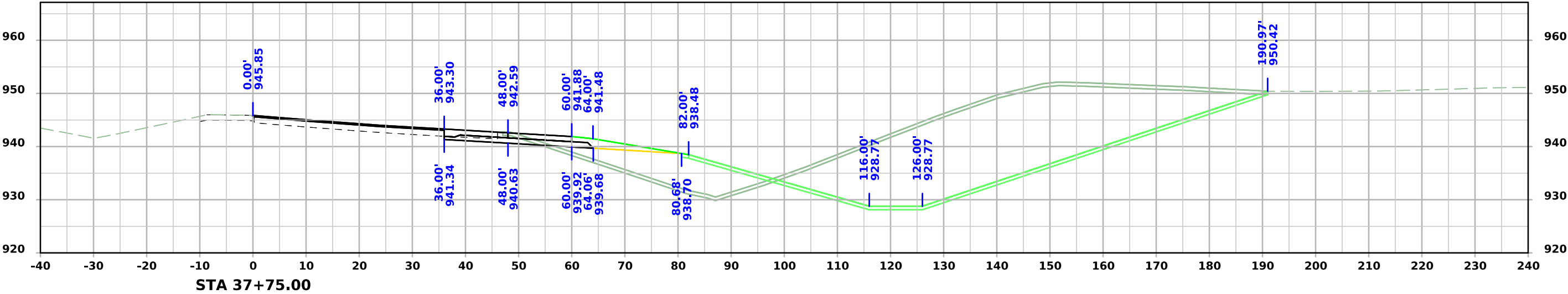
CROSS SECTIONS
LEGEND AND INFORMATION SHEET

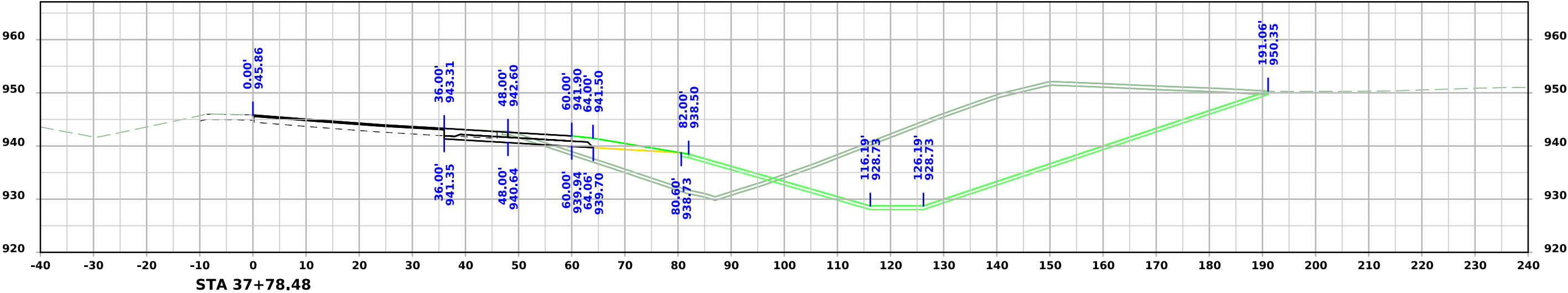
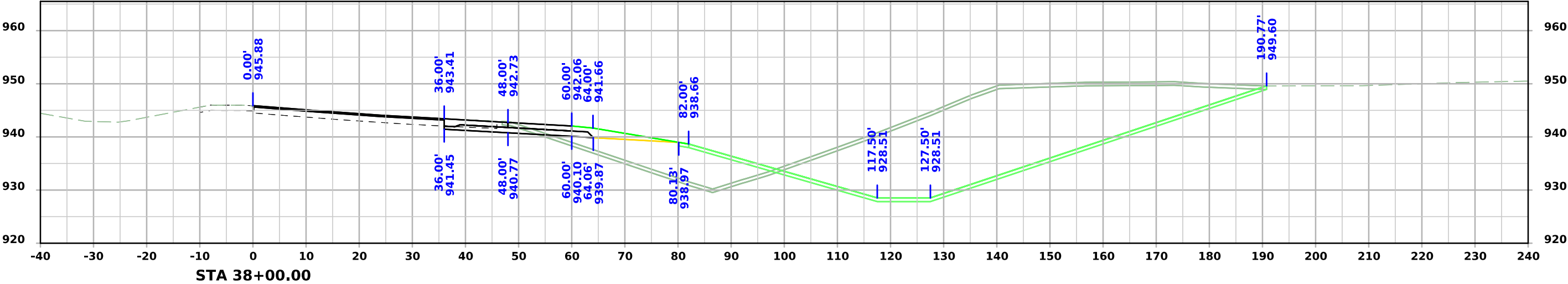
(COVERS SHEET SERIES W, X, Y, & Z)

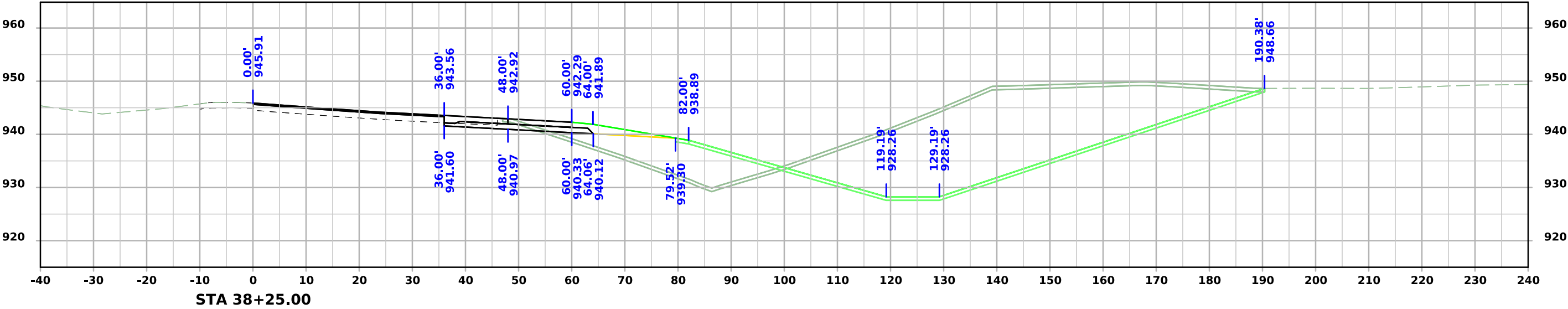
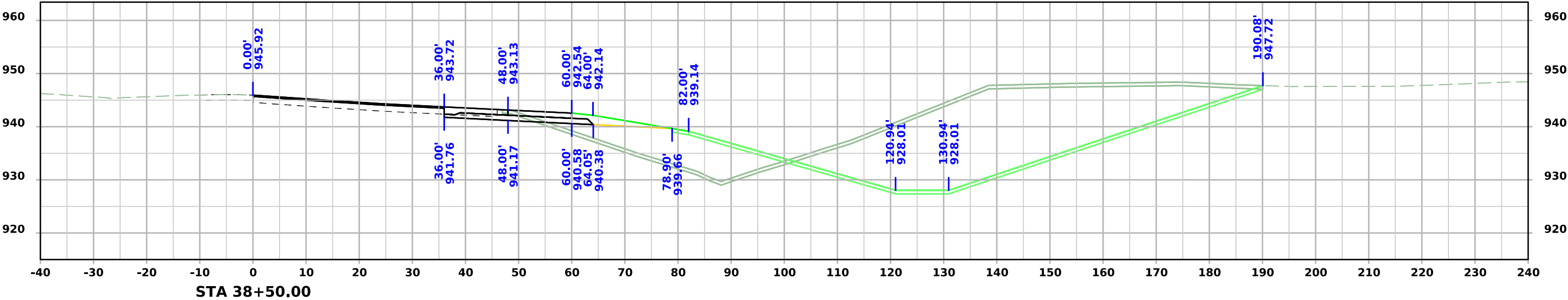




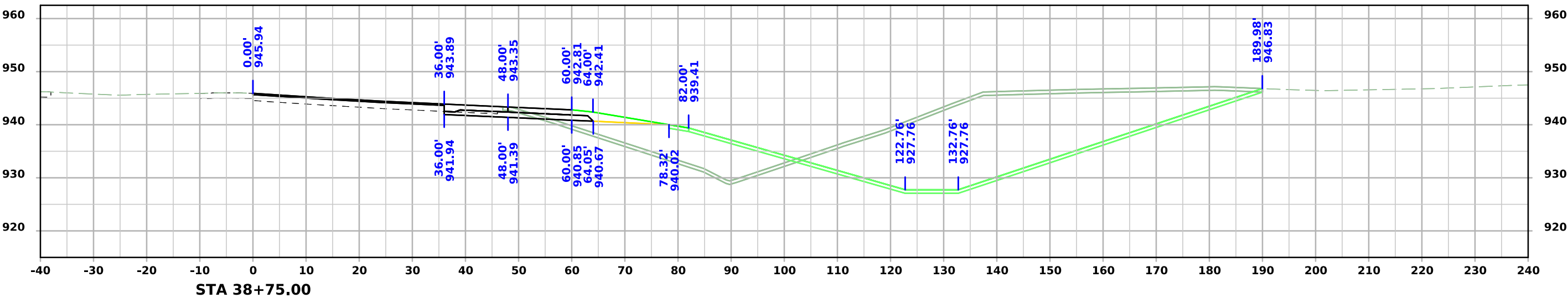
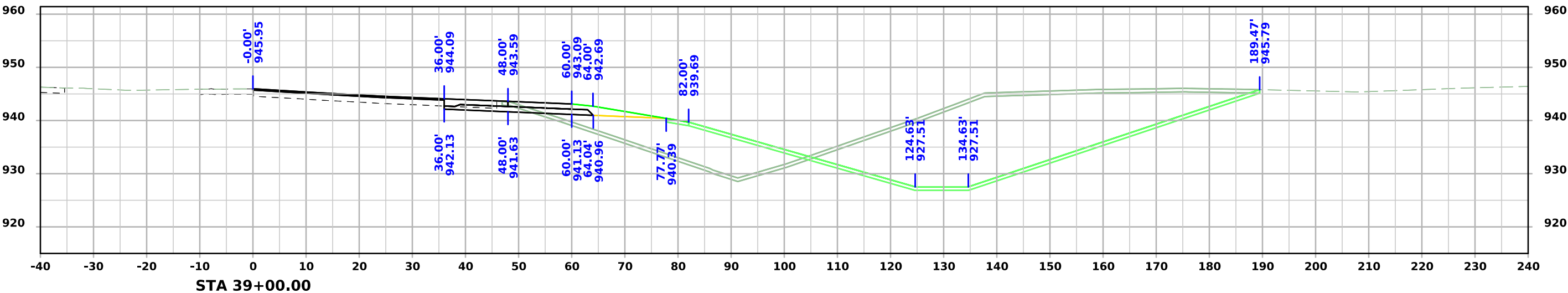
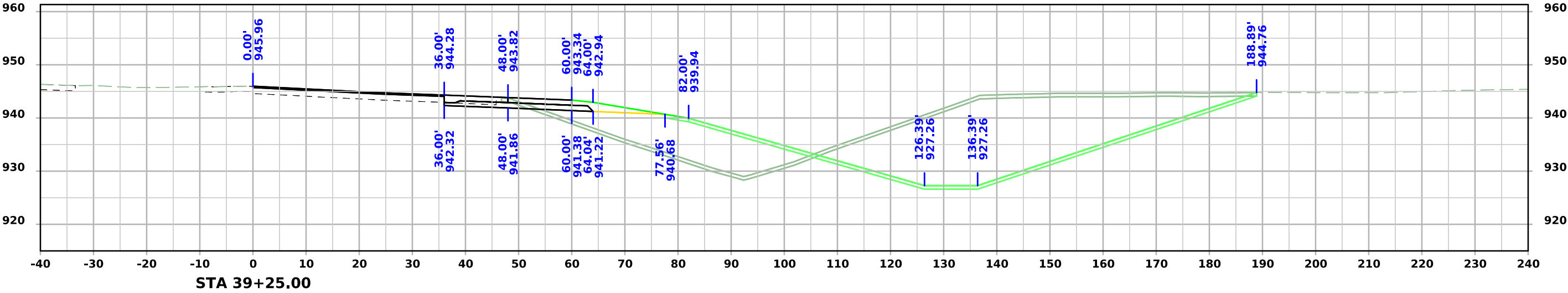
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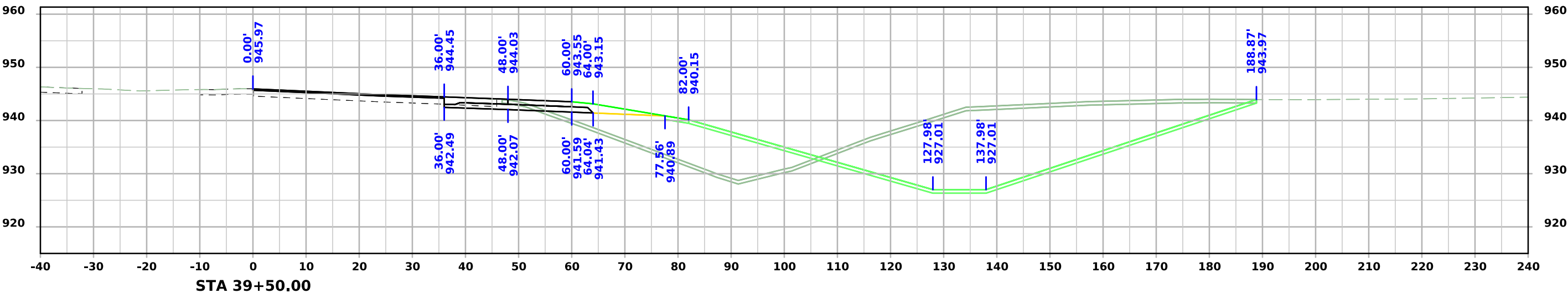
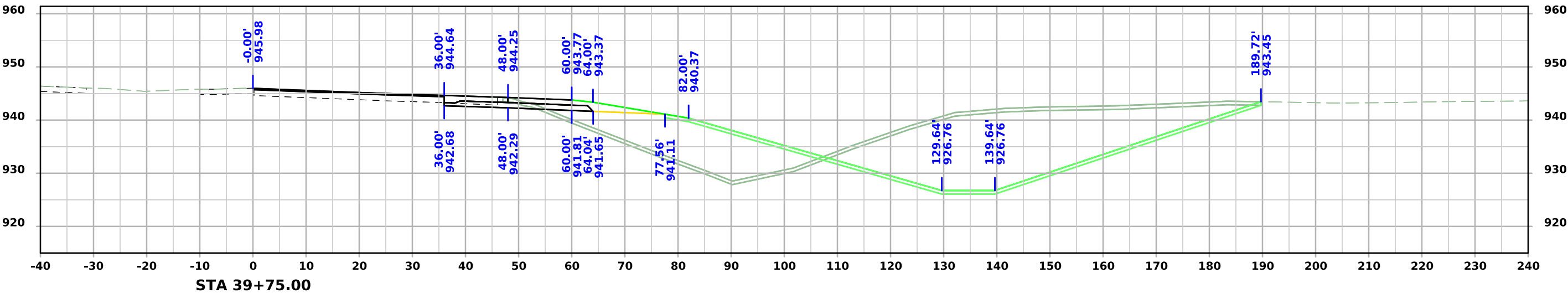
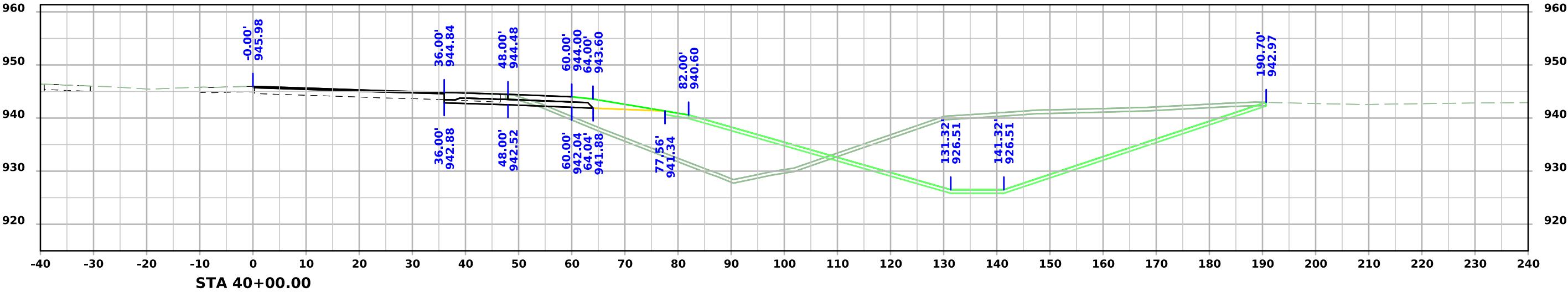




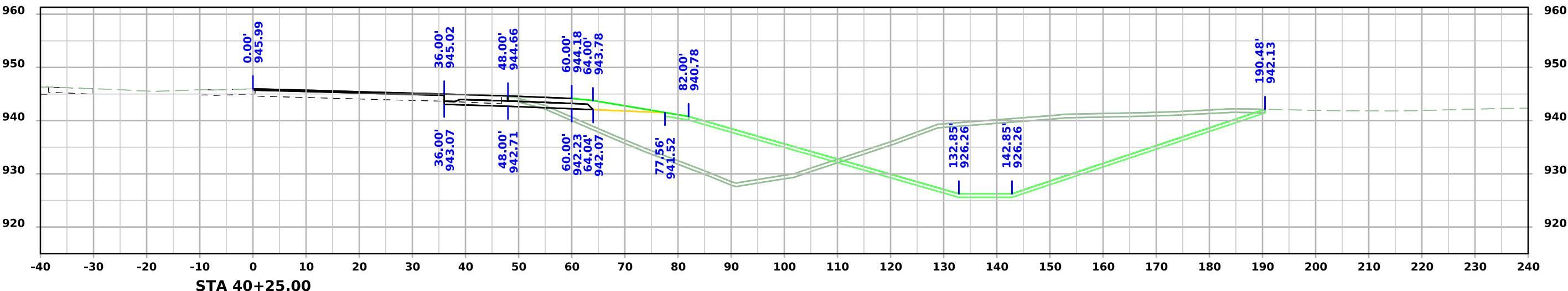
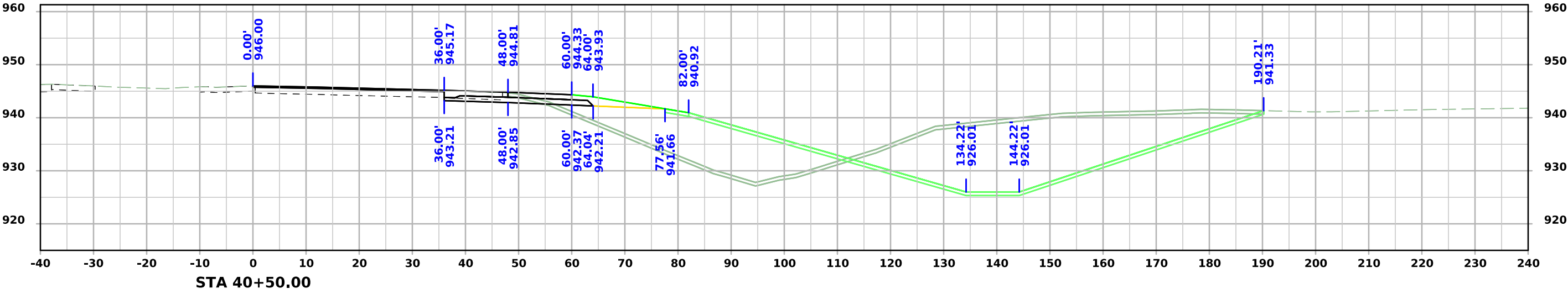
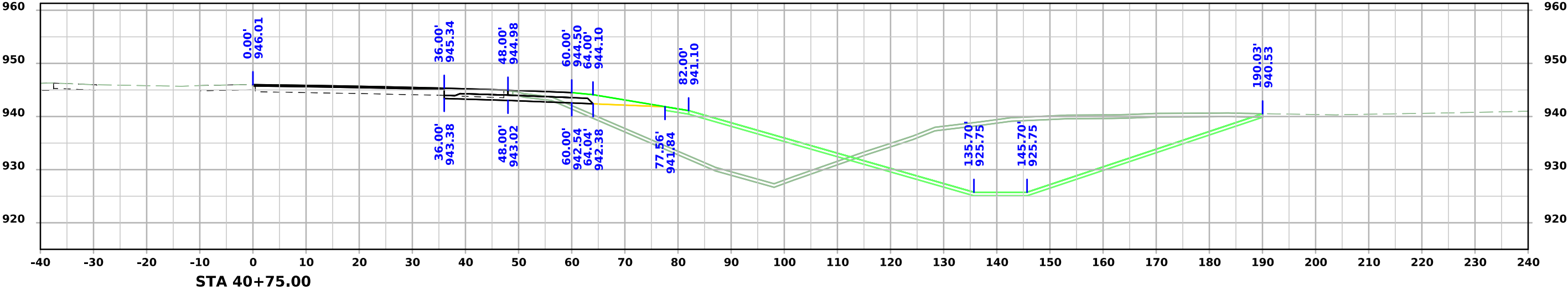
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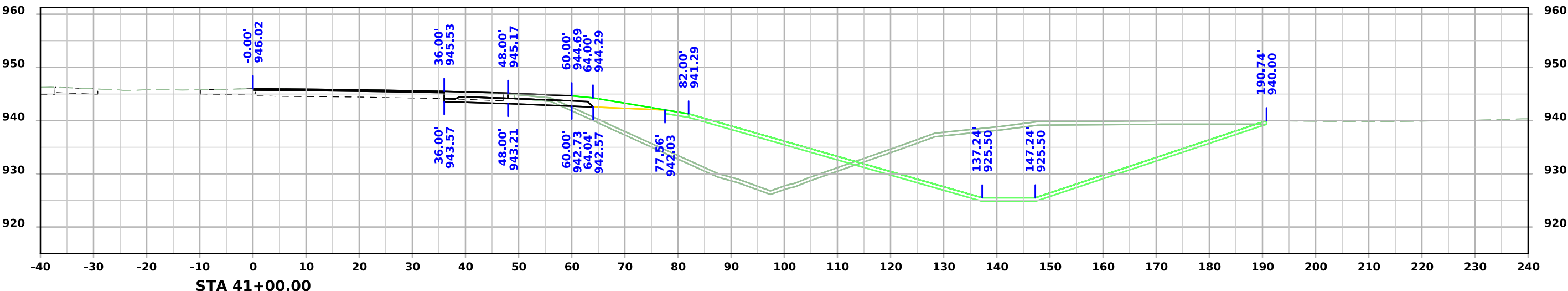
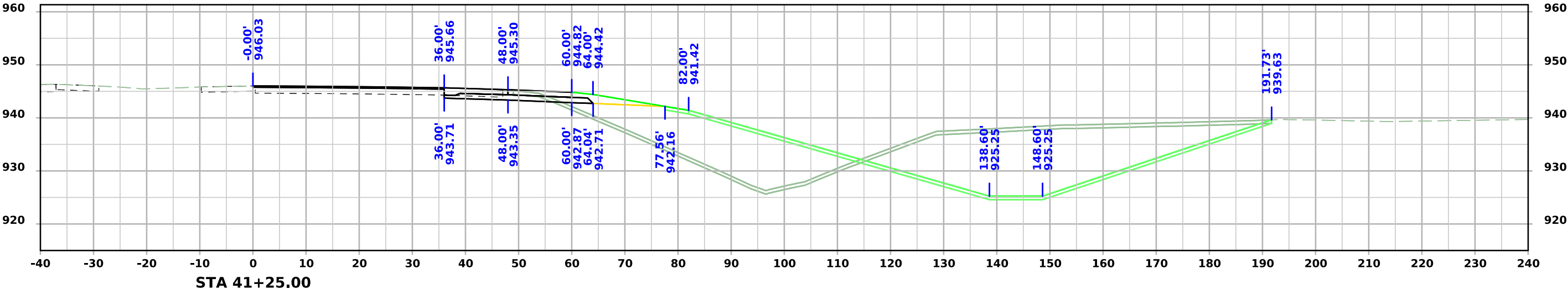
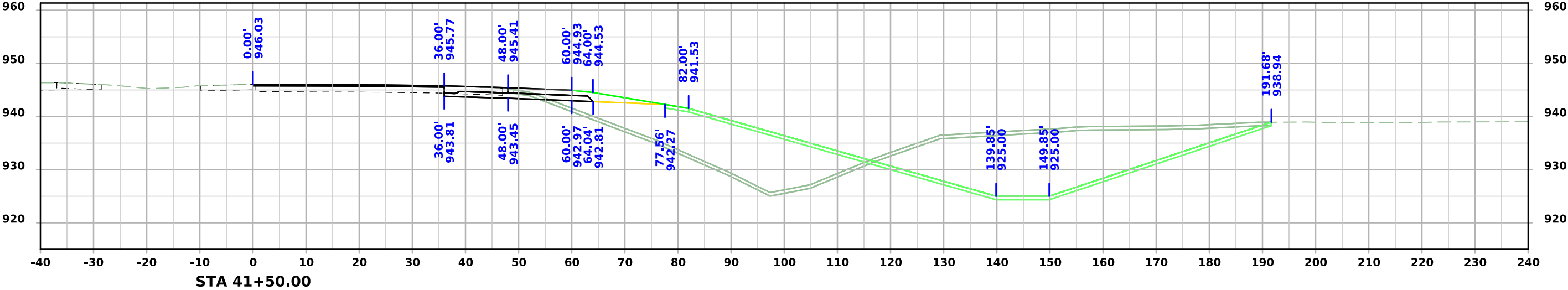
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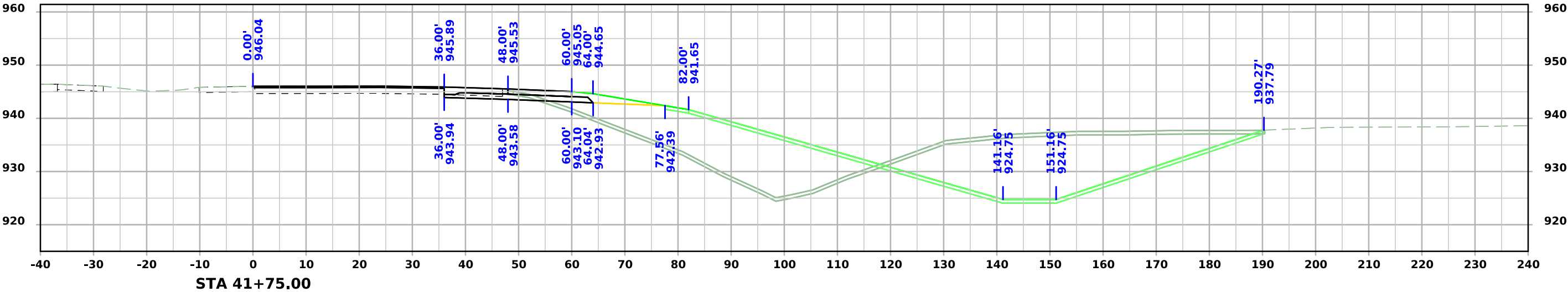
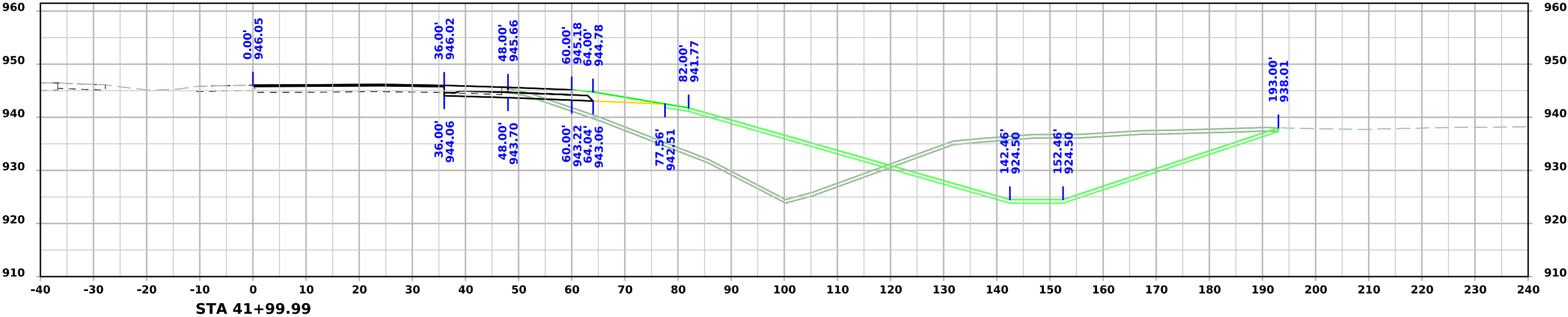


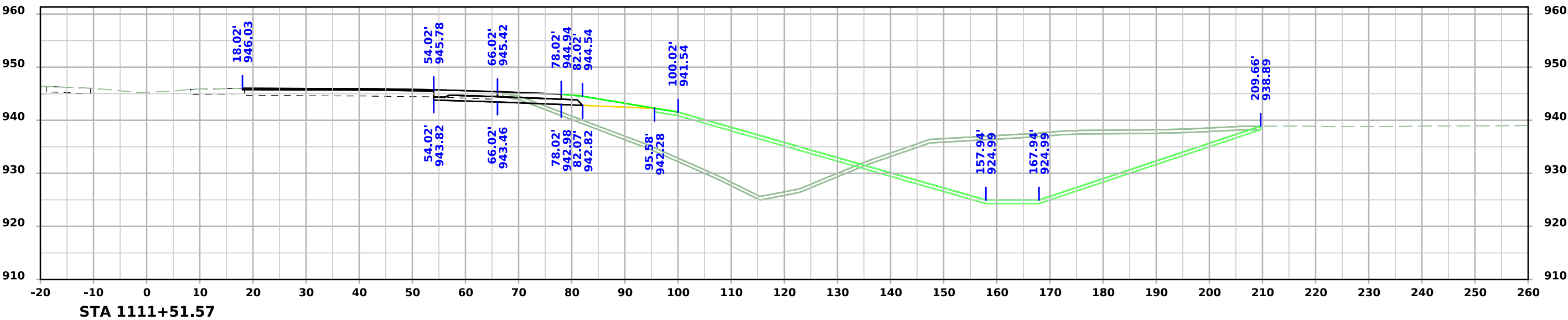
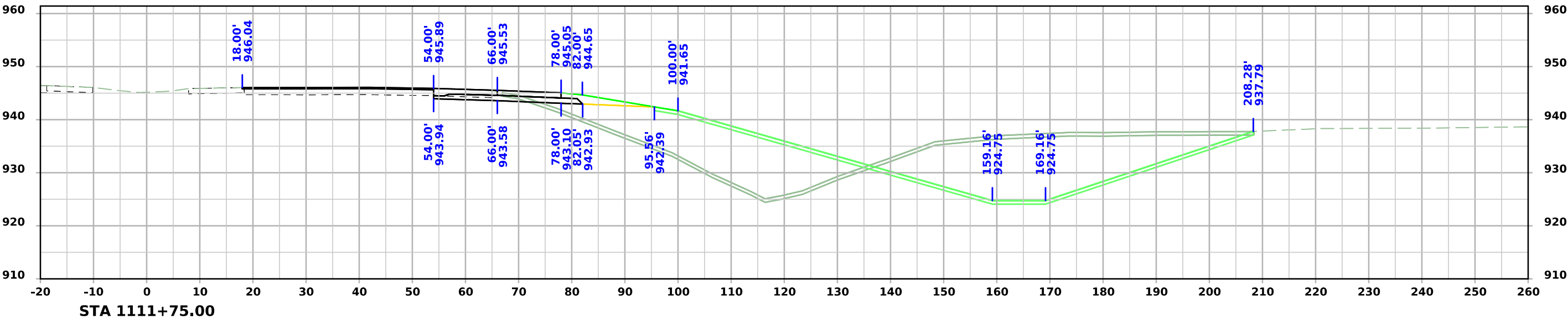
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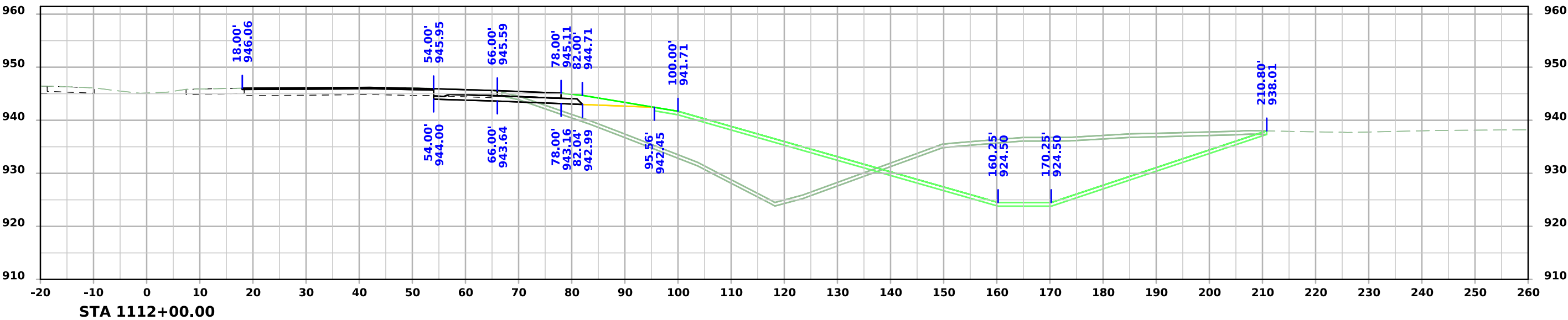
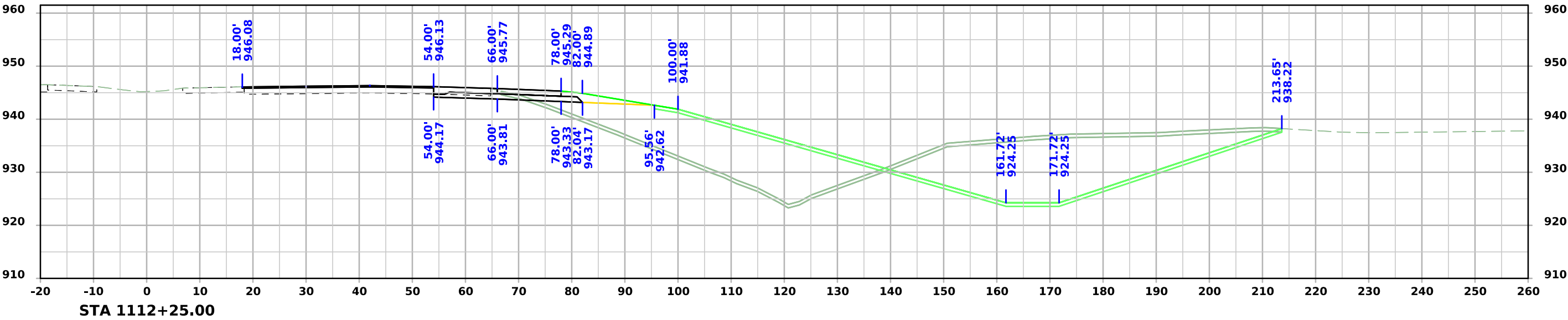


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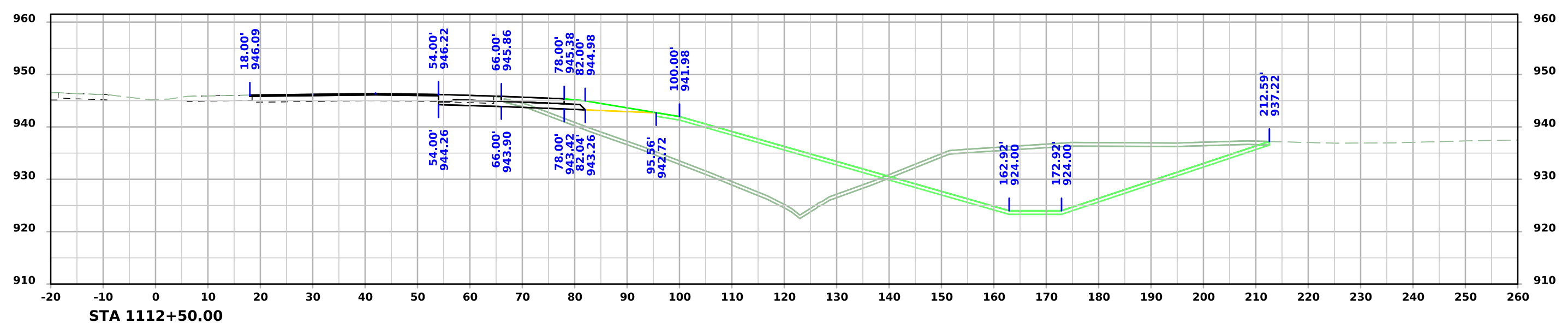
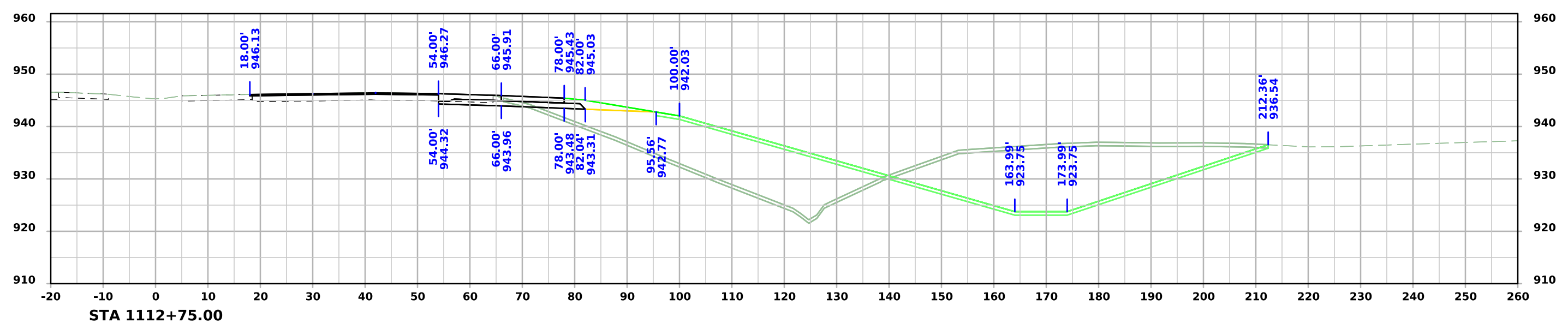


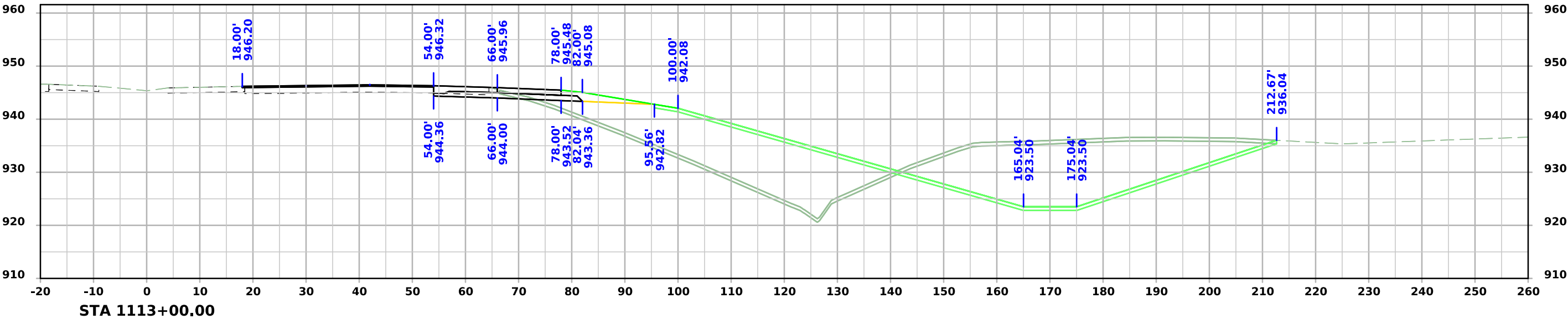
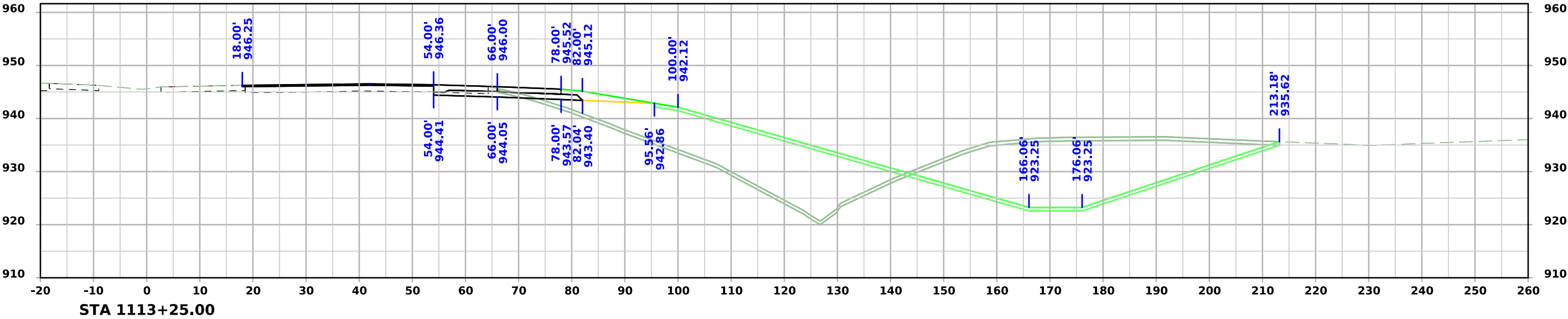


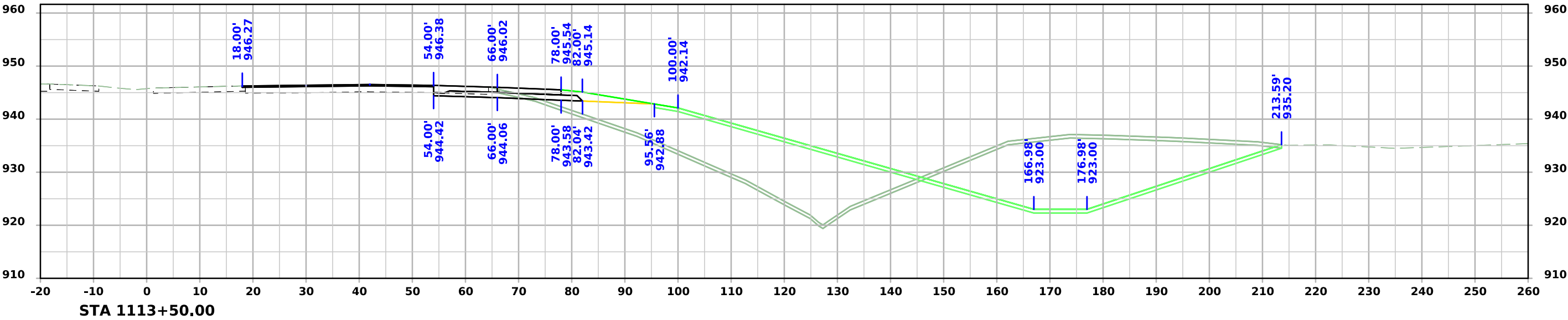
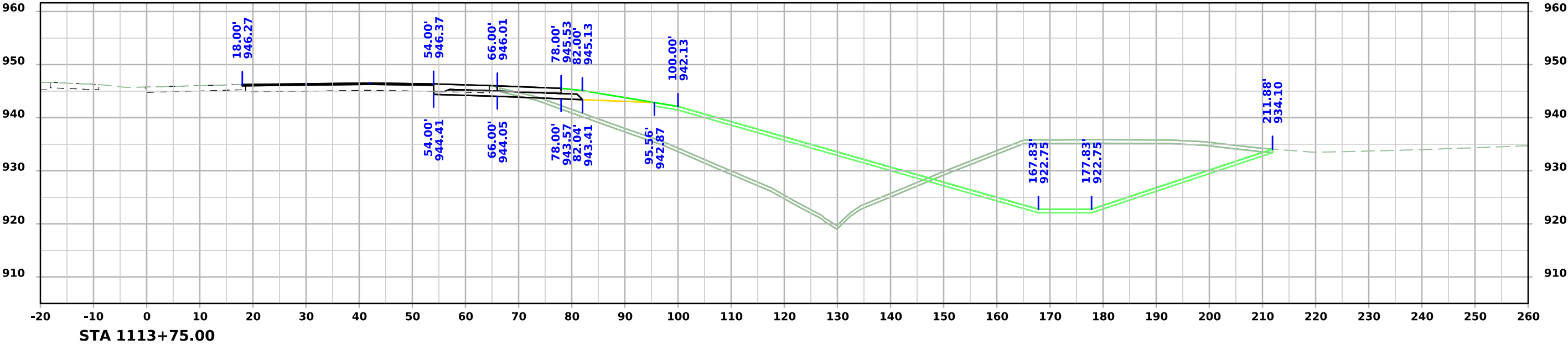


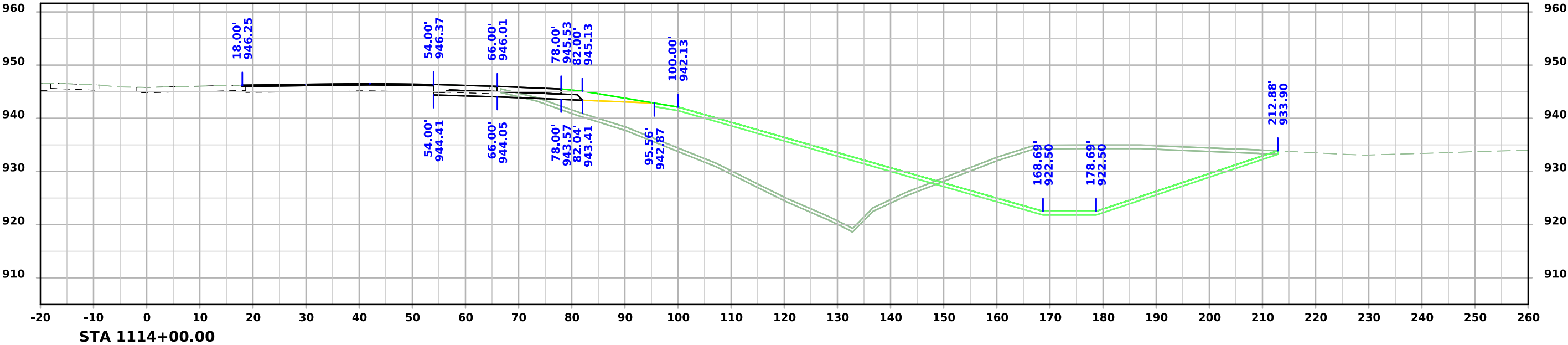
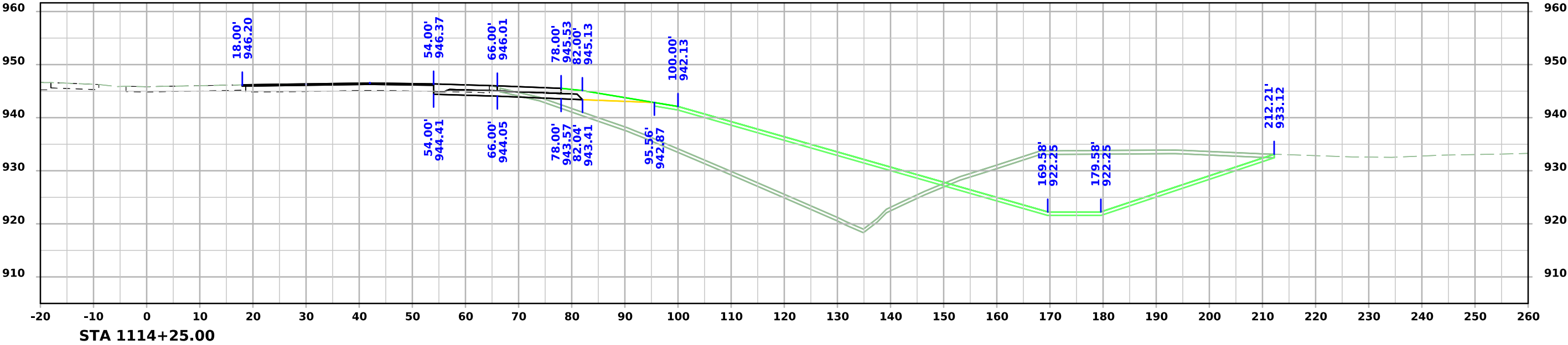


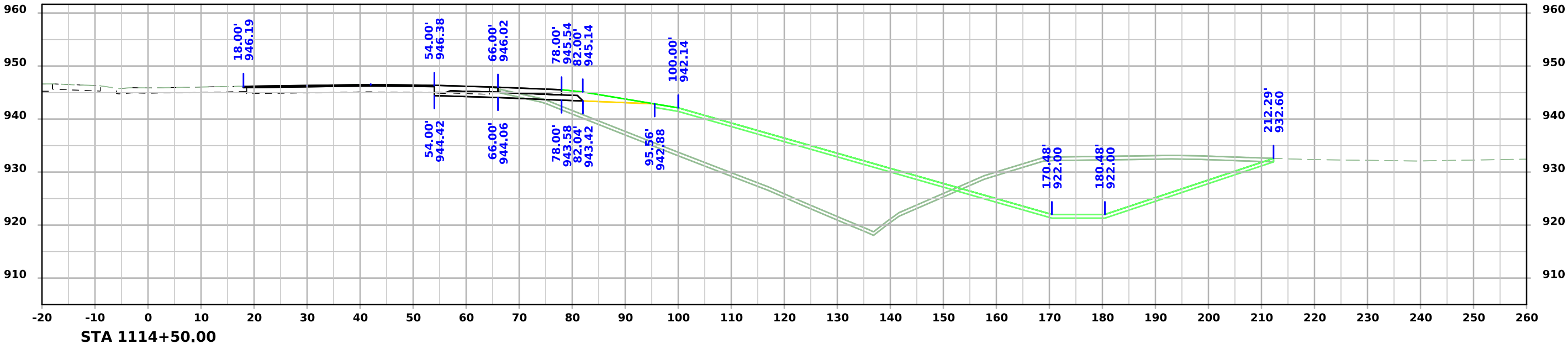
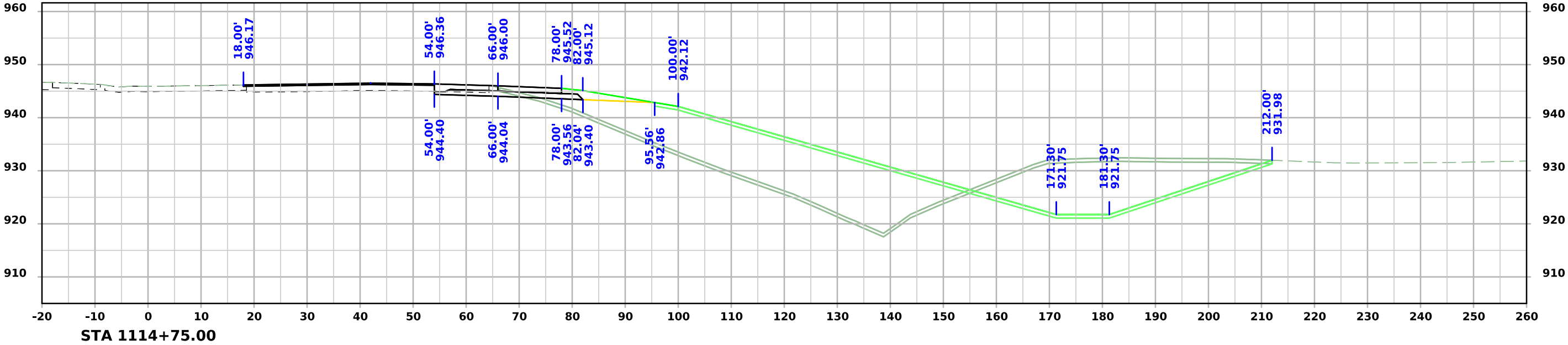
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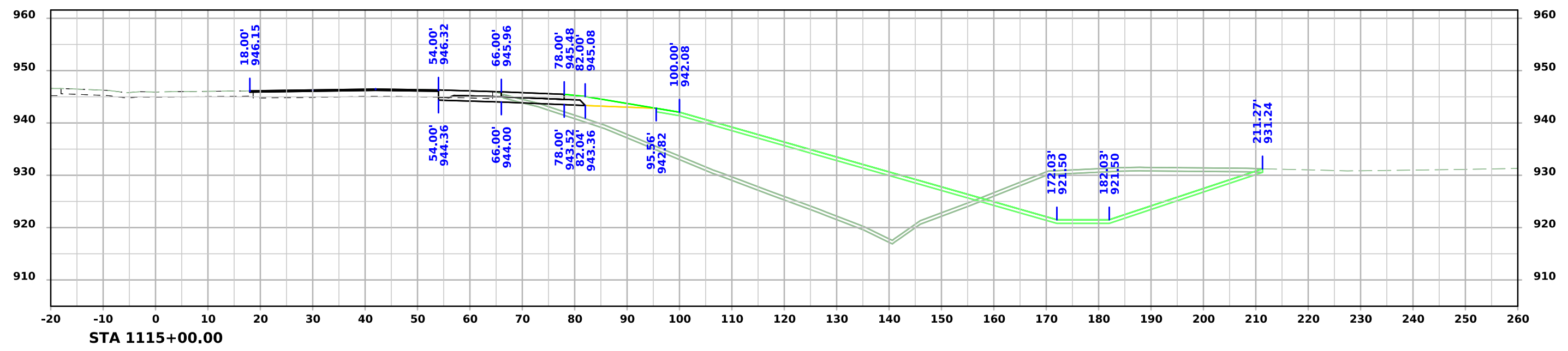
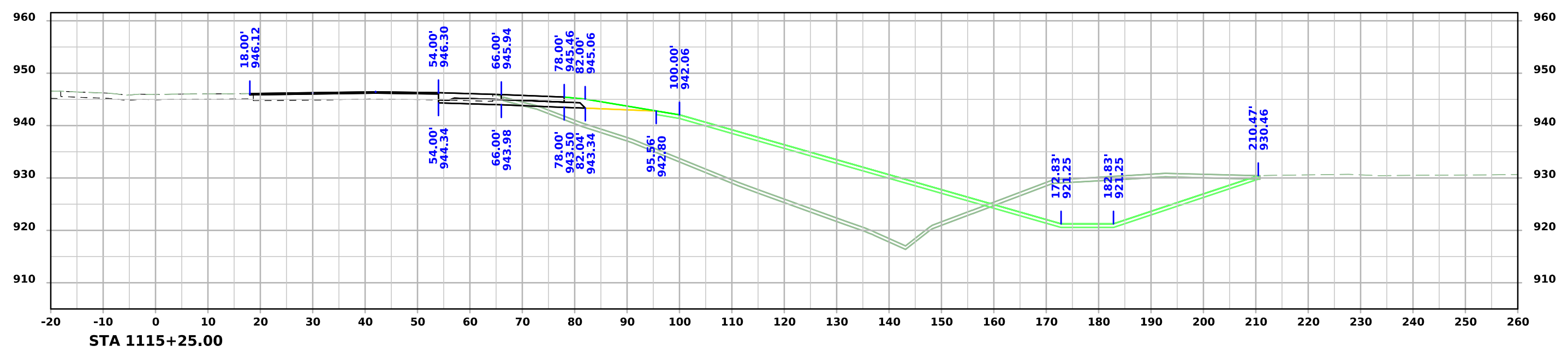


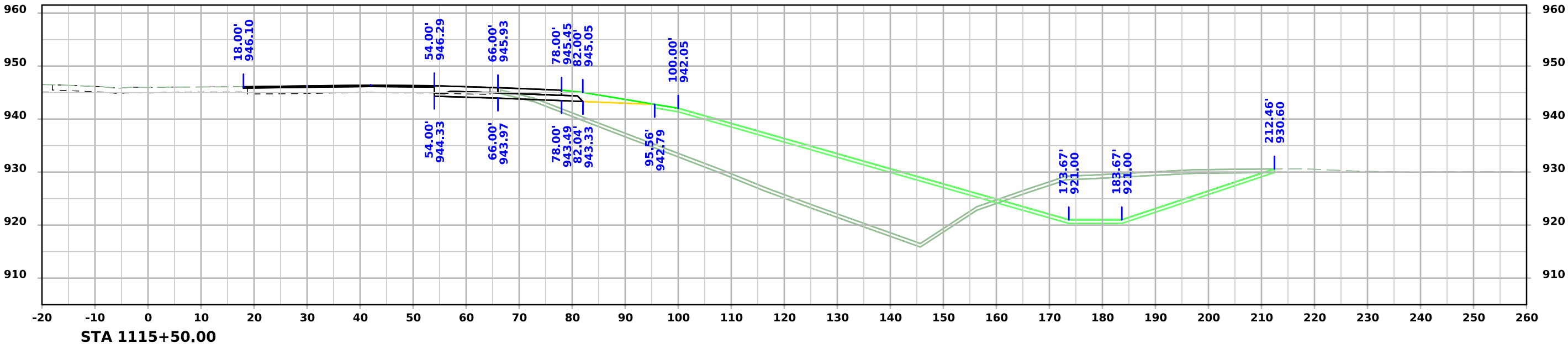
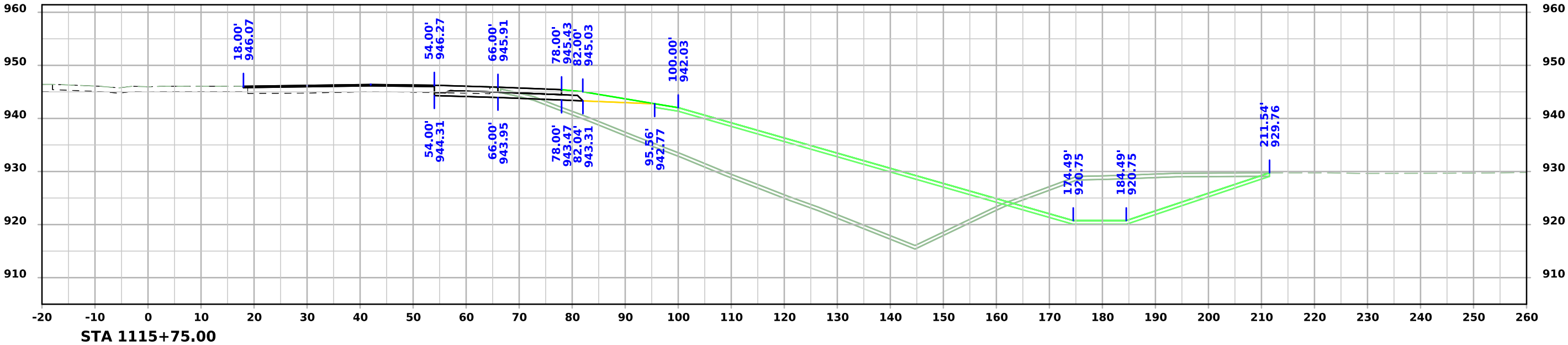




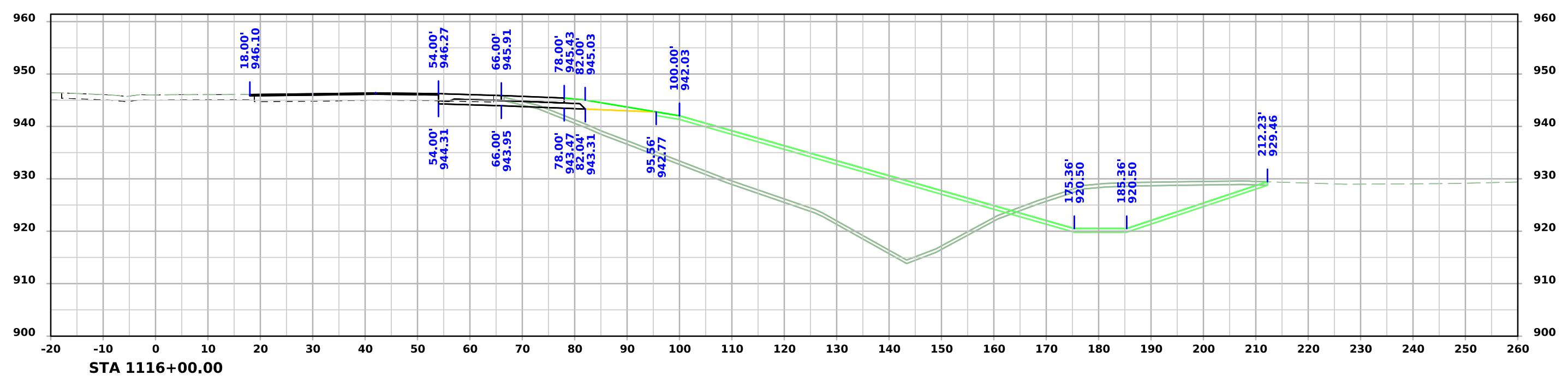
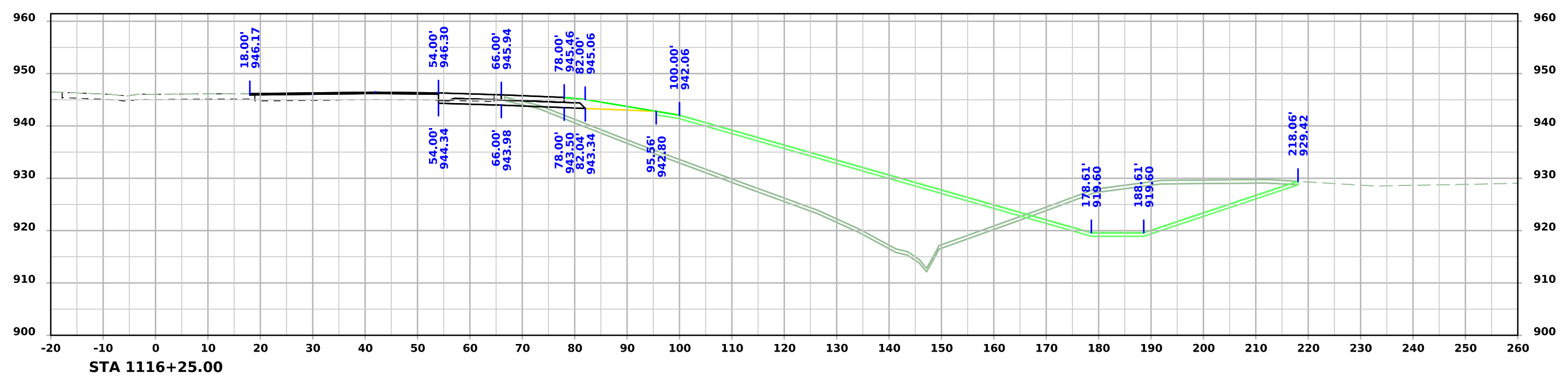


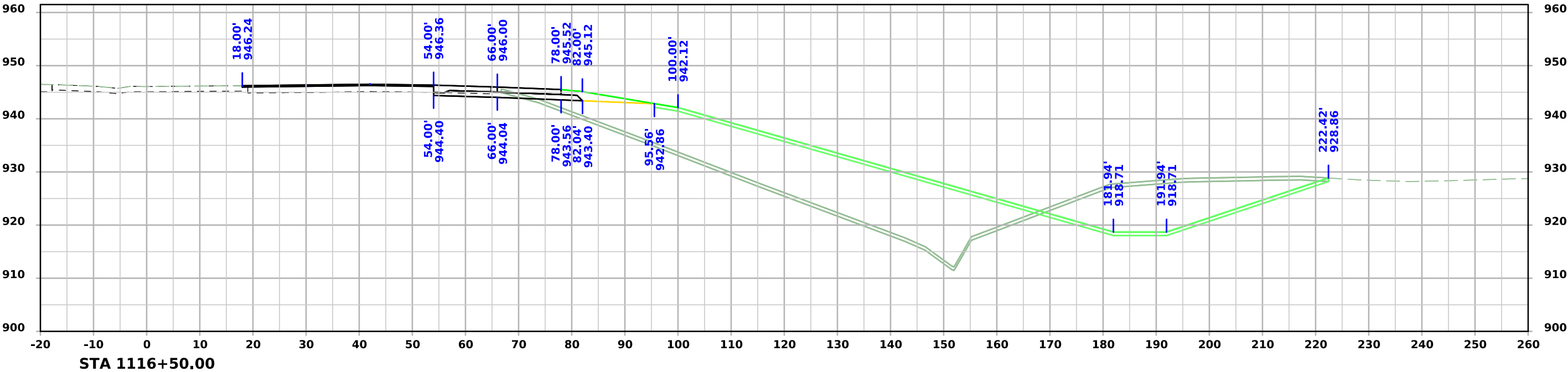
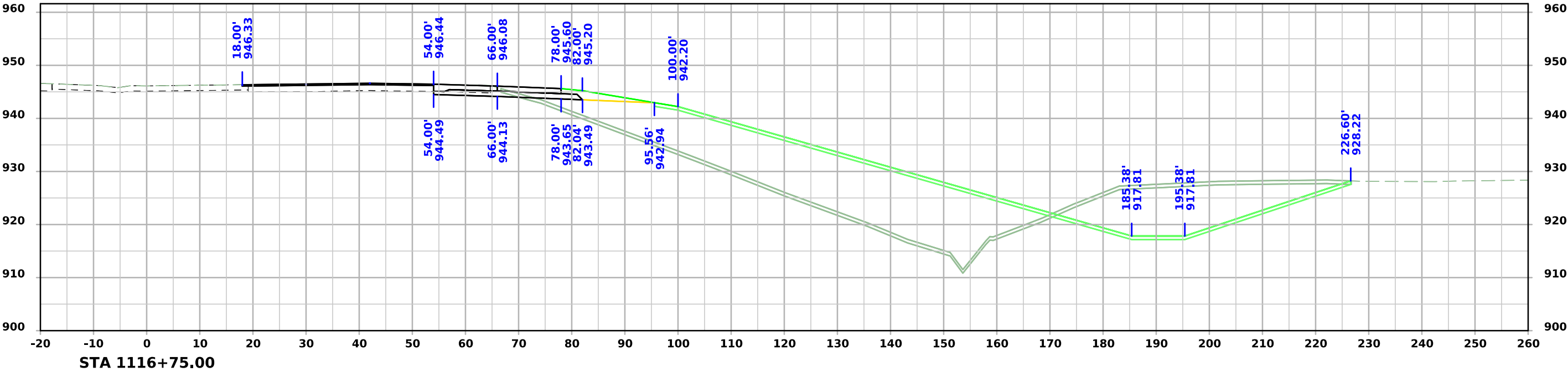
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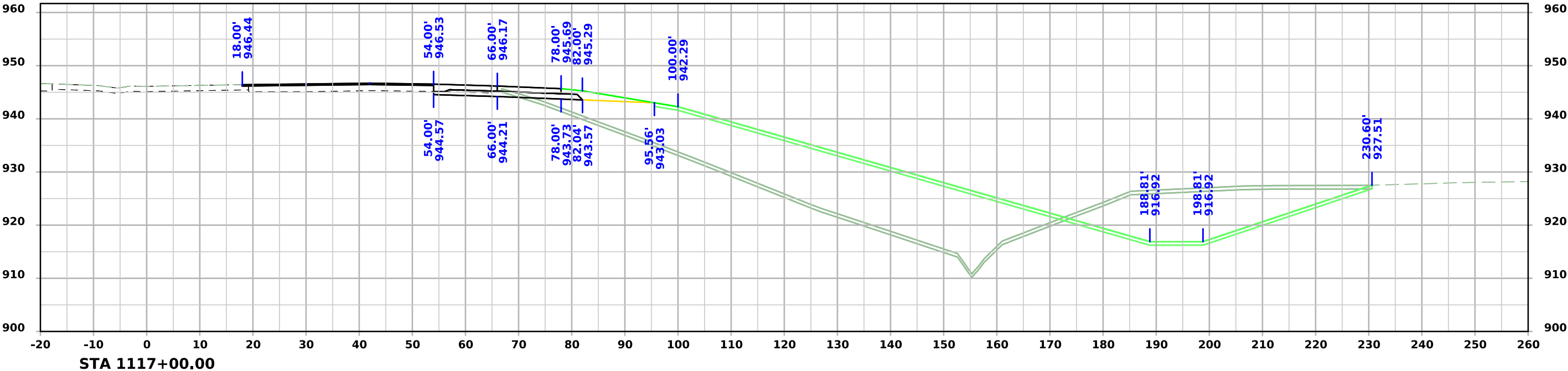
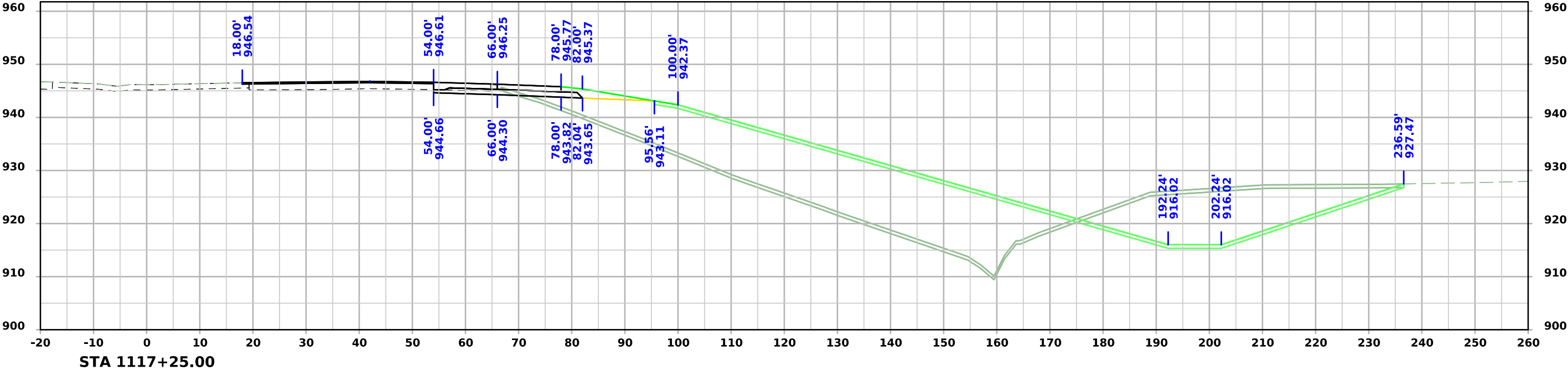


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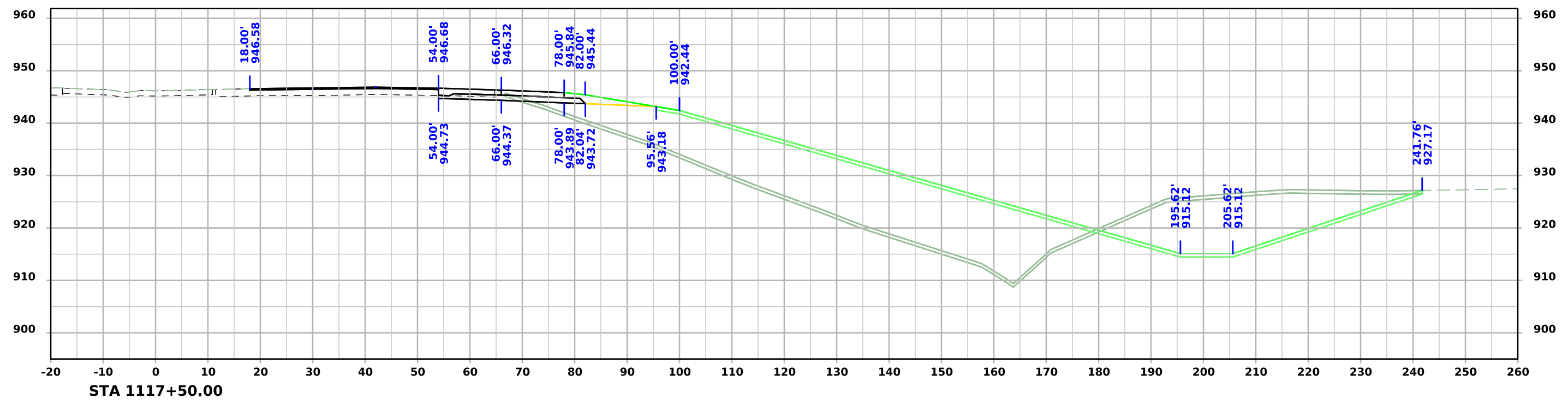
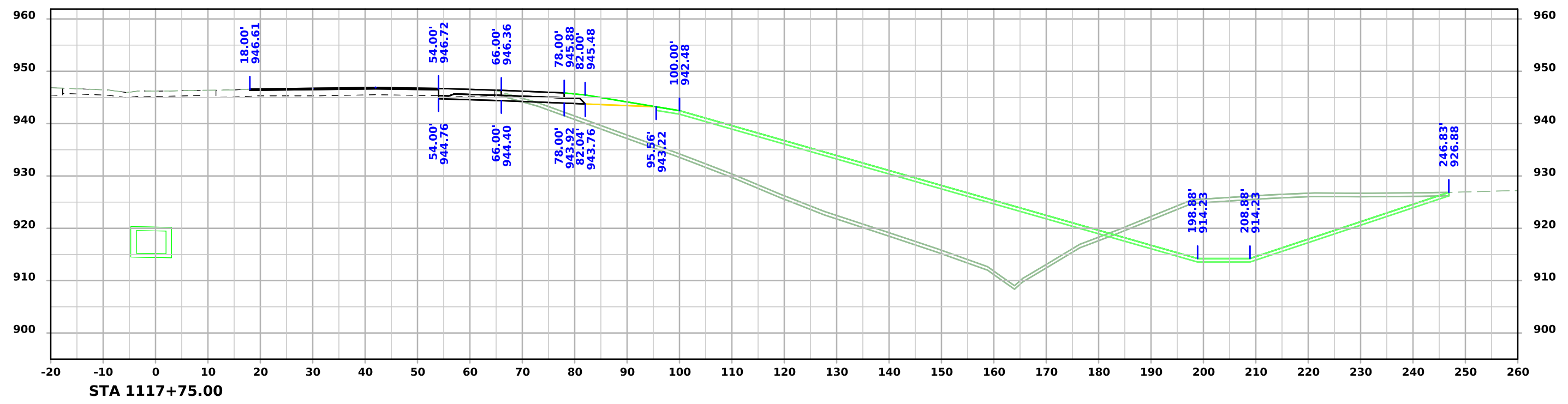




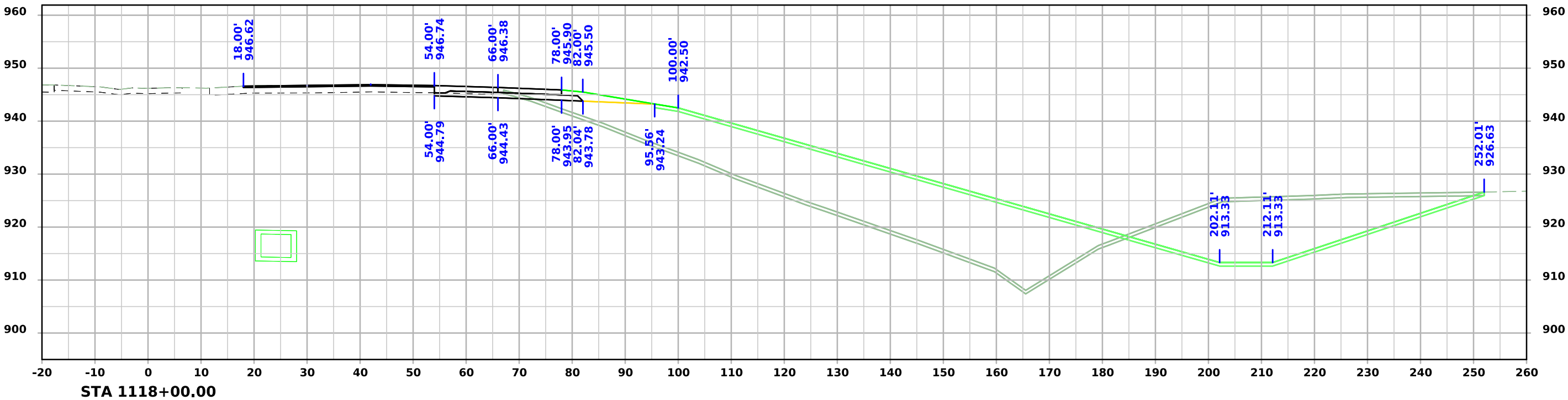
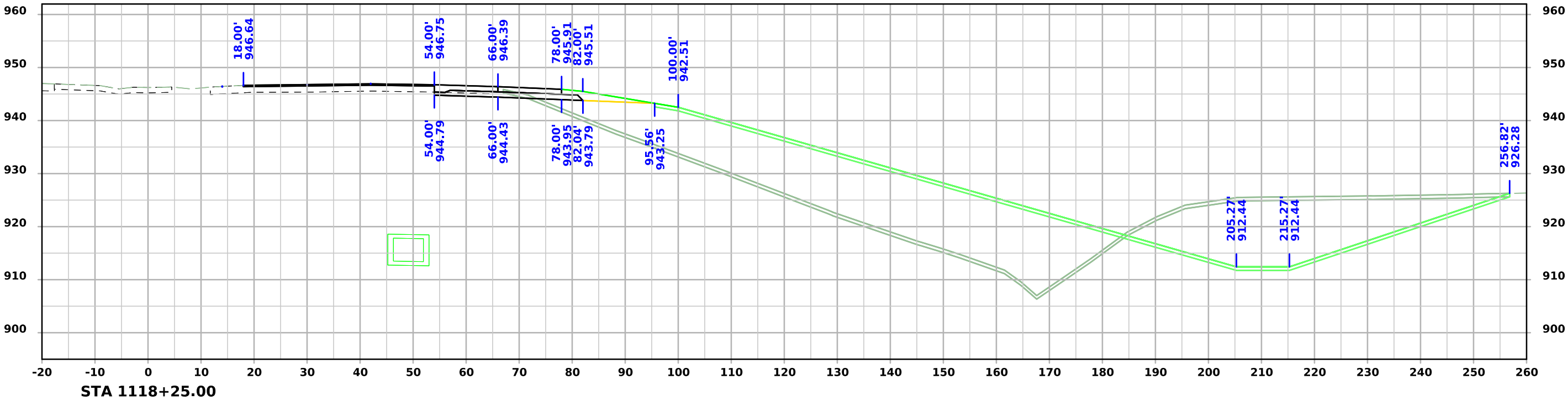
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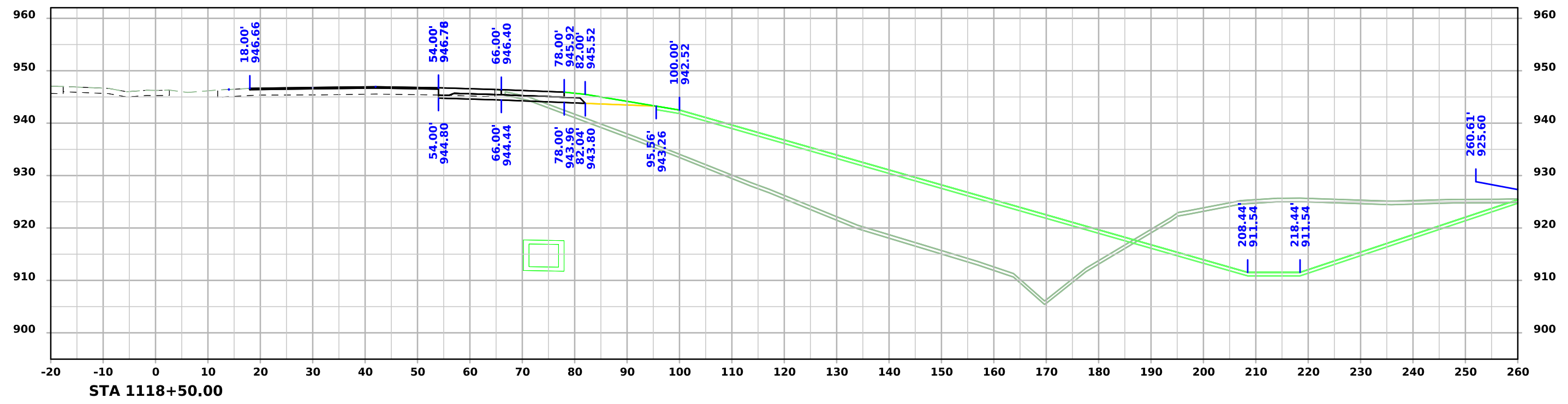
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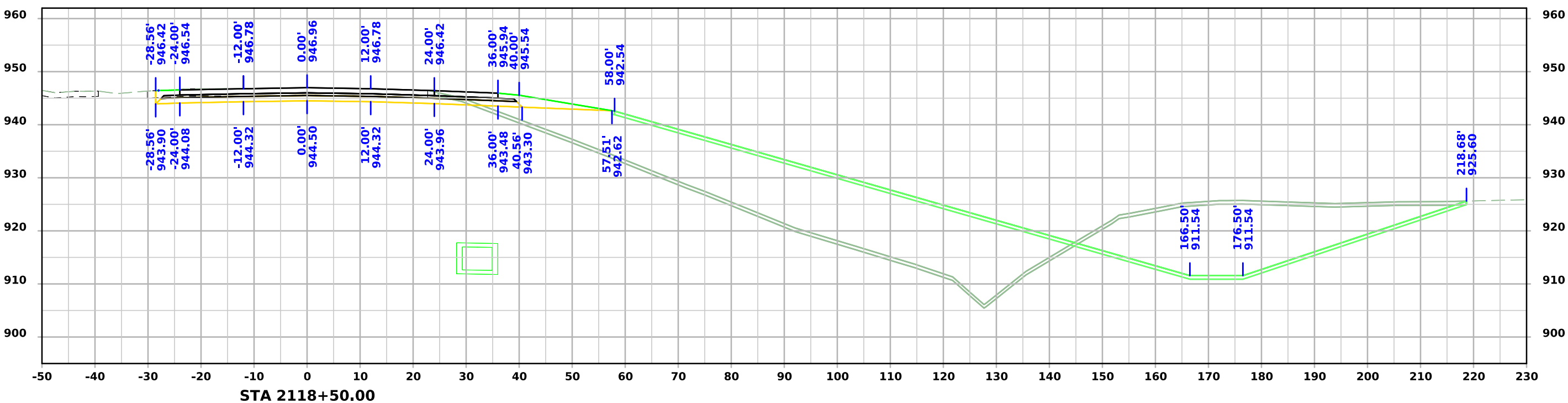
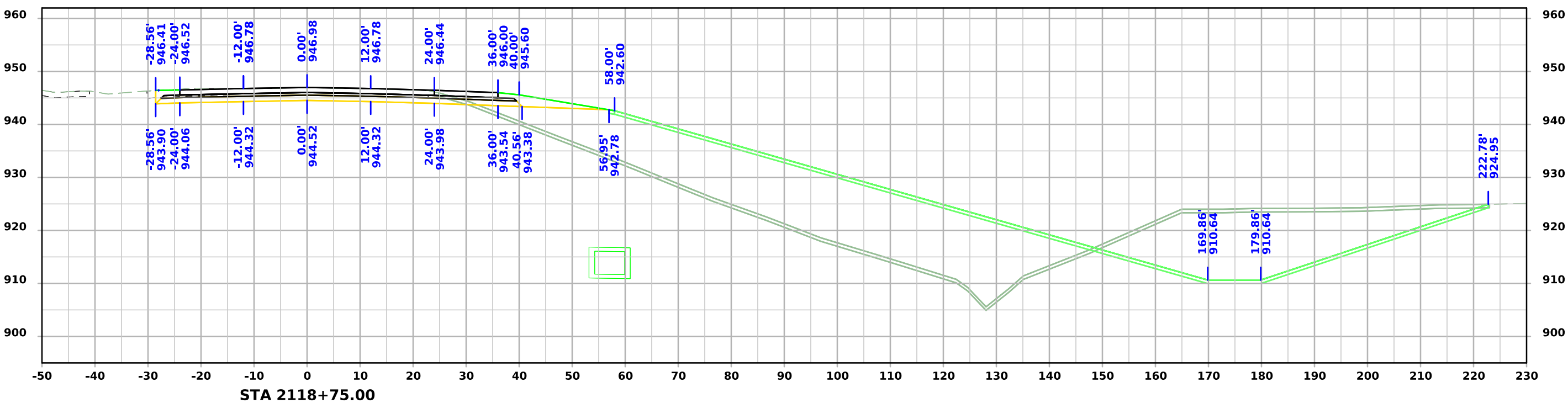
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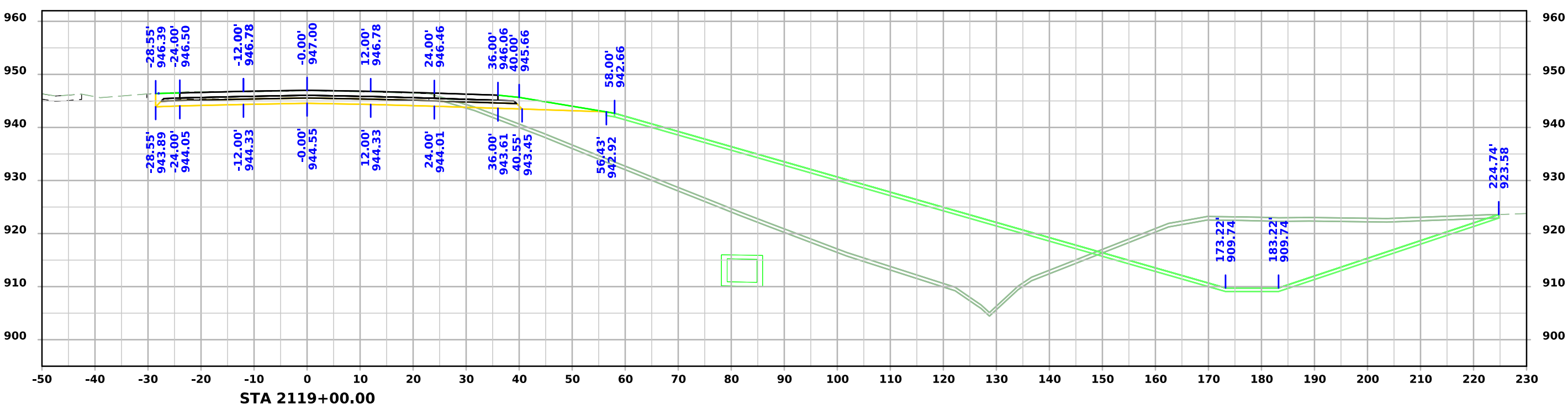
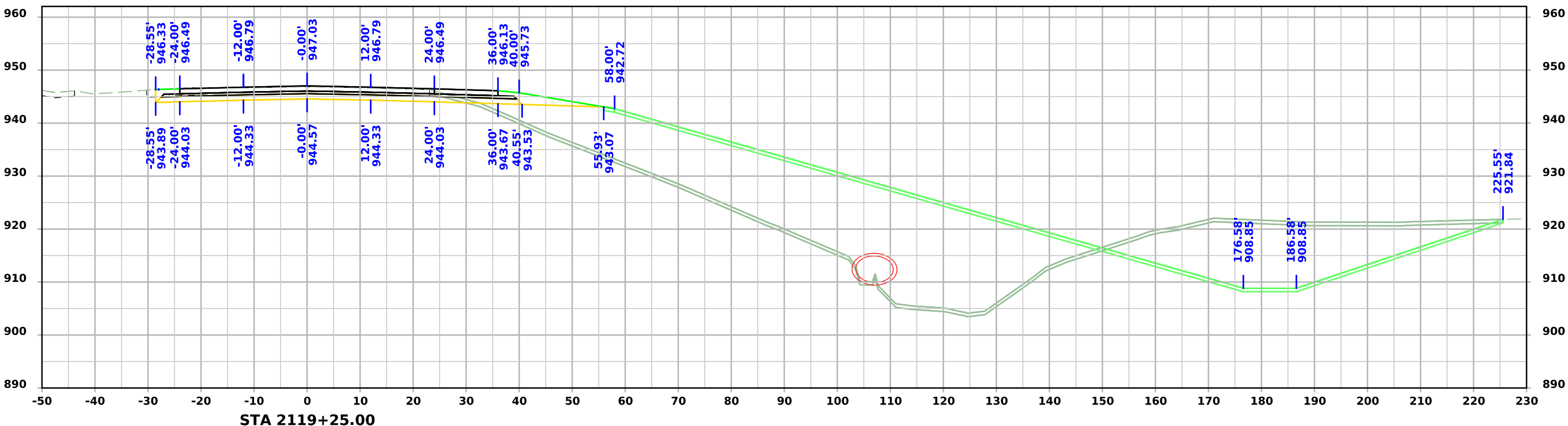
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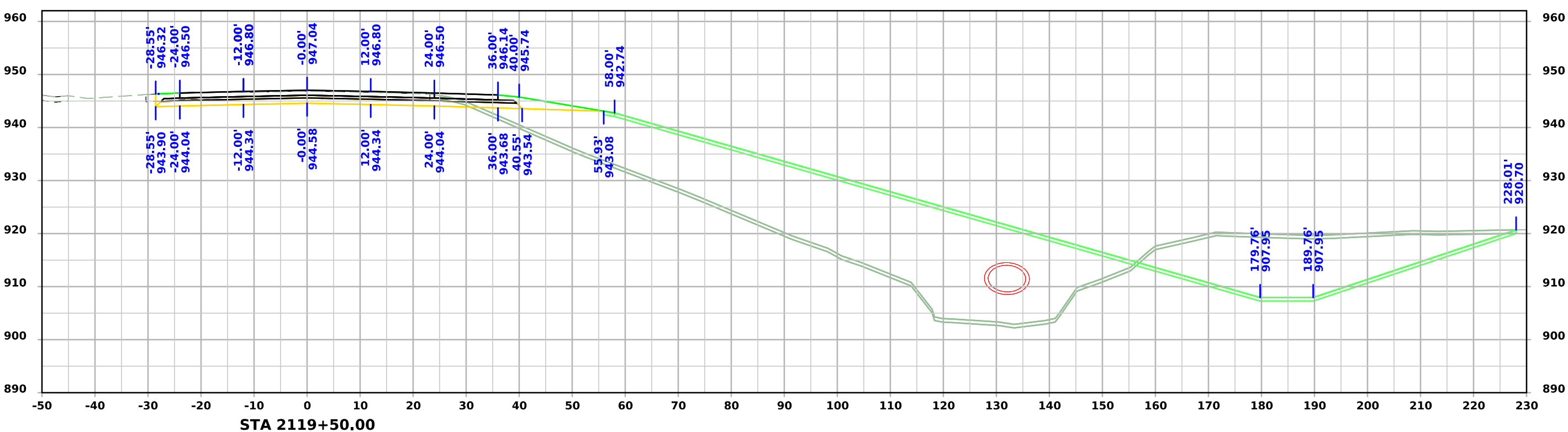
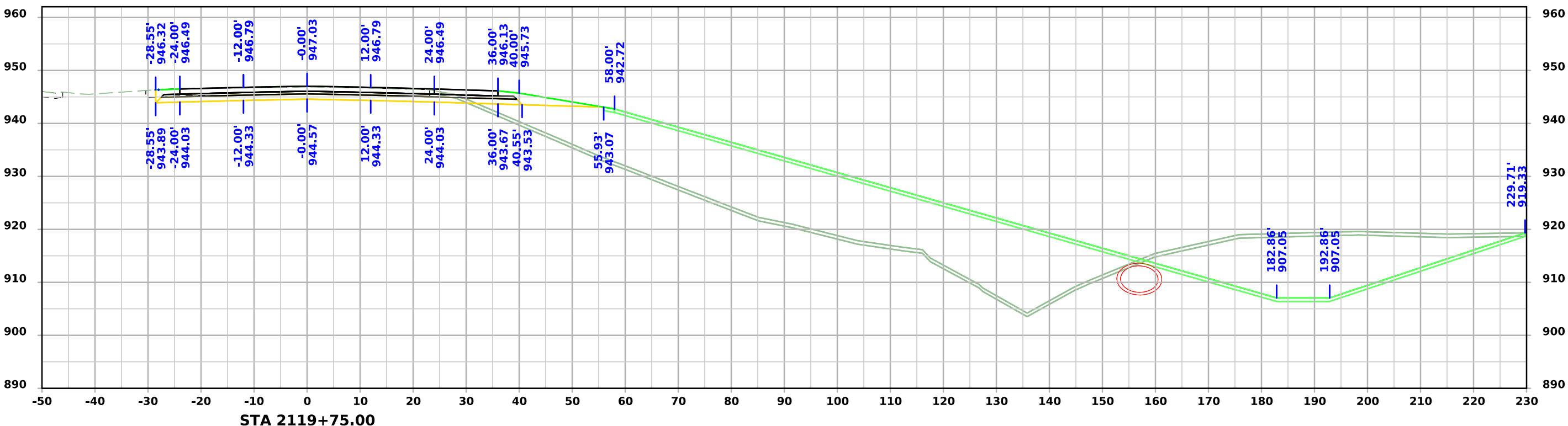
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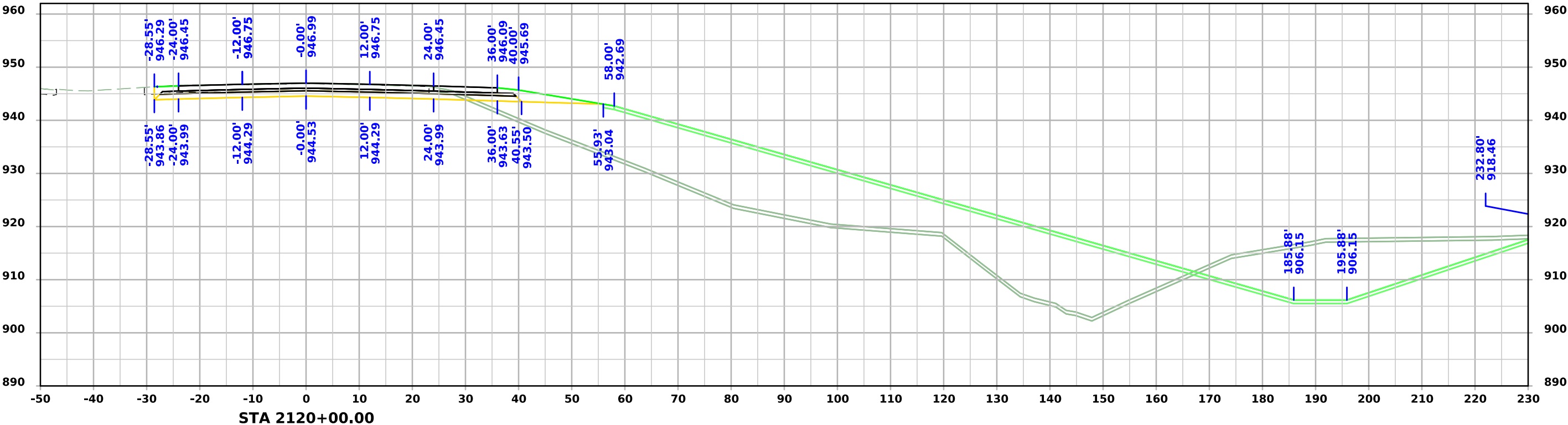
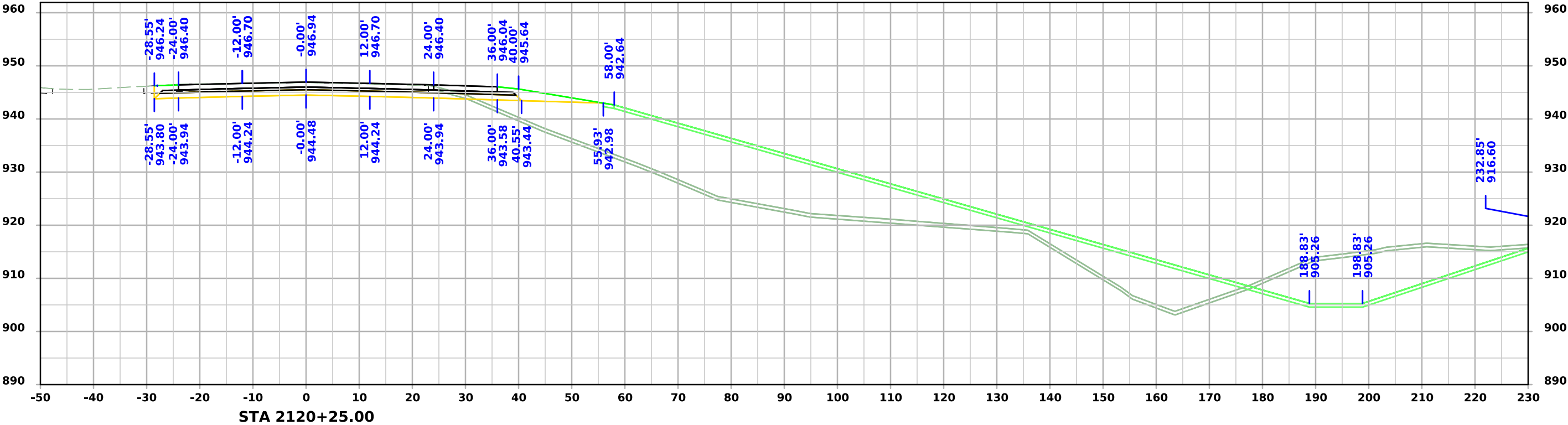
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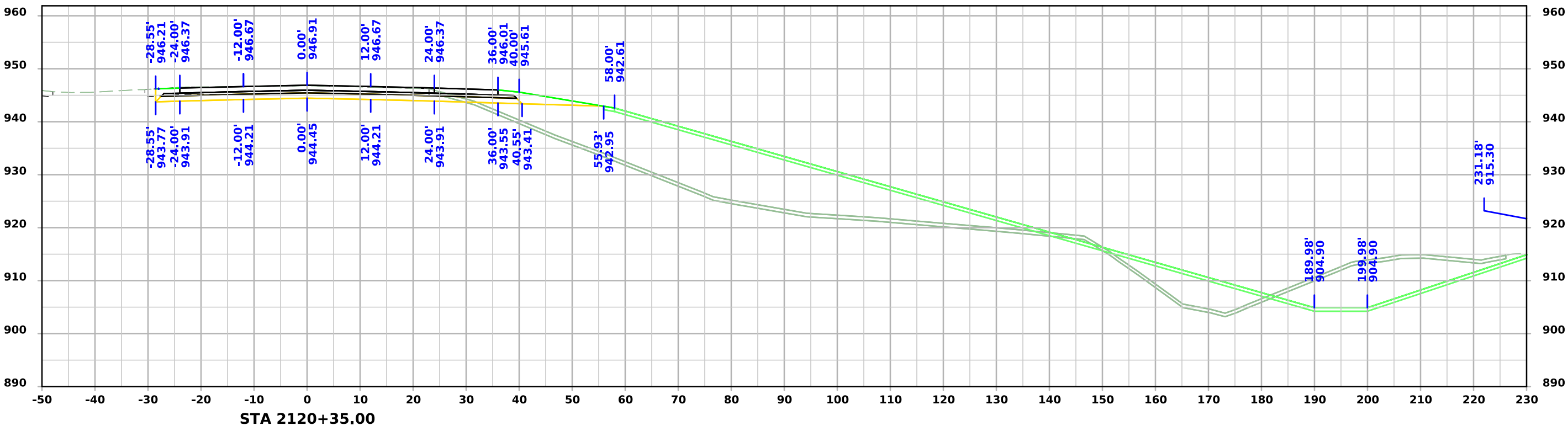
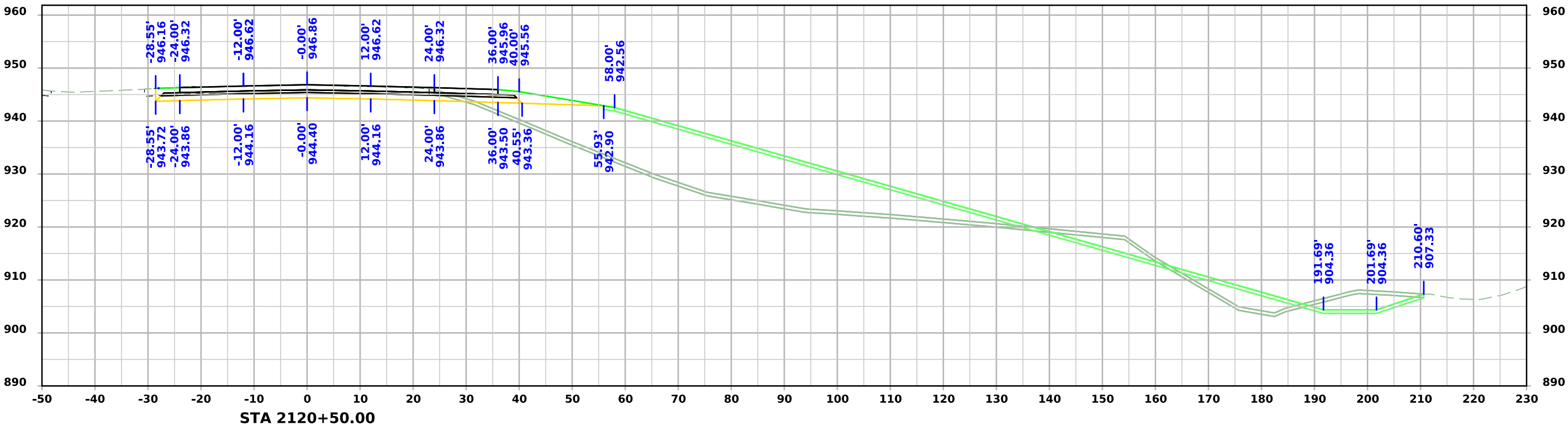
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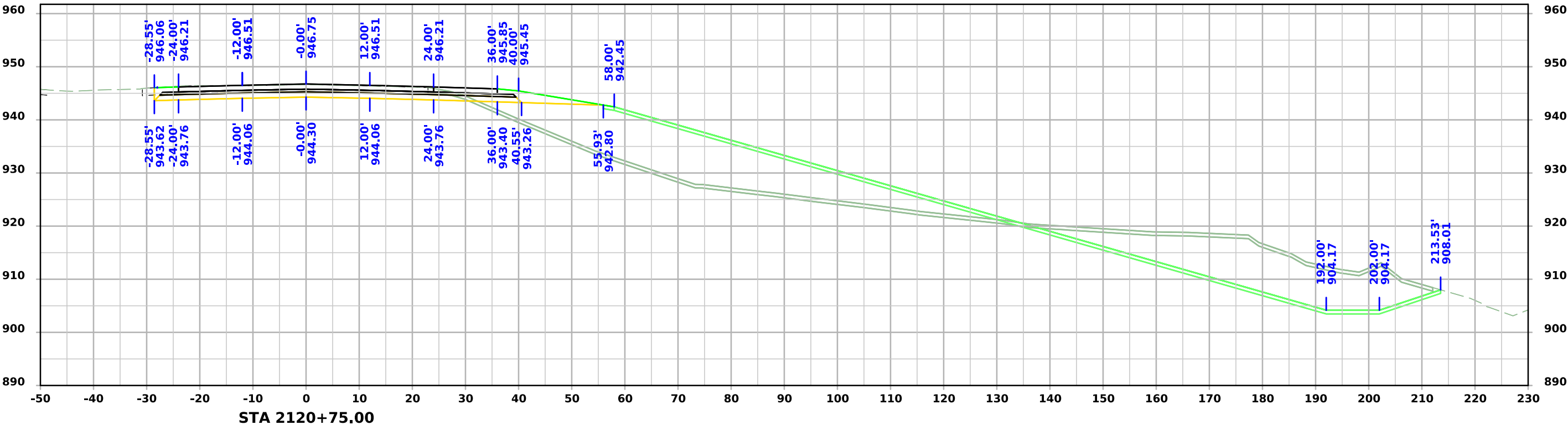
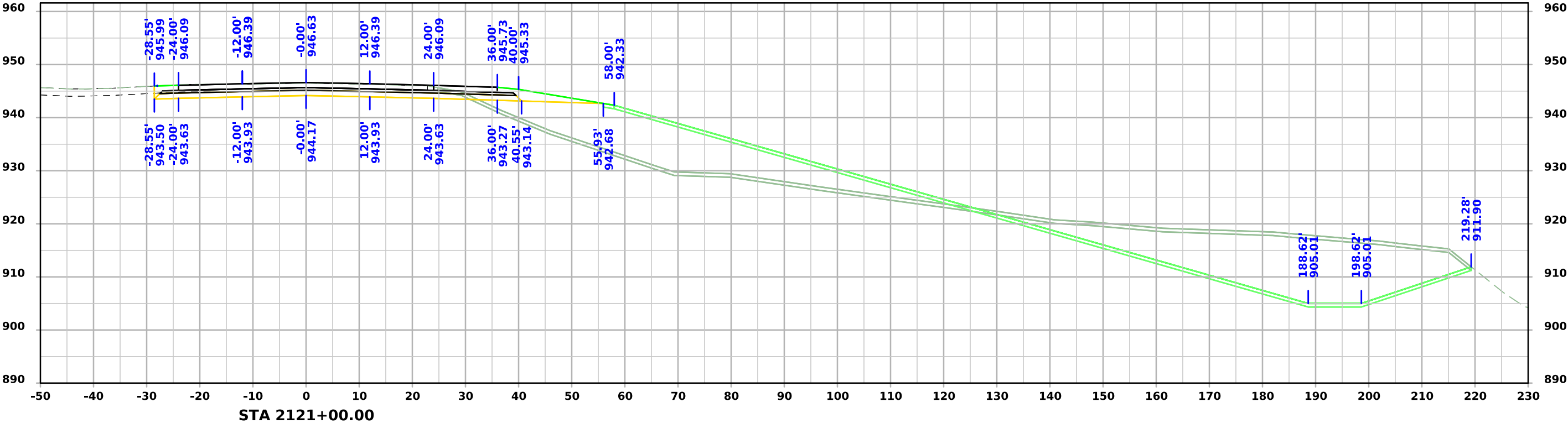
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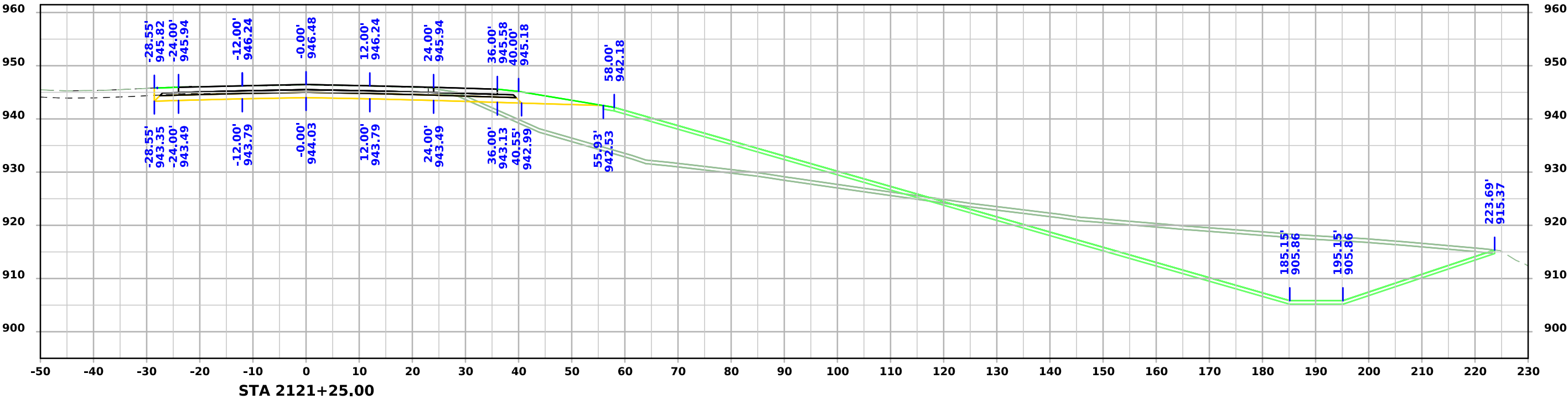
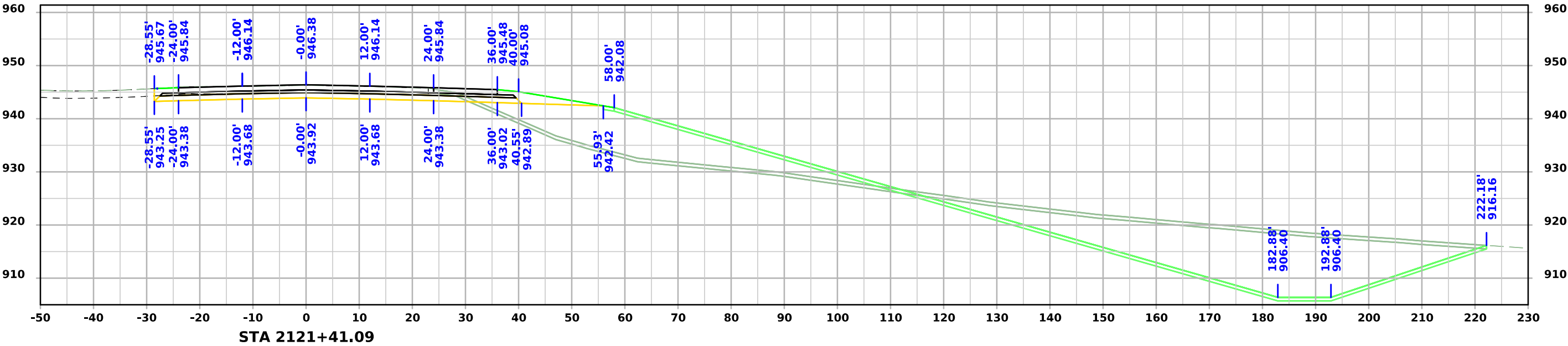
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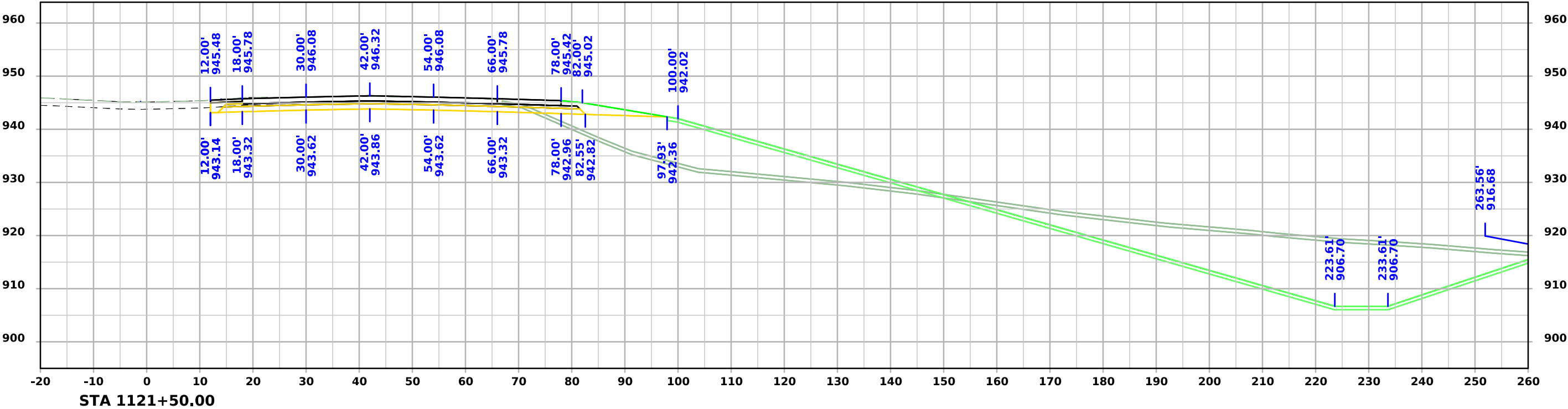
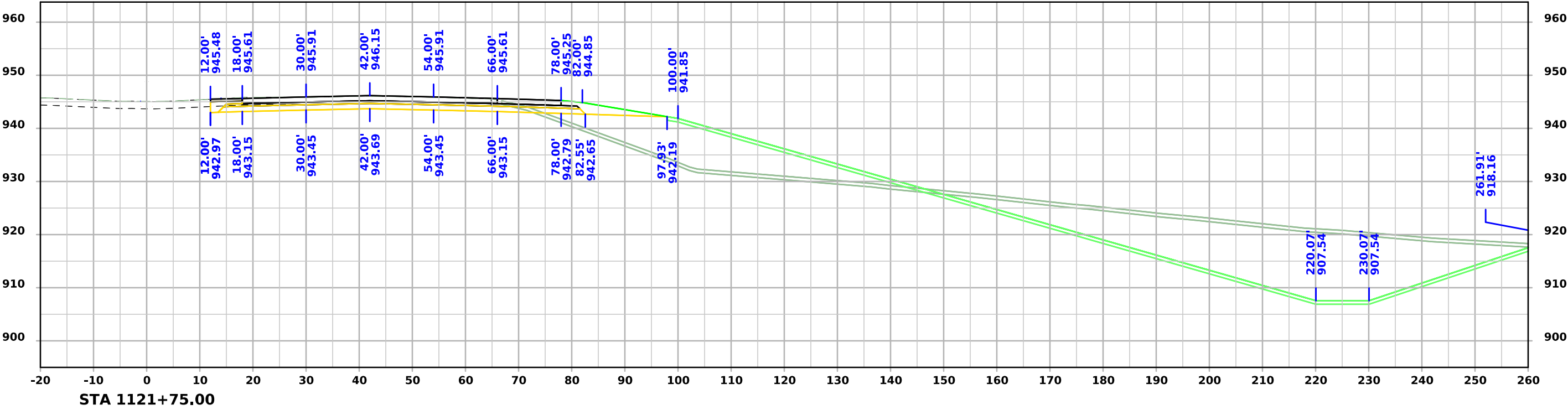
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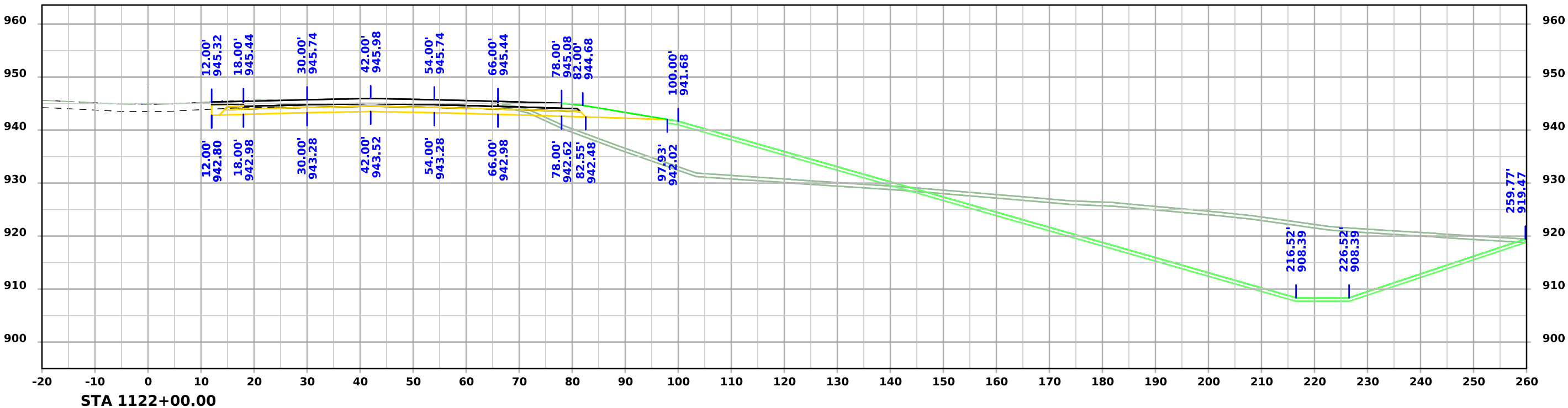
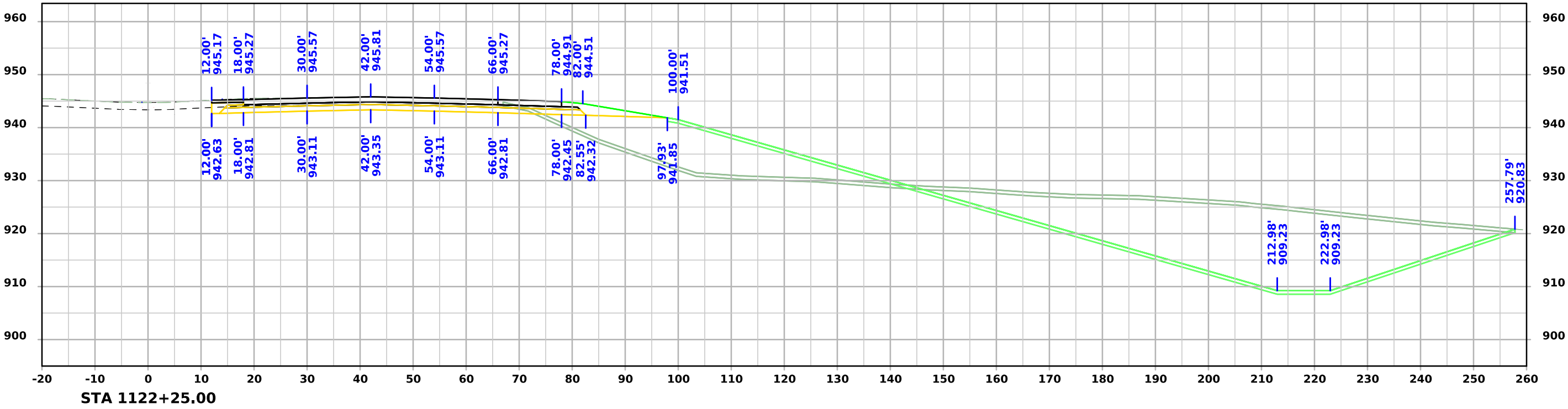
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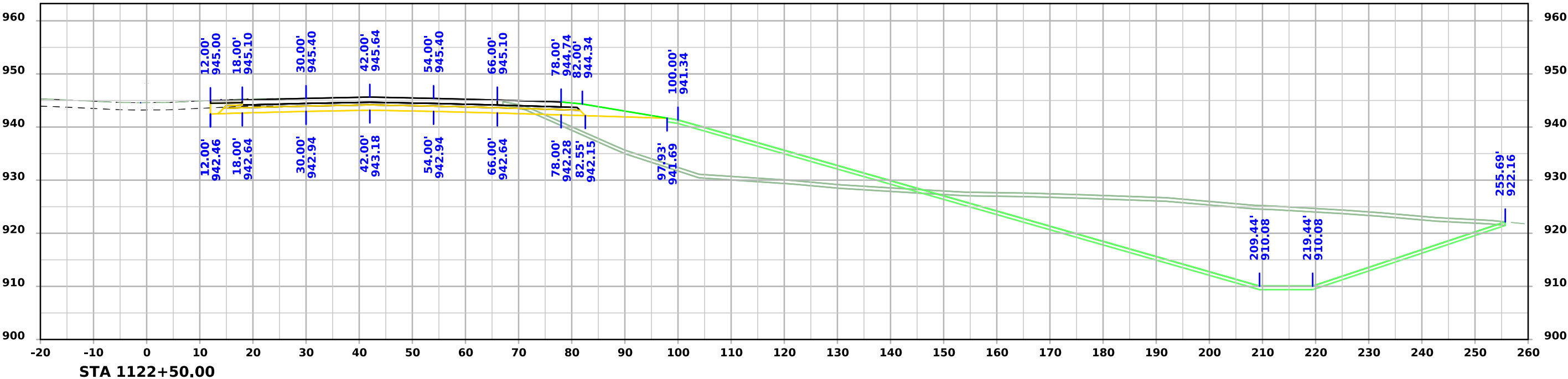
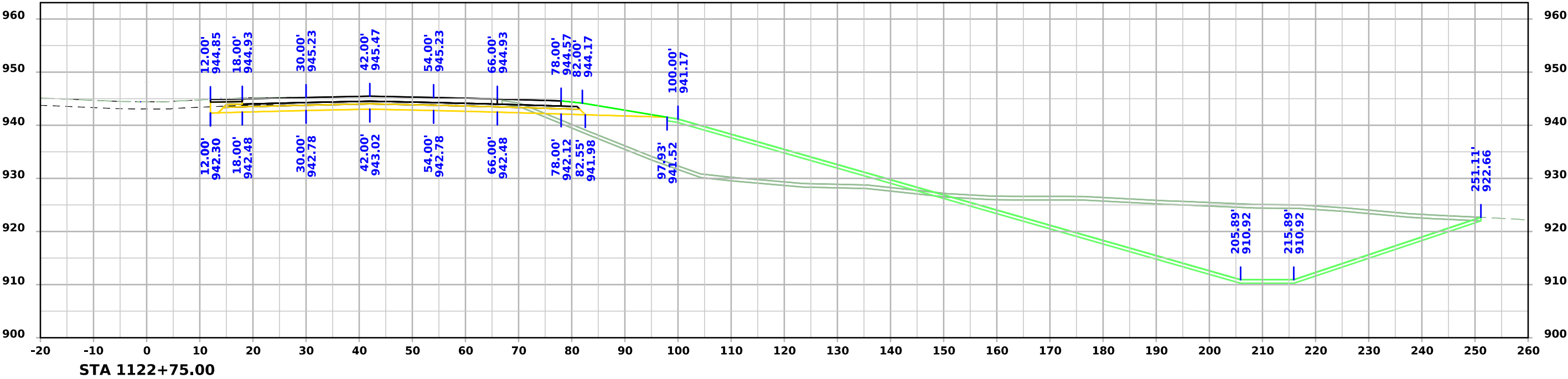
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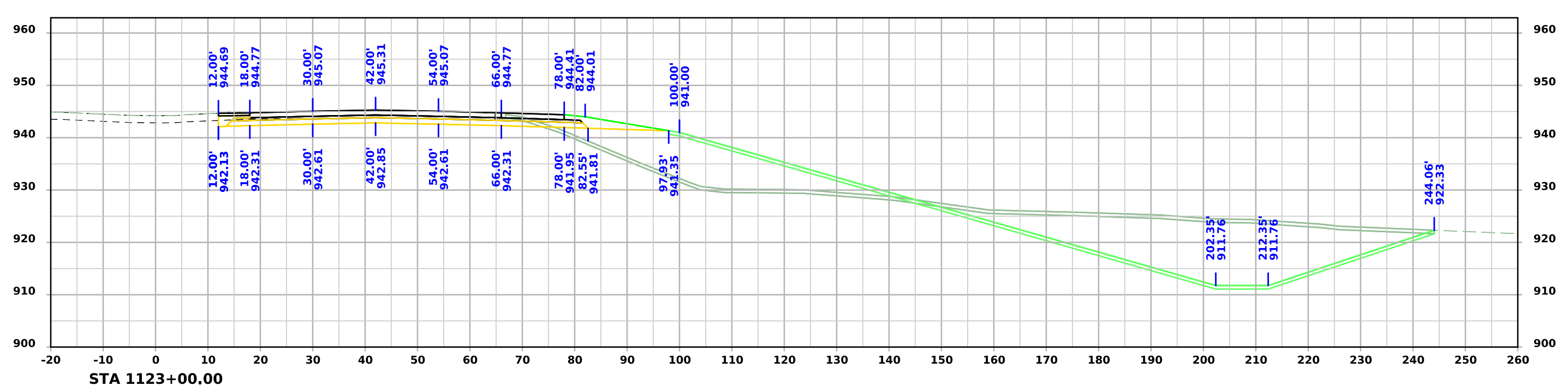
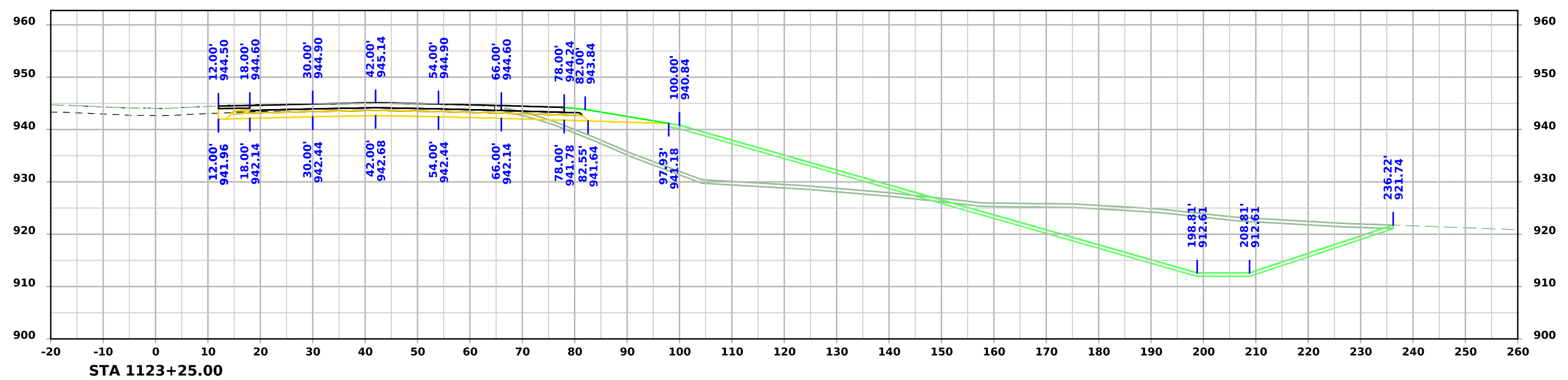
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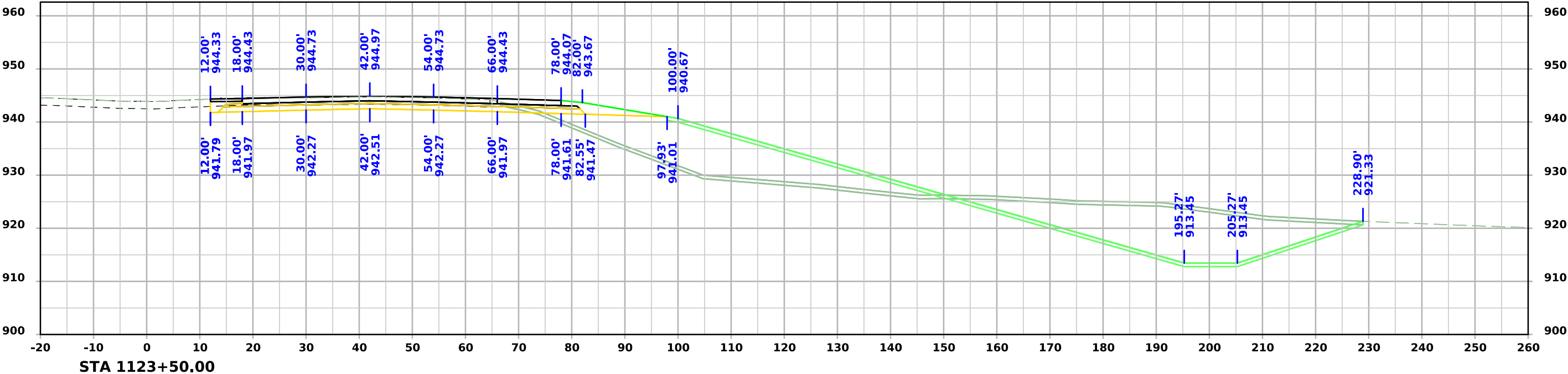
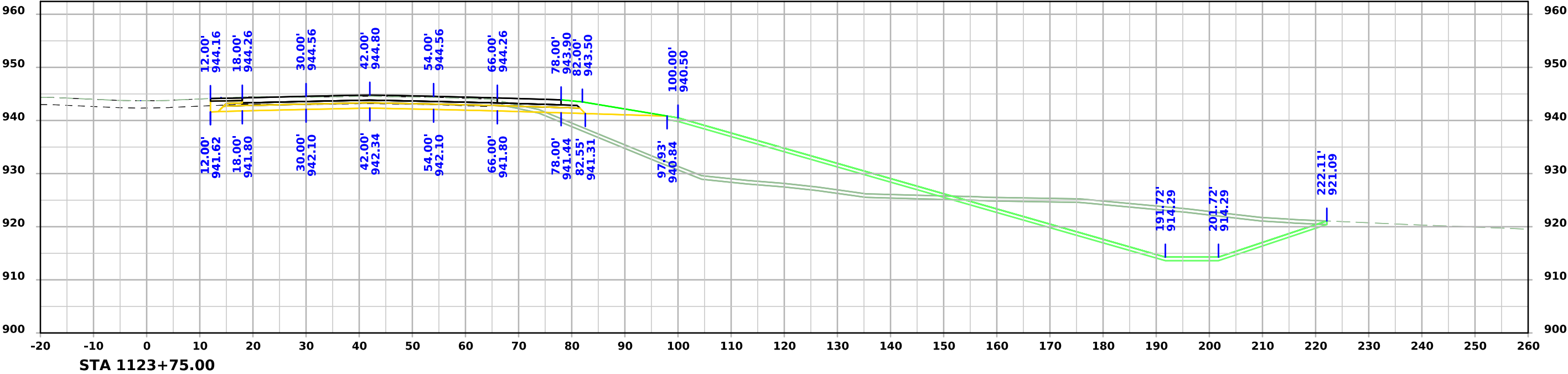
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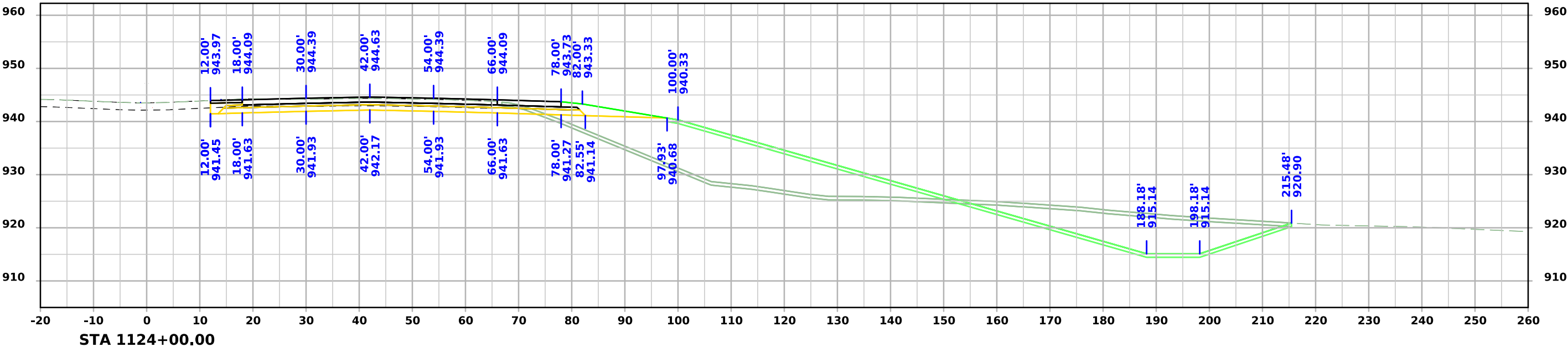
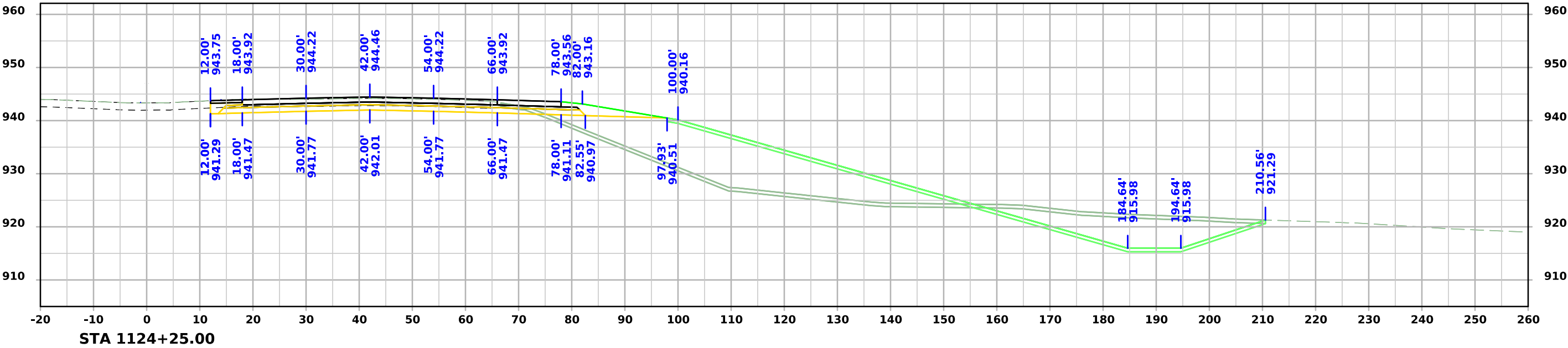
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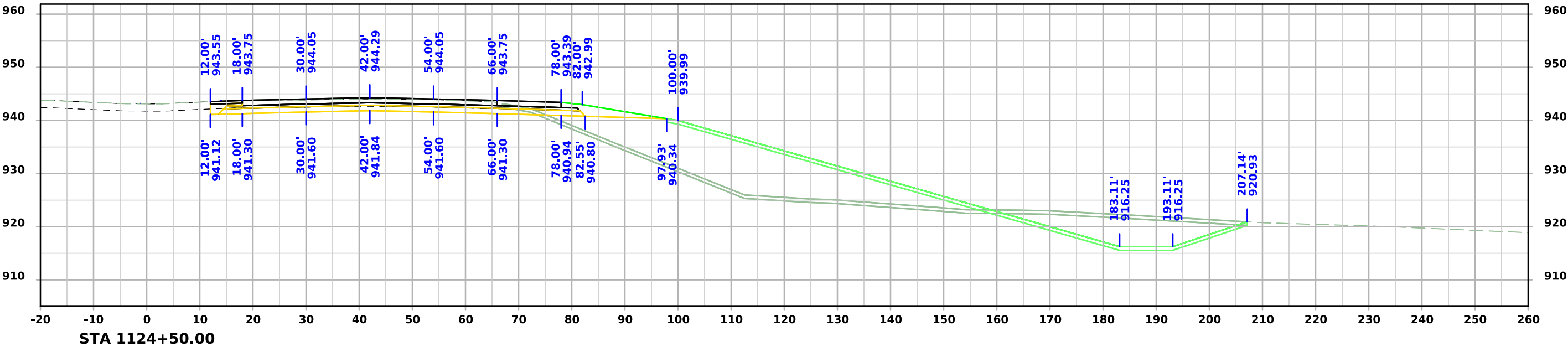
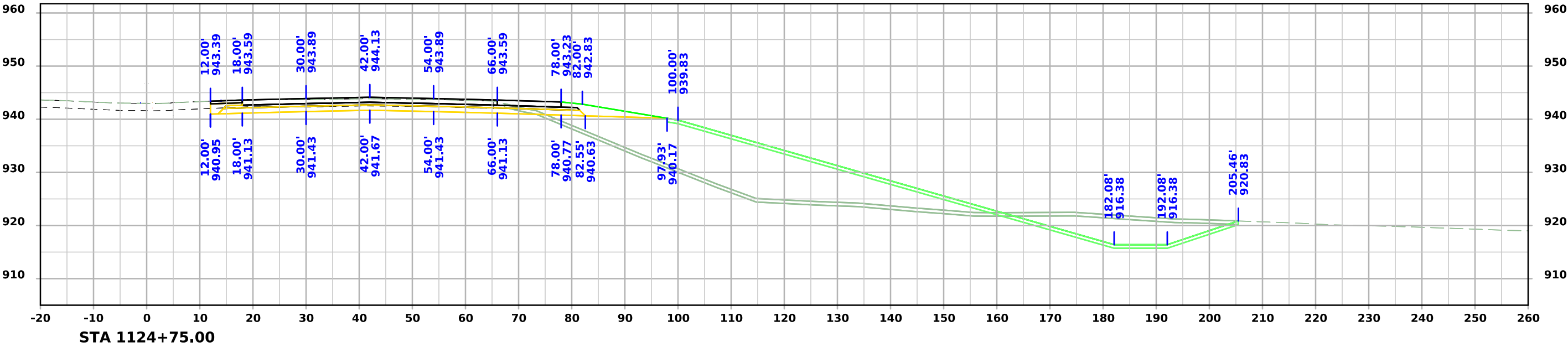
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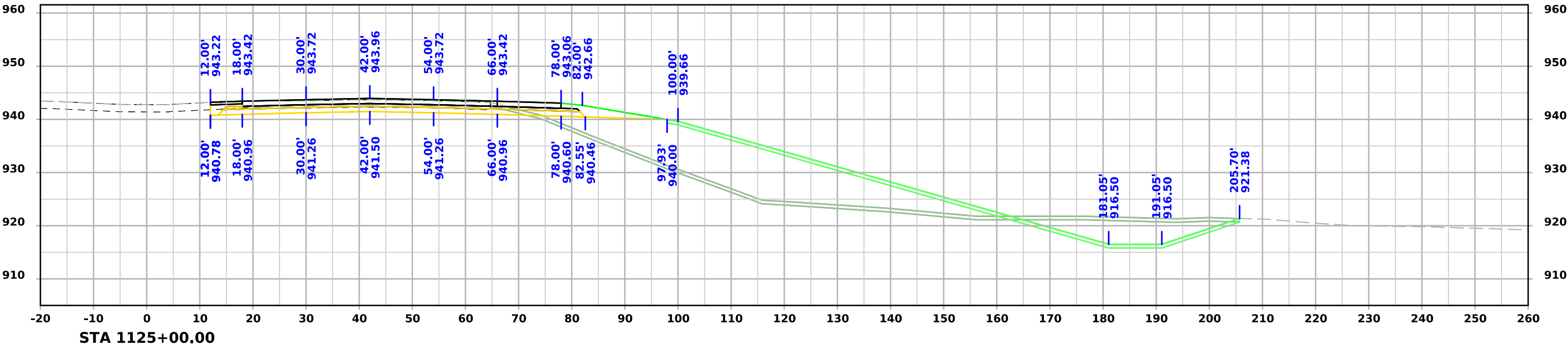
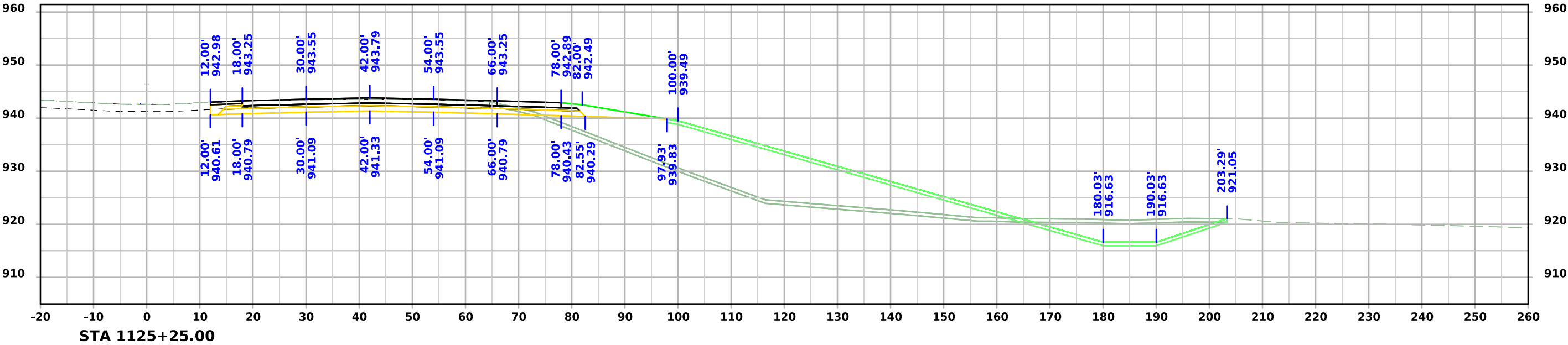


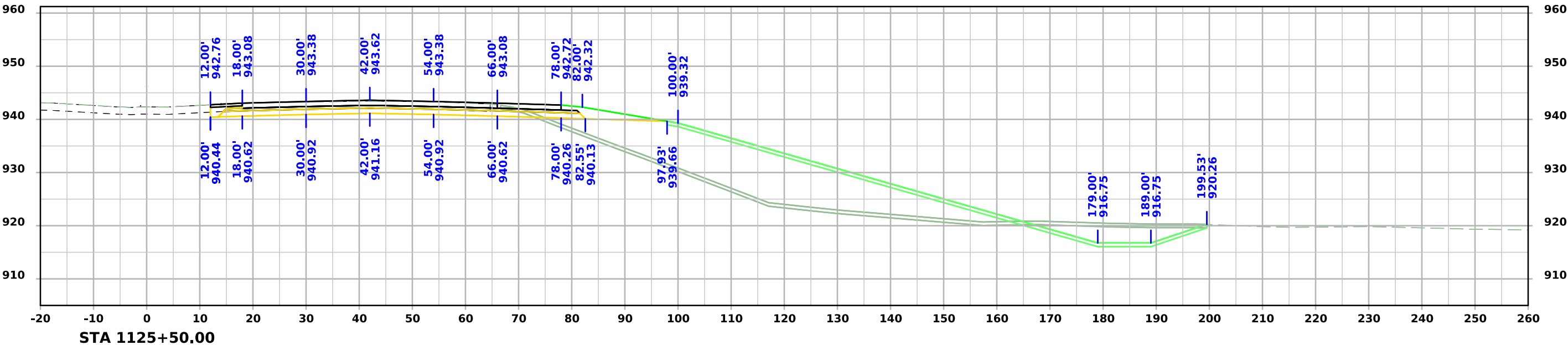
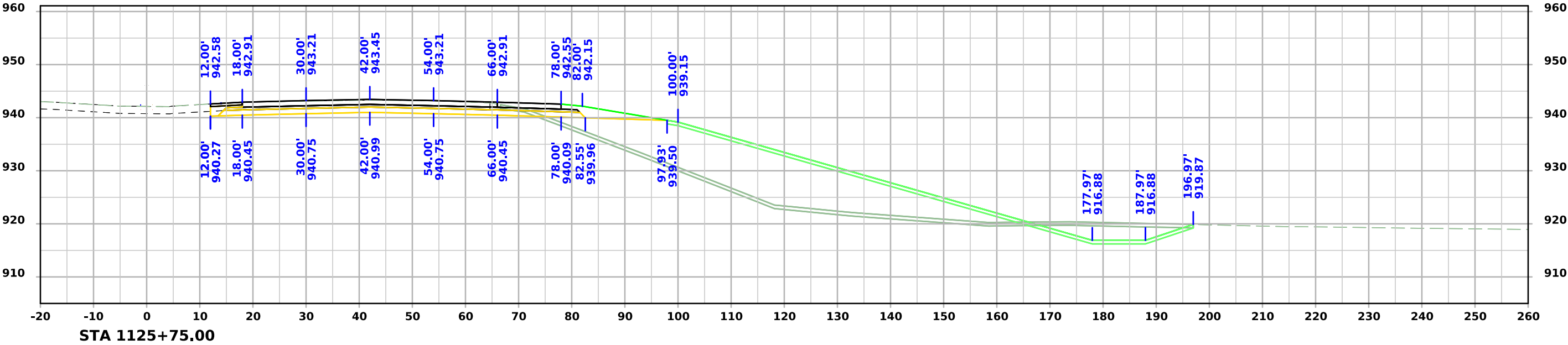
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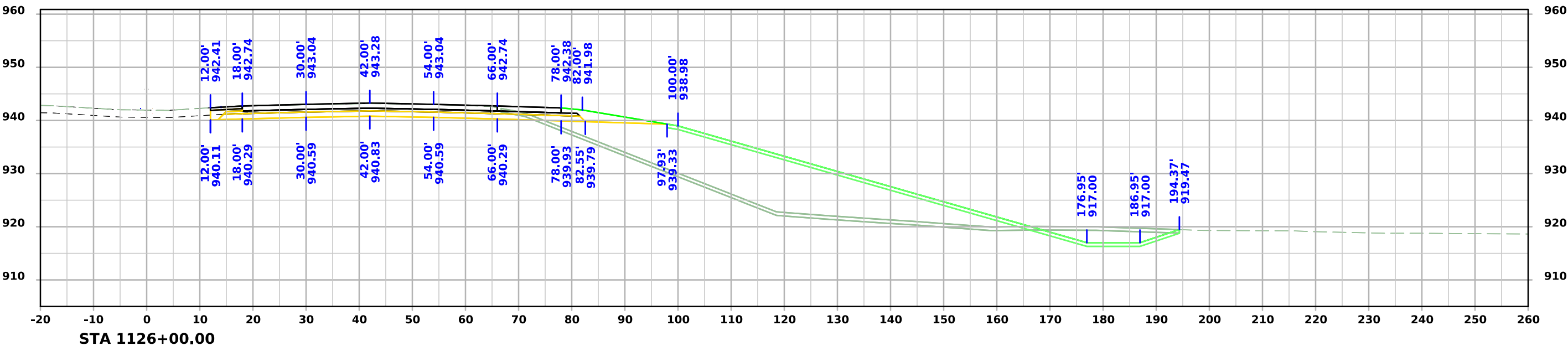
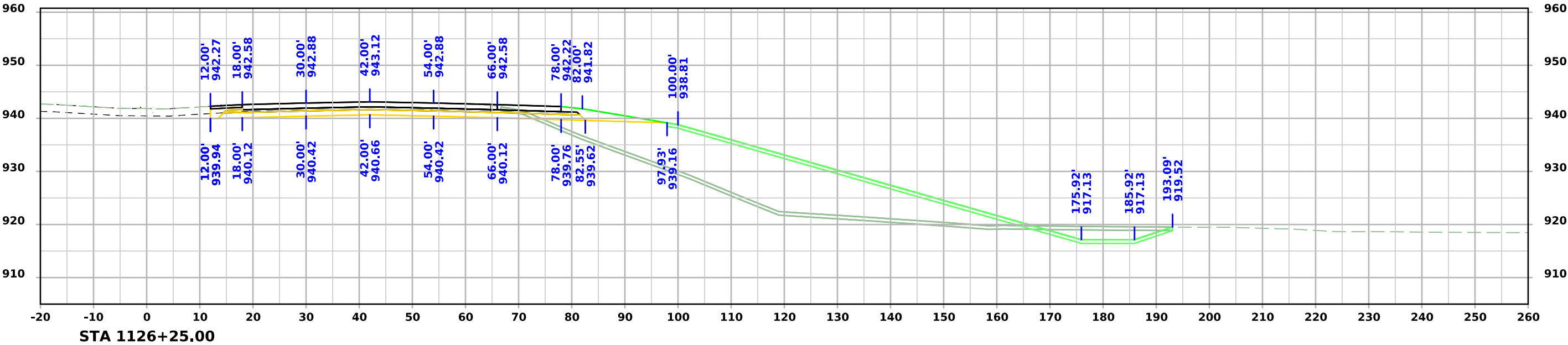
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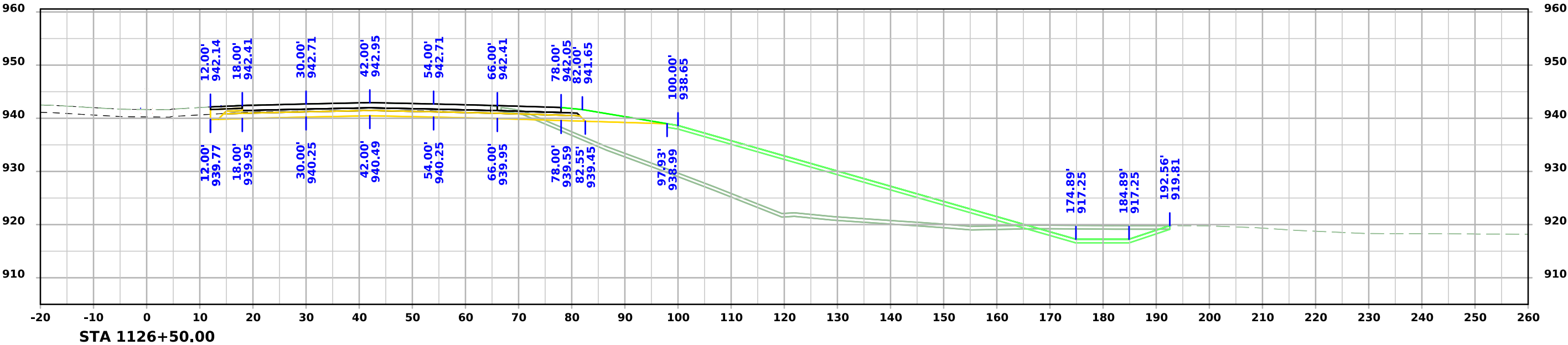
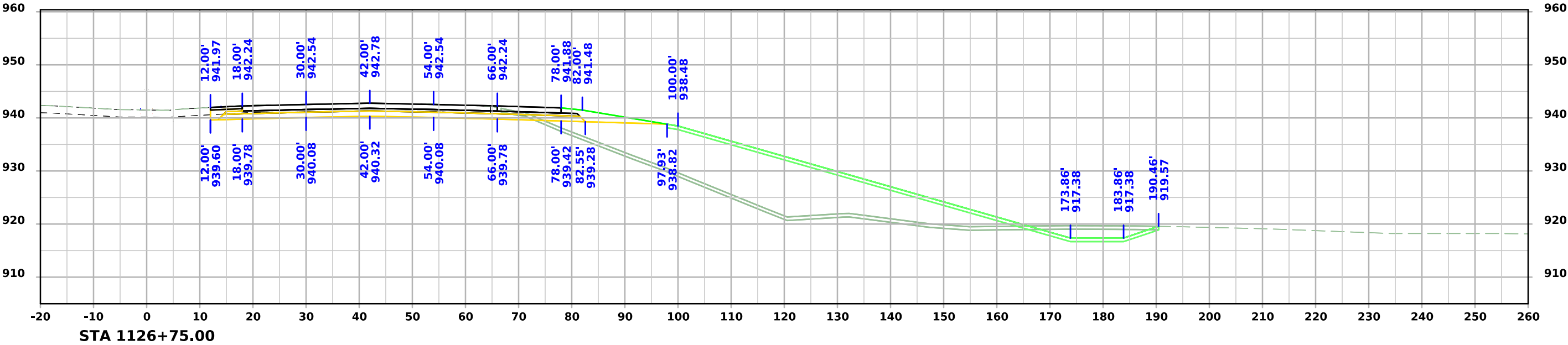




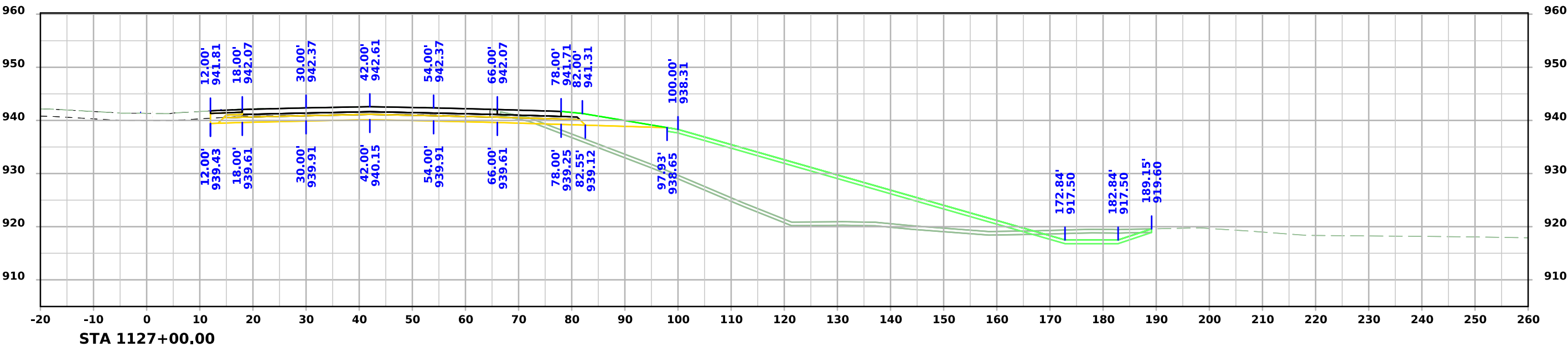
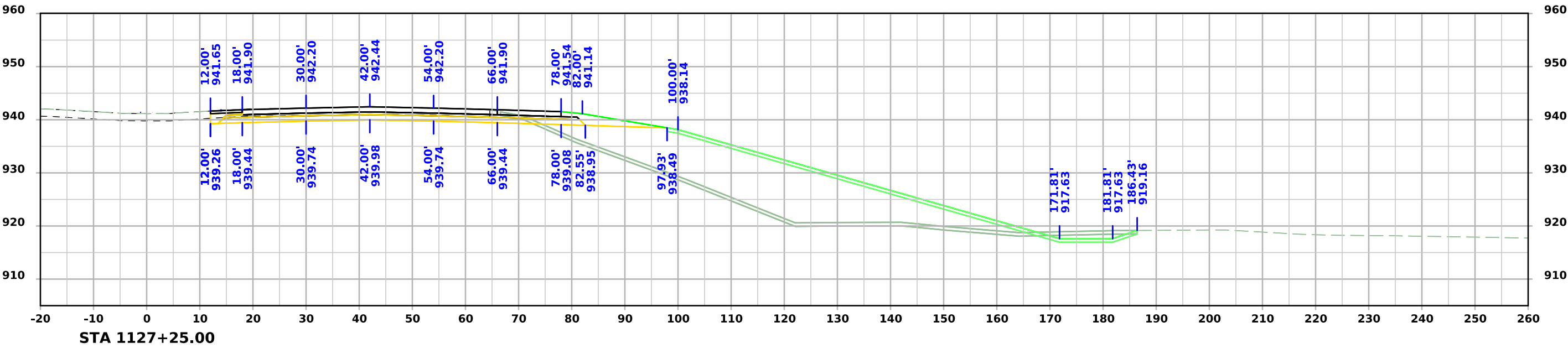


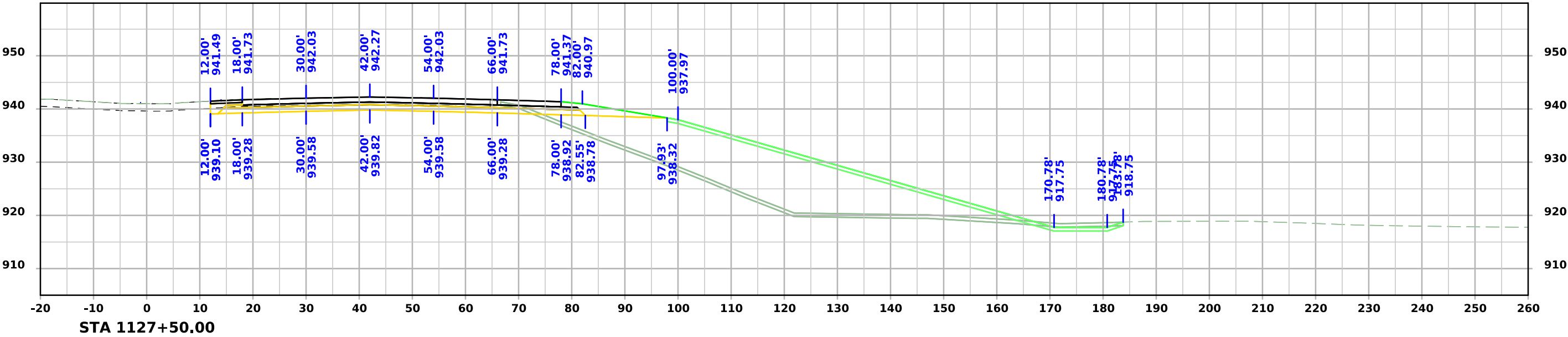
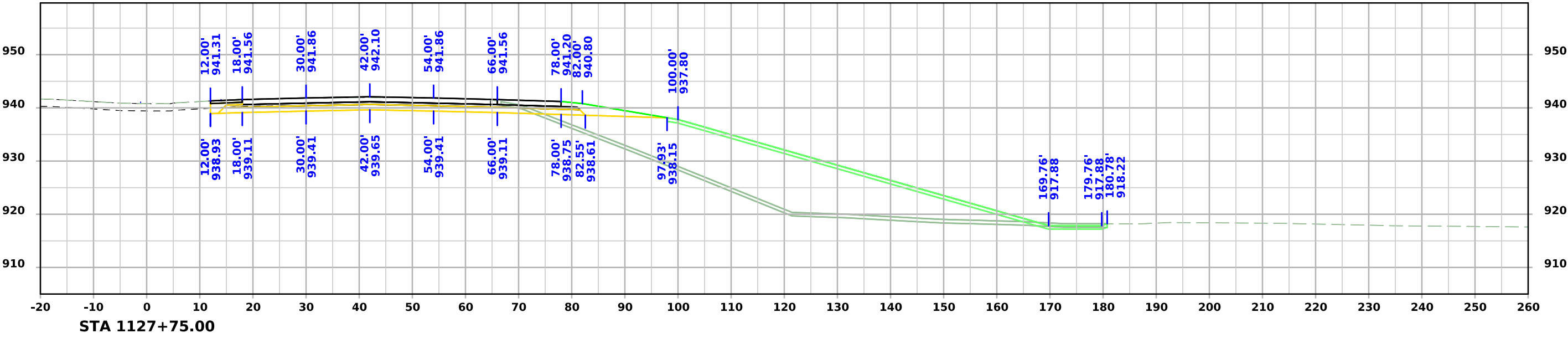
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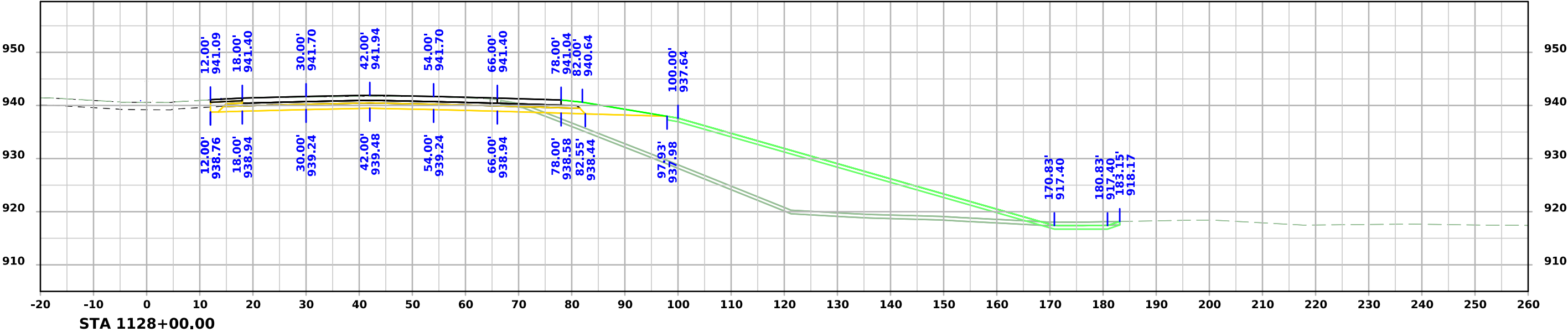
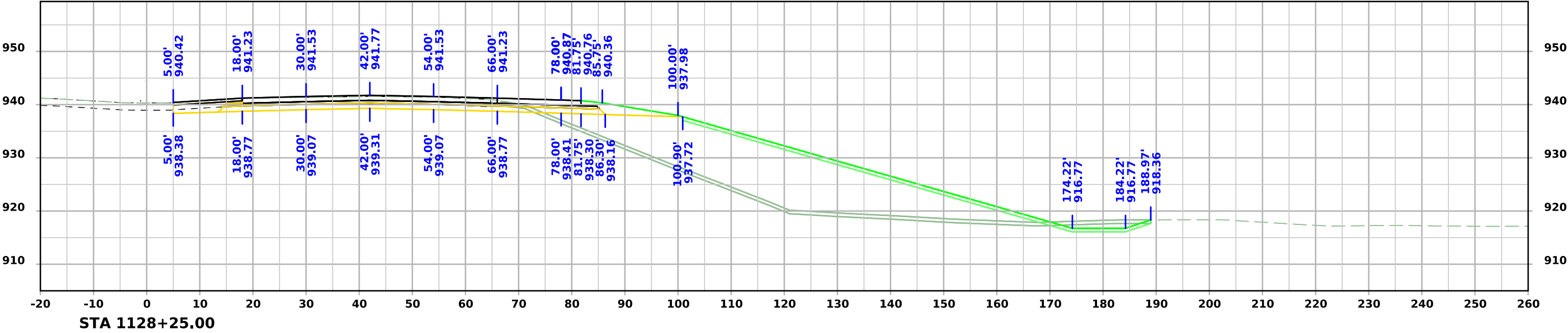


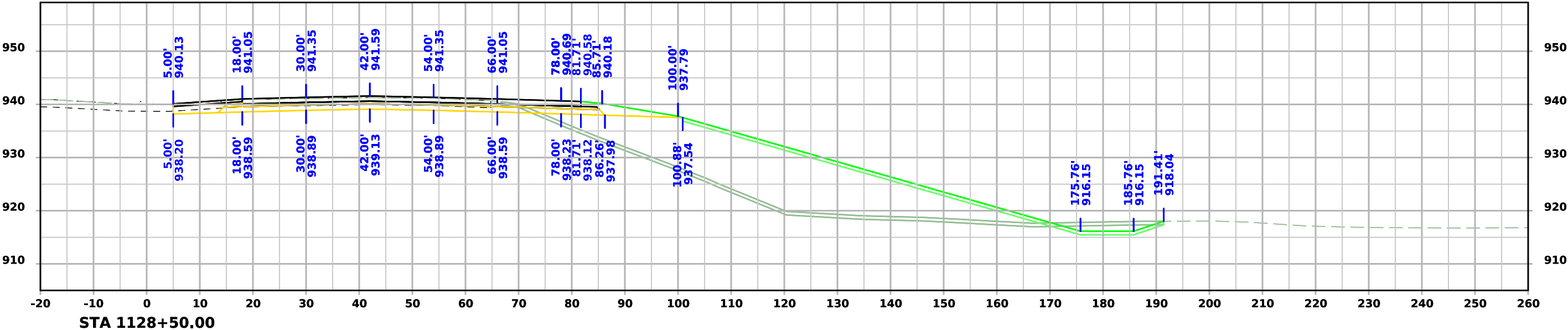
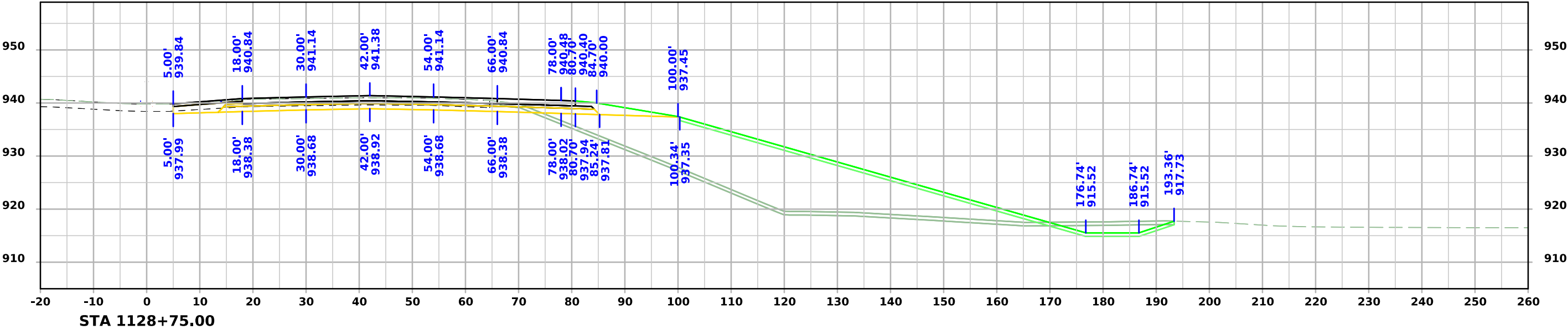
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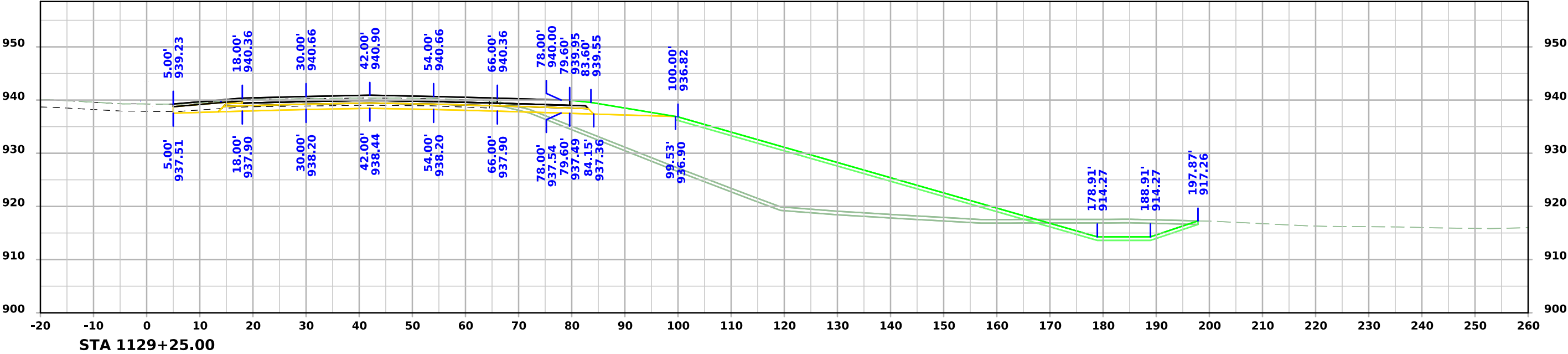




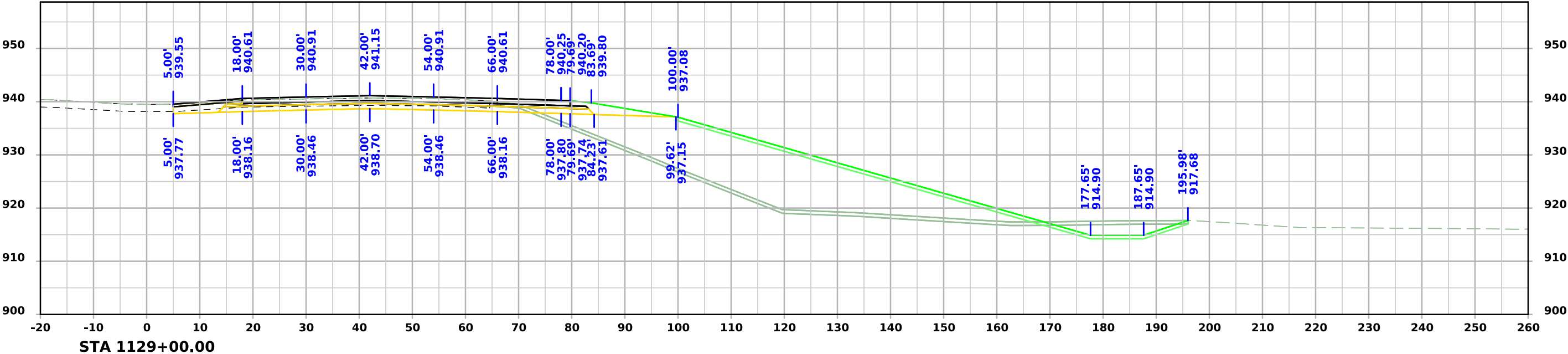
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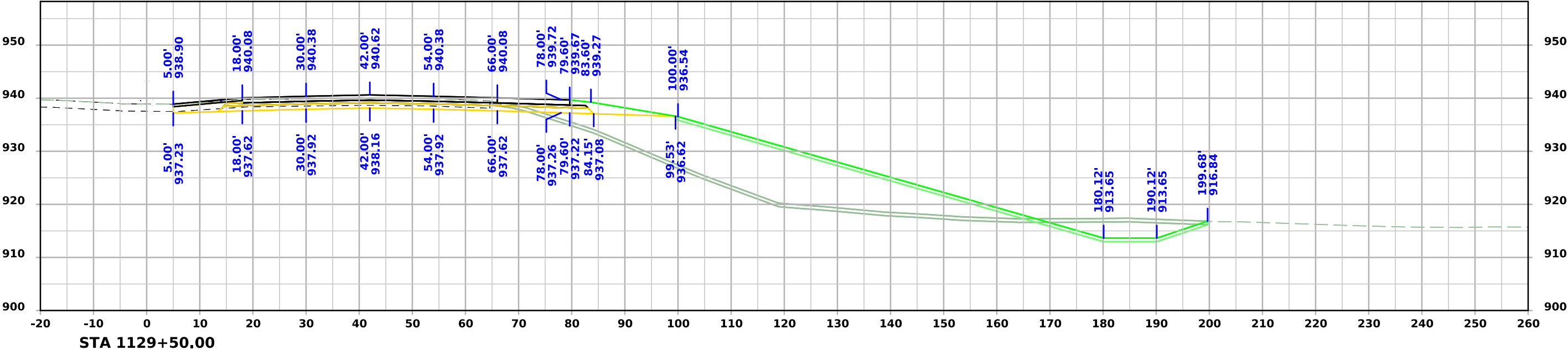
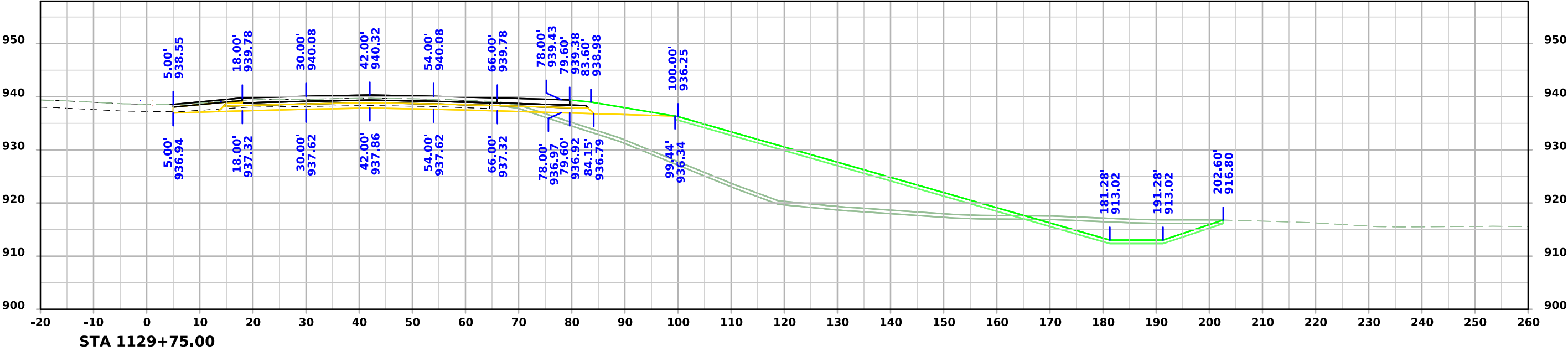


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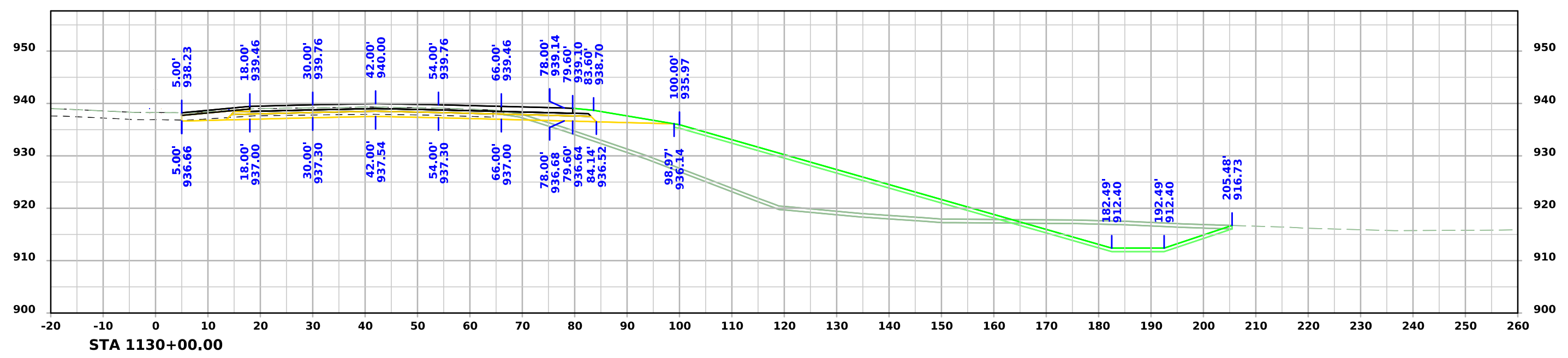
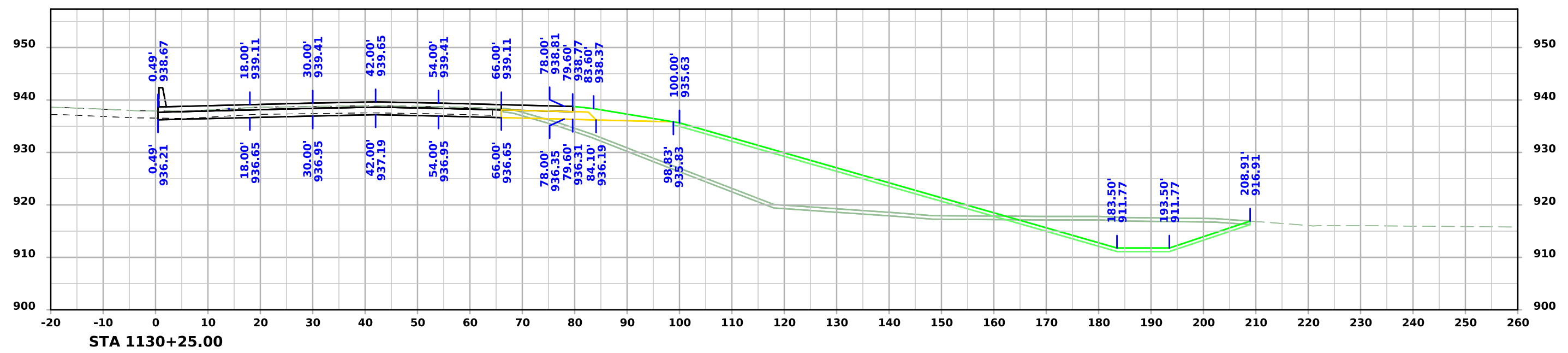


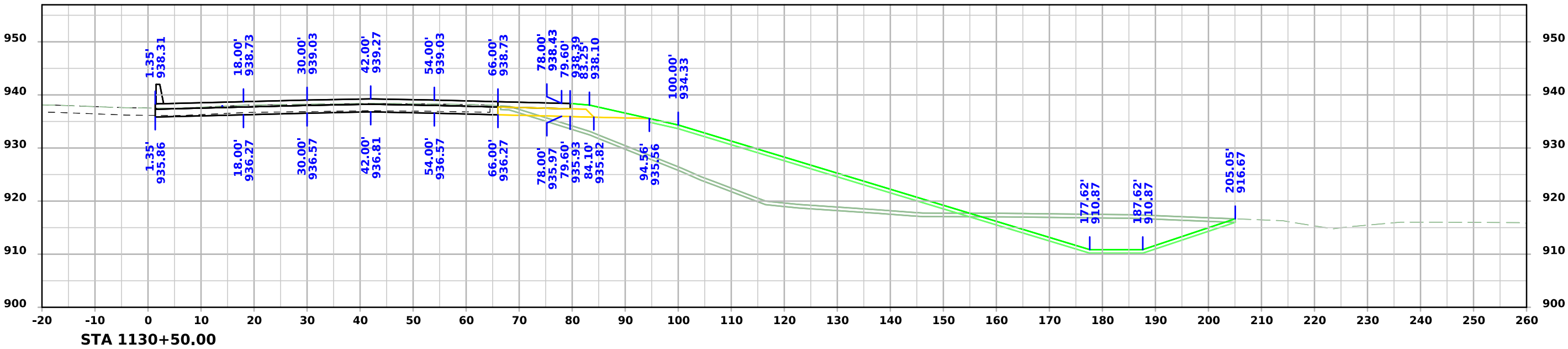
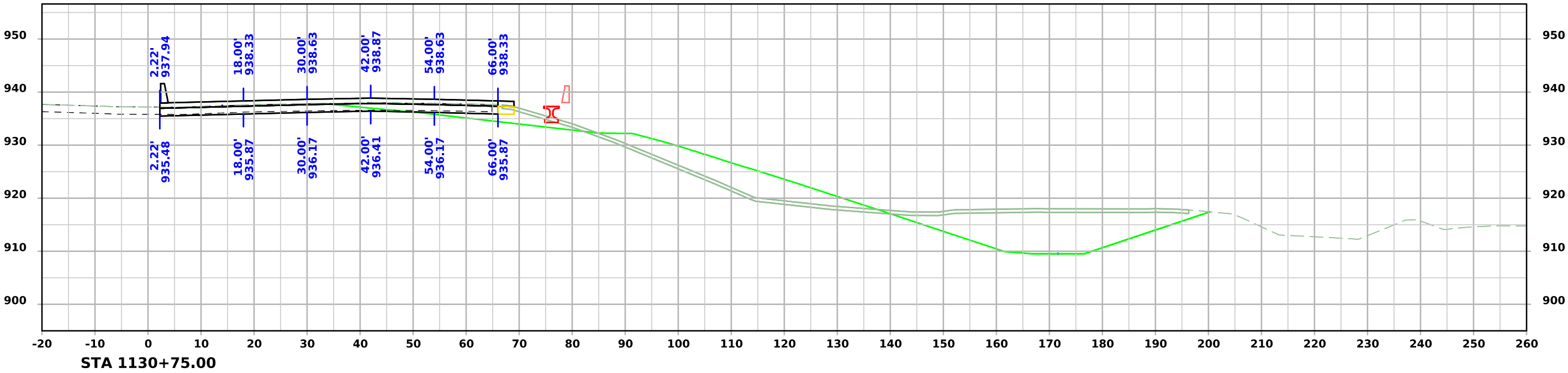
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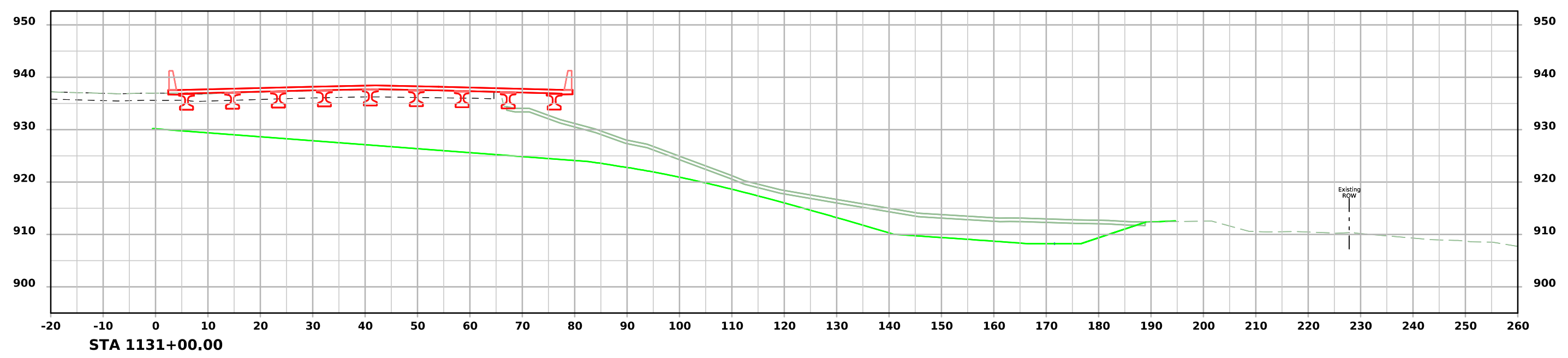
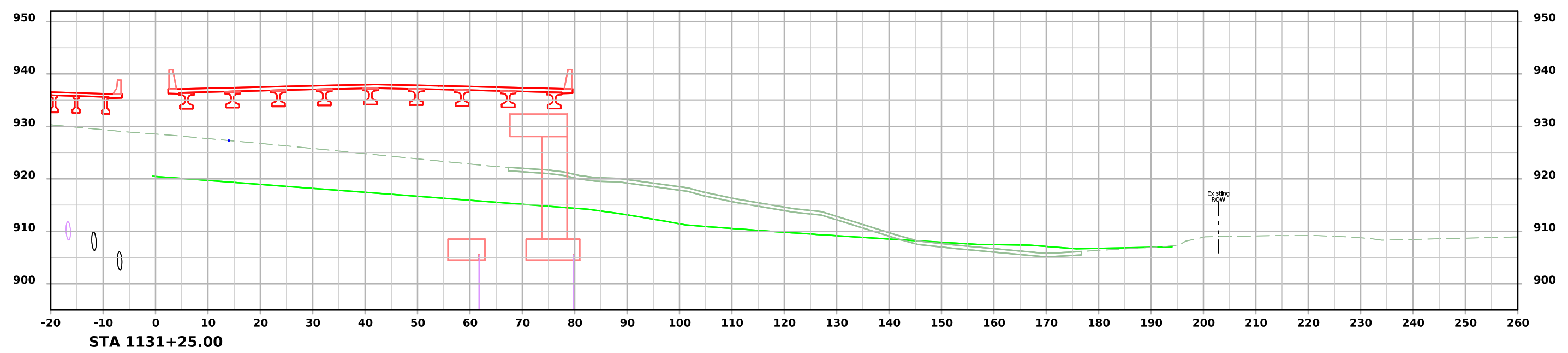


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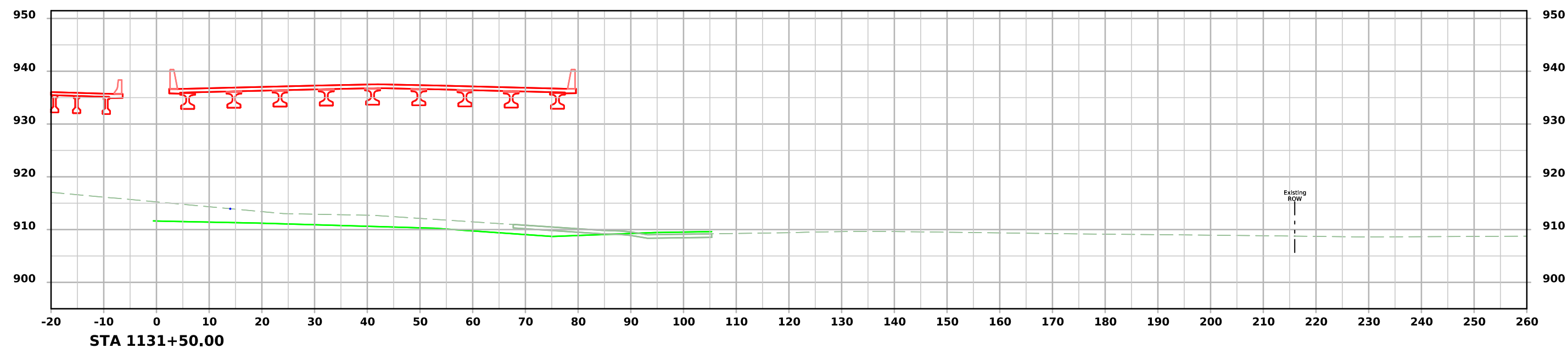
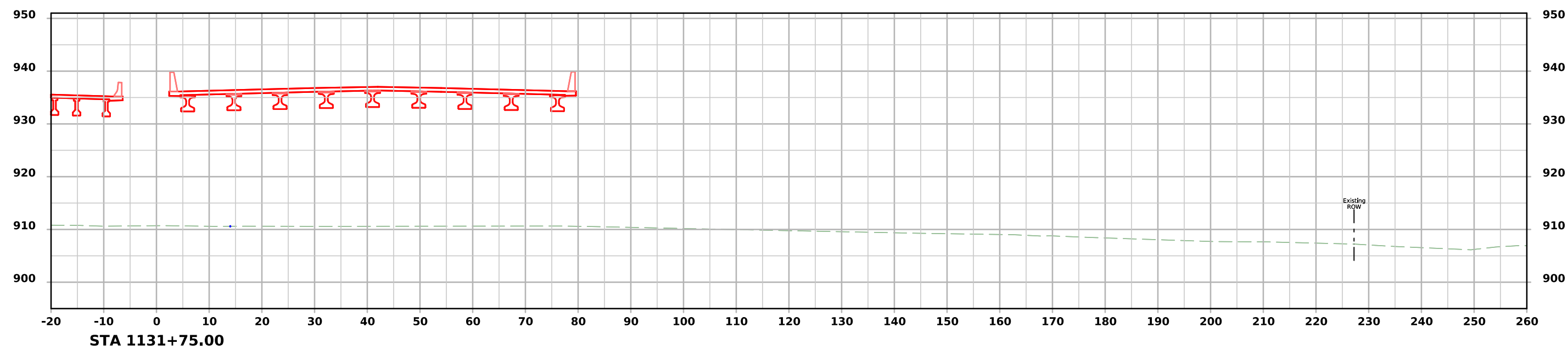




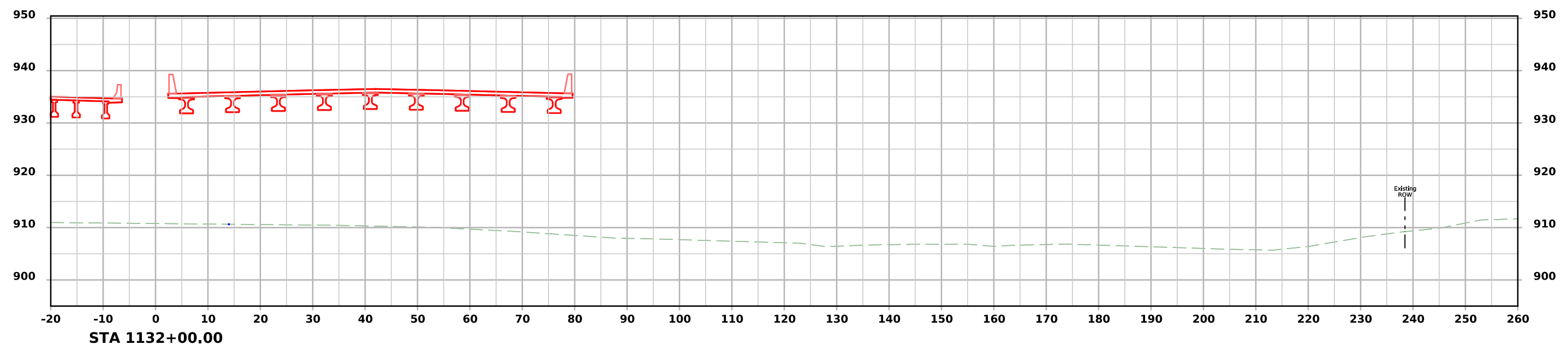
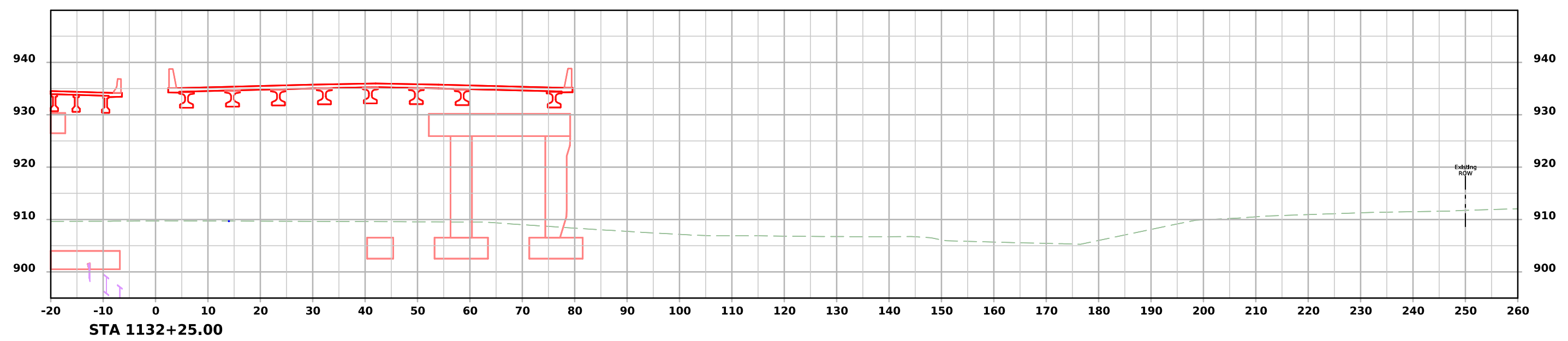
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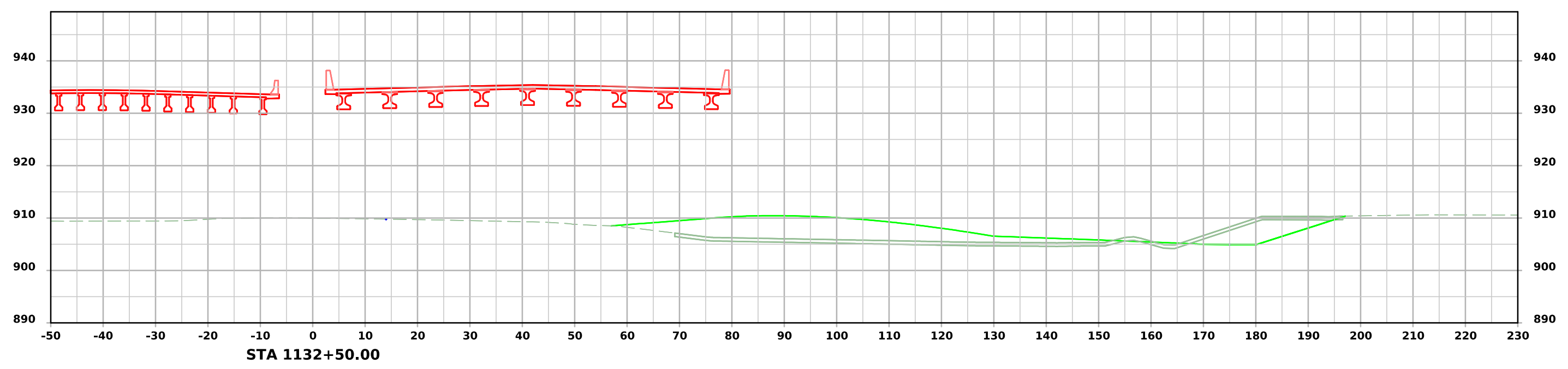
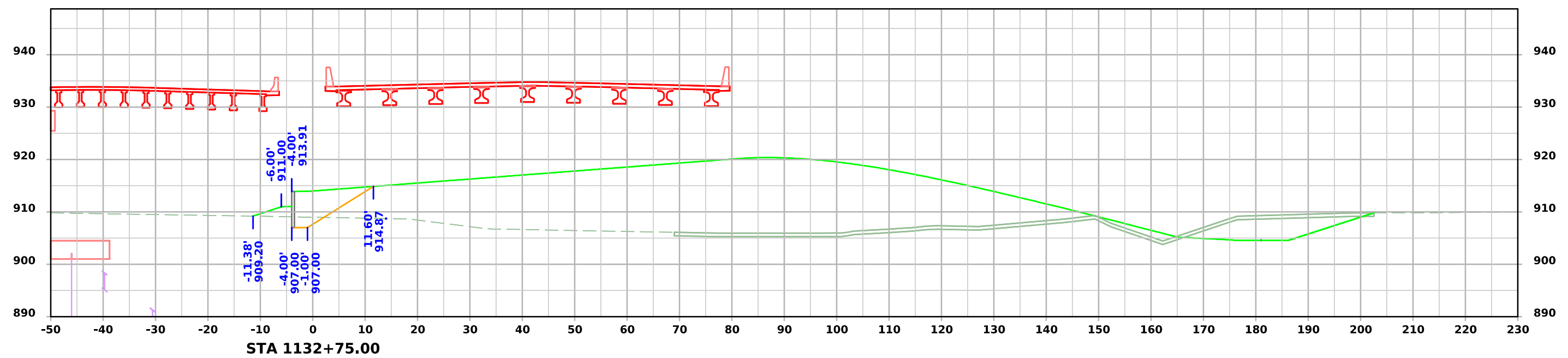
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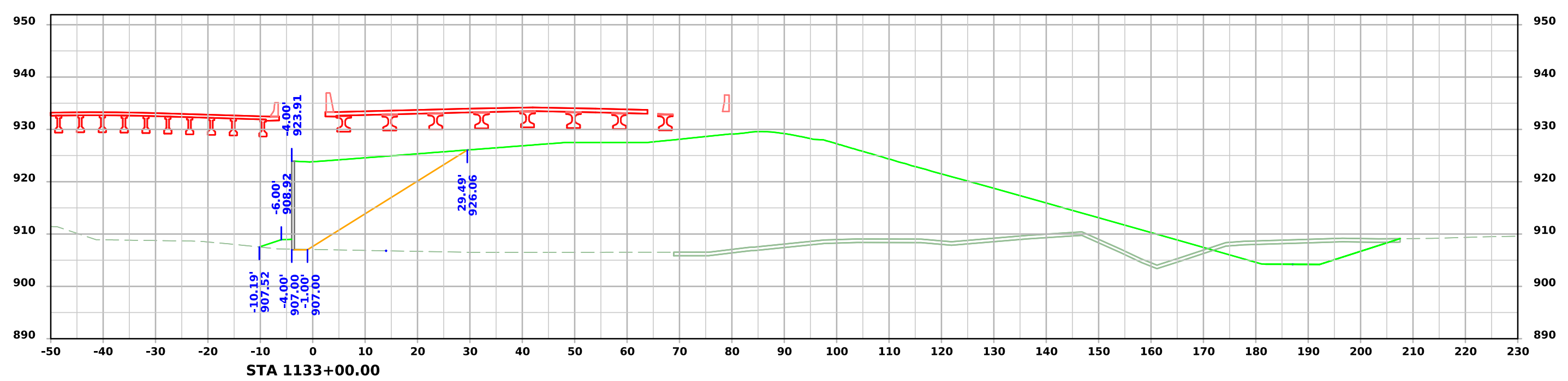
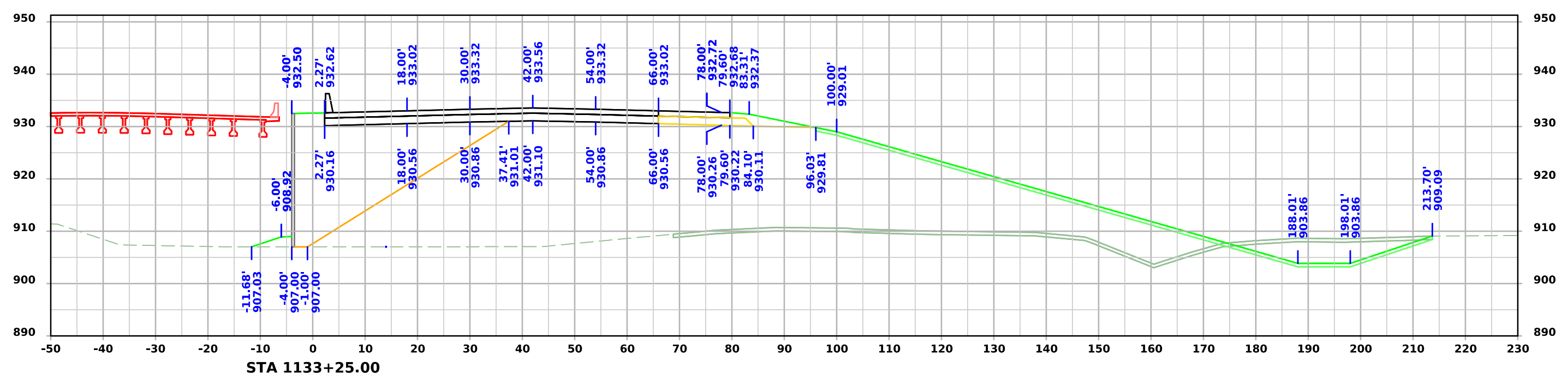
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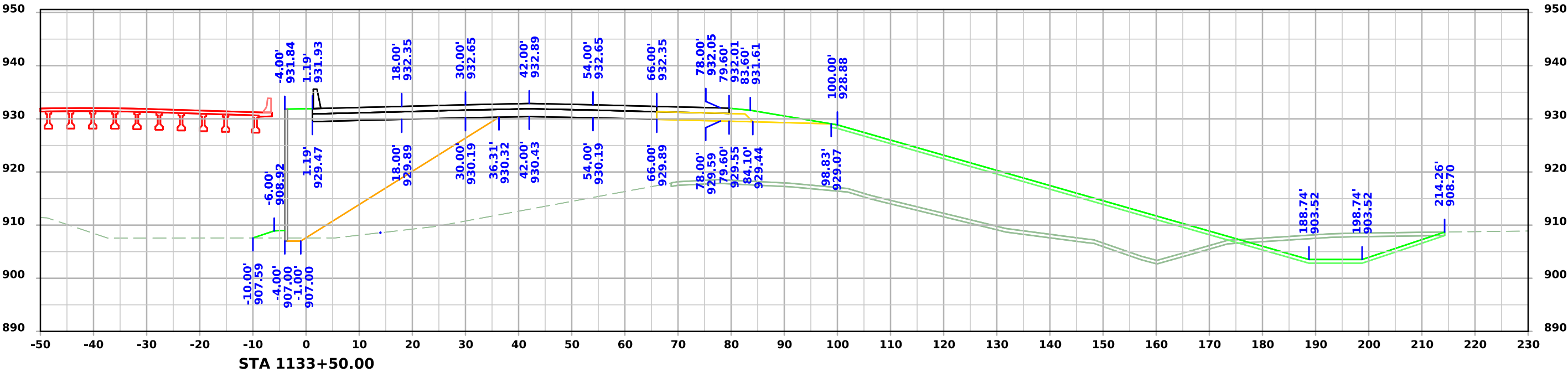
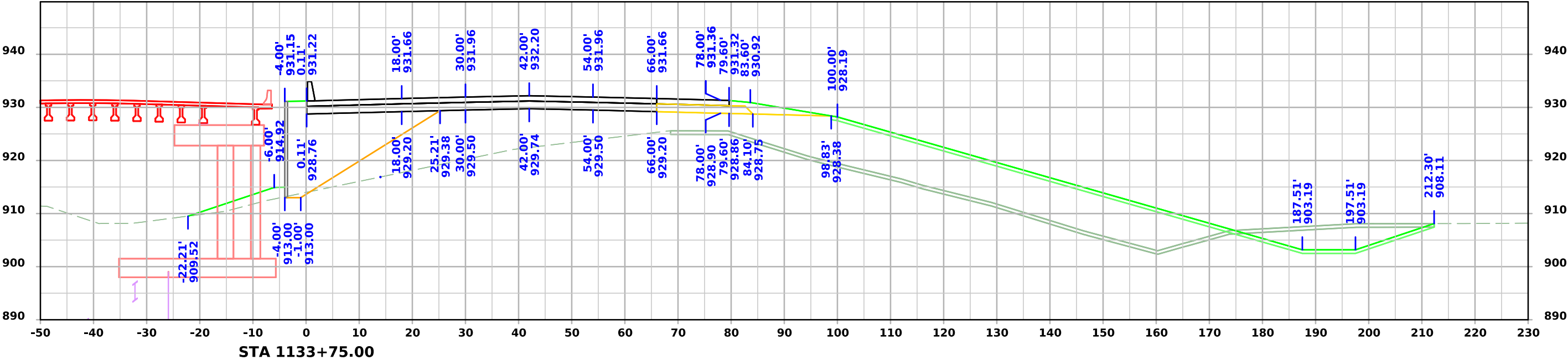


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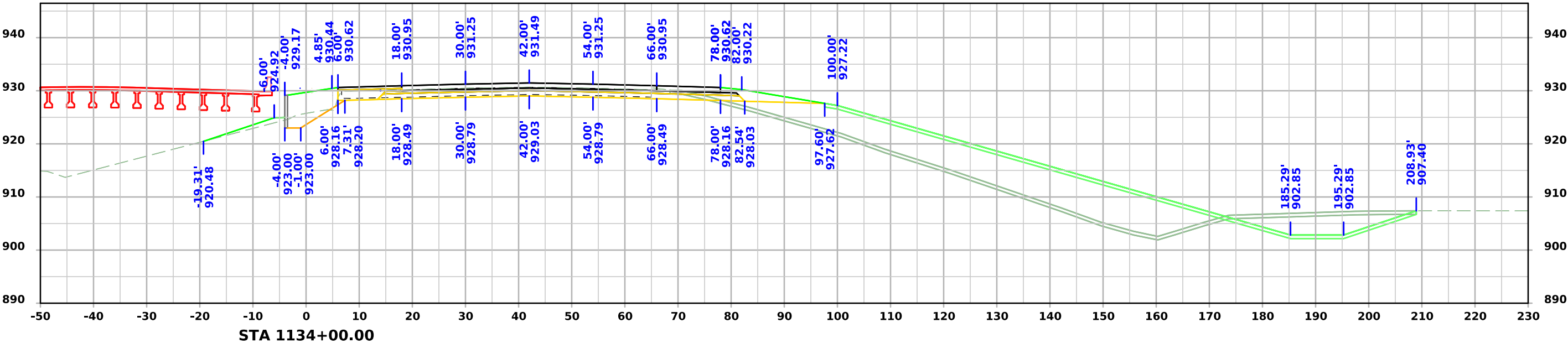
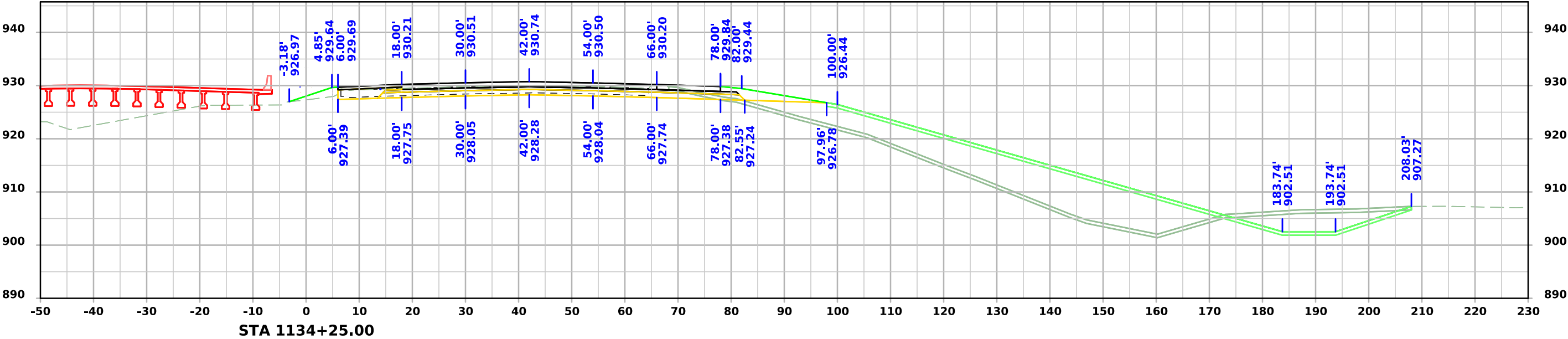


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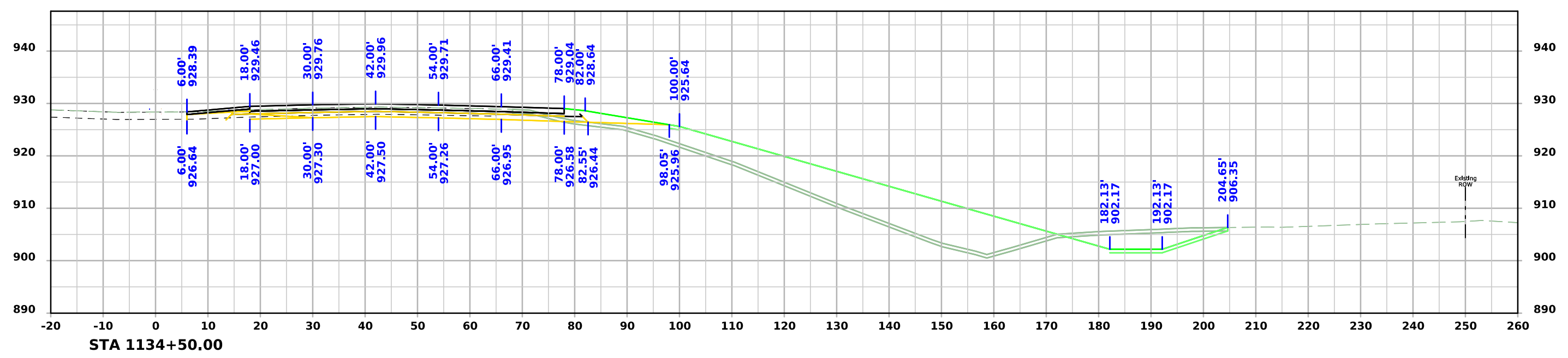
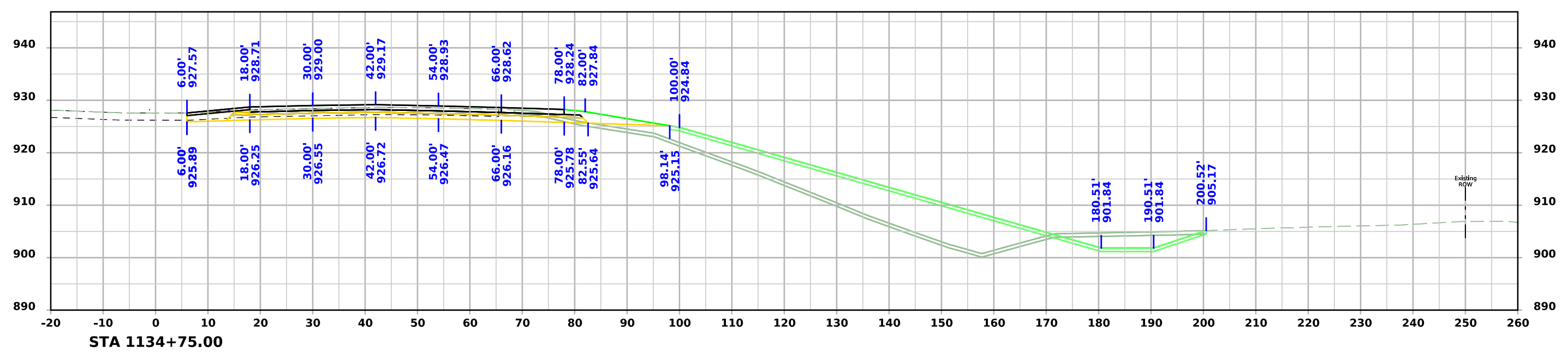




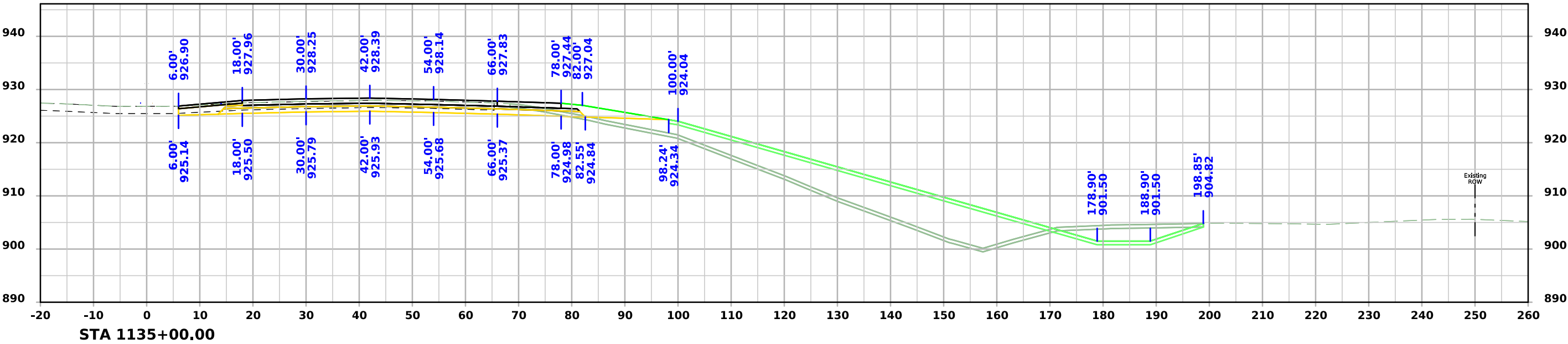
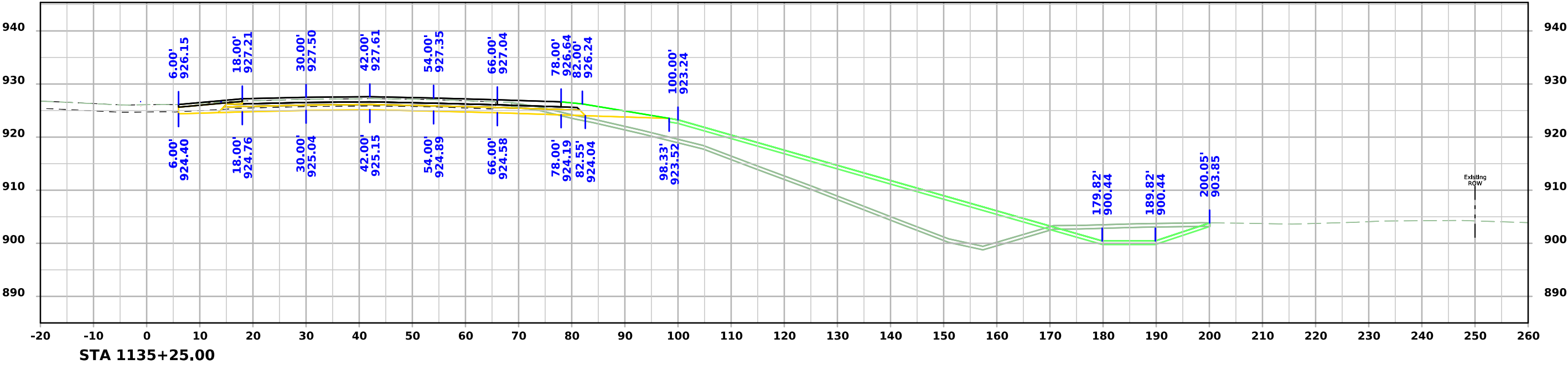
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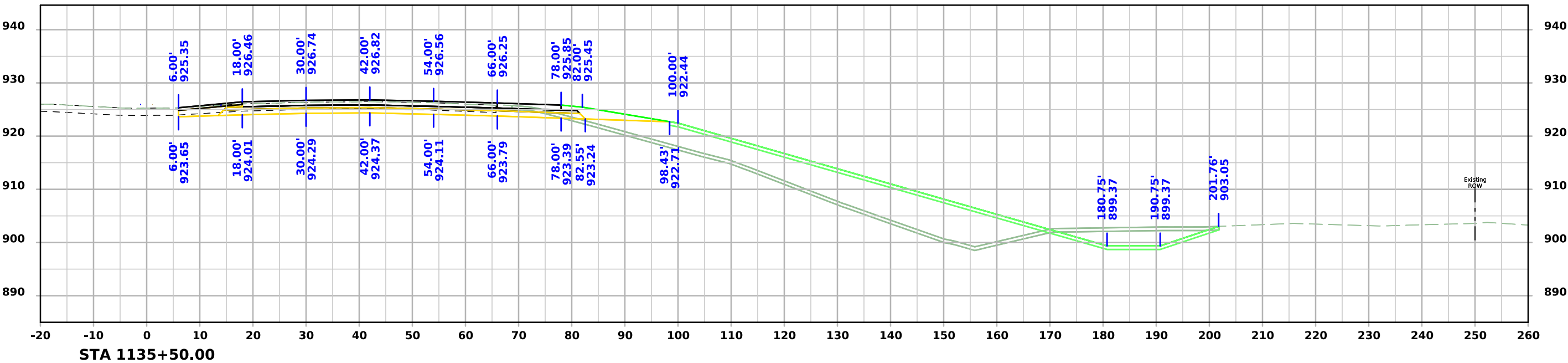
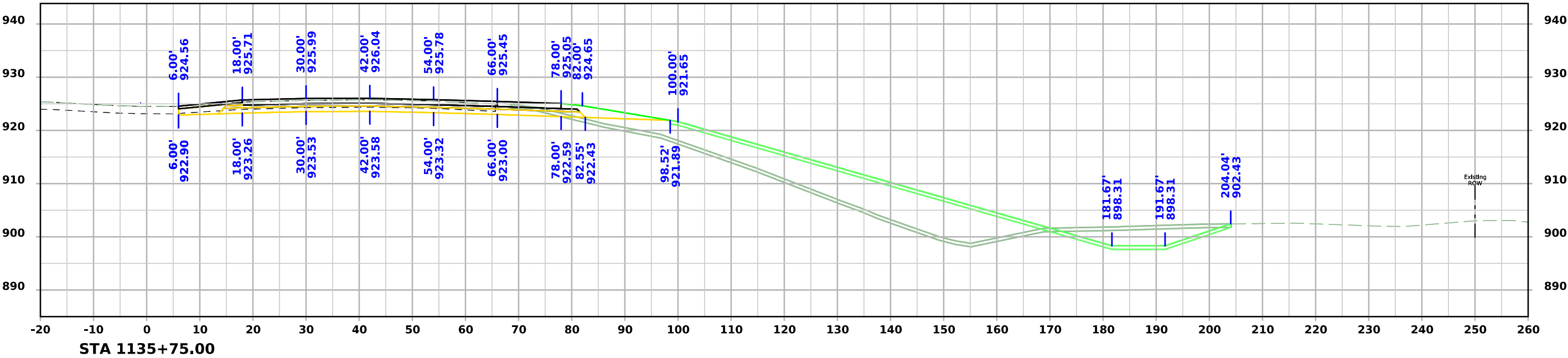
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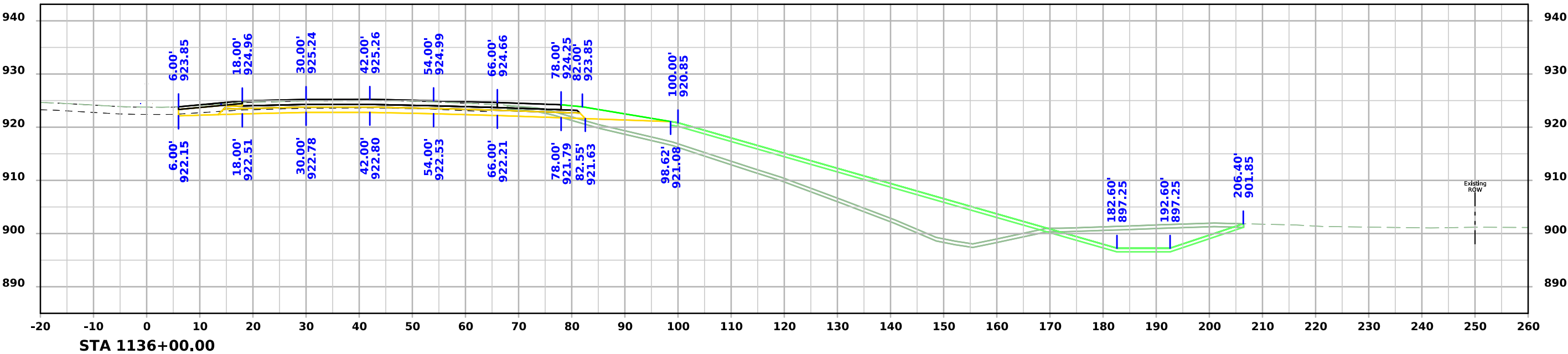
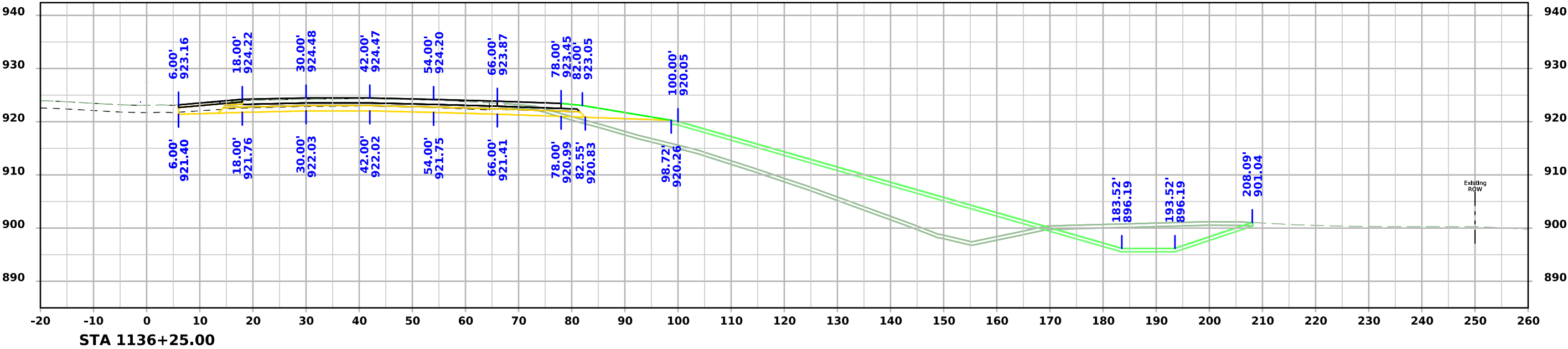
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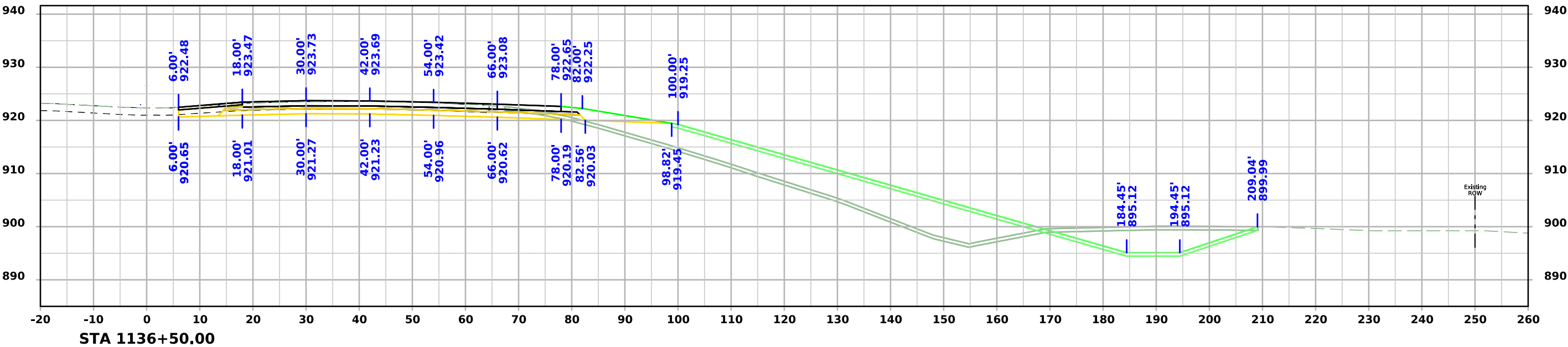
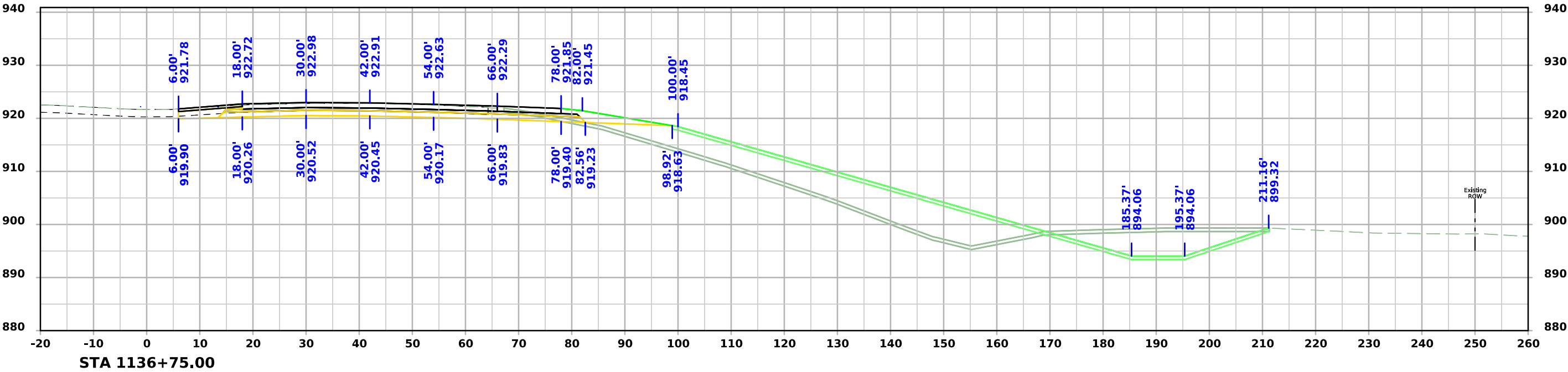
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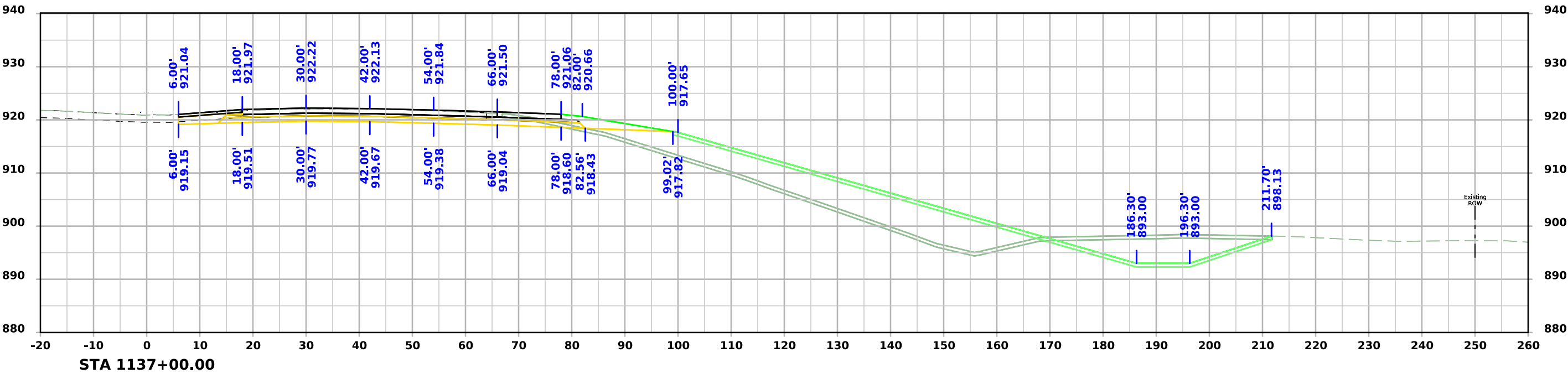
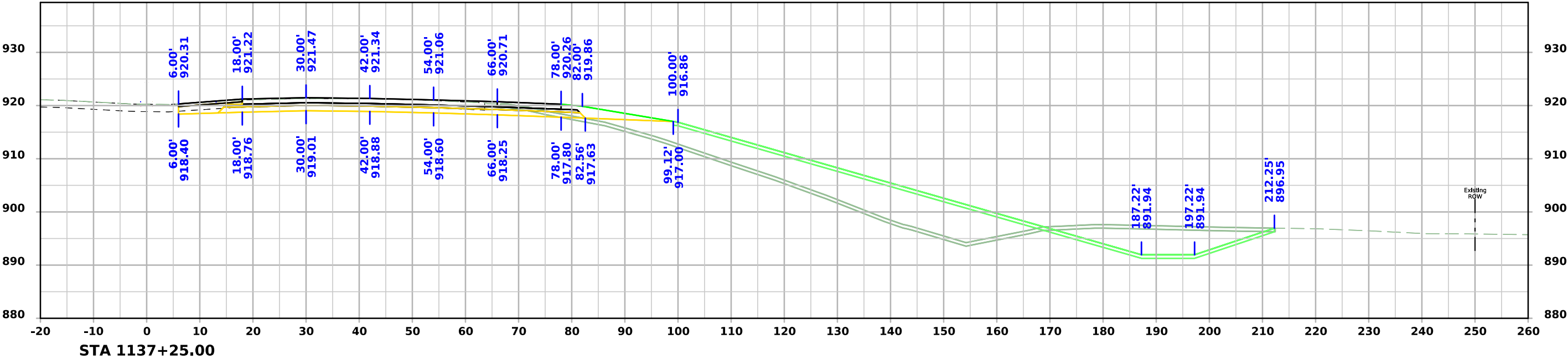
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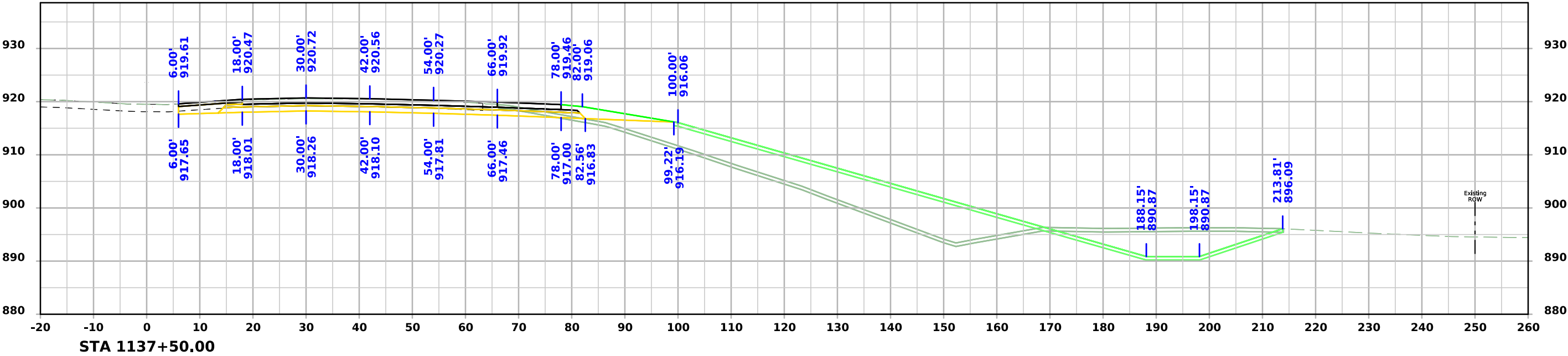
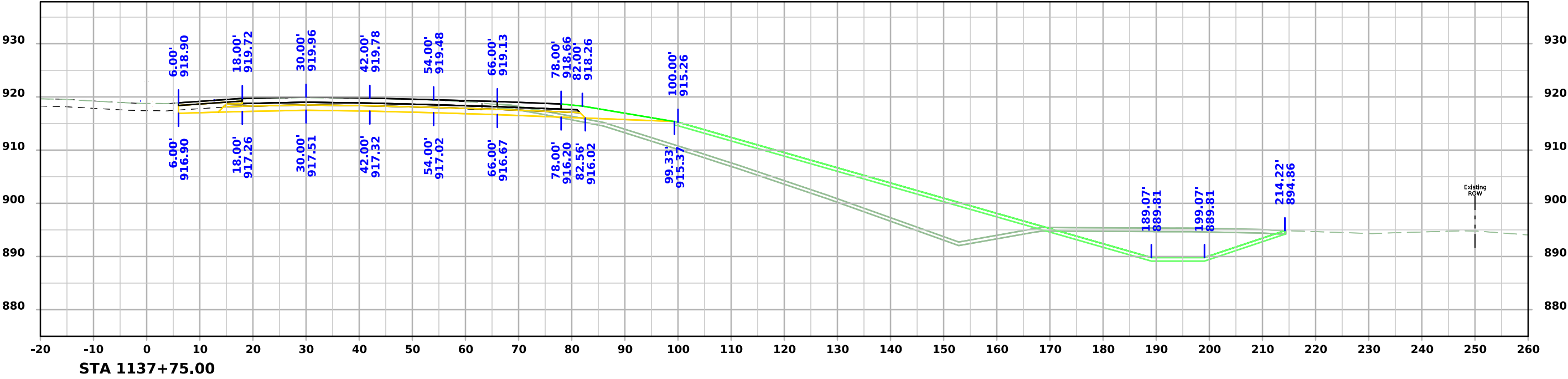
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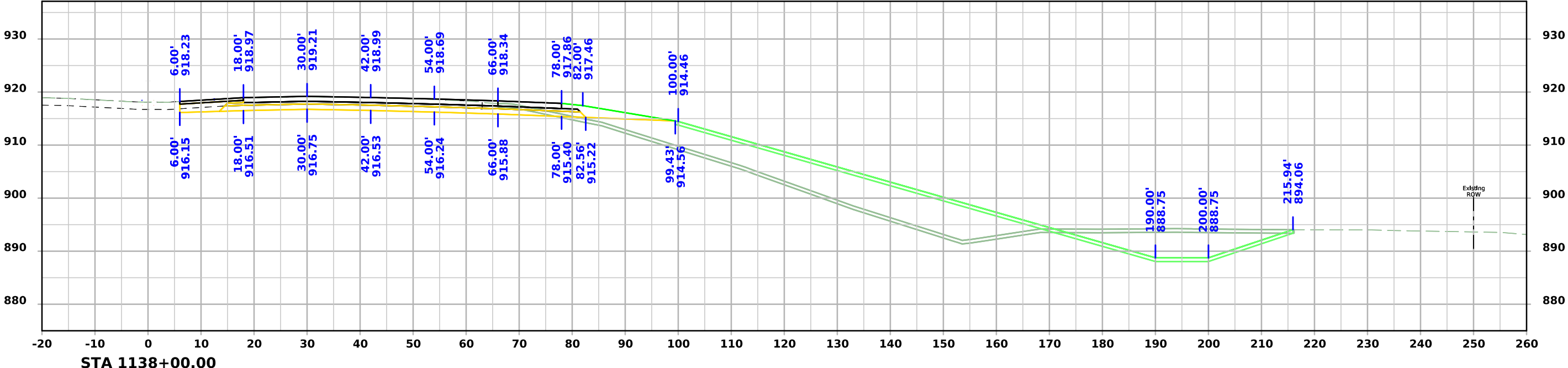
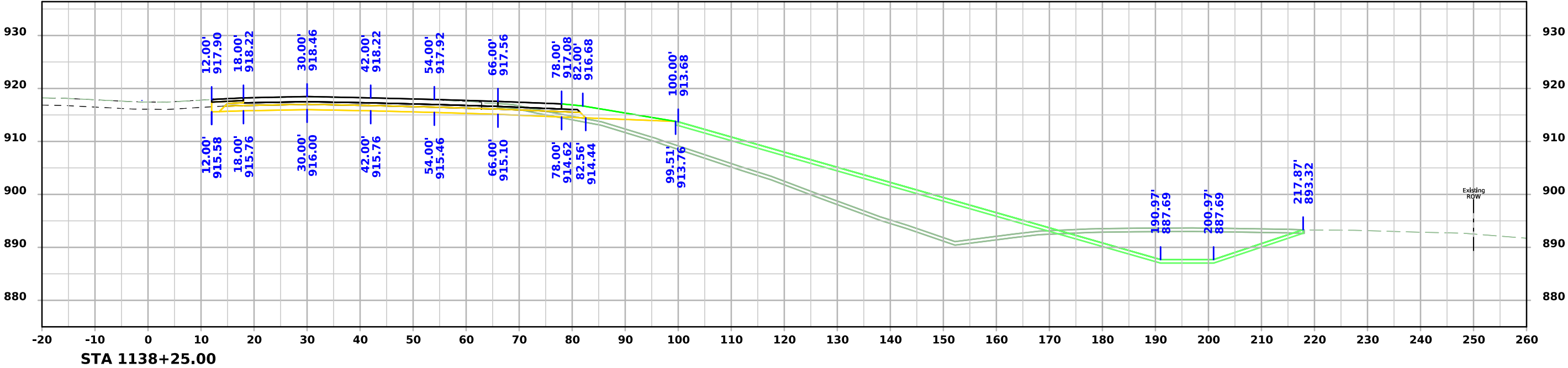
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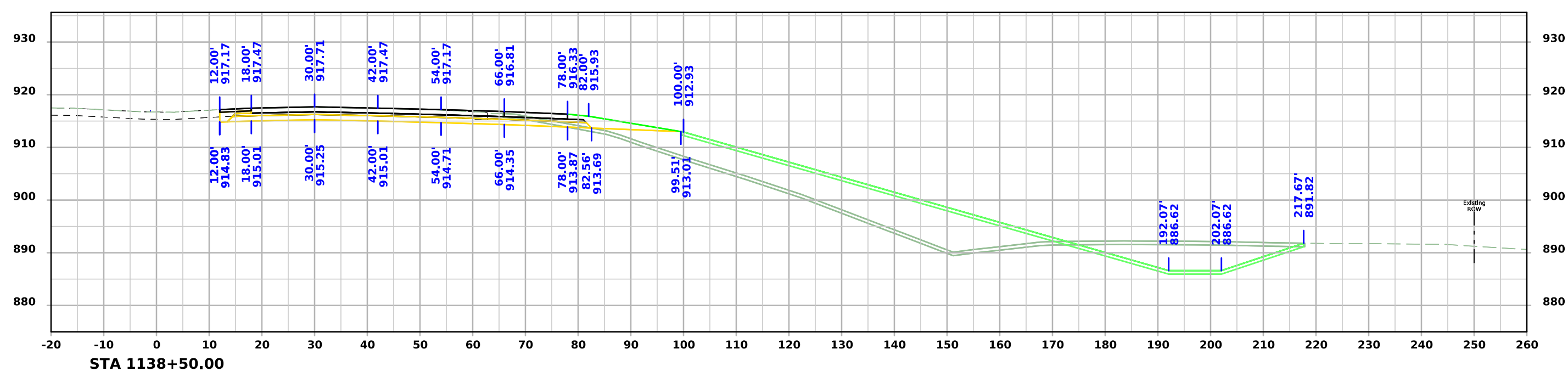
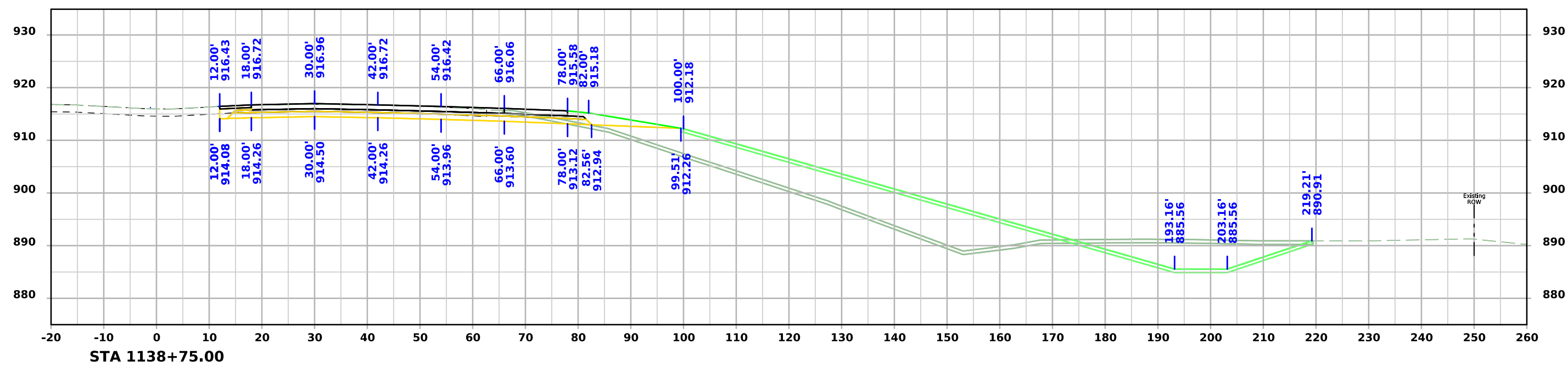
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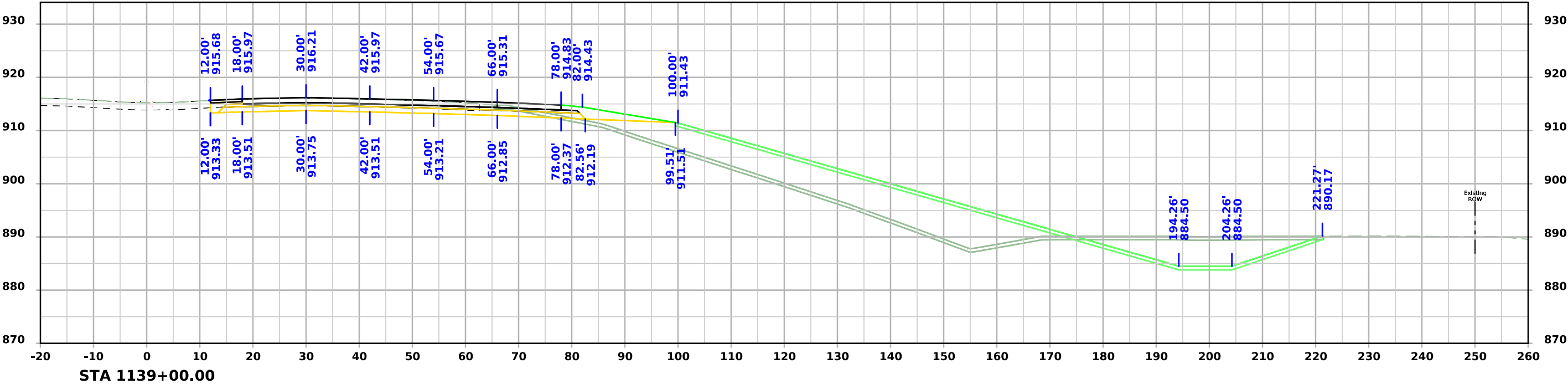
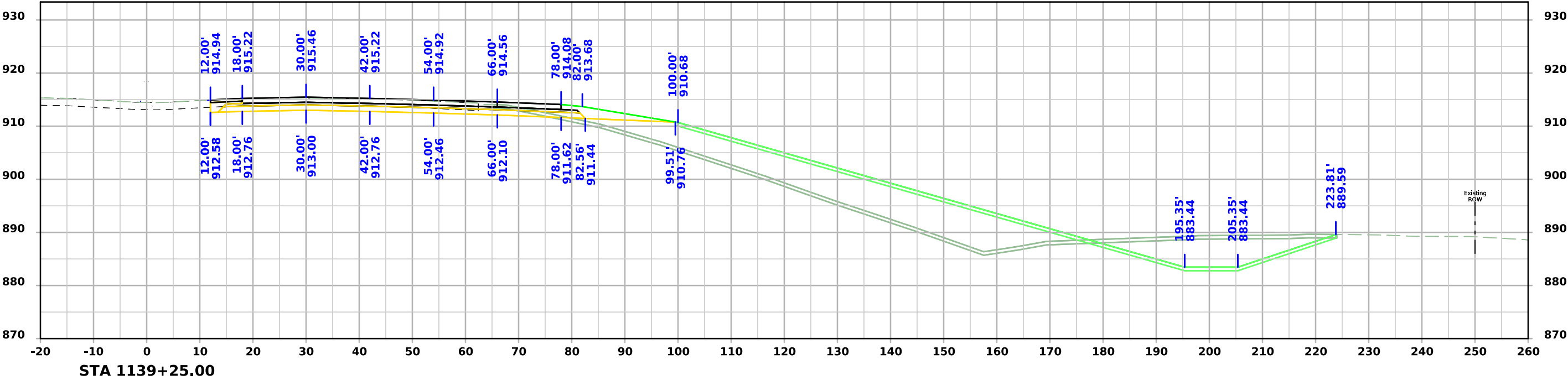
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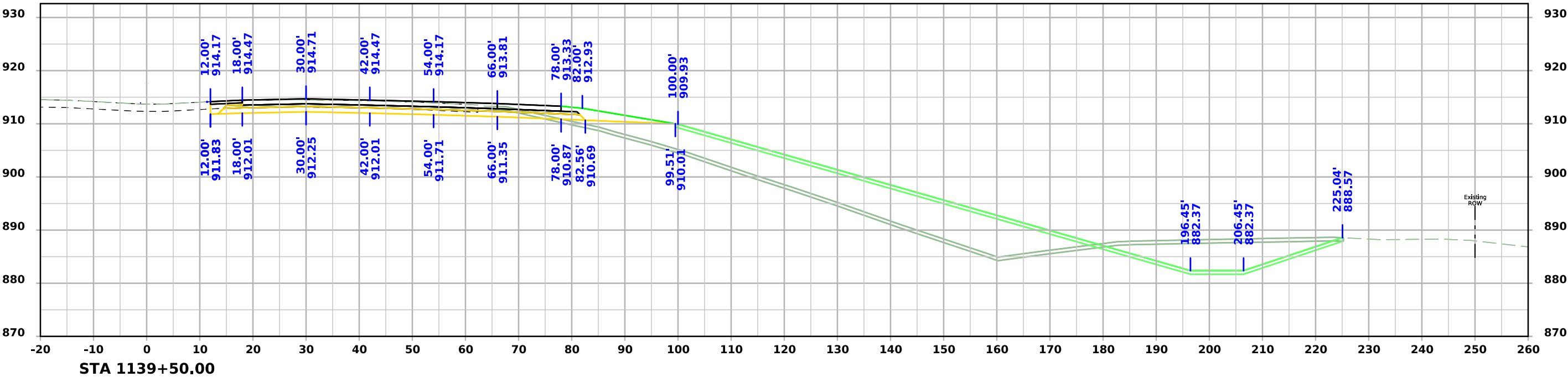
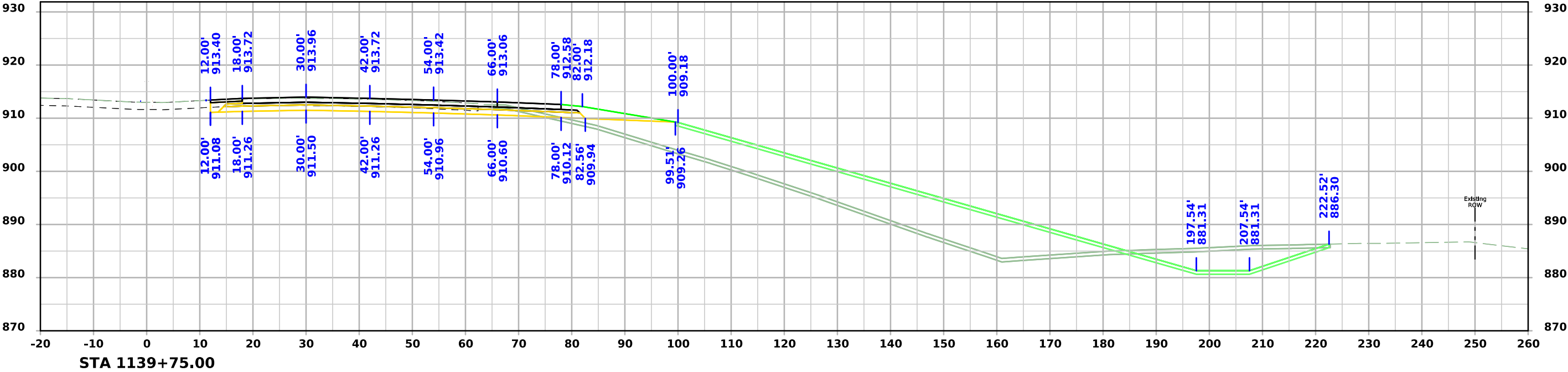
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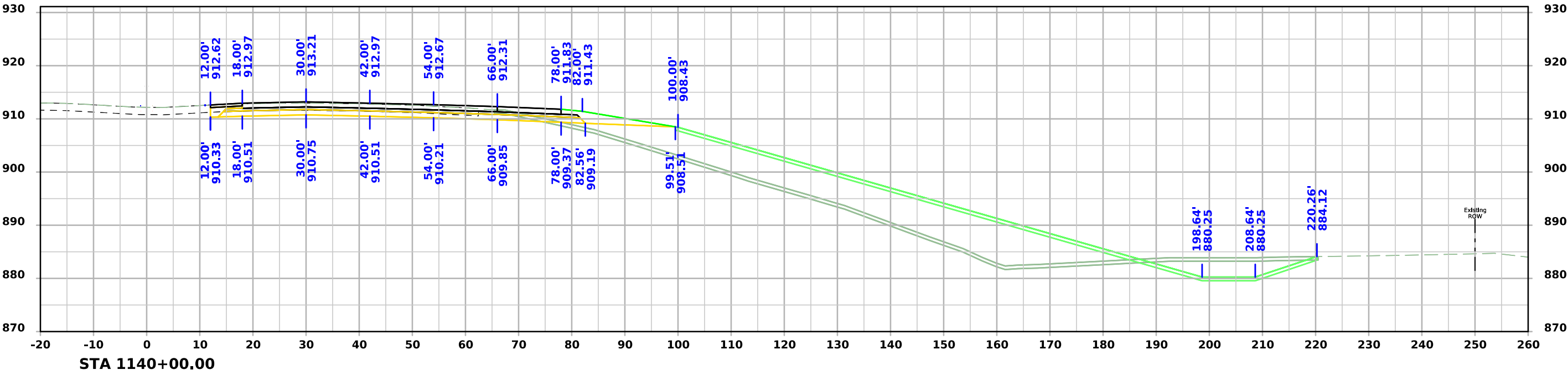
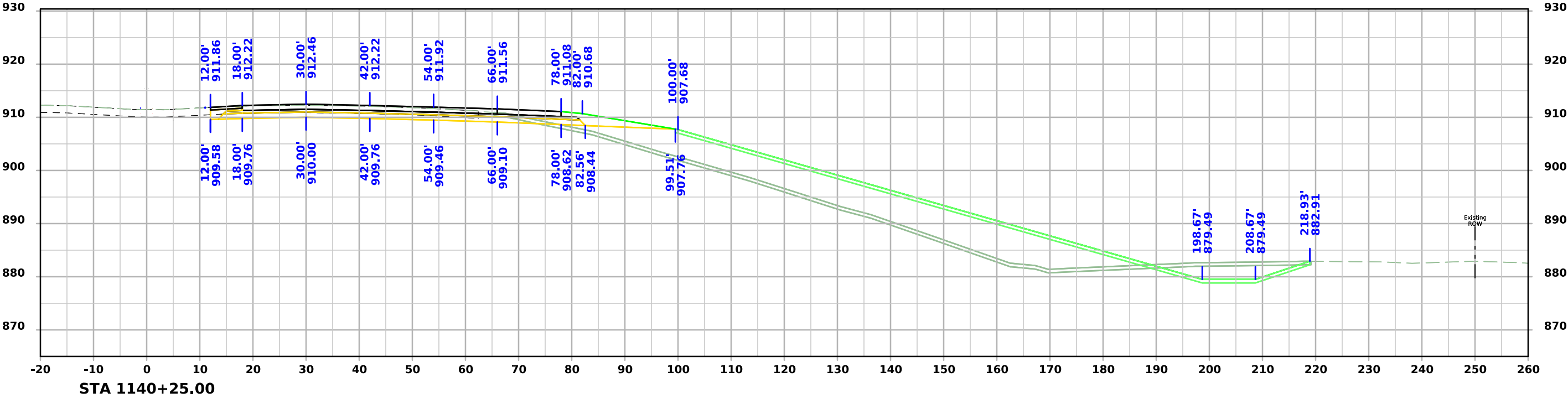
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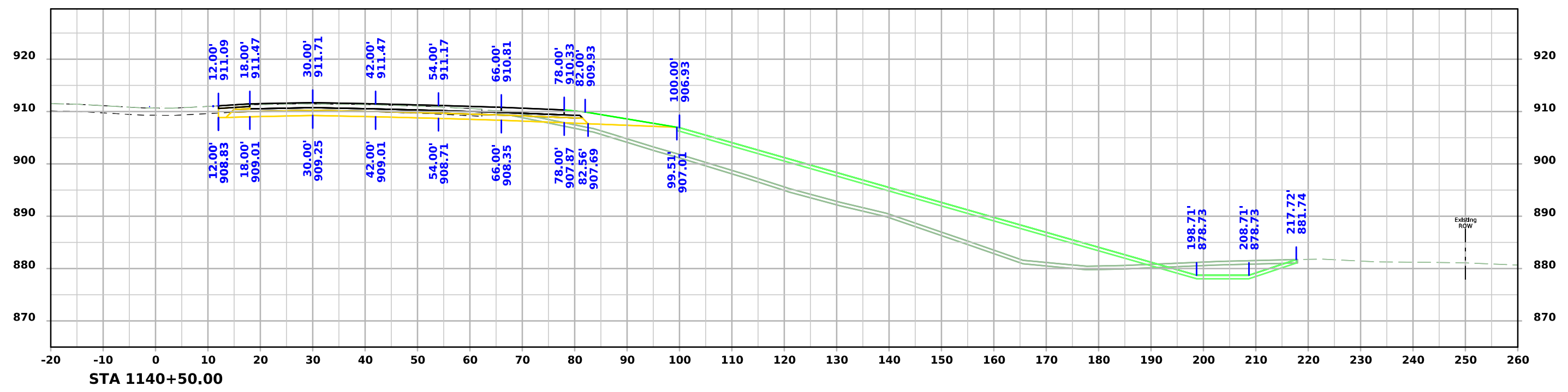
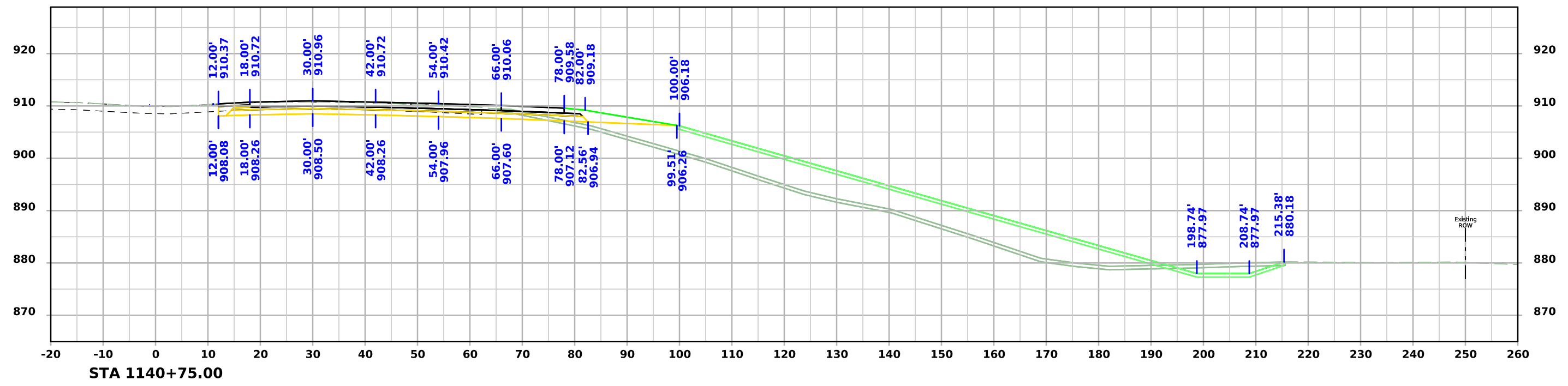
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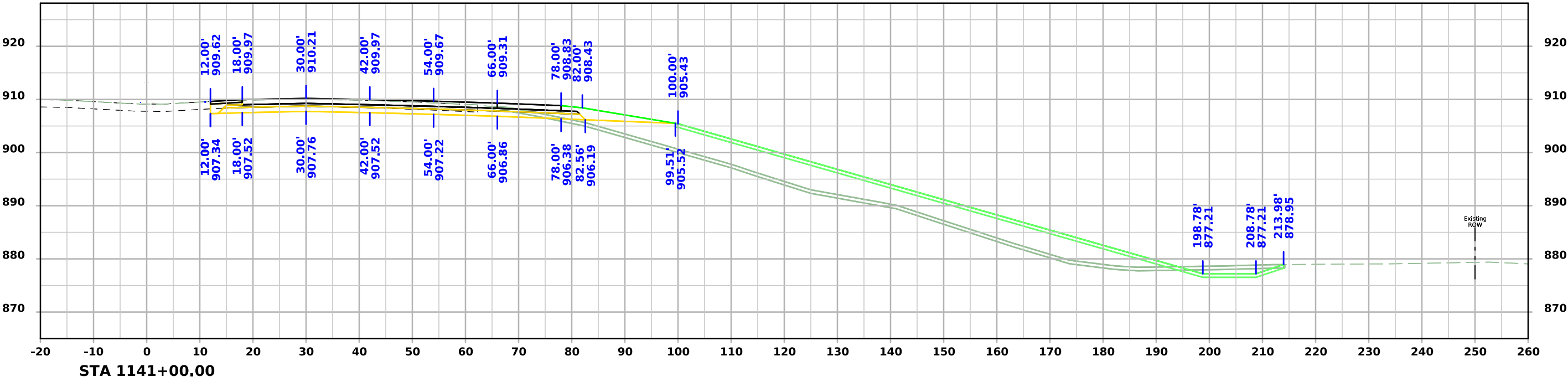
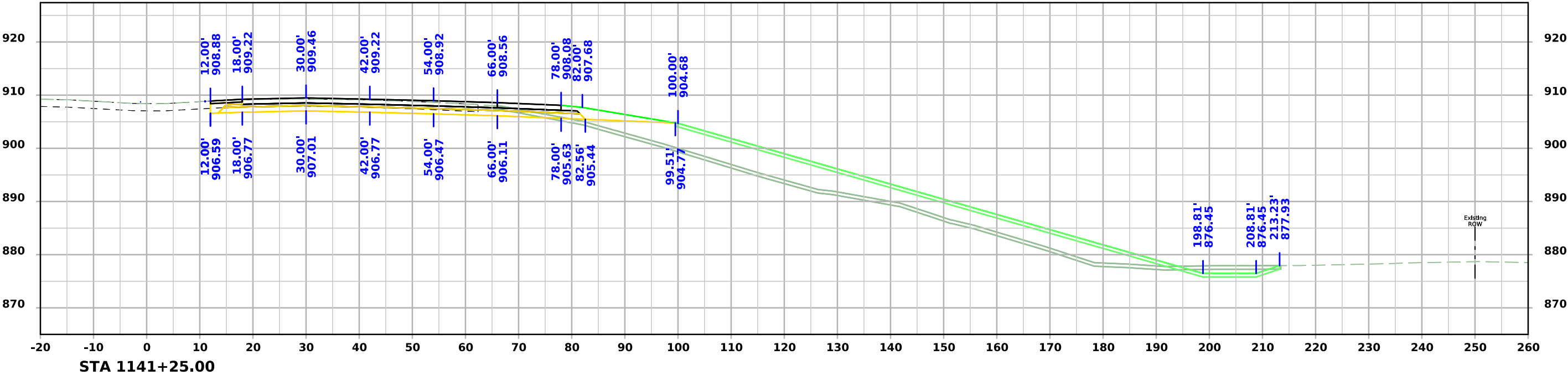
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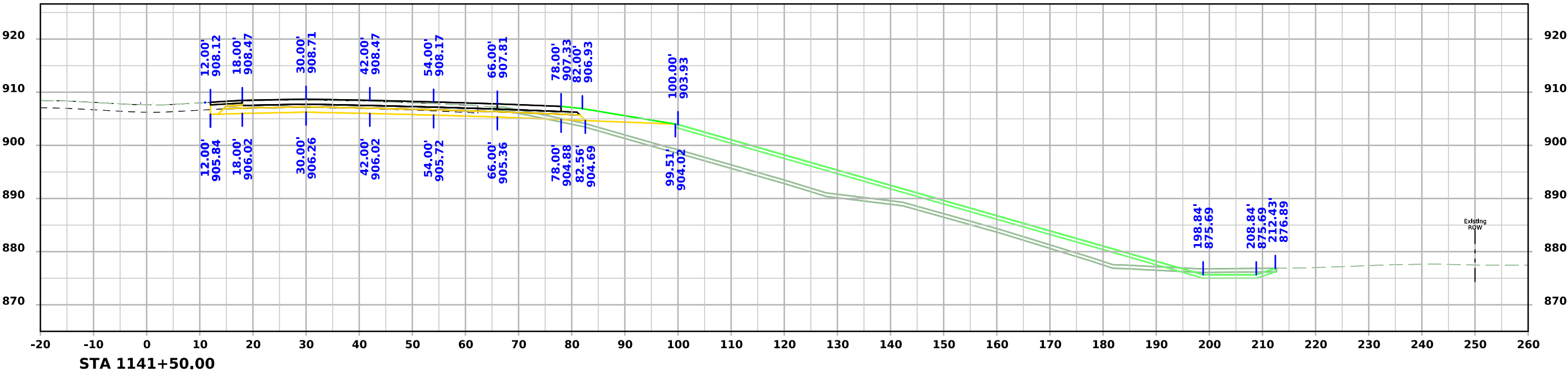
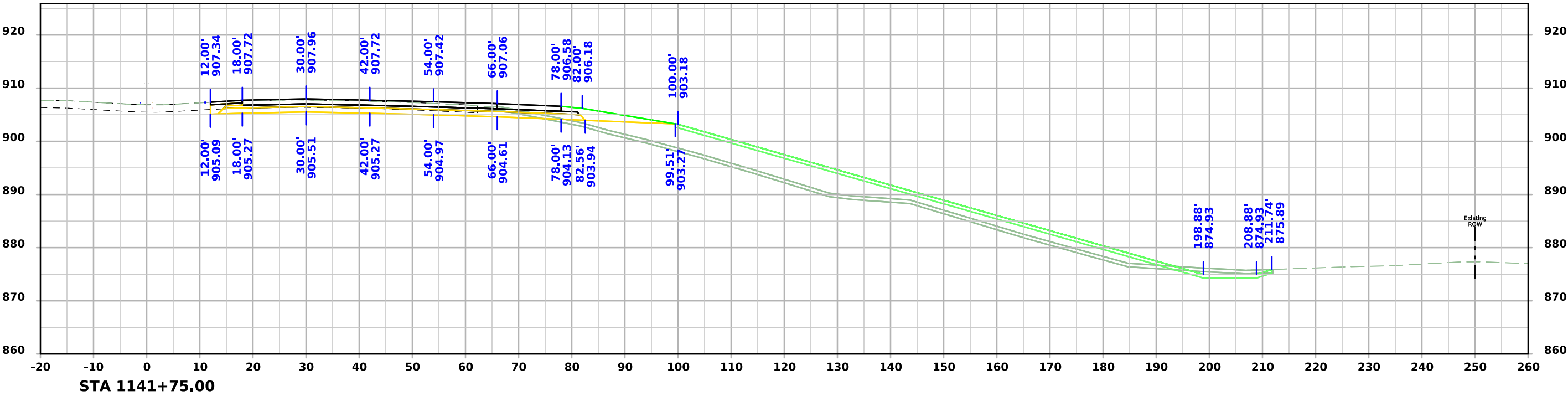
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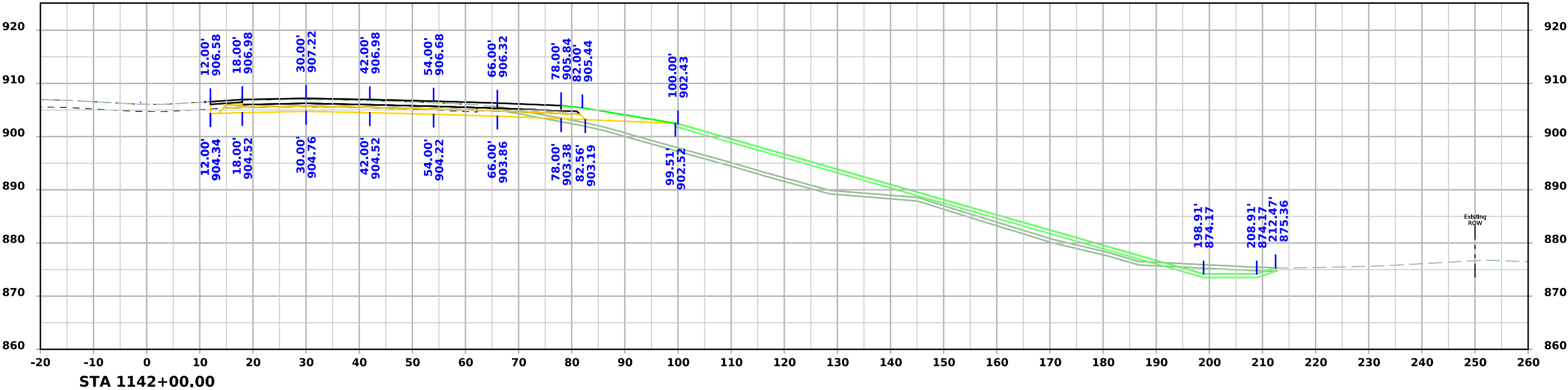
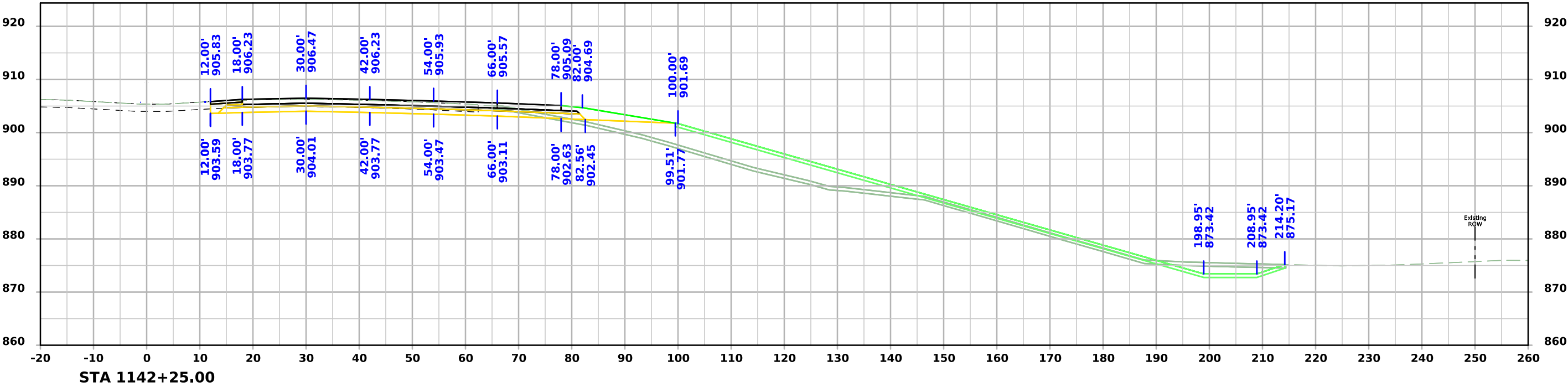
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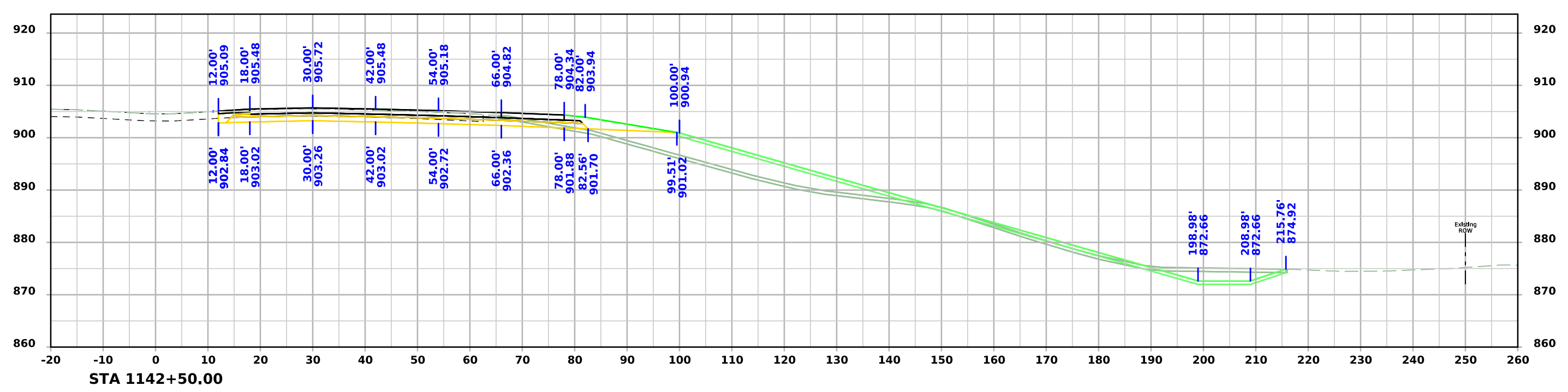
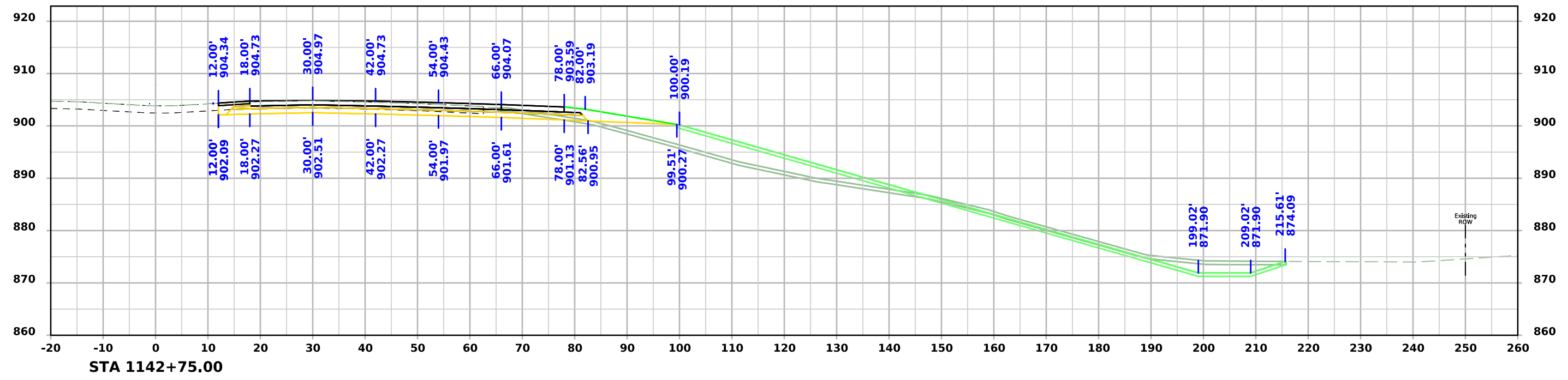
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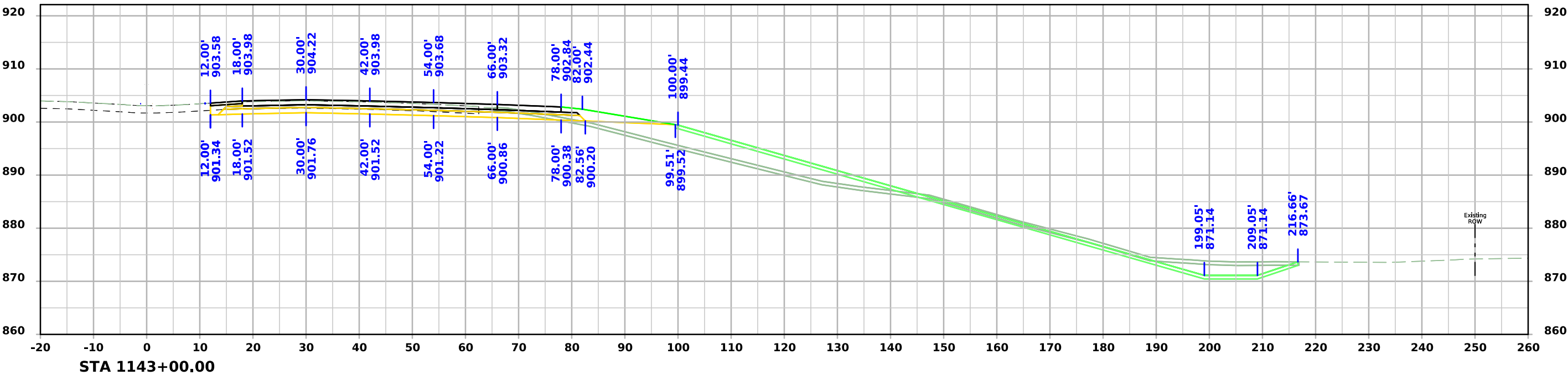
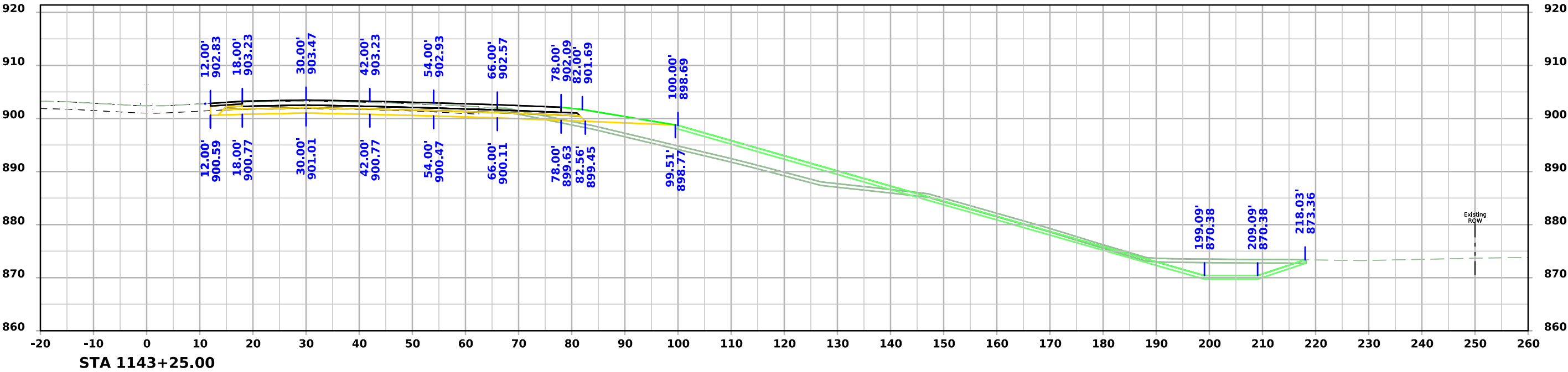
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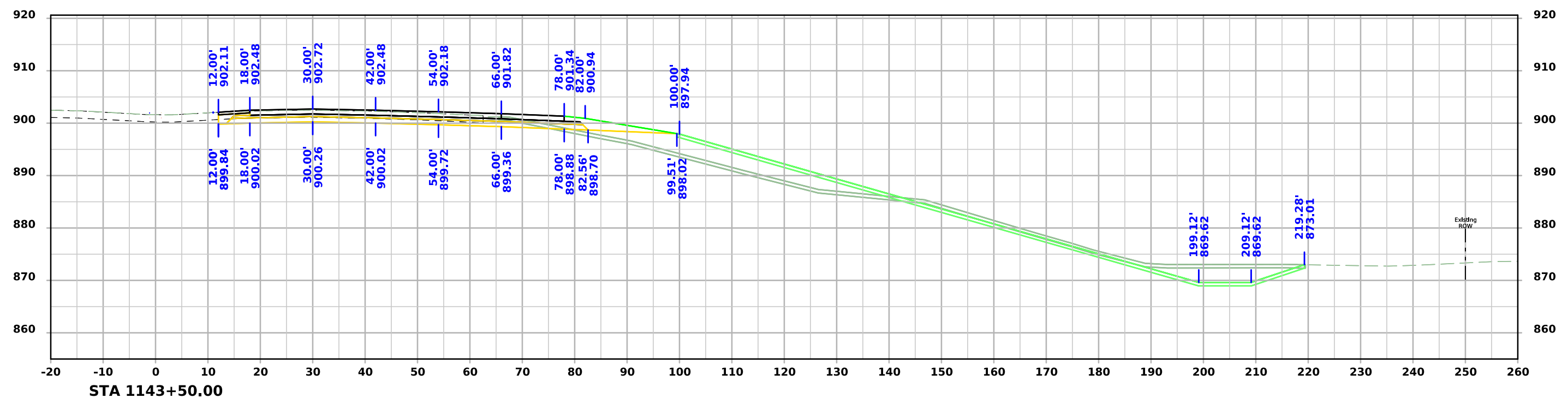
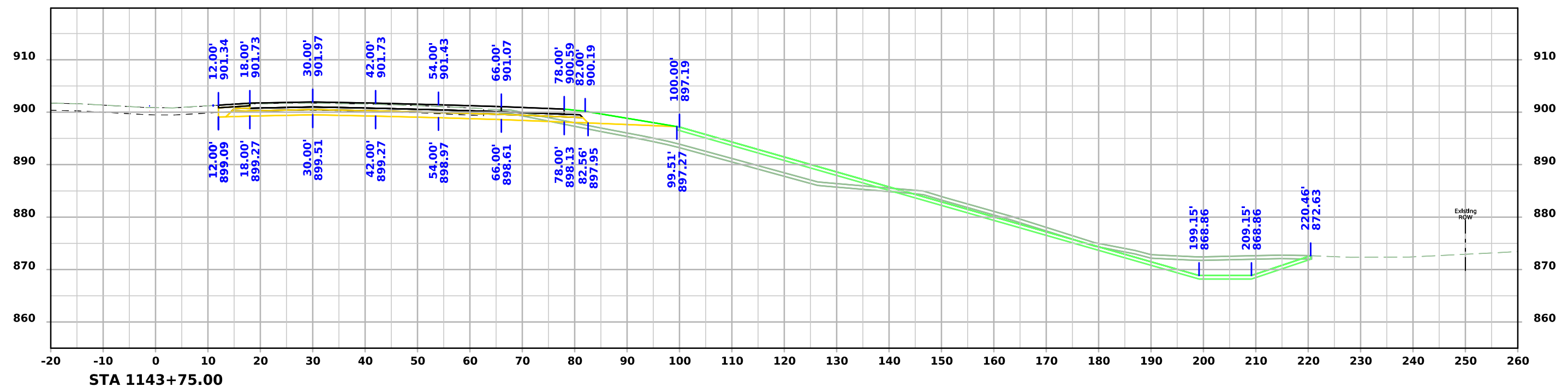
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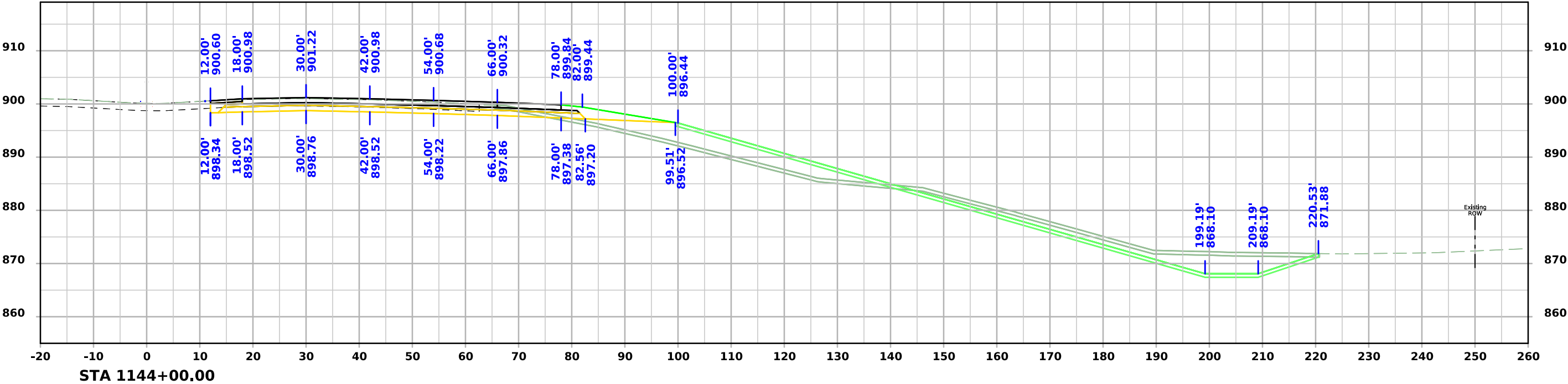
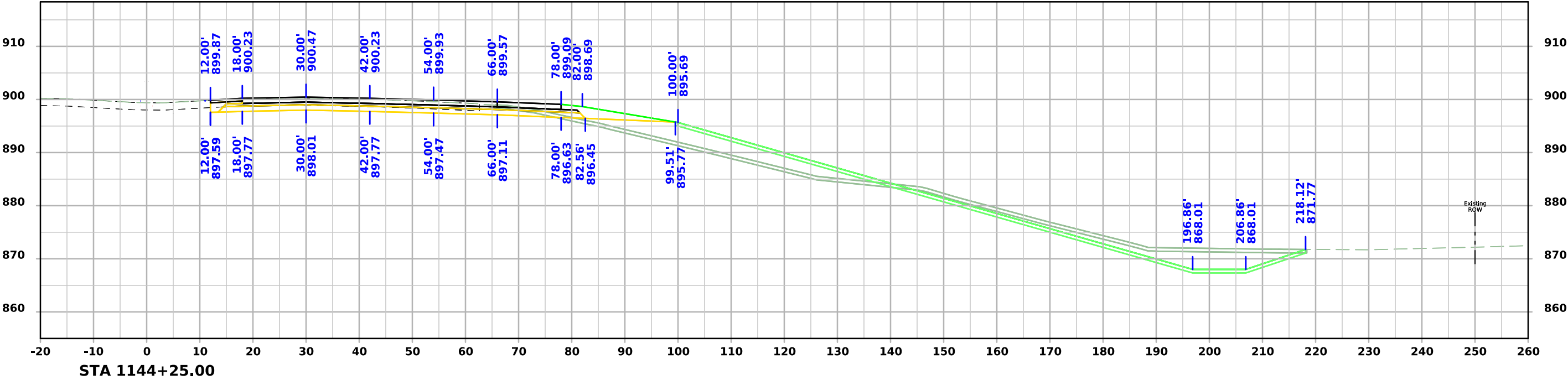
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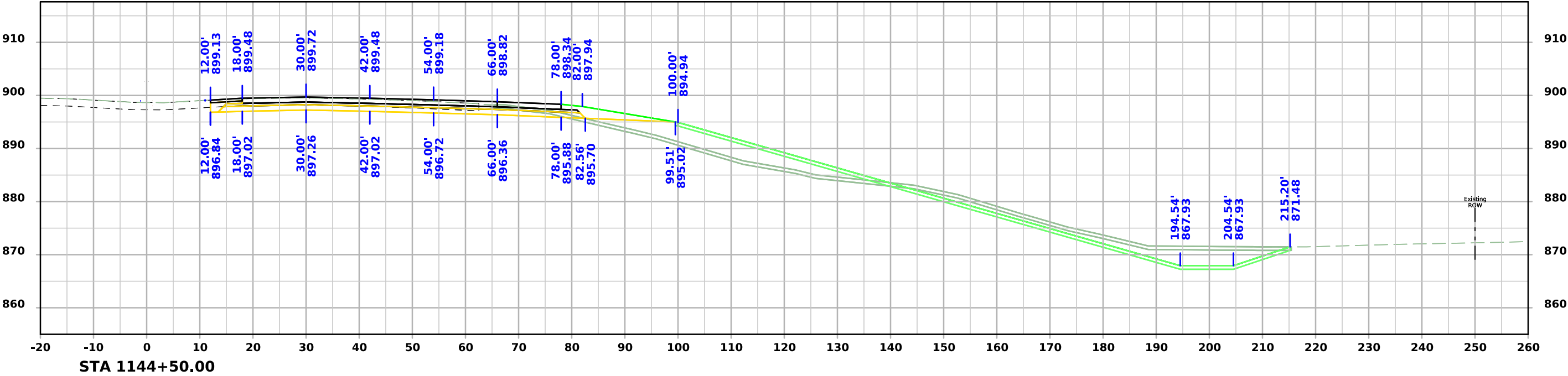
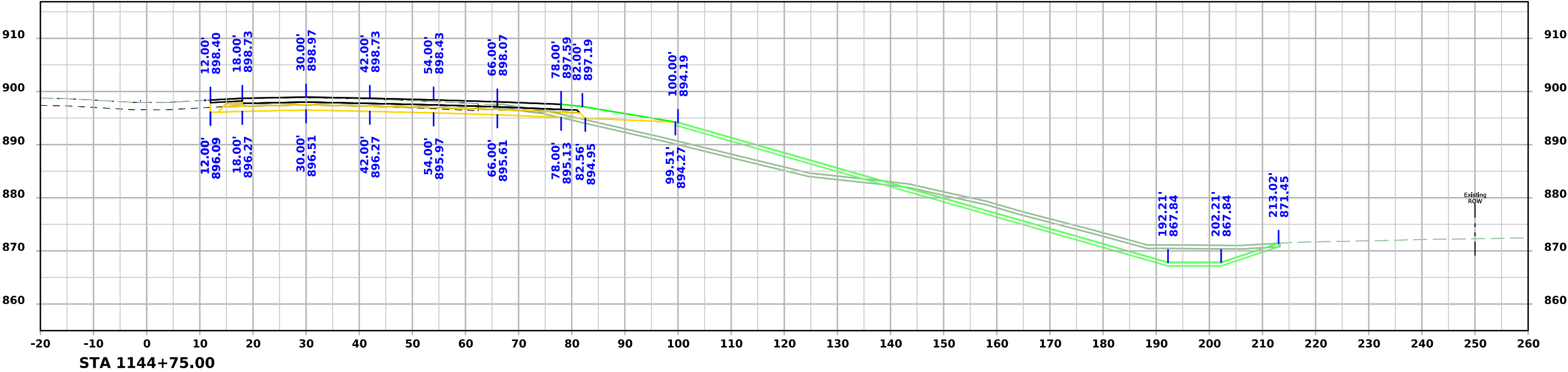
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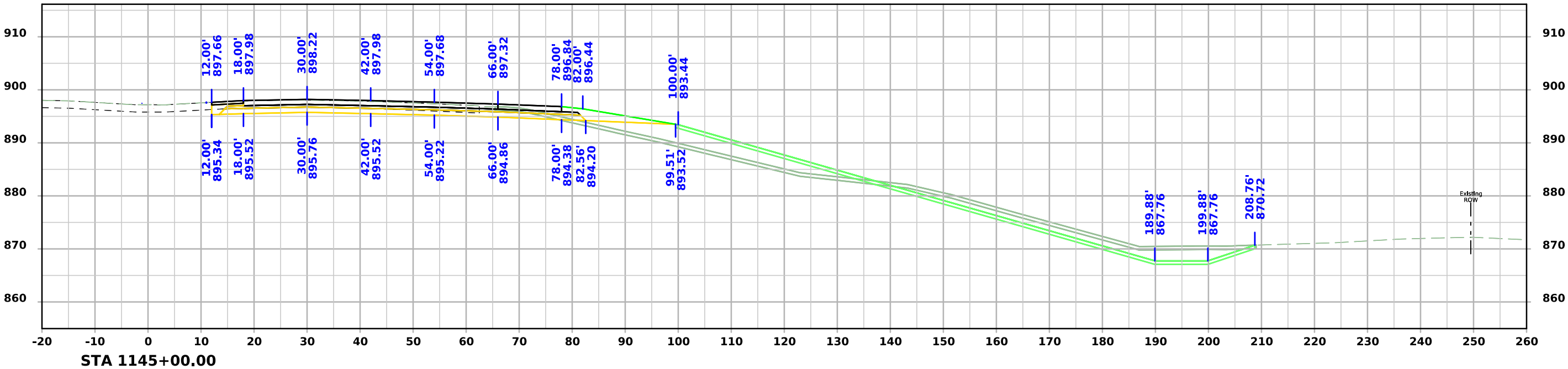
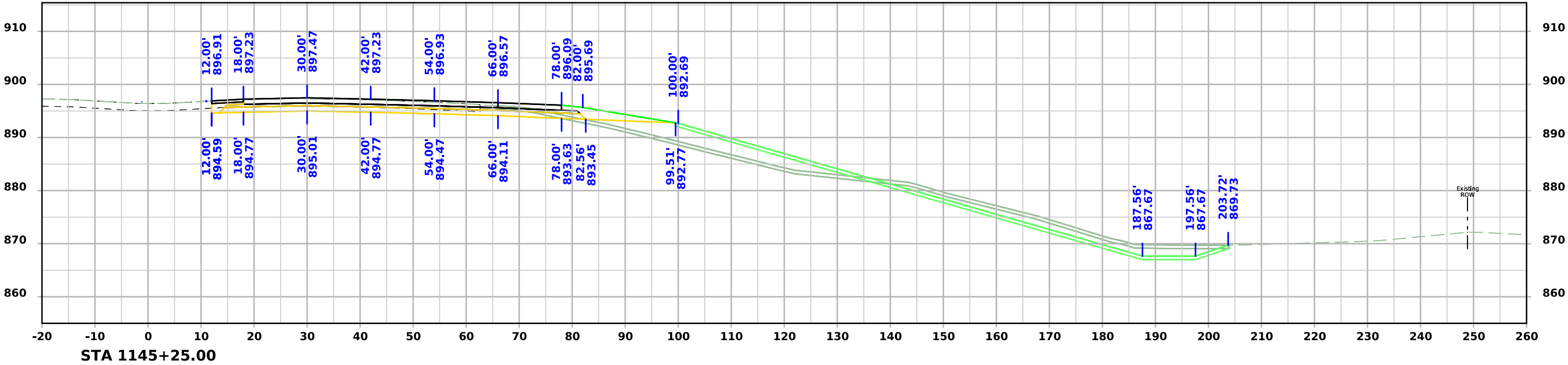
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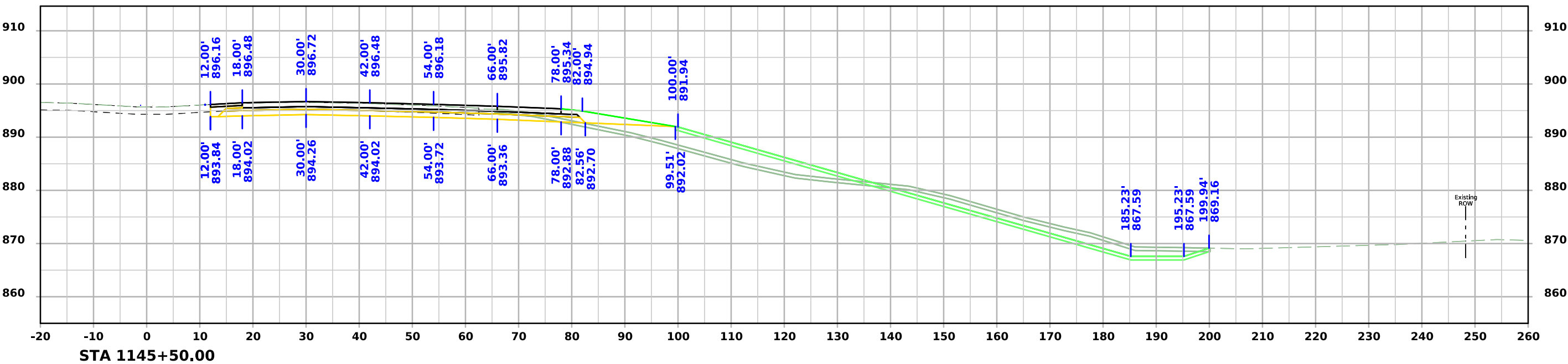
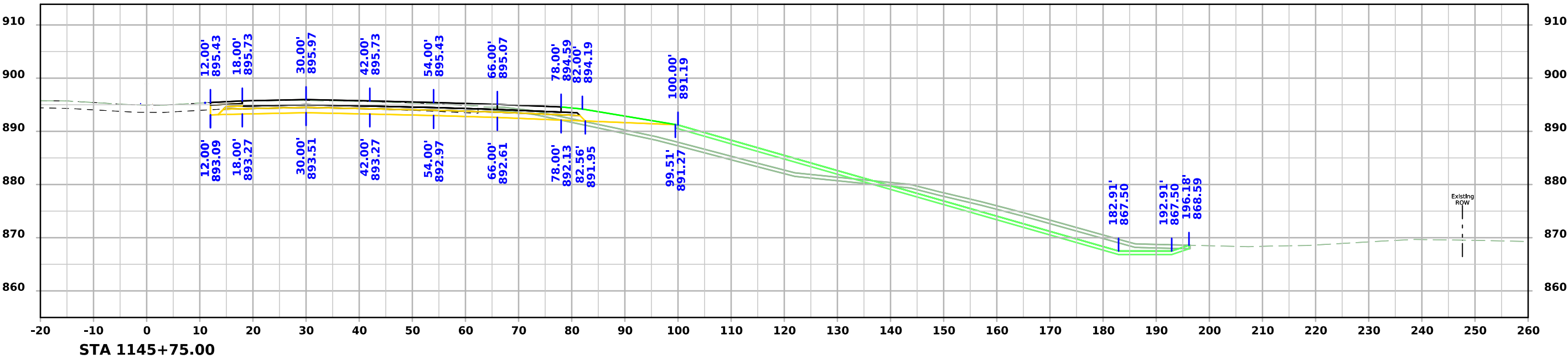
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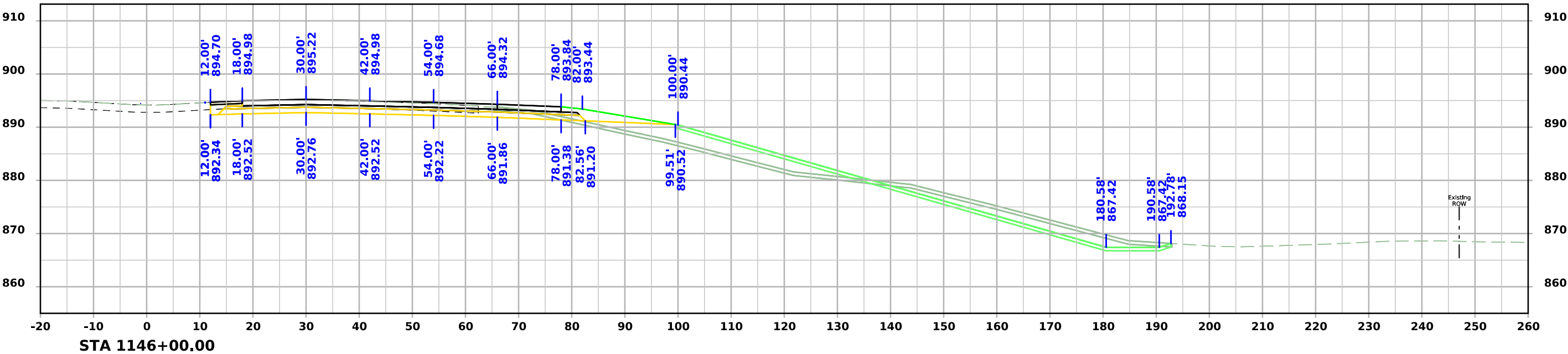
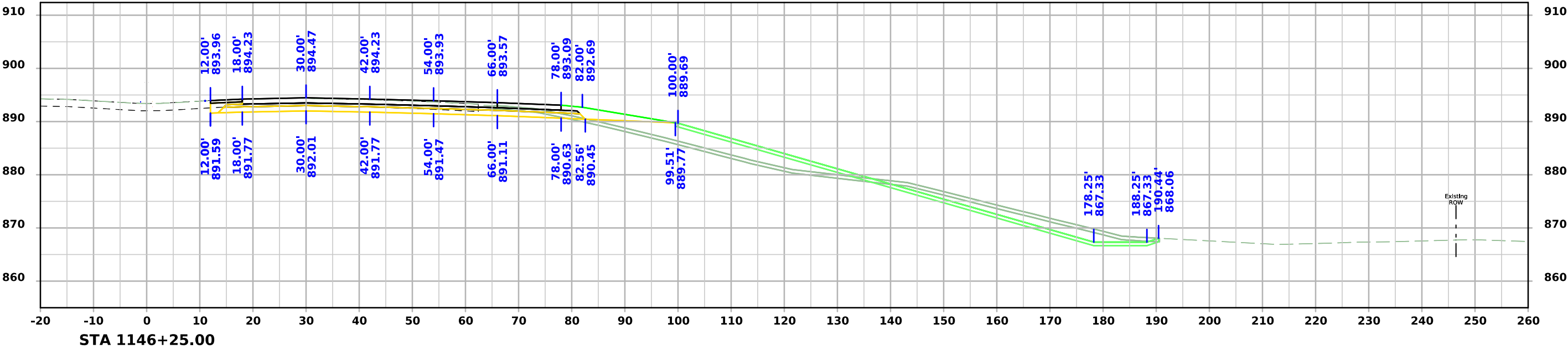
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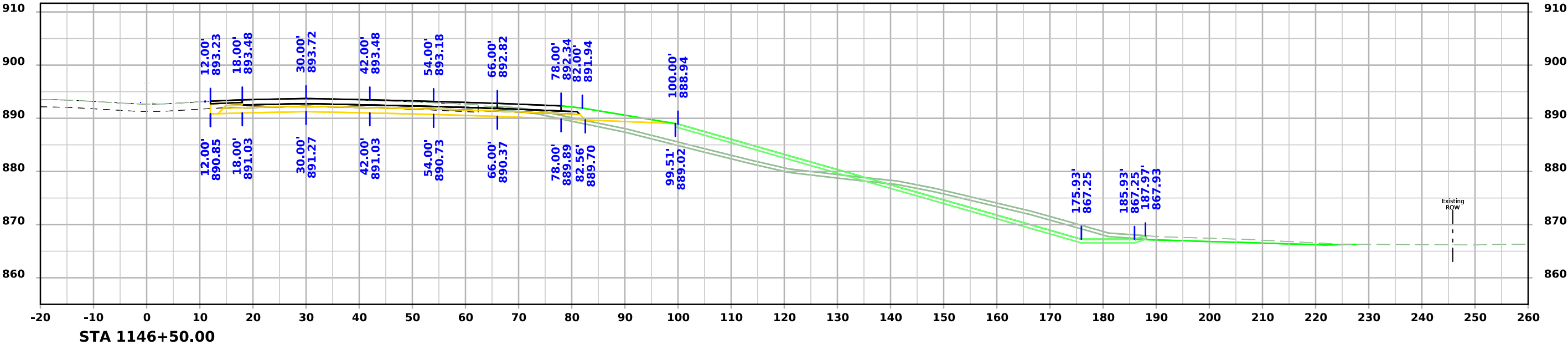
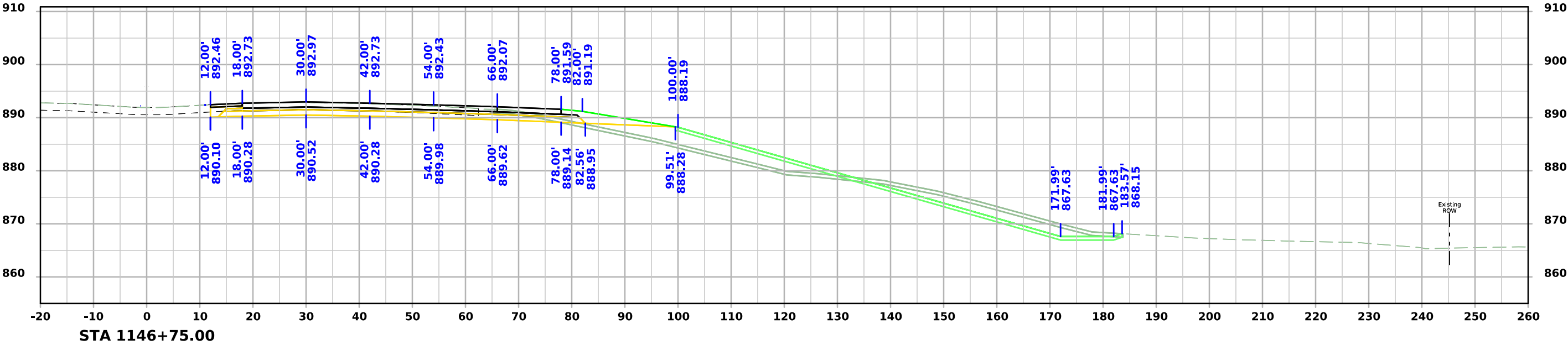


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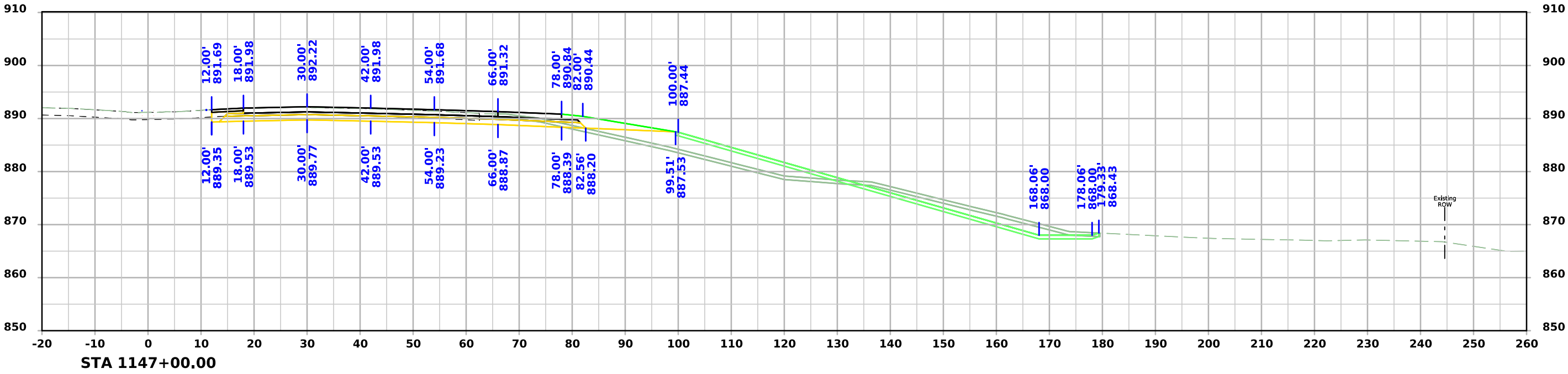
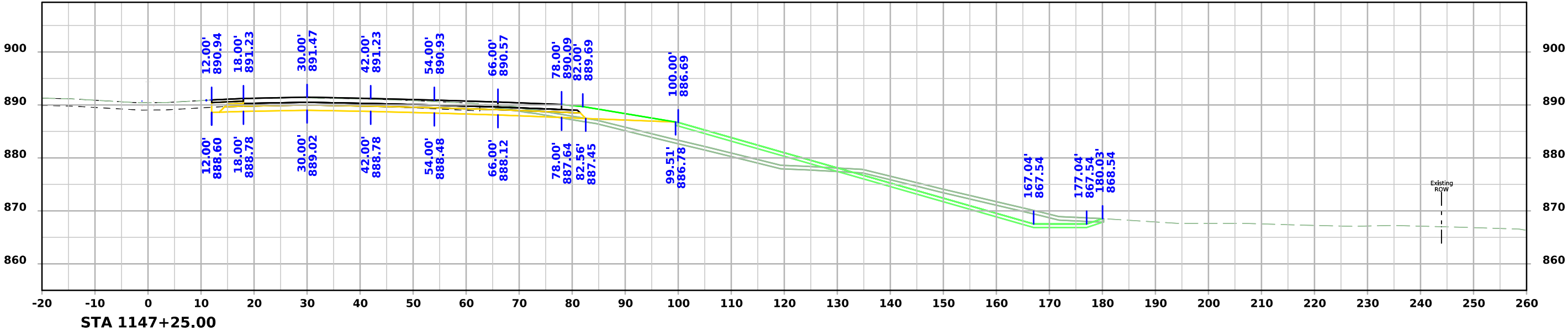


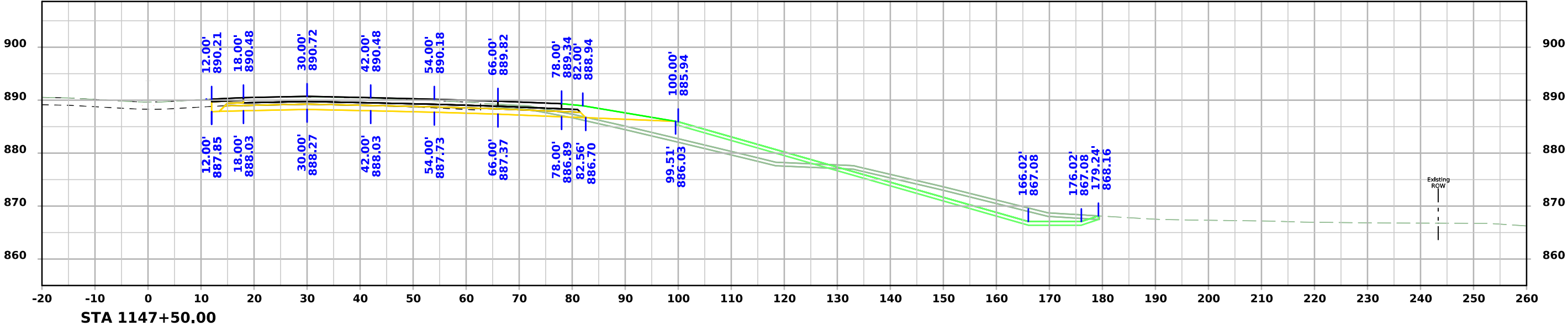
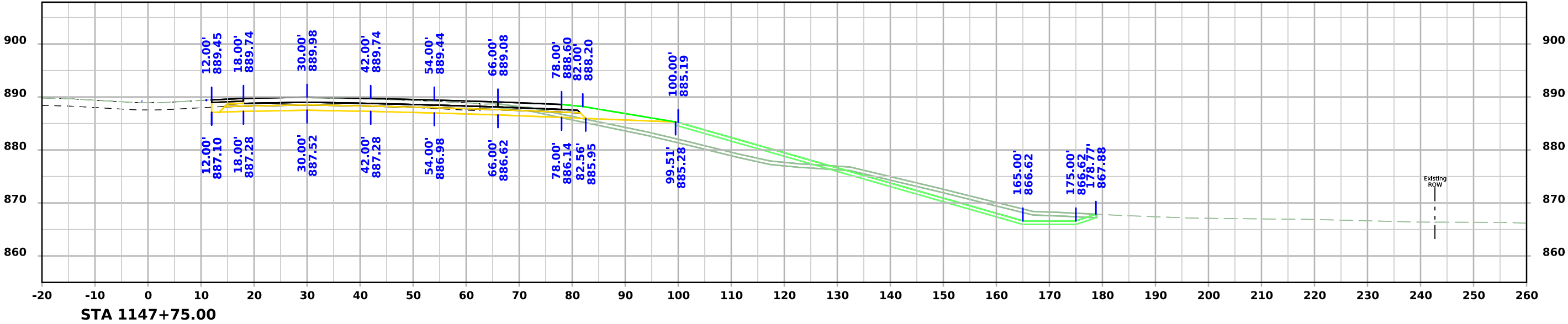
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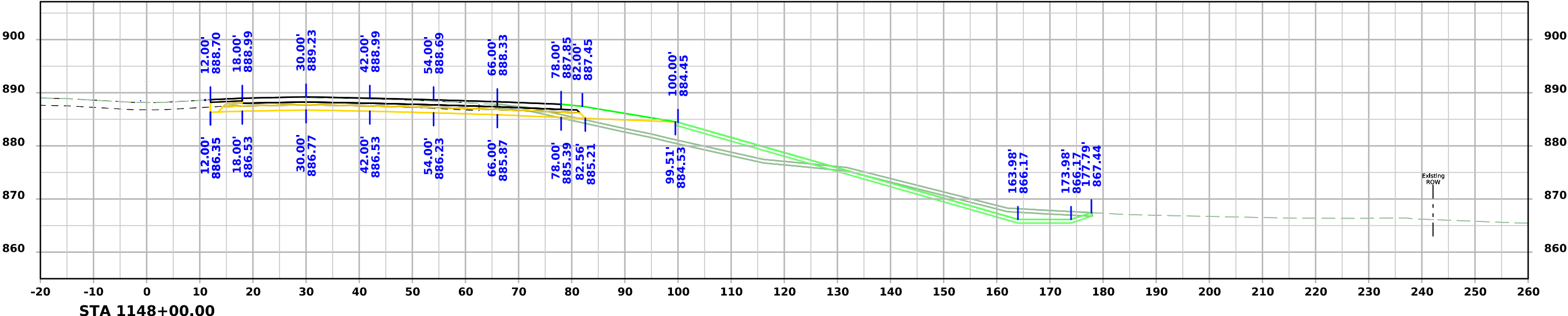
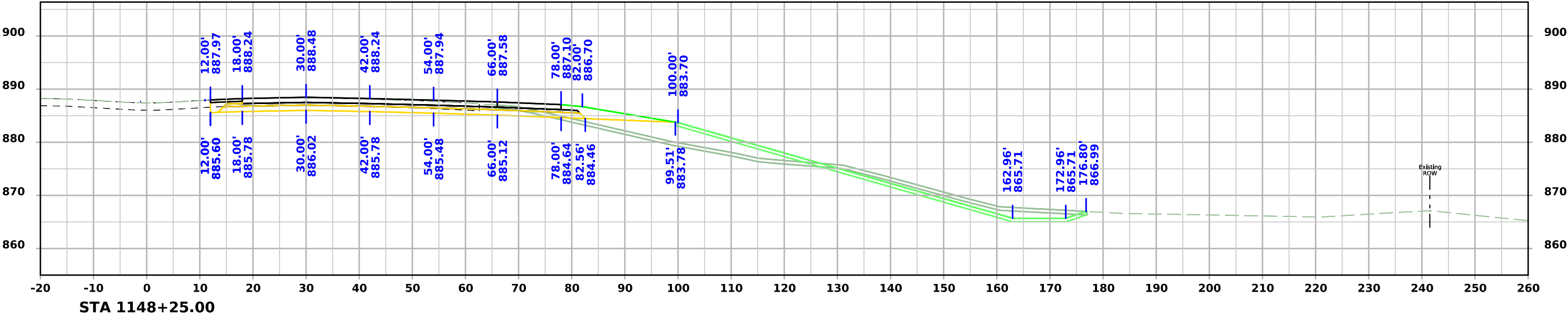




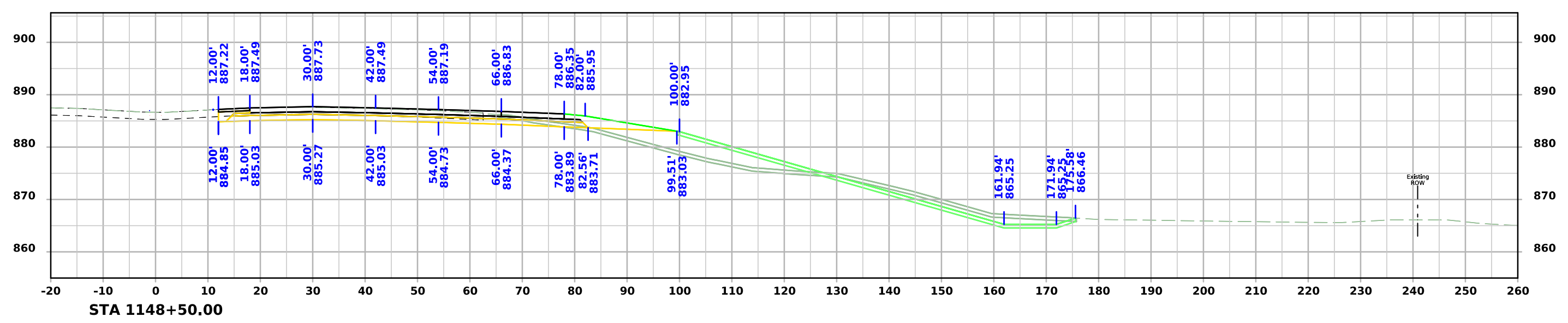
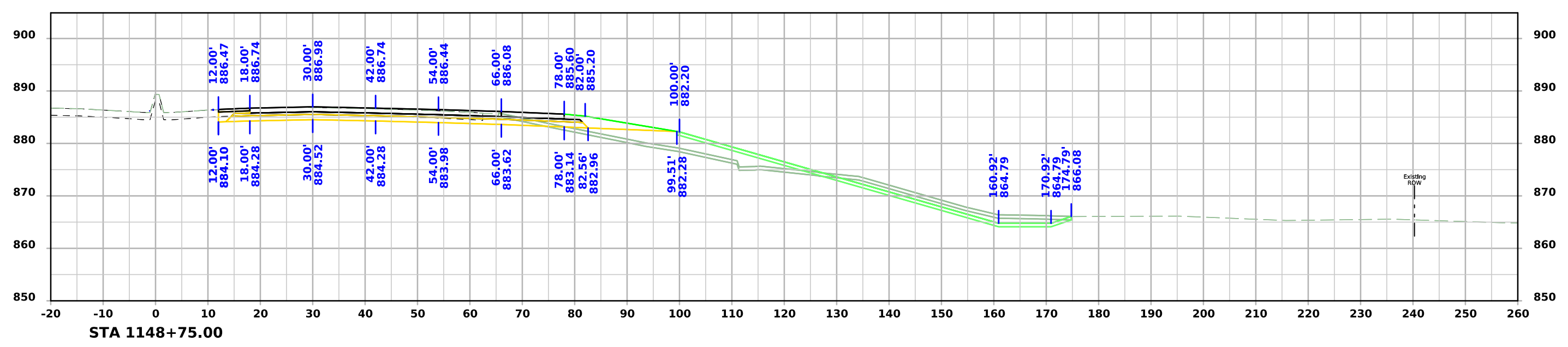
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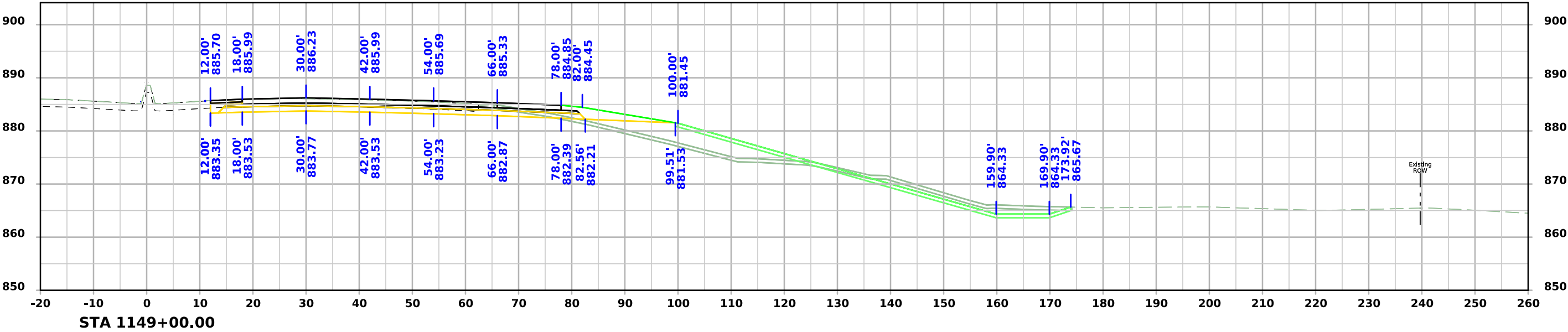
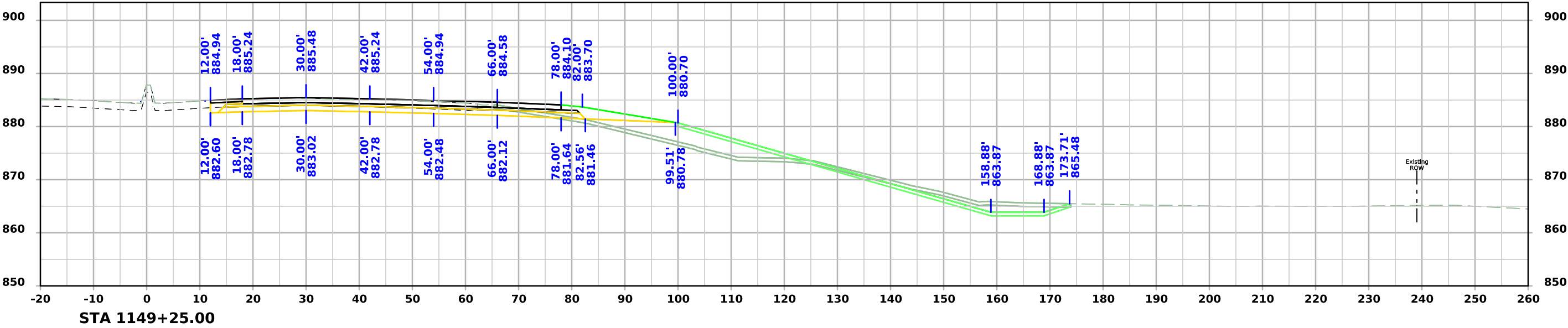




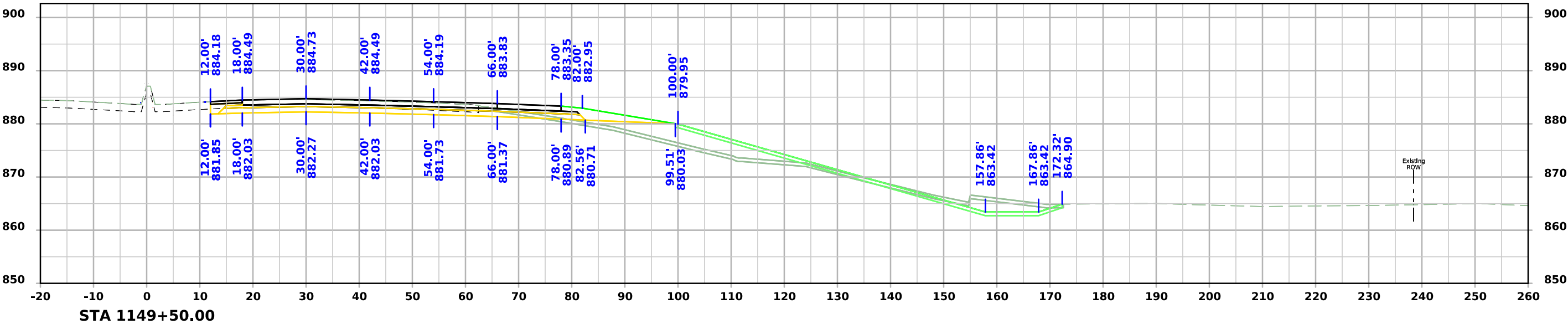
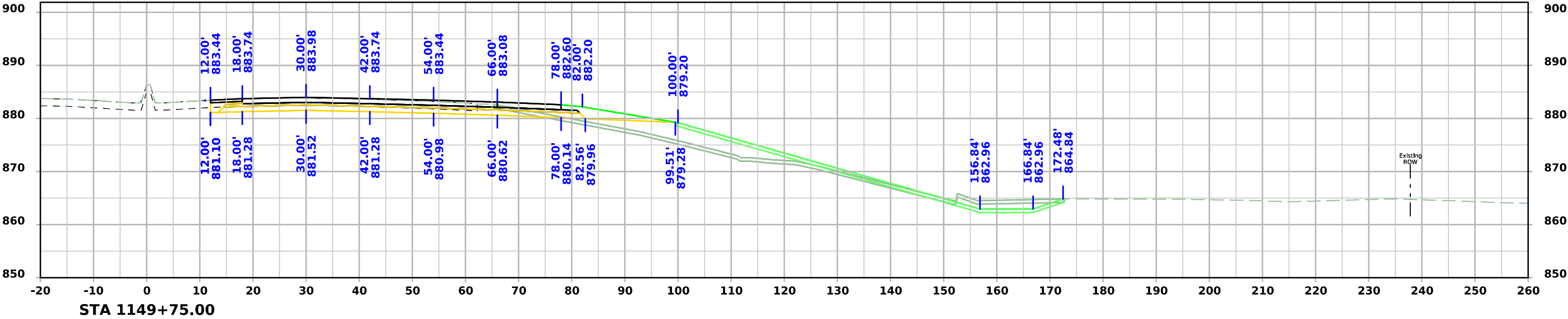


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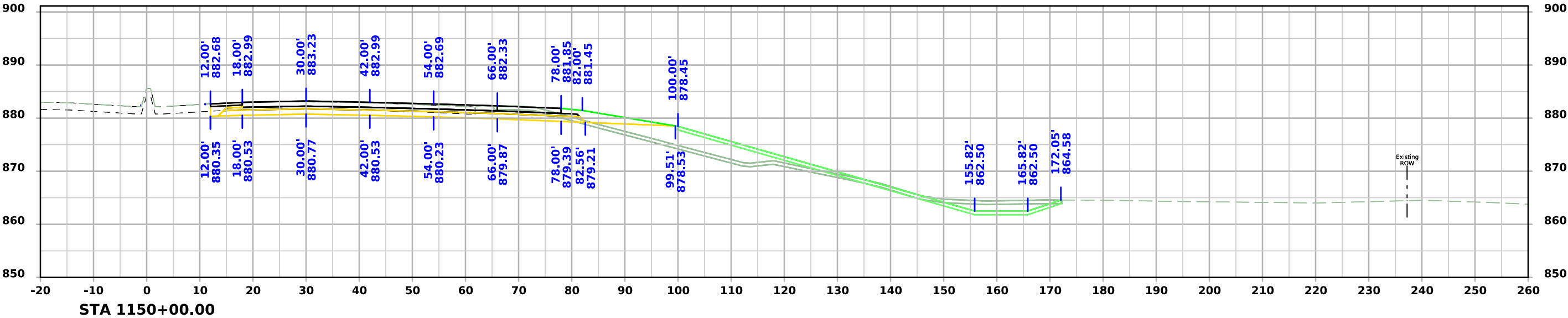
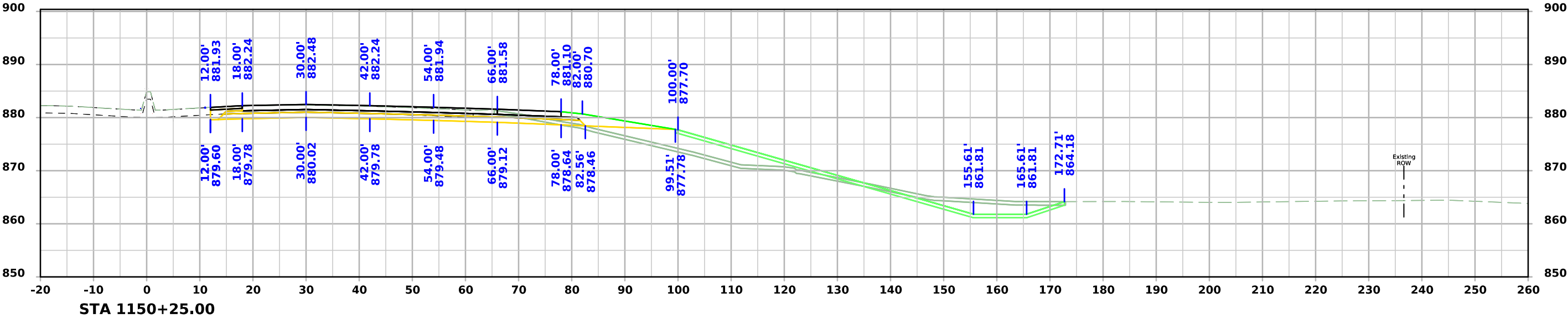


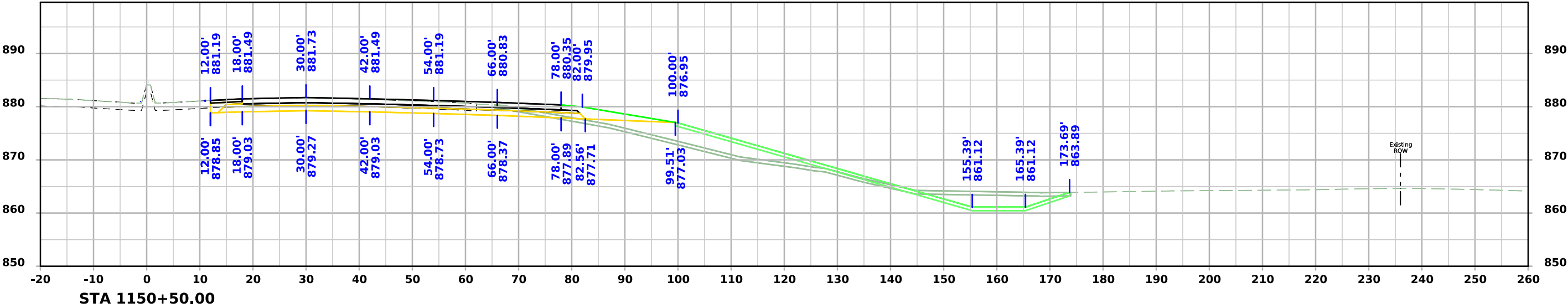
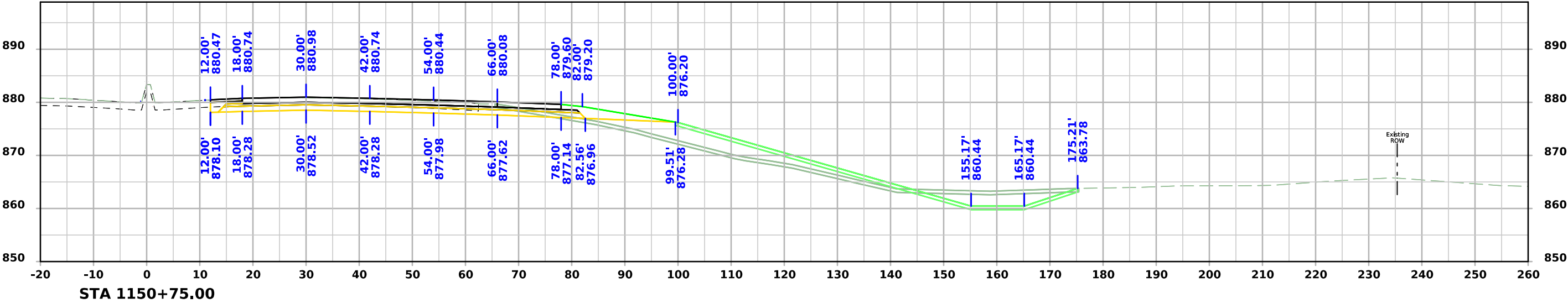


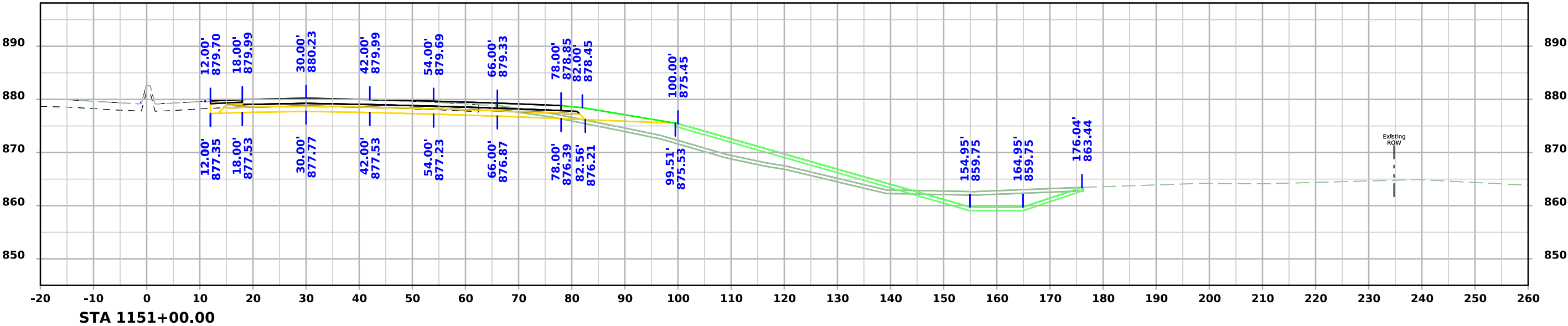
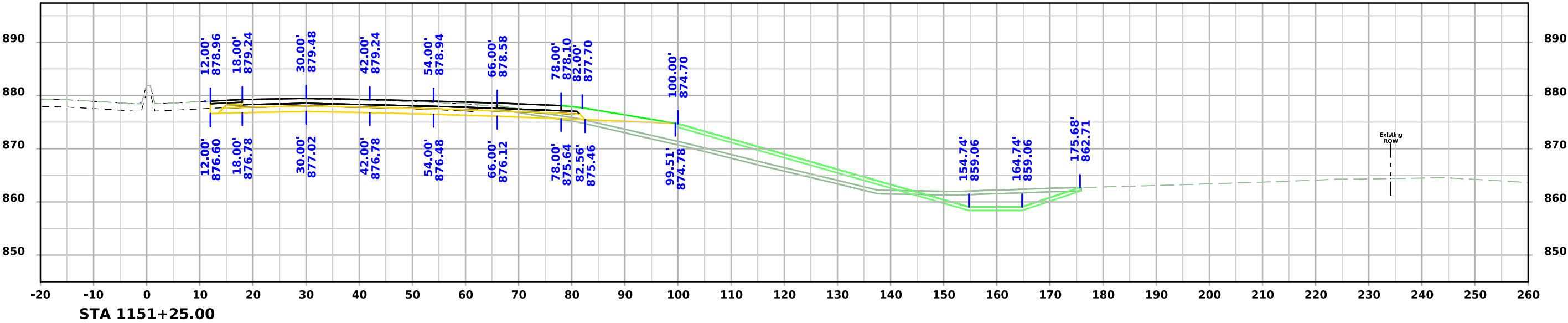
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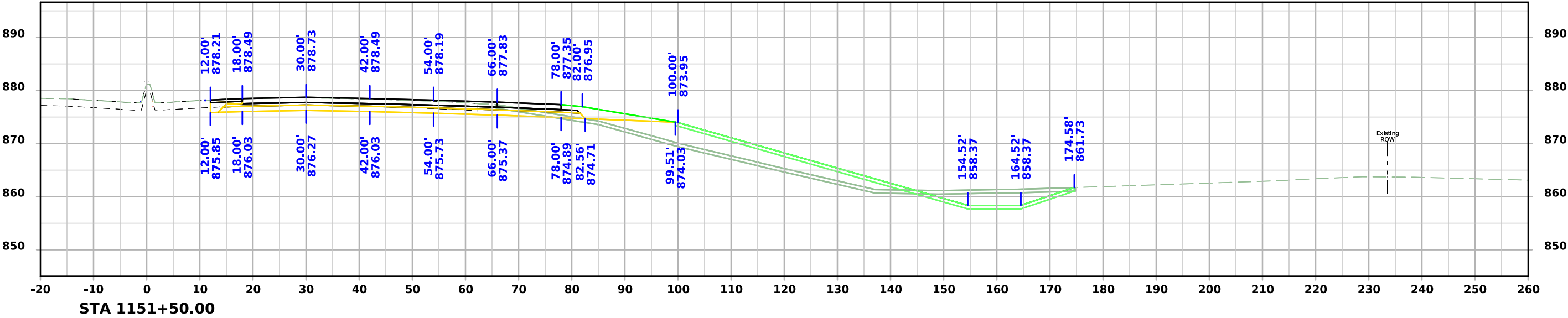
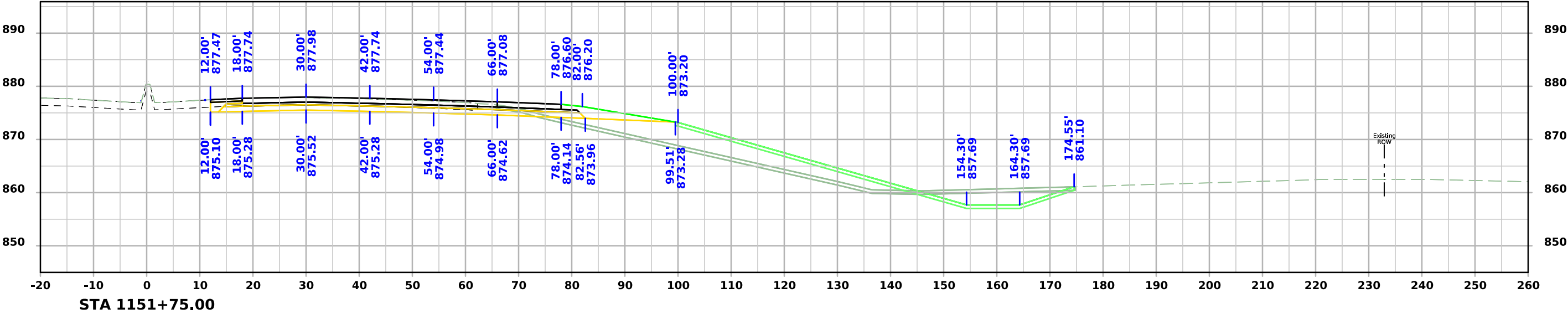


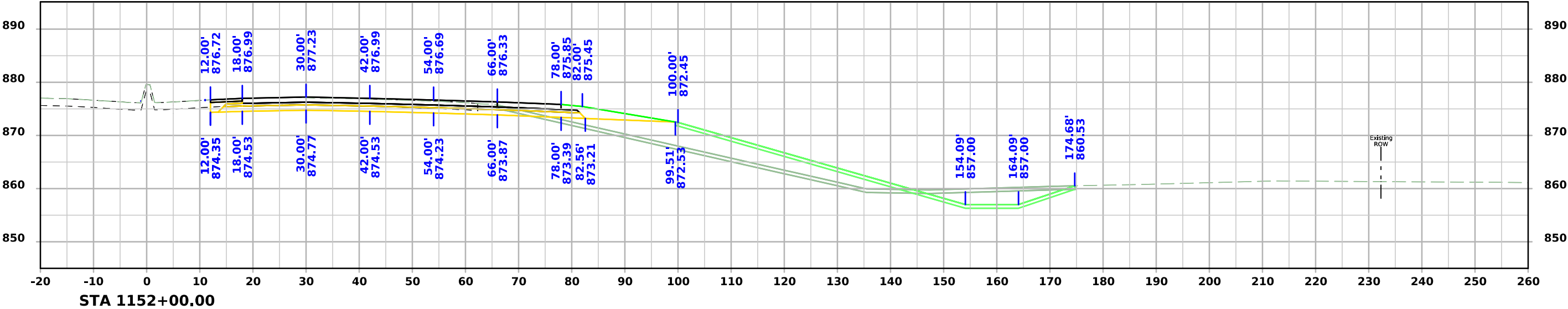
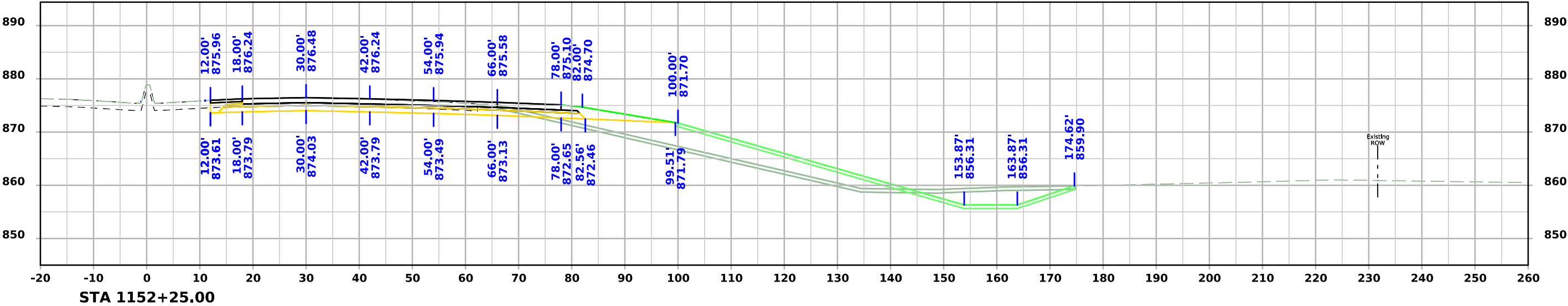
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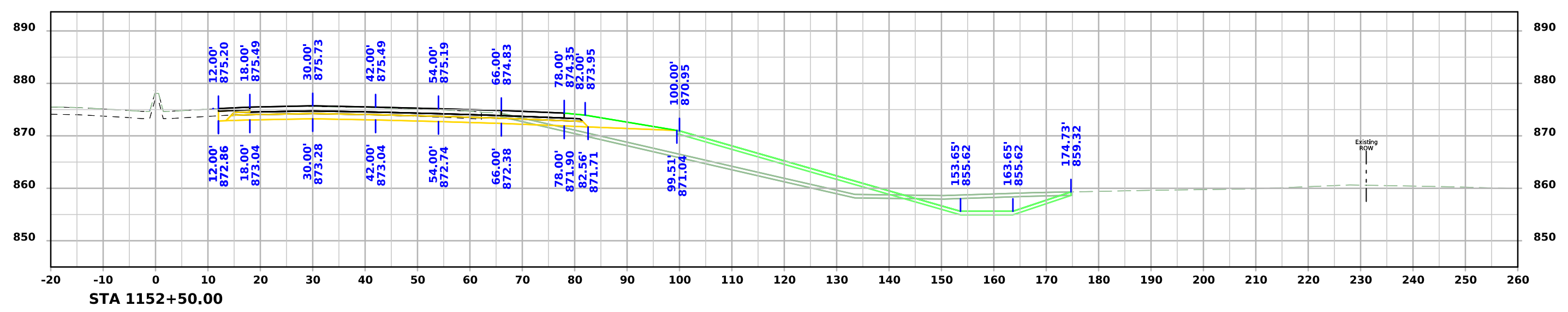
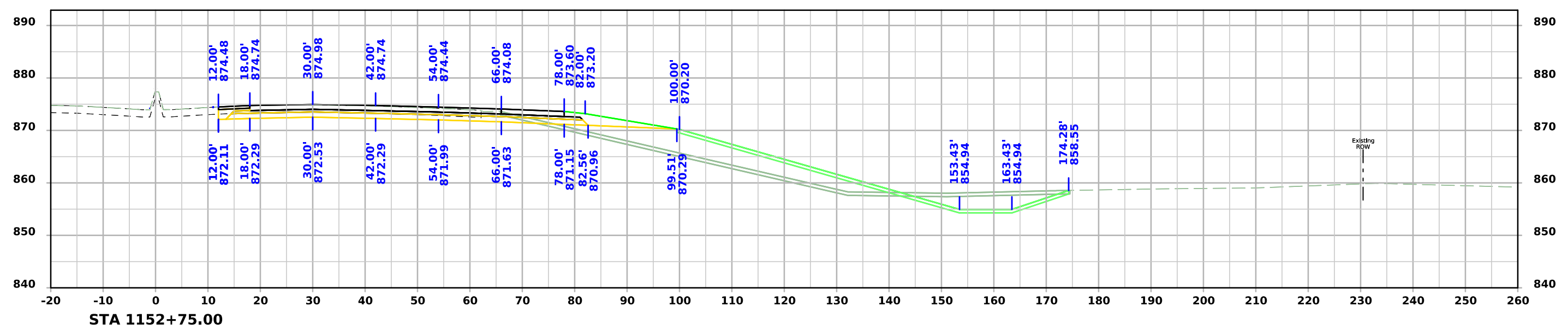


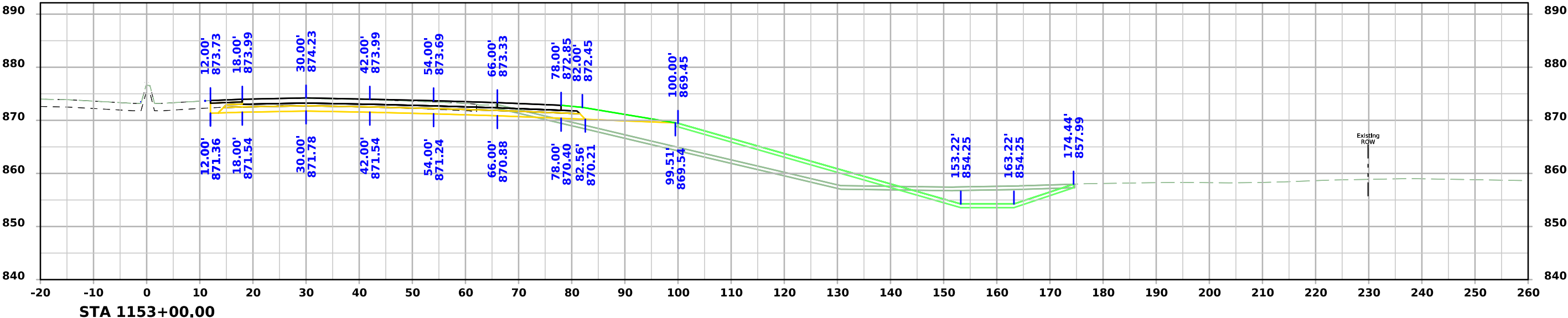
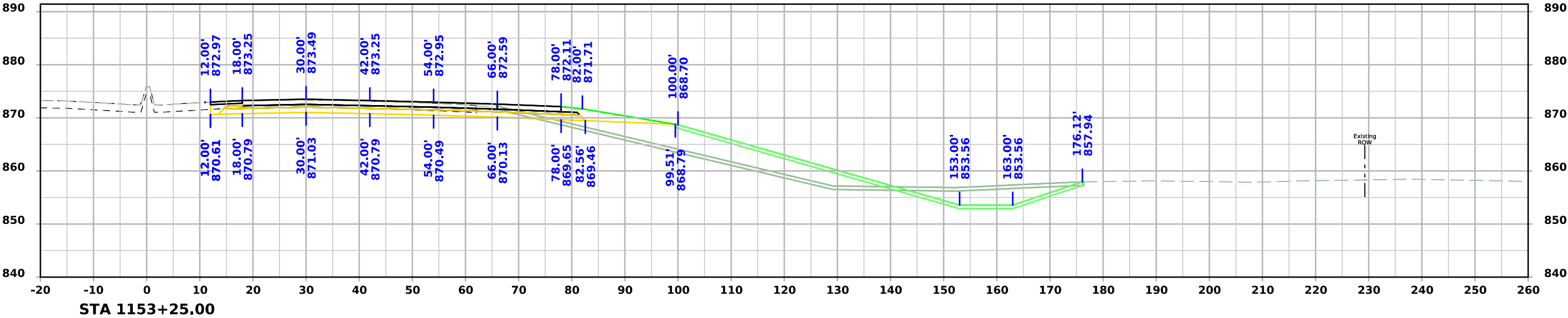




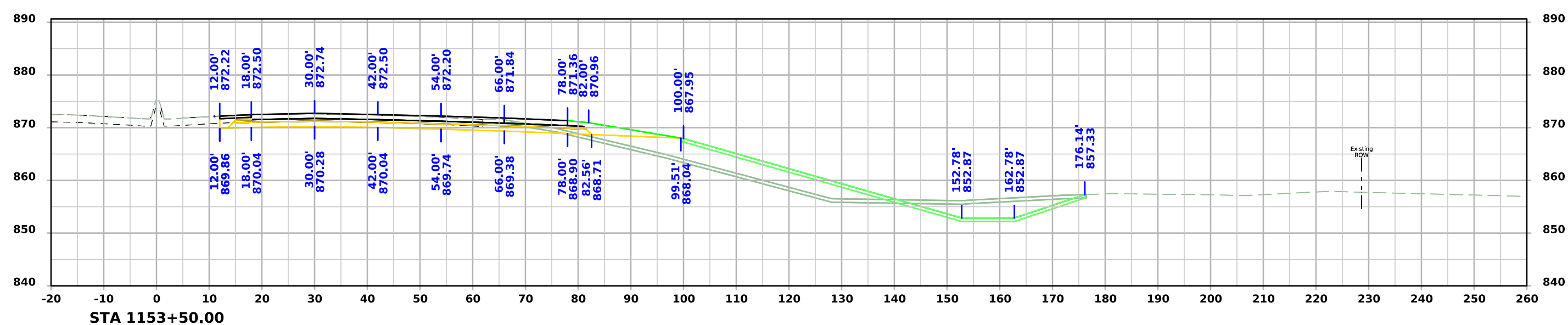
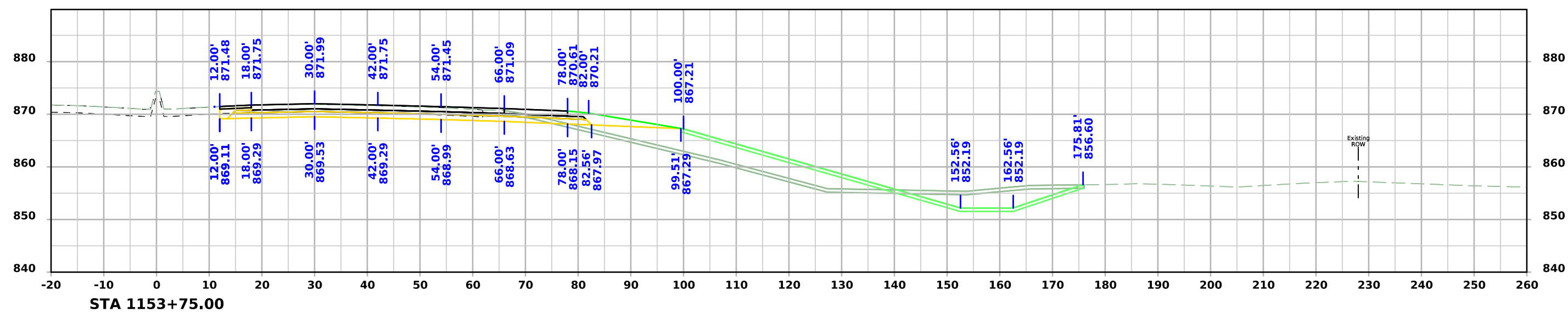


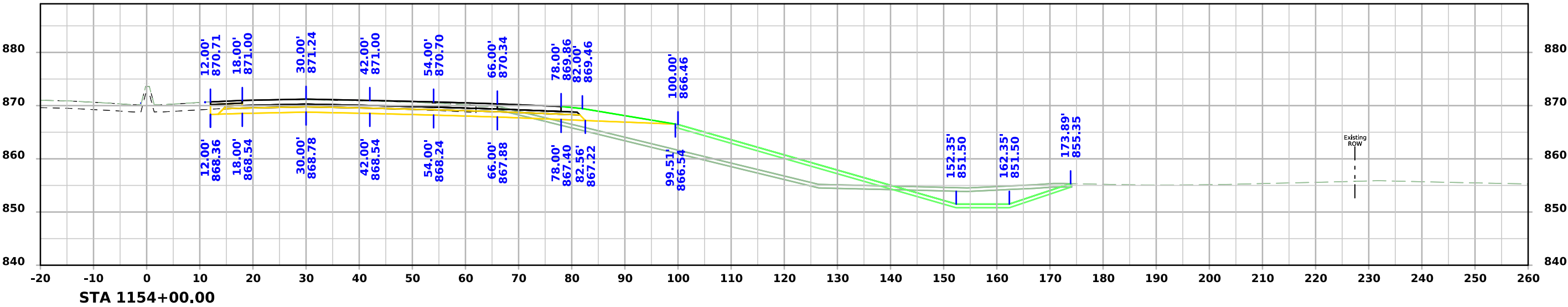
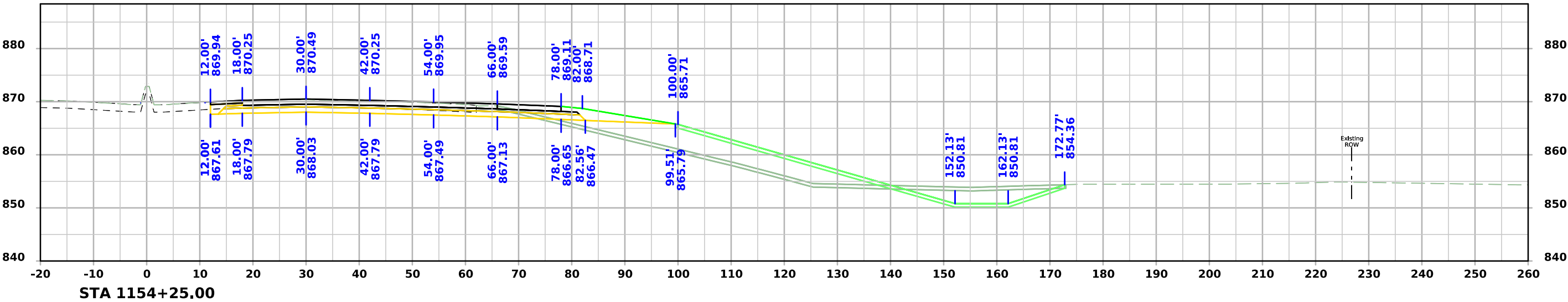
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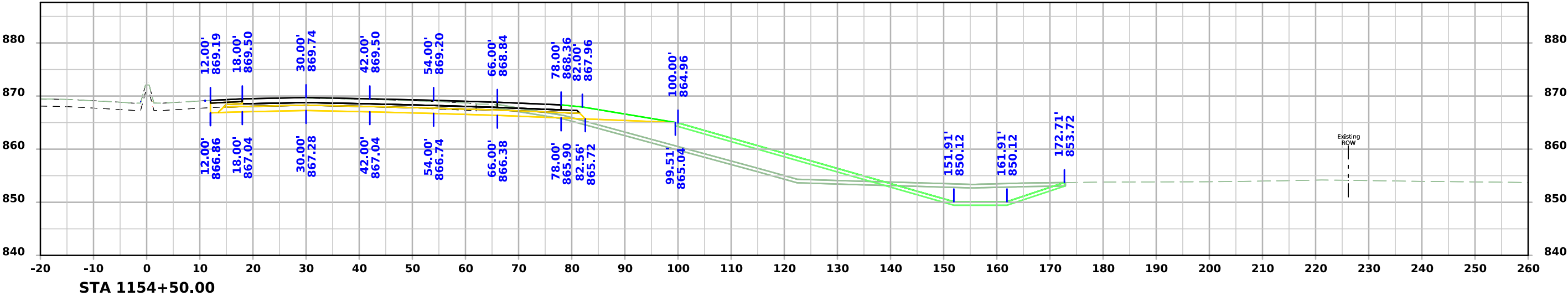
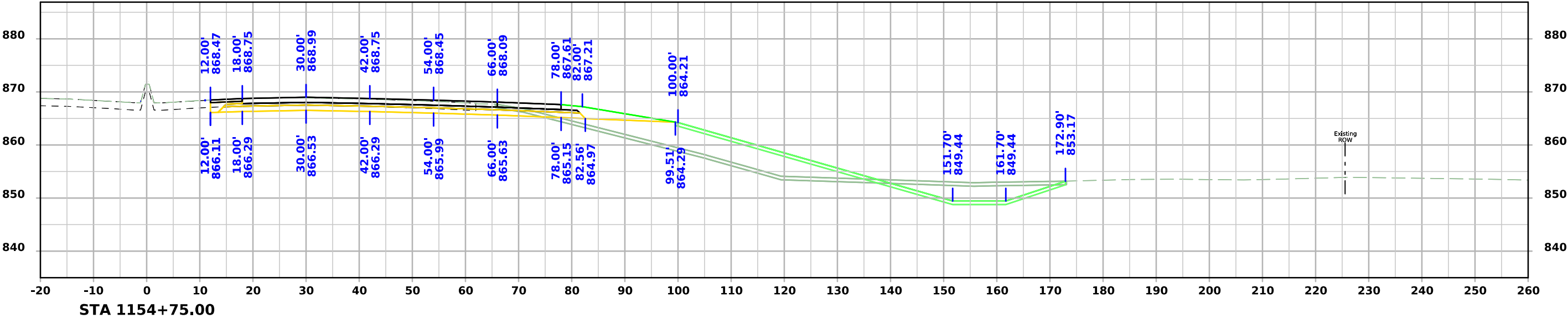


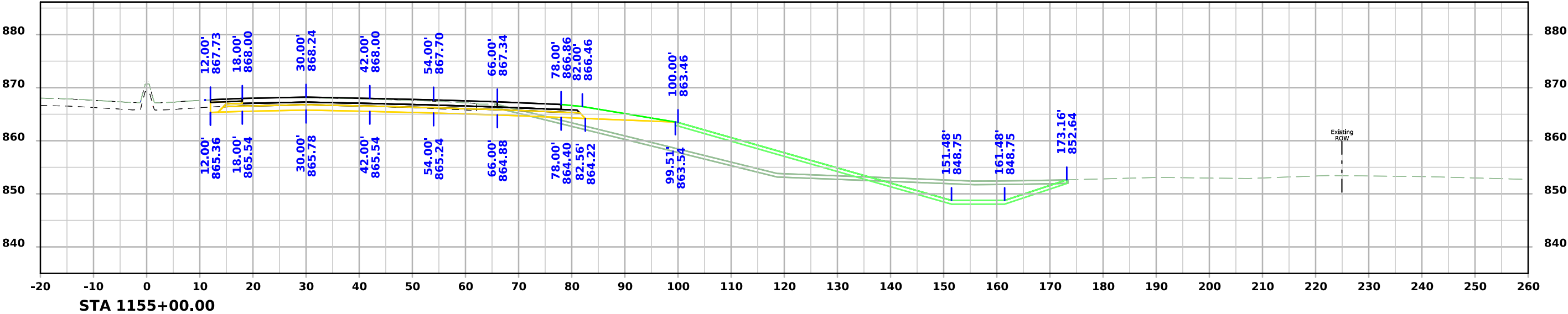
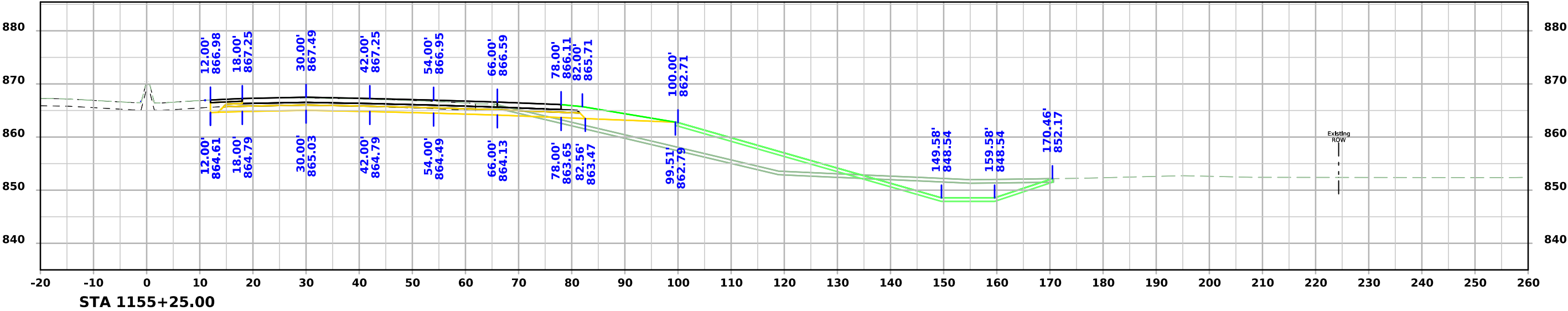


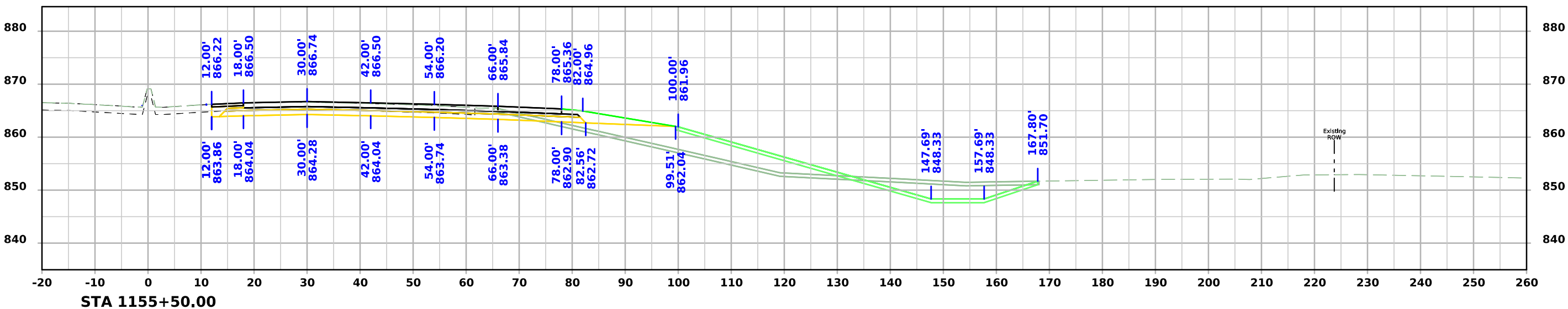
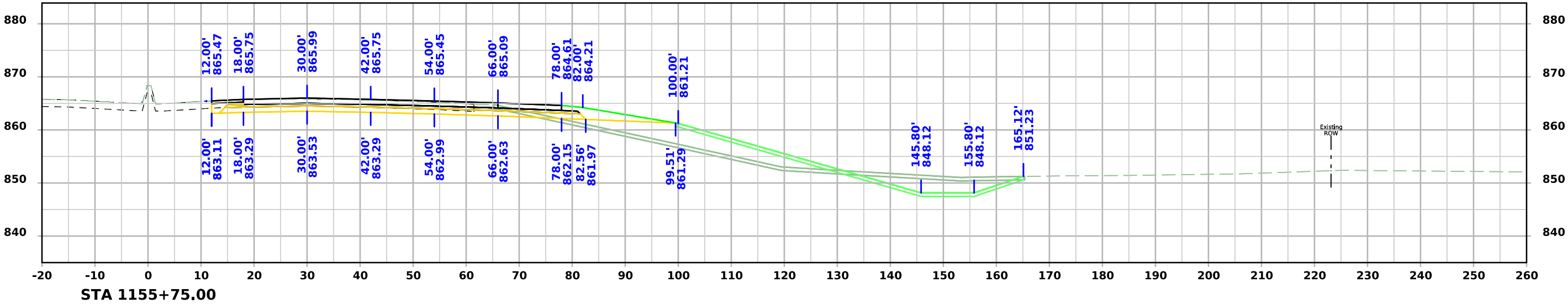
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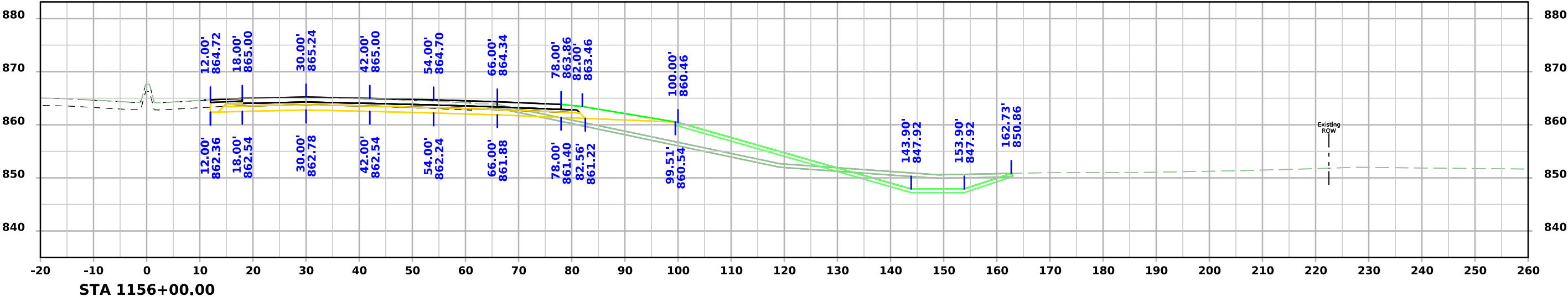
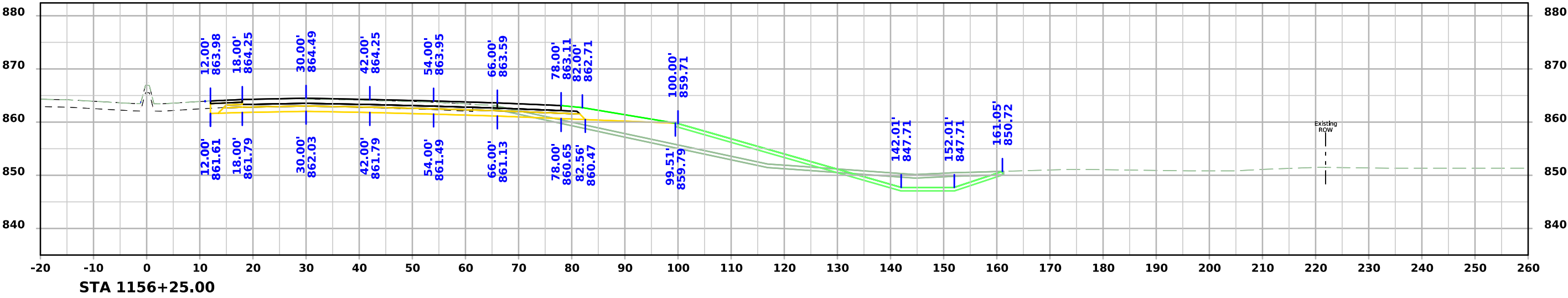


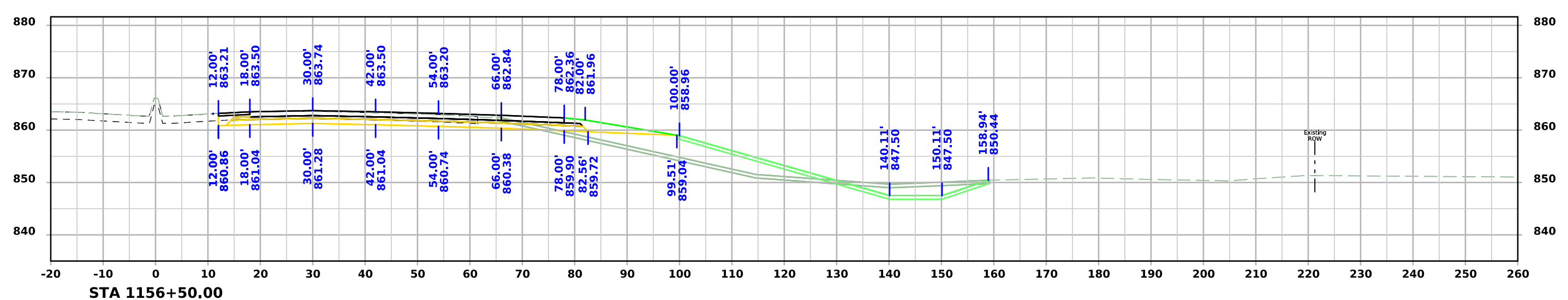
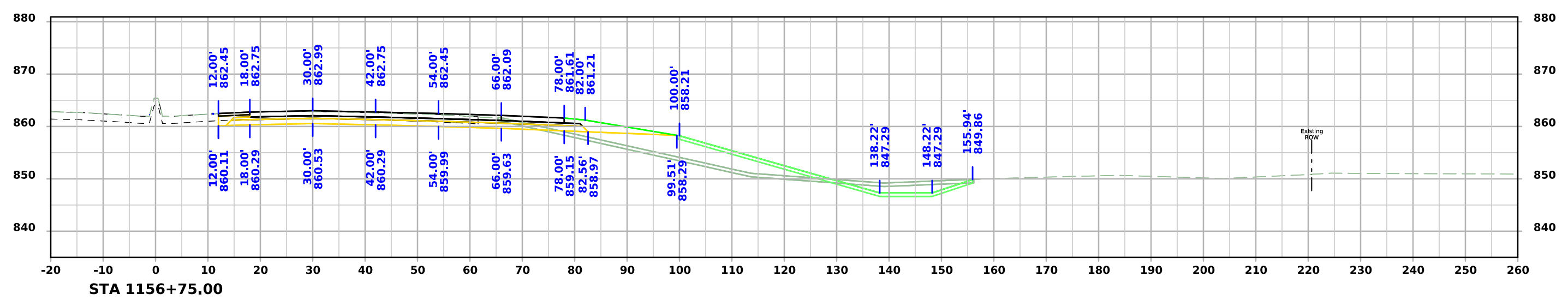
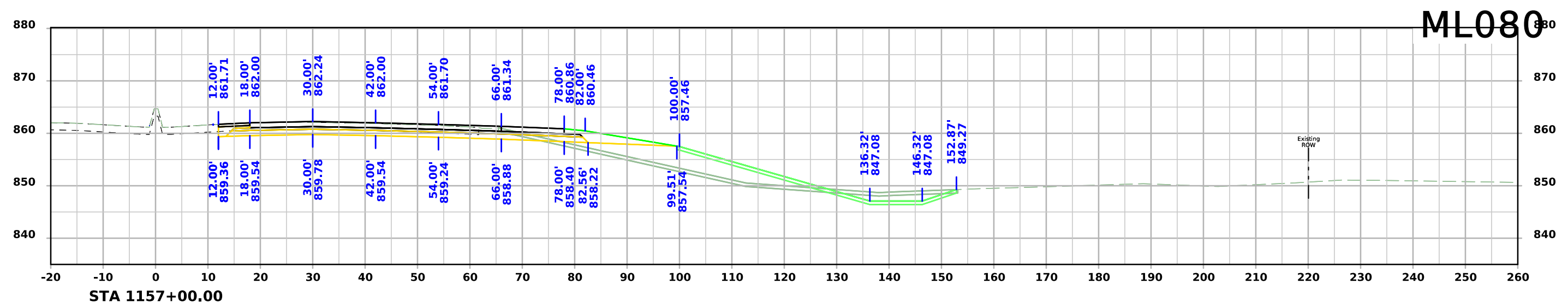




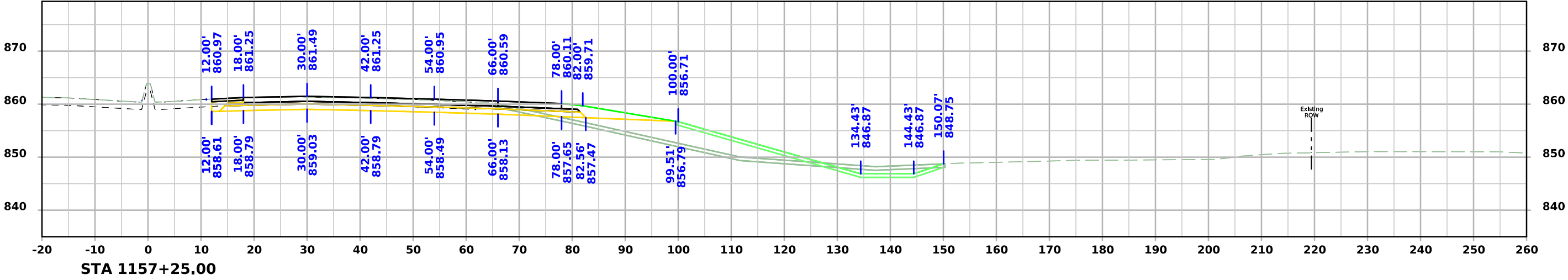
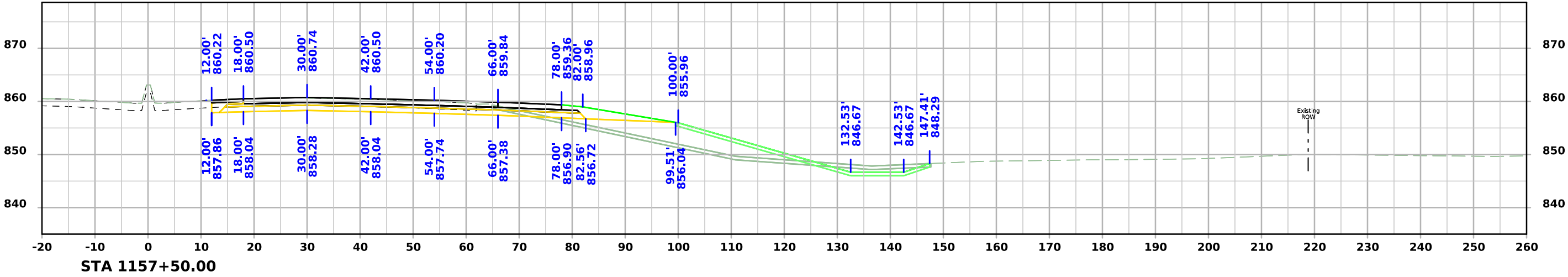
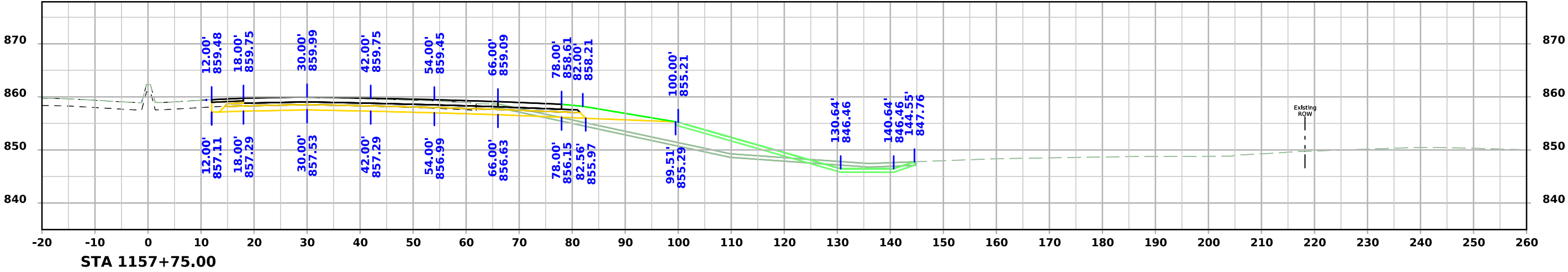




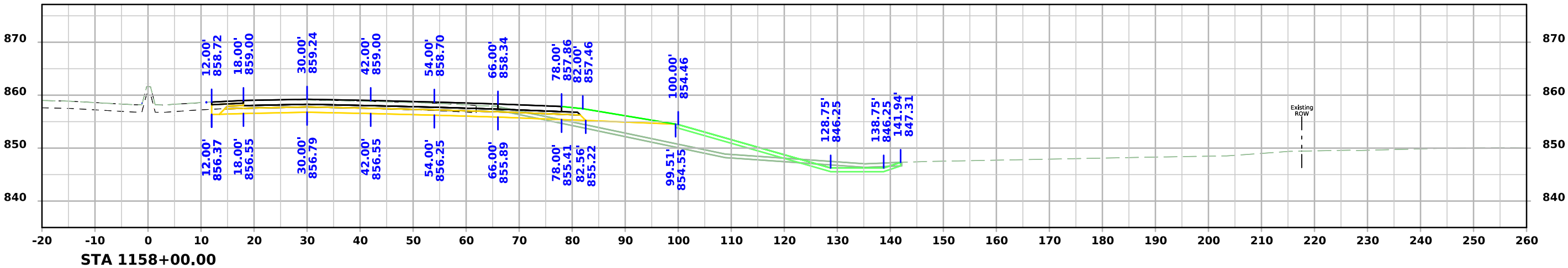
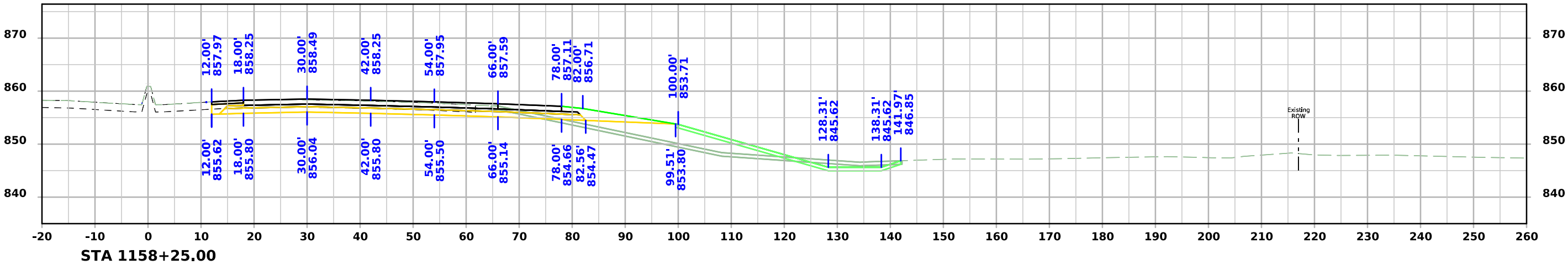
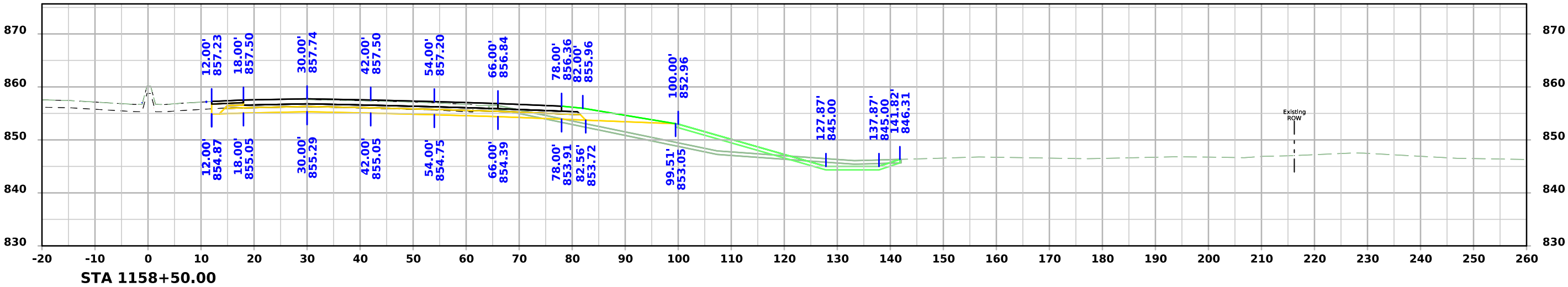




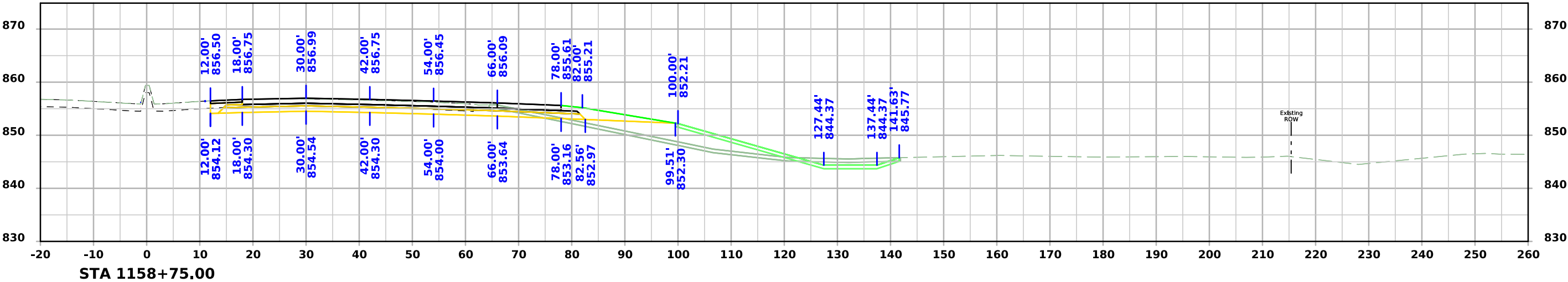
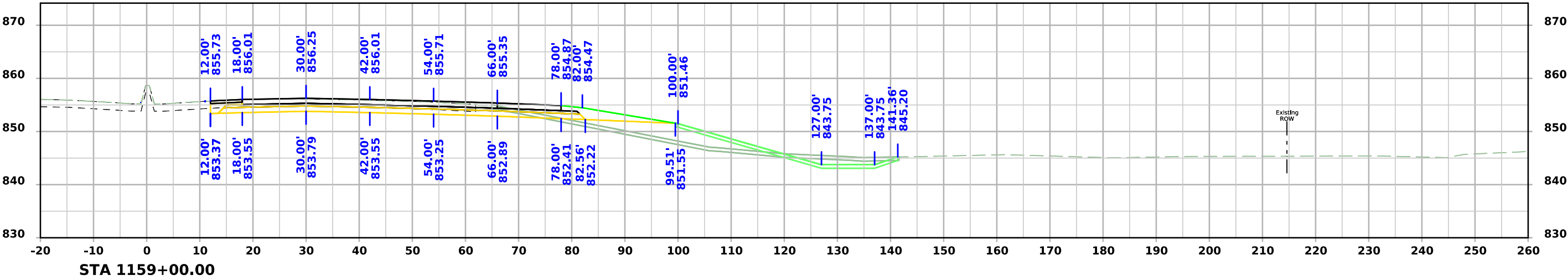
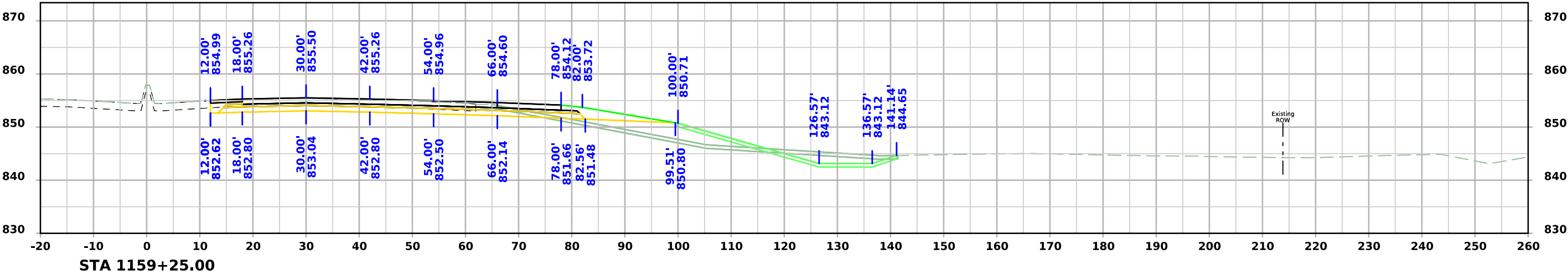
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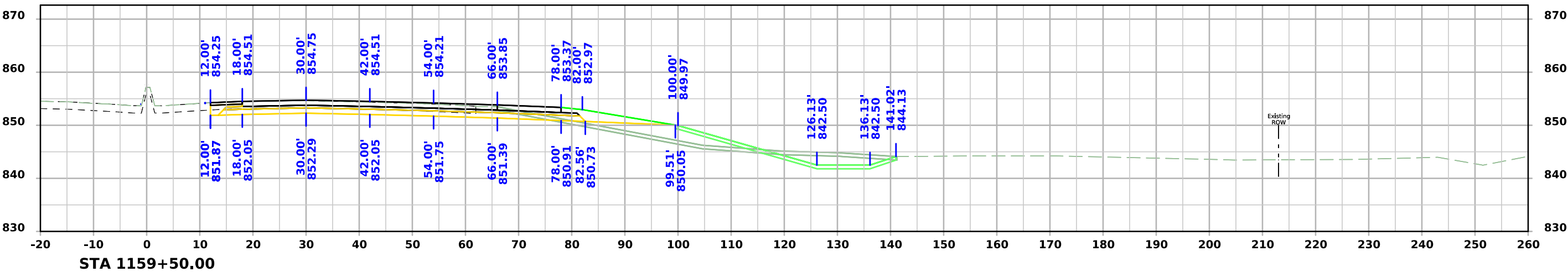
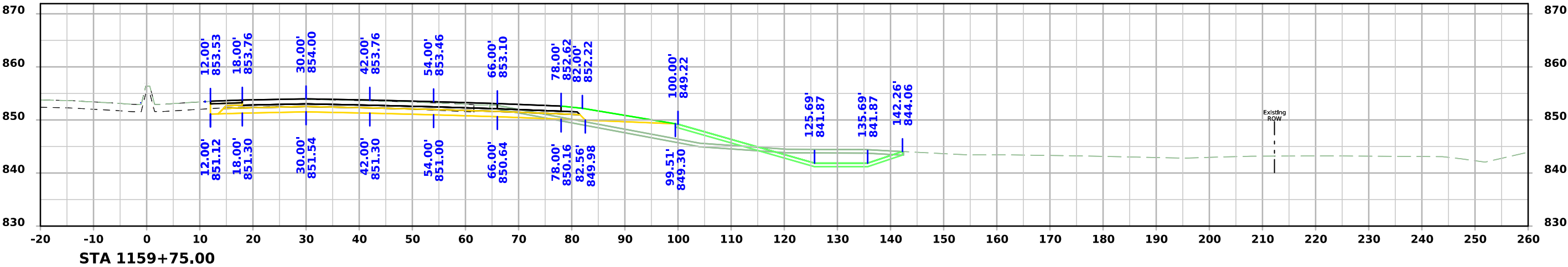
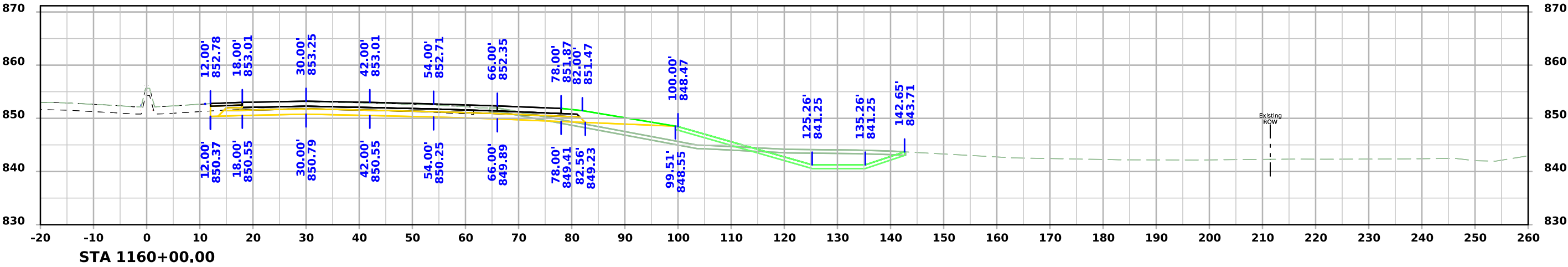
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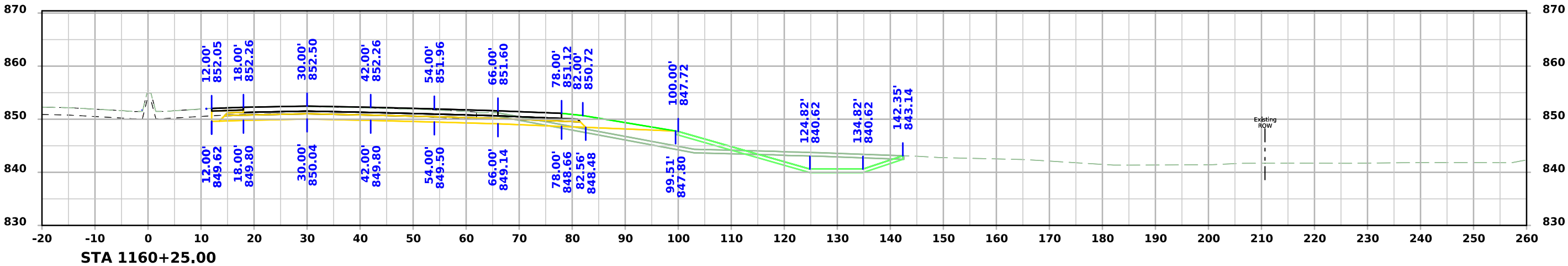
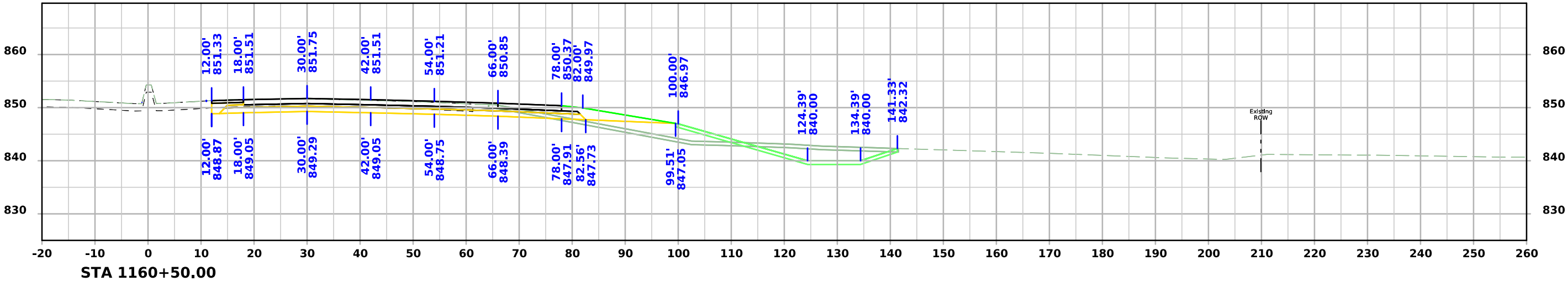
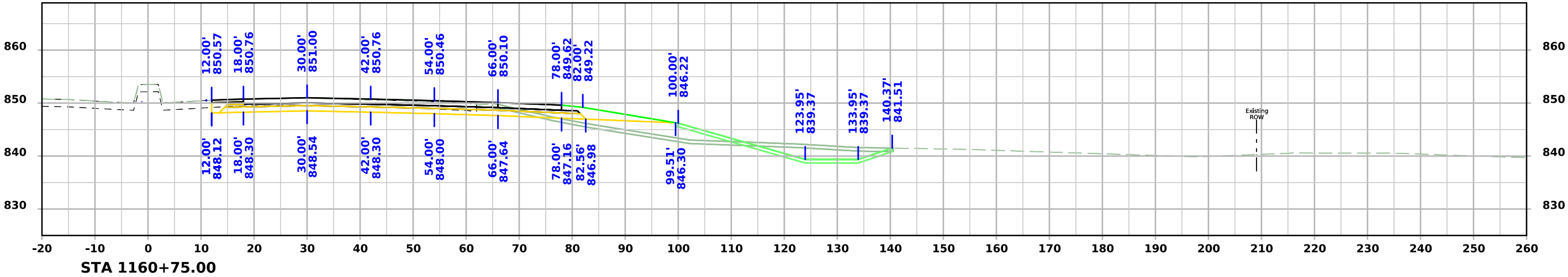
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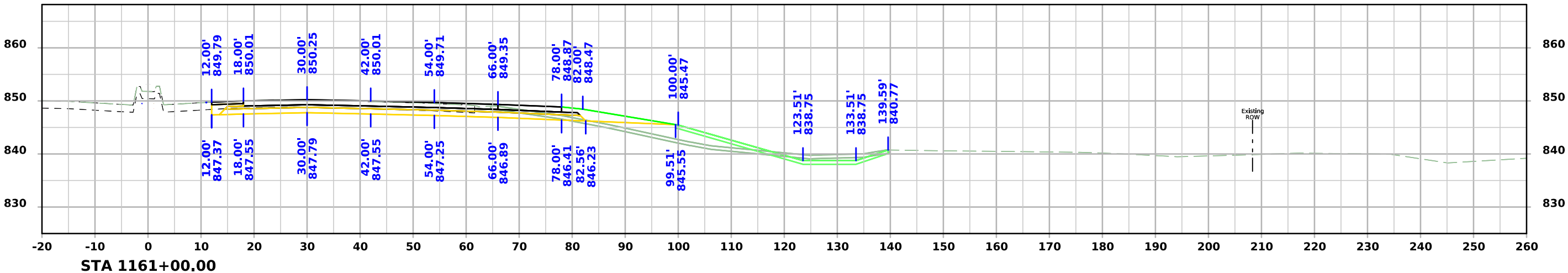
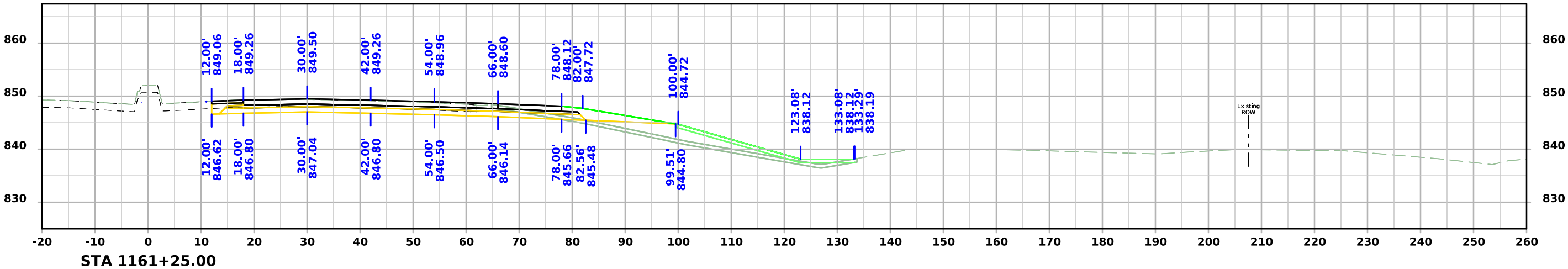
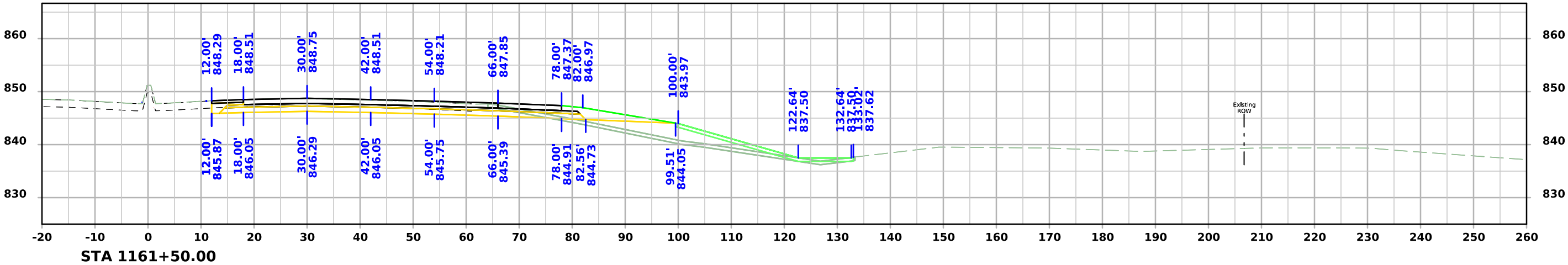
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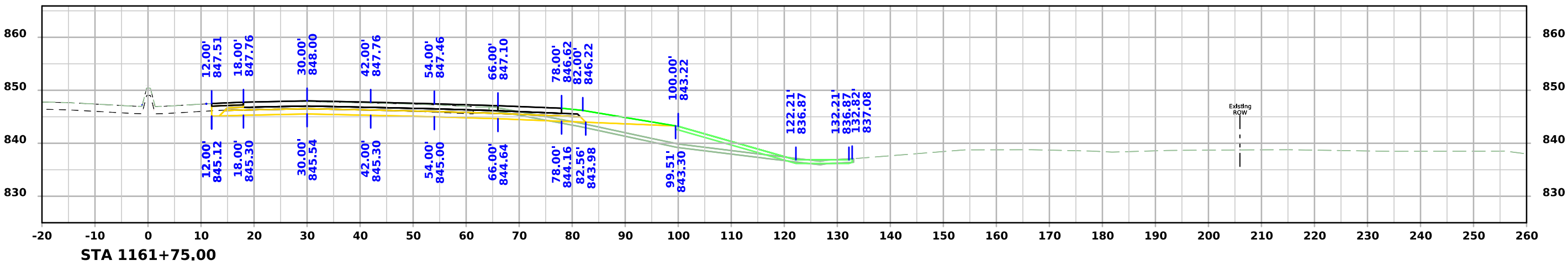
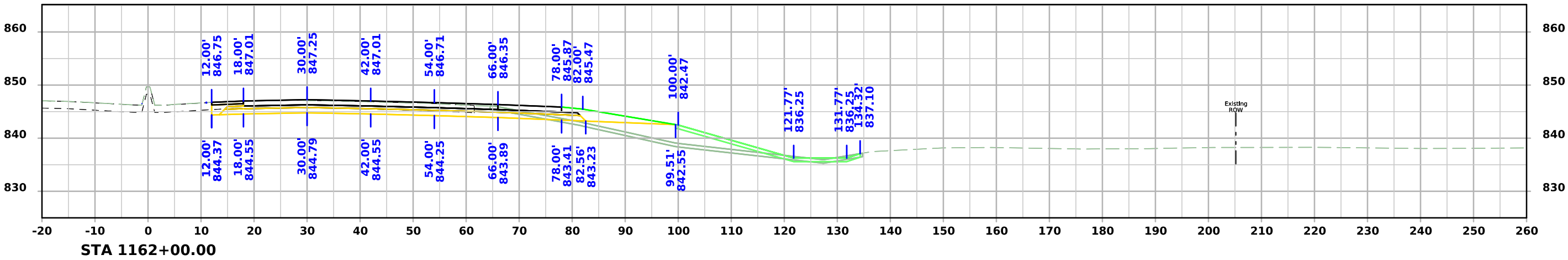
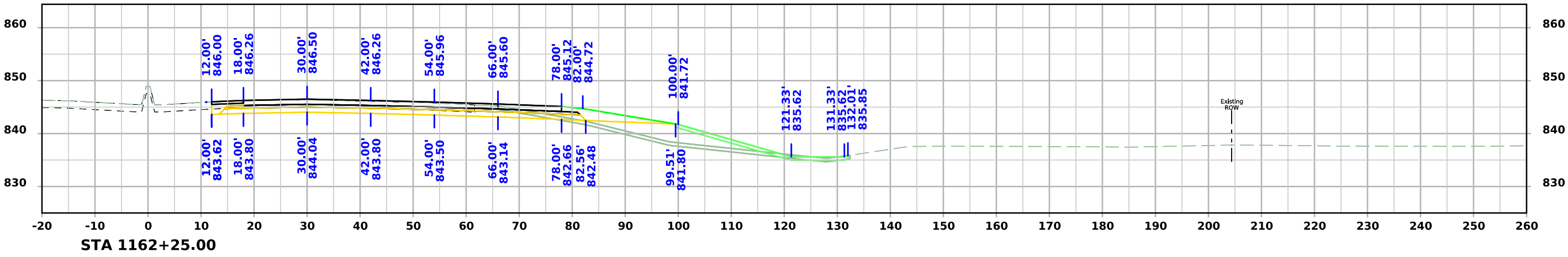
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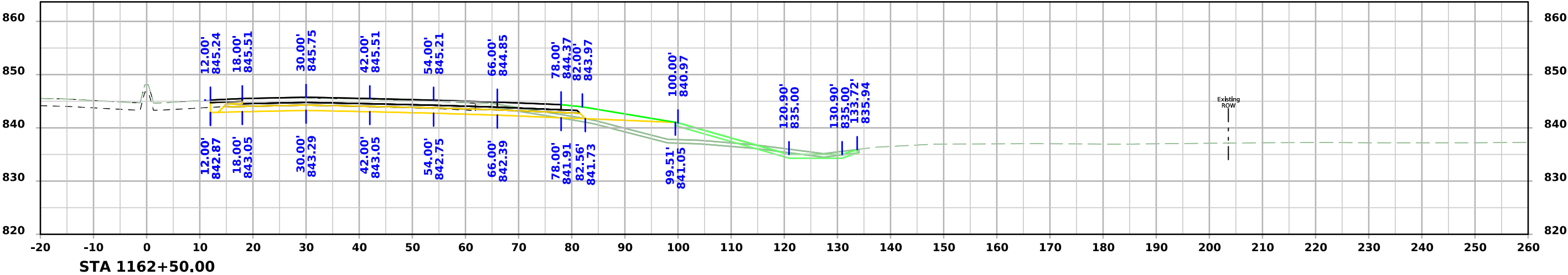
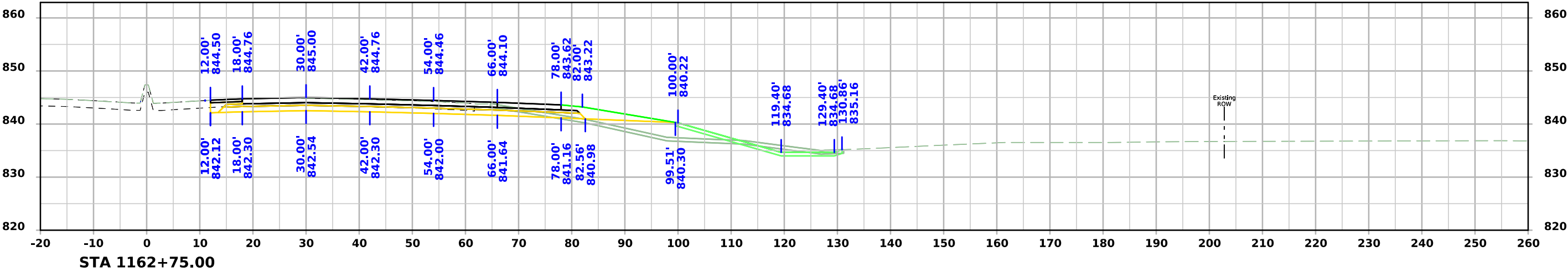
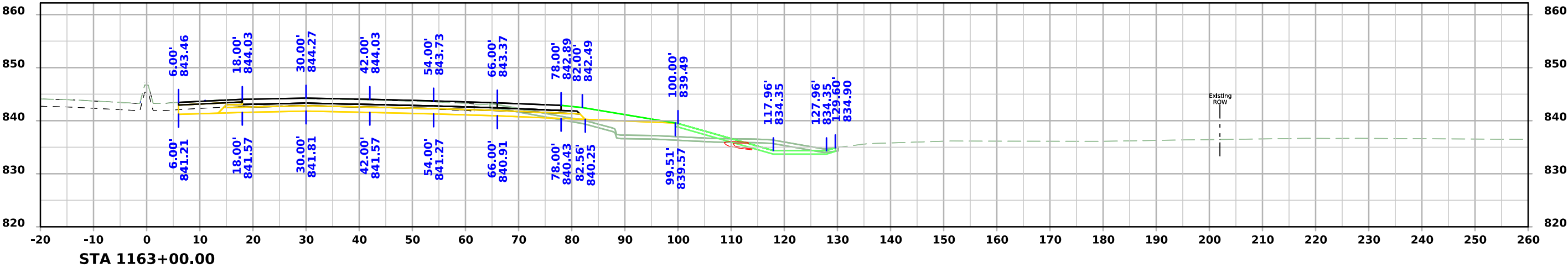
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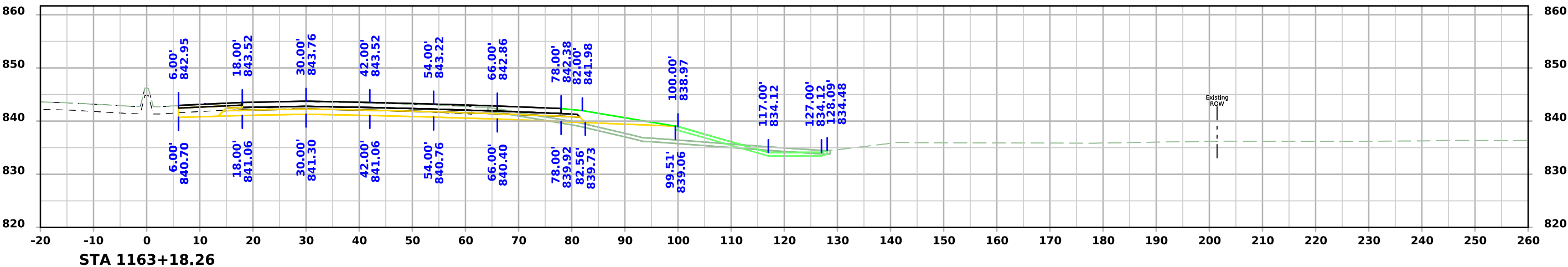
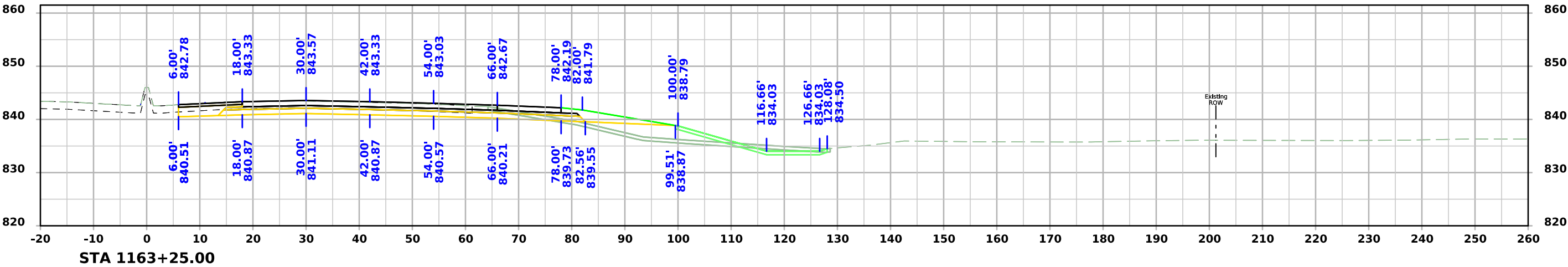
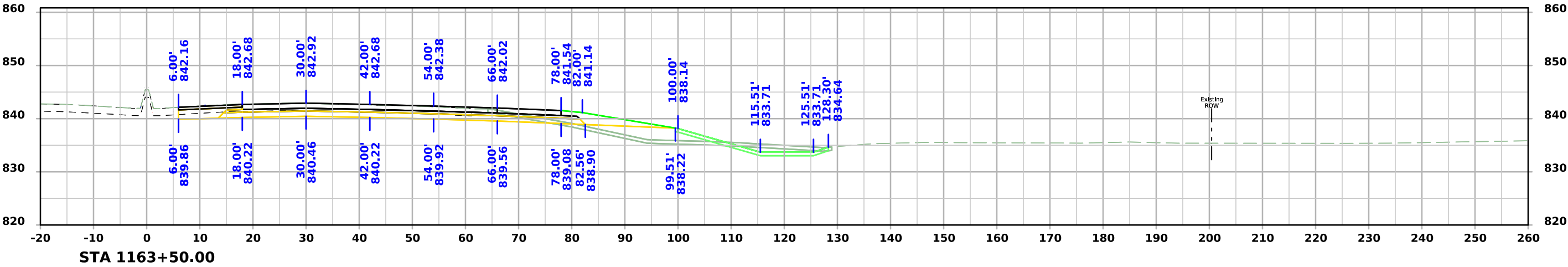
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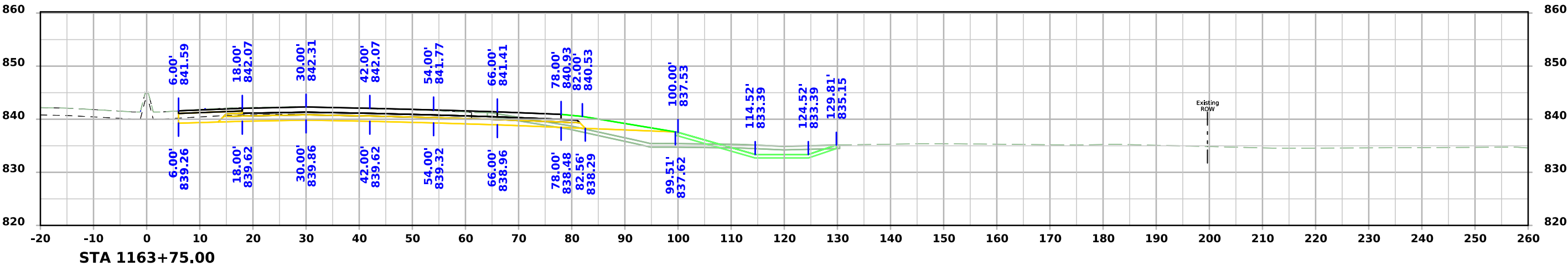
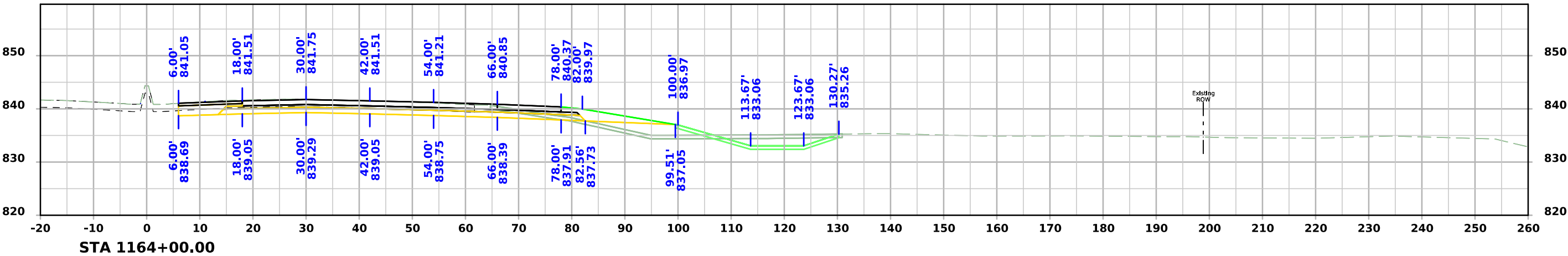
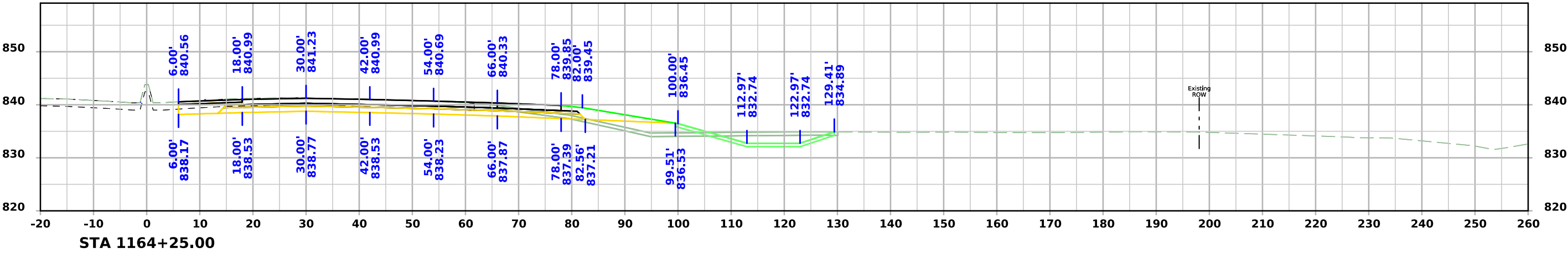
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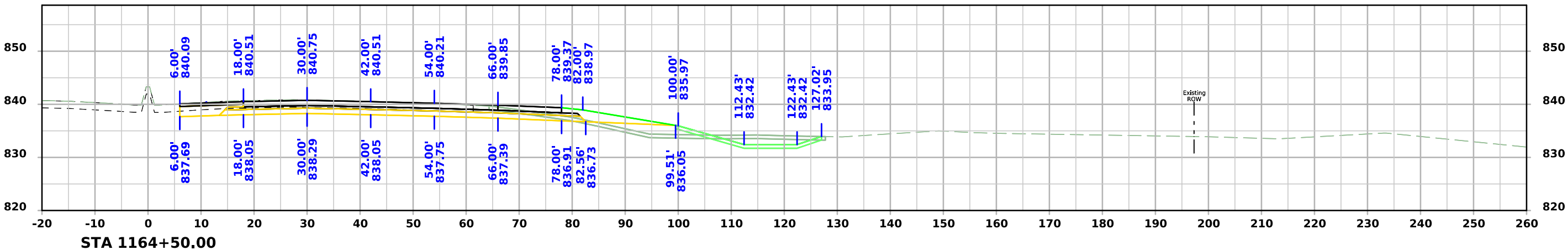
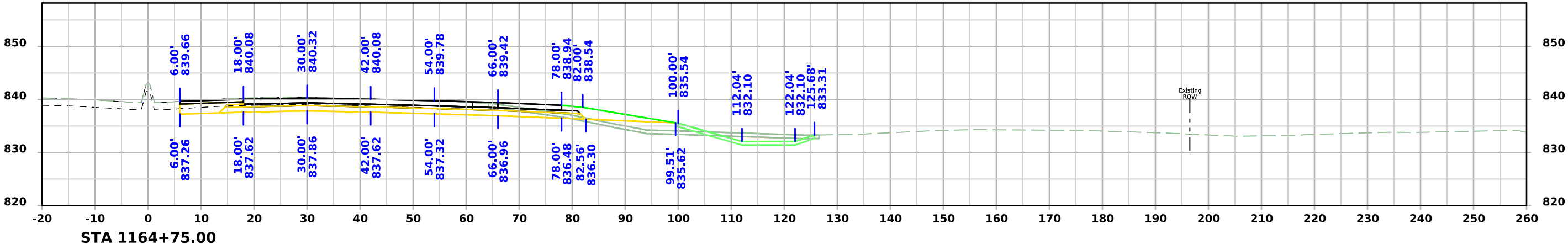
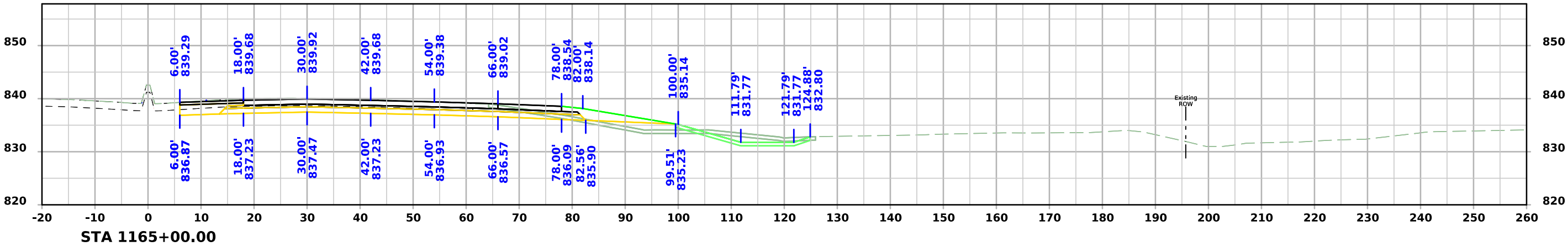
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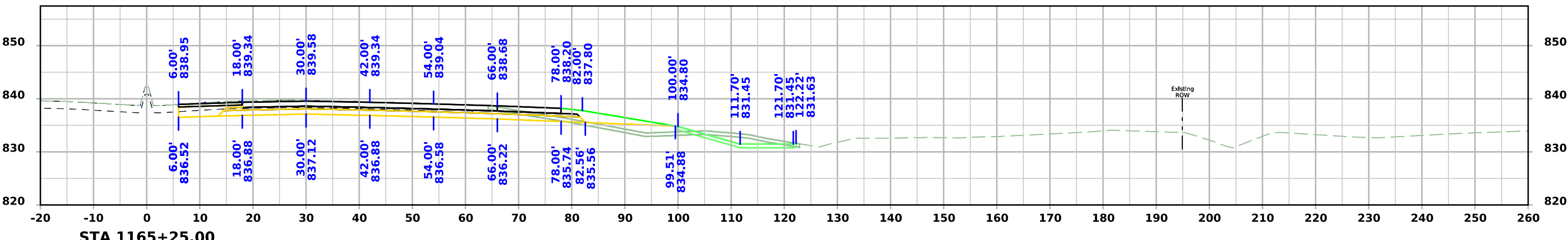
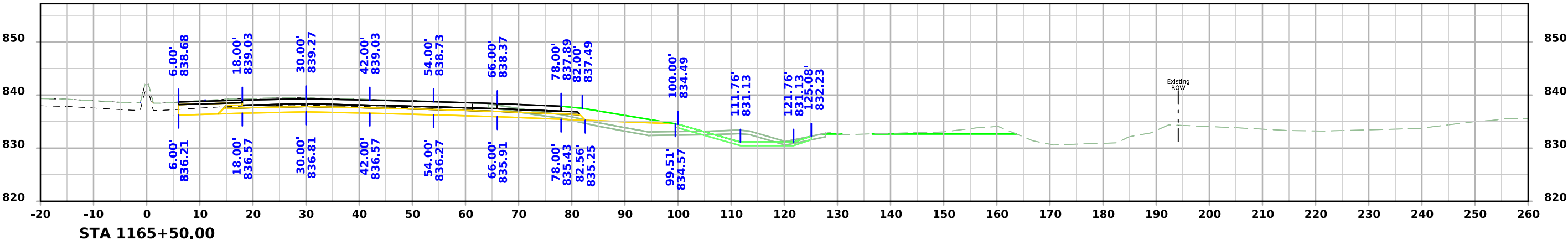
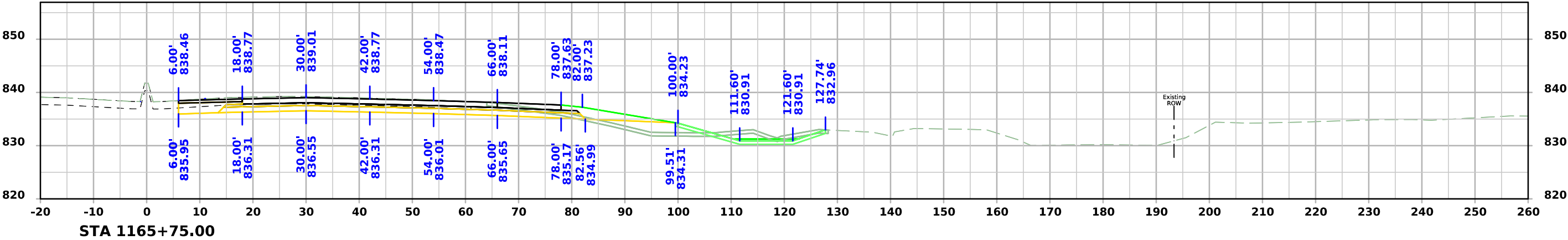
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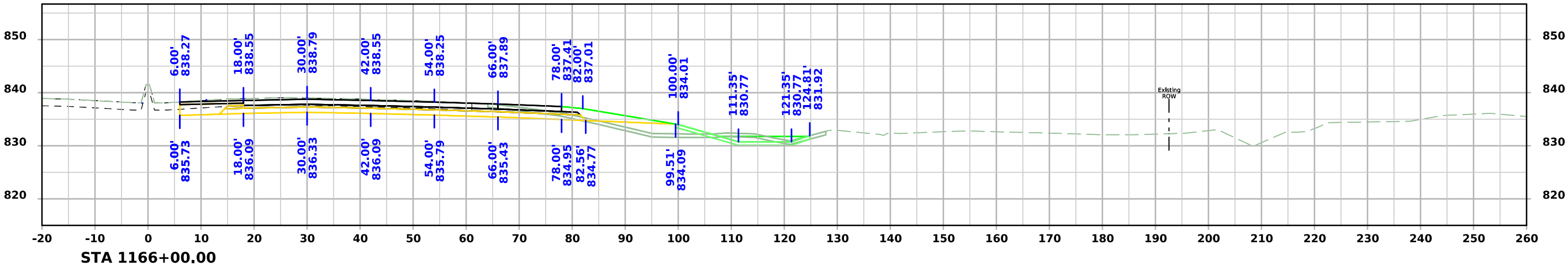
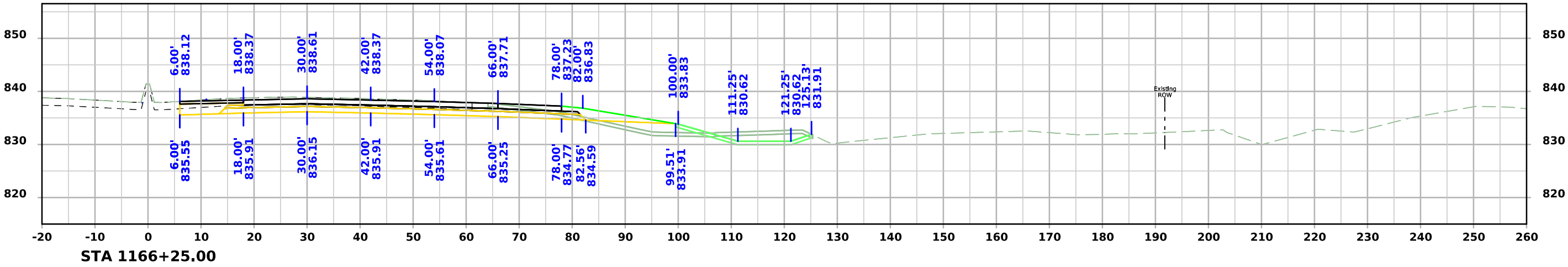
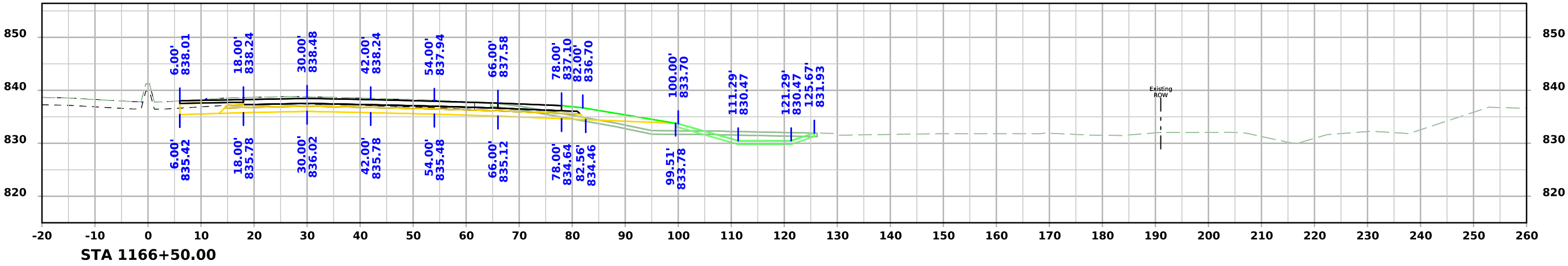
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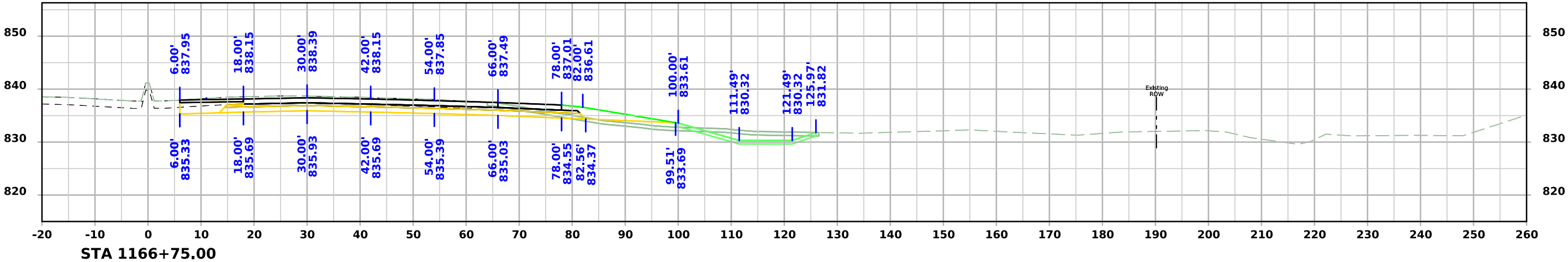
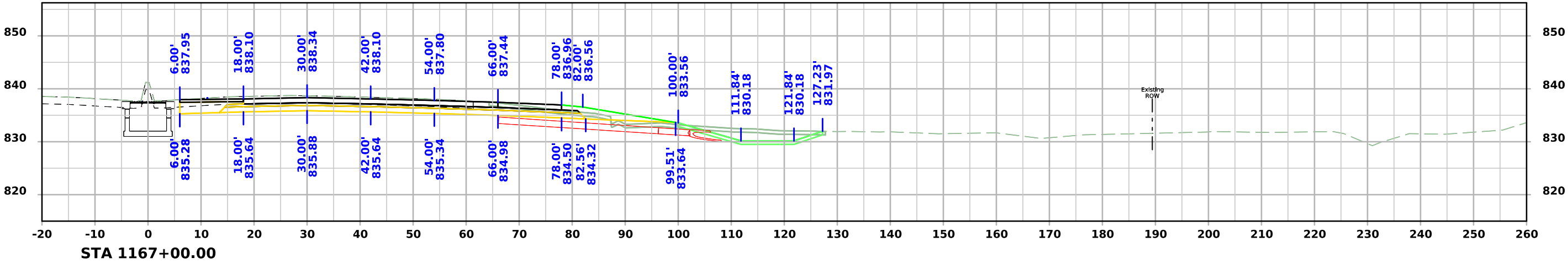
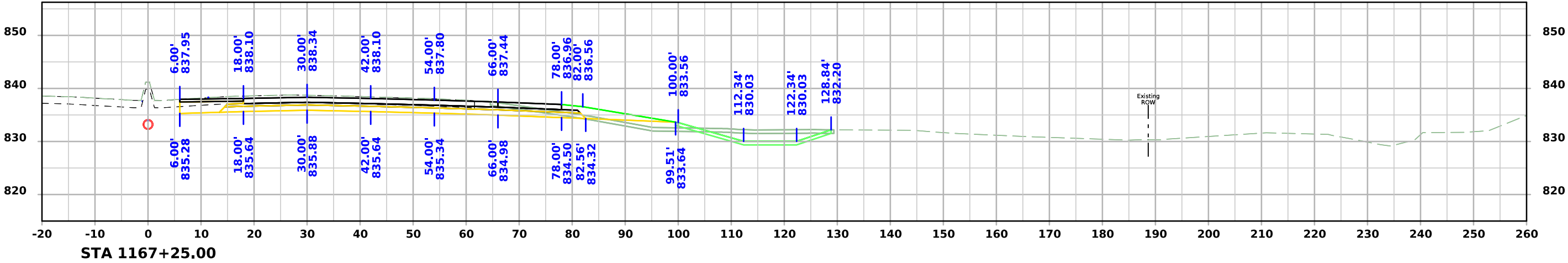
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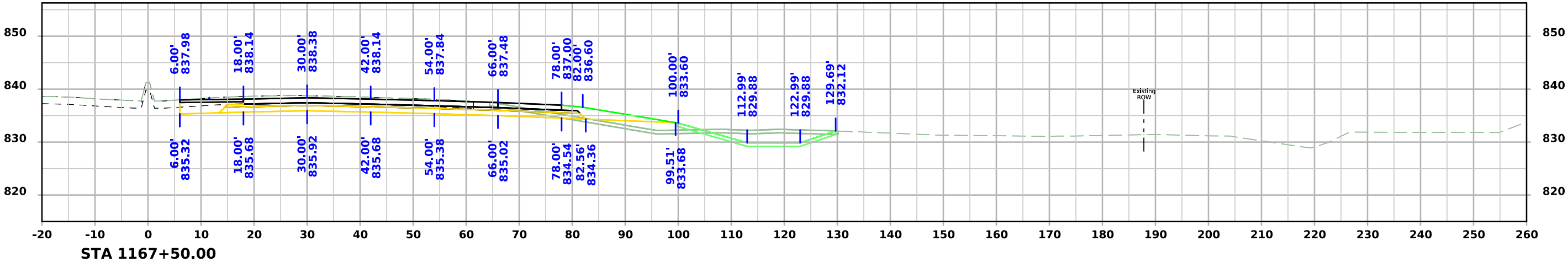
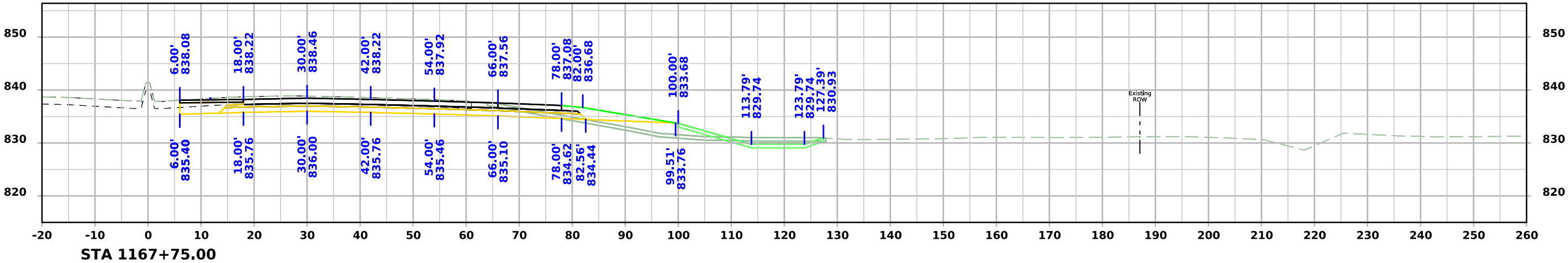
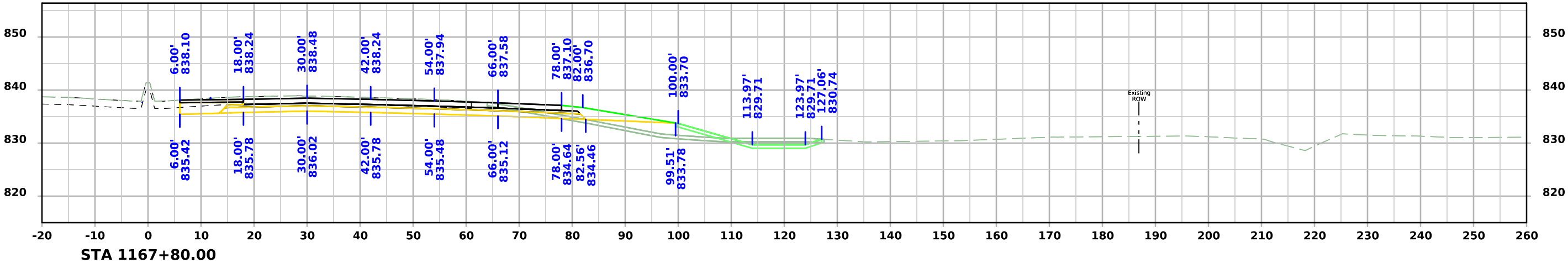
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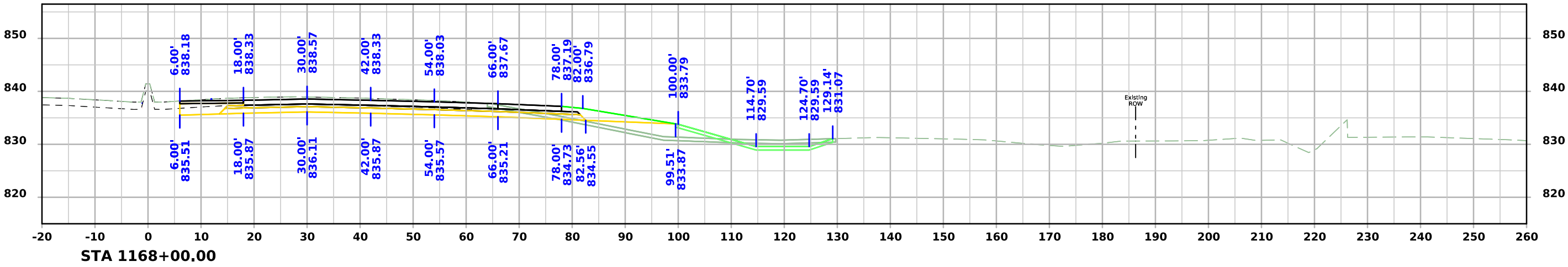
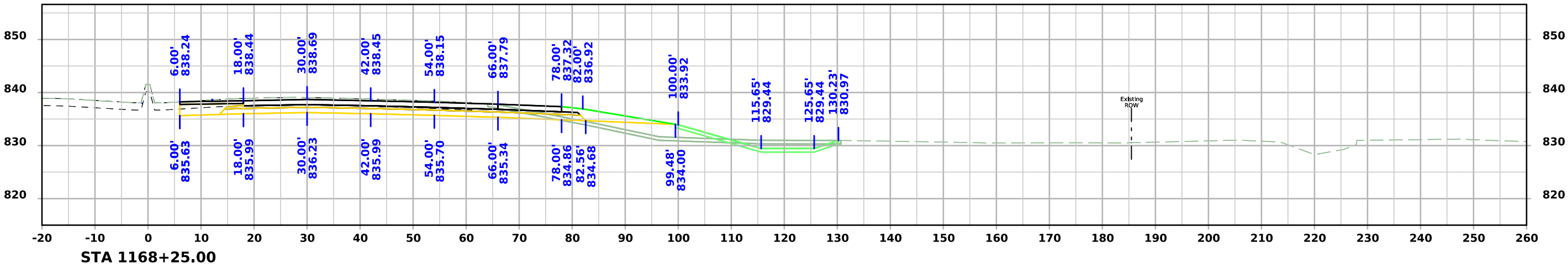
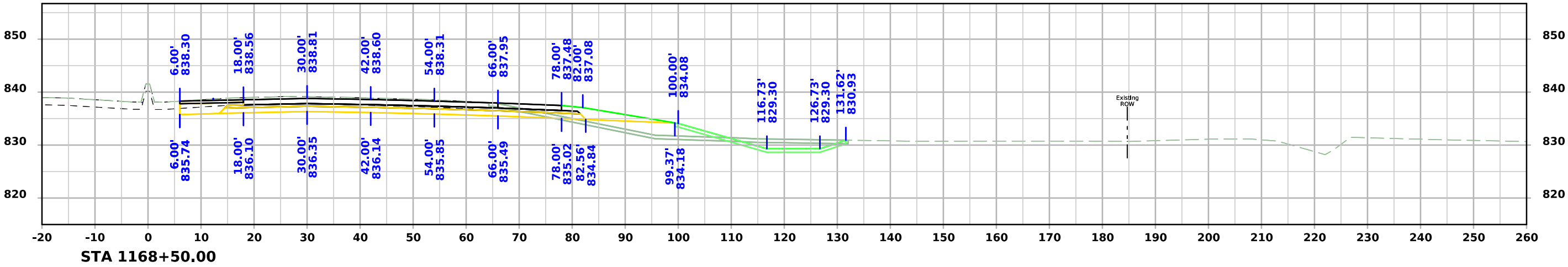
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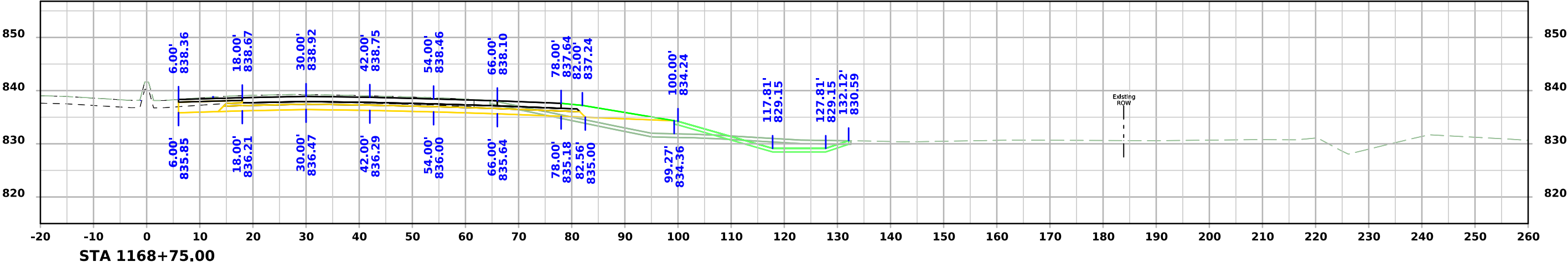
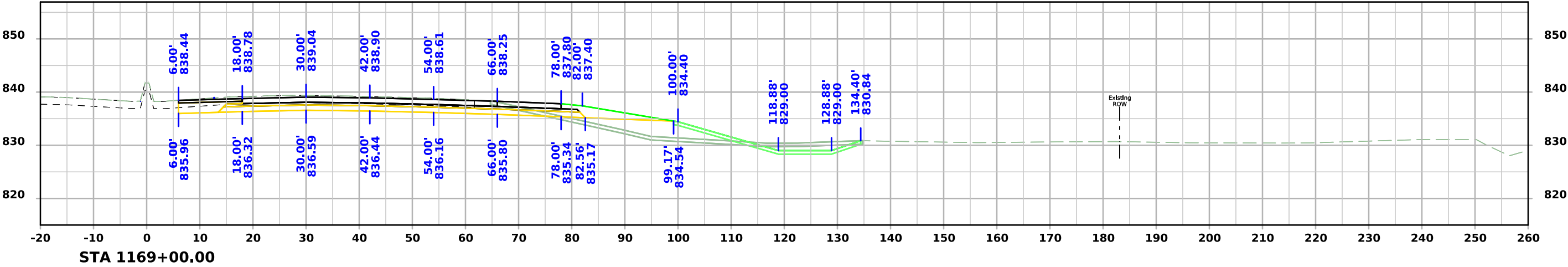
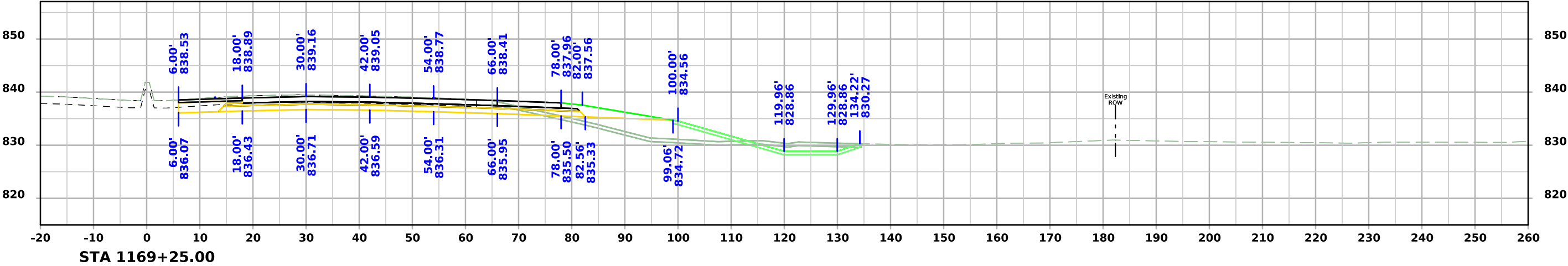
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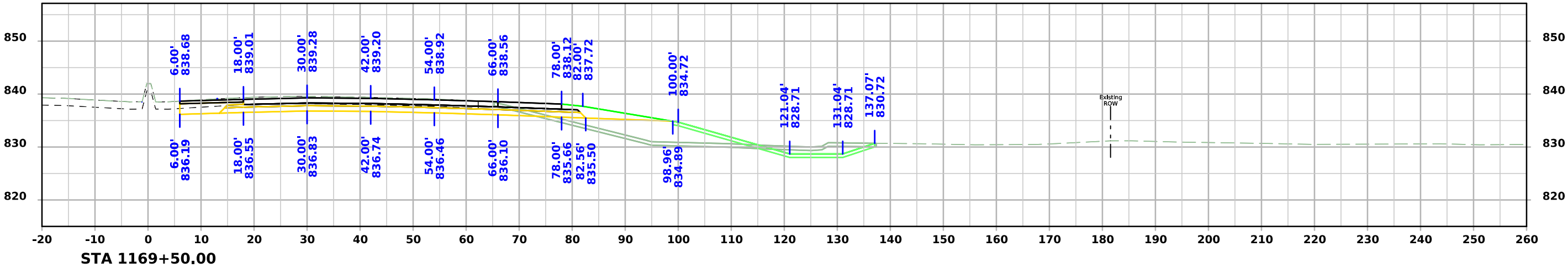
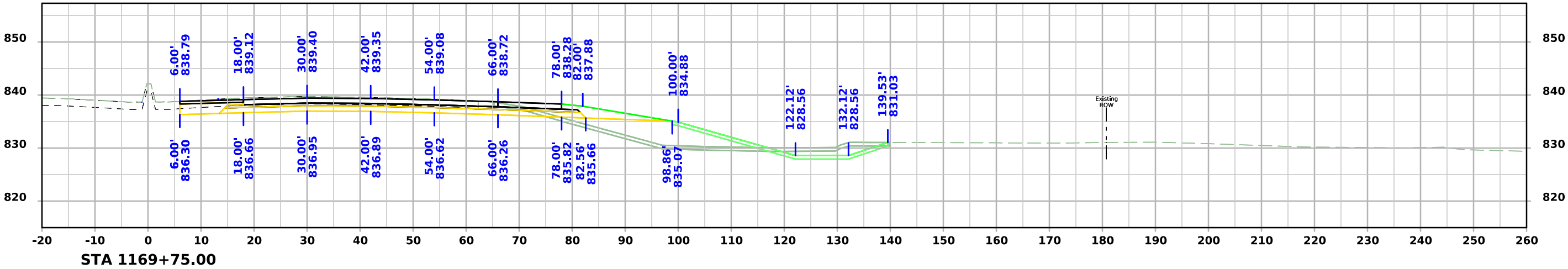
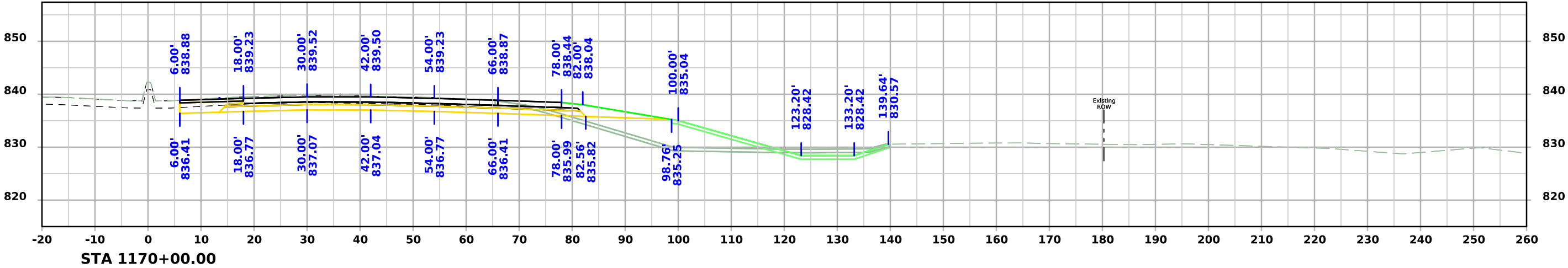
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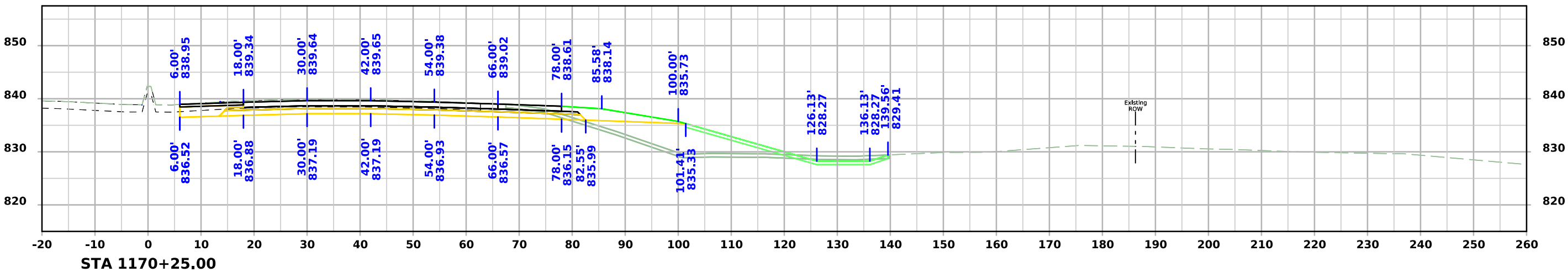
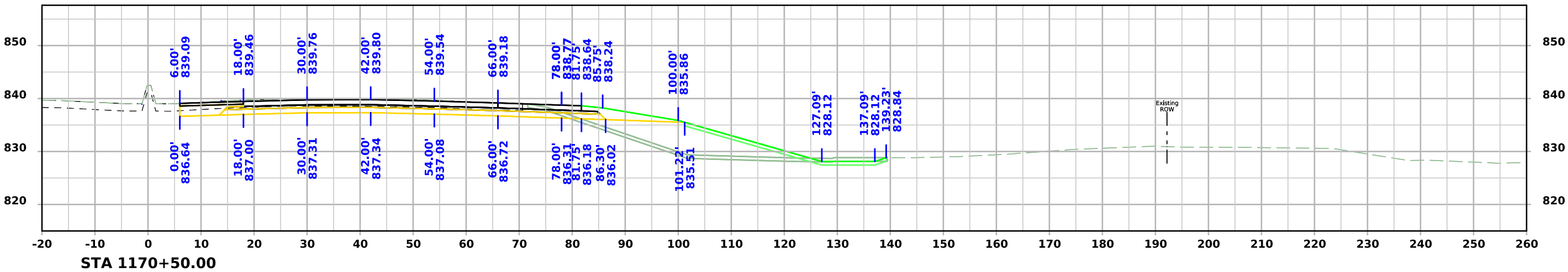
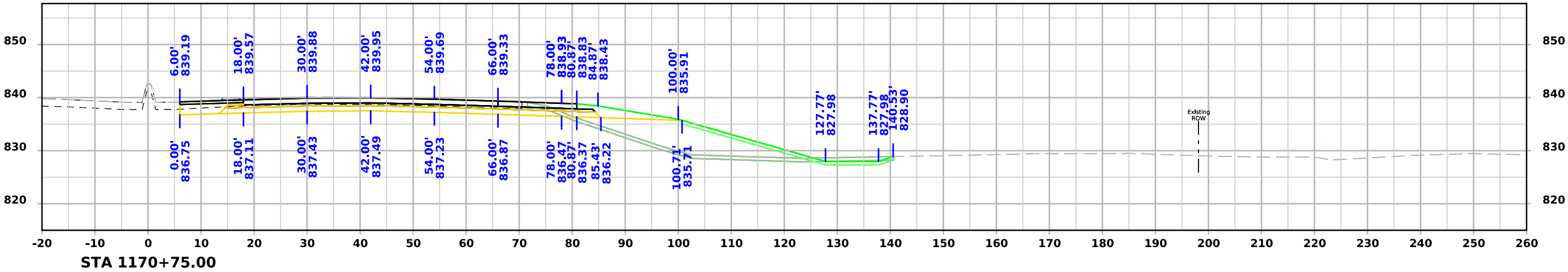
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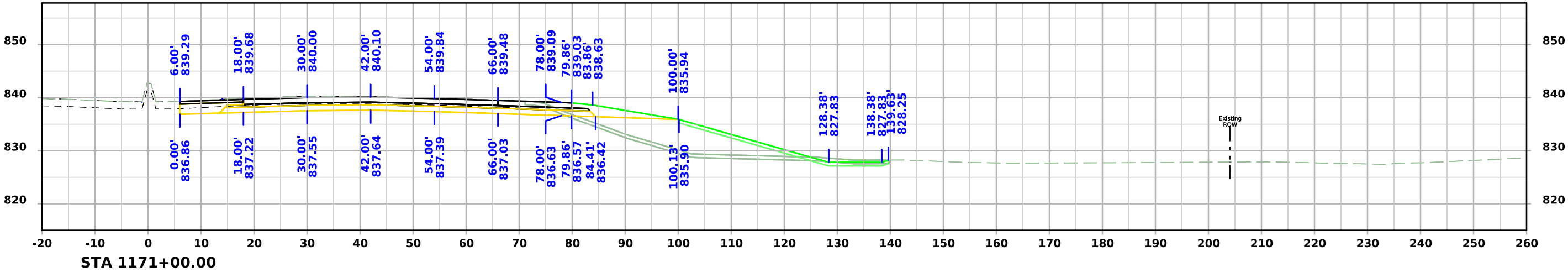
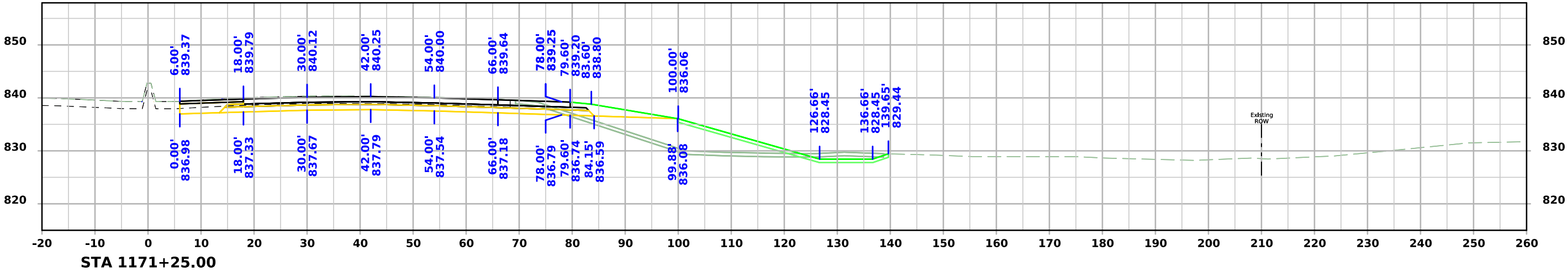
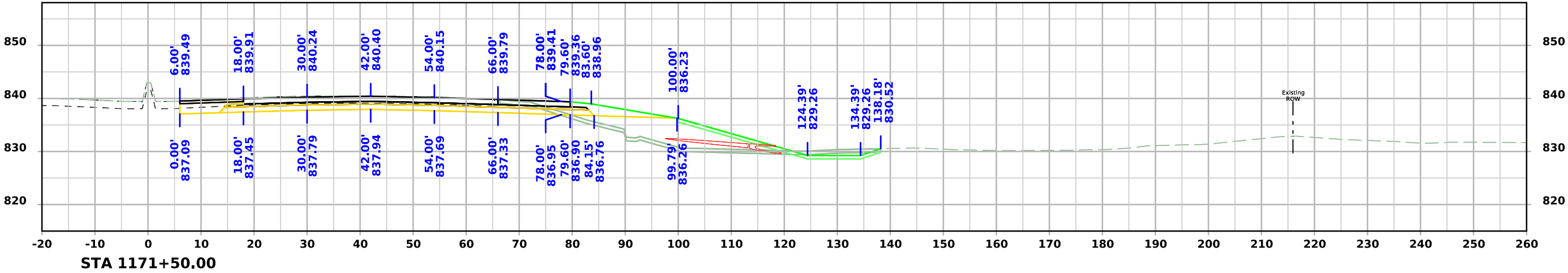
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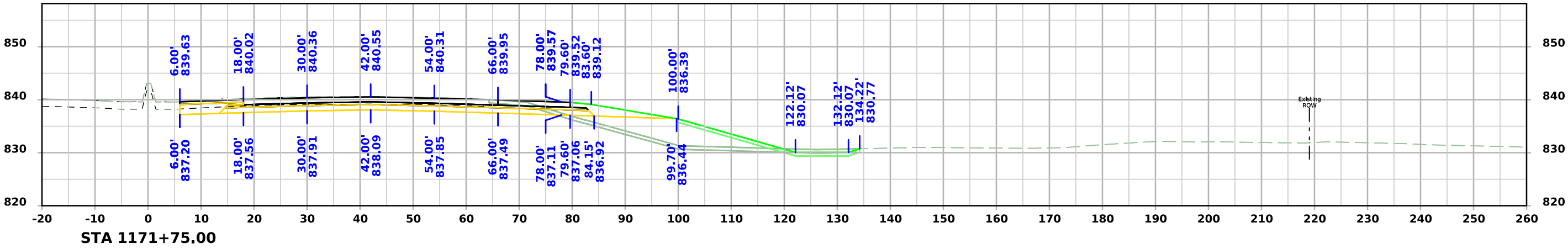
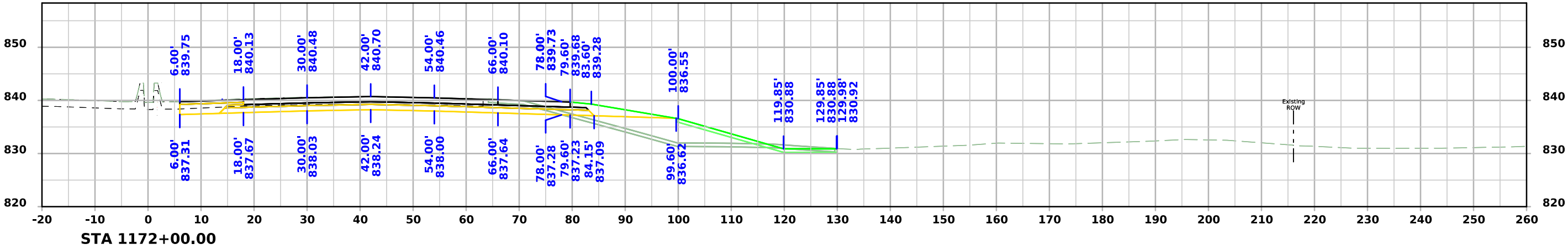
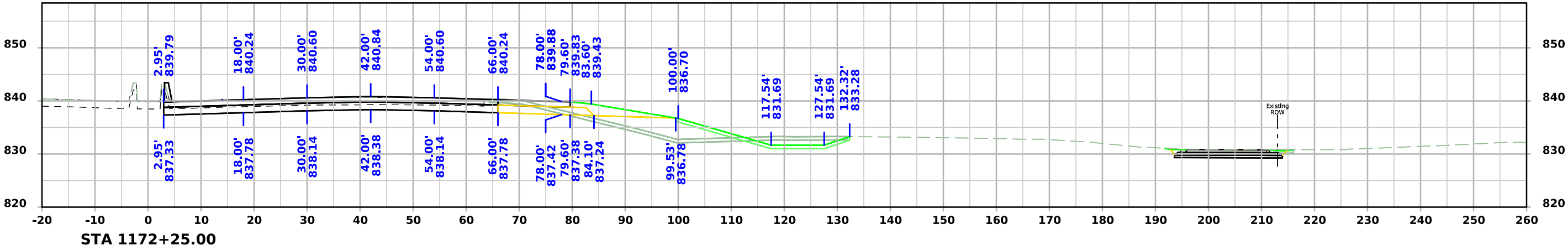


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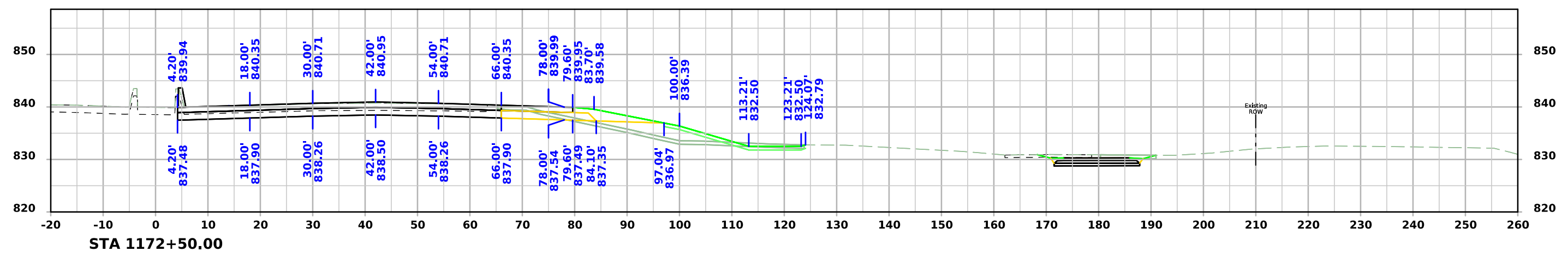
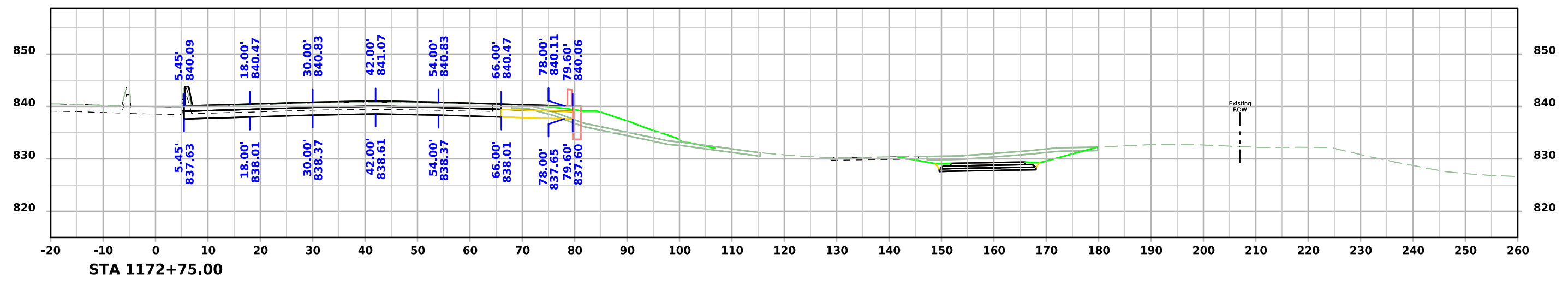
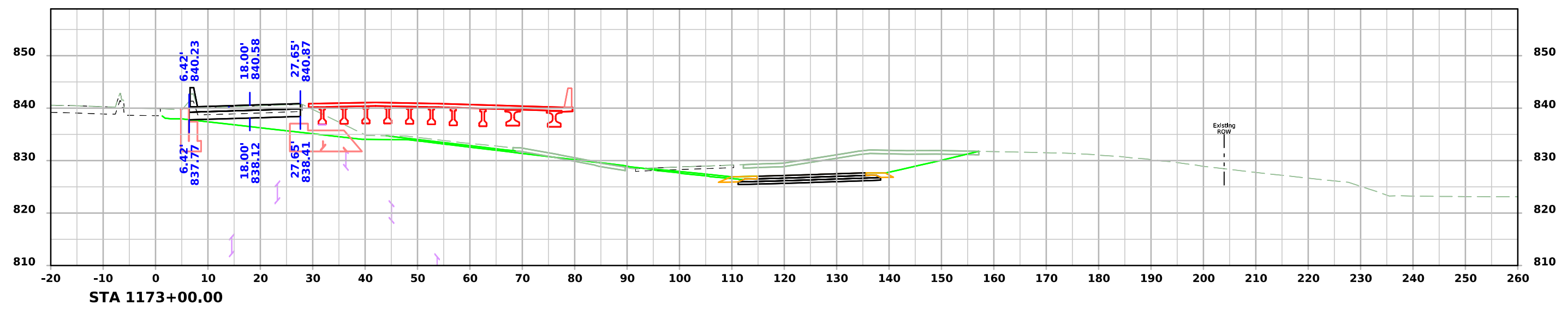


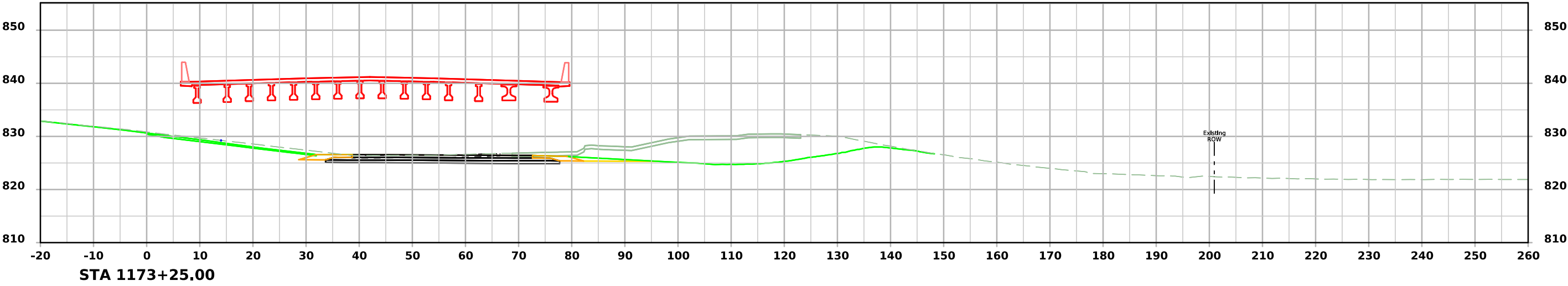
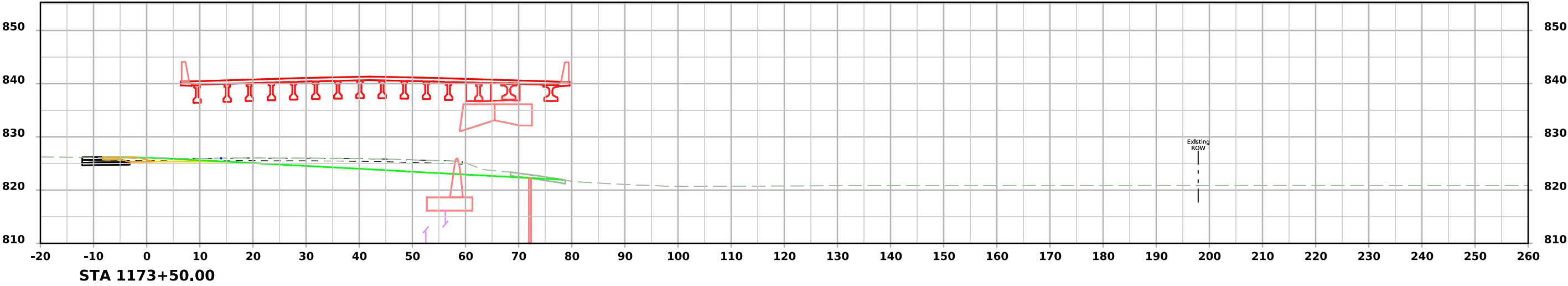
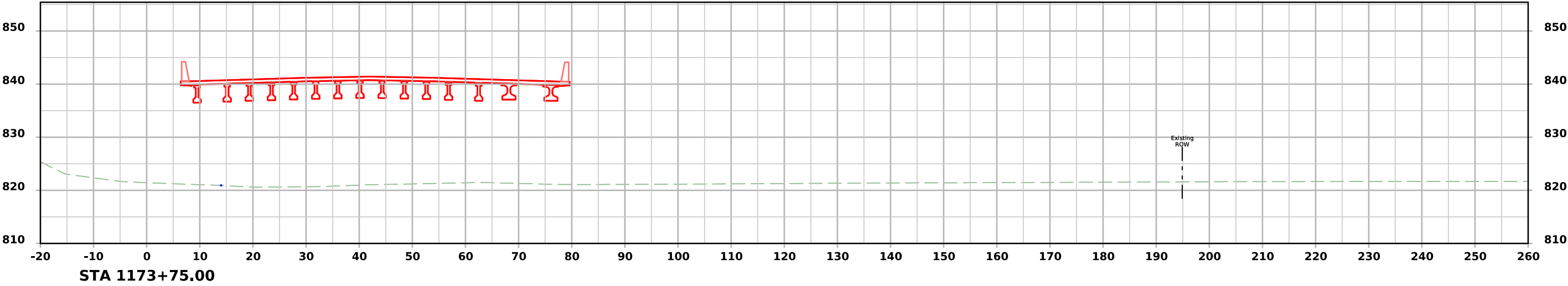
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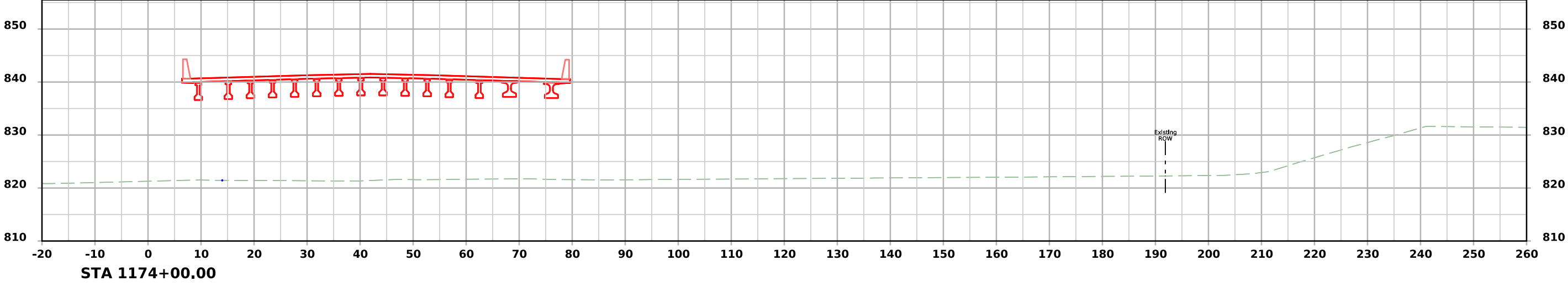
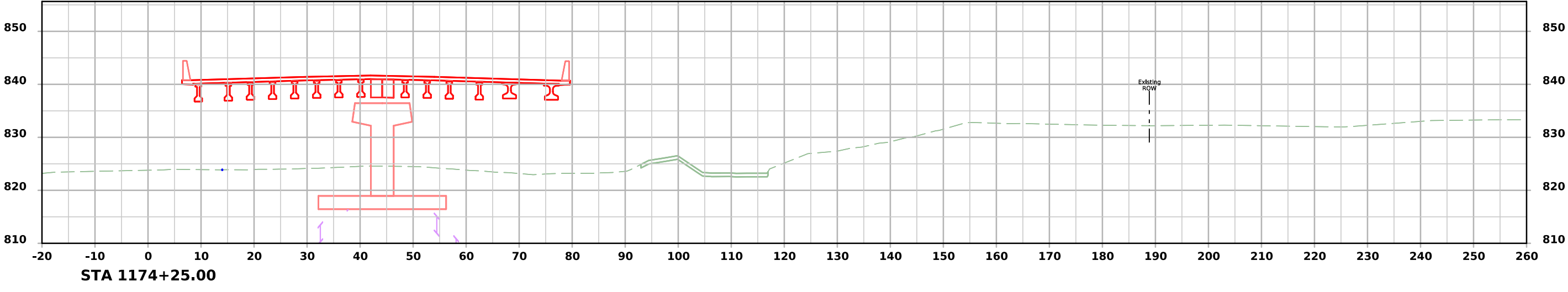
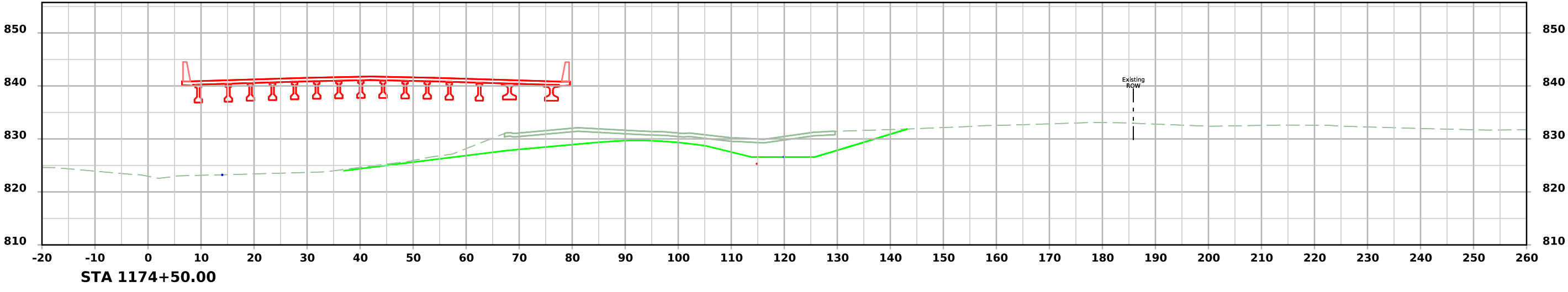


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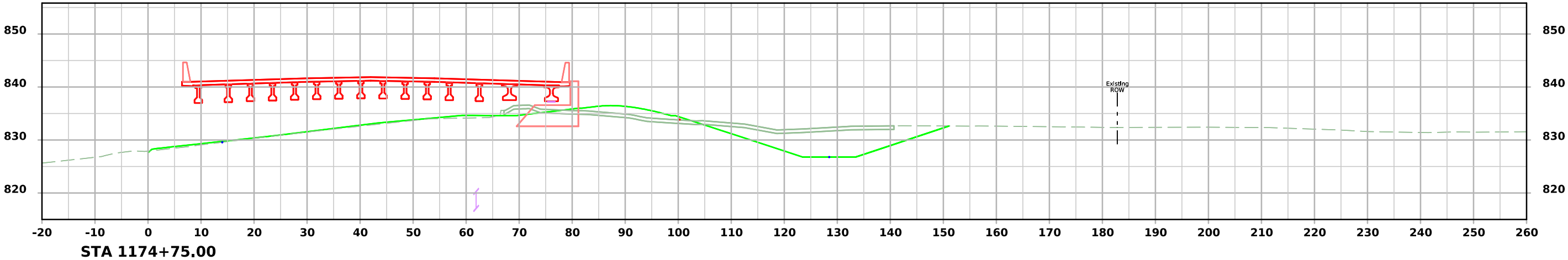
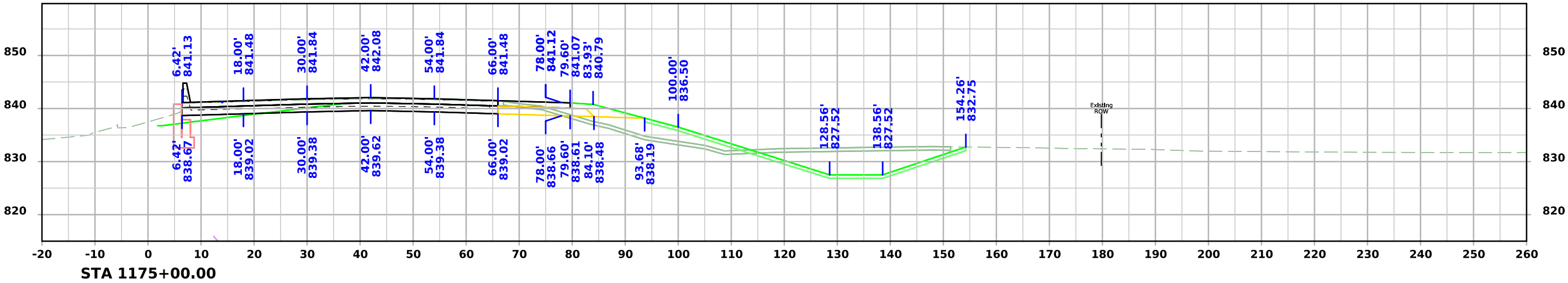
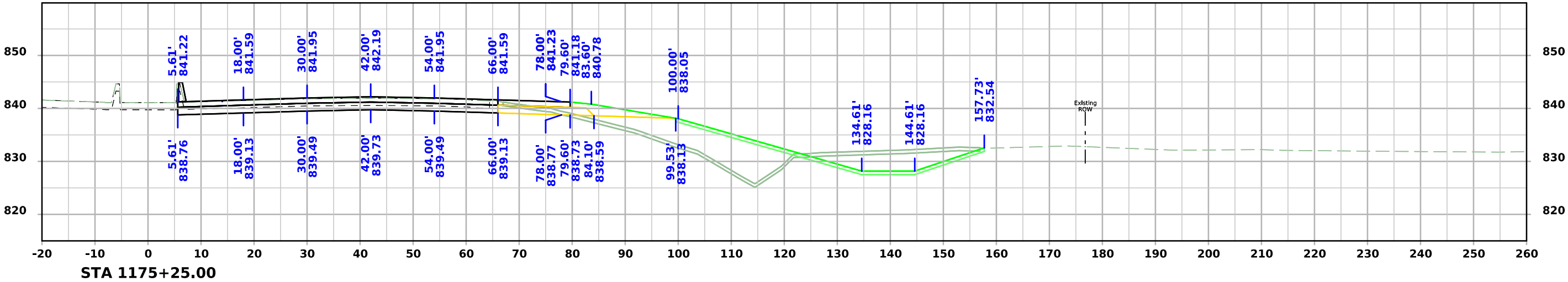




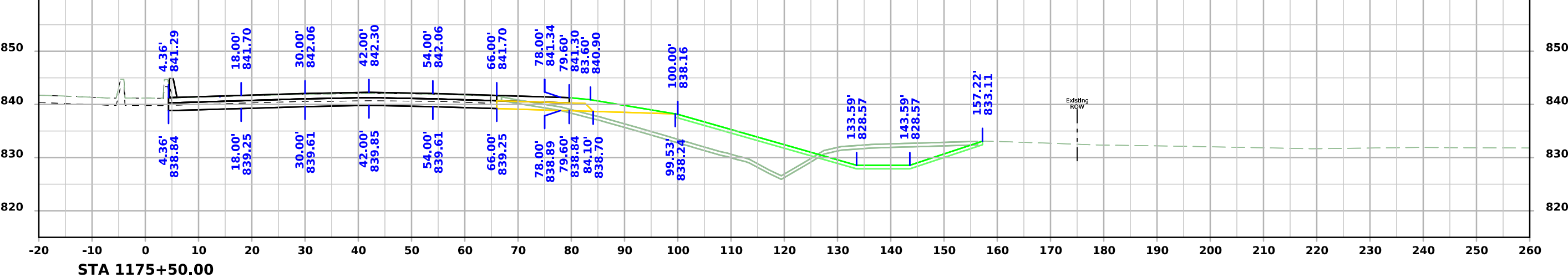
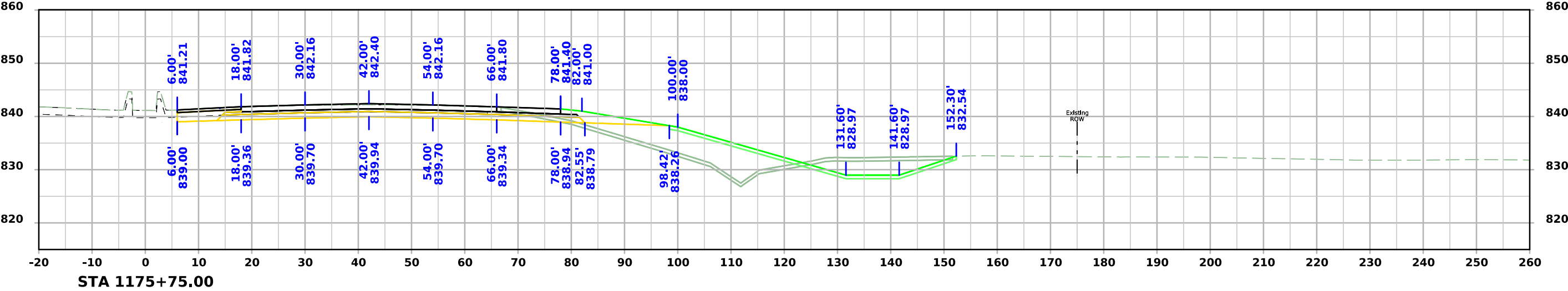
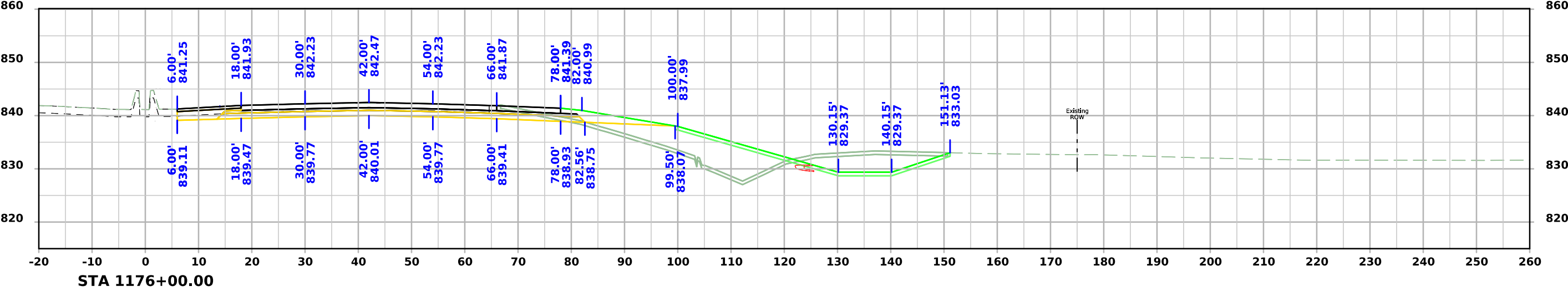
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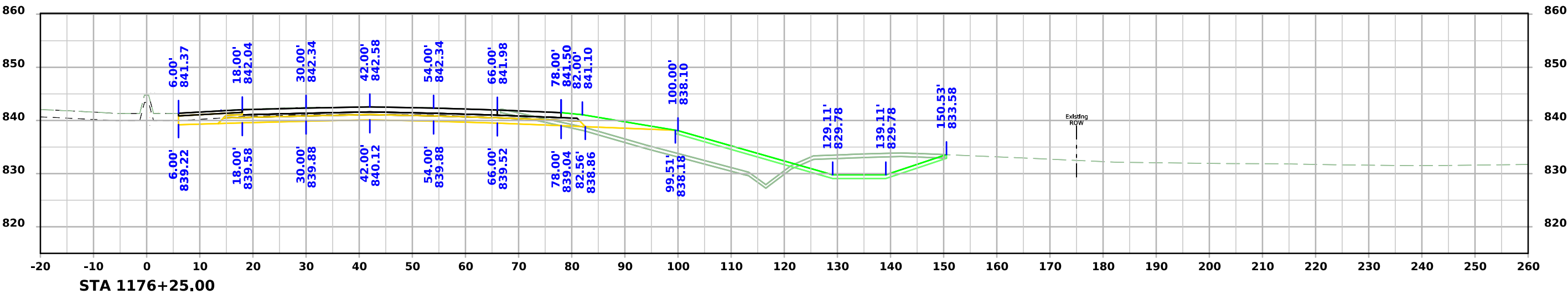
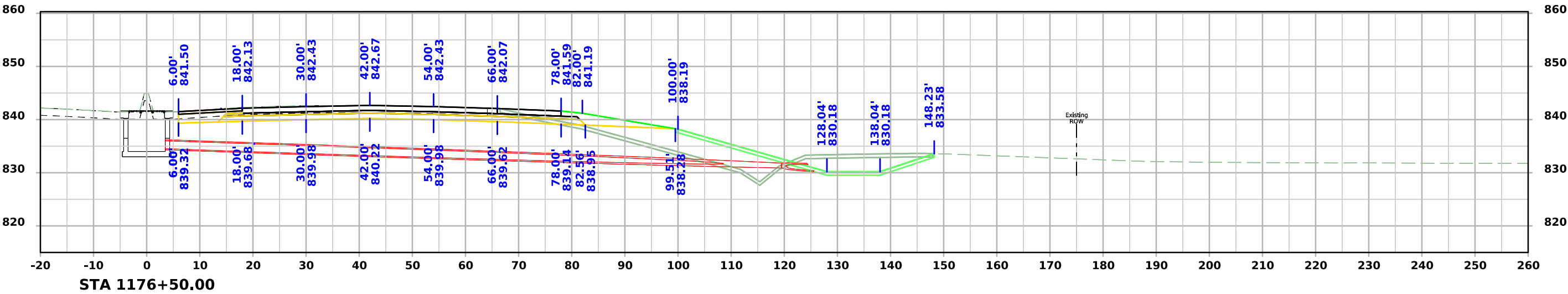
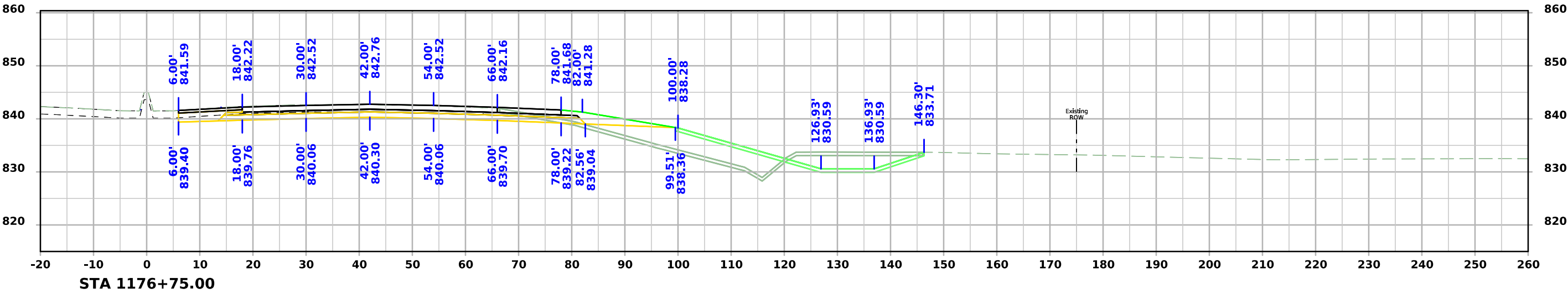
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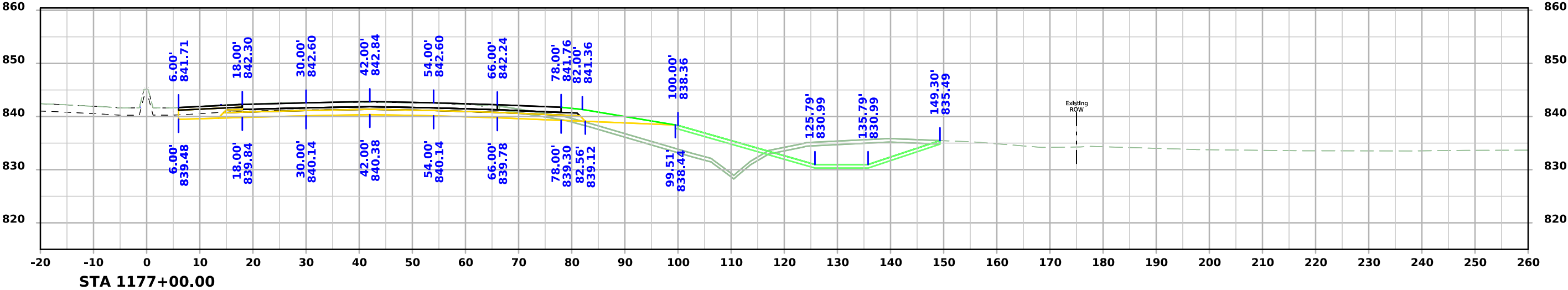
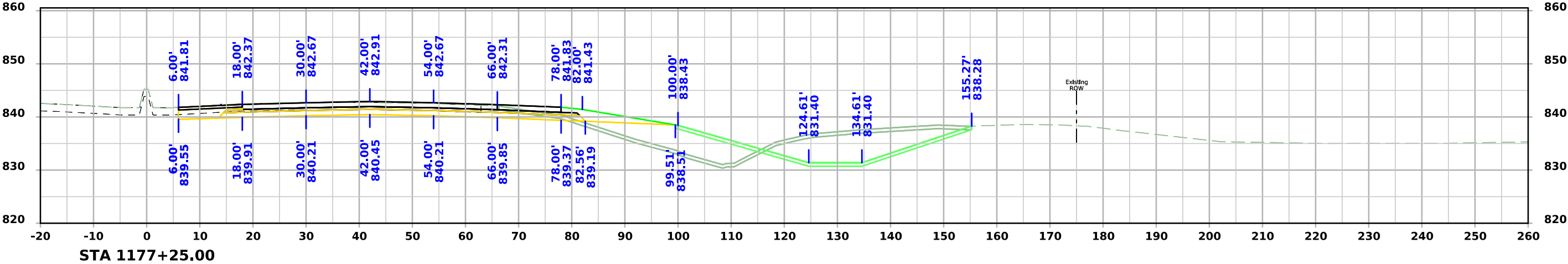
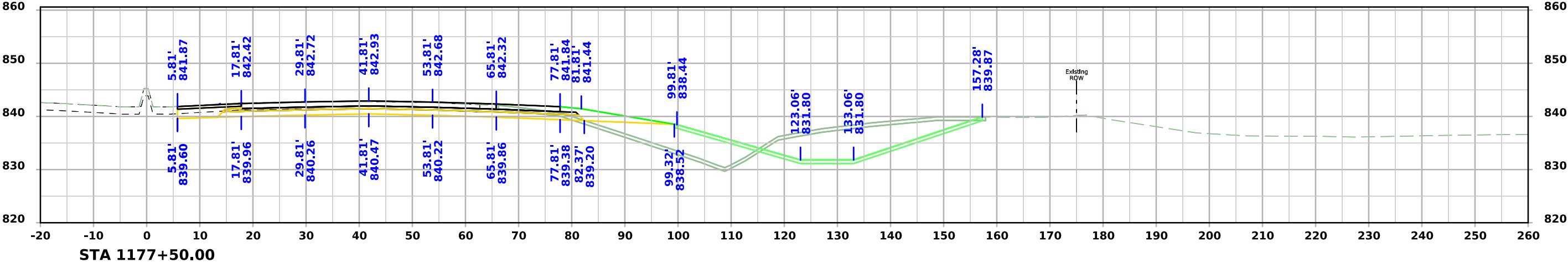
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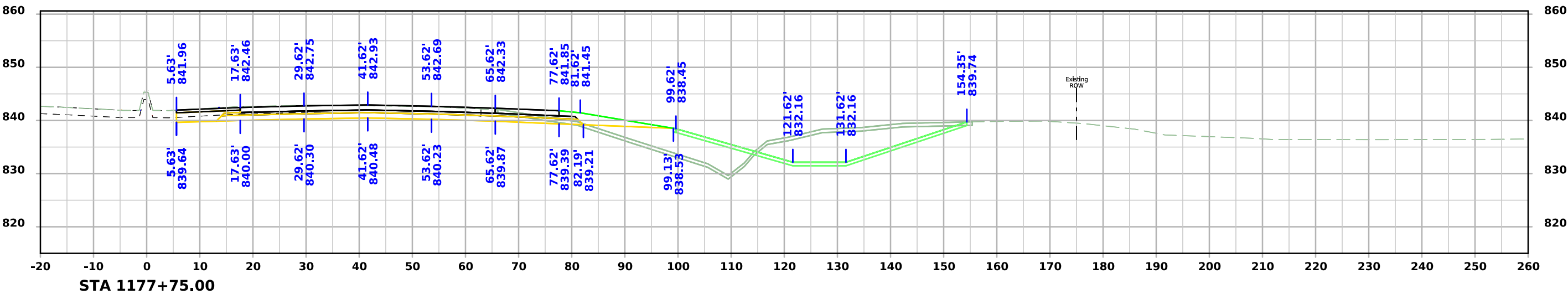
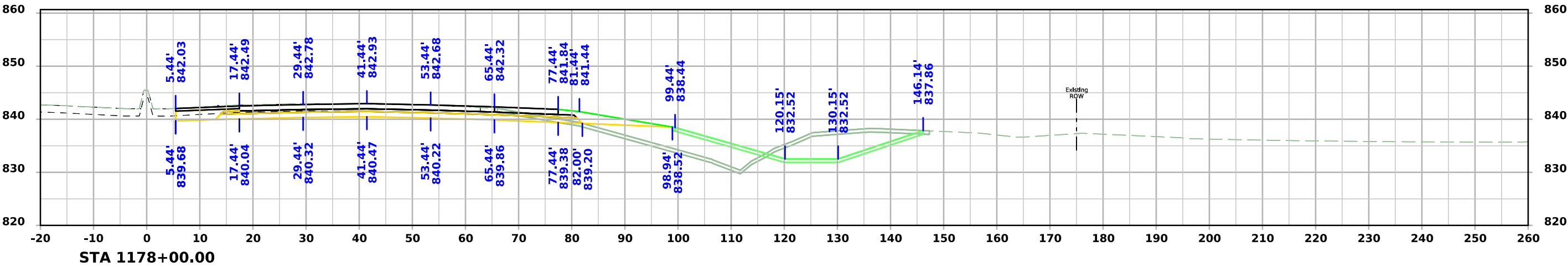
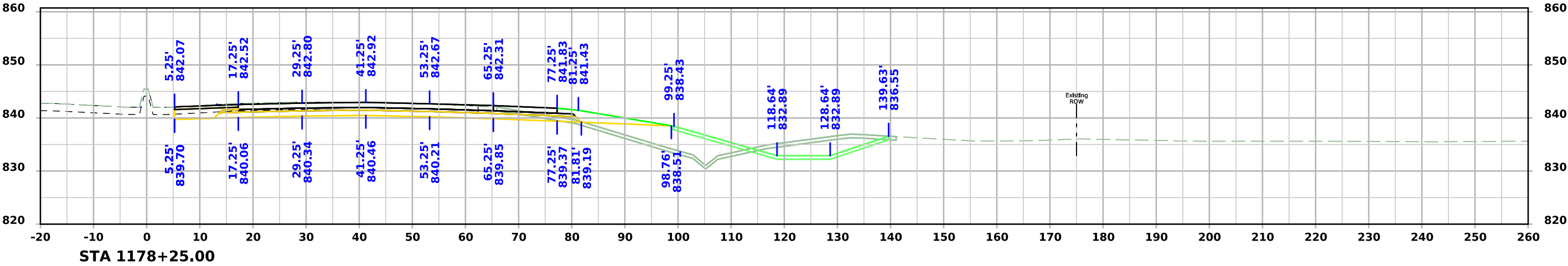
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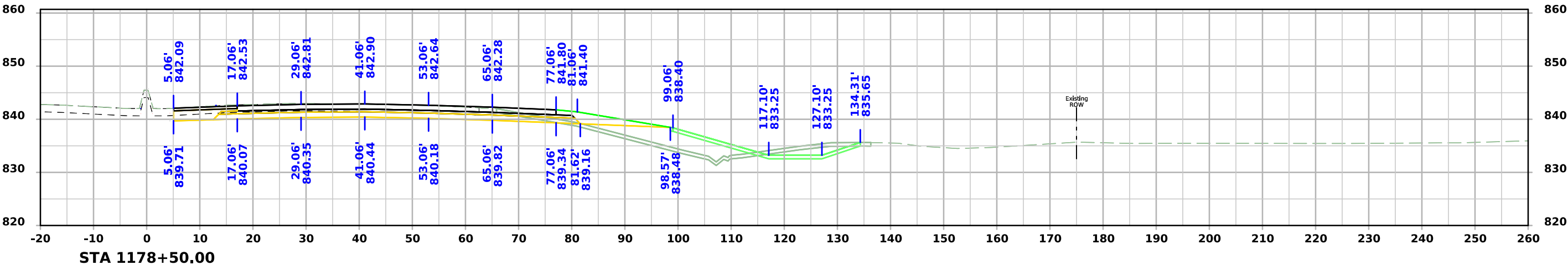
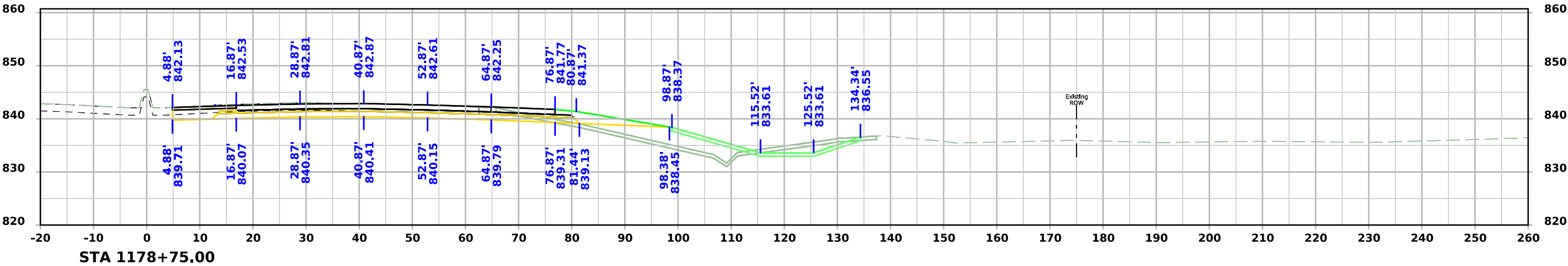
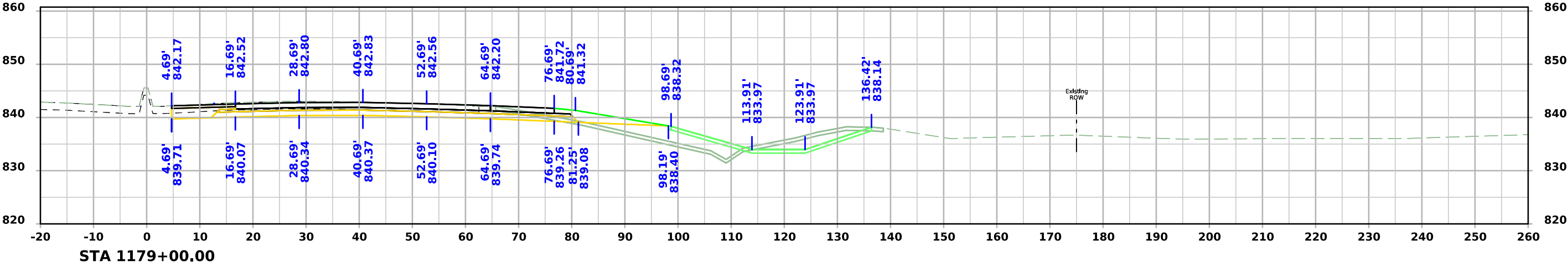
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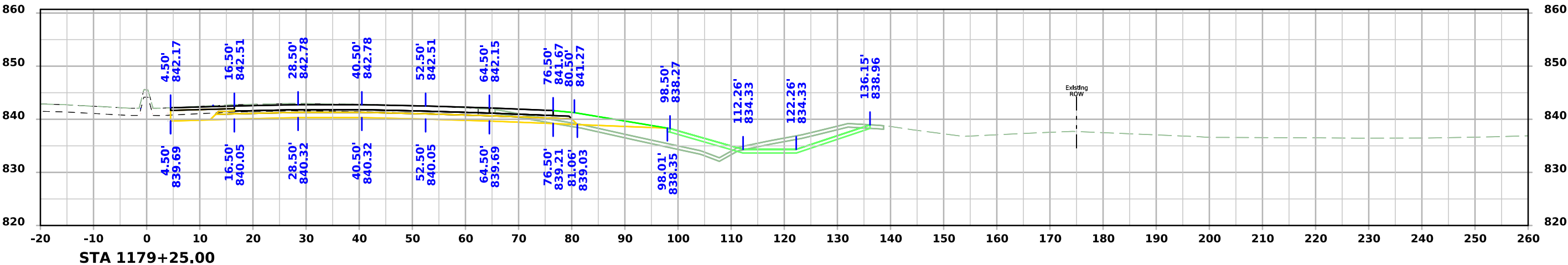
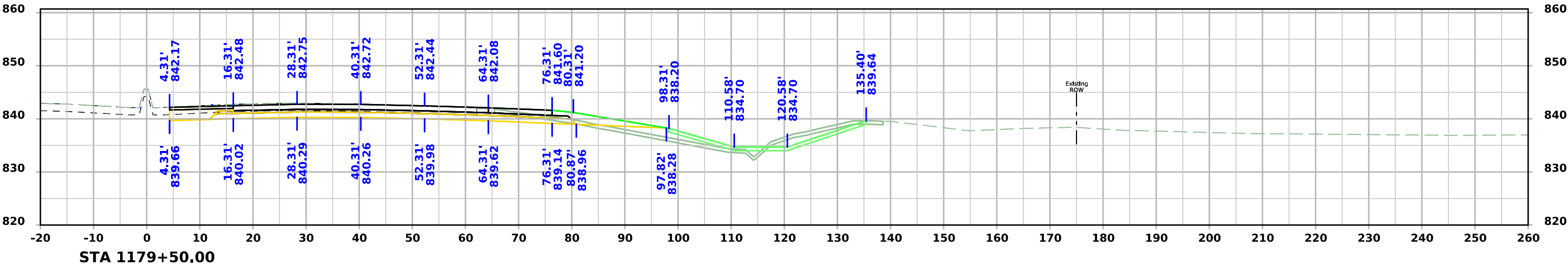
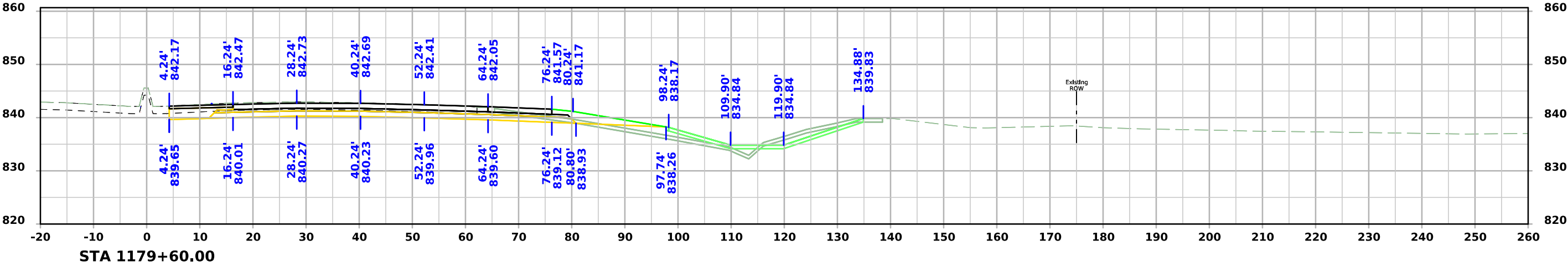
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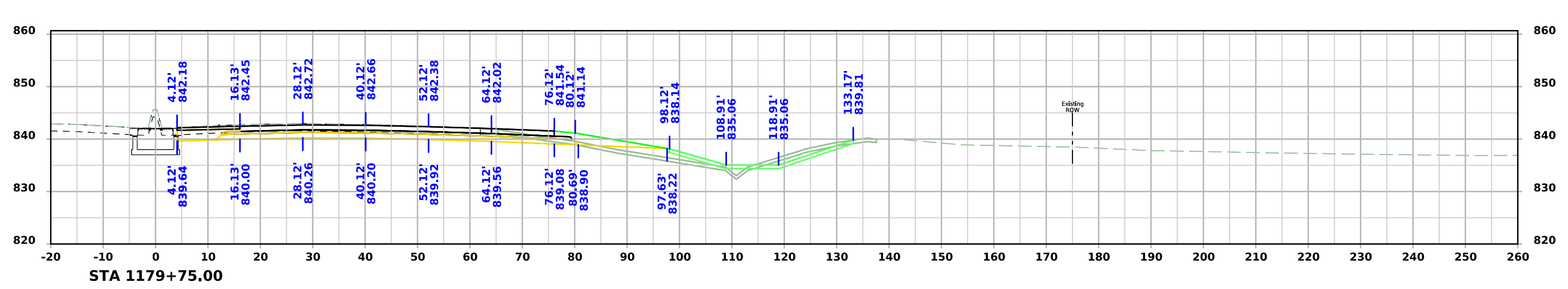
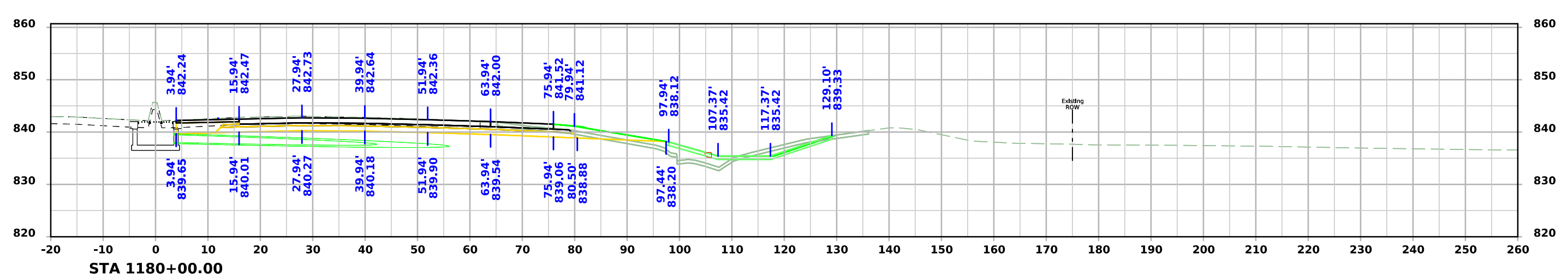
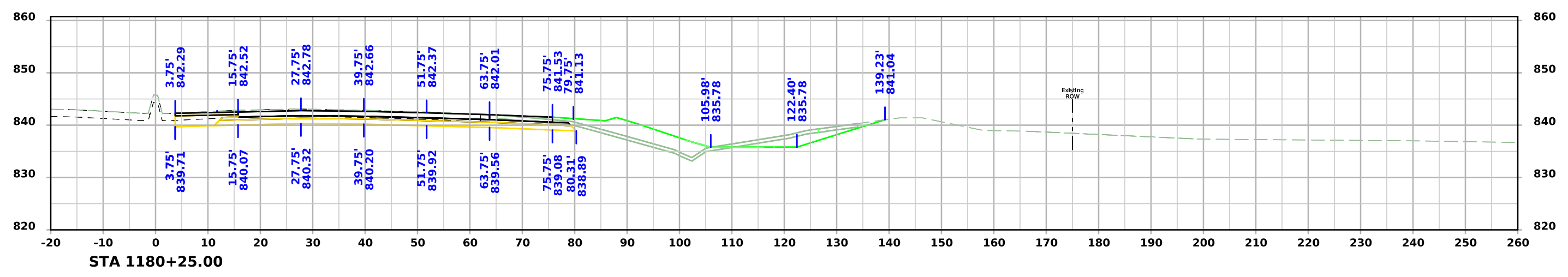
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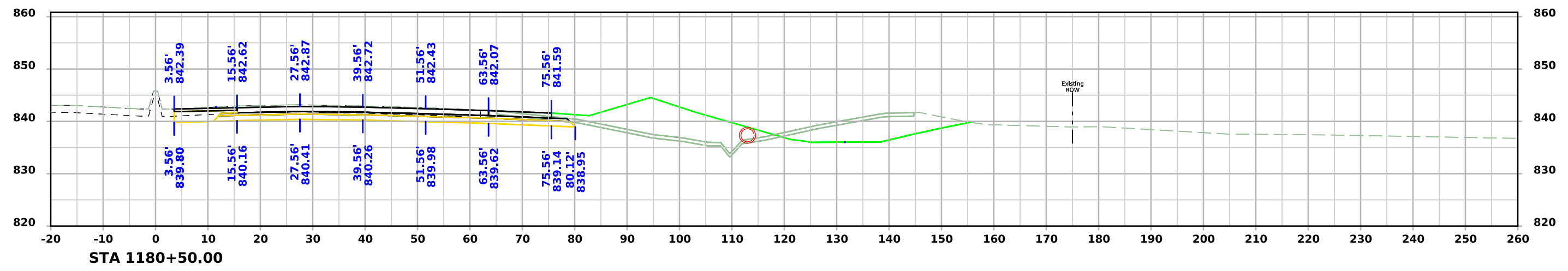
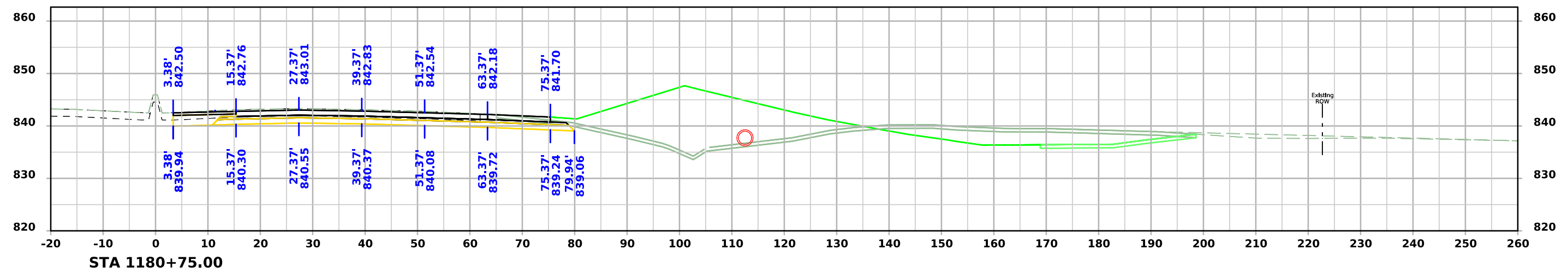
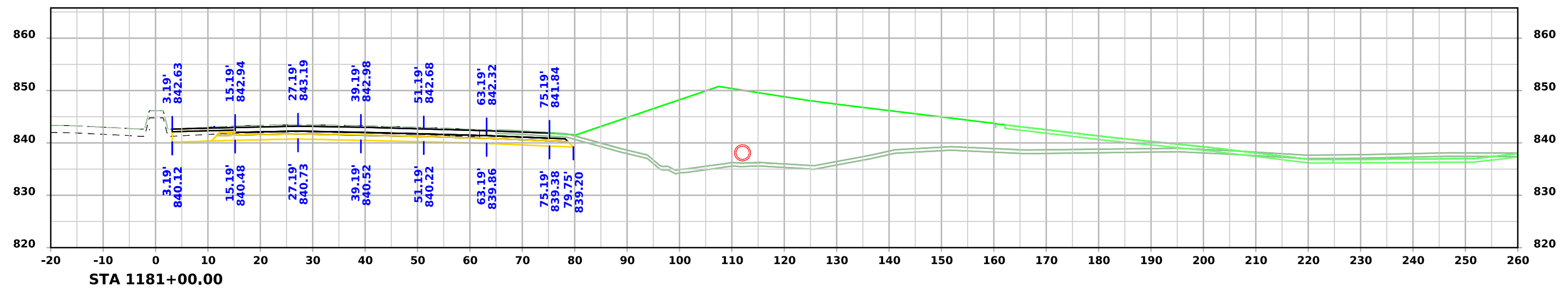
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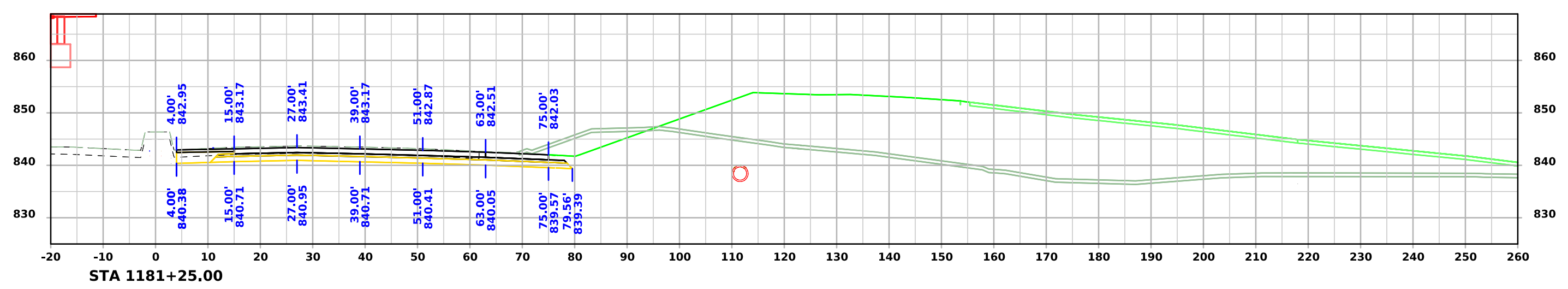
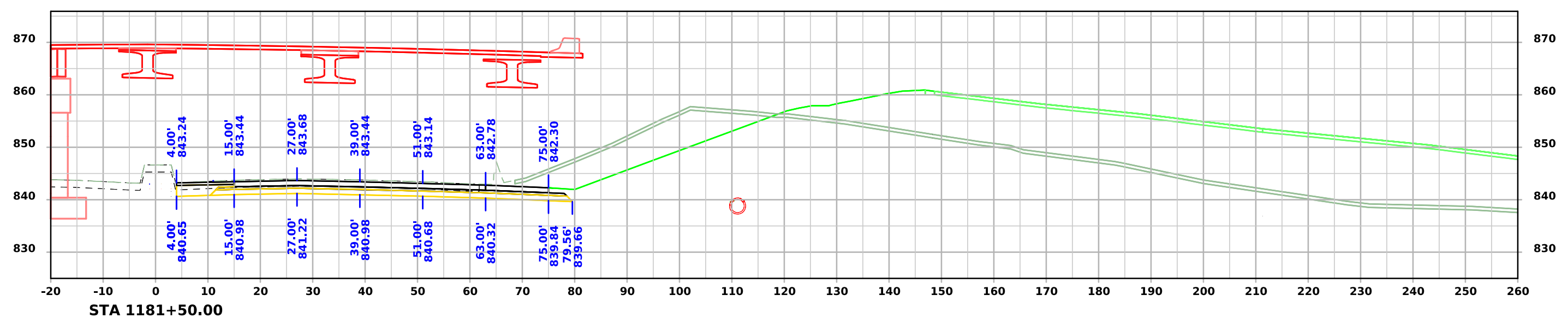
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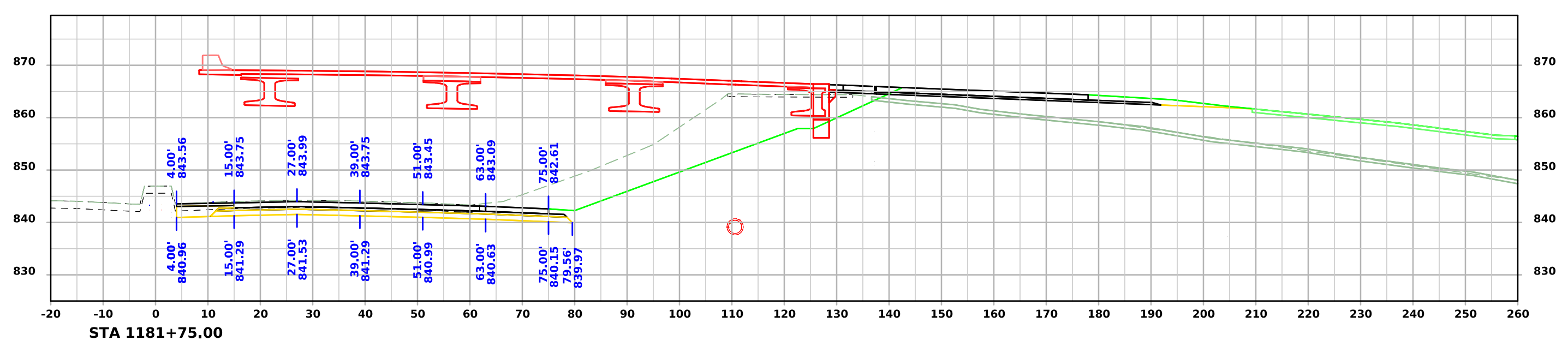
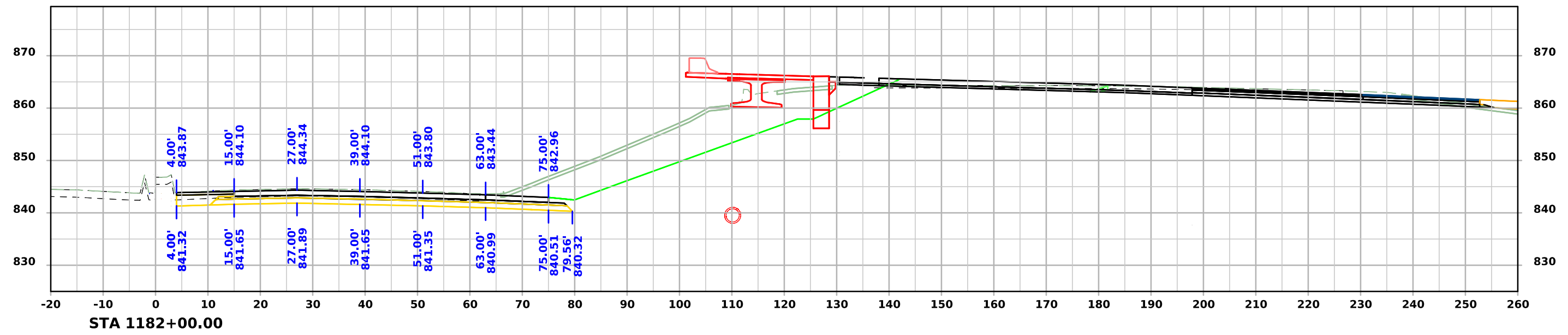
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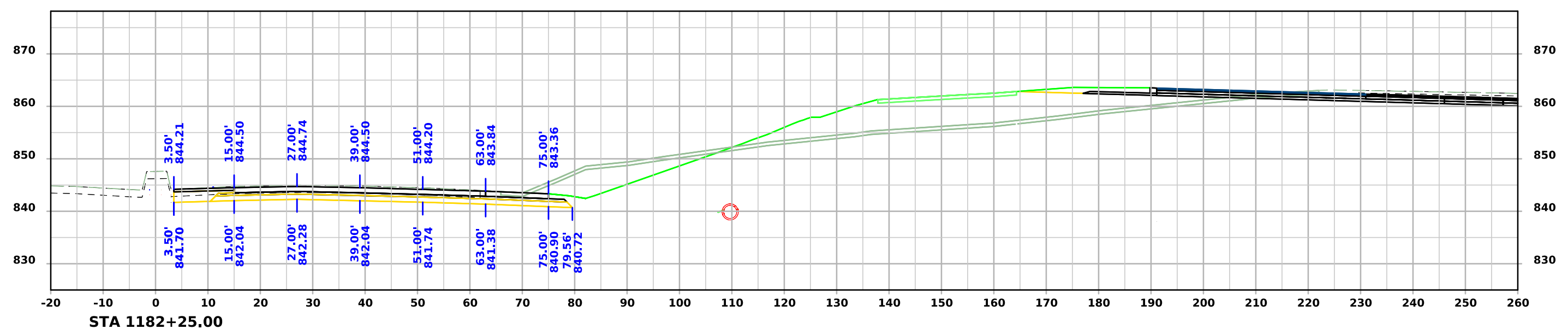
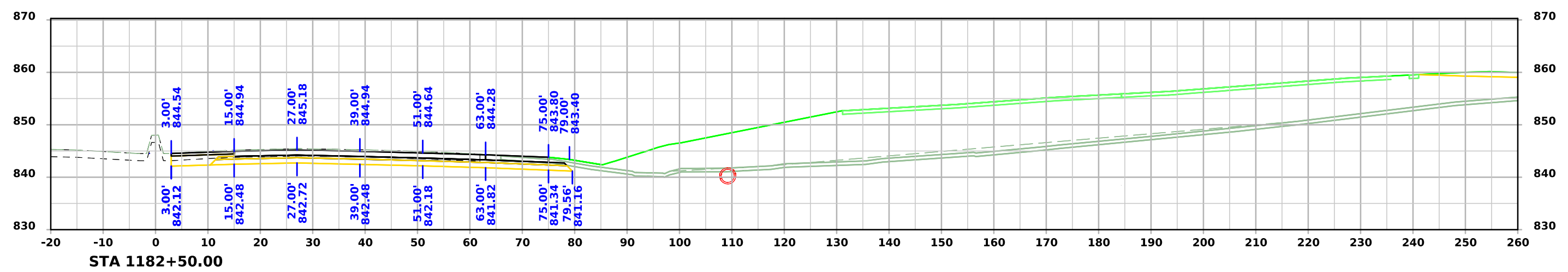
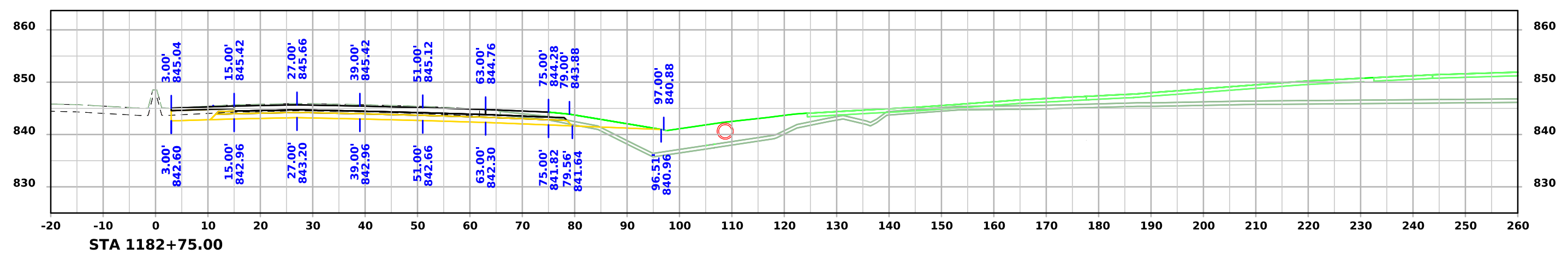
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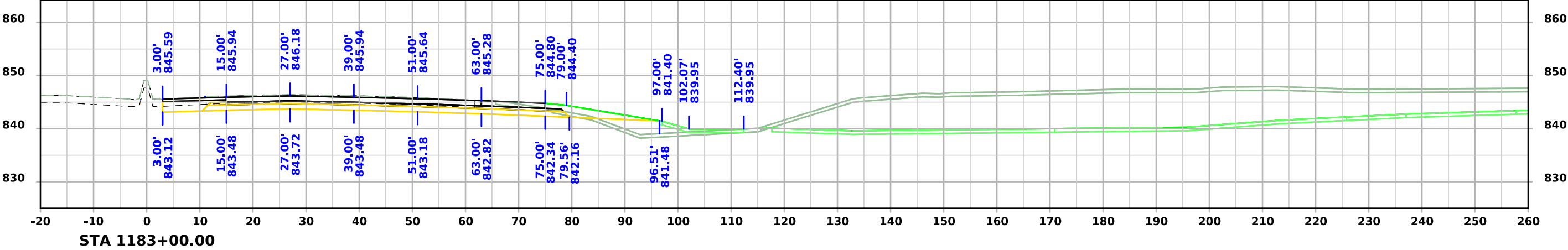
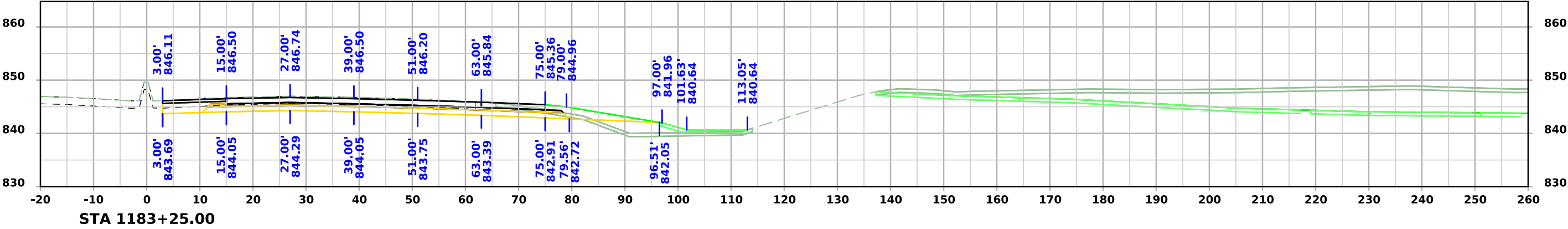
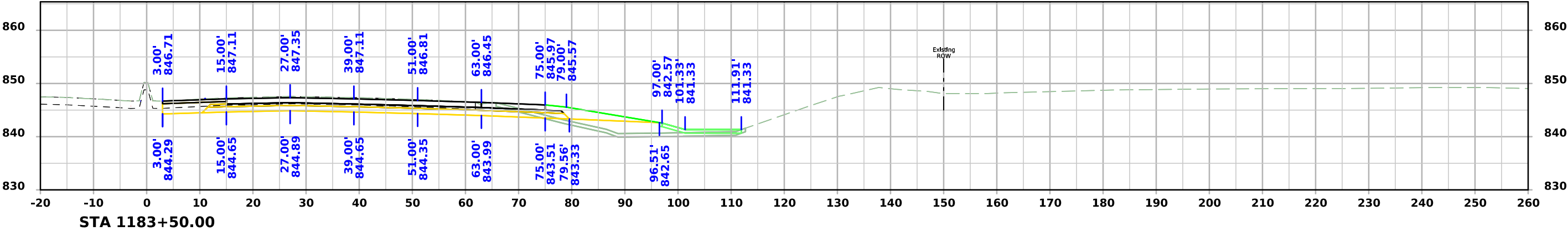
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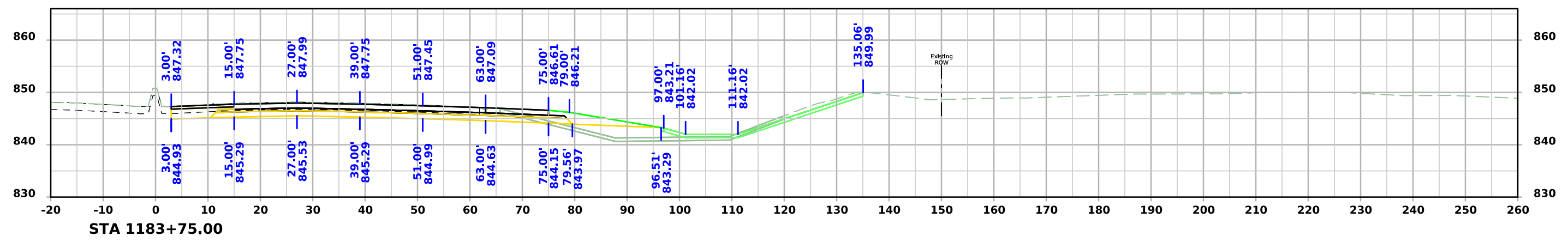
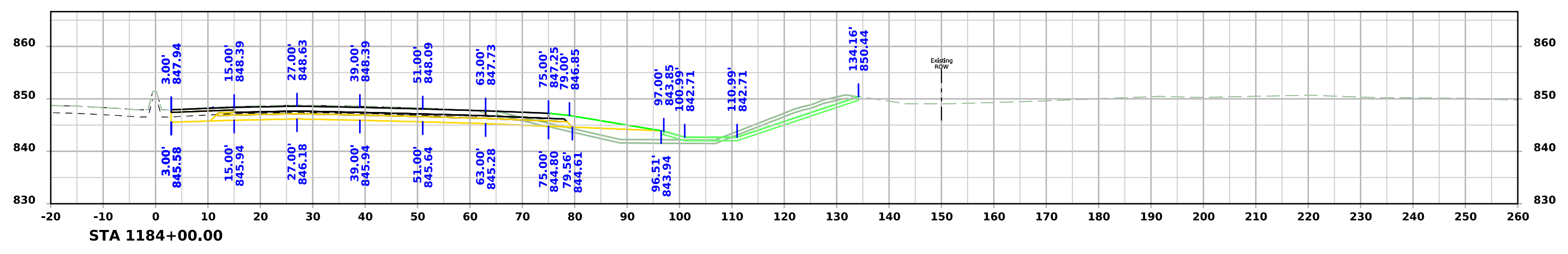
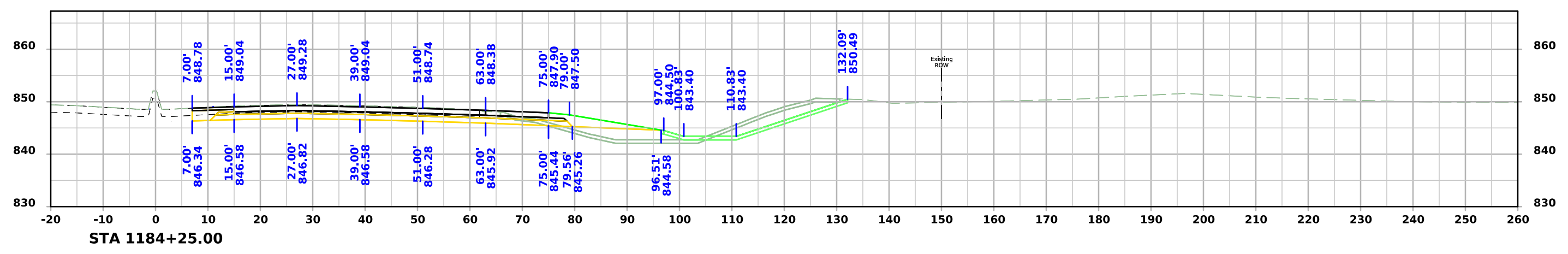
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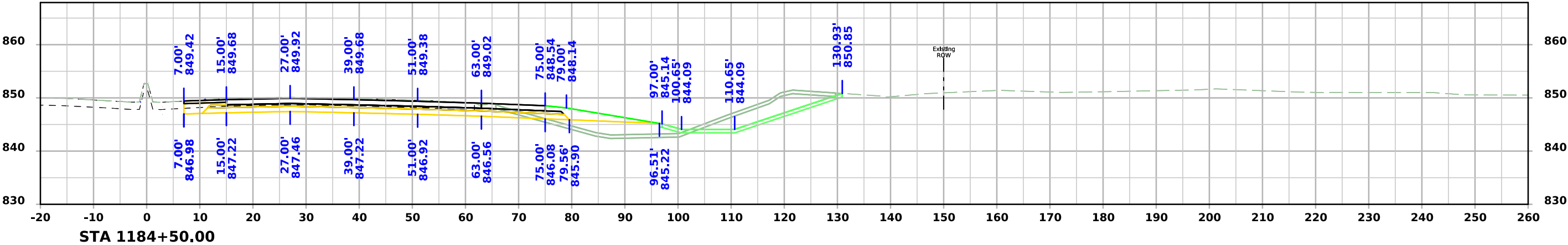
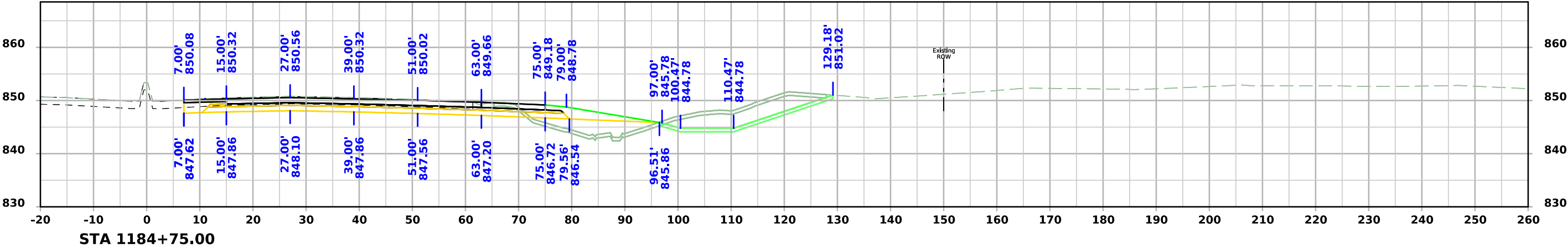
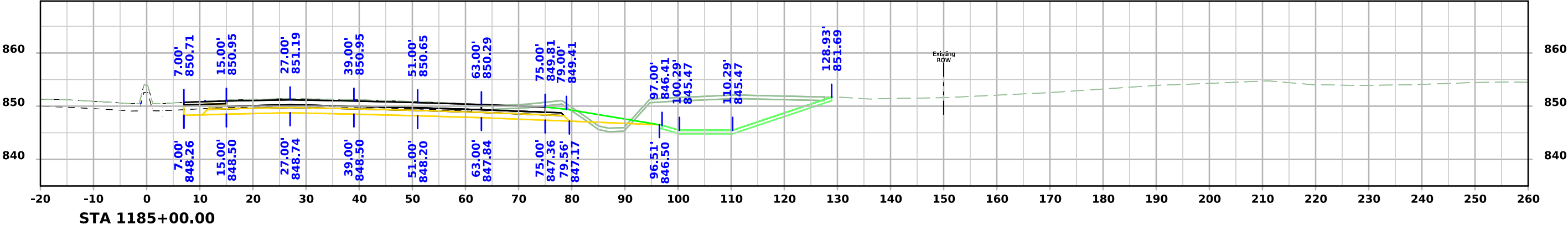
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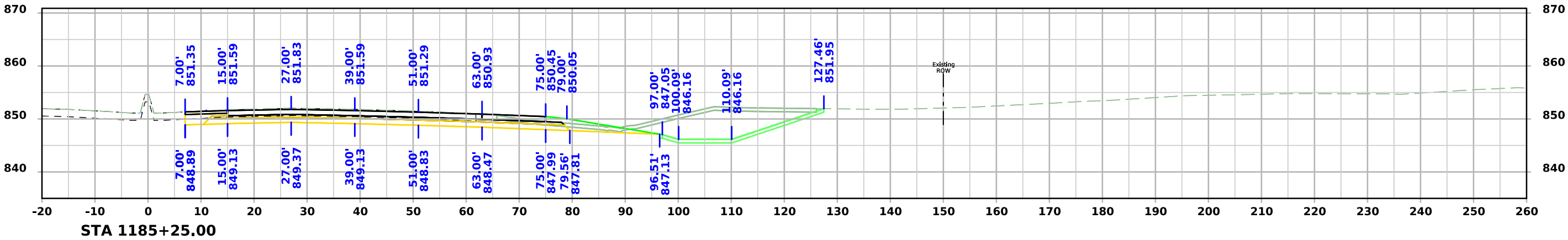
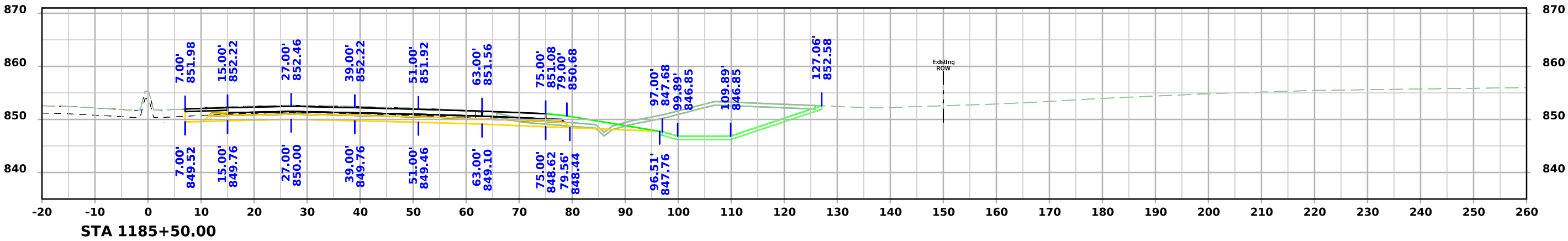
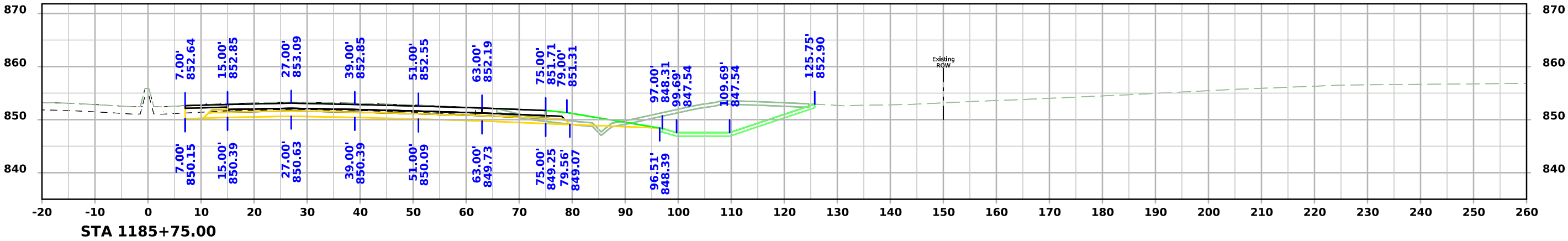
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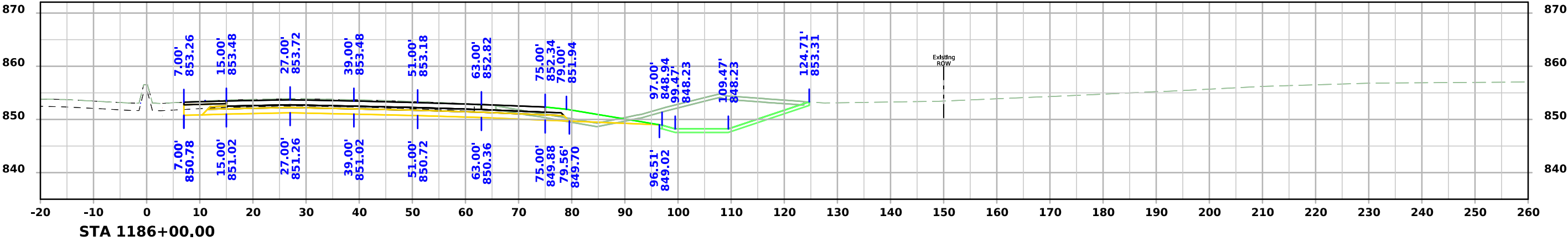
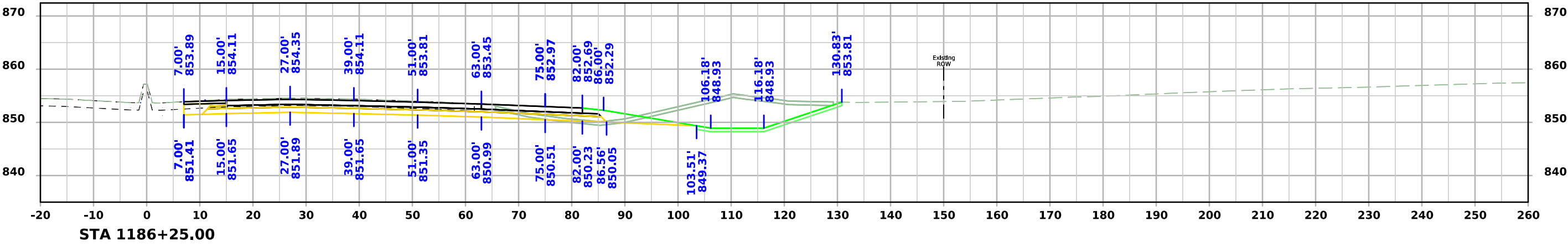
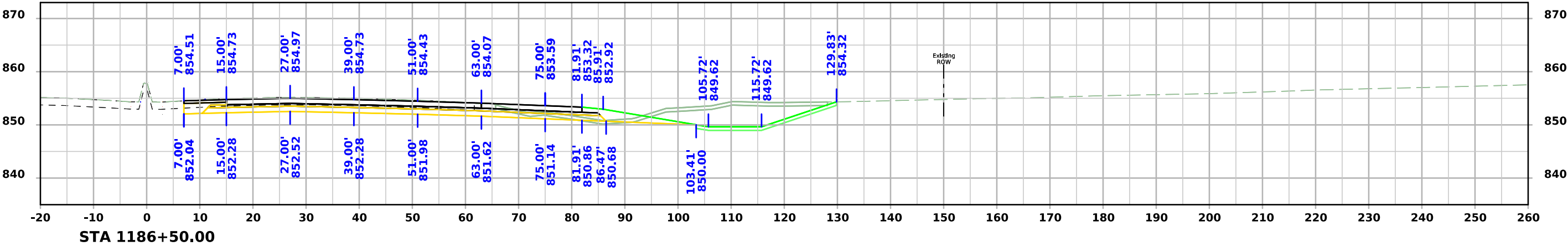
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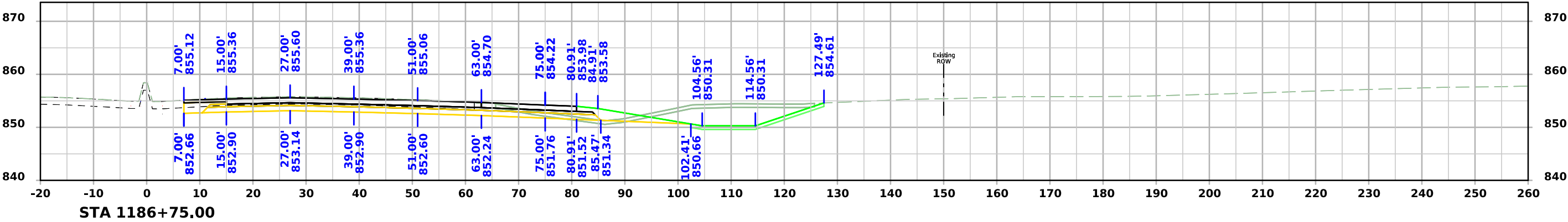
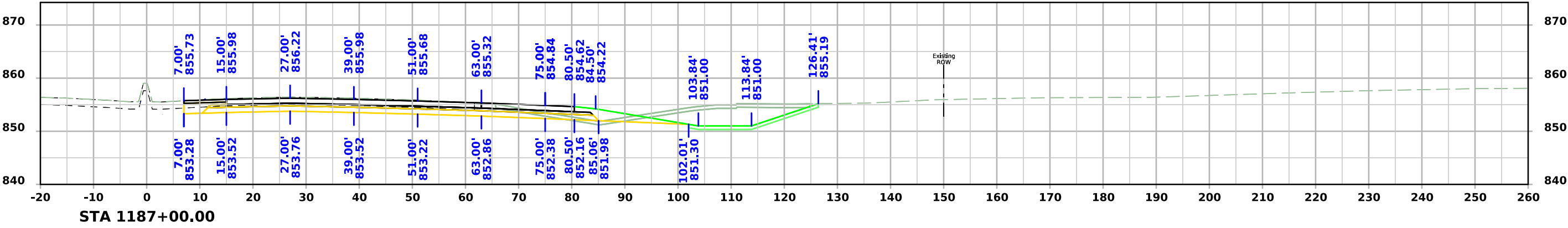
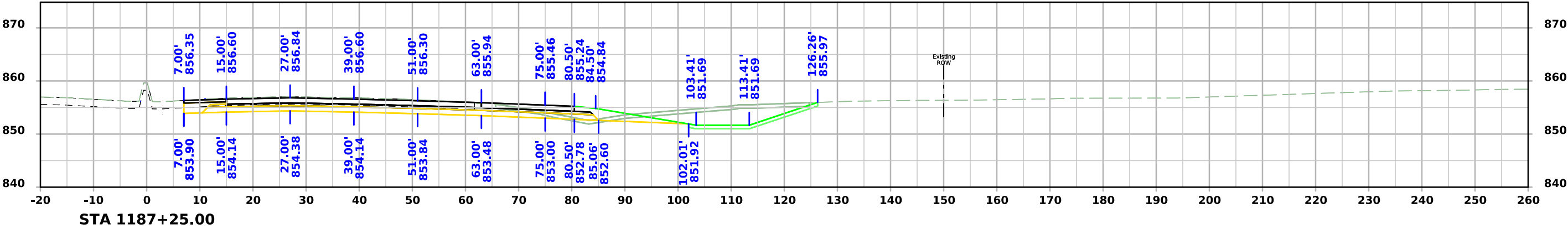


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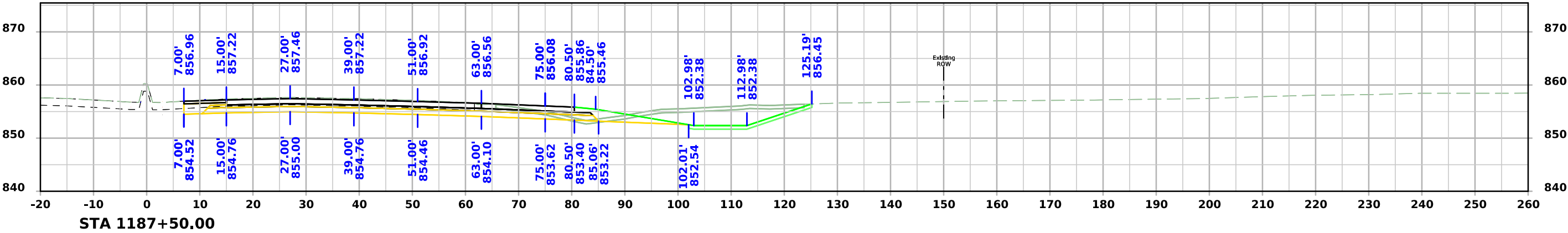
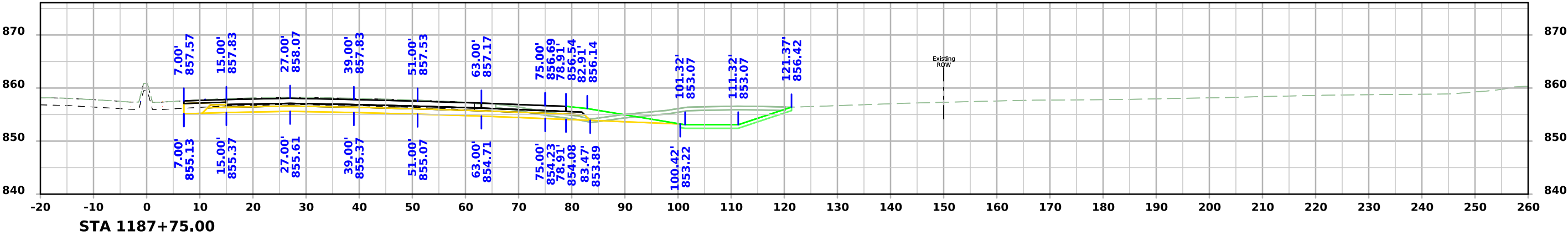
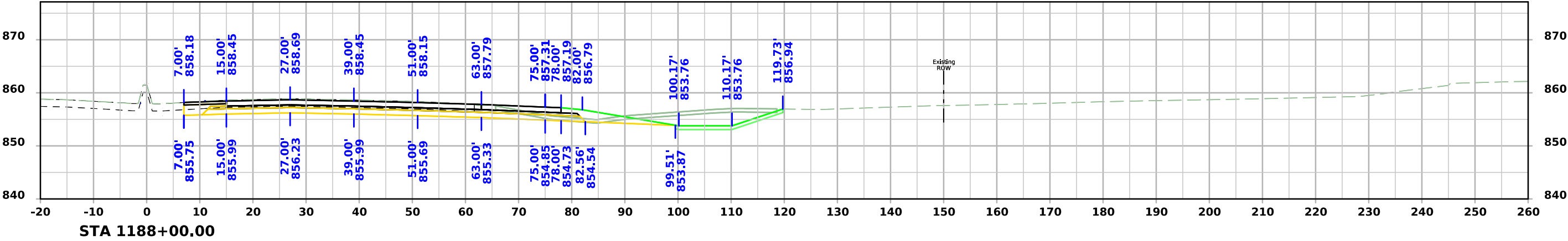


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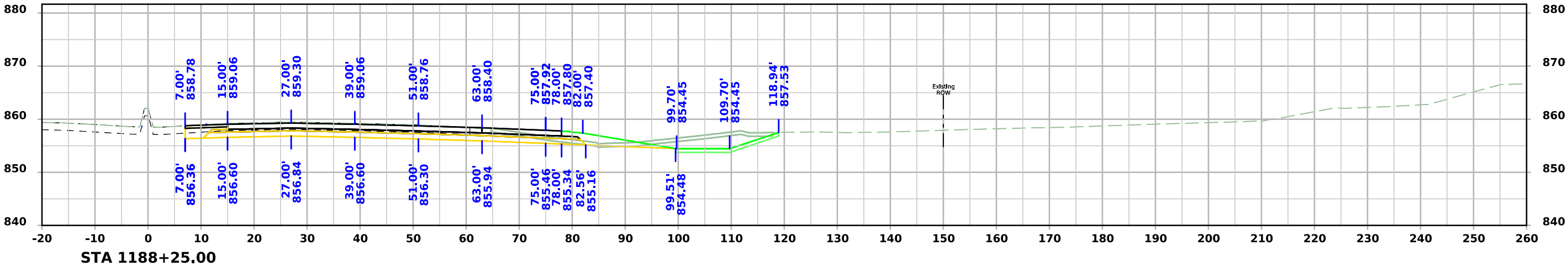
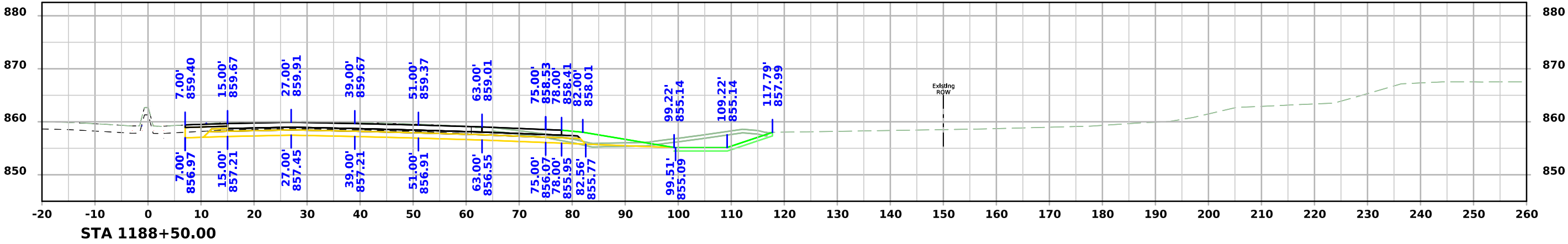
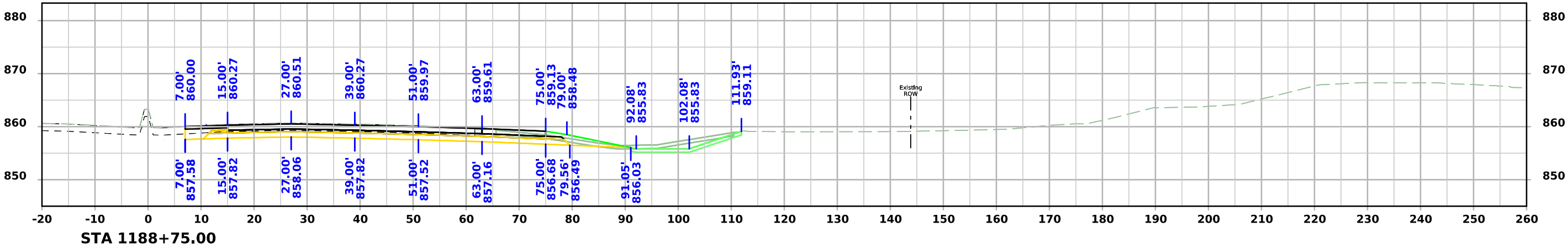




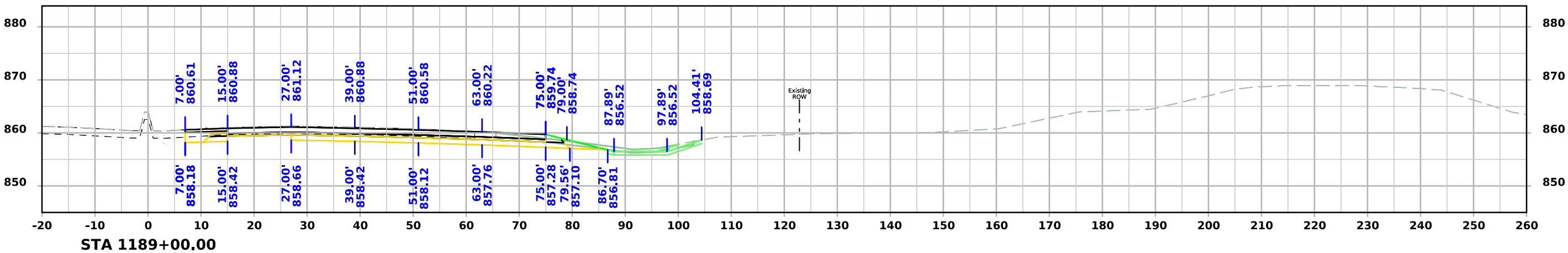
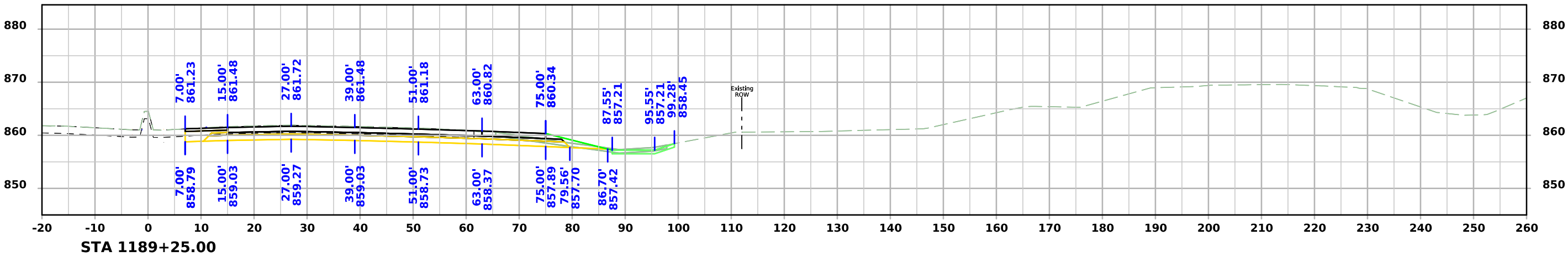
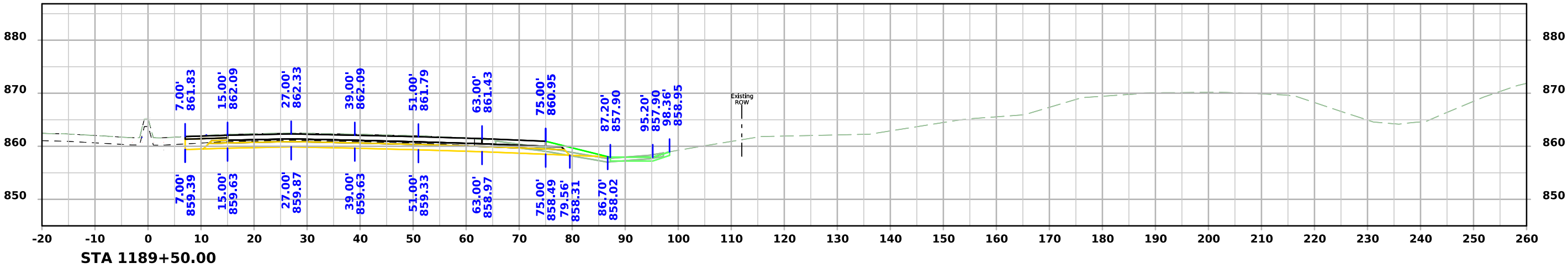
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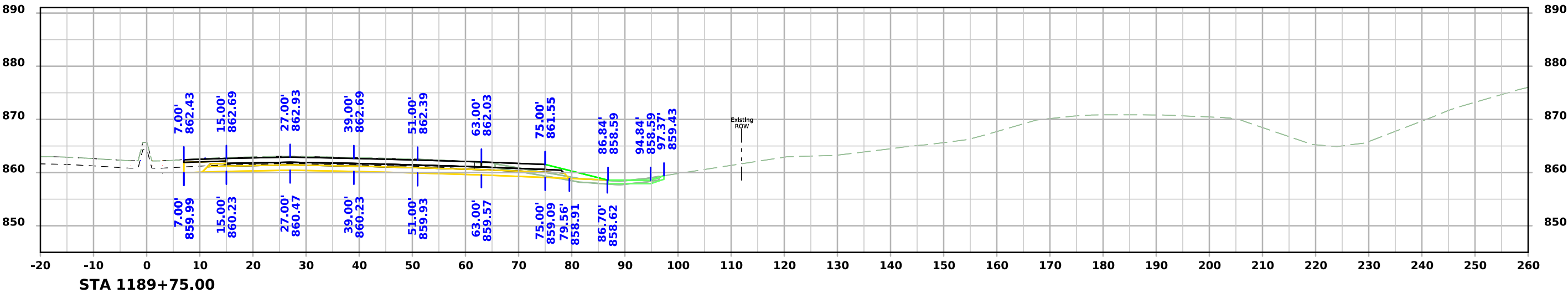
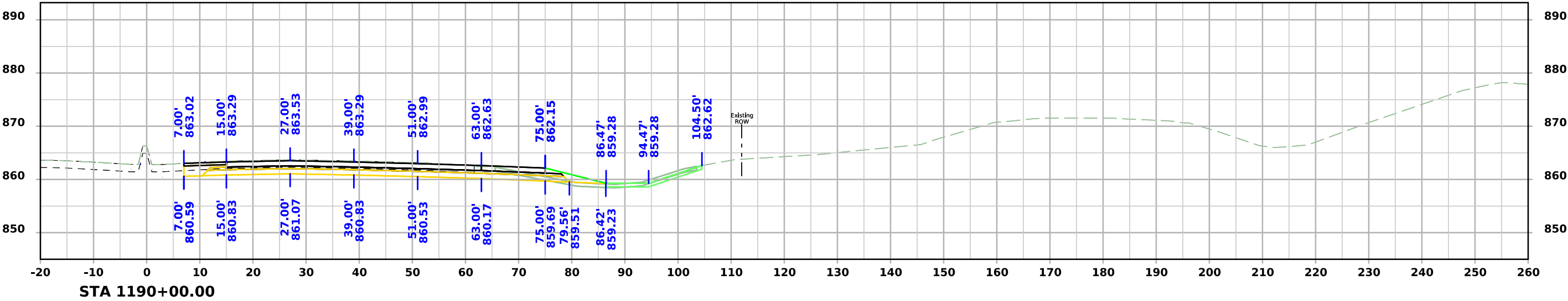


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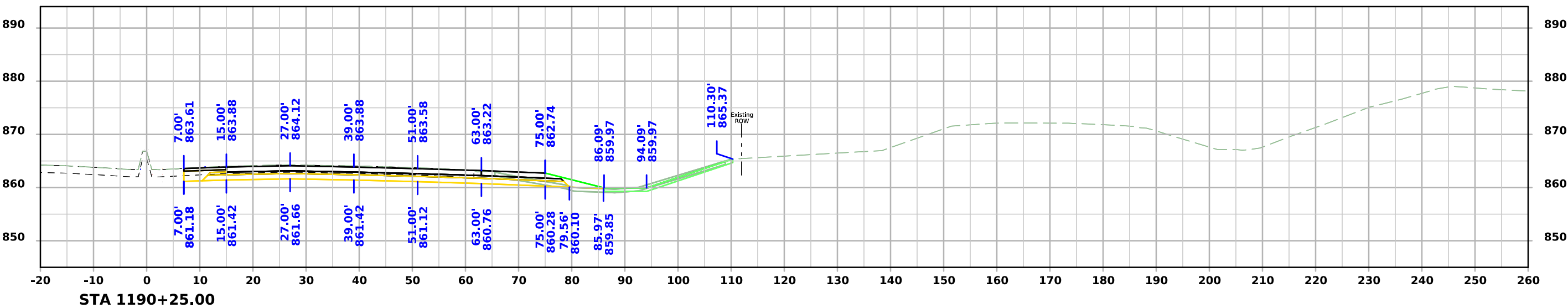
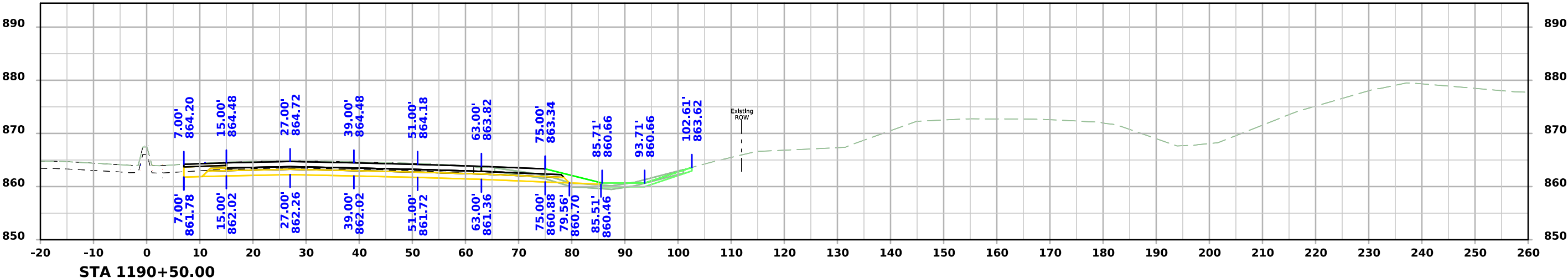
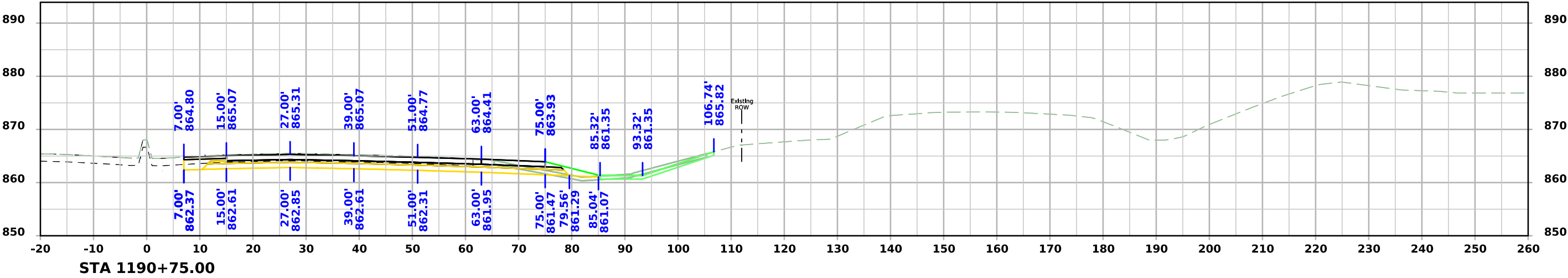


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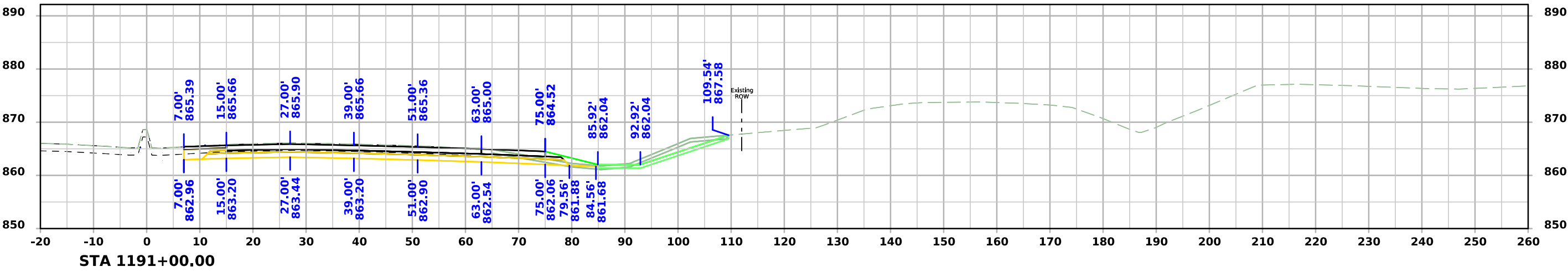
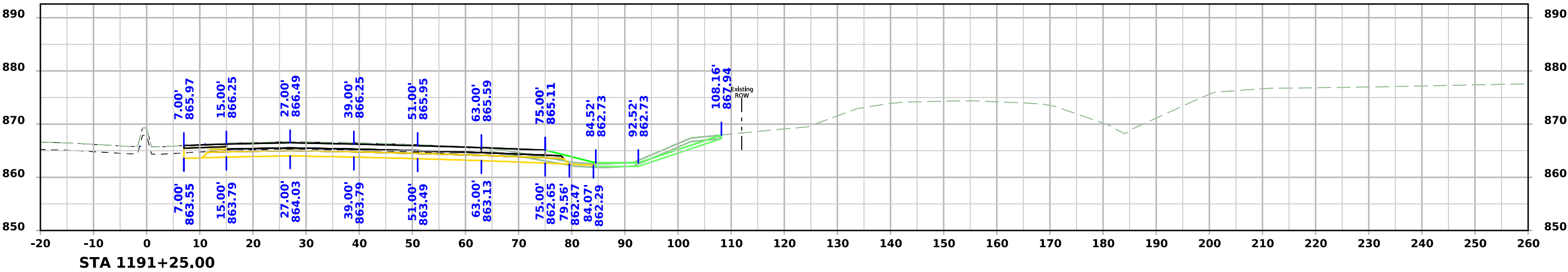
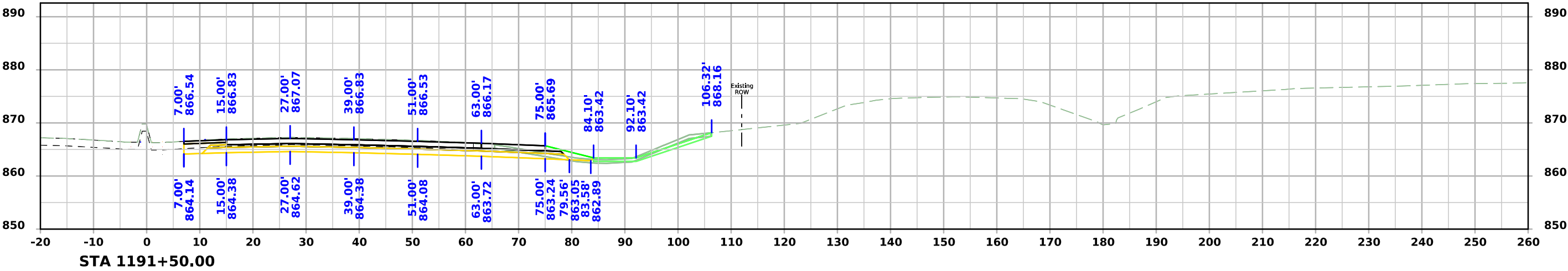




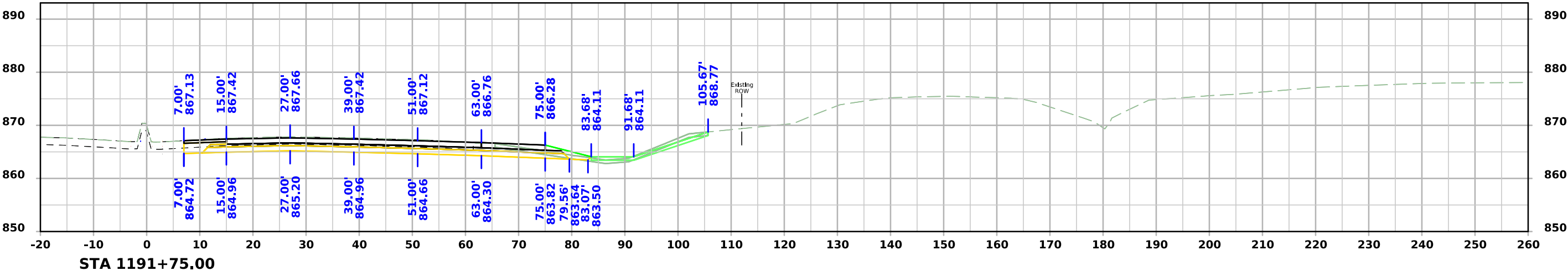
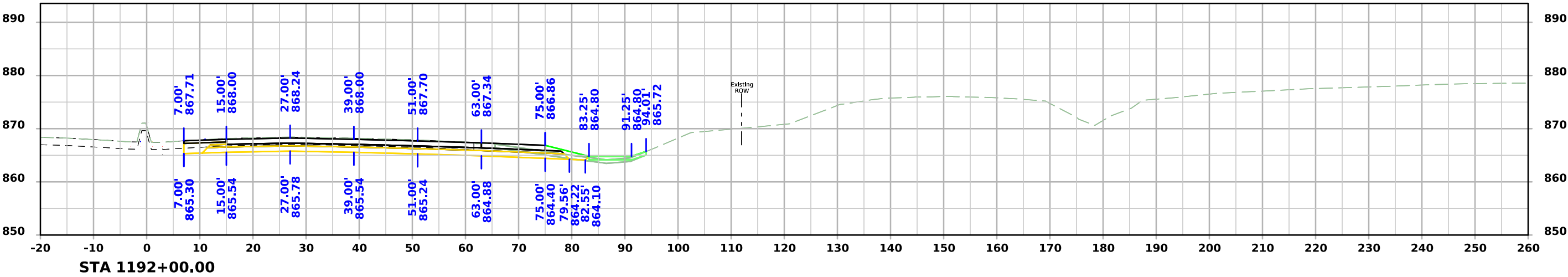
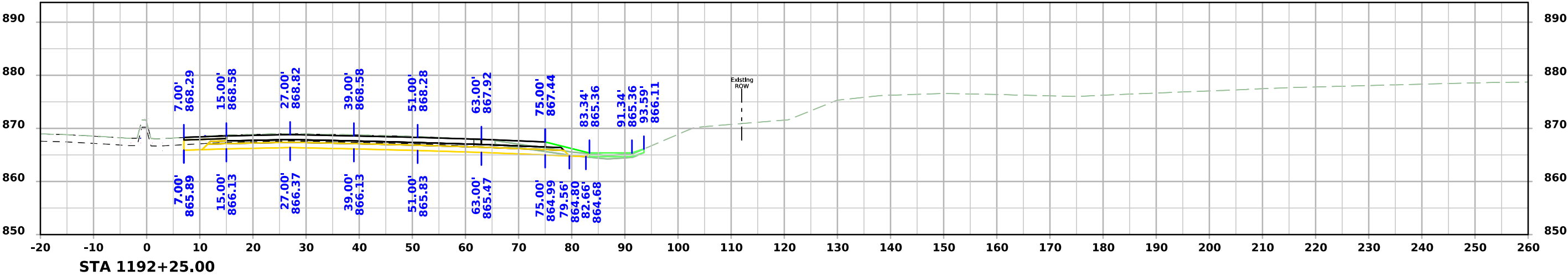
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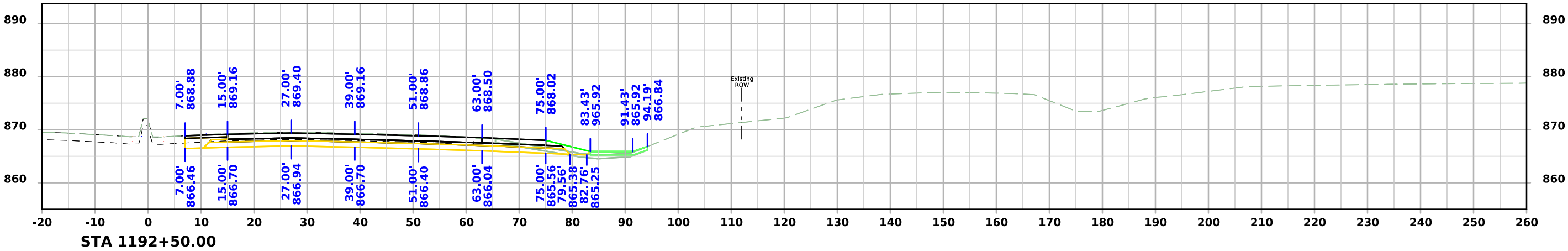
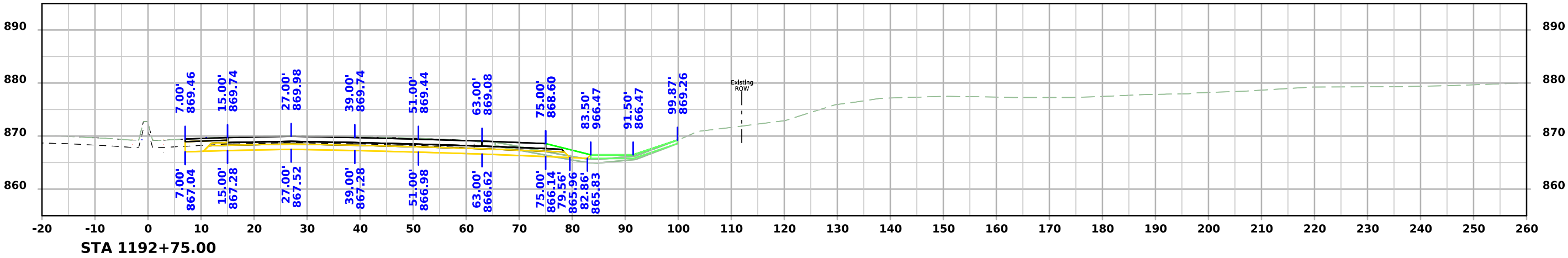
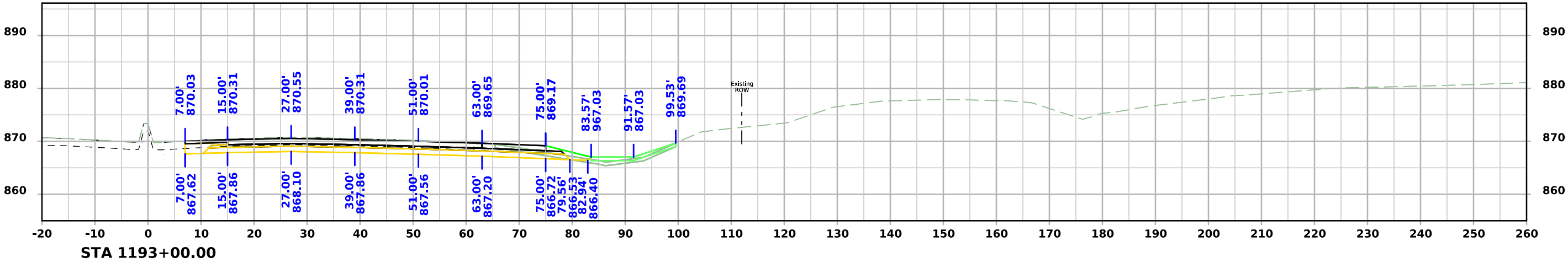
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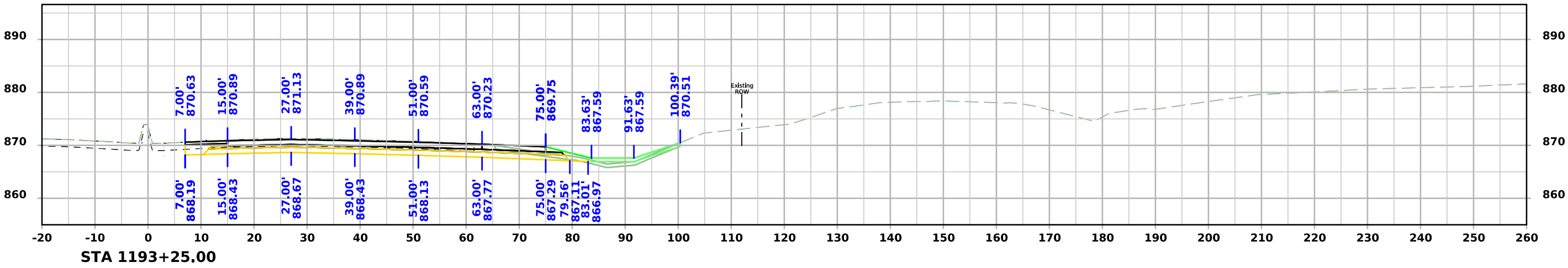
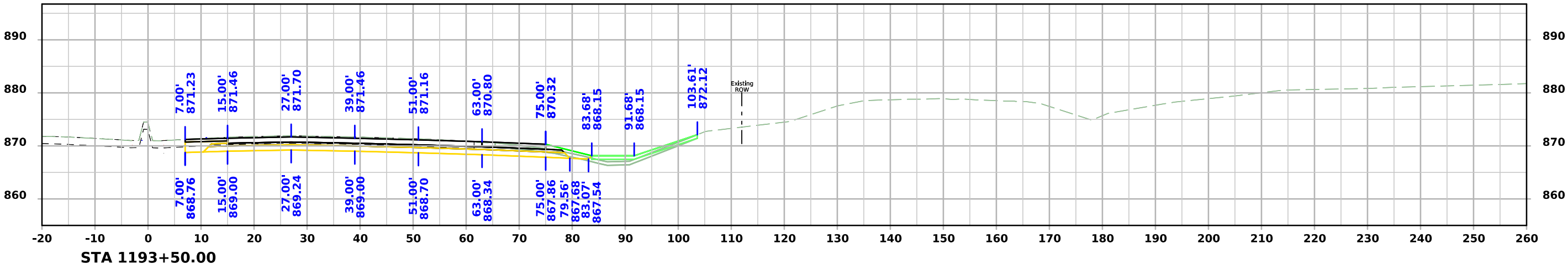
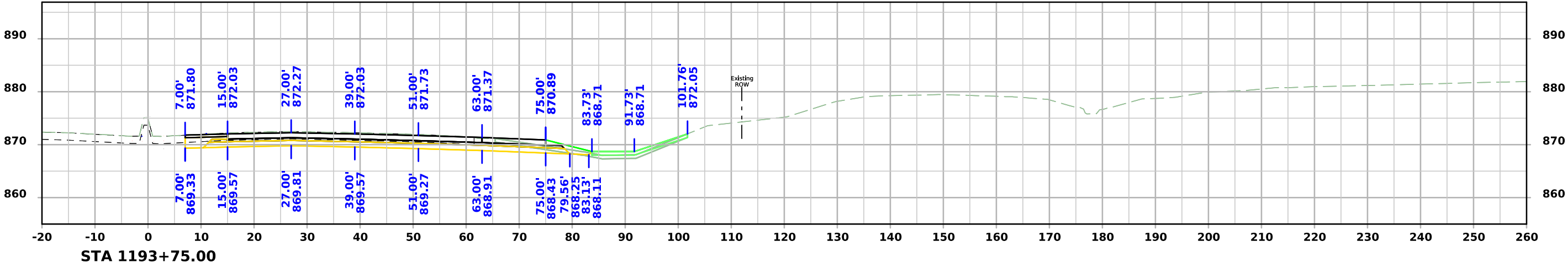
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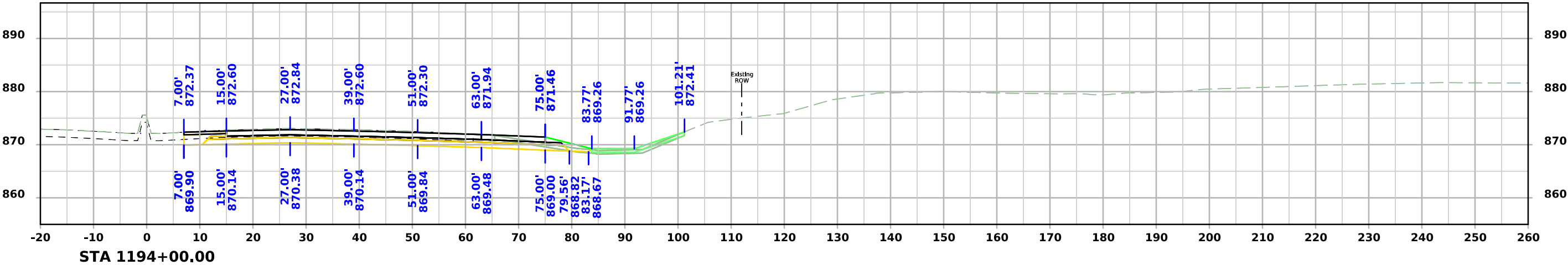
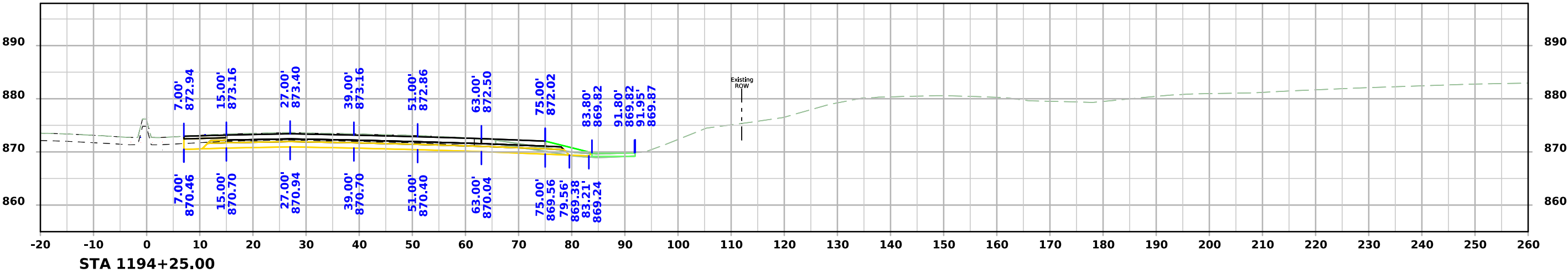
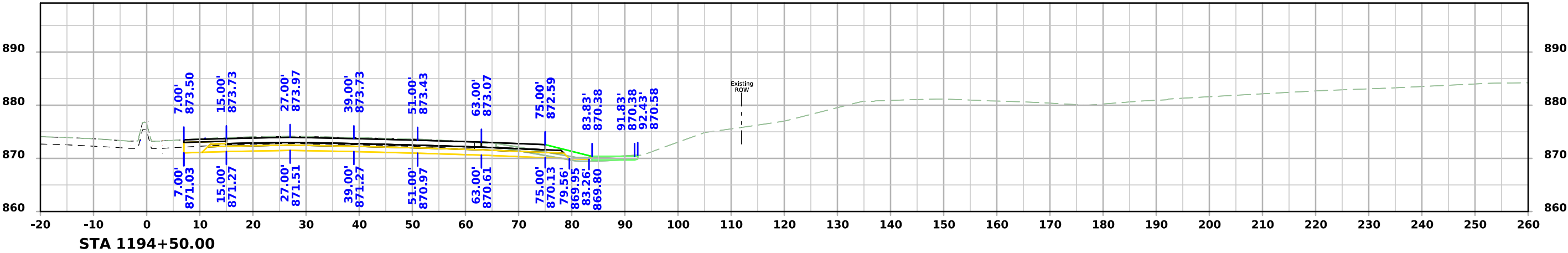
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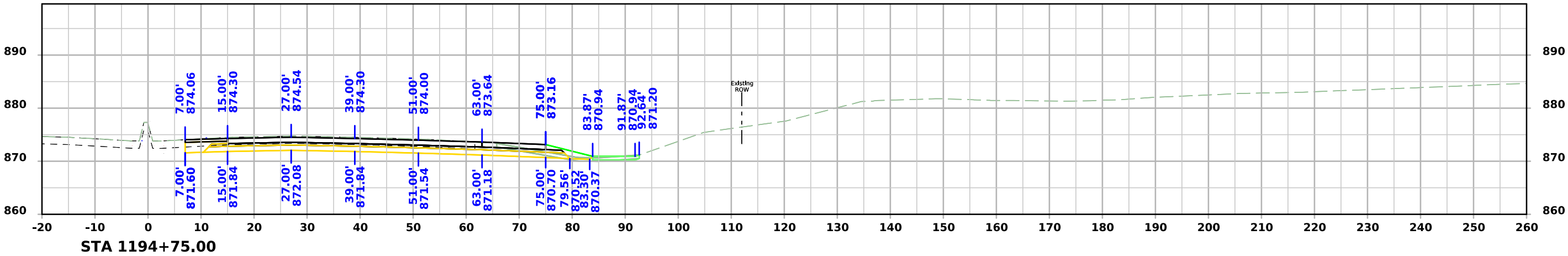
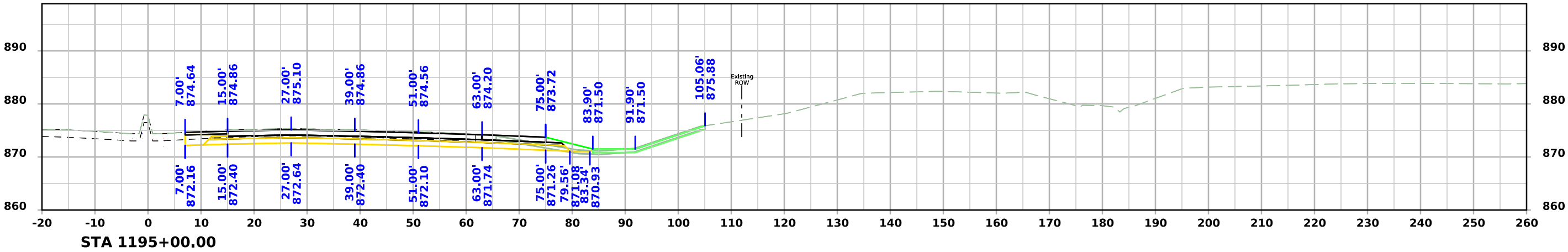
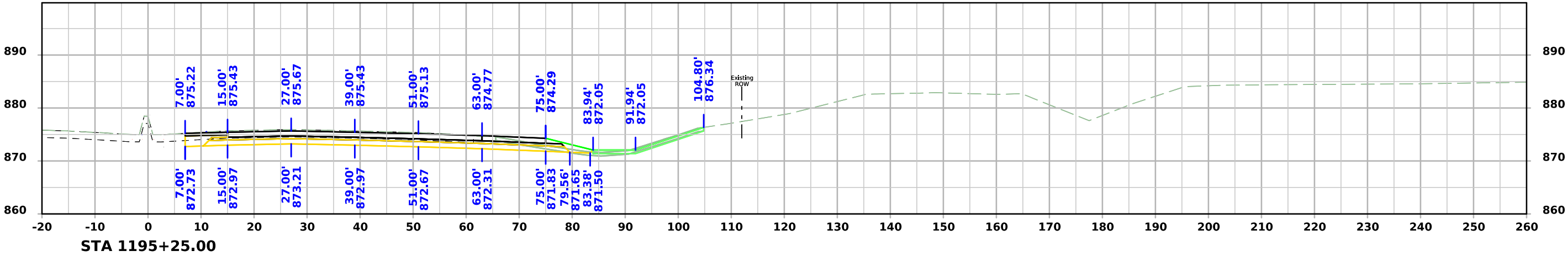
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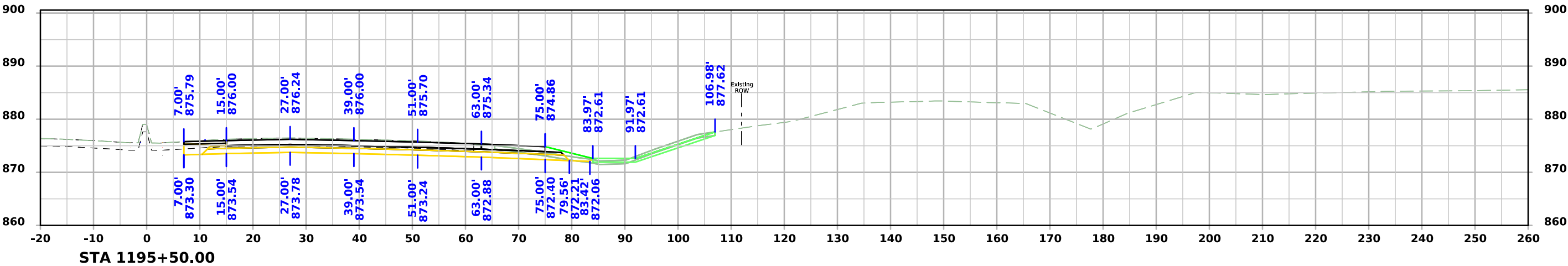
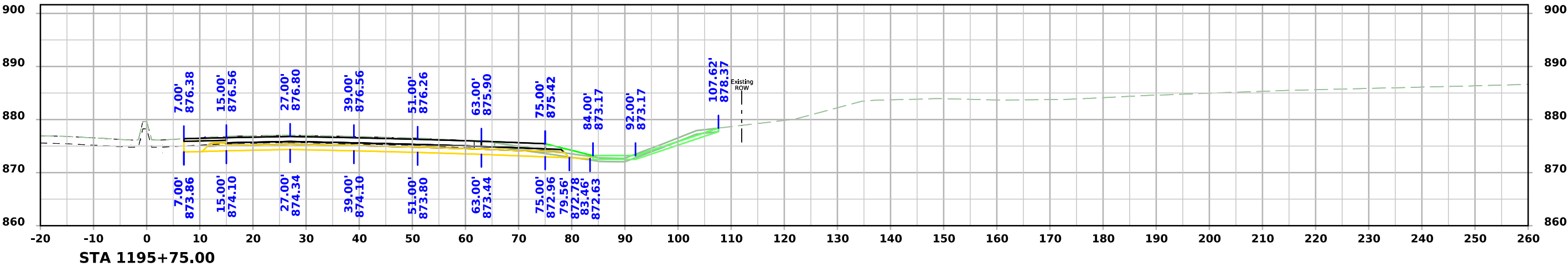
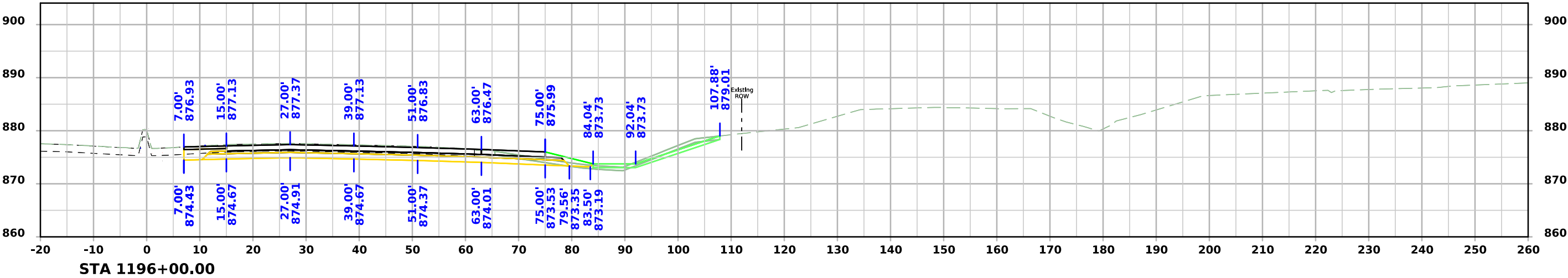
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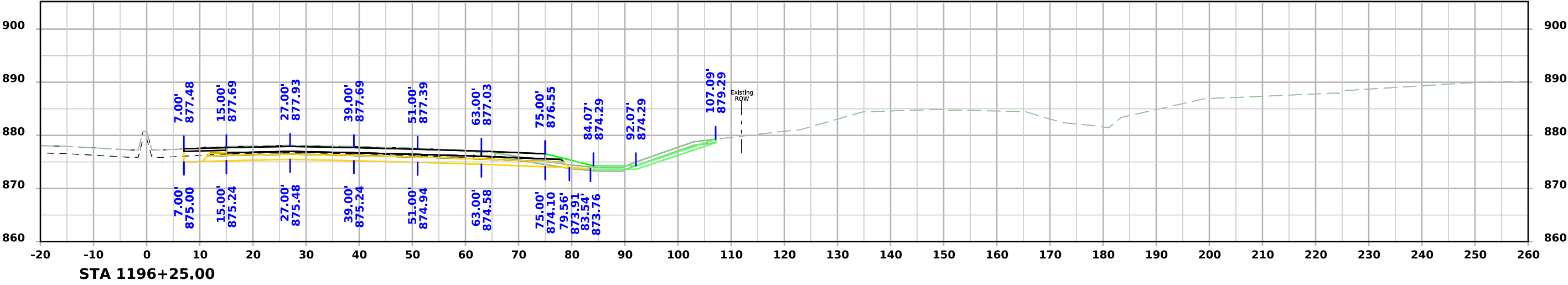
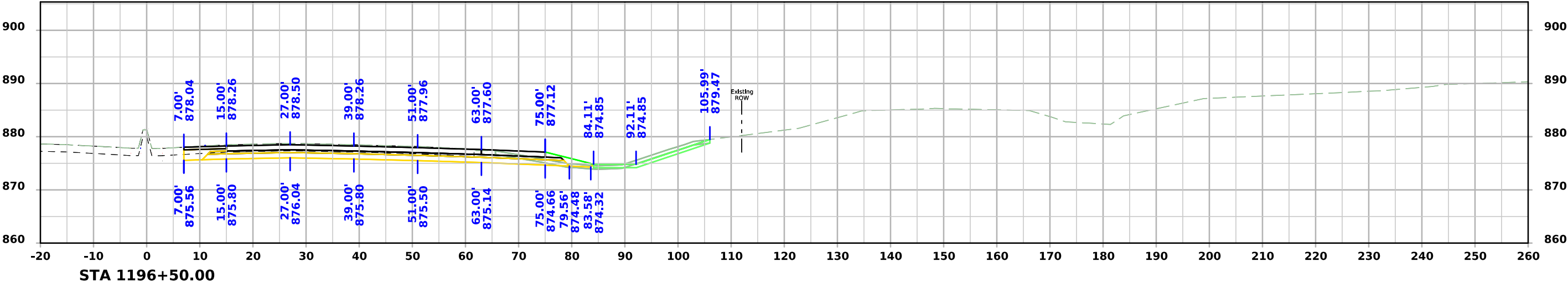
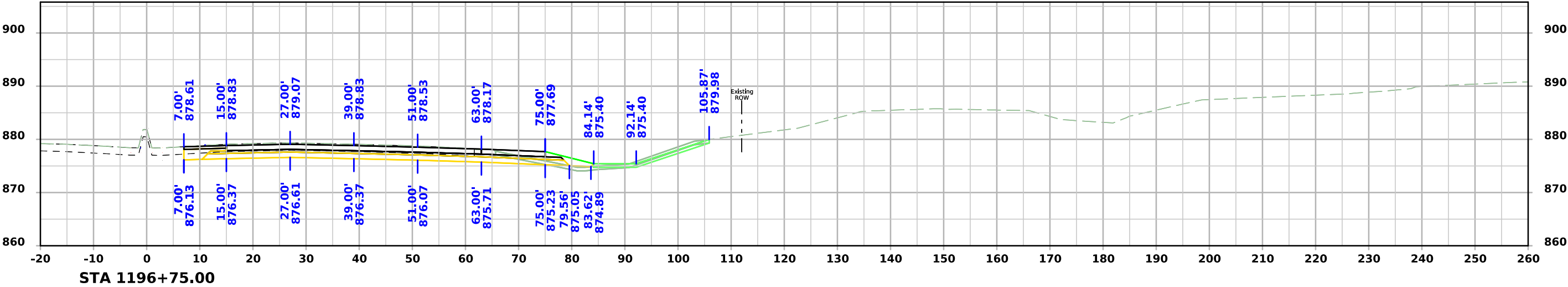
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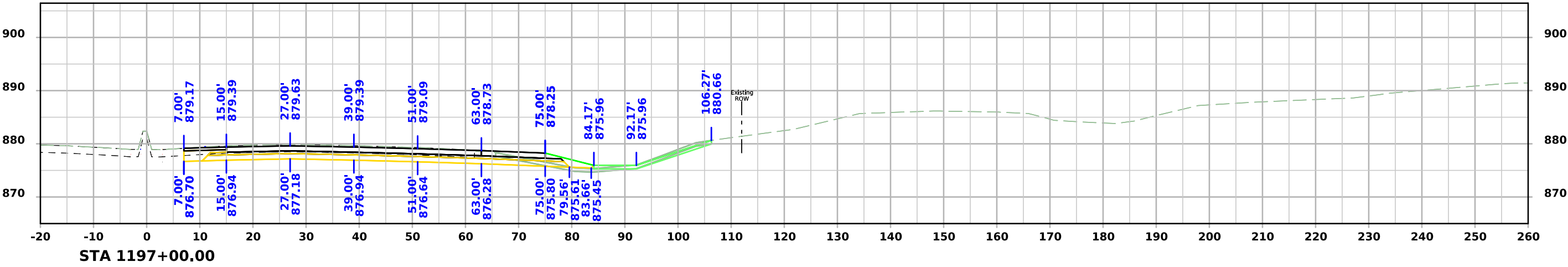
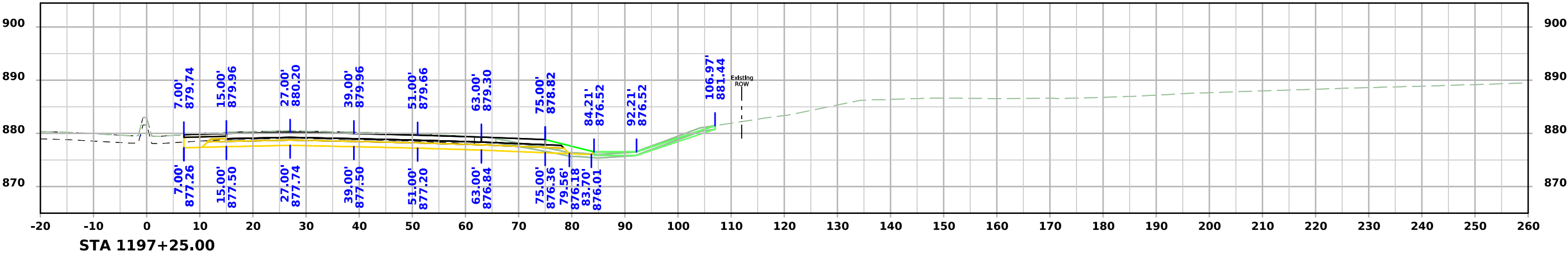
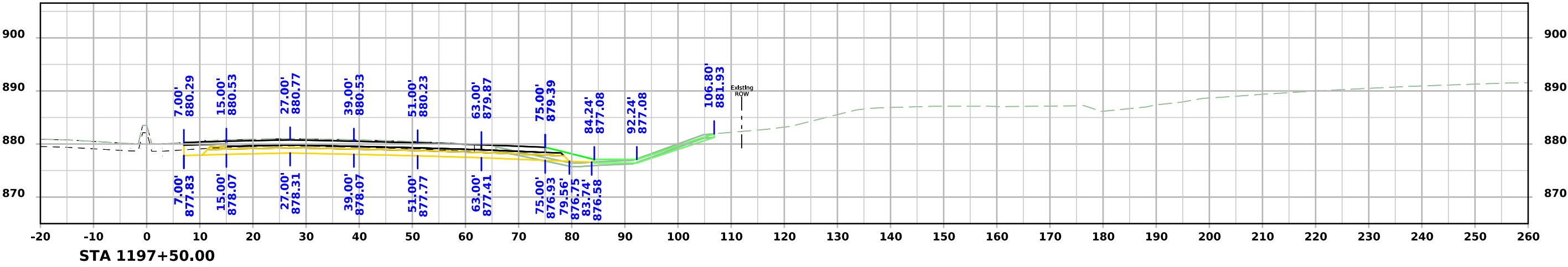
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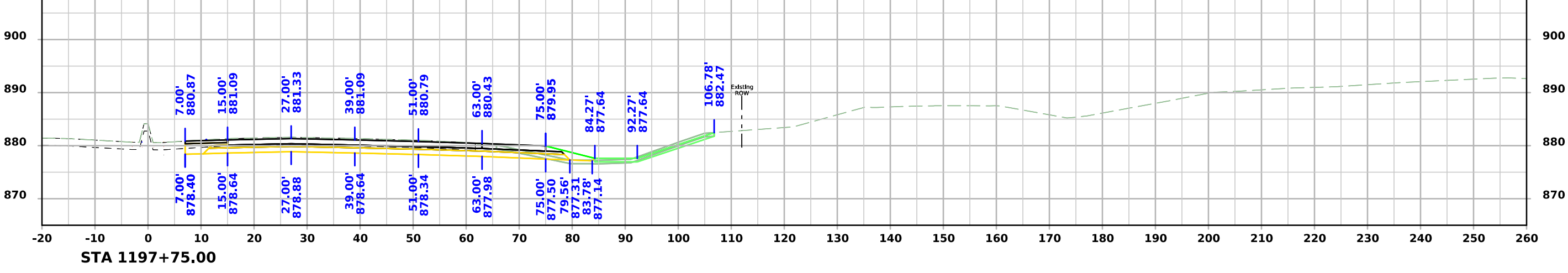
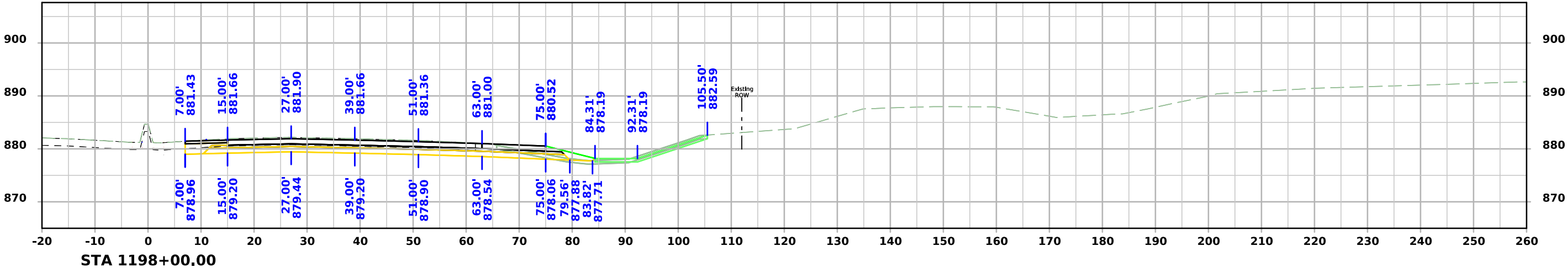
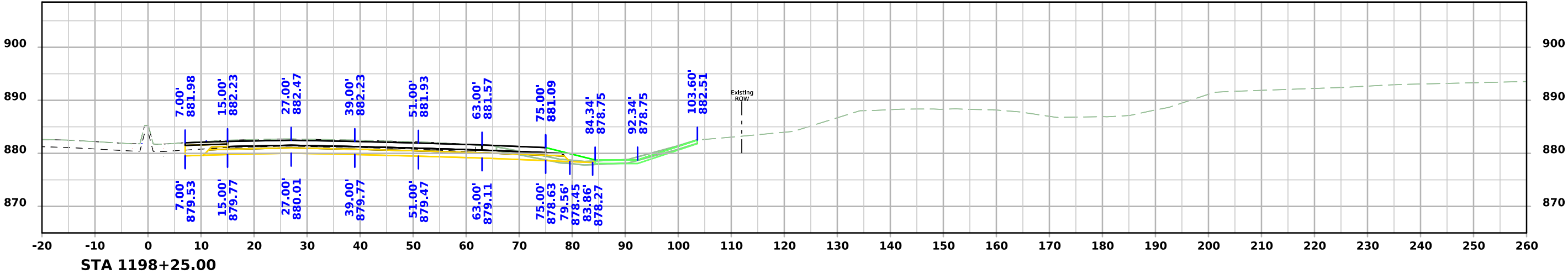
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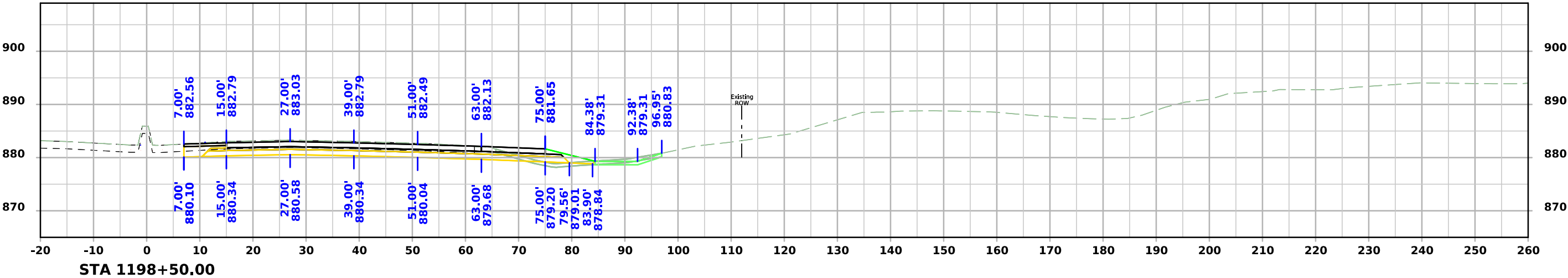
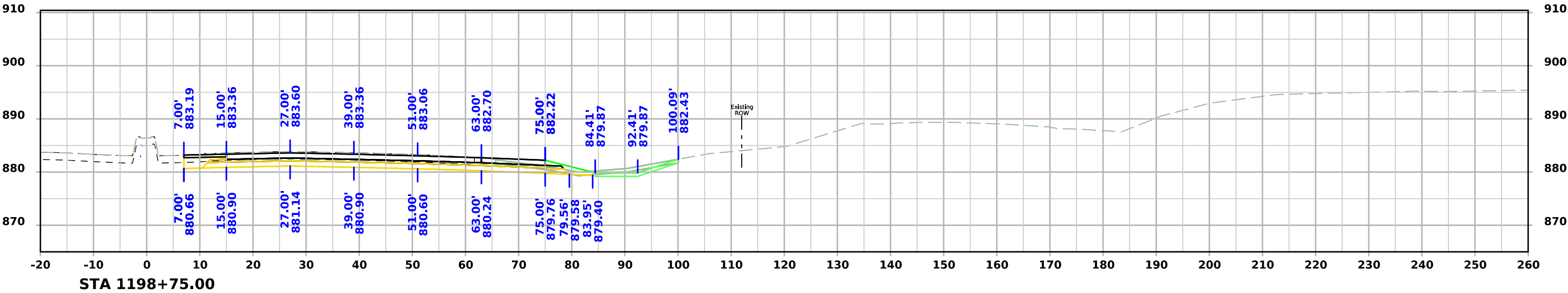
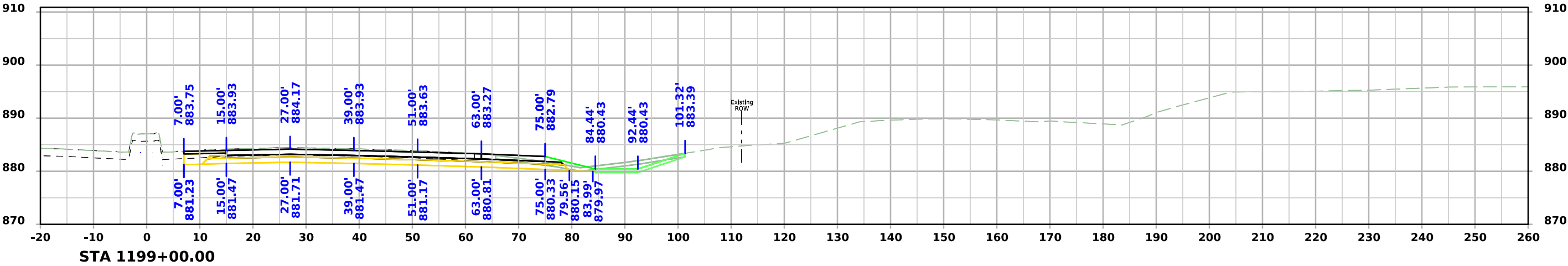
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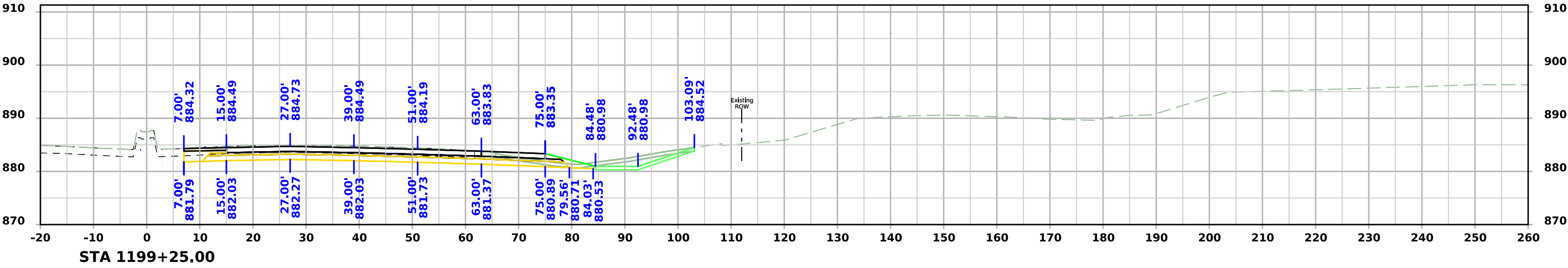
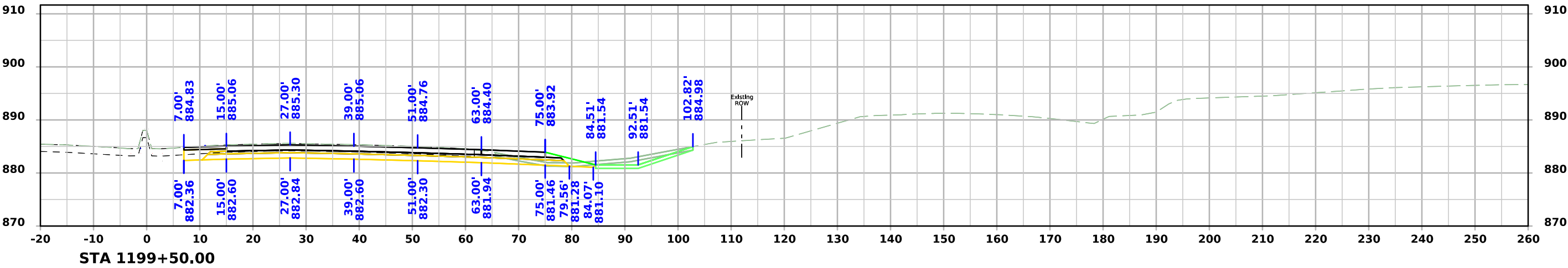
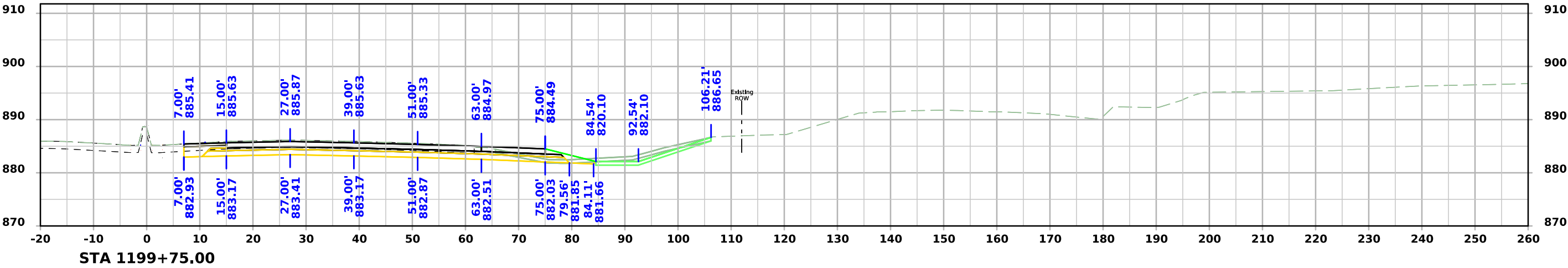
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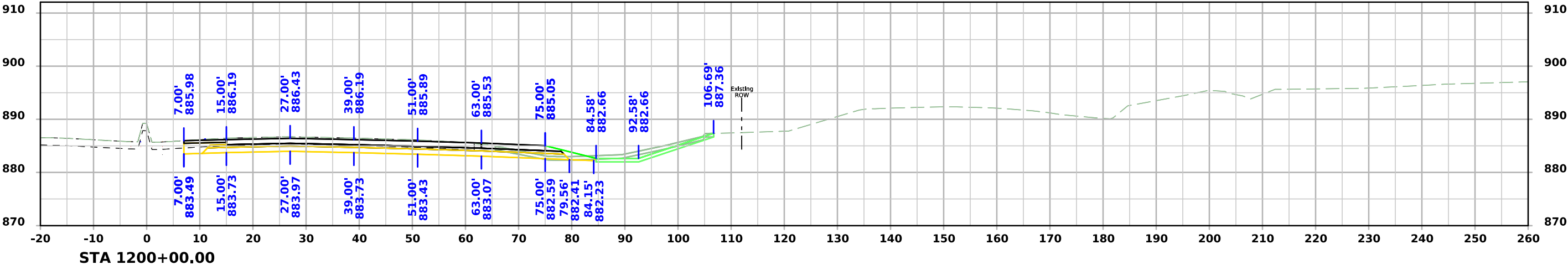
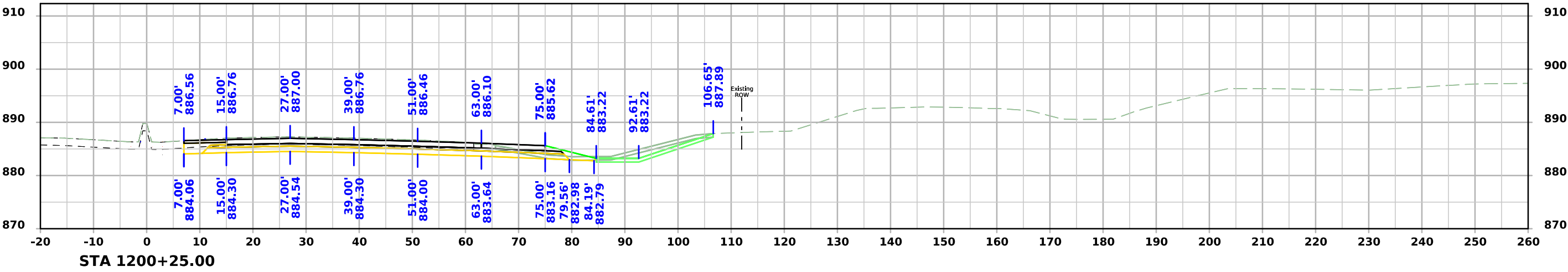
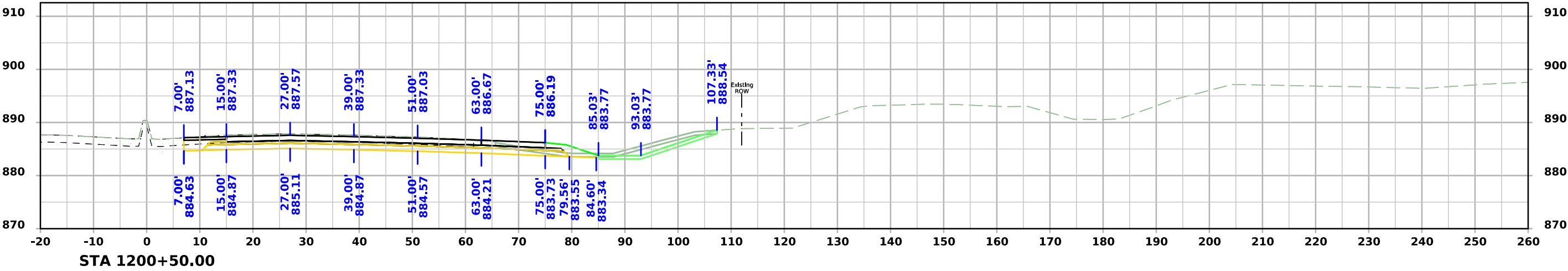
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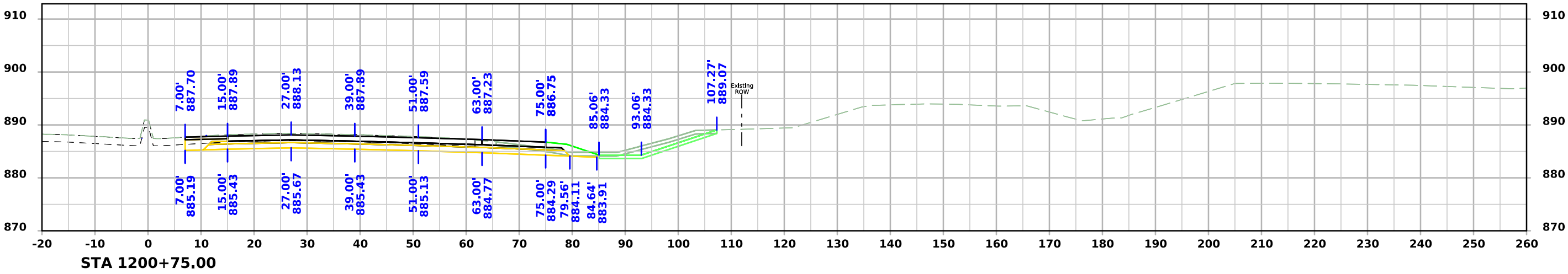
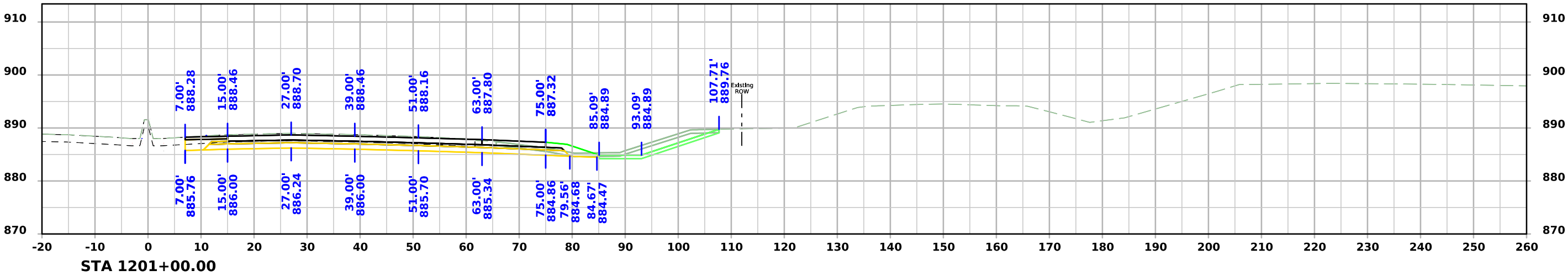
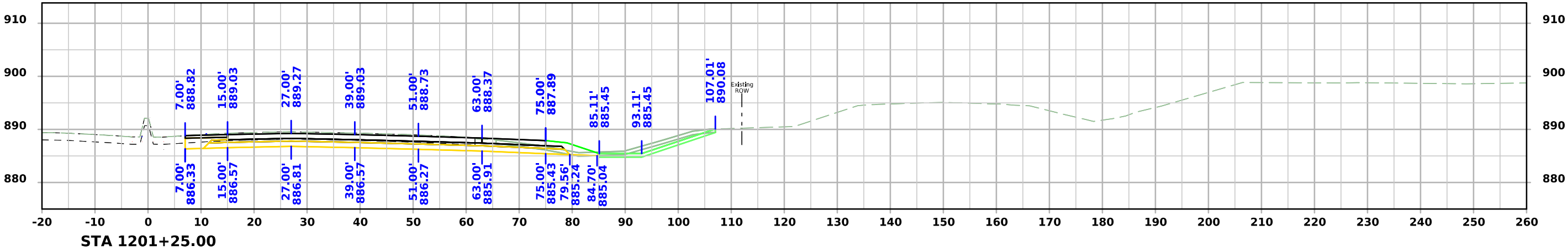
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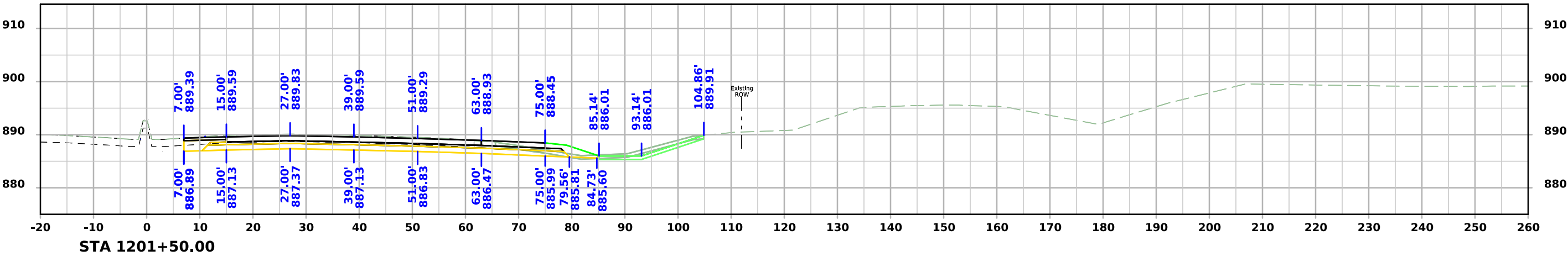
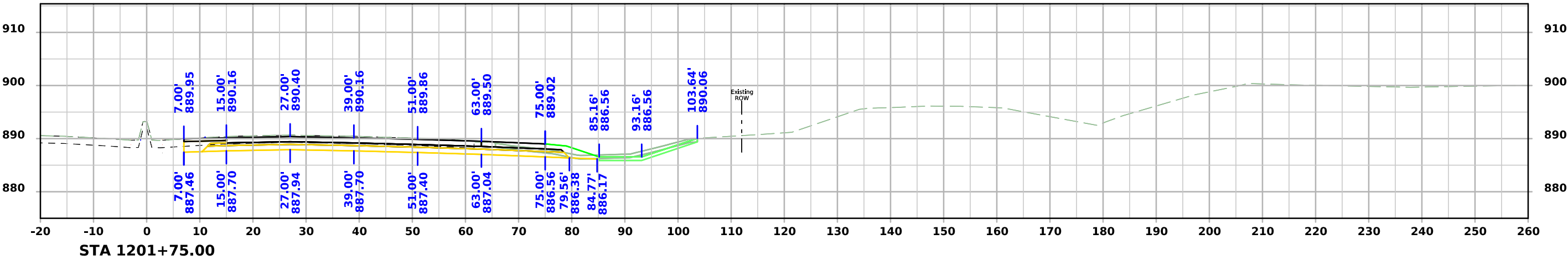
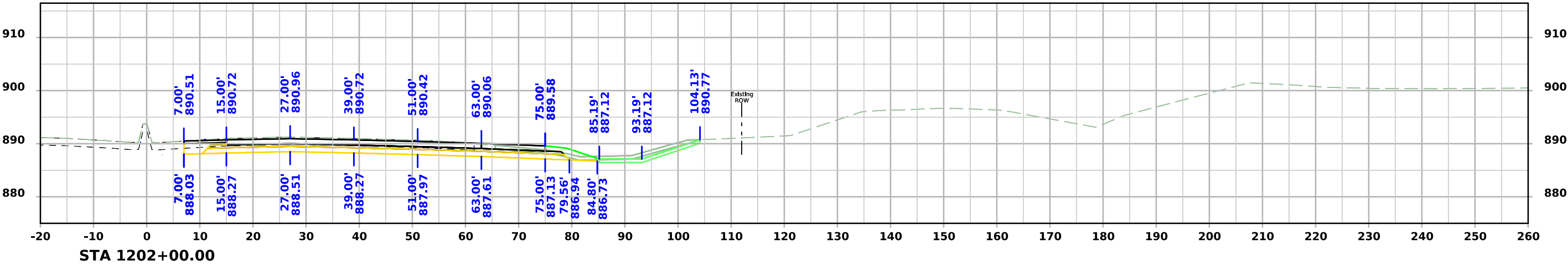
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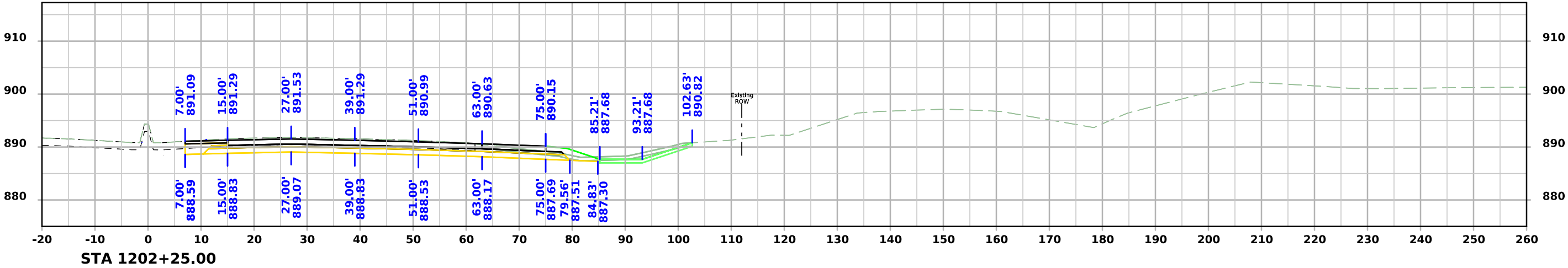
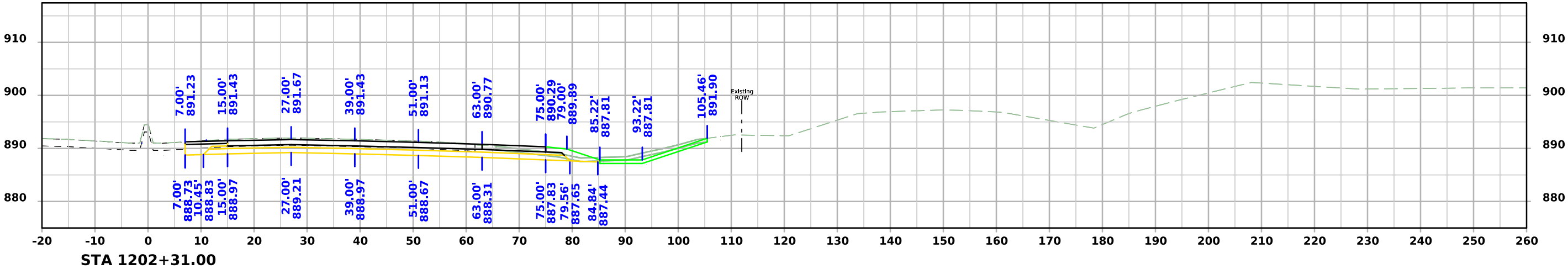


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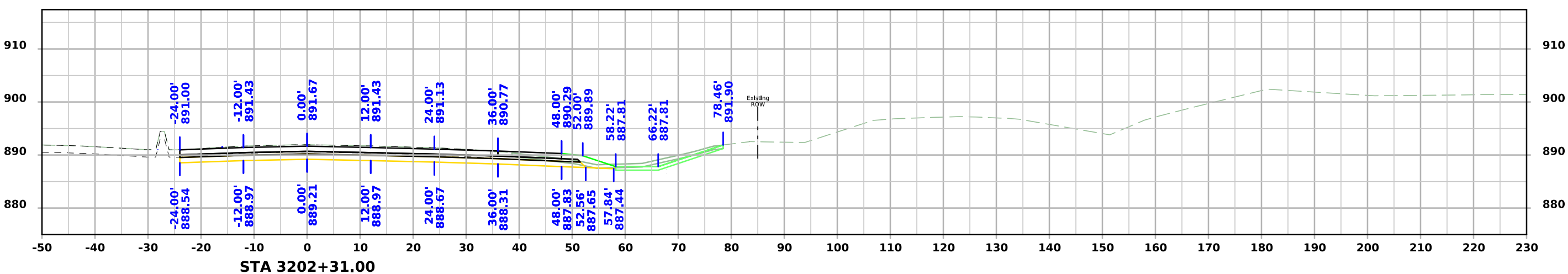
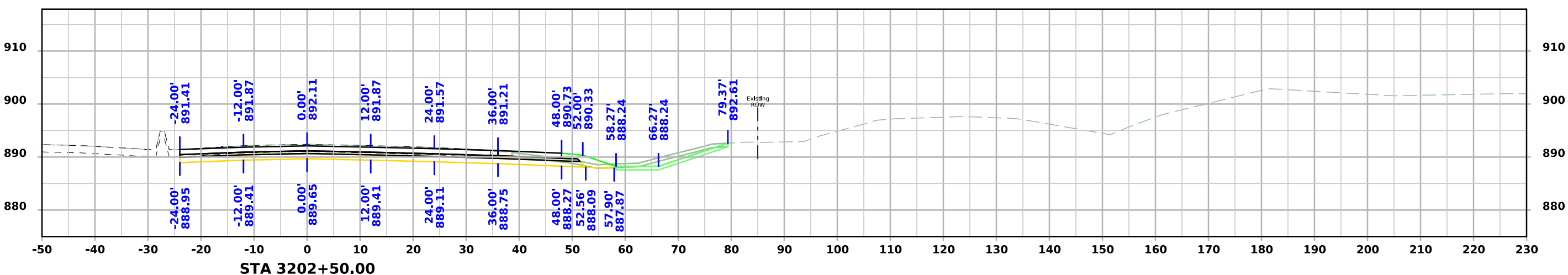
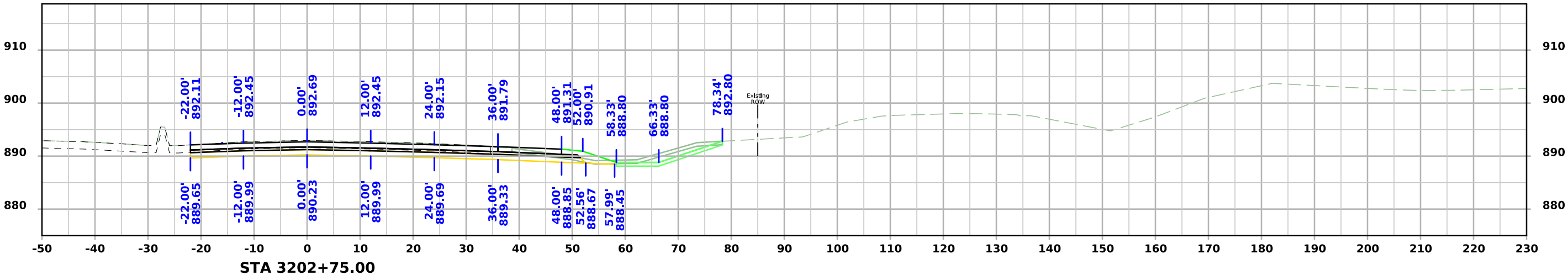


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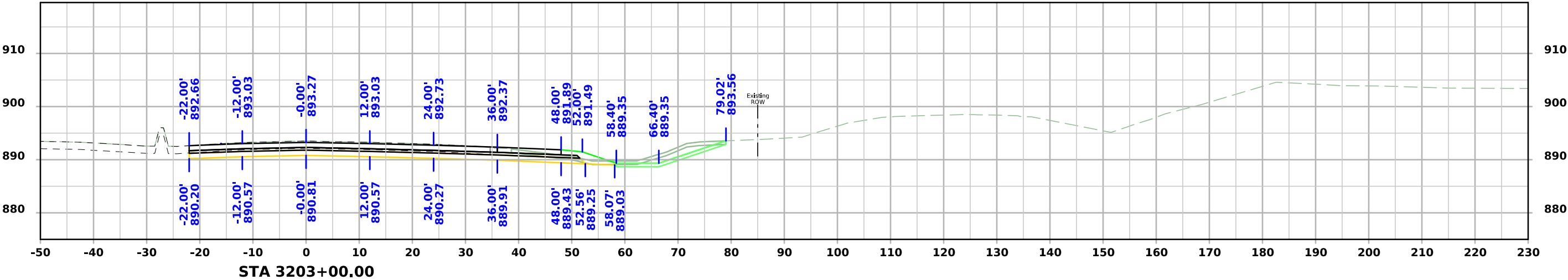
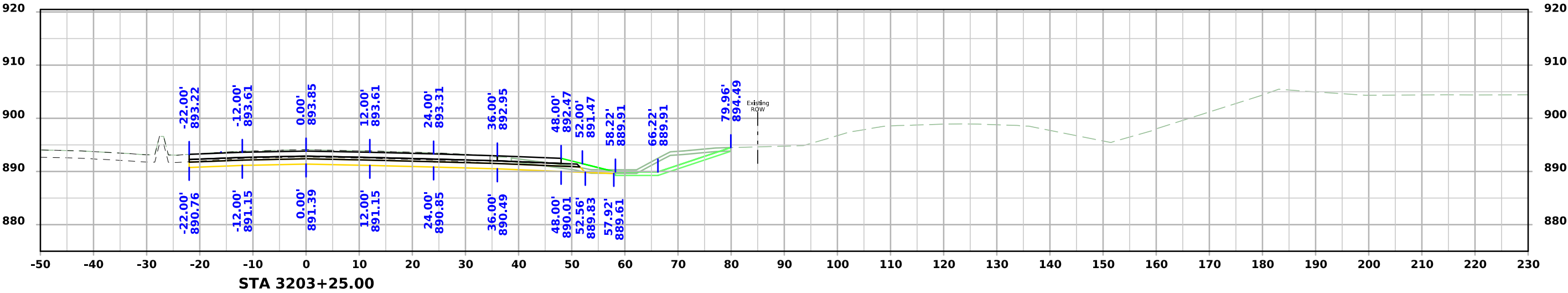
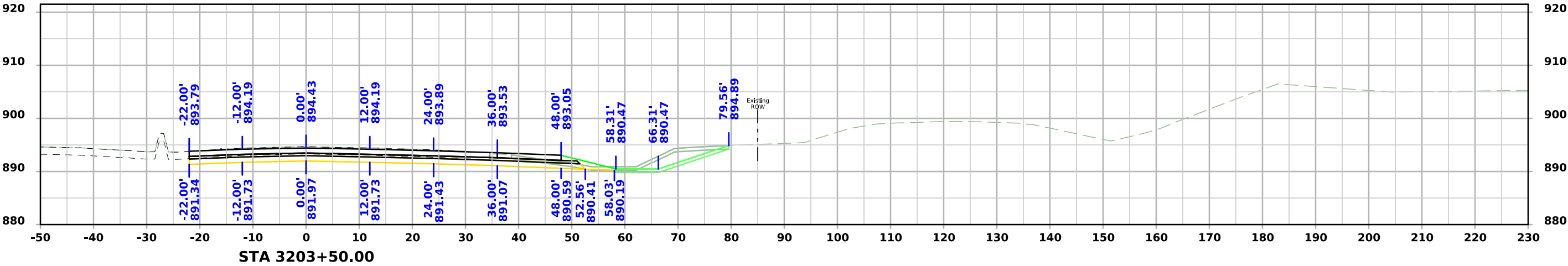




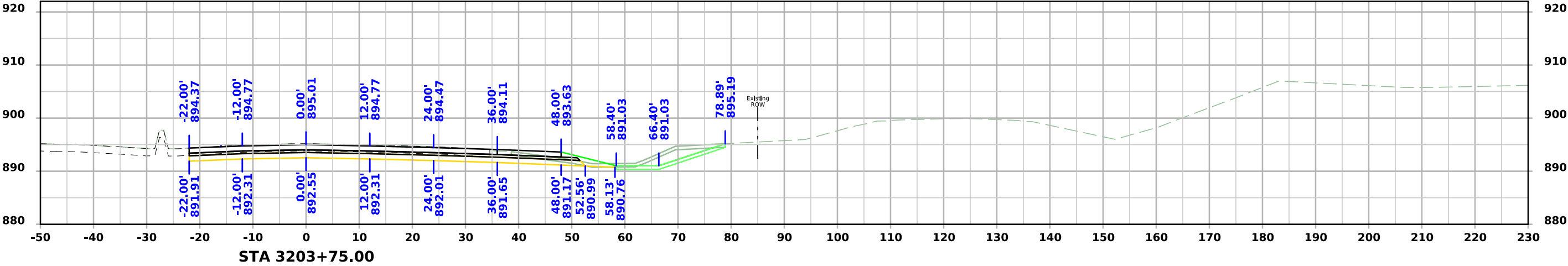
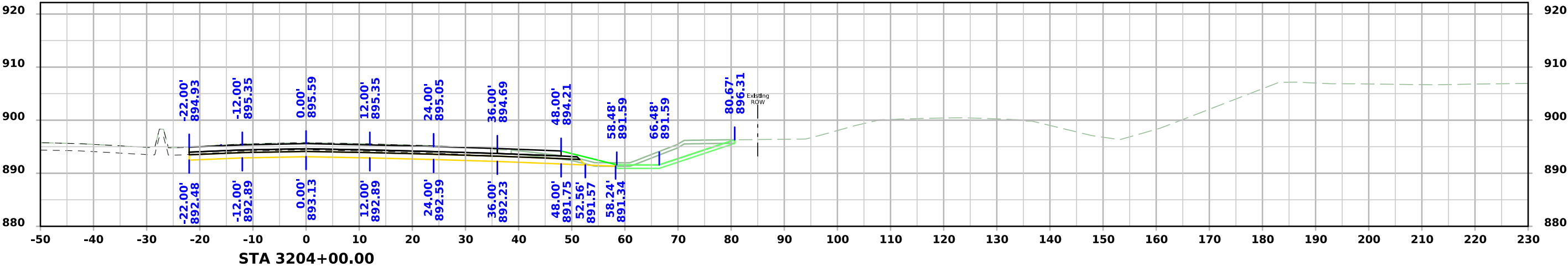
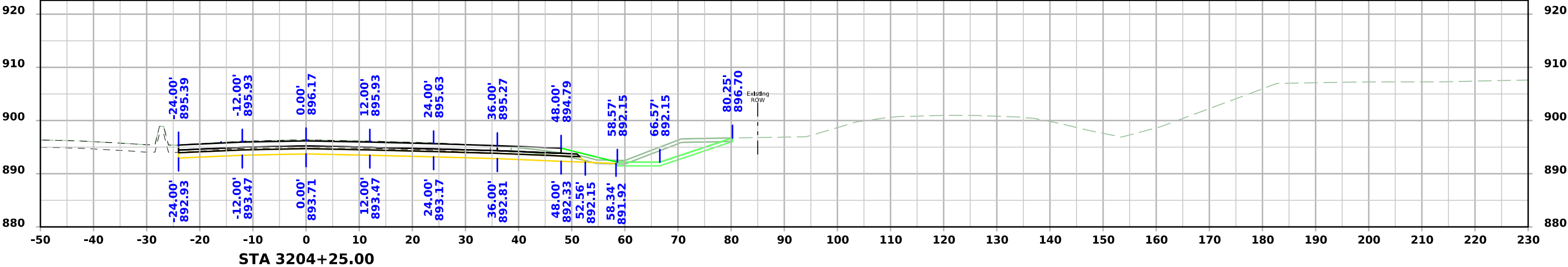
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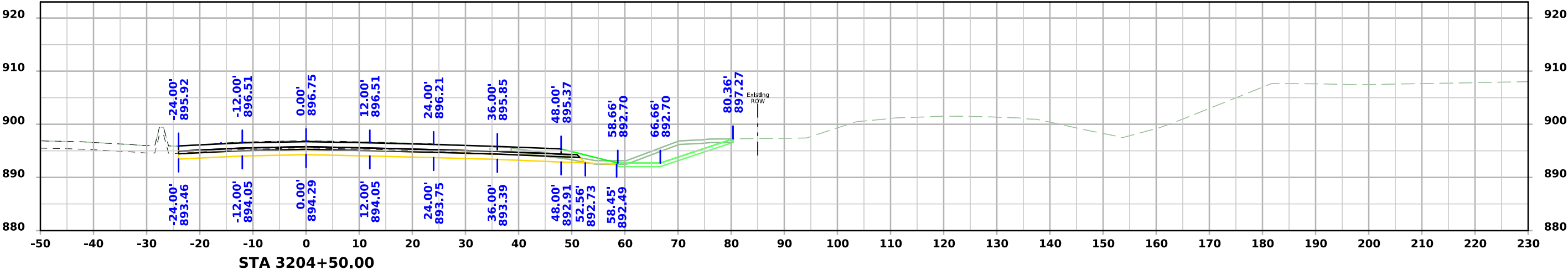
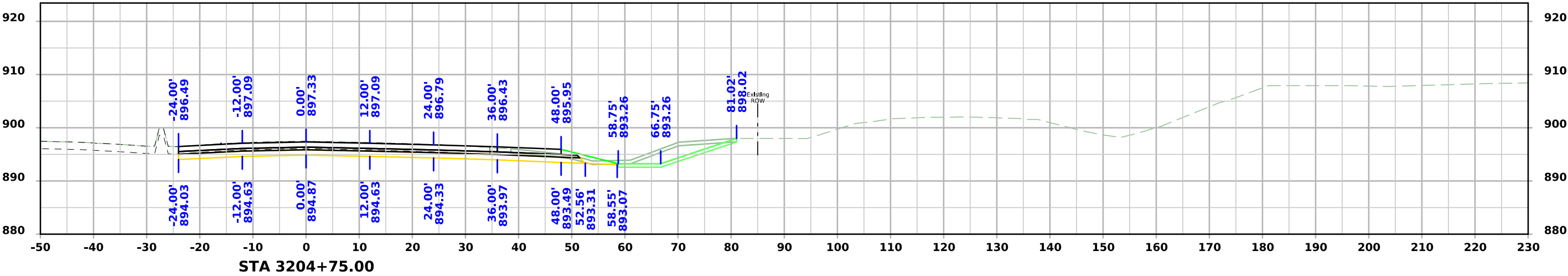
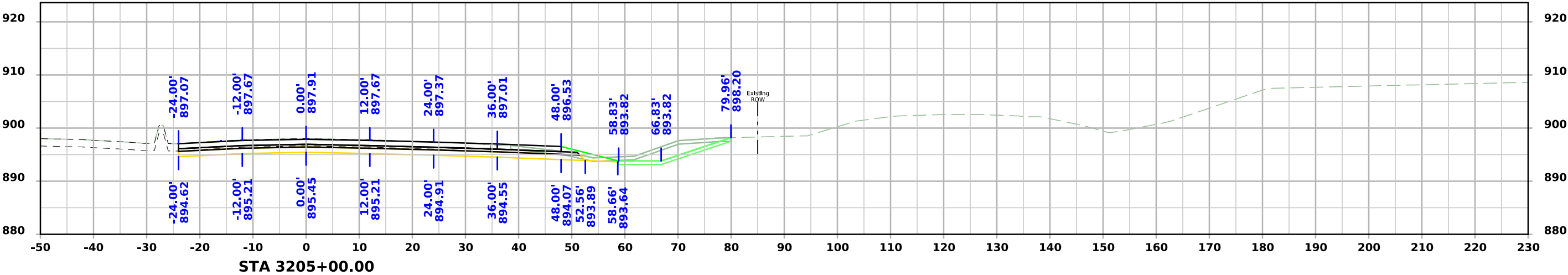
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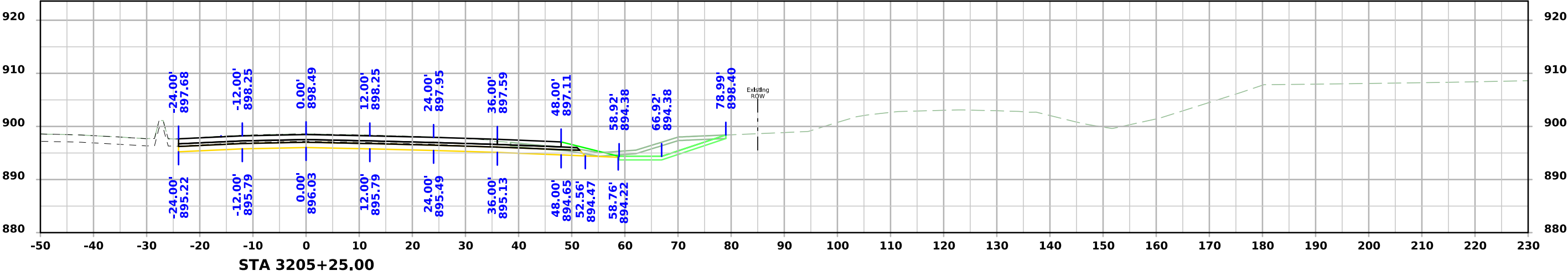
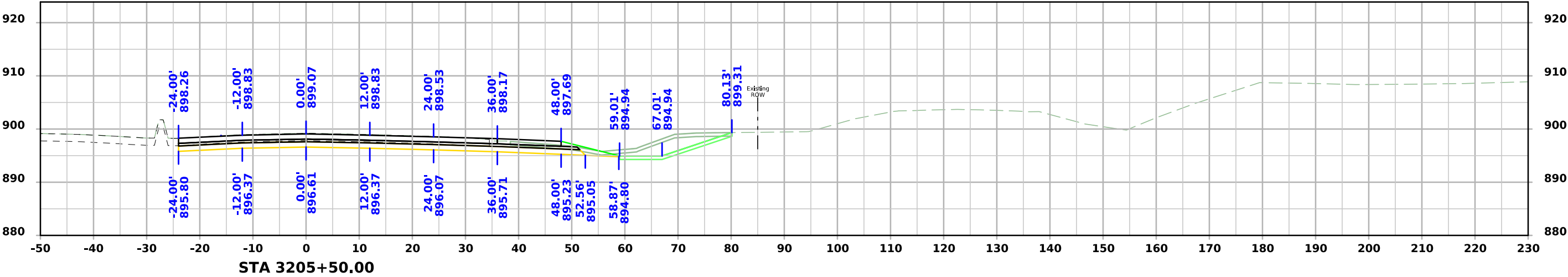
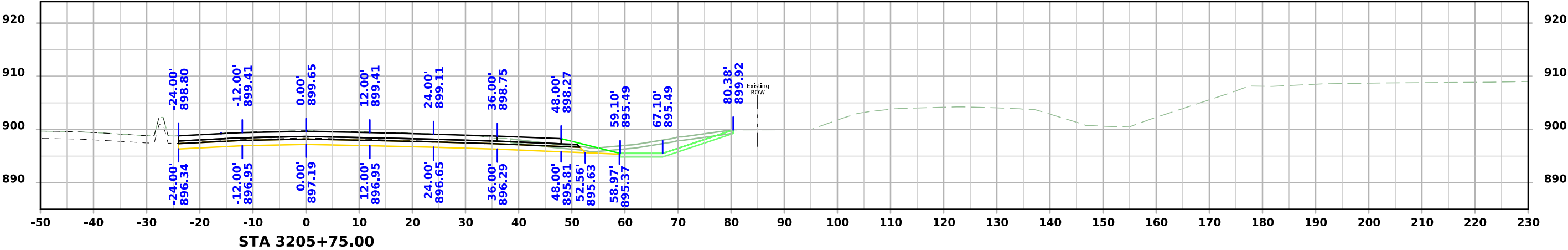
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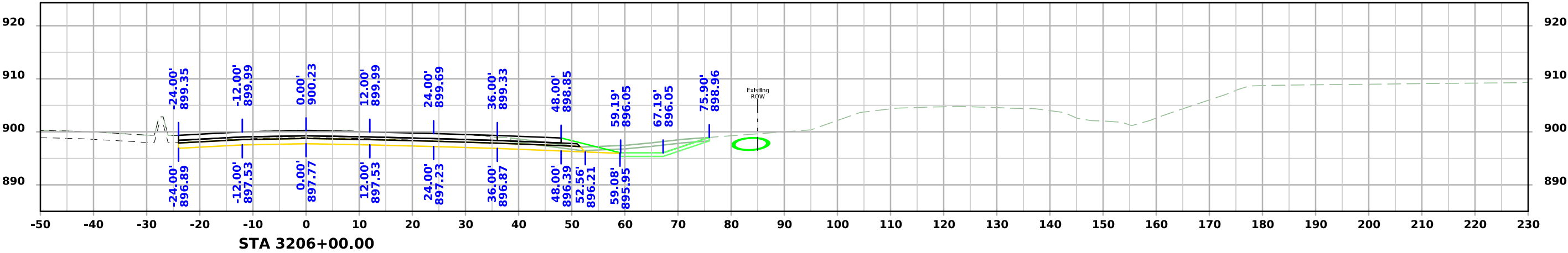
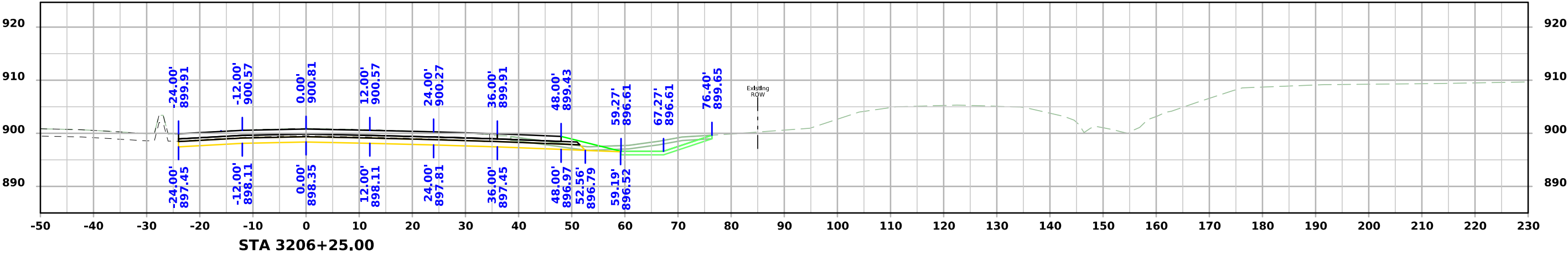
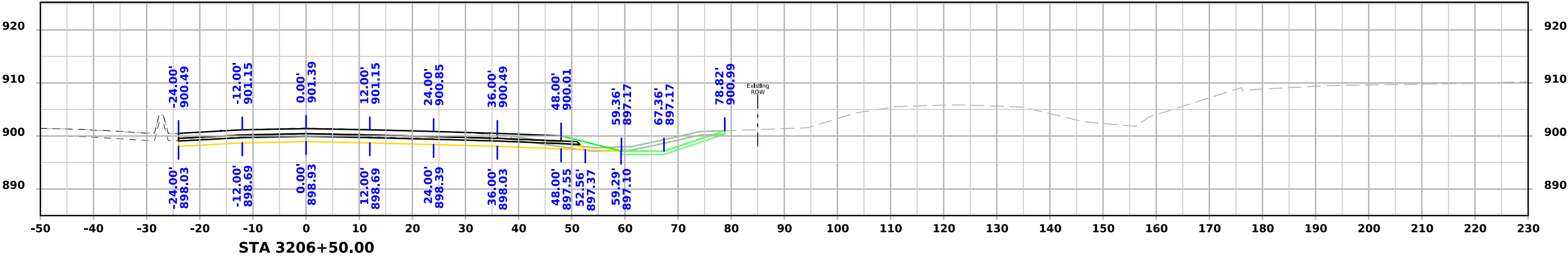
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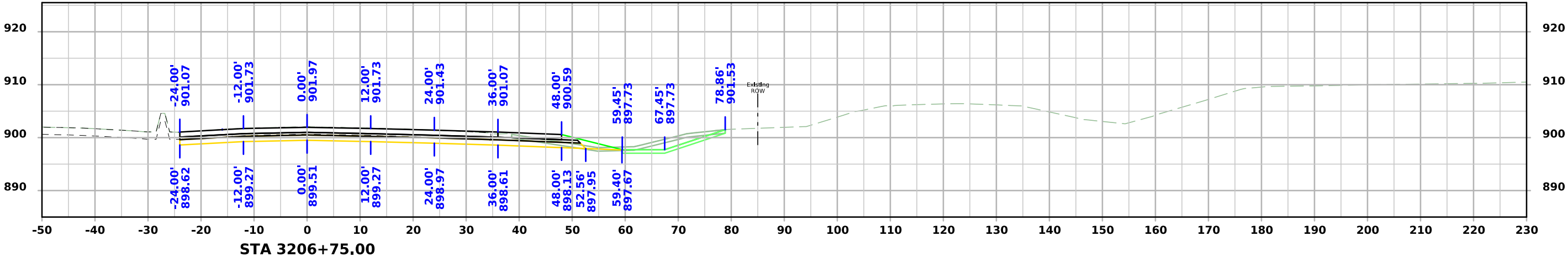
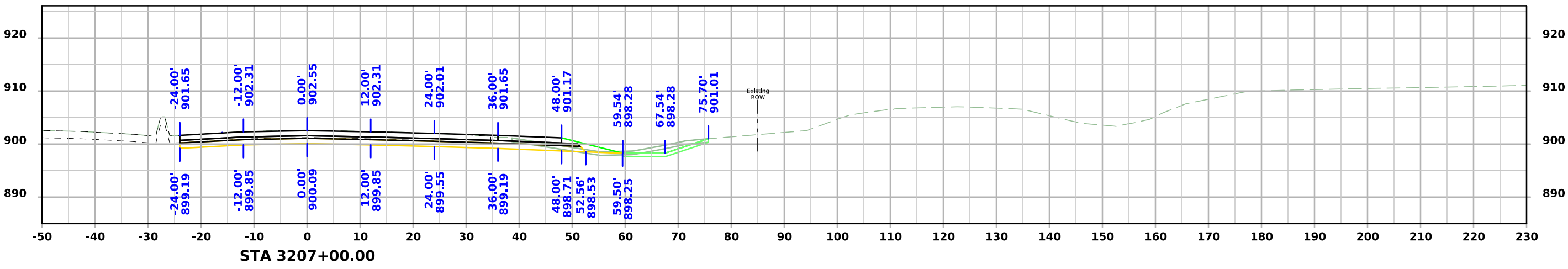
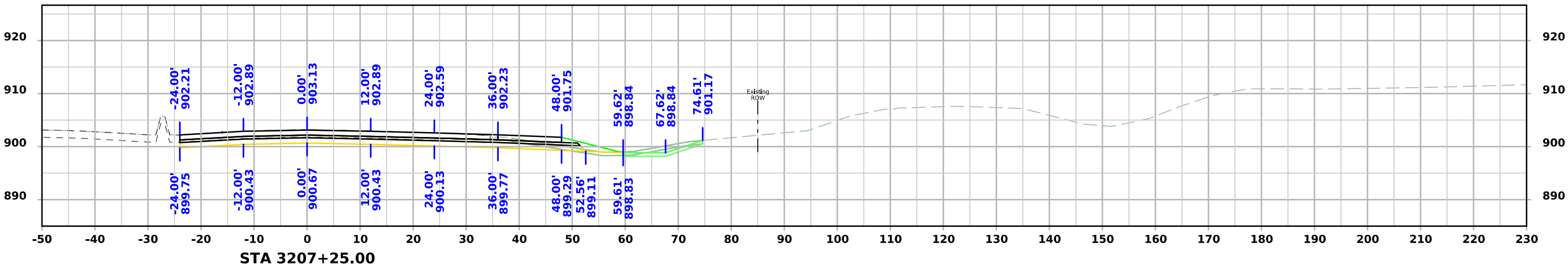
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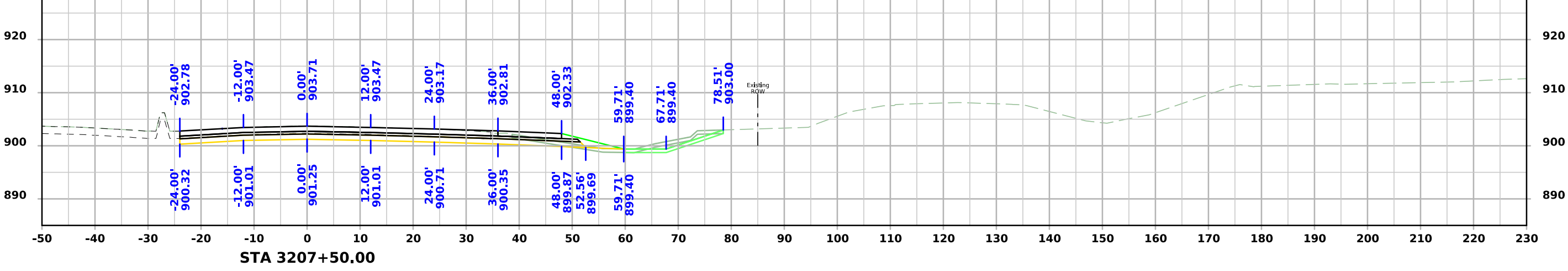
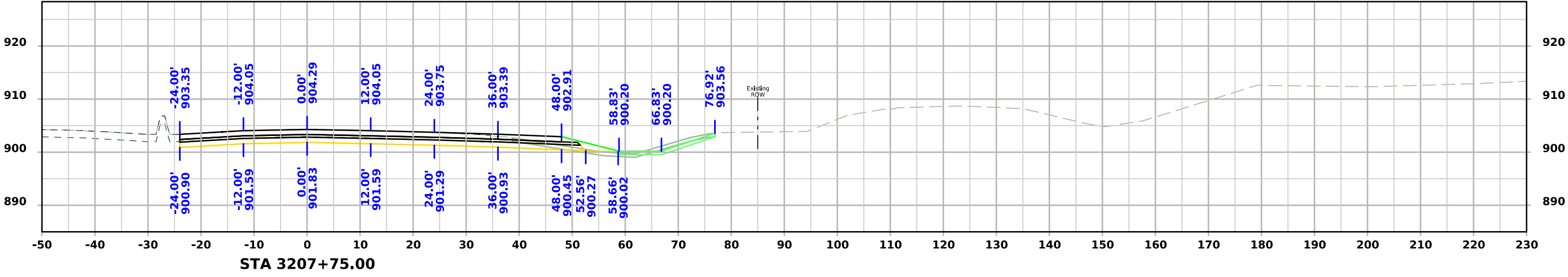
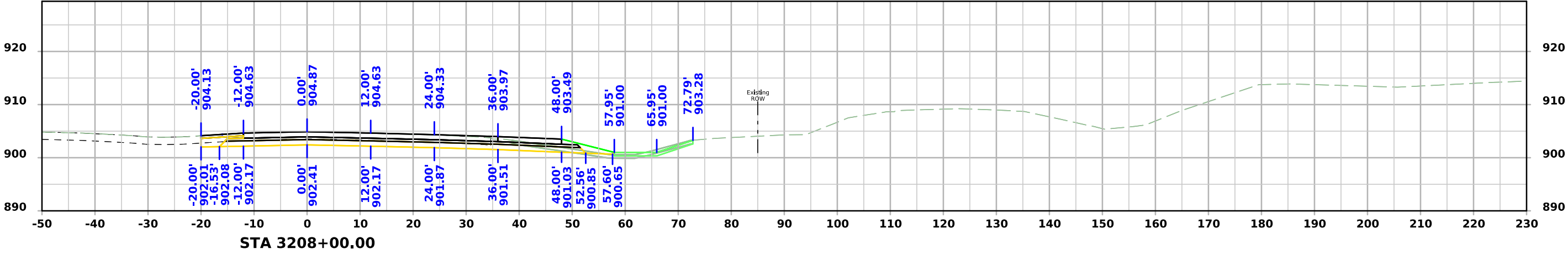
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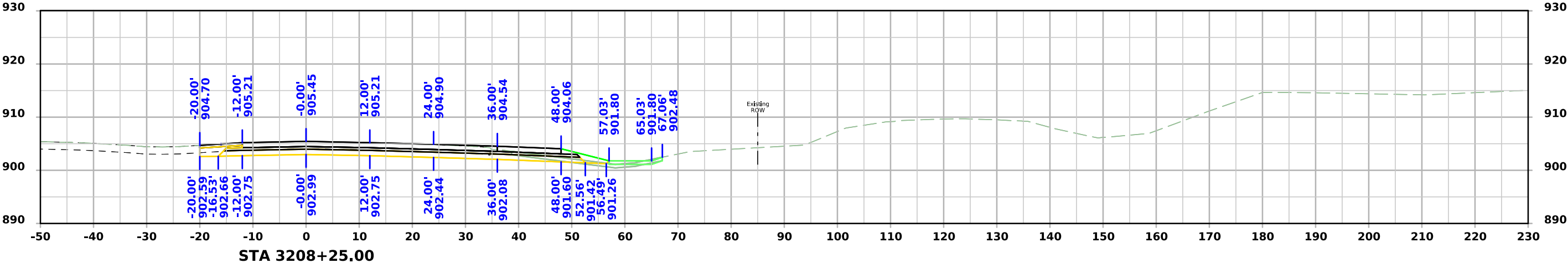
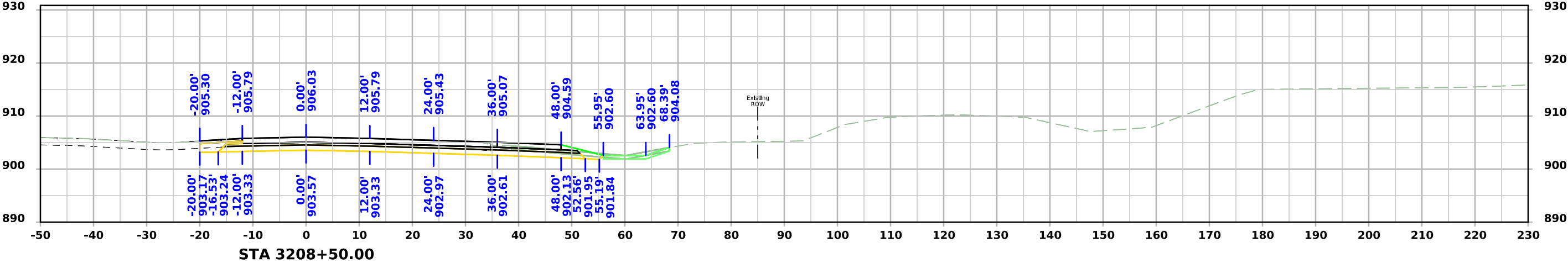
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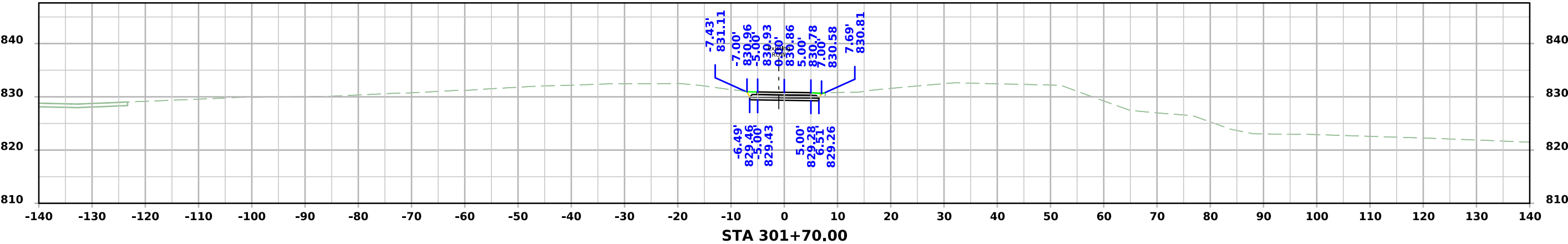
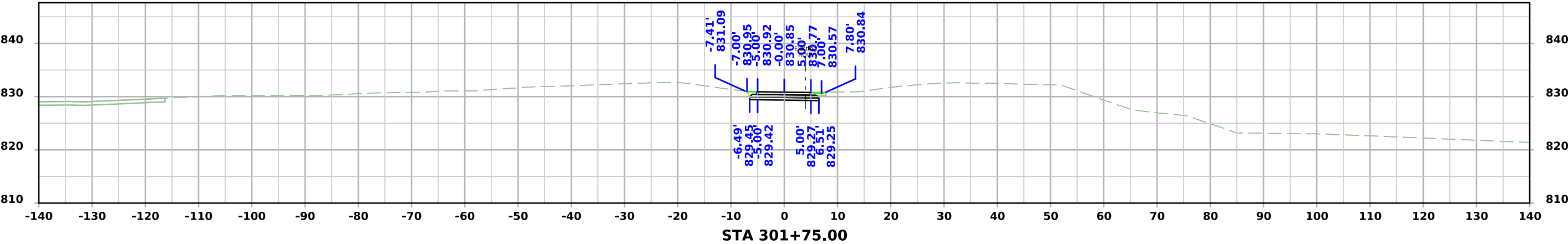
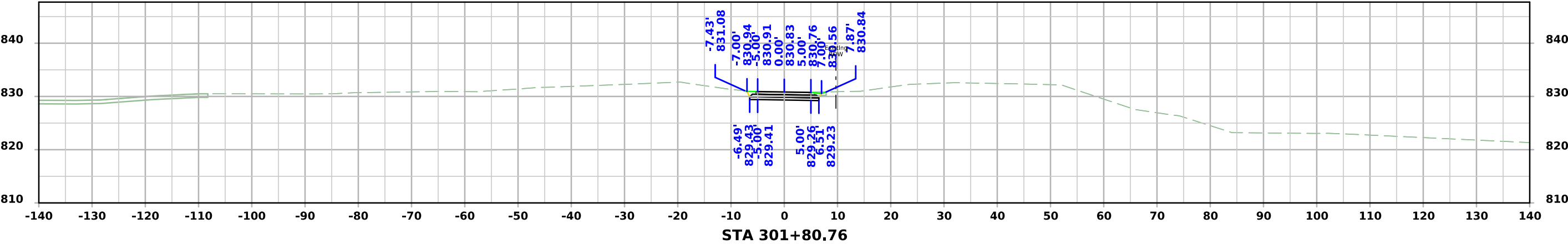
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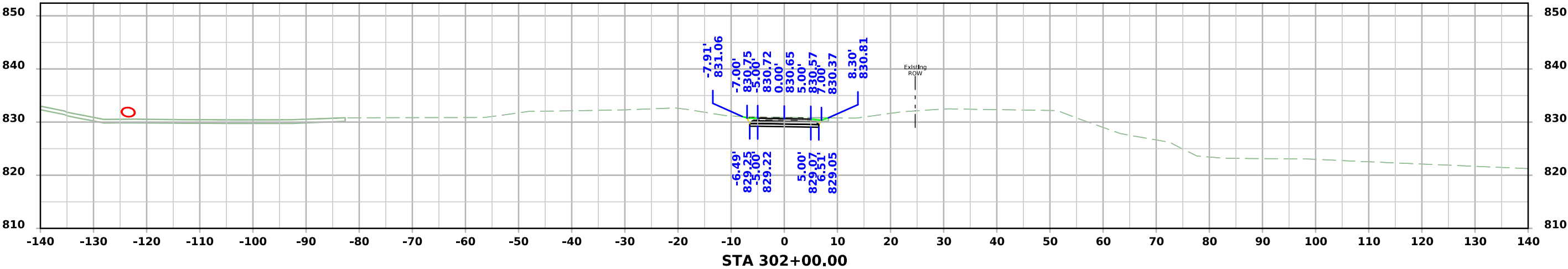
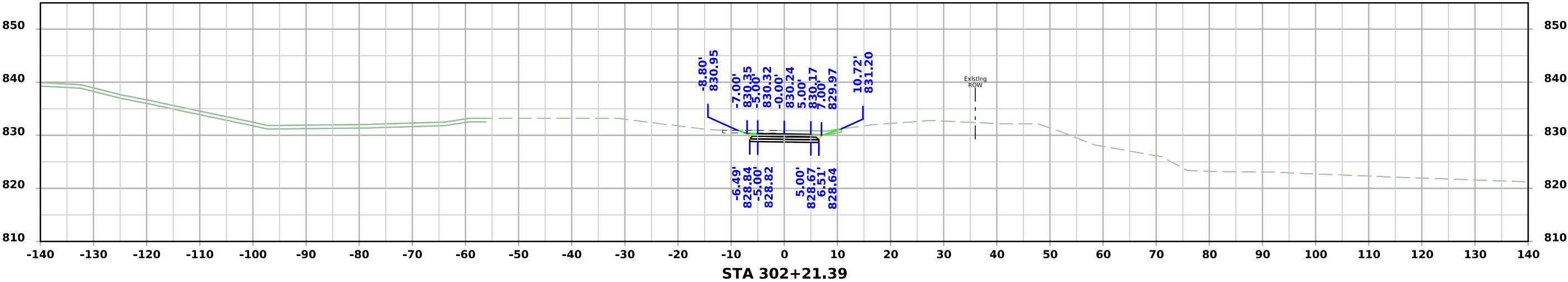
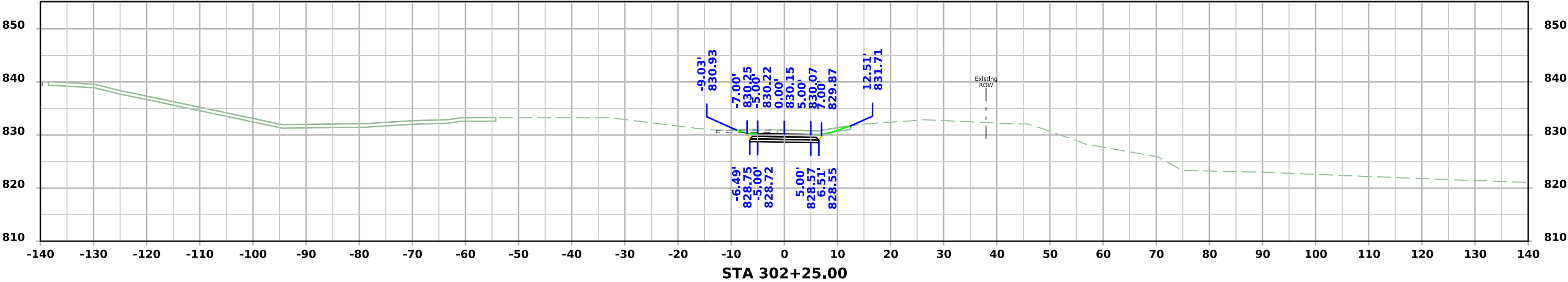
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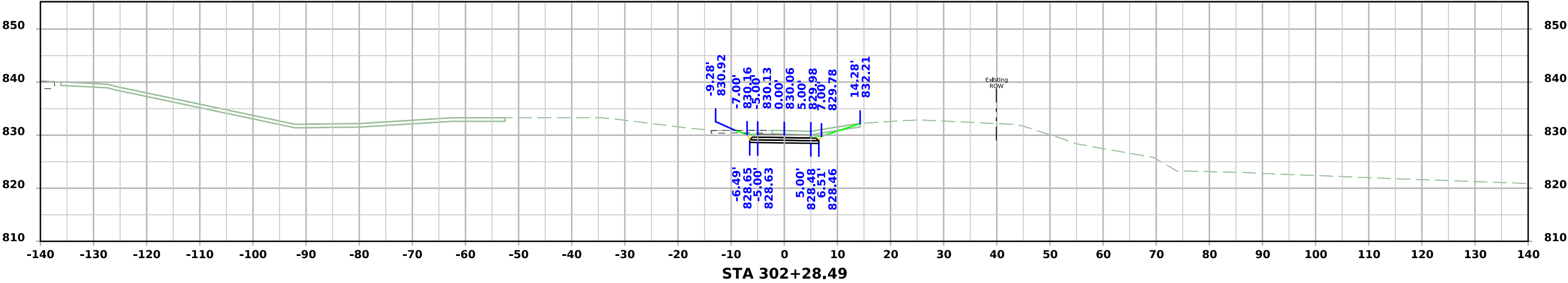
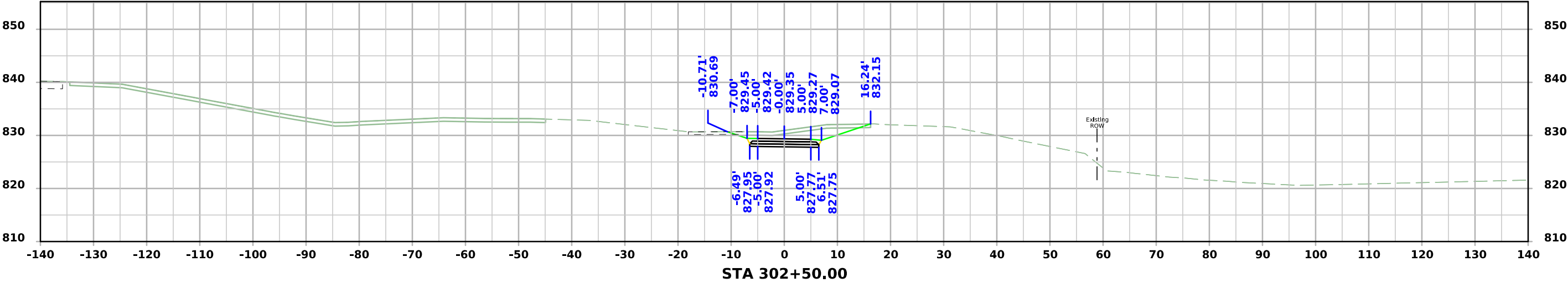
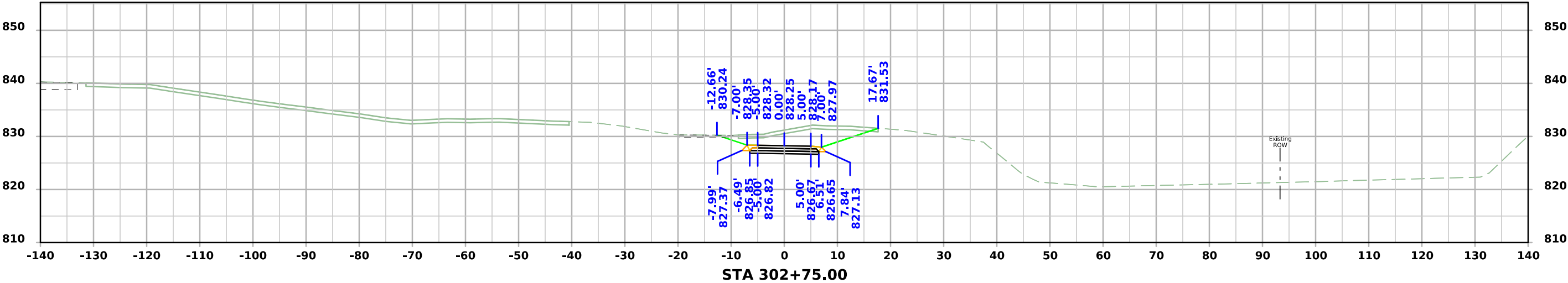
Four Mile Trail - Stage 2



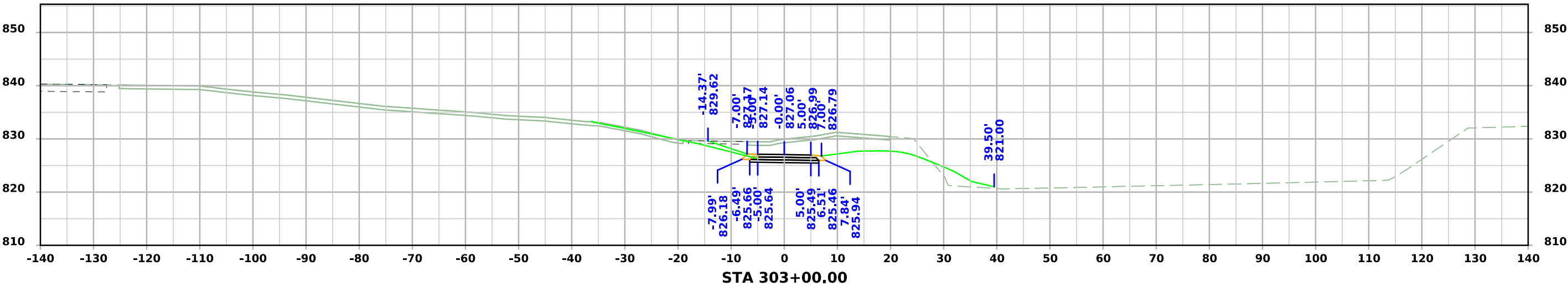
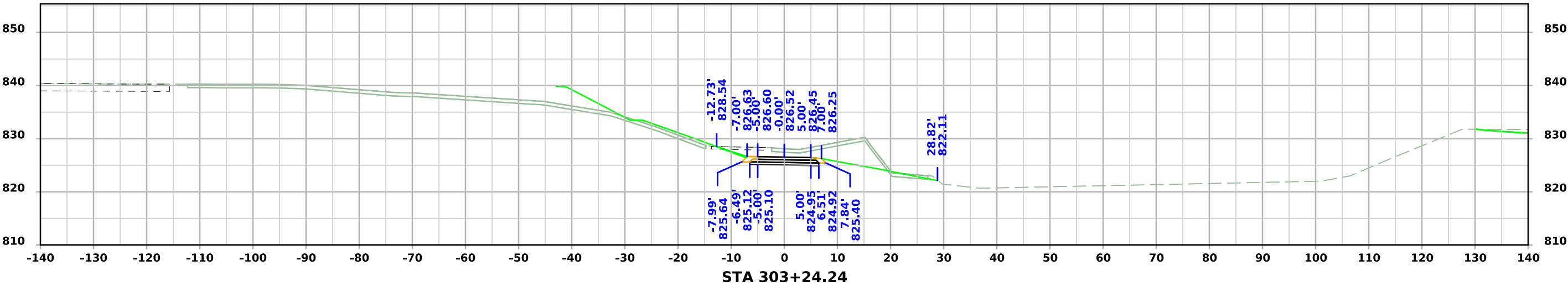
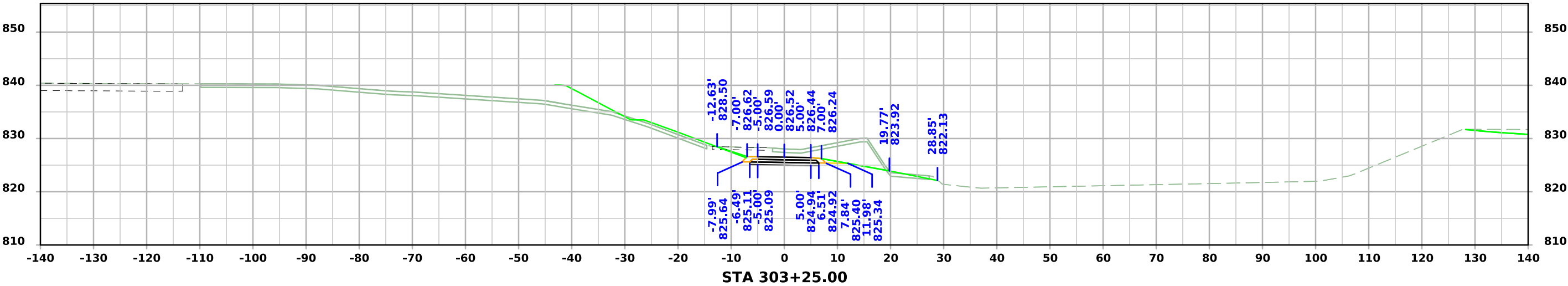
Four Mile Trail - Stage 2



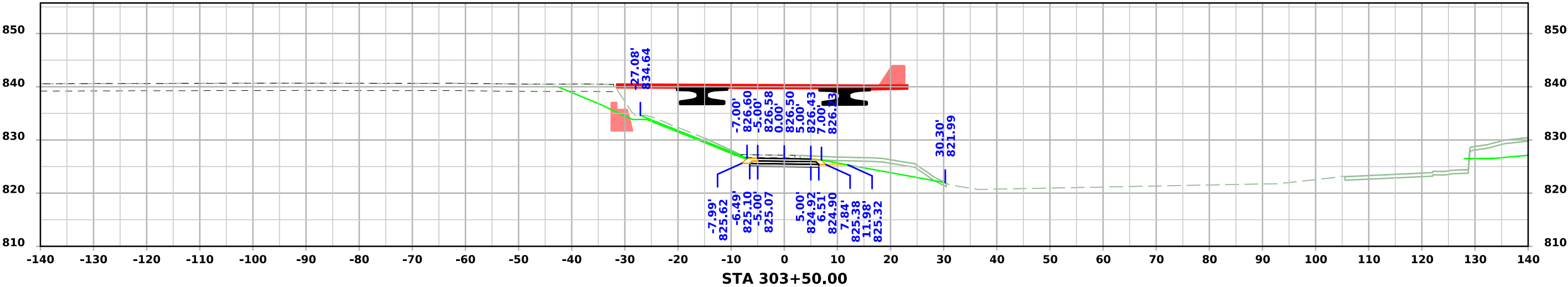
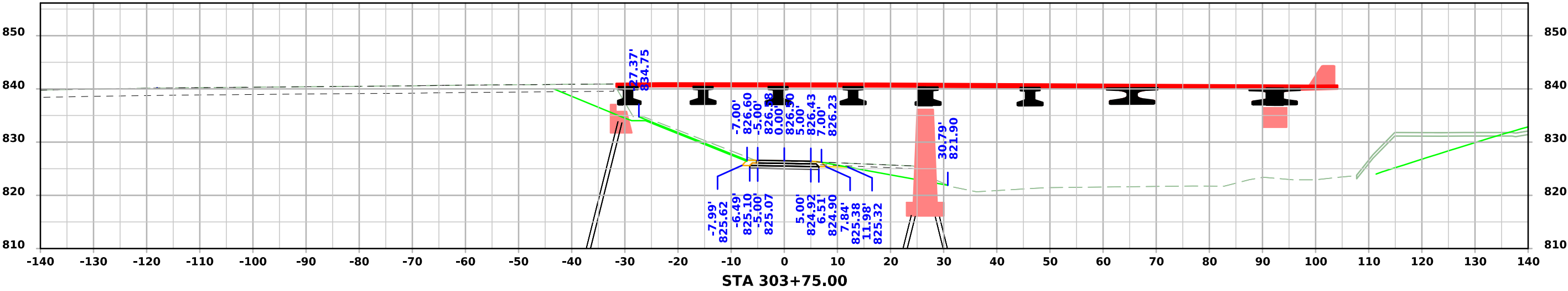
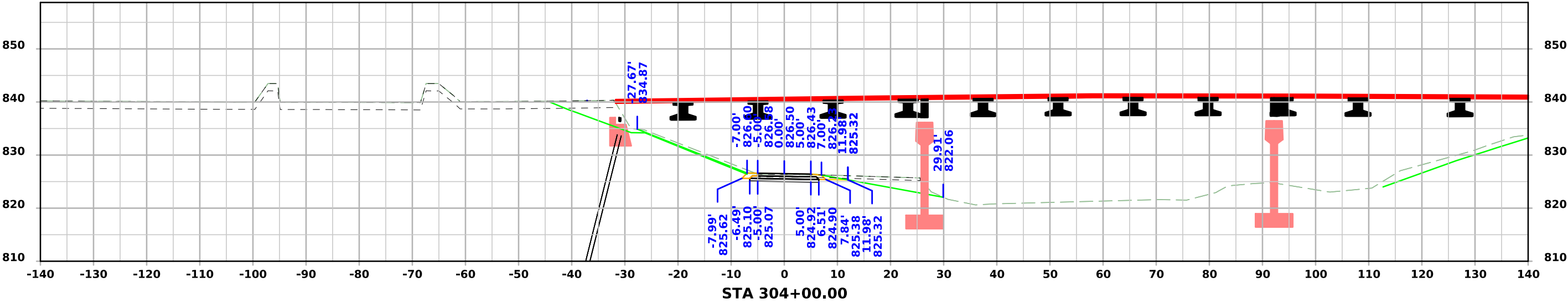
Four Mile Trail - Stage 2



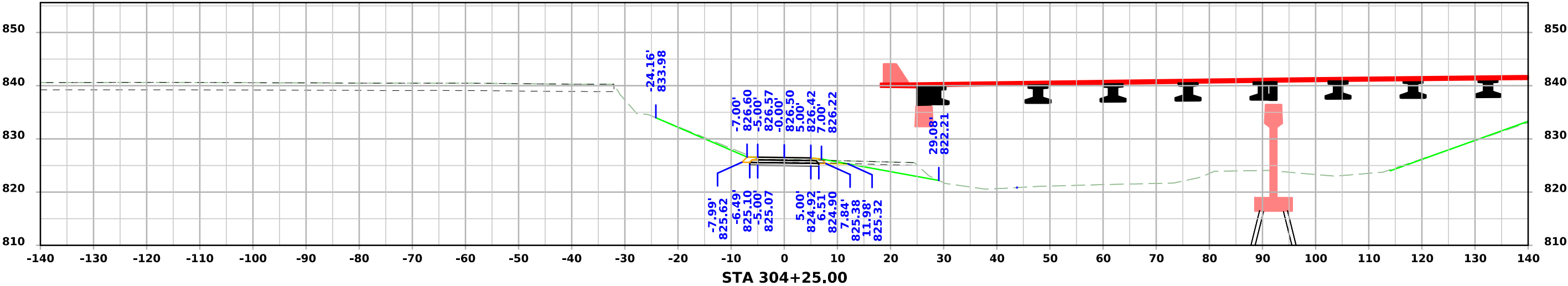
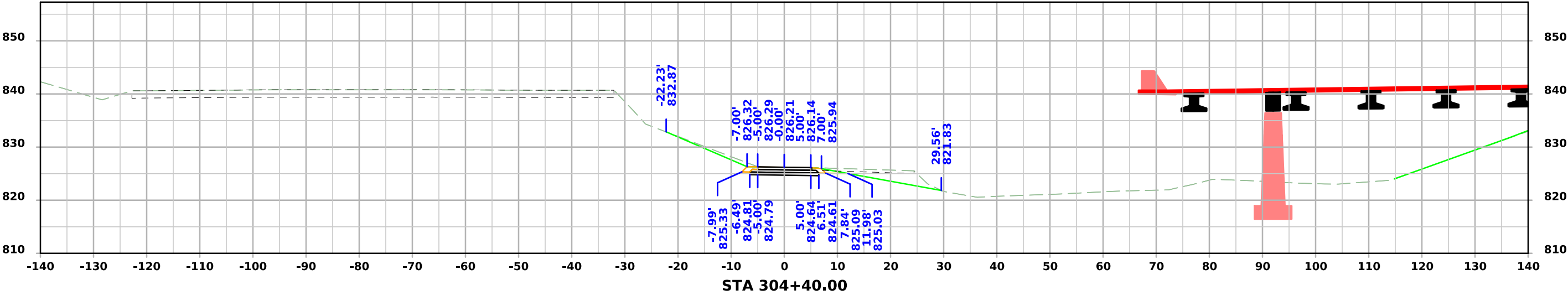
Four Mile Trail - Stage 2



Four Mile Trail - Stage 2

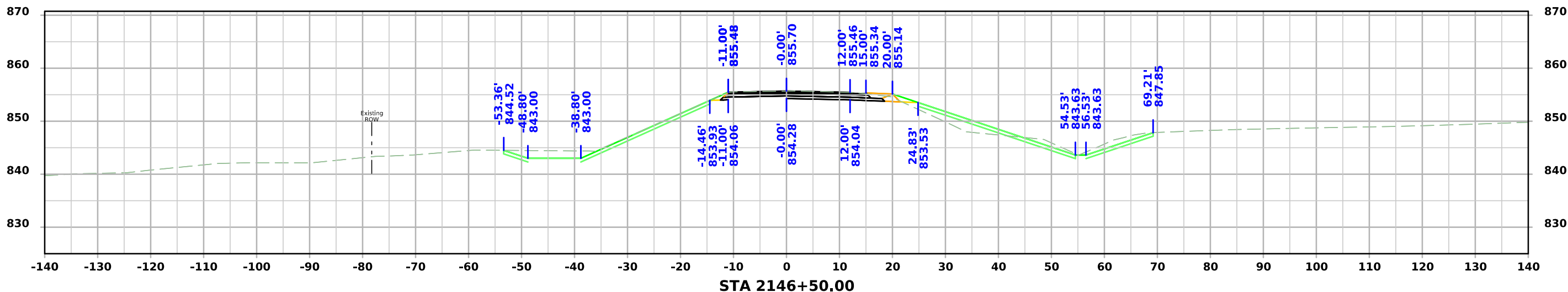
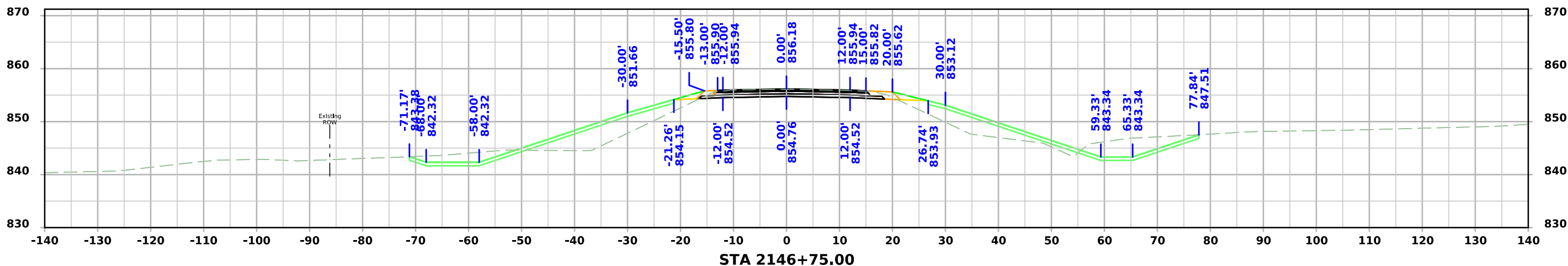
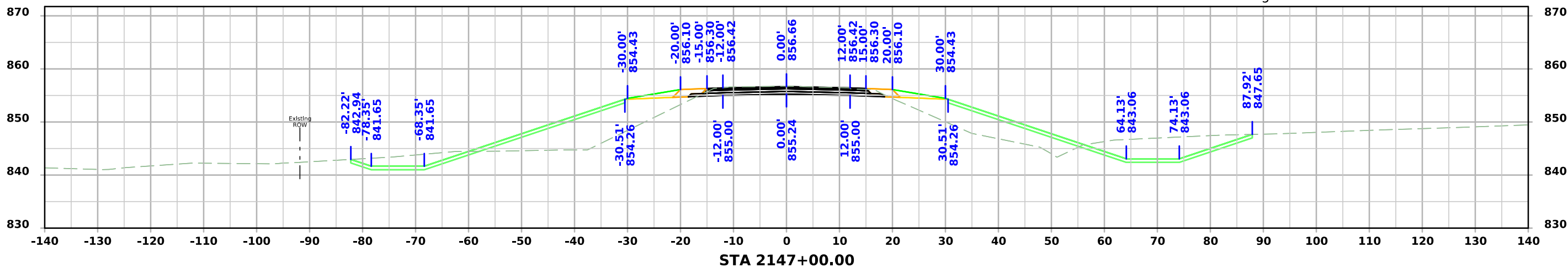


Four Mile Trail - Stage 2



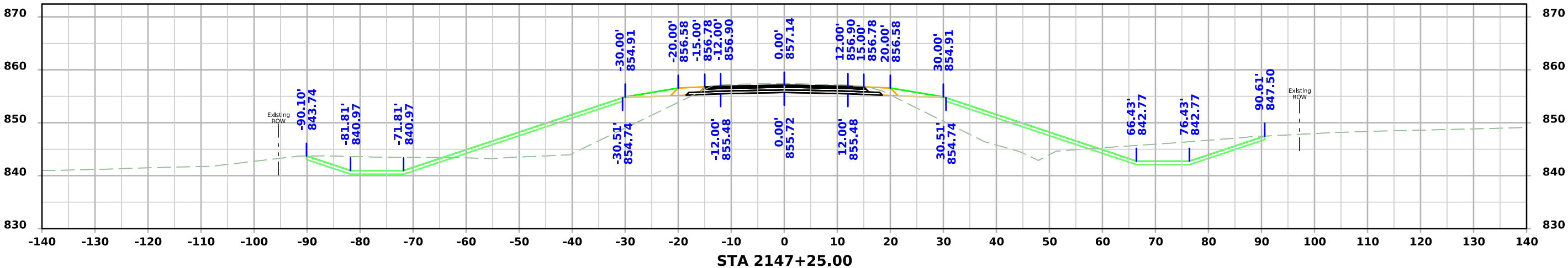
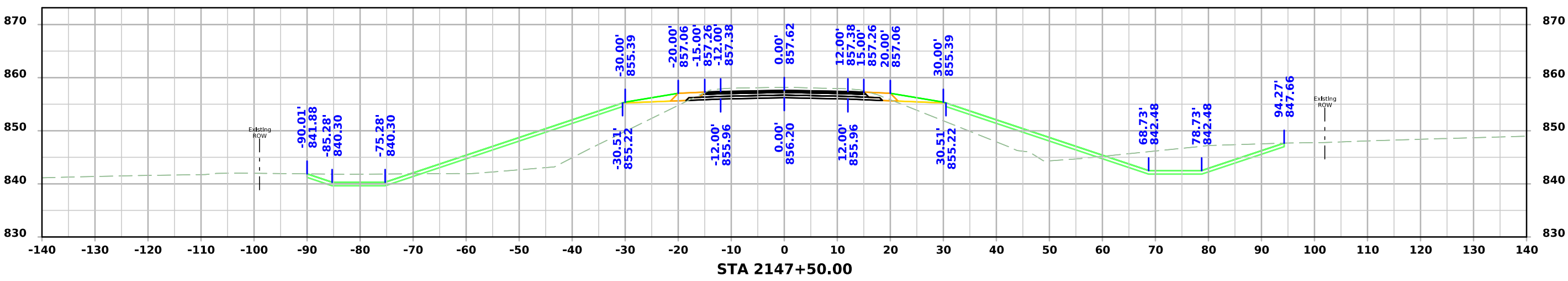
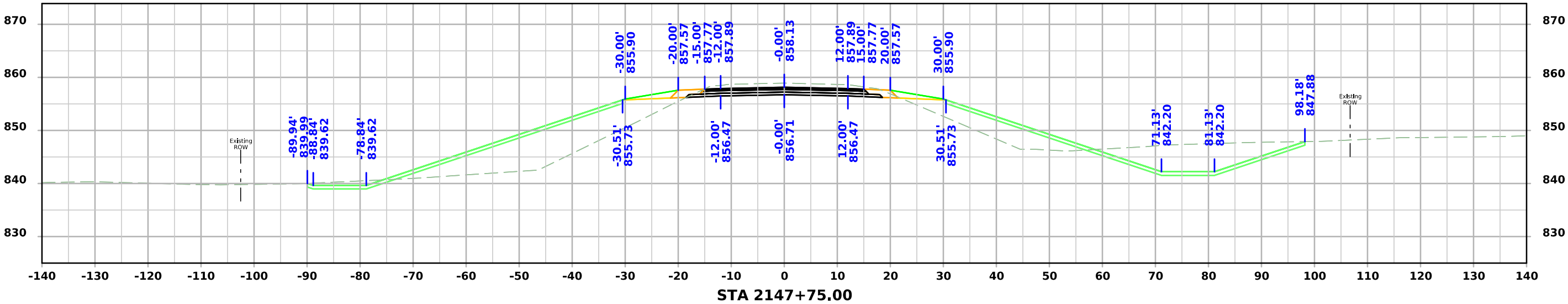
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



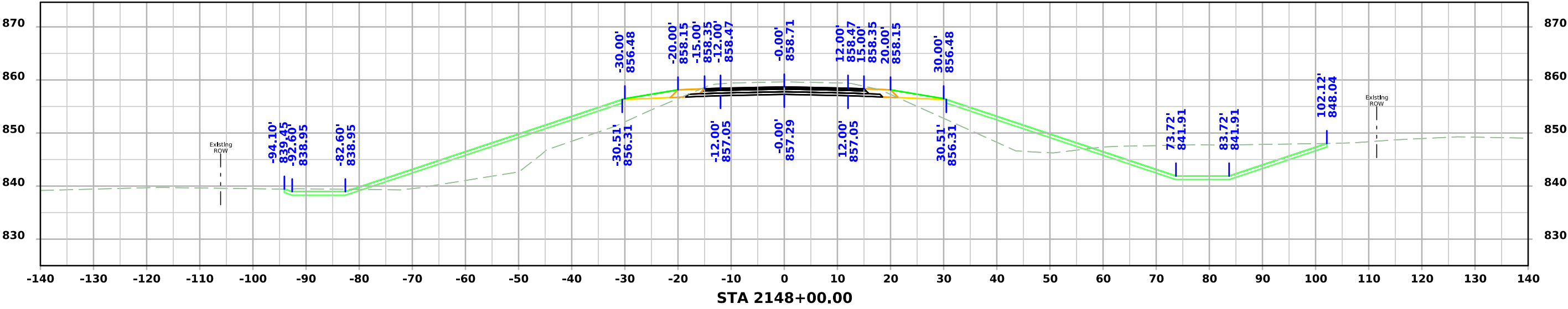
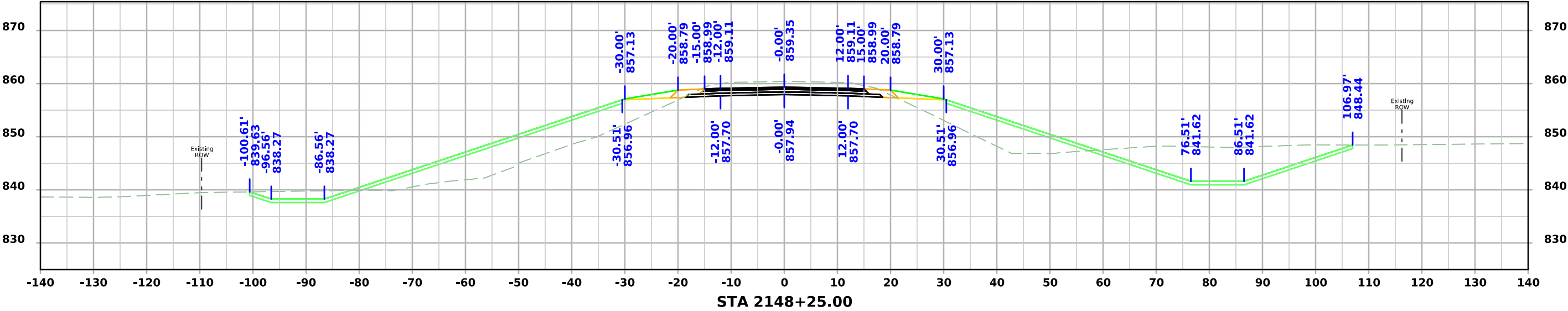
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



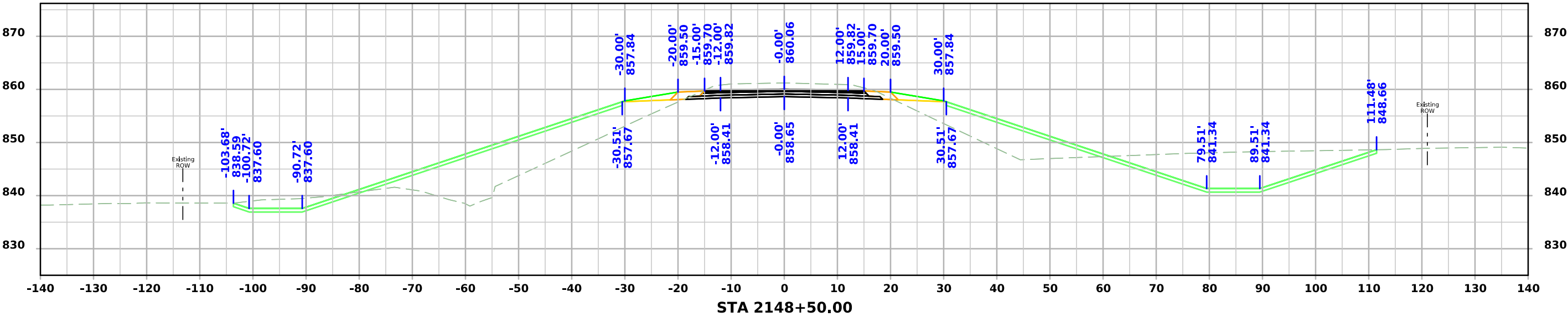
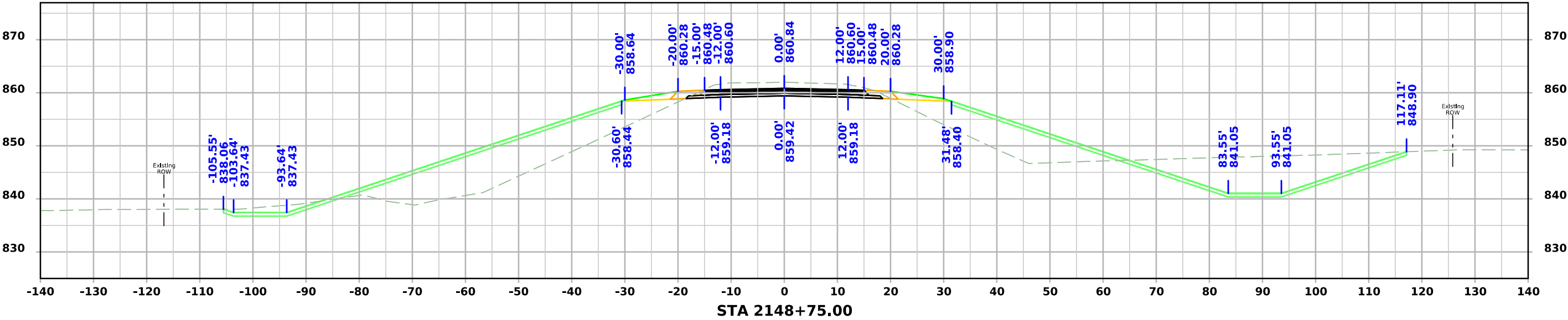
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



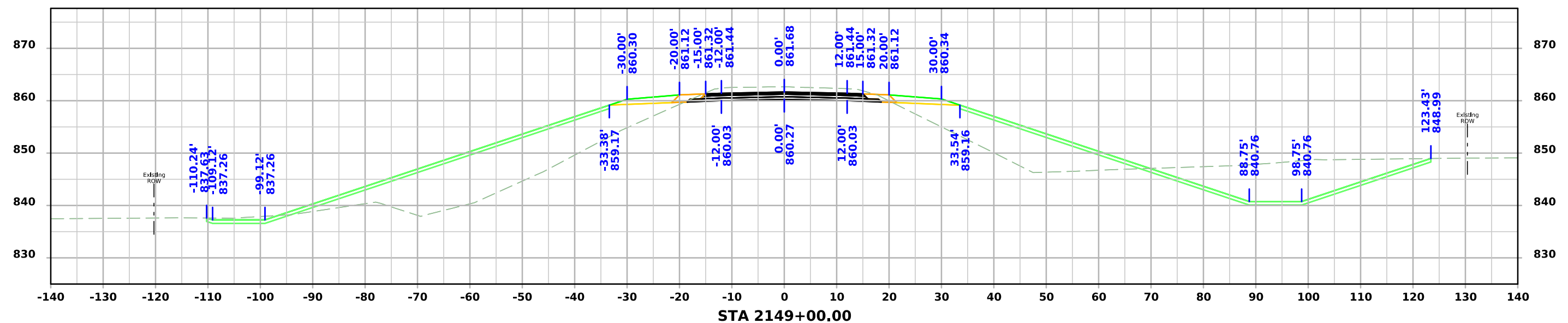
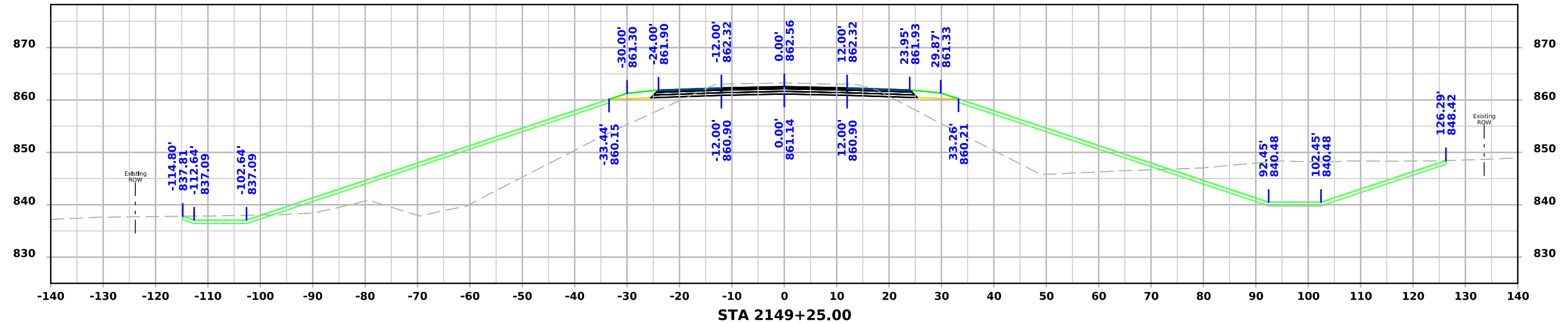
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



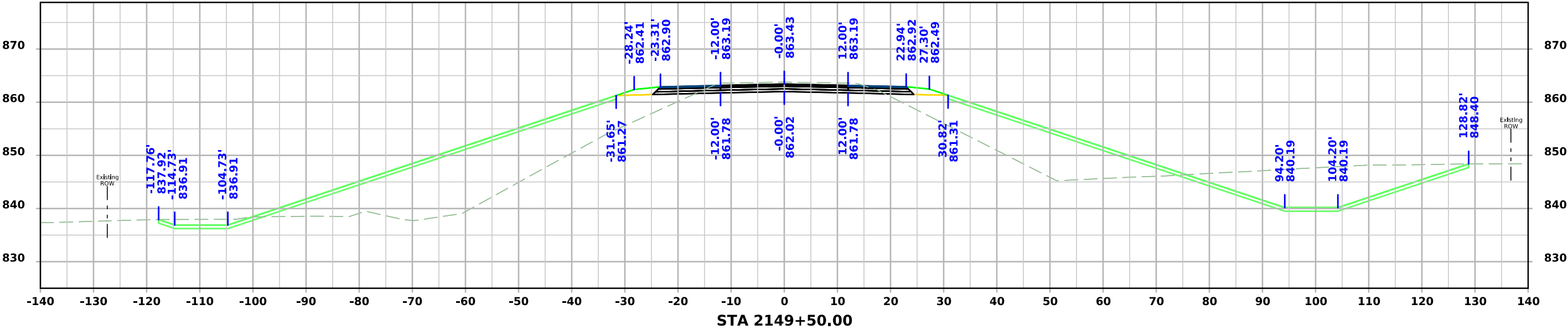
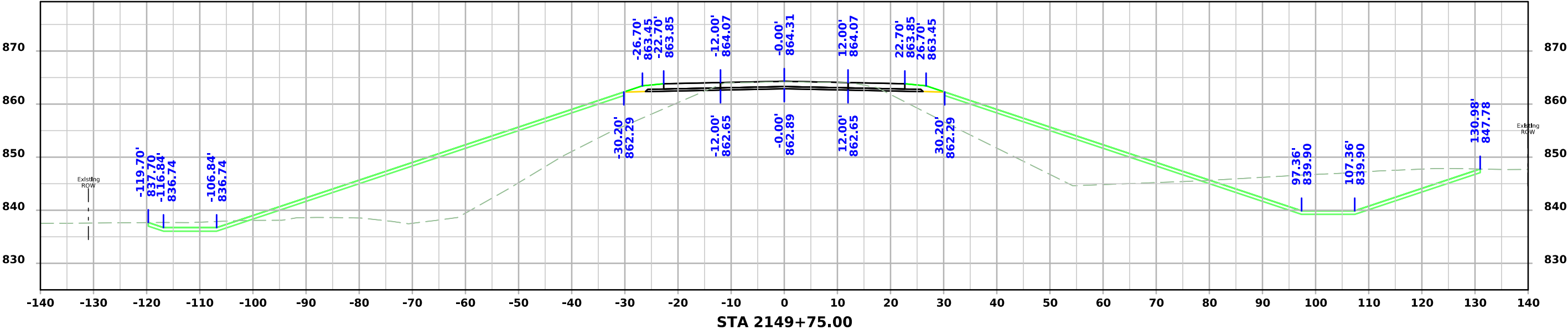
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



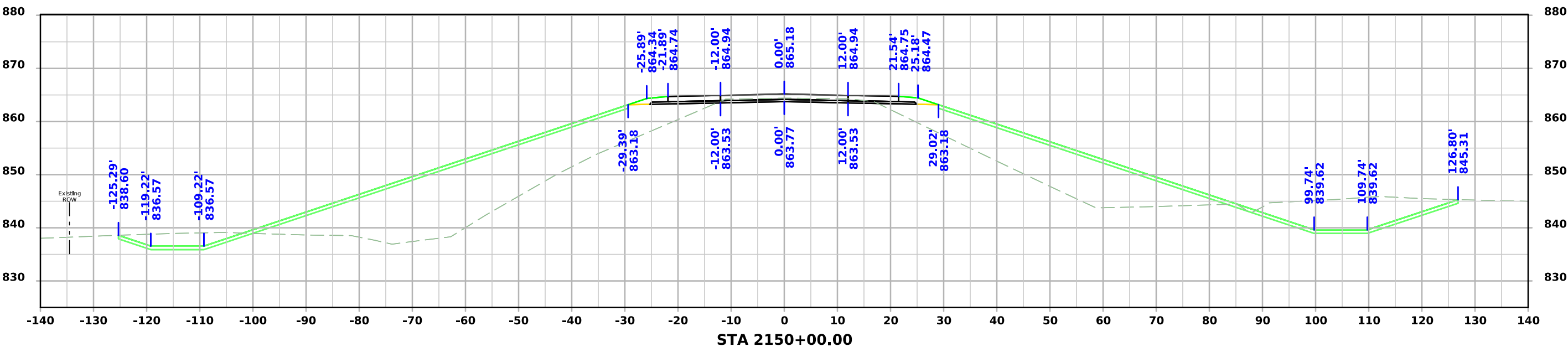
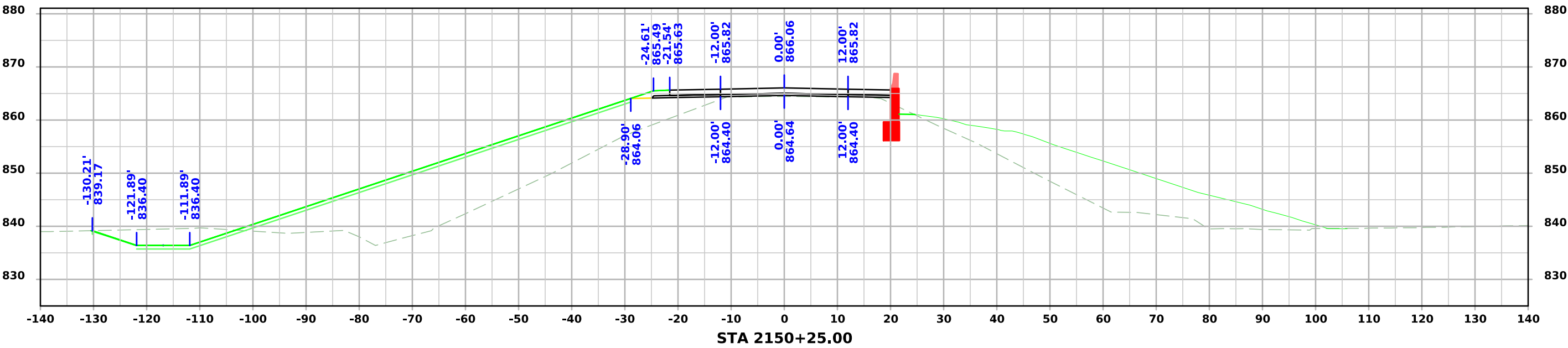
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



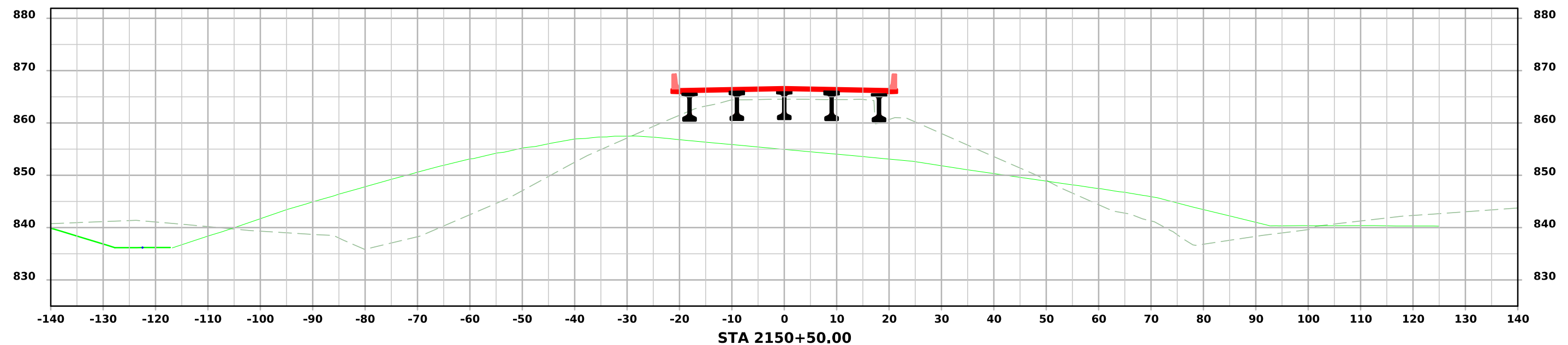
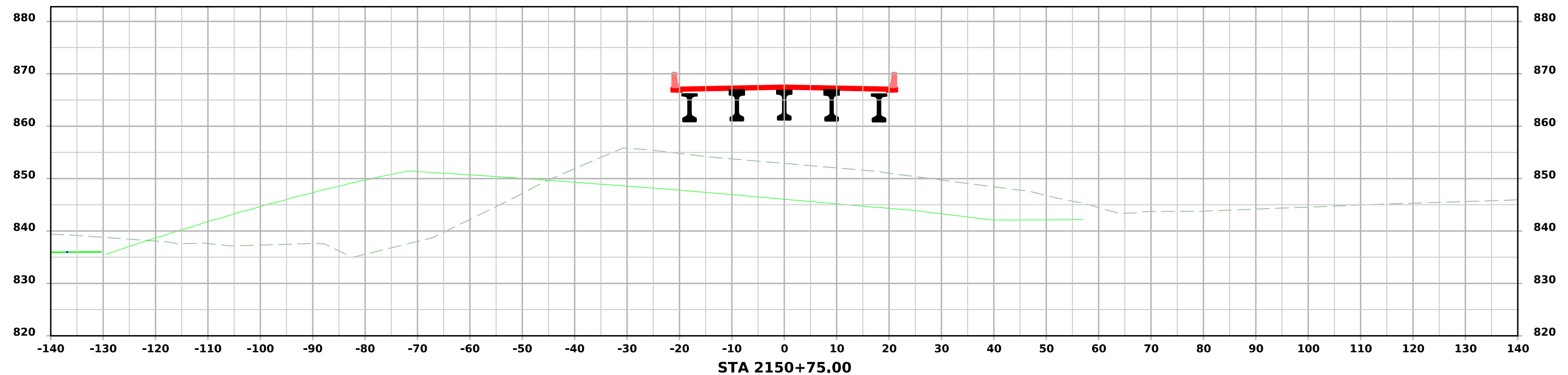
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



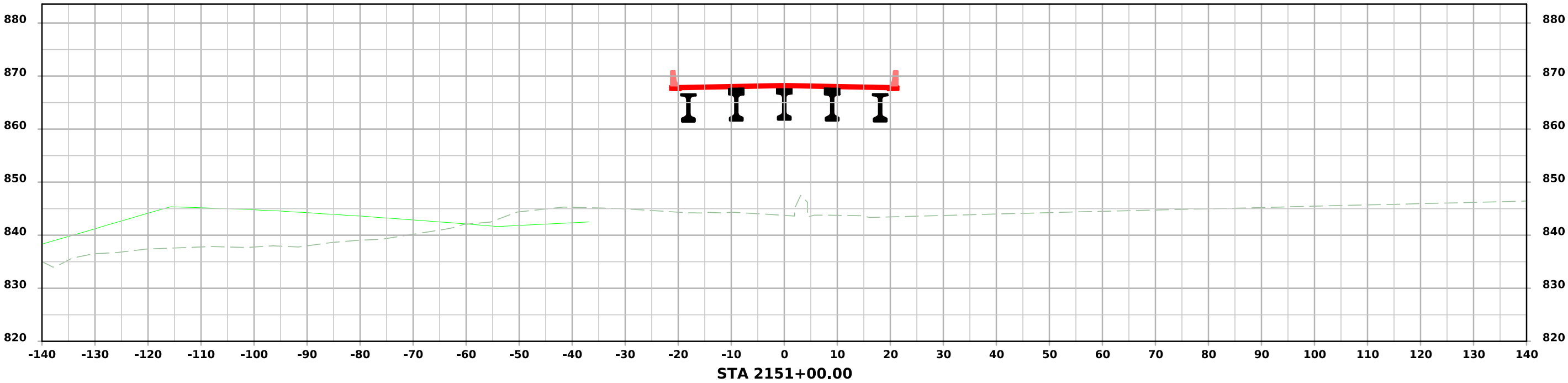
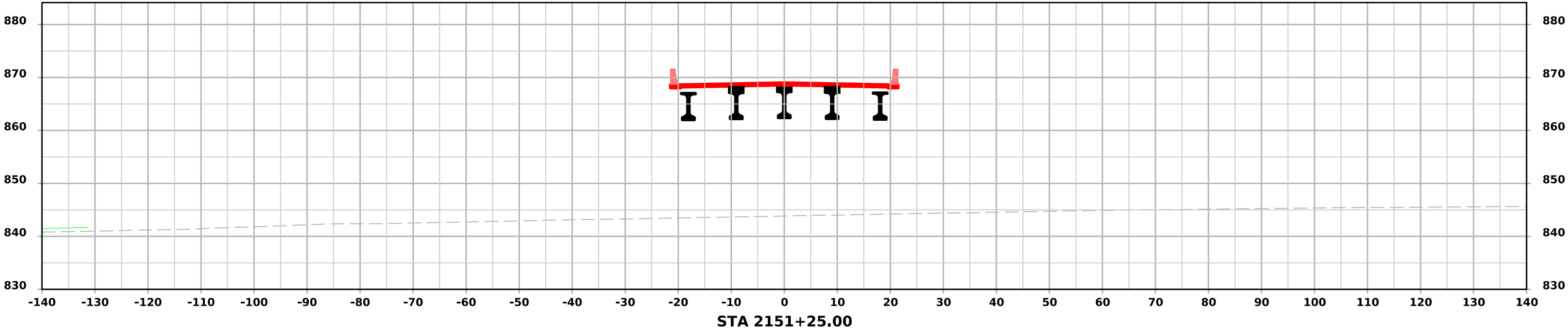
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



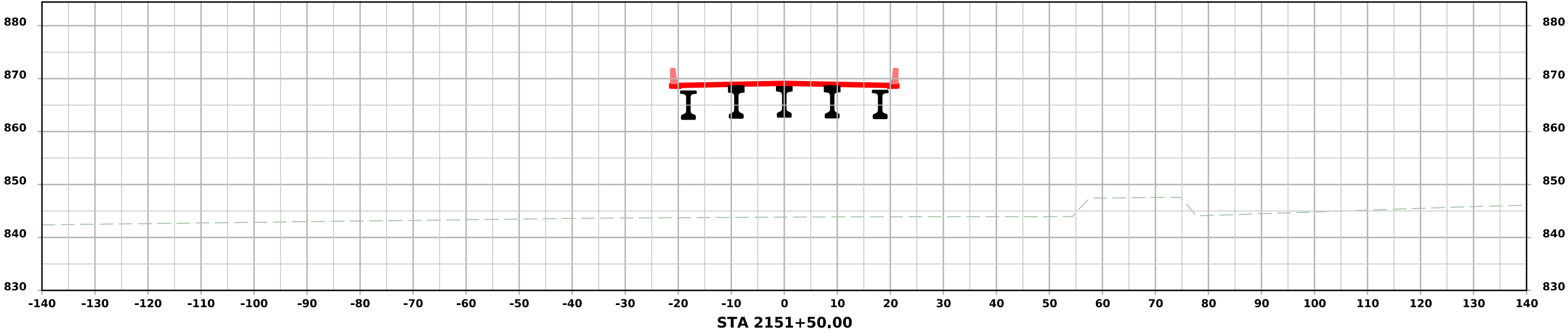
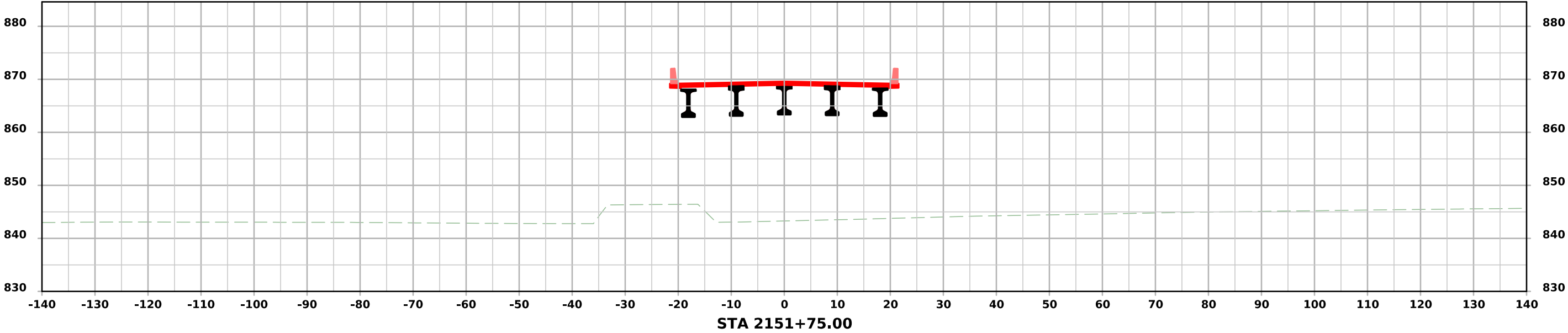
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



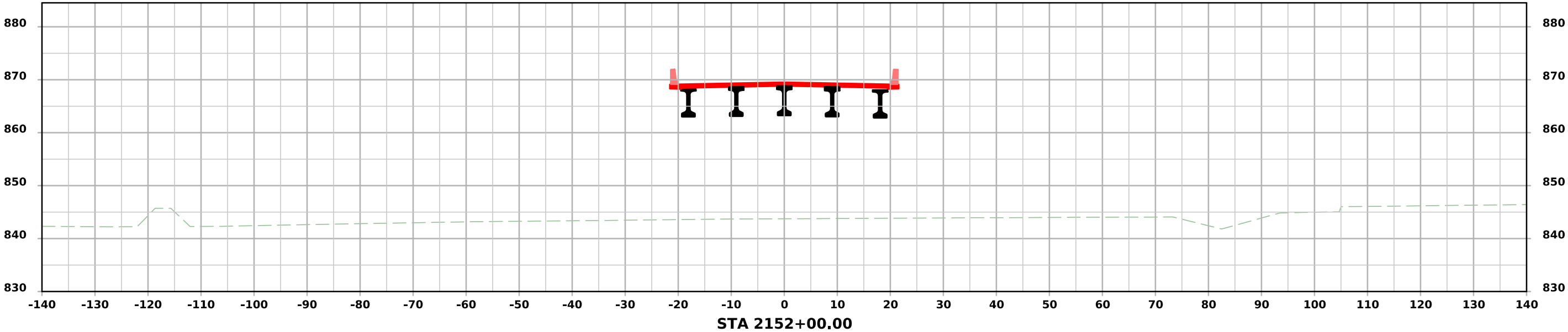
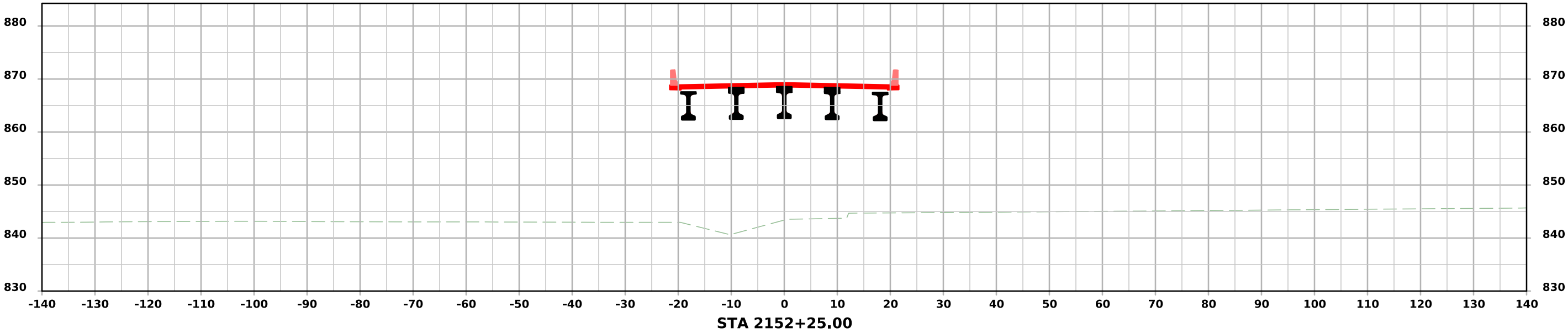
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



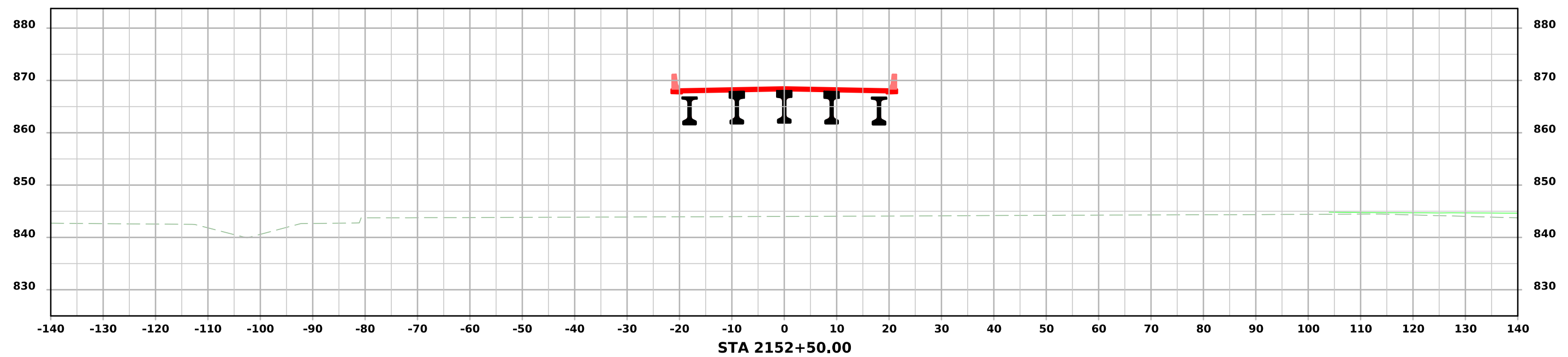
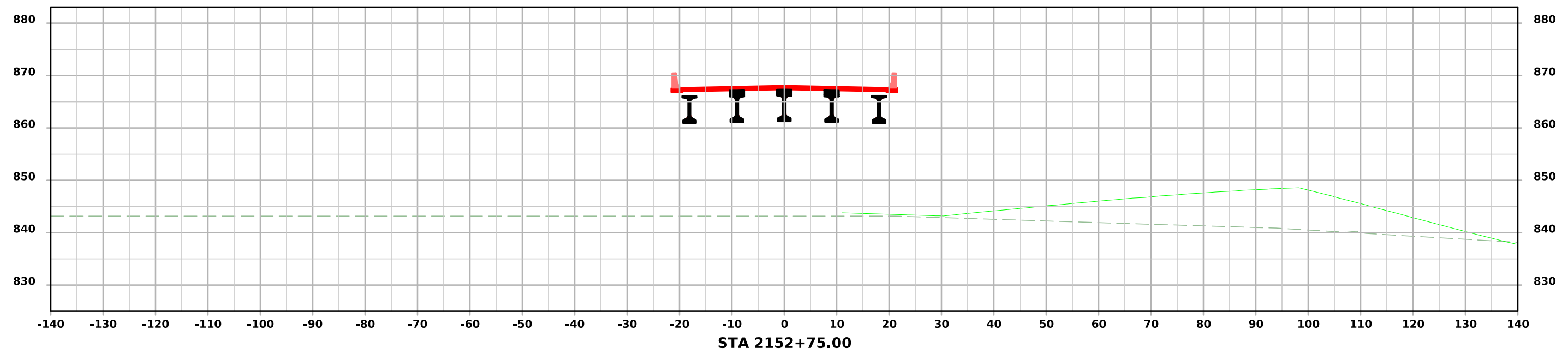
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



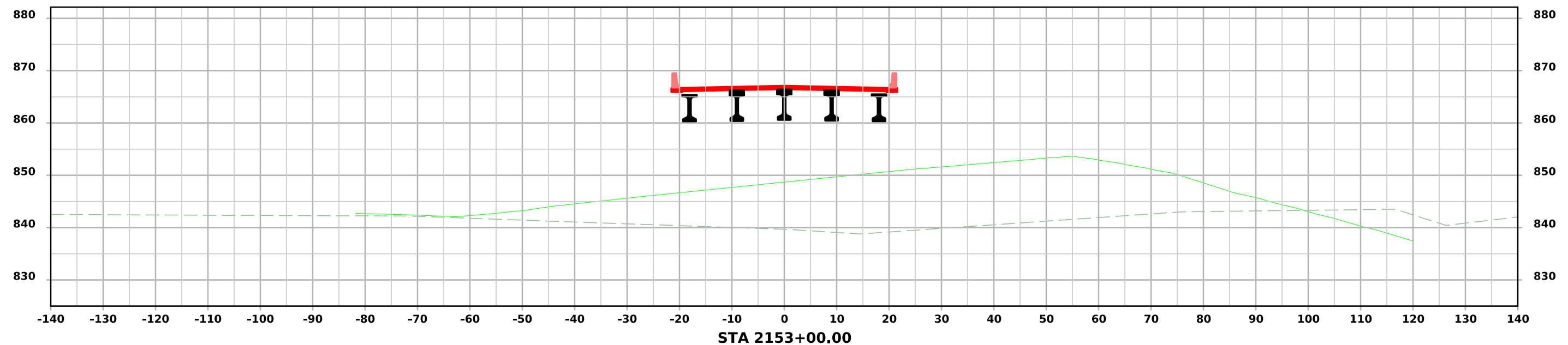
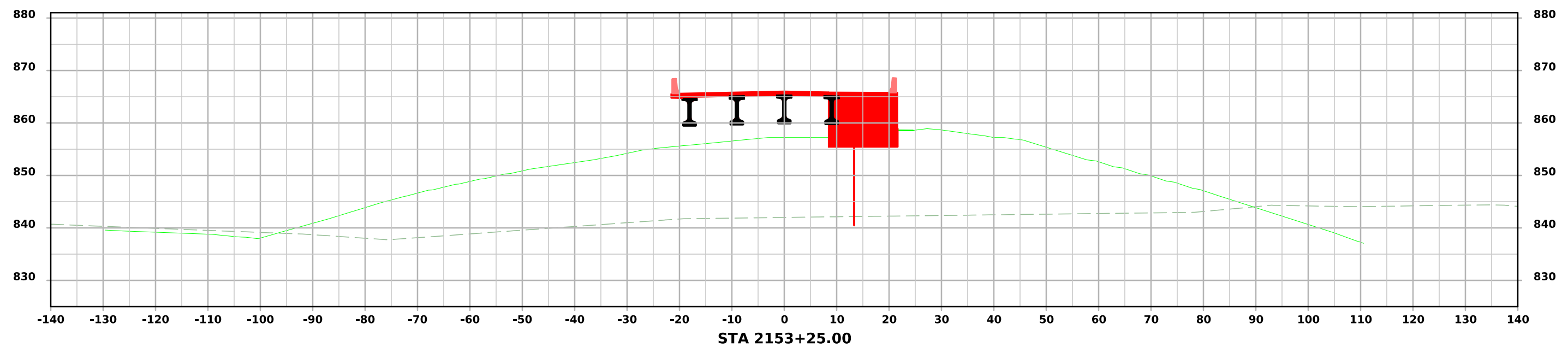
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



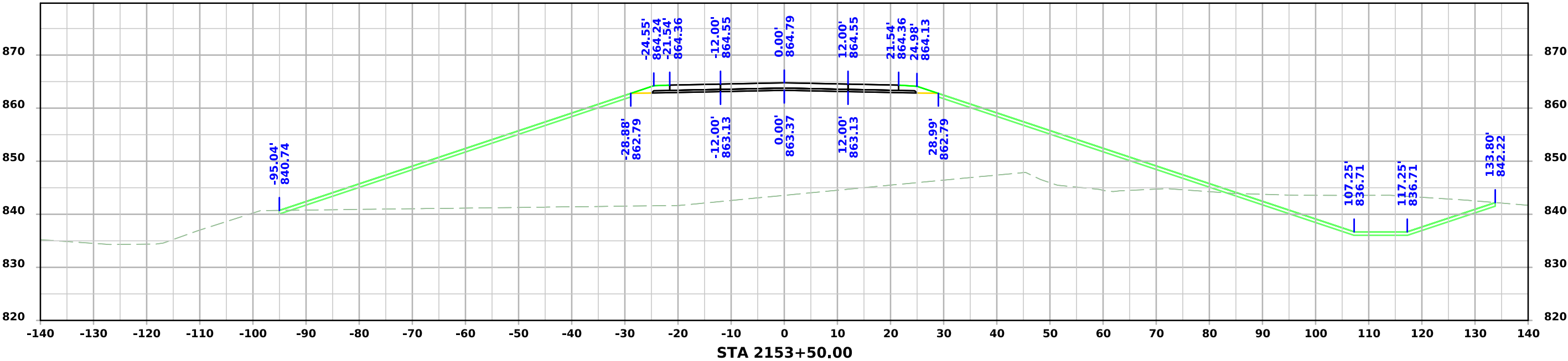
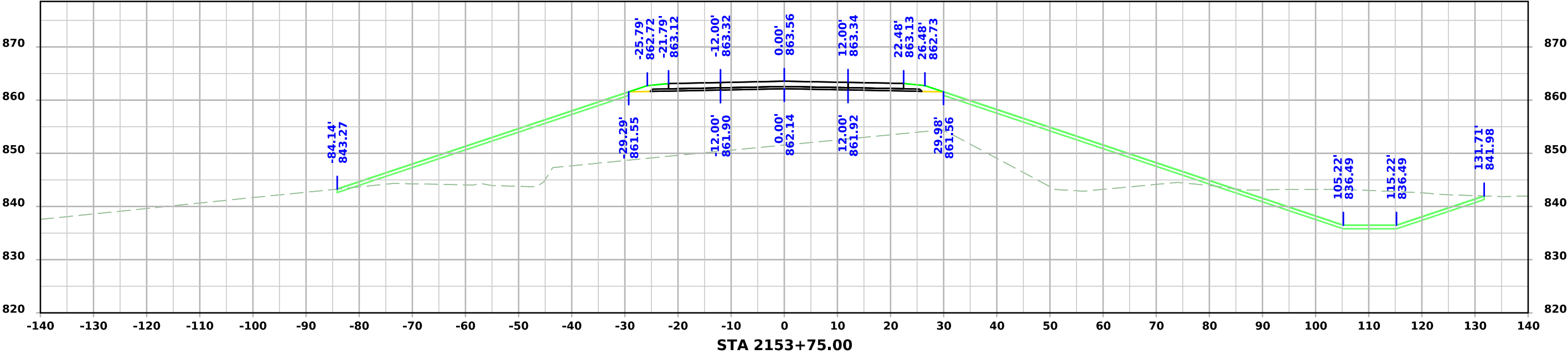
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



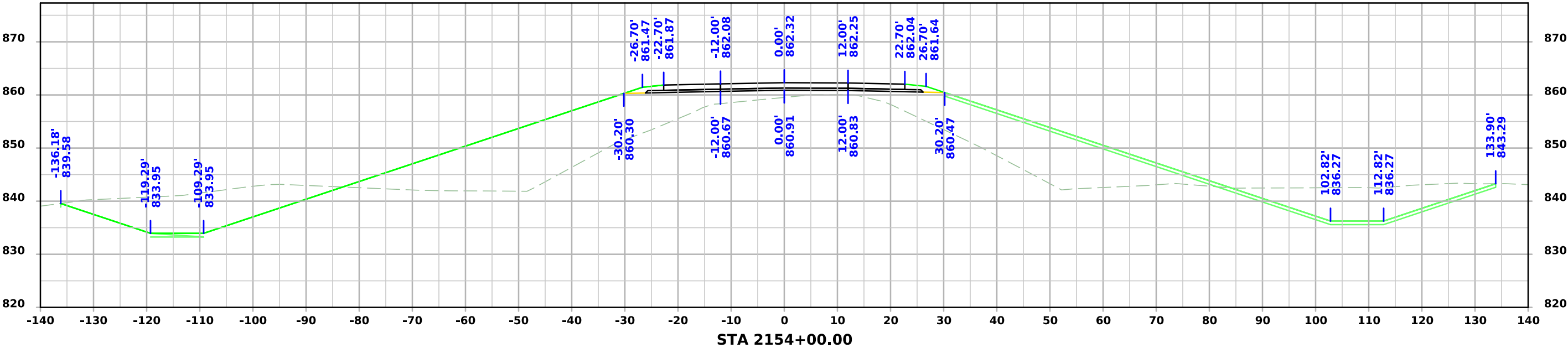
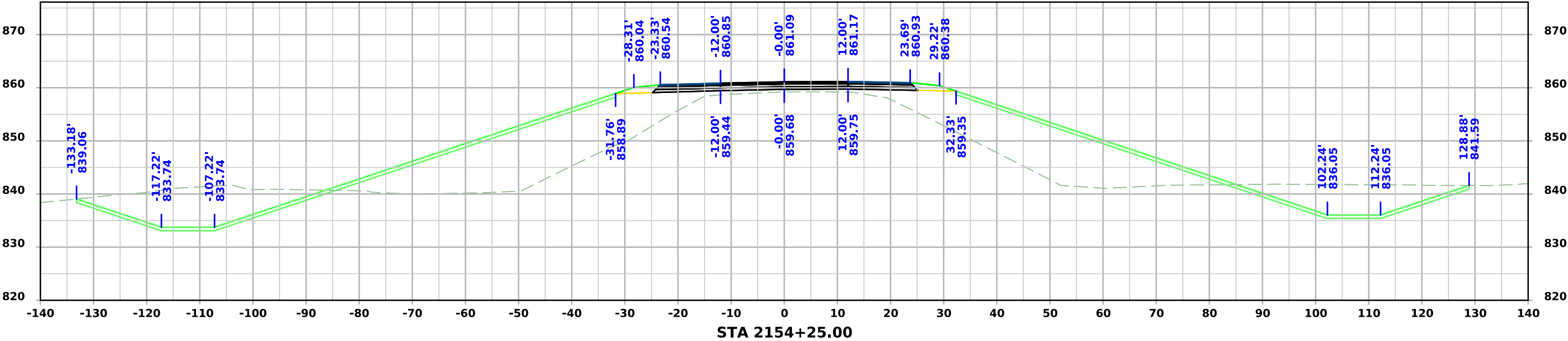
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



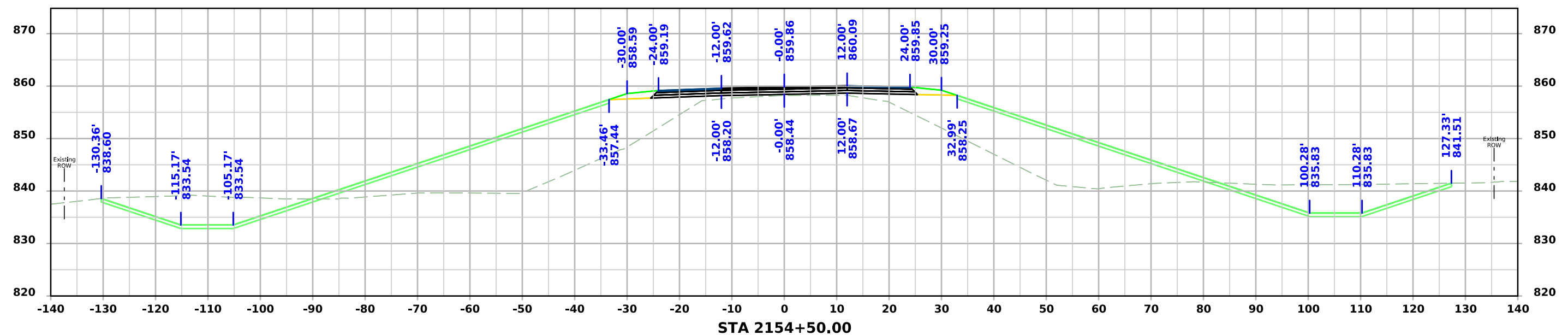
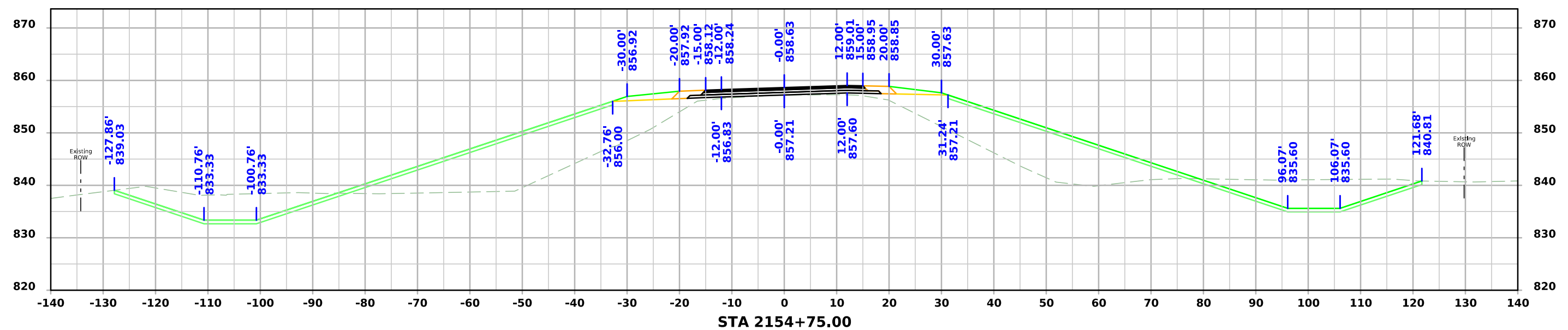
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



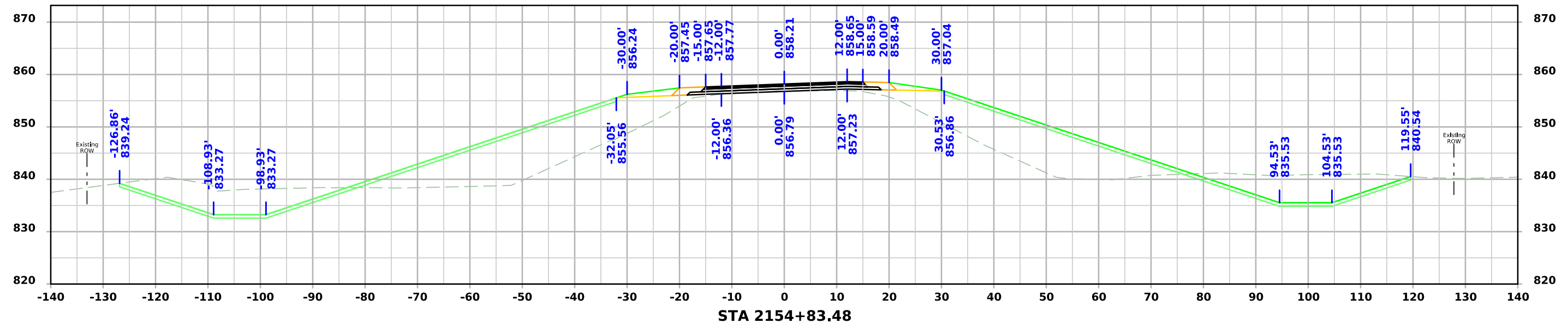
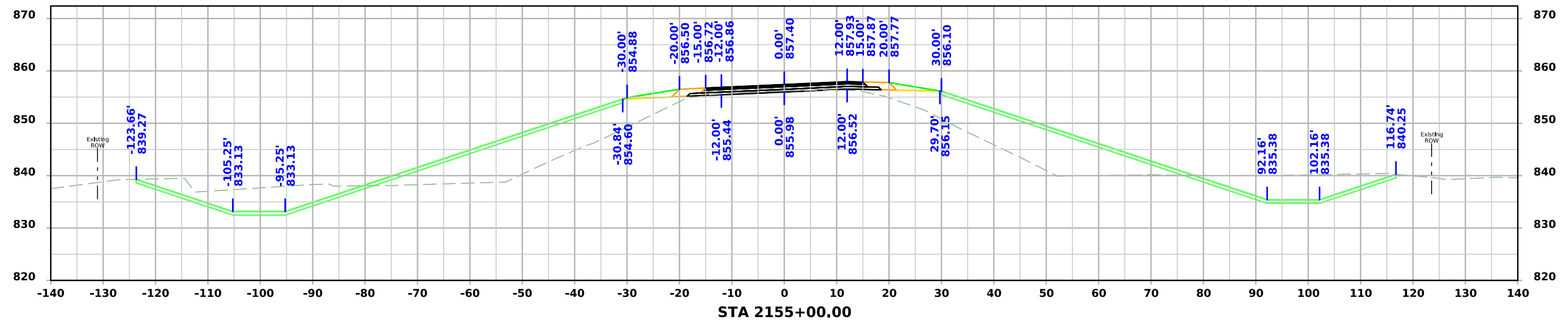
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



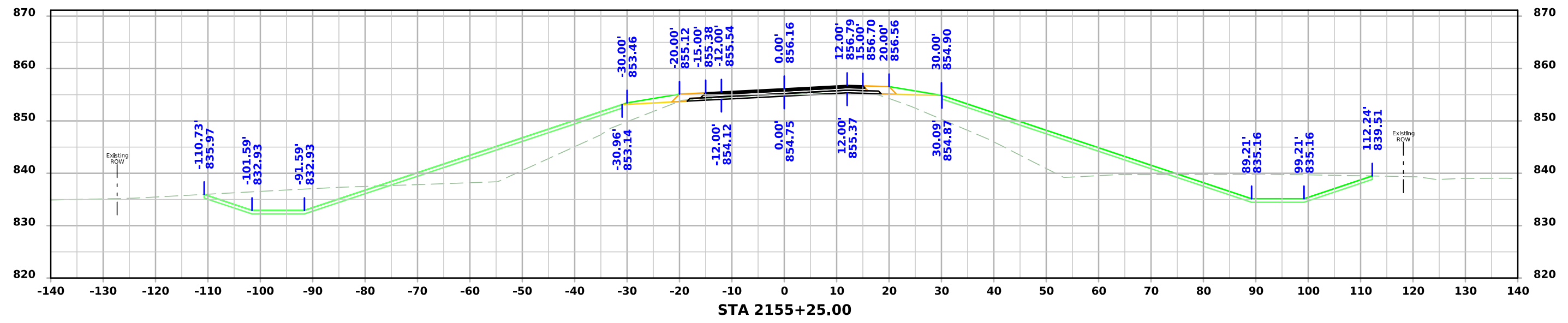
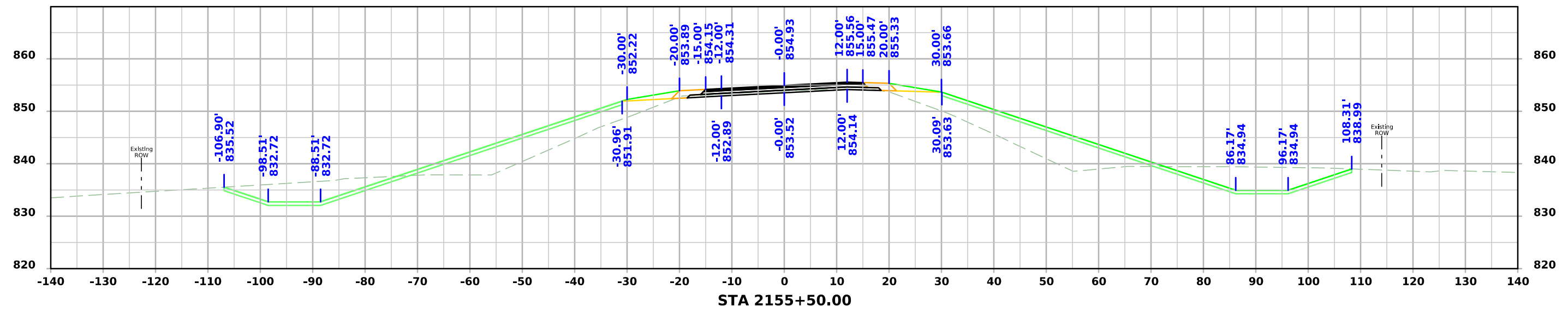
38th Street - Stage 2

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Pavement and Bridge Section - FOR INFORMATION ONLY



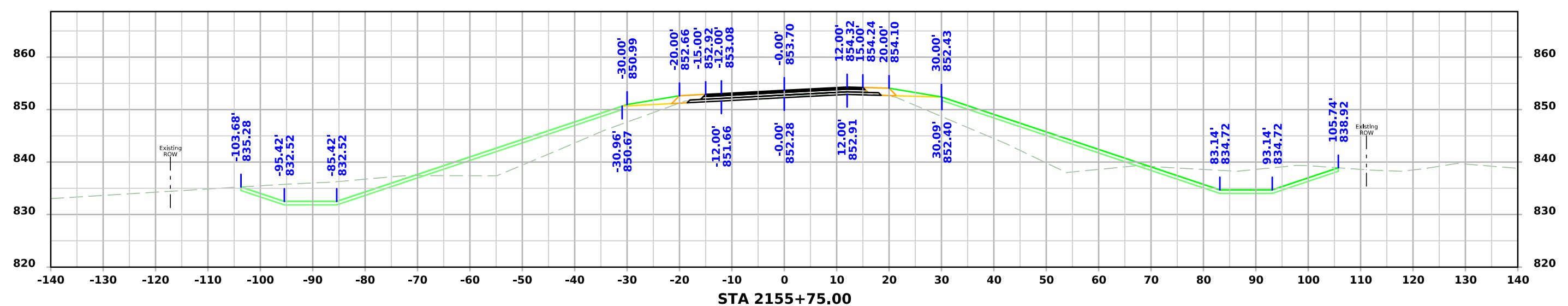
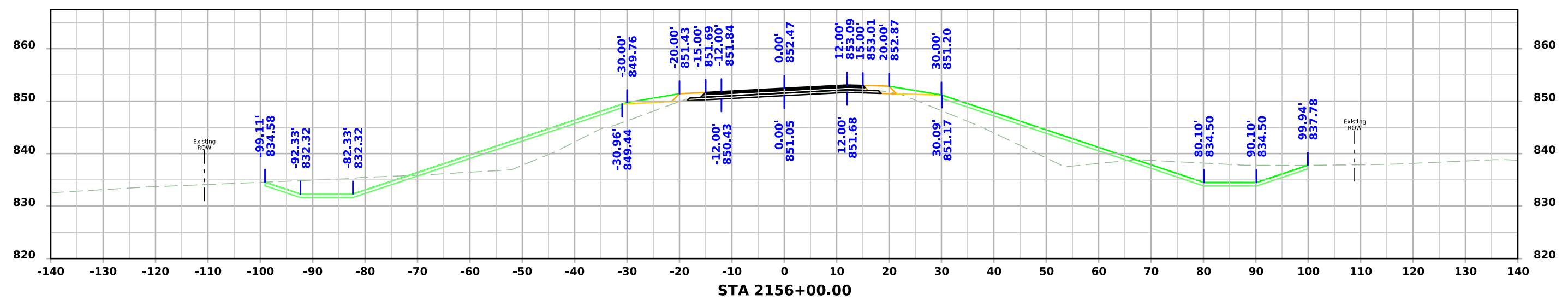
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



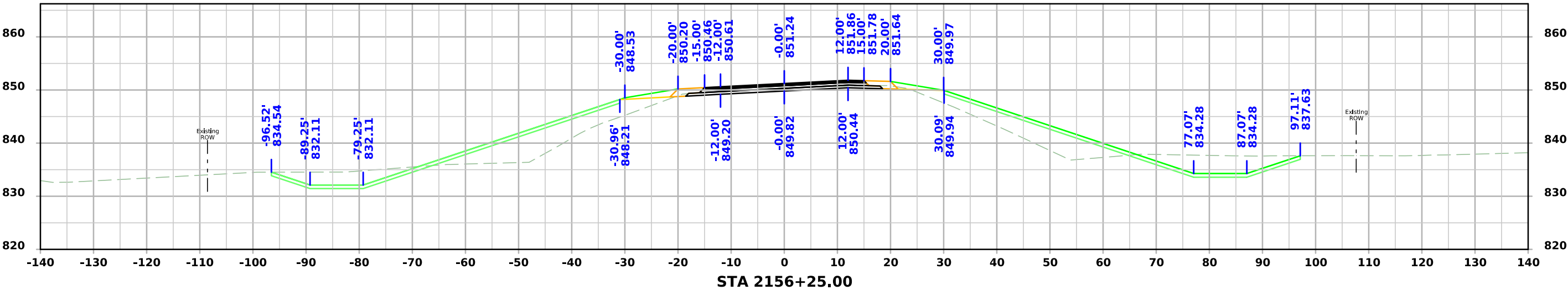
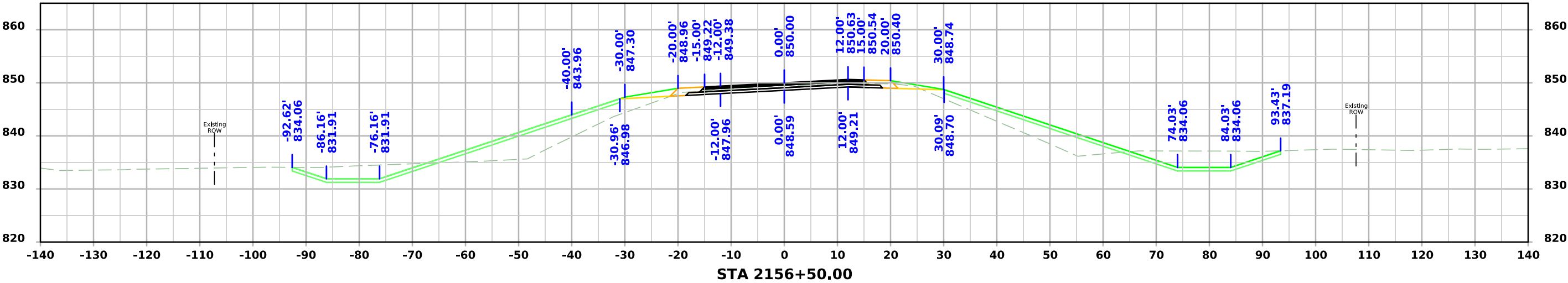
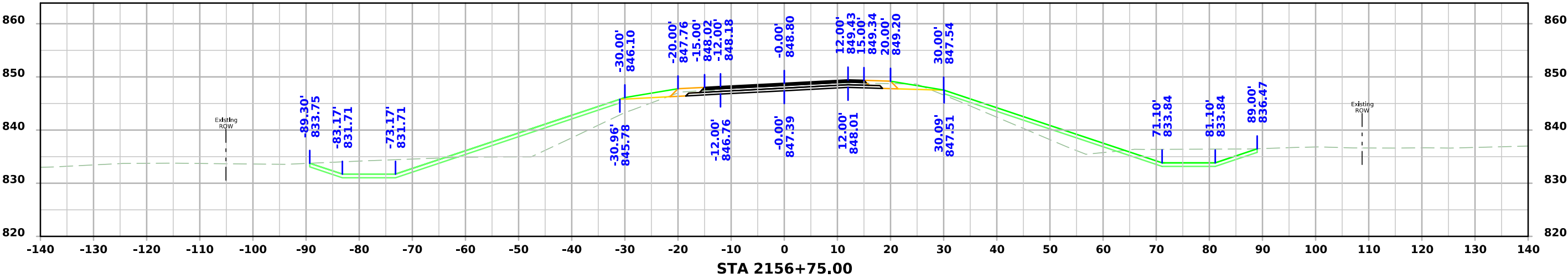
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



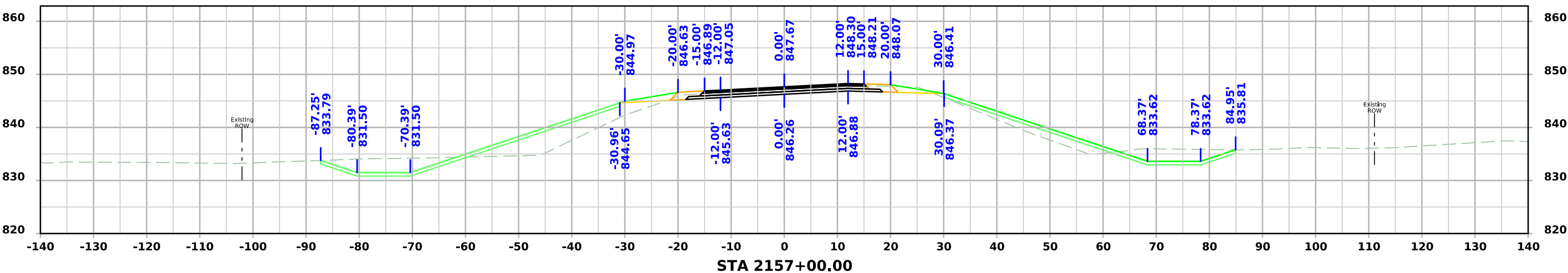
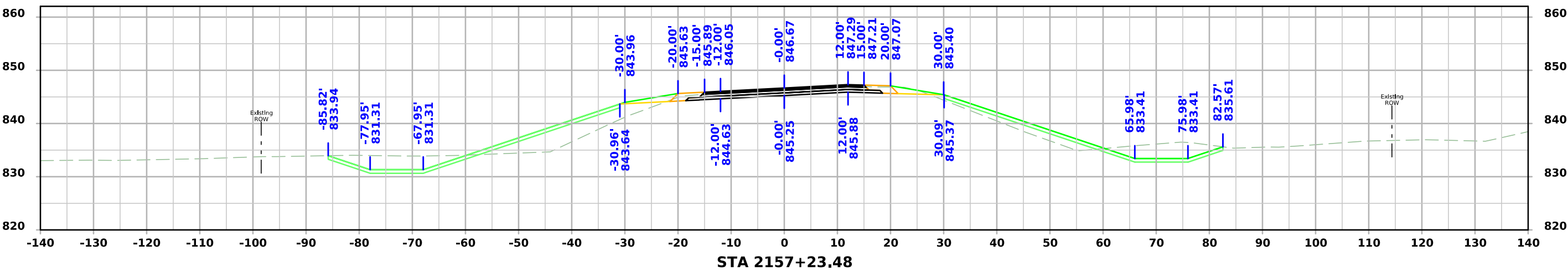
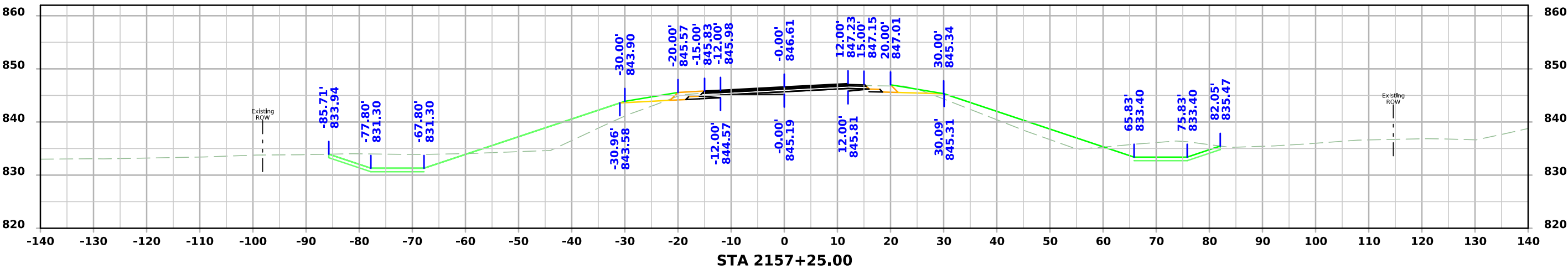
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



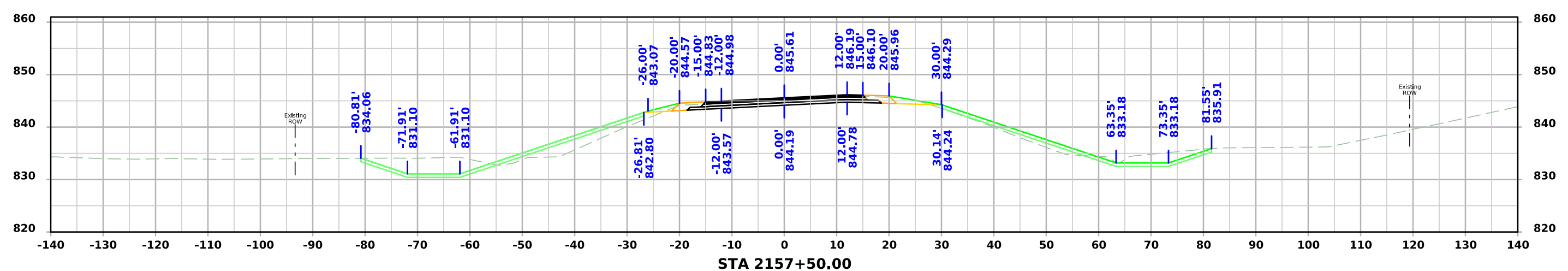
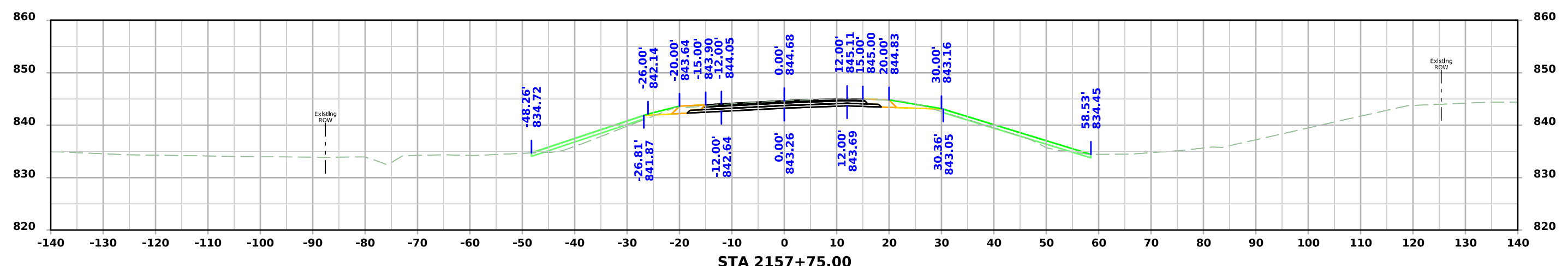
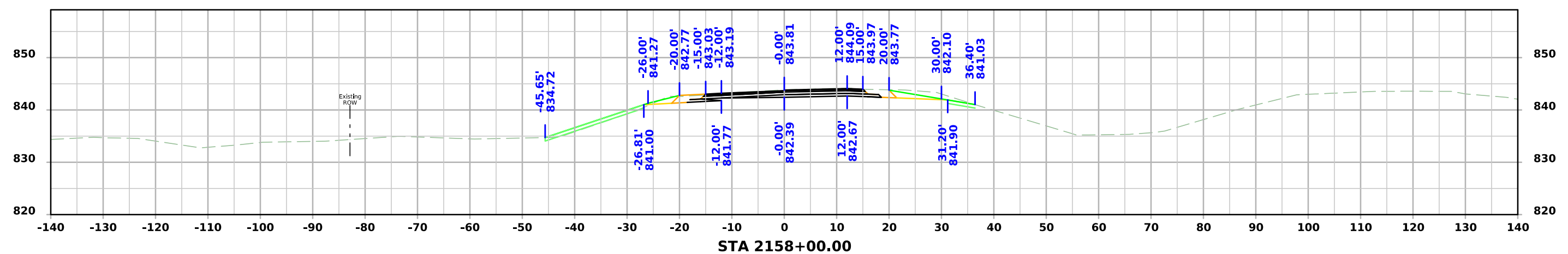
38th Street - Stage 2

Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY

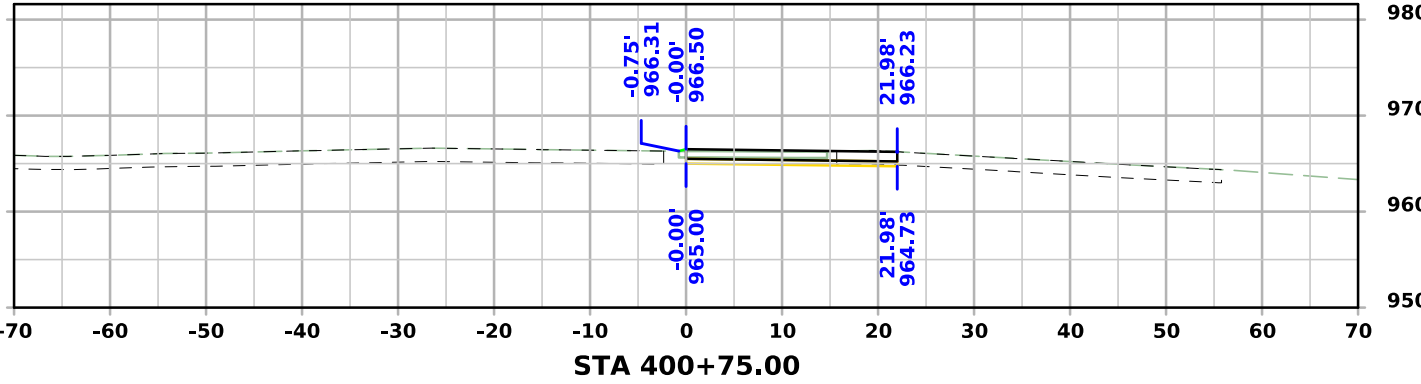
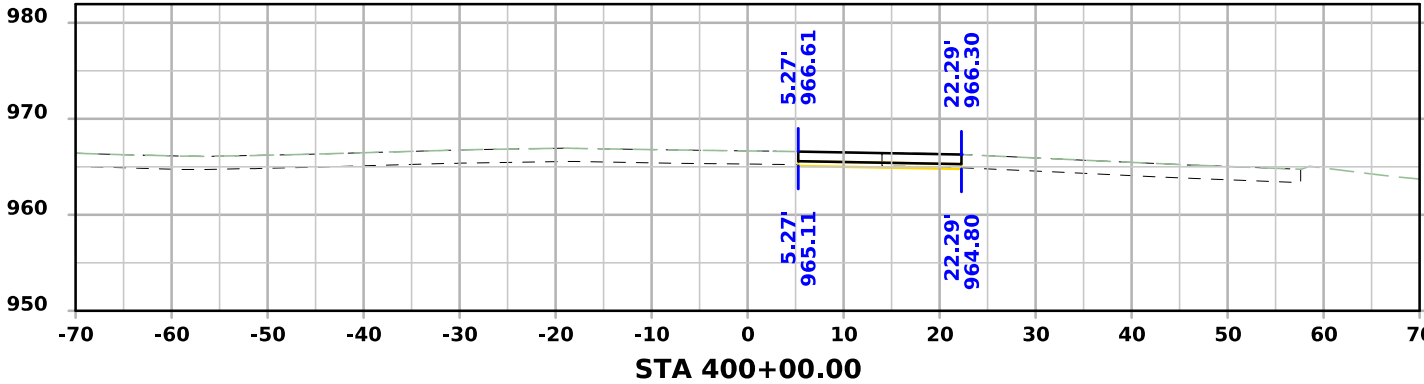
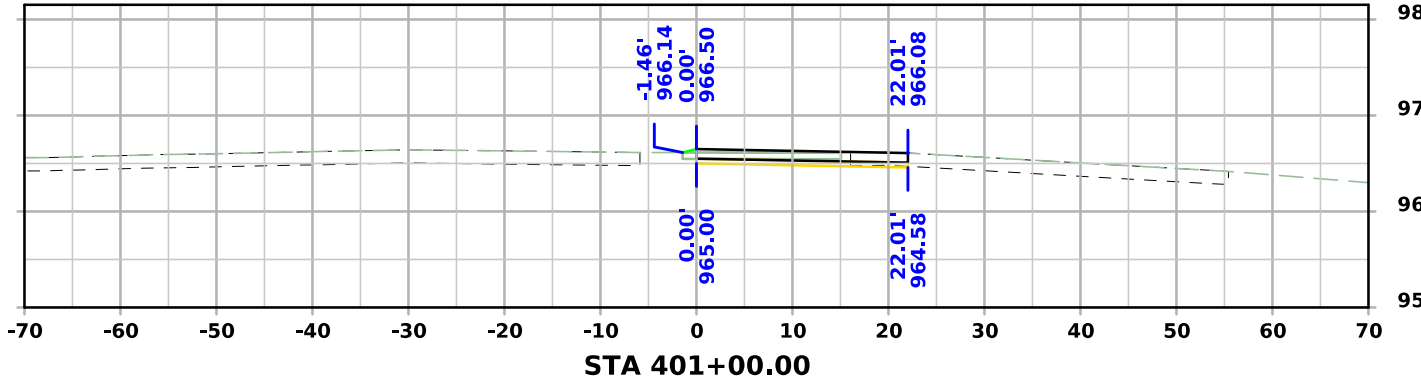
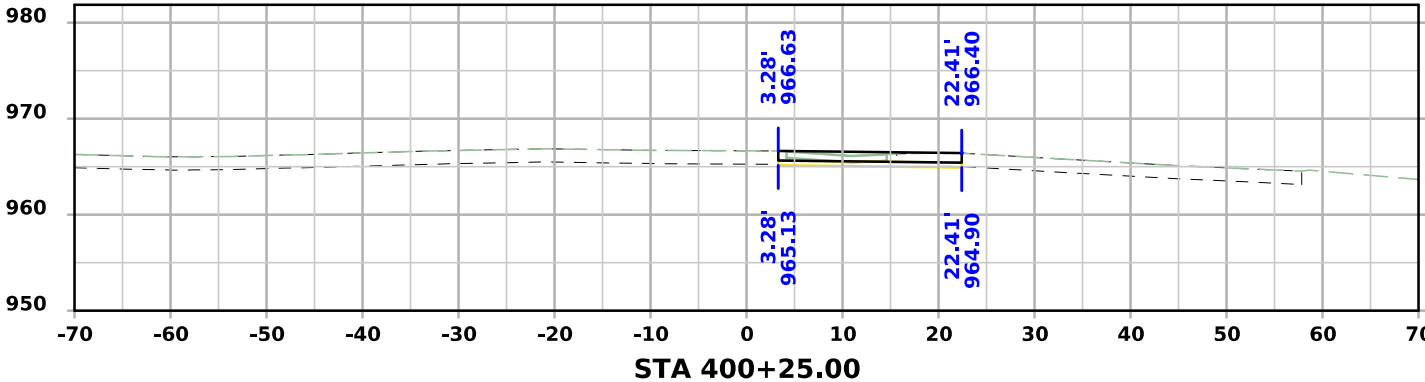
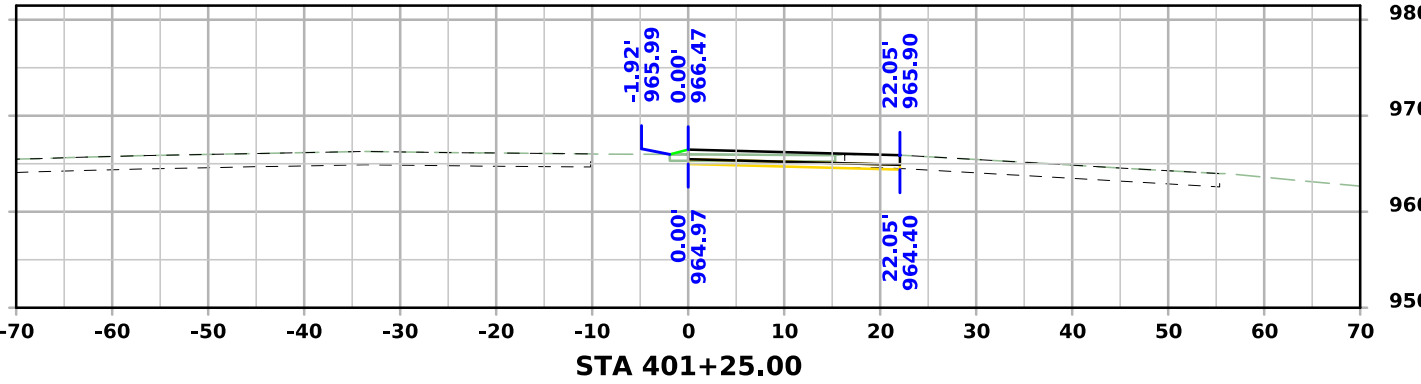
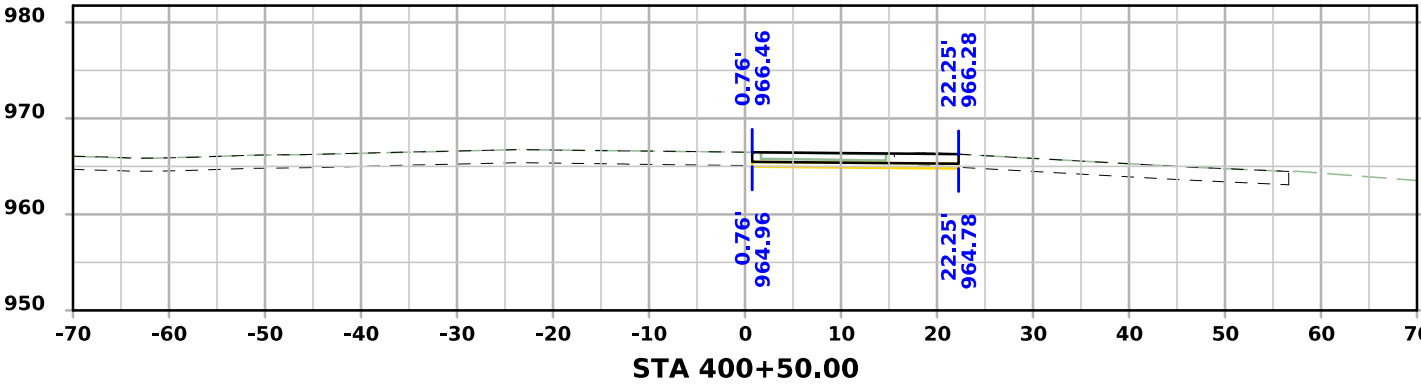


38th Street - Stage 2

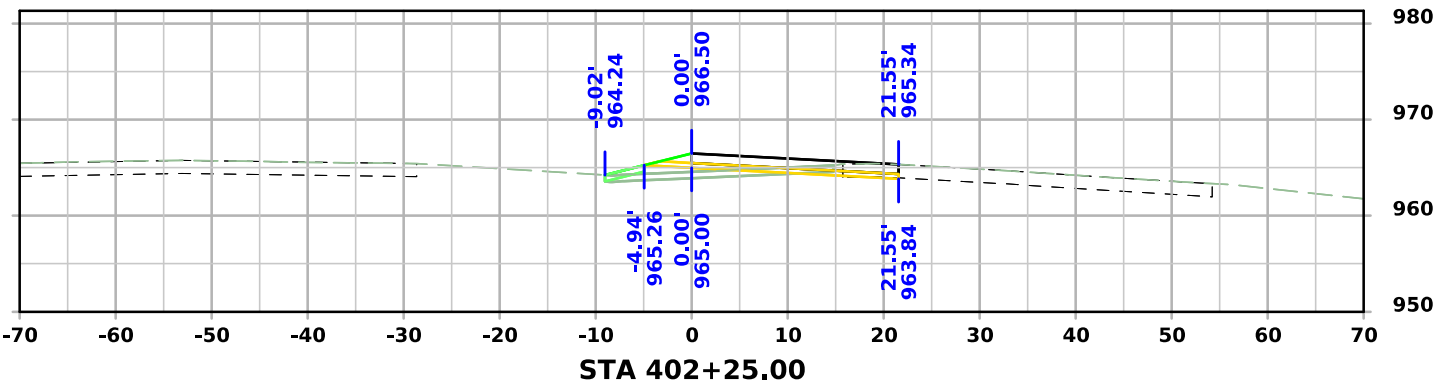
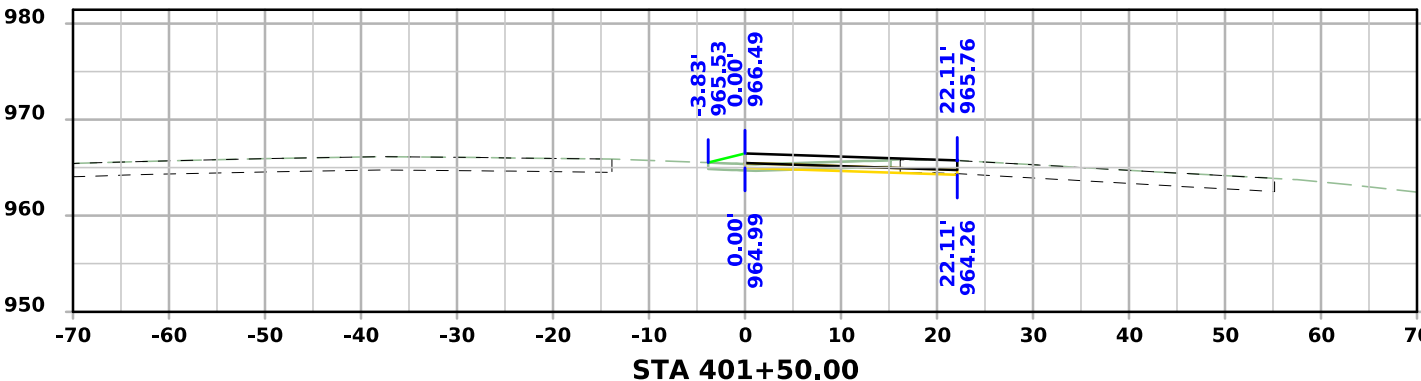
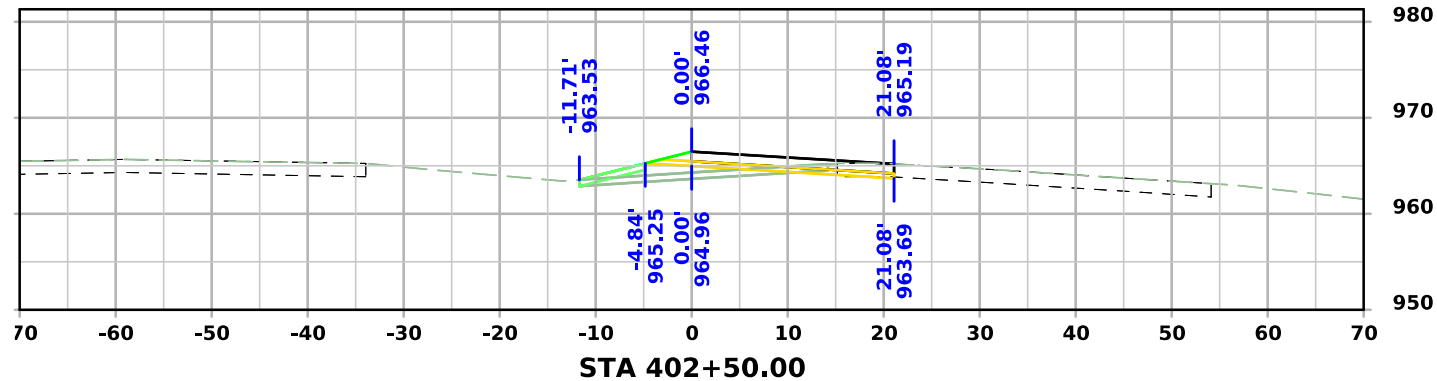
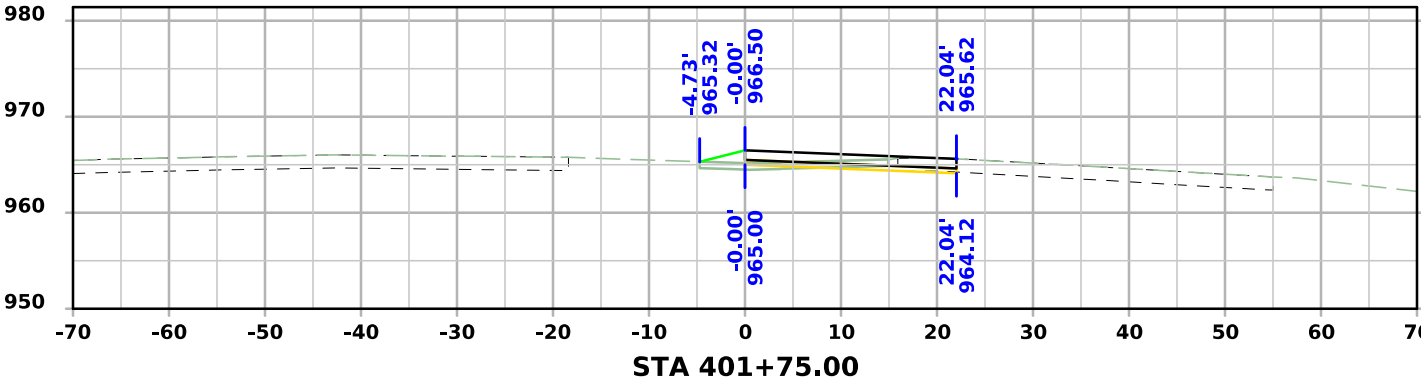
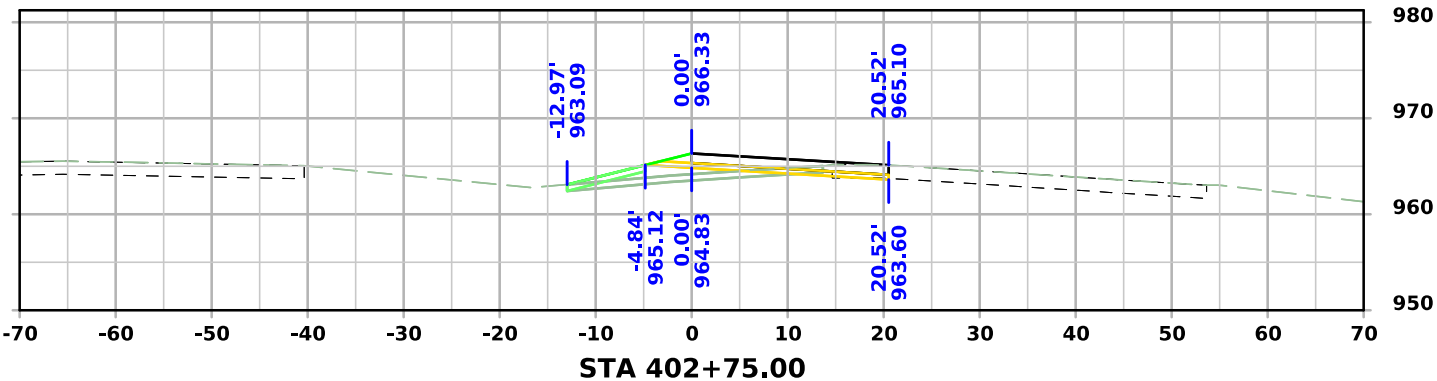
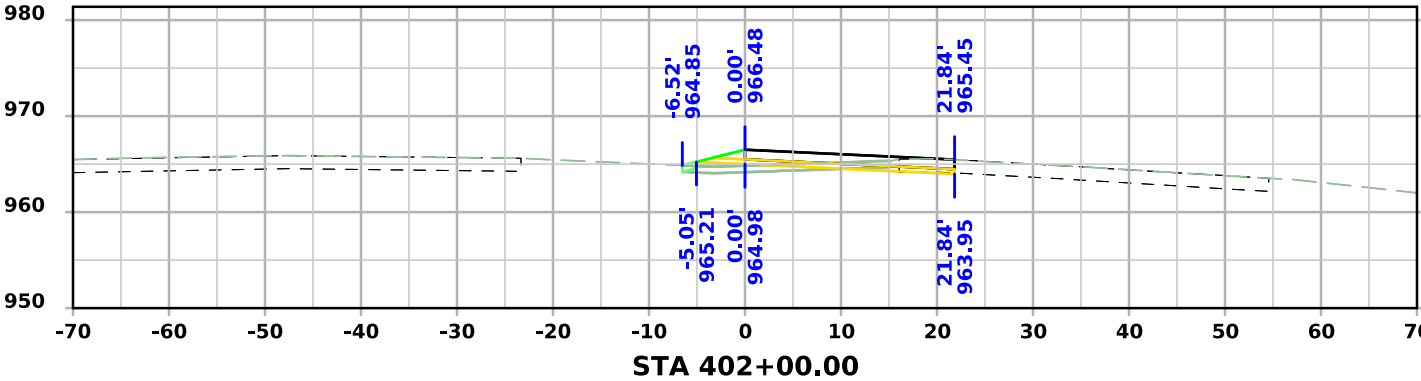
Grading Only
Pavement and Bridge Section - FOR INFORMATION ONLY



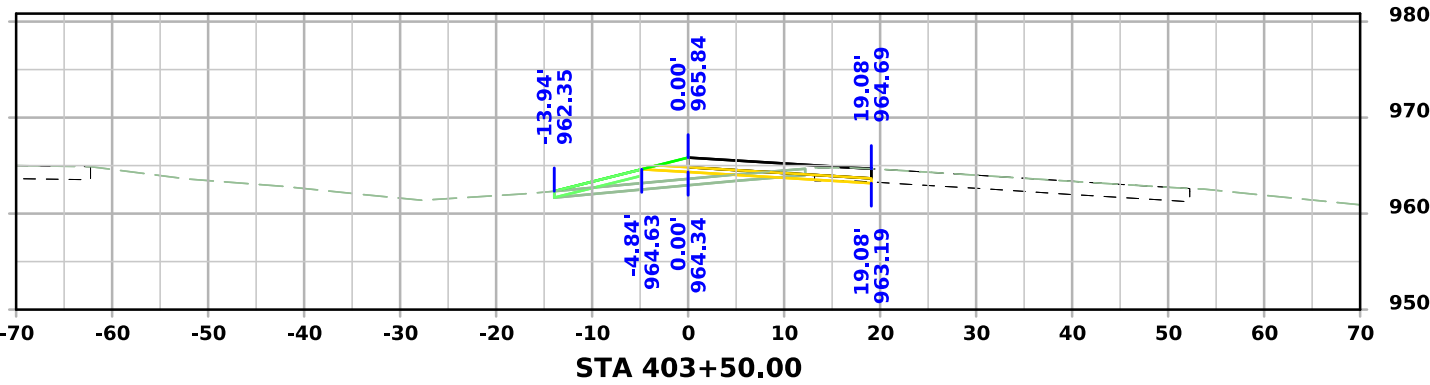
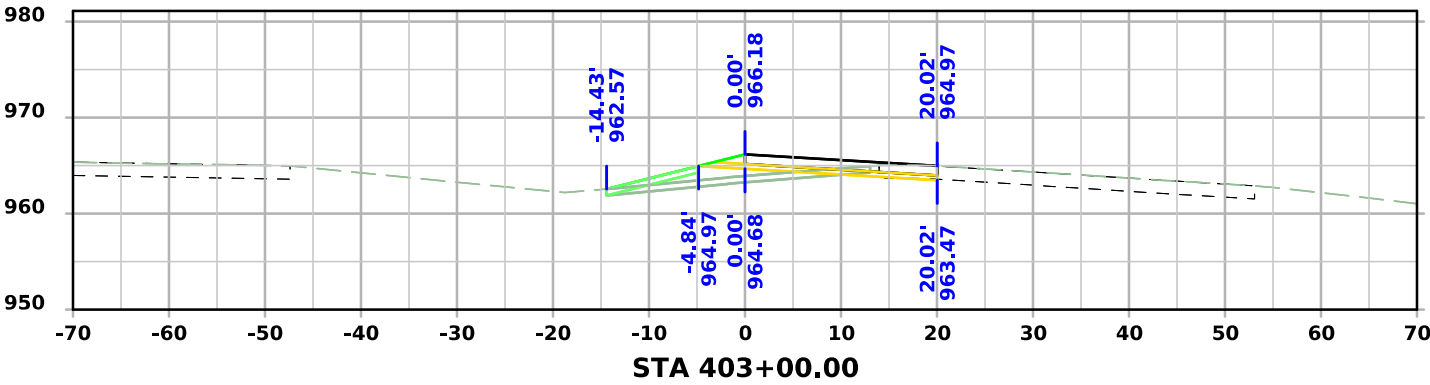
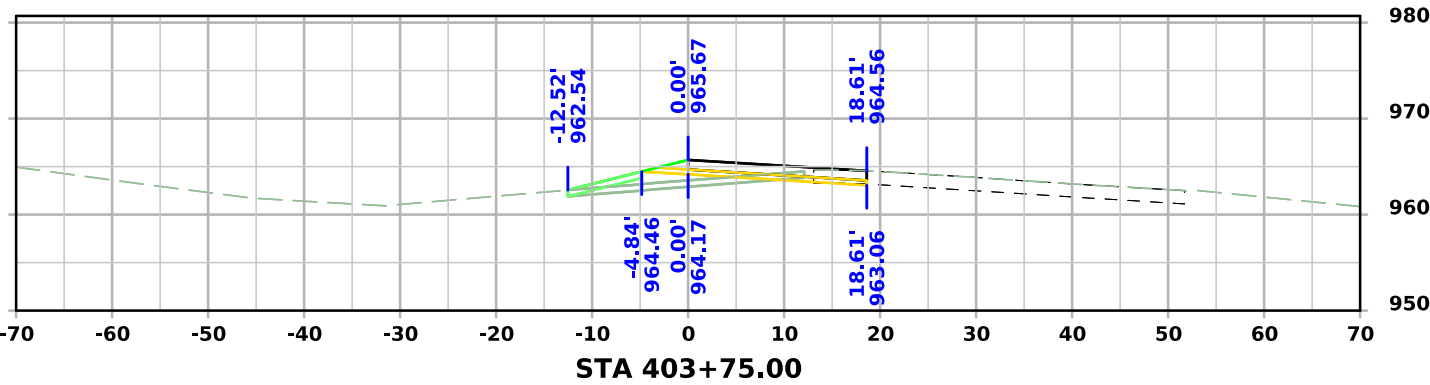
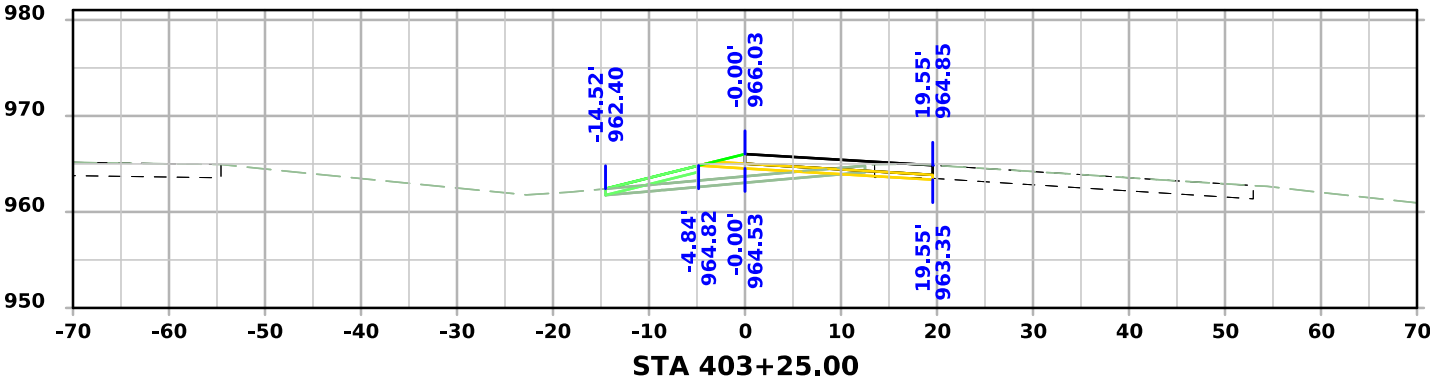
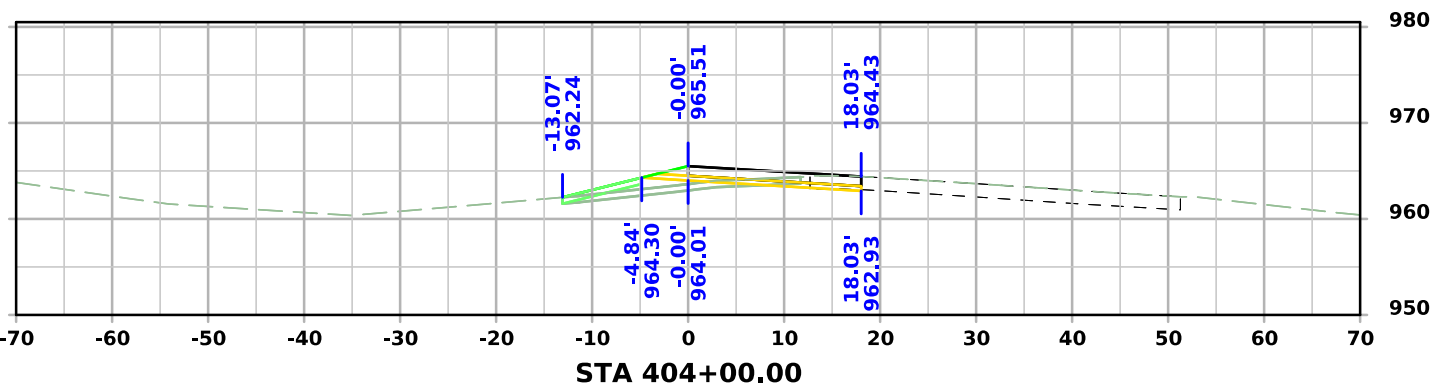
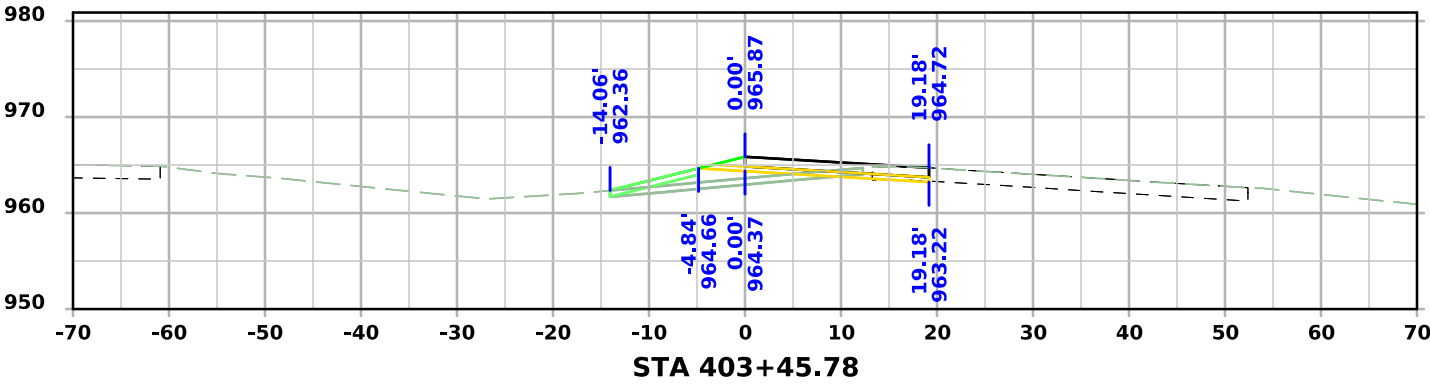
Detour 01 - Stage 1



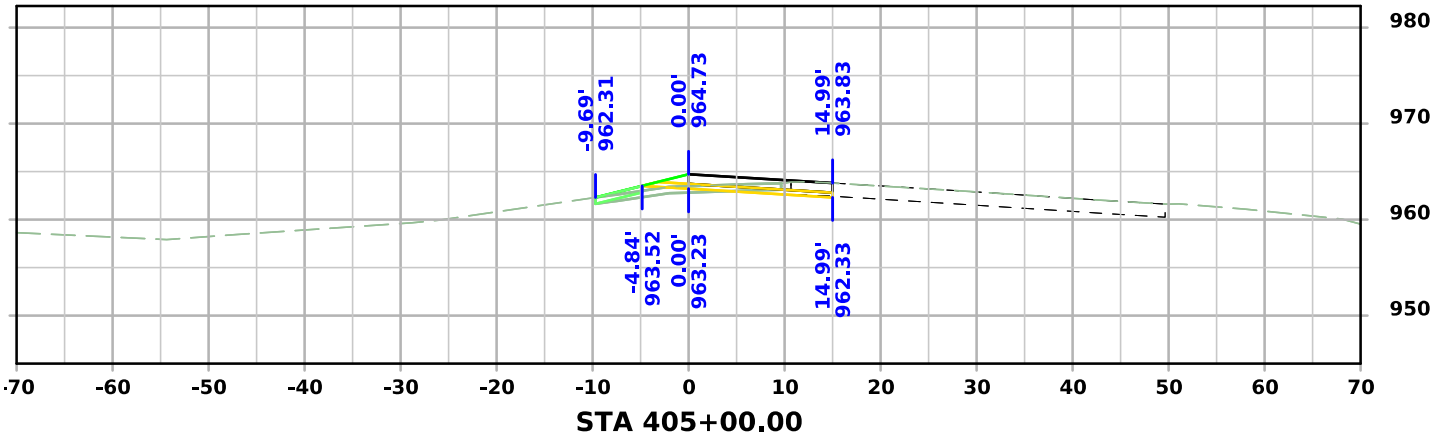
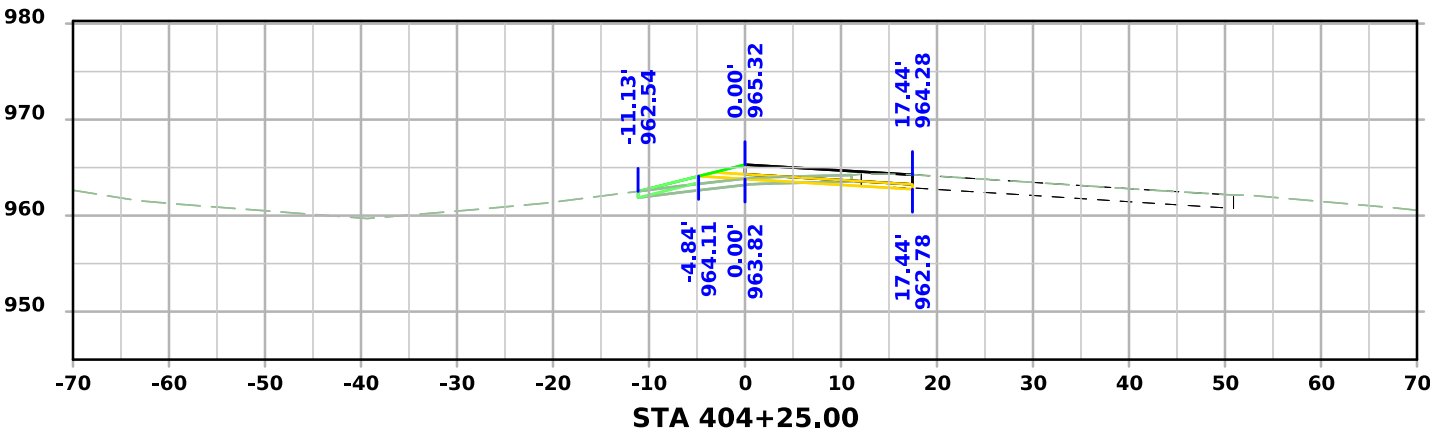
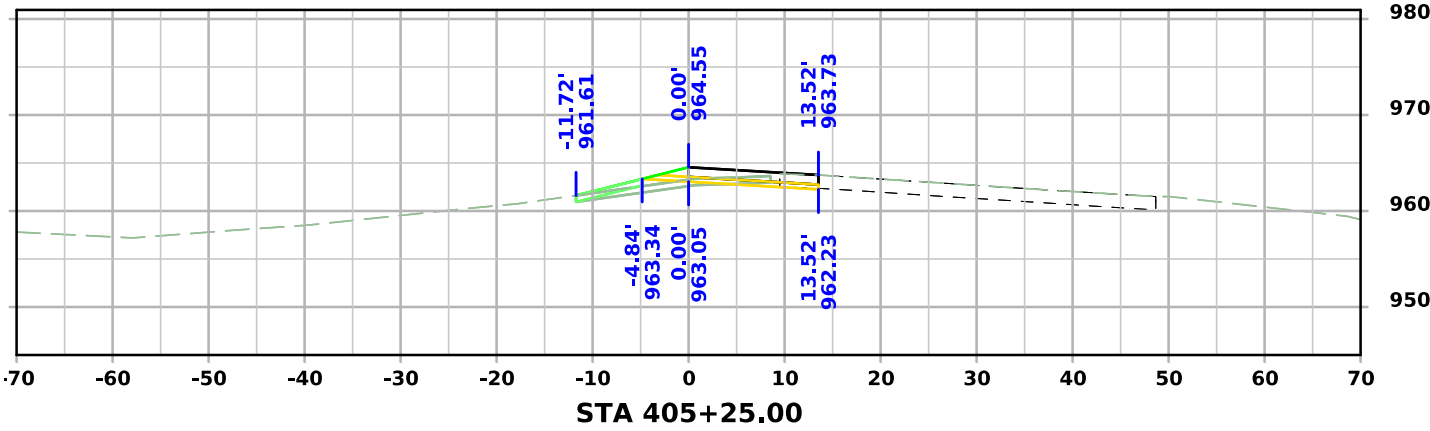
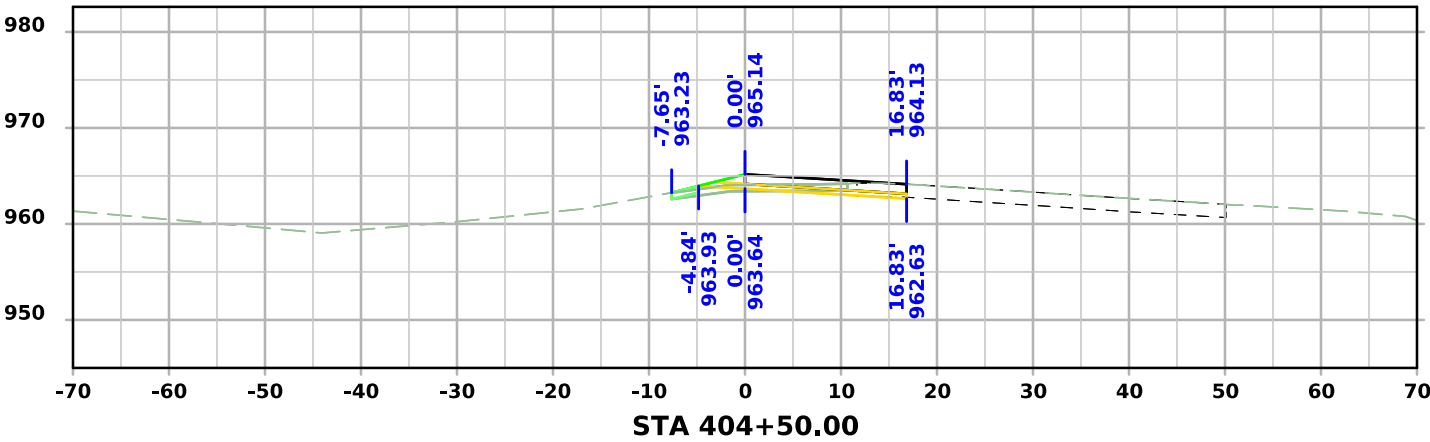
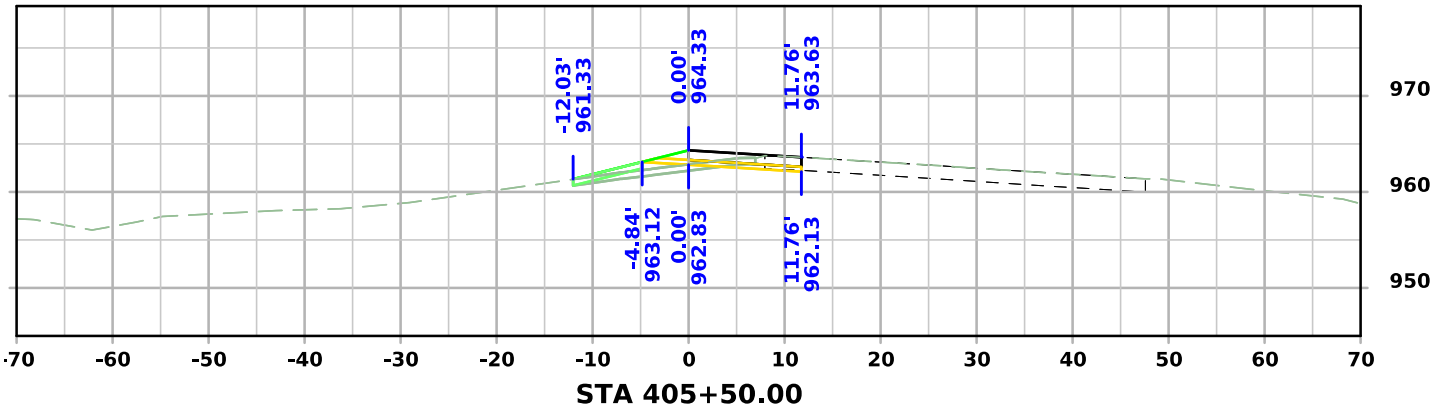
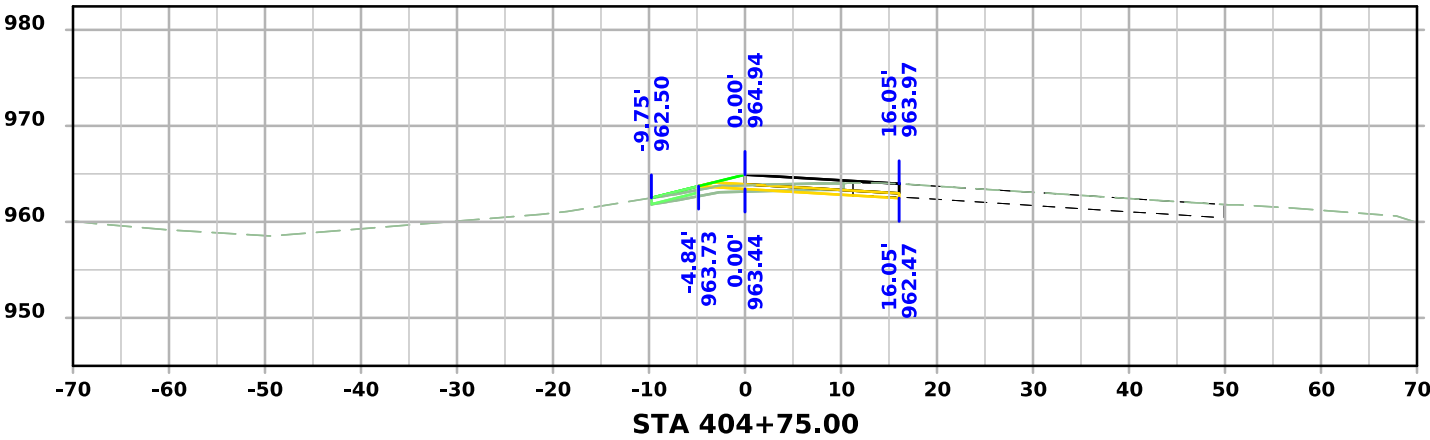
Detour 01 - Stage 1



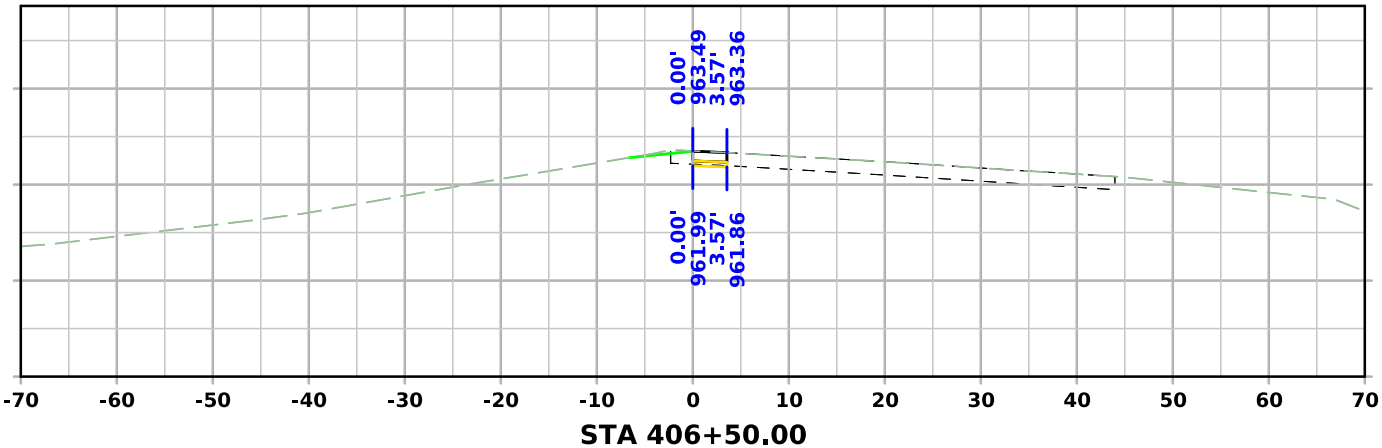
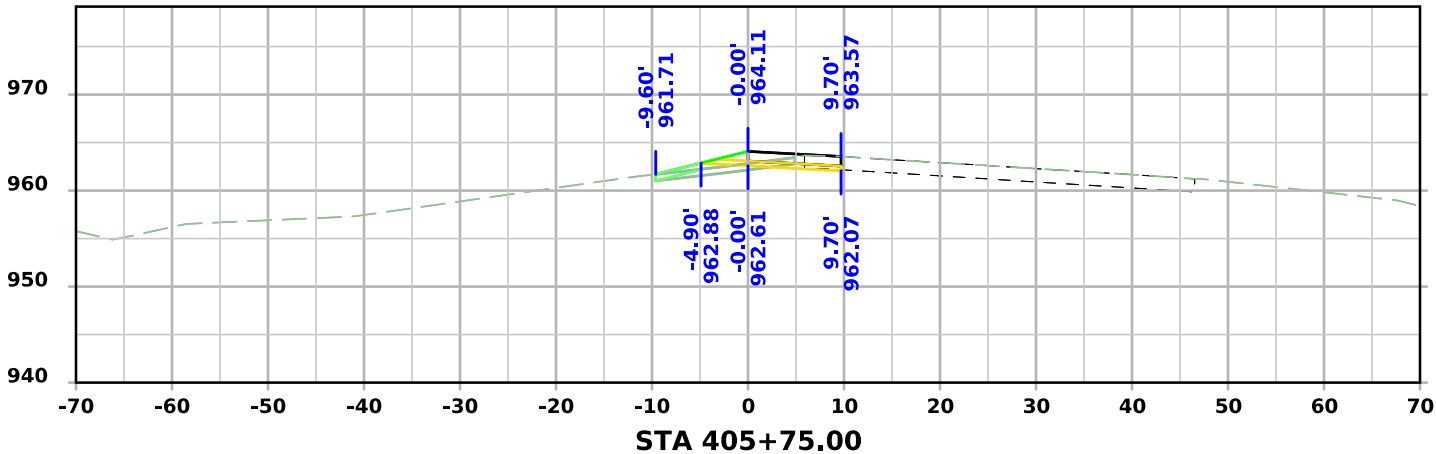
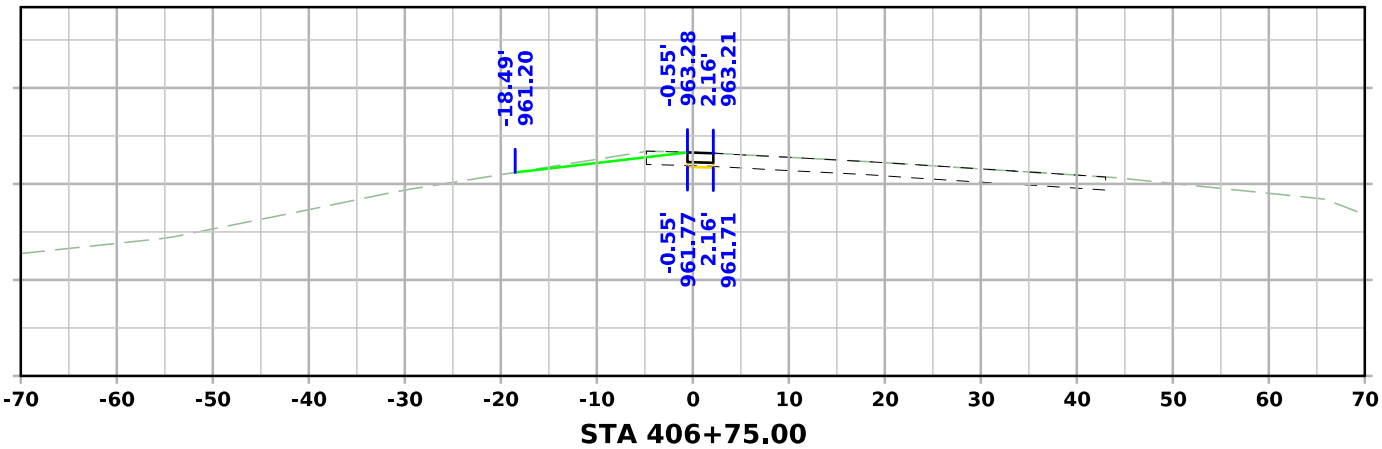
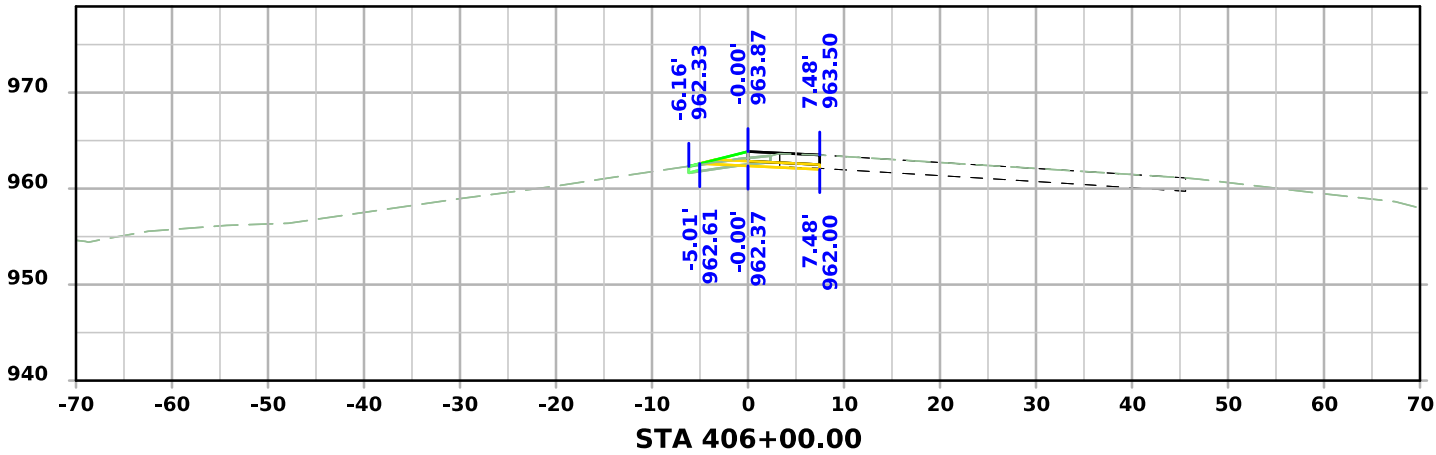
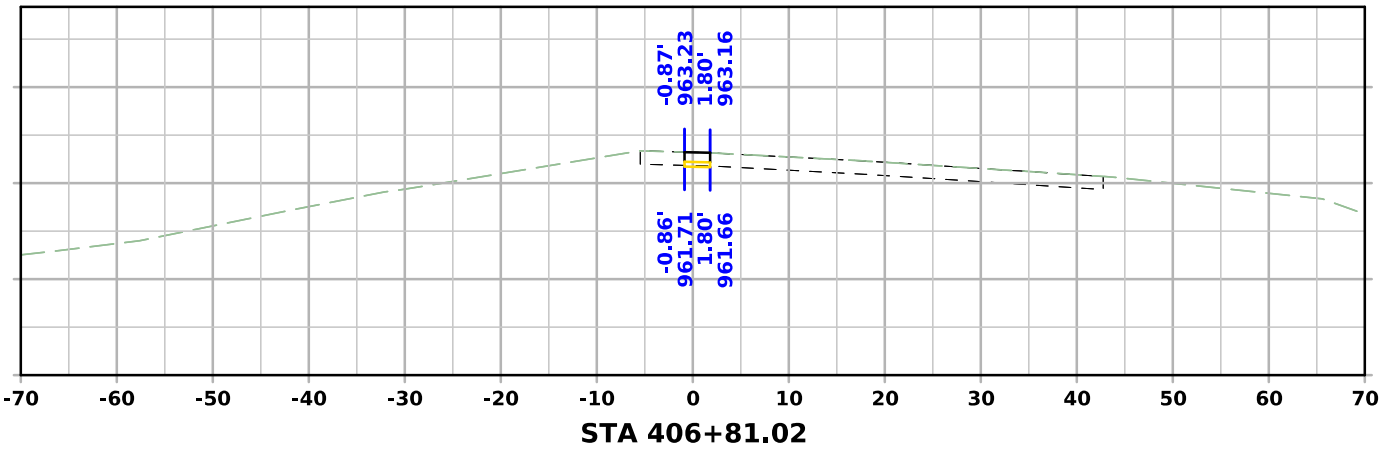
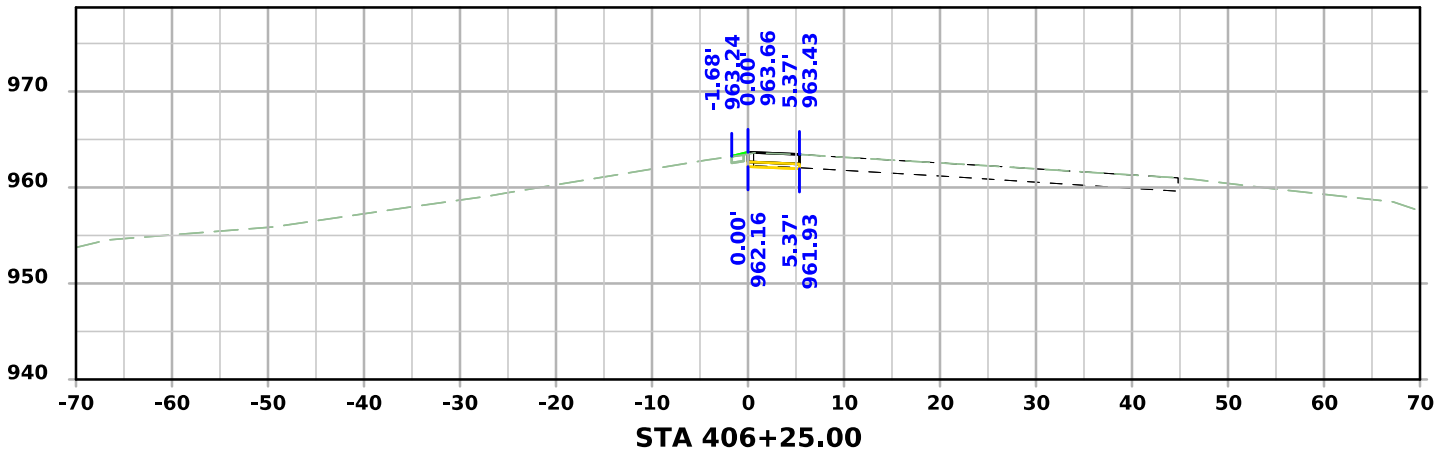
Detour 01 - Stage 1



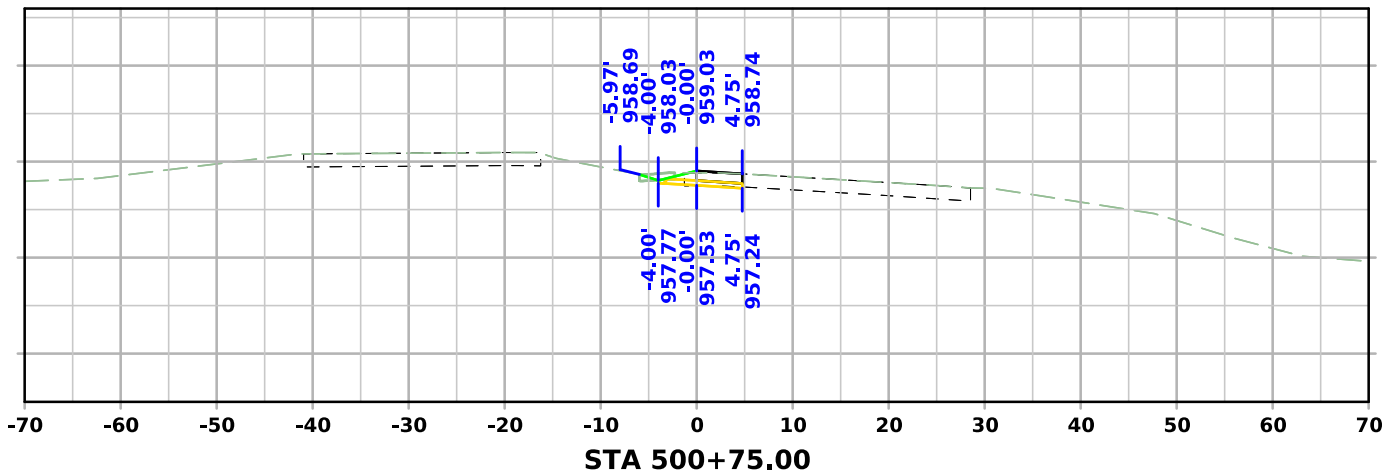
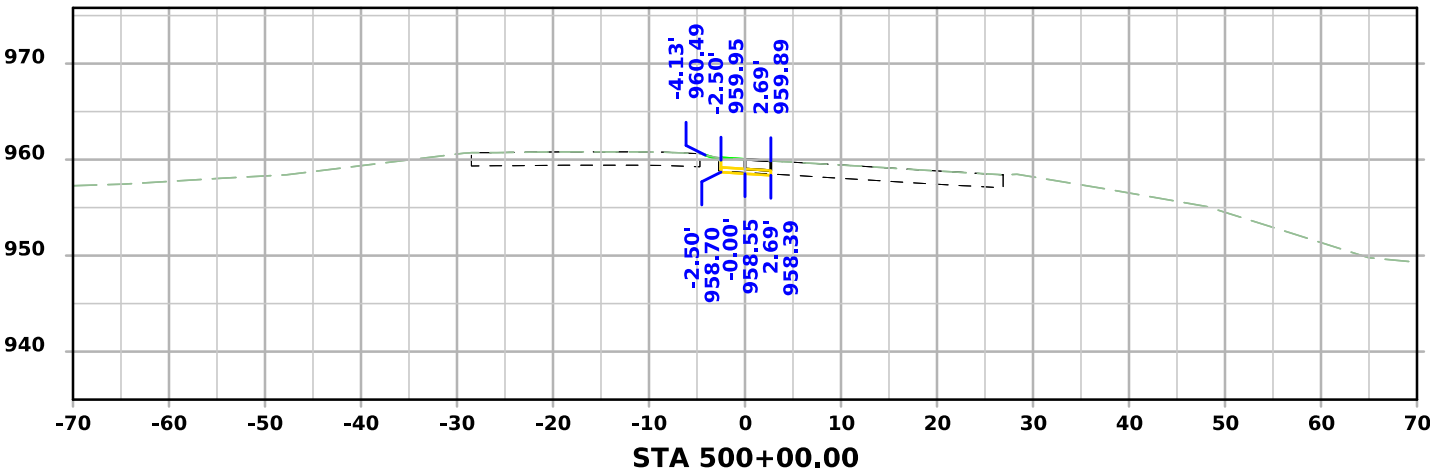
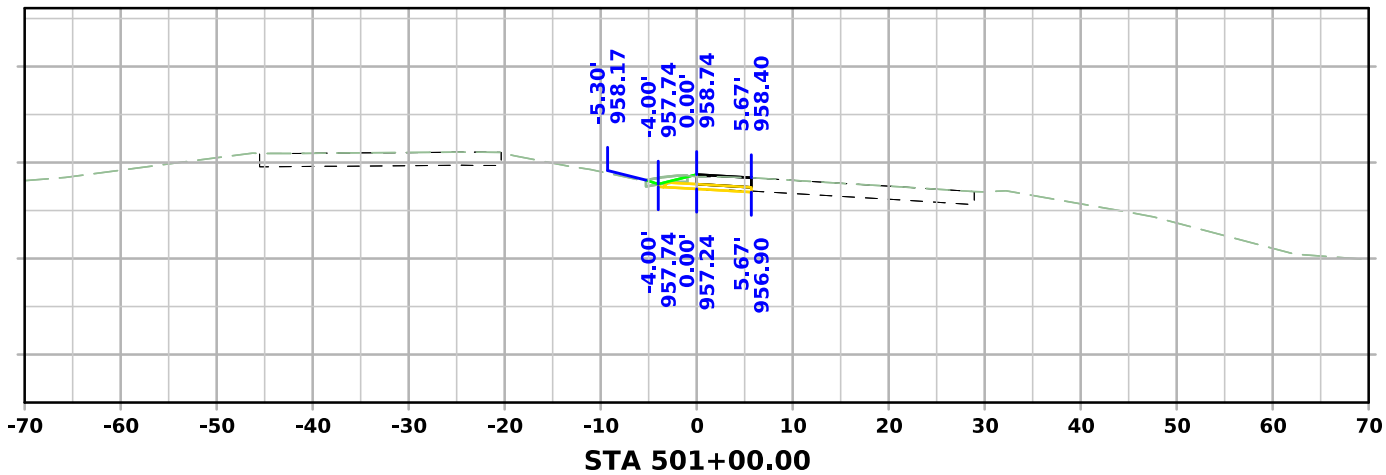
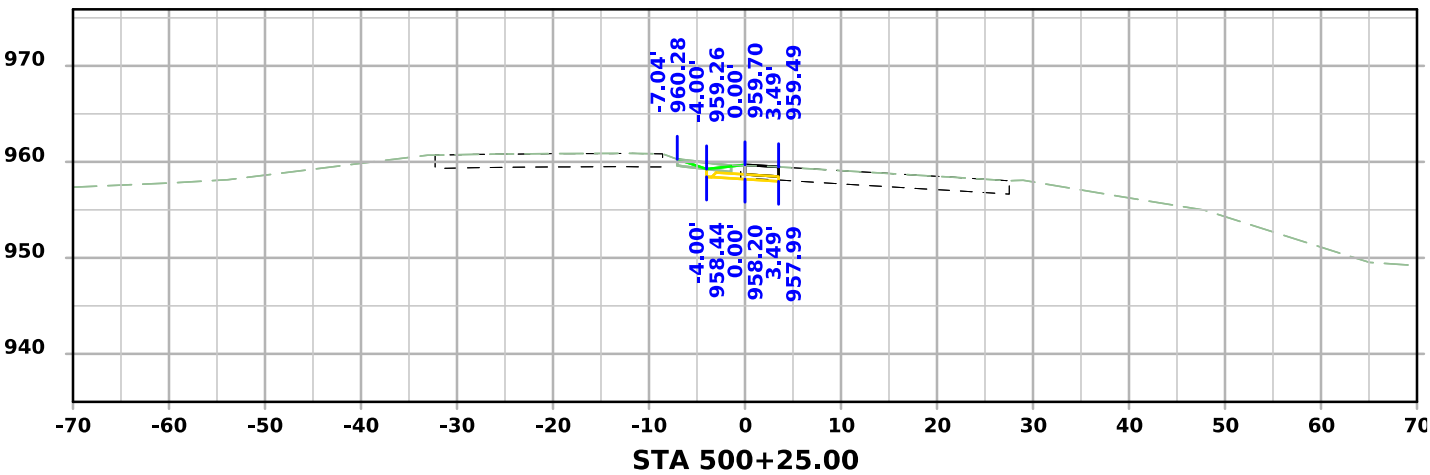
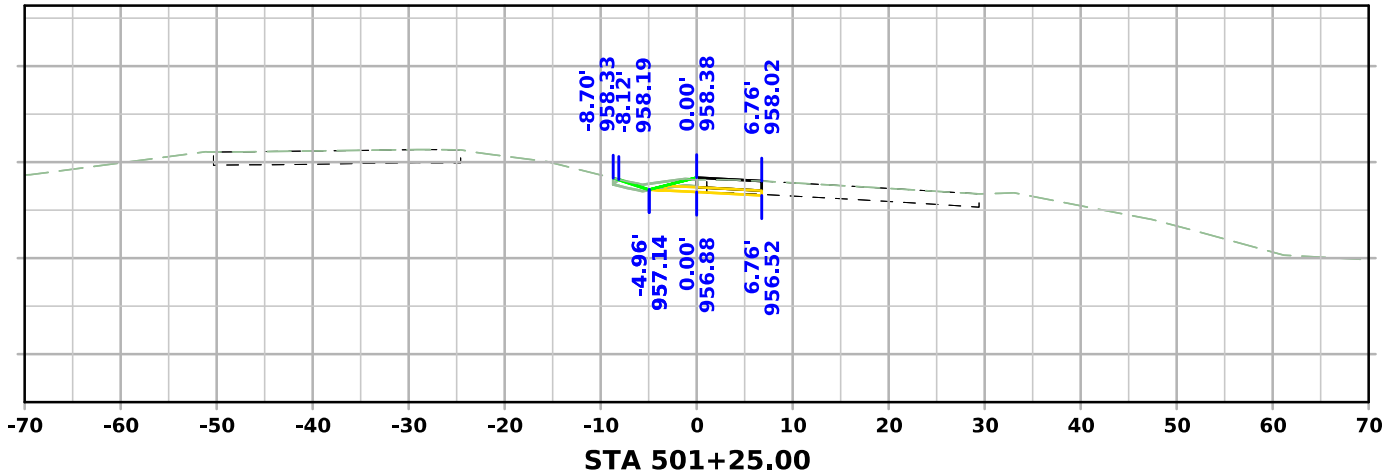
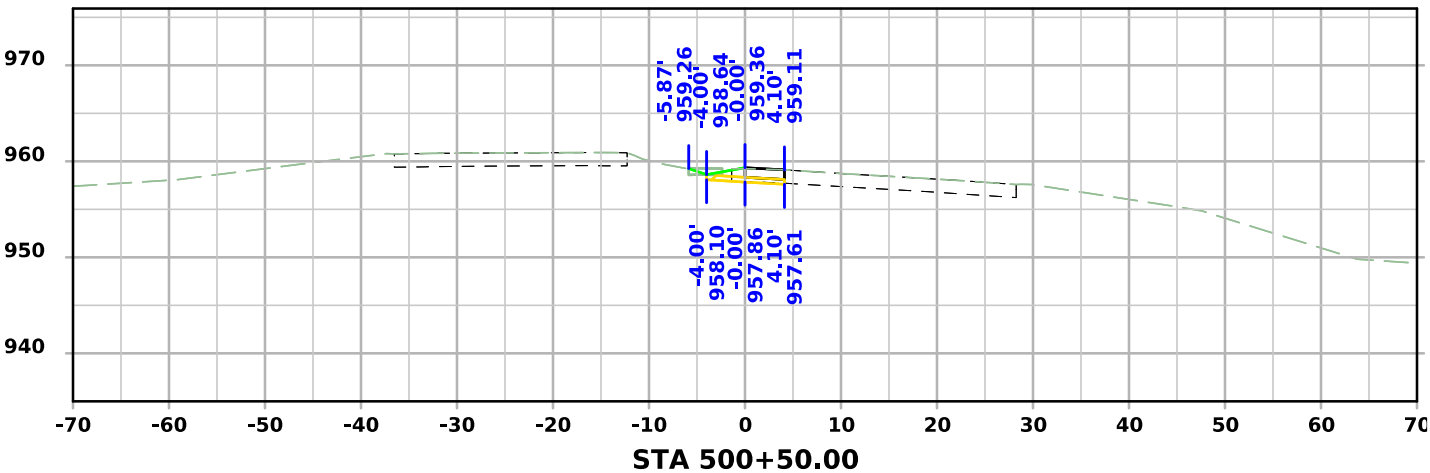
Detour 01 - Stage 1



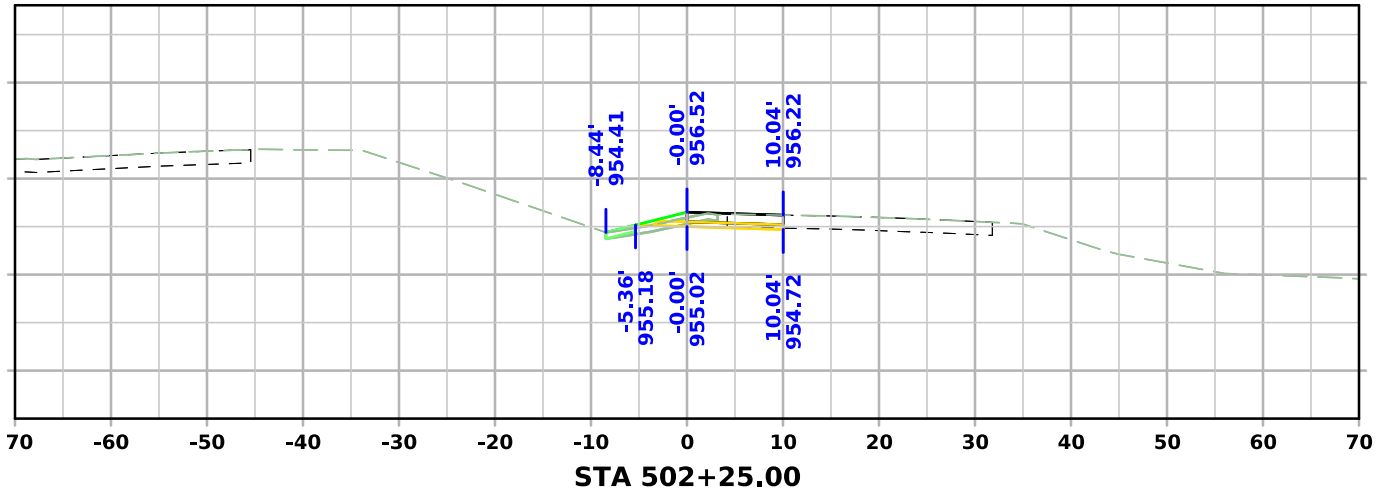
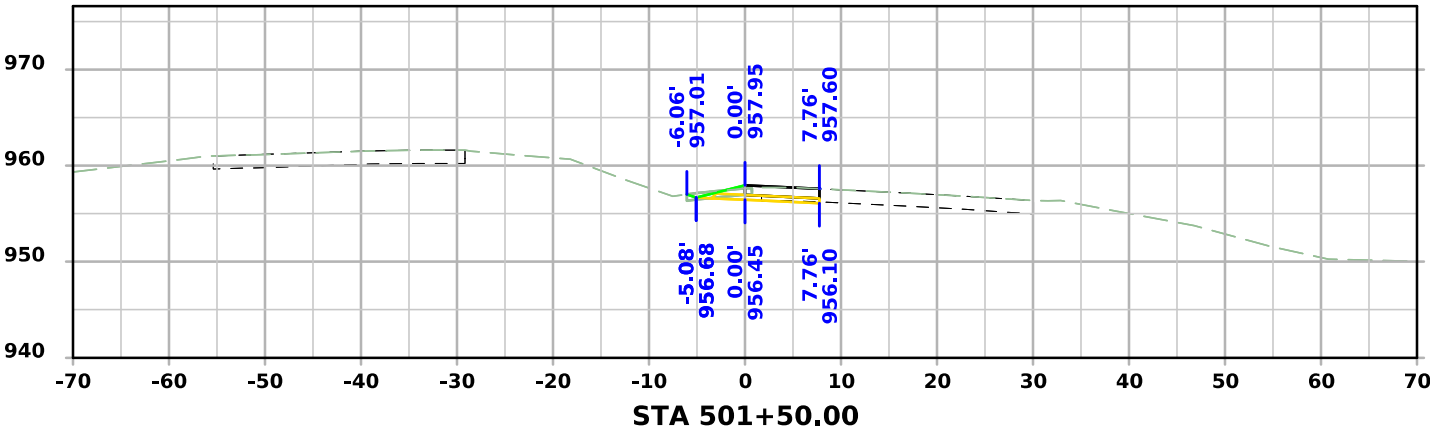
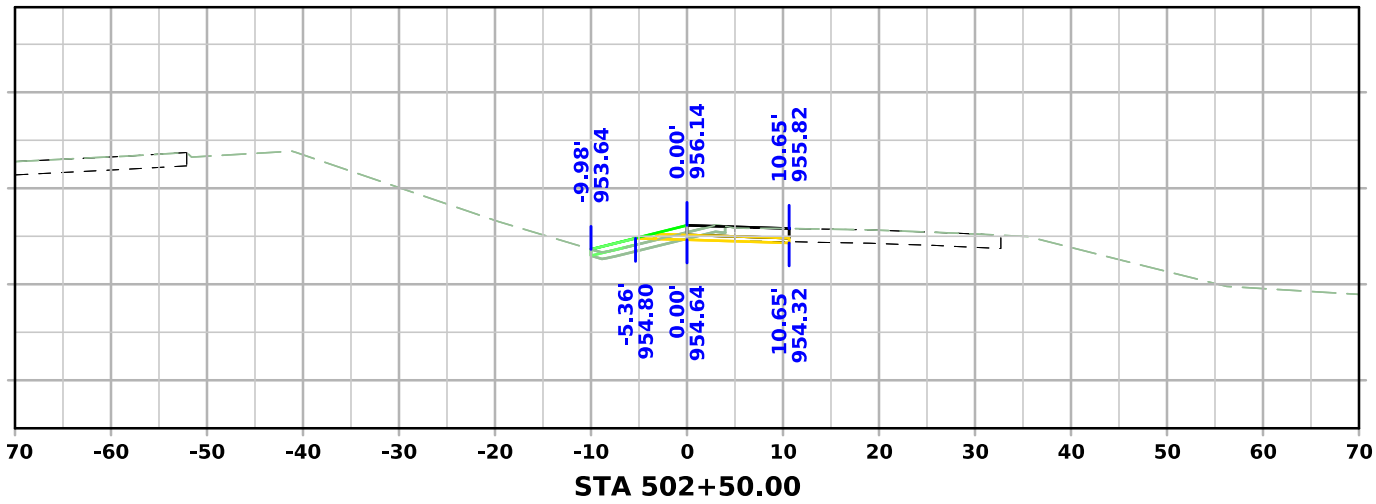
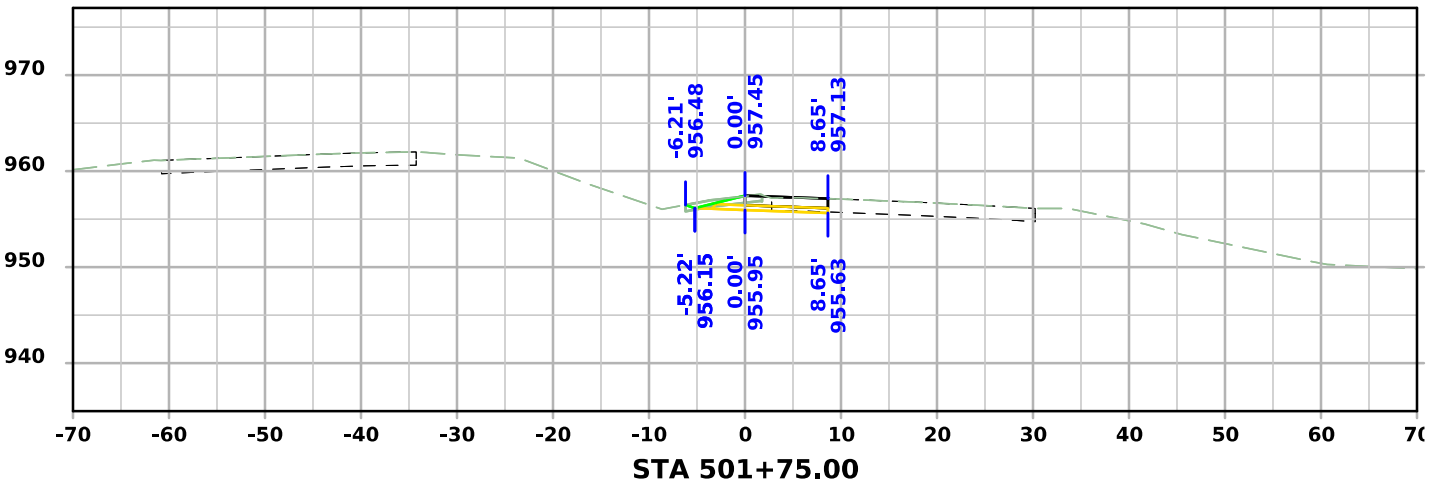
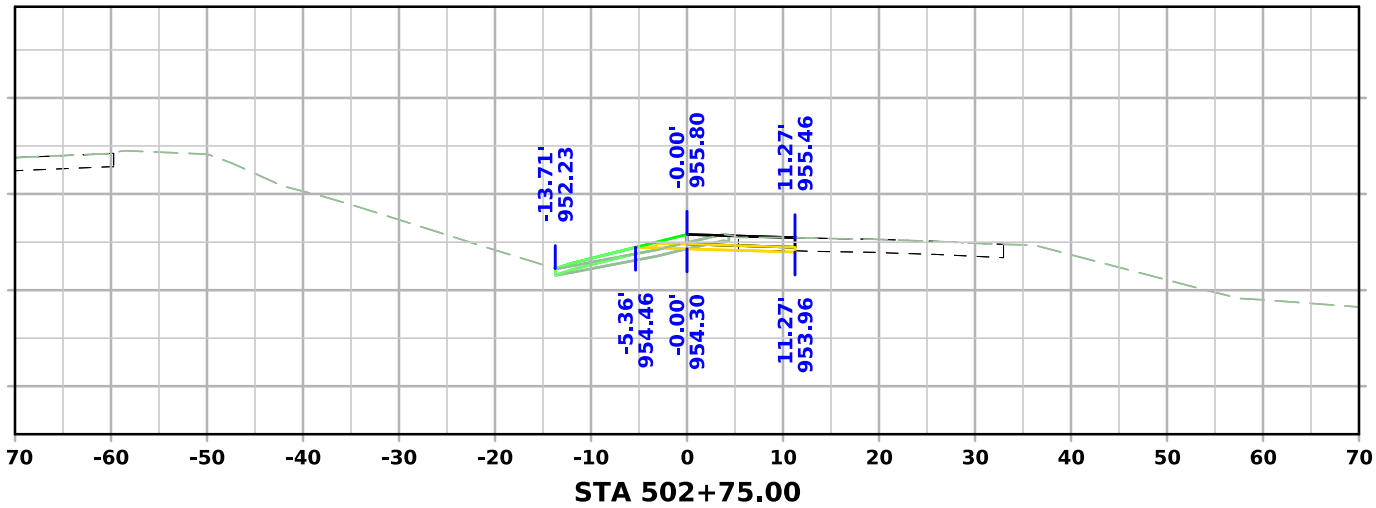
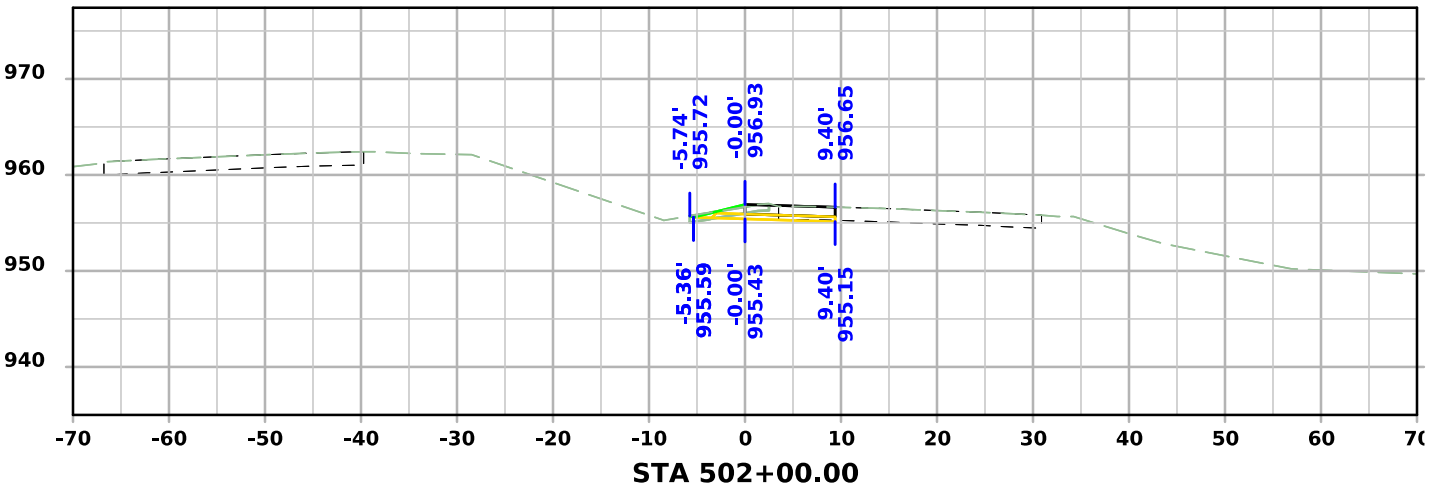
Detour 01 - Stage 1



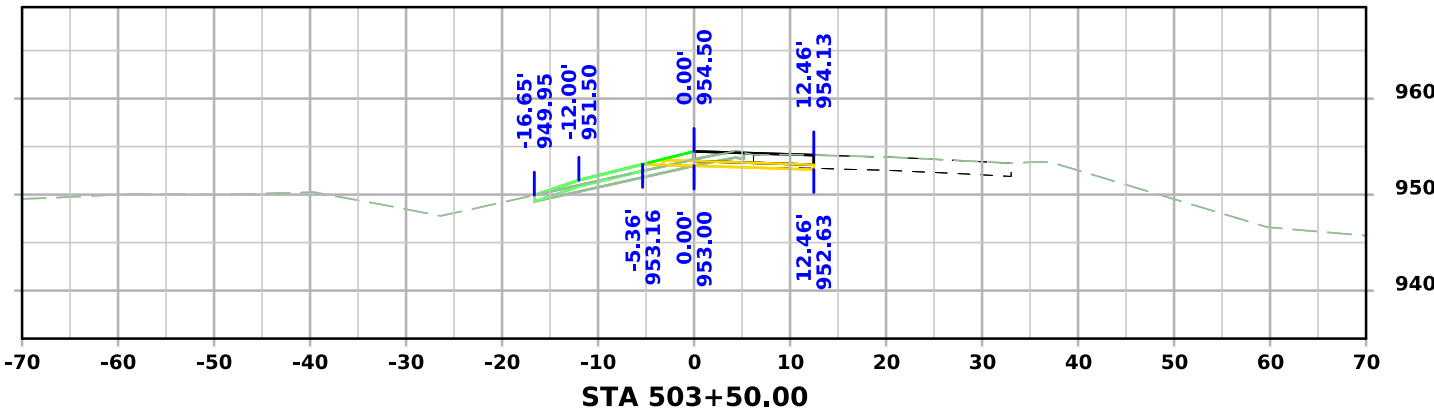
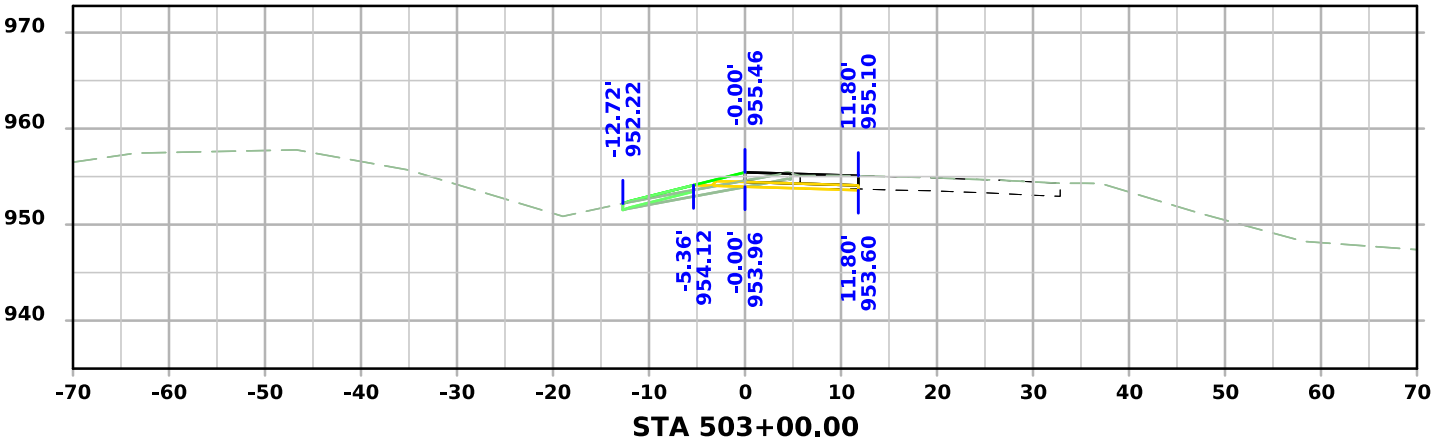
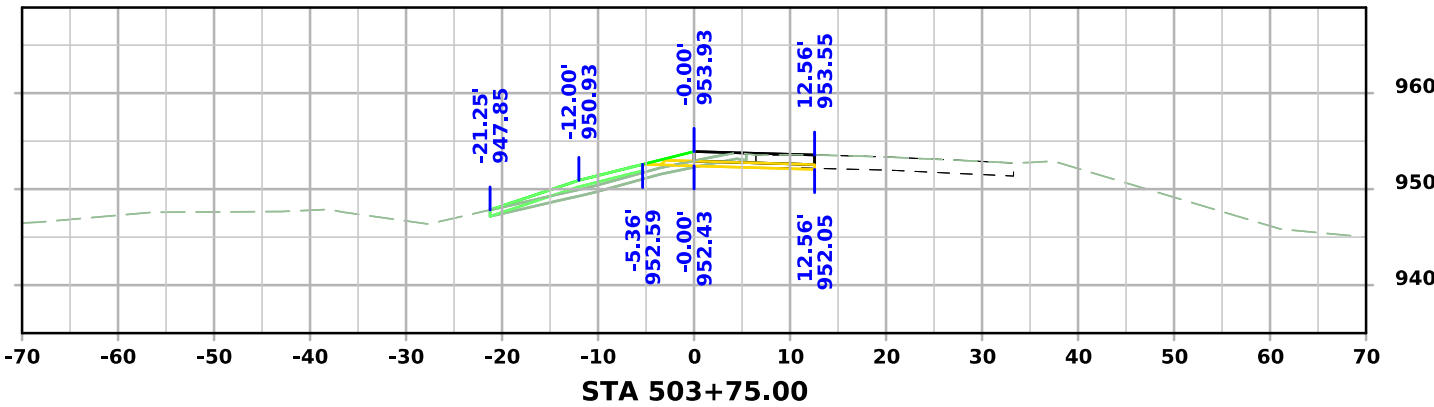
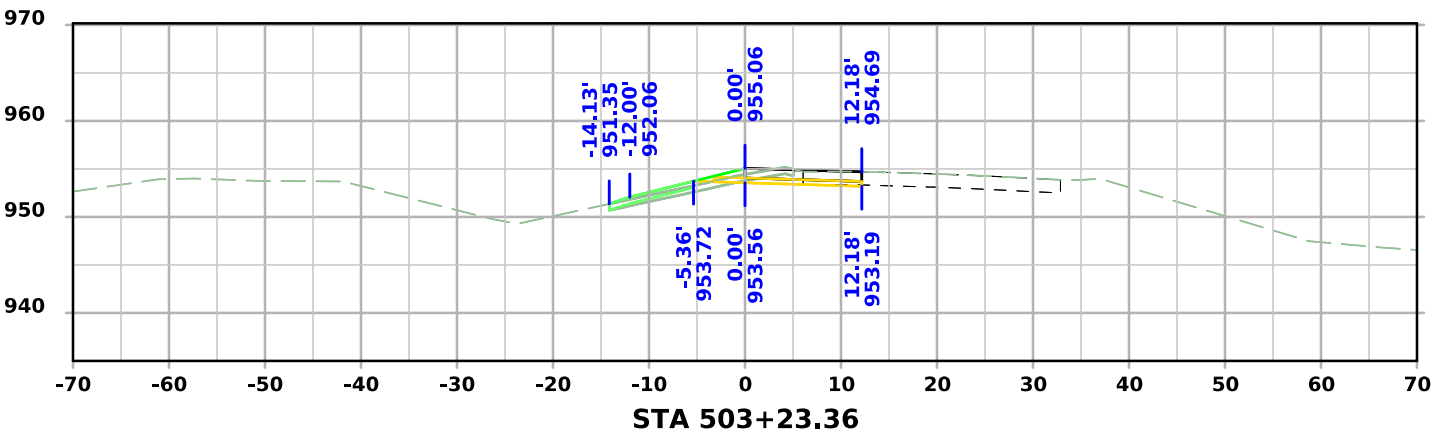
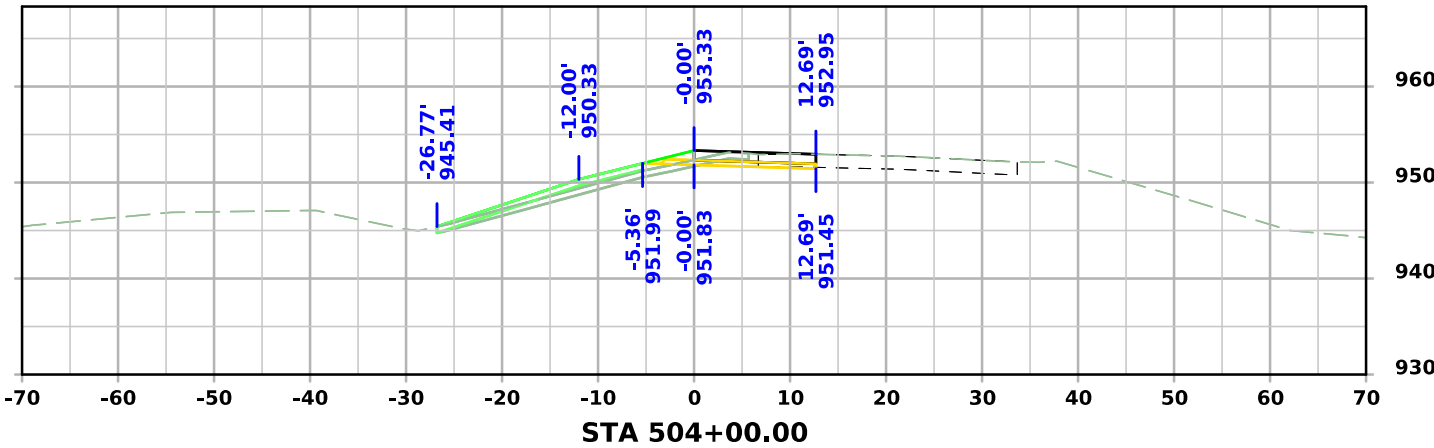
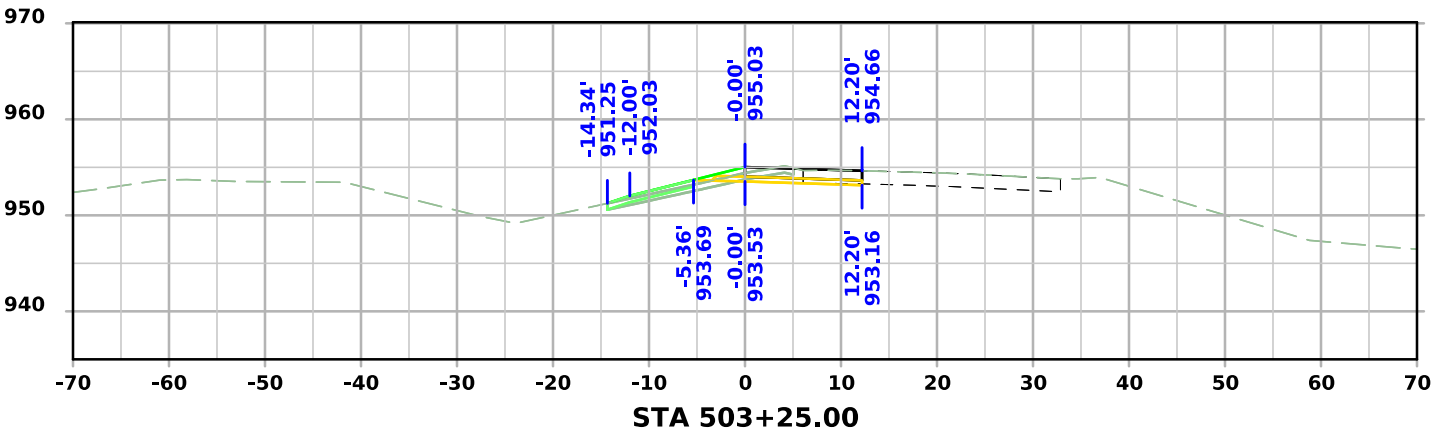
Detour 02 - Stage 1



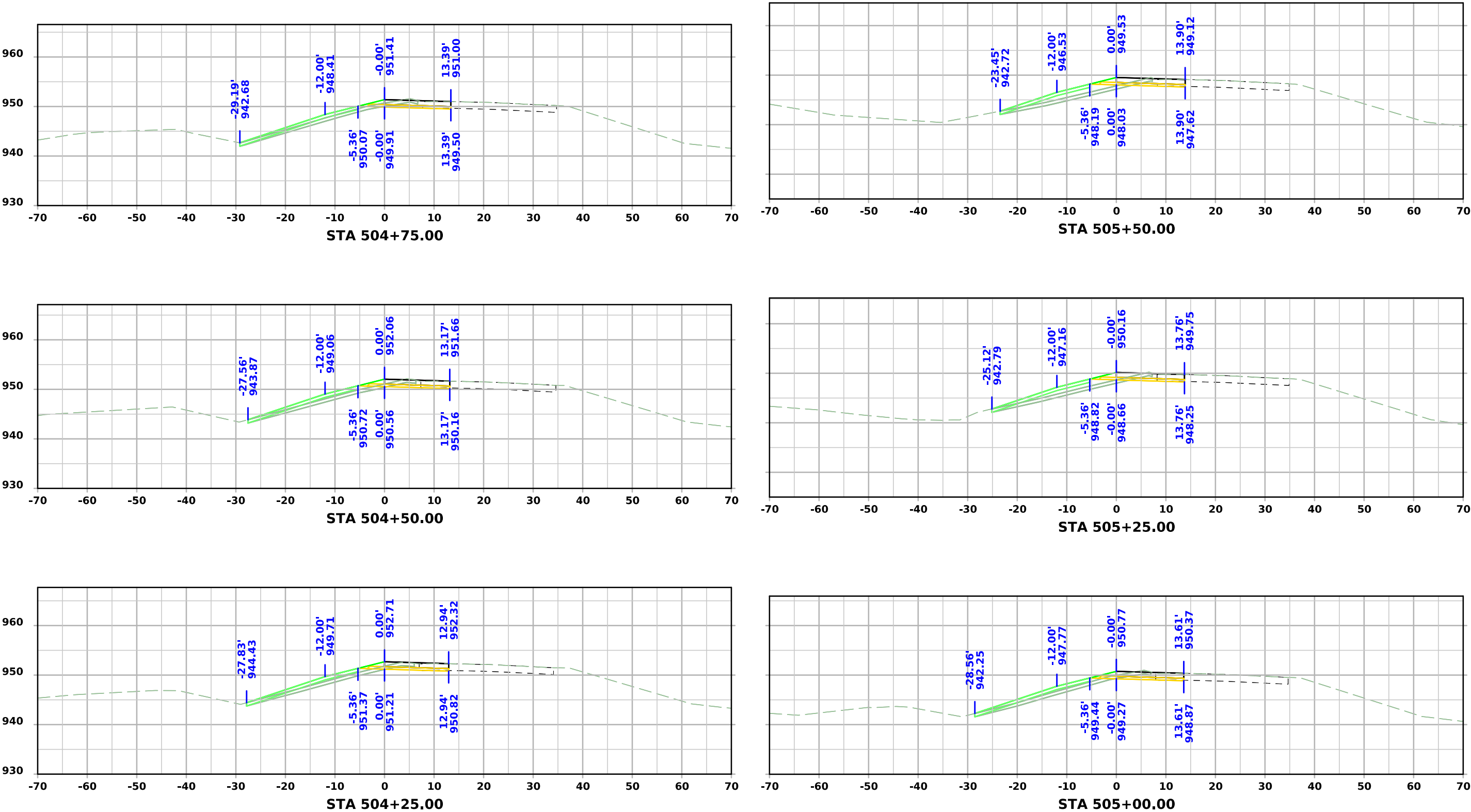
Detour 02 - Stage 1



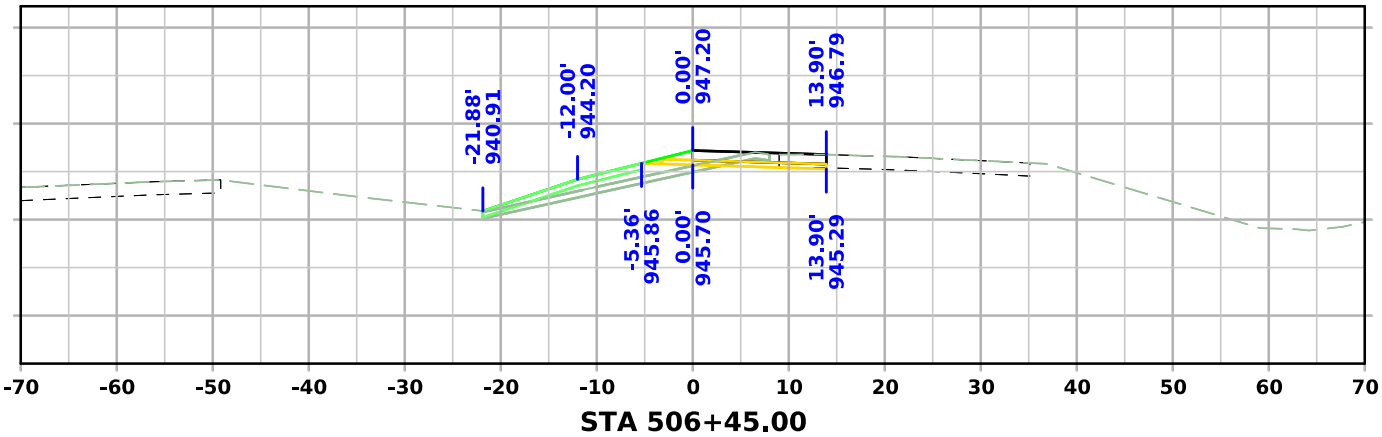
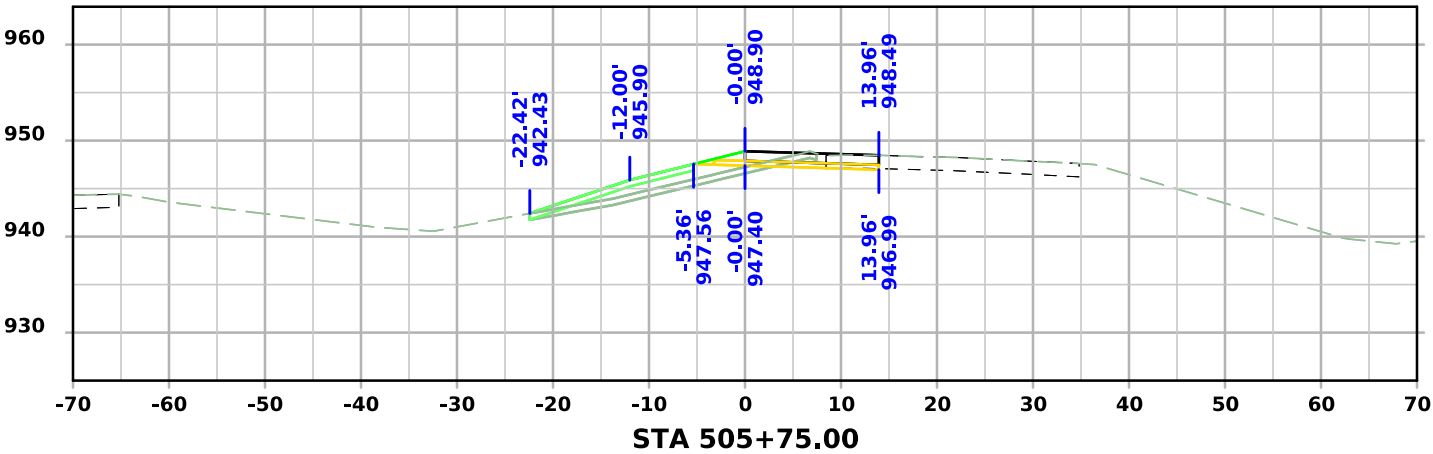
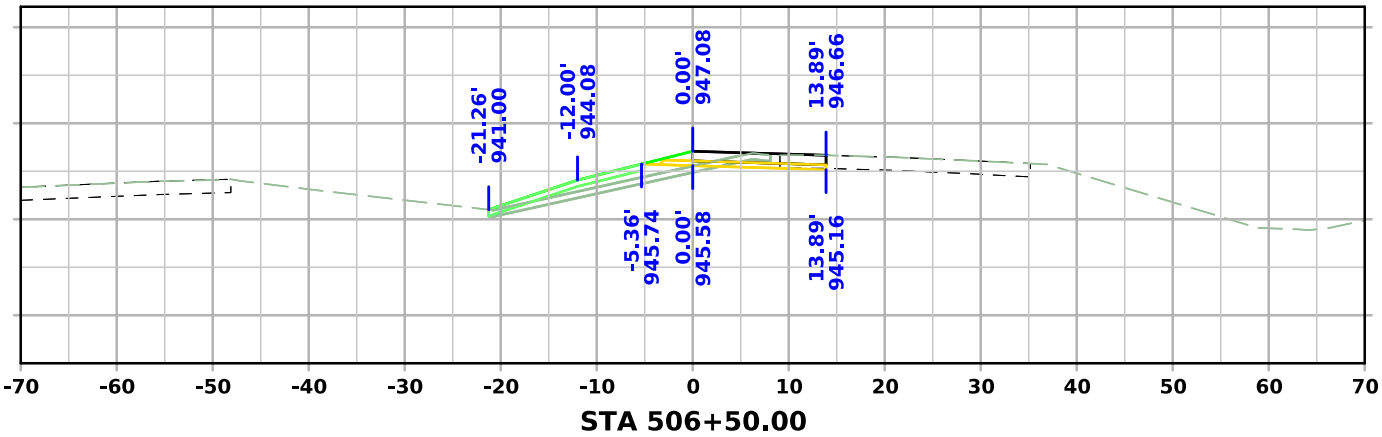
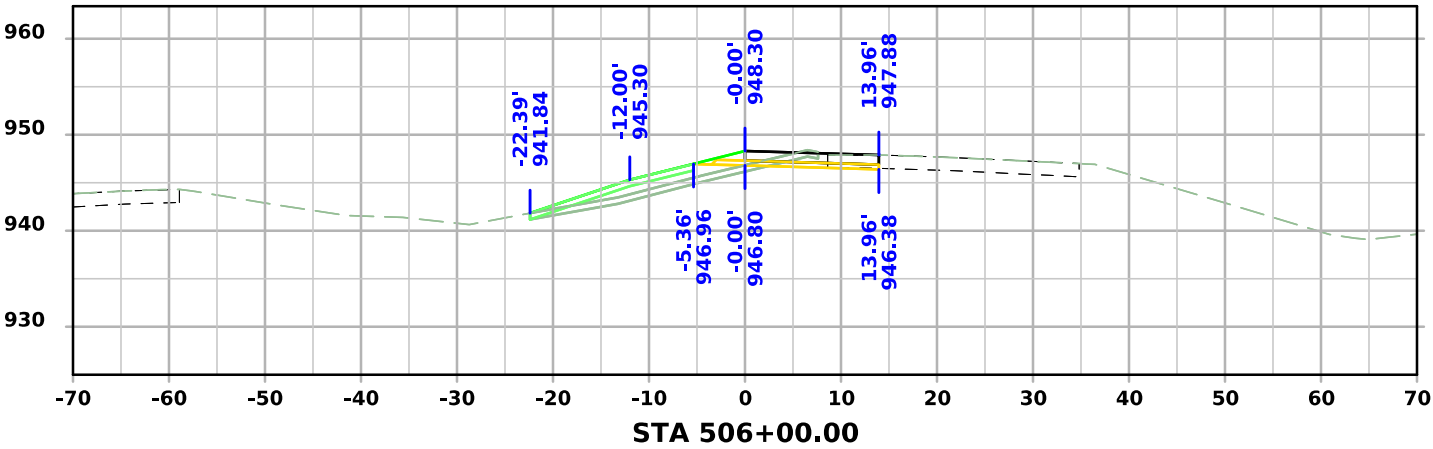
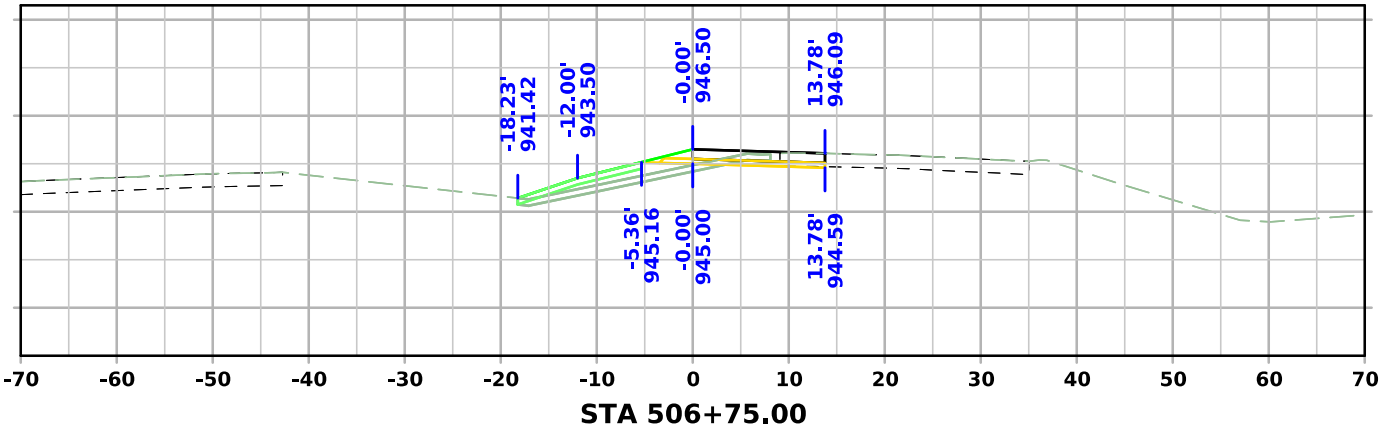
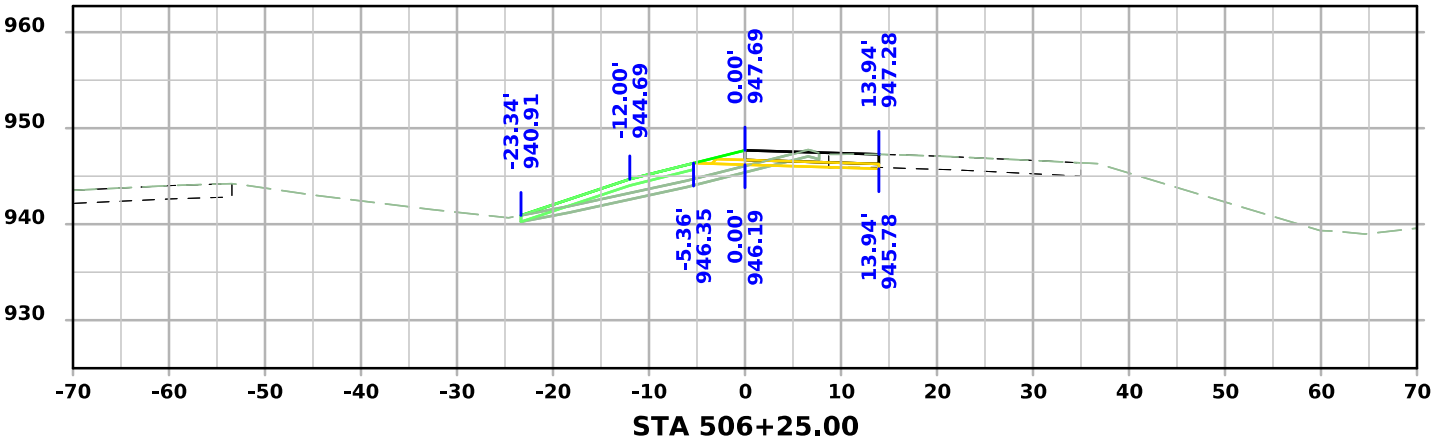
Detour 02 - Stage 1



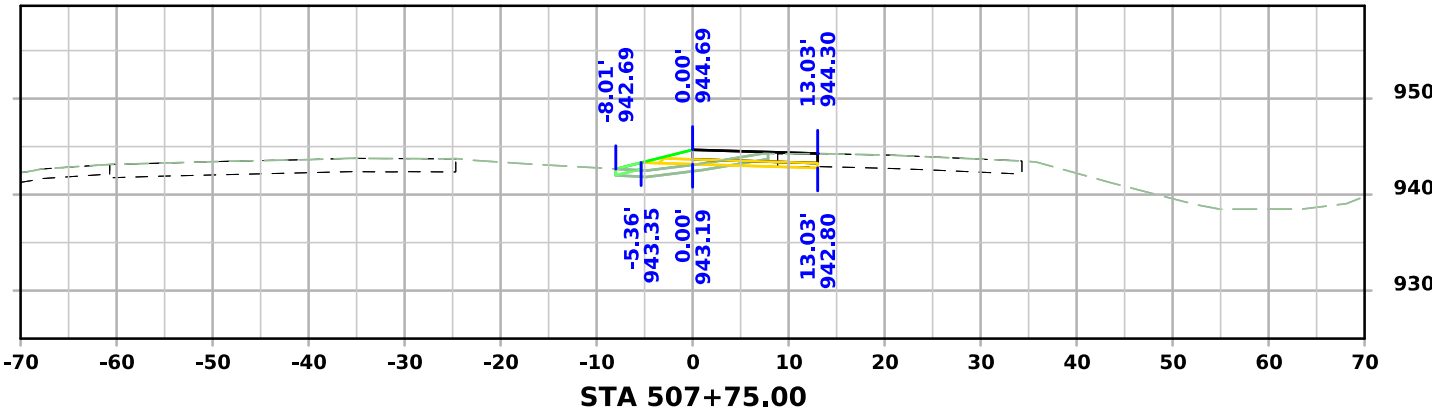
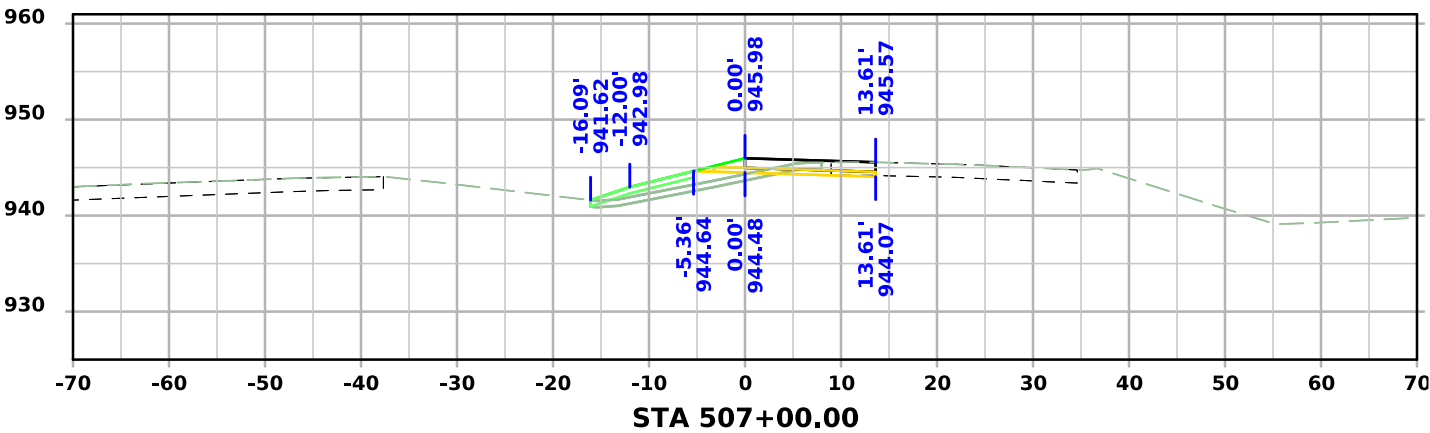
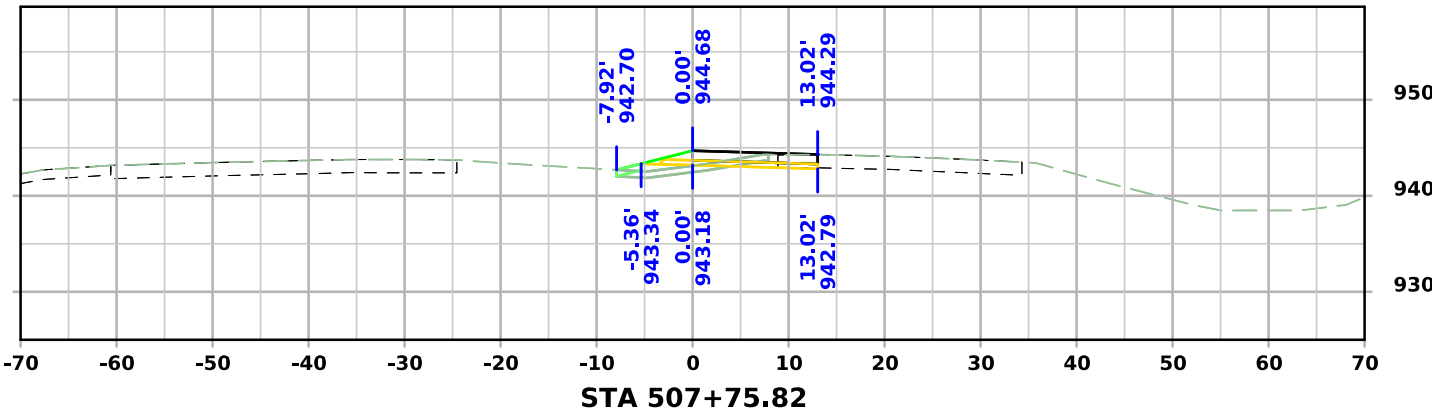
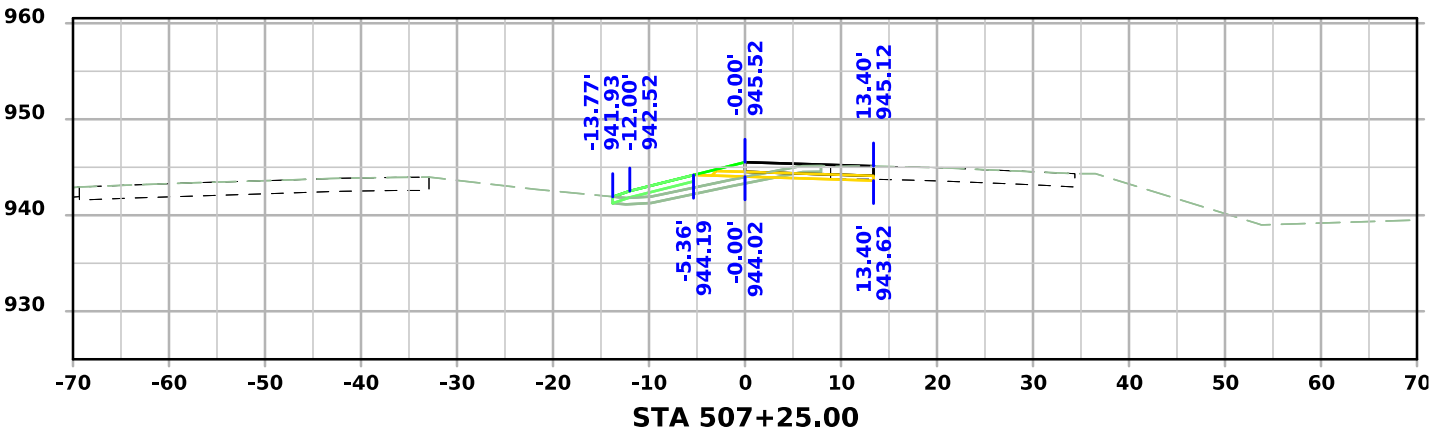
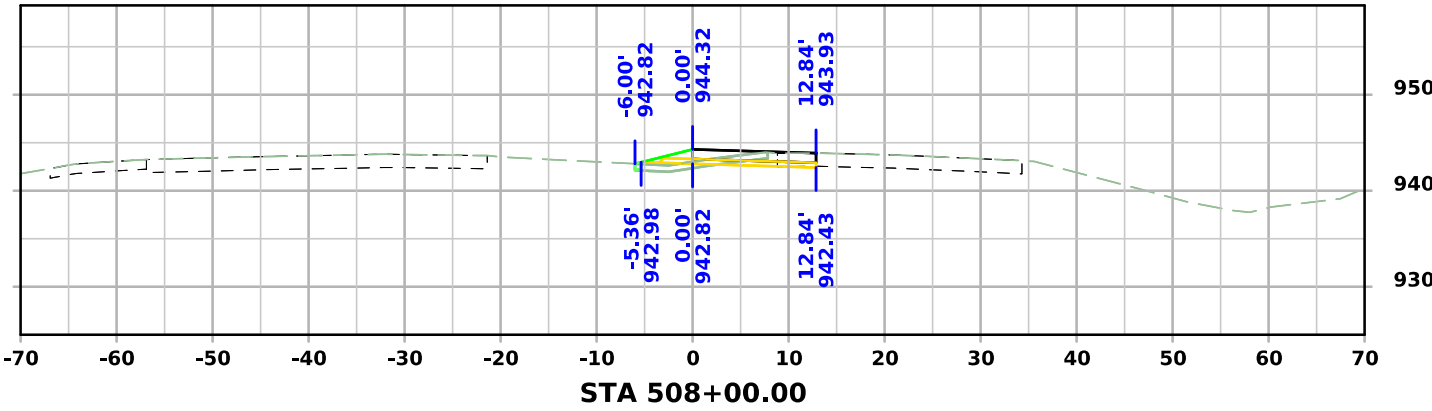
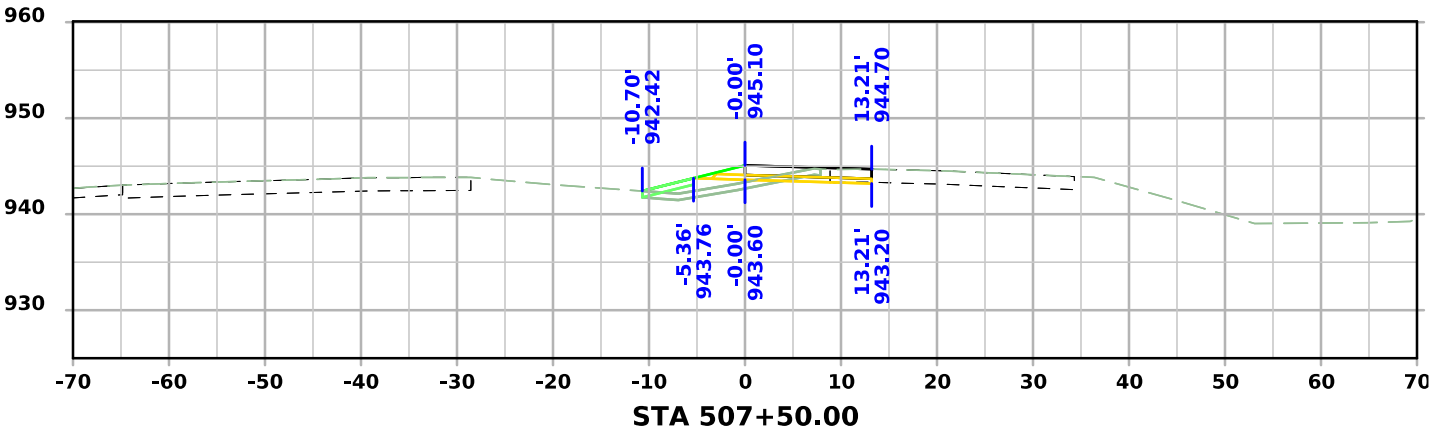
Detour 02 - Stage 1



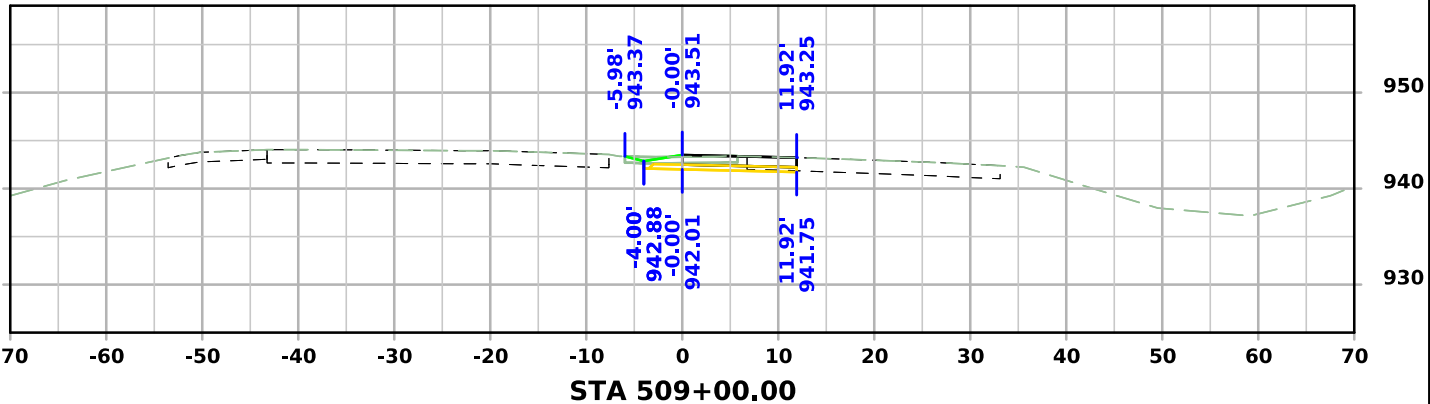
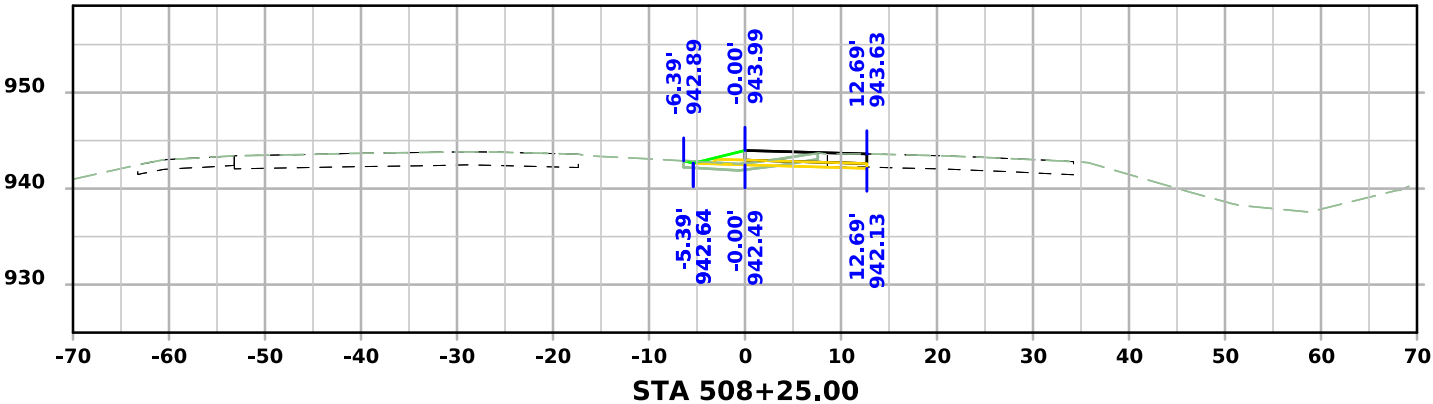
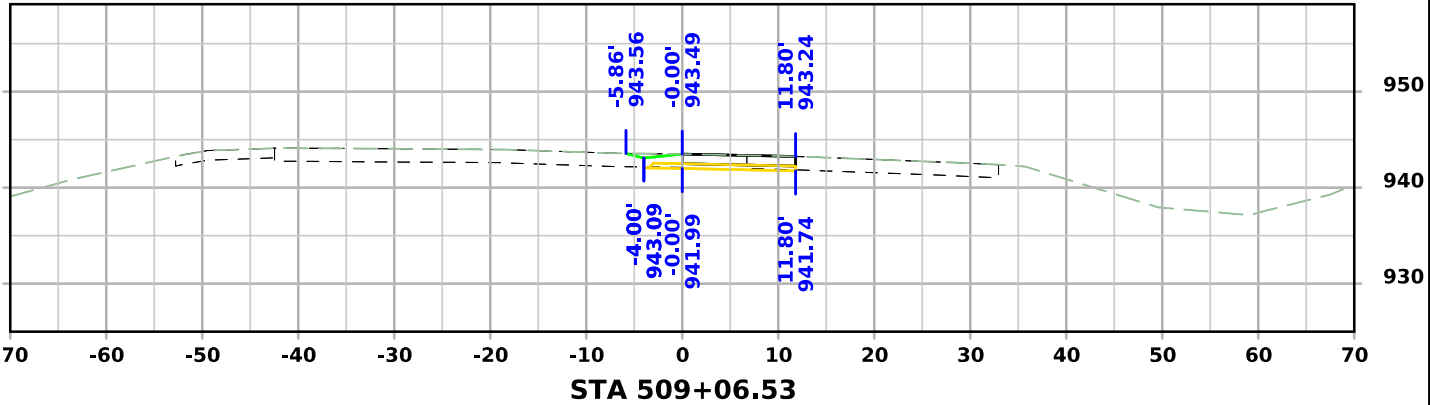
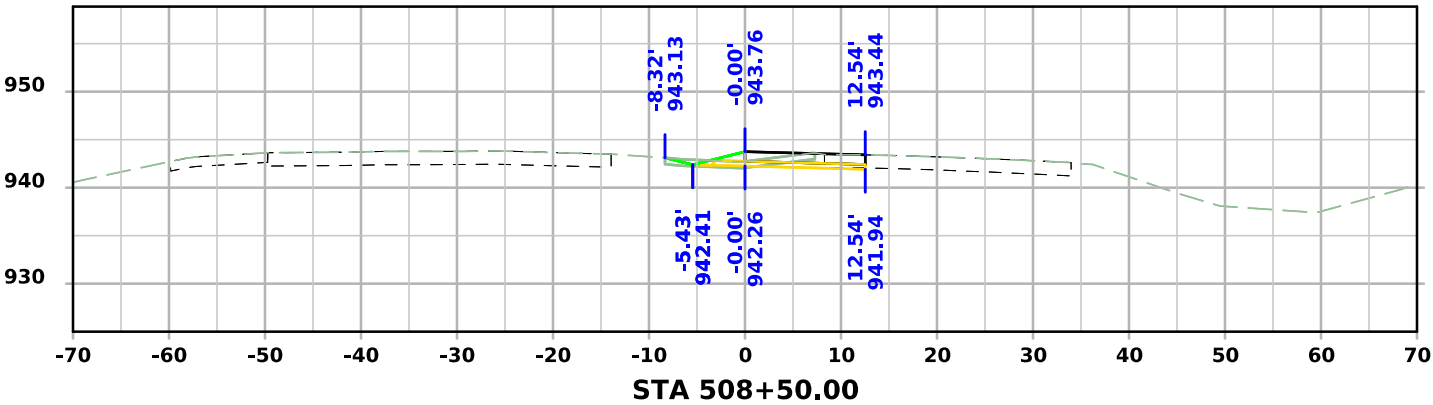
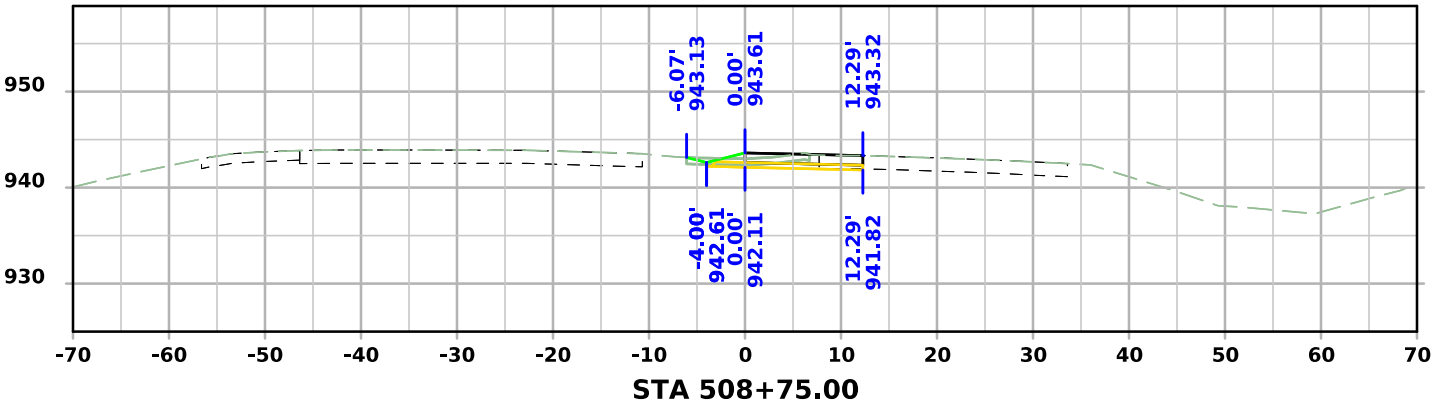
Detour 02 - Stage 1



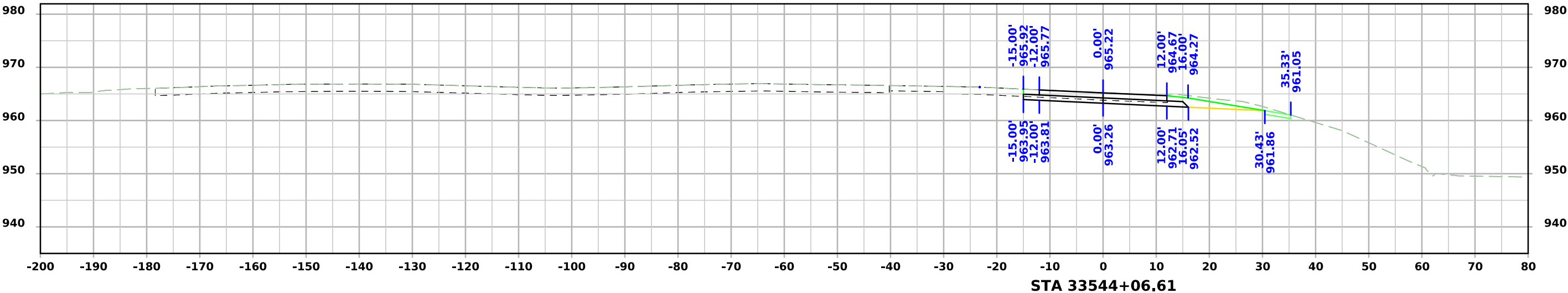
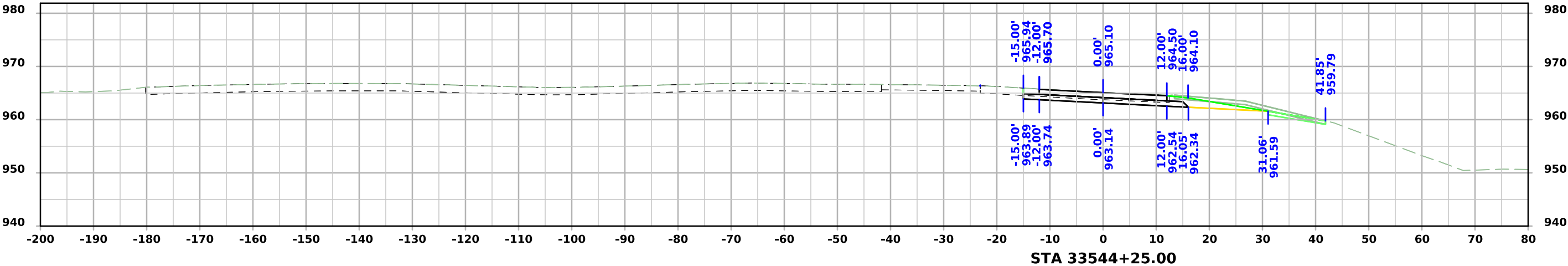
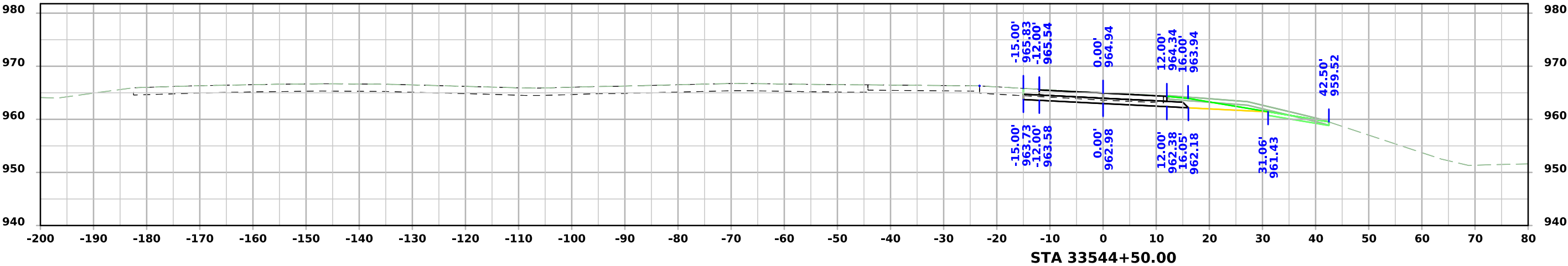
Detour 02 - Stage 1



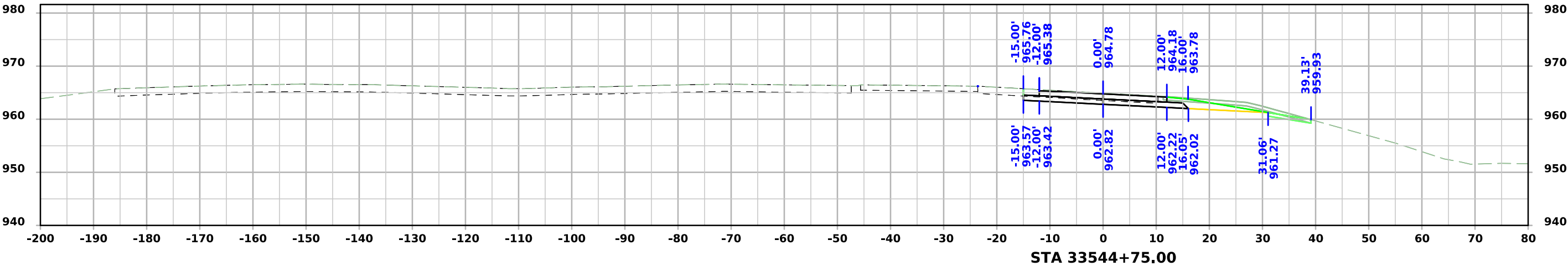
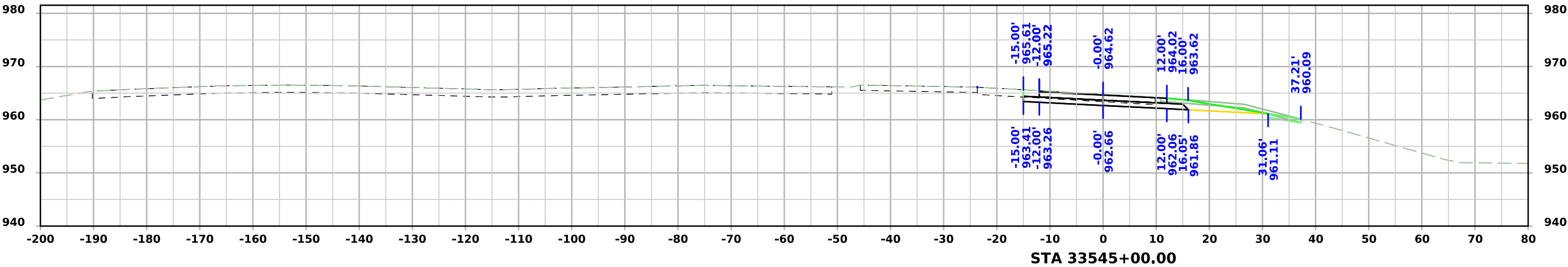
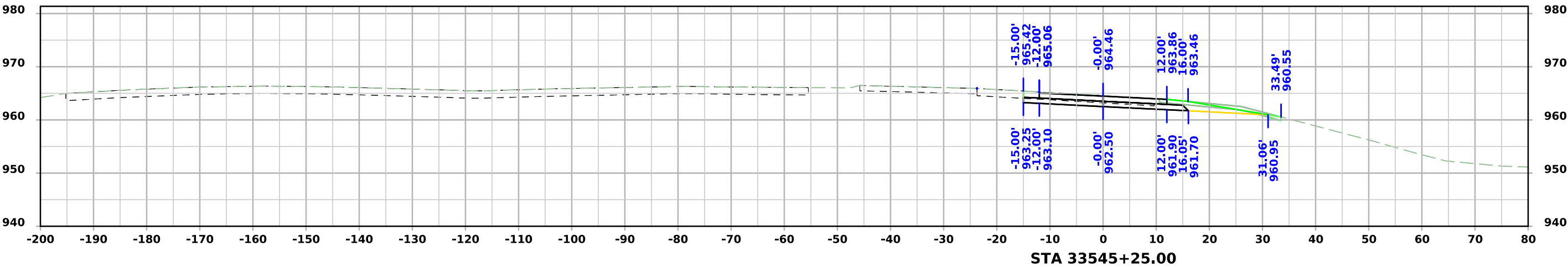
Detour 02 - Stage 1



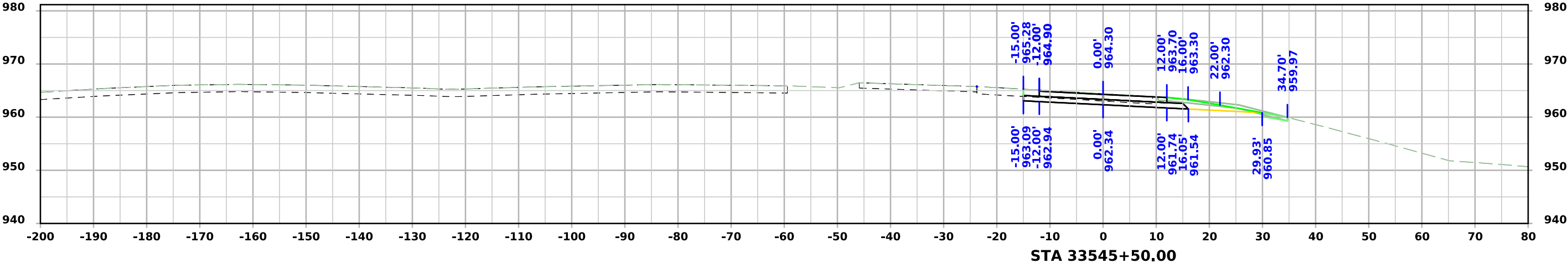
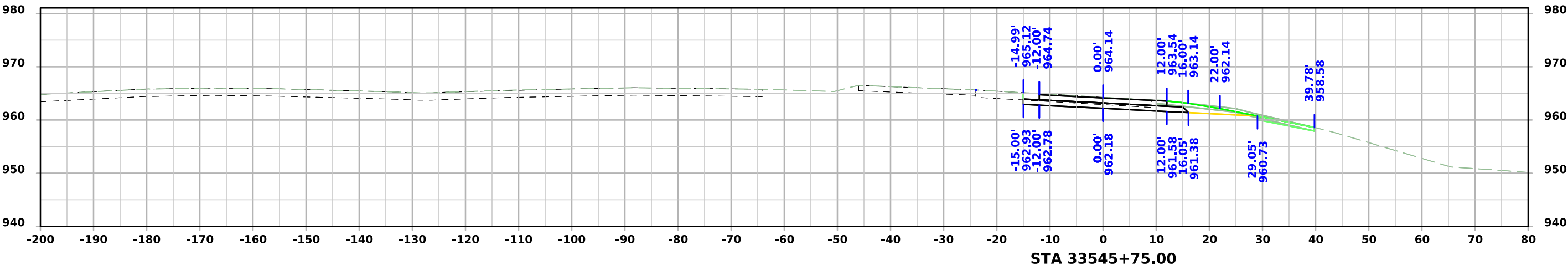
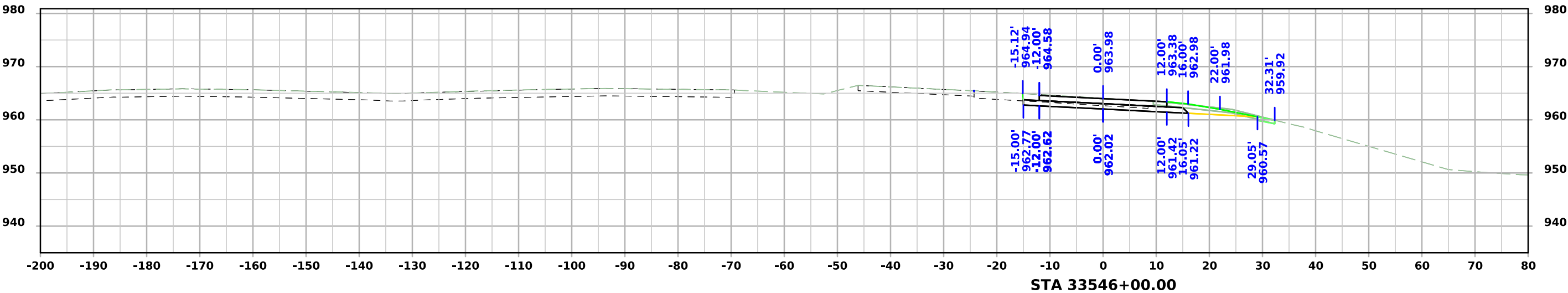
RAMPD_ULT Stage 2



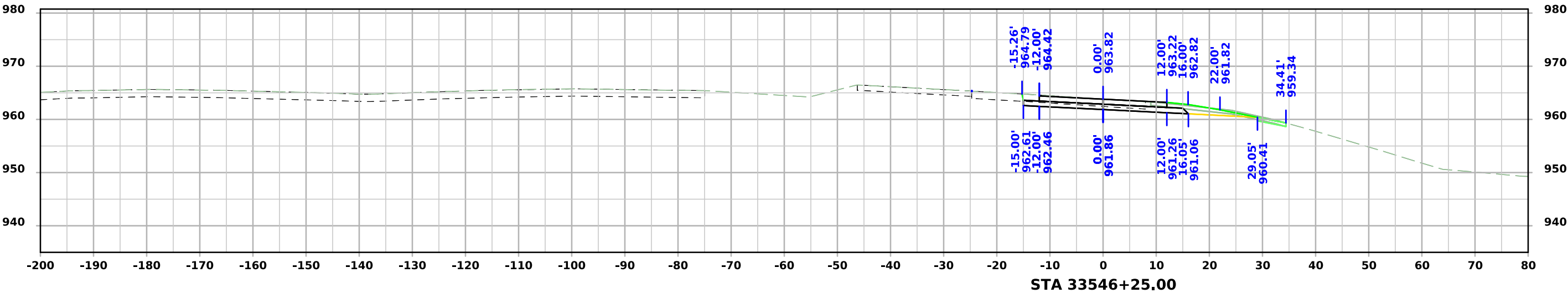
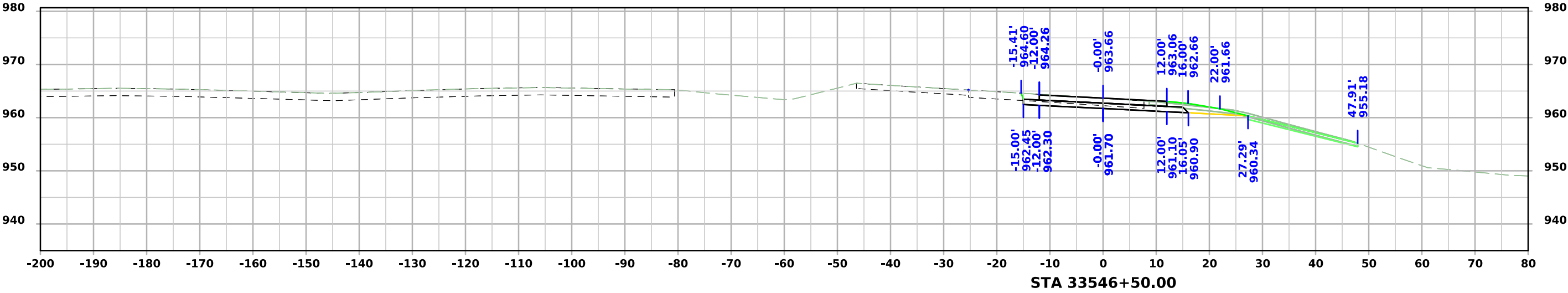
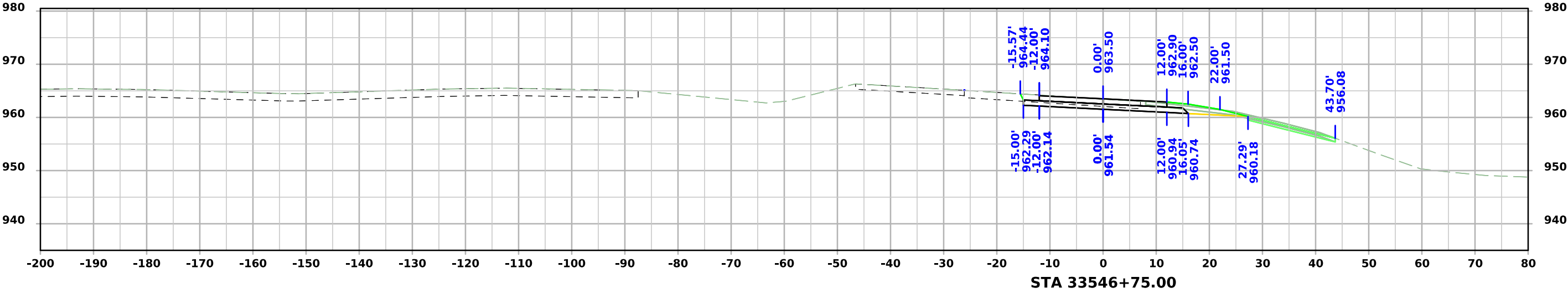
RAMPD_ULT Stage 2



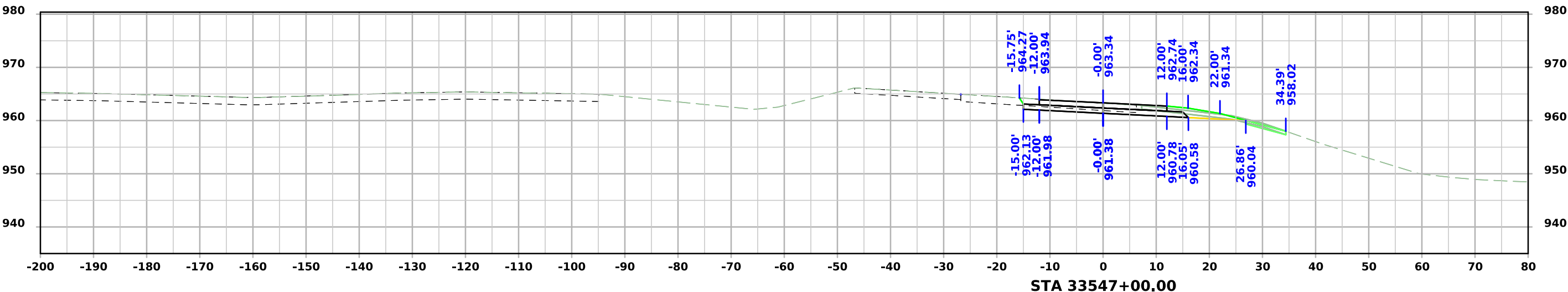
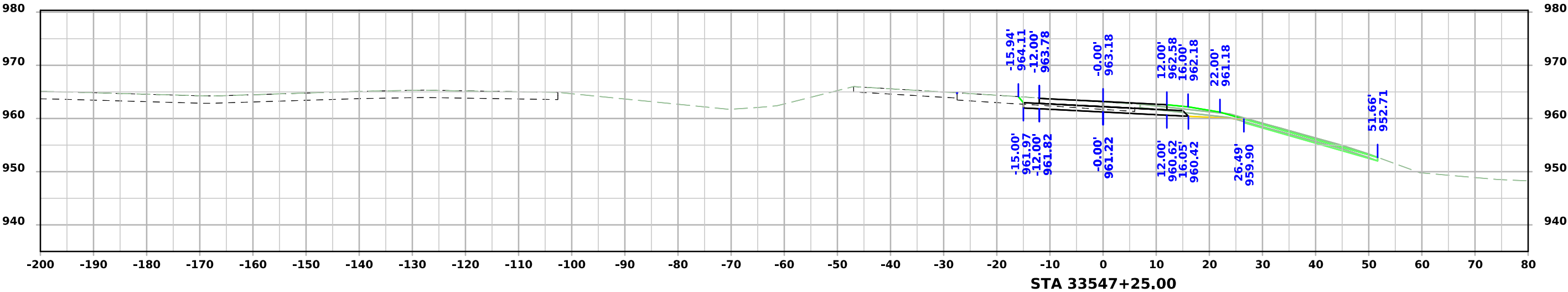
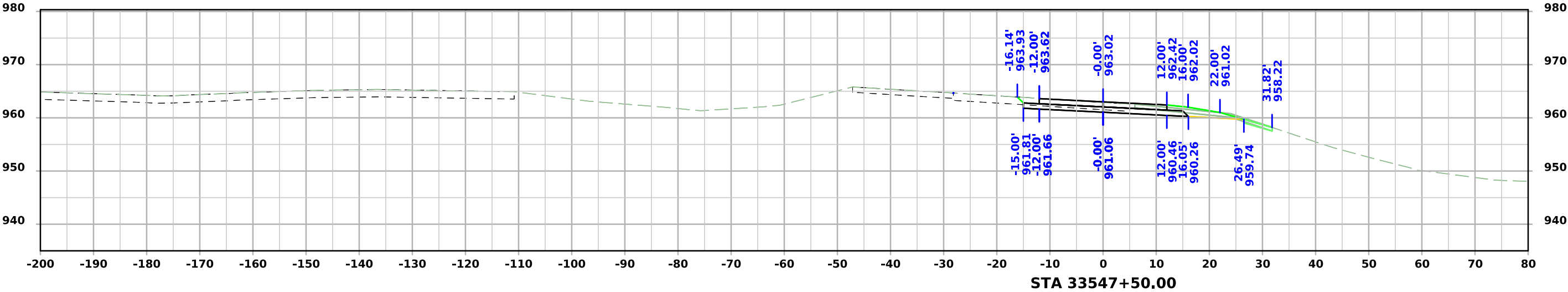
RAMPD_ULT Stage 2



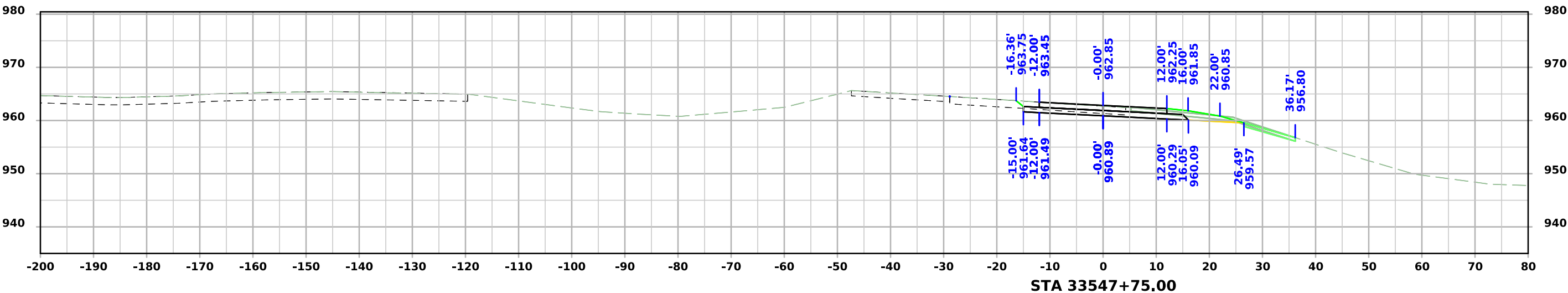
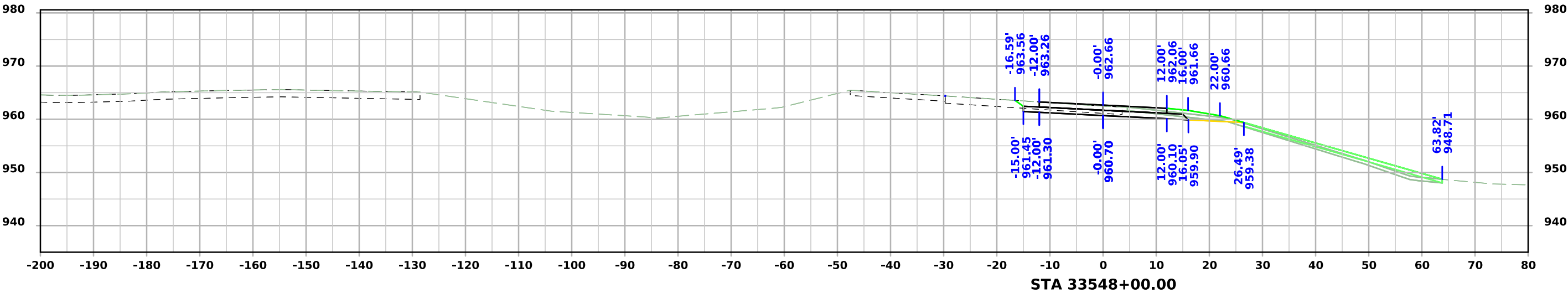
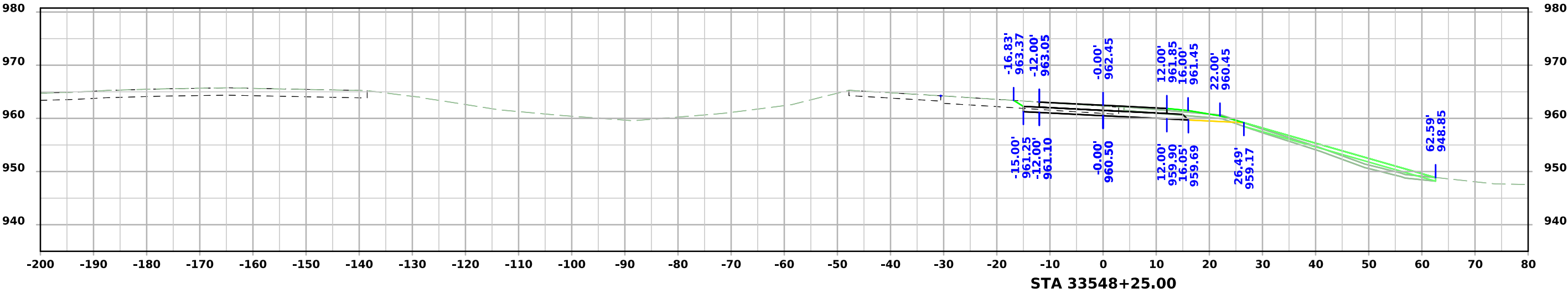
RAMPD_ULT Stage 2



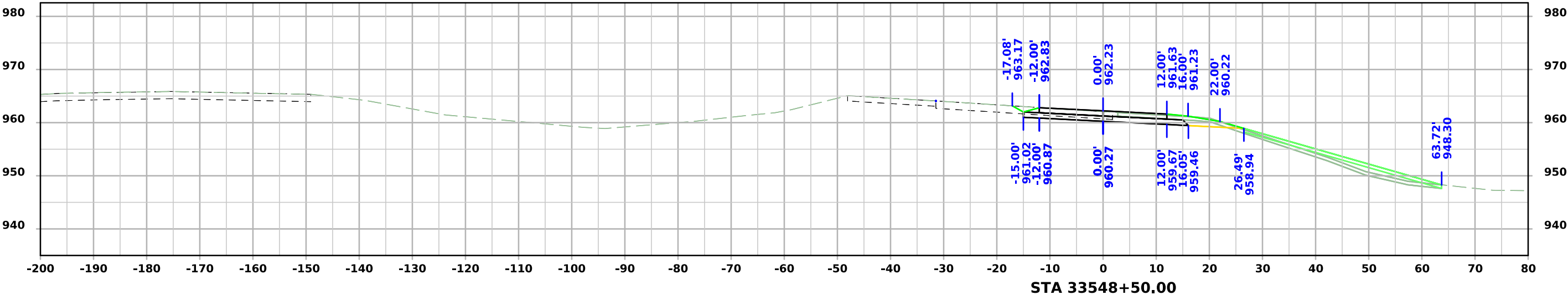
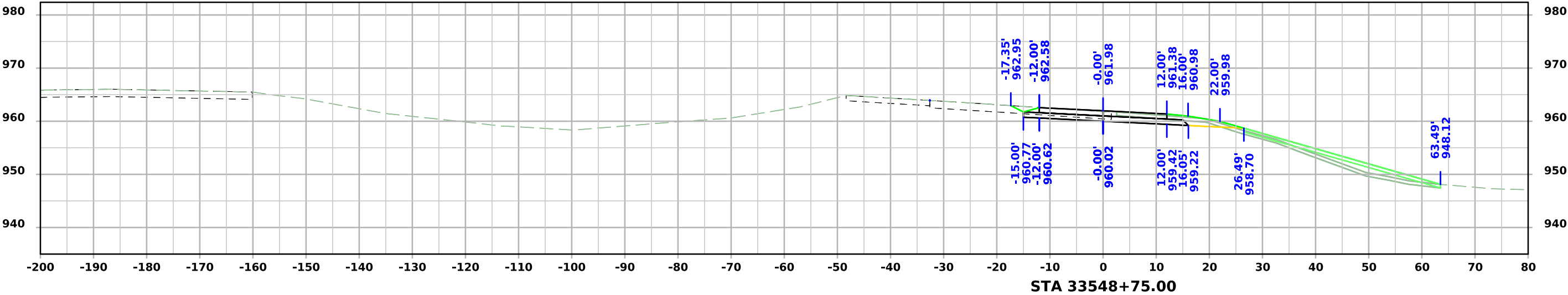
RAMPD_ULT Stage 2



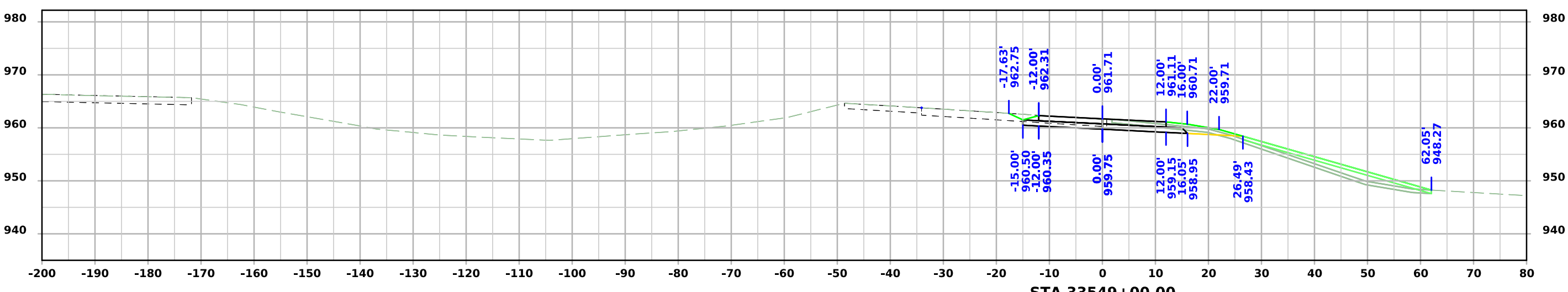
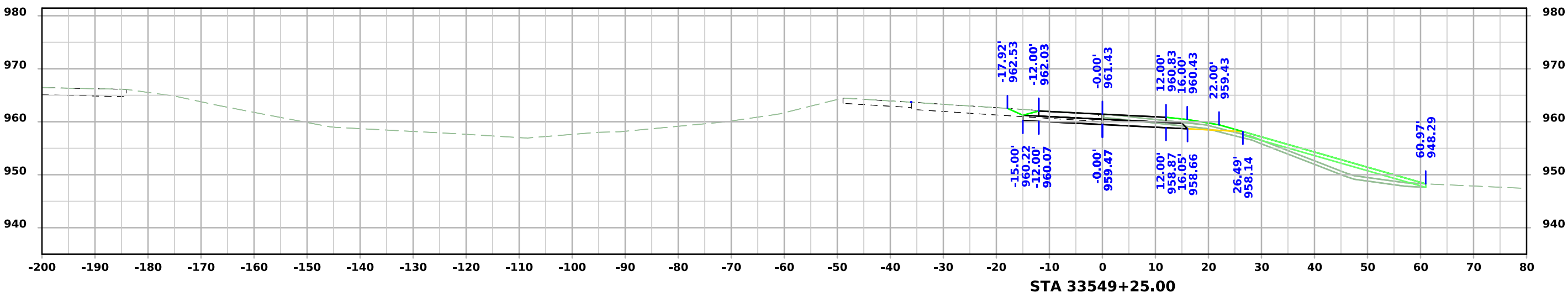
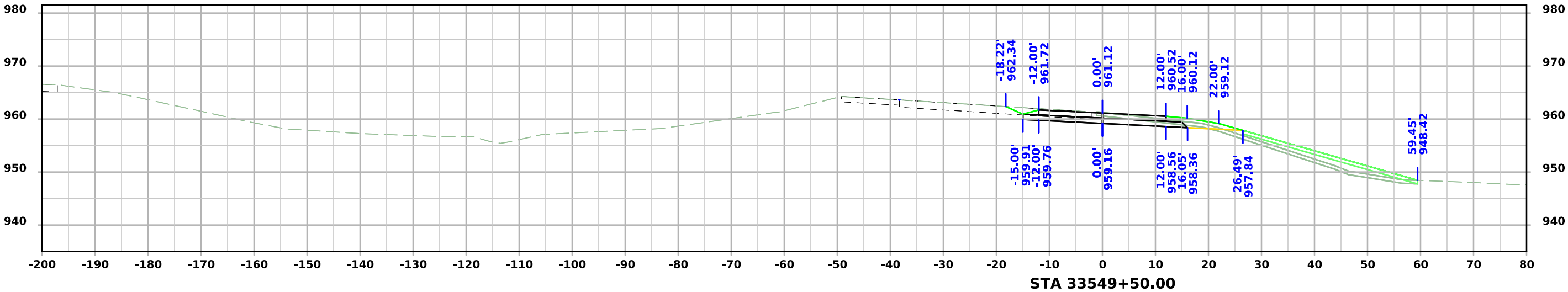
RAMPD_ULT Stage 2



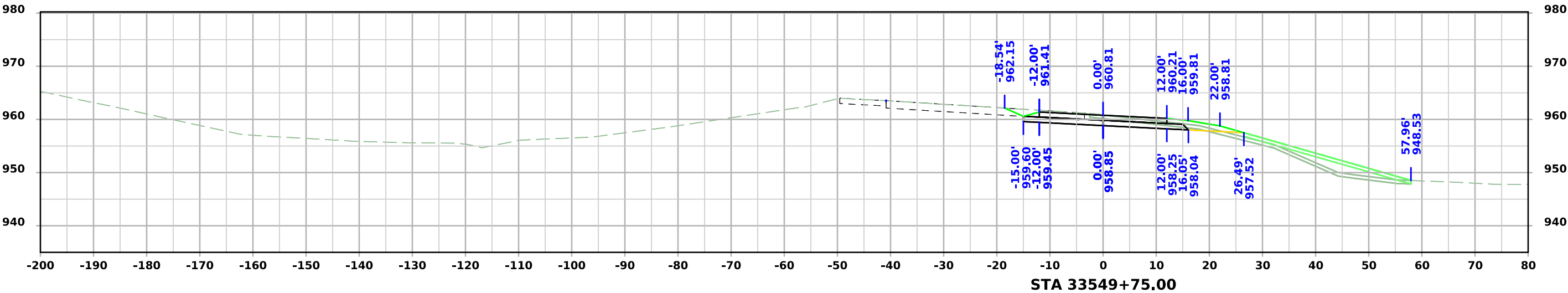
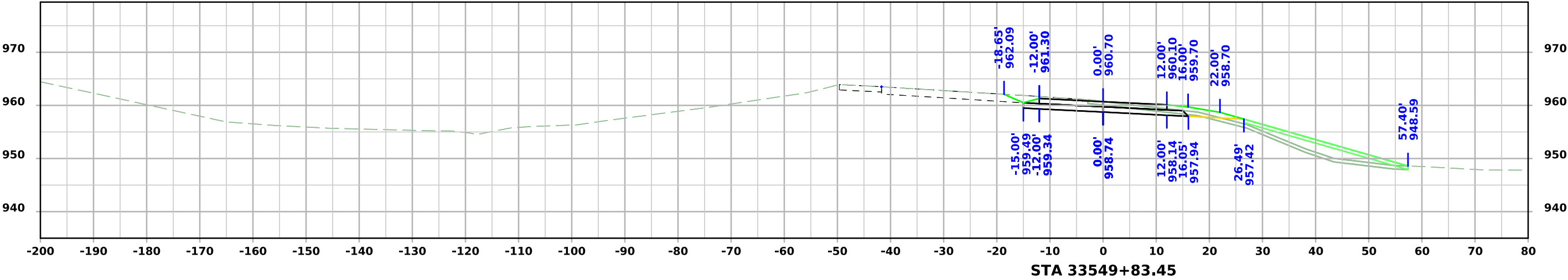
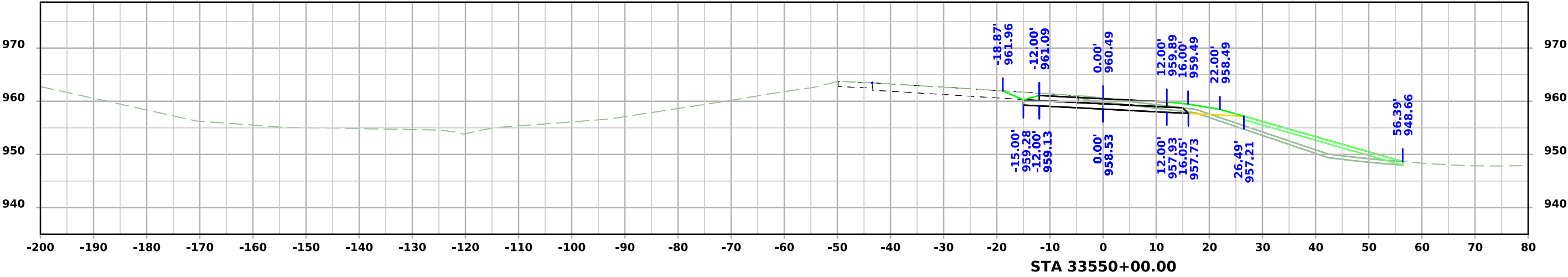
RAMPD_ULT Stage 2



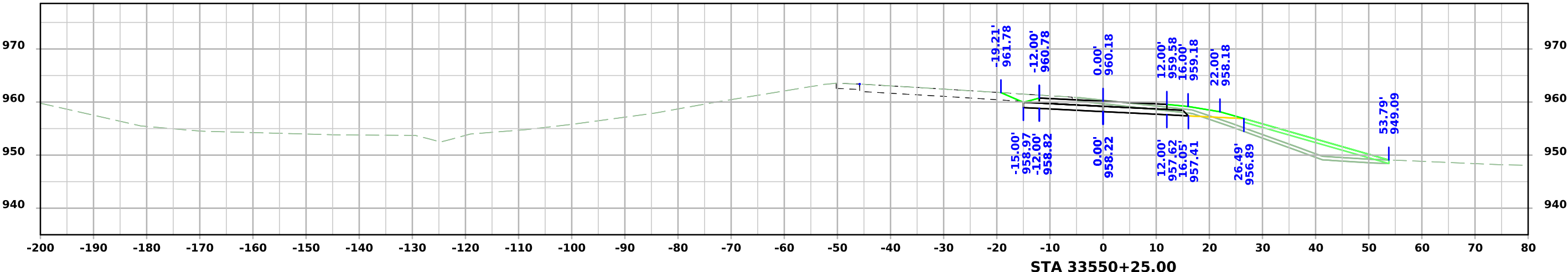
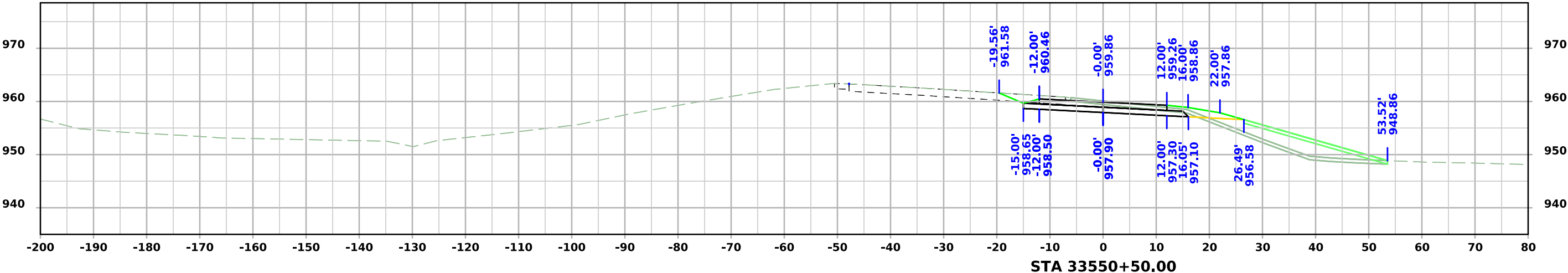
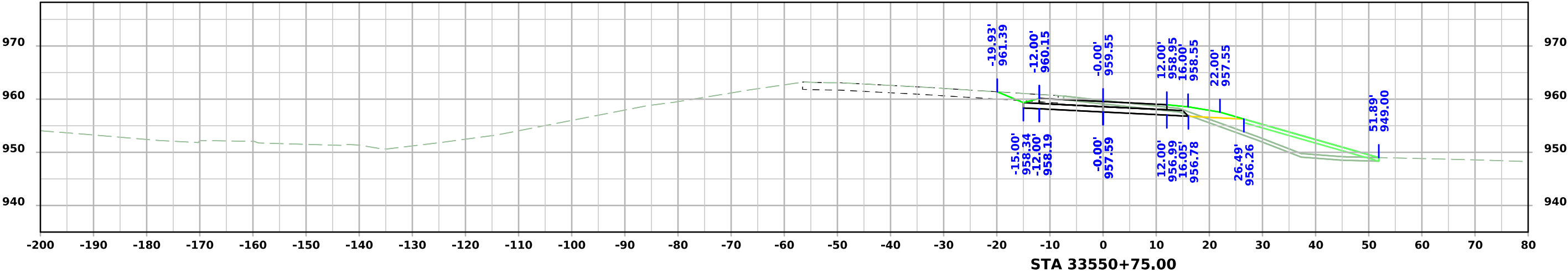
RAMPD_ULT Stage 2



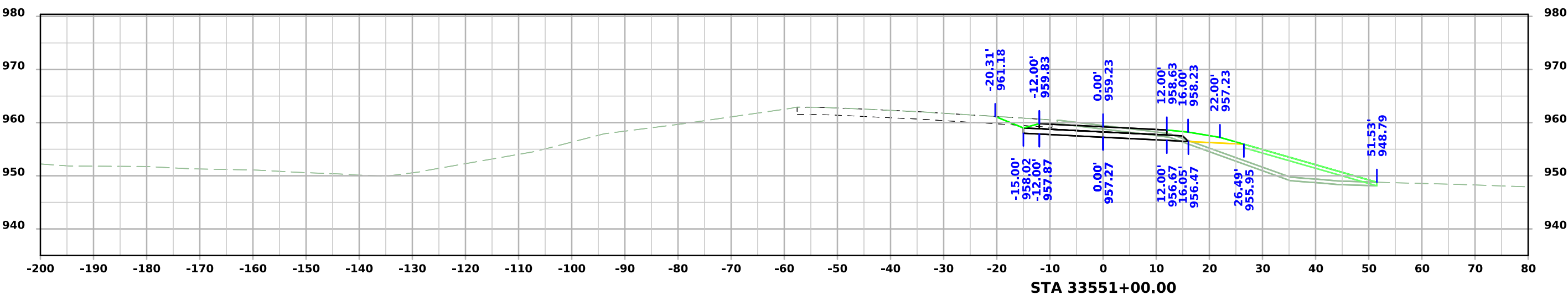
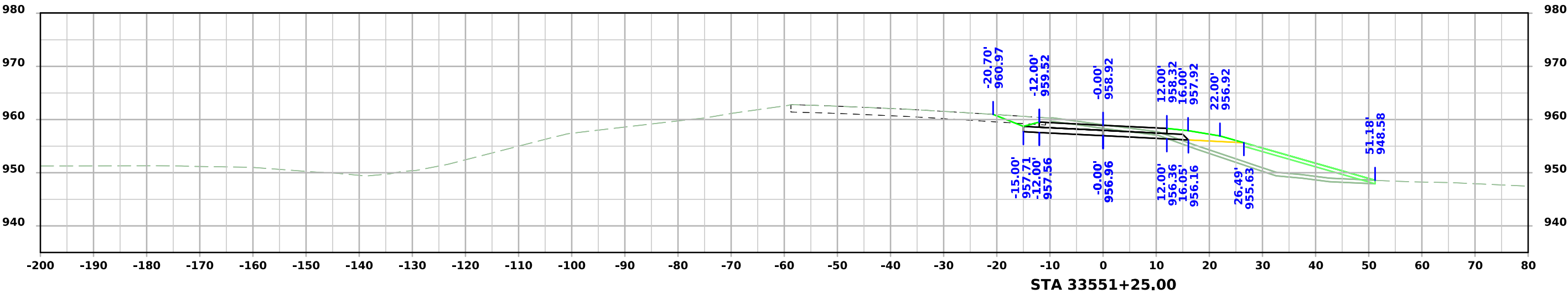
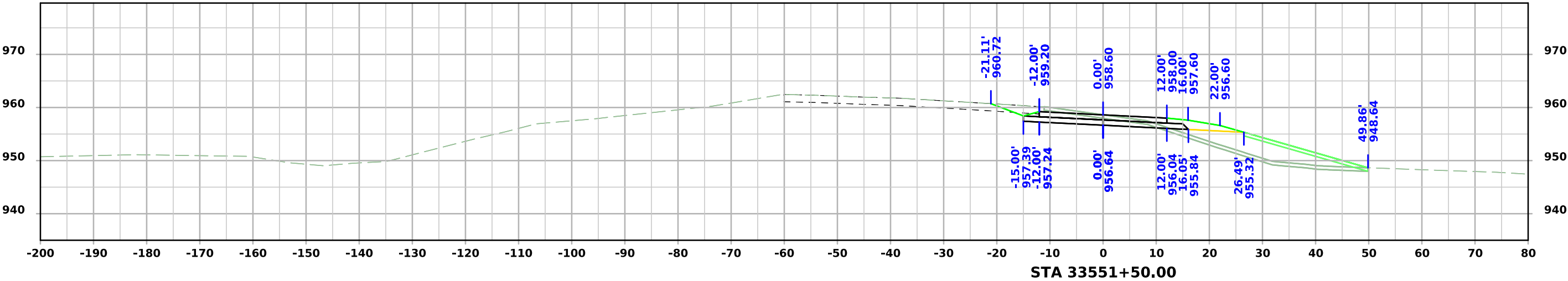
RAMPD_ULT Stage 2



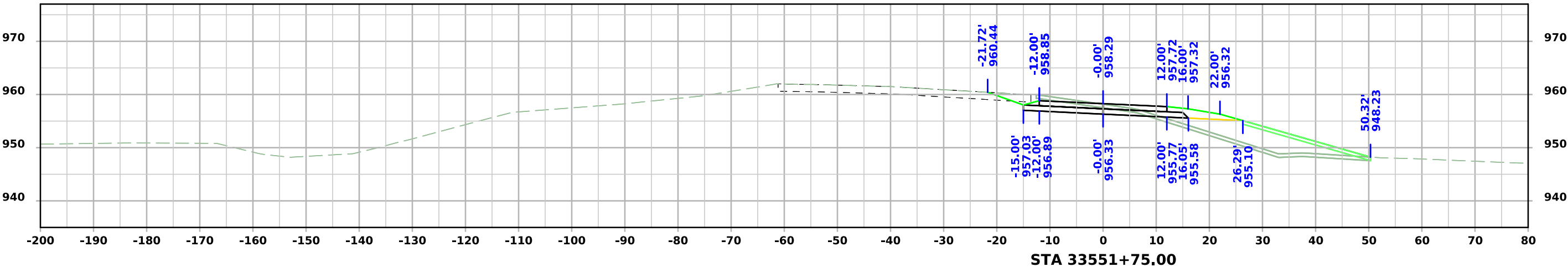
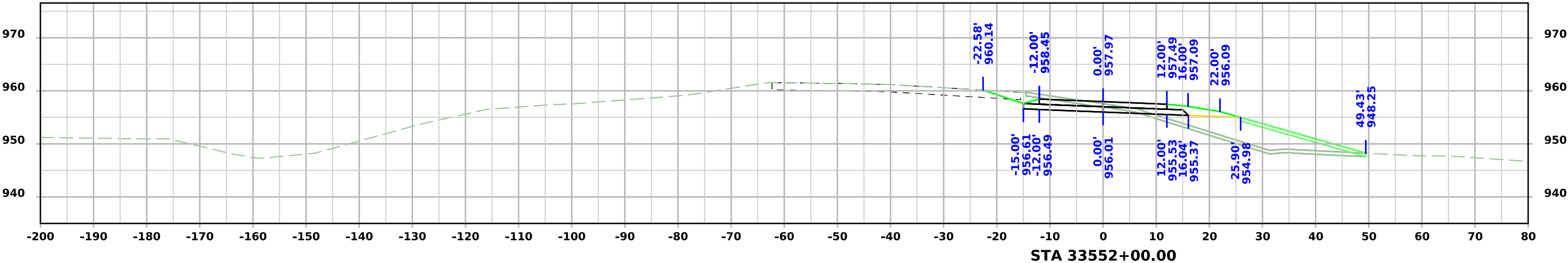
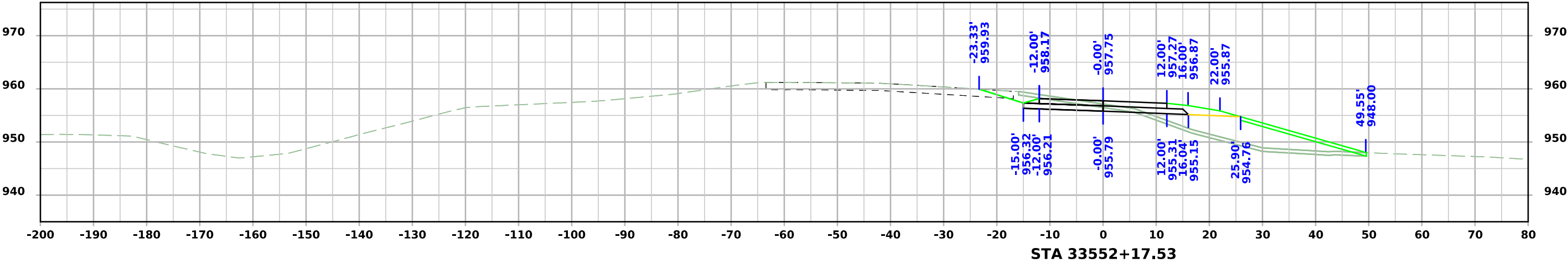
RAMPD_ULT Stage 2



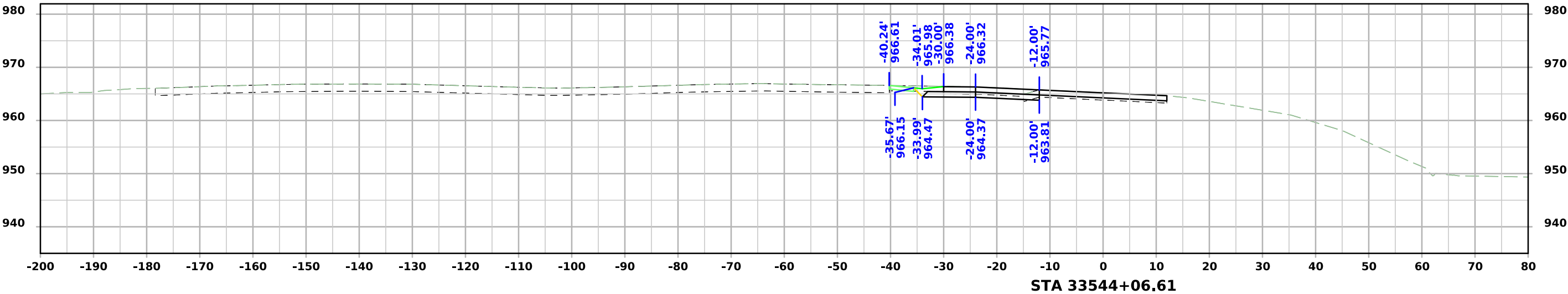
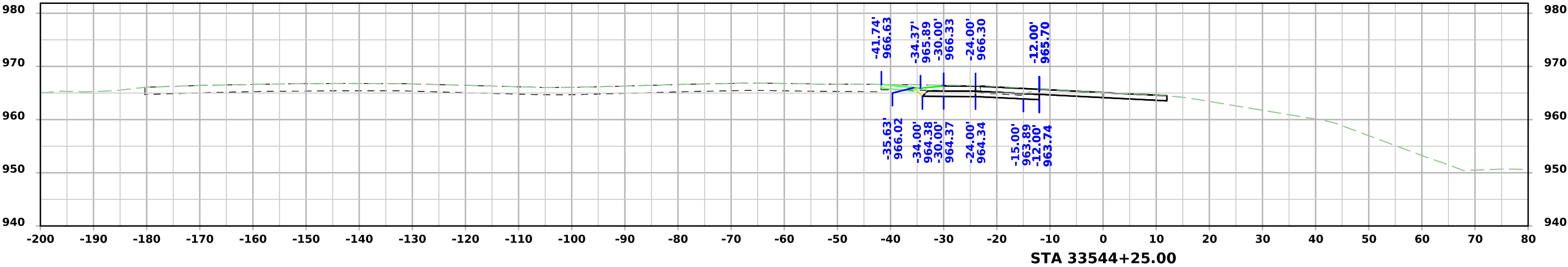
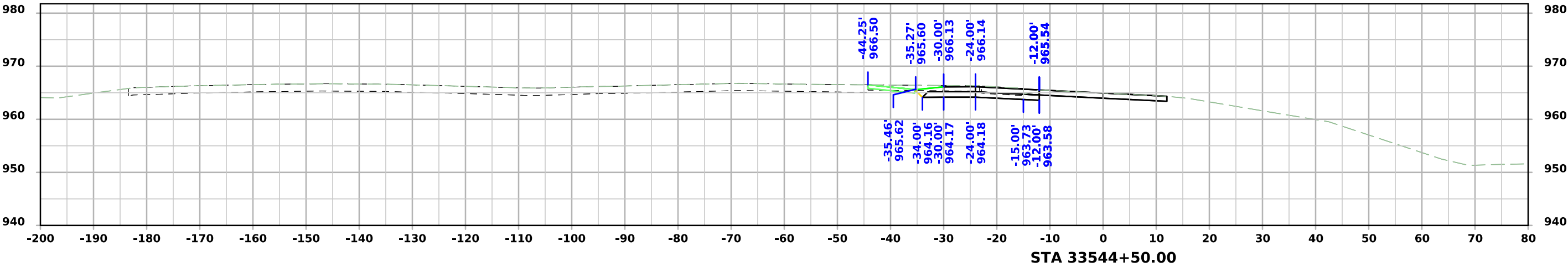
RAMPD_ULT Stage 2



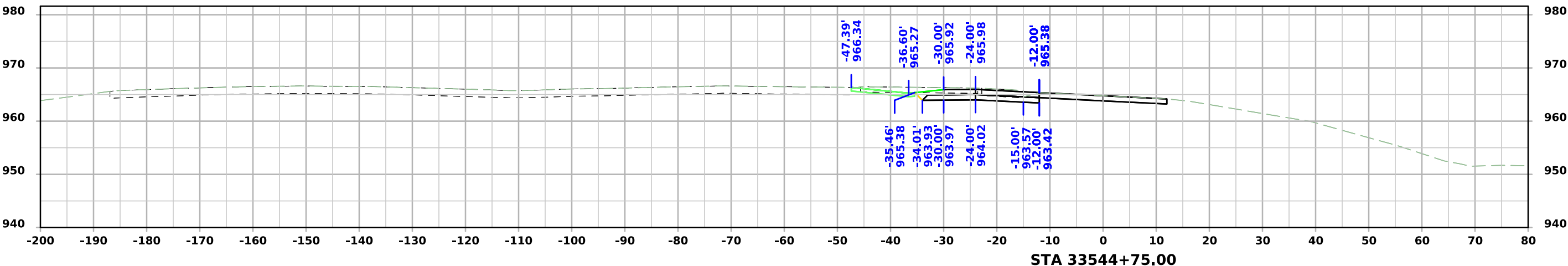
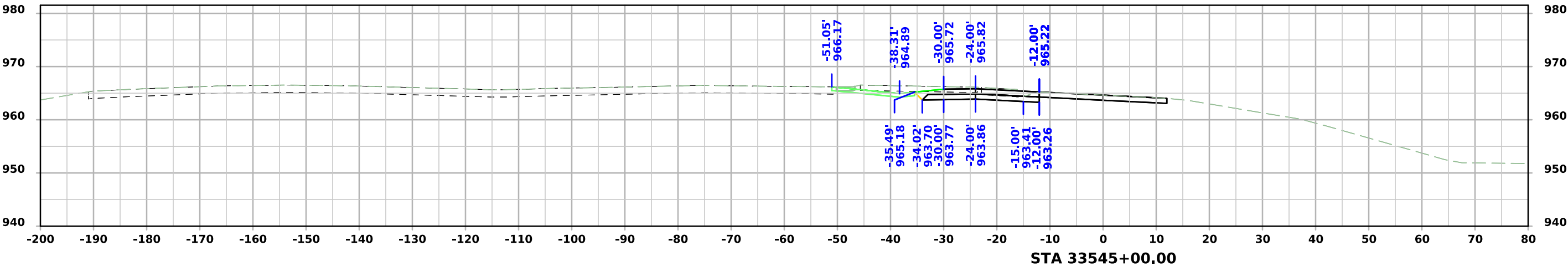
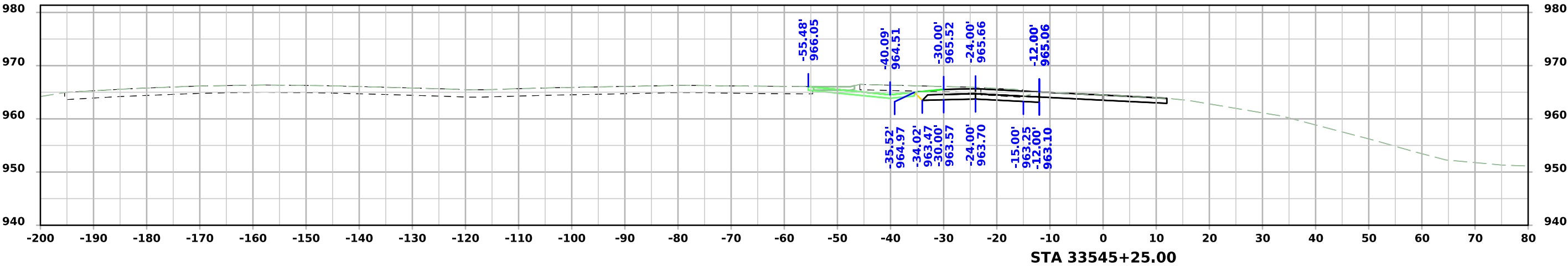
RAMPD_ULT Stage 2



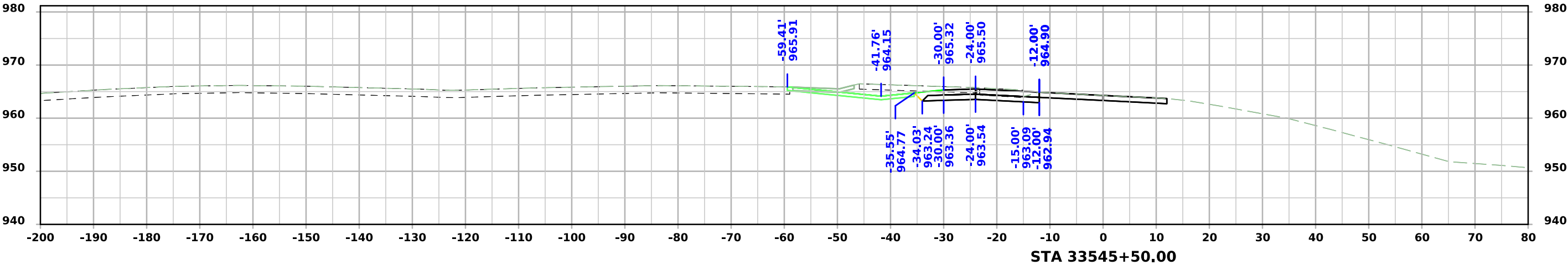
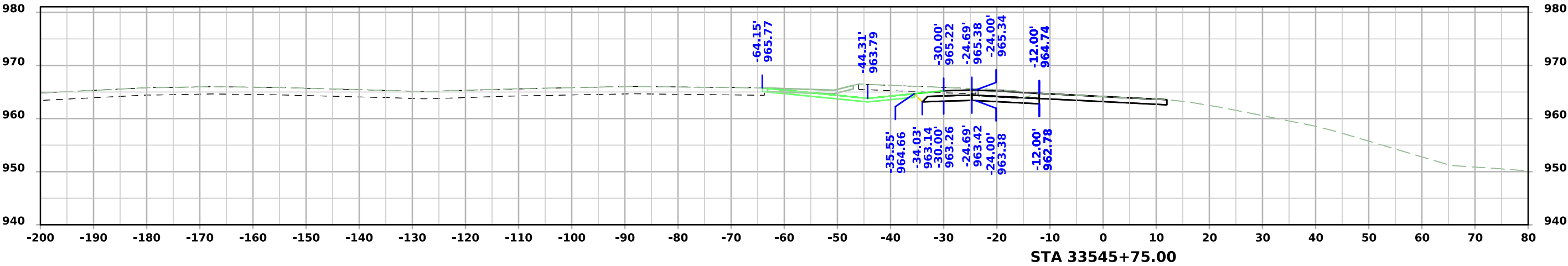
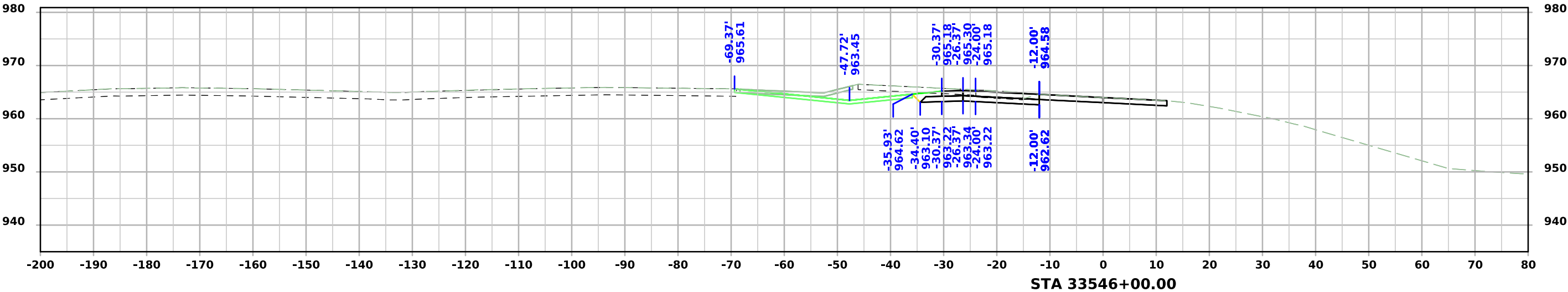
Ramp D ULT Stage 3



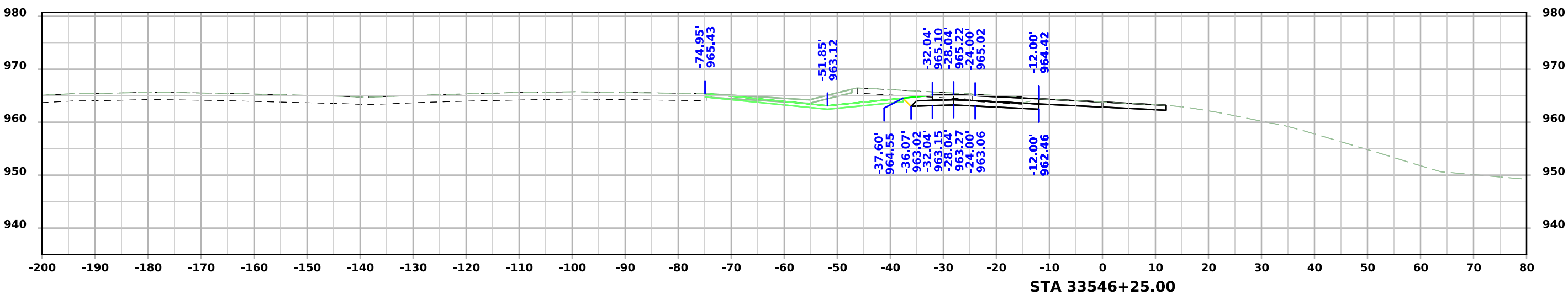
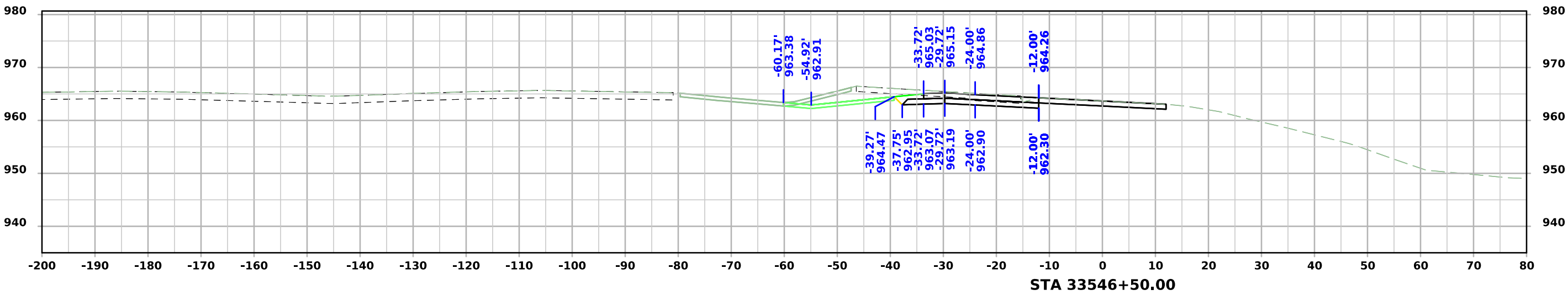
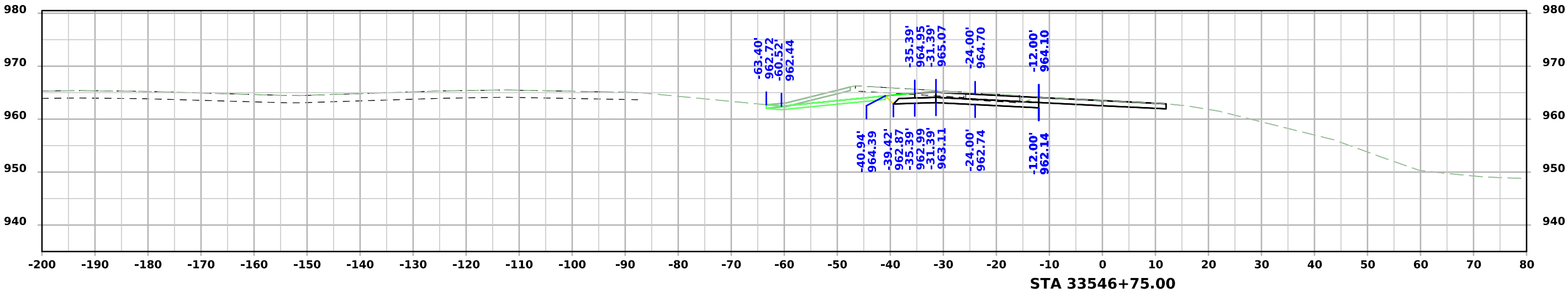
Ramp D ULT Stage 3



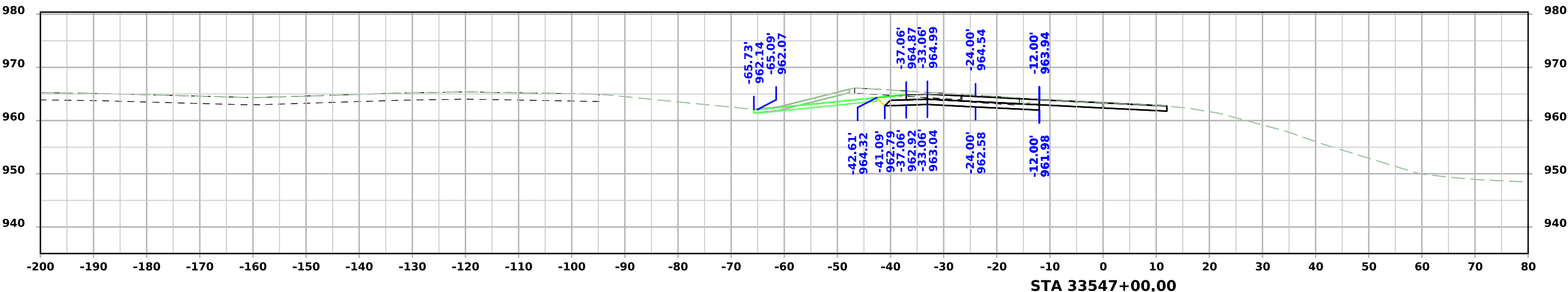
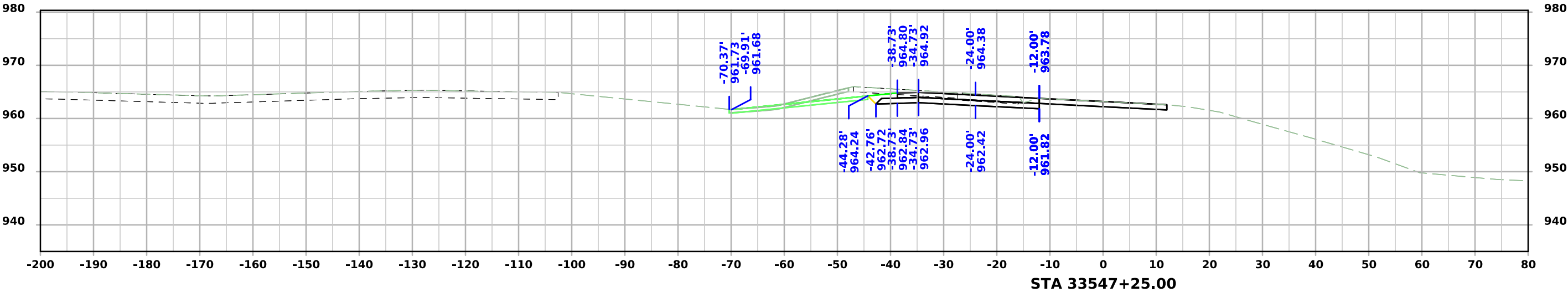
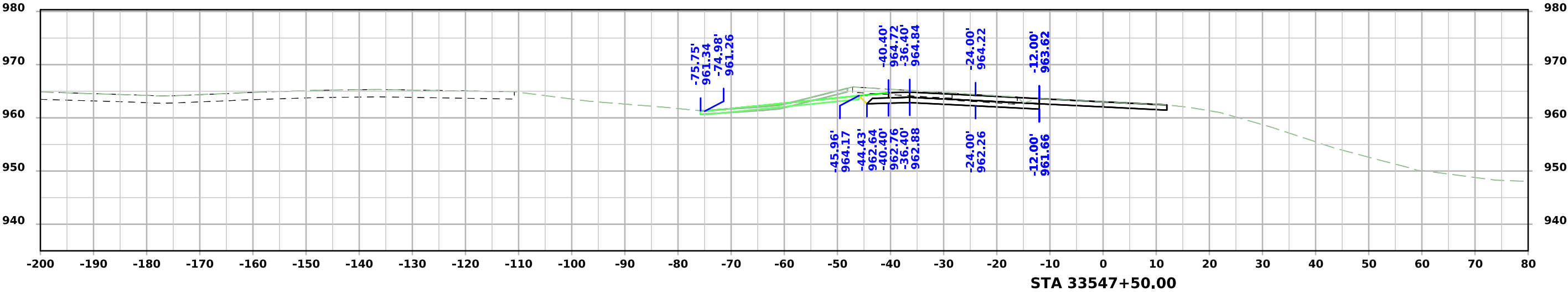
Ramp D ULT Stage 3



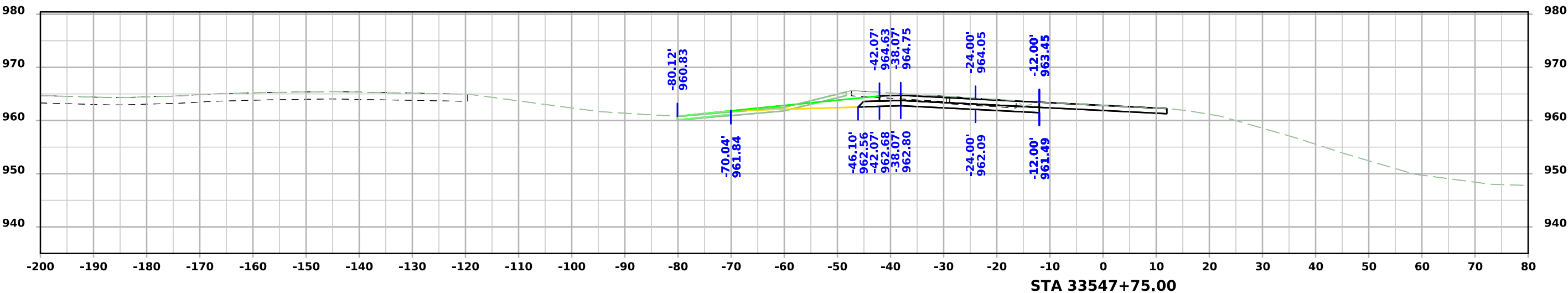
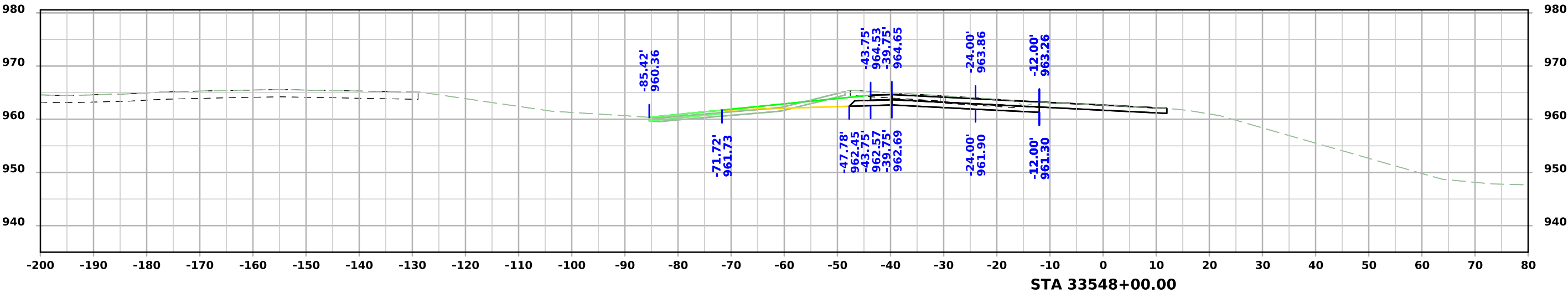
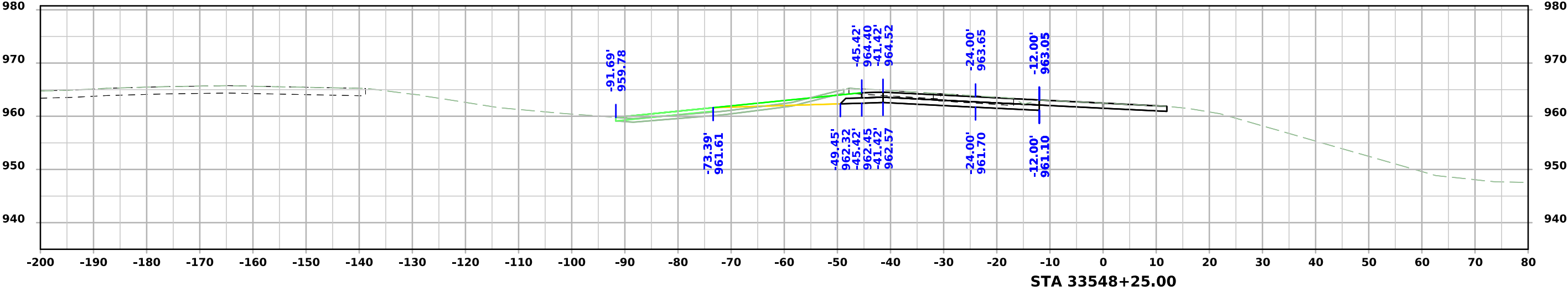
Ramp D ULT Stage 3



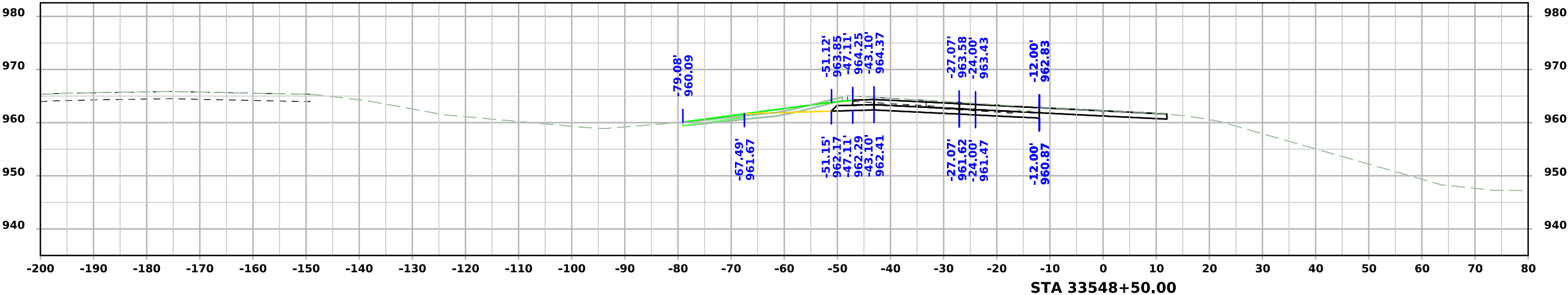
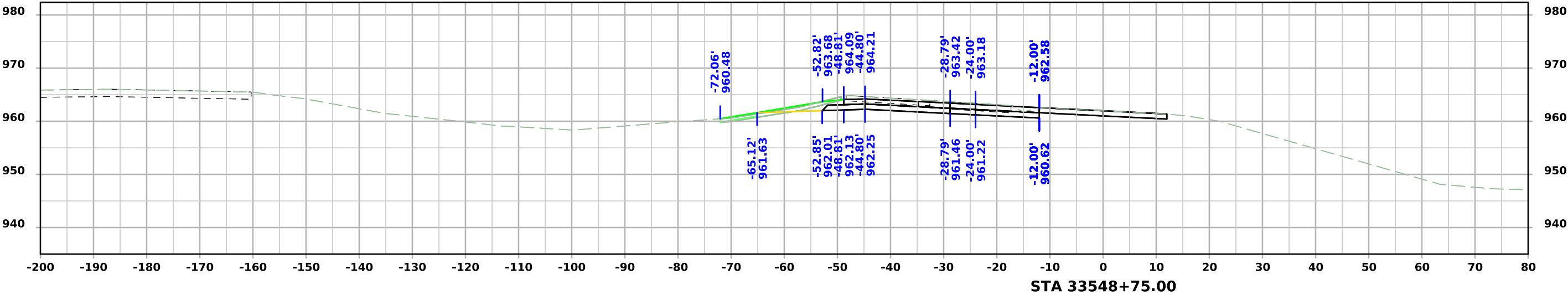
Ramp D ULT Stage 3



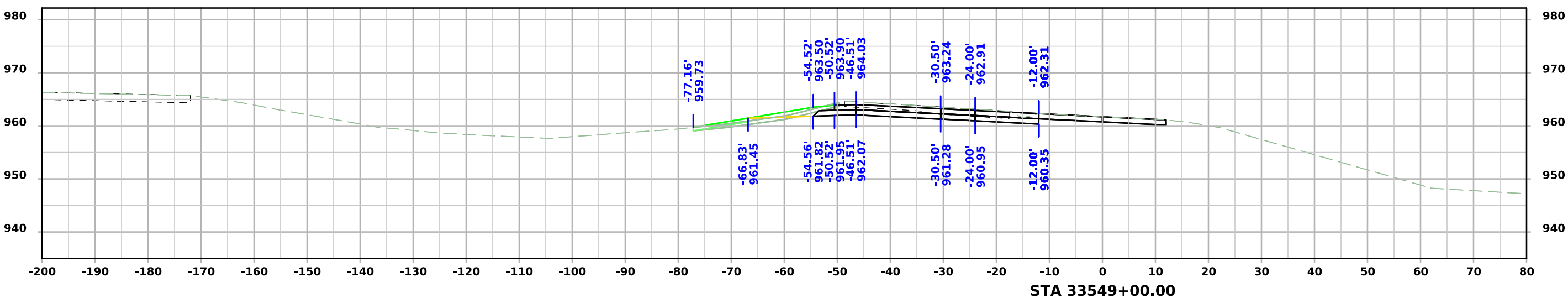
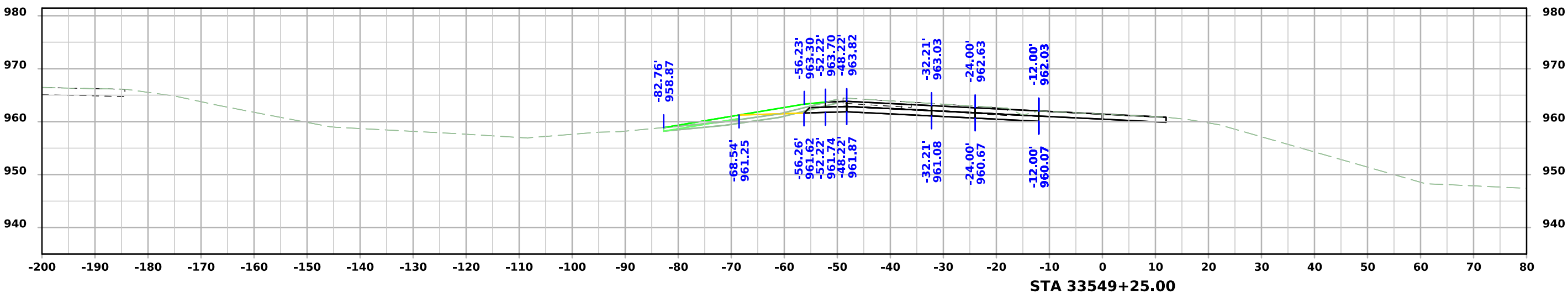
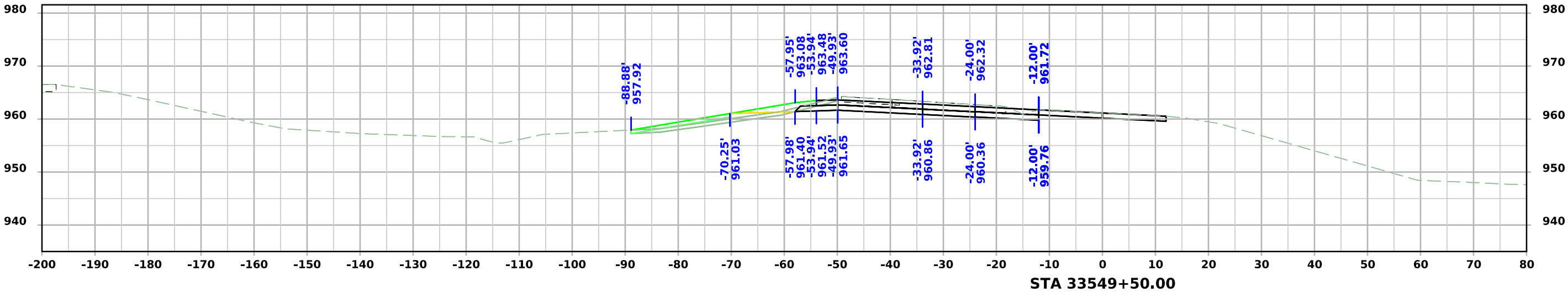
Ramp D ULT Stage 3



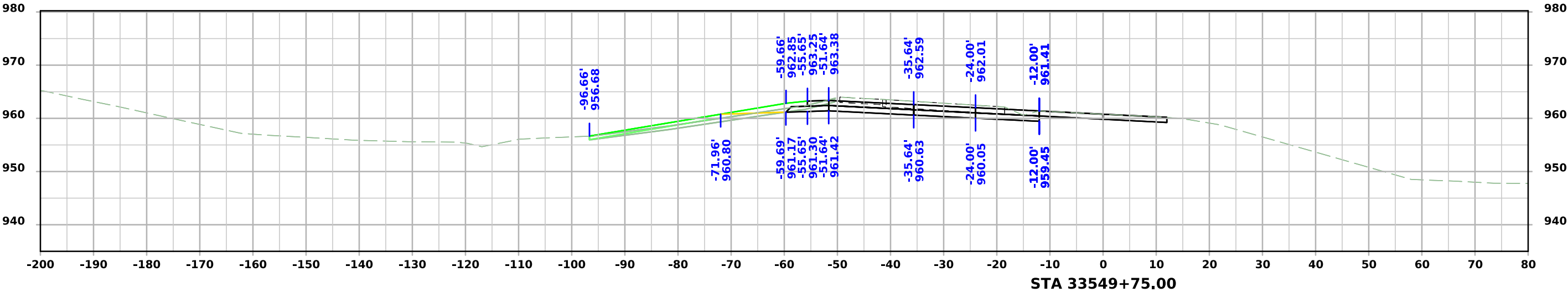
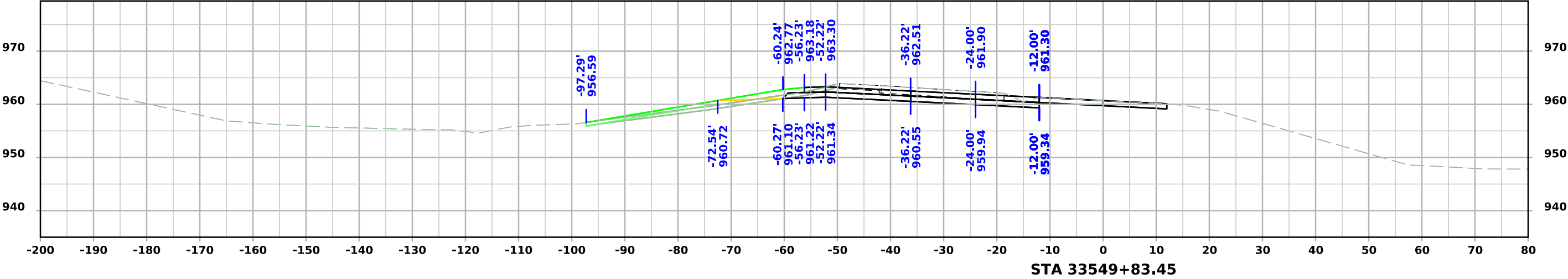
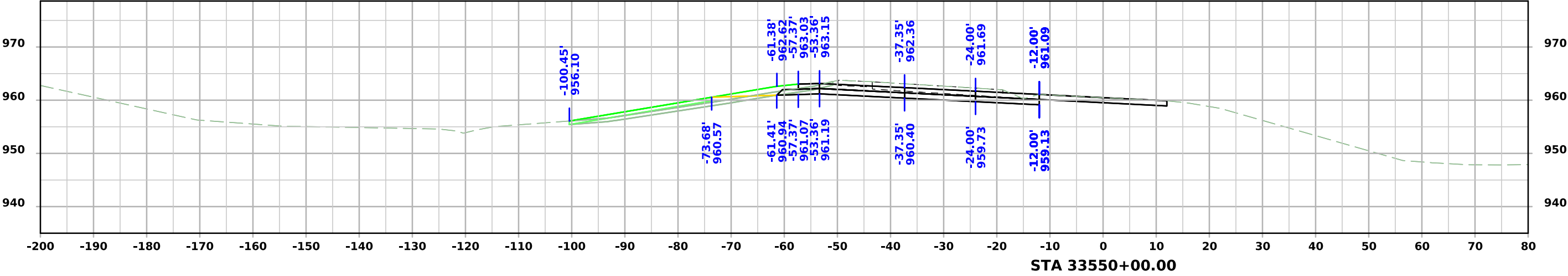
Ramp D ULT Stage 3



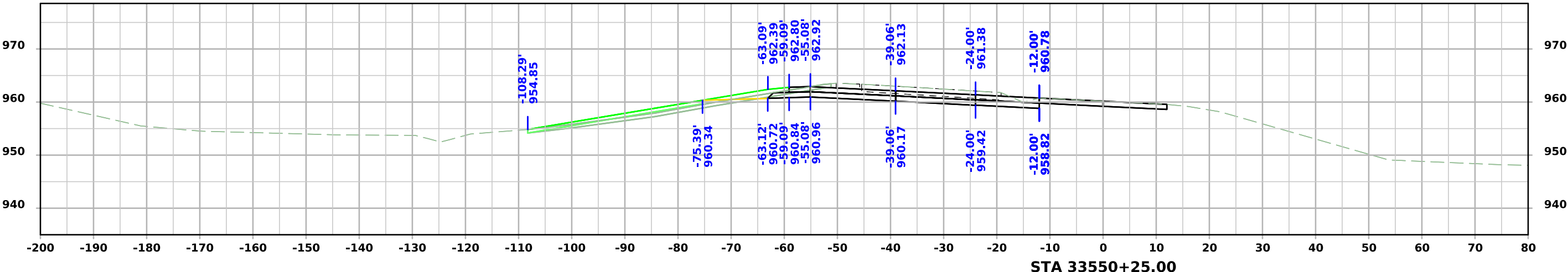
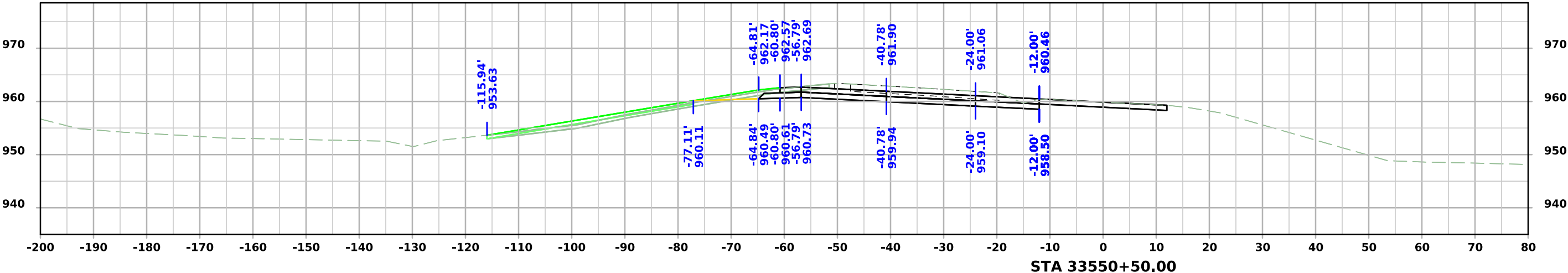
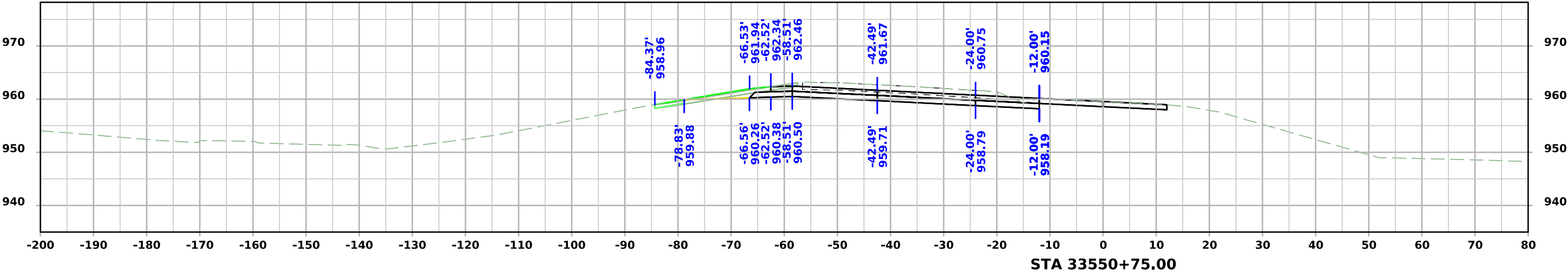
Ramp D ULT Stage 3



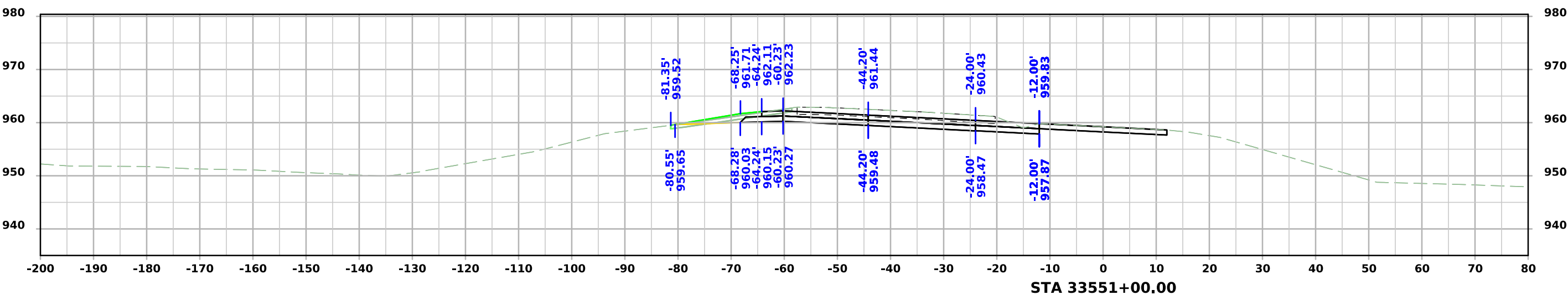
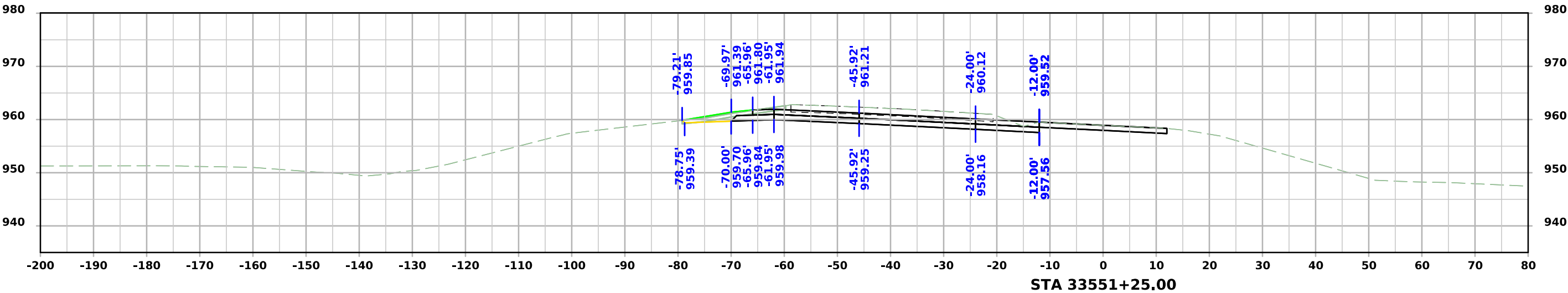
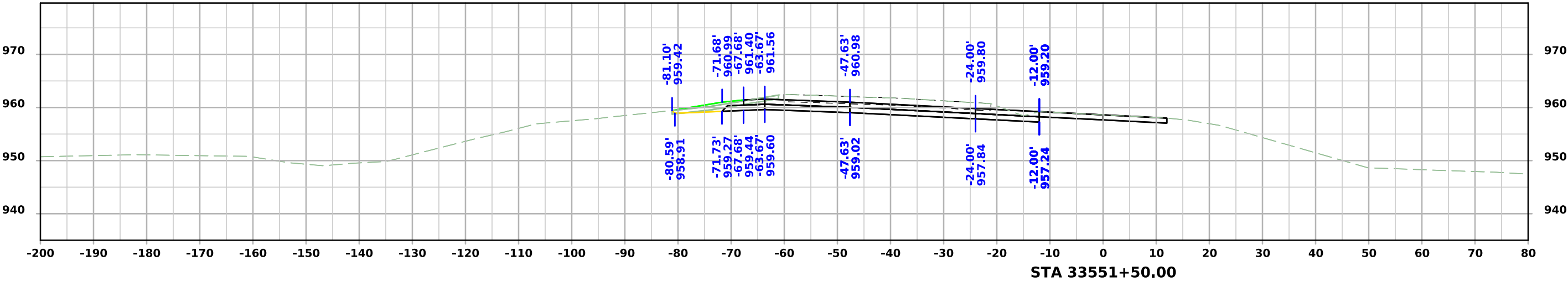
Ramp D ULT Stage 3



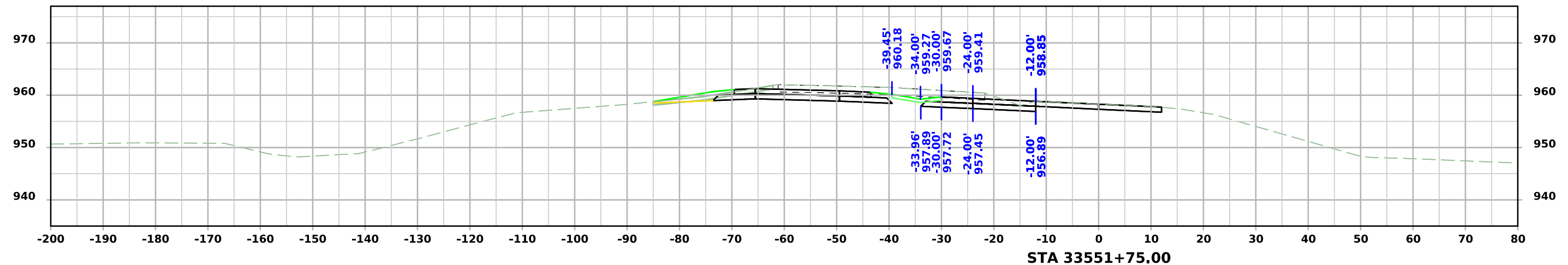
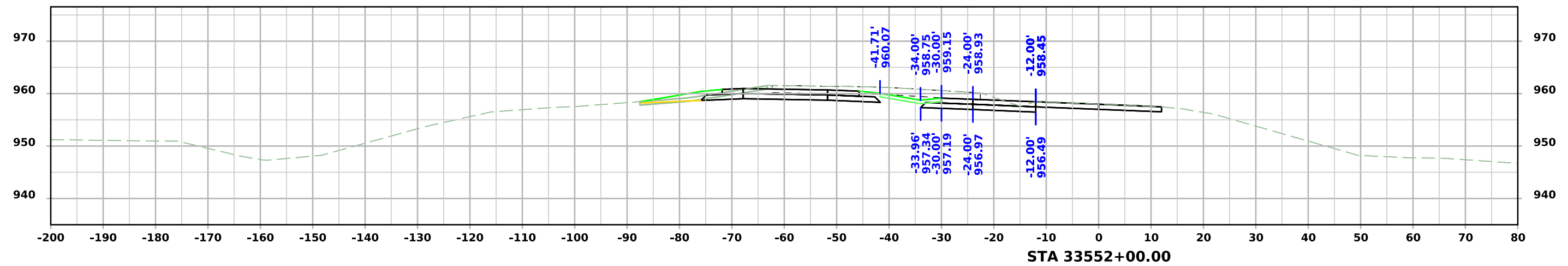
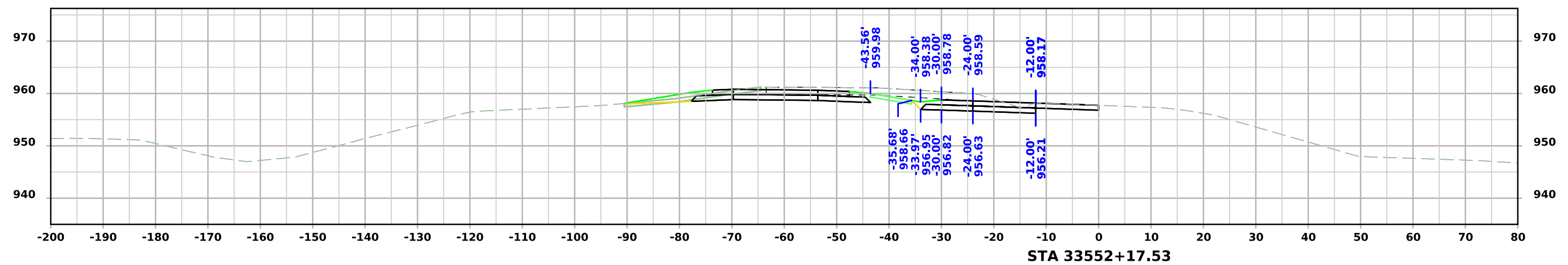
Ramp D ULT Stage 3



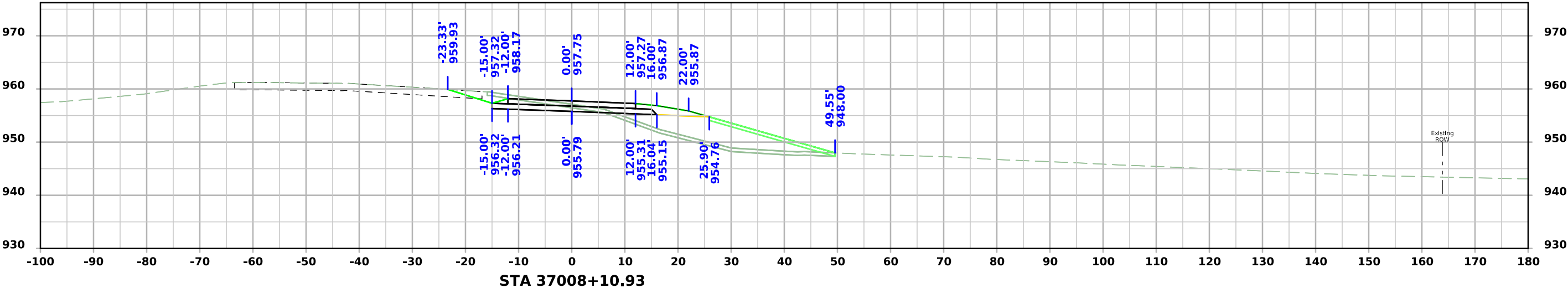
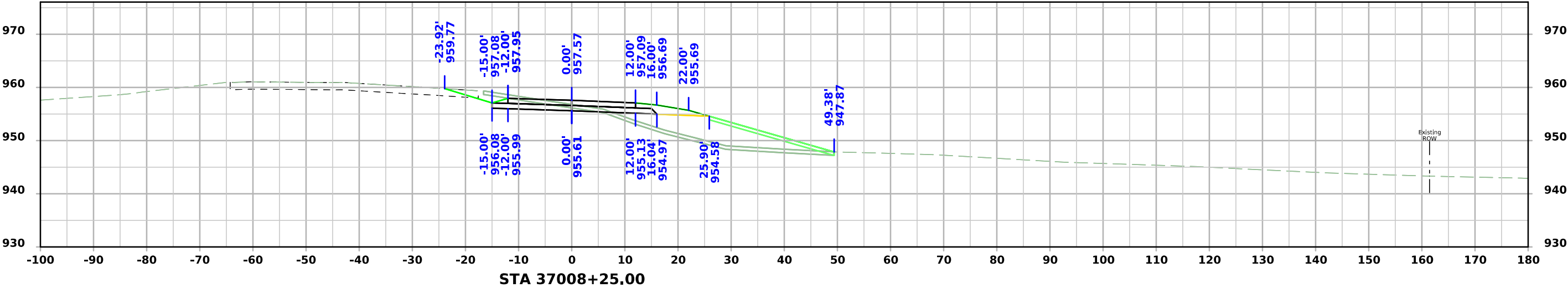
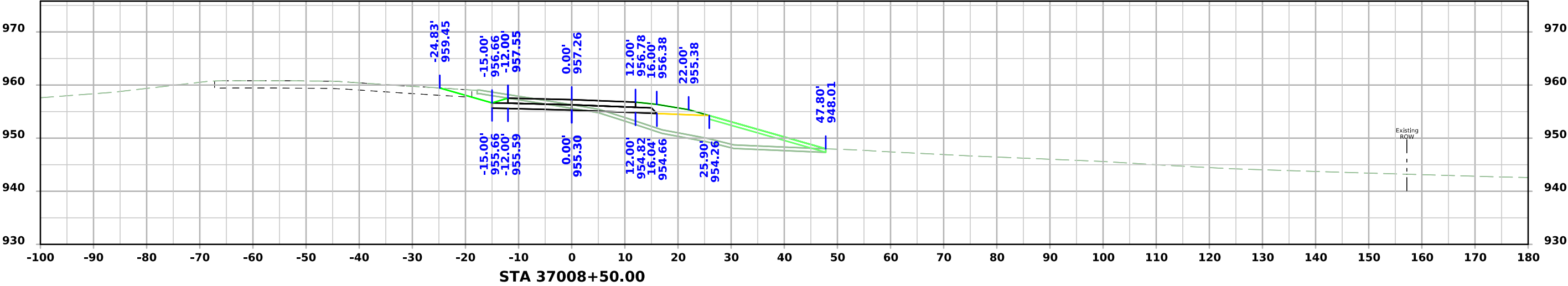
Ramp D ULT Stage 3



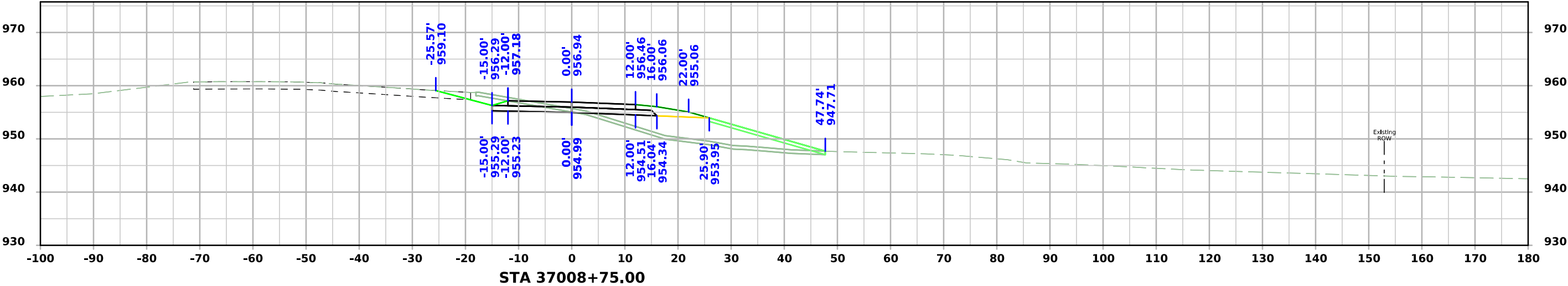
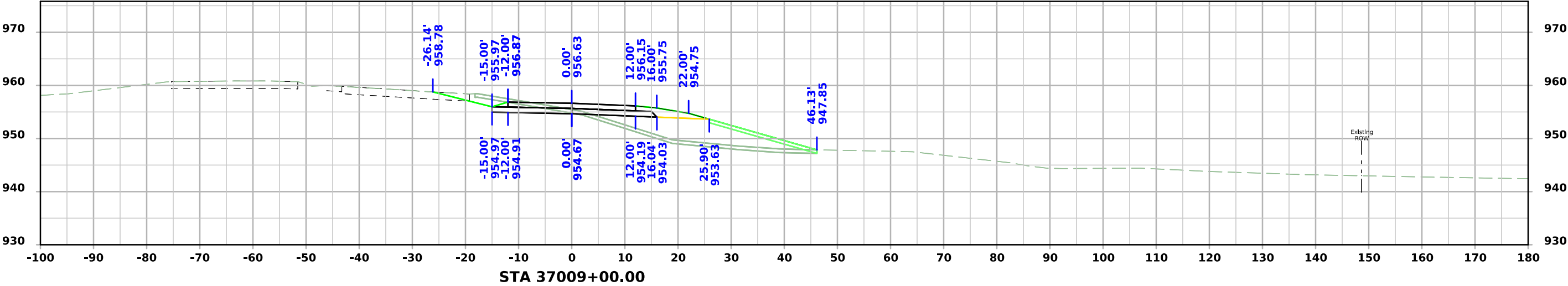
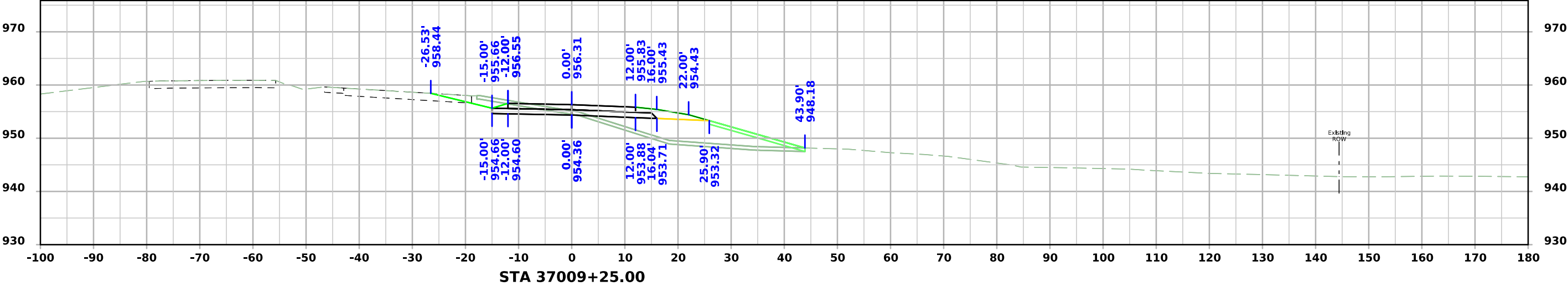
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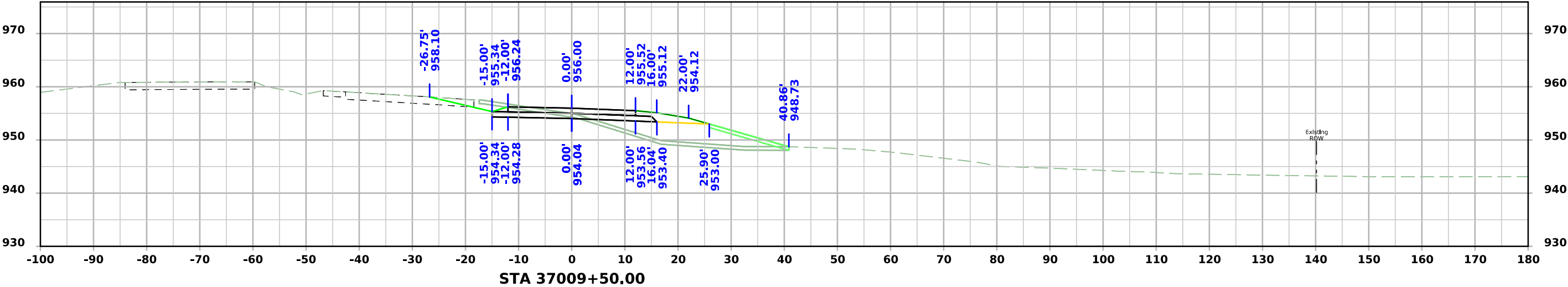
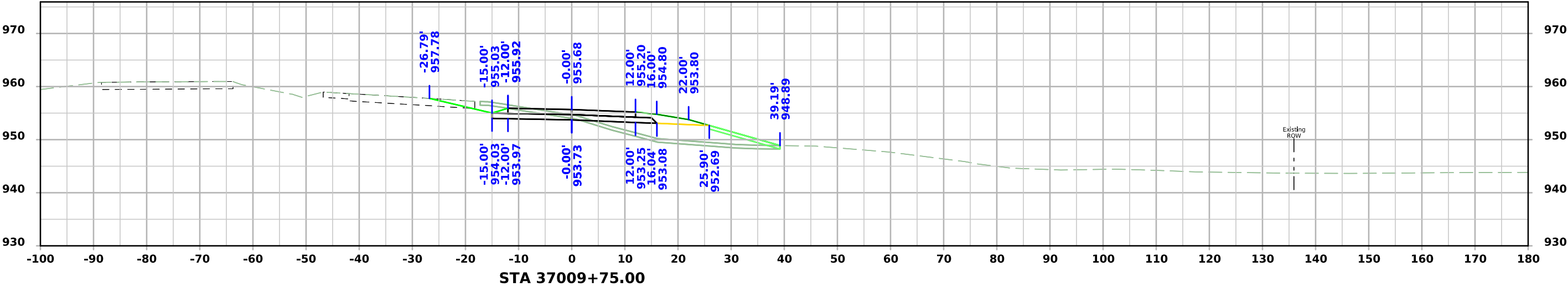
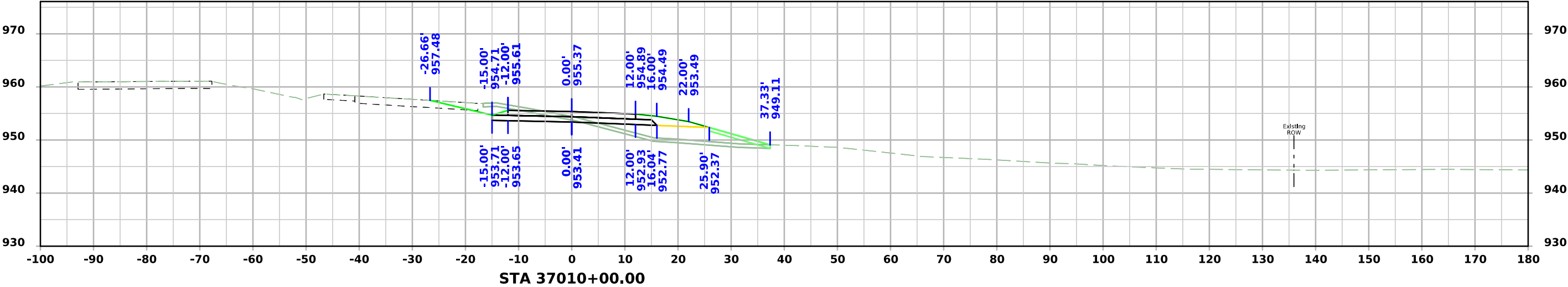
RAMPD_INT Stage 2



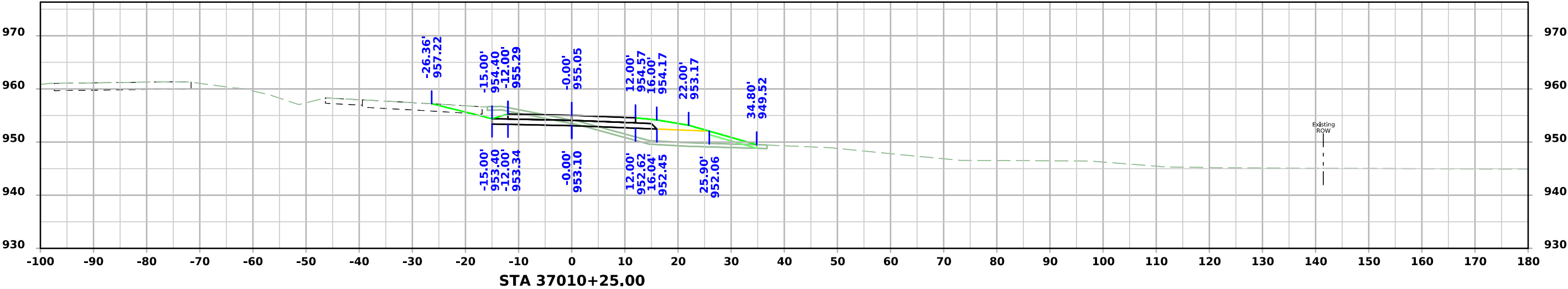
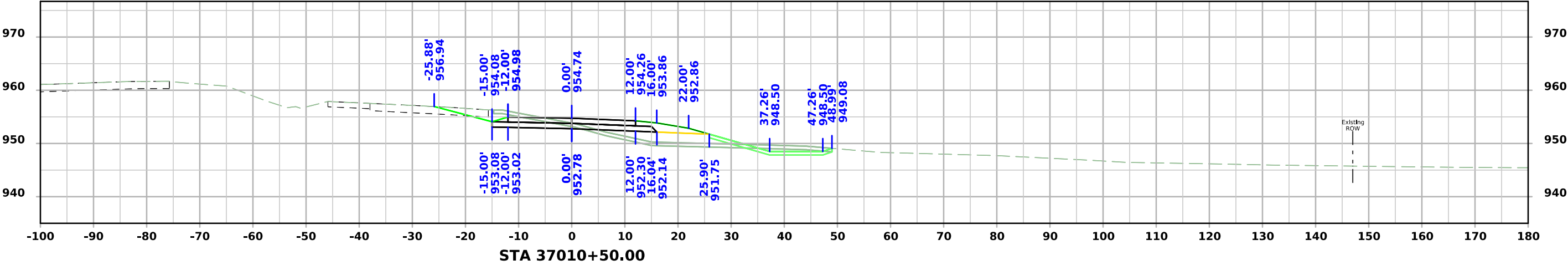
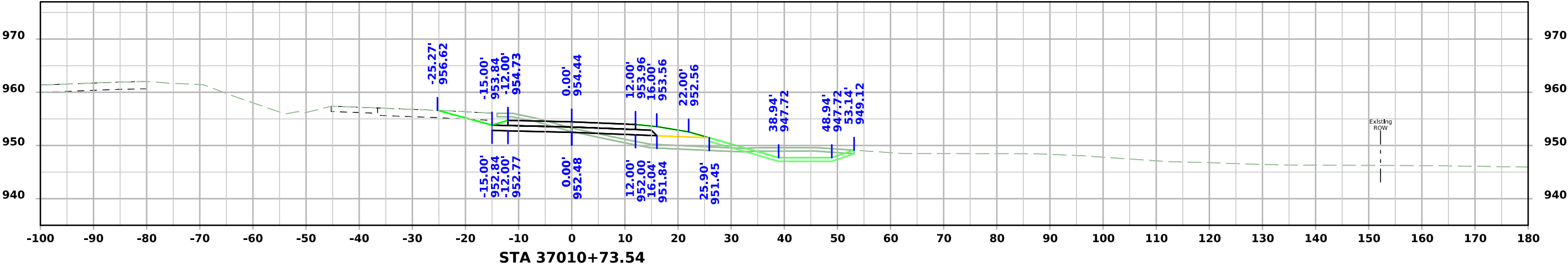
RAMPD_INT Stage 2



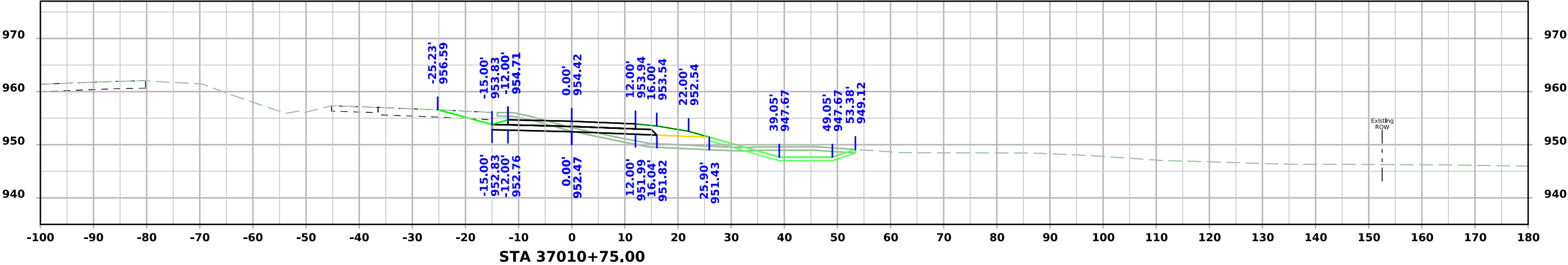
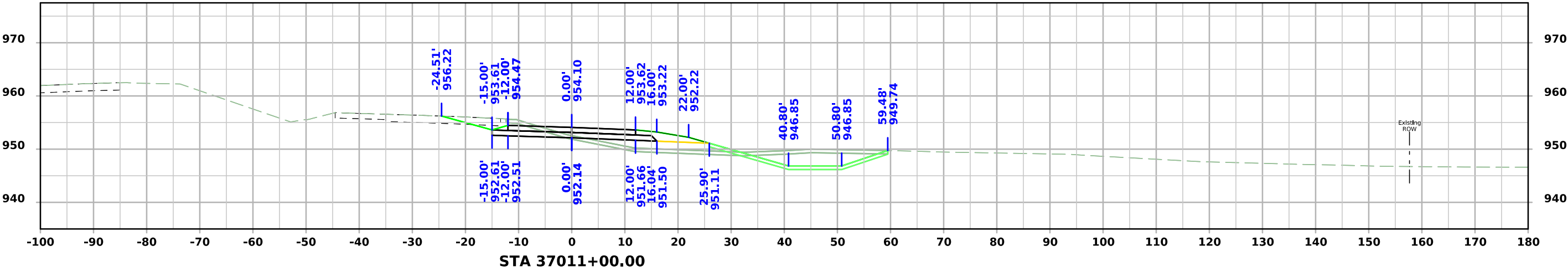
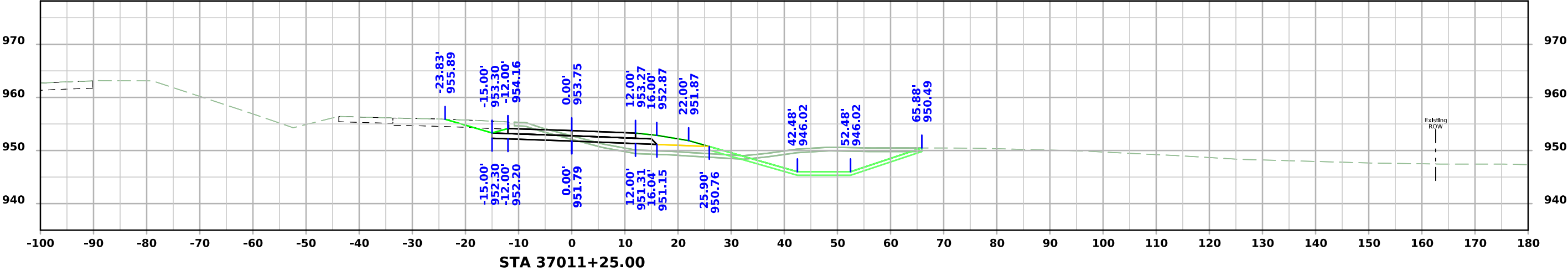
RAMPD_INT Stage 2



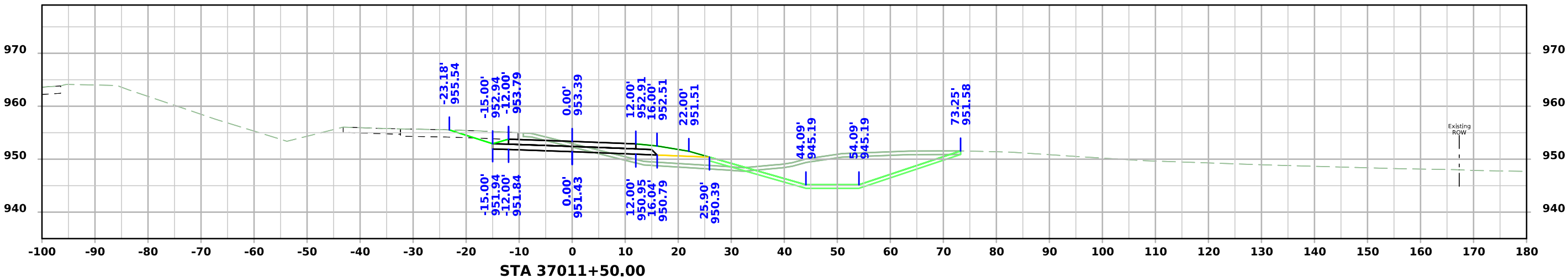
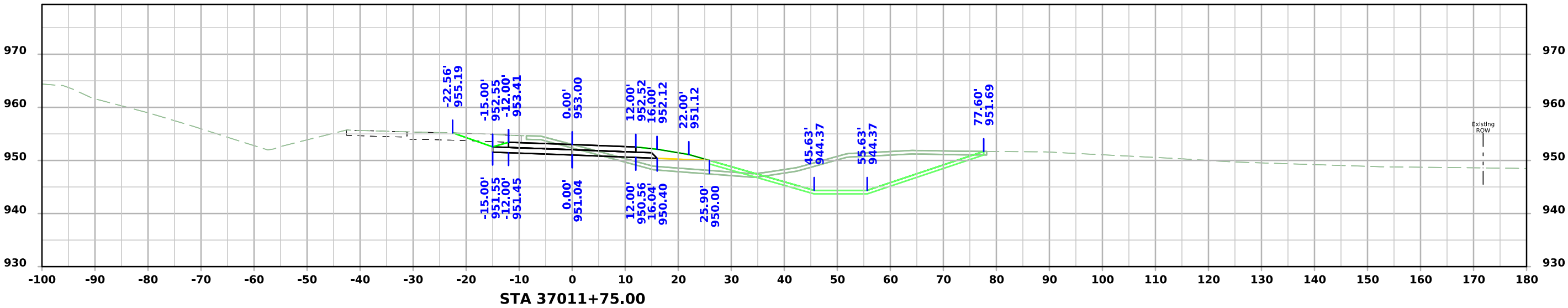
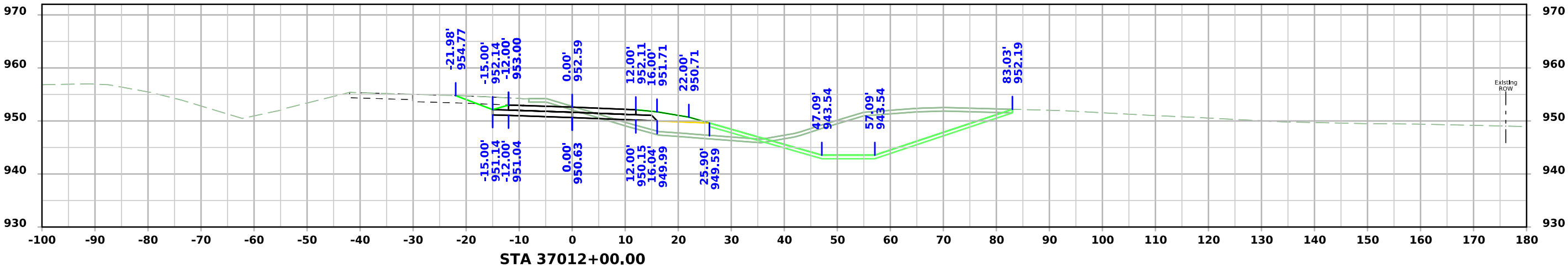
RAMPD_INT Stage 2



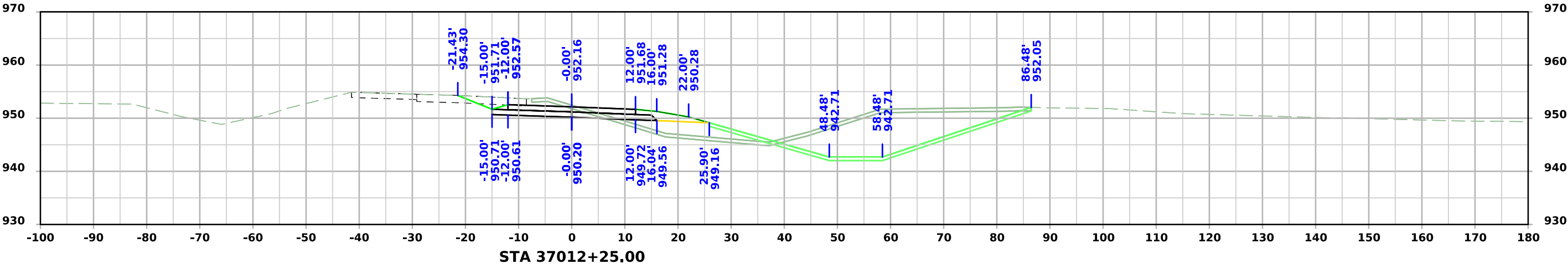
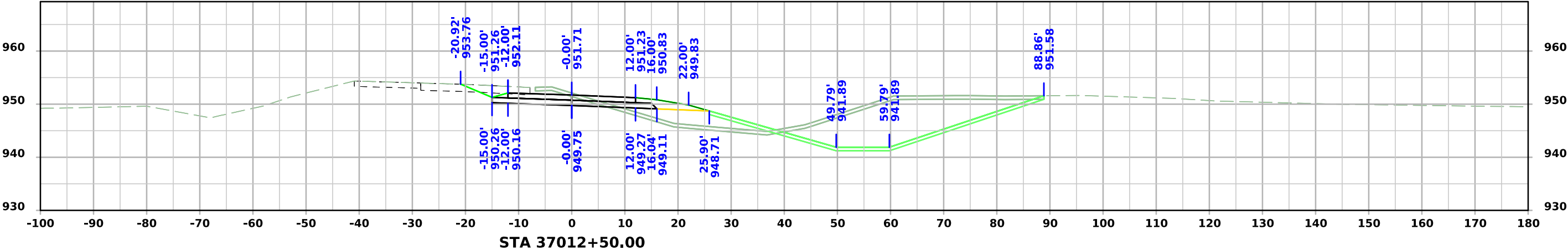
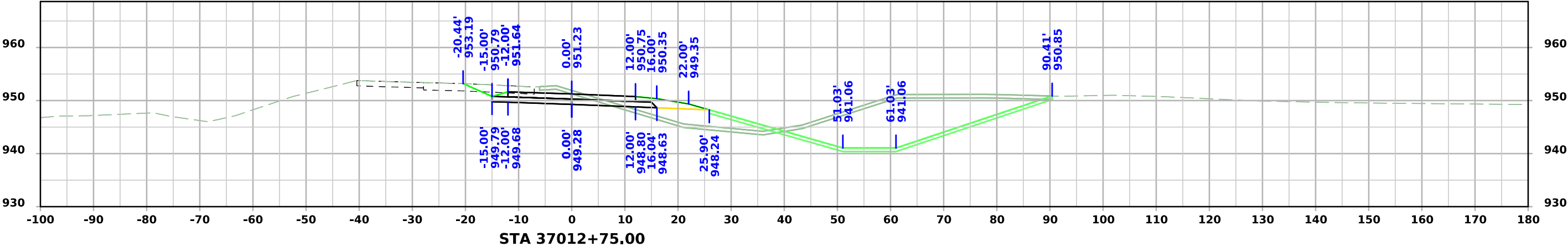
RAMPD_INT Stage 2



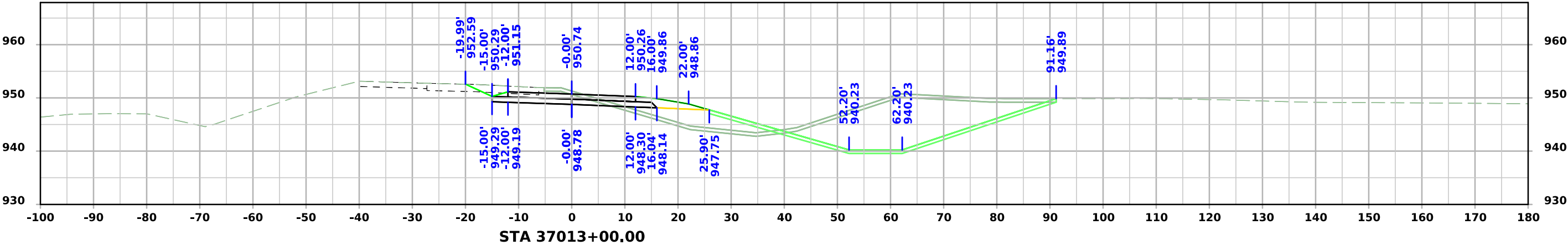
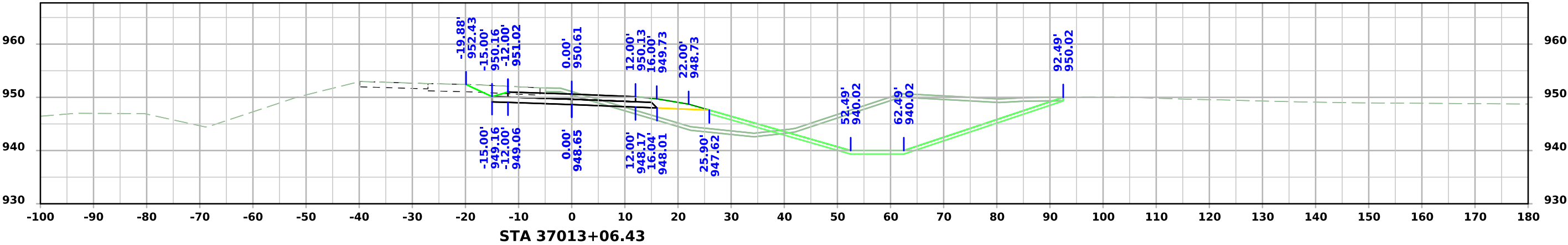
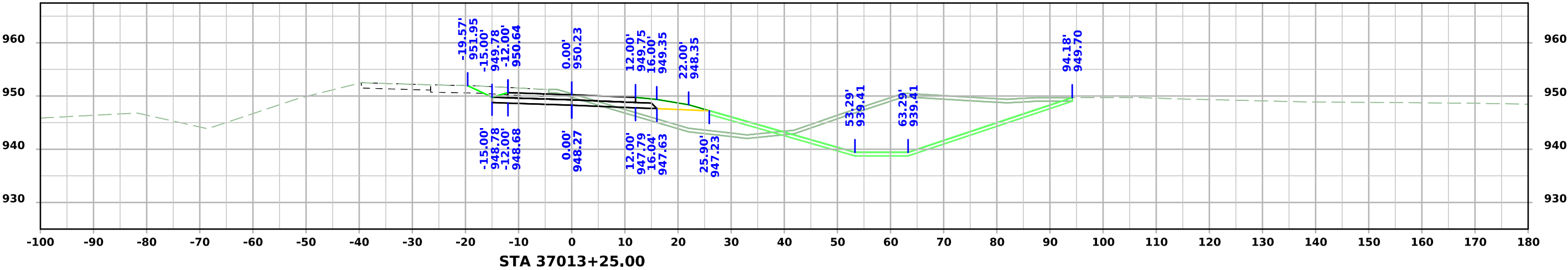
RAMPD_INT Stage 2



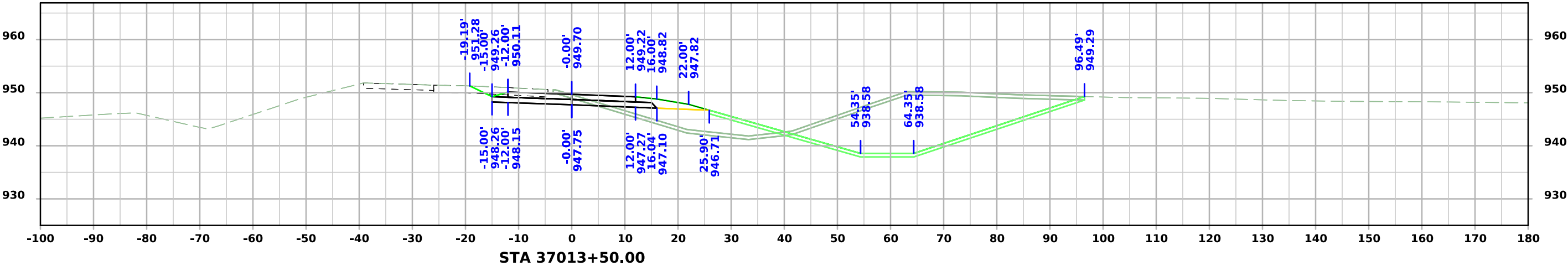
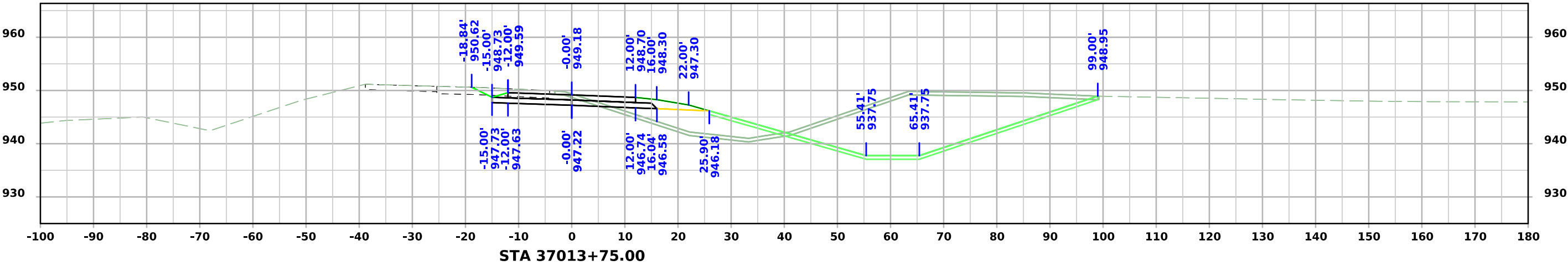
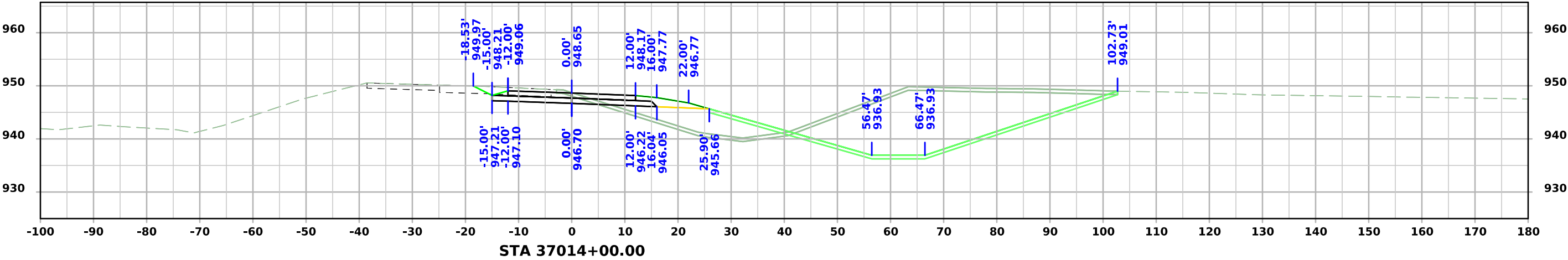
RAMPD_INT Stage 2



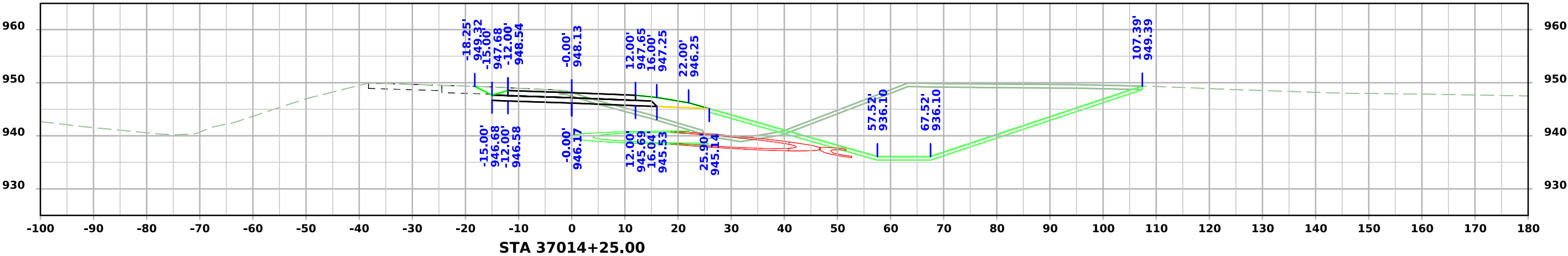
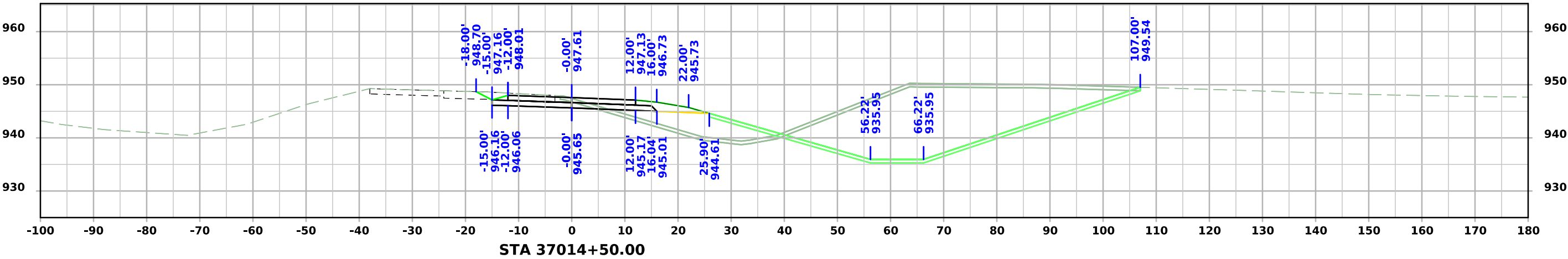
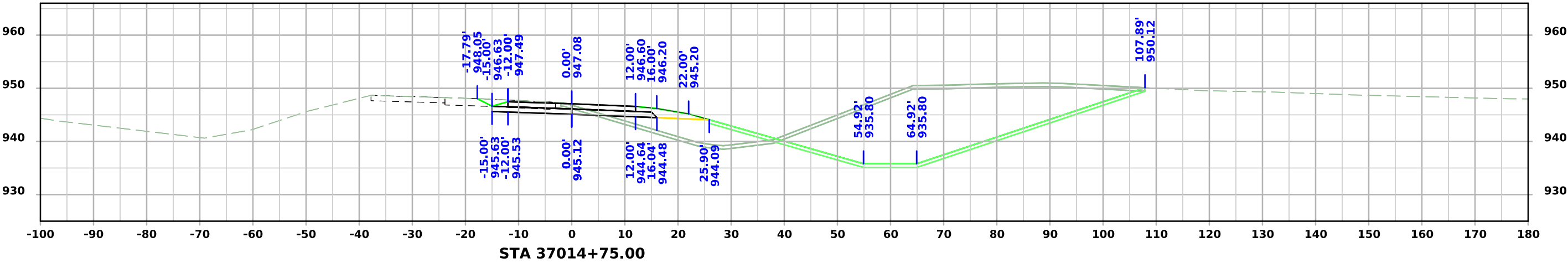
RAMPD_INT Stage 2



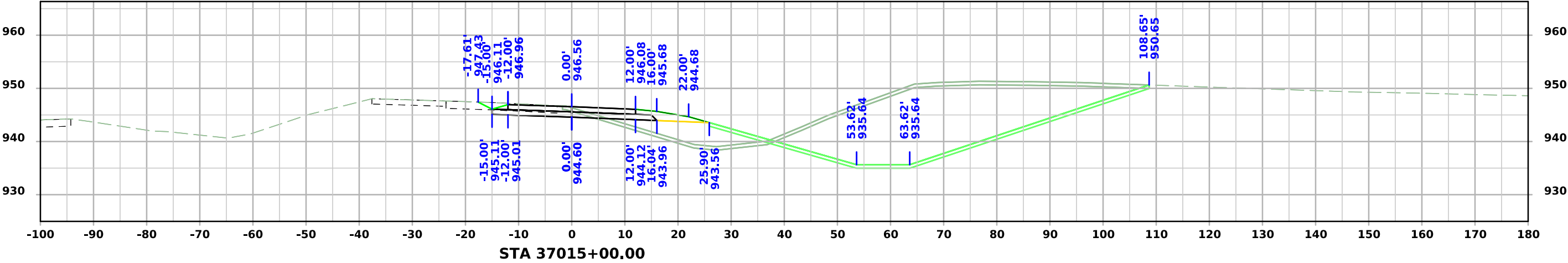
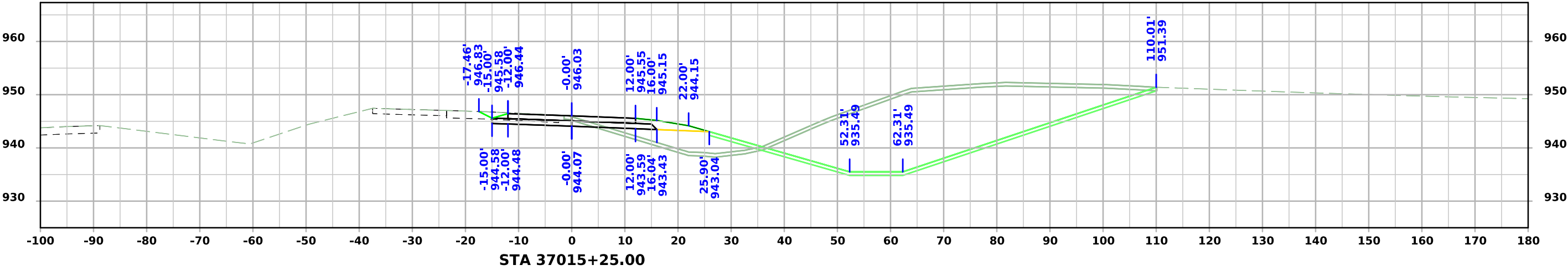
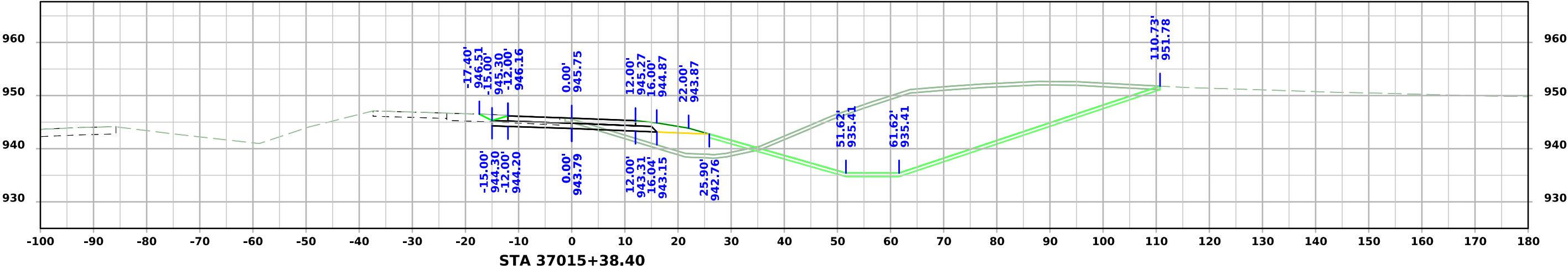
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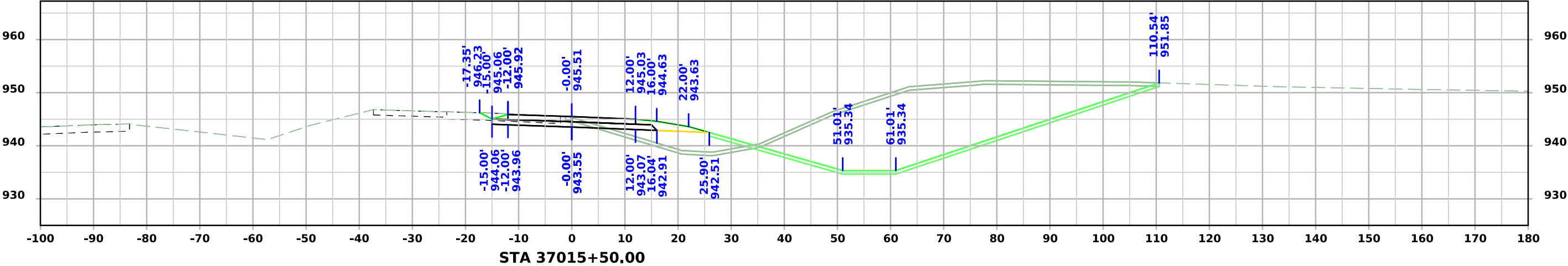
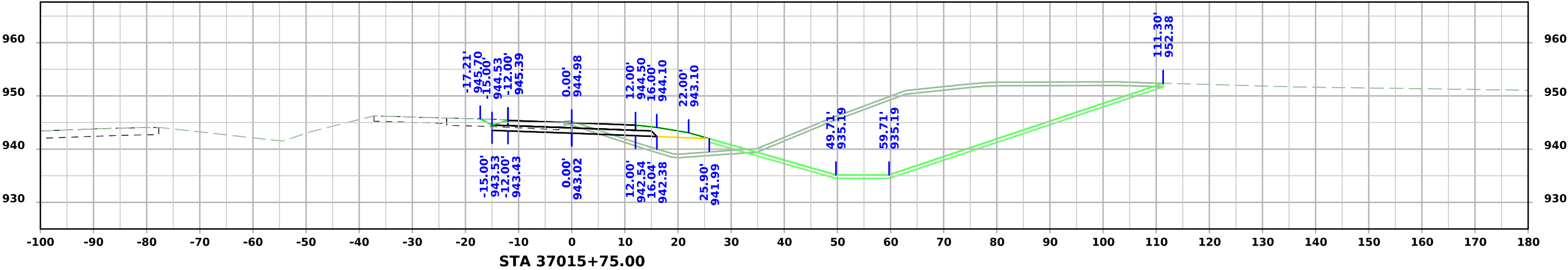
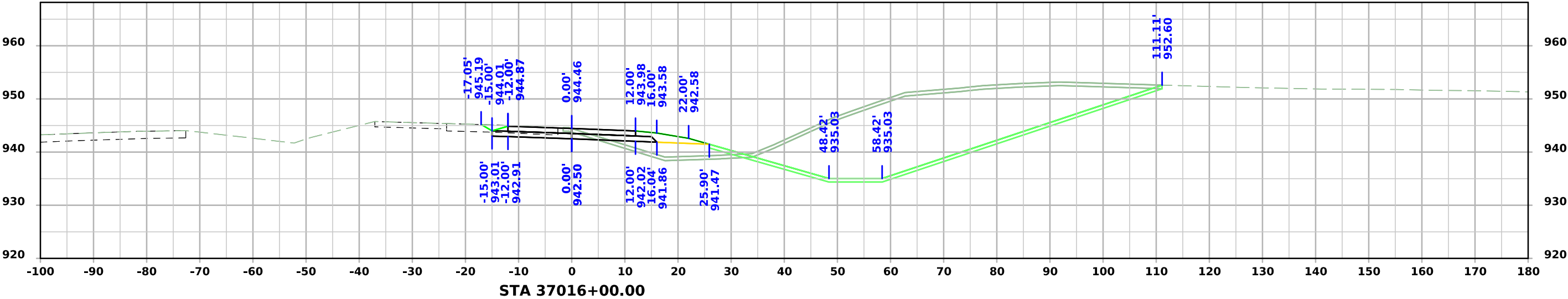
RAMPD_INT Stage 2



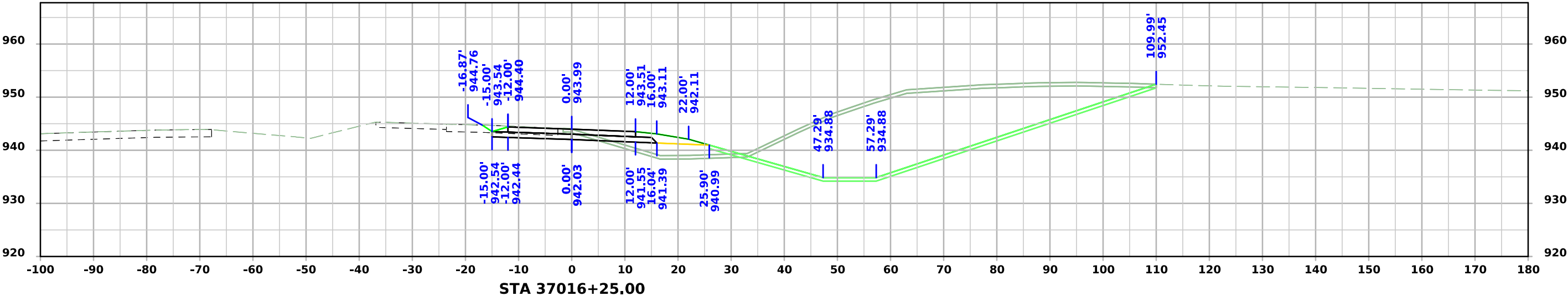
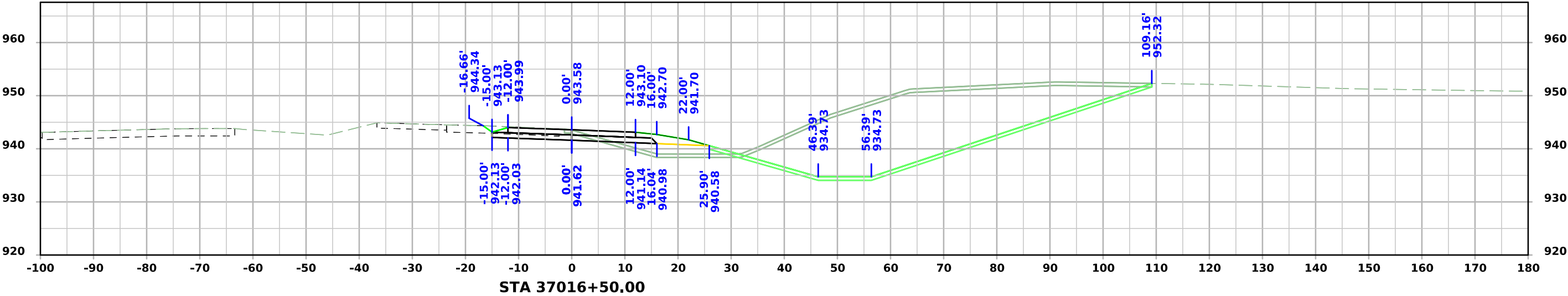
RAMPD_INT Stage 2



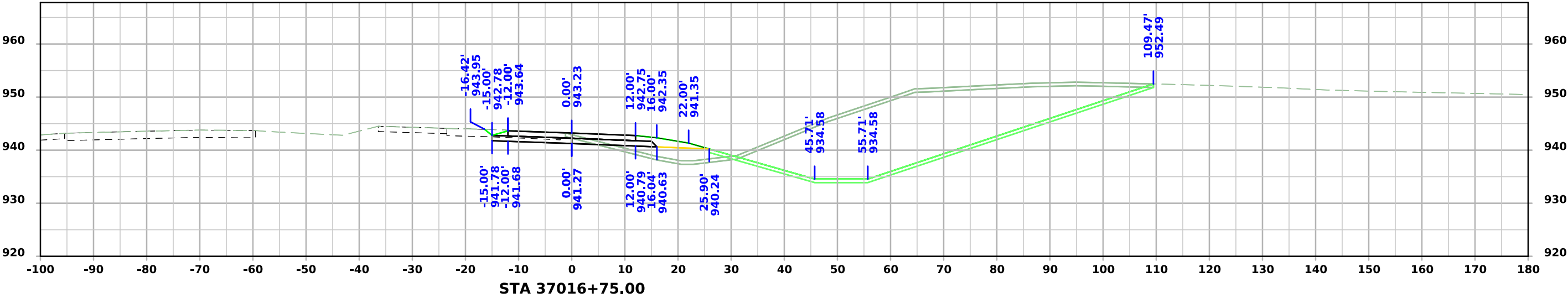
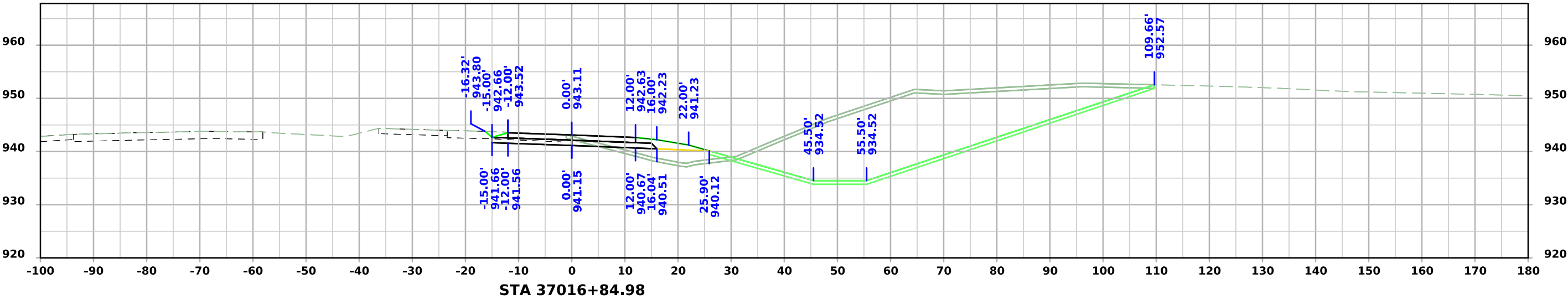
RAMPD_INT Stage 2



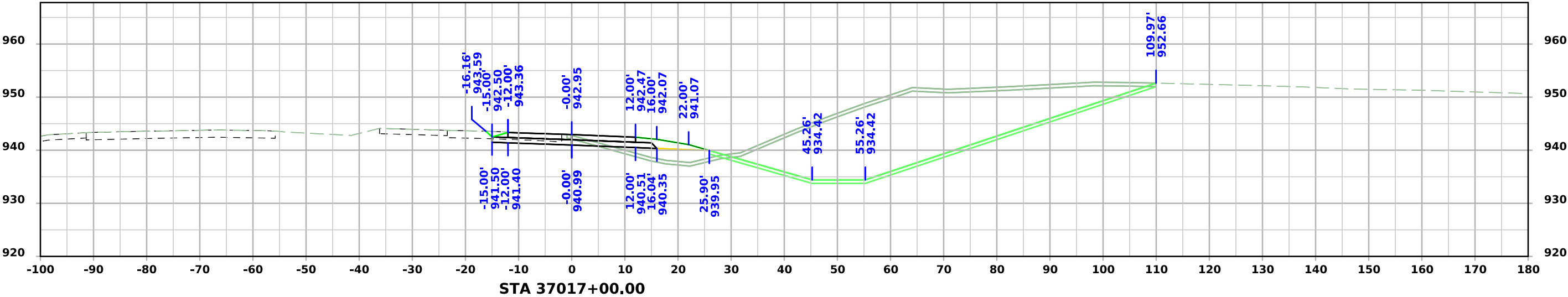
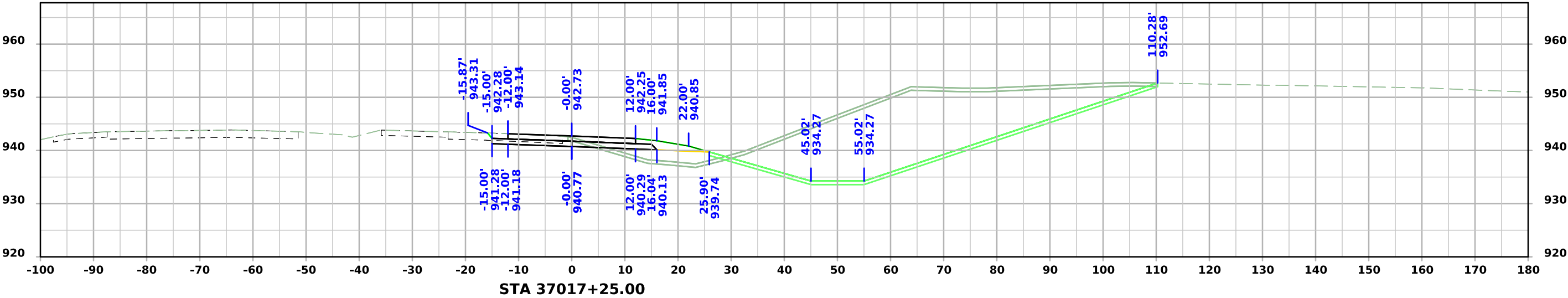
RAMPD_INT Stage 2



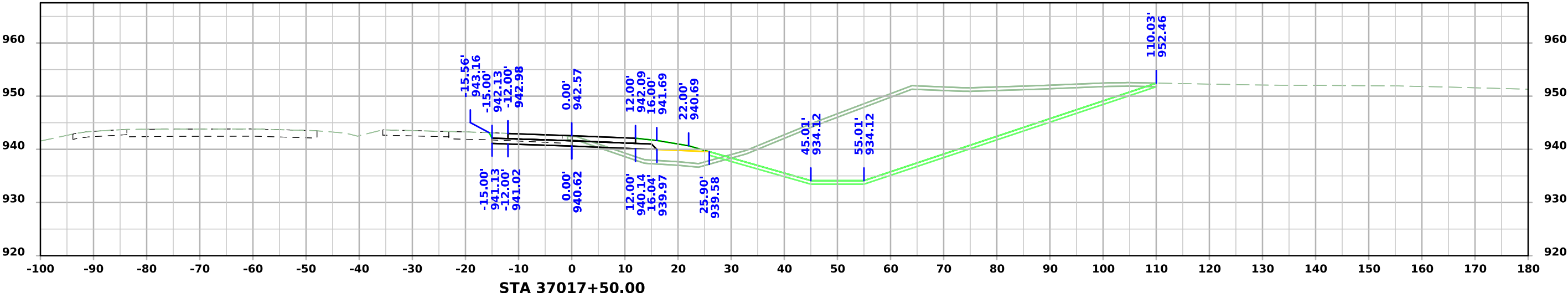
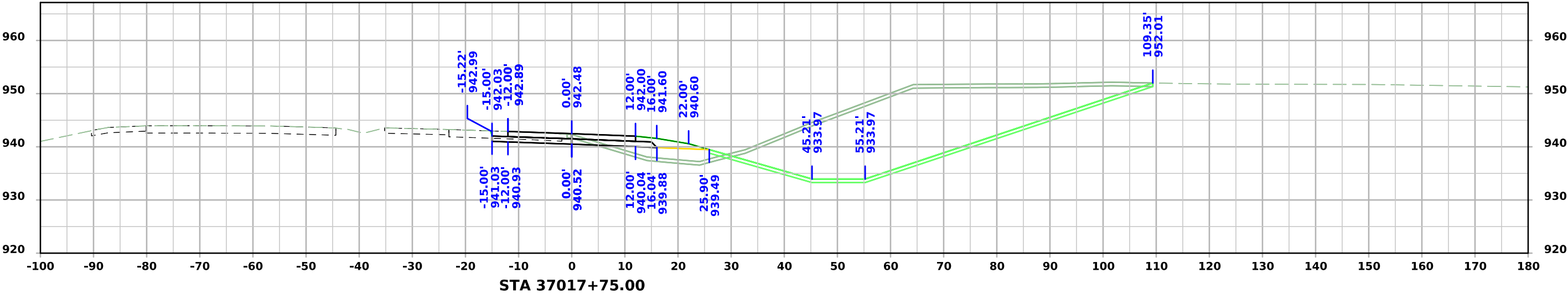
RAMPD_INT Stage 2



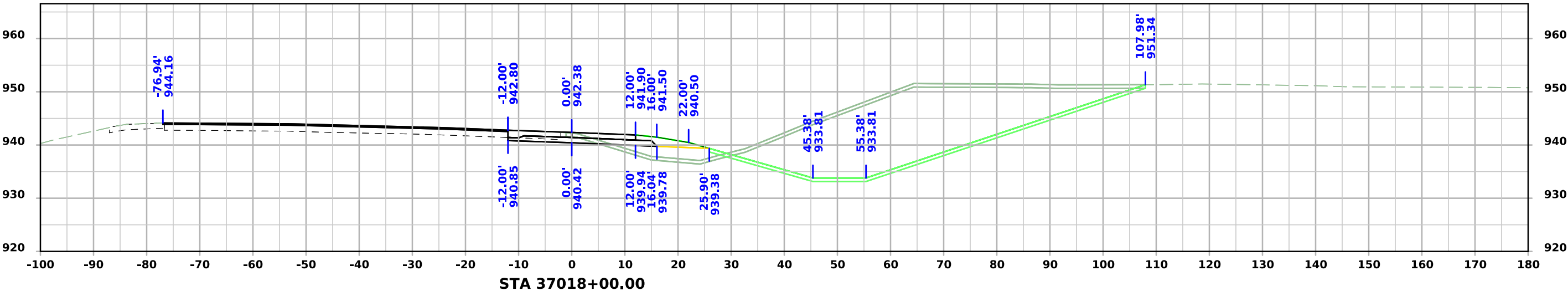
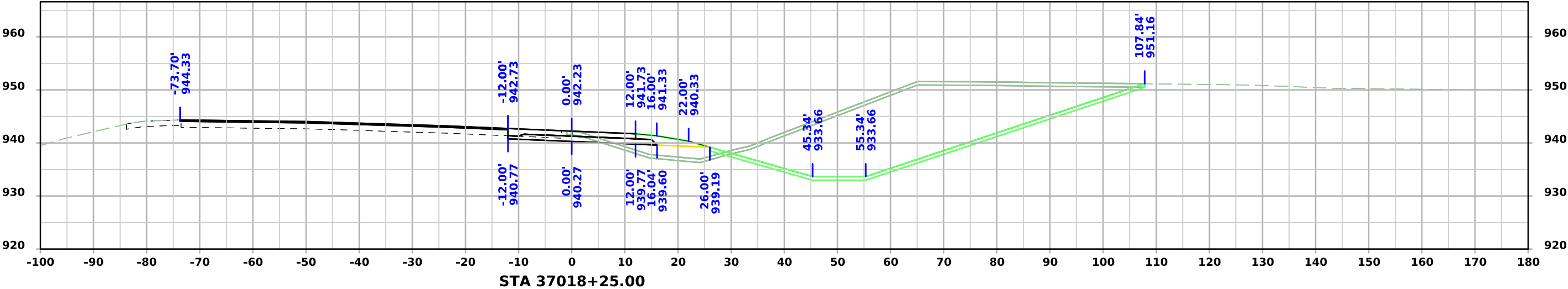
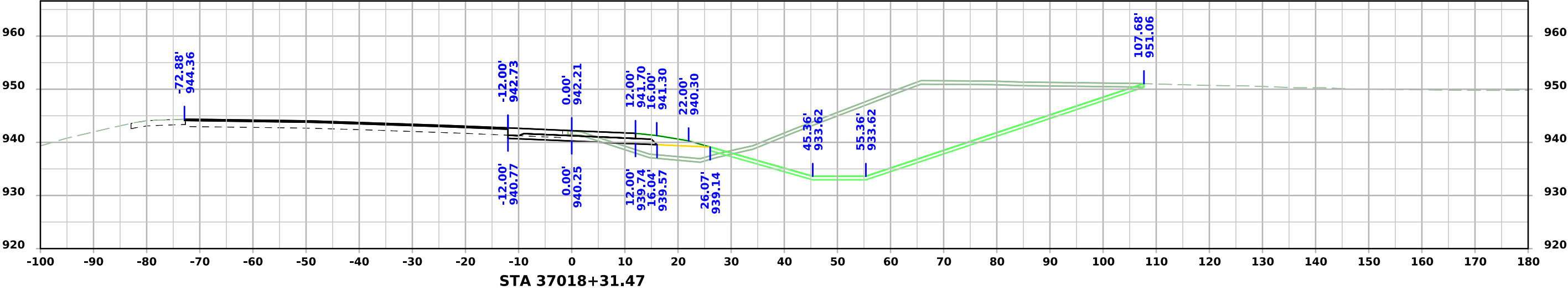
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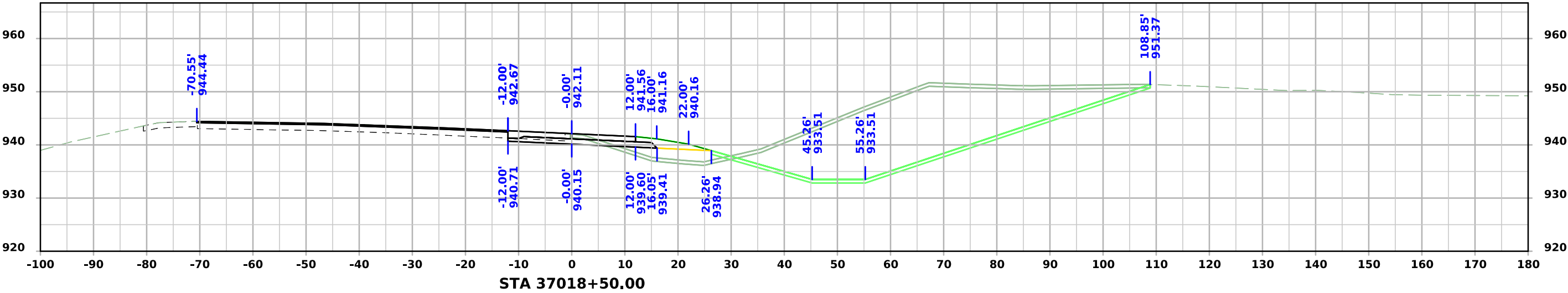
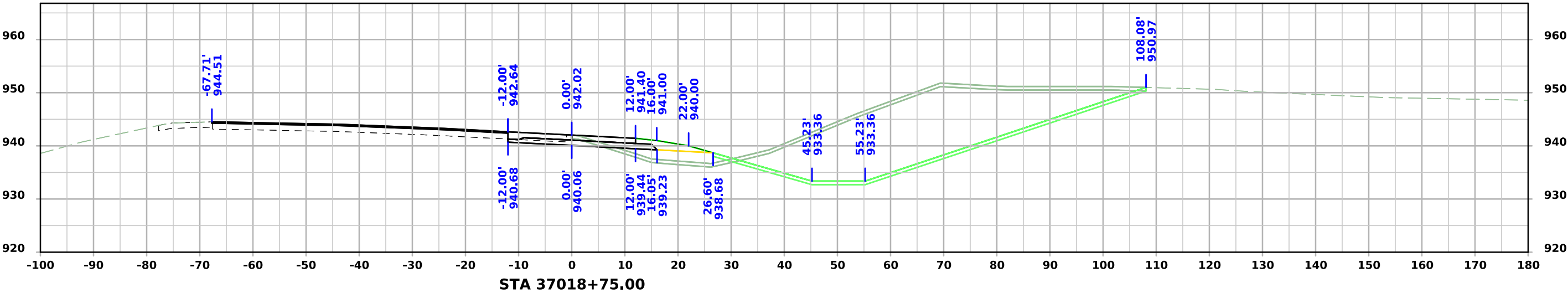
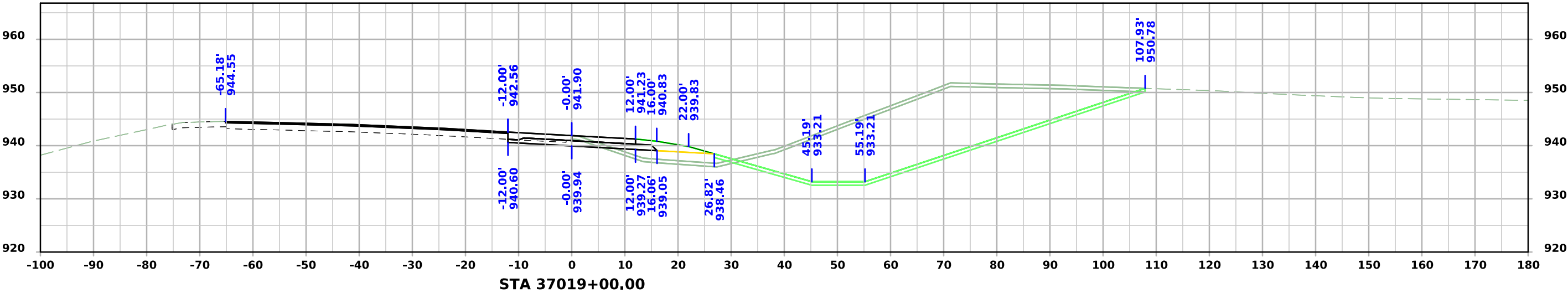
RAMPD_INT Stage 2



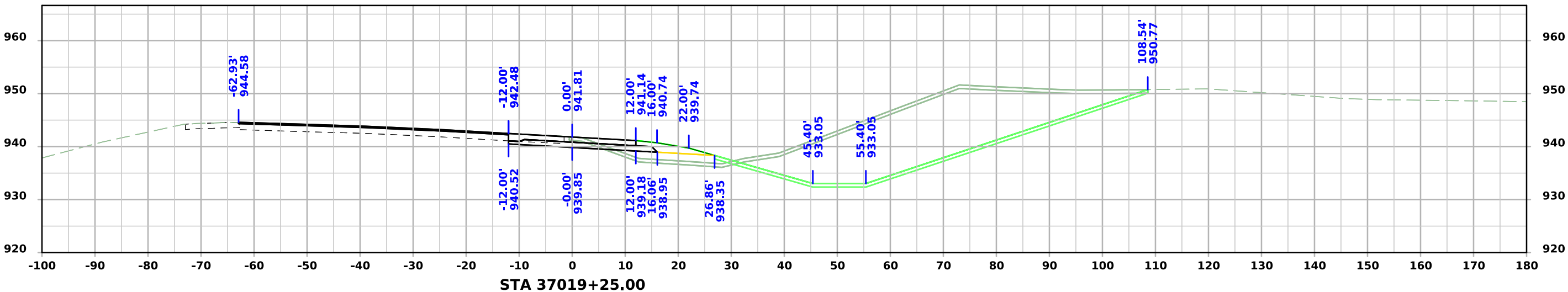
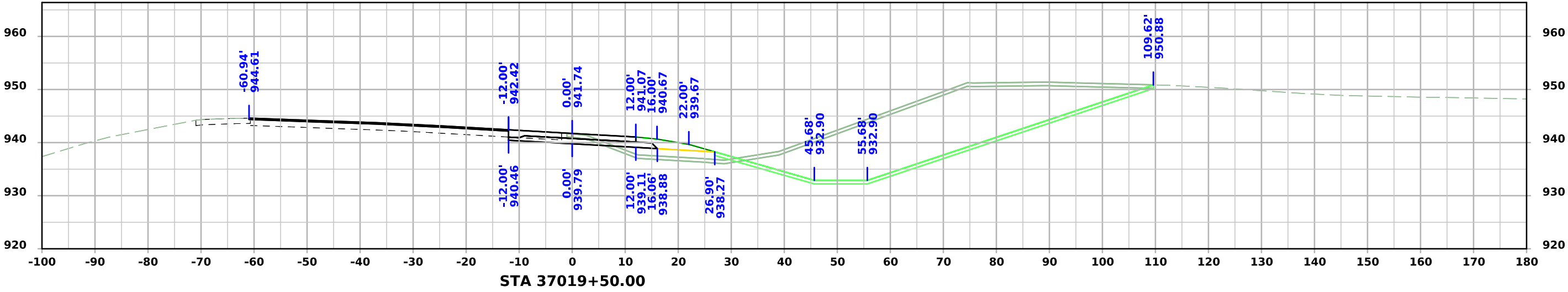
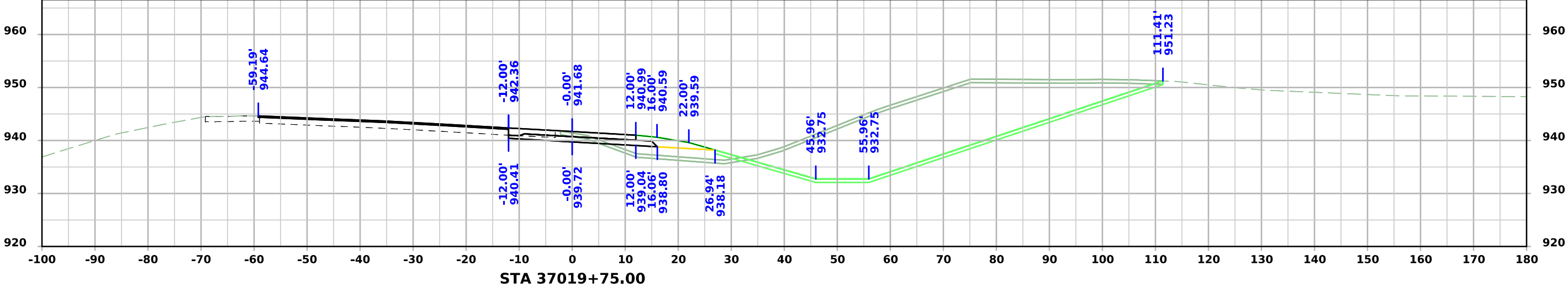
RAMPD_INT Stage 2



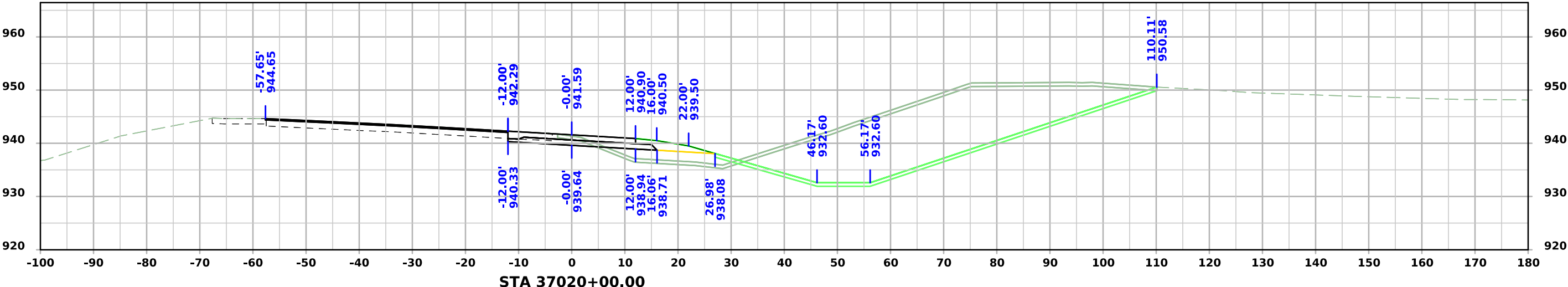
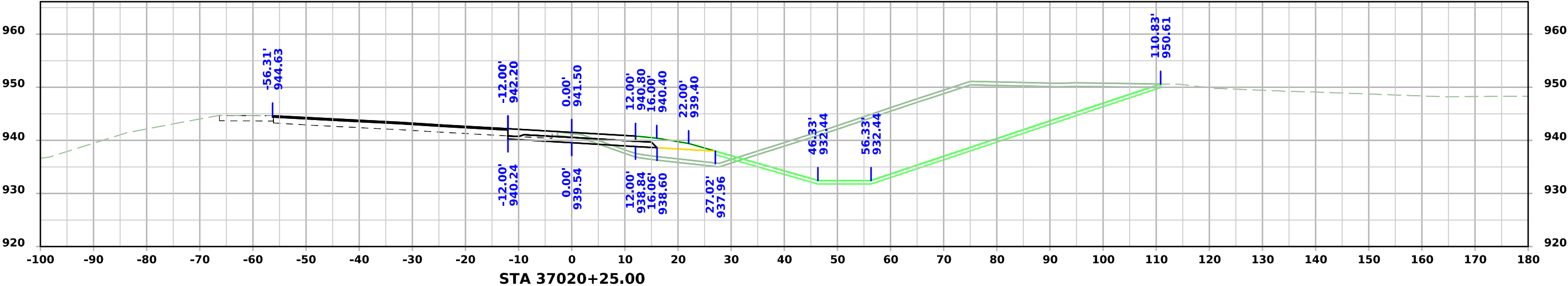
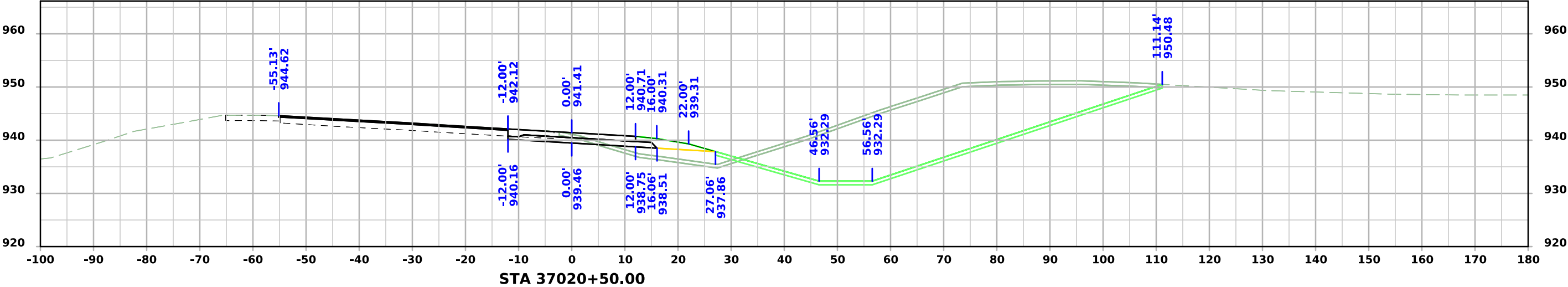
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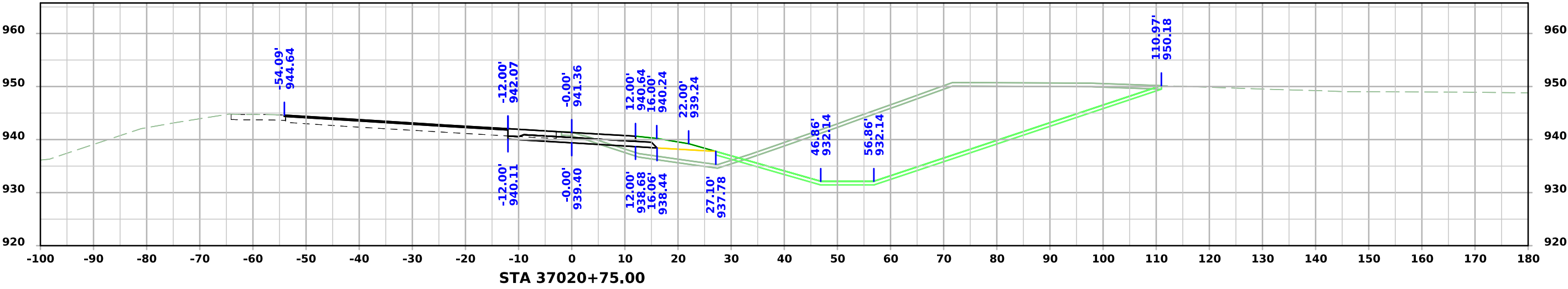
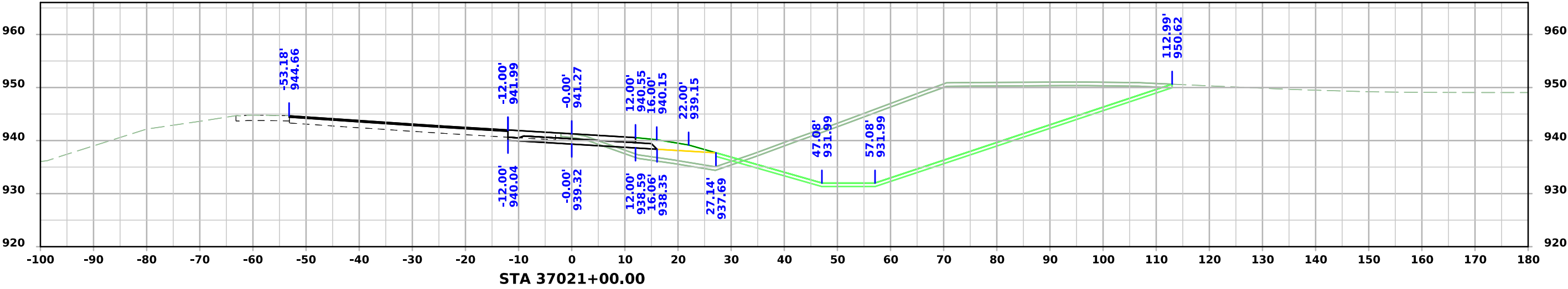
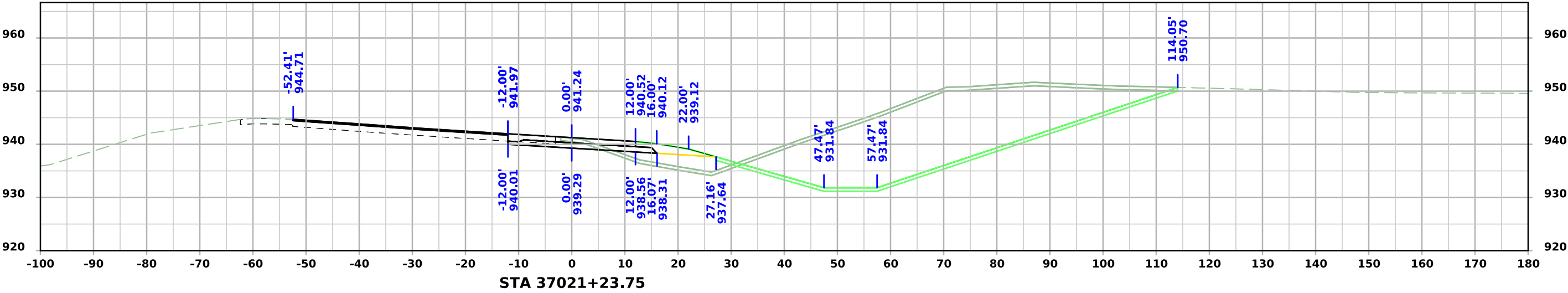
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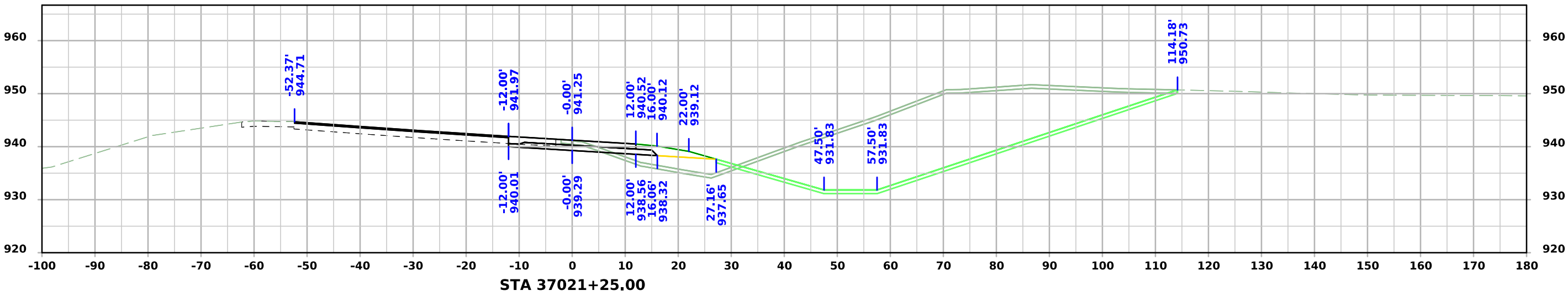
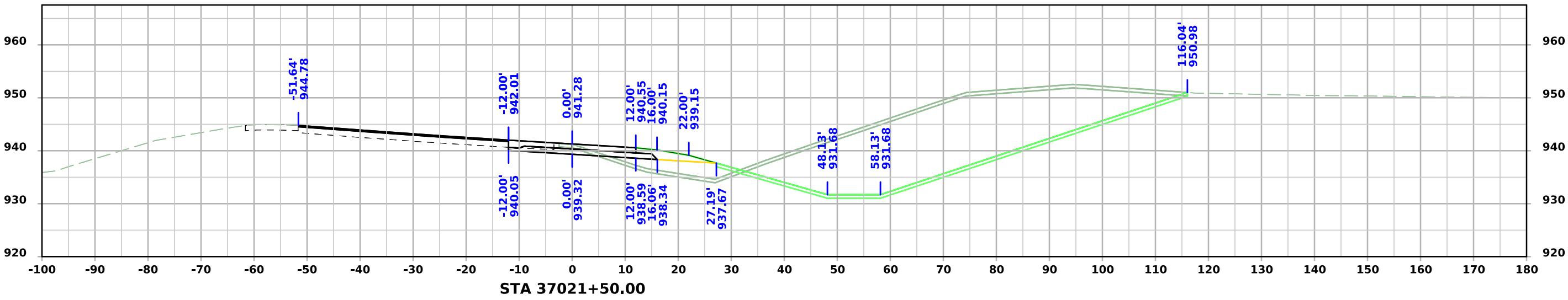
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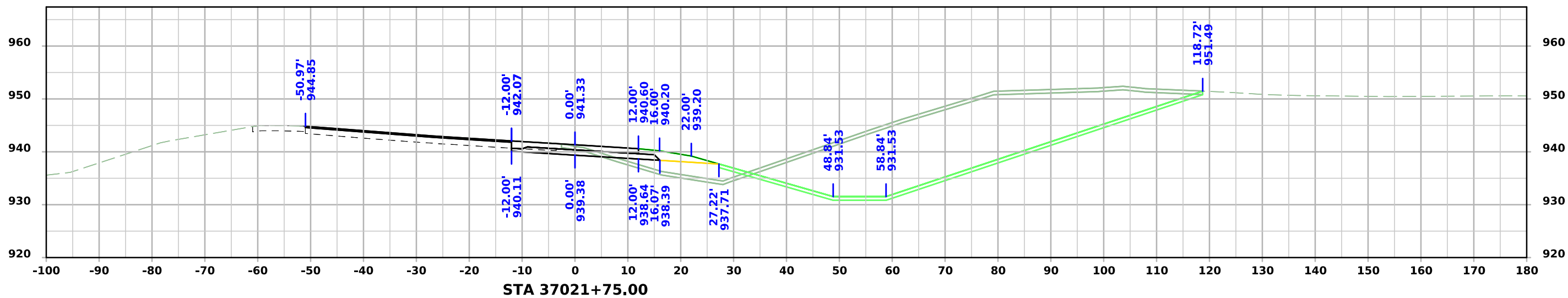
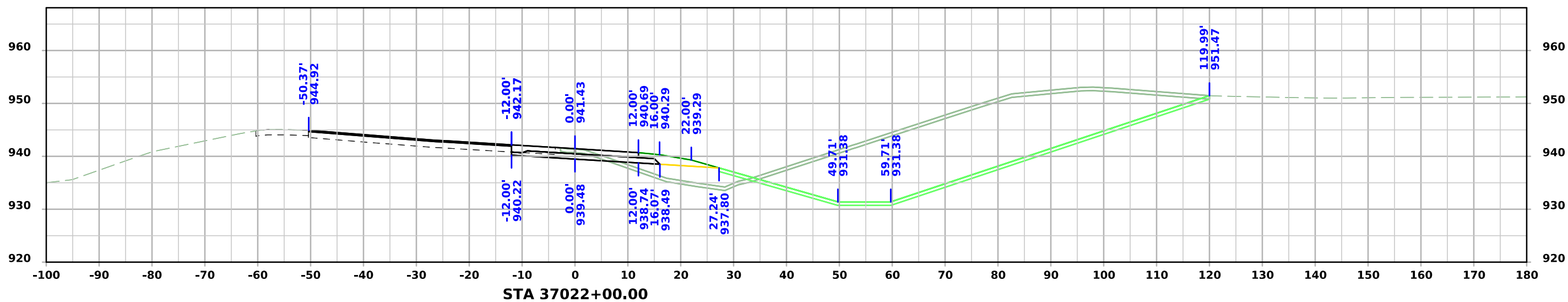
RAMPD_INT Stage 2



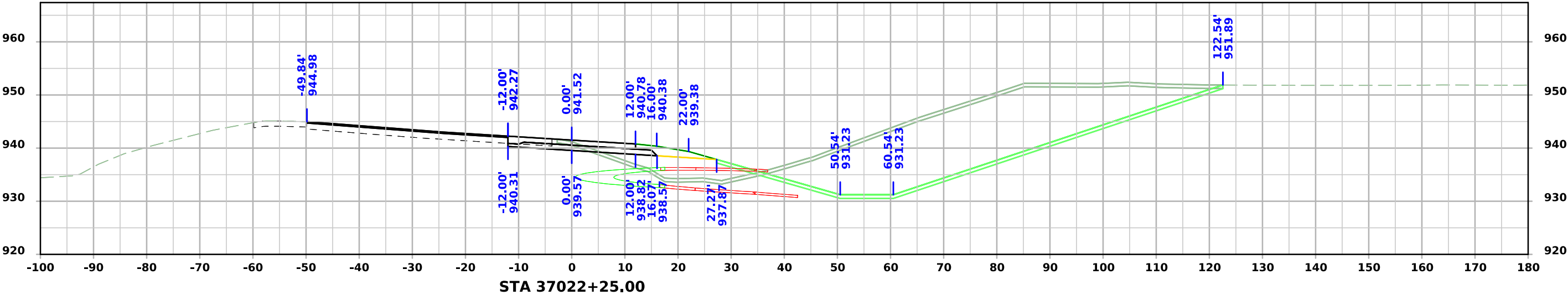
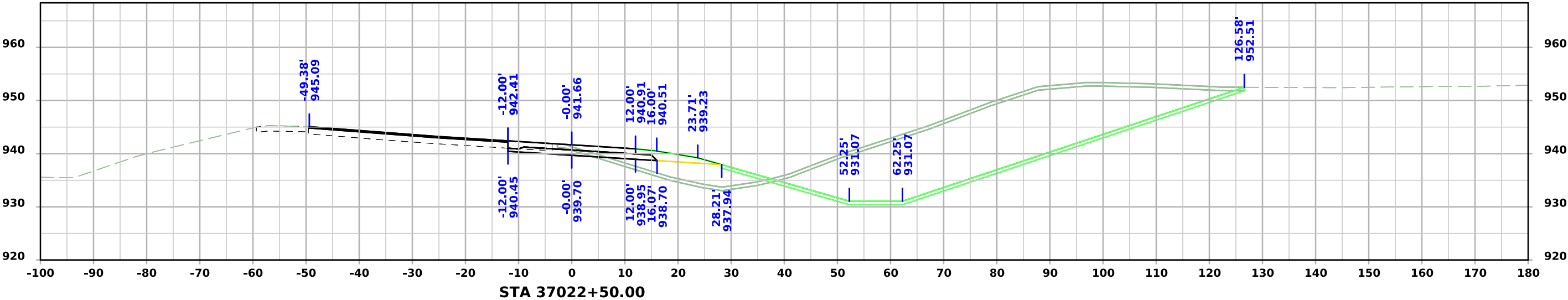
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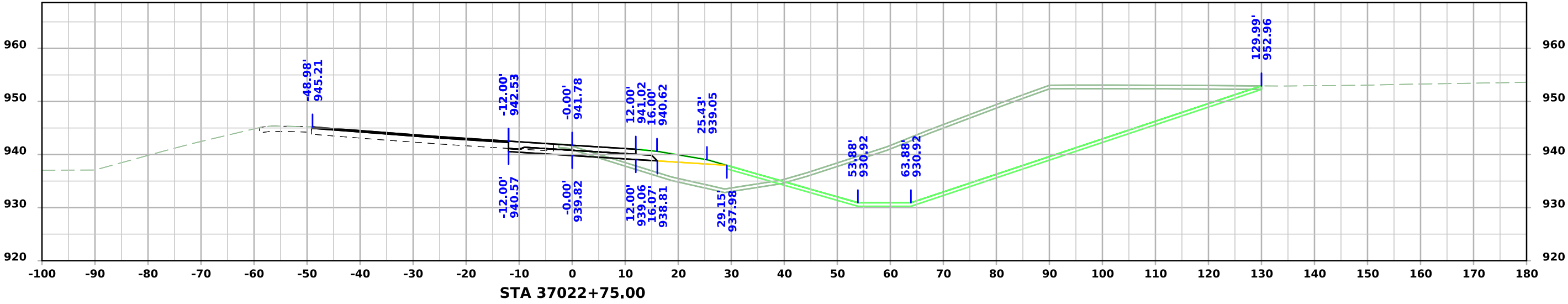
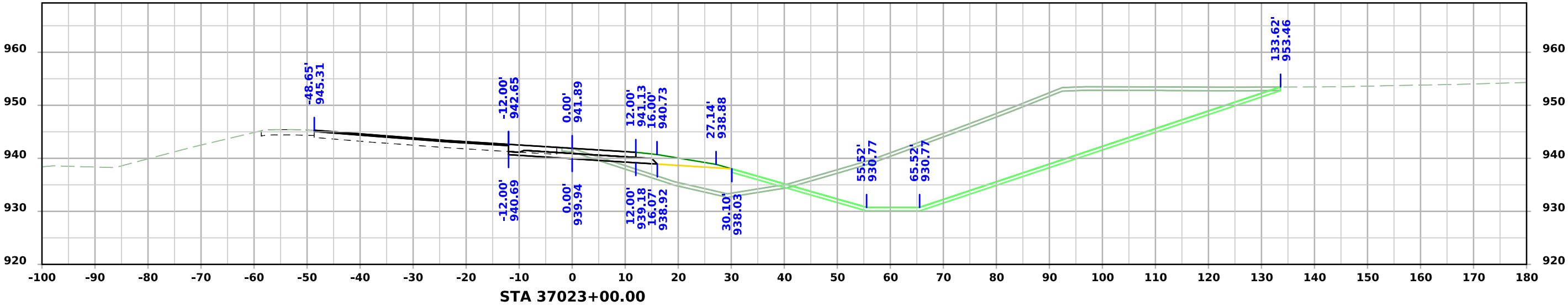
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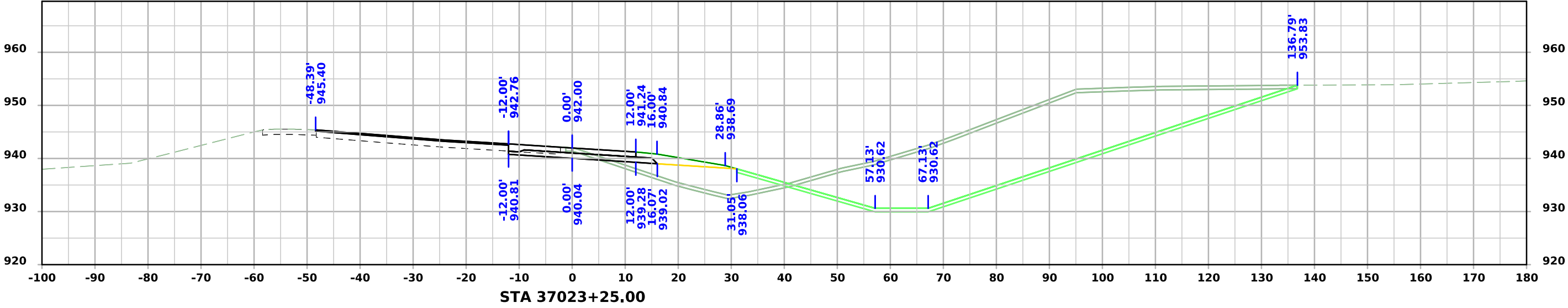
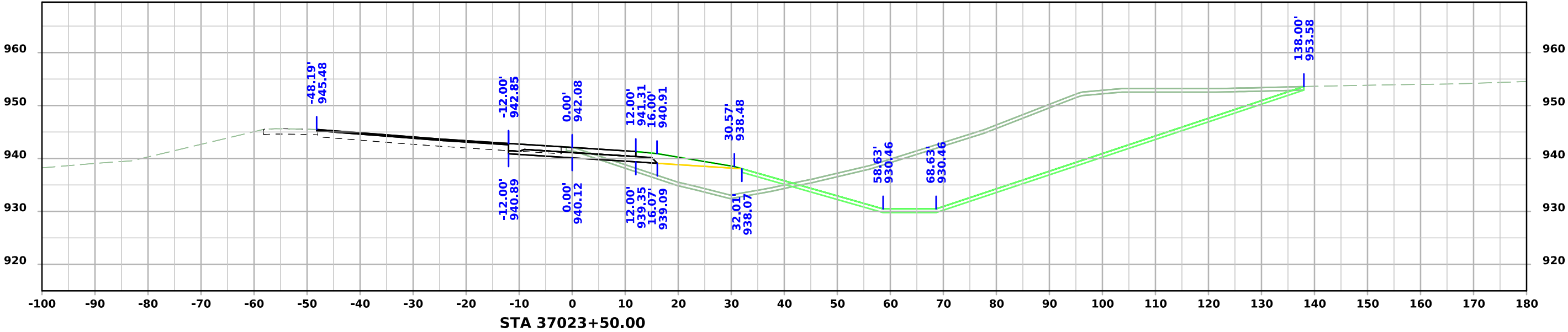
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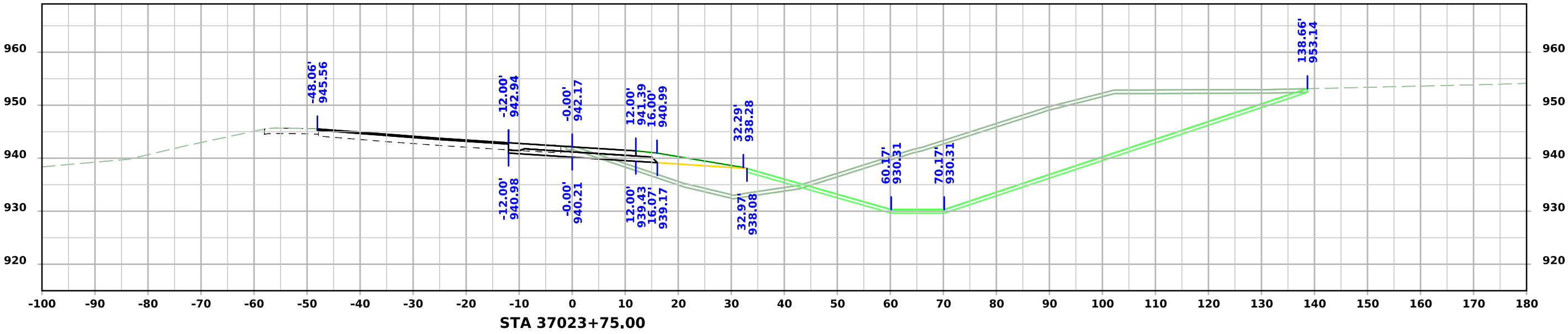
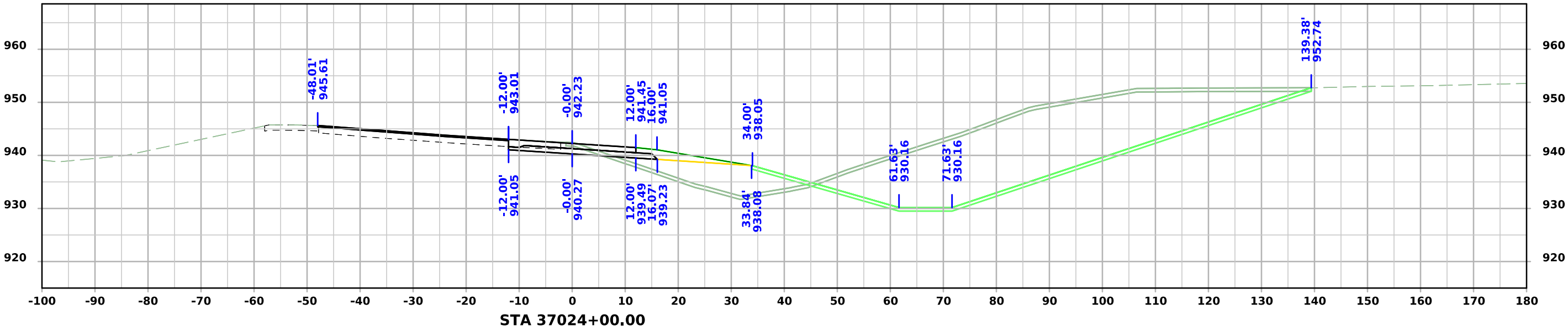
RAMPD_INT Stage 2



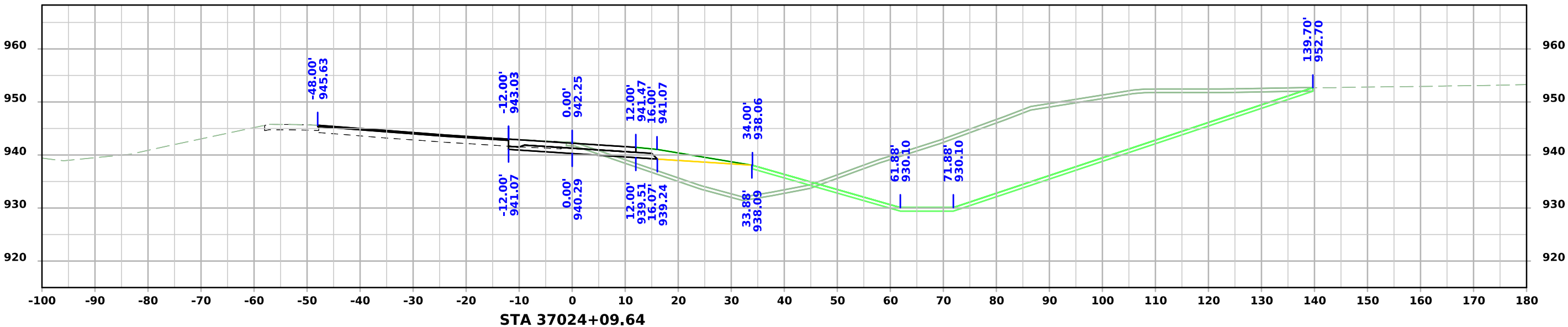
RAMPD_INT Stage 2



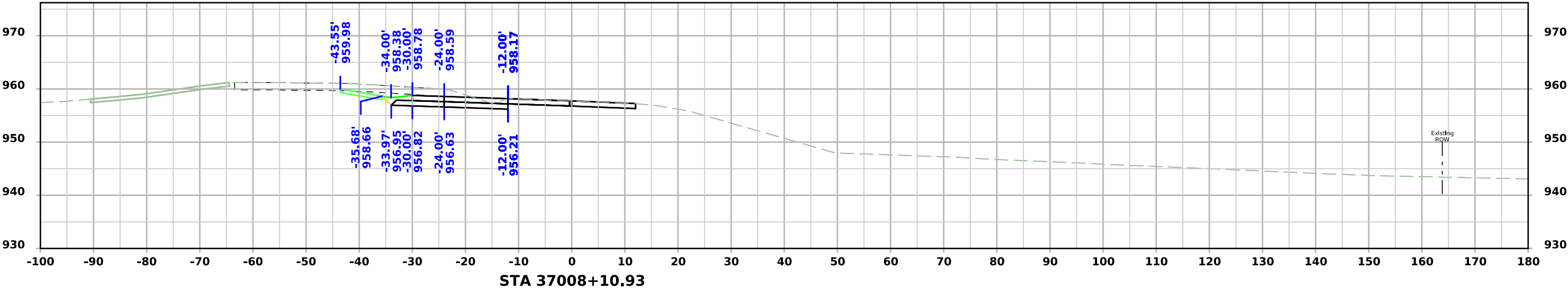
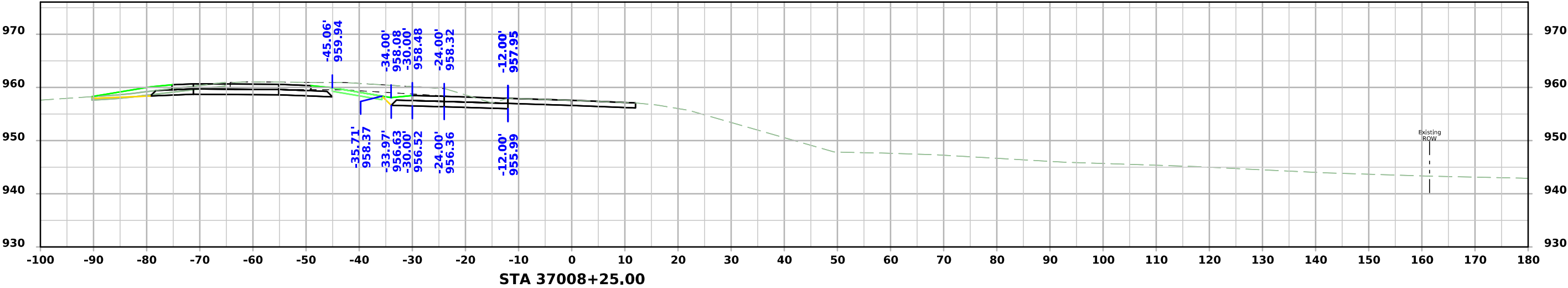
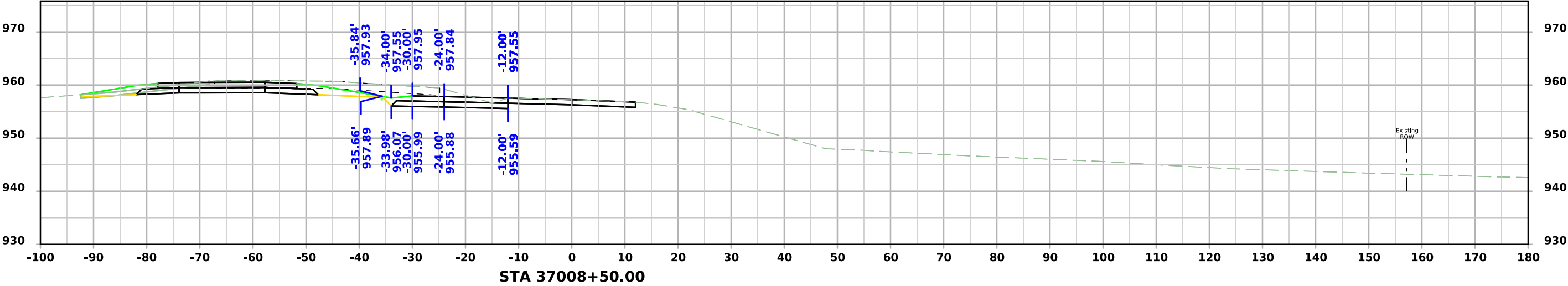
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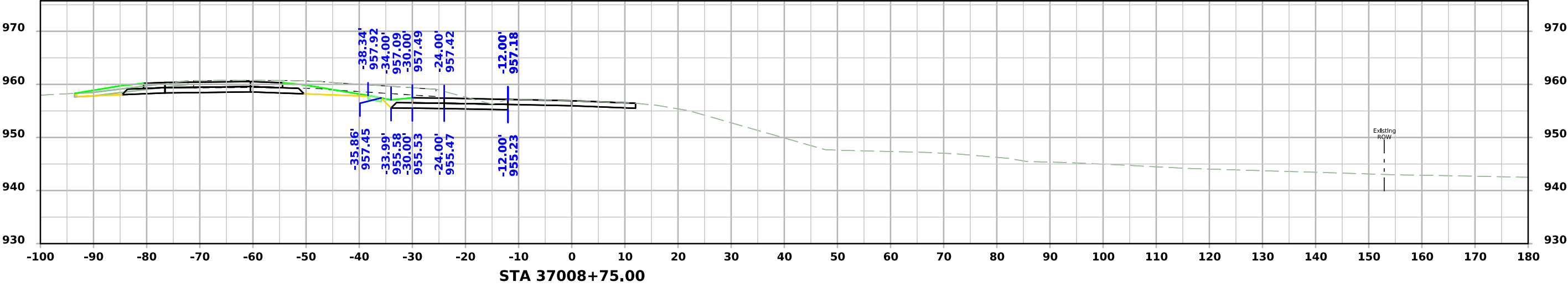
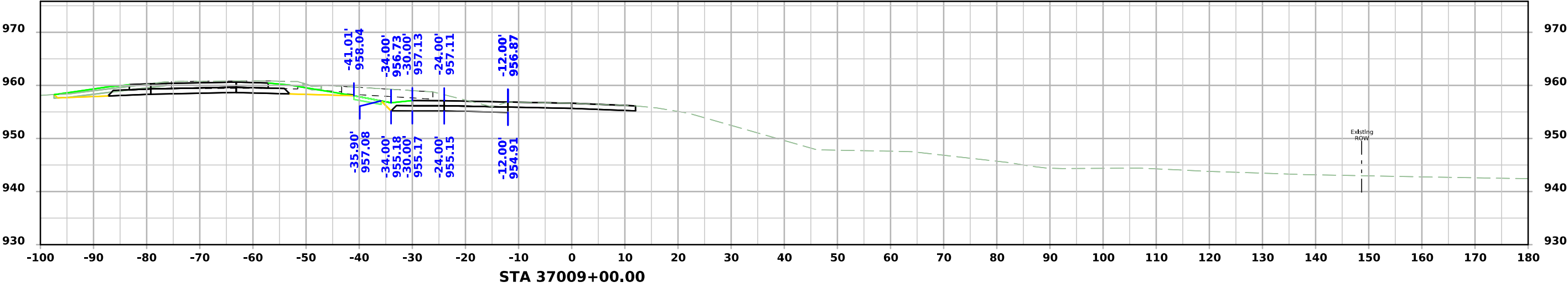
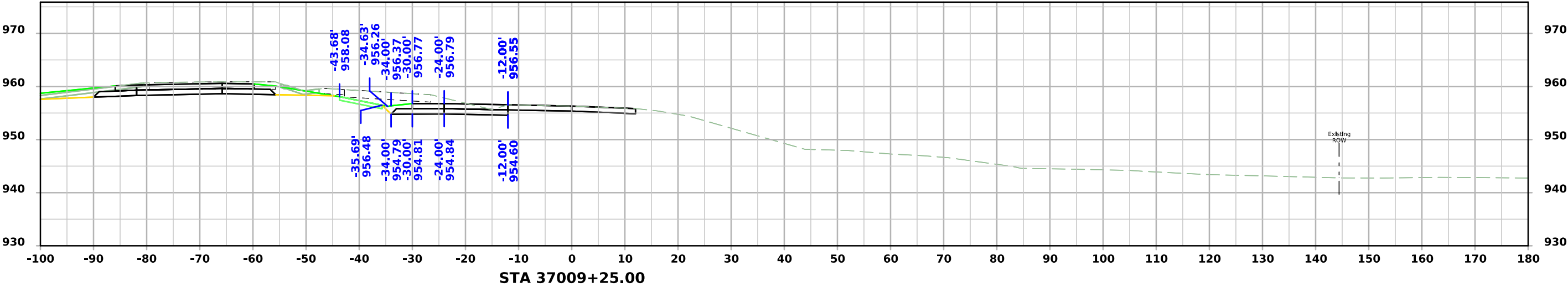
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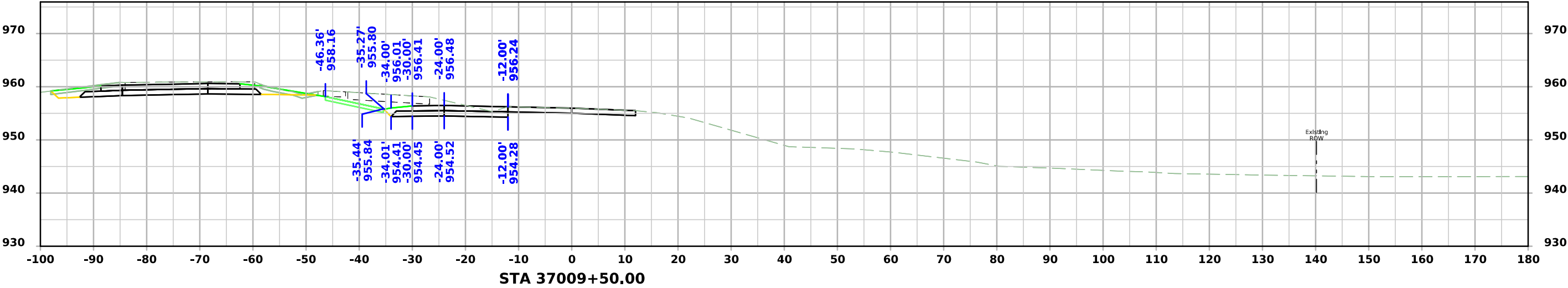
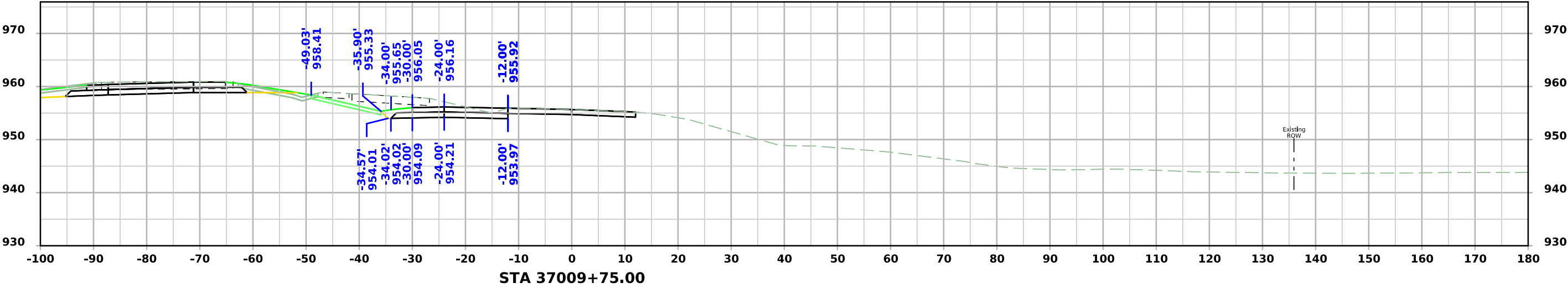
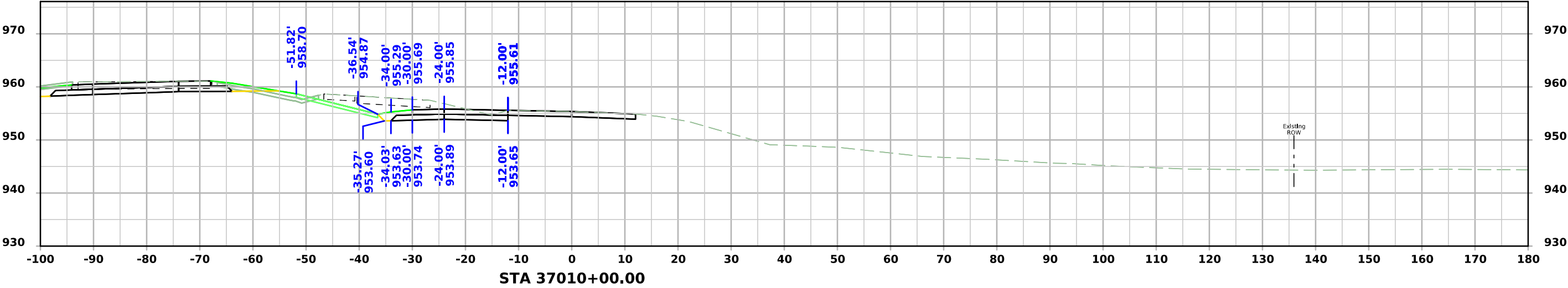
Ramp D INT Stage 3



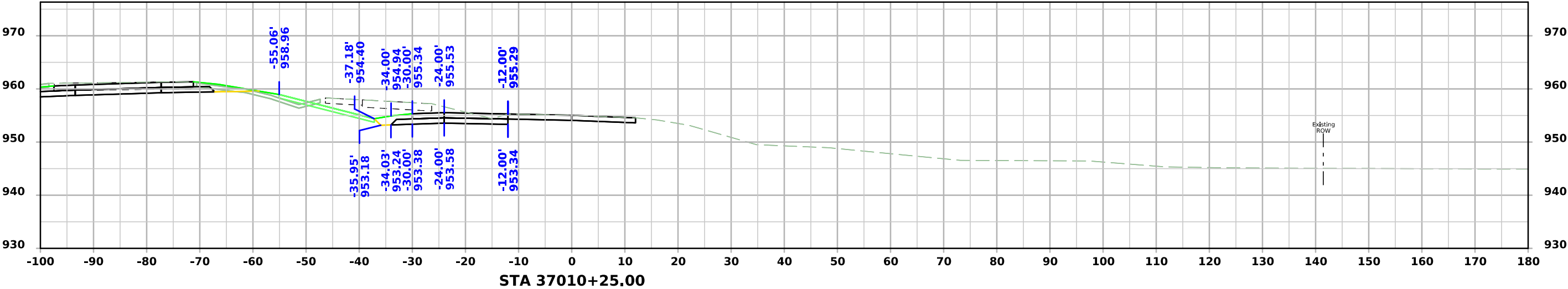
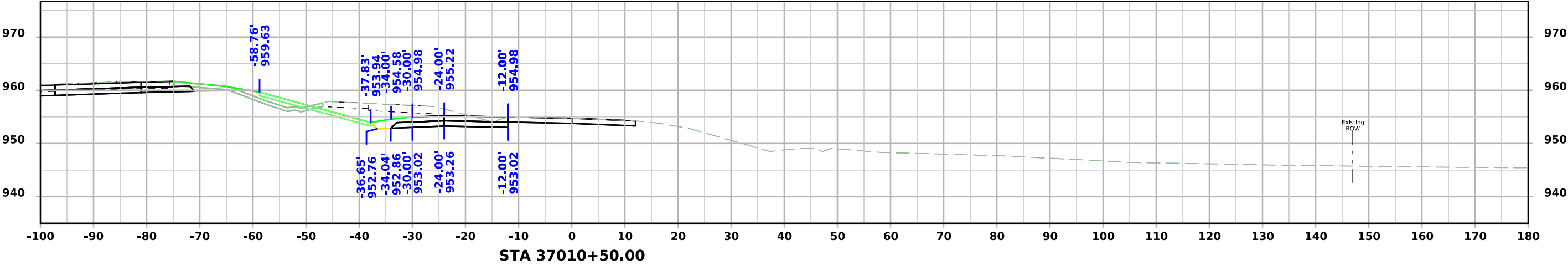
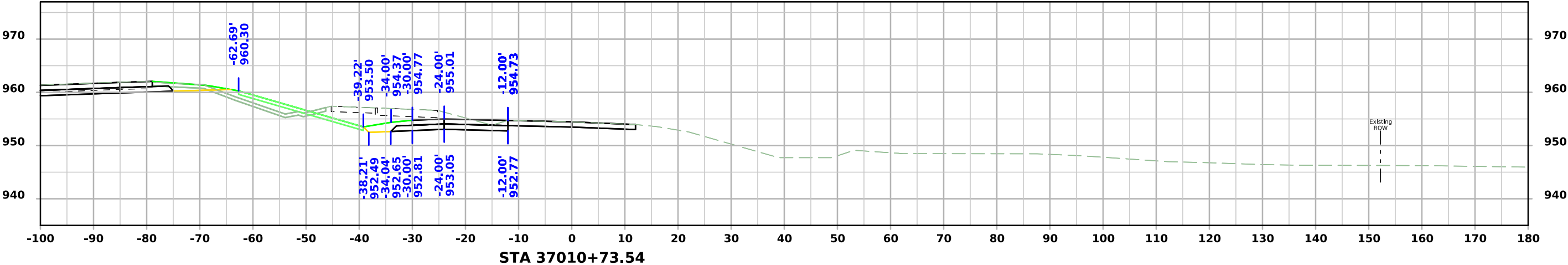
Ramp D INT Stage 3



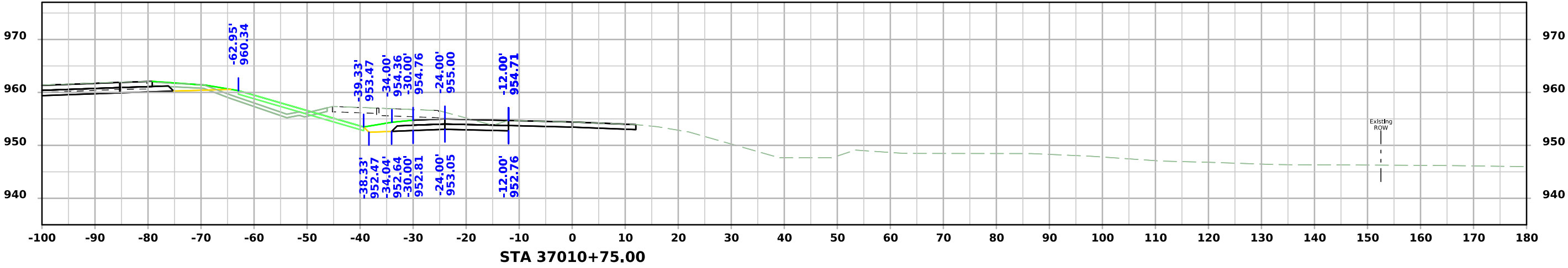
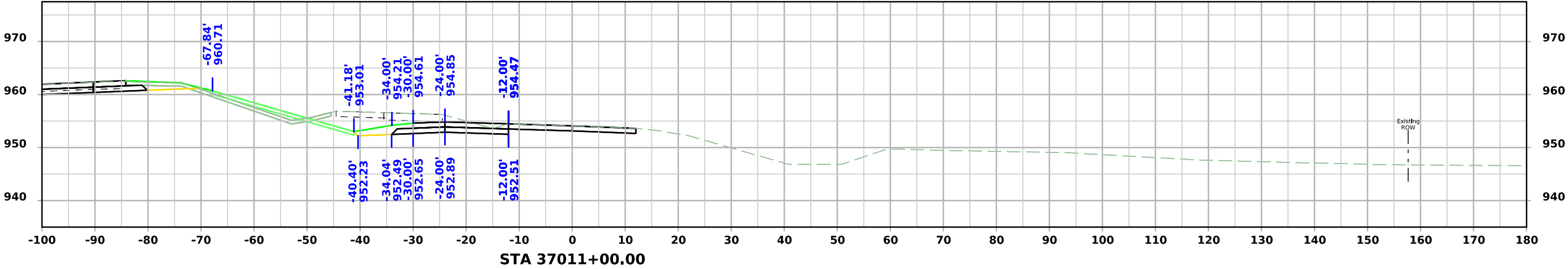
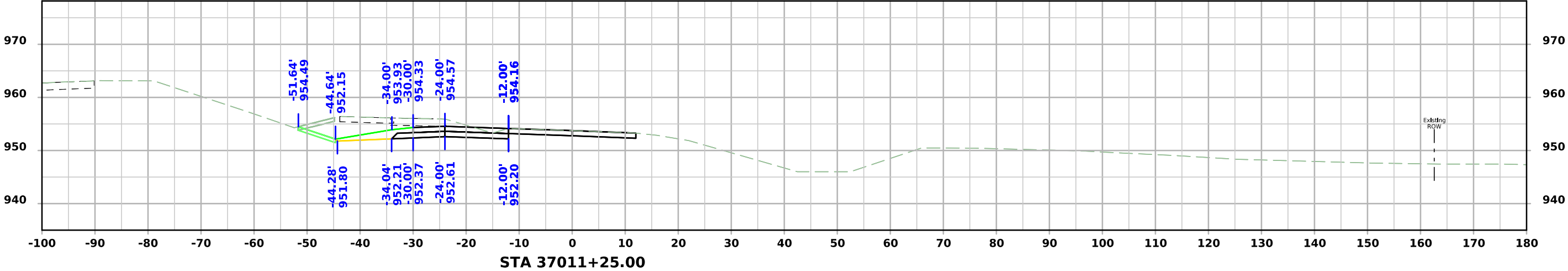
Ramp D INT Stage 3



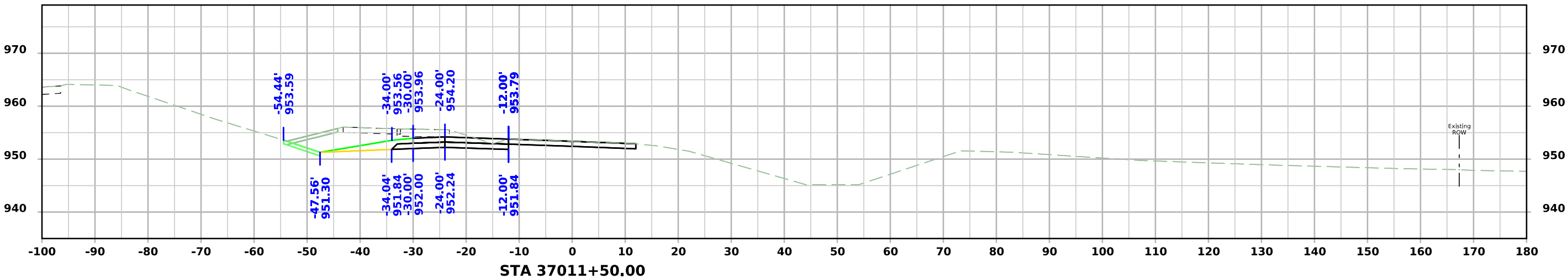
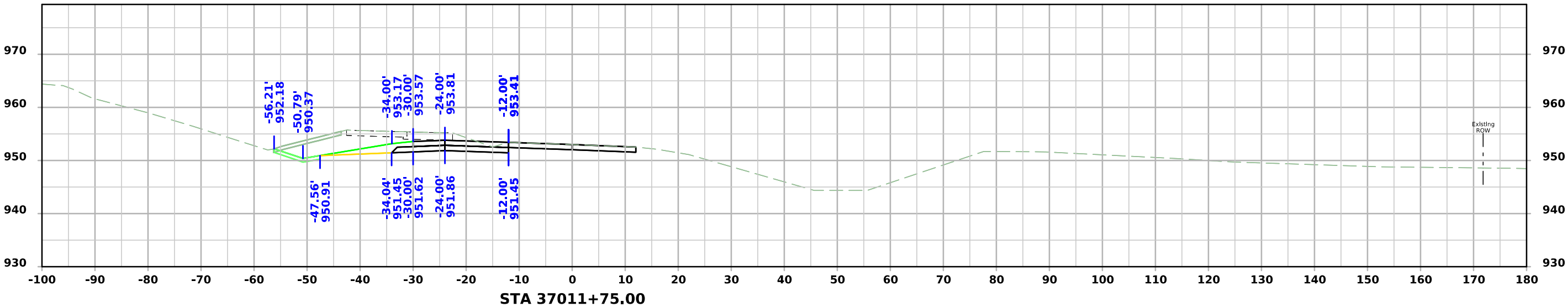
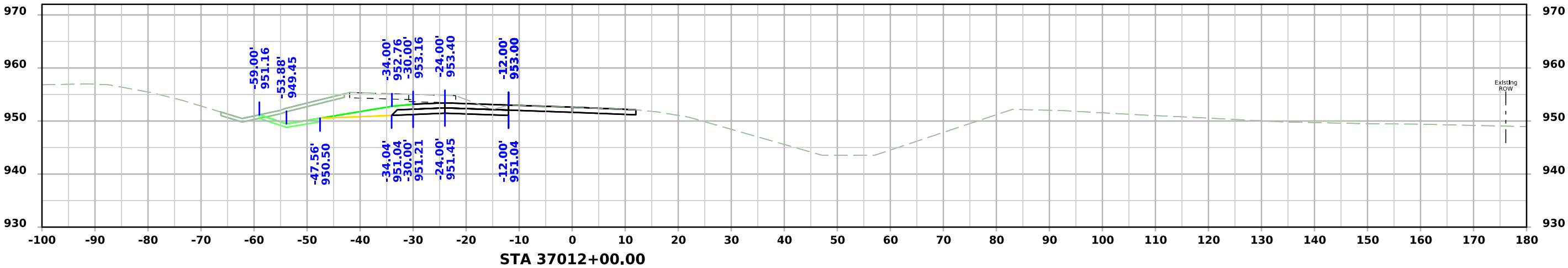
Ramp D INT Stage 3



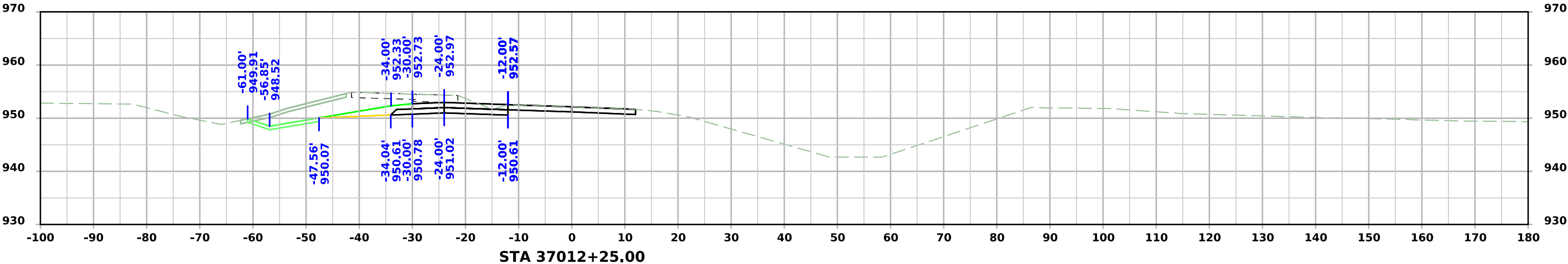
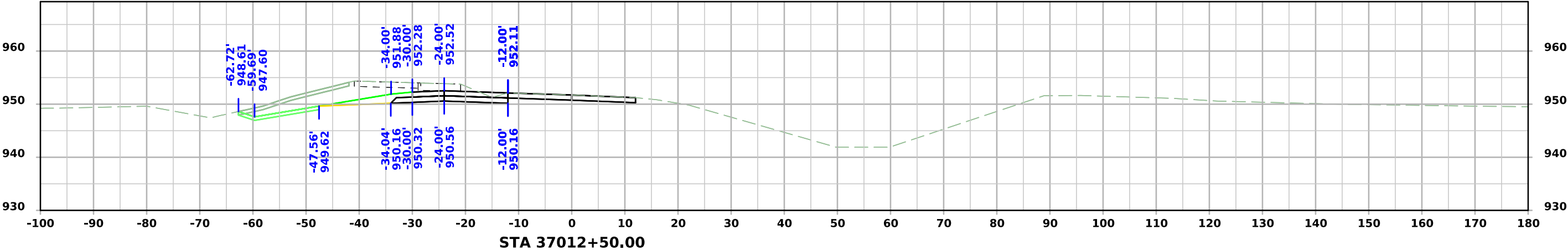
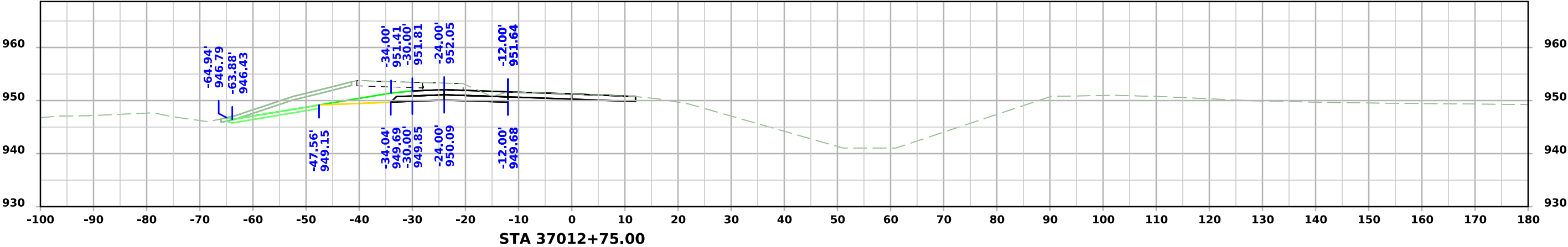
Ramp D INT Stage 3



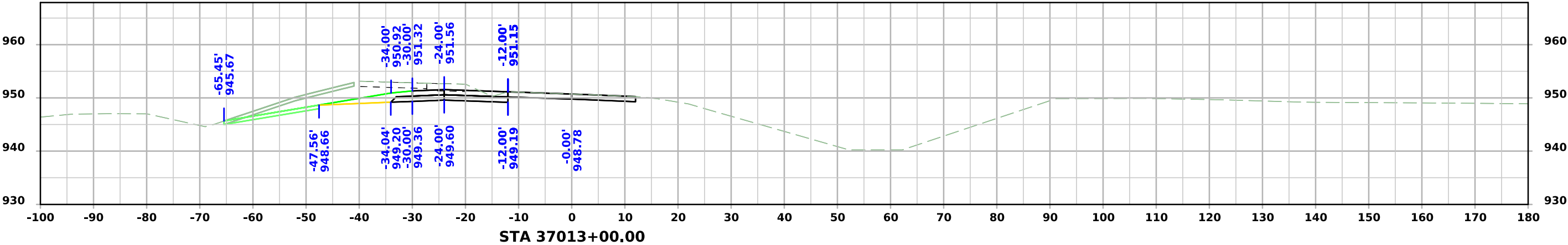
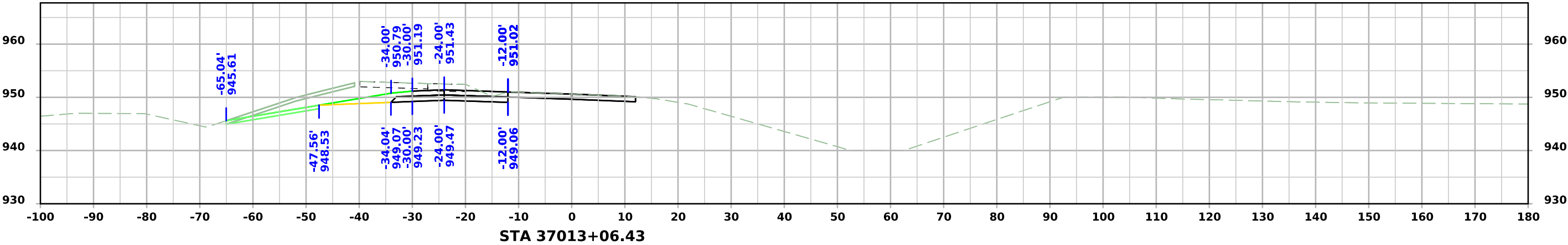
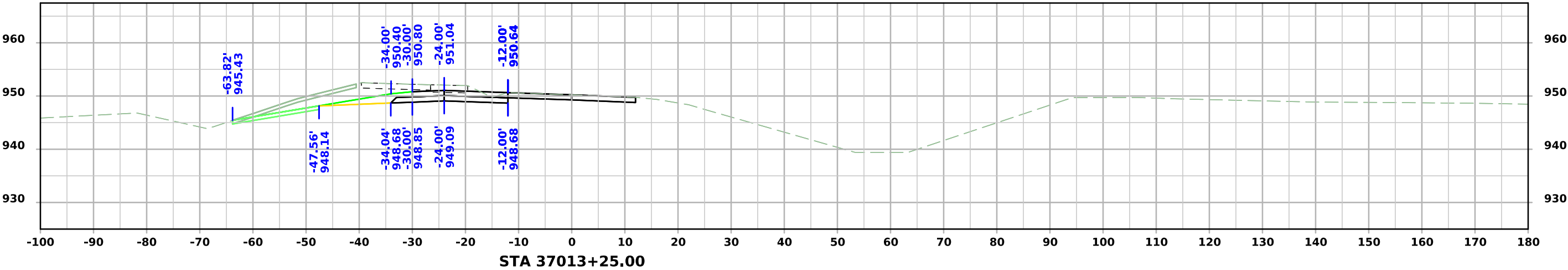
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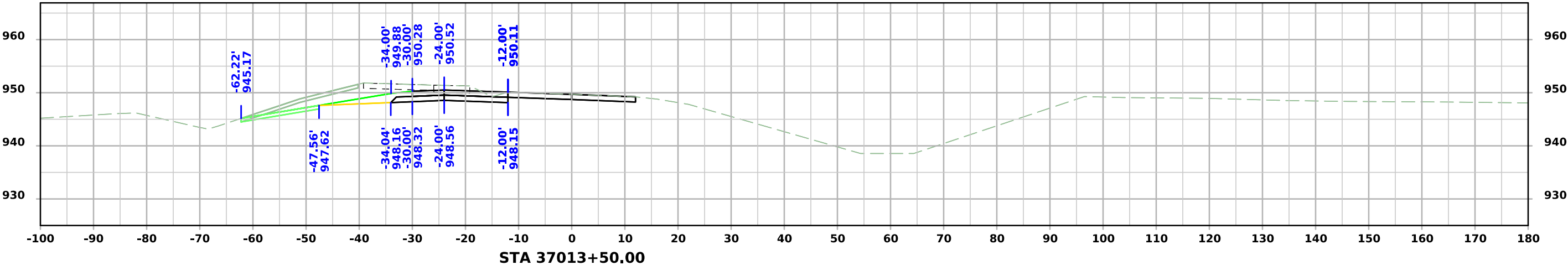
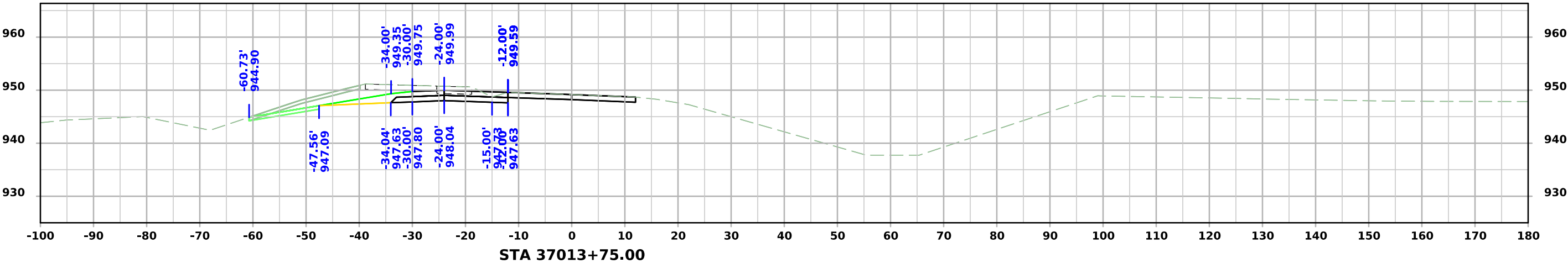
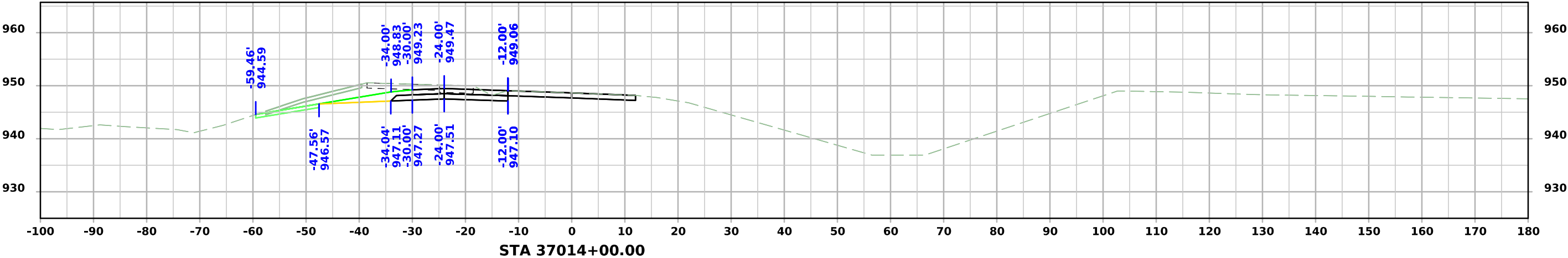
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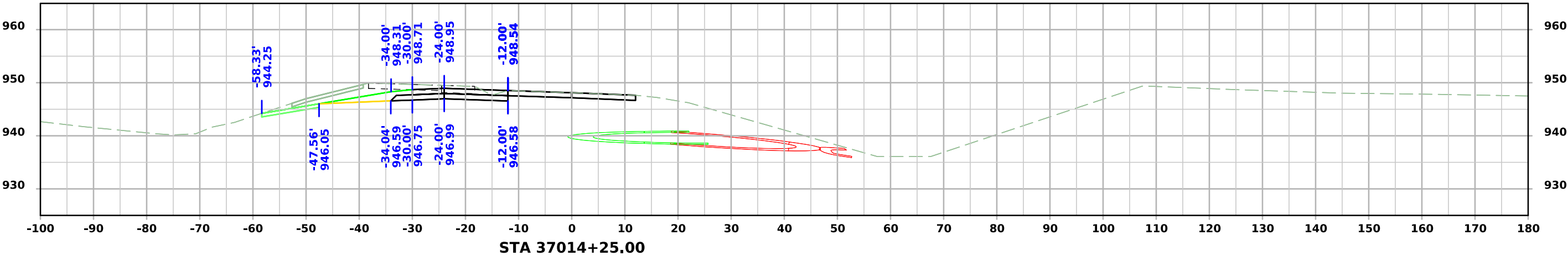
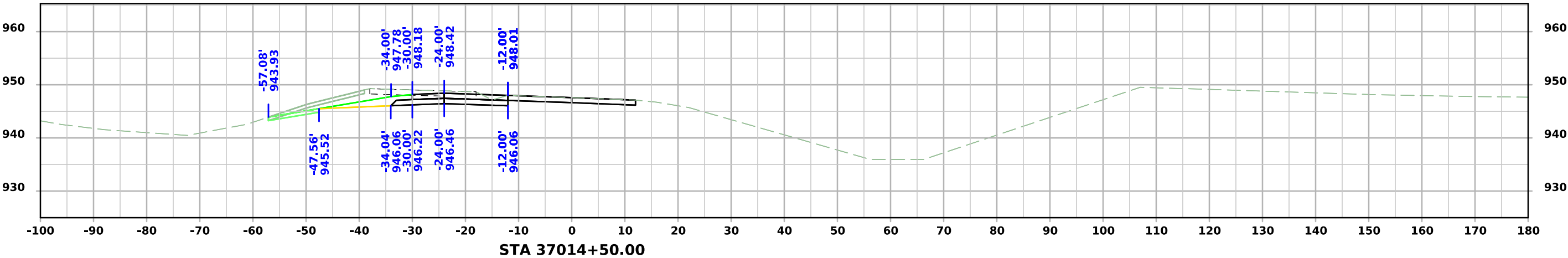
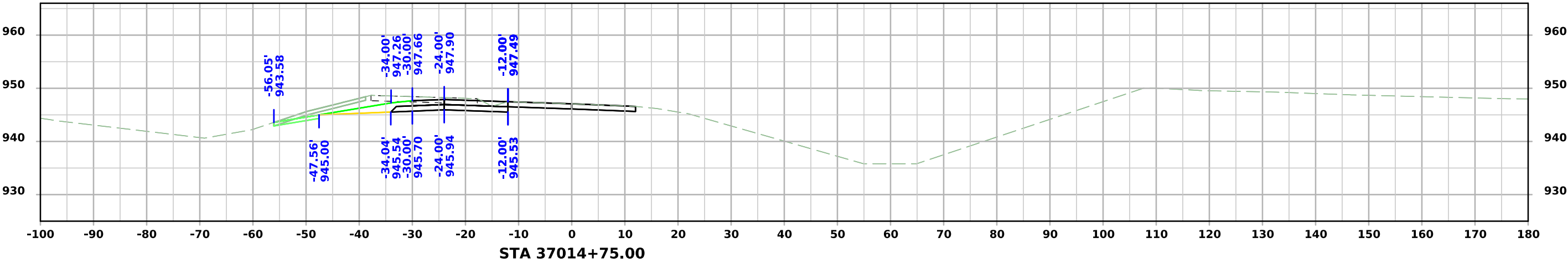
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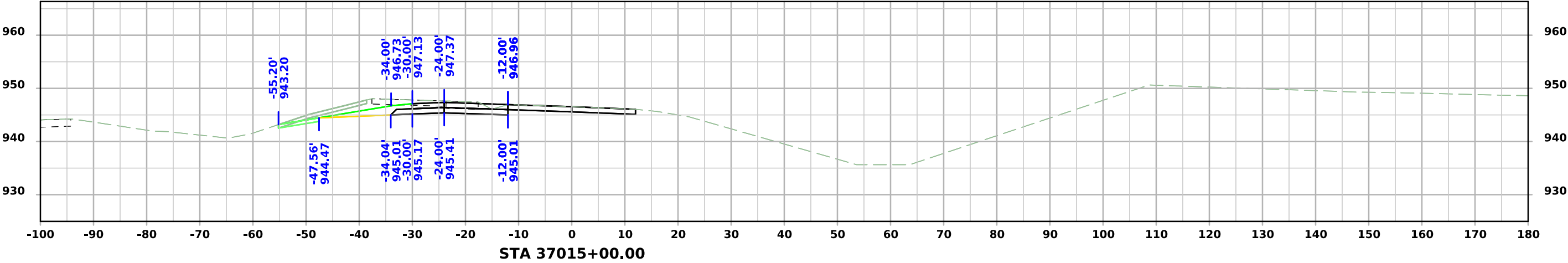
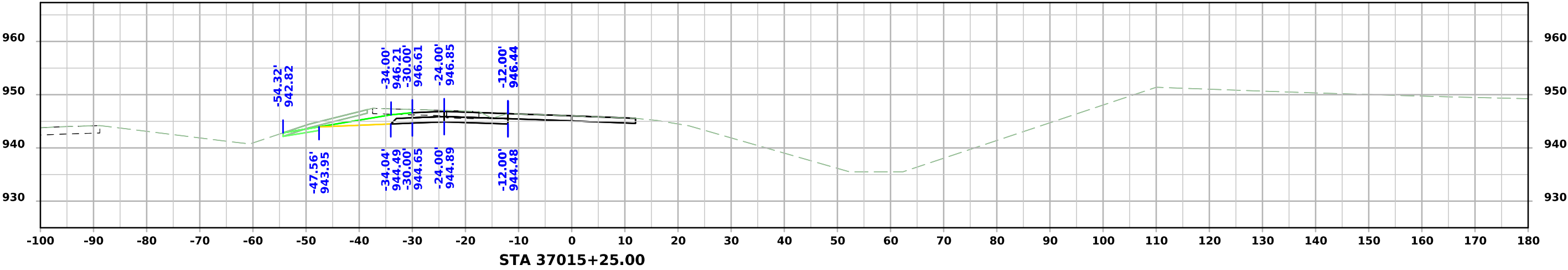
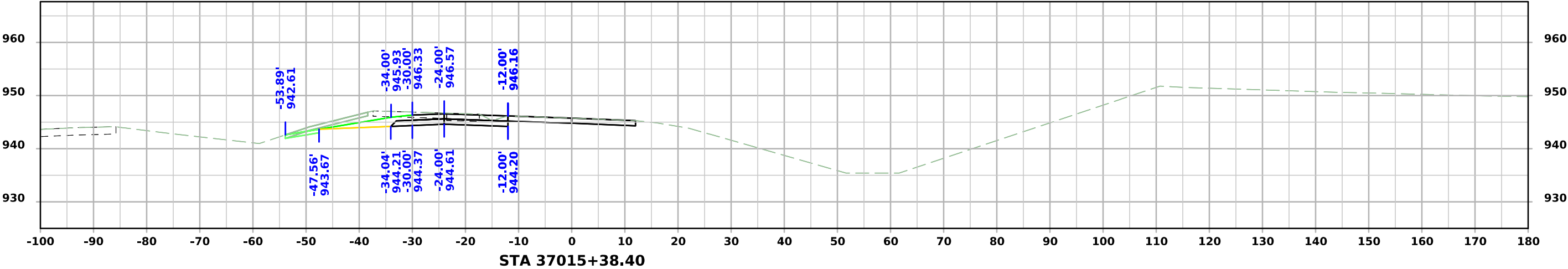
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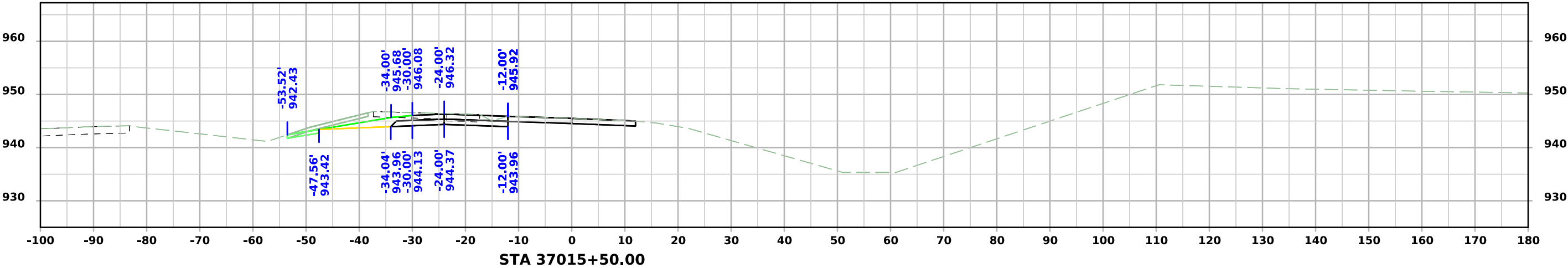
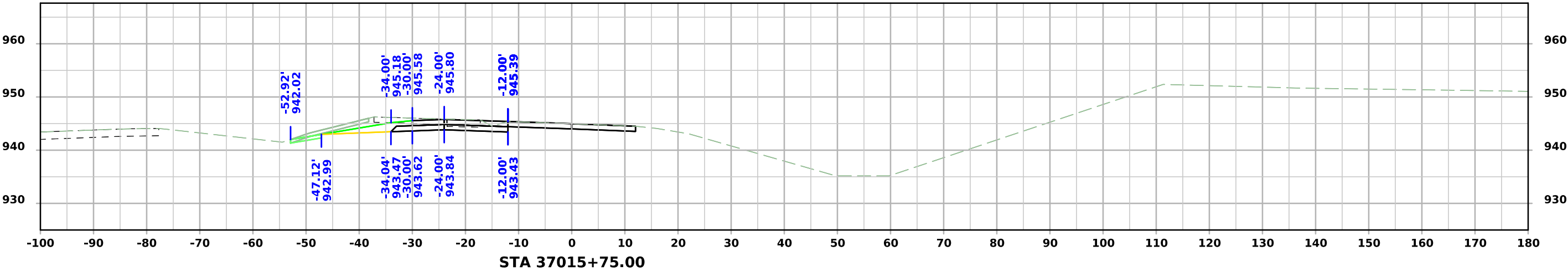
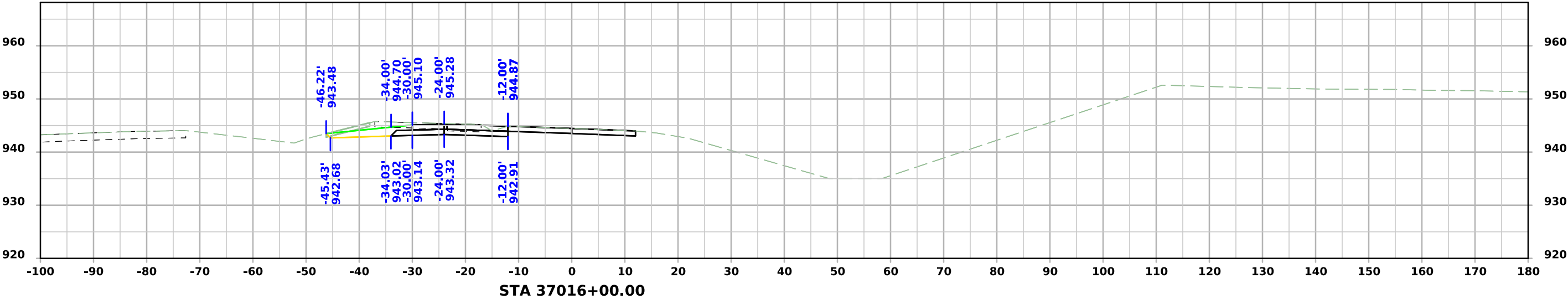
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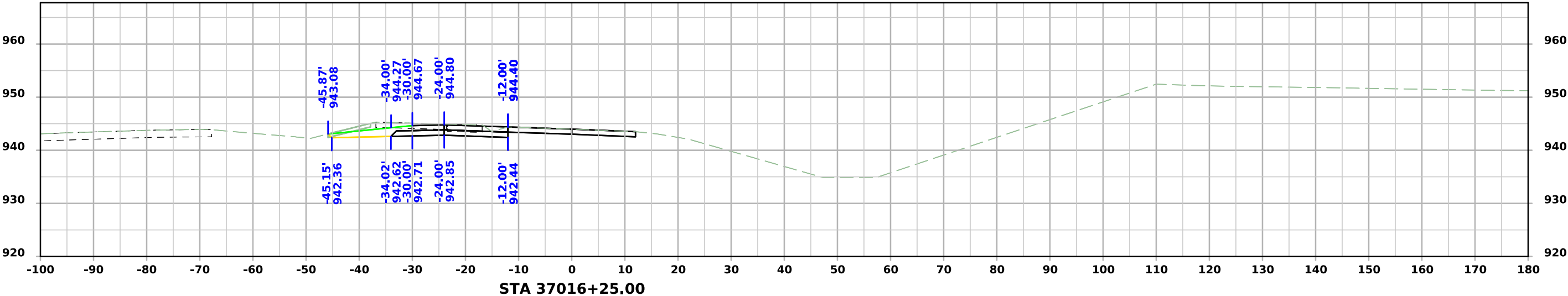
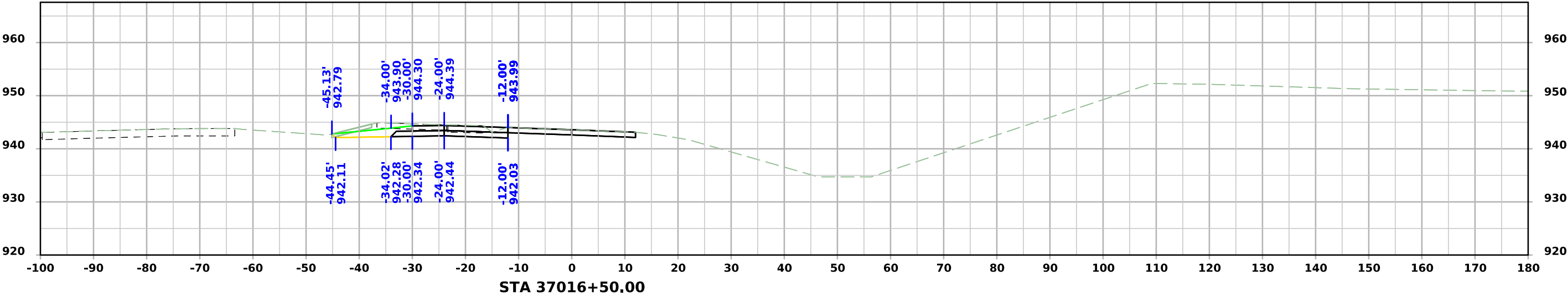
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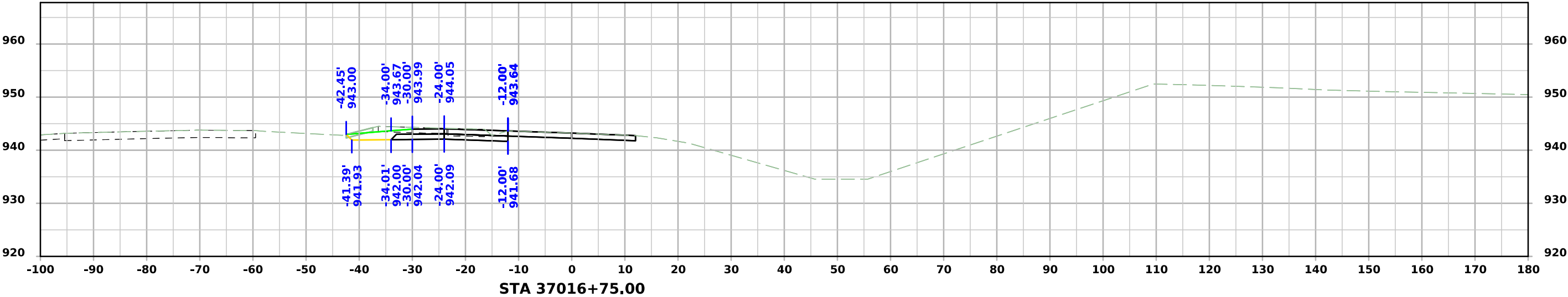
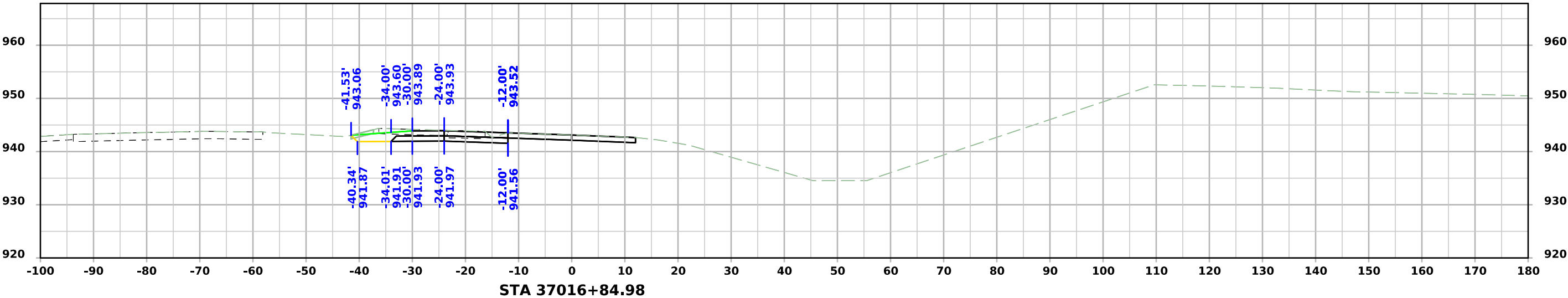
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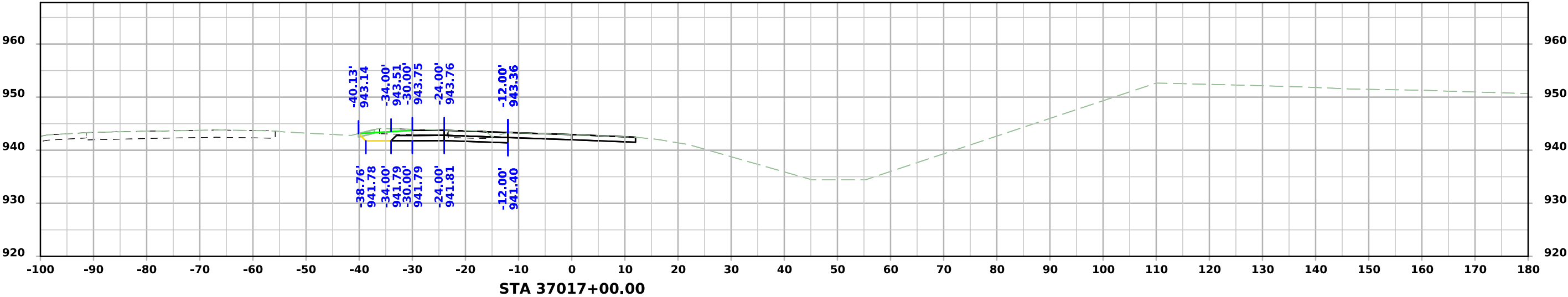
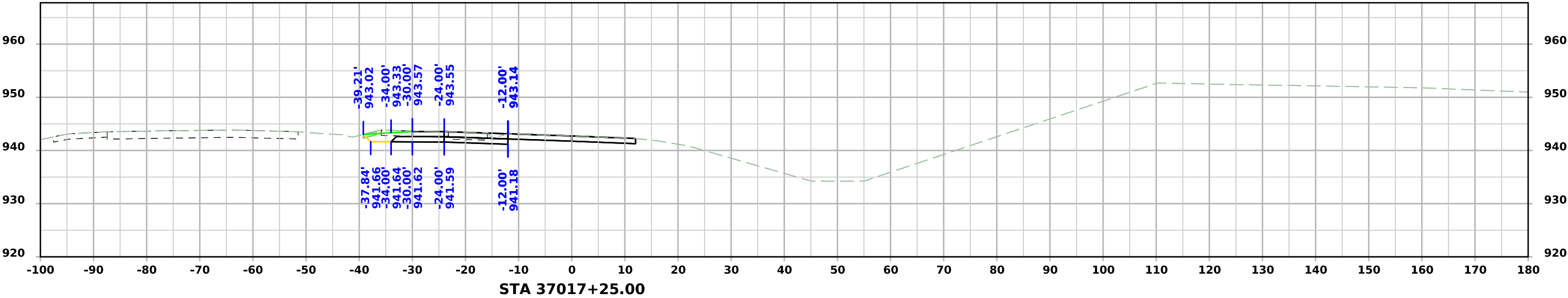
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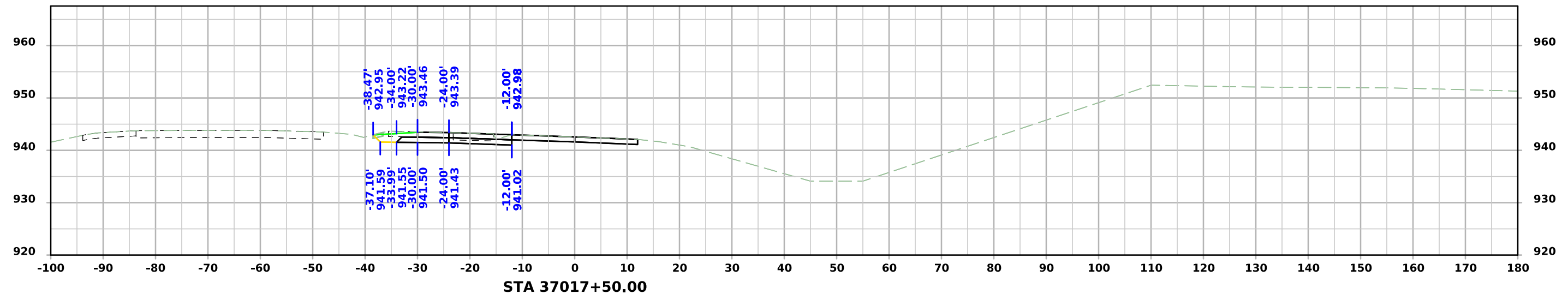
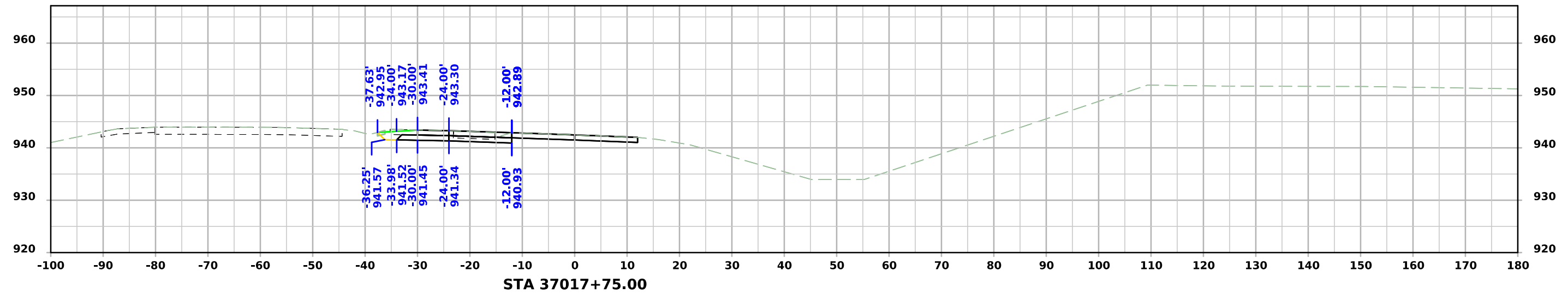
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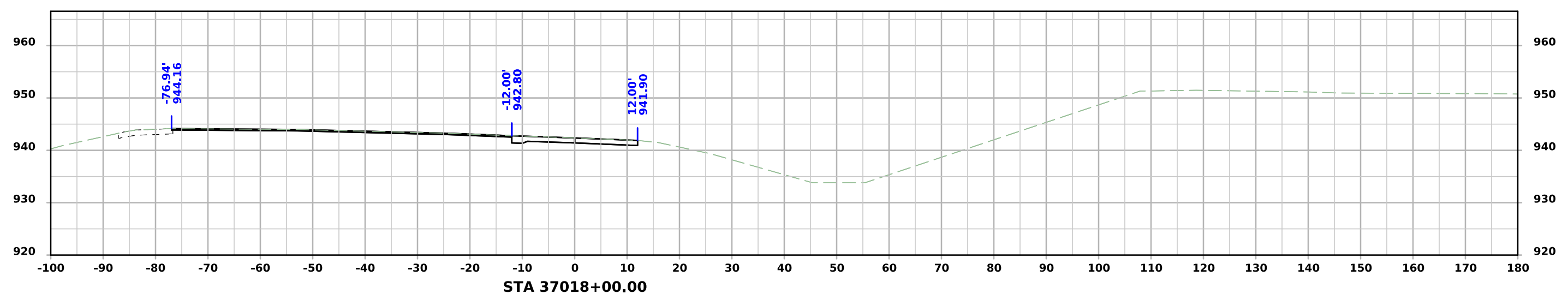
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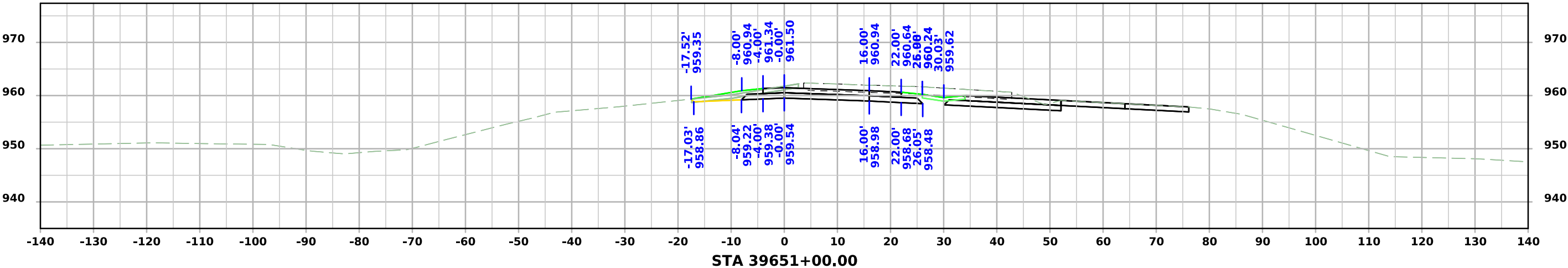
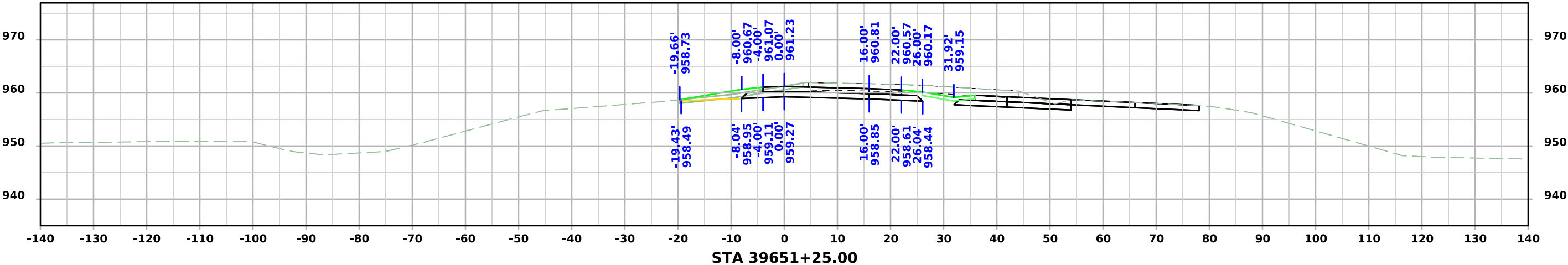
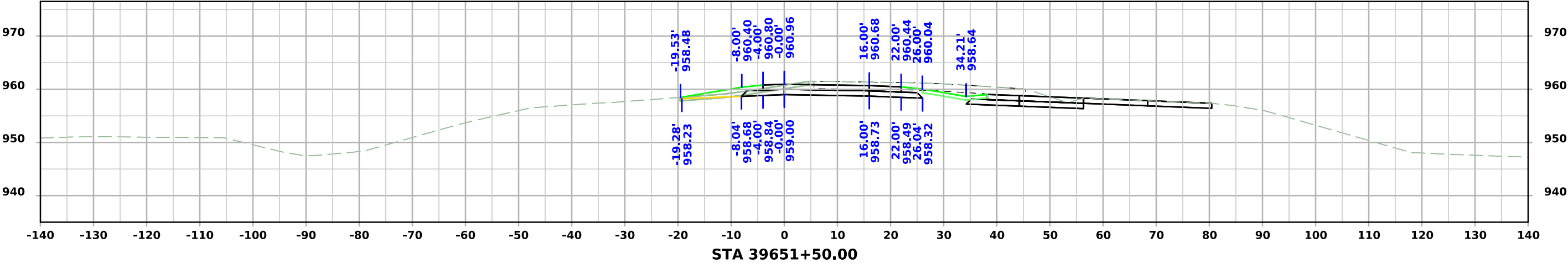
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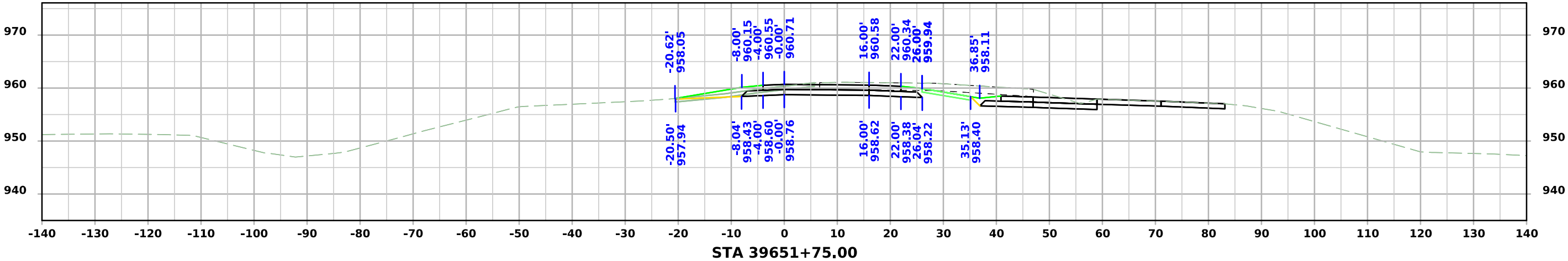
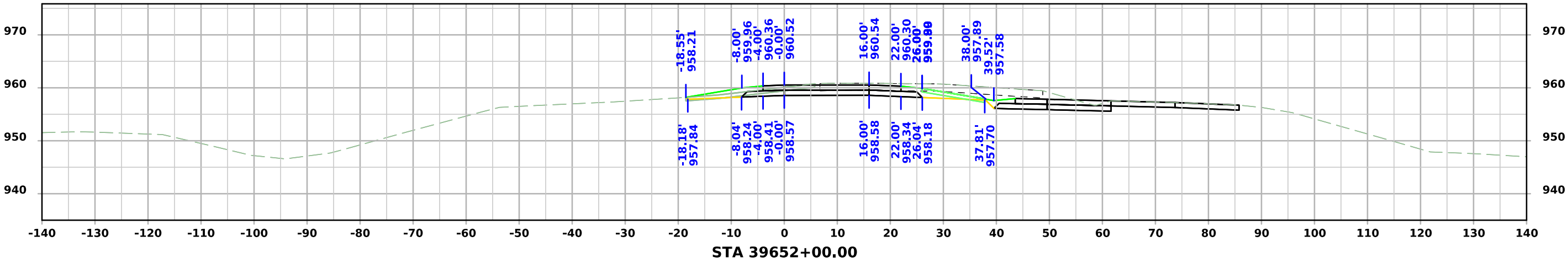
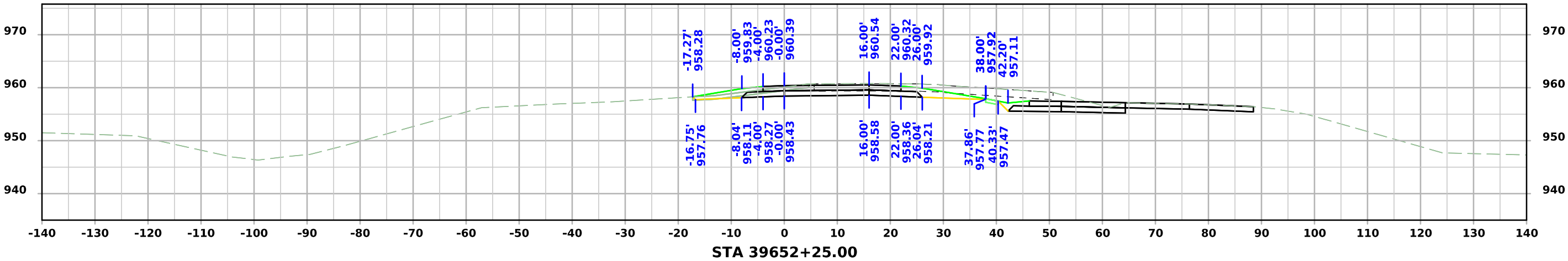
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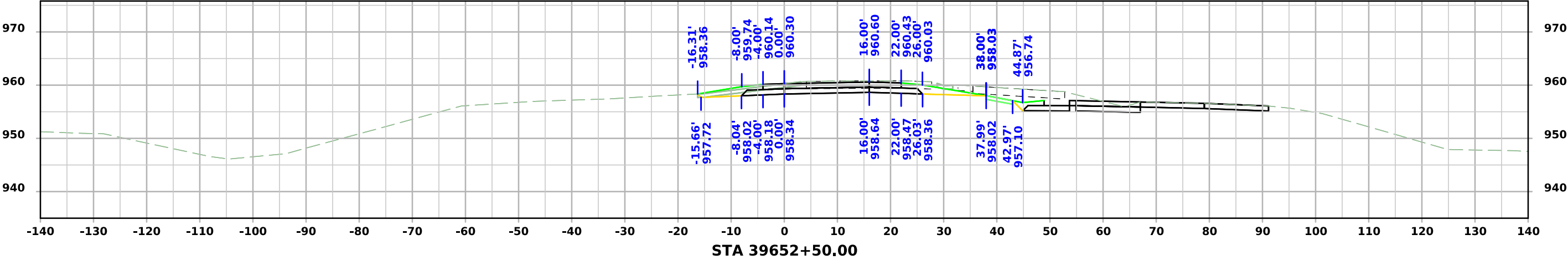
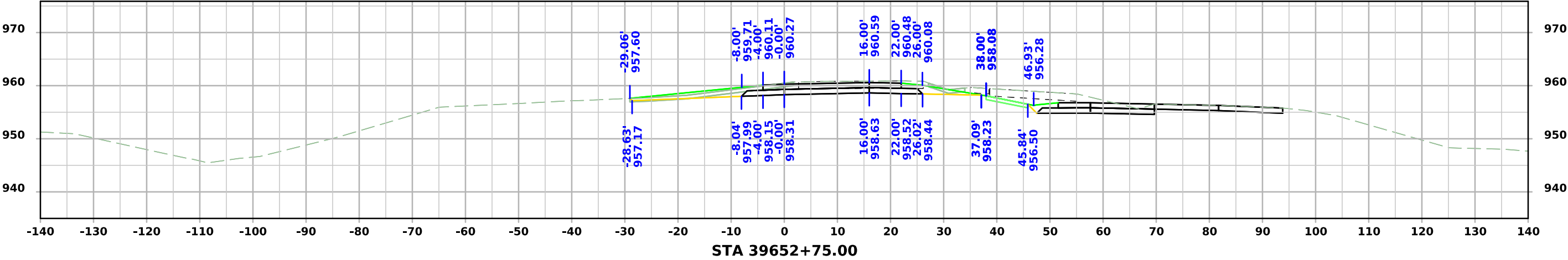
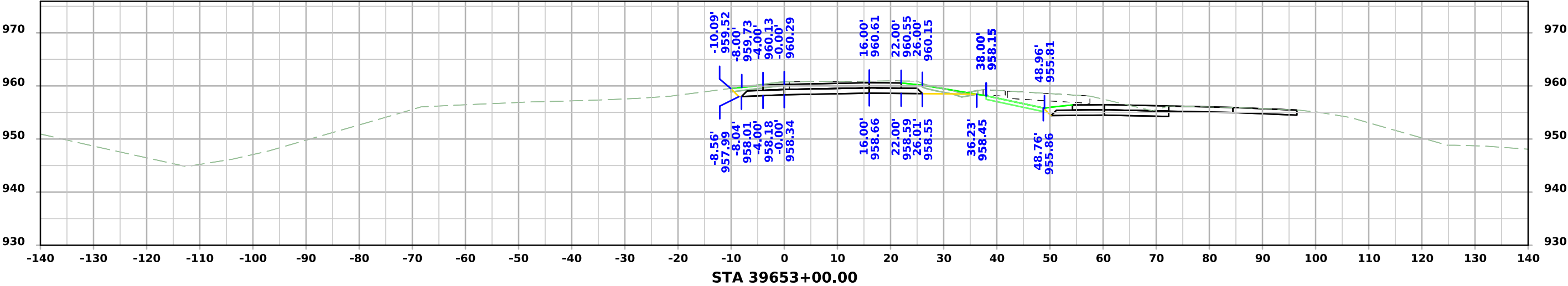
RAMP H



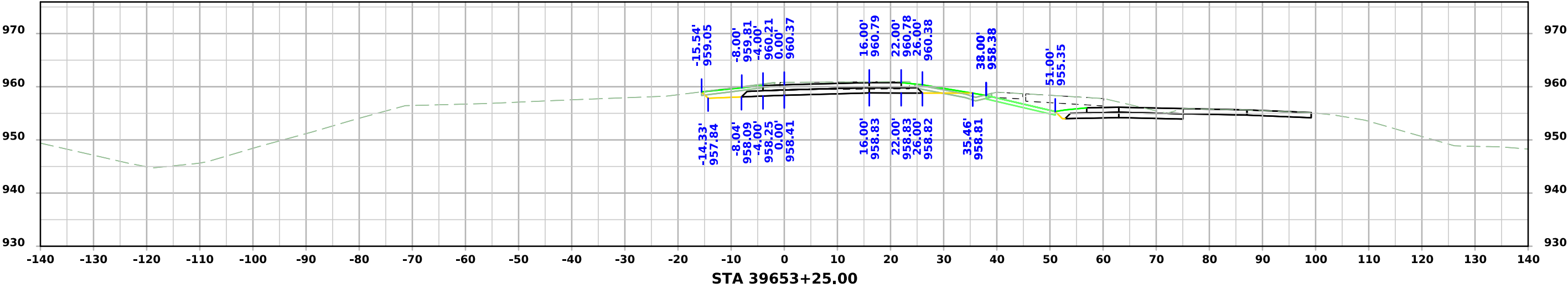
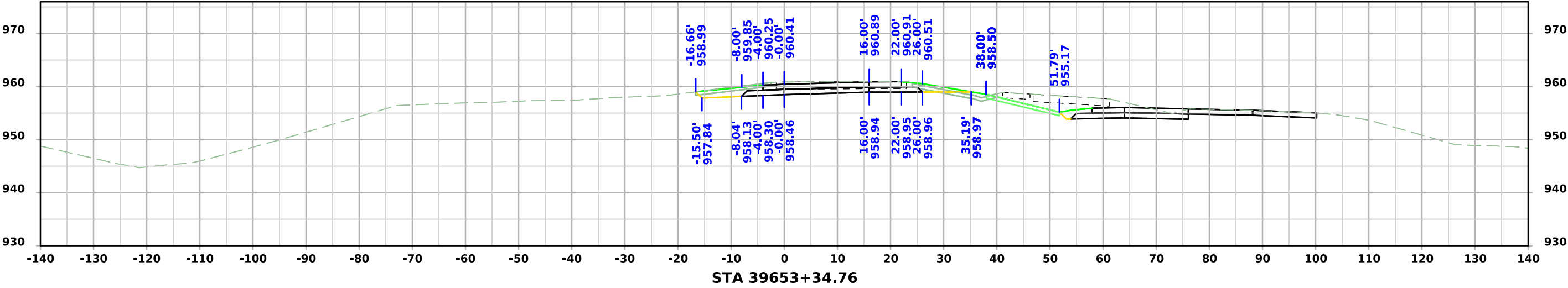
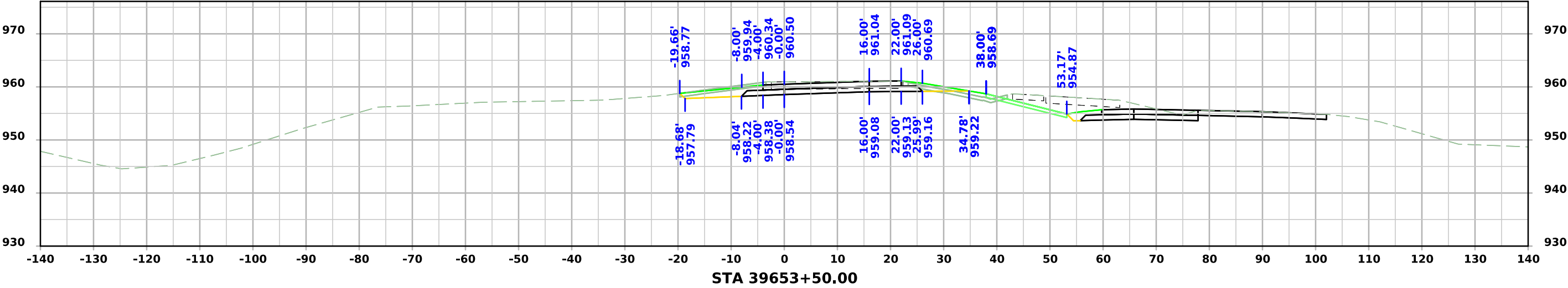
RAMP H



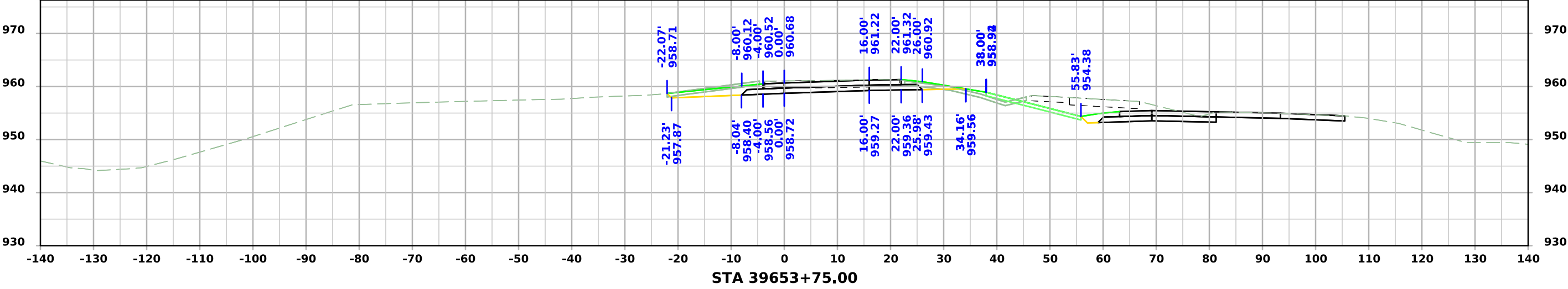
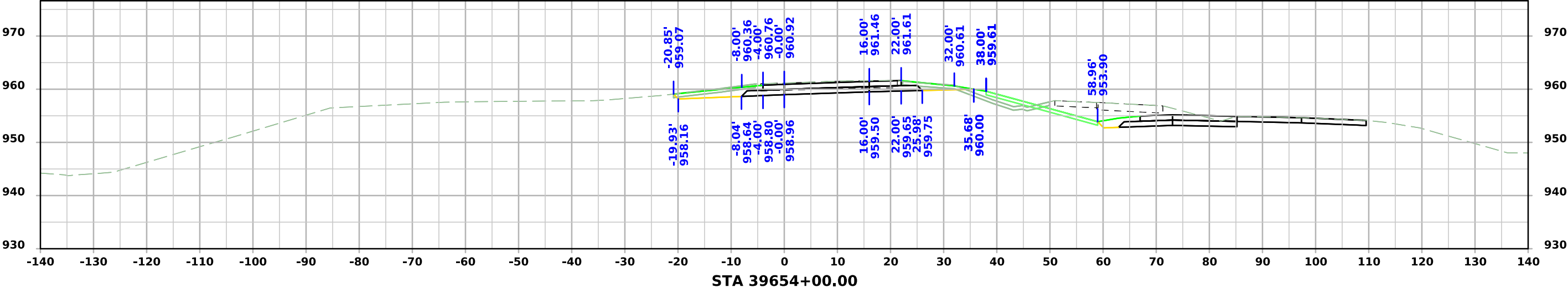
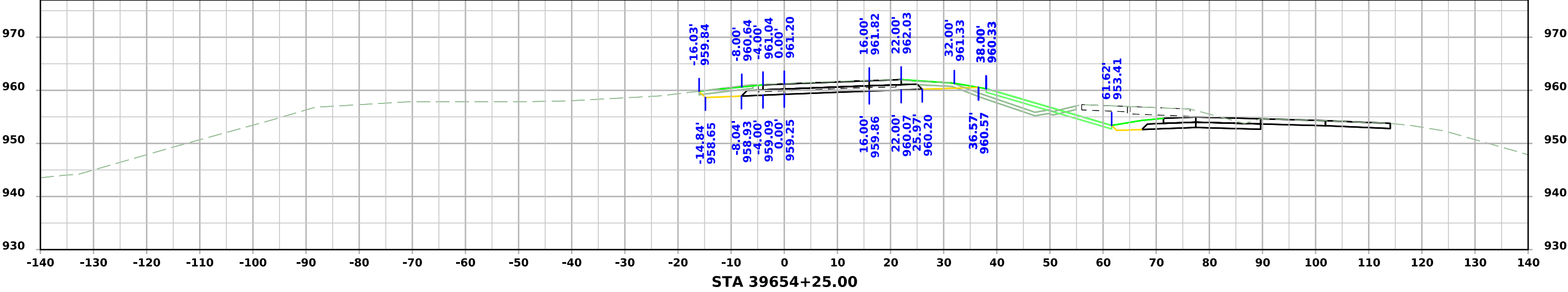
RAMP H



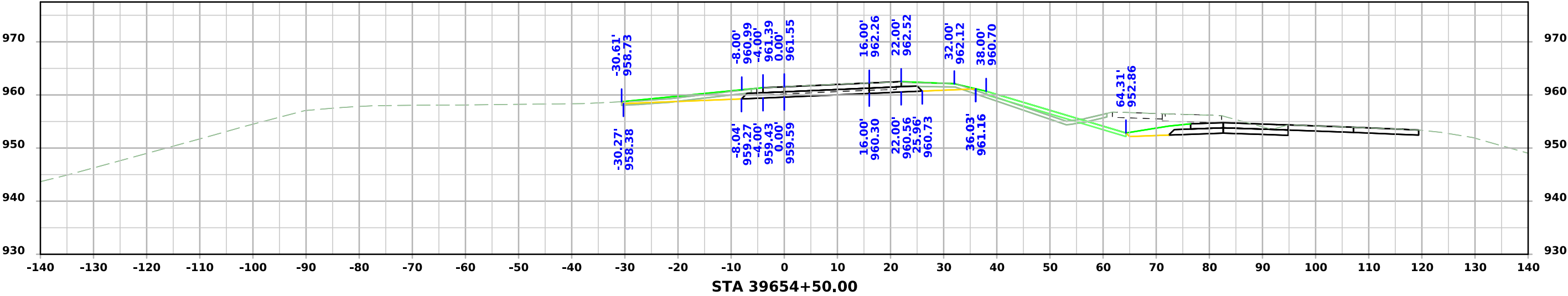
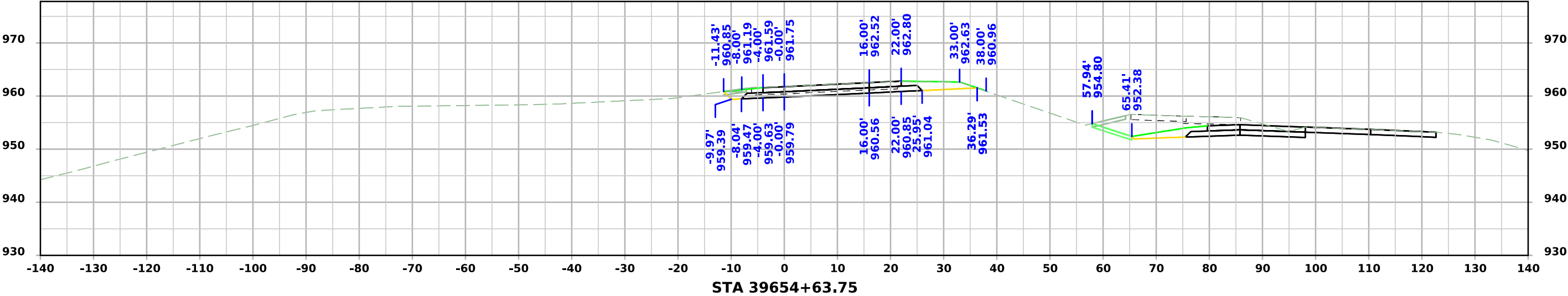
RAMP H



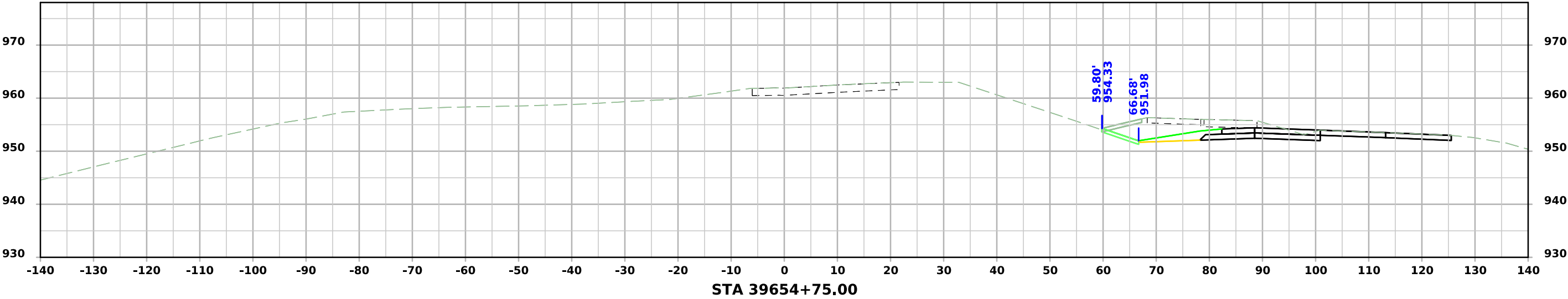
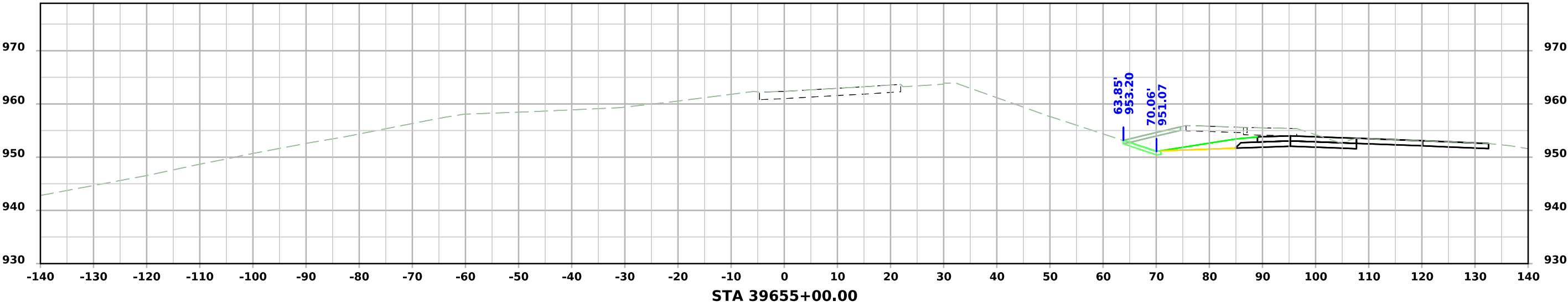
RAMP H



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