

KEOKUK CO.
PCC PAVEMENT - GRADE AND REPLACE
NHSN-092-8(36)--2R-54
 LETTING DATE
 01-19-2022

INDEX OF SHEETS	
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A Sheets	Title Sheets
* A.1	Title Sheet
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H Sheets



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

KEOKUK COUNTY

PCC PAVEMENT - GRADE AND REPLACE

IA 92 / IA 21 and IA 92 / Co Rd V33 Intersections

SCALES: As Noted

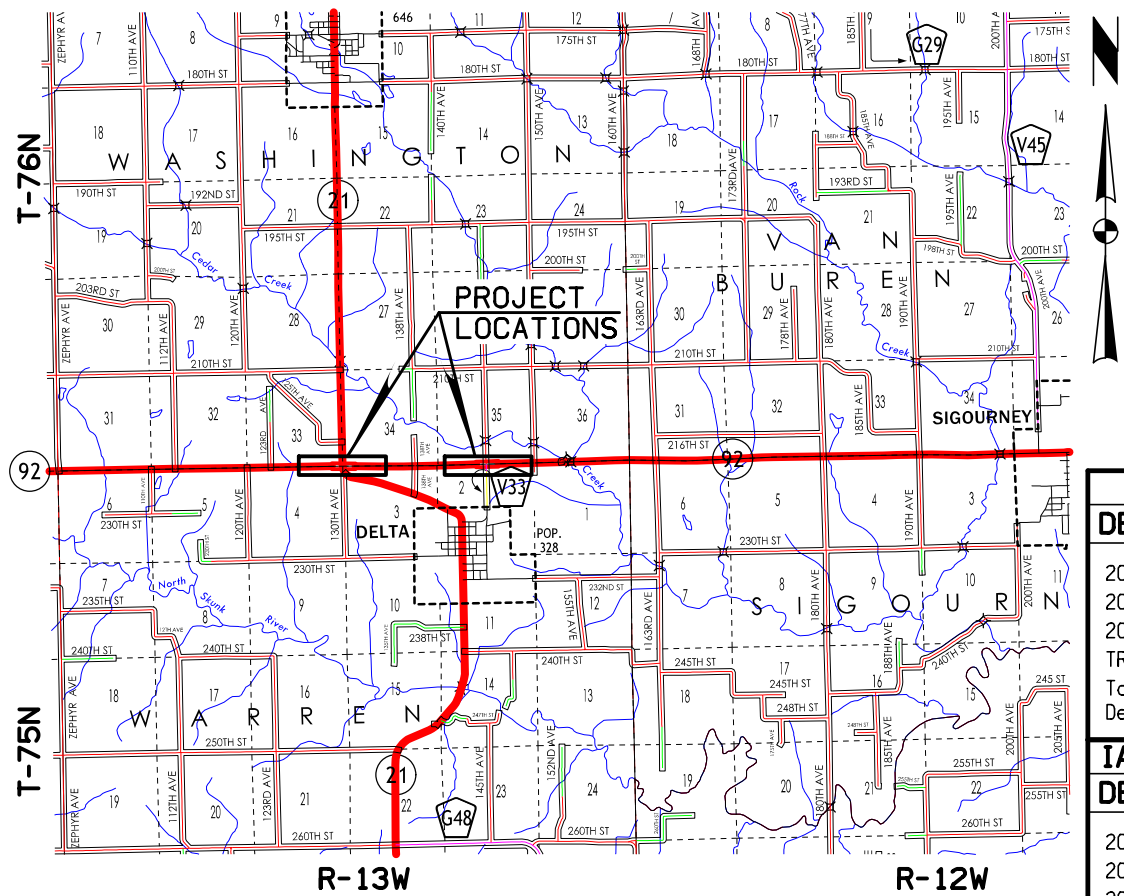
Refer to the Proposal Form for list of applicable specifications.
 Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS

TOTAL	240
PROJECT IDENTIFICATION NUMBER	16-54-092-030
PROJECT NUMBER	NHSN-092-8(36)--2R-54
R.O.W. PROJECT NUMBER	NHSN-092-8(39)--2R-54

INDEX OF SHEETS	
No.	DESCRIPTION
N Sheets	Traffic Signal Sheets
* N.1 - 10	Pavement Markings
P Sheets	Lighting Layout Sheets
* P.1	Highway Lighting Layout
P.2	Highway Lighting Details
* P.3	Lighting Removals
R Sheets	Erosion Control Sheets
RC.1 - 2	Est. Quantities, PPP, General Notes and Tabulations
T Sheets	Earthwork Quantity Sheets
* T.1A - 1B	Earthwork Legend Sheets
T.2 - 15	Earthwork Quantity Sheets
W Sheets	Mainline Cross Sections
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X.9 - 25	Stage 1A Detour
X.26 - 42	Stage 1B Detour
X.43 - 55	Stage 3 Detour
X.56 - 78	Stage 5A Detour
	* Color Plan Sheets



IA 92 / IA 21 DESIGN DATA RURAL		
2021 AADT	2870	V.P.D.
2041 AADT	3530	V.P.D.
20 -- DHV	--	V.P.H.
TRUCKS	15	%
Total Design ESALs	--	

IA 92 / Co Rd V33 DESIGN DATA RURAL		
2021 AADT	2590	V.P.D.
2041 AADT	3180	V.P.D.
20 -- DHV	--	V.P.H.
TRUCKS	11	%
Total Design ESALs	--	

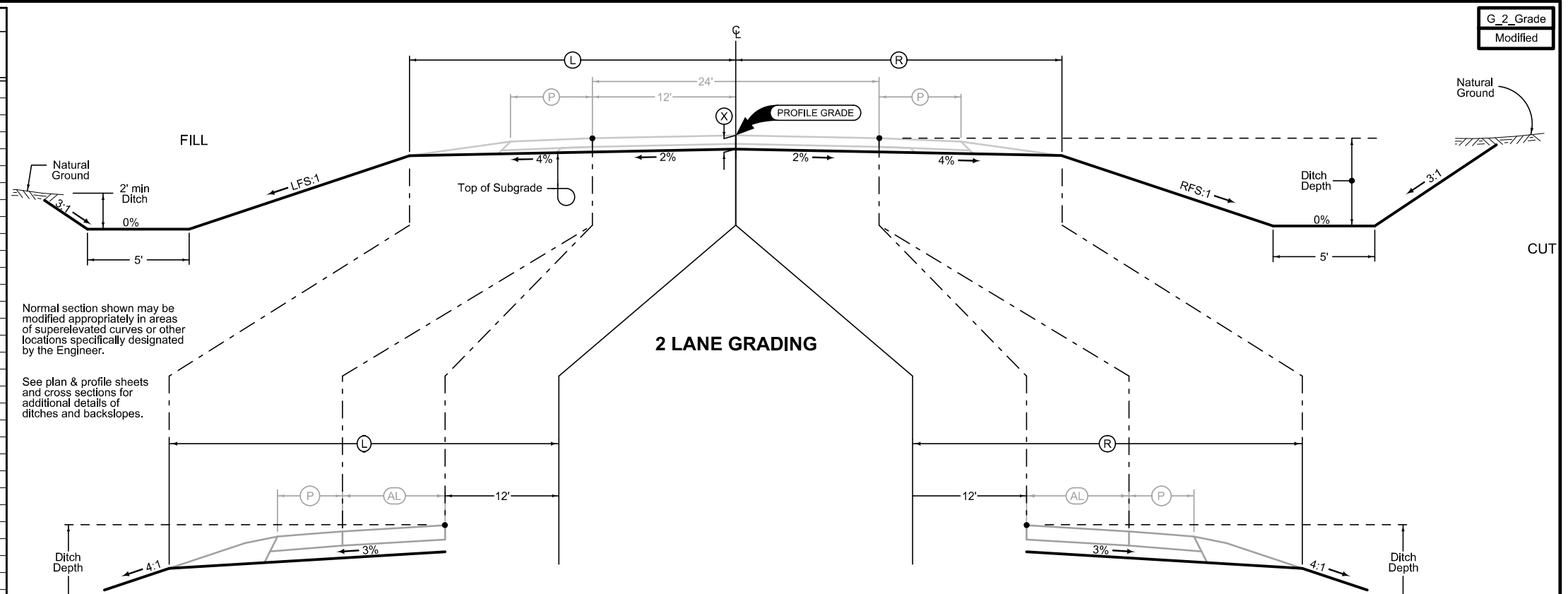
INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.1	Taylor Theulen	Primary Signature Block
P.1	Lane E. Ingram	Lighting Design

PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN - Date: 09-06-2019

ROAD IDENTIFICATION	LOCATION		DIMENSIONS				
	STATION TO STATION		Ⓐ Feet	Ⓑ Feet	ⓧ Inches	LFS	RFS
IA 92	144+11.57	144+40.00	25.3-41.3	25.3-51	21.5	3:1	4:1
	144+40.00	144+55.00				25:1	4:1
	144+55.00	147+10.00				25:1	25:1
	147+10.00	150+65.00				3:1	25:1
	150+65.00	152+00.00				3:1	4:1
	152+00.00	153+15.00				3:1	25:1
	153+15.00	154+70.00				N/A	25:1
	154+70.00	155+92.76				N/A	4:1
	157+60.00	158+67.03				25:1	N/A
	158+67.03	159+75.00	25.3-69.3	25.3	21.5	25:1	25:1
	159+75.00	167+50.00				3:1	25:1
	167+50.00	167+65.00				25:1	25:1
	167+65.00	167+80.00				25:1	4:1
	167+80.00	168+86.25				4:1	4:1
IA 92	223+61.49	223+68.00	25.3-41.3	25.3	21.5	3:1	4:1
	223+68.00	224+30.00				4:1	4:1
	224+30.00	225+80.00				4:1	25:1
	225+80.00	226+30.00				N/A	25:1
	226+30.00	227+10.00				25:1	25:1
	227+10.00	228+70.00				4:1	25:1
	228+70.00	231+75.00				3:1	25:1
	231+75.00	234+78.80				4:1	25:1
	234+78.80	235+00.00				4:1	N/A
	235+00.00	236+40.00				N/A	N/A
	236+40.00	237+73.53				4:1	N/A
	237+73.53	238+46.00				4:1	25:1
	238+46.00	244+04.00				4:1	25:1
	244+04.00	244+40.00				N/A	25:1
244+40.00	246+20.00				4:1	25:1	
246+20.00	247+50.00				N/A	25:1	
247+50.00	254+00.00				N/A	4:1	
IA 21	1154+50.00	1156+59.09	31.6	31.6	21.5	4:1	4:1
	1156+59.23	1159+12.83	31.6	31.6	21.5	25:1	25:1
V33	1231+00.00	1235+60.70	31.6	31.6	21.5	4:1	4:1



Normal section shown may be modified appropriately in areas of super-elevated curves or other locations specifically designated by the Engineer.
See plan & profile sheets and cross sections for additional details of ditches and backslopes.

Auxiliary Lane Grading

LOCATION		Ⓑ
ROAD IDENTIFICATION	STATION TO STATION	Feet
IA 92	157+57.43 - 166+03.04	76.6-44.6

Auxiliary Lane Grading

LOCATION		Ⓑ
ROAD IDENTIFICATION	STATION TO STATION	Feet
IA 92	148+08.93 - 155+93.94	31.6-57.3

Full Depth HMA Shoulder

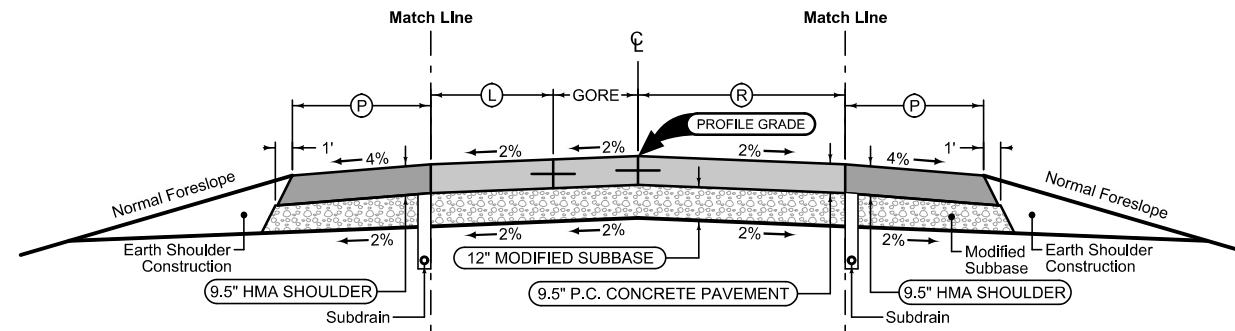
Shoulder Jointing:
Longitudinal joint: B

2_P_FullHMA_10-19-10		
STATION TO STATION		(P) Feet
134+25.00	154+88.36	10
166+03.04	178+50.00	10
218+25.00	254+00.00	10

Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_P_FullHMA_10-19-10		
STATION TO STATION		(P) Feet
134+25.00	148+08.93	10
158+61.62	178+50.00	10
218+25.00	234+78.80	10
237+73.53	254+00.00	10



Mainline Jointing:
Transverse joints: CD at 17' spacing
Longitudinal joint: L-2

2P_10-19-10				
STATION TO STATION	(L) Feet	GORE Feet	(R) Feet	
143+86.62	153+36.22	12	0 - 16	12
153+36.22	160+06.57	12	16	12
160+06.57	168+86.25	12	16 - 0	12
223+61.49	232+37.70	12	0 - 16	12
232+37.70	239+07.70	12	16	12
239+07.70	247+83.91	12	16 - 0	12

Full Depth HMA Shoulder

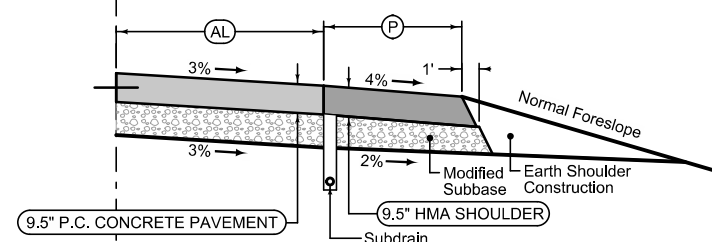
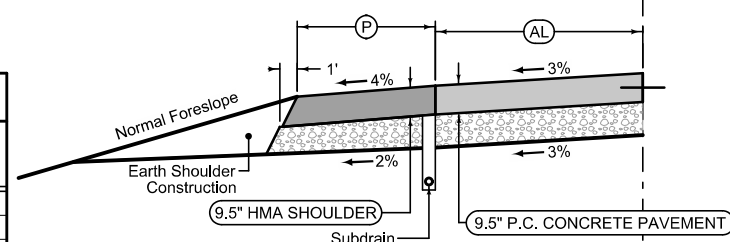
Shoulder Jointing:
Longitudinal joint: B

2_P_FullHMA_10-19-10		
STATION TO STATION		(P) Feet
157+57.43	164+83.29	6
164+83.29	166+03.04	6 - 10

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

2_AuxLane_PCC_10-18-16		
STATION TO STATION		(AL) Feet
157+57.43	166+03.04	32.7 - 0



Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

2_AuxLane_PCC_10-18-16		
STATION TO STATION		(AL) Feet
148+08.93	155+93.94	0 - 29.7

Full Depth HMA Shoulder

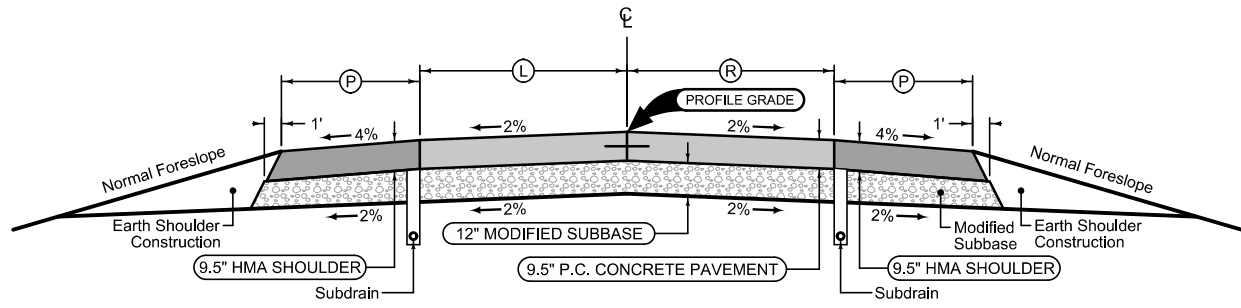
Shoulder Jointing:
Longitudinal joint: B

2_P_FullHMA_10-19-10		
STATION TO STATION		(P) Feet
148+08.93	148+97.46	10 - 6
148+97.46	155+93.94	6

Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_P_FullHMA_10-19-10		
STATION TO STATION	(P)	Feet
1154+00.00	1156+59.09	6
1156+99.23	1159+12.83	6



Mainline Jointing:
Transverse joints: CD at 17' spacing
Longitudinal joint: L-2

2P_10-19-10			
STATION TO STATION	(L)	(R)	Feet
1154+50.00	1156+59.09	11	11
1156+99.23	1159+12.83	11	11

Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

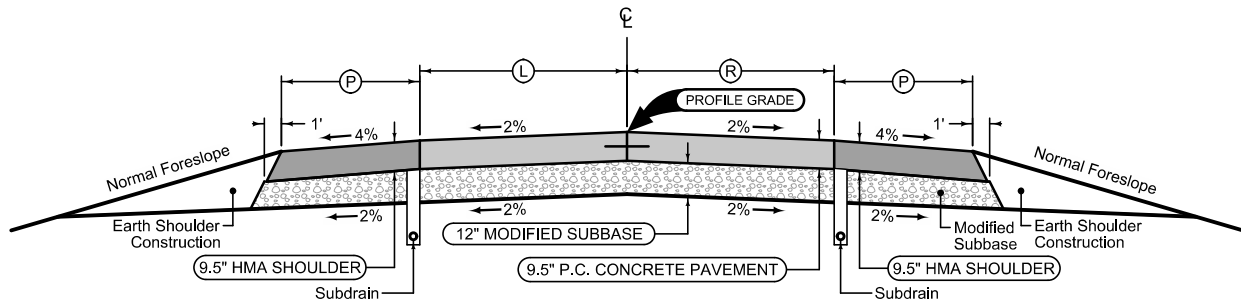
2_P_FullHMA_10-19-10		
STATION TO STATION	(P)	Feet
1154+50.00	1156+59.09	6
1156+99.23	1159+12.83	6

IA 21

Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_P_FullHMA_10-19-10		
STATION TO STATION	(P)	Feet
1231+00.00	1235+60.70	6



Mainline Jointing:
Transverse joints: CD at 17' spacing
Longitudinal joint: L-2

2P_10-19-10			
STATION TO STATION	(L)	(R)	Feet
1231+00.00	1235+60.70	12	12

Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_P_FullHMA_10-19-10		
STATION TO STATION	(P)	Feet
1231+00.00	1235+60.70	6

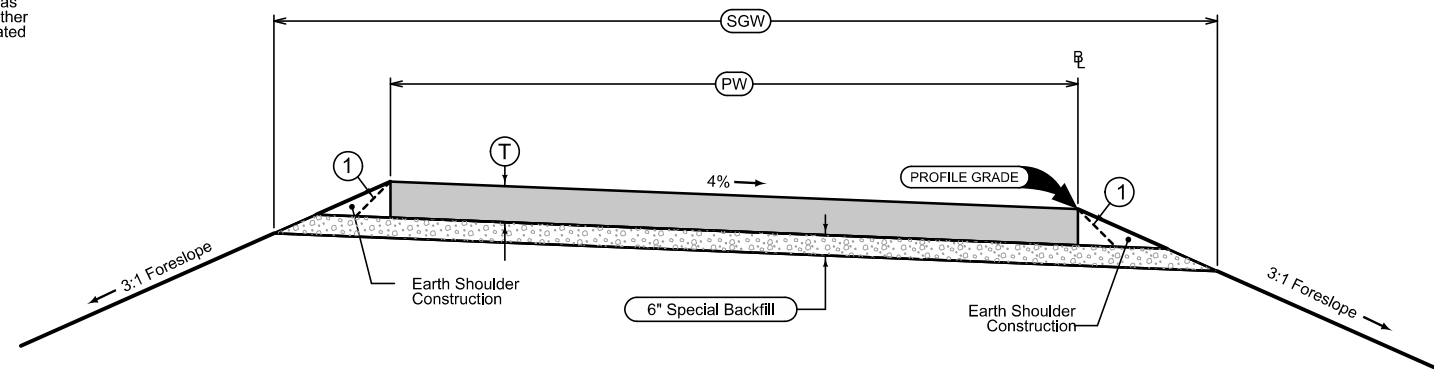
Co Rd V33

ROAD IDENTIFICATION	LOCATION STATION TO STATION		DIMENSIONS							6" Special Backfill Tons/Station	Earth Shoulder Construction Station
			HMA			PCC					
			PW Feet	T Inches	SGW Feet	PW Feet	T Inches	SGW Feet	SGW Feet		
DET01	2134+45.06	2154+63.79	VARIES	8	VARIES	VARIES	7	VARIES			
DET02	2157+65.60	2178+61.26	VARIES	8	VARIES	VARIES	7	VARIES			
DET03	3150+41.50	3156+21.14	VARIES	8	VARIES	VARIES	7	VARIES			
DET04	3157+05.03	3163+42.12	VARIES	8	VARIES	VARIES	7	VARIES			
DET05	4135+52.50	4154+70.99	VARIES	8	VARIES	VARIES	7	VARIES			
DET06	4157+65.03	4178+50.16	VARIES	8	VARIES	VARIES	7	VARIES			
DET07	5150+41.50	5154+70.23	VARIES	8	VARIES	VARIES	7	VARIES			
DET08	5157+65.03	5163+42.12	VARIES	8	VARIES	VARIES	7	VARIES			
DET09	6138+64.98	6151+12.34	VARIES	8	VARIES	VARIES	7	VARIES			
DET10	6157+66.66	6174+10.19	VARIES	8	VARIES	VARIES	7	VARIES			
DET11	7210+70.40	7235+07.11	VARIES	8	VARIES	VARIES	7	VARIES			
DET12	7236+39.34	7260+75.21	VARIES	8	VARIES	VARIES	7	VARIES			
DET13	8230+98.49	8235+35.20	VARIES	8	VARIES	VARIES	7	VARIES			
DET14	8236+36.93	8240+75.13	VARIES	8	VARIES	VARIES	7	VARIES			

Quantity calculations based on vertical pavement edges.

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

① Possible HMA 1:1 slope

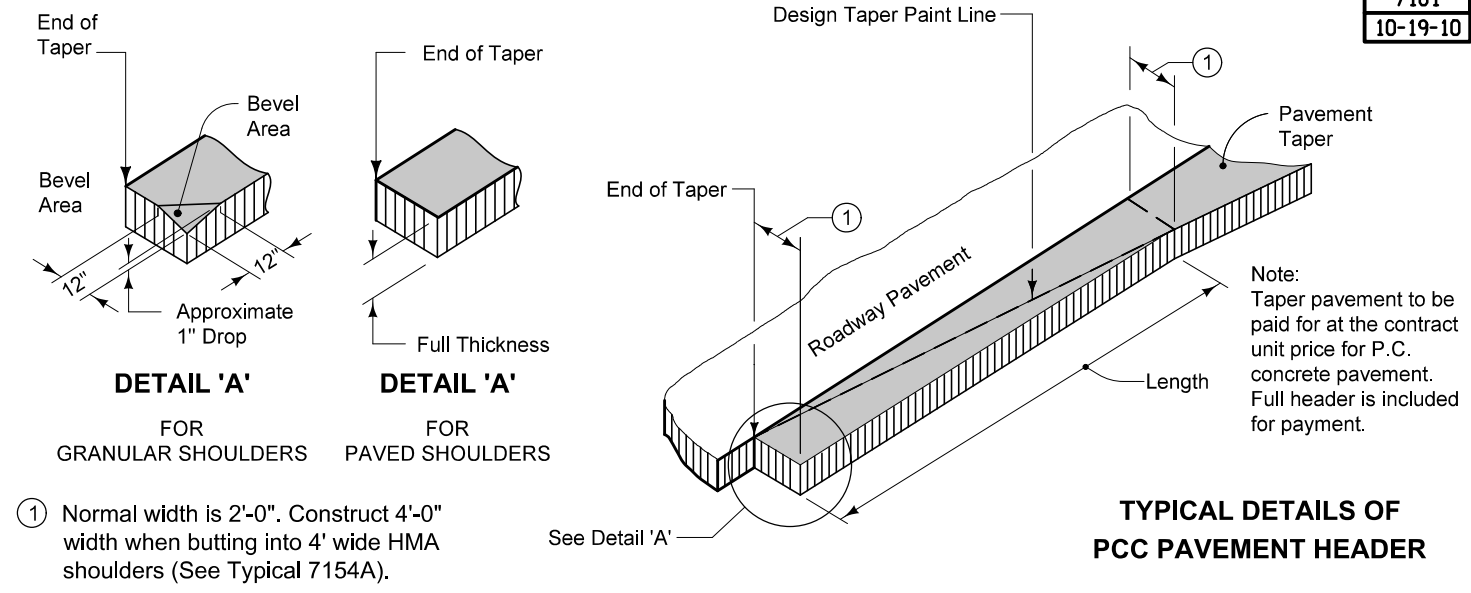


DETOUR PAVING

D_Detour
10-21-14

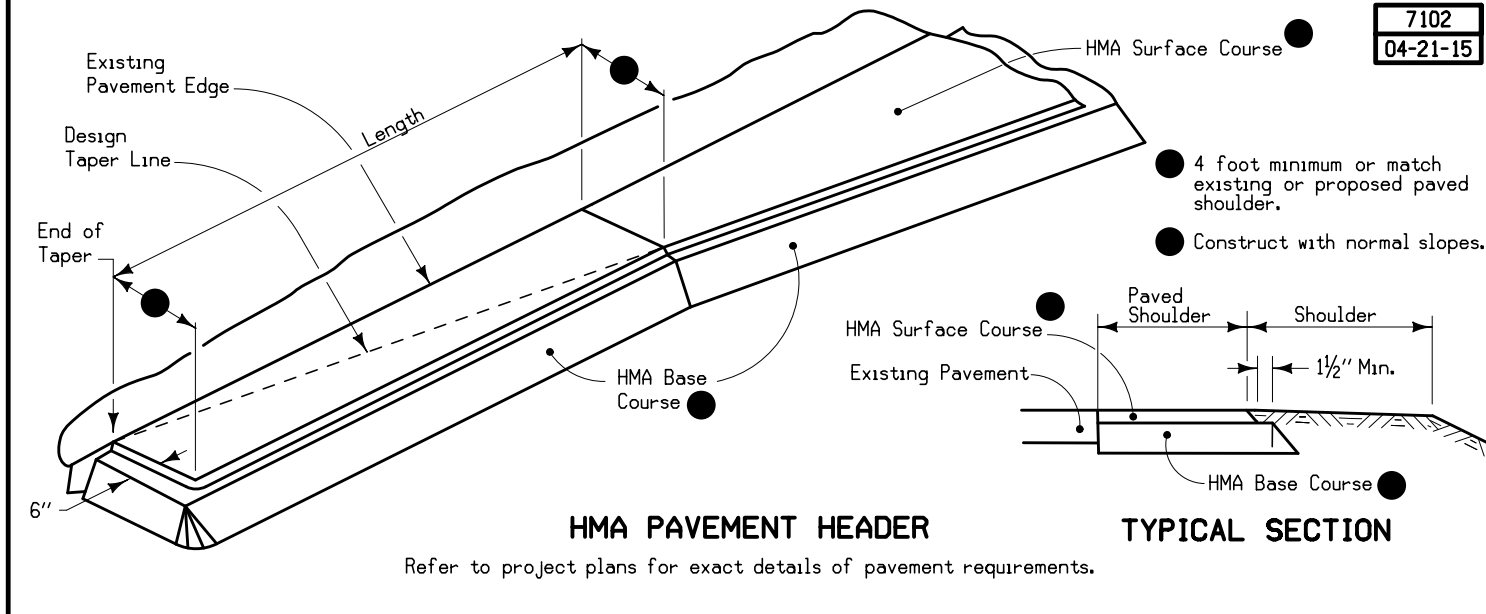
DESIGNER INFO

7101
10-19-10

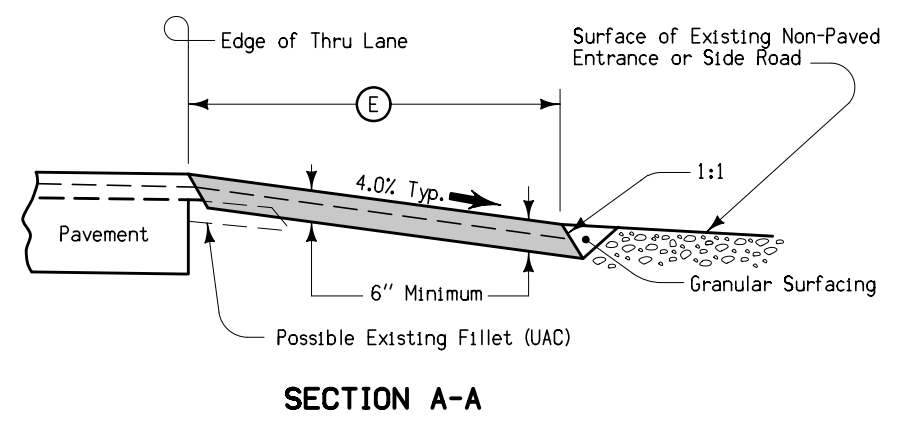
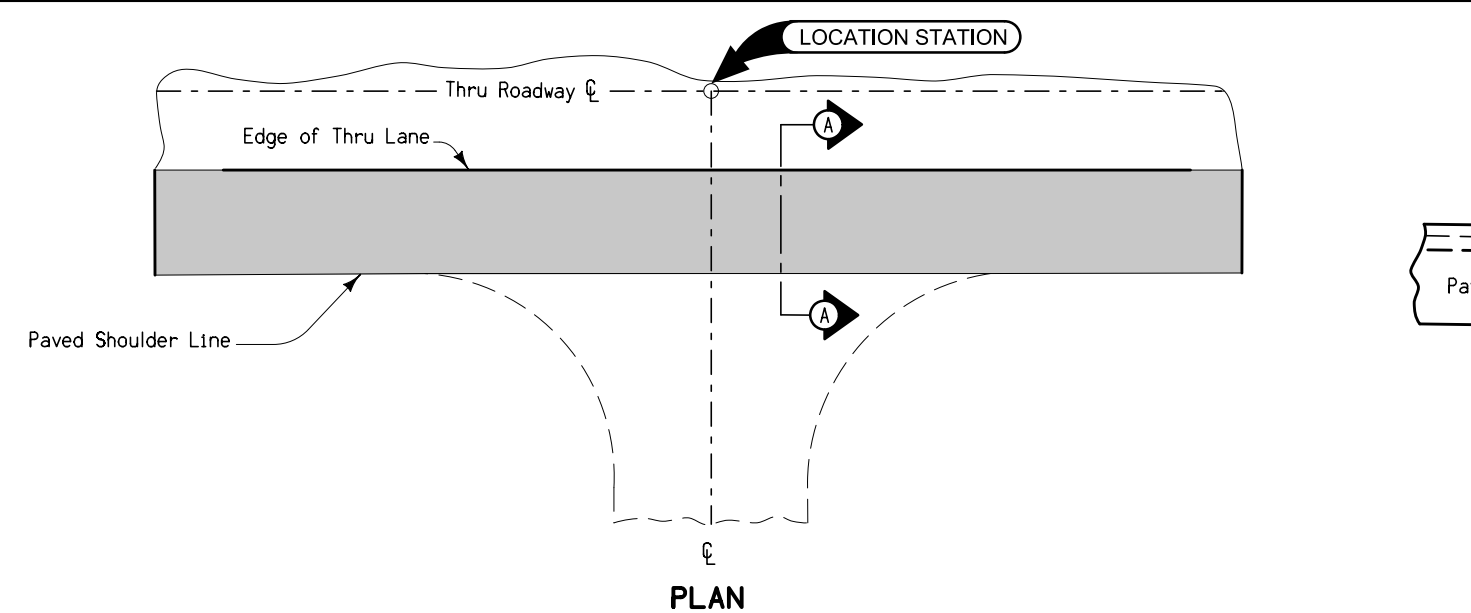


① Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).

7102
04-21-15



7148
Modified



Special shaping of existing surface prior to placement of fillet may be required by the Engineer and is incidental to other work on the project.
Quantities included with mainline quantities.

FILLET FOR NON-PAVED ENTRANCES OR SIDE ROADS

100-1D
10-18-05

PROJECT DESCRIPTION

This project involves the reconstruction of the IA 92 / IA 21 intersection and the IA 92 / County Road V33 intersection in Keokuk County.

100-1C
04-17-12

**ESTIMATED PROJECT QUANTITIES
(UP TO A 5 DIVISION PROJECT)**

Item No.	Item Code	Item	Unit	Estimated						As Built				
				Division 1	Division 2	Division 3	Division 4	Division 5	Total	Division 1	Division 2	Division 3	Division 4	Division 5

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description

105-4
10-18-11

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
BA-401	10-15-19	Temporary Barrier Rail (Precast Concrete)
BA-500	04-19-16	Temporary Crash Cushions Sand Barrel
DR-101	04-18-17	Pipe Culvert (Bedding and Backfill)
DR-102	04-21-15	Pipe Culvert (Cover and Camber)
DR-103	04-21-15	Pipe Culvert (Installation Details)
DR-121	10-17-17	Connected Pipe Joints
DR-201	10-16-18	Concrete Aprons
DR-203	04-21-15	Metal Pipe Aprons and Beveled Ends
DR-213	10-17-17	Pipe Apron Guard
DR-303	10-17-17	Subdrains (Longitudinal)
DR-306	10-16-18	Precast Concrete Headwall for Subdrain Outlets
DR-601	04-18-17	Reinforced Concrete Pipe Culvert
DR-621	04-18-17	Pipe Extension
EC-101	04-19-16	Wood Excelsior Mat for Ditch Protection
EC-103	04-21-15	Wood Excelsior Mat for Slope Protection
EC-104	04-17-18	Turf Reinforced Mat (TRM)
EC-201	10-15-19	Silt Fence
EC-204	04-18-17	Perimeter and Slope Sediment Control Devices
EC-303	04-16-19	Stabilized Construction Entrance
EC-502	04-21-15	Seeding in Rural Areas
EC-601	10-16-18	Temporary Sediment Control Basin
EW-101	10-17-17	Embankment and Rebuilding Embankments
EW-102	10-20-15	Allowable Placement of Unsuitable Soil in Embankments
EW-103	10-20-15	Embankment Subgrade Treatment, Moisture Density Control and Special Compaction
EW-105	04-21-15	Reshaping Slopes and Ditches
EW-503	10-20-15	Side Road Grading
LI-101	10-21-14	Light Pole Location
LI-103	10-21-14	Conduit and Precast Handholes
LI-130	10-17-17	Temporary Floodlighting Luminaires
LI-141	10-21-14	Electrical Installation (Roadway Ducts)
LI-142	04-21-15	Electrical Installation (Bases)
LI-201	04-18-17	Light Pole Foundation
LI-210	10-21-14	Transformer Base (Cast Aluminum)
PM-110	10-16-18	Line Types
PM-111	04-21-15	Symbols and Legends
PM-120	10-21-14	Stop Lines and Islands
PM-522	04-16-19	Two-Lane Roadway with Left Turn Lanes
PV-3	04-16-19	Safety Edge
PV-101	04-16-19	Joints
SI-101	04-19-16	Locations - Type 'A' Signs
SI-131	10-18-16	Installation - Type 'A' Signs
SI-133	10-17-17	Installation - Type "A" Sign Shim
SI-171	04-18-17	Reference Location Sign Posts
SI-172	04-19-16	Delineators
SI-881	04-16-19	Special Signs for Workzones
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-81	10-15-19	Restricted Width Signing (Less Than 14.5 Feet)
TC-202	04-21-15	Work Within 15 ft of Traveled Way
TC-233	10-17-17	Pavement Marking Operations Two-Lane
TC-252	04-19-16	Routes Closed to Traffic

SURVEY SYMBOLS

- FENO FENO Monument
- CP Control Point
- PLG Location of General Photo
- PCP Photo Control Point
- CU Back of Curb
- GU Gutter In Front of Curb
- EP Edge of Paved Roads (ML or SR)
- SH Paved Shoulder
- D Centerline Draw or Stream (Down)
- GR Ground Shot
- LIN Miscellaneous Line
- SNP Unpaved Shoulder
- C Centerline BL of Road (ML or SR)
- TIL Tile Line
- OUT Tile Outlet
- ENU Edge Unpaved Entrance & Parking
- ENT Centerline BL of Entrance
- BL Topo Breakline
- EG Edge of Gravel Road
- DTM Photogrammetry Elv Control Check
- PRO Profile Shot
- PIP Pipe Culvert
- SOP Size of Pipe or Culvert
- CUL Culvert
- IN Storm Sewer Intake
- UE Utility Elevation
- CON Concrete or A/C Slab
- REF Reference Tie Point
- PI Tangent Point
- PC Curve Point
- PT Curve Point
- SCR Section Corner
- POT Tangent Point
- WC Wild Card (Misc. Field Shot)
- T1 - TL1D Telephone Line Co. 1 - Quality D
- F0 - FO1D Fiber Optic Co. 1 - Quality D
- TP TPD Telephone Pedestal
- E1 - EL1D Electric Line Co. 1 - Quality D
- T2 - TL2D Telephone Line Co. 2 - Quality D
- LUM Luminaire
- PPA Power Pole Co. 1
- PR Electric Riser Pole
- W - WL1D Water Line Co. 1 - Quality D
- WV Water Valve
- ROW Right of Way Mark
- FW Wire Fence
- DU Centerline Draw or Stream (Up)
- GDL Guard Rail Steel

UTILITY LEGEND

- T1 - Windstream
Kelly Eggers
101 West Madison
Mt. Pleasant, IA 52641
319-385-5004
- F0 - Alliant Energy
Heather Doe
200 1st St. SE
Cedar Rapids, IA 52401
319-786-8196
- T2 - ICN
Mike Broderick
400 E 14th Street
Grimes State Office Bldg
Des Moines, IA 50319
515-725-4610
- W - Wapello Rural Water Association
Krista Huffman
PO Box 538
Ottumwa, IA 52501
641-682-8351
- E1 - State of Iowa Highway Maintenance
Supervisor - Transportation
Douglas Swan
207 E. 227th Street
Fairfield, IA 52556
641-472-5367

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	Description
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.	Description	
Yellow	(4)	Highlight for Critical Notes or Features
Red	(3)	Delineates Restricted Areas
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	Description
Green	(2)	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

Pavement Obliterate

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

SURVEYED UTILITY OWNER SYMBOLS

Sub-Surface Utility Mapping Quality Level is in accordance with CI/ASCE 38-02 Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data.

Remark Abbreviations

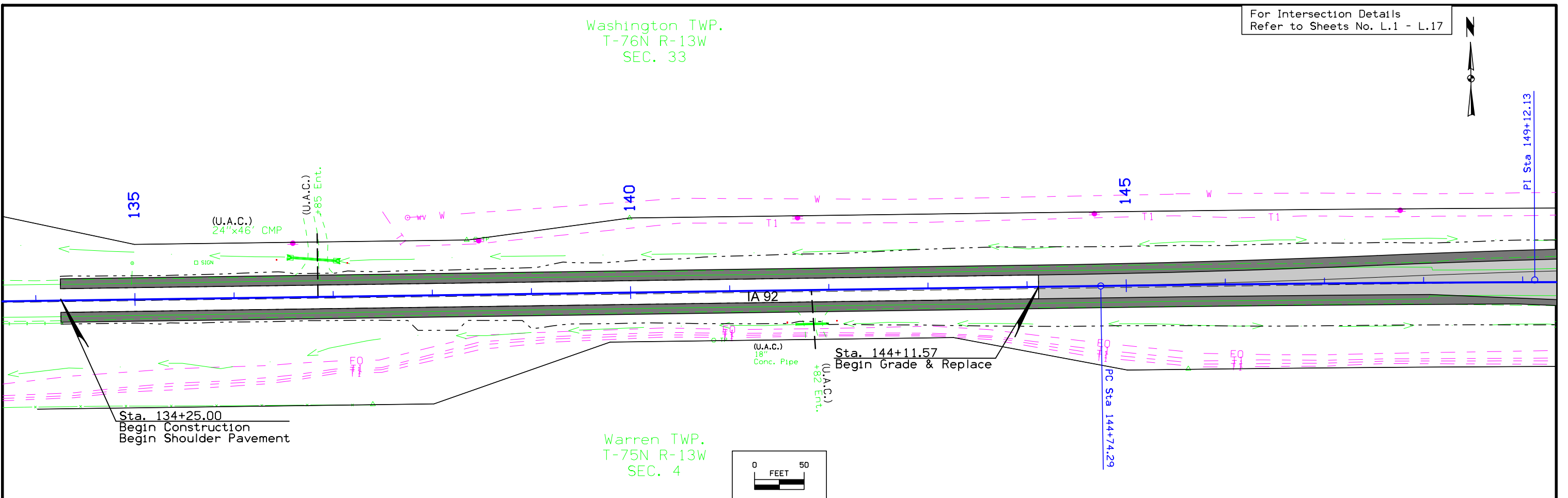
- QLA Quality Level A Highest guideline quality level
- QLD Quality Level D Lowest guideline quality level

- T1 - TL1D Windstream Communications - Quality D
- F0 - FO1D Windstream Communications - Quality D
- E1 - EL1D Iowa DOT- Quality D
- T2 - TL2D Iowa Communications Network - Quality D
- PPA Alliant Energy
- PR Iowa DOT
- W - WL1D Wapello Rural Water Association - Quality D

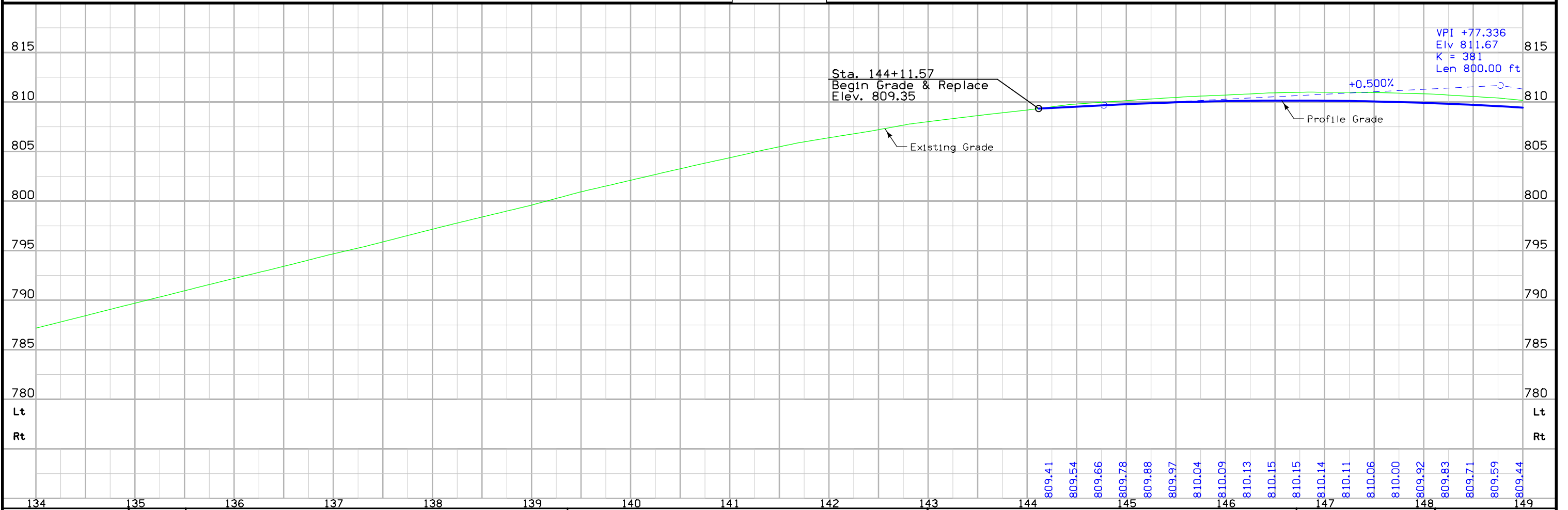
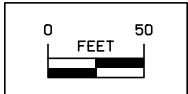
PLAN AND PROFILE
LEGEND AND SYMBOL
INFORMATION SHEET
(COVERS SHEET SERIES D, E, F, & K)

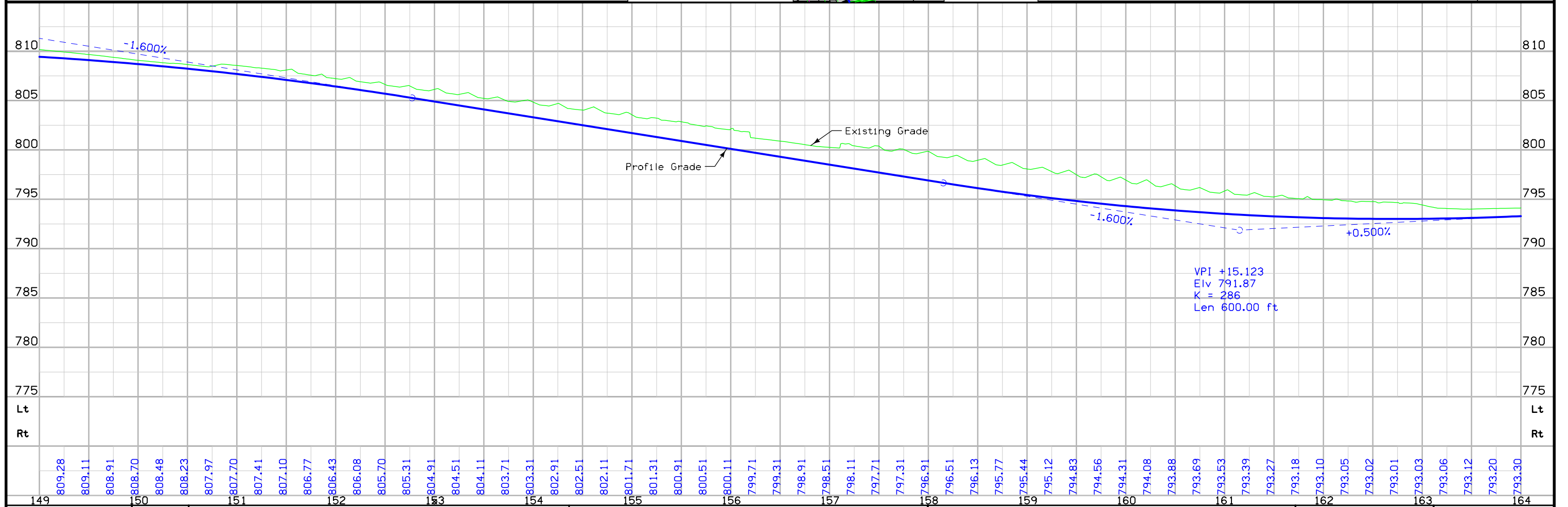
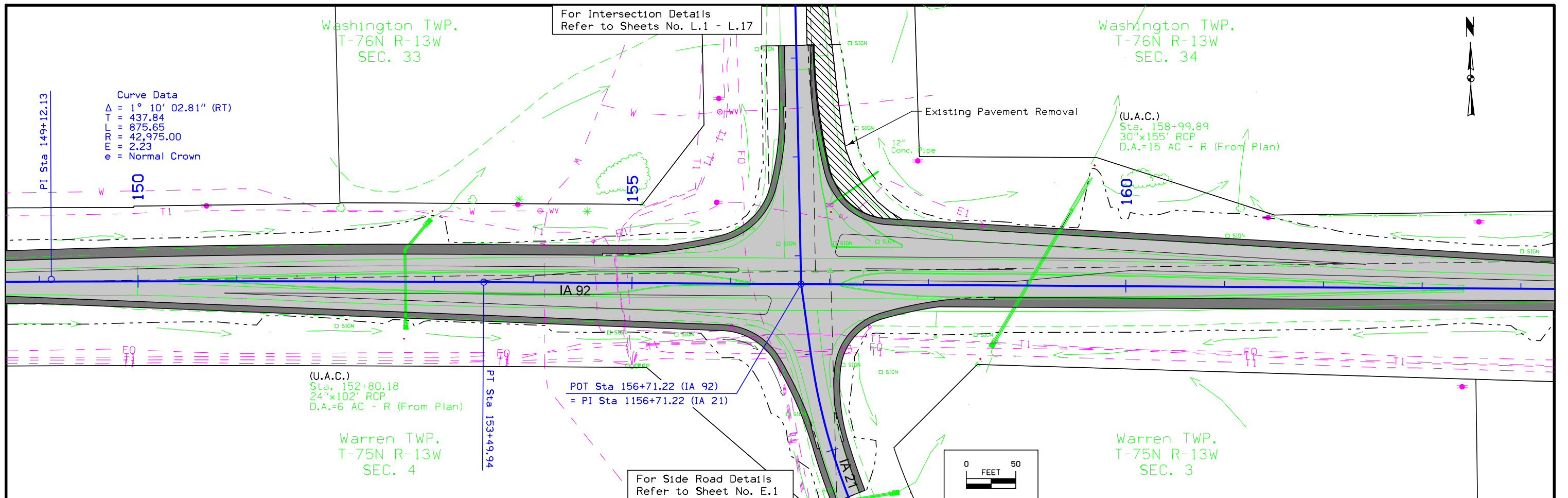
Washington TWP.
T-76N R-13W
SEC. 33

For Intersection Details
Refer to Sheets No. L.1 - L.17



Warren TWP.
T-75N R-13W
SEC. 4

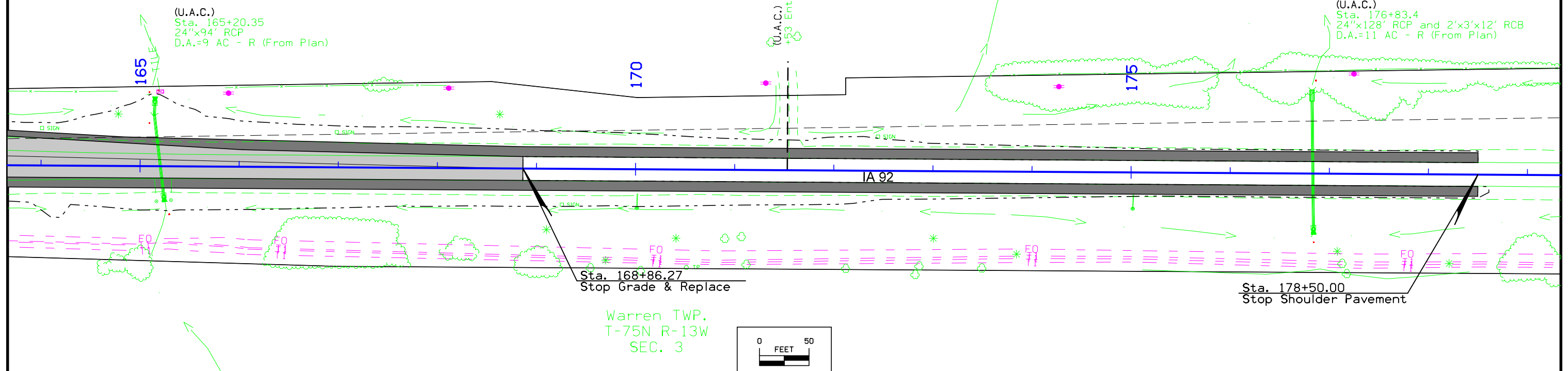




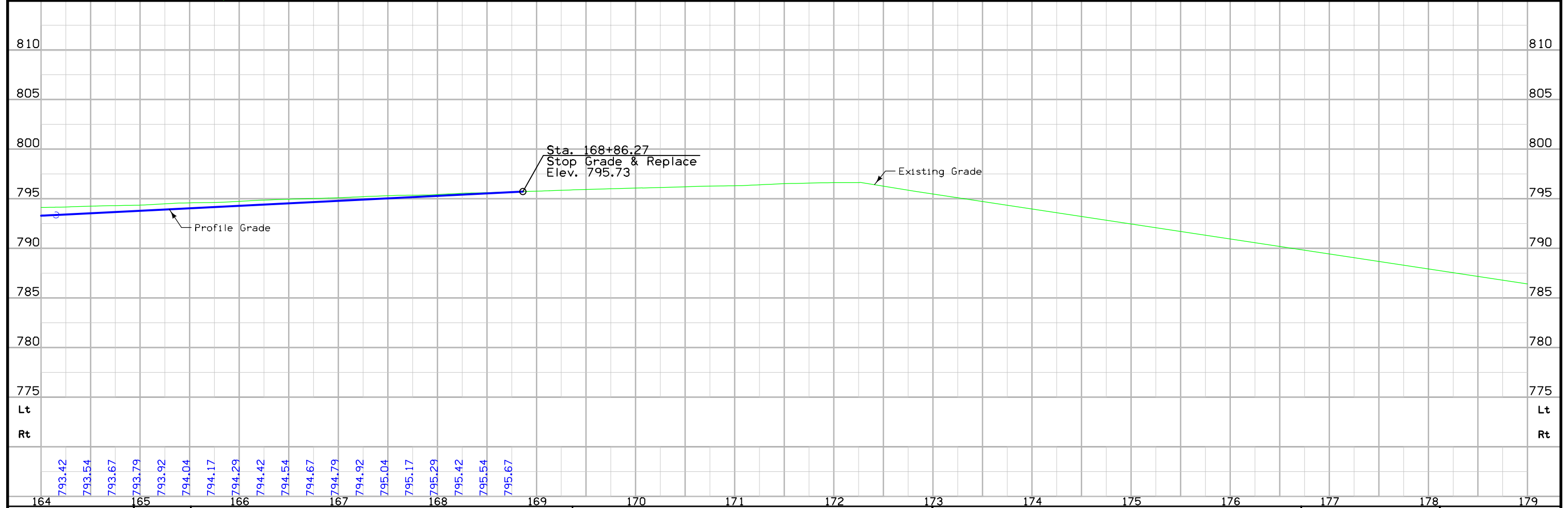
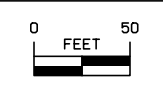
FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	D.3
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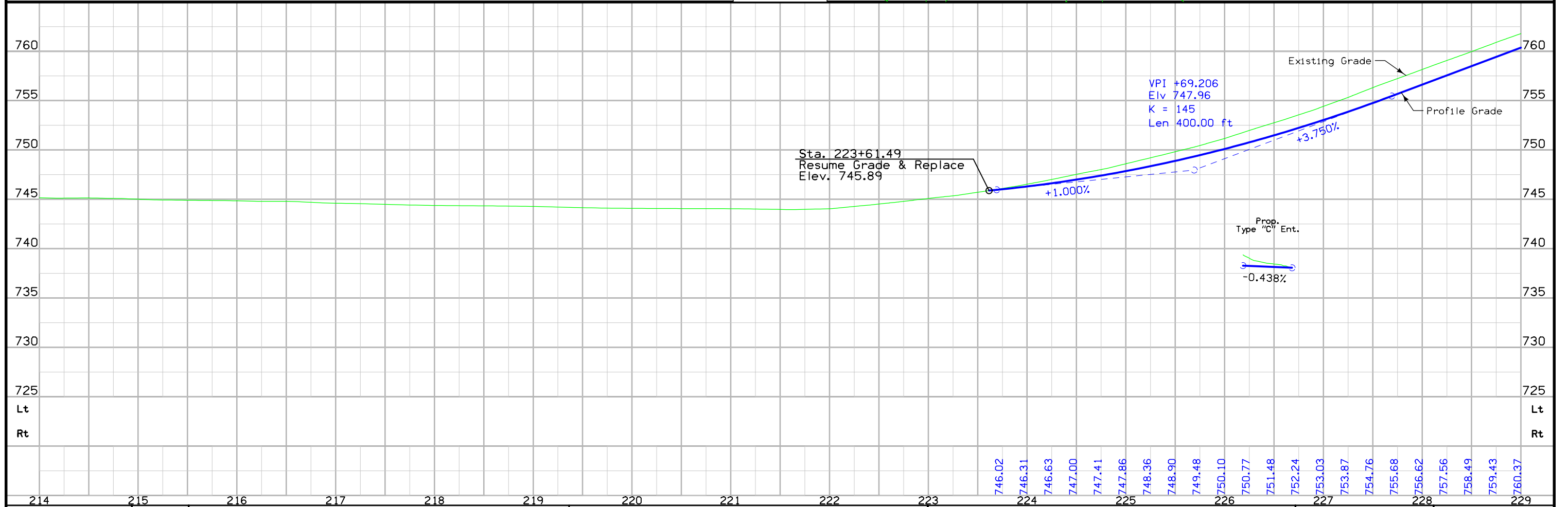
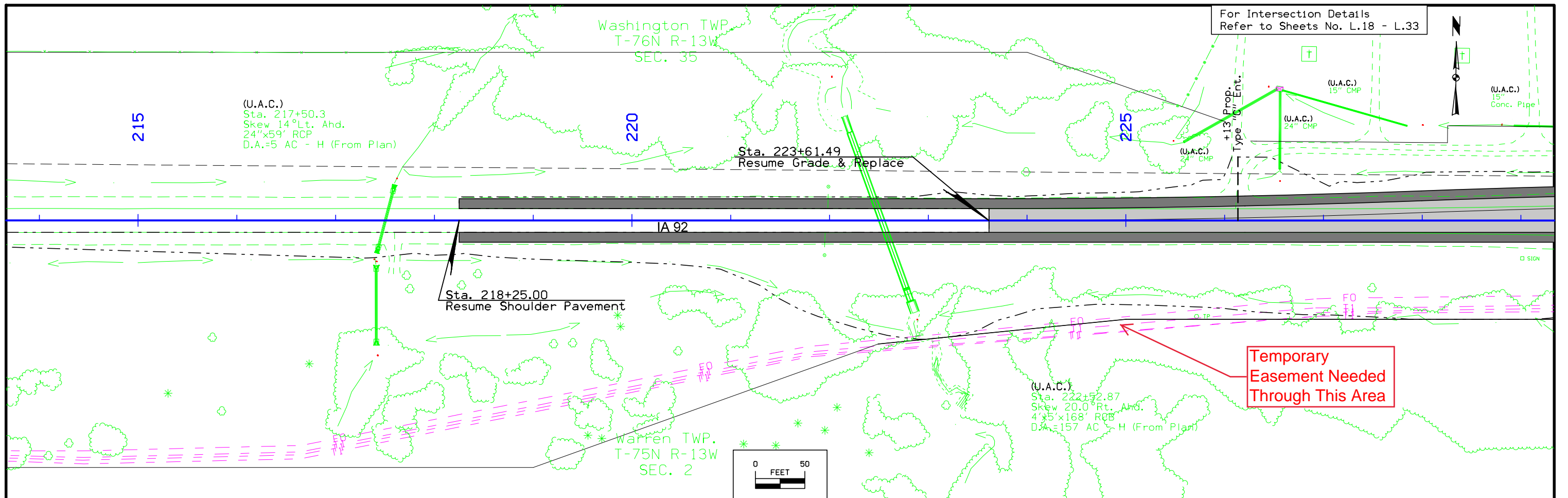
For Intersection Details
Refer to Sheets No. L.1 - L.17

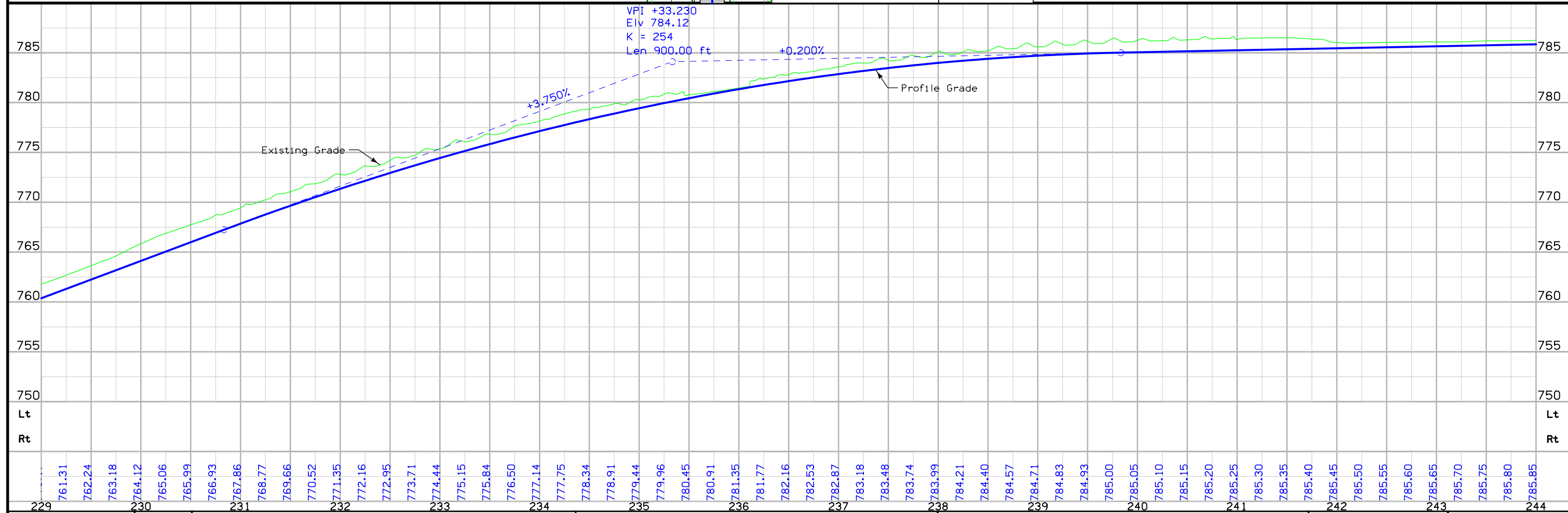
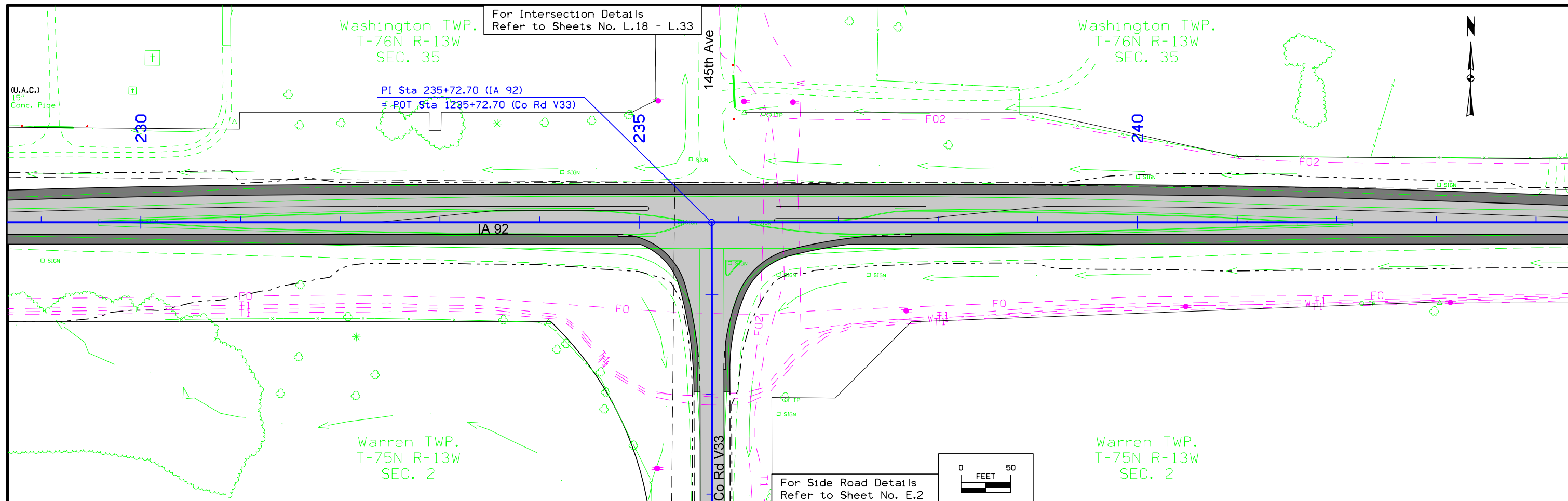
Washington TWP.
T-76N R-13W
SEC. 34



Warren TWP.
T-75N R-13W
SEC. 3

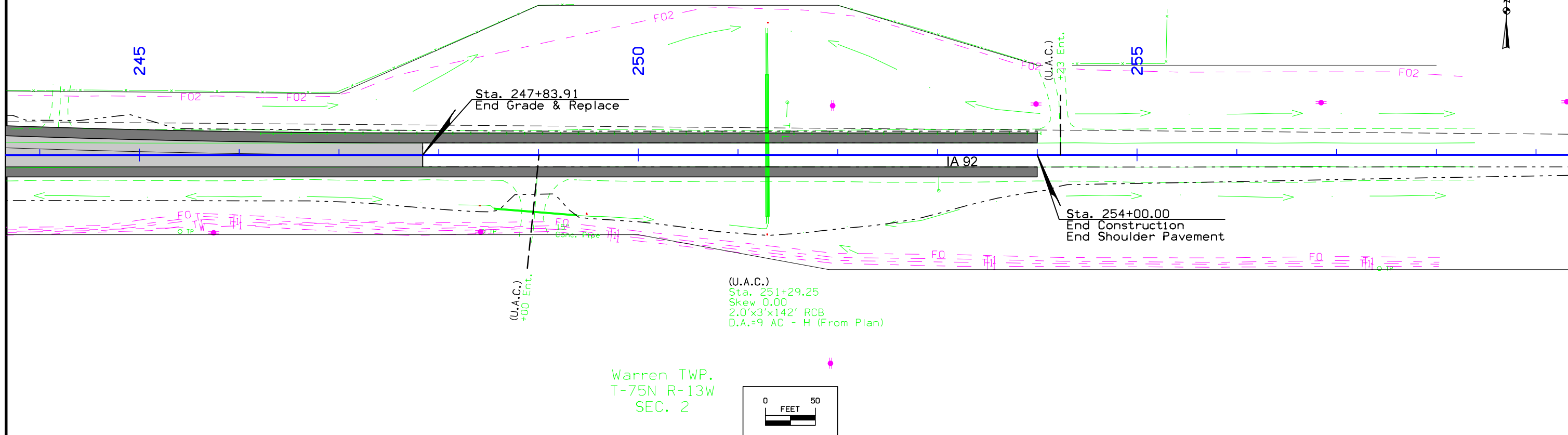




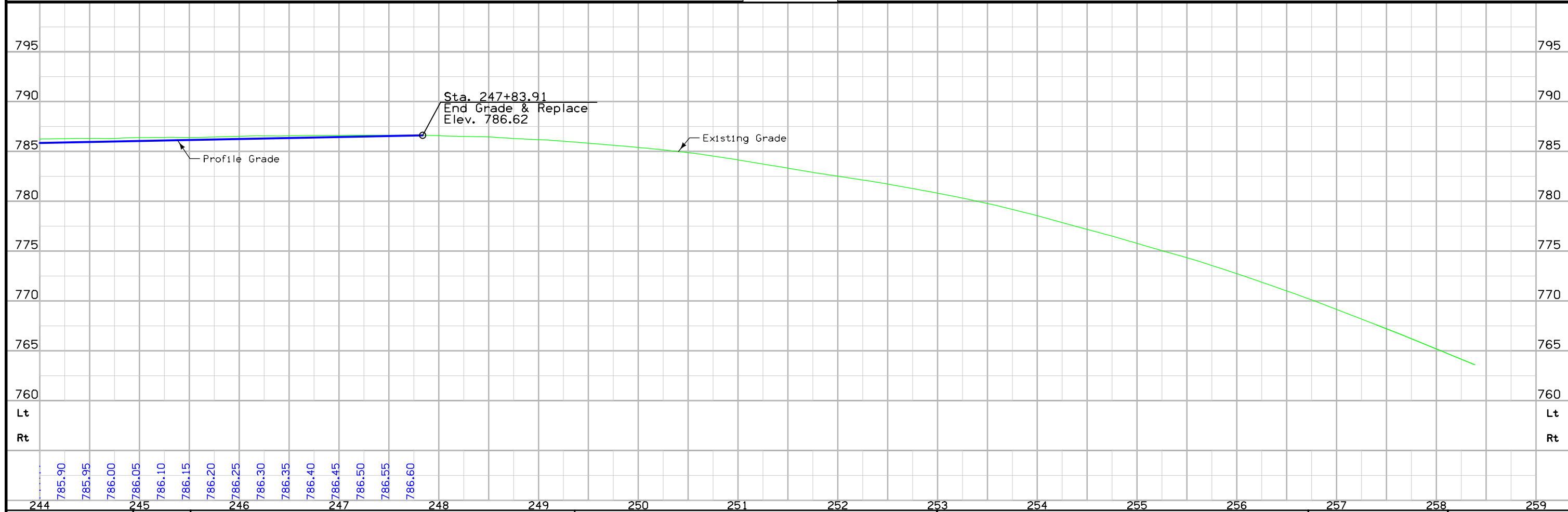
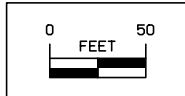


For Intersection Details
Refer to Sheets No. L.18 - L.33

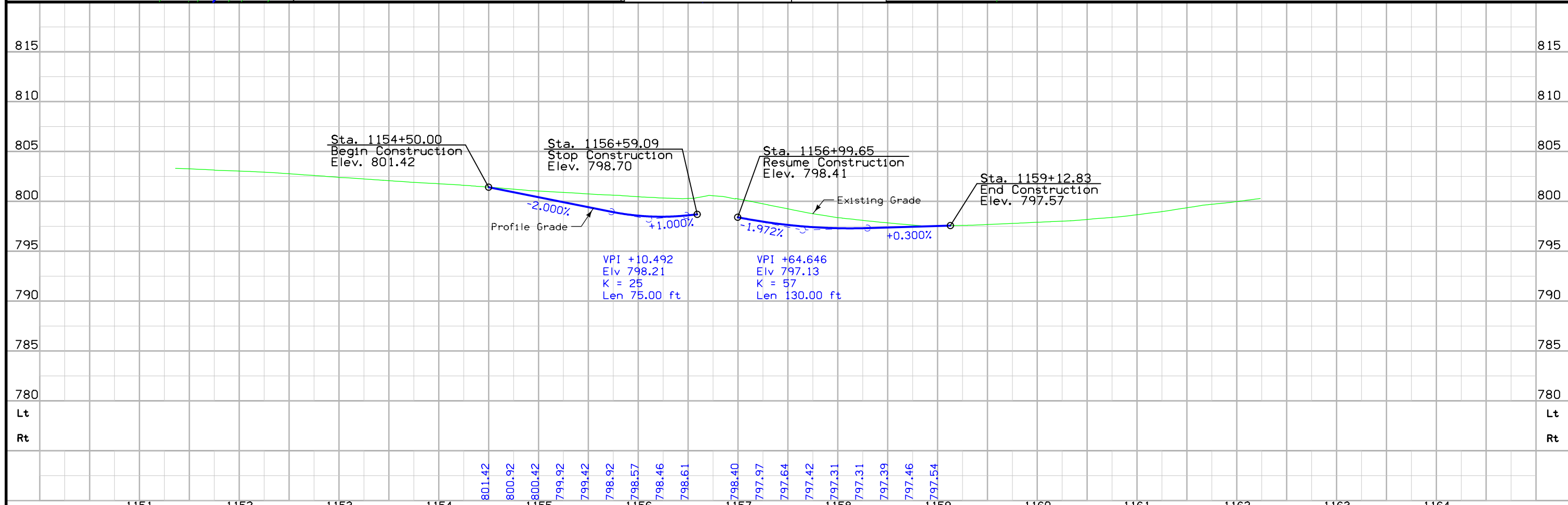
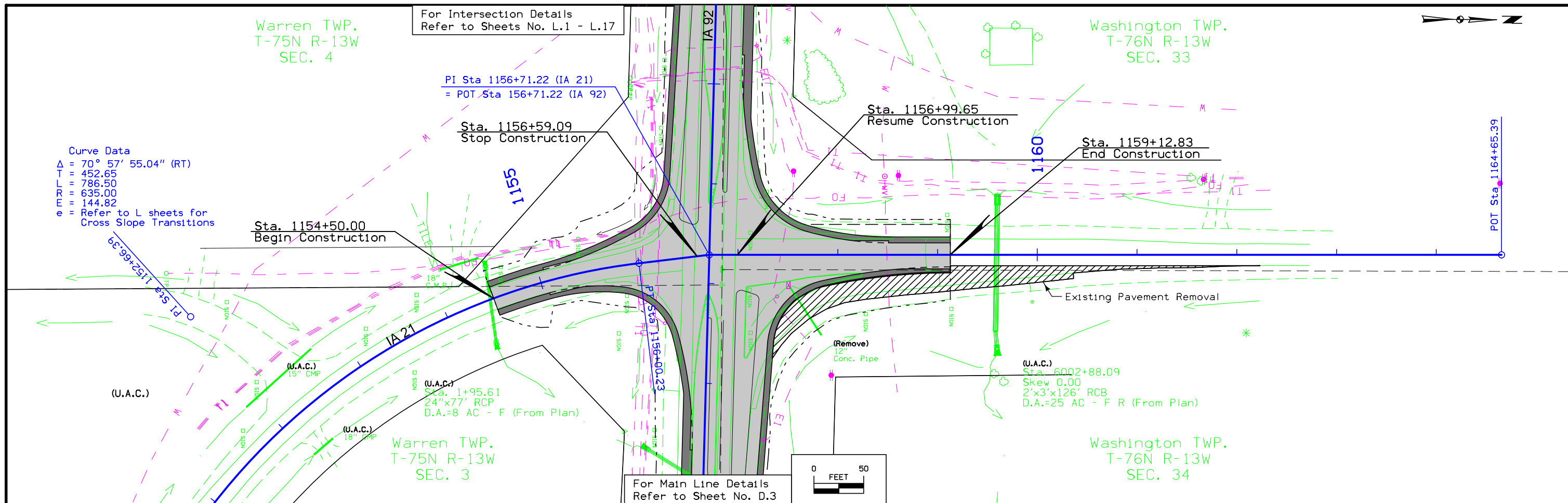
Washington TWP.
T-76N R-13W
SEC. 35



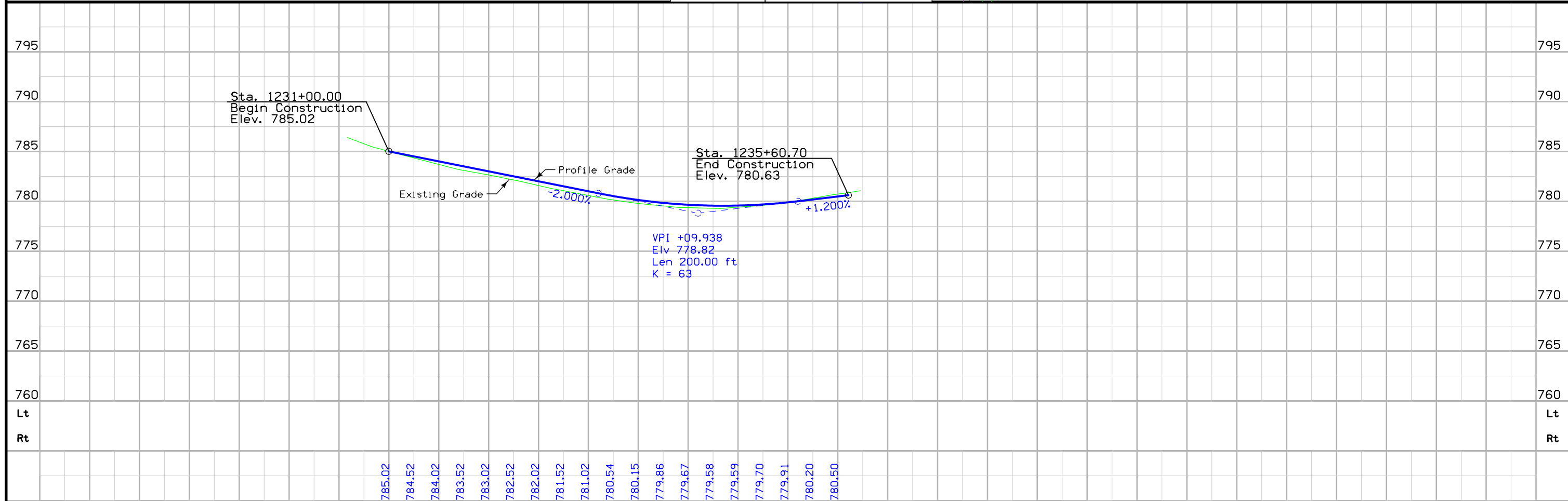
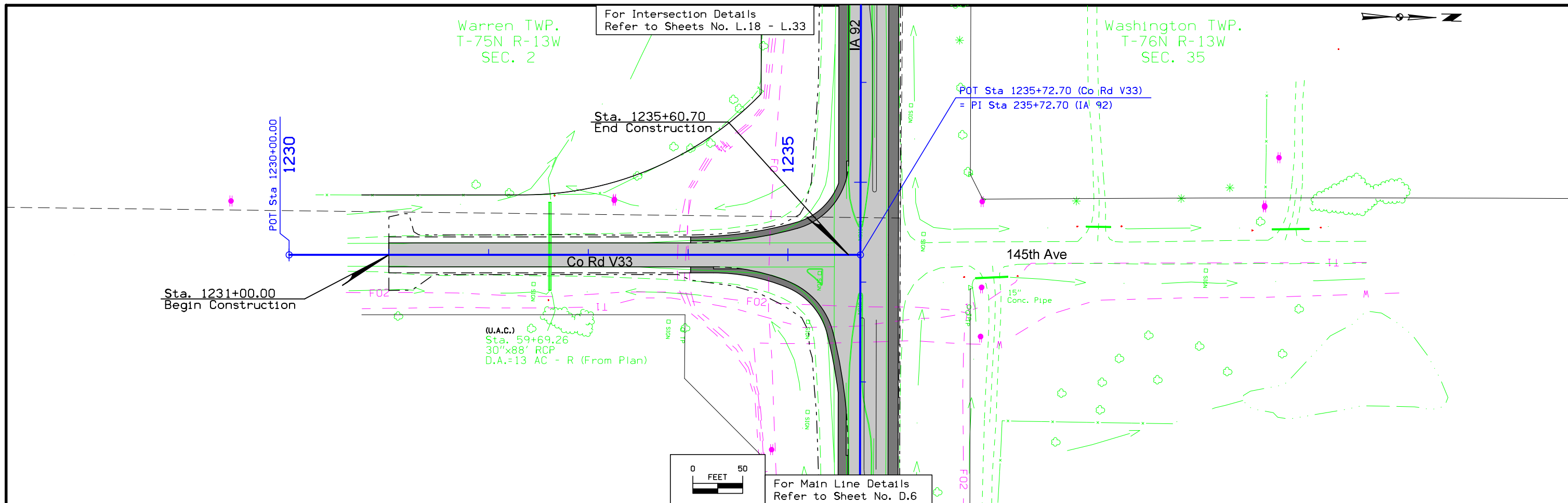
Warren TWP.
T-75N R-13W
SEC. 2



FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	D.7
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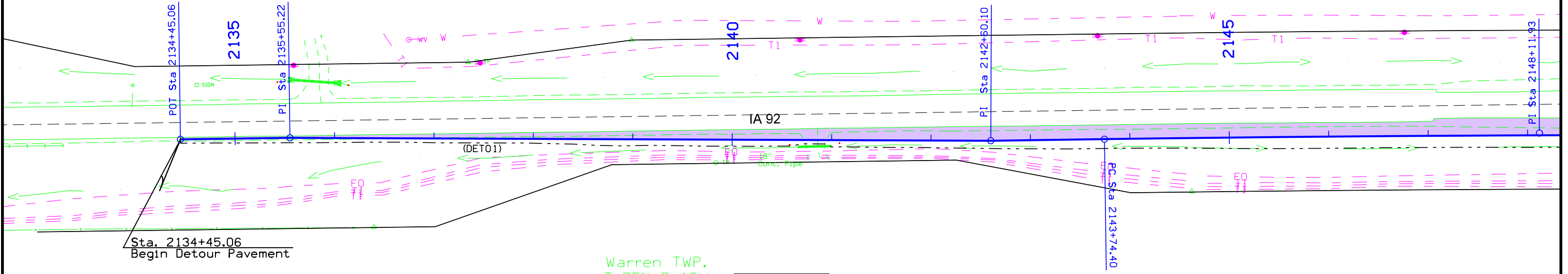


FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	E.1
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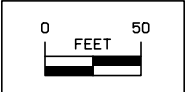


FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	E.2
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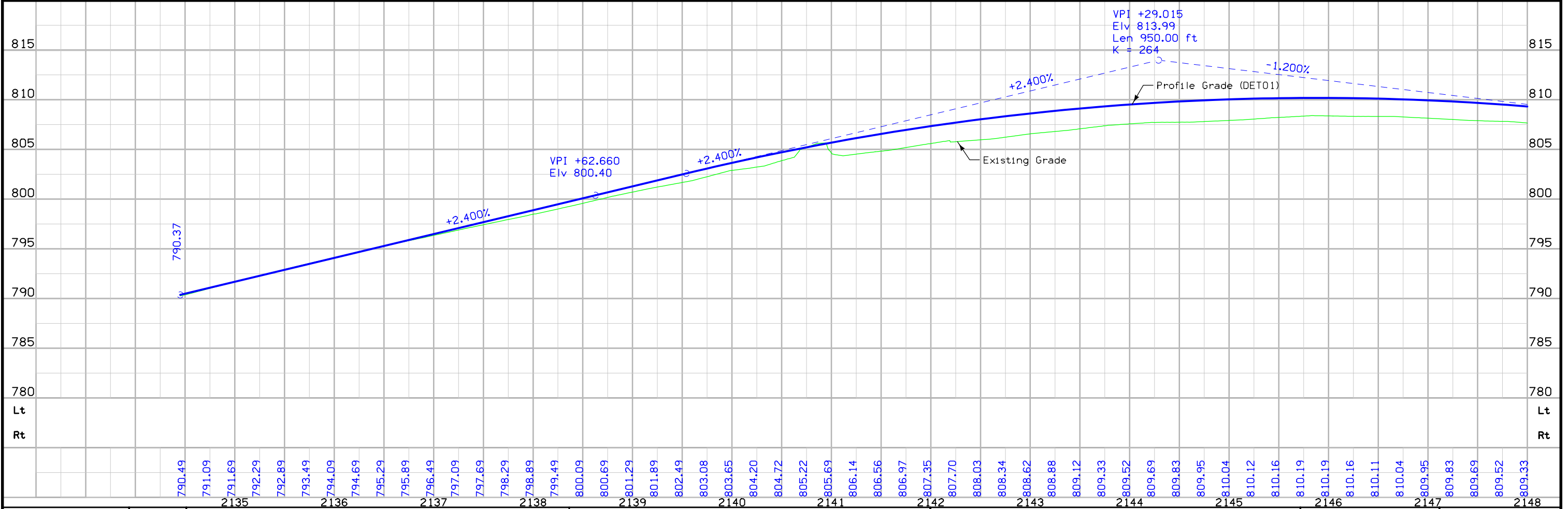
Washington TWP.
T-76N R-13W
SEC. 33



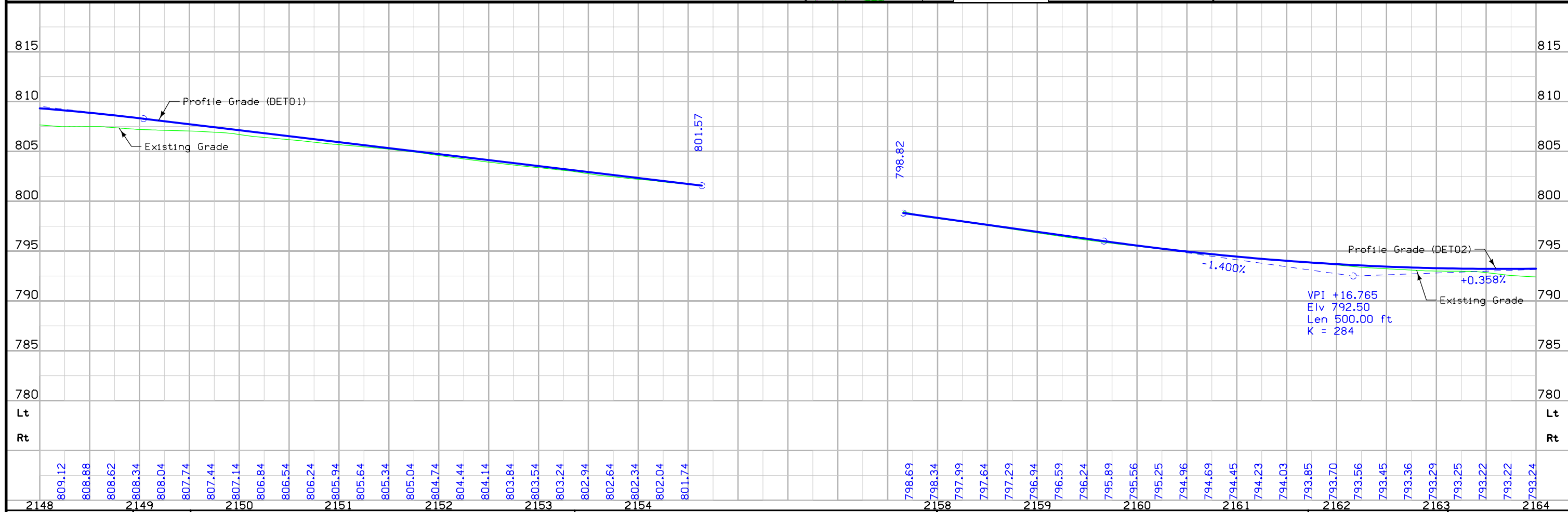
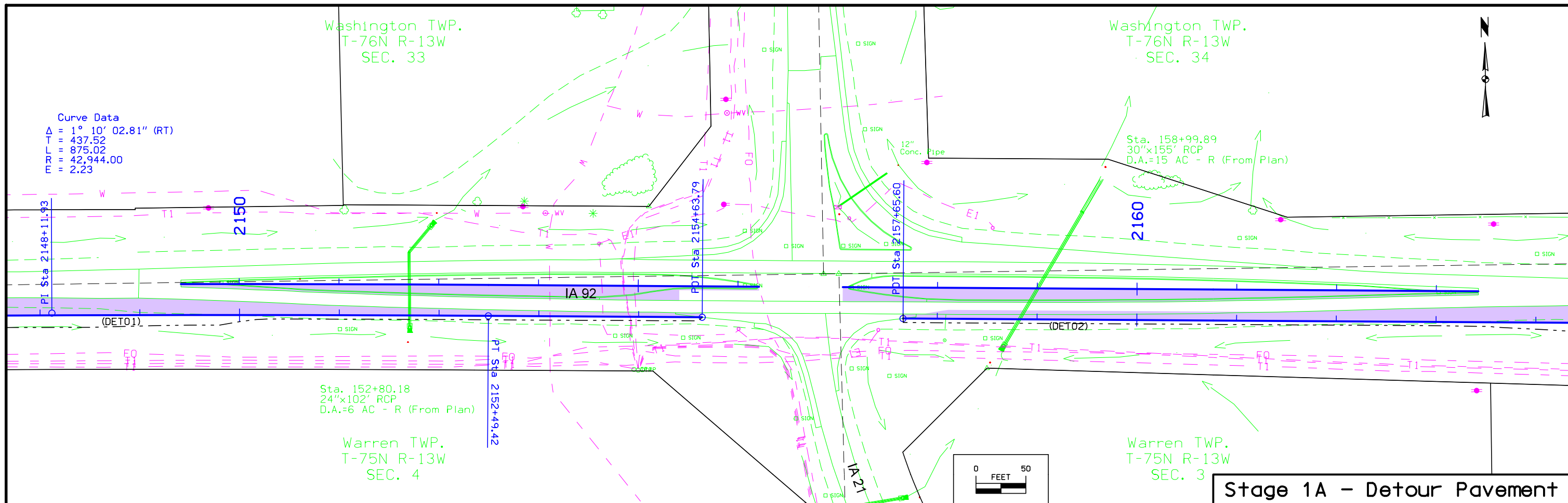
Warren TWP.
T-75N R-13W
SEC. 4



Stage 1A - Detour Pavement



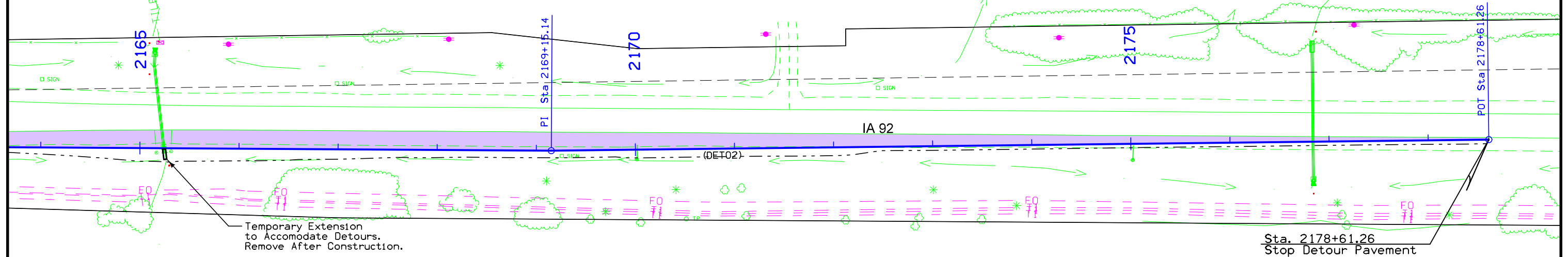
FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	F.1
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Washington TWP.
T-76N R-13W
SEC. 34

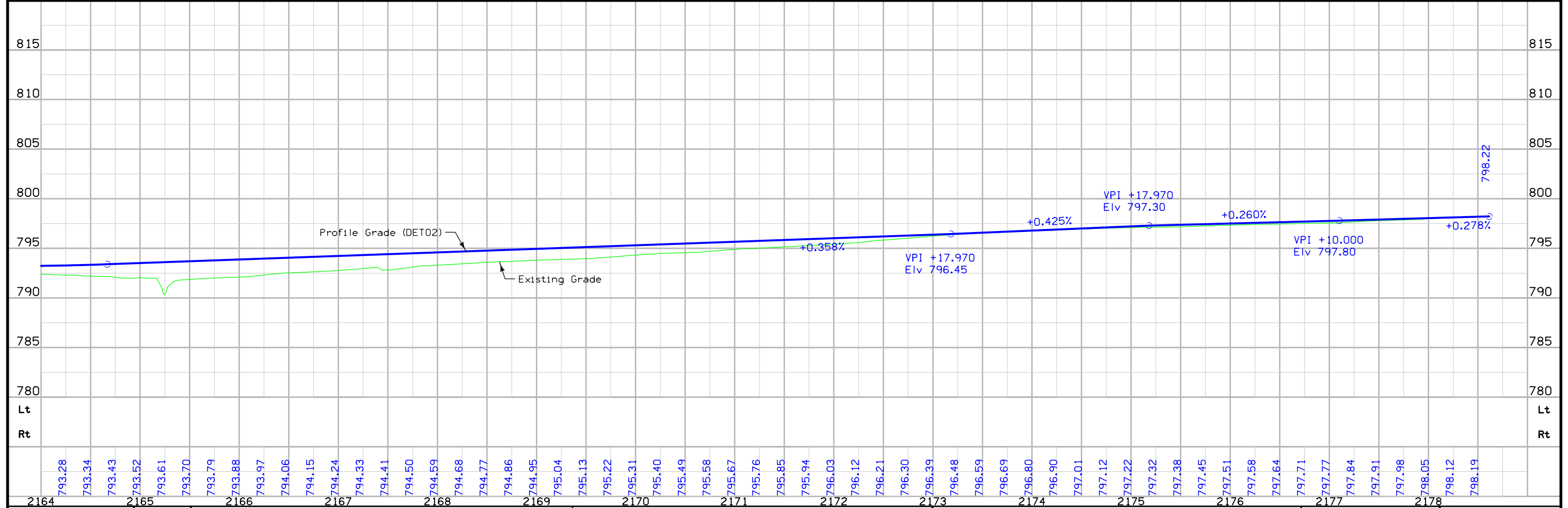


Sta. 165+20.35
24"x94' RCP
D.A.=9 AC - R (From Plan)

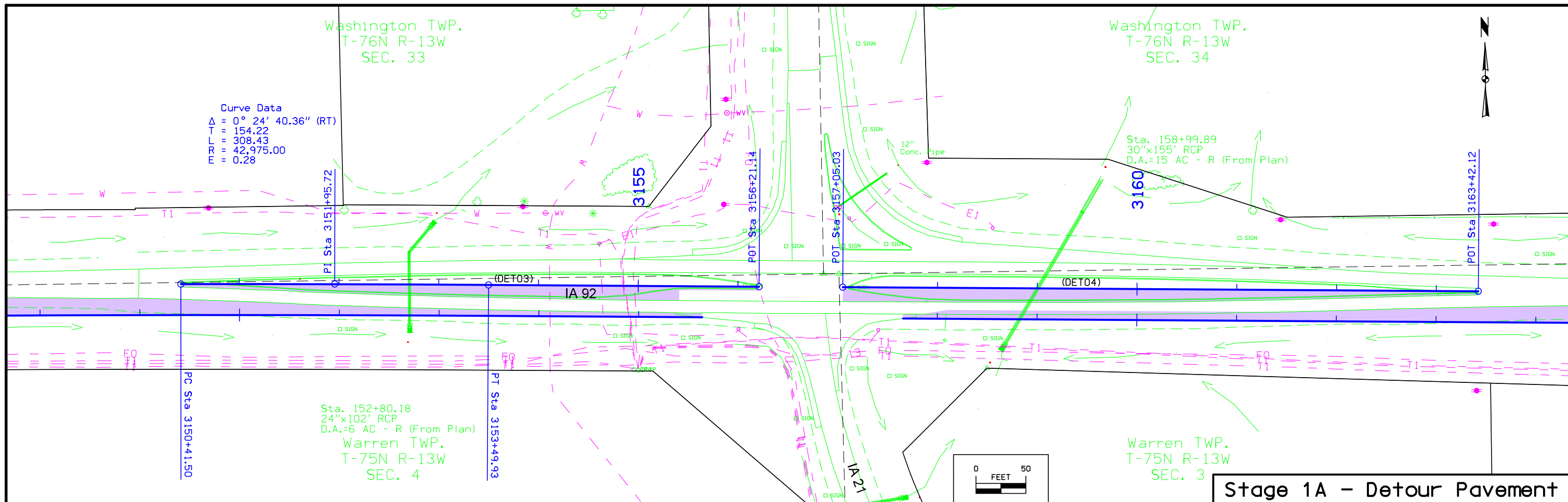


Warren TWP.
T-75N R-13W
SEC. 3

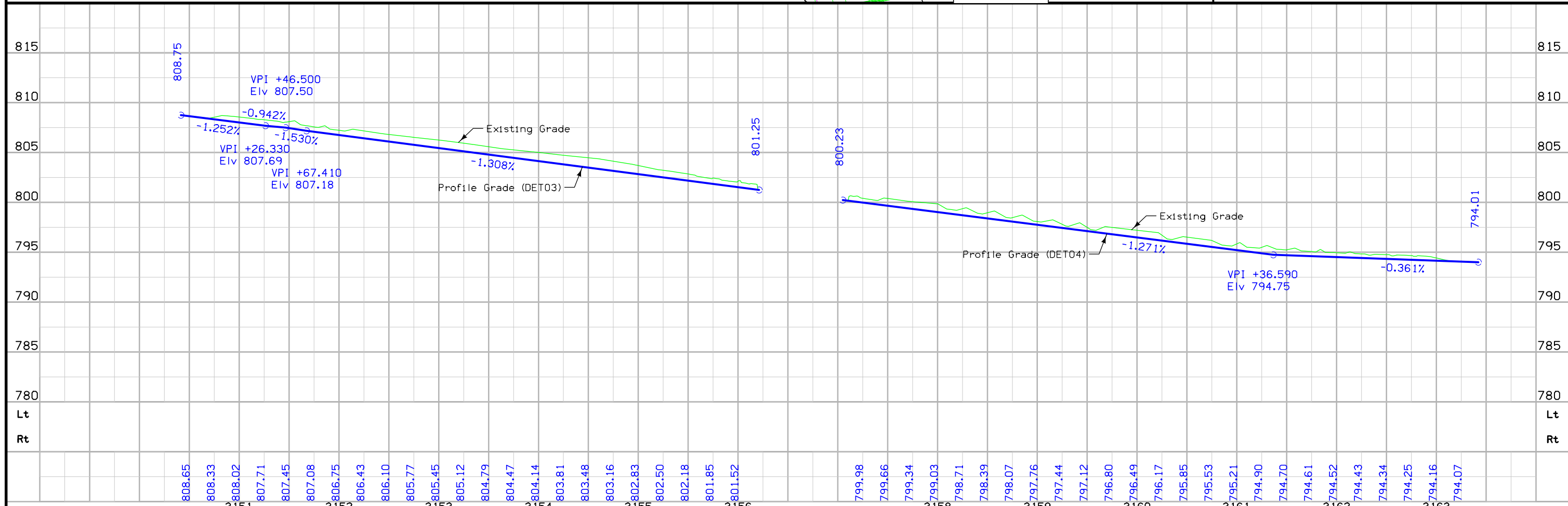
Stage 1A - Detour Pavement



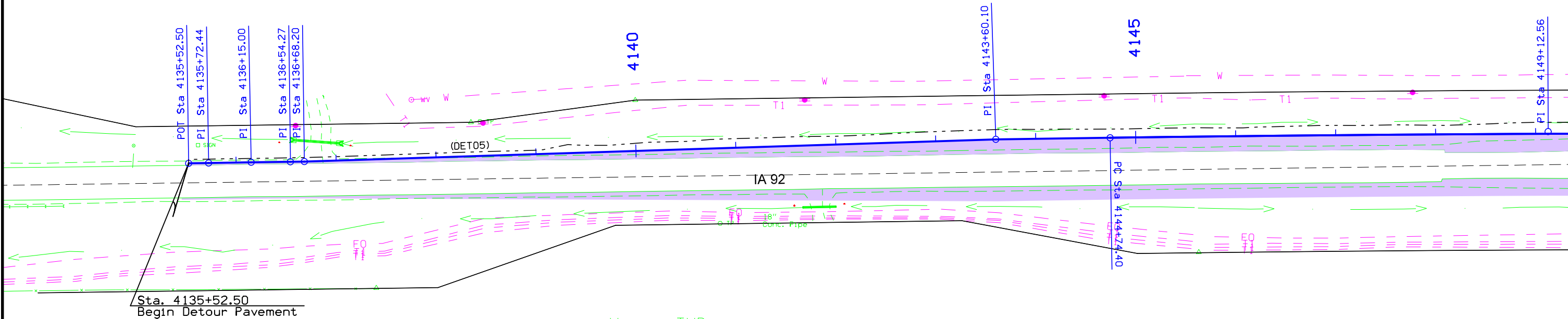
2164	793.28	793.34	793.43	793.52	793.61	793.70	793.79	793.88	793.97	794.06	794.15	794.24	794.33	794.41	794.50	794.59	794.68	794.77	794.86	794.95	795.04	795.13	795.22	795.31	795.40	795.49	795.58	795.67	795.76	795.85	795.94	796.03	796.12	796.21	796.30	796.39	796.48	796.59	796.69	796.80	796.90	797.01	797.12	797.22	797.32	797.38	797.45	797.51	797.58	797.64	797.71	797.77	797.84	797.91	797.98	798.05	798.12	798.19
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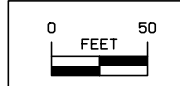
Stage 1A - Detour Pavement



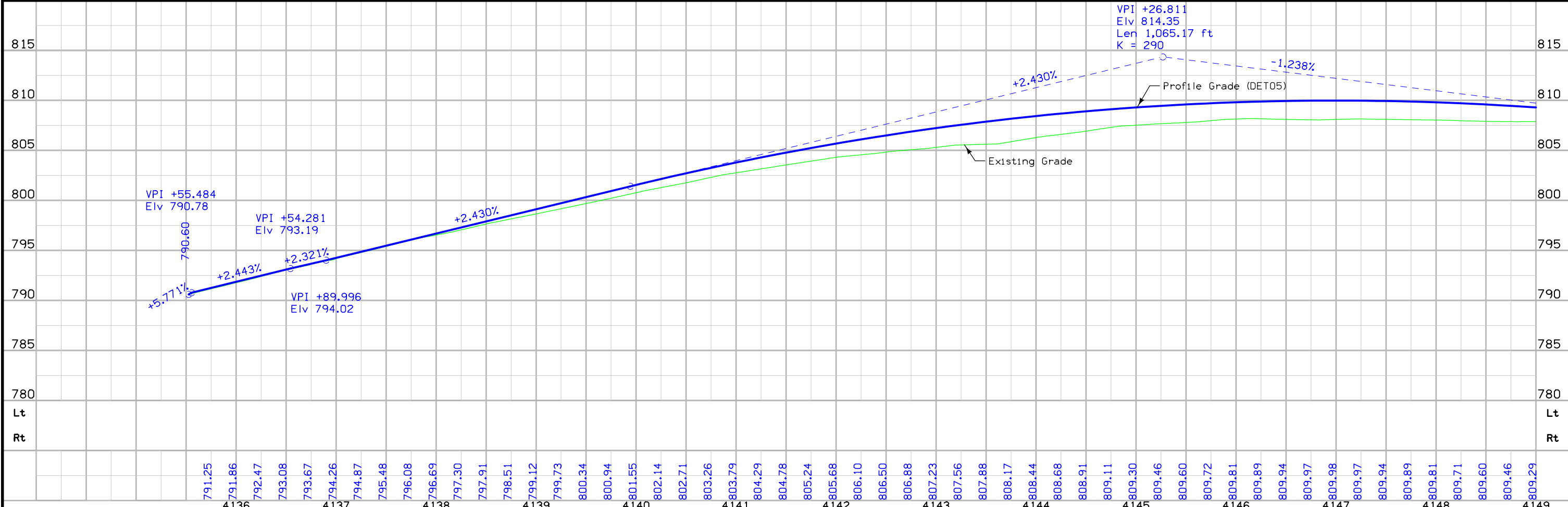
Washington TWP.
T-76N R-13W
SEC. 33



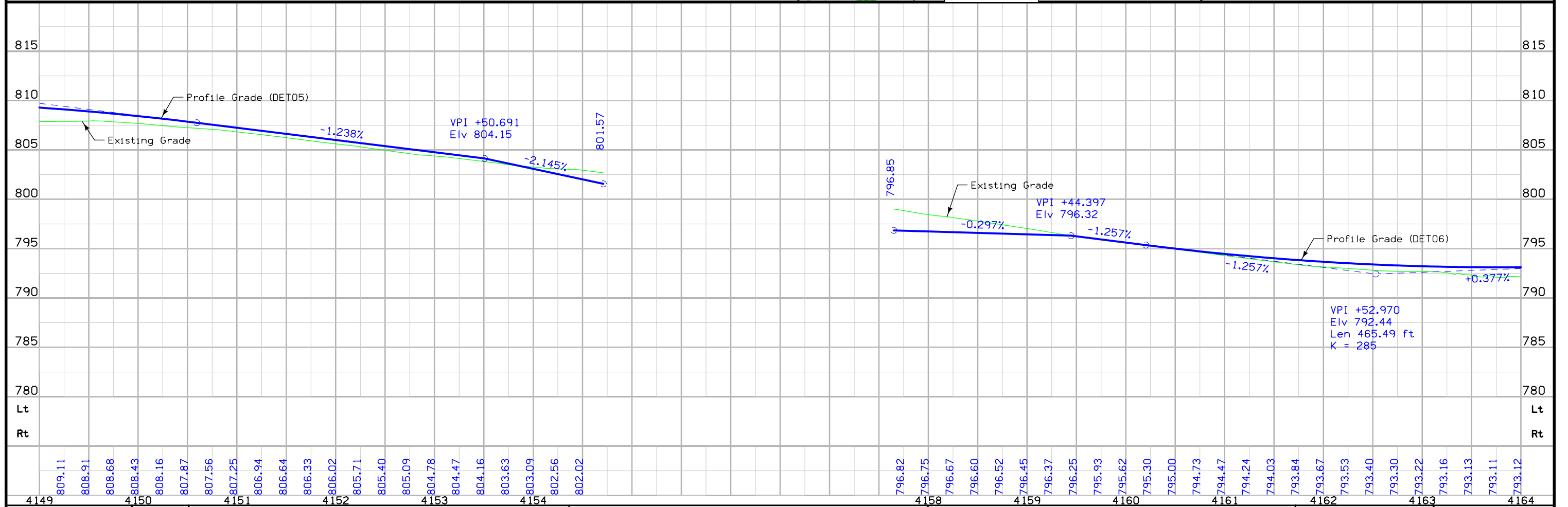
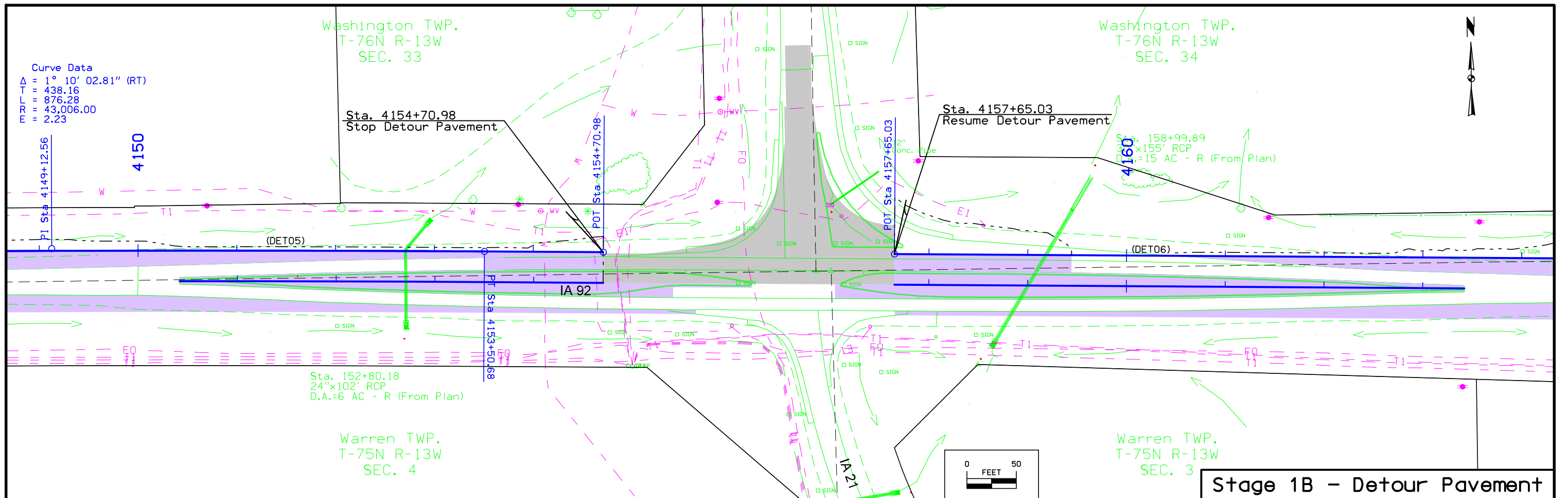
Warren TWP.
T-75N R-13W
SEC. 4



Stage 1B - Detour Pavement

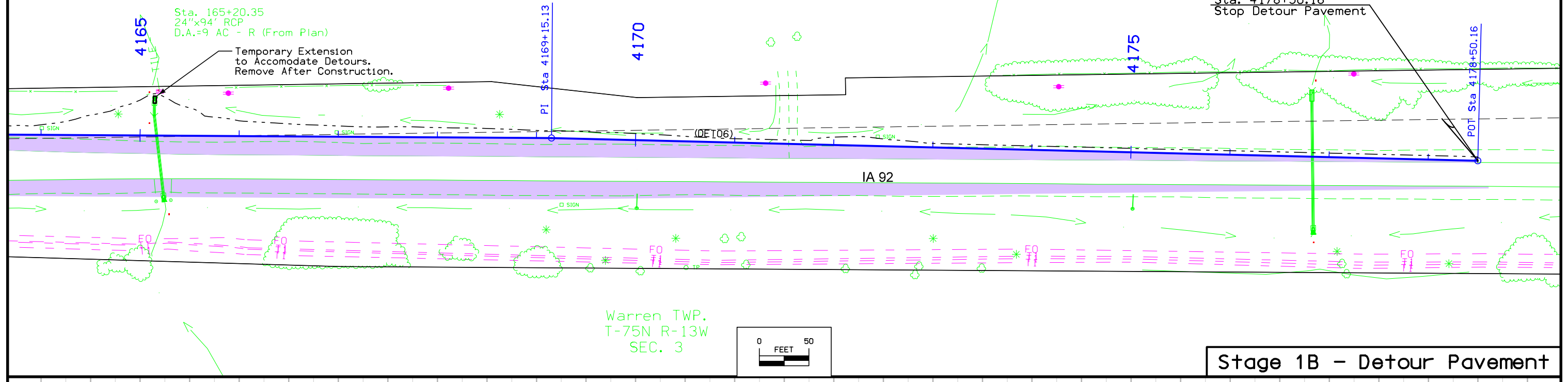


FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	F.5
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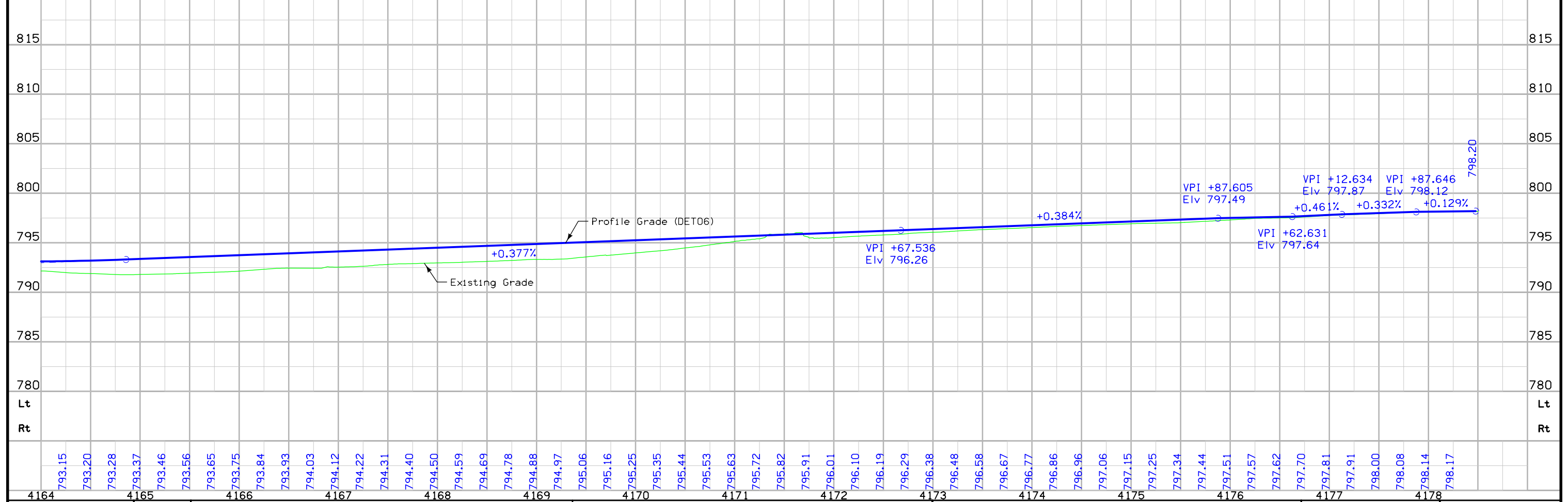


Washington TWP.
T-76N R-13W
SEC. 34

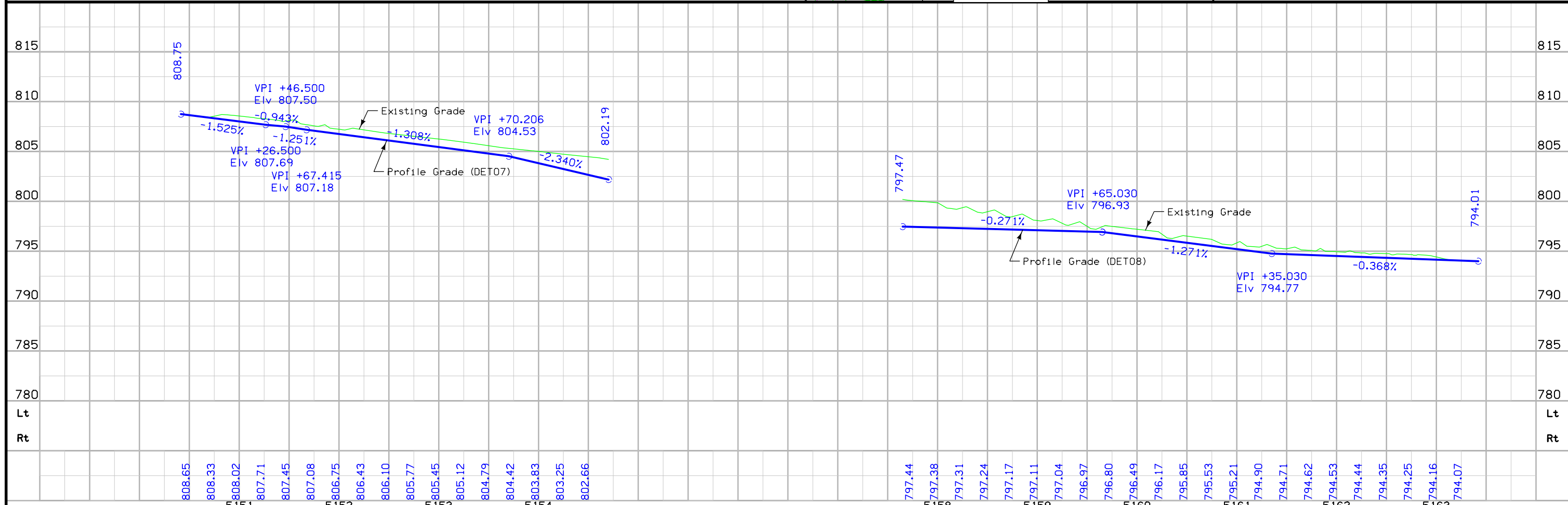
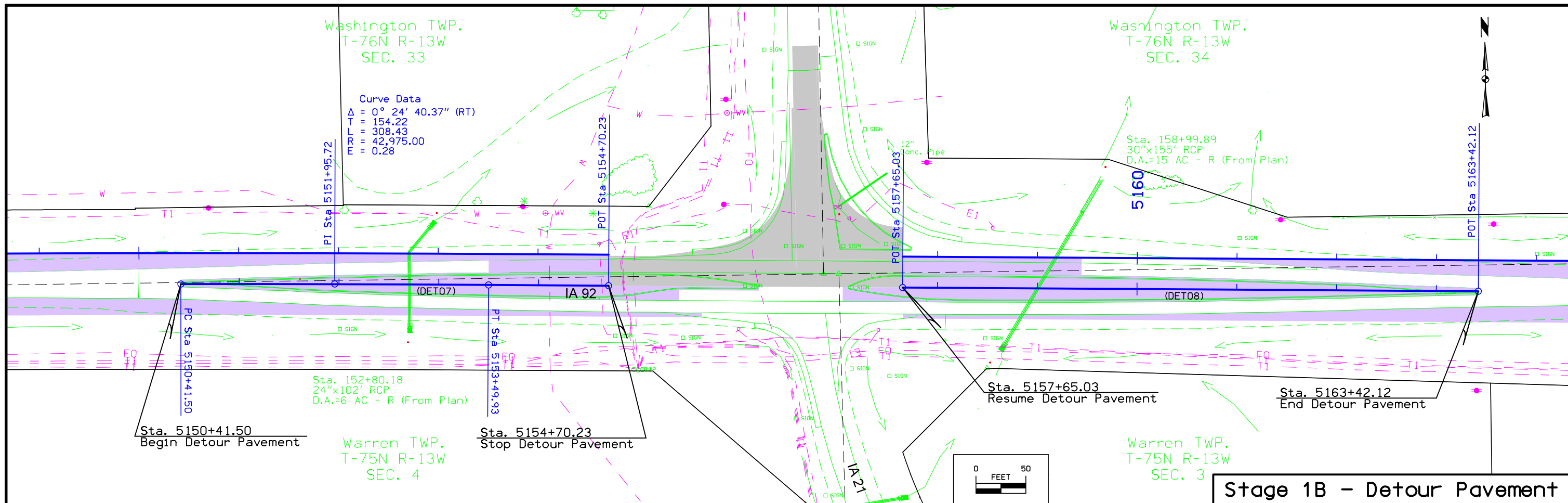
Warren TWP.
T-75N R-13W
SEC. 3



Stage 1B - Detour Pavement

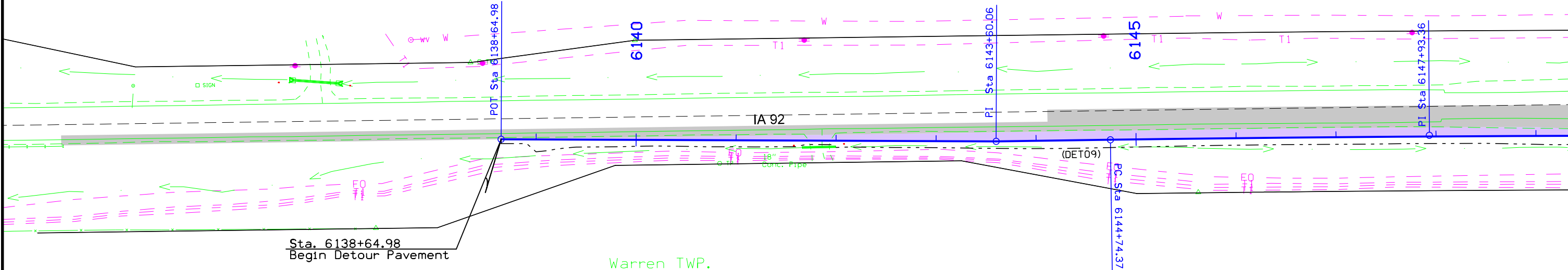


4164	793.15	793.20	793.28	793.37	793.46	793.56	793.65	793.75	793.84	793.93	794.03	794.12	794.22	794.31	794.40	794.50	794.59	794.69	794.78	794.88	794.97	795.06	795.16	795.25	795.35	795.44	795.53	795.63	795.72	795.82	795.91	796.01	796.10	796.19	796.29	796.38	796.48	796.58	796.67	796.77	796.86	796.96	797.06	797.15	797.25	797.34	797.44	797.51	797.57	797.62	797.70	797.81	797.91	798.00	798.08	798.14	798.17	798.20
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FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	F.8
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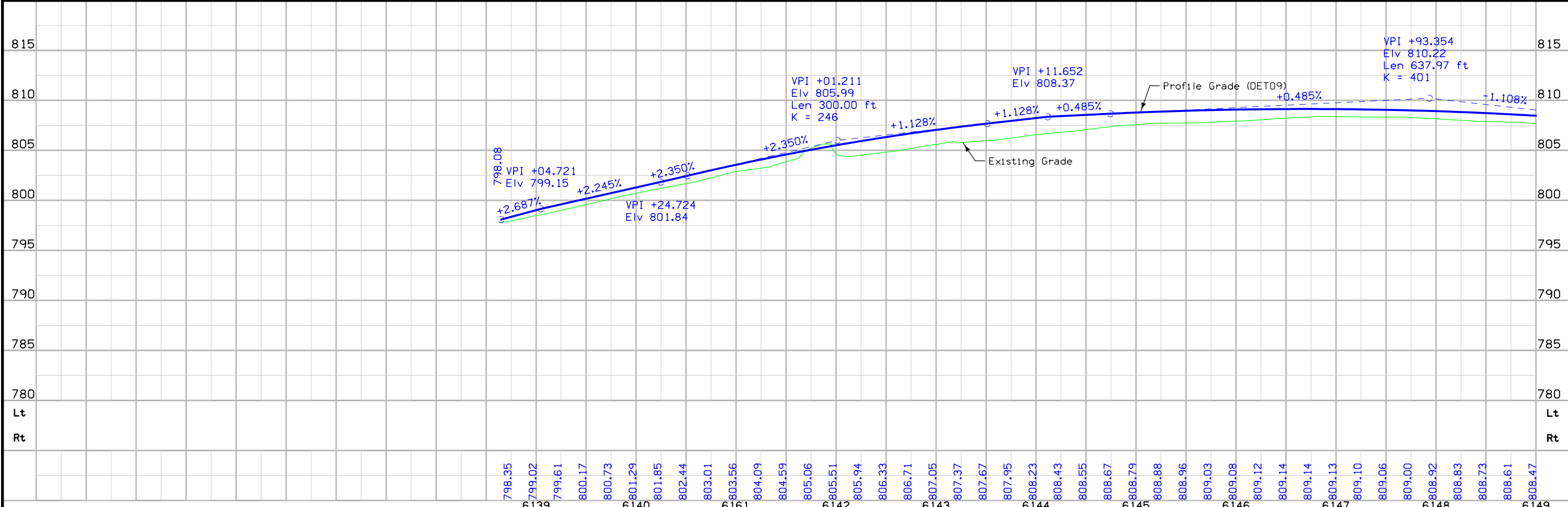
Washington TWP.
T-76N R-13W
SEC. 33



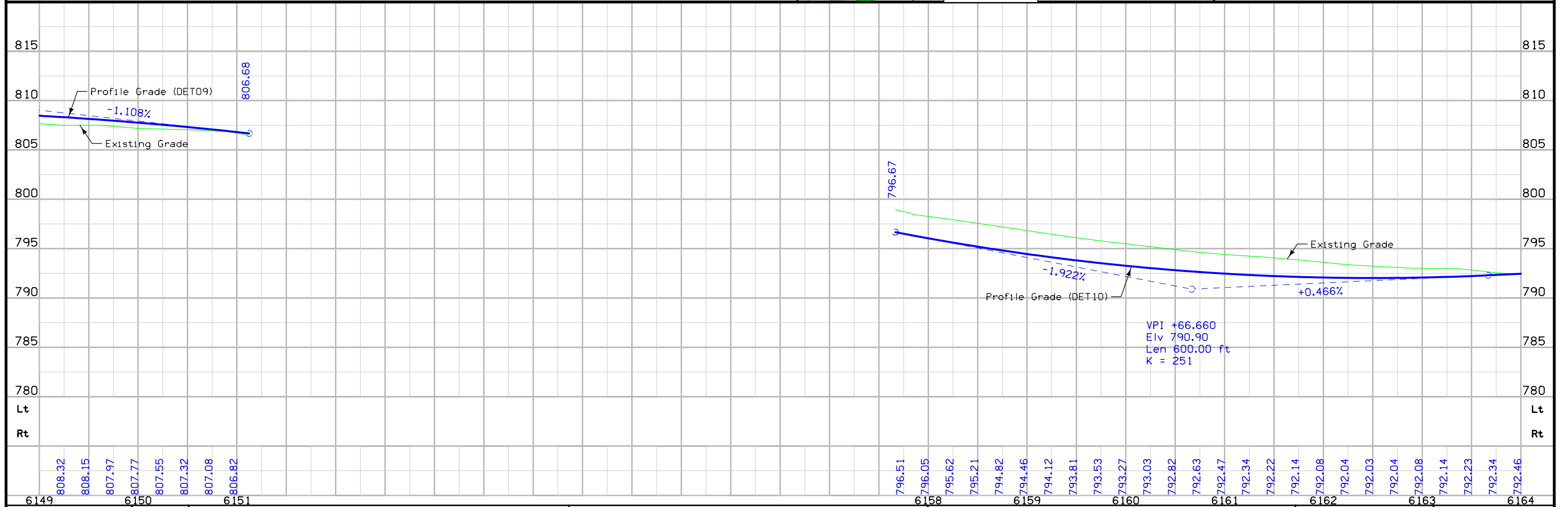
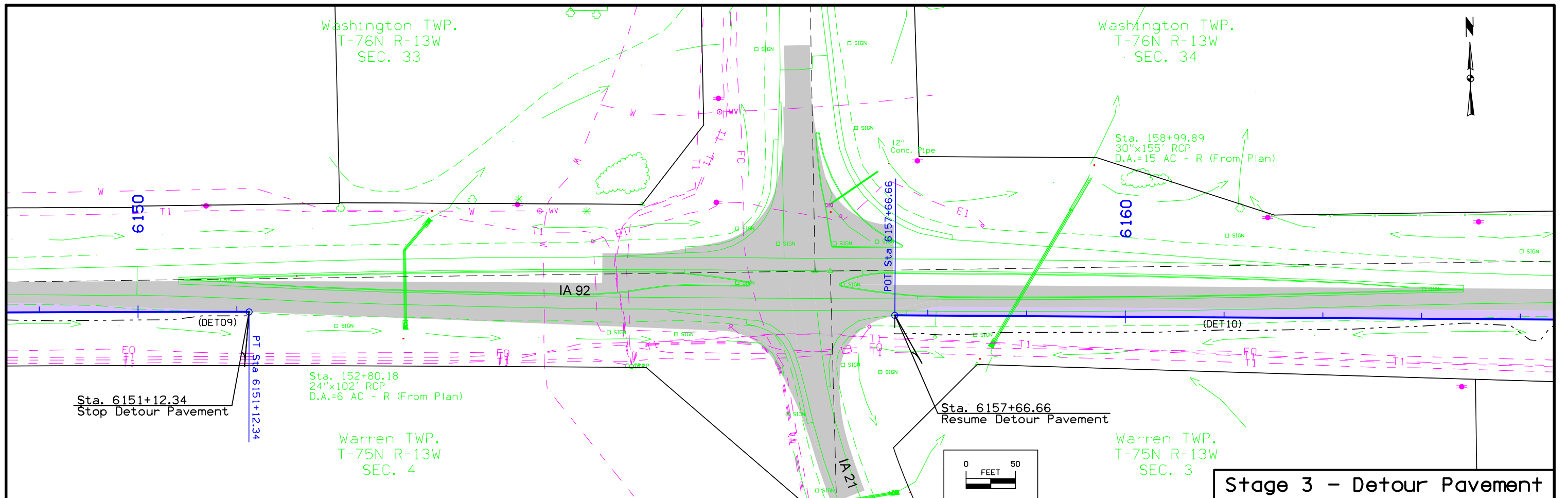
Sta. 6138+64.98
Begin Detour Pavement

Warren TWP.
T-75N R-13W
SEC. 4

Stage 3 - Detour Pavement



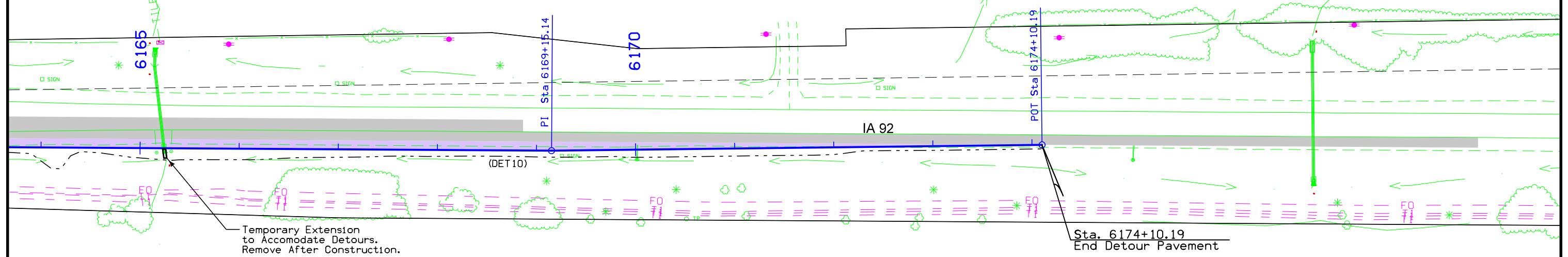
FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	F.9
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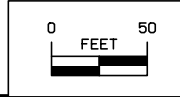
Washington TWP.
T-76N R-13W
SEC. 34



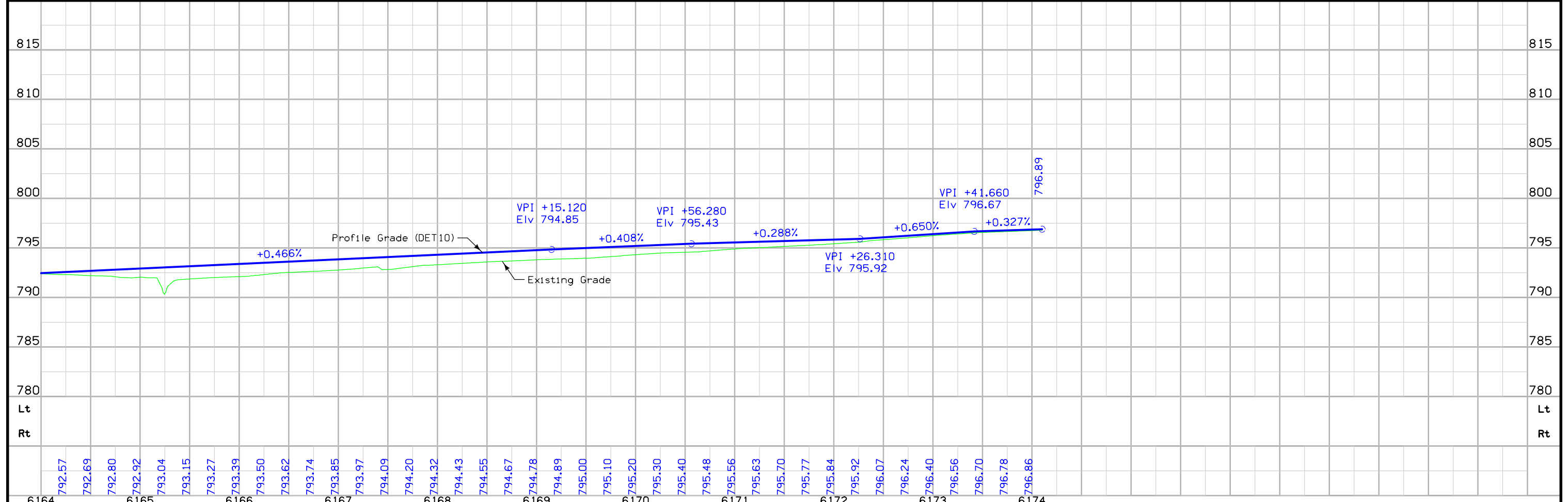
Sta. 165+20.35
24"x94' RCP
D.A.=9 AC - R (From Plan)



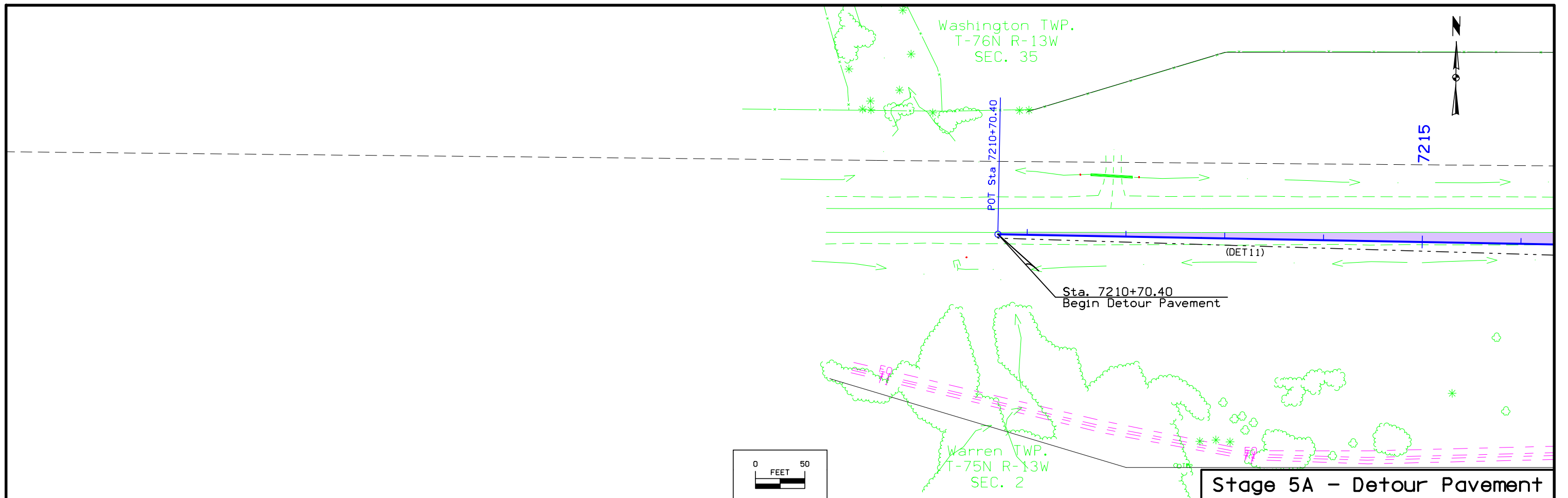
Warren TWP.
T-75N R-13W
SEC. 3



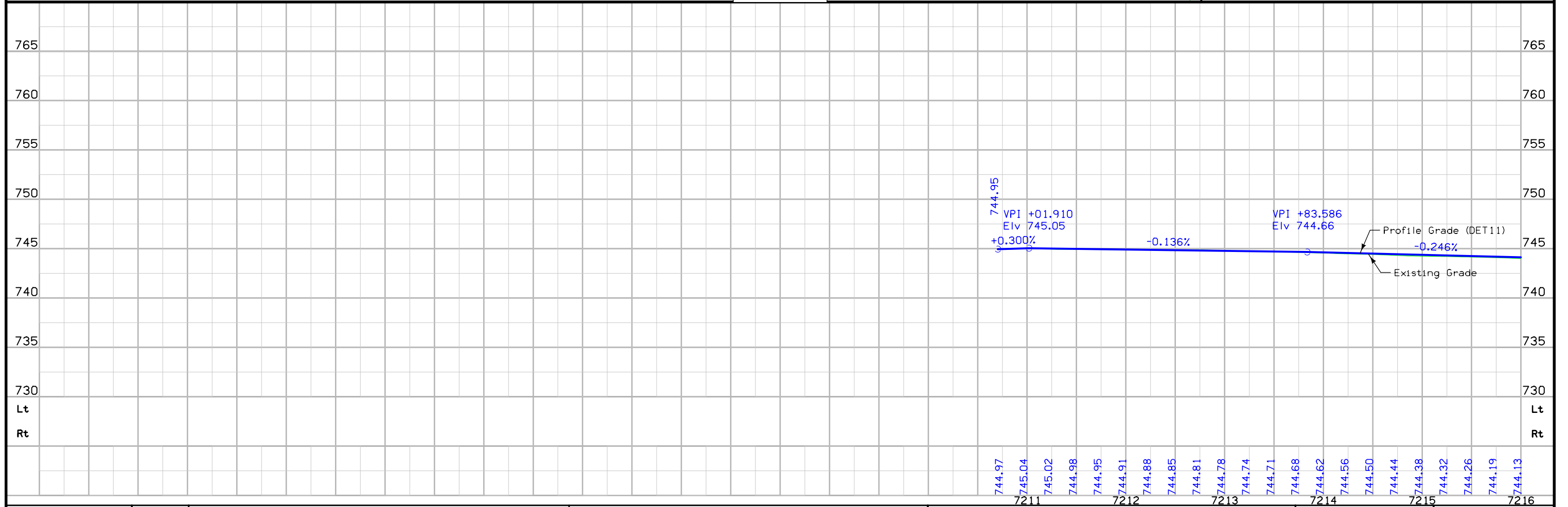
Stage 3 - Detour Pavement

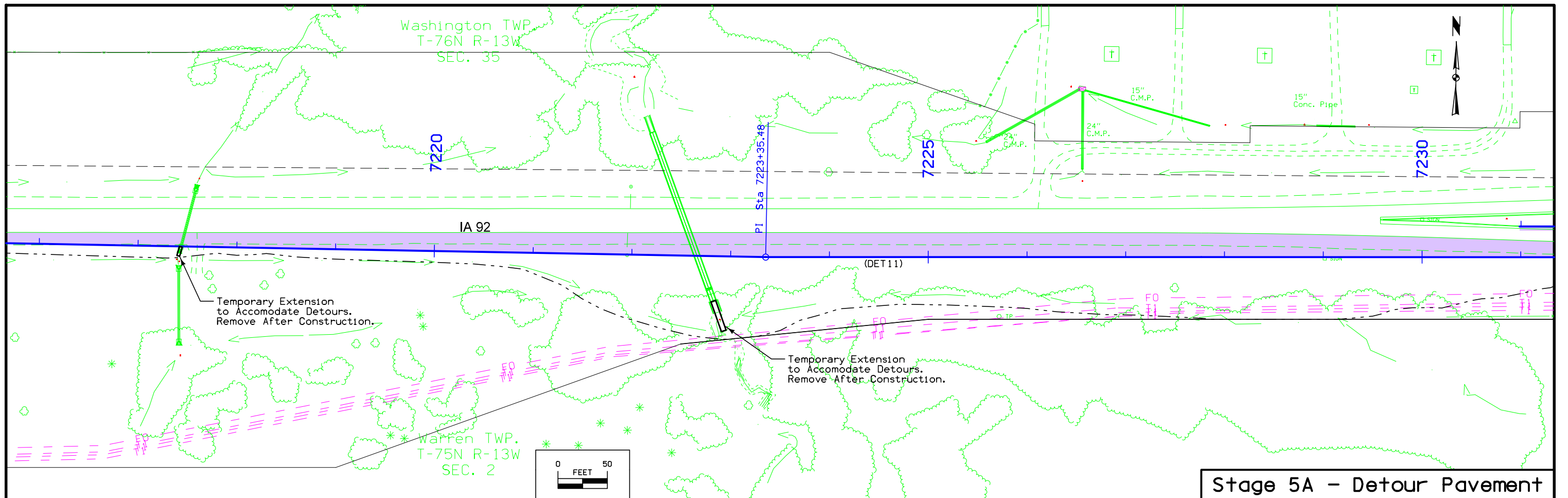


6164	792.57	792.69	792.80	792.92	793.04	793.15	793.27	793.39	793.50	793.62	793.74	793.85	793.97	794.09	794.20	794.32	794.43	794.55	794.67	794.78	794.89	795.00	795.10	795.20	795.30	795.40	795.48	795.56	795.63	795.70	795.77	795.84	795.92	796.07	796.24	796.40	796.56	796.70	796.78	796.86	6174
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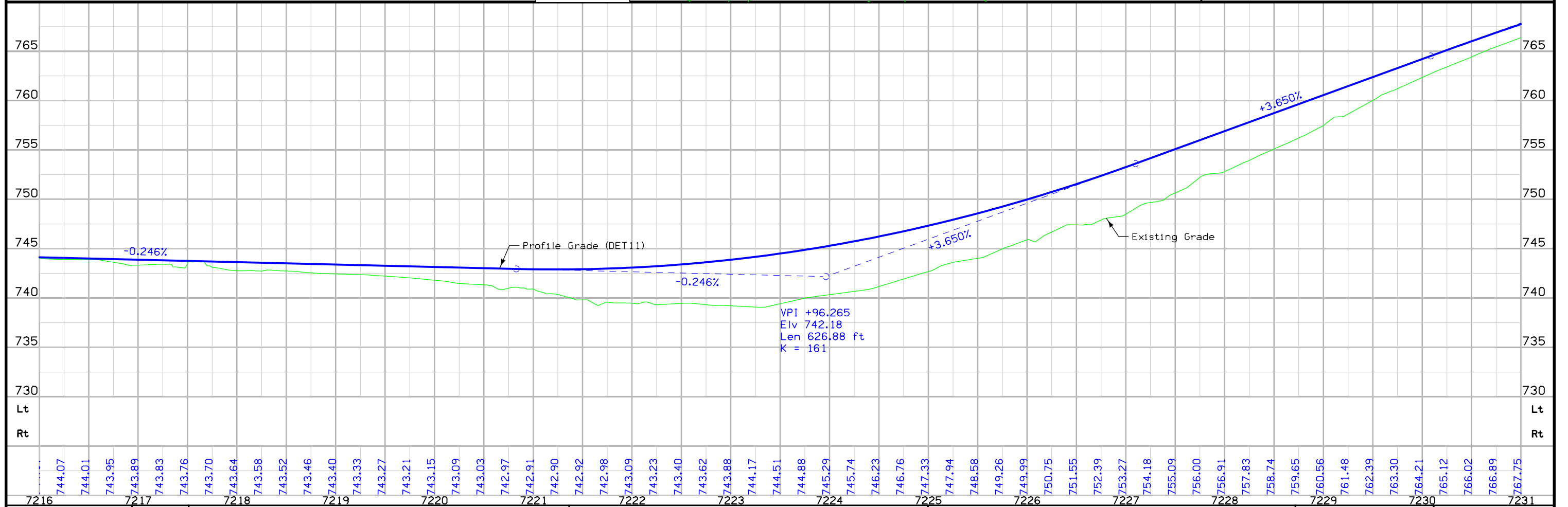


Stage 5A - Detour Pavement

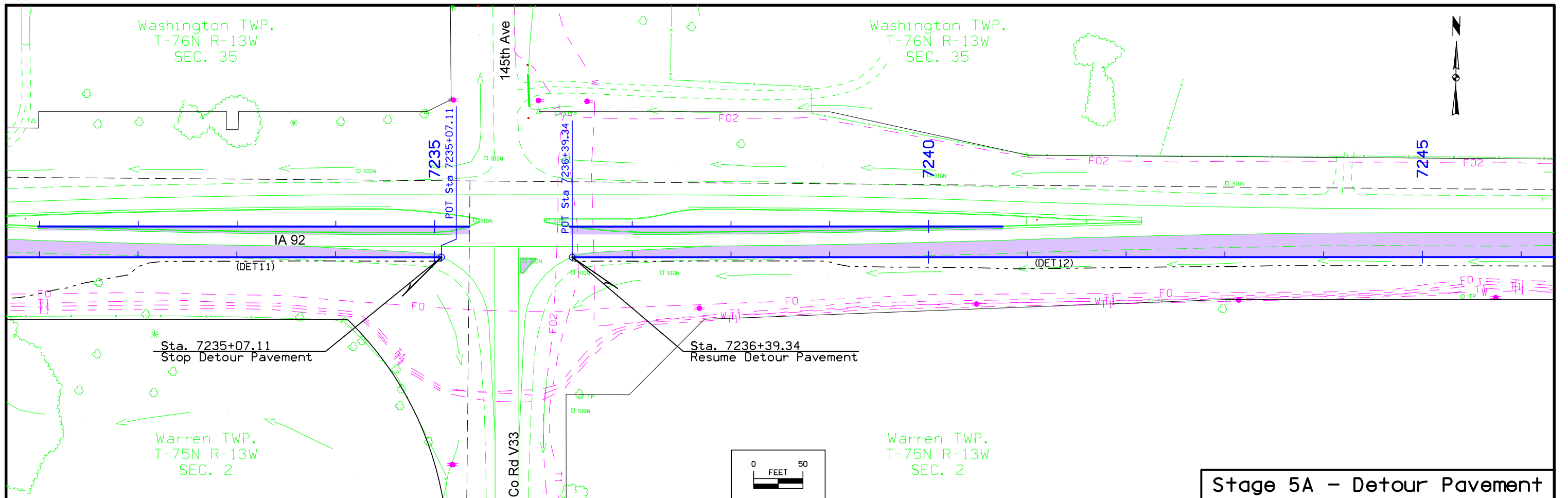




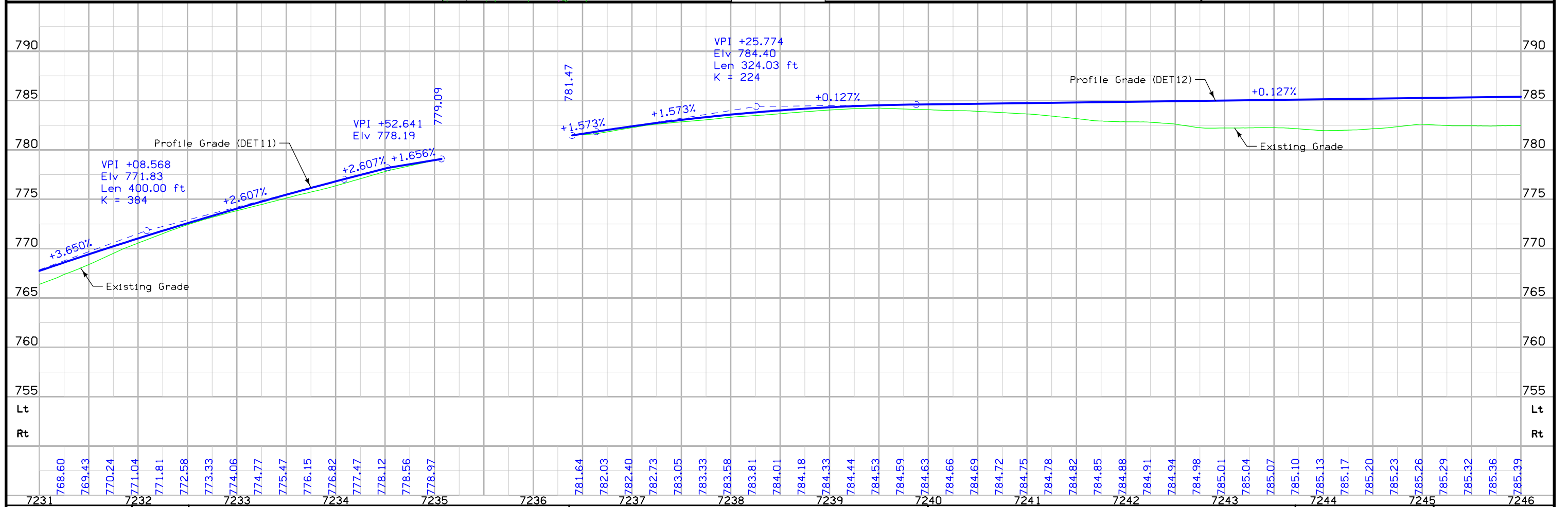
Stage 5A - Detour Pavement



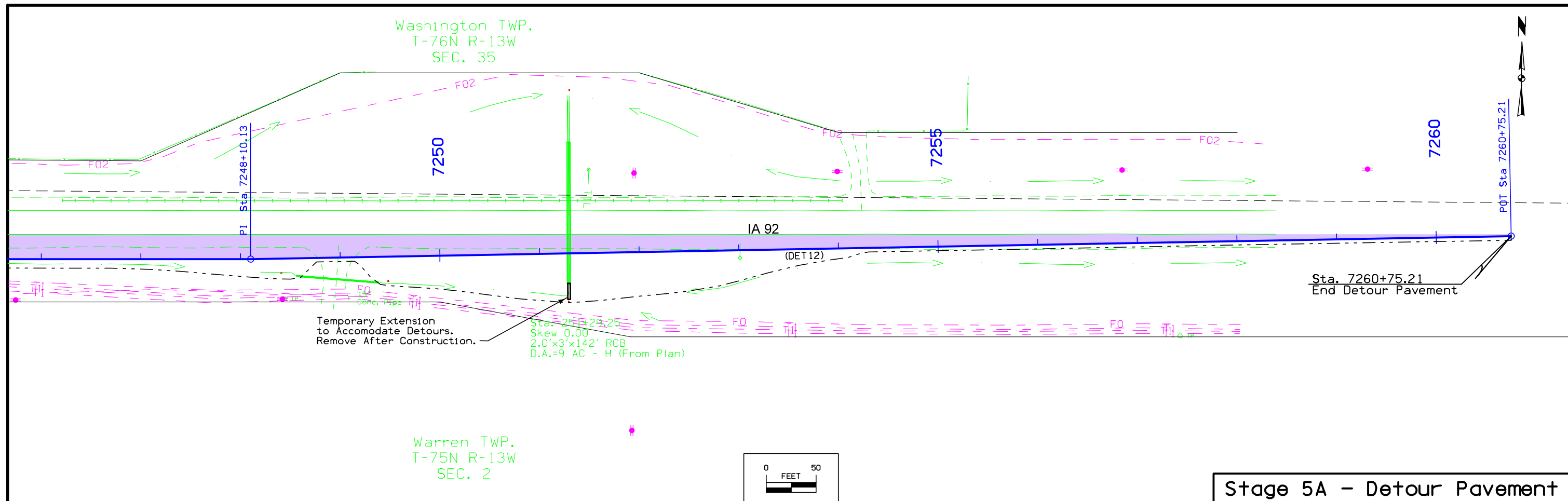
7216	744.07	744.01	743.95	743.89	743.83	743.76	743.70	743.64	743.58	743.52	743.46	743.40	743.33	743.27	743.21	743.15	743.09	743.03	742.97	742.91	742.90	742.92	742.98	743.09	743.23	743.40	743.62	743.88	744.17	744.51	744.88	745.29	745.74	746.23	746.76	747.33	747.94	748.58	749.26	749.99	750.75	751.55	752.39	753.27	754.18	755.09	756.00	756.91	757.83	758.74	759.65	760.56	761.48	762.39	763.30	764.21	765.12	766.02	766.89	767.75
FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.																								KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54										SHEET NUMBER	F.13																				



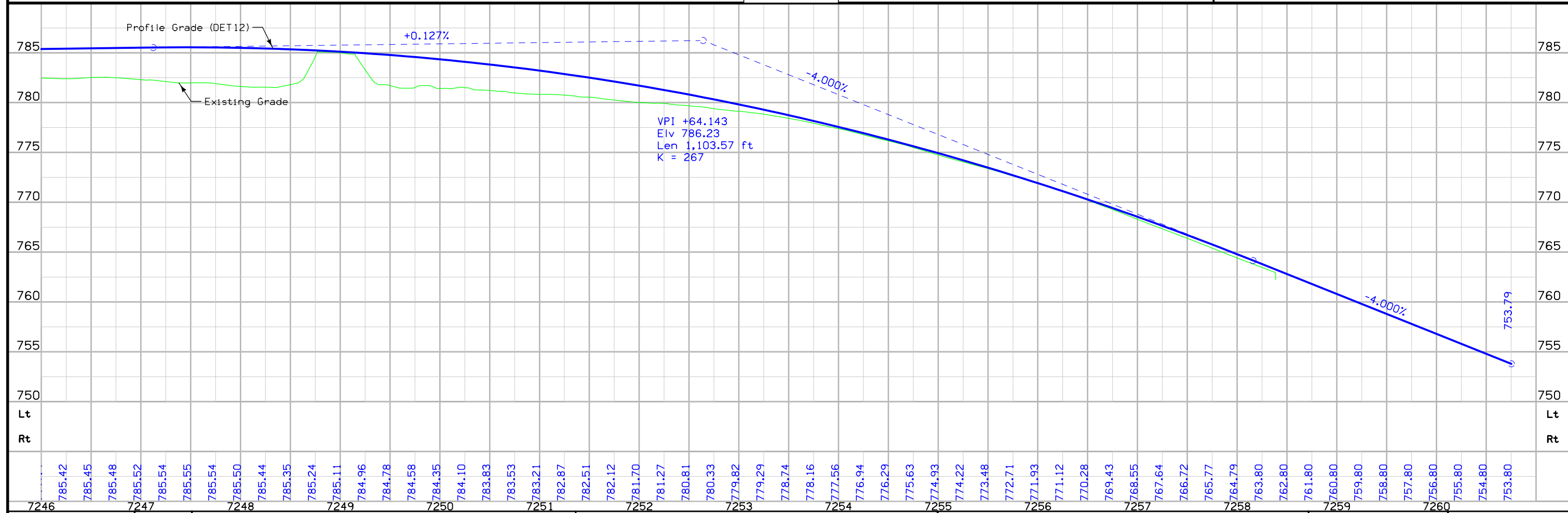
Stage 5A - Detour Pavement

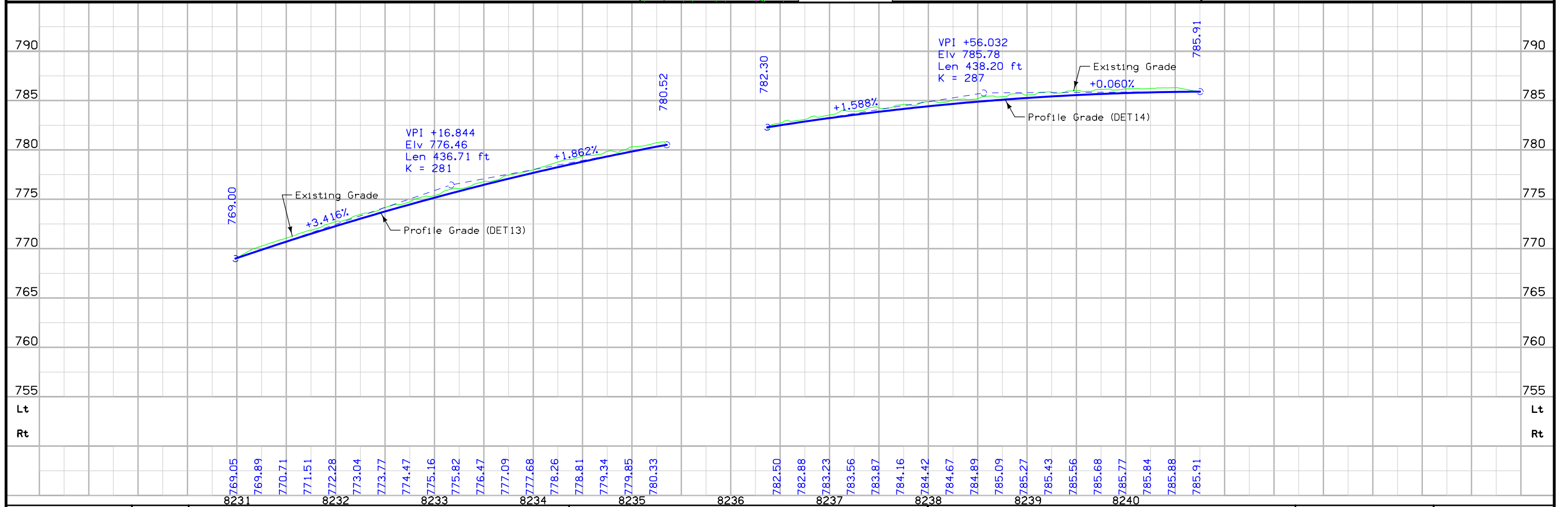
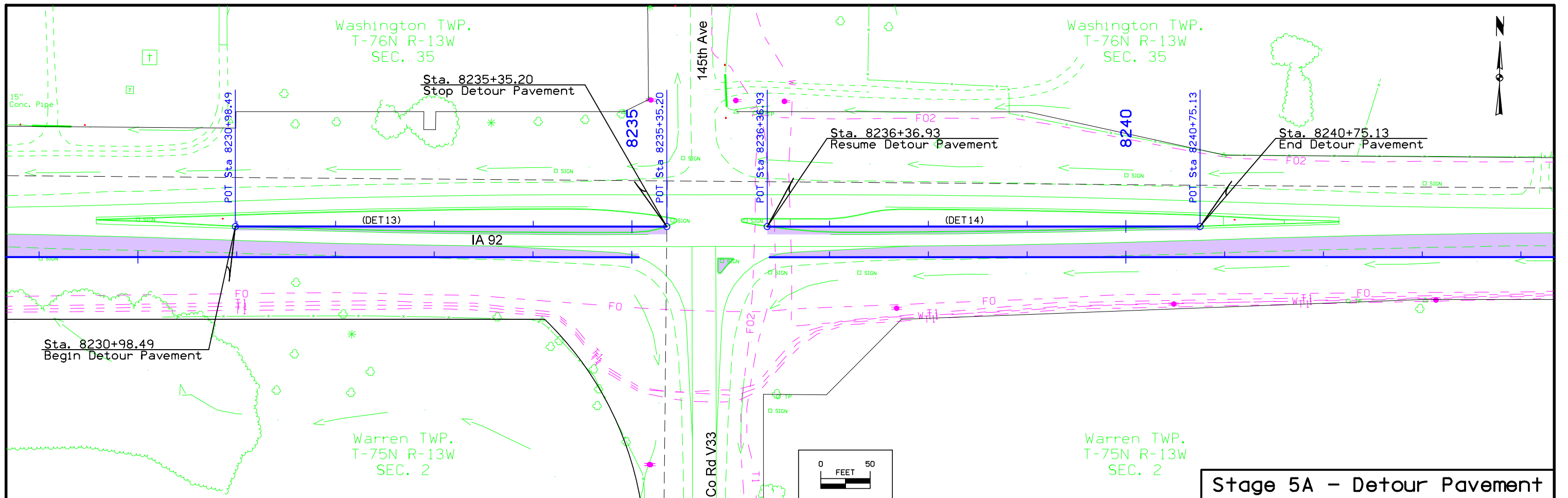


7231	768.60	769.43	770.24	771.04	771.81	772.58	773.33	774.06	774.77	775.47	776.15	776.82	777.47	778.12	778.56	778.97	7235	781.64	782.03	782.40	782.73	783.05	783.33	783.58	783.81	784.01	784.18	784.33	784.44	784.53	784.59	784.63	784.66	784.69	784.72	784.75	784.78	784.82	784.85	784.88	784.91	784.94	784.98	785.01	785.04	785.07	785.10	785.13	785.17	785.20	785.23	785.26	785.29	785.32	785.36	785.39	7246
FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.																		KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54										SHEET NUMBER	F.14																							



Stage 5A - Detour Pavement





Survey Information

County: Keokuk
 PIN: 16-54-092-030
 Project Number: NHSN-092-8(36)--2R-54
 Location: NW and N of Delta (District-5)
 Type of Work: Reconstruction of the IA 92 and IA 21 intersection and the IA 92 and County Rd V33 intersection
 Project Directory: 5409203016
 SAP 0932

General Information

Measurement units for this survey are US survey feet. This survey is proposed for two intersection replacements. The IA 92 and IA 21 intersection NW of Delta and the IA 92 and V33 intersection N of Delta. Project datum and control information is provided by Design Survey Office. This project is a Partial DTM with Photo control.

Vertical Control

Vertical datum for this survey is NAVD88 (Computed using Geoid12B). Benchmarks were placed throughout the project using post processed static observations relative to laRTN Base Network. A minimum of 6hrs of data was simultaneously collected on each of these primary control points.

Keokuk County Control Pt. 412 was checked for vertical tolerance. The vertical difference is about 0.1 ft.
 Keokuk County Control Pt. 419 was checked for vertical tolerance. The vertical difference is about 0.1 ft.

Horizontal Control

The project coordinate system for this survey is laRCS Zone 13 (U.S. Survey Feet). This survey control is relative to laRTN reference stations. laRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00.

Keokuk County Control Pt. 412 was checked for horizontal tolerance. The horizontal difference is about 0.05 ft.
 Keokuk County Control Pt. 419 was checked for horizontal tolerance. The horizontal difference is about 0.1 ft.

Point Name	Northing	Easting	Elevation	Feature	Definition
303	6796024.608	23389066.700	784.83	FENO3 MONUMENT 1304' EAST OF THE INTERSECTION OF IA92 AND V33 41' SOUTH OF CENTERLINE IA92 AND WEST OF DRIVEWAY.	
419	6796482.253	23397059.776	781.55	BM COUNTY MONUMENT #419 BERNTSEN TOP SECURITY ROD MONUMENT EITH A 2-1/2" DIA DOMED CAP AND A PERMANENT MAGNET INCASED IN A 5"DIA PVC PIPE WITH A NGS STYLE ALUMINUM ACCESS COVER.	
302	6796066.353	23386470.482	743.71	FENO2 MONUMENT 1293' WEST OF THE INTERSECTION OF IA92 AND V33 24.5' NORTH OF CENTERLINE IA92.	
412	6796167.686	23378996.388	809.04	BM COUNTY MONUMENT #412 BERNTSEN TOP SECURITY ROD MONUMENT EITH A 2-1/2" DIA DOMED CAP AND A PERMANENT MAGNET INCASED IN A 5"DIA PVC PIPE WITH A NGS STYLE ALUMINUM ACCESS COVER.	
301	6796092.641	23382200.835	796.09	FENO1 MONUMENT 2337' EAST OF THE INTERSECTION OF IA92 AND IA21 45' NORTH OF CENTERLINE IA92 AND EAST OF FIELD ENTRANCE.	

Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans Project No. F-34(5), No.452, Keokuk County No. S-1832, and No. F-961(1).

Survey stationing was equated to the plan PI at STA 143+59 for alignment SURML092W and ran ahead without equation throughout the survey.

Survey stationing was equated to the plan POT at Sta. 235+72.7 for alignment SURML092E and ran back and ahead without equation throughout the survey.

Survey stationing was equated to the plan POT at Sta. 6000+00 for alignment SURSR021N and ran ahead without equation throughout the survey.

Survey stationing was equated to the plan POT at Sta. 0+00 for alignment SURSR021S and ran ahead without equation throughout the survey.

Survey stationing was equated to the plan POT at Sta. 62+80.6 for alignment SURSRV33S and ran back without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

SURML092W Alignment

PI Sta. 143+59 As-built Plans Project No. F-34(5)
 Survey PI Sta. 143+59

PC Sta. 145+61 As-built Plans Project No. F-34(5)
 Survey PC Sta. 145+61.36

PI Sta. 149+48.6 As-built Plans Project No. F-34(5)
 Survey PI Sta. 149+48.69

PT Sta. 153+36 As-built Plans Project No. F-34(5)
 Survey PT Sta. 153+36

POE Sta. 187+03.71 Survey Best Fit

SURML092E Alignment

POT Sta. 207+98.4 As-built Plans Project No. F-34(5)
 Survey POT Sta. 207+99.8

POT Sta. 235+72.7 As-built Plans Project No. F-34(5)
 Survey POT Sta. 235+72.7

POE Sta. 258+48.66 Survey Best Fit

SURSR021N Alignment

POT Sta. 6000+00 As-built Plans Project No. 452
 Survey POT Sta. 6000+00

Survey $\frac{7}{32}$ Best Fit Centerline $\frac{9}{32}$ POT Sta. 6007+94.19

SURSR021S Alignment

POT Sta. 0+00 As-built Plans Keokuk County Project No. S-1832
 Survey POT Sta. 0+00

PC Sta. 0+22.4 As-built Plans Keokuk County Project No. S-1832
 Survey PC Sta. 0+22.4

PI Sta. 4+92.4 As-built Plans Keokuk County Project No. S-1832
 Survey PI Sta. 4+92.41

PT Sta. 8+32.2 As-built Plans Keokuk County Project No. S-1832
 Survey PT Sta. 8+32.2

Survey $\frac{7}{32}$ Best Fit Centerline $\frac{9}{32}$ POT Sta. 11+46.89

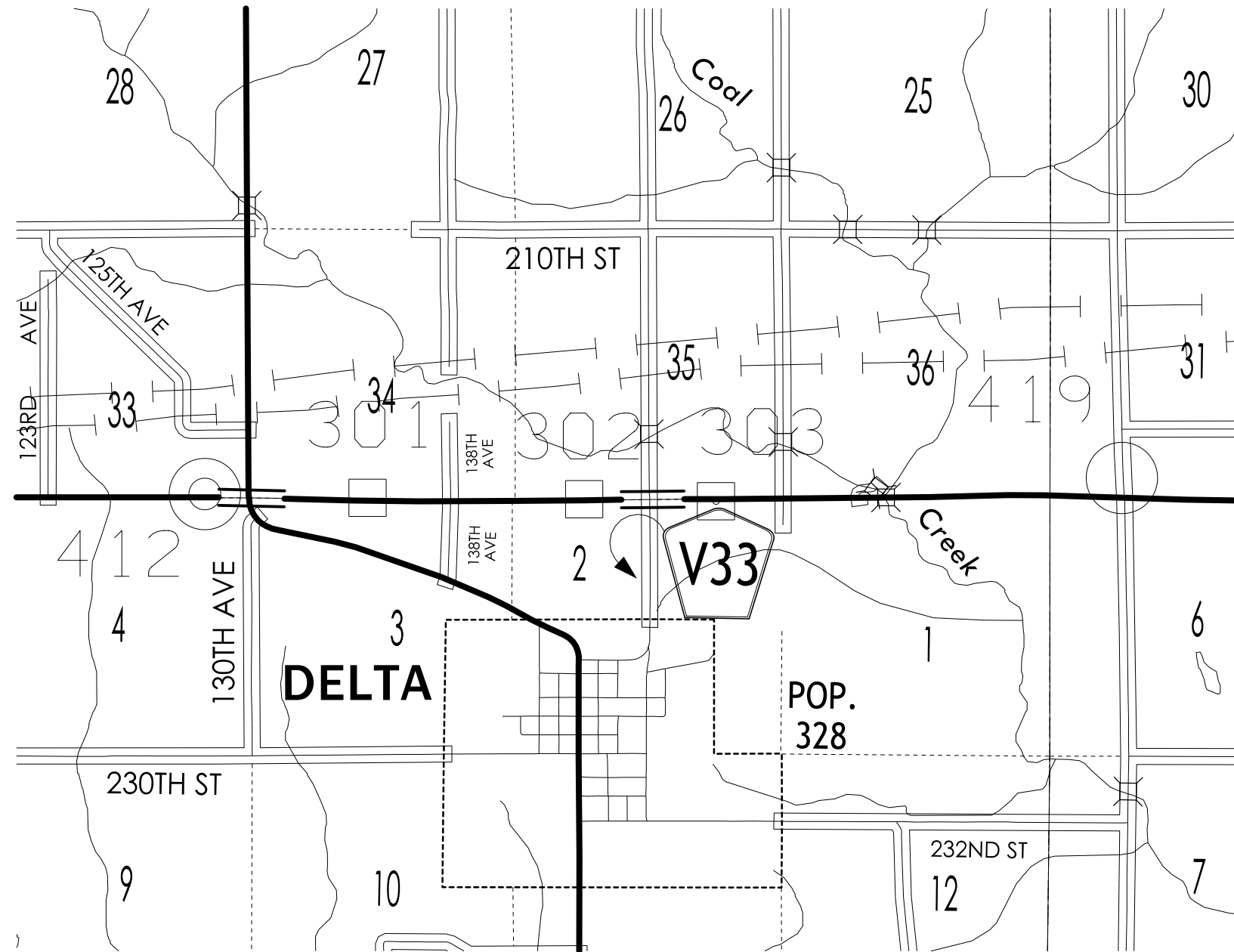
SURSRV33S

PT Sta. 54+92.5 As-built Plans Project No. F-961(1)
 Survey PT Sta. 54+92.5

POT Sta. 62+80.6 As-built Plans Project No. F-961(1)
 Survey POT Sta. 62+80.6

CONTROL POINT VICINITY MAP

This map is a guide to the vicinity of the primary project control points
 Primary control is for use with RTK base stations and for RTN validation.
 Future surveys will use primary project control to establish temporary control as needed for construction or other surveying applications.



HORIZ. DATUM: NAD83(2011) EPOCH 2010

VERT. DATUM: NAVD88

1a. Regional Coordinate System Zone 13

Coordinate listing from next sheet will be used with 1aRTN for monument recovery. No other reference ties are given.

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 13

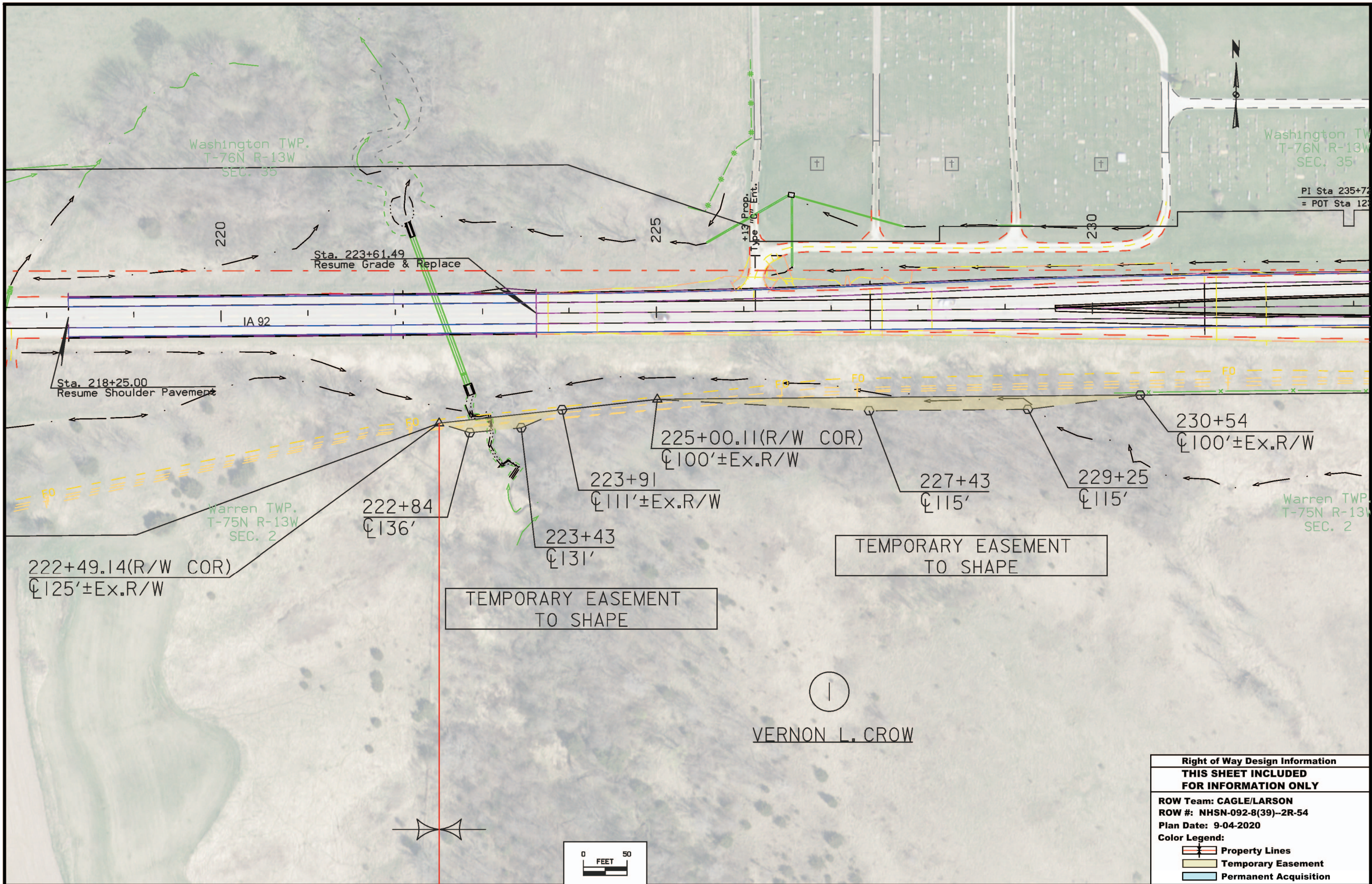
Point Name	Northing	Easting	Elevation	Feature	Definition
303	6796024.608	23389066.700	784.83	FENO3	MONUMENT 1304' EAST OF THE INTERSECTION OF IA92 AND V33 41' SOUTH OF CENTERLINE IA92 AND WEST OF DRIVEWAY.
419	6796482.253	23397059.776	781.55	BM	COUNTY MONUMENT #419 BERNTSEN TOP SECURITY ROD MONUMENT EITH A 2-1/2" DIA DOMED CAP AND A PERMANENT MAGNET INCASED IN A 5"DIA PVC PIPE WITH A NGS STYLE ALUMINUM ACCESS COVER.
302	6796066.353	23386470.482	743.71	FENO2	MONUMENT 1293' WEST OF THE INTERSECTION OF IA92 AND V33 24.5' NORTH OF CENTERLINE IA92.
412	6796167.686	23378996.388	809.04	BM	COUNTY MONUMENT #412 BERNTSEN TOP SECURITY ROD MONUMENT EITH A 2-1/2" DIA DOMED CAP AND A PERMANENT MAGNET INCASED IN A 5"DIA PVC PIPE WITH A NGS STYLE ALUMINUM ACCESS COVER.
301	6796092.641	23382200.835	796.09	FENO1	MONUMENT 2337' EAST OF THE INTERSECTION OF IA92 AND IA21 45' NORTH OF CENTERLINE IA92 AND EAST OF FIELD ENTRANCE.

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	ML092W	133+50.00	6796099.95	23377542.54															
2	ML092W							144+74.29	6796099.34	23378666.83	149+12.13	6796099.10	23379104.67	153+49.94	6796089.94	23379542.42			
3	ML092W	181+00.00	6796032.42	23382291.88															
4	ML092E	207+00.00	6796028.06	23384890.73															
5	ML092E	235+72.70	6796053.65	23387763.32															
6	ML092E	260+00.00	6796075.70	23390190.52															
7	SR021	1144+96.99	6795404.90	23380681.46															
8	SR021							1148+13.74	6795470.25	23380371.53	1152+66.39	6795563.63	23379928.61	1156+00.23	6796012.78	23379872.44			
9	SR021	1156+71.22	6796083.22	23379863.63															
10	SR021	1164+65.39	6796877.37	23379859.02															
11	SRV33	1230+00.00	6795480.99	23387769.57															
12	SRV33	1235+72.70	6796053.65	23387763.32															
13	DET01	2134+45.06	6796081.65	23377737.59															
14	DET01	2135+55.22	6796081.59	23377847.75															
15	DET01	2142+60.10	6796068.40	23378552.51															
16	DET01							2143+74.40	6796068.34	23378666.81	2148+11.93	6796068.10	23379104.34	2152+49.42	6796058.95	23379541.77			
17	DET01	2154+63.79	6796054.46	23379756.09															
18	DET02	2157+65.60	6796050.25	23379957.33															
19	DET02	2169+15.14	6796026.21	23381106.62															
20	DET02	2178+61.26	6796023.62	23382052.74															
21	DET03							3150+41.50	6796095.28	23379234.03	3151+95.72	6796093.16	23379388.23	3153+49.93	6796089.94	23379542.42			
22	DET03	3156+21.14	6796084.27	23379813.57															
23	DET04	3157+05.03	6796082.51	23379897.43															
24	DET04	3163+42.12	6796069.19	23380534.39															
25	DET05	4135+52.50	6796118.15	23377745.06															
26	DET05	4135+72.45	6796118.16	23377765.00															
27	DET05	4136+15.00	6796118.31	23377807.55															
28	DET05	4136+54.28	6796118.21	23377846.83															
29	DET05	4136+68.21	6796118.19	23377860.75															
30	DET05	4143+60.11	6796130.40	23378552.55															
31	DET05							4144+74.41	6796130.34	23378666.85	4149+12.57	6796130.10	23379105.00	4153+50.69	6796120.93	23379543.06			
32	DET05	4154+70.99	6796118.42	23379663.33															
33	DET06	4157+65.03	6796112.25	23379958.07															
34	DET06	4169+15.13	6796088.19	23381107.92															
35	DET06	4178+50.16	6796051.65	23382042.23															
36	DET07							5150+41.50	6796095.28	23379234.03	5151+95.72	6796093.16	23379388.23	5153+49.93	6796089.94	23379542.42			
37	DET07	5154+70.23	6796087.42	23379662.68															
38	DET08	5157+65.03	6796081.26	23379957.42															
39	DET08	5163+42.12	6796069.19	23380534.39															
40	DET09	6138+64.98	6796077.67	23378057.51															
41	DET09	6143+60.06	6796068.40	23378552.51															
42	DET09							6144+74.37	6796068.34	23378666.81	6147+93.36	6796068.16	23378985.81	6151+12.34	6796063.25	23379304.76			
43	DET10	6157+66.66	6796050.23	23379958.40															
44	DET10	6169+15.12	6796026.21	23381106.60															
45	DET10	6169+15.14	6796026.21	23381106.62															
46	DET10	6174+10.19	6796024.85	23381601.68															
47	DET11	7210+70.40	6796017.36	23385261.24															
48	DET11	7223+35.48	6796005.63	23386526.27															
49	DET11	7235+07.11	6796016.07	23387697.86															
50	DET12	7236+39.34	6796017.26	23387830.29															
51	DET12	7248+10.13	6796027.89	23389001.03															
52	DET12	7260+75.21	6796062.38	23390265.64															
53	DET13	8230+98.49	6796043.43	23387289.18															
54	DET13	8235+35.20	6796047.32	23387725.87															
55	DET14	8236+36.93	6796048.24	23387827.61															
56	DET14	8240+75.13	6796052.22	23388265.79															

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	
C1	ML092W											1°10'02.81"	437.84	875.65	42975.00	2.23	
C2	SR021											70°57'55.04"	452.65	786.50	635.00	144.82	
C3	DET01											1°10'02.81"	437.52	875.02	42944.00	2.23	
C4	DET03											0°24'40.36"	154.22	308.43	42975.00	0.28	
C5	DET05											1°10'02.81"	438.16	876.28	43006.00	2.23	
C6	DET07											0°24'40.37"	154.22	308.43	42975.00	0.28	
C7	DET09											0°51'04.23"	318.99	637.97	42944.00	1.18	



①
VERNON L. CROW

Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: CAGLE/LARSON	
ROW #: NHSN-092-8(39)--2R-54	
Plan Date: 9-04-2020	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition

TRAFFIC CONTROL PLAN

- IA 92
- Maintain traffic on existing IA 92 at all times utilizing on-site detours.
 - Maintain traffic to all residents, businesses, farmsteads, and field entrances at all times.
- IA 21
- Close for a maximum of 21 calendar days during construction.
 - During closure, detour NB IA 21 traffic to Co Rd V33 to IA 92 to IA 149 to IA 22 to IA 21.
 - During closure, detour SB IA 21 traffic to IA 22 to IA 21 to IA 149 to IA 92 to IA 21.
- Co Rd V33/145th Ave
- Close during construction.
 - IA 21 and Co Rd V33 intersections cannot be closed at the same time as City of Delta traffic to use IA 21 to access IA 92.
 - During closure, detour NB Co Rd V33 traffic to IA 21 to IA 92.
 - During closure, detour SB 145th Ave traffic to 210th St to 150th Ave to IA 92.
- Cemetery (NW corner of Co Rd V33/145th Ave)
- Access to cemetery shall be provided at all times during the project. Stage IA 92 work to keep one point of access open at all times.

STAGING NOTES

- Stage 5B Traffic (IA 92/Co Rd V33):
- Install traffic control including TBR as shown on J sheets and shift two-way traffic south utilizing EB lane and detour pavement.
 - Close 145th Ave north of intersection. Maintain local access.
 - Co Rd V33 to remain open south of intersection to access IA 92.
- Stage 5B Construction (IA 92/Co Rd V33):
- Construct north half improvements as shown in the J Sheets.
- Stage 6 Traffic (IA 92/Co Rd V33):
- Install traffic control including TBR as shown on J sheets and shift two-way traffic north utilizing previously constructed pavement.
 - Open 145th Ave to traffic.
 - After Stage 6 construction is complete, open all traffic to normal operations.
- Stage 6 Construction (IA 92/Co Rd V33):
- Remove previously installed on-site detours on the south.
 - Construct south half improvements as shown in the J Sheets.

STAGING NOTES

It is not the intent of the sequence of construction to confine the Contractor's activities to the area of suggested stages alone. It is understood that some of the various steps, though listed in numerical order, may occur simultaneously. Therefore, the Contractor may conduct several operations concurrently on the project, provided that the existing traffic is maintained and that these operations do not conflict with the staging indicated here in.

It is recognized that as various activities related to the construction progress, certain situations may arise which will preclude adhering to the original construction sequence or, which in the opinion of the Contractor, would readily adhere itself to a more efficient staging operation. Should this occur, and the Contractor desires to deviate from the original plan, they shall submit an alternate plan for approval by the Engineer.

Stage 1A Traffic (IA 92/IA 21):

- Install traffic control per Standard Road Plan TC-214 shifting all traffic onto the WB lane utilizing pilot car and flaggers. Maintain traffic on IA 21.

Stage 1A Construction (IA 92/IA 21):

- Construct on-site detours as shown in the F Sheets.

Stage 1B Traffic (IA 92/IA 21):

- Install traffic control including TBR as shown on J sheets and shift two-way traffic south utilizing EB lane and detour pavement.
- Close IA 21 north of IA 92/IA 21 intersection for a maximum of 14 calendar days.
- IA 21 south of IA 92/IA 21 intersection to remain open to access IA 92.

Stage 1B Construction (IA 92/IA 21):

- Construct north half of IA 92/IA 21 intersection improvements as shown in the J Sheets.
- Construct on-site detours as shown in the F Sheets.

Stage 2 Traffic (IA 92/IA 21):

- Install traffic control including TBR as shown on J sheets and shift two-way traffic north utilizing WB lane and detour pavement.
- Close IA 21 south of intersection for a maximum of 7 calendar days.
- IA 21 to remain open north of intersection to access IA 92.

Stage 2 Construction (IA 92/IA 21):

- Construct south half of IA 92/IA 21 intersection improvements as shown in the J Sheets.

Stage 3 Traffic (IA 92/IA 21):

- Adjust traffic control as shown on J sheets and open the IA 92/IA 21 intersection to traffic.

Stage 3 Construction (IA 92/IA 21):

- Remove previously installed on-site detours on the south.
- Construct the remainder of the south half improvements as shown in the J Sheets.
- Construct on-site detours as shown in the F Sheets.

Stage 4 Traffic (IA 92/IA 21):

- Install traffic control including TBR as shown on J sheets and shift two-way traffic south utilizing EB lane and detour pavement.
- IA 92/IA 21 intersection to remain open to traffic.
- After Stage 4 construction is complete, open all traffic to normal operations.

Stage 4 Construction (IA 92/IA 21):

- Construct the remainder of the north half improvements as shown in the J Sheets.
- Remove the remainder of the previously installed on-site detours on the south.

Stage 5A Traffic (IA 92/Co Rd V33):

- Install traffic control per Standard Road Plan TC-214 shifting all traffic onto the WB lane utilizing pilot car and flaggers. Maintain traffic on Co Rd V33 and 145th Ave.











Stage 5A Construction (IA 92/Co Rd V33):

- Construct on-site detours as shown in the F Sheets.

**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
	Temporary Sand Barrel		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
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

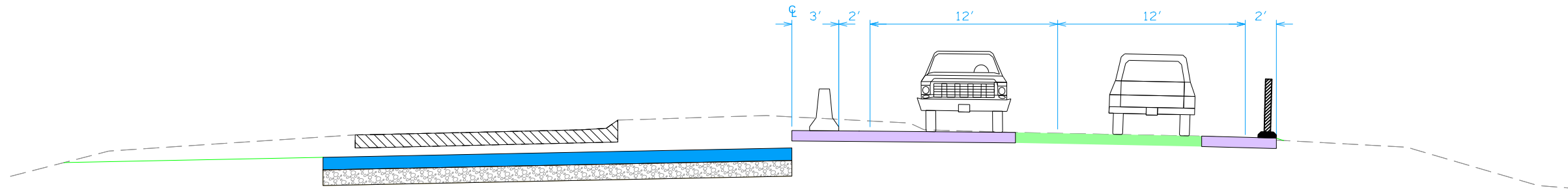
**PLAN VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**

	Channelizing Device		Crash Cushion (Temp or Perm)
	Drum		Traffic Signal
	Temporary Lane Separator		Flagger
	Tubular Marker		Temporary Floodlighting
	Single White Delineators		Traffic Sign
	Concrete Barrier Marker		Type III Barricade
	Delineator		Type A Warning Light
	Temporary Barrier Rail		Direction of Traffic
	Pavement Removal		Safety Closure
	Sand Barrel Layout		Lane Identification

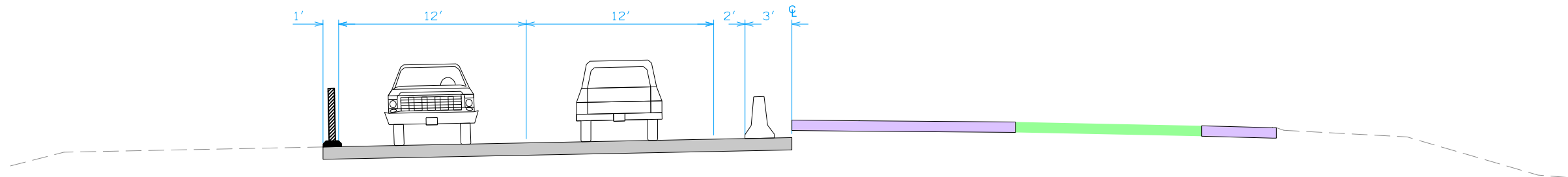
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

**TRAFFIC CONTROL
AND
STAGING
LEGEND AND SYMBOL
INFORMATION SHEET**

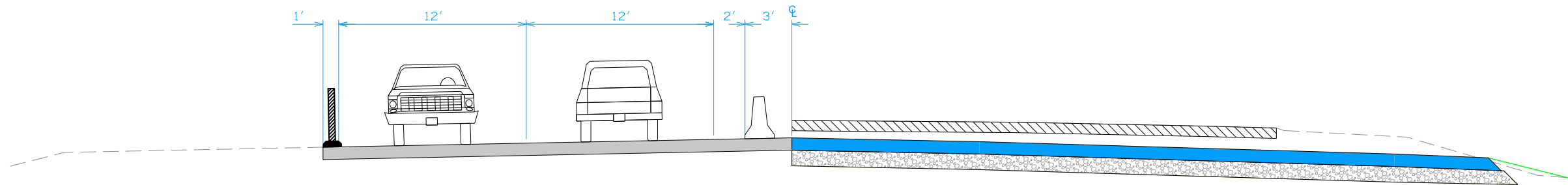
(COVERS SHEET SERIES J)



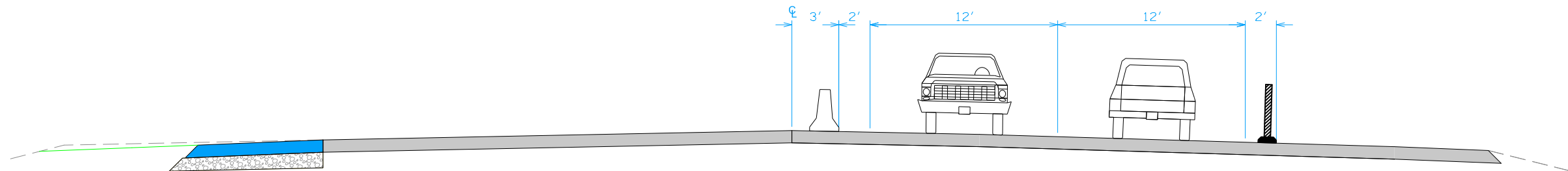
STAGE 1B
(STA. 155+00.00 SHOWN)



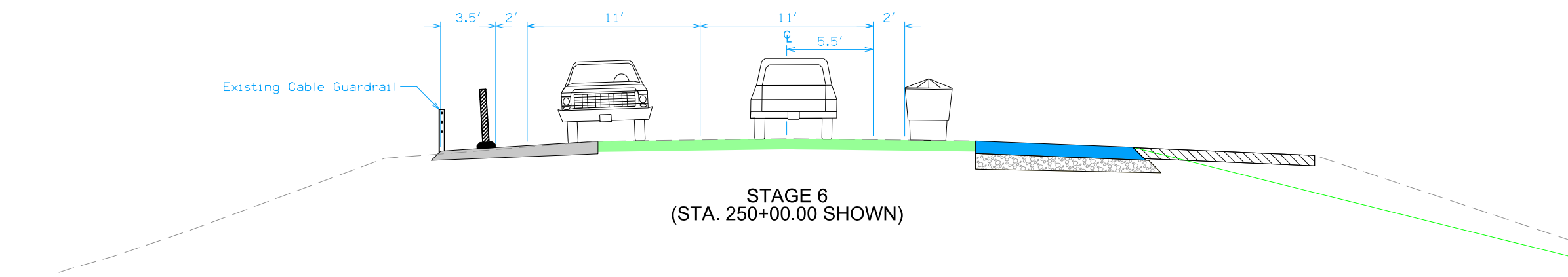
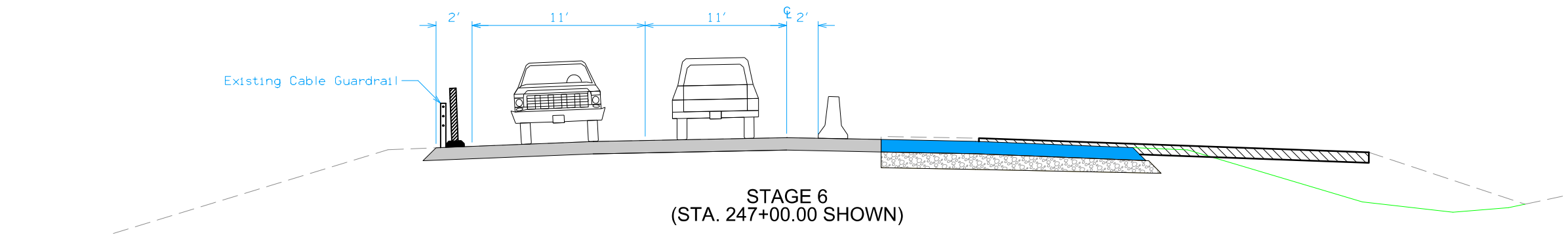
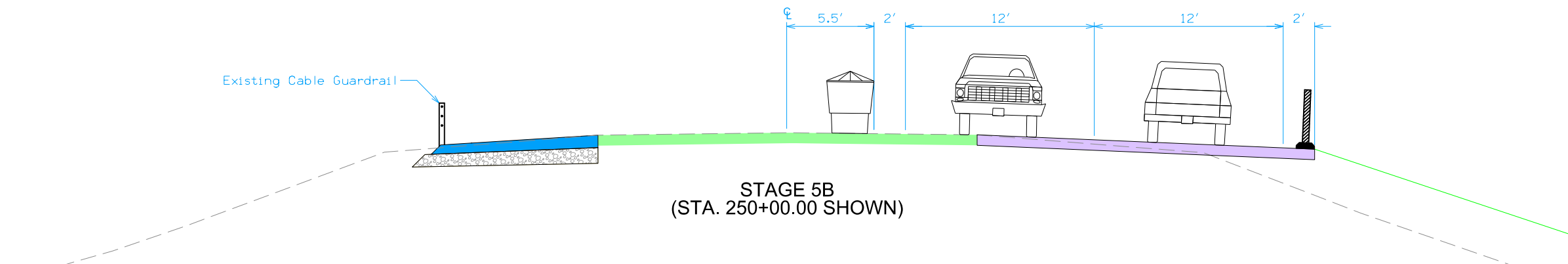
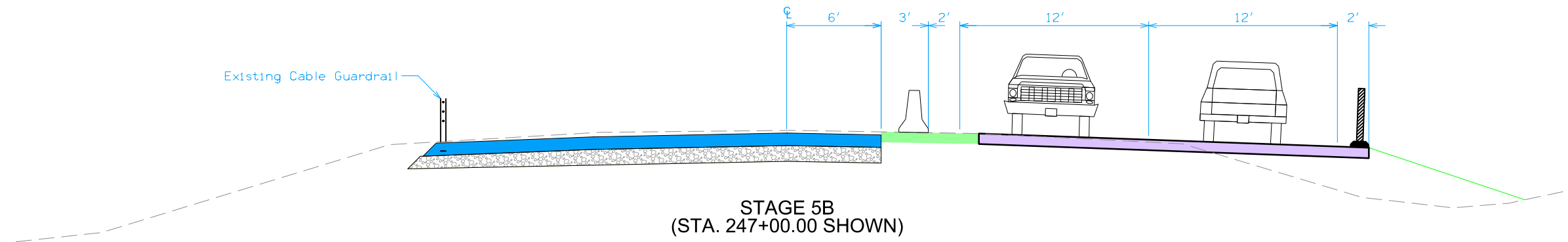
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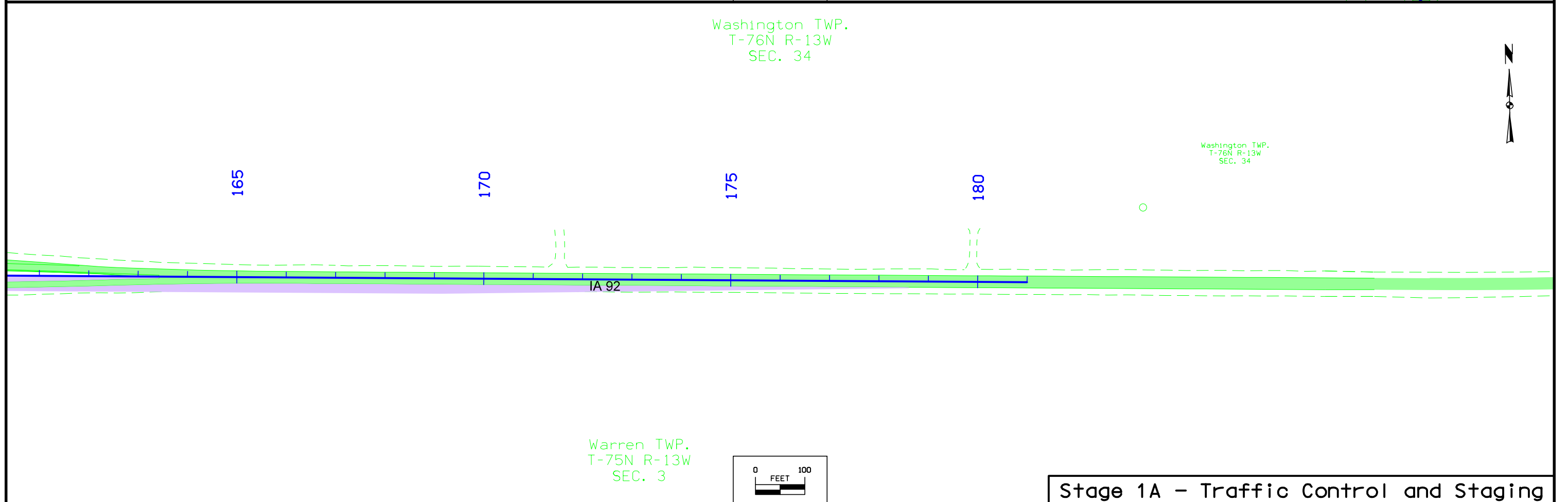
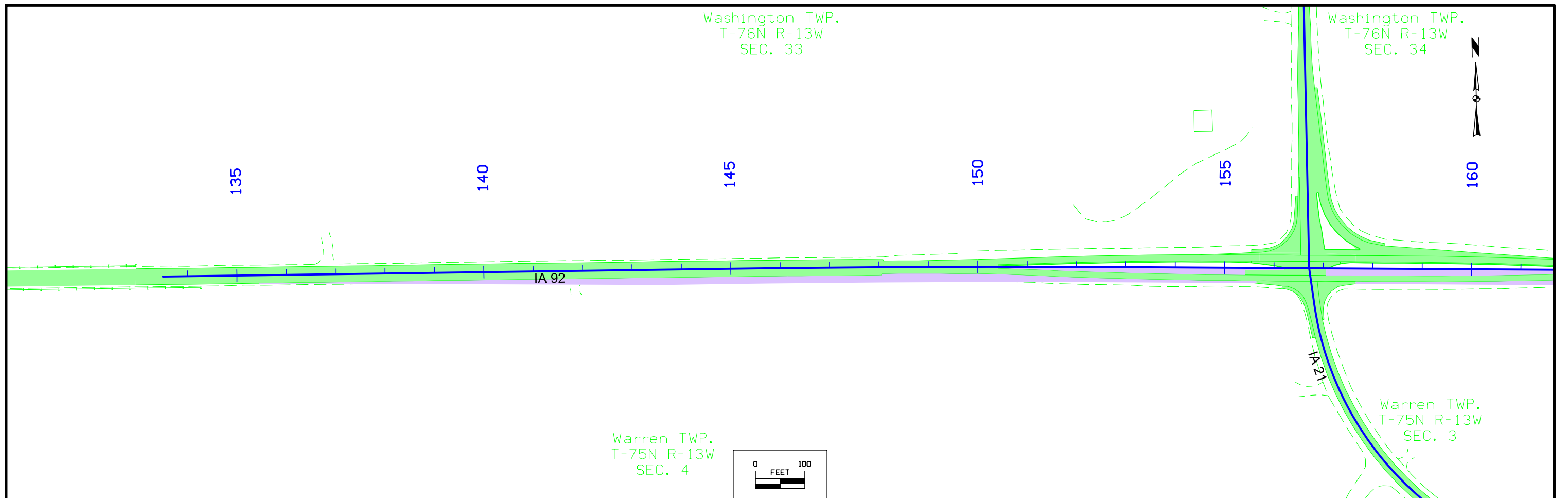


STAGE 3
(STA. 155+00.00 SHOWN)



STAGE 4
(STA. 155+00.00 SHOWN)





Stage 1A - Traffic Control and Staging

FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	J.5
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Washington TWP.
T-76N R-13W
SEC. 33



1000'

1000'

1000'

END
ROAD WORK

G20-2A
48" x 24"



W14-3
48" X 60" X 60"

IA 92

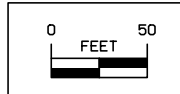


W20-1
48" x 48"



R4-1
36" x 48"

Warren TWP.
T-75N R-13W
SEC. 4



W13-1
24" x 24"



W1-4R
48" x 48"

Washington TWP.
T-76N R-13W
SEC. 33



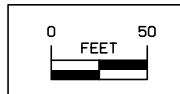
135

140

145

IA 92

Begin TBR



Warren TWP.
T-75N R-13W
SEC. 4

Stage 1B - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34



150

155

160

50
M.P.H.
W13-1
24" x 24"



W1-4R
48" x 48"

IA 92

50
M.P.H.
W13-1
24" x 24"

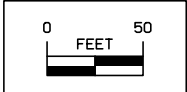


W1-4L
48" x 48"



W20-1
48" x 48"

Warren TWP.
T-75N R-13W
SEC. 3



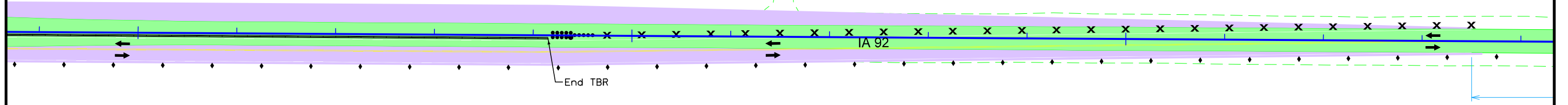
Stage 1B - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 34

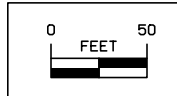
165

170

175



Warren TWP.
T-75N R-13W
SEC. 3



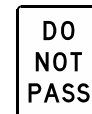
Washington TWP.
T-76N R-13W
SEC. 34



W1-4L
48" x 48"



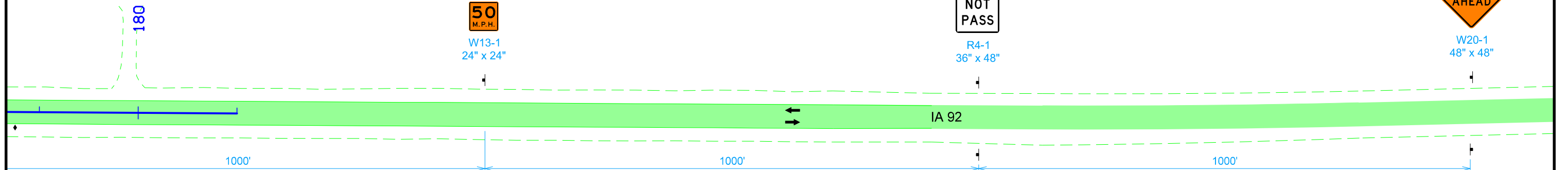
W13-1
24" x 24"



R4-1
36" x 48"



W20-1
48" x 48"



1000'

1000'

1000'

IA 92

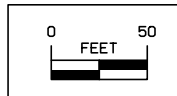


W14-3
48" X 60" X 60"



G20-2A
48" x 24"

Warren TWP.
T-75N R-13W
SEC. 3



Stage 1B - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 33



1000'

1000'

1000'

END
ROAD WORK

G20-2A
48" x 24"



W14-3
48" X 60" X 60"

IA 92

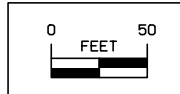


W20-1
48" x 48"



R4-1
36" x 48"

Warren TWP.
T-75N R-13W
SEC. 4



W13-1
24" x 24"



W1-4L
48" x 48"

Washington TWP.
T-76N R-13W
SEC. 33



135

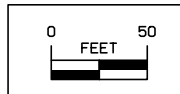
140

145

Begin TBR

IA 92

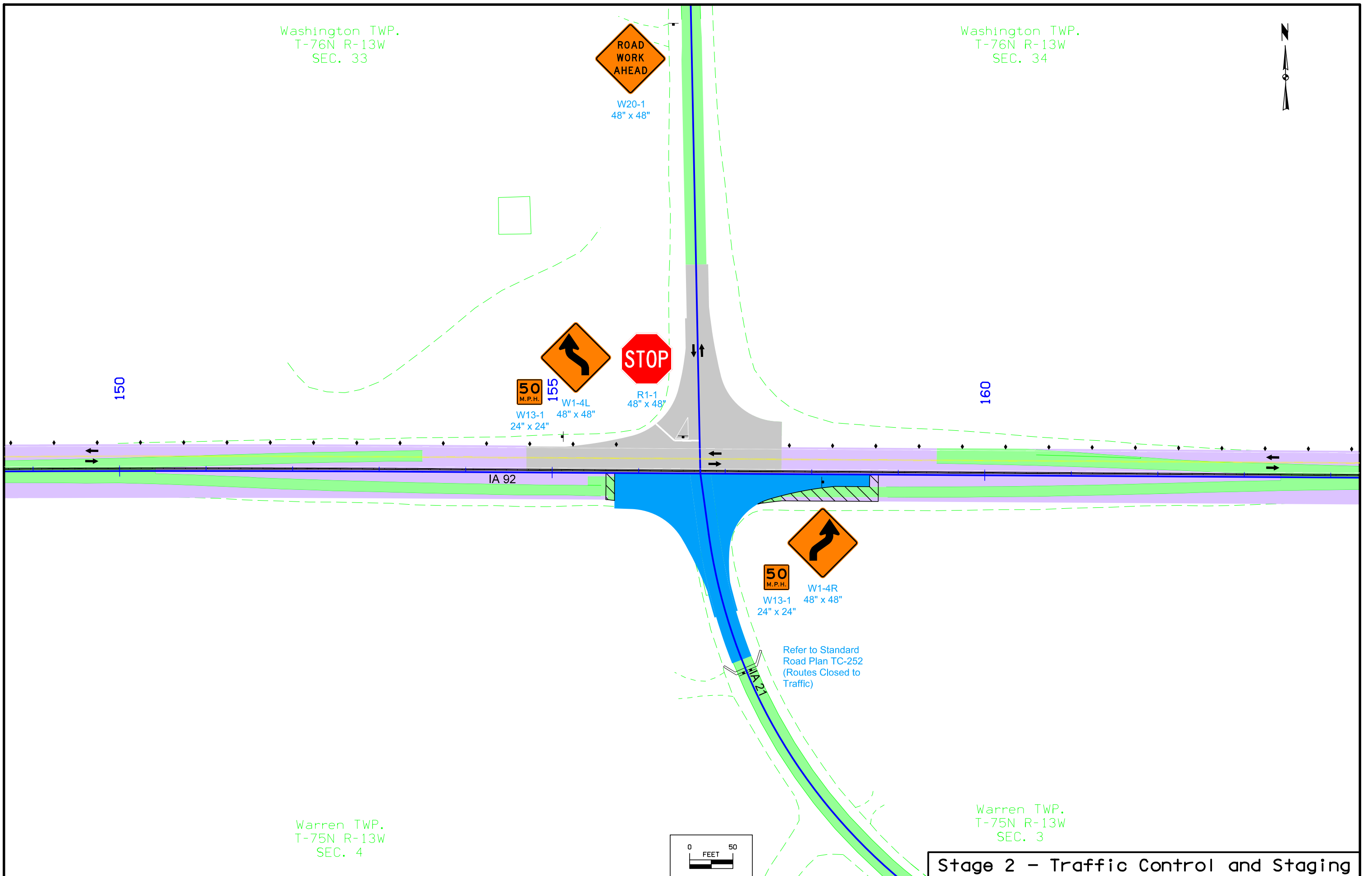
Warren TWP.
T-75N R-13W
SEC. 4



Stage 2 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34



Stage 2 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 34



165

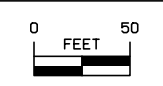
170

175

End TBR

IA 92

Warren TWP.
T-75N R-13W
SEC. 3



Washington TWP.
T-76N R-13W
SEC. 34



W1-4R
48" x 48"



W13-1
24" x 24"



R4-1
36" x 48"



W20-1
48" x 48"

180

IA 92

1000'

1000'

1000'

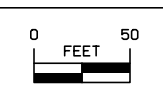


W14-3
48" X 60" X 60"



G20-2A
48" x 24"

Warren TWP.
T-75N R-13W
SEC. 3



Stage 2 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 33



1000'

1000'

1000'

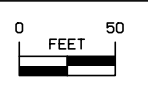
END
ROAD WORK

G20-2A
48" x 24"



W14-3
48" X 60" X 60"

IA 92



W20-1
48" x 48"

DO
NOT
PASS

R4-1
36" x 48"

Warren TWP.
T-75N R-13W
SEC. 4



50
M.P.H.

W13-1
24" x 24"

W1-4L
48" x 48"

Washington TWP.
T-76N R-13W
SEC. 33



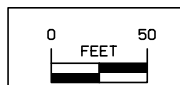
135

140

145

Begin TBR

IA 92

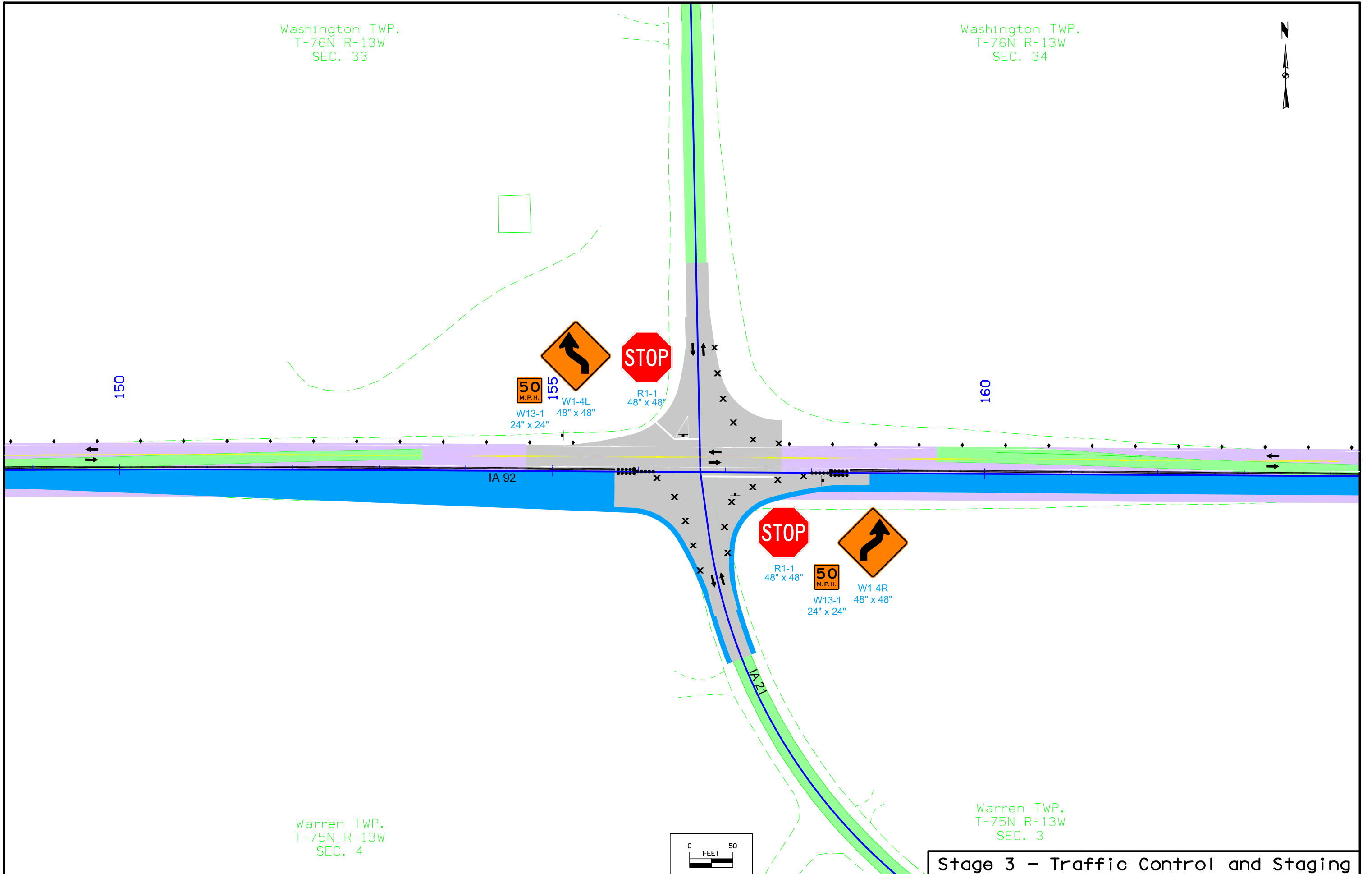


Warren TWP.
T-75N R-13W
SEC. 4

Stage 3 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34



150

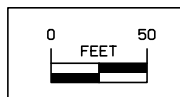
160

IA 92

IA 21

Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3



Stage 3 - Traffic Control and Staging

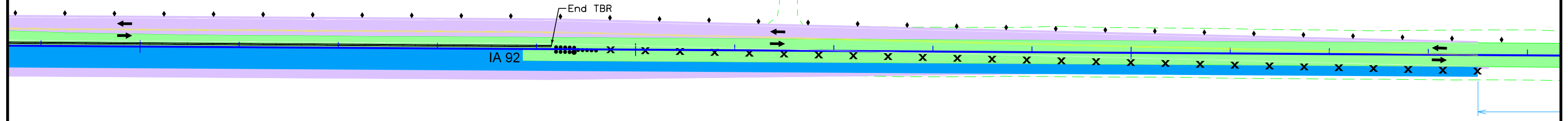
Washington TWP.
T-76N R-13W
SEC. 34



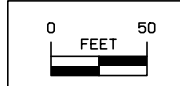
165

170

175



Warren TWP.
T-75N R-13W
SEC. 3



Washington TWP.
T-76N R-13W
SEC. 34



W1-4R
48" x 48"



W13-1
24" x 24"



R4-1
36" x 48"



W20-1
48" x 48"

180

IA 92

1000'

1000'

1000'

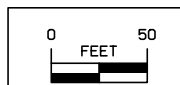


W14-3
48" X 60" X 60"



G20-2A
48" x 24"

Warren TWP.
T-75N R-13W
SEC. 3



Stage 3 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 33



1000'

1000'

1000'

END
ROAD WORK

G20-2A
48" x 24"



W14-3
48" X 60" X 60"

IA 92

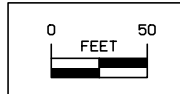


W20-1
48" x 48"

DO
NOT
PASS

R4-1
36" x 48"

Warren TWP.
T-75N R-13W
SEC. 4



50
M.P.H.



W13-1
24" x 24"

W1-4R
48" x 48"

Washington TWP.
T-76N R-13W
SEC. 33



135

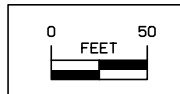
140

145

Begin TBR

IA 92

Warren TWP.
T-75N R-13W
SEC. 4



Stage 4 - Traffic Control and Staging

FILE NO.

ENGLISH

DESIGN TEAM

Van Dyke\Stanley Consultants Inc.

KEOKUK COUNTY

PROJECT NUMBER

NHSN-092-8(36)--2R-54

SHEET NUMBER

J.15

11:20:01 AM 7/31/2019 3994

pw:\projectwise.dot.int.lan:PWMain\Documents\Projects\5409203016\Design\CADD\SHT\SHT_54092036_J02.dgn

Washington TWP.
T-76N R-13W
SEC. 33

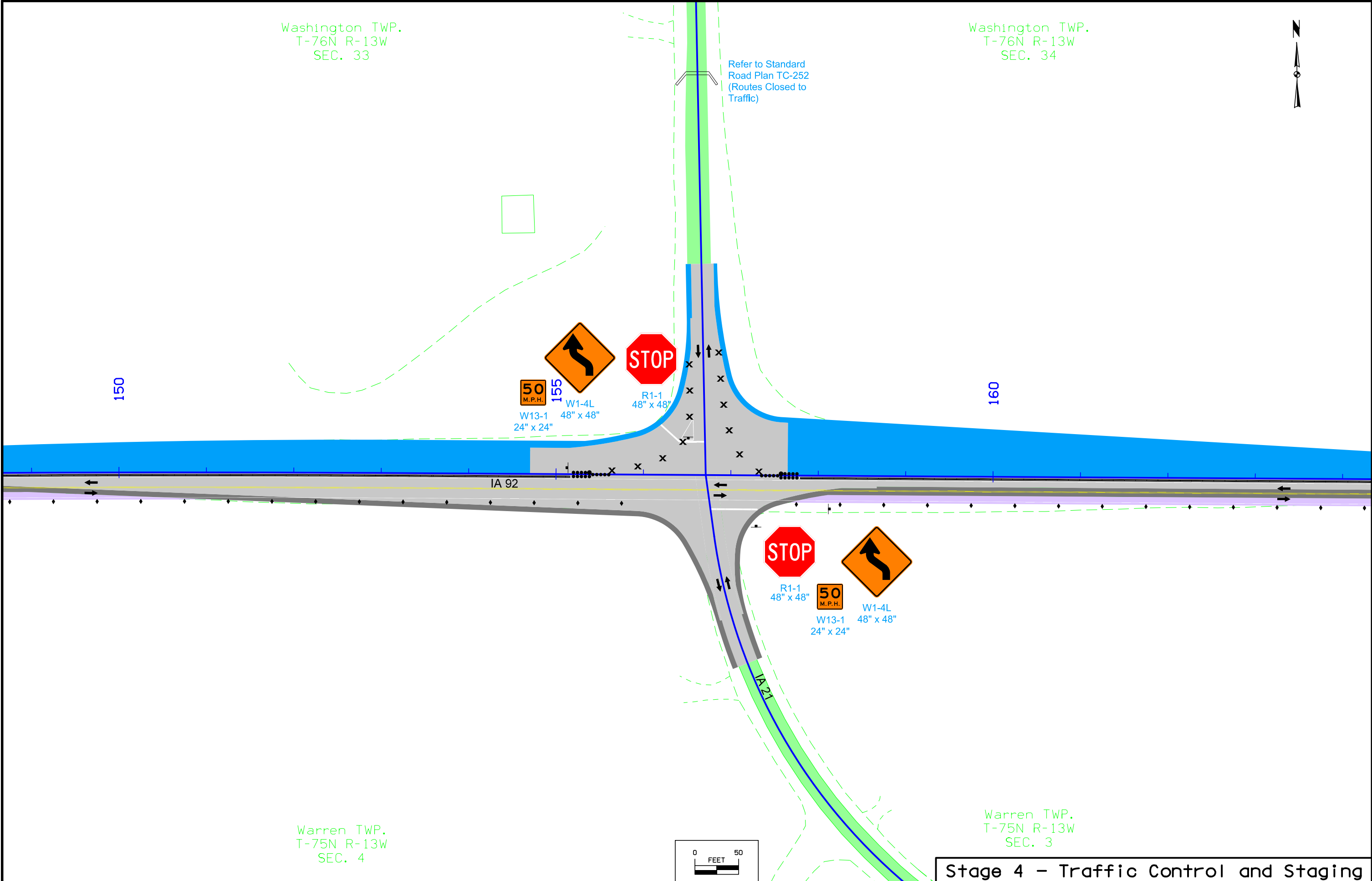
Washington TWP.
T-76N R-13W
SEC. 34



Refer to Standard
Road Plan TC-252
(Routes Closed to
Traffic)

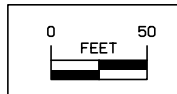
150

160



Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3



Stage 4 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 34

165

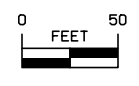
170

175

End TBR

IA 92

Warren TWP.
T-75N R-13W
SEC. 3



Washington TWP.
T-76N R-13W
SEC. 34

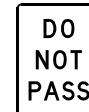


W1-4L
48" x 48"



W13-1
24" x 24"

180



R4-1
36" x 48"



W20-1
48" x 48"

IA 92

1000'

1000'

1000'

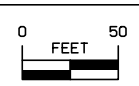


W14-3
48" X 60" X 60"

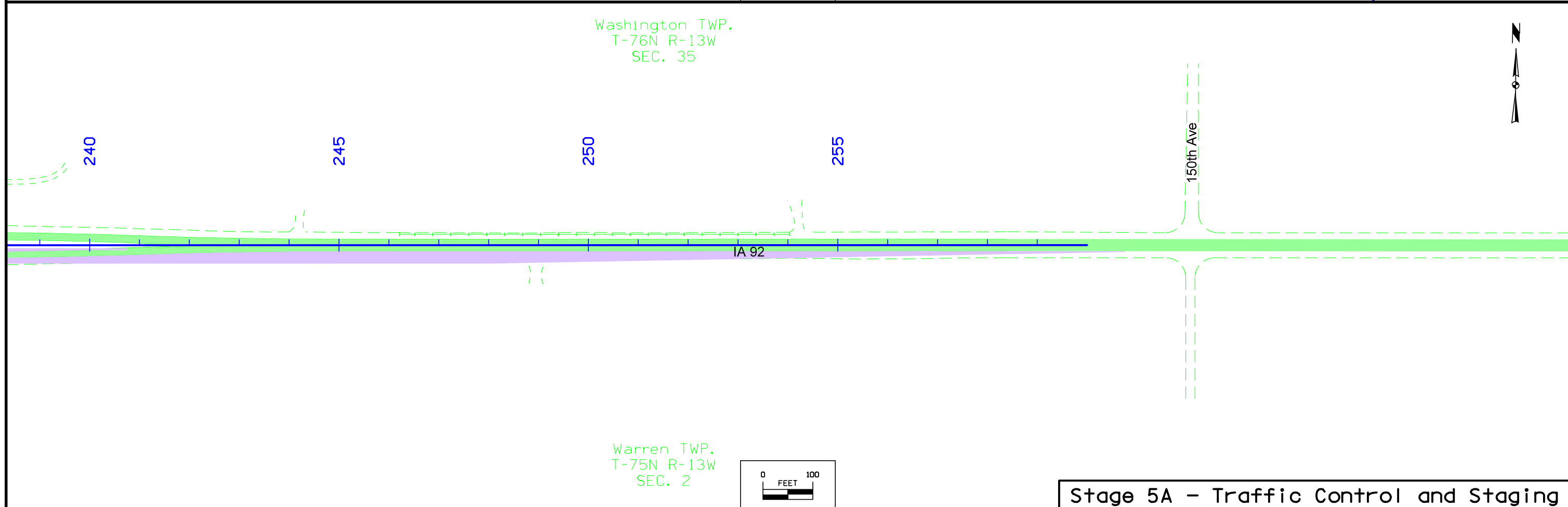
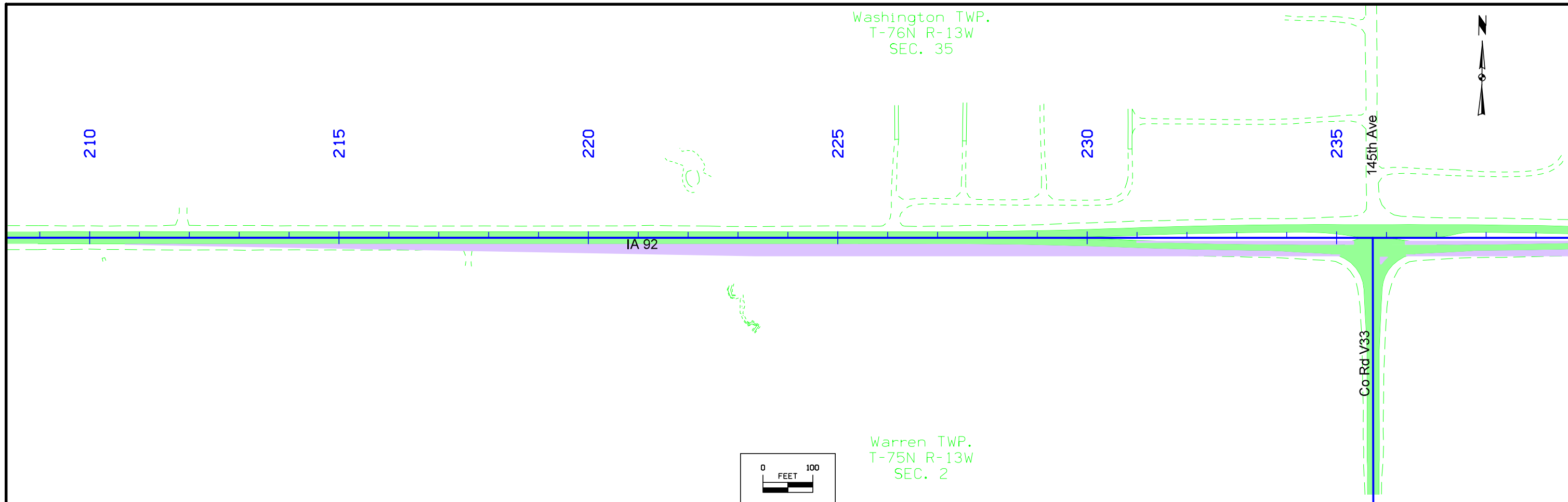


G20-2A
48" x 24"

Warren TWP.
T-75N R-13W
SEC. 3



Stage 4 - Traffic Control and Staging



Stage 5A - Traffic Control and Staging

FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	J.18
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Washington TWP.
T-76N R-13W
SEC. 34

Washington TWP.
T-76N R-13W
SEC. 35



END
ROAD WORK

G20-2A
48" x 24"

NO
PASSING
ZONE

W14-3
48" X 60" X 60"

210

IA 92

ROAD
WORK
AHEAD

W20-1
48" x 48"

1000'

DO
NOT
PASS

R4-1
36" x 48"

50
M.P.H.

W13-1
24" x 24"

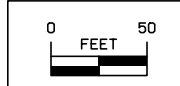
W1-4R
48" x 48"

1000'

1000'

Warren TWP.
T-75N R-13W
SEC. 3

Warren TWP.
T-75N R-13W
SEC. 2



Washington TWP.
T-76N R-13W
SEC. 35



215

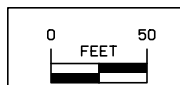
220

225

IA 92

Begin TBR

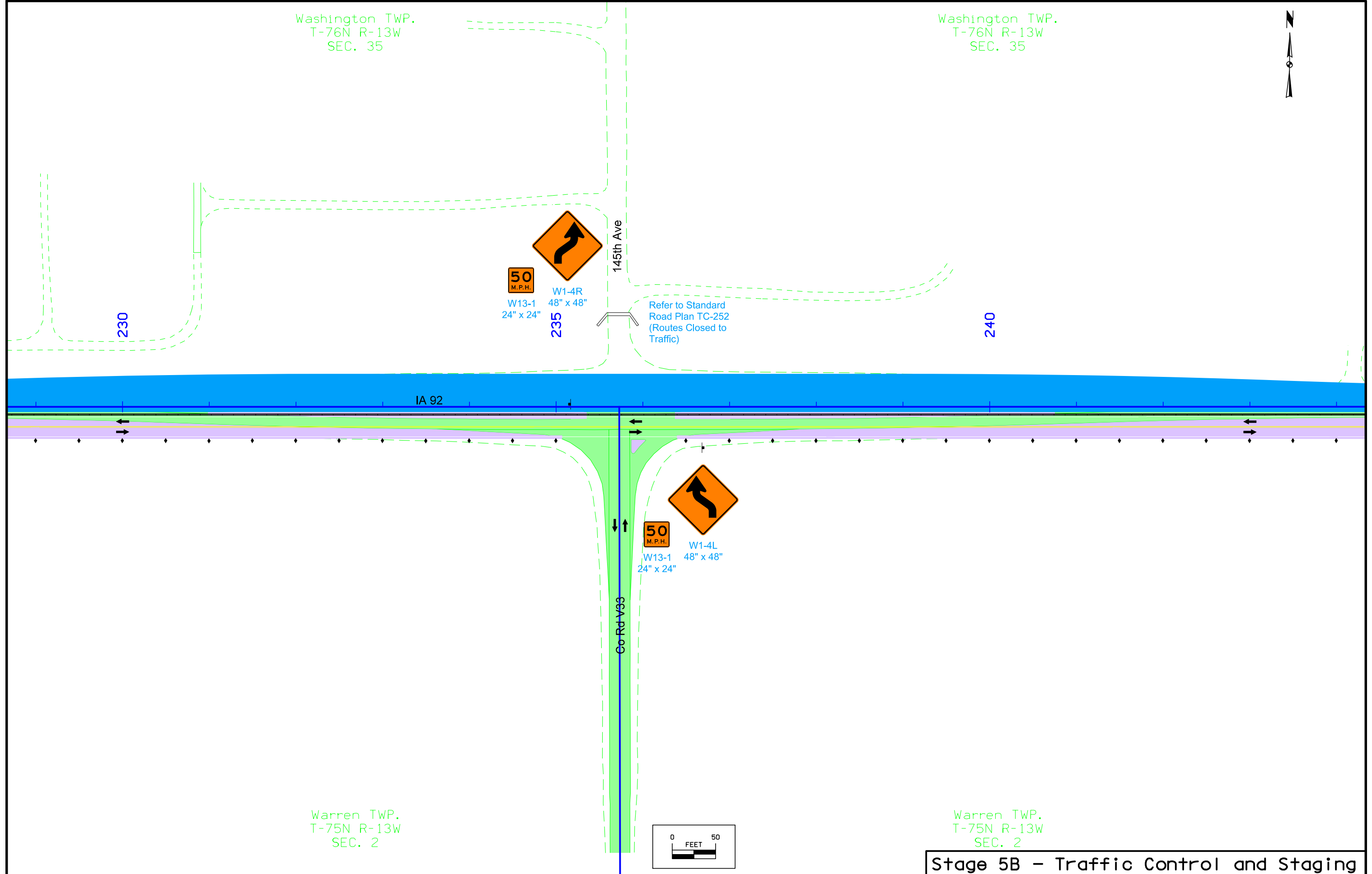
Warren TWP.
T-75N R-13W
SEC. 2



Stage 5B - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 35

Washington TWP.
T-76N R-13W
SEC. 35



230

50
M.P.H.
W13-1
24" x 24"



W1-4R
48" x 48"

145th Ave

Refer to Standard
Road Plan TC-252
(Routes Closed to
Traffic)

240

IA 92

Co Rd V33

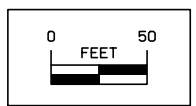
50
M.P.H.
W13-1
24" x 24"



W1-4L
48" x 48"

Warren TWP.
T-75N R-13W
SEC. 2

Warren TWP.
T-75N R-13W
SEC. 2



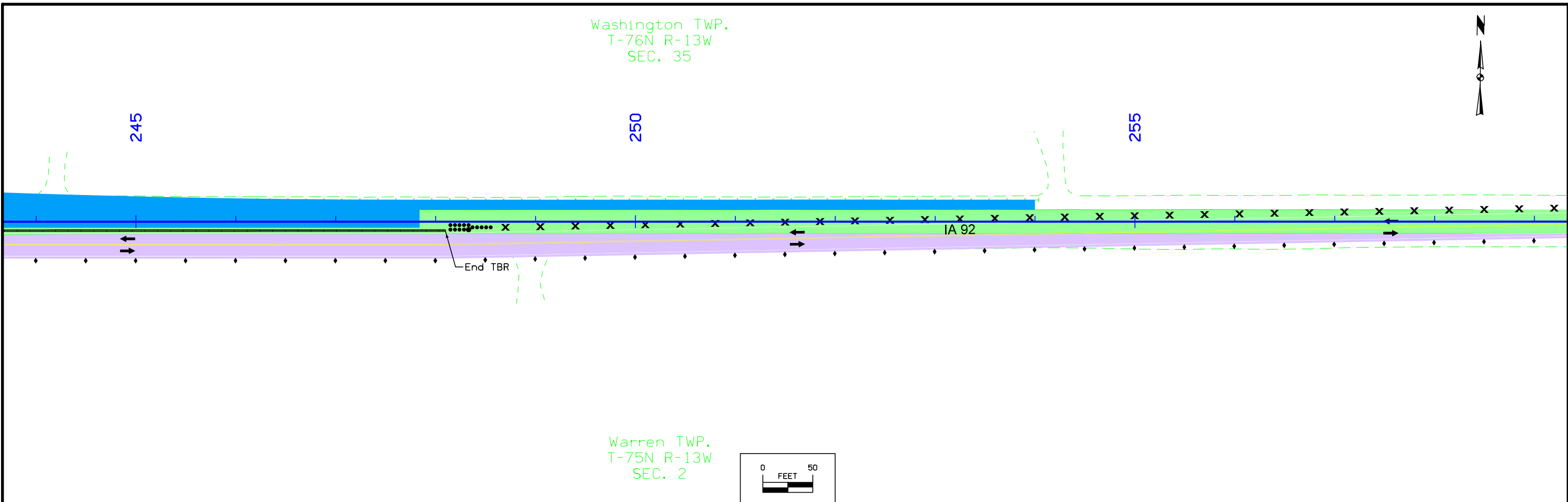
Stage 5B - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 35

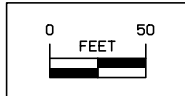
245

250

255



Warren TWP.
T-75N R-13W
SEC. 2



Washington TWP.
T-76N R-13W
SEC. 35

150th Ave



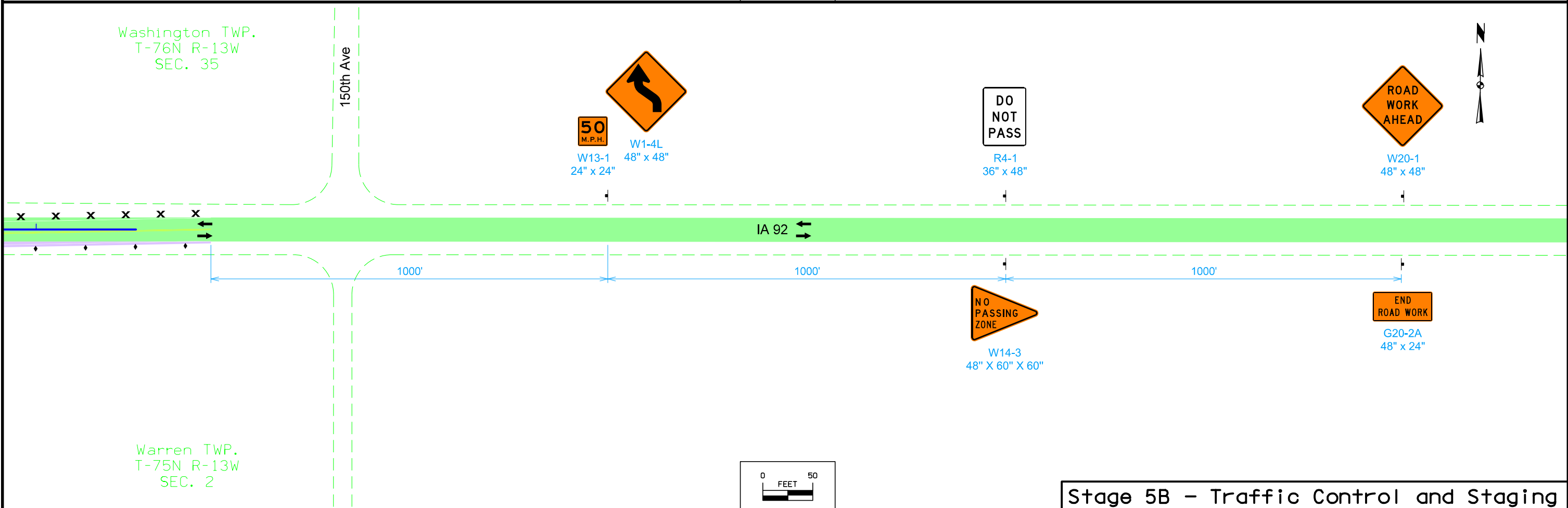
50
M.P.H.
W13-1
24" x 24"

W1-4L
48" x 48"

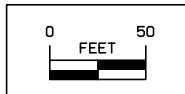
DO
NOT
PASS
R4-1
36" x 48"



W20-1
48" x 48"



Warren TWP.
T-75N R-13W
SEC. 2



Stage 5B - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 34

Washington TWP.
T-76N R-13W
SEC. 35

END
ROAD WORK

G20-2A
48" x 24"

NO
PASSING
ZONE

W14-3
48" X 60" X 60"

210

IA 92

ROAD
WORK
AHEAD

W20-1
48" x 48"

DO
NOT
PASS

R4-1
36" x 48"

1000'

1000'

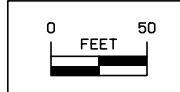
50
M.P.H.

W13-1
24" x 24"

W1-4L
48" x 48"

Warren TWP.
T-75N R-13W
SEC. 3

Warren TWP.
T-75N R-13W
SEC. 2



Washington TWP.
T-76N R-13W
SEC. 35

215

220

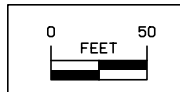
225

Begin TBR

IA 92

1000'

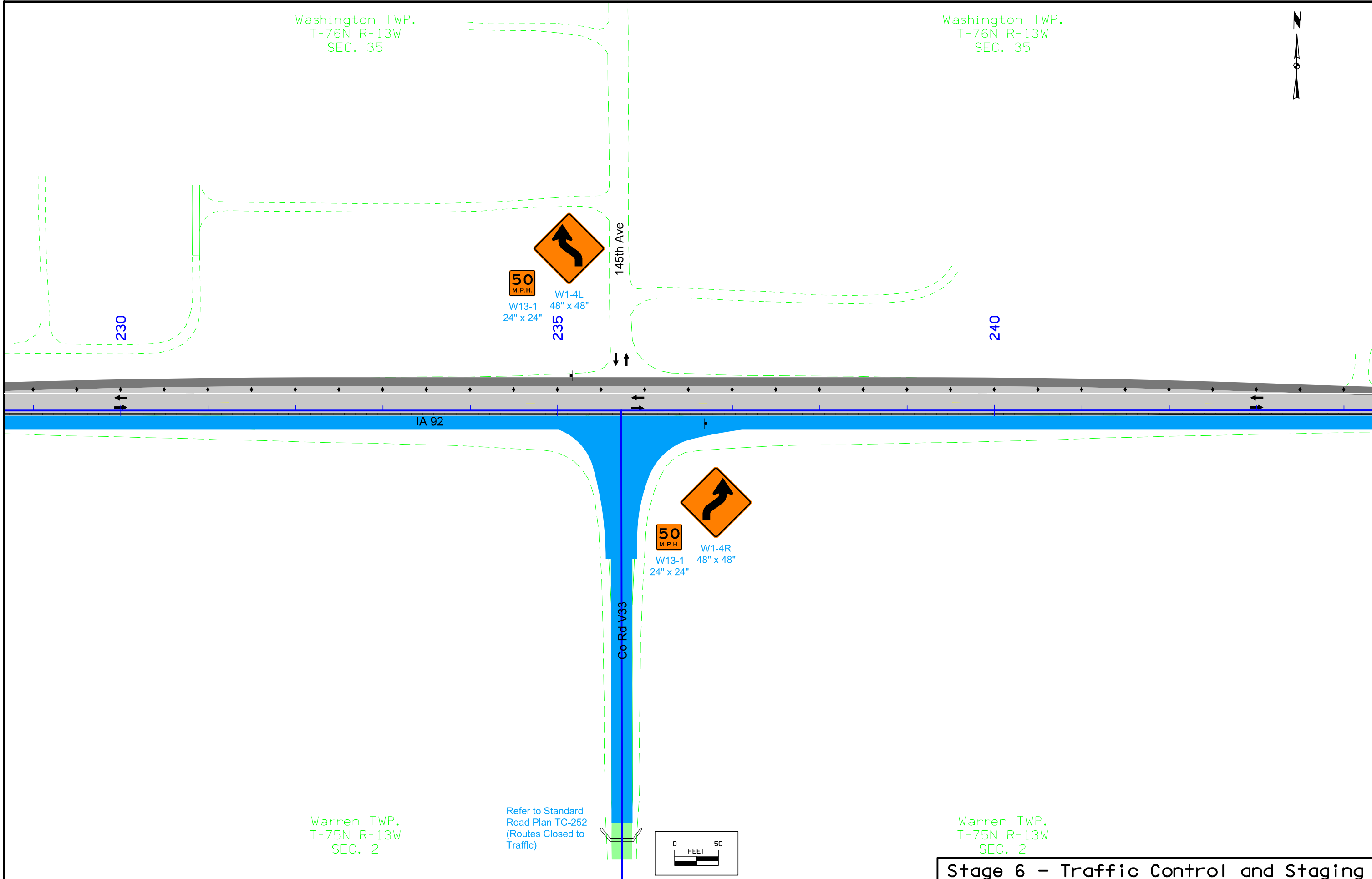
Warren TWP.
T-75N R-13W
SEC. 2



Stage 6 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 35

Washington TWP.
T-76N R-13W
SEC. 35



230

50 M.P.H.
W13-1 24" x 24"
W1-4L 48" x 48"

235

145th Ave

240

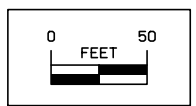
IA 92

Co Rd V33

50 M.P.H.
W13-1 24" x 24"
W1-4R 48" x 48"

Warren TWP.
T-75N R-13W
SEC. 2

Refer to Standard
Road Plan TC-252
(Routes Closed to
Traffic)



Warren TWP.
T-75N R-13W
SEC. 2

Stage 6 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 35

245

250

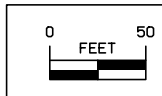
255

End TBR

IA 92

1000'

Warren TWP.
T-75N R-13W
SEC. 2



Washington TWP.
T-76N R-13W
SEC. 35



50
M.P.H.

W13-1
24" x 24"

W1-4R
48" x 48"

150th Ave

DO
NOT
PASS

R4-1
36" x 48"



W20-1
48" x 48"

IA 92

1000'

1000'

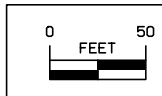


W14-3
48" X 60" X 60"



G20-2A
48" x 24"

Warren TWP.
T-75N R-13W
SEC. 2



Stage 6 - Traffic Control and Staging

FILE NO.

ENGLISH

DESIGN TEAM

Van Dyke\Stanley Consultants Inc.

KEOKUK COUNTY

PROJECT NUMBER

NHSN-092-8(36)--2R-54

SHEET NUMBER

J.24

Washington TWP.
T-76N R-13W
SEC. 33



142

143

Sta 144+11.57 12.00 Lt IA 92

144

145

146

Sta 147+53.72 17.79 Lt IA 92

147

IA 92

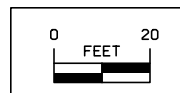
12.00'

12.00'

Varies

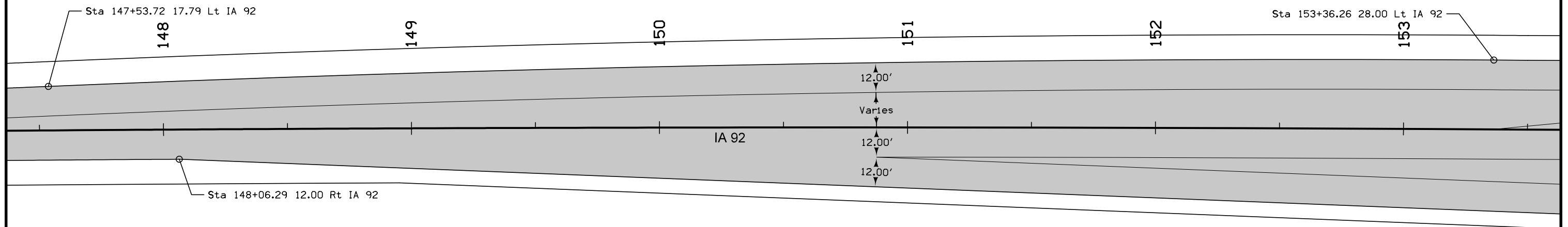
Warren TWP.
T-75N R-13W
SEC. 4

Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.



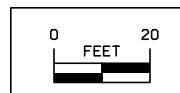
Geometric Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 33



Warren TWP.
T-75N R-13W
SEC. 4

Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.



Geometric Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 33

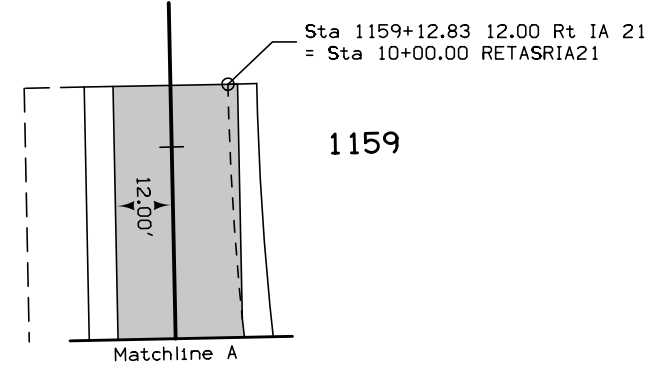
Washington TWP.
T-76N R-13W
SEC. 34



Radius Point
Curve RETBSRIA21_3
153+55.53 171.34 Lt

Radius Point
Curve RETBSRIA21_1
154+70.23 528.00 Lt

Radius Point
Curve RETASRIA21_1
1159+12.83 611.00 Rt



Sta 1158+50.93 12.00 Lt IA 21
= Sta 22+85.49 RETBSRIA21

RETASRIA21

Radius Point
Curve RETASRIA21_2
157+62.08 130.59 Lt

Radius Point
Curve RETBSRIA21_2
155+72.45 115.48 Lt

Sta 1157+84.32 25.95 Rt IA 21
= Sta 11+29.52 RETASRIA21

Sta 1157+68.65 23.54 Lt IA 21
= Sta 22+02.14 RETBSRIA21
RETBSRIA21

Sta 157+58.48 60.68 Lt IA 92
= Sta 12+18.87 RETASRIA21

Sta 154+70.23 28.00 Lt IA 92
= Sta 20+00.00 RETBSRIA21

Sta 154+70.23 28.00 Lt IA 92
= Sta 21+21.45 RETBSRIA21

154

155

156

157

158

159

12.00'

4.00'

88°28'09.54"

12.00'

Varies

12.00'

12.00'

12.00'

12.00'

4.00'

IA 92

Varies

12.00'

81°40'20.98"

Sta 158+67.03 12.00 Rt IA 92
= Sta 42+68.68 RETDSRIA21

Sta 157+51.65 29.00 Rt IA 92
= Sta 41+51.64 RETDSRIA21

Sta 155+92.76 41.64 Rt IA 92
= Sta 30+00.00 RETCSRIA21

Sta 1155+99.63 31.57 Lt IA 21
= Sta 30+69.61 RETCSRIA21

RETCSRIA21

Radius Point
Curve RETCSRIA21_1
155+90.43 111.61 Rt

Radius Point
Curve RETDSRIA21_2
1155+61.43 83.89 Rt

RETDSRIA21

Sta 1155+80.09 21.18 Rt IA 21
= Sta 40+73.49 RETDSRIA21

Radius Point
Curve RETDSRIA21_1
1155+05.68 211.00 Rt

Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3

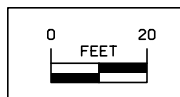
Radius Point
Curve RETDSRIA21_3
158+67.03 412.00 Rt

Sta 1155+05.69 12.00 Lt IA 21
= Sta 31+68.89 RETCSRIA21

Radius Point
Curve RETCSRIA21_2
1155+05.68 411.00 Lt

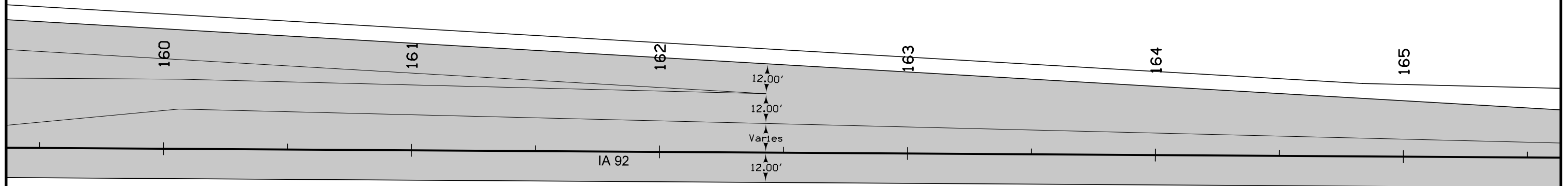
Sta 1155+05.68 12.00 Rt IA 21
= Sta 40+00.00 RETDSRIA21

Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

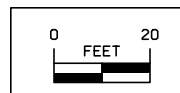


Geometric Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 34



Warren TWP.
T-75N R-13W
SEC. 3

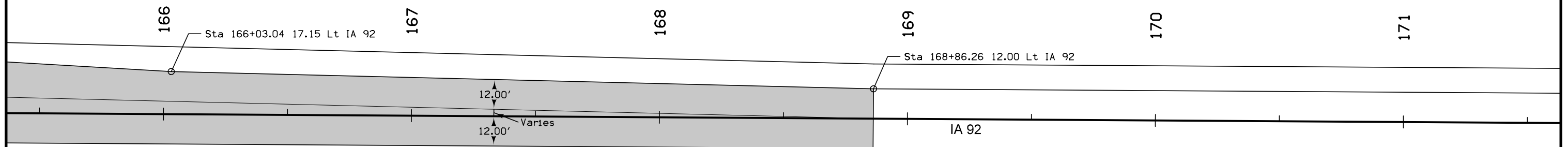


Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

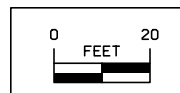
Geometric Details
Intersection of
IA 92 and IA 21

FILE NO.	ENGLISH	DESIGN TEAM Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER NHSN-092-8(36)--2R-54	SHEET NUMBER L.4
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Washington TWP.
T-76N R-13W
SEC. 34



Warren TWP.
T-75N R-13W
SEC. 3



Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

Geometric Details
Intersection of
IA 92 and IA 21

FILE NO.	ENGLISH	DESIGN TEAM Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER NHSN-092-8(36)--2R-54	SHEET NUMBER L.5
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Washington TWP.
T-76N R-13W
SEC. 33



142

143

144

145

146

147

IA 92

809.13

809.35

809.13

1.8%
12.0'

Constant 2% Slope

Constant 2% Slope

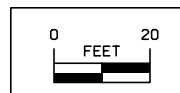
809.84

810.12

809.88

2.0%
12.0'

Warren TWP.
T-75N R-13W
SEC. 4



Staking Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 33



148

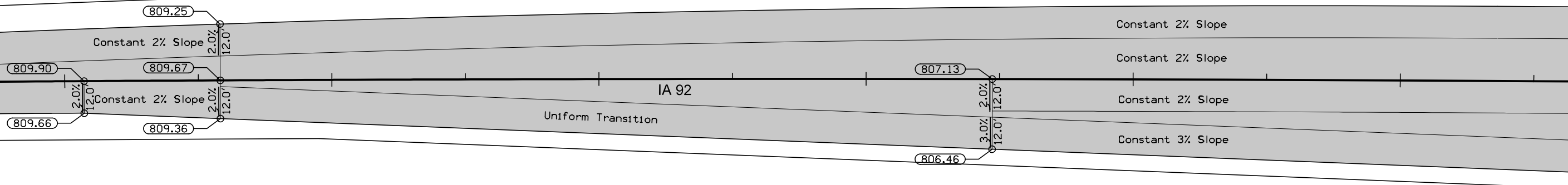
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150

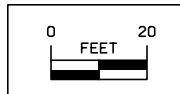
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152

153



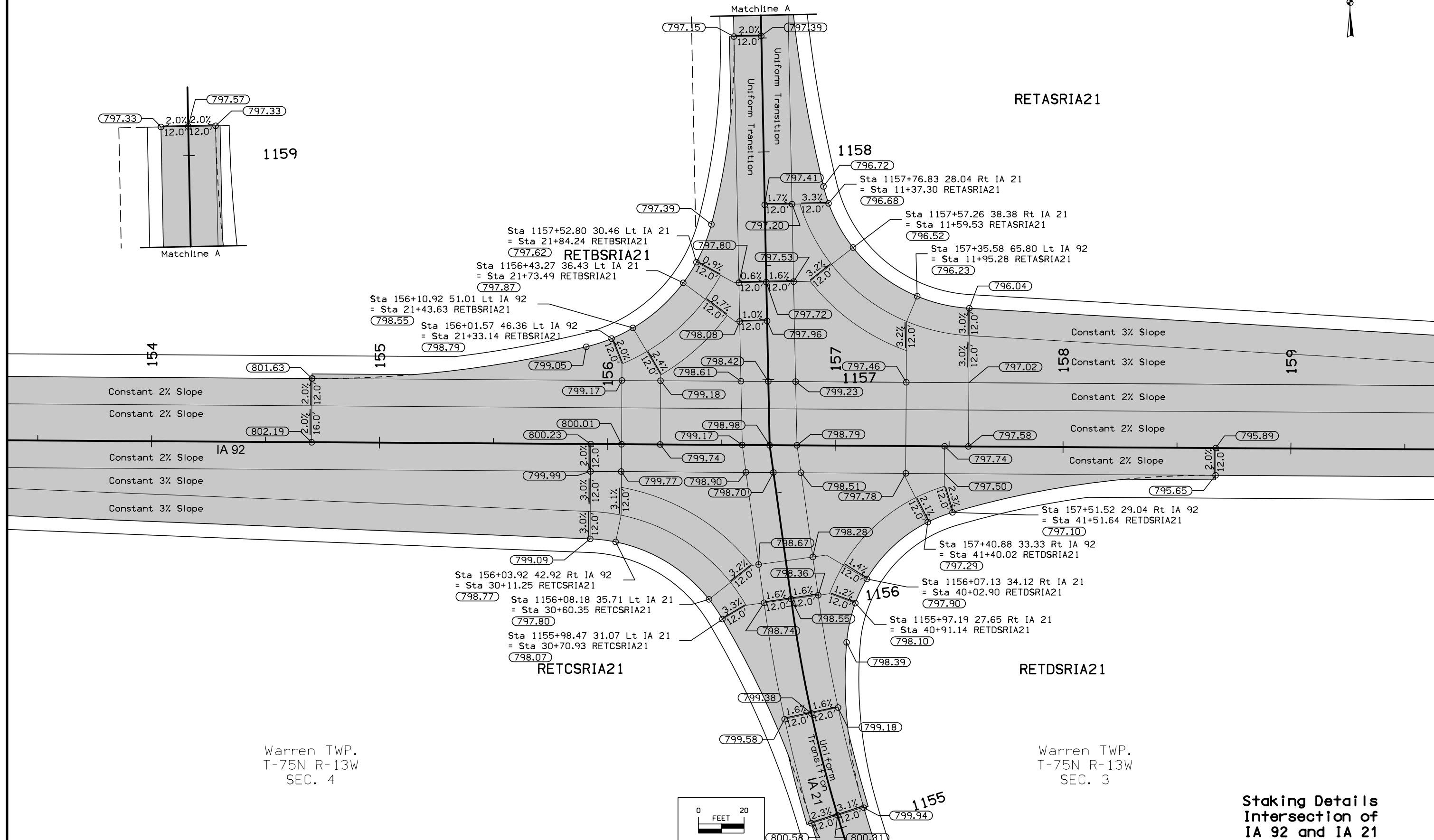
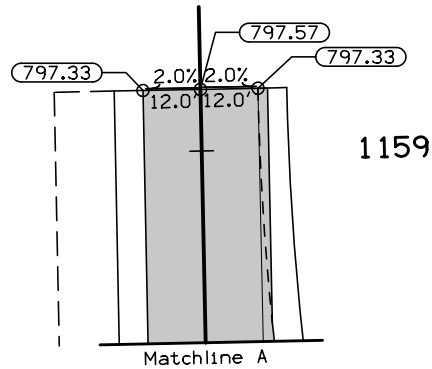
Warren TWP.
T-75N R-13W
SEC. 4



Staking Details
Intersection of
IA 92 and IA 21

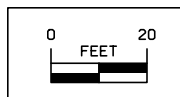
Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34



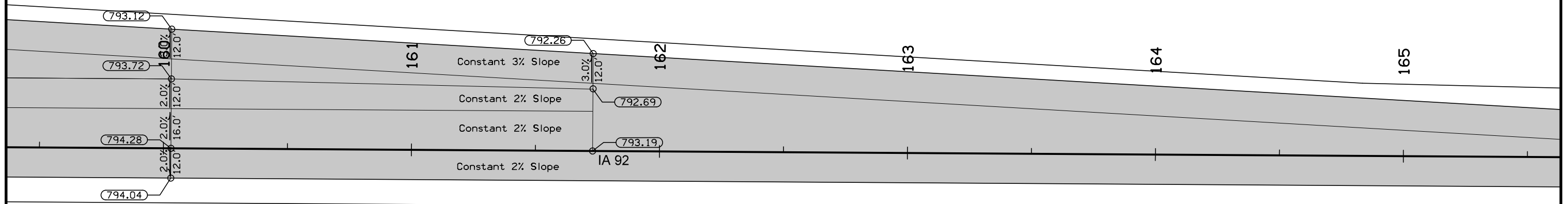
Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3

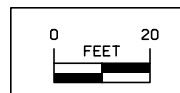


Staking Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 34



Warren TWP.
T-75N R-13W
SEC. 3



Staking Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 34



166

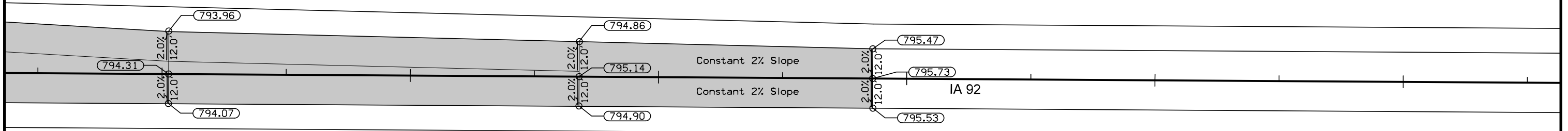
167

168

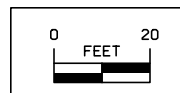
169

170

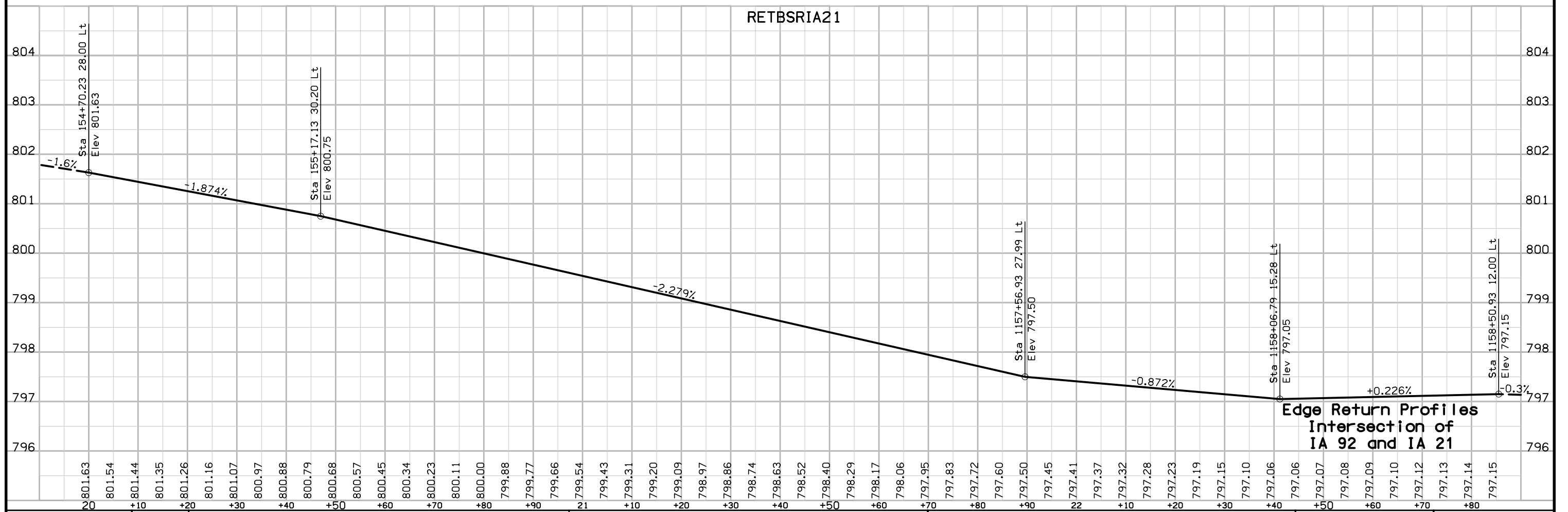
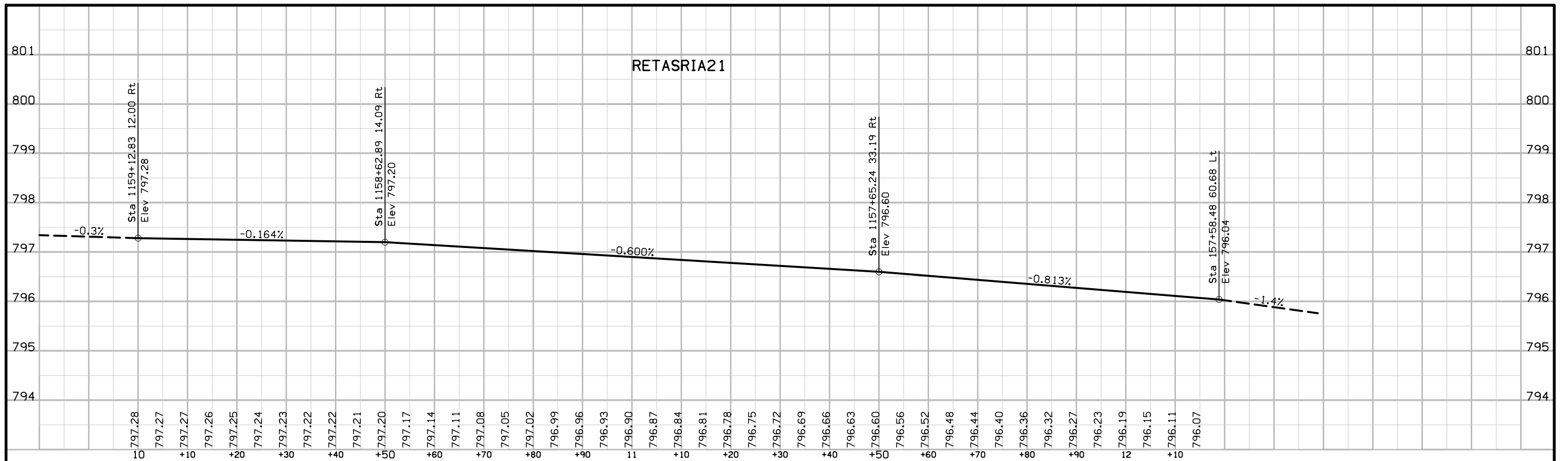
171



Warren TWP.
T-75N R-13W
SEC. 3

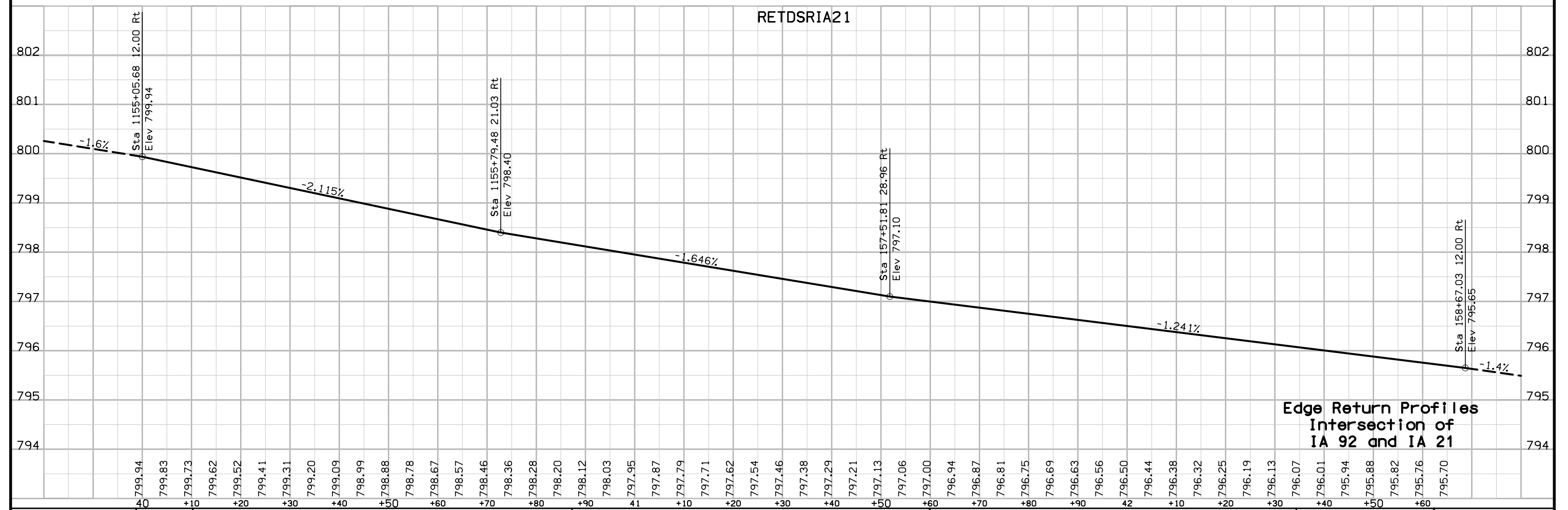
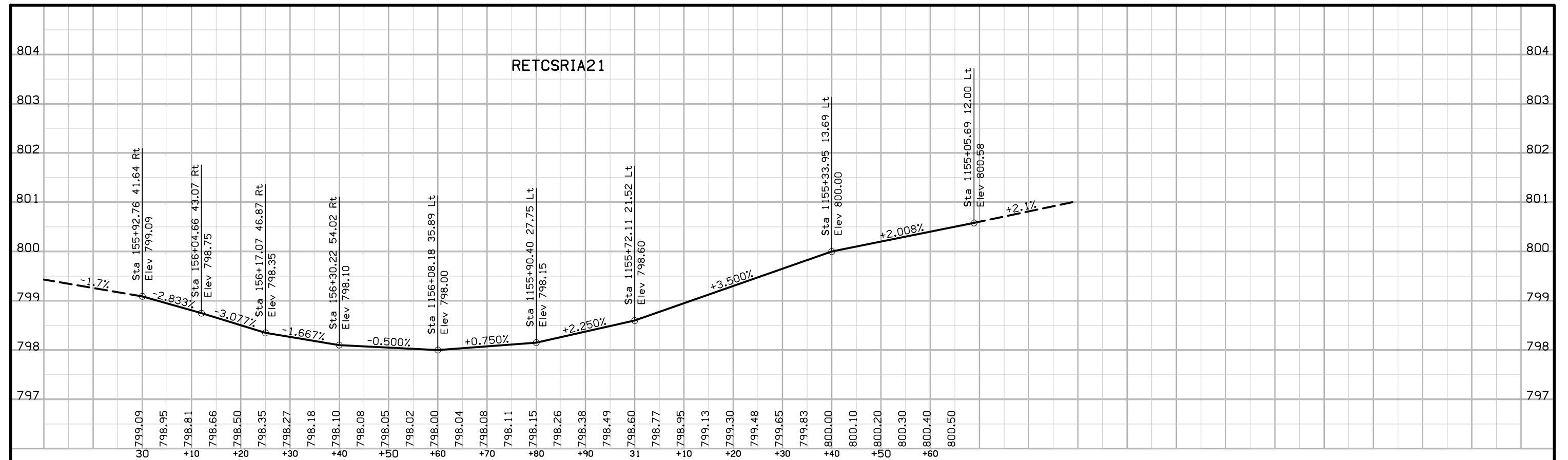


Staking Details
Intersection of
IA 92 and IA 21



**Edge Return Profiles
Intersection of
IA 92 and IA 21**

FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	L.11
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**Edge Return Profiles
Intersection of
IA 92 and IA 21**

Washington TWP.
T-76N R-13W
SEC. 33



142

143

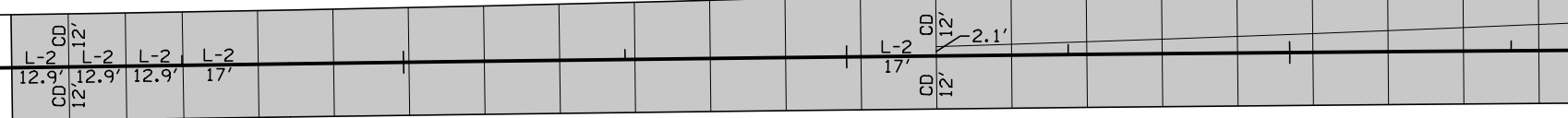
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145

146

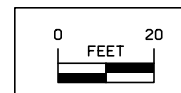
147

IA 92



Warren TWP.
T-75N R-13W
SEC. 4

NOTE:
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 Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



Jointing Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 33



148

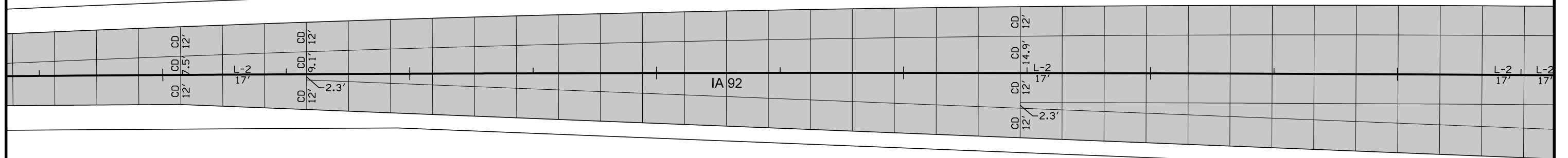
149

150

151

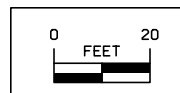
152

153



Warren TWP.
T-75N R-13W
SEC. 4

NOTE:
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.
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Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.

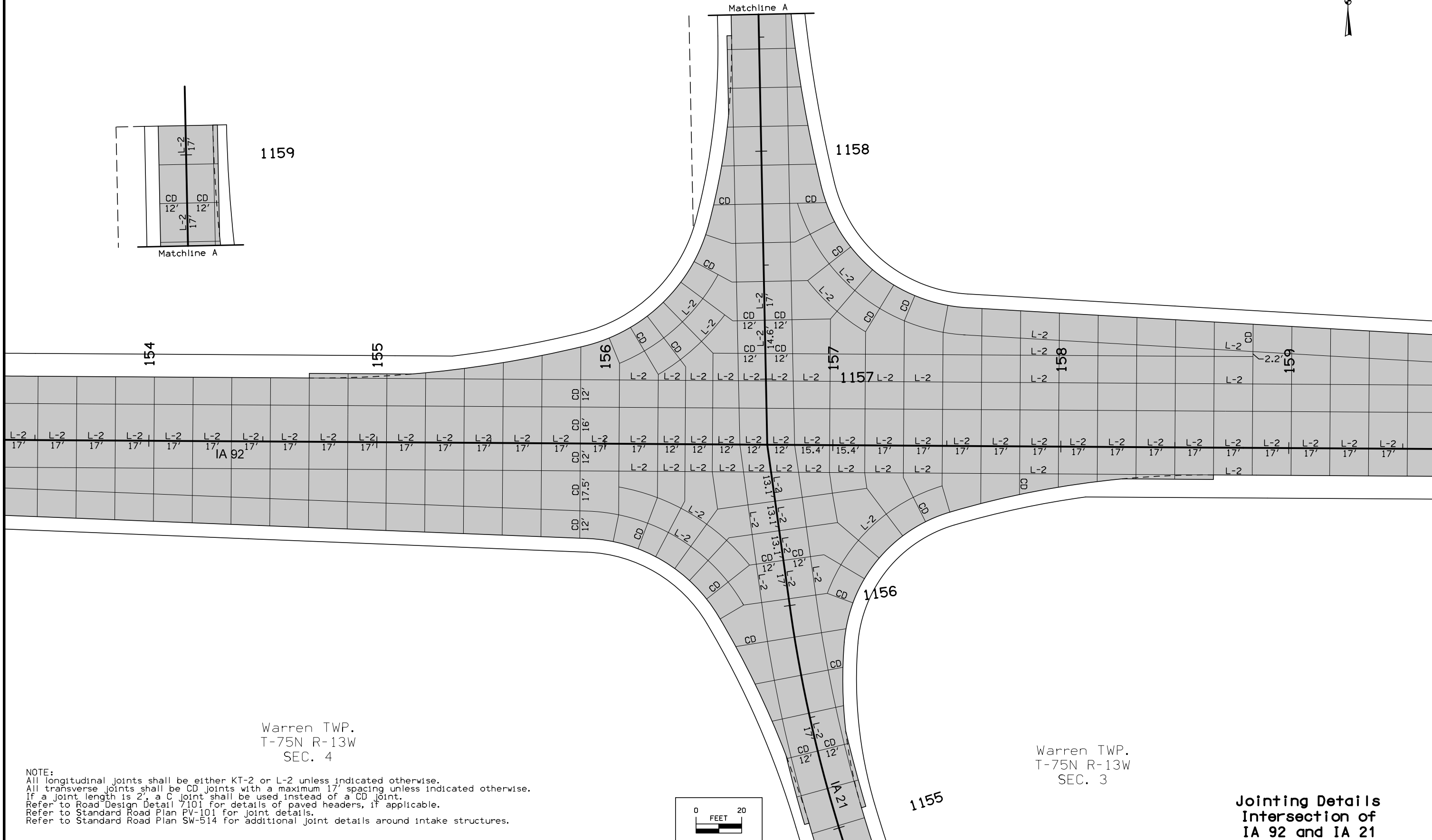
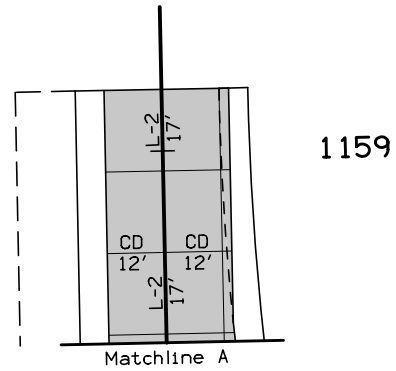


Jointing Details
Intersection of
IA 92 and IA 21

FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	L.14
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Washington TWP.
T-76N R-13W
SEC. 33

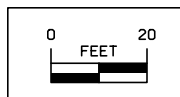
Washington TWP.
T-76N R-13W
SEC. 34



Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3

NOTE:
 All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
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 Refer to Road Design Detail 7101 for details of paved headers, if applicable.
 Refer to Standard Road Plan PV-101 for joint details.
 Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



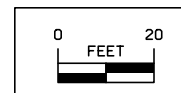
**Jointing Details
 Intersection of
 IA 92 and IA 21**

Washington TWP.
T-76N R-13W
SEC. 34



Warren TWP.
T-75N R-13W
SEC. 3

NOTE:
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 Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



Jointing Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 34



166

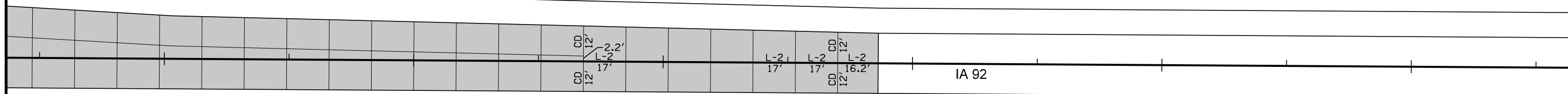
167

168

169

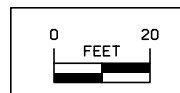
170

171



Warren TWP.
T-75N R-13W
SEC. 3

NOTE:
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 Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



Jointing Details
Intersection of
IA 92 and IA 21

FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	L.17
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Washington TWP.
T-76N R-13W
SEC. 35



221

222

223

224

225

226

Sta 223+61.49 12.00 Lt IA 92

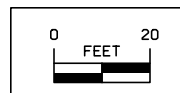
IA 92

12.00'

12.00'

Varies

Warren TWP.
T-75N R-13W
SEC. 2



Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

Geometric Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35



227

Sta 227+99.59 20.00 Lt IA 92

228

229

230

231

Sta 232+37.70 28.00 Lt IA 92

232

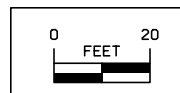
12.00'

Varies

12.00'

IA 92

Warren TWP.
T-75N R-13W
SEC. 2



Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

Geometric Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35

Washington TWP.
T-76N R-13W
SEC. 35



233

234

235

236

237

238

145th Ave

IA 92

Co Rd V33

Sta 234+78.80 12.00 Rt IA 92
= Sta 30+00.00 RETCSR33

Sta 237+73.53 12.00 Rt IA 92
= Sta 42+71.78 RETDSRV33

Radius Point
Curve RETCSR33.1
234+78.80 82.00 Rt

RETCSR33

Sta 1235+09.64 26.62 Lt Co Rd V33
= Sta 30+90.83 RETCSR33

Sta 236+50.68 27.33 Rt IA 92
= Sta 41+47.66 RETDSRV33

Radius Point
Curve RETDSRV33.2
1234+72.50 96.23 Rt

RETDSRV33

Sta 1235+00.79 26.77 Rt Co Rd V33
= Sta 40+77.34 RETDSRV33

Radius Point
Curve RETDSRV33.1
1234+25.36 212.00 Rt

Radius Point
Curve RETCSR33.2
1234+02.48 412.00 Lt

Warren TWP.
T-75N R-13W
SEC. 2

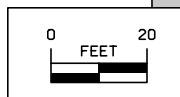
Sta 1234+25.37 12.00 Rt Co Rd V33
= Sta 40+00.00 RETDSRV33

Warren TWP.
T-75N R-13W
SEC. 2

Radius Point
Curve RETDSRV33.3
237+73.53 512.00 Rt

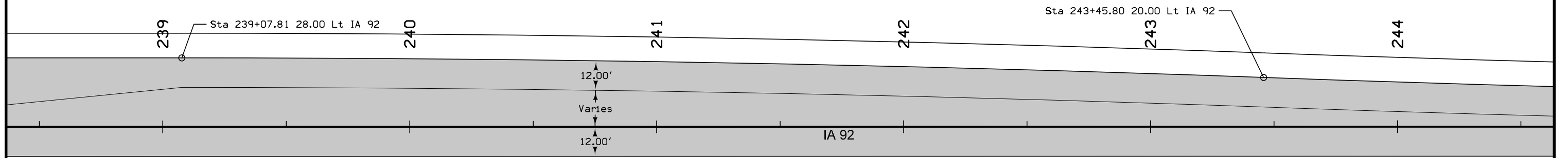
90°06'53.52"

Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

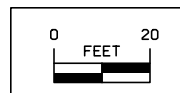


Geometric Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35



Warren TWP.
T-75N R-13W
SEC. 2



Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

Geometric Details
Intersection of
IA 92 and Co Rd V33

FILE NO.	ENGLISH	DESIGN TEAM Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER NHSN-092-8(36)--2R-54	SHEET NUMBER L.21
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Washington TWP.
T-76N R-13W
SEC. 35



245

246

247

248

249

250

Sta 247+83.91 12.00 Lt IA 92

12.00'

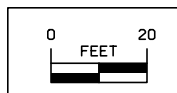
12.00'

Varies

IA 92

Warren TWP.
T-75N R-13W
SEC. 2

Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.



Geometric Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35



221

222

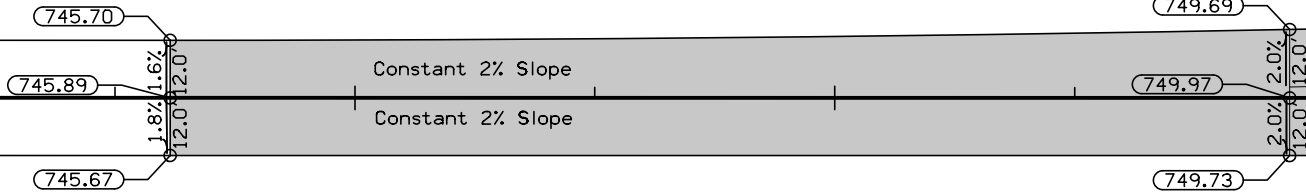
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224

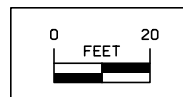
225

226

IA 92



Warren TWP.
T-75N R-13W
SEC. 2



Staking Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35



227

228

229

230

231

232

Constant 2% Slope

Constant 2% Slope

Constant 2% Slope

IA 92

772.10

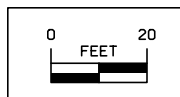
690.85

772.34

772.42

2.0%
12.0'
2.0%
16.0'
2.0%
12.0'

Warren TWP.
T-75N R-13W
SEC. 2



Staking Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35

Washington TWP.
T-76N R-13W
SEC. 35



233

234

235

236

237

238

145th Ave

IA 92

Co Rd V33

RETCSR33

RETDSRV33

1235

Sta 1235+00 26.45 Rt V33
= Sta 40+99.37 RETDSRV33
(779.75)

1234

(779.13)
(779.37)

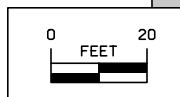
Sta 235+22.33 27.19 Rt IA 92
= Sta 30+46.99 RETCSR33
(779.36)

Sta 1235+17.00 29.11 Lt V33
= Sta 30+83.06 RETCSR33
(779.40)

Sta 236+41.88 30.14 Rt IA 92
= Sta 41+61.30 RETDSRV33
(780.88)

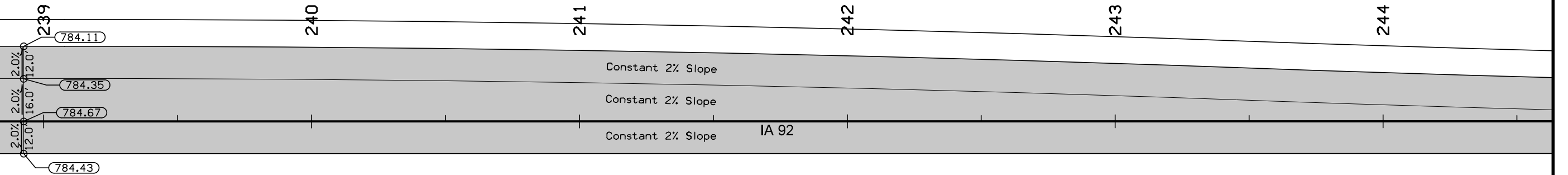
Warren TWP.
T-75N R-13W
SEC. 2

Warren TWP.
T-75N R-13W
SEC. 2

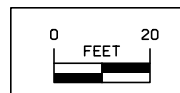


Staking Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35



Warren TWP.
T-75N R-13W
SEC. 2



Staking Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35



245

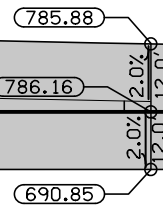
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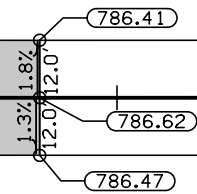
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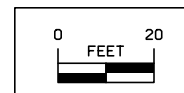


Constant 2% Slope
Constant 2% Slope

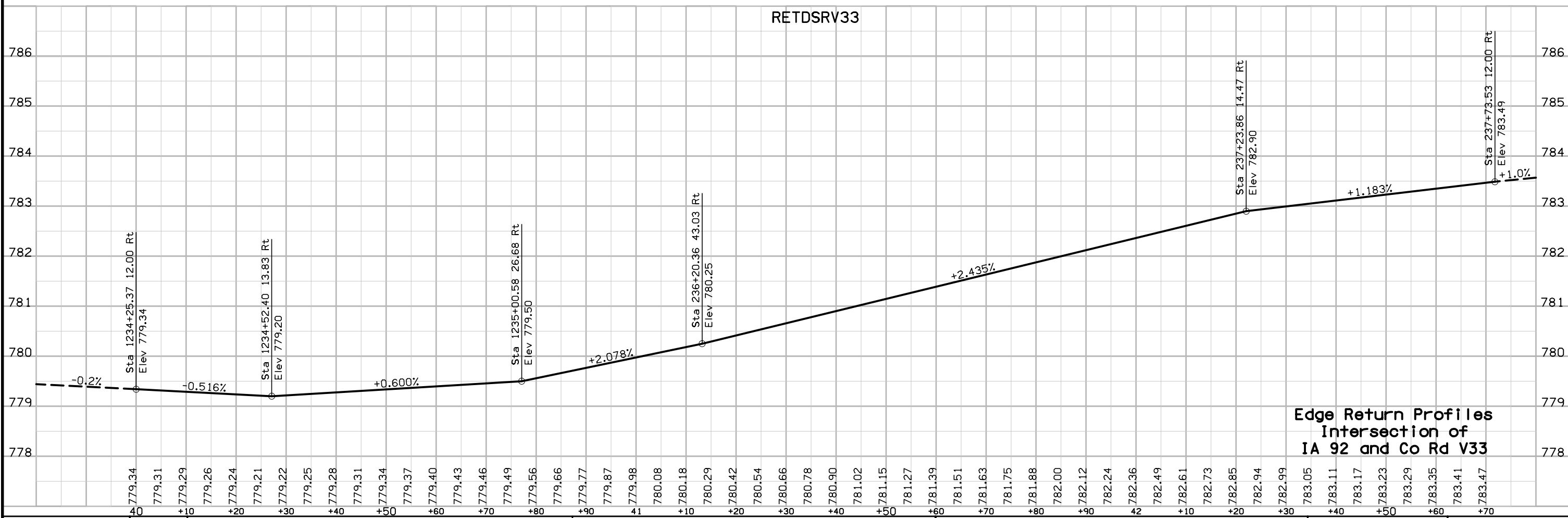
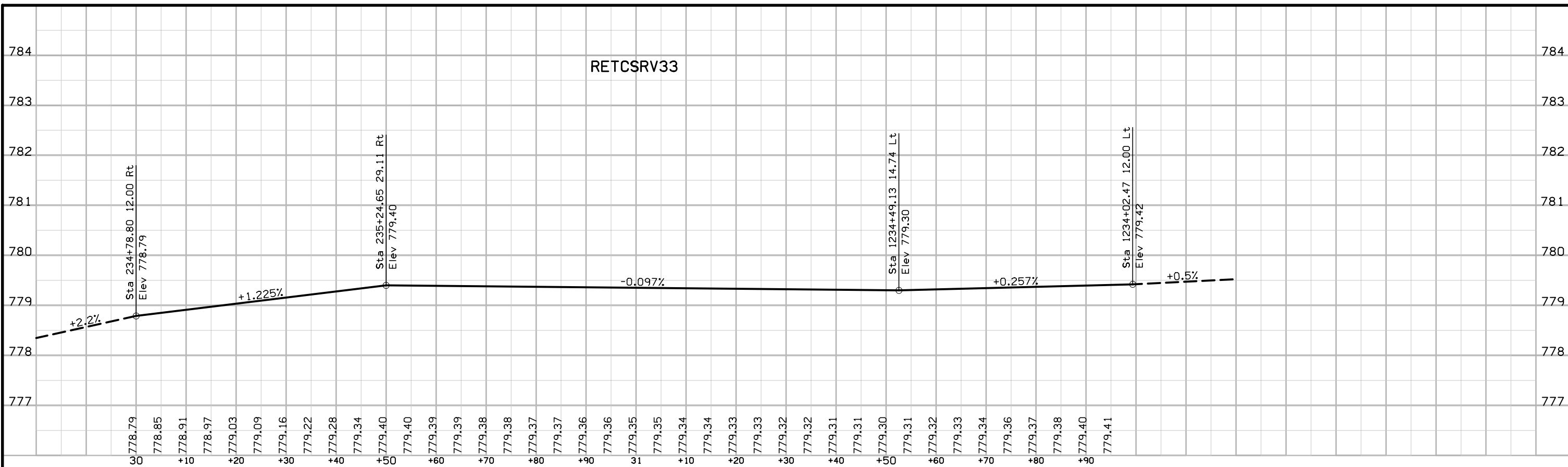


IA 92

Warren TWP.
T-75N R-13W
SEC. 2



Staking Details
Intersection of
IA 92 and Co Rd V33



**Edge Return Profiles
Intersection of
IA 92 and Co Rd V33**

Washington TWP.
T-76N R-13W
SEC. 35



227

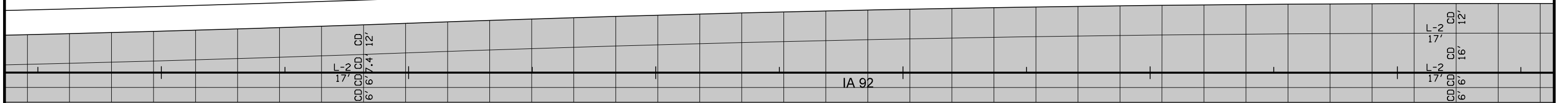
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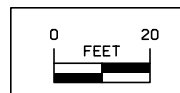
231

232



Warren TWP.
T-75N R-13W
SEC. 2

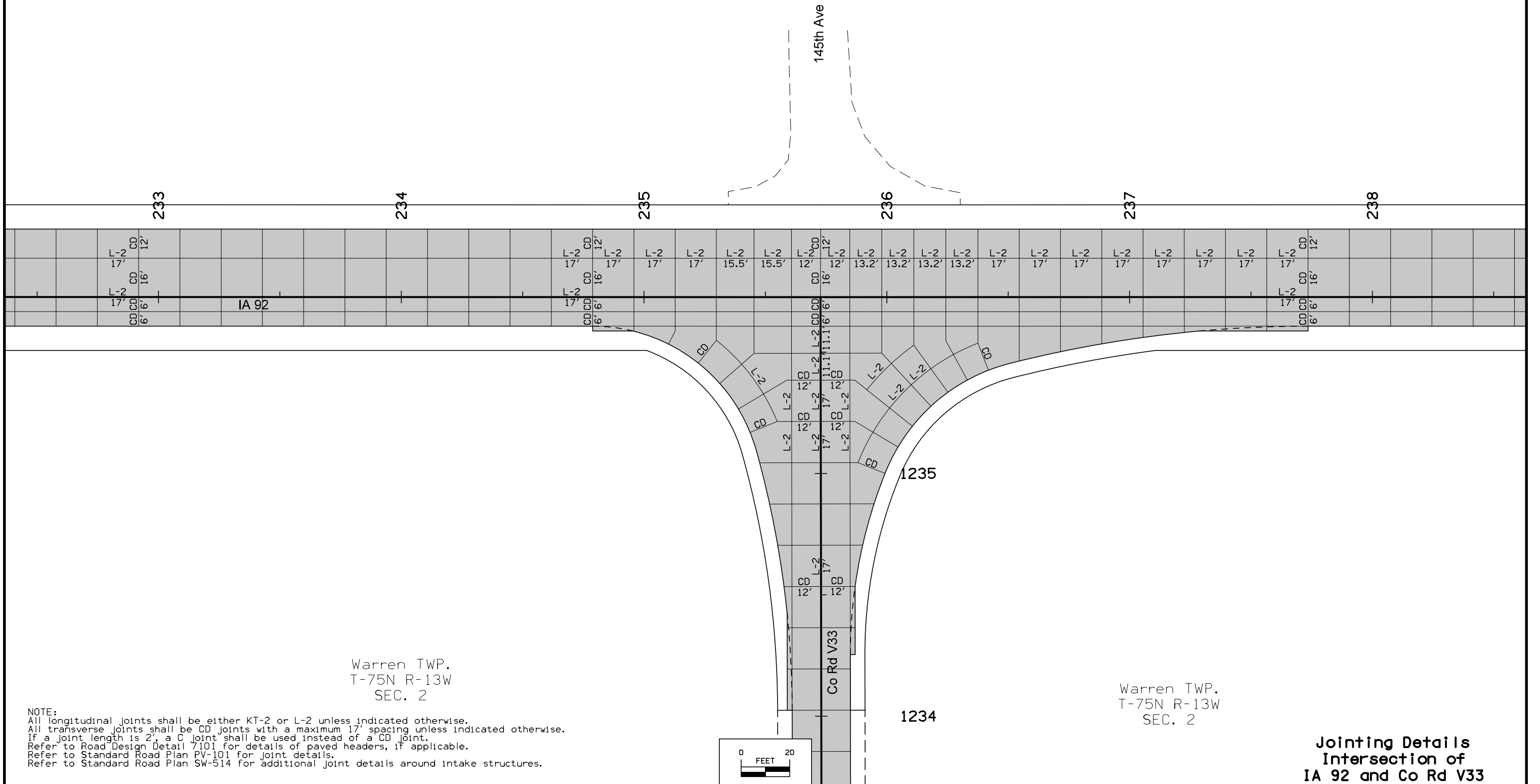
NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise.
If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



Jointing Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35

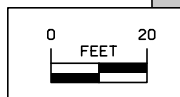
Washington TWP.
T-76N R-13W
SEC. 35



Warren TWP.
T-75N R-13W
SEC. 2

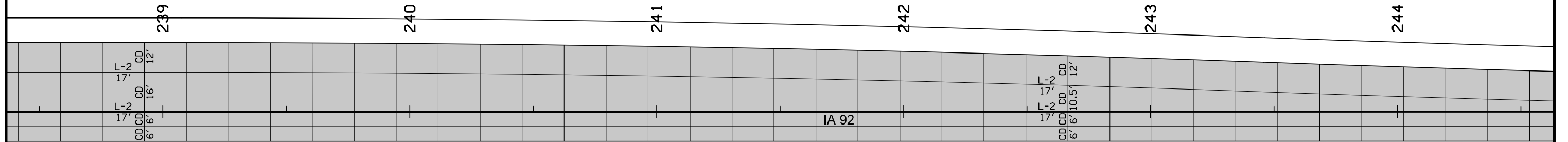
Warren TWP.
T-75N R-13W
SEC. 2

NOTE:
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 Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



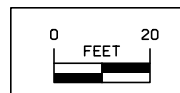
**Jointing Details
Intersection of
IA 92 and Co Rd V33**

Washington TWP.
T-76N R-13W
SEC. 35



Warren TWP.
T-75N R-13W
SEC. 2

NOTE:
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 Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



Jointing Details
Intersection of
IA 92 and Co Rd V33

FILE NO.	ENGLISH	DESIGN TEAM	Van Dyke\Stanley Consultants Inc.	KEOKUK COUNTY	PROJECT NUMBER	NHSN-092-8(36)--2R-54	SHEET NUMBER	L.32
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Washington TWP.
T-76N R-13W
SEC. 35



245

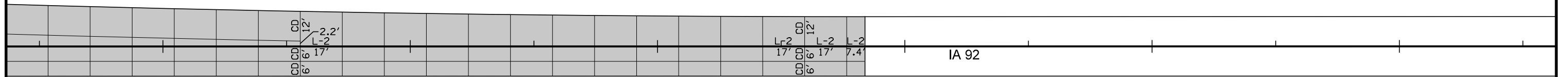
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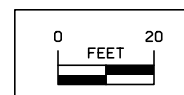
248

249

250



Warren TWP.
T-75N R-13W
SEC. 2



NOTE:
 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 Road Design Detail 7101 for details of paved headers, if applicable.
 Refer to Standard Road Plan PV-101 for joint details.
 Refer to Standard Road Plan SW-514 for additional joint details around intake structures.

**Jointing Details
 Intersection of
 IA 92 and Co Rd V33**

Washington TWP.
T-76N R-13W
SEC. 33



142

143

144

145

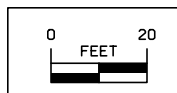
146

147

IA 92

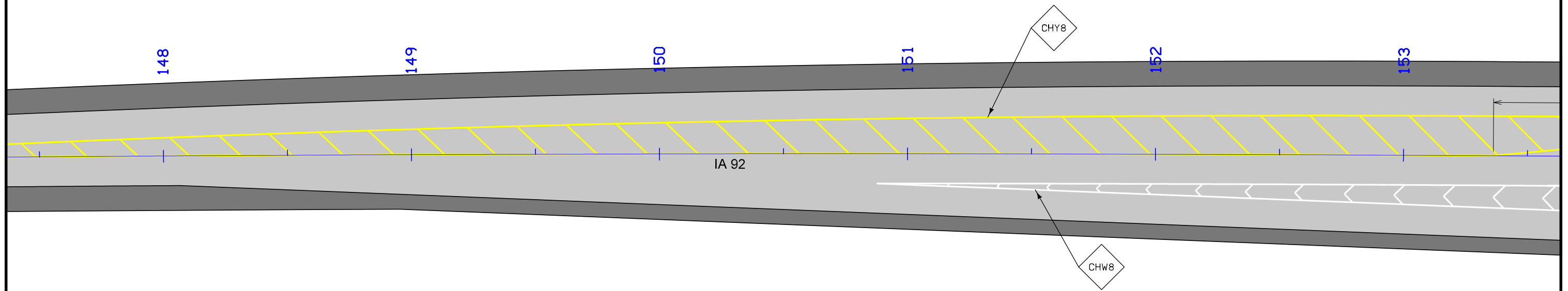
CHY8

Warren TWP.
T-75N R-13W
SEC. 4

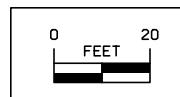


Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 33



Warren TWP.
T-75N R-13W
SEC. 4



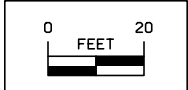
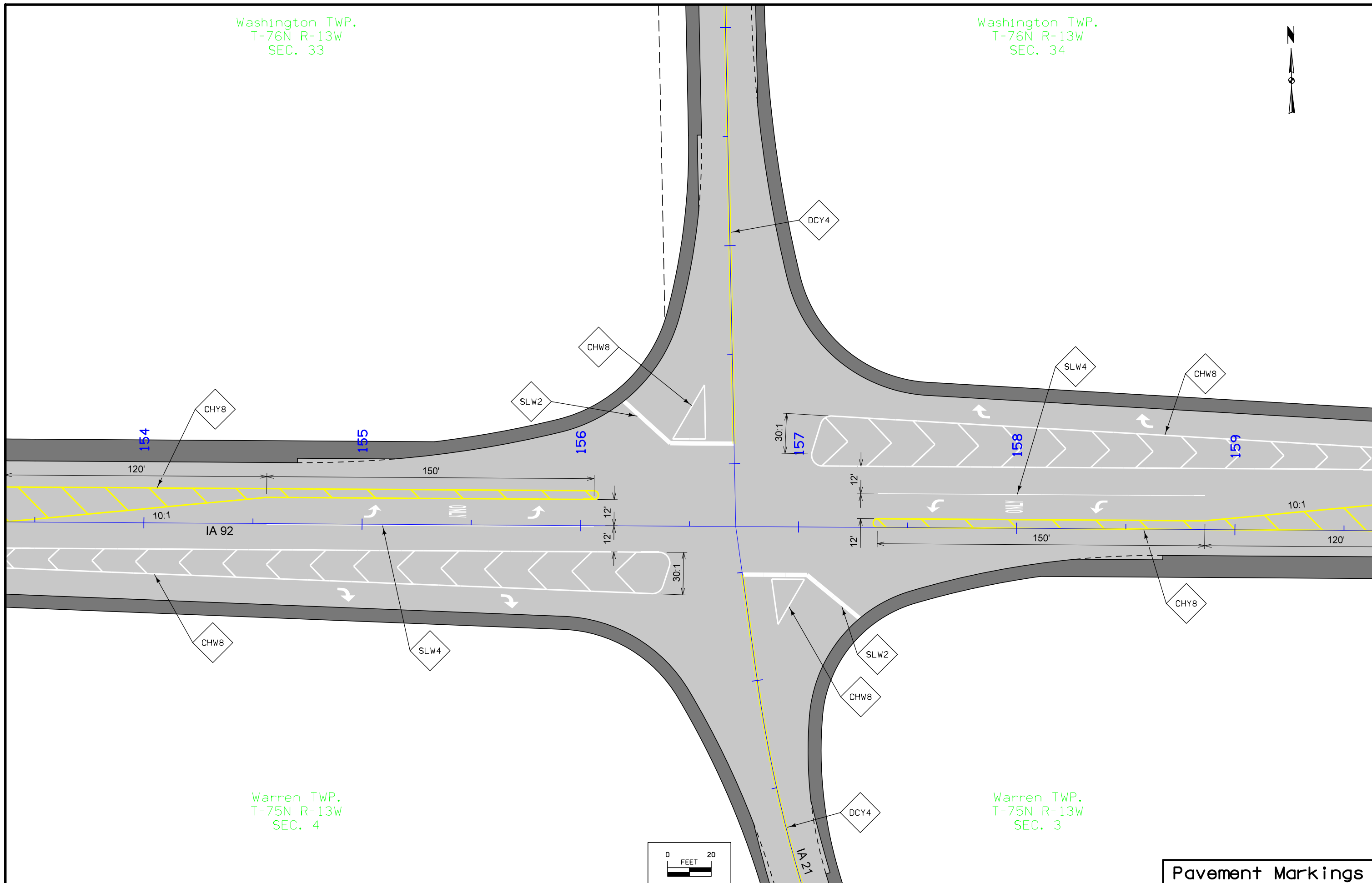
Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34

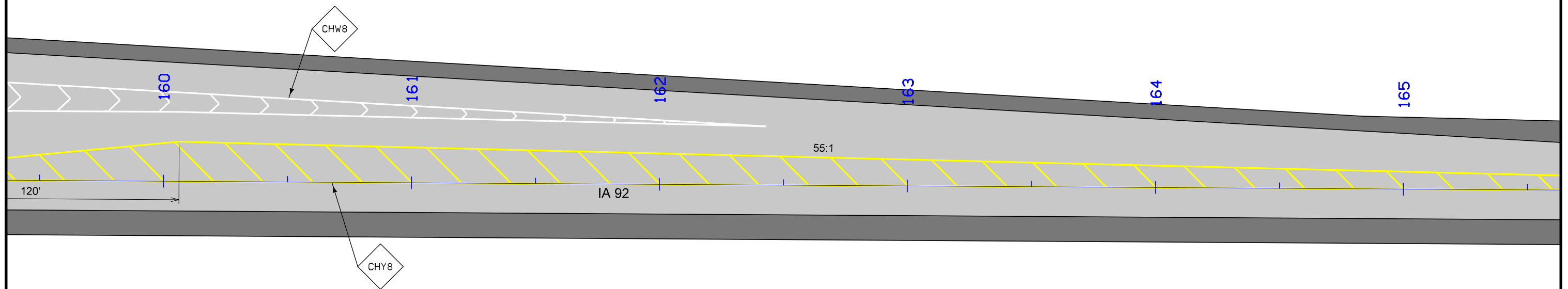
Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3

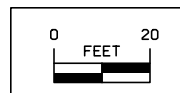


Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 34



Warren TWP.
T-75N R-13W
SEC. 3



Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 34



166

CHY8

167

168

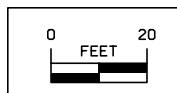
169

170

171

IA 92

Warren TWP.
T-75N R-13W
SEC. 3



Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 35



221

222

223

224

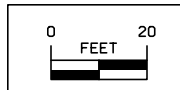
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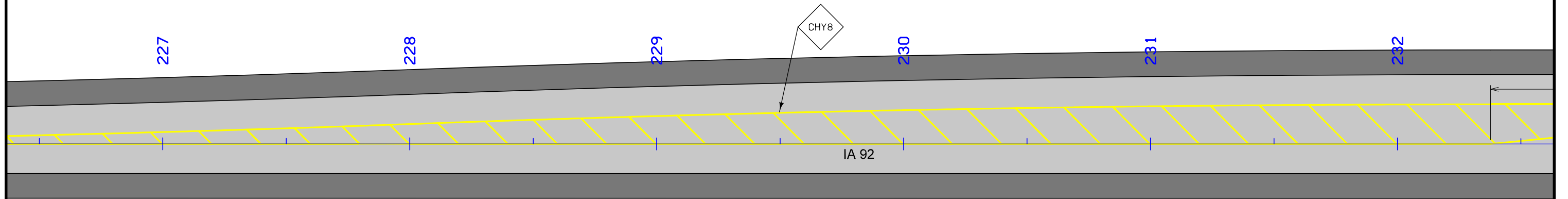
IA 92

Warren TWP.
T-75N R-13W
SEC. 2

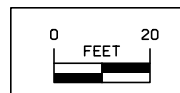


Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 35



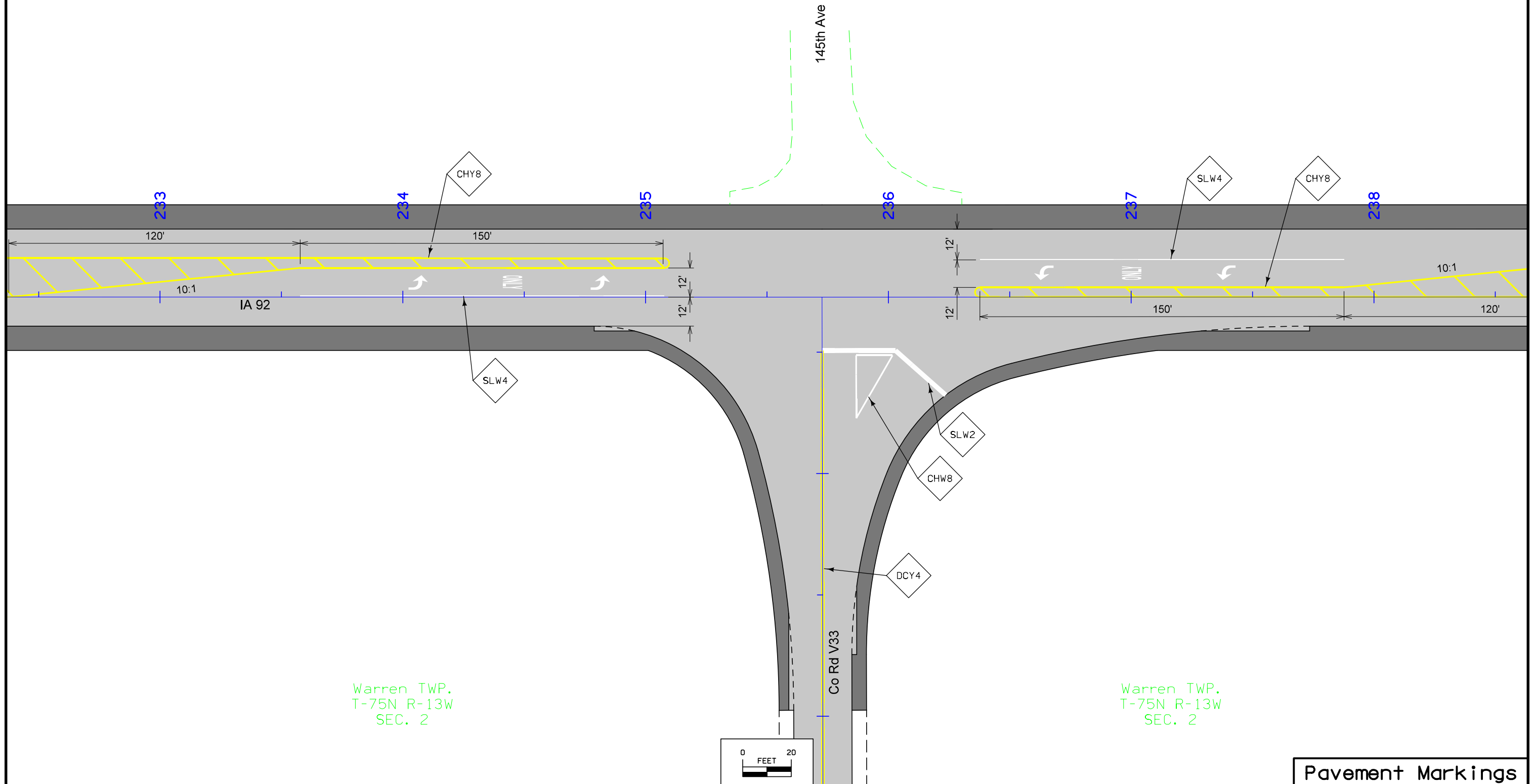
Warren TWP.
T-75N R-13W
SEC. 2



Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 35

Washington TWP.
T-76N R-13W
SEC. 35

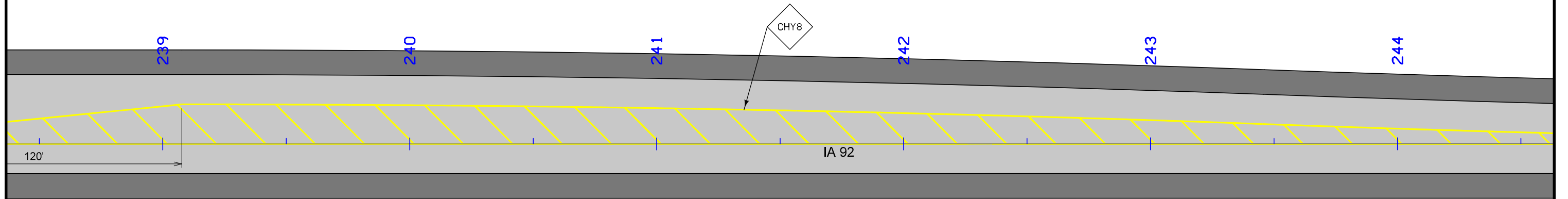


Warren TWP.
T-75N R-13W
SEC. 2

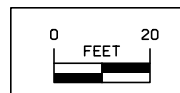
Warren TWP.
T-75N R-13W
SEC. 2

Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 35



Warren TWP.
T-75N R-13W
SEC. 2

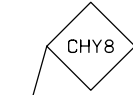


Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 35



245



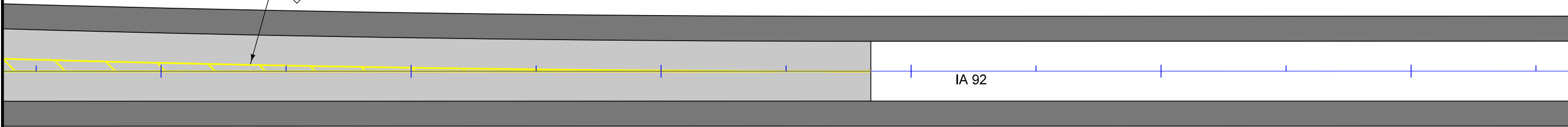
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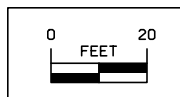
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250



IA 92

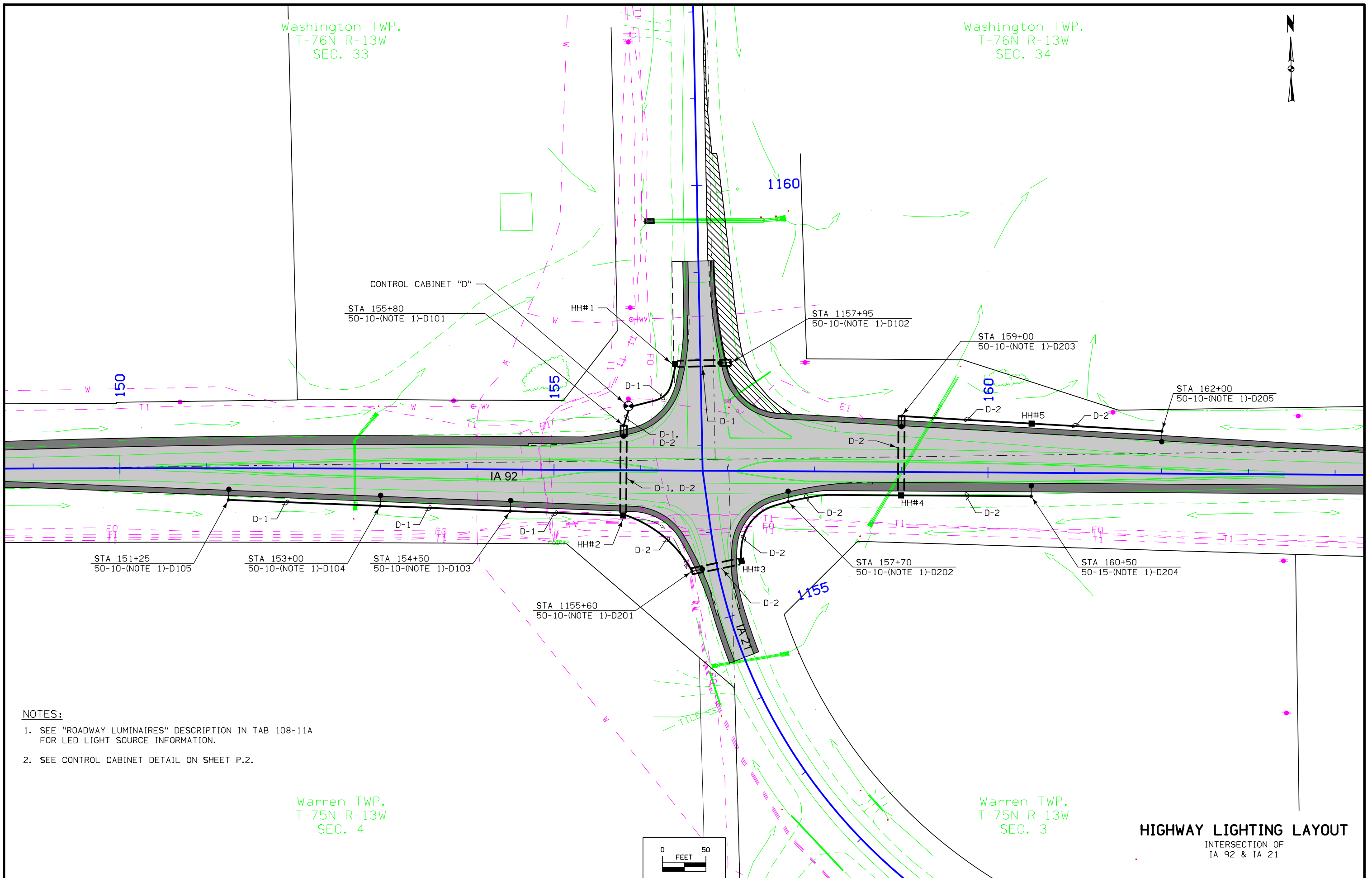
Warren TWP.
T-75N R-13W
SEC. 2



Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34

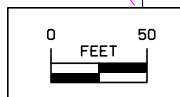


NOTES:

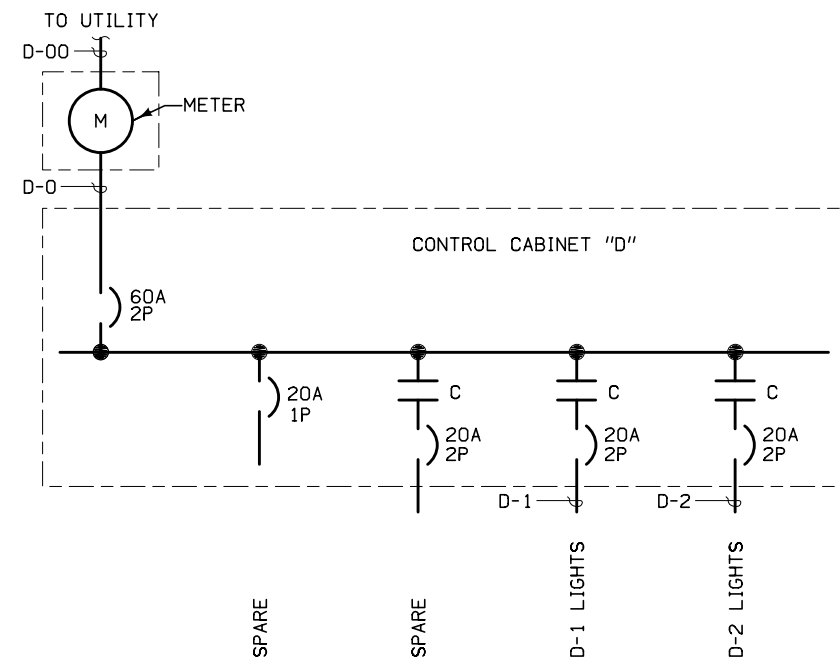
1. SEE "ROADWAY LUMINAIRES" DESCRIPTION IN TAB 108-11A FOR LED LIGHT SOURCE INFORMATION.
2. SEE CONTROL CABINET DETAIL ON SHEET P.2.

Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3

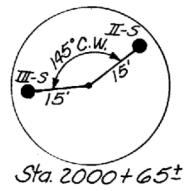


HIGHWAY LIGHTING LAYOUT
INTERSECTION OF
IA 92 & IA 21

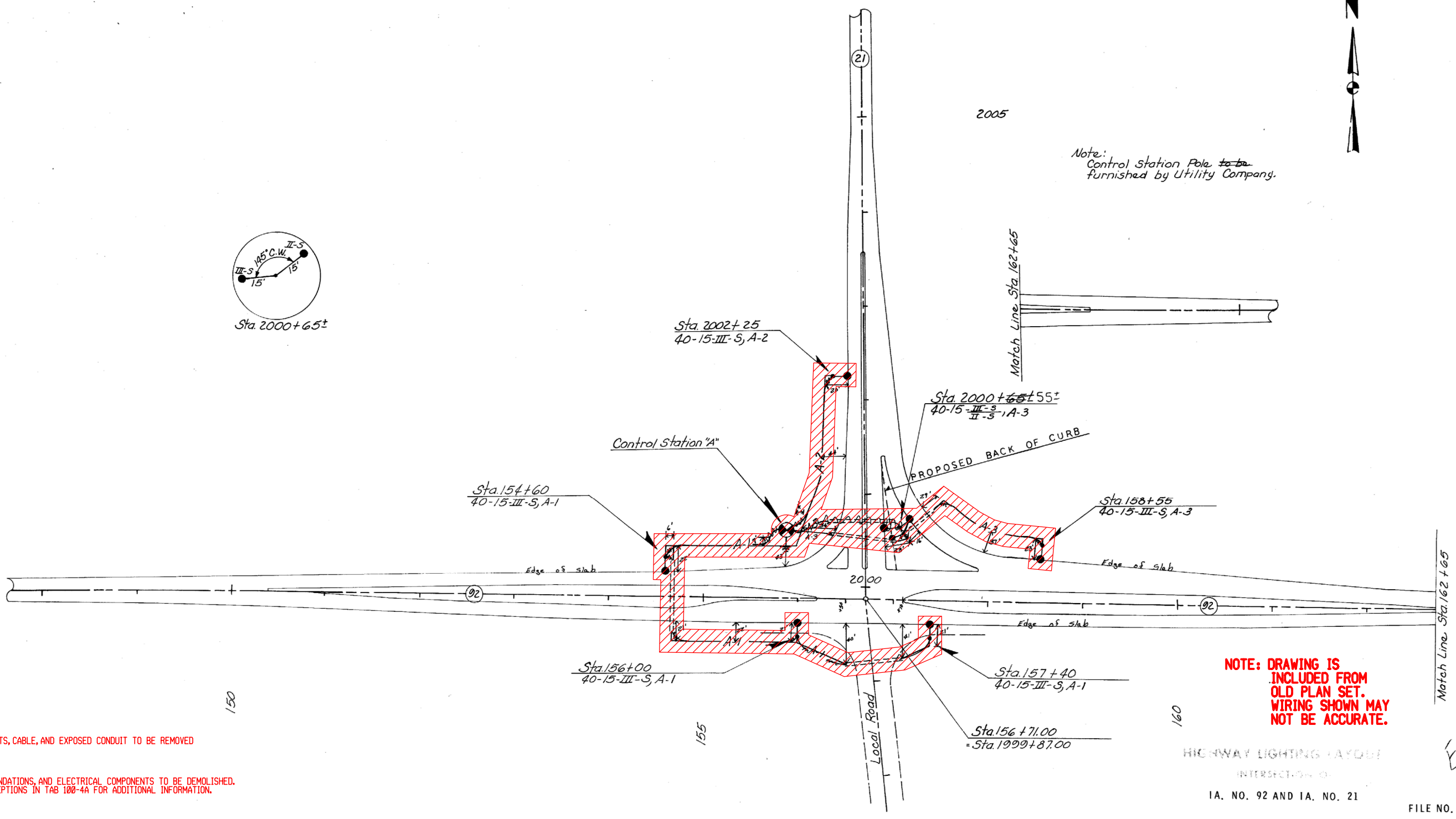


CABINET D ONE-LINE DIAGRAM

HIGHWAY LIGHTING DETAILS



Note:
Control Station Pole to be
furnished by Utility Company.



LEGEND:
 LIGHTS, CABLE, AND EXPOSED CONDUIT TO BE REMOVED

NOTES:
 1. POLES, FOUNDATIONS, AND ELECTRICAL COMPONENTS TO BE DEMOLISHED.
 SEE DESCRIPTIONS IN TAB 100-4A FOR ADDITIONAL INFORMATION.

**NOTE: DRAWING IS
 INCLUDED FROM
 OLD PLAN SET.
 WIRING SHOWN MAY
 NOT BE ACCURATE.**

HIGHWAY LIGHTING LAYOUT

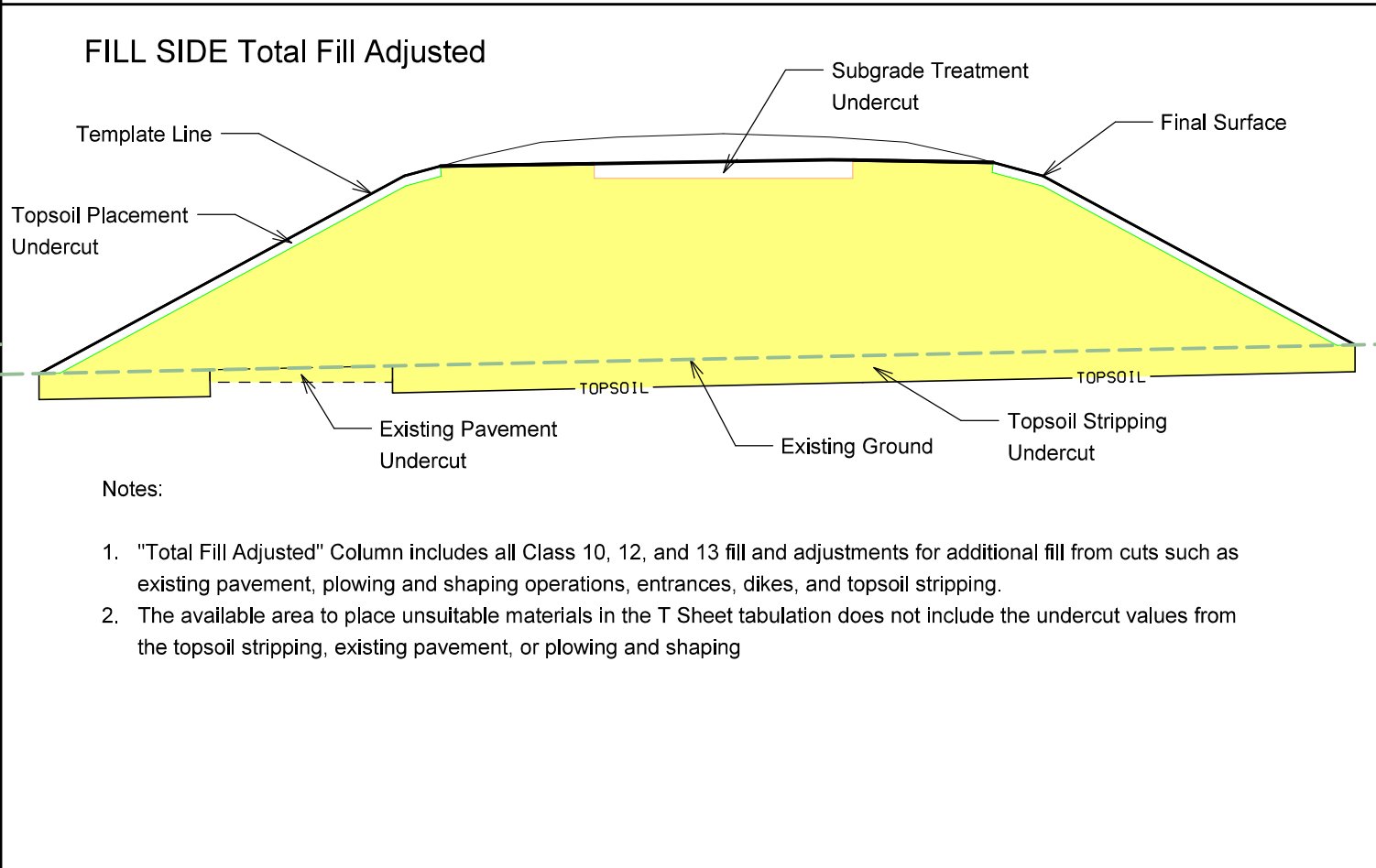
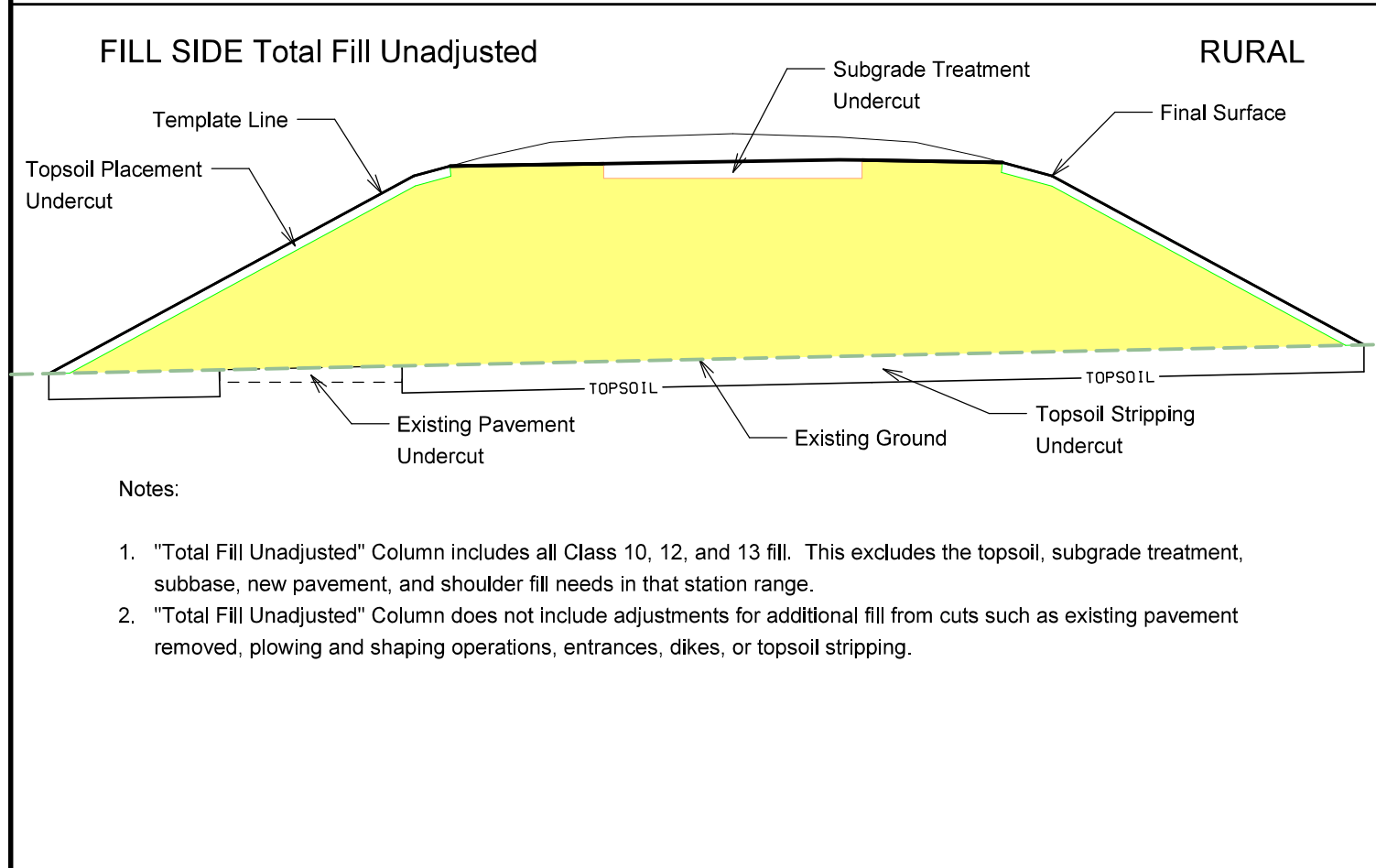
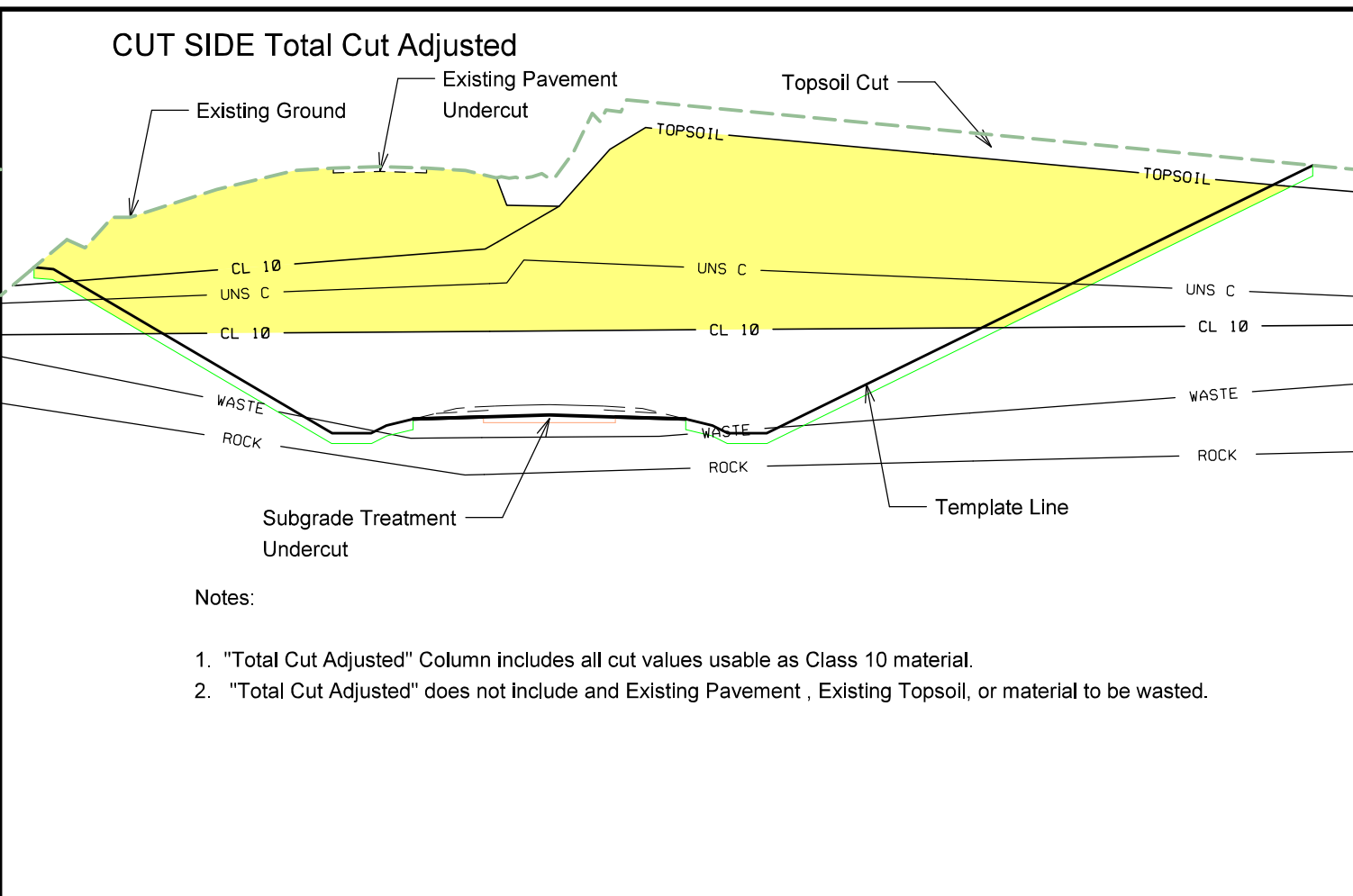
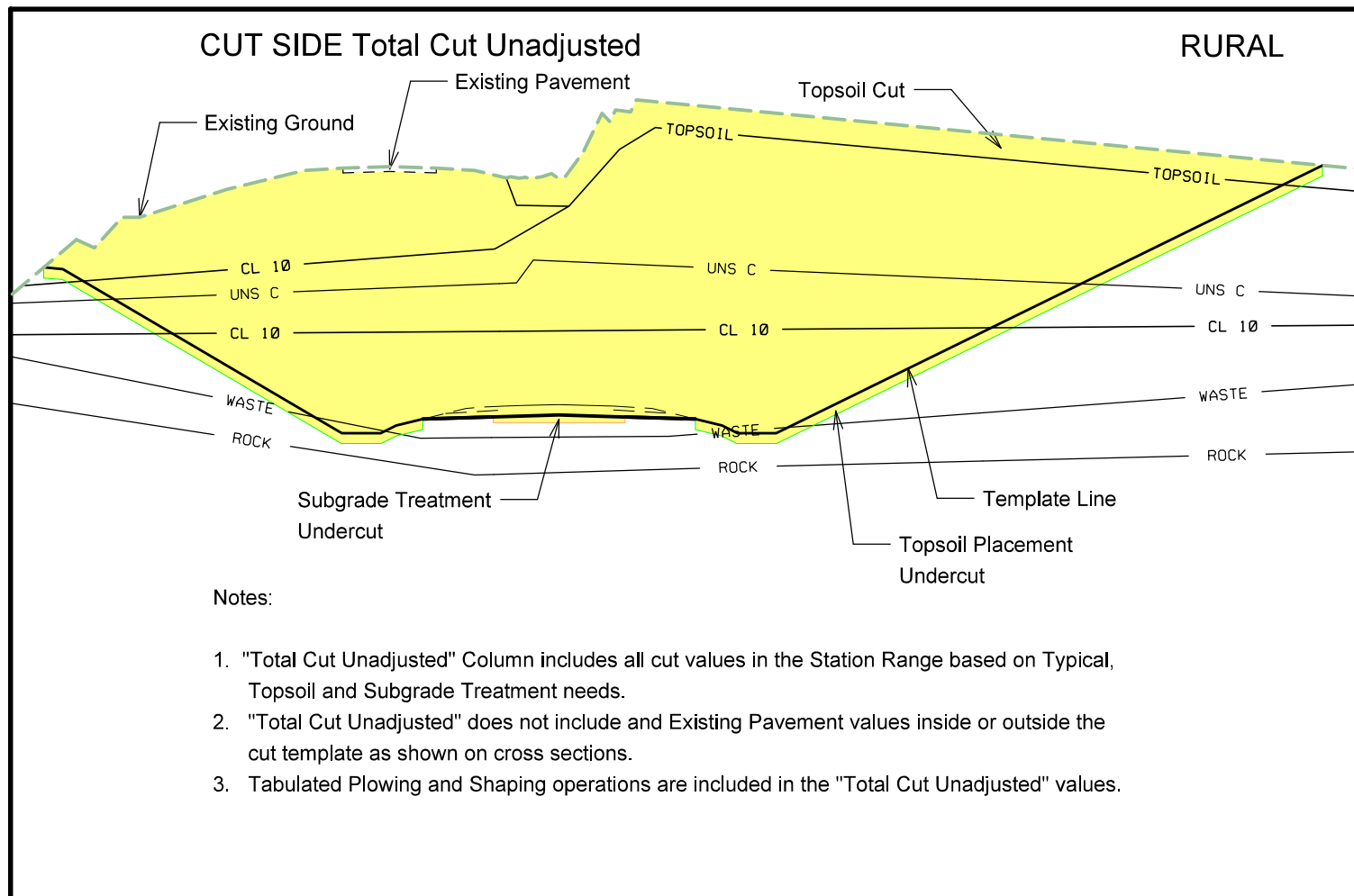
INTERSECTION OF

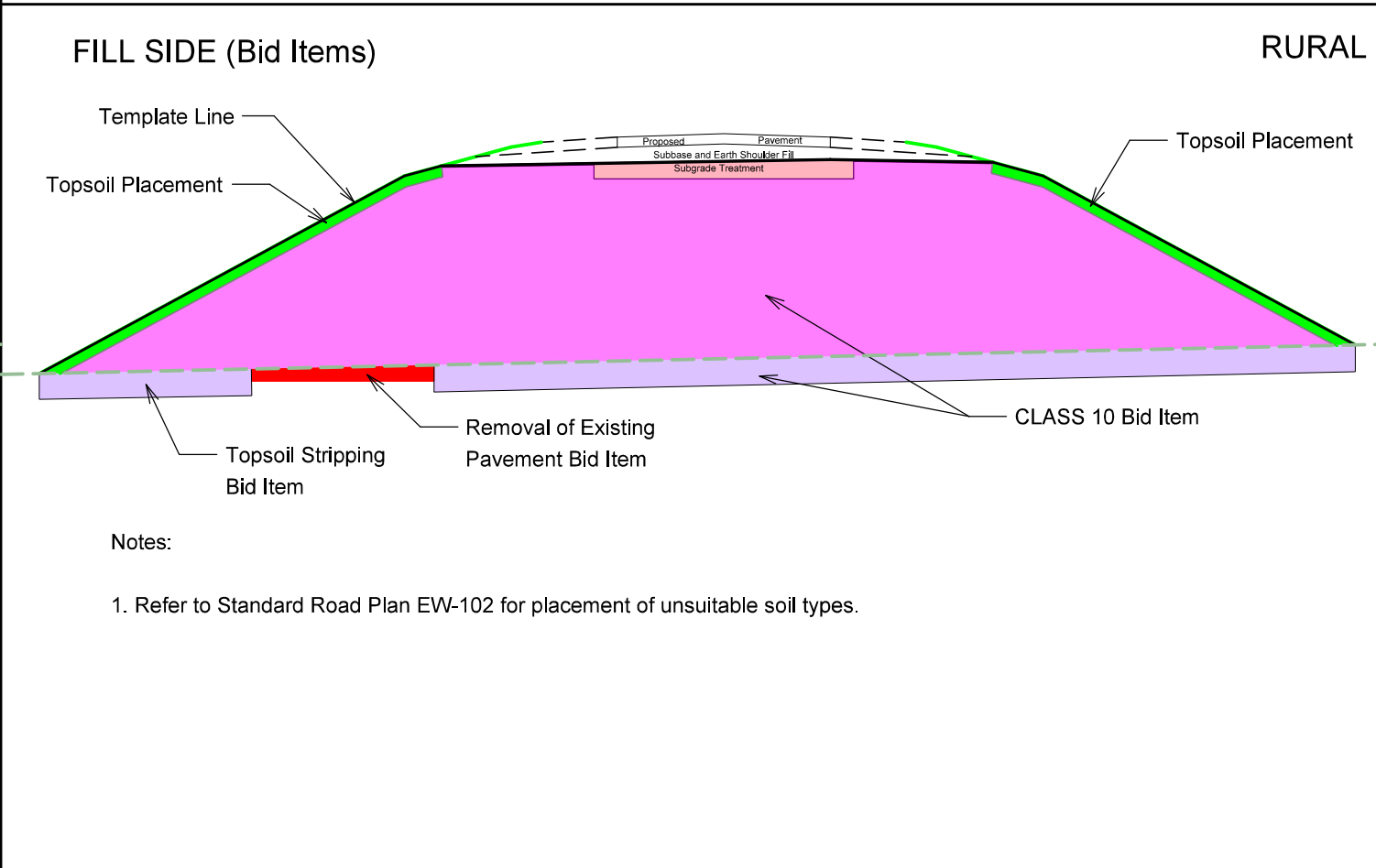
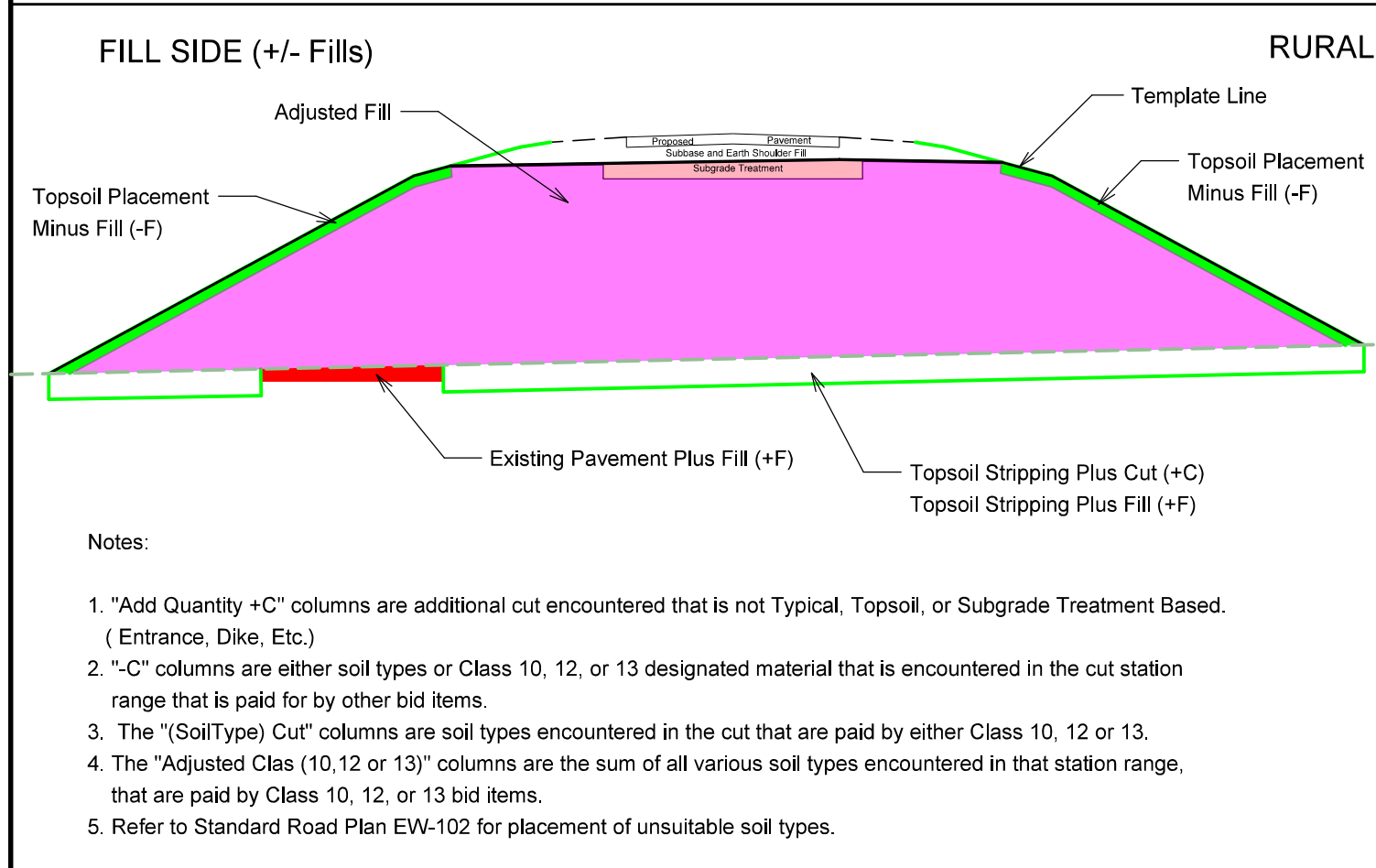
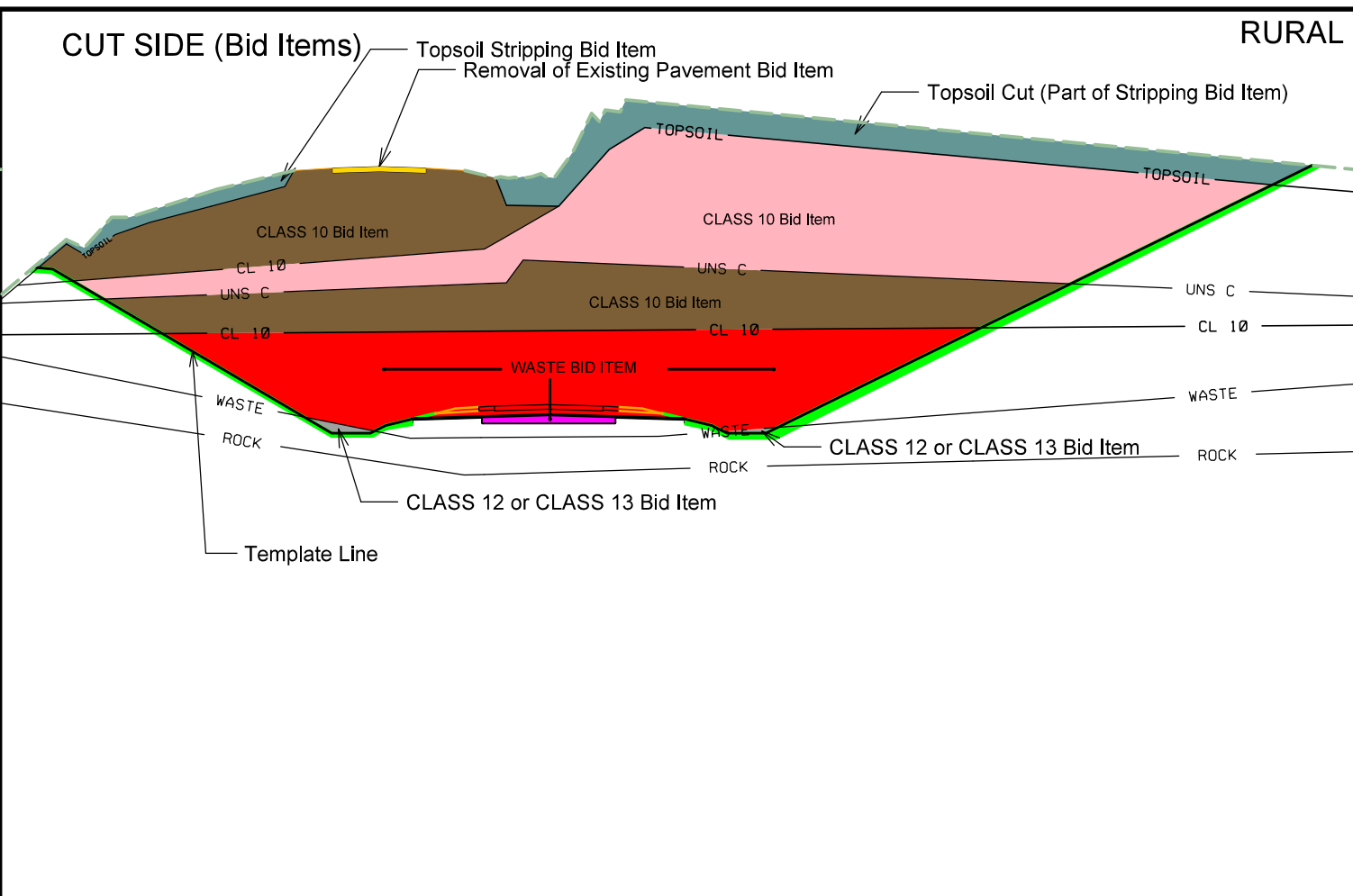
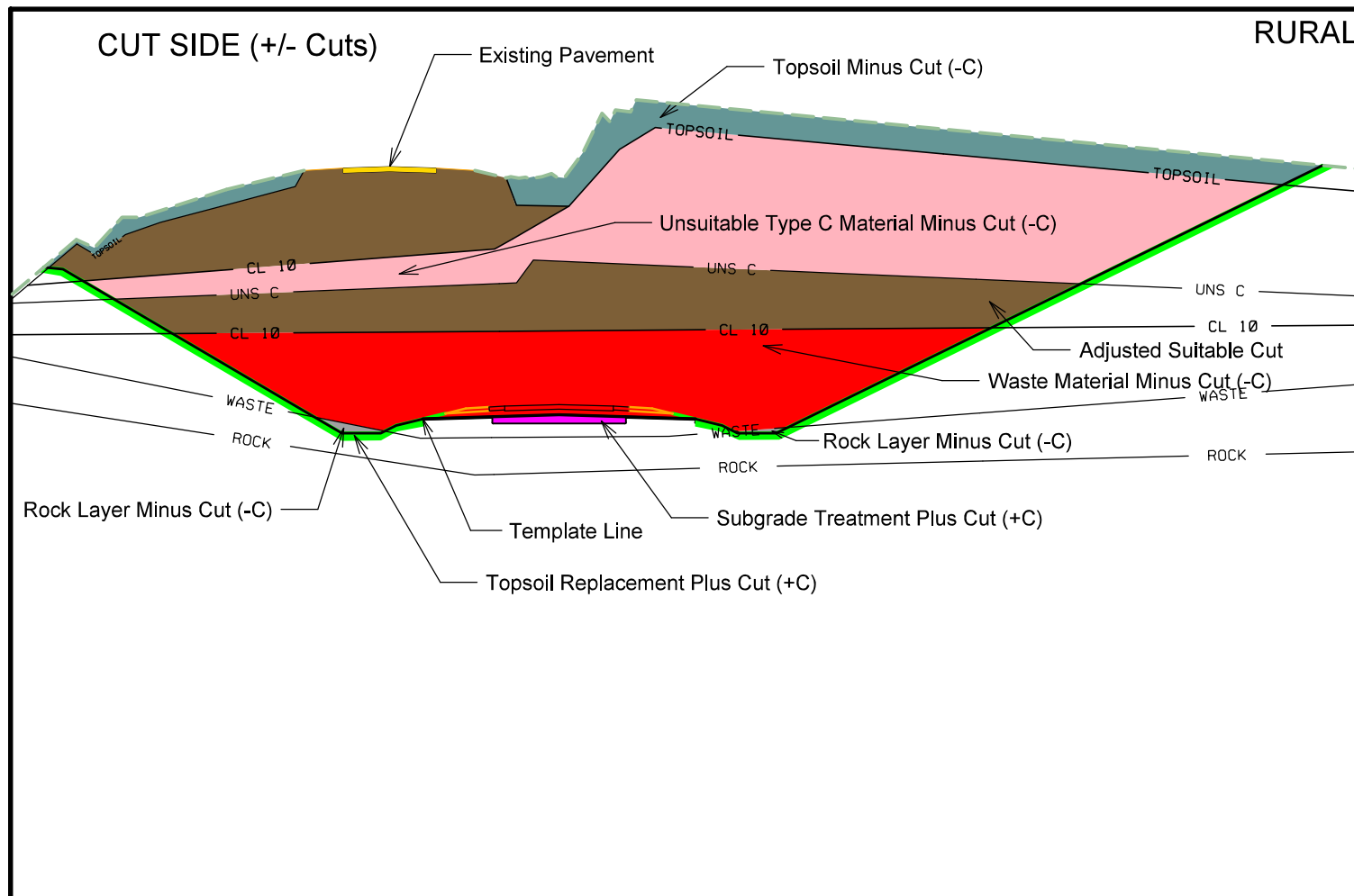
IA. NO. 92 AND IA. NO. 21

FILE NO. 169

Keokuk COUNTY

PROJECT NUMBER	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
FN-92-8(7)--21-54	IOWA	5		3	10





TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill						Checks (EW-102)		Topsoil				[18]	[19]	[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]						[17]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	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
ML092W																						
134+25.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
134+50.00	2	0	2	0	0	0	0	5	7	-7	0	0	2	0	0	0	2					
135+00.00	80	73	7	7	73	486	7	493	641	-568	0	0	7	7	10	-3						
135+50.00	83	70	13	0	70	0	13	0	13	53	0	0	13	3	4	9						
136+00.00	83	70	13	0	70	0	13	0	13	53	0	0	13	4	6	7						
136+50.00	84	71	13	0	71	0	13	0	13	54	0	0	13	4	6	7						
137+00.00	85	71	14	0	71	0	14	0	14	53	0	0	14	3	4	10						
137+50.00	77	64	13	7	64	0	13	0	13	47	0	0	13	3	4	9						
138+00.00	75	62	13	13	62	0	13	0	13	45	0	0	13	10	14	-1						
138+50.00	75	61	14	14	61	0	14	0	14	43	0	0	14	9	13	1						
139+00.00	71	57	14	14	57	0	14	51	65	-28	0	0	14	2	3	11						
139+50.00	71	57	14	14	57	0	14	0	14	39	0	0	14	3	4	10						
140+00.00	70	57	13	13	57	0	13	0	13	40	0	0	13	3	4	9						
140+50.00	73	60	13	13	60	0	13	0	13	43	0	0	13	6	8	5						
141+00.00	74	61	13	13	61	0	13	0	13	44	0	0	13	7	10	3						
141+50.00	72	59	13	13	59	0	13	0	13	42	0	0	13	5	7	6						
142+00.00	78	65	13	7	65	0	13	0	13	48	0	0	13	5	7	6						
142+50.00	80	67	13	6	67	0	13	9	22	38	0	0	13	7	10	3						
143+00.00	77	64	13	13	64	0	13	2	15	20	0	0	13	11	15	-2						
143+50.00	79	66	13	13	66	0	13	5	18	23	0	0	13	15	21	-8						
143+86.62	10	0	10	0	0	0	10	11	21	-27	0	0	10	0	0	10						
144+00.00	67	63	4	14	63	0	4	0	4	58	0	0	4	11	15	-11						
144+50.00	122	90	32	32	90	0	32	0	32	48	0	0	32	3	4	28						
145+00.00	175	125	50	50	125	0	50	0	50	65	0	0	50	1	1	49						
145+50.00	188	138	50	50	138	0	50	0	50	65	0	0	50	2	3	47						
145+60.95	11	0	11	0	0	0	11	1	12	-16	0	0	11	0	0	11						
146+00.00	191	152	39	50	152	0	39	0	39	101	0	0	39	2	3	36						
146+50.00	219	169	50	50	169	0	50	0	50	65	0	0	50	3	4	46						
147+00.00	235	184	51	50	184	0	51	0	51	66	0	0	51	4	6	45						
147+50.00	245	194	51	52	194	0	51	0	51	66	0	0	51	7	10	41						
148+00.00	250	200	50	51	200	0	50	0	50	65	0	0	50	9	13	37						
148+50.00	247	202	45	45	202	0	45	0	45	59	0	0	45	11	15	30						
149+00.00	242	202	40	40	202	2	40	0	42	55	0	0	40	12	17	23						
149+48.59	41	0	41	0	0	0	41	18	59	-77	0	0	41	0	0	41						
149+50.00	200	199	1	42	199	3	1	0	4	5	0	0	1	12	17	-16						
150+00.00	238	194	44	44	194	2	44	0	46	60	0	0	44	10	14	30						
150+50.00	239	192	47	47	192	2	47	0	49	64	0	0	47	9	13	34						
151+00.00	251	202	49	49	202	2	49	0	51	66	0	0	49	9	13	36						
151+50.00	265	218	47	47	218	3	47	0	50	65	0	0	47	10	14	33						
152+00.00	284	237	47	47	237	2	47	0	49	64	0	0	47	13	18	29						
152+50.00	309	262	47	47	262	1	47	0	48	62	0	0	47	13	18	29						
152+80.18	28	0	28	0	0	0	28	16	44	-57	0	0	28	0	0	28						
152+80.19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
153+00.00	312	294	18	46	294	5	18	0	23	30	0	0	18	20	28	-10						
153+36.21	33	0	33	0	0	0	33	17	50	-65	0	0	33	0	0	33						
153+50.00	337	324	13	46	324	5	13	0	18	23	0	0	13	15	21	-8						
154+00.00	406	360	46	46	360	0	46	0	46	60	0	0	46	2	3	43						
154+50.00	458	412	46	47	412	0	46	0	46	60	0	0	46	8	11	35						
155+00.00	507	456	51	51	456	0	51	0	51	66	0	0	51	13	18	33						
155+50.00	541	475	66	66	475	0	66	0	66	86	0	0	66	14	20	46						
156+00.00	620	531	89	89	531	0	89	0	89	116	0	0	89	9	13	76						
157+00.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
157+50.00	2,456	2,126	330	330	2,126	0	330	0	330	429	0	0	330	73	102	228						
158+00.00	878	776	102	102	776	0	102	0	102	133	0	0	102	37	52	50						
158+50.00	794	714	80	80	714	0	80	0	80	104	0	0	80	29	41	39						
158+99.89	72	0	72	0	0	0	72	34	106	-138	0	0	72	0	0	72						
159+00.00	693	693	0	72	693	0	0	0	0	0	0	0	0	26	36	-36						
159+50.00	719	651	68	68	651	0	68	0	68	88	0	0	68	24	34	34						
160+00.00	678	615	63	63	615	0	63	0	63	82	0	0	63	30	42	21						
160+50.00	633	574	59	59	574	0	59	0	59	77	0	0	59	41	57	2						
161+00.00	567	512	55	55	512	12	55	0	67	87	0	0	55	44	62	-7						
161+50.00	501	449	52	52	449	29	52	0	81	105	0	0	52	42	59	-7						
162+00.00	447	398	49	49	398	24	49	0	73	95	0	0	49	37	52	-3						
162+50.00	399	352	47	47	352	10	47	0	57	74	0	0	47	30	42	5						
163+00.00	357	309	48	48	309	5	48	0	53	69	0	0	48	25	35	13						
163+50.00	318	269	49	49	269	3	49	0	52	68	0	0	49	22	31	18						
164+00.00	284	238	46	47	238	1	46	0	47	61	0	0	46	19	27	19						

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut					Fill						Checks (EW-102)		Topsoil				[18]	[19]	[20]	[21]	[22]
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]					
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	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					
164+50.00	255	212	43	43	212	0	43	0	43	56	156	0	0	43	19	27	16					
165+00.00	237	197	40	40	197	0	40	0	40	52	145	0	0	40	27	38	2					
165+20.00	16	0	16	0	0	0	16	21	37	48	-48	0	0	16	0	0	16					
165+50.00	209	186	23	39	186	0	23	0	23	30	156	0	0	23	22	31	-8					
166+00.00	230	192	38	19	192	0	38	0	38	49	143	0	0	38	10	14	24					
166+50.00	217	180	37	19	180	0	37	0	37	48	132	0	0	37	7	10	27					
167+00.00	185	148	37	37	148	0	37	0	37	48	100	0	0	37	4	6	31					
167+50.00	175	138	37	37	138	0	37	0	37	48	90	0	0	37	2	3	34					
168+00.00	165	128	37	37	128	0	37	0	37	48	80	0	0	37	1	1	36					
168+50.00	155	118	37	37	118	0	37	0	37	48	70	0	0	37	0	0	37					
168+86.25	27	0	27	0	0	0	27	0	27	35	-35	0	0	27	0	0	27					
169+00.00	90	90	0	19	90	0	0	0	0	0	90	0	0	0	0	0	0					
169+50.00	66	66	0	0	66	0	0	0	0	0	66	0	0	0	1	1	-1					
170+00.00	66	66	0	0	66	0	0	0	0	0	66	0	0	0	1	1	-1					
170+50.00	127	66	61	0	66	0	61	0	61	79	-13	0	0	61	0	0	61					
171+00.00	66	66	0	0	66	0	0	0	0	0	66	0	0	0	0	0	0					
171+50.00	66	66	0	0	66	0	0	0	0	0	66	0	0	0	0	0	0					
172+00.00	65	65	0	0	65	0	0	0	0	0	65	0	0	0	1	1	-1					
172+50.00	65	65	0	0	65	0	0	0	0	0	65	0	0	0	1	1	-1					
173+00.00	66	66	0	0	66	0	0	0	0	0	66	0	0	0	0	0	0					
173+50.00	65	65	0	0	65	0	0	0	0	0	65	0	0	0	0	0	0					
174+00.00	65	65	0	0	65	0	0	0	0	0	65	0	0	0	1	1	-1					
174+50.00	66	66	0	0	66	0	0	0	0	0	66	0	0	0	0	0	0					
175+00.00	66	66	0	0	66	0	0	0	0	0	66	0	0	0	0	0	0					
175+50.00	65	65	0	0	65	0	0	0	0	0	65	0	0	0	0	0	0					
176+00.00	65	65	0	0	65	0	0	0	0	0	65	0	0	0	1	1	-1					
176+50.00	64	64	0	0	64	0	0	0	0	0	64	0	0	0	2	3	-3					
177+00.00	65	65	0	0	65	0	0	0	0	0	65	0	0	0	1	1	-1					
177+50.00	65	65	0	0	65	0	0	0	0	0	65	0	0	0	1	1	-1					
178+00.00	66	66	0	0	66	0	0	0	0	0	66	0	0	0	1	1	-1					
178+50.00	65	65	0	0	65	0	0	0	0	0	65	0	0	0	1	1	-1					
Totals:	21,721	18,738	2,983	2,806	18,738	597	2,983	188	3,768	4,899	13,840	0	0	2,983	914	1,280	1,704					

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut					Fill						Checks (EW-102)		Topsoil				[18]	[19]	[20]	[21]	[22]
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]					
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	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					
246+50.00	185	148	37	37	144	0	37	0	37	48	96	0	0	37	4	6	31					
247+00.00	181	144	37	37	135	0	37	0	37	48	87	0	0	37	3	4	33					
247+83.91	172	135	37	37	126	0	0	0	0	0	126	0	0	0	3	4	-4					
248+00.00	126	126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
248+50.00	0	0	0	18	93	0	0	0	0	0	93	0	0	0	2	3	-3					
249+00.00	93	93	0	0	64	0	0	0	0	0	64	0	0	0	1	1	-1					
249+50.00	64	64	0	0	64	0	0	0	0	0	64	0	0	0	1	1	-1					
250+00.00	64	64	0	0	64	0	0	0	0	0	64	0	0	0	1	1	-1					
250+50.00	64	64	0	0	63	0	0	0	0	0	63	0	0	0	1	1	-1					
251+00.00	63	63	0	0	60	0	0	0	0	0	60	0	0	0	2	3	-3					
251+29.25	60	60	0	0	59	0	0	0	0	0	59	0	0	0	2	3	-3					
251+50.00	59	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
252+00.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
252+50.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
253+00.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
253+50.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Totals:	15,383	12,686	2,697	2,353	12,686	26	2,697	40	2,763	3,592	9,095	0	0	2,697	750	1,050	1,648					

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut					Fill						Checks (EW-102)		Topsoil				[18]	[19]	[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]						
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	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						
SR021																							
1154+50.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
1155+00.00	0	0	0	0	0	0	0	1	1	1	-1	0	0	0	0	0	0						
1156+00.00	470	436	34	71	436	0	34	0	34	44	392	0	0	34	42	59	-25						
1157+00.00	442	425	17	47	425	0	17	0	17	22	403	0	0	17	33	46	-29						
1157+50.00	239	0	239	0	0	0	239	96	335	436	-436	0	0	239	0	0	239						
1158+00.00	576	170	126	50	170	1	126	0	127	165	5	0	0	126	45	63	63						
1158+50.00	332	243	89	89	243	0	89	0	89	116	127	0	0	89	44	62	27						
1159+00.00	213	133	80	78	133	0	80	0	80	104	29	0	0	80	38	53	27						
Totals:	2,272	1,407	585	335	1,407	1	585	97	683	888	520	0	0	585	202	283	303						

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill						Checks (EW-102)		Topsoil				[18]	[19]	[20]	[21]	[22]				
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]								
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	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								
SRV33																									
1231+00.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
1231+50.00	113	77	36	36	77	3	18	0	21	27	50	0	0	18	19	27	-9								
1232+00.00	102	65	37	37	65	0	1	0	1	1	64	0	0	1	2	3	-2								
1232+50.00	99	62	37	37	62	0	0	0	0	0	62	0	0	0	2	3	-3								
1233+00.00	98	61	37	37	61	0	0	0	0	0	61	0	0	0	3	4	-4								
1233+50.00	102	65	37	37	65	0	0	0	0	0	65	0	0	0	2	3	-3								
1234+00.00	105	64	41	41	64	0	0	0	0	0	64	0	0	0	1	1	-1								
1234+50.00	123	74	49	49	74	0	5	0	5	7	68	0	0	5	7	10	-5								
1235+00.00	187	120	67	67	120	0	4	0	4	5	115	0	0	4	16	22	-18								
Totals:	929	588	341	341	588	3	28	0	31	41	548	0	0	28	52	73	-45								

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut					Fill						Checks (EW-102)		Topsoil					[18]	[19]	[20]	[21]	[22]
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]						
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+Fill)	Existing Pavement Undercut (+Fill)	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						
DE11A																							
134+50.00	7	7	0	0	7	0			0	0	7	0	0	0	0	0	0						
135+50.00	24	24	0	0	24	0			0	0	24	0	0	0	0	0	0						
137+00.00	10	10	0	0	10	0			0	0	10	0	0	0	0	0	0						
137+50.00	12	12	0	0	12	0			0	0	12	0	0	0	0	0	0						
138+00.00	13	13	0	0	13	0			0	0	13	0	0	0	0	0	0						
138+50.00	15	15	0	0	15	0			0	0	15	0	0	0	0	0	0						
139+00.00	16	16	0	0	16	0			0	0	16	0	0	0	0	0	0						
139+50.00	17	17	0	0	17	0			0	0	17	0	0	0	0	0	0						
140+00.00	17	17	0	0	17	1			1	1	16	0	0	0	0	0	0						
140+50.00	17	17	0	0	17	2			2	3	14	0	0	0	0	0	0						
141+00.00	18	18	0	0	18	2			2	3	15	0	0	0	0	0	0						
141+50.00	32	32	0	0	32	13			13	17	15	0	0	0	0	0	0						
142+50.00	14	14	0	0	14	12			12	16	-2	0	0	0	0	0	0						
143+00.00	14	14	0	0	14	16			16	21	-7	0	0	0	0	0	0						
143+50.00	14	14	0	0	14	20			20	26	-12	0	0	0	0	0	0						
144+00.00	13	13	0	0	13	21			21	27	-14	0	0	0	0	0	0						
144+50.00	13	13	0	0	13	20			20	26	-13	0	0	0	0	0	0						
145+00.00	13	13	0	0	13	21			21	27	-14	0	0	0	0	0	0						
145+50.00	13	13	0	0	13	24			24	31	-18	0	0	0	0	0	0						
146+00.00	14	14	0	0	14	24			24	31	-17	0	0	0	0	0	0						
146+50.00	15	15	0	0	15	23			23	30	-15	0	0	0	0	0	0						
147+00.00	16	16	0	0	16	22			22	29	-13	0	0	0	0	0	0						
147+50.00	17	17	0	0	17	22			22	29	-12	0	0	0	0	0	0						
148+00.00	20	20	0	0	20	22			22	29	-9	0	0	0	0	0	0						
148+50.00	24	24	0	0	24	21			21	27	-3	0	0	0	0	0	0						
149+00.00	25	25	0	0	25	19			19	25	0	0	0	0	0	0	0						
149+50.00	26	26	0	0	26	14			14	18	8	0	0	0	0	0	0						
150+00.00	31	31	0	0	31	8			8	10	21	0	0	0	0	0	0						
150+50.00	36	36	0	0	36	3			3	4	32	0	0	0	0	0	0						
151+00.00	38	38	0	0	38	0			0	0	38	0	0	0	0	0	0						
151+50.00	40	40	0	0	40	0			0	0	40	0	0	0	0	0	0						
152+00.00	42	42	0	0	42	0			0	0	42	0	0	0	0	0	0						
152+50.00	43	43	0	0	43	0			0	0	43	0	0	0	0	0	0						
153+00.00	42	42	0	0	42	0			0	0	42	0	0	0	0	0	0						
153+50.00	43	43	0	0	43	0			0	0	43	0	0	0	0	0	0						
154+00.00	43	43	0	0	43	0			0	0	43	0	0	0	0	0	0						
154+50.00	43	43	0	0	43	0			0	0	43	0	0	0	0	0	0						
155+00.00	29	29	0	0	29	0			0	0	29	0	0	0	0	0	0						
155+50.00	12	12	0	0	12	0			0	0	12	0	0	0	0	0	0						
156+00.00	105	105	0	0	105	0			0	0	105	0	0	0	0	0	0						
158+00.00	44	44	0	0	44	0			0	0	44	0	0	0	0	0	0						
158+50.00	43	43	0	0	43	0			0	0	43	0	0	0	0	0	0						
159+00.00	43	43	0	0	43	0			0	0	43	0	0	0	0	0	0						
159+50.00	43	43	0	0	43	0			0	0	43	0	0	0	0	0	0						
160+00.00	43	43	0	0	43	0			0	0	43	0	0	0	0	0	0						
160+50.00	37	37	0	0	37	0			0	0	37	0	0	0	0	0	0						
161+00.00	37	37	0	0	37	0			0	0	37	0	0	0	0	0	0						
161+50.00	43	43	0	0	43	0			0	0	43	0	0	0	0	0	0						
162+00.00	42	42	0	0	42	0			0	0	42	0	0	0	0	0	0						
162+50.00	45	45	0	0	45	0			0	0	45	0	0	0	0	0	0						
163+00.00	79	79	0	0	79	2			2	3	76	0	0	0	0	0	0						
164+00.00	28	28	0	0	28	4			4	5	23	0	0	0	0	0	0						
164+50.00	25	25	0	0	25	13			13	17	8	0	0	0	0	0	0						
165+00.00	24	24	0	0	24	25			25	33	-9	0	0	0	0	0	0						
165+50.00	25	25	0	0	25	29			29	38	-13	0	0	0	0	0	0						
166+00.00	26	26	0	0	26	22			22	29	-3	0	0	0	0	0	0						
166+50.00	27	27	0	0	27	15			15	20	8	0	0	0	0	0	0						
167+00.00	28	28	0	0	28	12			12	16	12	0	0	0	0	0	0						
167+50.00	28	28	0	0	28	9			9	12	16	0	0	0	0	0	0						
168+00.00	29	29	0	0	29	6			6	8	21	0	0	0	0	0	0						
168+50.00	29	29	0	0	29	5			5	7	23	0	0	0	0	0	0						
169+00.00	28	28	0	0	28	5			5	7	22	0	0	0	0	0	0						
169+50.00	29	29	0	0	29	5			5	7	23	0	0	0	0	0	0						
170+00.00	29	29	0	0	29	5			5	7	23	0	0	0	0	0	0						
170+50.00	29	29	0	0	29	4			4	5	24	0	0	0	0	0	0						
171+00.00	26	26	0	0	26	3			3	4	22	0	0	0	0	0	0						
171+50.00	24	24	0	0	24	3			3	4	20	0	0	0	0	0	0						
172+00.00																							
Subtotals:	1,929	1,929	0	0	1,929	497	0	0	497	646	1,283	0	0	0	0	0	0						

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut					Fill						Checks (EW-102)		Topsoil					[18]	[19]	[20]	[21]	[22]
	[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	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	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						
172+00.00	26	26	0	0	26	1			1	1	25	0	0	0	0	0	0						
172+50.00	27	27	0	0	27	0			0	0	27	0	0	0	0	0	0						
173+00.00	52	52	0	0	52	0			0	0	52	0	0	0	0	0	0						
174+00.00	24	24	0	0	24	0			0	0	24	0	0	0	0	0	0						
174+50.00	21	21	0	0	21	0			0	0	21	0	0	0	0	0	0						
175+00.00	19	19	0	0	19	0			0	0	19	0	0	0	0	0	0						
175+50.00	17	17	0	0	17	0			0	0	17	0	0	0	0	0	0						
176+00.00	15	15	0	0	15	0			0	0	15	0	0	0	0	0	0						
176+50.00	13	13	0	0	13	0			0	0	13	0	0	0	0	0	0						
177+00.00	11	11	0	0	11	0			0	0	11	0	0	0	0	0	0						
177+50.00	10	10	0	0	10	0			0	0	10	0	0	0	0	0	0						
178+00.00																							
DET1A																							
Totals:	2,164	2,164	0	0	2,164	498	0	0	498	648	1,517	0	0	0	0	0	0						

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill						Checks (EW-102)		Topsoil					[18]	[19]	[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]						
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	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						
DET1B																							
134+50.00	11	11	0	0	11	0			0	0	11	0	0	0	0	0	0						
136+00.00	7	7	0	0	7	0			0	0	7	0	0	0	0	0	0						
136+50.00	8	8	0	0	8	0			0	0	8	0	0	0	0	0	0						
137+00.00	9	9	0	0	9	0			0	0	9	0	0	0	0	0	0						
137+50.00	11	11	0	0	11	0			0	0	11	0	0	0	0	0	0						
138+00.00	13	13	0	0	13	0			0	0	13	0	0	0	0	0	0						
139+00.00	14	14	0	0	14	0			0	0	14	0	0	0	0	0	0						
140+00.00	28	28	0	0	28	2			2	3	25	0	0	0	0	0	0						
140+50.00	14	14	0	0	14	2			2	3	11	0	0	0	0	0	0						
141+00.00	15	15	0	0	15	4			4	5	10	0	0	0	0	0	0						
141+50.00	15	15	0	0	15	6			6	8	7	0	0	0	0	0	0						
142+00.00	15	15	0	0	15	7			7	9	6	0	0	0	0	0	0						
142+50.00	15	15	0	0	15	11			11	14	1	0	0	0	0	0	0						
143+00.00	14	14	0	0	14	17			17	22	-8	0	0	0	0	0	0						
143+50.00	14	14	0	0	14	22			22	29	-15	0	0	0	0	0	0						
144+00.00	15	15	0	0	15	23			23	30	-15	0	0	0	0	0	0						
144+50.00	16	16	0	0	16	20			20	26	-10	0	0	0	0	0	0						
145+00.00	16	16	0	0	16	16			16	21	-5	0	0	0	0	0	0						
145+50.00	16	16	0	0	16	15			15	20	-4	0	0	0	0	0	0						
146+00.00	16	16	0	0	16	14			14	18	-2	0	0	0	0	0	0						
146+50.00	17	17	0	0	17	15			15	20	-3	0	0	0	0	0	0						
147+00.00	17	17	0	0	17	17			17	22	-5	0	0	0	0	0	0						
147+50.00	17	17	0	0	17	18			18	23	-6	0	0	0	0	0	0						
148+00.00	20	20	0	0	20	15			15	20	1	0	0	0	0	0	0						
148+50.00	23	23	0	0	23	15			15	20	4	0	0	0	0	0	0						
149+00.00	26	26	0	0	26	12			12	16	10	0	0	0	0	0	0						
149+50.00	26	26	0	0	26	6			6	8	18	0	0	0	0	0	0						
150+00.00	30	30	0	0	30	1			1	1	29	0	0	0	0	0	0						
150+50.00	37	37	0	0	37	0			0	0	37	0	0	0	0	0	0						
151+00.00	39	39	0	0	39	0			0	0	39	0	0	0	0	0	0						
151+50.00	39	39	0	0	39	0			0	0	39	0	0	0	0	0	0						
152+00.00	40	40	0	0	40	0			0	0	40	0	0	0	0	0	0						
152+50.00	40	40	0	0	40	0			0	0	40	0	0	0	0	0	0						
153+00.00	41	41	0	0	41	0			0	0	41	0	0	0	0	0	0						
153+50.00	439	439	0	0	439	0			0	0	439	0	0	0	0	0	0						
160+00.00	26	26	0	0	26	0			0	0	26	0	0	0	0	0	0						
160+50.00	29	29	0	0	29	0			0	0	29	0	0	0	0	0	0						
161+00.00	34	34	0	0	34	0			0	0	34	0	0	0	0	0	0						
161+50.00	36	36	0	0	36	0			0	0	36	0	0	0	0	0	0						
162+00.00	36	36	0	0	36	0			0	0	36	0	0	0	0	0	0						
162+50.00	36	36	0	0	36	0			0	0	36	0	0	0	0	0	0						
163+00.00	31	31	0	0	31	1			1	1	30	0	0	0	0	0	0						
163+50.00	27	27	0	0	27	3			3	4	23	0	0	0	0	0	0						
164+00.00	27	27	0	0	27	13			13	17	10	0	0	0	0	0	0						
164+50.00	26	26	0	0	26	43			43	56	-30	0	0	0	0	0	0						
165+00.00	28	28	0	0	28	55			55	72	-44	0	0	0	0	0	0						
165+50.00	29	29	0	0	29	33			33	43	-14	0	0	0	0	0	0						
166+00.00	28	28	0	0	28	18			18	23	5	0	0	0	0	0	0						
166+50.00	26	26	0	0	26	16			16	21	5	0	0	0	0	0	0						
167+00.00	28	28	0	0	28	15			15	20	9	0	0	0	0	0	0						
167+50.00	30	30	0	0	30	13			13	17	13	0	0	0	0	0	0						
168+00.00	29	29	0	0	29	13			13	17	12	0	0	0	0	0	0						
168+50.00	28	28	0	0	28	10			10	13	15	0	0	0	0	0	0						
169+00.00	29	29	0	0	29	8			8	10	19	0	0	0	0	0	0						
169+50.00	28	28	0	0	28	7			7	9	19	0	0	0	0	0	0						
170+00.00	29	29	0	0	29	3			3	4	25	0	0	0	0	0	0						
170+50.00	32	32	0	0	32	1			1	1	31	0	0	0	0	0	0						
171+00.00	33	33	0	0	33	0			0	0	33	0	0	0	0	0	0						
171+50.00	31	31	0	0	31	2			2	3	28	0	0	0	0	0	0						
172+00.00	27	27	0	0	27	2			2	3	24	0	0	0	0	0	0						
172+50.00	26	26	0	0	26	0			0	0	26	0	0	0	0	0	0						
173+00.00	25	25	0	0	25	0			0	0	25	0	0	0	0	0	0						
173+50.00	23	23	0	0	23	0			0	0	23	0	0	0	0	0	0						
174+00.00	22	22	0	0	22	0			0	0	22	0	0	0	0	0	0						
174+50.00	20	20	0	0	20	0			0	0	20	0	0	0	0	0	0						
175+00.00	18	18	0	0	18	0			0	0	18	0	0	0	0	0	0						
175+50.00																							
Subtotals:	2,027	2,027	0	0	2,027	530	0	0	530	689	1,338	0	0	0	0	0	0						

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill						Checks (EW-102)		Topsoil				[18]	[19]	[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]					
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	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					
175+50.00	16	16	0	0	16	0			0	0	16	0	0	0	0	0	0					
176+00.00	15	15	0	0	15	0			0	0	15	0	0	0	0	0	0					
176+50.00	13	13	0	0	13	0			0	0	13	0	0	0	0	0	0					
177+00.00	12	12	0	0	12	0			0	0	12	0	0	0	0	0	0					
177+50.00																						
DET1B																						
Totals:	2,083	2,083	0	0	2,083	530	0	0	530	689	1,394	0	0	0	0	0	0					

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut					Fill						Checks (EW-102)		Topsoil					[18]	[19]	[20]	[21]	[22]
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]						
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	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						
249+00.00	36	36	0	0	36	78		78	101	-65	0	0	0	0	0	0	0						
249+50.00	26	26	0	0	26	166		166	216	-190	0	0	0	0	0	0	0						
250+00.00	25	25	0	0	25	210		210	273	-248	0	0	0	0	0	0	0						
250+50.00	26	26	0	0	26	264		264	343	-317	0	0	0	0	0	0	0						
251+00.00	27	27	0	0	27	267		267	347	-320	0	0	0	0	0	0	0						
251+50.00	27	27	0	0	27	216		216	281	-254	0	0	0	0	0	0	0						
252+00.00	26	26	0	0	26	155		155	202	-176	0	0	0	0	0	0	0						
252+50.00	27	27	0	0	27	89		89	116	-89	0	0	0	0	0	0	0						
253+00.00	30	30	0	0	30	31		31	40	-10	0	0	0	0	0	0	0						
253+50.00	32	32	0	0	32	6		6	8	24	0	0	0	0	0	0	0						
254+00.00	31	31	0	0	31	1		1	1	30	0	0	0	0	0	0	0						
254+50.00	29	29	0	0	29	0		0	0	29	0	0	0	0	0	0	0						
255+00.00	27	27	0	0	27	0		0	0	27	0	0	0	0	0	0	0						
255+50.00	26	26	0	0	26	0		0	0	26	0	0	0	0	0	0	0						
256+00.00	25	25	0	0	25	0		0	0	25	0	0	0	0	0	0	0						
256+50.00	22	22	0	0	22	0		0	0	22	0	0	0	0	0	0	0						
257+00.00	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0						
DET5A	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0						
Totals:	2,560	2,560	0	0	2,560	12,131	0	0	12,131	15,771	-13,211	0	0	0	0	0	0						

LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

- Existing Ground Line
- ===== Proposed Template
- ===== Proposed Topsoil Placement
- Additional Topsoil Removal
- Subgrade Treatment
- Granular Shoulder
- ===== Pavement
- Existing Pipe\R/CB
- ===== Proposed Pipe\R/CB
- ===== Proposed Dike
- ===== All Elements Associated with Proposed Entrances

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- TS ----- Topsoil (Class 10)
- SLOPE DRESSING ----- Slope Dressing Only
- CL 10 ----- Class 10 Materials
- SEL LO ----- Select Loams And Clay-Loams
- SEL SA ----- Select Sand
- UNS A ----- Unsuitable Type A Disposal
- UNS B ----- Unsuitable Type B Disposal
- UNS C ----- Unsuitable Type C Disposal
- SHALE ----- Shale
- WASTE ----- Waste
- B&W LS ----- Broken and Weathered Rock
- ROCK ----- Solid Rock
- BLDRS ----- Boulders

Note: All layer lines and descriptions identify layers above the line.

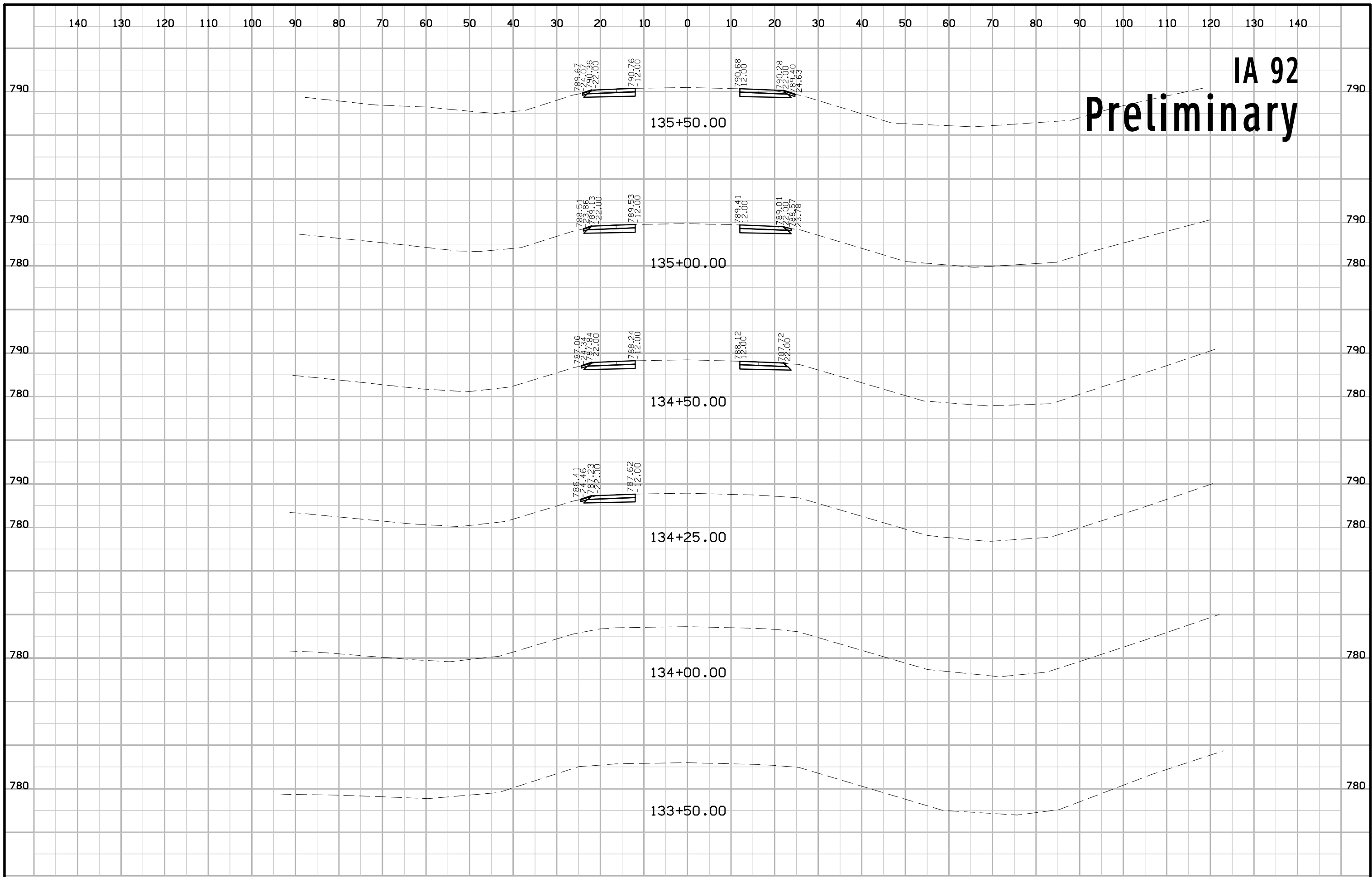
Note: Vertical or near vertical lines connecting soil layers at edges of cross sections are only for the purpose of calculating template quantities and do not depict soil stratification.

SYMBOL LEGEND OF CROSS SECTION SHEETS

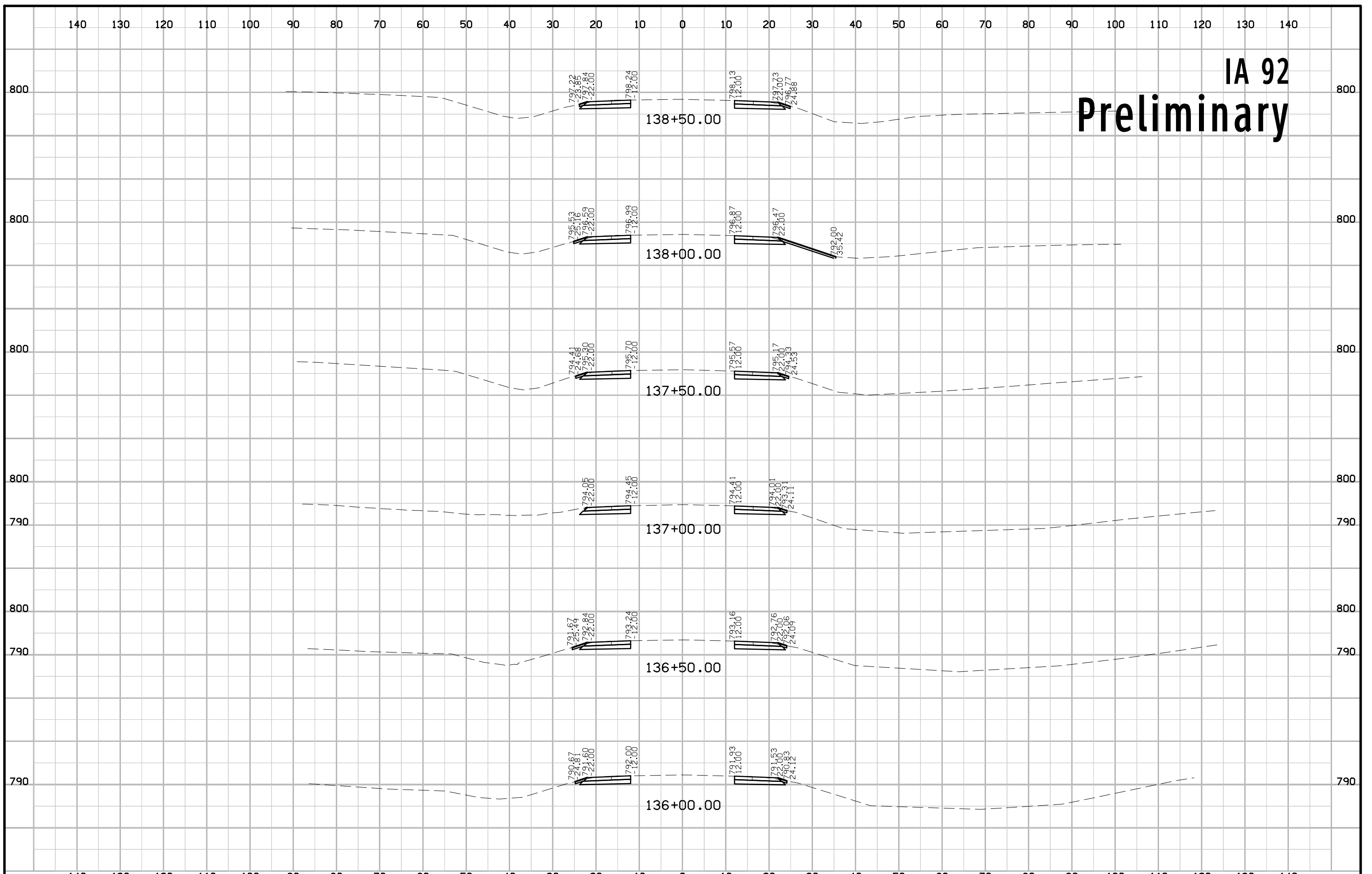
- Existing ROW
----- Existing Right-of-Way Limit
- Proposed ROW
----- Proposed Right-of-Way Limit
- Temporary ROW
----- Temporary Right-of-Way Limit

**CROSS SECTION
LEGEND AND SYMBOL
INFORMATION SHEET**

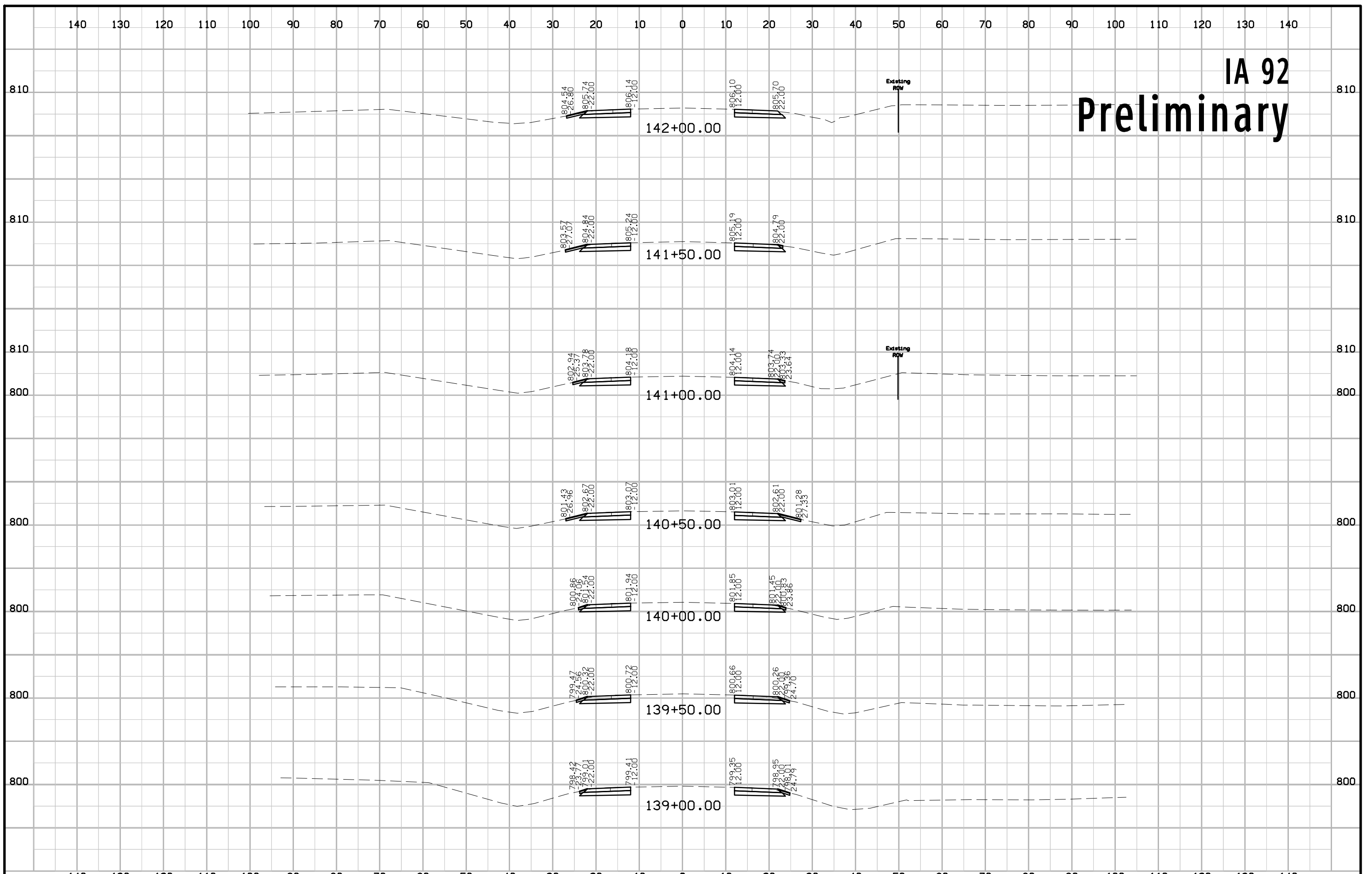
(COVERS SHEET SERIES W, X, Y, & Z)



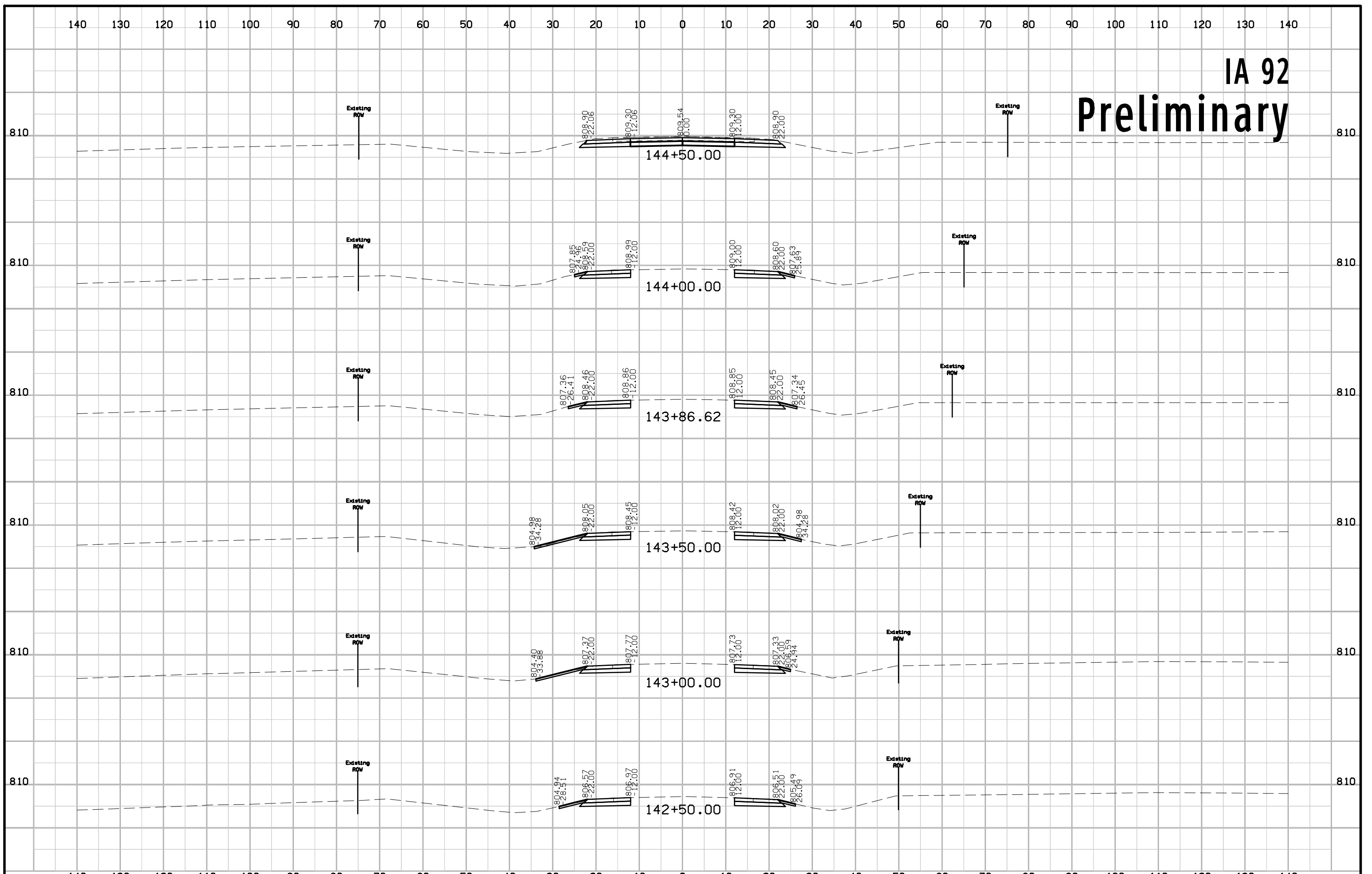
IA 92 Preliminary



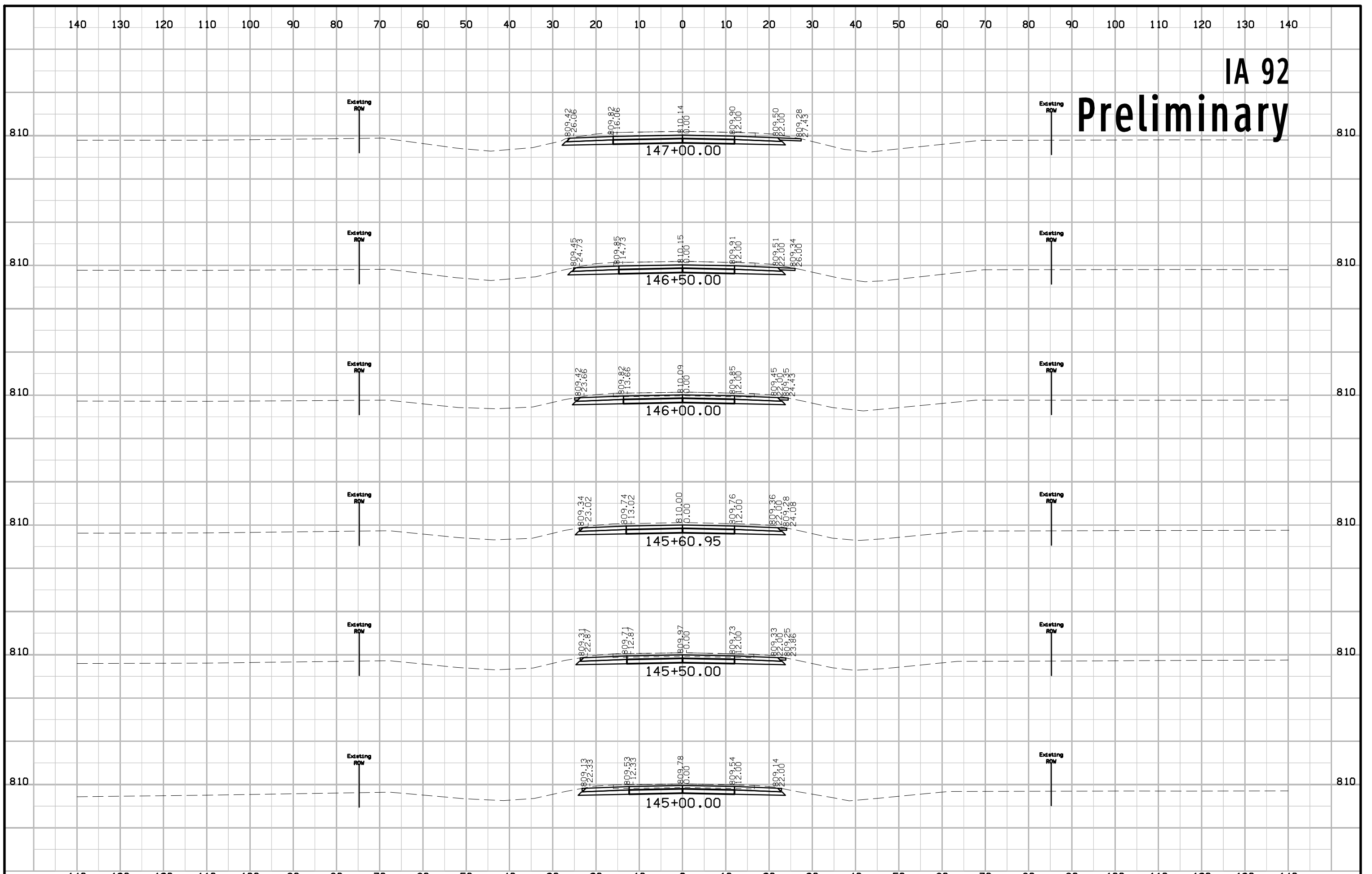
IA 92 Preliminary



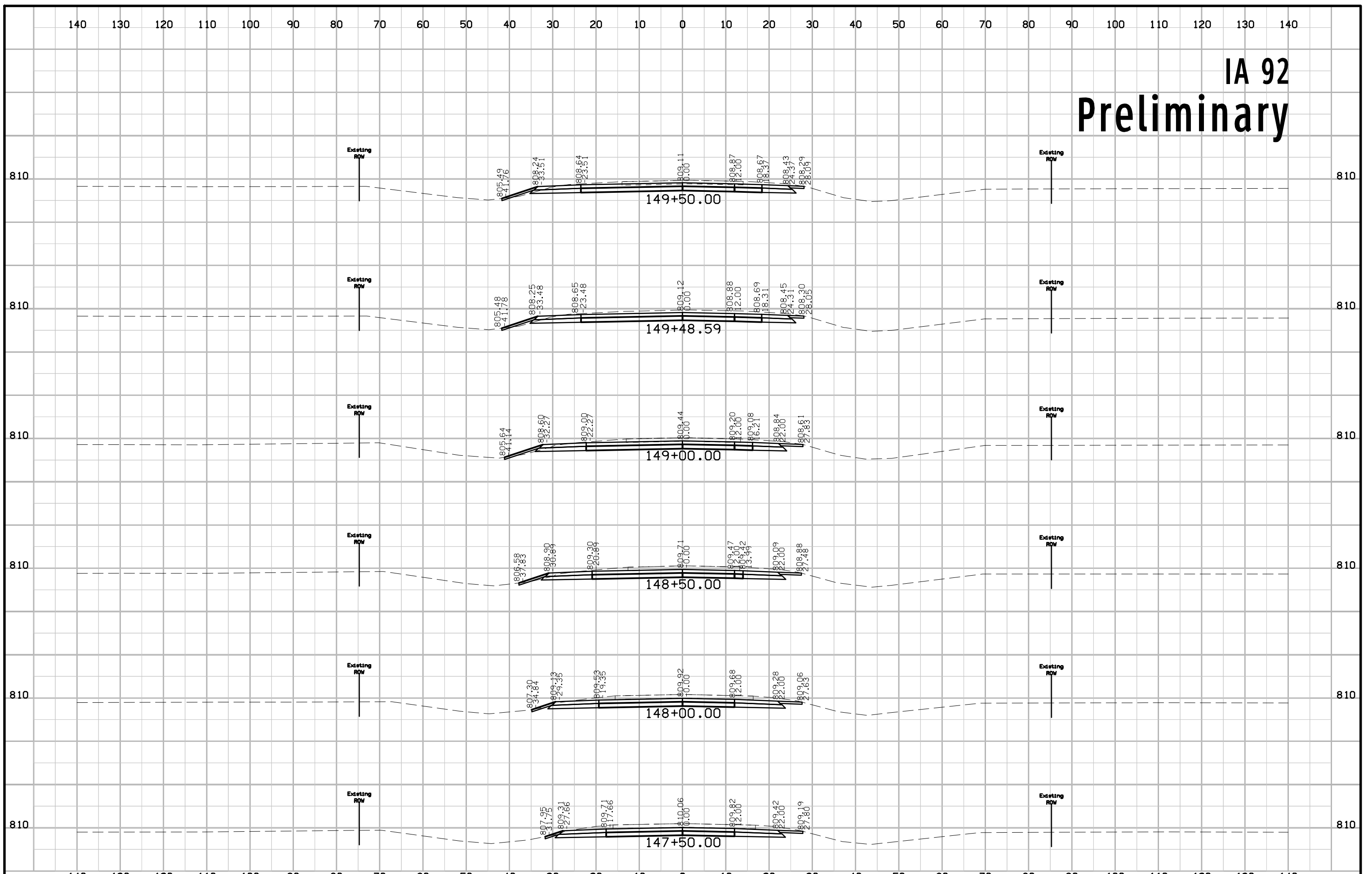
IA 92 Preliminary



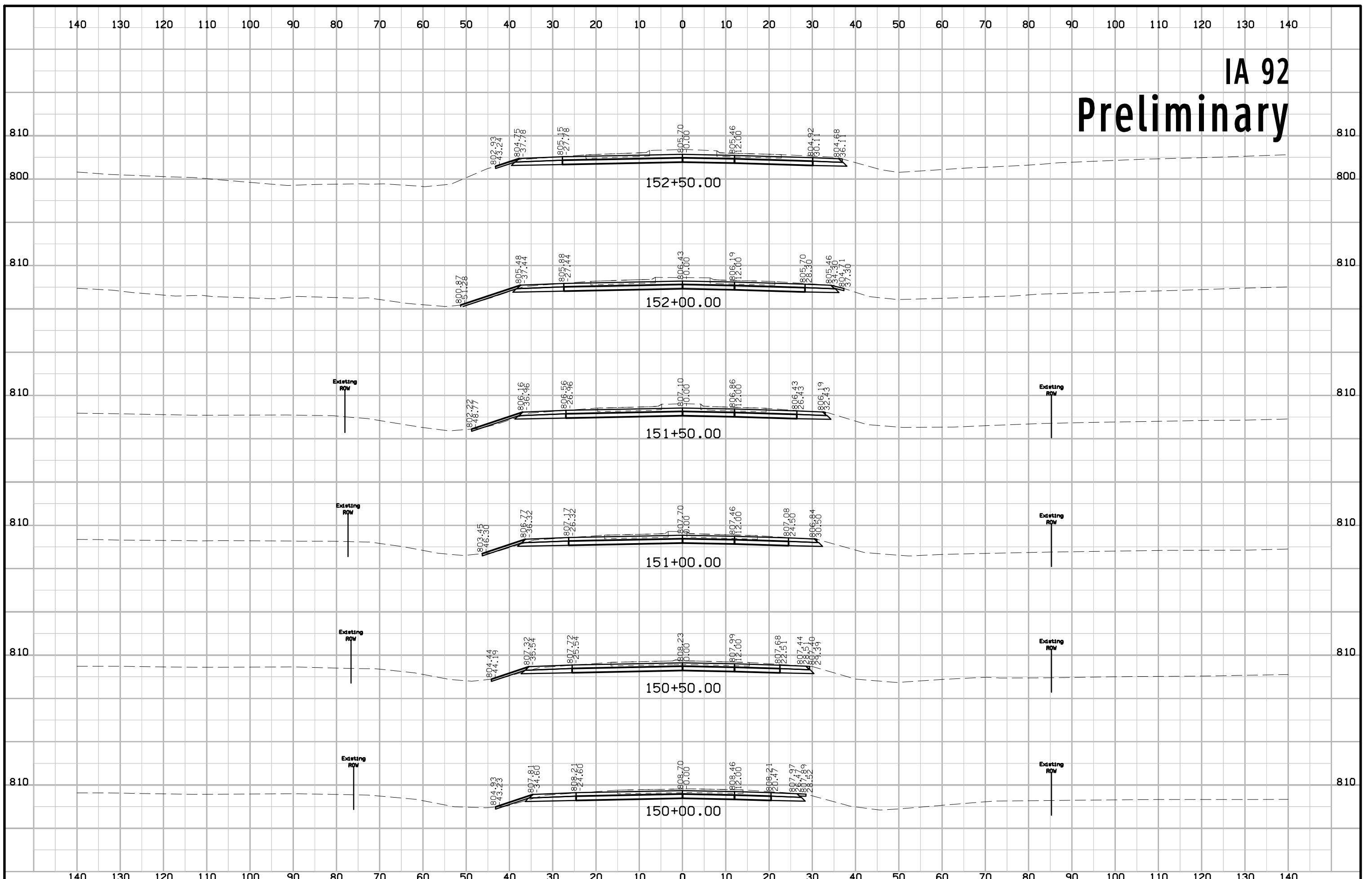
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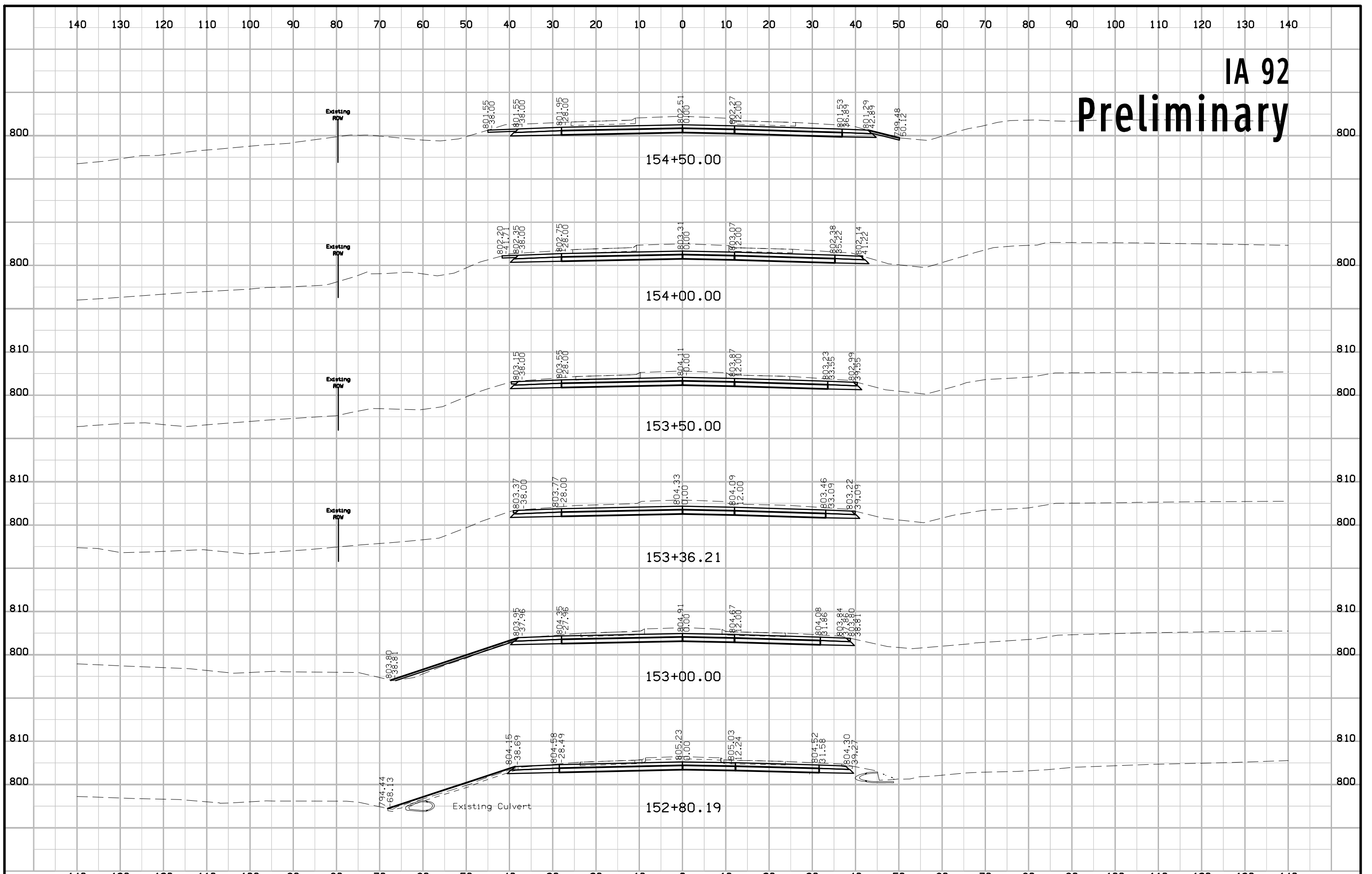
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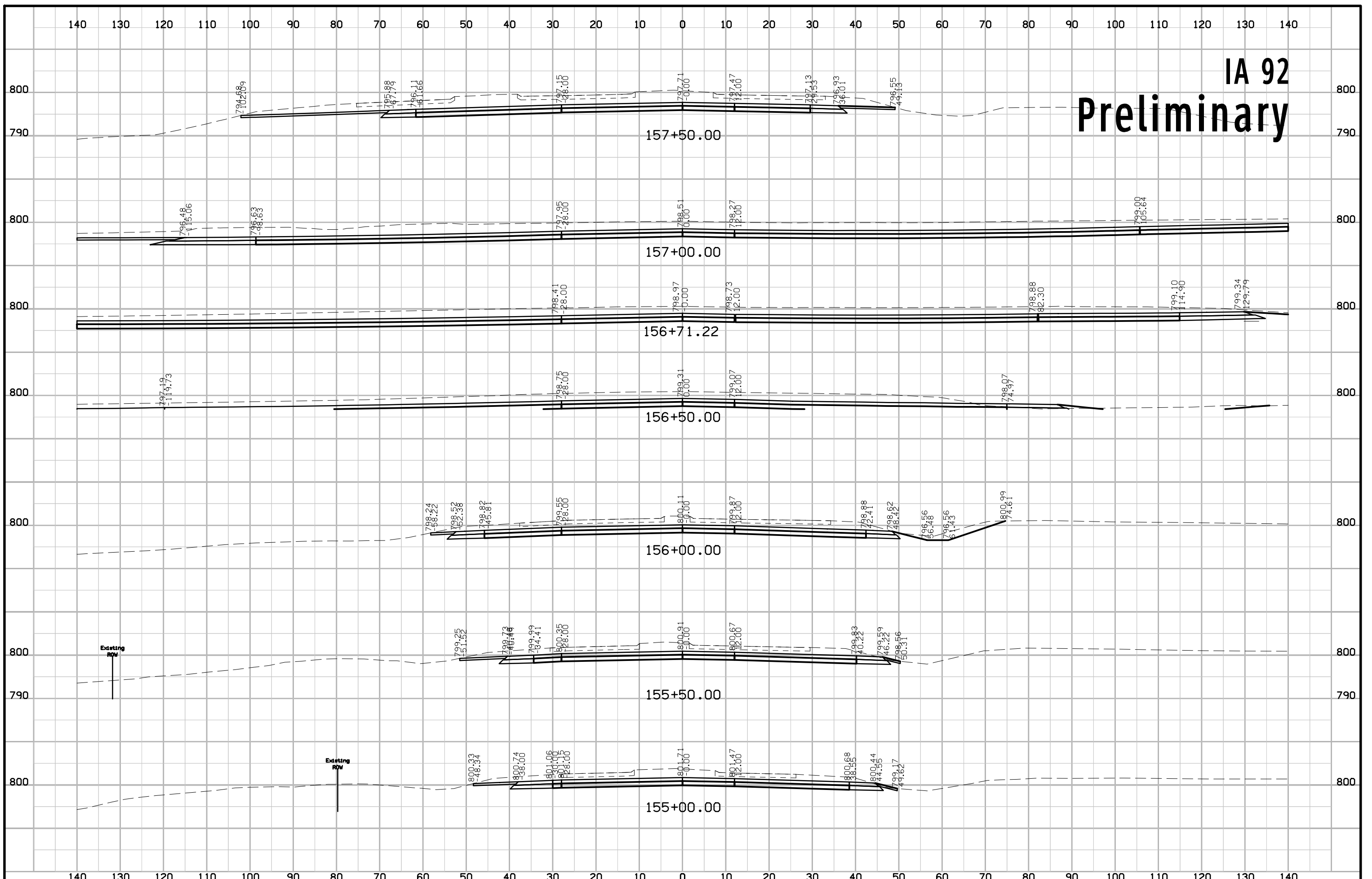
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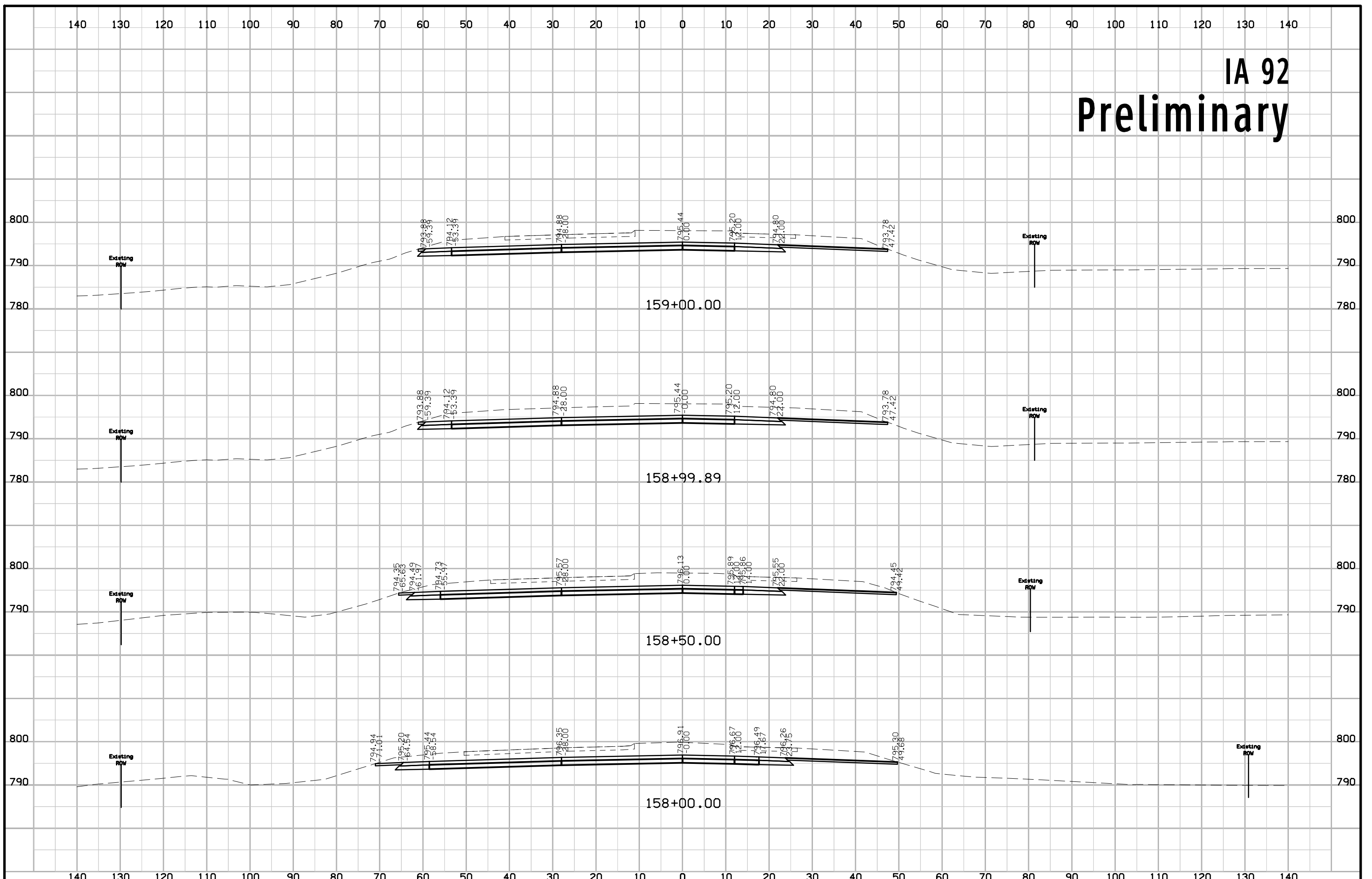
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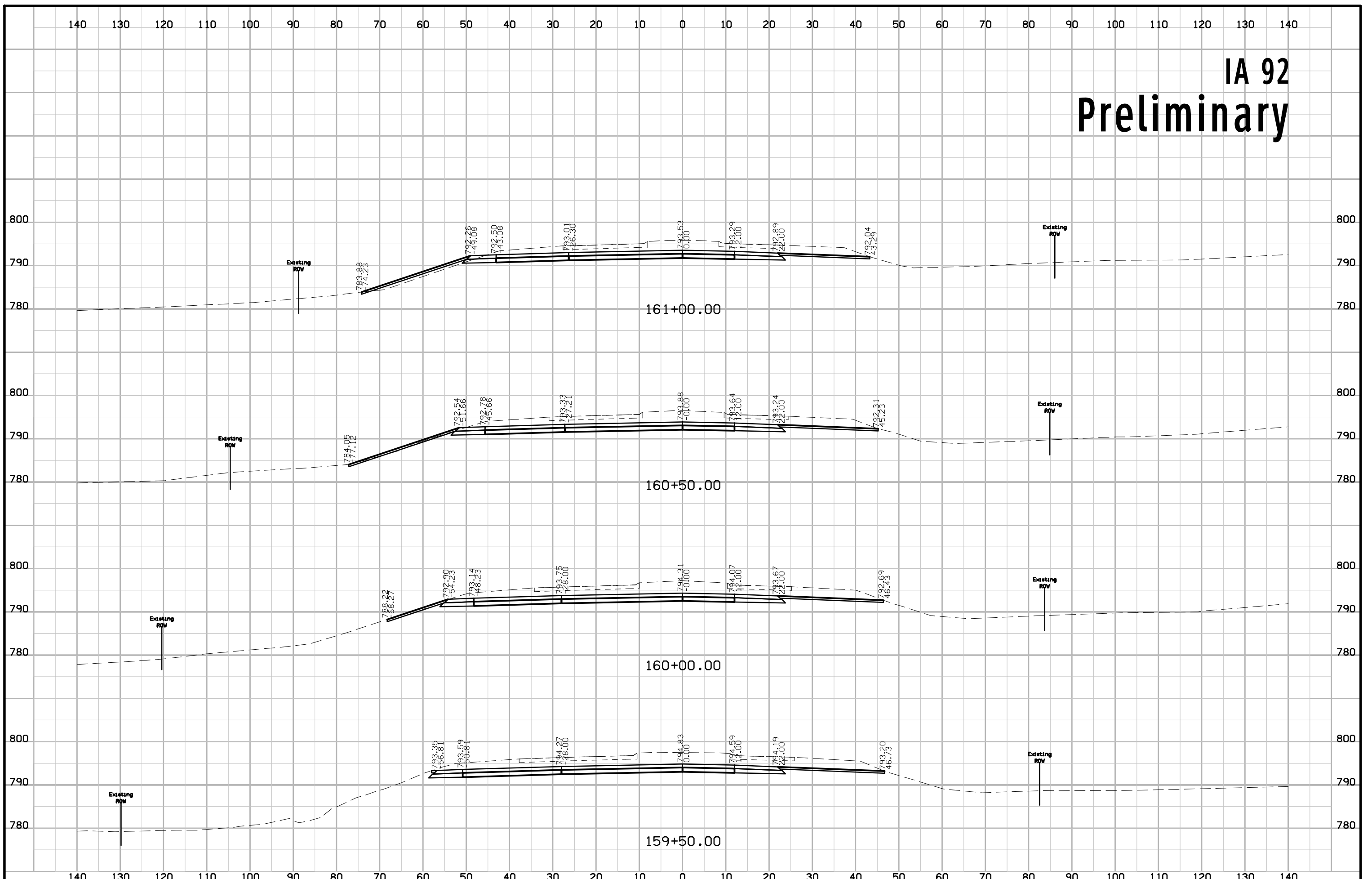
IA 92 Preliminary



IA 92 Preliminary

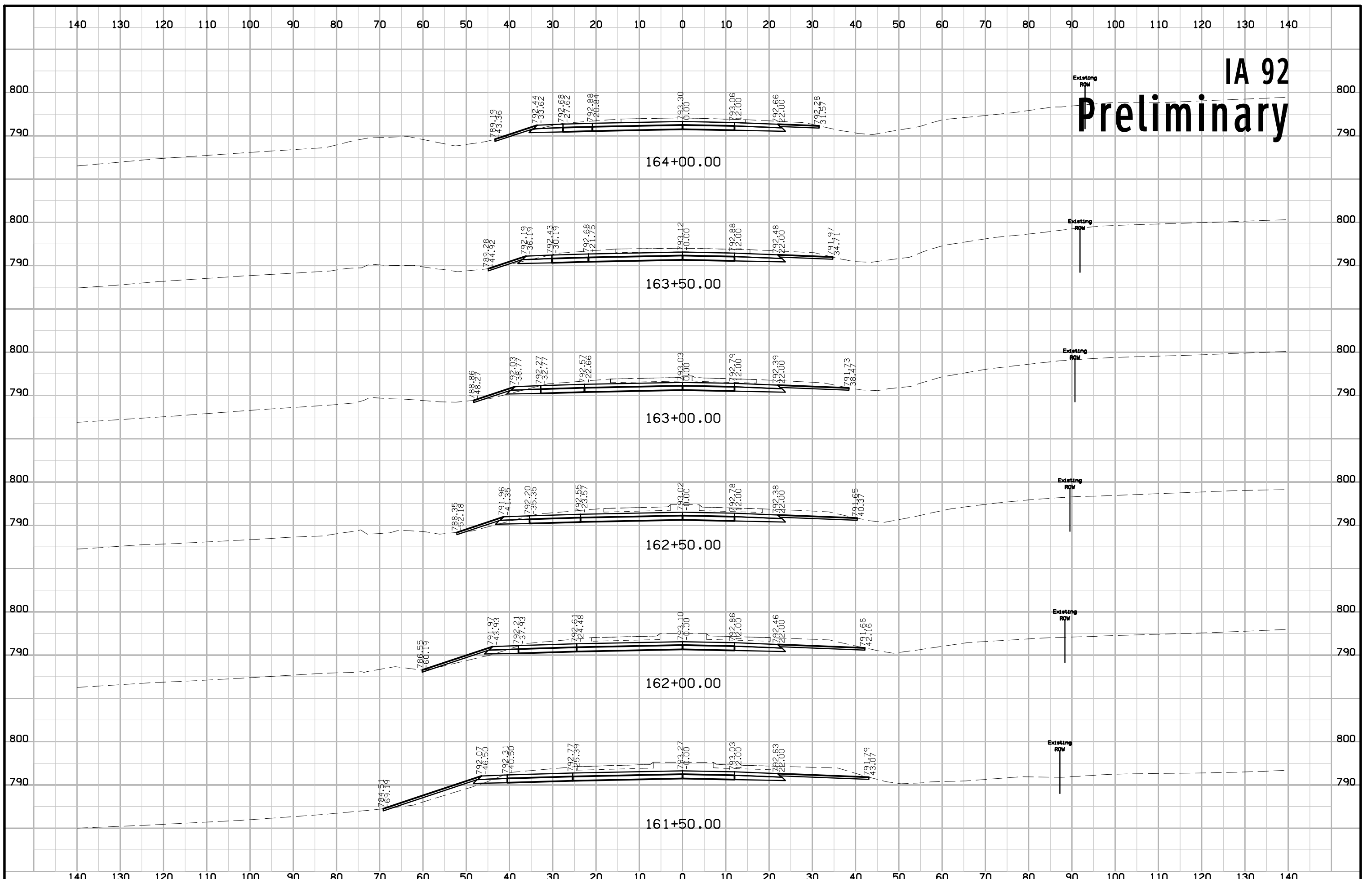


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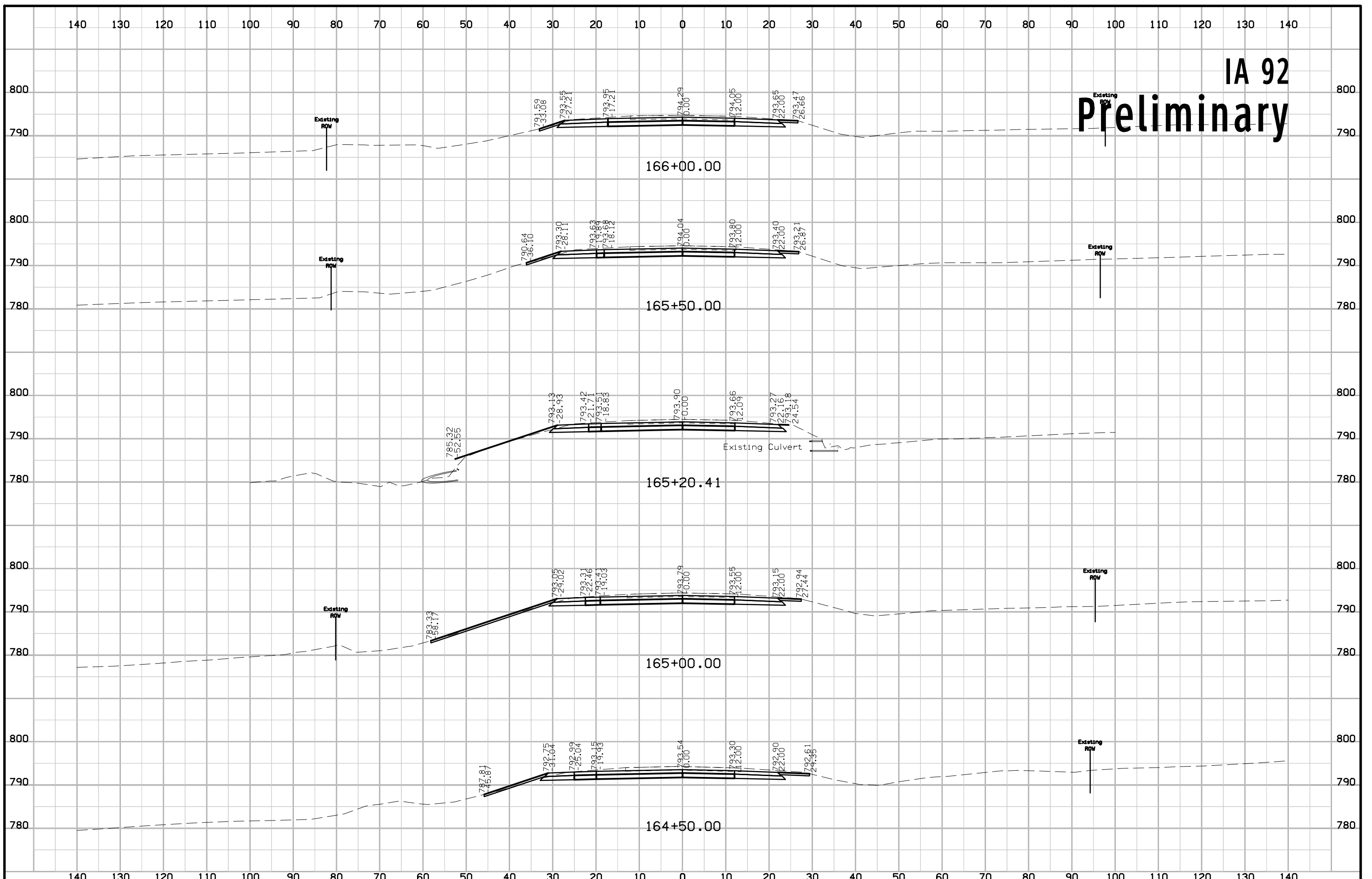
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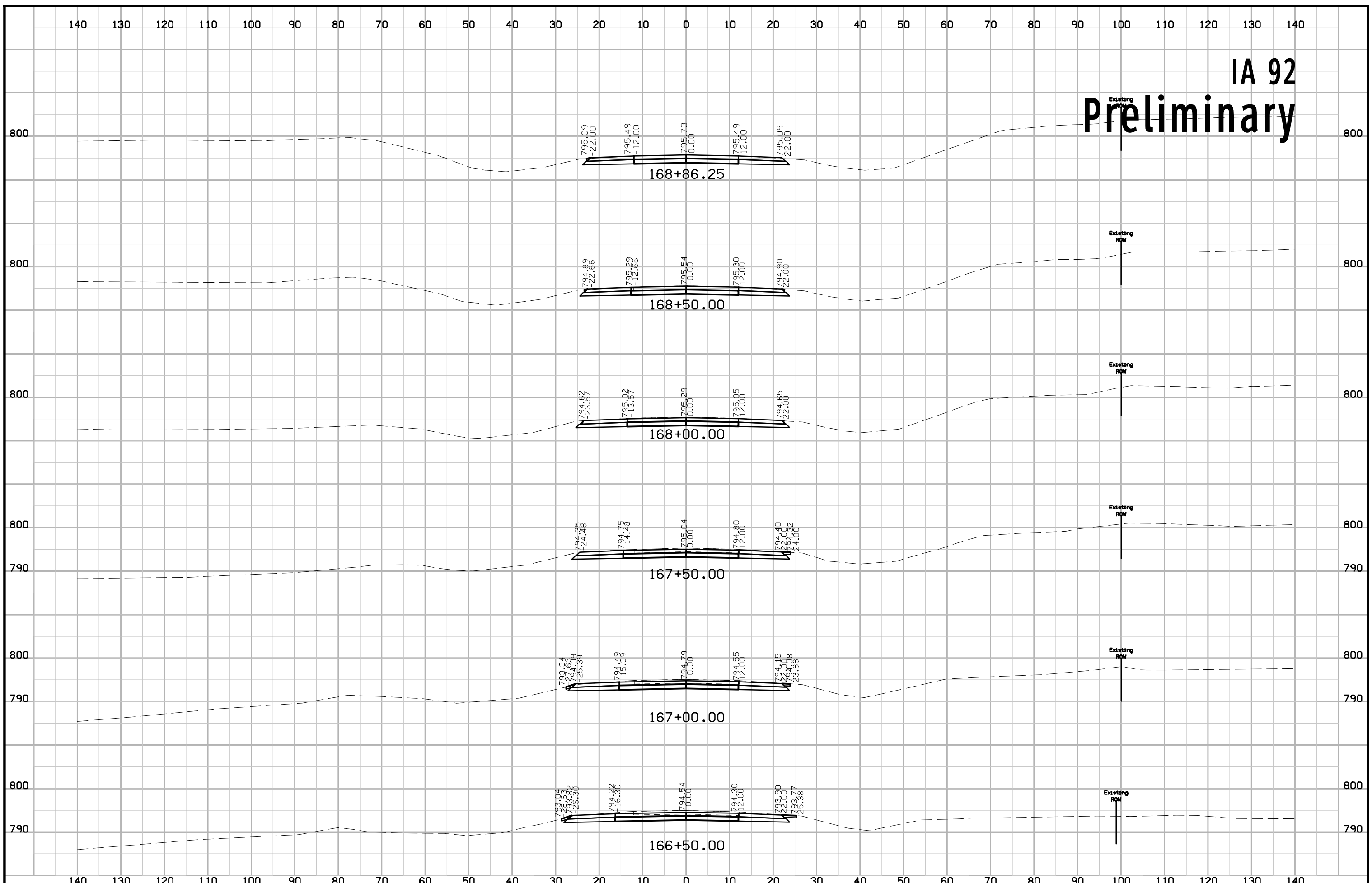
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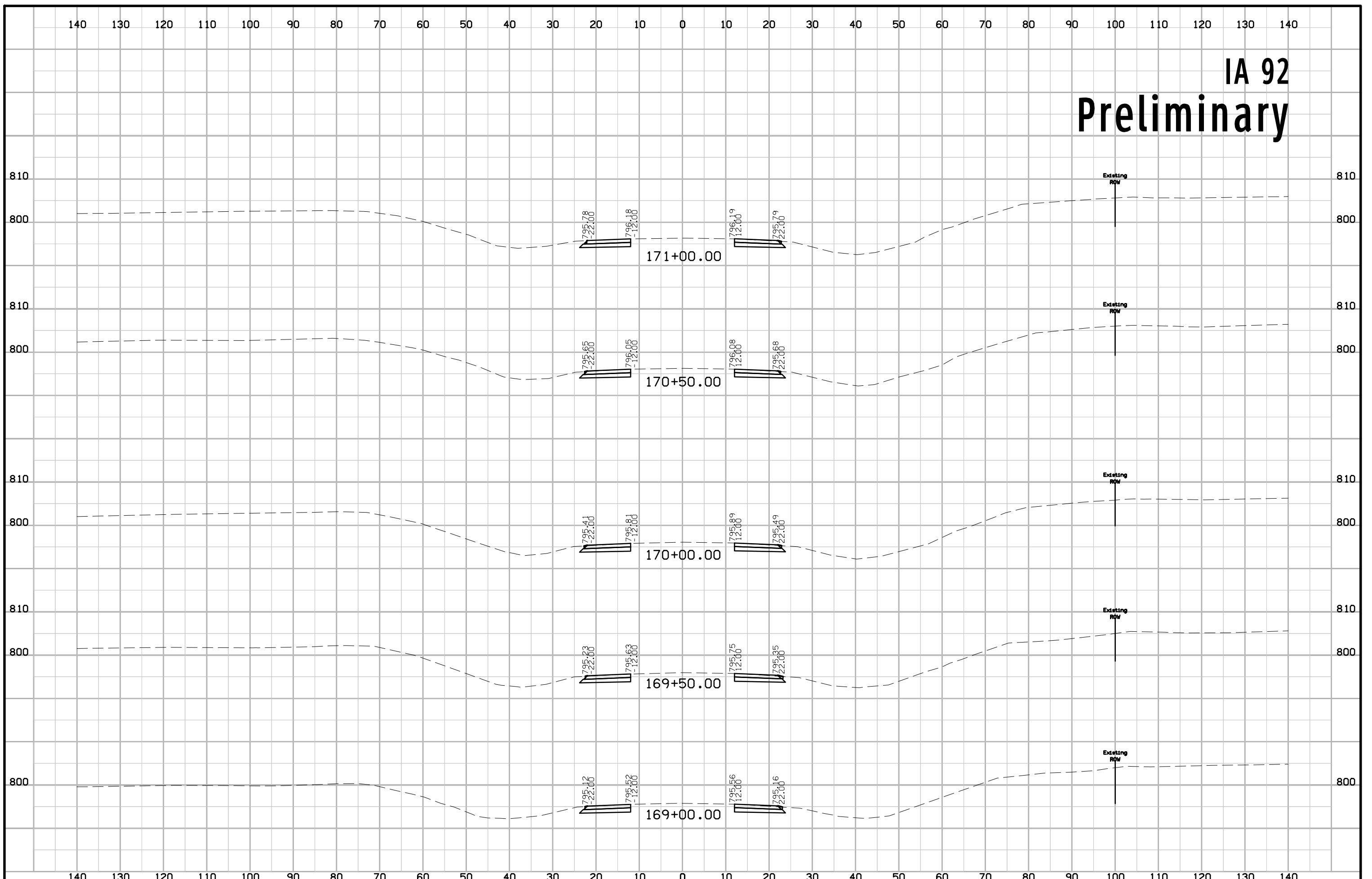


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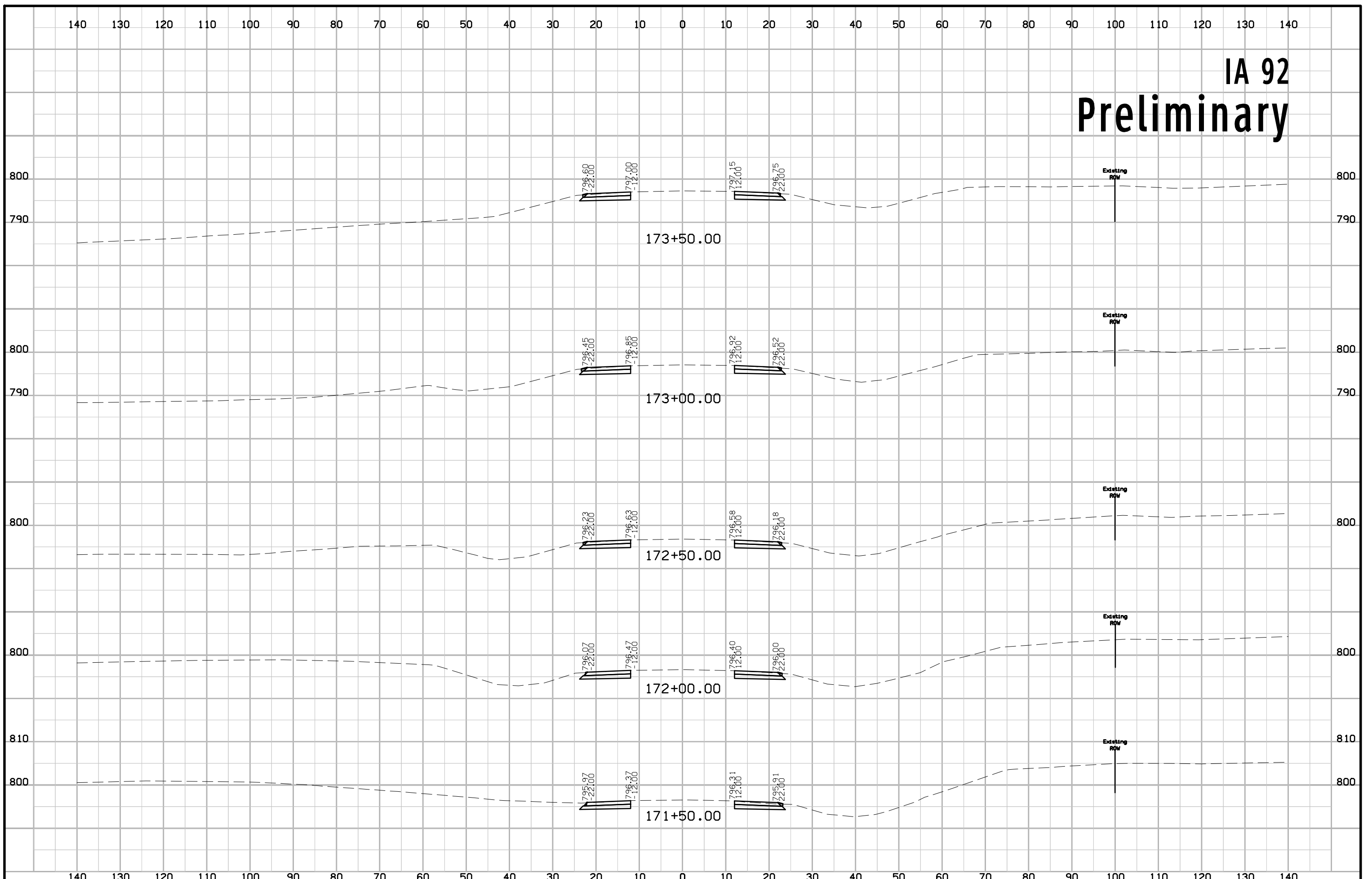
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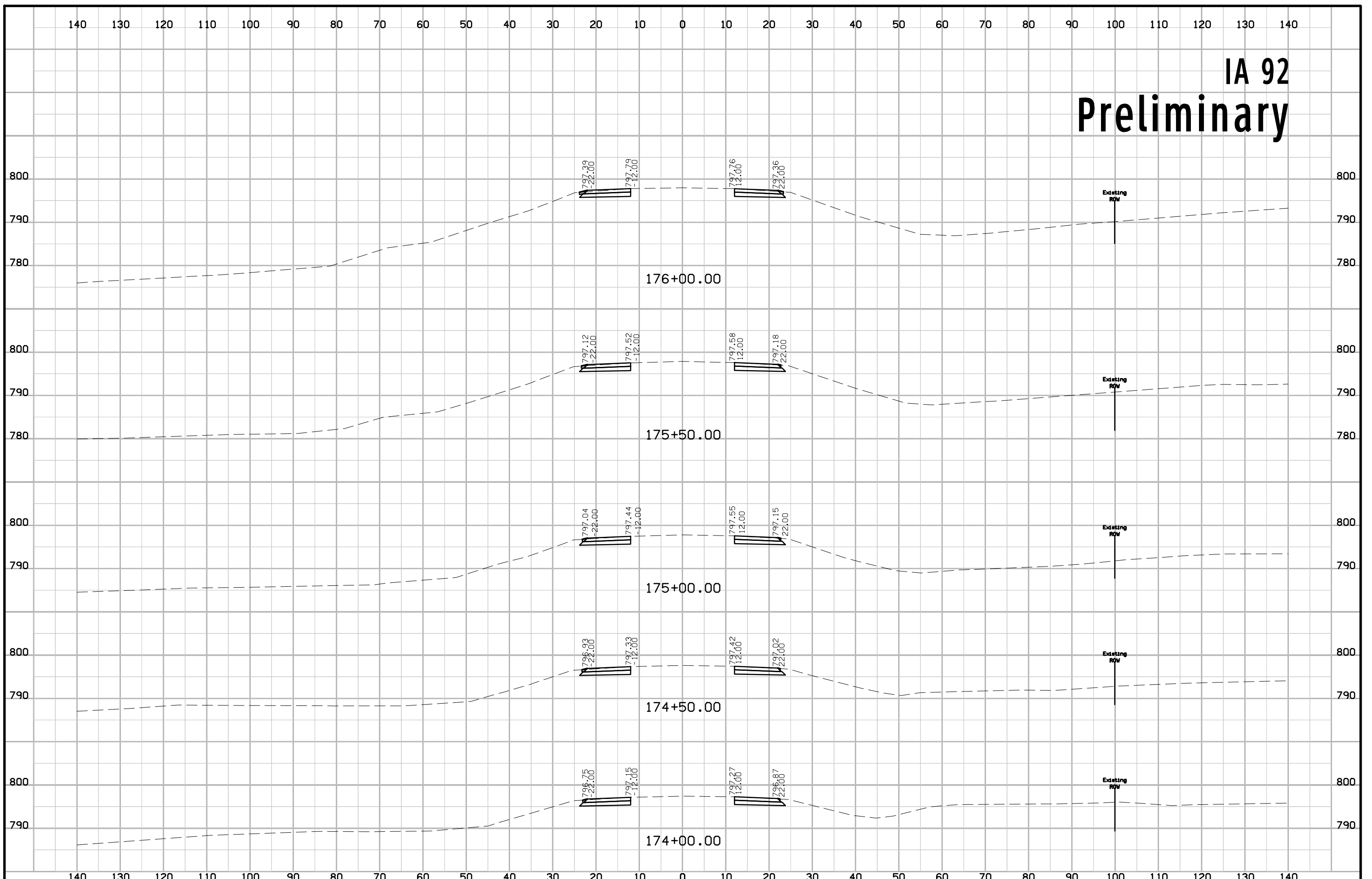
IA 92 Preliminary

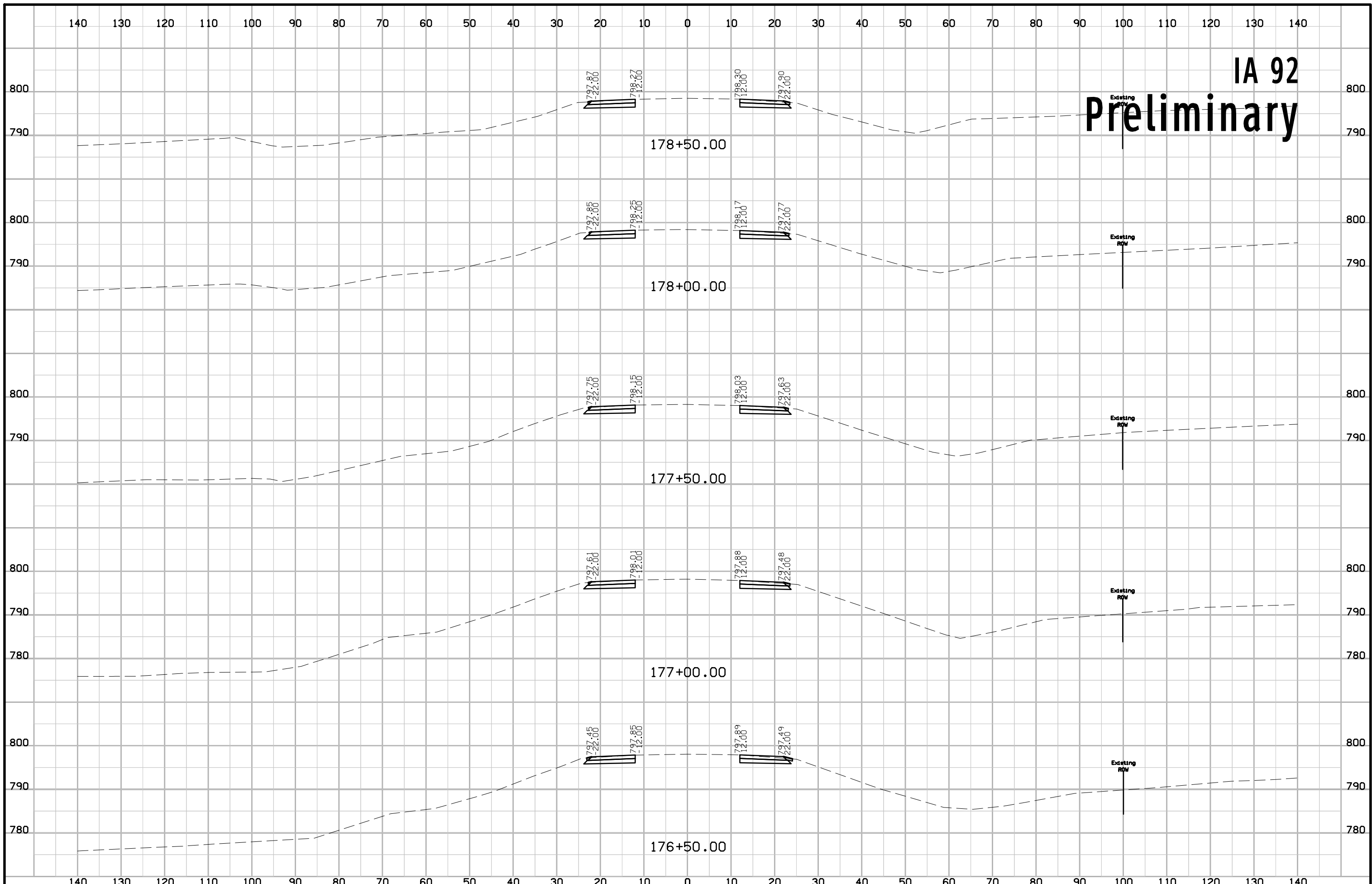


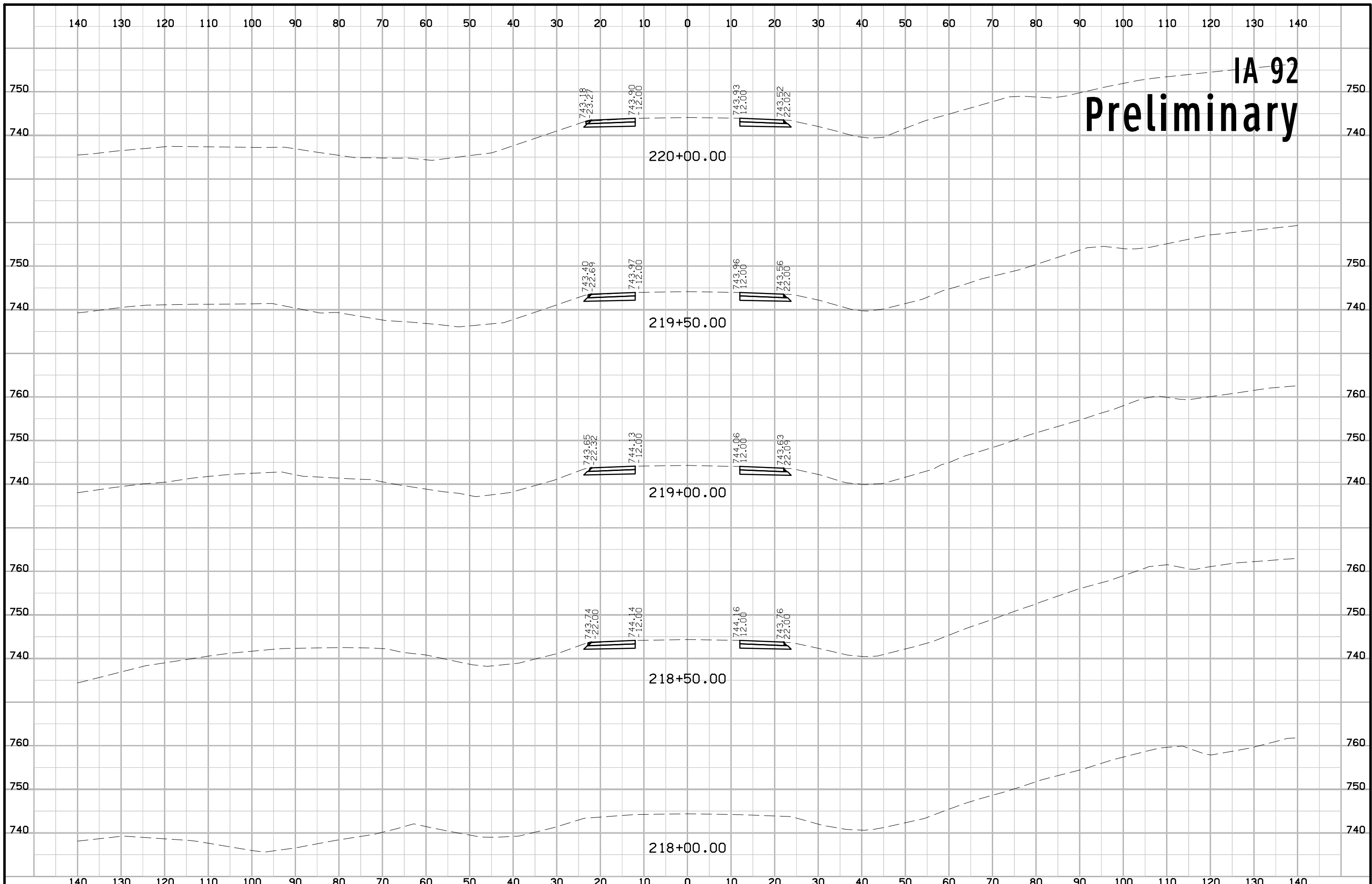
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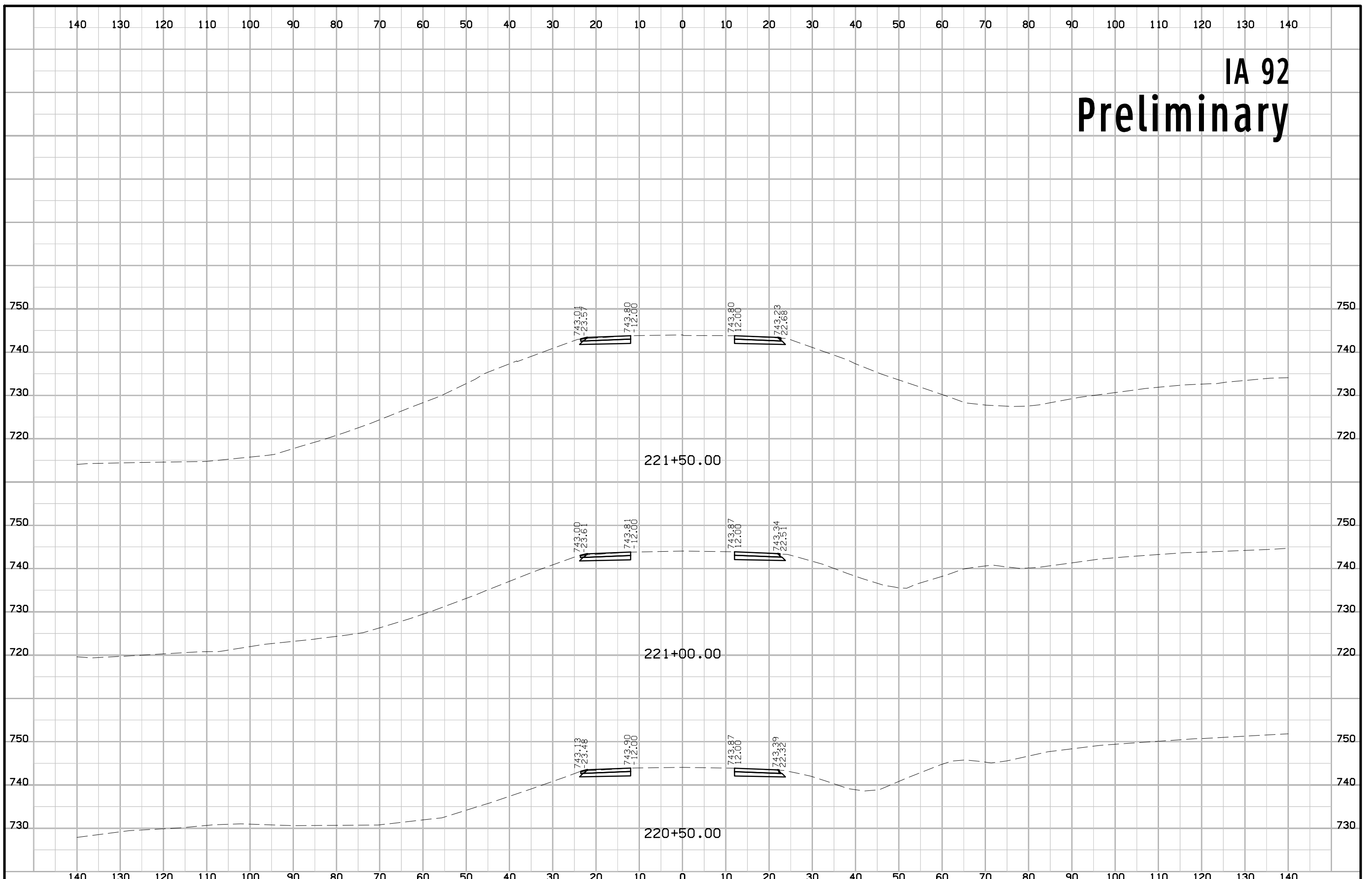
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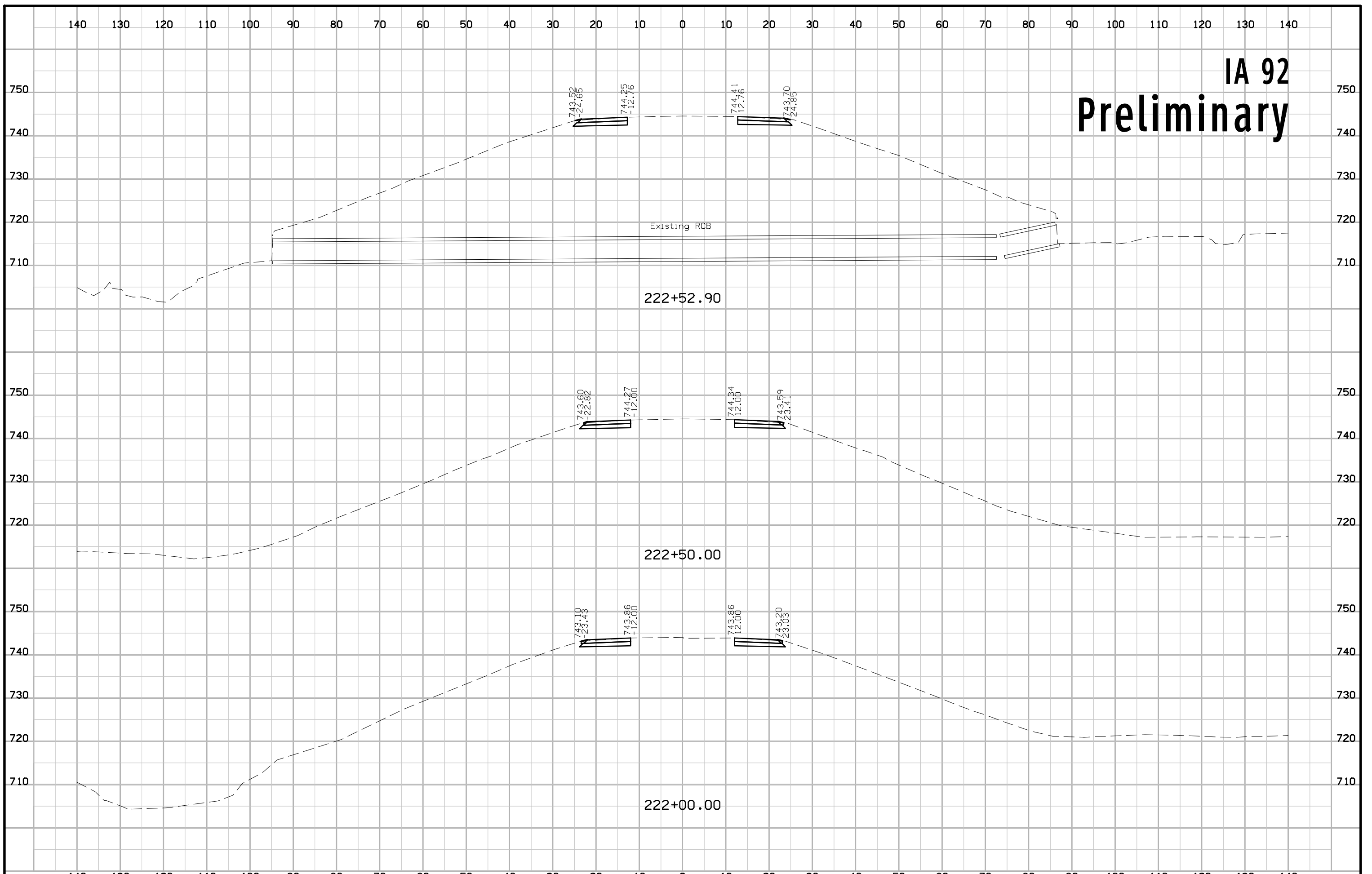




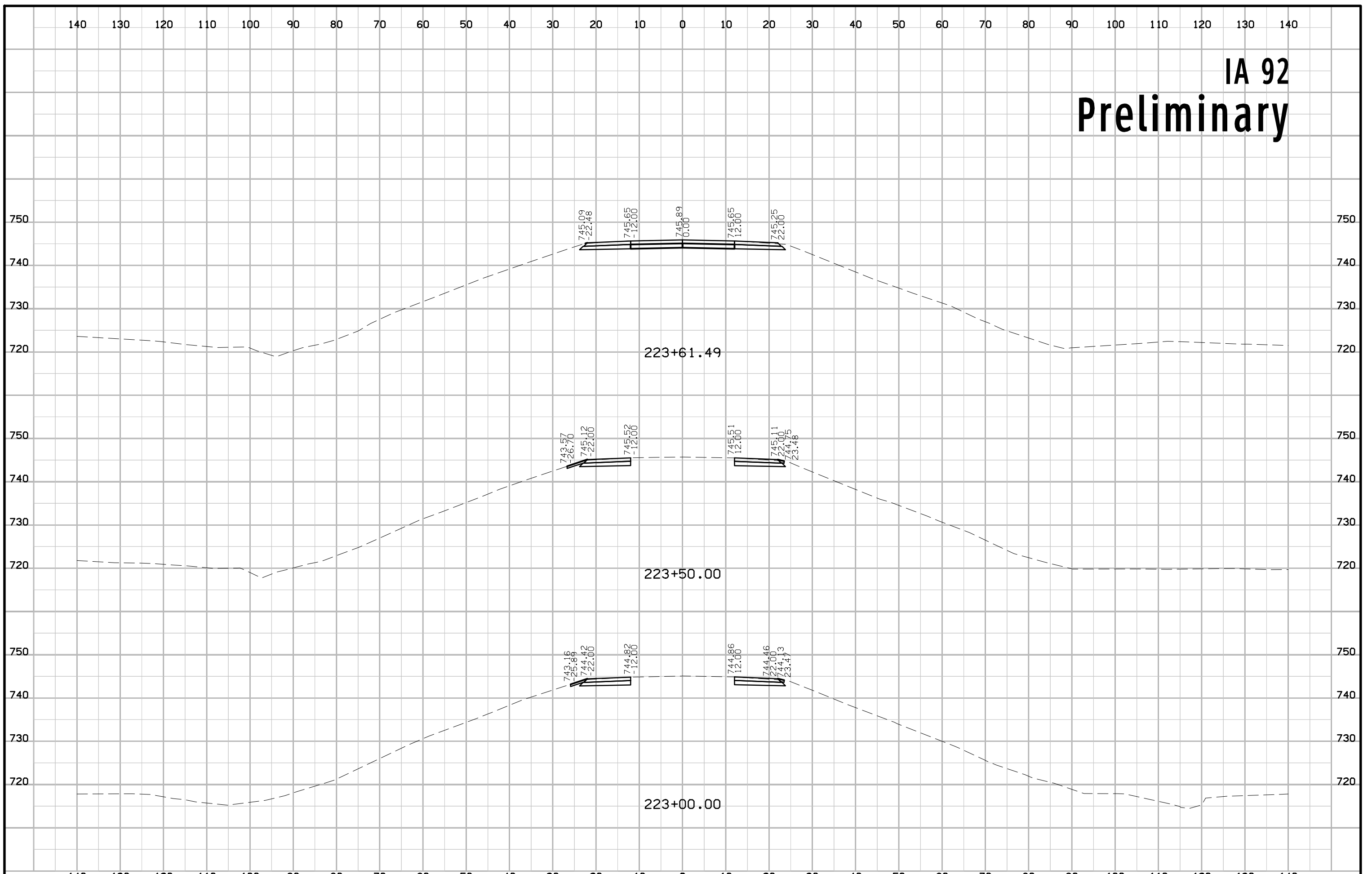
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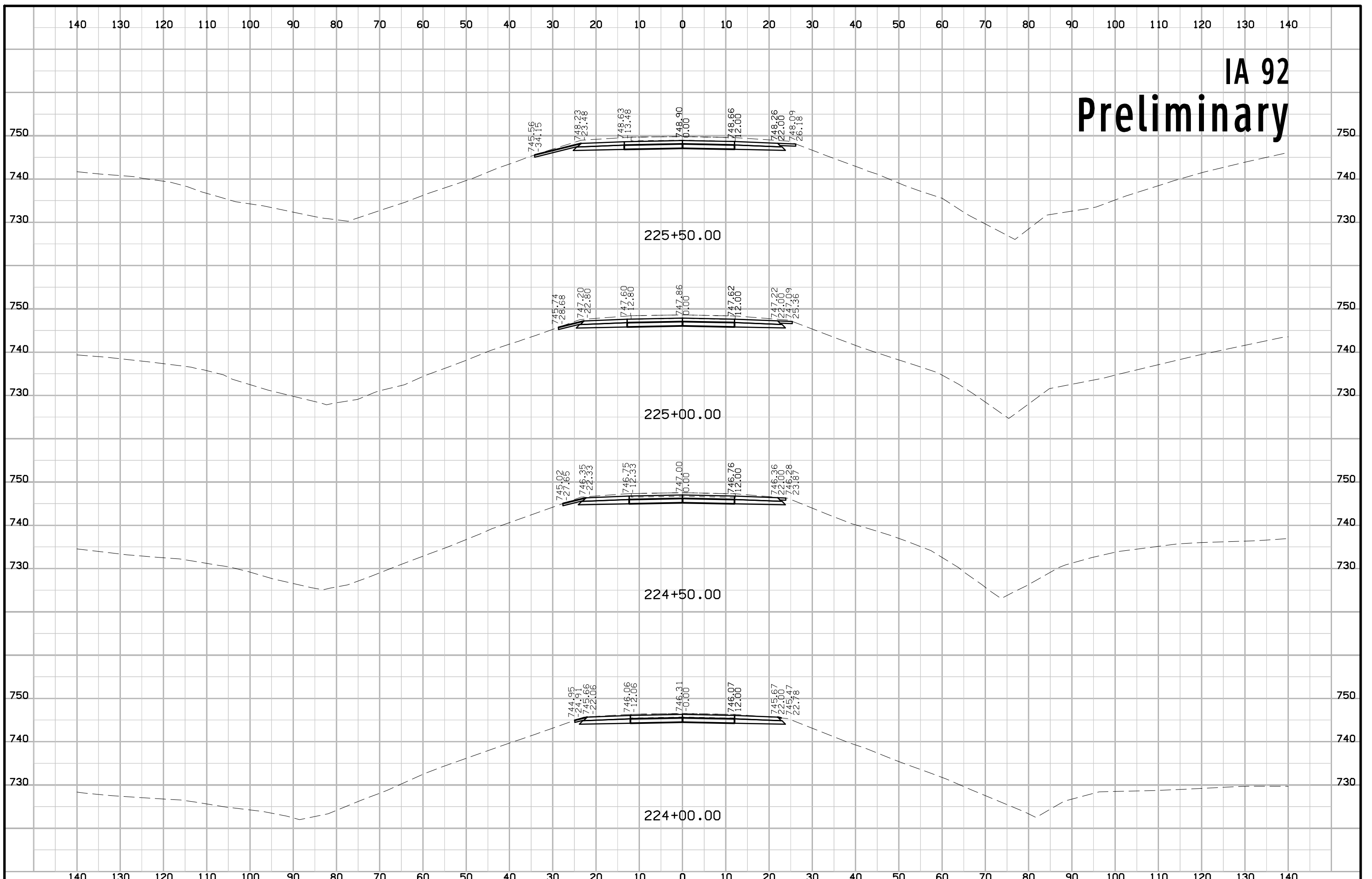
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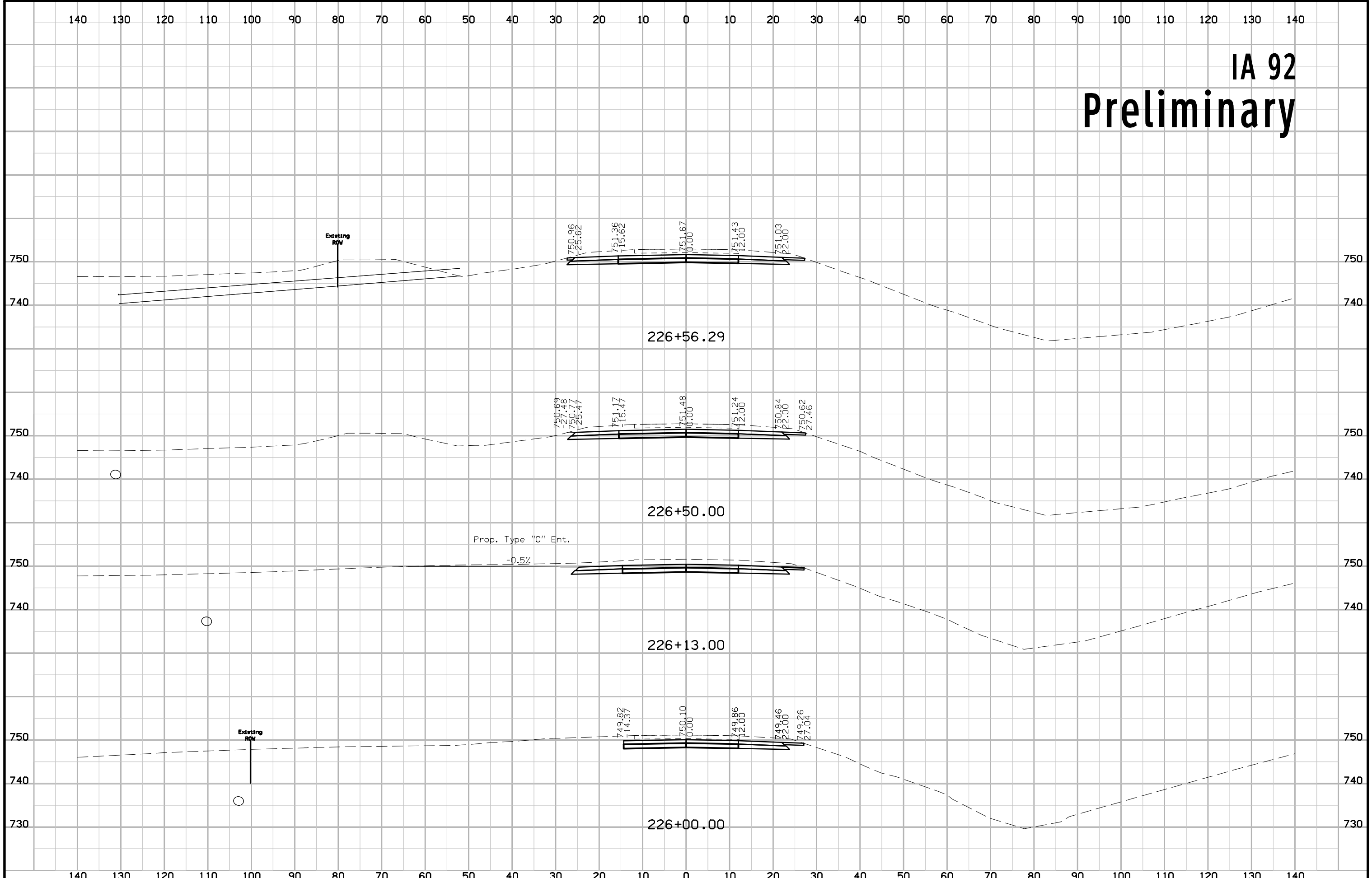
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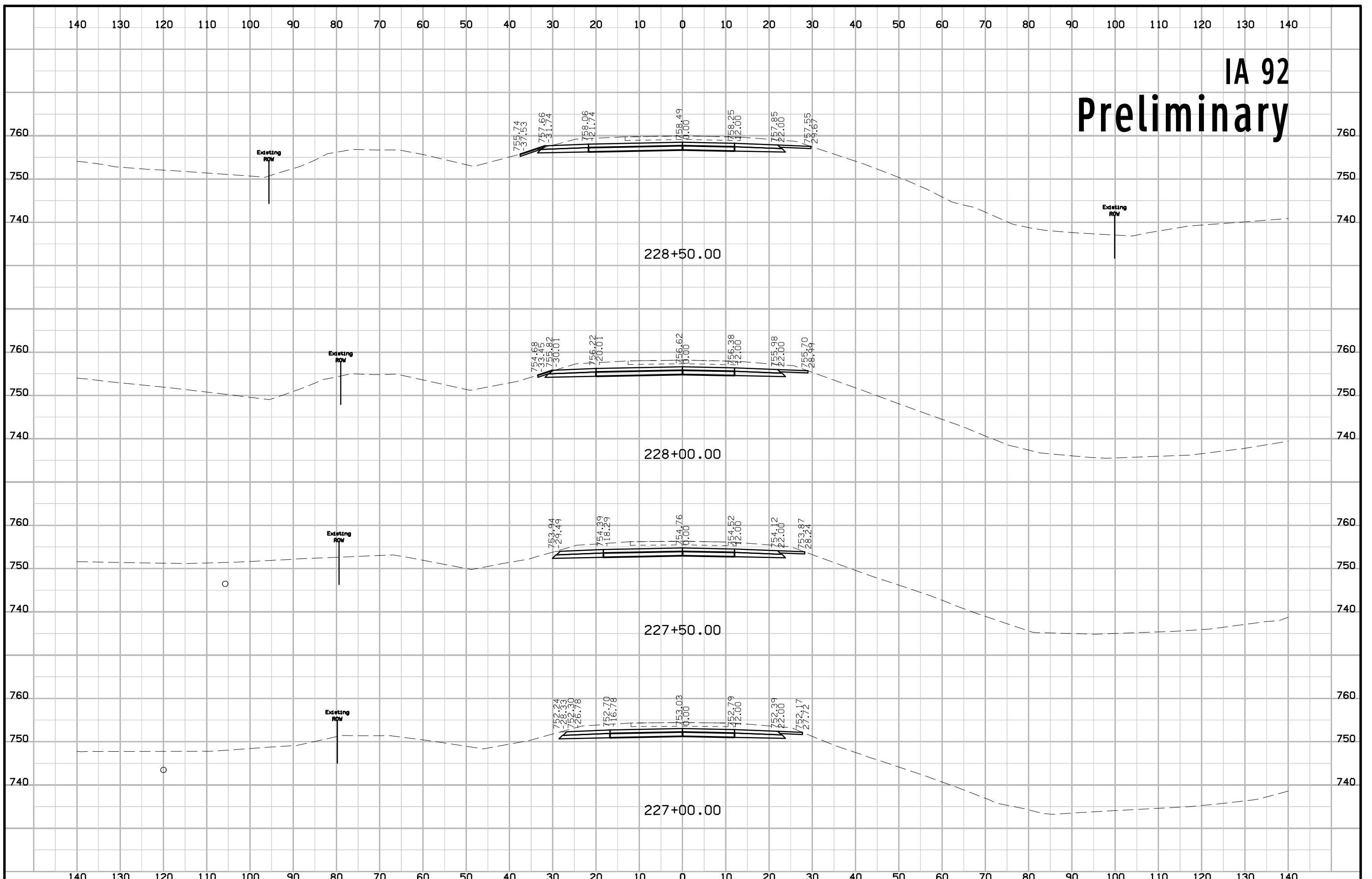
IA 92 Preliminary



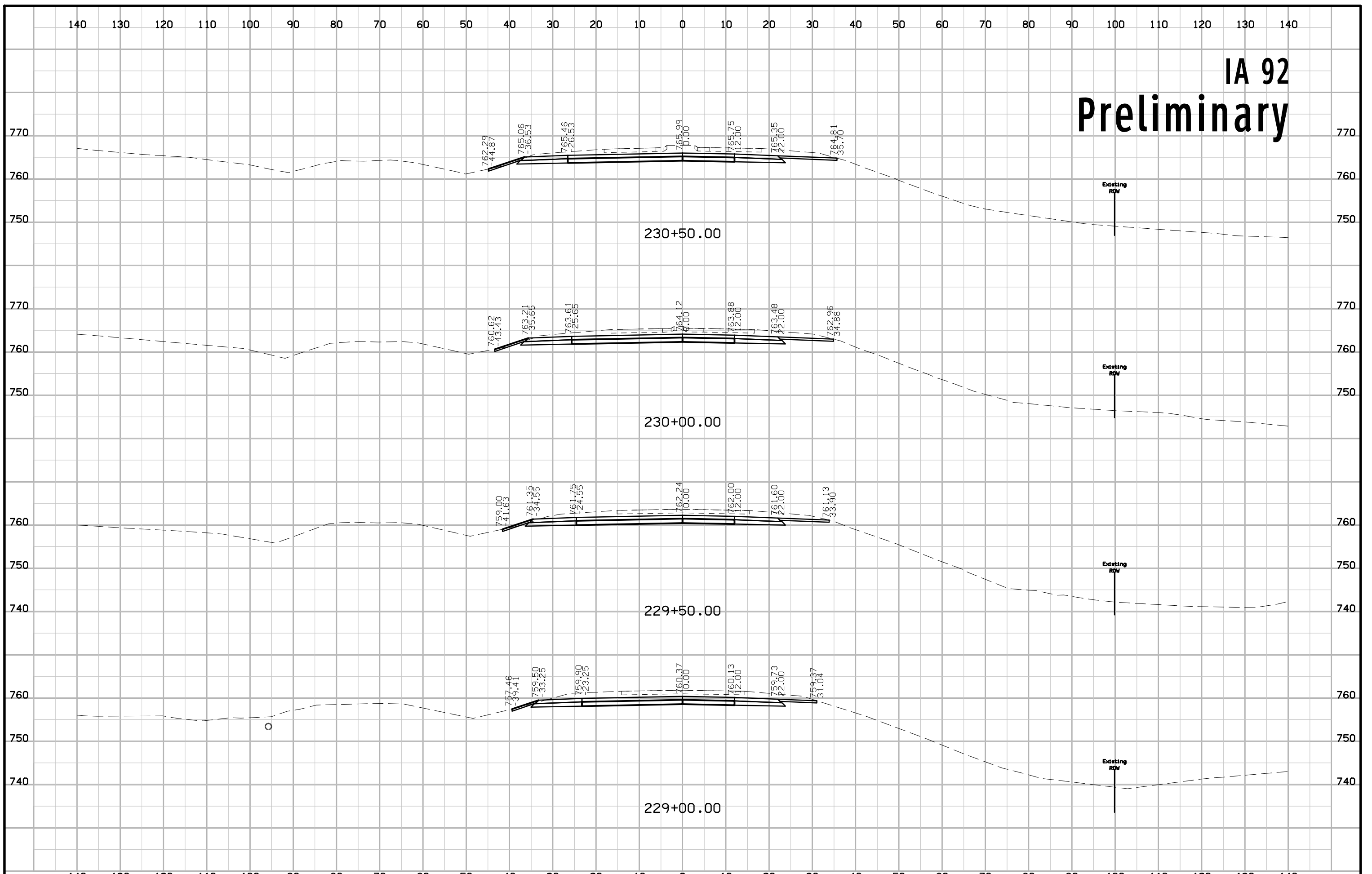
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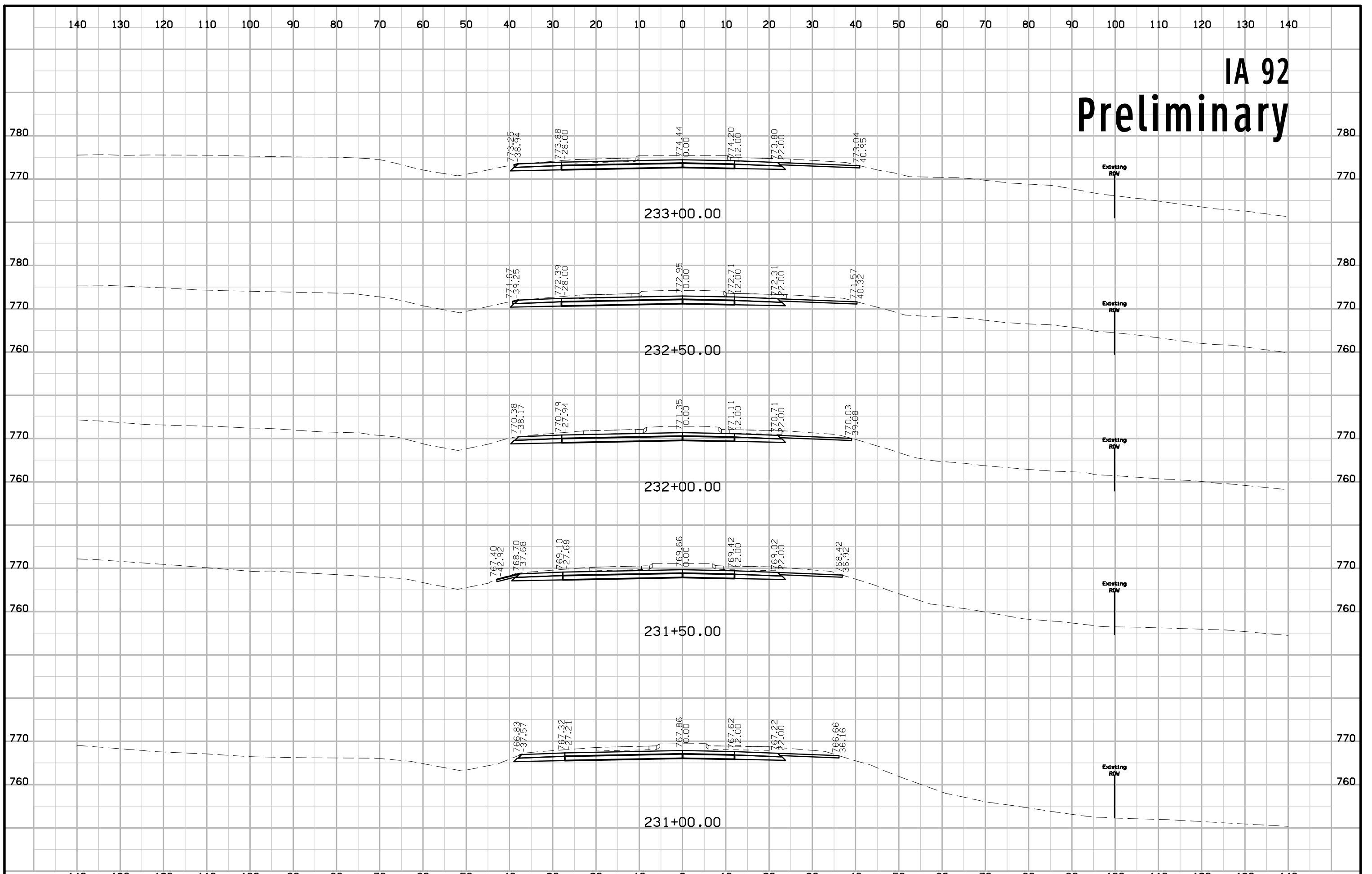
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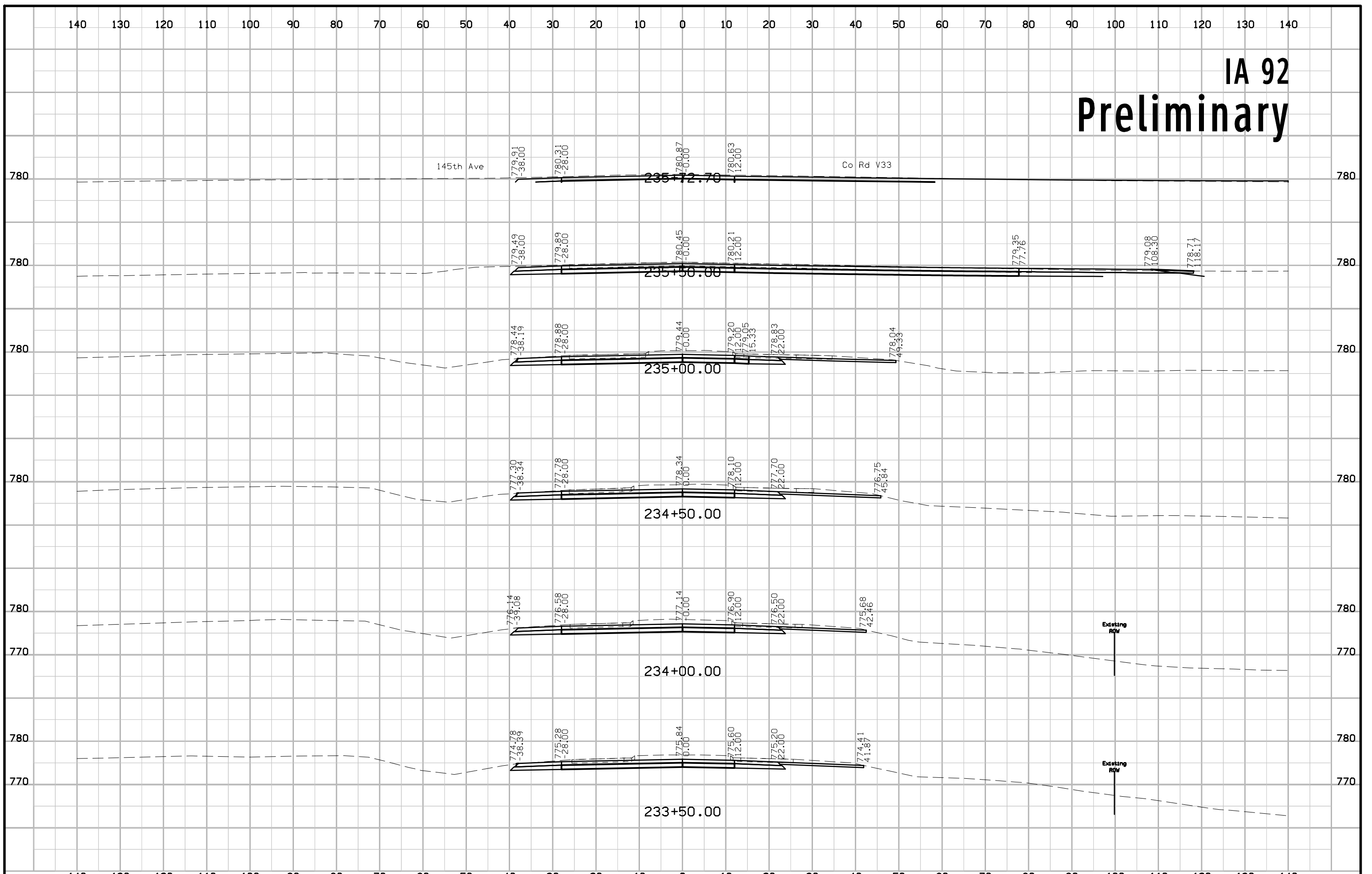
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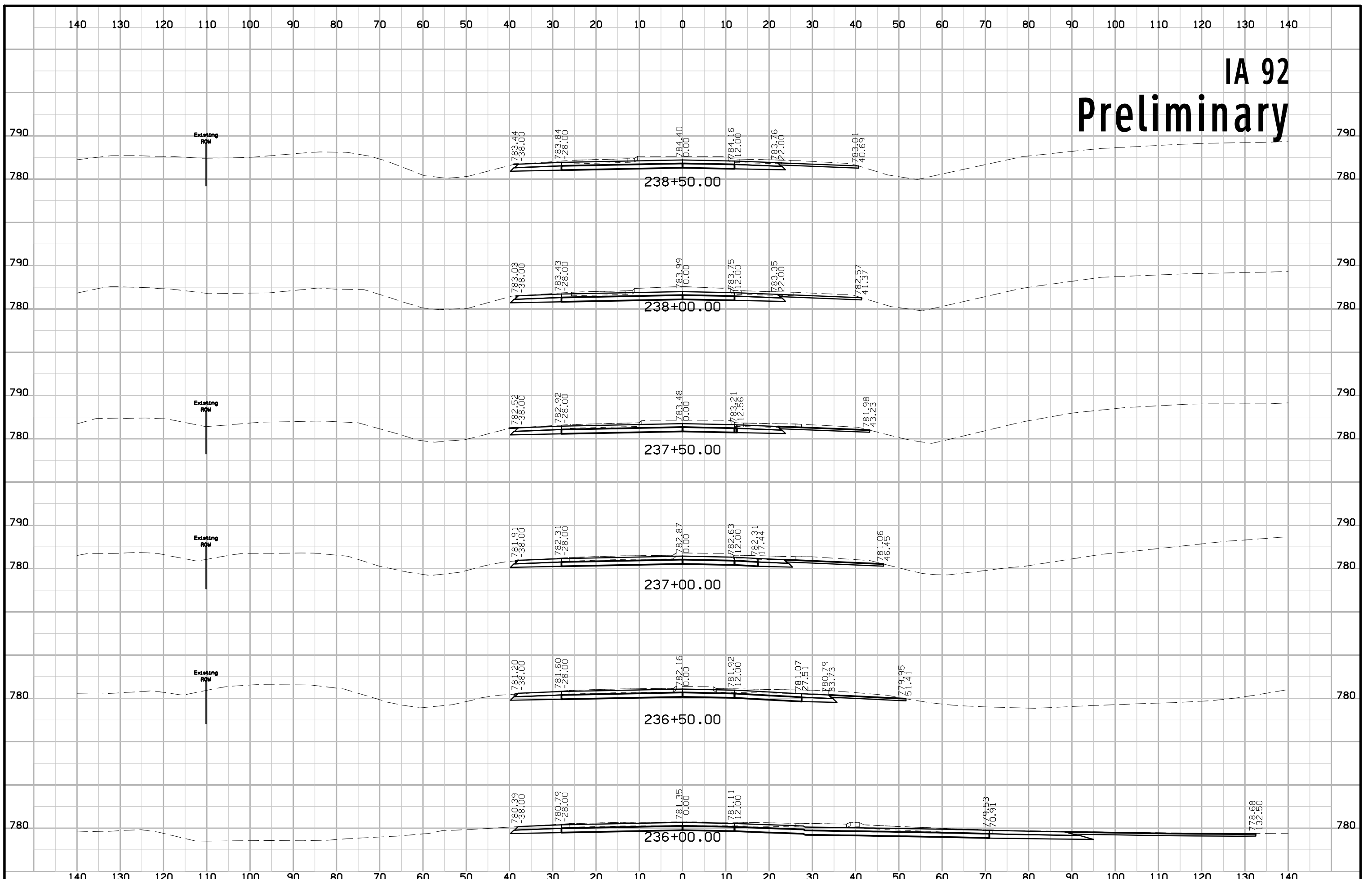
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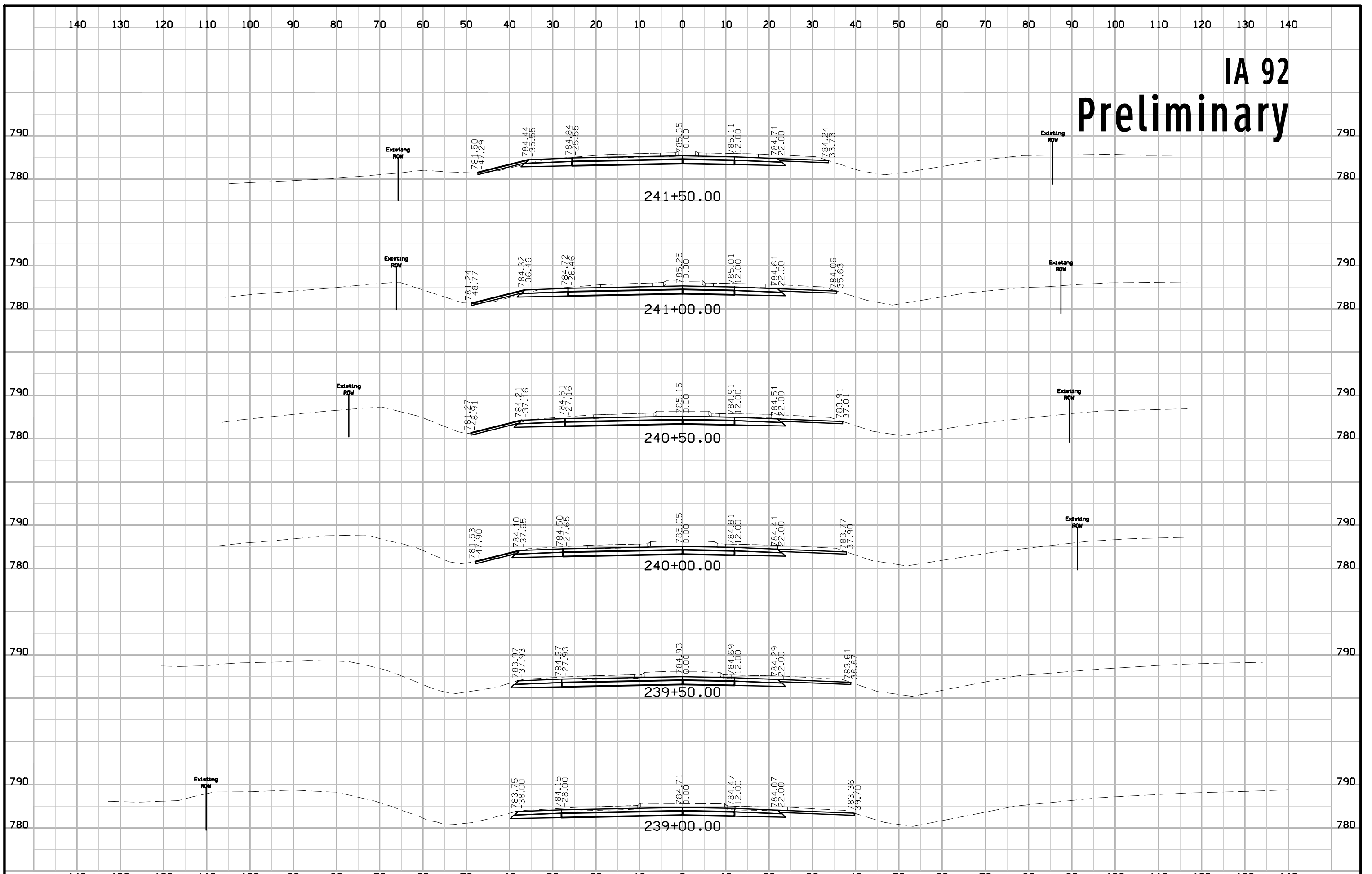
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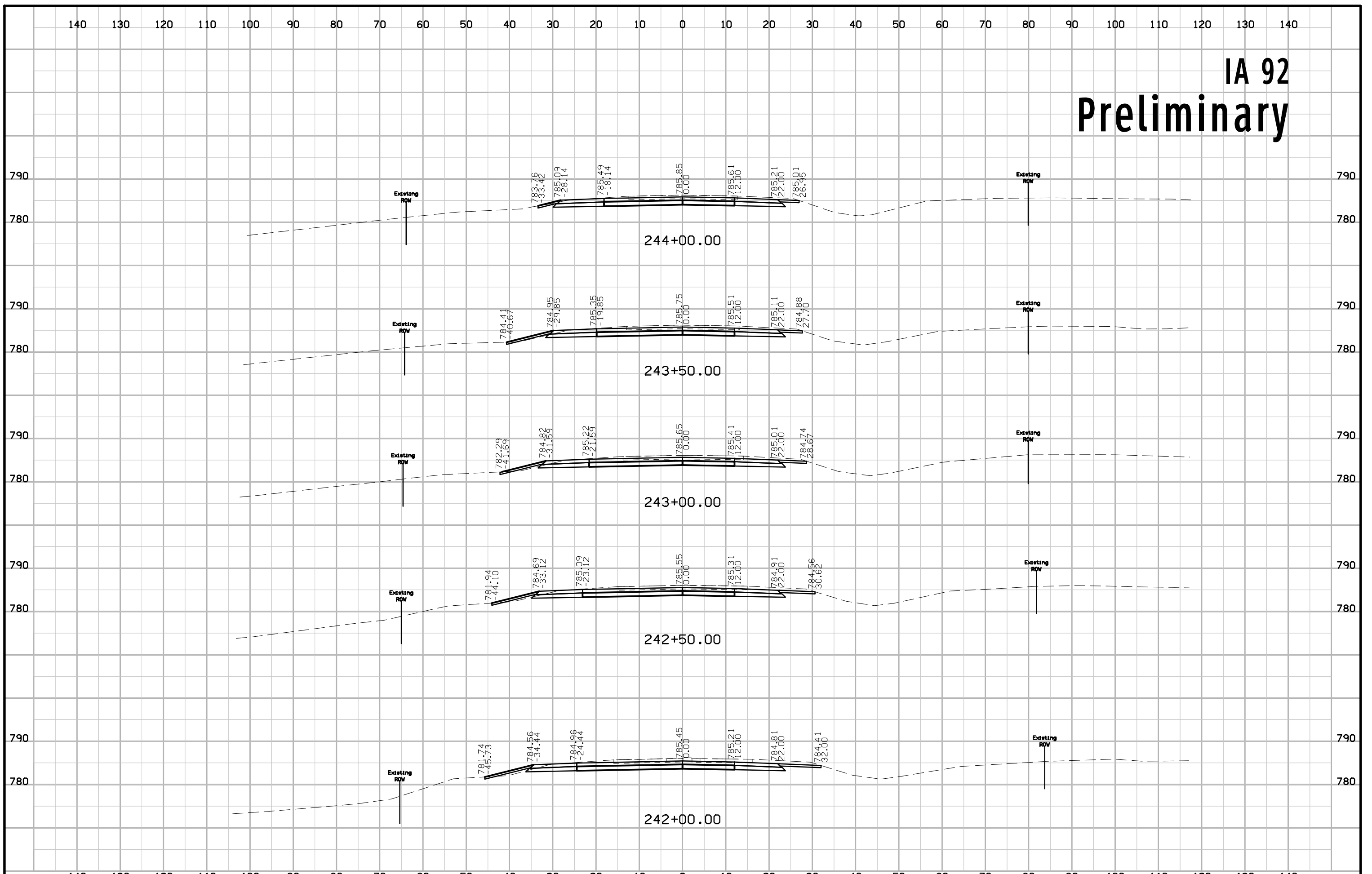
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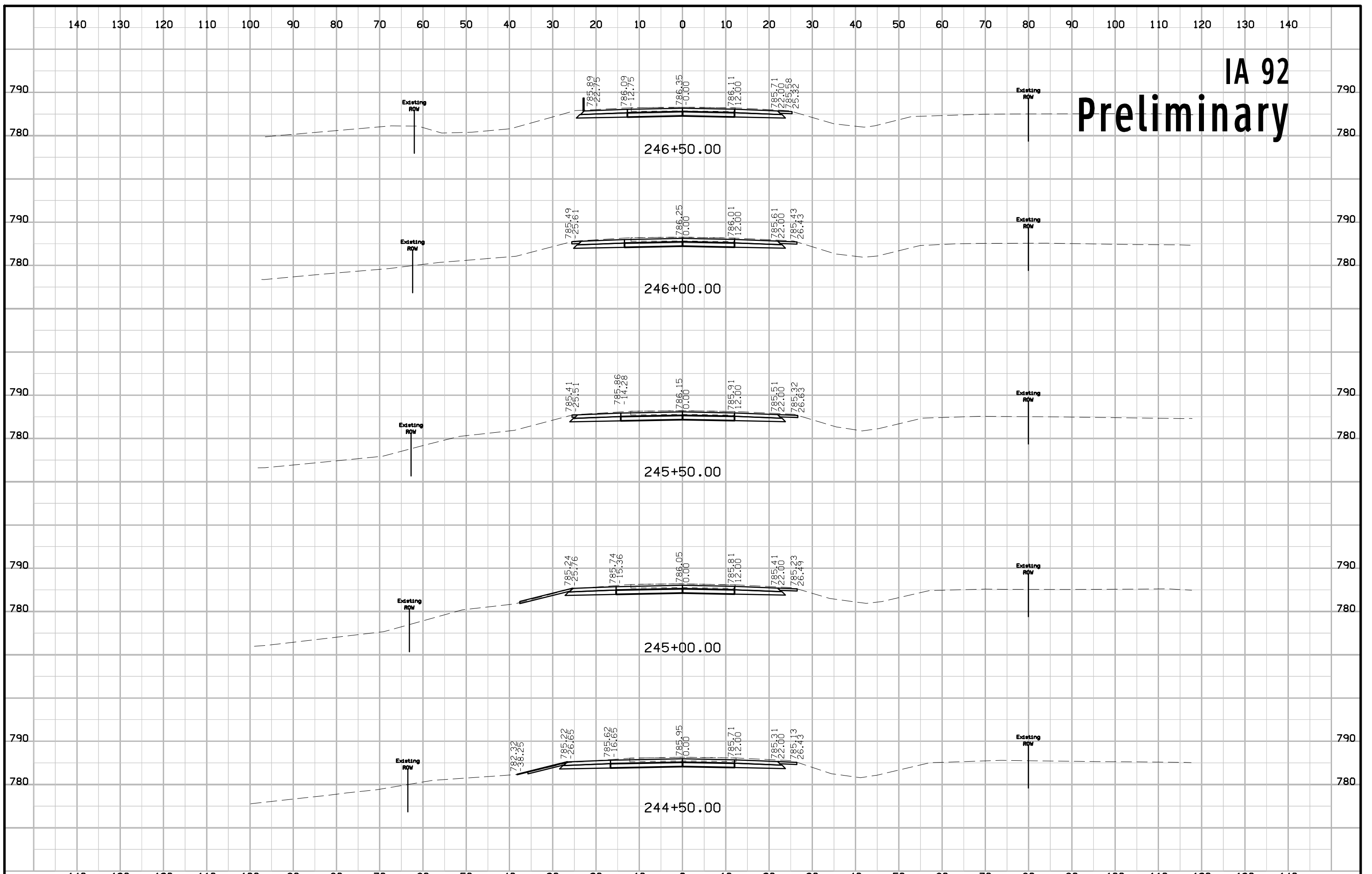
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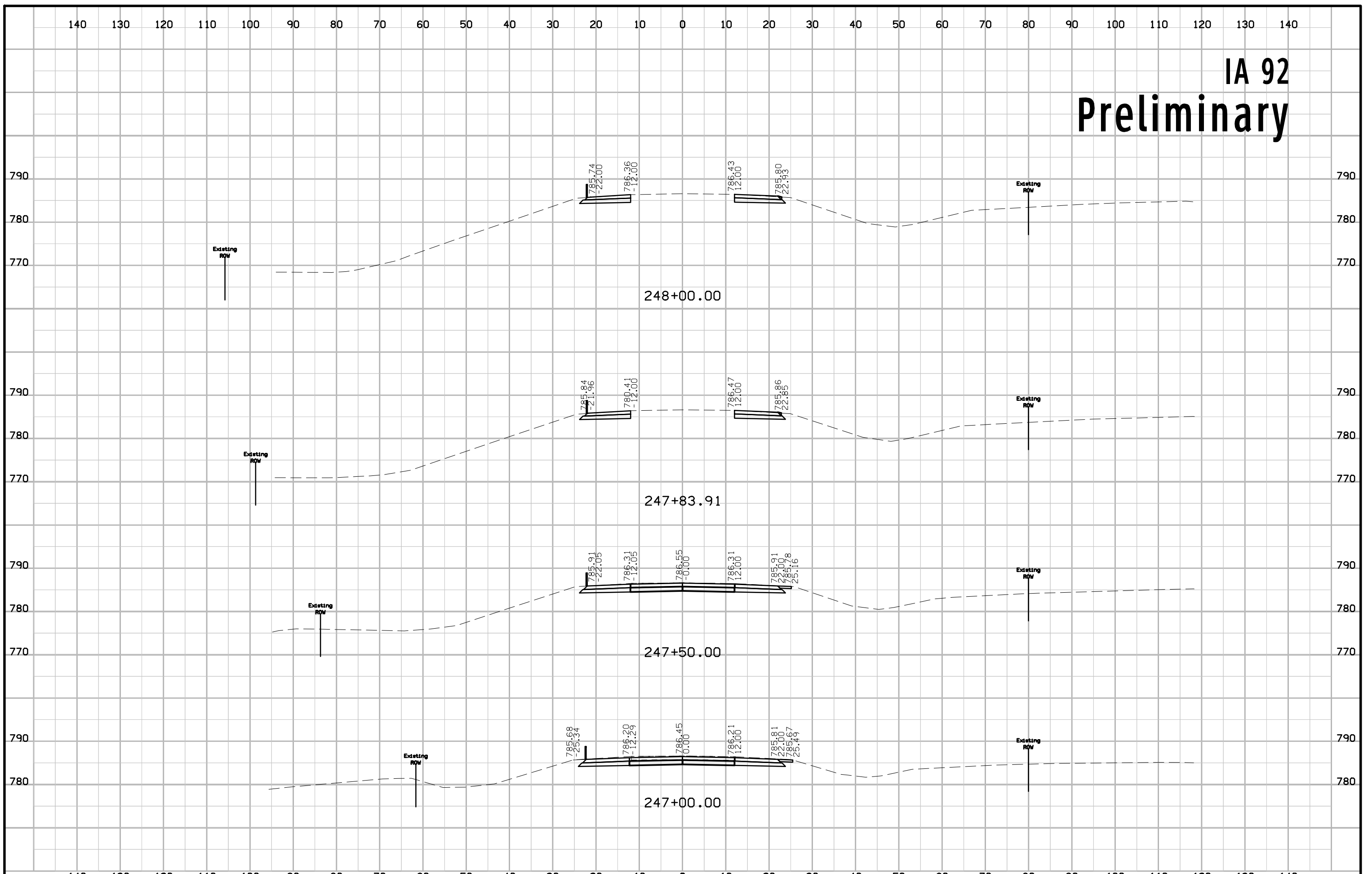
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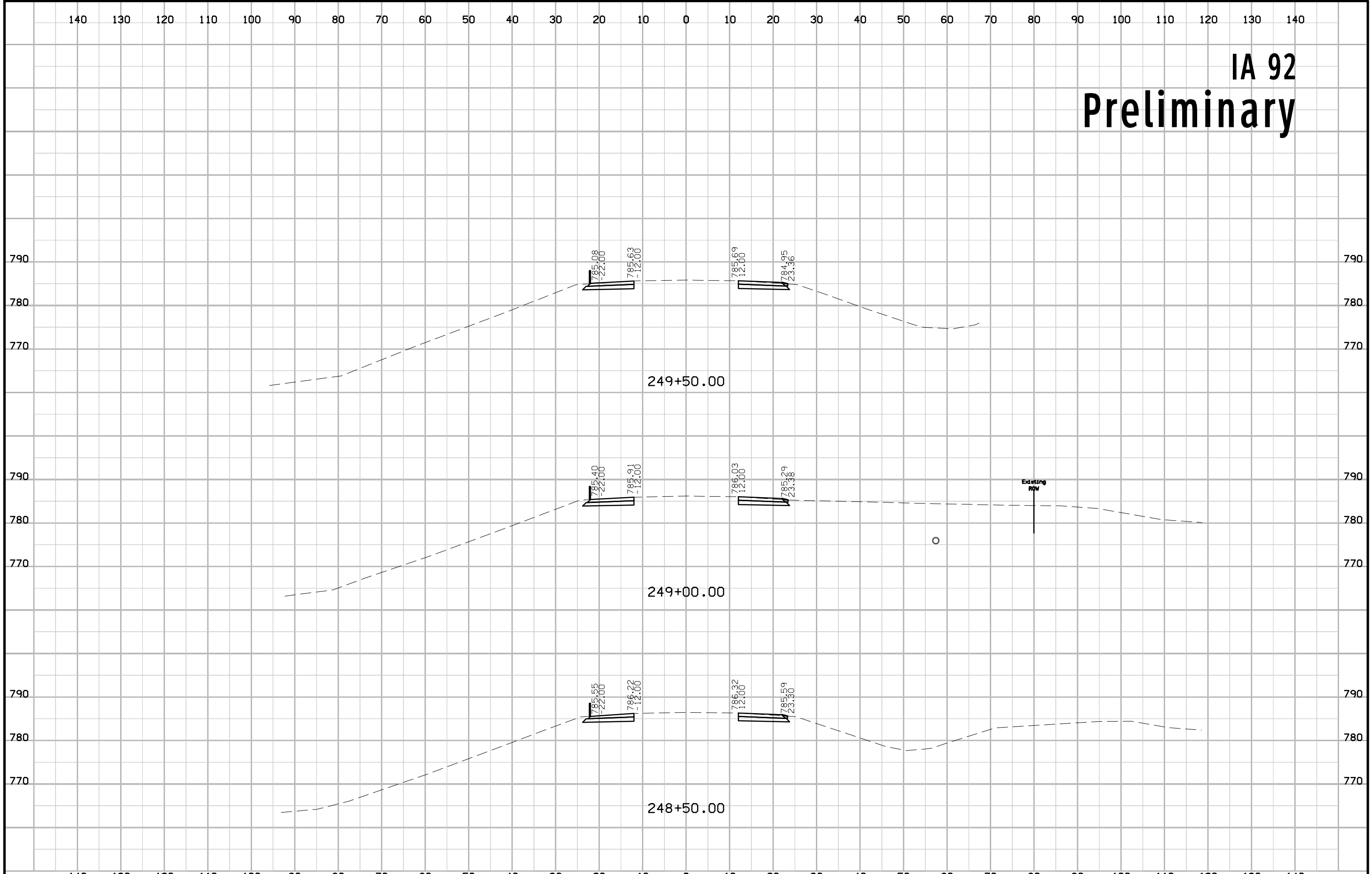
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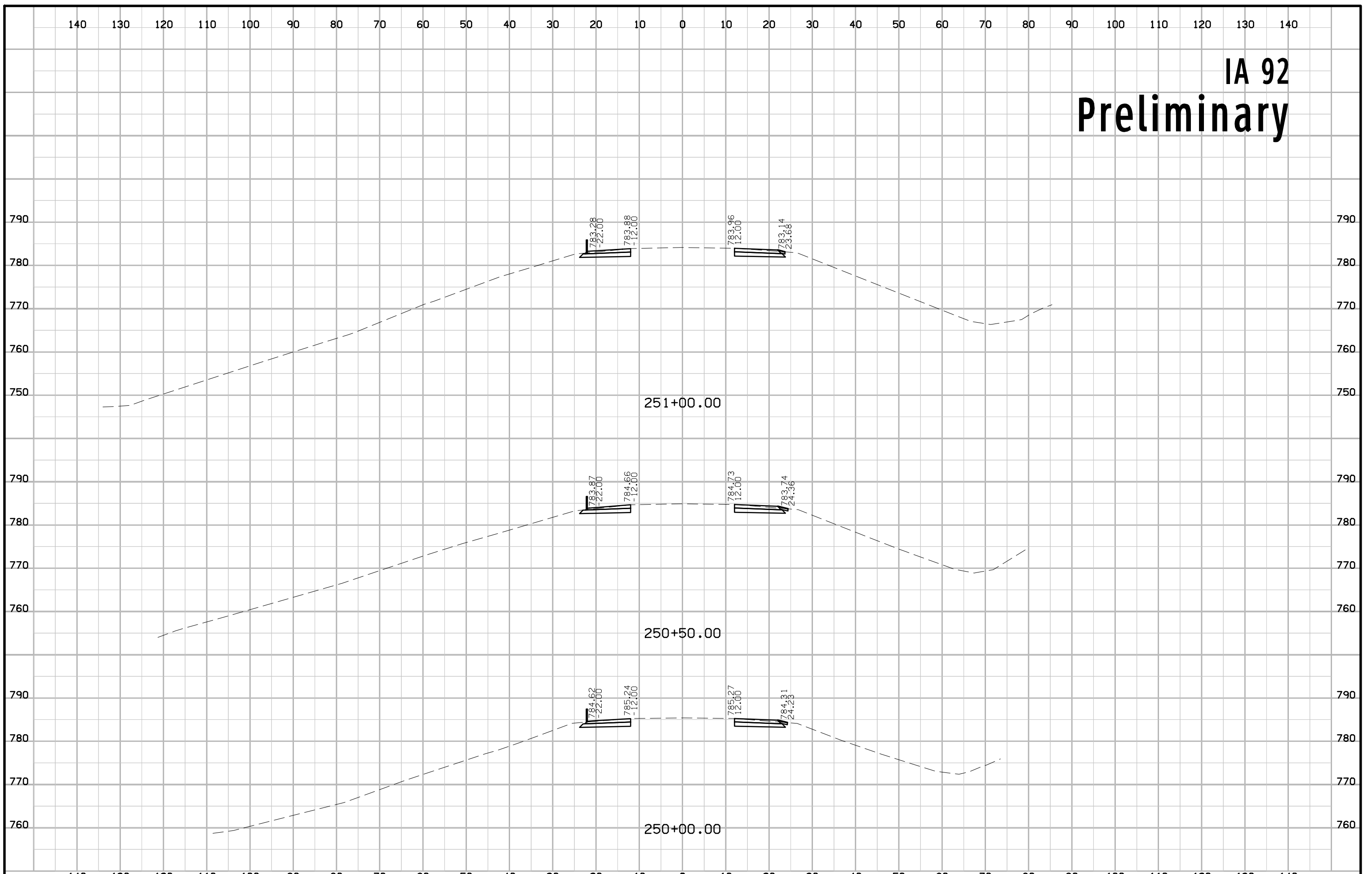
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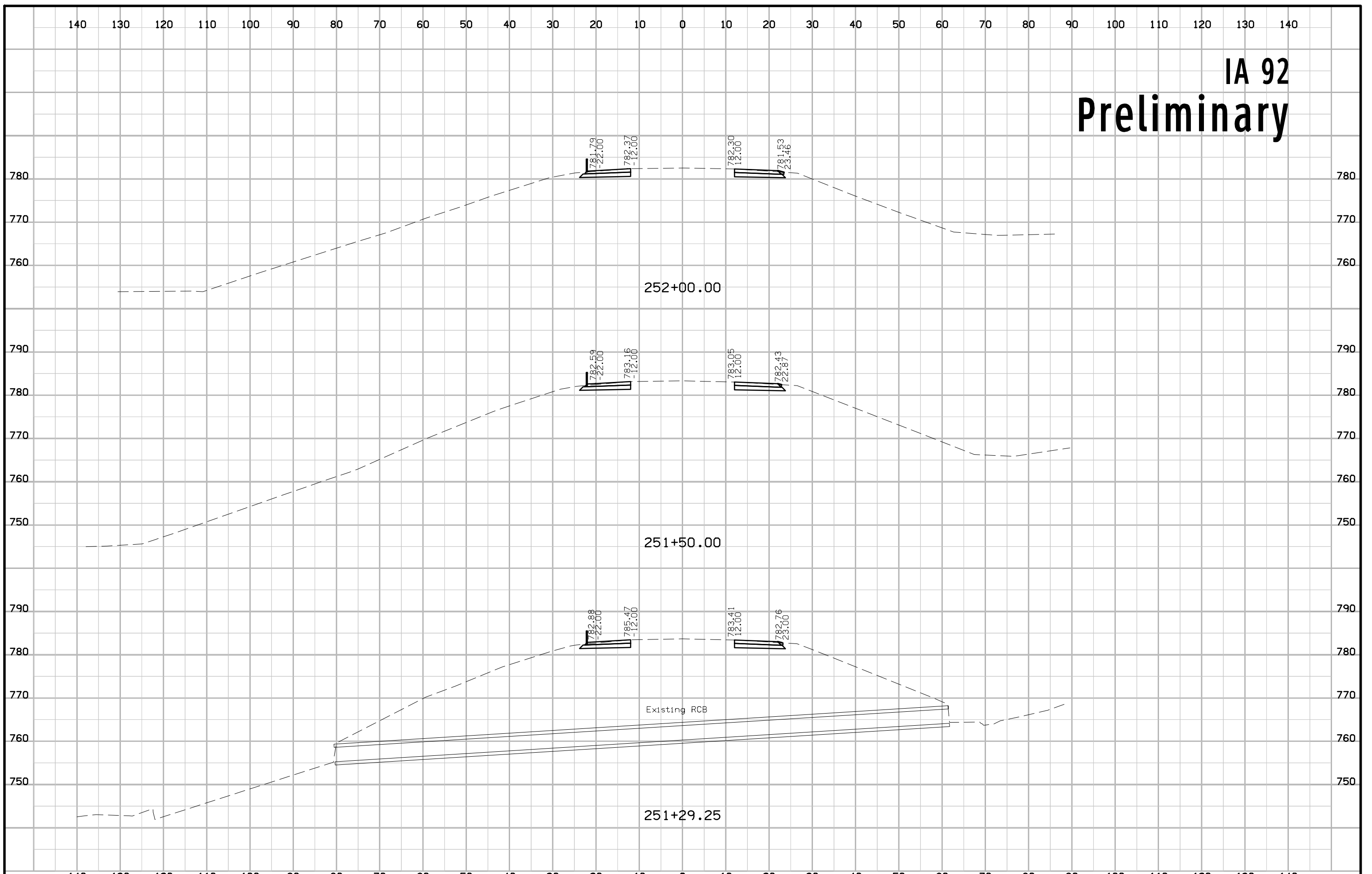
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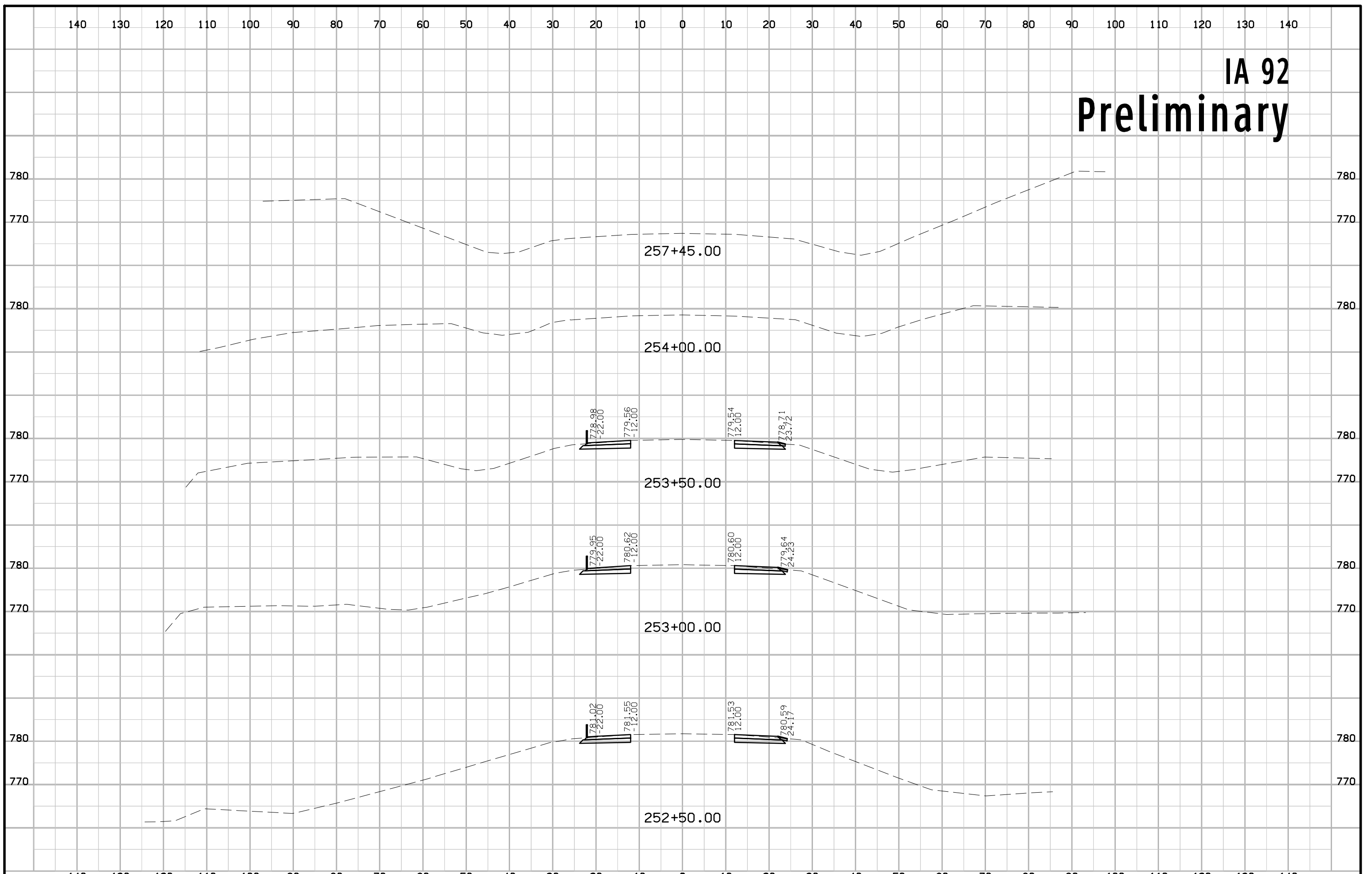
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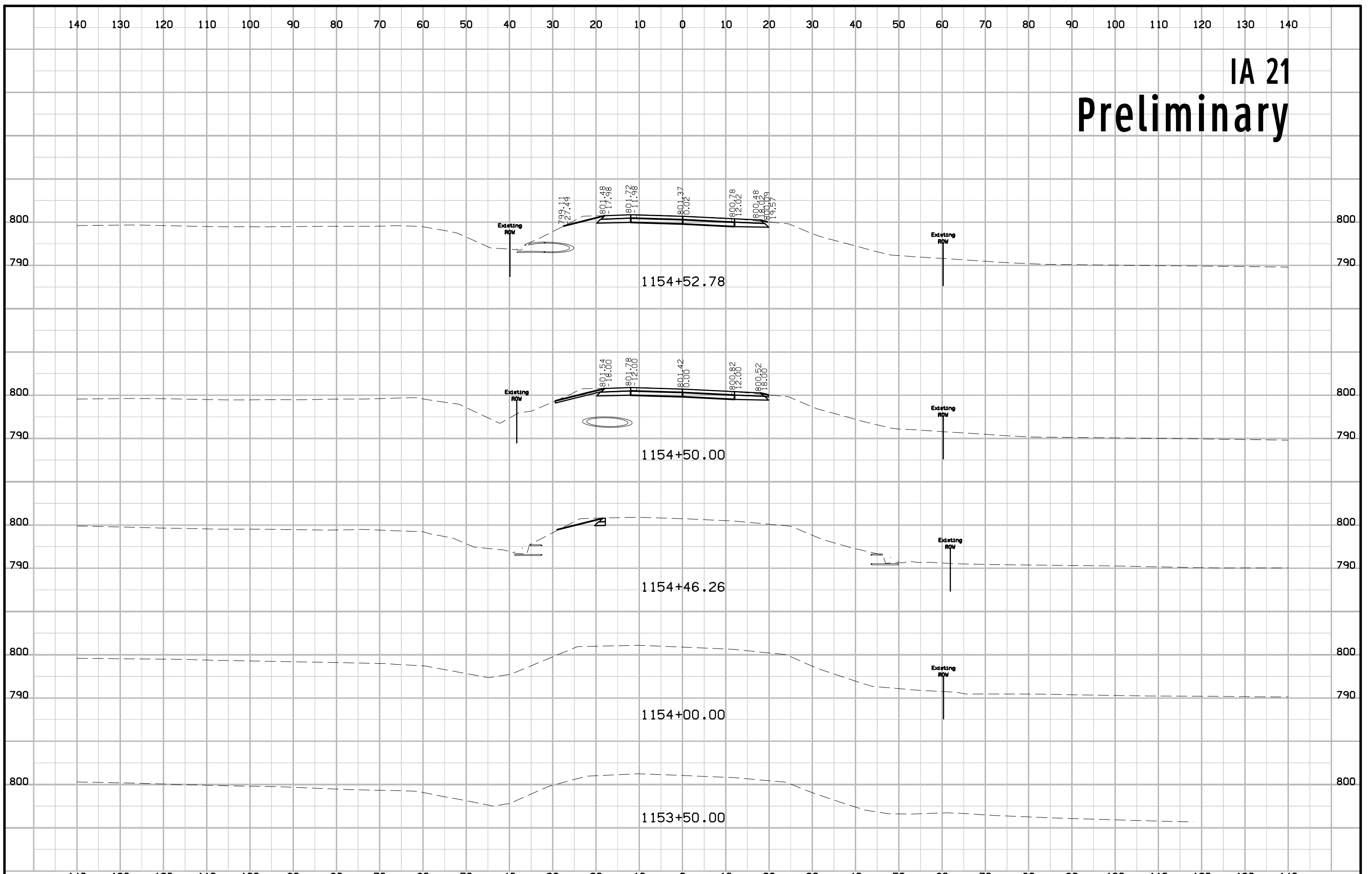
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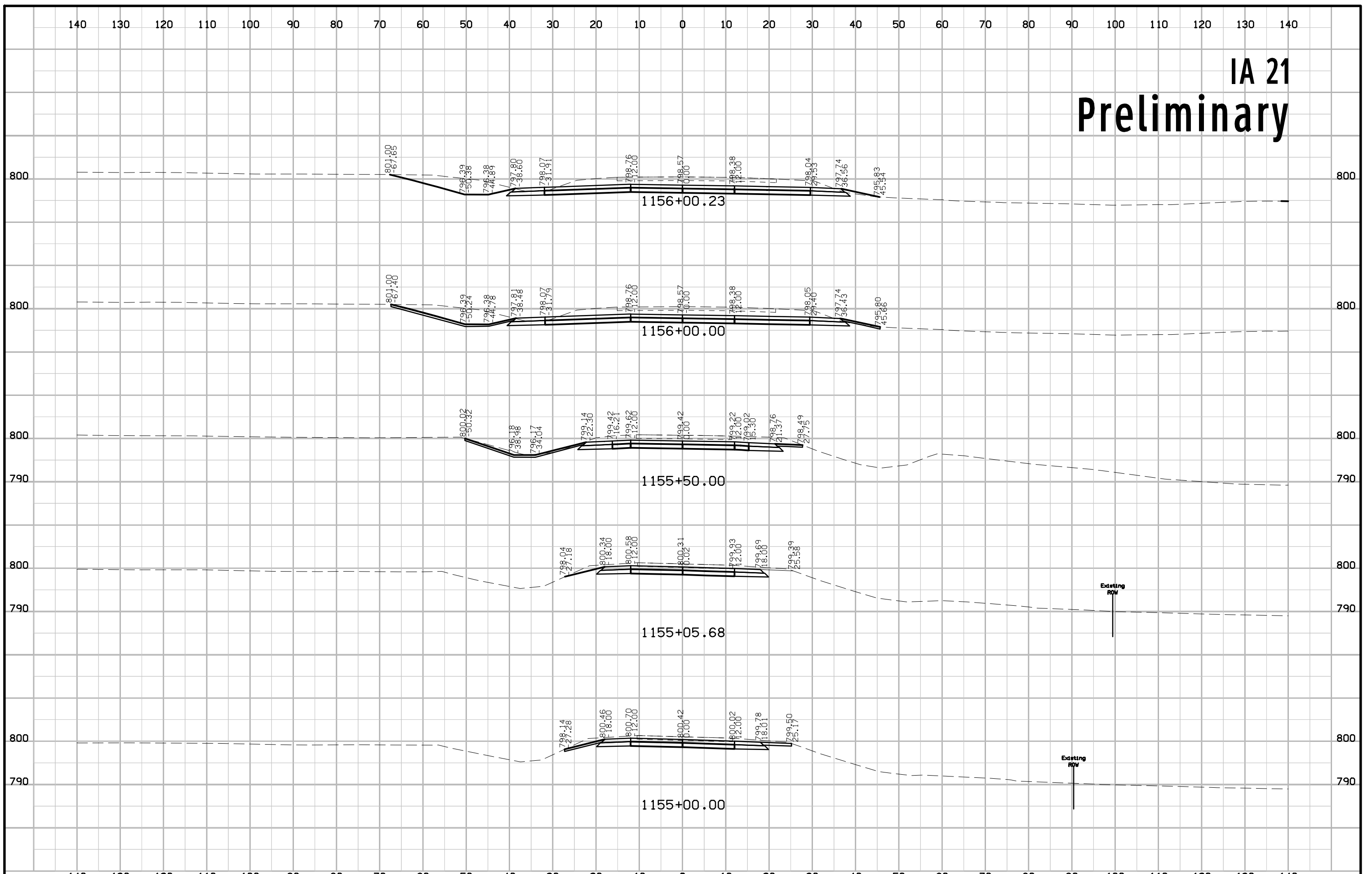
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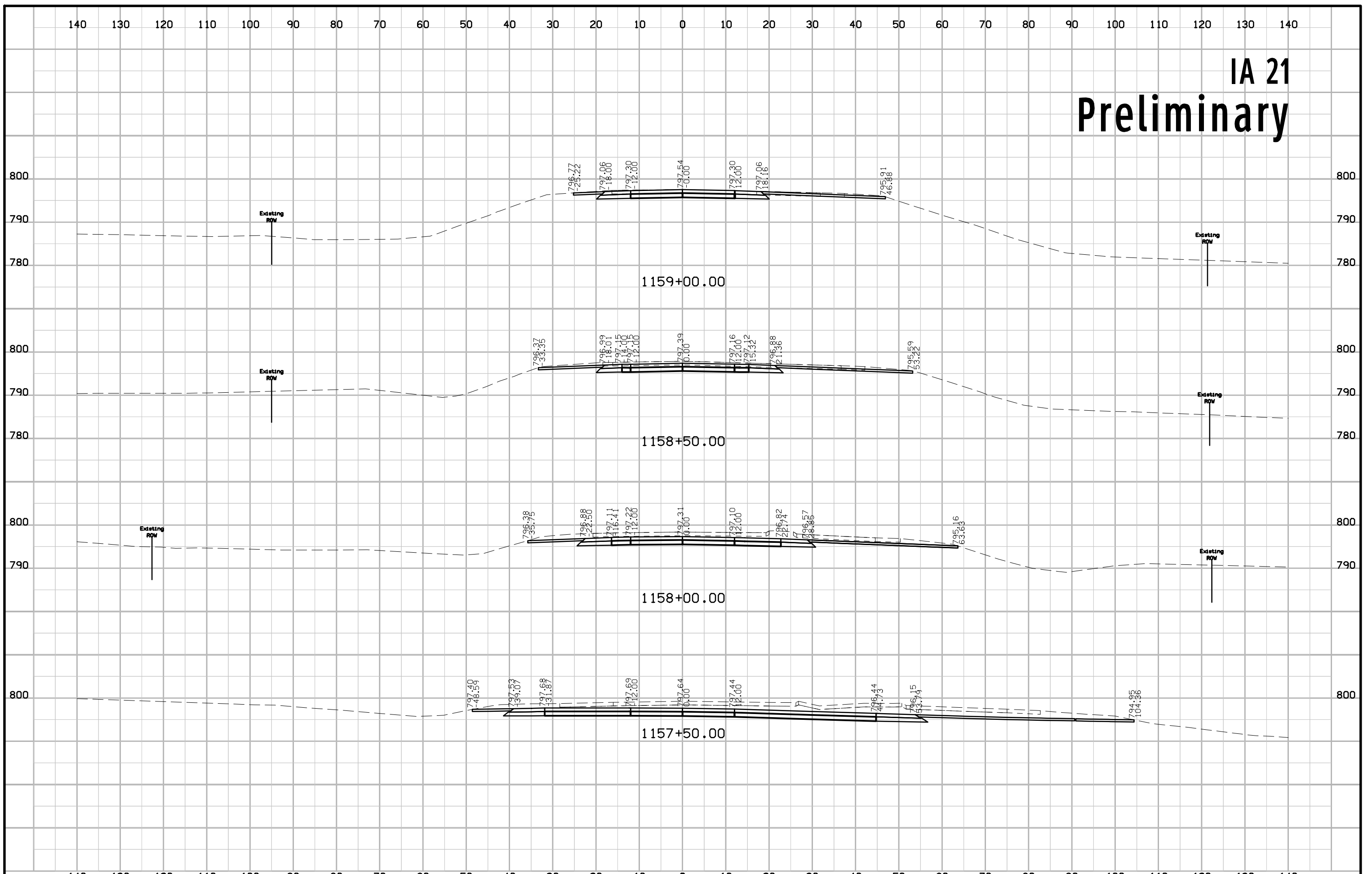
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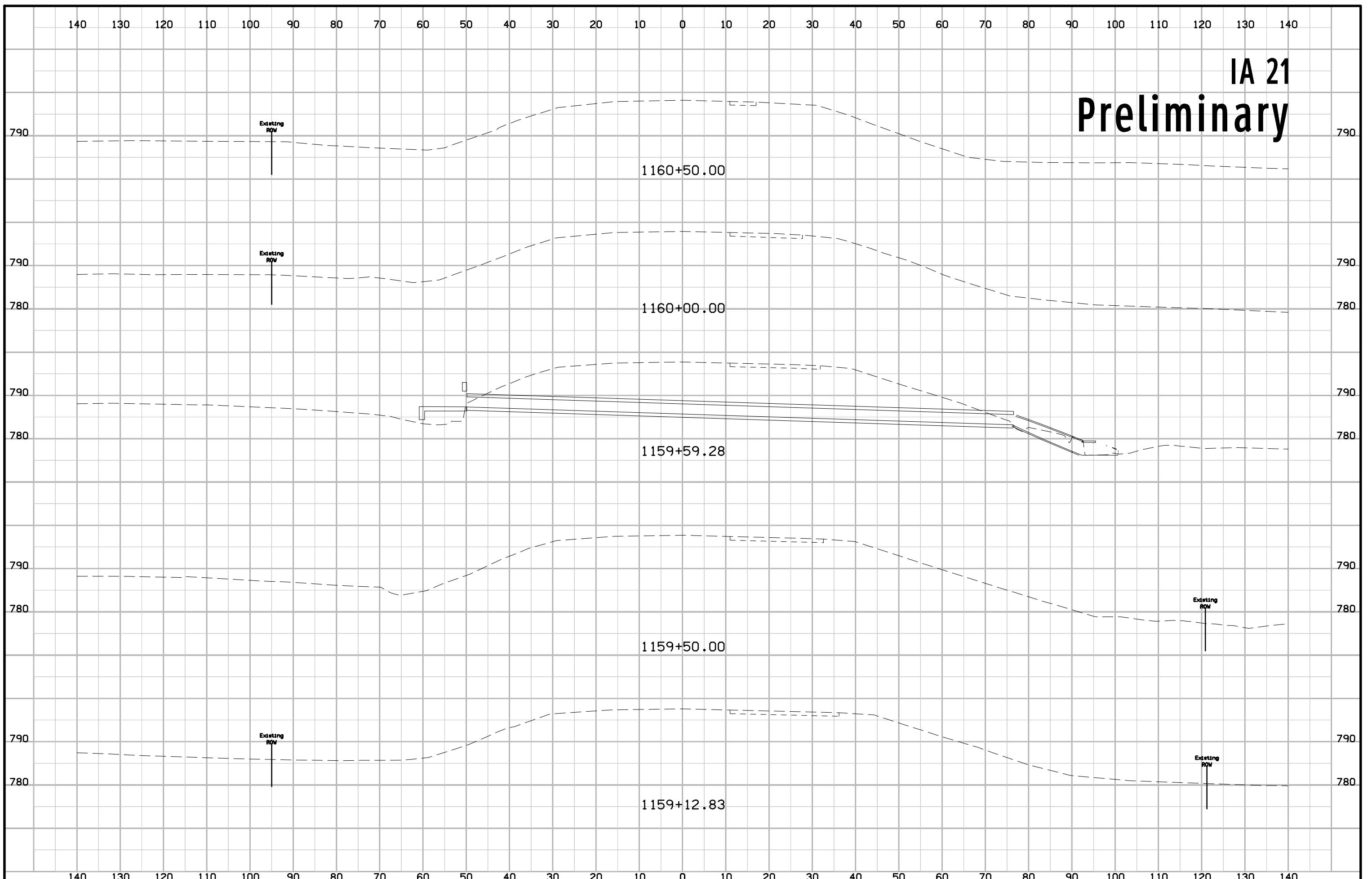
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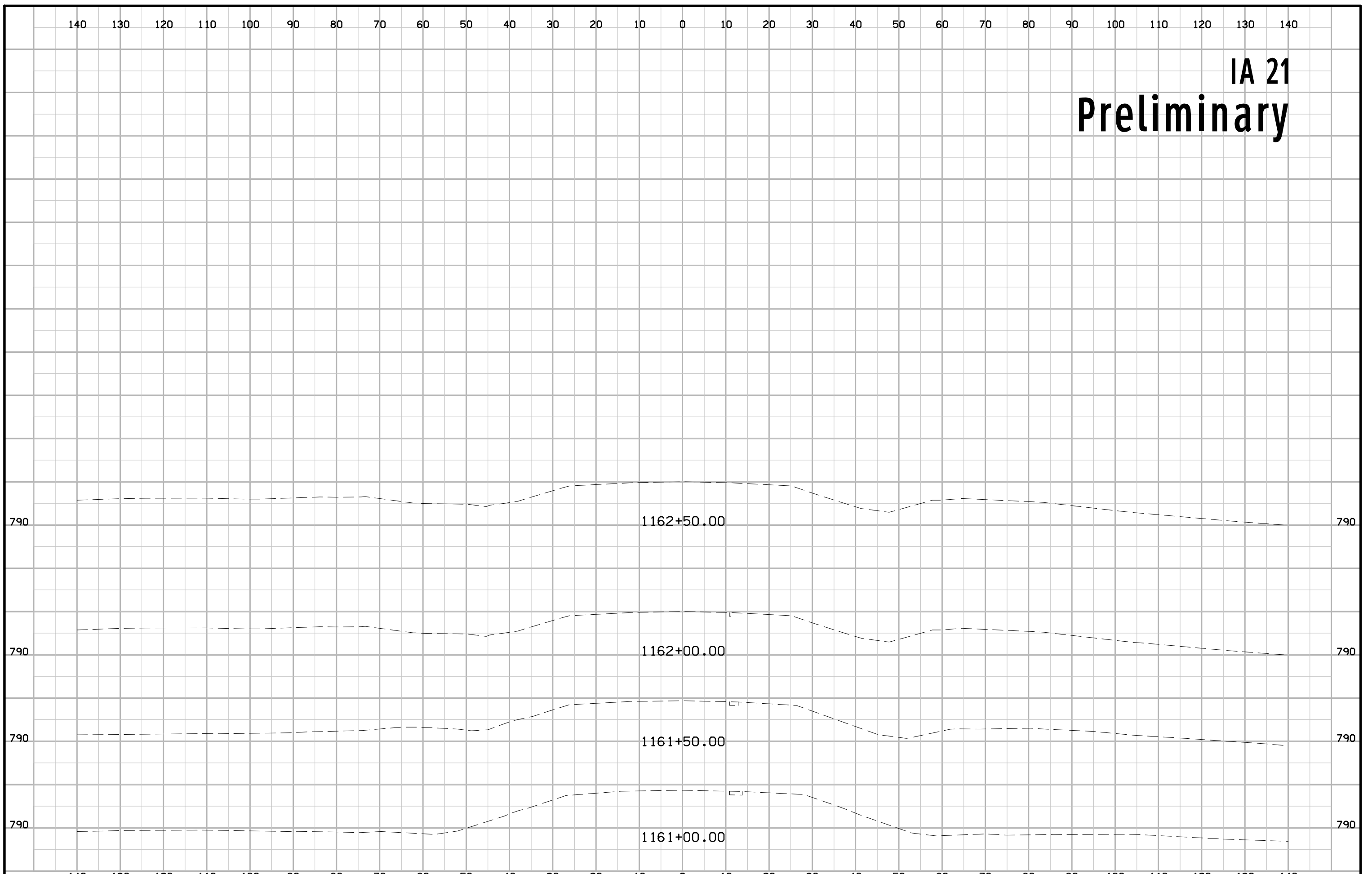
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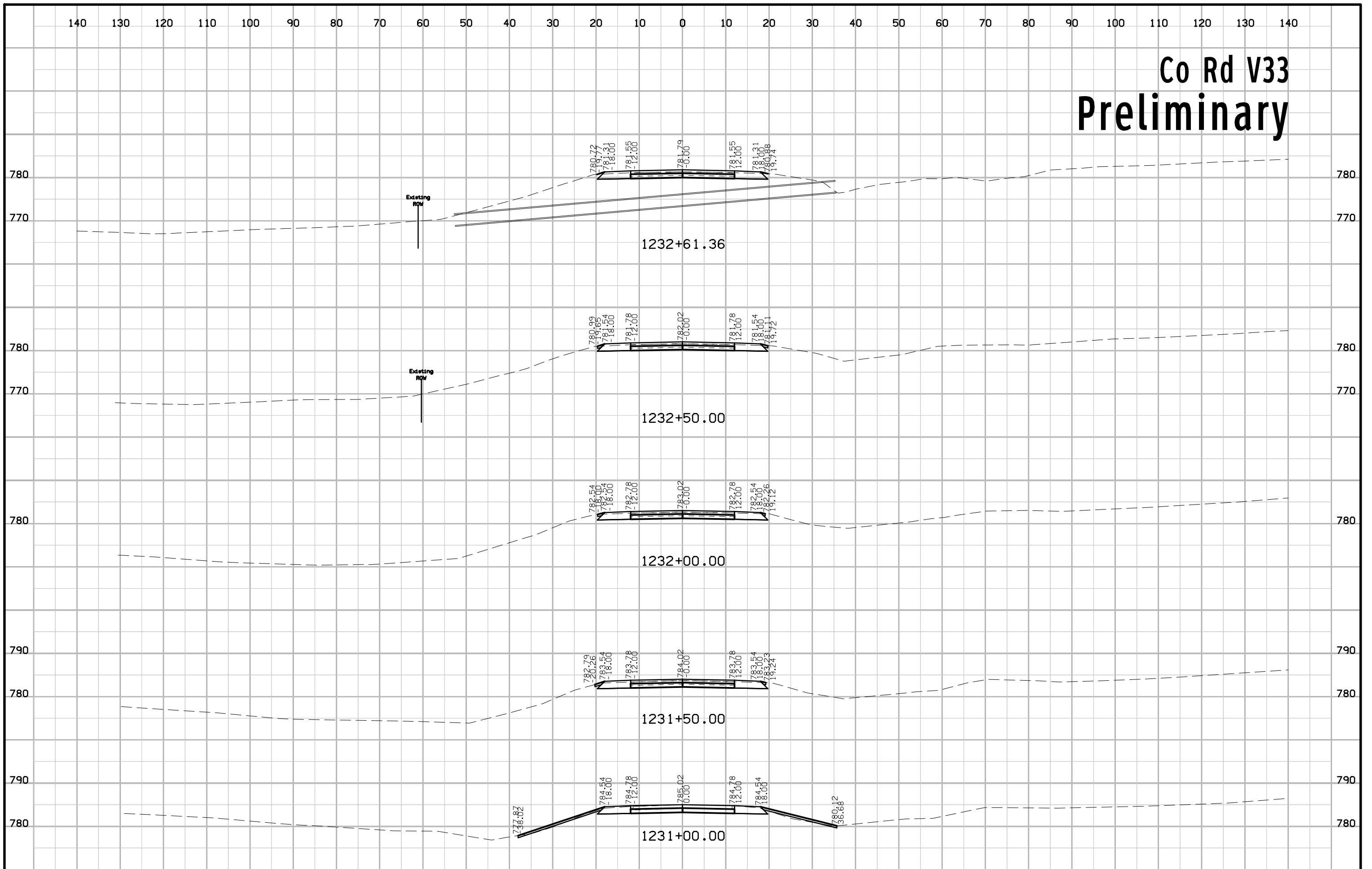
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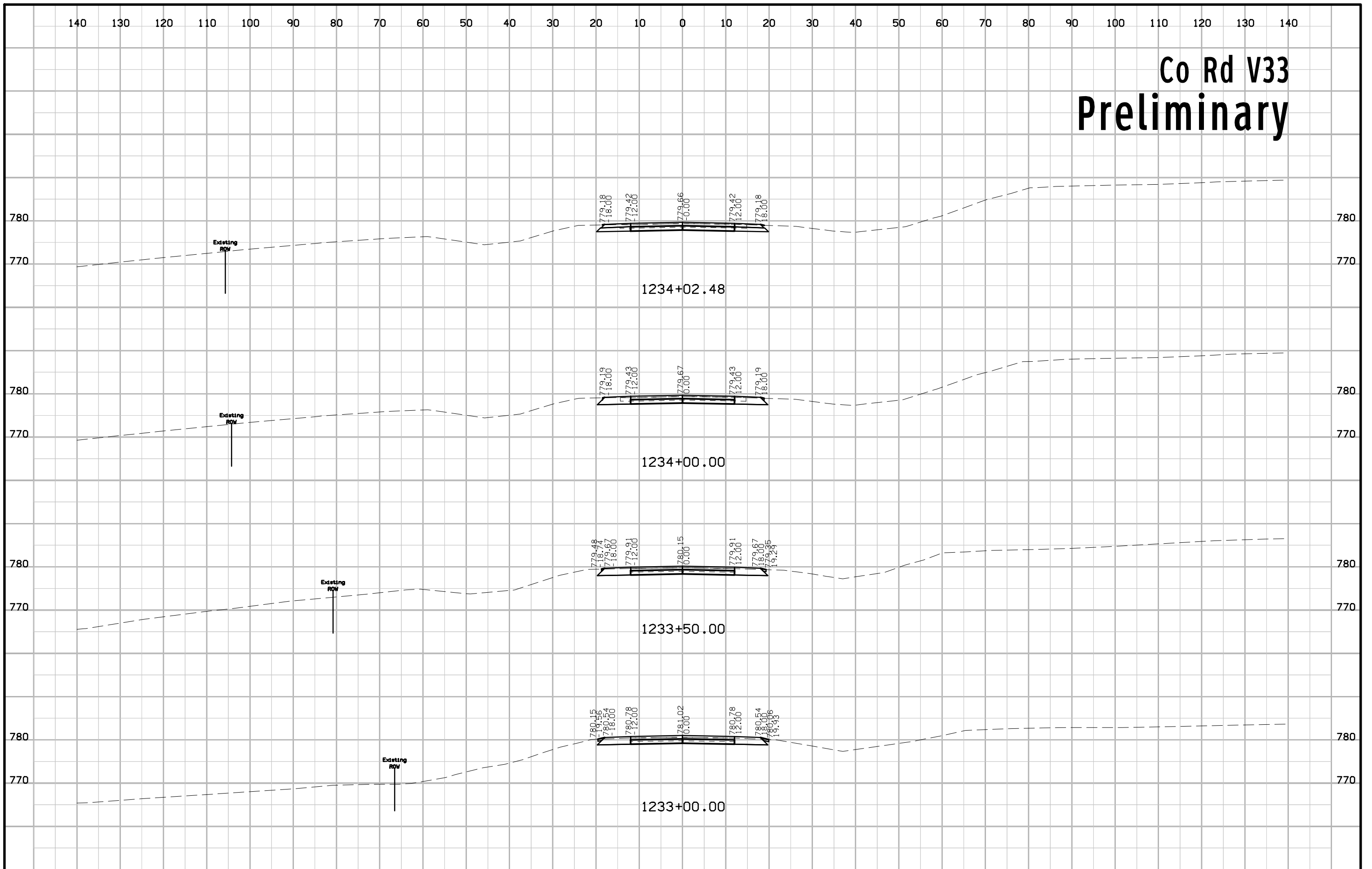
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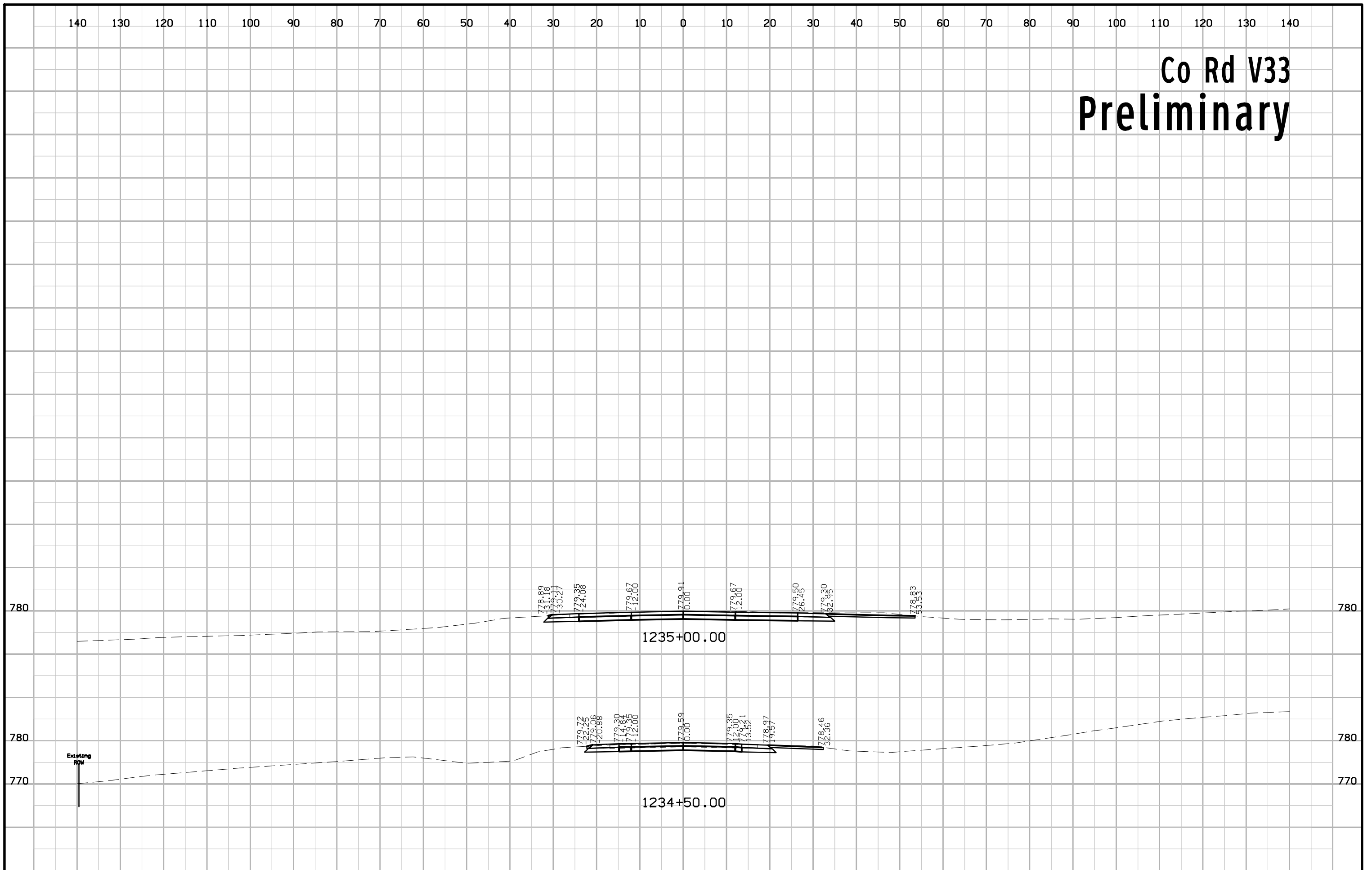
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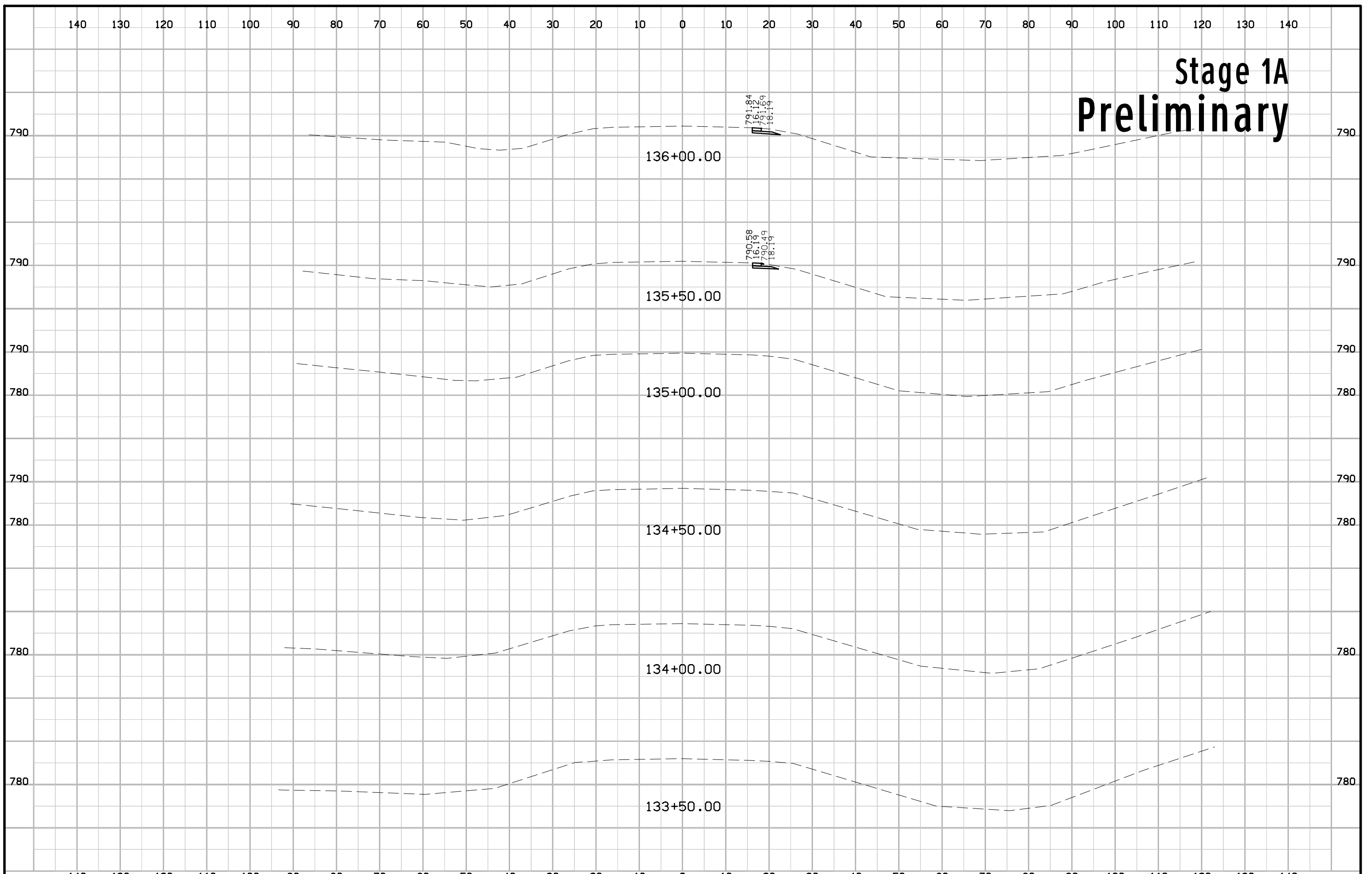
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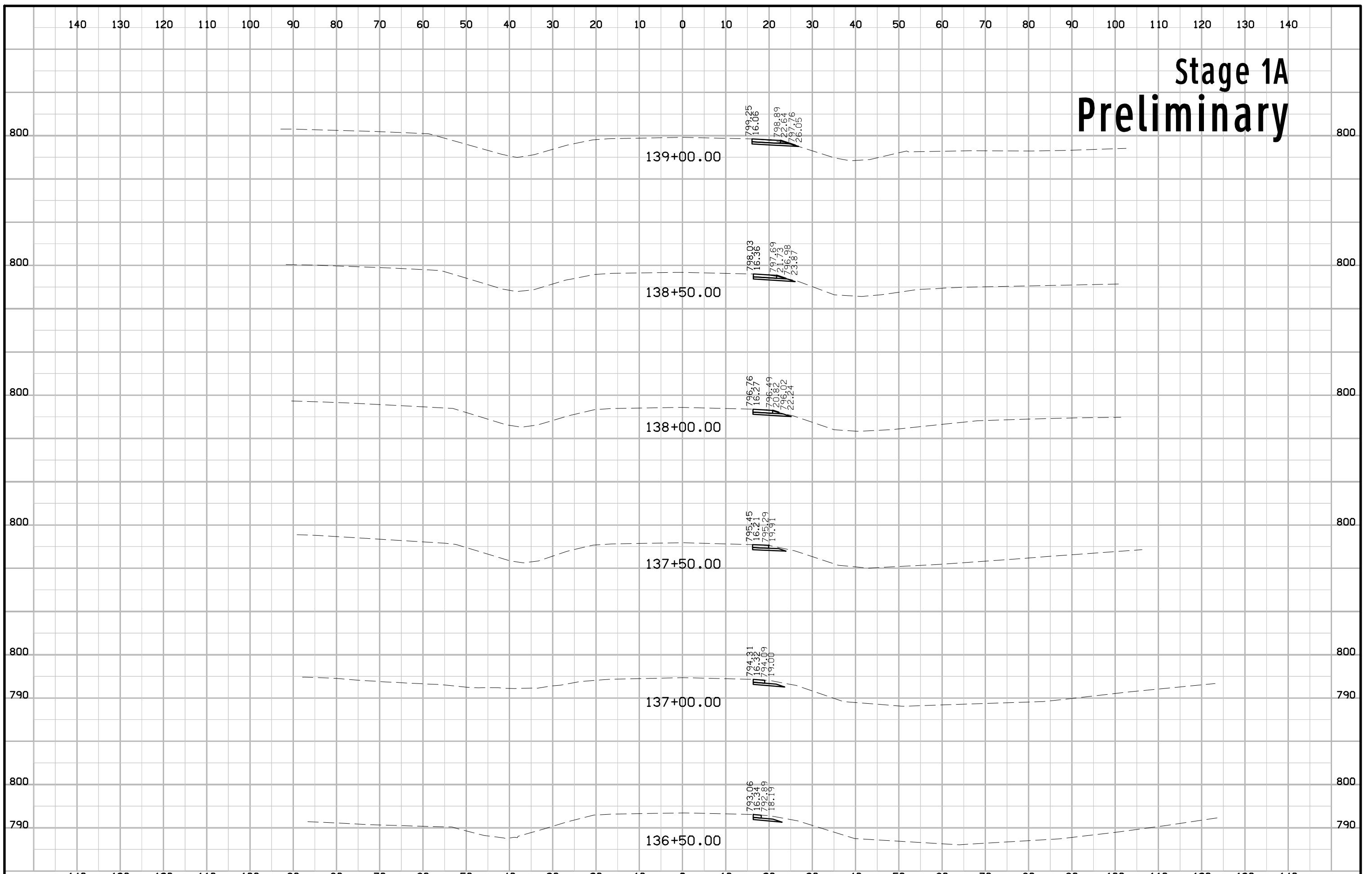
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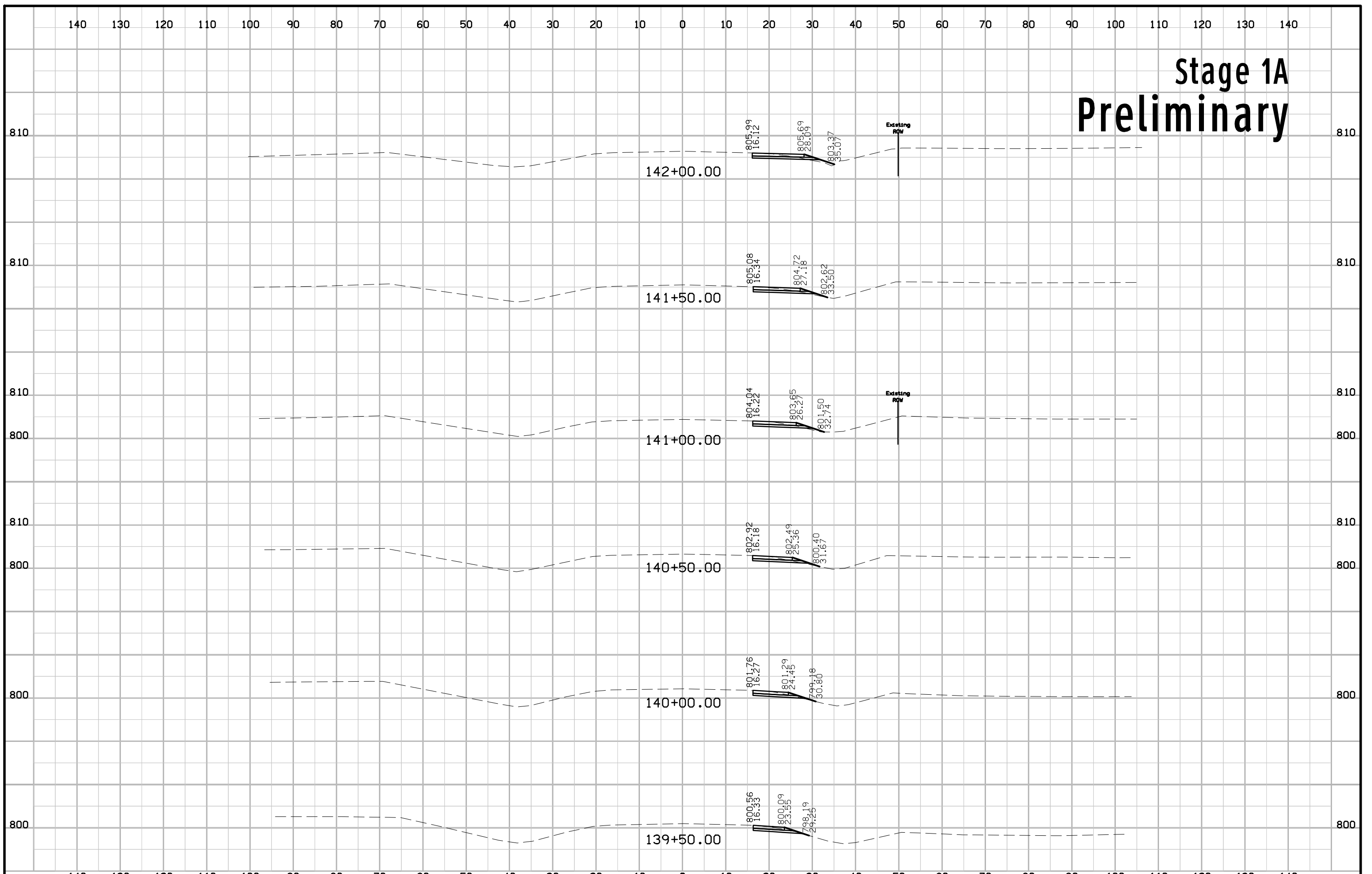
Stage 1A Preliminary



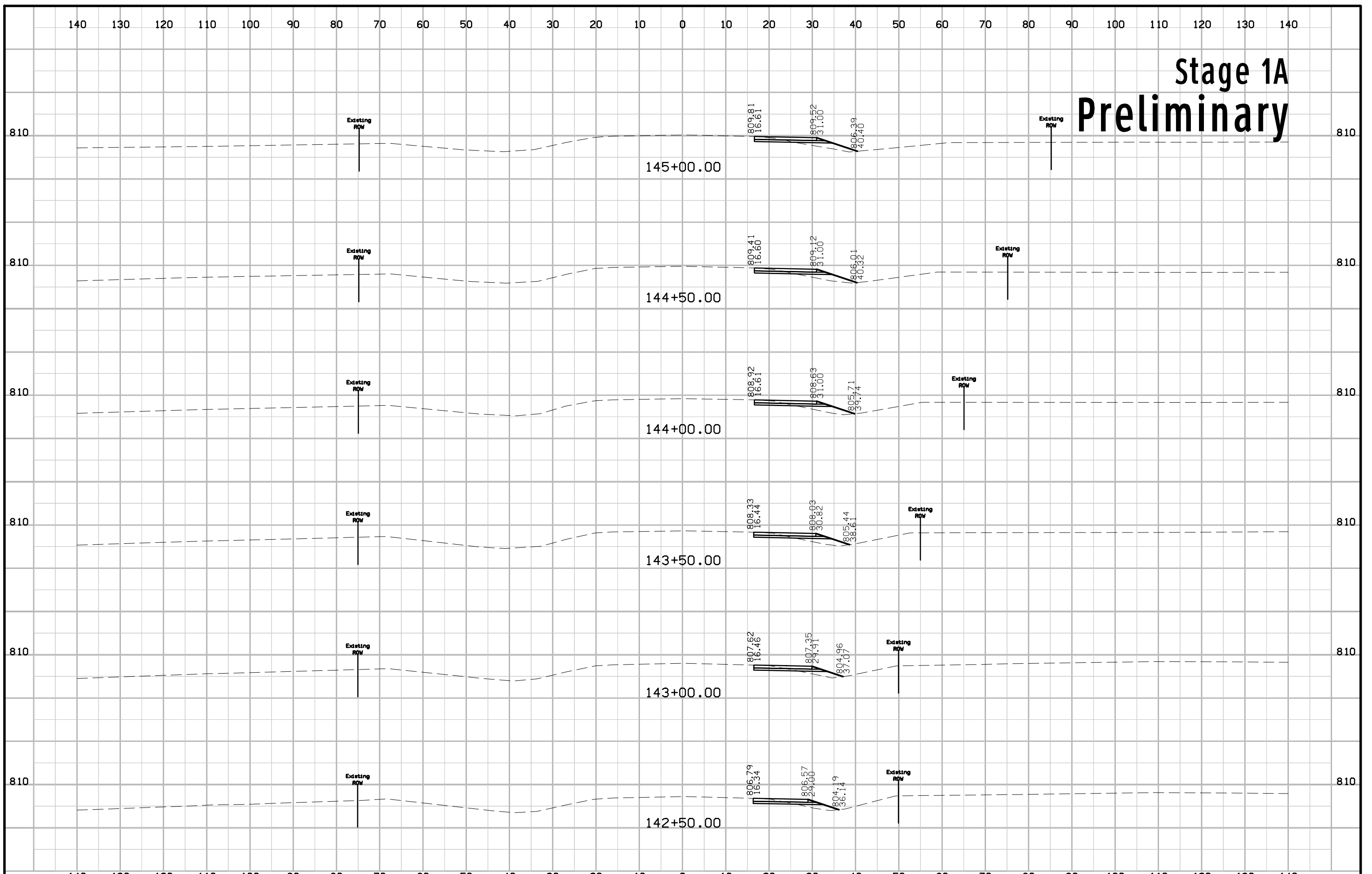
Stage 1A Preliminary



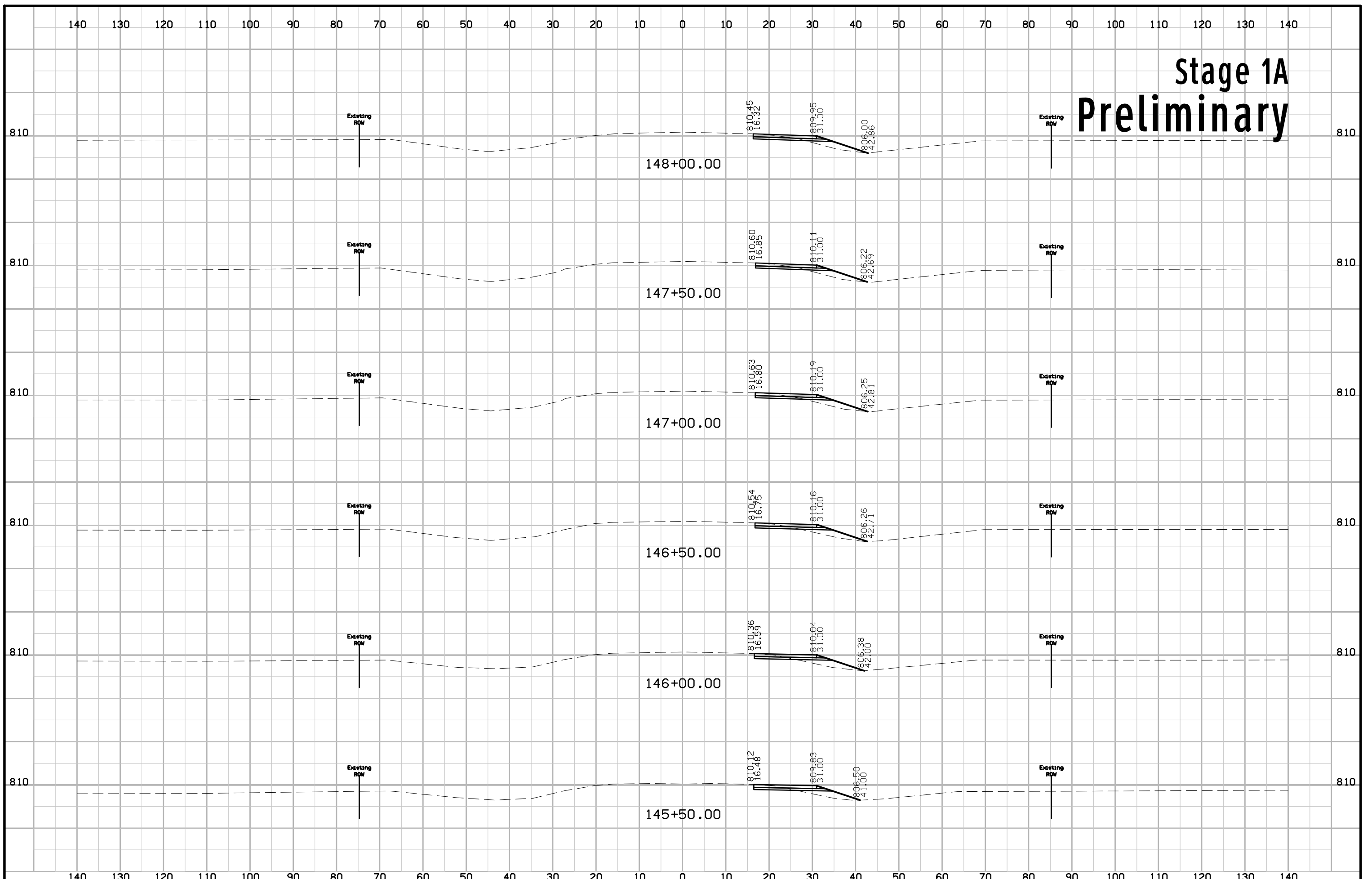
Stage 1A Preliminary



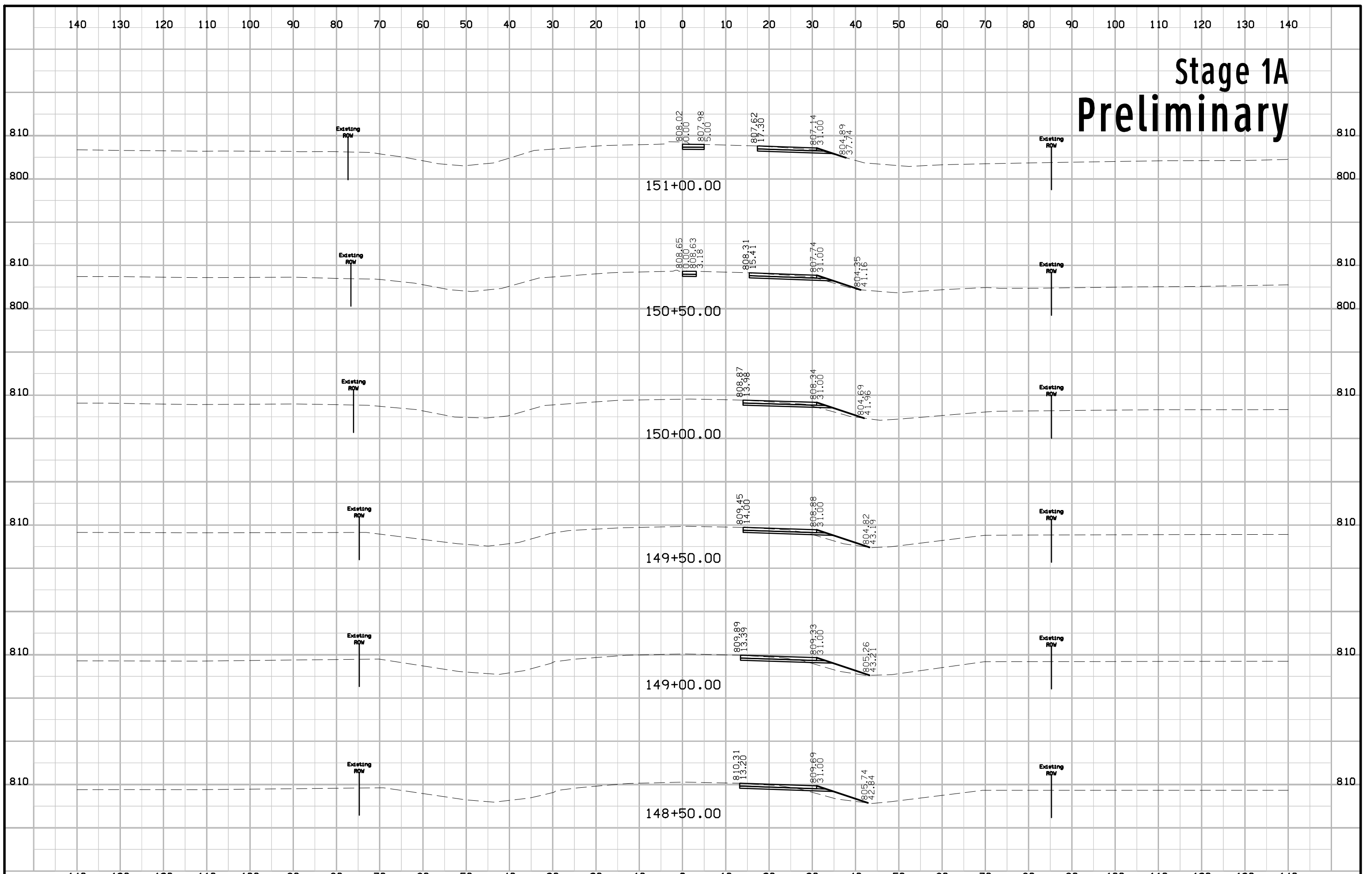
Stage 1A Preliminary



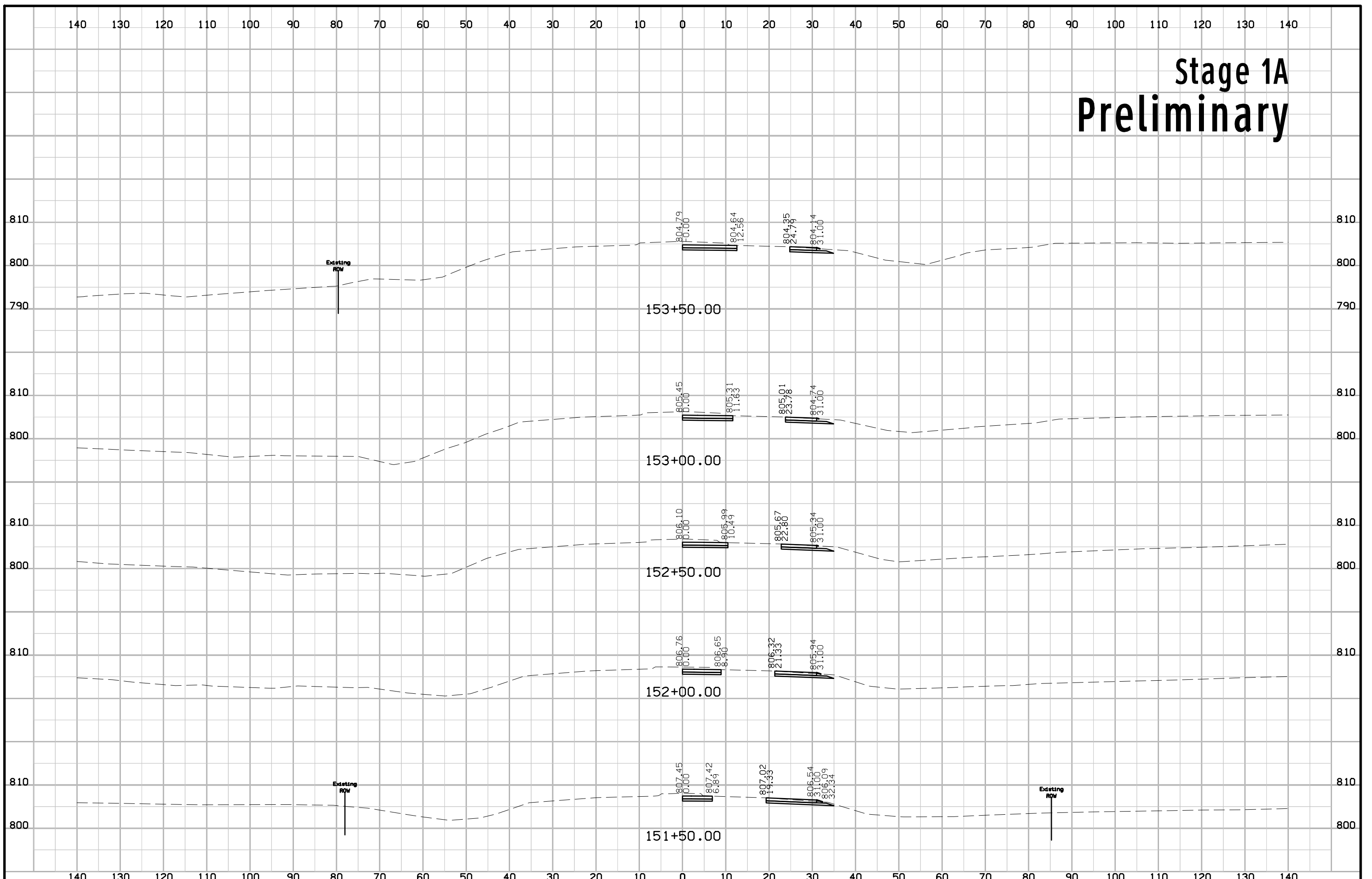
Stage 1A Preliminary



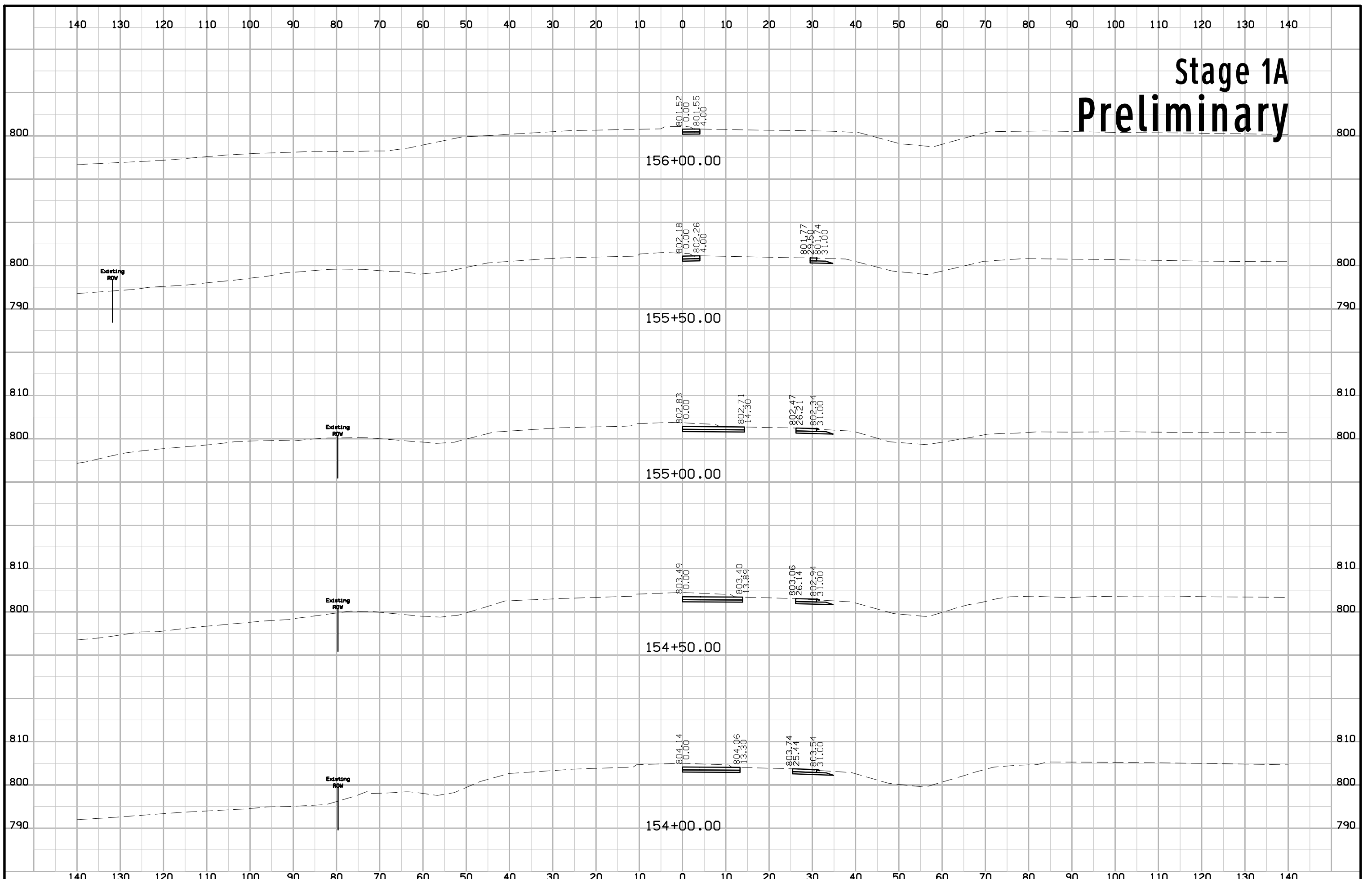
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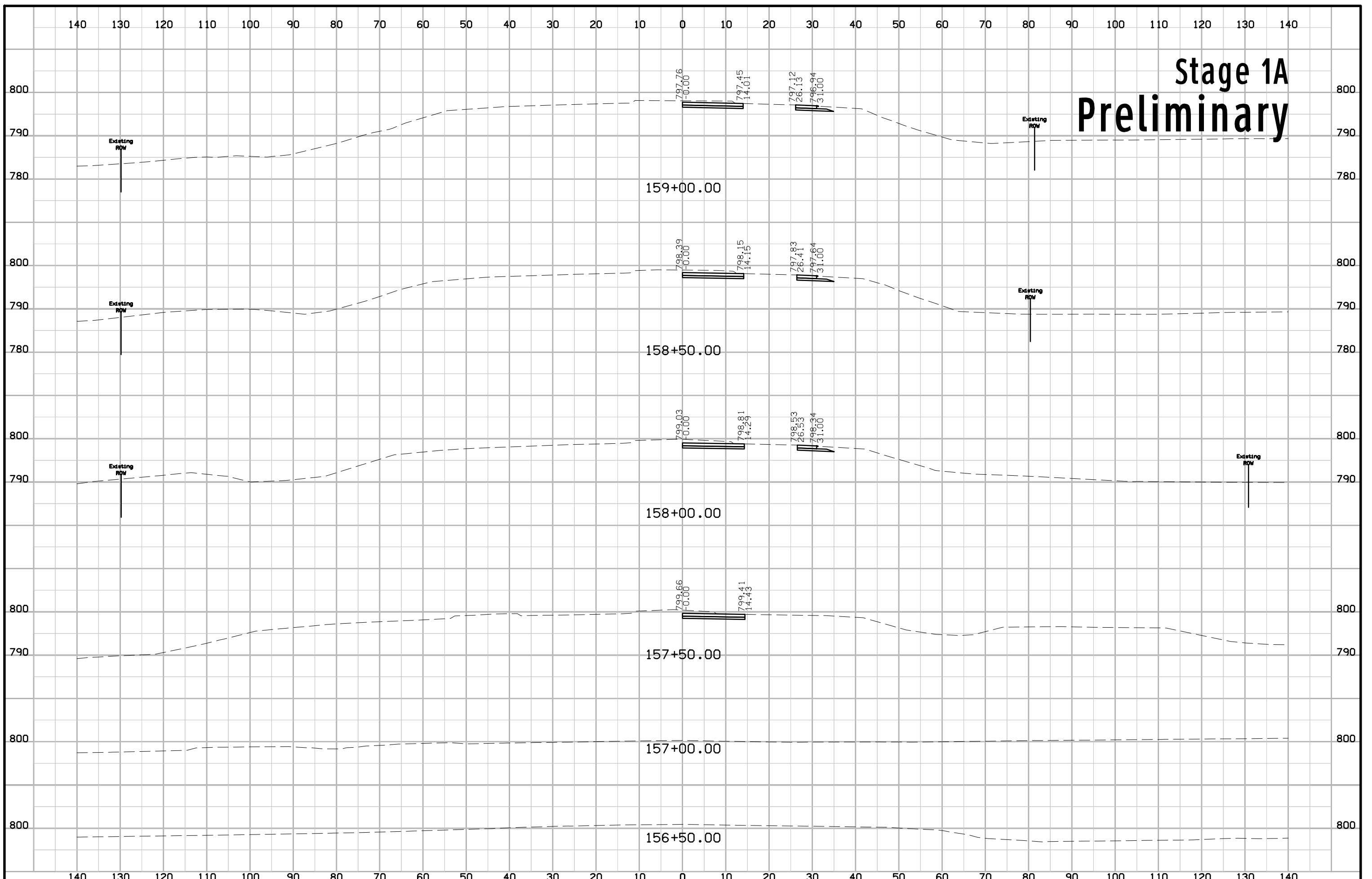
Stage 1A Preliminary



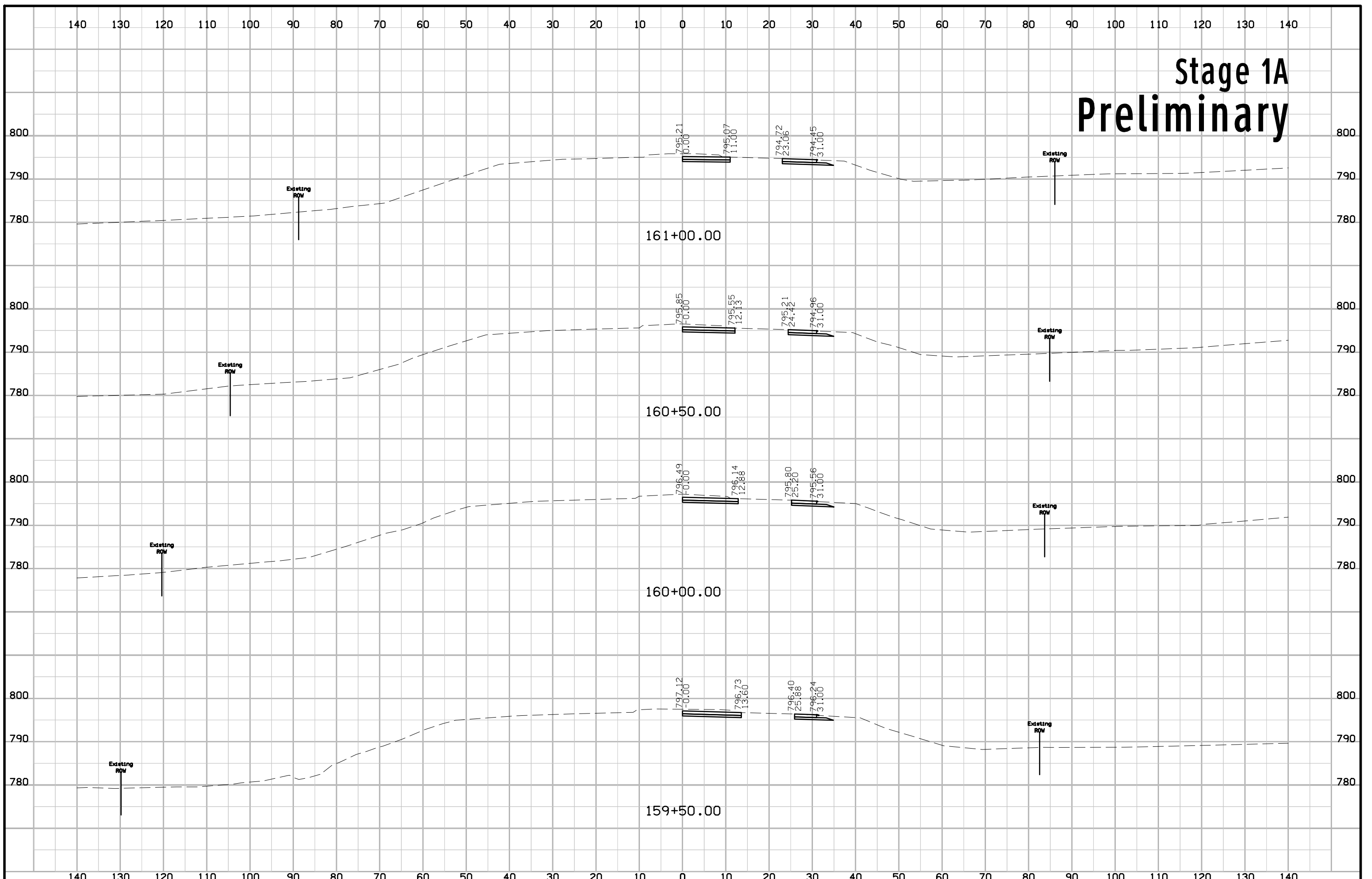
Stage 1A Preliminary



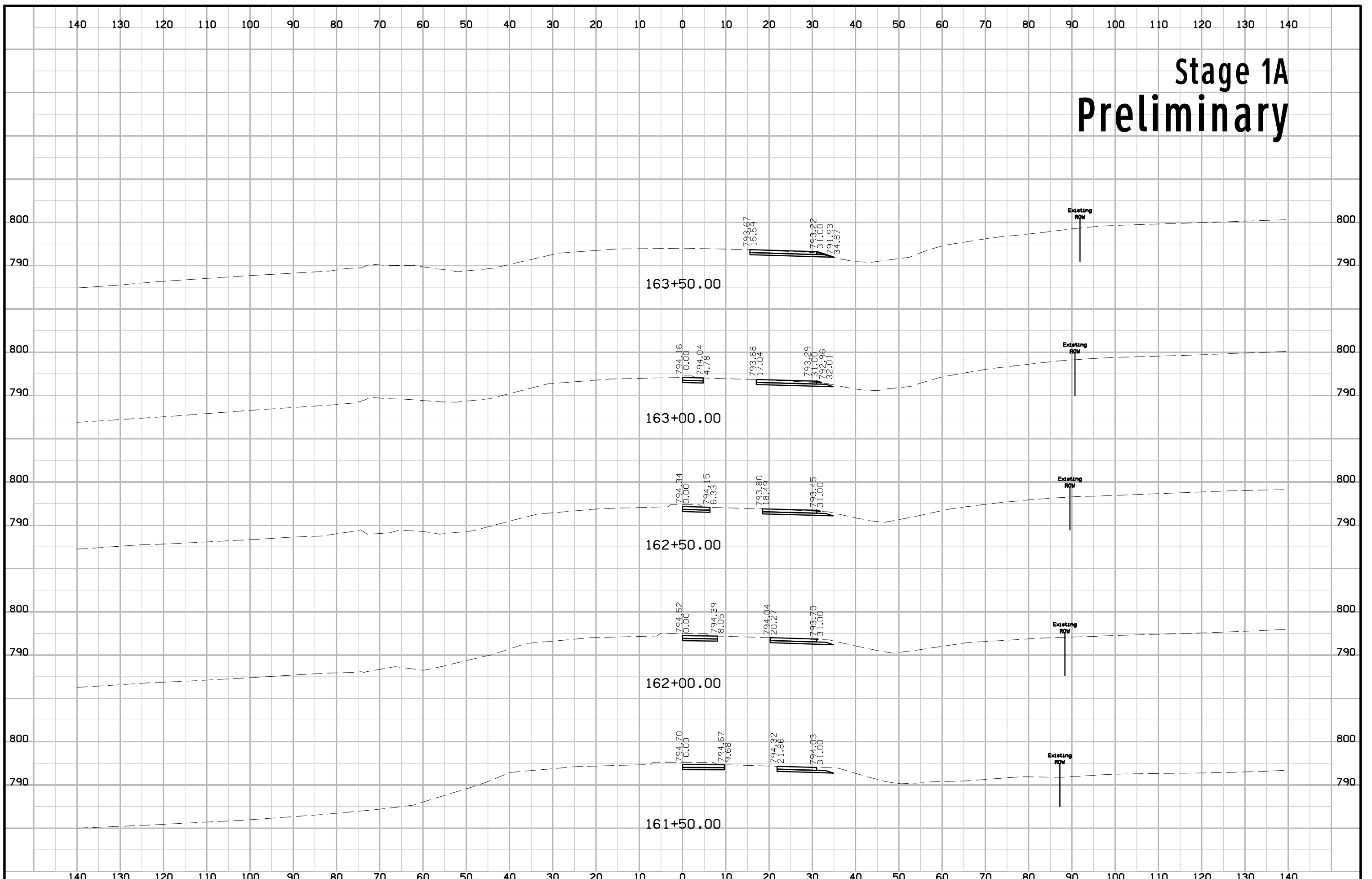
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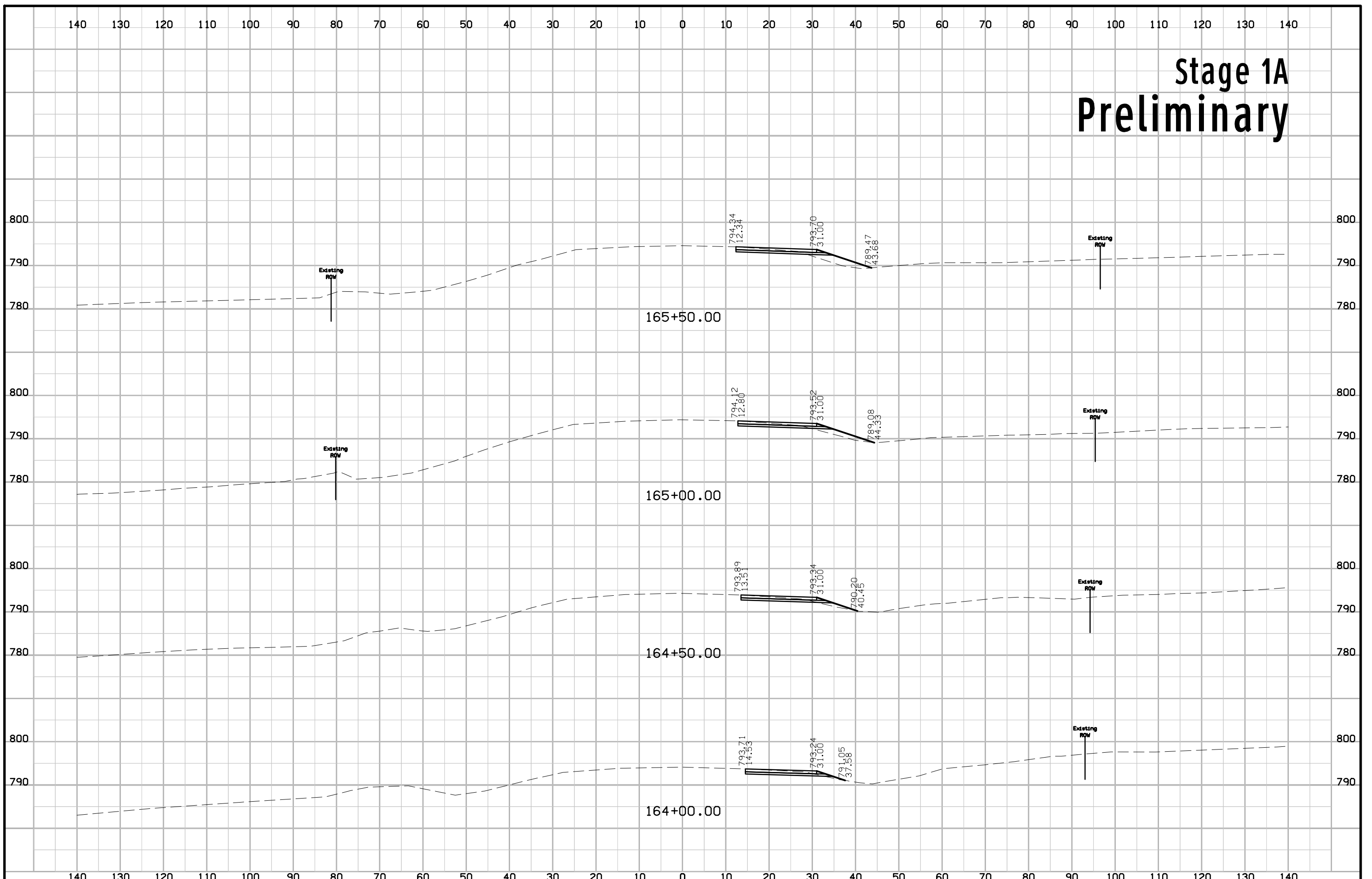
Stage 1A Preliminary



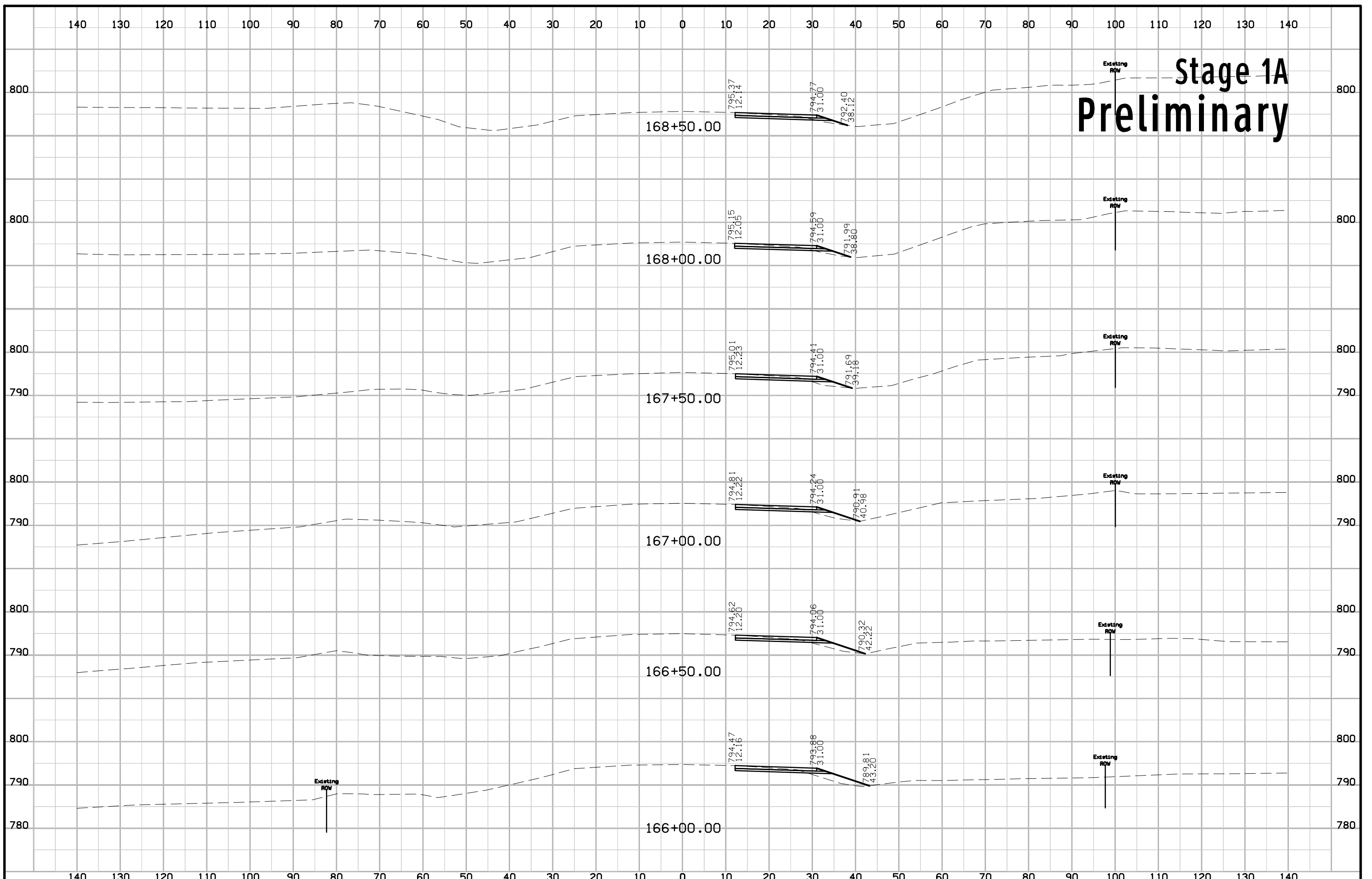
Stage 1A Preliminary



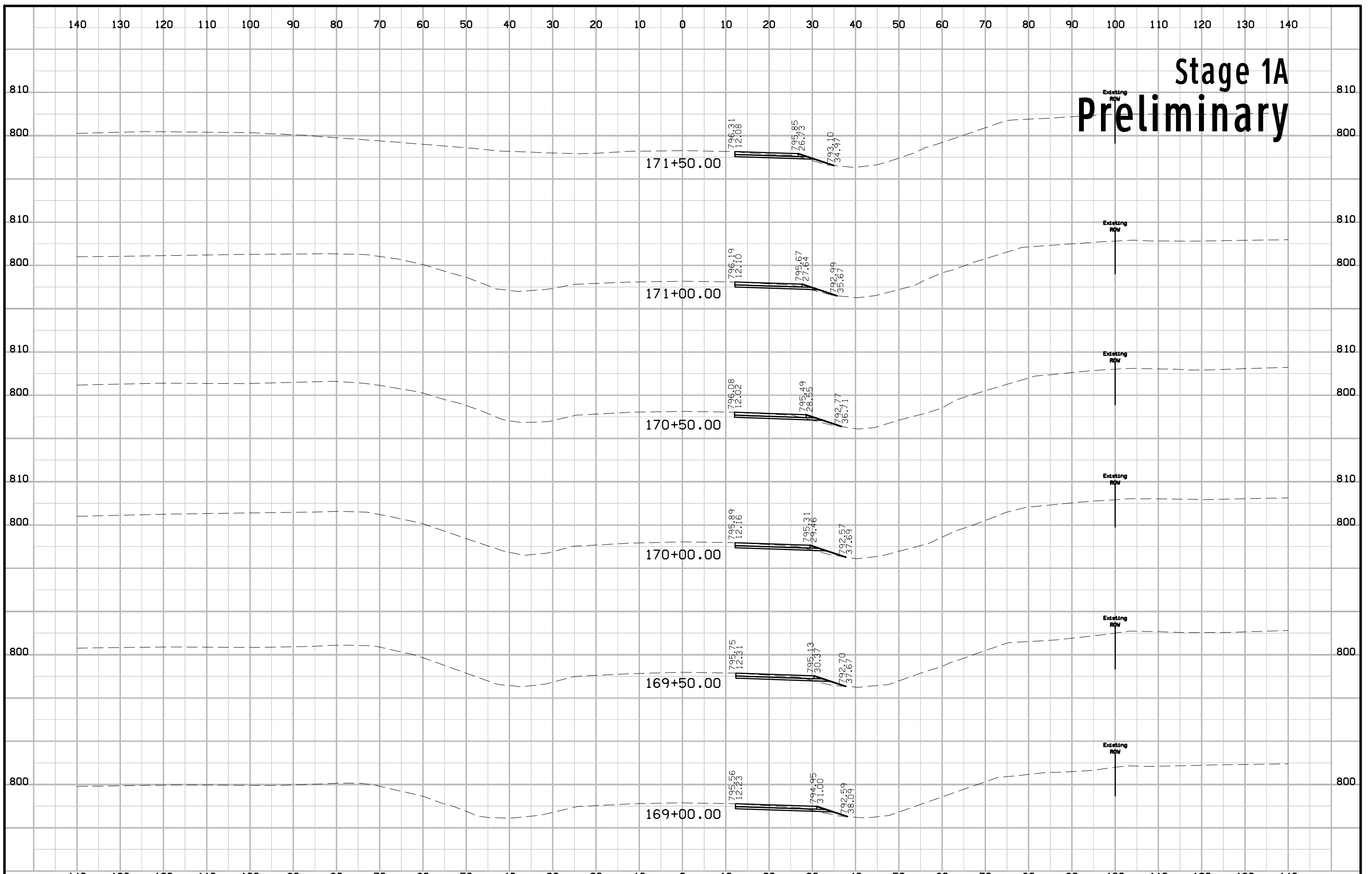
Stage 1A Preliminary



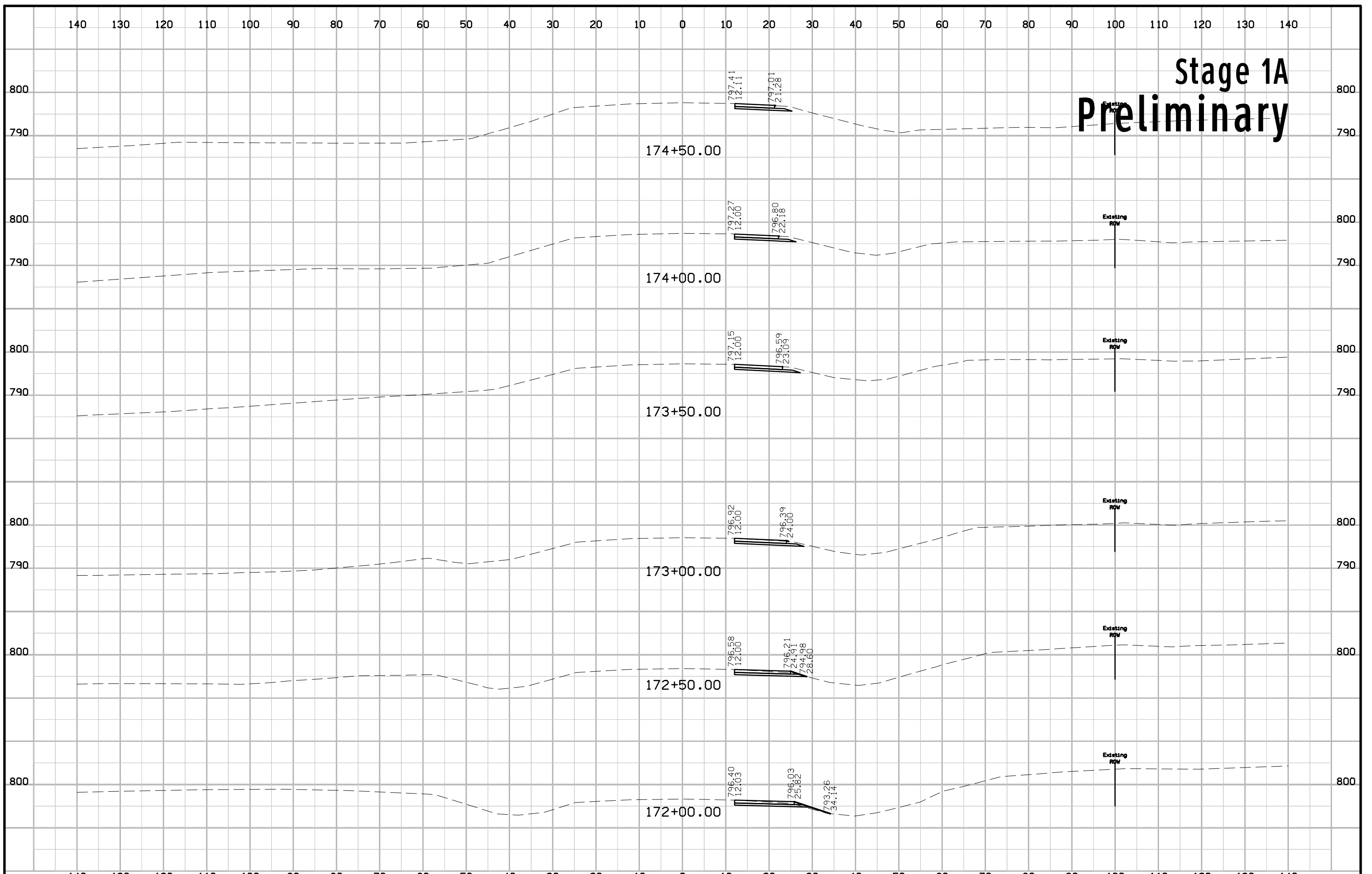
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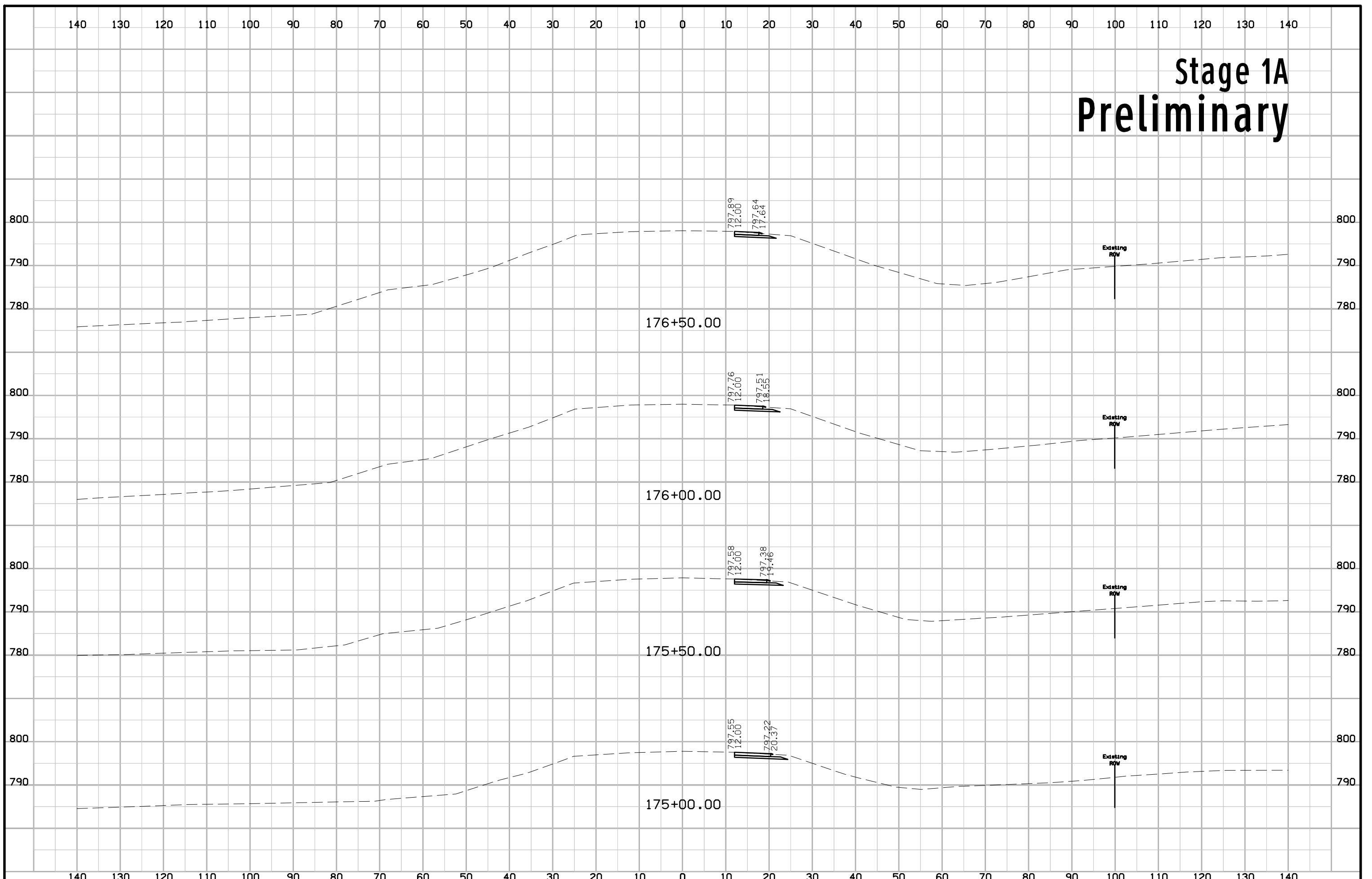
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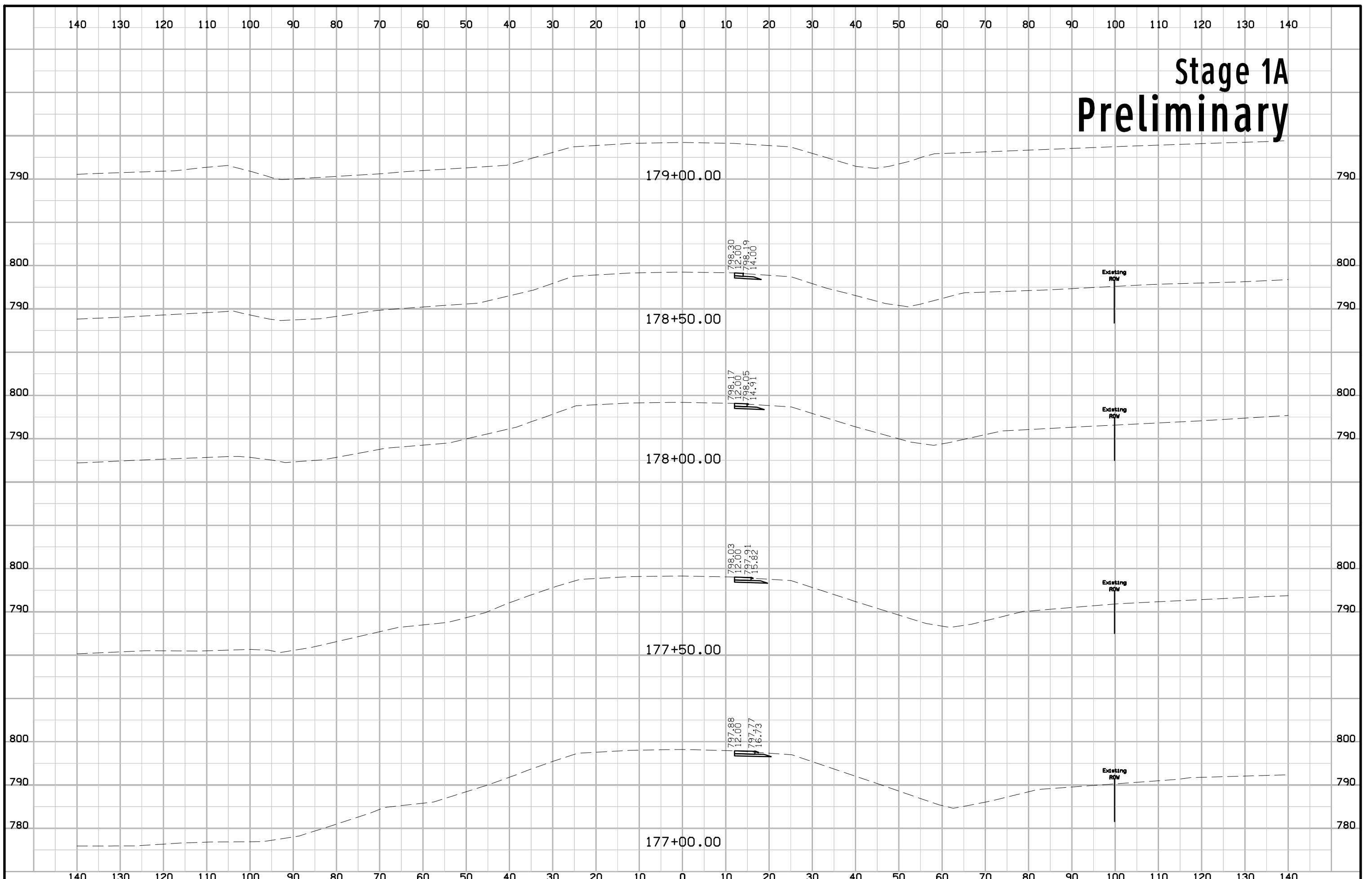
Stage 1A Preliminary



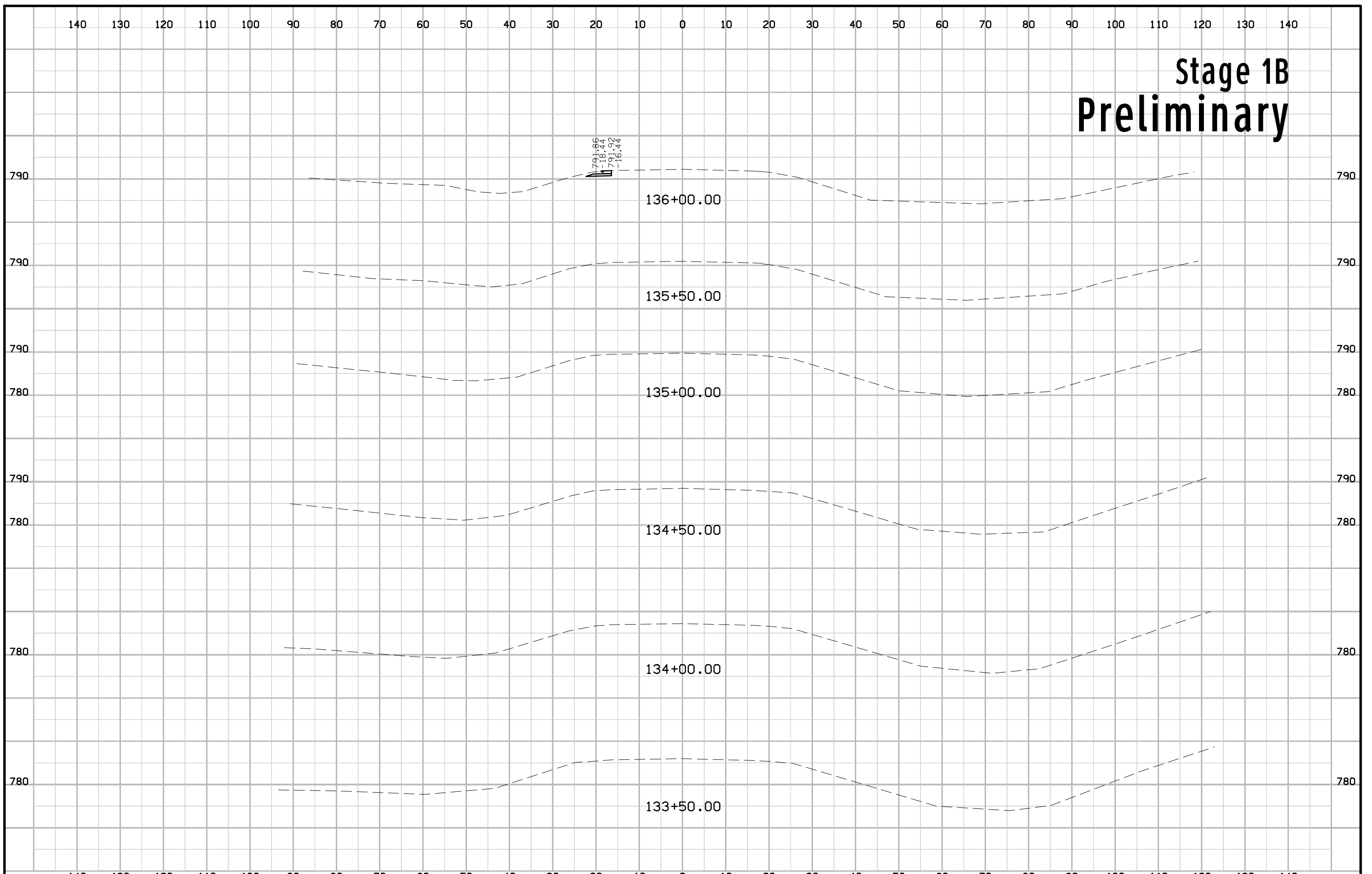
Stage 1A Preliminary



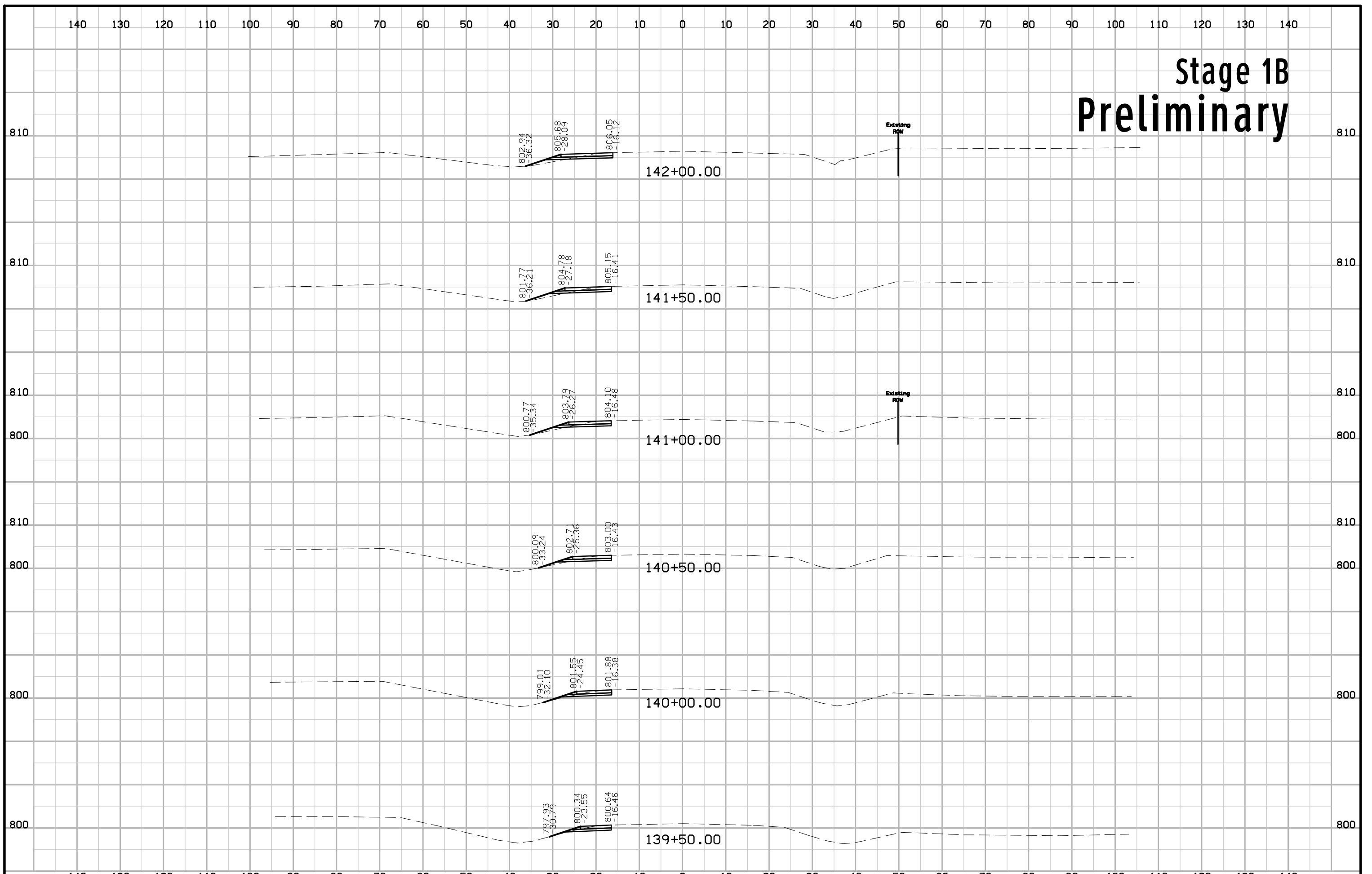
Stage 1A Preliminary



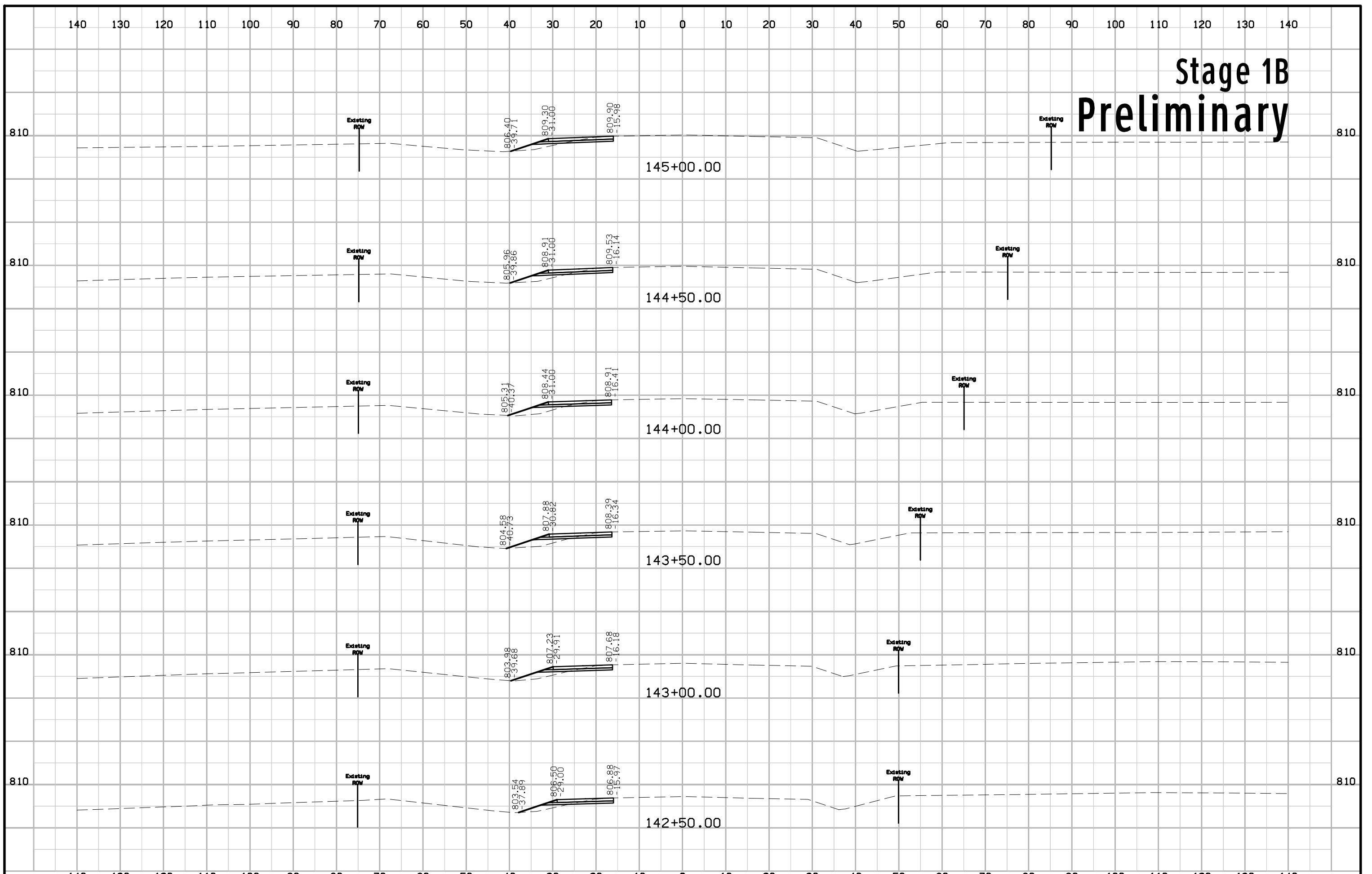
Stage 1B Preliminary



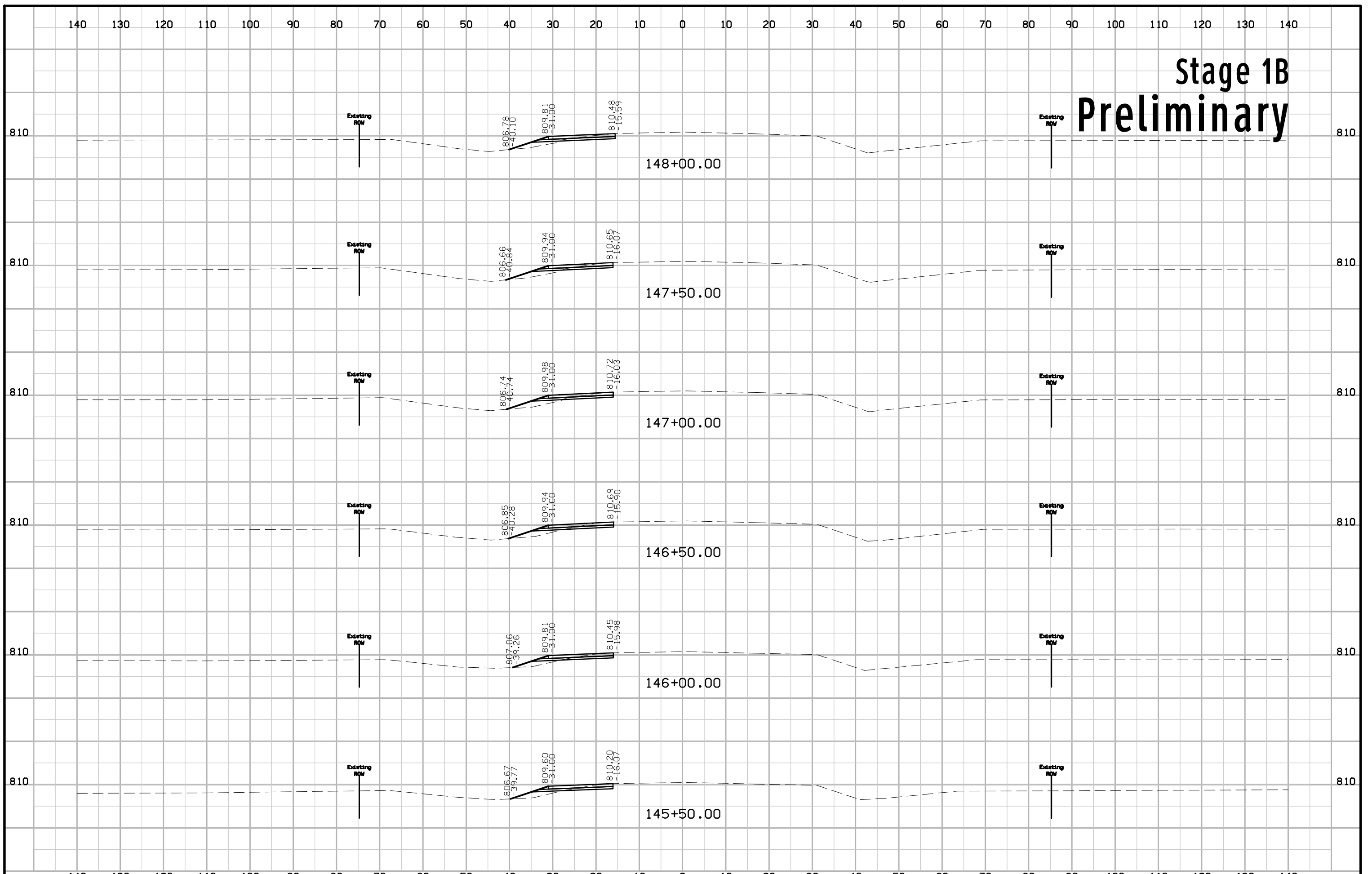
Stage 1B Preliminary



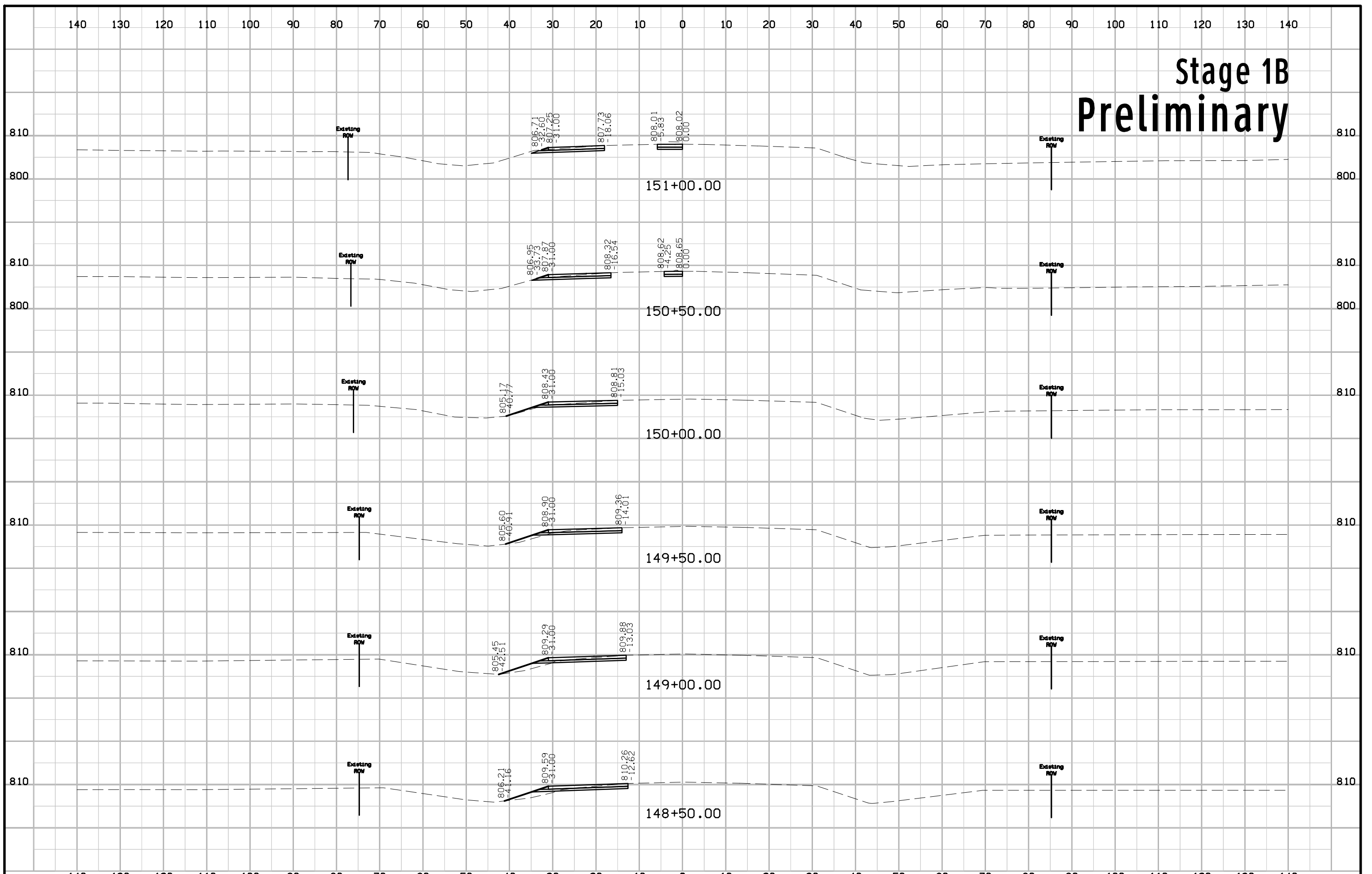
Stage 1B Preliminary



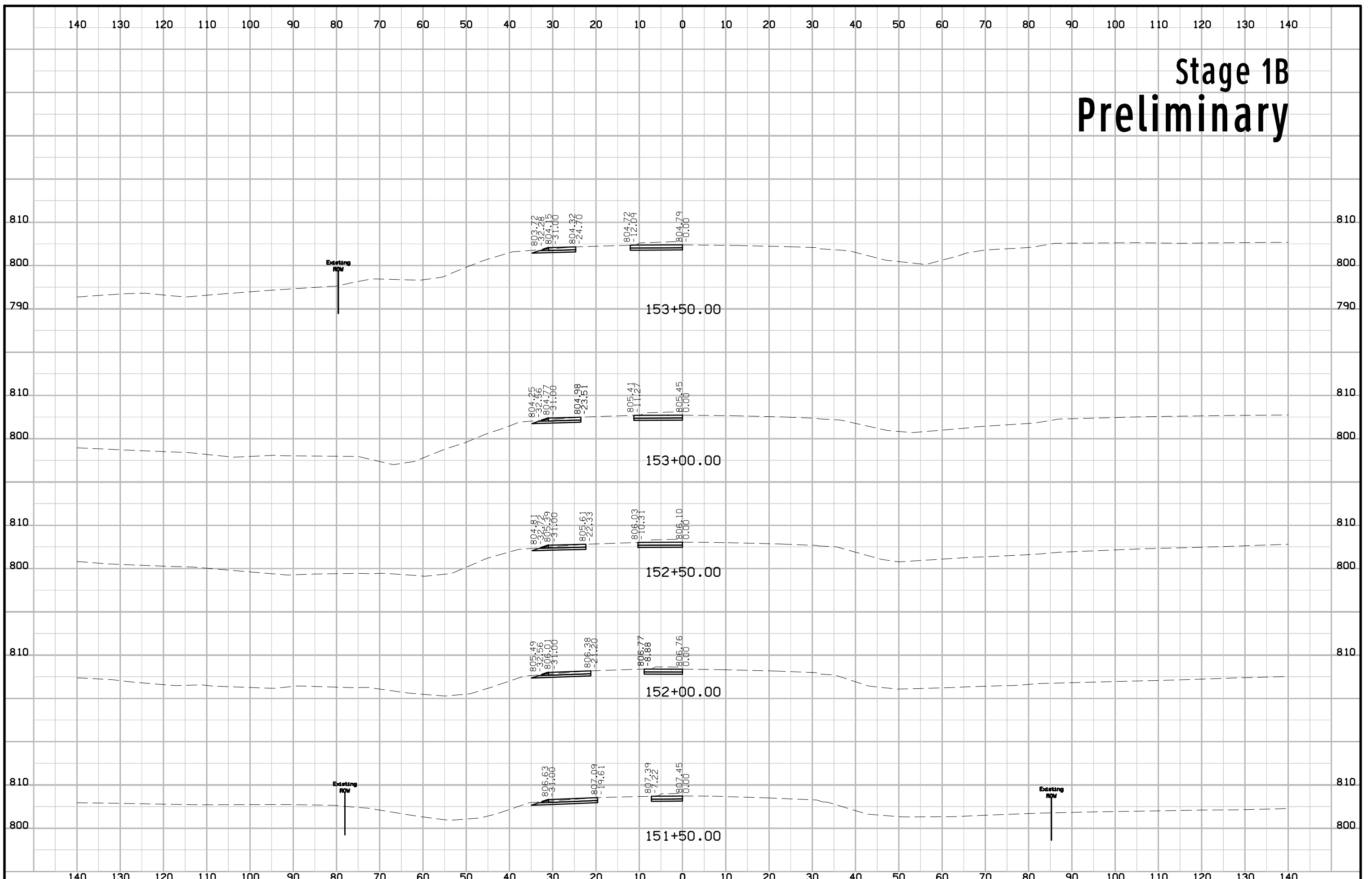
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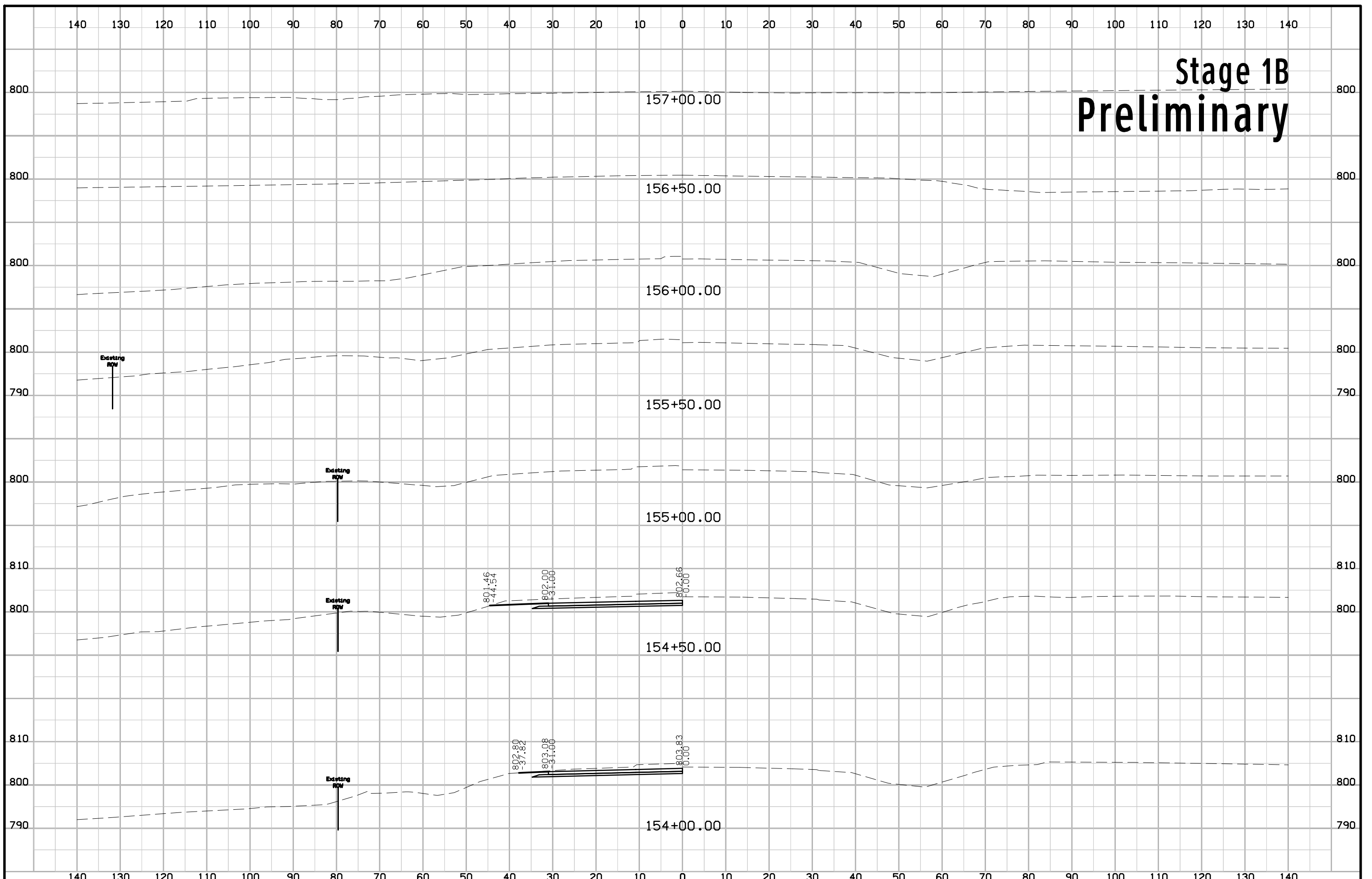
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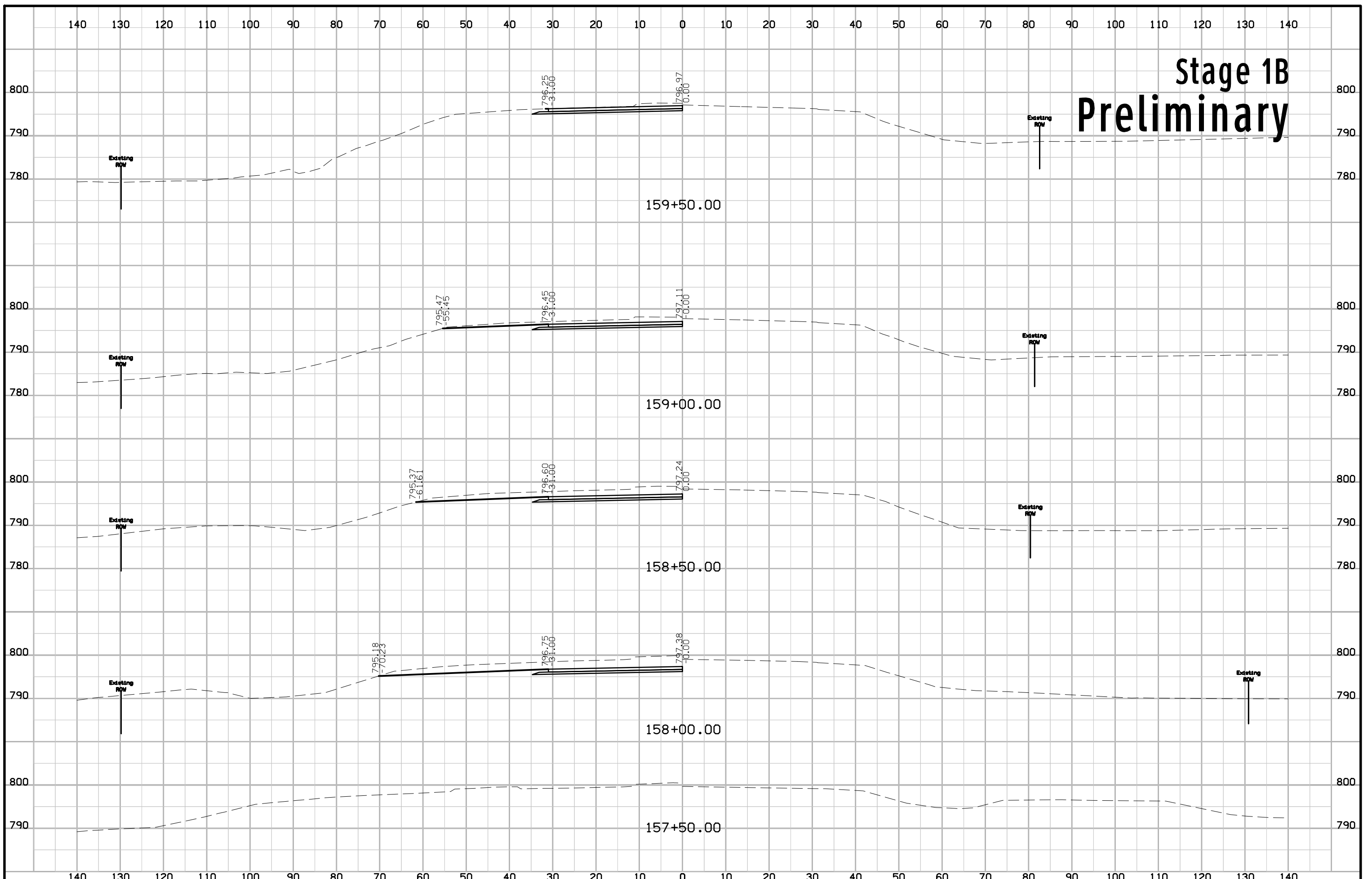
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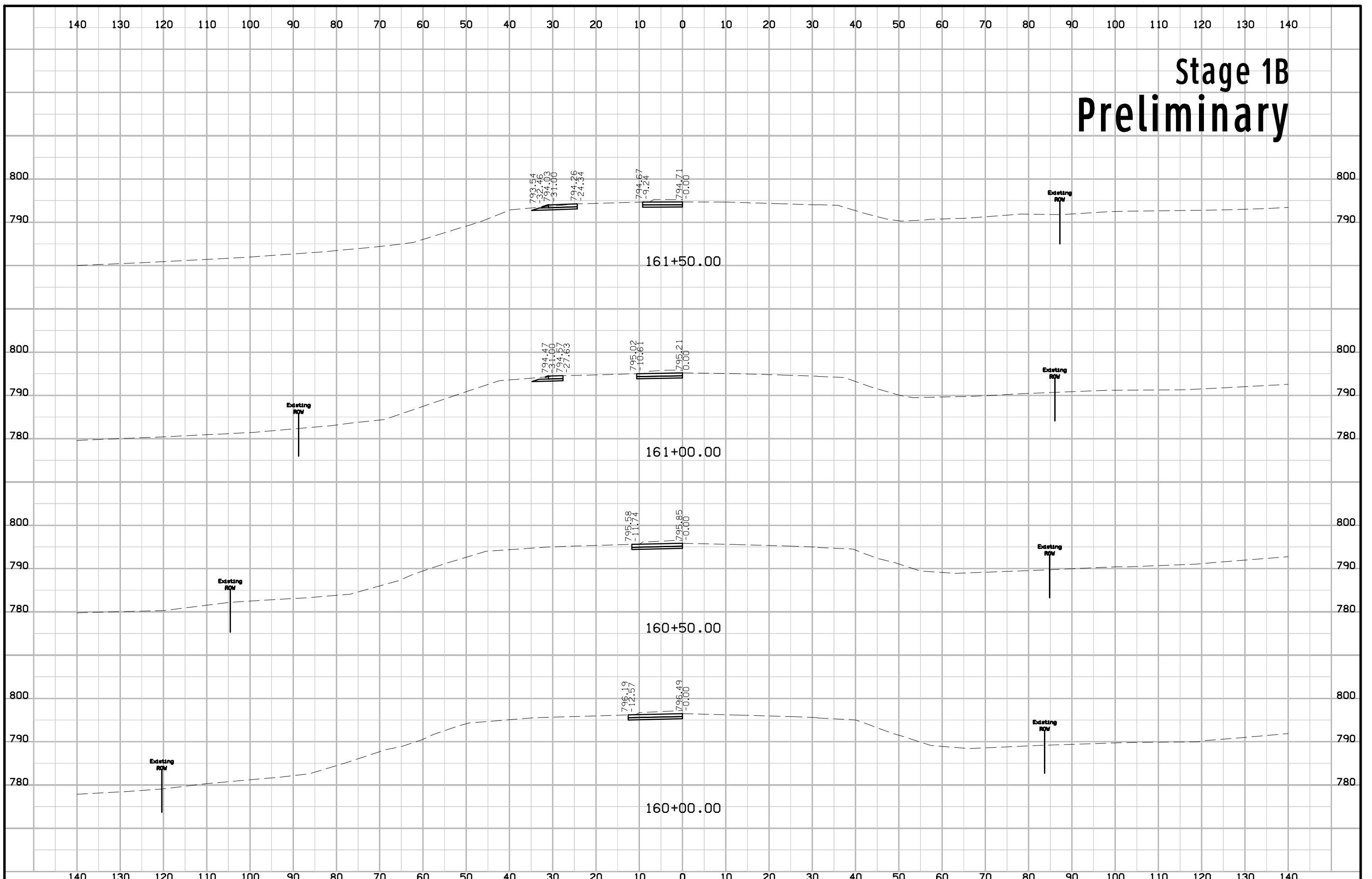
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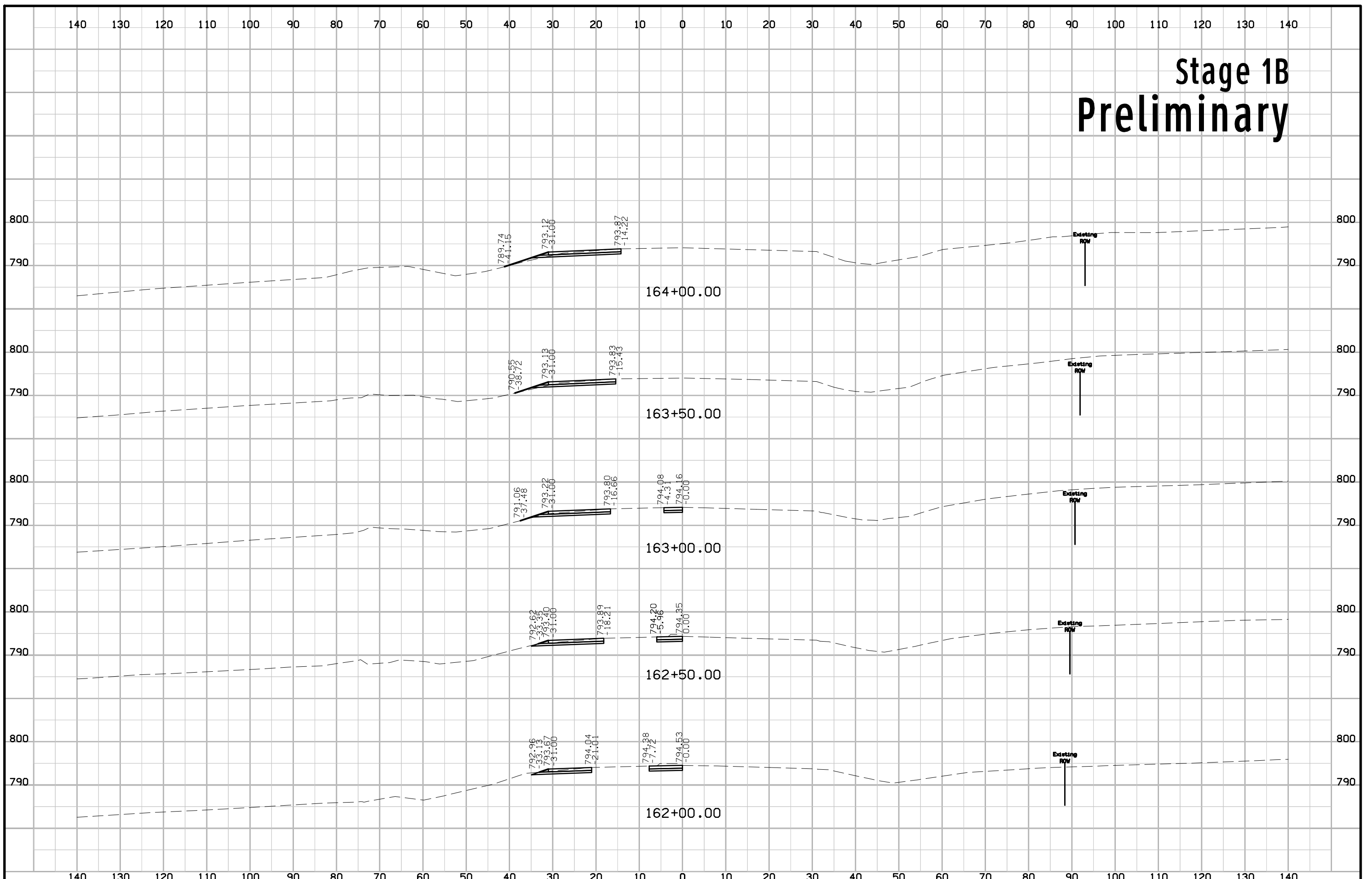
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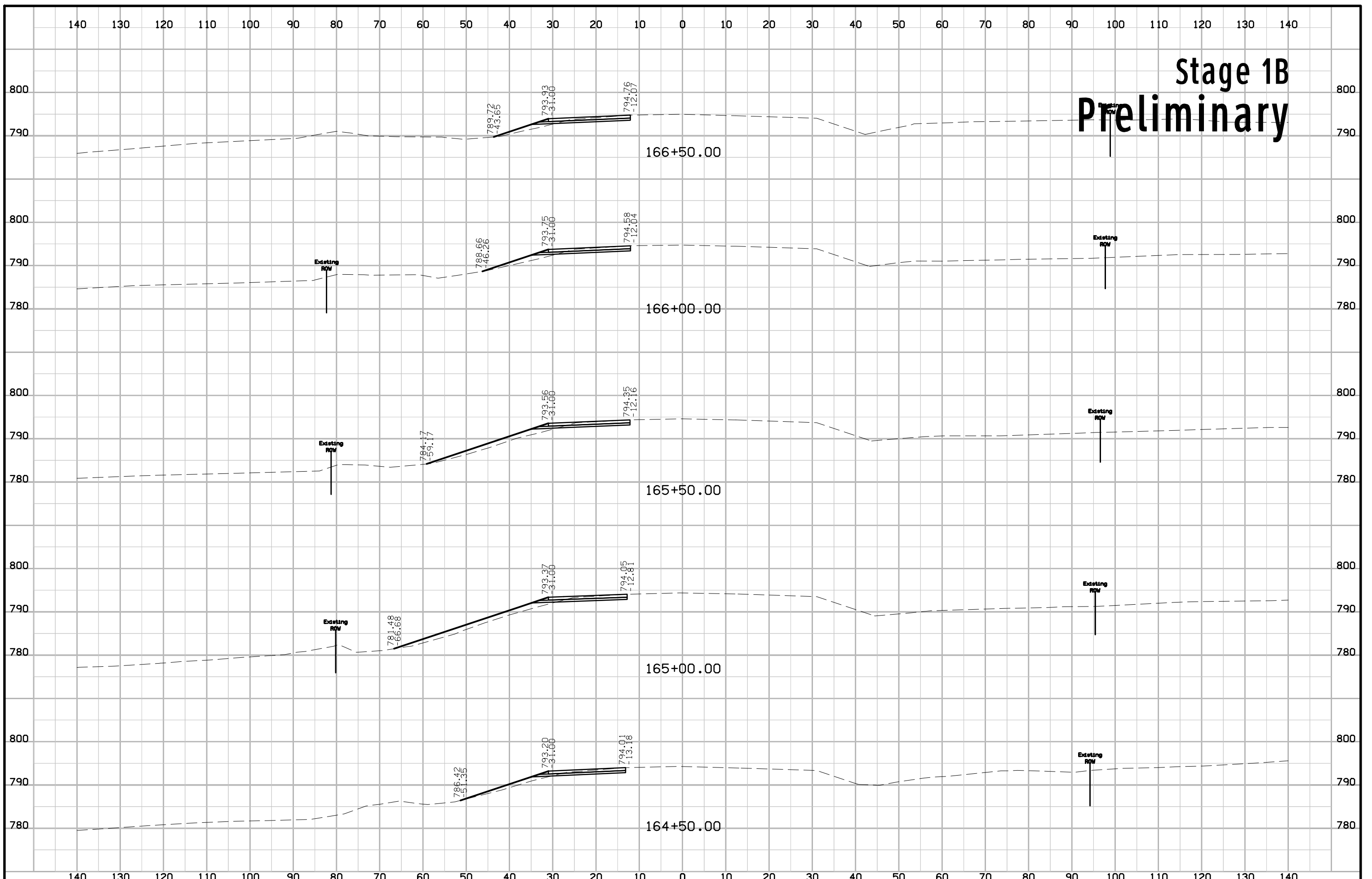
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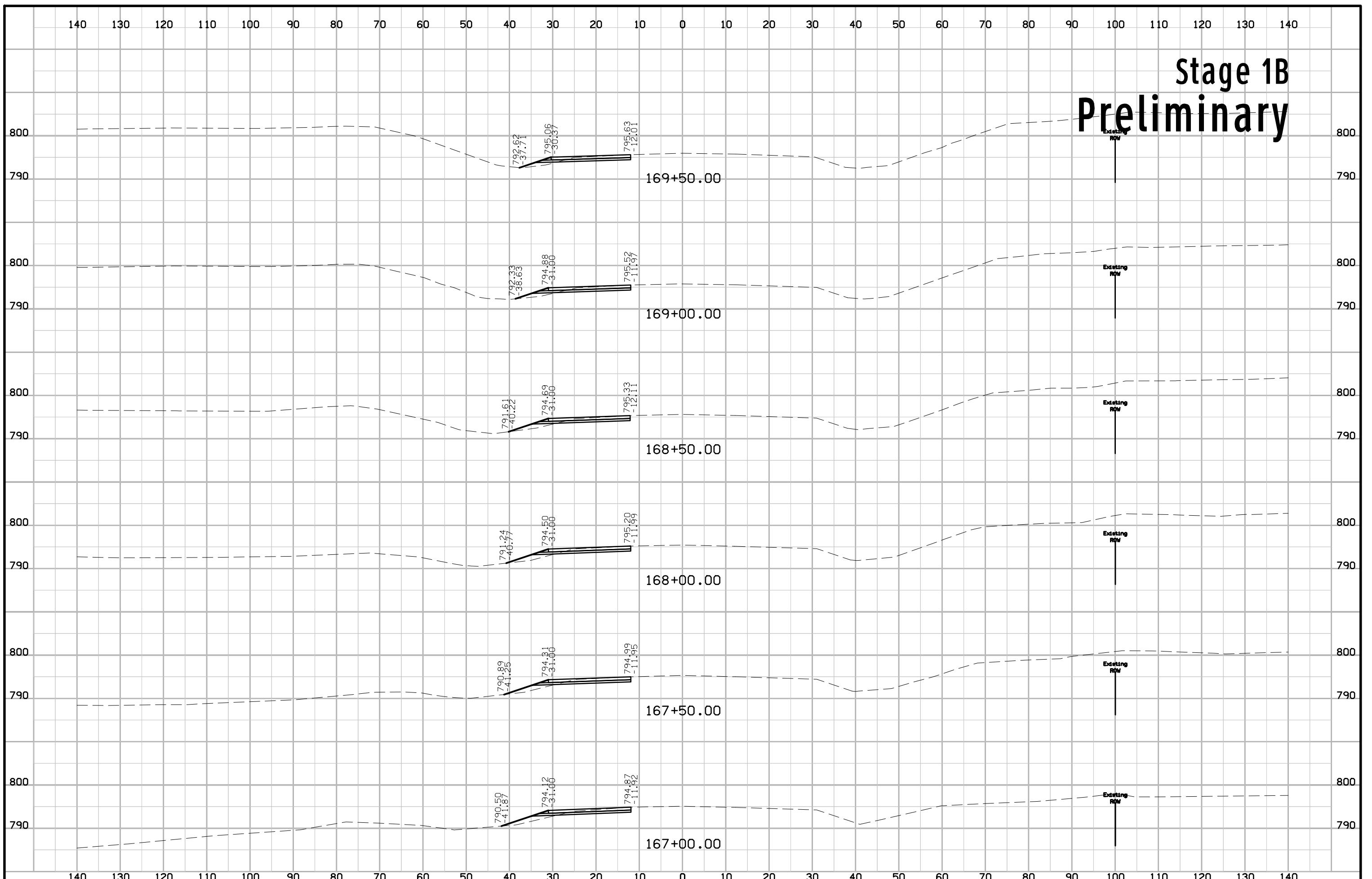
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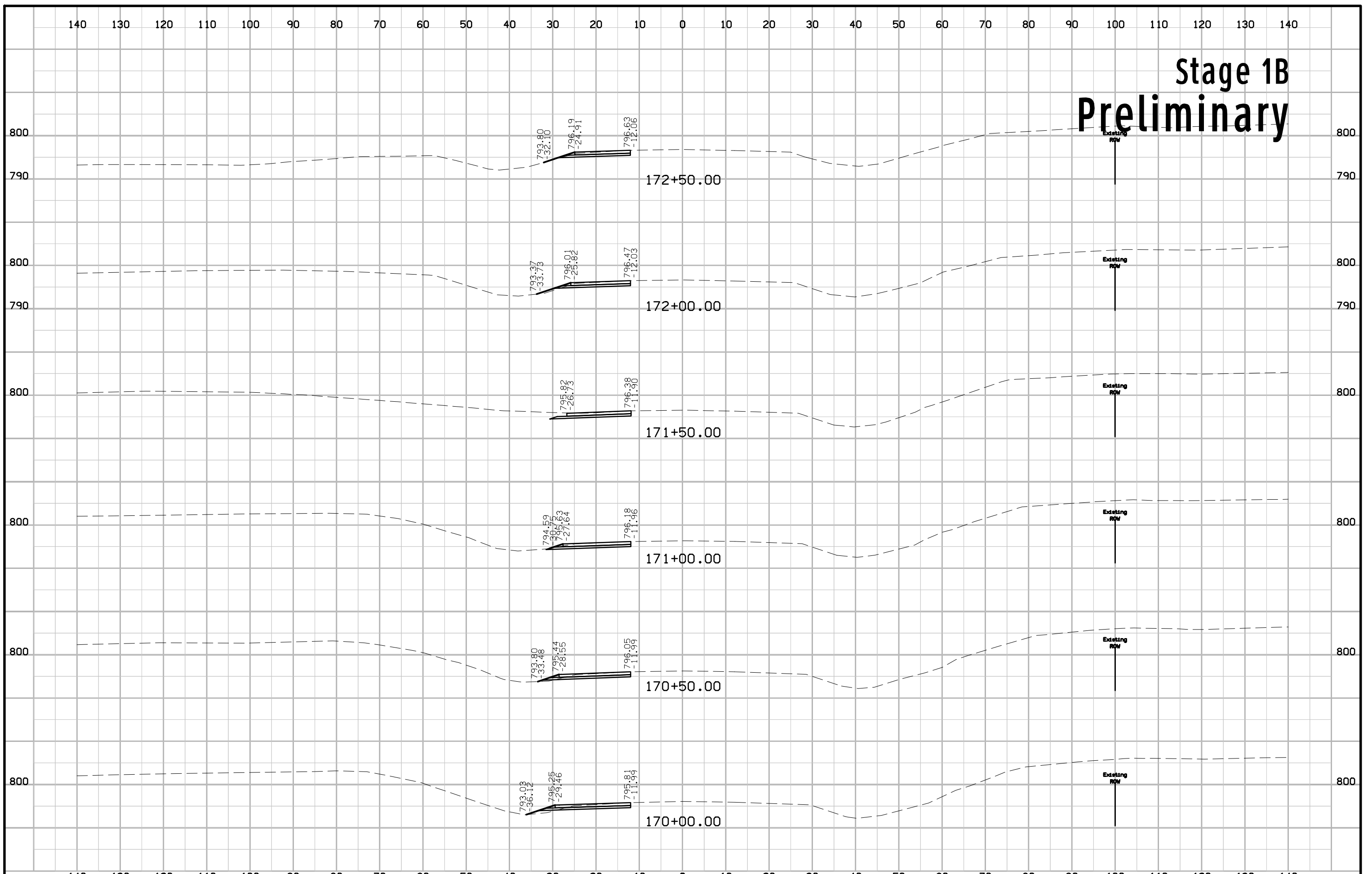
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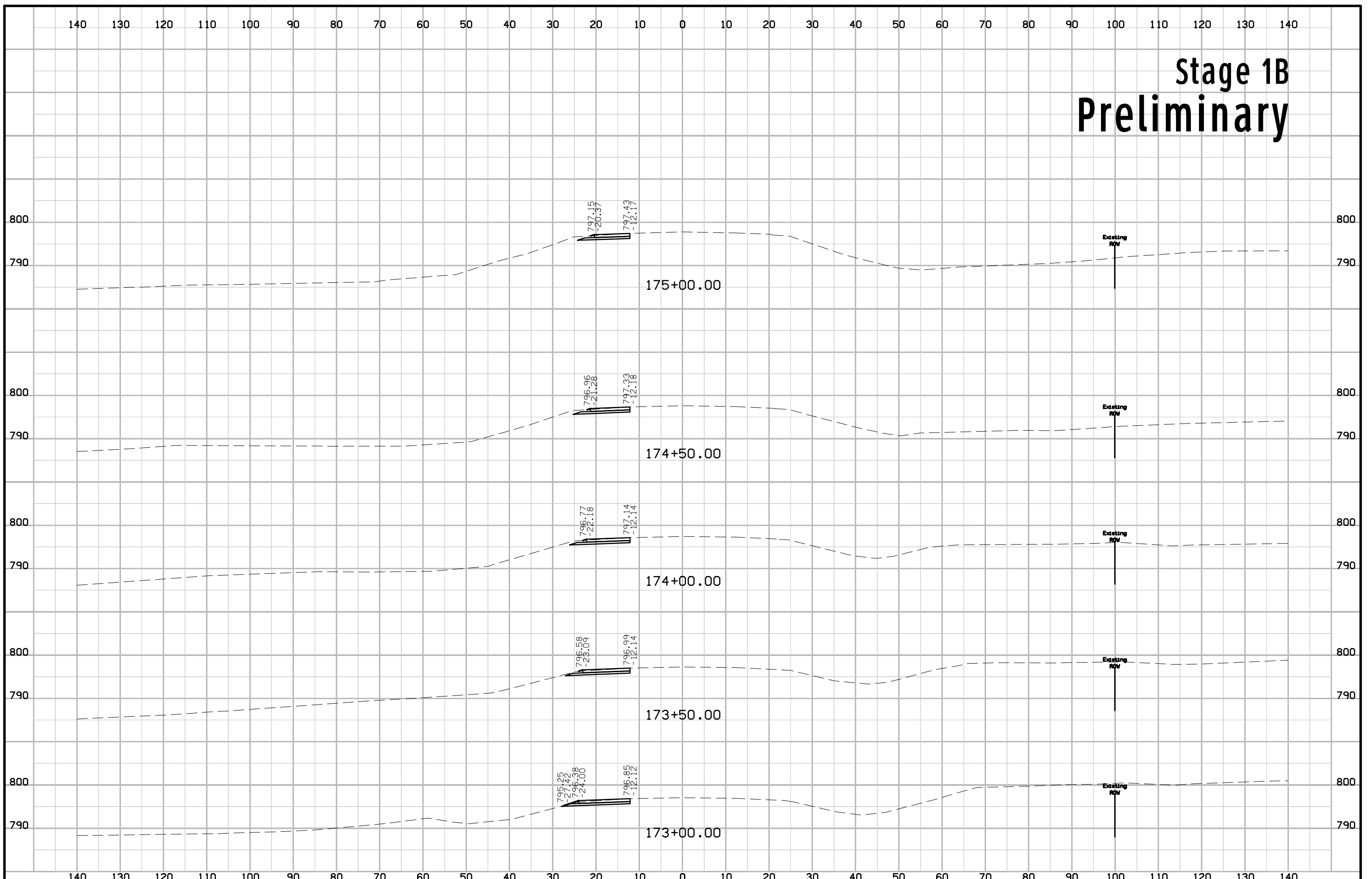
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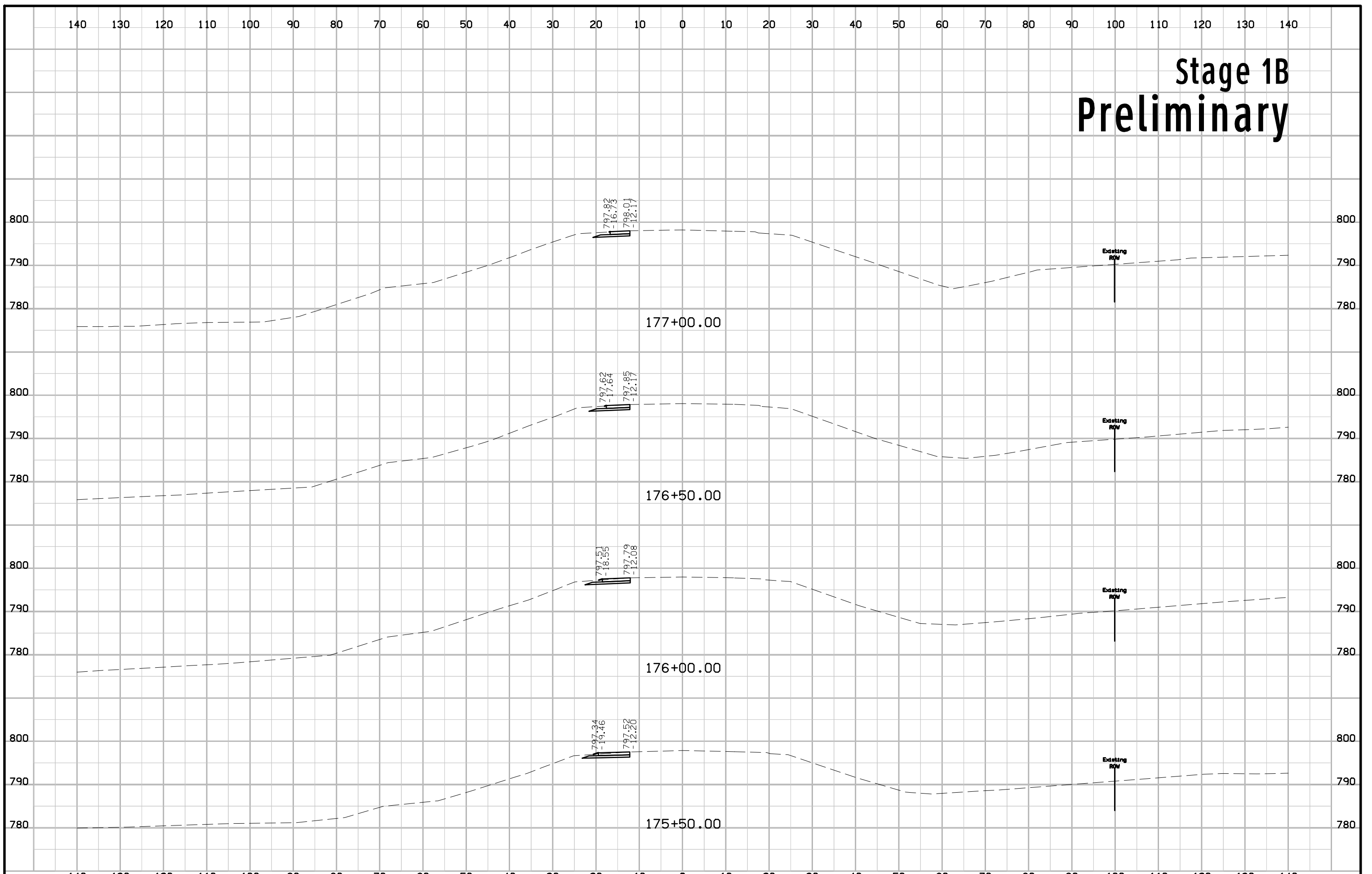
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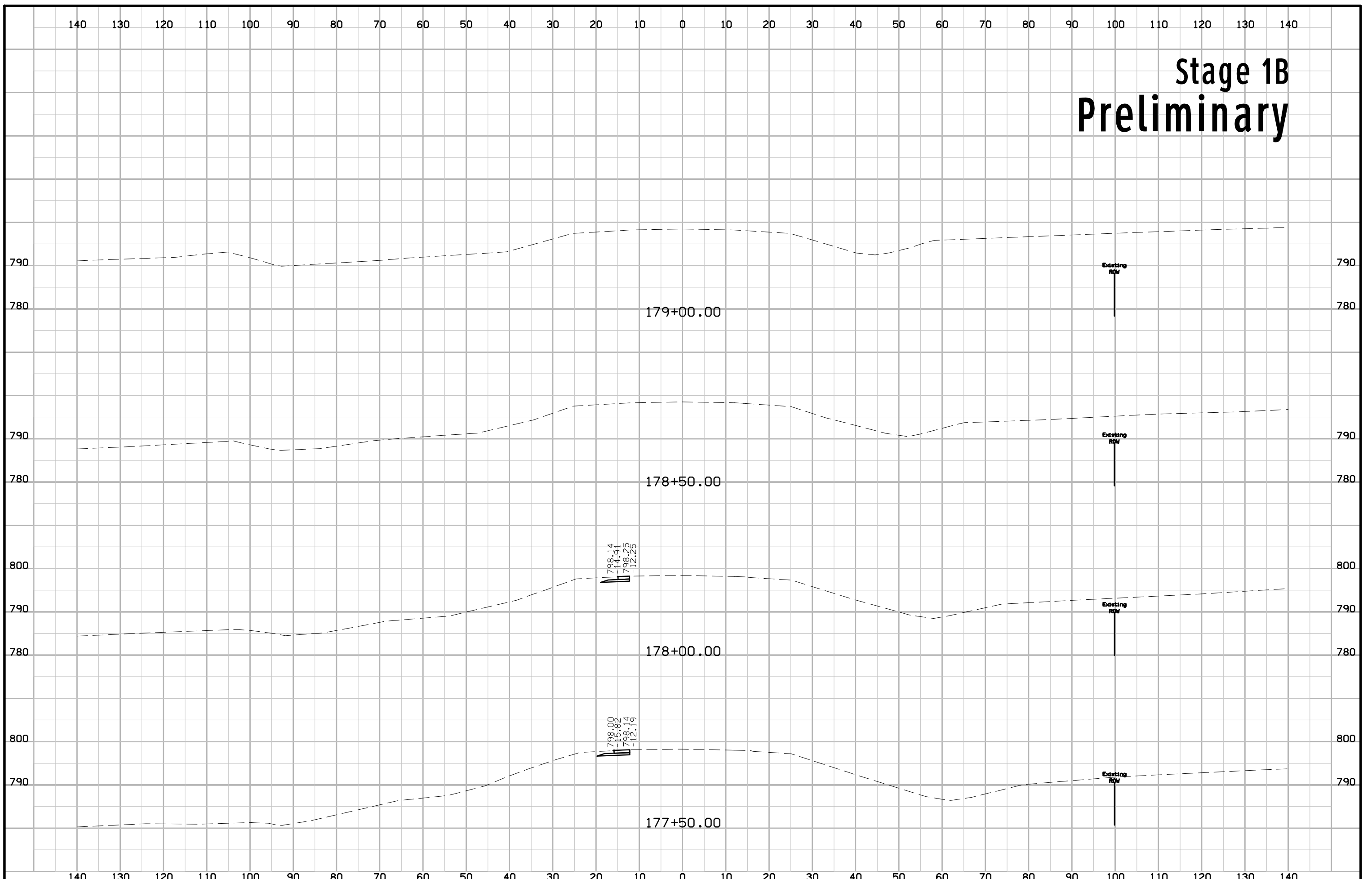
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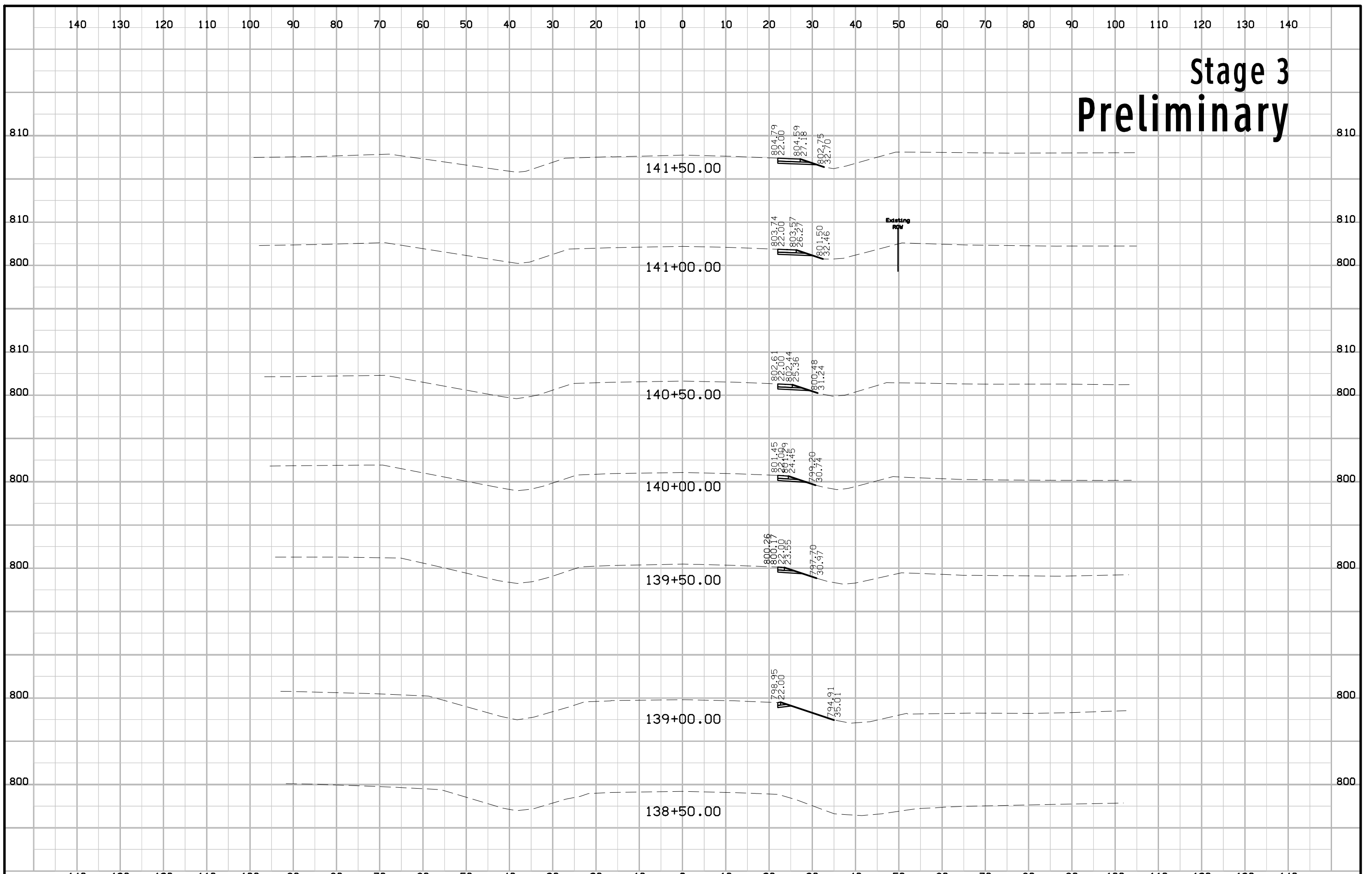
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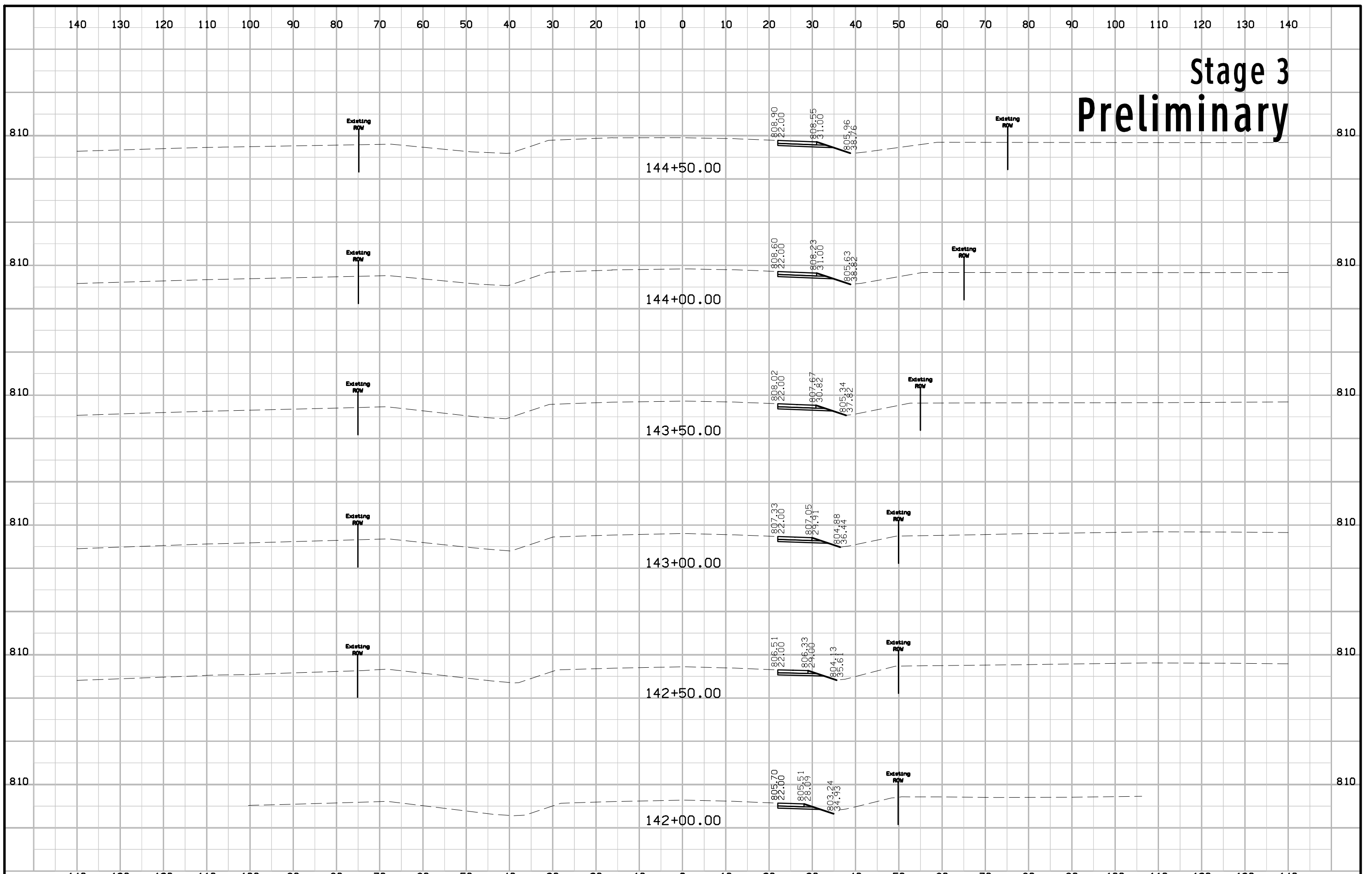
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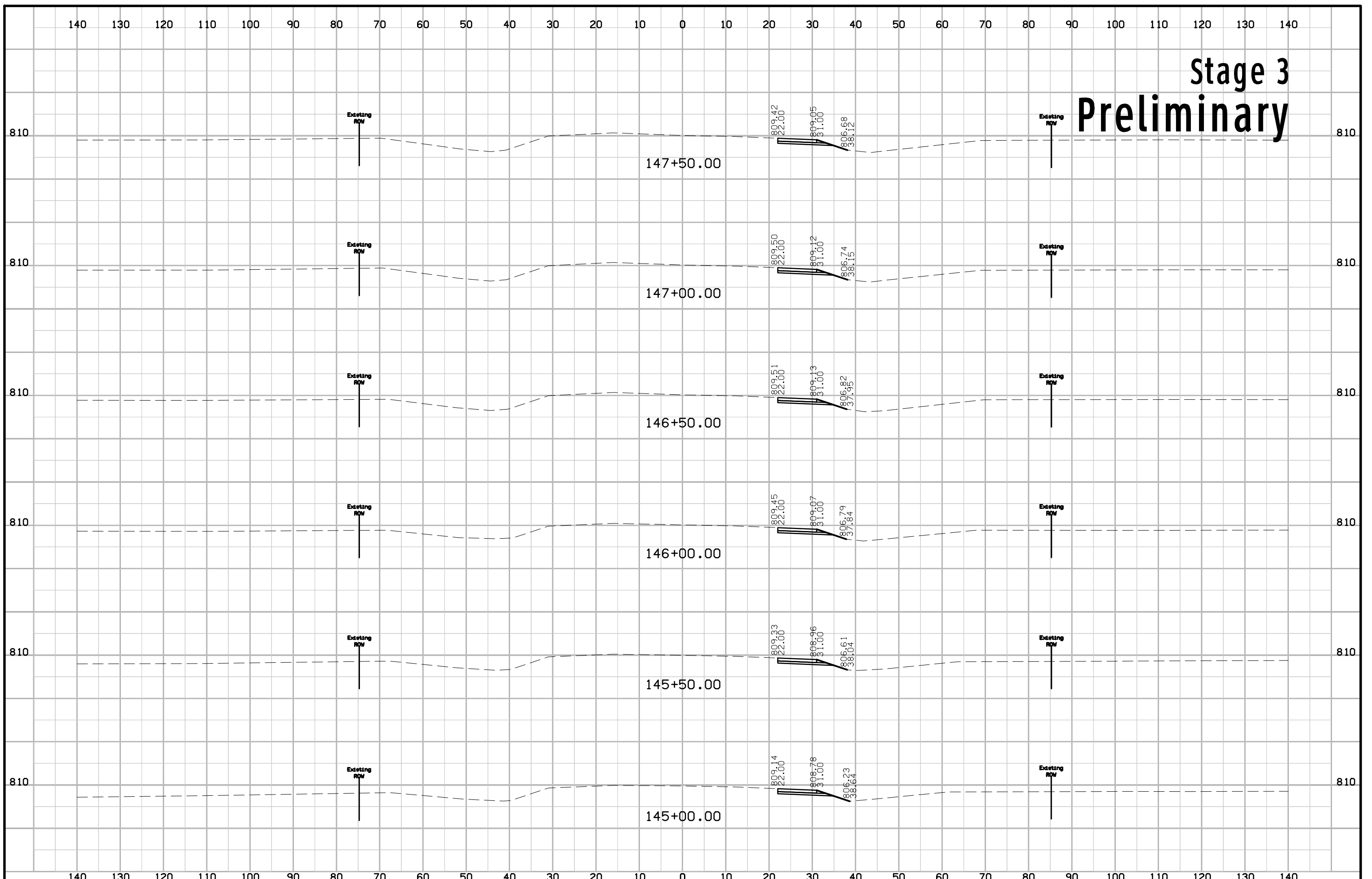
Stage 3 Preliminary



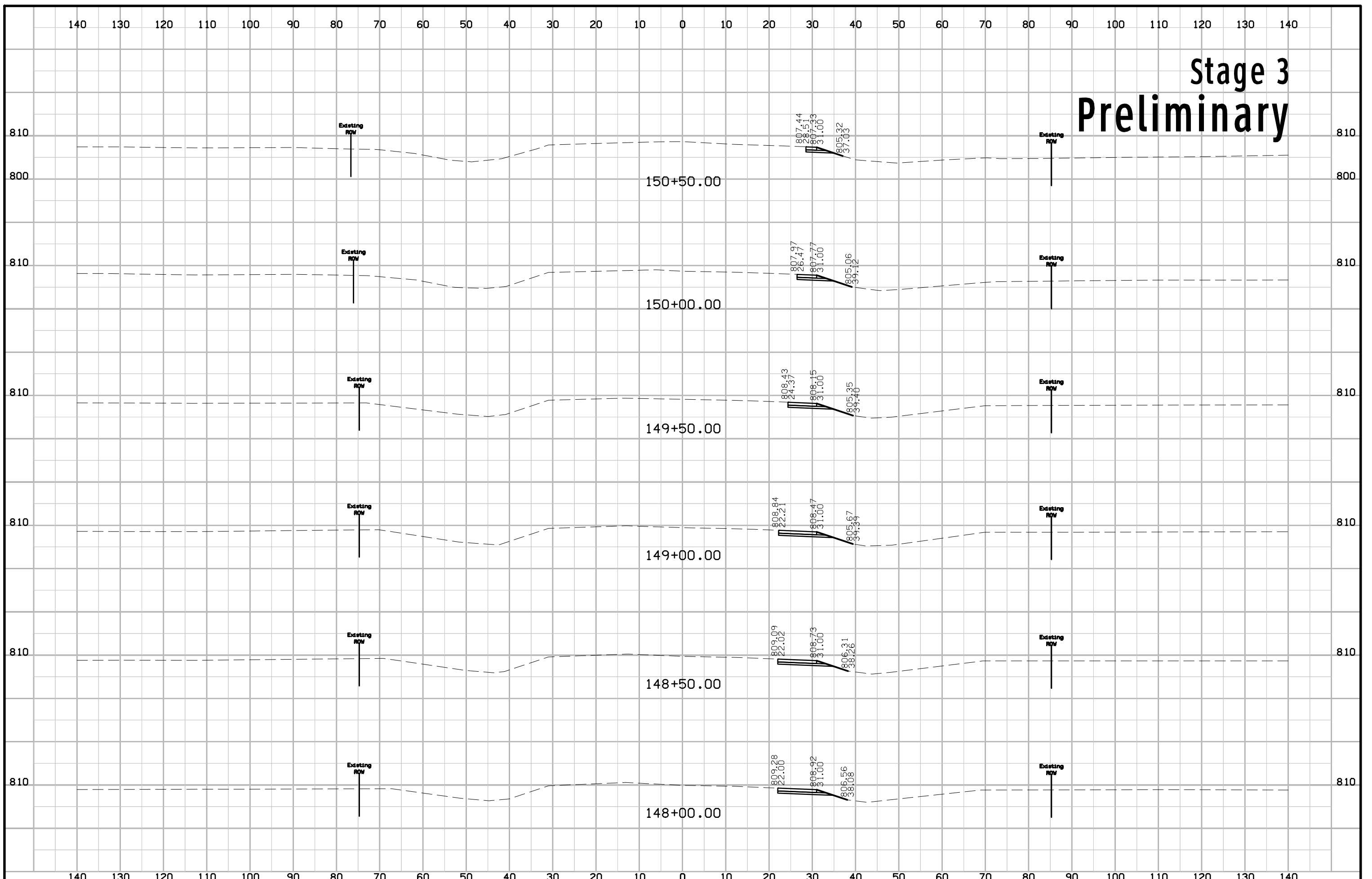
Stage 3 Preliminary

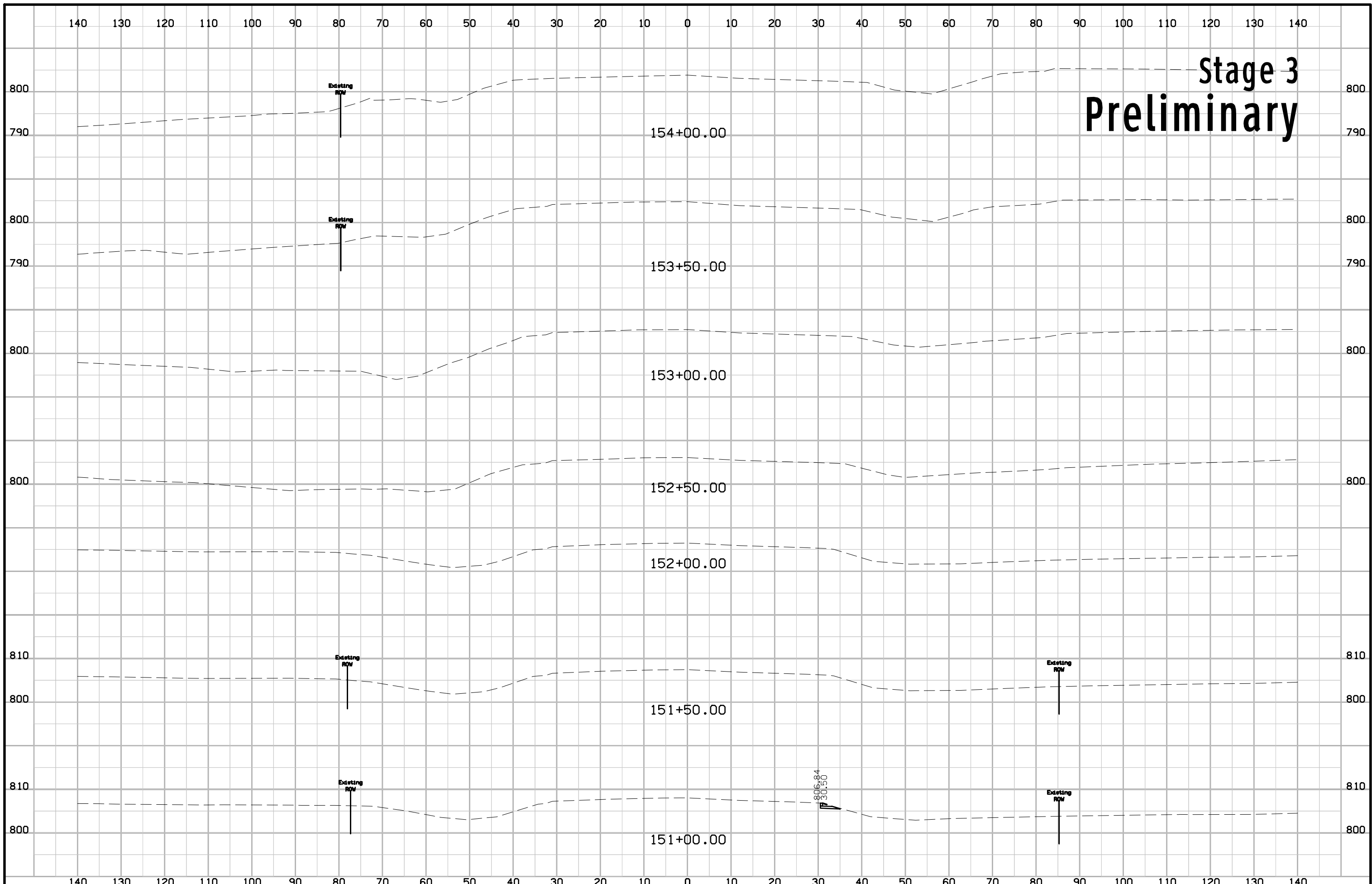


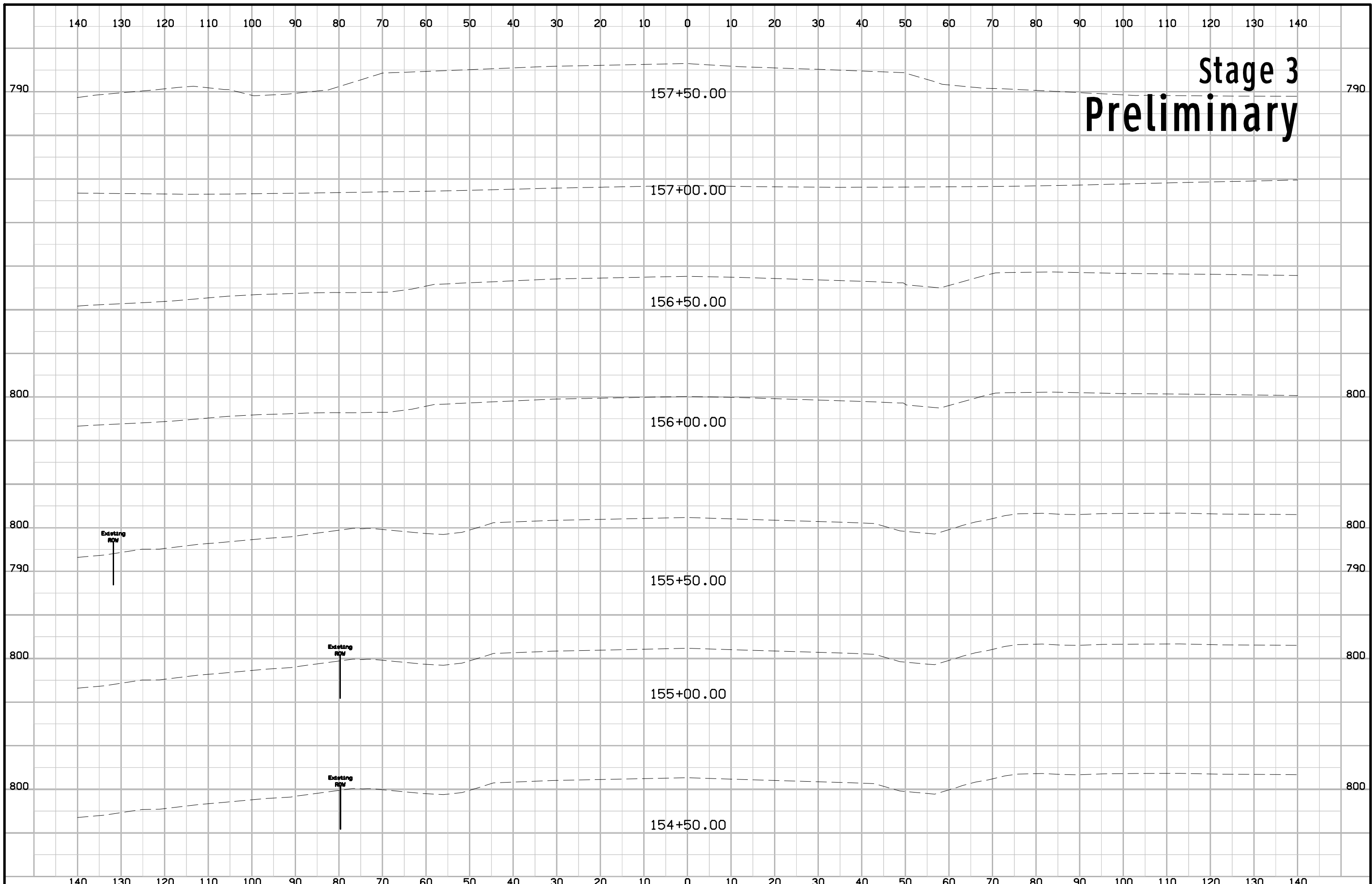
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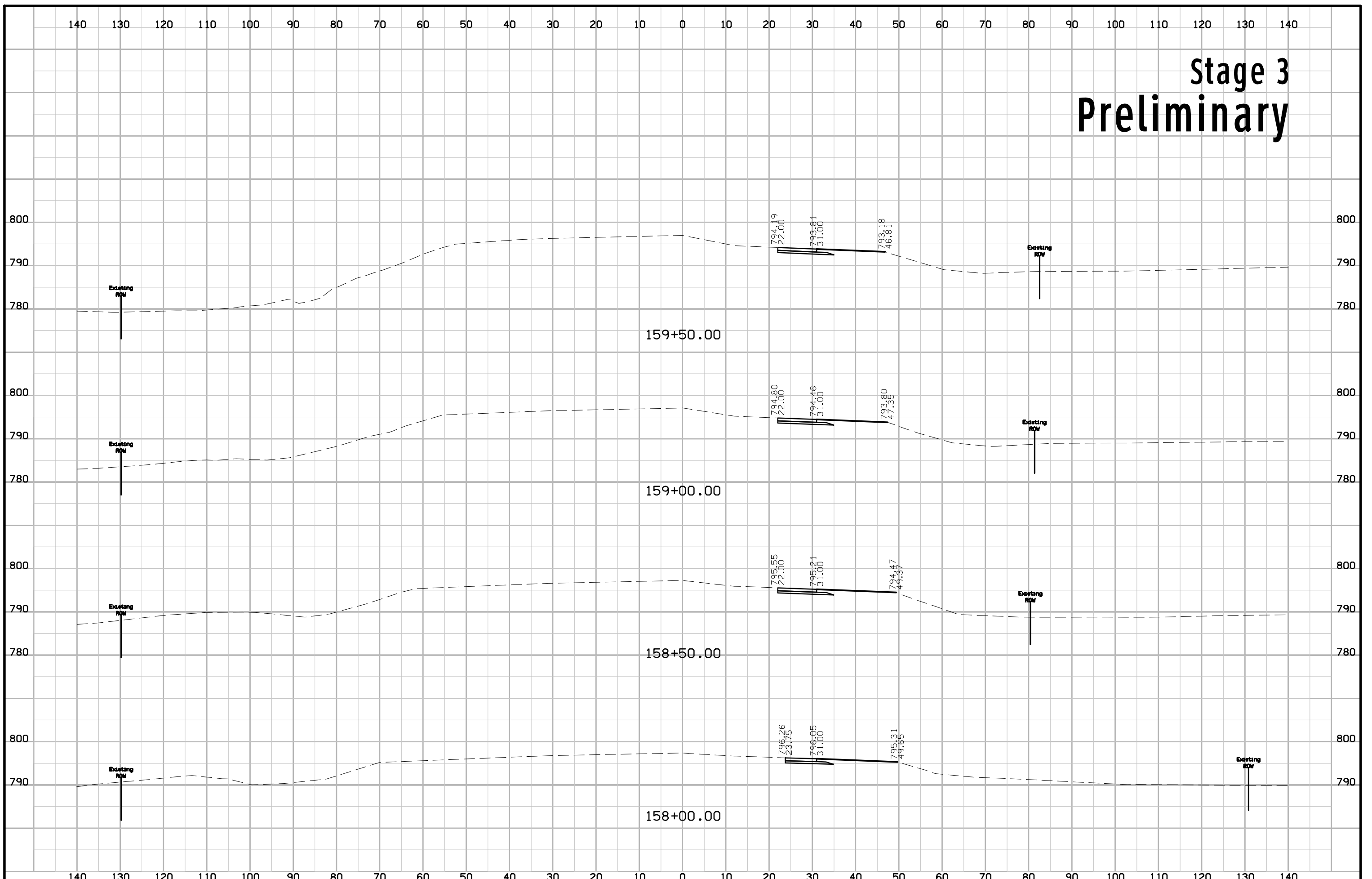
Stage 3 Preliminary



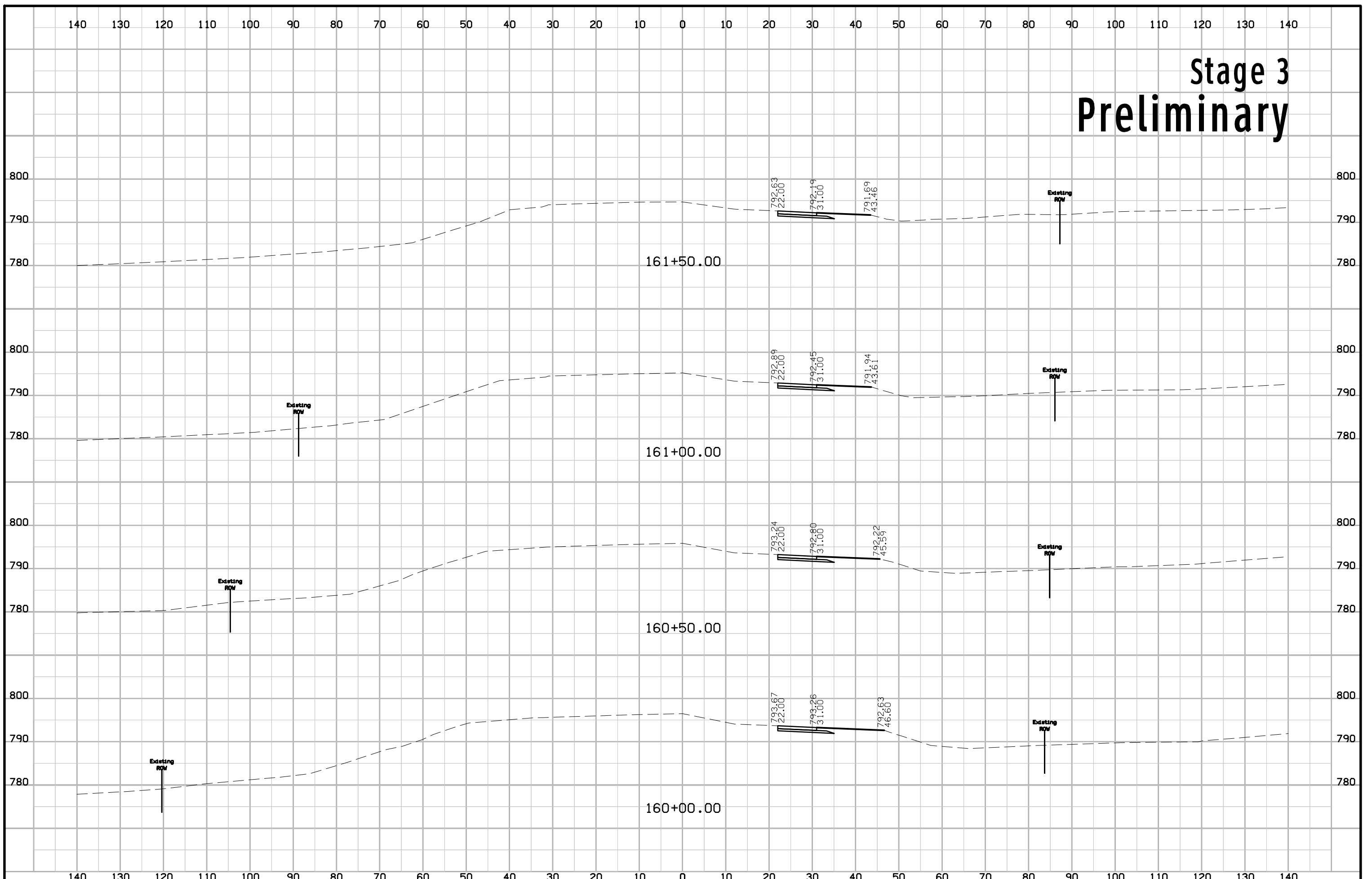




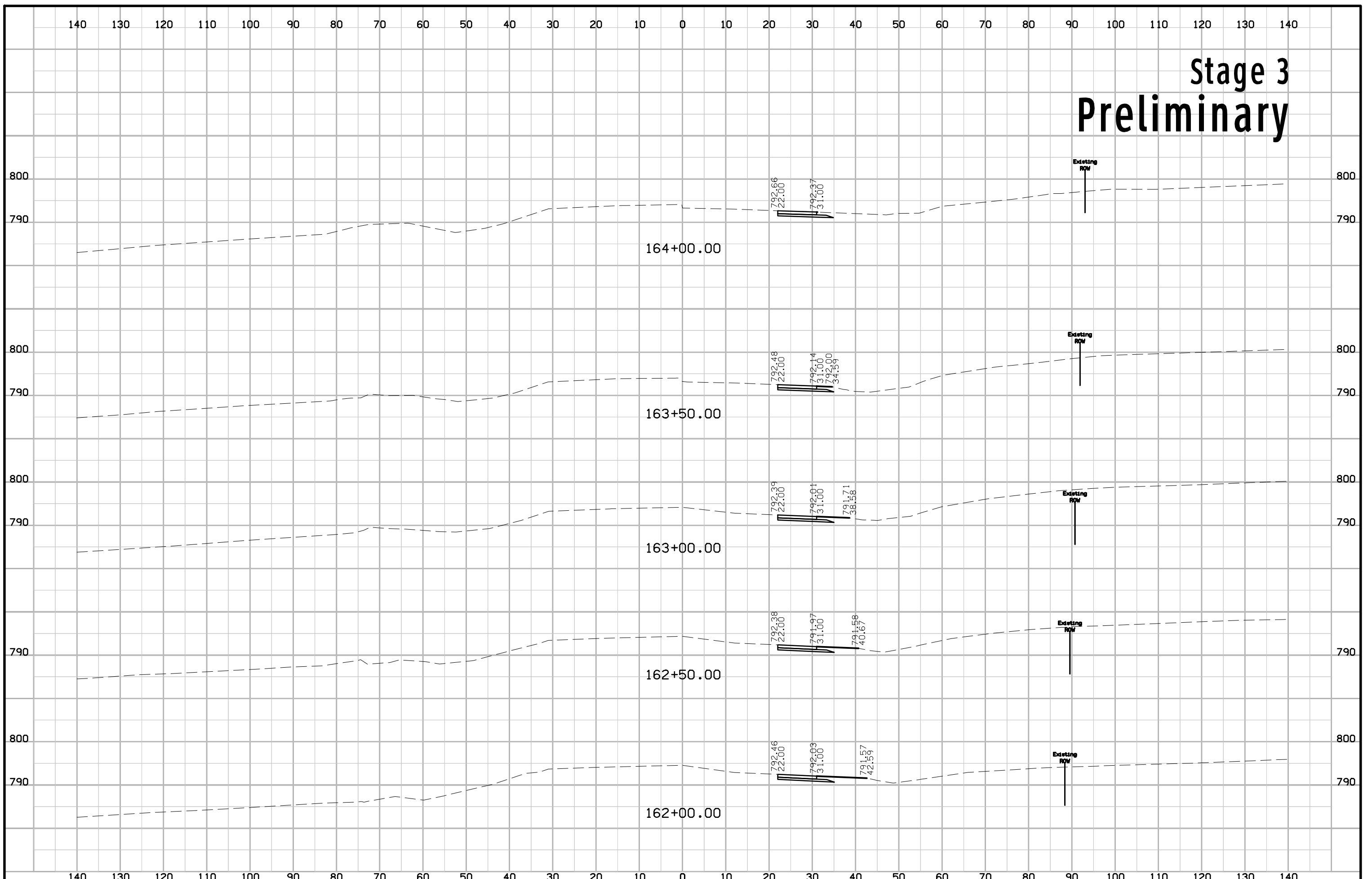
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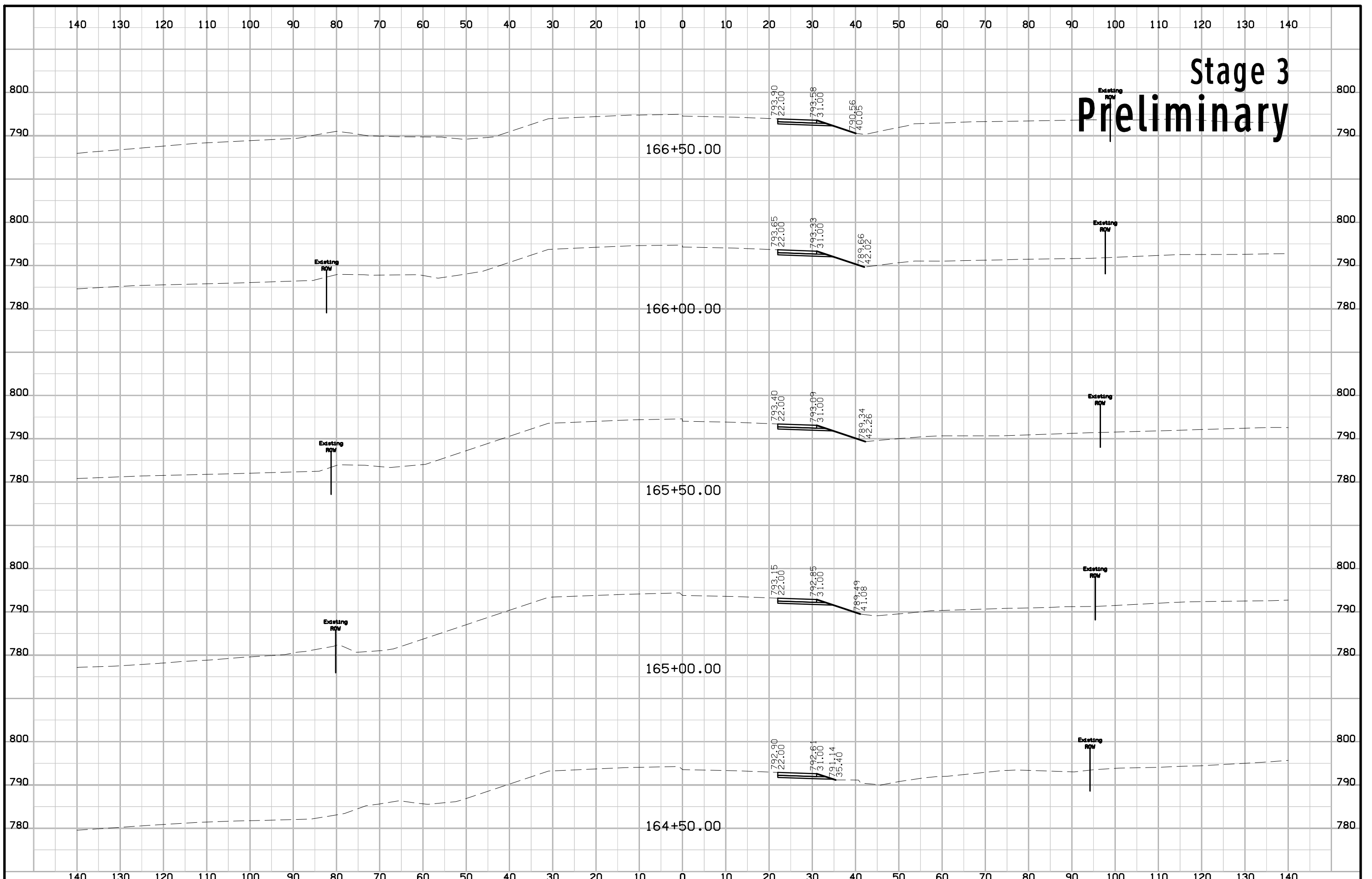
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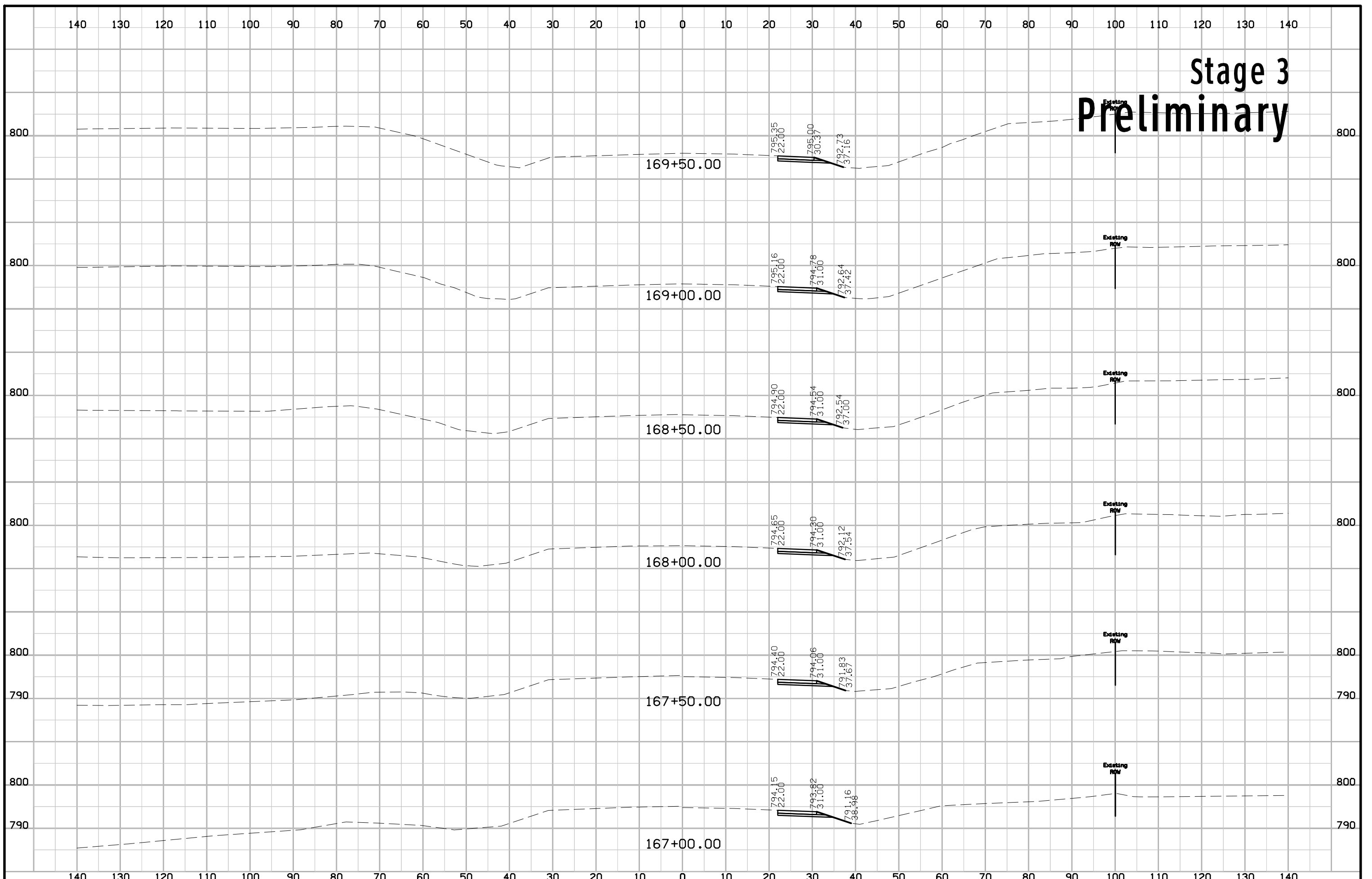
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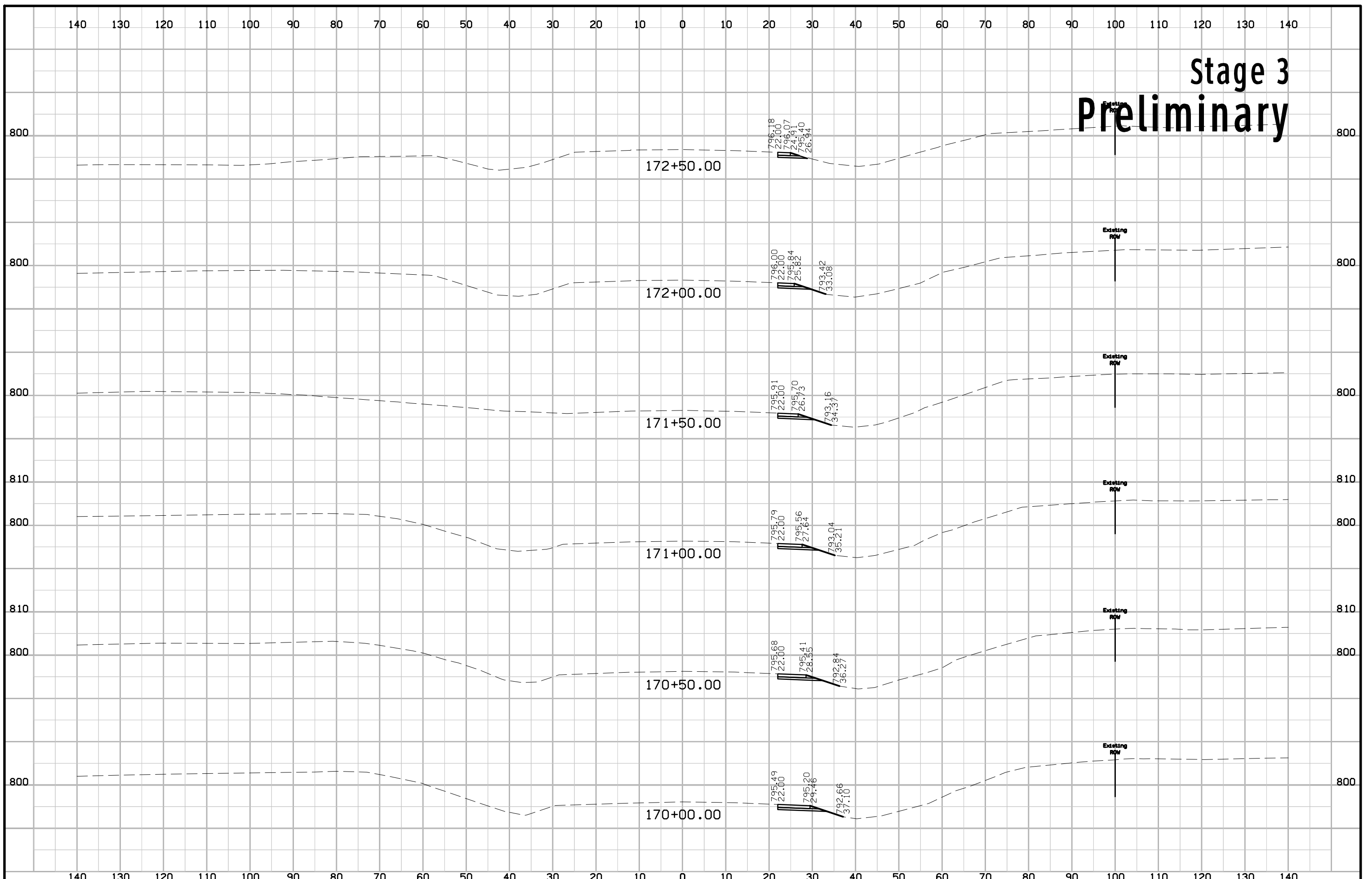
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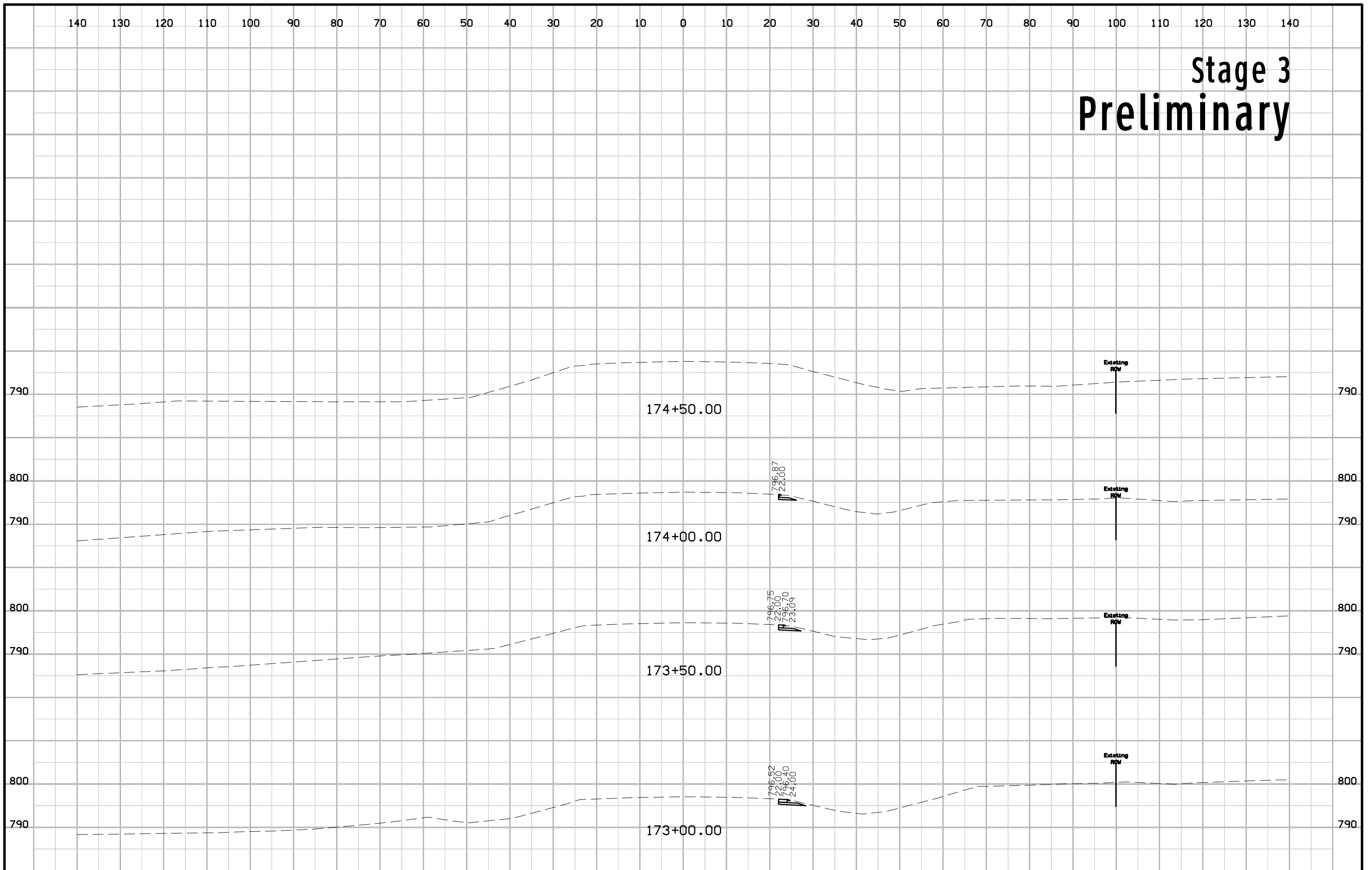
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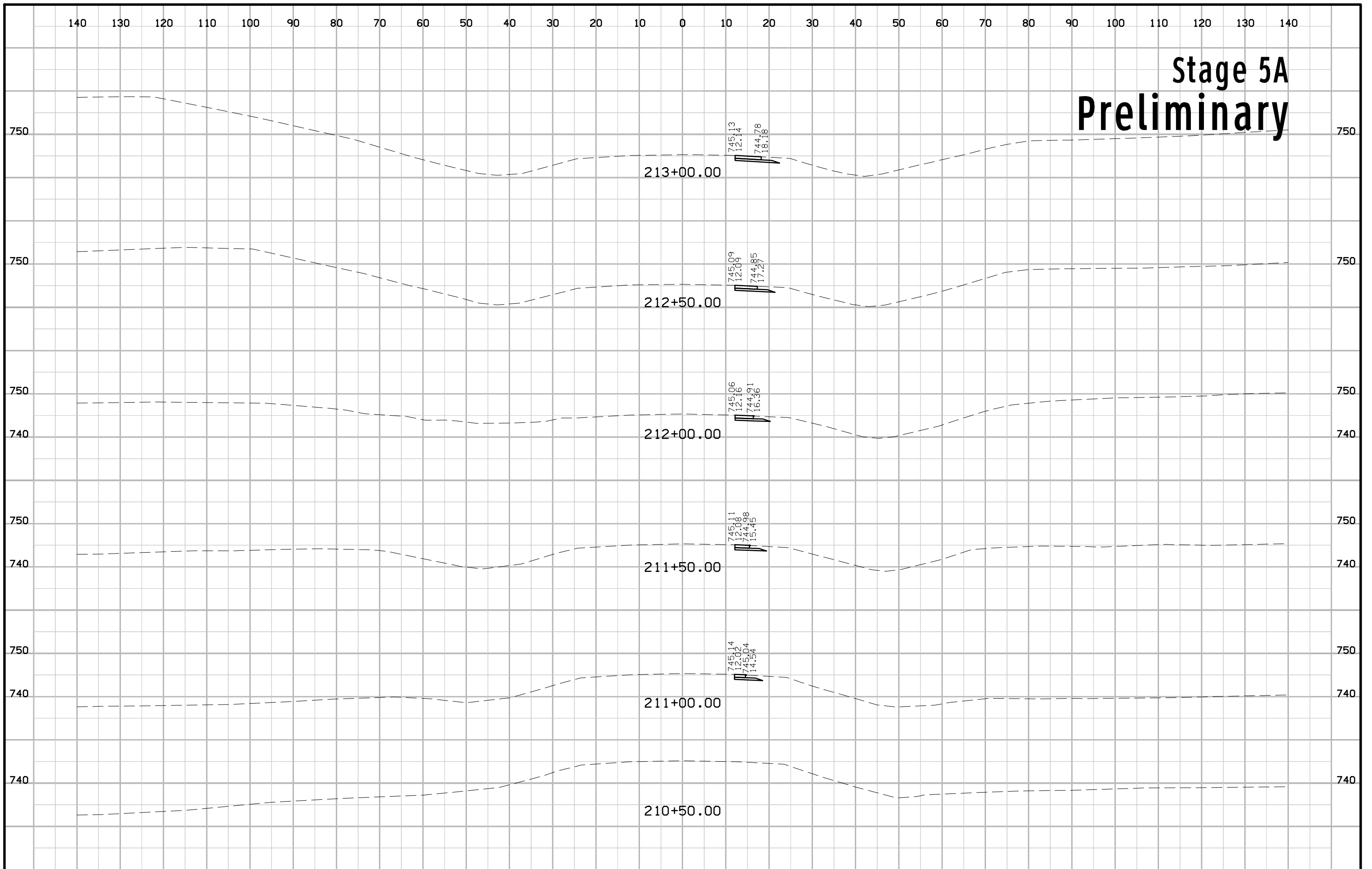
Stage 3 Preliminary



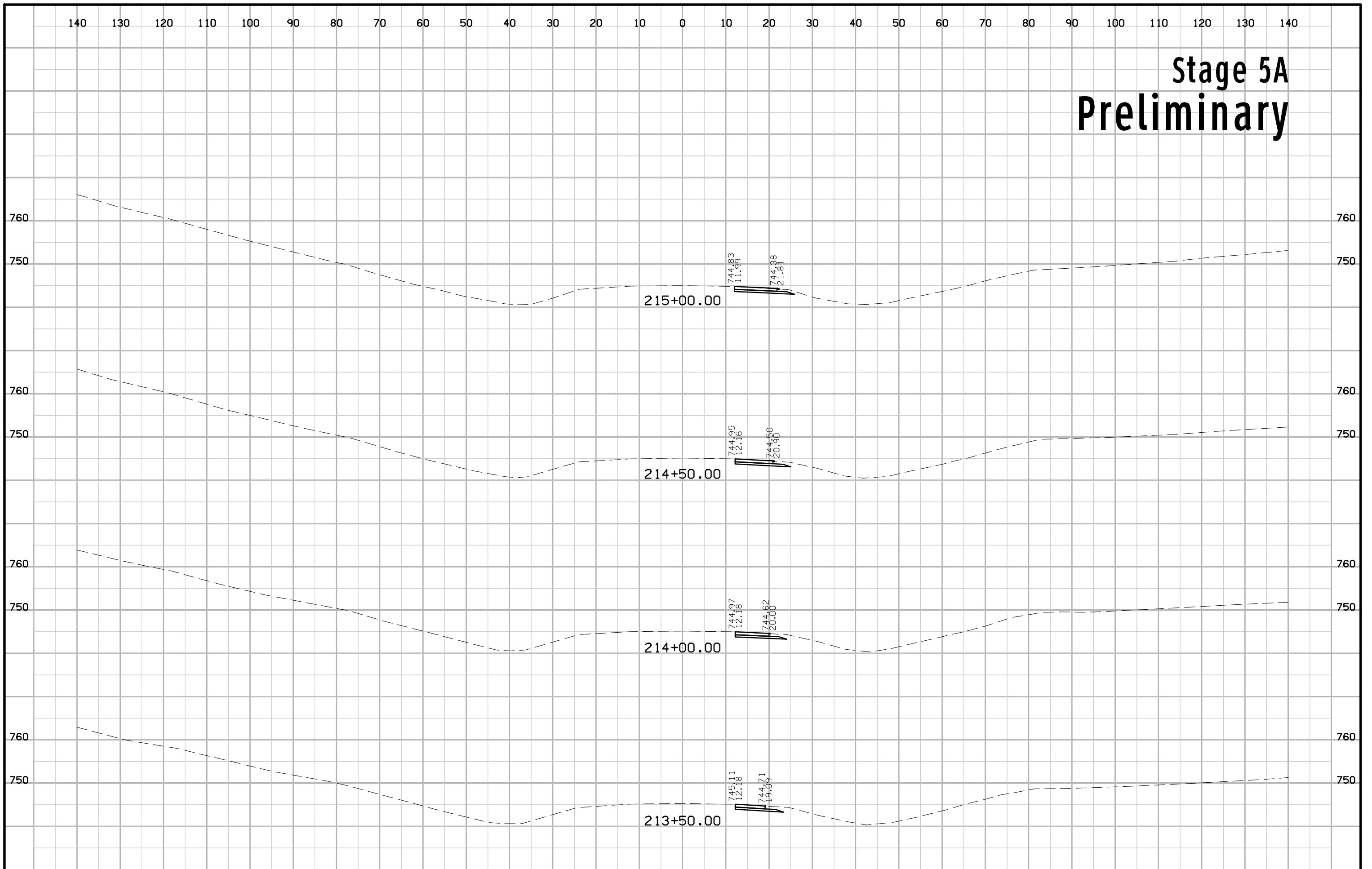
Stage 3 Preliminary



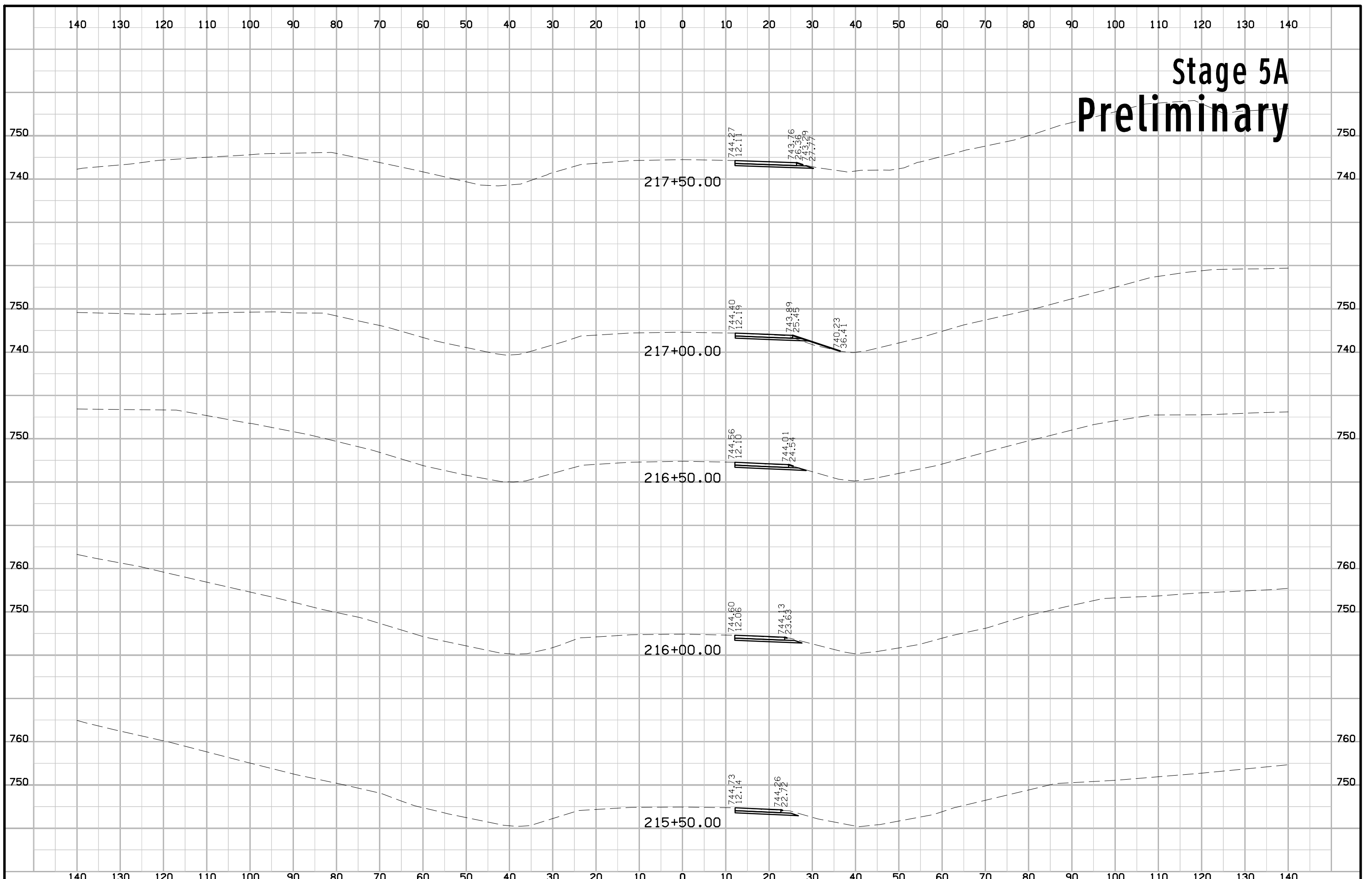
Stage 5A Preliminary



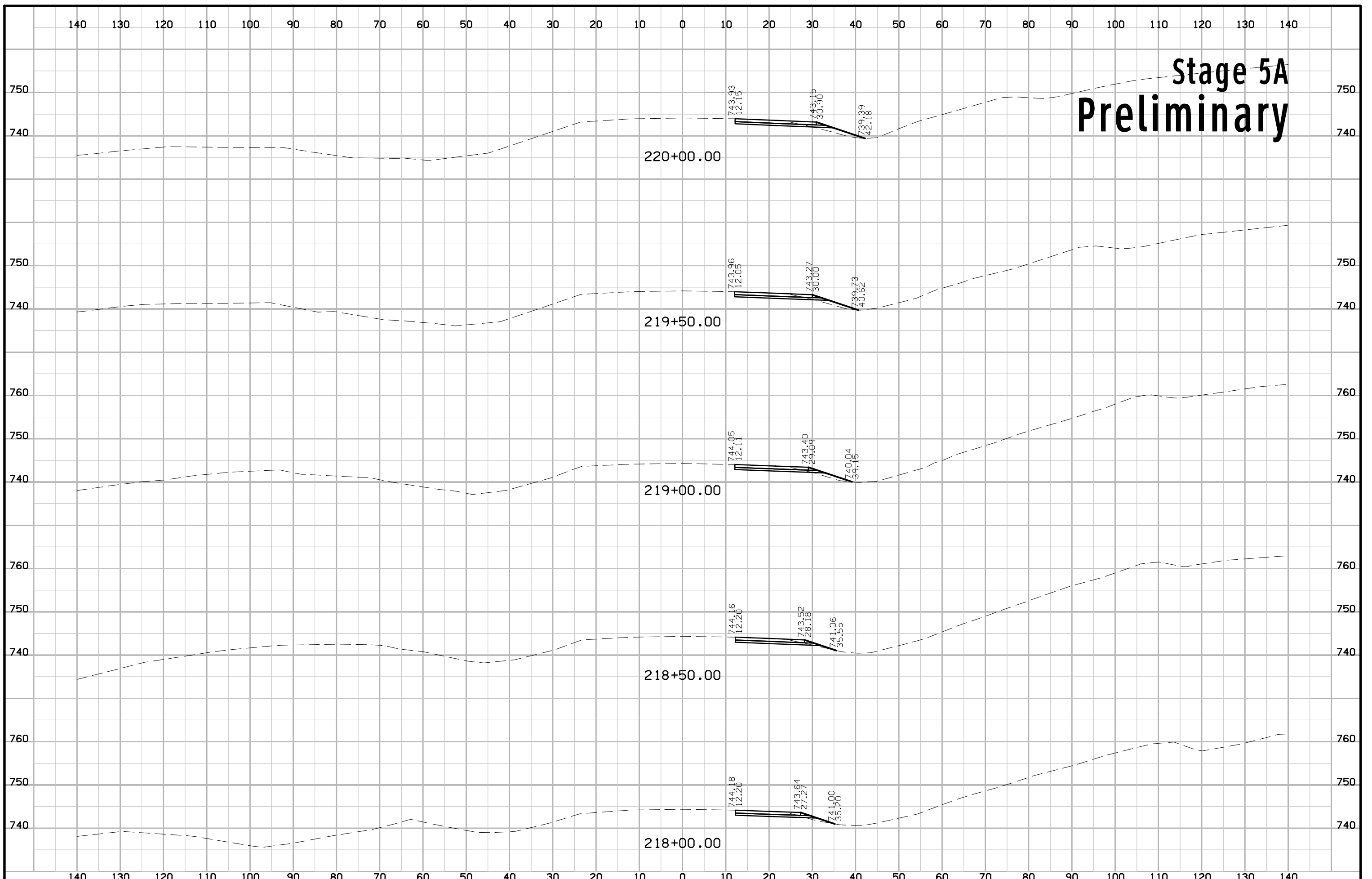
Stage 5A Preliminary



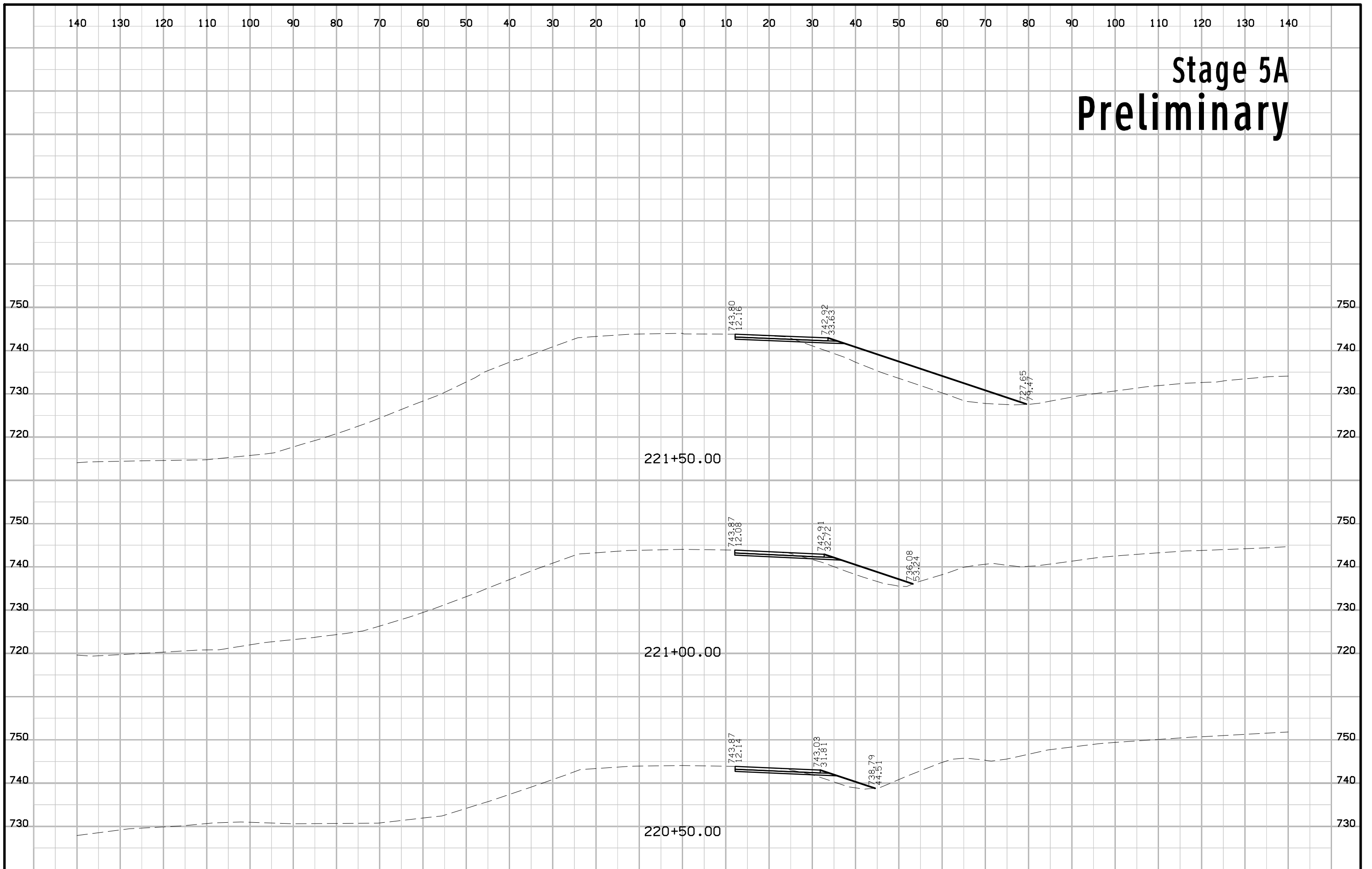
Stage 5A Preliminary



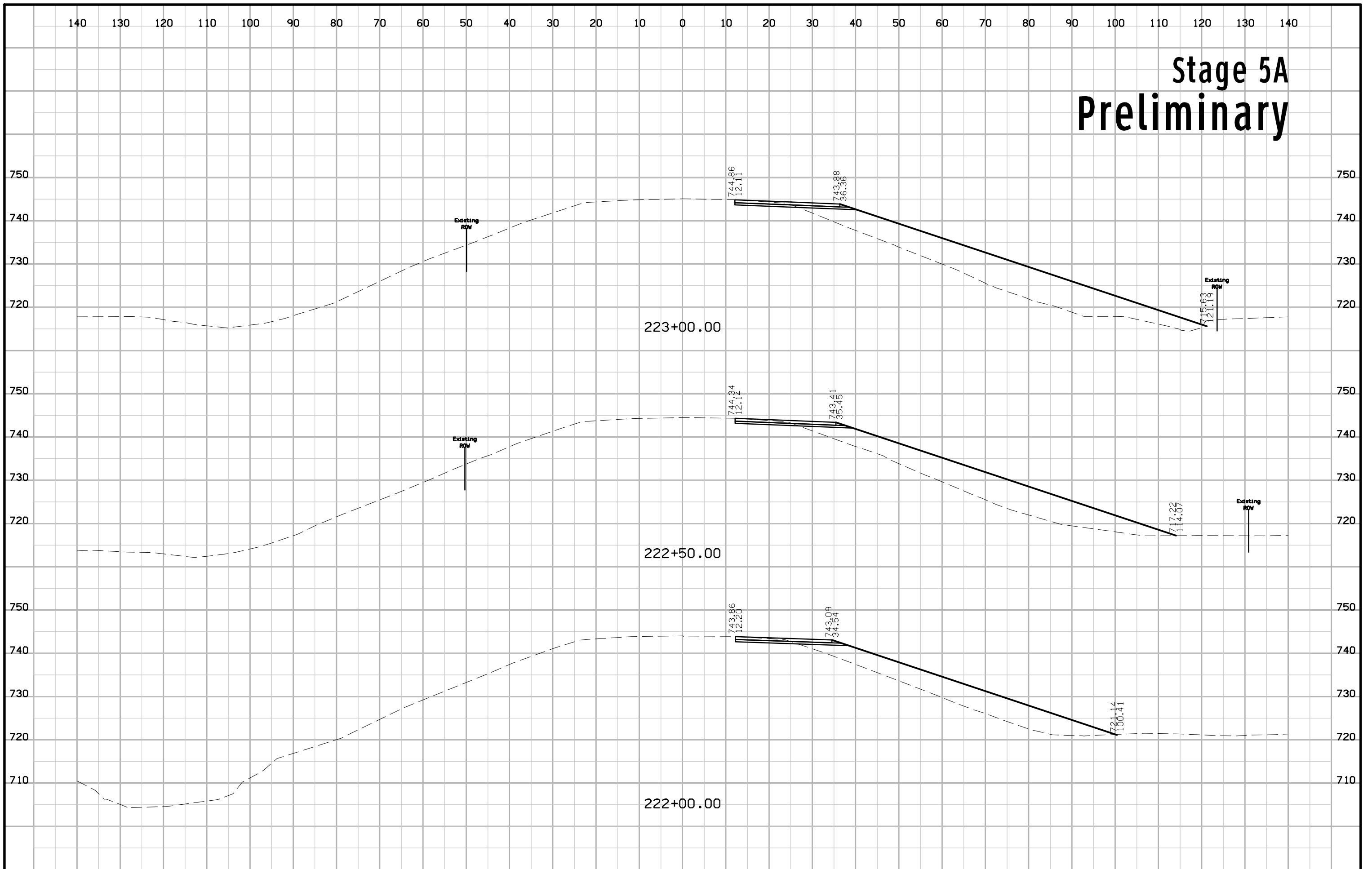
Stage 5A Preliminary



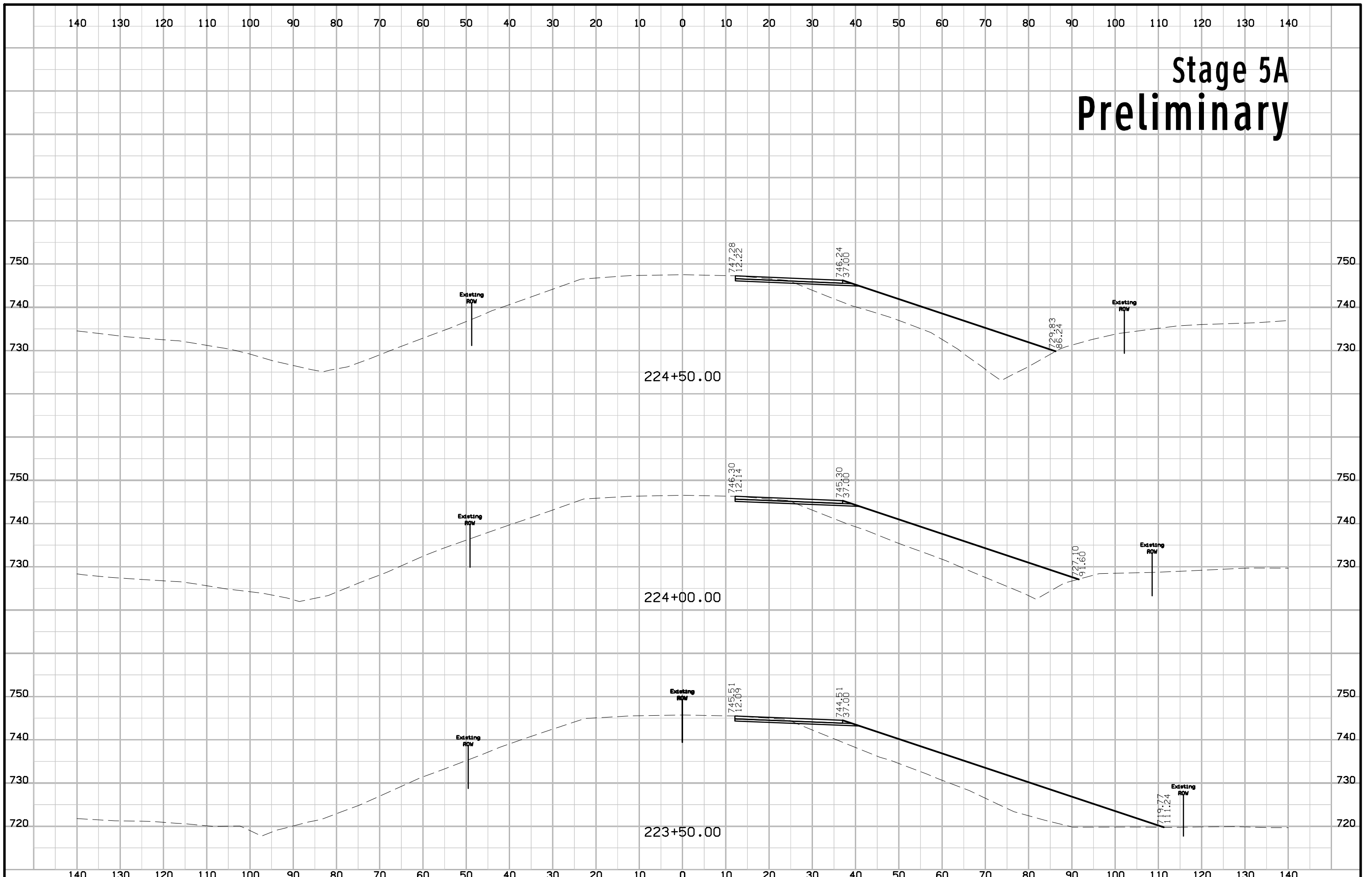
Stage 5A Preliminary



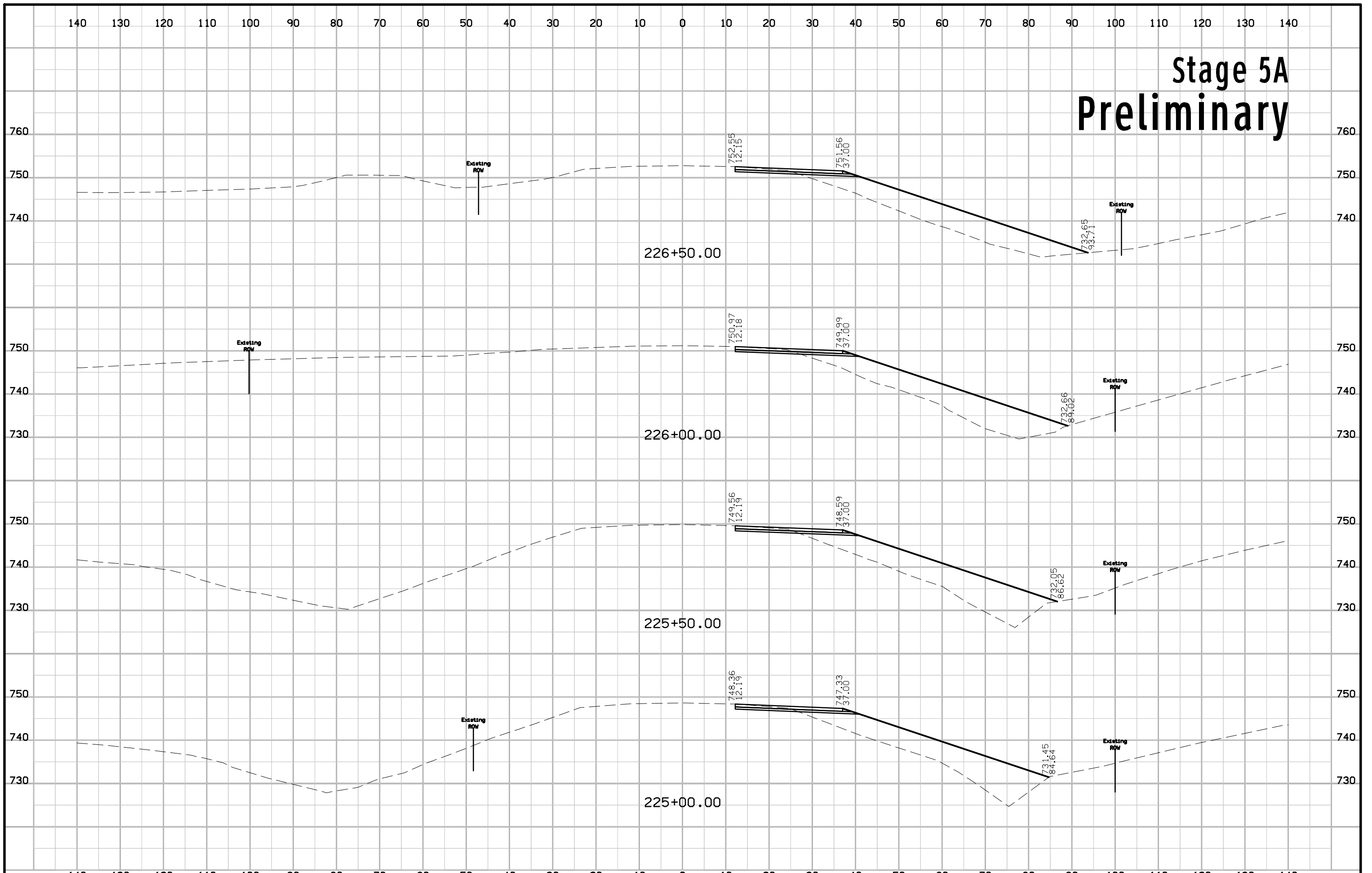
Stage 5A Preliminary



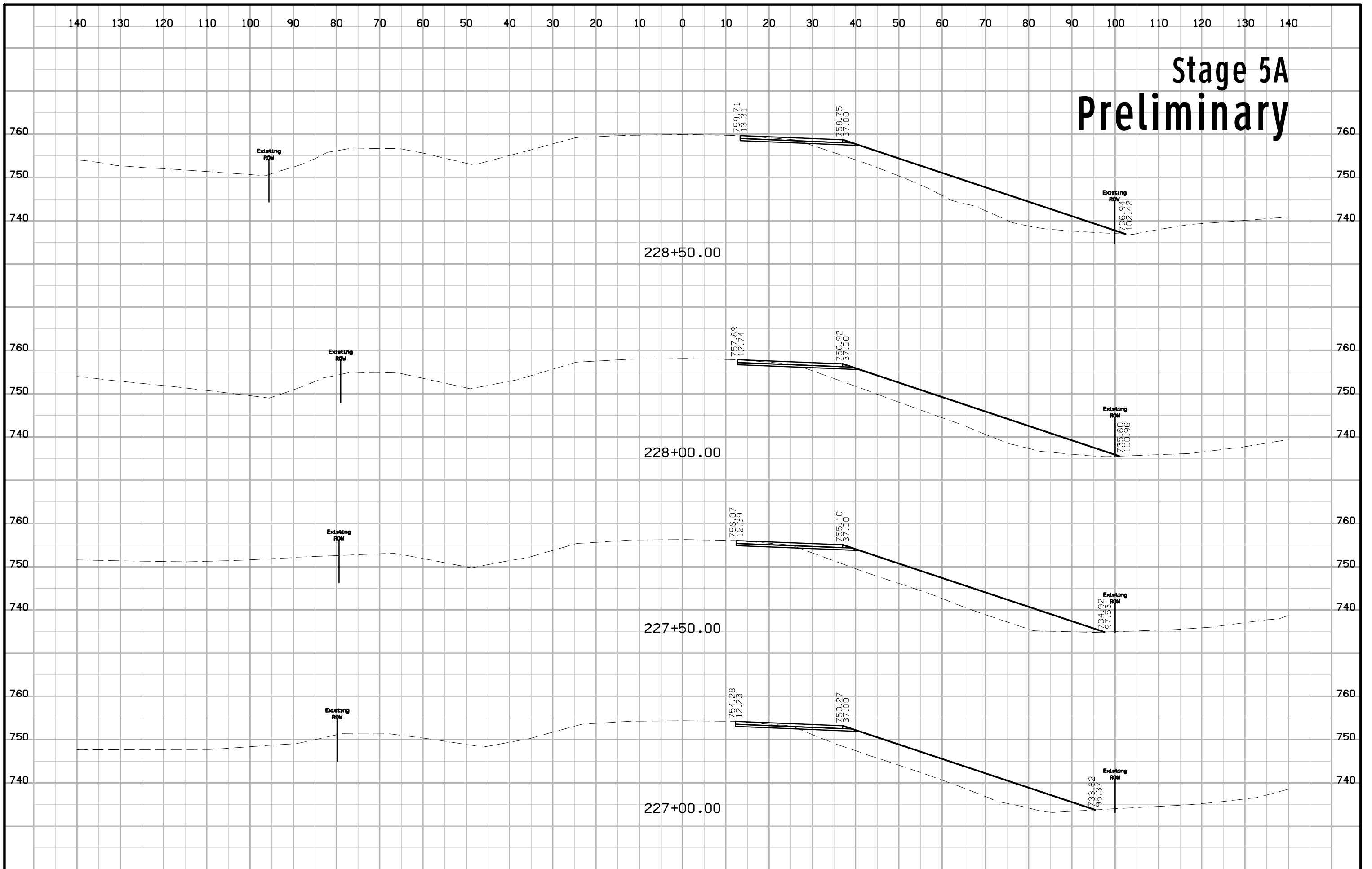
Stage 5A Preliminary



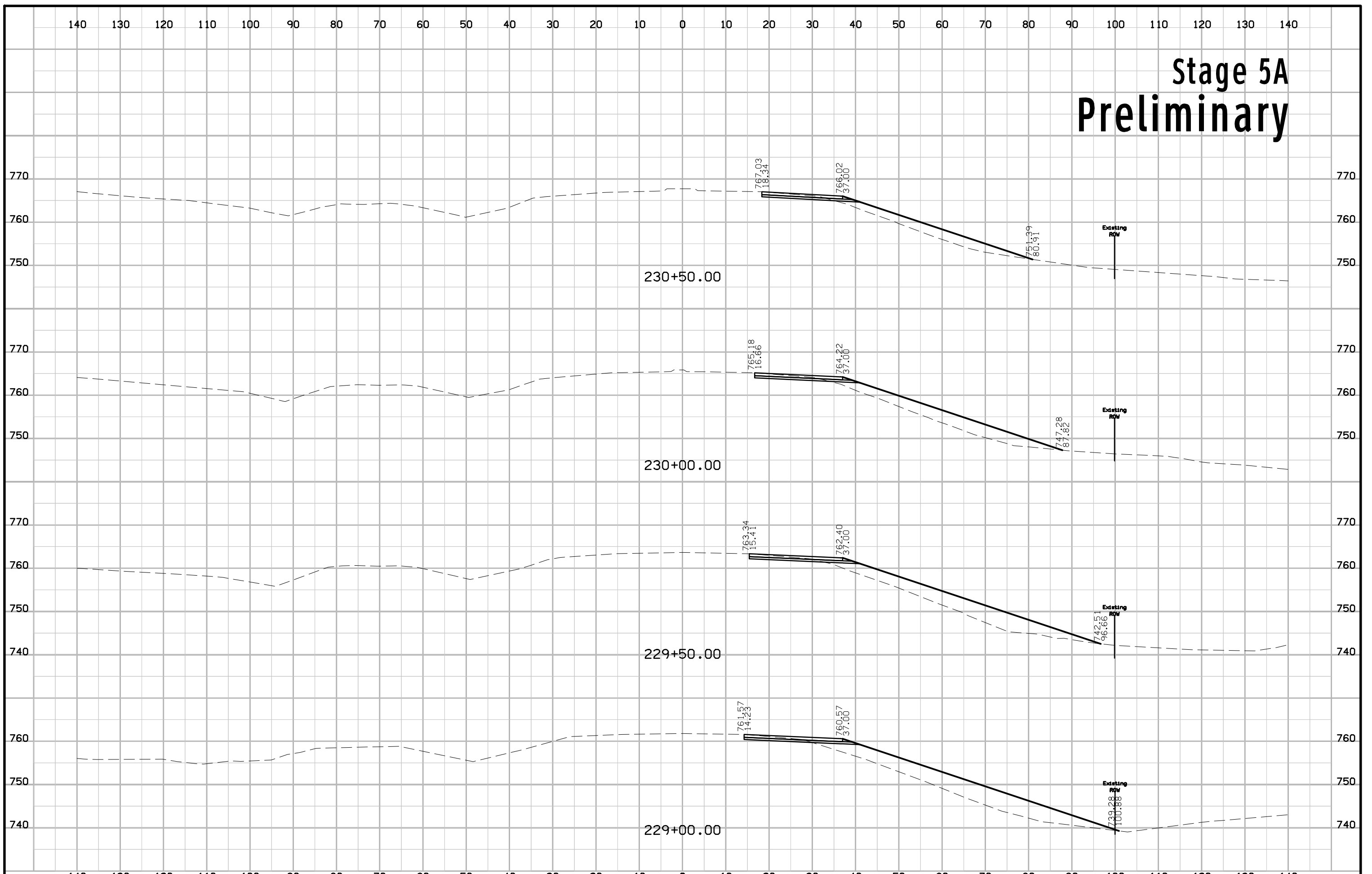
Stage 5A Preliminary



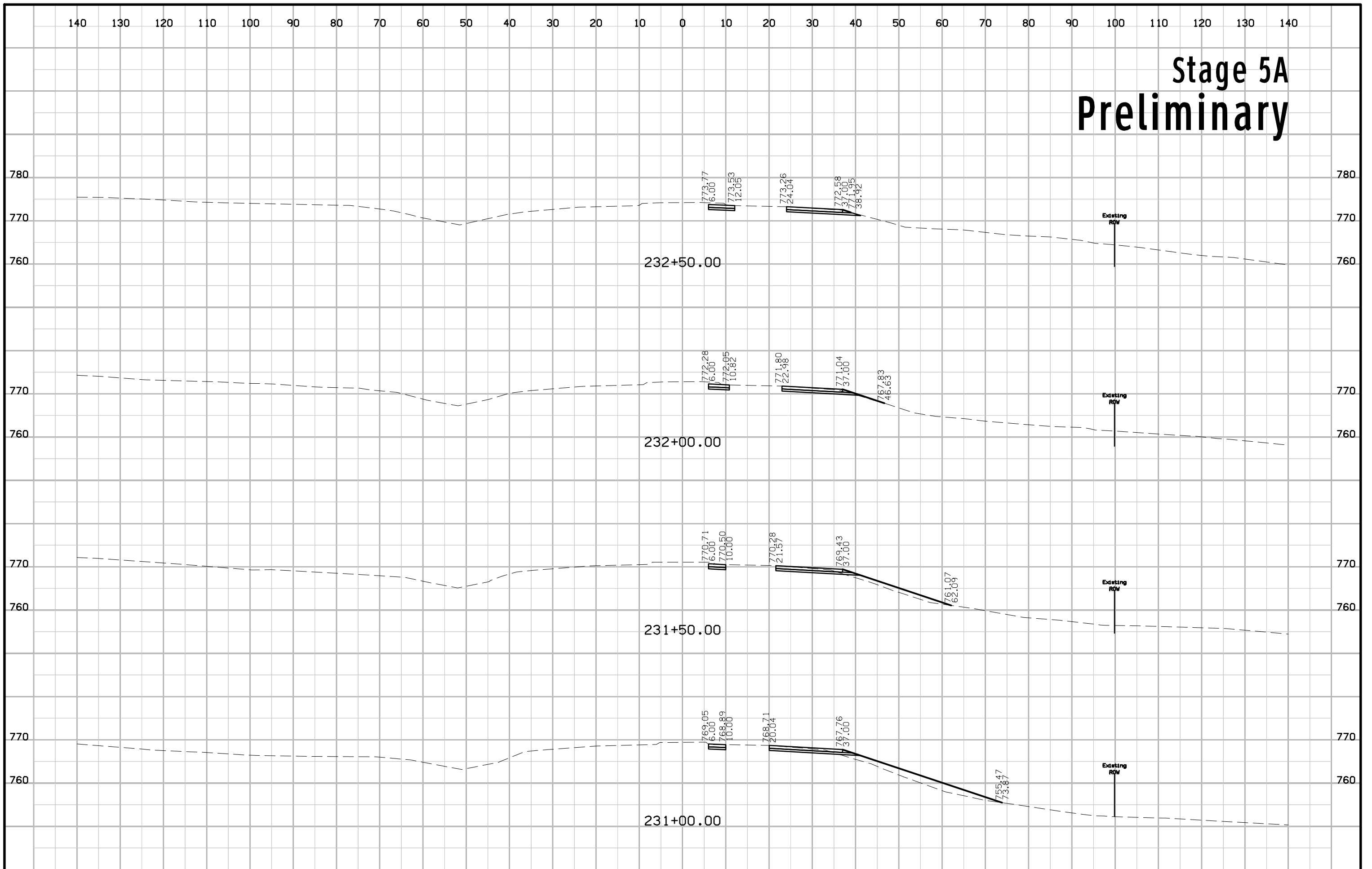
Stage 5A Preliminary



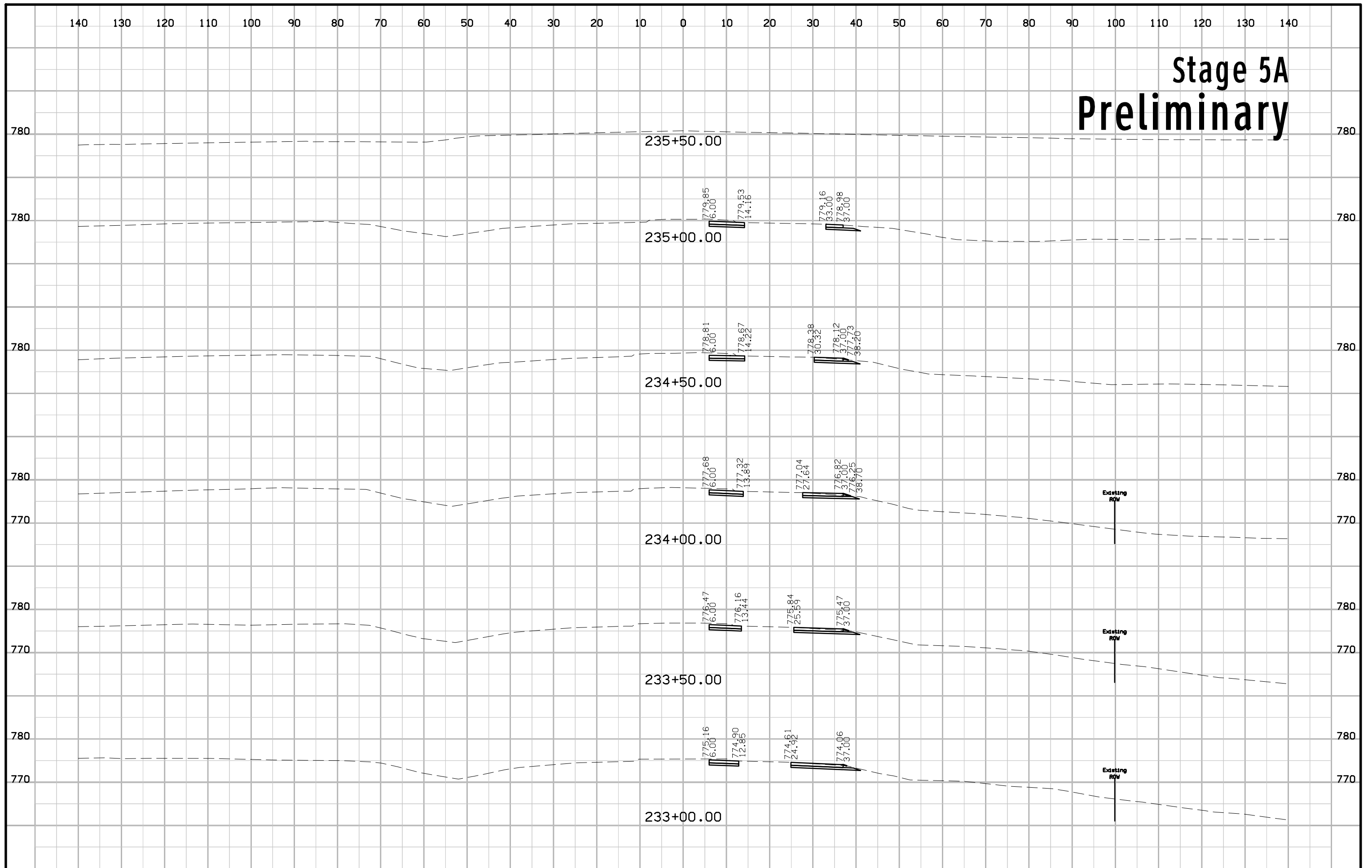
Stage 5A Preliminary



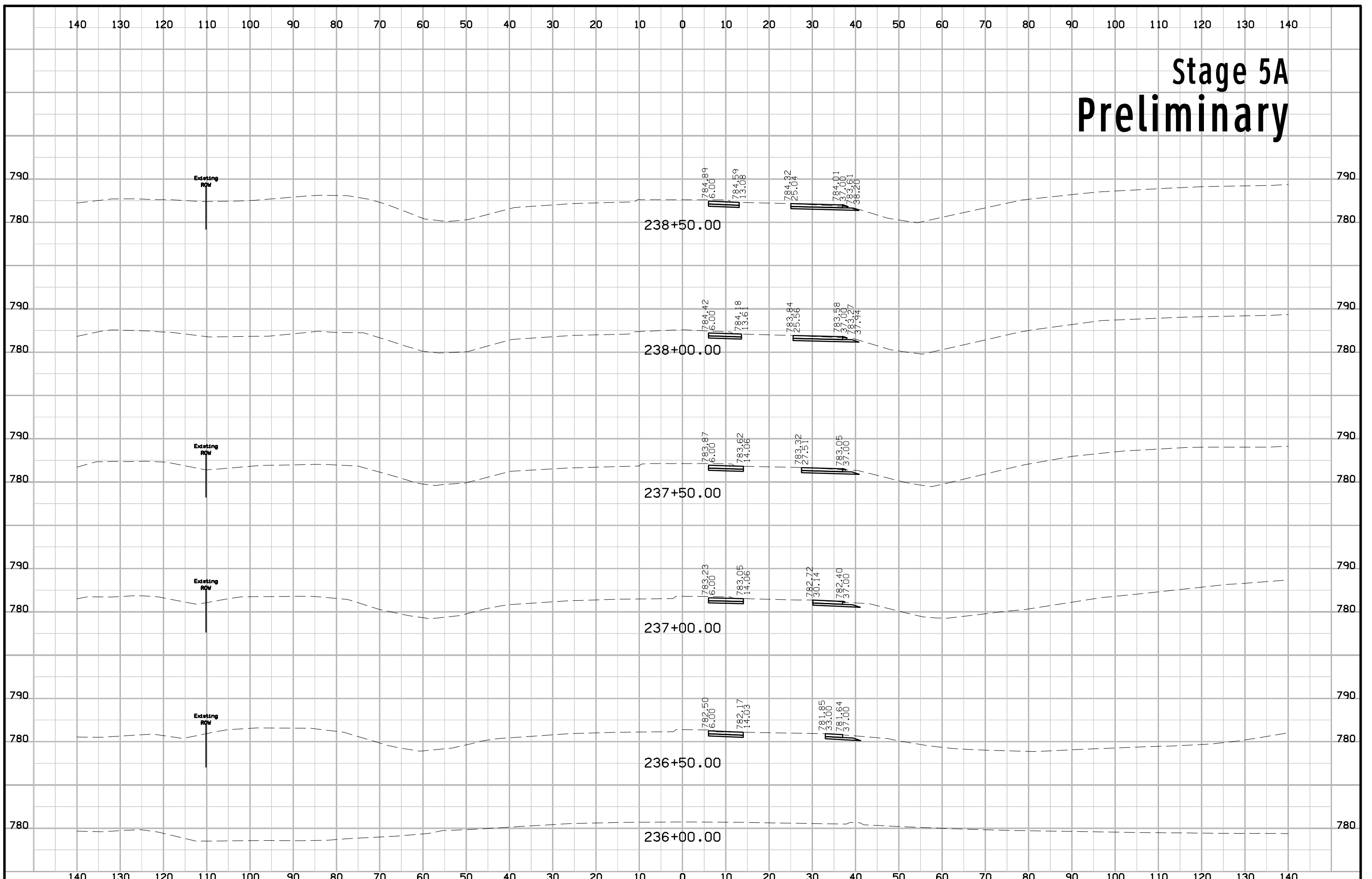
Stage 5A Preliminary



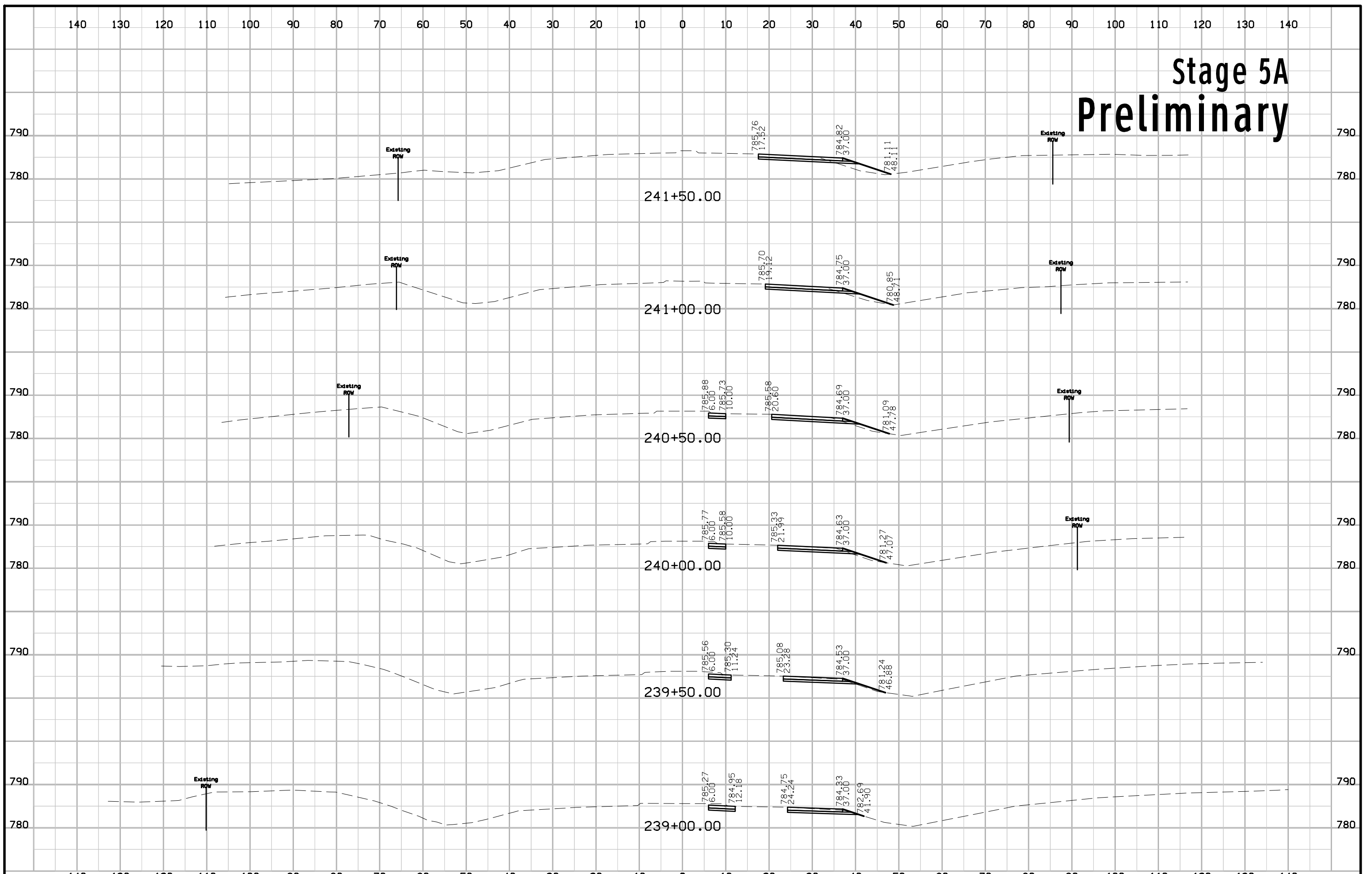
Stage 5A Preliminary



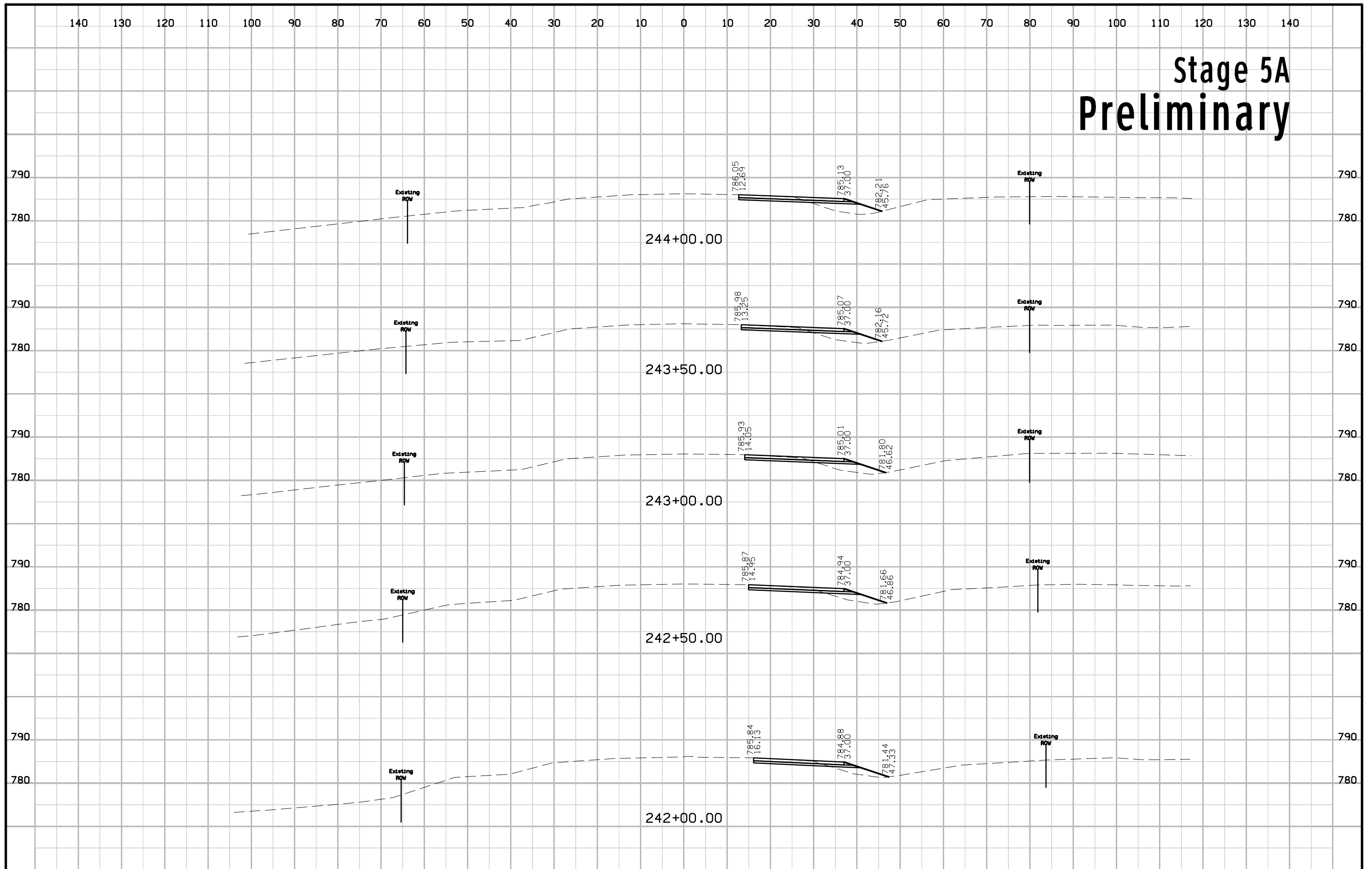
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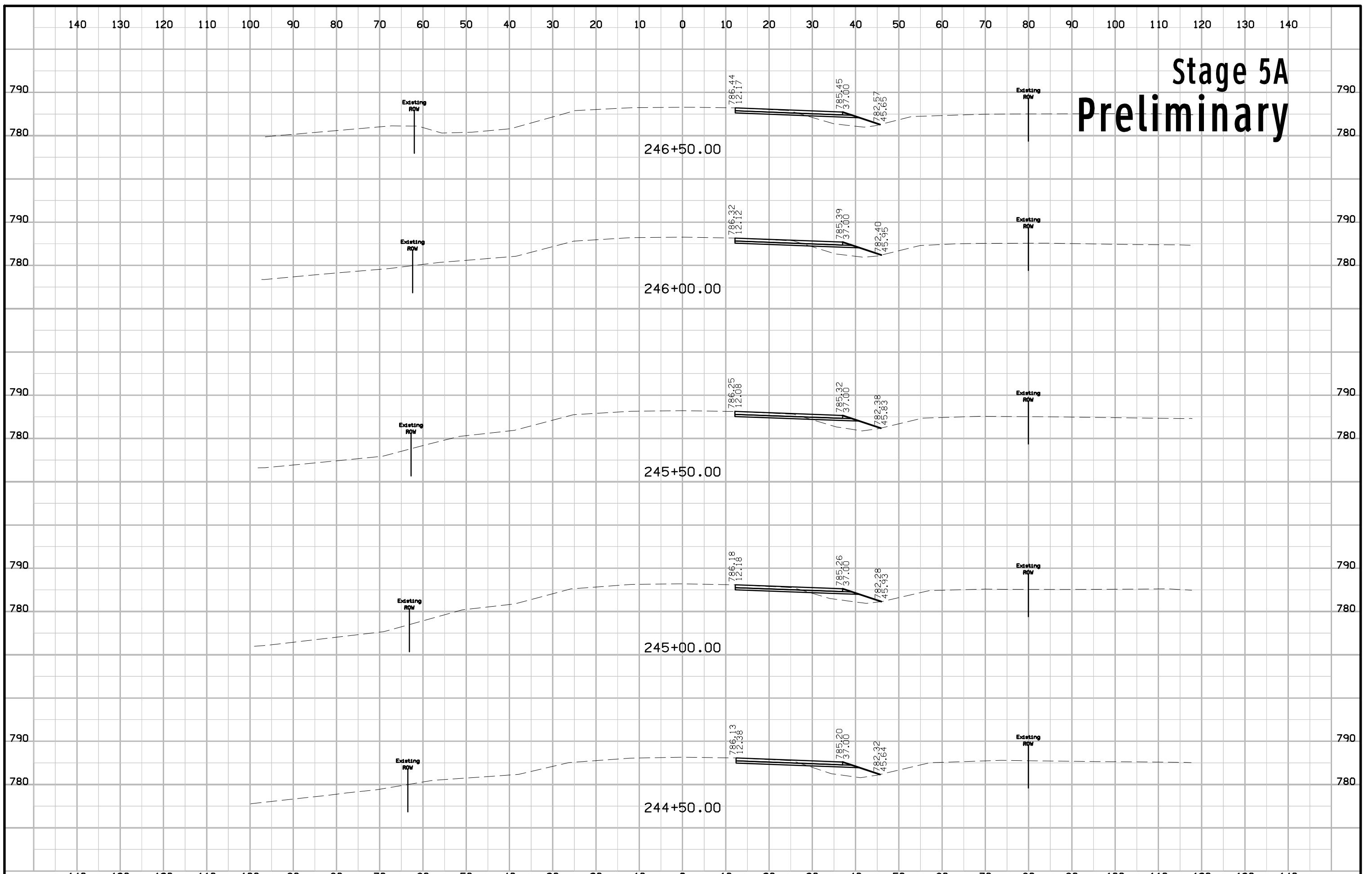
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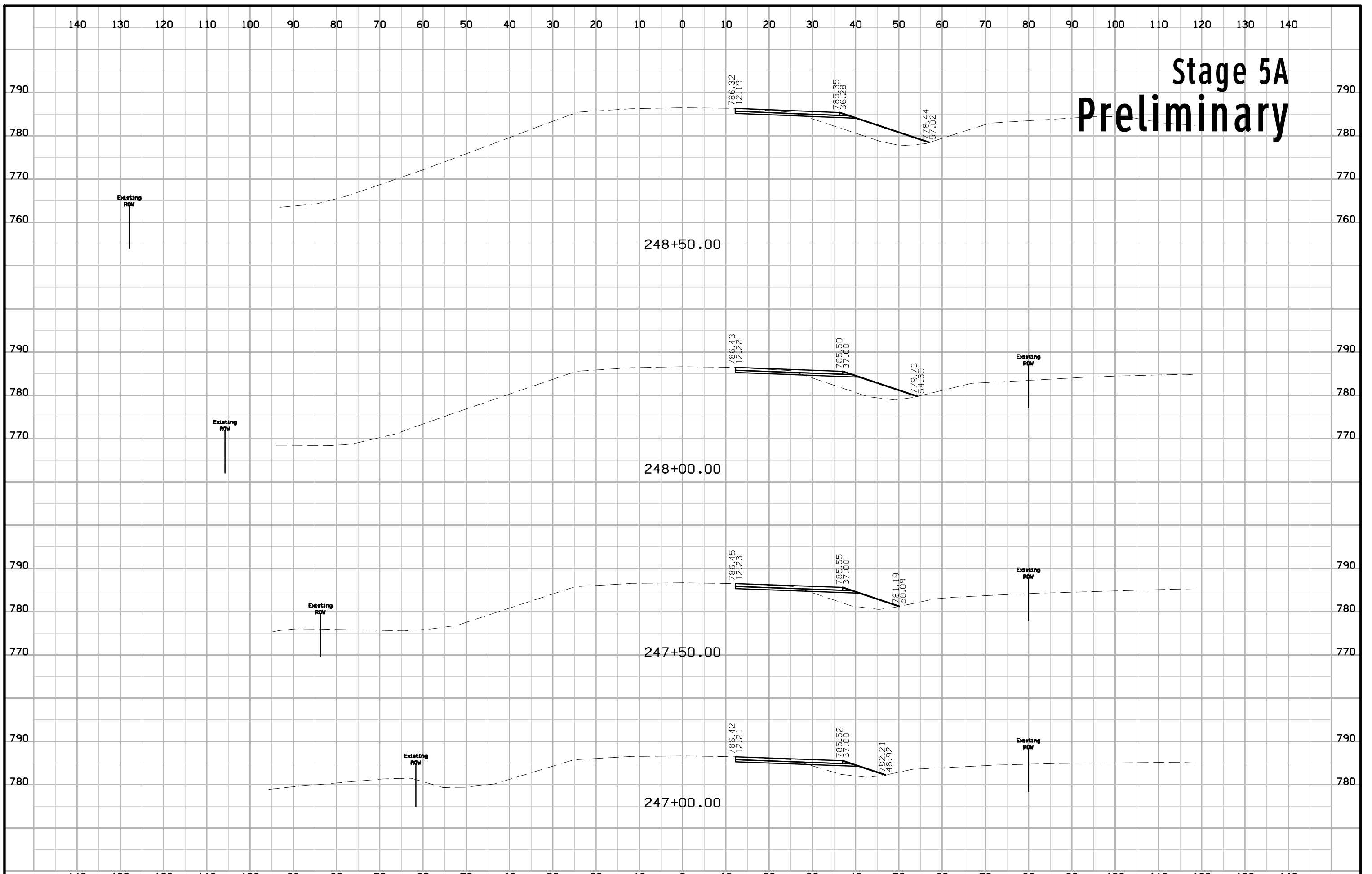
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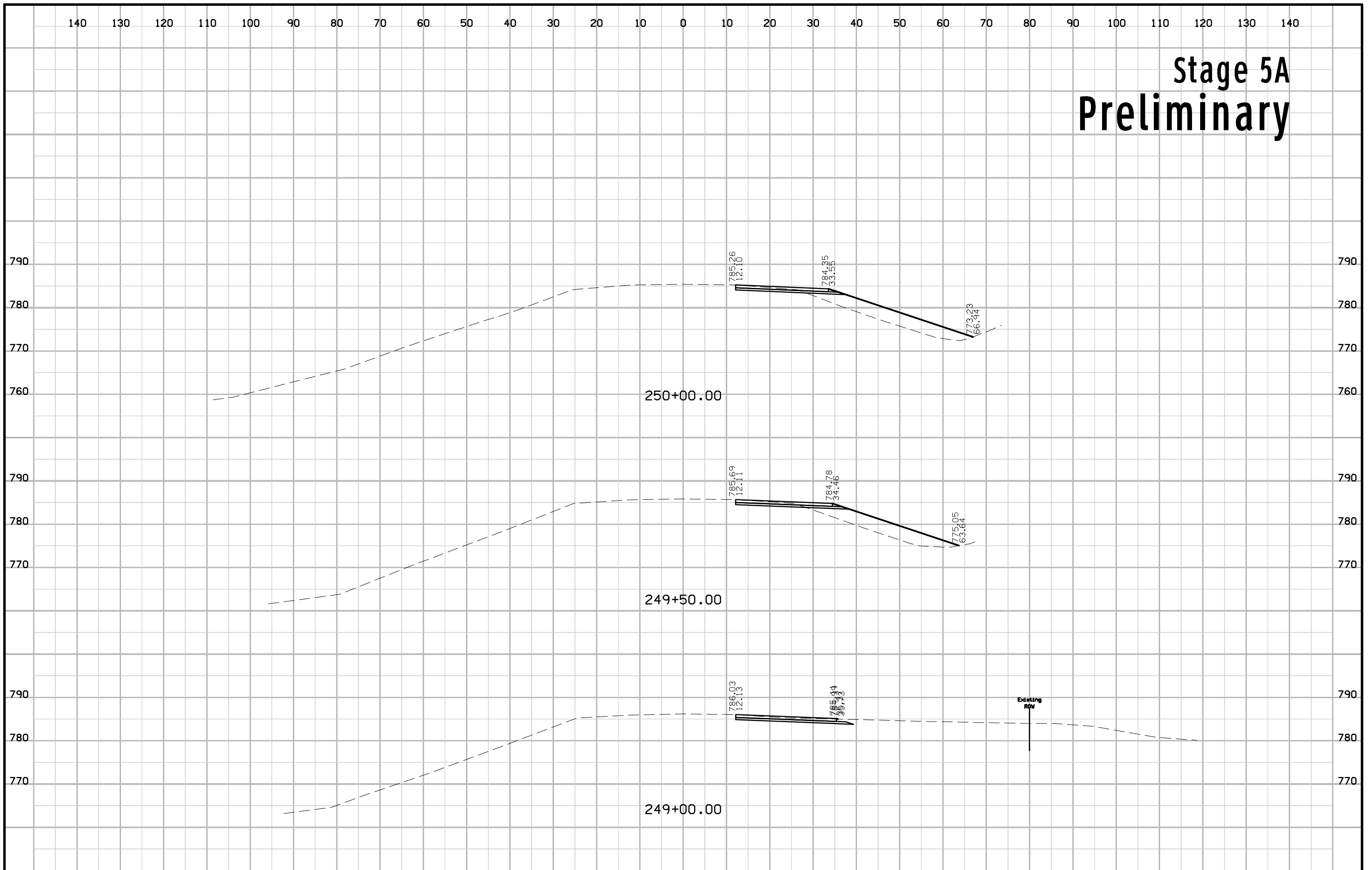
Stage 5A Preliminary



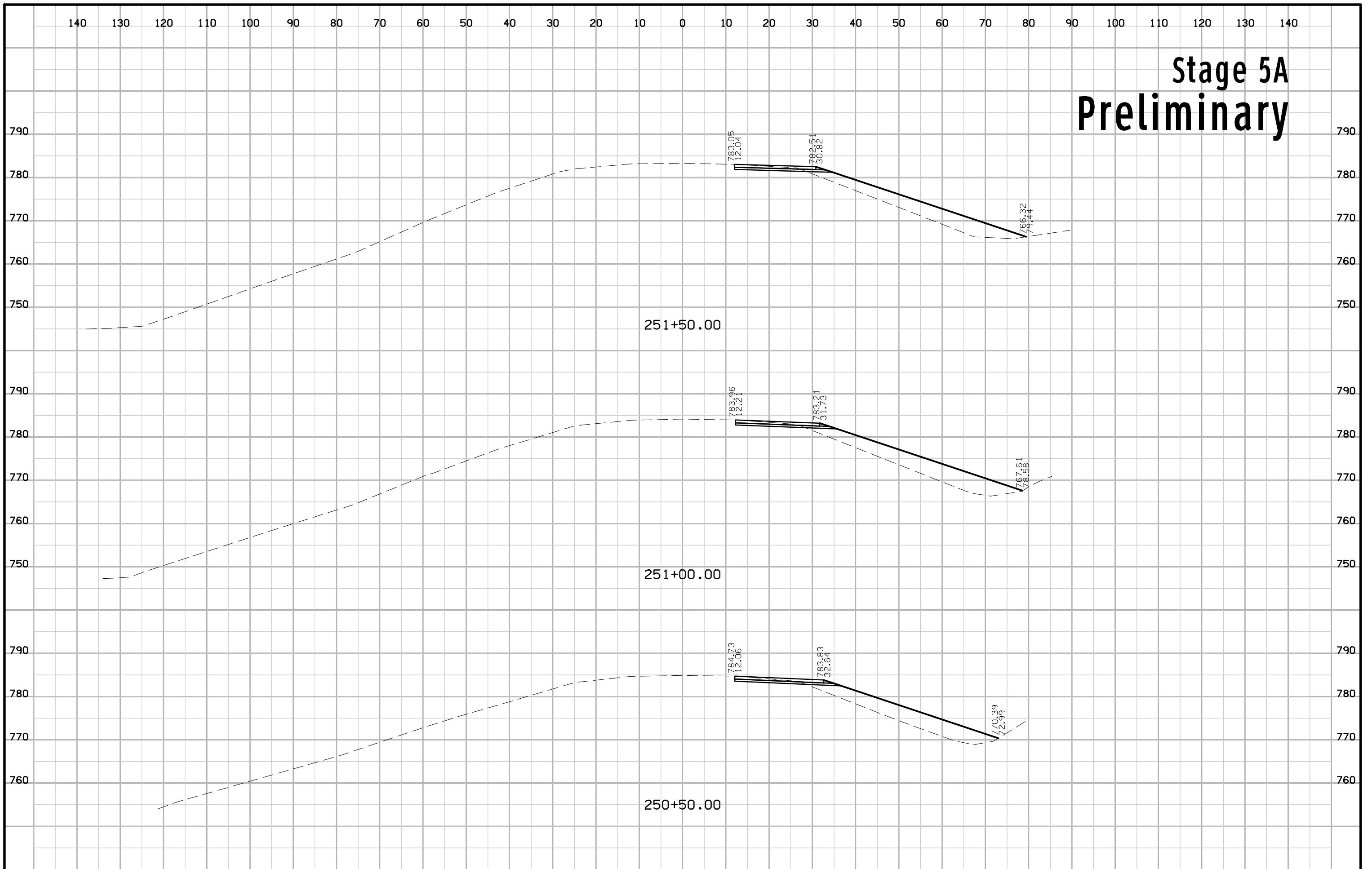
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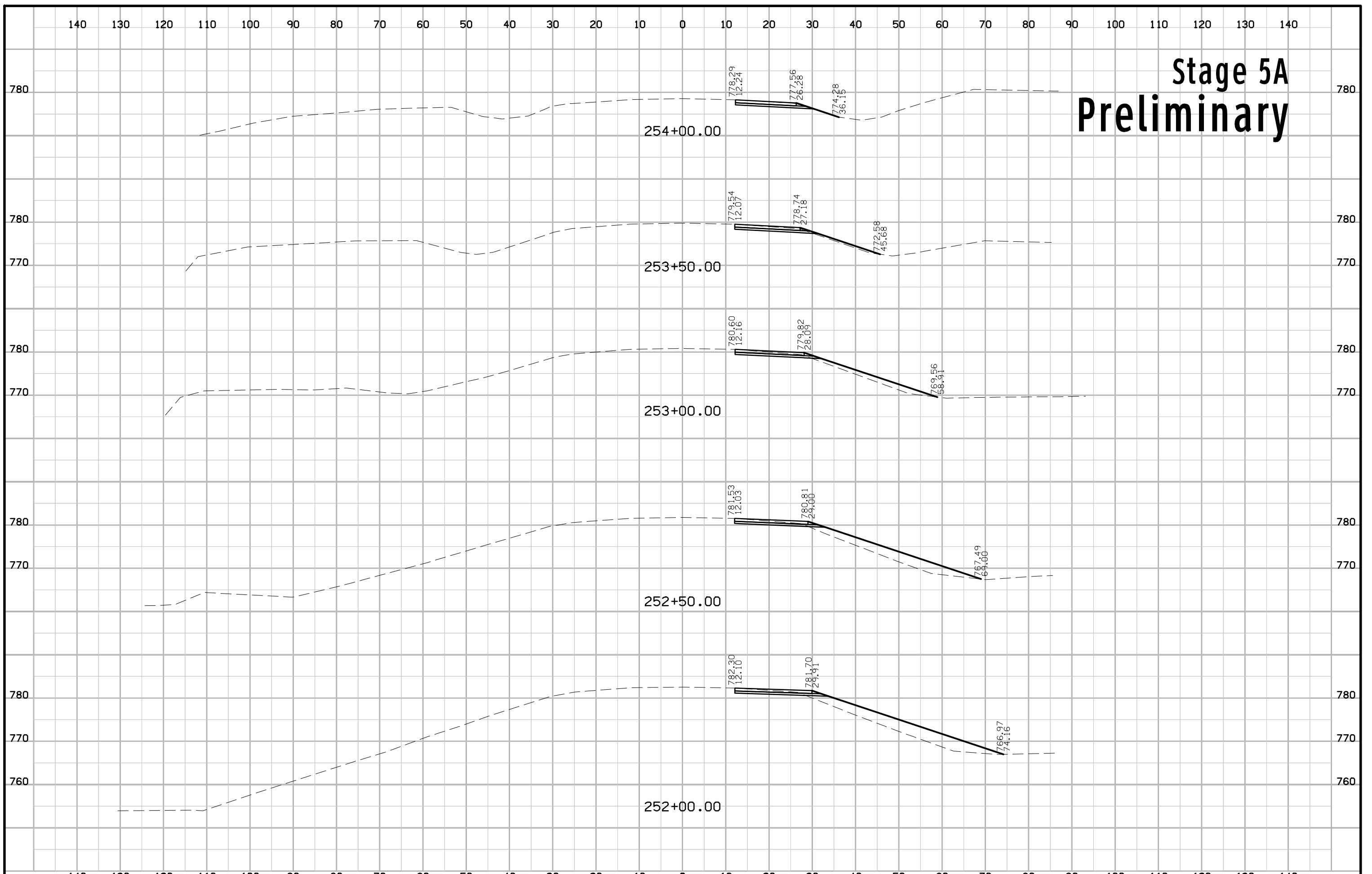
Stage 5A Preliminary



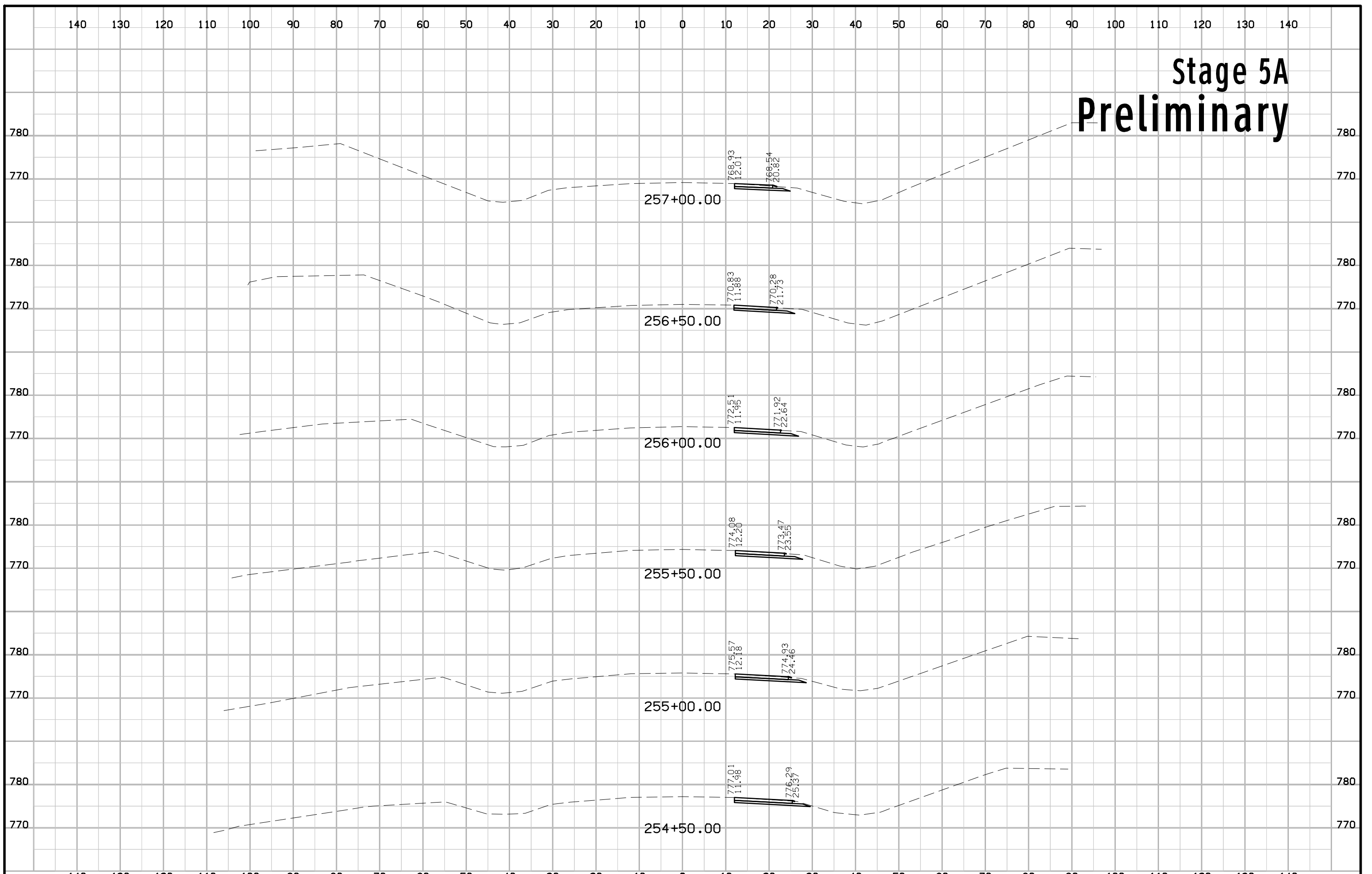
Stage 5A Preliminary



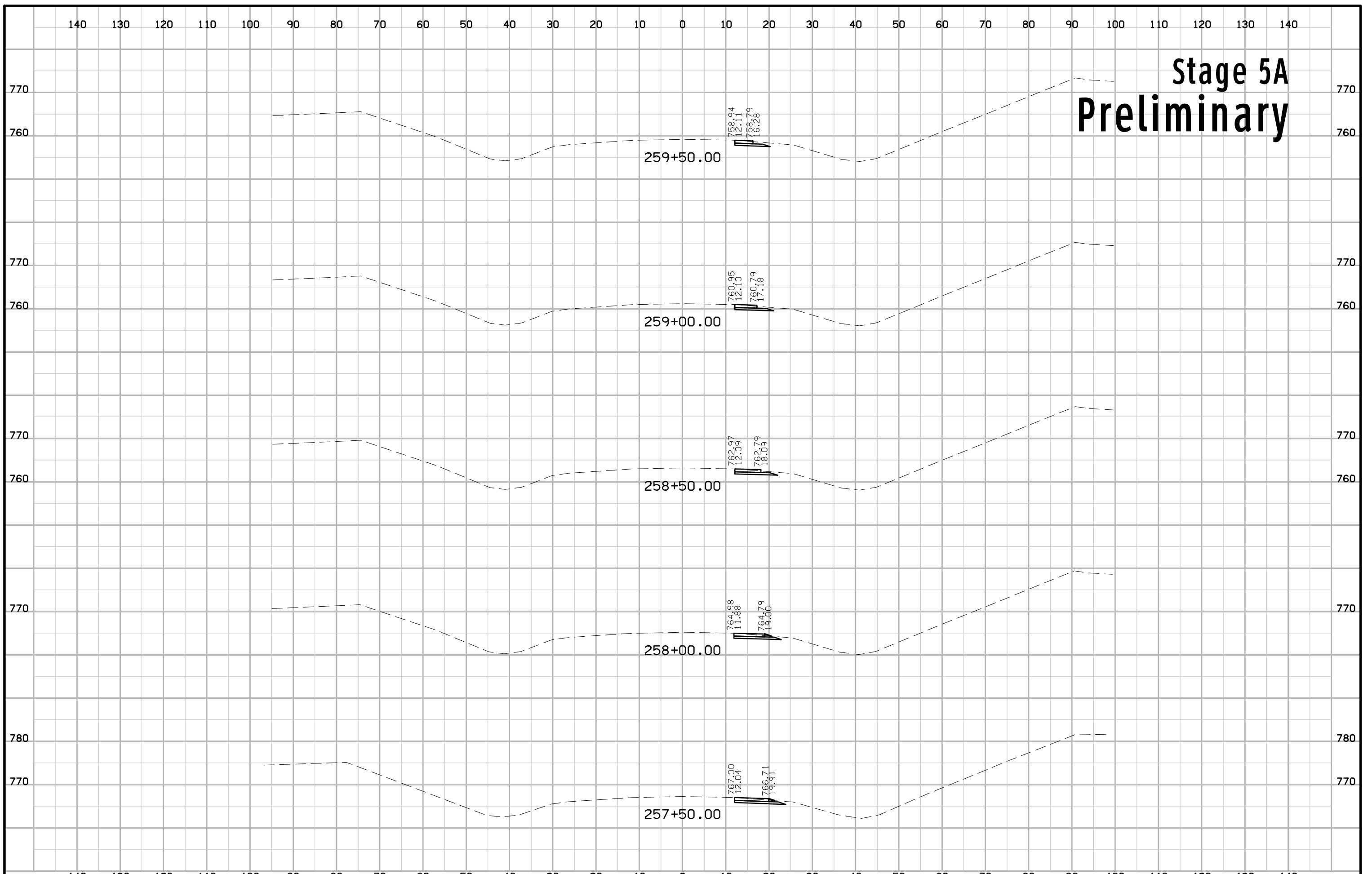
Stage 5A Preliminary



Stage 5A Preliminary



Stage 5A Preliminary



Stage 5A Preliminary

