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D Sheets	Mainline Plan and Profile Sheets
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J Sheets	Traffic Control and Staging Sheets
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K Sheets	Interchange Sheets
K.1	Ramp Acceleration Lane Details
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W.2 - 19	Interstate Highway 80 Cross Sections

Bridge TS&Ls from Concept not included due to changes in alignment/staging. Currently being developed for D05 submittal.



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
JASPER COUNTY
2000-Bridge-New/Replace
IAIS RR 0.4 mi W of IA 14
(EB/WB)

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



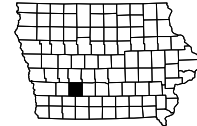
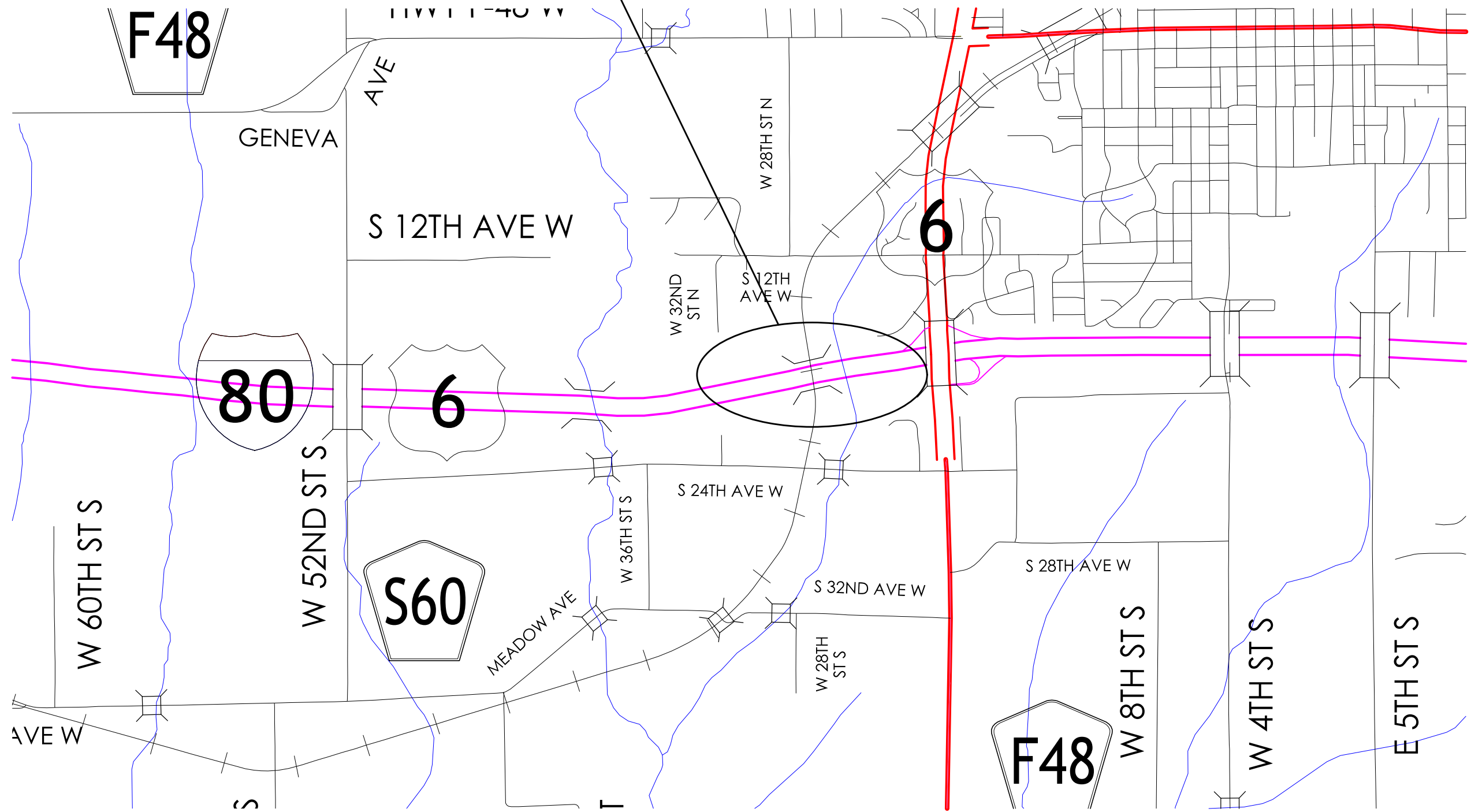
- Attendance:
- Ben Adey - District 1
 - Ronny Dykstra - District 1
 - Dave Phillips - Rail Transportation Bureau
 - Caleb Wilson - District 1
 - Christian Kennel = Bridges and Structures Bureau
 - Blake Walter - LEB
 - Sean Passick - District 1
 - Jacob Imming - District 1
 - Frank Leong - District 1
 - Greg Mitchell - IAIS Railroad
 - Josh Opheim - WHKS
 - Chase Holien - WHKS

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN - Date: 8/19/2026

PROJECT LOCATION



FIELD EXAM NOTES

WHKS will add the temporary pavement (F Sheets) and staging (J Sheets) to this plan set, to help with the railroad review

WHKS will work with the District on setting the detour route for the westbound entrance ramp from IA 14

Overnight lane and road closures will be necessary during construction

The barrier rail height on both bridges will be 44" - due to interstate and railroad requirements (no fence)

The railroad will want to review the bridge TS&L

- They want ditches on both sides of the tracks
- The railroad asked to keep existing pipes in mind when designing the grading
- The bridge designers will be cognizant of the drainage from the bridge over the railroad ROW
- Reduce need for temporary shoring near tracks by bringing drilled shaft at or above grade or eliminating footings

Railroad provided ROW maps in the area (MP 324.8 or MP 325) to assist with the pier layout

DOT staff will add a B02 event to the schedule to account for the culvert east of the bridges

There is a median crossover west of the railroad bridges - this will need to be put back in at the end of the project in same location, after removing the detour pavement

Project Schedule (Tied to Cherry Creek, built at same time):

- Median Project
 - B01/B02 Plans - September 4, 2026 (likely to be delayed)
 - D05 Plans - October 30, 2026
 - D04 Plans - August 10, 2027
 - B03 Plans - October 5, 2027
 - L05 - December 21, 2027
 - Construction - 2028 season
- Eastbound Project
 - Letting - Fall/Winter 2028
 - Construction - 2029 season
- Westbound Project
 - Letting - Fall/Winter 2029
 - Construction - 2030 season

Photos showing sanitary sewer at downstream end of 7' x 10.5' arch culvert Sta. 2535+35

FIELD EXAM NOTES



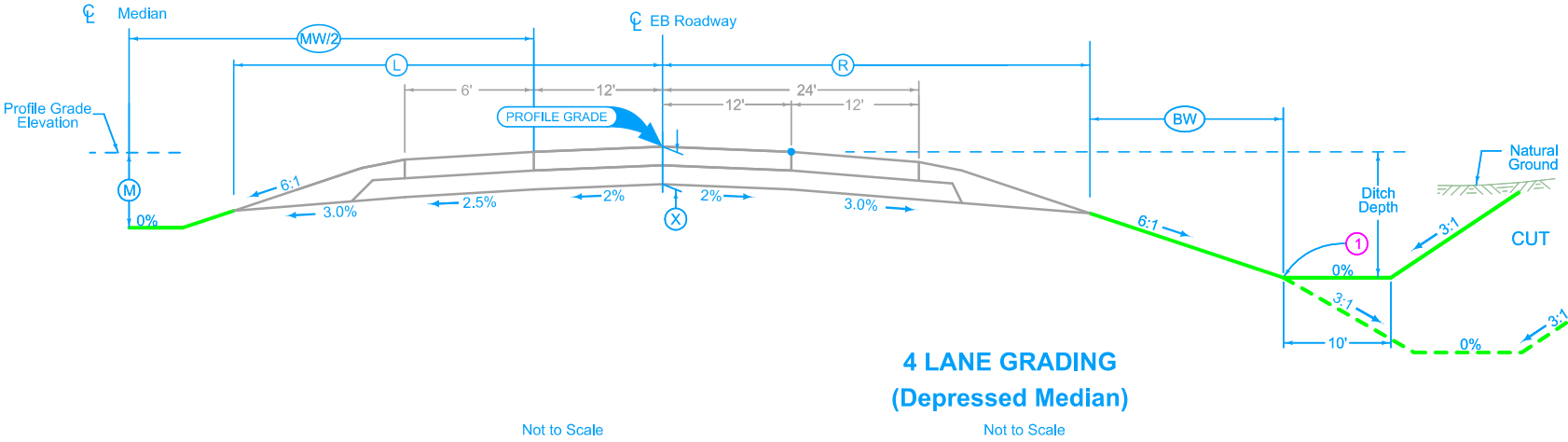
Electric transmission line west of bridges



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

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

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



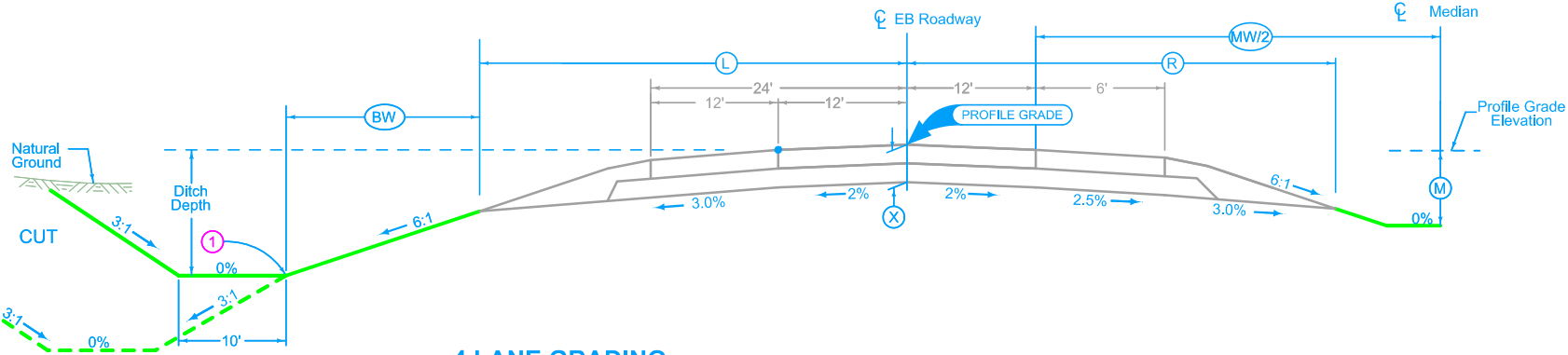
LOCATION			DIMENSIONS						
ROAD IDENTIFICATION	STATION TO STATION		L Feet	R Feet	X Inches	BW Feet	MW Feet	M Feet	
I-80 Eastbound	--	--	--	--	--	--	--	--	

I-80 FULL-WIDTH RECONSTRUCTION (EASTBOUND)

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

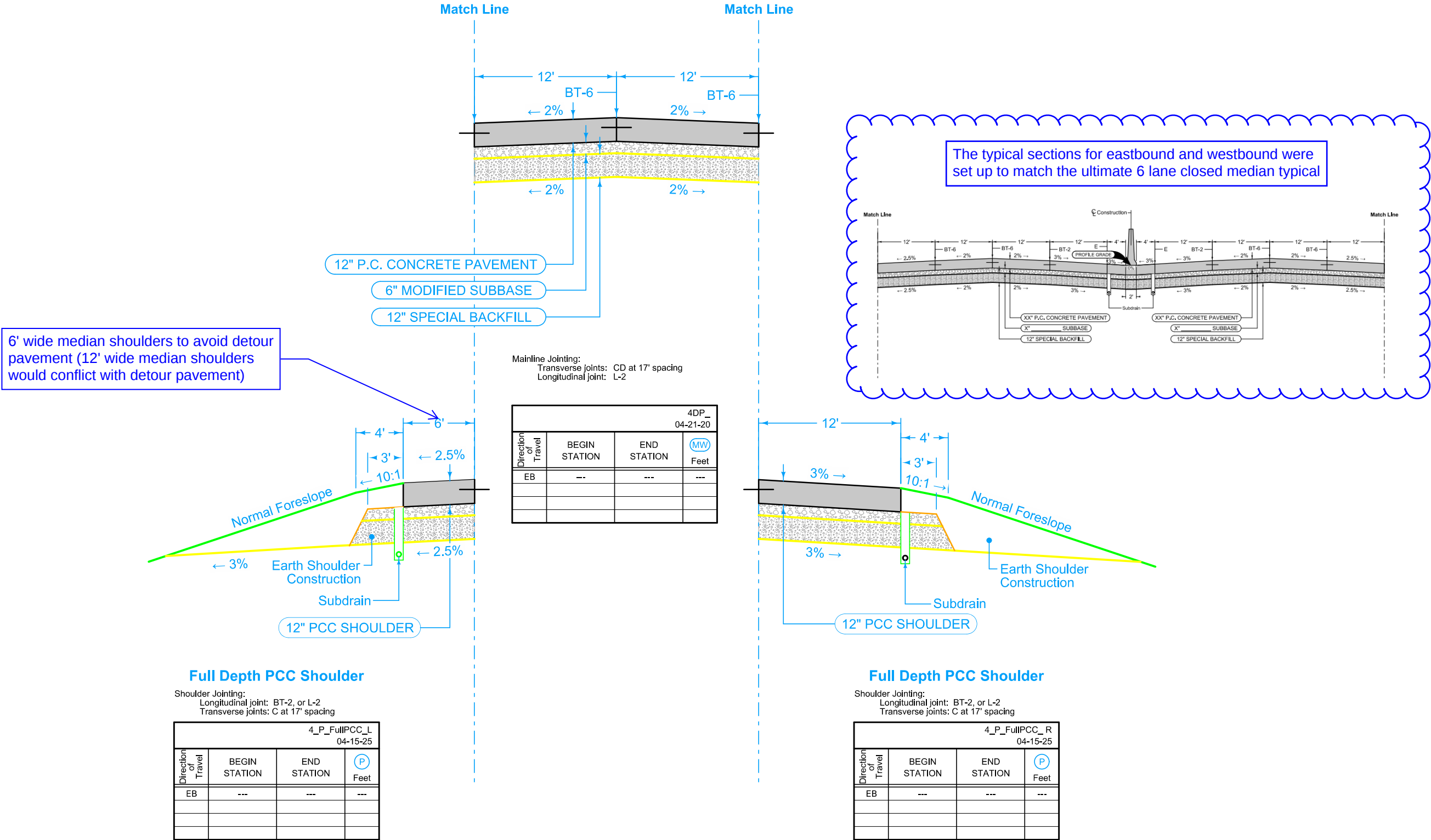
See Plan & Profiles sheets and cross sections for additional details of ditches and backslopes.

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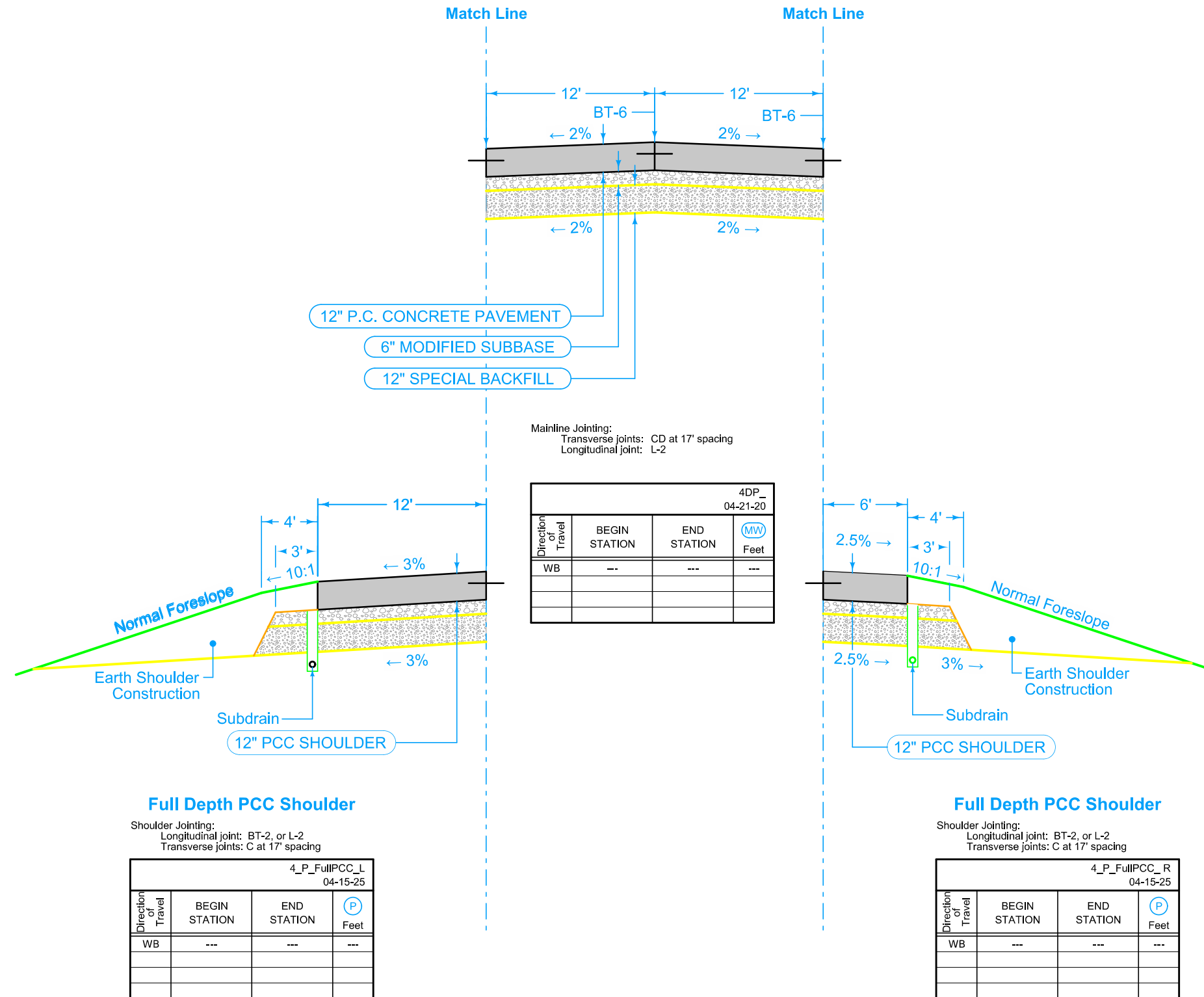


LOCATION			DIMENSIONS						
ROAD IDENTIFICATION	STATION TO STATION		L	R	X	BW	MW	M	
			Feet	Feet	Inches	Feet	Feet	Feet	
I-80 Westbound	--	--	--	--	--	--	--	--	--

I-80 FULL-WIDTH RECONSTRUCTION (WESTBOUND)



I-80 FULL-WIDTH RECONSTRUCTION (EASTBOUND)



I-80 FULL-WIDTH RECONSTRUCTION (WESTBOUND)

SURVEY SYMBOLS

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

UTILITY LEGEND

	E1	EL1D, Alliant - Quality D
	F0	FO1D, ICN - Quality D
	F02	FO2D, MCI/Verizon & ZEYO - Quality D
	SAN.	SA1D, City of Newton- Quality D

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING		Design Color No.	Transparency
Pink, Dark	(13)		Temporary Pavement Shading 50%
Yellow	(4)		Proposed Pavement Shading 50%
Orange	(6)		Proposed Granular Shading 50%
Orange	(70)		Proposed Shoulder Granular Shading 50%
Yellow	(68)		Proposed Shoulder Paved Full Depth Shading 50%
Yellow	(132)		Proposed Shoulder Paved Partial Depth Shading 50%
Brown, Light	(236)		Grading Shading 50%
Orange, Light	(134)		Proposed Granular Entrance Shading 50%
Yellow	(220)		Proposed Paved Entrance Shading 50%
Tan	(8)		Proposed Sidewalk Shading 50%
Blue, Light	(230)		Proposed Sidewalk Landing Shading 50%
Pink	(11)		Proposed Sidewalk Ramp Shading 50%
Red	(3)		Proposed Structure Shading 50%
Red	(3)		Delineates Restricted Areas 0%

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

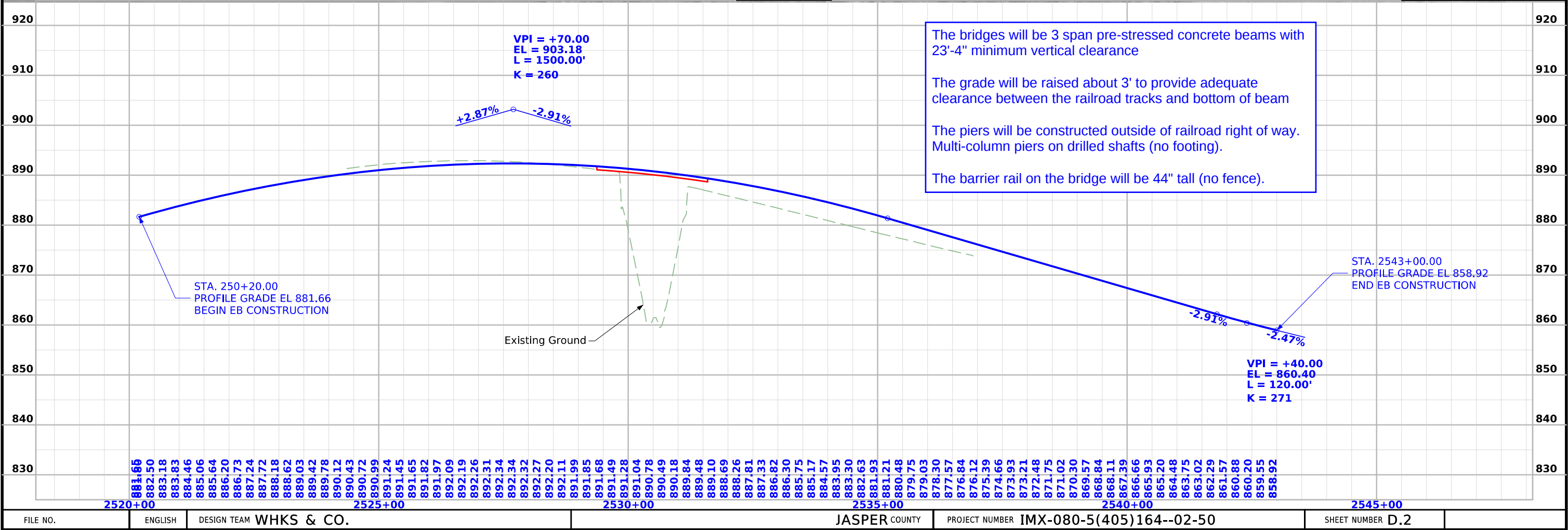
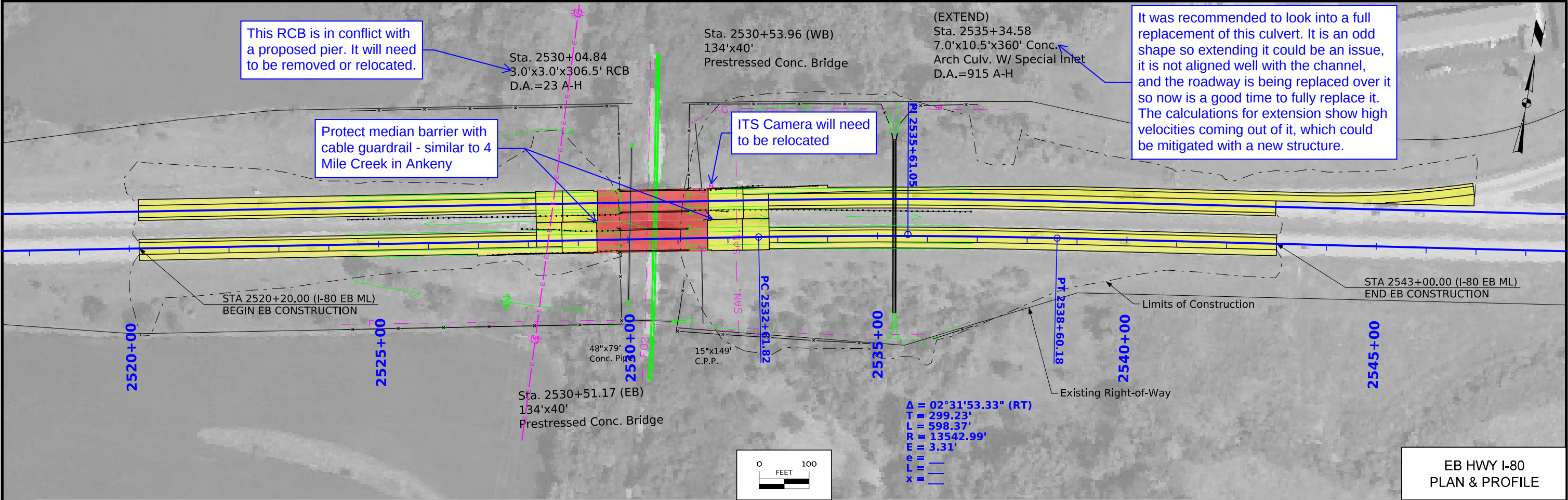
	Reference Point		Survey Line
	Station		Section Corner
	Ground Line Intercept		Saw Cut
	Guardrail		Trench Drain
	HighTension Cable Guardrail		Sheet Pile
	Pavement Removal		Clearing & Grubbing Area

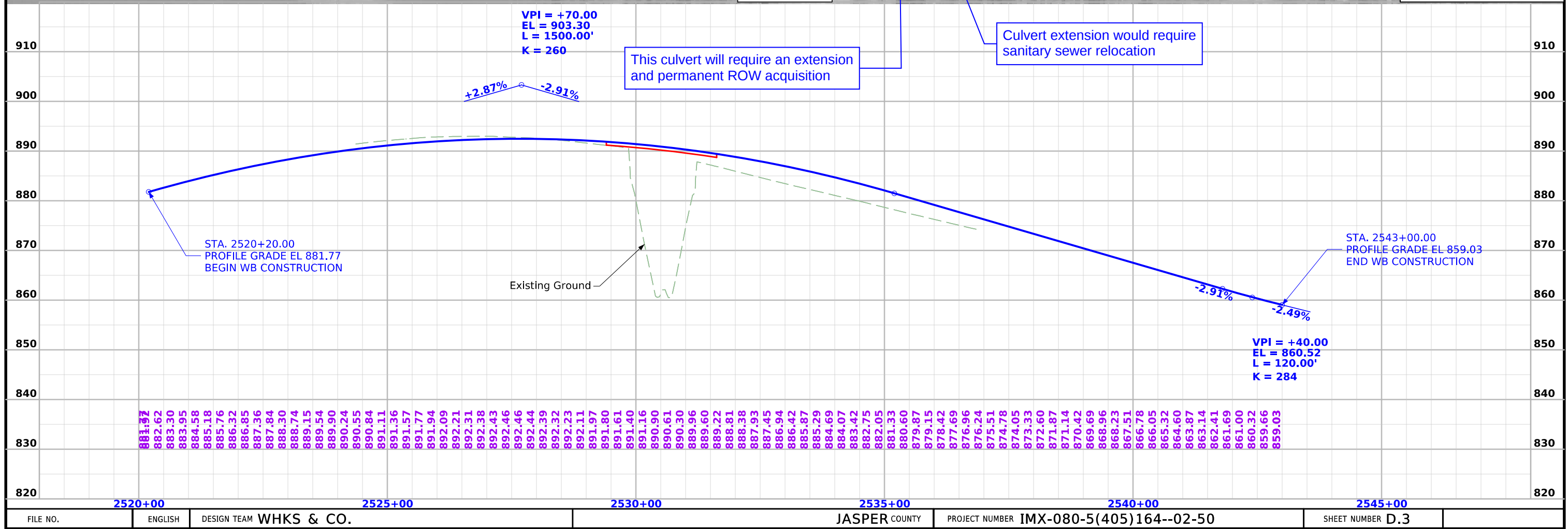
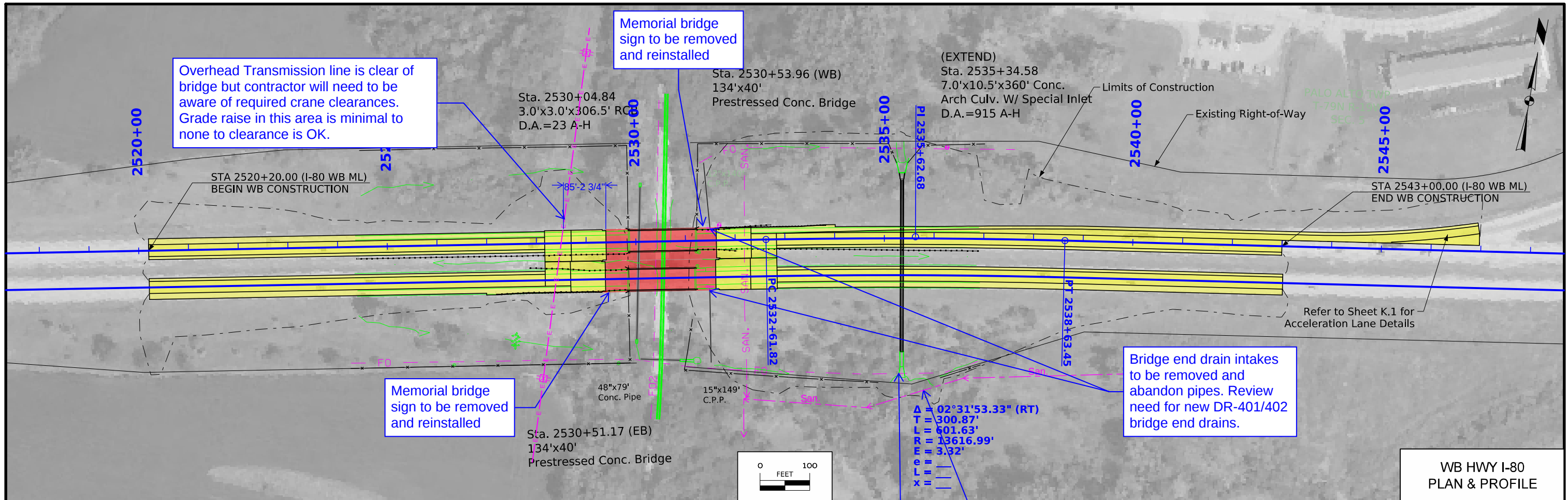
RIGHT-OF-WAY LEGEND

	Proposed Right-of-Way Symbol
	Proposed Right-of-Way Line
	Existing Right of Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Easement (Temporary) Symbol
	Easement (Temporary) Line
	Easement
	C/A Access Control
	Property Line Symbol
	Property Line

PLAN AND PROFILE
LEGEND AND SYMBOL
INFORMATION SHEET

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





Survey Information

SURVEY INDEX

County: Jasper
PIN: 26-50-080-030/25-50-080-030
Project Number: IMX-080-5(418)163--02-50/IMX-080-5(405)164--02-50
Location: I-80 EB/WB Bridges over Cherry Creek & IAIS RR.
Type of Work: Slide Repair
Project Directory: 5008003026

Survey Personnel

Jeremy Leemon – Survey Party Chief
Jacob Powers – Assistant Survey Party Chief
Matt Goedken –Survey Crew
Steve Lentz –Survey Crew

Date(s) of Survey

Begin Date 03/2/2026
End Date 04/10/2026

General Information

Full Field DTM survey for bridge replacement projects on I-80 in Jasper County: Cherry Creek EB/WB and IAIS RR EB/WB.

Utility Information

For logging data and other utility details see Utility Survey and Ownership Report in the Utility folder of the PrelimSurvey project directory.

Project Control

Nearby Iowa Real Time Network reference stations were utilized to obtain horizontal and vertical control on primary project control points. Three five-minute observations were taken with a minimum two-hour time span between and used in a weighted average to obtain final coordinate values. After control was established, a base was setup and all control points observed for consistency. For additional details of the control survey, contact the Preliminary Survey department.

PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 ADJUSTMENT)
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 9
Newton
(U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

The horizontal alignment for Interstate 80 (median) this survey is a retrace of As-built Plans No. 80-5(16)163. Survey stationing was equated to the plan PC at Sta. 2429+87.83 and carried ahead and back with equation at 2436+64.86(Bk)=2500+11.28(Ah).

Survey stationing relates to as built plan stationing as follows:

PC Sta. 2429+87.83 As-built Plans No. 80-5(16)163.
Survey PC Sta. 2429+87.83

PT Sta. 2506+67.70 As-built Plans No. 80-5(16)163.
Survey PT Sta. 2506+76.02

PC Sta. 2532+62.90 As-built Plans No. 80-5(16)163.
Survey PC Sta. 2532+61.82

PT Sta. 2538+62.90 As-built Plans No. 80-5(16)163.
Survey PT Sta. 2538+61.82

Survey Information

The horizontal alignment for Interstate 80 (Eastbound) this survey is a retrace of As-built Plans No. 80-5(16)163. Survey stationing was equated to the plan bridge center at Sta. 2426+55.73 and carried ahead and back with equation at 2436+64.86(Bk)=2500+02.58(Ah).

Survey stationing relates to as built plan stationing as follows:

PC Sta. 2429+92.18 As-built Plans No. 80-5(16)163.
Survey PC Sta. 2429+92.15

PT Sta. 2506+72.05 As-built Plans No. 80-5(16)163.
Survey PT Sta. 2506+71.69

The horizontal alignment for Interstate 80 (Westbound) this survey is a retrace of As-built Plans No. 80-5(16)163. Survey stationing was equated to the plan bridge center at Sta. 2426+23.42 and carried ahead and back with equation at 2436+64.86(Bk)=2500+17.24(Ah).

Survey stationing relates to as built plan stationing as follows:

PC Sta. 2428+11.21 As-built Plans No. 80-5(16)163.
Survey PC Sta. 2428+11.21

PT Sta. 2506+63.35 As-built Plans No. 80-5(16)163.
Survey PT Sta. 2506+80.37

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) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 09 (U.S. Survey Foot)

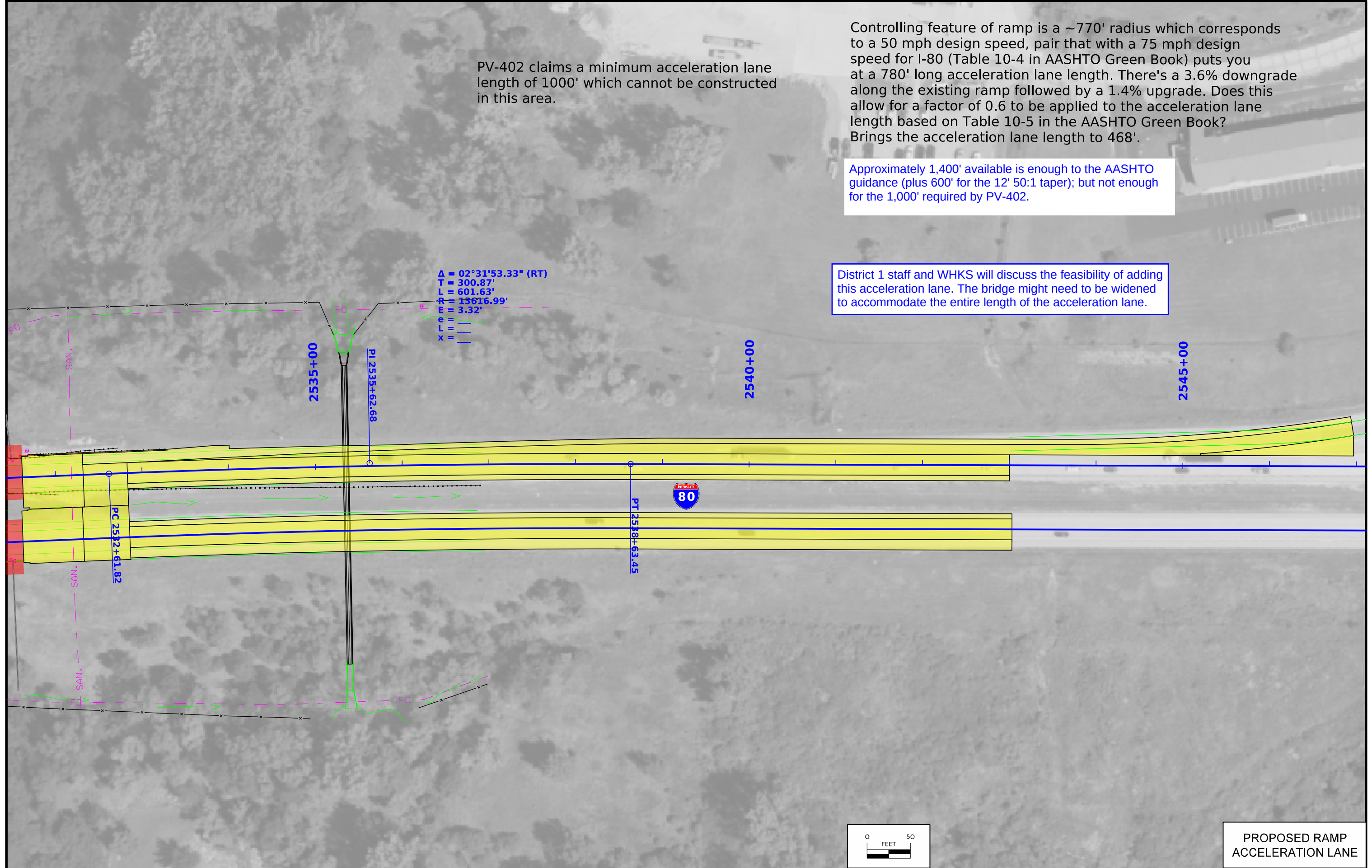
VERT. DATUM: NAVD88 - Geoid Model: 2018u3

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

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING
HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)
Ia. Regional Coordinate System Zone 09 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u3

Point Name	Northing	Easting	Elevation	Code-Description
101	7724180.94	19425193.40	913.19	CP SET 5/8" X 48" REBAR 6" DEEP, 6' SOUTH OF S 12TH AVE W, 35' WEST OF HARBOR AVE
102	7724272.42	19428914.96	921.32	CP SET 5/8" X 48" REBAR 6" DEEP, 2' WEST OF CURB, 22' NORTH OF SW CORNER OF NEWTON 66 PARKING LOT
103	7720048.48	19428997.10	893.09	CP SET 5/8" X 48" REBAR 6" DEEP, 30' EAST OF IA 14 CL, 223' SOUTH OF S 24TH AVE W CL
104	7720377.67	19423545.54	825.72	CP SET 5/8" X 48" REBAR 6" DEEP, 15' WEST OF W 36TH ST S, CL, 70' SOUTH OF S 24TH AVE W CL
105	7720179.11	19418126.44	869.44	CP SET 5/8" X 48" REBAR 6" DEEP, 15' WEST OF W 52ND ST S, CL, AT INTERSECTION W/ S 24TH AVE W CL
106	7724179.56	19418140.12	910.41	CP SET 5/8" X 48" REBAR 6" DEEP, 28' WEST OF W 52ND ST S, CL, AT INTERSECTION W/ S 12TH AVE W CL

For detour pavement, staging, and traffic control details refer to F Sheets and J Sheets in plan set IMX-080-5(418)163--02-50.



PV-402 claims a minimum acceleration lane length of 1000' which cannot be constructed in this area.

Controlling feature of ramp is a ~770' radius which corresponds to a 50 mph design speed, pair that with a 75 mph design speed for I-80 (Table 10-4 in AASHTO Green Book) puts you at a 780' long acceleration lane length. There's a 3.6% downgrade along the existing ramp followed by a 1.4% upgrade. Does this allow for a factor of 0.6 to be applied to the acceleration lane length based on Table 10-5 in the AASHTO Green Book? Brings the acceleration lane length to 468'.

Approximately 1,400' available is enough to the AASHTO guidance (plus 600' for the 12' 50:1 taper); but not enough for the 1,000' required by PV-402.

District 1 staff and WHKS will discuss the feasibility of adding this acceleration lane. The bridge might need to be widened to accommodate the entire length of the acceleration lane.

CROSS SECTION VIEW COLOR LEGEND			
Design Color No.	Feature	Design Color No.	Feature
Aggregate		Grading	
(64)	Choke Stone	(8)	Behind Curb Cut
(42)	Engineering Fabric	(6)	Granular
(8)	Flooded Backfill	(13)	Granular Back Fill
(92)	Macadam Stone	(48)	Rock Undercut
(20)	Modified	(8)	Shoulder Earth Fill
(12)	Plowing Shaping	(2)	Side Slopes
(14)	Porous Backfill	(226)	Side Slopes Dressing
(8)	Revetment Class A	Substrata	
(6)	Revetment Class B	(128)	Boulder
(62)	Revetment Class C	(209)	Boulder Removed
(188)	Revetment Class D	(48)	Broken Weathered
(28)	Revetment Class E	(210)	Broken Weathered Removed
(12)	Shoulder Special Backfill	(3)	Core Out
(12)	Special Backfill	(115)	Core Out Remove Only
(20)	Subbase	(195)	Core Out Remove and Replace
(20)	Subbase Lower	(203)	Existing Pavement
(20)	Subbase Upper	(184)	Existing Pavement Remove Only
(118)	Subgrade Treatment	(200)	Existing Pavement Remove and Replace
Asphalt		(6)	Loam
(207)	HMA Base Course	(211)	Loam Removed
(207)	HMA Interim Course	(80)	Rock
(207)	HMA Surface Course	(212)	Rock Removed
Bridge		(4)	Select Sand
(0)	Bridge	(214)	Select Sand Removed
Concrete		(3)	Shale
(0)	Barrier Concrete	(215)	Shale Removed
(0)	Barrier Concrete Footing	(10)	Topsoil
(0)	Curb Gutter	(2)	Topsoil Remove Only
(48)	Flowable Mortar	(4)	Topsoil Remove and Replace
(0)	Median Concrete	Unsuitable / Waste	
(0)	PCC Pavement	(3)	Unsuitable Type A
(0)	Sidewalk	(216)	Unsuitable Type A Removed
Existing		(13)	Unsuitable Type B
(0)	Existing Pavement	(217)	Unsuitable Type B Removed
Shoulder		(11)	Unsuitable Type C
(209)	Shoulder HMA	(218)	Unsuitable Type C Removed
(0)	Shoulder PCC	(3)	Waste
(6)	Shoulder Granular	(219)	Waste Removed
Structural			
(112)	Noise Wall		
(112)	Noise Wall Footing		
(112)	Retaining Wall Back		
(112)	Retaining Wall Back Excavate		
(112)	Retaining Wall Face		
(112)	Retaining Wall Front Excavate		
(112)	Retaining Wall Front Footing		
(112)	Retaining Wall MSE Gutter		
(112)	Retaining Wall Reinforced Earth		

NOTES:

Text

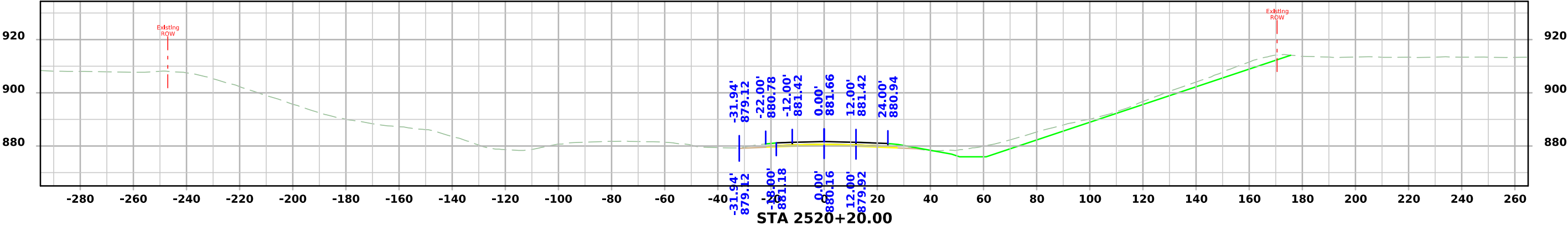
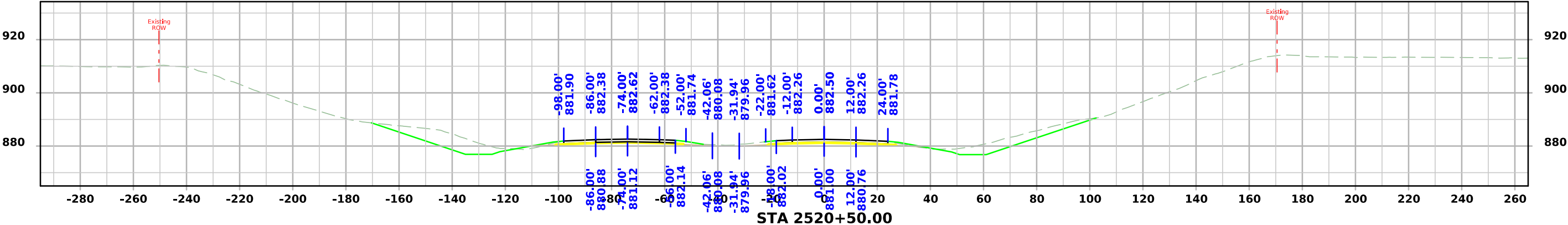
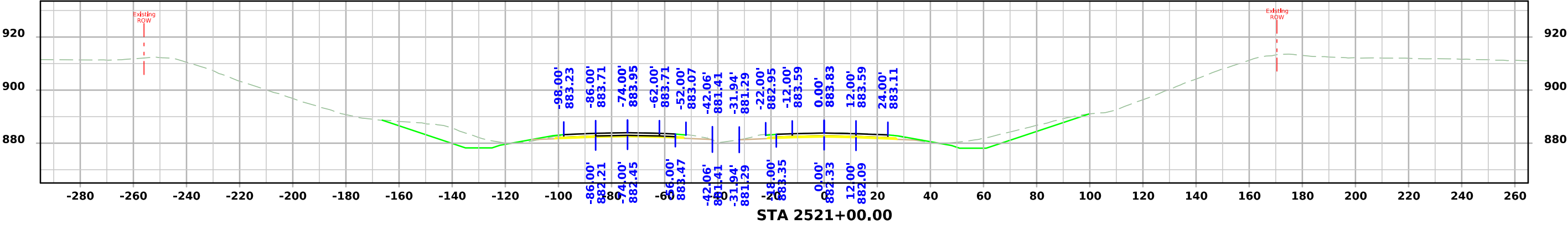
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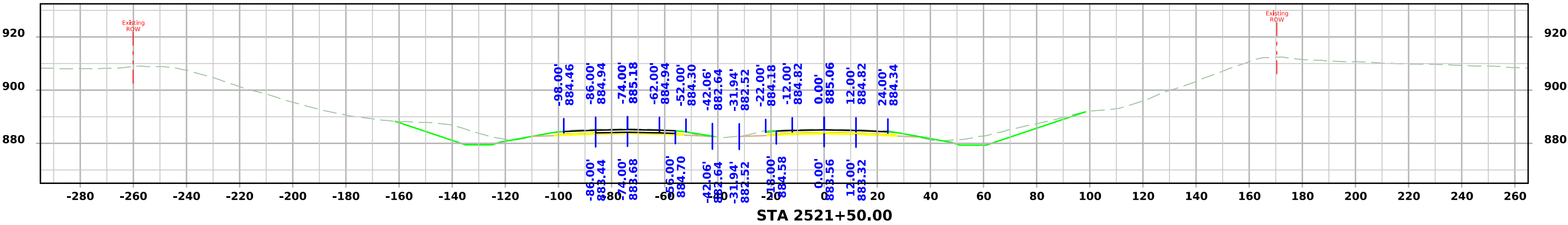
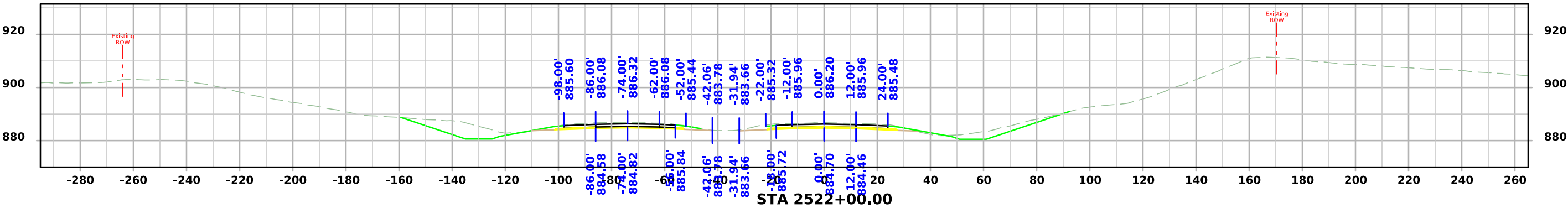
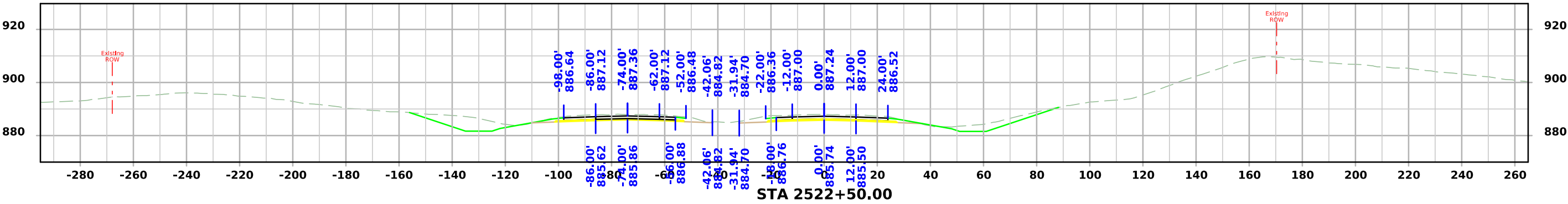
CROSS SECTIONS
LEGEND AND INFORMATION SHEET

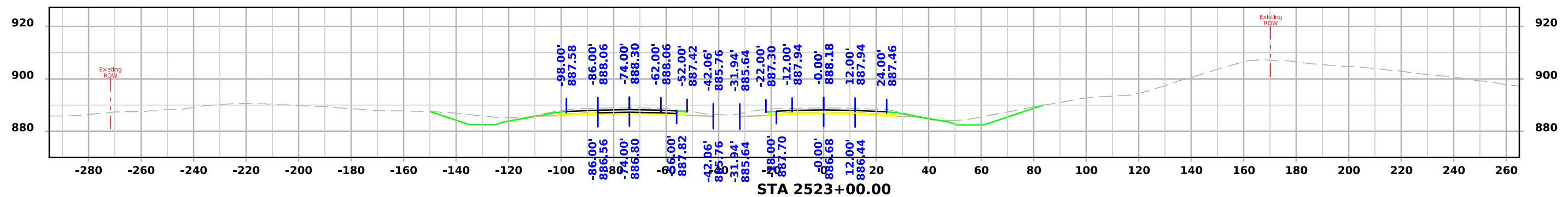
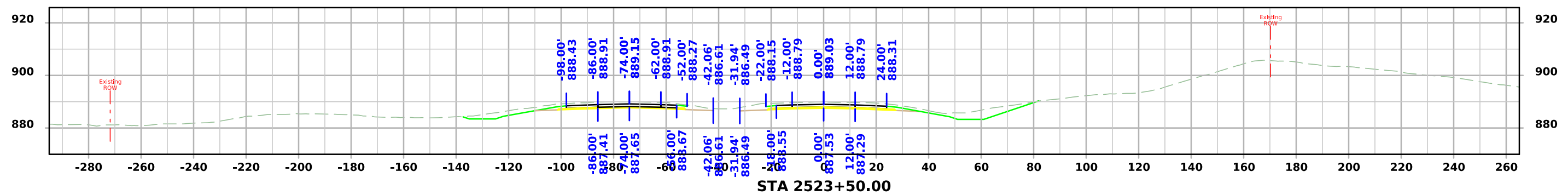
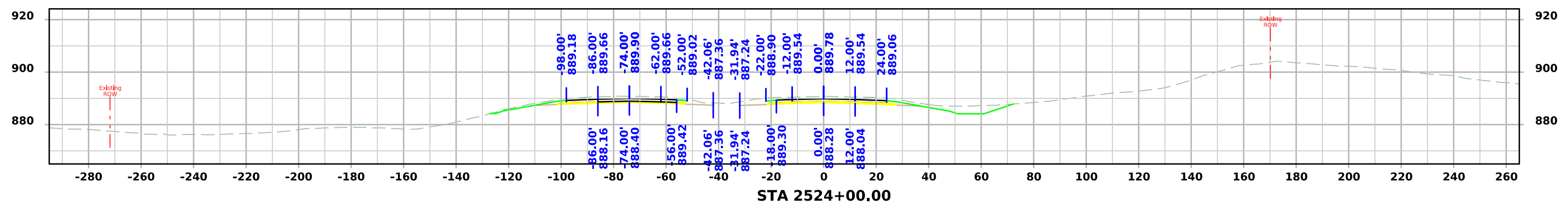
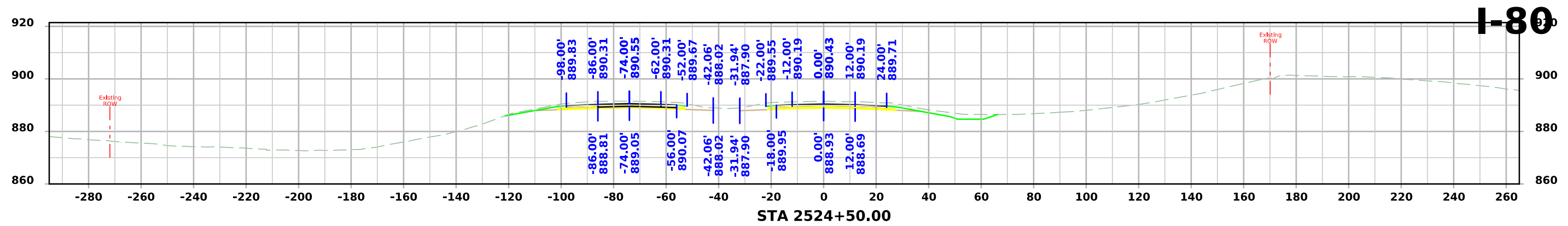
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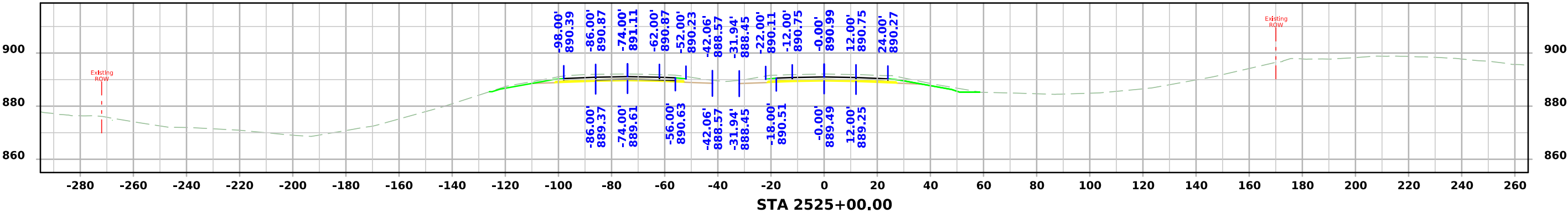
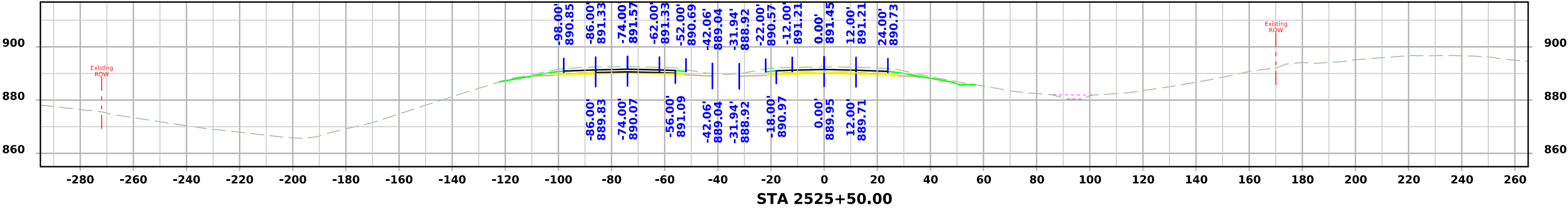
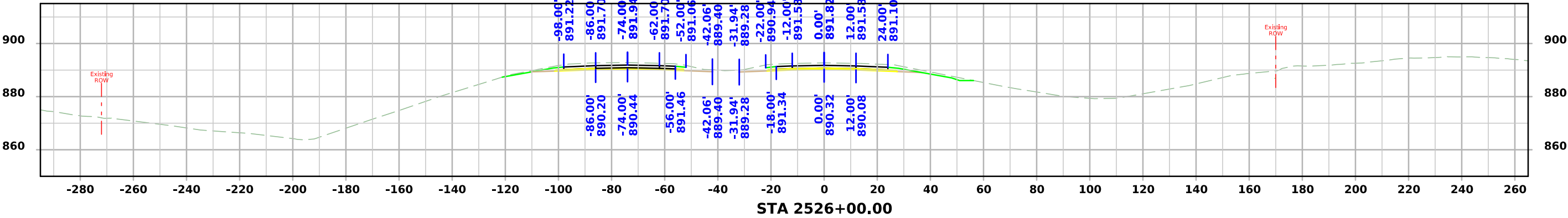
I-80



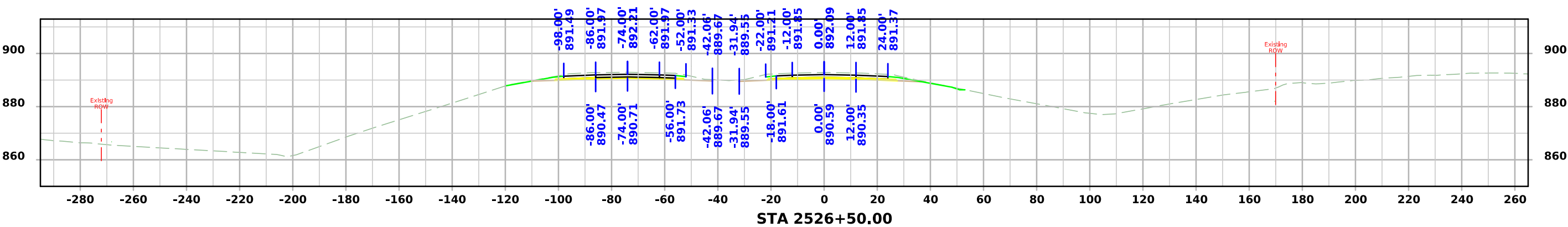
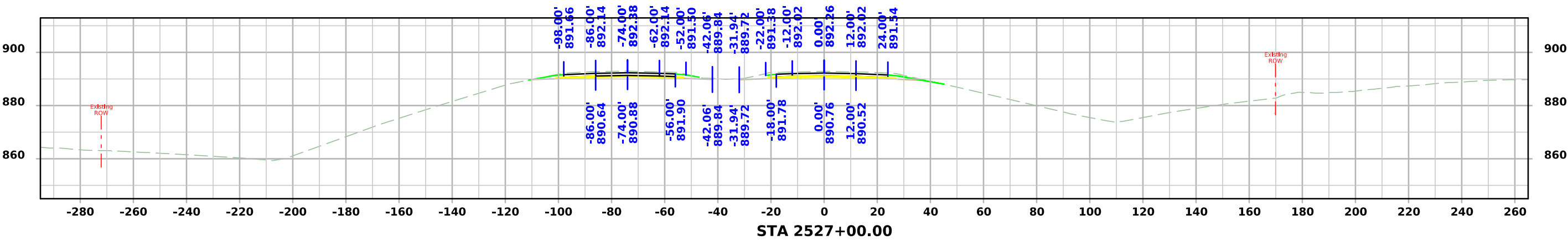
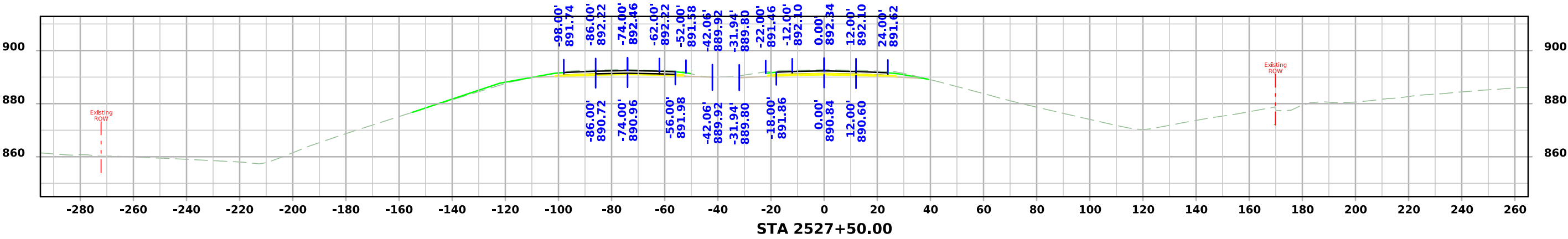
I-80



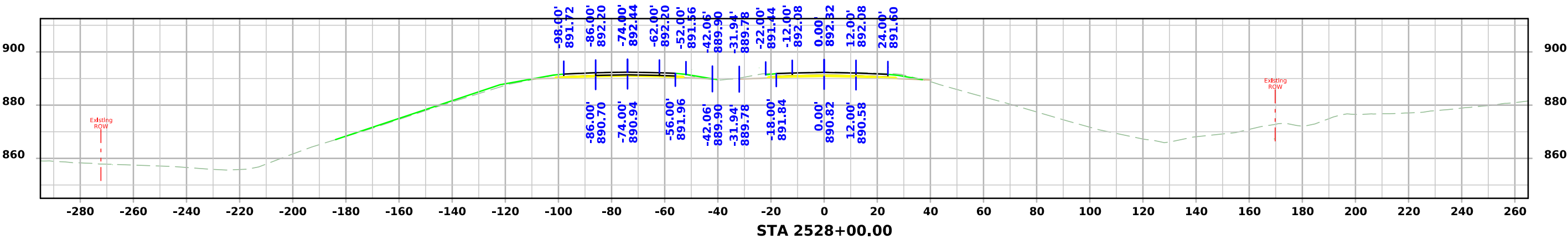
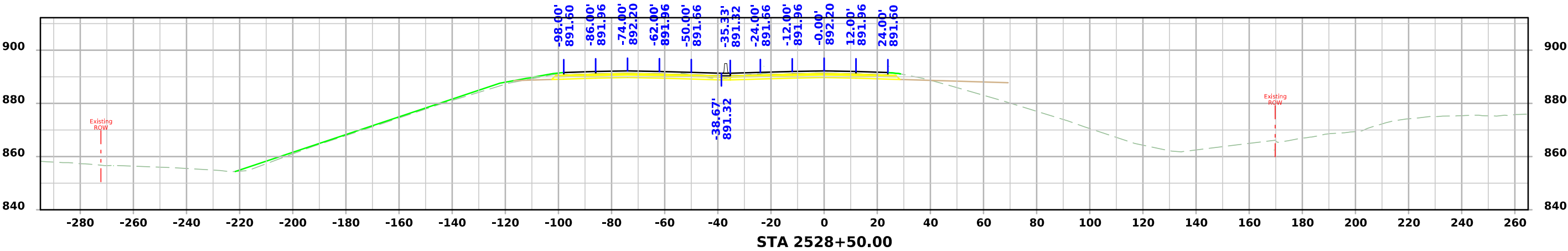
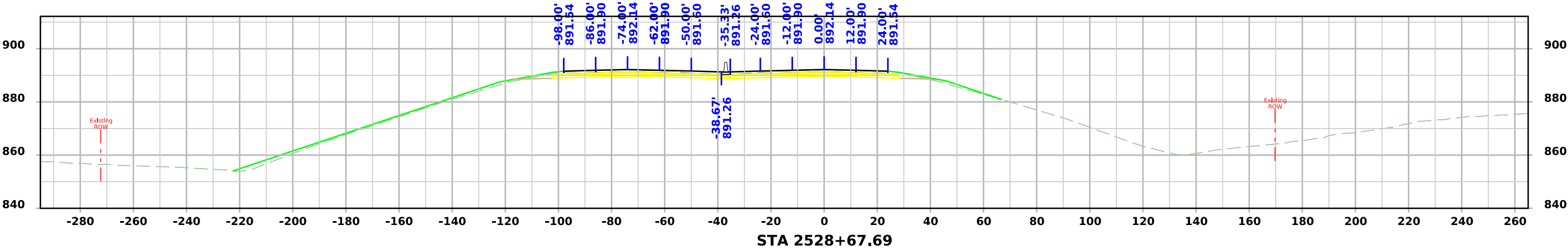


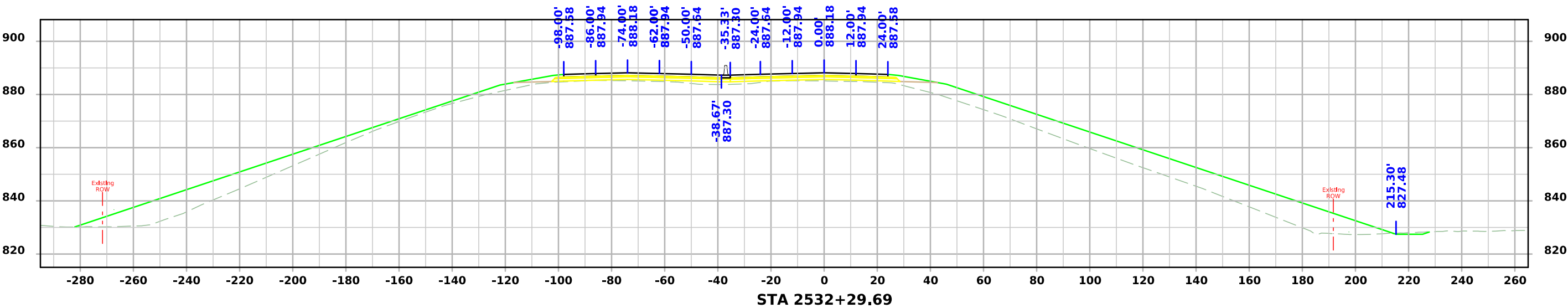
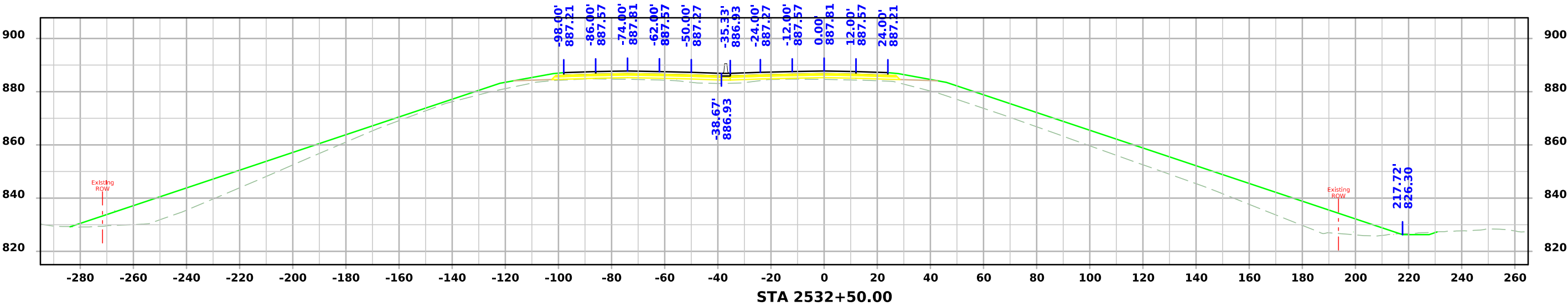


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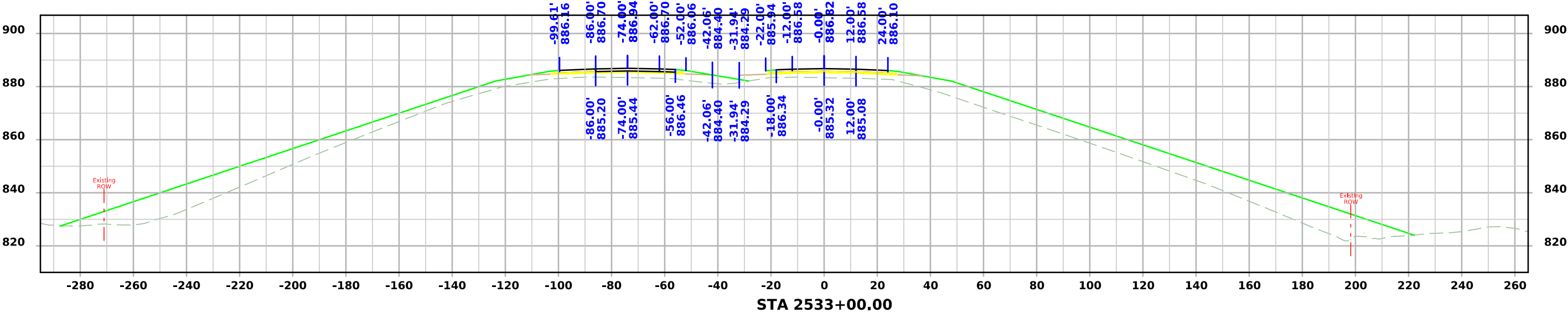
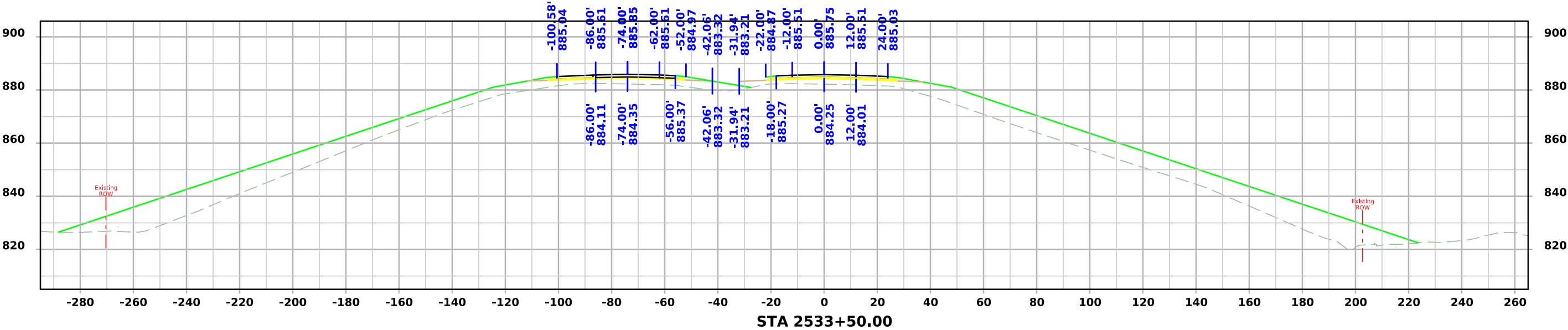


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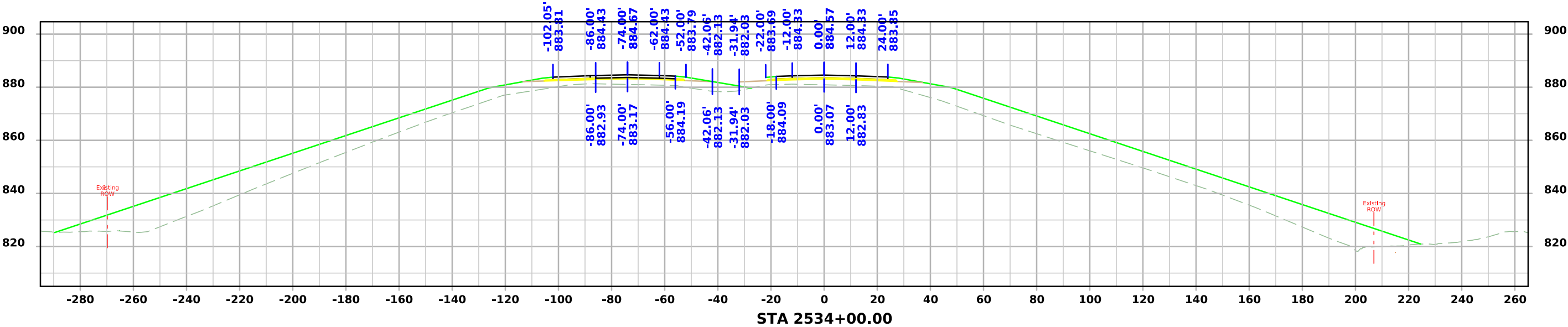
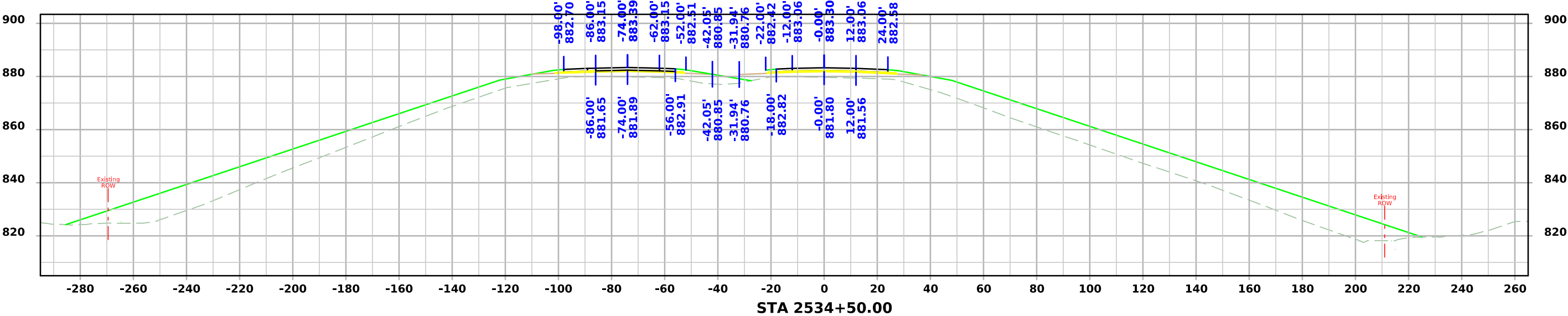




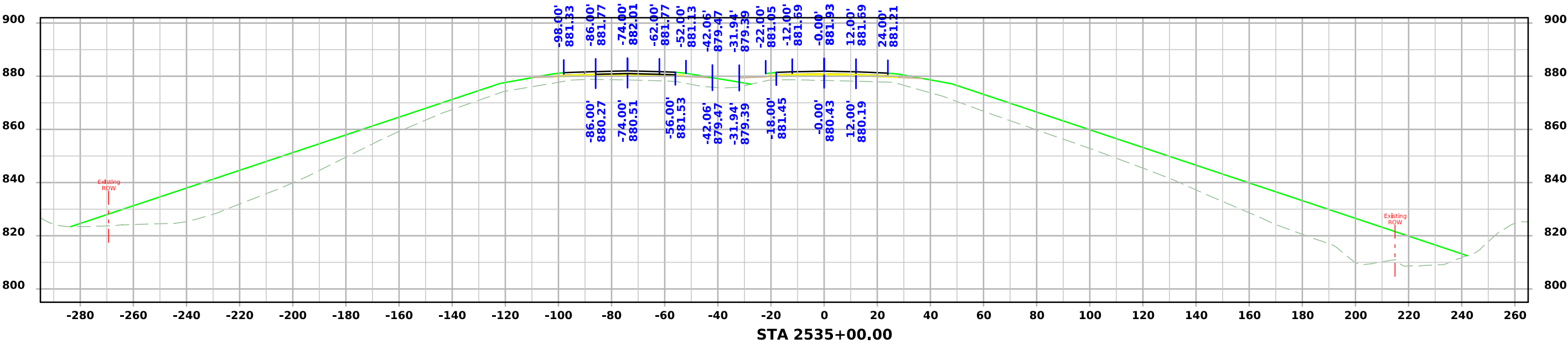
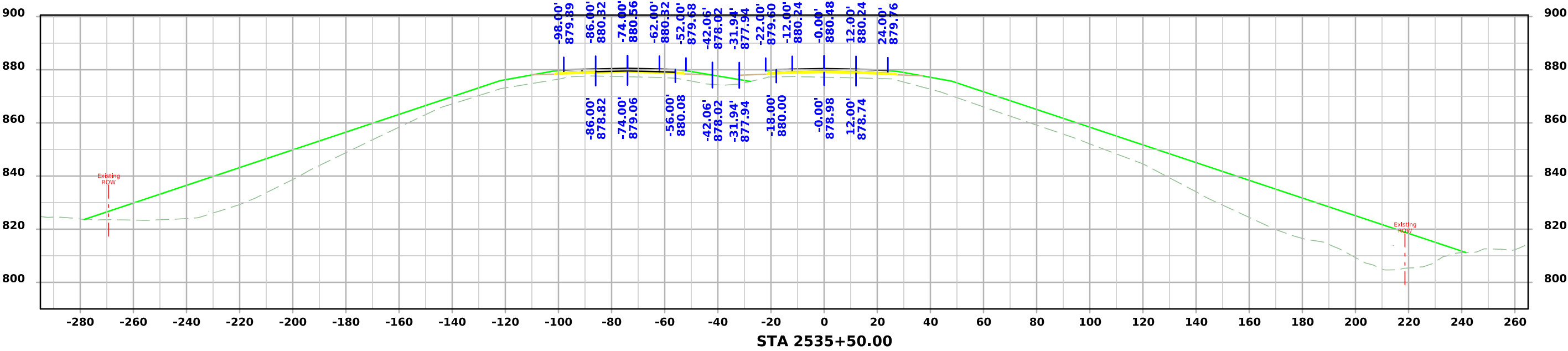
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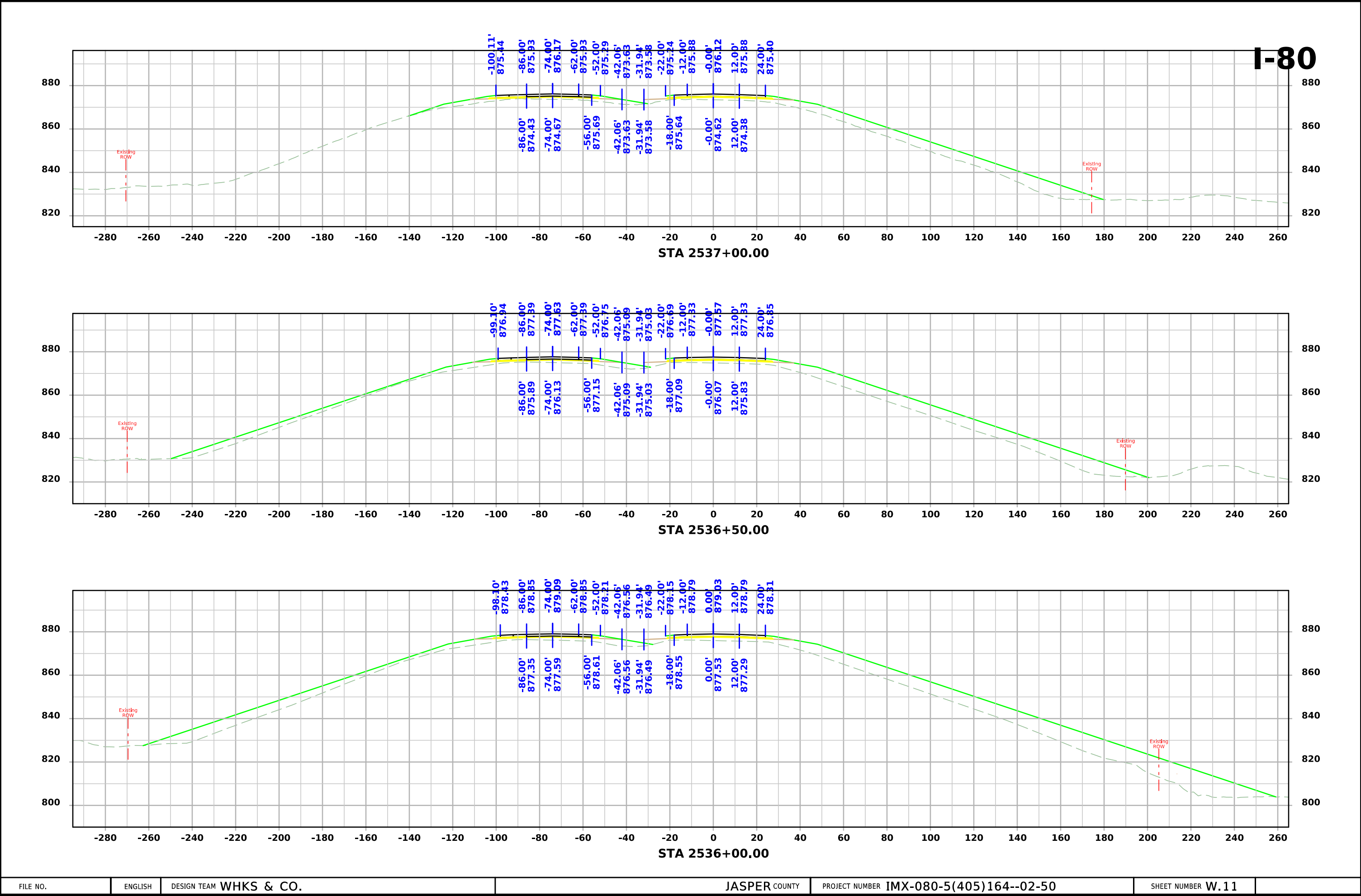


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