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No.	DESCRIPTION
A Sheets	Title Sheets
* A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 6	Typical Cross Sections and Details
C Sheets	Quantities and General Information
C.1	Standard Road Plans
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 11	US 30
G Sheets	Survey Sheets
* G.1 - 4	Reference Ties and Bench Marks
G.5	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan
J.1	Staging Notes
* J.2	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.3 - 7	Staging and Traffic Control Sheets
L Sheets	Geometric, Staking and Jointing Sheets
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R Sheets	Erosion Control Sheets
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* RR.1	Erosion Control Legend and Symbol Information Sheet
* RR.2 - 11	Drainage Basin and Erosion Control Device Maps
V Sheets	Bridge and Culvert Situation Plans
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* V.4 - 5	Retaining Wall Plans
* V.6 - 7	Bridge Plans, US 30 Over Overflow Ditch
* VW.1	US 30 Pipe Culvert Cross Sections
W Sheets	Mainline Cross Sections
* W.1	Cross Sections Legend & Symbol Information Sheet
* W.2 - 57	Mainline Cross Sections
	* Color Plan Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

CLINTON COUNTY

Roadway Realignment and Bridge Replacements

UP RR 0.6 mi E of Co Rd Y4E

<- H Sheets

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	
113	
PROJECT IDENTIFICATION NUMBER	
19-23-030-020	
PROJECT NUMBER	
BRF-030-9(189)--38-23	
R.O.W. PROJECT NUMBER	
NHSN-030-9(190)--2R-23	

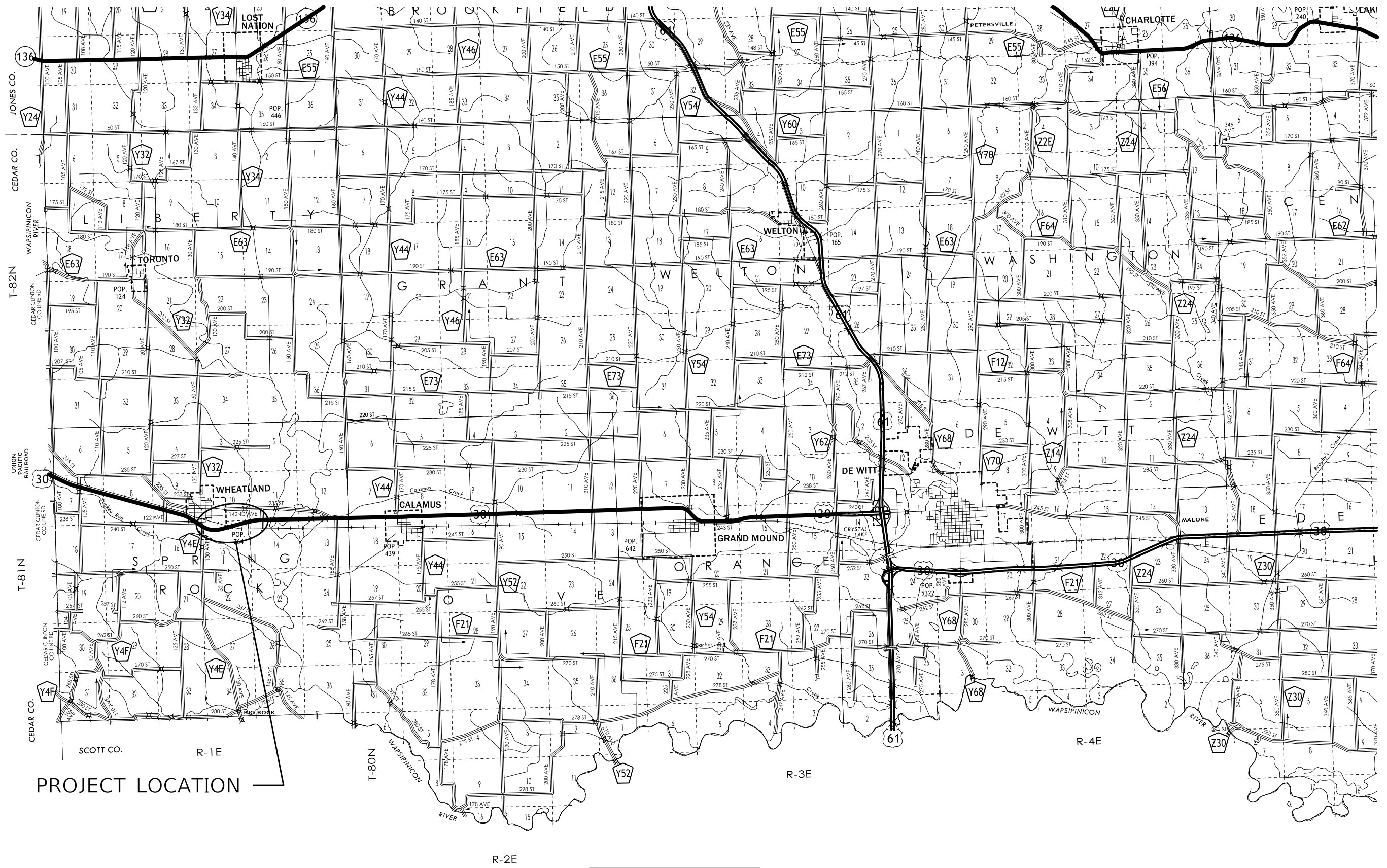
DESIGN DATA RURAL			
2020	AADT	3,100	V.P.D.
2044	AADT	3,800	V.P.D.
20 --	DHV	--	V.P.H.
TRUCKS		20	%
Total			
Design ESALs		3,200,000	

INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	X	Primary Signature Block	X
X	X	X	X

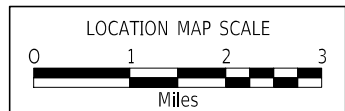
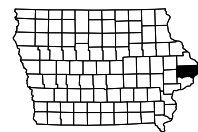
PRELIMINARY PLANS

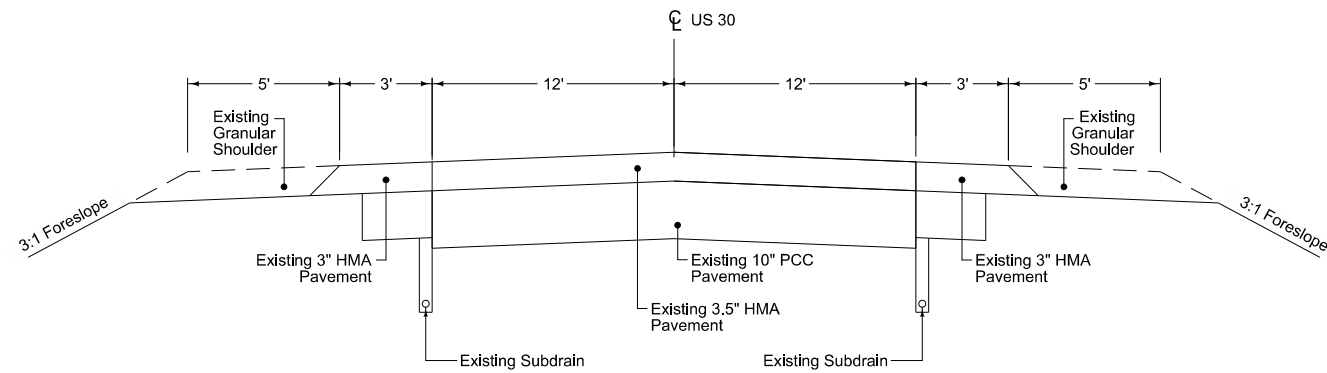
Subject to change by final design.

D05 – Date: 9–6–2024



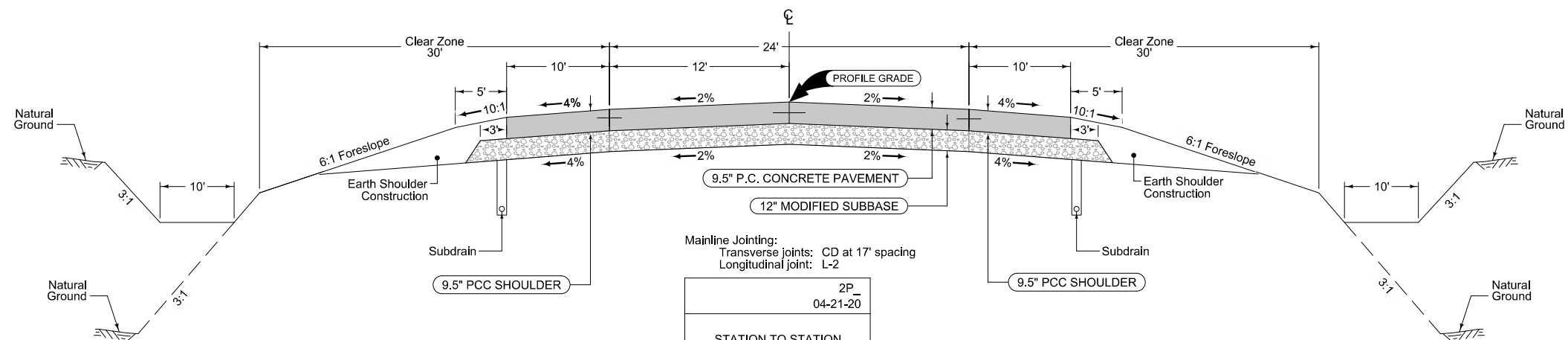
PROJECT LOCATION





EXISTING US 30

US 30



Full Depth PCC Shoulder

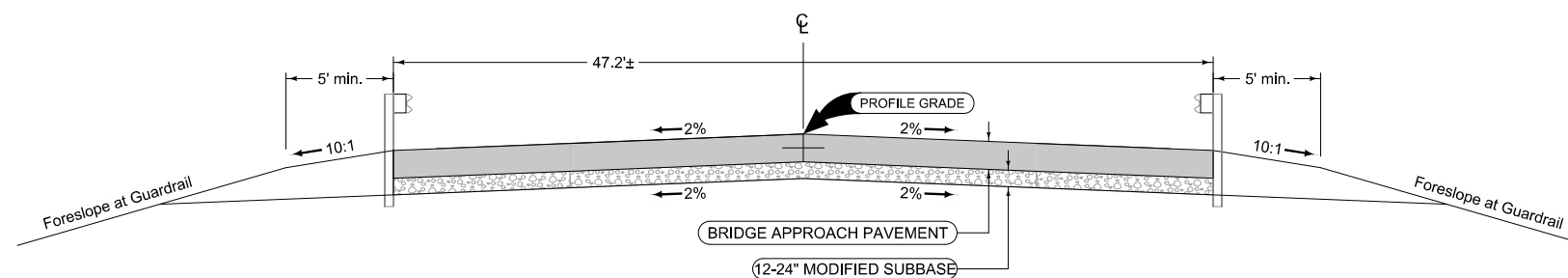
Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: C at 17' spacing

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

STATION TO STATION	
234+15.00	237+00.19
250+83.53	269+09.02
272+48.02	287+50.00
*287+50.00	*290+00.00

*Shoulder Construction Only

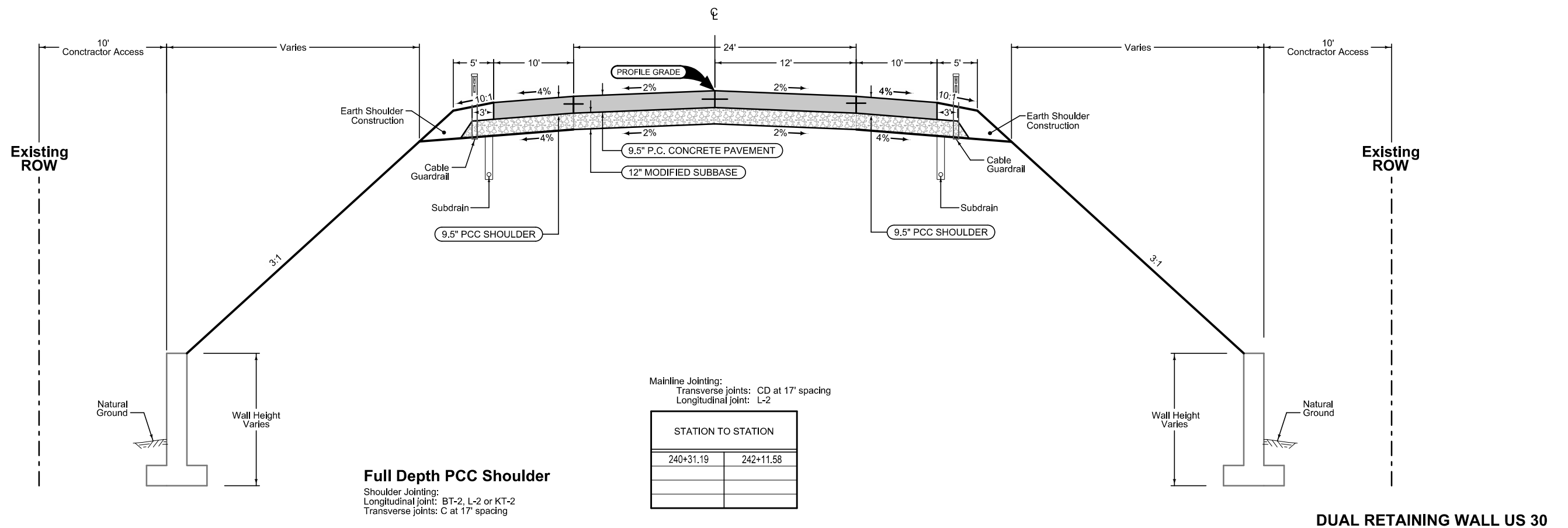
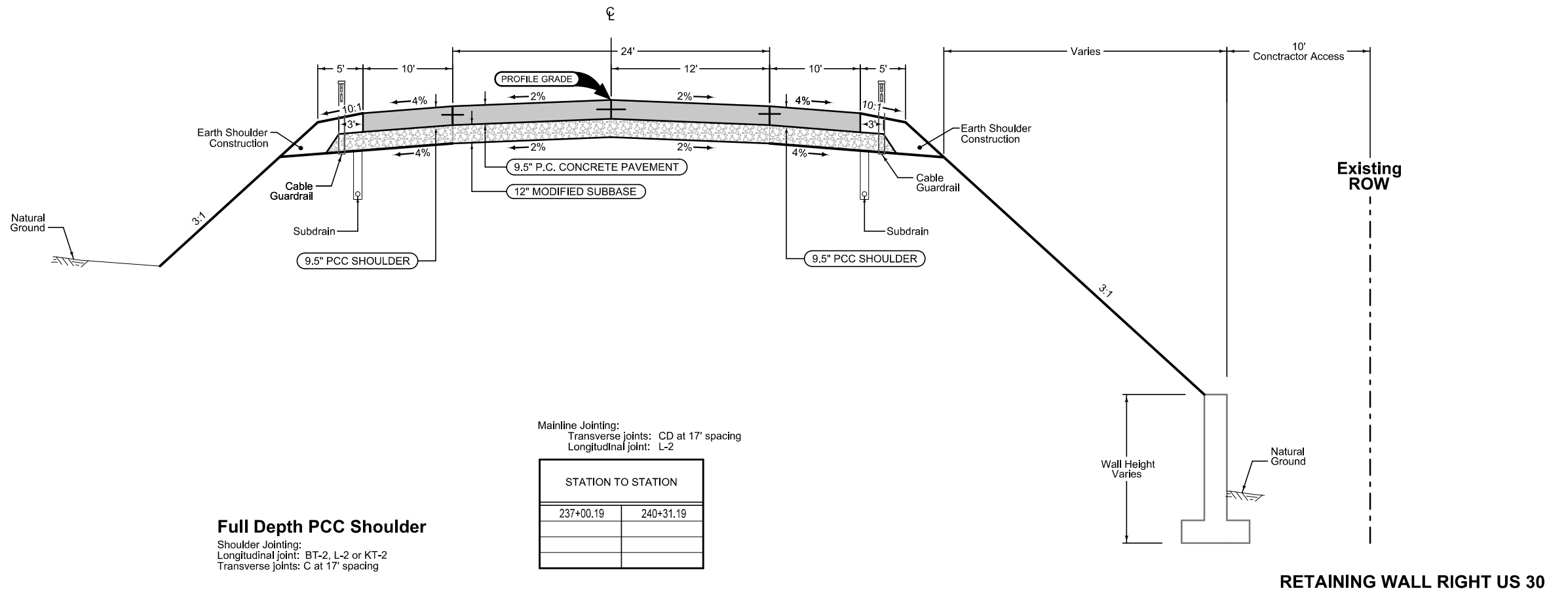
PROPOSED US 30

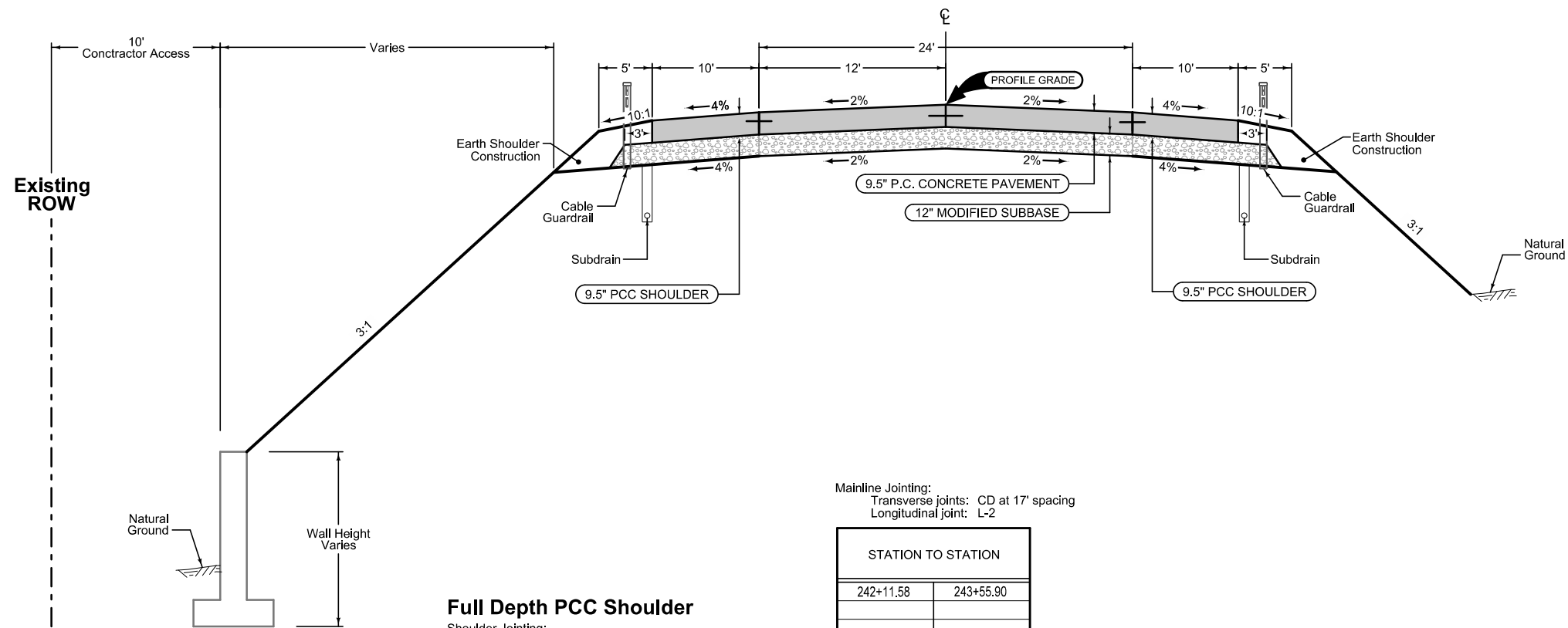


STATION TO STATION	
243+55.90	244+43.23
249+96.77	250+83.53
269+09.02	269+79.02
271+78.02	272+48.02

Refer to Bridge Approach
Standard Road Plans for
Jointing Information.

BRIDGE APPROACH US 30





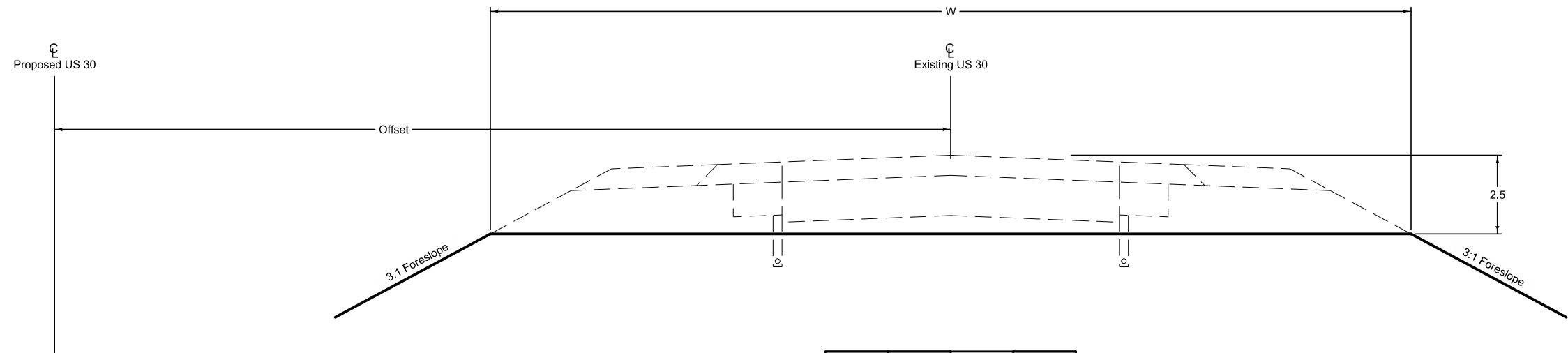
Mainline Jointing:
Transverse joints: CD at 17' spacing
Longitudinal joint: L-2

STATION TO STATION	
242+11.58	243+55.90

Full Depth PCC Shoulder
Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: C at 17' spacing

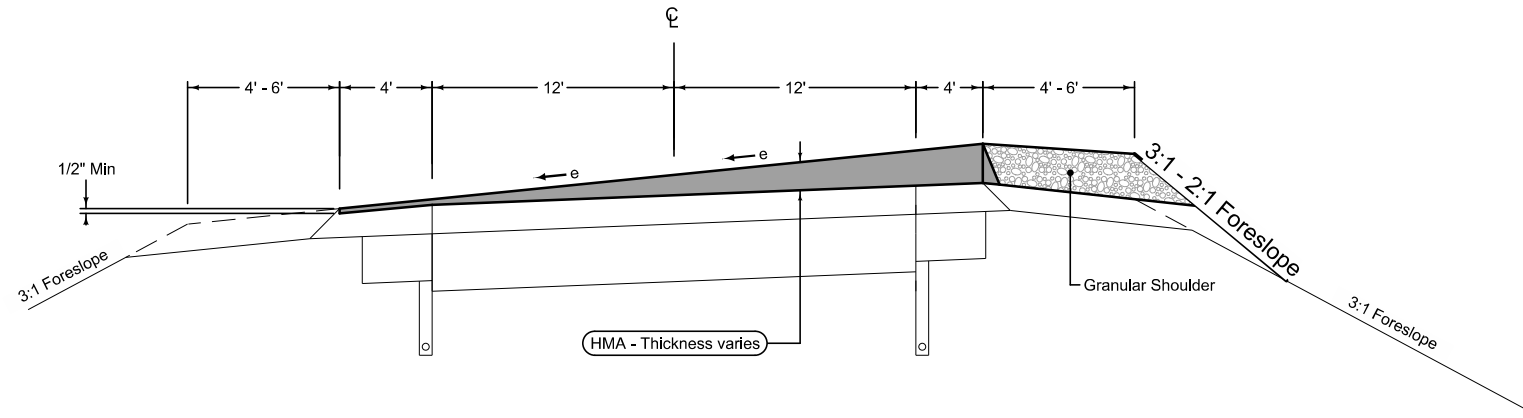
RETAINING WALL LEFT US 30

Review Obliteration Limits
During Final Design



Station	Offset (Feet)	L/R	W (Feet)
241+00.00	22.0	R	0
244+65.00	44.0	R	54
246+21.00	76.0	R	54
250+57.00	207.0	R	54
276+93.00	72.0	R	54
281+55.00	48.0	R	0

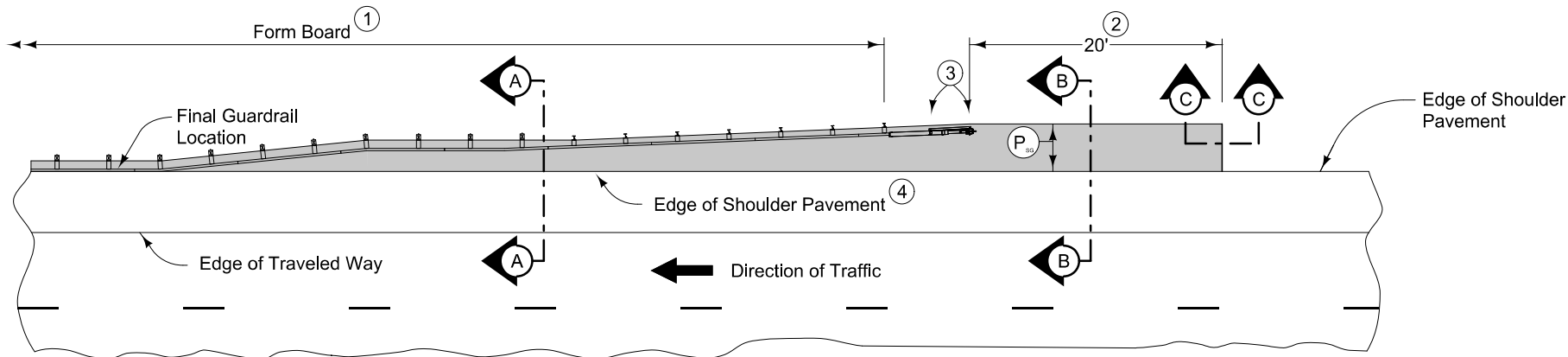
Obliteration of Existing Roadbed



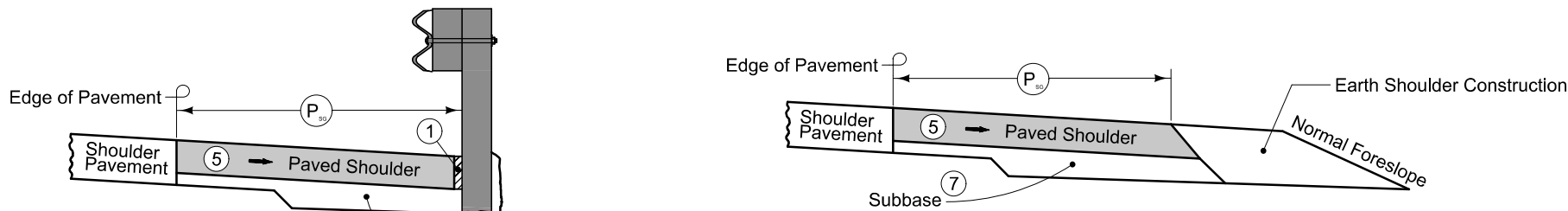
Superelevation Key Stations for Overlay		
DESCRIPTION	e	STATION
Existing/start of super correction	3.00%	219+00.00
Super transition/correction	5.20%	220+00.00
End of overlay area	5.20%	234+15.00

STATION TO STATION	
219+00.00	234+15.00

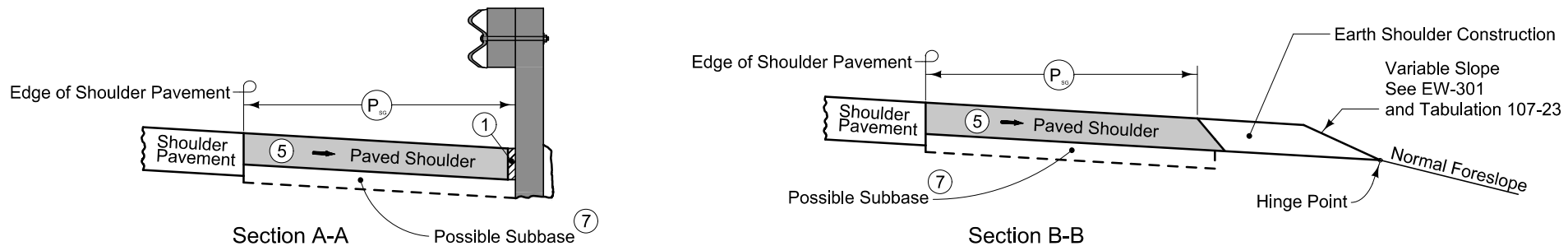
Overlay - Superelevation Correction



PLAN VIEW



NEW CONSTRUCTION



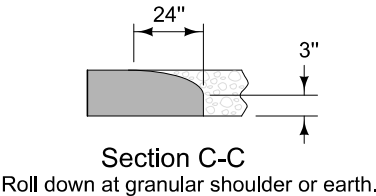
EXISTING SHOULDER

9.5" PCC Paved Shoulder at guardrail. Utilize the following jointing layout:

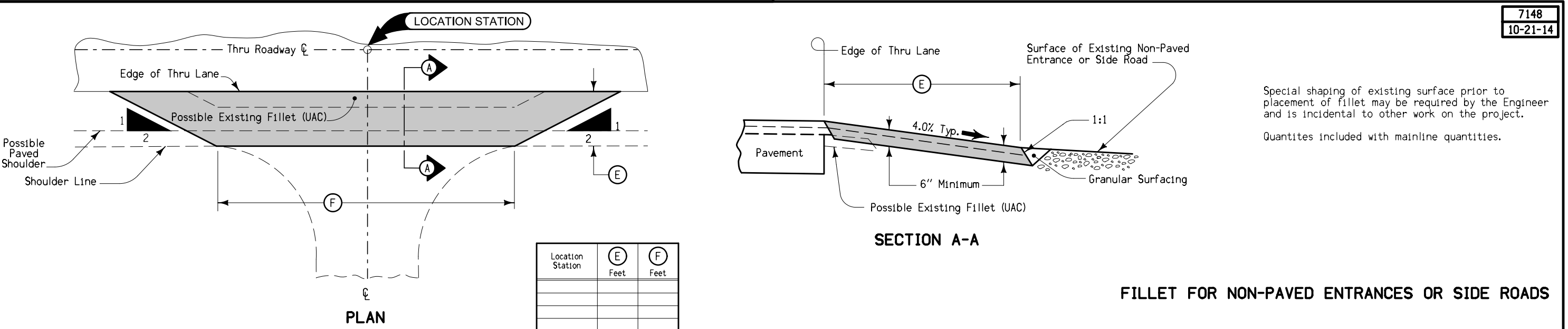
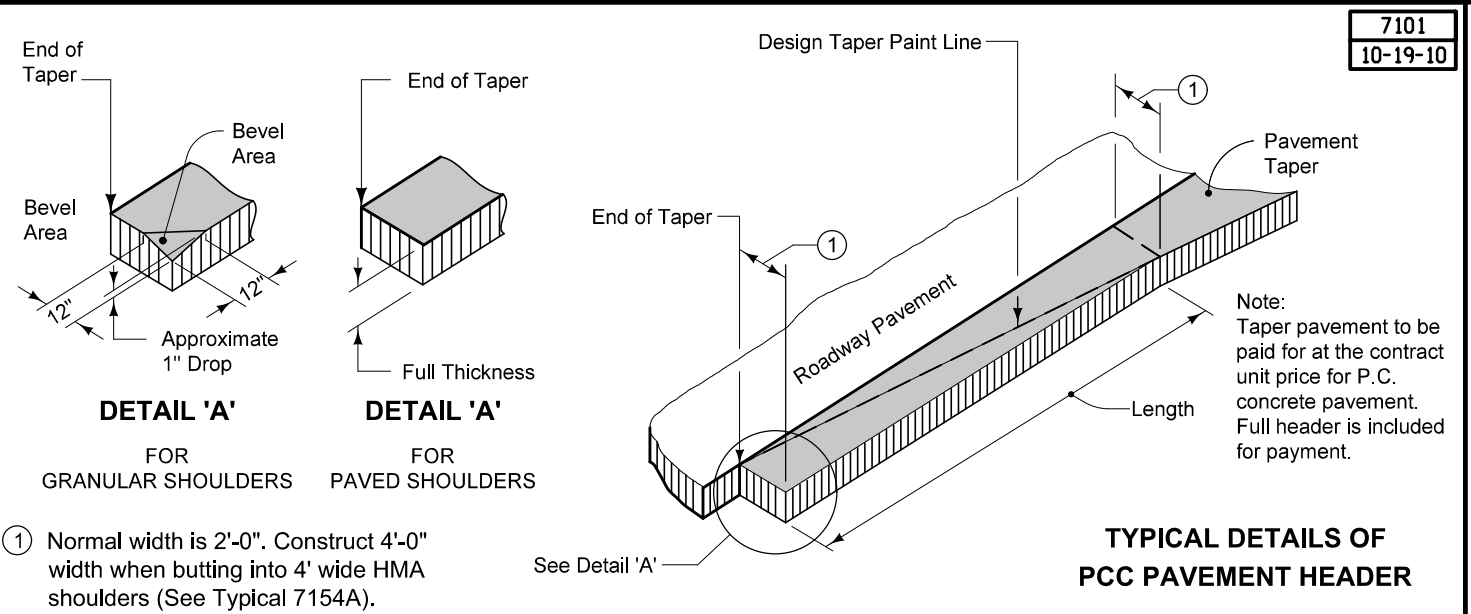
Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

Refer to Tabulation 112-9 for shoulder quantities.

- PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- Continue paved shoulder 20 feet beyond the center of the first post.
- Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- 'KT' (per PV-101) joint for PCC shoulder.
- Match shoulder slope.
- The Contractor has the option to pave the paved shoulder at guardrail and the full width paved shoulder as one operation.
- Refer to other details in the plan.



PAVED SHOULDER AT GUARDRAIL
(ADJACENT TO FULL WIDTH PAVED SHOULDER)



105_04 10/15/24 STANDARDS The following Standards apply to construction work on this project.		
Number	Date	Title
BA-200	04-20-21	Steel Beam Guardrail Components
BA-201	10-18-22	Steel Beam Guardrail Barrier Transition Section (MASH TL-3)
BA-202	10-15-24	Steel Beam Guardrail Bolted End Anchor
BA-205	10-17-23	Steel Beam Guardrail Tangent End Terminal (MASH TL-3)
BA-206	10-19-21	Steel Beam Guardrail Flared End Terminal For Cable Connection
BA-250	04-20-21	Steel Beam Guardrail Installation at Concrete Barrier or Bridge End Post (MASH TL-3)
BA-351	10-19-21	High Tension Cable Guardrail
BA-401	04-20-21	Temporary Barrier Rail (Precast Concrete)
BA-500	04-20-21	Temporary Crash Cushions Sand Barrel
BR-203	10-15-24	Double Reinforced 12 inch Approach
BR-213	10-19-21	Bridge Approach (Abutting Pavement)
DR-201	10-17-23	Concrete Aprons
DR-306	10-17-23	Precast Concrete Headwall for Subdrain Outlets
DR-402	04-16-24	Rock Flume for Bridge End Drain
DR-601	04-18-17	Reinforced Concrete Pipe Culvert
EC-201	04-20-21	Silt Fence
EC-301	10-18-22	Rock Erosion Control (REC)
EC-303	10-19-21	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-202	04-19-16	Bridge Berm Grading without Recoverable Slope (Non-Barnroof Section)
EW-301	04-16-24	Guardrail Grading
EW-403	04-18-17	Temporary Erosion Control Measures
EW-501	10-17-23	Rural Entrance
EW-503	10-20-15	Side Road Grading
PM-110	10-15-24	Line Types
PV-12	04-16-24	Milled Shoulder Rumble Strips
PV-13	04-16-24	Milled Centerline Rumble Strips
PV-101	04-19-22	Joints
PV-102	04-21-20	PCC Curb Details
PV-301	04-21-20	Superelevation Details Two Lane Roadway
SI-173	04-19-16	Object Markers
SI-211	10-18-22	Object Marker and Delineator Placement with Guardrail
SI-881	04-16-19	Special Signs for Workzones
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	04-18-23	Work Within 15 ft of Traveled Way
TC-213	04-18-23	Lane Closure with Flaggers
TC-217	04-18-23	Lane Closure with Signals and TBR
TC-252	04-21-20	Routes Closed to Traffic

SURVEY SYMBOLS

	AST, Above Ground Storage Tank		PR, Electric Riser Pole
	BB, Billboard		PRO, Profile Shot
	BBB, Bottom of Bridge Beam		PT, Curve Point
	BCL, Bridge Centerline		REF, Reference Tie Point
	BD, Bridge Deck		RET, Retaining Walls
	BIN, Grain Bin		RIP, Rip-Rap
	BL, Topo Breakline		ROC, Rock Outcropping
	BLD, Building or Foundation		ROW, Right of Way Mark
	BLS, Bridge Low Steel		RR, Centerline of Railroad Tracks
	BM, Bench Mark		RRB, Railroad Signal Box
	BNK, Stream Bank		RRF, Railroad Frog
	BRG, Bridge		RRR, Railroad Rail
	C, Centerline BL of Road -ML or SR		RRS, Railroad Signal
	CAV, Cave		RRW, Railroad Switch
	CEL, Cell Phone Tower		RT, Radio Tower
	CIS, Cistern		S, Soil Sampling Site -Wetlands
	CON, Concrete or A/C Slab		SBR, Size of Bridge
	CP, Control Point		SC, Spiral Point
	CRP, Corporation Line		SCR, Section Corner
	CS, Curve Point		SEP, Septic Tank
	CI, Back of Curb		SF, Silt Fence -Wetlands
	CUL, Culvert		SG, Staff Gauge -Wetlands
	D, Centerline Draw or Stream -Down		SH, Paved Shoulder
	DAB, Drainage Area Boundary		SHR, Shrub
	DIK, Centerline of Dike or Dam		SI, Sign
	DTM, Photogrammetry Elv Control Check		SL, Speed Limit Sign
	DU, Centerline Draw or Stream -Up		SLN, Section Line
	EB, Electrical Box		SLO, Silo
	EG, Edge of Gravel Road		SNK, Sink Hole
	ENP, Edge Paved Entrance and Park Lot		SNP, Unpaved Shoulder
	ENT, Centerline BL of Entrance		SP, Stream Profile
	ENU, Edge Unpaved Entrance and Parking		STP, Stump
	EP, Edge of Paved Roads -ML or SR		SWK, Sidewalk
	EW, Edge of Water		SWP, Swamp or Marsh
	FCL, Chain Link and Security Fence		TA, Tower Anchor
	FENO, FENO Monument		TBO, Telephone Booth
	FHD, Fire Hydrants		TCB, Traffic Signal Box
	FLG, Flag Poles		TDC, Tree Deciduous
	FP, Filler Pipe		TDL, Traffic Detection Loop
	FW, Wire Fence		TER, Terrace
	FWD, Wood Fence		TEV, Evergreen Tree
	GDC, Guard Rail Cable		TFR, Tree Fruit
	GDL, Guard Rail Steel		TGP, Telegraph Pole
	GP, Guard Post -Less Than 4 Posts		TIL, Tile Line
	GPR, Guard Post -4 or More Posts		TLNL, Tree Line Left
	GR, Ground Shot		TLNR, Tree Line Right
	GRV, Grave		TOP, Top of Bridge Pier
	GU, Gutter In Front of Curb		TPA, Telephone Pole Co. 1
	GV, Gas Valve		TPB, Telephone Pole Co. 2
	HDG, Hedge Row		TPC, Telephone Pole Co. 3
	HS, Hydric Soil -Wetlands		TR, Telephone Riser Pole
	HT, Electrical Highline Tower		TRL, Trail
	IN, Storm Sewer Intake		TS, Spiral Point
	INB, Storm Sewer Beehive Intake		TSB, Telephone Switch Box
	LC, Lot Corner		TSG, Traffic Signal
	LIN, Miscellaneous Line		TSL, Traffic Signal and Luminare
	LP, L.P. Tank		TV, Satellite TV Dish
	LUM, Luminaire		TVP, TV Pedestal
	MH, Utility Access -Manhole		TW, Top of Water
	MIS, Miscellaneous		UB, Utility Box
	MM, Mile Marker Post		UE, Utility Elevation
	OUT, Tile Outlet		UPH, Utility Pot Hole - Quality A
	PC, Curve Point		UST, Underground Tank
	PCP, Photo Control Point		UV, Underground Utility Vault
	PCT, Photo Control Target		VS, Channel Cross Section
	PI, Tangent Point		WC, Wild Card -Misc. Field Shot
	PIP, Pipe Culvert		WEL, Well
	PL, Location of Photo -Wetlands		WHD, Water Hydrant
	PLG, Location of General Photo		WHU, RV Water Hook Up
	POC, Curve Point		WM, Wind Mill
	POST, Spiral Point		WND, Wind Turbine
			WV, Water Valve

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

— E1 —	EL1D, Eastern Iowa Light & Power
— F0 —	FO1D, F&B Communications
— F02 —	FO2D, Sprint
— G —	GL1D, Alliant Energy
— SAN —	SA1D, City of Wheatland
— W —	WL1D, City of Wheatland

UTILITY LEGEND

— E1 —	Eastern Iowa Light & Power Chad Ruden chad.ruden@easterniowa.com
— F02 —	Sprint Mark Klinkenberg mark.klinkenberg2@t-mobile.com
— F0 —	F&B Communications Aaron Horman aaron@fbc-tele.com
— G —	Alliant Energy Mary Montgomery marymontgomery@alliantenergy.com
— T4 —	City of Wheatland Matt Cavey cityguys@fbcom.net
— W —	City of Wheatland Matt Cavey cityguys@fbcom.net
	Electric Transmission Chad Levi clevi@itctransco.com

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.		
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING	Design Color No.		
Lavender	(9)		Temporary Pavement Shading
Yellow	(4)		Proposed Pavement Shading
Orange	(6)		Proposed Granular Shading
Orange	(70)		Proposed Shoulder Granular Shading
Yellow	(68)		Proposed Shoulder Paved Full Depth Shading
Yellow	(132)		Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)		Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)		Grading Shading
Orange, Light	(134)		Proposed Granular Entrance Shading
Yellow	(220)		Proposed Paved Entrance Shading
Tan	(8)		Proposed Sidewalk Shading
Blue, Light	(230)		Proposed Sidewalk Landing Shading
Pink	(11)		Proposed Sidewalk Ramp Shading
Green, Light	(225)		Existing Pavement Shading
Red	(3)		Proposed Structure Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.		
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		Survey Line
	Station		Section Corner
	Ground Line Intercept		Saw Cut
	Guardrail		Trench Drain
	HighTension Cable Guardrail		Sheet Pile

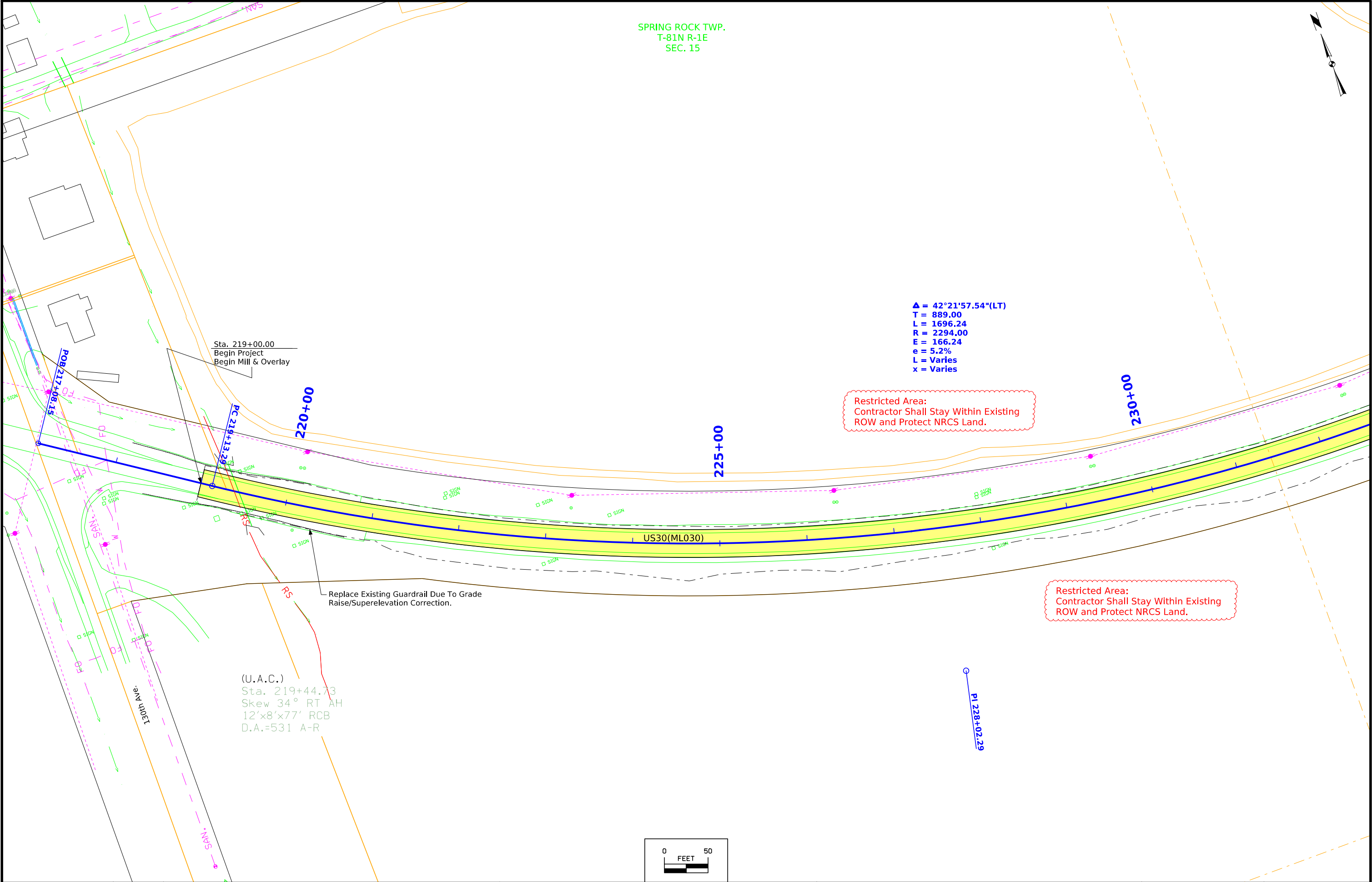
	Pavement Removal		Clearing & Grubbing Area
	Obliterate Roadbed		

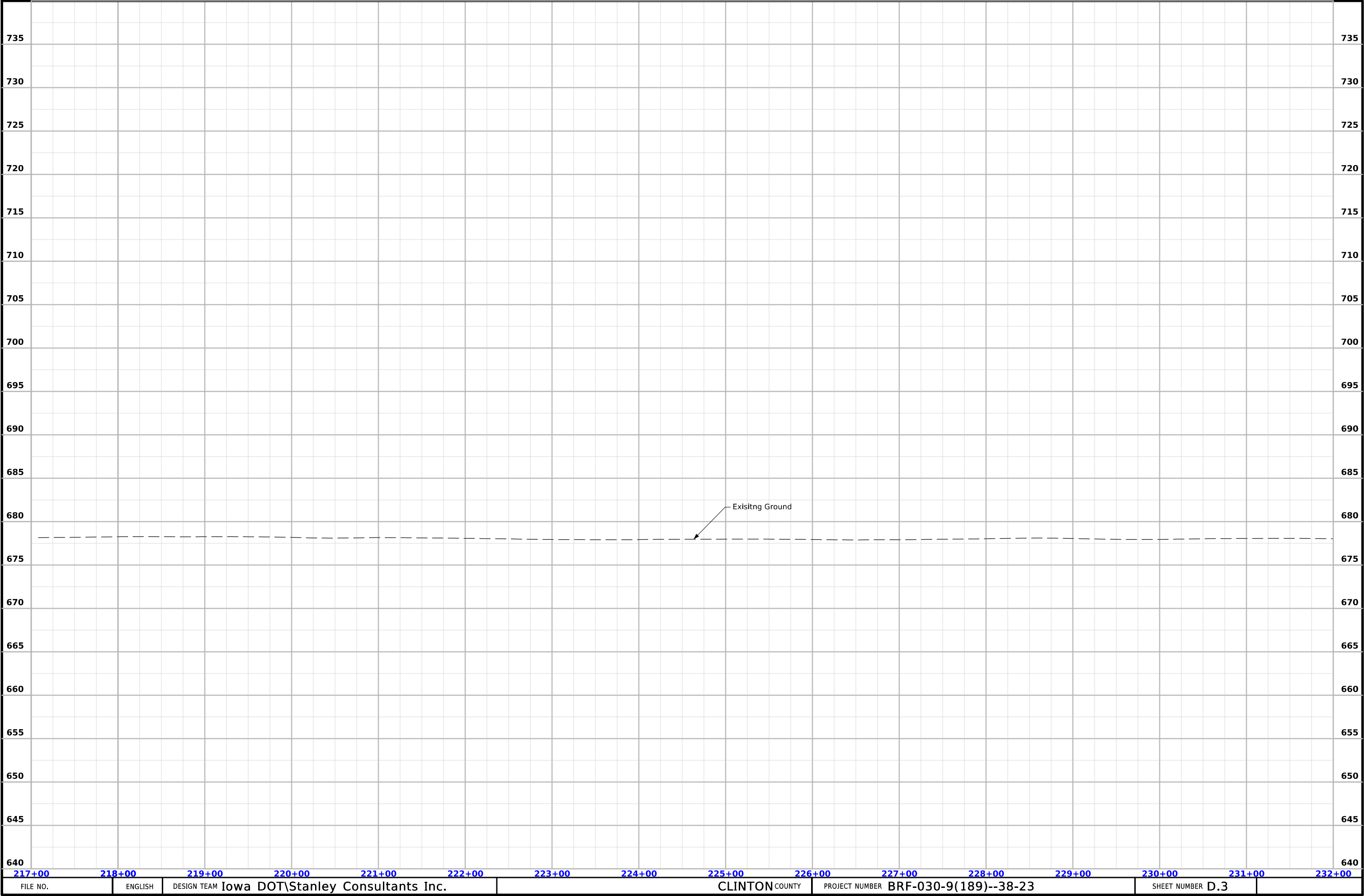
RIGHT-OF-WAY LEGEND

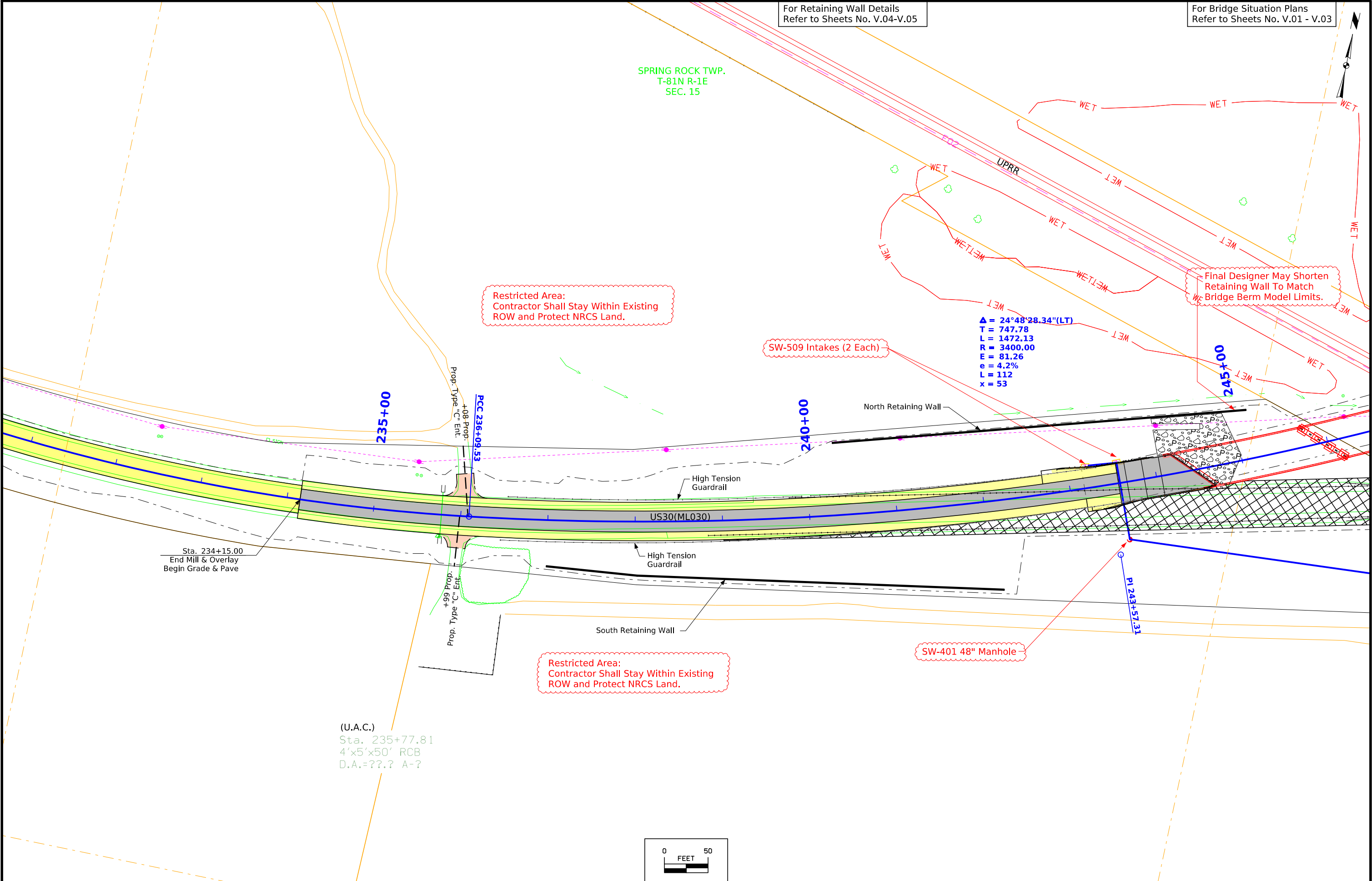
	Proposed Right-of-Way
	Existing Right of Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Easement (Temporary)
	Easement
	Access Control
	Property Line

PLAN AND PROFILE
LEGEND AND SYMBOL
INFORMATION SHEET

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

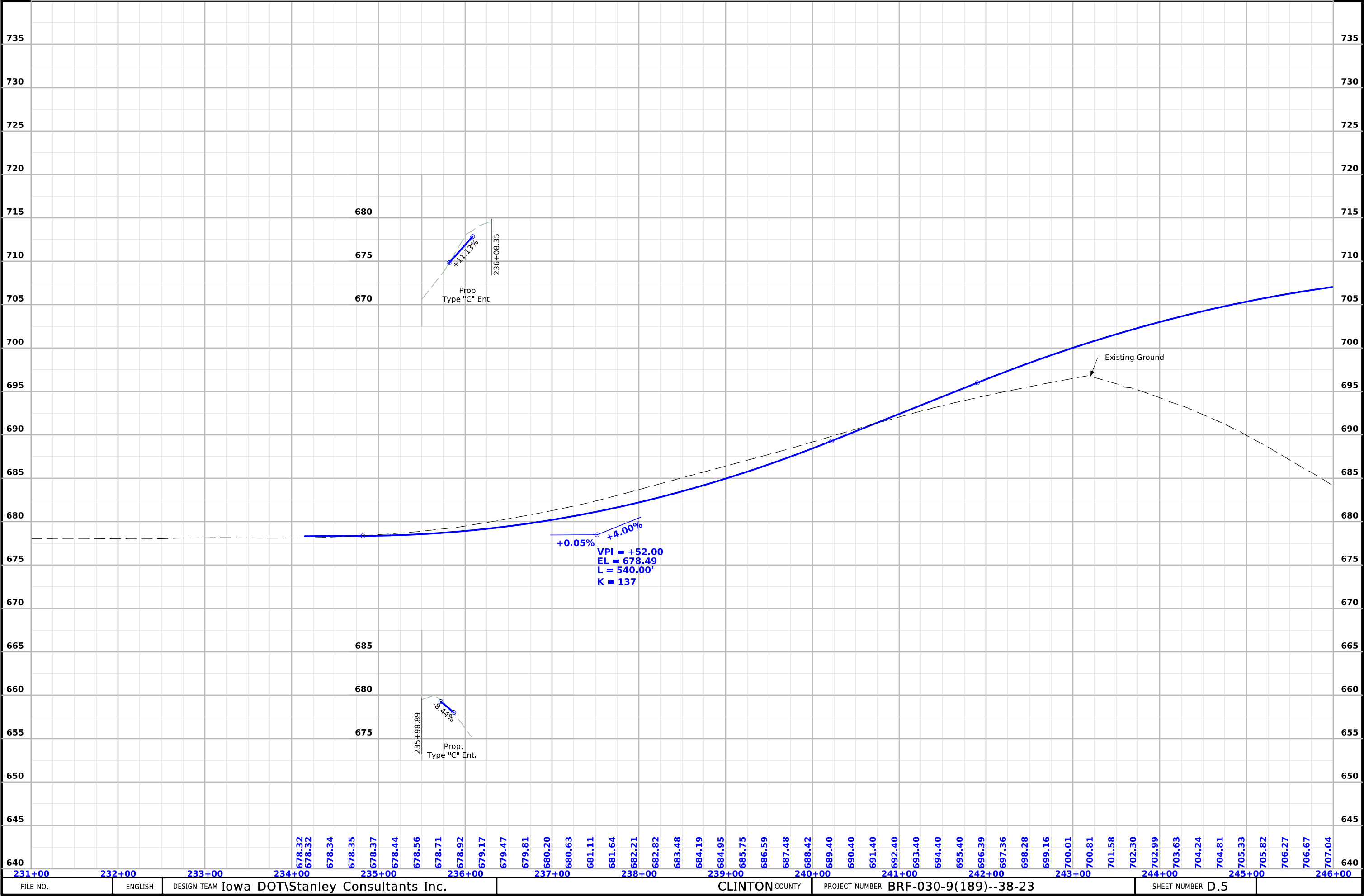






For Retaining Wall Details
Refer to Sheets No. V.04-V.05

For Bridge Situation Plans
Refer to Sheets No. V.01 - V.03



For Bridge Situation Plans
Refer to Sheets No. V.01 - V.03

SPRING ROCK TWP.
T-81N R-1E
SEC. 15

SPRING ROCK TWP.
T-81N R-1E
SEC. 10

"Restricted Access"

1. The Contractor will note the "Restricted Area - No Access" per the included link for the .dgn.
2. The Contractor shall furnish and install orange safety fence according to Article 4188.03 of the Standard Specifications.
3. The Contractor shall contact Jeff Bacon (515-233-7819) with the Location and Environment Bureau with questions.

TURTLE EXCLUSION

Temporary turtle barrier shall be installed by the contractor surrounding any areas with ground disturbance or construction vehicle traffic and be continuous with no openings or gaps, except at project ends and/or stream crossings. The contractor shall inspect active work areas for the presence of turtles daily. If turtles are present within the construction area, construction activities in the vicinity shall stop and Brock Struecker (515-567-0515) at the Location and Environment Bureau should be notified immediately. Any gaps in daily inspections of the barrier fence shall be repaired immediately by the contractor. If exclusion fencing is not installed prior to April 1, 2025, installation of fencing cannot begin until a visual inspection of the construction area is completed.

Sta. 255+97.17
Install 30"x210' 2000D
Lt. 666.00
F.L.= Rt. 665.00

(U.A.C.)
Sta. 247+06.99
SKEW 46° RT AH
36"x171' RCP

(U.A.C.)
Sta. 247+03.17
SKEW 46° RT AH
30"x166' CMP

Sta. 247+20.00
Construct 550'-0" x 44'-0"
Continuous Welded Plate
Girder Bridge

PT 250+81.66

US30(ML030)

PC 254+22.92

Need to discuss obliteration depth
vs. environmental considerations?
Needs more discussion with LEB.

DR-201 24" Apron

(Remove)
Sta. 246+51.49, 164.36 RT
24"x70' RCP

Bridge Removal

Existing US 30

0 50
FEET

FILE NO.

ENGLISH

DESIGN TEAM

Iowa DOT\Stanley Consultants Inc.

CLINTON COUNTY

PROJECT NUMBER

BRF-030-9(189)--38-23

SHEET NUMBER

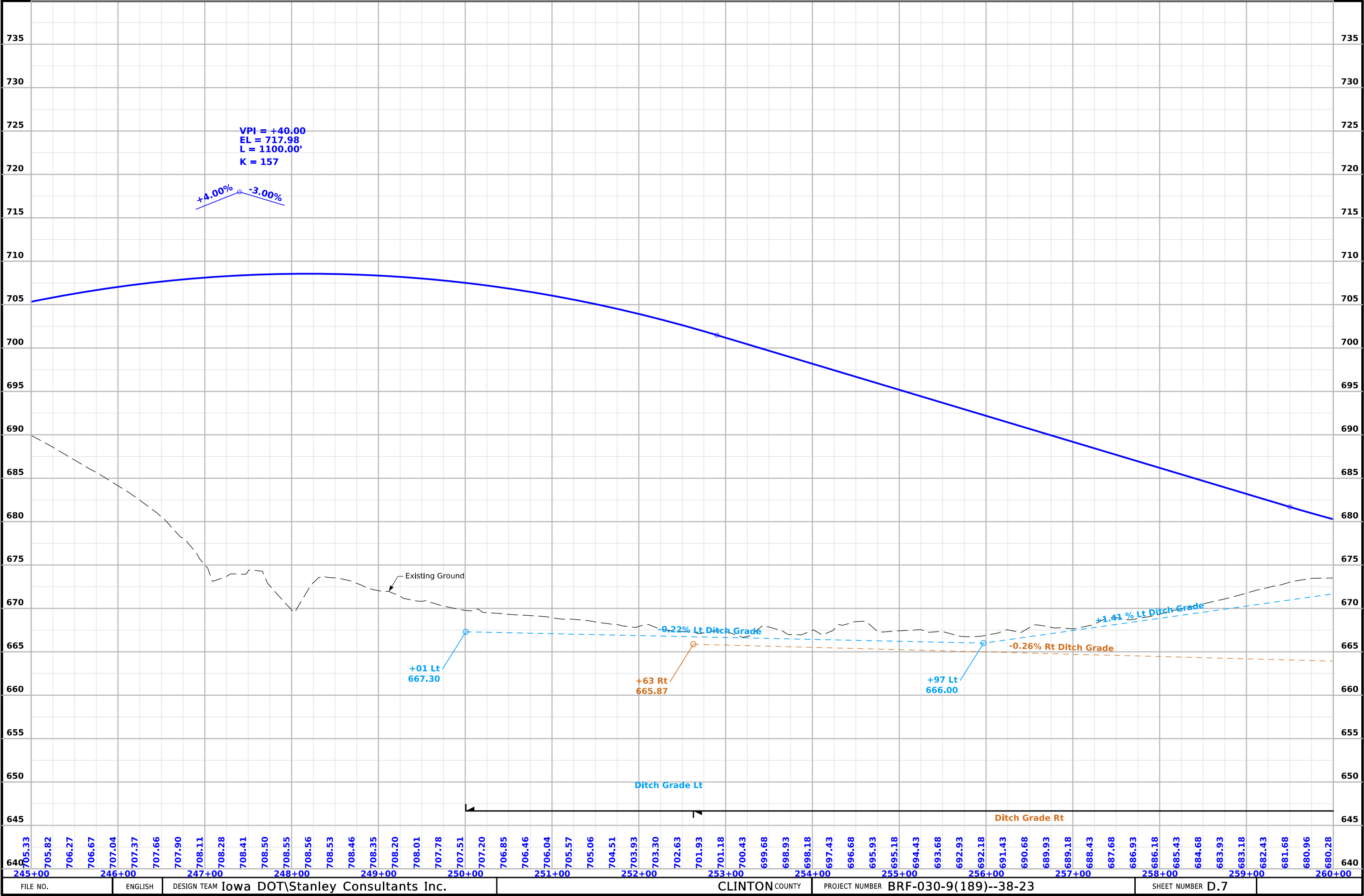
D.6

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12/11/2024

9474

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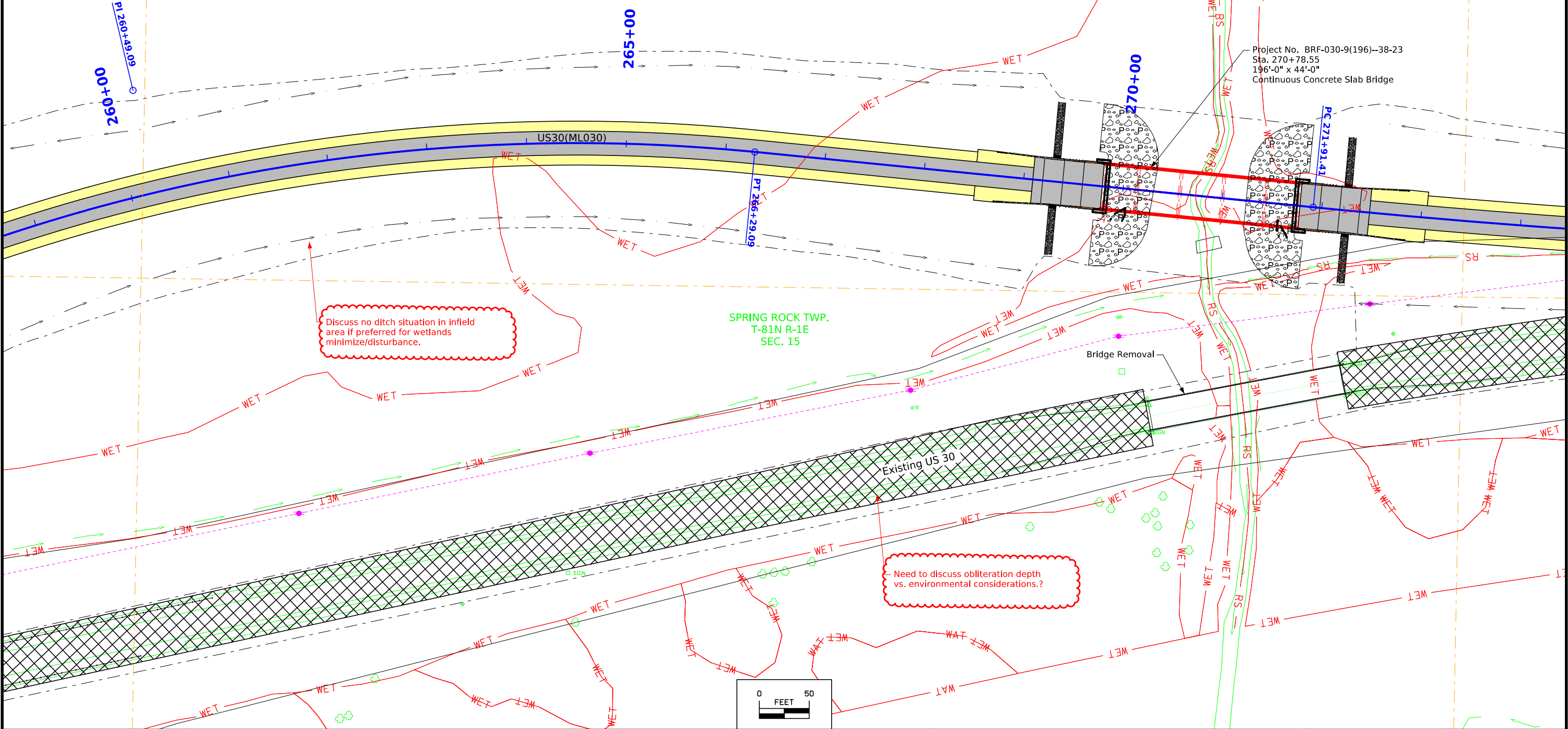
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SPRING ROCK TWP.
T-81N R-1E
SEC. 10

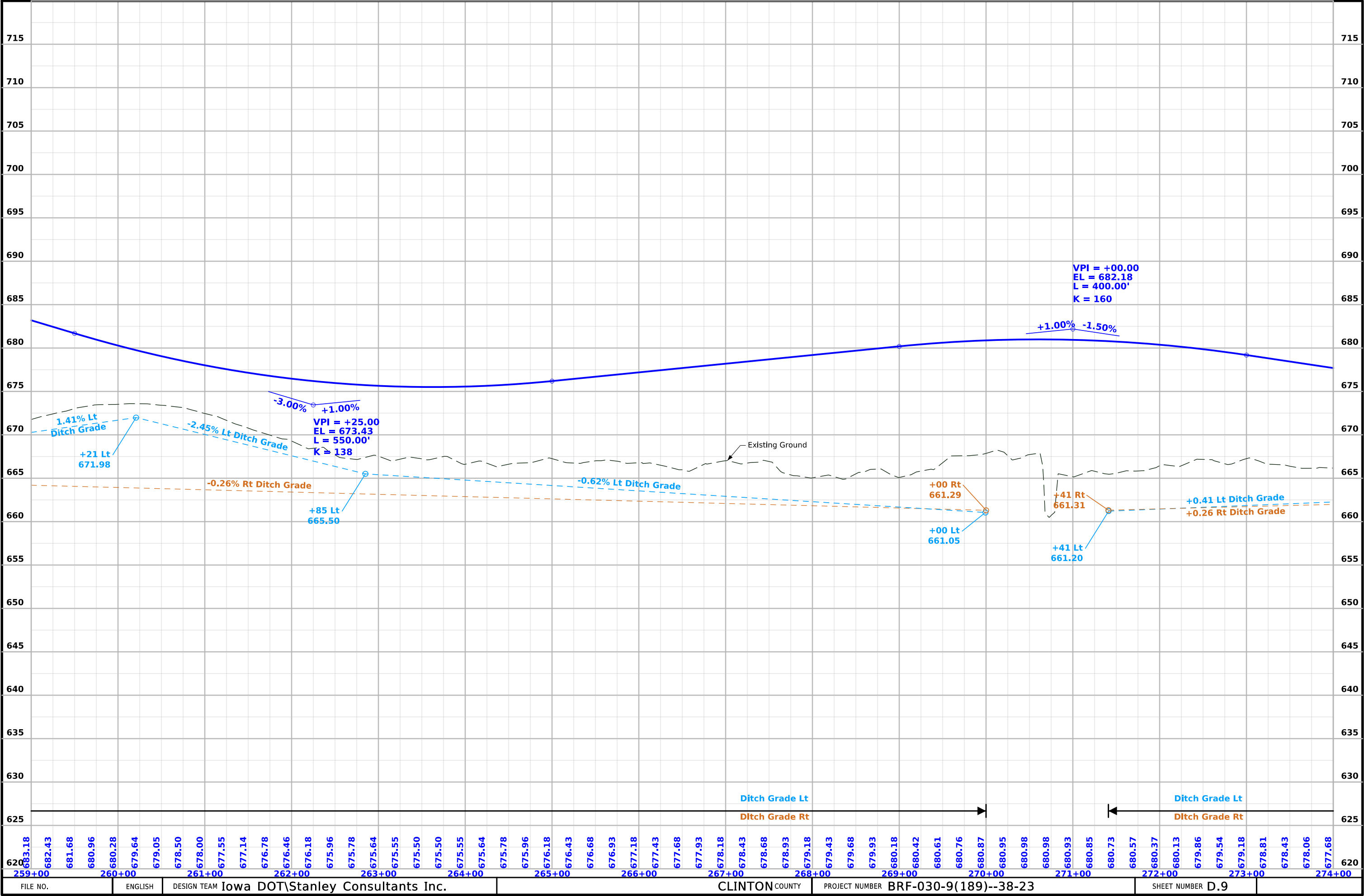
For Bridge Situation Plans
Refer to Project No. BRF-030-9(196)--38-23,
Sheets No. V.1-V.2



$\Delta = 37^\circ 58' 17.68'' (\text{RT})$
 $T = 626.17$
 $L = 1206.17$
 $R = 1820.00$
 $E = 104.71$
 $e = 5.8\%$
 $L = 155$
 $x = 53$



Project No. BRF-030-9(196)--38-23
Sta. 270+78.55
196'-0" x 44'-0"
Continuous Concrete Slab Bridge



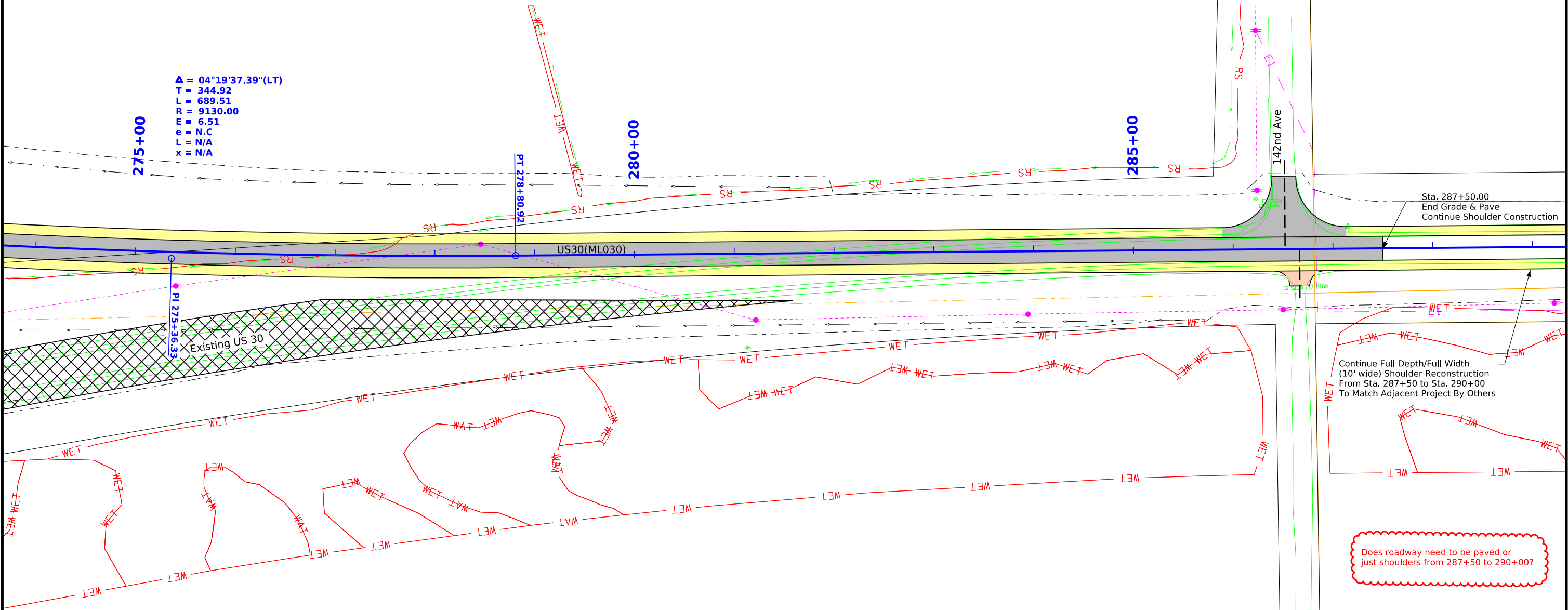
TURTLE EXCLUSION
Temporary turtle barrier shall be installed by the contractor surrounding any areas with ground disturbance or construction vehicle traffic and be continuous with no openings or gaps, except at project ends and/or stream crossings. The contractor shall inspect active work areas for the presence of turtles daily.
If turtles are present within the construction area, construction activities in the vicinity shall stop and Brock Struecker (515-567-0515) at the Location and Environment Bureau should be notified immediately. Any gaps in daily inspections of the barrier fence shall be repaired immediately by the contractor. If exclusion fencing is not installed prior to April 1, 2025, installation of fencing cannot begin until a visual inspection of the construction area is completed.

SPRING ROCK TWP.
T-81N R-1E
SEC. 11

Refer to L.1 for 142nd
Ave. Intersection

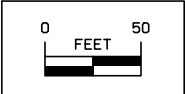


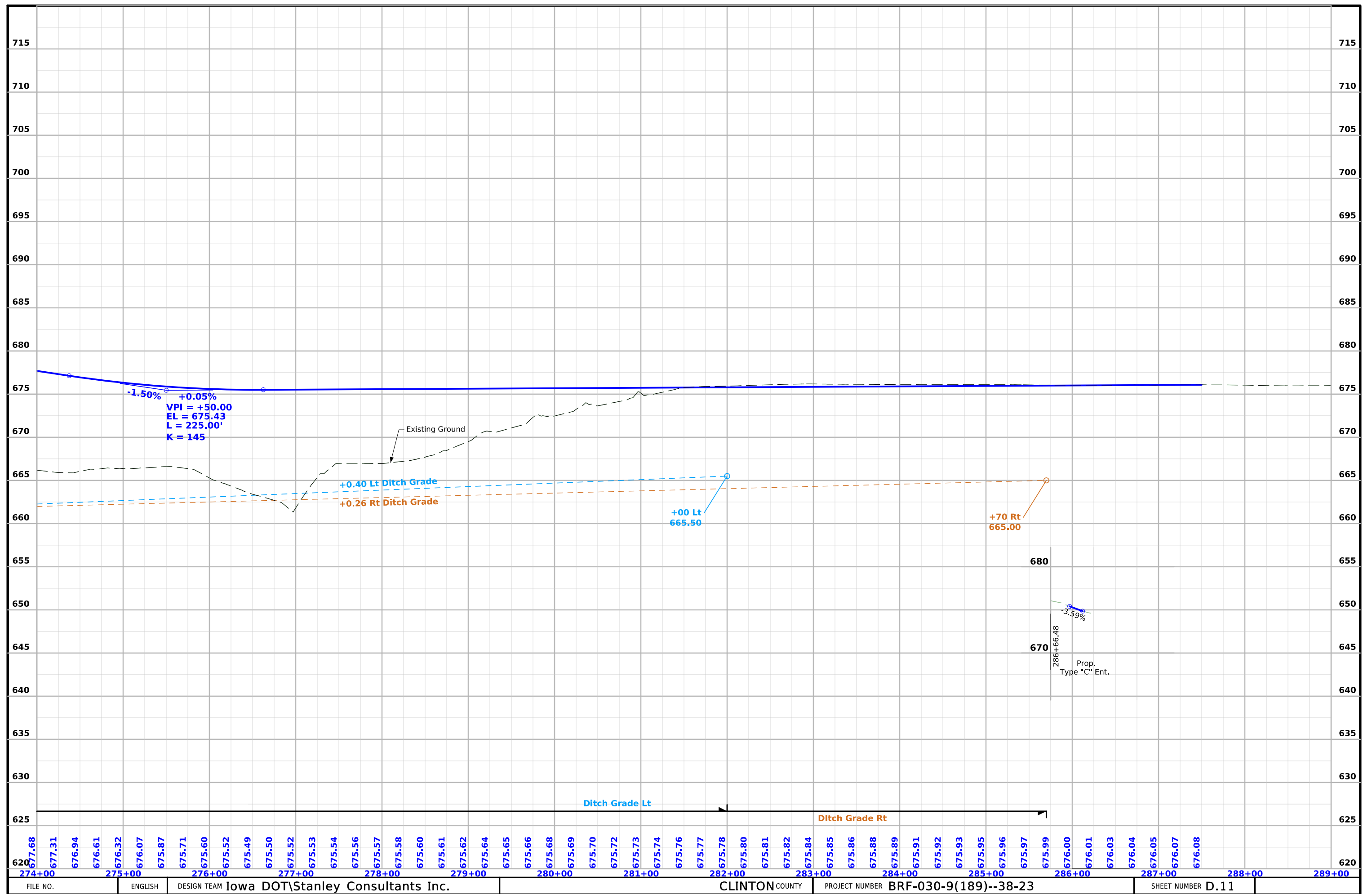
Δ = 04°19'37.39"(LT)
T = 344.92
L = 689.51
R = 9130.00
E = 6.51
e = N.C
L = N/A
x = N/A



Does roadway need to be paved or just shoulders from 287+50 to 290+00?

SPRING ROCK TWP.
T-81N R-1E
SEC. 14





Survey Information

Clinton County
BRF-030-9(186)—38-23
US30 Clinton County Survey
From 130th Ave to 158th Ave - Wheatland
PIN 18-23-030-030

Party Personnel

Jody Budde- PLS
Wes Shimp- PLS
Jon Miranda- Geospatial Lead Tech
Ben Sullivan- Geospatial Lead Tech
Matt Svec- Party Chief
Lee Budde- Party Chief
Aaron Paulsen- Party Chief
Katerina Wyatt- Assistant Survey Party Chief
Levi Suhr- Assistant Survey Party Chief
Jason Flaherty – Assistant Survey Party Chief
Scott Dillavou – Assistant Survey Party Chief

Date(s) of Survey

Begin Date 11/17/2021
End Date 02/28/2022

General Information

Measurement units for this survey are US survey feet. This survey is for the preliminary design for the section of approximately 3 miles of US Highway 30 beginning in Wheatland at 130th Ave east to 158th Ave. There were also a total of 15 bridge structures surveyed which included 5 bridges along the UPRR line south of Hwy 30, near Wheatland, IA.
Project datum and control information is provided by Design Survey Office. This project is a Full DTM survey. Project horizontal datum is NAD83 (2011) epoch 2010.00, Iowa RCS Zone 11 (Dubuque-Davenport). Foth established three new FENO monuments to supplement existing project control at a 1.0 mile distribution along the project corridor throughout the project lifecycle and for future corridor area work.

Vertical Control

Vertical datum for this survey is relative to NAVD88 (computed using Geoid18) for the new FENO marks: FENO 1, FENO 2 and FENO 3. This survey consisted of observing three new FENO 1-meter rod monuments and one existing USGS monument used by

the Iowa DOT previously using minimum 2hr initial static observations along with data from four Iowa RTN CORS sites: Anamosa (IAAN), Maquoketa (IAMQ), Tipton (IATI) and Davenport (IADA).

The published Ellipsoidal heights for the four Iowa RTN stations were held for the vertical adjustment portion of this survey using as-published RTN positions by the Iowa DOT dated August 6, 2021.

Additionally, three nearby Scott County GPS monuments were recovered and observed with published NAVD88 elevations were observed and used that are located within the Hwy 30 project corridor region:

Scott County GPS 601 has a published Elv of: 757.56 usft (Geoid12A)
Adj Elv: 757.48

Scott County GPS 602 has a published Elv of: 706.44 usft (Geoid12A)
Adj Elv: 706.49

Scott County GPS 642 has a published Elv of: 640.80 usft (Geoid12A)
Adj Elv: 640.80

The final vertical adjustment results show standard deviations were less than 0.023 ft. at 95% confidence level (2 sigma) for the new FENO monuments.

Horizontal Control

The project coordinate system for this survey is NAD83 (2011) Iowa RCS Zone 11 (Dubuque-Davenport), US survey feet. This survey control is relative to IaRTN reference stations. IaRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00. Coordinates were determined by observing each mark for 120 minutes minimum.

For the January 2022 control survey FOTH added FENO monuments FENO 1, FENO 2 and FENO 3 to supplement an existing DOT control monument recovered along the project corridor, Pt 706. Existing monuments Scott Co GPS 601, 602 and 642 were recovered and observed as part of this survey. The existing DOT concrete monument with brass cap (Pt 706) is on the east end of the project. The as listed adjusted coordinates in this report were the result of combined field observations and adjustment to the four Iowa RTN stations as listed herein.

Four Iowa RTN CORS stations: Anamosa, Maquoketa, Davenport and Tipton were utilized for the horizontal adjustment portion of this survey. The published horizontal geodetic positions for the four Iowa RTN stations were held for the horizontal

Survey Information

adjustment portion of this survey using as-published RTN positions by the Iowa DOT dated August 6, 2021.

The published horizontal positions of the existing three Scott County GPS Monuments 601, 602 and 642 were also confirmed and held fixed for the final horizontal constrained adjustment of the three new FENOs established by Foth.

The horizontal standard deviation of these adjusted observations was less than 0.015 ft. at 95% confidence level (2 sigma).

PROJECT CONTROL COORDINATE LISTING

Point ID	Northing	Easting	Elevation	Description
706	8175524.45	21430991.30	673.72	Existing Concrete Monument with brass disk set flush with the ground. 35.9 feet east of 158th Ave, 62.9 feet south of Hwy 30, 9.6 feet southeast of a utility pole.
FENO 1	8175123.51	21416496.20	676.87	New FENO style monument set flush with the ground. 33.5 feet southwest of centerline of Hwy 30, 147.5 feet east of center of 130th Ave.
FENO 2	8175556.21	21421292.80	674.35	New FENO style monument set flush with the ground. 28.15 feet NW of NW cor of wingwall of NW cor of Hwy 30 bridge over a creek. 37.3 feet south southeast of utility pole. 114.0
FENO 3	8175553.56	21426066.29	667.37	New FENO style monument set flush with the ground. 90.8 feet south of centerline of Hwy 30, 48.15 feet southwest of utility pole.
Scott Co GPS 601	8154639.01	21398578.53	757.48	Existing Berntsen driven rod monument with 2 1/2" aluminum cap with access cover.
Scott Co GPS 602	8154565.39	21415761.26	706.49	Existing Berntsen driven rod monument with 2 1/2" aluminum cap with access cover.
Scott Co GPS 642	8152509.73	21458526.18	640.80	Existing Berntsen driven rod monument with 2 1/2" aluminum cap with access cover.

PC Sta. 220+30.9 As-built Plans Project No. F-Proj No. 147 (9)
Survey PC Sta. 220+30.7

PT Sta. 239+21.2 As-built Plans Project No. F-Proj No. 147 (9)
Survey PT Sta. 239+21.2

PC Sta. 268+98.6 As-built Plans Project No. F-Proj No. 147 (9)
Survey PC Sta. 268+97.0

PT Sta. 287+08.6 As-built Plans Project No. F-Proj No. 147 (9)
Survey PT Sta. 287+08.1

Station Equation
As-built Plans POT Sta 366+23.9 (Back) = POT Sta 341+26.6(Ahead)
Survey POT Sta 366+23.9 (Back) = POT Sta 341+26.6(Ahead)

END POT Sta. 350+00.0 As-built Plans Project No. F-Proj No. 147 (9)
Survey POT Sta. 350+00.0

Alignment Information

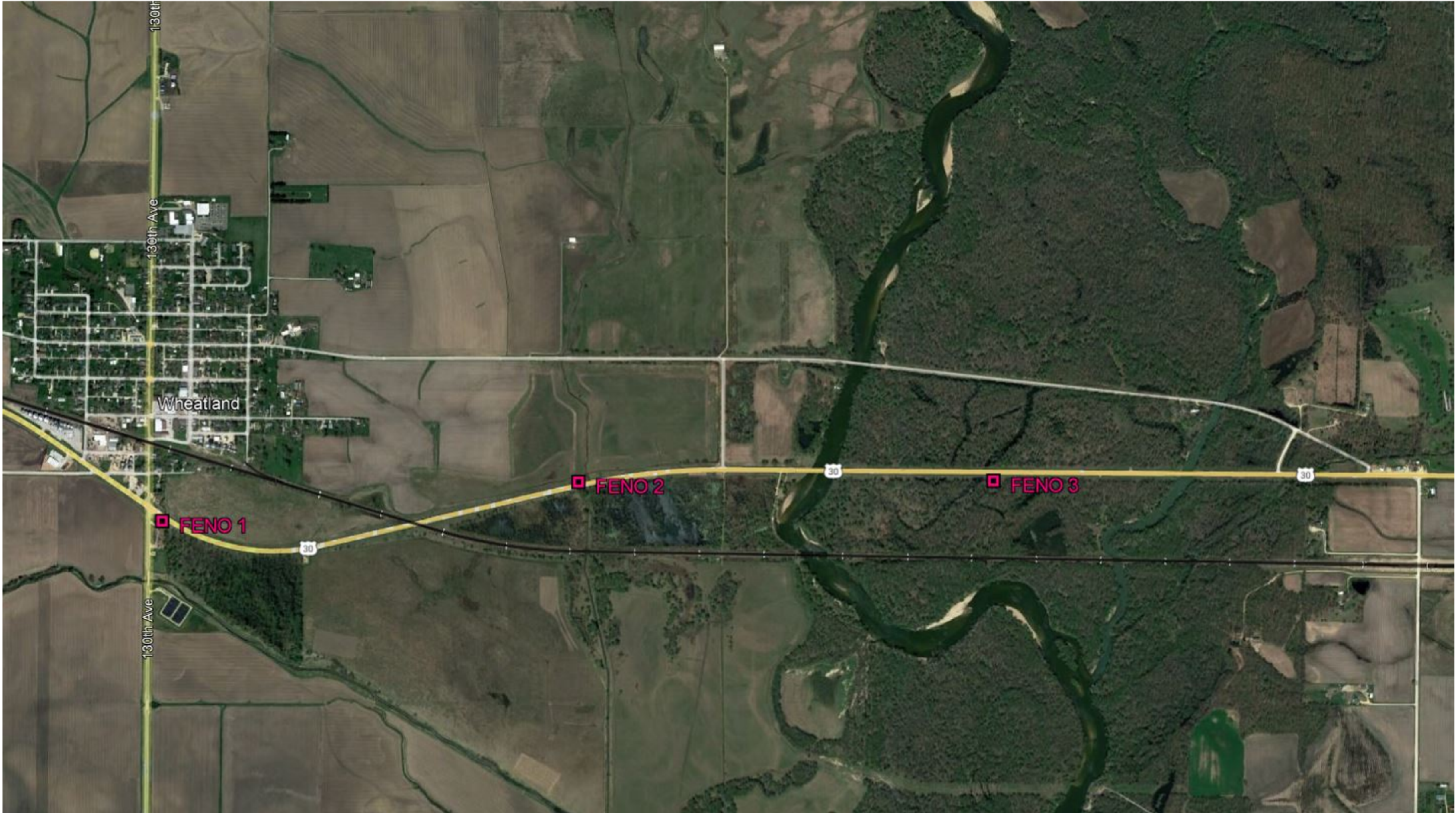
The horizontal alignment for this survey is a retrace of As-built Plans No. F-Proj No. 147 (9). Survey stationing was equated to the plan PT at STA 239+21.2 and run back and ahead throughout the survey.

Mainline (US30) Survey stationing relates to as built plan stationing as follows:

POB POT Sta. 211+54.50 As-built Plans Project No. F-Proj No. 147 (9)
Survey POT Sta. 211+54.30

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 2010.00 - Ia. RCS Zone 11
VERT. DATUM: NAVD88 - Geoid Model G018

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) EPOCH 2010.00
1a. Regional Coordinate System Zone 11

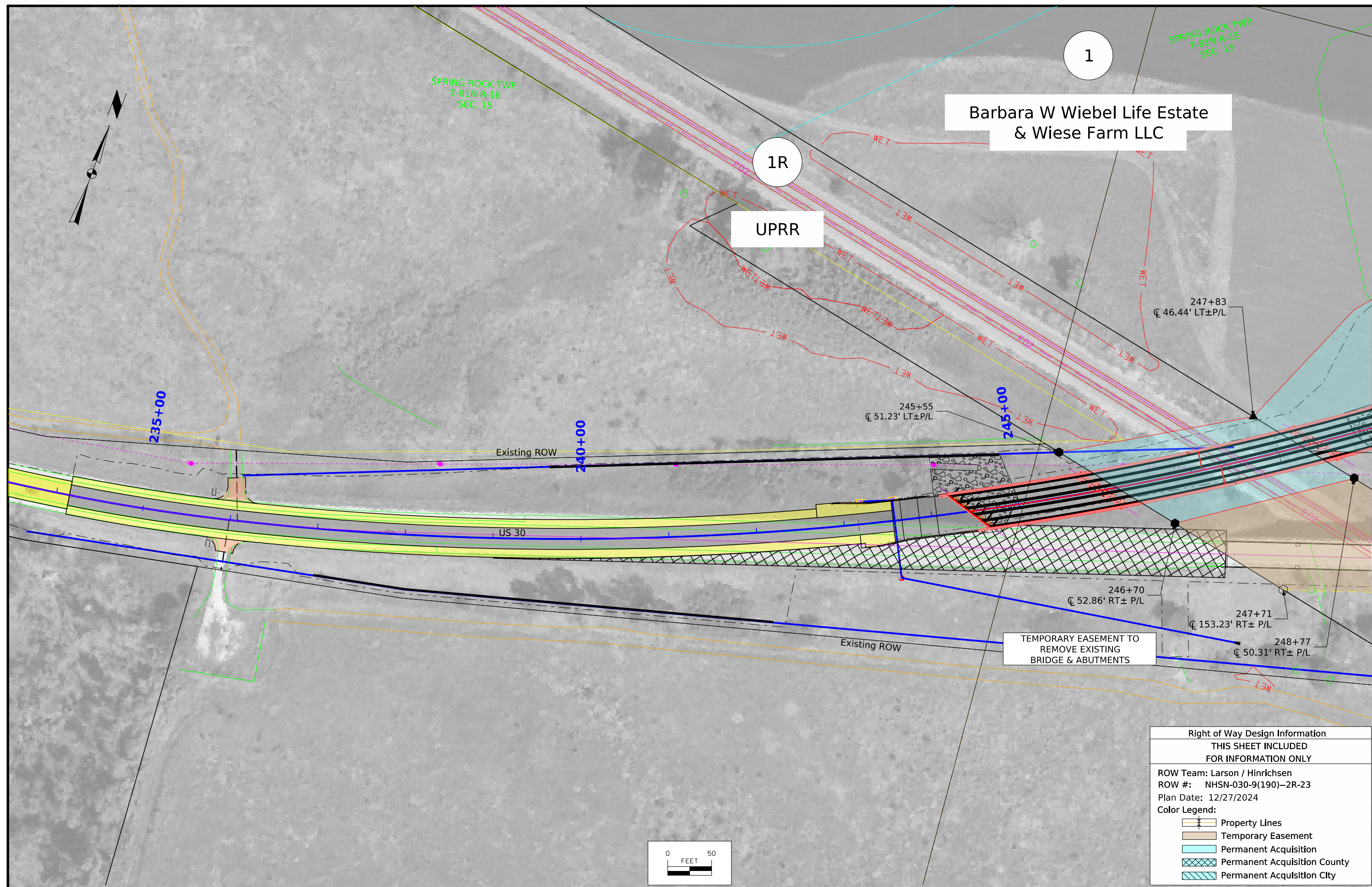
VERT. DATUM: NAVD88
Geoid Model G018
Project Control Marks are Bench Marks

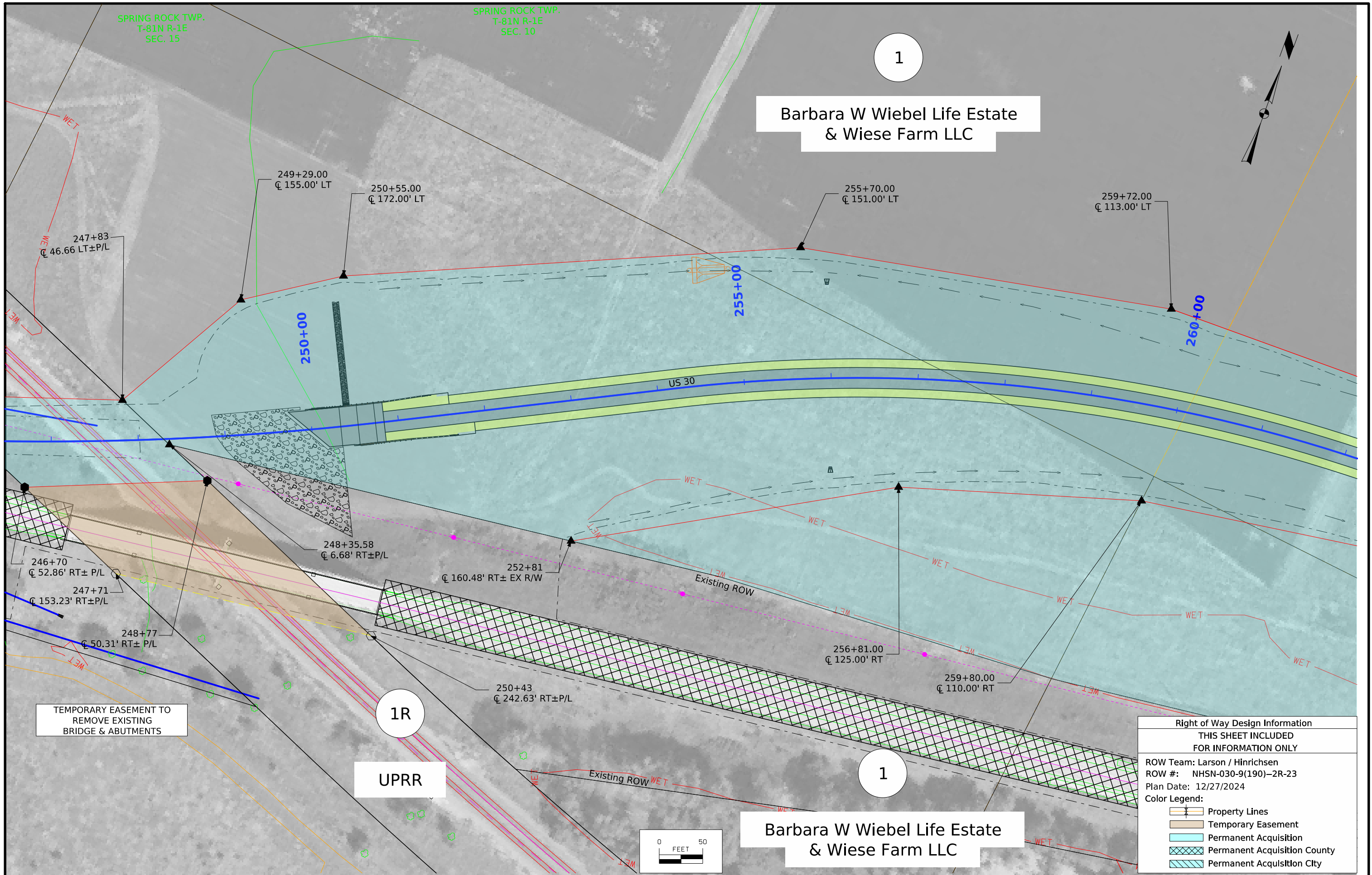
Point ID	Northing	Easting	Elevation	Description
706	8175524.45	21430991.30	673.72	Existing Concrete Monument with brass disk set flush with the ground. 35.9 feet east of 158th Ave, 62.9 feet south of Hwy 30, 9.6 feet southeast of a utility pole.
FENO 1	8175123.51	21416496.20	676.87	New FENO style monument set flush with the ground. 33.5 feet southwest of centerline of Hwy 30, 147.5 feet east of center of 130th Ave.
FENO 2	8175556.21	21421292.80	674.35	New FENO style monument set flush with the ground. 28.15 feet NW of NW cor of wingwall of NW cor of Hwy 30 bridge over a creek. 37.3 feet south southeast of utility pole. 114.0 feet west of middle of small creek.
FENO 3	8175553.56	21426066.29	667.37	New FENO style monument set flush with the ground. 90.8 feet south of centerline of Hwy 30, 48.15 feet southwest of utility pole.
Scott Co GPS 601	8154639.01	21398578.53	757.48	Existing Berntsen driven rod monument with 2 1/2" aluminum cap with access cover.
Scott Co GPS 602	8154565.39	21415761.26	706.49	Existing Berntsen driven rod monument with 2 1/2" aluminum cap with access cover.
Scott Co GPS 642	8152509.73	21458526.18	640.80	Existing Berntsen driven rod monument with 2 1/2" aluminum cap with access cover.

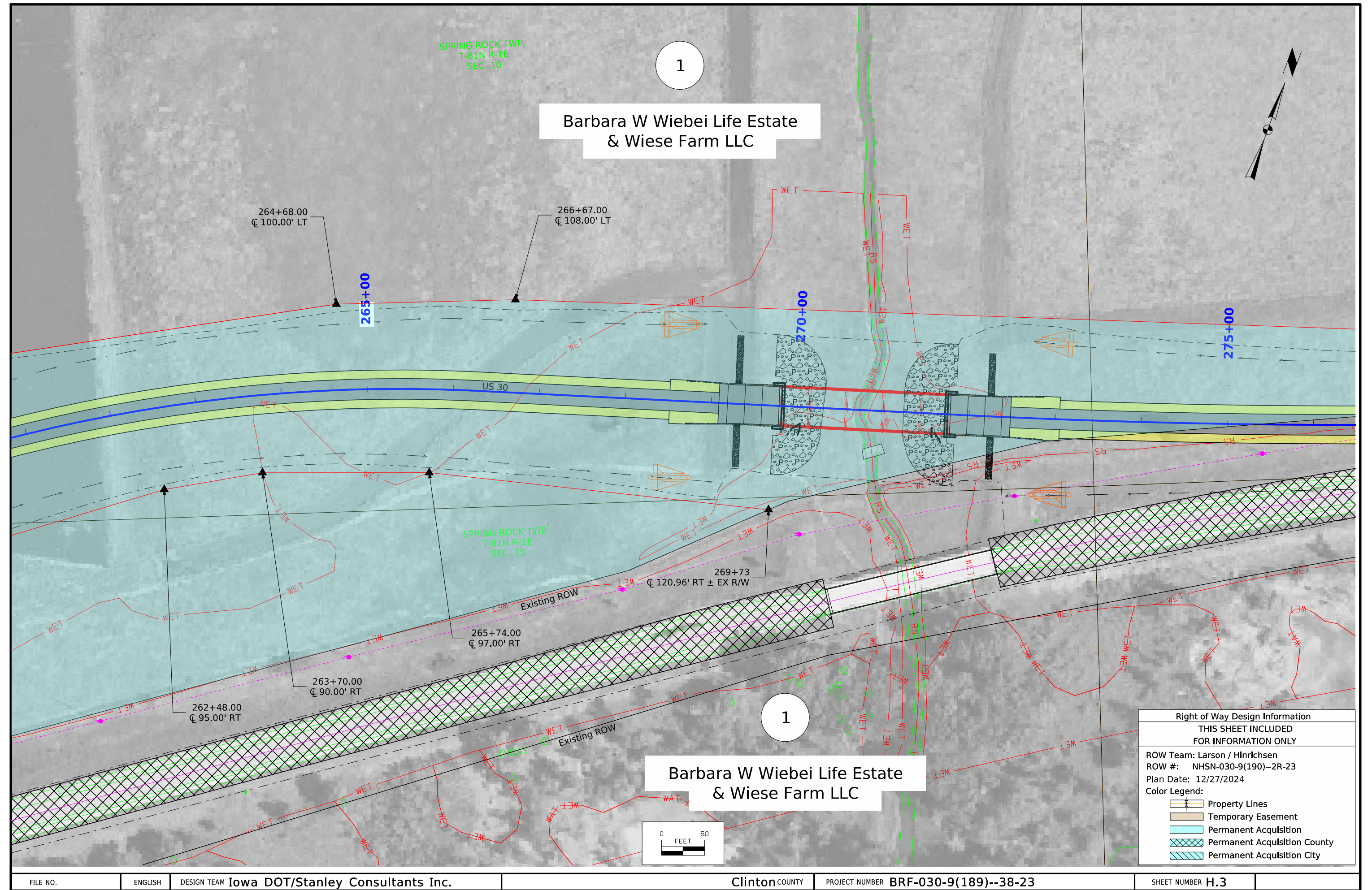
ALIGNMENT COORDINATES																			101-16 10-20-09	
Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral			
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		
			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	US 30	217+08.153	8175275.64	21416334.66																
2	US 30							219+13.285	8175160.33	21416504.32	228+02.286	8174660.61	21417239.57	236+09.528	8174786.85	21418119.56				
3	US 30							236+09.528	8174786.85	21418119.56	243+57.311	8174893.04	21418859.77	250+81.657	8175300.00	21419487.12				
5	US 30							254+22.920	8175485.72	21419773.42	260+49.091	8175826.50	21420298.74	266+29.086	8175771.93	21420922.52				
7	US 30							271+91.408	8175722.92	21421482.71	275+36.327	8175692.85	21421826.31	278+80.917	8175688.80	21422171.21				
8	US 30	290+00.000	8175675.66	21423290.21																

101-17 04-19-11																
SPIRAL OR CIRCULAR CURVE DATA																
Name	Location	ΔSCS	Horizontal Alignment Data												Remarks	
			Spiral Data								Curve Data					
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R		E
C1	US 30										42.366°	889.001	1696.243	2294	166.235	
C2	US 30										24.808°	747.783	1472.129	3400	81.261	
C3	US 30										37.972°	626.171	1206.167	1820	104.705	
C4	US 30										4.327°	344.919	689.510	9130	6.513	

101-18 04-19-22																			
SUPERELEVATION DATA																			
See PV-300 Series																			
Road Identification	Circular Curve or Spiral Curve Name	Radius	Superelevation Data			Standard Road Plan	Section A-A	Section A'-'A'	Section B-B	Section C'-'C'	Section C-C	Section D-D	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
			FT	%	FT														
US 30	C1	2294	5.2	139	53	PV-301						220+00.00							Special transition. See other details.
												236+09.53							Special transition. See other details.
US 30	C2	3400	4.2	112	53	PV-301						236+59.53							Special transition. See other details.
							252+13.06					250+48.06	250+81.66			250+53.39	250+53.39		
US 30	C3	1820	5.8	155	53	PV-301	252+61.42					253+67.42	254+69.42	254+22.92		254+21.32	254+21.32		
							267+90.59					266+84.59	265+82.59	266+29.09		266+30.69	266+30.69		







SPRING ROCK TWP.
T-81N R-1E
SEC. 11

1

Barbara W Wiebel Life Estate
& Wiese Farm LLC

282+00.00
CL 81.00' LT

282+95
CL 63.68' LT ±EX R/W

280+00

285+00

290+00

US 30

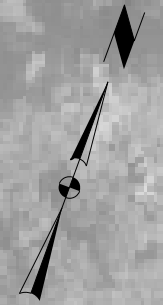
142nd Ave

Existing ROW

1

Barbara W Wiebel Life Estate
& Wiese Farm LLC

SPRING ROCK TWP.
T-81N R-1E
SEC. 14



Right of Way Design Information

THIS SHEET INCLUDED
FOR INFORMATION ONLY

ROW Team: Larson / Hinrichsen
ROW #: NHSN-030-9(190)--2R-23
Plan Date: 12/27/2024

Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition
- Permanent Acquisition County
- Permanent Acquisition City

FILE NO.

ENGLISH

DESIGN TEAM Iowa Dot/Stanley Inc.

Clinton COUNTY

PROJECT NUMBER BRF-030-9(189)--38-23

SHEET NUMBER H.4

7:39:01 AM 5/15/2025 thinric pw:\NTP\wint1.dot.int.lan:PWMain\Documents\Projects\2303002019\ROW\ROW_23030190.dgn

108-25
10-21-14

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
US 30	EB/WB	Clinton	Closed to Traffic During Stage 2. See J sheets for info.									

108-23A
08-01-08

TRAFFIC CONTROL PLAN

US 30
- Maintain US 30 two-lane, two-way traffic during Stage 1 at all times utilizing Standard Road Plans as noted in the Staging Plan.
- Close US 30 and utilize detour route during Stage 2.

142nd Avenue
- To remain open to traffic for the duration of the project.

Private Entrances
- Maintain access to US 30 for the duration of the project.

111-01
04-17-12

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
BRF-030-9(205)--38-23	Bridge Replacement
BRF-030-9(186)--38-23	Bridge Replacement
BRF-030-9(196)--38-23	Bridge Replacement
BRF-030-9(198)--38-23	Bridge Replacement

108-26A
08-01-08

STAGING NOTES

US 30

Stage 1 Traffic:
- Maintain 2-way traffic on existing US 30 at all times.

Stage 1 Construction:
- Grade and Pave US 30 from Sta. 244+20 to Sta. 278+00. Grade US 30 from Sta. 278+00 to Sta. 284+00.

Stage 2 Traffic:
- Detour Traffic north on State Hwy 38 to east on State Hwy 64 to south on US 61.
Refer to detour sheet J.3 for details.

Stage 2 Construction:
- Mill and Overlay US 30 from Sta. 219+00 to Sta. 234+15.
- Grade and Pave US 30 from Sta. 234+15 to Sta. 244+20.
- Grade and Pave US 30 from Sta. 278+00 to Sta. 287+50.
- Obliterate existing US 30.
- Pave US 30 shoulder from Sta. 287+50 to Sta. 290+00

FILE NO.

ENGLISH

DESIGN TEAM Stanley Consultants Inc.

CLINTON COUNTY

PROJECT NUMBER BRF-030-9(189)--38-23

SHEET NUMBER J.1

9/3/2024

3:07:00 PM

8877

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CROSS SECTION VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS			
SHADING	Design Color No.		
Green, Light	(225)		Existing Pavement Shading
Gray, Light	(48)		Previously Constructed Pavement Shading
Gray, Med	(80)		Previously Constructed Granular Surface Shading
Blue, Light	(230)		Proposed Pavement Shading
Lavender	(9)		Temporary Pavement Shading
Brown, Med	(237)		Future Proposed Pavement Shading

CROSS SECTION VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS			
	Pavement Removal		Proposed Granular Shoulder
	Proposed Granular Subbase		Temporary Shoulder
	Proposed Special Backfill		Existing Shoulder Strengthening
	Temporary Barrier Rail		Permanent Barrier Rail
			Channelizing Device

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

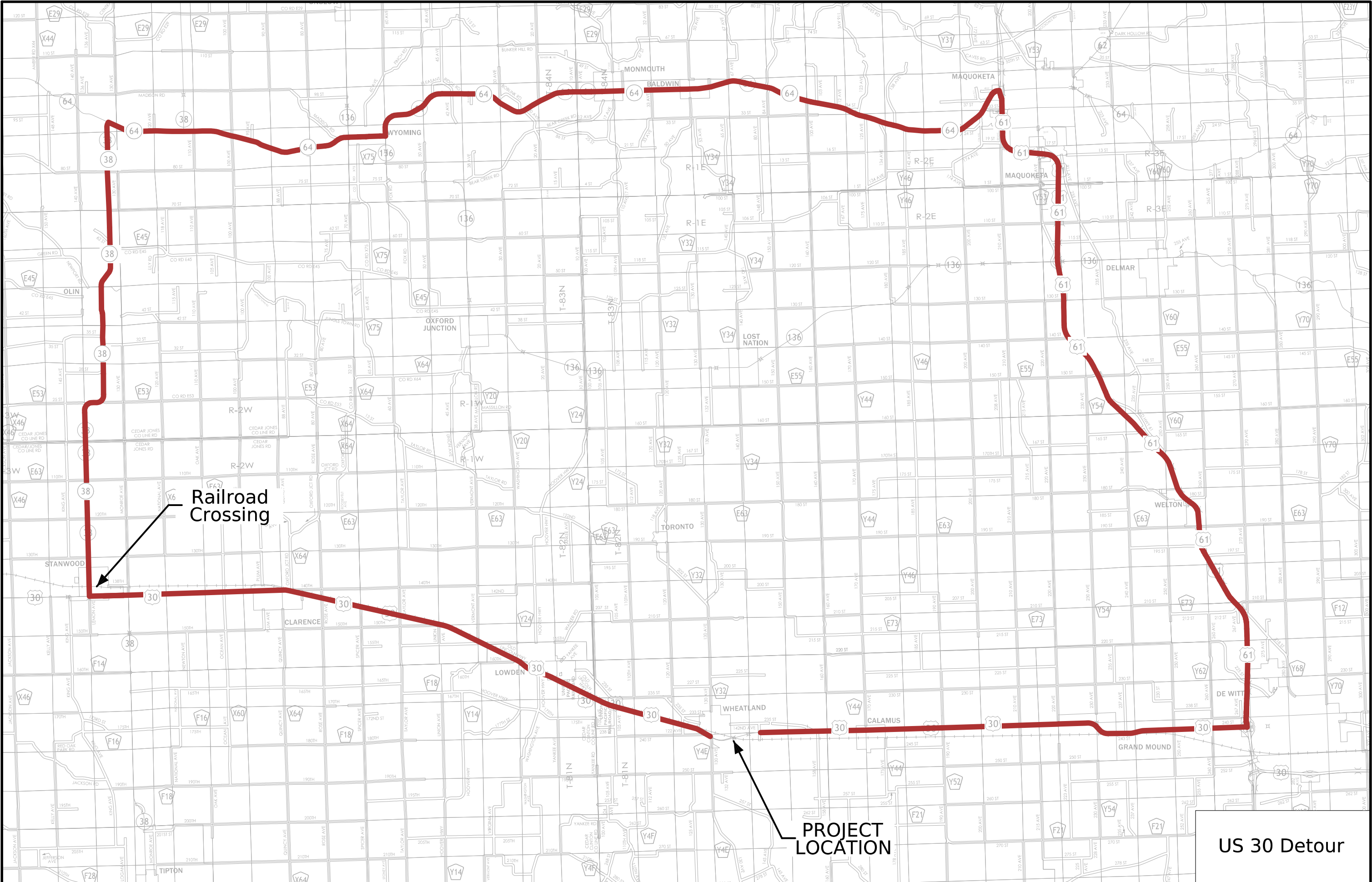
SHADING	Design Color No.		
Green, Light	(225)		Existing Pavement Shading
Gray, Light	(48)		Previously Constructed Pavement Shading
Gray, Med	(80)		Proposed Granular Surface Shading
Gray, Med	(80)		Previously Constructed Granular Surface Shading
Blue, Light	(230)		Proposed Pavement Shading
Lavender	(9)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

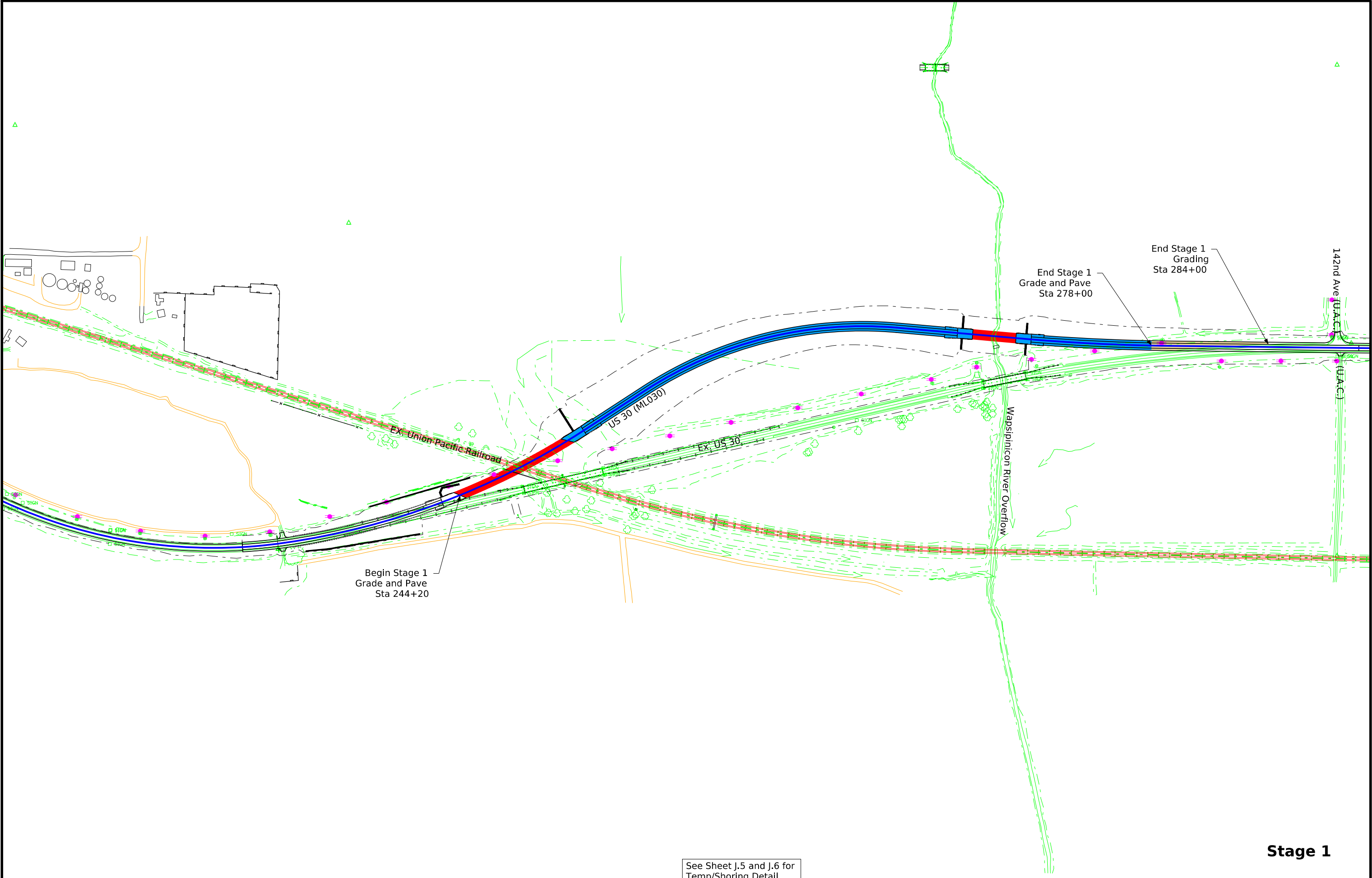
PLAN VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS			
	Channelizing Device		Crash Cushion (Temp or Perm)
	Drum		Traffic Signal
	Temporary Lane Separator		Flagger
	Tubular Marker		Temporary Floodlighting
	Channelizer Marker		Traffic Sign
	Concrete Barrier Marker		Type III Barricade
	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)

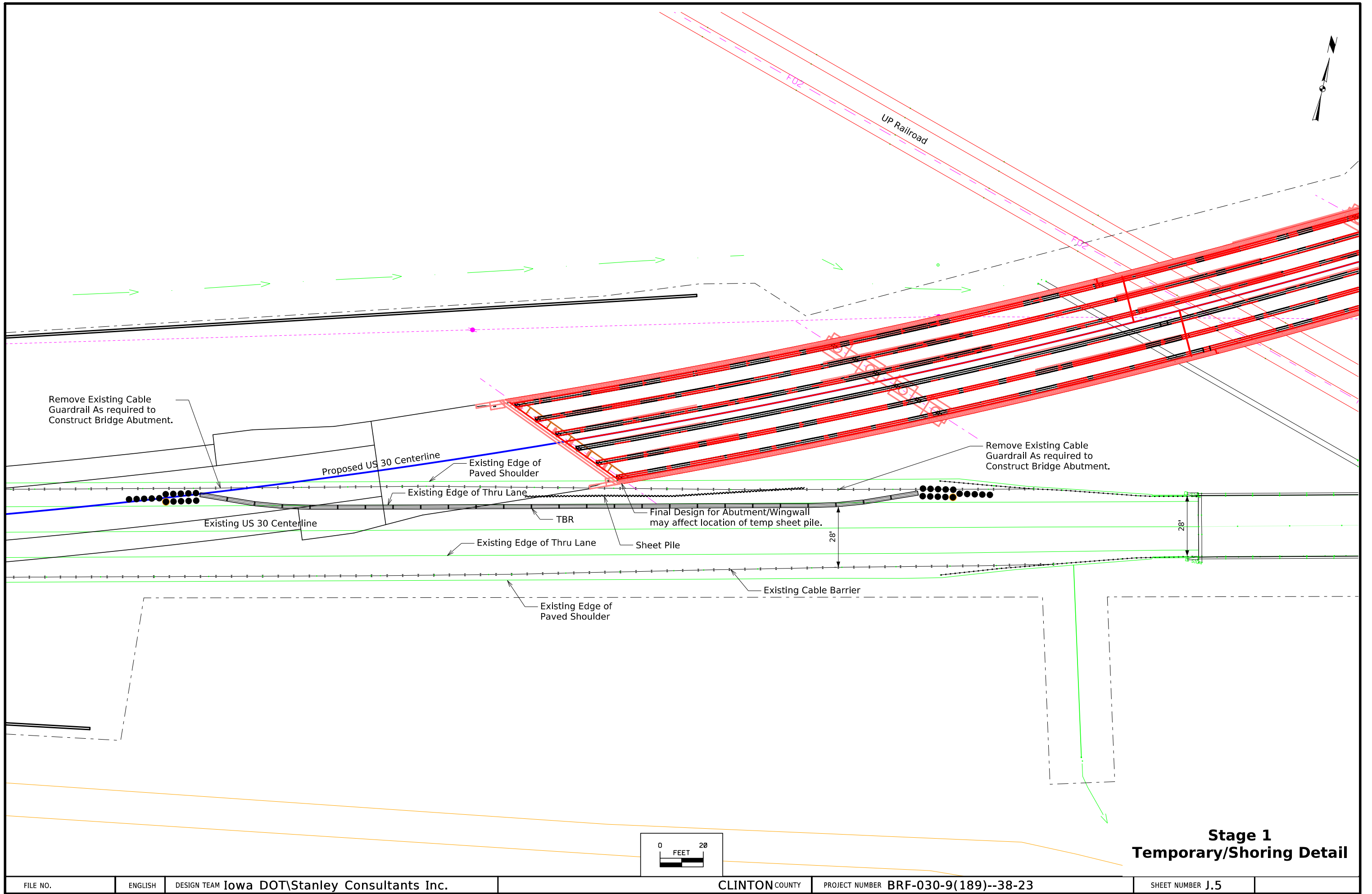


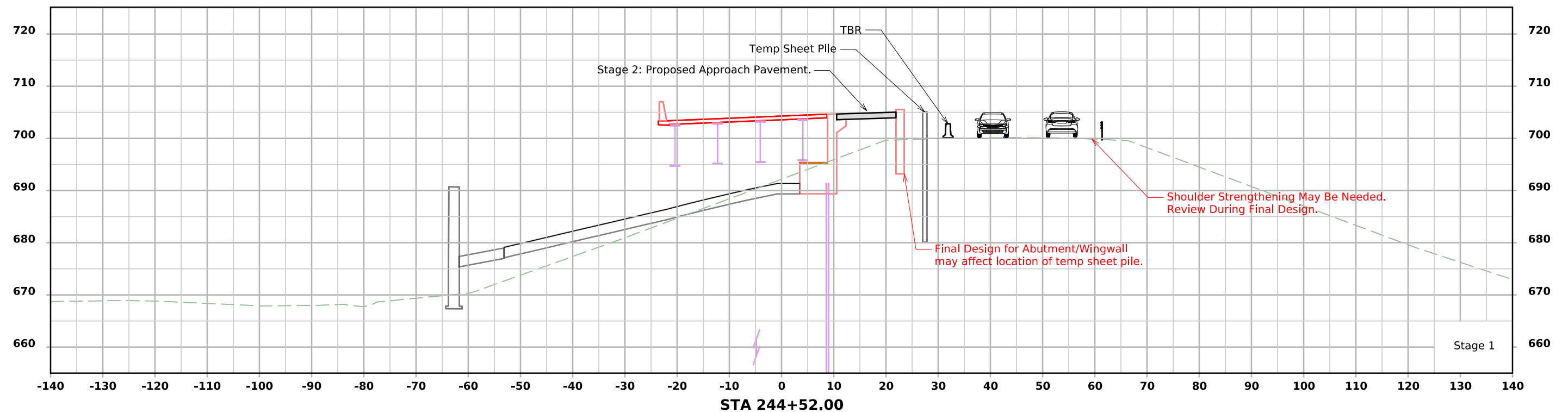


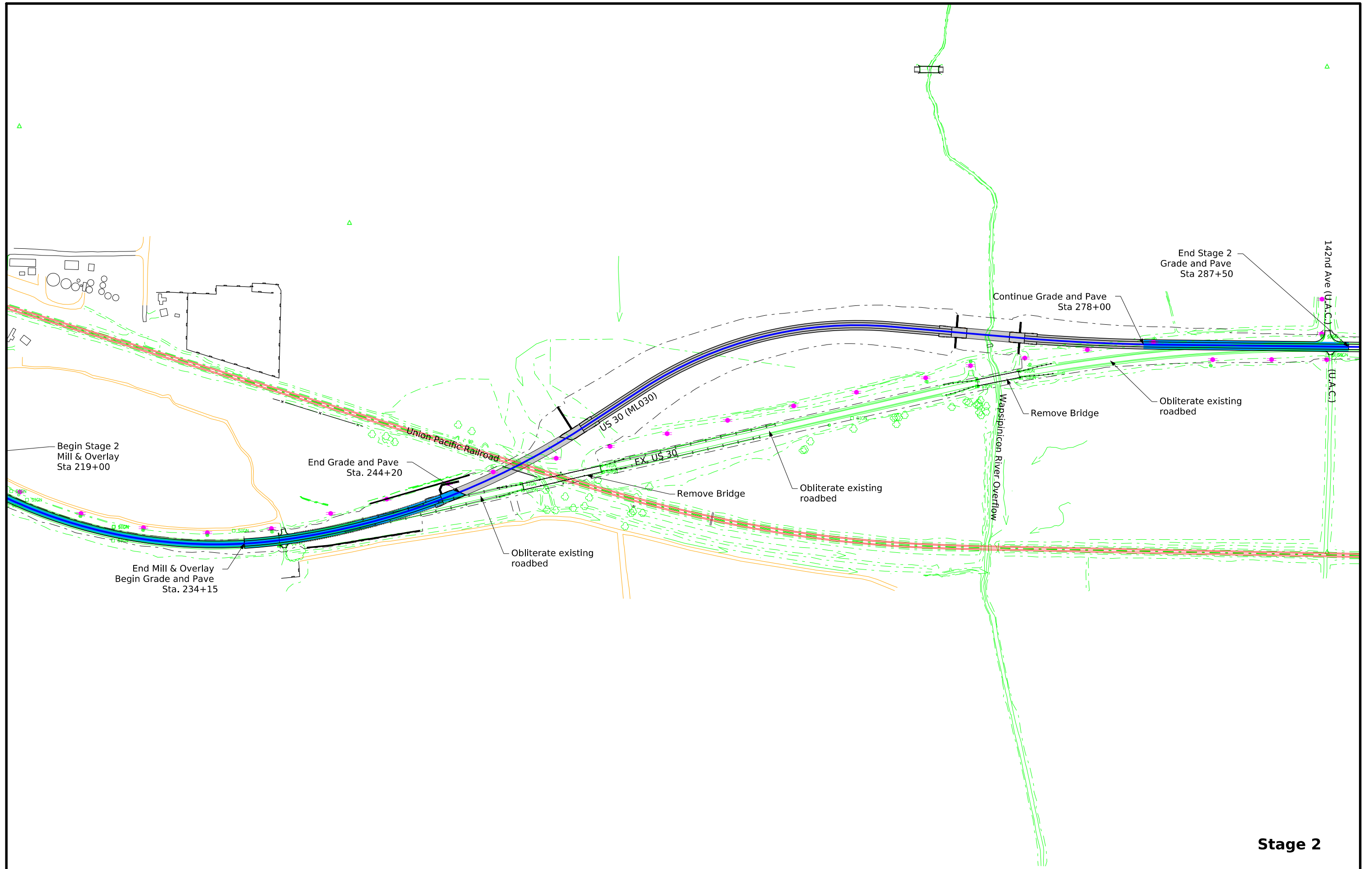
See Sheet J.5 and J.6 for
Temp/Shoring Detail

Stage 1

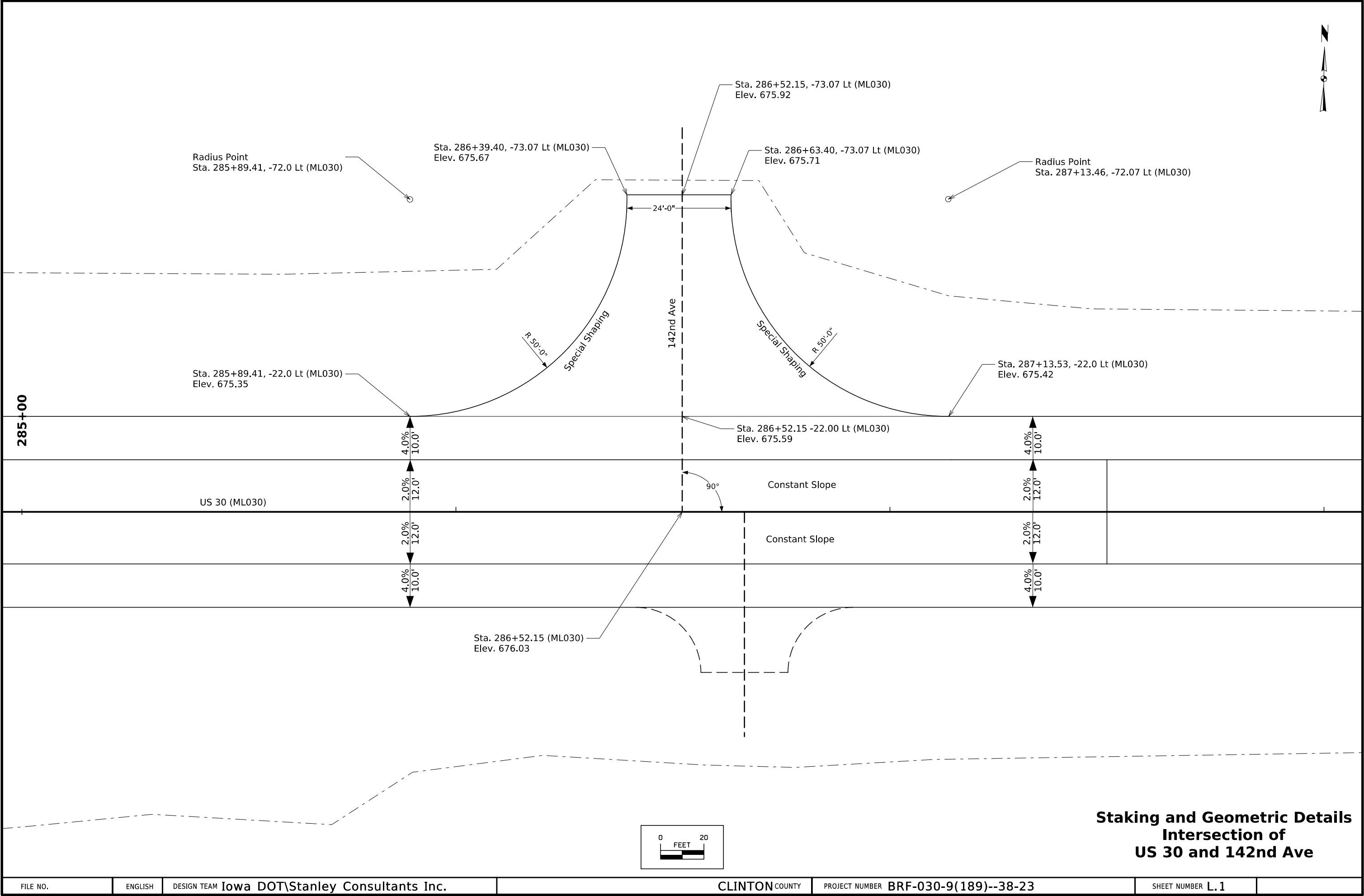
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pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\2303002019\Design\CADD_Files_Alt_Alignment\Sheet_Files\SHT_23030189_J04.dgn					





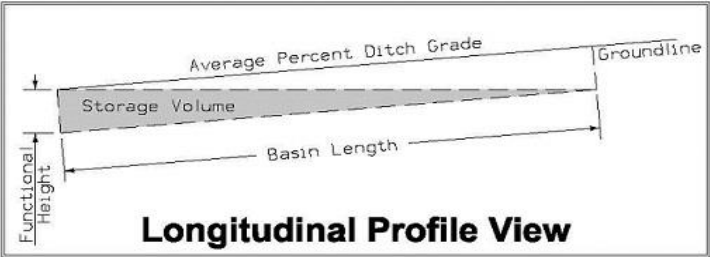
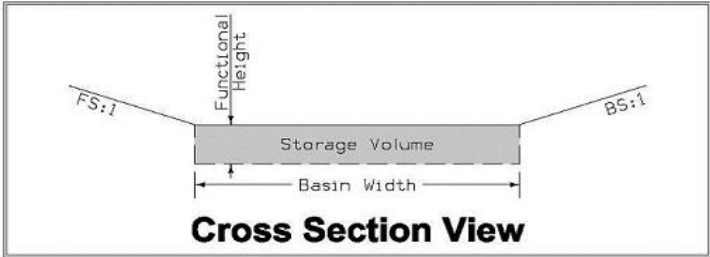


Stage 2



100-14
10-17-17

SILT BASINS
Possible Standard: EW-403



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

Basin No.	Location		Bid Items		Stormwater Storage Volume Summary					Remarks
	Station	Side	Installation	Removal	Basin Width	Basin Length	Height	Avg. % Slope	Volume*	
			EACH	EACH	FT	FT	FT		CF	
5	255+60.00	Lt	1	1	10.0	50.0	2.85	0.2%	1400.0	
5	256+30.00	Lt	1	1	10.0	50.0	2.85	0.2%	1400.0	
6	255+60.00	Rt	1	1	10.0	50.0	2.85	0.3%	1387.5	
6	256+30.00	Rt	1	1	10.0	50.0	2.85	0.3%	1387.5	
	Totals:		4	4						

100-17
04-20-10

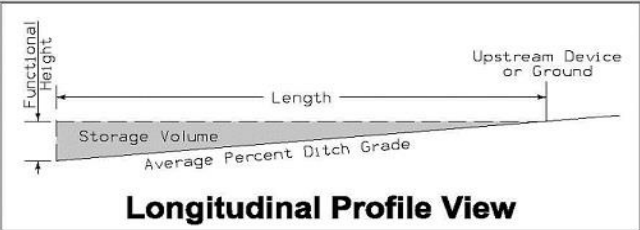
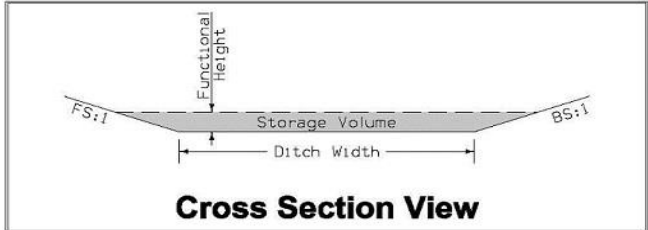
TABULATION OF SILT FENCES
Refer to EC-201

Location			Length LF	Remarks
Begin Station	End Station	Side		
219+00.00	235+60.00	Lt	1660.0	
219+00.00	235+60.00	Rt	1660.0	
228+15.00	235+60.00	Rt	745.0	
233+35.00	235+60.00	Lt	225.0	
235+70.00	235+70.00	Both	60.0	
236+25.00	236+25.00	Both	60.0	
236+50.00	243+00.00	Both	1300.0	
237+25.00	243+50.00	Lt	625.0	
238+00.00	242+00.00	Rt	400.0	
242+20.00	246+00.00	Rt	380.0	
250+75.00	274+25.00	Rt	2350.0	
250+50.00	287+50.00	Rt	3700.0	
251+60.00	268+50.00	Both	1690.0	
251+60.00	268+50.00	Both	1690.0	
251+60.00	258+10.00	Lt	650.0	
251+60.00	269+10.00	Lt	1750.0	
252+90.00	269+10.00	Rt	1620.0	
269+80.00	269+80.00	Both	300.0	
271+80.00	271+80.00	Both	200.0	
272+00.00	285+80.00	Both	1380.0	
272+00.00	274+00.00	Lt	200.0	
272+00.00	286+25.00	Lt	1425.0	
286+75.00	287+50.00	Lt	75.0	
	Totals:		24070.0	

100-18
10-16-18

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



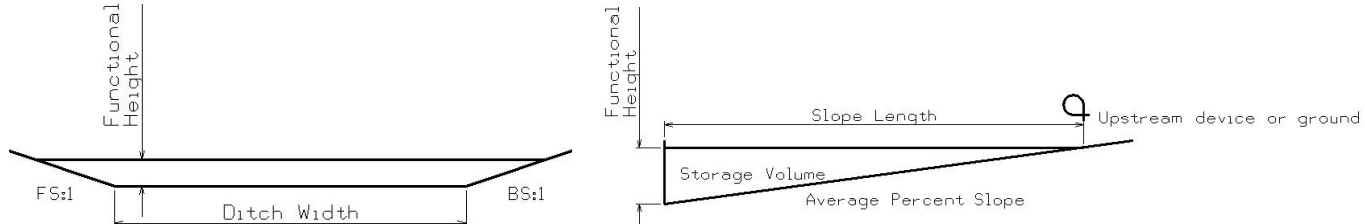
* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: $[0.5 * \text{Spacing} * (0.5 * H^2 * FS + DW * H + 0.5 * H^2 * BS)]$

Basin No.	Type	Location		Bid Items			Stormwater Storage Volume Summary					Remarks
		Station	Side	Installation LF	Maintenance LF	Removal LF	Foreslope FS:1	Backslope BS:1	Ditch Width FT	Avg.% Slope Ditch Grade	Volume* CF	
5		252+80.00	Lt	23.0	23.0	23.0	3.0	0.0	10.0	0.2%	2541.3	
5		254+10.00	Lt	23.0	23.0	23.0	3.0	0.0	10.0	0.2%	2541.3	
5		257+60.00	Lt	23.0	23.0	23.0	3.0	0.0	10.0	0.2%	2541.3	
5		259+15.00	Lt	23.0	23.0	23.0	3.0	0.0	10.0	0.2%	2541.3	
6		253+25.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.3%	2541.3	
6		254+50.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.3%	2541.3	
6		257+40.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.3%	2541.3	
6		260+55.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.3%	2541.3	
6		263+70.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.3%	2541.3	
6		264+60.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.3%	2541.3	
6		266+85.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.3%	2541.3	
6		268+80.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.3%	2541.3	
7		263+00.00	Lt	23.0	23.0	23.0	3.0	0.0	10.0	0.3%	2541.3	
7		265+50.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.3%	2541.3	
7		267+50.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.3%	2541.3	
9		273+00.00	Lt	23.0	23.0	23.0	3.0	0.0	10.0	0.5%	2541.3	
9		275+60.00	Lt	23.0	23.0	23.0	3.0	0.0	10.0	0.5%	2541.3	
9		278+80.00	Lt	23.0	23.0	23.0	3.0	0.0	10.0	0.5%	2541.3	
9		271+80.00	Lt	23.0	23.0	23.0	3.0	0.0	10.0	0.5%	2541.3	
10		272+50.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.5%	2541.3	
10		274+30.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.5%	2541.3	
10		276+50.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.5%	2541.3	
10		279+35.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.5%	2541.3	
10		282+50.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.5%	2541.3	
10		271+80.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.5%	2541.3	
11		285+75.00	Rt	23.0	23.0	23.0	3.0	0.0	10.0	0.5%	2541.3	
12		282+15.00	Lt	23.0	23.0	23.0	3.0		10.0	0.5%	2541.3	
		Totals:		621.0	621.0	621.0						

100-33
10-16-18

TEMPORARY SEDIMENT CONTROL BASIN

Possible Standard: EC-601



* The functional height used in the volume equation is 95% of effective height. Effective height is 2.5 feet as shown in EC-601.
* Volume equation: $[(1/4 * (FS * H^2)) + (DW * H) + (1/4 * (BS * H^2))] * (H / \text{Avg} \% \text{Slope})$

Basin No.	Location		Bid Items			Stormwater Storage Volume Summary					Remarks
	Station	Side	Installation	Maintenance	Removal	Foreslope	Backslope	Ditch Width	Average %	Volume*	
			Each	Each	Each	FS:1	BS:1	FT	Slope	CF	
5	255+50.00	Lt	1	1	1	3.0	3.0	10.00	0.5%	9660	
6	268+50.00	Rt	1	1	1	3.0	3.0	10.00	0.3%	16099	
7	268+50.00	Lt	1	1	1	3.0	3.0	10.00	0.6%	8050	
9	273+00.00	Lt	1	1	1	3.0	3.0	10.00	0.4%	12074	
10	273+00.00	Rt	1	1	1	3.0	3.0	10.00	0.3%	16099	
	Totals:		5	5	5						

														100-23 04-17-18	
ROCK EROSION CONTROL															
Refer to EC-301 and Detail 570-8															
Location				L	W	Rock Erosion Control (REC)					Material Bid Quantities			Remarks	
Road Identification	Begin Station	End Station	Side			Type 1	Type 2	Type 3	Type 4	Type 5	Eng. Fabric	Class E Revetment	Erosion Stone		
						Rock Ditch Check	Rock Ditch	Rock Flume	Rock Splash Basin	Rock Slope Protection					
			Lt./Rt.	FT	FT										
US 30	255+91.00	256+03.00	Lt.	12	12				1		28.4	15.1			
US 30	255+91.00	256+03.00	Rt.	12	12				1		28.4	15.1			
		Totals:							2		56.8	30.2			

100-34 10-17-17														
STORMWATER DRAINAGE BASIN AND STORAGE														
Refer to EC Standards and 570s Details.														
Drainage Basin Location						Summary of Stormwater Storage							Remarks	
Basin No.	Station to Station		Side	Discharge Point		Total Disturbed Area	Disturbed Area with Storage Provided	Disturbed Area without Storage Provided	Best Management Practice	Total Storage Volume Provided	Total Storage Volume Required	Storage Volume Met?		
				Station	Side									
				Acres	Acres	Acres	CF	CF		Yes/No				
1	219+00.00	236+00.00	Rt	230+00.00	Rt	0.8	0.0	0.8	Vegetated Buffer		0.0	Yes		
2	219+00.00	236+00.00	Lt	230+00.00	Lt	1.5	0.0	1.5	Vegetated Buffer		0.0	Yes		
3	236+00.00	247+37.00	Lt	236+70.00	Lt	2.2	0.0	2.2	Vegetated Buffer		0.0	Yes		
4	236+00.00	247+80.00	Rt	236+70.00	Rt	1.6	0.0	1.6	Vegetated Buffer		0.0	Yes		
5	247+37.00	260+25.00	Lt	245+25.00	Lt	3.4	3.4	0.0			12140.0			
									Silt Fence for Ditch Check (EC-201)	10165.3		Yes		
									Silt Basin (EW-403)	2800.0				
									Temporary Sediment Control Basin (EC-601)	9659.6				
									Total:	22624.9				
6	247+37.00	270+80.00	Rt	269+80.00	Rt	6.5	6.5	0.0			23400.0			
									Silt Fence for Ditch Check (EC-201)	20330.7		Yes		
									Silt Basin (EW-403)	2775.0				
									Temporary Sediment Control Basin (EC-601)	16099.3				
									Total:	39205.0				
7	260+25.00	270+80.00	Lt	269+80.00	Lt	1.9	1.9	0.0			6840.0			
									Silt Fence for Ditch Check (EC-201)	7624.0		Yes		
									Temporary Sediment Control Basin (EC-601)	8049.6				
									Total:	15673.7				
8	250+50.00	270+50.00	Rt	270+50.00	Rt	3.1	0.0	3.1	Vegetated Buffer		0.0	Yes		
9	270+80.00	282+10.00	Lt	271+80.00	Lt	2.2	2.2	0.0			7920.0			
									Silt Fence for Ditch Check (EC-201)	10165.3		Yes		
									Temporary Sediment Control Basin (EC-601)	12074.5				
									Total:	22239.8				
10	270+80.00	285+60.00	Rt	271+80.00	Rt	3.8	3.8	0.0			13680.0			
									Silt Fence for Ditch Check (EC-201)	15248.0		Yes		
									Temporary Sediment Control Basin (EC-601)	16099.3				
									Total:	31347.3				
11	285+60.00	286+65.00	Rt	286+65.00	Rt	0.2	0.0	0.2	Vegetated Buffer		0.0	Yes		
12	282+10.00	286+50.00	Lt	286+50.00	Lt	0.7	0.7	0.0			2459.4			
									Silt Fence for Ditch Check (EC-201)	2541.3		Yes		
13	286+50.00	287+50.00	Lt	287+50.00	Lt	0.2	0.0	0.2	Vegetated Buffer		0.0	Yes		
14	286+65.00	287+50.00	Rt	287+50.00	Lt	0.1	0.0	0.1	Vegetated Buffer		0.0	Yes		

110-12 10-20-20 POLLUTION PREVENTION PLAN This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP). This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed during construction, will be readily available for review. All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The Contractor shall be responsible for compliance and implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP. I. ROLES AND RESPONSIBILITES A. Designer: 1. Prepares Base PPP included in the project plan. 2. Prepares Notice of Intent (NOI) submitted to Iowa DNR. 3. Is signature authority on the Base PPP. If consultant designed, signature from Contracting Authority is also required. B. Contractor: 1. Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP. 2. Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications. 3. Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications. 4. Installs and maintains appropriate controls. This work may be subcontracted as documented through Subcontractor Request Forms (Form 830231). 5. Supervises and implements good housekeeping practices according to Paragraph III, C, 2. 6. Conducts joint required inspections of the site with inspection staff. When Contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the Contractor) is still responsible to review and sign inspection reports. 7. Complies with training and certification requirements of Section 2602 of the Standard Specifications. 8. Submits amended PPP site map according to Section 2602 of the Standard Specifications. C. Subcontractors: 1. Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if: responsible for sediment or erosion controls; involved in land disturbing activities; or performing work that is a source of potential pollution as defined in this PPP. Subcontracted work items are identified in Subcontractor Request Forms (Form 830231). All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP. 2. Implement good housekeeping practices according to Paragraph III, C, 2. D. RCE/Project Engineer: 1. Is Project Storm Water Manager. 2. On projects where DOT is the Contracting Authority, is current with erosion control training or certification. 3. Takes actions necessary to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, and directing additional inspections at construction project sites that are experiencing problems with achieving permit compliance. 4. Orders the taking of measures to cease, correct, prevent, or minimize the consequences of non-compliance with the storm water requirements of the Applicable Permit. 5. Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors. 6. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order or recommend such other actions as necessary to meet storm water requirements. 7. Is familiar with the Project PPP and storm water site map. 8. On projects where DOT is Contracting Authority, is responsible for periodically monitoring inspection reports to determine whether deficiencies identified in inspection reports were adequately and timely addressed, and if not, has the authority and responsibility to direct immediate actions to correct the deficiencies. 9. Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements. 10. Is signature authority on Notice of Discontinuation. 11. Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231). 12. Makes information to determine permit compliance available to the DNR upon their request. E. Inspector: 1. Updates PPP through fieldbook entries and storm water site inspection reports if there is a change in design, construction, operation, or maintenance which has a significant effect on the discharge of pollutants from the project. 2. Makes information to determine permit compliance available to the DNR upon their request. 3. Conducts joint required inspections of the site with the contractor/subcontractor. 4. Completes an inspection report after each inspection. 5. Is signature authority on storm water inspection reports. II. PROJECT SITE DESCRIPTION A. This Pollution Prevention Plan (PPP) is for the construction of a Roadway Realignment and Bridge Replacement. B. This PPP covers approximately 28.0 acres with an estimated 28.0 acres being disturbed. The portion of the PPP covered by this contract has 28.0 acres disturbed. C. The PPP is located in an area of one soil association (Sparta - Chelsea - Dickinson). The estimated weighted average runoff coefficient number for this PPP after completion will be 0.26. D. Storm Water Site Map is located in the R sheets. Proposed slopes are shown in cross sections, details, or standard road plans. Supplemental information is located in the Tabulations in the C or CE sheets. E. The base storm water site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be				110-12 10-20-20 POLLUTION PREVENTION PLAN documented by fieldbook entries and amended PPP site map. F. Runoff from this work will flow into the Wapsipinicon River. III. CONTROLS A. The Contractor’s ECIP specified in Article 2602.03 of the Standard Specifications for accomplishment of storm water controls should clearly describe the intended sequence of major activities, and for each activity define the control measure and the timing during the construction process that the measure will be implemented. B. Preserve vegetation in areas not needed for construction. C. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries, amended PPP site map, or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water site inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B of the Standard Specifications. 1. EROSION AND SEDIMENT CONTROLS a. Stabilization Practices 1) Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized. 2) Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have: a) Permanently ceased on any portion of the site, or b) Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. 3) Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above. 4) Permanent and Temporary Stabilization practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C or R sheets. 5) Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips. 6) Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets. Additional information may be found in the Tabulations in the C or T Tabulation sheets, or is referenced in Section 2105 of the Standard Specifications. b. Structural Practices 1) Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water from surface when discharging basins, and controls to direct storm water to vegetated areas. 2) Structural practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found on the B or R sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C or R sheets. c. Storm Water Management Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the storm water site map and Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation. The installation of these devices may be subject to Section 404 of the Clean Water Act. 2. OTHER CONTROLS Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply. a. Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways. b. Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use. c. Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving. d. Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit. e. Spill Prevention and Control - Implement chemical spill and leak prevention and response procedures to contain and clean up spills and prevent material discharges to the storm drain system and waters of the state. f. Concrete Residuals and Washout Wastes - Waste shall not be discharged to a surface water and is not allowed to adversely affect a water of the state. Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located. Designated washout areas should be located at least 50 feet away from storm drains, streams or other water bodies. Care should be taken to ensure these facilities do not overflow during storm events. g. Concrete Grooving/Grinding Slurry - Do not discharge slurry to a waterbody or storm drain. Slurry may be applied on foreslopes or removed from the project. h. Vehicle and Equipment Storage and Maintenance Areas - Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onsite fuels and proper disposal of used engine oil or other fluids on site. Employ washing practices that prevent contamination of surface and ground water from wash water. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge. i. Litter Management - Ensure employees properly dispose of litter. Minimize exposure of trash if exposure to precipitation or storm water would result in a discharge of pollutants. j. Dewatering - Properly treat water to remove suspended sediment before it re-enters a waterbody or discharges off-site. Measures are also to be taken to prevent scour erosion at dewatering discharge point. 3. APPROVED STATE OR LOCAL PLANS During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time. IV. MAINTENANCE PROCEDURES				
FILE NO.	ENGLISH	DESIGN TEAM	Stanley Consultants Inc.	CLINTON COUNTY	PROJECT NUMBER	BRF-030-9(189)--38-23	SHEET NUMBER	RC.3
8/30/2024 3:09:15 PM 8877 c:\pw_work\pmain\greg.shuger\d2188301\SHF_23030189_RC01.xlsm								

POLLUTION PREVENTION PLAN

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

V. INSPECTION REQUIREMENTS

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

VI. NON-STORM WATER DISCHARGES

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

VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION

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

VIII. DEFINITIONS

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

CERTIFICATION STATEMENT

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

Signature

Printed or Typed Name

Signature

LINE STYLE LEGEND OF LANDSCAPE SHEETS	
LINESTYLE	Design Element
-----	Living Snow Fence Single Row
- - - - -	Living Snow Fence Double Row
_____	Mechanical Edge

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

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

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

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

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

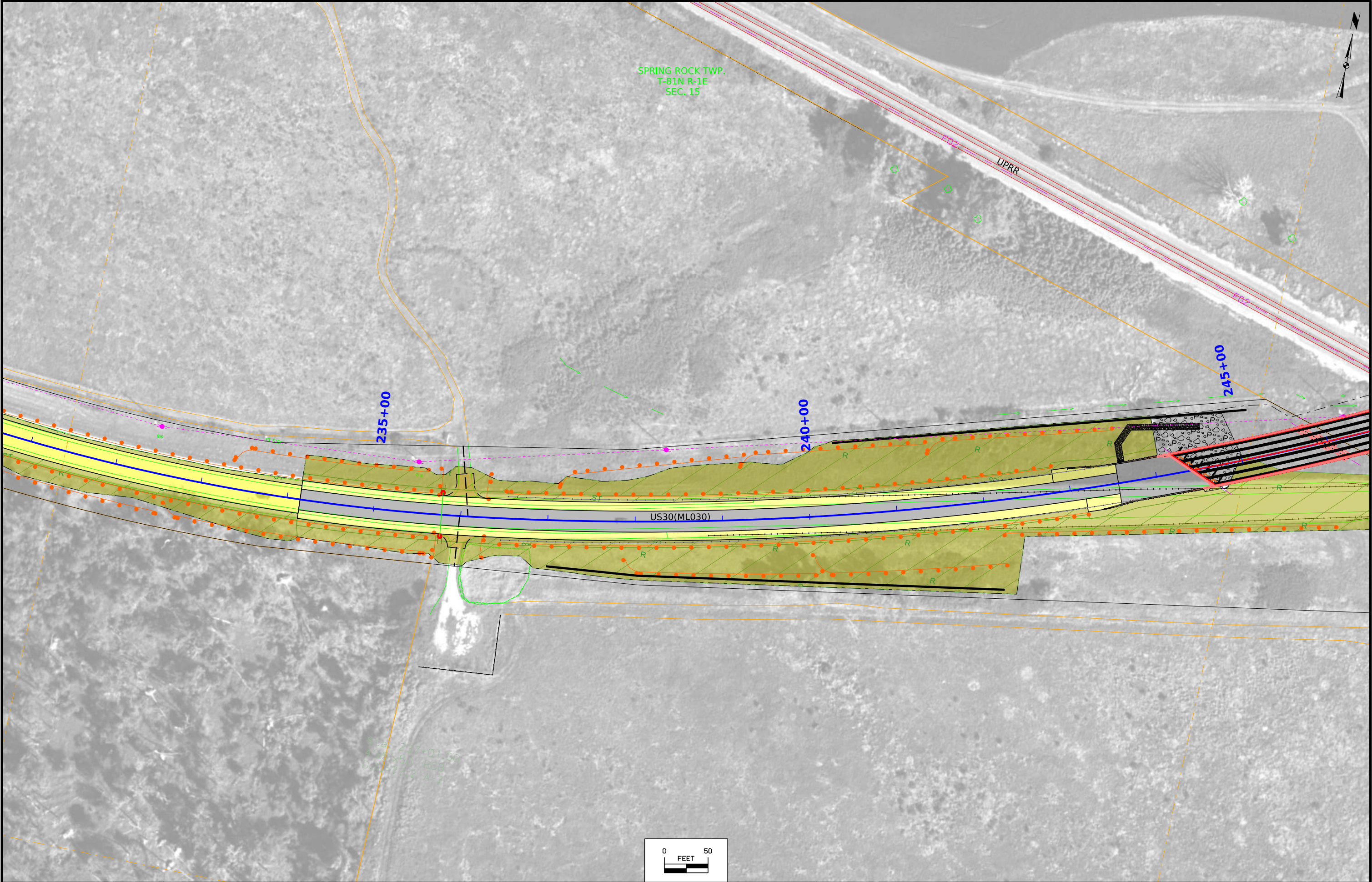
PATTERN LEGEND OF EROSION CONTROL SHEETS	
	Seeding and Fertilizing
	Seeding and Fertilizing (Rural)
	Seeding and Fertilizing (Urban)
	Native Grass Seeding
	Salt Tolerant Seeding
	Wetland Grass Seeding
	Wildflower Seeding
	Sodding
	Turf Reinforcement Mat Type 1
	Turf Reinforcement Mat Type 2
	Turf Reinforcement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

EROSION CONTROL
LEGEND AND SYMBOL
INFORMATION SHEET

(COVERS SHEET SERIES R)

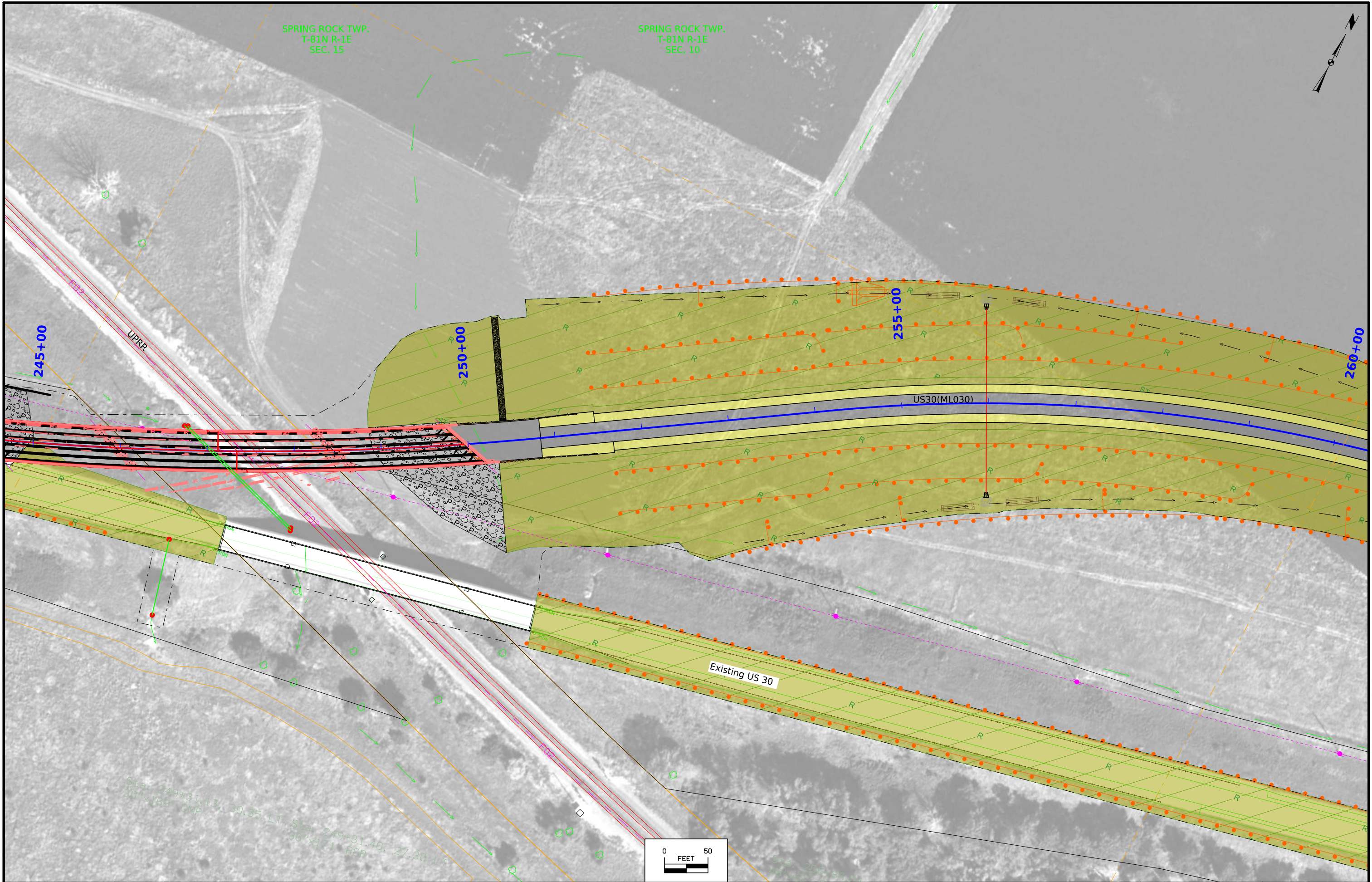


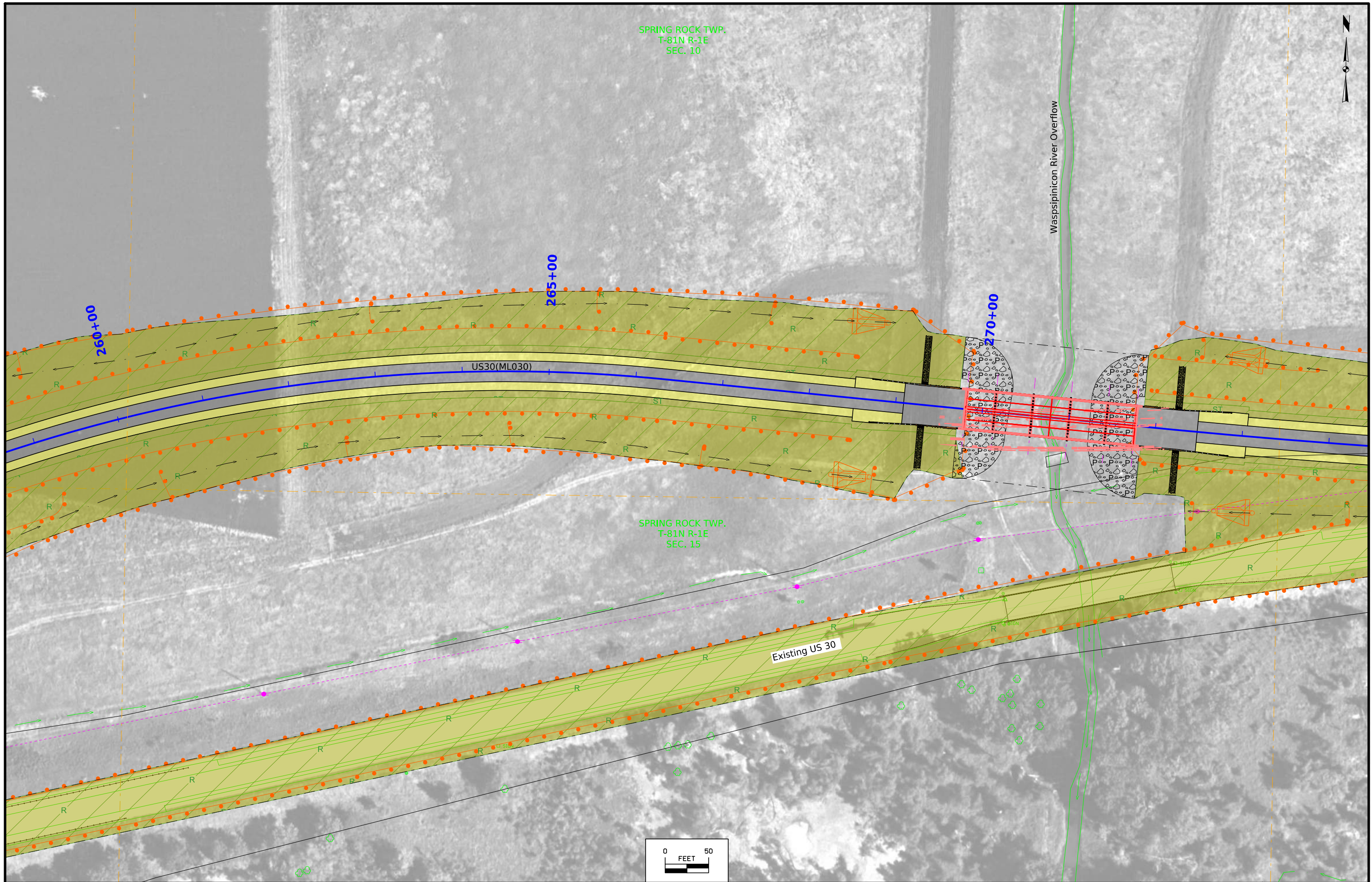
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FILE NO.	ENGLISH	DESIGN TEAM	CLINTON COUNTY	PROJECT NUMBER	SHEET NUMBER
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3:48:09 PM	8/30/2024	8877	pw:\\projectwise.dot.int.lan:PWMain\\Documents\\Projects\\2303002019\\Design\\CADD_Files_Alt_Alignment\\Sheet_Files\\SHT_23030189_RR02.dgn	BRF-030-9(189)--38-23	RR.3
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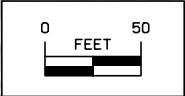
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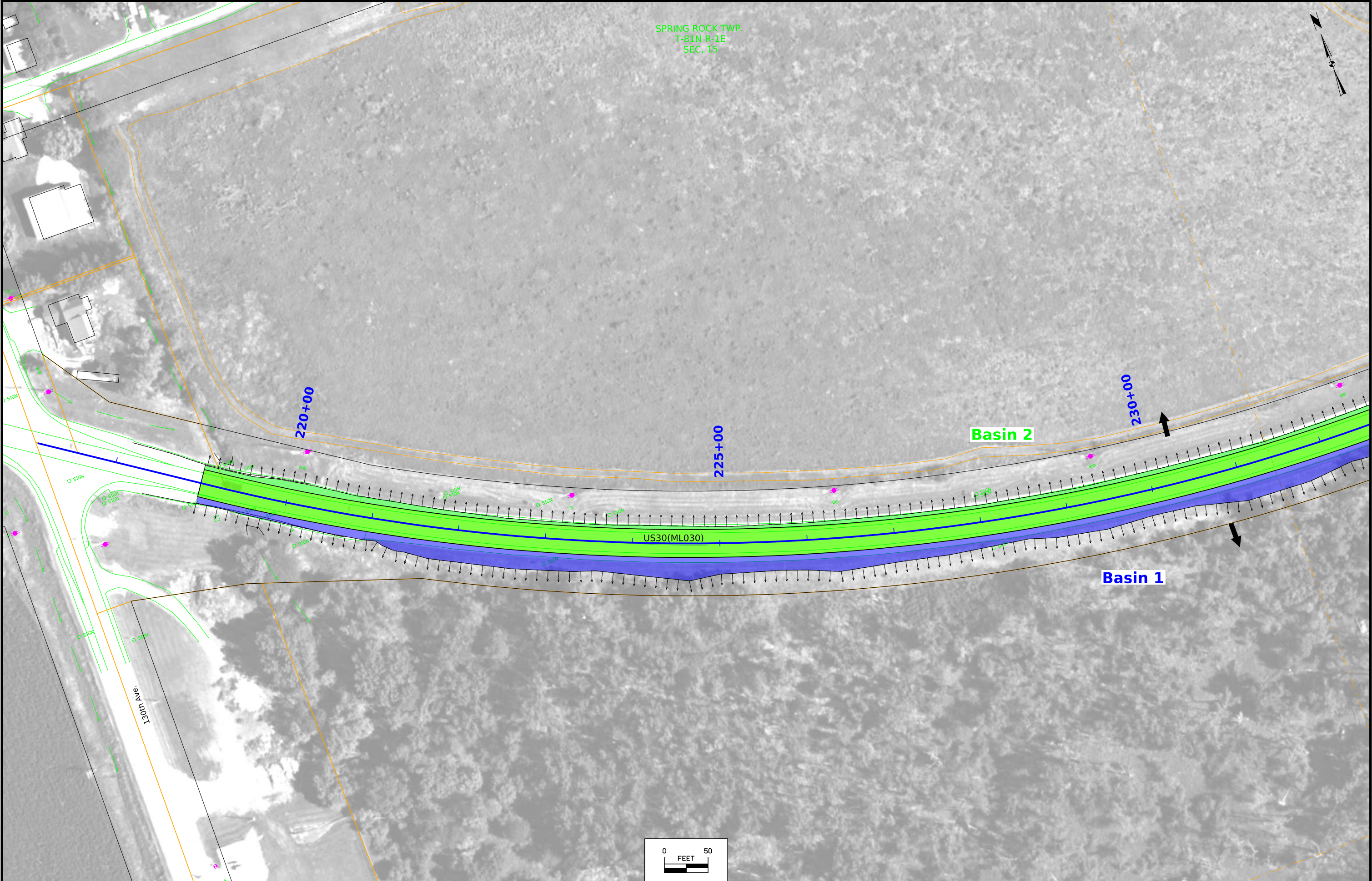
SPRING ROCK TWP.
T-81N R-1E
SEC. 11

SPRING ROCK TWP.
T-81N R-1E
SEC. 14

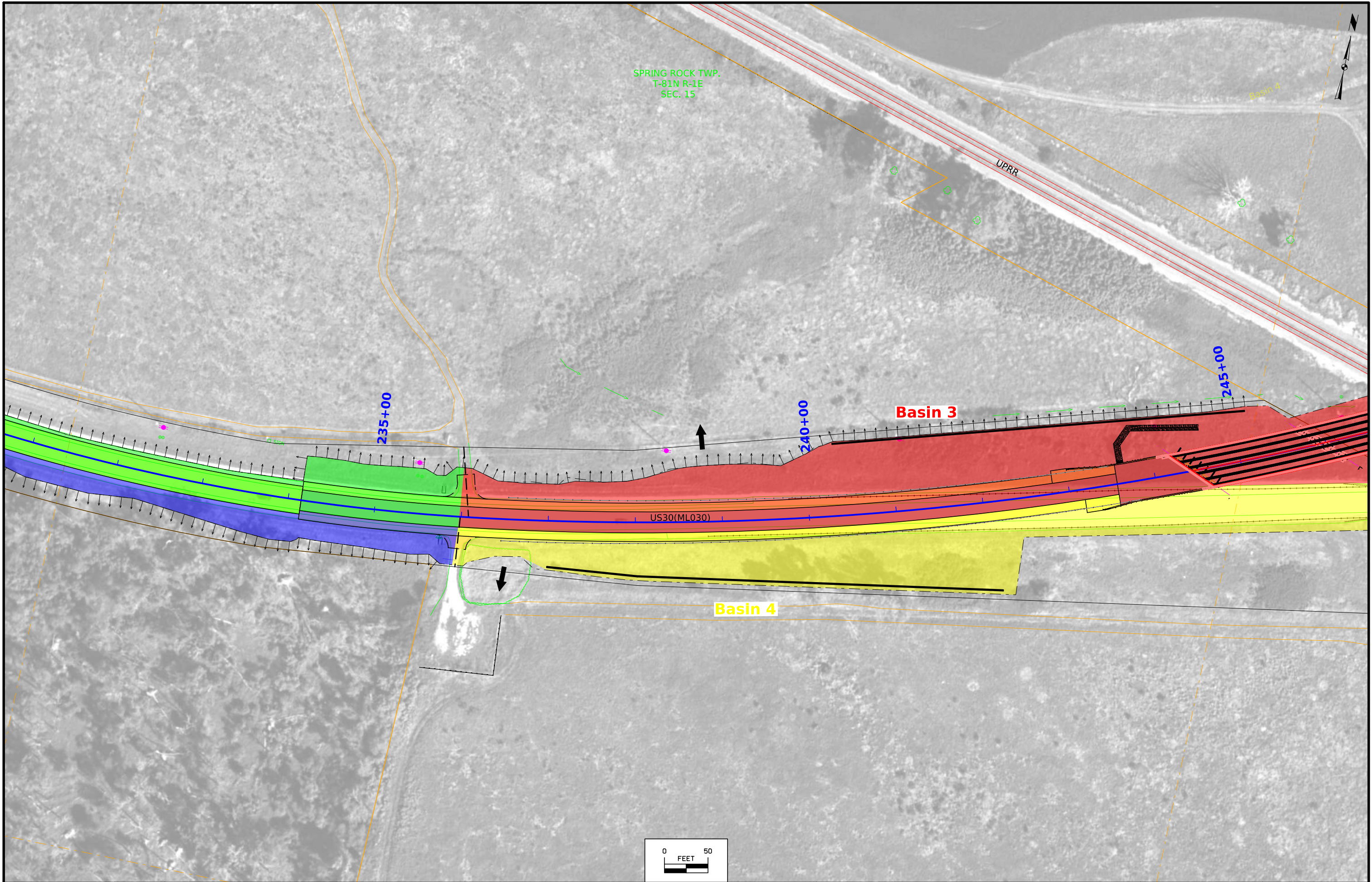


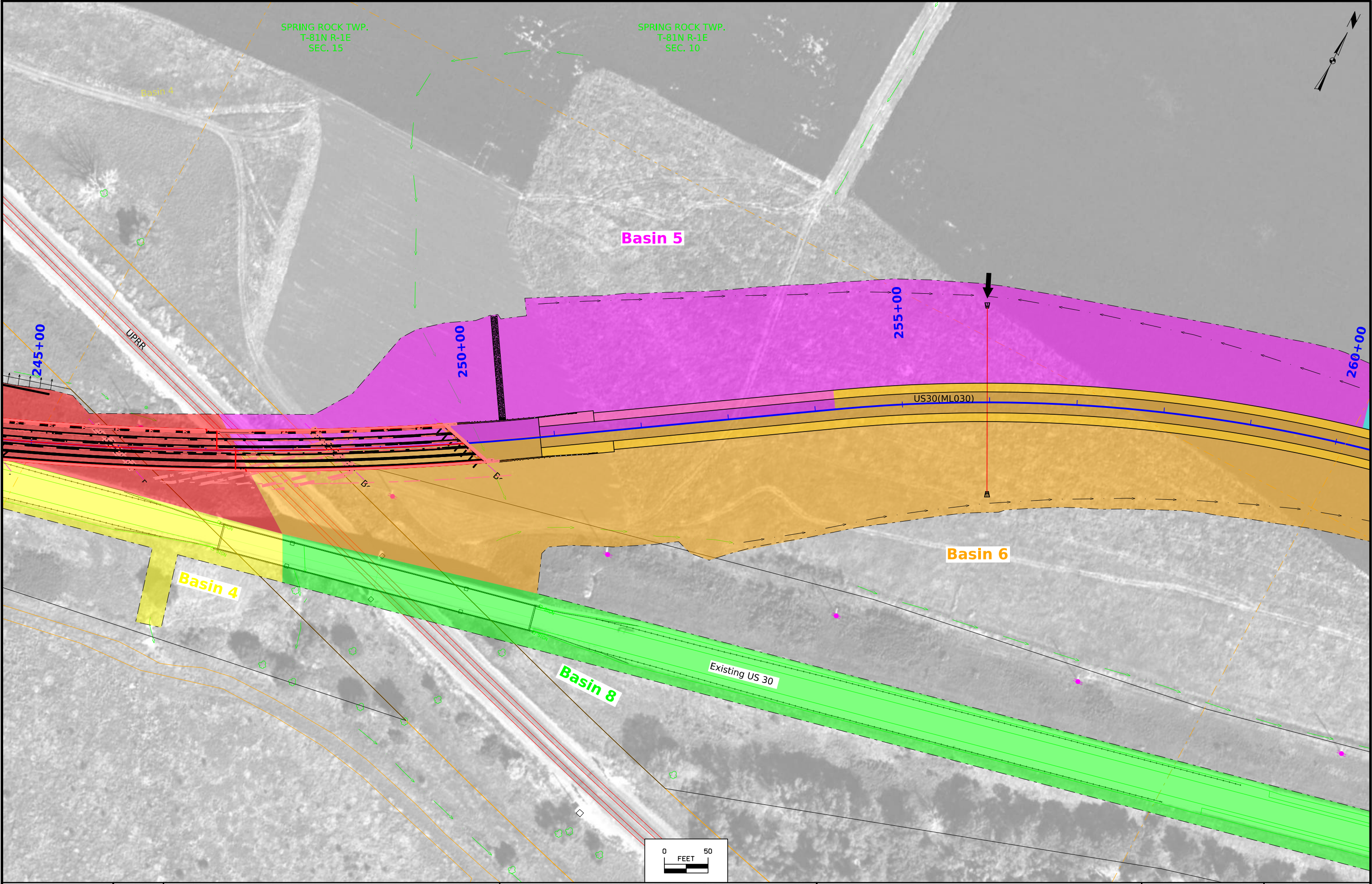
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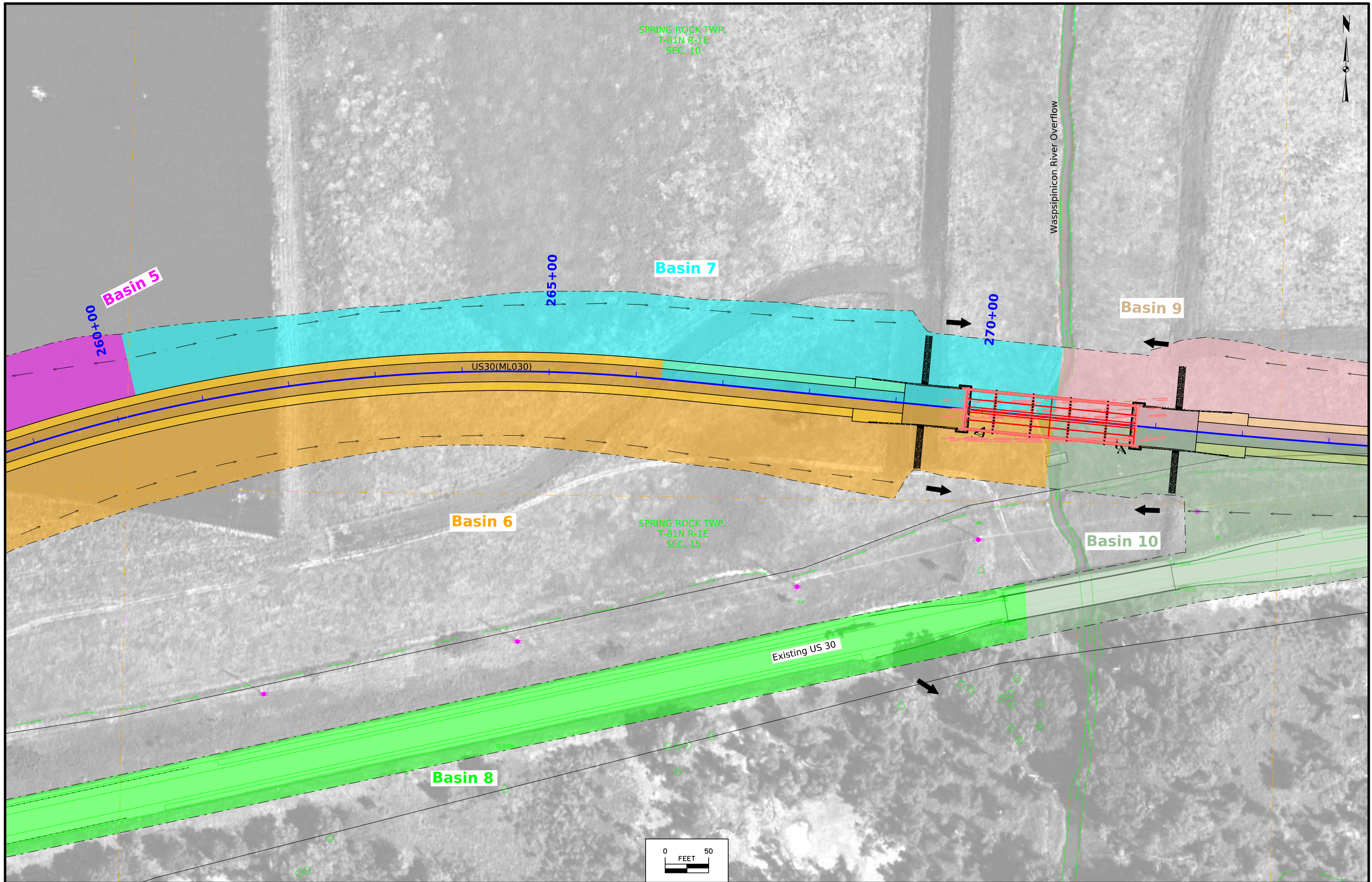
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FILE NO.	ENGLISH	DESIGN TEAM	Iowa DOT\Stanley Consultants Inc.	CLINTON COUNTY	PROJECT NUMBER	BRF-030-9(189)--38-23	SHEET NUMBER	RR.7
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FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Stanley Consultants Inc.	CLINTON COUNTY	PROJECT NUMBER BRF-030-9(189)--38-23	SHEET NUMBER RR.10
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FILE NO.	ENGLISH	DESIGN TEAM	Iowa DOT\Stanley Consultants Inc.	CLINTON COUNTY	PROJECT NUMBER	BRF-030-9(189)--38-23	SHEET NUMBER	RR.11
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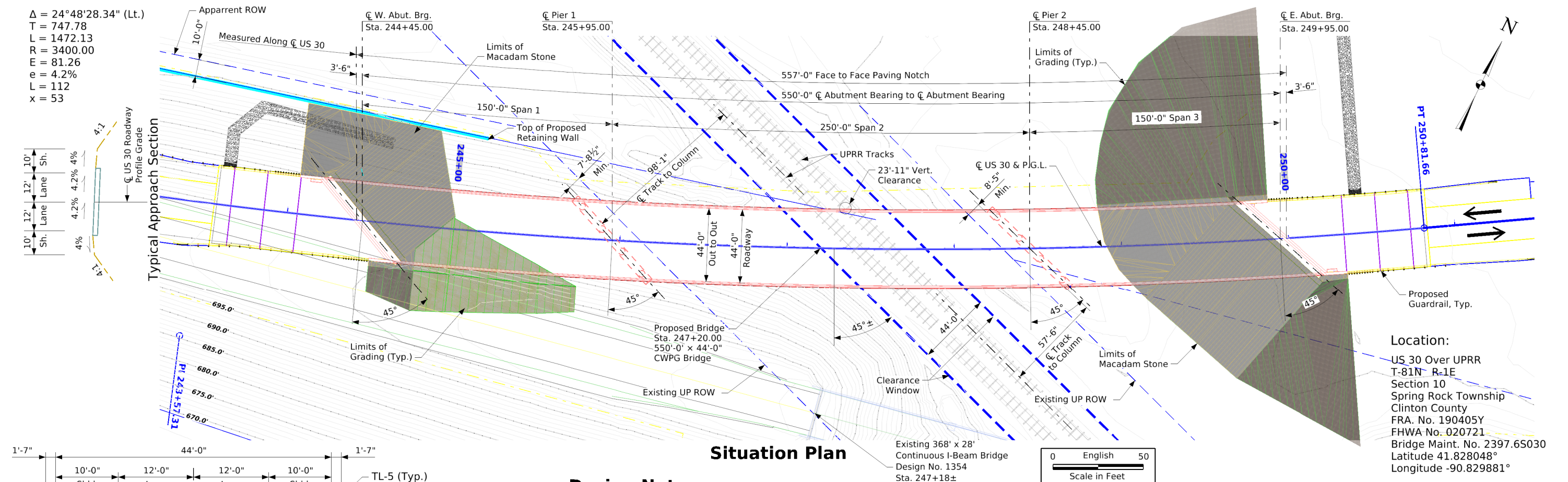
Profile view of the proposed bridge structure. The vertical axis shows elevations from 640 to 730 feet. The horizontal axis represents the bridge length. Key features include:

- Proposed Profile Grade US 30:** A dashed line showing the proposed road grade with a +4.00% and -3.00% slope. VPI Sta. = 247+40.00, VPI Elev. = 717.98, L = 1100'.
- Bridge Structure:** A solid line representing the bridge deck. Key elevations include:
 - Top of Berm: Elev. 691.31
 - Low Beam: Elev. 698.71
 - Top of Rail at Crit. Clearance: Elev. 674.77
 - Bottom of Footing: Elev. 673.20
 - Bottom of Footing: Elev. 669.60
 - Bottom of Footing: Elev. 692.67
- Ground Profiles:**
 - Existing Ground:** A dashed line showing the existing ground profile.
 - Proposed Ground:** A solid line showing the proposed ground profile.
- Clearance and Dimensions:**
 - Clearance Window:** A blue dashed rectangle indicating the required clearance. Dimensions include 23'-4" Min. and 4'-0".
 - Measured Perpendicular to C.R.R.:** Dimensions of 15'-0" Min. and 14'-0" are shown.
 - Overall Dimensions:** 44'-0" and 4'-0" are indicated.
- Structural Details:**
 - Macadam Stone (Typ.):** Indicated on the bridge deck.
 - Steel Brg. Piling (Typ.):** Indicated for the bridge piers.
- Stationing and Elevation Data:**
 - Station 730: Elev. 704.12 (W. Abut. Brg.), Elev. 706.97 (Pier 1), Elev. 708.54 (Pier 2), Elev. 707.57 (E. Abut. Brg.)

General Notes:

Minimum Vertical Clearance

$\Delta = 24^{\circ}48'28.34''$ (Lt.)
 $T = 747.78$
 $L = 1472.13$
 $R = 3400.00$
 $E = 81.26$
 $e = 4.2\%$
 $L = 112$
 $x = 53$



Situation Plan

Design Notes:

1. All units are in feet unless noted otherwise.
2. TL-5 bridge railing proposed
3. Pier Type = Concrete frame piers
4. Beam Type = Welded plate girder
5. Foundation type to be confirmed during final design.
6. Bridge aesthetics to be incorporated during final design.
7. Berm slopes to be confirmed during final design.
 - a. Berm slopes along wing walls are anticipated to exceed 1:2.5 for staging width.
 - b. Further evaluation of the wing walls & berm slope to be performed during Final Design.

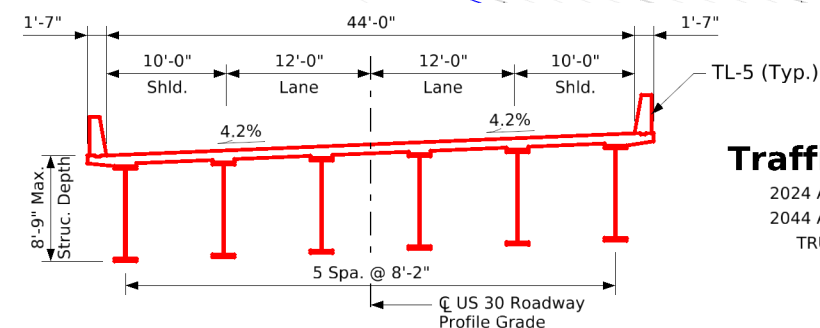
Utilities Legend:

E1	-EL1D, Eastern Iowa Light and Power
F0	-FO1D, F&B Communications
F02	-FO2D, Sprint
G	-GL1D, Alliant Energy
SAN.	-SA1D, City of Wheatland
W	-WL1D, City of Wheatland

Utilities shown on this sheet are for information only, see road design sheets for final utility information.

Traffic Estimate

2024 AADT	3,100 V.P.D.
2044 AADT	3,800 V.P.D.
TRUCKS	20 %



Typical Bridge Section (Looking East)

PRELIMINARY

Design For 45° Skew (R.A.), Radius = 3400'

550'-0" x 44'-0" Continuous Welded
Plate Girder Bridge

150'-0" End Spans 250'-0" Interior Span

Situation Plan

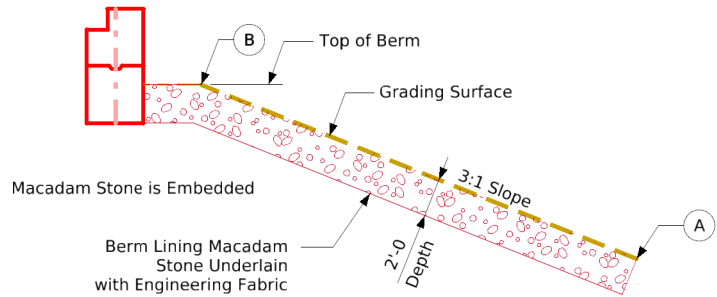
STA. 247+20.00 (US 30) Turn-in Date: August 2024

Clinton County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 125 Design Sheet No. 1 of 3 FHWA No. 020721

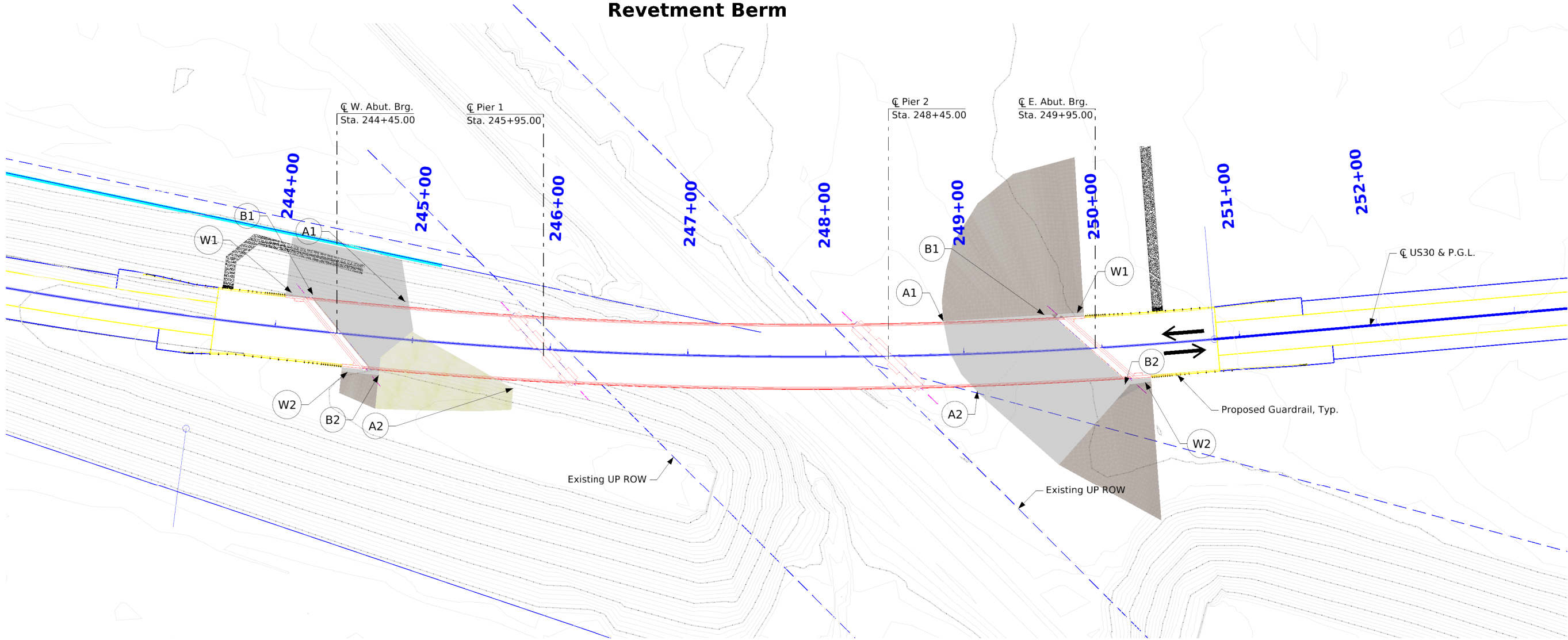
BENCH MARK: New FENO Style monument set flush with ground.
28.15 feet NW of NW corner of wingwall of NW corner of Hwy 30
Bridge over creek. 37.3 feet south southeast of utility pole.
114.0 feet west of middle of small creek.



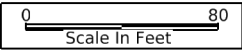
Berm Slope Location Table						
Points	West Abutment			East Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	244+96.20	23.63' LT.	681.73	248+86.24	23.63' LT.	671.99
A2	245+75.00	29.00' RT.	696.10	249+06.14	23.63' RT.	672.27
B1	244+25.60	26.96' LT.	691.38	249+65.14	21.77' LT.	694.64
B2	244+72.21	19.74' RT.	691.38	250+16.55	29.58' RT.	694.64
W1	244+05.32	23.44' LT.	702.20	249+88.62	23.66' LT.	706.70
W2	244+51.13	23.51' RT.	705.20	250+34.00	23.73' RT.	708.15

Berm slope elevations reflect the grading surface.

Section Thru Embedded
Revetment Berm



Site Plan



Estimated Berm Armoring Quantities			
Location	Macadam Stone (SY)	Engineering Fabric (SY)	Excavation (CY)
Berm Lining - West	645	645	1504
Berm Lining - East	983	983	0
Totals	1628	1628	1504

Excavation quantity calculated from grading surface.

Utilities Legend:

- E1 EL1D Eastern Iowa Light and Power
- F0 FO1D F&B Communications
- F02 FO2D Sprint
- G GL1D Alliant Energy
- SAN. SA1D City of Wheatland
- W WL1D City of Wheatland

Utilities shown on this sheet are for information only, see road design sheets for final utility information.

General Notes:

This design is for the replacement of the existing 368'-0" x 28'-0" continuous I-beam bridge, Clinton County Design No. 1354, FHWA No. 020720, Maint. 2397.6S030.

PRELIMINARY

Design For 45° Skew (R.A.), Radius = 3400'

550'-0" x 44'-0" Continuous Welded Plate Girder Bridge

150'-0" End Spans250'-0" Interior Span

Site Plan

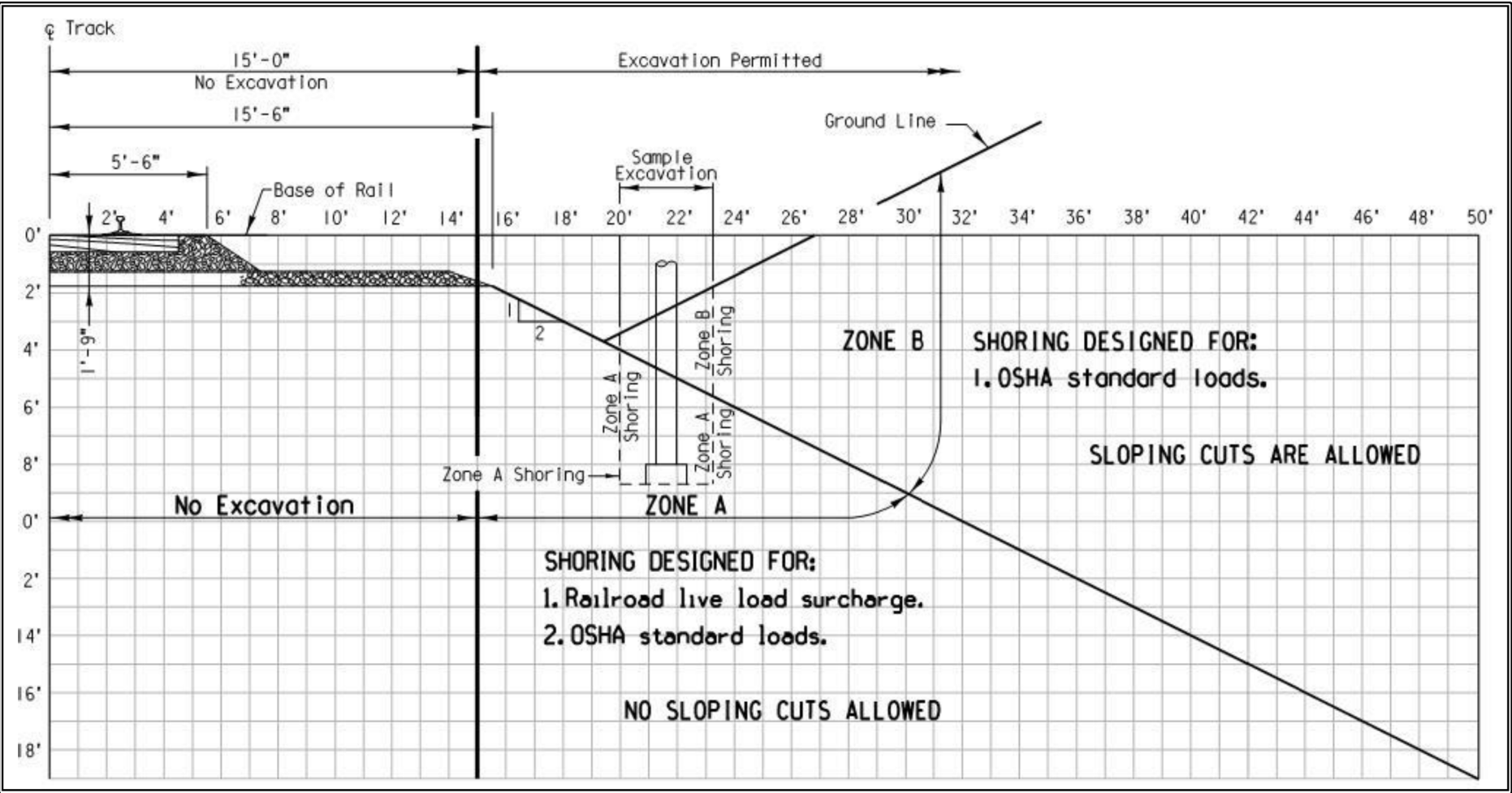
STA. 247+20.00 (US 30)Turn-in Date: August 2024

Clinton County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 125Design Sheet No. 2 of 3FHWA No. 020721

Revised 07-2019: For UPRR, Changed Horizontal Distance of Minimum Construction Clearance Envelope to 15'-0" (Was 12'-0").
Revised 03-2022: Updated "General Excavation Zones" Detail and "General Shoring Notes" to Follow the "UPRR & BNSF Guidelines for Temporary Shoring, 2021".
Issued 12-2008.
MiscellaneousBridges.dgn - 1067 - This Sheet Re-Issued 11-2023. Sheet Format Update.

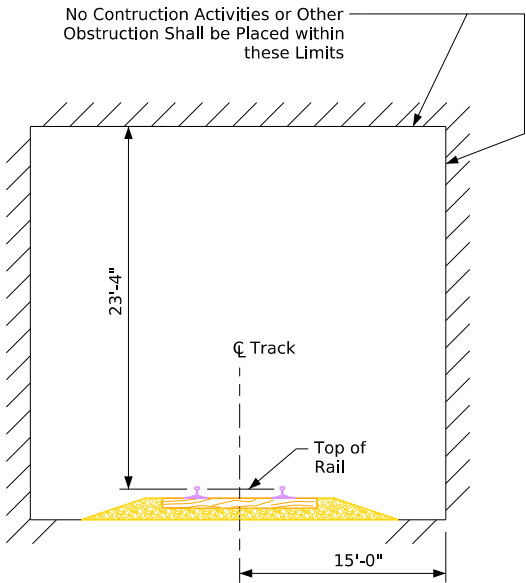


General Excavation Zones
Source: UPRR & BNSF Guideline for Temporary Shoring, 2021

Railroad General Notes:
Railroad review and approval of shoring, erection, demolition, and falsework is required. Allow a minimum of four weeks for the review and approval of each submittal.
The proposed grade separation project shall not increase the quantity and/or characteristics of the flow in the railroad's ditches and/or drainage structures.
The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the railroad prior to construction.
The Contractor must submit a proposed method of erosion and sediment control and have the method approved by the railroad.
All shoring systems that impact the railroad's operations and/or supports the railroad's embankment shall be designed and constructed per current railroad guidelines for temporary shoring.
All demolitions within the railroad's right-of-way and/or demolition that may impact the railroad's tracks or operations shall be in compliance with the railroad's demolition guidelines.
Erection over the railroad's right-of-way shall be designed to cause no interruption to the railroad's operation, enabling the track(s) to remain open to traffic per the railroad's requirements.
All construction phasing that may impact the railroad operations shall be designed to cause no interruption to the railroad's operation, enabling the track(s) to remain open to traffic per the railroad's requirements.
False-work clearances shall comply with minimum construction clearances.
All permanent clearances shall be verified before project closing.
For railroad coordination please refer to the railroad coordination requirements as part of special provisions.

General Shoring Notes:
All dimensions are measured perpendicular to track. Prior to commencing any work, the Contractor shall submit for approval by the Railroad detailed plans indicating the nature and extent of the track protection shoring proposed. The Contractor shall install the temporary shoring system per the approved plans. Design of the temporary shoring system to comply with UPRR & BNSF Guidelines for Temporary Shoring.
For excavations which encroach into Zone A or B, shoring plans shall be accompanied by design calculations. Plans and calculations must be signed and stamped by a Professional Engineer registered in the State of Iowa.

Note:
UPRR = Union Pacific Railroad



Minimum Construction Clearance Envelope
(Normal to Railroad)

Top of Rail Elevations
(Stations Increase with Milepost Increase)

North Main Line			
Alignment: North Rail		Alignment: South Rail	
Station	Elevation	Station	Elevation
12+00.00	675.05	12+00.00	675.05
12+10.00	675.04	12+10.00	675.04
12+20.00	675.03	12+20.00	675.03
12+30.00	675.03	12+30.00	675.03
12+40.00	675.02	12+40.00	675.02
12+50.00	675.01	12+50.00	675.01
12+60.00	674.95	12+60.00	674.95
12+70.00	674.89	12+70.00	674.89
12+80.00	674.82	12+80.00	674.82
12+90.00	674.76	12+90.00	674.76
13+00.00	674.70	13+00.00	674.70
13+10.00	674.69	13+10.00	674.69
13+20.00	674.68	13+20.00	674.68
① 13+24.33	674.67	① 13+19.08	674.67
13+30.00	674.67	13+30.00	674.67
13+40.00	674.66	13+40.00	674.66
13+50.00	674.65	13+50.00	674.65
13+60.00	674.62	13+60.00	674.62
13+70.00	674.59	13+70.00	674.59
13+80.00	674.56	13+80.00	674.56
13+90.00	674.53	13+90.00	674.53
14+00.00	674.50	14+00.00	674.50

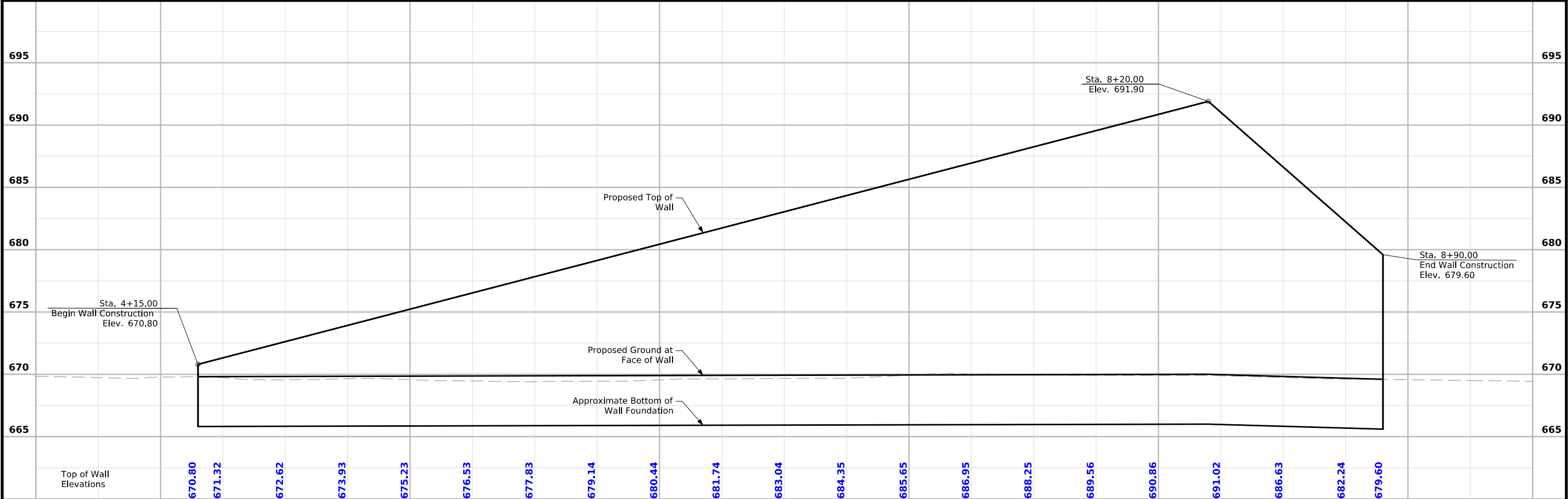
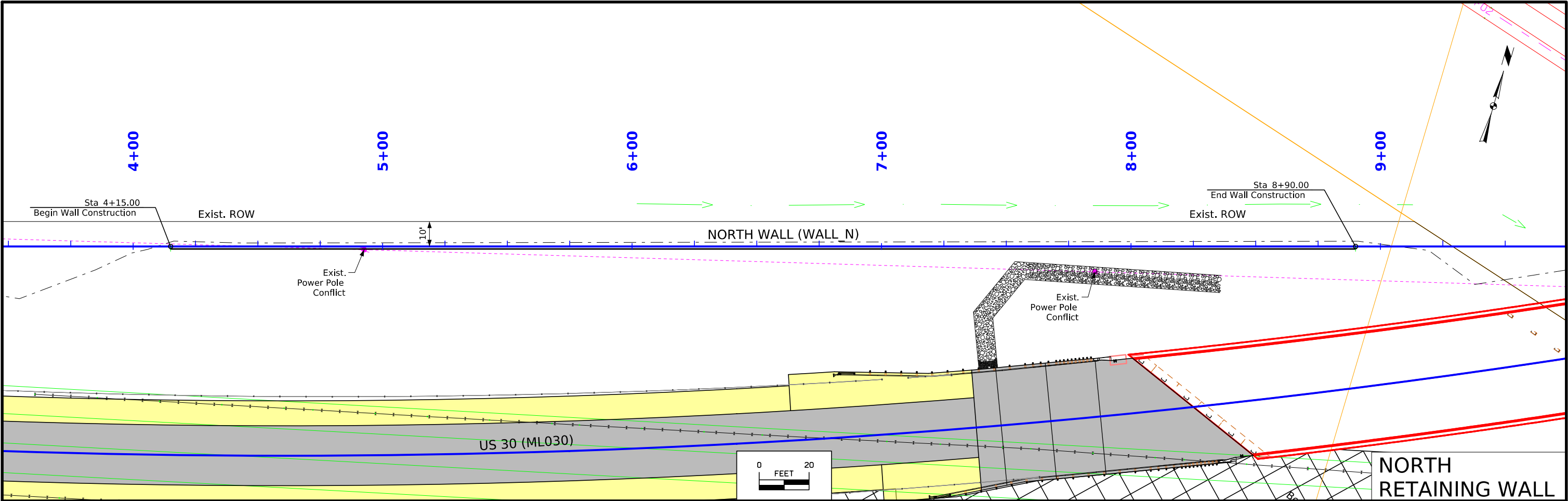
① Intersection @ US30: Sta. 247+62.15 North Rail
Sta. 247+55.20 South Rail

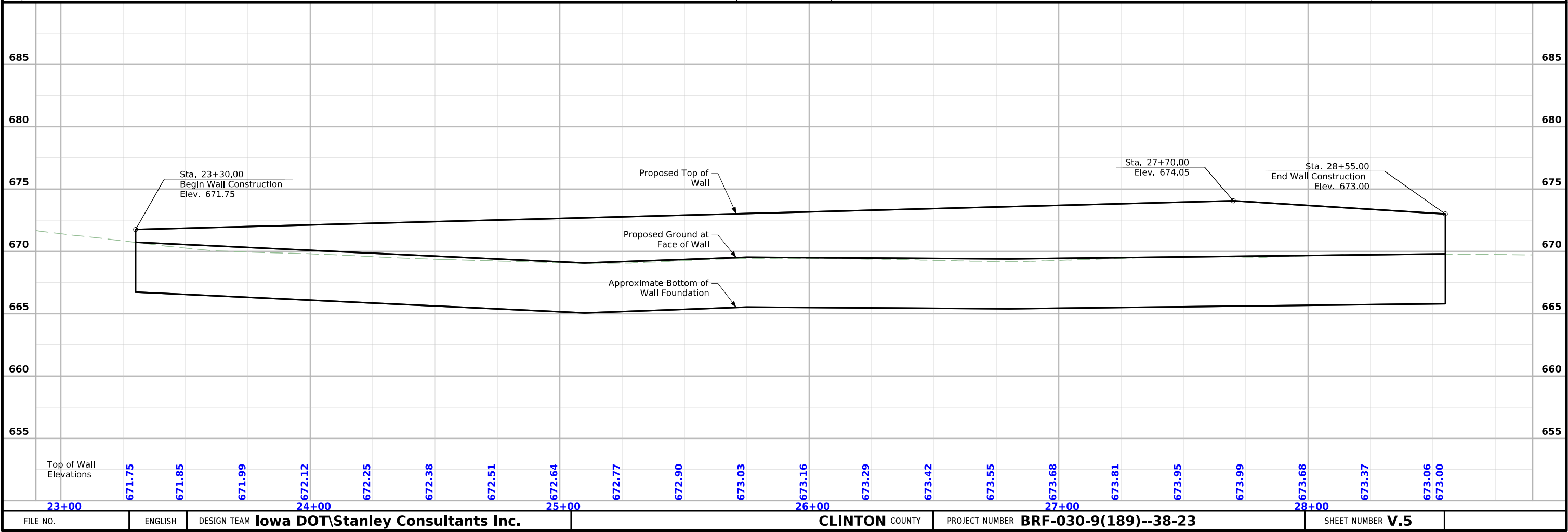
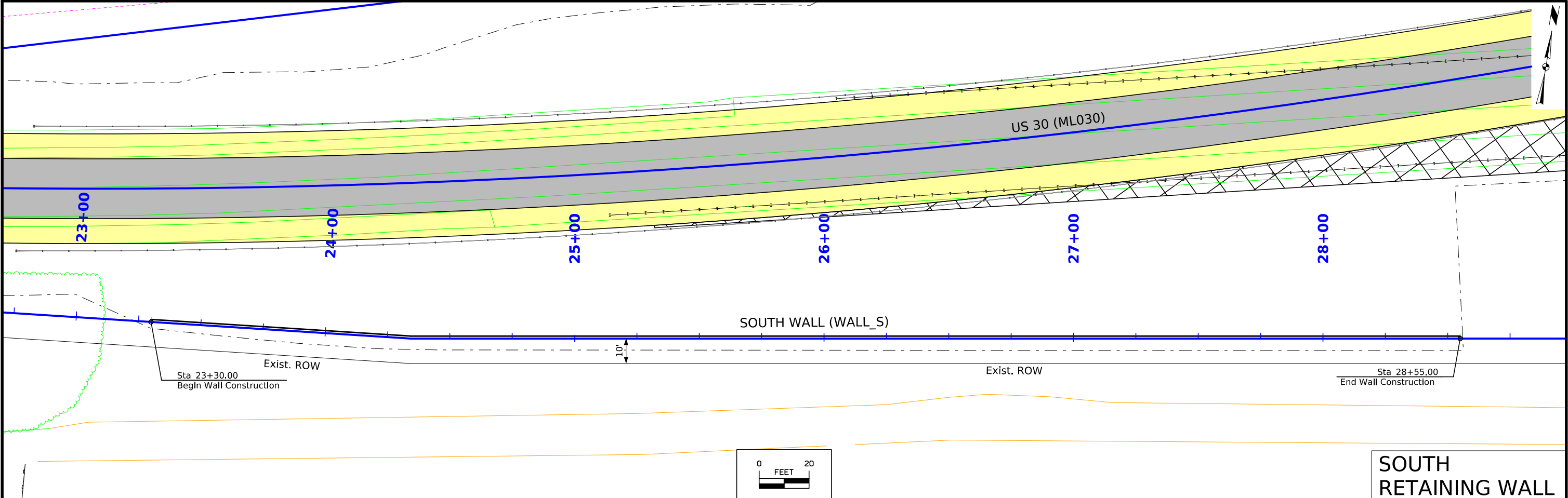
South Main Line			
Alignment: North Rail		Alignment: South Rail	
Station	Elevation	Station	Elevation
12+00.00	674.65	12+00.00	674.65
12+10.00	674.64	12+10.00	674.64
12+20.00	674.63	12+20.00	674.63
12+30.00	674.61	12+30.00	674.61
12+40.00	674.60	12+40.00	674.60
12+50.00	674.59	12+50.00	674.59
12+60.00	674.56	12+60.00	674.56
12+70.00	674.54	12+70.00	674.54
12+80.00	674.51	12+80.00	674.51
12+90.00	674.48	12+90.00	674.48
13+00.00	674.46	13+00.00	674.46
② 13+09.08	674.44	② 13+05.38	674.44
13+10.00	674.44	13+10.00	674.44
13+20.00	674.42	13+20.00	674.42
13+30.00	674.41	13+30.00	674.41
13+40.00	674.39	13+40.00	674.39
13+50.00	674.37	13+50.00	674.37
13+60.00	674.34	13+60.00	674.34
13+70.00	674.31	13+70.00	674.31
13+80.00	674.28	13+80.00	674.28
13+90.00	674.25	13+90.00	674.25
14+00.00	674.22	14+00.00	674.22

② Intersection @ US30: Sta. 247+42.10 North Rail
Sta. 247+35.18 South Rail

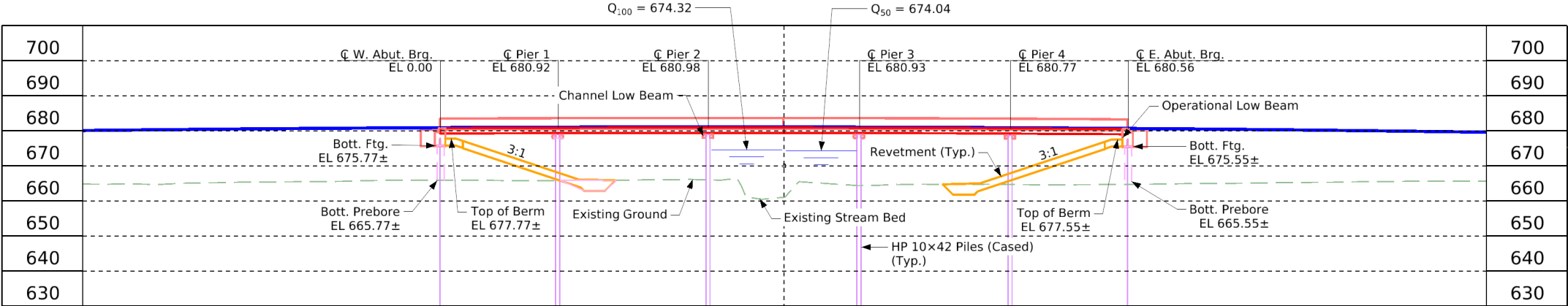
PRELIMINARY

Design For 45° Skew (R.A.), Radius = 3400'
550'-0" x 44'-0" Continuous Welded Plate Girder Bridge
150'-0" End Spans 250'-0" Interior Span
BNSF & UPRR General Notes & Shoring
STA. 247+20.00 (US 30) Turn-in Date: August 2024
Clinton County
IOWA DEPARTMENT OF TRANSPORTATION
Design No. 125 Design Sheet No. 3 of 3 FHWA No. 020721





BENCH MARK: New FENO Style monument set flush with ground.
28.15 feet NW of NW corner of wingwall of NW corner of Hwy 30
Bridge over creek. 37.3 feet south southeast of utility pole.
114.0 feet west of middle of small creek.



- Plan Notes:
- Top of bridge slab crown 0.03' below profile grade to account for parabolic crown.
 - Class E Revetment stone is embedded.
 - The Bridge will be designed to withstand the applicable effects of ice and the horizontal stream loads and uplift forces associated with the Q_{100} .

Longitudinal Section Along US30

General Notes:

This design is for the replacement of the existing 194'-0" x 28'-0" Continuous Concrete Slab Bridge, Clinton Design No. 254, FHWA No. 20730, Maint. No. 2397.95030.

Hydraulic Data

RIDB: Not Applicable
Drainage Area = 6.7 sq. mi.
Stream Slope (HGL) = 14.3 ft./mi.
Avg. Low Water Stage = 662.5

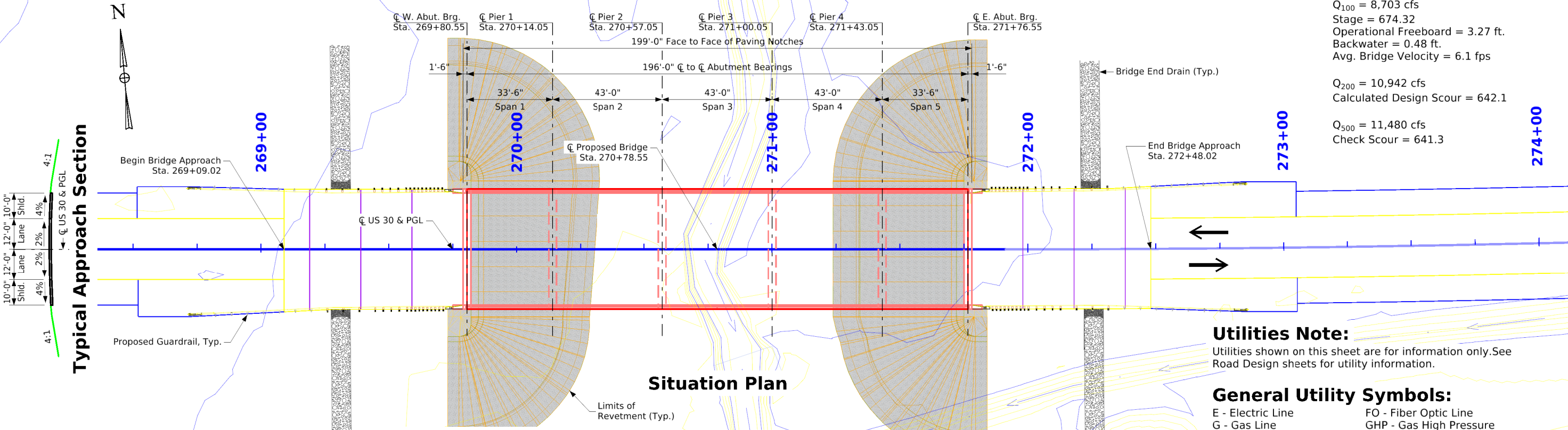
Operational Low Beam = 677.59 ft.
Channel Low Beam = 677.11 ft.

Q_{50} = 8,260 cfs
Stage = 674.04
Operational Freeboard = 3.55 ft.
Avg. Bridge Velocity = 6.0 fps

Q_{100} = 8,703 cfs
Stage = 674.32
Operational Freeboard = 3.27 ft.
Backwater = 0.48 ft.
Avg. Bridge Velocity = 6.1 fps

Q_{200} = 10,942 cfs
Calculated Design Scour = 642.1

Q_{500} = 11,480 cfs
Check Scour = 641.3



Utilities Note:

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

General Utility Symbols:

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

Traffic Estimate

2024 AADT	3,100	V.P.D.
2044 AADT	3,800	V.P.D.
TRUCKS	20	%

Location

US 30 over Overflow Ditch
T-81N R-1E
Section 10
Spring Rock Township
Clinton County
FHWA No. 020731
Bridge Maint. No. 2397.95030
Latitude 41.829747°
Longitude -90.822478°

Hydraulic Design

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

Signature: *Mark D. Werner* Date: 8/16/2024

Printed or Typed Name: Mark D. Werner

My license renewal date is December 31, 2025

Pages or sheets covered by this seal: V.1

Mark D. Werner
15418
IOWA

Design For 0 Degree

196'-0" x 44'-0" Continuous Concrete Slab Bridge

33'-6" End Spans 43'-0" Interior Spans

Situation Plan

STA. 270+78.55 (US 30) Turn-in Date: August 2024

Clinton County

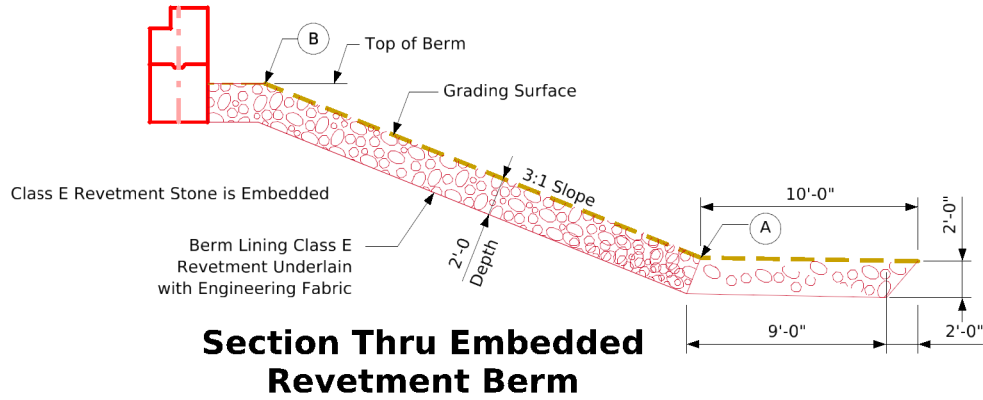
IOWA DEPARTMENT OF TRANSPORTATION

Design No. TBD Design Sheet No. 1 of 2 FHWA No. 020731

BENCH MARK: New FENO Style monument set flush with ground.
28.15 feet NW of NW corner of wingwall of NW corner of Hwy 30
Bridge over creek. 37.3 feet south southeast of utility pole.
114.0 feet west of middle of small creek.

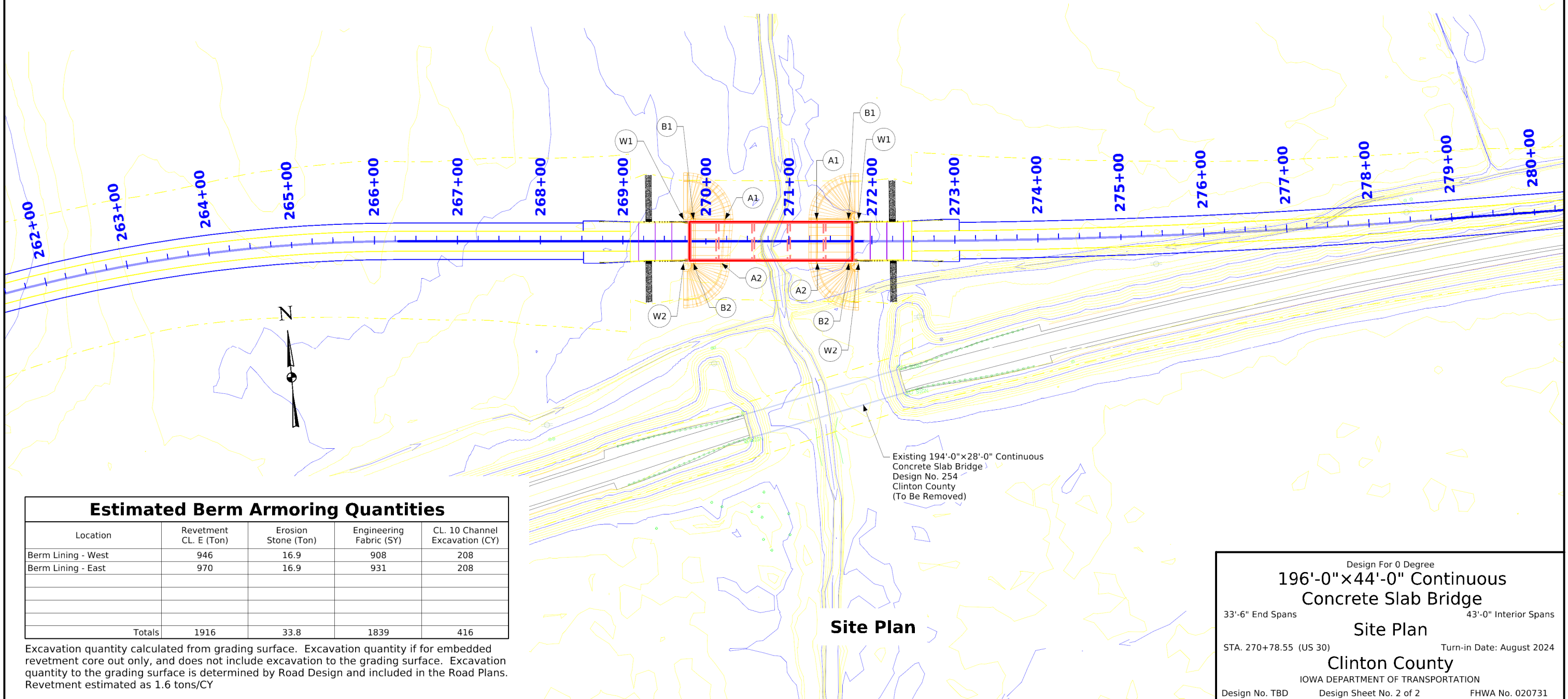
Design Notes:

- 1. All units in feet unless otherwise noted.
- 2. TL-4 bridge railing proposed.
- 3. Pier type - fully encased pile bent piers.
- 4. Bridge aesthetics to be incorporated during final design.
- 5. Berm slopes to be confirmed during final design.



Berm Slope Location Table						
Points	West Abutment			East Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	270+22.13	26.58' LT.	665.42	271+34.41	26.58' LT.	665.00
A2	270+17.98	26.58' RT.	666.78	271+34.41	26.58' RT.	665.00
B1	269+85.05	26.58' LT.	677.77	271+72.05	26.58' LT.	677.55
B2	269+85.05	26.58' RT.	677.77	271+72.05	26.58' RT.	677.55
W1	269+73.05	26.58' LT.	680.32	271+84.05	26.58' LT.	680.10
W2	269+73.05	26.58' RT.	680.32	271+84.05	26.58' RT.	680.10

Berm slope elevations reflect the grading surface.



Estimated Berm Armoring Quantities				
Location	Revetment CL. E (Ton)	Erosion Stone (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Berm Lining - West	946	16.9	908	208
Berm Lining - East	970	16.9	931	208
Totals	1916	33.8	1839	416

Excavation quantity calculated from grading surface. Excavation quantity if for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans. Revetment estimated as 1.6 tons/CY

Design For 0 Degree

196'-0" x 44'-0" Continuous Concrete Slab Bridge

33'-6" End Spans43'-0" Interior Spans

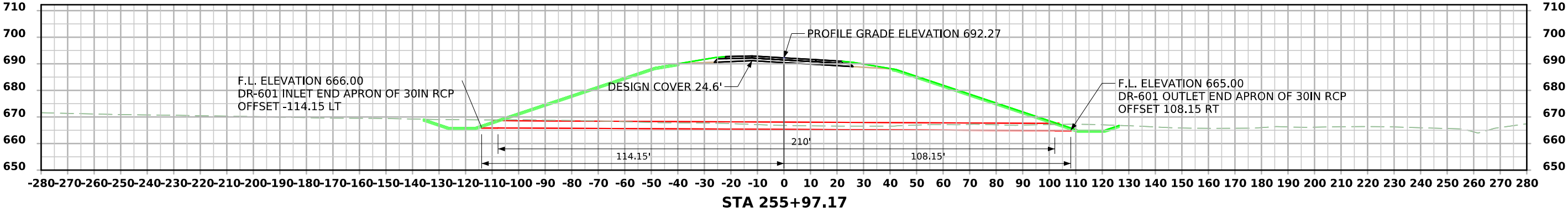
Site Plan

STA. 270+78.55 (US 30)Turn-in Date: August 2024

Clinton County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. TBDDesign Sheet No. 2 of 2FHWA No. 020731



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

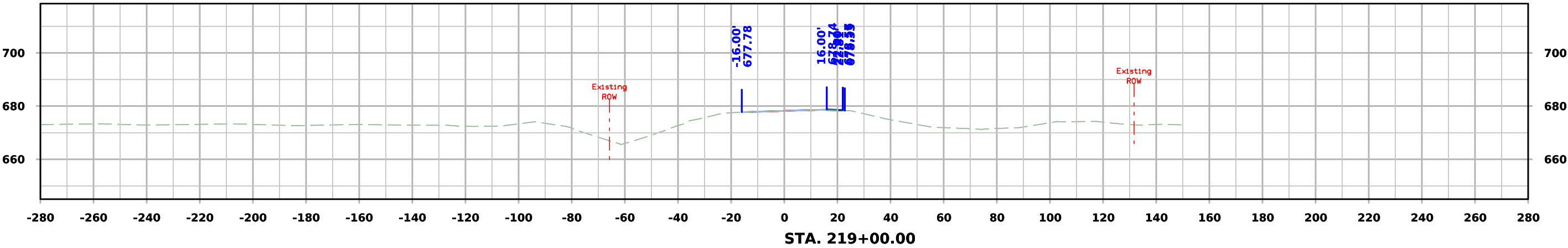
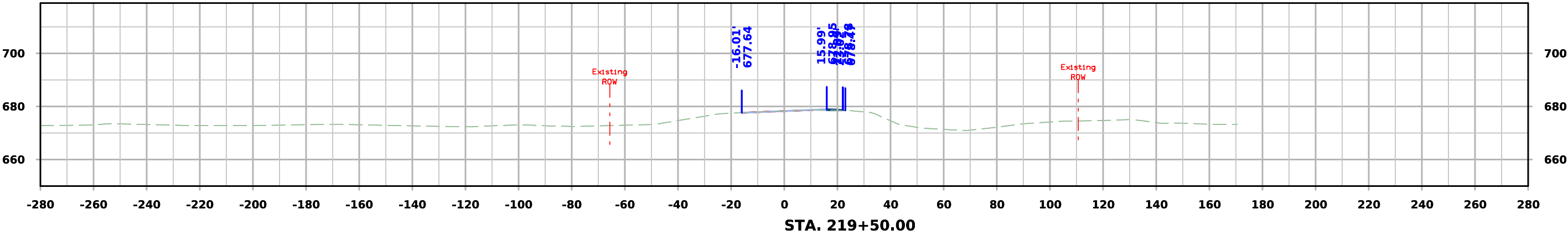
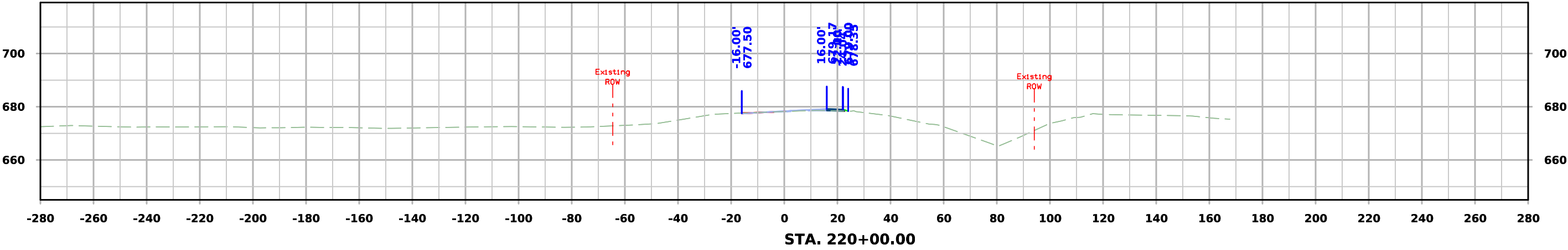
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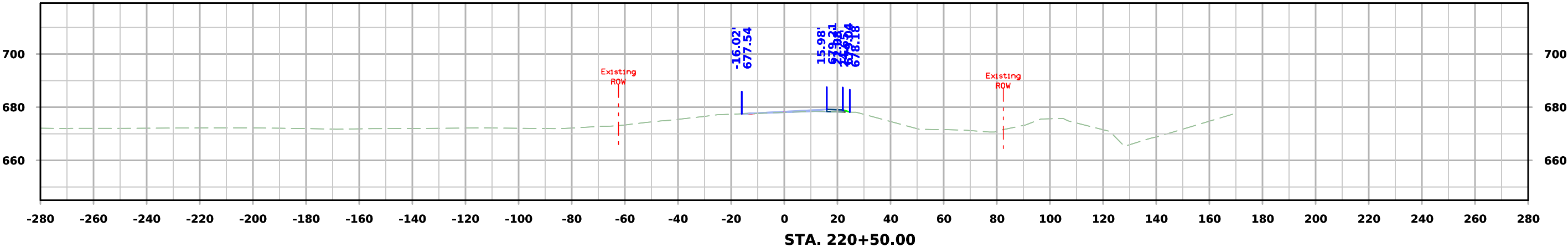
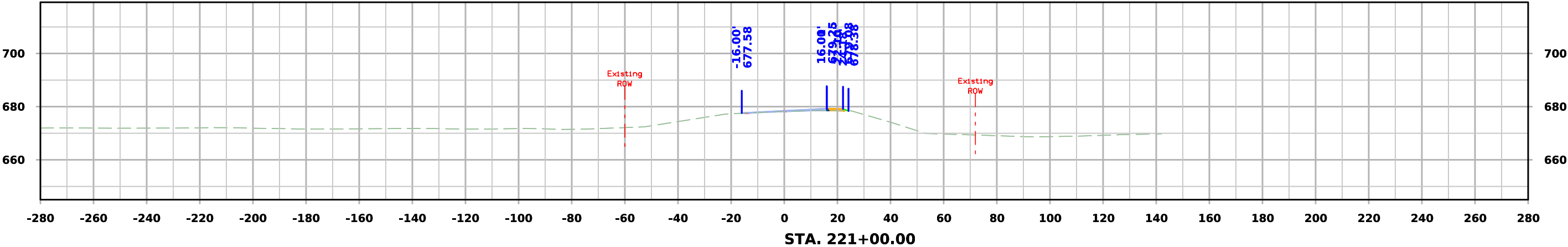
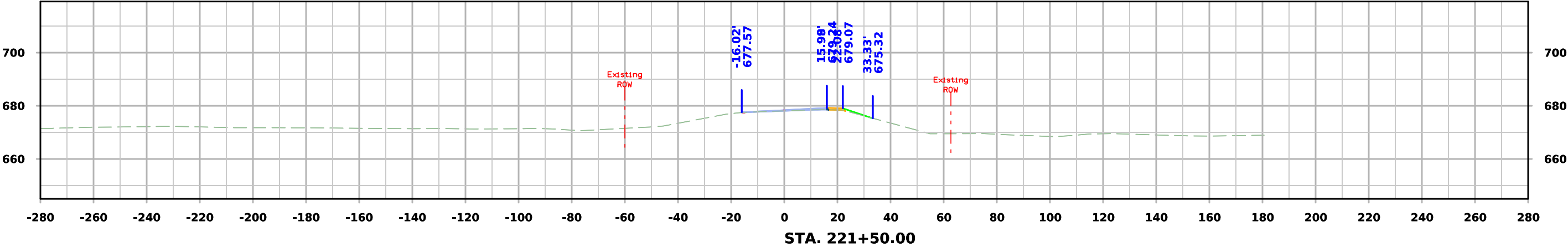
CROSS SECTIONS
LEGEND AND INFORMATION SHEET

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

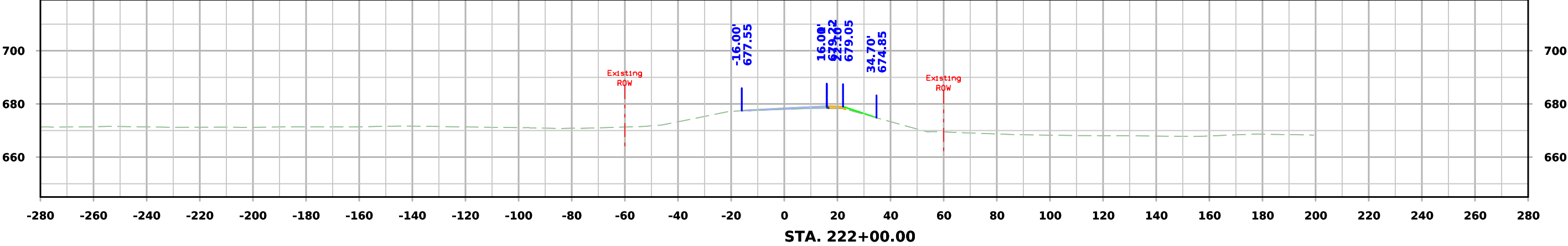
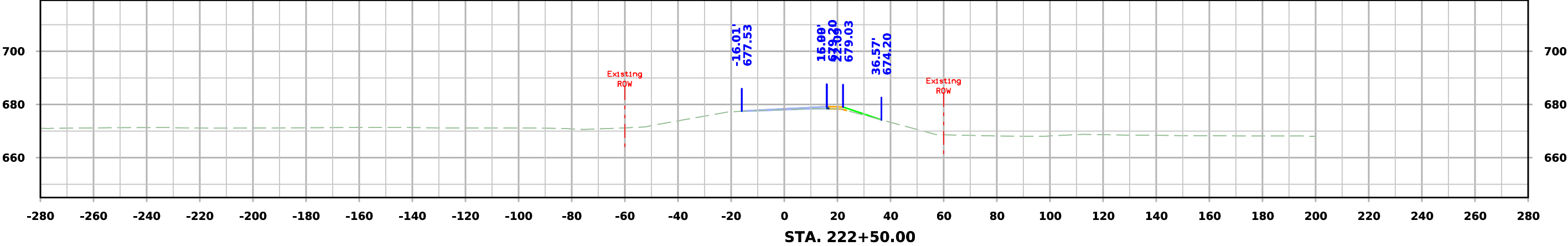
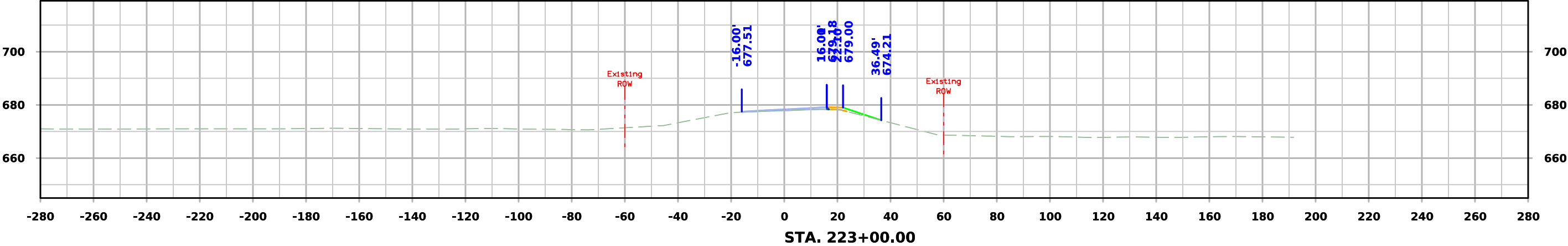
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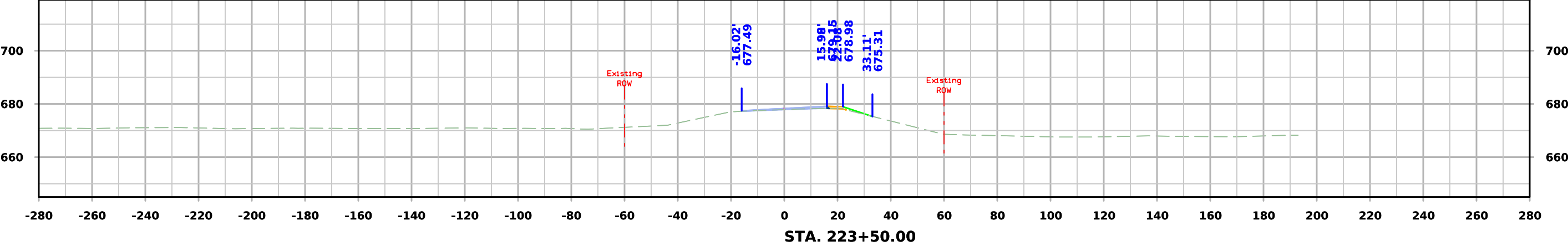
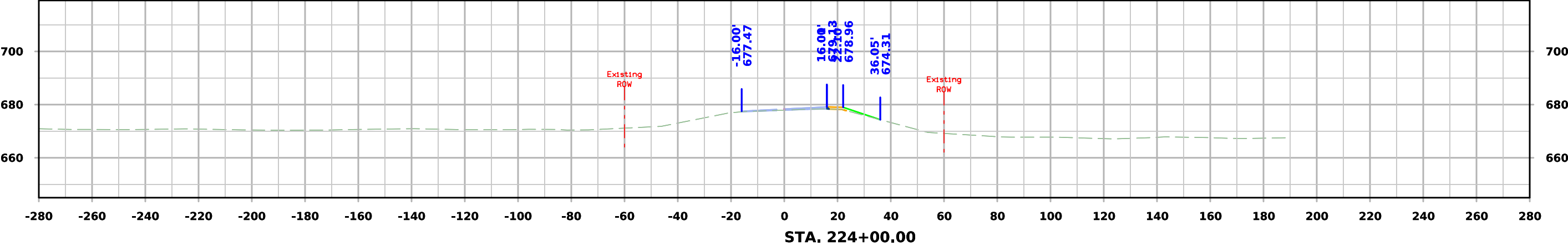
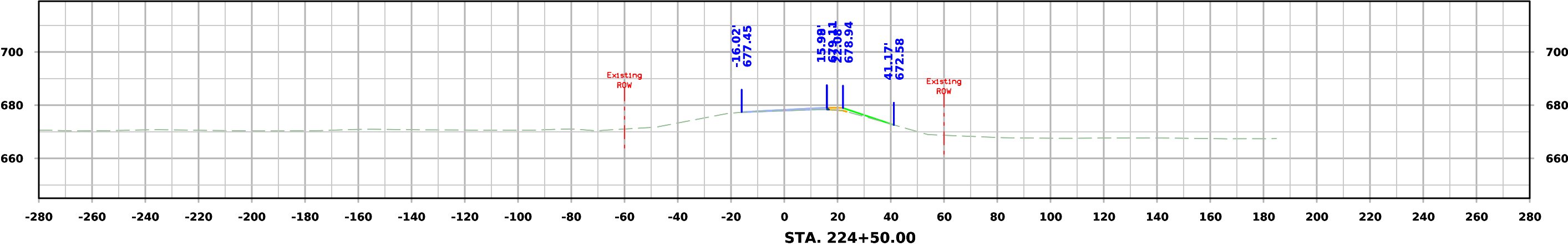
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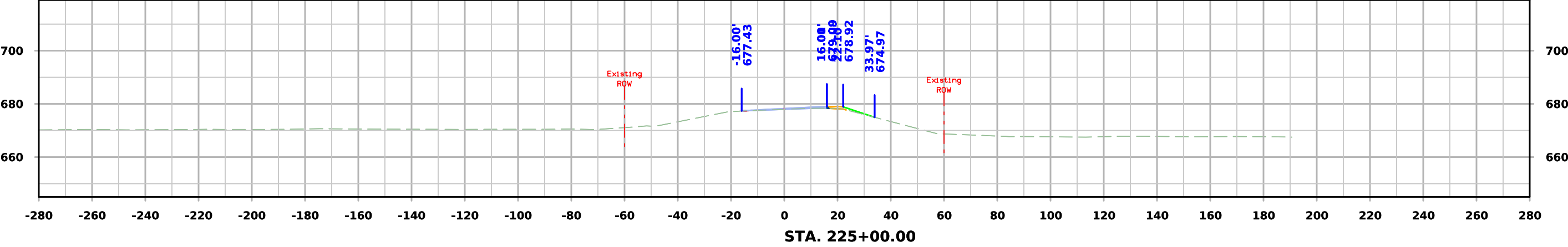
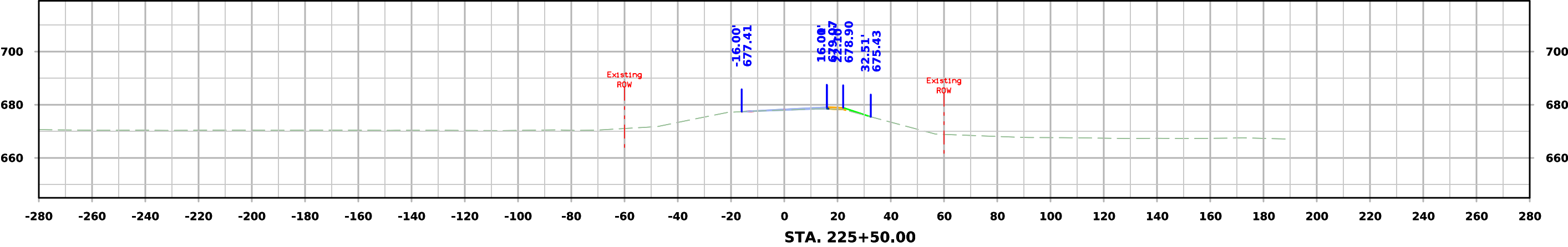
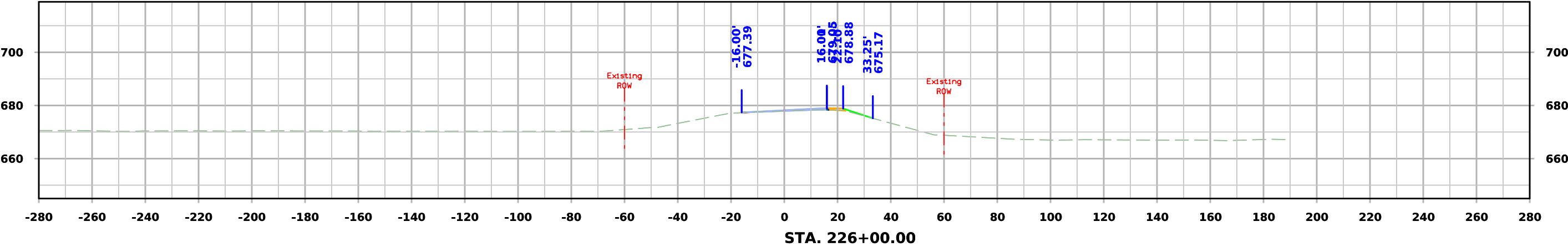
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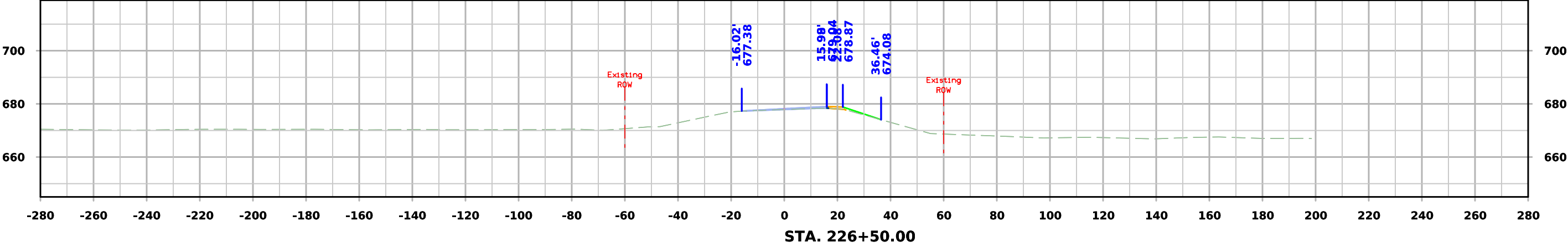
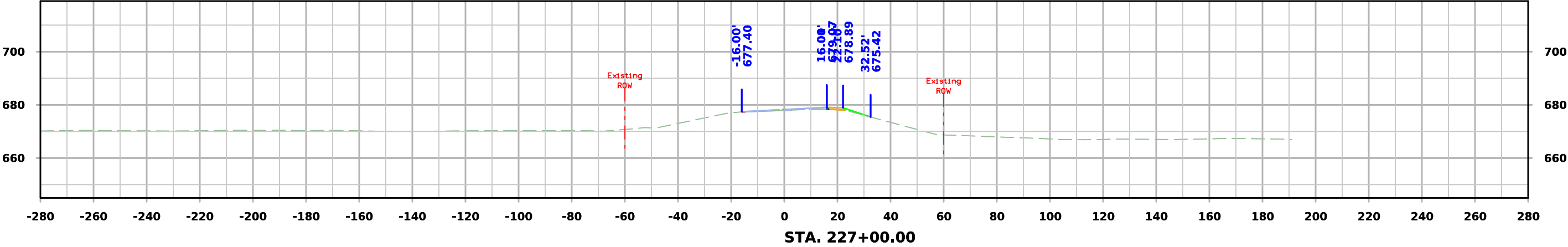
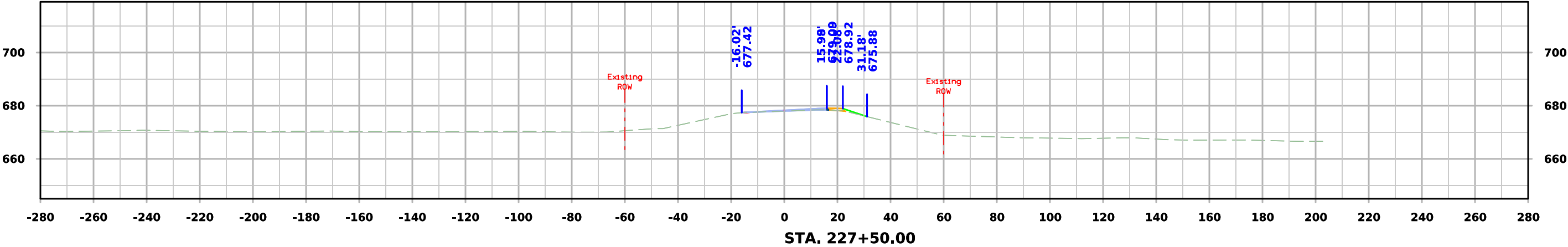
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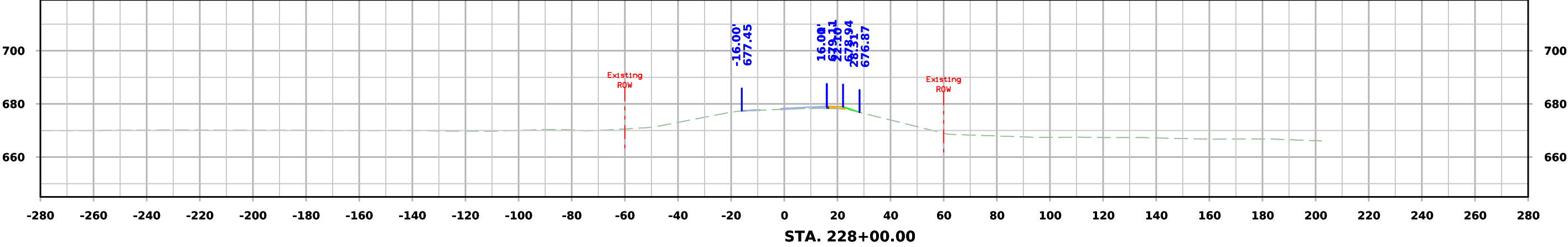
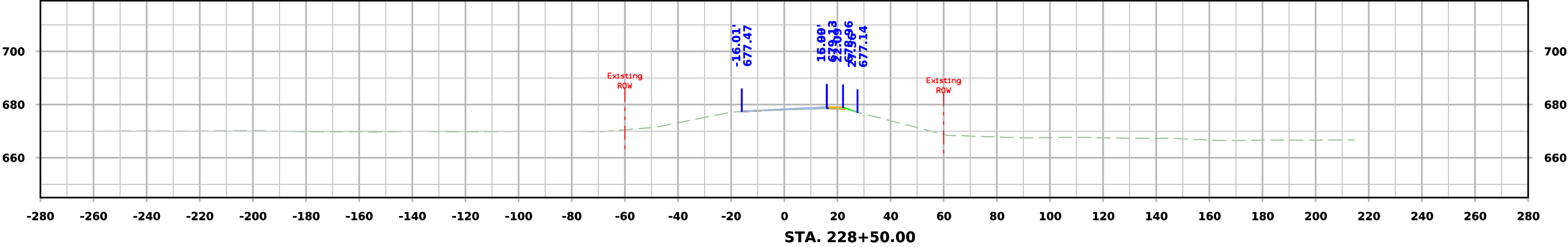
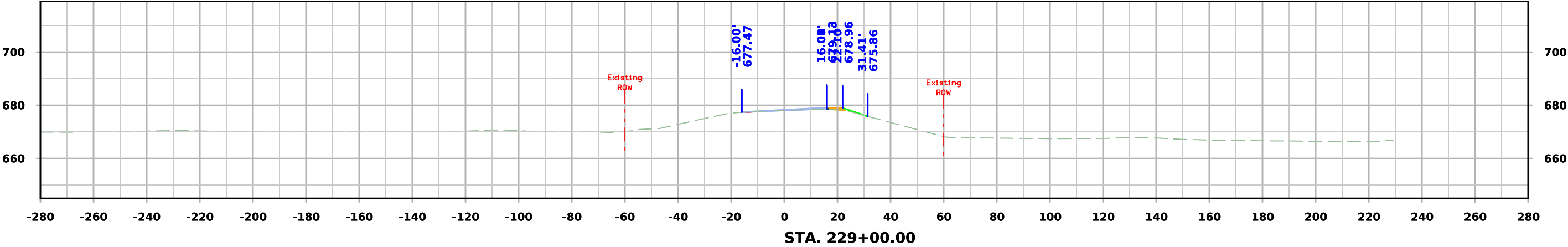
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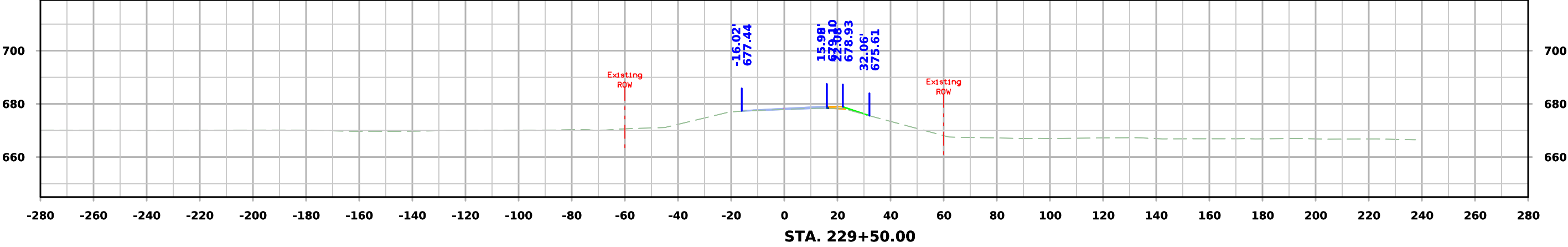
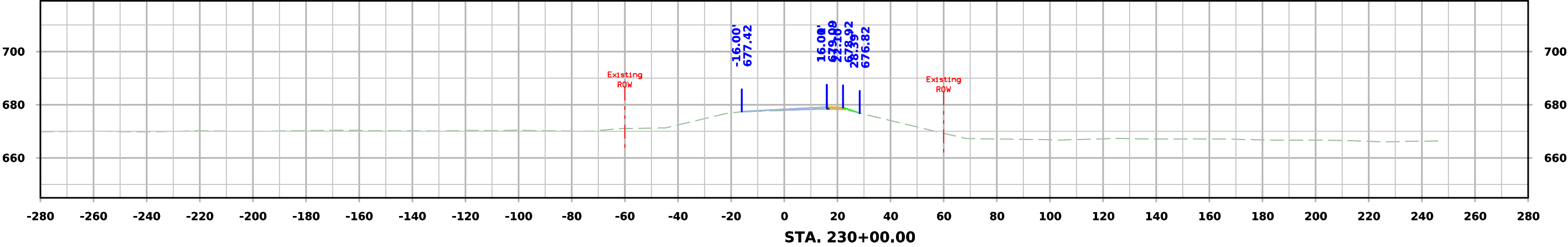
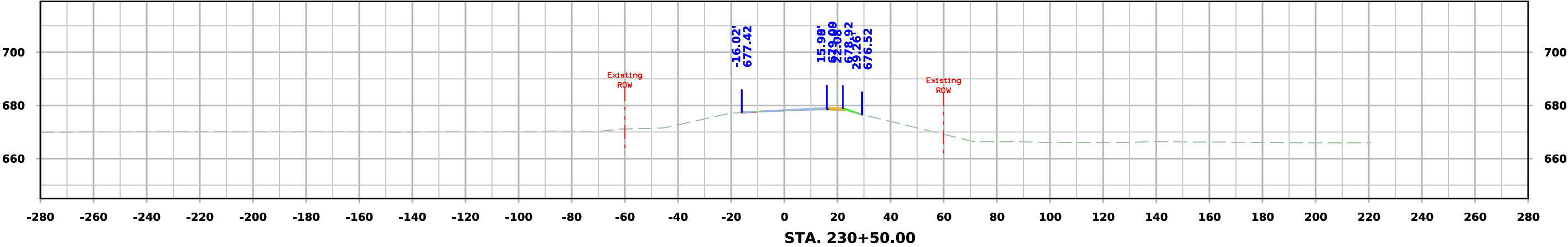
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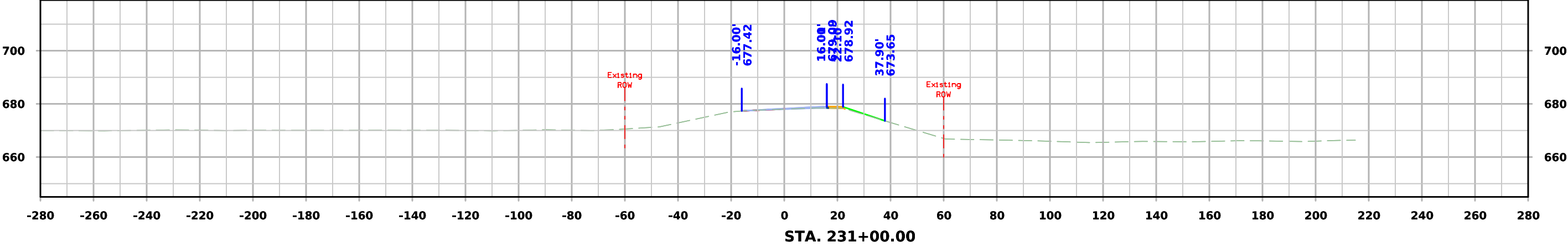
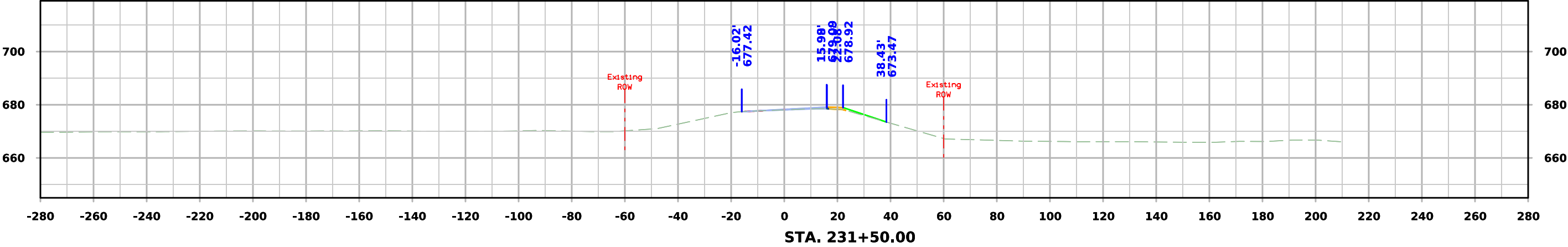
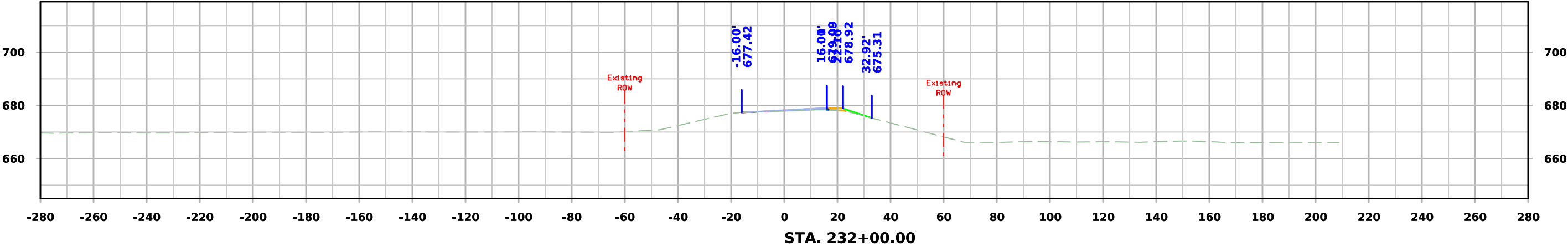
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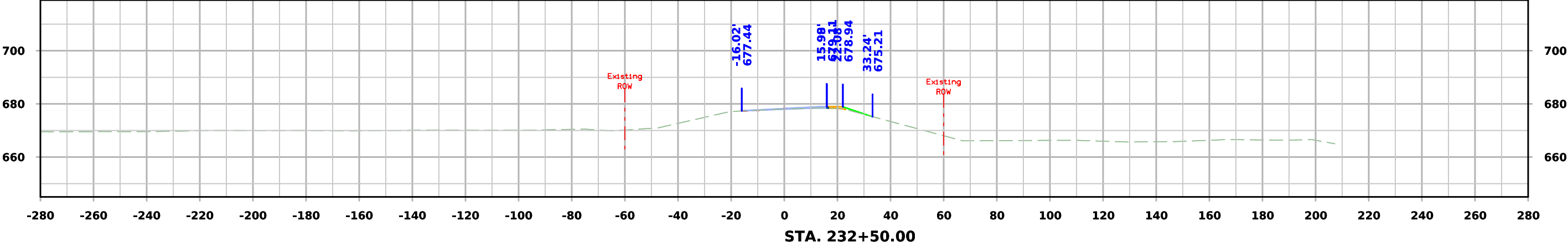
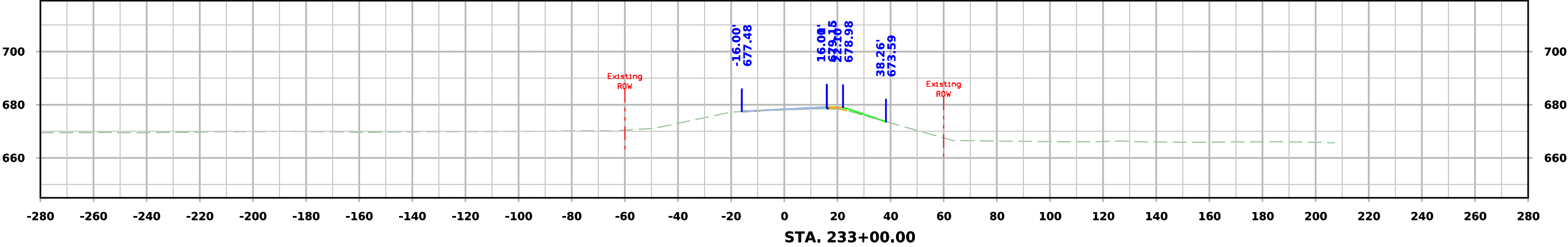
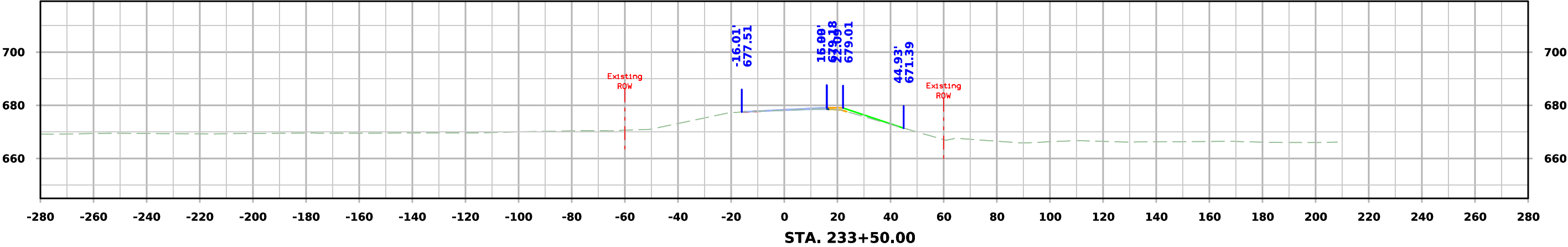
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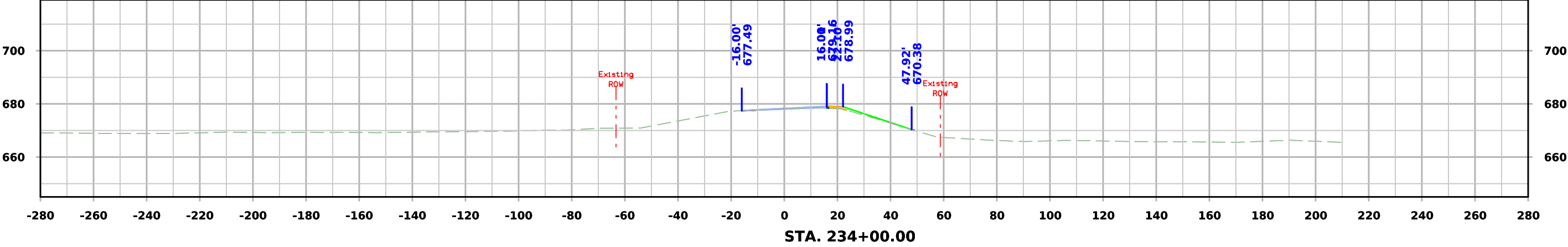
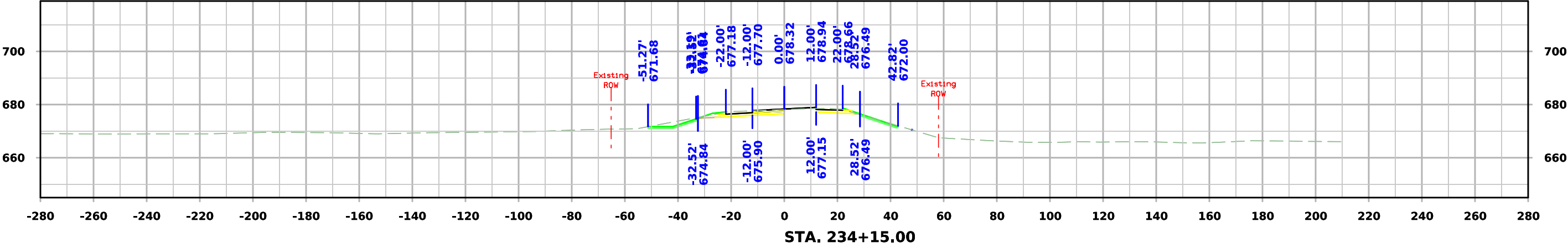
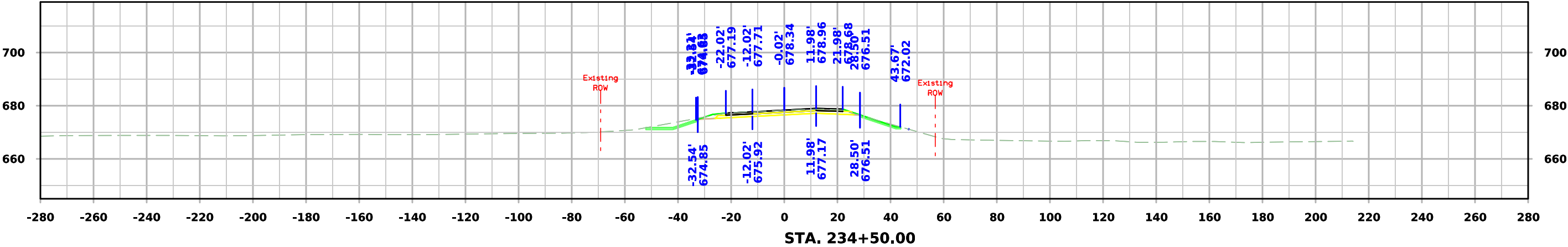
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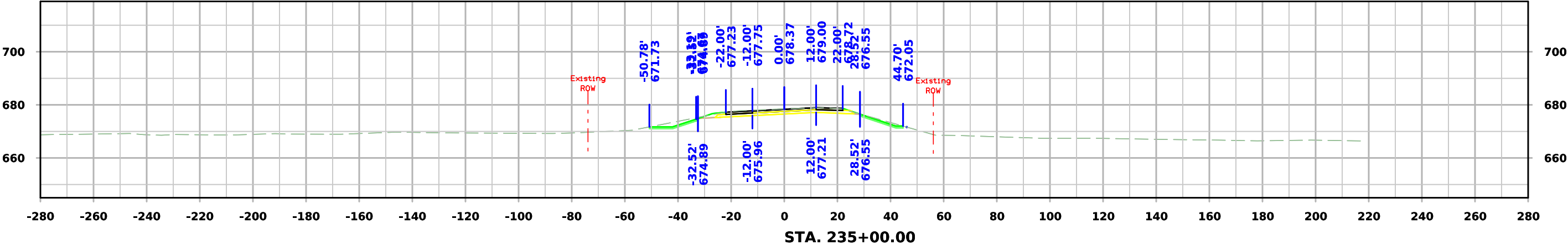
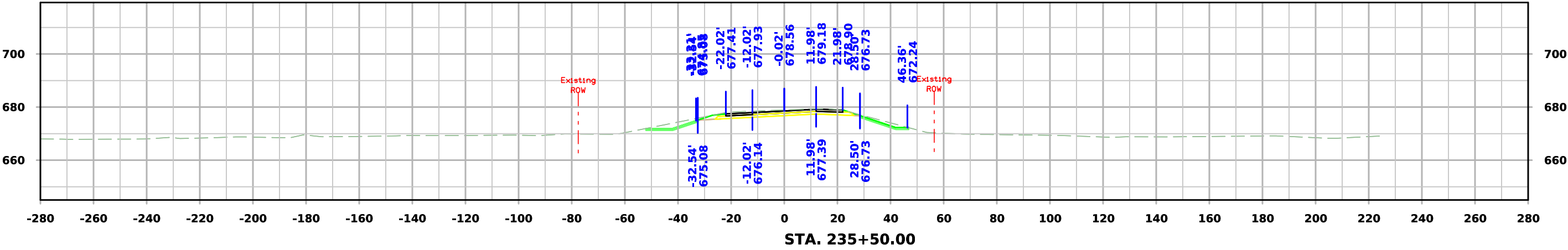
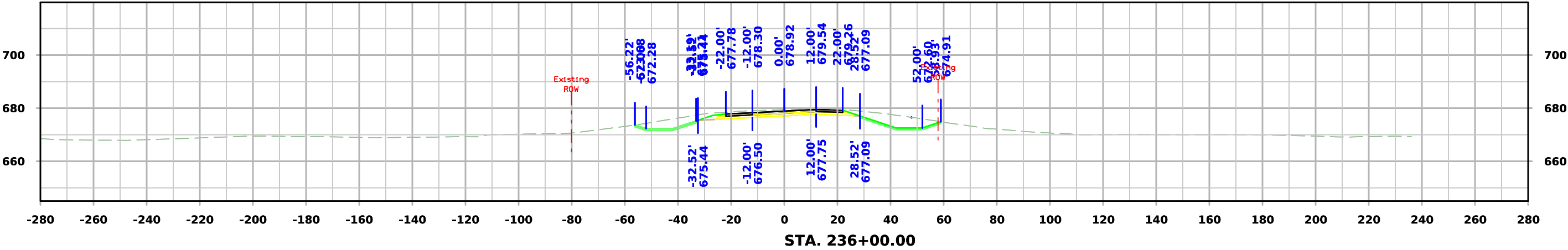
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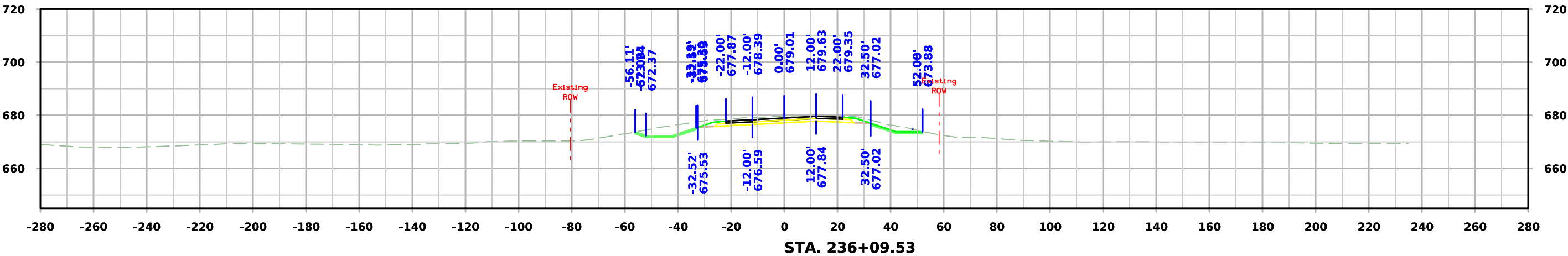
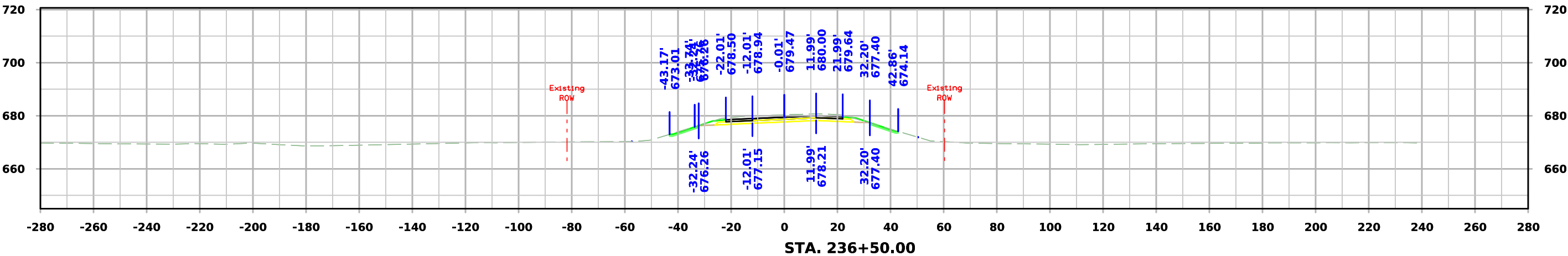
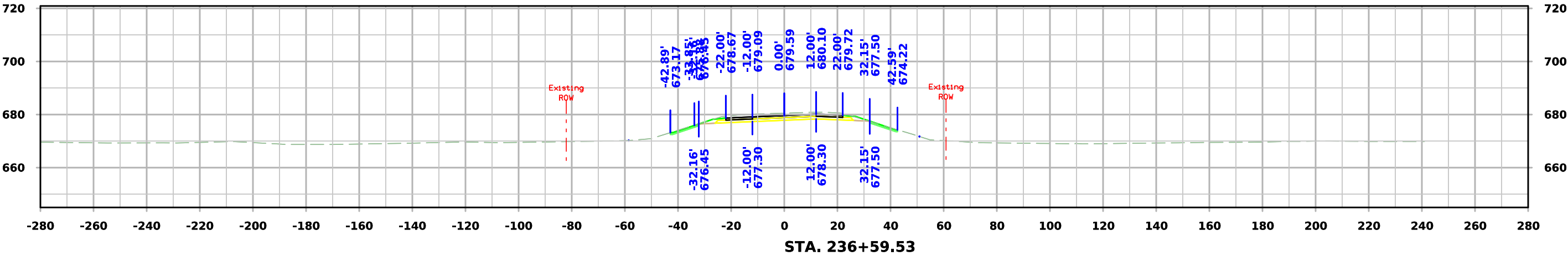
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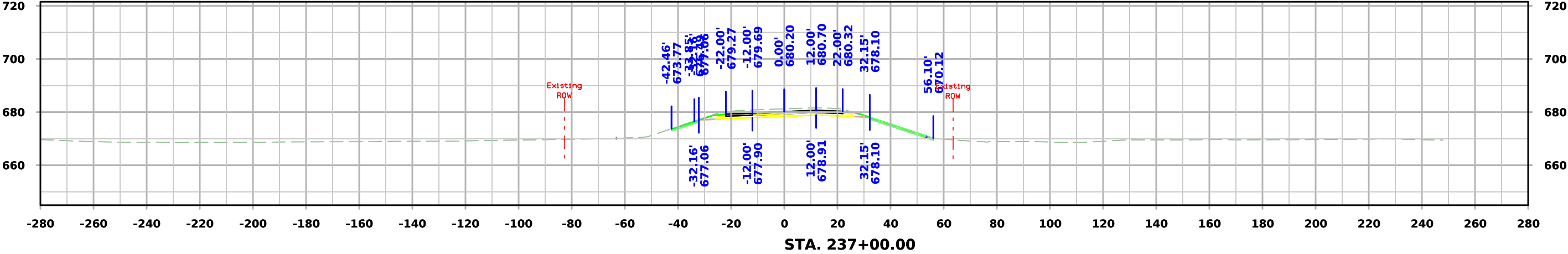
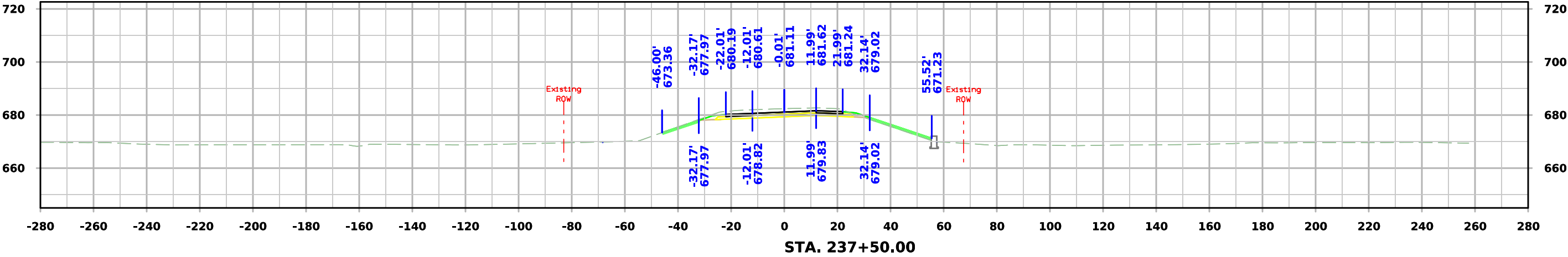
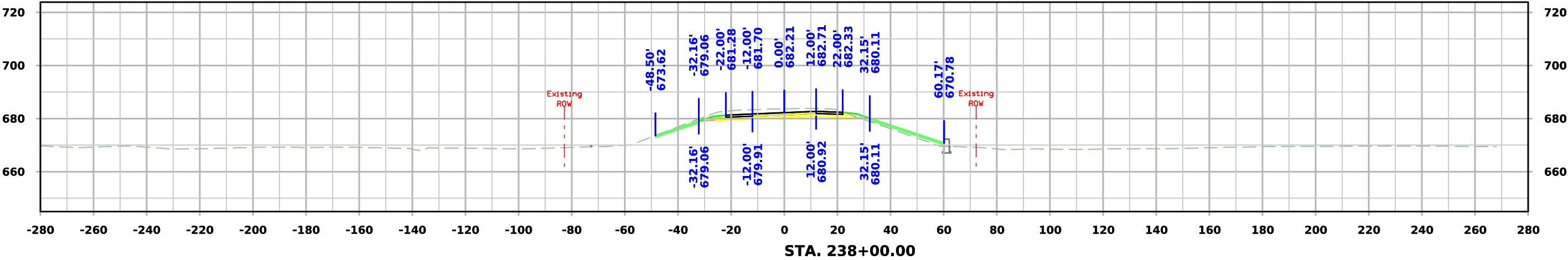
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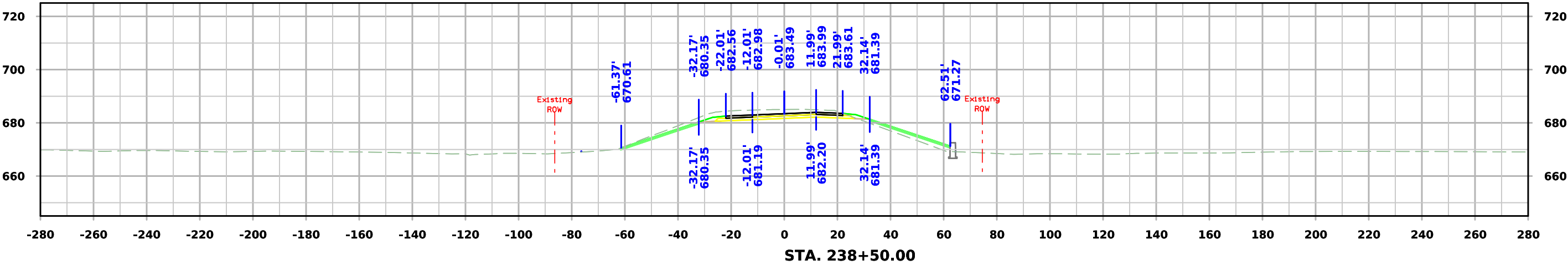
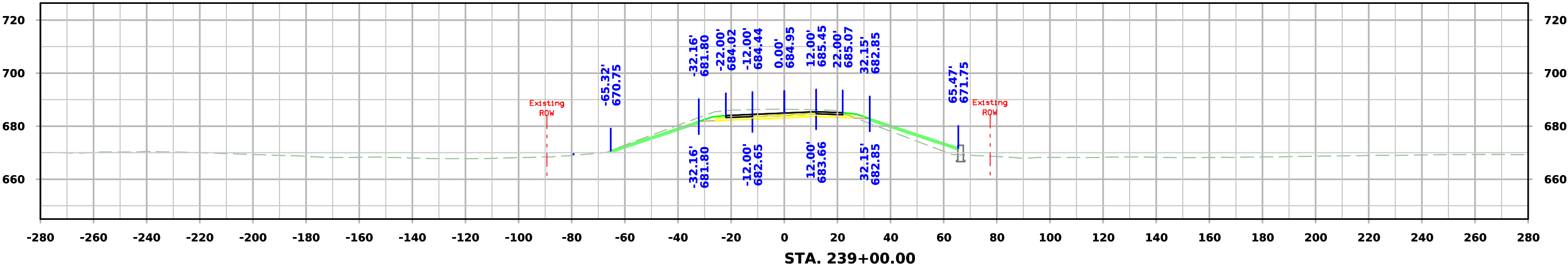
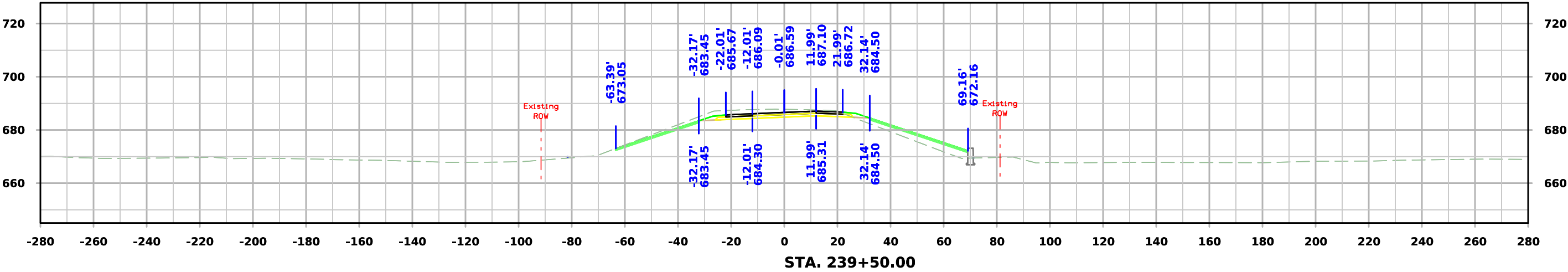
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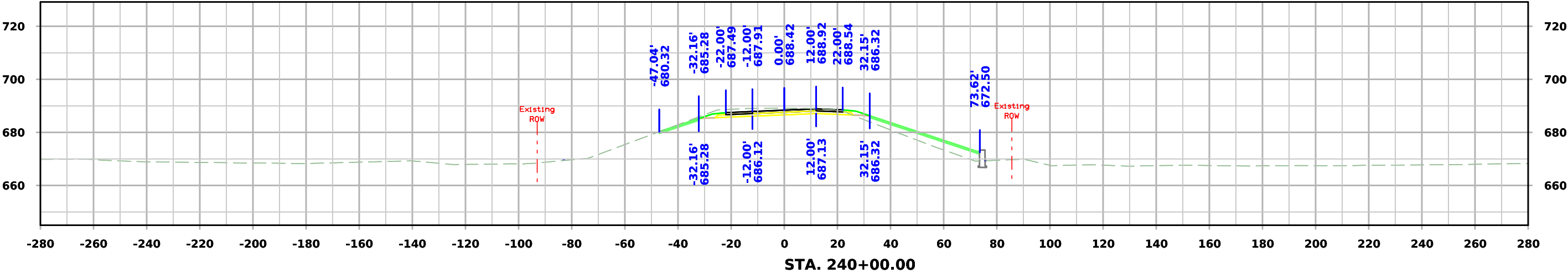
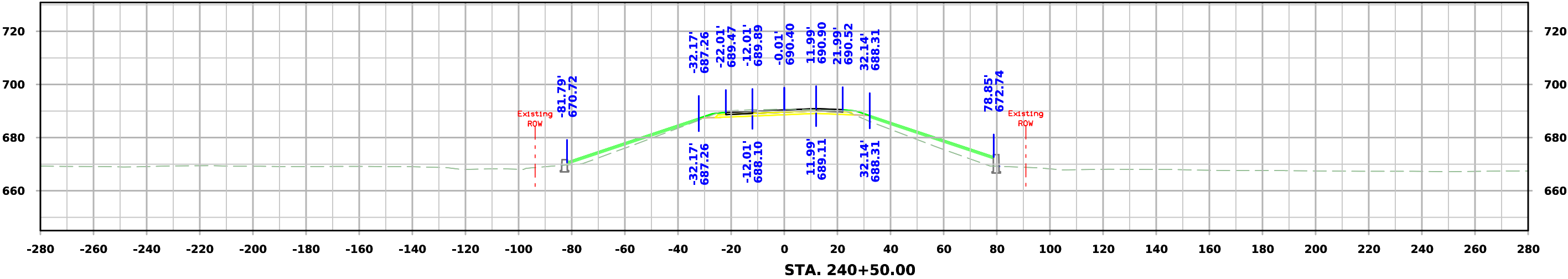
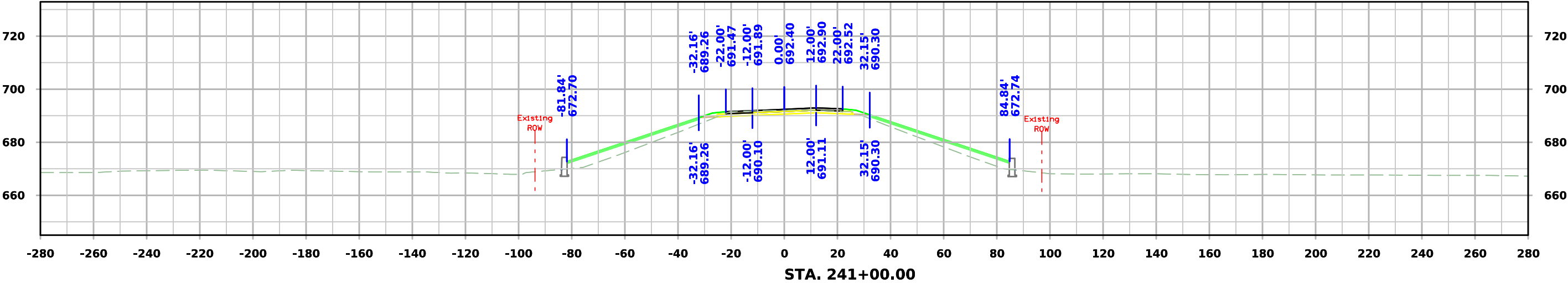
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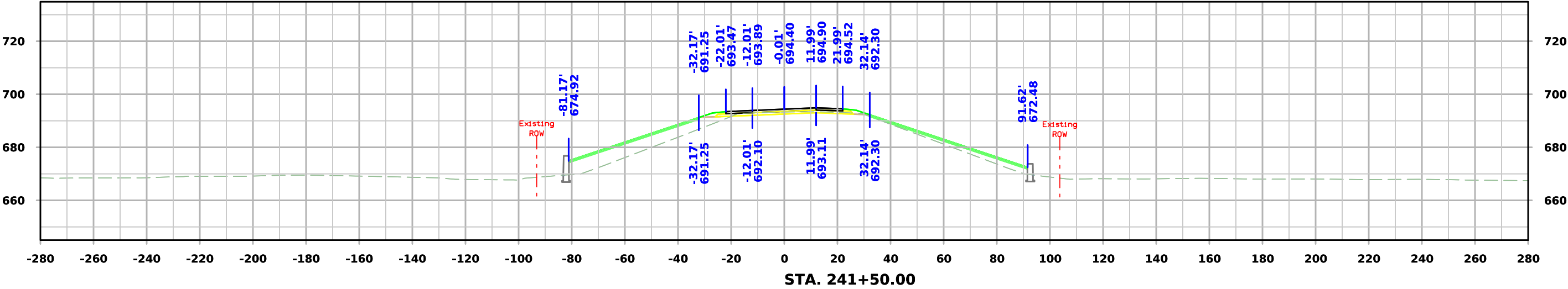
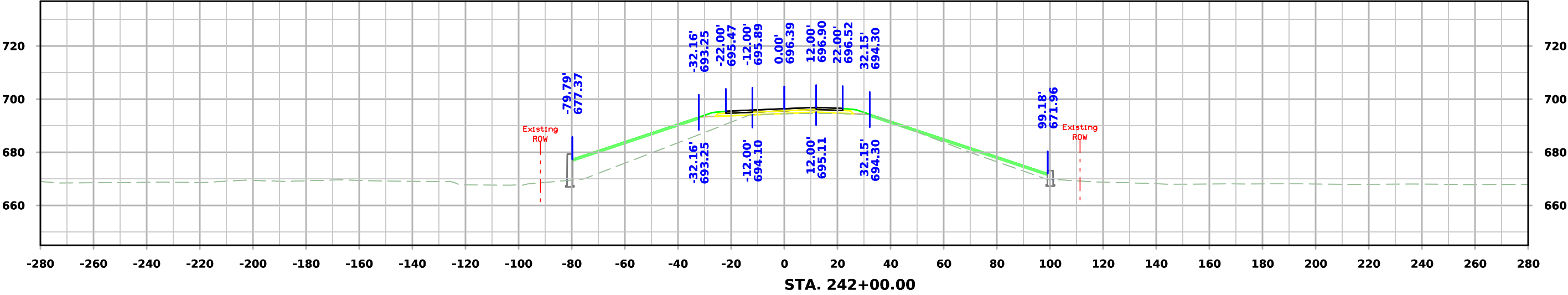
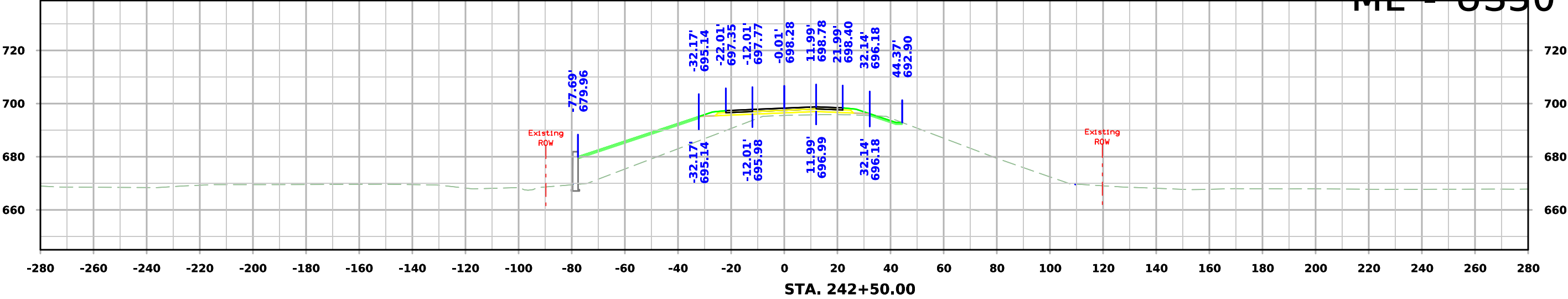
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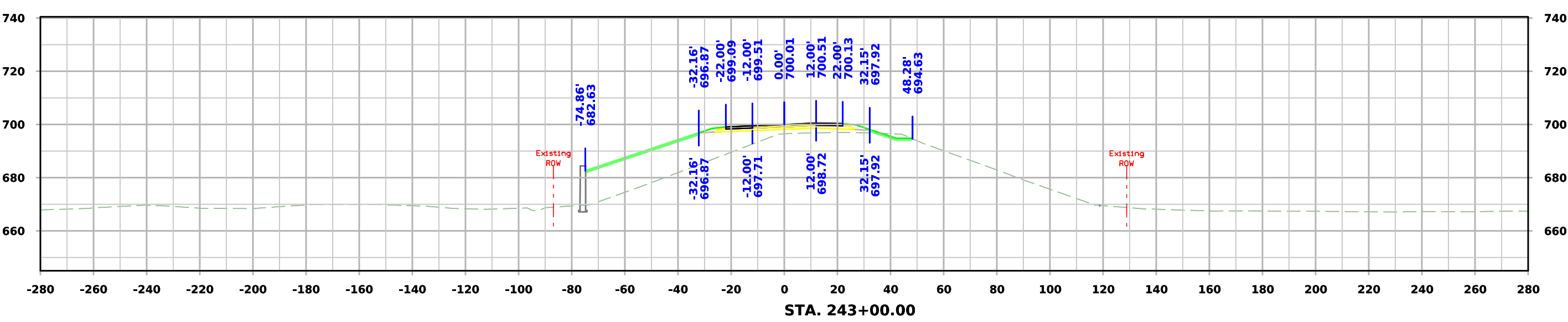
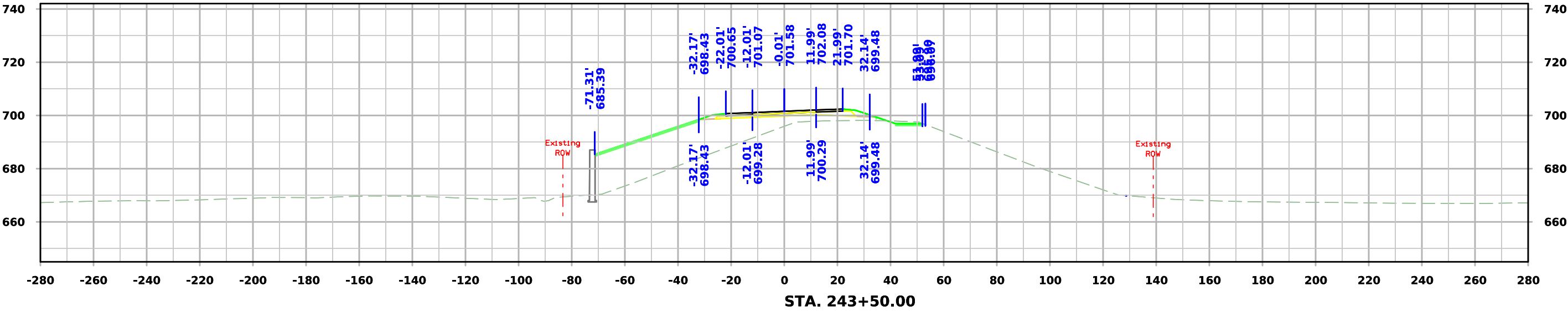
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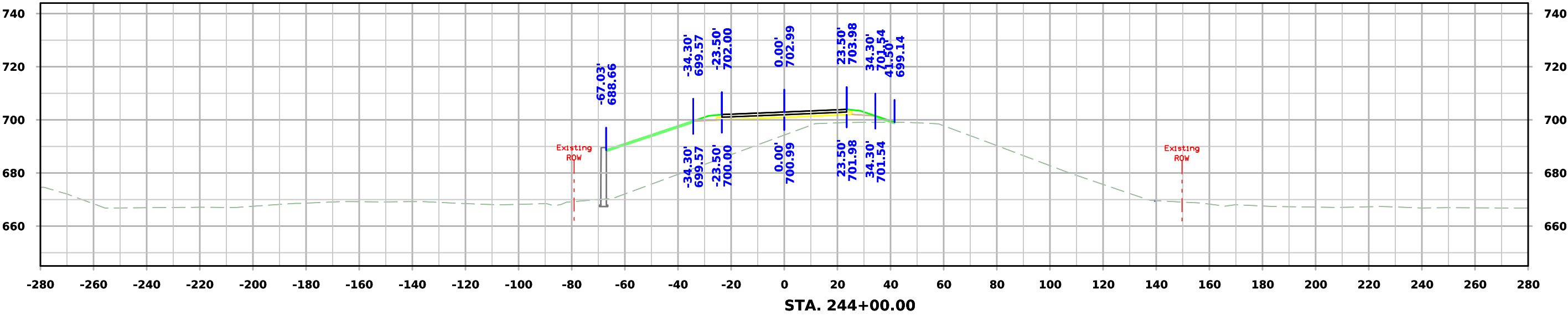
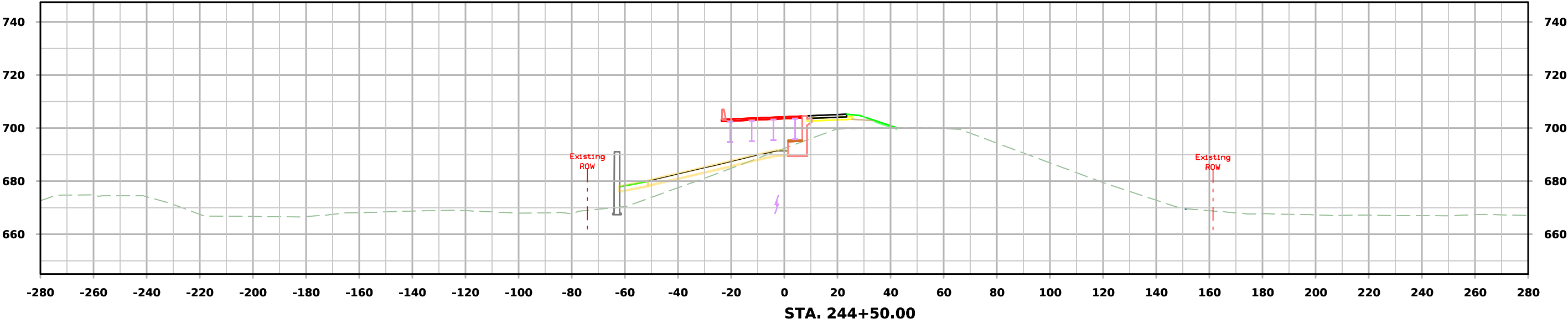
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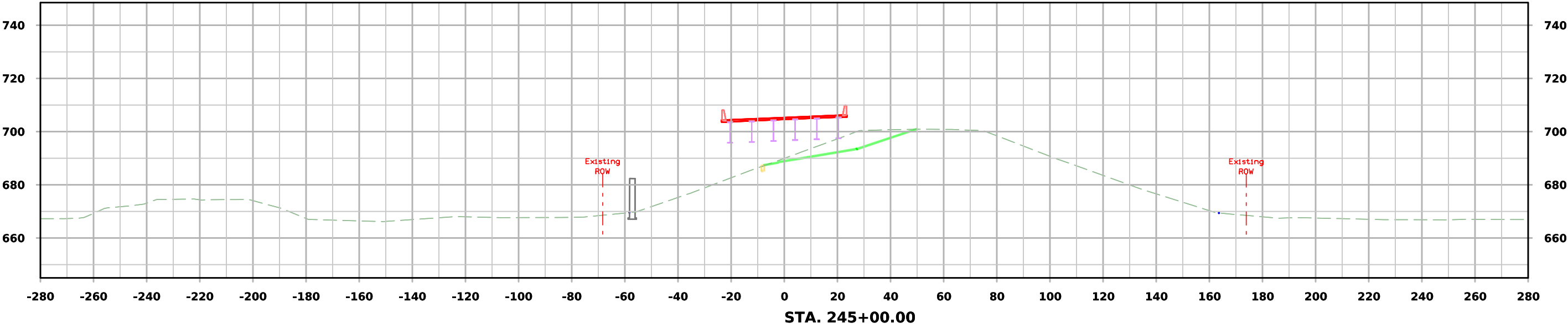
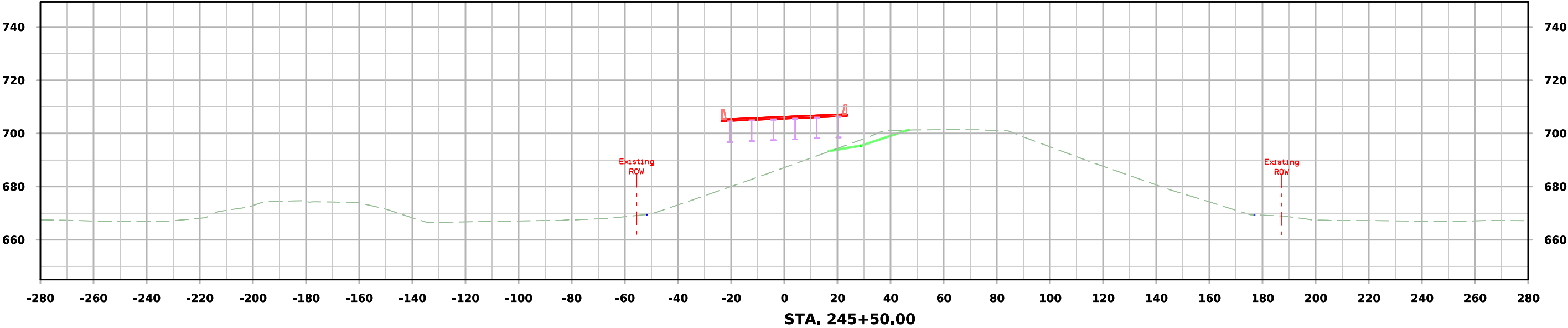
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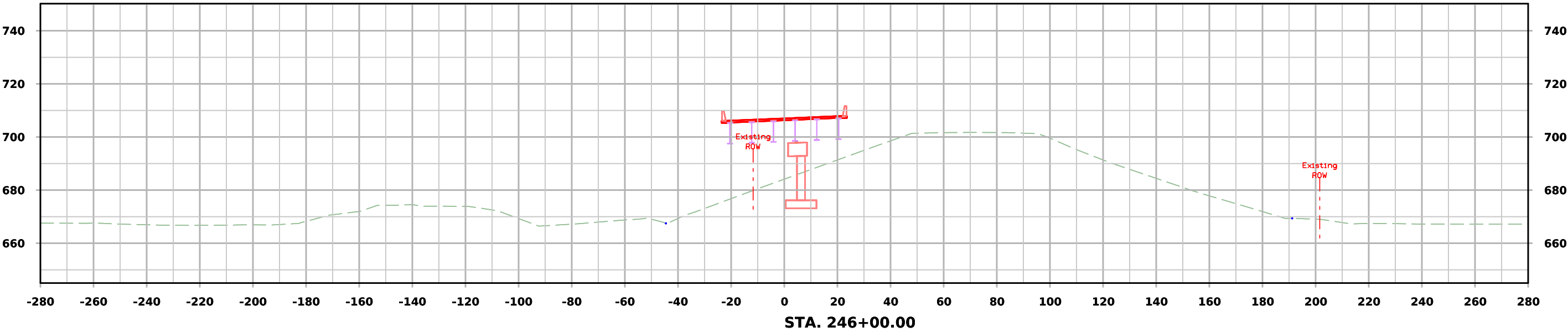
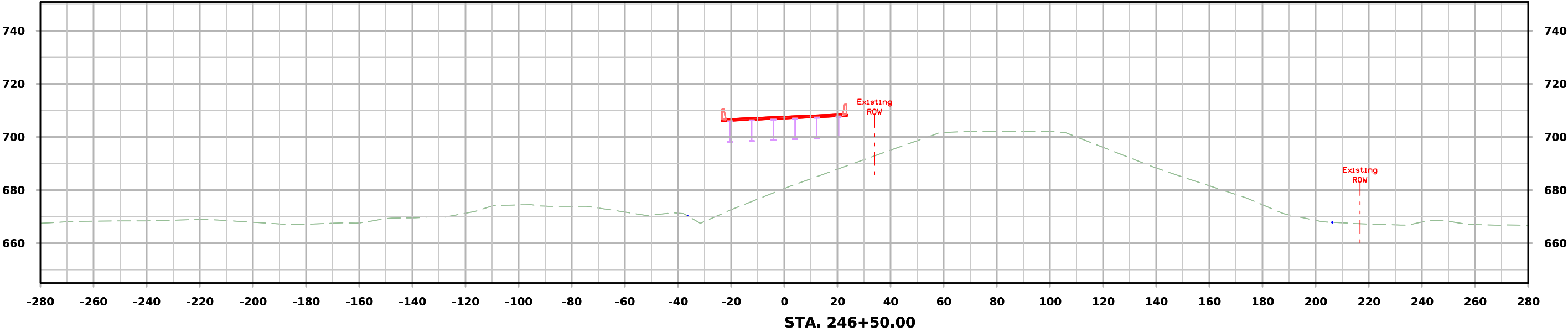
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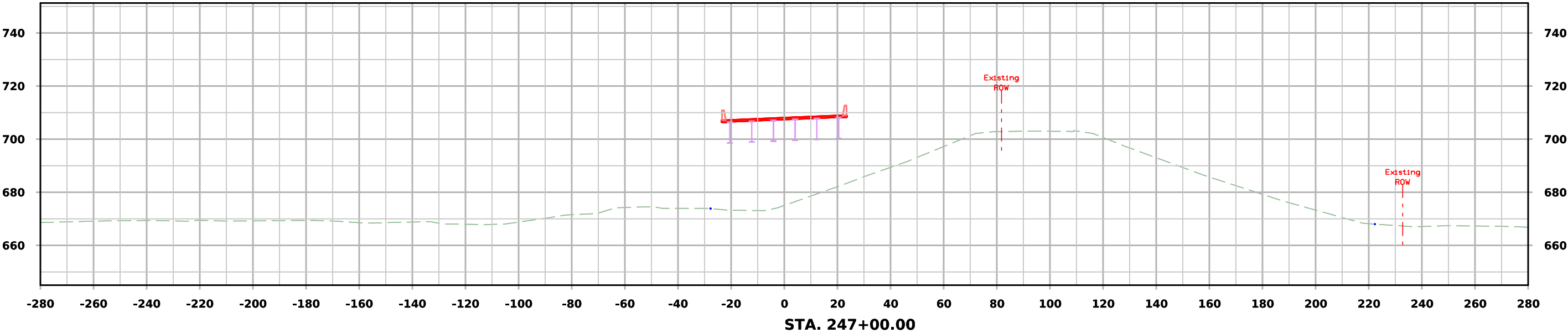
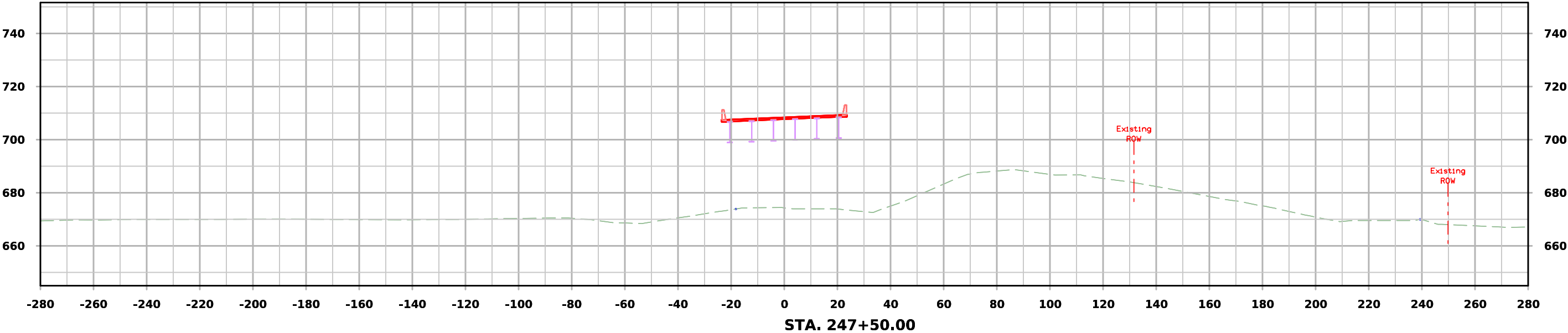
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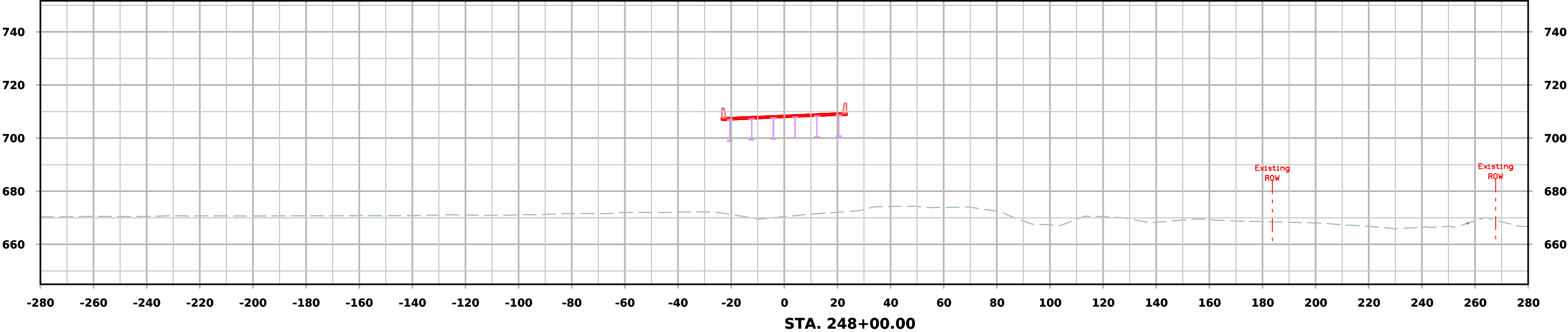
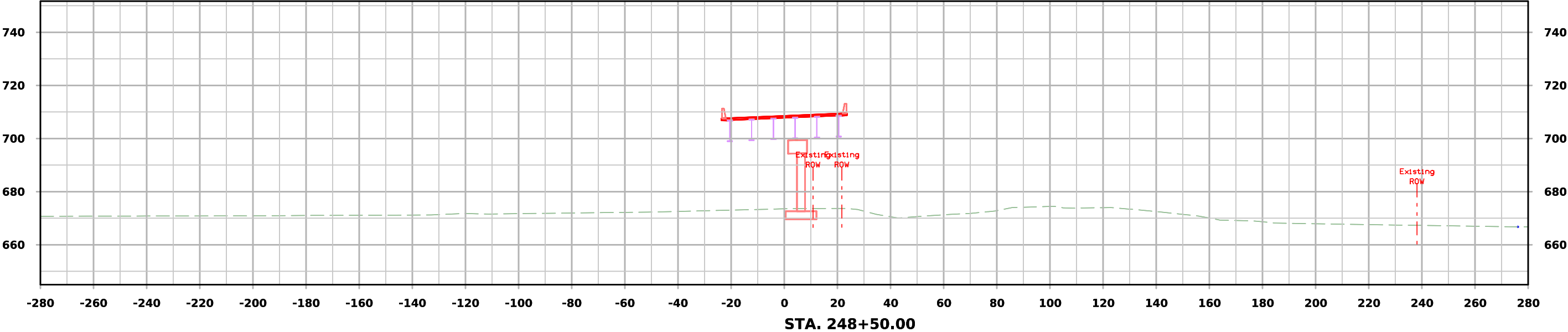
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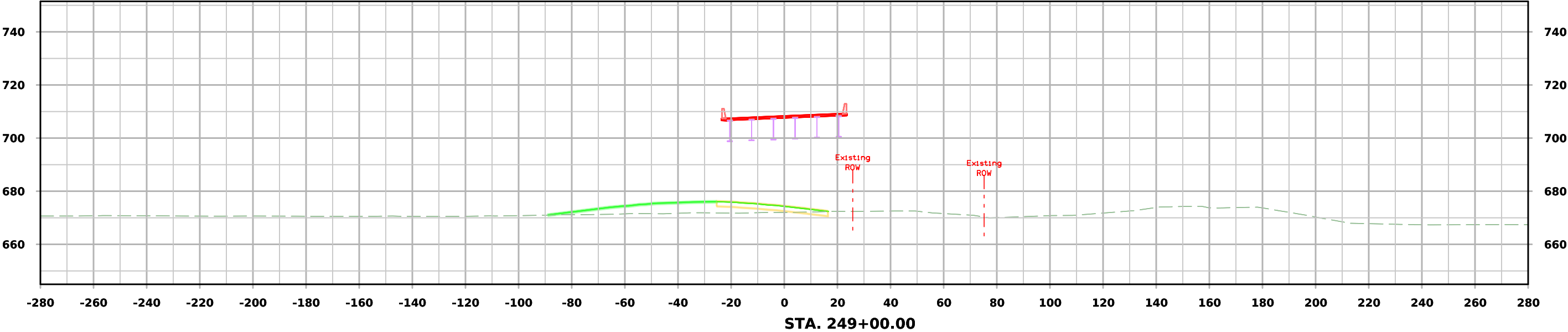
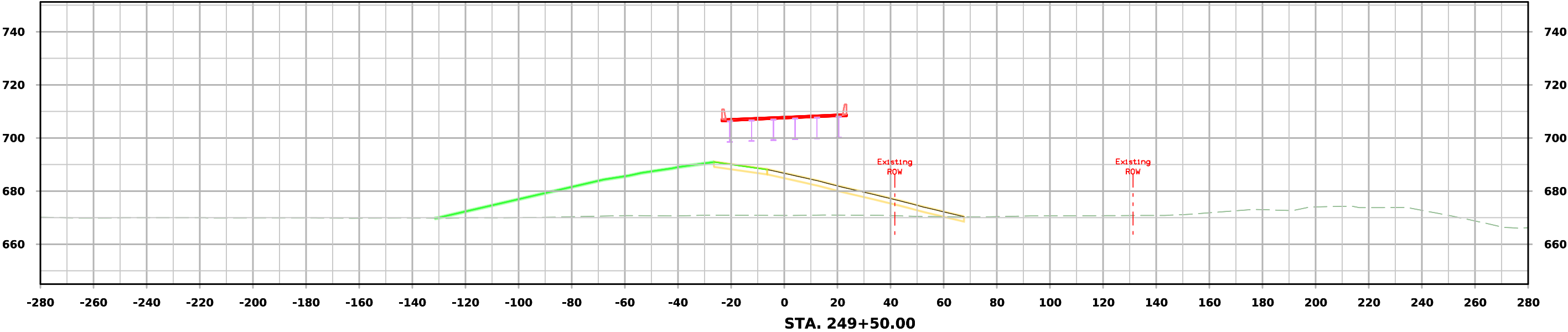
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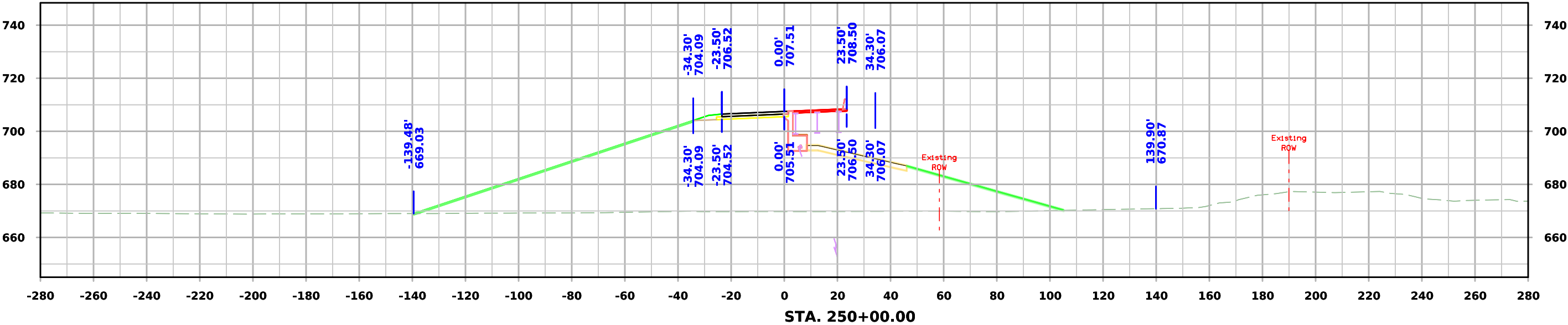
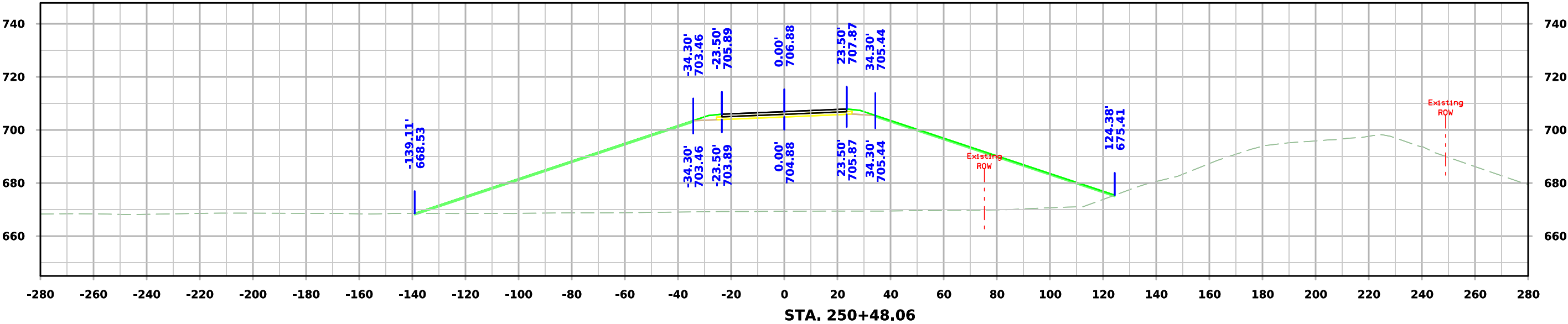
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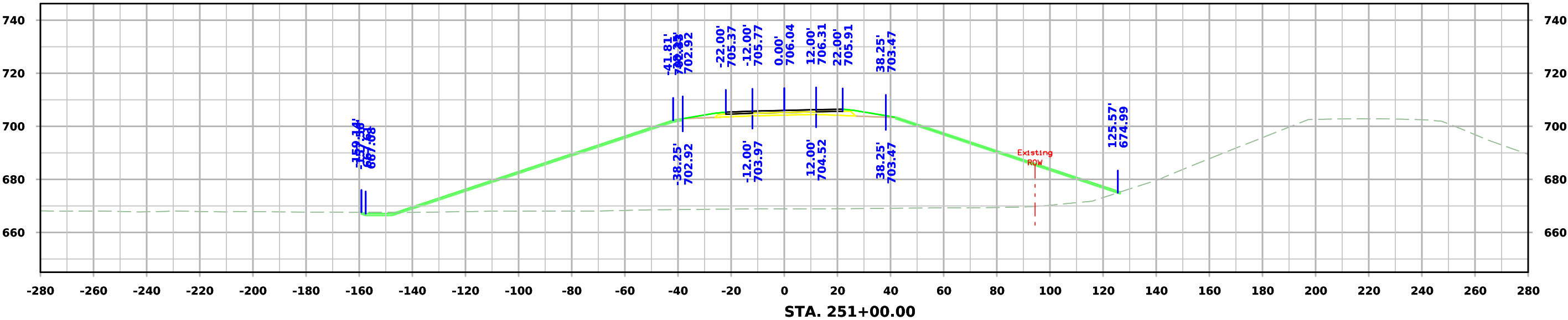
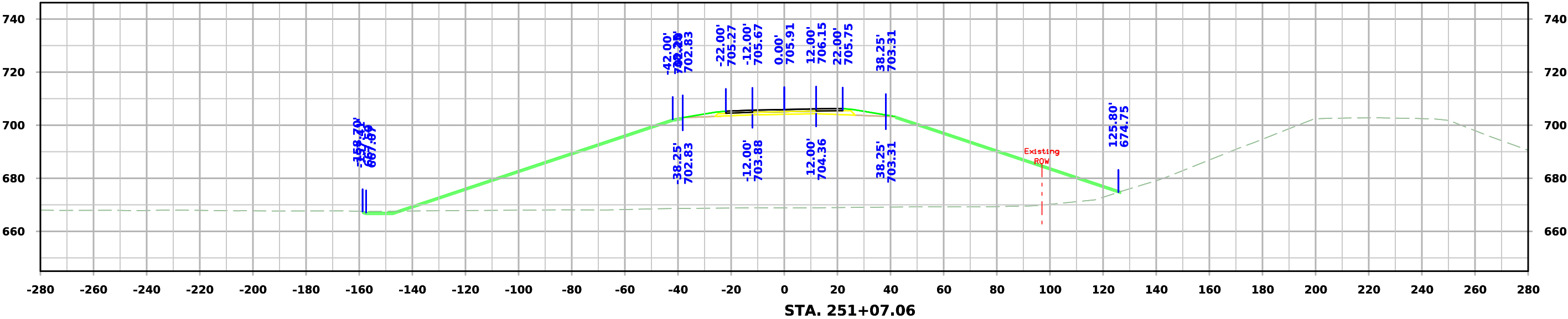
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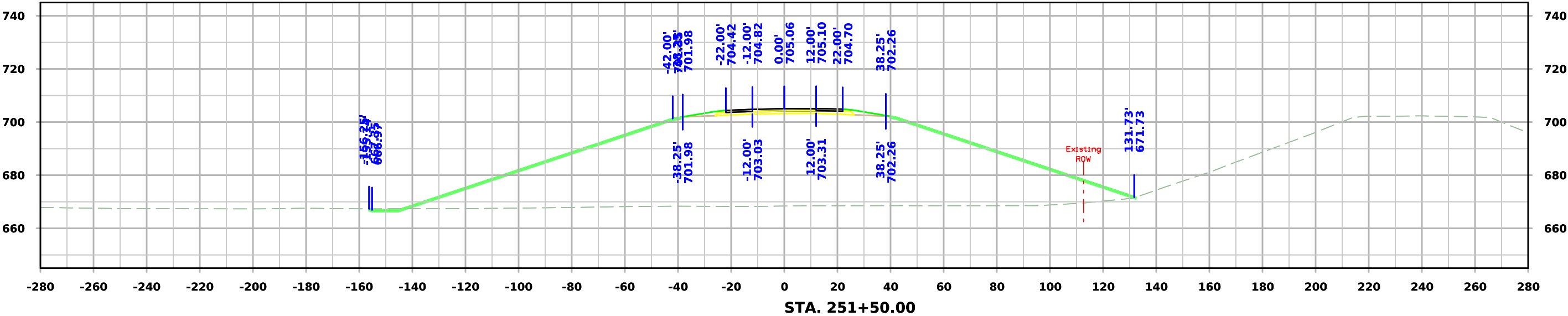
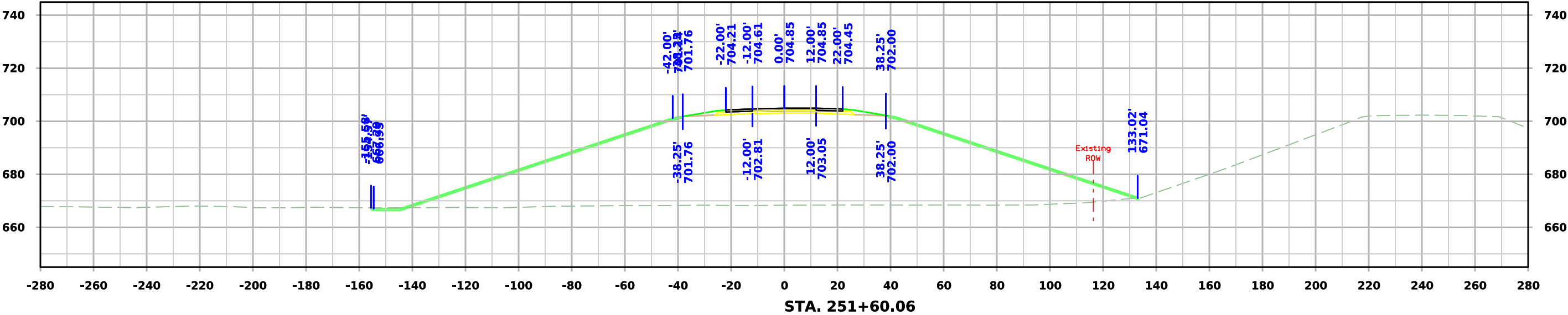
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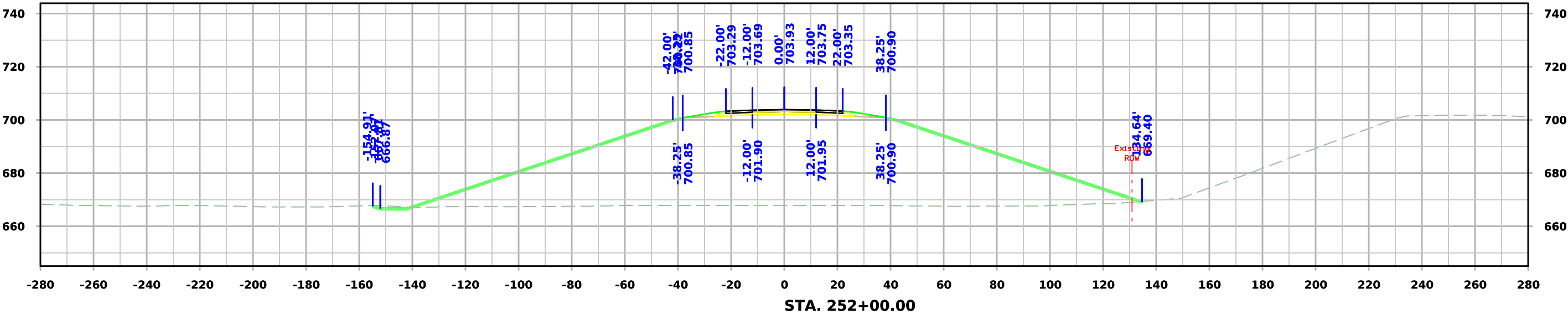
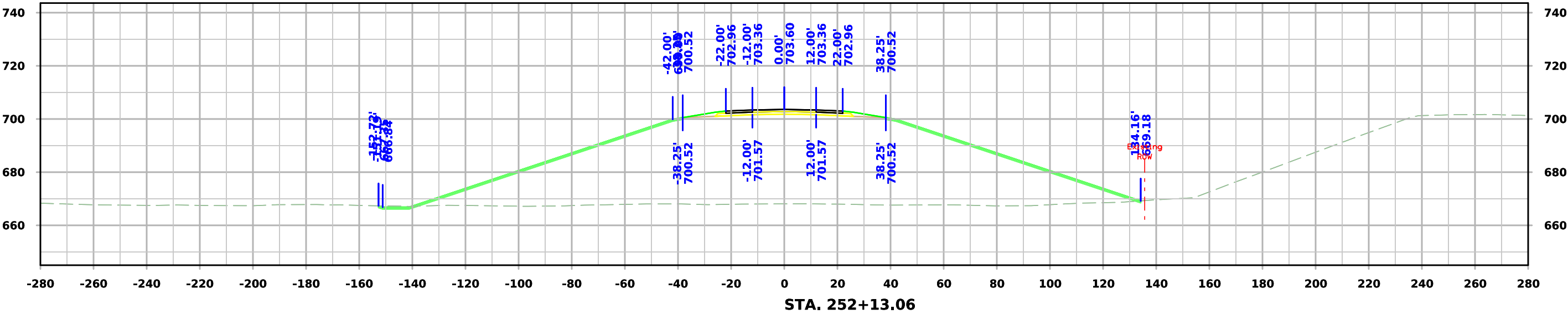
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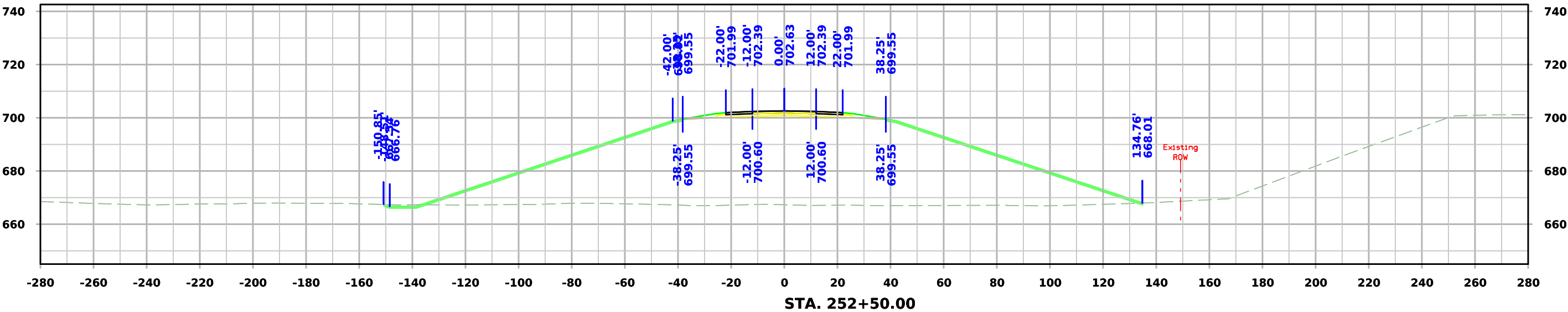
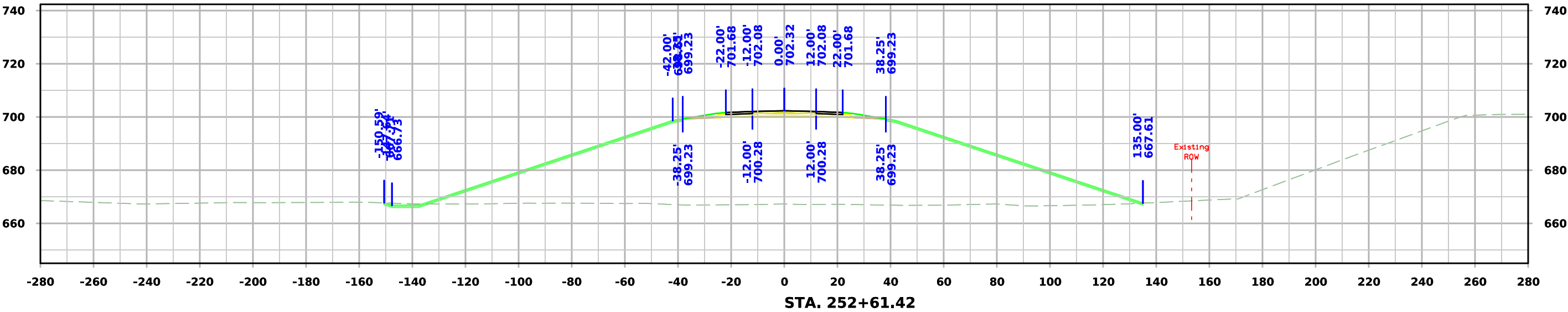
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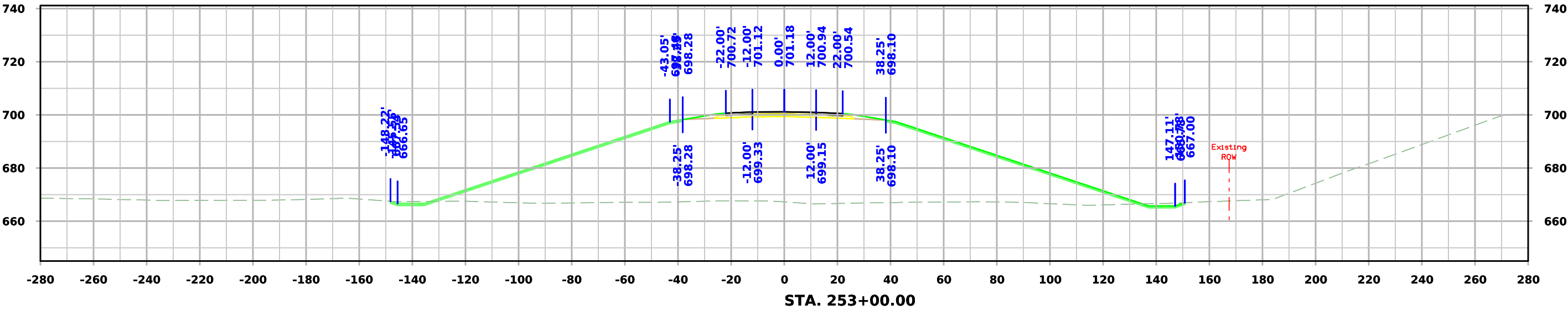
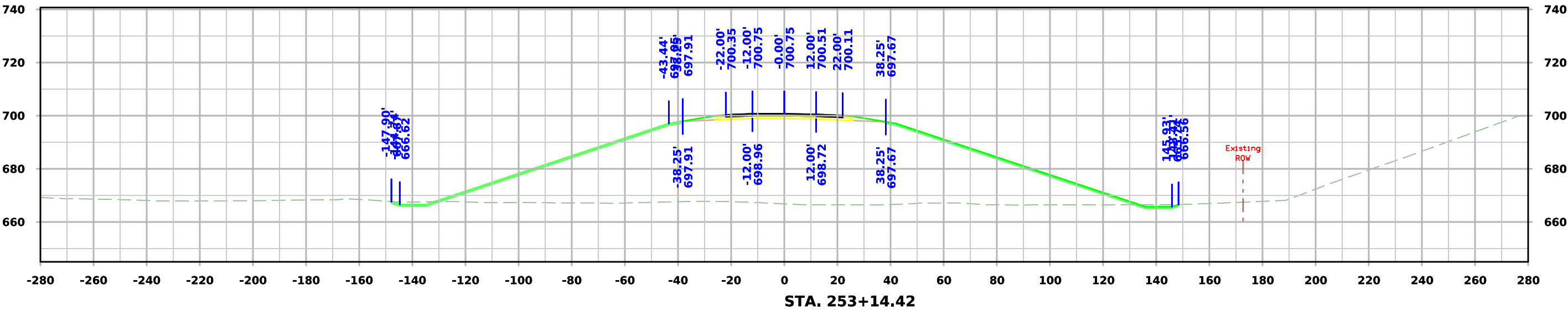
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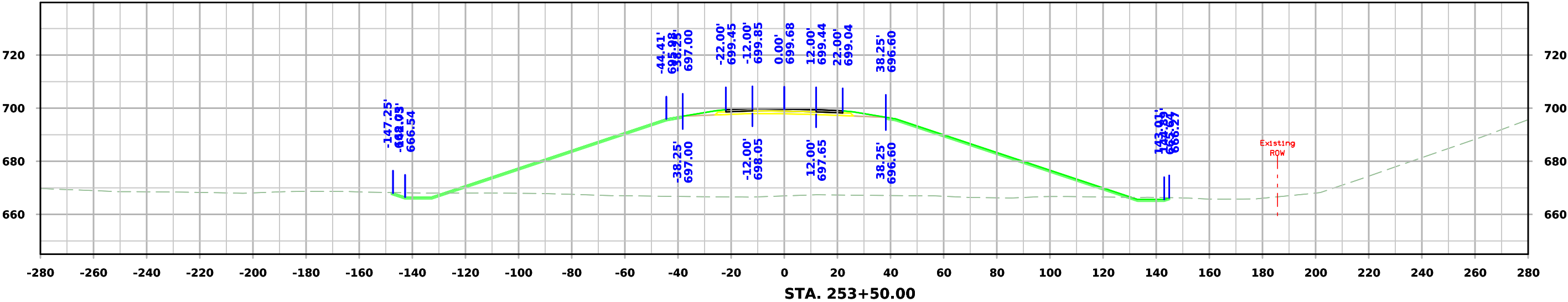
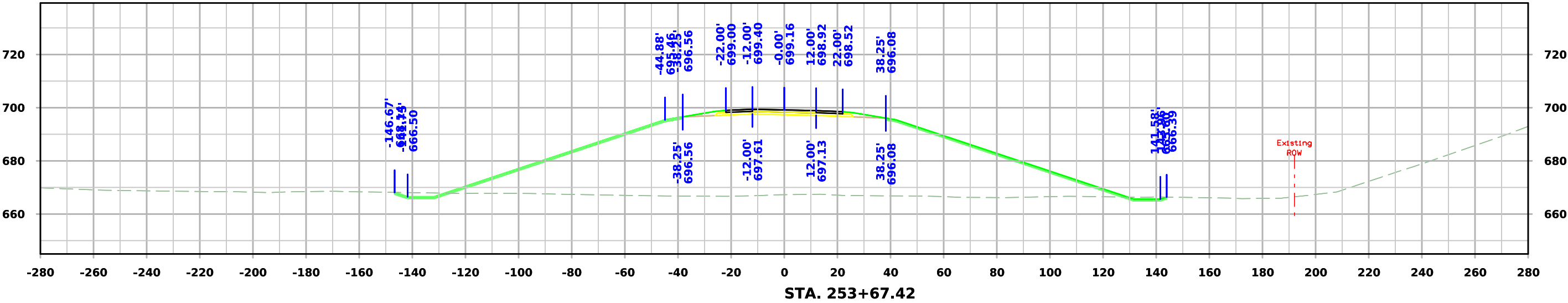
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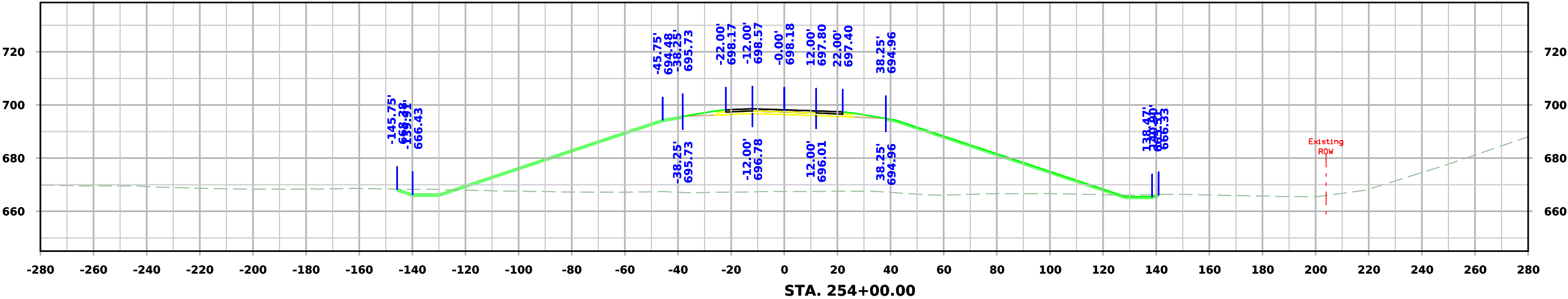
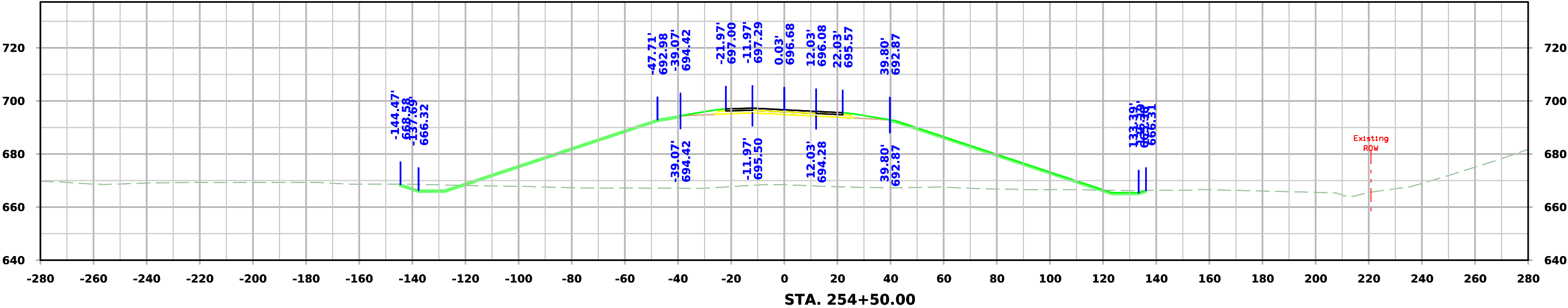
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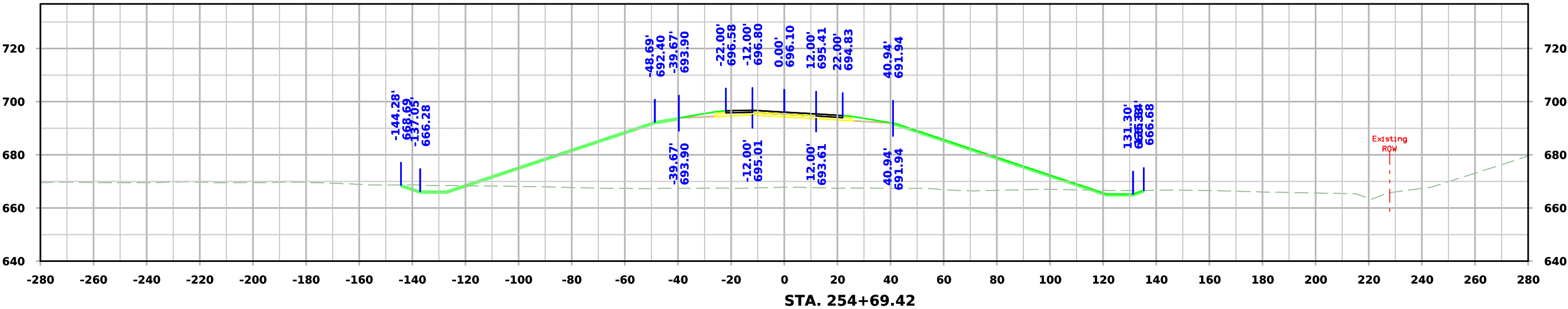
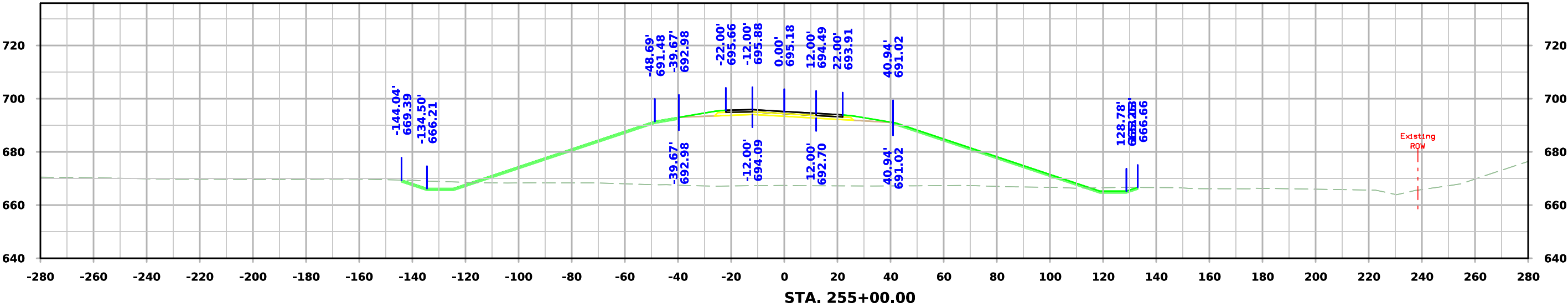
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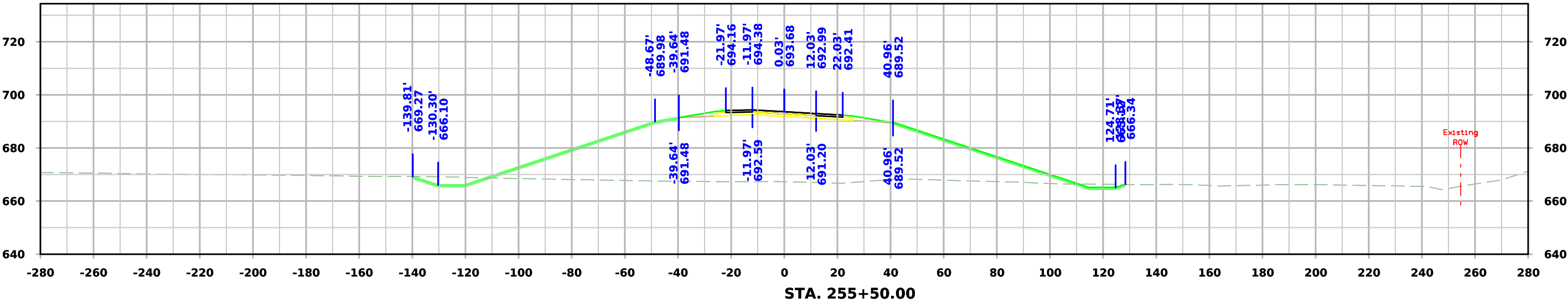
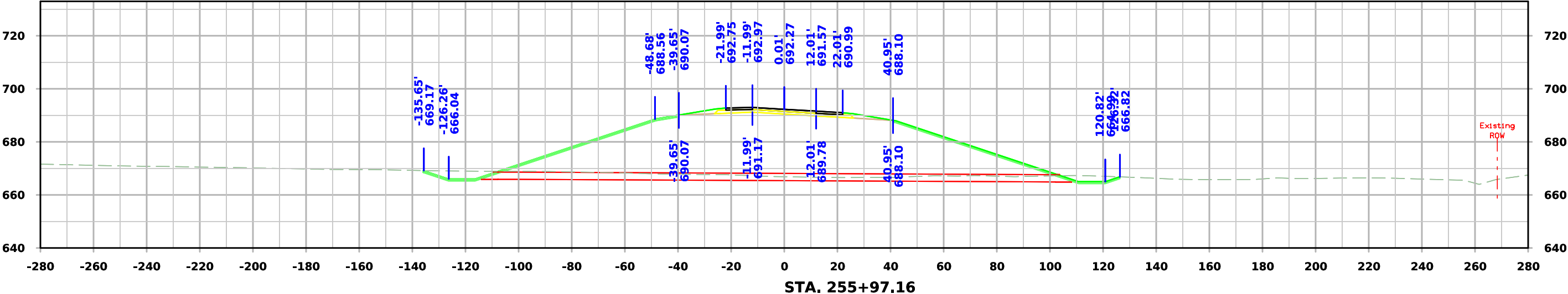
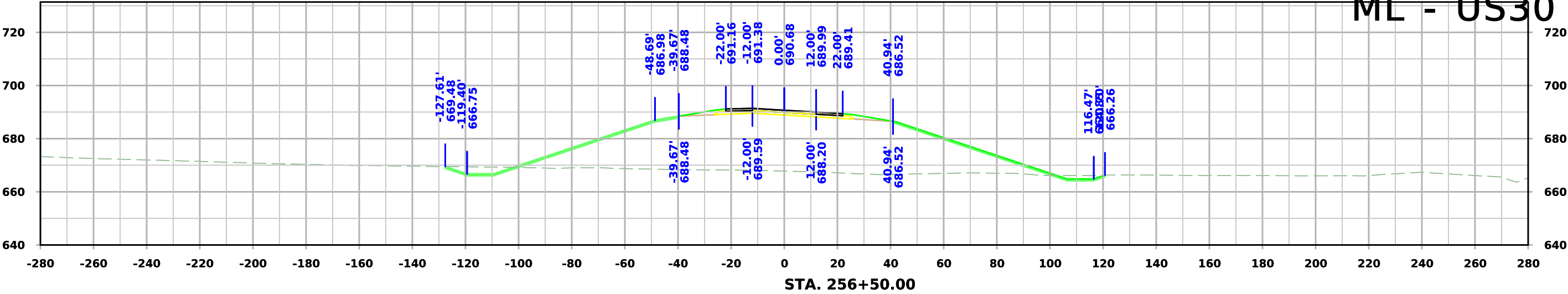
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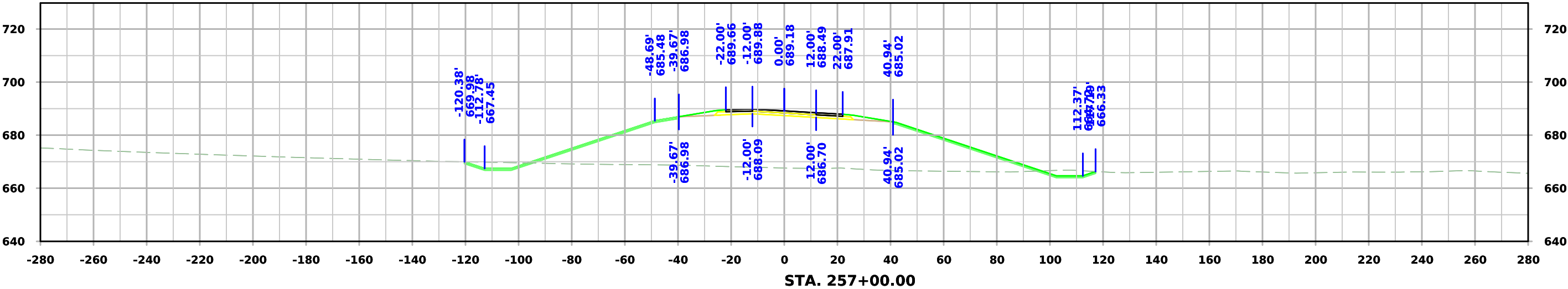
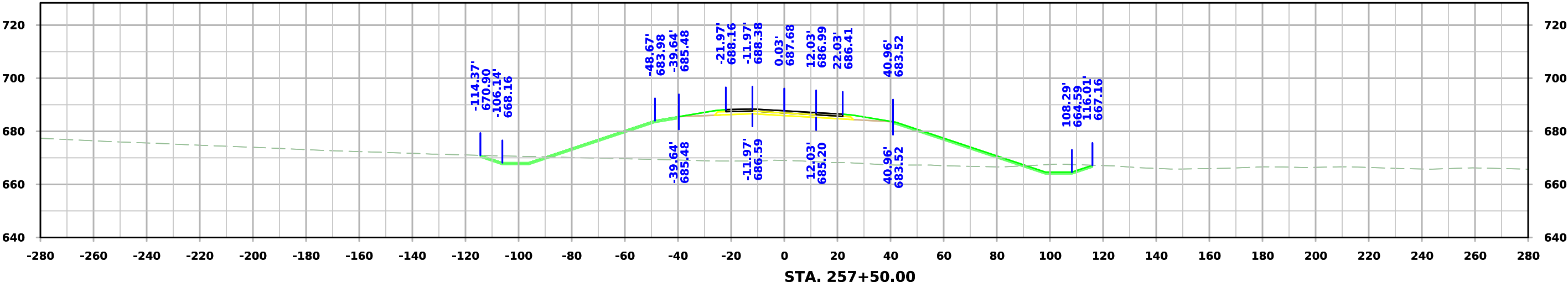
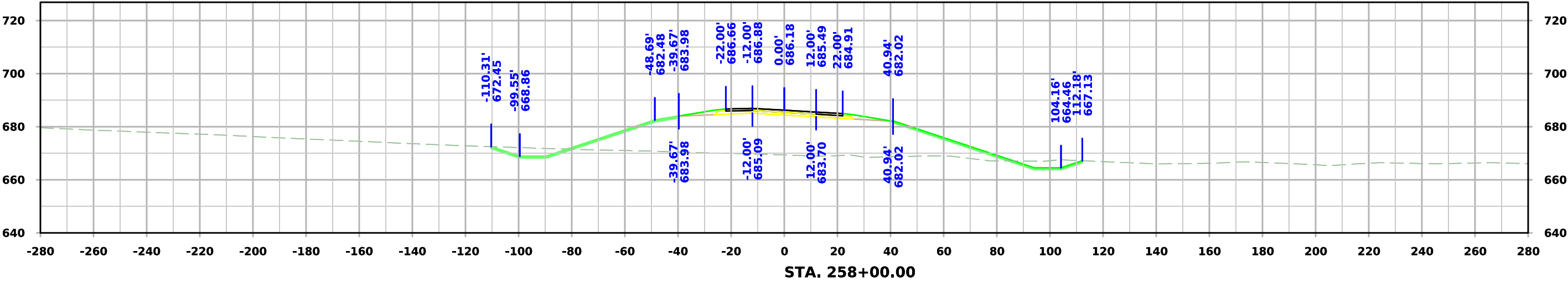
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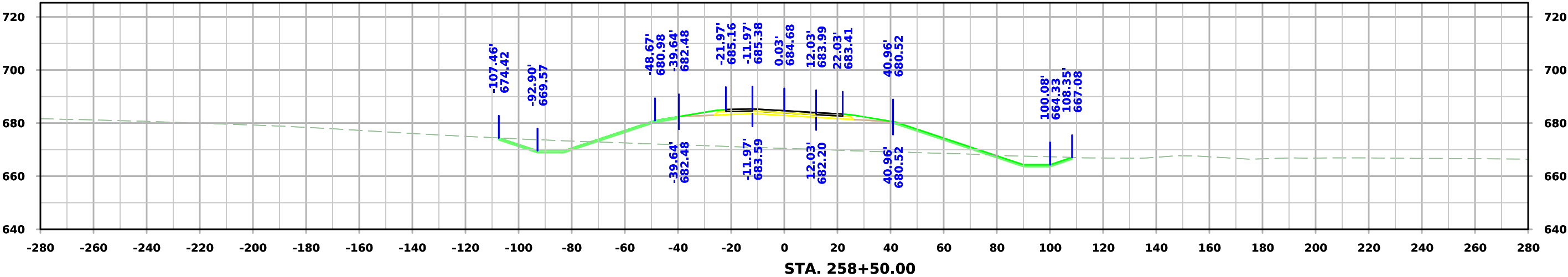
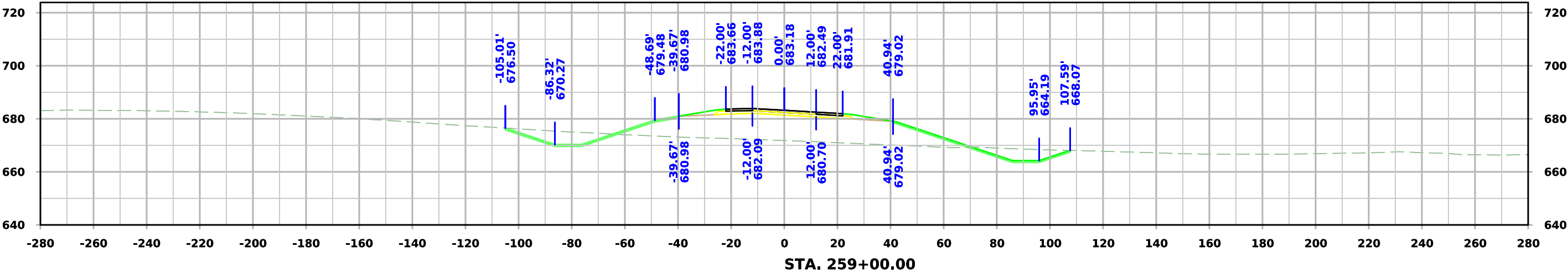
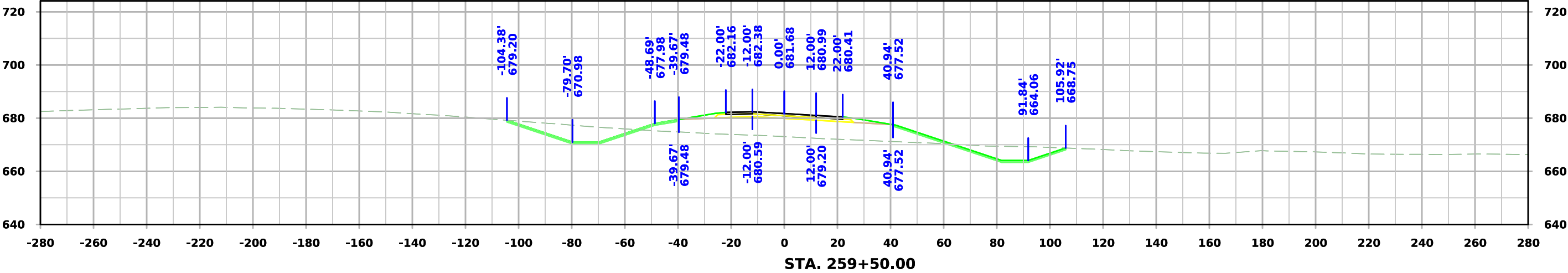
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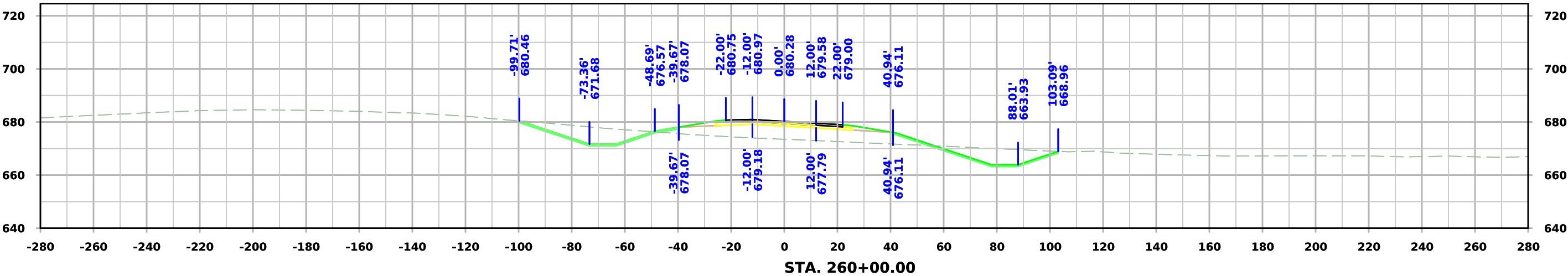
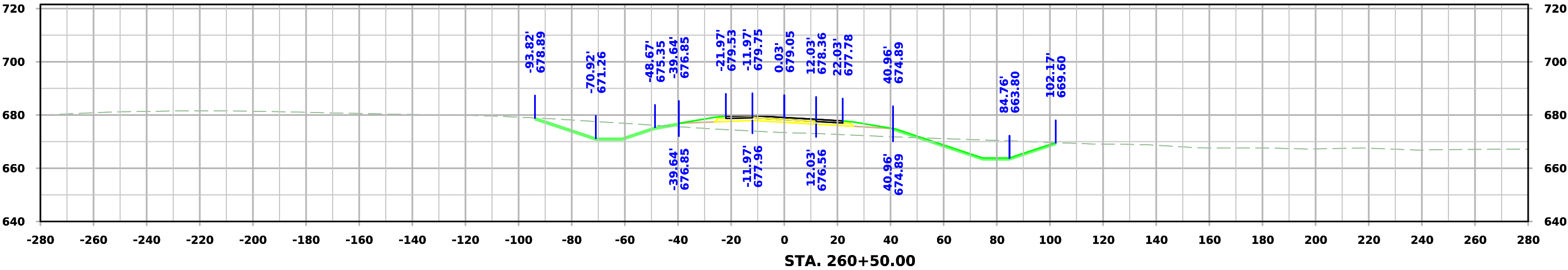
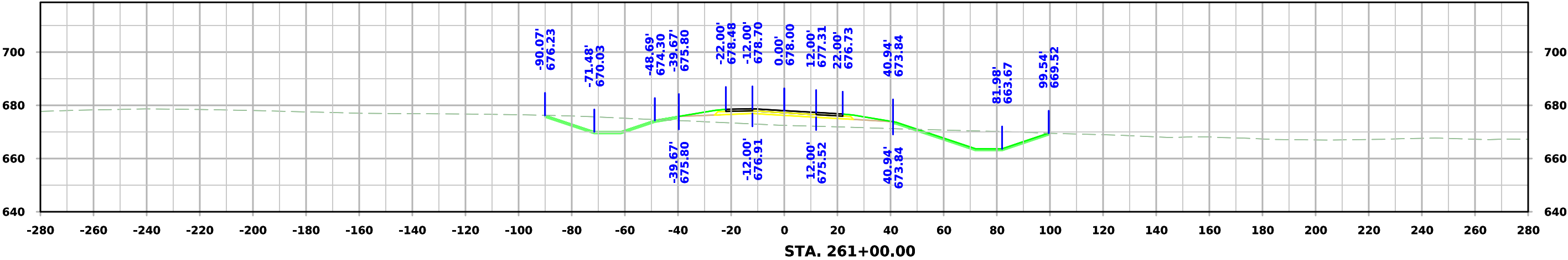
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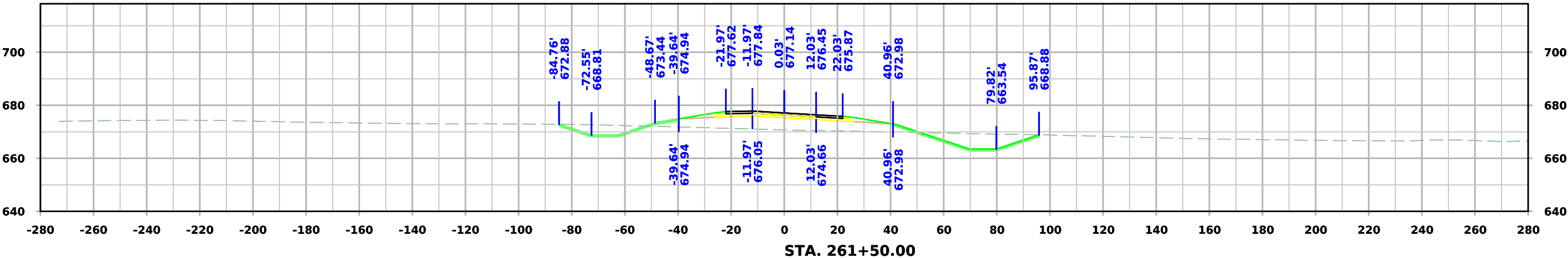
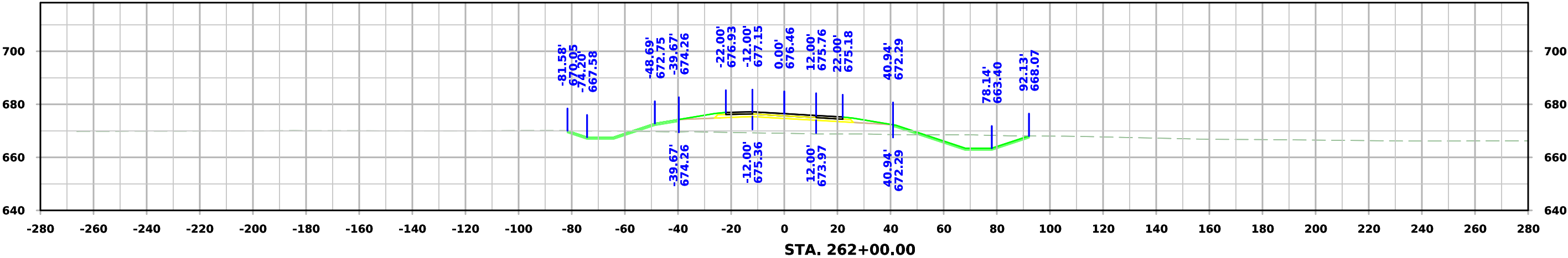
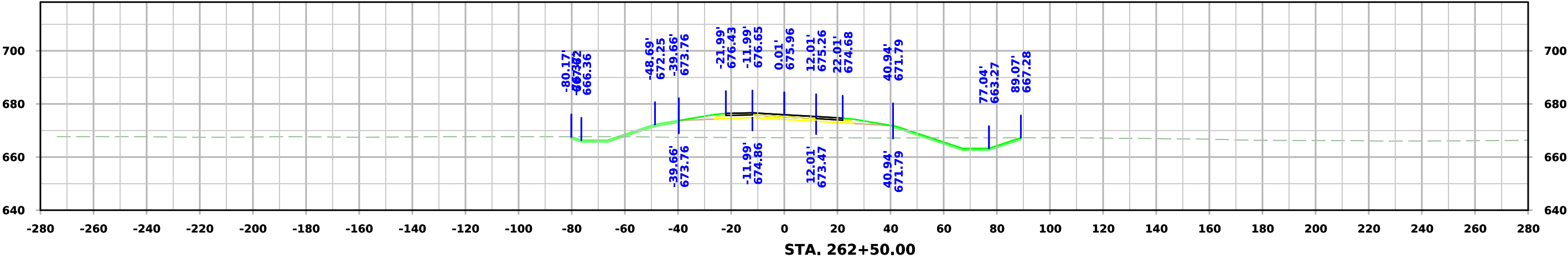
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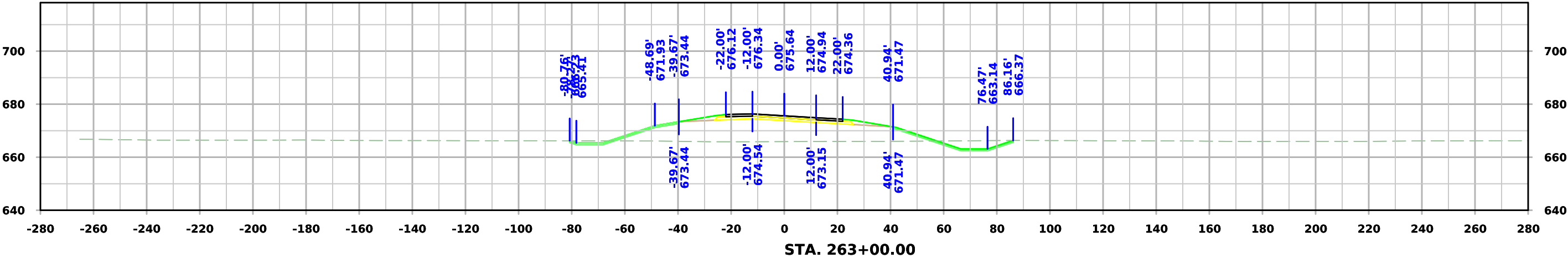
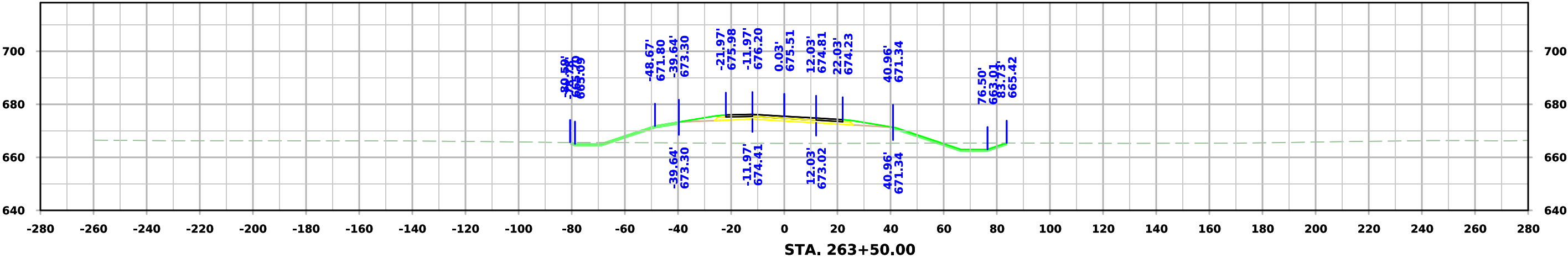
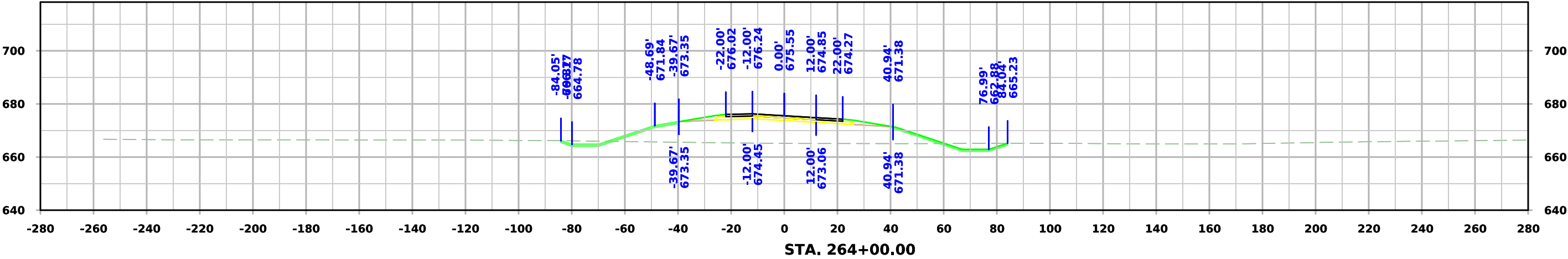
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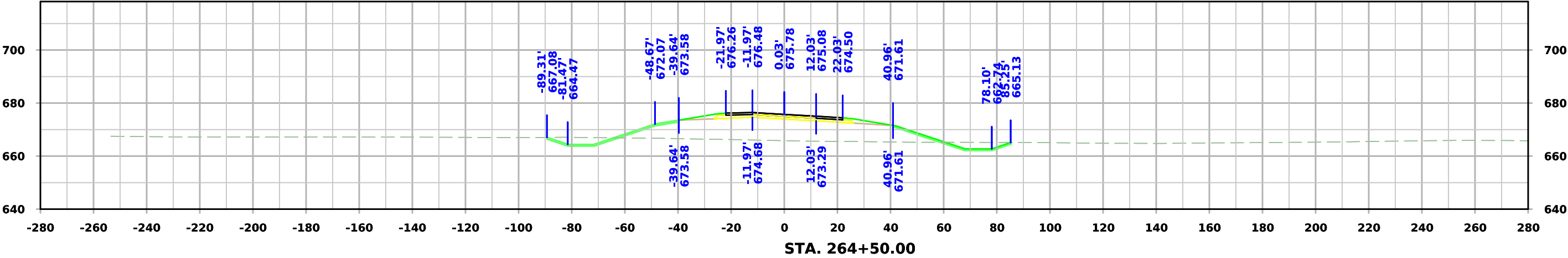
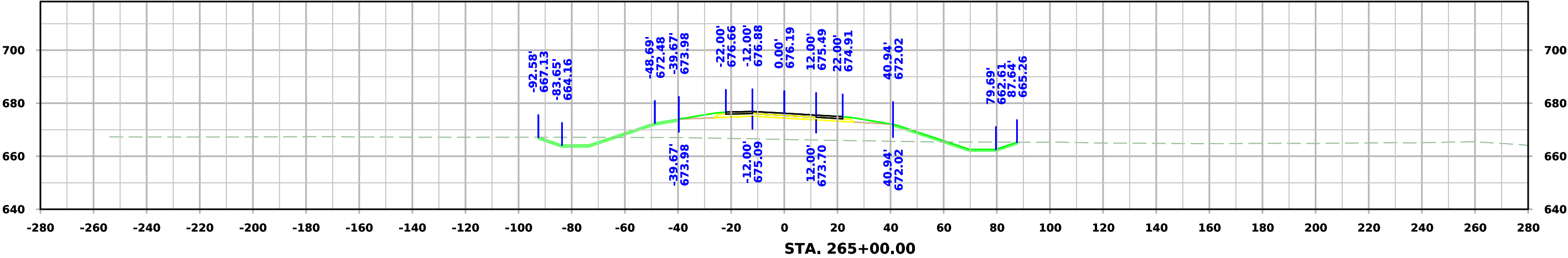
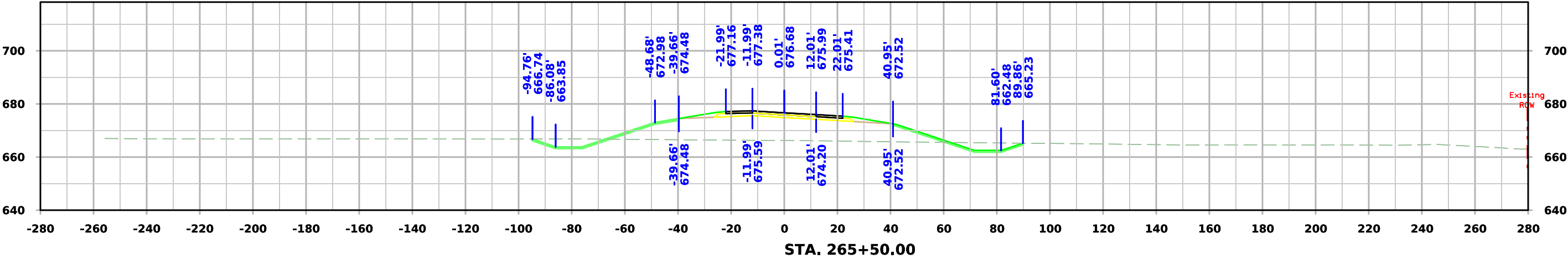
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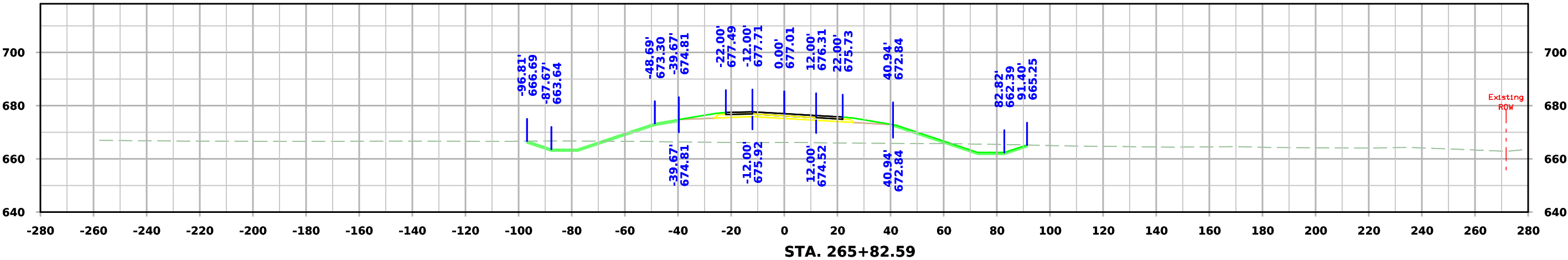
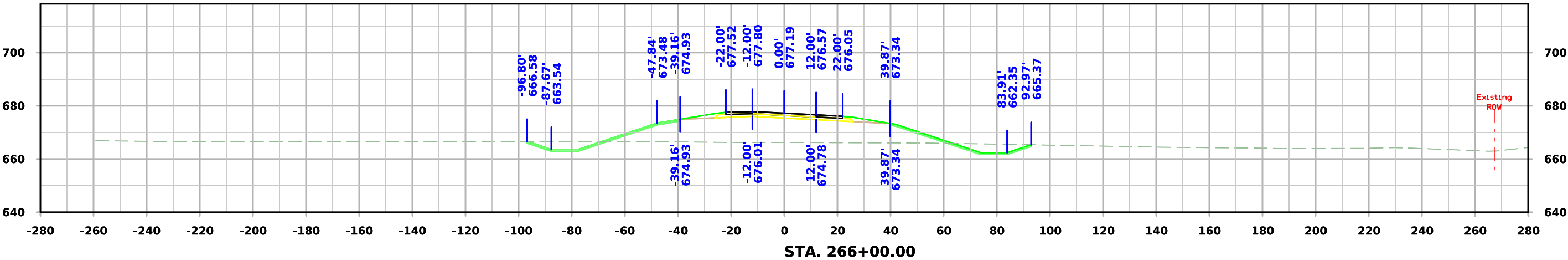
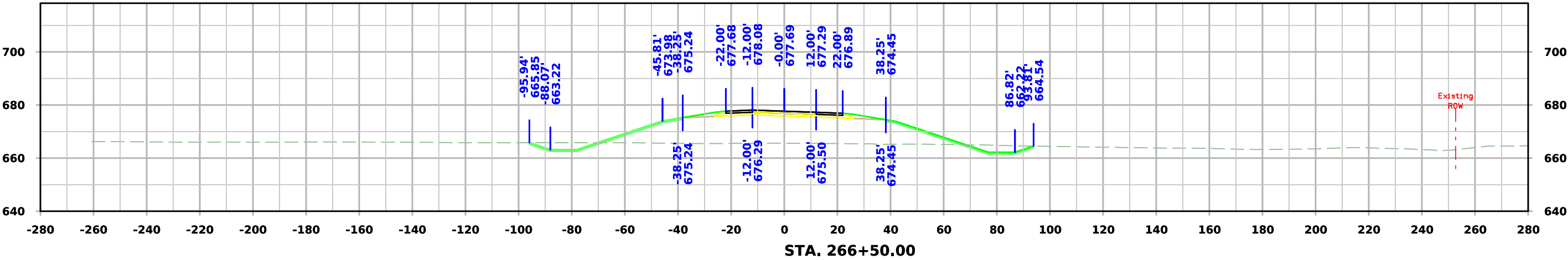
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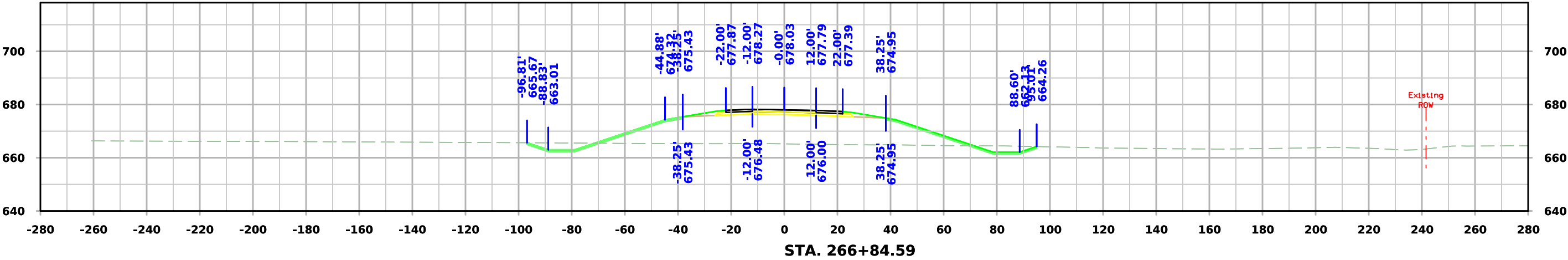
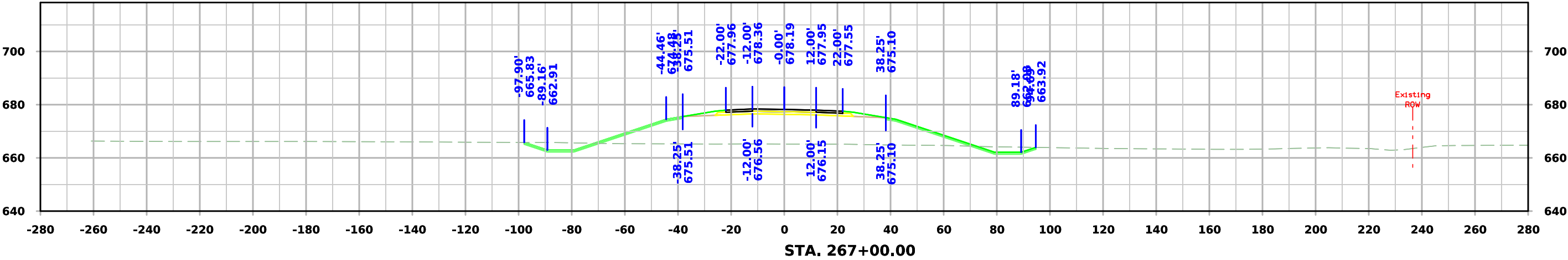
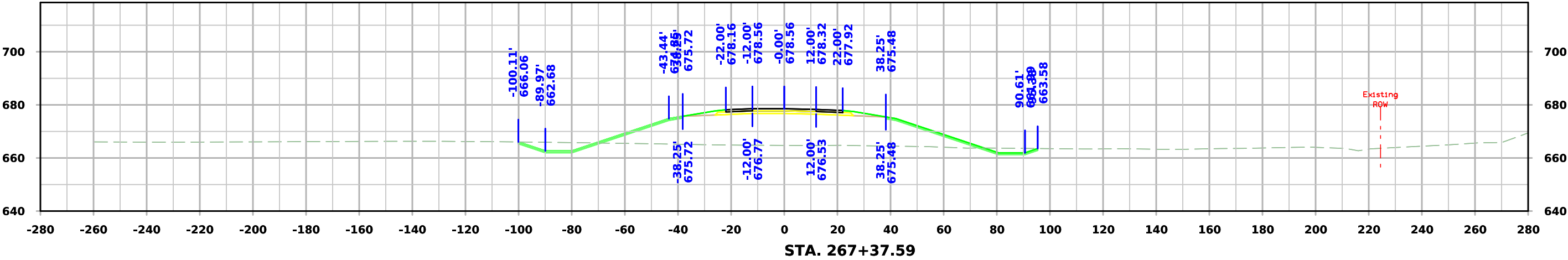
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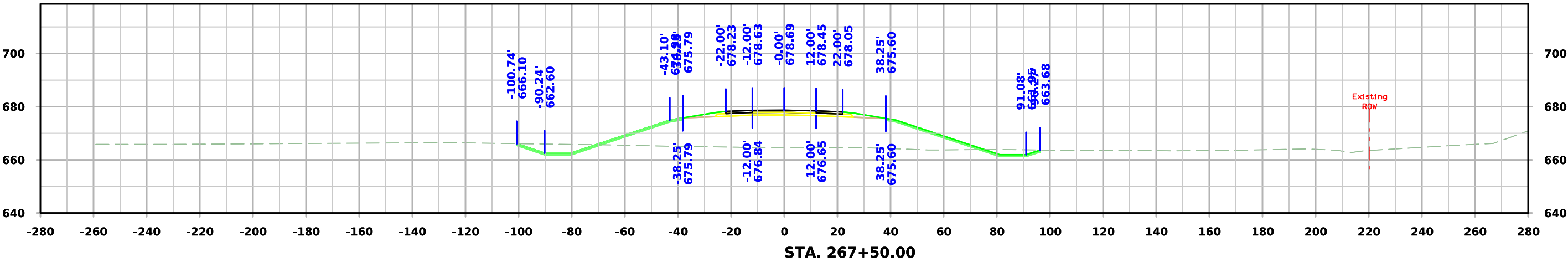
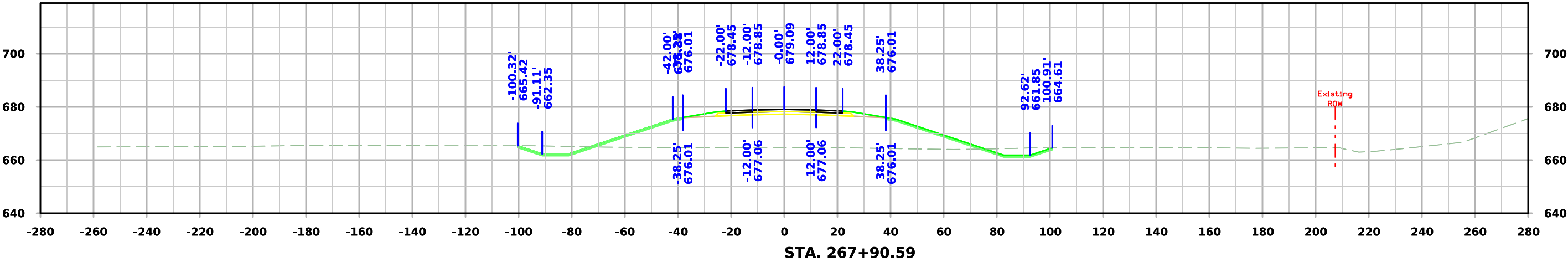
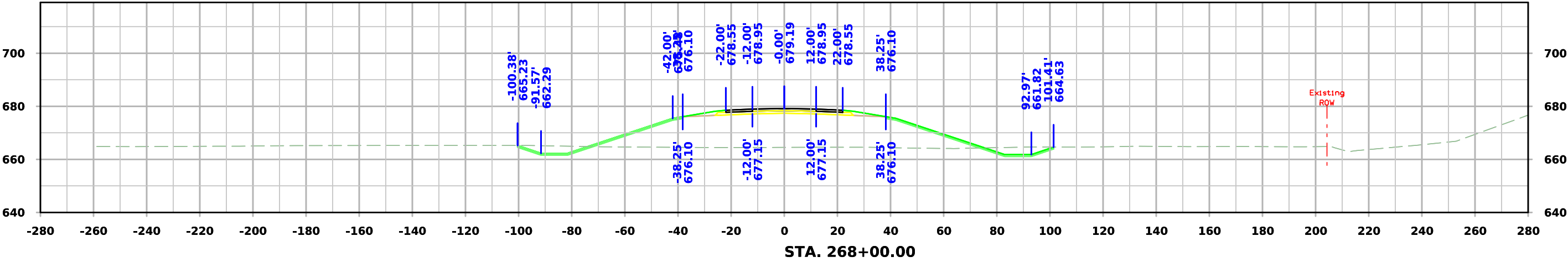
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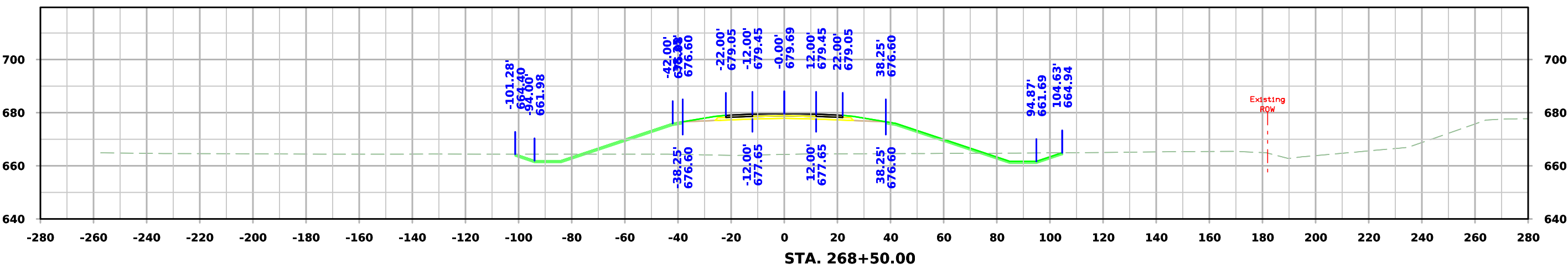
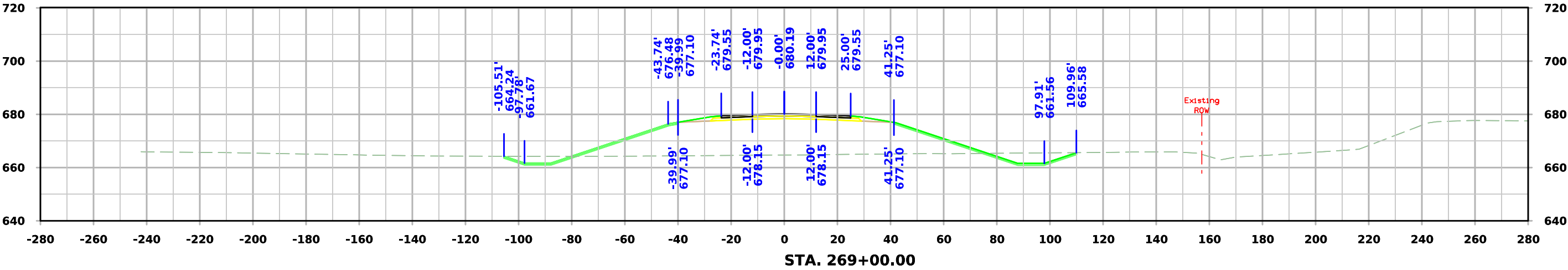
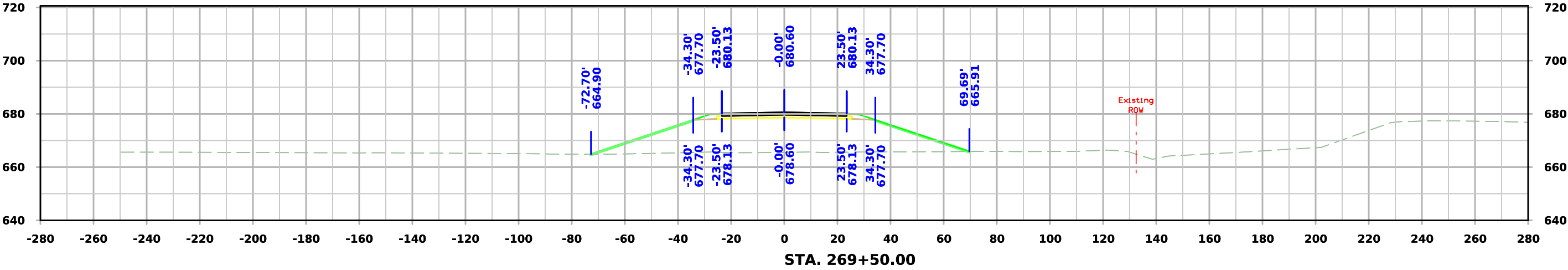
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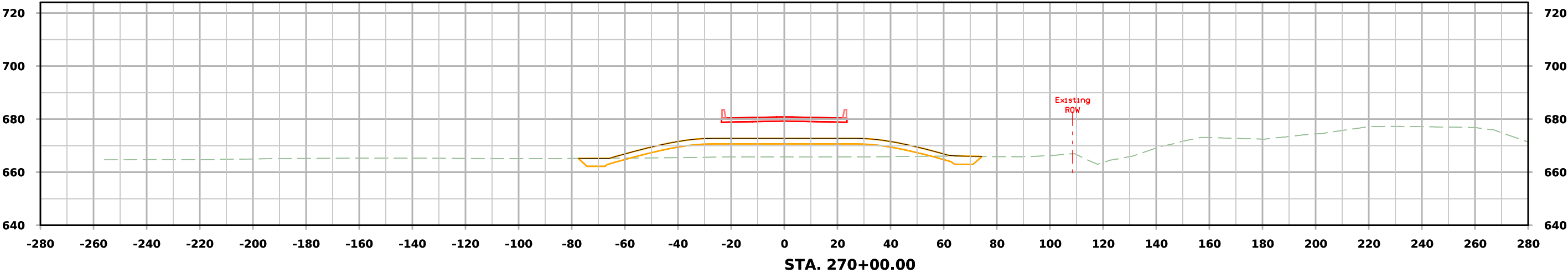
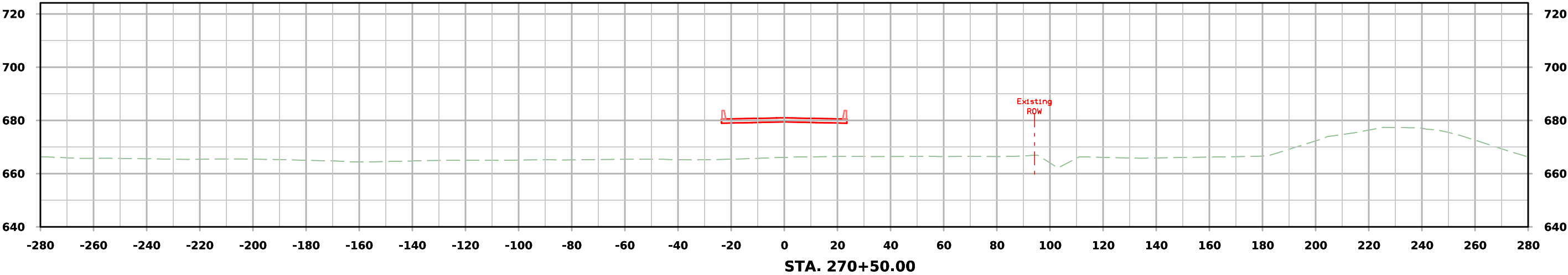
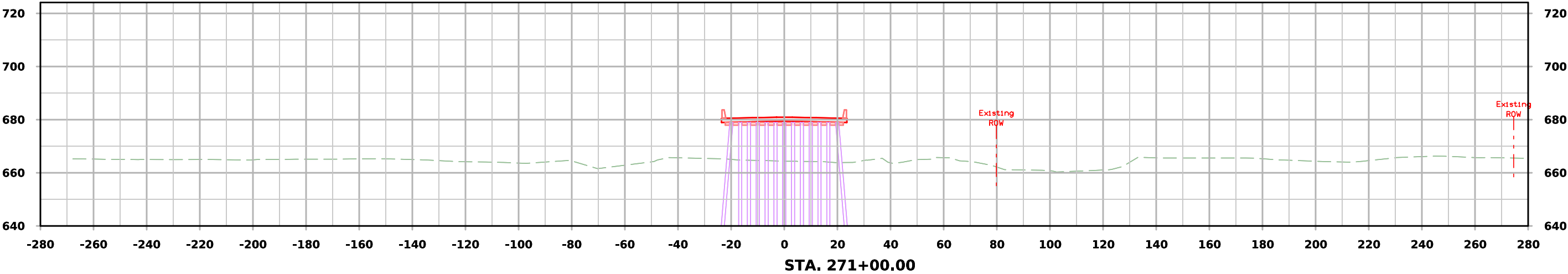
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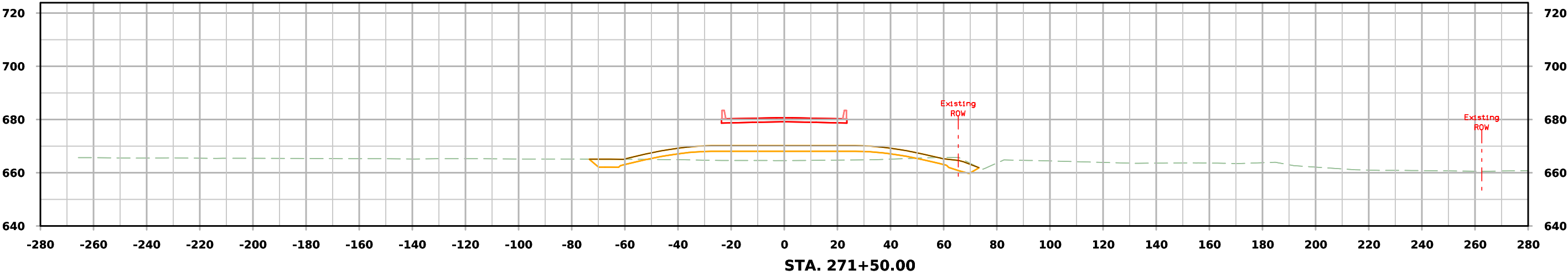
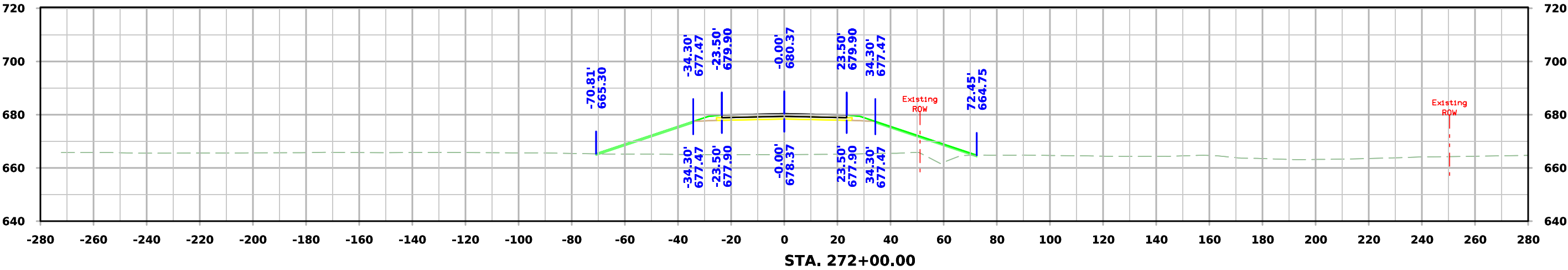
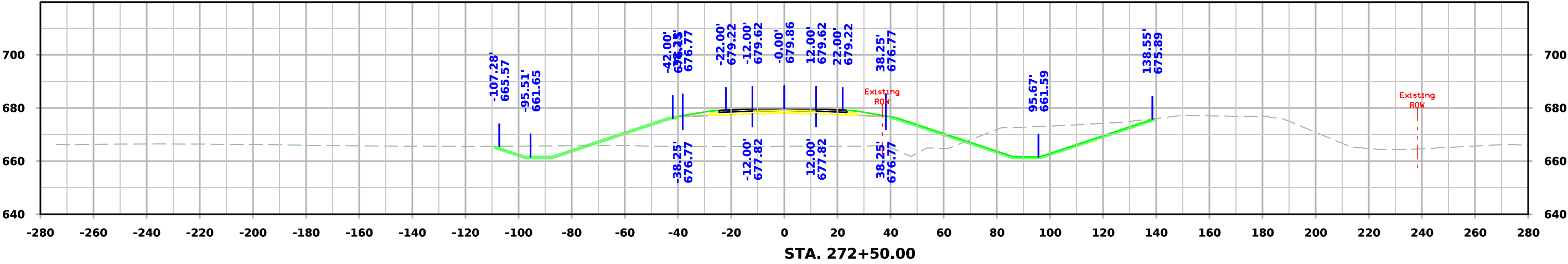
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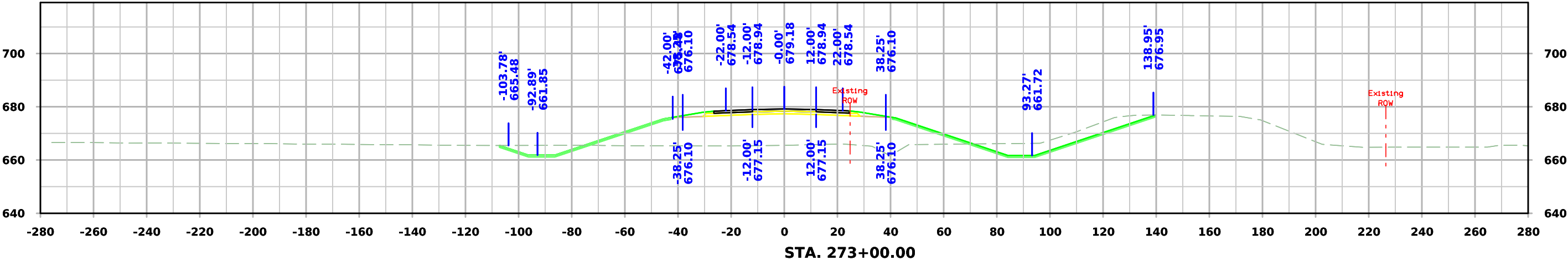
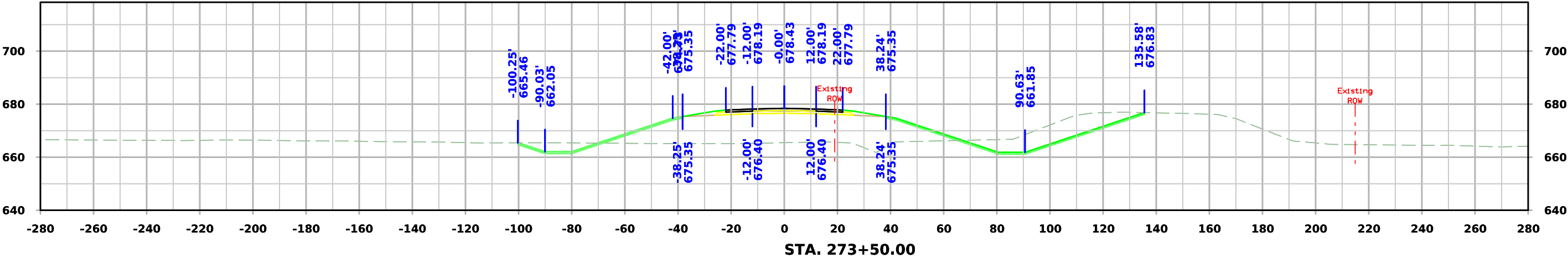
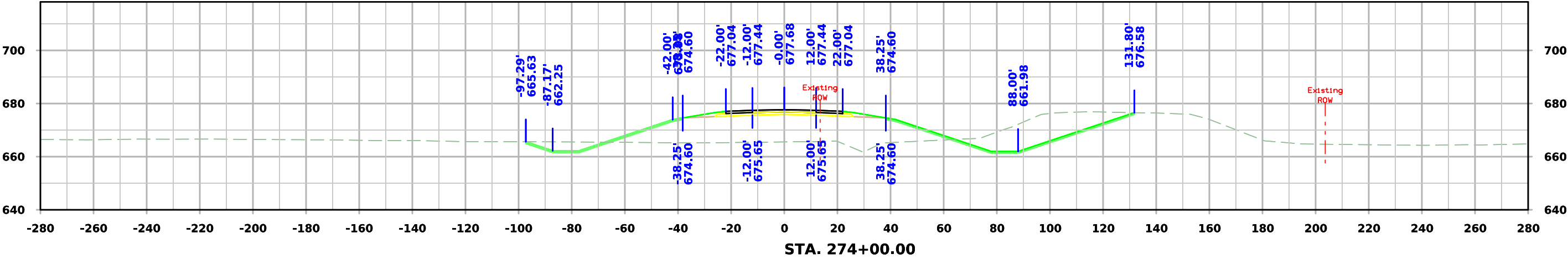
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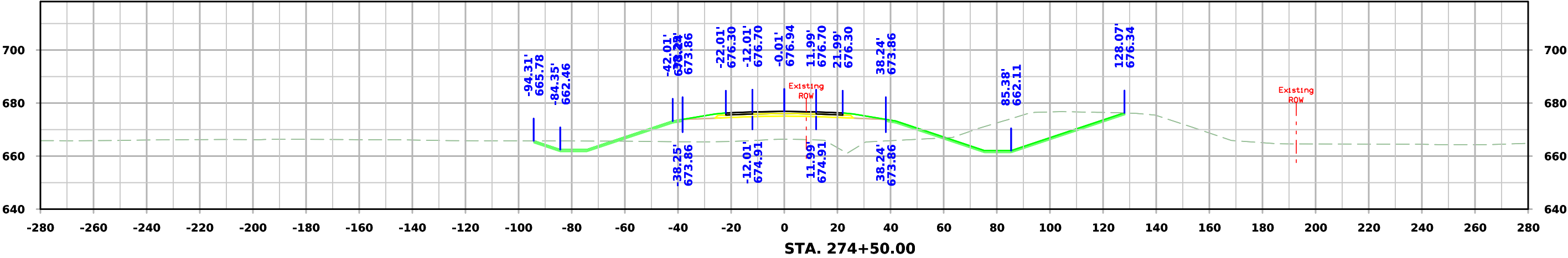
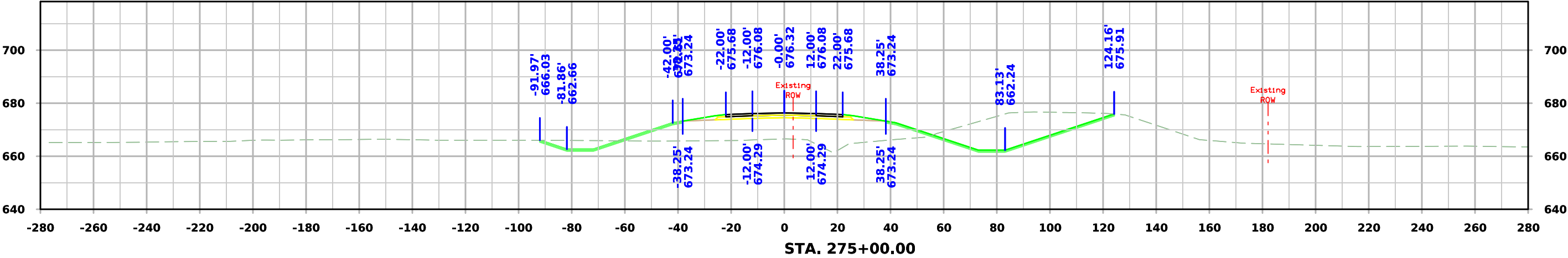
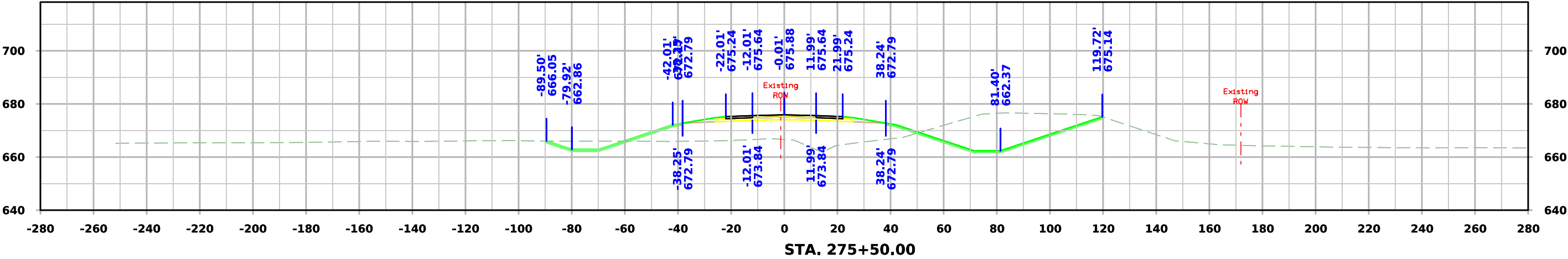
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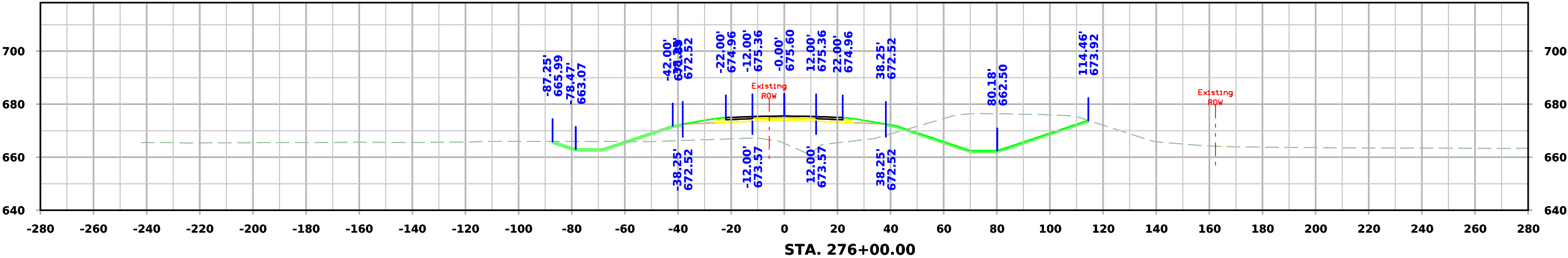
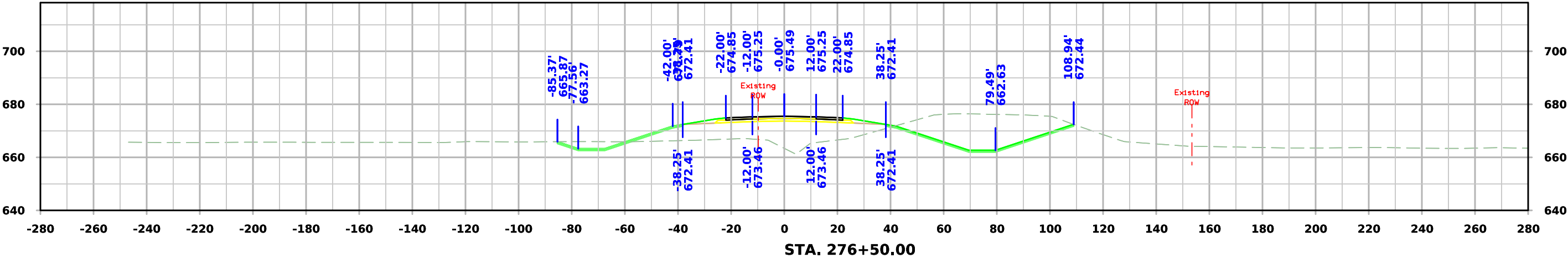
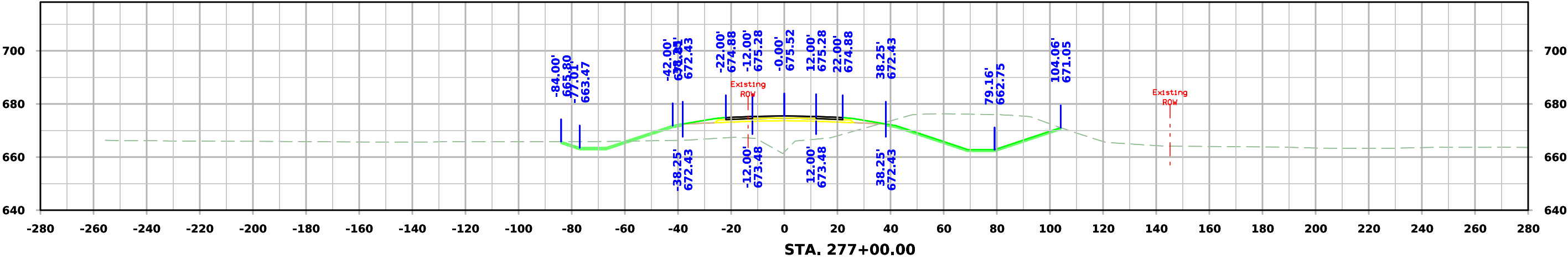
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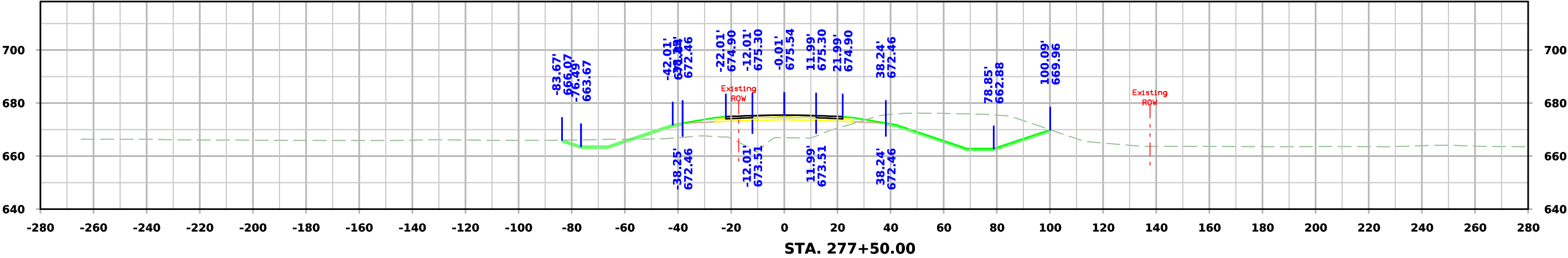
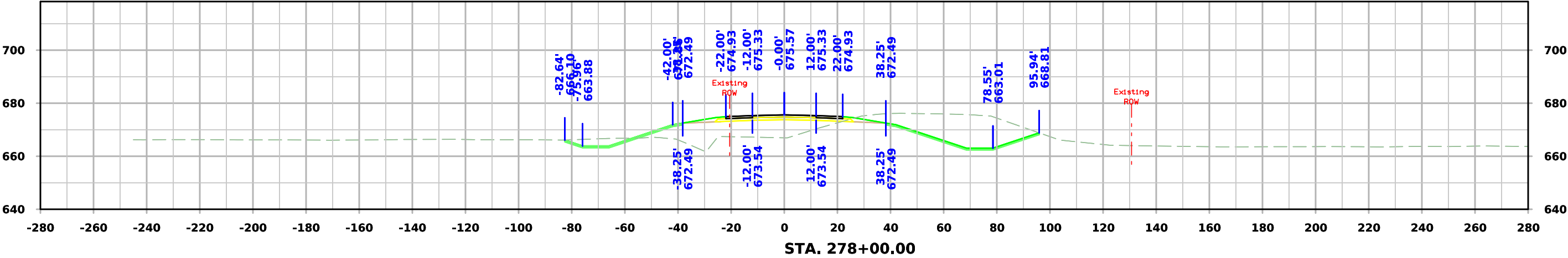
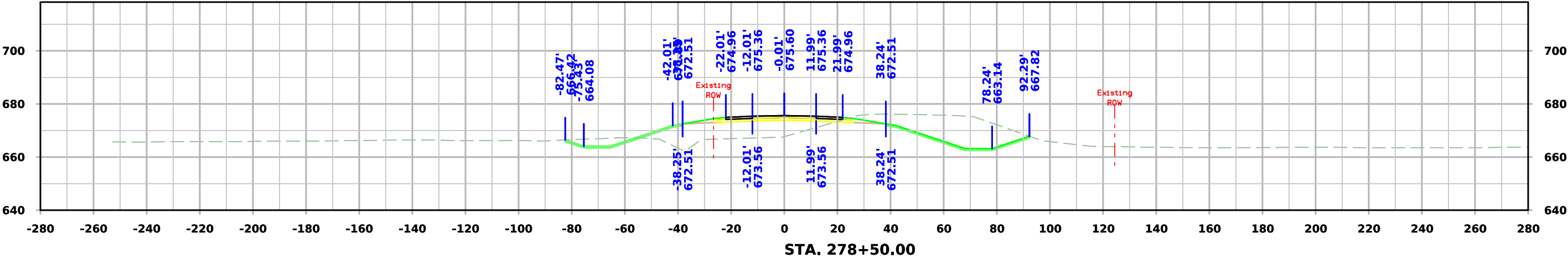
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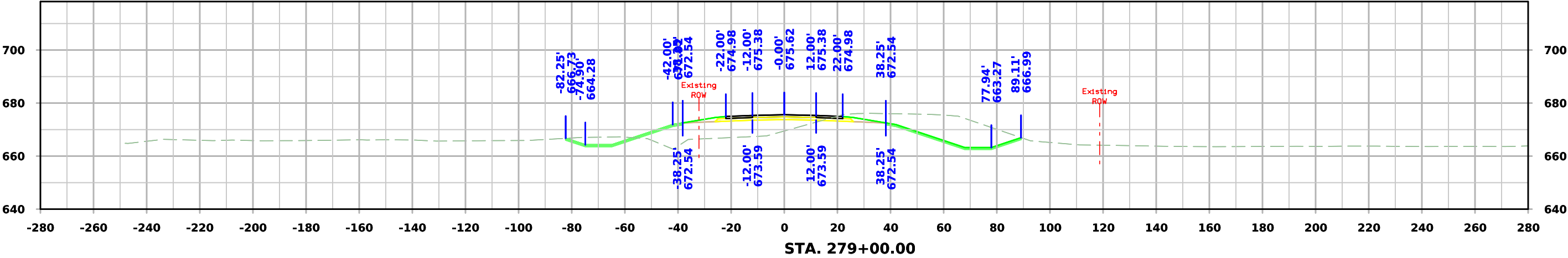
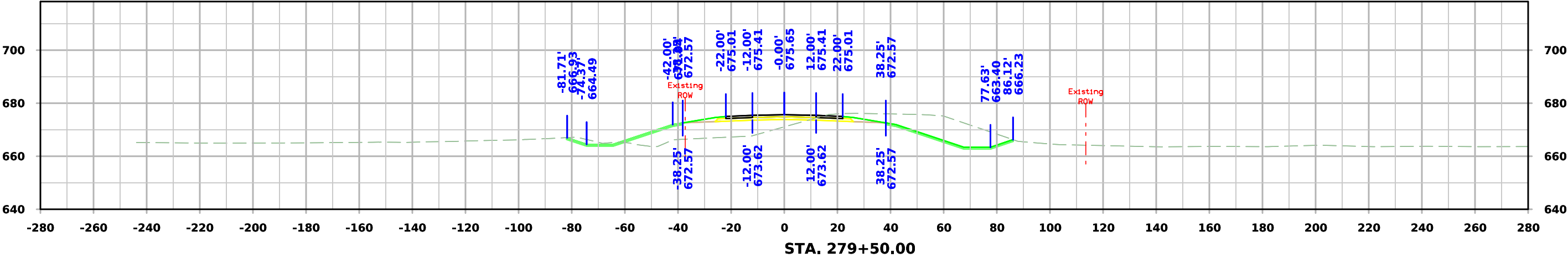
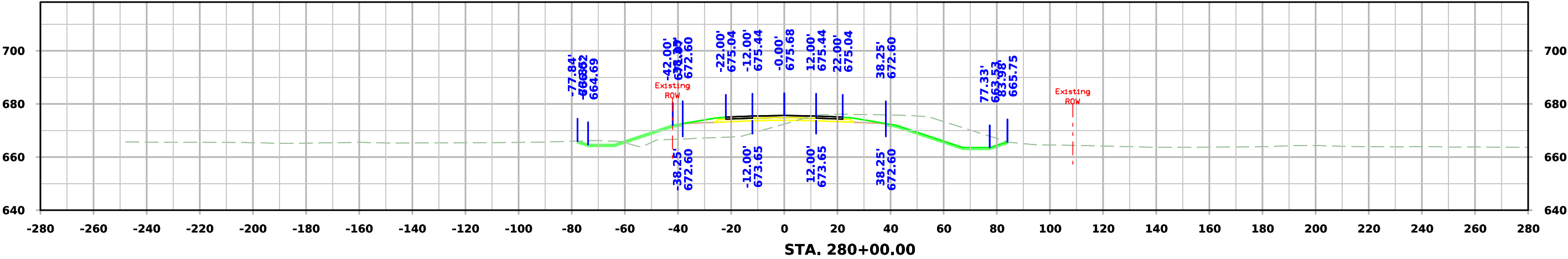
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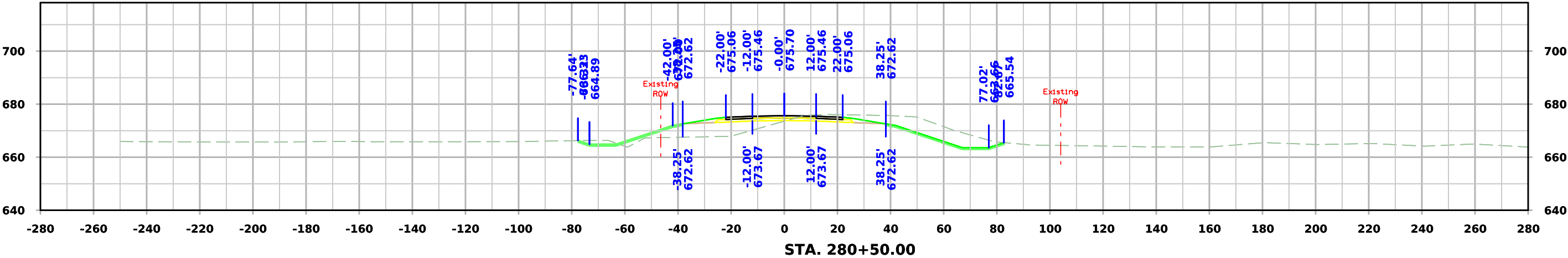
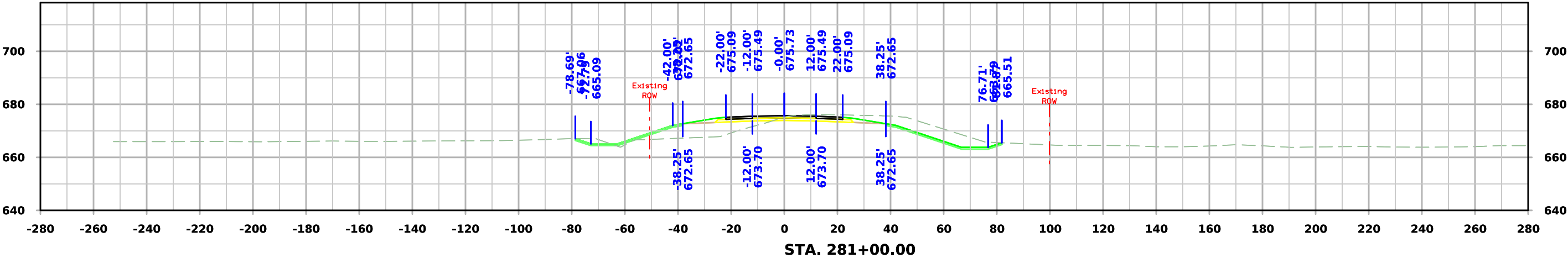
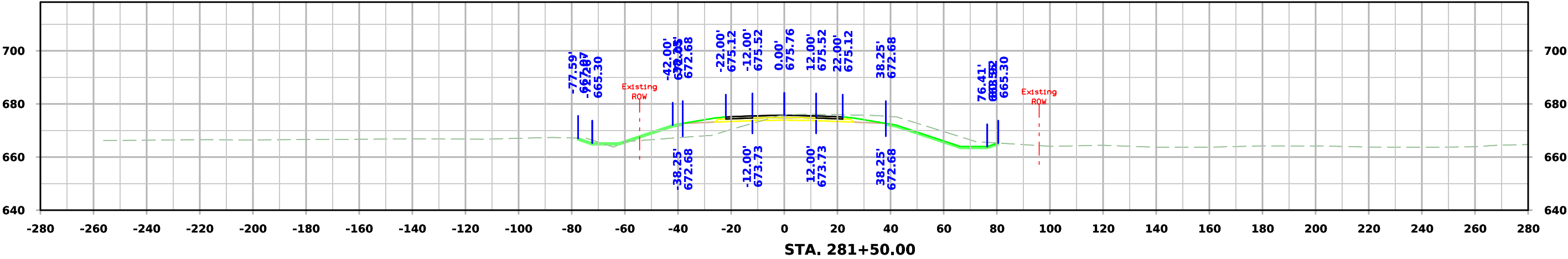
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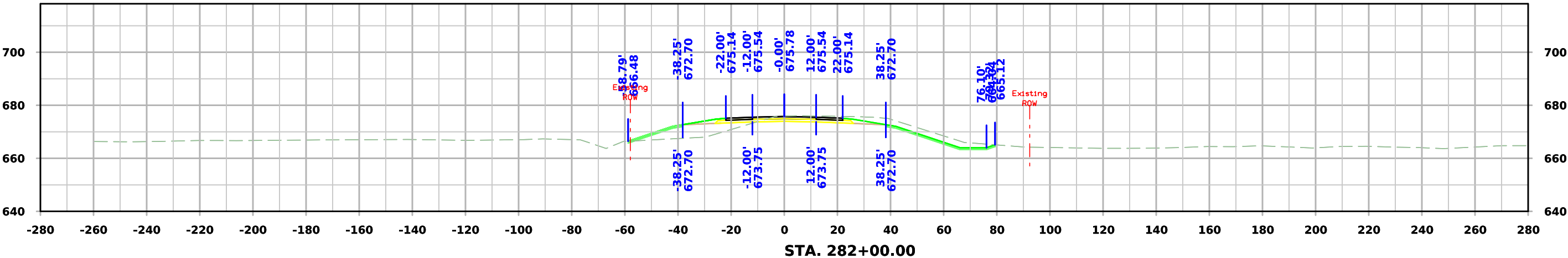
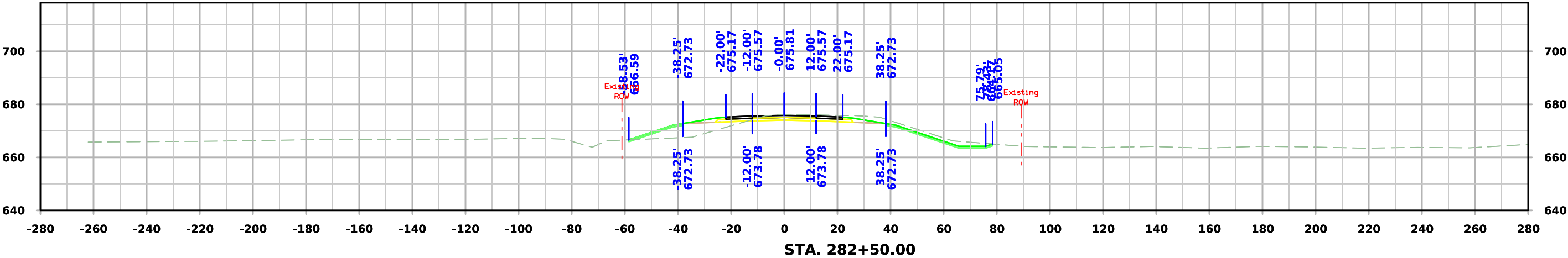
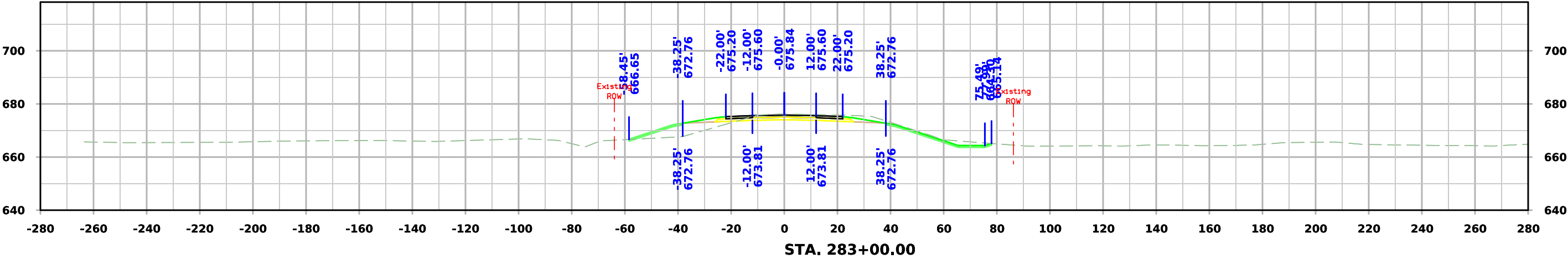
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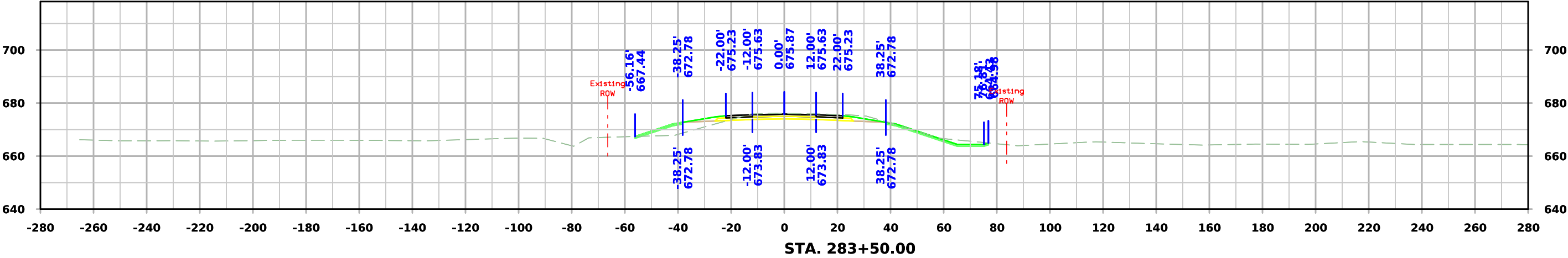
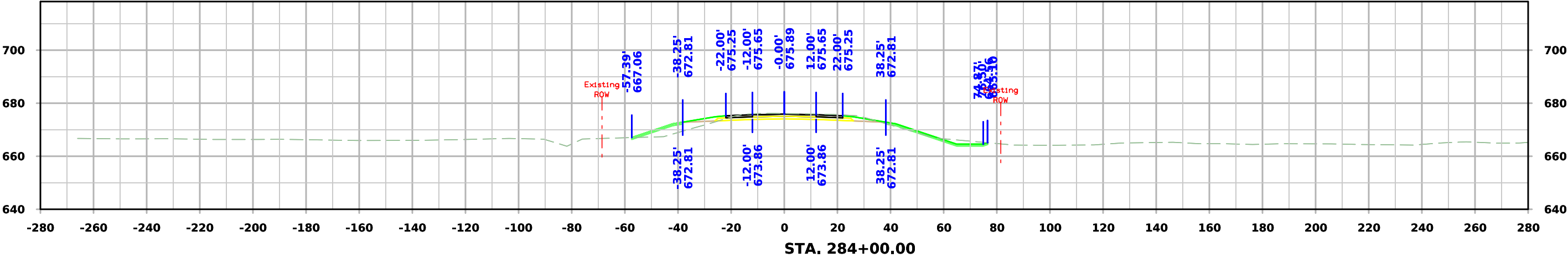
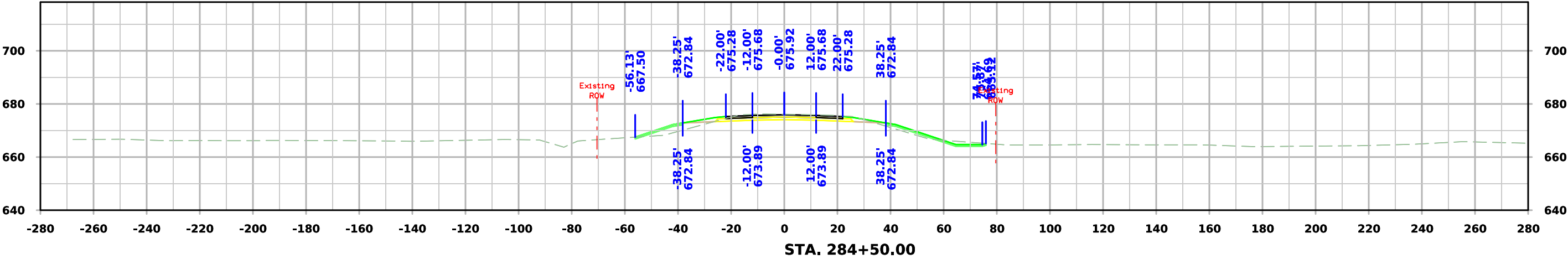
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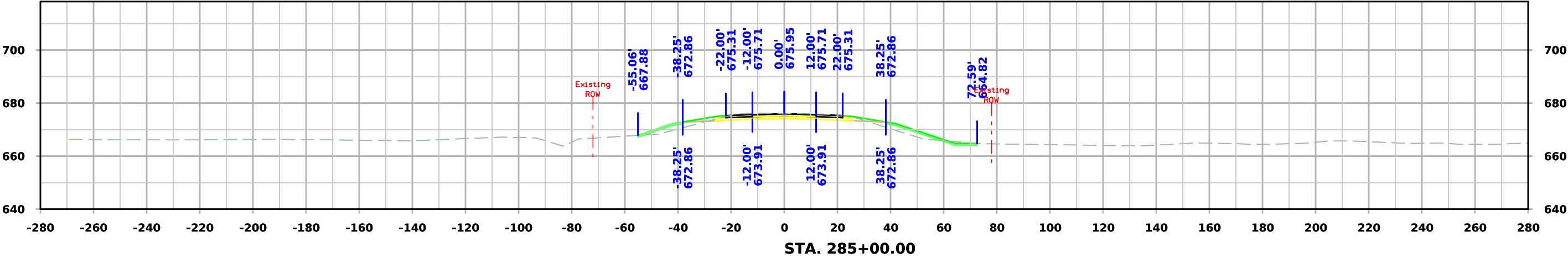
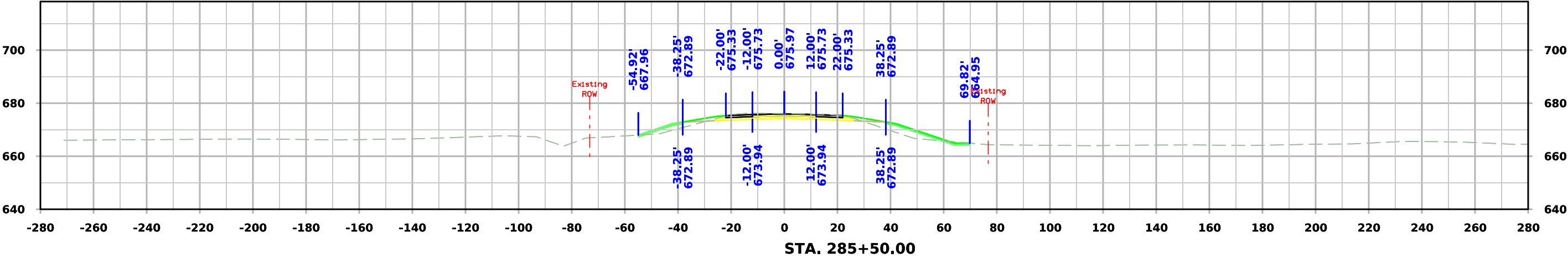
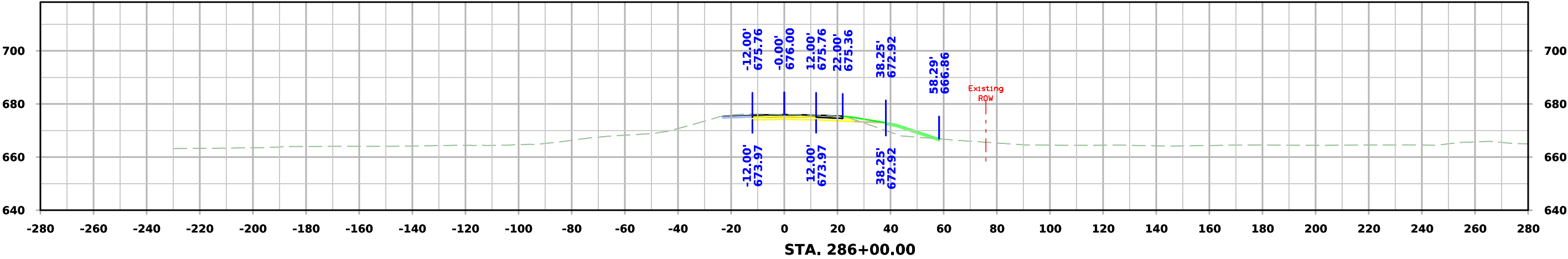
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