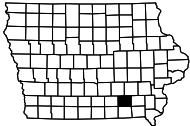


WAPELLO COUNTY

BRIDGE REPLACEMENT

LETTING DATE
10-19-2027

BRF-034-7(154)--38-90



INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
* A.3 - 11	Project Concept
* A.12 - 14	Design Criteria
* A.15 - 21	D2 Questions with Responses
B Sheets	Typical Cross Sections and Details
* B.1 - 4	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2	US 34 Plan / Profile Sheets
G Sheets	Survey Sheets
* G.1 - 3	Reference Ties and Bench Marks
G.4	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan
J.1	511 Travel Restrictions
J.1	Staging Notes
J.1	Coordinated Operations
U Sheets	500 Series, Mod.Stds. and Detail Sheets
* U.1	Blakesburg Detour Intersection Turning Exhibit
W Sheets	Mainline Cross Sections
* W.1 - 15	Mainline Cross Sections
	* Color Plan Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

WAPELLO COUNTY

BRIDGE REPLACEMENT

BEAR CREEK AND CPKC RR 4.2 MI W OF CO RD H35

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



For Project Location Map
Refer to Sheet No. A.2

PROJECT EVENT DATES

D-3 - 05-30-2025
D-5 - 10-03-2025
D-4 - 06-22-2027
B03 - 08-03-2027

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN - Date: 06-16-2025

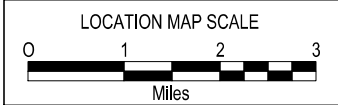
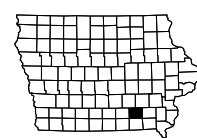
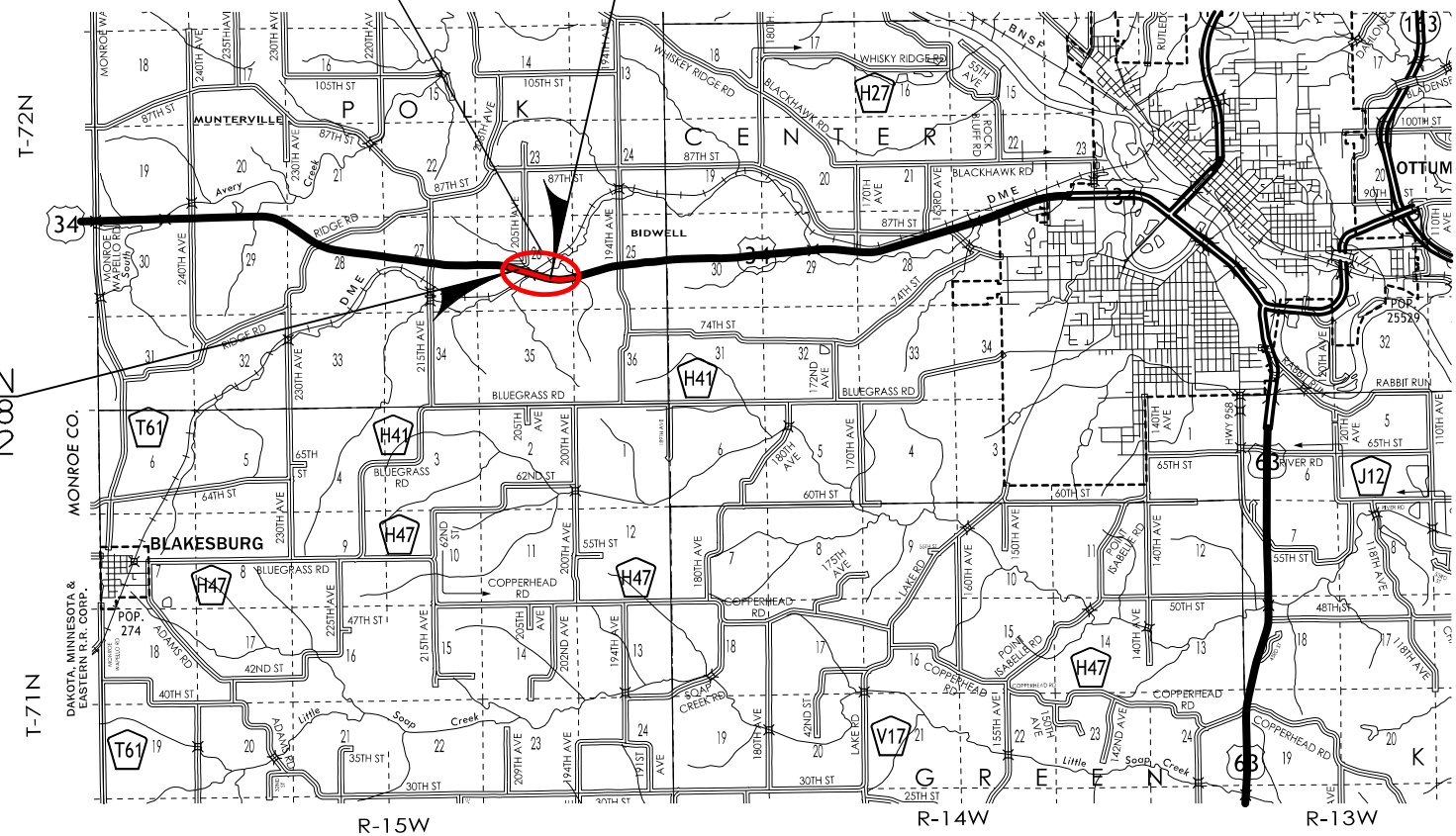
WAPELLO COUNTY			
DESIGN DATA RURAL			
2028	AADT	4,543	V.P.D.
2048	AADT	5,510	V.P.D.
2048	DHV	570	V.P.H.
TRUCKS		14	%
Total			
Design ESALs		2.33 million	

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

PROJECT LOCATION
STA 249+89

END CONSTRUCTION
STA. 256+00
REF. LOC. 181.65

BEGIN CONSTRUCTION
STA. 244+08
REF. LOC. 181.42



IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE:

District 5

DATE:

May 8, 2024

ATTENTION:

Robert Younie

PROJECT:

Wapello County
BRF-034-7(154)--38-90
PIN: 23-90-034-010

FROM:

John E. Bartholomew

BUREAU:

Design

SUBJECT:

Project Concept Statement; (Final, D0)

This project involves the replacement of the US 34 bridge (Maint. No.:9081.5S034) over Bear Creek and ICE RR 4.2 mi W of Co Rd H35.

A concept review was held on March 21,2024. Those present included Bonnie Clancy, Steve McElmeel, Marv May, Anthony Blint, Dale Harmon, Christy VanBuskirk, and Bob Younie from the District 5 Office; Jim Ellis and Patricia Schwartz from the Bridges and Structures Bureau; and John Bartholomew from the Design Bureau.

The four alternatives considered were:

1.

Replace the existing 362’ x 30’ Continuous I Beam bridge with a 506’ x 44’ Pretensioned Prestressed Concrete Beam (PPCB) Bridge. Traffic will be maintained by an offsite detour. **Estimated cost \$7,913,000**
2.

Replace the existing 362’ x 30’ Continuous I Beam bridge with a 506’ x 44’ Pretensioned Prestressed Concrete Beam (PPCB) Bridge. Traffic will be maintained on the existing bridge and the new bridge will be constructed on a new alignment
3.

Replace the existing 362’ x 30’ Continuous I Beam bridge with a 506’ x 44’ Pretensioned Prestressed Concrete Beam (PPCB) Bridge. Traffic will be staged to maintain to one lane of traffic, a minimum 3’ permanent roadway shift is required.
4.

Replace the existing 362’ x 30’ Continuous I Beam bridge with a 506’ x 44’ Pretensioned Prestressed Concrete Beam (PPCB) Bridge. Traffic will be staged to maintain one lane of traffic for each stage during construction. Construct 3’ minimum additional bridge width in lieu of a permanent roadway shift. The completed bridge would not be symmetrical, as it would have a wider shoulder on one side.

Alternative 1 is the preferred alternative to maintain consistency with nearby structures and shorter construction timeframe (see attached concept for details). Alternatives 2,3 & 4 were discussed and dismissed due to additional upfront costs. Additional right of way will be required. Traffic will be maintained by an offsite detour

The Draft Project Concept Statement was sent out for review and comment with concerns to be resolved by Monday, May 7, 2024. Comments received during the review period have been considered and resolved.

JEB:jaa
Attach.
cc:

C. Purcell
M. Dell
M. A. Swenson
S. Majors
D. L. Newell
W. A. Sorenson
A. A. Welch
B. Hofer
T. Jerman
K. K. Patel
B. Dolan
R. Meyer
M. E. Khoda
J. Ellis
E. Engle
S. McElmeel
J. Garton
B. Porter
FHWA

M. J. Kennerly
J. S. Nelson
D. E. Sprengeler
A. Poole
B. Bradley
E. C. Wright
J. Harris
G. Karssen
S. Anderson
R. Harris
T. Lovan
J. Hauber
K. Olson
N. Abuissa
T. Quam
D. Bielser
J. Woodcock
H. Torres-Cacho

K. D. Nicholson
M. Nop
C. C. Poole
K. Brink
J. W. Laaser-Webb
M. E. Ross
M. Van Dyke
B. E. Azeltine
D. Stokes
M. Todsen
Z. Abrams
S. Sersland
S. Neubauer
C. Brakke
B. Beavers
B. Lauderman
B. M. Clancy
P. Leanos

FINAL PROJECT CONCEPT STATEMENT

US 34 Bridge over Bear Creek and ICE RR 4.2 mi W of Co Rd H35

Wapello County
BRF-034-7(154)--38-90
PIN: 23-90-034-010
Maint. No. 9081.5S034
FHWA No. 50410

Highway Division
Design Bureau

John Bartholomew, P.E.
515-239-1540

May 8, 2024

I. STUDY AREA

A. Project Description

This project involves the replacement of the US 34 bridge (Maint. No. 9081.5S034) over Bear Creek and ICE RR 4.2 mi W of Co Rd H35.

The four alternatives considered were:

1. Replace the existing 362' x 30' Continuous I Beam bridge with a 506' x 44' Pretensioned Prestressed Concrete Beam (PPCB) Bridge. Traffic will be maintained by an offsite detour. **Estimated cost \$7,913,000.**
2. Replace the existing 362' x 30' Continuous I Beam bridge with a 506' x 44' Pretensioned Prestressed Concrete Beam (PPCB) Bridge. Traffic will be maintained on the existing bridge and the new bridge will be constructed on a new alignment.
3. Replace the existing 362' x 30' Continuous I Beam bridge with a 506' x 44' Pretensioned Prestressed Concrete Beam (PPCB) Bridge. Traffic will be staged to maintain to one lane of traffic, a minimum 3' permanent roadway shift is required.
4. Replace the existing 362' x 30' Continuous I Beam bridge with a 506' x 44' Pretensioned Prestressed Concrete Beam (PPCB) Bridge. Traffic will be staged to maintain one lane of traffic for each stage during construction. Construct 3' minimum additional bridge width in lieu of a permanent roadway shift. The completed bridge would not be symmetrical, as it would have a wider shoulder on one side.

Wapello County
BRF-034-7(154)--38-90
PIN: 23-90-034-010
Page 2

Alternative 1 is the preferred alternative to maintain consistency with nearby structures and shorter construction timeframe (see attached concept for details). Alternatives 2,3 & 4 were discussed and dismissed due to additional upfront costs. Additional right of way will be required. Traffic will be maintained by an offsite detour

B. Need for Project

This is a 362' x 30' continuous I-Beam steel bridge that was built in 1960 and overlaid in 1977 and is near the end of its useful life. The bottom of the deck has several cracking, leaching, hollow areas, and a honeycombed area. The steel girders have rust and section loss. Due to the overall condition of the bridge, a replacement is recommended.



With Route



Against Route



Right Profile



Left Profile

C. Present Facility

The existing structure is a 362' x 30', Continuous I-Beam bridge constructed in 1954.

US 34 in the project area is 24' wide PCC pavement with 10' wide granular shoulders

and 3:1 foreslopes, constructed in 1962. A 3.5” ACC resurfacing was accomplished in 1990, and a 3.5” HMA overlay was placed in 2013.

D. Traffic Estimates

The 2028 construction year and 2048 design year average daily traffic estimates are 4500 ADT with 14% trucks and 5500 ADT with 14% trucks, respectively.

E. Sufficiency Ratings

US 34 is classified as a Commercial and Industrial route and is a maintenance service level “B” roadway. The Bridge Condition Index is 53.0 and the Bridge Condition Rating is Fair.

F. Access Control

Access rights will not be acquired for this project.

G. Crash History

During the five-year study period from January 1, 2019 through December 31, 2023, there were 3 crashes including, no fatal crashes, 2 personal injury crashes, and 1 personal property crashes.

II. PROJECT CONCEPT

A. Feasible Alternatives

Alternative #1 - Replace with a bridge

Replace the existing 362’ x 30’ Continuous I Beam bridge with a 506’ x 44’ Pretensioned Prestressed Concrete Beam (PPCB) Bridge.

The typical cross section adjacent to the bridge approach will consist of a 24’ roadway (24’ wide pavement) with 10’ effective shoulders and 3:1 foreslopes. effective paved shoulders extending 230’ beyond each corner of the bridge approach and 3:1 foreslopes.

The existing grade will need to be raised a minimum of 3’ to provide the required clearance over the railroad, this will require approximately 425’ of roadway reconstruction on each end and foreslope reconstruction. This bridge will be constructed on the existing horizontal alignment. New bridge approaches will be constructed. The existing guardrail will be replaced with new guardrail and the shoulders will be paved 20’ beyond the ends of the guardrail. Class 10 will be necessary to flatten the existing foreslopes and to construct the new guardrail blisters. Class E revetment will be placed under the bridge for slope protection. New bridge end drains will be constructed on both ends of the bridge.

The existing high tension cable guardrail on the southwest side of the road will be removed and reinstalled.

Apply erosion control and rural seeding and fertilizing to all disturbed areas.

It appears that right of way will be required for this project.

Traffic will be maintained by an off-site detour.

Bridge Items	<u>Estimated Costs</u>
New Bridge	\$3,971,000
Bridge Removal	265,000
Revetment	150,000
Mobilization - 10%	441,000
M & C - 20%	<u>970,000</u>
Bridge Costs	\$ 5,822,000

Roadway Items	
Clearing and Grubbing	\$24,700
Embankment in place, contractor furnished	260,100
Excavation Class 13 Waste	281,900
Modified Subbase	81,600
PCC Pavement Shoulder	92,700
Bridge Approaches	145,400
PCC Pavement	252,500
Subdrain, Longitudinal,(SHLD)4’	20,300
Subdrain Outlet	6,300
Bridge End Drain	15,200
Guardrail (Includes Removal)	5,300
High Tension Cable Guardrail, End Anchor	5,400
Remove & Reinstall High Tension Cable Guardrail	62,900
Removal of Pavement	43,600
Wetland Mitigation	50,000
Erosion Control	50,000

Seeding and Fertilizing	5,100
Composite-Paved Shoulders for Guardrail	9,000
Composite-Class 10 for Guardrail Blisters	27,300
Composite-Guardrail	14,300
Right of Way	10,000
Mobilization - 5%	104,600
Traffic Control - 5%	104,600
M & C - 20%	418,200
Roadway costs	\$ 2,091,000
Project Total	\$7,913,000

C. Recommendations

It is recommended that the present structure be replaced, as described in Alternative No. 1.

D. Construction Sequence

It is anticipated that all work on this project will be awarded to one prime contractor. The Bridges and Structures Bureau will coordinate the plan preparation with assistance from the Design Bureau.

E. ADA Accommodations

There are no bike paths or sidewalks adjacent to US 34; therefore, no ADA accommodations are planned in conjunction with this project.

F. Special Considerations

This will not be a traffic critical project.

The ABC Rating Score of 36 is less than the first stage filter threshold of 50, therefore this bridge will not be considered further as a candidate for ABC construction.

No bike path or sidewalk will be required as part of this project.

Waterway is not on a state water trail or paddling route.

Right of Way appears to be required for this project.

The Location and Environment Bureau has reviewed this project and based on preliminary desktop observations, has determined that a Section 404 Permit will be required. It is expected that the work will be covered by Nationwide Permit 14.

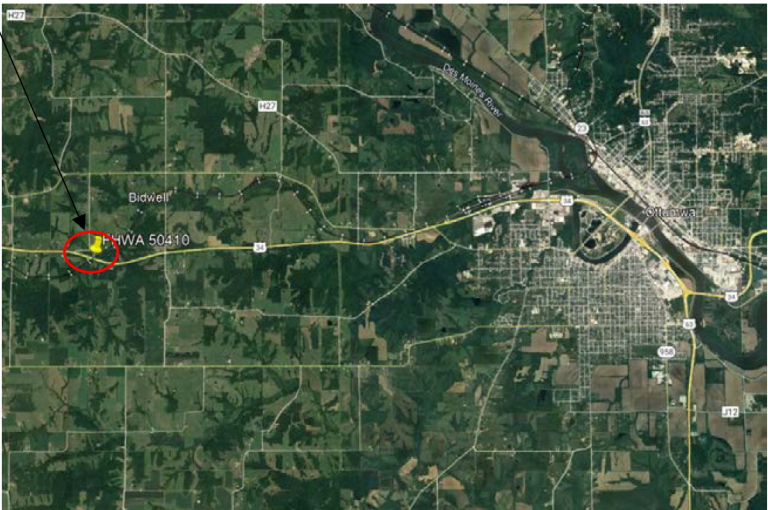
G. Program Status

Site data has been developed by the Design Bureau. This project is listed in the 2024-2028 Iowa Transportation Improvement Program, with \$10,000 programmed for right of way in FY 2028, and \$4,990,000 for replacement in FY 2028. Costs for this project may be eligible for bridge replacement funds. A schedule of events will be developed following approval of the Project Concept.

JEB:jaa

WAPELLO COUNTY

PROJECT LOC
MILEPOST 81.5



On US 34, Bear Creek and ICE RR 4.2 mi W of Co Rd H35
BRF-034-7(154)--38-90
PIN: 23-90-034-010



Bridge Bureau Attachment for Concept Statement

Date: December 20, 2023
By: P. Schwarz
Location: US 34 over Bear Creek and CNKC RR 4.2 mi W of Co Rd H35

County: Wapello County
Phase No.: BRF-034-7(154)--38-90
Project Code: 23-90-034-010

1. Regulatory/Coordination
- a. Iowa DNR Flood Plain permit = No, DA = 10 sq.mi. rural area is below the DNR FP permit threshold.

b. Iowa DNR Sovereign Lands permit = Not required.

c. Local Record of Coordination = Yes, required at the B01.

d. Flood Insurance Study = Yes Zone A, Panel 19179C0175E, 1/29/21

e. Drainage District = No, the site is not part of a drainage district.

f. Corps of Engineers Section 408 = Not required.

g. State Water Trail or Paddling Route = Not SWT or Paddling Route.

h. Historic Structure = No

i. Federally owned land in vicinity = No

j. USGS or Iowa Flood Center (IFC) gage or sensor impacted? No
2. Hydrologic/Hydraulic Analysis/RIDB Dataset
- a. Design discharges determined = Yes, flowrates have been determined MRRE 2013 methodology.

b. Hydraulic analysis done = No, required at the B1. For Concept, a Geo HECRAS model was utilized to estimate design backwater and average bridge velocity.

c. If DA > 10 sq. mi. Riverine Infrastructure Database (RIDB) dataset is required with B1 submittal = Yes (site ID BearC_Wap_9.19)

d. Project development hydraulic analysis will comply with the RIDB Guidelines at a minimum.
3. Structure/Roadway Layout Considerations
- a. A roadway profile grade raise of 3+' over the RR ROW is required. A higher profile is needed to account for deeper proposed girders and to obtain clearance over the full RR ROW. (If a staged option is selected, the profile shall additionally be evaluated to ensure that the existing pier cap is not in conflict with proposed beams. If proposed beams need to span the existing pier caps, a minimum 1' vertical clearance is the policy.)

b. The toe of the west bridge berm and proposed bridge pier foundations are proposed to be placed outside of the RR ROW. The intent is to meet the RR policy for bridges spanning the RR ROW to allow for potential future RR expansion.

c. The proposed 40-degree skew for a PPCB bridge being greater than 30 degrees was discussed and approved by the BSB. The rationale is to match the existing foundation skew and to provide a better fit to the RR and channel skew than a 30-degree skew bridge would provide.

d. Due to the high fills anticipated to exceed 30 feet, 3:1 berms are shown at the concept stage. Actual fill heights and TSL preliminary berm design slopes shall be verified during the preliminary B1

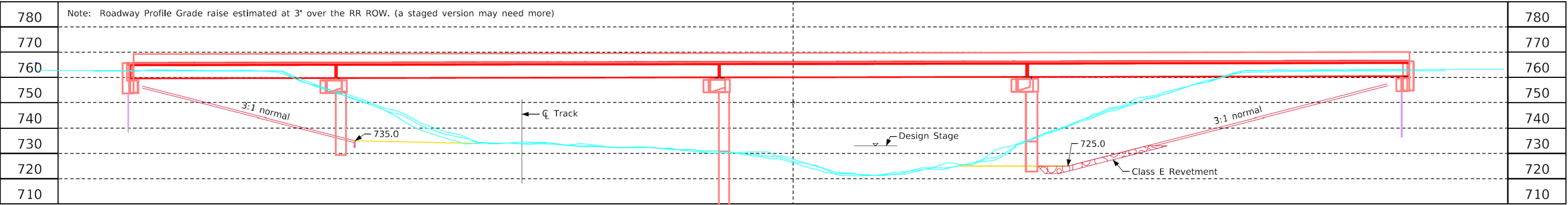
~ 1 ~

- development. Potentially, Soils Design may need to be contacted for an initial berm estimate, if proposed fills exceed 40 feet [BDM 3.7.3].
- e. A bench at approximately elevation 725 was considered during the concept hydraulic analysis in order to provide desirable average bridge velocity. Such a bench was considered for placement on the east side of the channel to avoid any potential impact to the RR ROW.
4. Special construction issues
- a. Special requirements may be applicable for construction over the RR track and ROW. The assumed RR ROW width for the concept is 100' width, 50' to each side of centerline track (actual ROW to be verified during preliminary design).
 - b. Drilled shaft pier foundations shall be considered to reduce potential conflicts between proposed foundations and existing bridge steel piling. The soil profile on the existing bridge plans appears to be acceptable for a drilled shaft design. The pier foundation type determination shall be made during final bridge design. A designer note identifying this effort on the TSL is recommended.
5. Special survey = No
6. Aesthetic enhancements = Not anticipated due to the site located in a rural area.
7. Other
- a. The District has recommended potential use of an off-site detour to the south. The estimated out of distance travel length is 7 miles. Use of the detour is be subject to coordination and agreement with the County. Shifted roadway alignment and/or staged alternatives may be considered in the event that an acceptable detour is not confirmed.

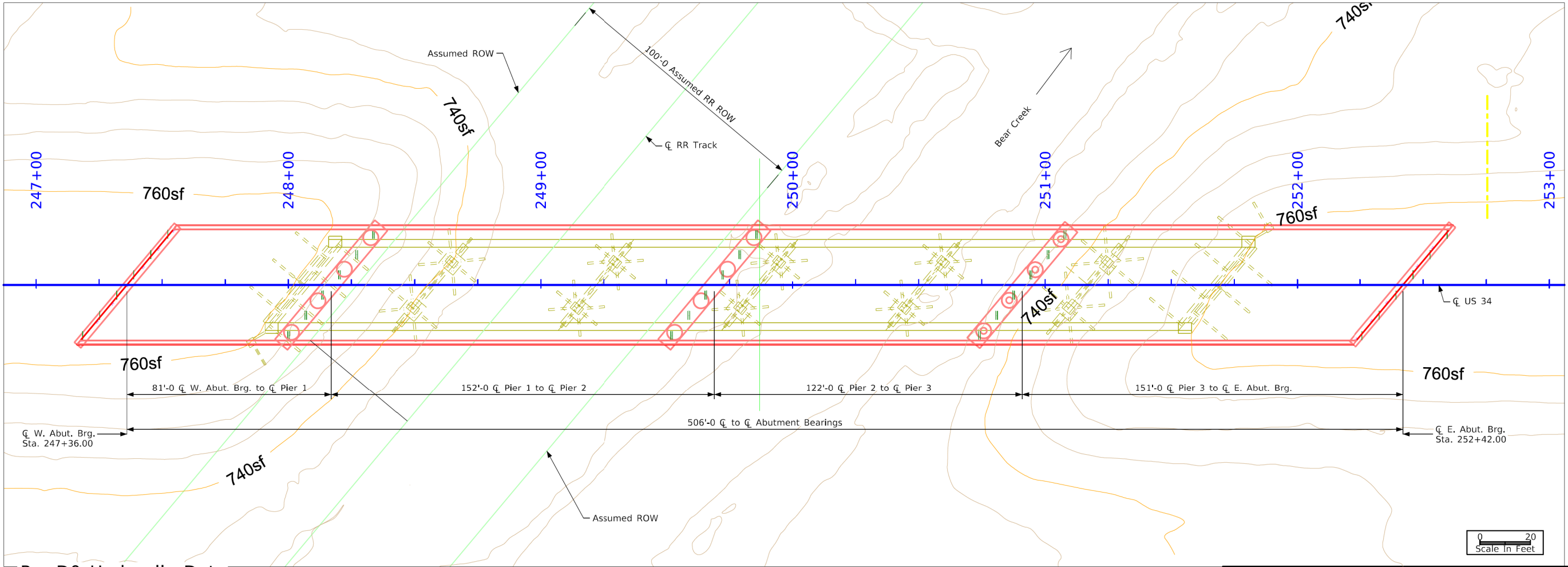
Special Survey:

None.

Control Point:



BRG TSL Longitudinal Section Along CL Approach Roadway



Pre-D0 Hydraulic Data

RIDB: BearC_Wap_9.19
Drainage Area = 10.0 Sq. Mi.
Stream Slope (HGL) = 11.3 Ft./Mi.
Q₅₀ = 5430 cfs
Stage = 733.0 (Design Stage)
Avg. Bridge Velocity = 6.1 fps
Q₁₀₀ = 6640 cfs
Stage = 733.7
Backwater = 0.5 Ft.

Situation Plan

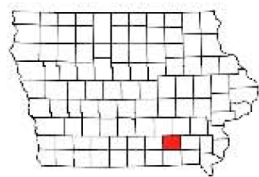
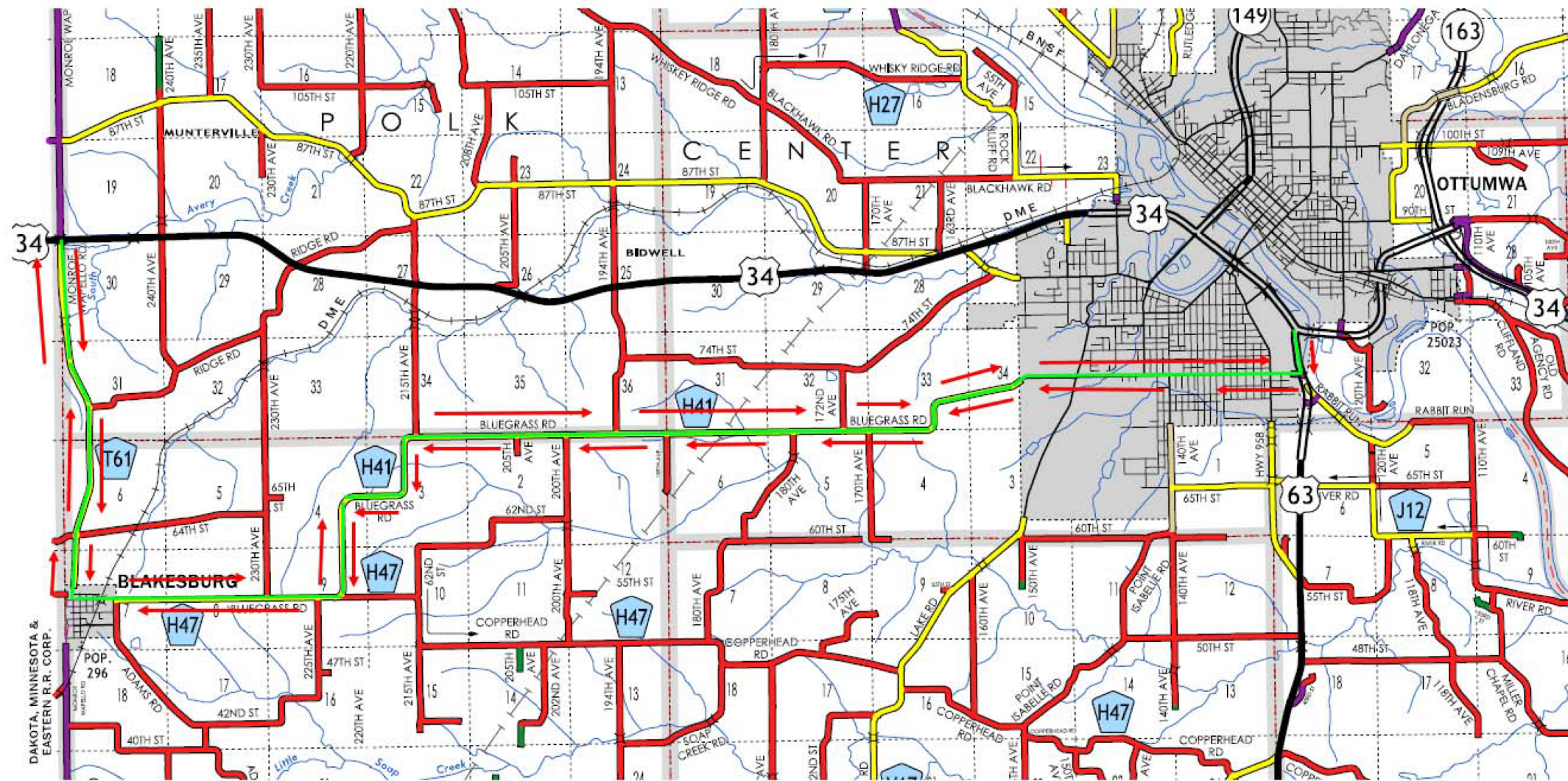
Location

US 34 over CPKC RR and Bear Ck
T-72N R-15W
Section 26
Polk Township
Wapello County
FHWA No. TBD (existing is 50410)
Bridge Maint. No. 9081.5S034
FRA No. 375750W
Latitude ??,123456°
Longitude -??,123456°

Design For 40 Degree Skew LA
**506'-0 x 44'-0 Pretensioned,
Prestressed Concrete Beam Bridge**
81'-0, 151'-0 End Spans 152'-0, 122'-0 Interior Span
STA. 249+89.00 (US 34) (US 34) Turn-in Date: Dec 2023
Wapello County
IOWA DEPARTMENT OF TRANSPORTATION
Design No. ??? Design Sheet No. 1 of 1 FHWA No. TBD

FILE NO. ???	ENGLISH	DESIGN TEAM AAA\BBB\CCC	Wapello COUNTY	PROJECT NUMBER BRF-034-7(154)--38-90	SHEET NUMBER V.1
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Wapello County
 Bear Creek and ICE RR 4.2 mi W of Co Rd H35
 BRF-034-7(154)--38-90
 PIN:23-90-034-010

← DETOUR



BRF-034-7(154)--38-90 Utilities

Lumen/CenturyLink

Steve Parker

CTL-RDMV-IA@lumen.com

Work # 515-265-0968

Iowa Communication Network

Mike Dalen

Mike.dalen@iowa.gov

Work # 515-725-4707

Southern Iowa Electric Cooperative

Greg Proctor

gproctor@sie.coop

work # 641-664-2277

Wapello Rural Water Association

Krista Huffman

kristah@wapelloruralwater.com

work # 641-682-8351

Roadway	US 34		
PIN Number	23-90-034-010	Submittal Date	04/22/25
Project Number	BRF-034-7(154)--38-90		Approval Date
District	District 5	Assistant District Engineer	Steve McElmeel
County	WAPELLO	or	
Route	US 34	Office Director	
Location	Bear Creek and ICE RR 4.2 mi W of Co Rd H35		
Work Type	Bridge Replacement		
Segment Manager			
Designer	Jonathan Bahr		

[Design Manual Section 1C-1](#)
[Last Updated: 04-29-19](#)

Rural Two-Lane Highways (Rural Arterials)

Design Element		Preferred	Acceptable	Project Values
Design speed (mph)		60	50	60
Maximum superelevation rate (Refer to Section 2A-2)		6%	8%	See Note 1
Design lane width (ft)		12	12	12
Full depth paved width (ft)		12	12	12
Right turn lane (ft)		12	10	n/a
Climbing Lane (ft)		12	12	n/a
Left turn lane (ft)		12	10	n/a
Pavement cross-slope (on tangent sections)	Through lanes	2%	1.5% minimum, 2% maximum	2
	Auxiliary and turn lanes	3%	3% maximum	n/a
	Crown break at centerline	4%	4% maximum	4
Shoulder cross-slope (on tangent sections)		4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	4
Curb type (Refer to Section 3C-2)	Design speed = 50 or 55 mph	6-inch sloped	6-inch standard	n/a
	Design speed ≥ 60 mph	4-inch sloped	6-inch sloped	n/a
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	3:1	10:1 for 4', then 3:1
	Beyond standard ditch depth and design clear zone	3.5:1	3:1	3:1
	Curbed roadways	2%	not steeper than 3:1	n/a
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)		3:1	2.5:1	3:1
Transverse Slopes	w/ drainage structures	8:1	6:1	n/a (see Note 2)
	w/o drainage structures	10:1	6:1	n/a (see Note 2)
Ditches (Refer to Section 3G-1)	Outside ditch (depth x width) (ft)	5 x 10	--	proposed 10' width
Bridge width—new*	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	n/a
	Bridge length > 200 ft	design lane widths + effective shoulder widths	design lane width + 4' right and left of the design lane widths	12' lanes + 10' shldrs
Bridge width—existing*		design lane widths + no less than 2 ft left and right	design lane widths + 2 ft. offset left and right	(see Note 3)
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary	16.5	16	n/a
	Over non-primary	16.5 at interchange locations, 15 at all other locations	14	n/a
	Over railroad	23.3	23.3	24.75' (see note 4)
	Sign trusses and pedestrian bridges	17.5	17	n/a
Structural Capacity		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	
Level of Service		B	B	B

*FHWA notification via email is required if acceptable critera is not met on the NHS system (No formal design exeption is required)

Note 1: Record Drawings (1962) show Superelevated Curves in the vicinity of the Project were designed at 3.5% (west of the bridge) and 4.7% east of the bridge. The highest superelevation on the 1962 project was 4.7%.

Note 2: Record Drawings (1962) does not indicate the existing Transverse Slopes. Entrances within the vicinity of this project do not have culverts and will not be effected by this project.

Note 3: Existing Bridge is being replaced. The existing Bridge is 362' x 30' (12' lanes + 3' shoulders) Continuous I Beam Bridge.

Note 4: Proposed 24.75' clearance was approximated at STA 248+70. Distance was measured from bottom of 3D modeled beam to the surface of surveyed 3D terrain (westernmost rail).

Roadway Design Speed (mph) =				60											
Design Manual Section 1C-1 Last Updated: 04-29-19				Design Criteria for High Speed Roadways											
Design Element			Preferred Criteria						Acceptable Criteria						Project Values
			Design Speed, mph						Design Speed, mph						
			50	55	60	65	70	75	50	55	60	65	70	75	
Stopping sight distance (ft) (Refer to Section 6D-1)			425	495	570	645	730	820	425	495	570	645	730	820	570
Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3)	Method 5 superelevation and side friction distribution	e _{max} = 6%	833	1060	1330	1660	2040	2500	833	1060	1330	1660	2040	2500	1330
		e _{max} = 8%	--	--	--	--	--	--	758	960	1200	1480	1810	2210	n/a
Minimum vertical curve length (ft) (Refer to Section 2B-1)			150	165	180	195	210	225	150	165	180	195	210	225	180
Minimum rate of vertical curvature (K) (Refer to Section 2B-1)	crest vertical curves		84	114	151	193	247	312	84	114	151	193	247	312	151
	sag vertical curves	roadways without fixed-source lighting	96	115	136	157	181	206	96	115	136	157	181	206	136
		roadways with fixed- source lighting	96	115	136	157	181	206	54	66	78	91	106	121	n/a
Minimum gradient (%) (Refer to Section 2B-1)			0.5						0.3% with a curb, 0.0% without a curb						0.17 no curb
Maximum gradient (%)	(Refer to Section 2B-1)	Urban roadways	4		3				7	6	6	--	--	--	n/a
		Rural roadways							5	5	4	4	4	4	3.2
		Interstates							5	5	4	4	4	4	n/a
Clear zone			See "Preferred Clear Zone" table in Section 8A-2						See "Acceptable Clear Zone" table in Section 8A-2						30

D2 Questions for District 5 – with Responses in GREEN Text

Date 6/10/2025
Time: 1:30pm to 2:50pm via Microsoft Teams.
Description: D2 Field Exam
Location: Microsoft Teams

Attendees:
Ames Road Design: Jonathan Bahr (Transportation Engineer Specialist), Kyle Schrock (Road Design Section Manager), Yan Jia (Transportation Engineer Administrator), Kolby Kohl (Road Design Intern).
District 5: Steve McElmeel (Assistant District Engineer), Dale Harmon (District Construction Tech Auditor), Darrick Bielser (District Construction Engineer), Bryan Archer (Utility Coordination), Marv May (Engineering Technician Senior).
Bridge Bureau: Jimmy Ellis (Preliminary Bridge Manager), Patricia Schwarz (Preliminary Bridge Engineer).
Location and Environment Bureau: Jill Garton (Protected Species), Brandy Beavers (Environmental Specialist Senior), Jacob Woodcock (Cultural Resources).
Pre-Design: Yuejia Gu (Transportation Engineer Associate), Joe Adams (Design Technician Specialist), John Bartholomew (Transportation Engineer Specialist).

County : Wapello
Project Code : 23-90-034-010
Phase Number : BRF-034-7(154)--38-90
Location : Bear Creek and ICE RR 4.2 mi W of Co Rd H35
2025-06-10 Field Exam Response: (Location updated: Bear Creek and CPKC RR 4.2 mi W of Co Rd H35)
Work Code : 2001-Bridge-Unspecified
Project Directory : 9003401023

1. PROJECT LIMITS

- a. Beginning of Project: Beginning of Project depends on proposed profile and installation of paved shoulder and installation of high-tension cable guardrail at the SWC of the bridge.
 - i. 2025-06-10 Field Exam Response: Confirmed. Beginning of Project is located at the beginning of the proposed Roadway Profile Adjustment. Extent of installation/reinstallation of high-tension cable guardrail at the SWC of the bridge shall be determined as design progresses.
- b. End of Project: End of Project depends on proposed profile and installation of paved shoulder.
 - i. Confirmed. End of Project is located at the end of the proposed Roadway Profile Adjustment.

2. PAVEMENT DESIGN

- a. Road Design has been working with Danny Zeimen in Materials to determine the appropriate Pavement Specifications. Road Design sent coordination e-mails to Danny Zeimen on 2/26/2025, 4/1/2025, and 5/29/2025. Danny Zeimen responded on 5/29/2025 and recommended that both the Mainline and Shoulder Pavement should be



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9.5" PCC over 12" Modified Subbase.

- i. 2025-06-10 Field Exam Response: Confirmed pavement design. Both the Mainline and Shoulder Pavement should be 9.5" PCC over 12" Modified Subbase.

3. TYPICAL SECTIONS and CROSS-SECTIONS

- a. Review Typical Sections and Cross-Sections developed for the D2 Field Exam. The cross-sections were designed to illustrate maximum impacts. Determine where and what components should be constricted (if any) in order to reduce the impacts.
 - i. 2025-06-10 Field Exam Response: Confirmed Typical Sections and Cross-Sections as shown in the Field Exam Plans. No changes to the foreslope design (10:1 x 4' wide shelf to 3:1 foreslope) or Ditch design (10' wide ditch bottom) were requested.

4. ROADWAY PROFILE

- a. Discuss the Proposed Roadway Profile:
 - i. 2025-06-10 Field Exam Response: Bridge Bureau worked with Road Design to develop a Roadway Profile that provided the 23'-4" vertical Railroad Clearance Requirement with an additional buffer of at least 3" to 4" across the entire Railroad Right of Way envelope.

5. SAFETY CONSIDERATIONS

- a. Are there any additional safety considerations besides typical features (rumble strips, and full-width paved shoulder) that should be introduced to the scope of this project?
 - i. 2025-06-10 Field Exam Response: No additional safety considerations were requested other than the typical features (rumble strips and full-width paved shoulder).
- b. There we no reported fatalities within the project vicinity between the current date (4/18/2025) and 2018 according to the Iowa Crash Analysis Tool.
 - i. 2025-06-10 Field Exam Response: No comment.

6. SUPERELEVATED CURVES

- a. There is a superelevated curve on the east side of the Project that is within the Project Limits. The superelevation rate appears to be approximately 1% every 90’ according to the surveyed terrain surface (Maximum superelevation exceeds 4%). This existing superelevation rate is VERY gradual when compared to Superelevation Table 2 in Section 2B-3 of the Design Manual. The superelevation rate to go from 2% to 0% should be approximately 48’ (1% every 24’). Road Design recommends that the existing superelevation rate should be maintained so drivers do not need to adjust the rate at which they are adjusting their turning rate. Are there exceptions to this recommendation? Are there any complaints about how this curve currently functions?
 - i. 2025-06-10 Field Exam Response: No exceptions were taken to the Road Design recommendation that the existing superelevation rate should be maintained. No complaints regarding how the curve currently functions were reported by the attendees.

7. ROADWAY SIGNAGE NEEDING ADJUSTMENT

- a. 2025-04-18 Road Design Note: There may be Roadway Signage needing adjustment with this project. “Slower Traffic Keep Right” at 244+35 (LT) and “No Passing Zone” at 255+60 (LT). However, the overall foreslope change at both of these locations appears to be minimal.
 - i. 2025-06-10 Field Exam Response: No comment.

8. RAILROAD PERMITTING

- a. The Iowa, Chicago, and Eastern Railroad (IC&E) has a track that passes beneath the Bridge. Discuss coordination with the Railroad Bureau (ie. will the Bridge Bureau be the main point of contact with the Railroad Bureau?).
 - i. 2025-06-10 Field Exam Response: Patricia Schwarz (Bridge Bureau) mentioned that the Railroad ownership has changed from IC&E to Canadian Pacific/Kansas City (CPKC). The change in ownership makes it a Class 1 Railroad now. Patricia will send the Pre-Concept e-mail thread from Ed Engle (Rail Bureau, retired) regarding the change in ownership to the plans. The location for the project will be updated by Mark Swenson (Contracts Bureau).
 - ii. 2025-06-10 Field Exam Response: Jimmy Ellis (Bridge Bureau) responded that Rail Bureau will lead communication with the Railroad. Most of the communication with Rail Bureau will be with Bridge Bureau because the Bridge improvements consist of the majority (if not all) of the impact to the Railroad Property.
 - iii. 2025-06-11 Field Exam Follow-Up Response: Patricia Schwarz forwarded the e-mail thread mentioned during the 6/10/2025 Field Exam Meeting. Mark Swenson updated the Project Location in Masterworks accordingly (Bear Creek



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and CPKC RR 4.2 mi W of Co Rd H35).

- iv. 2025-06-11 Field Exam Follow-Up Response: Tami Quam (Design Bureau, formerly Rail Bureau) responded to Patricia Schwarz’s 6/11/2025 e-mail and mentioned; “The ownership should be Dakota, Minnesota, & Eastern (DME) Railroad Company which is doing business as Canadian Pacific Kansas City (CPKC), but Amanda Woods (Rail Bureau, Tami Quam’s replacement) and Dave Phillips (Rail Bureau, Ed Engle’s replacement) can confirm that.” Amanda Woods



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and Dave Phillips were copied on Tami’s e-mail.

9. LONGITUDINAL SUBDRAINS

- a. Danny Zeimen ‘recommended 100% subdrain coverage’ in his 5/29/2025 Pavement Determination e-mails for US 34 (154) over Bear Creek. The Estimated Costs section of the Project Concept (Page 4) suggested subdrain is necessary. The 2013 Record Drawings (NHSX-034-7(139)--3H-90) suggest there is longitudinal subdrain in the area because of the need for a ‘new’ outlet at STA 242+00, the Record Drawings for the original existing subdrain in the vicinity of the project could not be found. The Road Design Team will discuss the placement of longitudinal subdrain with Soils Bureau. Soils Bureau will put together the subdrain tabulation and should be the final say regarding whether 100% subdrain means that subdrain needs to be on both sides of a given portion of roadway or just on one side. Road Design suspects that if the subgrade is crowned then the longitudinal subdrain will need to be on both sides of a given portion of roadway. FYI, the Bridge Approaches have their own transverse subdrain system.
 - i. 2025-06-10 Field Exam Response: No comment.

10. SLIDE REPAIR / EROSION

- a. Slide Repair was NOT mentioned within the Project Concept and is assumed NOT to be necessary. Please confirm there are no locations within the Project Limits that require Slide Repair.
 - i. 2025-06-10 Field Exam Response: No slides along the Roadway were reported by the District attendees. Jimmy Ellis (Rail Bureau) mentioned that there is significant bridge berm embankment erosion under the bridge at the existing abutments (enough erosion to create significant gullies and open up the abutment cap). Jimmy added that the bridge earthwork operations (rocking of the new berms and armor for the bridge abutments) will fix the erosion issues.

11. BENCHING

- a. Is Benching necessary to install any of the proposed foreslope? Preliminary maximum height of the proposed 3:1 foreslope from the roadway surface down to the ground intercept point is approximately 30’ (near the bridge).
 - i. 2025-06-10 Field Exam Response: Road Design shall coordinate with Soils Bureau to determine whether benching is necessary to install any of the proposed foreslope.

12. BRIDGE END DRAINS/EROSION ROCK FLUMES

- a. The Estimated Costs section of the Project Concept (Page 4) indicates Bridge End Drains / Erosion Rock Flumes are necessary within the Approach Sections of the Bridge? Are there any special recommendations for the Bridge End Drains?
 - i. 2025-06-10 Field Exam Response: No special recommendations for the Bridge End Drains were made. The attendees confirmed Erosion Stone should extend to the toe of the back slope of the proposed ditch at the NW quadrant of the Bridge (per [Standard Road Plan DR-402 \[Rock Flume for Bridge End Drain\]](#)). Notes on DR-402 mention that Erosion Stone should “extend to a minimum of 4’ beyond the toe of foreslope where no backslope exists” (this effectively correlates with 4’ beyond the proposed grade intercept point at the remaining three quadrants).

13. BRIDGE APPROACH

- a. It has not yet been determined whether the abutment is a ‘movable’ abutment or a ‘fixed’ abutment. Please verify the abutment type so that the appropriate Bridge Approach Pavement Standard Road Plan is selected. The Note on the Bridge Approach Typical Section on the B Sheets will be updated as needed.
 - i. 2025-06-10 Field Exam Response: Patricia Schwarz (Bridge Bureau) confirmed that the Bridge Abutment will be a Fixed Abutment. Patricia added that if the Concept or Bridge Documents mention that the Bridge will have a ‘Stub Abutment’ then that means that the Abutment is Fixed. Patricia added that ‘Integral Abutments’ are ‘Movable Abutments’. Patricia added that the ‘Stub Abutment’ was mentioned in the ‘Bridge Cost Analysis and Concept Statement’ and the Statement wasn’t published as part of the Concept Document. Another way to tell if the Abutment is ‘Stubbed’ is if the Bridge Drawings show an abutment with a battered piling.
- b. It appears as though the double reinforced section will be longer than 20’ (as measured along the centerline of the road) because of the skew of the Bridge. The Designer Information for Bridge Approach Pavement section of the Standard Road Plans say “If the need arises for the double reinforced section to be longer than the 20 foot minimum shown on BR-201, BR-202, BR-203, and BR-204, contact the Bridges and Structures Bureau to verify location of the lug for movable abutments.”
 - i. 2025-06-10 Field Exam Response: Location of the lug for Movable Abutments is not applicable because the Abutment for this Bridge will be Fixed (not Movable).
- c. Extended Wings:
 - i. 2025-06-10 Field Exam Response: Patricia Schwarz said that she anticipates extended wings will be necessary on the Bridge and wanted to make sure it was brought to Road Design’s attention as the extended wings may have an impact to the design of the Bridge Approach (Patricia wasn’t sure if it made a difference or not). Road Design will make note of the extended wings and review the Bridge Approach design accordingly.
- d. Skewed Bridge Deck:
 - i. 2025-06-10 Field Exam Response: Patricia Schwarz said that she anticipates that the 40 degree Skewed Bridge Deck utilized on the existing bridge will be replicated on the Proposed Bridge. Additional justification for the 40 degree skew can be found in the Section 3.c (‘Structure/Roadway Layout

Considerations’) of the ‘Bridge Bureau Attachment of Concept Statement’ found in the Project Concept.

14. GUARDRAIL

- a. Some High-Tension Cable Guardrail at the SWC of the Bridge will need to be connected to the new steel beam guardrail end terminal. Can the existing High-Tension Cable Guardrail be ‘removed and reinstalled’ or must new High-Tension Cable Guardrail be specified?
 - i. 2025-06-10 Field Exam Response: Yan Jia (Road Design) recommended that the Road Design Team discuss the High Tension Cable Guardrail with Methods.
- b. Extended Wings:
 - i. 2025-06-10 Field Exam Response: Patricia mentioned that she anticipates extended wings will be necessary on the Bridge and wanted to make sure it was brought to Road Design’s attention as the extended wings may have an impact to the design of the Steel Beam Guardrail and the associated Concrete Barrier End Sections (Patricia wasn’t sure if it made a difference or not). Road Design will make note of the extended wings and review the design of the Steel Beam Guardrail and the associated Concrete Barrier End Sections accordingly.
- c. Barrier Rail:
 - i. 2025-06-10 Field Exam Response: Patricia mentioned that she anticipates the use of TL5 Barrier Rail because the Bridge is over a Class 1 Railroad. The use of TL5 Barrier Rail (as opposed to TL4) is usually a question that would be asked by Bridge Bureau to the District, but in this case the use of the TL5 Barrier Rail is a given because of the Class 1 Railroad. Also, the TL5 Barrier Rail will be used through the entire bridge. TL5 Barrier Rail is a higher rail than normal and provides additional safety over Railroads.

15. SIDEROAD AND ENTRANCE TREATMENT

- a. An eastbound residential entrance at 257+20 and a westbound field entrance at 257+32 are in the vicinity of the project, but are outside the proposed limits. There should NOT be any impacts to these entrances due to the construction of this project (the entrances will be UAC’d).
 - i. 2025-06-10 Field Exam Response: Jimmy Ellis requested that Sight Distances be checked for the eastbound entrance at 257+20 to make sure the new guardrail at the SEC of the bridge does and the proposed roadway profile crest curve does not obstruct vision to and from the entrance. Sight Distances will be checked by Road Design according to Design Manual Section 6D-1 (Sight Distance).
 - ii. 2025-06-12 Field Exam Follow-Up Response: Horizontal Intersection Sight Distance and Vertical Intersection Sight Distance for the eastbound entrance at 257+20 was evaluated by Jonathan Bahr according to the Horizontal Intersection Sight Distance Section and Vertical Intersection Sight Distance Section of Design Manual Section 6D-1 (Sight Distance).
 - 1. Horizontal Intersection Sight Distance: $L = 1.47V_{major}t_g$
 - a. L = sight distance along major road (ft) = 1,014.3 ft (correlates with center of EB lane at STA 247+05).

- b. V_{major} = design speed of major roadway (mph) = 60 MPH (posted 55 MPH)
 - c. t_g = time gap (seconds) = 11.5 seconds assuming a left turn maneuver for a combination truck (Table 3 of Section 6D-1.). Passenger cars have a time gap of 8.5s (we are assuming worst case scenario with the time gap for a combination truck).
 - d. Horizontal Intersection Sight Distance Summary: The Proposed Concrete Barrier Rail of the Bridge and the Proposed Steel Beam Guardrail are outside of the Horizontal Intersection Sight Distance Triangle. The Horizontal Intersection Sight Distance for a vehicle at the 257+20 EB entrance is satisfied. Linework for the Horizontal Intersection Sight Distance Triangle can be found in the file PLN_90034154Z12.dgn under the level 'Draft_DNC'.
 - 2. Vertical Intersection Sight Distance:
 - a. Summary: Jonathan Bahr analyzed the Vertical Intersection Sight Distance of an EB passenger car at 247+05 and a passenger car at the 257+20 EB entrance (see Horizontal Intersection Sight Distance section for Distance Calculation). Both vehicles were assumed to be a passenger car and passenger cars have a driver's eye height of 3.5 feet above the roadway surface (trucks have a driver's eye height of 7.6'). The proposed crest curve does NOT obstruct the Vertical Intersection Sight Distance of the respective vehicles view of each other. Linework can be found in the profile view of GEO_ML034_90034154Z12.dgn file under the level 'Draft_DNC'.
 - b. No Sideroads will not be impacted by this project (US 34 (154)).
 - i. 2025-06-10 Field Exam Response: No comment.

16. MAILBOXES

- a. The eastbound residential entrance at 257+20 has a mailbox at eastbound STA 256+93. This mailbox will not be impacted by construction.
 - i. 2025-06-10 Field Exam Response: No comment.

17. SURVEY

- a. Are additional soil borings needed for this project (the 'Special Construction Issues' Section on Page 2 of the 'Bridge Bureau Attachment for Concept Statement' suggests some soil analysis has been made with reference to a 'soil profile', but it's not clear whether soil borings are scheduled or needed).
 - i. 2025-06-10 Field Exam Response: Jimmy Ellis confirmed that Soil Borings will be needed at each pier and the abutments. Patricia Schwarz mentioned that the normal process is that once the TS&L is completed then the TS&L gets distributed to Soils Bureau and then Soils Bureau would come up with a plan for Soil Borings at the proposed Bridge. Patricia added that this Bridge may need additional testing because Bridge Bureau is proposing Drilled Shafts. Patricia added that the 'Soil Profile' mentioned in the 'Bridge Bureau Attachment for Concept Statement' probably came from Record Drawings.

18. SPECIAL FEATURES

- a. Are there any special features not shown on the plans that need to be taken into consideration, either design or Traffic Control-wise?
 - i. 2025-06-10 Field Exam Response: No Special Features were identified by the attendees.

19. RIGHT OF WAY

- a. 2025-04-18 Road Design Note: ROW does not appear to necessary for this Project. Easements with the Railroad may be needed.
 - i. 2025-06-10 Field Exam Response: Patricia Schwarz mentioned that the Piers will be outside of the Railroad Right of Way and that the Abutments were set back (particularly on the west side) so that the proposed 3:1 bridge berm could stay outside of the Railroad Right of Way, which is a Class 1 Railroad Requirement. Patricia added that the proposed bridge berms are also outside of the Bear Creek stream channel. Patricia added that the existing bridge berm that is currently within the Railroad Right of Way will need to be removed as part of this project.
 - ii. 2025-06-10 Field Exam Response: Rail Bureau and Right of Way Bureau will work with the Railroad to secure easements for construction.

20. UTILITY IMPACTS

- a. There is a Fiber Optic and T1 line located along the north side of US 34, within DOT ROW. Current cross-sections suggest approximately 60' of the lines may be in a cut section of new 10' wide ditch (depth of cut in the area is approximately 3'). Other portion of the Fiber Optic line is within fill zones. Discuss the impacts of these lines and whether the lines should be moved (and the extent of movement). The DOT ROW in the area is very large, so movement of the lines to a location outside of the DOT ROW may not be viable.
 - i. 2025-06-10 Field Exam Response: The attendees agreed that it would be best if the impacted Fiber Optic and T1 lines within the cut zone would simply be lowered in its current place (or possibly UAC'd if the existing lines are deep enough) instead of being rerouted or secured to the new Bridge Concrete Barrier Rail. Bryan Archer (District Utility Coordinator) will coordinate with the utility companies accordingly. Patricia Schwarz will put a note in the TS&L plans to follow up with an investigation with the utilities to see if Bridges should specify that a conduit be placed in the concrete barrier rail just in case something occurs in the future and utilities have to find another way to cross the Railroad Tracks and Bear Creek.
 - b. The survey shows a gap in the Fiber Optic and T1 line from STA 246+00 to STA 253+00. The line may not be actually be gapped. Discuss.
 - i. 2025-06-10 Field Exam Response: Jimmy Ellis and Patricia Schwarz reviewed Bridge Photos in the Structure Inventory and Inspection Management System (SIIMS) and observed that the Fiber Optic and T1 lines were NOT attached to the Bridge's Concrete Barrier Rail. Fiber Optic and T1 lines are more than likely

- buried and continue in a West to East line from STA 246+00 to STA 253+00 (beneath the Railroad Tracks and Bear Creek).
- c. 2025-06-10 Road Design Note: No Utility Structures needing adjustment were observed with respect to grading for the roadway construction. However, there is a 'ICN Marker' (Iowa Communications Network). at the NW quadrant of the bridge (248+30, 94' LT) that may be impacted by bridge berm/embankment grading.
- i. 2025-06-10 Field Exam Response: No comment.
- d. Utility Contacts:
- i. 2025-06-10 Field Exam Response: Road Design will add the Utility to the 'Utility Legend' on Sheet D.1 of the Plan Set. Survey Bureau should be able to get the Utility Contact information for the project for Road Design. The Utility Contact information on the Project Concept can be used to help generate the list of all the Utility Contacts.

21. CULVERTS/PIPES

- a. This project will not impact any existing culverts. It does not appear that any culverts will need to be installed.
- i. 2025-06-10 Field Exam Response: No comment.

22. EXISTING DRAINAGE PROBLEMS

- a. Are there any existing drainage problems that may need to be mitigated (shoulder washout, standing water, etc.)?
- i. 2025-06-10 Field Exam Response: See SLIDE REPAIR Section with respect to significant bridge berm erosion.

23. STOCKPILED MATERIALS (TAB 110-13 DELIVERY AND STOCKPILING):

- a. Confirm that Maintenance would like the following Stockpiled Materials:
- i. Existing Pavement
1. 2025-06-10 Field Exam Response: NO.
- ii. Class 13 Excavation (not applicable)
1. 2025-06-10 Field Exam Response: Not Applicable.
- iii. Steel Beam Guardrail W-Beam
1. 2025-06-10 Field Exam Response: NO.
- iv. Steel Beam Guardrail Posts
1. 2025-06-10 Field Exam Response: NO.
- v. Cable Guardrail
1. 2025-06-10 Field Exam Response: NO.
- vi. Cable Guardrail Posts
1. 2025-06-10 Field Exam Response: NO.
- b. Verify the location of Stockpiled Materials (Primary Location? Secondary location? Is there a preferred distribution of materials across the sites?)
- i. 2025-06-10 Field Exam Response: Not Applicable.
- c. Maintenance Contact Person and Phone Number:
- i. 2025-06-10 Field Exam Response: Not Applicable.

24. CONTINGENCY PERCENTAGES

- a. HMA or PCC Pavement Contingency for Irregularities: 5.0% is Typical. Please confirm.
- i. 2025-06-10 Field Exam Response: 5% PCC Contingency confirmed. 5% is Typical because the District wants to make sure the pavement is not thin.
- b. Granular Shoulder (if found to be applicable): 20% has been used on recent projects. Please confirm.
- i. 2025-06-10 Field Exam Response: Not Applicable.
- c. Patches Contingency (if found to be applicable): 15% is Typical. Please confirm.
- i. 2025-06-10 Field Exam Response: No contingency is necessary because the patching is limited to such a small area (NEC of State/Main intersection in Blakesburg).

25. RCE BID ITEMS (2025-06-10 Field Exam Response: Darrick Bielser requested that Road Design send the RCE Bid Item List to RCE Liz Finarty for comment. 2025-06-12 Field Exam Follow-Up: Jonathan Bahr sent the RCE Bid Item List to RCE Liz Finarty for comment via e-mail.):

- a. Construction Survey?
- b. Field Lab?
- c. Field Office?
- d. Traffic Control/Work Hour Restrictions?
- e. Project Requiring Contractor Coordination (COORDINATED OPERATIONS TAB 111-01 on J Sheets)?
- f. Site Times Needed?
- g. Project Management?

26. PCC PAVEMENT SAMPLES

- a. Confirm whether the PCC Pavement Samples Bid Item needs to be included on this Project.
- i. 2025-06-10 Field Exam Response: Dale Harmon and Steve McElmeel indicated that PCC Pavement Samples were handled by specification (Pavement Samples verify thickness). According to the Specifications Section 2301 (Portland Cement Concrete Pavement) the type of thickness testing depends on the total area of PCC pavement of a given design thickness; if the total area of a given thickness of PCC pavement is more than 3,500 SY then non-destructive sampling is needed (see section 2301.04.A.2.c) and a PCC Pavement Samples Bid Item is needed. If the total area of a given thickness of PCC pavement is less than 3,500 SY then thickness measurements are taken with Depth Checks (see section 2301.04.A.2.d) and PCC Pavement Samples would then only be required if specifically requested by the District. This Bridge Replacement Project is currently scheduled to have less than 3,500 SY of 9.5" thick PCC, therefore a PCC Pavement Sample Bid Item will NOT be necessary by area count and the District did not specifically request PCC Pavement Samples for this project. Bridge Approach Pavement and the Bridge Decks are not included in the total area count.

27. TIED PROJECTS
- a. Are there any Projects Expected to be Tied to this Project during the 10/19/2027 Letting?
 - i. 2025-06-10 Field Exam Response: Steve McElmeel indicated that this Bridge Replacement project will most likely be a standalone project and will not be Tied to another project. A final determination regarding Tied projects will be made by the District closer to the Letting Date.

28. DESIGN EVENT DATES
- a. D2 and D3 Event Dates have already passed by the time of the 6/10/2025 Field Exam Meeting (D2 was 5/16/2025 and D3 was 5/30/2025). How should the schedule be updated?
 - i. 2025-06-10 Field Exam Response: John Bartholomew requested that the D2 and D3 submittals be combined into a single submittal. Jonathan Bahr mentioned that Road Design should be able to accommodate John Bartholomew’s request to combine the D2 and D3 submittal and added that Road Design will work with Bridge Bureau to get the submittal out as soon as possible.

29. LETTING DATE
- a. The Letting Date is currently scheduled for 10/19/2027. Road Design Team does not have any exceptions regarding the Letting Date at this time.
 - i. 2025-06-10 Field Exam Response: Road Design Team does not have any exceptions regarding the 10/19/2027 Letting Date at this time. Jill Garton (LEB) mentioned that work for Winter Tree Clearing may need a separate Letting if the Bridge Replacement Letting moves to a later date (ie. such as March 2028).

30. SPECIAL EVENTS
- a. Are there any Special Events that need to be identified? If so, what are their schedules?
 - i. 2025-06-10 Field Exam Response: Bryan Archer mentioned that the City of Blakesburg usually has its annual ‘Corn Carnival’ in September and that it might be affected by the Detour. Road Design will ask Jared Klein (District 5) to confirm all Special Events possibly impacted by the project. Special Events will be added to the Traffic Control Plan Tabulation (Tab 108-23A on J Sheets) accordingly.

31. TRAFFIC CONTROL PLAN (TAB 108-23A on J SHEETS)

- a. Are there any special Traffic Control Notes that District would like to include on the Traffic Control Plan Tabulation?
 - i. 2025-06-10 Field Exam Response: See SPECIAL EVENTS Section of these Project Notes and DETOUR Section of these Project Notes.
 - ii. 2025-06-10 Field Exam Response: The District prefers that the Offsite Detour for this Bridge Replacement project be provided and installed by the Contractor (not the DOT) because the project is being let in October and the Contractor should have enough time before construction to get the appropriate Detour signage. A revision to the associated note on the Traffic Control Plan tabulation will be done by Road Design.
- b. Confirm Contact Information on Traffic Control Plan Tabulation 108-23A (Jay Ridlen is listed as Maintenance Supervisor and Ottumwa phone number (641 684-8231) was taken from DOT Contacts Website).
 - i. 2025-06-10 Field Exam Response: Steve McElmeel indicated that Jay Ridlen may be close to retirement during construction of this Bridge Replacement project, but added that Jay should still be listed as Ottumwa Highway Maintenance Supervisor on the plans. The phone number (641-684-8231) provided on the tabulation was correct.

32. STAGING NOTES (TAB 108-26A on J SHEETS)
- a. Are there any special Staging Notes that District would like to include on the Staging Notes Tabulation?
 - i. 2025-06-10 Field Exam Response: See DETOUR Section of these Project Notes.

33. DETOUR
- a. The Project Concept recommends that this Project be completed under Detour. The Route was reviewed by Road Design:
 - i. Are pavement repairs in Blakesburg needed (pavement is beaten up at the intersection of Main & State)? If so, discuss Traffic Control needed for this work, extend of work, and potential impacts to utilities.
 - 1. 2025-06-10 Field Exam Response: Steve McElmeel recommended that patching be limited to the NEC of the intersection of Main Street and State Street in Blakesburg (see Pink Polygon in Google Earth Screenshot below for patching limits). Steve added that the respective County should keep the County roads in good enough shape that the DOT wouldn’t have to do repairs to a Detour Route, but since this is a limited patching area, then it can be added to the plans. Dale Harmon recommended specifying Standard Road Plan TC-213 (Lane Closure with Flaggers) for the Traffic Control of this patching work (any adjustments to get the Standard Road Plan to conform to the specific location can be handled by the Town, County, or RCE).



- 2.
- ii. Is the available turning path envelope at the intersection of Main & State in Blakesburg large enough? There appear to be off-tracking issues with both the Westbound to Northbound Path as well as the Southbound to Eastbound Path. WB-67 Semi-Truck and SU-40 Single Unit Trucks were modeled. Review turning path exhibit in the U Sheets.
1. 2025-06-10 Field Exam Response: The team agreed that vehicles will have to resume off-tracking turning movements within Blakesburg and no adjustments to the intersection returns should be designed (the speed within Blakesburg should be low enough that the potential off-tracking should be safe-enough as-is). Steve McElmeel commented that if the City or County had any concern about the turning paths then the DOT could sign the Detour to try to keep the main Detour on State Routes and then only locals would be using the Detour through Blakesburg. Steve then recommended that the Detour through Blakesburg be kept as the main Detour unless the City or County has misgivings. The reason being is that if the DOT signs the Detour for State Routes and the traffic still uses Blakesburg then the County and City will not get compensation for the use of their roads. The District will discuss the Detour with the County during a separate meeting.

34. AGREEMENTS

- a. Are any Agreements necessary for this Project?
- i. 2025-06-10 Field Exam Response: Agreements with Cities and Counties will be investigated by the District. Agreements with the Railroad will be handled by Rail Bureau.

35. DESIGN EXCEPTIONS

- a. Are there any portions of this Project that may need require Design Exceptions?
- i. 2025-06-10 Field Exam Response: Attendees did not anticipate that any Design Exceptions would be needed. If any Exceptions or Deviations come up as design progresses then they should be documented in these Project Notes and/or the Design Criteria document.

36. SHOULDER RUMBLES

- a. Please confirm the use of Shoulder Rumble Strips as opposed to Shoulder Rumble STRIPES (rumble stripes are placed under the traffic edge line and increase the functional width of the shoulder). Road Design suggests that the use of standard Shoulder Rumble Strips is appropriate for this project since the minimum functional width for a paved shoulder used by bicyclists is 4 feet (Bicyclist Operating Space, Section 3.2 – Figure 3-1 of the [AASHTO Bike Guide 2012](#) and Section 4.9 [Bicycling in Rural Context] of [the Iowa DOT Bicycle and Pedestrian Long-Range Plan](#)), outside the rumble strips should be achieved with the construction of the 10' paved shoulders.
- i. 2025-06-10 Field Exam Response: Attendees agreed that Shoulder Rumble Strips (not StripEs) are OK for use.

37. THREATENED AND ENDANGERED SPECIES REVIEW (OLE) / SUITABLE BAT HABITAT / TREE CLEARING

- a. Verify the language needed in the Clearing and Grubbing Estimate Reference Note (ie. review the need for Iowa DOT Spec 2101.01A regarding tree clearing dates per direction from Threatened and Endangered Species).
- b. Winter Tree Clearing and Letting Date:
- i. 2025-06-10 Field Exam Response: Jill Garton (LEB) mentioned that work for winter Tree Clearing may need a separate Letting if the Bridge Replacement Letting moves to a later date (ie. such as March 2028).
- c. Tree Impacts Due to proposed Roadway Foreslopes:
- i. 2025-06-10 Field Exam Response: The attendees reviewed the proposed Grade Intercept Lines with respect to the impacts to the trees around the Project. Jonathan Bahr showed that the extent of Tree Removal as measured from the Edge of Pavement (Shoulder) is 100' maximum at the NW corner of the bridge and 90' from the Edge of Pavement (Shoulder) elsewhere. Jill Garton (LEB) mentioned that it would be good if we could stay around those distances (improves chances of registering 'not likely impacting Threatened and Endangered Species' upon review). This bridge is listed in the Iowa DOT Structure Inventory and Inspection Management System (SIIMS) as 'potential that usage was identified' and that Consultation will likely be necessary, so anywhere that we can minimize tree clearing would be great.
- d. Stream Impacts Due to Bridge Construction:
- i. 2025-06-10 Field Exam Response: Patricia Schwarz confirmed that the new piers will be outside of the Bear Creek Stream Bed (set further back than the existing piers). Patricia added that the existing piers within the Bear Creek Stream Banks will be removed per the Standard Specifications (piers shall be removed to a depth at least one foot below the stream bed or the existing ground).

Full Depth PCC Shoulder

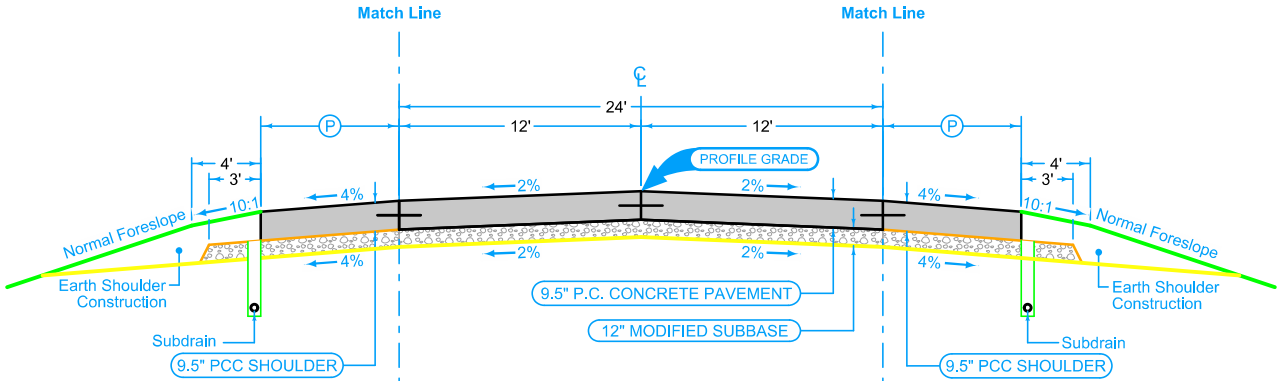
Shoulder Jointing:
Longitudinal joint: BT-2 or L-2
Transverse joints: C at 17' spacing

2_P_FullPCC_04-20-21		
STATION TO STATION		Feet
244+08	245+61	10
254+17	256+00	10

Paved Shoulder at Guardrail

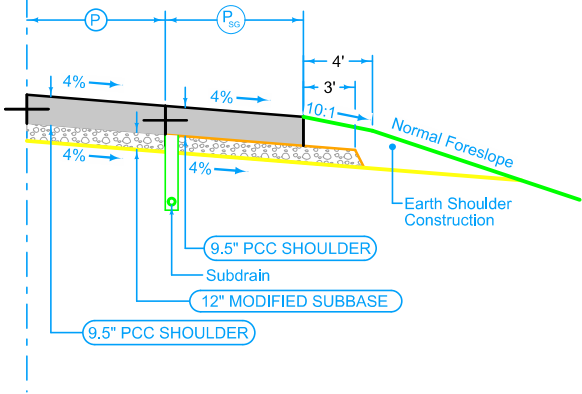
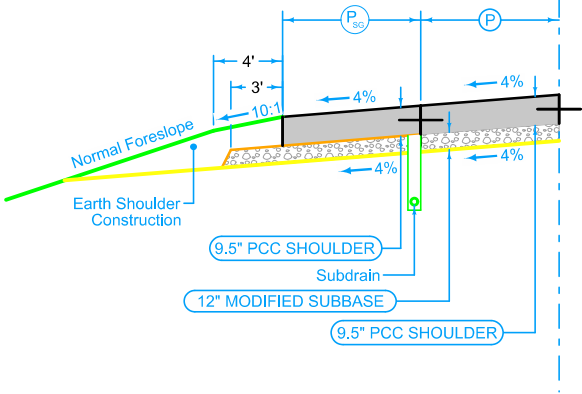
PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at mainline spacing
HMA Shoulder Jointing:
Longitudinal joint: B

2_P_Guard_04-21-20			
STATION TO STATION		Feet	Feet Feet
245+61	246+50	10	See Detail 7158-M for Details
253+28	254+17	10	See Detail 7158-M for Details



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

2P_04-21-20	
STATION TO STATION	
244+08	246+50
253+28	256+00



Full Depth PCC Shoulder

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

2_P_FullPCC_04-20-21		
STATION TO STATION		Feet
244+08	245+83	10
254+17	256+00	10

Paved Shoulder at Guardrail

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at mainline spacing
HMA Shoulder Jointing:
Longitudinal joint: B

2_P_Guard_04-21-20			
STATION TO STATION		Feet	Feet Feet
245+83	246+50	10	See Detail 7158-M for Details
253+28	254+17	10	See Detail 7158-M for Details

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

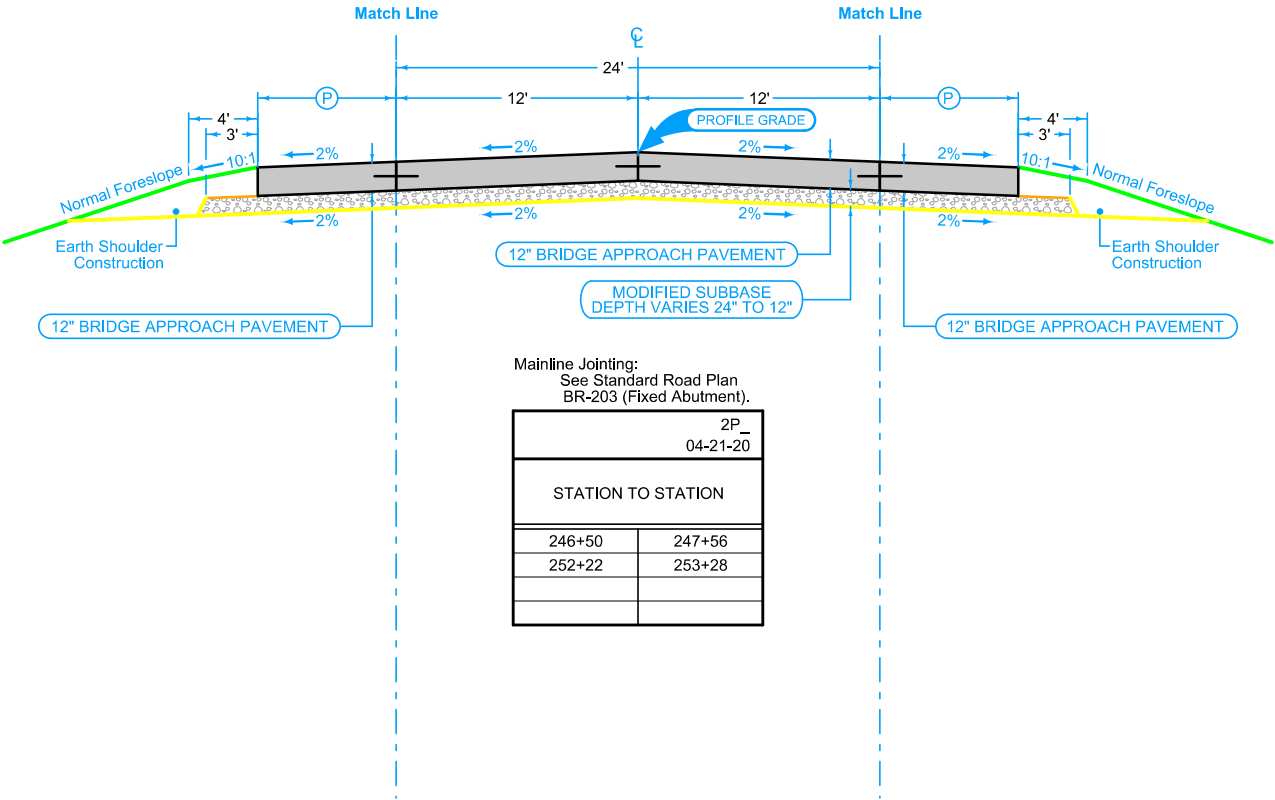
See Tab 112-9 for shoulder quantities.

US 34
Mainline, Paved Shoulder,
and Paved Shoulder at Guardrail

Shoulder at Bridge Approach

Mainline Jointing:
See Standard Road Plan BR-203 (Fixed Abutment).

2_P_FullIPCC_04-20-21		
STATION TO STATION		<div>Ⓐ</div> Feet
246+50	247+56	11.58
252+62	253+28	11.58



Mainline Jointing:
See Standard Road Plan
BR-203 (Fixed Abutment).

2P_04-21-20	
STATION TO STATION	
246+50	247+56
252+22	253+28

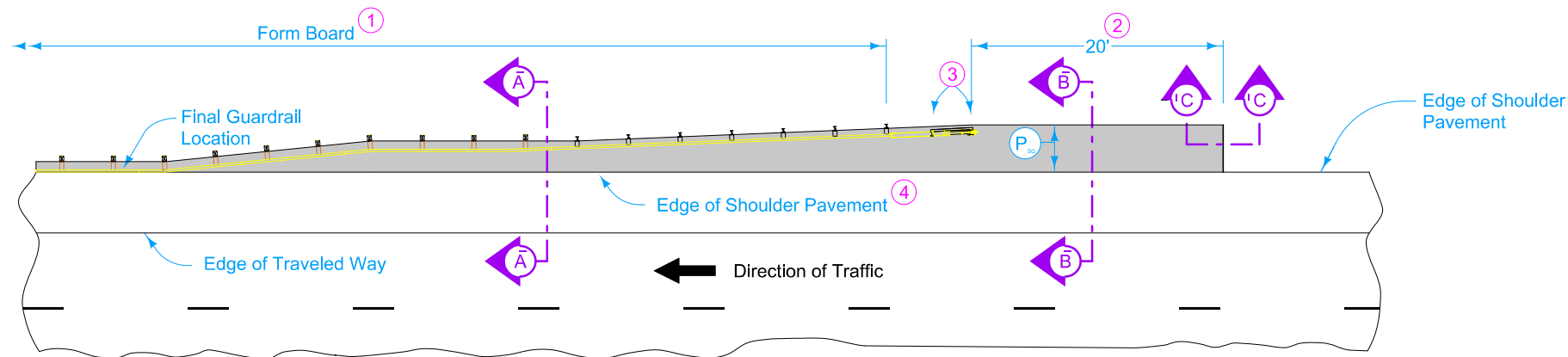
Shoulder at Bridge Approach

Mainline Jointing:
See Standard Road Plan BR-203 (Fixed Abutment).

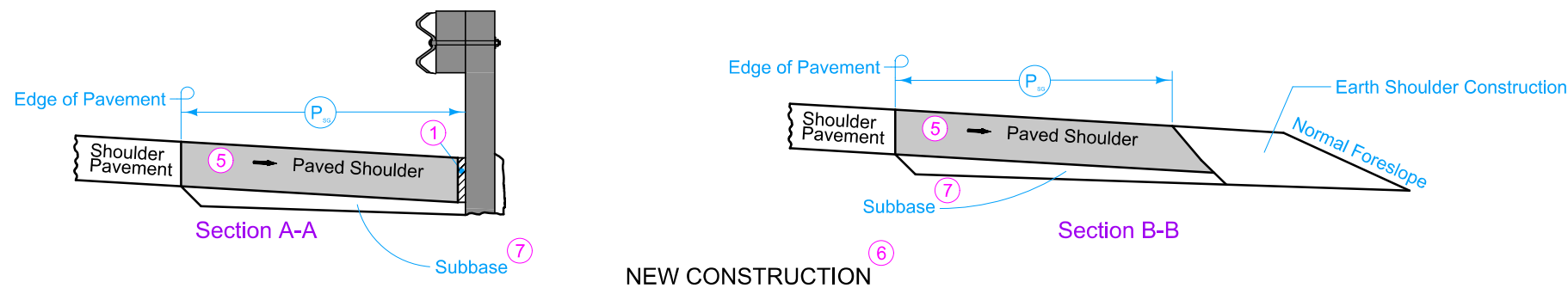
2_P_FullPCC_04-20-21		
STATION TO STATION		<div>Ⓐ</div> Feet
246+50	247+16	11.58
252+22	253+28	11.58

See Tab 112-6 for Bridge Approach Pavement quantities.
See Standard Road Plan BR-203 (Fixed Abutment) for details.

US 34
Bridge Approach Pavement



PLAN VIEW



NEW CONSTRUCTION

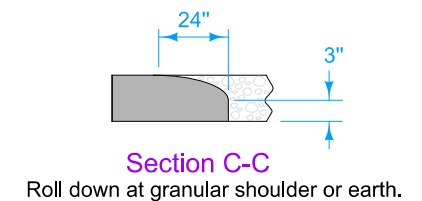
10" HMA Paved Shoulder at guardrail. 9.5" PCC may be substituted with the following jointing layout:

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.

Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

- 1 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.
- 2 Continue paved shoulder 20 feet beyond the center of the first post.
- 3 Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- 4 'BT' (per PV-101) joint for PCC shoulder. 'B' (per PV-101) joint for HMA shoulder.
- 5 Match shoulder slope.
- 6 The Contractor has the option to pave the paved shoulder at guardrail and the full width paved shoulder as one operation.
- 7 Refer to other details in the plan.



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

SURVEY SYMBOLS

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

UTILITY LEGEND

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.		
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING	Design Color No.		Transparency
Pink, Dark	(13)		Temporary Pavement Shading
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
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
Red	(3)		Proposed Structure Shading
Red	(3)		Delineates Restricted Areas

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

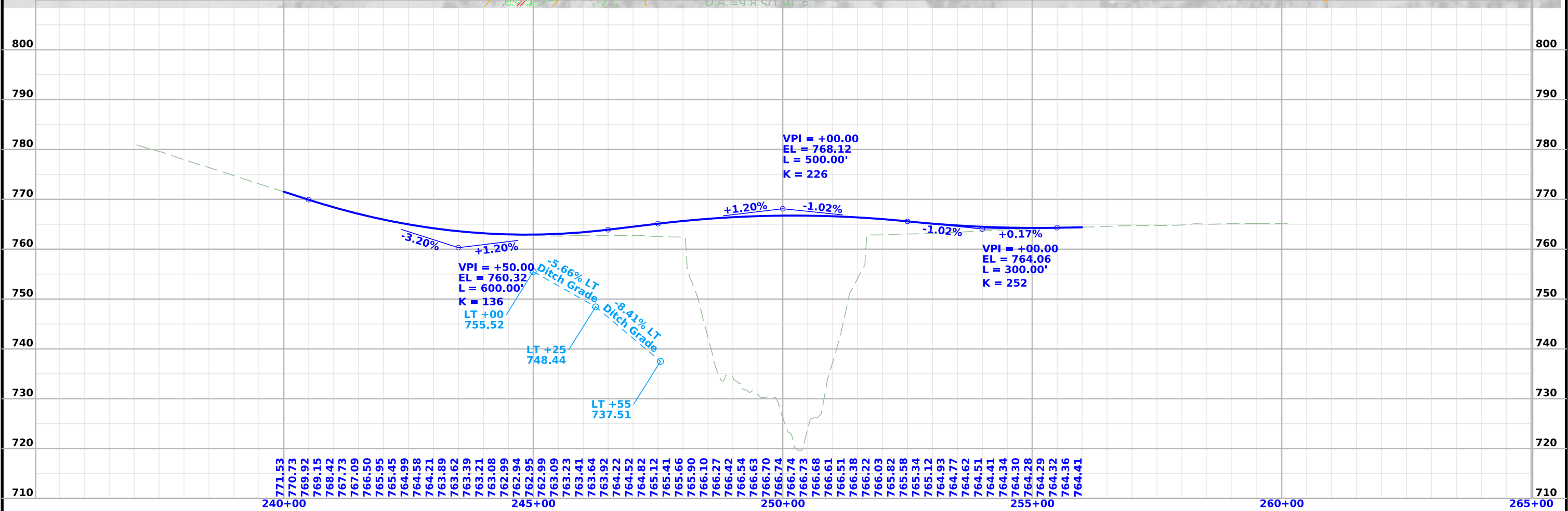
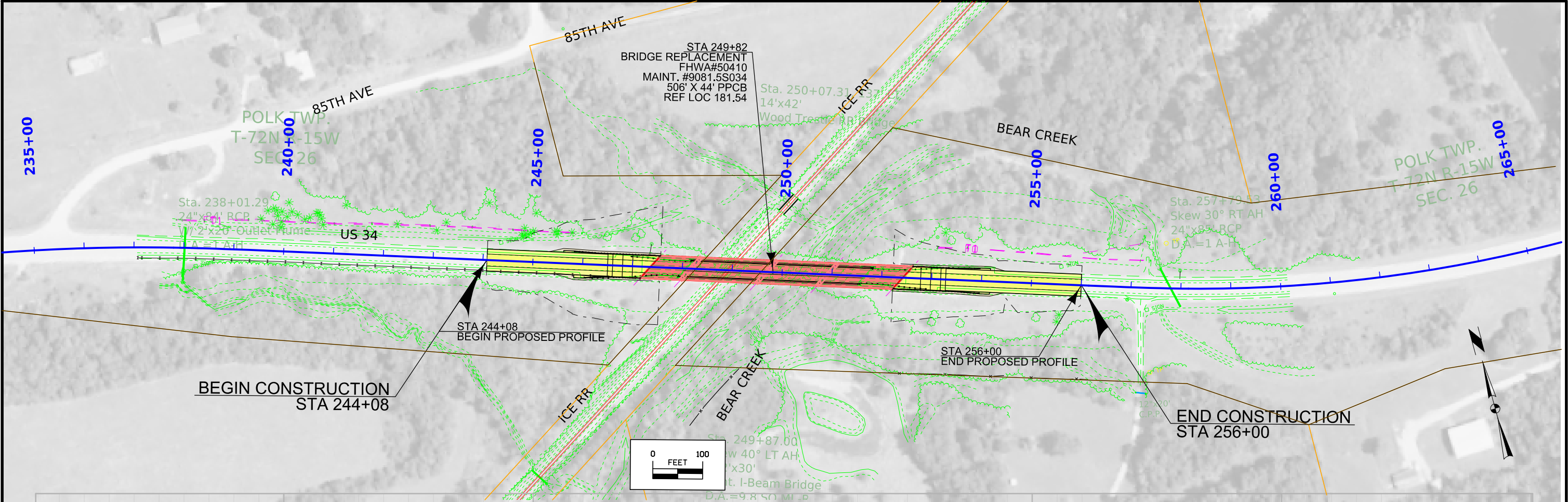
LINEWORK	Design Color No.		
Green	(10)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

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

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

PLAN AND PROFILE
LEGEND AND SYMBOL
INFORMATION SHEET

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



Survey Information

SURVEY INDEX

County: Wapello
PIN: 23-90-034-010
Project Number: BRF-034-7(154)--38-90
Location: 4.2 Miles West of Co. Rd. H35 over Bear Creek & ICE RR
Type of Work: Bridge Replacement
Project Directory: 9003401023

Survey Personnel

Jeremy Leemon	Survey Project Manager
Chris Ries	Assistant Survey Project Manager
Jacob Powers	Instrument
Matt Goedken	Instrument

Date(s) of Survey

Begin Date	08/07/2024
End Date	10/21/2024

General Information

This survey is for US Hwy 34 over Bear Creek and ICE RR, Wapello County. This project is a Full Field DTM survey.

Utility Information

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

Project Control

Project control was provided by the Design Bureau Preliminary Survey Office. A Site Calibration consisting of 3 rounds of 5 minute observations separated by 2 hour intervals was completed to aid in setting additional control along the route. For additional details of the control survey, contact the Preliminary Survey department.

PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 ADJUSTMENT)
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 12
(U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans Project No. 1027 (9). Survey stationing was equated to the measured center of bridge at Sta. 249+87 and carried back and ahead without equation throughout the survey. No alignment points were found in pavement so alignment was built using bridge center and right-of-way monuments.

Survey stationing relates to as built plan stationing as follows:

POT Sta. 220+24.1 As-built Plans Project No. 1027 (9)
Survey POT Sta. 220+24.10

TS Sta. 226+93.46 As-built Plans Project No. 1027 (9)
Survey TS Sta. 226+93.46

ST Sta. 239+52.34 As-built Plans Project No. 1027 (9)
Survey ST Sta. 239+52.34

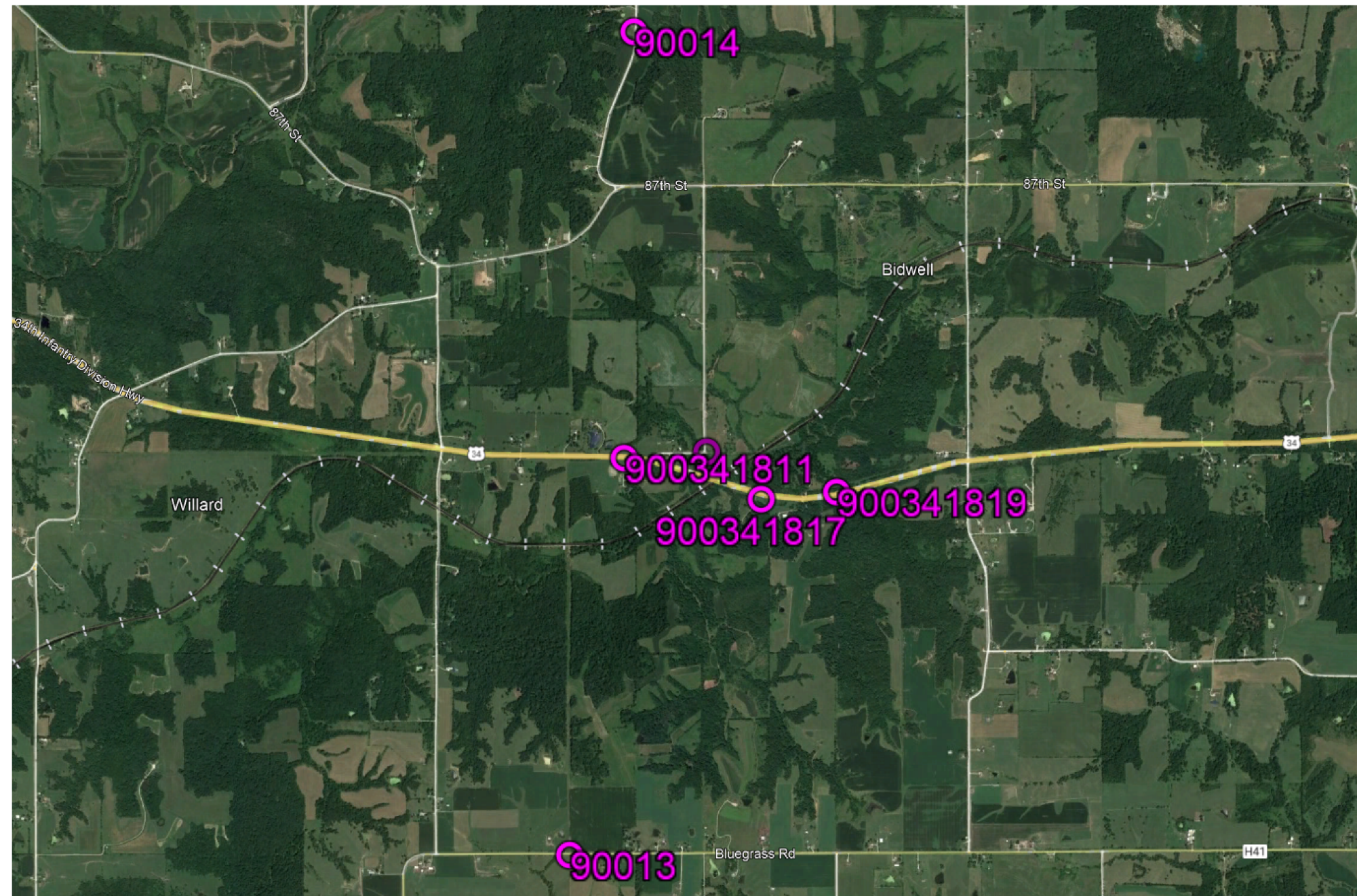
TS Sta. 256+15.0 As-built Plans Project No. 1027 (9)
Survey TS Sta. 256+15.00

ST Sta. 247+55.0 As-built Plans Project No. 1027 (9)
Survey ST Sta. 274+55.51

PC Sta. 291+30.5 As-built Plans Project No. 1027 (9)
Survey POT Sta. 291+31.01

CONTROL POINT VICINITY MAP

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



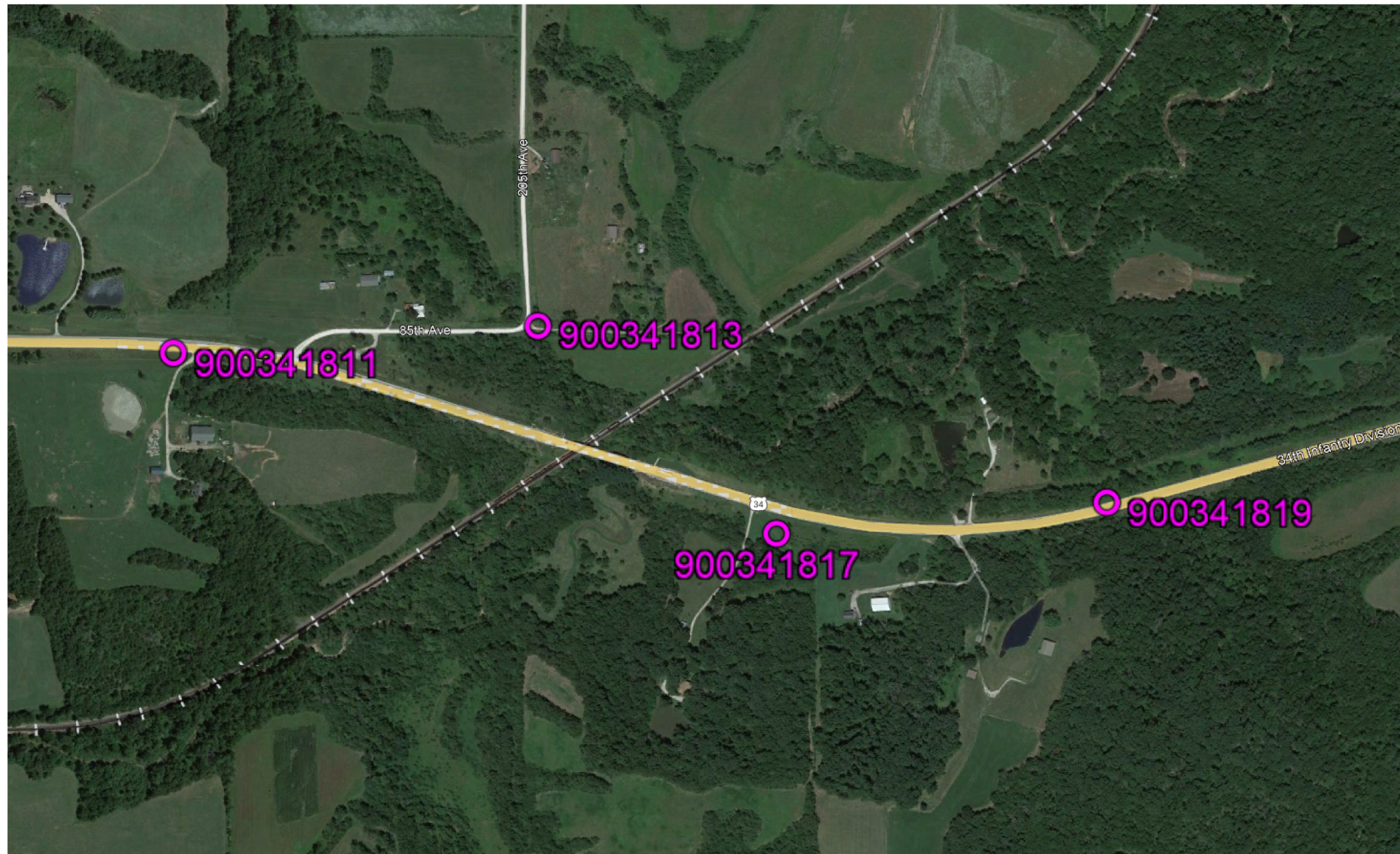
HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 12 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u3

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

CONTROL POINT VICINITY MAP

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



HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 12 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u3

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

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING
HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)
Ia. Regional Coordinate System Zone 12 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u3

Point Name	Northing	Easting	Elevation	Code - Description
900341811	6235745.87	22828740.91	798.84	FENO SET -6in. Dp. located about 520ft West along IA. Hwy. 34 from 85th St. Intersection at 33.6ft South of CL IA34; and 17.2ft South of South Edge IA34 HMA Pavement; and 6.7ft North of Sta. 230 Sign; and 71.0ft W/SW. of Wood Mailbox Post (Res. #20814); and 81.1ft North of Center West Gate Post.
900341813	6235894.35	22830371.98	737.30	FENO SET -3.5in. Dp. located at NE. Corner Intersection of 85th St. and 205th Ave. at 13.0ft West of North I-Beam to Level-C Gate Post (Access to East); and 13.0ft North of CL Level-C Access Road; and 6.9ft W/SW of Stop Sign; and 27.5ft N/NW of South I-Beam Gate Post to Level-C Access East.
900341817	6234973.25	22831466.72	784.27	FENO SET -6in. Dp. located at about 2332ft SE. along IA. Hwy. 34 from 85th St. Intersection at 109.3ft Southwest of CL IA34; and 92.9ft SW. of SW'ly Edge IA34 HMA Pavement near Top of Backslope (Embankment); and 132.7ft SE. of Res. #20322 Metal Sign Post; and 88.2ft South/SE. of Top South End RCP; and 123.0ft Easterly of top center Phone Ped. Box.
900341819	6235133.27	22832962.24	765.60	FENO SET -6in. Dp. located about 2680ft West along IA. Hwy. 34 from 194th Ave. Intersection at 25.1ft North of CL IA34; and 9.2ft North/NW of Northerly Edge IA34 HMA Pavement; and 119.1ft NW. of Mile Marker 182 Metal Sign Post; and 128.0ft Easterly of West end Cable Barrier Anchor; and 4ft North/NW of Cable Barrier.
90013	6227896.81	22827774.53	848.46	CP Fnd. CCP Berntsen 6ft. L. Rod Mon. w/Cap under Access Cover flush w/Ground at Wapello County GPS Network CP #93-013 per Tie Sheet details.
90014	6244156.33	22828822.72	848.46	CP Fnd. CCP Berntsen 6ft. L. Rod Mon. w/Cap under Access Cover flush w/Ground at Wapello County GPS Network CP #93-014 per Tie Sheet details.

108-23A
08-01-08

TRAFFIC CONTROL PLAN

US 34:

A. Route will be closed during construction. Contractor shall install hard closure at MP 181.51 on US 34, per TC-252.

B. Access to all properties shall be maintained at all times.

C. Offsite detour will be provided and installed by DOT. Refer to J.2 for detour.

Contractor shall contact Jay Ridlen, Ottumwa Highway Maintenance Supervisor, (641) 684-8231 a minimum of 10-days in advance of the closure for the coordination of the detour signing.

D. The Contractor shall place two (2) portable digital message signs (PDMS) prior to closing US 34.

Place one PDMS on eastbound US 34, east of the intersection of US 34 and Monroe Wapello Road/T61 and one PDMS on westbound US 34, west of the intersection of US 34 and US 63.
Place PDMS 7-10 days prior to the closure/detour of US 34.

Use the following messages:
1st Display: "US 34 Closed"
2nd Display: "Starting (Add Date)"

Intersection of Main St and State St in Blakesburg:

A. Traffic shall be maintained on Main St and State St at all times.

B. Pedestrian traffic shall be detoured as shown in TC-601.

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
To Be Determined	

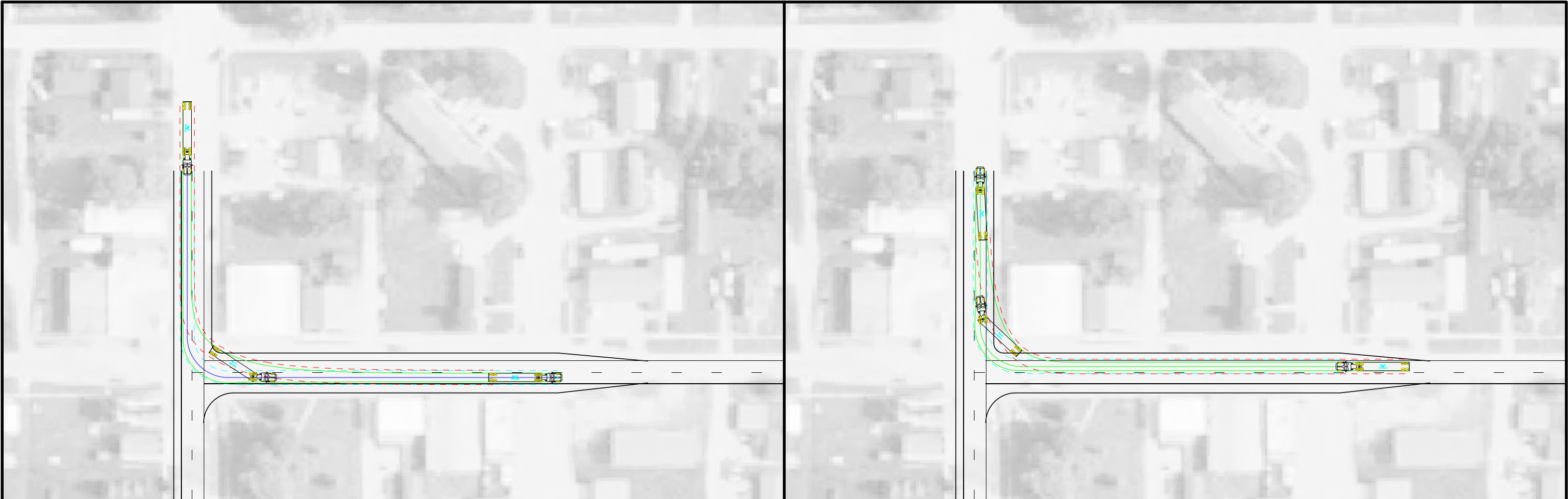
108-25
10-21-14

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
			No Travel Restrictions Expected									

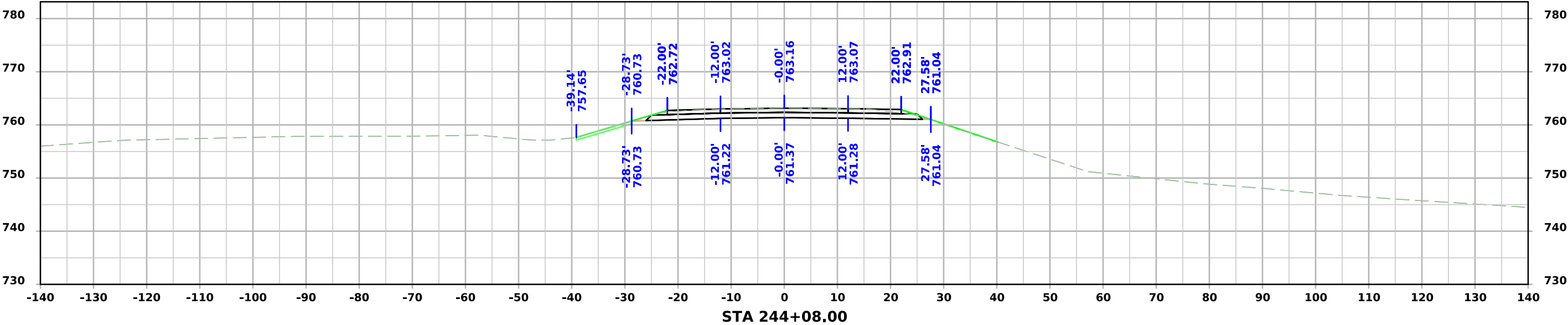
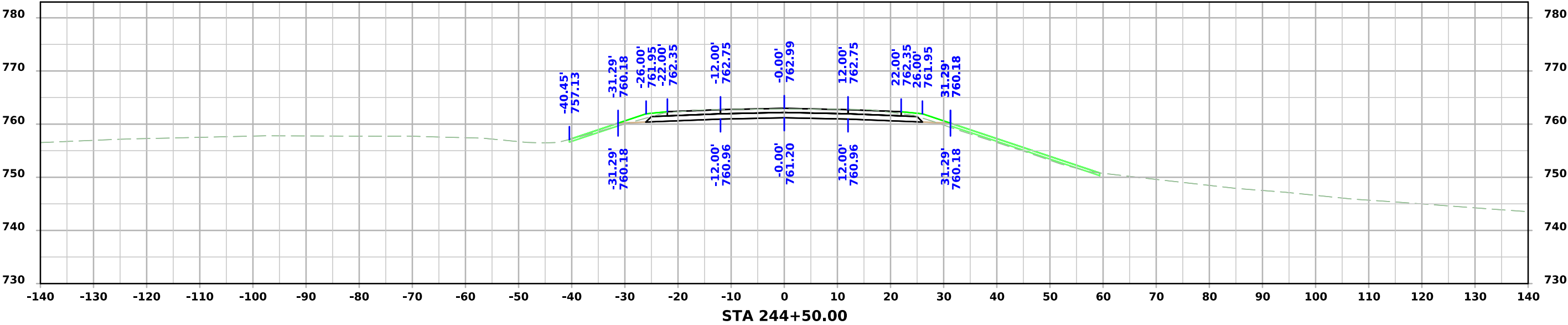
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08-01-08

STAGING NOTES

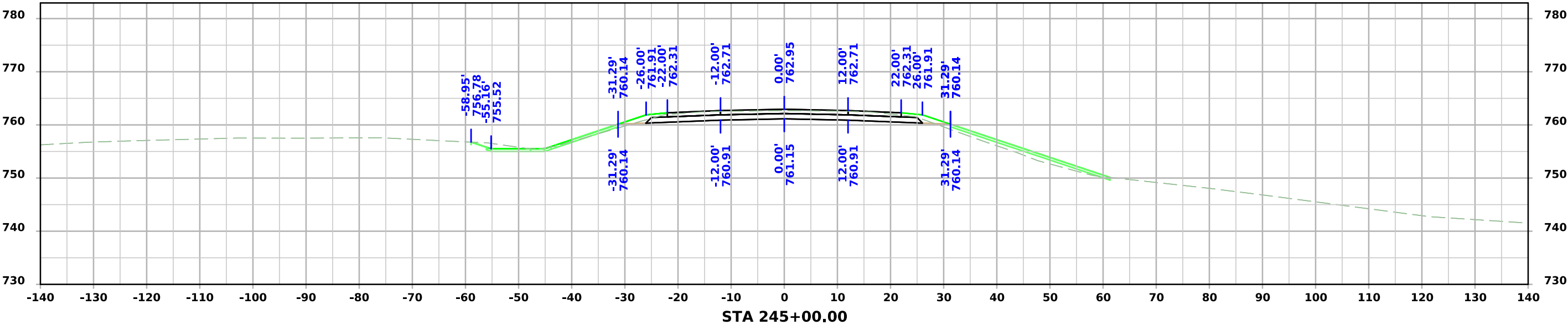
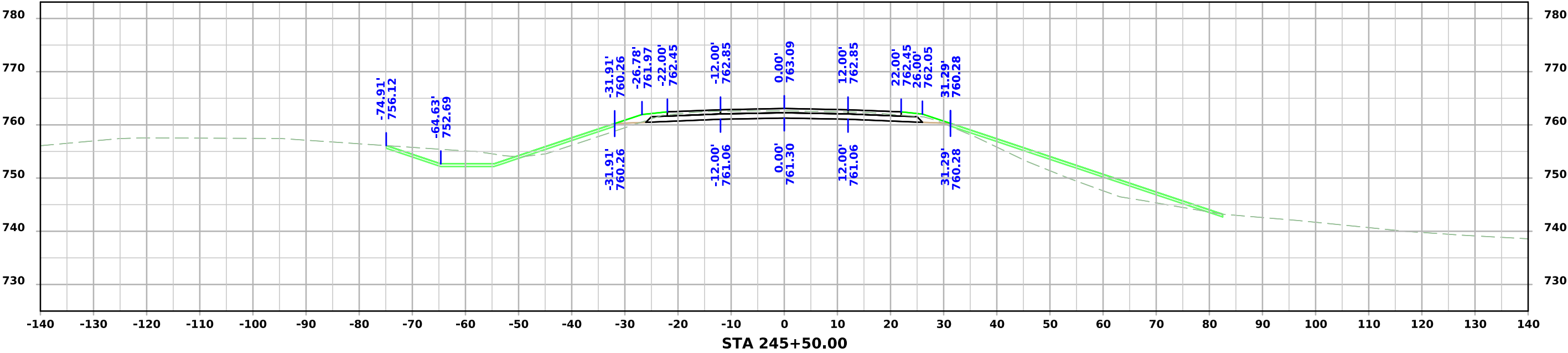
A. Pavement widening and intersection reconstruction in Blakesburg, and detour route painting shall be completed prior to closing US 34 and initiating the detour.



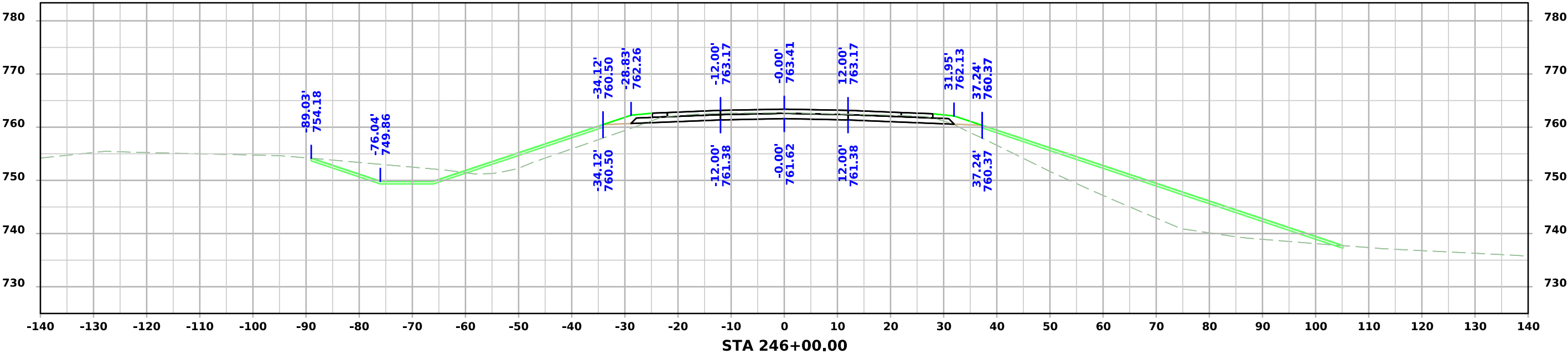
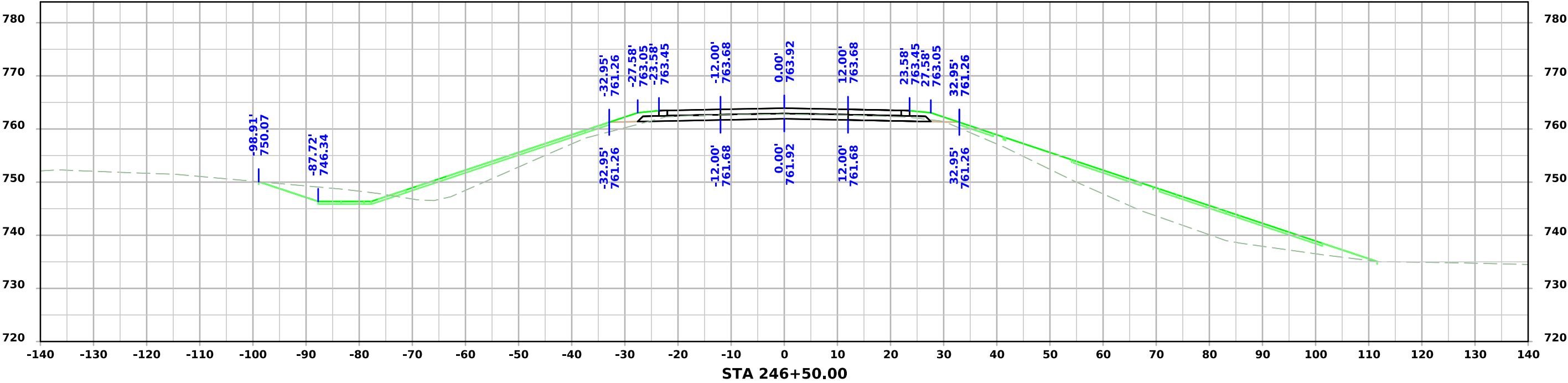
ML - US 34



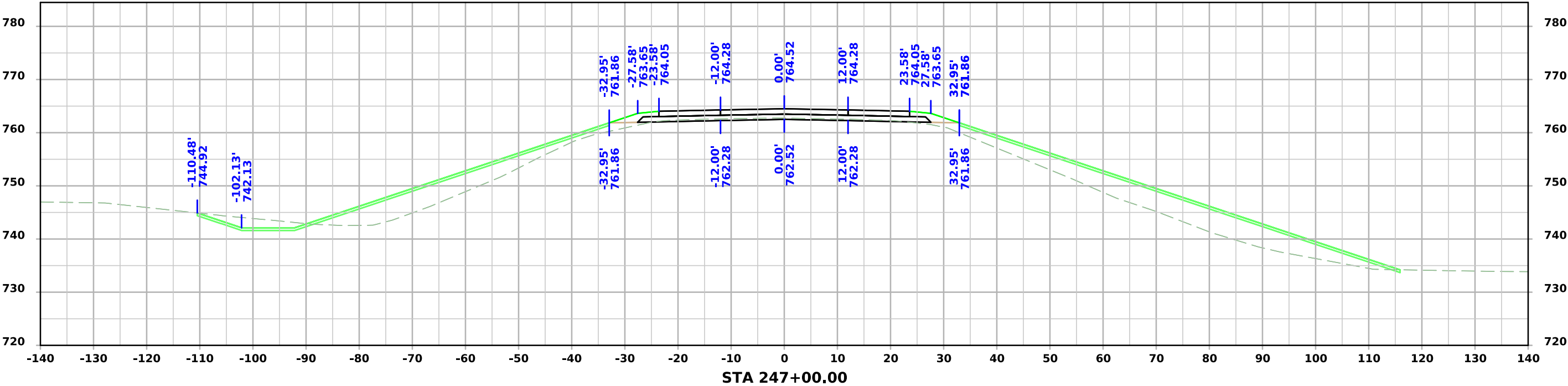
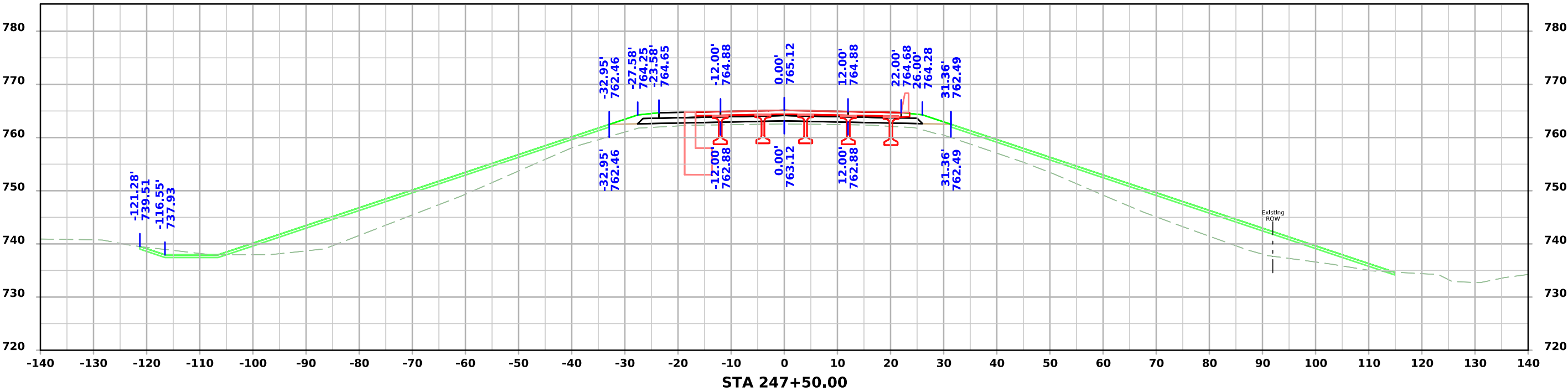
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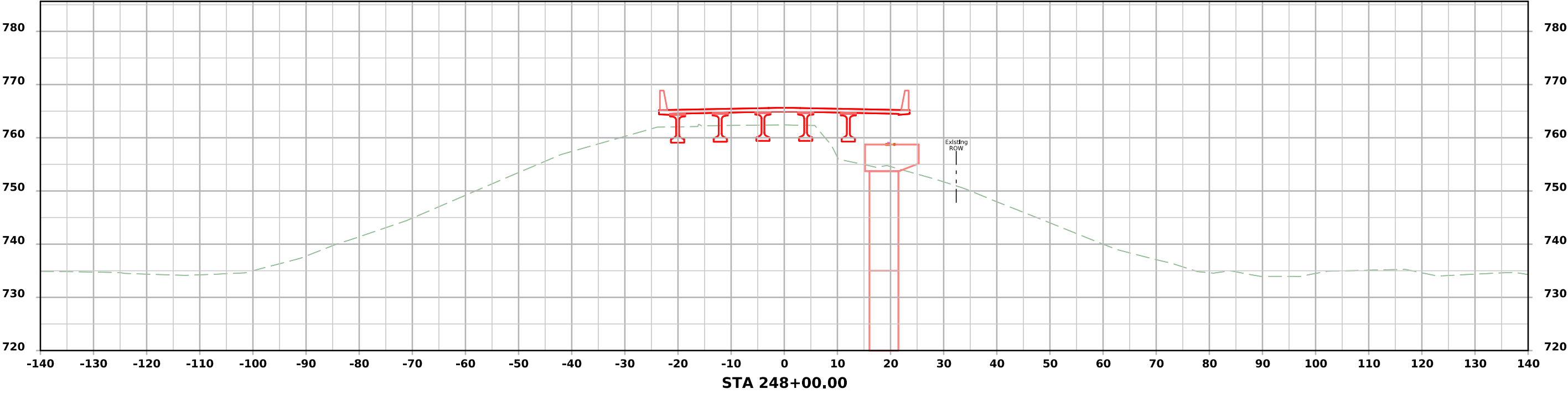
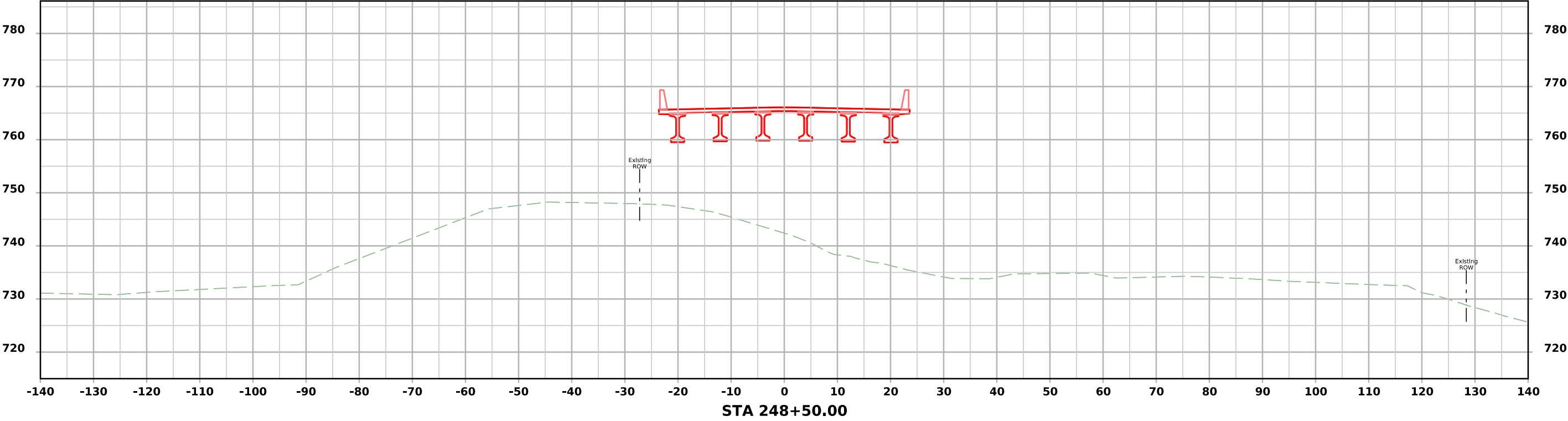
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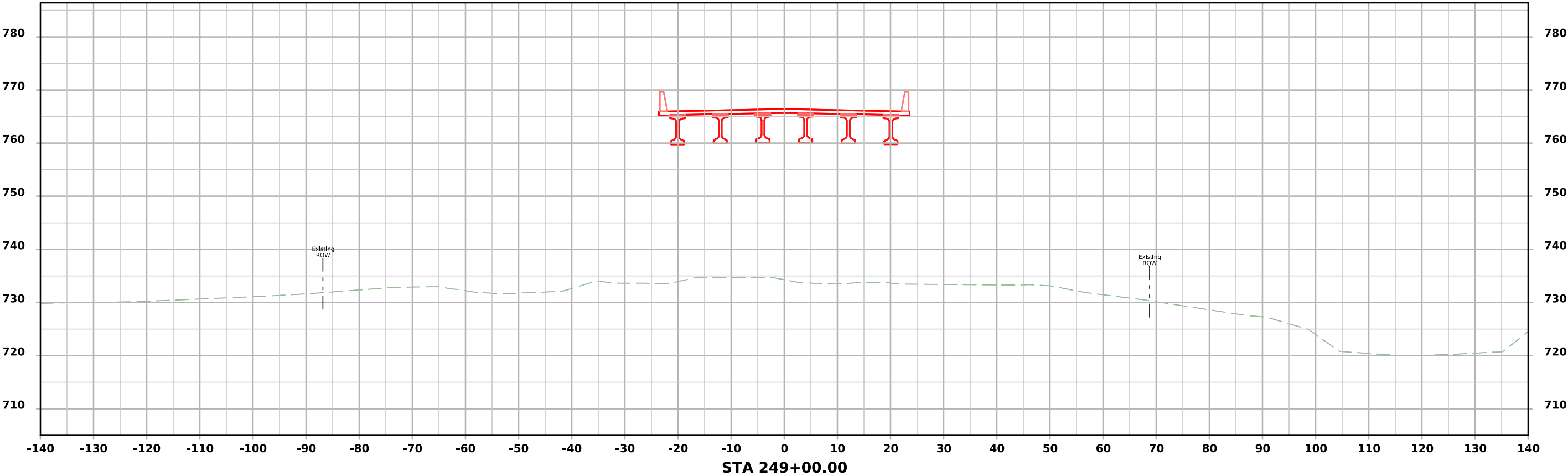
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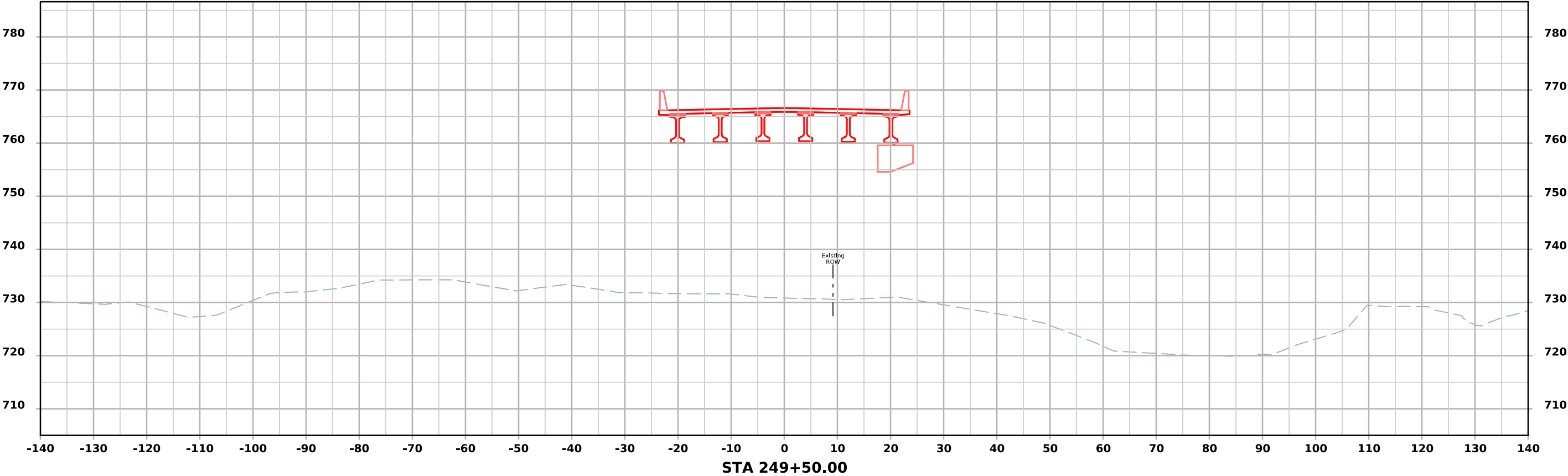
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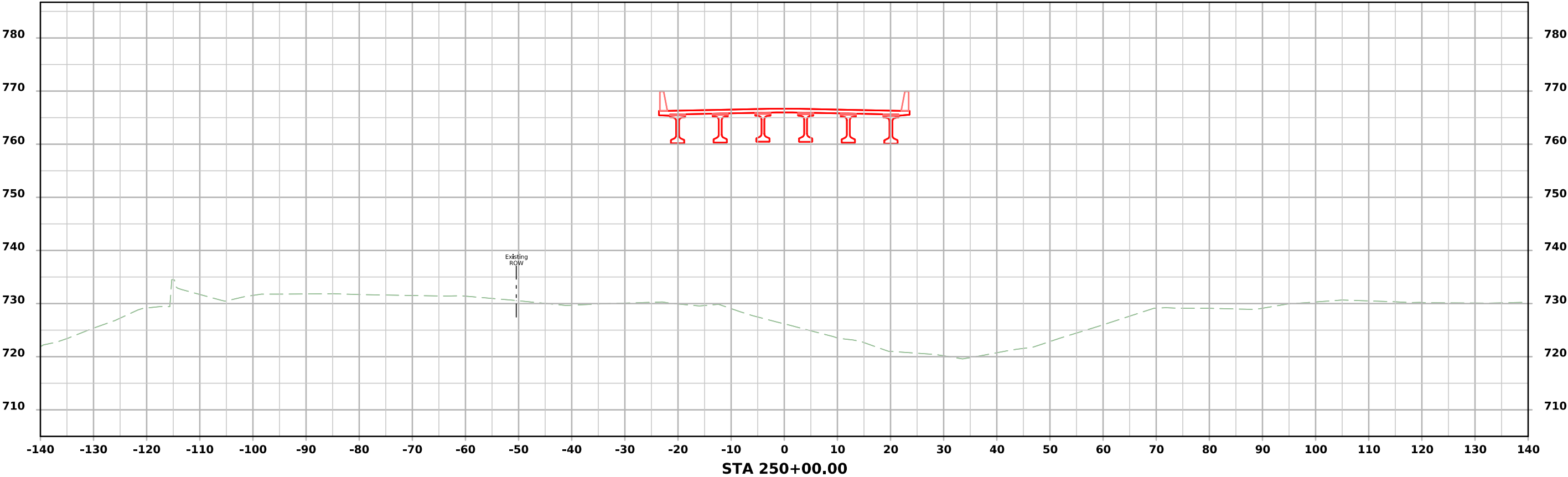
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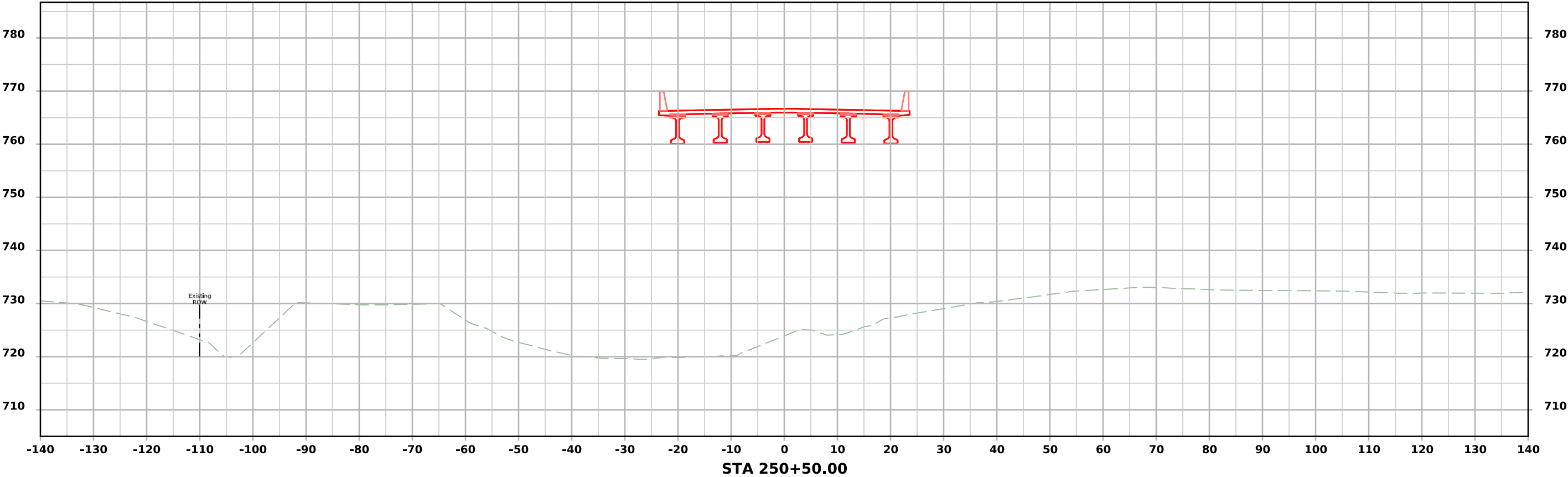
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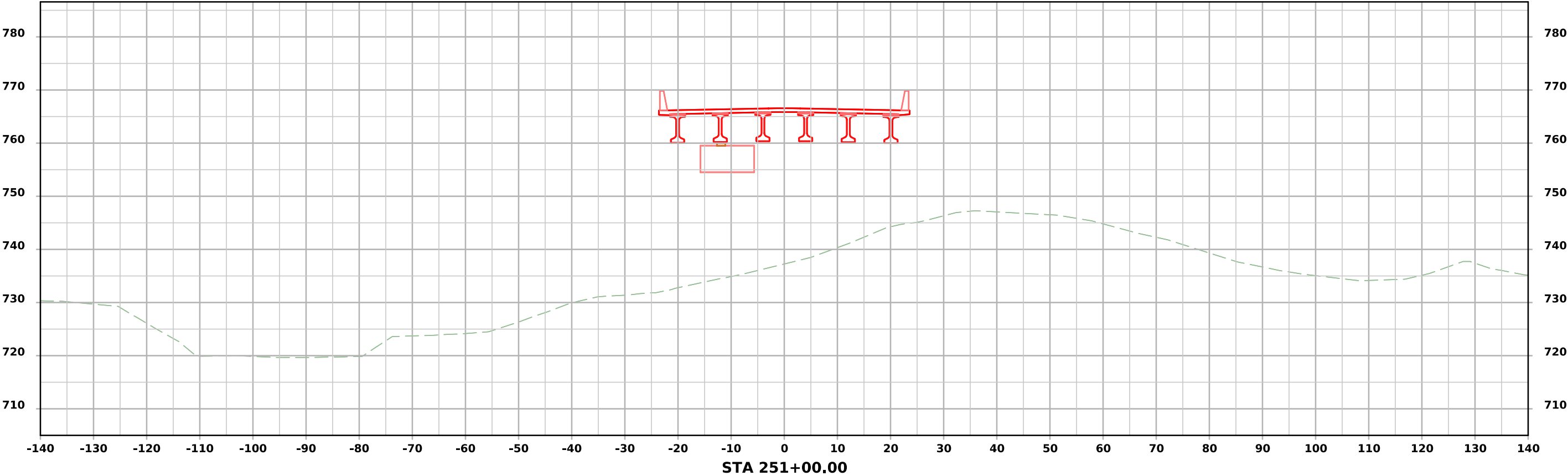
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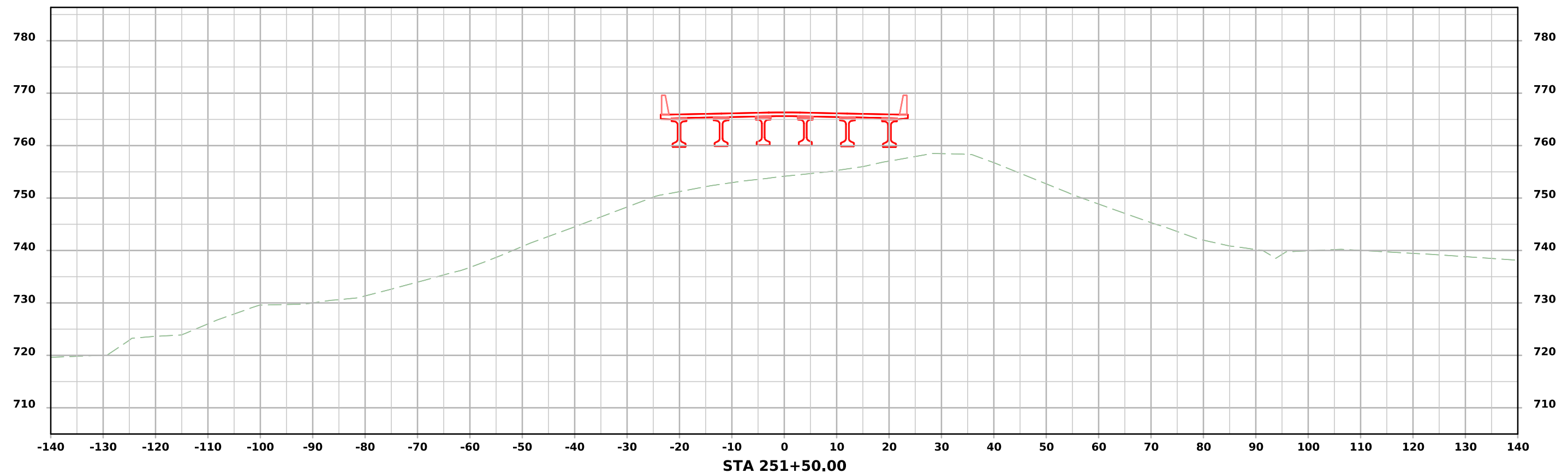
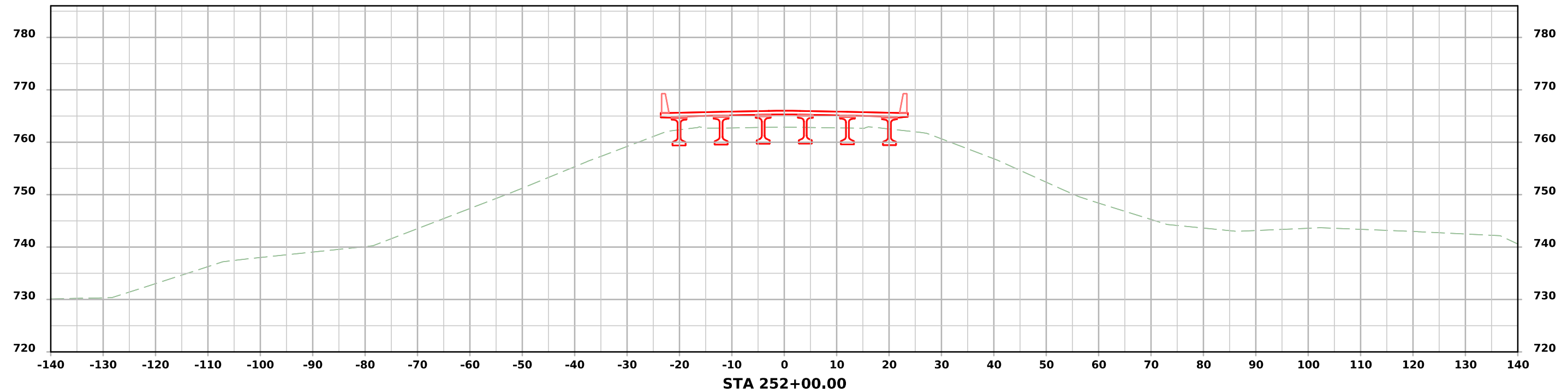
ML - US 34



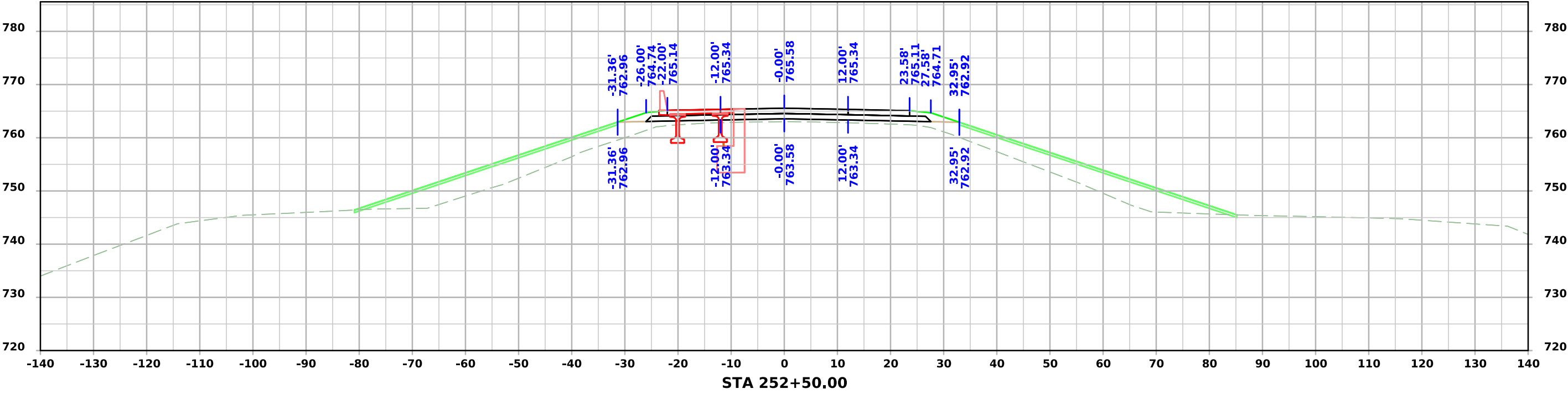
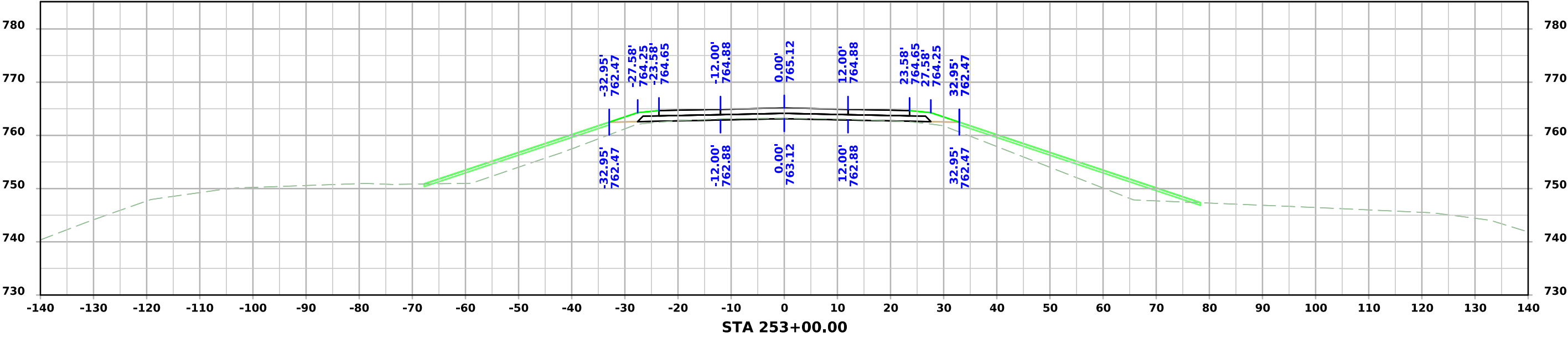
ML - US 34



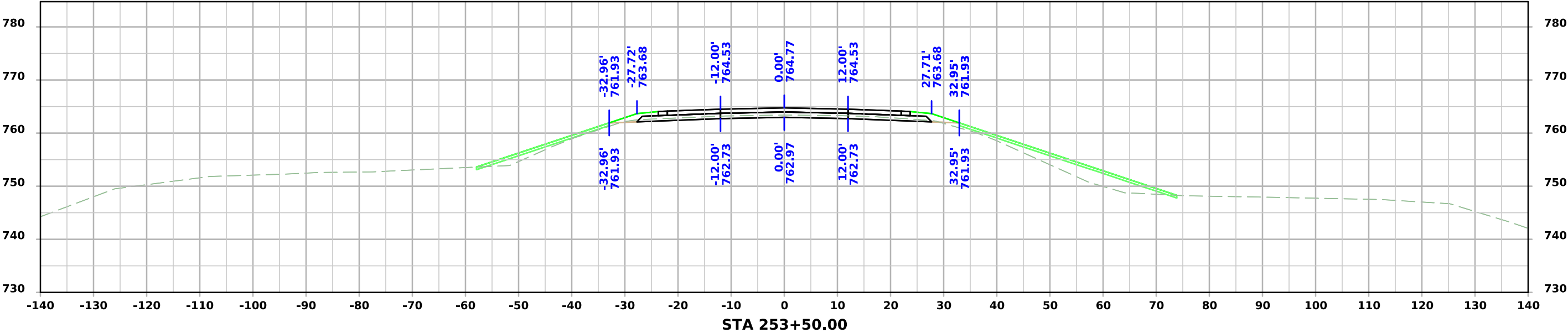
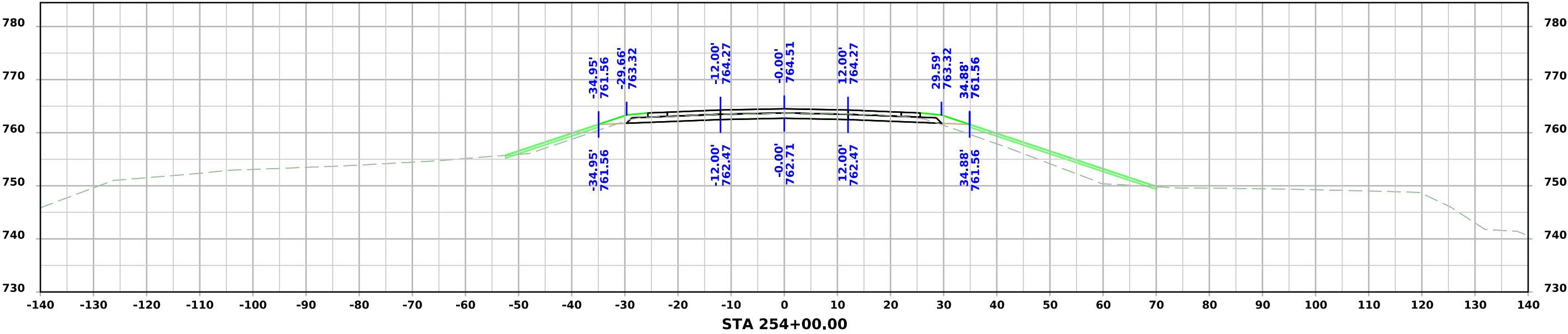
ML - US 34



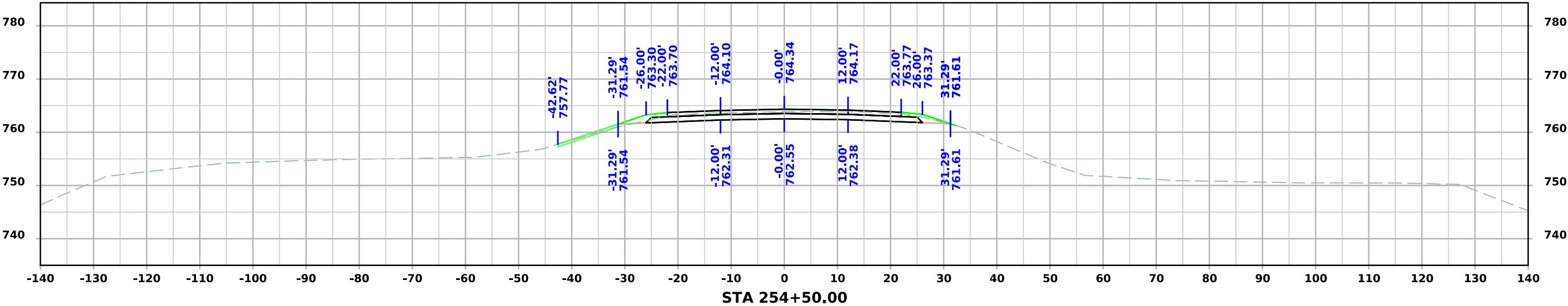
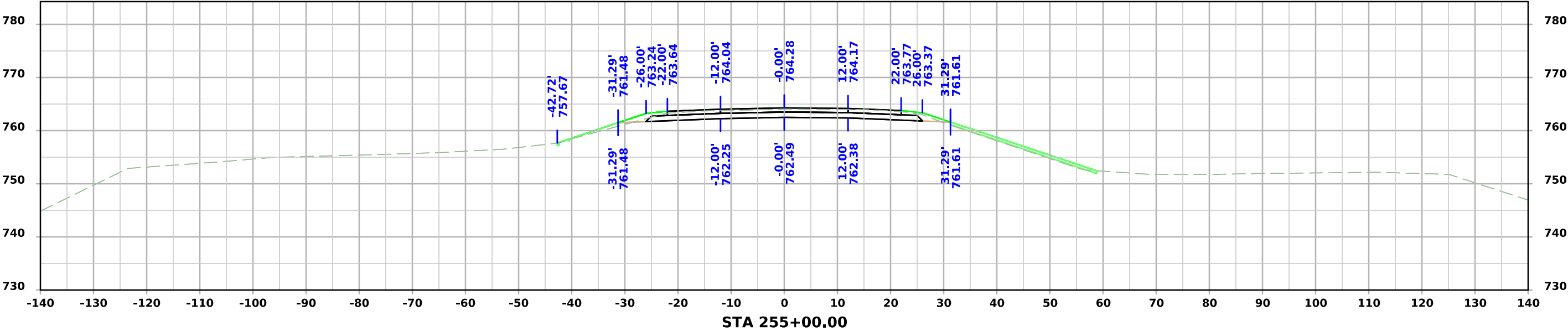
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