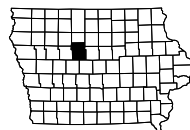


INDEX OF SHEETS	
No.	DESCRIPTION
<b>A Sheets</b>	<b>Title Sheets</b>
A.1	Title Sheet
<b>B Sheets</b>	<b>Typical Cross Sections and Details</b>
B.1 - 2	Typical Cross Sections and Details
<b>C Sheets</b>	<b>Quantities and General Information</b>
C.1 - 2	Estimated Project Quantities
C.1 - 2	Estimate Reference Information
C.3	Standard Road Plans
C.3	Index of Tabulations
C.3	General Notes
C.4 - 7	Tabulations (beg. with tab. of incidentals if needed)
<b>D Sheets</b>	<b>Mainline Plan and Profile Sheets</b>
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2	IA 926 Plan Sheet
* D.3	IA 926 Profile Sheet
<b>G Sheets</b>	<b>Survey Sheets</b>
G.1	Reference Ties and Bench Marks
G.2	Control Point Vicinity Map
G.3	Horizontal Control Tab. & Super for all Alignments
<b>J Sheets</b>	<b>Traffic Control and Staging Sheets</b>
J.1	Traffic Control Plan
<b>L Sheets</b>	<b>Geometric, Staking and Jointing Sheets</b>
L.1	Geometric & Staking "Mainline or Side Road Name"
L.2	Edge Profiles "Mainline or Side Road Name"
L.3	Jointing "Mainline or Side Road Name"
<b>M Sheets</b>	<b>Storm Sewer Sheets</b>
M.1	Storm Sewer Tabulations
M.2	Storm Sewer Legend & Symbol Information Sheet
M.3	Storm Sewer Plan and Profile Sheets "ML or SR Name"
<b>R Sheets</b>	<b>Erosion Control Sheets</b>
RC.1	Est. Quantities, PPP, General Notes and Tabulations
* RR.1	Erosion Control Legend and Symbol Information Sheet
<b>S Sheets</b>	<b>Sidewalk Sheets</b>
* S .1	Sidewalk Legend & Symbol Information Sheet
* S .2	Sidewalk Plan Sheets
* S .3	Sidewalk Tabulations
<b>U Sheets</b>	<b>500 Series, Mod.Stds. and Detail Sheets</b>
U.1	500 Series, Modified Standards and Detail Sheets
<b>W Sheets</b>	<b>Mainline Cross Sections</b>
W.1	Cross Sections Legend & Symbol Information Sheet
W.1 - 9	IA 926 Cross Sections
	* Color Plan Sheets



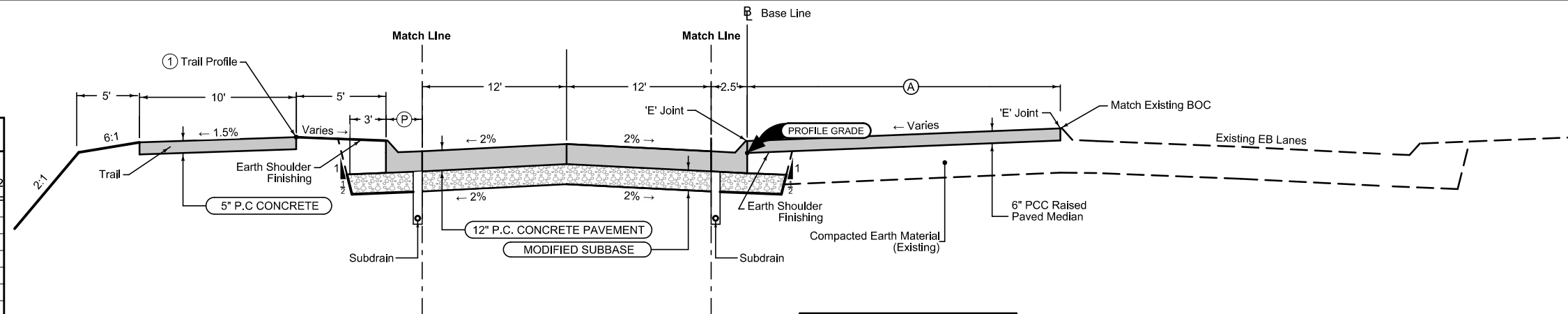
INDEX OF SEALS			
Sheet No.	Name	Type	Bid Quantity Sheets
A.1	Yanxiao Jia	Primary Signature Block	X
	X		
X	X	X	

ROADWAY DESIGN	
	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.
	<i>Yanxiao Jia</i> <span style="float: right;">XX-XX-XXXX</span> Signature <span style="float: right;">Date</span>
	Yanxiao Jia Printed or Typed Name
	My license renewal date is December 31, 20XX
	Pages or sheets covered by this seal: A.1, X

**Curbed Shoulder with Trail**

STATION TO STATION		(P) Feet	Curb Type See PV-102
732+18.61	732+41.43	2.5	6" Std
732+41.43	732+70.61	2.5-5.0	6" Std
732+70.61	732+90.61	5.0	6" Std
740+52.23	740+59.69	5.5	6" Std
740+59.69	740+72.39	5.5-4.0	6" Std
740+72.39	740+92.20	4.0	6" Std

- ① Trail Profile from Sta. 732+10.00 to Sta. 732+73.77
- ② Nominal 15'
- ③ Nominal 3'



**Bridge Approach**

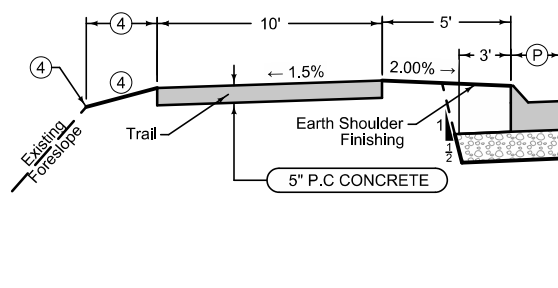
BEGIN STATION	END STATION
732+18.61	732+90.61
740+30.39	741+00.39

4DP_Raised_Out_04-21-20		
BEGIN STATION	END STATION	(A) Feet
732+18.61	732+90.61	②
740+30.39	741+00.39	③

**Curbed Shoulder with Trail**

STATION TO STATION		(P) Feet	Curb Type See PV-102
740+92.20	741+02.30	4.0	6" Std

- ④ Tie to existing break



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

**IA 926**

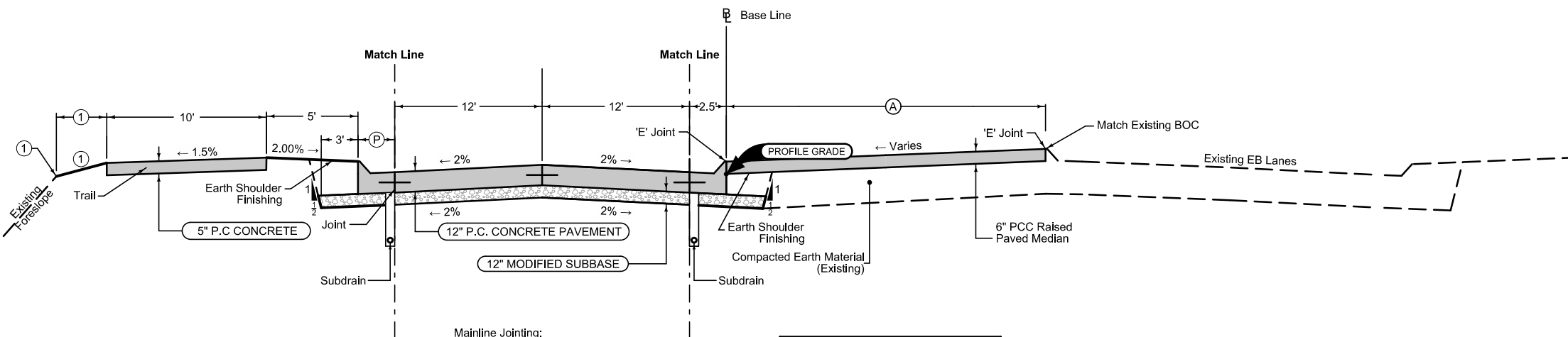
**Curbed Shoulder with Trail**

Shoulder Jointing:  
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2  
Staged: KT-2  
Transverse: C at 17' spacing

STATION TO STATION		(P) Feet	Curb Type See PV-102
741+02.30	741+35.00	4.0	6" Std

- ① Tie to existing break
- ② Nominal 3'



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

BEGIN STATION	END STATION
741+00.39	741+35.00

4DP_Raised_Out_04-21-20		
BEGIN STATION	END STATION	(A) Feet
741+00.39	741+35.00	②

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

**IA 926**

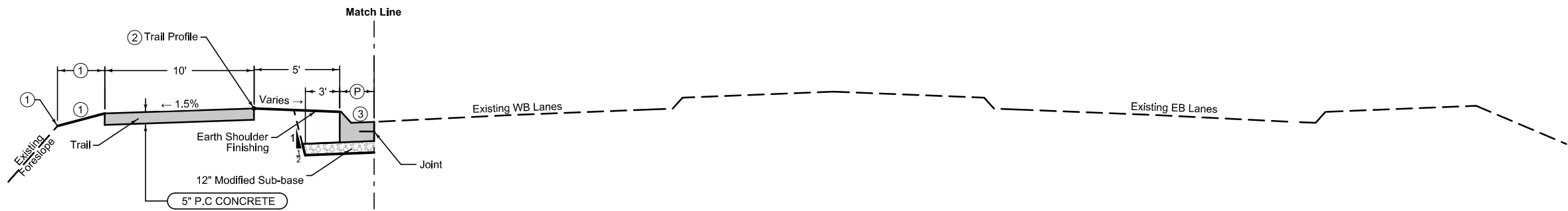
### Curbed Shoulder with Trail

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2  
 Transverse: Match Main Line Joint Spacing

STATION TO STATION		(P) Feet	Curb Type See PV-102
731+10.00	731+90.00	2.5	6" Std

- ① Tie to existing break
- ② Trail Profile from Sta. 732+10.00 to Sta. 732+70.14
- ③ Match existing cross slope



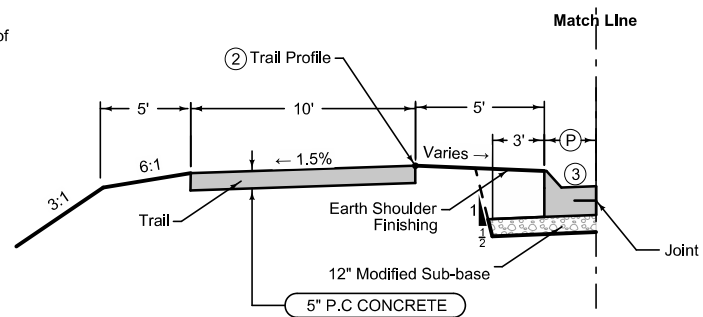
### Curbed Shoulder with Trail

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2  
 Transverse: Match Main Line Joint Spacing

STATION TO STATION		(P) Feet	Curb Type See PV-102
731+90.00	732+18.61	2.5	6" Std

- ② Trail Profile from Sta. 732+10.00 to Sta. 732+70.14
- ③ Match existing cross slope



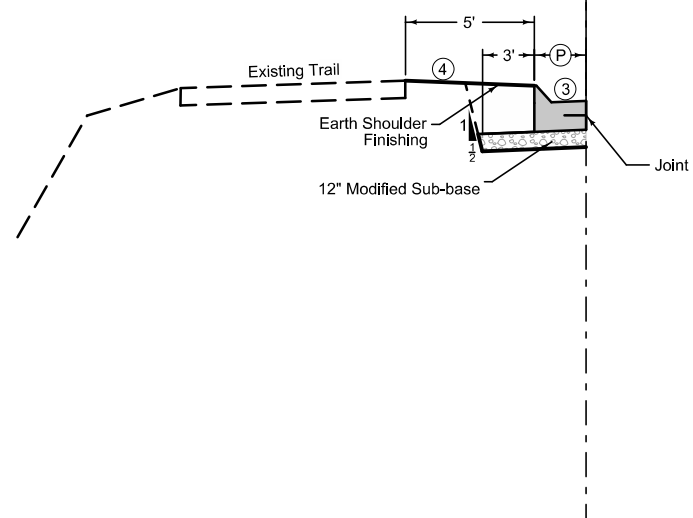
### Curbed Shoulder

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2  
 Transverse: Match Main Line Joint Spacing

STATION TO STATION		(P) Feet	Curb Type See PV-102
741+35.00	741+62.00	4.0	6" Std

- ③ Match existing cross slope
- ④ Tie to existing edge of sidewalk



# ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadway Items : Roadway Items

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated		
				Roadway Items		
1	2115-0100000	MODIFIED SUBBASE	CY	45.4		Refer to Tab. 100-24, C&G, and Typical in B Sheets.
2	2123-7450020	SHOULDER FINISHING, EARTH	STA	4.5		Refer to Tab. 100-24 and Typical in B Sheets.
3	2301-0690203	BRIDGE APPROACH, BR-203	SY	243.4		Refer to Tab. 112-6.
4	2301-0690205	BRIDGE APPROACH, BR-205	SY	177.3		
5	2301-1033120	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 12 IN.	SY	114.3		Refer to Tab. 100-24.
6	2301-4875006	MEDIAN, P.C. CONCRETE, 6 IN.	SY	153.9		Refer to Tab. 112-5.
7	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS	1		A. For removal of bridge barrier end rails. B. Refer to Tab. 110-2.
8	2412-0000100	LONGITUDINAL GROOVING IN CONCRETE	SY	480.4		Refer to Tab. 100-28. (??? Need Long. Grooving from Bridge still ???)
9	2435-0140200	MANHOLE, STORM SEWER, SW-402	EACH	1		Refer to M Sheets for additional information and locations.
10	2435-0250700	INTAKE, SW-507	EACH	1		
11	2435-0254500	INTAKE, SW-545	EACH	1		
12	2435-0254510	INTAKE, SW-545 MODIFIED	EACH	1		Refer to M Sheets for additional information and locations and U Sheets.
13	2510-6745850	REMOVAL OF PAVEMENT	SY	701.3		A. Refer to Tab. 110-1 and 102-5. B. Requires 216.6 linear feet of saw cut.
14	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES	EACH	3		Refer to Tab. 110-15.
15	2511-0302500	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 5 IN.	SY	154.5		Refer to Tab. 113-1A.
16	2511-6745900	REMOVAL OF SIDEWALK	SY	264		1. A. Refer to Tab. 110-5. B. Includes 29.4 lin. ft. 2. of full depth saw cut.
17	2512-1725256	CURB AND GUTTER, P.C. CONCRETE, 2.5 FT.	LF	108.61		Refer to Tab. C&G.
18	2512-1725406	CURB AND GUTTER, P.C. CONCRETE, 4.0 FT.	LF	27		Refer to Tab. C&G.
19	2528-8445110	TRAFFIC CONTROL	LS	1		Refer to Traffic Control plans in J Sheets.

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated	Roadway Items	
				20	2599-9999010	

### SURVEY SYMBOLS

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

### UTILITY LEGEND

- SA1D Sanitary Sewer City of Fort Dodge - Quality D
- ST1D Storm Sewer City of Fort Dodge - Quality D
- WL1D Water Line City of Fort Dodge - Quality D
- Jeff Wood  
819 1st Avenue S  
Fort Dodge, IA 50501-4739  
jwood@fordodgeiowa.org  
(515) 955-6139
- FO1D Fiber Optic Frontier Communications - Quality D
- TL1D Telephone Line Frontier Communications - Quality D
- Trent Flockhart  
600 1st Avenue North  
Fort Dodge, IA 50501  
Trent.Flockhart@ftr.com  
(515) 573-1268
- GL1D Cable TV Line Mediacom Communications Corporation - Quality D
- Mike Lawler  
1225 2nd Ave. S  
Fort Dodge, IA 50501  
mlawler@mediacomcc.com  
(515) 955-6100
- PPA Power Pole MidAmerican Energy - Quality D
- EL1D Electric Line MidAmerican Energy - Quality D
- GL1D Gas Line MidAmerican Energy - Quality D
- GL2D Gas Line MidAmerican Energy - Quality D
- Brian Sewell  
4000 1st Ave. S  
Fort Dodge, IA 50501  
Brian.Sewell@midamerican.com  
(515) 574-5042
- GL3D Gas Line MidAmerican Energy - Quality D
- Matt Kovacic  
2811 5th Avenue  
Rock Island, IL 61201  
mskovacic@midamerican.com  
(309) 793-3704
- TL2D Telephone Line ICN Iowa Communication Network - Quality D

### PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING		Design Color No.	
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	(10)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

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

### 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)

DOUGLAS TWP  
T-89N R-28W  
SEC. 30

(Remove)  
BRIDGE  
658' X 34' CONT. STEEL GIRDER BRIDGE  
WITH 2-36' X 34' CONC. APPROACHES  
DESIGN NO. 9408  
Sta. 736+61.02  
Build 735'-9" X 30'-0" PPCB & RSB w/  
10'-0" Bike Trail  
Skew 0  
Design No. 224

Sta. 731+10.00  
Begin Trail and  
Curb & Gutter  
Paving  
Begin Project

Sta. 741+02.35  
End Bridge  
Approach

Sta. 741+35.00  
End Roadway and  
Trail Paving

Sta. 741+62.00  
End Project

IA 926 WB  
IA 926 EB  
Sta. 729+49.13  
15"x69' RCP  
(U.A.C)

Sta. 732+18.61  
Begin Bridge  
Approach

Mod. SW-545  
w/ 4' X 6' well

(U.A.C)  
WIDEN BRIDGE  
Sta. 736+60  
736.67'X46' P.C. BEAM BRIDGE  
DESIGN NO. 272

Sta. 732+57.26  
15"x42' RCP  
(???)

Sta. 735+55.68  
60"x168' RCP  
(U.A.C)

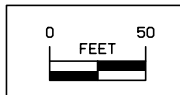
Sta. 735+64.13  
48"x208' RCP  
(U.A.C)

Sta. 740+79.70  
15"x80' RCP  
(???)

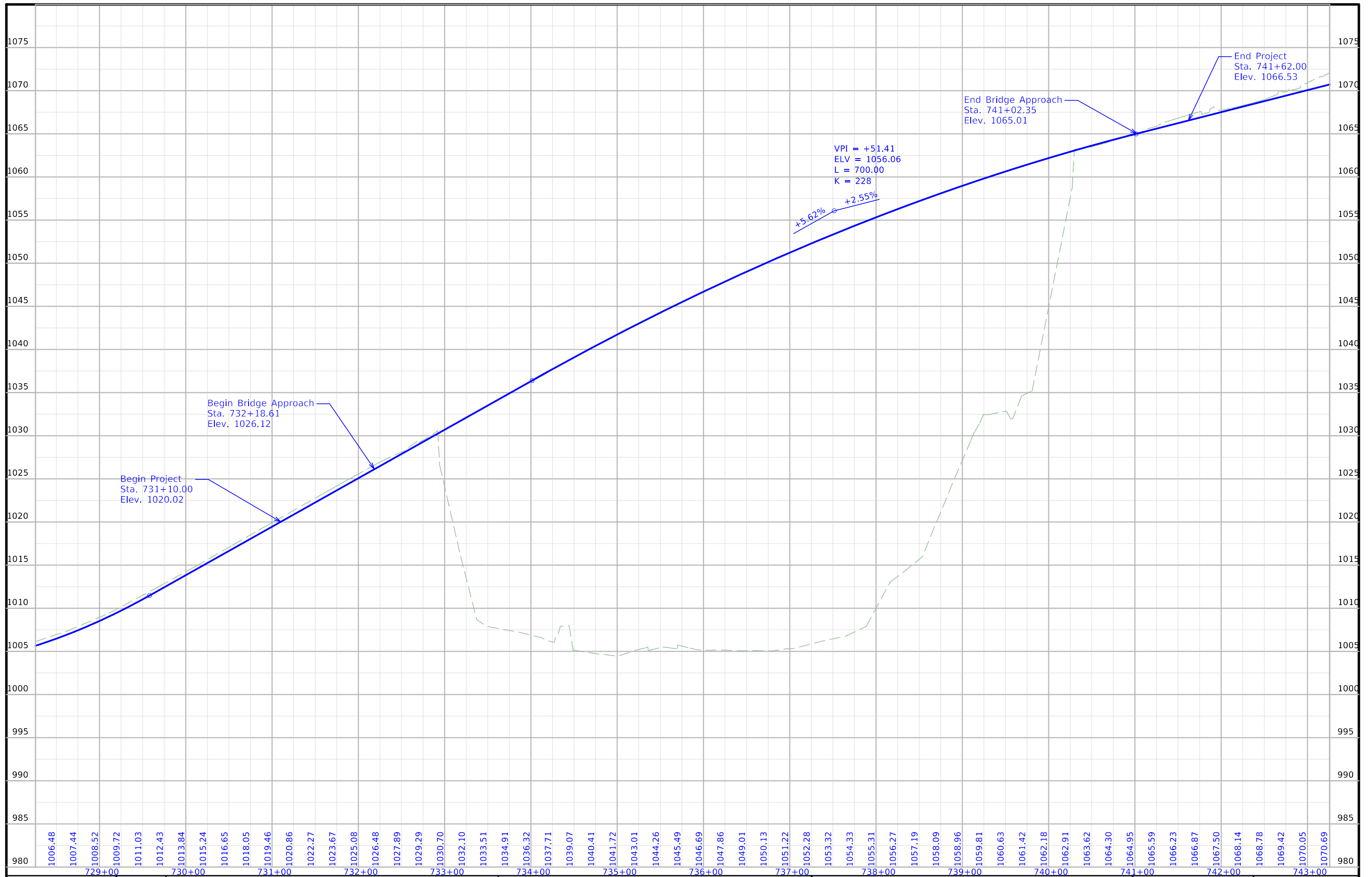
$\Delta = 59^{\circ}09'11.18"$  (RT)  
T = 274.69  
L = 499.69  
R = 484.00  
e = 72.52  
x =

COOPER TWP  
T-89N R-28W  
SEC. 29

Note: The 1st 22' of the Approach  
including sleeper Beginning at  
Sta. 740+30.40 will be designed and  
dimensioned by Benesch.



① Refer to Bridge Plans  
for additional information.



FILE NO. 32183	ENGLISH	DESIGN TEAM Jia \ Cooper \ McClanahan	Webster COUNTY	PROJECT NUMBER BRF-926-0(19)--38-94	SHEET NUMBER D.3
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## Survey Information

Webster County  
BRF-926-0(17)--38-94  
BRF-926-0(19)--38-94  
US 20 Fort Dodge  
PIN 18-94-926-010  
18-94-926-020  
Sap-09590

### General Information

Measurement units for this survey are US survey feet. This preliminary engineering survey is for improvements to US 20 over Des Moines River and B Ave 1.3 miles north of south junction US 169 in Fort Dodge. This project is a full field survey within the survey limits.

### Vertical Control

Vertical datum for this survey is relative to NAVD88, Geoid 12b.

Vertical positions were established by static observations and post processed using concurrent observations from the IaRTN Fort Dodge and Clarion reference stations.

### Horizontal Control

The project coordinate system is the Iowa Regional Coordinate System, Zone 4. Horizontal datum is NAD83 (2011) for Epoch 2010.00. The projection parameters for Zone 4 of the IaRCS is defined below:

Lambert Conformal Conic Projection North American Datum of 1983  
Origin Lat: 42°32'00"N  
Origin Central Meridian: 094°50'00"W  
Central Meridian Scale: 1.000045  
False Northing: 8,600,000  
False Easting: 14,500,000

Horizontal positions for site control were established by static observations and post processed using concurrent observations from the IaRTN Fort Dodge and Clarion reference stations

### Alignment Information

US 20  
The horizontal alignment for this survey is a retrace of as-built plans U-20-3(11)--40-94. Survey stationing was equated to the plan POC at station 747+50.00 and run back without equation.

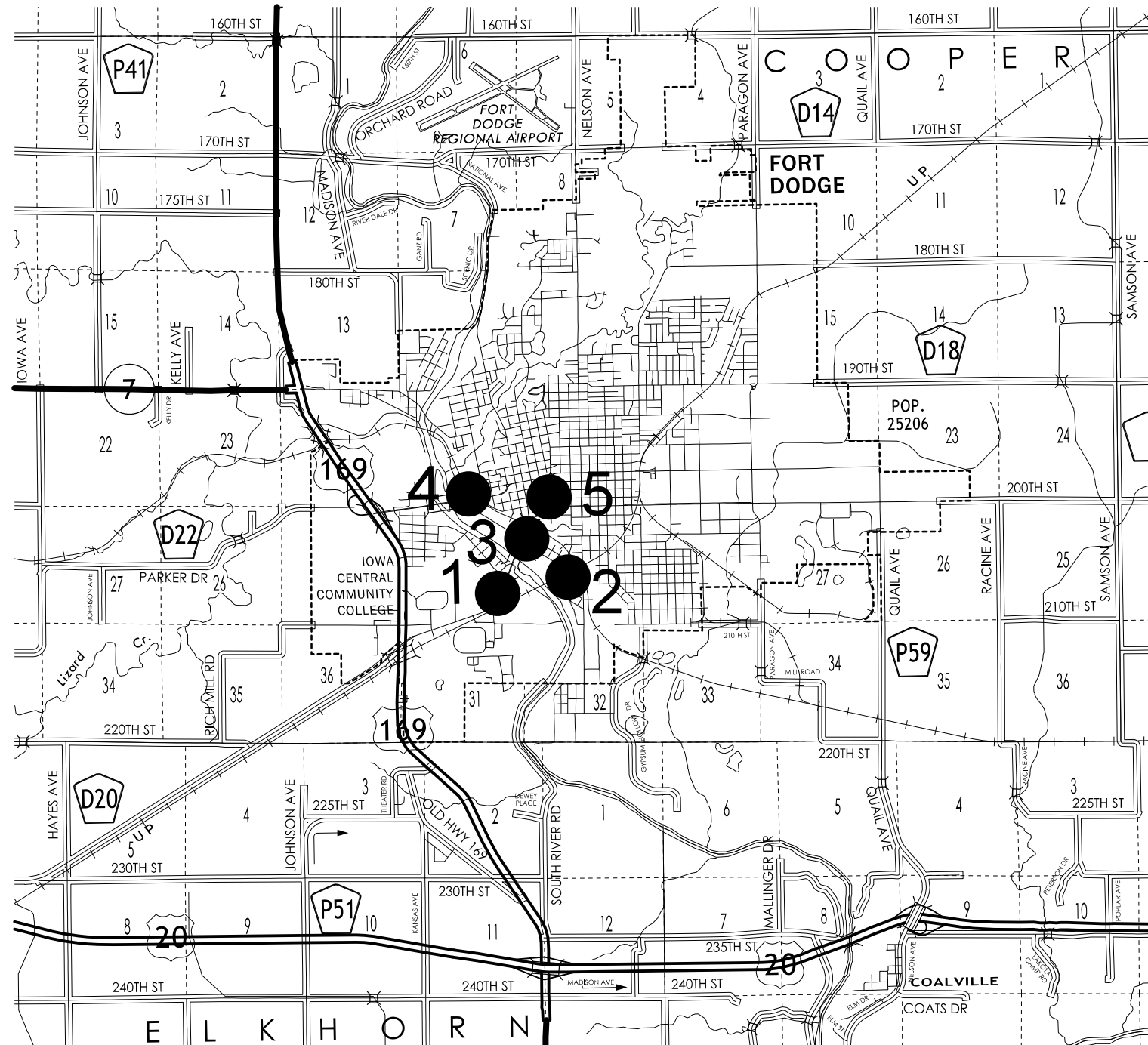
Utility Information  
Sub-Surface Utility Mapping Quality Level is in accordance with CI/ASCE 38-02 Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data.

Remark abbreviations  
QLA – Quality Level A Highest guideline quality level  
QLD – Quality Level D Lowest guideline quality level

A One-call utility locate request (Ticket# 552004559) was made July 7, 2020. The following Companies were listed:

## 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

VERT. DATUM: NAVD88

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

# HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

Point Name	Northing	Easting	Elevation	Feature Definition	Description
CP1	8585070.70	14673125.15	1079.760	CP	SET FENO MONUMENT//IDOT BRASS CAP NW QUADRANT OF KENYON ROAD AND AVE E//+/-20FT NORTH OF UNITY POINT SIGN//+/-20FT WEST OF SIDEWALK
CP2	8586386.79	14675715.07	1005.635	CP	SET FENO MONUMENT//IDOT BRASS CAP SOUTH SIDE OF 11TH AVE SW INLINE WITH POWERPOLE//+/-7FT SOUTH OF BACK OF CURB//+/-70FT EAST OF 13TH ST SW
CP3	8587469.60	14674403.20	1008.556	CP	SET FENO MONUMENT//IDOT BRASS CAP SOUTH SIDE OF 11TH AVE SW INLINE WITH 1ST PIER FROM SOUTH SIDE OF NORTH BOUND BRIDGE//+/-45FT SOUTHWEST OF BACK OF CURB//ACROSS FROM ROW SIGN
CP4	8588826.74	14671977.48	991.811	CP	SET FENO MONUMENT//IDOT BRASS CAP SOUTH SIDE OF MERIWETHER DRIVE//5FT SOUTH OF BACK OF CURB//ACROSS FROM 2ND LIGHT POLE WEST OF DRIVE TO RIVERFRONT PARKING LOT
CP5	8588447.63	14674882.86	1084.993	CP	SET FENO MONUMENT//IDOT BRASS CAP SOUTH SIDE OF KENYON ROAD//+/-5FT SOUTH OF SIDEWALK//+/-75FT EAST OF 2ND POWER POLE EAST OF S 8TH ST

**TRAFFIC CONTROL PLAN**

108-23A  
08-01-08

IA 926 west bound lanes will be closed during construction. Through traffic will be maintained via crossovers detailed in sheets J.3 through J.9. The contractor shall provide access to all entrances at all times.

Refer to project BRF-926-0(17)--38-94 for Traffic Control layout of CN Railroad Bridge (BRF-926-0(19)--38-94) and Des Moines River bridge (BRF-926-0(17)--38-94) projects.

**COORDINATED OPERATIONS**

111-01  
04-17-12

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.

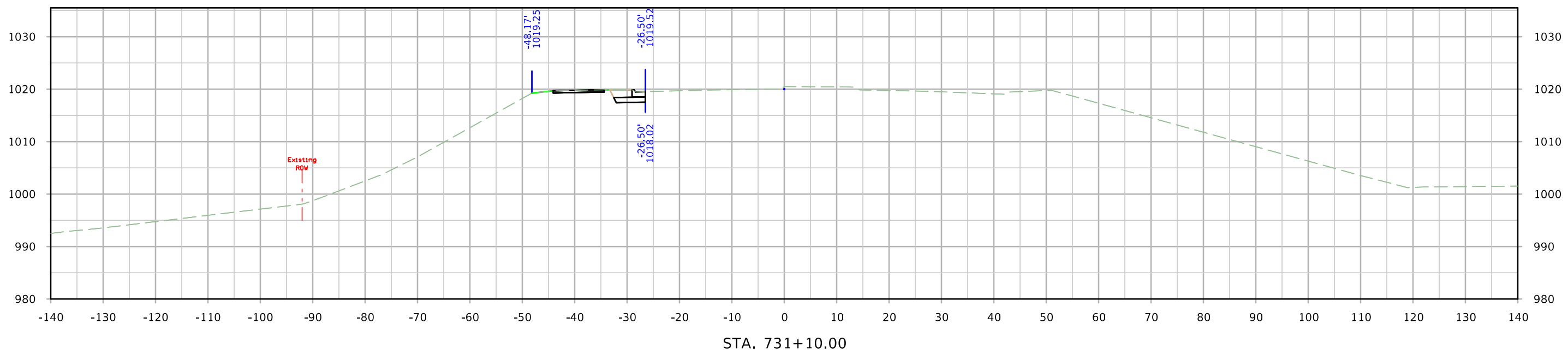
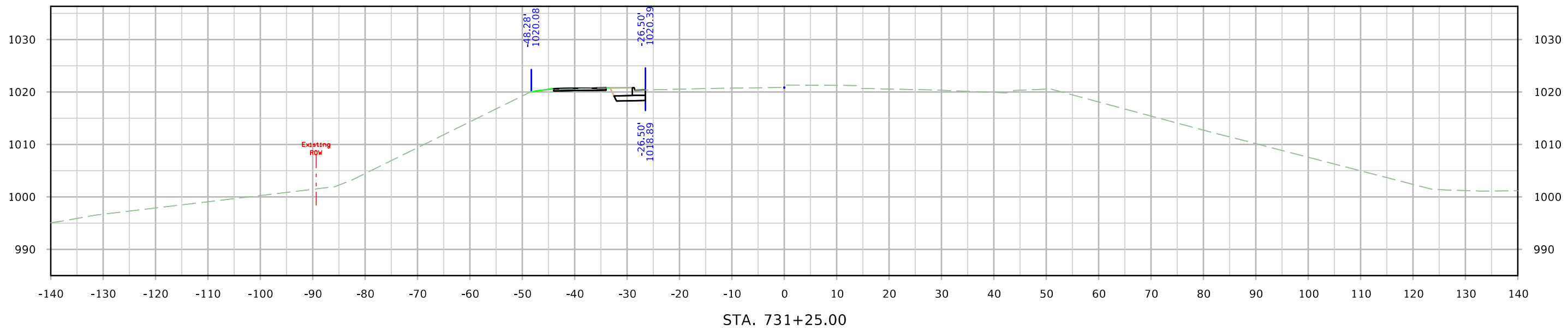
Project	Type of Work
BRF-926-0(17)--38-94	Bridge Replacement

**511 TRAVEL RESTRICTIONS**

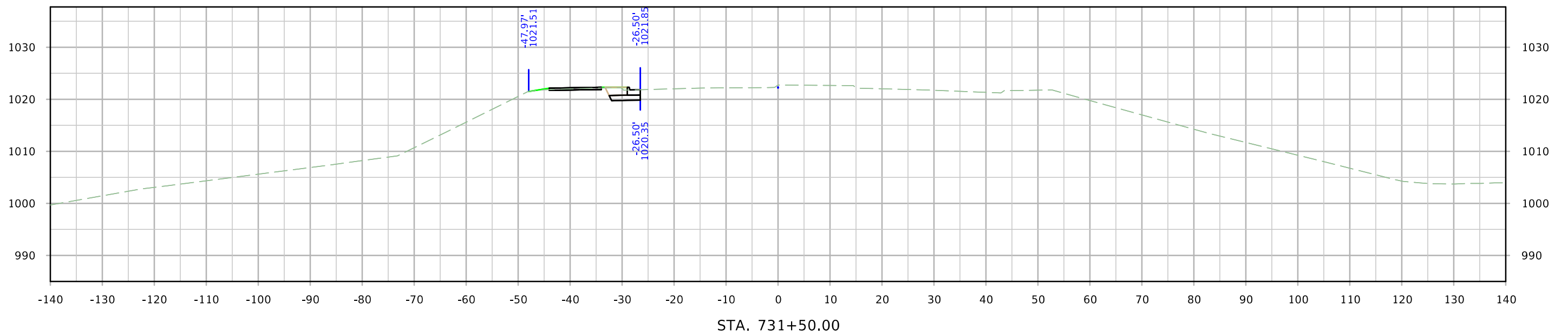
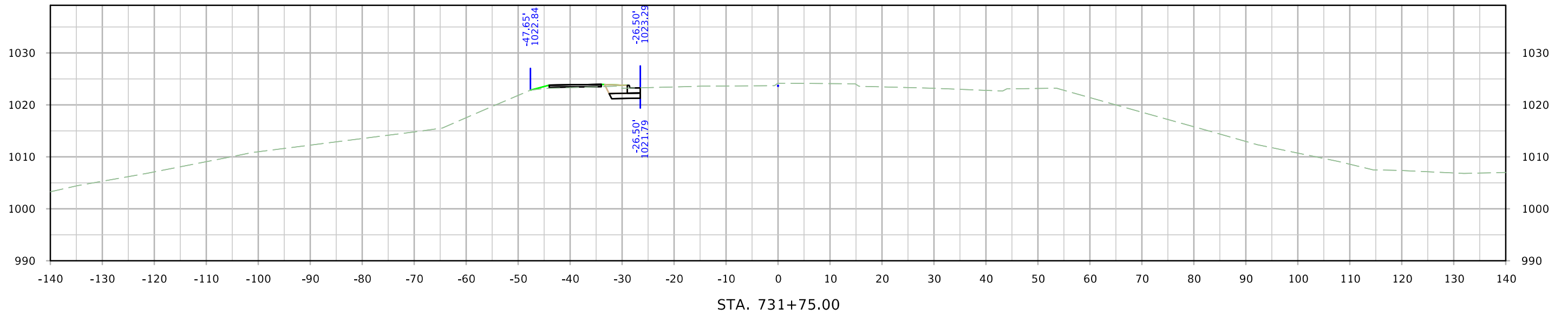
108-25  
10-21-14

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

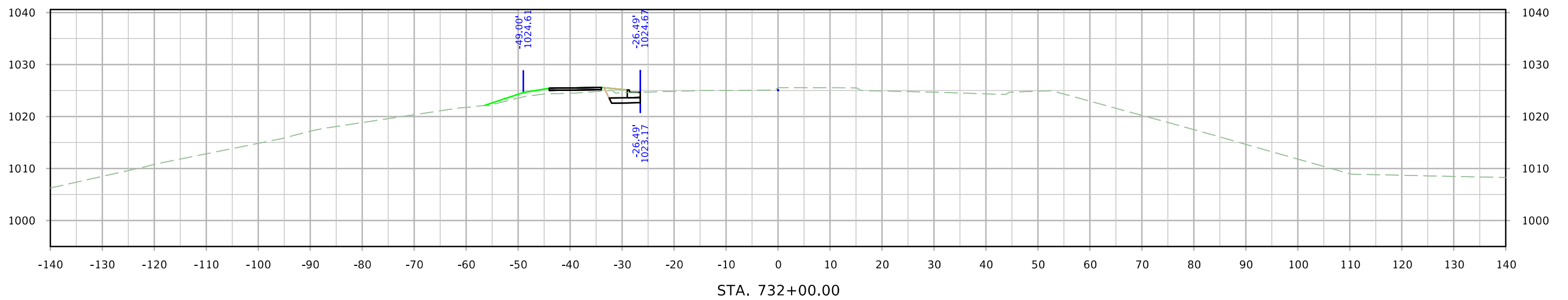
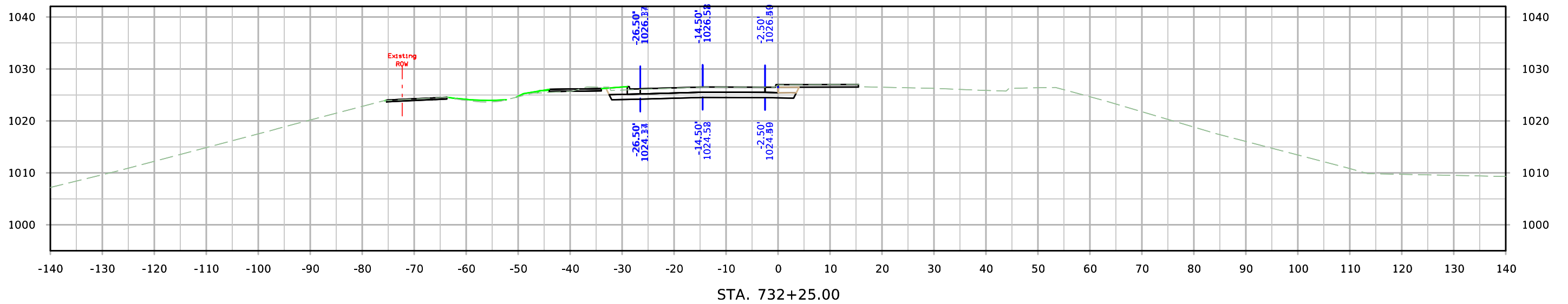
# ML - IA 926



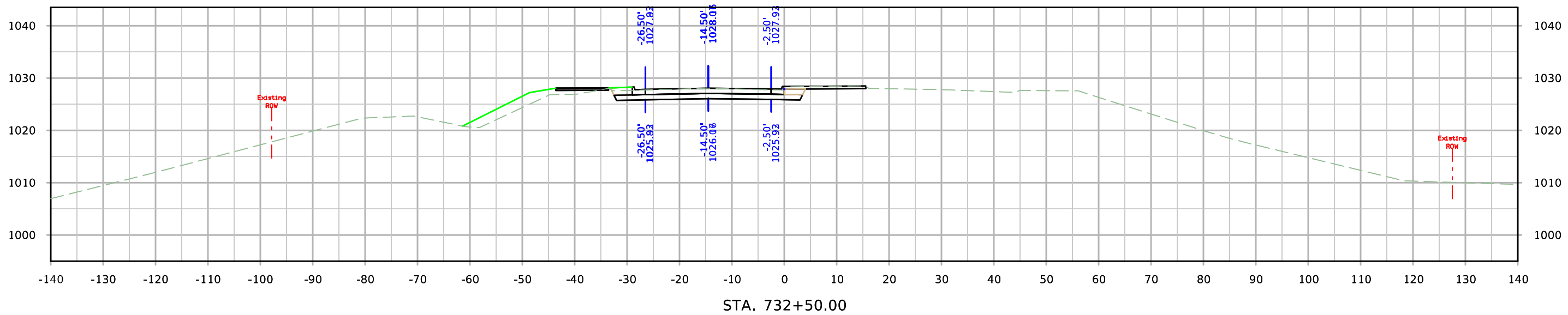
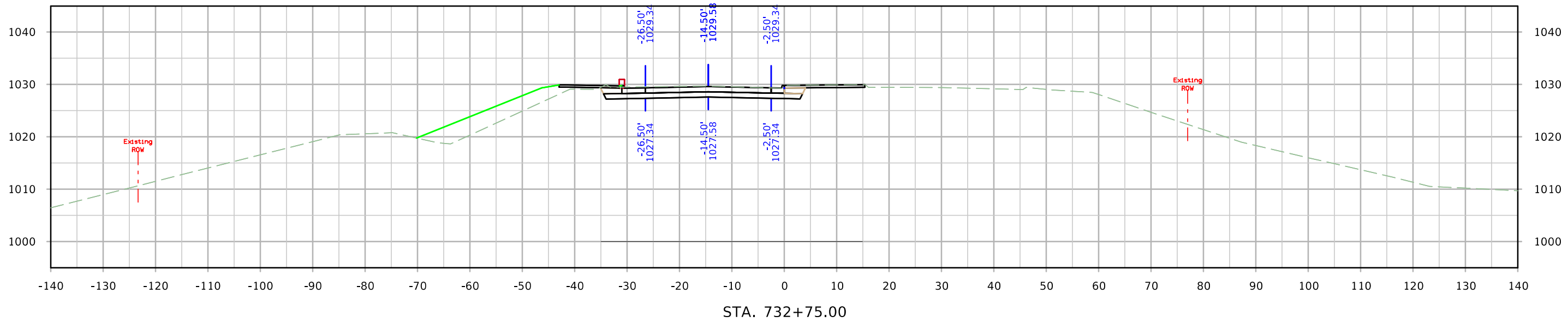
# ML - IA 926



# ML - IA 926

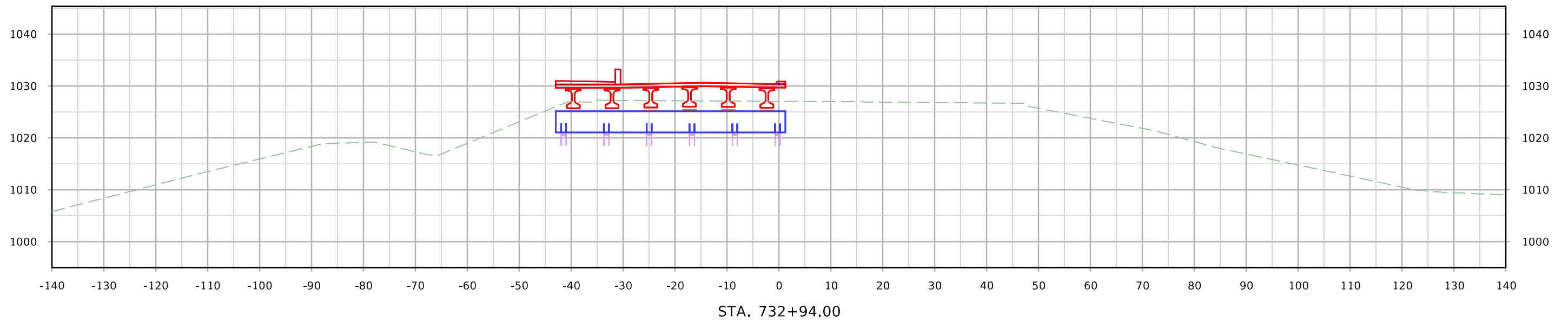


# ML - IA 926

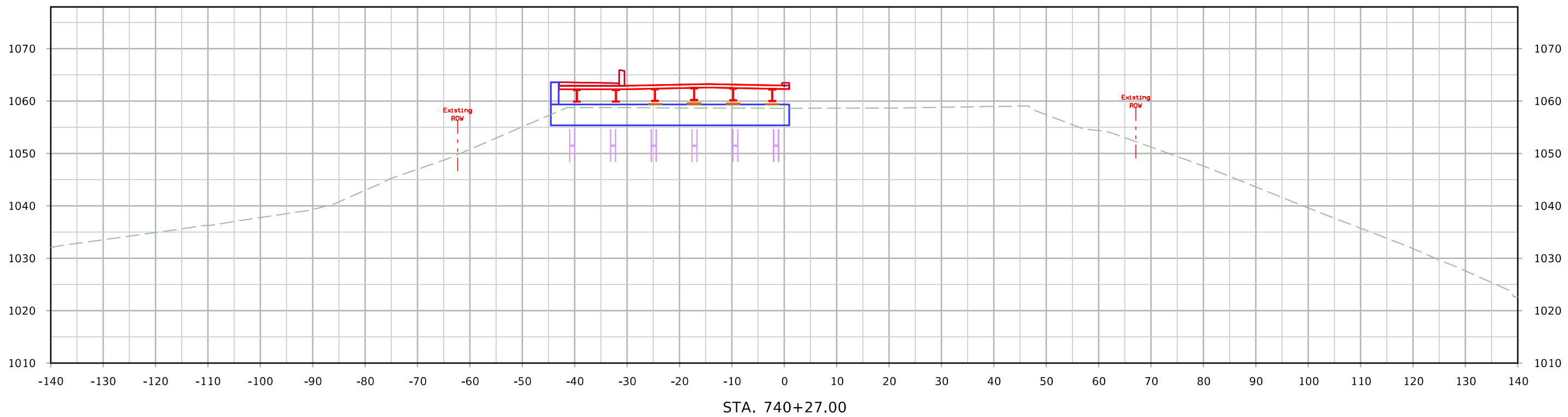
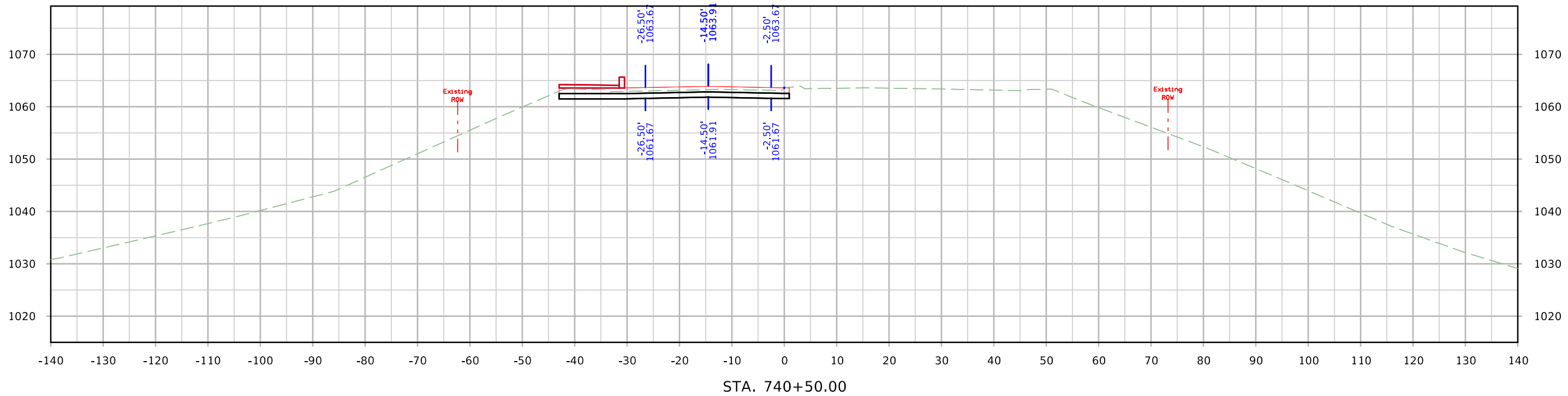




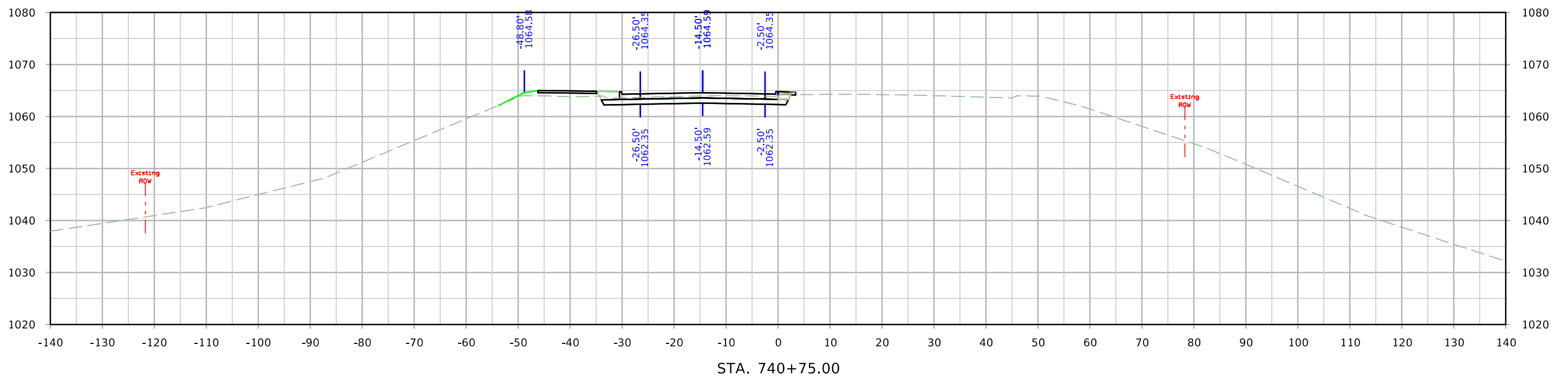
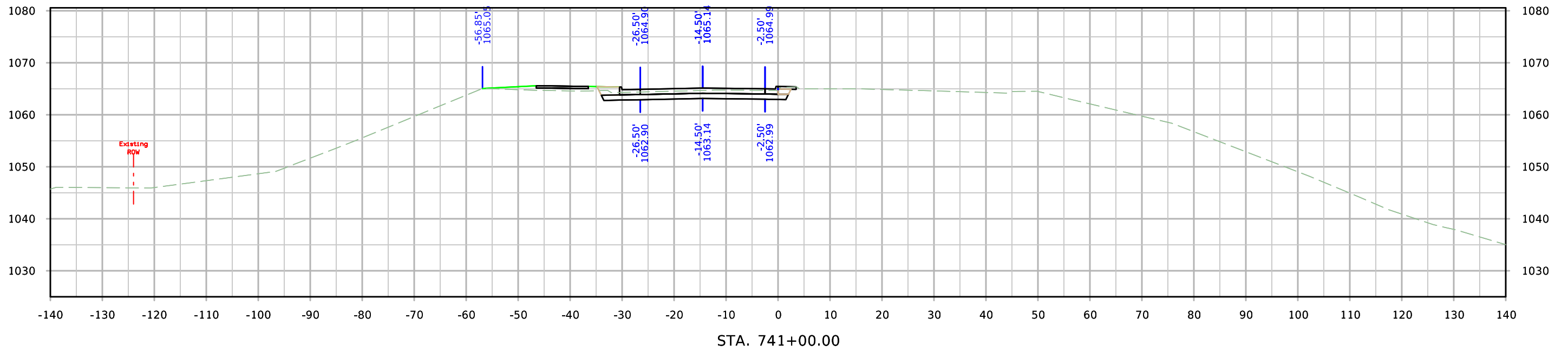
# ML - IA 926



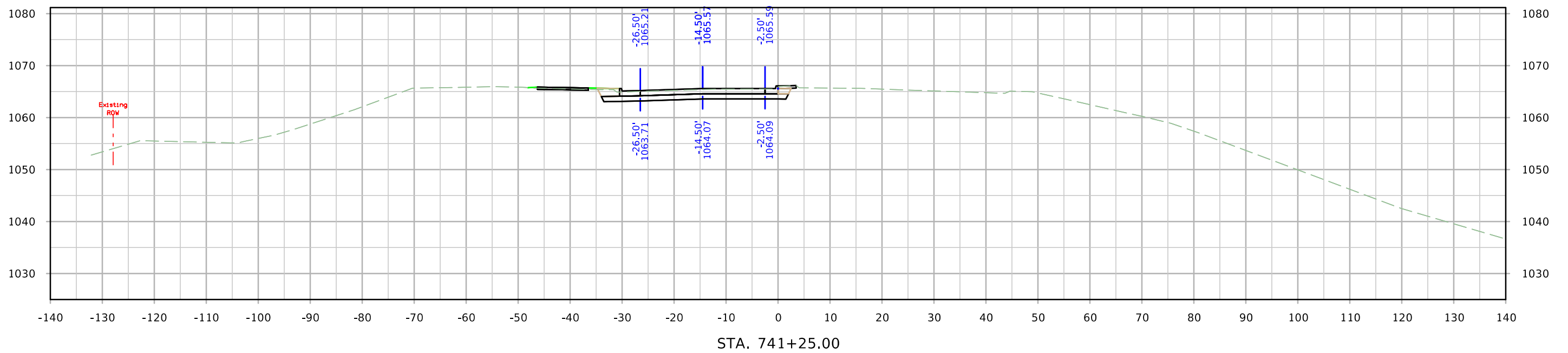
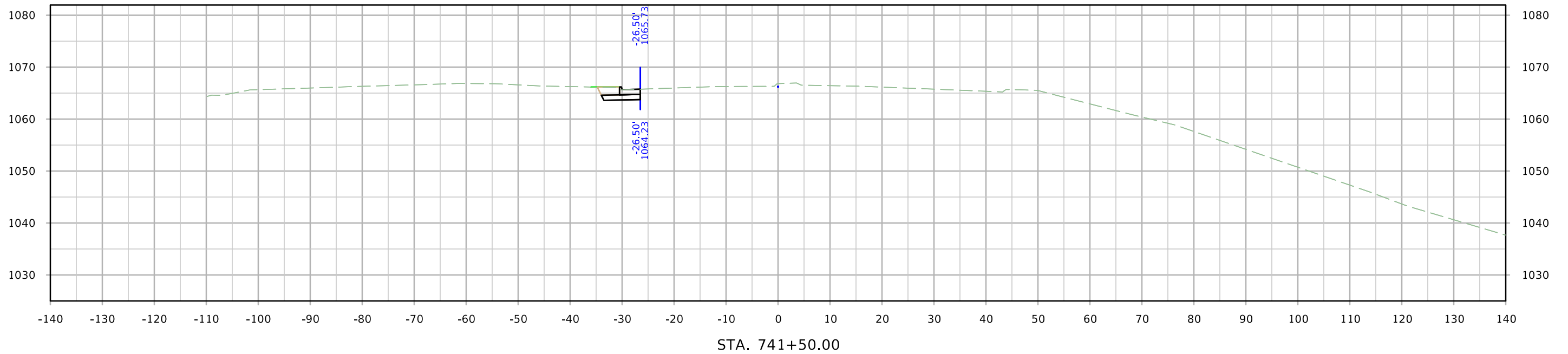
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