

SCOTT COUNTY

BRIDGE REPLACEMENT - CCS
BRFN-461-1(13)--38-82

LETTING DATE
12-17-2024



INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
* A.1	Title Sheet
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B Sheets	Typical Cross Sections and Details
B.1	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2	SB IA 461
E Sheets	Side Road Plan and Profile Sheets
* E.1	Duck Creek Parkway Trail
G Sheets	Survey Sheets
G.1	Reference Ties and Bench Marks
G.2 - 3	Horizontal Control
G.4	Alignment Coordinates
G.5	Spiral Circular Curve Data
J Sheets	Traffic Control and Staging Sheets
* J.1	Traffic Control Plan and Staging Notes
* J.2	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.3	Staging Typical
* J.4 - 7	Staging and Traffic Control Sheets - Stage 1
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U Sheets	500 Series, Mod.Stds. and Detail Sheets
* U.1 - 5	Modified Standards
V Sheets	Bridge and Culvert Situation Plans
* V.1 - 4	SB IA 461 Bridge Situation Plan
W Sheets	Mainline Cross Sections
* W.1	Cross Sections Legend & Symbol Information Sheet
* W.2 - 9	SB IA 461 Cross Sections
X Sheets	Side Road Cross Sections
* X.1 - 5	Duck Creek Parkway Trail Cross Sections
	* Color Plan Sheets



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM
SCOTT COUNTY
BRIDGE REPLACEMENT - CCS

Duck Creek 0.3 mi S of US 6 in Davenport (SB)

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



DESIGN DATA URBAN			
2025	AADT	20,800	V.P.D.
2045	AADT	23,600	V.P.D.
20 --	DHV	--	V.P.H.
TRUCKS		1	%
Total			
Design ESALs		--	

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

REVISIONS

TOTAL	
..	
PROJECT IDENTIFICATION NUMBER	
19-82-461-040	
PROJECT NUMBER	
BRF-461-1(13)--38-82	
R.O.W. PROJECT NUMBER	
NHSN-461-1(14)--2R-82	

PRELIMINARY PLANS

Subject to change by final design.

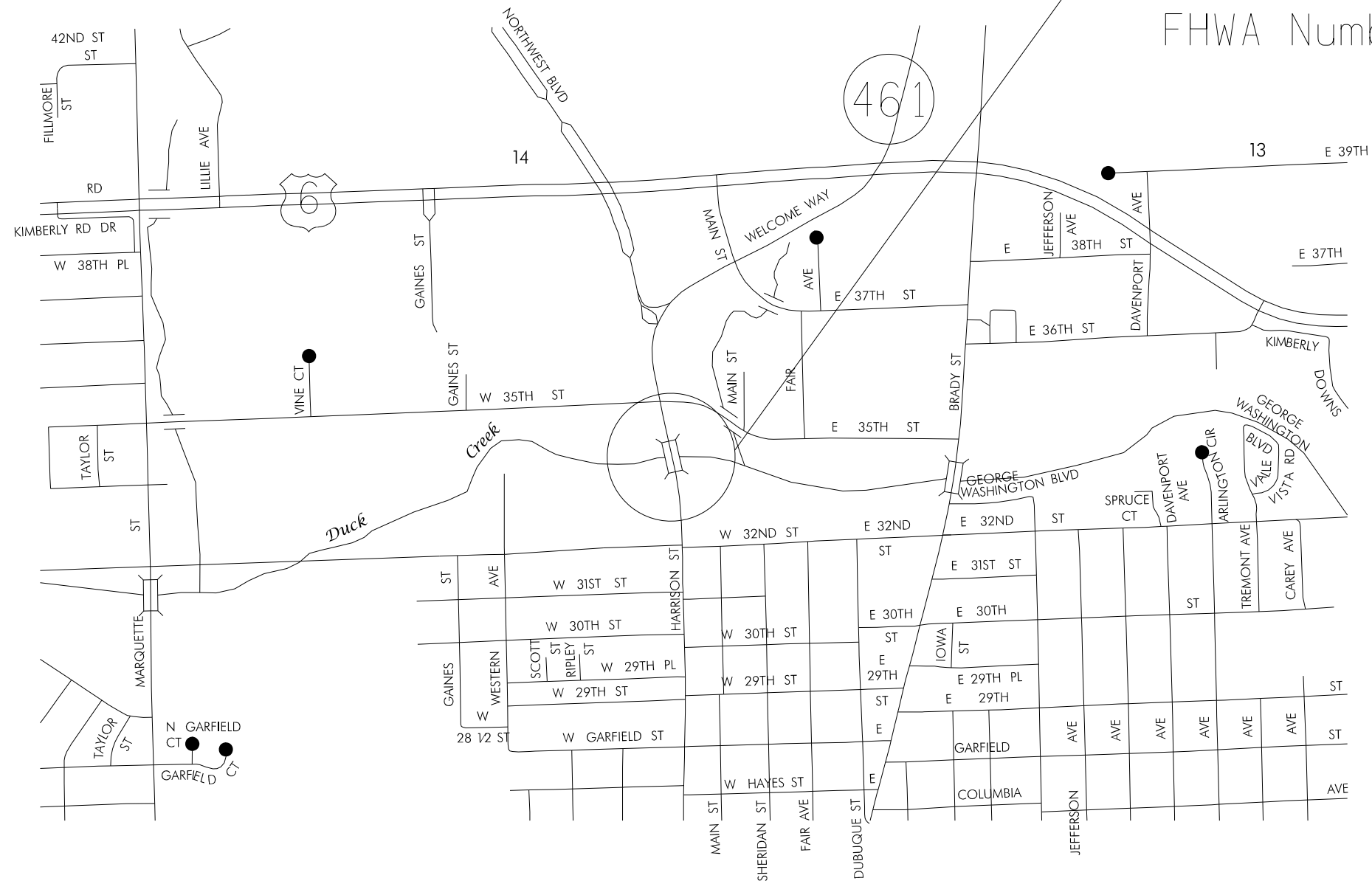
D5 PLAN – Date: 12–9–22

STA. 36+40.15

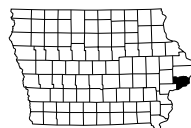
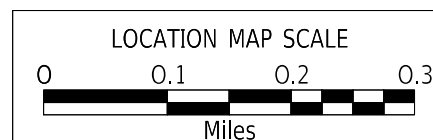
Project Location

Maint. Number: 8220.1L061

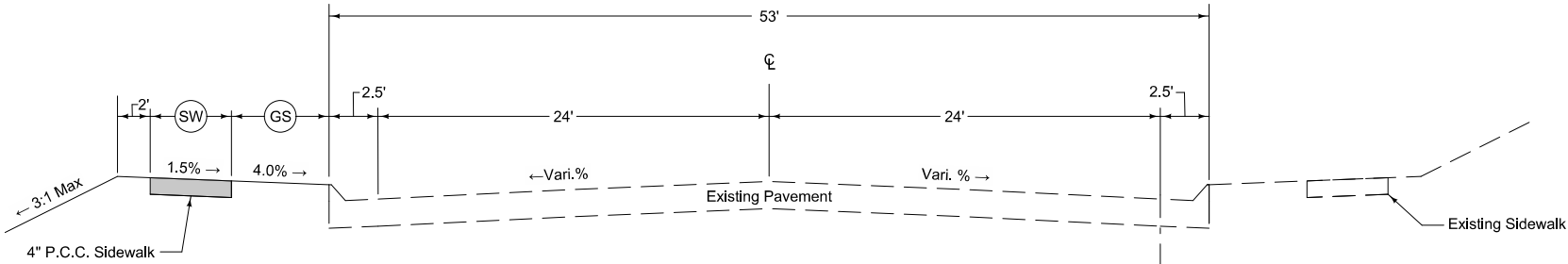
FHWA Number 47211



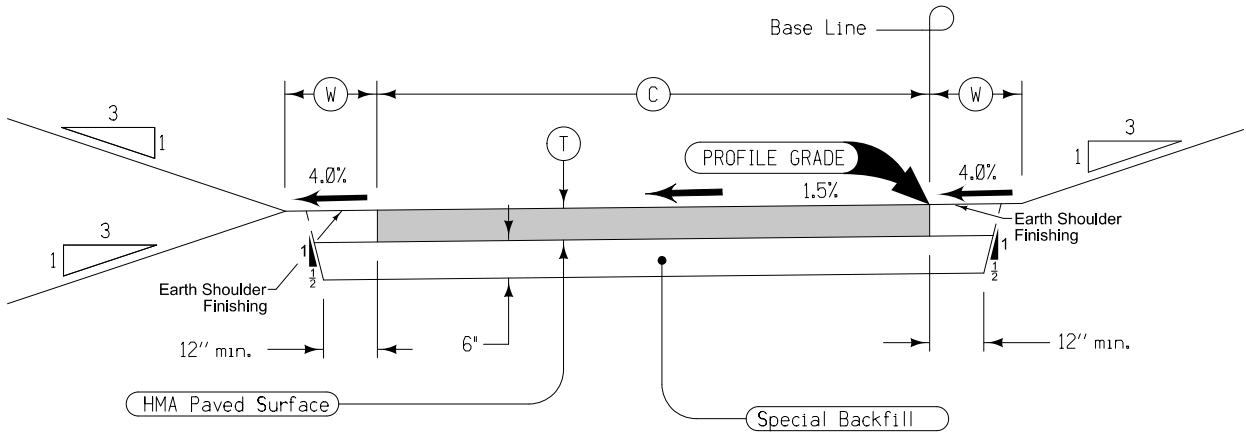
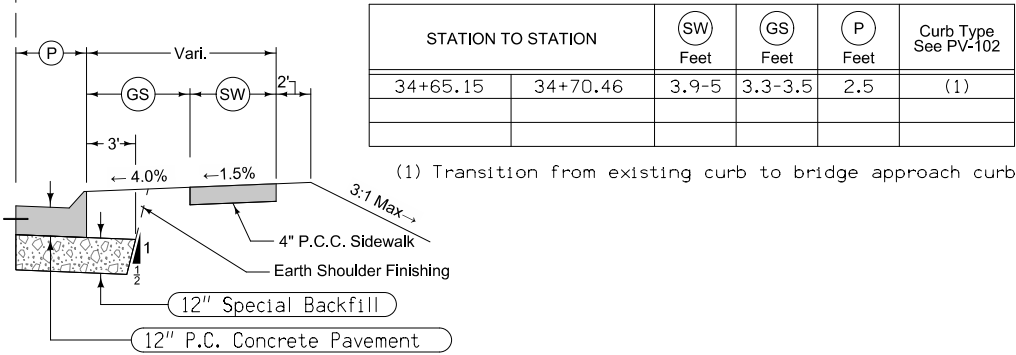
CITY OF DAVENPORT



STATION TO STATION		ⓈⓌ Feet	ⓖⓈ Feet
34+44.37	34+70.46	3.8-5	3.5
38+09.84	38+25.00	5	3.4-5
38+25.00	39+75.76	5	5

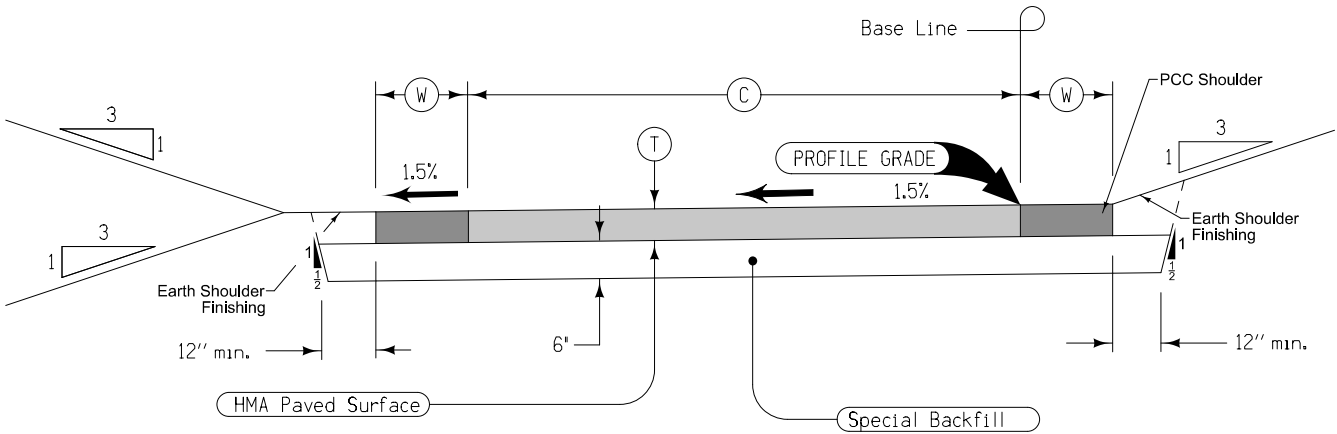


SB IA 461 (N HARRISON ST)



STATION TO STATION		PAVEMENT TYPE	Ⓢ Feet	Ⓣ Inches	Ⓦ TURF SHLDR	
10+30.00	11+05.00	HMA	10	6	3'	3'
11+90.00	12+65.00	HMA	10	6	3'	3'

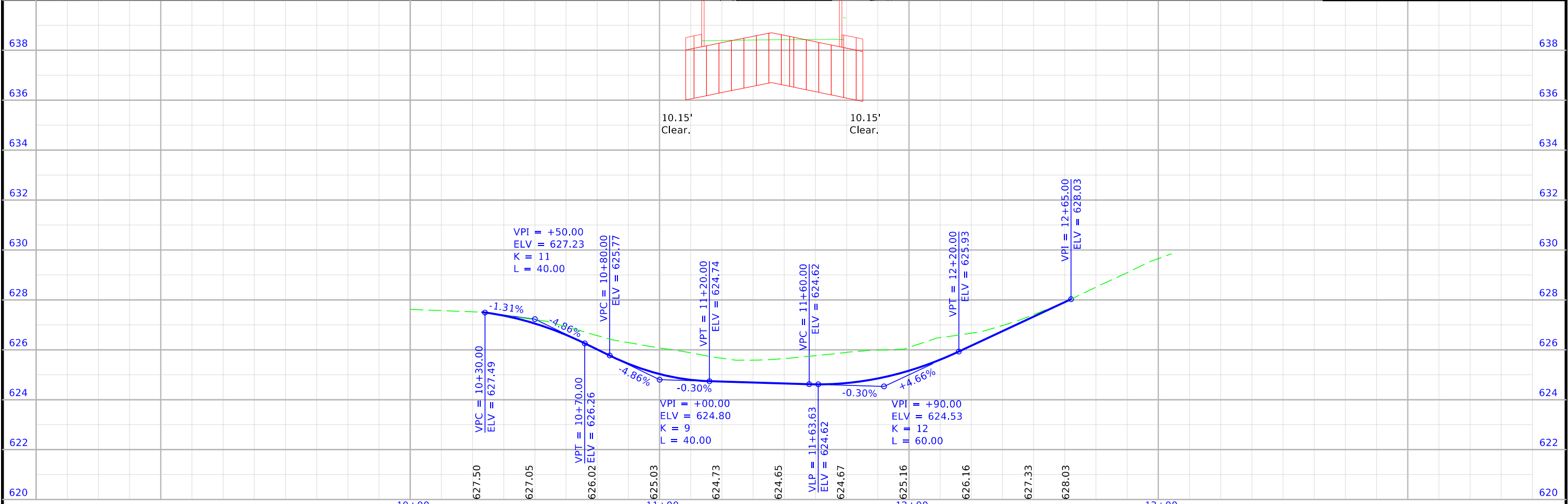
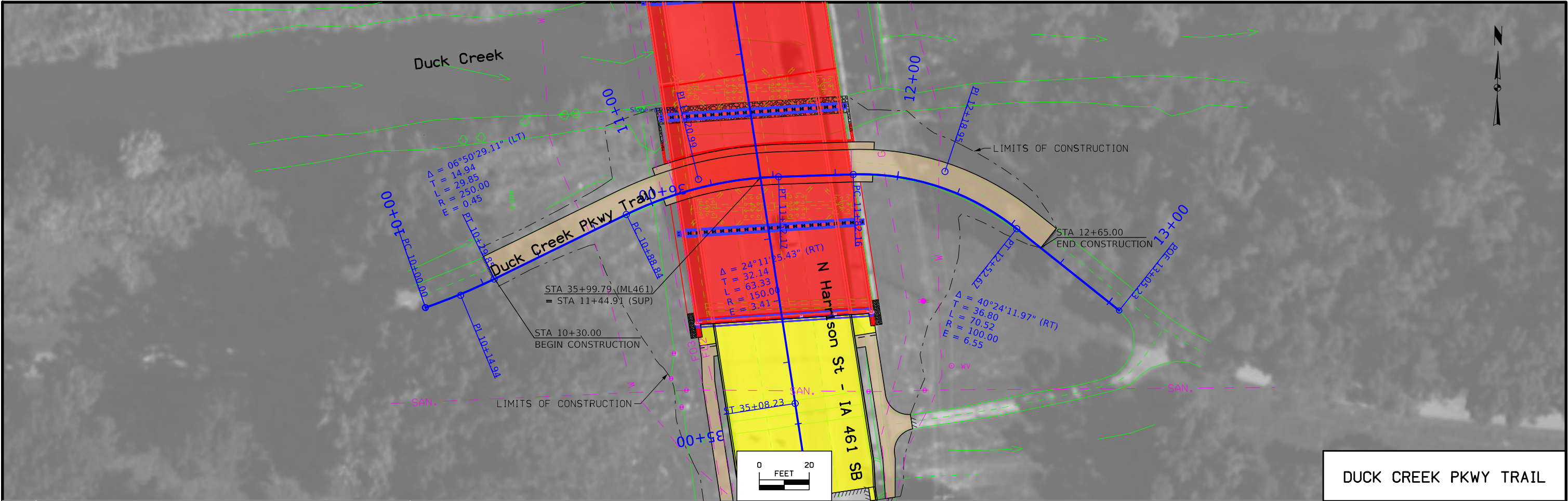
TYPICAL CROSS SECTION
DUCK CREEK PKWY TRAIL



STATION TO STATION		PAVEMENT TYPE	Ⓢ Feet	Ⓣ Inches	Ⓦ PCC SHLDR	
11+05.00	11+90.00	HMA	10	6	3'	3'

TYPICAL CROSS SECTION
DUCK CREEK PKWY TRAIL

<div>SURVEY SYMBOLS</div> <div><div><div></div><div>Interstate Highway Symbol</div></div><div><div></div><div>U.S. Highway Symbol</div></div><div><div></div><div>Iowa Highway Symbol</div></div><div><div></div><div>County Road Highway Symbol</div></div><div><div></div><div>Evergreen Tree</div></div><div><div></div><div>Deciduous Tree</div></div><div><div></div><div>Fruit Tree</div></div><div><div></div><div>Shrub (Bushes)</div></div><div><div></div><div>Timber</div></div><div><div></div><div>Hedge</div></div><div><div></div><div>Stump</div></div><div><div></div><div>Swamp</div></div><div><div></div><div>Rock Outcrop</div></div><div><div></div><div>Broken Concrete</div></div><div><div></div><div>Revetment (Rip Rap)</div></div><div><div></div><div>Cemetery</div></div><div><div></div><div>Grave</div></div><div><div></div><div>Cave</div></div><div><div></div><div>Sink Hole</div></div><div><div></div><div>Board Fence</div></div><div><div></div><div>Chain Link or Security Fence</div></div><div><div></div><div>Wire Fence</div></div><div><div></div><div>Terrace</div></div><div><div></div><div>Earth Dam or Dike (Existing)</div></div><div><div></div><div>Tile Outlet</div></div><div><div></div><div>Edge of Water</div></div><div><div></div><div>Existing Drainage</div></div><div><div></div><div>Right of Way Rail or Lot Corner</div></div><div><div></div><div>Concrete Monument</div></div><div><div></div><div>Well</div></div><div><div></div><div>Windmill</div></div><div><div></div><div>Beehive Intake</div></div><div><div></div><div>Existing Intake</div></div><div><div></div><div>Existing Utility Access (Manhole)</div></div><div><div></div><div>Fire Hydrant</div></div><div><div></div><div>Water Hydrant (Rural)</div></div></div> <div><div><div></div><div>Septic Tank</div></div><div><div></div><div>Cistern</div></div><div><div></div><div>L.P. Gas Tank (No Footing)</div></div><div><div></div><div>Underground Storage Tank</div></div><div><div></div><div>Latrine</div></div><div><div></div><div>Satellite TV Dish</div></div><div><div></div><div>Water Hook Up</div></div><div><div></div><div>Radio Tower</div></div><div><div></div><div>Tower Anchor</div></div><div><div></div><div>Guardrail (Beam or Cable)</div></div><div><div></div><div>Guard Post (one or two)</div></div><div><div></div><div>Guard Post (over two)</div></div><div><div></div><div>Filler Pipe</div></div><div><div></div><div>Gas Valve</div></div><div><div></div><div>Water Valve</div></div><div><div></div><div>Speed Limit Sign</div></div><div><div></div><div>Mile Marker Post</div></div><div><div></div><div>Sign</div></div><div><div></div><div>Traffic Signal Control Box</div></div><div><div></div><div>Rail Road Signal Control Box</div></div><div><div></div><div>Telephone Switch Box</div></div><div><div></div><div>Electric Box</div></div></div>			<div>UTILITY LEGEND</div> <div><div><div></div><div>FO</div><div>Iowa Communications Network Mike Broderick 400 E 14th Street Des Moines, IA 50319 (515) 725-4610 mike.broderick@iowa.gov</div></div><div><div></div><div>FO</div><div>Unite Private Networks Clark Lundy 2320 Wakonda View Dr. Des Moines, IA 50321 (515) 321-3336 clark.lundy@upnfiber.com</div></div><div><div></div><div>FO TV</div><div>Fiber Optic, Centurylink Telephone, Centurylink Brent Giese 3908 Utica Ridge Road Bettendorf, IA 52722 (563) 355-2592 Brent.Giese@lumen.com</div></div><div><div></div><div>ST S SAN. FO</div><div>Steve Parker 2103 E. University Avenue Des Moines, IA 50317 (515) 265-0968 Steven.Parker4@lumen.com</div></div><div><div></div><div>W</div><div>Storm Sewer, Davenport Sanitary Sewer, Davenport Fiber Optic, Davenport Brian Schadt 1200 East 46th Street Davenport, IA 52807 (563) 326-7923 bschadt@ci.davenport.ia.us</div></div><div><div></div><div>TV</div><div>Mediacom Communication Corporation Mitch Hancock 3900 26th Avenue Moline, IL 61265 (309) 743-4735 mhancock@mediacomcc.com</div></div><div><div></div><div>E1</div><div>MidAmerican Energy Company Nick Benhart 5955 Fenno Rd. Bettendorf, IA 52722 (563) 333-8718 NCBenhart@midamerican.com</div></div><div><div></div><div>G</div><div>MidAmerican Energy Company Paul Swanson 2811 5th Avenue Rock Island, IL 61201 (309) 793-3760 pcswanson@midamerican.com</div></div><div><div></div><div>FO</div><div>Fiber Optic, Metro Fibernet, LLC Lori Kemper 3701 Communications Way Evansville, IN 47715 (812) 213-1050 rrhwypermits@metronet.com</div></div></div>			<div>PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS</div> <div><div><div><div>LINEWORK</div><div>Design Color No.</div></div><div><div>Green</div><div>(2)</div><div></div><div>Existing Topographic Features and Labels</div></div><div><div>Blue</div><div>(1)</div><div></div><div>Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation</div></div><div><div>Magenta</div><div>(5)</div><div></div><div>Existing Utilities</div></div></div><div><div><div>SHADING</div><div>Design Color No.</div></div><div><div>Lavender</div><div>(9)</div><div></div><div>Temporary Pavement Shading</div></div><div><div>Yellow</div><div>(4)</div><div></div><div>Proposed Pavement Shading</div></div><div><div>Orange</div><div>(6)</div><div></div><div>Proposed Granular Shading</div></div><div><div>Orange</div><div>(70)</div><div></div><div>Proposed Shoulder Granular Shading</div></div><div><div>Yellow</div><div>(68)</div><div></div><div>Proposed Shoulder Paved Full Depth Shading</div></div><div><div>Yellow</div><div>(132)</div><div></div><div>Proposed Shoulder Paved Partial Depth Shading</div></div><div><div>Gray, Dark</div><div>(112)</div><div></div><div>Proposed Grade and Pave Shading "In conjunction with a paving project"</div></div><div><div>Brown, Light</div><div>(236)</div><div></div><div>Grading Shading</div></div><div><div>Orange, Light</div><div>(134)</div><div></div><div>Proposed Granular Entrance Shading</div></div><div><div>Yellow</div><div>(220)</div><div></div><div>Proposed Paved Entrance Shading</div></div><div><div>Tan</div><div>(8)</div><div></div><div>Proposed Sidewalk Shading</div></div><div><div>Blue, Light</div><div>(230)</div><div></div><div>Proposed Sidewalk Landing Shading</div></div><div><div>Pink</div><div>(11)</div><div></div><div>Proposed Sidewalk Ramp Shading</div></div><div><div>Green, Light</div><div>(225)</div><div></div><div>Existing Pavement Shading</div></div><div><div>Red</div><div>(3)</div><div></div><div>Proposed Structure Shading</div></div></div></div> <div><div>PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS</div><div><div><div><div>LINEWORK</div><div>Design Color No.</div></div><div><div>Green</div><div>(2)</div><div></div><div>Existing Ground Line Profile</div></div><div><div>Blue</div><div>(1)</div><div></div><div>Proposed Profile and Annotation</div></div><div><div>Magenta</div><div>(5)</div><div></div><div>Existing Utilities</div></div><div><div>Blue, Light</div><div>(230)</div><div></div><div>Proposed Ditch Grades, Left</div></div><div><div>Black</div><div>(0)</div><div></div><div>Proposed Ditch Grades, Median</div></div><div><div>Rust</div><div>(14)</div><div></div><div>Proposed Ditch Grades, Right</div></div></div></div></div> <div><div><div><div>Reference Point</div><div>Station</div><div>Survey Line</div></div><div><div></div><div>Section Corner</div></div><div><div></div><div>Ground Line Intercept</div></div><div><div></div><div>Saw Cut</div></div><div><div></div><div>Guardrail</div></div><div><div></div><div>Trench Drain</div></div><div><div></div><div>HighTension Cable Guardrail</div></div><div><div></div><div>Sheet Pile</div></div><div><div></div><div>Pavement Removal</div></div><div><div></div><div>Clearing & Grubbing Area</div></div></div></div> <div><div>RIGHT-OF-WAY LEGEND</div><div><div><div></div><div>Proposed Right-of-Way</div></div><div><div></div><div>Existing Right of Way</div></div><div><div></div><div>Existing and Proposed Right-of-Way</div></div><div><div></div><div>Easement and Existing Right-of-Way</div></div><div><div></div><div>Easement (Temporary)</div></div><div><div></div><div>Easement</div></div><div><div></div><div>Access Control</div></div><div><div></div><div>Property Line</div></div></div></div> <div><div>PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET</div><div>(COVERS SHEET SERIES D & E)</div></div>			FILE NO. 32279	ENGLISH	DESIGN TEAM HNTB	SCOTT COUNTY	PROJECT NUMBER 12345BRF-461-1(13)--38-82	SHEET NUMBER D.1
11:26:50 AM 12/9/2022 bcharipar pw:\\pw-int.hntb.org:PWCentralDiv\Documents\Kansas City Projects\71903 Iowa DOT Task Order 2\Production\Roadway\SHT_D_82461013Z11.dgn														



Survey Information

SURVEY INDEX

County: Scott

PIN: 19-82-461-040

Project Number: BFR-461-1(13)—38-82

Location: IA 461 Bridge over Duck Creek/Bike Path, 0.3 miles south of
US 6 in Davenport (SB)

Type of Work: Bridge Replacement

Project Directory: 8246104019

Survey Personnel

Nels Sutherland – Survey Party Chief
Myron Fox – Survey Party Chief

Date(s) of Survey

Begin Date 03/13/2022
End Date 04/12/2022

General Information

Measurement units for this survey are US survey feet. This survey is for the southbound IA 461 bridge replacement over Duck Creek/Bike Path. This project is a Full DTM survey.

Project Control

Control Points from a previous project, No. BRF-461-1(9)—38-82, were utilized for horizontal and vertical control. For additional details of the control survey, contact the Preliminary Survey department.

PROJECT DATUM: NAD83(2011) EPOCH 2010.00
VERTICAL DATUM: NAVD88
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 11
GEOID MODEL: 2012bu3

Alignments Information

The alignment created for this project is “Best Fit”. No reference monumentation was found. The centerline of roadway was used for the back and ahead tangent lines. Referenced As-built plan set UN 130-1(4)—41-82 for centerline geometry and stationing. Held bridge centerline Sta. 36+36.00 running back and ahead without equation.

Survey stationing relates to As-built plan stationing as follows:

PI Sta. 30+00.00 Plan
= Survey PI Sta. 30+00.72

TS Sta. 30+88.31 Plan
= Survey TS Sta. 30+89.03

SC Sta. 32+32.31 Plan
= Survey SC Sta. 32+33.03

CS Sta. 33+63.31 Plan
= Survey CS Sta. 33+64.03

ST Sta. 35+07.31 Plan
= Survey ST Sta. 35+08.03

Bridge CL Sta. 36+36.00 Plan (Held)
= Survey Bridge CL Sta. 36+36.00

Utility Information

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

CONTROL POINT VICINITY MAP

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



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00 - Ia. RCS Zone 11
VERT. DATUM: NAVD88 - Geoid Model g2012bu3

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

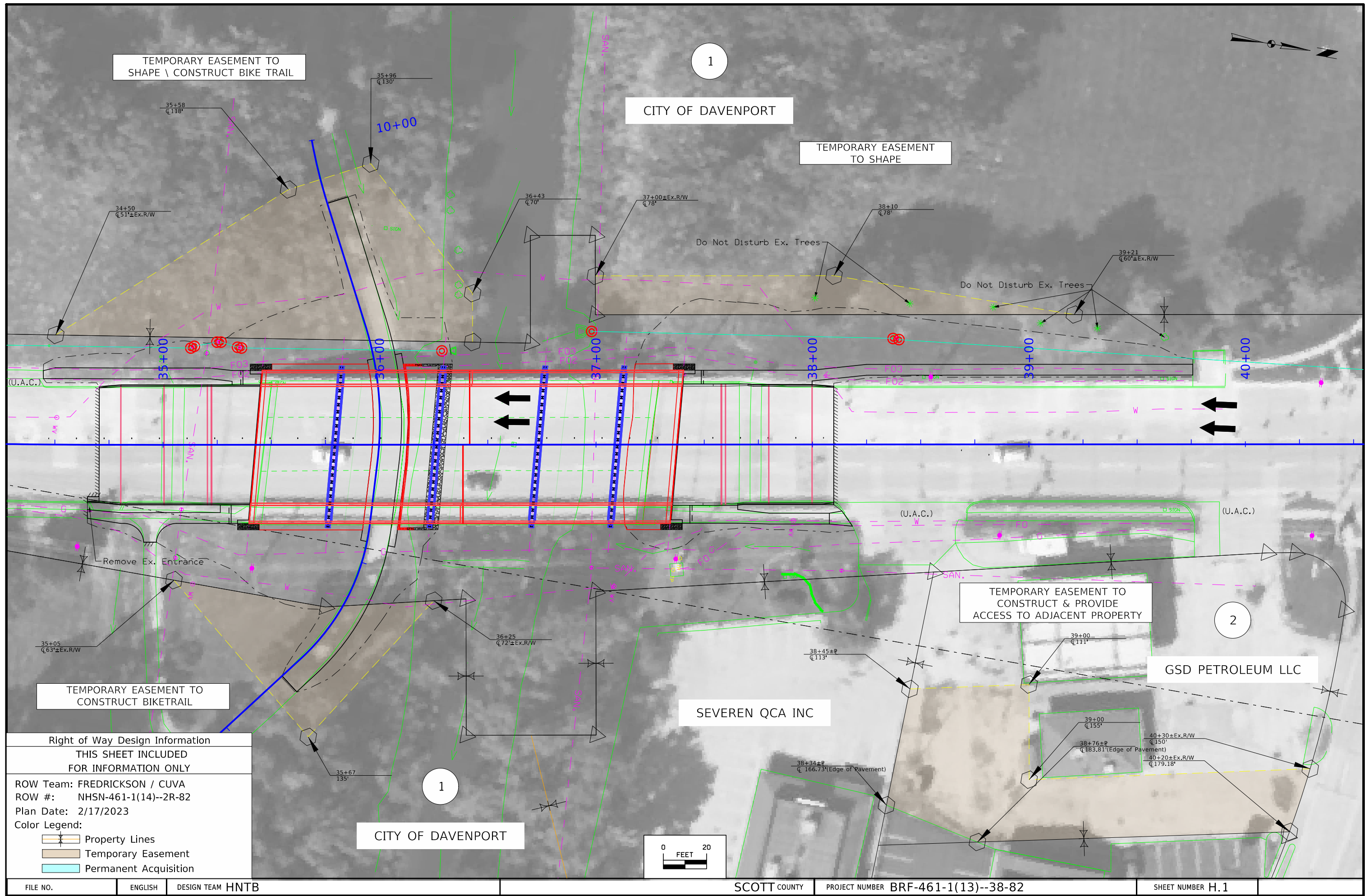
HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00
1a. Regional Coordinate System Zone 11

VERT. DATUM: NAVD88
Geoid Model g2012bu3
Project Control Marks are Bench Marks

Point Name	Northing	Easting	Elevation	Code Description
TP300	8063982.963	21489043.224	584.468	CP MAG NAIL on sidewalk from the intersection of Perry St and E 4th St proceed W 195ft point is 30ft S of the CL of E 4th St
FEN078	8074966.258	21490011.035	625.688	CP IDOT FENO MON from the intersection of E George Washington Blvd and Hwy 461N proceed N 75ft point is W 168ft of the CL of Hwy 461N 4in below surface
D414	8074614.278	21494983.650	635.317	CP CO GPS PT from the intersection of E 33rd St and Eastern Ave proceed S 210ft point is 55ft W of the CL of Eastern Ave 4in below the surface
648	8084840.612	21481722.019	731.464	CP CO GPS PT from the intersection of W 58th St and N Division St proceed N 215ft point is 42ft W of the CL of N Division St 4in below surface
FENO1	8075102.223	21488092.040	635.022	CP IDOT FENO MON from the intersection of Hwy 461S and W 35th St proceed S 640ft point is 49ft W of the CL of Hwy 461S 4in below the surface

[illegible][illegible]



CROSS SECTION VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS			
SHADING	Design Color No.		
Green, Light	(225)	<div></div>	Existing Pavement and Bridge Shading
Gray, Light	(48)	<div></div>	Previously Constructed Pavement and Bridge Shading
Gray, Med	(80)	<div></div>	Previously Constructed Granular Surface Shading
Blue, Light	(230)	<div></div>	Proposed Pavement Shading
Lavender	(9)	<div></div>	Temporary Pavement Shading
Red	(3)	<div></div>	Proposed Bridge Shading

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

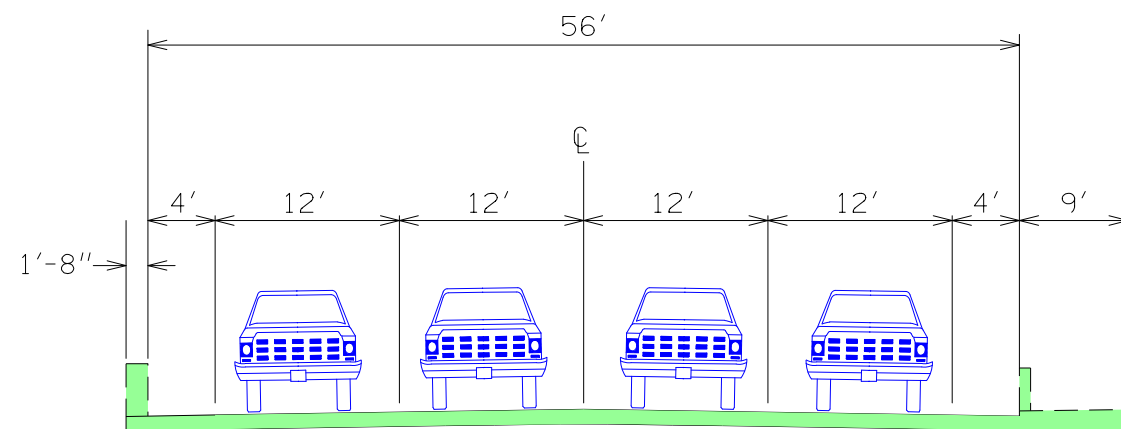
PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS			
LINEWORK	Design Color No.		
Green	(2)	<div></div>	Existing Topographic Features and Labels
Magenta	(5)	<div></div>	Pavement Marking Call Outs
Blue	(1)	<div></div>	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Yellow	(4)	<div></div>	Pavement Markings, Yellow
Off White	(254)	<div></div>	Pavement Markings, White
Violet	(15)	<div></div>	Temporary barrier rail, Unpinned
Flush Orange	(228)	<div></div>	Temporary barrier rail, Pinned
SHADING	Design Color No.		
Green, Light	(225)	<div></div>	Existing Pavement Shading
Gray, Light	(48)	<div></div>	Previously Constructed Pavement Shading
Gray, Med	(80)	<div></div>	Proposed Granular Surface Shading
Gray, Med	(80)	<div></div>	Previously Constructed Granular Surface Shading
Blue, Light	(230)	<div></div>	Proposed Pavement Shading
Lavender	(9)	<div></div>	Temporary Pavement Shading
Brown, Light	(236)	<div></div>	Proposed Grading Limits Shading
Pink, Dark	(13)	<div></div>	Proposed MSE or CIP Wall Shading
Red	(3)	<div></div>	Proposed Bridge Shading and Sign Trusses
Black w/Gray, Light Fill	(0,48)	<div></div>	Previously Constructed Structure

PLAN VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS			
<div></div>	Channelizing Device	<div></div>	Crash Cushion (Temp or Perm)
<div></div>	Drum	<div></div>	Traffic Signal
<div></div>	Temporary Lane Separator	<div></div>	Flagger
<div></div>	Tubular Marker	<div></div>	Temporary Floodlighting
<div></div>	Channelizer Marker	<div></div>	Traffic Sign
<div></div>	Concrete Barrier Marker	<div></div>	Type III Barricade
<div></div>	Delineator	<div></div>	Type A Warning Light
<div></div>	Temporary Barrier Rail	<div></div>	Direction of Traffic
<div></div>	Pavement Removal	<div></div>	Safety Closure
<div></div>	Sand Barrel Layout	<div></div>	Lane Identification

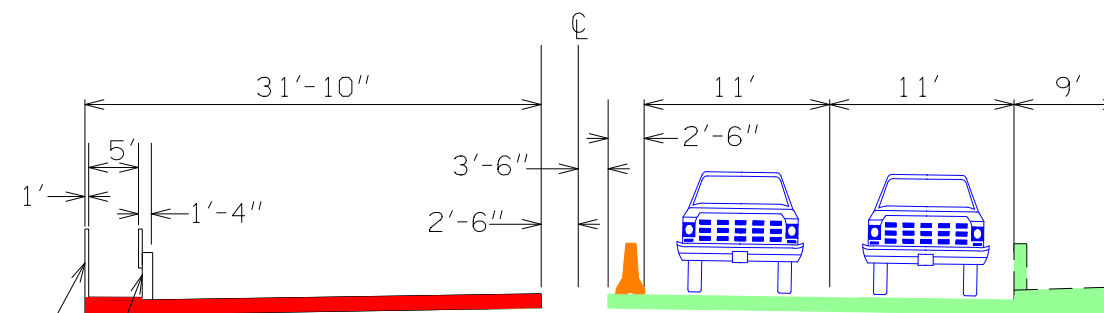
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

TRAFFIC CONTROL
AND
STAGING
LEGEND AND SYMBOL
INFORMATION SHEET

(COVERS SHEET SERIES J)

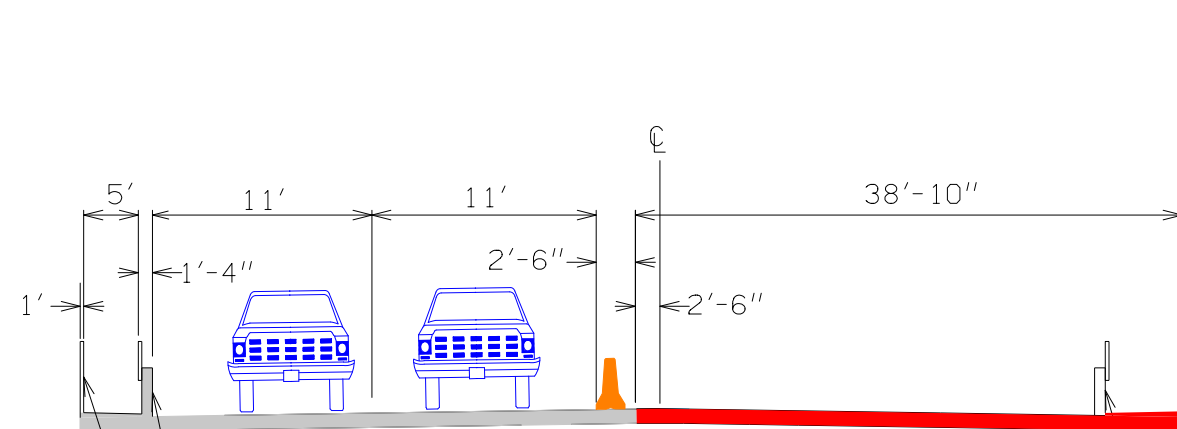


EXISTING
(LOOKING NORTH)



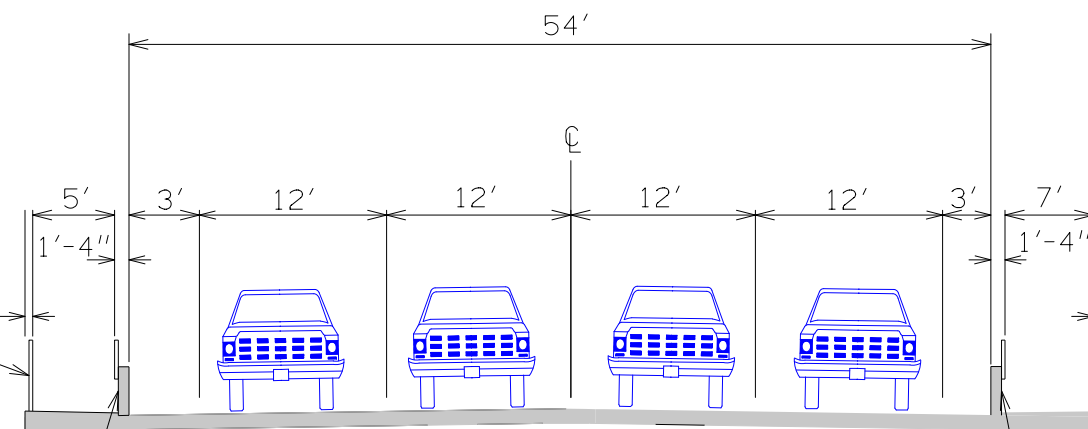
STAGE 1
(LOOKING NORTH)

CHAIN LINK FENCE
BARRIER RAIL
W/STRUCTURAL
STEEL RAILING



STAGE 2
(LOOKING NORTH)

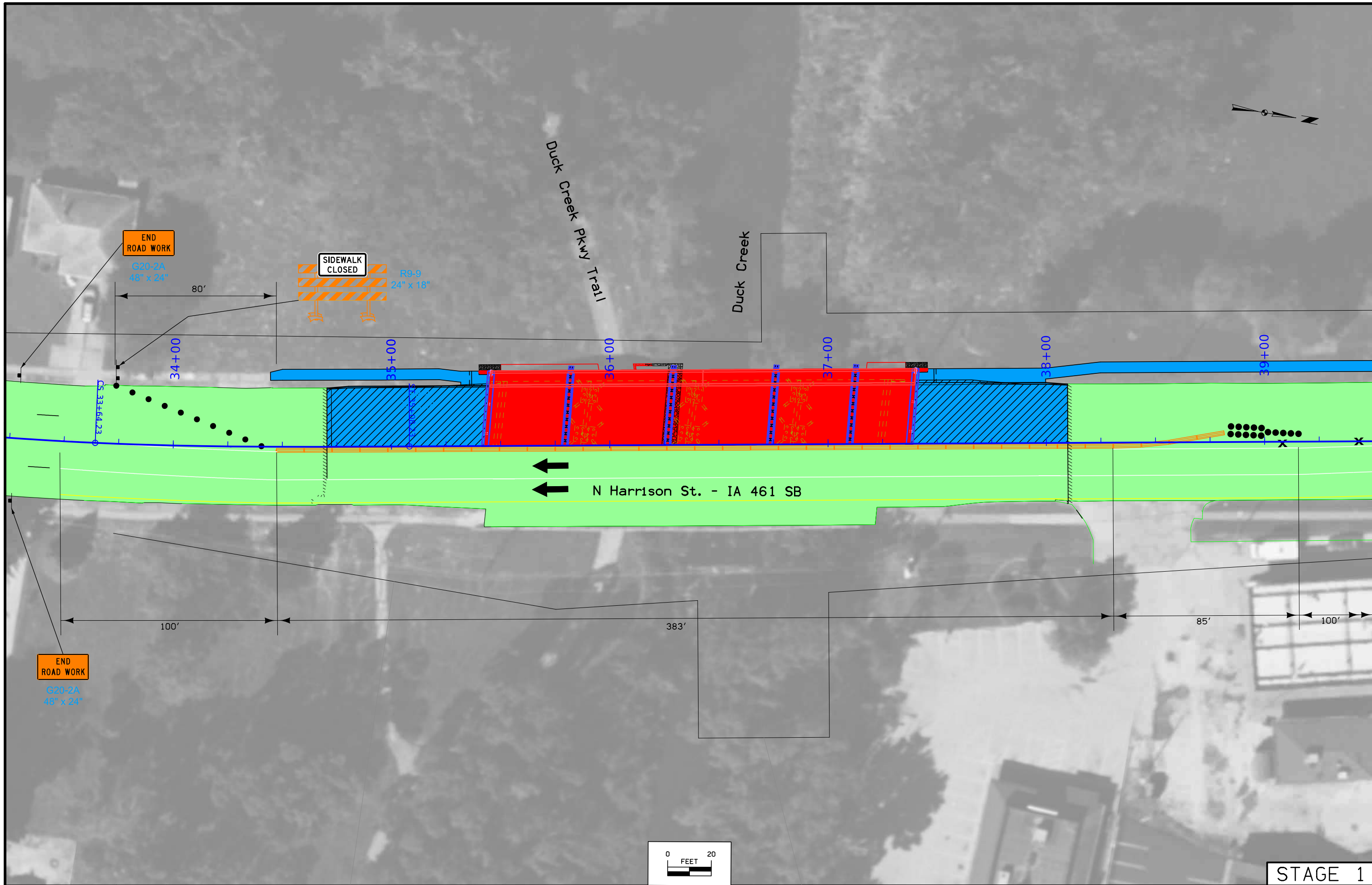
BARRIER RAIL
W/STRUCTURAL
STEEL RAILING
CHAIN LINK FENCE

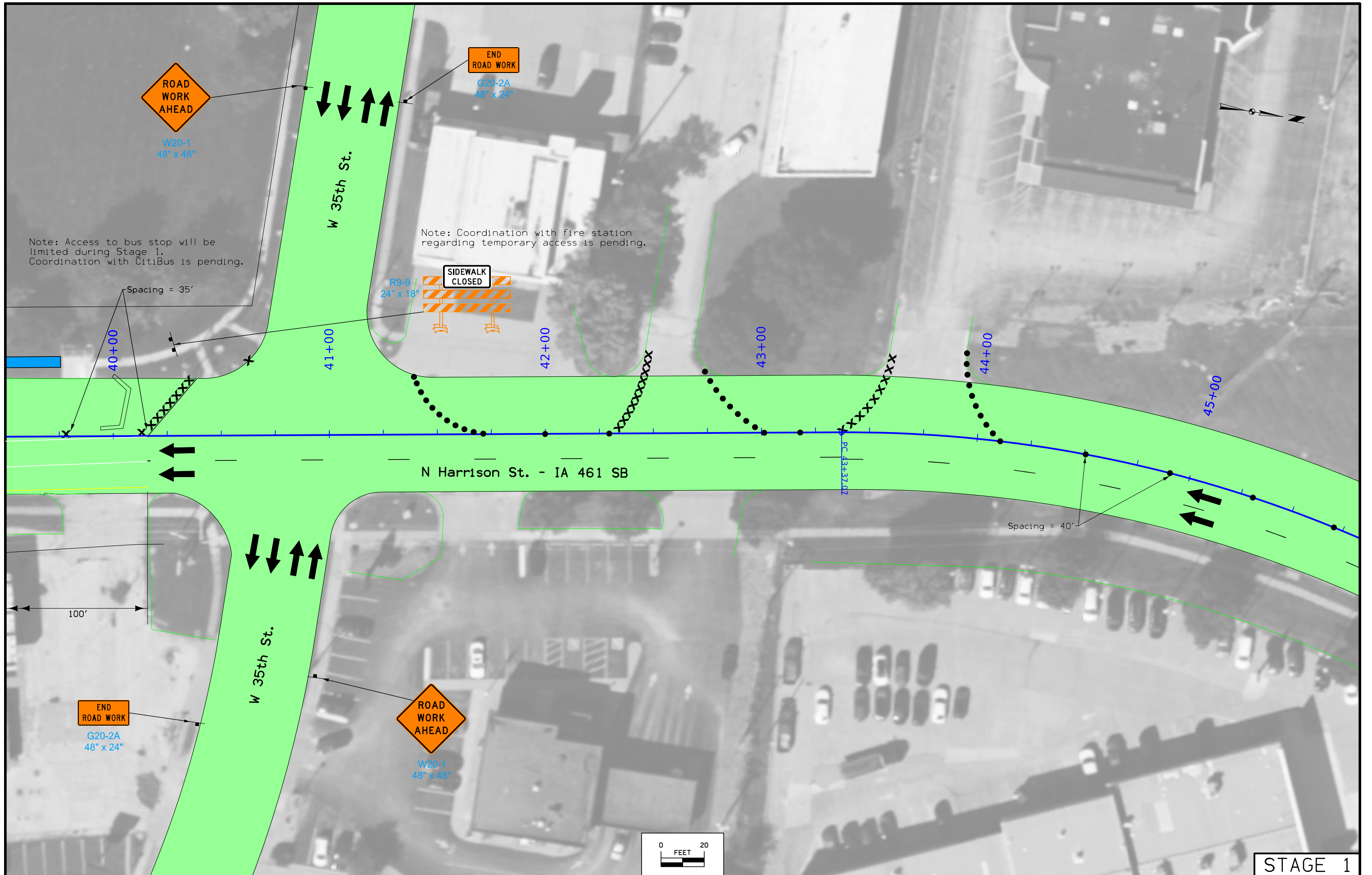


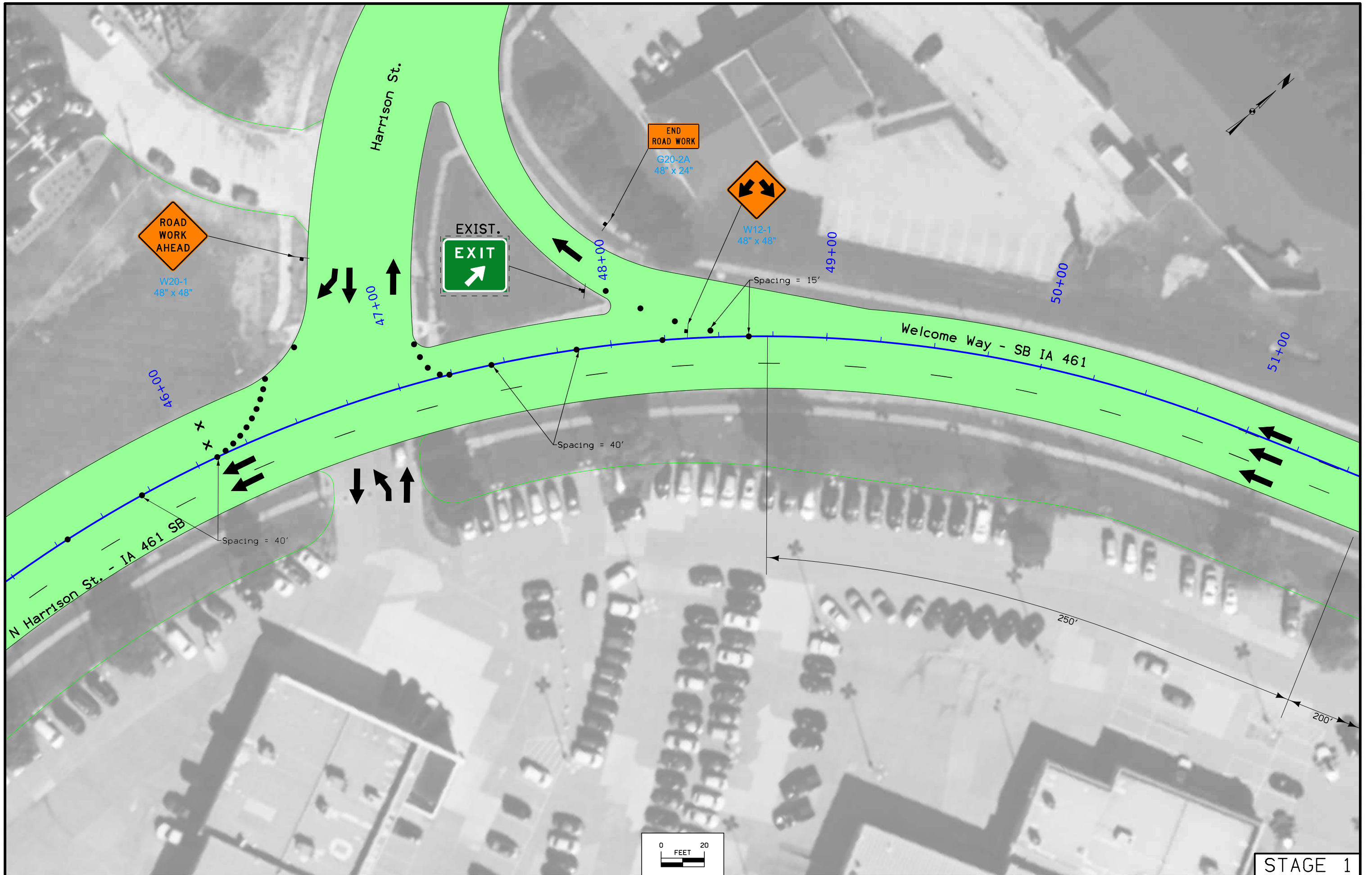
FINAL
(LOOKING NORTH)

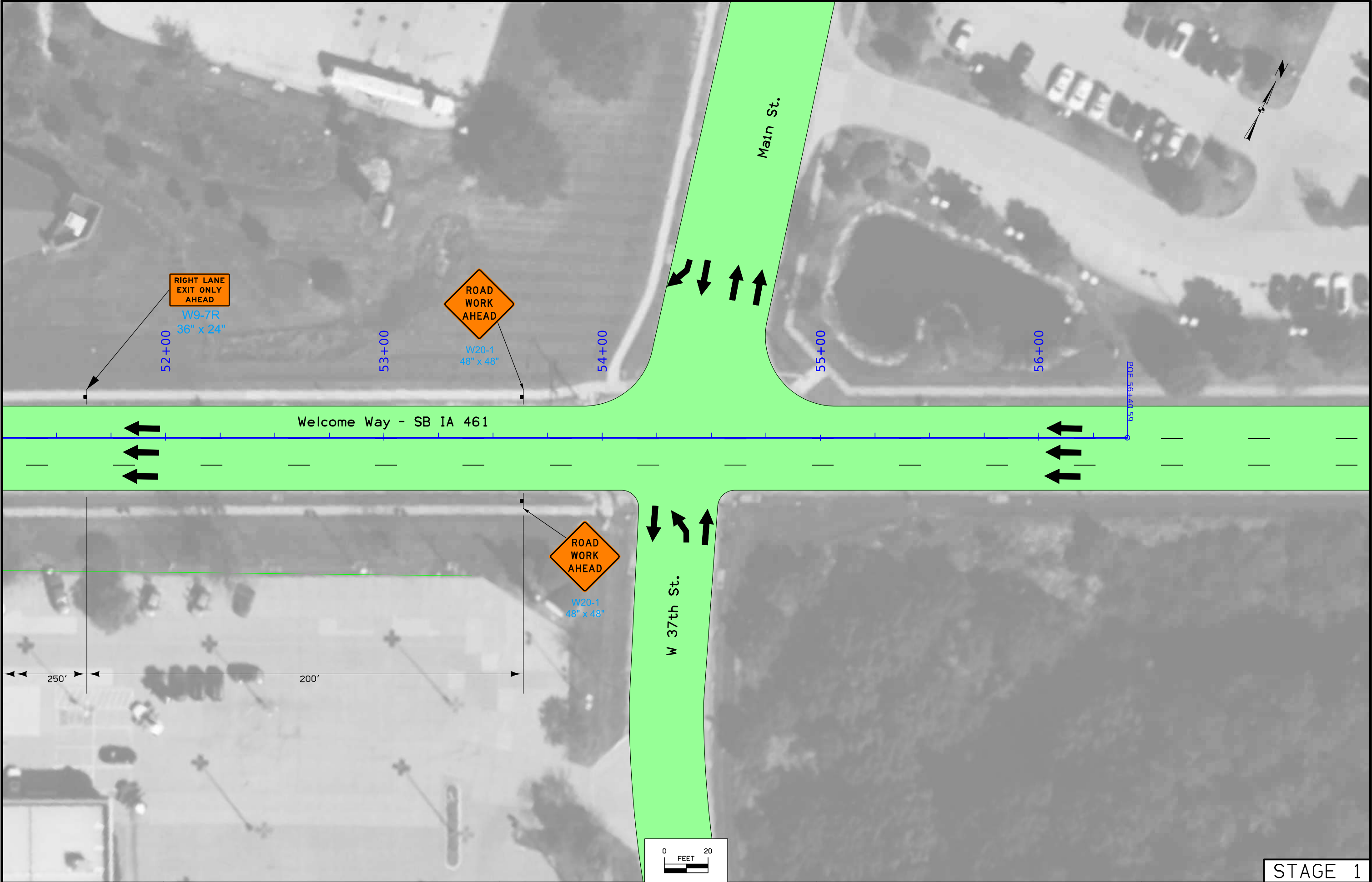
CHAIN LINK FENCE
CHAIN LINK FENCE
BARRIER RAIL
W/STRUCTURAL
STEEL RAILING
BARRIER RAIL
W/STRUCTURAL
STEEL RAILING

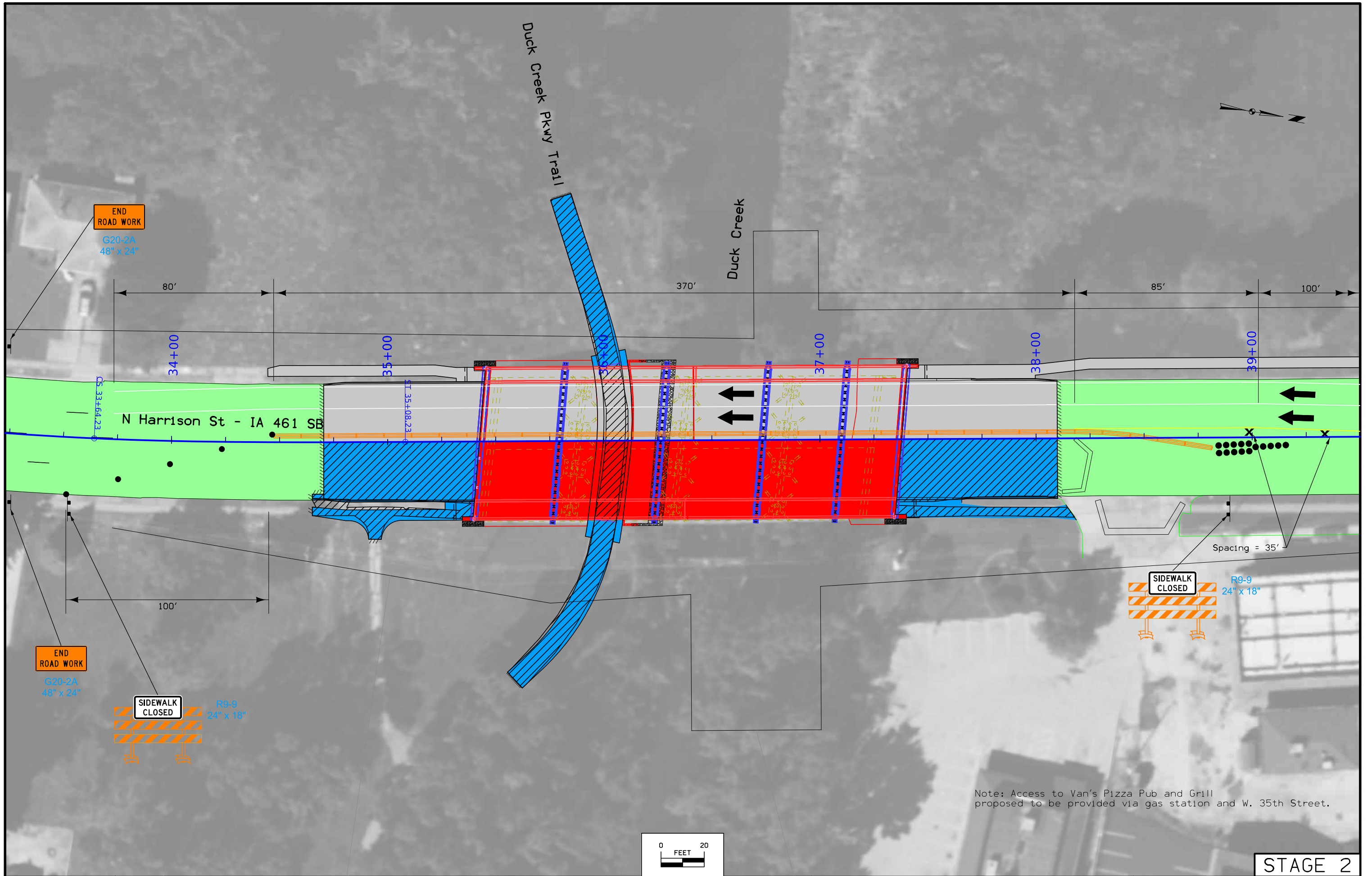
CHAIN LINK FENCE
BARRIER RAIL
W/STRUCTURAL
STEEL RAILING

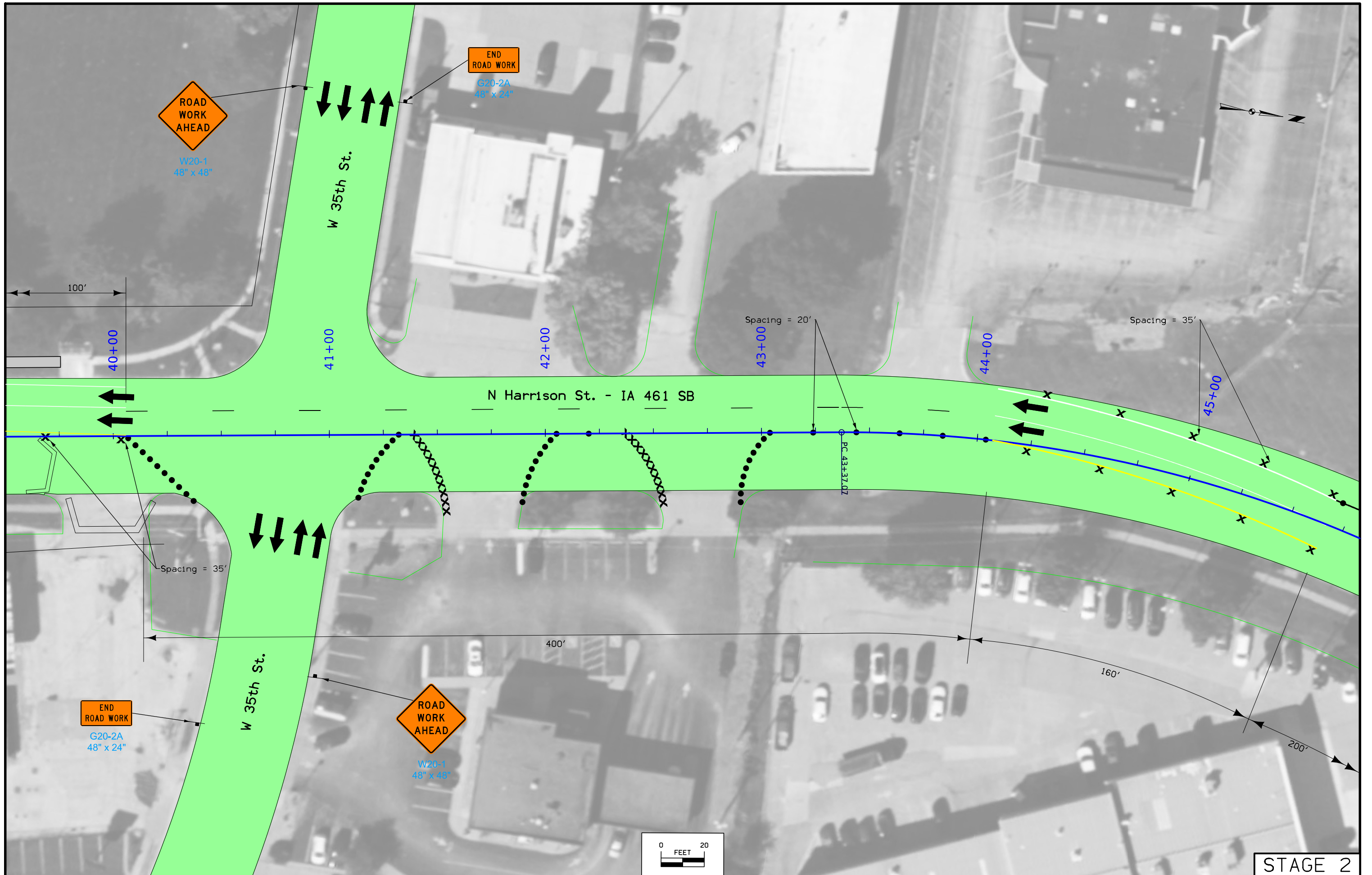




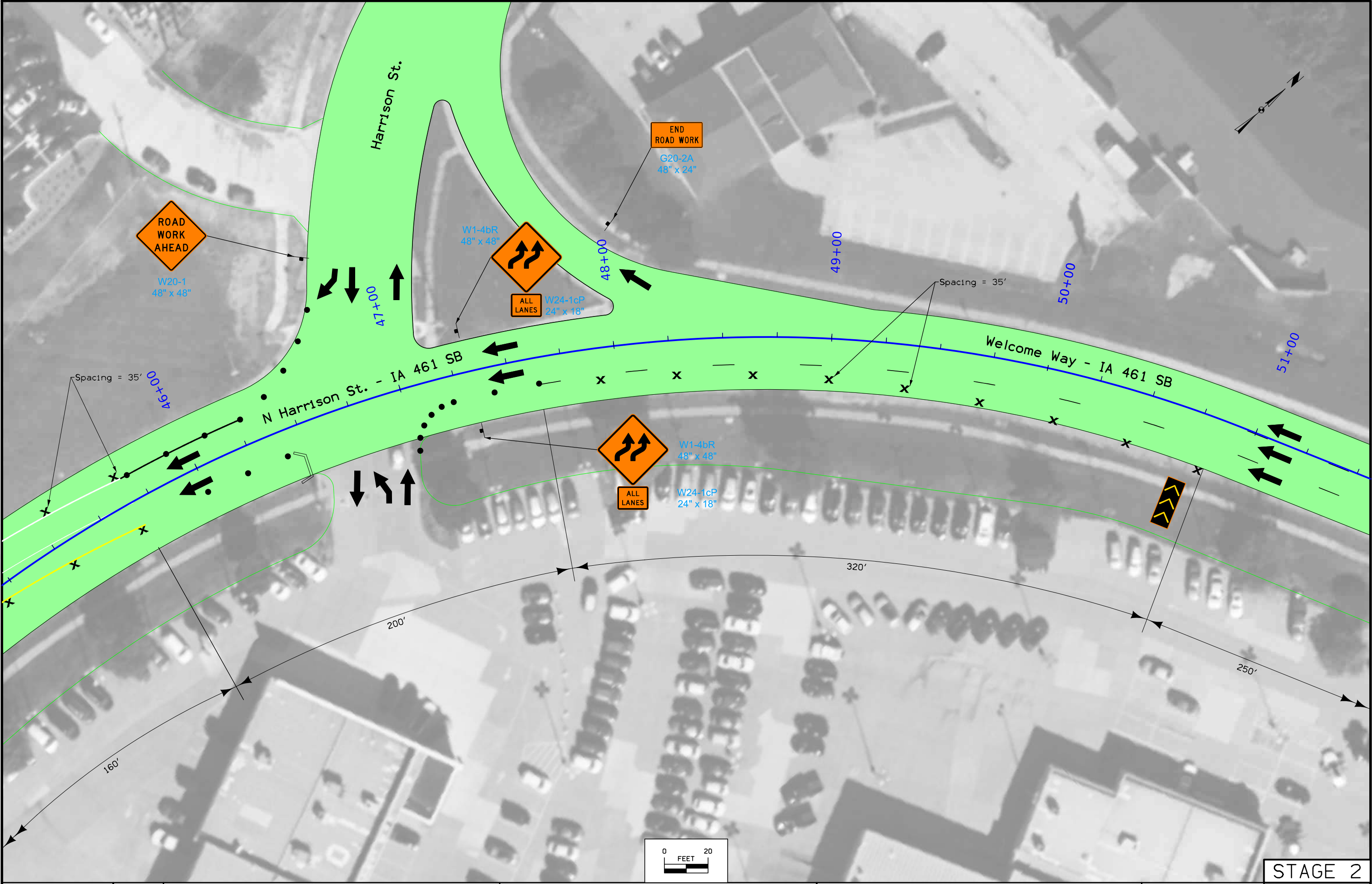


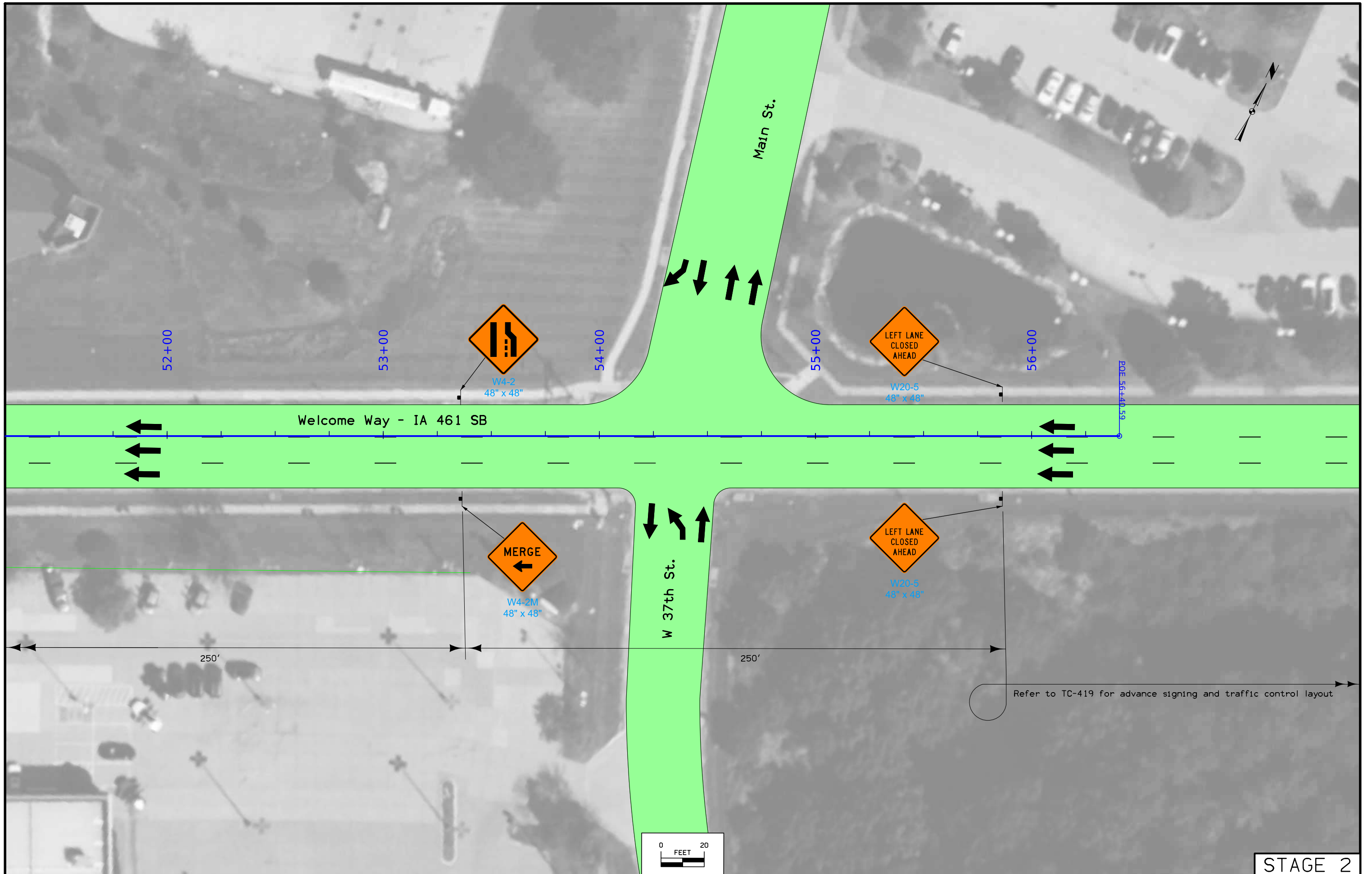


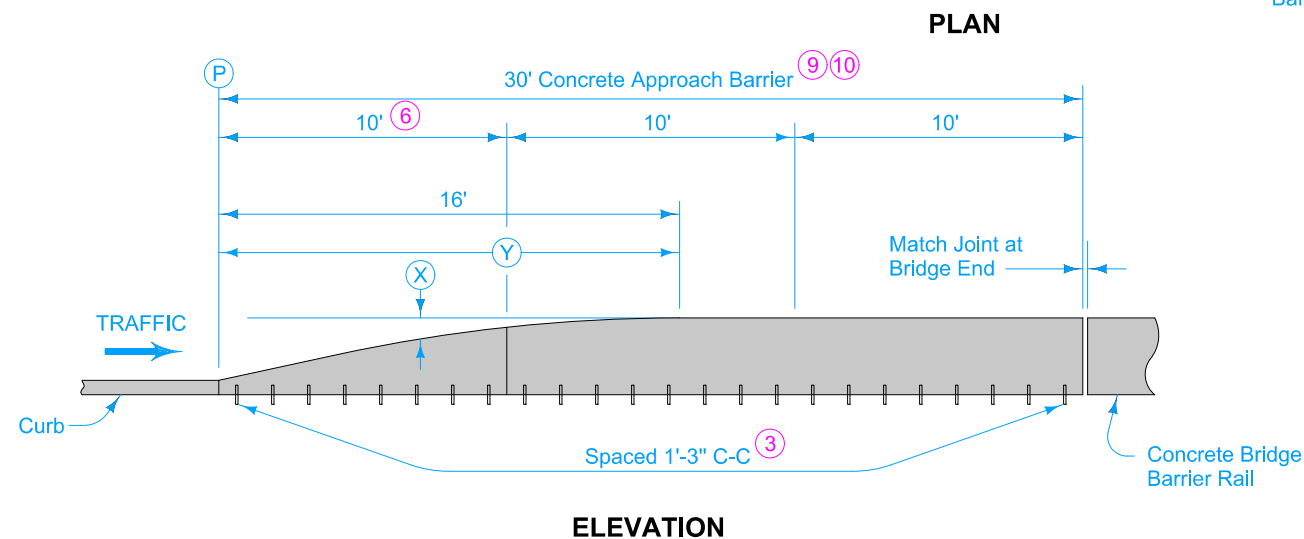
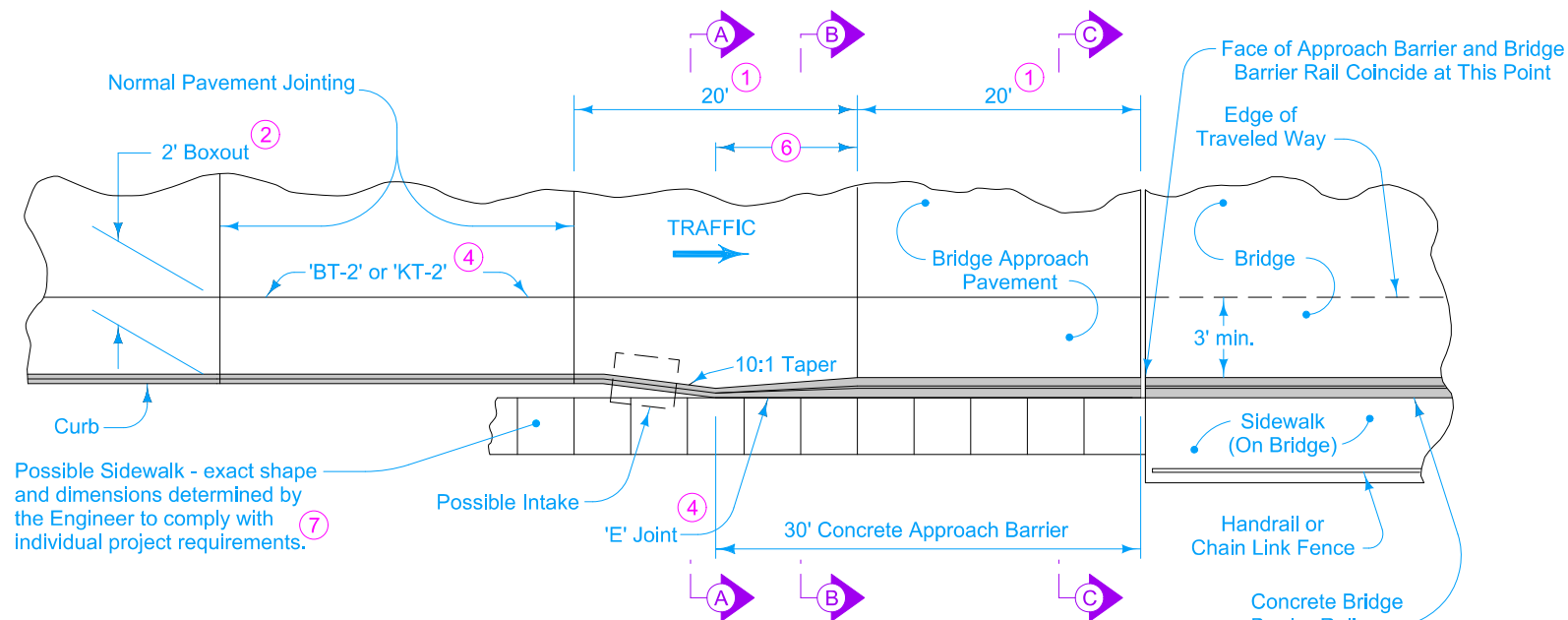




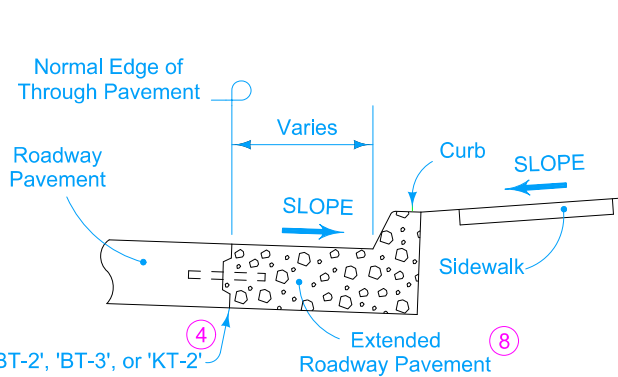
STAGE 2



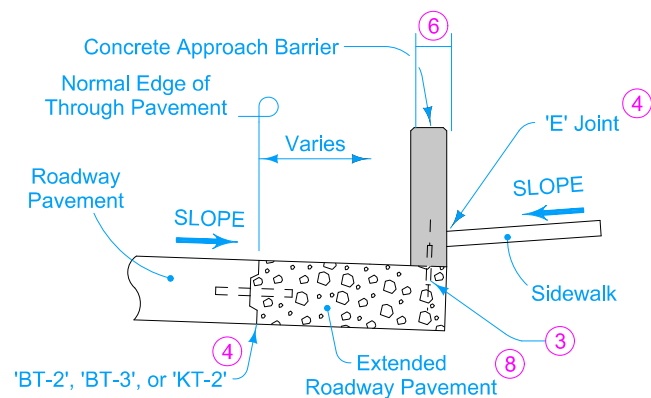




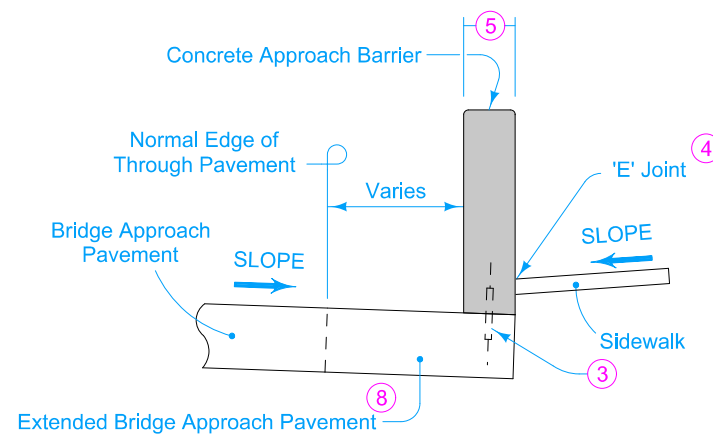
OFFSETS FOR ROUNDED BARRIER TOP																	
Y = Distance from (P)	ft.	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0
X = Offset to Rounded Top	ft.	2.13	1.91	1.70	1.48	1.26	1.06	0.87	0.70	0.54	0.42	0.30	0.20	0.12	0.06	0.02	0.00



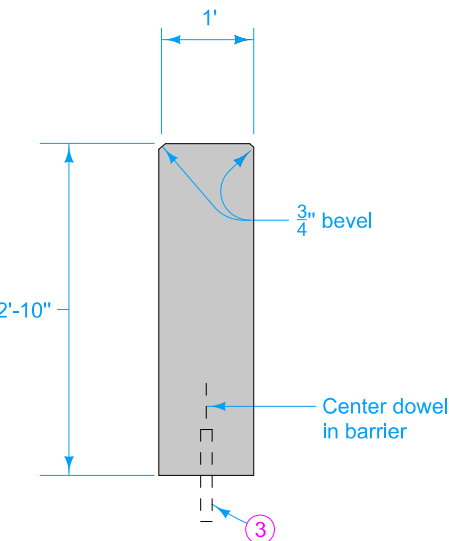
SECTION A-A



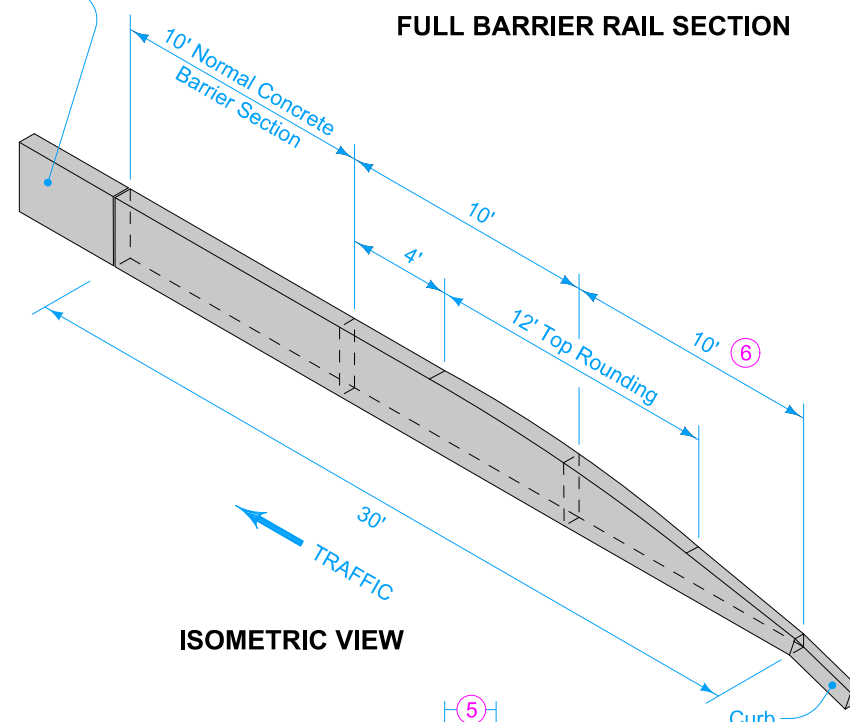
SECTION B-B



SECTION C-C



FULL BARRIER RAIL SECTION



ISOMETRIC VIEW

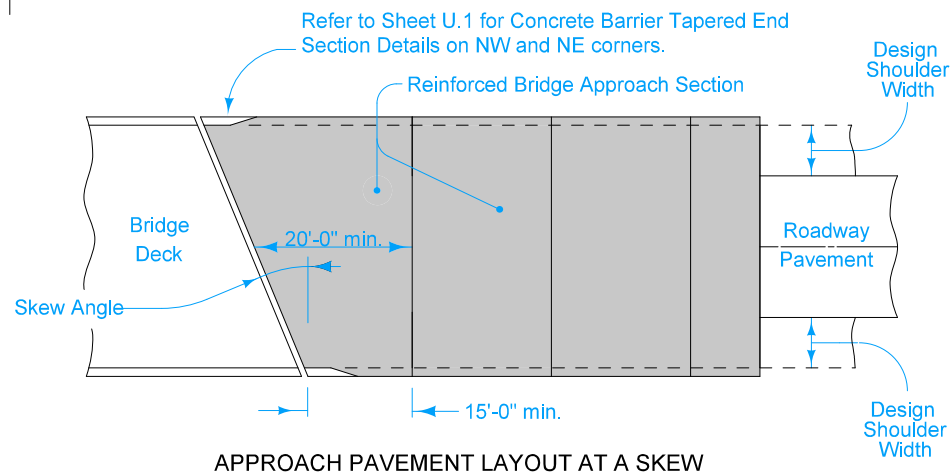
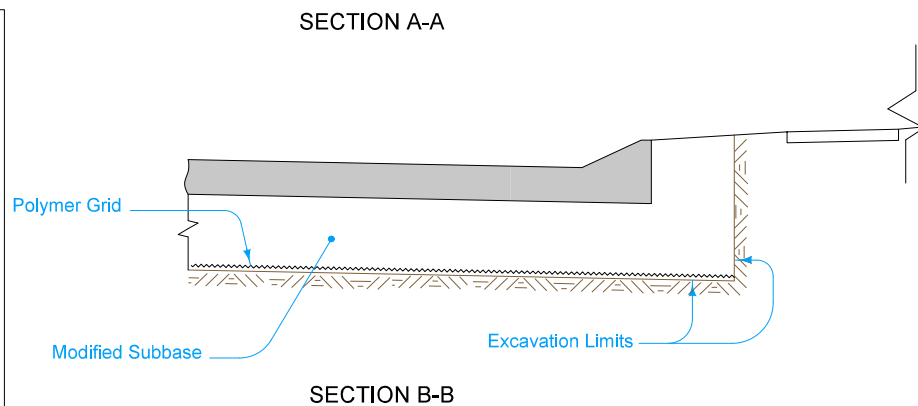
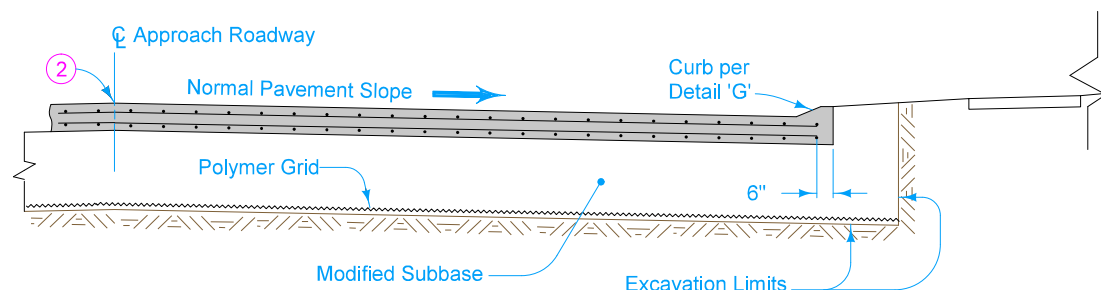
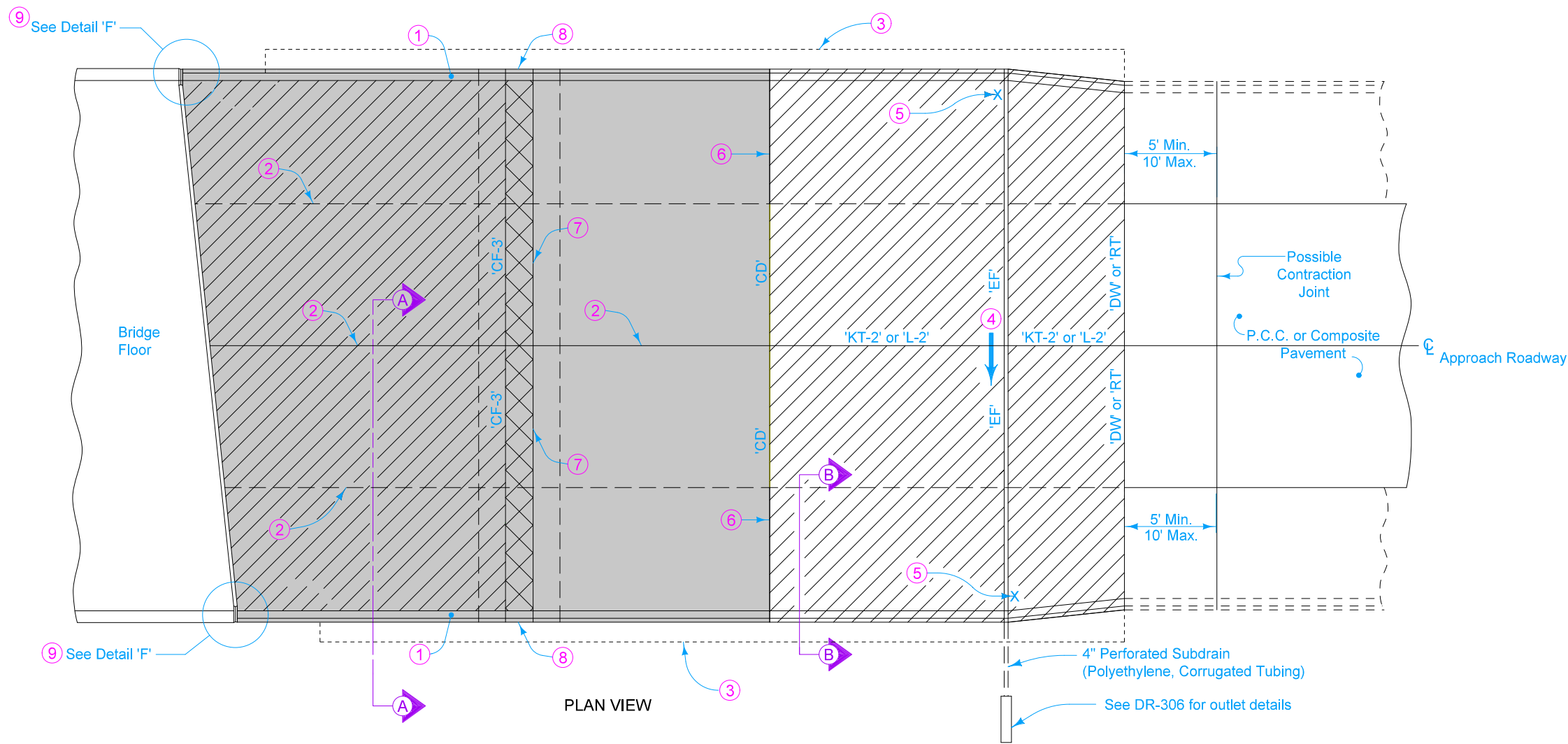
Install a 'C' joint in concrete approach barrier to match the location of each joint in both roadway and bridge approach pavement.

- Typical joint spacing and location. Follow specific project requirements as directed by the Engineer.
- Match boxout width to existing curb and gutter joint. Use 2 foot wide boxout where curb and gutter are not constructed.
- #8 x 8 inch deformed bars or 1 inch diameter smooth.
- For joint detail, see PV-101.
- Bottom width of barrier is maintained at 12 inches.
- Bottom width of barrier transitions from 9 to 12 inches.
- Required sidewalk will be measured and paid for separately.
- Additional concrete quantity required for extended roadway pavement will be included in roadway paving quantity.
- Place no delineator or object marker in front of, or on, the barrier.
- Approximately 2.6 cubic yards of concrete are required to construct barrier as shown. Amount may vary depending on individual site requirements.

Possible Contract Item:
Concrete Barrier, Tapered End, BA-108

Possible Tabulation:
108-18B

<div>MODIFIED</div> <div>STANDARD ROAD PLAN</div>	REVISION	
	BA-108	
SHEET 1 of 1		
MODIFICATIONS: Modified the Full Barrier Rail Section. Changed sidewalk to slope towards curb.		
<div>CONCRETE BARRIER</div> <div>TAPERED END SECTION</div>		



For joint details, see [PV-101](#).

For curb details, see Detail 'G'.

All transverse bars are #5.

Use epoxy coated bars for all reinforcement.

Quantities for both the 1'-9" top part of the sleeper slab and the 6'-3" portion under the approach pavement have been included in the double reinforced section quantities.

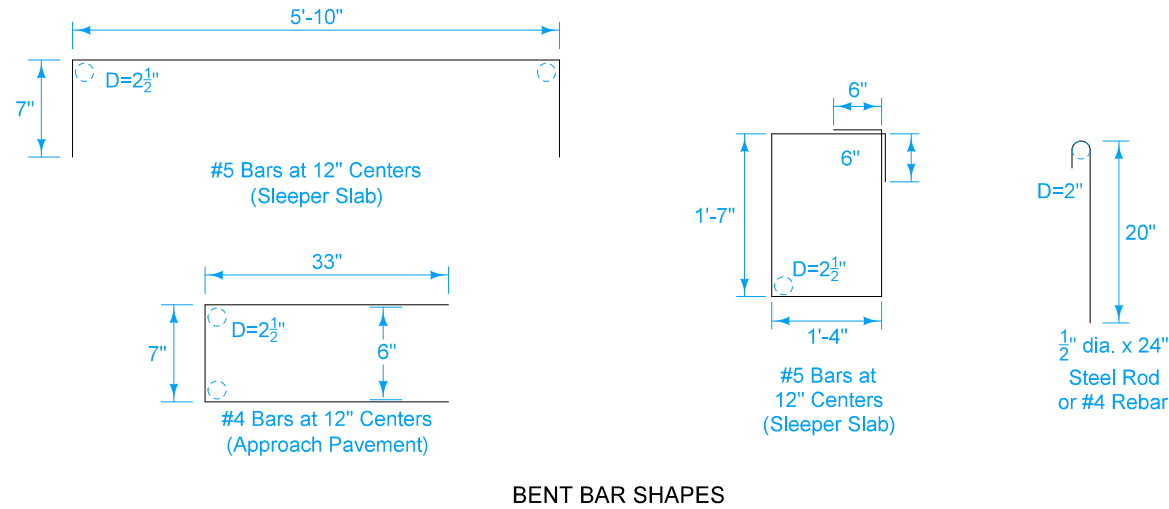
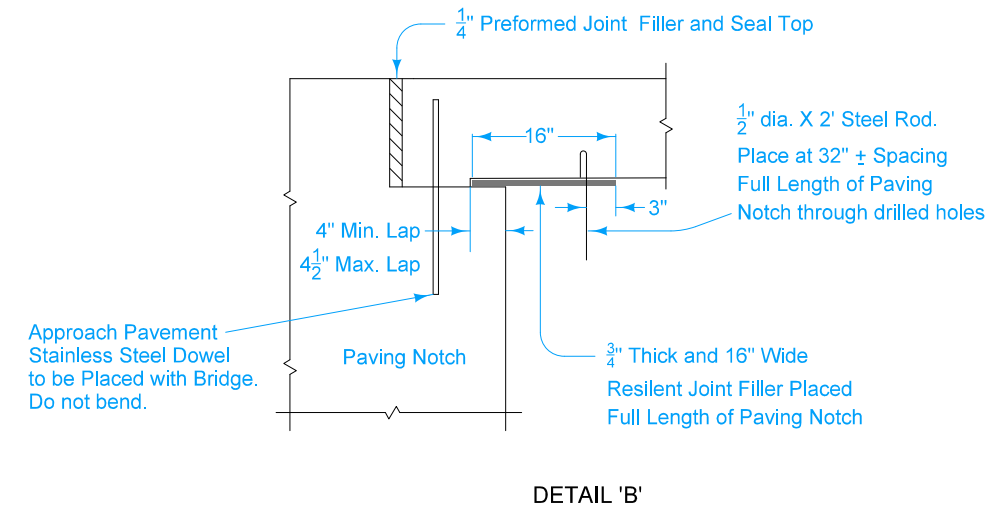
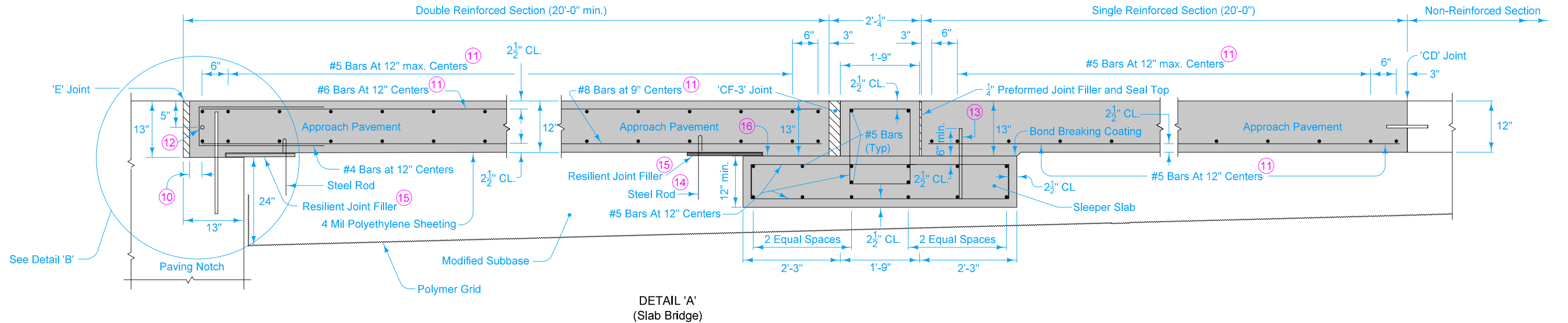
- 1 Build 4 inch Sloped Curb as shown in Details G and H on Sheet U.4. Transition curb to match existing curb the last 5' of approach pavement in the NW, NE and SW corners. Refer to [PV-102](#) for curb transtion details.
- 2 Longitudinal Joint ([PV-101](#)):
Single Pour - Saw cut joint per Detail B .
Two Pours - Use 'KS-1' joint (Single Reinforced Section).
Use 'KS-2' joint (Double Reinforced Section).
- 3 Polymer Grid and excavation limits of Modified Subbase 2 feet outside of pavement edge.
- 4 Slope subdrain to drain.
- 5 Place an "X" in the plastic concrete near the 'EF' joint at the outside edge of pavement.
- 6 Place 'RD' Joint where PCC shoulder. Place 'B' joint otherwise.
- 7 1/4 inch Preformed Joint Filler and seal top.
- 8 See Detail 'C'.
- 9 Detail 'F' for SW and SE Corners Only. Refer to Modified BA-108 on Sheet U.1 for NW and NE corner barrier details.

Possible Contract Item:
Bridge Approach, As Per Plan

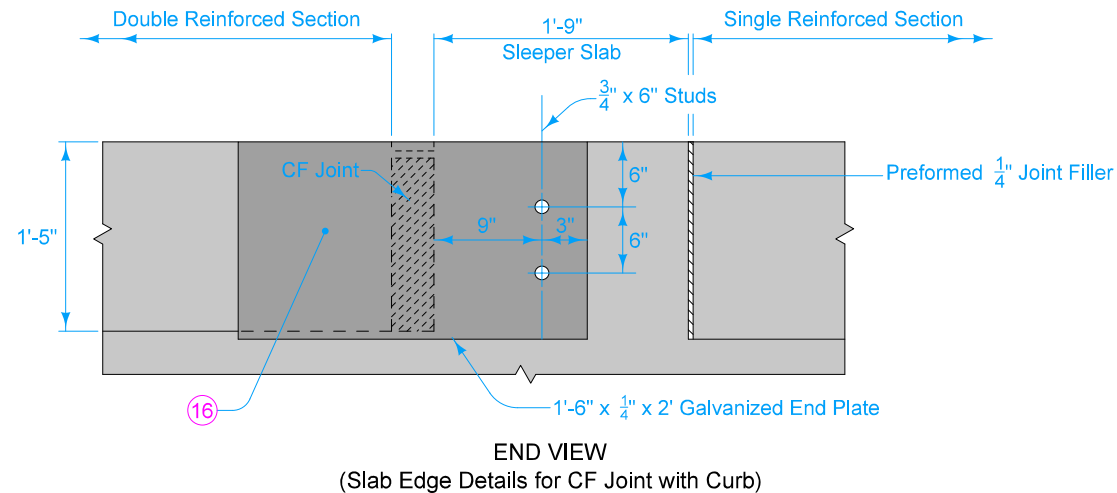
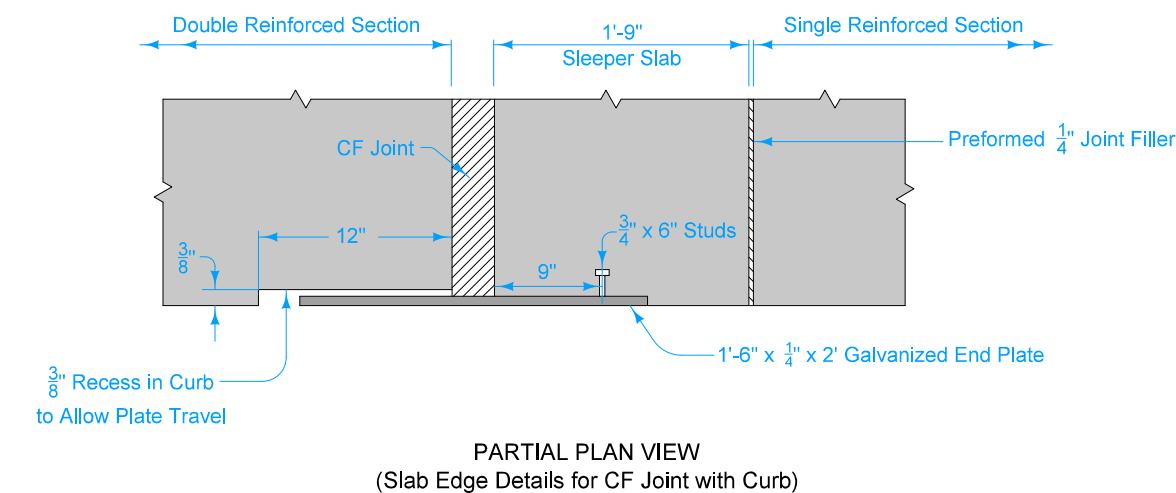
Possible Tabulation:
[112-6](#)

112-0		REVISION	
MODIFIED			
STANDARD ROAD PLAN		BR-205	
		SHEET 1 of 4	
MODIFICATIONS: Modified curb lengths and Notes 1 and 9. Modified Details F, G and H. Removed Detail E. Removed Abutting HMA Detail. Removed Note 17.			
DOUBLE REINFORCED 12" APPROACH (SLAB BRIDGE)			

Pay limits for contract item include the following areas:	
	Double Reinforced Section
	Sleeper Beam Section
	Single Reinforced Section
	Non-Reinforced Section



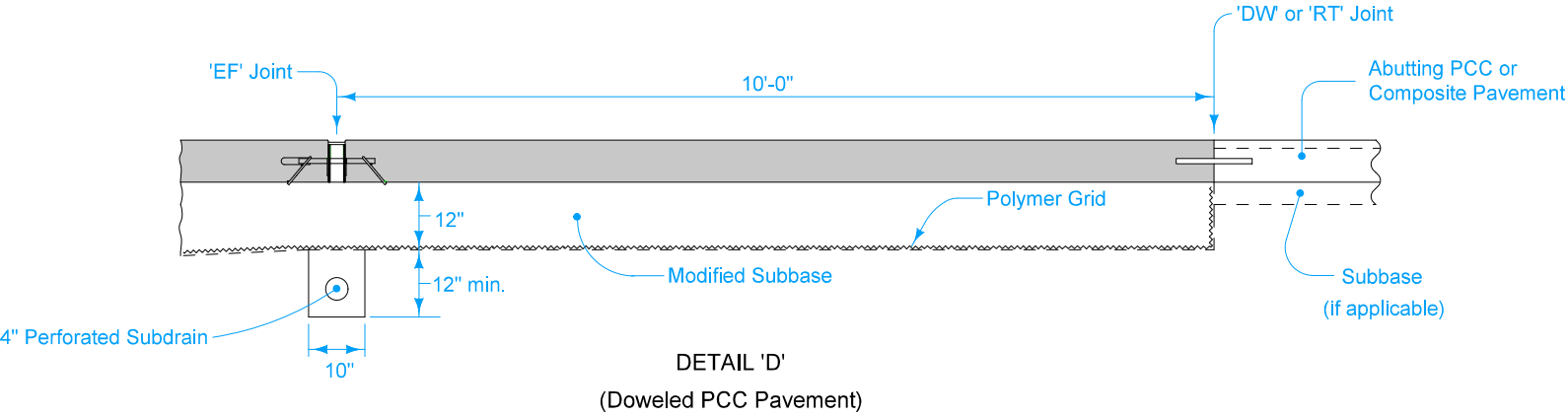
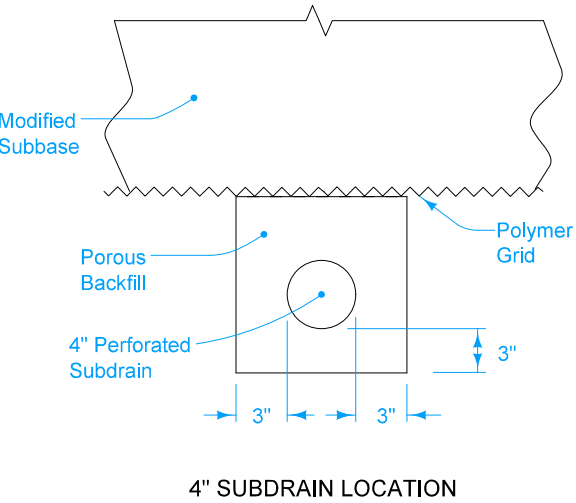
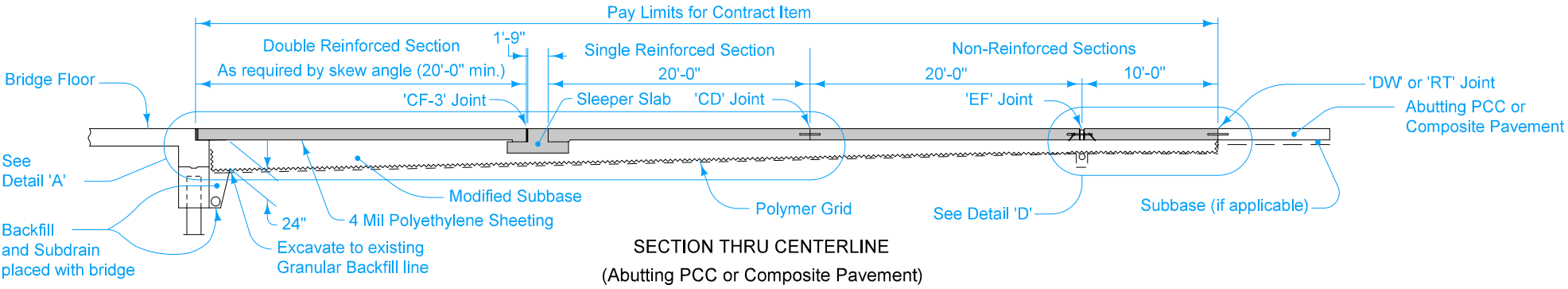
- ⑩ 2" min. to 2 1/2" max. clear to bent bar.
- ⑪ Minimum lap length: #5 Bars - 18"
#6 Bars - 27"
#8 Bars - 48"
- ⑫ If bridge is skewed, place additional #5 bar parallel to skewed face.
- ⑬ #8 dowels 1'-6" long with 2 1/2 inch bottom end clearance. Space at 24 inches O.C.
- ⑭ Space at 32" ± for full length of Sleeper Slab.
- ⑮ 3/4 inch thick x 16 inch wide Resilient Joint Filler for full length of Sleeper Slab.
- ⑯ Debond Paving Notch with 2 layers of 30# Asphaltic Felt Paper full length.



DETAIL 'C'

<h1>MODIFIED</h1> <h1>STANDARD ROAD PLAN</h1> <p>MODIFICATIONS: Modified curb lengths and Notes 1 and 9. Modified Details F, G and H. Removed Detail E. Removed Abutting HMA Detail. REMOVED Note 17.</p>	REVISION
	BR-205
	SHEET 2 of 4

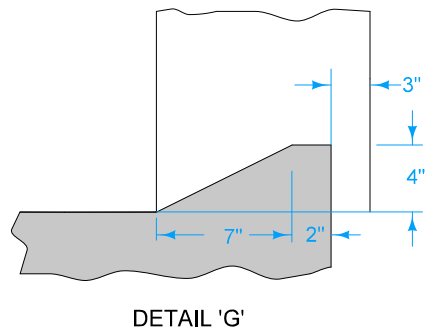
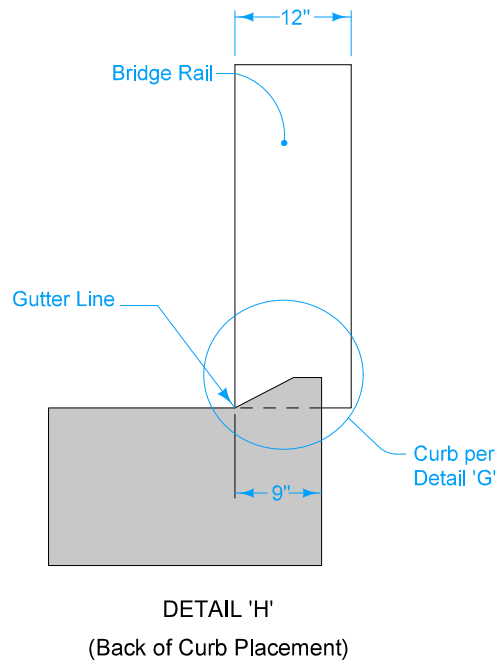
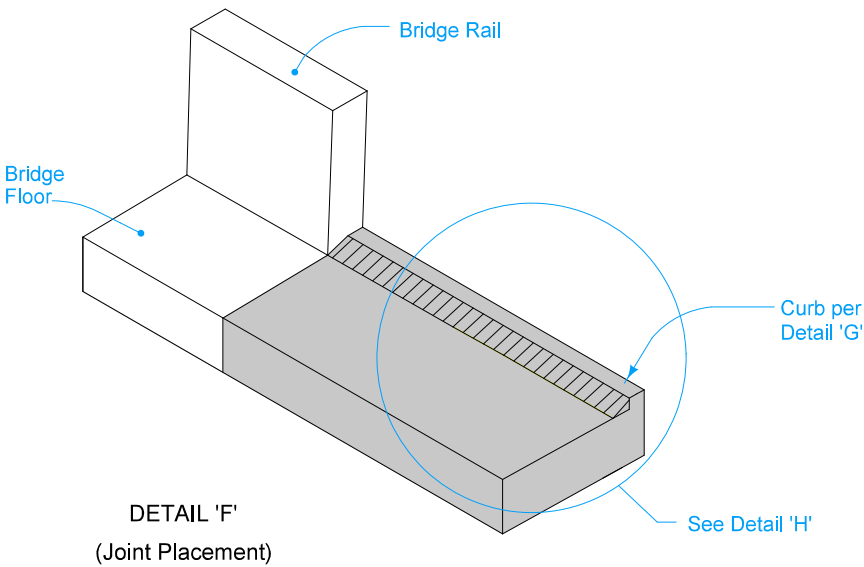
DOUBLE REINFORCED 12" APPROACH
(SLAB BRIDGE)



<div>MODIFIED</div> <div>STANDARD ROAD PLAN</div>	REVISION	
	BR-205	
	SHEET 3 of 4	

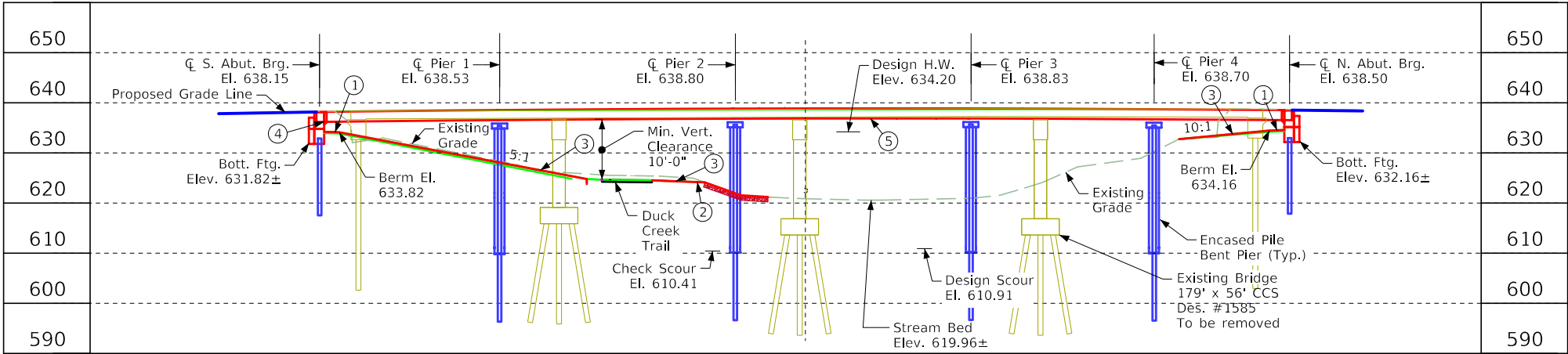
MODIFICATIONS: Modified curb lengths and Notes 1 and 9.
Modified Details F, G and H.
Removed Detail E.
Removed Abutting HMA Detail.
Removed Note 17.

DOUBLE REINFORCED 12" APPROACH
(SLAB BRIDGE)



<div>MODIFIED</div> <div>STANDARD ROAD PLAN</div>	REVISION	
	BR-205	
	SHEET 4 of 4	
MODIFICATIONS: Modified curb lengths and Notes 1 and 9. Modified Details F, G and H. Removed Detail E. Removed Abutting HMA Detail. Removed Note 17.		
<div>DOUBLE REINFORCED 12" APPROACH</div> <div>(SLAB BRIDGE)</div>		

Control Point: BENCH MARK FENO 1, 8075102.223N, 21488092.040S, CP IDOT FENO Monument from the Intersection of Hwy SB 461 and W. 35th St.
proceed S. 640 ft., Point is 49ft W. of the CL of Hwy SB 461, 4 in. below the surface. El. 635.022



- ① Concrete Slope Protection
- ② Articulated Concrete Block Mat Erosion Protection
- ③ Grading Surface
- ④ Operation Low Superstructure Elev. 635.45
- ⑤ Regulatory Low Superstructure Elev. 636.15
- ⑥ Concrete Slope Protection
- ⑦ Concrete Articulated Mat Erosion Protection
- ⑧ Erosion Stone, 9" Thick

Proposed Profile
Grade IA 461 SB

Hydraulic Data

Drainage Area = 39.4 Sq. Mi.
Stream Slope = 7.4 Ft./Mi.
Avg. Low Water Stage = 620.96

Q₅₀ = 7,438 CFS
Stage = 633.76
Backwater = 0.15 Ft.
Avg. Bridge Velocity = 4.0 FPS

Q₁₀₀ = 8,516 CFS
Stage = 634.20
Backwater = 0.18 Ft.
Avg. Bridge Velocity = 4.4 FPS

Q₅₀₀ = 11,200 CFS
Stage = 635.06
Calculated Check Scour = 610.91
Calculated Design Scour = 610.41

Roadway Overtop 631.56
Sta. 41+04

Location

IA 461 SB over Duck Creek
T-78N R-3E
Section 14
Davenport Township
Scott County
City of Davenport
FHWA No. 047211
Bridge Maint. No. 8220.1L061
Latitude 41.554544° N
Longitude 90.576837° W

Traffic Estimate

2025 AADT 20,800 V.P.D.
2045 AADT 23,600 V.P.D.
202_ DHV _____ V.P.H.
Trucks _____ 1 %
Total _____
Design ESALs _____

Notes to Final Designer:

- Continuous concrete slab proposed. Deck depth assumed 2' thick for preliminary design. Notify prelim. engineer if final deck depth exceeds 2'.
- TL-4 barrier separation rail proposed.
- Pier Type - Pile Bent (Fully Encased)
- Bridge aesthetics to be incorporated into final design.
- Steel sheet piling may be necessary for staged construction; see sheet 4 for staging details.
- The bridge will be designed to withstand the applicable effects of ice and the horizontal stream loads and uplift forces associated with the Q100.

LONGITUDINAL SECTION ALONG Q APPROACH ROADWAY

General Notes:

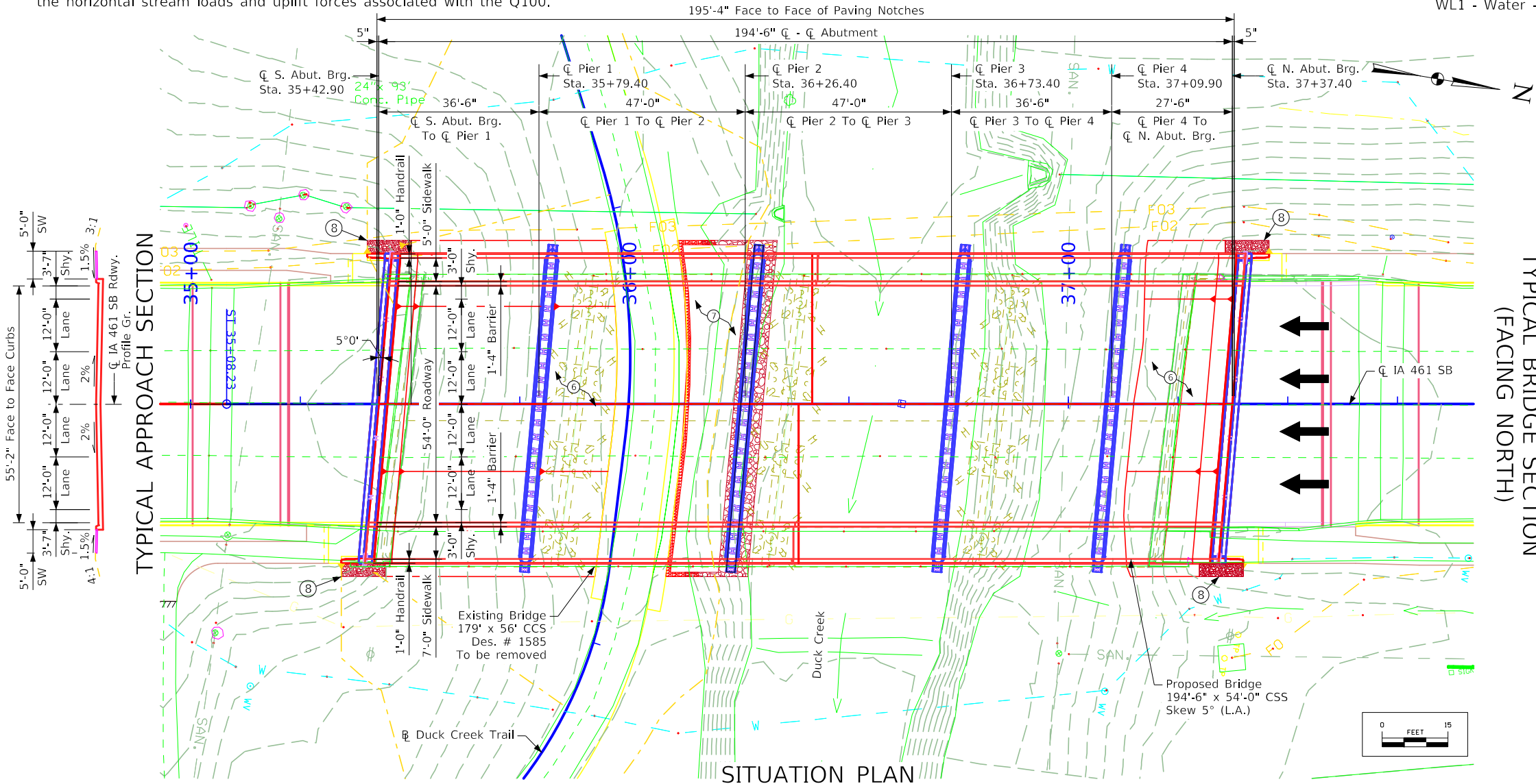
This design is for the replacement of the existing 176'-0" x 56'-0" Continuous Concrete Slab Bridge, Scott Design No. 1585, FHWA No. 047210, Maint. No. 8220.1L061.
Top of bridge deck crown is 0.03' below profile grade.

Minimum Vertical Clearance:

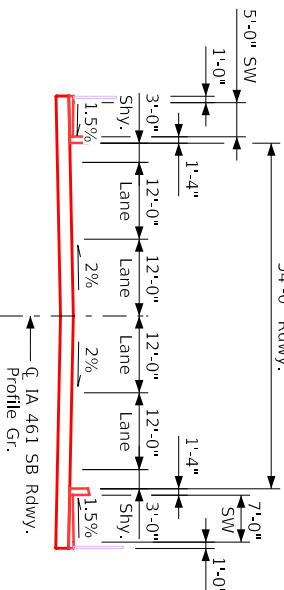
Overhead Station = 35+98.33, Offset 34.33'
Overhead Elevation = 638.00
Depth Of Superstructure = 3.03'
Underpass Station = 11+10.45
Underpass Elevation = 624.82
Minimum Vertical Clearance = 10.15'

Utilities Legend:

FO1 - Fiber Optic - CentryLink
FO2 - Fiber Optic - Unite Private Networks
FO3 - Fiber Optic - ICN
GL1 - Gas Line - MidAmerican-Gas
SA1 - Sewer - City of Davenport
WL1 - Water - Iowa American Water



TYPICAL BRIDGE SECTION
(FACING NORTH)



PRELIMINARY

Design For 5° Skew (L.A.)
**194'-6" X 54'-0" CONTINUOUS
CONCRETE SLAB BRIDGE W/ 7' EAST
SIDEWALK AND 5' WEST SIDEWALK
SITUATION PLAN**

STA. 36+40.15 (Q IA 461 SB) Turn-In Date: November 2022

Scott County

IOWA DEPARTMENT OF TRANSPORTATION
Design No. 225 Design Sheet No. 1 of 4 FHWA No. 047211

Hydraulic Design



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

Signature: Heidi Lane
Printed or Typed Name: Heidi Lane
My license renewal date is December 31, 2023

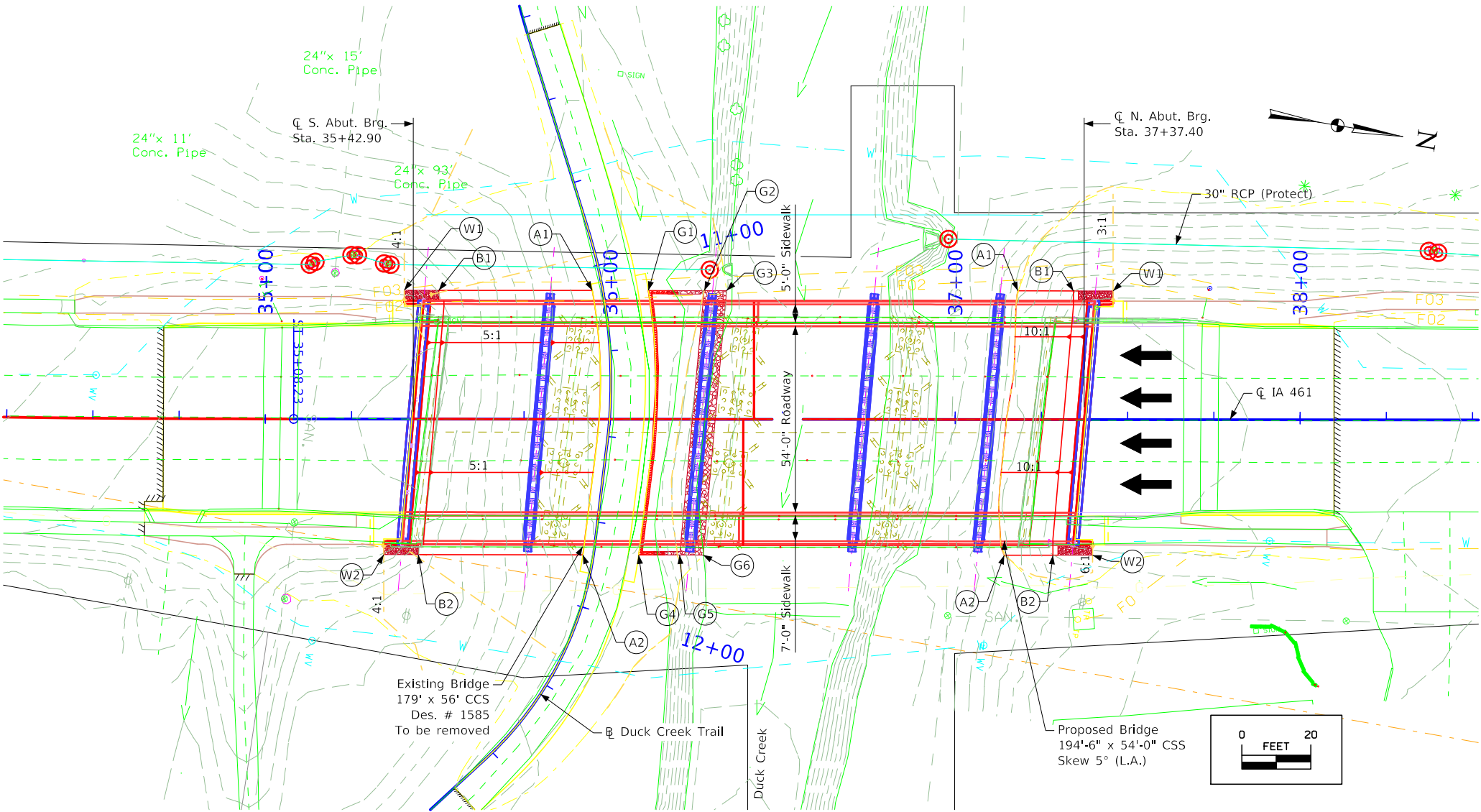
Pages or sheets covered by this seal: V.1 thru V.3

Berm Slope Location Table

Points	South Abutment				North Abutment				Description
	Station	Offset	Side	Elev.	Station	Offset	Side	Elev.	
A1	35+94.76	37.33	LT	625.00	37+18.15	37.33	LT	631.61	Limits of Conc. Slope Protection
A2	35+92.12	39.33	RT	624.92	37+14.24	39.33	RT	632.82	Limits of Conc. Slope Protection
B1	35+50.26	37.33	LT	633.82	37+35.77	37.33	LT	634.16	Top of Berm Elevation
B2	35+44.35	39.33	RT	633.82	37+29.87	39.33	RT	634.16	Top of Berm Elevation
W1	35+40.26	37.33	LT	638.20	37+45.77	37.33	LT	638.15	Limit of Erosion Stone
W2	35+34.35	39.33	RT	637.92	37+39.87	39.33	RT	638.23	Limit of Erosion Stone
G1	36+11.02	37.33	LT	624.64	Ex. Toe of Slope	--	--	--	Limit of Articulated Concrete Block
G2	36+27.23	37.33	LT	623.90	Ex. Toe of Slope	--	--	--	Limit of Articulated Concrete Block
G3	36+33.69	37.33	LT	622.04	--	--	--	--	Limit of Revetment, 2' Thick
G4	36+08.28	39.33	RT	624.58	--	--	--	--	Limit of Articulated Concrete Block
G5	36+20.17	39.33	RT	623.75	--	--	--	--	Limit of Articulated Concrete Block
G6	36+29.97	39.33	RT	621.13	--	--	--	--	Limit of Revetment, 2' Thick

W = End Wing/Erosion Stone
Berm slope elevations reflect the grading surface.

South Berm
Points G1 through G4 are to top of Articulated Concrete Block Mat Erosion Protection, Concrete Anchor or Class E Revetment Wedge. See Sheet 3 for details.



SITE PLAN

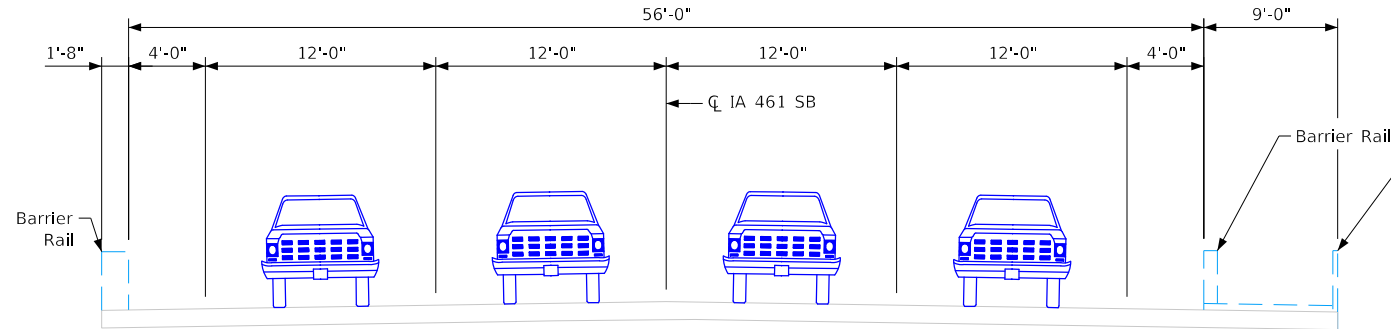
Design For 5° Skew (L.A.)
194'-6" X 54'-0" CONTINUOUS CONCRETE
SLAB BRIDGE W/ 7' EAST
SIDEWALK AND 5' WEST SIDEWALK
SITE PLAN

STA. 36+40.15 (Q IA 461 SB) Turn-in Date: November 2022

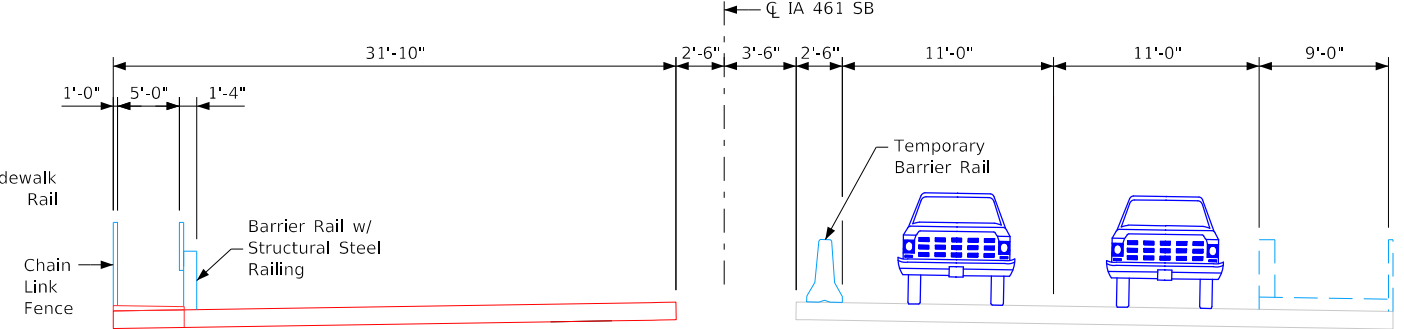
Scott County

IOWA DEPARTMENT OF TRANSPORTATION

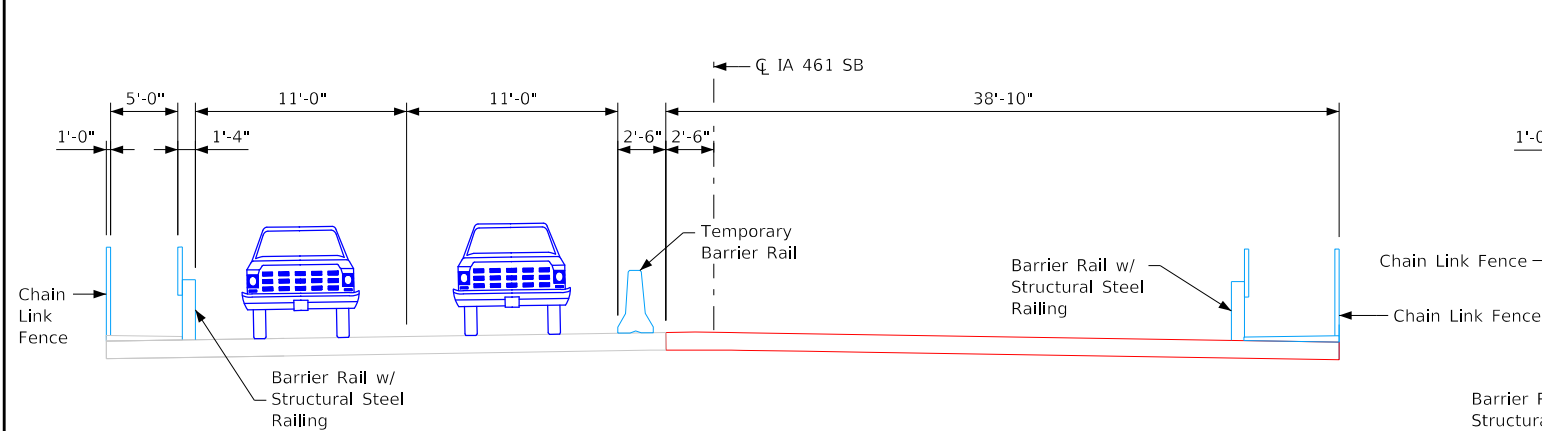
Design No. 225 Design Sheet No. 2 of 4 FHWA No. 047211



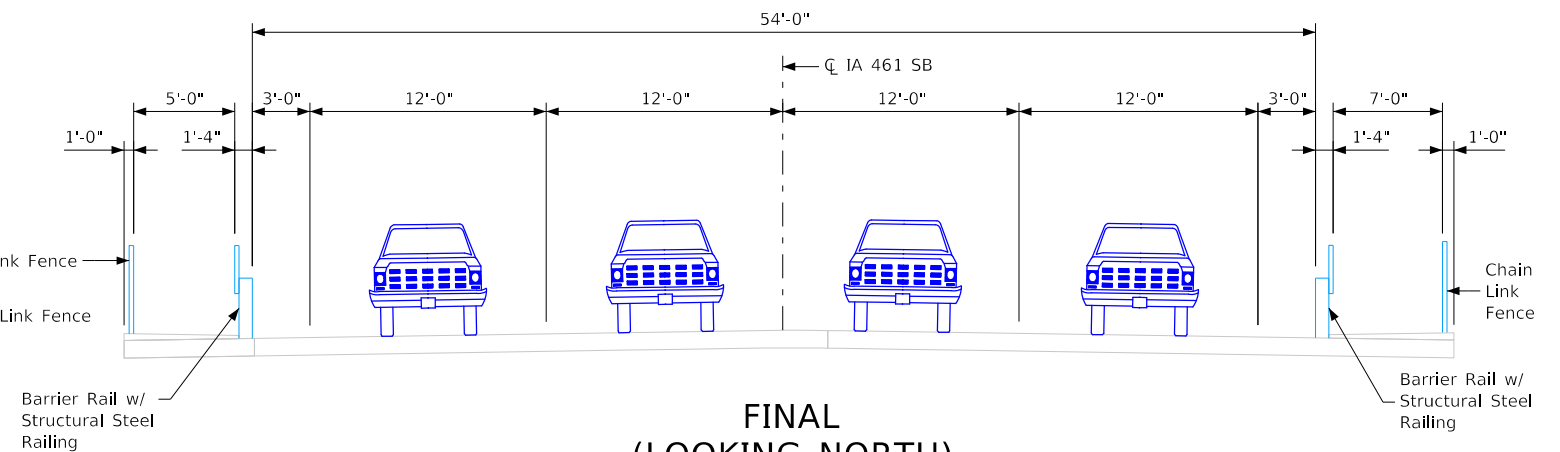
EXISTING TYPICAL SECTION
(LOOKING NORTH)



STAGE 1
(LOOKING NORTH)



STAGE 2
(LOOKING NORTH)



FINAL
(LOOKING NORTH)

Driving/Sidewalk Surface
Under Construction
All Sections Looking North

Design For 5° Skew (L.A.)
194'-6" X 54'-0" CONTINUOUS CONCRETE
SLAB BRIDGE W/ 7' EAST
SIDEWALK AND 5' WEST SIDEWALK
STAGING DETAILS
STA. 36+40.15 (CL IA 461 SB) Turn-in Date: November 2022
Scott County
IOWA DEPARTMENT OF TRANSPORTATION
Design No. 225 Design Sheet No. 4 of 4 FHWA No. 047211

CROSS SECTION VIEW COLOR LEGEND			
Design Color No.	Feature	Design Color No.	Feature
Aggregate		Grading	
(64)	Choke Stone	(8)	Behind Curb Cut
(42)	Engineering Fabric	(6)	Granular
(8)	Flooded Backfill	(13)	Granular Back Fill
(92)	Macadam Stone	(48)	Rock Undercut
(20)	Modified	(8)	Shoulder Earth Fill
(12)	Plowing Shaping	(2)	Side Slopes
(14)	Porous Backfill	(226)	Side Slopes Dressing
(8)	Revetment Class A	Substrata	
(6)	Revetment Class B	(128)	Boulder Substrata
(62)	Revetment Class C	(209)	Boulder Removed Substrata
(188)	Revetment Class D	(48)	Broken Weathered Substrata
(28)	Revetment Class E	(210)	Broken Weathered Removed Substrata
(12)	Shoulder Special Backfill	(3)	Core Out Substrata
(12)	Special Backfill	(195)	Core Out Remove and Replace Substrata
(20)	Subbase	(115)	Core Out Remove Only Substrata
(20)	Subbase Lower	(203)	Existing Pavement Substrata
(20)	Subbase Upper	(200)	Existing Pavement Remove and Replace Substrata
(118)	Subgrade Treatment	(184)	Existing Pavement Remove Only Substrata
Asphalt		(6)	Loam Substrata
(207)	HMA Base Course	(211)	Loam Removed Substrata
(207)	HMA Interim Course	(80)	Rock Substrata
(207)	HMA Surface Course	(212)	Rock Removed Substrata
Concrete		(4)	Select Sand Substrata
(0)	Barrier Concrete	(214)	Select Sand Removed Substrata
(0)	Barrier Concrete Footing	(3)	Shale Substrata
(0)	Curb Gutter	(215)	Shale Removed Substrata
(48)	Flowable Mortar	(10)	Topsoil Substrata
(0)	Median Concrete	(4)	Topsoil Remove and Replace Substrata
(0)	PCC Pavement	(2)	Topsoil Remove Only Substrata
(0)	Sidewalk	Unsuitable / Waste	
Shoulder		(3)	Unsuitable Type A
(209)	Shoulder HMA	(216)	Unsuitable Type A Removed
(0)	Shoulder PCC	(13)	Unsuitable Type B
(6)	Shoulder Granular	(217)	Unsuitable Type B Removed
Existing		(11)	Unsuitable Type C
(0)	Existing Pavement	(218)	Unsuitable Type C Removed
Structural		(3)	Waste
(3)	Bridge	(219)	Waste Removed
(21)	Guardrail	Trigger Switches	
(112)	Noise Wall	(27)	Do Not Construct
(112)	Noise Wall Footing		
(112)	Retaining Wall Back		
(112)	Retaining Wall Back Excavate		
(112)	Retaining Wall Face		
(112)	Retaining Wall Front Excavate		
(112)	Retaining Wall Front Footing		
(112)	Retaining Wall MSE Gutter		
(112)	Retaining Wall Reinforced Earth		

NOTES:

Text

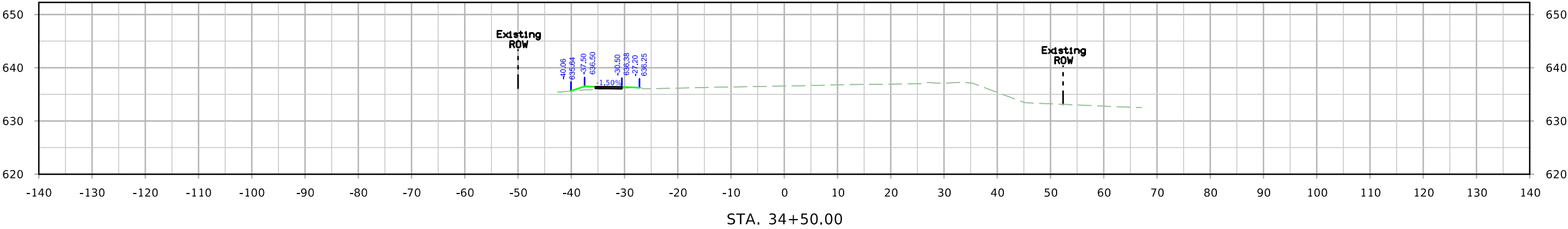
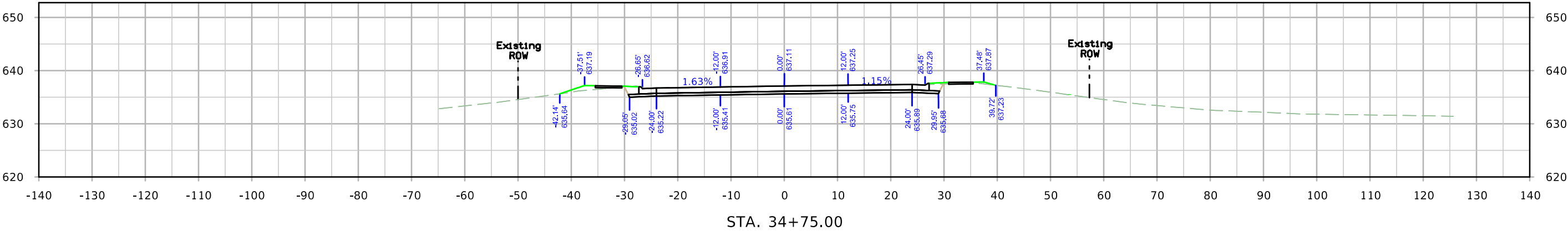
NOTES:

Text

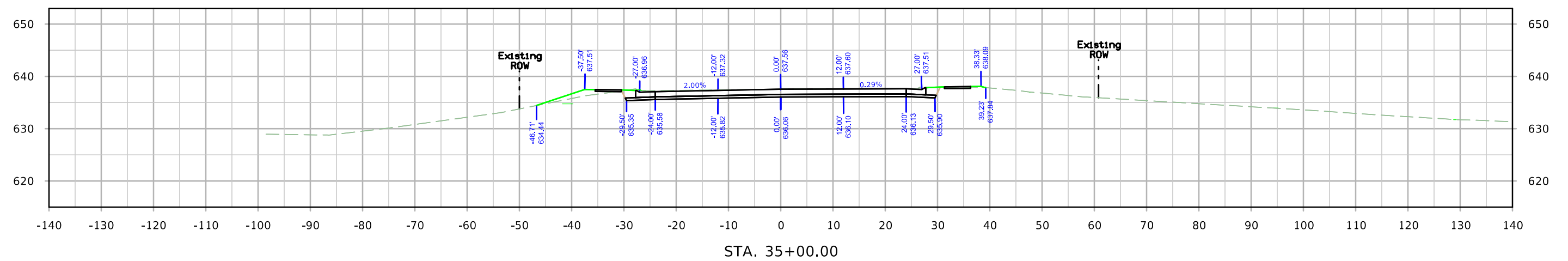
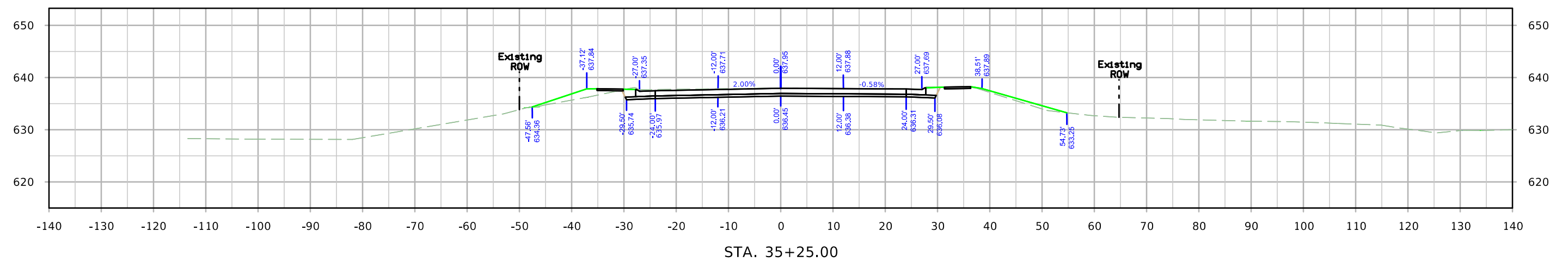
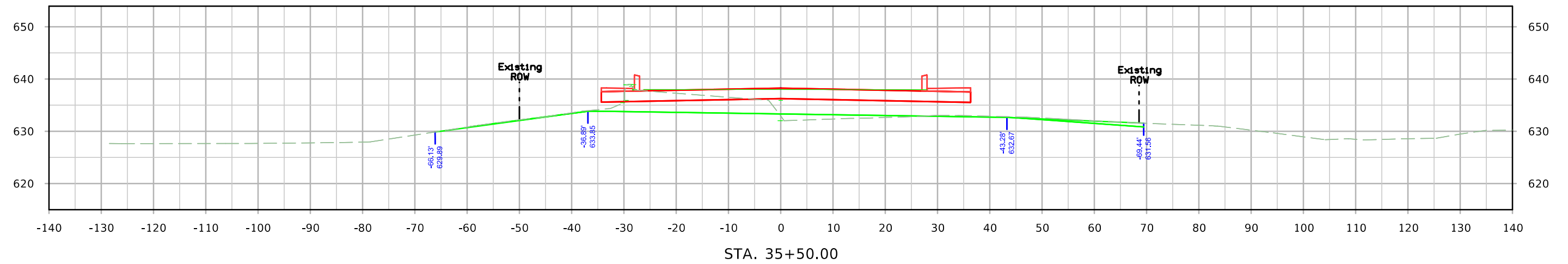
CROSS SECTIONS
LEGEND AND INFORMATION SHEET

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

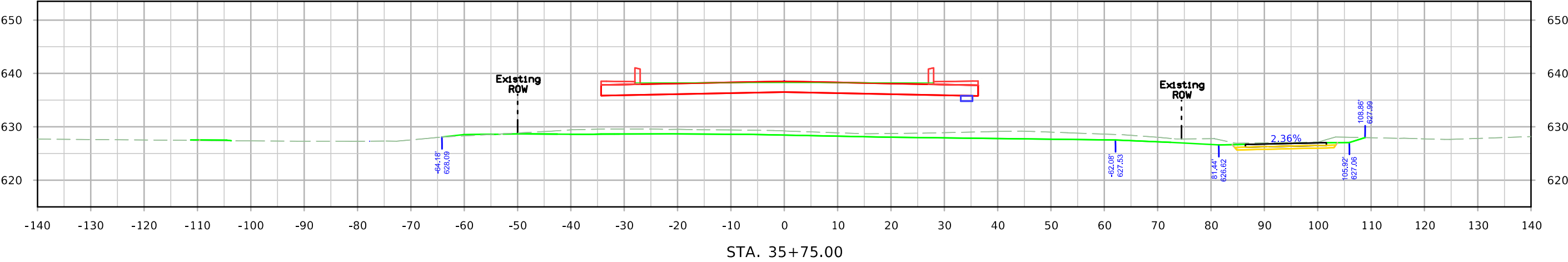
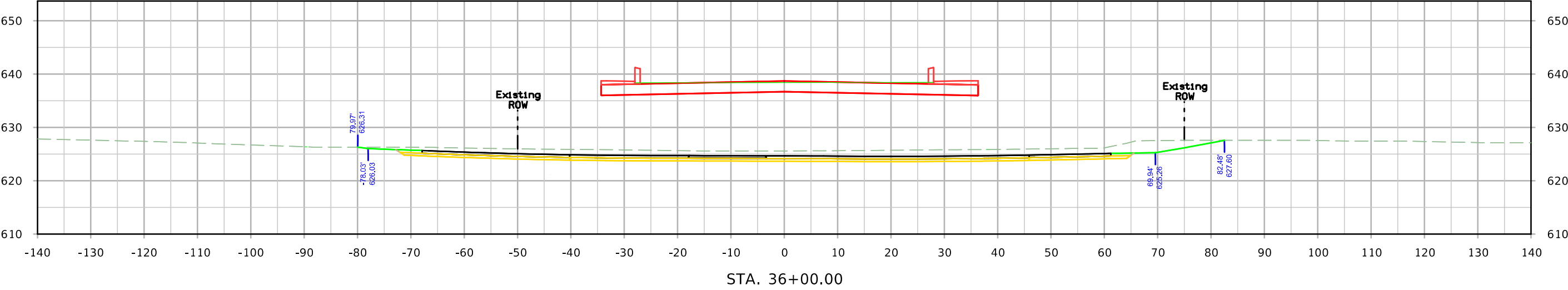
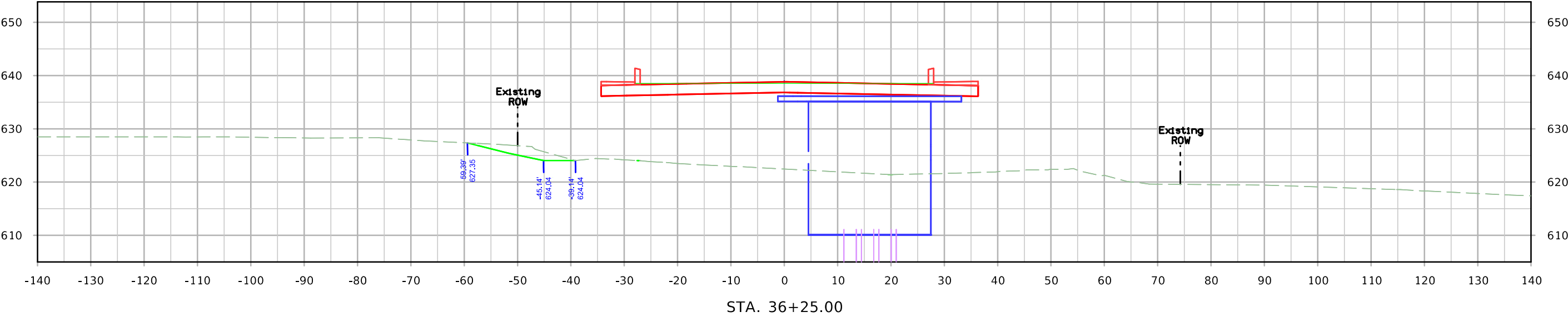
ML - IA 461 SB



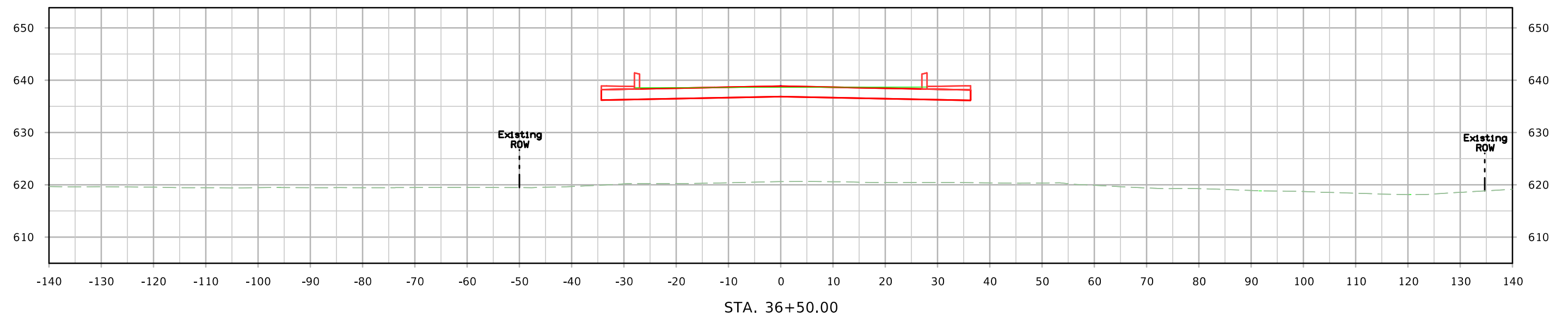
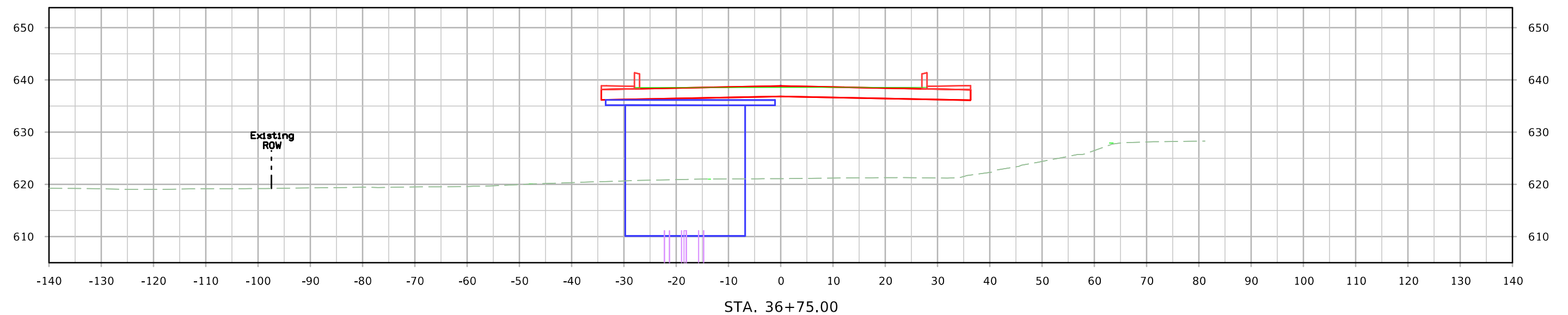
ML - IA 461 SB



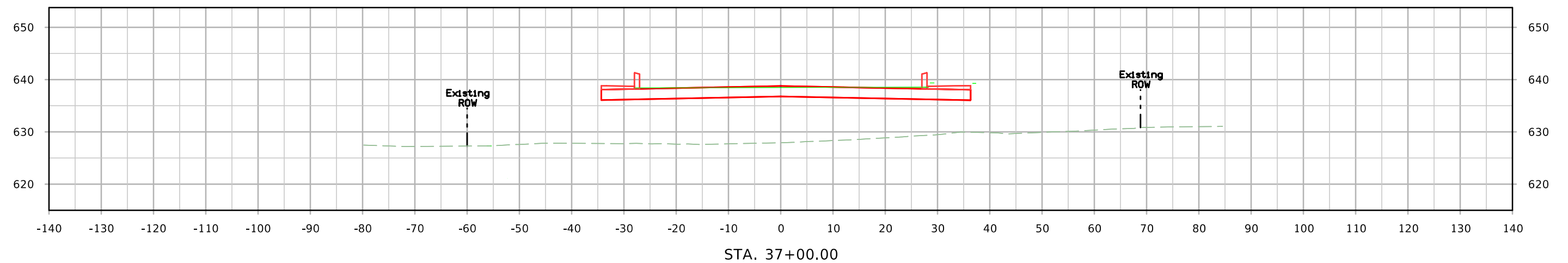
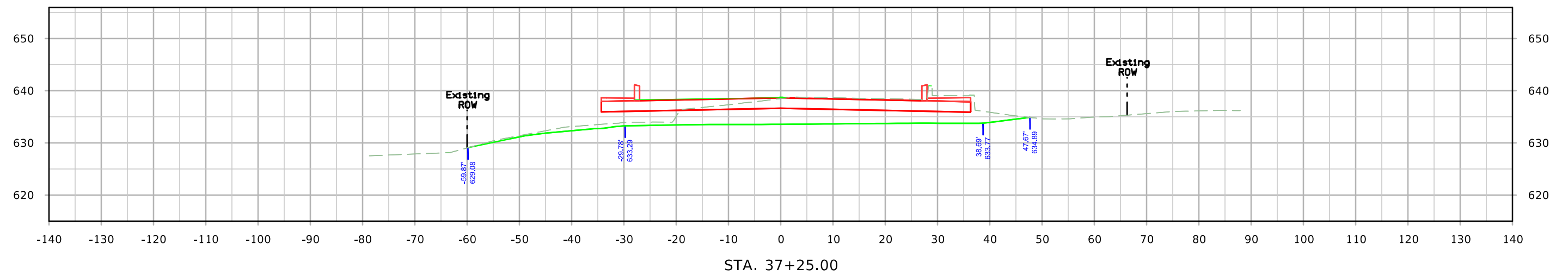
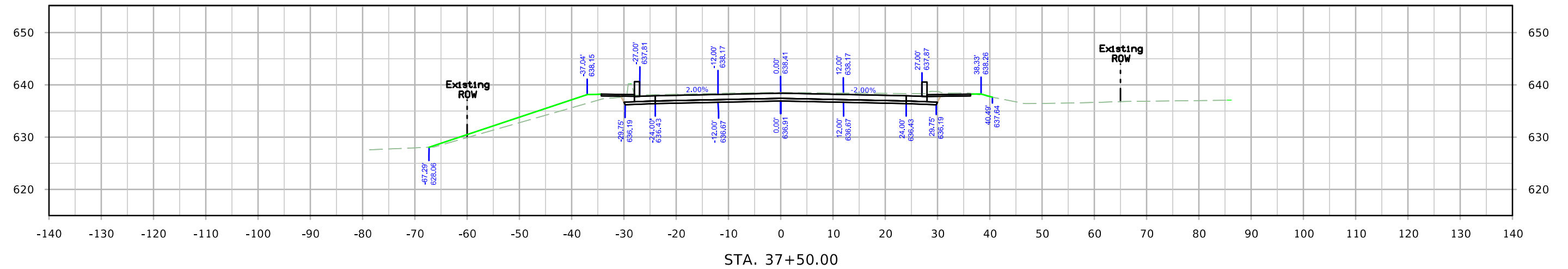
ML - IA 461 SB



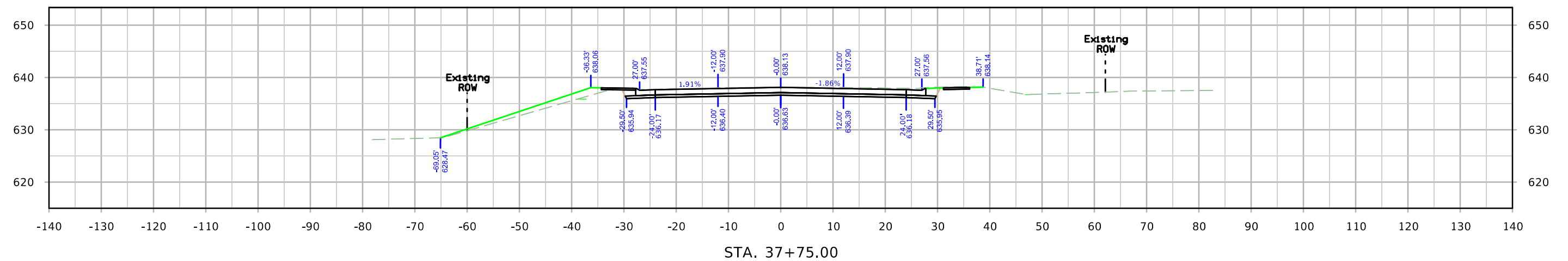
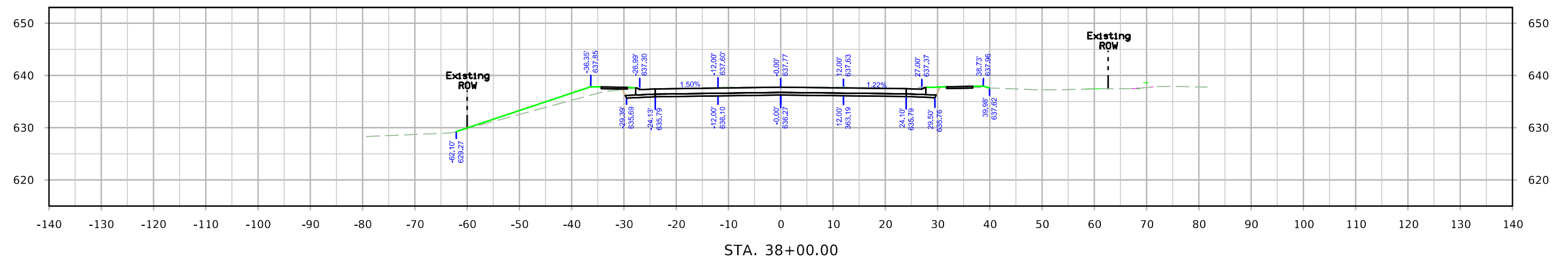
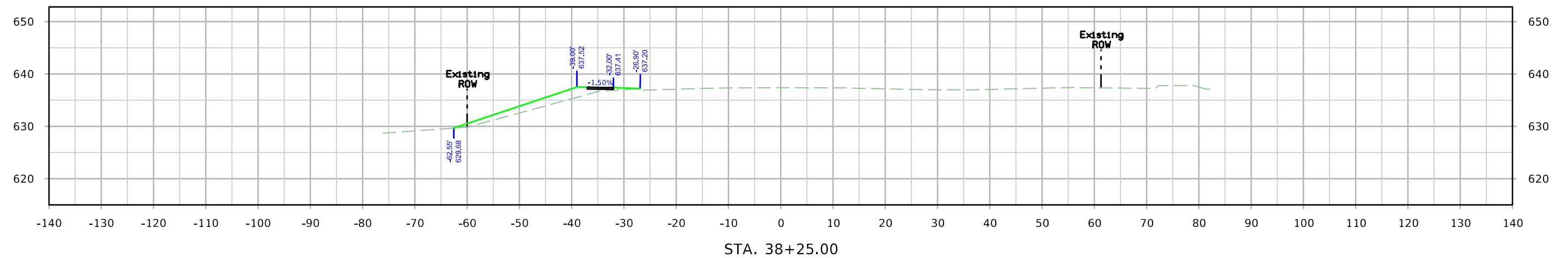
ML - IA 461 SB



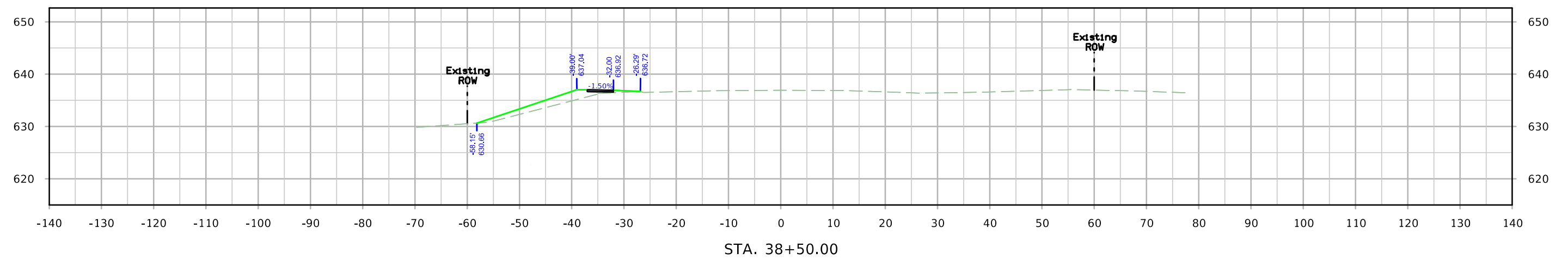
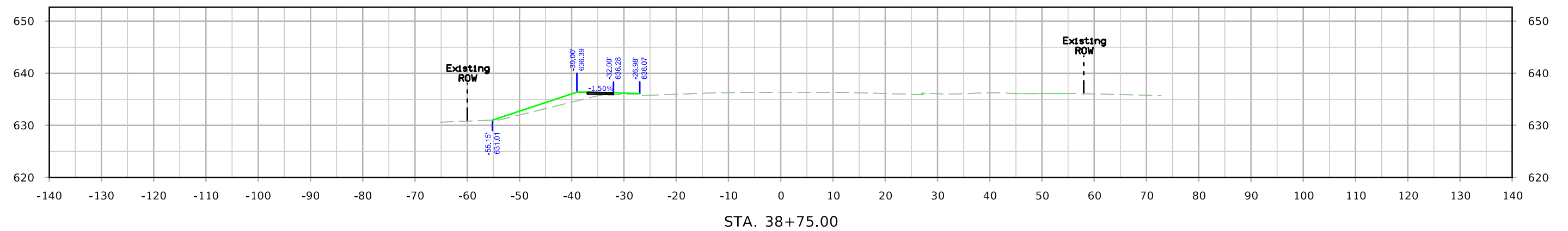
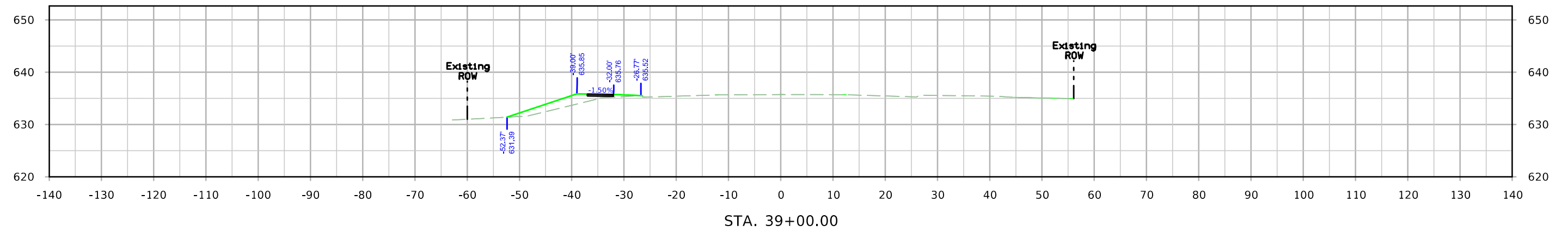
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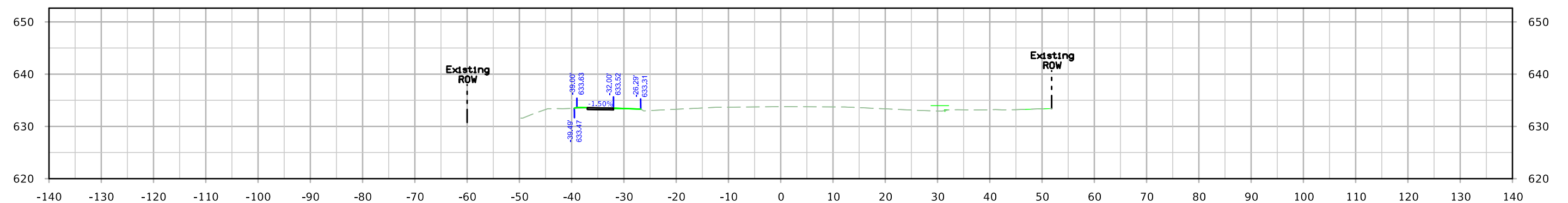
ML - IA 461 SB



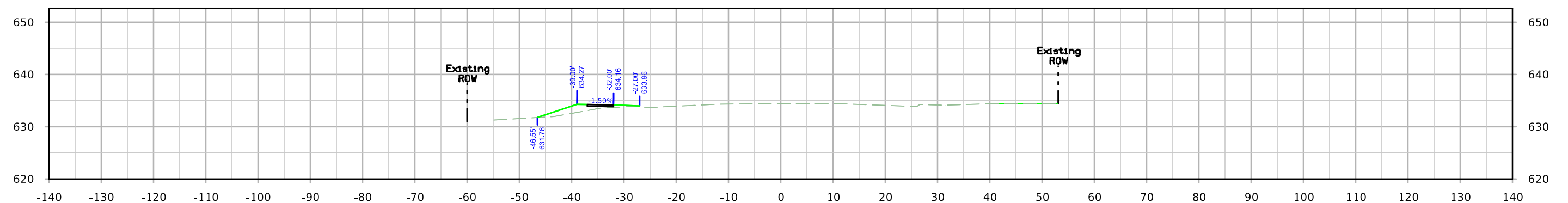
ML - IA 461 SB



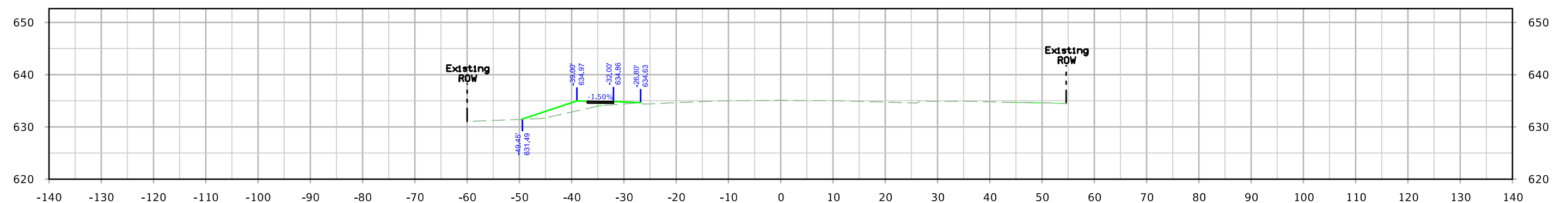
ML - IA 461 SB



STA. 39+75.00

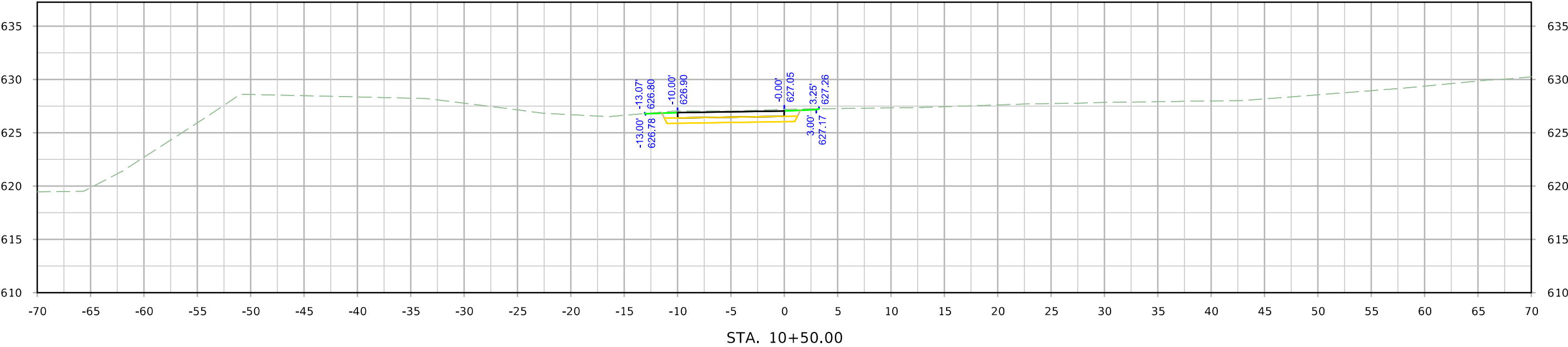


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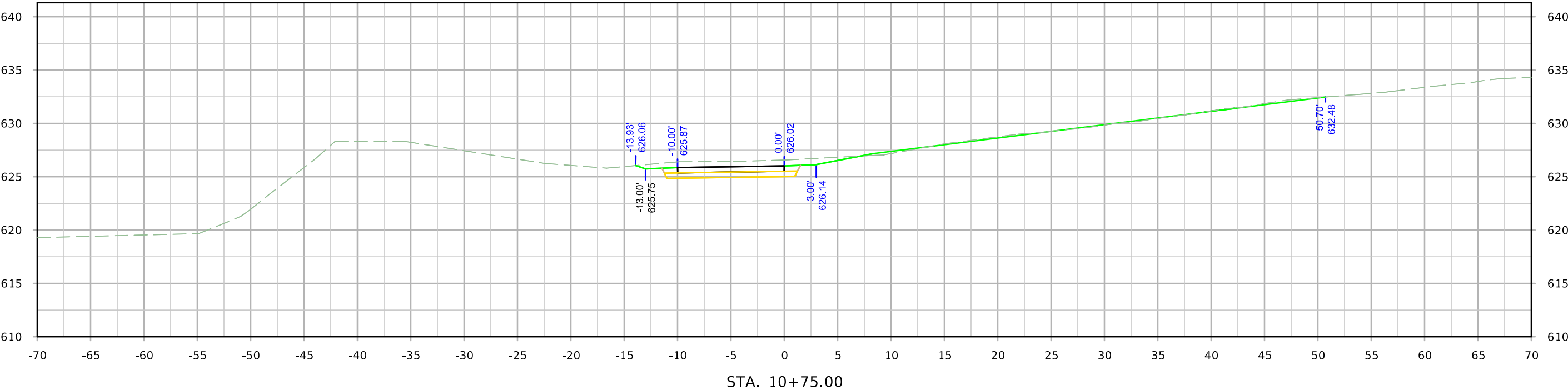
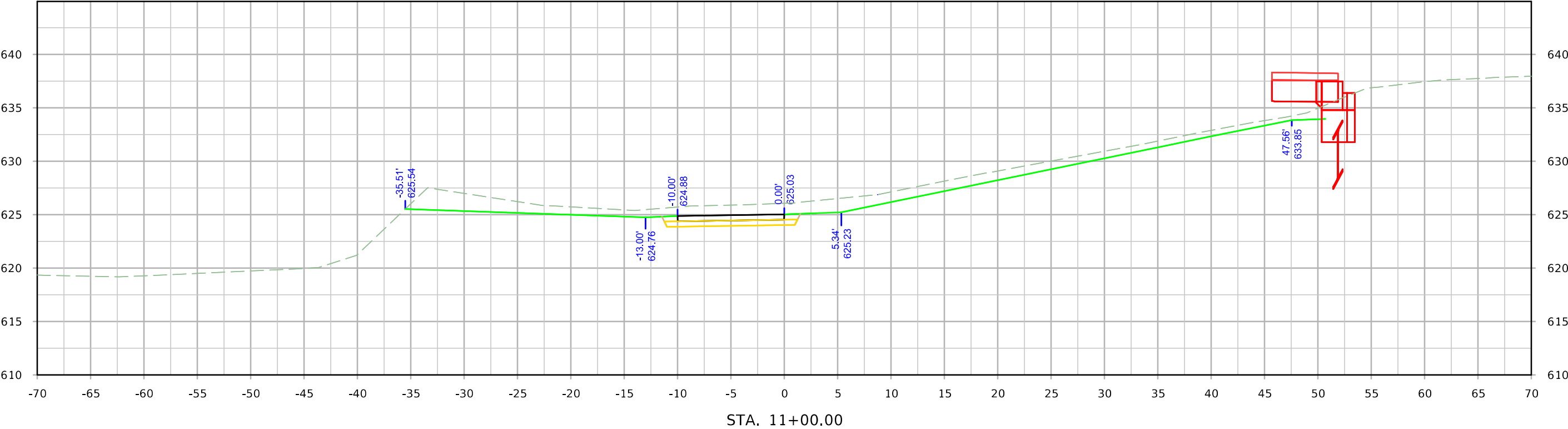


STA. 39+25.00

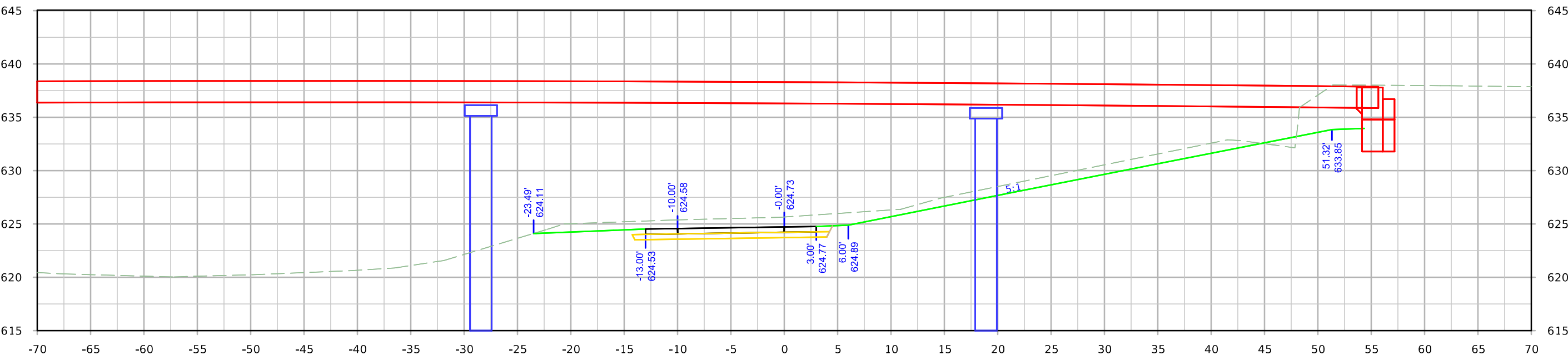
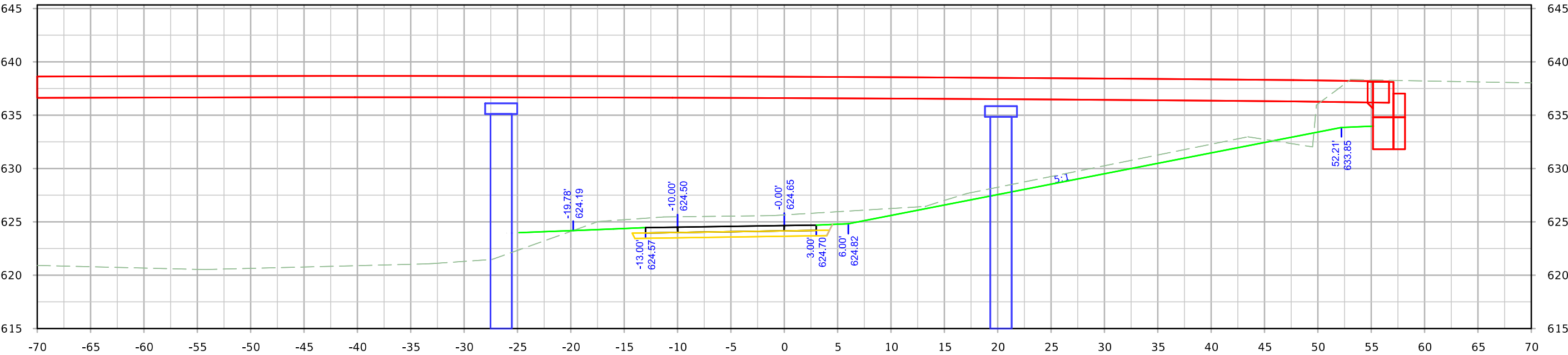
Duck Creek Parkway Trail



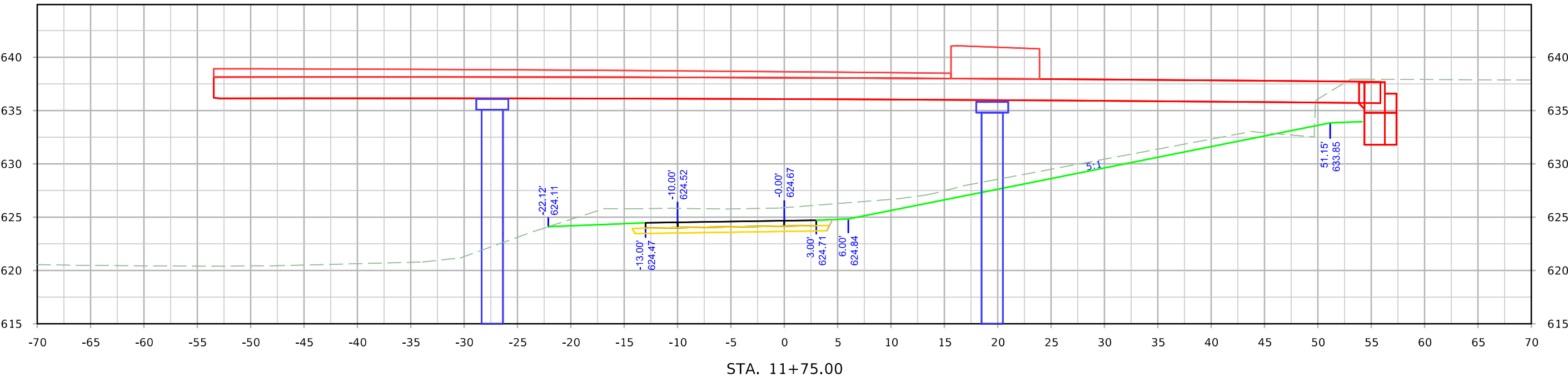
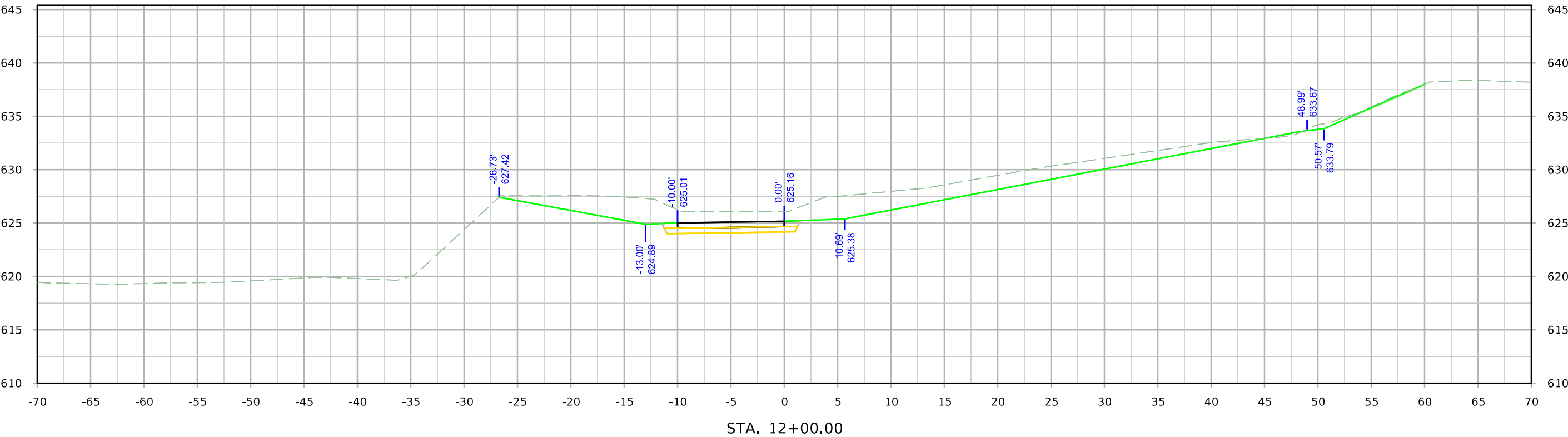
Duck Creek Parkway Trail



Duck Creek Parkway Trail



Duck Creek Parkway Trail



Duck Creek Parkway Trail

