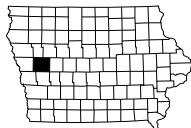


For Project Location Map
Refer to Sheet No. A.2



DESIGN DATA URBAN				
2027	AADT	9,300	V.P.D.	
2047	AADT	10,200	V.P.D.	
2047	DHV	1,050	V.P.H.	
TRUCKS		16	%	
Total				
Design ESALs		--		

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
* A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	Typical Cross Sections and Details
B.1 - B.4	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - D.5	US 30 Plan and Profile Sheets
F Sheets	Detour or Temporary Pavement Sheets
* F.1	Temporary Crossover Plan Sheet
G Sheets	Survey Sheets
G.1 - G.3	Reference Ties and Bench Marks
G.4	Horizontal Control Tabulation
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan, Staging Notes and Tabulations
* J.2	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.3 - J.14	Staging and Traffic Control Sheets
* J.15	Detour Sheet
U Sheets	Modified Standards and Detail Sheets
* U.1	Modified Crossover Standard
V Sheets	Bridge Situation Plans
* V.1 - V.5	Bridge Situation Plans
VW Sheets	Culvert Situation Plans
* VW.1	ML030 Culverts
W Sheets	Mainline Cross Sections
* W.1	Cross Sections Legend and Information Sheet
* W.2 - W9	US 30 Cross Sections
* Color Plan Sheets	



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
CRAWFORD COUNTY
BRIDGE REPLACEMENT
US 30 EB/WB BRIDGES OVER UPRR
Approx. 0.4 mi E of the W Junction of US 59
SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



REVISIONS

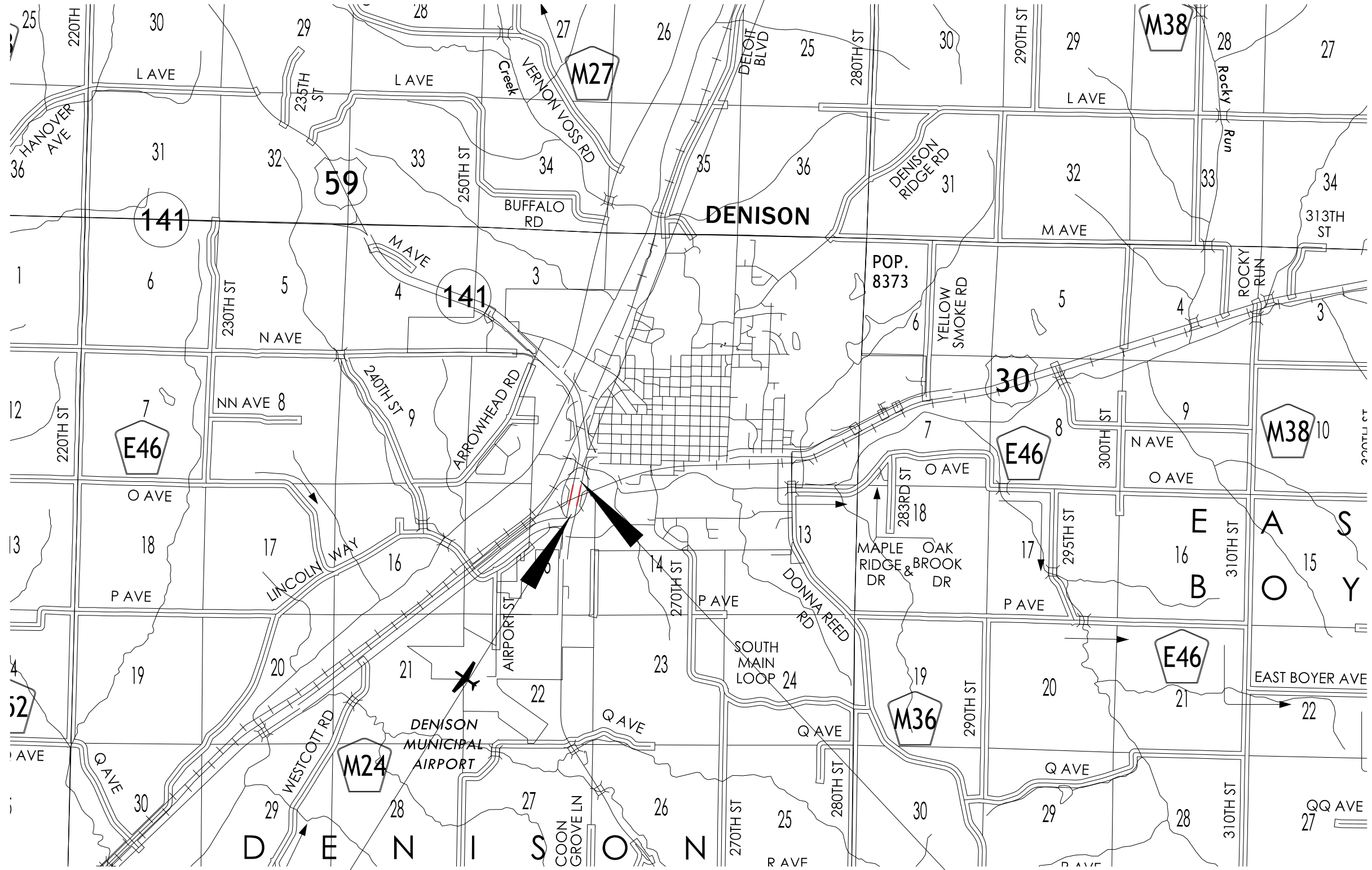
TOTAL	
49	
PROJECT IDENTIFICATION NUMBER	
22-24-030-010	
PROJECT NUMBER	
BRF-030-2(180)--38-24	
R.O.W. PROJECT NUMBER	
NHSN-030-2(181)--2R-24	

PRELIMINARY PLANS

Subject to change by final design.

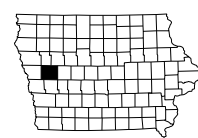
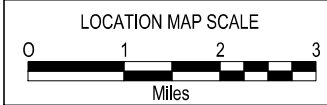
D5 PLAN - Date: 10/11/2024

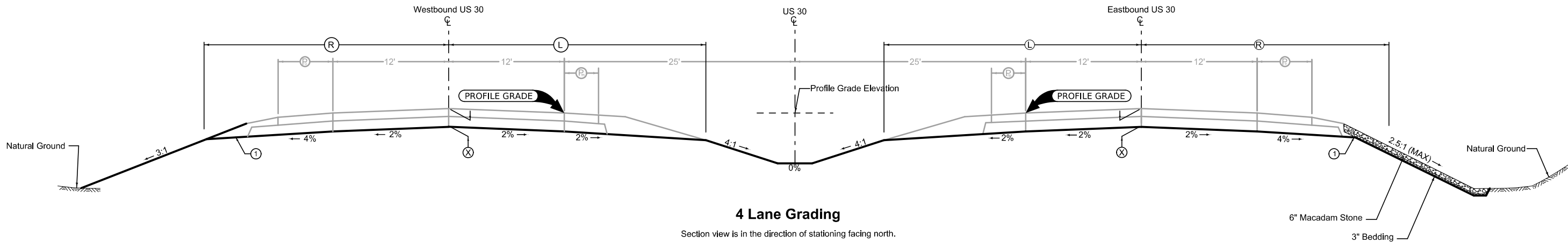
FHWA Numbers: 21330 (E.B.) & 21340 (W.B.)
Maint. Numbers: 2454.2R030 (E.B.) & 2454.2L030 (W.B.)
TWIN 432' x 40' CWPG BRIDGE



US 30 STA. 532+04.00
BEGIN CONSTRUCTION

US 30 STA. 551+20.00
END CONSTRUCTION





4 Lane Grading

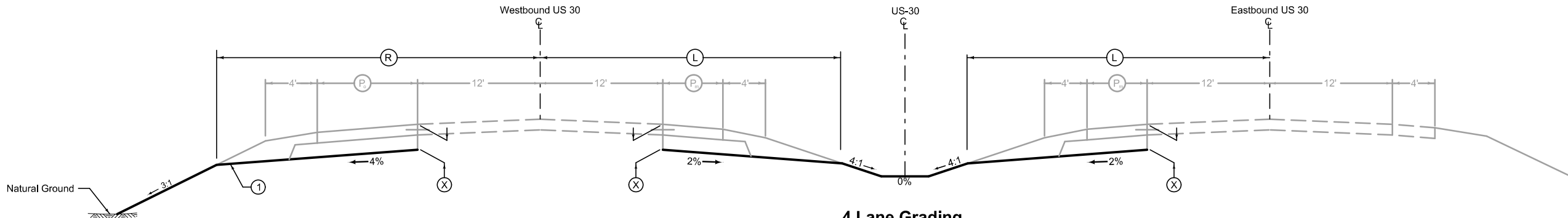
Section view is in the direction of stationing facing north.

LOCATION			DIMENSIONS		
ROAD INDENTIFICATION	STATION TO STATION		(X) Inches	(L) Feet	(R) Feet
US 30 EB	540+20.00	540+76.99	22	27	34
US 30 EB	546+74.88	548+25.00	22	27	34
US 30 WB	546+19.96	548+25.00	22	27	34

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

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

US HIGHWAY 30
GRADING



4 Lane Grading

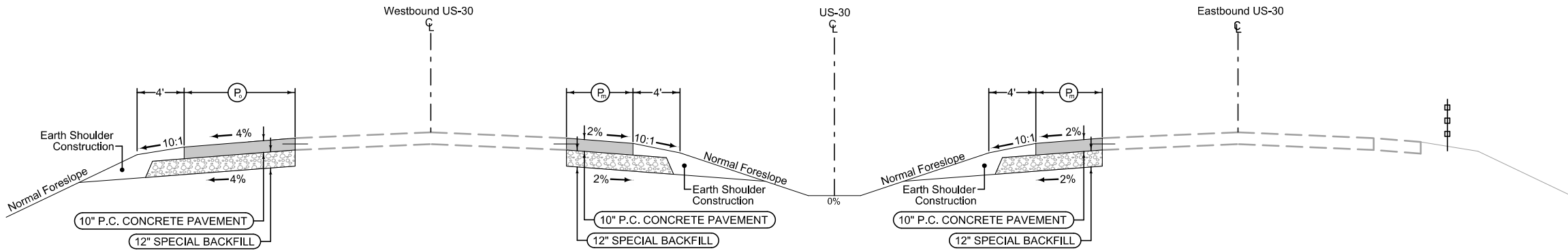
Section view is in the direction of stationing facing north.

LOCATION			DIMENSIONS		
ROAD INDENTIFICATION	STATION TO STATION		(X) Inches	(L) Feet	(R) Feet
US 30 EB	537+04.50	540+20.00	22	27	
US 30 EB	548+25.00	551+20.00	22	27	
US 30 WB	537+04.50	537+70.05	22	27	
US 30 WB	537+70.05	540+20.00	22	27	34
US 30 WB	548+25.00	551+20.00	22	27	34

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

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

US HIGHWAY 30
GRADING



Section view is in the direction of stationing facing north.

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: CD matching mainline jointing

Direction of Travel	BEGIN STATION	END STATION	(P) Feet
WB	537+70.05	540+20.00	5.8-8

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: CD matching mainline jointing

Direction of Travel	BEGIN STATION	END STATION	(P) Feet
WB	537+04.50	537+48.23	6
WB	539+55.20	540+20.00	6
WB	548+25.00	548+70.88	6
WB	550+78.00	551+20.00	6

Full Depth PCC Shoulder

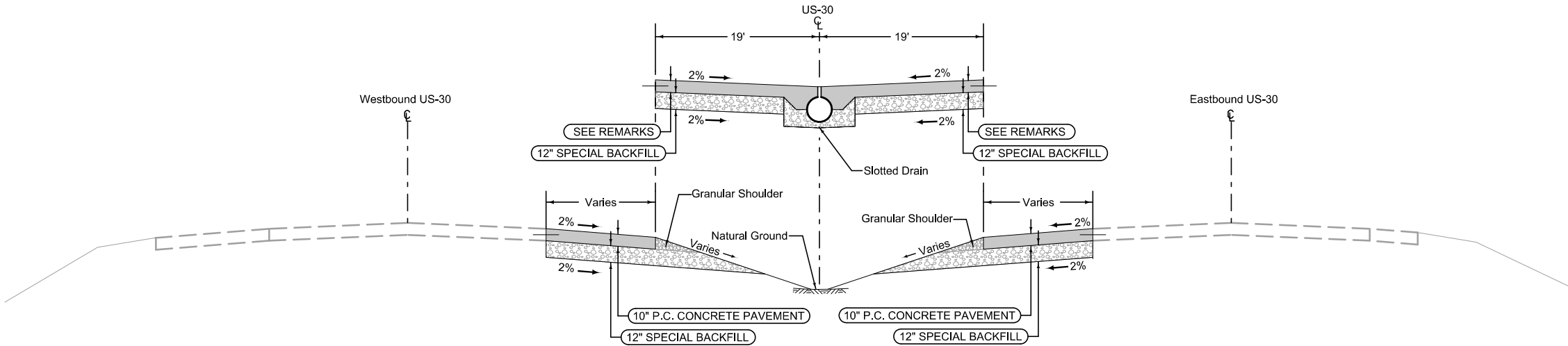
Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: CD matching mainline jointing

Direction of Travel	BEGIN STATION	END STATION	(P) Feet
EB	537+04.50	537+52.60	6
EB	539+48.29	539+92.90	6
EB	539+92.90	540+12.91	9.5
EB	540+12.91	540+20.00	9.5-9.2
EB	548+25.00	548+73.27	6
EB	550+71.02	551+20.00	6

US HIGHWAY 30
SHOULDER PAVING

Median Crossover Pavement

BEGIN STATION	END STATION	REMARKS
538+16.48	538+85.28	See Sheet U.1 for permanent crossover information.
549+39.20	550+08.01	See Sheet F.1 for temporary crossover information.



Section view is in the direction of stationing facing north.

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: CD matching mainline jointing

BEGIN STATION	END STATION	REMARKS
537+48.23	539+55.20	See Sheet U.1 for permanent crossover information.
548+70.88	550+78.00	See Sheet F.1 for temporary crossover information.

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: CD matching mainline jointing

BEGIN STATION	END STATION	REMARKS
537+52.60	539+48.29	See Sheet U.1 for permanent crossover information.
548+73.27	550+70.97	See Sheet F.1 for temporary crossover information.

US HIGHWAY 30
CROSSOVER PAVING

Full Depth PCC Shoulder

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

Direction of Travel	BEGIN STATION	END STATION	(P) Feet
WB	546+19.96	546+44.33	13-15.7
WB	546+44.33	546+64.33	15.7
WB	546+64.33	548+25.00	10

Full Depth PCC Shoulder

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

Direction of Travel	BEGIN STATION	END STATION	(P) Feet
WB	546+19.69	546+35.76	7.6
WB	546+35.76	546+83.53	7.6-9.5
WB	546+83.53	547+03.53	9.5
WB	547+03.53	548+25.00	6

Full Depth PCC Shoulder

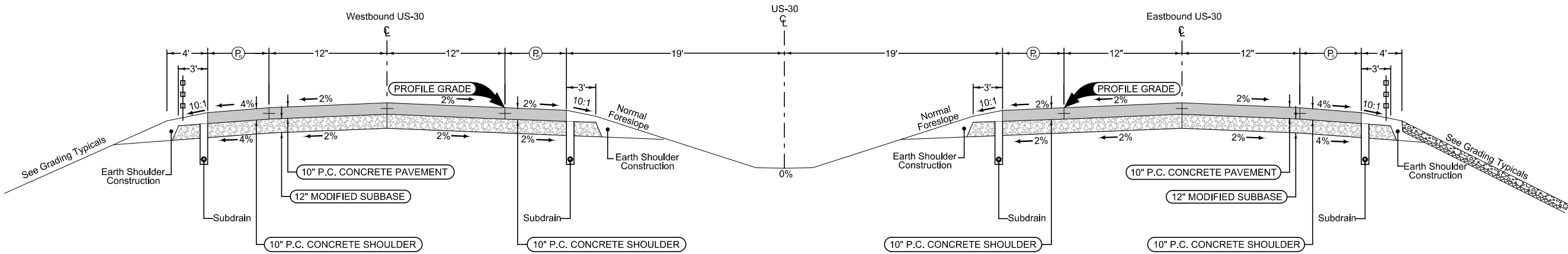
Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: CD at 17' spacing

Direction of Travel	BEGIN STATION	END STATION	(P) Feet
EB	540+20.00	540+60.85	9.2-7.6
EB	540+60.85	540+76.99	7.6
EB	546+74.88	548+25.00	6

Full Depth PCC Shoulder

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

Direction of Travel	BEGIN STATION	END STATION	(P) Feet
EB	540+20.00	540+32.10	10
EB	540+32.10	540+52.10	15.7
EB	540+52.10	540+76.99	15.7-13
EB	546+74.88	548+25.00	10



Section shown in the direction of stationing facing north.

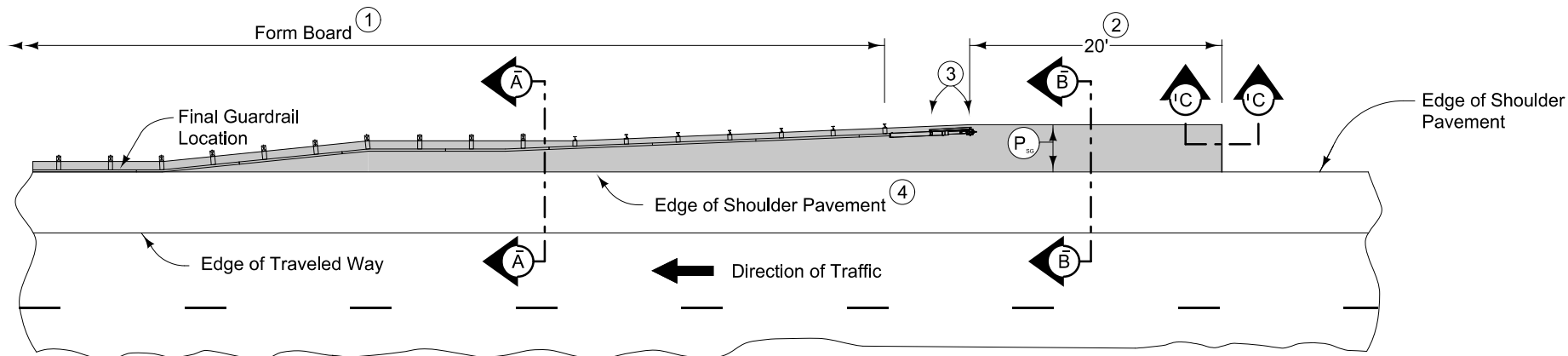
Mainline Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: CD at 17' spacing

Direction of Travel	BEGIN STATION	END STATION
WB	546+19.69	548+25.00

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

Direction of Travel	BEGIN STATION	END STATION
EB	540+20.00	540+76.99
EB	546+74.88	548+25.00

US HIGHWAY 30
PAVING



PLAN VIEW

DESIGNER
INFO

7158
04-19-22

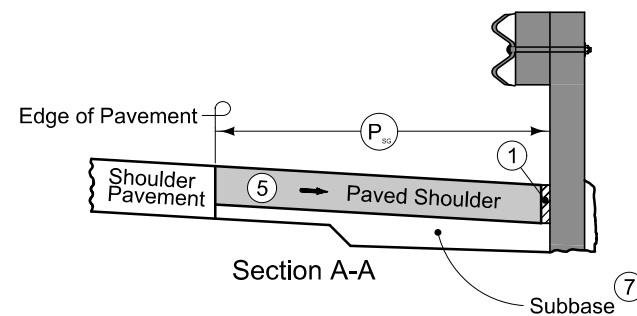
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

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.

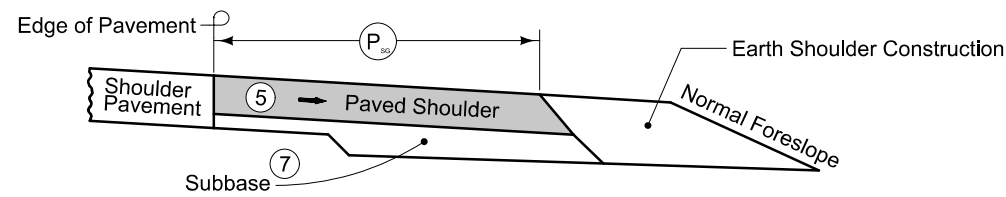
Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

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 'KT' (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.

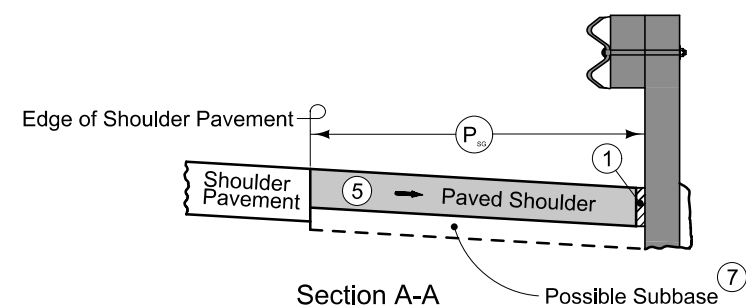


Section A-A

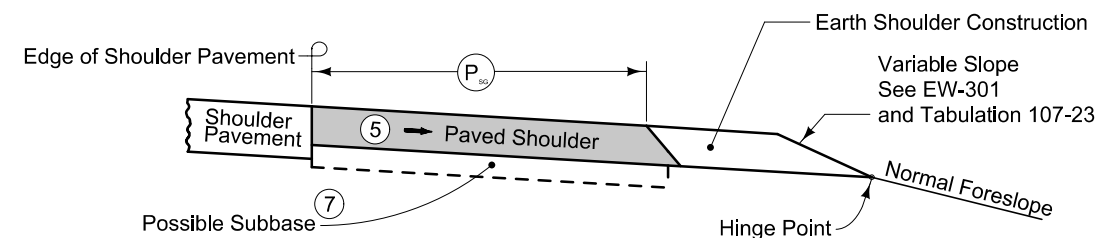


Section B-B

NEW CONSTRUCTION

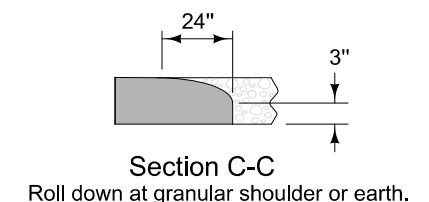


Section A-A



Section B-B

EXISTING SHOULDER



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

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 - G - Black Hills Energy Distribution Brad Fleming (402) 221-2714 brad.fleming@blackhillscorp.com - E1 - Denison Municipal Utilities (Electric/Sanitary/Water) Mike Wight (712) 263-4154 mwight@dmuonline.com - FO - Iowa Communications Network (Fiber/Telephone) Michael Dalen (515) 725-4707 mike.dalen@iowa.gov - F02 - Mediacom Communications Corporation (Cable/Fiber) Tim Adreon (515) 233-4646 tadreon@mediacomcc.com - F03 - Frontier Communications Fiber Distribution Trent Flockhart (515) 573-1268 Trent.Flockhart@ftr.com Lumen Centurylink (Fiber/Telephone) Steve Parker (515) 265-0968 Steve.Parker4@lumen.com Western Iowa Networks (Telephone) Mike Ludwig (712) 673-2311 mludwig@westianet.com	PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS <table><tr><th>LINEWORK</th><th>Design Color No.</th><th></th></tr><tr><td>Green</td><td>(2)</td><td>Existing Topographic Features and Labels</td></tr><tr><td>Blue</td><td>(1)</td><td>Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation</td></tr><tr><td>Magenta</td><td>(5)</td><td>Existing Utilities</td></tr></table> <table><tr><th>SHADING</th><th>Design Color No.</th><th></th></tr><tr><td>Pink, Dark</td><td>(13)</td><td>Temporary Pavement Shading</td></tr><tr><td>Yellow</td><td>(4)</td><td>Proposed Pavement Shading</td></tr><tr><td>Orange</td><td>(6)</td><td>Proposed Granular Shading</td></tr><tr><td>Orange</td><td>(70)</td><td>Proposed Shoulder Granular Shading</td></tr><tr><td>Yellow</td><td>(68)</td><td>Proposed Shoulder Paved Full Depth Shading</td></tr><tr><td>Yellow</td><td>(132)</td><td>Proposed Shoulder Paved Partial Depth Shading</td></tr><tr><td>Gray, Dark</td><td>(112)</td><td>Proposed Grade and Pave Shading "In conjunction with a paving project"</td></tr><tr><td>Brown, Light</td><td>(236)</td><td>Grading Shading</td></tr><tr><td>Orange, Light</td><td>(134)</td><td>Proposed Granular Entrance Shading</td></tr><tr><td>Yellow</td><td>(220)</td><td>Proposed Paved Entrance Shading</td></tr><tr><td>Tan</td><td>(8)</td><td>Proposed Sidewalk Shading</td></tr><tr><td>Blue, Light</td><td>(230)</td><td>Proposed Sidewalk Landing Shading</td></tr><tr><td>Pink</td><td>(11)</td><td>Proposed Sidewalk Ramp Shading</td></tr><tr><td>Green, Light</td><td>(225)</td><td>Existing Pavement Shading</td></tr><tr><td>Red</td><td>(3)</td><td>Proposed Structure Shading</td></tr><tr><td>Red</td><td>(3)</td><td>Delineates Restricted Areas</td></tr><tr><td>Gray</td><td>(64)</td><td>Revetment, Class E</td></tr></table> PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS <table><tr><th>LINEWORK</th><th>Design Color No.</th><th></th></tr><tr><td>Green</td><td>(10)</td><td>Existing Ground Line Profile</td></tr><tr><td>Blue</td><td>(1)</td><td>Proposed Profile and Annotation</td></tr><tr><td>Magenta</td><td>(5)</td><td>Existing Utilities</td></tr><tr><td>Blue, Light</td><td>(230)</td><td>Proposed Ditch Grades, Left</td></tr><tr><td>Black</td><td>(0)</td><td>Proposed Ditch Grades, Median</td></tr><tr><td>Rust</td><td>(14)</td><td>Proposed Ditch Grades, Right</td></tr></table> Reference Point 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 Existing Right of Way Existing and Proposed Right-of-Way Easement and Existing Right-of-Way Easement (Temporary) Easement Access Control Property Line	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.		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	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	Red	(3)	Delineates Restricted Areas	Gray	(64)	Revetment, Class E	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
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| PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET (COVERS SHEET SERIES D & F) | | | |

FILE NO. 32646	ENGLISH	DESIGN TEAM Iowa DOT / HNTB	CRAWFORD COUNTY	PROJECT NUMBER BRF-030-2(180)--38-24	SHEET NUMBER D.1
----------------	---------	-----------------------------	-----------------	--------------------------------------	------------------

- G -

Black Hills Energy Distribution

Brad Fleming

(402) 221-2714

brad.fleming@blackhillscorp.com

- E1 -

Denison Municipal Utilities

(Electric/Sanitary/Water)

Mike Wight

(712) 263-4154

mwight@dmuonline.com

- FO -

Iowa Communications Network

(Fiber/Telephone)

Michael Dalen

(515) 725-4707

mike.dalen@iowa.gov

- FO2 -

Mediacom Communications Corporation

(Cable/Fiber)

Tim Adreon

(515) 233-4646

tadreon@mediacomcc.com

- FO3 -

Frontier Communications Fiber Distribution

Trent Flockhart

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Trent.Flockhart@ftr.com

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Steve Parker

(515) 265-0968

Steve.Parker4@lumen.com

Western Iowa Networks

(Telephone)

Mike Ludwig

(712) 673-2311

mludwig@westianet.com

LINWORK

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.

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

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

Red

(3)

Delineates Restricted Areas

Gray

(64)

Revetment, Class E

LINWORK

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

Proposed Right-of-Way

Existing Right of Way

Existing and Proposed Right-of-Way

Easement and Existing Right-of-Way

Easement (Temporary)

Easement

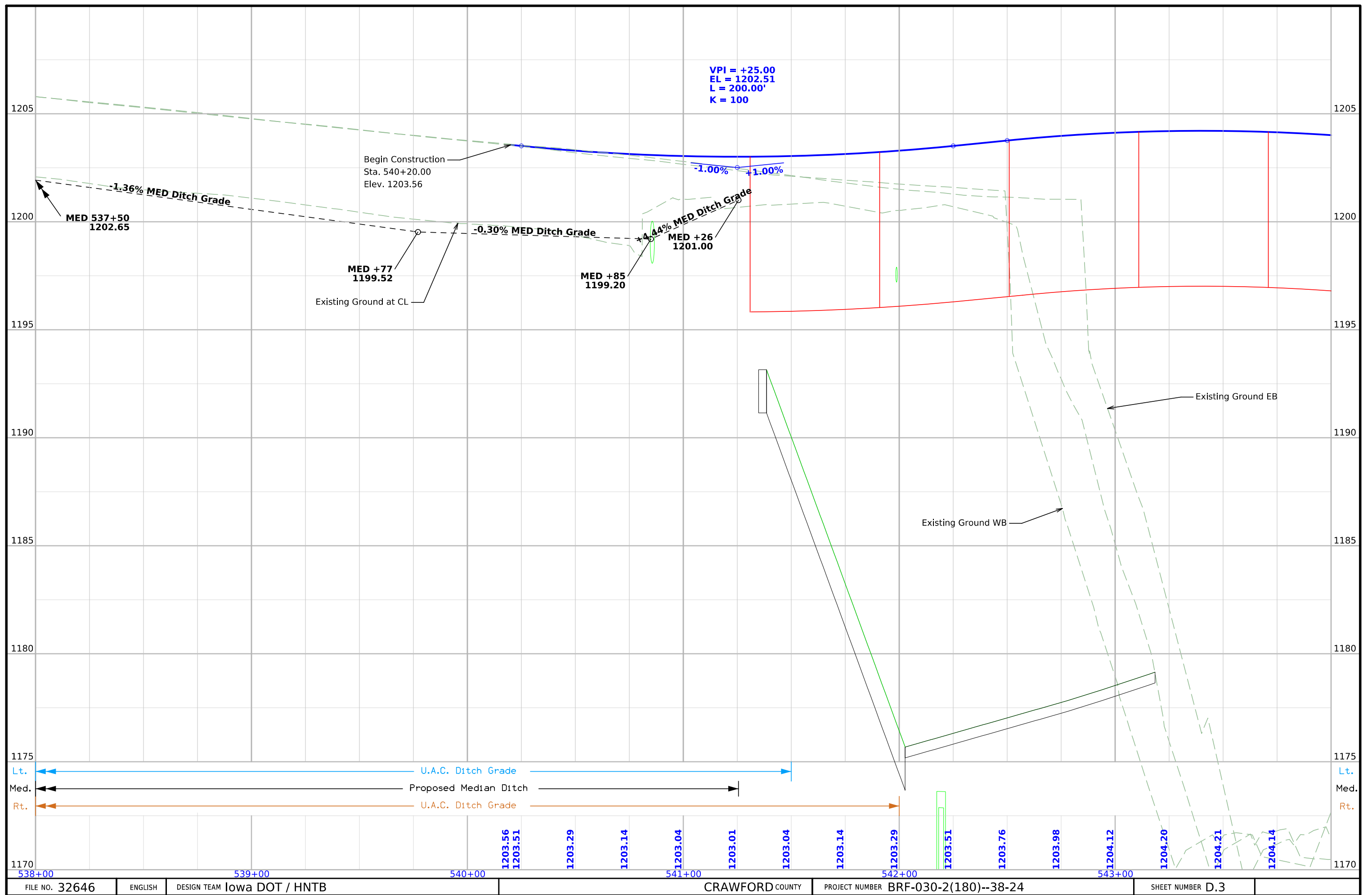
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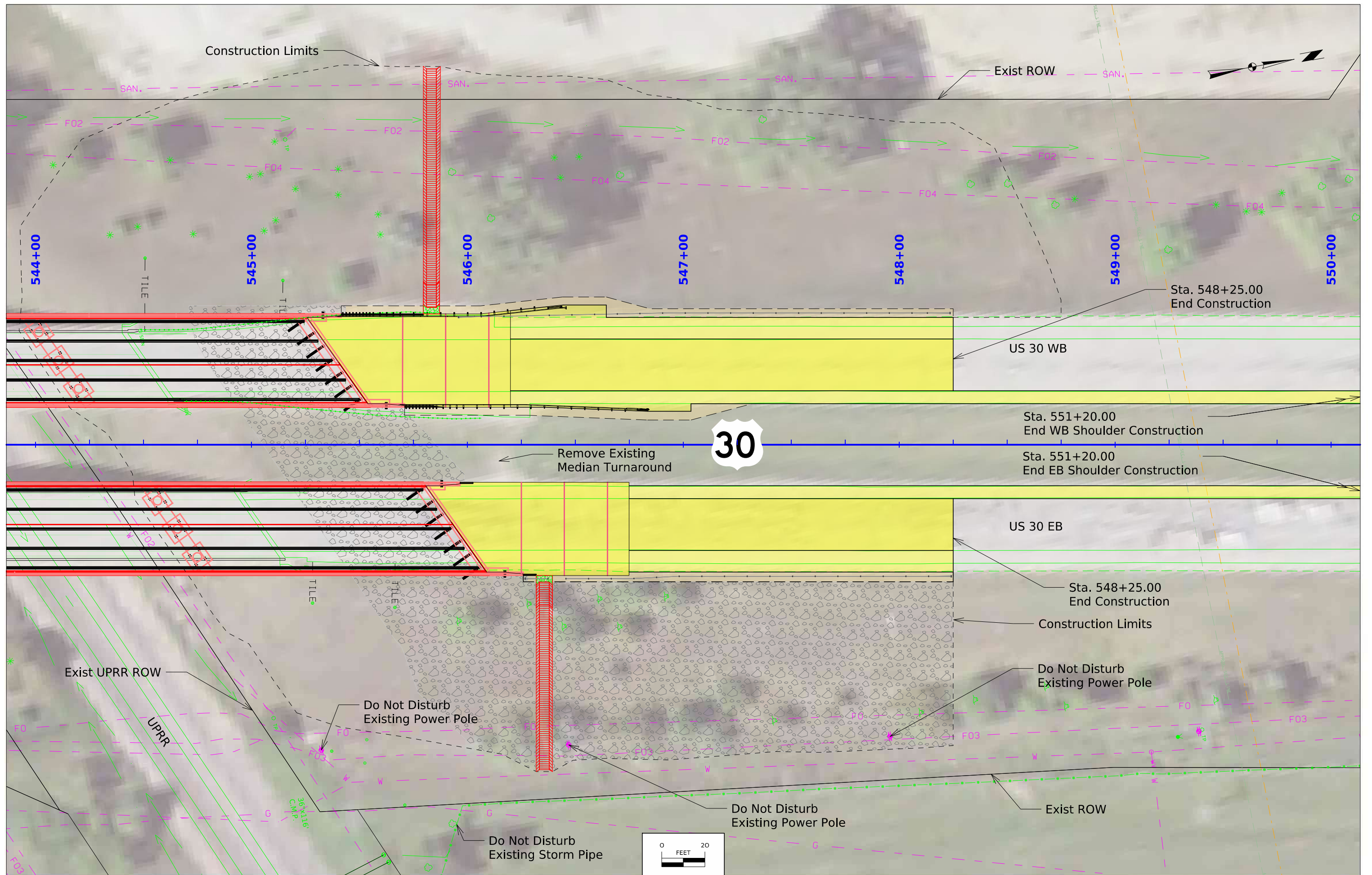
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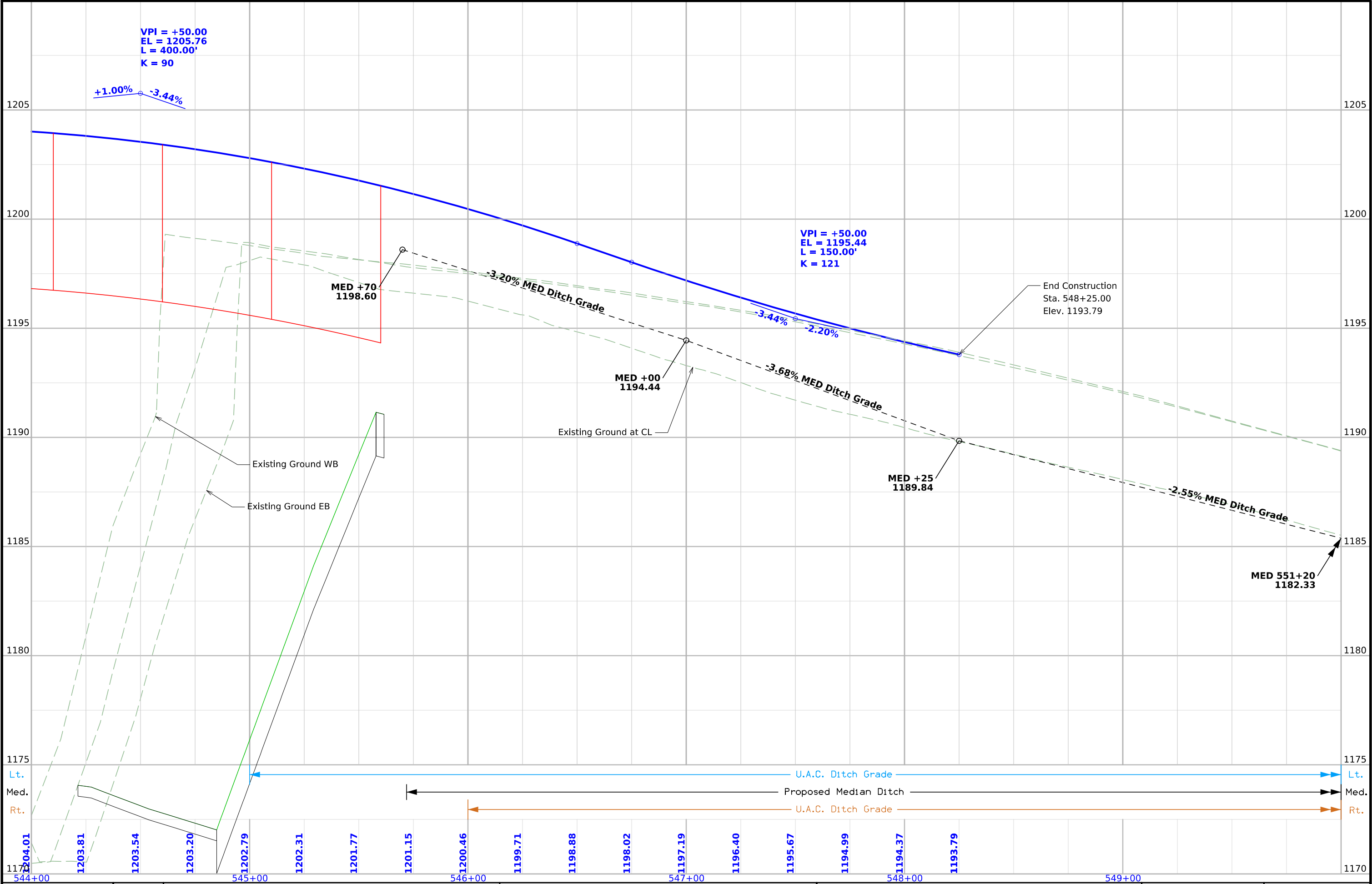
PLAN AND PROFILE
LEGEND AND SYMBOL
INFORMATION SHEET

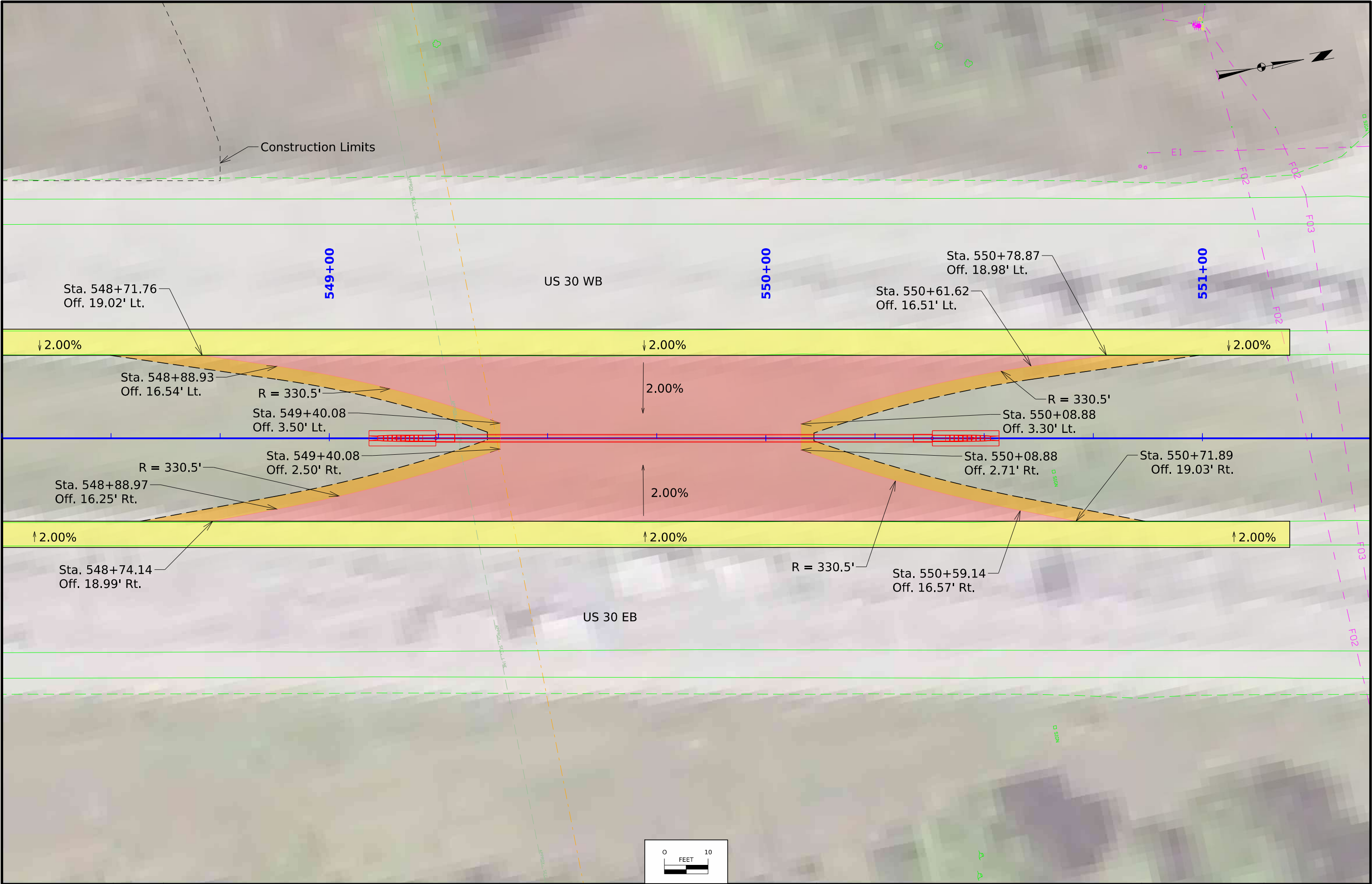
(COVERS SHEET SERIES D & F)

| FILE NO. 32646 | ENGLISH | DESIGN TEAM Iowa DOT / HNTB | CRAWFORD COUNTY | PROJECT NUMBER BRF-030-2(180)--38-24 | SHEET NUMBER D.1 |
| 11:12:06 AM | 9/27/2024 | bcharipar | pw:\\projectwise.dot.int.lan:PWMMain\\Documents\\Projects\\2403001022\\Design\\CADD_Files\\Sheet_Files\\SHT_D_24030180206.dgn | | |









Survey Information

SURVEY INDEX

County: Crawford
PIN: 22-24-030-010
Project Number: BRF-030-2(180)--38-24
Location: UP RR 0.4 mile E of W Jct US 59 in Denison (EB/WB)
Type of Work: 2001-Bridge-Unspecified
Project Directory: 2403001022

PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 ADJUSTMENT)
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 06
(U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u2

Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans No. F-FG 1059(3). Survey stationing was equated to the plan POT at Sta. 527+20.23 and carried back and ahead with/without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

POT Sta. 527+20.23 As-built Plans Project No. F-FG 1059(3)
Survey POT Sta. 527+20.23

POT Sta. 555+00.00 As-built Plans Project No. F-FG 1059(3)
Survey POT Sta. 555+00.00

Survey Personnel

Wes Shimp – Lead Land Surveyor, PLS
Lee Budde – Geospatial Specialist
Katerina Wyatt – Geospatial Technician
Matt Svec – Survey Party Chief
Nate Theis-Barnett – Survey Party Chief
Alexis Avila – Assistant Survey Party Chief

Date(s) of Survey

Begin Date 02/07/2024
End Date 06/30/2024

General Information

This survey is for US 59 Bridge Replacement over the UP railroad in Denison, Iowa. The corridor starts near the intersection of US 59 and Boyer Valley Road and runs southerly to the intersection of US 30. This project is a Full Field DTM survey.

Utility Information

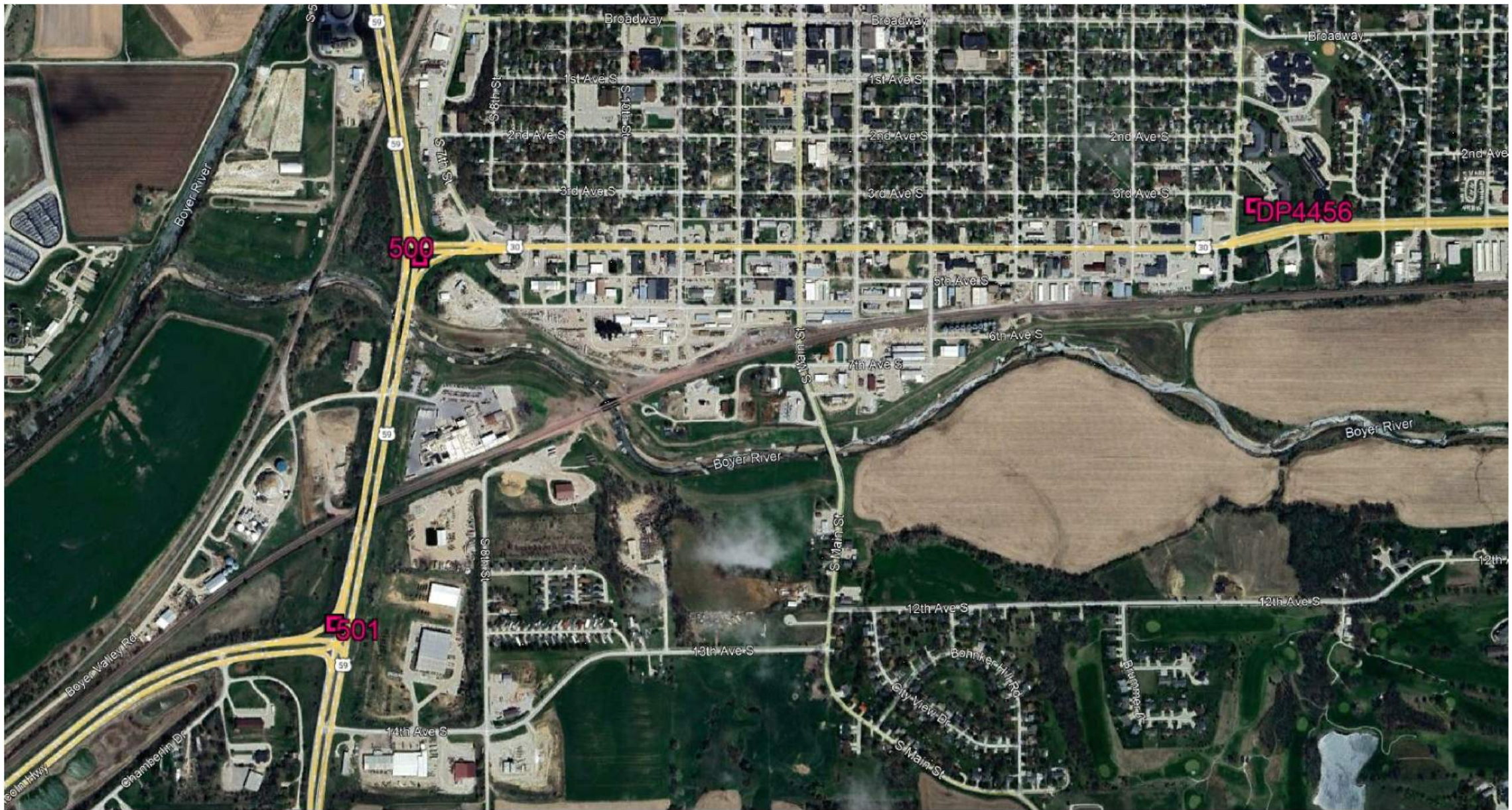
For logging data and other utility details see Utility Survey and Ownership Report in the Utility folder of the PrelimSurvey project directory.

Project Control

Nearby Iowa Real Time Network reference stations were utilized to obtain horizontal and vertical control on primary project control points. Two FENO monuments were set using the following method. Three five-minute observations were taken with a minimum two-hour time span between and used in a weighted average to obtain final coordinate values. A three-minute verification shot was taken on existing point DP4456. For additional details of the control survey, contact the Preliminary Survey department.

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 06 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u2

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 06 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u2

POINT NAME	NORTHING	EASTING	ELEVATION	DESCRIPTION
500	7242312.08	16600081.63	1173.54	Set FENO Monument in median near the northern intersection of Highway 30 and Highway 59
501	7239745.53	16599491.90	1205.60	Set FENO Monument in median near the southern intersection of Highway 30 and Highway 59
DP4456	7242707.04	16605947.61	1183.75	Found existing flange encased rod as described in the NGS Data Sheet

ALIGNMENT COORDINATES																		101-16 01-00-00	
Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
ML030	Point ML030 1	527+20.23	7238927.84	16599407.47															
	Curve ML030							559+11.57	7242065.81	16599988.67	562+39.17	7242387.94	16600048.33	565+60.46	7242711.53	16599997.24			
	Point ML030 2	578+85.97	7244020.83	16599790.52															

SPIRAL OR CIRCULAR CURVE DATA																	101-17 04-19-11
Name	Location	ΔSCS	Horizontal Alignment Data														Remarks
			Spiral Data								Curve Data						
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R	E		
ML030	Curve ML030										12°27'54.96"	327.600	648.890	1910	27.89'		

1R

2

Crawford County, Iowa

STATE OF IOWA

UP RR

15-83-39

TEMPORARY EASEMENT
TO SHAPE

542+43.00
CL 104.00' LT

541+93.41
CL 138.23' LT

544+27.89
CL 159.91' LT

545+55.00
CL 184.00' LT

546+65.00
CL 174.00' LT

547+45.52
CL 159.96' LT

Exist. ROW

30

30

Exist. ROW

Exist. ROW

540+75.00
CL 157.00' RT

540+96.00
CL 157.00' RT

543+51.00
CL 52.00' RT

543+62.49
CL 96.00' RT

1

15-83-39

Double L Holdings LLC

0 50
FEET

Right of Way Design Information

THIS SHEET INCLUDED
FOR INFORMATION ONLY

ROW Team: Larson / Hinrichsen
ROW #: NHSN-030-2(181)-2R-24
Plan Date: 1/10/2025

Color Legend:

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

FILE NO. 32646

ENGLISH

DESIGN TEAM DOT / HNTB

Crawford COUNTY

PROJECT NUMBER BRF-030-2(180)--38-24

SHEET NUMBER H1

8:18:30 AM 1/31/2025 thinric pw:\\NTPwint1.dot.int.lan:P\\Main\\Documents\\Projects\\2403001022\\ROW\\ROW_24030181.dgn

108-23A
08-01-08

TRAFFIC CONTROL PLAN

US 30:
Median crossovers will be utilized to maintain traffic on US 30 at all times in accordance with J Sheets. Traffic will be head to head in Stages 2 and 3. Inside lane closures will be permitted to construct the inside shoulders and median crossovers in Stage 1.

All traffic movements at the US 30 and US 59 junctions north and south of the project area will be maintained. All traffic will be required to stop before entering the work zone due to the low design speed of the median crossovers.

Sideroads:
Boyer Valley Road west of the US 30 intersection will be closed during construction and traffic will be detoured. See Sheet J.15 for detour route.

The entrance on the east of the US 30 and Boyer Valley Road intersection will remain open during construction.

Portable DMS shall be deployed two weeks prior to the start of construction.

Refer to Tab. 108-26A for Staging Notes.

For additional information, refer to Part 6 of the Manual on Uniform Traffic Control Devices, Iowa DOT Standard Road Plan TC Series and the current Standard Specifications.

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

108-26A
08-01-08

STAGING NOTES

Stage 1:

Traffic:
Close the inside lanes for both eastbound and westbound US 30 in accordance with the J Sheets.

Construction:
Construct the inside shoulders and median crossovers as shown in the J Sheets.

Stage 2:

Traffic:
Shift westbound traffic to the eastbound lanes using the median crossovers. Maintain head to head traffic on the existing eastbound bridge in accordance with the J Sheets.
Close Boyer Valley Road west of the US 30 intersection and detour traffic. See Sheet J.15 for detour route.
Maintain access to the entrance on the east side of Boyer Valley Road and US 30 intersection at all times.

Construction:
Remove existing westbound bridge and bridge approach.
Construct new westbound bridge and bridge approach.
Remove and replace the existing guardrail on the north side of the westbound bridge.
Construct new westbound pavement and shoulders.
Construct new high tension cable guardrail on the outside north end of the westbound bridge.
Construct revetment at both abutments of the westbound bridge and slope protection on the sideslopes.

Stage 3:

Traffic:
Shift eastbound traffic to the westbound lanes using the median crossovers. Maintain head to head traffic on the new westbound bridge in accordance with the J Sheets.
Close Boyer Valley Road west of the US 30 intersection and detour traffic. See Sheet J.15 for detour route.
Maintain access to the entrance on the east side of Boyer Valley Road and US 30 intersection at all times.

Construction:
Remove existing eastbound bridge and bridge approach.
Construct new eastbound bridge and bridge approach.
Remove and replace the existing guardrail on the south side of the eastbound bridge.
Construct new eastbound pavement and shoulders.
Construct new high tension cable guardrail on the outside eastbound shoulder on both sides of the bridge.
Construct revetment at both abutments of the eastbound bridge and slope protection on the sideslopes.

Final:

Traffic: Open all roads to all traffic

Restore north median area utilizing Standard Road Plan TC-402.
Set up pavement marking operations utilizing Standard Road Plan TC-433.
Set up rumble strip operations in accordance with Standard Road Plan TC-432.

Construction:
Regrade median in the areas of the temporary crossover. Sawcut the pavement at the edge of inside shoulder six feet from the edge of lane, remove the north temporary crossover pavement and regrade to original condition. Maintain the south crossover pavement as a new median turnaround following project completion.
Complete final pavement marking and mill rumble strips.

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

FILE NO. 32646

ENGLISH

DESIGN TEAM Iowa DOT / HNTB

CRAWFORD COUNTY

PROJECT NUMBER BRF-030-2(180)--38-24

SHEET NUMBER J.1

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

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

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

PLAN VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS			
●	Channelizing Device		Crash Cushion (Temp or Perm)
✕	Drum		Traffic Signal
■	Temporary Lane Separator		Flagger
◆	Tubular Marker		Temporary Floodlighting
♦	Channelizer Marker		Traffic Sign
△	Concrete Barrier Marker		Type III Barricade
⚡	Delineator		Type A Warning Light
—	Temporary Barrier Rail		Direction of Traffic
	Pavement Removal		Safety Closure
	Sand Barrel Layout		Lane Identification
	Temporary Rumble Strips		

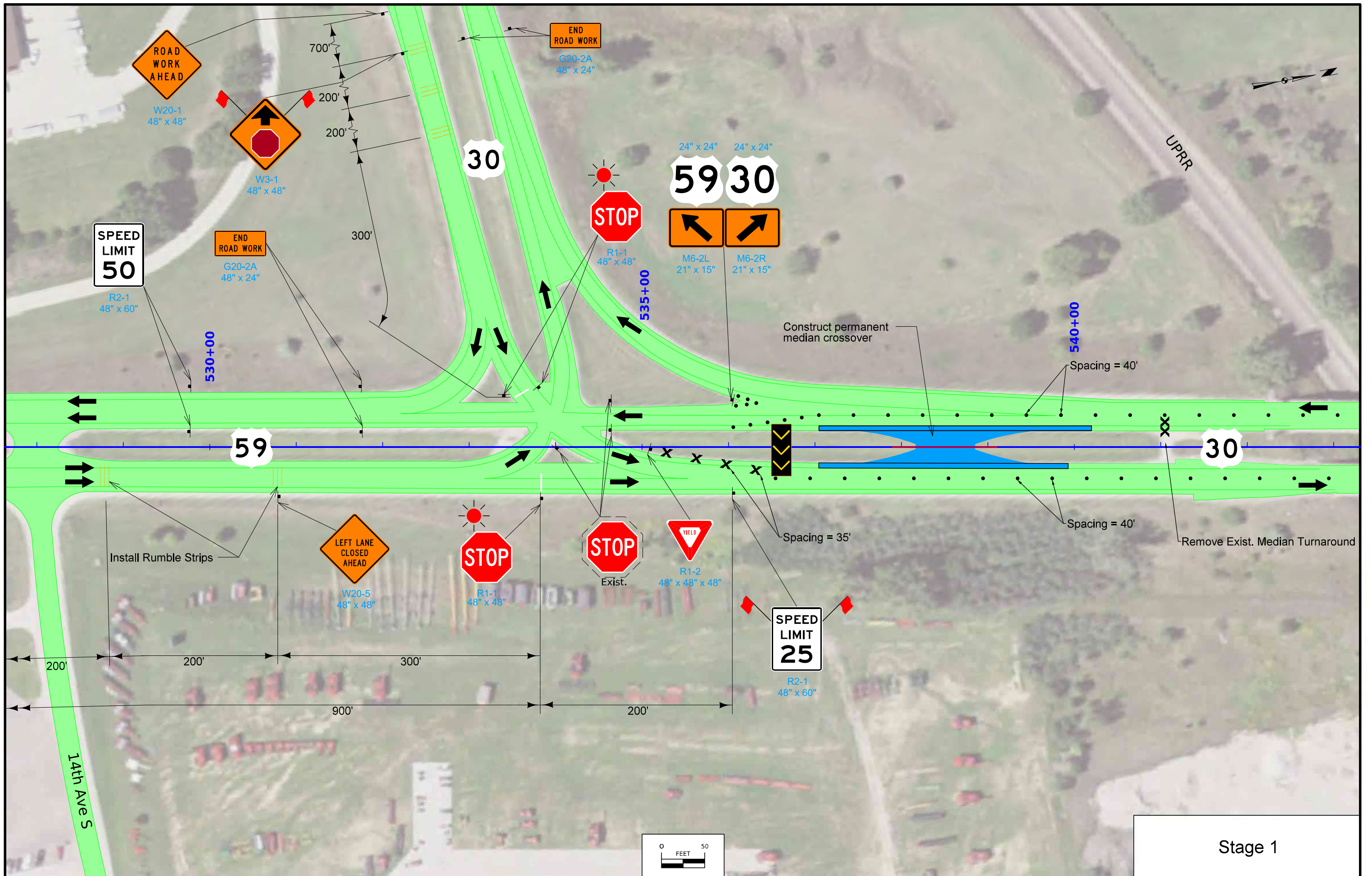
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

TRAFFIC CONTROL
AND
STAGING
LEGEND AND SYMBOL
INFORMATION SHEET

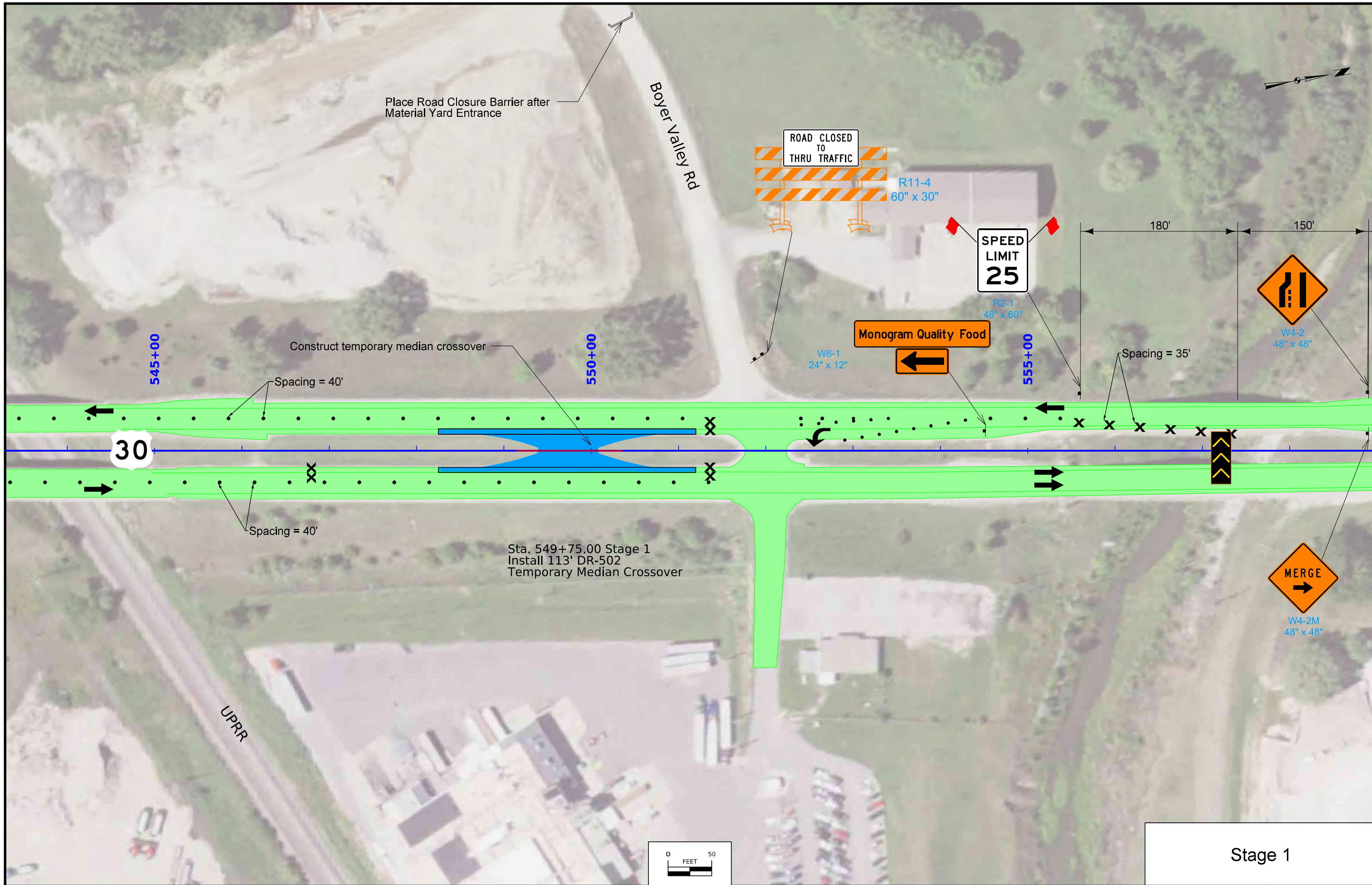
(COVERS SHEET SERIES J)

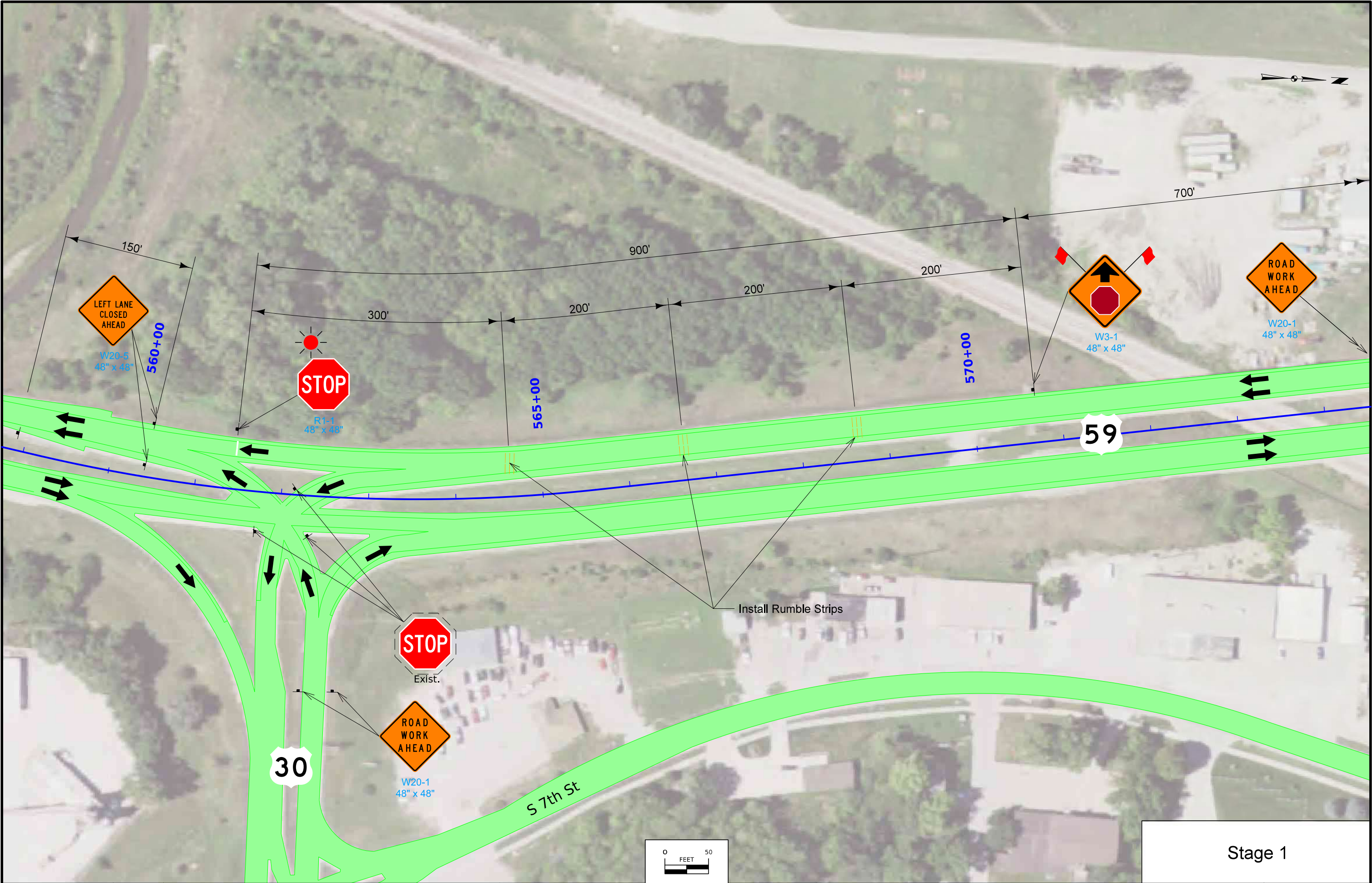


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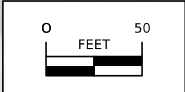


Stage 1

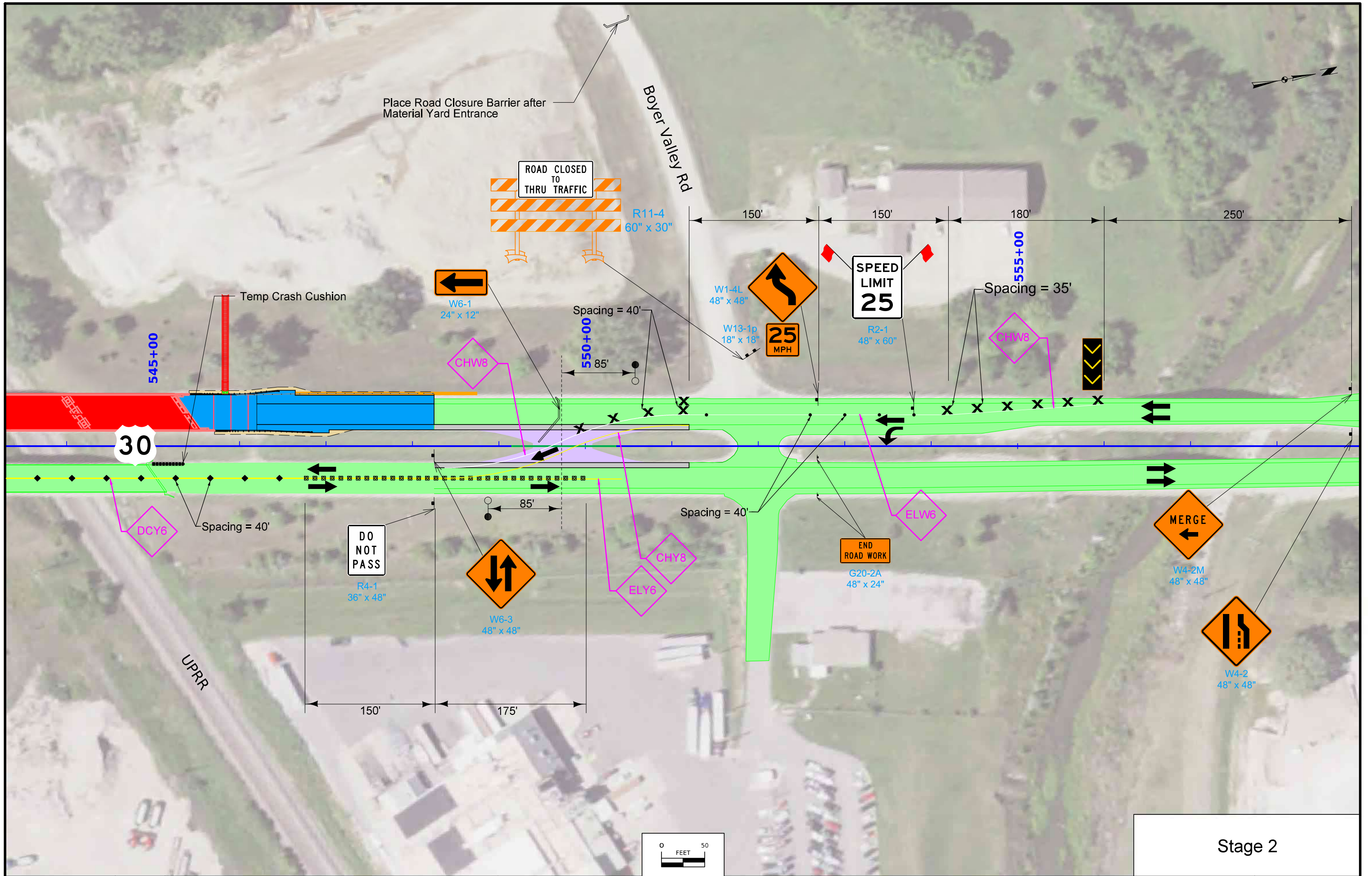




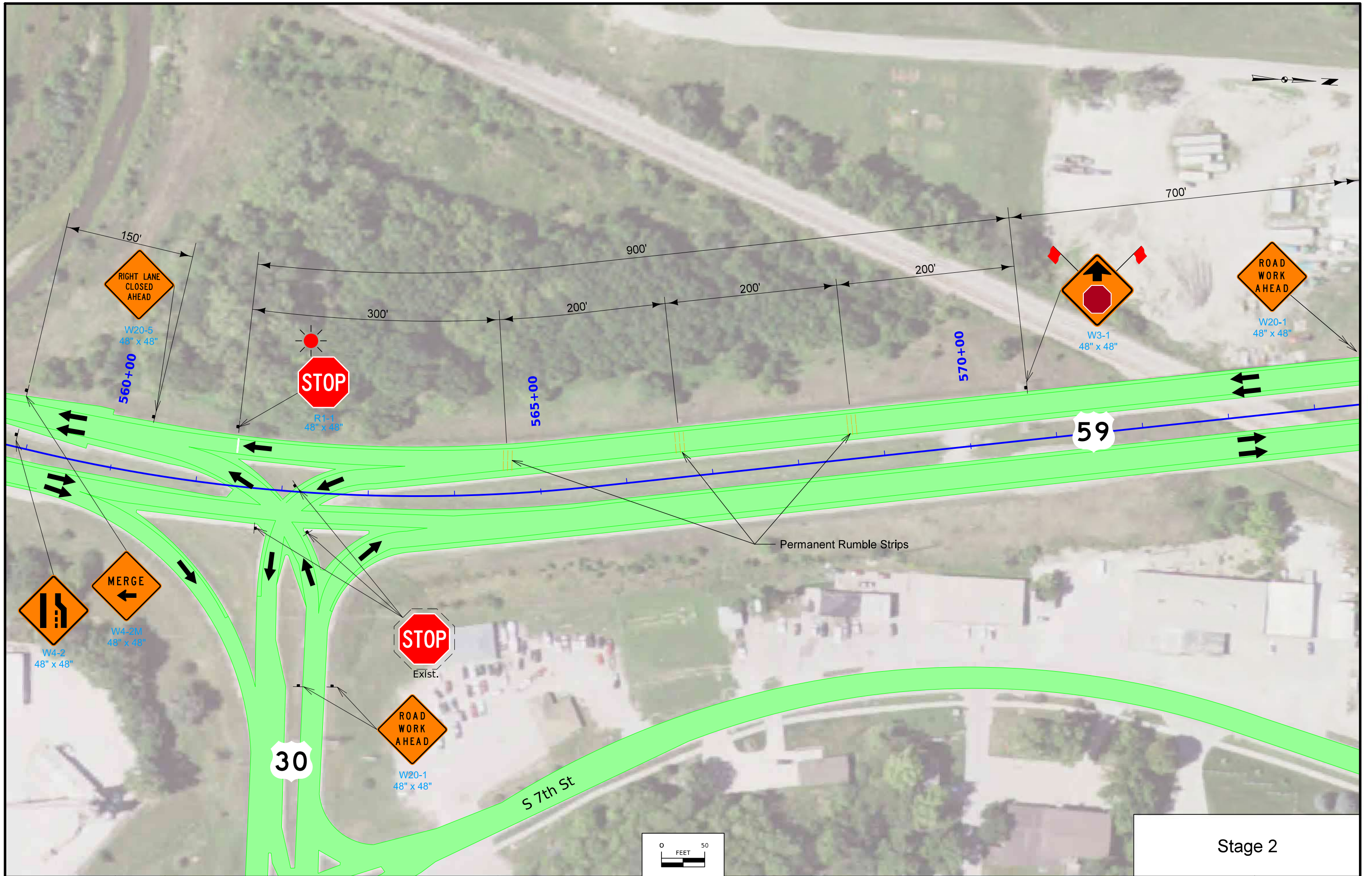




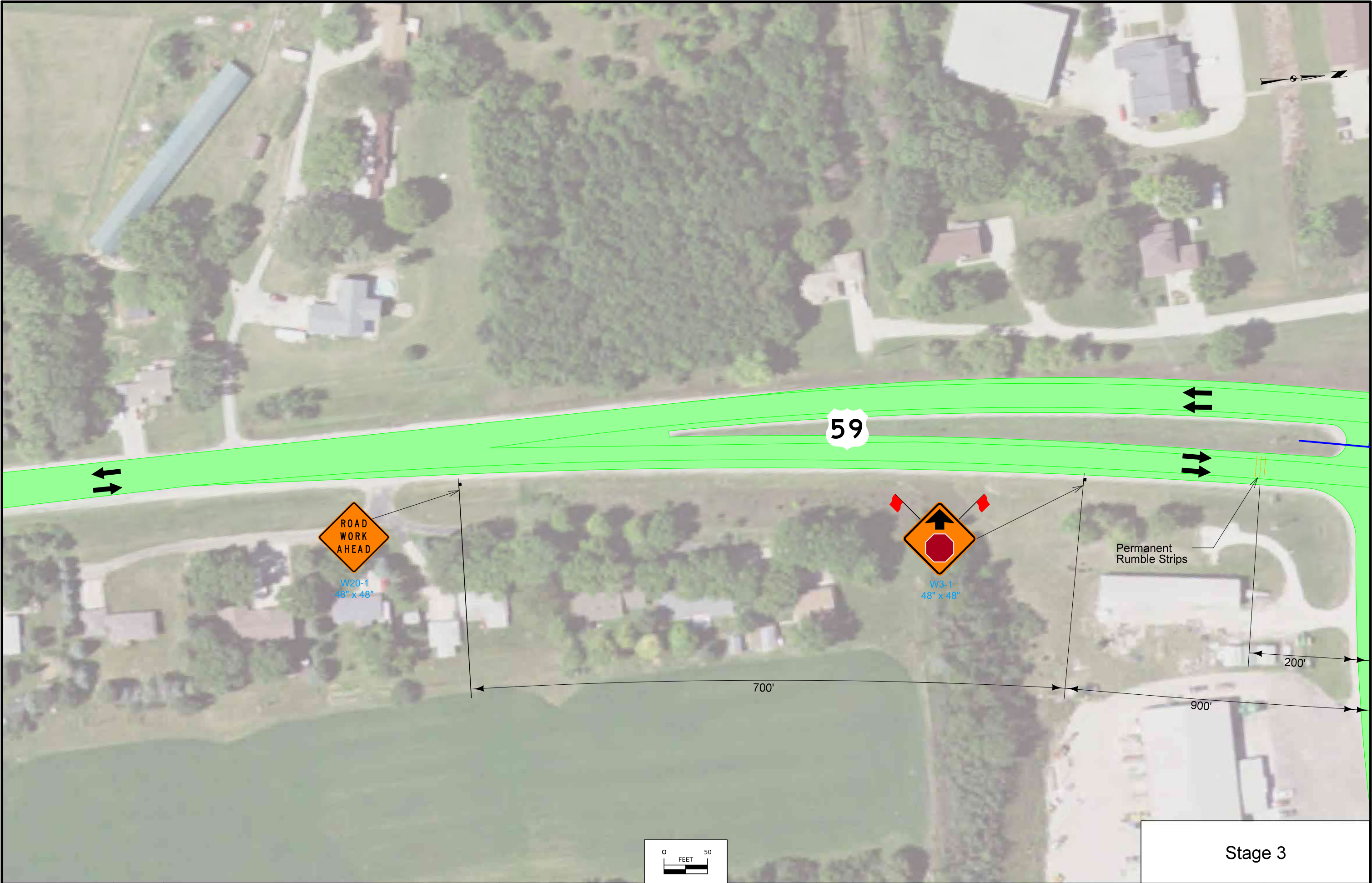
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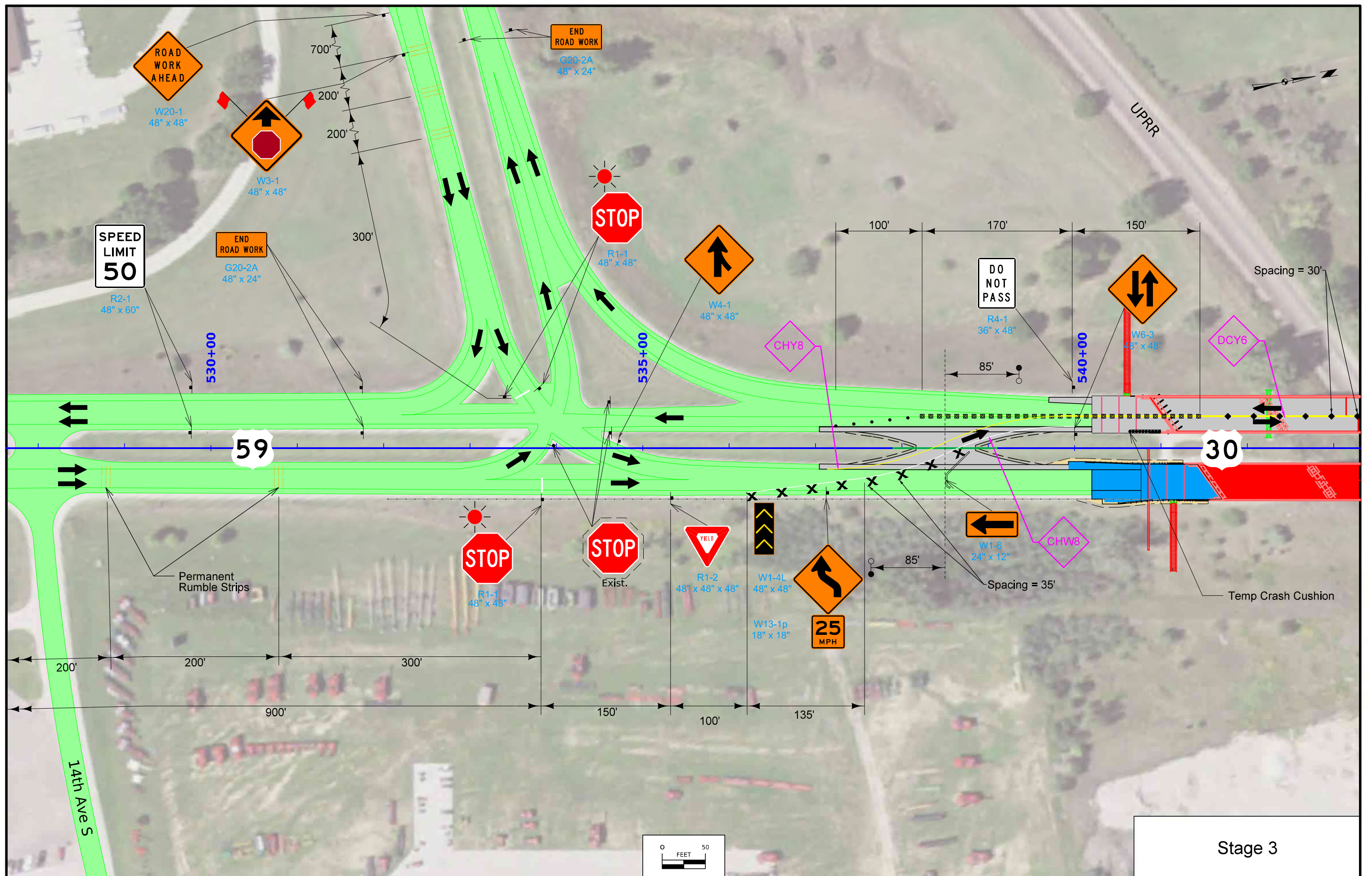


Stage 2



Stage 2





Stage 3

FILE NO. 32646

ENGLISH

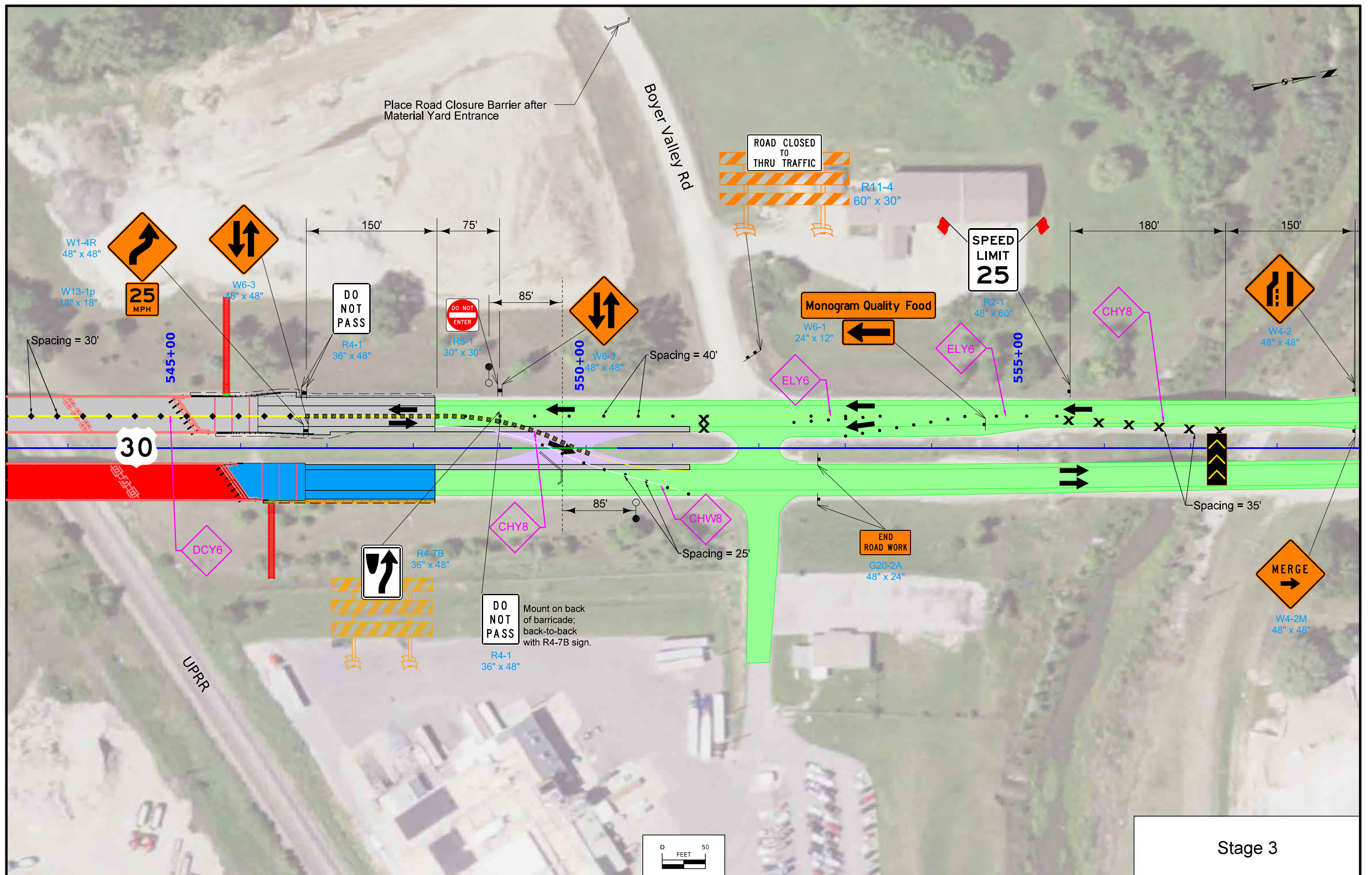
DESIGN TEAM Iowa DOT / HNTB

CRAWFORD COUNTY

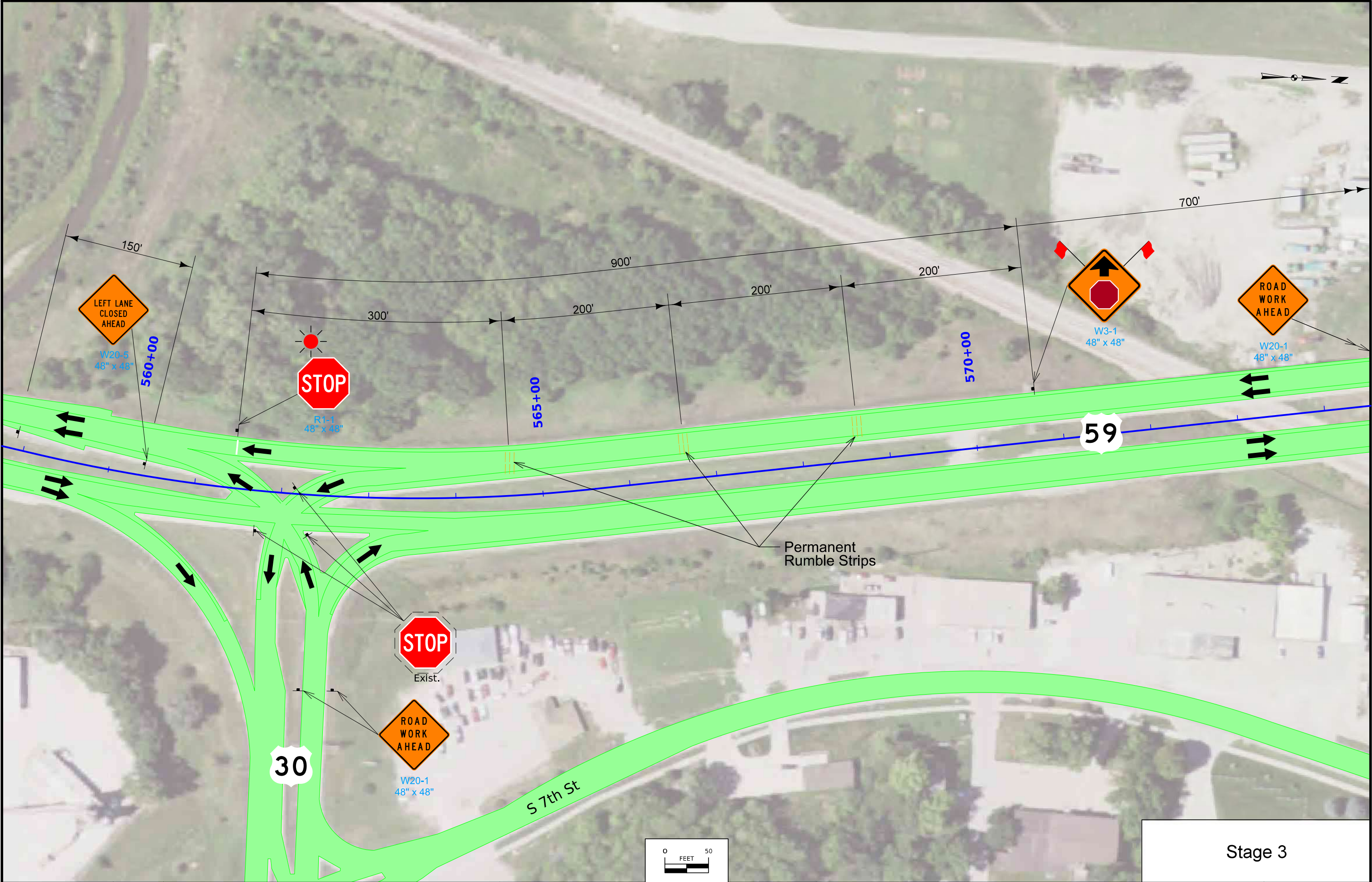
PROJECT NUMBER BRF-030-2(180)--38-24

SHEET NUMBER J.12

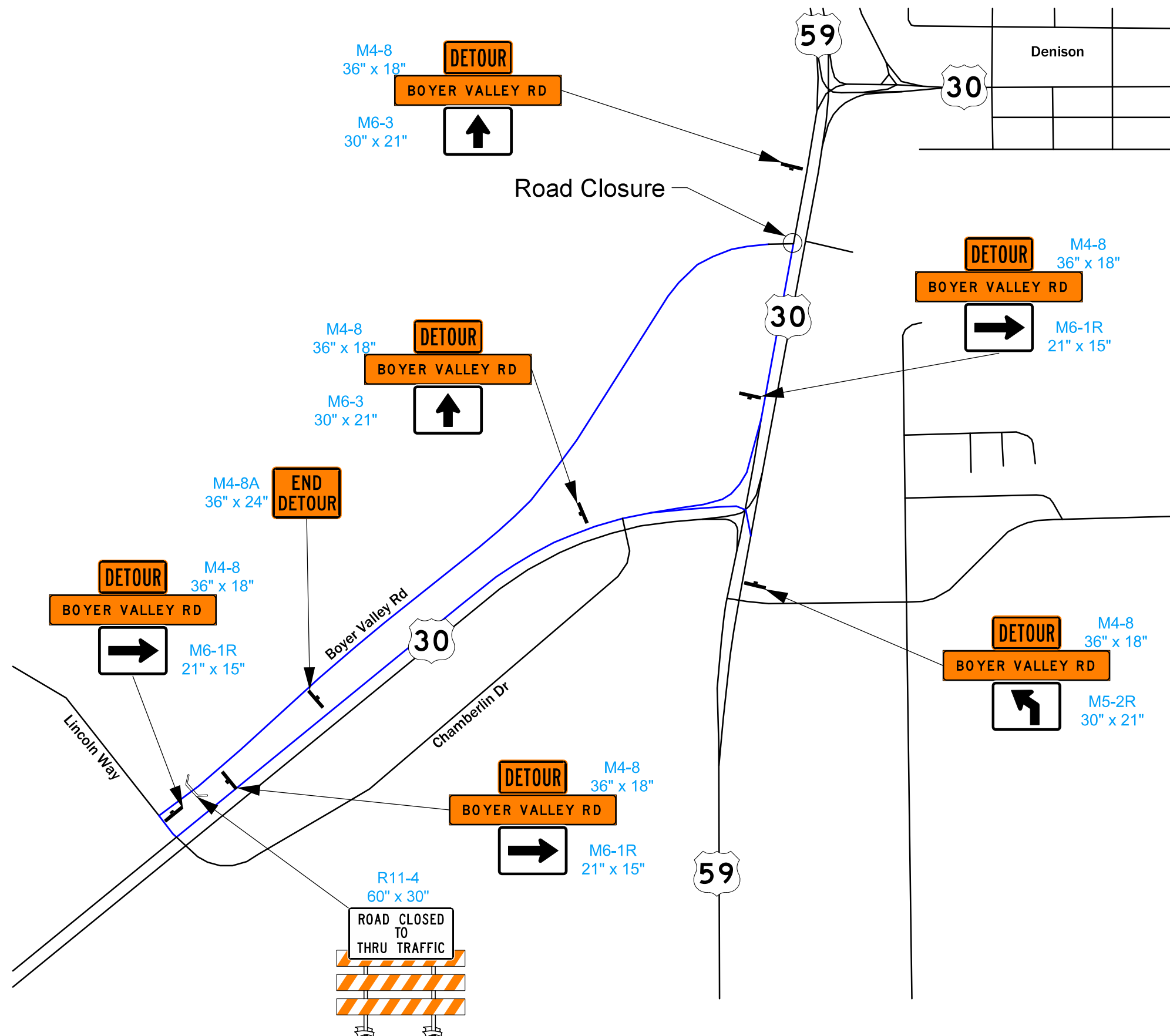
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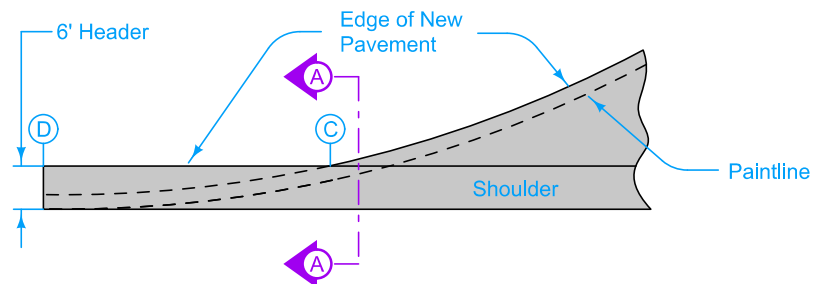
Stage 3



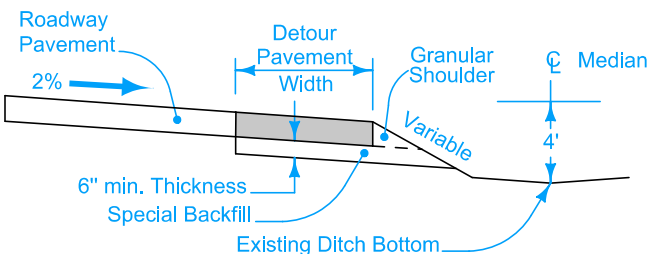
Stage 3



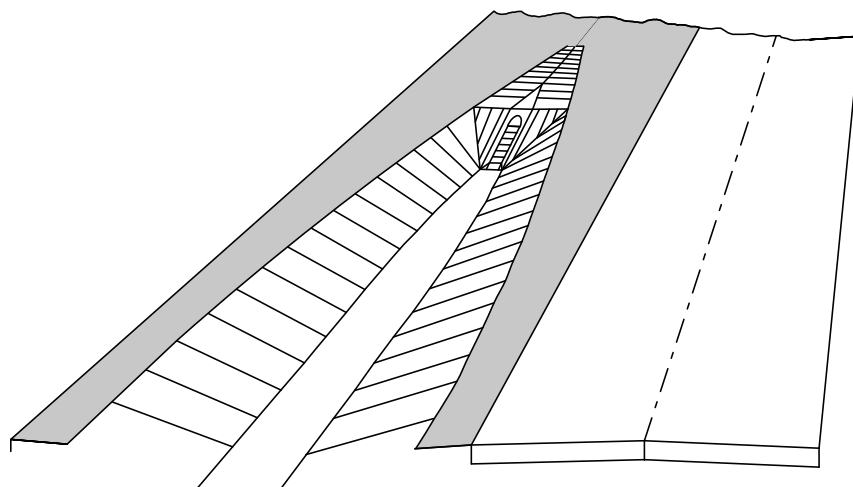
DETOUR
BOYER VALLEY ROAD
IF NEEDED



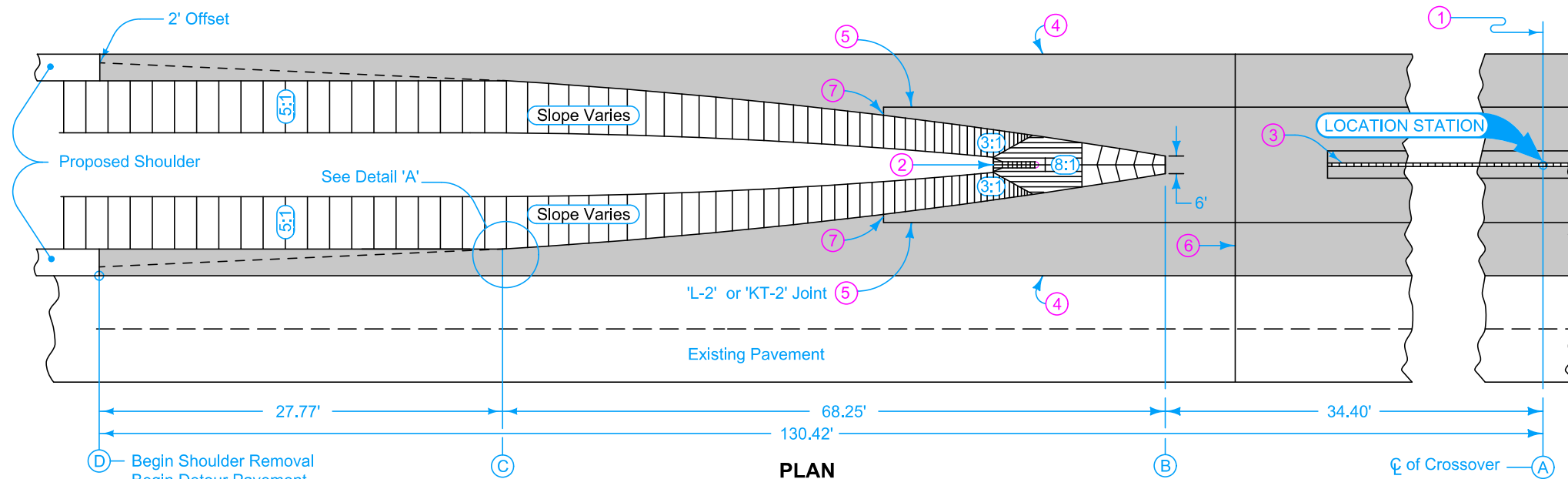
DETAIL 'A'



SECTION A-A



PERSPECTIVE VIEW
DITCH SLOPE AND BEVELED PIPE



PLAN

TABLE OF OFFSETS AND DROPS (PAVED SHOULDERS)																
Distance from Location Station (Feet)	130.42	120	110	102.65	100	90	80	70	60	50	40	34.40	30	20	10	0
Offset from inside edge of Pavement (Feet)	6.00	6.00	6.00	6.00	6.38	7.82	9.33	11.21	13.52	16.28	19.42	21.50	24.51	24.54	24.56	24.59
Cross-Slope from inside edge of Pavement	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Drop from inside edge of Pavement (Feet)	0.12	0.12	0.12	0.12	0.13	0.16	0.19	0.22	0.27	0.33	0.39	0.43	0.49	0.49	0.49	0.49
POINT LOCATION	(D)			(C)								(B)				(A)

Detour Pavement options: 9" PCC or 12" HMA

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

- Median crossover is symmetrical about centerline.
- Beveled pipe and guard. See [DR-212](#).
- Slotted drain for median crossover. See [DR-502](#).
- 'KT-2' or 'L-2' joint if mainline pavement is new construction. Bend bars out.
'BT-3' joint if mainline pavement is existing.
'B' joint if Detour Pavement is HMA.
- For PCC Detour Pavement, 'KT-2' or 'L-2' spaced at one-quarter median width.
- For PCC Detour Pavement, match existing roadway joints. 'CD' joints are required.
- For PCC Detour Pavement, 2 foot 'C' Joint.

DESIGN QUANTITY TABLE		
Detour Pavement Sq. Yds.	Special Backfill Tons	Granular Shoulder Tons
824	320	35



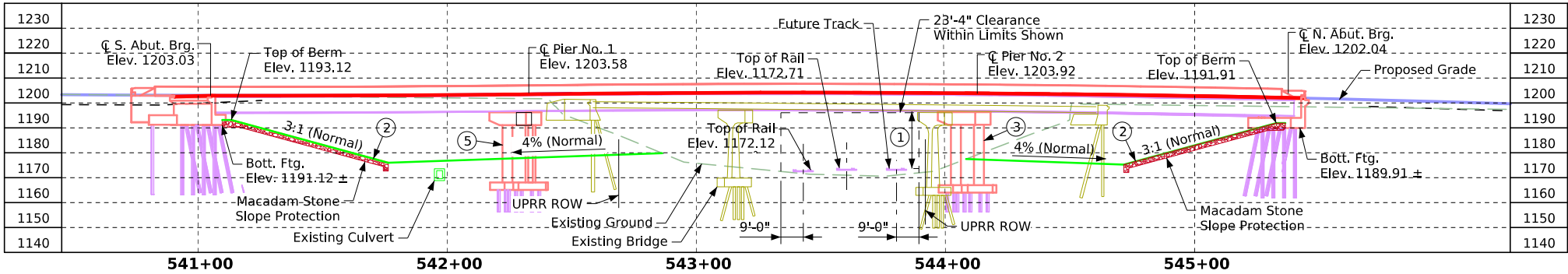
Possible Contract Items:
Granular Shoulders, Type A
Detour Pavement
Embankment In Place
Excavation, Class 10, Roadway and Borrow
Excavation, Class 13, Roadway and Borrow
Removal of Pavement
Special Backfill

Possible Tabulation:
[112-8](#)

MODIFIED STANDARD ROAD PLAN	REVISION	
	5	04-21-15
	PV-500	
	SHEET 1 of 1	
MODIFICATIONS: Updated crossover to meet 25 mph standards.		
APPROVED BY DESIGN METHODS ENGINEER		
MEDIAN CROSSOVER (50' MEDIAN)		

Control Point: N 7239745.53, E 16599491.90; Set FENO Monument in median near the southern intersection of Highway 30 and Highway 59. Elev. 1205.60

- ① Minimum vertical clearance = 24.11'
- ② Grading Surface
- ③ Frame Pier
- ④ Macadam Stone Slope protection (Embedded)
- ⑤ Frame Pier or Drilled Shaft (See design notes)



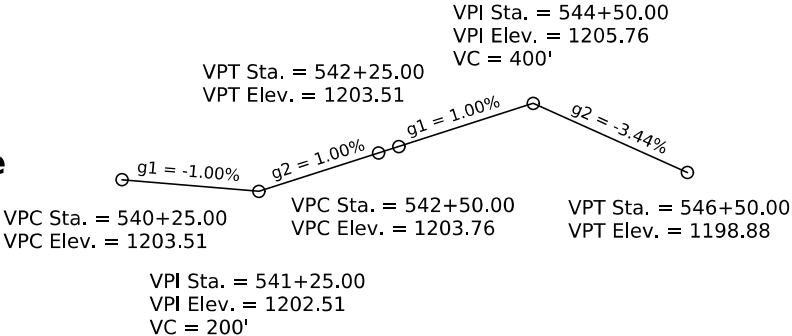
Longitudinal Section Along WB US 30

Note:
Top of bridge deck at centerline roadway is 0.21' above the profile grade to account for deck cross slope and parabolic crown.

- Design Notes
1. TSS TL-5 Bridge Railing Proposed
2. Frame Type Pier Proposed assumed 4'-0" column width, pier type may change in final design and will require a review of heavy construction requirements.
3. Substantial shoring is required to build the buried pile cap. During final design, consider replacing piles, pile cap and columns with drilled shafts installed from EL 1190 ±. Final grading below Pier No. 1 and the south approach would occur after traffic is shifted to the new WB bridge, thereby minimizing the need for shoring.
4. Wing extensions are 11'-0"
5. Note possible pile conflicts at Pier 2. Review need for pre-drilling of proposed pile.
6. This design is for the replacement of the existing 210'-0" x 30'-0" continuous steel I-beam bridge, Crawford Design No. 660, FHWA No. 021340, Maint. No. 2454.2L030

Minimum Vertical Clearance

Overhead Station = 543+94.95, Offset 20.92' Lt.
Overhead Elevation = 1203.96
Depth of Superstructure = 7.2 ft.
Deck Thickness = 8.5 in.
Estimated Haunch = 2 in.
Beam Depth = 6.325 ft.
Underpass Station = 10+06.29, 29.0' Rt.
Top of Rail Elevation = 1172.65
Minimum Vertical Clearance = 24.11'



Proposed Profile Grade US-30 WB

Utilities Note:

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

General Utility Symbols:

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

Location

WB US-30 over UPRR
T-83N R-39W
Section 15
Denison Township
Crawford County
FHWA No. 021341
Latitude 42.007644°
Longitude -95.366600°

PRELIMINARY

Design For 35°11' Skew (R.A.)

432'-0" x 40'-0" Continuous Welded Plate Girder Bridge

126'-0" End Spans180'-0" Interior Span

Situation Plan

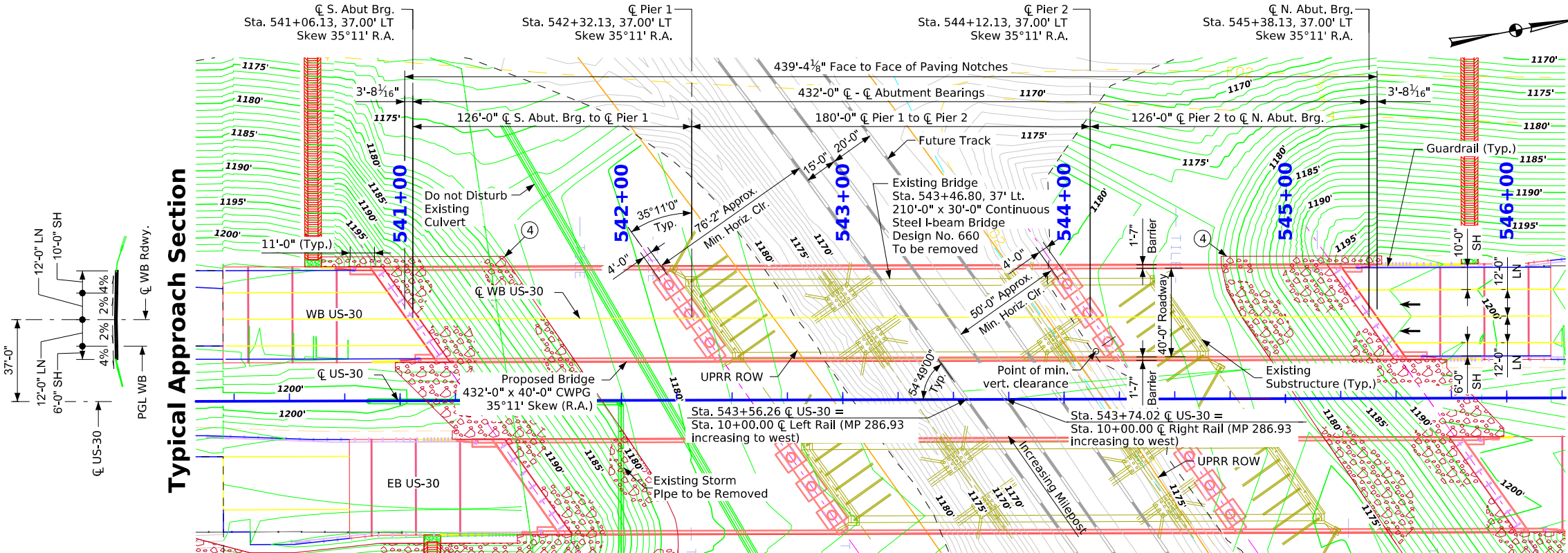
STA. 543+22.13 (US 30 WB)Turn-in Date: Sept, 2024

Crawford County

IOWA DEPARTMENT OF TRANSPORTATION

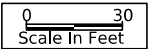
Design No. 0229Design Sheet No. 1 of 5FHWA No. 021341

Typical Approach Section

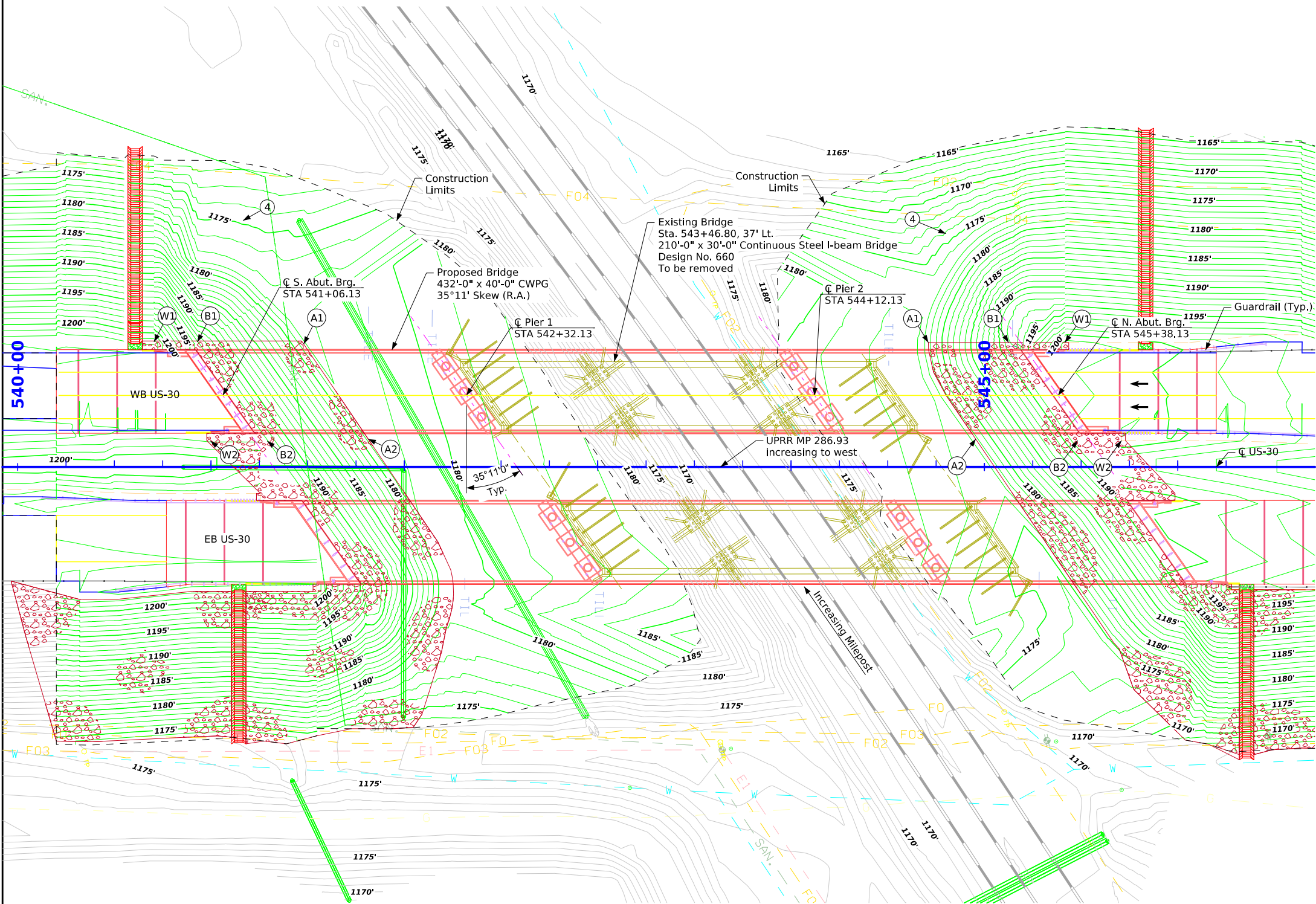


Situation Plan

Typical Bridge Section



Control Point: N 7239745.53, E 16599491.90; Set FENO Monument in median near the southern intersection of Highway 30 and Highway 59. Elev. 1205.60



Site Plan

④ Macadam Stone Slope Protection (Embedded)

Berm Slope Location Table						
Points	South Abutment			North Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	541+47.92	63.58' Lt.	1178.35	544+71.04	63.58' Lt.	1177.63
A2	541+81.33	14.42' Lt.	1178.71	544+93.56	14.42' Lt.	1177.70
B1	540+93.81	63.58' Lt.	1193.12	545+12.97	63.58' Lt.	1191.91
B2	541+28.47	14.42' Lt.	1193.12	545+47.63	14.42' Lt.	1191.91
W1	540+70.56	63.58' Lt.	1202.61	545+41.62	63.58' Lt.	1201.38
W2	540+99.82	14.42' Lt.	1202.66	545+70.93	14.42' Lt.	1200.86

Berm slope elevations reflect the grading surface.



- Design Notes
1. TSS TL-5 Bridge Railing Proposed
 2. Frame Type Pier Proposed assumed 4'-0" column width, pier type may change in final design
 3. Substantial shoring is required to build the buried pile cap. During final design, consider replacing piles, pile cap and columns with drilled shafts installed from EL 1190 ±. Final grading below Pier No. 1 and the south approach would occur after traffic is shifted to the new WB bridge, thereby minimizing the need for shoring.

PRELIMINARY

Design For 35°11' Skew (R.A.)

432'-0" x 40'-0" Continuous Welded Plate Girder Bridge

126'-0" End Spans180'-0" Interior Span

Situation Plan-Site

STA. 543+22.13 (US 30 WB)Turn-in Date: Sept, 2024

Crawford County

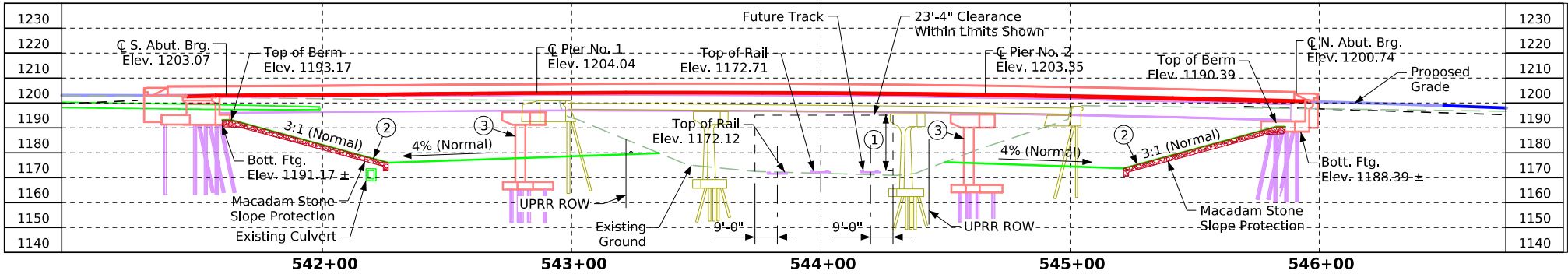
IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0229Design Sheet No. 2 of 5FHWA No. 021341



Control Point: N 7239745.53, E 16599491.90; Set FENO Monument in median near the southern intersection of Highway 30 and Highway 59. Elev. 1205.60

- ① Minimum vertical clearance = 23.41'
- ② Grading Surface
- ③ Frame Pier
- ④ Macadam Stone Slope protection (Embedded)



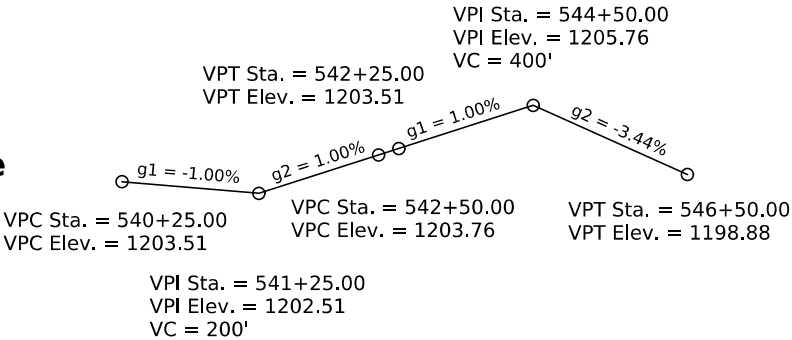
Longitudinal Section Along CL EB US 30

Note:
Top of bridge deck at centerline roadway is 0.21' above the profile grade to account for deck cross slope and parabolic crown.

- Design Notes
1. TSS TL-5 Bridge Railing Proposed
2. Frame Type Pier Proposed assumed 4'-0" column width, pier type may change in final design and will require a review of heavy construction requirements.
3. Wing extensions are 11'-0"
4. Note possible pile conflicts at Pier 2. Review need for pre-drilling of proposed pile.
5. This design is for the replacement of the existing 210'-0" x 30'-0" continuous steel I-beam bridge, Crawford Design No. 660, FHWA No. 021330, Maint. No. 2454.2L030

Minimum Vertical Clearance

Overhead Station = 544+49.21, Offset 57.08' Rt.
Overhead Elevation = 1203.39
Depth of Superstructure = 7.2 ft.
Deck Thickness = 8.5 in.
Estimated Haunch = 2 in.
Beam Depth = 6.325 ft.
Underpass Station = 9+10.55, 29.0' Rt.
Top of Rail Elevation = 1172.78
Minimum Vertical Clearance = 23.41'



Proposed Profile Grade US-30 WB

Utilities Note:

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

General Utility Symbols:

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

Location

EB US-30 over UPRR
T-83N R-39W
Section 15
Denison Township
Crawford County
FHWA No. 021331
Latitude 42.007027°
Longitude -95.366470°

PRELIMINARY

Design For 35°11' Skew (R.A.)
432'-0" x 40'-0" Continuous Welded Plate Girder Bridge
126'-0" End Spans 180'-0" Interior Span

Situation Plan

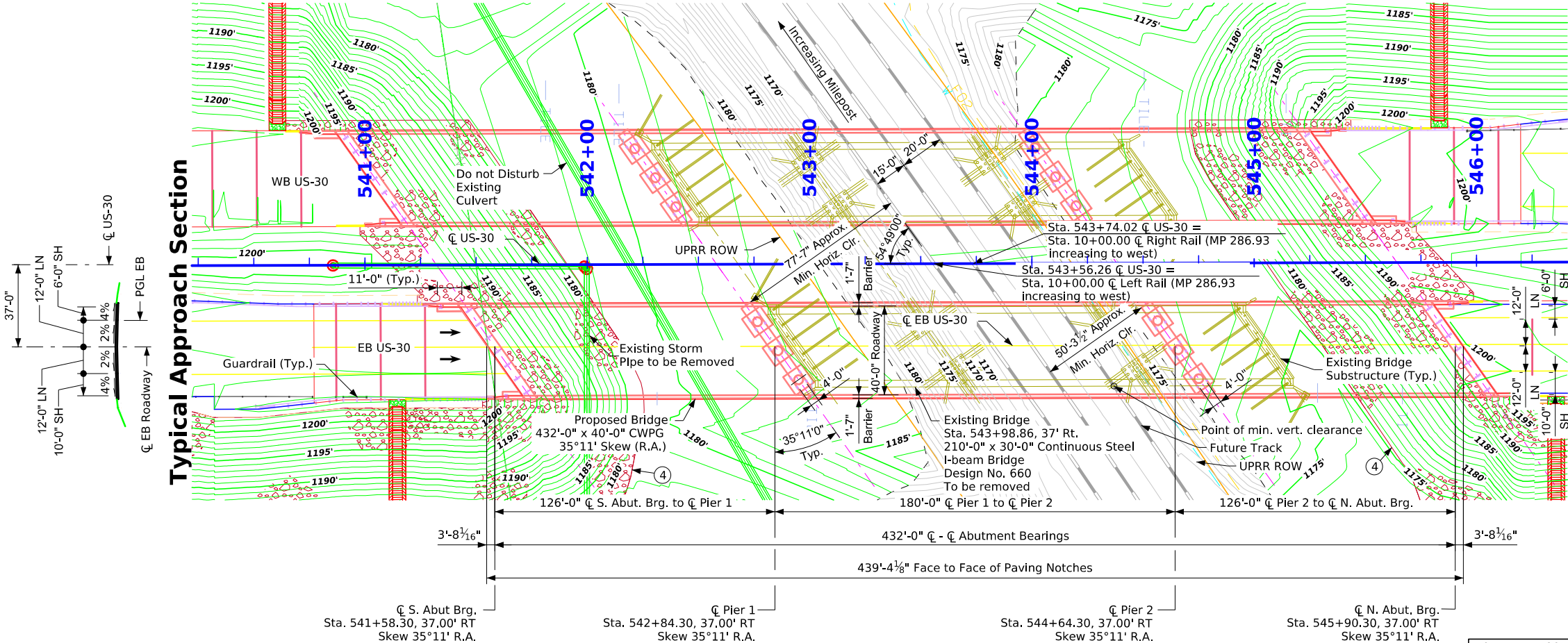
STA. 543+74.30 (US 30 EB) Turn-in Date: Sept, 2024

Crawford County

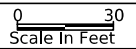
IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0129 Design Sheet No. 3 of 5 FHWA No. 021331

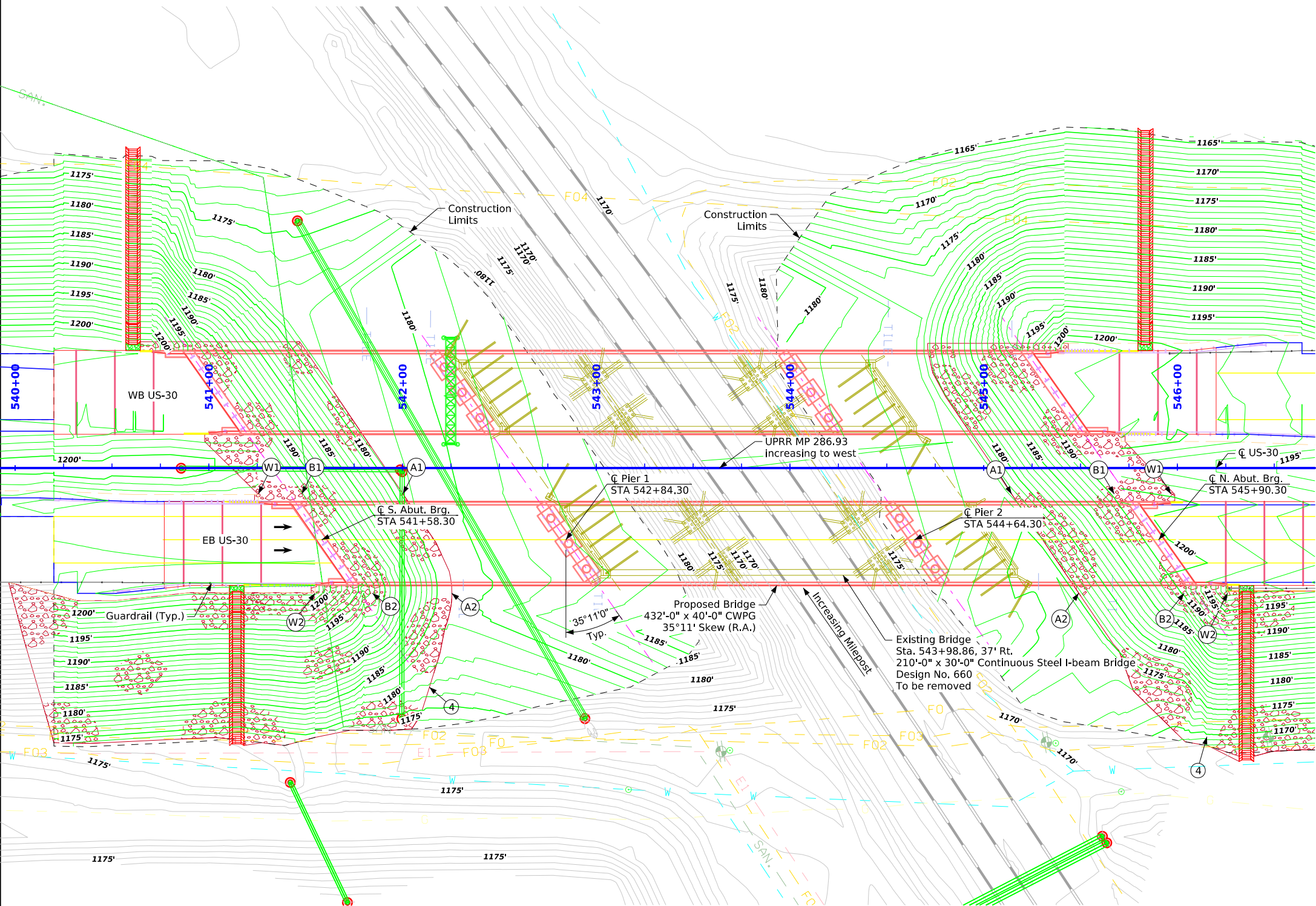
Typical Approach Section



Situation Plan



Control Point: N 7239745.53, E 16599491.90; Set FENO Monument in median near the southern intersection of Highway 30 and Highway 59. Elev. 1205.60



Site Plan

④ Macadam Stone Slope Protection (Embedded)

Berm Slope Location Table						
Points	South Abutment			North Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	542+01.37	14.42' Rt.	1178.81	545+11.55	14.42' Rt.	1176.39
A2	542+24.75	63.58' Rt.	1179.13	545+44.88	63.58' Rt.	1174.63
B1	541+48.80	14.42' Rt.	1193.17	545+67.96	14.42' Rt.	1190.39
B2	541+83.46	63.58' Rt.	1193.17	546+02.62	63.58' Rt.	1190.39
W1	541+25.55	14.42' Rt.	1202.62	545+96.61	14.42' Rt.	1200.14
W2	541+54.81	63.58' Rt.	1202.49	546+25.86	63.58' Rt.	1199.13

Berm slope elevations reflect the grading surface.



- Design Notes
1. TSS TL-5 Bridge Railing Proposed
 2. Frame Type Pier Proposed assumed 4'-0" column width, pier type may change in final design.

PRELIMINARY

Design For 35°11' Skew (R.A.)

432'-0" x 40'-0" Continuous Welded Plate Girder Bridge

126'-0" End Spans180'-0" Interior Span

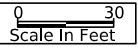
Situation Plan-Site

STA. 543+74.30 (US 30 EB)Turn-in Date: Sept, 2024

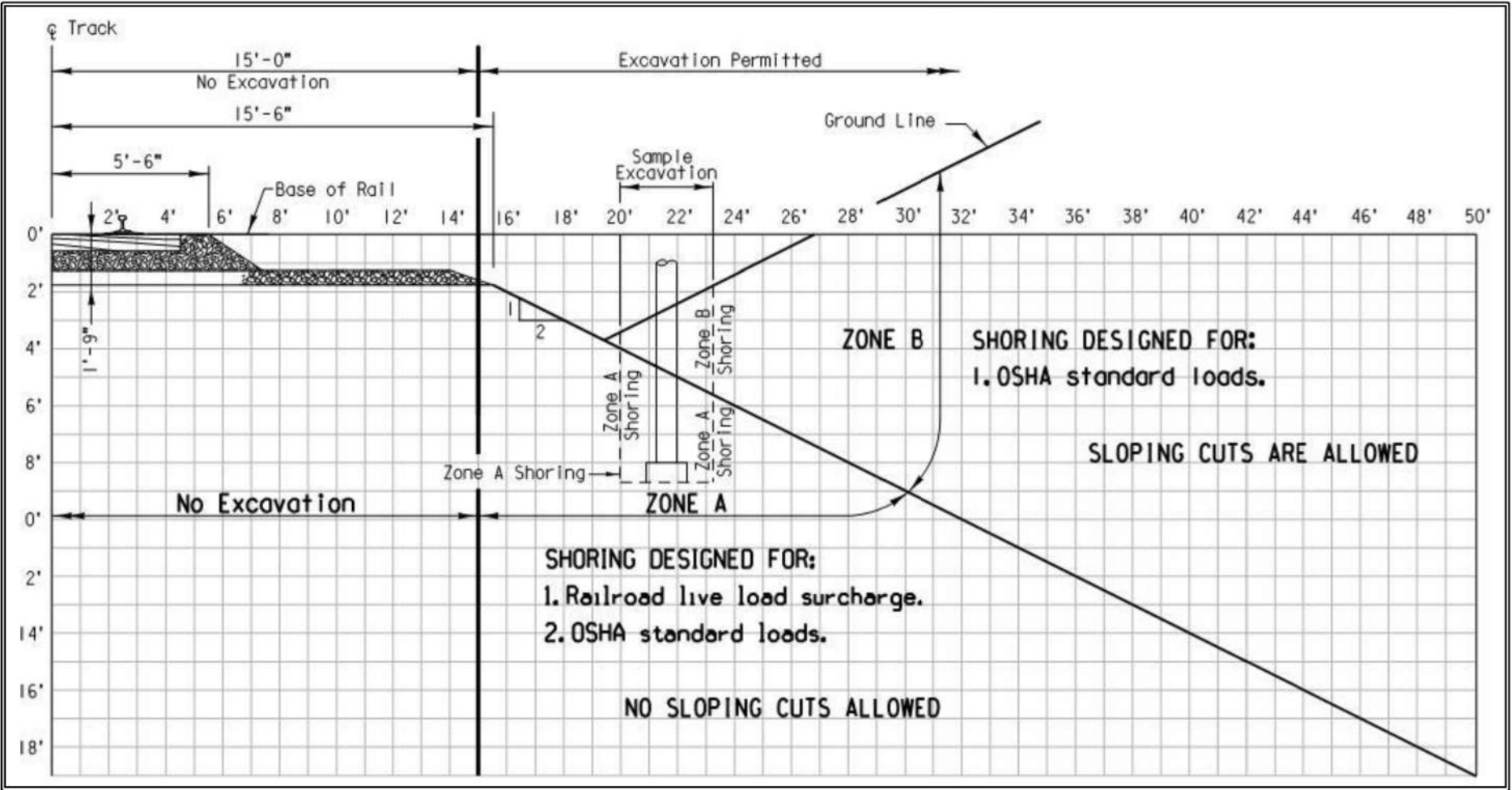
Crawford County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0129Design Sheet No. 4 of 5FHWA No. 021331



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



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

Railroad General Notes:

Railroad review and approval of shoring, erection, demolition, and falsework is required. Allow a minimum of four weeks for the review and approval of each submittal.

The proposed grade separation project shall not increase the quantity and/or characteristics of the flow in the railroad's ditches and/or drainage structures.

The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the railroad prior to construction.

The Contractor must submit a proposed method of erosion and sediment control and have the method approved by the railroad.

All shoring systems that impact the railroad's operations and/or supports the railroad's embankment shall be designed and constructed per current railroad guidelines for temporary shoring.

All demolitions within the railroad's right-of-way and/or demolition that may impact the railroad's tracks or operations shall be in compliance with the railroad's demolition guidelines.

Erection over the railroad's right-of-way shall be designed to cause no interruption to the railroad's operation, enabling the track(s) to remain open to traffic per the railroad's requirements.

All construction phasing that may impact the railroad operations shall be designed to cause no interruption to the railroad's operation, enabling the track(s) to remain open to traffic per the railroad's requirements.

False-work clearances shall comply with minimum construction clearances.

All permanent clearances shall be verified before project closing.

For railroad coordination please refer to the railroad coordination requirements as part of special provisions.

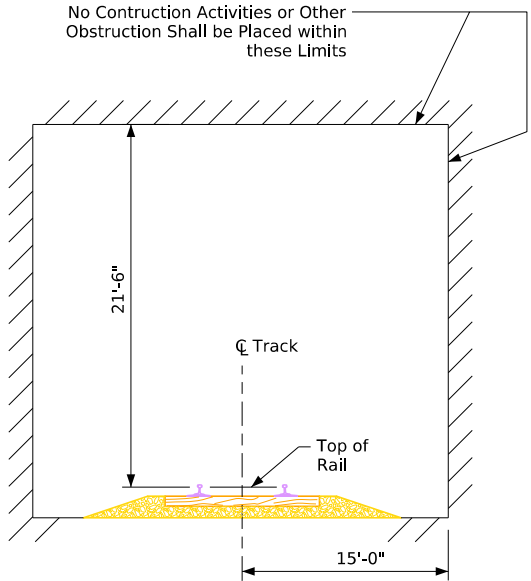
General Shoring Notes:

All dimensions are measured perpendicular to track.

Prior to commencing any work, the Contractor shall submit for approval by the Railroad detailed plans indicating the nature and extent of the track protection shoring proposed. The Contractor shall install the temporary shoring system per the approved plans.

Design of the temporary shoring system to comply with UPRR Guidelines for Temporary Shoring.

For excavations which encroach into Zone A or B, shoring plans shall be accompanied by design calculations. Plans and calculations must be signed and stamped by a Professional Engineer registered in the State of Iowa.

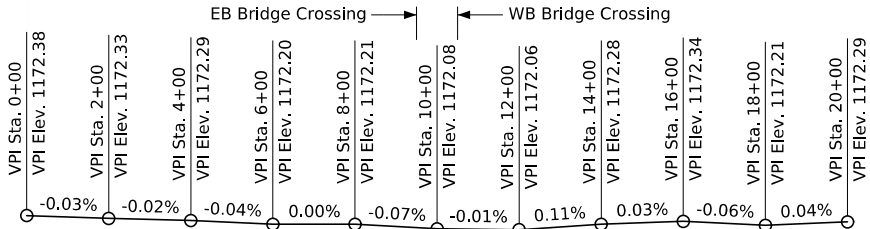


Minimum Construction Clearance Envelope
(Normal to Railroad)

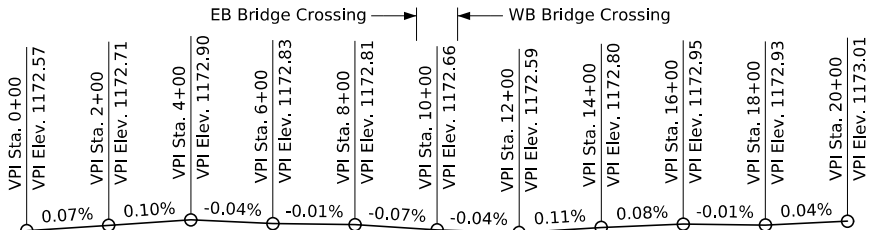
Top of Rail Elevations
(Stations Increase with Milepost Increase)

Main Line			
Alignment: Left Rail		Alignment: Right Rail	
Station	Elevation	Station	Elevation
0+00	1172.38	0+00	1172.57
1+00	1172.38	1+00	1172.62
2+00	1172.33	2+00	1172.71
3+00	1172.33	3+00	1172.87
4+00	1172.29	4+00	1172.90
5+00	1172.21	5+00	1172.82
6+00	1172.20	6+00	1172.83
7+00	1172.20	7+00	1172.85
8+00	1172.21	8+00	1172.81
9+00	1172.15	9+00	1172.79
① 10+00	1172.08	① 10+00	1172.66
11+00	1172.05	11+00	1172.58
12+00	1172.06	12+00	1172.59
13+00	1172.16	13+00	1172.80
14+00	1172.28	14+00	1172.80
15+00	1172.35	15+00	1172.98
16+00	1172.34	16+00	1172.95
17+00	1172.32	17+00	1172.86
18+00	1172.21	18+00	1172.93
19+00	1172.24	19+00	1172.93
20+00	1172.29	20+00	1173.01

① Existing Track Sta. 10+00



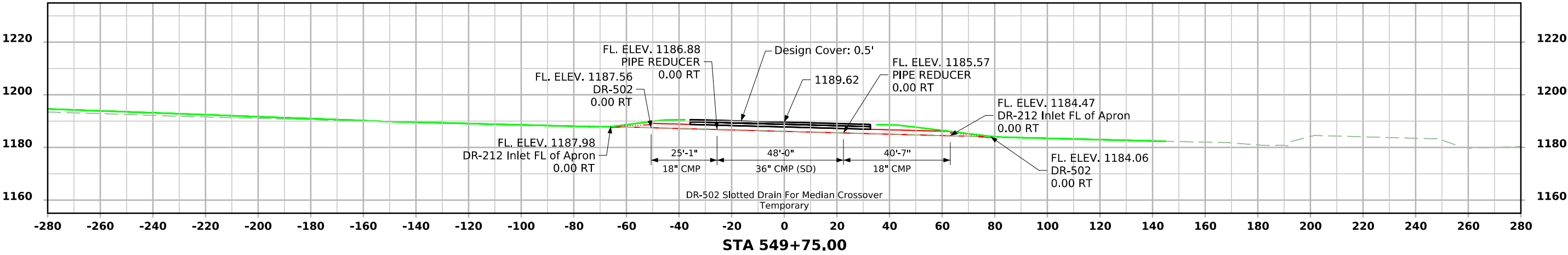
Left Rail Profile



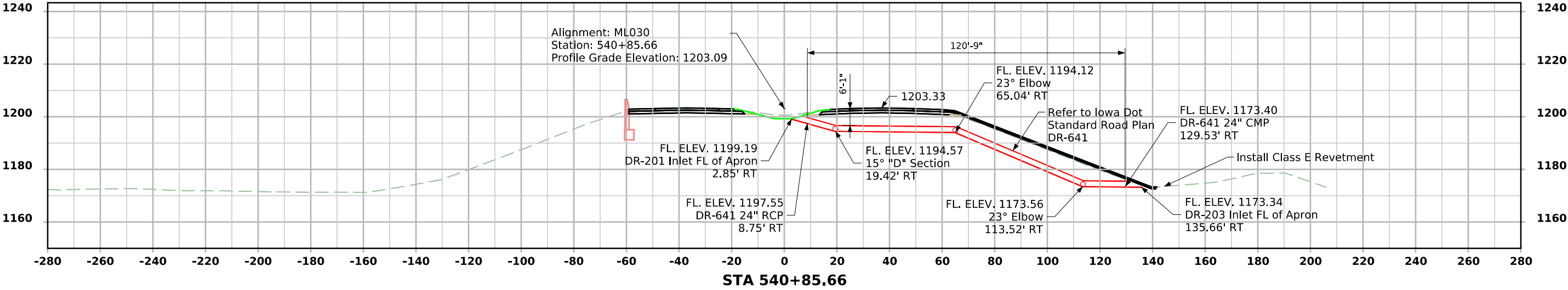
Right Rail Profile

UPRR General Notes & Shoring Details

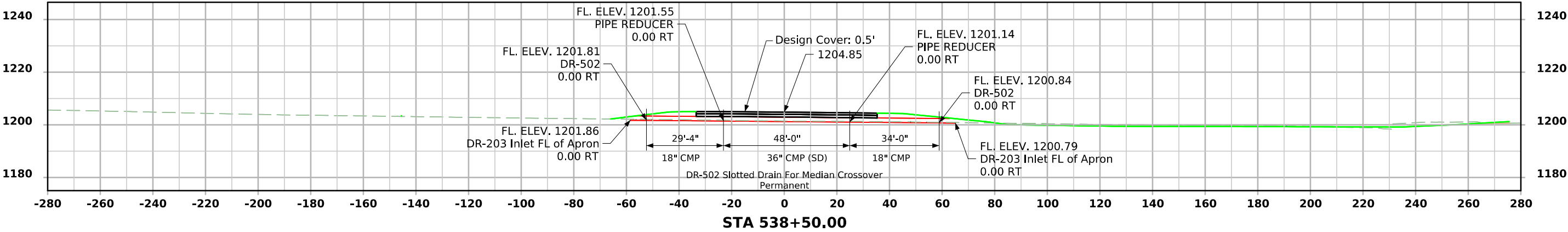
Refer to Iowa Dot Road Design Detail 531-02 for Median Crossover.
Refer to Iowa Dot Standard Road Plan DR-502 for Slotted Drain for Median Crossover.
Construct during Stage 1.



Refer to Iowa Dot Standard Road Plan DR-641.
Construct during Stage 3.



Refer to Iowa Dot Road Design Detail 531-02 for Median Crossover.
Refer to Iowa Dot Standard Road Plan DR-502 for Slotted Drain for Median Crossover.
Construct during Stage 1.



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

NOTES:

Text

NOTES:

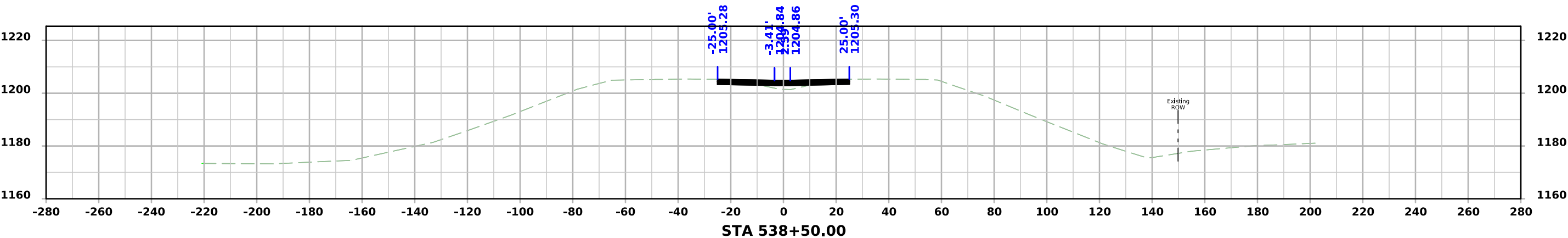
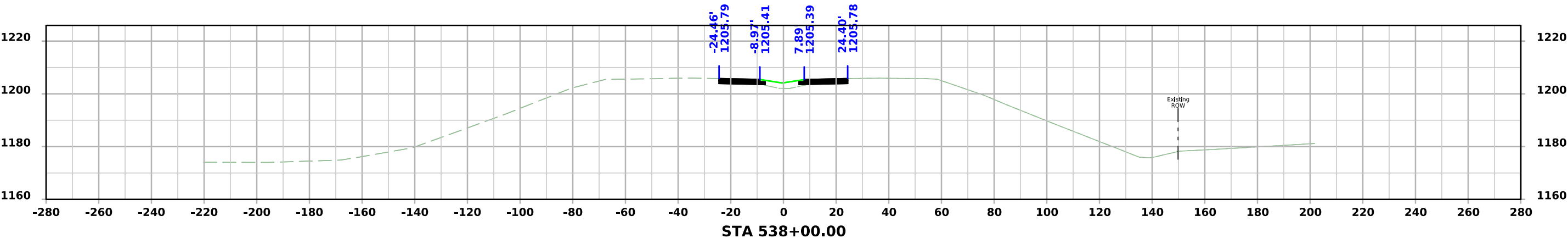
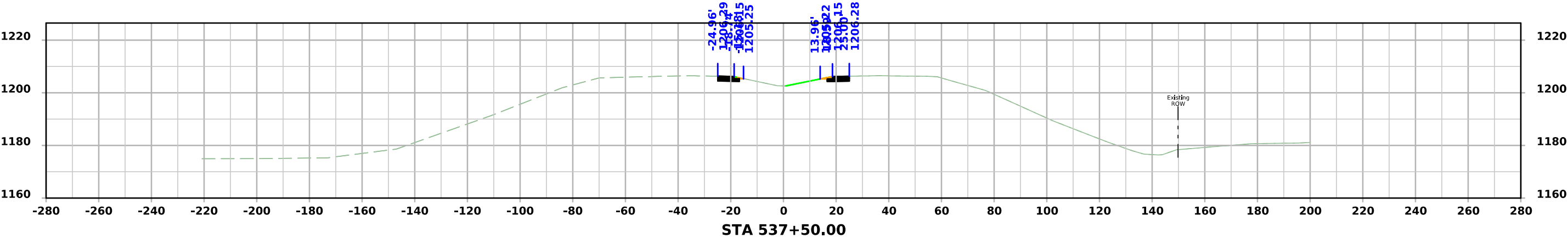
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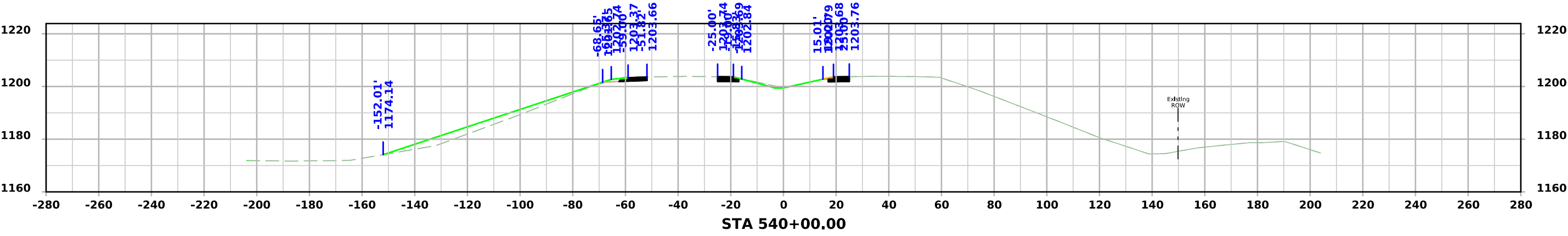
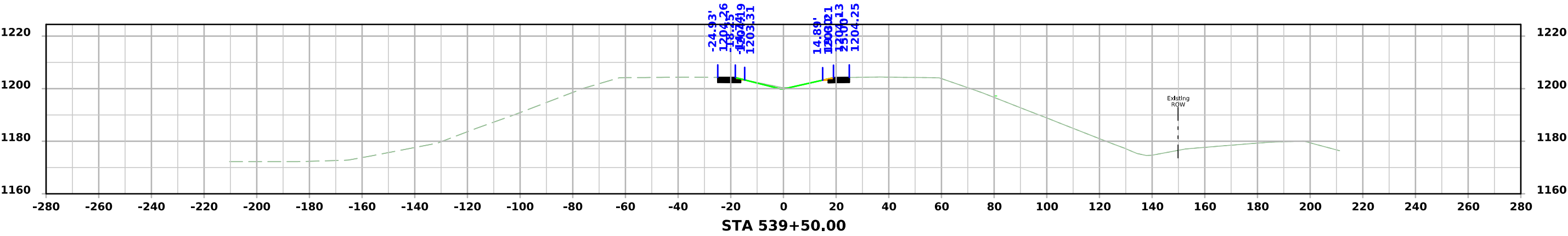
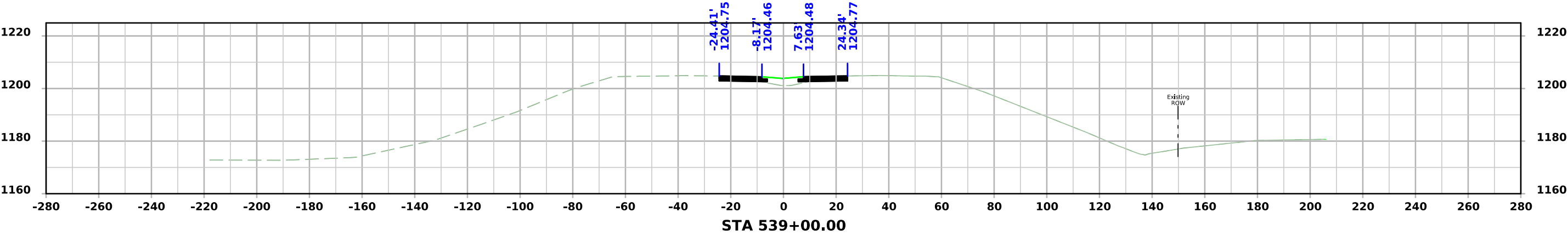
CROSS SECTIONS

LEGEND AND INFORMATION SHEET

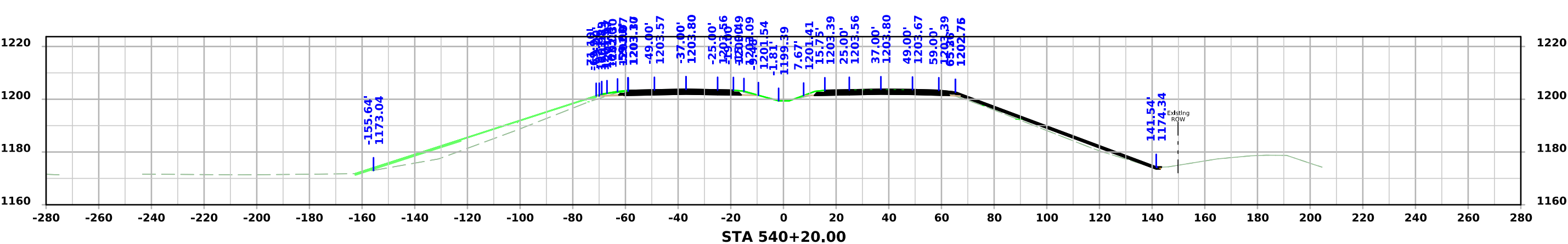
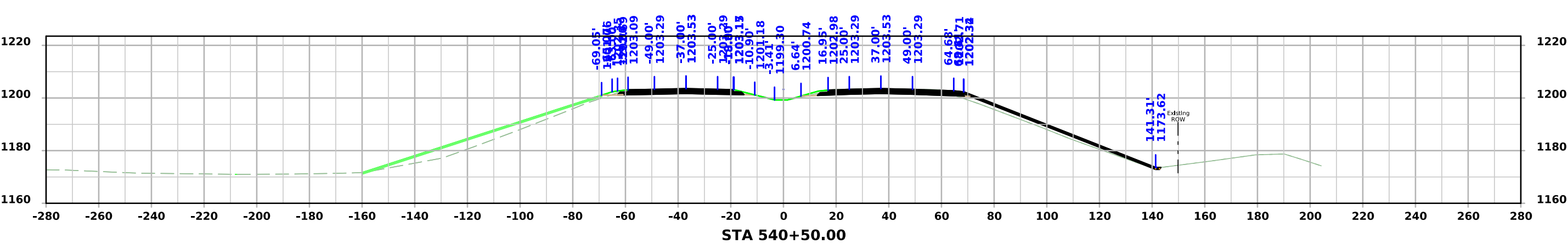
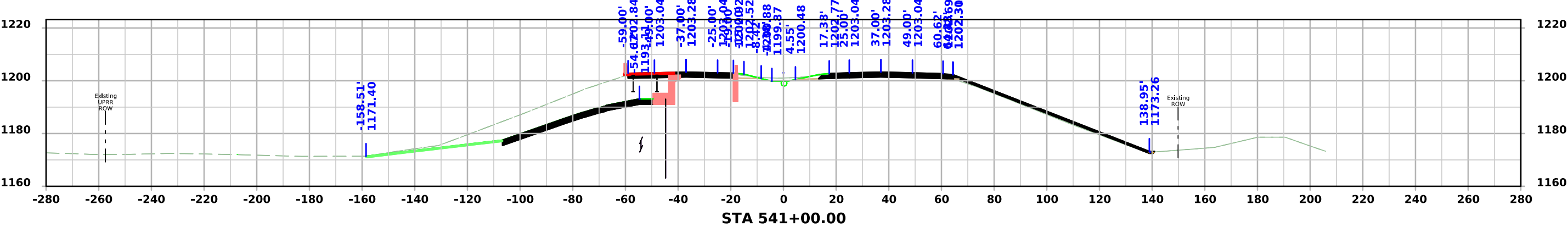
(COVERS SHEET SERIES W)

US 30

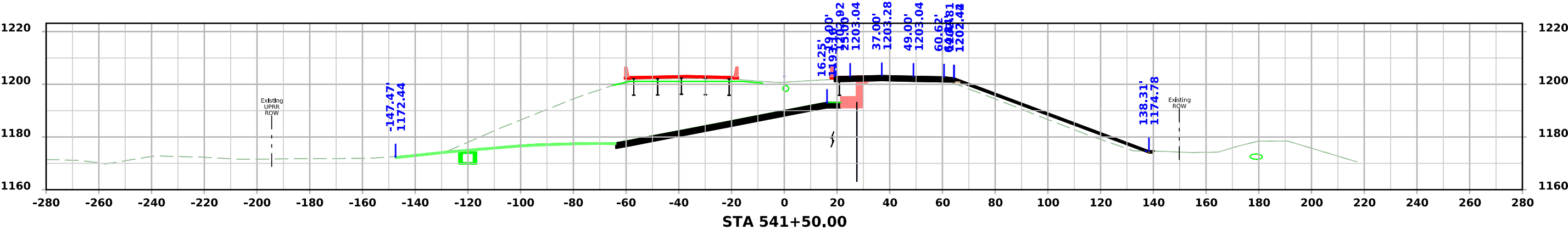
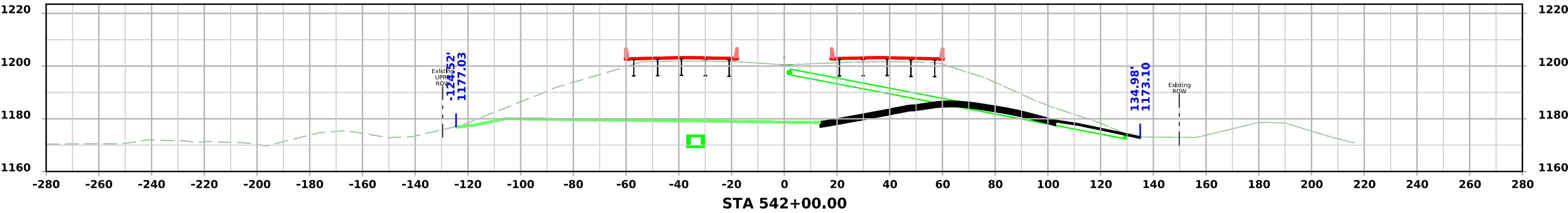
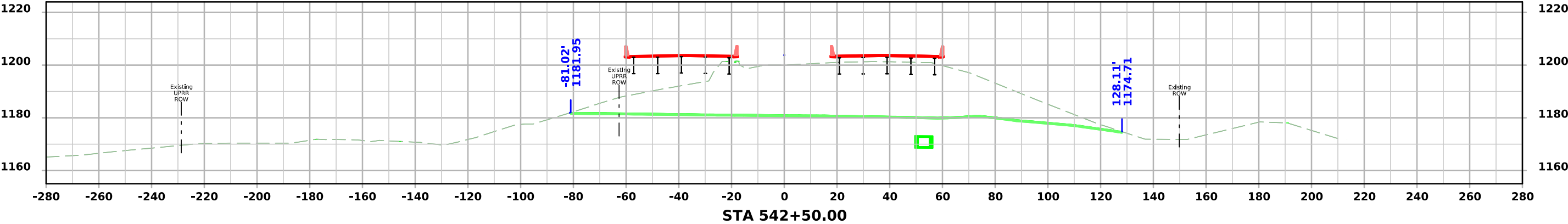




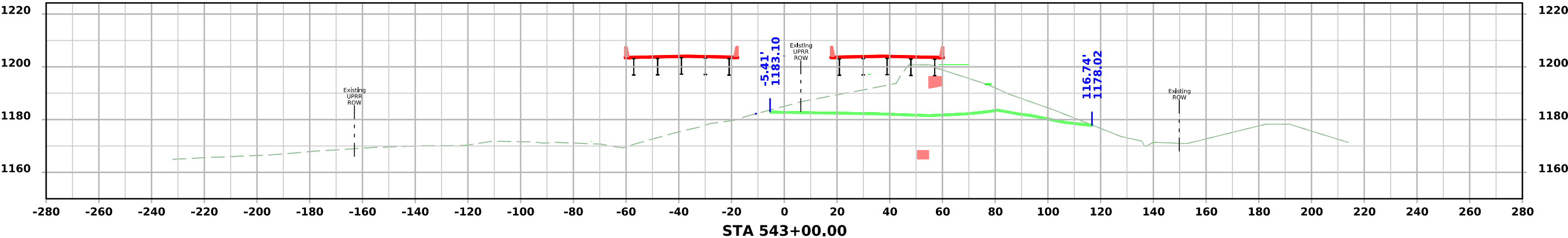
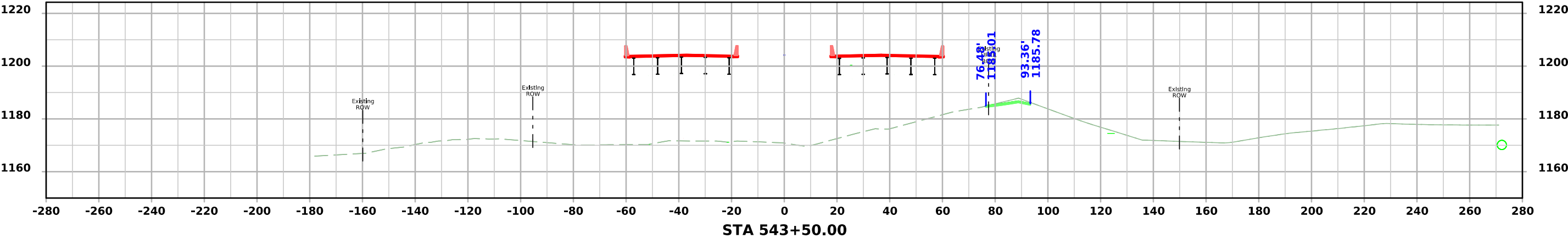
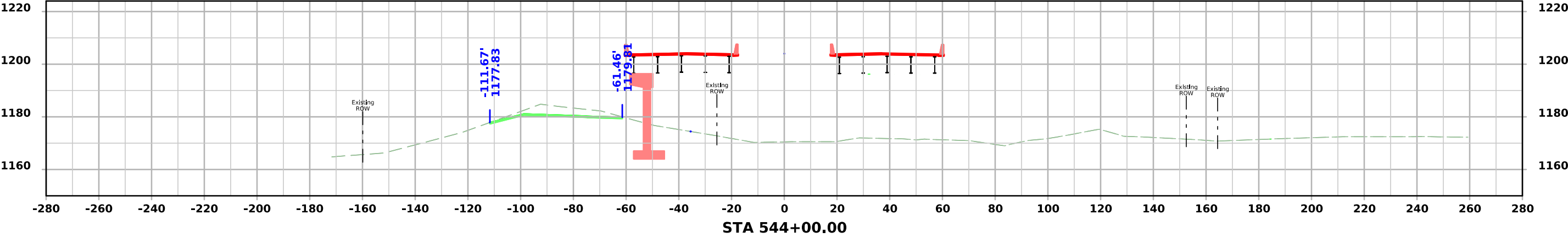
US 30



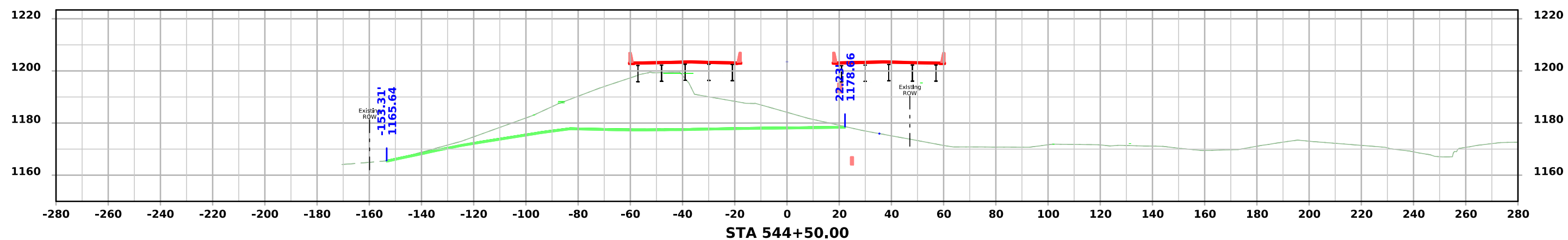
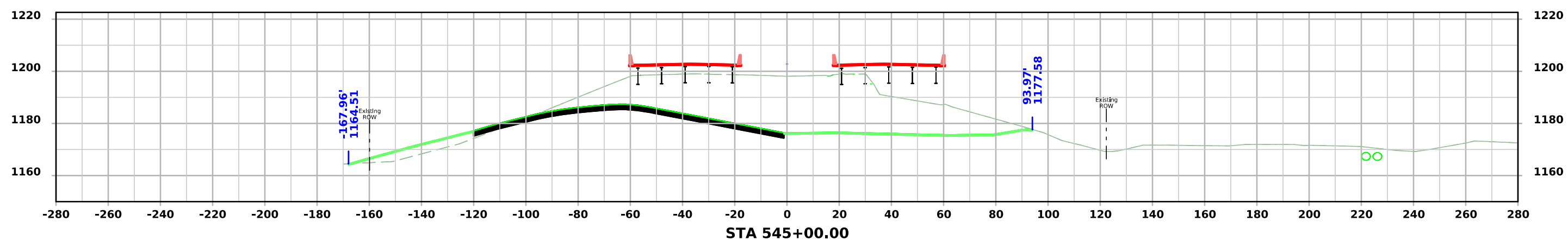
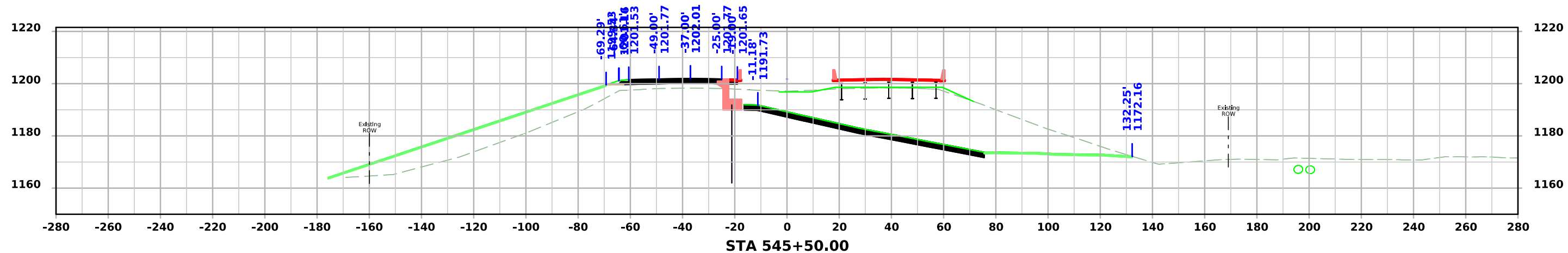
US 30



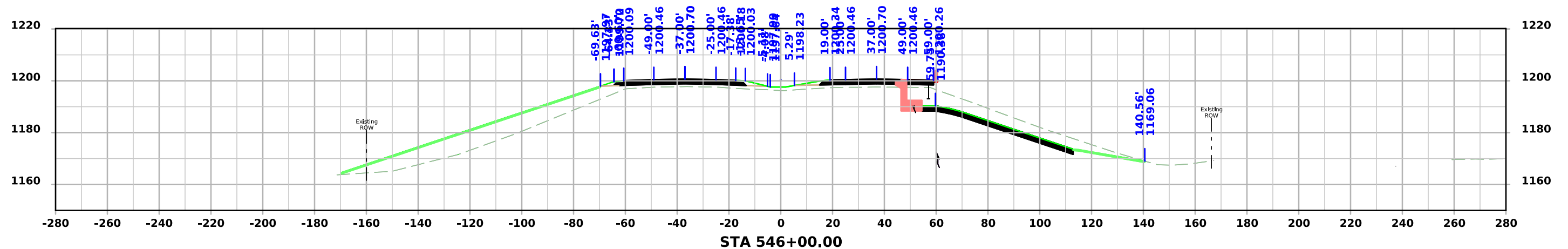
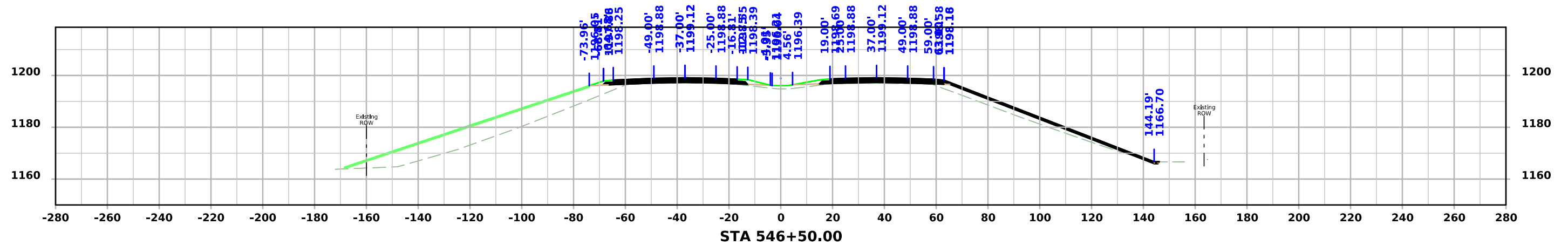
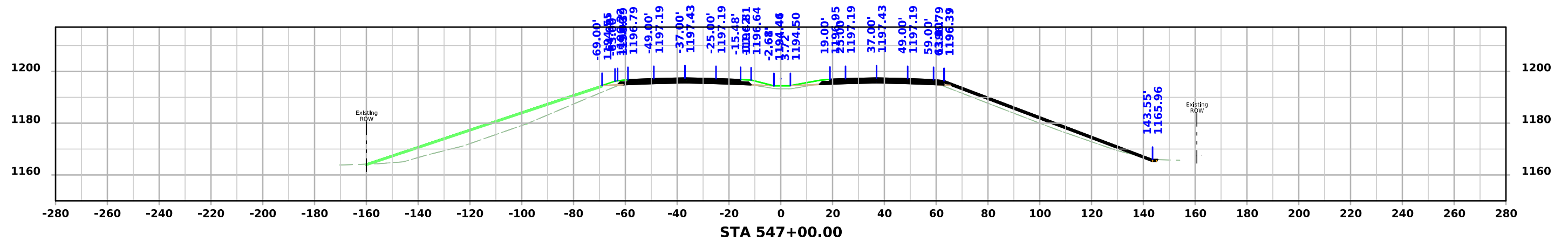
US 30



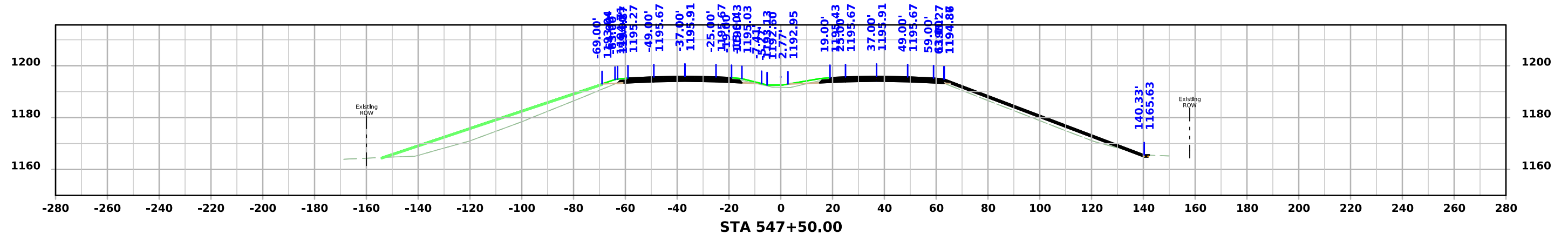
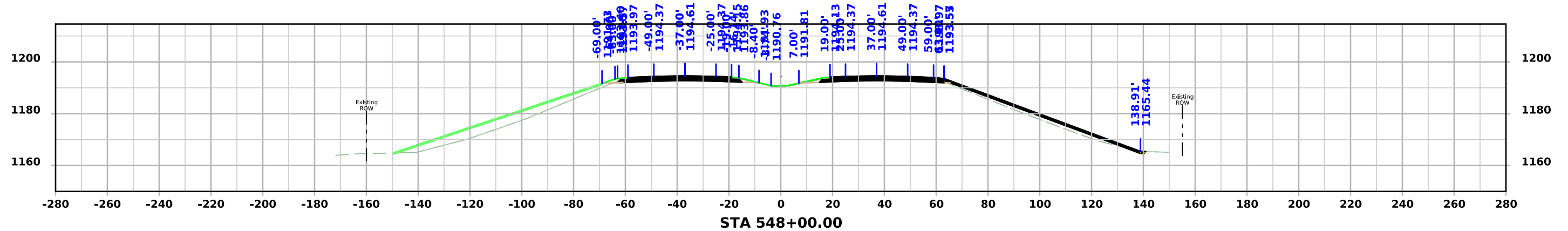
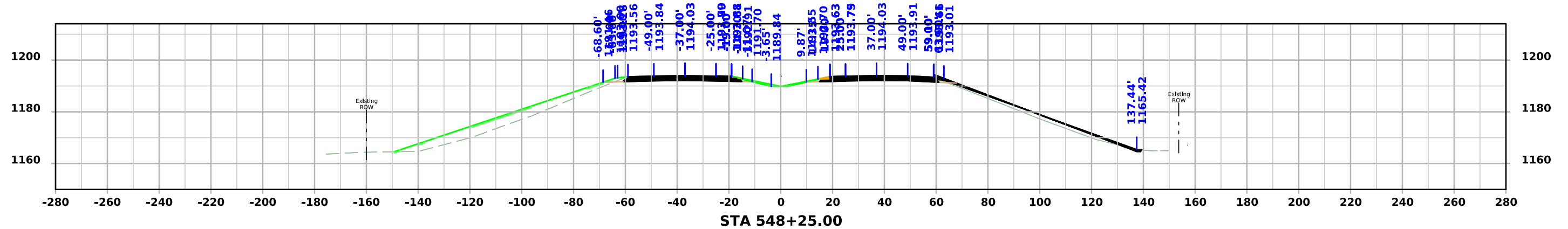
US 30



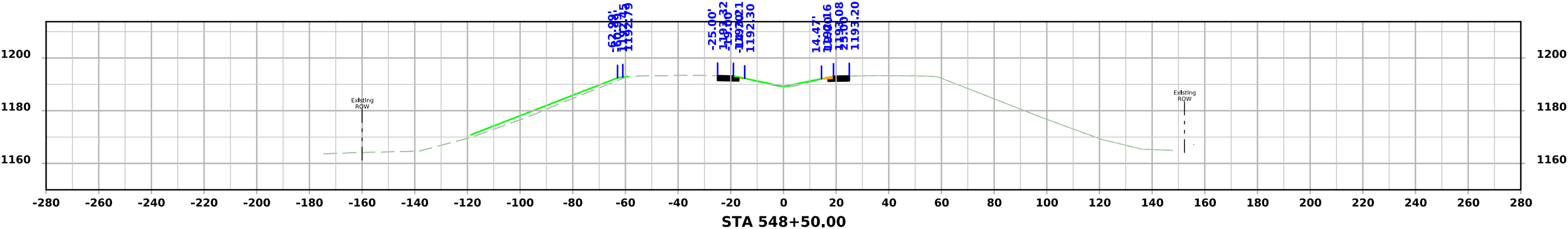
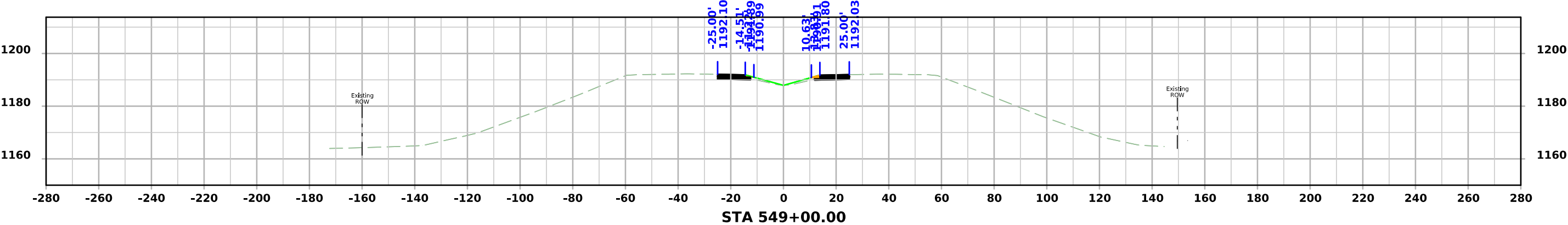
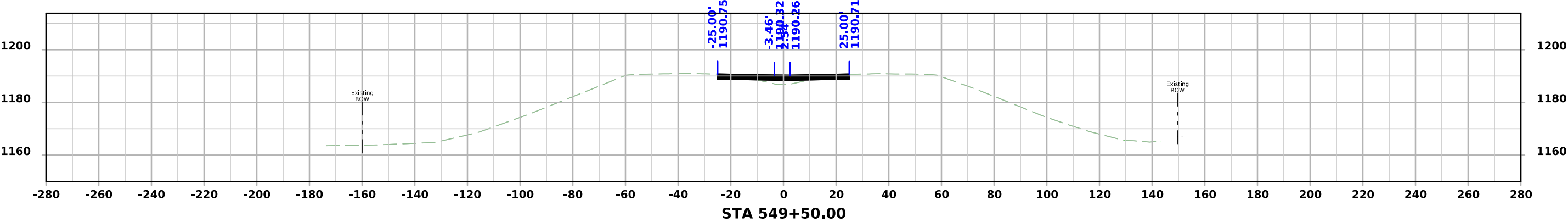
US 30



US 30



US 30



US 30

