LETTING DATE 12/18/2029

Bridge-Unspecified

BRF-071-4(064)--38-05

AUDUBON COUNTY

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	**Title Sheets**
A.1	Title Sheet
A.2	Location Map Sheet
A.3 - 11	Concept and Design Criteria
A.11 - 12	Design Criteria
B Sheets	**Typical Cross Sections and Details**
B.1 - 2	Typical Cross Sections and Details
D Sheets	**Mainline Plan and Profile Sheets**
D.1	Plan & Profile Legend & Symbol Information Sheet
D.2 - 3	US 71
G Sheets	**Survey Sheets**
G.1 - 3	Reference Ties and Bench Marks
G.4	Alignment Coordinates
J Sheets	**Traffic Control and Staging Sheets**
J.1	Traffic Control Plan
J.2	Detour Route
V Sheets	**Bridge and Culvert Situation Plans**
V.1 ~~X~~	Bridge and Culvert Situation Plans
W Sheets	**Mainline Cross Sections**
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 11	Mainline Cross Sections

IOWA DOT

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

AUDUBON COUNTY

Bridge-Unspecified

Stream 1.7 mi N of I-80

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.13 of the Specifications.

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

REVISIONS

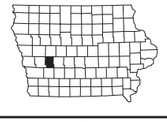
	TOTAL 35
PROJECT IDENTIFICATION NUMBER	
25-05-071-020	
PROJECT NUMBER	
BRF-071-4(064)--38-05	
R.O.W. PROJECT NUMBER	
NHSN-071-4(065)--2R-05	

Future Event Dates:

D03: 10/16/2026
D05: 03/12/2027
D04: 08/07/2029

Scan the QR code or click the link below to leave plan quality feedback and help us improve future projects.

Design QR Feedback Link



INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Kelly C. Bell	Primary Signature Block	X
V.1	Randall M.L. Friend	Hydraulic Design	X

PRELIMINARY PLANS

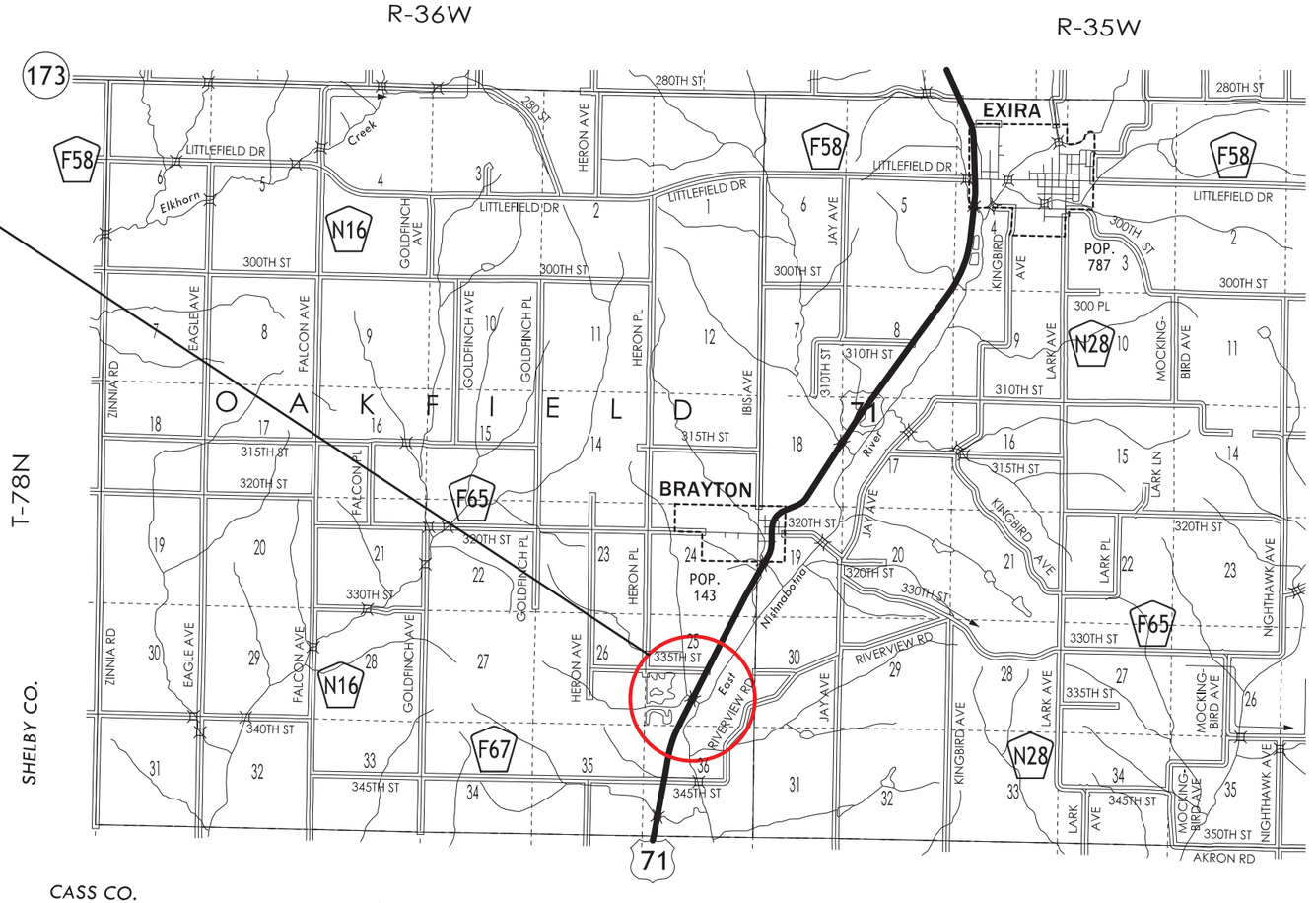
Subject to change by final design.

D2 PLAN - Date: Oct. 14, 2026

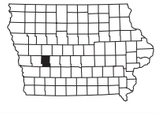
FILE NO. | ENGLISH | DESIGN TEAM Flattery\Bell\Jack | AUDUBON COUNTY | PROJECT NUMBER BRF-071-4(064)--38-05 | SHEET NUMBER A.1

8:32:47 AM 10/7/2026 mjack pw:\\iowadot-pw.bentley.com:iowadot-pw-02\Documents\Projects\25-05-071-020\BRF-071-4(064)--38-05\SHT_A01_05071064Z07.dgn

US 71 Bridge
FHWA #: 14070
Maint. #: 0570.1S071







LOCATION MAP SCALE
0 1 2
Miles

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Jack	AUDUBON COUNTY	PROJECT NUMBER BRF-071-4(064)--38-05	SHEET NUMBER A.2	

8:32:48 AM 10/7/2026 mjack pw:\\iowadot-pw.bentley.com:iowadot-pw-02\Documents\Projects\25-05-071-020\BRF-071-4(064)--38-05\SHT_A01_05071064Z07.dgn

IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE:	District 4	**DATE:**	April 8, 2026
ATTENTION:	Scott Schram	**PROJECT:**	Audubon County BRF-071-4(064)--38-05 25-05-071-020
FROM:	John E. Bartholomew		
BUREAU:	Design		
SUBJECT:	Project Concept Statement; (Final, D0)		

This project involves the replacement of the US 71 bridge (Maint. No. 0570.1S071) over Stream 1.7 mi N of I-80.

A concept review was held on February 2, 2026. Those present included Nathaniel Epperson, Jason Sallach, Daniel Redmond from the District 4 Office; Jim Ellis, and Mohammed Dokmak from the Bridges and Structures Bureau; Claire Asberry, and Jacob Woodcock from the Location and Environment Bureau; Edward Sowder, Gina Horner, Heidi Lane and Jordan Zacny from HNTB; and John Bartholomew, Jason Holst and Jackson Lewis from the Design Bureau.

The two alternatives considered were:

1. replace the existing US 71 bridge with a 130 x 44 continuous concrete slab (CCS) bridge.
   Estimated cost for this project is **$2,037,500**
2. replace the existing US 71 bridge with a triple 12’ x 10’ x 108’ reinforced concrete box (RCB) culvert.
   Estimated cost for this project is **$1,580,700**

Alternative 2 is the preferred alternative. Additional right of way may be required. Traffic will be maintained by an off-site detour.

This project is recommended for construction in FY 2030. The Design Bureau will coordinate plan preparation with assistance from the Bridges and Structures Bureau.

JEB:jdl
Attach.
cc:

C. Purcell	K. D. Nicholson	Y. Jia
M. Dell	C. Carter	M. Nop
M. A. Swenson	A. Knight	C. C. Poole
S. Majors	A. Poole	K. Brink
D. L. Newell	D. Breitbach	J. W. Laaser-Webb
W. A. Sorenson	E. C. Wright	M. E. Ross
A. A. Welch	J. Harris	M. Van Dyke
B. Hofer	G. Karssen	D. Johnson
W. Musgrove	S. Anderson	D. Stokes
J. Holst	R. Harris	B. Dolan
T. Lovan	M. Solberg	T. Gustafson
D. Dudley	L. Armstrong	B. Smith
Paul Flattery	A. Yates	J. Ellis
L. Narigon	J. Hauber	S. Sersland
M. E. Khoda	M. Gordy	M. Todsen
J. Sallach	J. Garton	O. Lechnowsky
J. Cihacek	D. Redmond	N. Epperson
S. Suhr	J. Woodcock	C. Asberry
W. Mayberry	C. Schwienebart	T. Frank
N. Mocha	B. Asberry	J. Keller
G. Horner	FHWA	

FINAL PROJECT CONCEPT STATEMENT

US-71 Bridge over Stream 1.7 mi N of I-80

Audubon County
BRF-071-4(064)--38-05
PIN: 25-05-071-020
Maint. No. 0570.1S071
FHWA No. 14070
Highway Division
Design Bureau

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

April 8, 2026

I. STUDY AREA

A. Project Description

This project involves the replacement of the US 71 bridge (Maint. No. 0570.1S071) over Stream 1.7 mi N of I-80.

The two alternatives considered were:

1. replace the existing US 71 bridge with a 130 x 44 continuous concrete slab (CCS) bridge.
   Estimated cost for this project is **$2,037,500**
2. replace the existing US 71 bridge with a triple 12' x 10' x 105' reinforced concrete box (RCB) culvert.
   Estimated cost for this project is **$1,580,700**

Alternative 2 is the preferred alternative due to the increased construction and lifetime maintenance costs associated with a new continuous concrete slab bridge.

B. Need for Project

This is an 80'x30' concrete slab bridge that was built in 1961 and overlaid in 1987. The overlay has reached the end of its service life. The deck has several wide cracks, leaching cracks, delaminated areas, and a spall with exposed steel. The bridge was designed for load below the current standards. Due to the condition, the bridge should be replaced.

Audubon County (14070)



14070 with US-71



14070 right profile



14070 span 2 floor system



Downstream including pedestrian bridge

C. Present Facility

The existing structure is an 80’ x 30’, continuous concrete slab bridge constructed in 1961.

US 71 in the project area is 32’ wide HMA pavement with 6’ wide granular shoulders and 3:1 foreslopes, constructed in 1930. HMA resurfacing was accomplished in 2015.

D. Traffic Estimates

The 2030 construction year and 2050 design year average daily traffic estimates are 2800 ADT with 18% trucks and 3100 ADT with 18% trucks, respectively.

E. Sufficiency Ratings

Route is classified as a commercial and industrial route
route and is a maintenance service level " C " roadway. The Bridge Condition Index is 53.2 and the Bridge Condition Rating is "Fair".

F. Access Control

Access rights will not be acquired for this project.

G. Crash History

During the five-year study period from January 1, 2021, through December 31, 2025, there were 0 crashes including, 0 fatal crashes, 0 personal injury crashes, and 0 personal property crashes.

PCR Level All Crashes (KABCO): Negligible
PCR Level Severe Crashes (KAB): Negligible

PCR Value All Crashes (KABCO): -0.018659 crash/mile/year
PCR Value Severe Crashes (KAB): -0.009557 crash/mile/year

II. PROJECT CONCEPT

A. Feasible Alternatives

Alternative #1 - Replace with a 130’ x 44’ CCS bridge

The existing 80’ x 30’, continuous concrete slab bridge will be replaced with a 130’ x 44’, Continuous concrete slab bridge.

The typical cross section adjacent to the bridge approach will consist of a 24’ roadway (32’ wide pavement) with 10’ effective shoulders (4’ outside pavement, and 6’ granular) and 3:1 foreslopes.

This bridge will be constructed on the existing vertical and horizontal alignment. New bridge approaches will be constructed. The existing guardrail will be replaced with new guardrail and the shoulders will be paved 20 ft. beyond the ends of the guardrail. Class 10 will be necessary to flatten the existing foreslopes and to construct the new guardrail blisters. Class E revetment will be placed under the bridge for slope protection. New bridge end drains will be constructed on both corners on the east end of both bridges.

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

Right of Way appears to be required for this project.

Traffic will be maintained by an offsite detour.

Bridge Items	Estimated Costs
New Bridge	$ 910,000
Bridge Removal	59,000
Revetment	44,000
Mobilization - 10%	117,000
M & C - 15%	256,000
Bridge Costs	**$ 1,538,000**

Roadway Items	
Bridge Approaches	$168,300
Removal of Pavement	10,800
Guardrail (Includes Removal)	69,600
Paved Shoulders for Guardrail	14,200
Class 10 for Guardrail Blisters	19,200
Bridge End Drains	14,600
Clearing and Grubbing	2,900
Seeding and Fertilizing	1,000
Erosion Control	50,000
Right of Way	10,000
Wetland Mitigation	10,000
Traffic Control - 5%	21,500
Mobilization - 5%	21,500
M & C - 20%	85,900
Roadway costs	**$ 499,500**
Project Total	**$2,037,500**

Alternative #2 - Replace with a culvert

The existing 80’ x 30’ bridge will be replaced with a triple 12’ x 10’ x 105’ reinforced concrete box (RCB).

The typical cross section adjacent to the culvert will consist of a 24’ roadway (32’ wide pavement) with 10’ effective shoulders (4’ outside pavement, and 6’ granular) and 6:1/3:1 foreslopes.

The roadway will be reconstructed on the existing vertical and horizontal alignment. The flow line of the box will be buried 1’ below the existing flow line in the channel. This will allow the bottom of the box to silt in and provide a natural bottom for fish passage. The existing ditches will need to be relocated to meet the inlet and outlet flowlines of the new RCB. Class E revetment will be placed at the ends of the RCB.

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

Right of way appears to be required for this project.

Traffic will be maintained by an offsite detour.

Bridge Items	Estimated Costs
New Culvert	$ 720,000
Bridge Removal	59,000
Revetment	30,000
Mobilization - 10%	89,000
M & C - 15%	196,000
Bridge Costs	**$ 1,175,000**
Roadway Items	
Removal of Pavement	22,800
PCC Pavement	131,100
Special Backfill	58,100
Granular Shoulder	2,600
Embankment in place, contractor furnished	37,300
Excavation Class 13 Waste	3,200
Guardrail Removal	2,800
Clearing and Grubbing	6,600
Seeding and Fertilizing	900
Erosion Control	10,000
Right of Way	10,000
Wetland Mitigation	50,000
Traffic Control - 5%	17,600
Mobilization - 5%	17,600
M & C - 30%	35,100
Roadway Costs	**$ 405,700**
Project Total	**$1,580,700**

B. Detour Analysis

US 71 will be closed and an offsite detour will be utilized. It is anticipated that the detour will be in place for approximately 120 days. The detour would follow I 80 west for 6 miles, then north on Iowa 173 for 9.6 miles, and then east on Iowa 44 for 9.9 miles. Out of distance travel is 12.9 miles. The total distance user cost is anticipated to be **$1,195,236.** The cost for county road maintenance will be **$94,636.** Calculated by the gas tax method. Detour signing costs will be 10,000.

C. Recommendations

It is recommended that the present structure be replaced, as described in Alternative No. 2.

D. Construction Sequence

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

E. ADA Accommodations

There are no bike paths or sidewalks adjacent to US 71; therefore, no ADA accommodations are planned in conjunction with this project.

F. Special Considerations

This will not be a critical traffic project. Traffic critical projects identify key construction projects across the state that may cause significant safety or mobility issues to the traveling public. Mitigation strategies could include intelligent work zones, TIM plans, workday restrictions, night work, lane rental etc.

Restricted working days will be needed for this project.

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

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

Special Survey:

a. Survey of the existing foundations from the bridge demolished in 1961.
b. Survey to determine ROW from the T-Bones Recreational Trail.
c. Channel survey with bathymetry (if applicable) through the existing project bridge opening.
d. Channel survey with bathymetry (if applicable) through the existing trail bridge opening.
e. Detailed ground survey needed of the existing berm with a culvert through it (believed to be an abandoned access to the old quarry immediately north of the bridge in the western ditch). Based on LiDAR modeling, this feature is directly causing roadway flooding.

Right of Way appears to be required for this project.

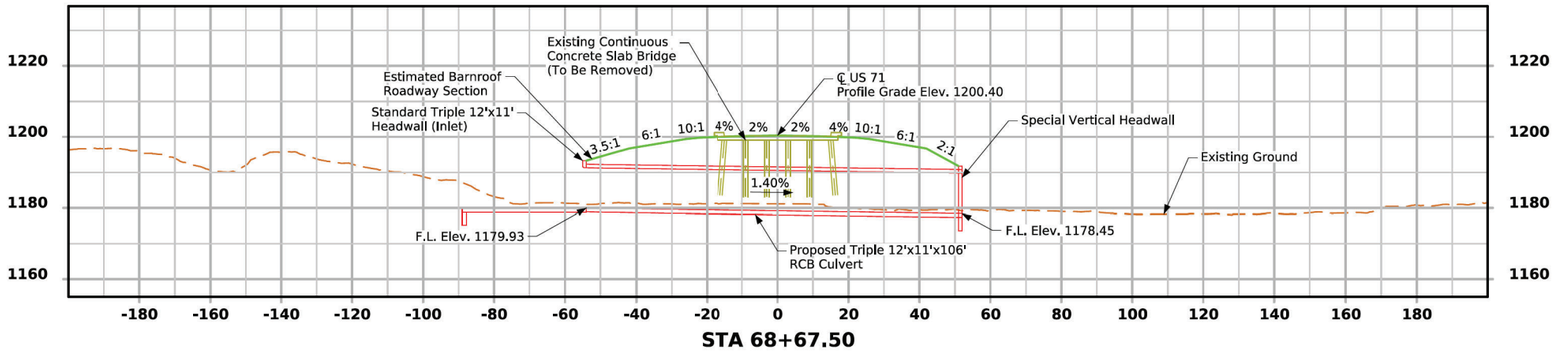
The Location and Environment Bureau has reviewed this project and no special concerns were noted.

An Environmental Research Study Area (ERSA) has been developed for this project and can be viewed in the concept attachments.

G. Program Status

Site data has been developed by the Design Bureau. This project is listed in the 2026-2030 Iowa Transportation Improvement Program, with $5,000 programmed for right of way in FY 2030, and $1,303,000 for replacement in FY 2030. Costs for this project may be eligible for bridge replacement funds. A schedule of events will be developed following approval of the Project Concept.

JEB:jdl



Longitudinal Section Along ℄ Culvert

General Notes:

This design is for the replacement of an existing Continuous Concrete Slab Bridge, Audubon Design No. 260 Bridge Maintenance No. 0570.1S071 FHWA No. 014070

Design Notes:

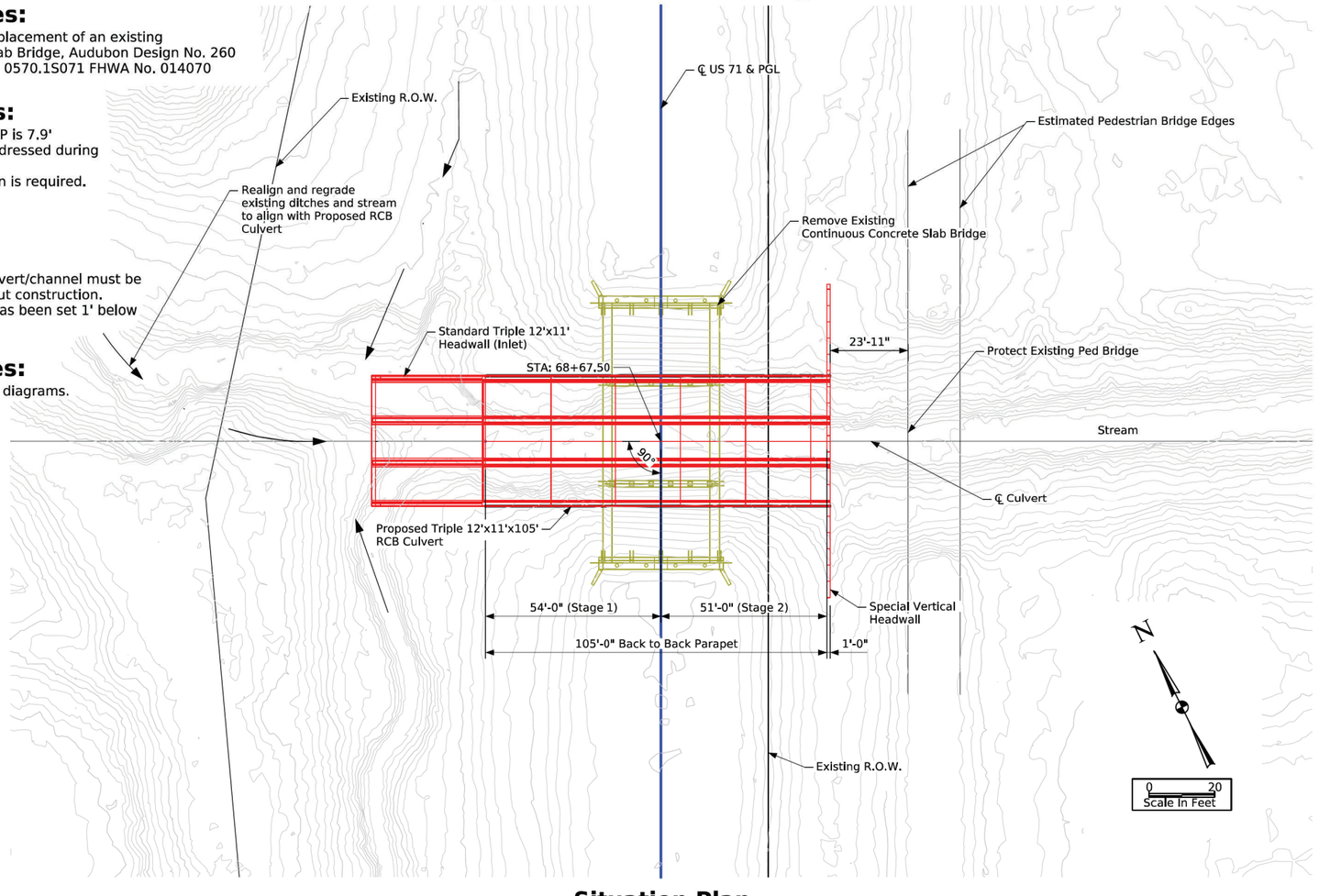
1. Design fill for this C.I.P is 7.9'
2. Settlement will be addressed during later design stages.
3. Permanent acquisition is required.

Plan Notes:

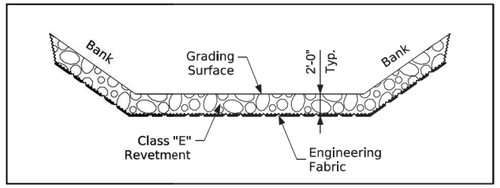
1. Drainage through culvert/channel must be maintained throughout construction.
2. Flow Line of culvert has been set 1' below streambed.

Staging Notes:

1. See attached staging diagrams.



Situation Plan



Typical Channel Protection

Estimated Revetment Quantities Included With Road Plans

Location	Revetment Class "E" (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Inlet			
Outlet			
Totals			

Excavation quantity calculated from grading surface. Excavation quantity is for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans. Quantities shown for information only. See Road Sheets.

Hydraulic Data

RIDB: Not Applicable
Drainage Area = 3.12 Sq. Mi.
Stream Slope = 65.43 Ft./Mi.
Q_{50} = 2,240 cfs
HW Elev. = 1192.99
Exit Velocity = 6.22 fps

Q_{100} = 2,600 cfs
HW Elev. = 1194.21
Exit Velocity = 6.66 fps

Location

US 71 Over Stream
T-78N R-36W
Section 25
Oakfield Township
Audubon County
FHWA No. XXXXXX
Bridge Maint. No. 0570.1S071
Latitude 41.533628°
Longitude -94.937325°

Traffic Estimate

2024 AADT	2670 V.P.D.
20?? AADT	??? V.P.D.
20?? DHV	??? V.P.H.
TRUCKS	?? %
Total Design ESALs	???

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

CONCEPT

Concept Design For 0° Skew

Triple 12'x11'x105' Reinforced Concrete Box Culvert

Situation Plan

STA. 68+67.50 (US 71)

Turn-In Date: March 2026

Audubon County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. XXXX Design Sheet No. 1 of 1 FHWA/Asset XXXXXX

FILE NO. 98765	ENGLISH	DESIGN TEAM HNTB	AUDUBON COUNTY	PROJECT NUMBER BRF-071-4(064)--38-05	SHEET NUMBER V.1

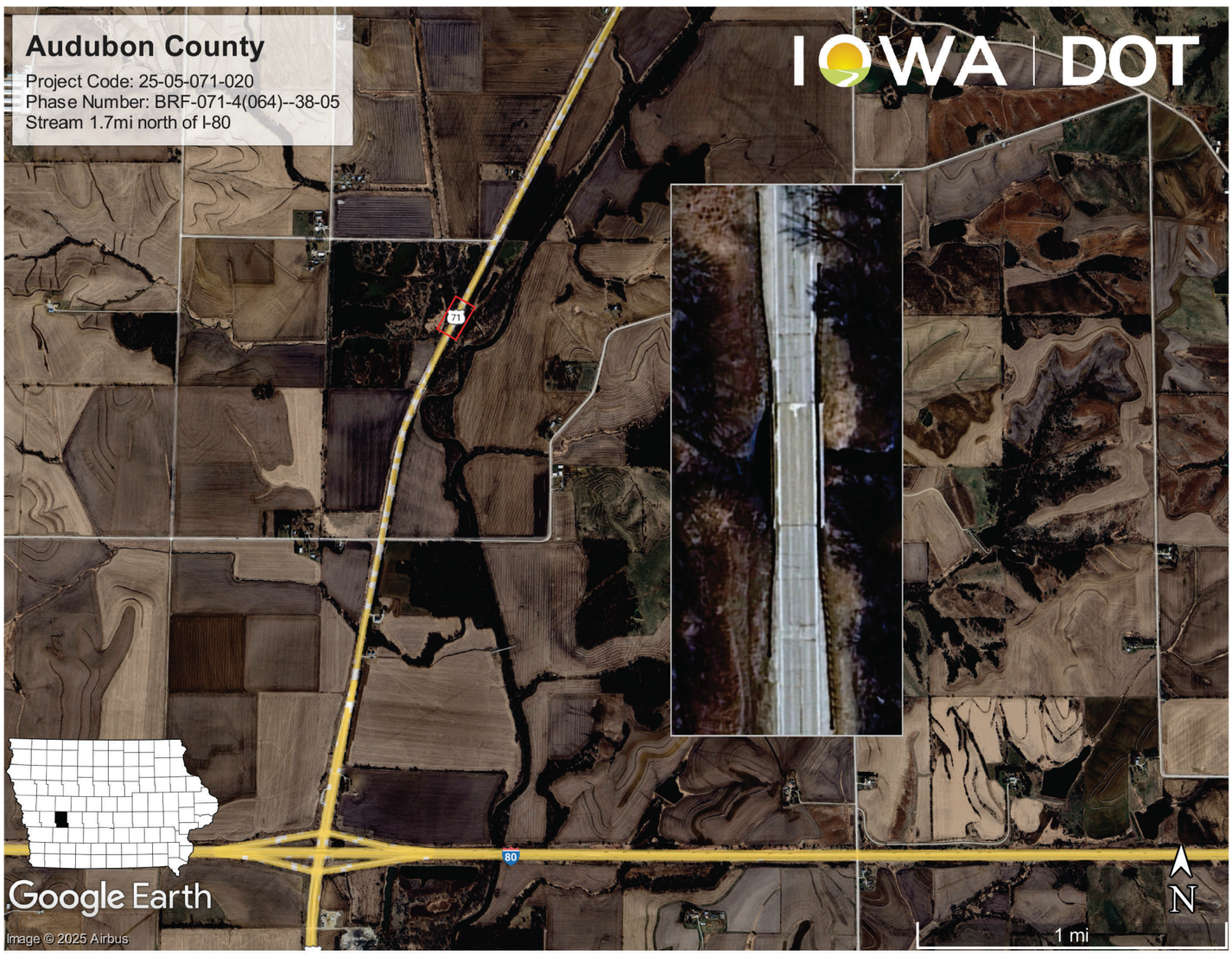
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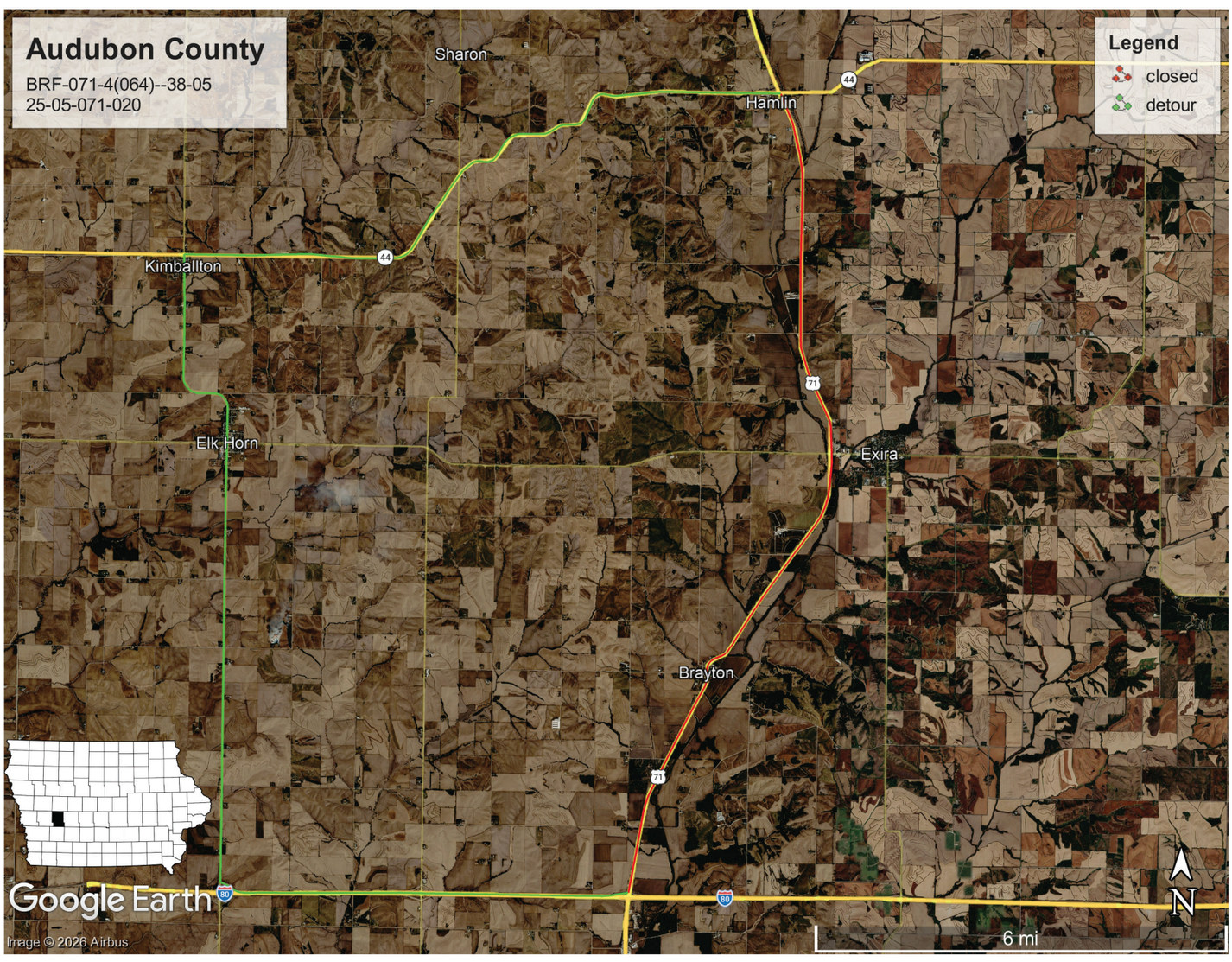
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FILE NO.
ENGLISH
DESIGN TEAM Flattery\Bell\Jack
AUDUBON COUNTY
PROJECT NUMBER BRF-071-4(064)--38-05
SHEET NUMBER A.9







Bridge Bureau Attachment for Concept Statement

Date: March 2, 2026
By: Gina Horner, P.E.
Location: 1.7 MI. N of Jct.I-80

County: Audubon County
Phase No.: BRF-071-4(064)--38-05
Project Code: 25-05-071-020

1. Regulatory/Coordination
   - a. Iowa DNR Flood Plain permit = No
   - b. Iowa DNR Sovereign Lands permit = No, but notification will be made as part of the joint application.
   - c. Local Record of Coordination = Yes (Audubon County)
   - d. Flood Insurance Study = No, Zone A
   - e. Drainage District = No
   - f. Corps of Engineers Section 408 = No, but notification will be made a part of the joint application.
   - g. State Water Trail or Paddling Route = No
   - h. Historic Structure = Bridge is possibly eligible for National Register of Historic Places and requires further investigation before determination can be made.
   - i. Federally owned land in vicinity = No
   - j. USGS or Iowa Flood Center (IFC) gage or sensor impacted? No
   - k. Obstruction Evaluation/Airport Airspace Analysis per FAA website = No

2. Hydrologic/Hydraulic Analysis/RIDB Dataset
   - a. Design discharge methodology = StreamStats used to determine discharges. Q50=2,880cfs and Q100=3,540cfs.
   - b. Hydraulic analysis done = Yes. 2D HEC-RAS model pre survey.
   - c. If DA > 10 sq. mi. Riverine Infrastructure Database (RIDB) dataset is required with B1 submittal = No.
   - d. Project development hydraulic analysis will comply with the RIDB Guidelines at a minimum.

3. Structure/Roadway Layout Considerations
   - a. Roadway profile grade raise is not anticipated.
   - b. Soils investigation will be performed after the concept stage.
   - c. Fully enclosed pile bents are assumed for replacement bridge.
   - d. Triple 12’x10’105’ RCB will have standard parallel wings on the upstream (West)end and transverse wings on the downstream (East) end due to the T-Bone Recreation Trail to the East.

4. Special construction issues
   - a. It is desirable for new structure foundations to avoid existing foundations when possible.
   - b. Final bridge length will be determined after survey to avoid existing foundations from a previous bridge at this location.
   - c. Staged CCS bridge and triple RCB options may have constructability issues depending on the contractor.

Concept Statement – Bridge Bureau Attachment

5. Special survey = Yes

6. Aesthetic enhancements = No

7. Other

   a. 12.5′ lanes to be maintained during staged construction.

Special Survey:

a. Survey of the existing foundations from the bridge demolished in 1961.
b. Survey to determine ROW from the T-Bones Recreational Trail.
c. Channel survey with bathymetry (if applicable) through the existing project bridge opening.
d. Channel survey with bathymetry (if applicable) through the existing trail bridge opening.
e. Detailed ground survey needed of the existing berm with a culvert through it (believed to be an abandoned access to the old quarry immediately north of the bridge in the western ditch). Based on LiDAR modeling, this feature is directly causing roadway flooding.

	Submittal Date	Approval Date
District Engineer	Scott Schram	
	or	
Office Director		

Roadway	
PIN Number	25-05-071-020
Project Number	BRF-071-4(064)--38-05
District	District 4
County	AUDUBON
Route	US 71
Location	Stream 1.7 mi N of I-80
Work Type	2001-Bridge-Unspecified
Segment Manager	
Designer	

Rural Two-Lane Highways (Rural Arterials)

Design Manual Section 1C-1
Last Updated: 04-29-19

Design Element	Preferred	Acceptable	Project Values
Design speed (mph)	60	50	60
Maximum superelevation rate (Refer to Section 2A-2)	6%	8%	6%
Design lane width (ft)	12	12	12
Full depth paved width (ft)	12	12	12
Right turn lane (ft)	12	10	-
Climbing Lane (ft)	12	12	-
Left turn lane (ft)	12	10	-
Pavement cross-slope (on tangent sections) — Through lanes	2%	1.5% minimum, 2% maximum	-
Pavement cross-slope (on tangent sections) — Auxiliary and turn lanes	3%	3% maximum	-
Pavement cross-slope (on tangent sections) — Crown break at centerline	4%	4% maximum	-
Shoulder cross-slope (on tangent sections)	4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	-
Curb type (Refer to Section 3C-2) — Design speed = 50 or 55 mph	6-inch sloped	6-inch standard	-
Curb type (Refer to Section 3C-2) — Design speed ≥ 60 mph	4-inch sloped	6-inch sloped	-
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance) — Adjacent to shoulder	10:1 for 4' then 6:1	3:1	6:1 and 3:1
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance) — Beyond standard ditch depth and design clear zone	3.5:1	3:1	-
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance) — Curbed roadways	2%	not steeper than 3:1	-
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	3:1	2.5:1	
Transverse Slopes — w/ drainage structures	8:1	6:1	
Transverse Slopes — w/o drainage structures	10:1	6:1	
Ditches (Refer to Section 3G-1)	5 x 10	--	
Bridge width—new* — Bridge length ≤ 200 ft	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	
Bridge width—new* — Bridge length > 200 ft	design lane widths + effective shoulder widths	design lane width + 4' right and left of the design lane widths	
Bridge width—existing*	design lane widths + no less than 2 ft offset left and right	design lane widths + 2 ft. offset left and right	30
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks) — Over primary	16.5	16	
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks) — Over non-primary	16.5 at interchange locations, 15 at all other locations	14	
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks) — Over railroad	23.3	23.3	
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks) — Sign trusses and pedestrian bridges	17.5	17	
Structural Capacity	Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	
Level of Service	B	B	C

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

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Design year ADT =

Design Manual Section 1C-1
Last Updated: 04-29-19

Effective Shoulder Width and Type for Two-Lane Highways

Preferred (values shown in feet)			Acceptable (values shown in feet)			Project Values
	Rural Roadways	Urban Roadways		Rural Roadways	Urban Roadways	
Turn lanes with shoulders	6	6	Turn lanes with shoulders	6	0	
Turn lanes with curbs	6	See Section 3C-2	Turn lanes with curbs	6	0	
	Effective Shoulder Width	Paved Width		Effective Shoulder Width	Paved Width	
Climbing Lanes	6	4	Climbing Lanes	4	0	
Two-Lane Highways	Effective Shoulder Width	Paved Width	Two-Lane Highways	Effective Shoulder Width	Paved Width	
Routes where bicycles are to be accommodated	10	10	Design year ADT > 2000 vpd	8	0*	
On roadways approaching urban areas (due to increased bike traffic)	10	10				
On all curves with a superelevation rate of 7.0% or greater	10	10				
On roadways with design year ADT > 5000	10	6	Design year ADT between 400 - 2000 vpd	6	0*	
On all other NHS	10	6				
On non-NHS routes with design year ADT > 3000	10	6	Design year ADT < 400 vpd	4	0*	
On non-NHS routes with design year ADT < 3000	8	0*				

*Requires safety edge-Refer to Section 3C-6

Curbs should be located beyond the outer edge of the effective shoulder width in rural areas

Refer to Section 3C-2 for curb offsets in urban areas

Notes:

Roadway Design Speed (mph) =

Design Manual Section 1C-1
Last Updated: 04-29-19

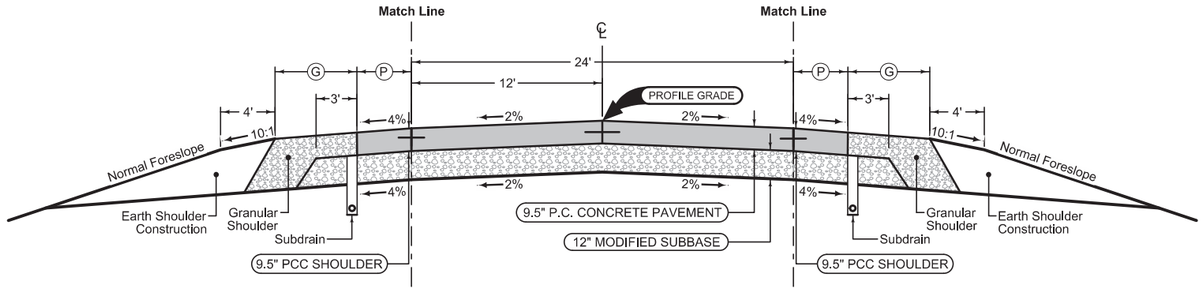
Design Criteria for High Speed Roadways

Design Element			Preferred Criteria, Design Speed, mph						Acceptable Criteria, Design Speed, mph						Project Values
			50	55	60	65	70	75	50	55	60	65	70	75	
Stopping sight distance (ft) (Refer to Section 6D-1)			425	495	570	645	730	820	425	495	570	645	730	820	
Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3)	Method 5 superelevation and side friction distribution	e_{max} = 6%	833	1060	1330	1660	2040	2500	833	1060	1330	1660	2040	2500	
		e_{max} = 8%	--	--	--	--	--	--	758	960	1200	1480	1810	2210	
Minimum vertical curve length (ft) (Refer to Section 2B-1)			150	165	180	195	210	225	150	165	180	195	210	225	
Minimum rate of vertical curvature (K) (Refer to Section 2B-1)	crest vertical curves		84	114	151	193	247	312	84	114	151	193	247	312	
	sag vertical curves	roadways without fixed-source lighting	96	115	136	157	181	206	96	115	136	157	181	206	
		roadways with fixed-source lighting	96	115	136	157	181	206	54	66	78	91	106	121	
Minimum gradient (%)	(Refer to Section 2B-1)		0.5						0.3% with a curb, 0.0% without a curb						
Maximum gradient (%)	(Refer to Section 2B-1)	Urban roadways	4		3				7	6	6	–	–	–	
		Rural roadways							5	5	4	4	4	4	
		Interstates							5	5	4	4	4	4	
Clear zone			See "Preferred Clear Zone" table in Section 8A-2						See "Acceptable Clear Zone" table in Section 8A-2						

Full Depth PCC Combination Shoulder

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

2_C_FullPCC_ 04-15-25			
STATION TO STATION		(P) Feet	(G) Feet
67+00.00	70+25.00	4	6



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

2P_ 04-21-20	
STATION TO STATION	
67+00.00	70+25.00

Full Depth PCC Combination Shoulder

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

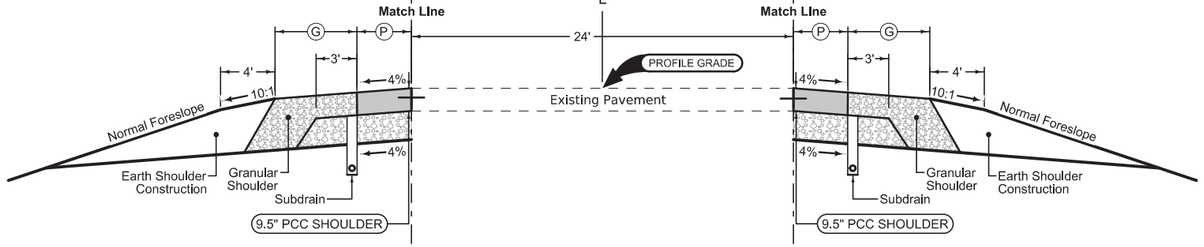
2_C_FullPCC_ 04-15-25			
STATION TO STATION		(P) Feet	(G) Feet
67+00.00	70+25.00	4	6

2E_
10-19-10

Full Depth PCC Combination Shoulder

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

2_C_FullPCC_ 04-15-25			
STATION TO STATION		(P) Feet	(G) Feet
70+25.00	70+75.00	4	6



Full Depth PCC Combination Shoulder

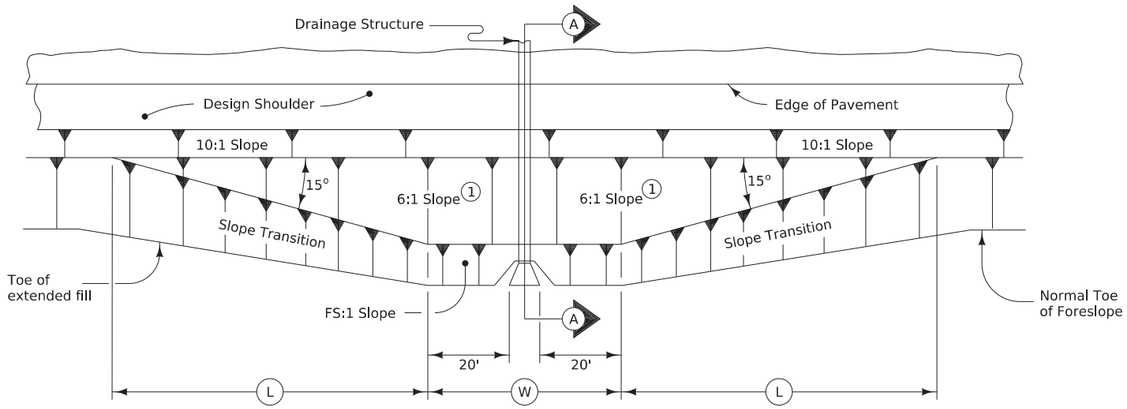
Shoulder Jointing:
Longitudinal joint: BT-2, or L-2
Transverse joints: C at 17' spacing

2_C_FullPCC_ 04-15-25			
STATION TO STATION		(P) Feet	(G) Feet
66+50.00	67+00.00	4	6

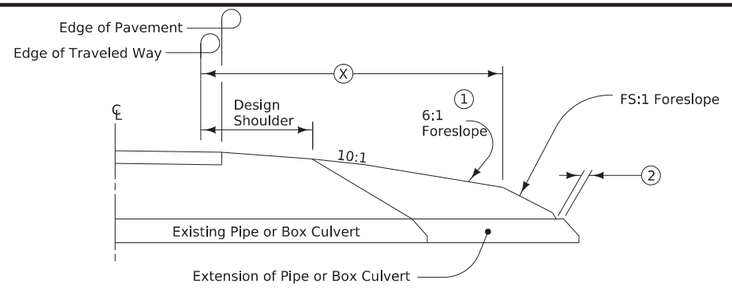
See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

US 71



PLAN VIEW



SECTION A-A

STRUCTURE LOCATION		W	L	X	FS
STATION	SIDE	Feet	Feet	Feet	
68+67.50	West	80	74.64	30	3
68+67.50	East	80	74.64	30	3

4311
04-18-17

Notes:

At locations where an extended or newly constructed drainage structure extends beyond the normal foreslope cover, flatten the foreslope as indicated so as to cover the structure. Minimum earth cover is 6".

(1) Slope may be flatter than 6:1.

(2) 6" Minimum for pipe installations or to top of headwall on R.C.B.

(W) = Pipe or R.C.B. opening width plus 20 feet each side.

BARNROOF FORESLOPE AT DRAINAGE STRUCTURE

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
- WH Water Hydrant (Rural)
- ST Septic Tank
- C Cistern
- LP L.P. Gas Tank (No Footing)
- UST Underground Storage Tank
- Latrine
- Satellite TV Dish
- WHU Water Hook Up
- RT Radio Tower
- TA Tower Anchor
- Guardrail (Beam or Cable)
- GP Guard Post (one or two)
- Guard Post (over two)
- FP Filler Pipe
- GV Gas Valve
- WV Water Valve
- SL Speed Limit Sign
- MM Mile Marker Post
- SIGN Sign
- TCB Traffic Signal Control Box
- RRB Rail Road Signal Control Box
- TSB Telephone Switch Box
- EB Electric Box

UTILITY LEGEND

SURVEYED UTILITY OWNER SYMBOLS

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

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

FO — ***FO1D, Fiber Optic Marne Elk Horn Telephone - Quality D***
FO2 — ***FO2D, Fiber Optic ICN - Quality D***

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.		
Green	(2)	Existing Topographic Features and Labels	
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation	
Magenta	(5)	Existing Utilities	
SHADING	**Design Color No.**		**Transparency**
Pink, Dark	(13)	Temporary Pavement Shading	50%
Yellow	(4)	Proposed Pavement Shading	50%
Orange	(6)	Proposed Granular Shading	50%
Orange	(70)	Proposed Shoulder Granular Shading	50%
Yellow	(68)	Proposed Shoulder Paved Full Depth Shading	50%
Yellow	(132)	Proposed Shoulder Paved Partial Depth Shading	50%
Brown, Light	(236)	Grading Shading	50%
Orange, Light	(134)	Proposed Granular Entrance Shading	50%
Yellow	(220)	Proposed Paved Entrance Shading	50%
Tan	(8)	Proposed Sidewalk Shading	50%
Blue, Light	(230)	Proposed Sidewalk Landing Shading	50%
Pink	(11)	Proposed Sidewalk Ramp Shading	50%
Red	(3)	Proposed Structure Shading	50%
Red	(3)	Delineates Restricted Areas	0%

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

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

RIGHT-OF-WAY LEGEND

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

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Jack	AUDUBON COUNTY	PROJECT NUMBER BRF-071-4(064)--38-05	SHEET NUMBER D.1

8:52:06 AM 10/7/2026 mjack pw:\\iowadot-pw.bentley.com:iowadot-pw-02\Documents\Projects\25-05-071-020\BRF-071-4(064)--38-05\SHT_D01_05071064Z07.dgn

Oakfield TWP.
T-78N R-36W
SEC. 25

REMOVE
Sta. 68+70.0
30'x80'
Continuous Concrete
Slab Bridge
D.A.=2284Ac VH-F

STA 67+00.00 (ML071)
BEGIN FULL WIDTH CONSTRUCTION

STA 70+25.00 (ML071)
END FULL WIDTH CONSTRUCTION

STA 70+75.00 (ML071)
END SB SHOULDER
CONSTRUCTION

U.A.C.
18"x39'
C.M.P.

REMOVE
40"x55'
C.M.P.

66+00
67+00
68+00
69+00
70+00
71+00

F0
F02

71

STA 66+50.00 (ML071)
BEGIN NB SHOULDER
CONSTRUCTION

T-Bone Recreational Trail

T-Bone Recreational Trail

0 20
FEET

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Jack	AUDUBON COUNTY	PROJECT NUMBER BRF-071-4(064)--38-05	SHEET NUMBER D.2	

8:58:11 AM 10/7/2026 mjack pw:\\iowadot-pw.bentley.com:iowadot-pw-02\Documents\Projects\25-05-071-020\BRF-071-4(064)--38-05\SHT_D02_05071064Z07.dgn

Imagery ©2026 Airbus

TIE IN
STA 67+00.00
EL 1199.96

VPI = +25.00
EL = 1200.34
L = 200.00'
K = 334

TIE IN
STA 70+25.00
EL 1199.74

+0.30%

-0.30%

RT +50
1192.38

-0.40% RT Ditch Grade

RT +25
1191.68

+1.00% RDG

RT +15
1192.24

RT +50
1192.59

+0.90% LT Ditch Grade

LT +75
1189.85

LT +62
1188.84

+11.50% LT Ditch Grade

-9.53% LDG

+0.00% LDG

LT +30
1181.36

LT +45
1179.93

LT +85
1179.93

1205
1200
1195
1190
1185
1180
1175
1170

66+00 67+00 68+00 69+00 70+00 71+00

1199.96 1200.02 1200.08 1200.12 1200.16 1200.18 1200.19 1200.18 1200.17 1200.14 1200.10 1200.05 1199.99 1199.93 1199.87 1199.81 1199.75 1199.74

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Jack	AUDUBON COUNTY	PROJECT NUMBER BRF-071-4(064)--38-05	SHEET NUMBER D.3

8:58:12 AM 10/7/2026 mjack pw:\\iowadot-pw.bentley.com:iowadot-pw-02\Documents\Projects\25-05-071-020\BRF-071-4(064)--38-05\SHT_D02_05071064Z07.dgn

Imagery ©2026 Airbus

SURVEY INDEX

County: Audubon
Project Code: 25-05-071-020
Phase Number: BRF-071-4(064)--38-05
Location: Stream 1.7 mi N of I-80
Work Code: 2001-Bridge-Repacement
Project Directory: 0507102025

Survey Personnel

Paul Harry – Survey Party Chief
Bob Fredrickson – Assistant Survey Party Chief

Date(s) of Survey

Begin Date	02/12/2026
End Date	04/20/2026

General Information

This survey is for US Hwy 71 bridge replacement over stream 1.7miles north of I-80.
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

Coordinates were determined for primary project control points by conducting concurrent six-hour static observations. Post processing is constrained to nearby Iowa Real Time Network reference stations. For additional details of the control survey, contact the Preliminary Survey department.

PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 ADJUSTMENT)
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 07 (U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

The horizontal alignment for U.S. Hwy 71 this survey was provided by the District 4 ROW Office.

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 07 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u3

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

FILE NO.	ENGLISH	DESIGN TEAM **Flattery\Bell\Jack**	**AUDUBON** COUNTY	PROJECT NUMBER **BRF-071-4(064)--38-05**	SHEET NUMBER **G.2**	

9:15:34 AM 10/7/2026 mjack pw:\\iowadot-pw.bentley.com:iowadot-pw-02\Documents\Projects\25-05-071-020\BRF-071-4(064)--38-05\SHT_G01_05071064Z07.dgn

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)
Ia. Regional Coordinate System Zone 07 (U.S. Survey Foot)

VERT. DATUM: NAVD88
Geoid Model: 2018u3

Point Name	Northing	Easting	Elevation	Code-Description
50710698	7262528.64	17416160.71	1196.052	CP SET IOWA DOT FENO MONUMENT
50710704	7265217.89	17416571.82	1196.77	CP SET IOWA DOT FENO MONUMENT
BRAY	7254460.83	17408878.96	1363.45	CP NGS MONUMENT AS DESCRIBED IN GOOD CONDITION

ALIGNMENT COORDINATES

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
1	ML071	2687.600 R1	7259930.39	17415433.55															
2	ML071							3797.253 R1	7261024.28	17415619.95	4639.159 R1	7261854.22	17415761.38	5469.152 R1	7262608.62	17416135.11			
4	ML071	8700.864 R1	7265504.46	17417569.72															
4	ML071	12194.834 R1	7268634.21	17419122.93															

SPIRAL OR CIRCULAR CURVE DATA

Name	Chain	ΔSCS	Horizontal Alignment Data													Remarks
			Spiral Data								Curve Data					
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R	E	
C1	ML071										16.683	841.906	1671.899	5741.800	61.395	

108-23A
08-01-08

TRAFFIC CONTROL PLAN

US 71 will be closed to thru traffic during construction.

US 71 shall be maintained via offsite detour. Detour shall be signed and maintained by contractor. See J Sheets for detour.

111-01
04-17-12

COORDINATED OPERATIONS

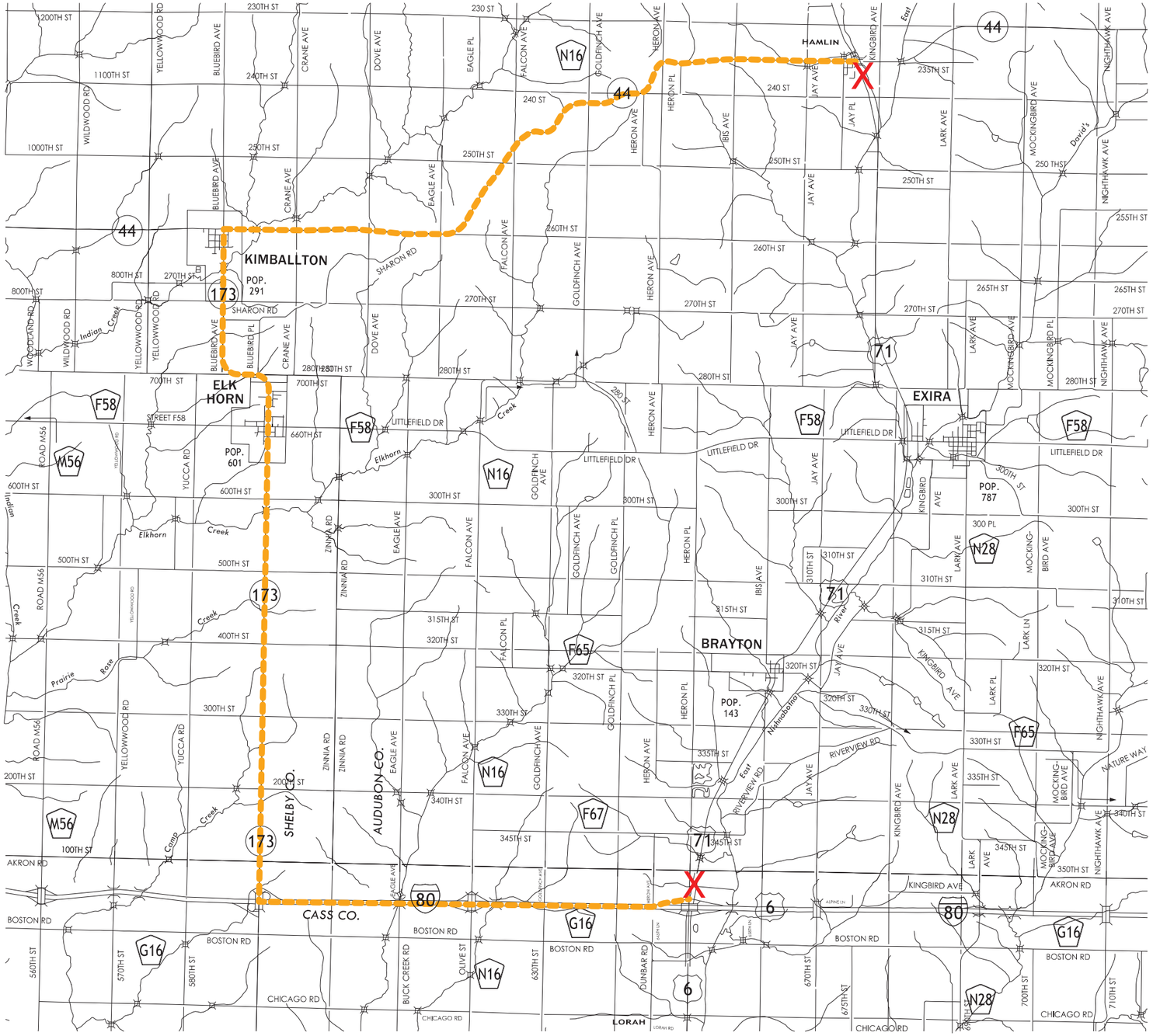
Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
	None provided.

108-25
10-21-14

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
			No travel restrictions expected.									



NOT TO SCALE

LEGEND

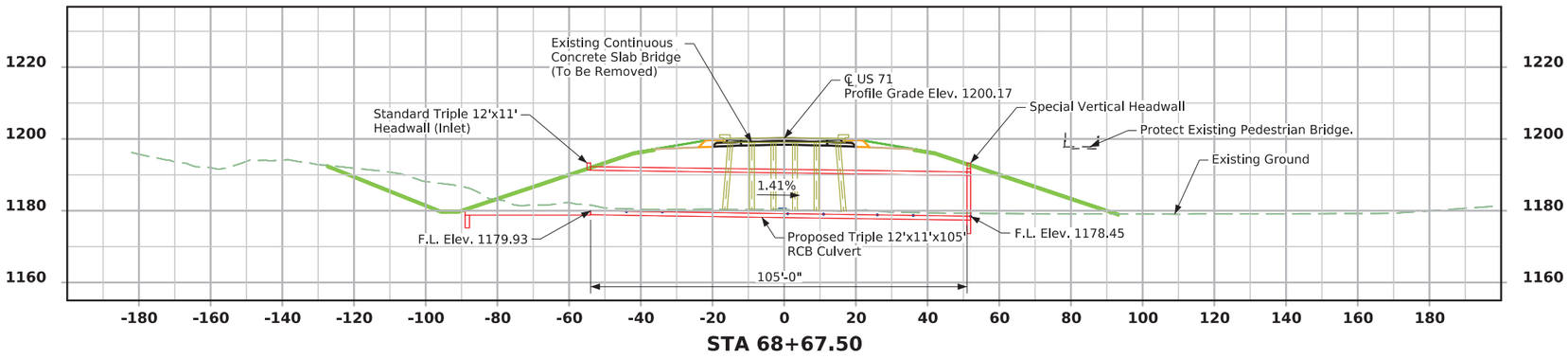
DETOUR ROUTE

CLOSED X

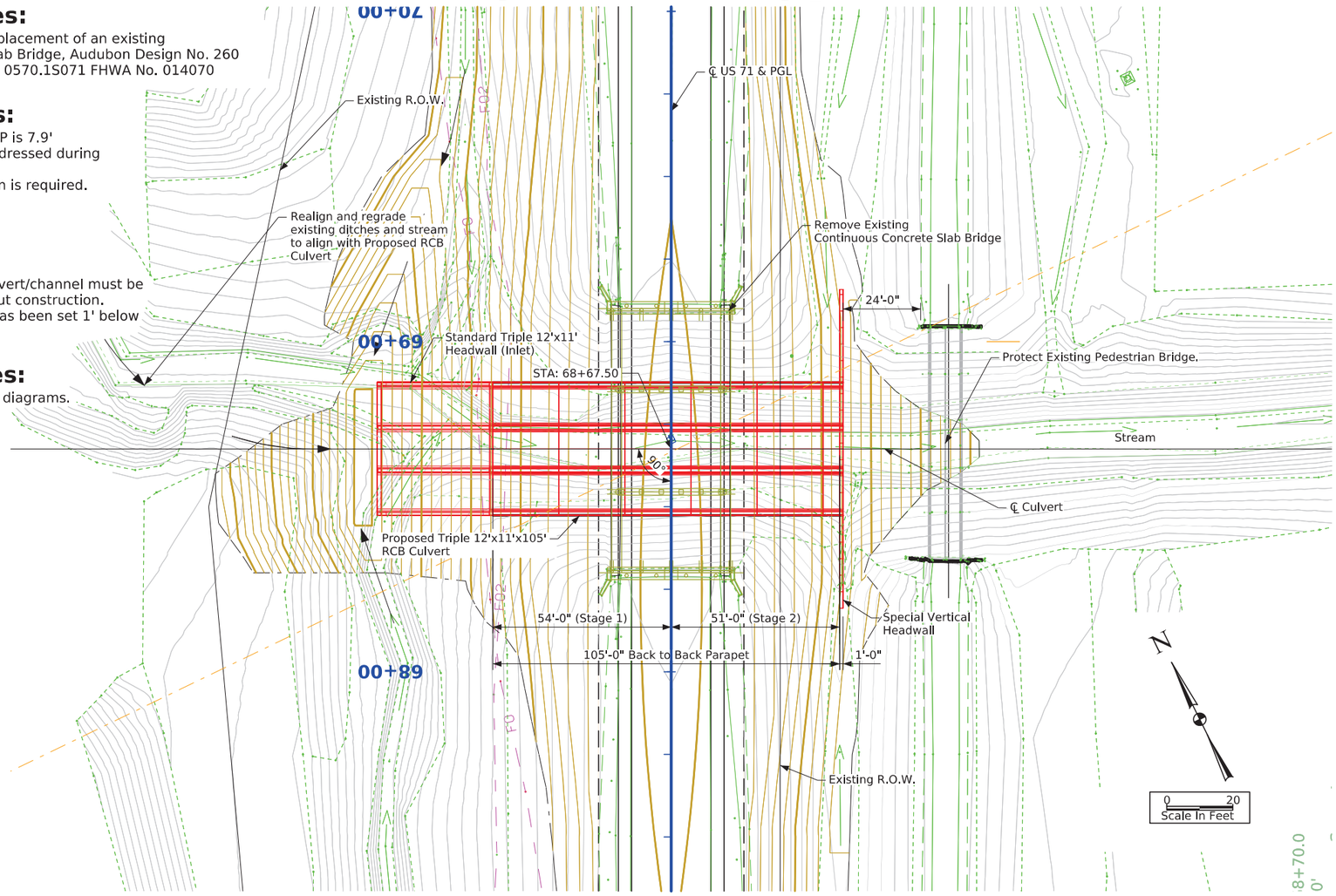
Co Rd L66
DETOUR

FILE NO.	ENGLISH	DESIGN TEAM **Flattery\Bell\Jack**	**AUDUBON** COUNTY	PROJECT NUMBER **BRF-071-4(064)--38-05**	SHEET NUMBER **J.2**	

9:22:59 AM 10/7/2026 mjack pw:\\iowadot-pw.bentley.com:iowadot-pw-02\Documents\Projects\25-05-071-020\BRF-071-4(064)--38-05\SHT_J02_05071064Z07.dgn



Longitudinal Section Along ℄ Culvert



Situation Plan

General Notes:

This design is for the replacement of an existing Continuous Concrete Slab Bridge, Audubon Design No. 260 Bridge Maintenance No. 0570.1S071 FHWA No. 014070

Design Notes:

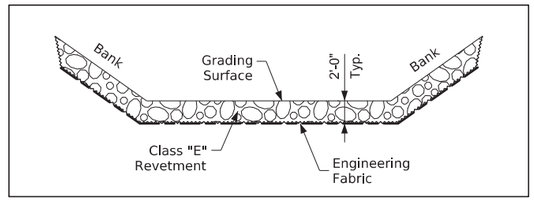
1. Design fill for this C.I.P is 7.9'
2. Settlement will be addressed during later design stages.
3. Permanent acquisition is required.

Plan Notes:

1. Drainage through culvert/channel must be maintained throughout construction.
2. Flow Line of culvert has been set 1' below streambed.

Staging Notes:

1. See attached staging diagrams.



Typical Channel Protection

Estimated Revetment Quantities Included With Road Plans

Location	Revetment Class "E" (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Inlet			
Outlet			
Totals			

Excavation quantity calculated from grading surface. Excavation quantity is for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans. Quantities shown for information only. See Road Sheets.

Hydraulic Data

RIDB: Not Applicable
Drainage Area = 3.12 Sq. Mi.
Stream Slope = 65.43 Ft./Mi.
Q_{50} & Q_{100} Pulled From HEC-RAS 2D Model

Q_{50} = 2,240 cfs
HW Elev. = 1192.99
Exit Velocity = 6.22 fps

Q_{100} = 2,600 cfs
HW Elev. = 1194.21
Exit Velocity = 6.66 fps

Location

US 71 Over Stream
T-78N R-36W
Section 25
Oakfield Township
Audubon County
FHWA No. XXXXXX
Bridge Maint. No. 0570.1S071
Latitude 41.522704°
Longitude -94.937325°

Traffic Estimate

2030 AADT	2800 V.P.D.
2050 AADT	3100 V.P.D.
TRUCKS	18 %

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

CONCEPT

Concept Design For 0° Skew

Triple 12'x11'x105' Reinforced Concrete Box Culvert

Situation Plan

STA. 68+67.50 (US 71)

Turn-in Date: October 2026

Audubon County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. XXXX | Design Sheet No. 1 of 1 | FHWA/Asset XXXXXX

CROSS SECTION VIEW COLOR LEGEND

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

NOTES:

Text

NOTES:

Text

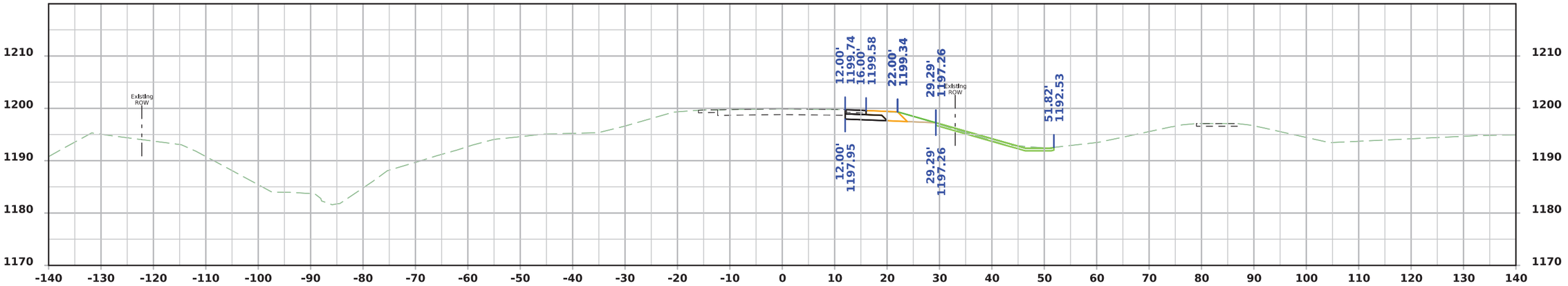
CROSS SECTIONS
LEGEND AND INFORMATION SHEET

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

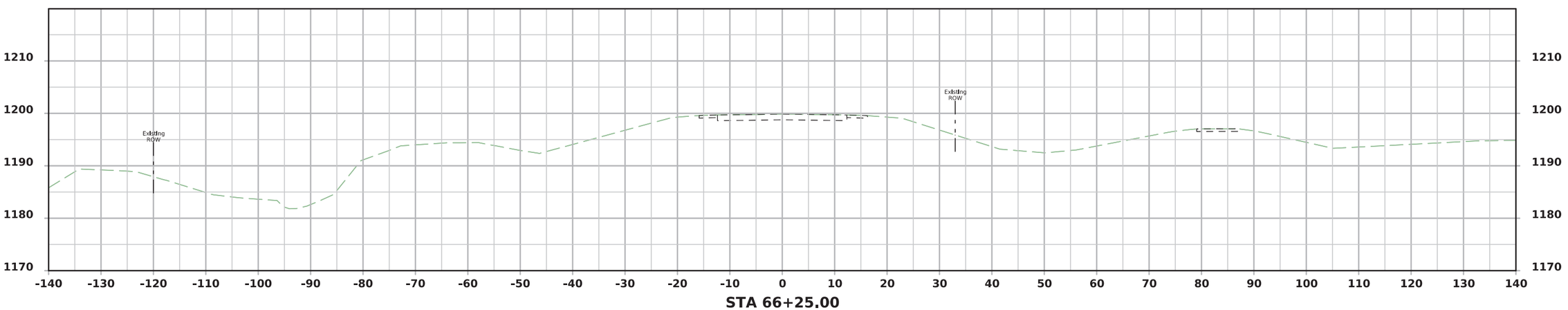
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US 71



STA 66+50.00

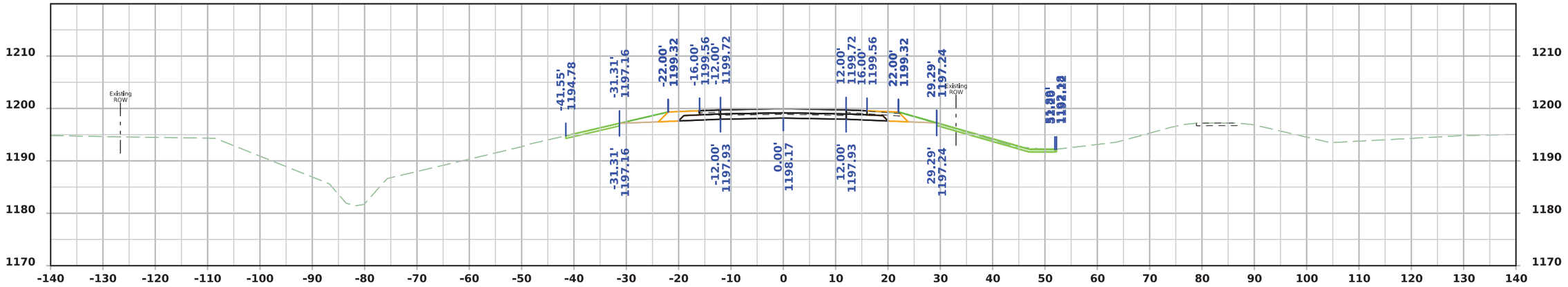


STA 66+25.00

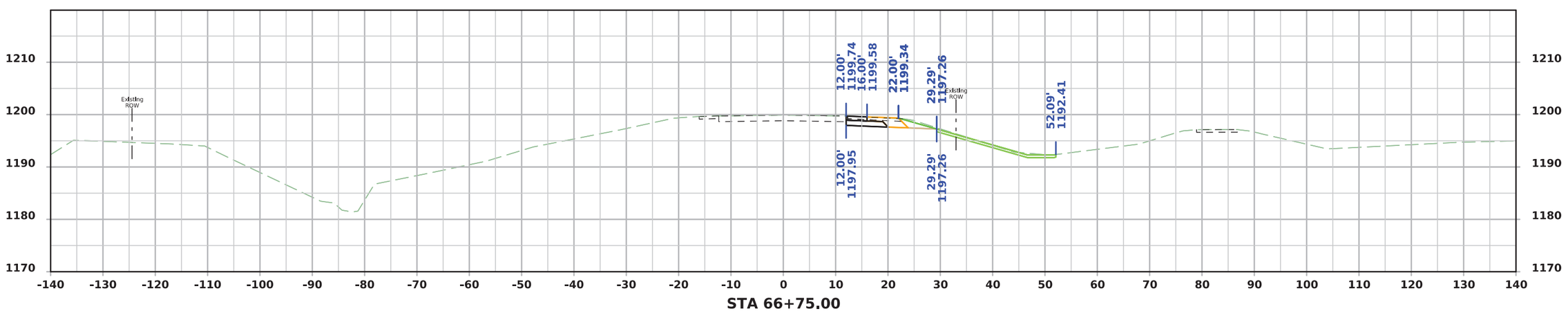
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US 71



STA 67+00.00

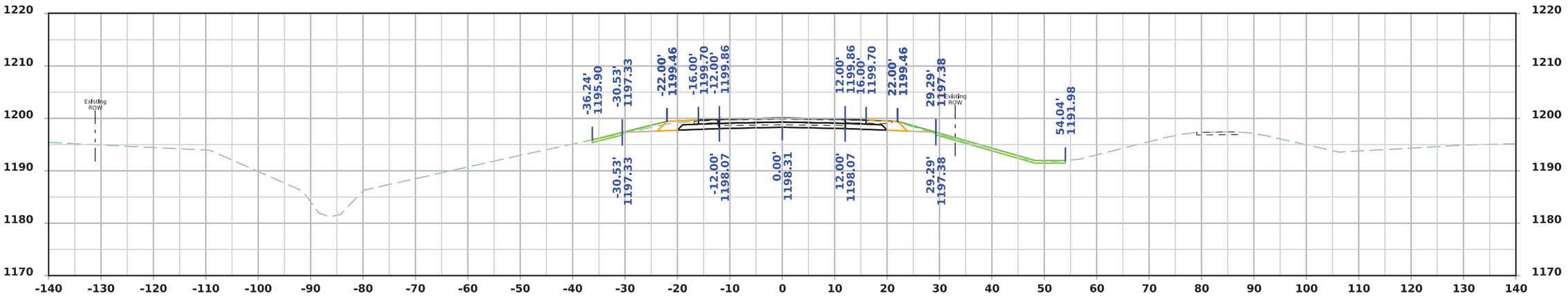


STA 66+75.00

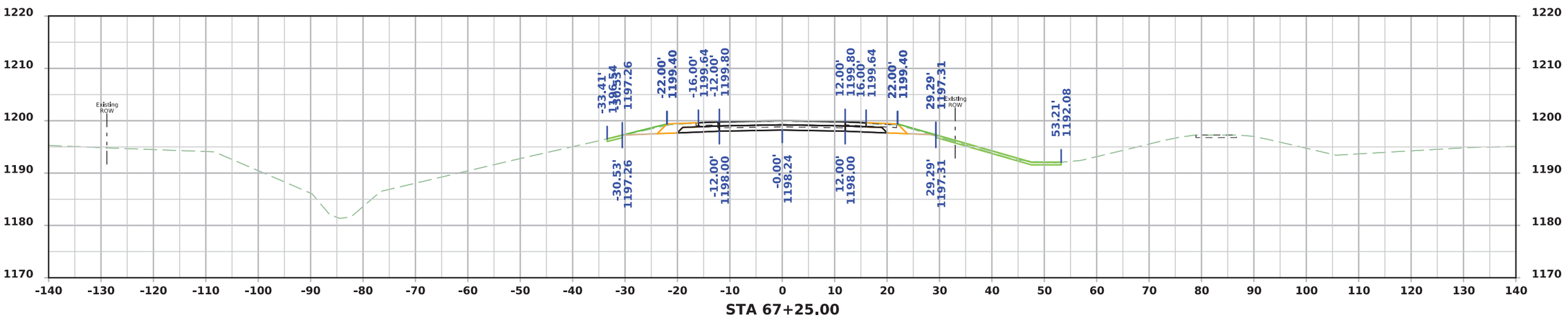
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US 71



STA 67+50.00

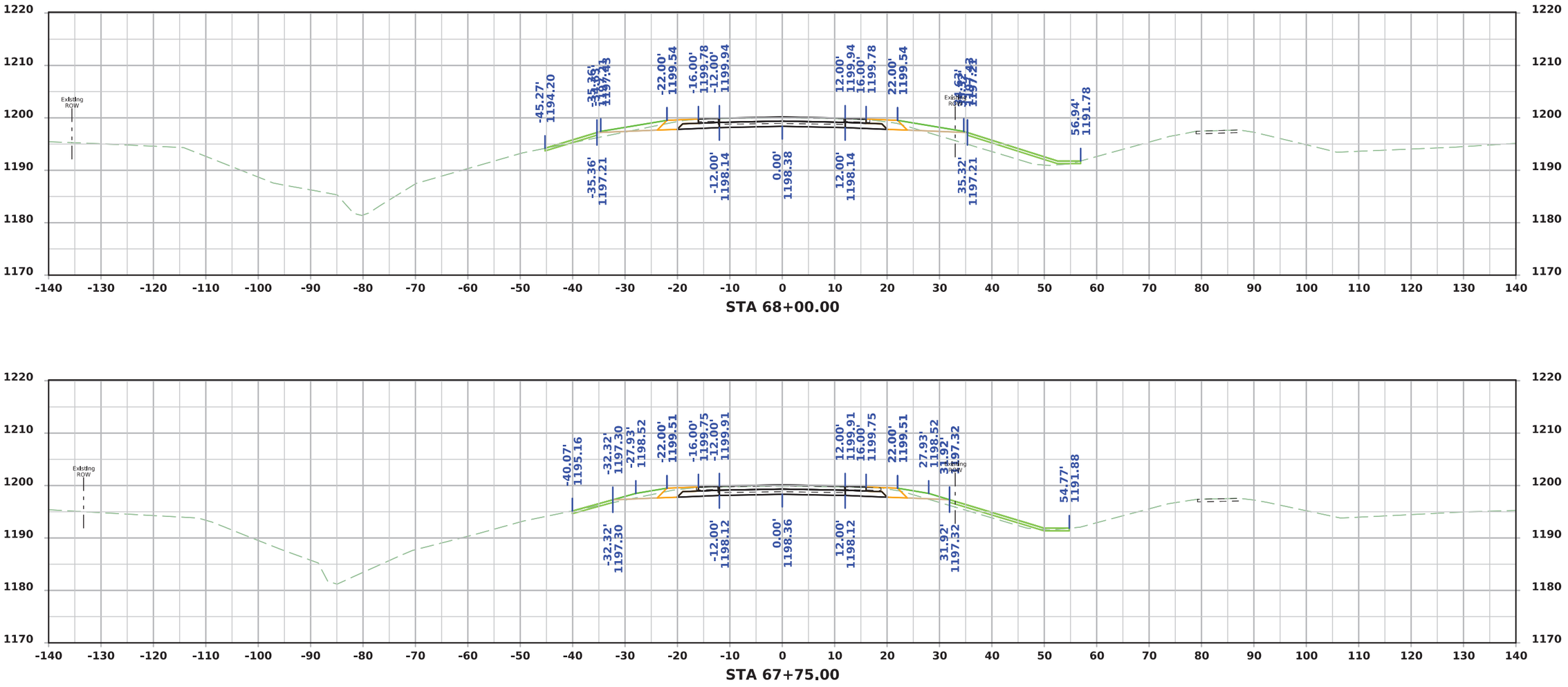


STA 67+25.00

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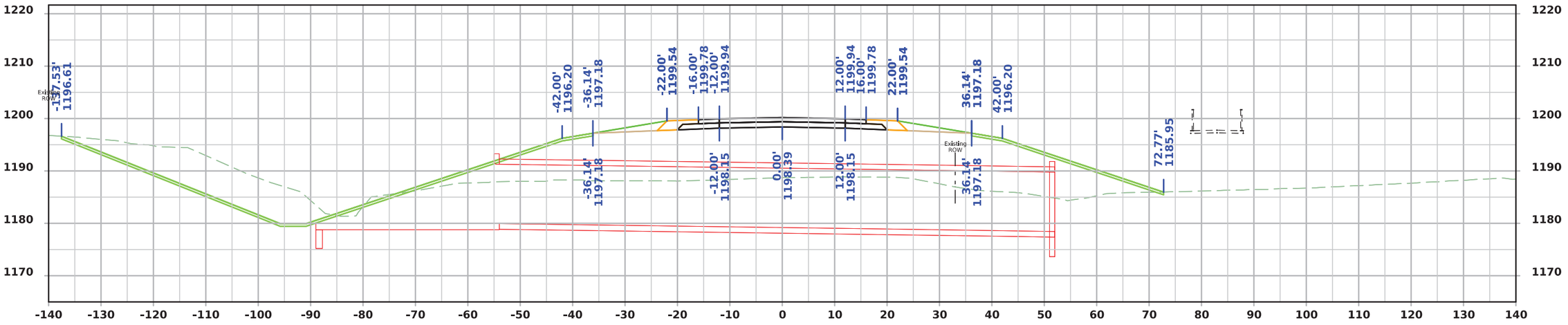
US 71



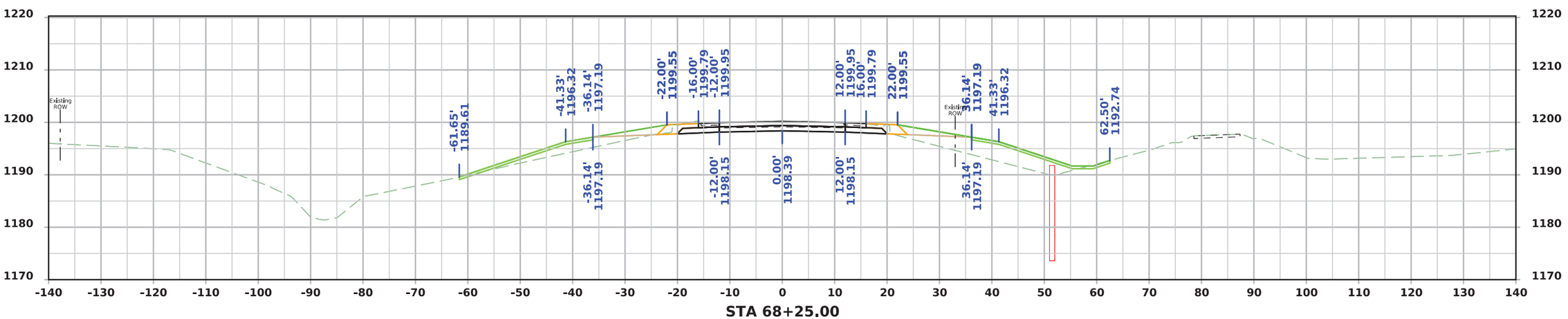
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US 71



STA 68+50.00

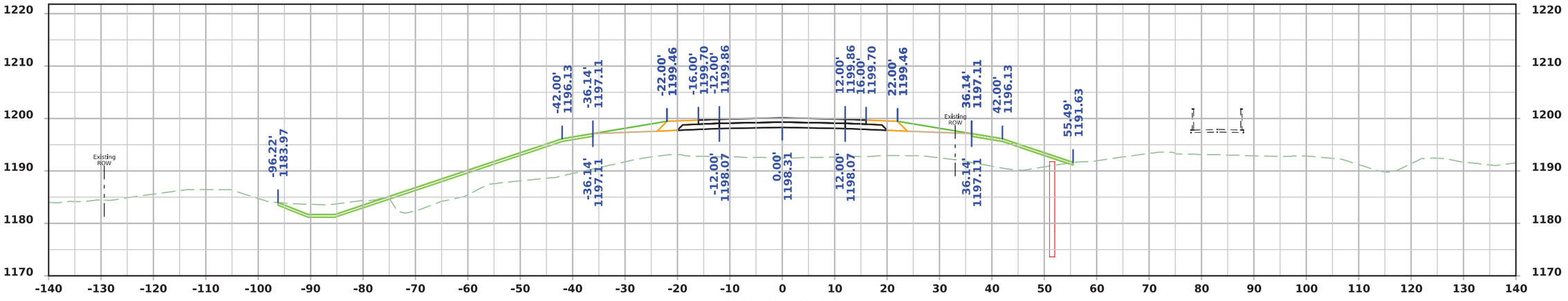


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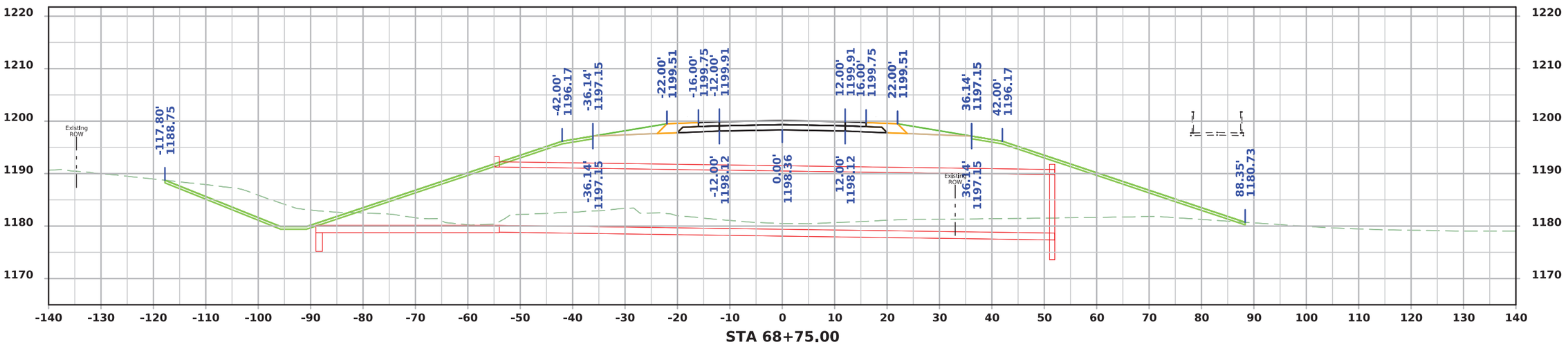
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US 71



STA 69+00.00

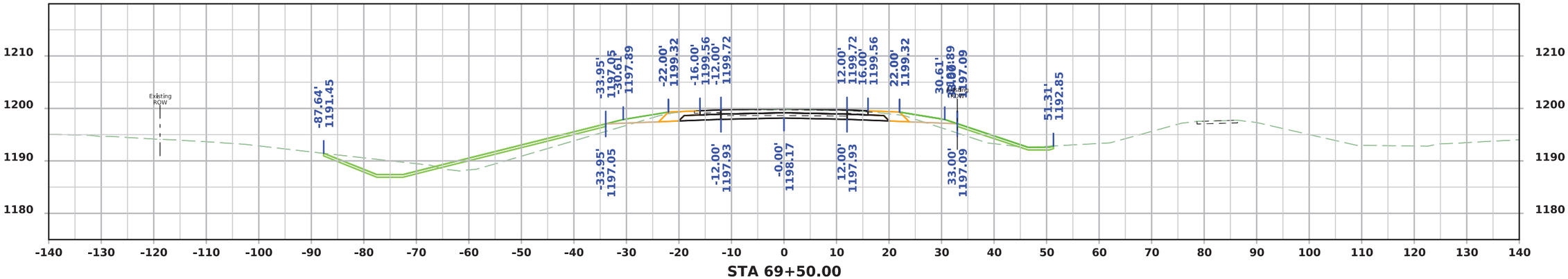


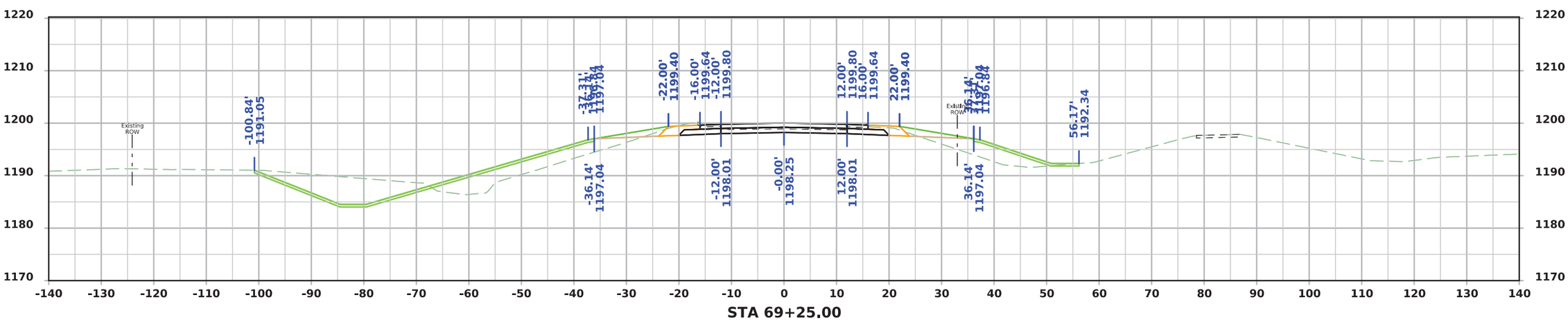
STA 68+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Jack	AUDUBON COUNTY	PROJECT NUMBER BRF-071-4(064)--38-05	SHEET NUMBER W.7

10:44:13 AM 10/7/2026 mjack pw:\\iowadot-pw.bentley.com:iowadot-pw-02\Documents\Projects\25-05-071-020\BRF-071-4(064)--38-05\SHT_W02_05071064Z07.dgn

US 71

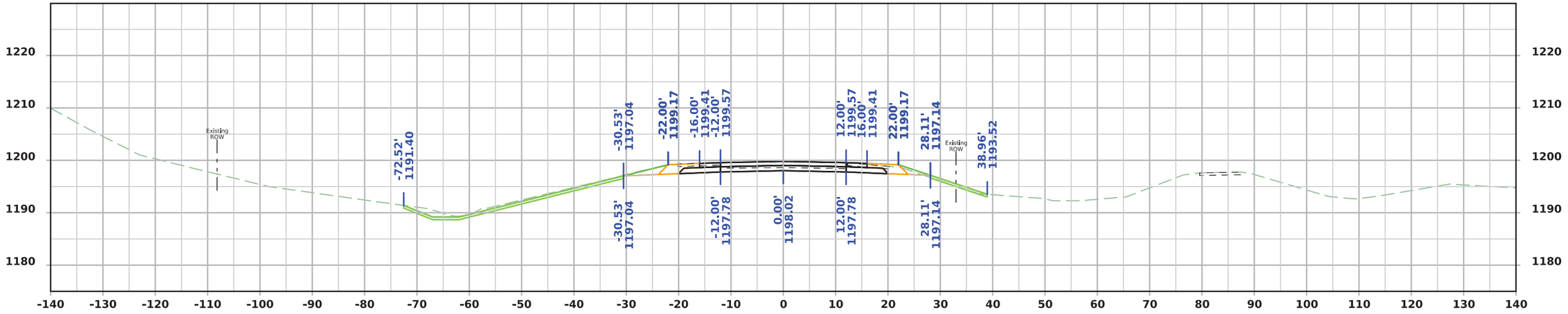




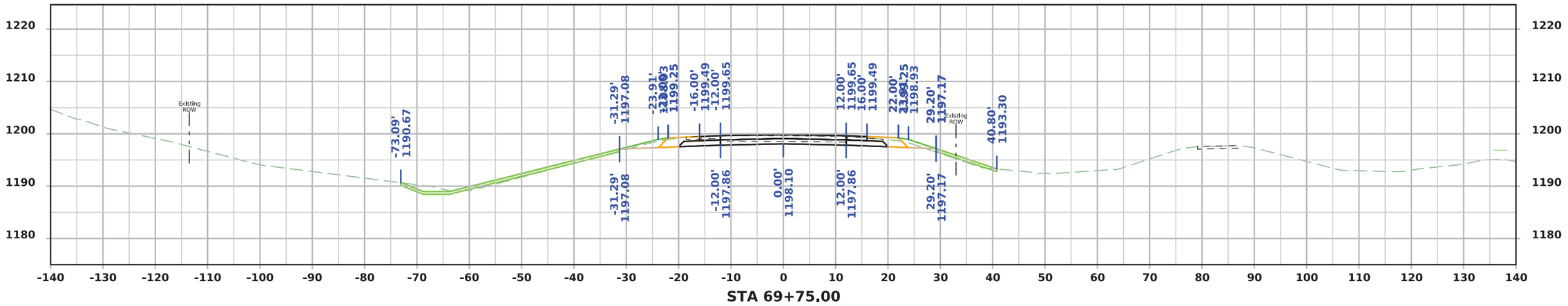
FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Jack	AUDUBON COUNTY	PROJECT NUMBER BRF-071-4(064)--38-05	SHEET NUMBER W.8

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US 71



STA 70+00.00

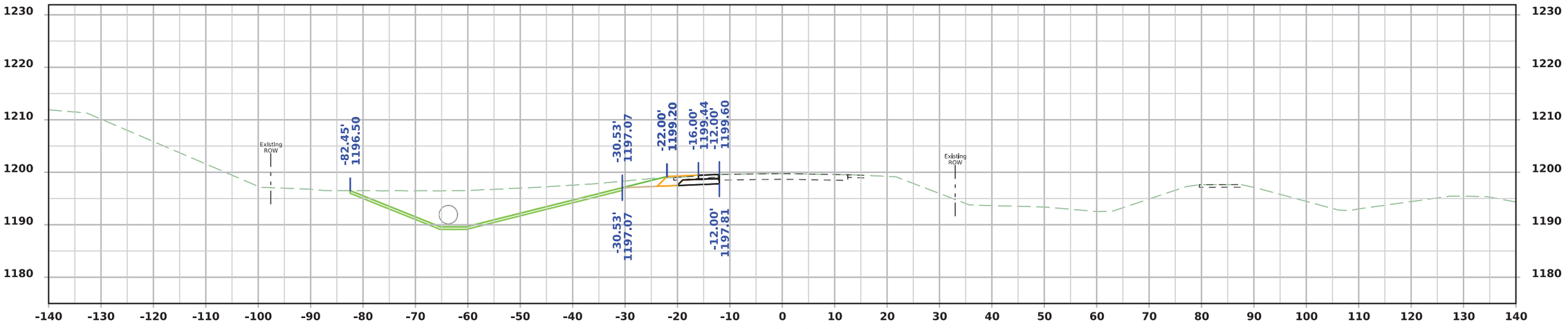


STA 69+75.00

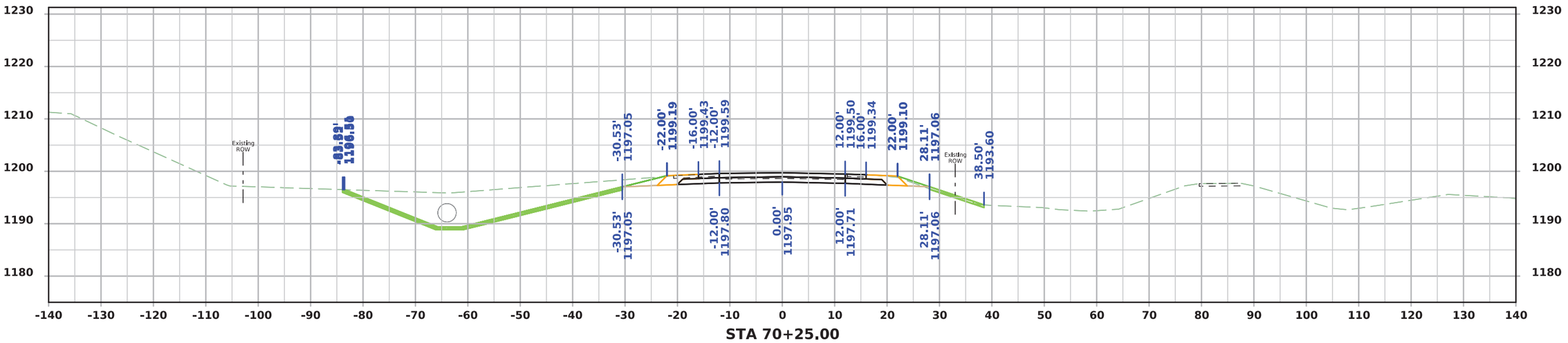
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US 71



STA 70+50.00

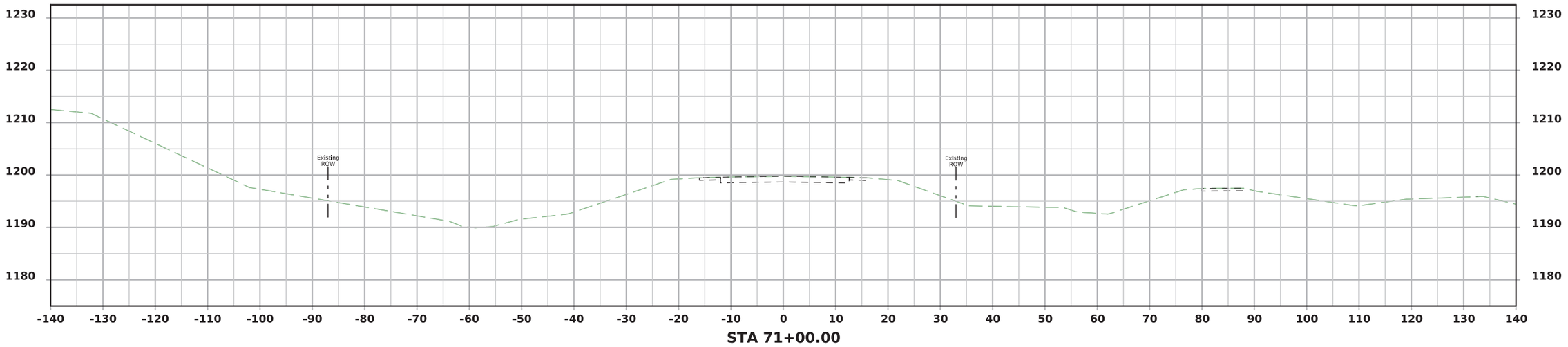


STA 70+25.00

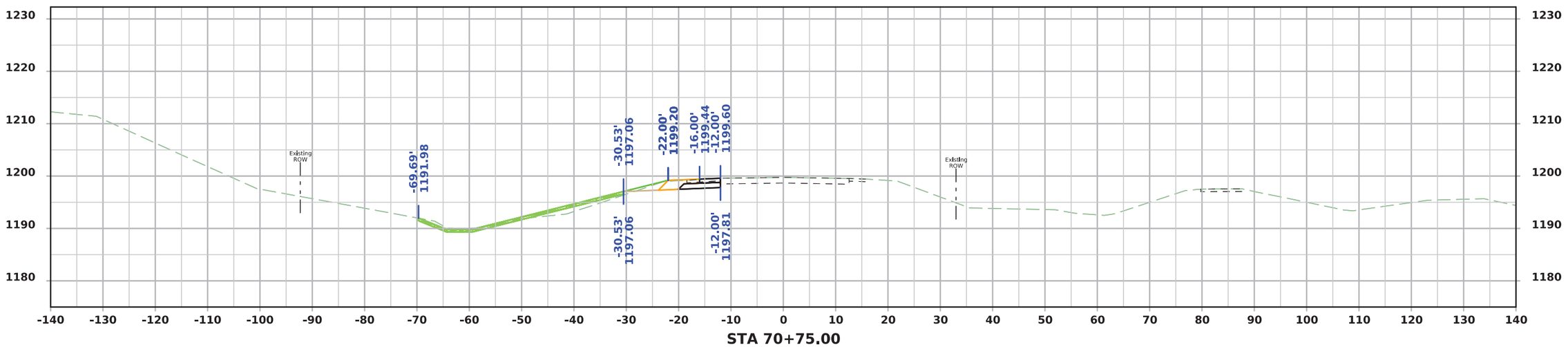
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US 71



STA 71+00.00



STA 70+75.00

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Jack	AUDUBON COUNTY	PROJECT NUMBER BRF-071-4(064)--38-05	SHEET NUMBER W.11

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