



REVISIONS

TOTAL
15

PROJECT IDENTIFICATION NUMBER
22-94-169-020
PROJECT NUMBER
BRF-169-6(093)--38-94
R.O.W. PROJECT NUMBER
NHSN-169-6(096)--2R-94

No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
B Sheets	Typical Cross Sections and Details
B.1	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2	U.S. 169 - Bass Creek Bridge Replacement
G Sheets	Survey Sheets
G.1	Reference Ties and Bench Marks
G.2	Control Point Vicinity Map
G.3	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan
* J.2	Detour Plan
V Sheets	Bridge and Culvert Situation Plans
V.1	Bridge and Culvert Situation Plans
W Sheets	Mainline Cross Sections
W.1 - 5	Mainline Cross Sections
	* Color Plan Sheets

<<< H SHEETS

PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
WEBSTER COUNTY
Bridge-Unspecified
Bass Creek 0.6 mi S of Co Rd C56

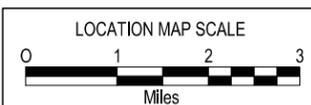
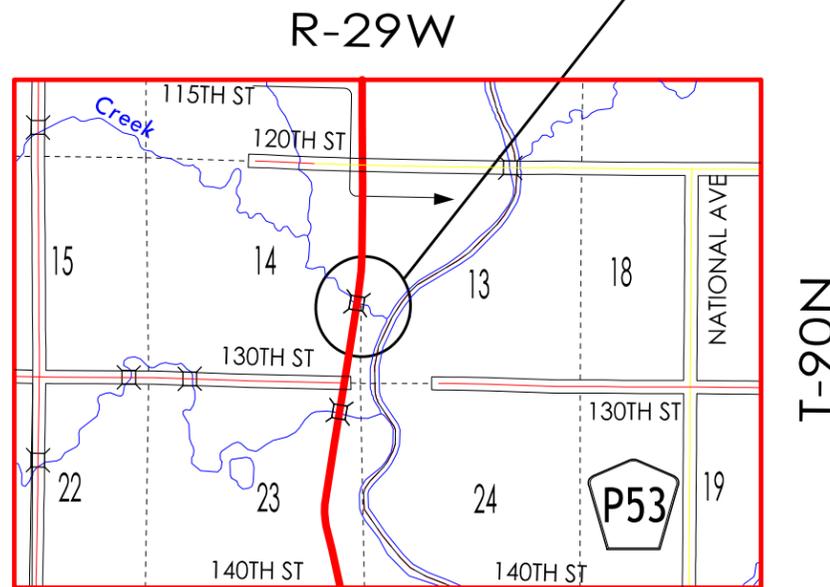
SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



PROJECT LOCATION



DESIGN DATA RURAL			
2023	AADT	4,900	V.P.D.
2043	AADT	6,802	V.P.D.
20	- DHV	-	V.P.H.
	TRUCKS	16.92	%
	Total Design ESALs	3,126,486	

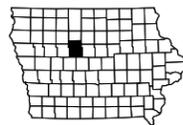
INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Jeremy Vortherms	Primary Signature Block	C.01

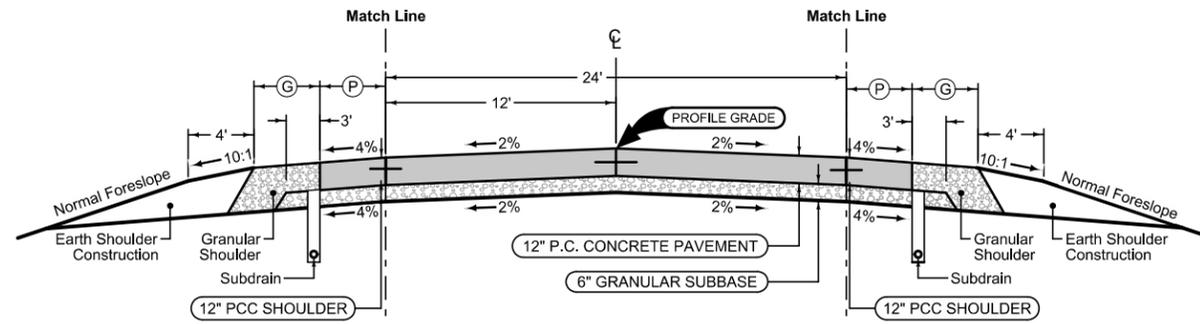
Task Name	Description	Finish	Actual Finish
D01	Survey Plan and Photogrammetry (DTM)	10/04/2024	09/09/2024
D00	Pre-Design Concept	02/21/2025	02/18/2025
D02	Design Field Exam	05/16/2025	05/15/2025
D03	Plans for Preliminary Bridge	05/30/2025	7/10/2025
D05	Plans to Right Of Way	10/03/2025	
L05	Letting-Bridge and Culverts	10/19/2027	

PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN - Date: 10/8/25





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
333+25.00	338+00.00	6	4

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

2P_04-21-20	
STATION TO STATION	
333+25.00	338+00.00

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
333+25.00	338+00.00	6	4

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 Sign
- Traffic Signal Control Box
- Rail Road Signal Control Box
- Telephone Switch Box
- Electric Box

UTILITY LEGEND

- TL1D, ICN - Quality D**
Iowa Communications Network Fiber Transmission
David Augspurger
daugspurger@icn.state.ia.us
- FO1D, WCCTA - Quality D**
Webster-Calhoun Co-op Telephone Assn. Telephone
Daryl Promes
515-351-0833
dpromes@wccta.com
- PPA, MidAmerican Energy**
MidAmerican Energy Company
Matt Novy
515-252-6730
matthew.novy@midamerican.com
- Lumen Centurylink**
Steve Parker
507-358-1978
Steven.Parker4@lumen.com

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

- Reference Point
- 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)

Survey Information

SURVEY INDEX

County: Webster
PIN: 22-94-169-020
Project Number: BRF-169-6(093)--38-94
Location: Bass Creek 0.6 mi S of Co Rd C56
Type of Work: Bridge-Unspecified
Project Directory: 9416902022

Survey Personnel

Clayton Henningsen – Survey Party Chief
Jason Arn – Survey Party Chief

Date(s) of Survey

Begin Date 07/23/2024
End Date 09/03/2024

General Information

This survey is for IA Hwy 169 bridge over bass Creek 0.6 mi south of Co Rd C56 This survey request was for the IA Hwy 169 corridor only. 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 04
(U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

The horizontal alignment for IA Hwy 169 was provided by the IA dot District 1 Land Survey Office.

General Information:

Measurement units for this survey are US survey feet. This survey was completed to find and preserve centerline monumentation and to create a centerline alignment before a work is done on a bridge over US HWY 169.

Vertical Control:

The vertical datum for this survey is NAVD88. The vertical control for this project is relative to said datum, computed using GEOID 12a, and is dependent on the Iowa Real-Time Network (IaRTN) reference stations. Control point elevations were established by 5 redundantly averaged RTK GPS shots utilizing the IaRTN.

Horizontal Control:

The horizontal project coordinate system basis for this survey is from the Iowa Regional Coordinate System Zone 4 projection. Beginning at the PT Sta. 245+63.30 (F-422(4)) and running northerly along US HWY. 169 to PI Sta. 369+03.10 F-422(4) and ending there. The Geodetic Datum is NAD83 (2011) EPOCH 2010.0. Control Point horizontal coordinate positions were established by 5 redundantly averaged RTK GPS shots utilizing the Iowa Real-Time Network.

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 04 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u3

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

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING
 HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)
 Ia. Regional Coordinate System Zone 04 (U.S. Survey Foot)
 VERT. DATUM: NAVD88
 Geoid Model: 2018u3

<u>Point Name</u>	<u>Northing</u>	<u>Easting</u>	<u>Elevation</u>	<u>Feature Definition-Description</u>
6011	8625484.66	14652354.90	1110.04	CP WEBSTER CO MONUMENT AS DESCRIBED IN GOOD CONDITION
941691652	8625321.26	14662866.87	1031.58	CP FENO SET SE QUAD INTERSECTION IA 169 & 130TH ST APPROX 100 FT EAST OF HWY 88 FT SOUTH OF 130TH ST
941691657	8628091.51	14663222.32	1058.09	CP CONC MONUMENT REFERENCE FOR PI OF CURVE ON EAST SIDE IA HWY 169 APPROX 1 FT WEST OF FENCELINE
941691662	8630821.26	14663065.26	1116.42	CP CONC MONUMENT IN NW QUAD INTERSECTION IA 169 & 120TH ST APPROX 85 FT WEST OF HWY 140 FT NORTH OF 120TH ST 10 FT SW OF POWER POLE

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.

Webster NHSN-169-6(096)--2R-94
Bass Creek 0.6 mi S of Co Rd C56
[9416902022](#)

Project Code 22-94-169-020

Route US 169

Parcel No	Owner Name	State		County		City		Excess	Temp Ease		Mitigation	Other	Relocation Needed	A/C Only	Total Acq
		Fee	Ease	Fee	Ease	Fee	Ease								
1	C4 Land LLC	0.02 AC													
2	Tom J Donney	0.17 AC													

2 Parcels

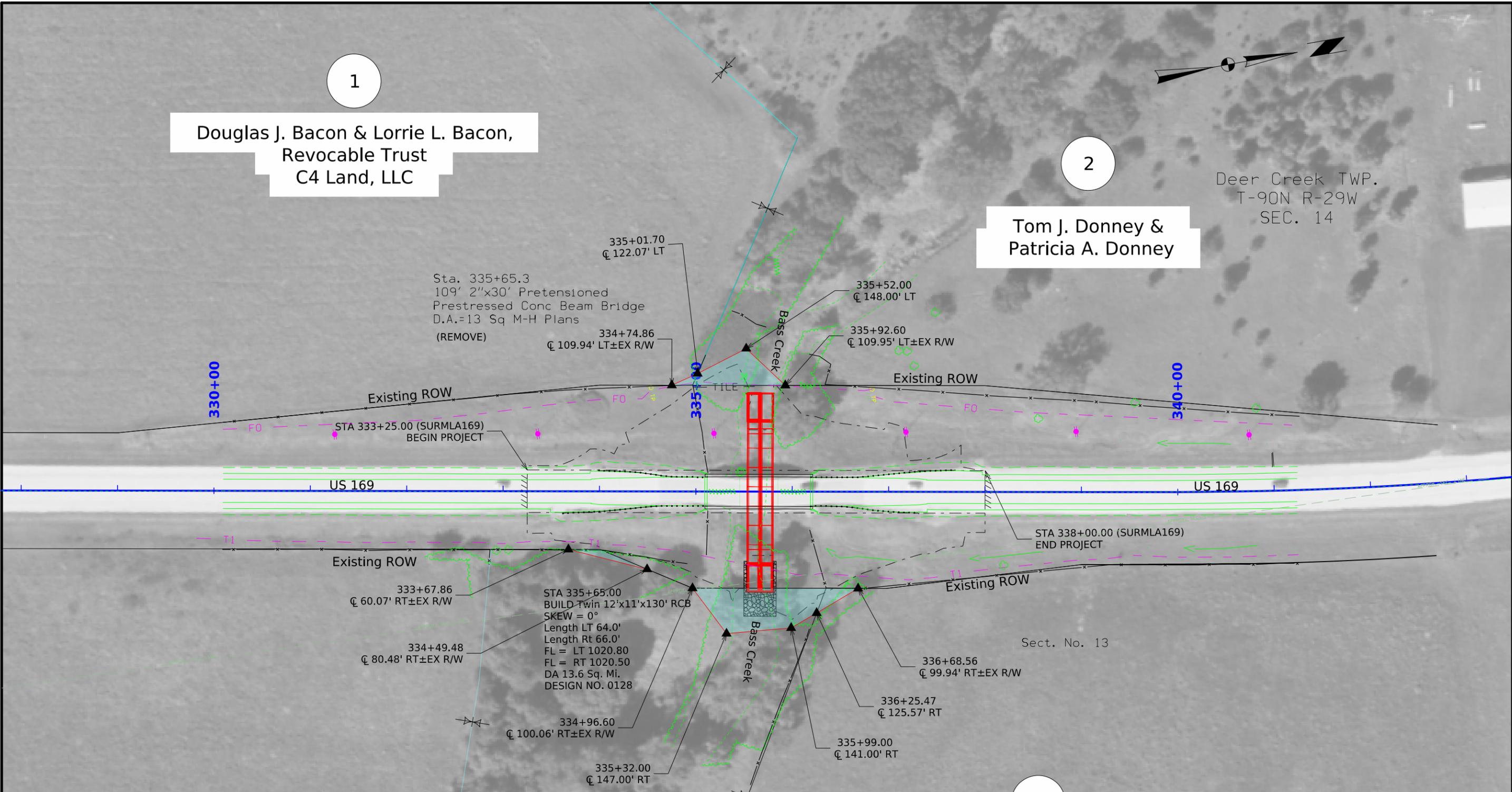
1

Douglas J. Bacon & Lorrie L. Bacon,
Revocable Trust
C4 Land, LLC

2

Tom J. Donney &
Patricia A. Donney

Deer Creek TWP.
T-90N R-29W
SEC. 14



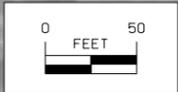
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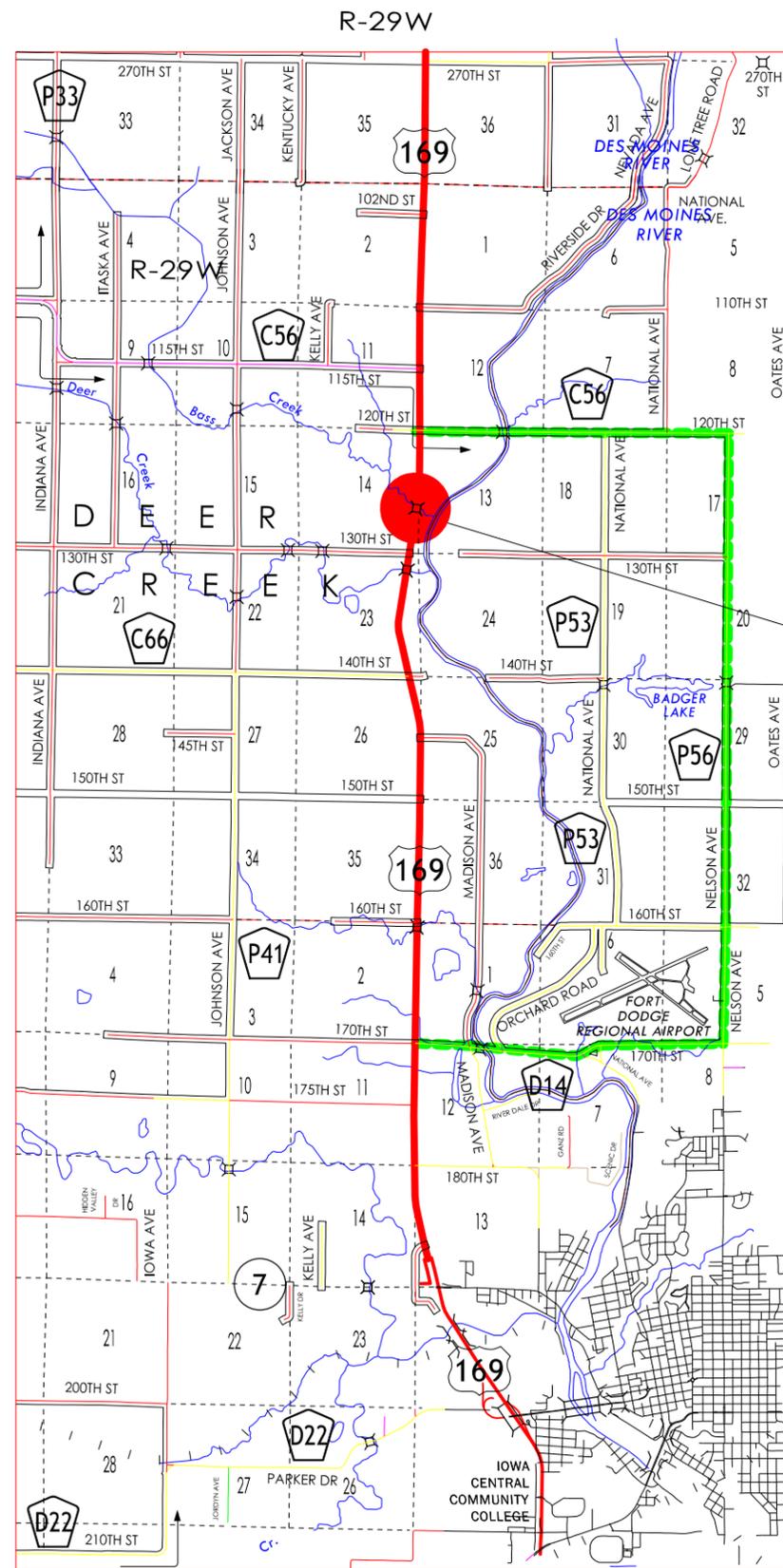
Tom J. Donney &
Patricia A. Donney

1

Douglas J. Bacon & Lorrie L. Bacon,
Revocable Trust
C4 Land, LLC

Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: Fredrickson / Hinrichsen	
ROW #: NHSN-169-6(096)--2R-94	
Plan Date: 1/30/26	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition
	Permanent Acquisition County
	Permanent Acquisition City





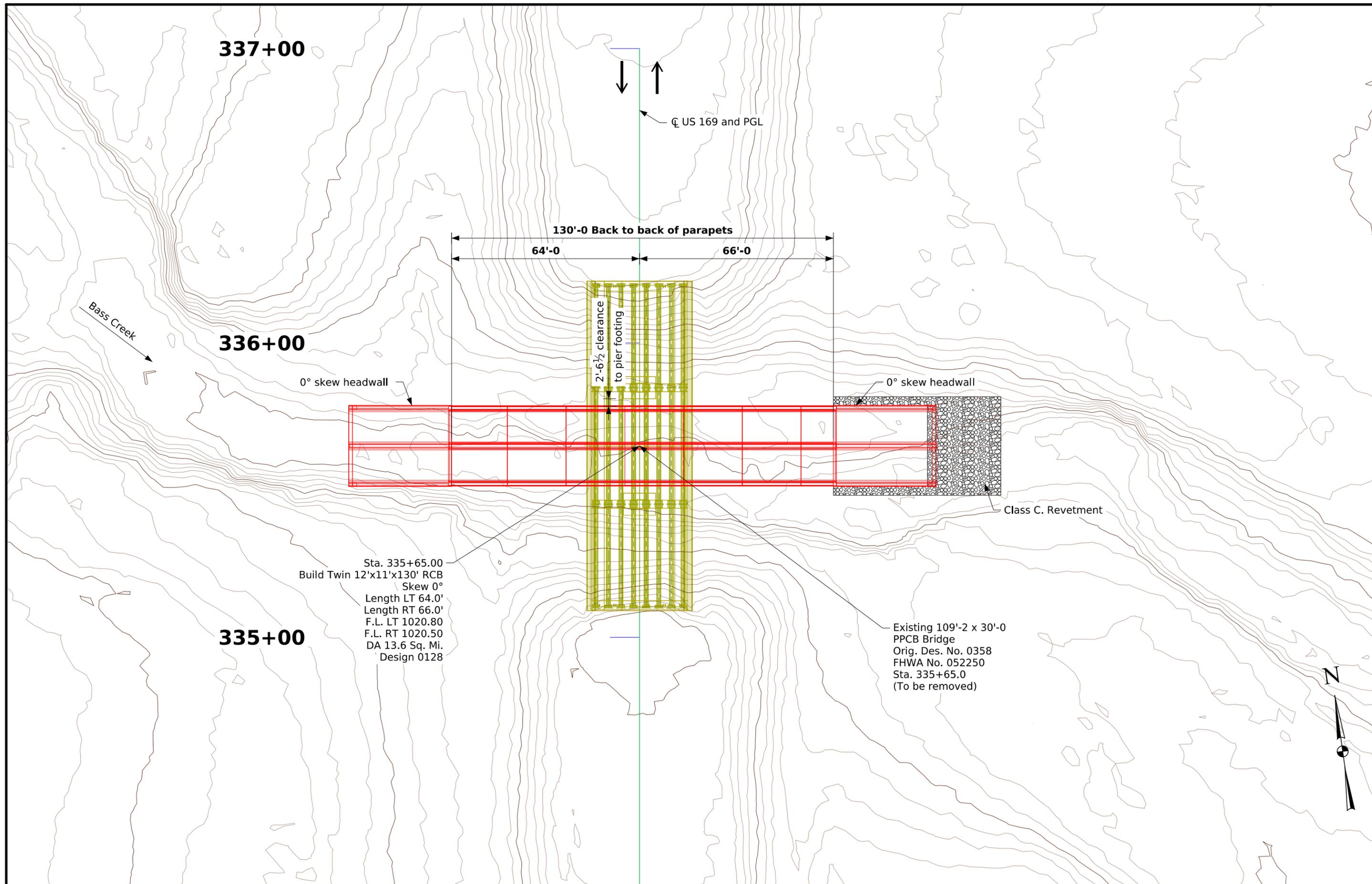
T-90N

PROJECT LOCATION

LEGEND

	U.S. ROUTE 169
	DETOUR ROUTE

DETOUR FOR
ROAD CLOSURE
OF US 169



337+00

336+00

335+00

☐ US 169 and PGL

130'-0" Back to back of parapets

64'-0"

66'-0"

0° skew headwall

0° skew headwall

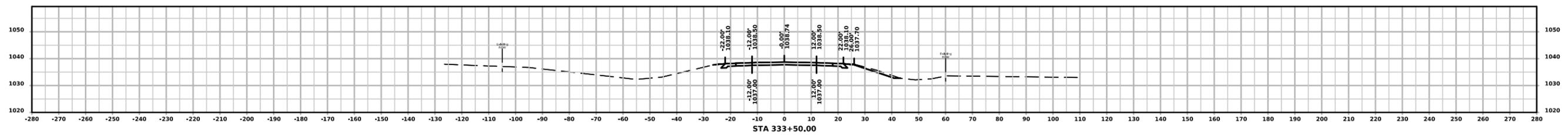
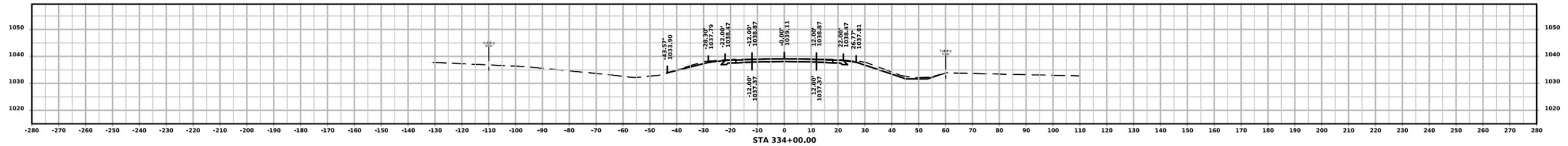
Class C. Revetment

Sta. 335+65.00
 Build Twin 12'x11'x130' RCB
 Skew 0°
 Length LT 64.0'
 Length RT 66.0'
 F.L. LT 1020.80
 F.L. RT 1020.50
 DA 13.6 Sq. Mi.
 Design 0128

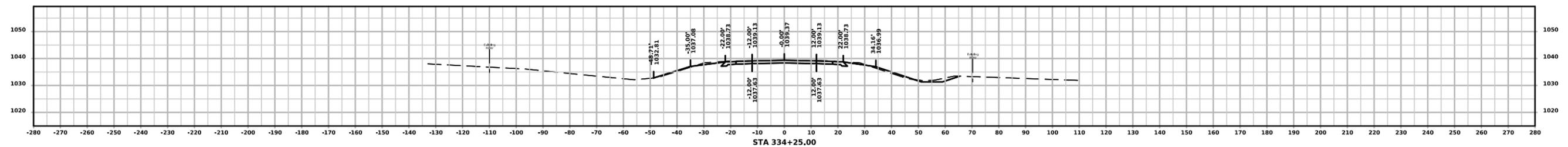
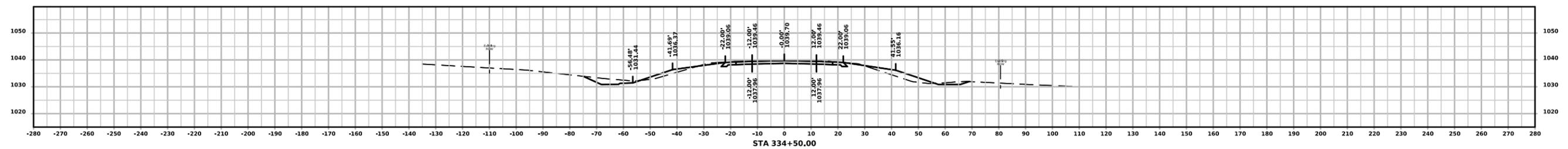
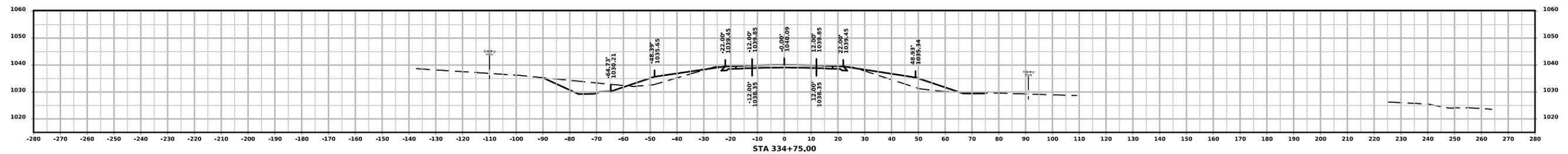
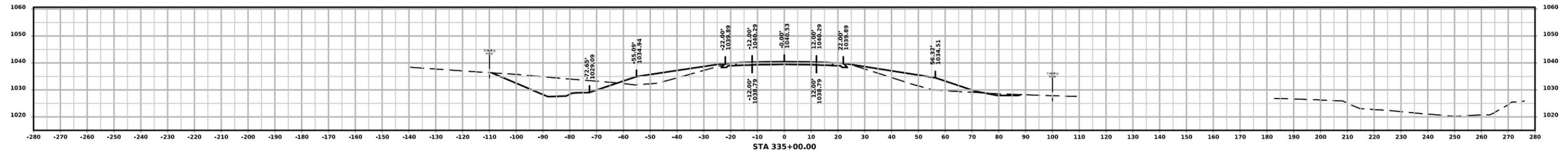
Existing 109'-2 x 30'-0
 PPCB Bridge
 Orig. Des. No. 0358
 FHWA No. 052250
 Sta. 335+65.0
 (To be removed)



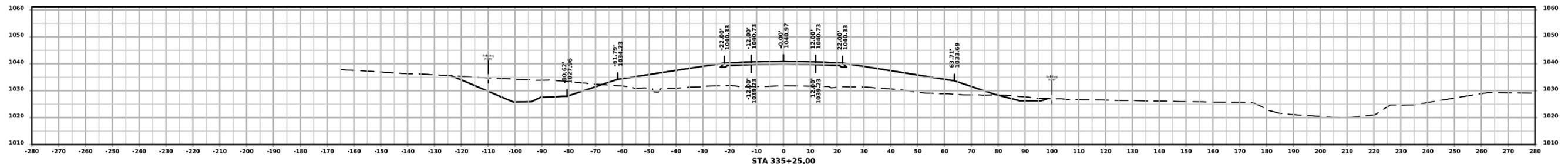
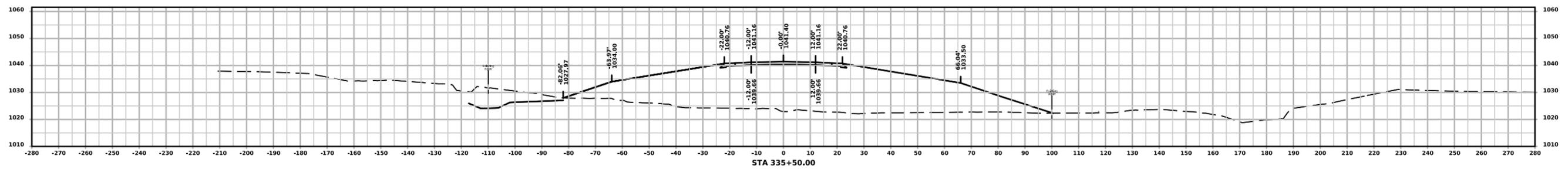
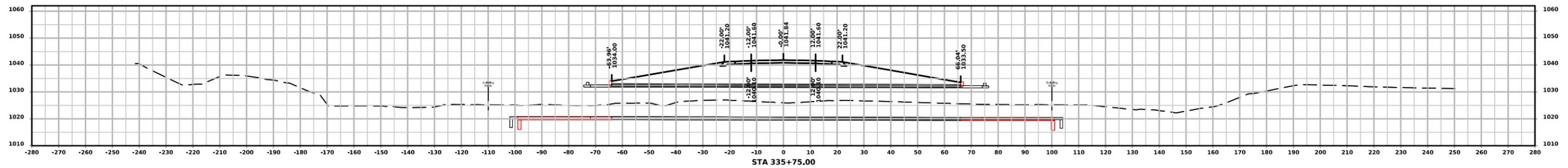
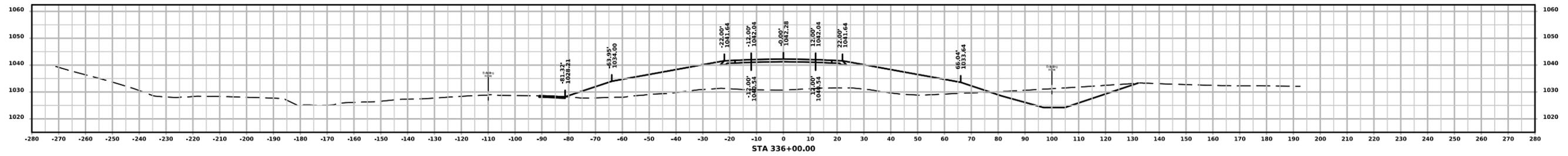
ML - US169



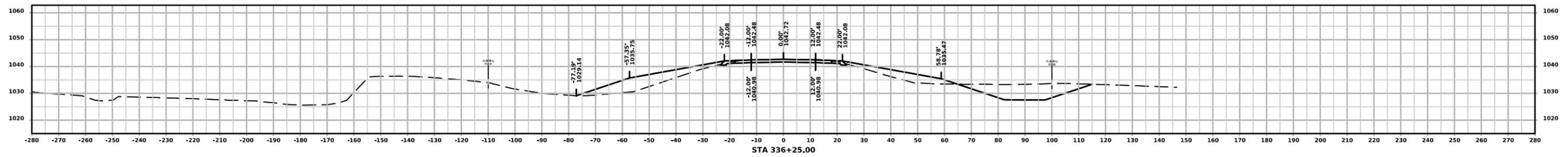
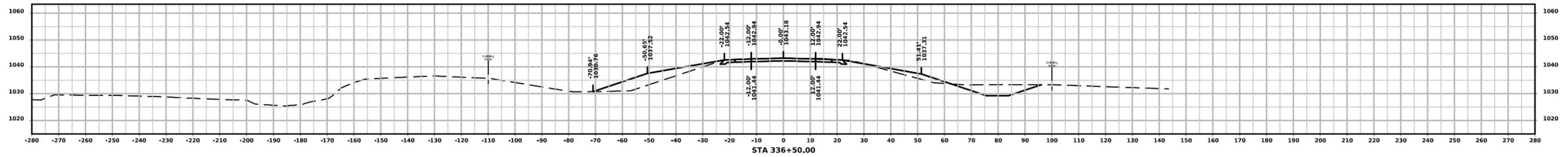
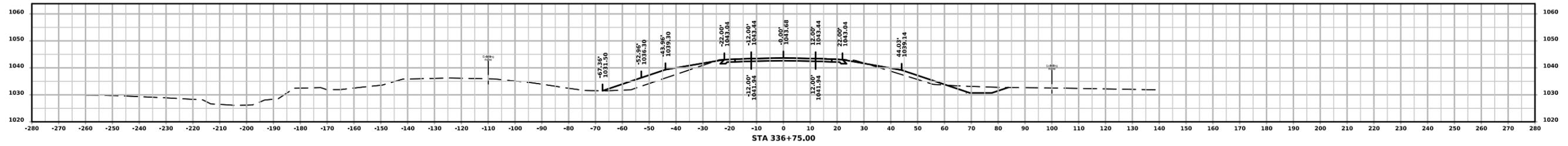
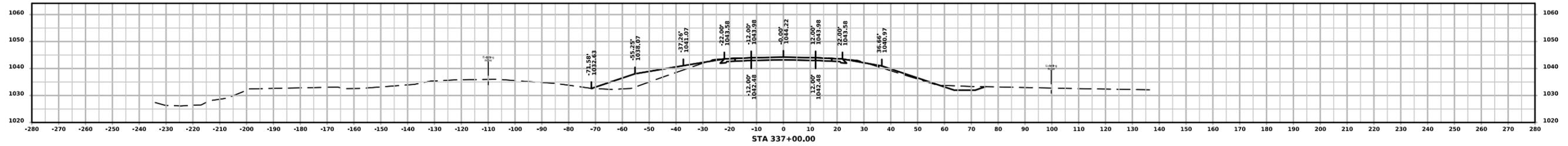
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