IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE: Bridges and Structures

DATE: April 23, 2012

ATTENTION: D. R. Claman

REF. NO. Dallas County
Proj. No. BRF-006-3(67)--38-25
PIN: 10-25-006-010

FROM: Paul Flattery

OFFICE: Design

SUBJECT: Culvert Submittal (D3)

This project involves the bridge replacement of FHWA bridge number 21880 /Maint. No. 2510.3S06, on US 6 /US169 over South Raccoon River North of DeSoto. Traffic will be maintained via staging with one lane two-way with signals.

The Project Directory is W:\Projects\2500601010\Design. No printed plan sheets are included with this submittal. Items included in the electronic files with this submittal are tabulated on the "D3 Check List." The MicroStation and GEOPAK files, chains, and profiles are described in "ProjectDocumentation.xlsm".

By copy of this letter, the Office of Location and Environment is requested to make any necessary reviews.

The Bridge submittal (B1) is scheduled for 9/04/2012. The Right of Way submittal (D5) is scheduled for 10/04/2012. The current letting date is 10/21/2014.

You may indicate your acceptance or request additional information by e-mail.

PWF:mk

cc:

M. J. Kennerly	N. L. McDonald
G. A. Novey	S. Seivert
K. D. Nicholson	J. P. Rost
R. L. Stanley	L. C. Funnell
Judy Lensing	S. C. Marler
M. J. Sankey	T. Crouch
T. Gettings	E.C. Wright
D. A. Widick	B. Bradley
M. A. Swenson	J. W. Smith
J. McCollough	J. Vortherms
D. Stevens	G. Feazell
D. Dorsett	R. Moraine
T. Jerman	E. Keiner

D3 Check List

Updated Field Exam Plans including:

Typicals reviewed for correct dimensions, and stationing.

X	Main Line
N|A	Side roads
N\A	Accessways
N\A	Interchange Ramps & Loops

D, E, F & K sheets updated for Field Exam changes.

X	Horizontal and vertical alignments, including stationing and tic marks.
X	Ditch bar graph and ditch grades
X	Entrances and crossovers (future labeled as future)
X	Auxiliary and turn lanes including tapers.
N\A	Final Interchange layouts and details
X	Staging or Detour Runarounds.

Cross Sections

X	Mainline
N\A	Side road
N\A	Accessways
N\A	Ramps and loops
X	Detour runarounds or staging details
N|A	Draw sections, at box culvert locations
N\A	Skewed culvert locations (3 cross sections minimum, 1 on skew and 1 at each end of skewed culvert, perpendicular to centerline)
_X	Estimate of Stability berm and backslope benching locations
N|A	Auxiliary and turn lanes including tapers
X	Entrances

N|A	Pipe culvert layouts with type, size and location of culvert from Field Exam; including station/elevations for centerline, hinge point, flow lines and length of the culverts.

X	A copy of the PDF of the plans and cross sections has been created, printed and checked to make sure the plans and cross sections print appropriately.

DALLAS Co.

BRIDGE REPLACEMENT - PPCB

BRF-006-3(67)--38-25

LETTING DATE 10-21-2014

PRODUCTION SCHEDULE			
	EVENT	Proposed Date	Completed Date
D-1	Survey	1-04-2012	1-25-2012
D-2	Field Exam	5/04/2012	4/11/2012
D-3	To Prelim. Culverts	6/04/2012	4/18/2012
B-1	Structures Layout	9/04/2012	
D-5	To Right of Way	10/04/2012	
D-4	Design Plans to Bridge	6/24/2014	

Iowa Department of Transportation

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

DALLAS COUNTY

BRIDGE REPLACEMENT - PPCB

Bridge over the South Raccoon River on U.S. 6.U.S. 69

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.15 of the Specifications.

NO MILEAGE SUMMARY

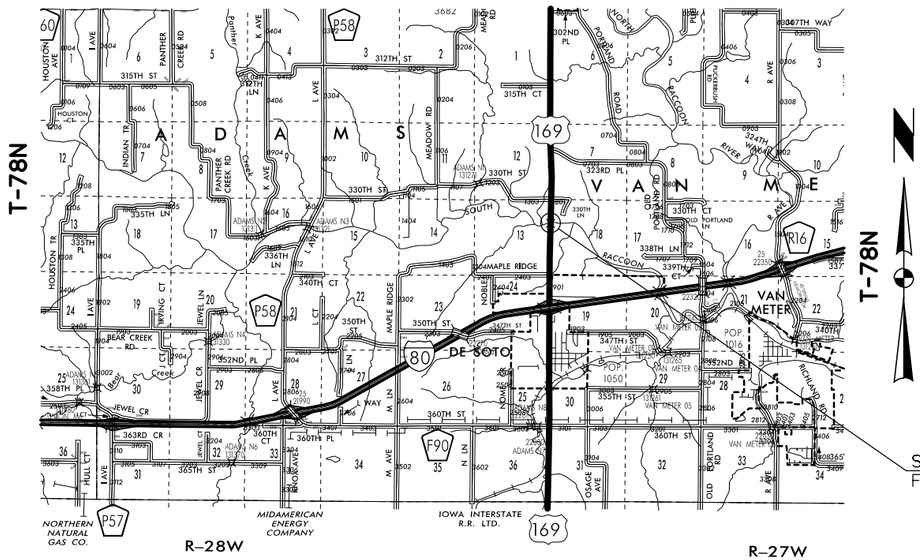
IOWA ONE CALL 1-800-292-8989 811 www.iowaonecall.com Know what's below. Call before you dig.

REVISIONS

TOTAL 28
PROJECT IDENTIFICATION NUMBER
10-25-006-010
PROJECT NUMBER
BRF-006-3(67)--38-25
R.O.W. PROJECT NUMBER
STPN-006-3(68)--2J-25

INDEX OF SHEETS

R-28W R-27W



STA. 193+86
FHWA # 21880 Maint. No. 2510.3S006

DESIGN DATA RURAL		
2016 AADT	5,700	V.P.D.
2036 AADT	7,500	V.P.D.
20-- DHV	--	V.P.H.
TRUCKS	10	%
Total Design ESALs	--	

LOCATION MAP SCALE
0 1 2 3
Miles

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.1	Paul W. Flattery	Primary Signature Block
X	X	X

PRELIMINARY PLANS

Subject to change by final design.

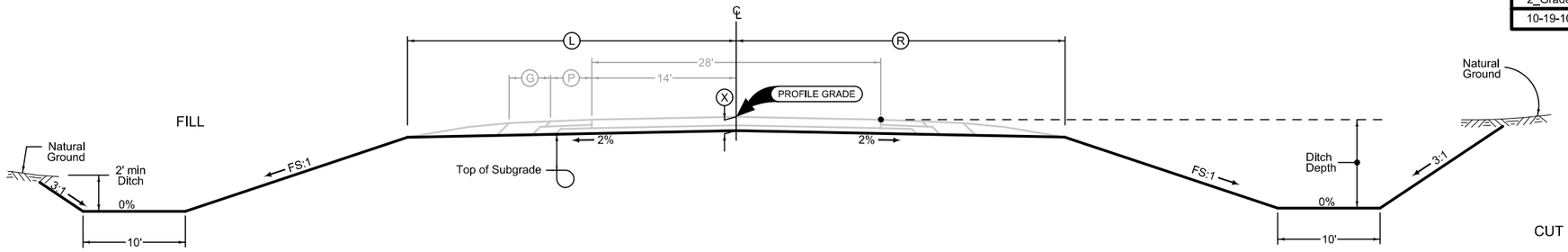
D3 PLAN – Date: 4–18–2012

ENGLISH	IOWA DOT	DESIGN TEAM Flattery\Buttolph	DALLAS COUNTY	PROJECT NUMBER BRF-006-3(67)--38-25	SHEET NUMBER A.1

8:47:22 AM 4/18/2012 jbuttol W:\Projects\2500601010\Design\25006067a01.sht

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	FS
US 6 / US 169	191+20.00	191+90.66	32.67	32.67	22	3
US 6 / US 169	195+76.66	196+50.00	32.67	32.67	22	3

2_Grade
10-19-10

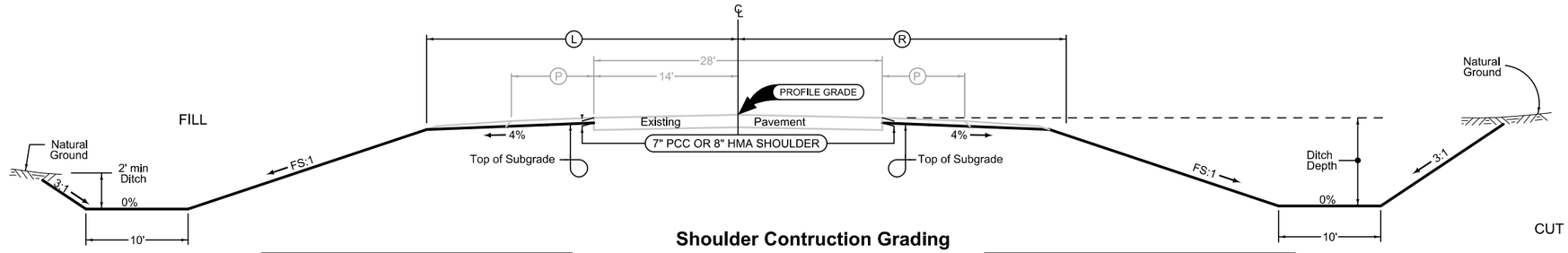


Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See plan & profile sheets and cross sections for additional details of ditches and backslopes.

2 LANE GRADING

Pave Shldr
Modified



Shoulder Contruction Grading

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

See plan & profile sheets and cross sections for additional details of ditches and backslopes.

Left Shoulder Dimensions

STATION TO STATION		(P) Feet	(L) Feet	FS
189+50.00	189+98.00	8	30.56	3
189+98.00	191+20.00	(1)	(1)	3
196+50.00	197+21.00	(1)	(1)	3
197+21.00	197+80.00	8	30.56	3

Right Shoulder Dimensions

STATION TO STATION		(P) Feet	(R) Feet	FS
188+70.00	190+47.80	8	30.56	3
190+47.80	191+20.00	(1)	(1)	3
196+50.00	197+55.20	(1)	(1)	3
197+55.20	199+00.00	8	30.56	3

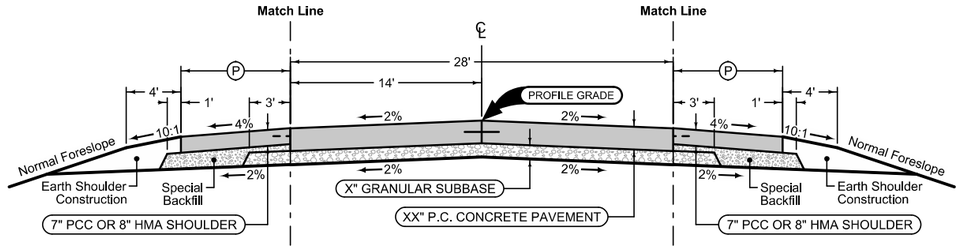
(1) See Typ. 7156 for locations and details.

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

2_P_ALT_ 10-19-10		
STATION TO STATION		(P) Feet
191+20.00	191+30.66	(1)
196+36.66	196+50.00	(1)

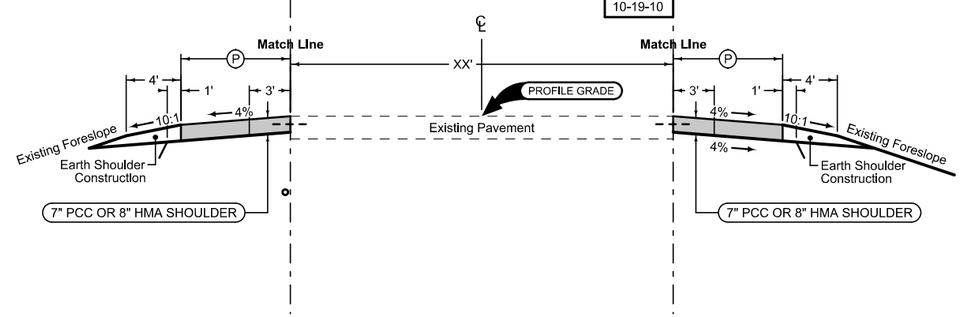
(1) See Typ. 7156 for P distance



Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

2P_ 10-19-10	
STATION TO STATION	

2E_
10-19-10



Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

2_P_ALT_ 10-19-10		
STATION TO STATION		(P) Feet
188+70.00	190+47.80	8
190+47.80	191+20.00	(1)
196+50.00	197+55.20	(1)
197+55.20	199+00.00	8

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

2_P_ALT_ 10-19-10		
STATION TO STATION		(P) Feet
191+20.00	191+30..33	(1)
196+36.66	196+50.00	(1)

(1) See Typ. 7156 for P distance

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

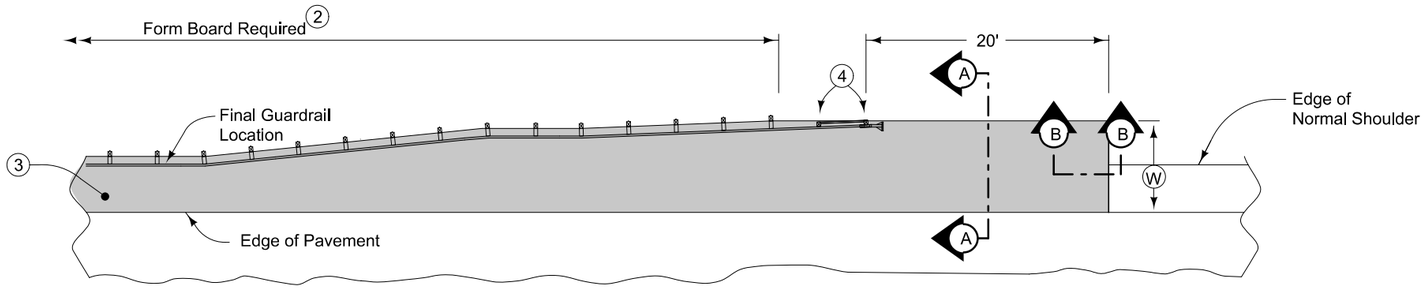
2_P_ALT_ 10-19-10		
STATION TO STATION		(P) Feet
189+50.00	189+98.00	8
189+98.00	191+20.00	(1)
196+50.00	197+21.00	(1)
197+21.00	197+80.00	8

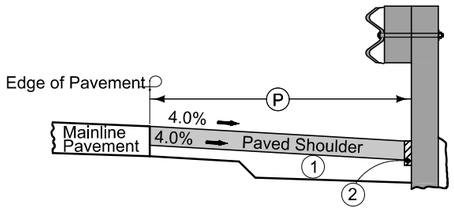
(1) See Typ. 7156 for P distance

See Tab 100-24 for Bridge Approach pavement quantities.

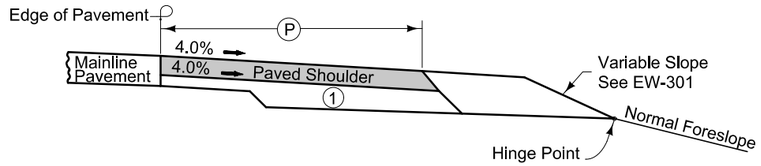
See Tab 112-9 for shoulder quantities.

U.S. 6 / U.S. 169

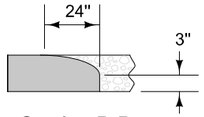




Typical Section with Form Board



Section A-A



Section B-B
Roll down at granular shoulder or earth.

6" HMA Paved Shoulder at guardrail. 7" 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 joints in shoulder at mid-panel of the mainline pavement. Place longitudinal joint at W/2 from edge of mainline pavement when W 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 & reinstallation of guardrail will be allowed with no additional payment.

Refer to Shoulder tabulation (112-9) for quantities.

(1) 6" subgrade treatment.

(2) When guardrail posts are installed prior to construction of paved shoulder, nail 1" x 6" untreated form boards along the face of guardrail posts for the length shown. This board is to prevent shoulder material from contacting the sides of the posts and altering the function of the guardrail. Form board not required for final 2 posts.

(3) Continue paved shoulder to existing paved shoulder or 20' beyond the end of guardrail.

(4) Shoulder may be notched for final 2 posts or post sleeves may be installed through pavement.

PAVED SHOULDER AT GUARDRAIL

SURVEY SYMBOLS

- BRG Bridge
- GDL Guard Rail Steel
- SIGN SI Sign
- PIP Pipe Culvert
- WH WHD Water Hydrant
- WV WV Water Valve
- FW Wire Fence
- TP TPD Telephone Pedestal
- PPA Power Pole Co. 1
- CON Concrete or A/C Slab
- EW Edge of Water
- RIP Rip-Rap
- BNK Stream Bank
- D Centerline Draw or Stream (Down)
- EP Edge of Paved Roads (ML or SR)
- SH Paved Shoulder
- ENT Centerline BL of Entrance
- ENU Edge Unpaved Entrance & Parking
- DU Centerline Draw or Stream (Up)
- W WLA Underground Water Line Co. 1
- T1 TLA Underground Telephone Line Co. 1
- FO FOA Underground Fiber Optic Co. 1
- BL Topo Breakline

UTILITY LEGEND

- MidAmerican Energy Company
- T1 – Windstream Communications
- W – Xenia Rural Water District
- FO – Paetec/Iowa Communications Net

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.**	
Yellow	(4)	Highlight for Critical Notes or Features
Red	(3)	Delineates Restricted Areas
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading
Brown, Light	(236)	Grading Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	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
- Clearing & Grubbing Area
- Pavement Removal

RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Borrow
- Easement (Temporary)
- Easement
- Excess
- A/C Access Control

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

Adams Twp.
T-78N R-28W
Sec. 13

Sta. 168+70.00
Begin Project

Sta. 188+70.00
Begin Contruction

24" X 44.5' CMP
D.A. = Ditch

24" X 34.2' CMP
with FES at Ends
D.A. = Ditch

Sta. 199+00.00
End Construction

Sta. 219+00.00
End Project

UAC Ent.

APPROX. SEC. LINE

(Close)

STA. 189+50.00
Begin Rt. Shoulder

STA. 191+20
Begin Bridge Approach

Sta. 193+86±
Build 386' x 44' PPCB Bridge
Design # ?

Sta. 193+86.14
374' X 26' Continuous
I-Beam Bridge
D.A. = 1116 Sq. Mi.

STA. 196+50
End Bridge Approach

STA. 197+80
End Rt. Shoulder

Van Meter Twp.
T-78N R-27W
Sec. 18

0 FEET 50

Cut = 467
Topsoil Need = 562
Fill+35% = 337
Waste = 130
467

Bridge

Cut = 342
Topsoil Need = 497
Fill+35% = 269
Waste = 72
342

Tie-In
191+20
884.23

VPI +85.000
Elv 886.56

+0.880%

-0.880%

Len 470.00 ft

Tie-In
196+50
884.23

UAC Ditch
U.A.C.

UAC Ditch

Bridge

UAC Ditch

U.A.C.

884.27 884.49 884.70 884.89 885.05 885.19 885.30 885.39 885.46 885.51 885.53 885.52 885.50 885.45 885.38 885.28 885.16 885.02 884.85 884.66 884.45 884.23

C	ENGLISH	IOWA DOT	DESIGN TEAM Flattery\Buttolph	DALLAS COUNTY	PROJECT NUMBER BRF-006-3(67)--38-25	SHEET NUMBER D.2

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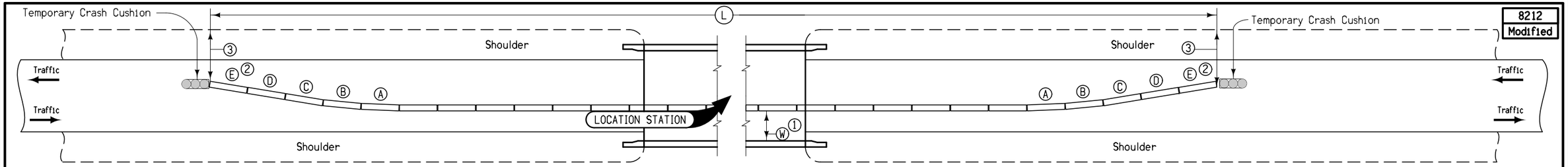

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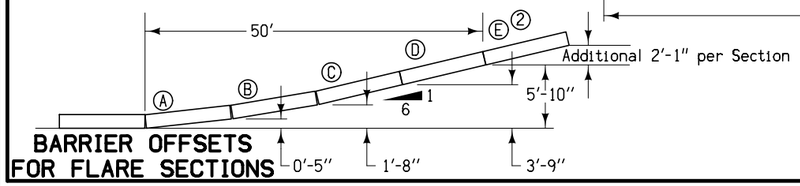


BARRIER OFFSETS FOR FLARE SECTIONS

Station	Side	AE	AA	WL	TA	TE	L	Anchored	W 1	Remarks
		Feet	Feet	Feet	Feet	Feet	Feet	X	Ft-Inches	
193+83.73	Lt.	112.5	20	535	20	112.5	800	537.5	11-7 1/2	Stage 1
193+83.73	Rt	50	20	535	20	50	675	537.5	22-0	Stage 2

1. Where W = 14'-6" or less, install restricted width signing as per Standard Road Plan TC-81.
2. E can be multiple Temporary Barrier Sections. Distance/12.5 = number of Temporary Barrier Sections.
3. Distance from Shoulder to Front Face of Barrier Gutter.
   Minimum Distance = 16.0'
   Maximum Distance = 20.0'.

TEMPORARY CONCRETE BARRIER LAYOUT for Two-Way Traffic

Survey Information

General Information

Measurement units for this survey are US survey feet. This survey is for proposed replacement of the U.S. 69/ U.S. 169 over the South Raccoon River, 1.1 miles north of the junction with I-80. This project is a partial DTM Survey. It is anticipated aerial coverage will be added at a later date.

Vertical Control

Vertical datum for this survey is relative to NAVD88 computed orthometric height using Geoid 09. US survey feet.

This survey control is relative to IaRTN reference stations. Multiple Iowa RTN observations were completed on CP2. After review of these observations, the shots were averaged to establish the site BM elevation. A level run was then completed through project control points and benchmarks. The error was allowable and the error was distributed proportionately among the project monuments.

Vertical equations are as follows:

Datum Benchmark
BM #1 this survey Elevation = 888.678 NAVD 88(Geiod09)
BM #25A Project #366(6) Elevation = 888.18
Found IHC plug on top of RCBC headwall.

Horizontal Control

Measurement units for this survey are US survey feet. Iowa State Plane South coordinates were transformed to project ground coordinates by applying a 1/combined scale factor from held point CP2 at the center of the project.

State Plane Coordinate Zone 1402 (Iowa South)
State Plane Coordinate held at Point CP2
N=567131.177 E=1500169.839
Combined Scale Factor (Grid)=0.9999301
1 / Grid= 1.0000699

Local Project Coordinates Conversion Equation:

Local Project Coord y=[(State Plane y-hold point y)1/grid factor]+hold point y
Local Project Coord x=[(State Plane x-hold point x)1/grid factor]+hold point x

Point	STATE PLANE COORDS(Y)	STATE PLANE COORDS(X)	LOCAL PROJECT COORDS(Y)	LOCAL PROJECT COORDS(X)
CP1	568382.580	1500151.225	568382.667	1500151.224
CP2	567131.177	1500169.839	567131.177	1500169.839
CP3	566196.952	1500146.066	566196.886	1500146.064

Alignment Information

The horizontal alignment for this survey is a retrace of Widening & Resurfacing Project No. FR-169-4(30)--2G-25. Survey stationing was equated to the plan at P.I. Sta. 169+78.4 and run ahead without equation throughout the survey.

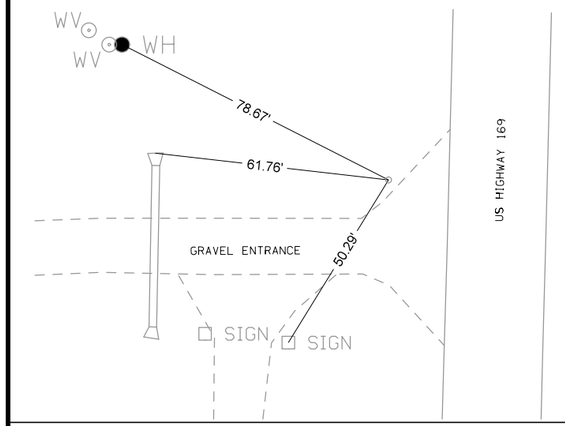
Equations are as follows:
P.I. Sta. 169+78.4 This Survey found PK Nail in Asphalt
= P.I. Sta. 169+78.4 Dallas Co. Plans FR-169-4(30)--2G-25

P.I. Sta. 216+96.67 This Survey found hinge nail from references
= P.O.T. Sta. 217+00 Dallas Co. Plans FR-169-4(30)--2G-25

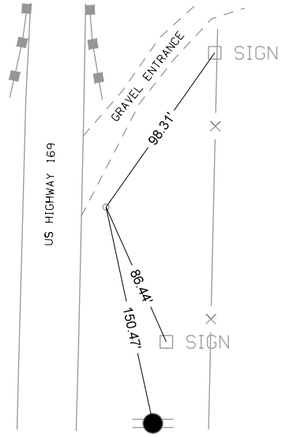
VERTICAL CONTROL

Point	North	East	Elevation	Station	Offset	Feature	Description
BM1	568523.091	1500223.972	888.678	204+60.42	40.033	BM	IHC PLUG TOP OF RCBC HEADWALL
BM2	567638.438	1500146.051	887.369	195+74.00	-14.140	BM	IHC PLUG TOP OF BARRIER WALL OF BRIDGE OVER S RACCOON RIVER
BM3	566371.967	1500185.386	895.426	183+09.04	59.138	BM	SET RR SPIKE IN PP @ NE QUAD HWY 169 & OVERTON CIRCLE

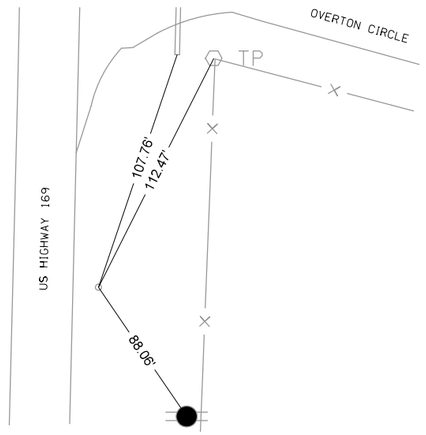
STA. 203+18.10, 28.92 Lt.
CP 1 SET 1/2" REBAR WEST OF US HIGHWAY 169 SHOULDER
N=568382.667 E=1500151.224



STA. 190+67.56, 23.24' Rt.
CP 2 SET 1/2" REBAR EAST OF US HIGHWAY 169 SHOULDER
N=567131.177 E=1500169.839



STA. 181+32.97, 24.53' Rt.
CP 3 SET 1/2" REBAR EAST OF US HIGHWAY 169 SHOULDER
N=566196.886 E=1500146.065



ENGLISH	IOWA DOT	DESIGN TEAM Flattery\Buttolph		DALLAS COUNTY	PROJECT NUMBER	BRF-006-3(67)--38-25	SHEET NUMBER G.2

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108-26A
08-01-08

STAGING NOTES

Stage 1
With One Way Traffic alternating using Temporary Traffic Signals on the NBL.

A. Sawcut Old Bridge 5' Lt. of Centerline and remove Bridge, Bridge Approachs and Abutments Lt. of the Sawcut.
B. Build Lt. 14' of New Bridge and Bridge Approaches.
C. Build 10' Shoulder to Stop Bar.

Stage 2
With One Way traffic alternating using Temporary Taffic signals on New Bridge, SBL Shoulder.

A. Buid Rt. 30' of New Bridge and Bridge Approaches.

Stage 3
Open Roadway to two way, two lane, traffic patterns.

108-23A
08-01-08

TRAFFIC CONTROL PLAN

No notes known at this time.

102-15
08-01-08

TABULATION OF SPECIAL EVENTS

Event	Location	Date
None known at this time.		

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 known at this time.	

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

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, 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

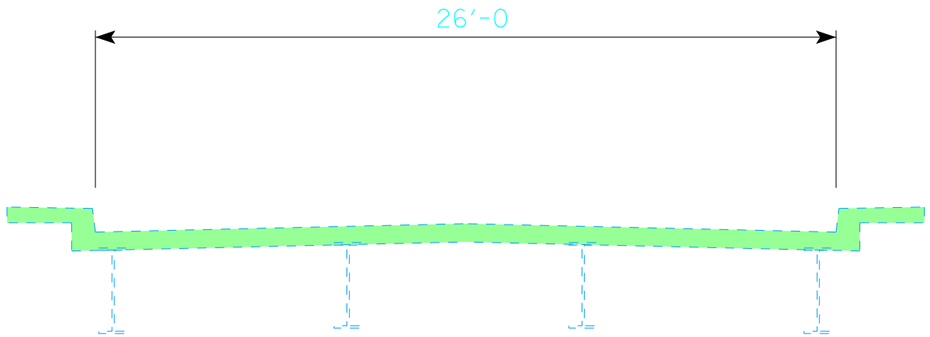
PLAN VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

●	Channelizing Device	▬	Crash Cushion
×	Drum	○→	Traffic Signal
▫	Temporary Lane Separator		Flagger
◆	Tubular Marker	○-○●	Temporary Floodlighting
♦	Channelizer Marker	⊢	Traffic Sign
△	Concrete Barrier Marker	⁞	Type III Barricade
ς	Delineator	☀	Type A Warning Light
	Temporary Barrier Rail	←	Direction of Traffic
	Pavement Removal		Safety Closure

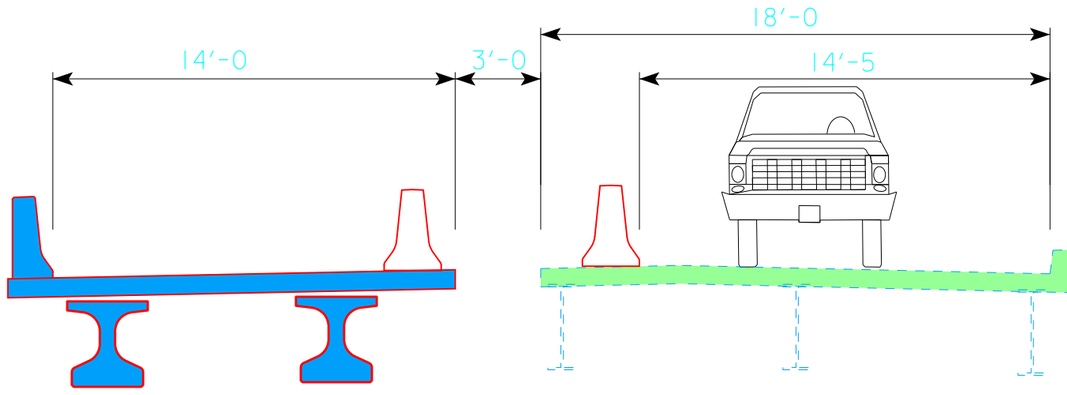
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

TRAFFIC CONTROL AND STAGING LEGEND AND SYMBOL INFORMATION SHEET

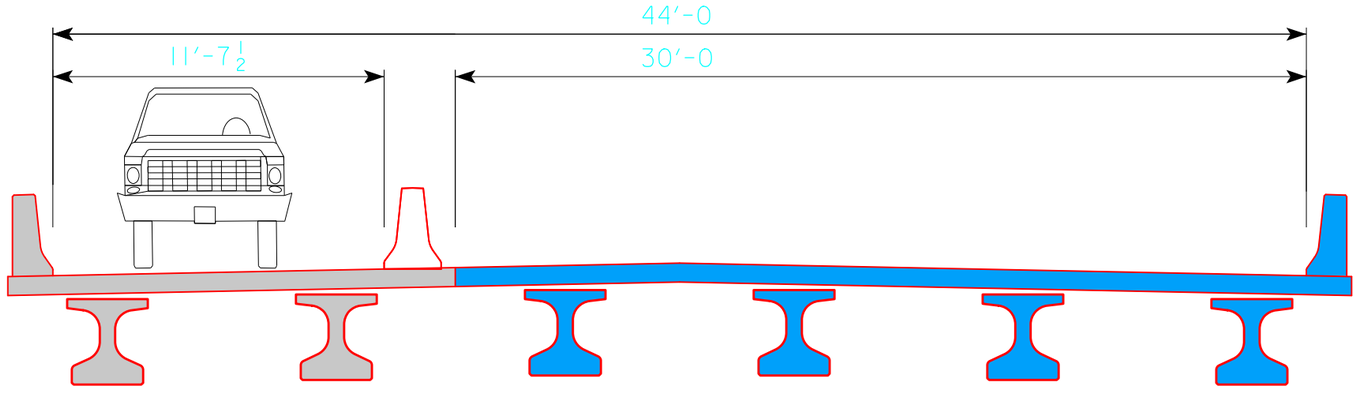
(COVERS SHEET SERIES J)



Existing Bridge



Stage 1 Bridge Construction

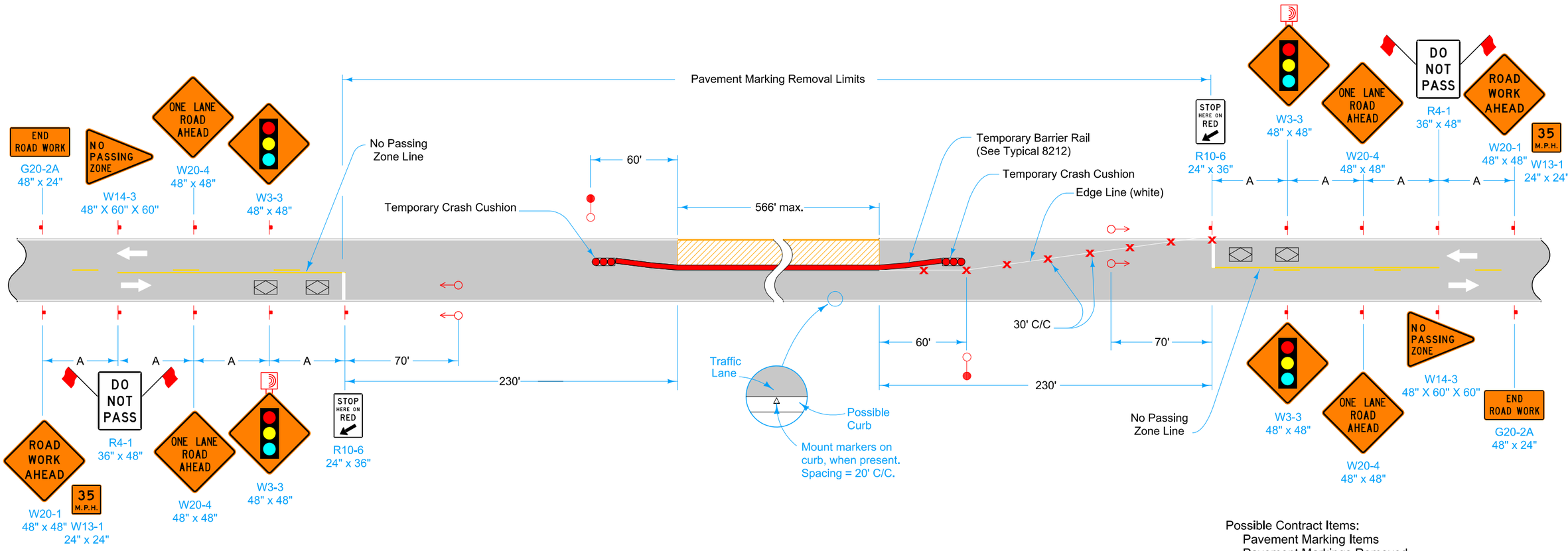


Stage 2 Bridge Construction

Bridge Staging Layout

ENGLISH	IOWA DOT	DESIGN TEAM Flattery\Buttolph	DALLAS COUNTY	PROJECT NUMBER BRF-006-3(67)--38-25	SHEET NUMBER J.3

8:17:54 AM 3/13/2012 jbuttol W:\Projects\2500601010\Design\25006067J02.sht



LEGEND

- Concrete Barrier Marker
- Vehicle Detection Area
- Temporary Crash Cushion
- Direction of Traffic
- Traffic Sign
- Drum
- Temporary Floodlighting
- Type 'B' High-Intensity Flashing Warning Light
- Work Area
- Temporary Traffic Signal

TIMING FOR ACTUATED SIGNALS Recommended Settings, secs.	Distance Between Stop Lines	All Red (secs.)*
Initial = 12.0	1050'	20.4-35.7
Extension = 2.5	950'	18.5-32.3
Maximum Green = 45.0	850'	17-30
Yellow = 5.0	750'	15-27
All Red = (see table)	650'	14-23
	550'	12-20

* Range of values are based on operating speeds between 20 and 35 mph

SPEED LIMIT (mph)	A
35 or less	250'
40 - 45	350'
50 or greater	500'

Possible Contract Items:

- Pavement Marking Items
- Pavement Markings Removed
- Temporary Barrier Rail
- Temporary Crash Cushions
- Temporary Floodlighting
- Temporary Traffic Signals
- Traffic Control

Possible Tabulations:

- 108-22
- 108-27
- 108-28
- 108-30
- 108-33

MODIFIED

STANDARD ROAD PLAN

REVISION	
4	10-19-10

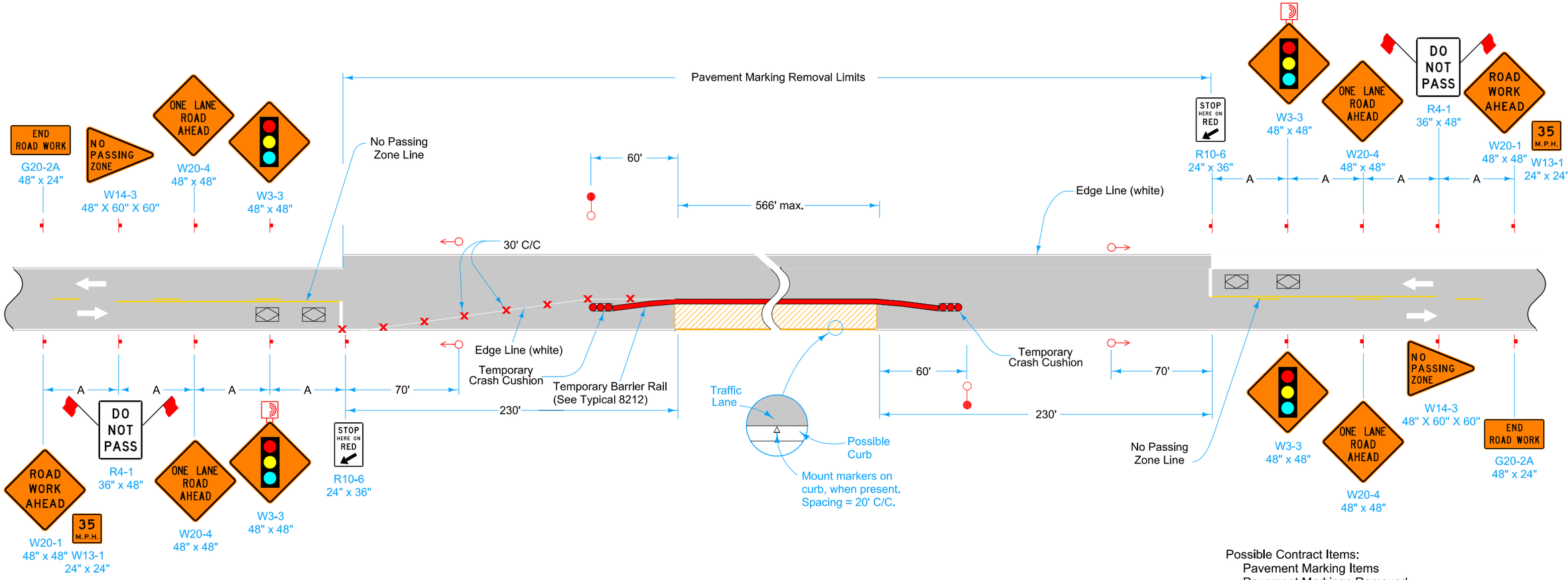
TC-217-1

SHEET 1 of 1

REVISIONS: Fixed spelling errors and added color.

APPROVED BY DESIGN METHODS ENGINEER

STAGE 1 LANE CLOSURE WITH SIGNALS AND TBR



LEGEND

- Concrete Barrier Marker
- Vehicle Detection Area
- Temporary Crash Cushion
- Direction of Traffic
- Traffic Sign
- Drum
- Temporary Floodlighting
- Type 'B' High-Intensity Flashing Warning Light
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- Pavement Markings Removed
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- Temporary Floodlighting
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- Traffic Control

Possible Tabulations:

- 108-22
- 108-27
- 108-28
- 108-30
- 108-33

MODIFIED

STANDARD ROAD PLAN

REVISION	
4	10-19-10

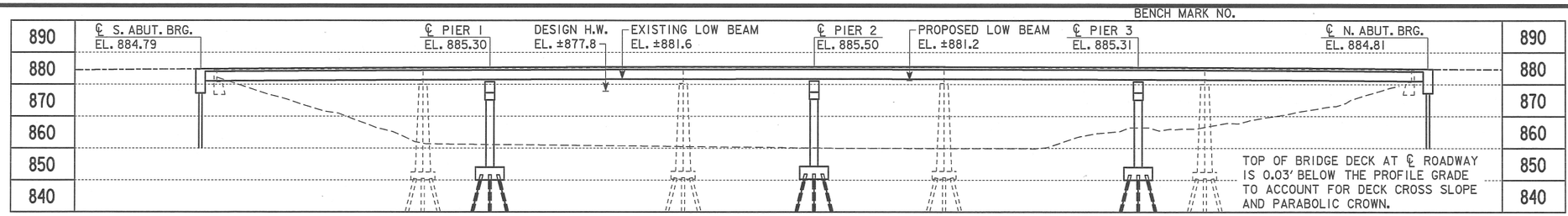
TC-217-2

SHEET 1 of 1

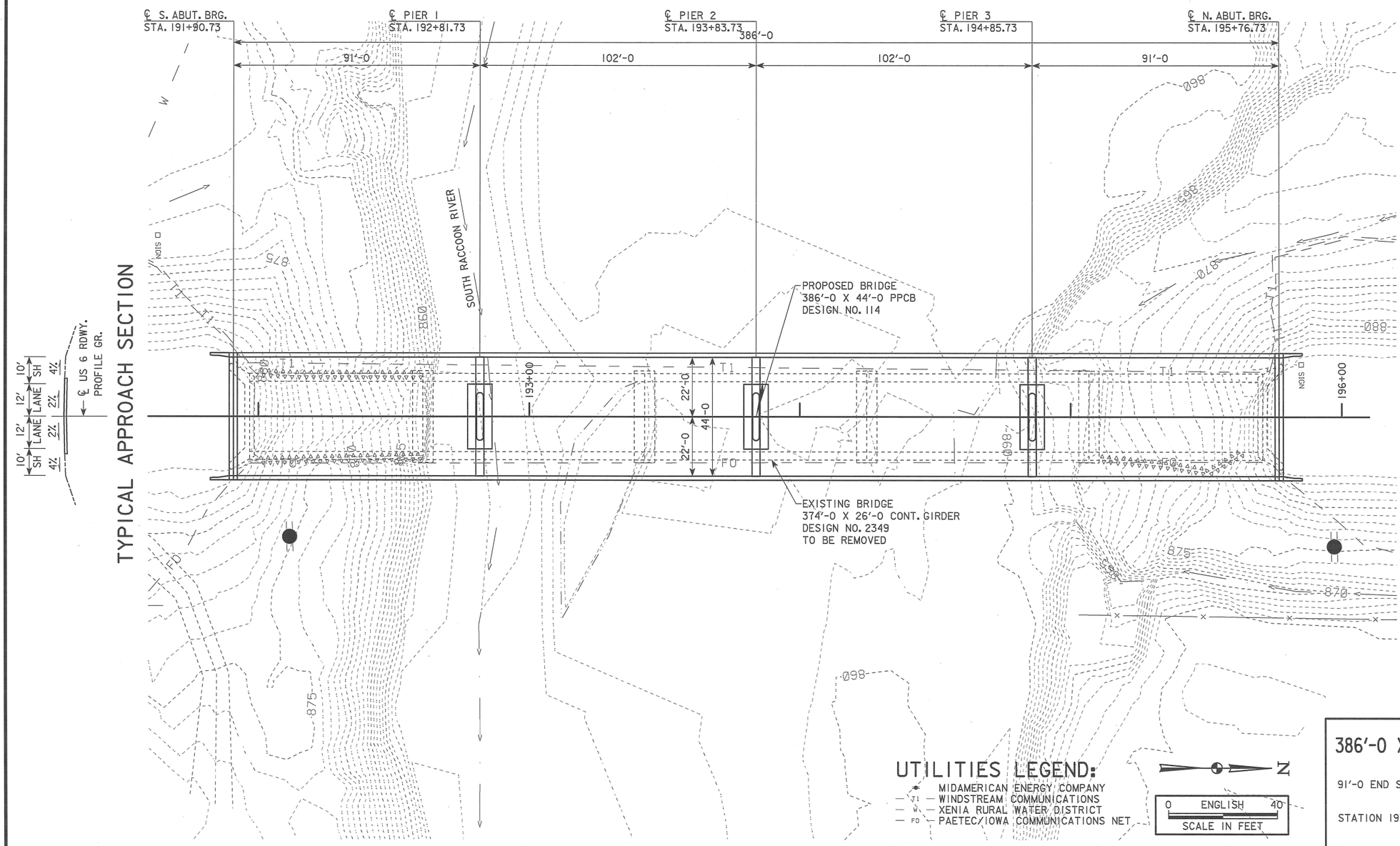
REVISIONS: Fixed spelling errors and added color.

APPROVED BY DESIGN METHODS ENGINEER

STAGE 2
LANE CLOSURE WITH SIGNALS AND TBR



LONGITUDINAL SECTION ALONG ℄ ROADWAY



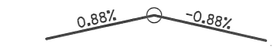
TYPICAL APPROACH SECTION

UTILITIES LEGEND:

- T1 — WINDSTREAM COMMUNICATIONS
- W — XENIA RURAL WATER DISTRICT
- FO — PAETEC/IOWA COMMUNICATIONS NET

0 ENGLISH 40
SCALE IN FEET

SITUATION PLAN



VPI STA = 193+85.00 VC = 470'
VPI ELEV = 886.56

PROPOSED PROFILE GRADE US 6

TRAFFIC ESTIMATE

2016 AADT	5,700	V.P.D.
2036 AADT	7,500	V.P.D.
202_ DHV	-	V.P.H.
TRUCKS	10	%
TOTAL DESIGN ESALs	-	

HYDRAULIC DATA

DRAINAGE AREA = 1,116 SQ. MI.
STREAM SLOPE = 3.2 FT./MI.

Q_2 = 10,801 CFS
STAGE = EL. 869.5
CHANNEL VELOCITY = ? FPS

Q_{50} = 31,674 CFS
STAGE = EL. 877.6
BACKWATER = ? FT.
AVG. BRIDGE VELOCITY = ? FPS

Q_{100} = 35 912 CFS
STAGE = EL. 878.7
BACKWATER = ? FT.
AVG. BRIDGE VELOCITY = ? FPS
CALCULATED DESIGN SCOUR = EL. ?

Q_{500} = 45,697 CFS
STAGE = EL. 881.2
CALCULATED CHECK SCOUR = ?

ROADWAY OVERTOP EL. 881.2
STA. 200+58

AVG. LOW WATER = EL. ?

LOCATION

US 6 OVER SOUTH RACCOON RIVER
T-78 N R-28 W
SECTION 13
ADAMS TOWNSHIP
DALLAS COUNTY
BRIDGE MAINT. NO. 2510.3S006
LATITUDE 41.556345°
LONGITUDE -94.012485°

PRELIMINARY

DESIGN FOR 0° SKEW

386'-0 X 44'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

91'-0 END SPANS (BTB BEAM TYPE) 2 @ 102'-0 INTERIOR SPANS

SITUATION PLAN

STATION 193+83.73 APR 2012

DALLAS COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. 30725 DESIGN NO. 114

DESIGN TEAM | DALLAS COUNTY | PROJECT NUMBER BRF-006-3(67)--38-25 | SHEET NUMBER V.01

LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

- Existing Ground Line
- Proposed Template
- Proposed Topsoil Placement
- Additional Topsoil Removal
- Subgrade Treatment
- Granular Shoulder
- Pavement
- Existing Pipe\RCB
- Proposed Pipe\RCB
- Proposed Dike
- All Elements Associated with Proposed Entrances

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- TS — Topsoil (Class 10)
- TS A — Topsoil (Type A Disposal)
- TS B — Topsoil (Type B Disposal)
- TS C — Topsoil (Type C Disposal)
- CL 10 — Class 10 Materials
- SEL LO — Select Loams And Clay-Loams
- SEL SA — Select Sand
- UNS A — Unsuitable Type A Disposal
- UNS B — Unsuitable Type B Disposal
- UNS C — Unsuitable Type C Disposal
- SHALE — Shale
- WASTE — Waste
- B&W LS — Broken and Weathered Rock
- ROCK — Solid Rock
- BLDRS — Boulders

Note: All layer lines and descriptions identify layers above the line.

Note: Vertical or near vertical lines connecting soil layers at edges of cross sections are only for the purpose of calculating template quantities and do not depict soil stratification.

SYMBOL LEGEND OF CROSS SECTION SHEETS

Existing ROW — Existing Right-of-Way Limit

Proposed ROW — Proposed Right-of-Way Limit

Temporary ROW — Temporary Right-of-Way Limit

CROSS SECTION LEGEND AND SYMBOL INFORMATION SHEET

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

US 6/169
Preliminary

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

880
870

877.51
38.72
881.27
27.45

189+00.00

881.11
27.45

188+75.00

881.13
26.36

188+70.00

188+50.00

188+25.00

188+00.00

ENGLISH	IOWA DOT	DESIGN TEAM Flattery\Buttolph	DALLAS COUNTY	PROJECT NUMBER BRF-006-3(67)--38-25	SHEET NUMBER W.2

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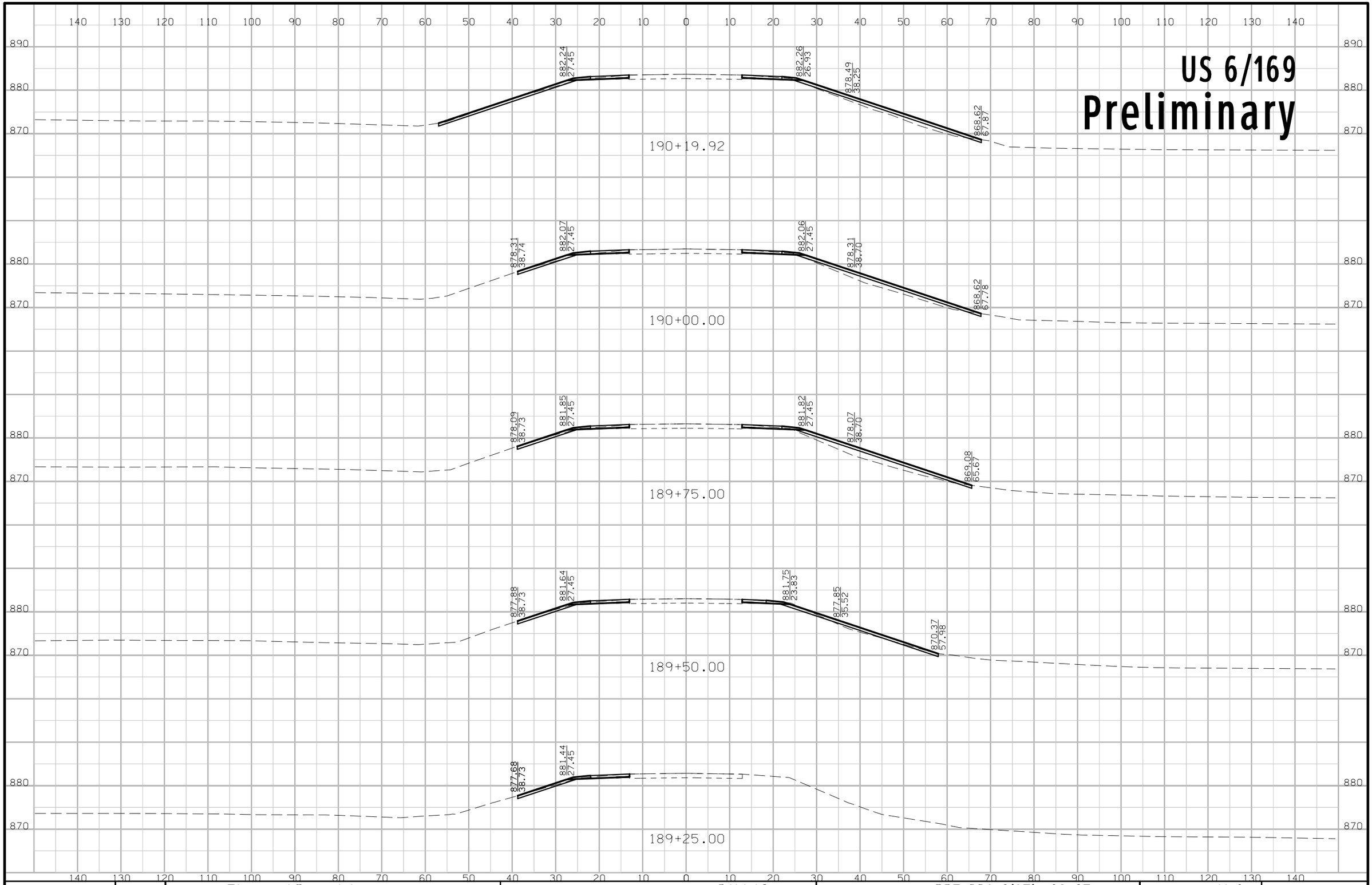
US 6/169
Preliminary



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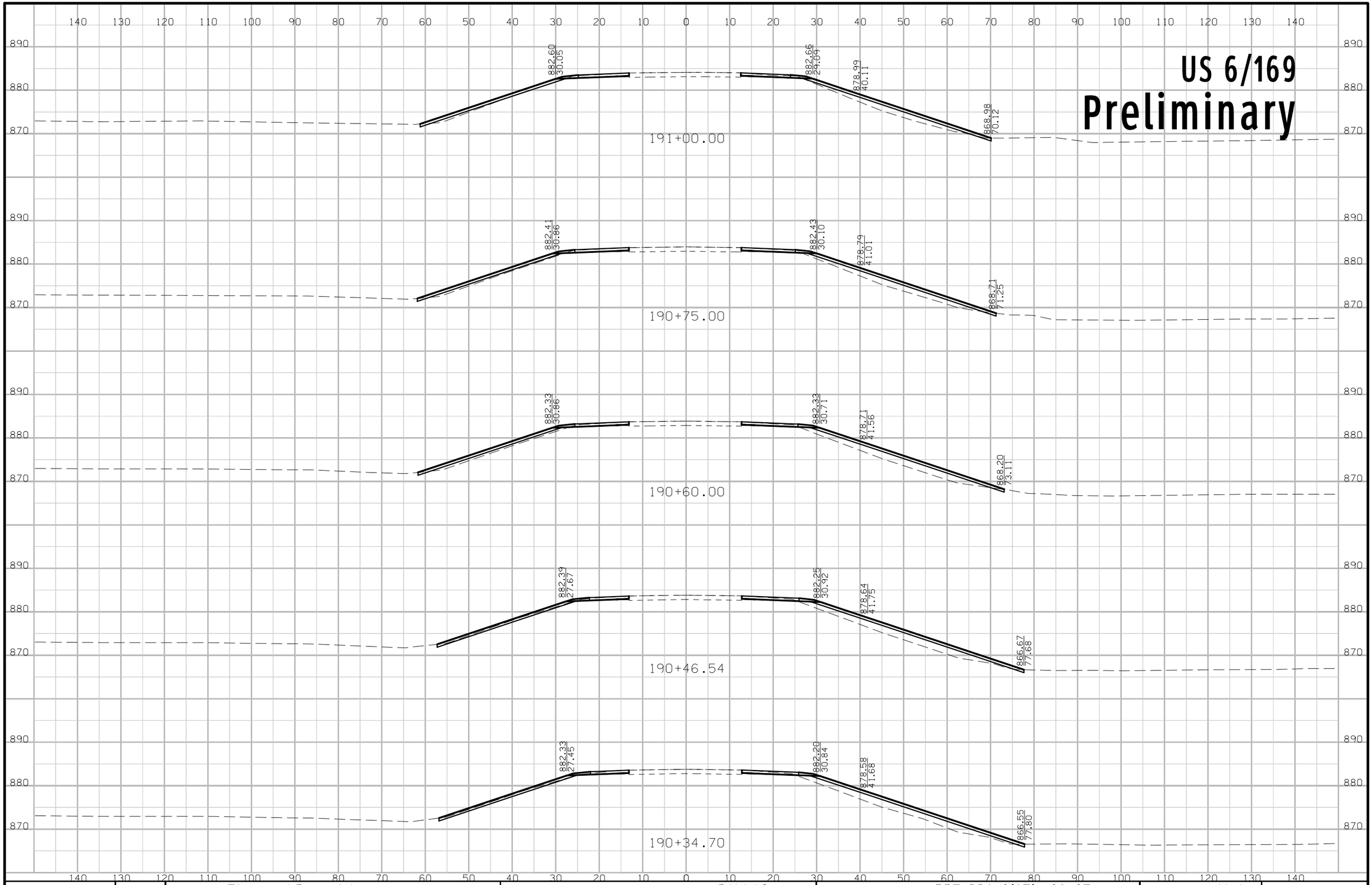
US 6/169
Preliminary



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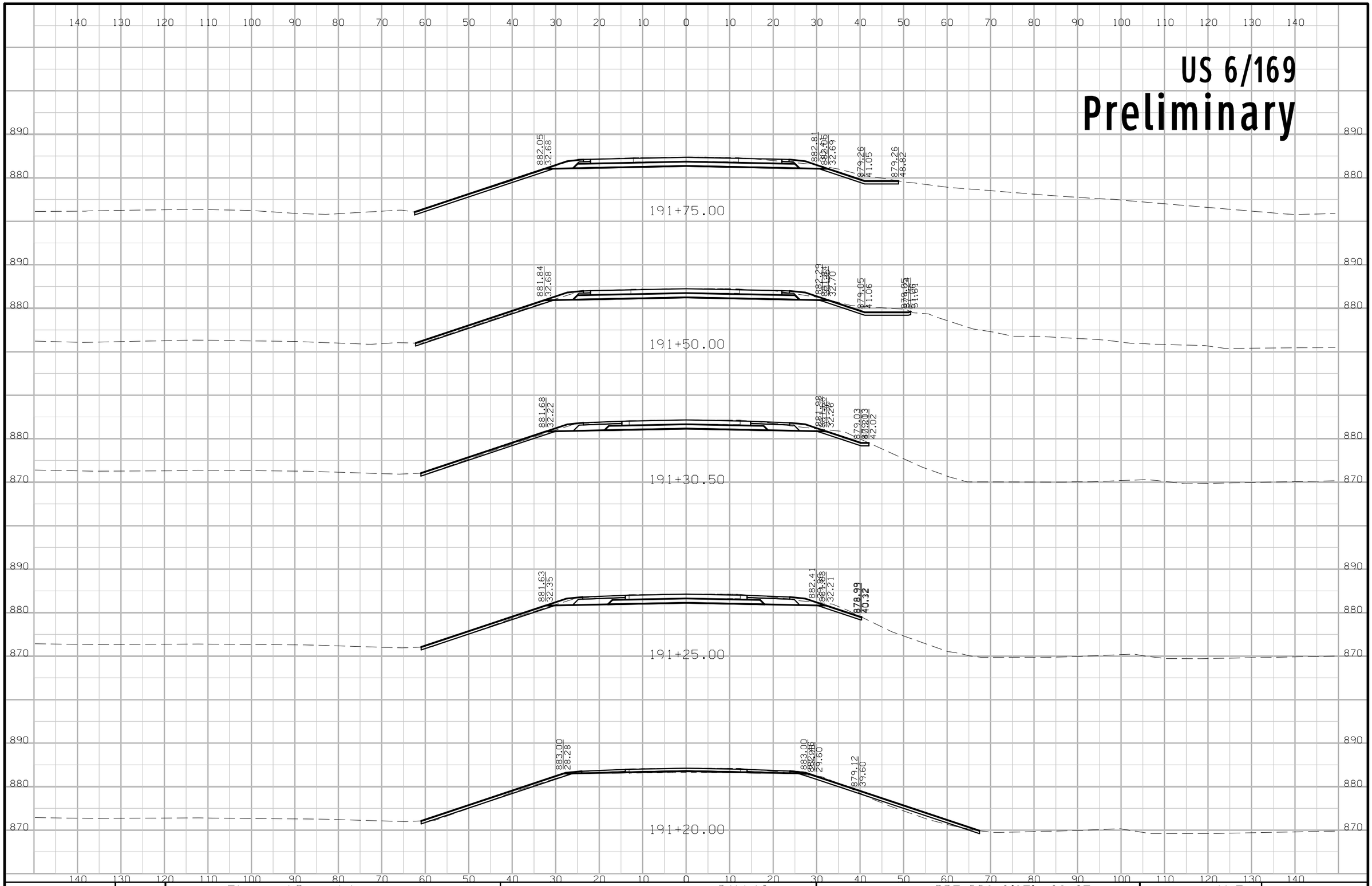
US 6/169
Preliminary



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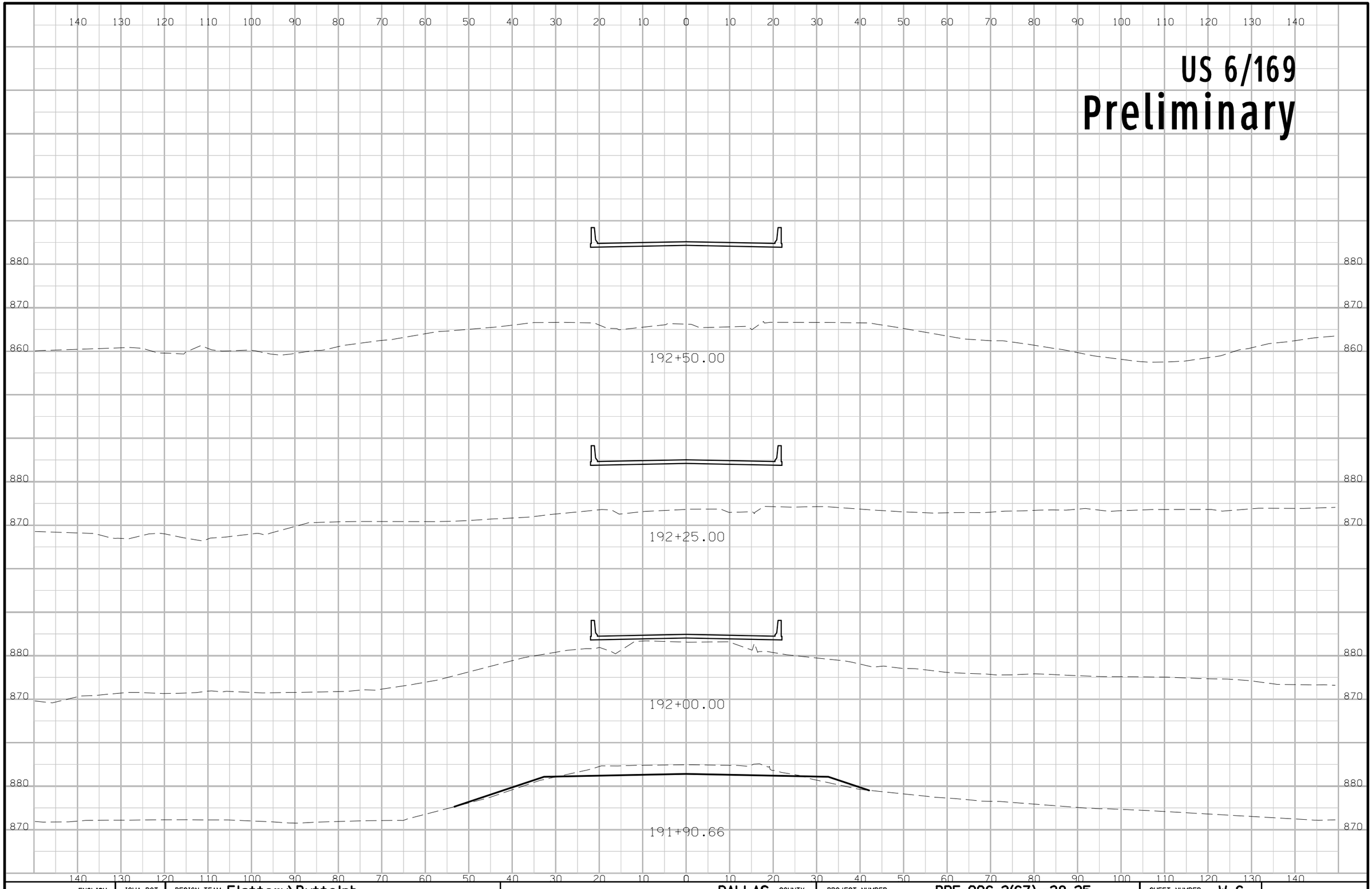
US 6/169
Preliminary



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US 6/169
Preliminary

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

880
870
860

193+50.00

880
870
860

193+25.00

880
870
860

193+00.00

880
870
860

192+75.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

ENGLISH	IOWA DOT	DESIGN TEAM Flattery\Buttolph	DALLAS COUNTY	PROJECT NUMBER BRF-006-3(67)--38-25	SHEET NUMBER W.7

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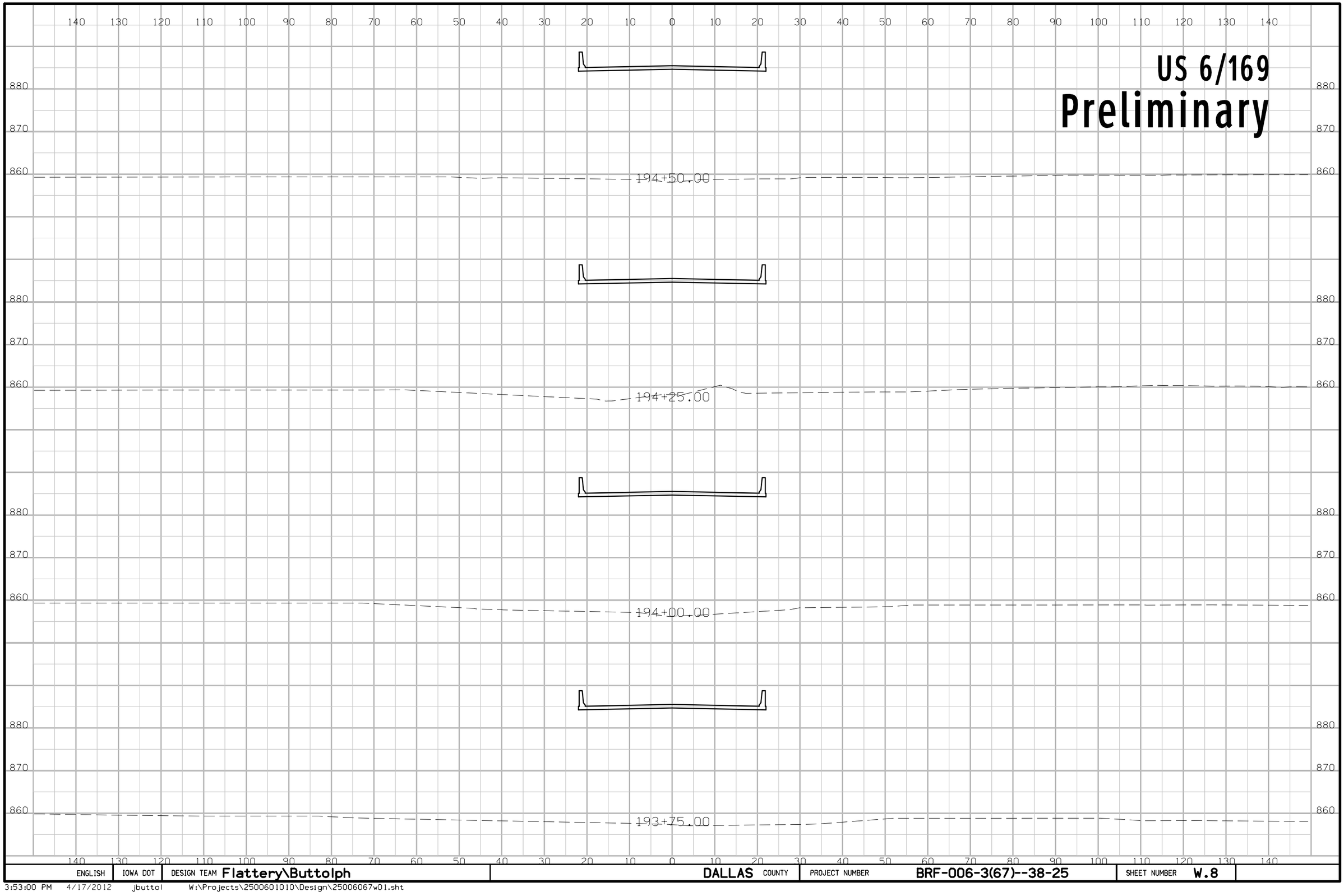
US 6/169
Preliminary



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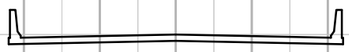
US 6/169
Preliminary

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

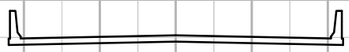
880
870
860

195+50.00



880
870
860

195+25.00



880
870
860

195+00.00

880
870
860

194+75.00

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ENGLISH	IOWA DOT	DESIGN TEAM Flattery\Buttolph	DALLAS COUNTY	PROJECT NUMBER BRF-006-3(67)--38-25	SHEET NUMBER W.9

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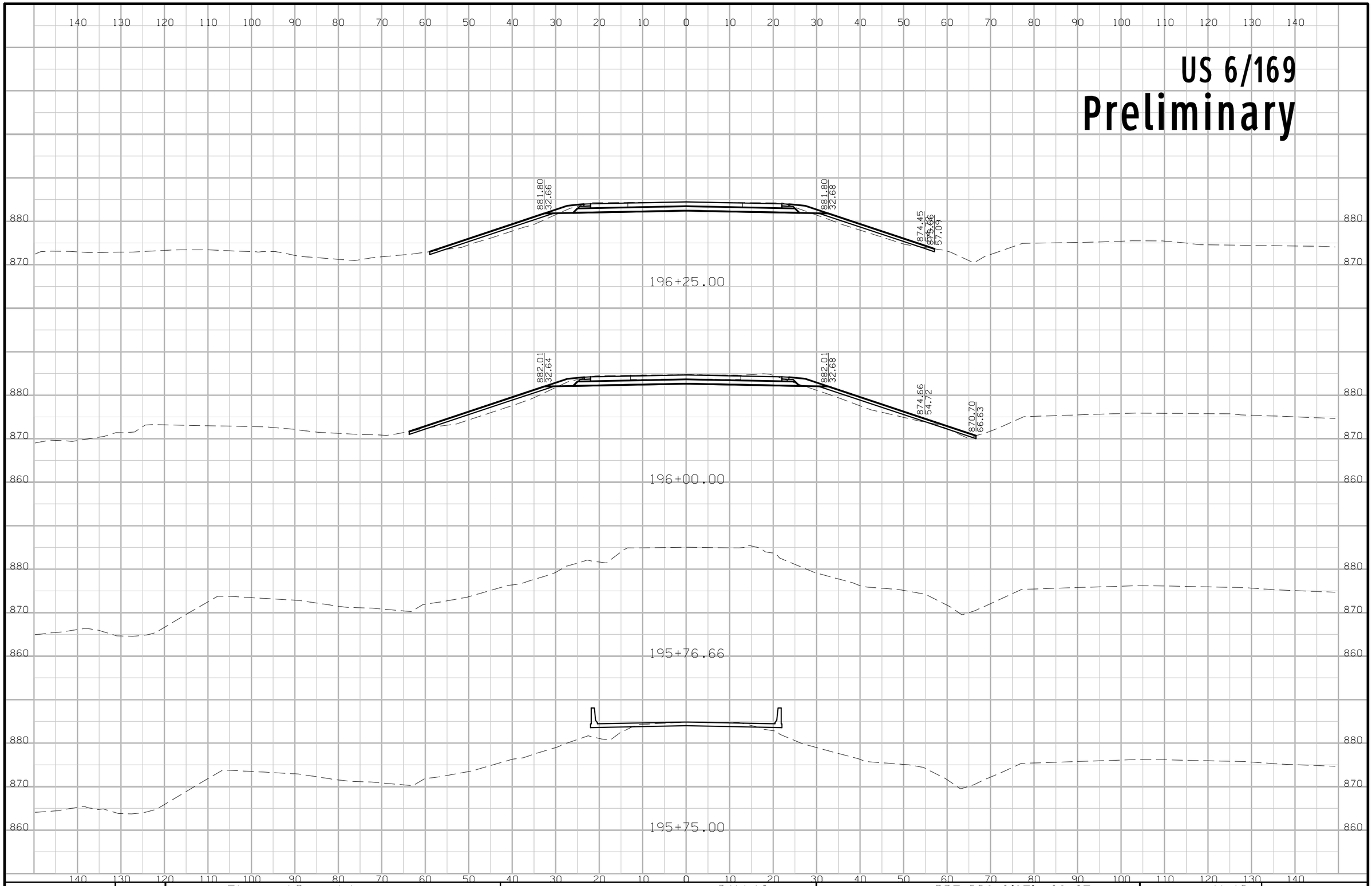
US 6/169
Preliminary



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US 6/169
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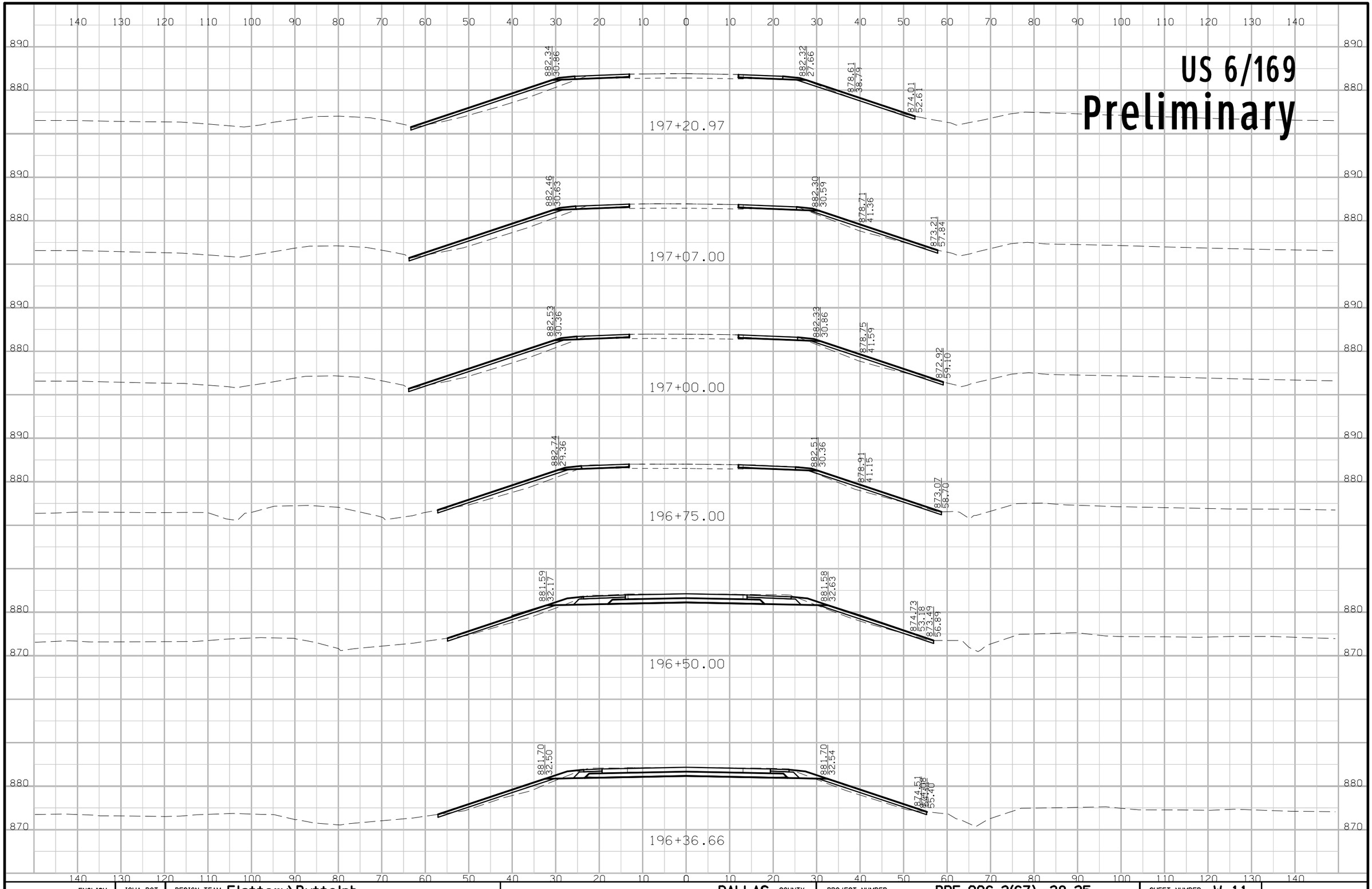

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US 6/169
Preliminary

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

880

881.68
27.45

198+25.00

880

881.89
27.45

198+00.00

880

882.05
27.45

881.89
27.45

878.17
38.60

873.54
52.51

197+80.00

880

882.09
27.45

881.93
27.45

878.21
38.60

873.61
52.39

197+75.00

890

880

882.30
27.28

882.15
27.45

878.44
38.60

873.49
53.46

197+46.03

890

880

882.27
30.69

882.25
27.45

878.54
38.60

873.78
52.86

197+32.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

ENGLISH	IOWA DOT	DESIGN TEAM Flattery\Buttolph	DALLAS COUNTY	PROJECT NUMBER BRF-006-3(67)--38-25	SHEET NUMBER W.12

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US 6/169
Preliminary

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

880

199+50.00

880

199+25.00

880.99
27.45

880

199+00.00

881.23
27.45

880

198+75.00

881.47
27.45

880

198+50.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

ENGLISH	IOWA DOT	DESIGN TEAM Flattery\Buttolph	DALLAS COUNTY	PROJECT NUMBER BRF-006-3(67)--38-25	SHEET NUMBER W.13

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