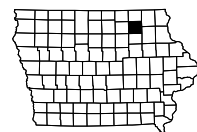


CHICKASAW CO.

CCS BRIDGE REPLACEMENT
BRF-018-7(67)--38-19

LETTING DATE
10-17-2023



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

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
A.3 - 7	Legend Sheet (B&W Plans Only)
B Sheets	Typical Cross Sections and Details
B.1 - 3	Typical Cross Sections and Details
C Sheets	Quantities and General Information
C.1	Project Description
C.1	Estimated Project Quantities
C.1	Estimate Reference Information
C.1	Standard Road Plans
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2	US 18
G Sheets	Survey Sheets
G.1 - 3	Reference Ties and Bench Marks
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan
V Sheets	Bridge and Culvert Situation Plans
* V.1 - 2	Bridge and Culvert Situation Plans
W Sheets	Mainline Cross Sections
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 7	Mainline Cross Sections
	* Color Plan Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
CHICKASAW COUNTY
CCS BRIDGE REPLACEMENT

US 18 - Winters Lake Overflow 2.9 mi E of Co Rd T76

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



REVISIONS

TOTAL

21

PROJECT IDENTIFICATION NUMBER

19-19-018-010

PROJECT NUMBER

BRF-018-7(67)--38-19

R.O.W. PROJECT NUMBER

D4 PLAN - June 20, 2023

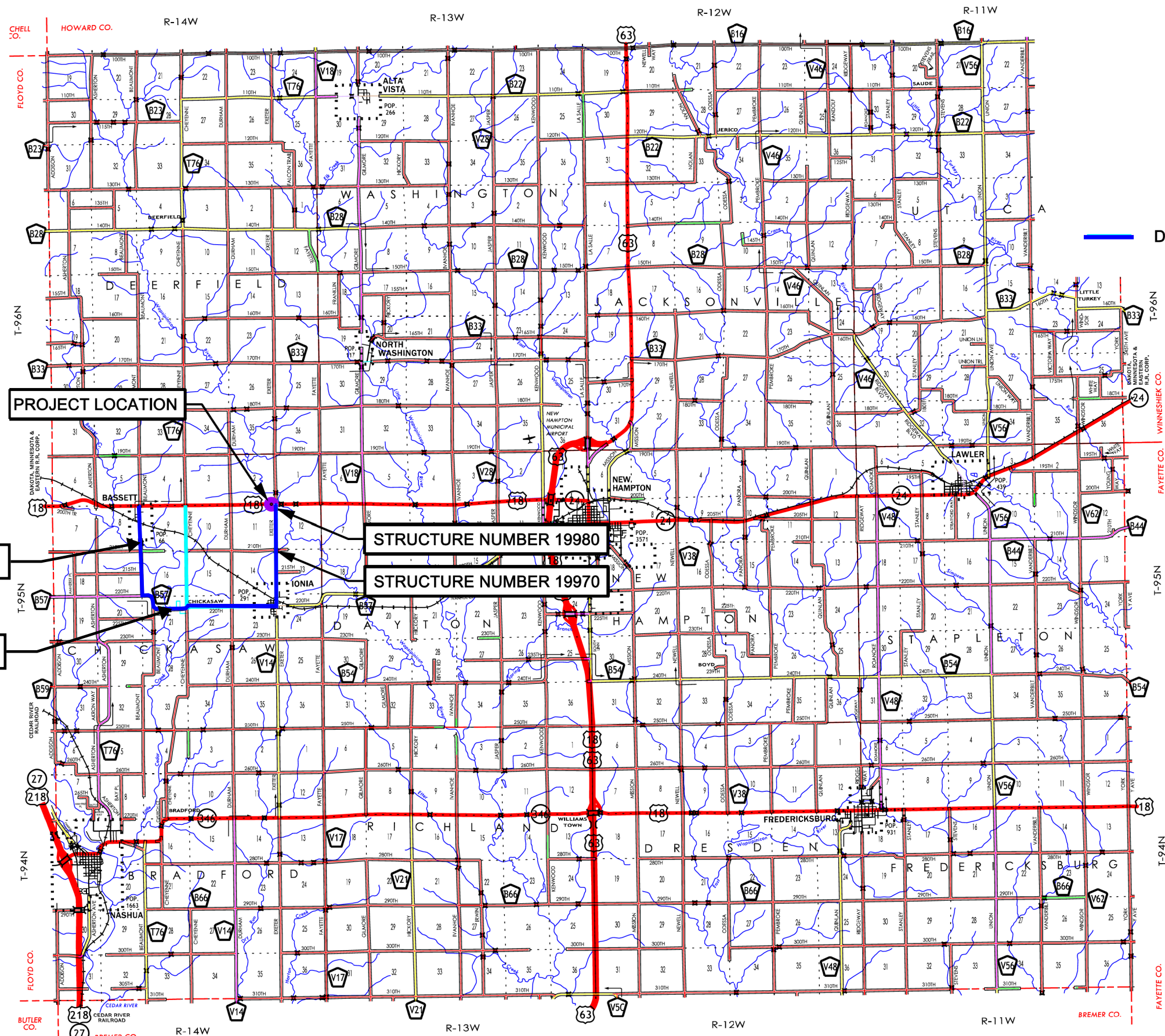
PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN - September 17, 2021

DESIGN DATA RURAL			
2024	AADT	2,100	V.P.D.
2044	AADT	2,400	V.P.D.
2044	DHV	250	V.P.H.
	TRUCKS	20	%
	Total		
	Design ESALs	--	

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.1	Michael J. Janecek	Primary Signature Block
V.1	Phillip M. Harpole	Hydraulic Design



— DETOUR ROUTE

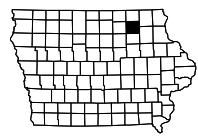
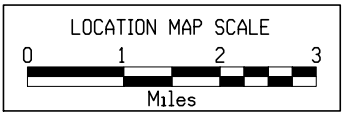
PROJECT LOCATION

STRUCTURE NUMBER 1980

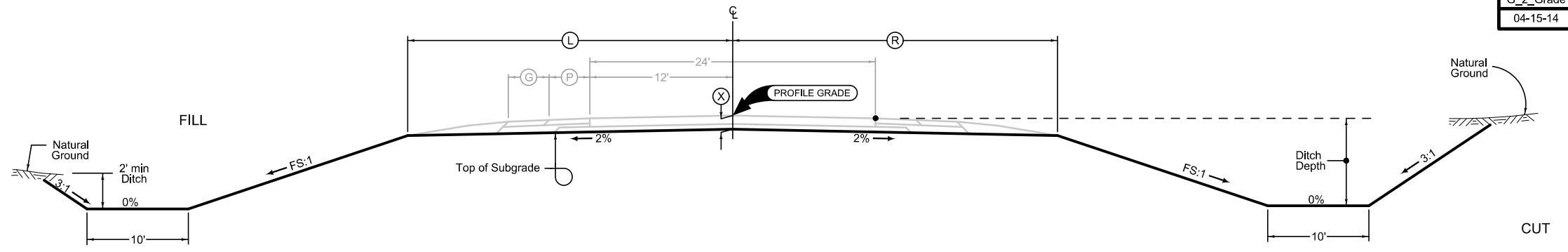
STRUCTURE NUMBER 19970

STRUCTURE NUMBER 11790

STRUCTURE NUMBER 11810



LOCATION		DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION	(L) Feet	(R) Feet	(X) Inches	FS
US 18	258+02.80 262+04.12	35.60	35.60	24	3



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

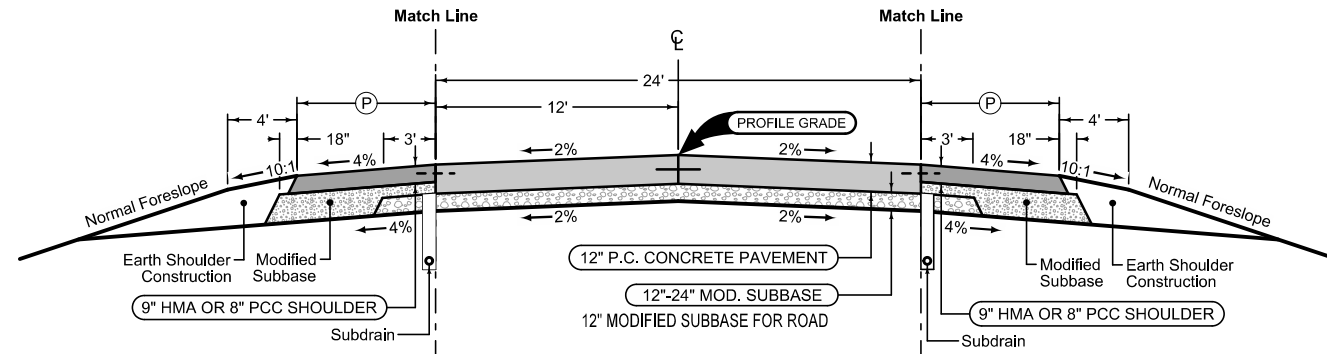
See plan & profile sheets and cross sections for additional details of ditches and backslopes.

2 LANE GRADING

Paved Shoulder at Guardrail

PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at mainline spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

2_P_Guard_04-21-20		
STATION TO STATION		(P) Feet
258+27.87	258+95.97	VARIABLE
261+33.92	262+24.12	VARIABLE



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

2P_04-21-20			
STATION TO STATION			
ROAD	258+02.08	258+73.08	
APPROACH	258+73.08	259+43.08	PER BR-203
APPROACH	260+63.92	261+33.92	PER BR-203
ROAD	261+33.92	262+04.12	

Paved Shoulder at Guardrail

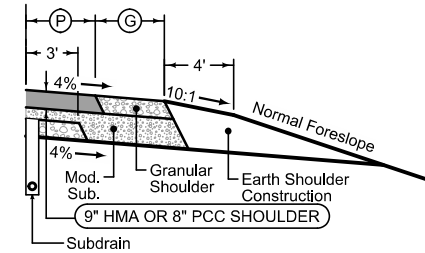
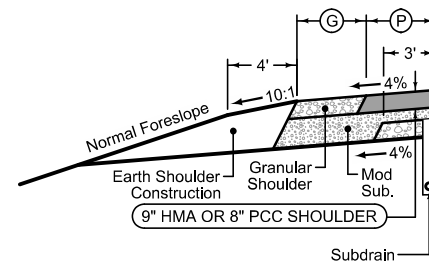
PCC Shoulder Jointing:
 Longitudinal joint: BT-1 or BT-5
 Transverse joints: C at mainline spacing
 HMA Shoulder Jointing:
 Longitudinal joint: B

2_P_Guard_04-21-20		
STATION TO STATION		(P) Feet
258+73.08	258+02.80	VARIABLE
261+33.92	261+79.22	VARIABLE

Combination Shoulder

Shoulder Jointing:
 Longitudinal joint: B

2_C_04-21-20			
STATION TO STATION		(P) Feet	(G) Feet
258+02.80	258+27.87	6	4



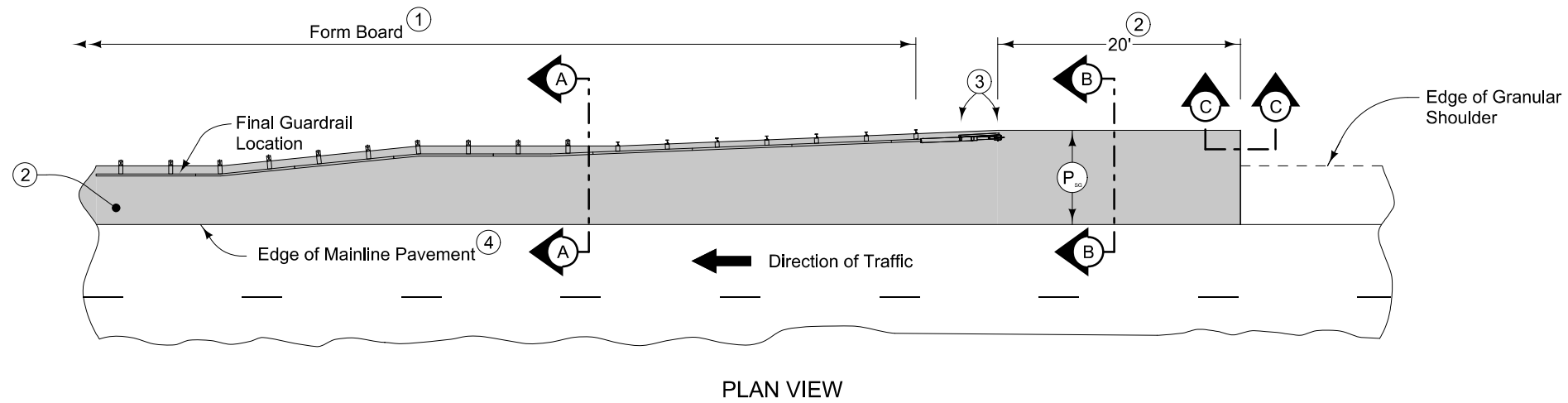
Combination Shoulder

Shoulder Jointing:
 Longitudinal joint: B

2_C_04-21-20			
STATION TO STATION		(P) Feet	(G) Feet
261+79.22	262+04.12	6	4

See Tab 100-24 or 100-25 for pavement quantities.
 See Tab 112-9 for shoulder quantities.

US 18



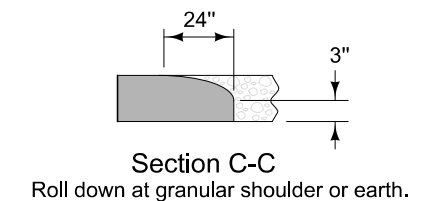
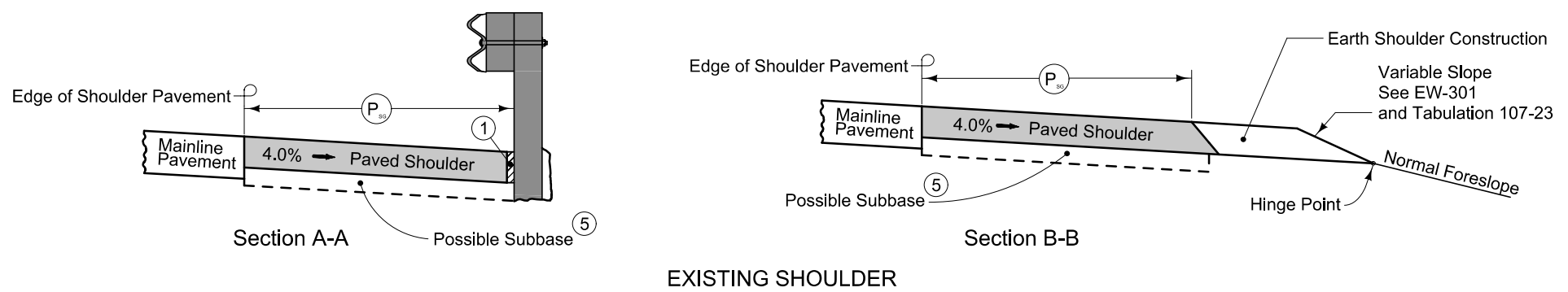
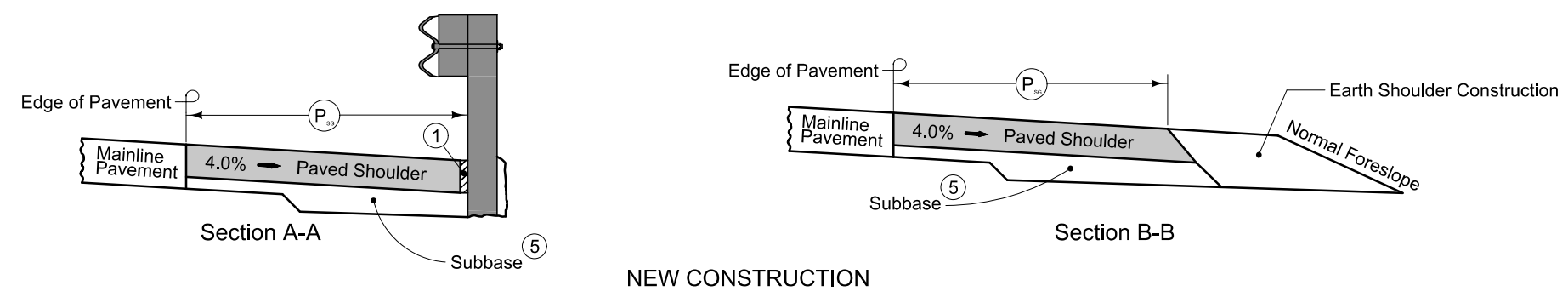
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

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

Refer to Tabulation 112-9 for shoulder quantities.

- ① PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'KT-1 joint for PCC shoulder. 'B' joint for HMA shoulder.
- ⑤ Refer to other details in the plan.



PAVED SHOULDER AT GUARDRAIL (GRANULAR SHOULDER ADJACENT TO MAINLINE)

100-1D
10-18-05

PROJECT DESCRIPTION

This project involves the replacement of the US 18 bridge over Winters Lake Overflow, 2.9 miles east of Co. Rd. 176 using an off site detour.

100-0A
10-28-97

**ESTIMATED ROADWAY QUANTITIES
(1 DIVISION PROJECT)**

Item No.	Item Code	Item	Unit	Total	As Built Qty.

105-4
10-18-11

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
BA-200	04-16-19	Steel Beam Guardrail Components
BA-201	04-18-17	Steel Beam Guardrail Barrier Transition Section (MASH TL-3)
BA-202	10-20-15	Steel Beam Guardrail Bolted End Anchor
BA-205	04-19-16	Steel Beam Guardrail Tangent End Terminal (MASH TL-3)
BA-250	10-18-16	Steel Beam Guardrail Installation at Concrete Barrier or Bridge End Post (MASH TL-3)
BR-203	10-19-21	Double Reinforced 12" Approach
DR-303	10-17-17	Subdrains (Longitudinal)
DR-306	10-16-18	Precast Concrete Headwall for Subdrain Outlets
DR-402	10-15-19	Rock Flume for Bridge End Drain
EW-102	10-20-15	Allowable Placement of Unsuitable Soil in Embankments
EW-202	04-19-16	Bridge Berm Grading without Recoverable Slope (Non-Barnroof Section)
EW-301	10-20-15	Guardrail Grading
EW-501	10-20-15	Rural Entrances
PM-110	04-21-20	Line Types
PV-101	04-21-20	Joints
SI-172	04-19-16	Delineators
SI-173	04-19-16	Object Markers
SI-211	10-18-16	Object Marker and Delineator Placement with Guardrail
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	04-21-15	Work Within 15 ft of Traveled Way
TC-252	04-21-20	Routes Closed to Traffic

SURVEY SYMBOLS

- ▲ SCR Section Corner
- CP Control Point
- POT Tangent Point
- REF Reference Tie Point
- ▲ ROW Right of Way Mark
- ▲ BM Bench Mark
- WC Wild Card (Misc. Field Shot)
- GR Ground Shot
- BL Topo Breakline
- FO1D Fiber Optic Co. 1 - Quality D
- FO2D Fiber Optic Co. 2 - Quality D
- TL1D Telephone Line Co. 1 - Quality D
- BNK Stream Bank
- SNP Unpaved Shoulder
- EP Edge of Paved Roads (ML or SR)
- C Centerline BL of Road (ML or SR)
- CU Back of Curb
- GU Gutter In Front of Curb
- ↓ PLG Location of General Photo
- ← DU Centerline Draw or Stream (Up)
- PIP Pipe Culvert
- D Centerline Draw or Stream (Down)
- FW Wire Fence
- EW Edge of Water
- EB Electrical Box
- CON Concrete or A/C Slab
- PR Electric Riser Pole
- PPA Power Pole Co. 1
- ENU Edge Unpaved Entrance & Parking
- ENT Centerline BL of Entrance
- TPD Telephone Pedestal
- UB Utility Box
- SH Paved Shoulder
- GDL Guard Rail Steel
- LIN Miscellaneous Line
- BD Bridge Deck
- BCL Bridge Centerline
- SBR Size of Bridge
- BRG Bridge

UTILITY LEGEND

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
 - Iowa Communications Network - Quality D
 - Windstream Communications - Quality D
 - Windstream Communications - 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.		
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 "In conjunction with a paving project"
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

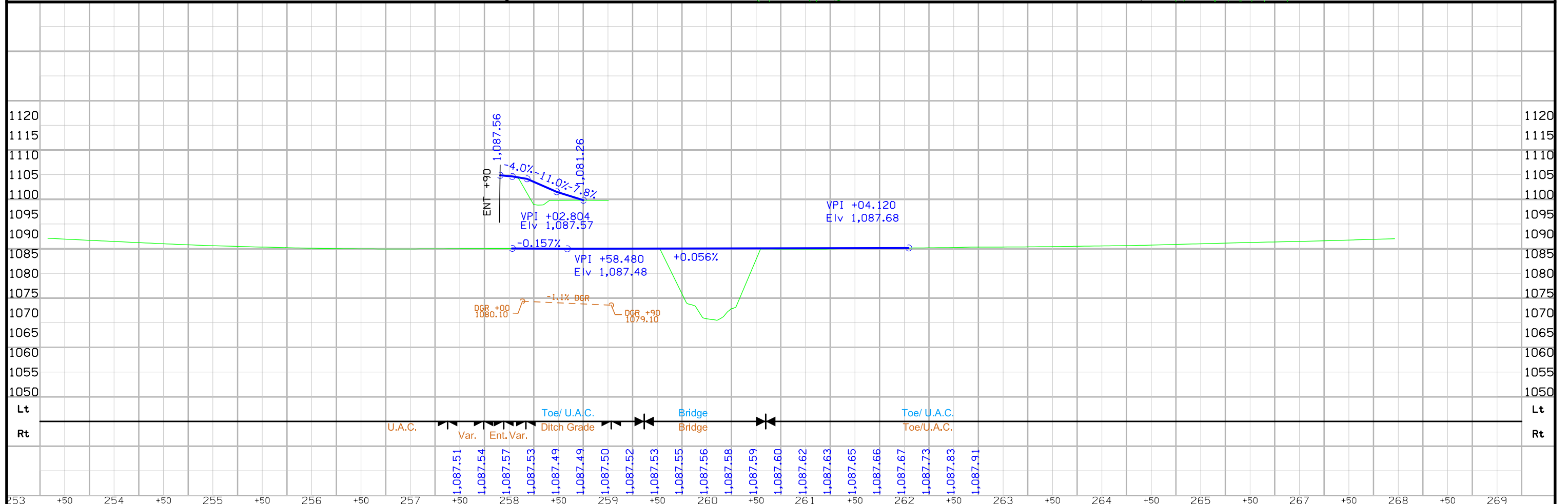
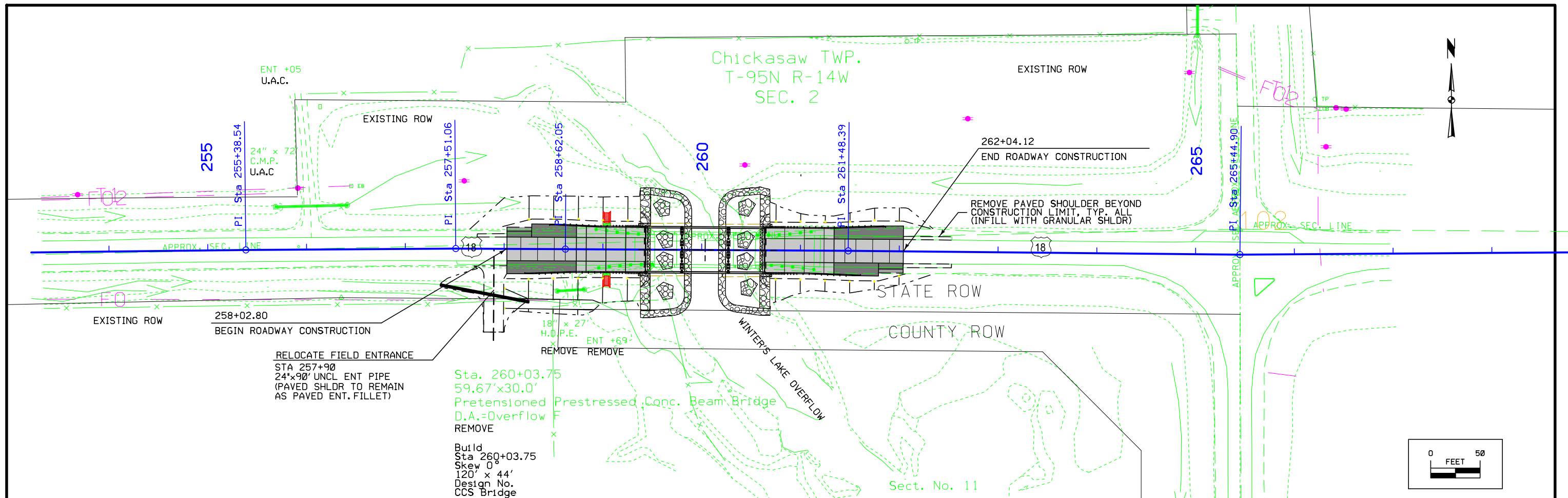
- Reference Point
- Station
- ▲ Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- ▨ Pavement Removal
- ▩ Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

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

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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



253	+50	254	+50	255	+50	256	+50	257	+50	258	+50	259	+50	260	+50	261	+50	262	+50	263	+50	264	+50	265	+50	267	+50	268	+50	269
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Survey Information

Chickasaw County
BRFN-018-7(67)--39-19
Winters Lake Overflow 2.9 mi E of Co Rd T76
Bridge-Unspecified
PIN 19-19-018-010
Sap-343.1

General Information

Measurement units for this survey are US survey feet. This survey is for proposed Bridge reconstruction over Winters Lake overflow. Project datum and control information is provided by Design Survey Office. This project is a Full DTM. This survey request was for the U.S. Hwy. 18 and Chickasaw Co. Rte. V-14 corridor only.

Vertical Control

Vertical datum for this survey is NAVD88 (Computed using Geoid12b). GRS80 Ellipsoidal Height was computed at project Pts. 220, 182237, 182239, 182246 and U 36 by conducting one concurrent six-hour static observation. Additional benchmarks were placed throughout the project using a GNSS Base-Rover setup relative to Pts. 182237, 182239, and Pt. 182246. Two observations with a minimum of four-hours between were collected and used in a weighted average.

This survey observed 1 NGS Control Monument with published NAVD88 heights to compare to local ground control:

NGS 2nd. order class 0 benchmark designated U 36 has a published Elev. Of 1123.38
Survey Elev. = 1123.73

This NGS Control Monument is also known as Chickasaw County GPS Control Point 513 designated NGS 2nd Order vertical control station "U 36" PID 000217. The published Elevation is 1123.73

This survey observed 1 local area county Control Monument with published NAVD88 heights to compare to local ground control:

Chickasaw County GPS Control Pt 2000-220 has a published Elev. of 1125.81
Survey Elev. = 1125.83

No As-Built Plan benchmarks could be located, however survey elevations obtained on the bridge seats have a close vertical difference relationship with the plan bridge seat elevations as follows:

As-built Plan FN-160 Bridge Design No. 264

West abutment low step bridge seat plan elev. = 1092.07
Survey elev. = 1084.40

The average vertical difference is -7.67 to be applied to as built elevations

Horizontal Control

The project coordinate system for this survey is Iowa RCS Zone 2 (U.S. Survey Feet). This survey control is relative to laRTN reference stations. laRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00. Coordinates were determined by conducting one concurrent six-hour static observation at project control Pts. 220, 182237, 182239, 182246 and U 36. Additional control points were placed throughout the project using a GNSS Base-Rover setup relative to Pts. 182237, 182239 and 182246.

Alignment Information

The horizontal alignment for U.S. Hwy 18 this survey is a retrace of As-built Plans No. FA-160 and F-18-7(24)--20-19. Survey stationing was equated to the plan POT at Sta. 265+45.2 and run back and ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

POT Sta. 265+45.2 As-built Plans Project No. FA-160
Survey POT Sta. 265+45.2

PI Sta. 255+91.1 As-built Plans Project No. FA-160
Survey PI Sta. 255+91.21

POT Sta. 238+69.5 As-built Plans Project No. FA-160
Survey POT Sta. 238+69.67

POT Sta. 265+46.0 As-built Plans Project No. F-18-7(24)--20-19
Survey POT Sta. 265+45.20

PI Sta. 276+34.20 As-built Plans Project No. F-18-7(24)--20-19
Survey PI Sta. 276+33.68

POT Sta. 291+71.30 As-built Plans Project No. F-18-7(24)--20-19
Survey POT Sta. 291+70.16

The horizontal alignment for Chickasaw Co. Rte. V-14 (Old Iowa 393) this survey is a retrace of As-built Plans No. F-1055(3). Survey stationing was equated to the plan PI at Sta. 129+53.4 and run back and ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

PI Sta. 129+53.4 As-built Plans Project No. F-1055(3)
Survey PI Sta. 129+53.4

POT Sta. 129+27.9 As-built Plans Project No. F-1055(3) = POT Sta. 265+45.2
As-built Plans Project No. FA-160
Survey POT Sta. 129+27.90 Co. Rte. V-14 = Survey POT Sta. 265+45.2 U.S. Hwy. 18

POT Sta. 102+61.8 As-built Plans Project No. F-1055(3)
Survey POT Sta. 102+61.85

POT Sta. 76+10.2 As-built Plans Project No. F-1055(3)
Survey PI Sta. 76+09.41

CONTROL POINT VICINITY MAP

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



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

1a. Regional Coordinate System Zone 2

Coordinate listing from next sheet will be used with 1aRTN for monument recovery. No other reference ties are given.

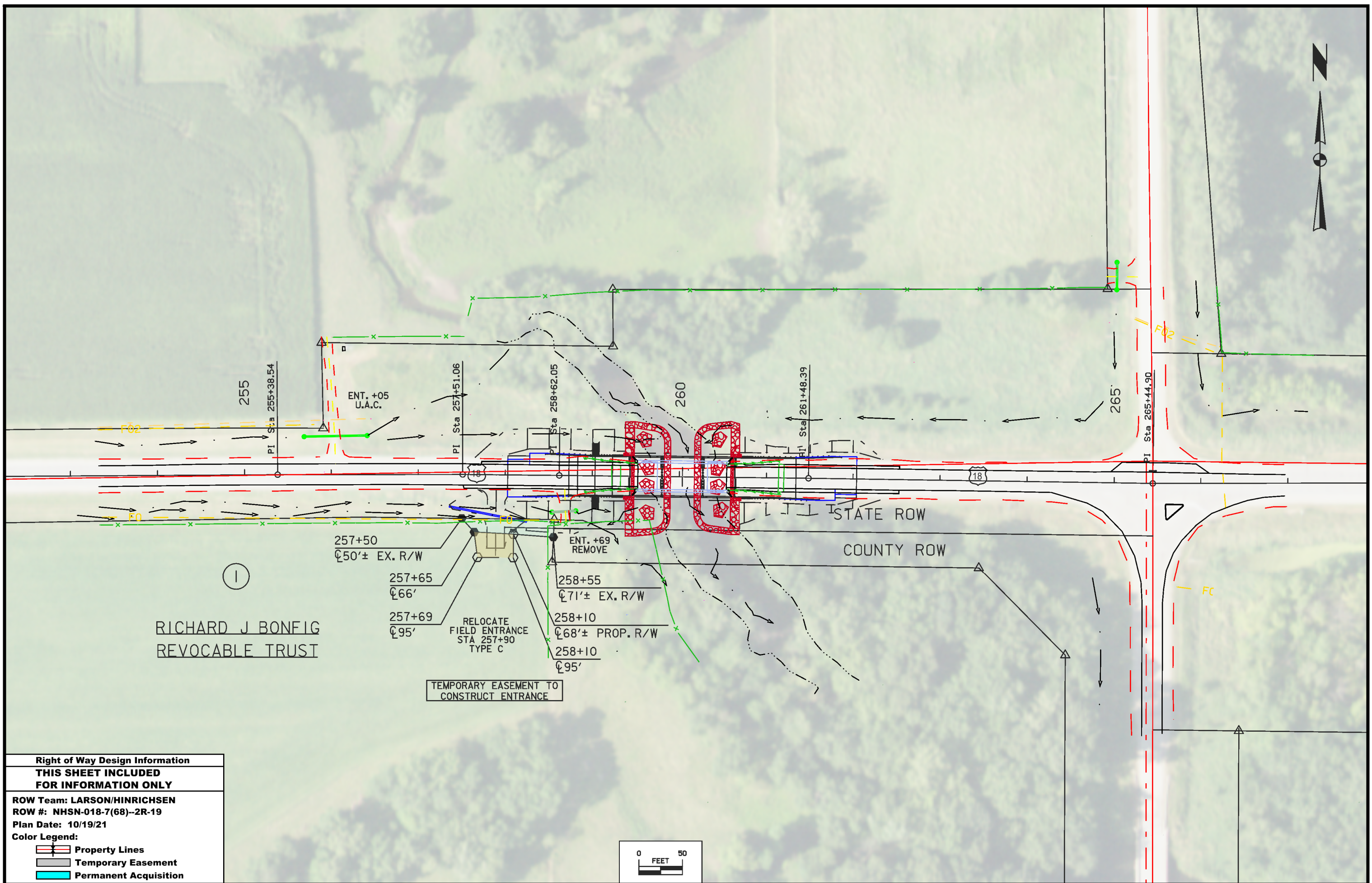
HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 2

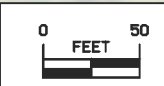
Point Name	Northing	Easting	Elevation	Code - Description
182237	9763689.154	12576695.637	1095.319	BM SET FENO MONUMENT 0.37 MI W OF INTSC US HWY 18 AND EXETER AVE_53 FT S OF CTR US HWY 18_36 FT E OF CTR FLD ENT S_48 FT E OF ROW RAIL
182239	9763707.043	12577739.324	1082.481	BM FND ROW RAIL DRILL HOLE IN BALL_0.17 MI W OF INTSC US HWY 18 AND EXETER AVE_50 FT S OF CTR US HWY 18_32 FT E OF CTR FLD ENT N
182246	9763700.770	12581241.175	1085.935	BM SET FENO MONUMENT 0.49 MI E OF INTSC US HWY 18 AND EXETER AVE_39 FT S OF CTR US HWY 18_25 FT W OF CTR FLD ENT S
220	9769649.973	12583896.798	1125.825	BM FND CHICKASAW CO GPS CONTROL PT 2000-220 AS DESCRIBED
U36	9755815.907	12573313.084	1123.727	BM FND NGS 2ND ORDER CLASS 0 BM U 36 AS DESCRIBED_AKA CHICKASAW CO GPS CONTROL PT 513



RICHARD J BONFIG
REVOCABLE TRUST

TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE

Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: LARSON/HINRICHSEN	
ROW #: NHSN-018-7(68)--2R-19	
Plan Date: 10/19/21	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



108-23A
08-01-08

TRAFFIC CONTROL PLAN

- 1) While bridge and approaches are being removed and replaced, traffic on US 18 shall be maintained via an off-site detour.
- 2) Signage and devices shall be furnished, installed, maintained, by District 2. See sheet A.2 for proposed detour.

108-25
10-21-14

511 TRAVEL RESTRICTIONS

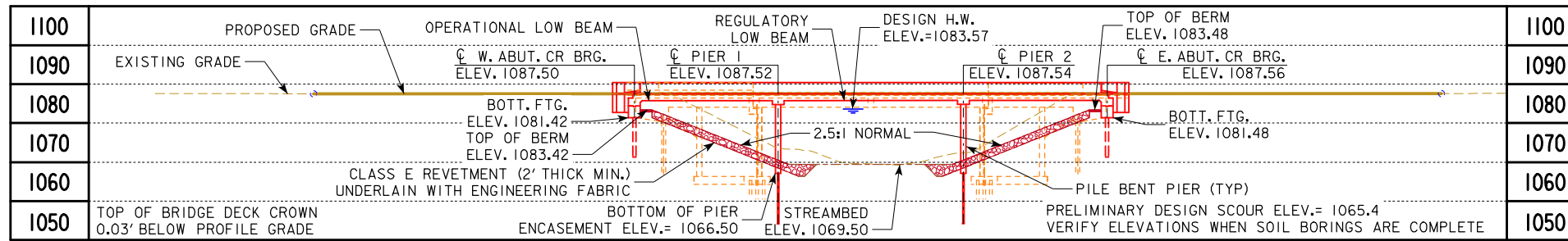
Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
US 14	Both	Chickasaw	No Restrictions Anticipated	None - Detour								

111-01
04-17-12

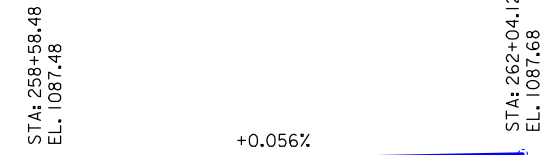
COORDINATED OPERATIONS

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	



BENCH MARK NO. 182239, FOUND ROW RAIL WITH DRILL HOLE IN BALL, 0.17 MILES WEST OF INTERSECTION US HWY 18 AND EXETER AVENUE, 50 FEET SOUTH OF CENTERLINE US HWY 18, 32 FEET EAST CENTERLINE FIELD ENTRANCE NORTH. ELEVATION = 1082.48



PROPOSED PROFILE GRADE US 18

UTILITIES LEGEND:

- FO - IOWA COMMUNICATIONS NETWORK - QUALITY D
 - FO2 - WINDSTREAM COMMUNICATIONS - QUALITY D
 - T1 - WINDSTREAM COMMUNICATIONS - QUALITY D
- UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

HYDRAULIC DATA

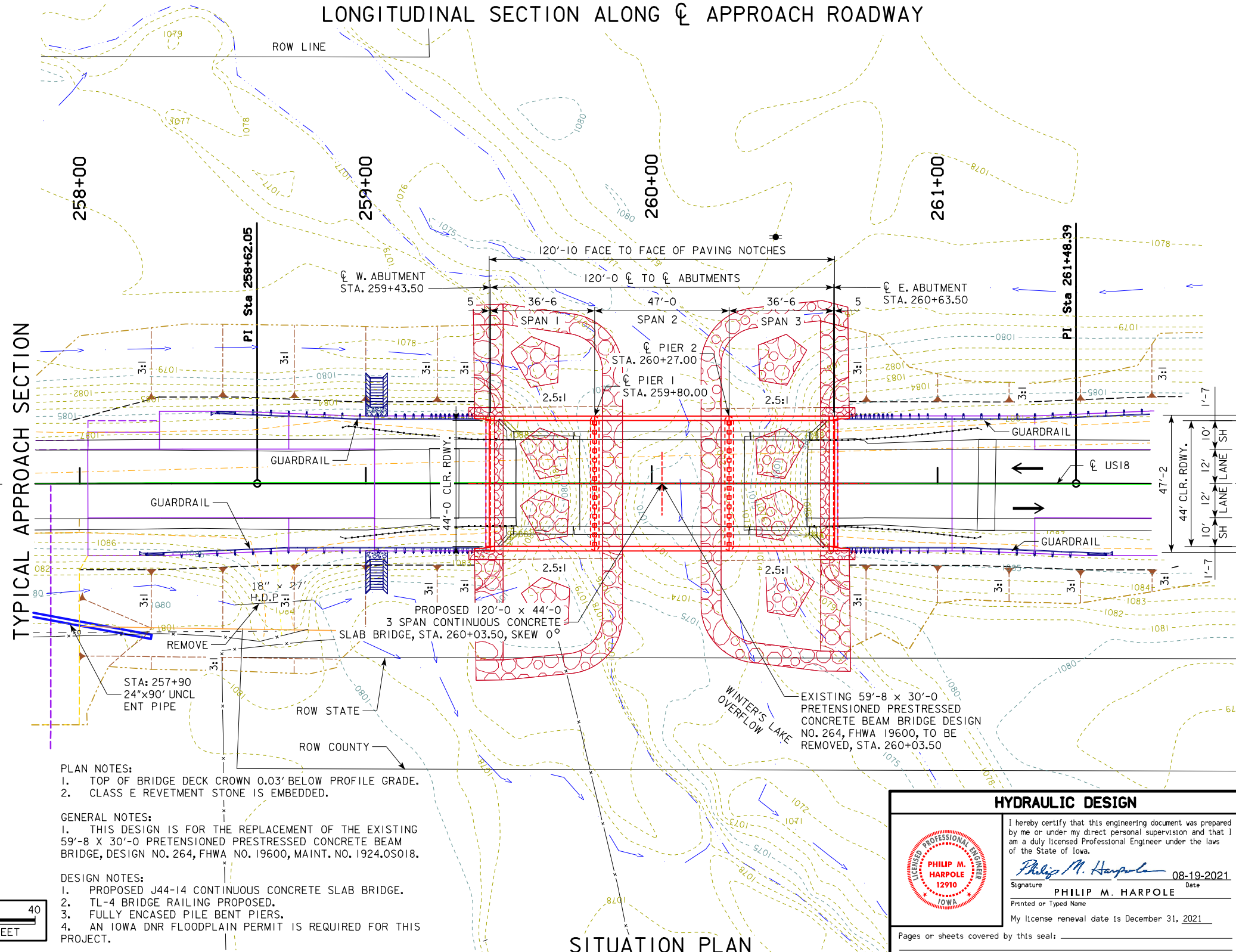
DRAINAGE AREA = 147.0 SQ. MI.
 STREAM SLOPE = 3.42 FT./MI.
 AVG. LOW WATER STAGE = 1076.5

Q₉₀ = 2,306 CFS
 STAGE = 1083.57 FT.
 REGULATORY LOW BEAM = 1085.42
 BACKWATER = 1.33 FT.
 AVG. BRIDGE VELOCITY = 3.62 FPS

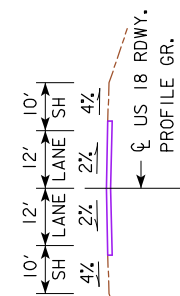
Q₁₀₀ = 2,626 CFS
 STAGE = 1083.96 FT.
 OPERATIONAL LOW BEAM = 1085.39
 BACKWATER = 1.51 FT.
 AVG. BRIDGE VELOCITY = 3.91 FPS

Q₂₀₀ = 3,132 CFS
 STAGE = 1084.68
 CALCULATED DESIGN SCOUR = 1065.4

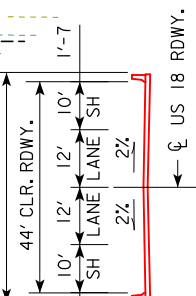
Q₅₀₀ = 3,176 CFS
 STAGE = 1084.82
 CALCULATED CHECK SCOUR = 1064.7
 ROADWAY OVERTOP = 1087.43



TYPICAL APPROACH SECTION



TYPICAL BRIDGE SECTION



- PLAN NOTES:**
- TOP OF BRIDGE DECK CROWN 0.03' BELOW PROFILE GRADE.
 - CLASS E REVETMENT STONE IS EMBEDDED.
- GENERAL NOTES:**
- THIS DESIGN IS FOR THE REPLACEMENT OF THE EXISTING 59'-8" X 30'-0" PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE, DESIGN NO. 264, FHWA NO. 19600, MAINT. NO. 1924.OS018.
- DESIGN NOTES:**
- PROPOSED J44-14 CONTINUOUS CONCRETE SLAB BRIDGE.
 - TL-4 BRIDGE RAILING PROPOSED.
 - FULLY ENCASED PILE BENT PIERS.
 - AN IOWA DNR FLOODPLAIN PERMIT IS REQUIRED FOR THIS PROJECT.

LOCATION

US18 OVER WINTERS LAKE
 OVERFLOW
 T-95N R-14W
 SECTION 2 & 11
 CHICKASAW TOWNSHIP
 CHICKASAW COUNTY
 FHWA NO. 019601
 BRIDGE MAINT. NO. 1924.OS018
 LATITUDE 43.066840
 LONGITUDE -92.457832

TRAFFIC ESTIMATE

2024 AADT	2100	V.P.D.
2044 AADT	2400	V.P.D.
2044 DHV	250	V.P.H.
TRUCKS	20	%



SITUATION PLAN

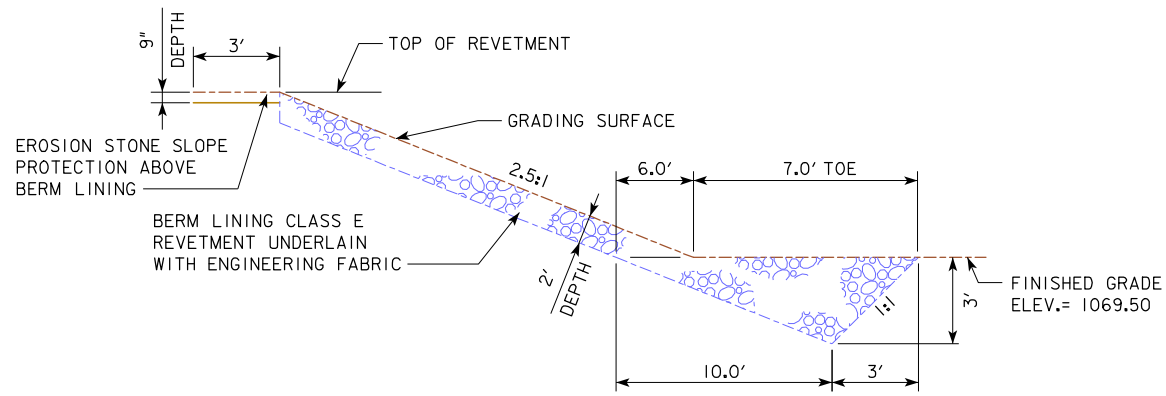
HYDRAULIC DESIGN

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

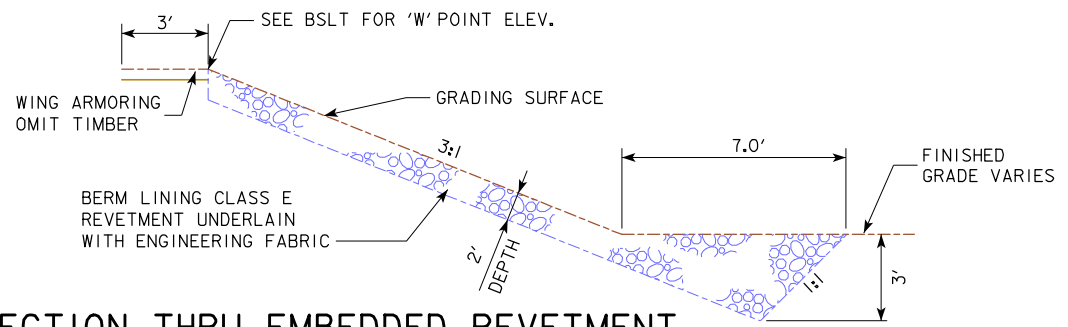
Signature: *Philip M. Harpole* Date: 08-19-2021
 PHILIP M. HARPOLE
 Printed or Typed Name
 My license renewal date is December 31, 2021

Pages or sheets covered by this seal: _____

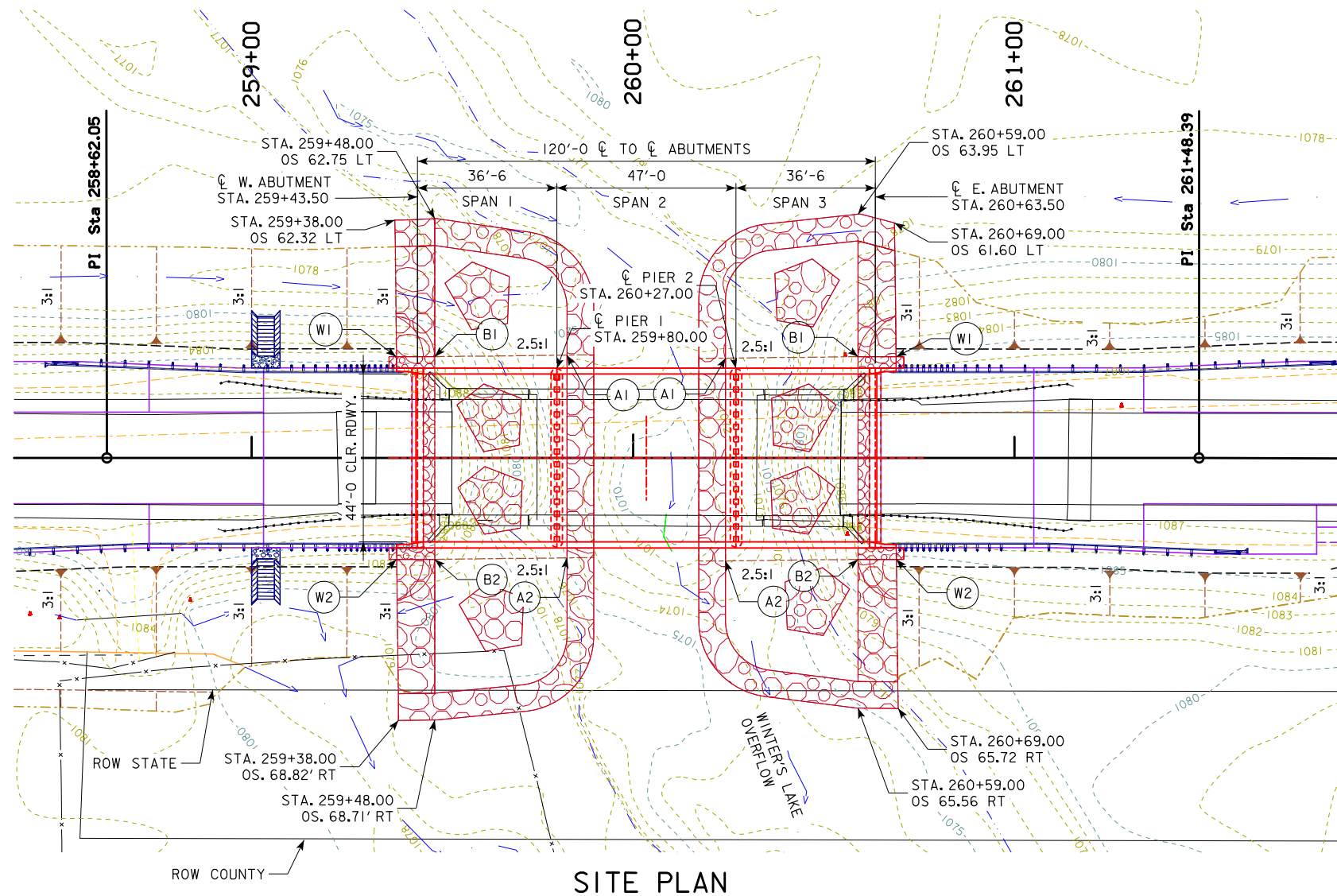
DESIGN FOR 0° SKEW
120'-0" X 44'-0" CONTINUOUS CONCRETE SLAB BRIDGE
 36'-6" END SPANS 47'-0" INTERIOR SPAN
SITUATION PLAN
 STATION 260+03.50 (US18) AUGUST, 2021
CHICKASAW COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION
 DESIGN SHEET NO. 1 OF 2 FILE NO. 32085 DESIGN NO. 124



SECTION THRU EMBEDDED REVETMENT BERM



SECTION THRU EMBEDDED REVETMENT NORMAL TO BRIDGE WING AT W POINT



SITE PLAN

BERM SLOPE LOCATION TABLE						
POINTS	WEST ABUTMENT			EAST ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	259+82.70	26.58' LT	1069.50	260+24.25	26.58' LT	1069.50
A2	259+82.70	26.58' RT	1069.50	260+24.25	26.58' RT	1069.50
B1	259+48.00	26.58' LT	1083.42	260+59.00	26.58' LT	1083.48
B2	259+48.00	26.58' RT	1083.42	260+59.00	26.58' RT	1083.48
W1	259+38.00	26.58' LT	1086.93	260+69.00	26.58' LT	1087.01
W2	259+38.00	26.58' RT	1086.93	260+69.00	26.58' RT	1087.01

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

ESTIMATED BERM ARMORING QUANTITIES				
LOCATION	RETVETMENT CL. E (TON)	EROSION STONE (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
BERM LINING - WEST ABUTMENT	773.4	9.6	765.9	489.3
BERM LINING - EAST ABUTMENT	760.9	9.6	754.2	481.5
TOTALS	1534.3	19.2	1520.1	970.8

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.

PRELIMINARY
 DESIGN FOR 0° SKEW
120'-0" X 44'-0" CONTINUOUS CONCRETE SLAB BRIDGE
 36'-6" END SPANS 47'-0" INTERIOR SPAN
SITUATION PLAN - SITE
 STATION 260+03.50 (US18) AUGUST, 2021
CHICKASAW COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION
 DESIGN SHEET NO. 2 OF 2 FILE NO. 32085 DESIGN NO. 124

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)

- Topsoil (Class 10)
- Slope Dressing Only
- Class 10 Materials
- Select Loams And Clay-Loams
- Select Sand
- Unsuitable Type A Disposal
- Unsuitable Type B Disposal
- Unsuitable Type C Disposal
- Shale
- Waste
- Broken and Weathered Rock
- Solid Rock
- Boulders

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

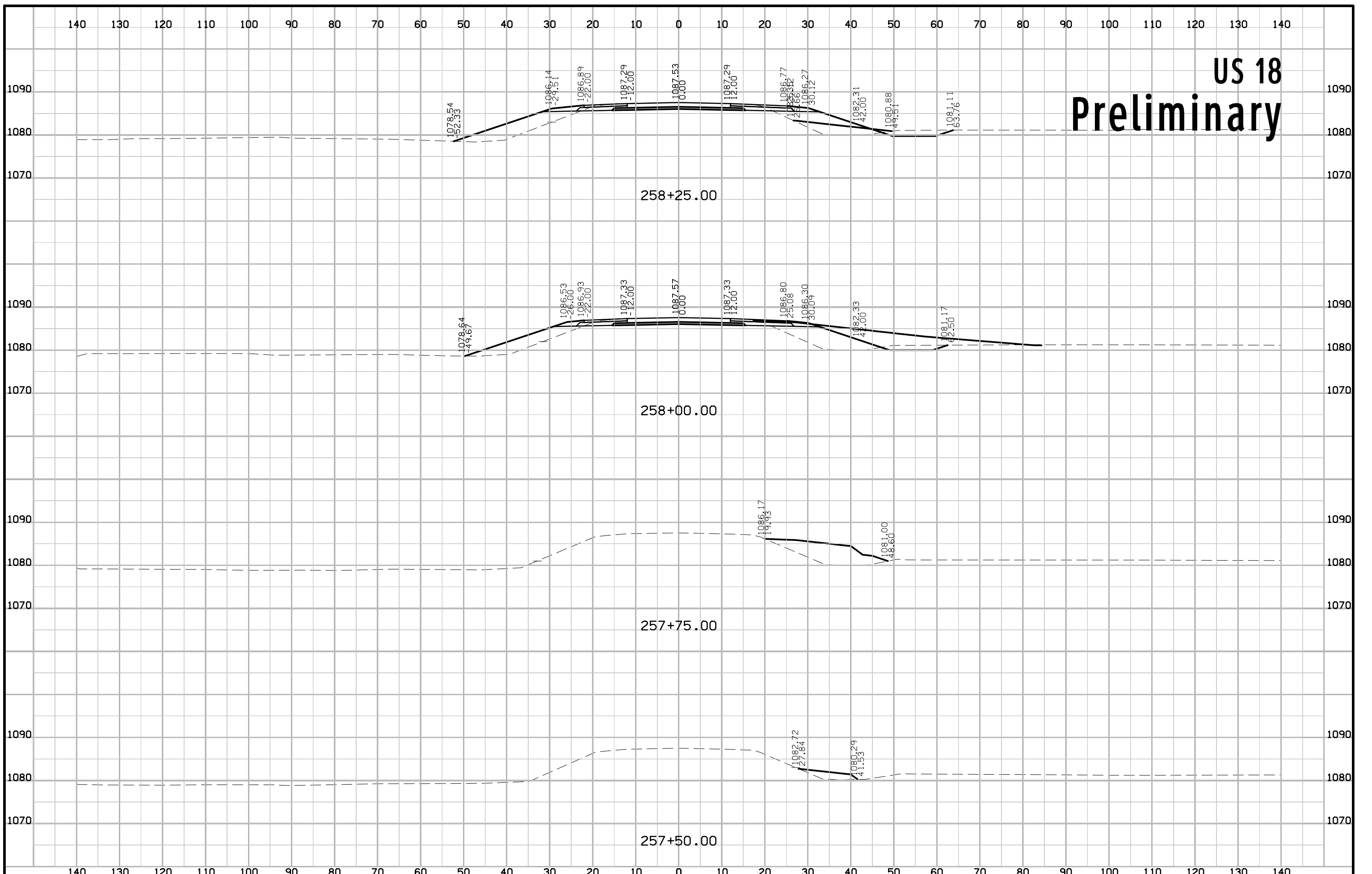
Note: Vertical or near vertical lines connecting soil layers at edges of cross sections are only for the purpose of calculating template quantities and do not depict soil stratification.

SYMBOL LEGEND OF CROSS SECTION SHEETS

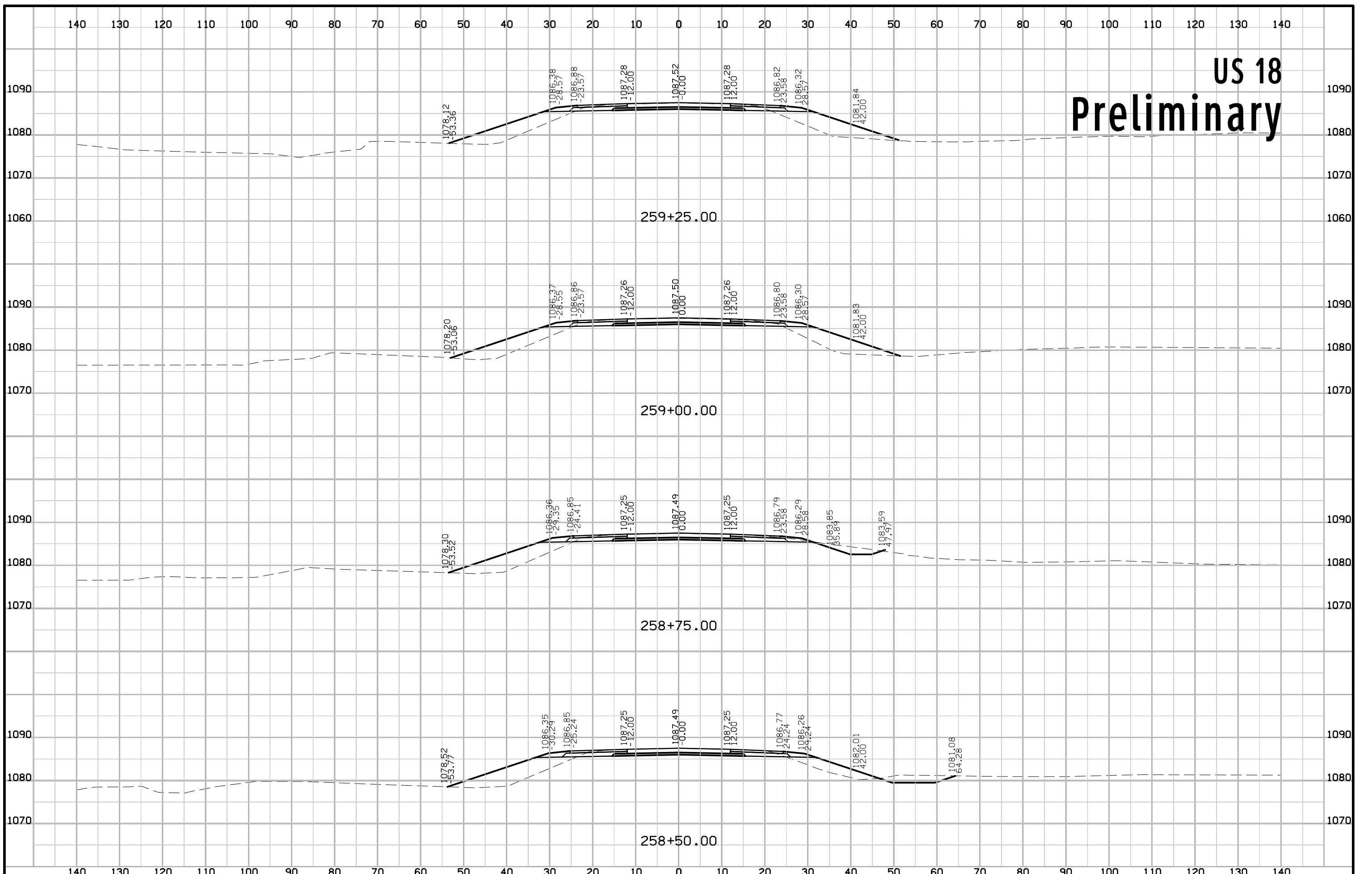
- Existing ROW
|
Existing Right-of-Way Limit
- Proposed ROW
|
Proposed Right-of-Way Limit
- Temporary ROW
|
Temporary Right-of-Way Limit

**CROSS SECTION
LEGEND AND SYMBOL
INFORMATION SHEET
(COVERS SHEET SERIES W, X, Y, & Z)**

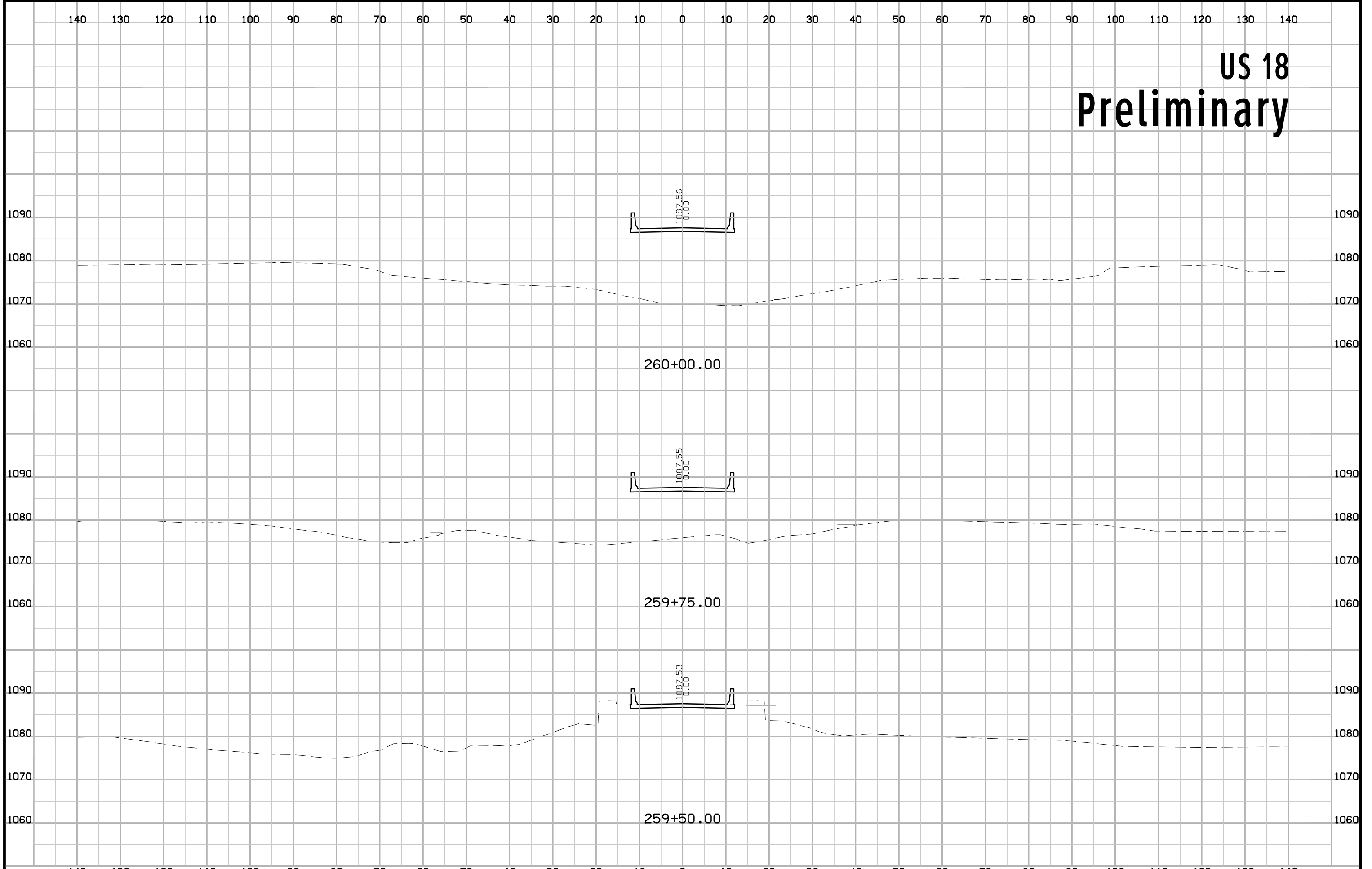
US 18 Preliminary



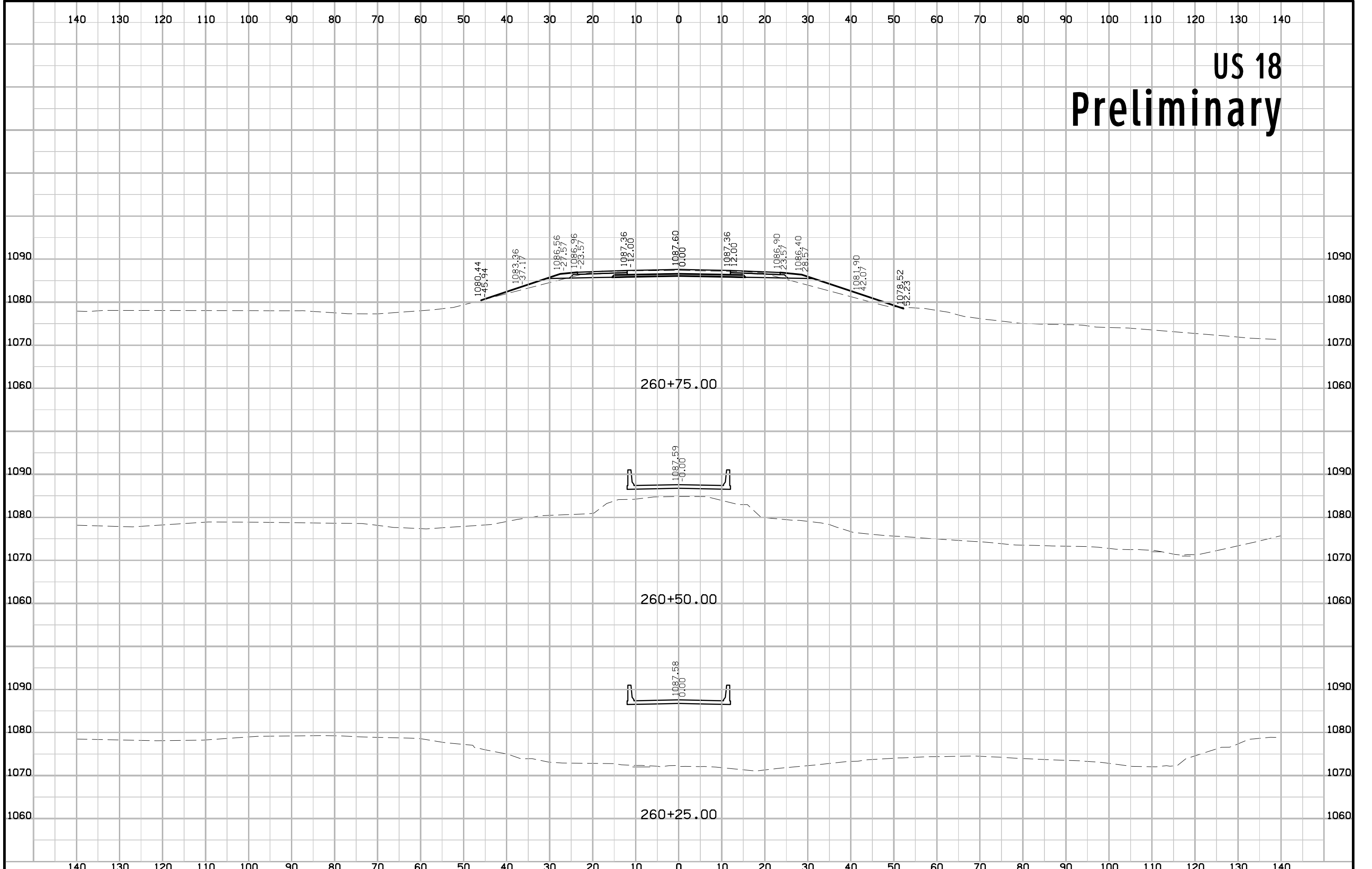
US 18 Preliminary



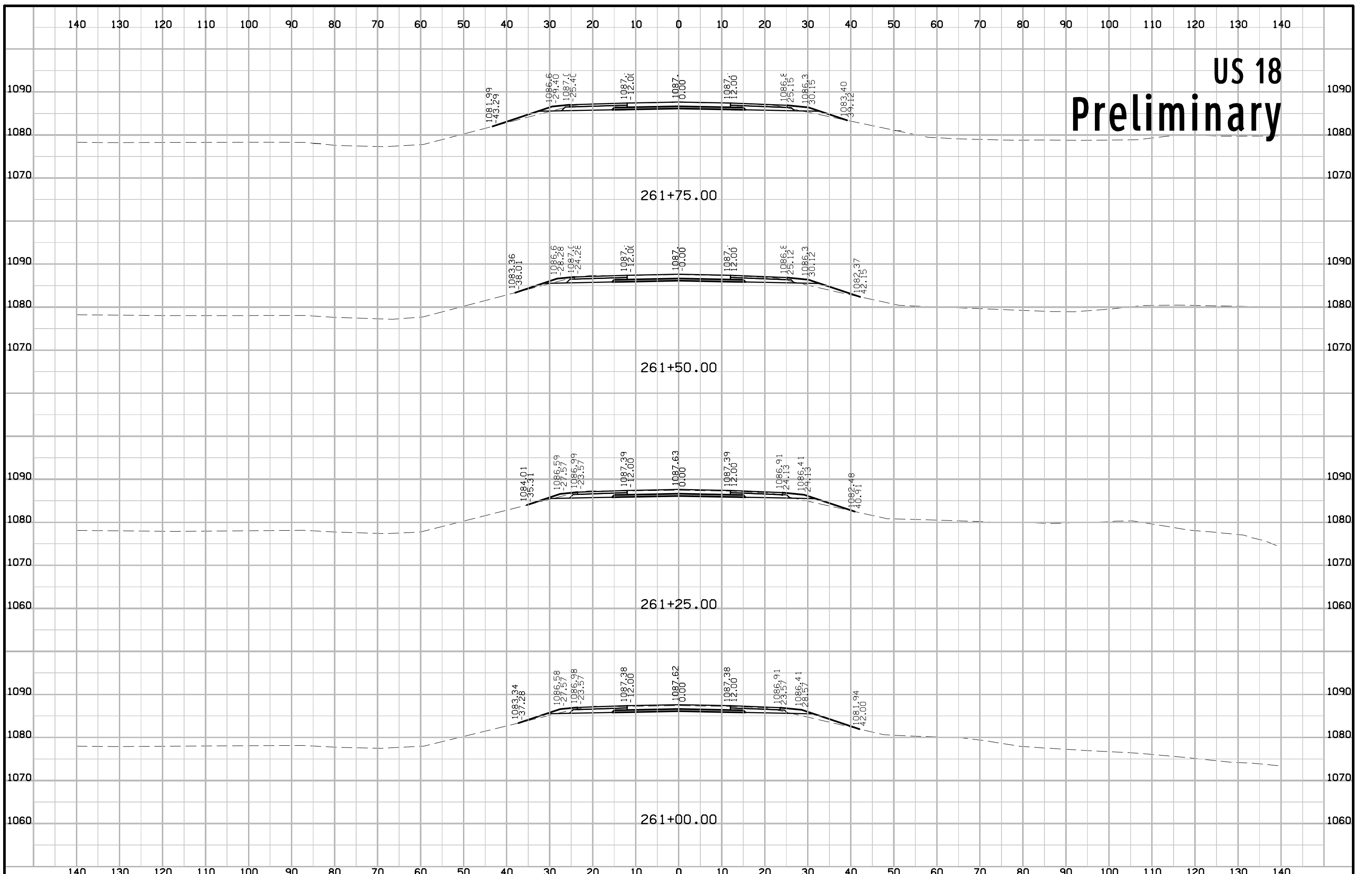
US 18 Preliminary



US 18 Preliminary



US 18 Preliminary



US 18 Preliminary

