

better align with the stream. It could also allow for resizing of the culvert to reduce stream velocities, since current culvert size was specifically used to fit under the existing bridge. The overall project length will be able to be shortened, since the existing project length is based on full depth overlay of bridge approaches and deck, moving the notches outside that area. The road would need to be closed to remove the existing bridge; a detour route has been identified, from Iowa 14, north to C55, then south on T47. Roadway closure time may be able to be limited through contract incentives and use of precast box culvert units. The design changes associated with removal of the existing bridge will be shown in the D3 submittal.

Approximately 2,500 CY of fill material will be required for this project.

No plan sheets are included in this submittal; however, plan sheets may be viewed on Projectwise at the following link: [D2](#)

The D3 submittal date for this project is 10-23-2020, and the D5 date is 2-12-2020.

This project is currently scheduled for a January, 2023 letting. The estimated cost of construction shown in the final concept was \$845,692. The current cost estimate is \$795,261.

cc:	B. Hofer	S. J. Gent	M. J. Kennerly
	W.A. Sorenson	E. C. Wright	T. Nicholson
	K. D. Nicholson	D. Newell	K. K. Patel
	K. Brink	J. E. Laaser-Webb	T. Crouch
	V. A. Brewer	S. Godbold	N. L. Cuva
	M. A. Swenson	C. B. Brakke	D. E. Sprengeler
	J.S. Nelson	D. A. Popp	A. Shell
	M. Nop	D. R. Claman	J. McCollough
	S. P. Anderson	J. Garton	D. Stokes
	E. D. Gansen	J. Vortherms	M. K. Solberg
	S. J. Megivern	H. Beach	C. Burke
	D. T. Ta	J. E. Bartholomew	J. Page
			S. Schroder
	N. Humpal	R. Loecher	District Utility Coordinator
	R. Gelhaus	Local FHWA	Others on Field Exam

RCB CULVERT REPLACEMENT - TRIPLE BOX
BRFN-057-1(34)--39-12

BUTLER COUNTY
BUTLER COUNTY - DESIGN NO. 0123

LETTING DATE
01-18-2023

LEGEND

INTERSTATE HIGHWAY	
PRIMARY HIGHWAY-DIVIDED	
PRIMARY HIGHWAY	
PORTLAND CEMENT CONCRETE ROAD	
ASPHALT ROAD	
BITUMINOUS ROAD	
GRAVEL ROAD	
EARTHEN ROAD	
INTERSTATE HIGHWAY	
UNITED STATES HIGHWAY	
STATE HIGHWAY	
COUNTY HIGHWAY	
RAILROAD	
PIPELINE	
AIRPORT	
HYDROLOGY	
BRIDGE	
STATE BOUNDARY	
COUNTY BOUNDARY	
CORPORATE BOUNDARY	
TOWNSHIP LINE	
SECTION LINE	
ROAD NAMES	
UNINCORPORATED PLACE	



Highway Division

PLANS OF PROPOSED IMPROVEMENTS ON THE

PRIMARY ROAD SYSTEM

BUTLER COUNTY

RCB CULVERT REPLACEMENT - TRIPLE BOX

IOWA 57 OVER MAX CREEK

THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2015, PLUS APPLICABLE GENERAL SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT.

ENGLISH STANDARD CULVERT PLANS

STANDARD	ISSUED	REVISED
PRCB G1-13	01-13	07-16
PRCB G2-13	01-13	07-16
PRCB I2-13	01-13	
PES 1-13-T1	01-13	07-16
PES 1-13-T3	01-13	07-16
PES 3-13-T3	01-13	07-16
PES 4-13	01-13	
PEP 1-13	01-13	12-15

TOTAL SHEETS	?
PROJECT NUMBER	BRFN-057-1(34)--39-12
R.O.W. PROJECT NUMBER	
STPN-057-1(35)--2J-12	
PROJECT IDENTIFICATION NUMBER	18-12-057-010

INDEX OF SHEETS

NO.	DESCRIPTION
I	TITLE SHEET
V.1-V.2	DESIGN NO. 0123
B.1-B.2	TYPICAL SECTION AND DETAILS
C.1	TABULATIONS
D.1-D.2	IOWA 57 PLAN AND PROFILE
G.1-G.3	SURVEY INFORMATION
J.1-J.2	TRAFFIC CONTROL
W.1-W.2	CROSS SECTION

REVISIONS



1-800-292-8989

www.iowaonecall.com



REVISIONS TO THIS DESIGN PLAN AND/OR PROJECT SPECIFICATIONS SHOULD BE SUBMITTED BY _____

STANDARD ROAD PLANS

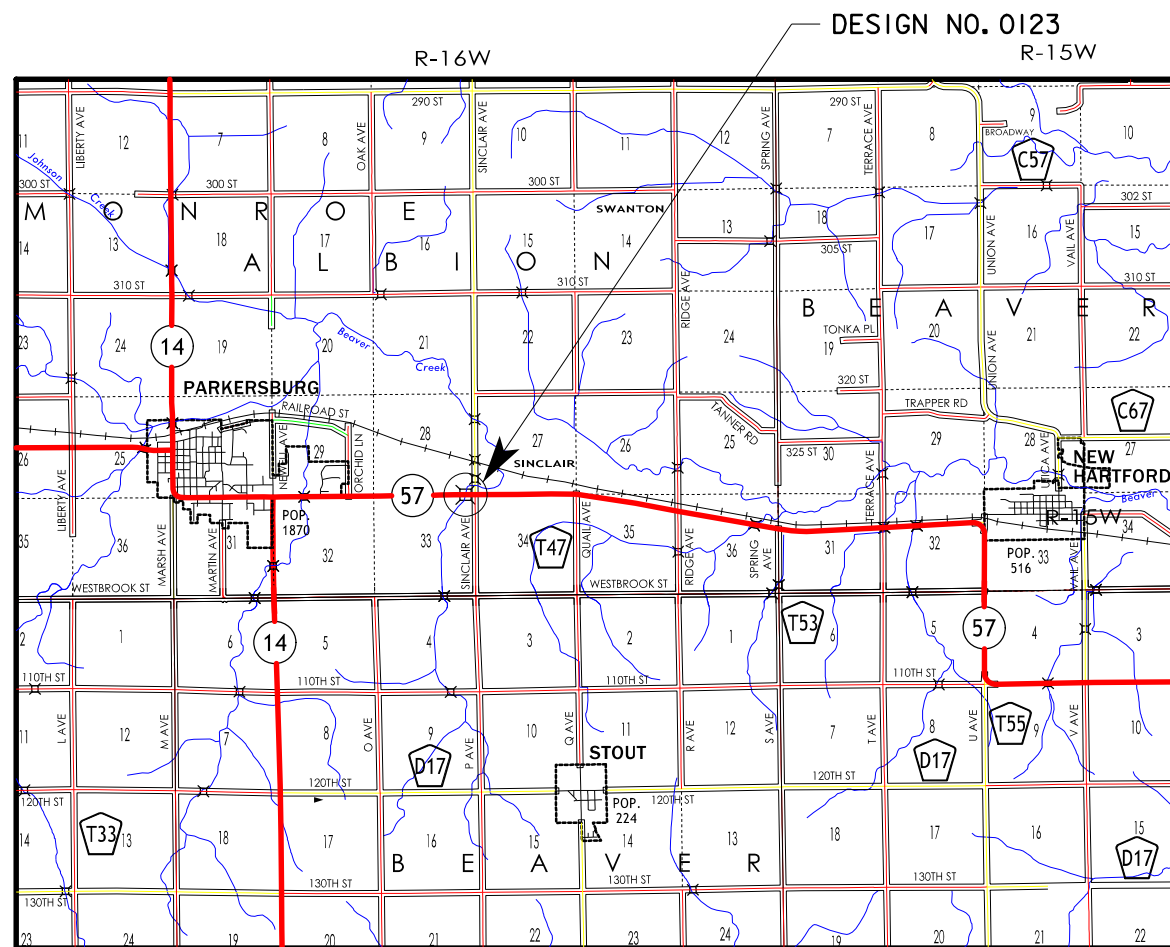
STANDARD ROAD PLANS ARE LISTED ON SHEET NUMBER _____

DESIGN DATA RURAL

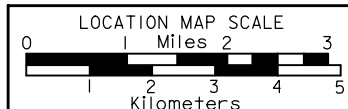
2023 AADT	2670	V.P.D.
2043 AADT	3100	V.P.D.
2043 DHV	310	V.P.H.
TRUCKS	8	%
Total Design ESALs	?	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
I	CHRISTOPHER J. CRISWELL	STRUCTURAL DESIGN
I	STEVEN A. KLOCKE	HYDRAULIC DESIGN
B.1	CINDY A. SPENCER	ROADWAY DESIGN
P/C CULVERT STANDARDS	NORMAN L. McDONALD	STRUCTURAL DESIGN



LOCATION MAP



PROJECT DIRECTORY NAME: I205701018

HYDRAULIC DESIGN

I hereby certify that the 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: Steven A. Klocke Date: _____
 Printed or Typed Name: Steven A. Klocke
 My license renewal date is December 31, 2021

Pages or sheets covered by this seal: V.1 & V.2 (HYDRAULIC DATA, CHANNEL GRADING AND RETVEMENT)

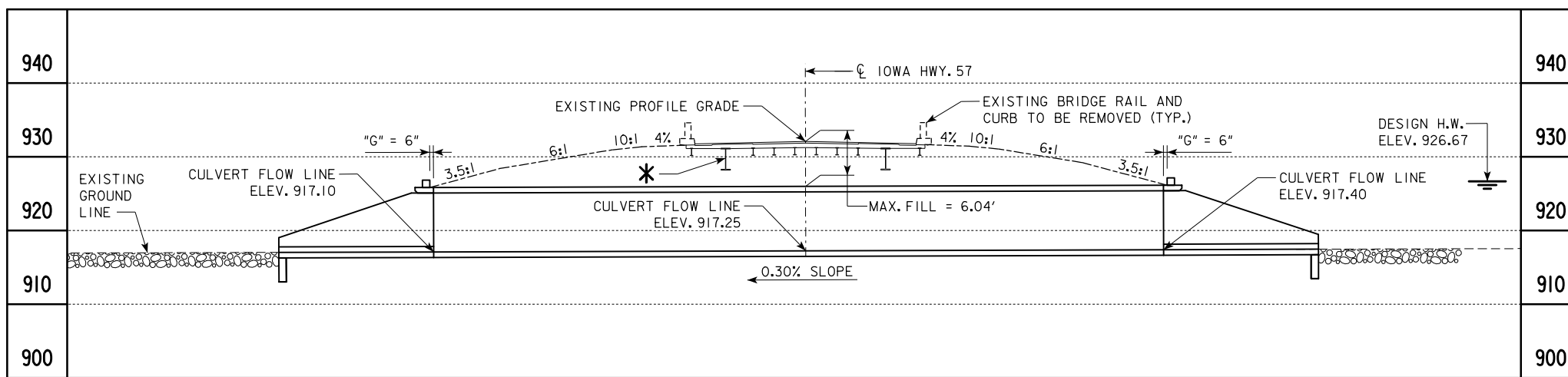
STRUCTURAL DESIGN

I hereby certify that the 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: Christopher J. Criswell Date: _____
 Printed or Typed Name: Christopher J. Criswell
 My license renewal date is December 31, 2021

Pages or sheets covered by this seal: SHEETS ? THRU ? OF ?

CONTROL POINT 103 NORTHING 8871415.70 EASTING 15367959.05 ELEVATION 957.82
 DESCRIPTION: BM SET FENO MONUMENT 0.42 MI WEST OF INTERSECTION STATE
 HWY 57 AND CO ROUTE T47...44FT NORTH OF CTR STATE HWY 57 AND 41 FT WEST
 OF CTR FIELD ENTRANCE



LONGITUDINAL SECTION ALONG ϕ CULVERT

**EXISTING PROFILE GRADE
ON IOWA HIGHWAY 57**
U.A.C.

NOTES:

- FOR DETAILS OF RESURFACING AND EXISTING PROFILE GRADE, SEE ROADWAY PLANS.
- * CONSTRUCT REINFORCED CONCRETE BOX CULVERT UNDER EXISTING BRIDGE AND BURY WITH FLOODABLE BACKFILL AND FLOWABLE MORTAR. VENT HOLES WILL BE DRILLED IN THE EXISTING DECK TO FACILITATE MORTAR PLACEMENT. REMOVE EXISTING BRIDGE RAIL AND CURB AS NEEDED TO PLACE ROADWAY PAVEMENT. SEE ROADWAY SHEET B2 FOR ADDITIONAL INFORMATION.
- ** SEDIMENT REDUCTION WEDGES MAY BE ADDED FOR STREAM SHAPE AND FUNCTIONALITY PURPOSES.

HYDRAULIC DATA

DRAINAGE AREA = 6.03 SQ. MI.
 STREAM SLOPE = 15.3 FT./MI.
 DESIGN DISCHARGE, Q_{50} = 2,786 CFS
 H.W. ELEVATION = 926.67
 OUTFLOW VELOCITY = 13.56 FT/S
 DISCHARGE, Q_{100} = 3,308 CFS
 H.W. ELEVATION = 927.81
 OUTFLOW VELOCITY = 14.32 FT/S

LOCATION

IOWA 57 OVER MAX CREEK
 2.1 MILES EAST OF HWY. 14
 T-90N R-16W
 SECTION 28 & 33
 ALBION TOWNSHIP
 BUTLER COUNTY
 LATITUDE 42.570423°
 LONGITUDE -92.733320°

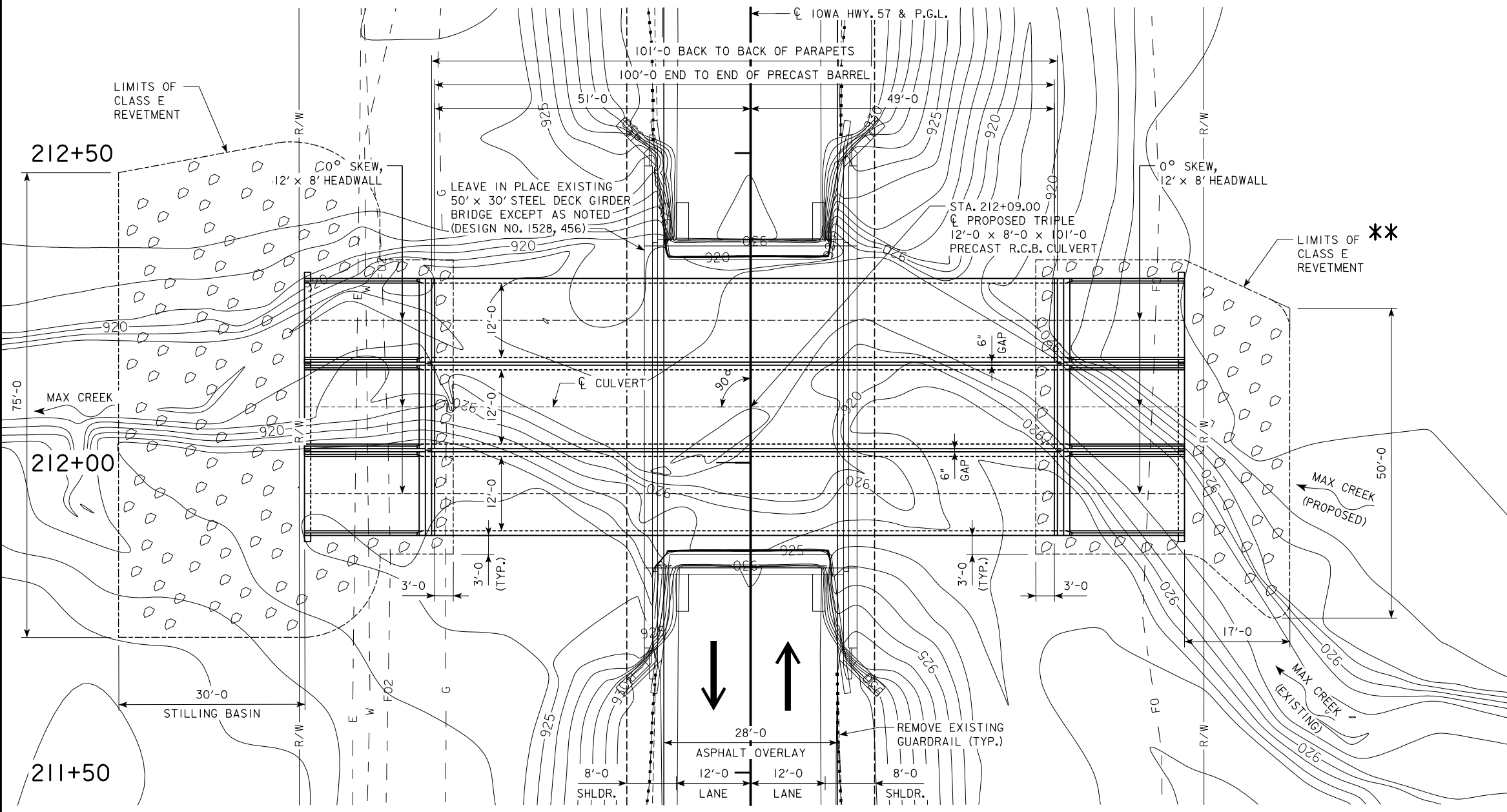
TRAFFIC ESTIMATE

2023 AADT	2670	V.P.D.
2043 AADT	3100	V.P.D.
2043 DHV	310	V.P.H.
TRUCKS	8	%

UTILITY LEGEND

- E-- OVERHEAD ELECTRIC
- G-- GAS LINE
- FO-- FIBER OPTIC
- FO2-- FIBER OPTIC
- W-- WATER
- POWER POLE

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.



SITUATION PLAN

PRELIMINARY
 DESIGN FOR 0° SKEW
TRIPLE 12'-0" x 8'-0" x 101'-0"
PRECAST R. C. B. CULVERT
SITUATION PLAN
 STATION 212+09.00 (1A 57) AUGUST 2020
BUTLER COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 2 FILE NO. 31712 DESIGN NO. 0123



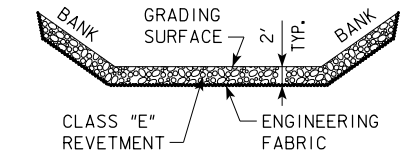
LI NTEL BEAM AND CURTAIN WALLS SHALL FORM ONE CONTINUOUS LINE AND SHALL NOT BE STAGGERED OR OFFSET.

CONTROL POINT 103 NORTHING 8871415.70 EASTING 15367959.05 ELEVATION 957.82
 DESCRIPTION: BM SET FENO MONUMENT 0.42 MI WEST OF INTERSECTION STATE
 HWY 57 AND CO ROUTE T47...44FT NORTH OF CTR STATE HWY 57 AND 41 FT WEST
 OF CTR FIELD ENTRANCE

GENERAL NOTE:
 THIS DESIGN IS FOR THE REPLACEMENT OF THE EXISTING
 50' x 30' STEEL DECK GIRDER BRIDGE, BUTLER DESIGN
 NO. 456, FHWA 16440, MAINTENANCE NO. 1226.6S057.

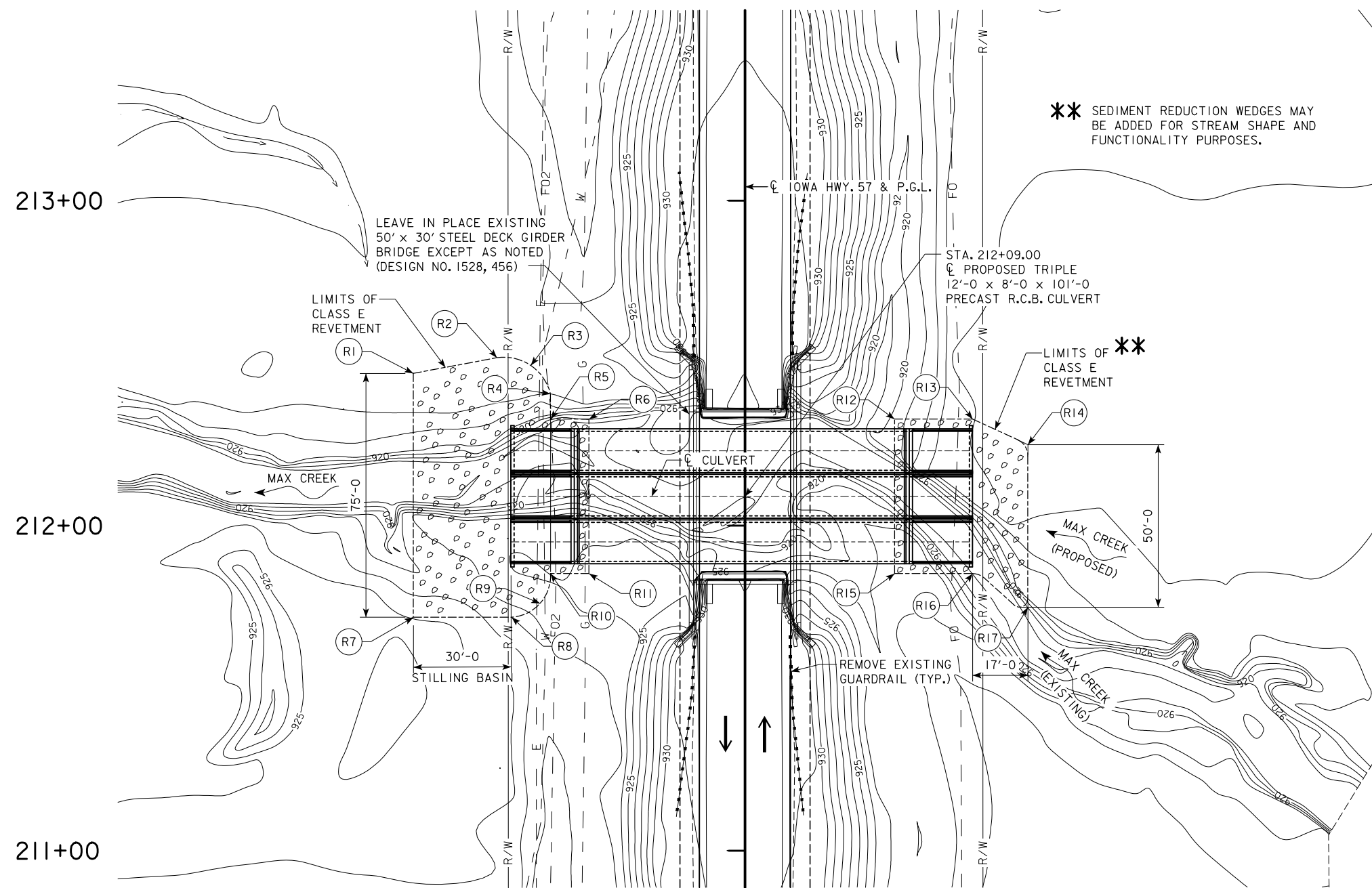
TYPICAL CHANNEL PROTECTION			
ESTIMATED REVETMENT QUANTITIES INCLUDED WITH ROAD PLANS			
LOCATION	REVETMENT CL. "E" (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	xx	109	xx
OUTLET	xxx	311	xxx
TOTALS	xxx	xxx	xxx

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.
 QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.



REVETMENT LAYOUT:

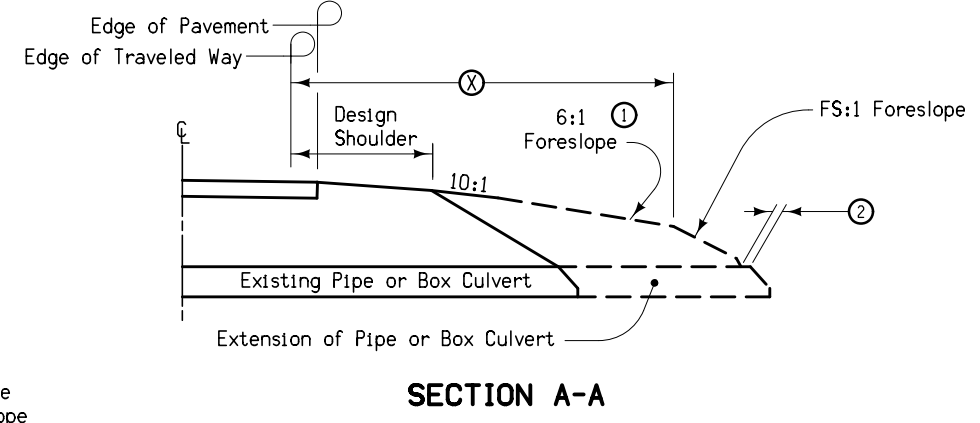
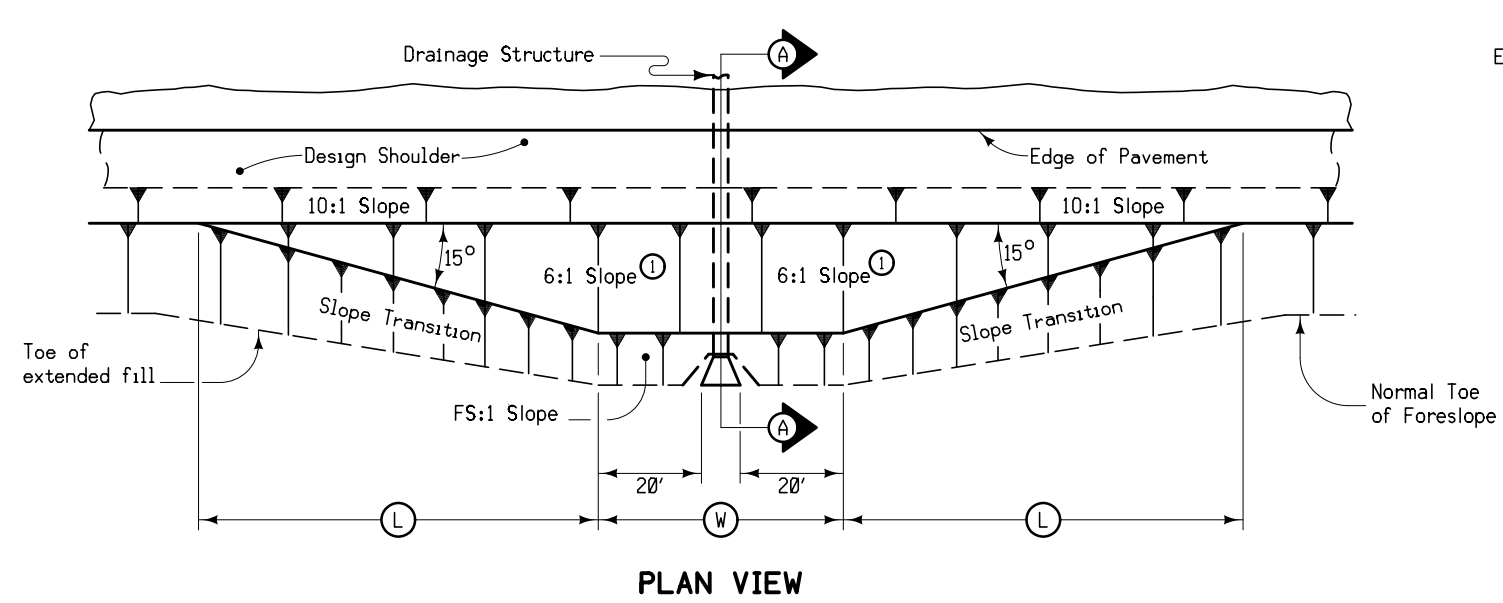
- (R1) HWY. 57 212+46.82 102.00' LT.
- (R2) HWY. 57 212+51.94 76.31' LT.
- (R3) HWY. 57 212+49.26 65.91' LT.
- (R4) HWY. 57 212+40.49 59.82' LT.
- (R5) HWY. 57 212+32.75 59.82' LT.
- (R6) HWY. 57 212+32.75 48.00' LT.
- (R7) HWY. 57 211+71.81 102.00' LT.
- (R8) HWY. 57 211+71.81 71.82' LT.
- (R9) HWY. 57 211+76.04 71.82' LT.
- (R10) HWY. 57 211+85.25 59.82' LT.
- (R11) HWY. 57 211+85.25 48.00' LT.
- (R12) HWY. 57 212+32.75 46.00' RT.
- (R13) HWY. 57 212+32.75 70.00' RT.
- (R14) HWY. 57 212+24.92 87.00' RT.
- (R15) HWY. 57 211+85.25 46.00' RT.
- (R16) HWY. 57 211+85.25 70.00' RT.
- (R17) HWY. 57 211+74.91 87.00' RT.



SITE PLAN

PRELIMINARY
 DESIGN FOR 0° SKEW
TRIPLE 12'-0 x 8'-0 x 101'-0
PRECAST R. C. B. CULVERT
 SITUATION PLAN - SITE
 STATION 212+09.00 (IA 57) AUGUST 2020
BUTLER COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 2 OF 2 FILE NO. 31712 DESIGN NO. 0123

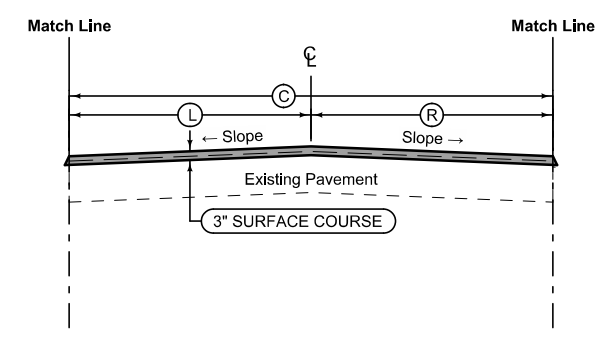




- Notes:
- At locations where an extended or newly constructed drainage structure extends beyond the normal foreslope cover, flatten the foreslope as indicated so as to cover the structure. Minimum earth cover is 6".
 - ① Slope may be flatter than 6:1.
 - ② 6" Minimum for pipe installations or to top of headwall on R.C.B.
 - Ⓜ = Pipe or R.C.B. opening width plus 20 feet each side.

STRUCTURE LOCATION		Ⓜ	Ⓛ	Ⓧ	ⓕ
STATION	SIDE	Feet	Feet	Feet	Feet
212+09.00	Both	80.0	97.0	30.0	3.5

BARNROOF FORESLOPE AT DRAINAGE STRUCTURE



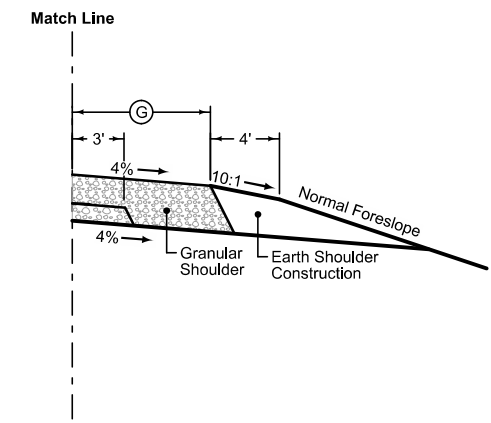
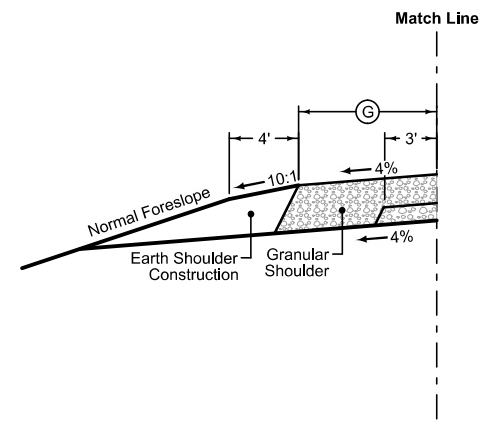
3R_MillingOverlay_04-19-11				
STATION TO STATION	ⓐ	Ⓛ	Ⓡ	Pavement Scarification SY
209+49.48	214+79.47	28	14	14

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

ROADWAY IDENTIFICATION

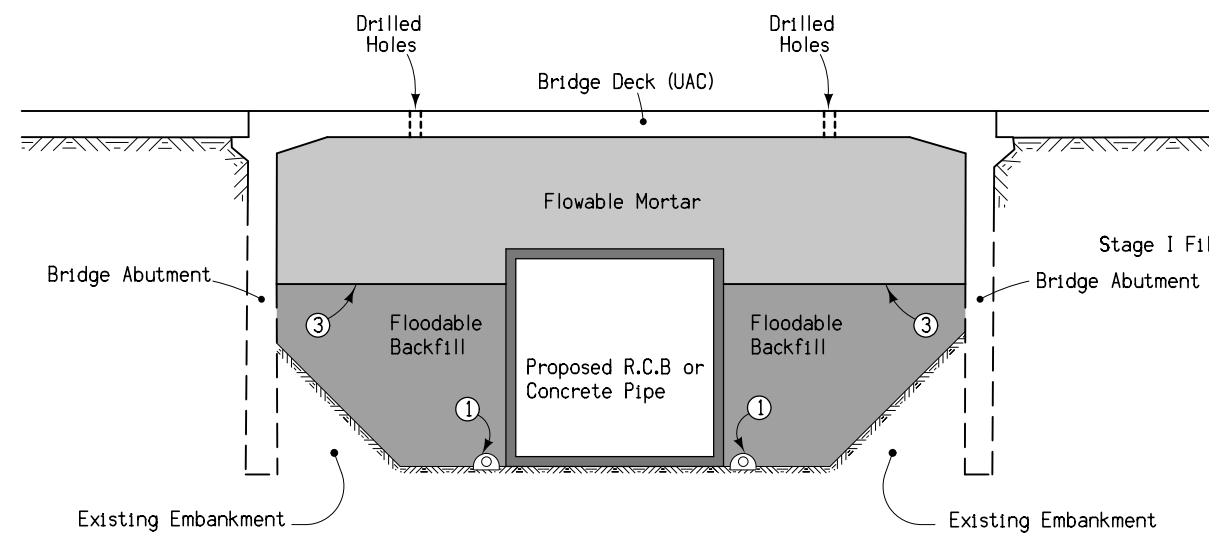
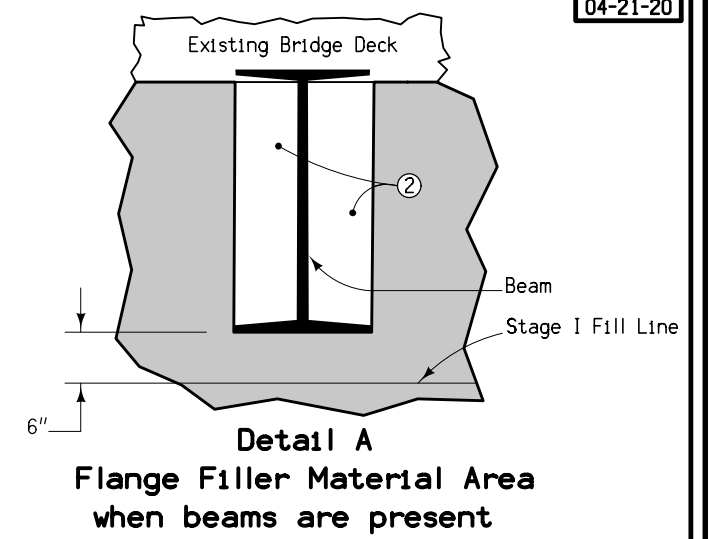
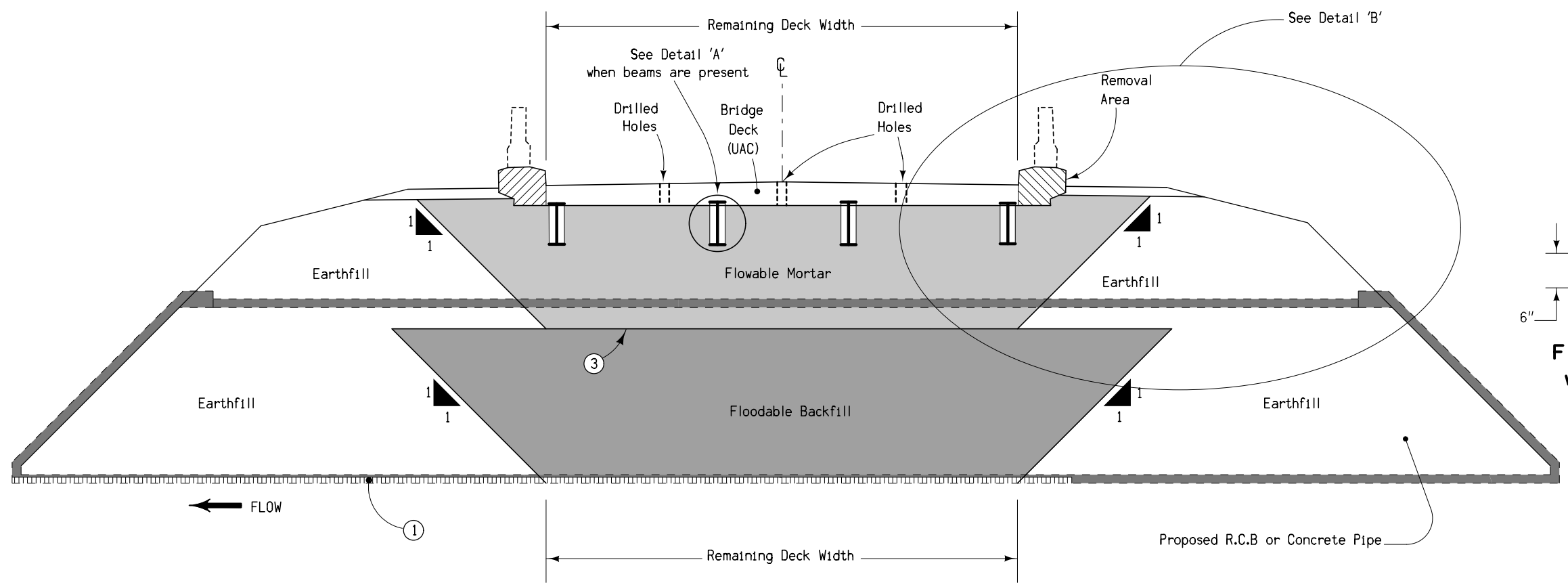
Granular Shoulder

2_G_SR_04-21-20		
STATION TO STATION	ⓐ	Feet
209+49.48	214+79.47	6

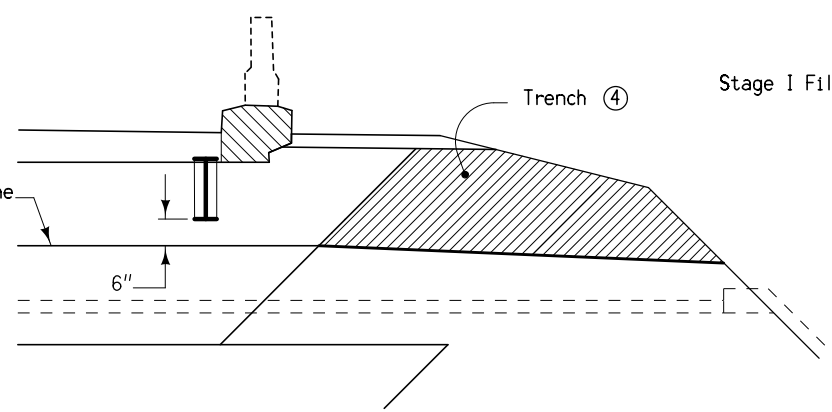


Granular Shoulder

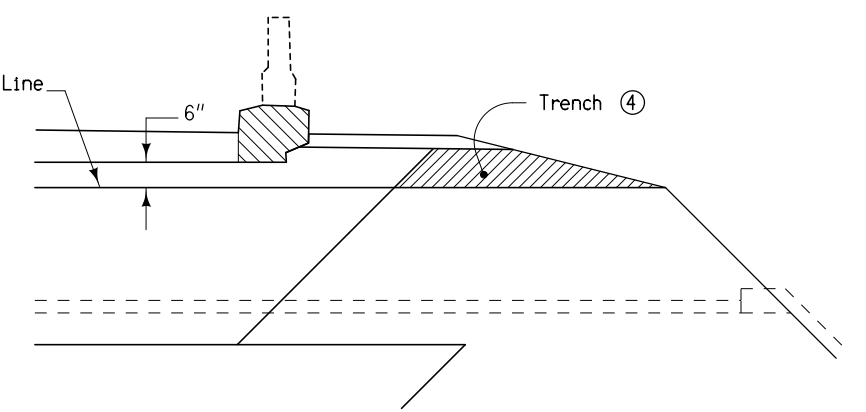
2_G_SR_04-21-20		
STATION TO STATION	ⓐ	Feet
209+49.48	214+79.47	6



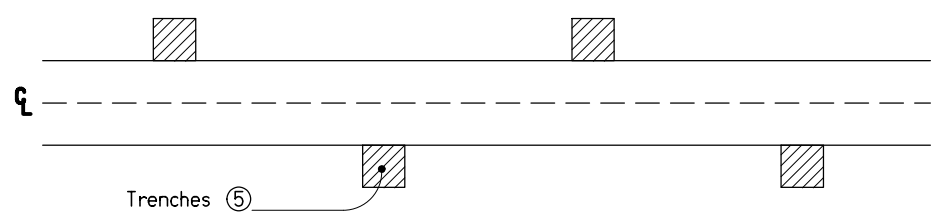
Section along Centerline



Detail B (Beam Bridge)



Detail B (Slab Bridge)



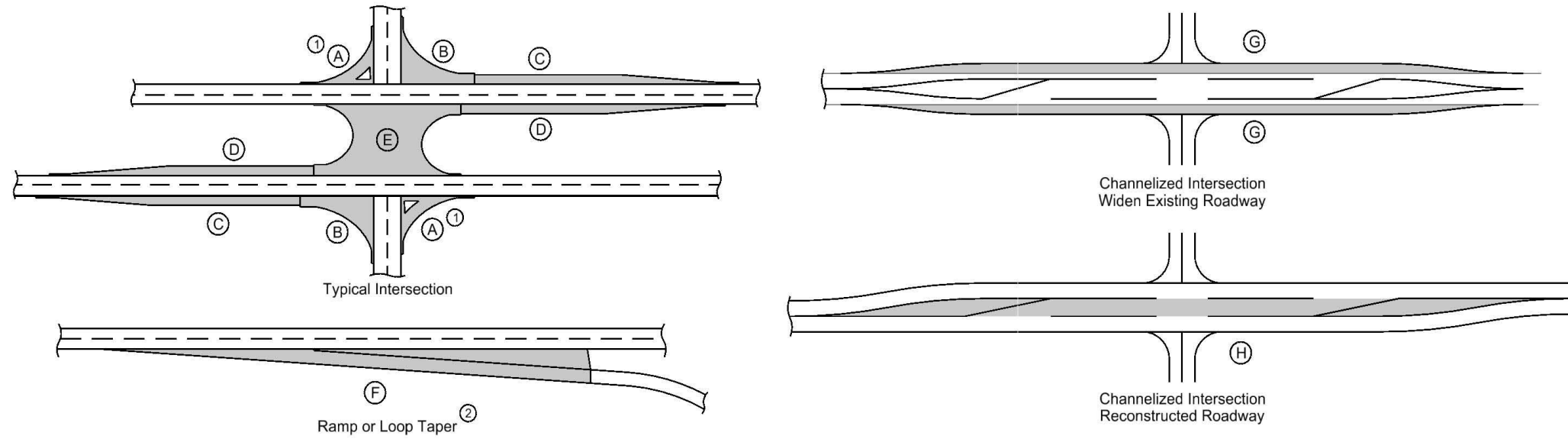
Trench Layout

Denotes pay limits for flowable mortar
 Denotes pay limits for flooded backfill

- ① 4" Subdrain at flowline elevation of culvert with 4" cover of porous backfill.
- ② Place Flange Filler Material to fill pocket area between flanges to prevent flowable mortar from building up. Flange Filler Material is incidental to flowable mortar.
- ③ Fill void with the maximum amount of Floodable Backfill possible. Distance from Floodable Backfill to bridge beams (when present) or bridge deck shall not exceed 5'.
- ④ Cut trenches in the soil plug to provide drainage for the flowable mortar. Backfill the trenches with open graded crushed stone, gravel, or recycled PCC to allow water to drain. Backfill material is incidental to flowable mortar.
- ⑤ Place trenches at 20' spacing with a minimum of two trenches on each side of the roadway.

**FILL FOR CULVERT USED
IN BRIDGE REPLACEMENTS**

HMA PAVEMENT



- ① Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.
- ② Refer to PV-410, PV-411, PV-412, and PV-414.
- ③ Quantity includes Pavement Header.

Calculations assume a surface course unit weight (lbs/cf) of 147, an intermediate course unit weight (lbs/cf) of 147, a base course unit weight (lbs/cf) of 145, and a special backfill unit weight (lbs/cf) of 140.

Location				Mainline			Area ③								Hot Mix Asphalt Pavement										Remarks				
Road Identification	Direction of Travel	Station to Station		Width	Length	Area	A ①		C	D	E	F ②		G	H	Bid Items													
							Surface	Intermediate				Base	Binder			Special Backfill	Modified Subbase	Granular Subbase	Pavement Scarification										
													Surface							Intermediate	Base	Surface	Intermediate	Base					
				FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	TONS	SY	TONS	SY	TONS	SY	TONS	TONS	TONS	TONS	CY	SY	SY		
Iowa 57	BOTH	209+49.48	214+75.47	28.0	526.0	1636.4										270.622	1636.4												

102-16
10-21-14

NOTCHES AND RUNOUTS FOR RESURFACING

Refer to PR-201 and PR-202.
① Bid item. Applies only to Types 'N1' and 'N3' on PR-202. Refer to 100-25 for remaining values.

Location Station	Type of Notch or Runout	S	I	DI	L	M	Pavement Scarification ①	Remarks
		IN	IN	IN	FT	IN	SY	
212+09.00	Type 'N1'	3.0			150.0	3.0	466.7	

110-7A
04-17-12

REMOVAL OF STEEL BEAM GUARDRAIL

① Lane(s) to which the installation is adjacent.
② Includes length of End Terminals and End Anchors.

No.	Direction of Traffic	Location		Removal of Guardrail ②
		Station to Station	Side	
1	EB	212+09.60	R	56.25
2	WB	212+09.60	L	56.25
3	EB	212+09.60	R	56.25
4	WB	212+09.60	L	56.25

SHOULDERS

- ① Lane(s) to which the shoulder is adjacent.
- ② Bid Item
- ③ Applies only for Paved Shoulders constructed on project with existing granular shoulders.
- ④ Does not include shrink.

Calculations assume a HMA unit weight (lbs/cf) of 145, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/cf) of 140.

Location				Quantities																Remarks							
Road Identification	Direction Of Traffic	Station to Station		Side	P Width FT	G Width FT	L Length FT	Class 13 Excavation CY ②	Hot Mix Asphalt TON TON/STA		Binder TONS	Paved Shoulder SY ②	Reinforced Paved Shoulder SY ②	Special Backfill				Modified Subbase CY ②	Granular Shoulder		Earth Shoulder Construction Alternates						
														HMA Alternate		PCC Alternate			TON ②		TON/STA	CY ②	TON ②	TON/STA	STA ②	HMA CY ④	PCC CY ④
														TON ②	TON/STA	TON ②	TON/STA										
Iowa 57	EB	209+49.48	214+75.47	RT		6.0	526.0											183.360	34.860	5.3							
Iowa 57	WB	209+49.48	214+75.47	LT		6.0	526.0											183.360	34.860	5.3							

SURVEY SYMBOLS

UTILITY LEGEND

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

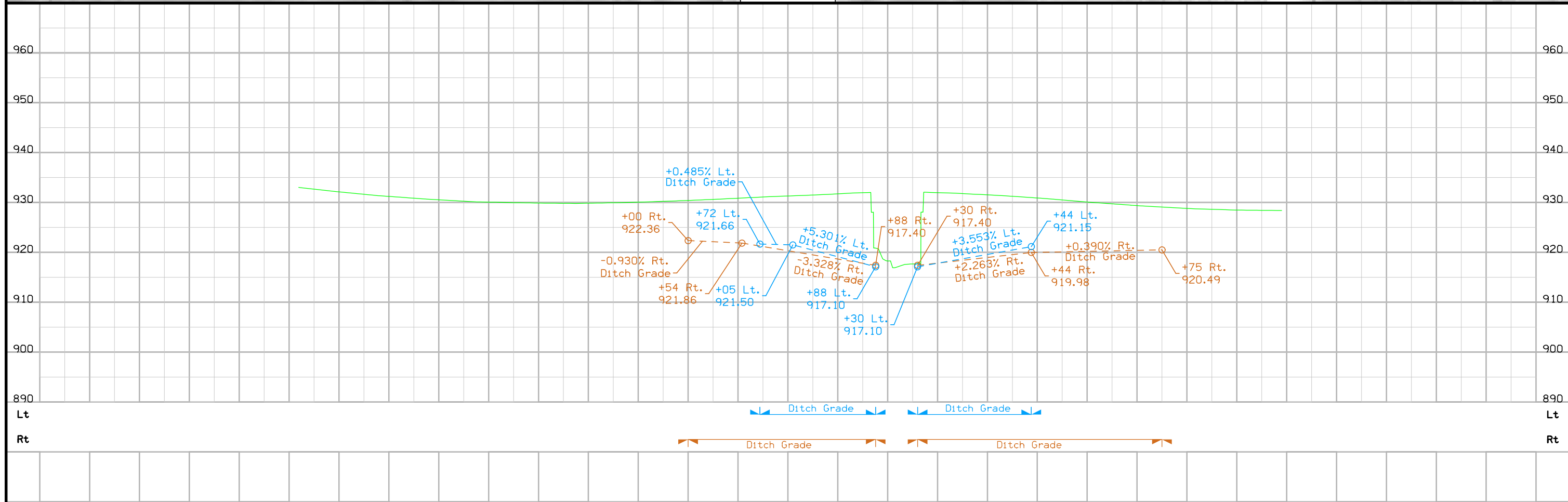
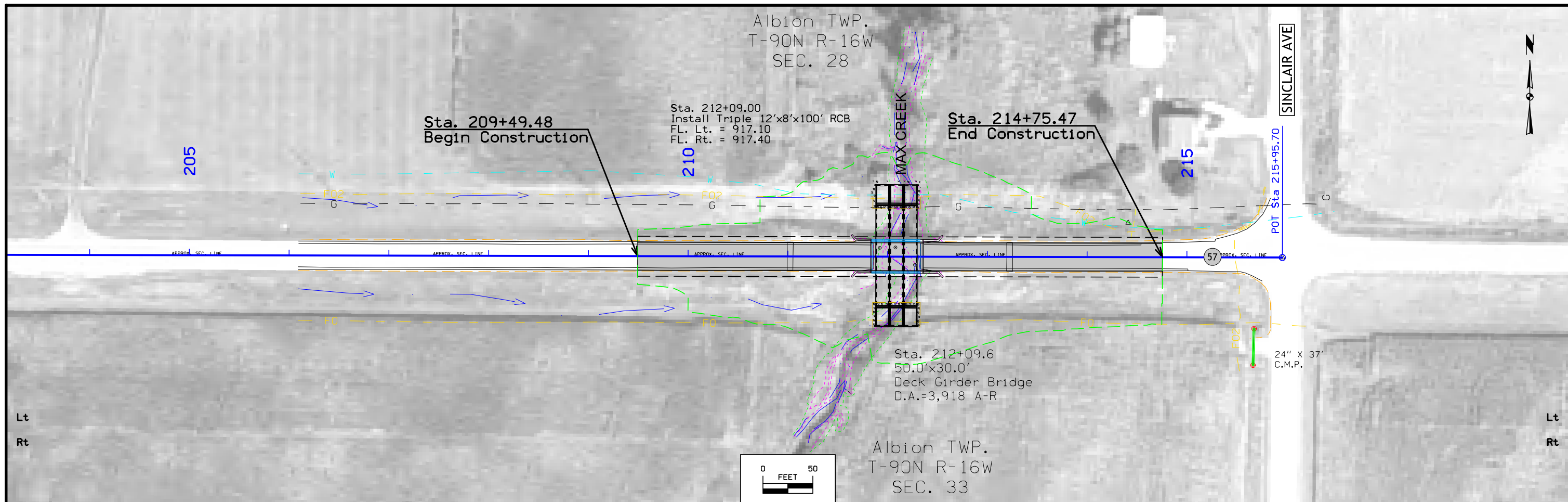
LINEWORK		Design Color No.	
Green	(2)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

	Reference Point
	Station
	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
	Existing Right of Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Easement (Temporary)
	Easement
	Access Control
	Property Line

**PLAN AND PROFILE
LEGEND AND SYMBOL
INFORMATION SHEET**

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



205	206	207	208	209	210	211	212	213	214	215	216	
FILE NO.	ENGLISH	DESIGN TEAM	SNYDER AND ASSOCIATES, INC.			BUTLER COUNTY		PROJECT NUMBER	BRFN-57-1(34)-39-12		SHEET NUMBER	D.2

Survey Information

Butler County
BRFN-057-1(34)--39-12
Ditch Bridge 1.9 mi E of E Jct. IA 14
Bridge - Unspecified
PIN 18-12-057-010
Sap-0830.2

General Information

Measurement units for this survey are US survey feet. This survey is for proposed Bridge replacement. Project datum and control information is provided by the Design Survey Office. This project is a Partial DTM with Photo control. This survey request was for the IA Hwy 57 corridor only.

Vertical Control

Vertical datum for this survey is NAVD88 (Computed using Geoid12b). GRS80 Ellipsoidal Heights were computed at project Pts. 98-053, 98-148, SALEM, CP102, CP103 and CP104 by conducting one concurrent 6-hour static session. Additional benchmarks were placed throughout the project using a GNSS Base-Rover setup relative to Pt. CP103 and Pt. CP104. Two observations with a minimum of four-hours between were collected and used in a weighted average.

This survey observed 2 local area county Control Monuments with published NAVD88 heights to compare to local ground control:

Butler County Control mark 98-053 has a published Elev. of 957.28
Survey Elev. = 957.20

Butler County Control mark 98-148 has a published Elev. of 989.73
Survey Elev. = 989.69

No As-built Plan benchmarks could be located. Bridge widening Project No. FN-226 for design number 456 calls for bench mark elevation of 100.00 at CL grade west end of bridge, CL abutment bearing, and bridge seat elevations of 96.28 both ends of bridge. The average bridge seat elevation this survey is 928.05 both ends of bridge. It appears there has been a 3" deck overlay on this bridge, therefore a vertical difference equation to the bridge seats is as follows:

Survey bridge seat elevation = 928.05
Plan bridge seat elevation = 96.28

The average vertical difference is +831.77 to be applied to as-built plan FN-226 for design number 456 elevations.

Horizontal Control

The project coordinate system for this survey is Iowa RCS Zone 5 (U.S. Survey Feet). This survey control is relative to IaRTN reference stations. IaRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00. Coordinates were determined at project control Pts. 98-053, 98-148, SALEM, CP102, CP103 and CP104 by conducting one concurrent 6-hour static session. Additional control points were placed throughout the project using a GNSS Base-Rover setup relative to Pt. CP103 and Pt. CP104. Two observations with a minimum of four-hours between were collected and used in a weighted average.

Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans Project No. BRF-57-1(2)--38-12. Survey stationing was equated to the plan PI at Sta. 215+95.7 and run back to the plan POT at equation Sta. 200+00.0 AH = Sta. 189+89.9 BK. Back stationing was carried back to the PI at Sta. 152+75.53.

Survey stationing relates to as built plan stationing as follows:

PI Sta. 215+95.7 As-built Plans No. BRF-57-1(2)--38-12
= Survey PI Sta. 215+95.7

POT Sta. 189+89.9 BK = Sta. 200+00.0 AH As-built Plans No. BRF-57-1(2)--38-12
= Survey POT Sta. 189+89.9 BK = Sta. 200+00.0 AH

PI Sta. 179+48.0 As-built Plans No. BRF-57-1(2)--38-12
= Survey PI Sta. 179+47.91

PI Sta. 152+75.6 As-built Plans No. BRF-57-1(2)--38-12
= Survey PI Sta. 152+75.53

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

Ia. Regional Coordinate System Zone 5

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) EPOCH 2010.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 5

Point Name	Northing	Easting	Elevation	Feature Code-Monument Description
CP102	8871344.89	15362512.93	983.54	BM FD IDOT FENO MONUMENT CP102 AS DESCRIBED IN AS BUILT PLAN BRFN-057-1(25)--39-12
CP103	8871415.70	15367959.05	957.82	BM SET FENO MONUMENT 0.42 MI WEST OF INTERSECTION STATE HWY 57 AND CO ROUTE T47...44 FT NORTH OF CTR STATE HWY 57 AND 41 FT WEST OF CTR FIELD ENTRANCE
SALEM	8850703.34	15361616.49	1093.76	BM FD USGS TRAVERSE STATION SALEM AS DESCRIBED
CP104	8871299.86	15371863.00	918.97	BM SET FENO MONUMENT 0.32 MI EAST OF INTERSECTION STATE HWY 57 AND CO ROUTE T47...61 FT SOUTH OF CTR STATE HWY 57 AND 22 FT WEST OF CTR FIELD ENTRANCE
98-053	8865972.23	15370115.61	957.20	BM FD BUTLER CO GPS CONTROL MONUMENT AS DESCRIBED
98-148	8881692.07	15370238.33	989.69	BM FD BUTLER CO GPS CONTROL MONUMENT AS DESCRIBED
500	8871350.38	15369776.93	934.62	BM FD CUT X TOP BARRIER RAIL
501	8871383.90	15369844.93	932.38	BM SET CUT V AT RBR TOP NE WING FNDTN

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1. Iowa 57 will remain open to traffic during construction. Individual lane and shoulder closures as necessary will be per the Standard Road Plans listed elsewhere in these plans.
2. Access to individual properties shall be maintained at all times.

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 ————— Topsoil (Class 10)
- Slope Dressing Only
- 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
- BRW LS ————— Broken and Weathered Rock
- ROCK ————— Solid Rock
- BLDGS ————— 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.

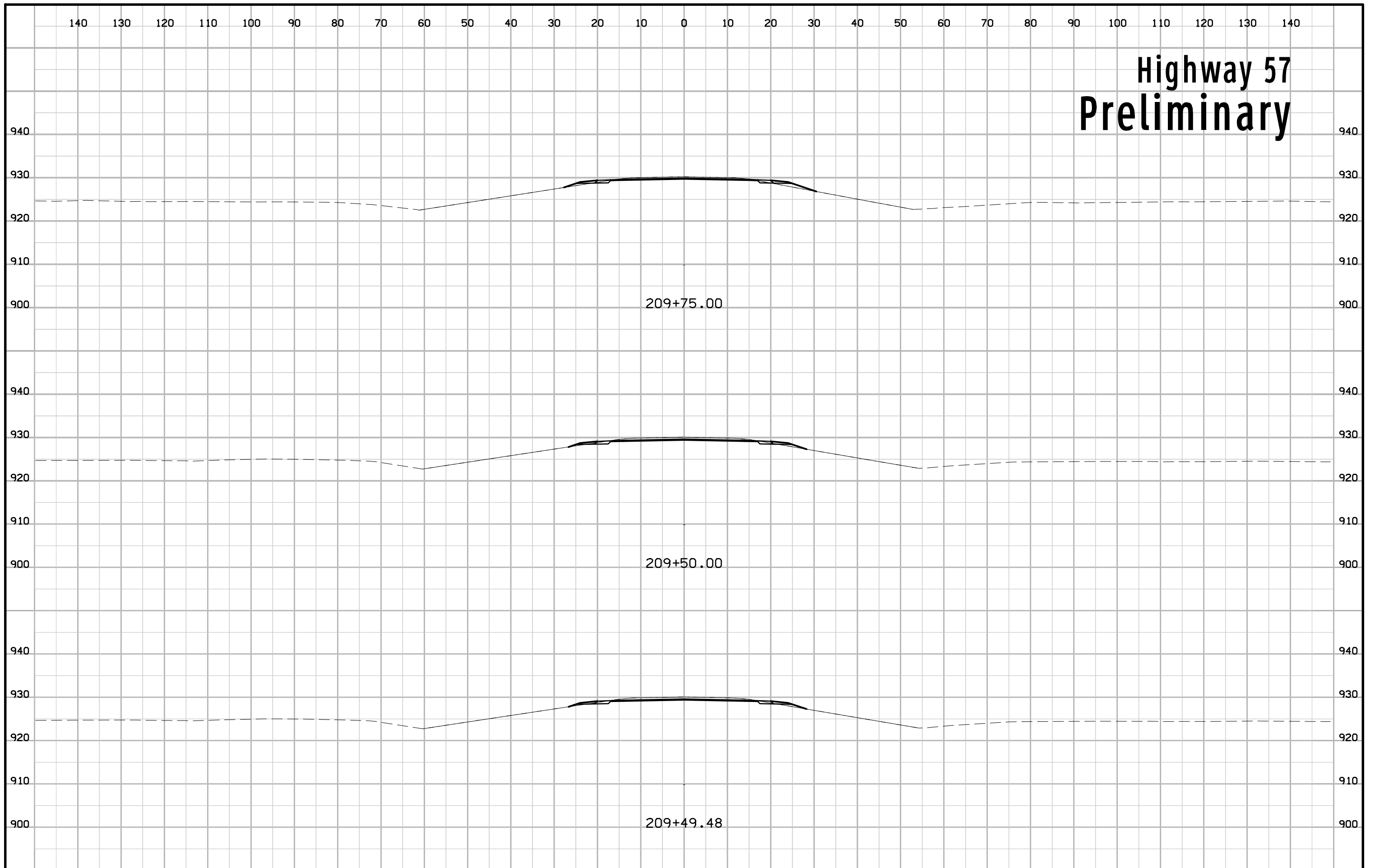
SYMBOL LEGEND OF CROSS SECTION SHEETS

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

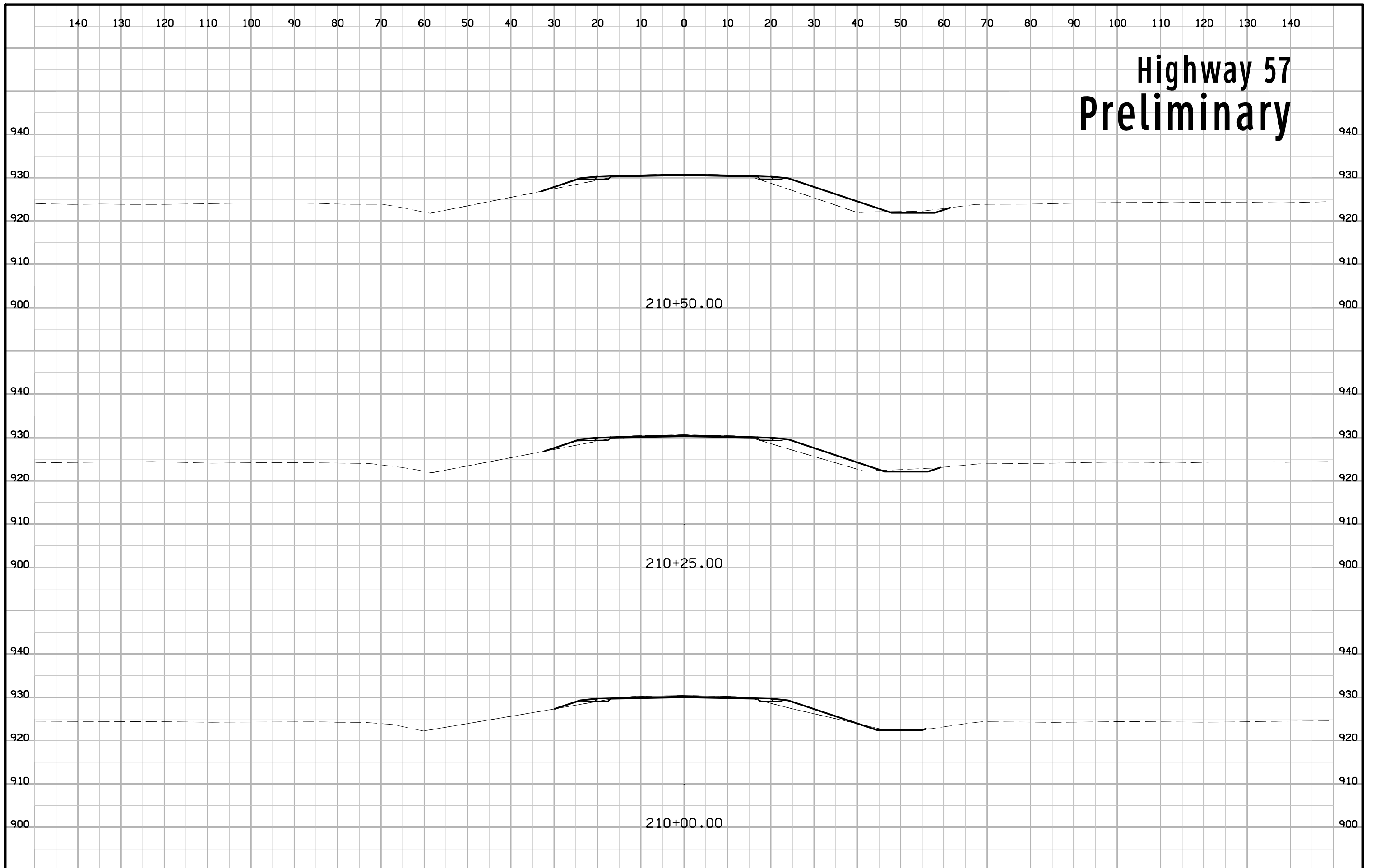
**CROSS SECTION
LEGEND AND SYMBOL
INFORMATION SHEET**

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

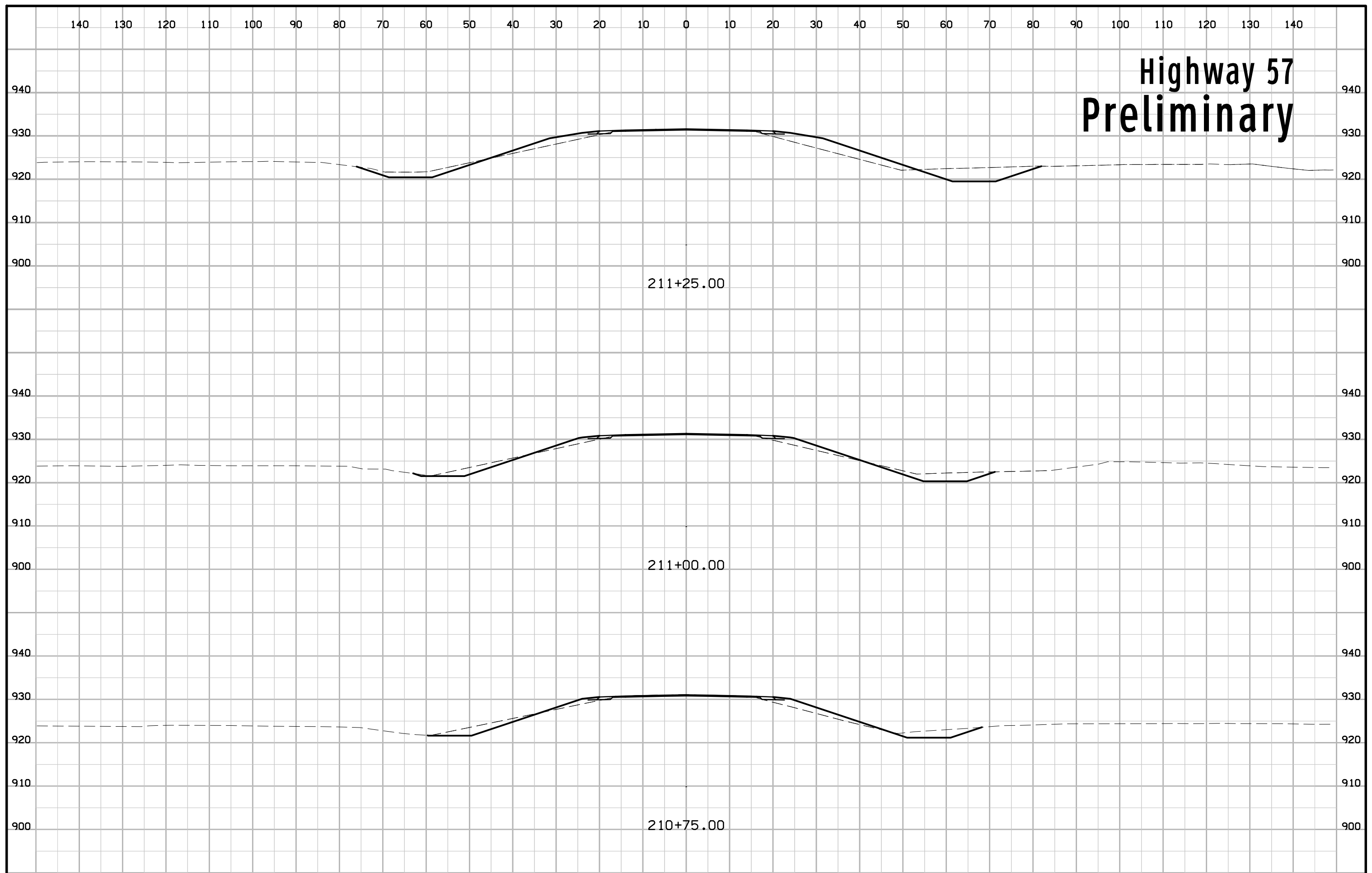
Highway 57 Preliminary



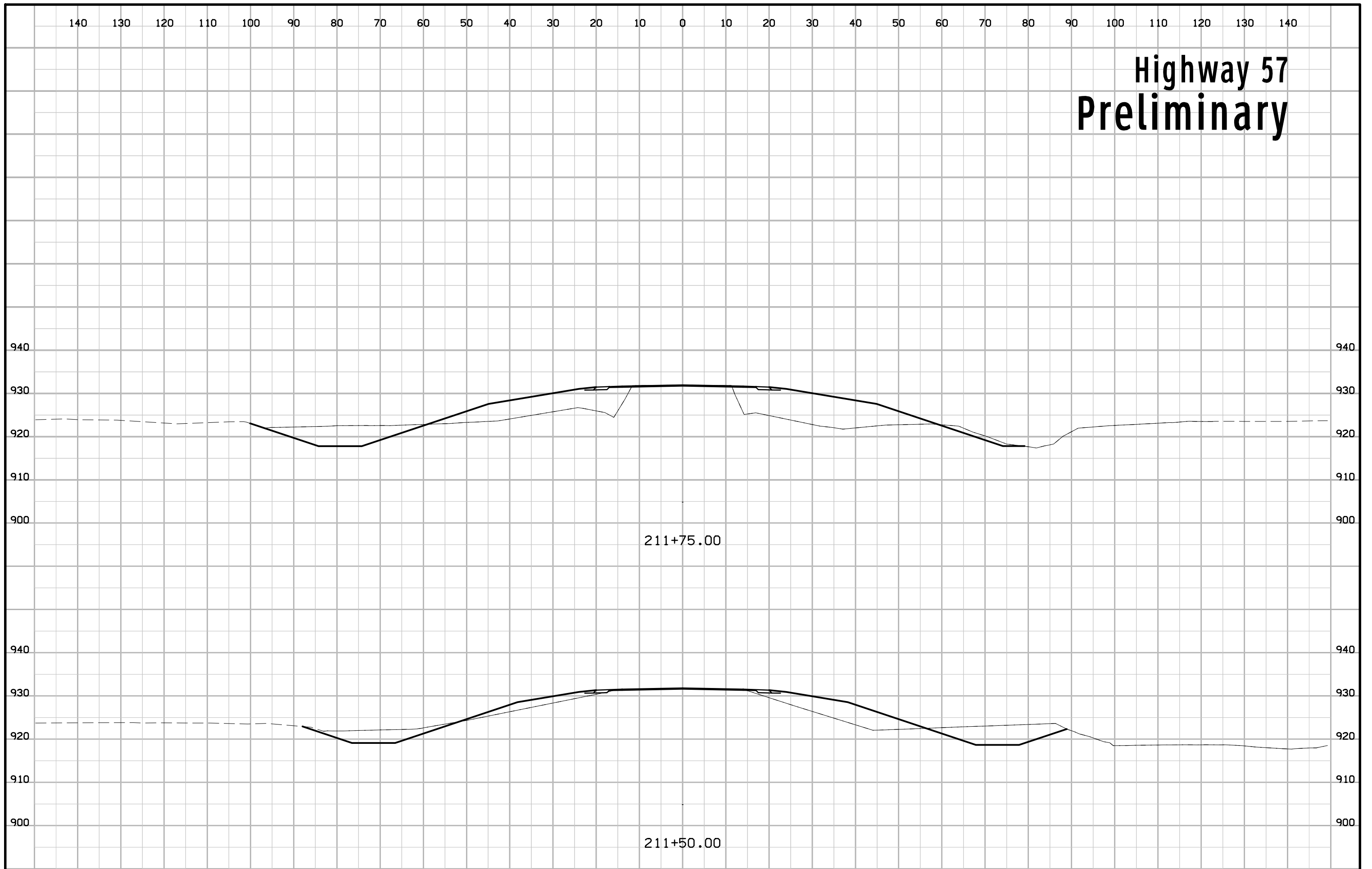
Highway 57 Preliminary



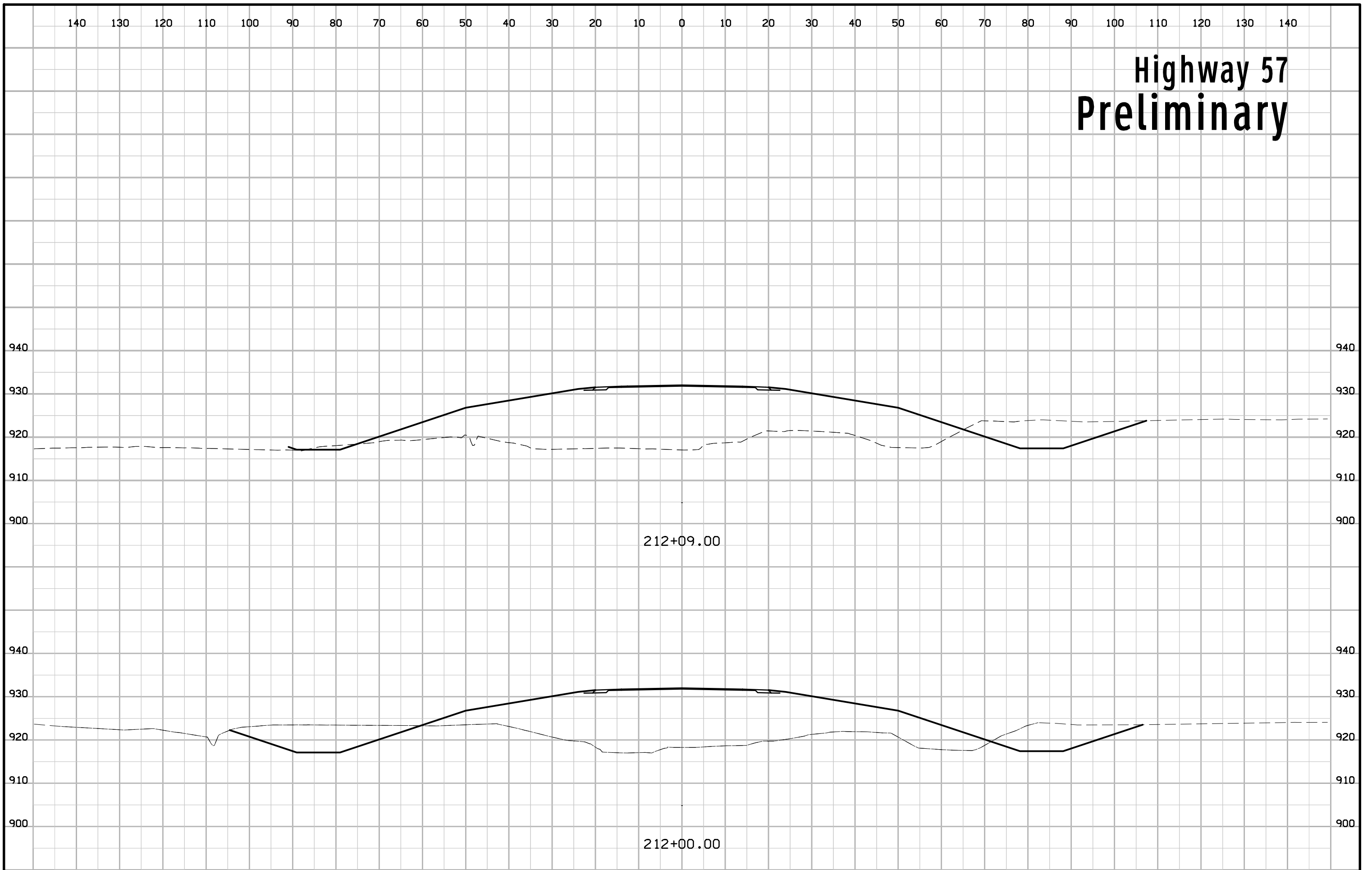
Highway 57 Preliminary



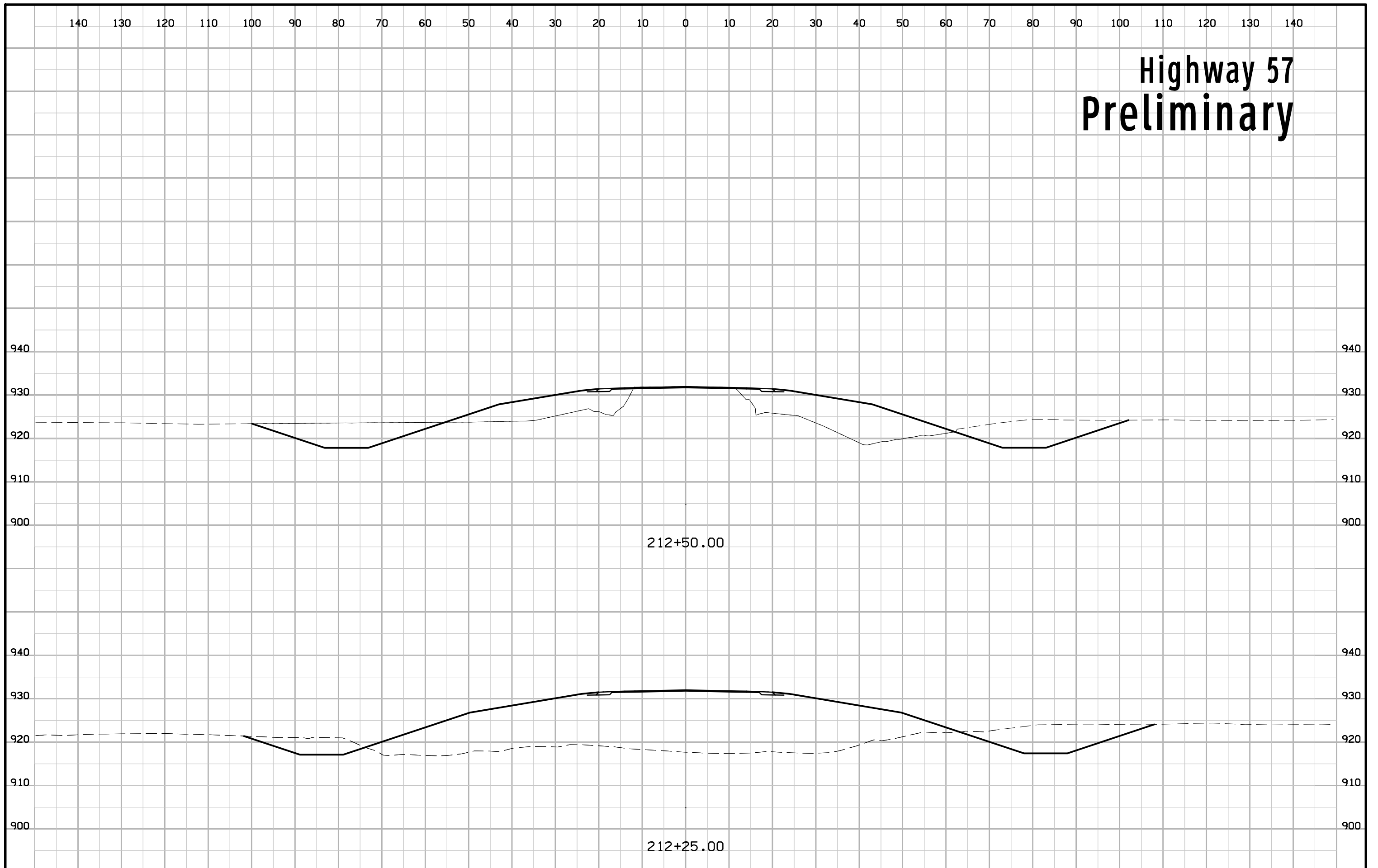
Highway 57 Preliminary



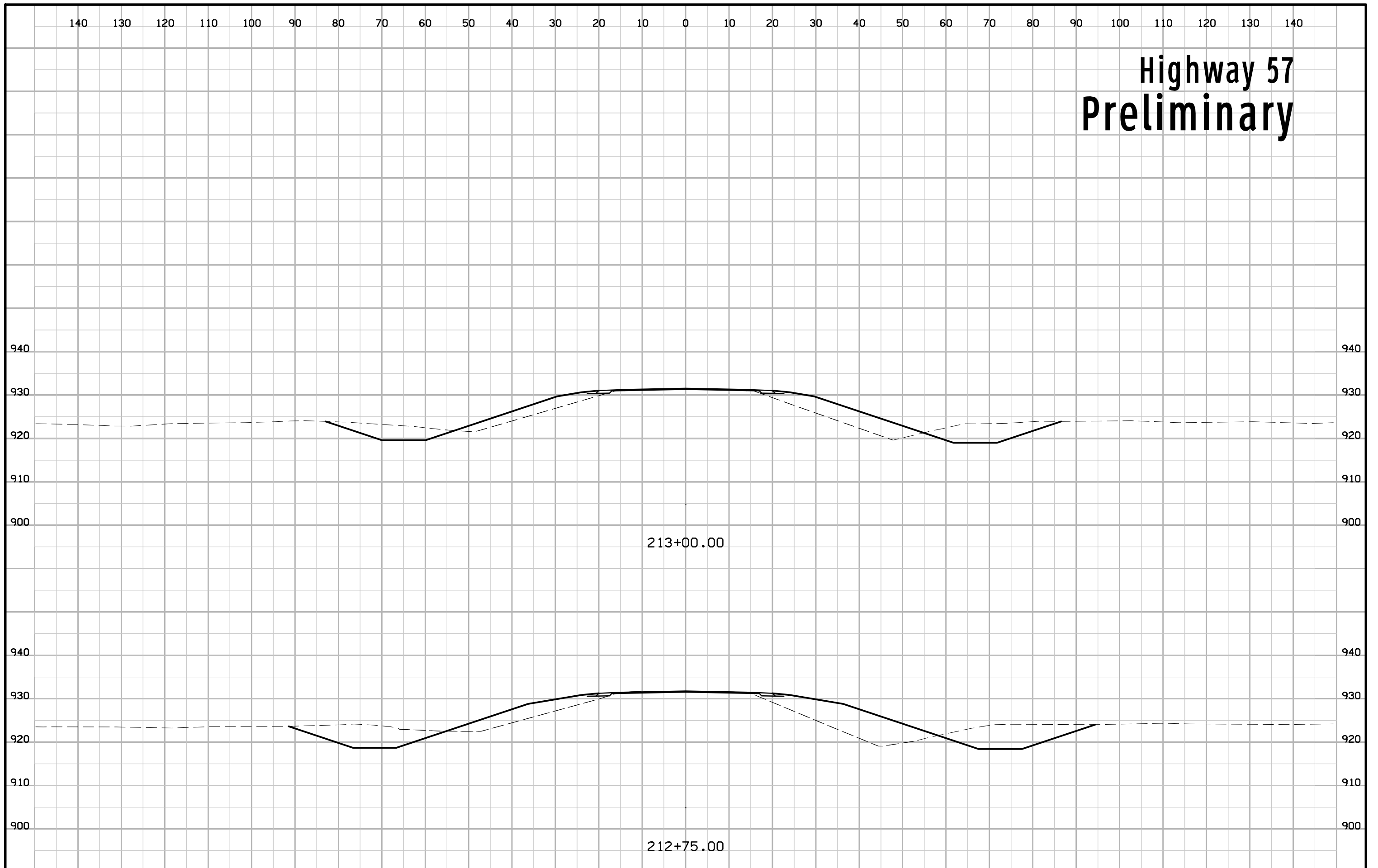
Highway 57 Preliminary



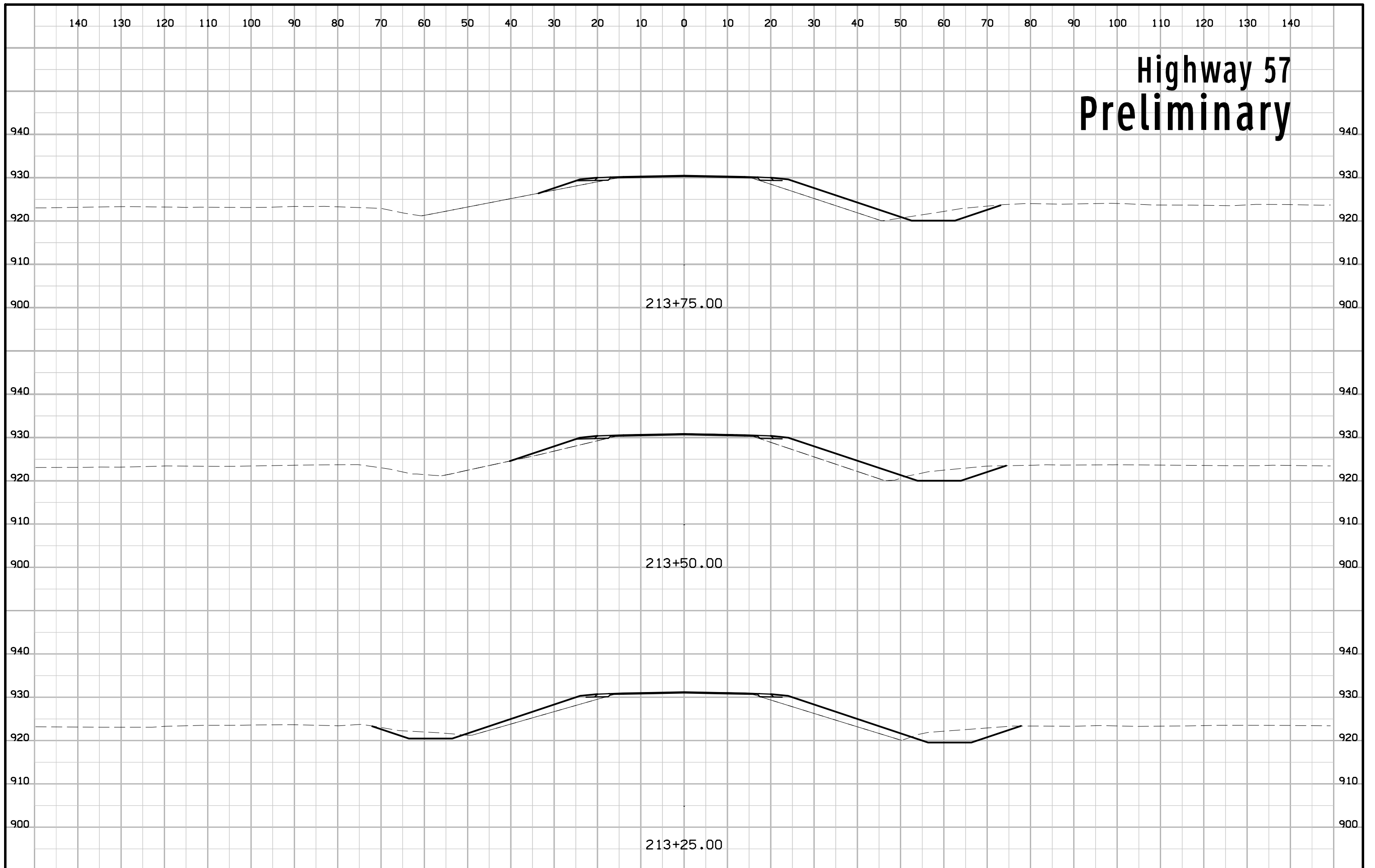
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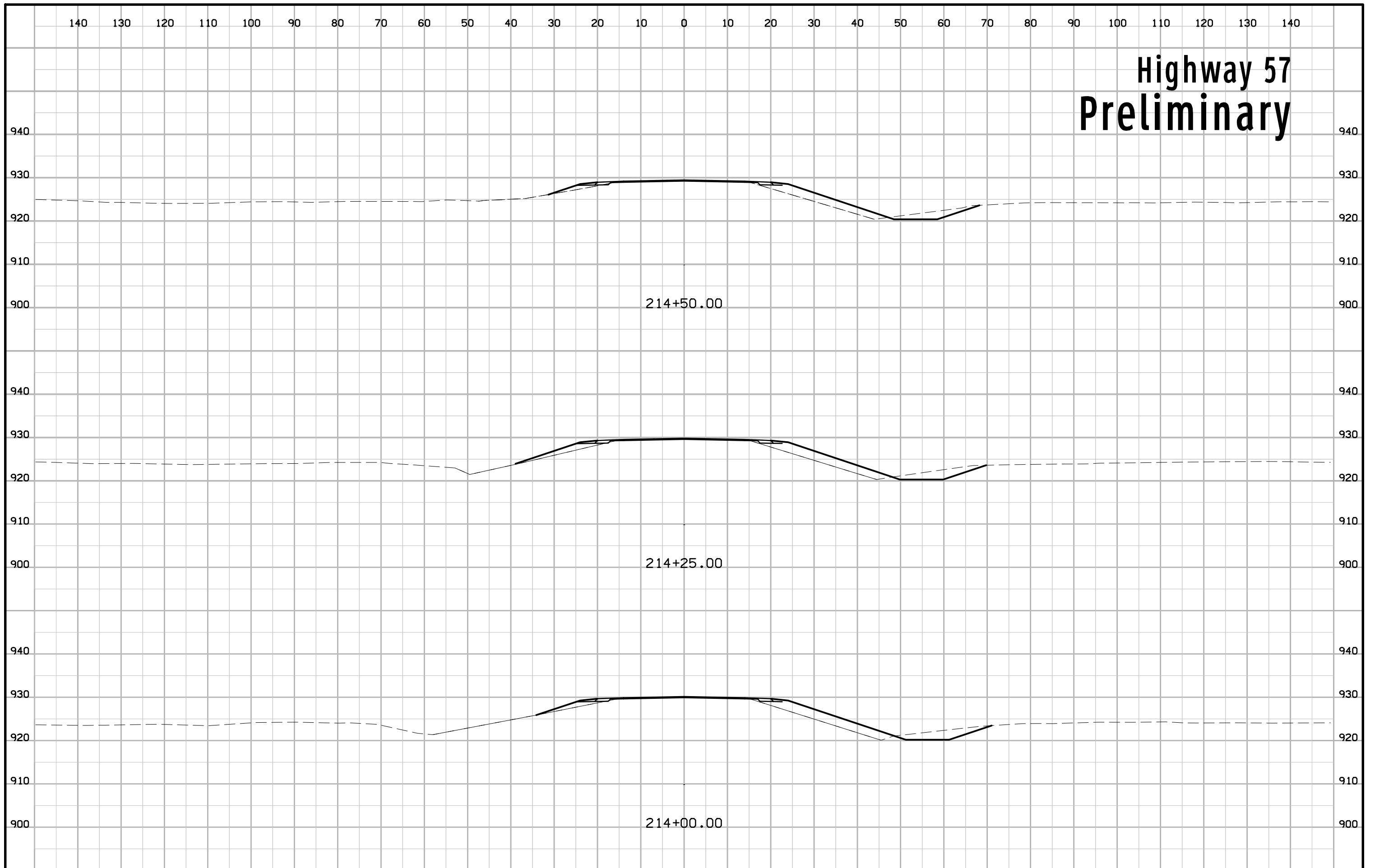
Highway 57 Preliminary



Highway 57 Preliminary



Highway 57 Preliminary



Highway 57 Preliminary

