

BRIDEN CO.
PCC PAVEMENT - GRADE AND REPLACE
BRFN-059-8(30)--39-71
 LETTING DATE **11-17-2020**

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.1	Location Map Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 5	Typical Cross Sections and Details
C Sheets	Quantities and General Information
C.1	Access Tab.
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 3	U.S. 59
E Sheets	Side Road Plan and Profile Sheets
* E.1 - 2	Sneaker's Run Trail
G Sheets	Survey Sheets
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G.2	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan
* J.2	Detour Map
V Sheets	Bridge and Culvert Situation Plans
V.1	Bridge and Culvert Situation Plans
W Sheets	Mainline Cross Sections
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X Sheets	Side Road Cross Sections
X.1 - 10	Trail Cross Sections
	* Color Plan Sheets



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
O BRIEN COUNTY
PCC PAVEMENT - GRADE AND REPLACE

Abandoned RR 0.9 mi S of Co Rd B-40

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

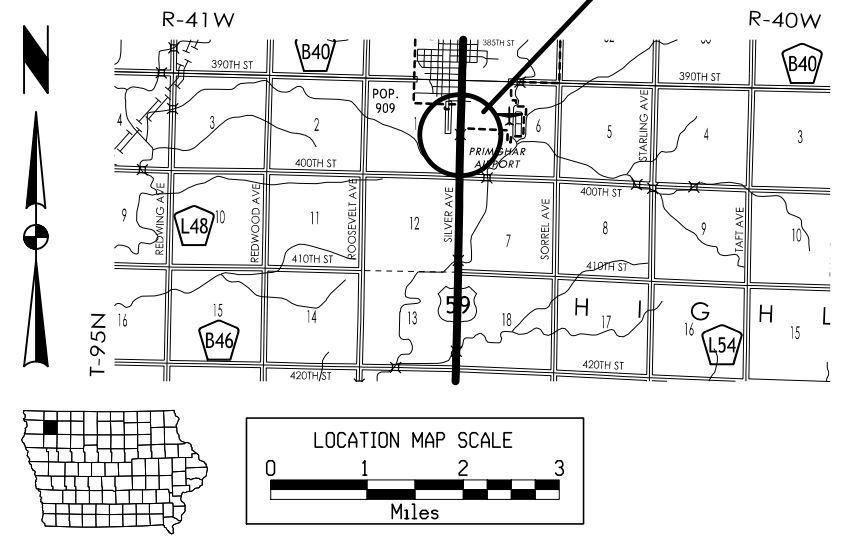
Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS

TOTAL
PROJECT IDENTIFICATION NUMBER
16-71-059-020
PROJECT NUMBER
BRFN-059-8(30)--39-71
R.O.W. PROJECT NUMBER
STPN-059-8(31)--2J-71

Project Location



DM5 PLAN - Date: 7-28-20
 D08 PLAN - Date: 9-01-20

PRELIMINARY PLANS

Subject to change by final design.

D05 PLAN - Date: 3-12-18

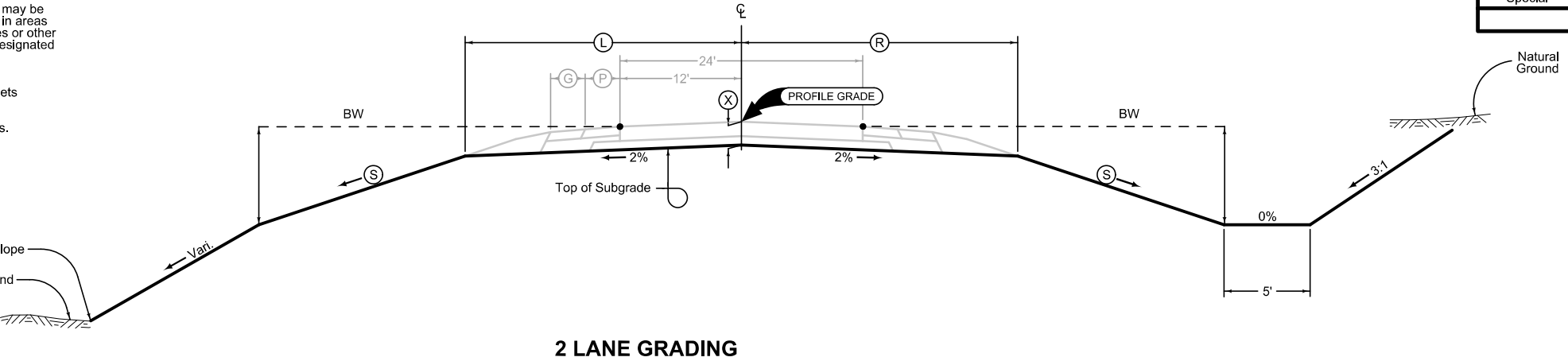
DESIGN DATA RURAL			
2018	AADT	1400	V.P.D.
2038	AADT	1700	V.P.D.
20--	DHV	--	V.P.H.
	TRUCKS	18	%
	Total		
	Design ESALs	--	

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

LOCATION		DIMENSIONS				
ROAD IDENTIFICATION	STATION TO STATION	L Feet	R Feet	X Inches	S	BW Feet
U.S. 59	324+00.00 349+00.00	32.7'	32.7'	21"	6:1	30'
U.S. 59	349+00.00 352+00.00	32.7'	32.7'	21"	6:1-3:1	30'-20.7'
U.S. 59	352+00.00 356+74.00	32.7'	32.7'	21"	--	20.7'

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.



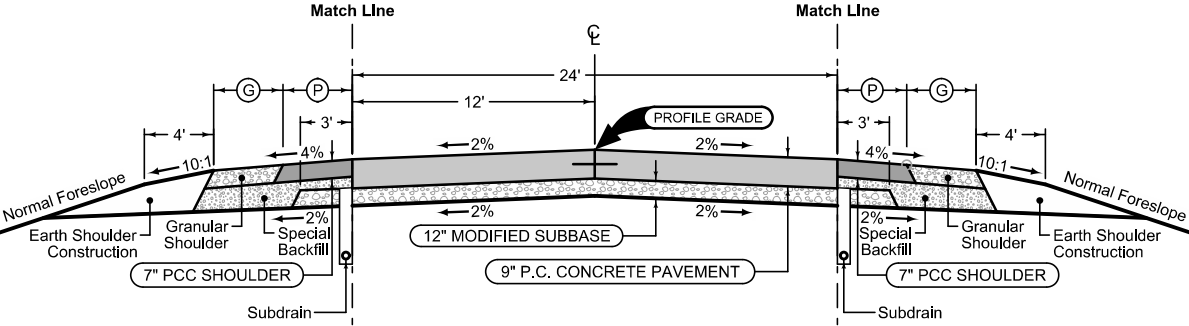
2 LANE GRADING

Special

Combination Shoulder

Shoulder Jointing:
 Longitudinal joint: B
 Transverse joint: C (match ML spacing)

2_C_ 10-15-13			
STATION TO STATION	P Feet	G Feet	
324+00.00 356+74.00	4'	4'	



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

2P_ 10-19-10	
STATION TO STATION	
324+00.00	356+74.00

Combination Shoulder

Shoulder Jointing:
 Longitudinal joint: B
 Transverse joint: C (match ML spacing)

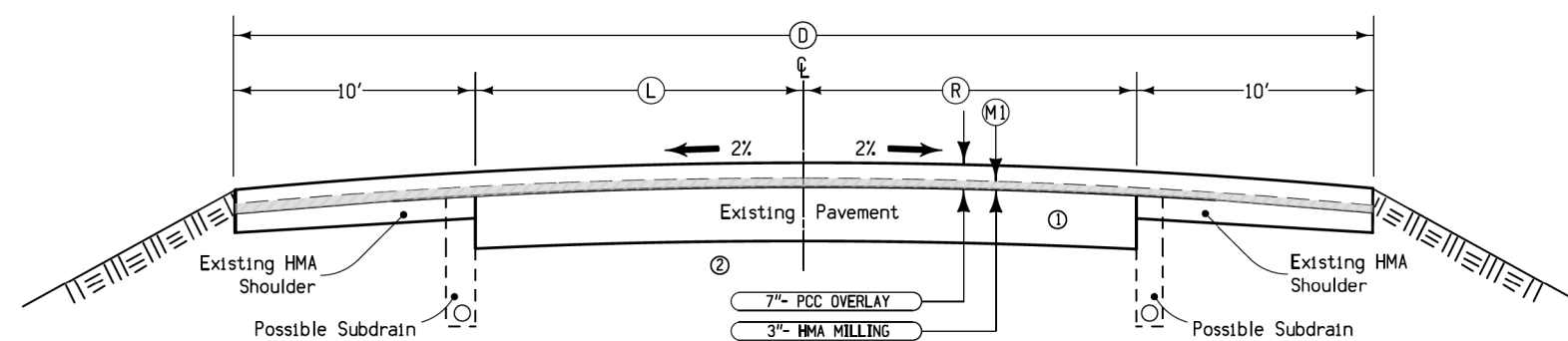
2_C_ 10-15-13			
STATION TO STATION	P Feet	G Feet	
324+00.00 356+74.00	4'	4'	

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

U.S. 59

Notes:

- ① See Tab. 102-5 on Sheet C.3 for existing pavement types.
- ② See Sheet B.2 to Sheet B.3 for PCC overlay construction details.
- ③ Shoulder material as specified elsewhere in these plans; refer to Typical 7135 on Sheet B.4.
- ④ Blading and Shaping of Shoulder Material. Area consists of the top 2" of existing shoulder. Slope shall be adjusted as directed by the engineer.



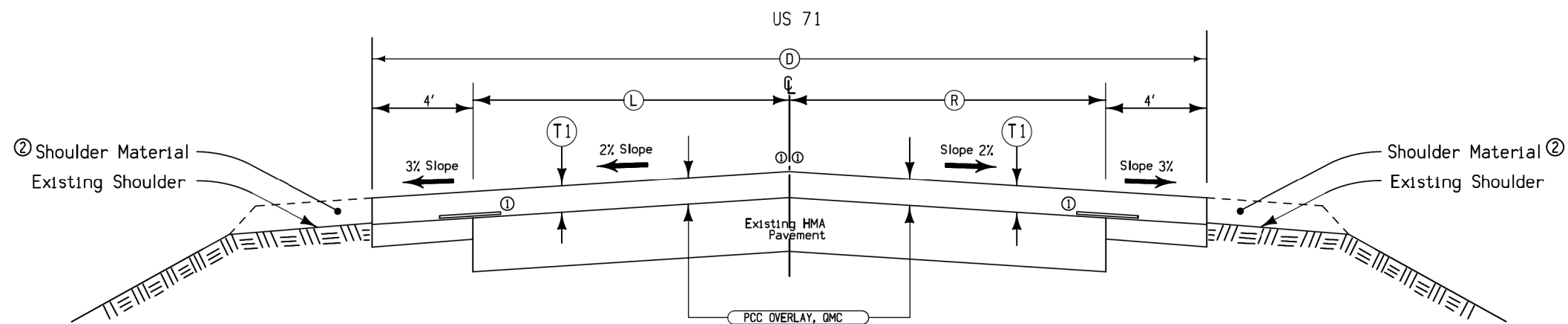
LOCATION		TABLE OF DESIGN QUANTITIES Per Station							REMARKS
ROAD IDENTIFICATION	STATION TO STATION	D Feet	L Feet	R Feet	M1 Inches	MILLING Tons	BLADE & SHAPING Sta. ④		
US 59	144+74.50 - 149+13.00	44	12	12	3.0	79.75	1		
US 59	12+72.10 - 21.93.00	44	12	12	3.0	79.75	1		
US 59	24+58.00 - 269+75.00	44	12	12	3.0	79.75	1		
US 59	272+40.00 - 330+00.00	44	12	12	3.0	79.75	1		
US 59	352+60.00 - 356+74.00	44	12	12	3.0	79.75	1		
US 59	410+60.00 - 718+80.00	44	12	12	3.0	79.75	1	DME RR Crossing	
US 59	719.60.00 - 739+37.00	44	12	12	3.0	79.75	1	DME RR Crossing/End Project	

TYPICAL CROSS SECTION
MILLING PRIOR TO
UNBONDED PCC OVERLAY

INFORMATION ONLY

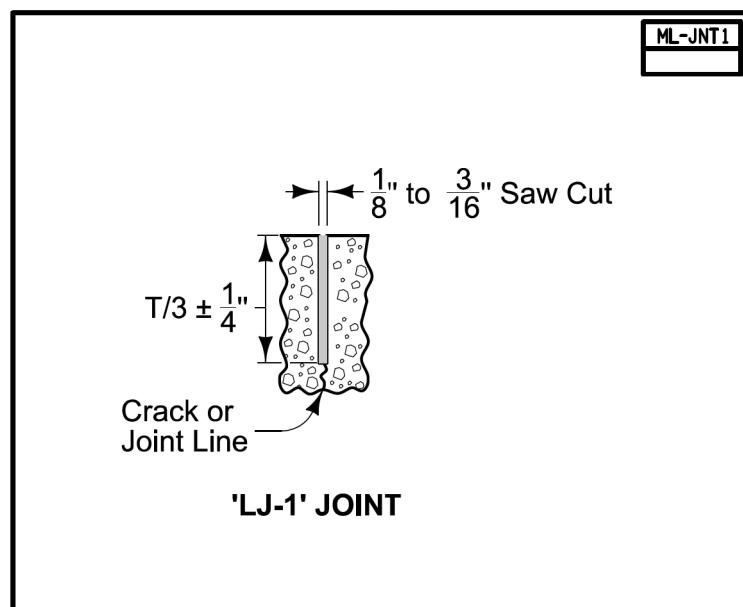
Notes:

- ① Refer to jointing layout on Sheet B.4 and B.5.
- ② Shoulder material as specified elsewhere in these plans; refer to typical 7135 on Sheet B.4 for "Type 'B' Granular Surfaced Shoulders."

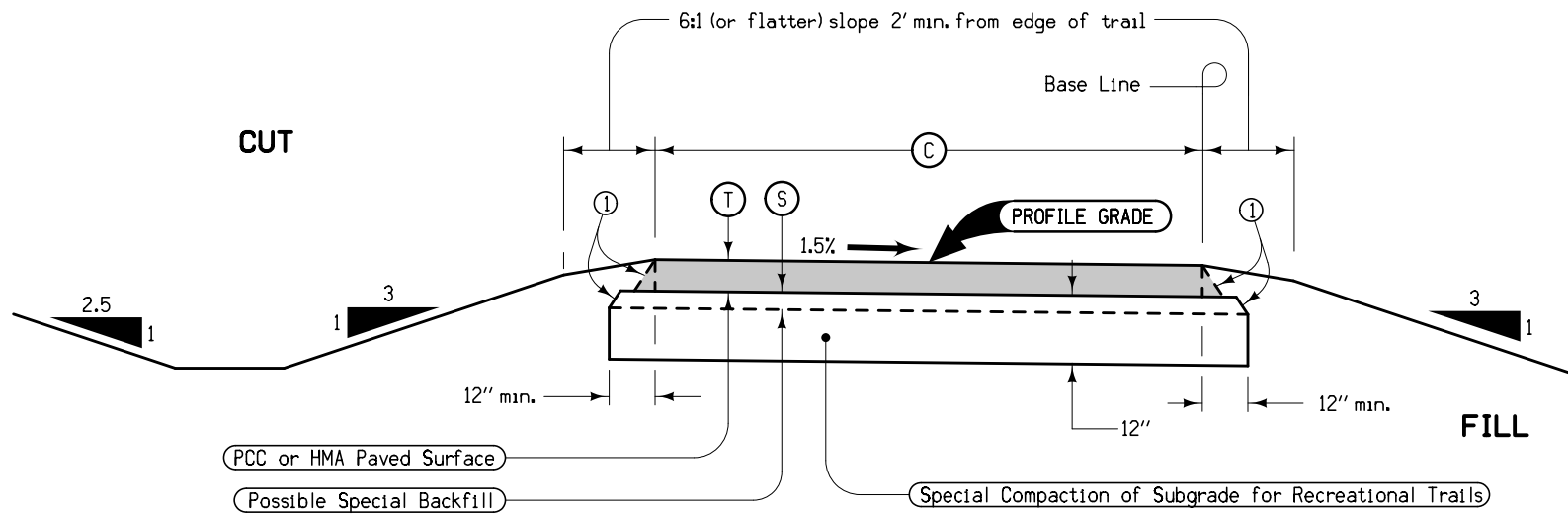


LOCATION		Per Station				PCC OVERLAY, GMC (PLACE) Sq. Yds.	PCC OVERLAY, GMC (FURNISH) Cu. Yds.	REMARKS
ROAD IDENTIFICATION	STATION TO STATION	(D) Feet	(L) Feet	(R) Feet	(T1) Inches			
US 59	144+74.50 - 149+13.00	32	12	12	7.0	355.56	69.14	
US 59	12+72.10 - 21+93.00	32	12	12	7.0	355.56	69.14	MANLEY CREEK
US 59	24+58.00 - 34+00.00	32	12	12	7.0	355.56	69.14	MANLEY CREEK
US 59	122+00.00 - 137+23.00	32	12	12	7.0	355.56	69.14	
US 59	185+00.00 - 226+00.00	32	12	12	7.0	355.56	69.14	
US 59	259+00.00 - 269+75.00	32	12	12	7.0	355.56	69.14	DRY CREEK
US 59	272+40.00 - 277+50.00	32	12	12	7.0	355.56	69.14	DRY CREEK
US 59	321+00.00 - 330+00.00	32	12	12	7.0	355.56	69.14	TRAIL CROSSING
US 59	352+60.00 - 356+75.00	32	12	12	7.0	355.56	69.14	TRAIL CROSSING/SCL PRIMGAR
US 59	438+75.00 - 524+80.00	32	12	12	7.0	355.56	69.14	
US 59	524+80.00 - 529+51.60	28	12	12	7.0	311.11	60.49	B24 - SEE U SHEETS
US 59	529+51.60 - 559+75.00	32	12	12	7.0	355.56	69.14	
US 59	579+20.00 - 607+00.00	32	12	12	7.0	355.56	69.14	
US 59	624+00.00 - 628+00.00	32	12	12	7.0	355.56	69.14	
US 59	665+50.00 - 670+00.00	32	12	12	7.0	355.56	69.14	
US 59	681+00.00 - 685+00.00	32	12	12	7.0	355.56	69.14	DME RR CROSSING
US 59	718+80.00 - 719+60.00	32	12	12	7.0	355.56	69.14	DME RR CROSSING

TYPICAL CROSS SECTION
UNBONDED PCC OVERLAY OVER
FULL DEPTH HMA PAVEMENT



INFORMATION ONLY



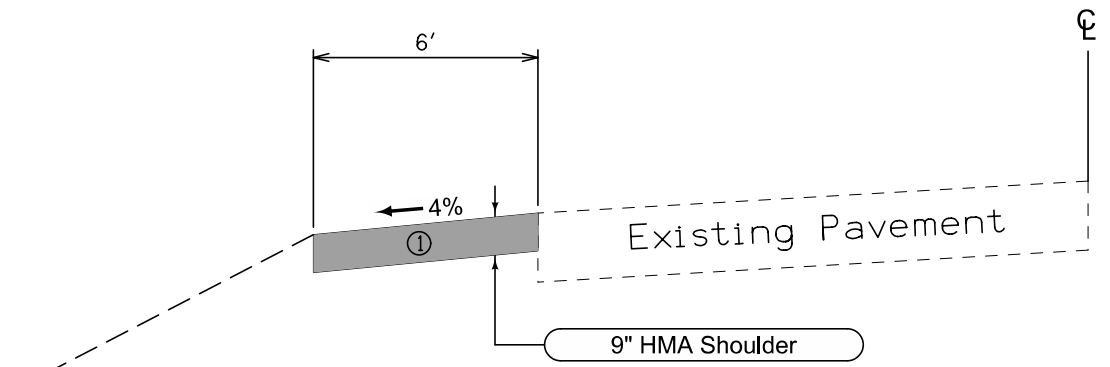
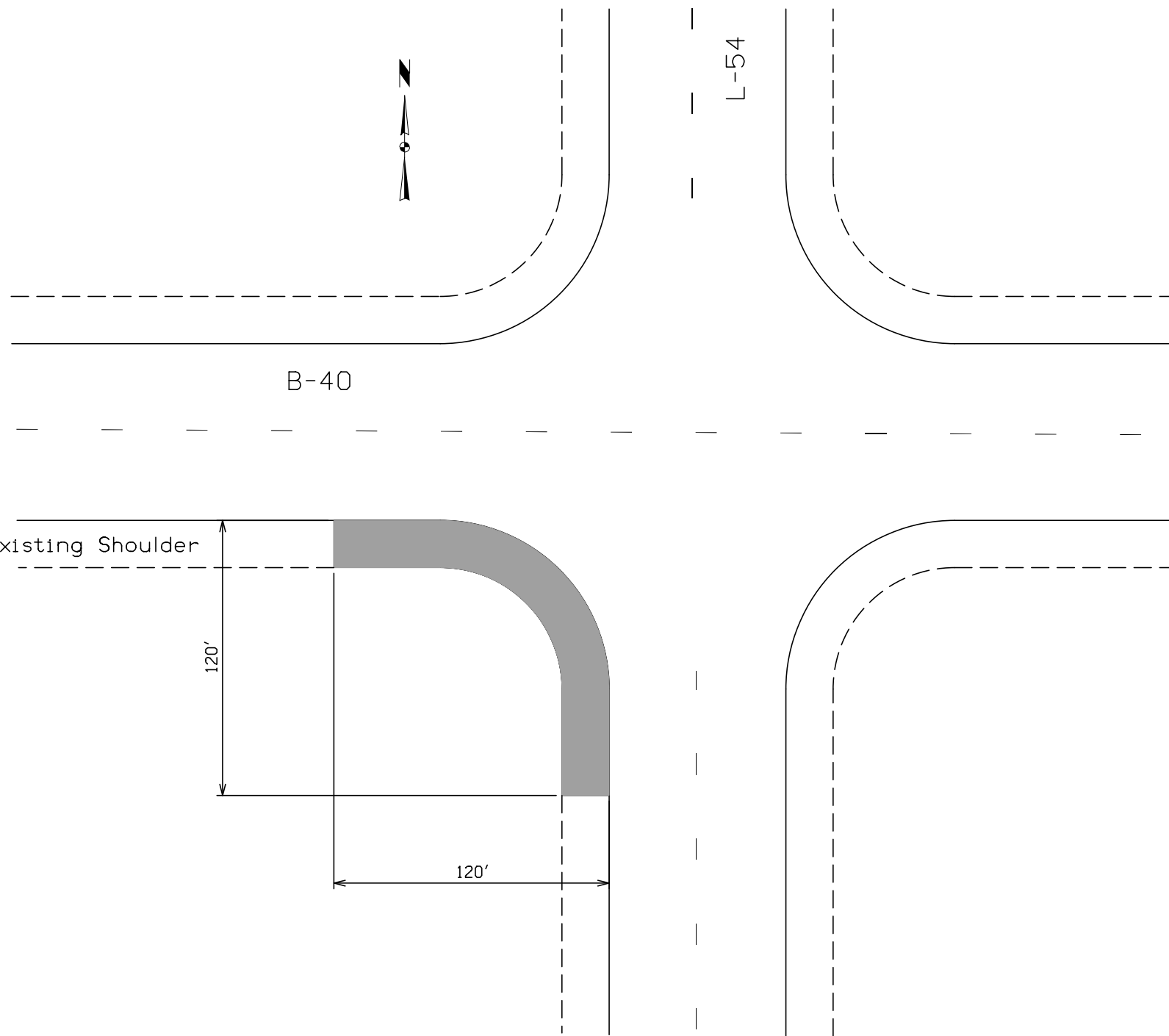
PAVEMENT THICKNESS		
Pavement Type	Trail Width	
	(C)	(T)
PCC	8'	4"
	10' or greater	5"
HMA	8'	5"
	10' or greater	6"

Notes:
 Bid item is "Recreational Trail".
 (1) Nominal 1:1 slope (HMA only)

STATION TO STATION		PAVEMENT TYPE PCC, HMA, or option	(C) Feet	(S) Inches	10' DITCH	
					Left	Right
3+48.07	10+76.27		10			

**TYPICAL CROSS SECTION
 RECREATIONAL TRAIL
 PAVED SURFACE**

Trail material is under review



- ① **Quantity: 9" HMA 131.1 SY**
Class 13 Excavation: 32.8 CY
- ② **Refer to sheet J.2 for additional information on location.**

Intersection Improvement Detail
B-40 and L-54

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.

- ① Refer to MI-210
- ② Refer to EW-501.
- ③ Refer to EW-501 or EW-502.

*Predetermined for access point not constructed with this project.

Location		Type	Length of Opening ①			Pipe Culvert ③			Aprons		Driveway Surface Area		Driveway Surfacing Material	Remarks				
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case	1½" Dropped Curb	3" Dropped Curb	W	① PR	② SR	H	Size	Pipe Length	Lt.	Rt.		No.	HMA	PCC	TON
			1 or 2	LF	LF	FT	FT	FT	FT	IN	LF	LF	LF		SY	SY	TON	
US 59																		
329+40.80	Rt.	C				18.0		35.0	1.5	18.0	42.0	22.4	27.1	2			41.2	add quantity for temp access
352+94.86	Lt.	B				45.0		40.0									60.7	
354+43.10	Lt.	B															19.9	UAC *
354+99.40	Lt.	C															10.4	UAC *
356+33.90	Rt.	C															11.1	UAC *
* Granular material added for access tie-in																		

SURVEY SYMBOLS

- CP Control Point
- ▲ PI Tangent Point
- ▲ SCR Section Corner
- POT Tangent Point
- BM Bench Mark
- WC Wild Card (Misc. Field Shot)
- BL Topo Breakline
- D Centerline Draw or Stream (Down)
- GR Ground Shot
- SNP Unpaved Shoulder
- SIGN SI Sign
- GDL Guard Rail Steel
- ENU Edge Unpaved Entrance & Parking
- ENT Centerline BL of Entrance
- EP Edge of Paved Roads (ML or SR)
- SH Paved Shoulder
- C Centerline BL of Road (ML or SR)
- EB EB Electrical Box
- PIP Pipe Culvert
- PRO Profile Shot
- PR Electric Riser Pole
- ← DU Centerline Draw or Stream (Up)
- PPA Power Pole Co. 1
- REF Reference Tie Point
- FO - FO1D Fiber Optic Co. 1 - Quality D
- G - GL1D Gas Line Co. 1 - Quality D
- T1 - TL1D Telephone Line Co. 1 - Quality D
- CON Concrete or A/C Slab
- BD Bridge Deck
- LIN Miscellaneous Line
- BCL Bridge Centerline
- BRG Bridge
- SBR Size of Bridge
- DTM Photogrammetry Elv Control Check
- TPD Telephone Pedestal
- COR Round Bridge Pier Column
- BLS Bridge Low Steel
- TOP Top of Bridge Pier
- SOP Size of Pipe or Culvert

UTILITY LEGEND

- FO - FO1D Fiber Optic Windstream - Quality D
- T1 - TL1D Telephone Line Windstream - Quality D
Terry Burke
115 South 2nd Ave. West
Newton, IA 50208
641-787-2259
terry.r.burke@windstream.com
- G - GL1D Gas Line Black Hills Energy - Quality D
Black Hills Energy
Brad Fleming
1102 East First Street
Papillion, NE 68046-7641
402-221-2714
brad.fleming@blackhillscorp.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.	
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

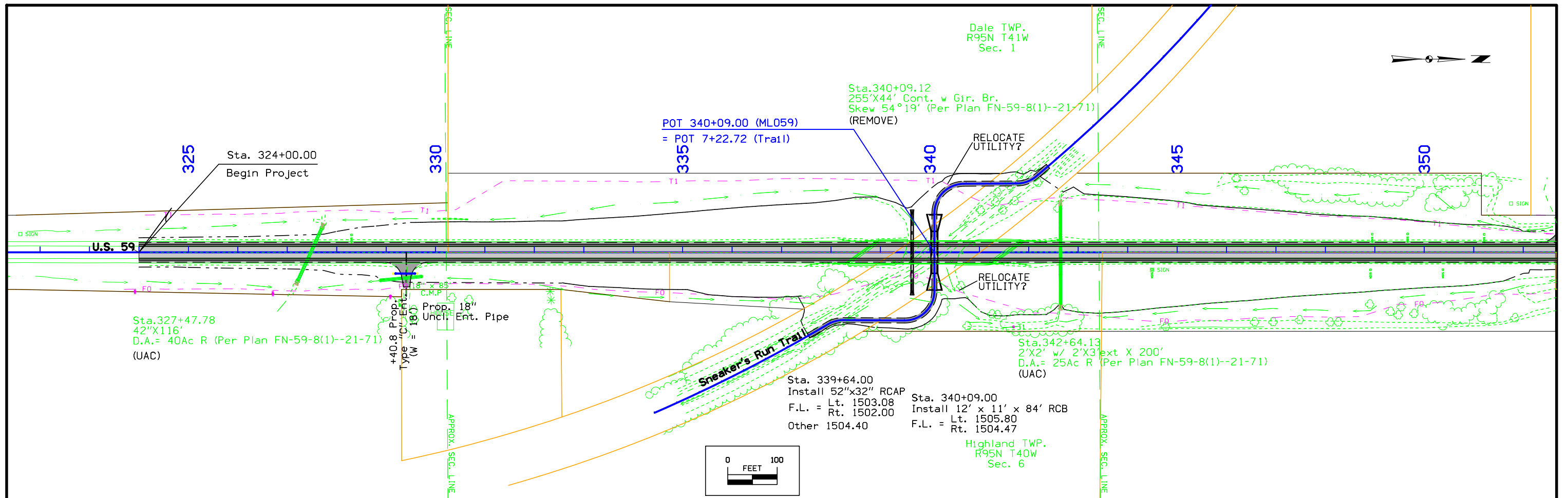
- ▲ Section Corner
- Ground Line Intercept
- //// Saw Cut
- ++++ Guardrail
- ==== Trench Drain
- HighTension Cable Guardrail
- ~~~~ Sheet Pile
- ▨ Pavement Removal
- ▩ Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

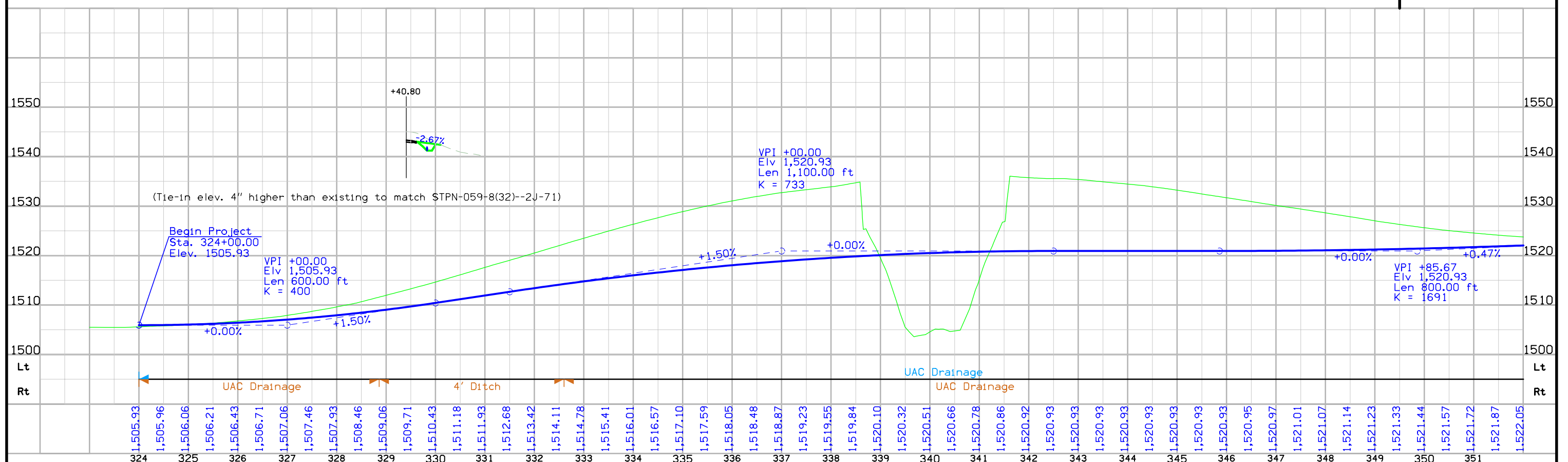
- ▲ Proposed Right-of-Way
- △ Existing Right of Way
- ▲ Existing and Proposed Right-of-Way
- ▲ Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- C/A Access Control
- ← Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

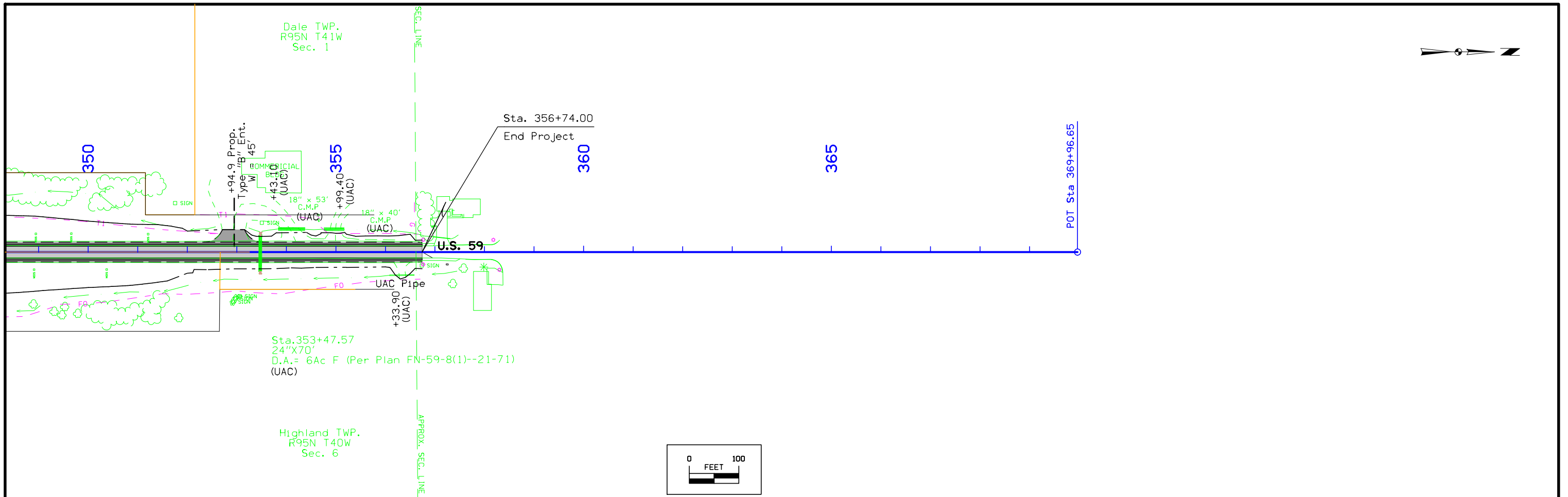
(COVERS SHEET SERIES D, E, F, & K)



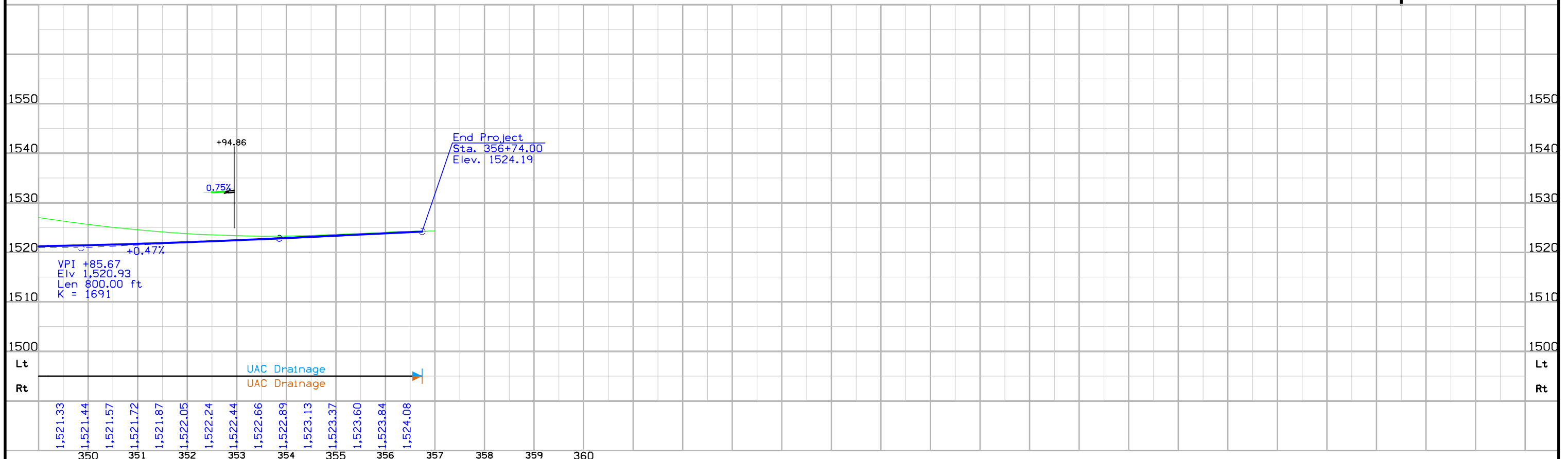
U.S. 59

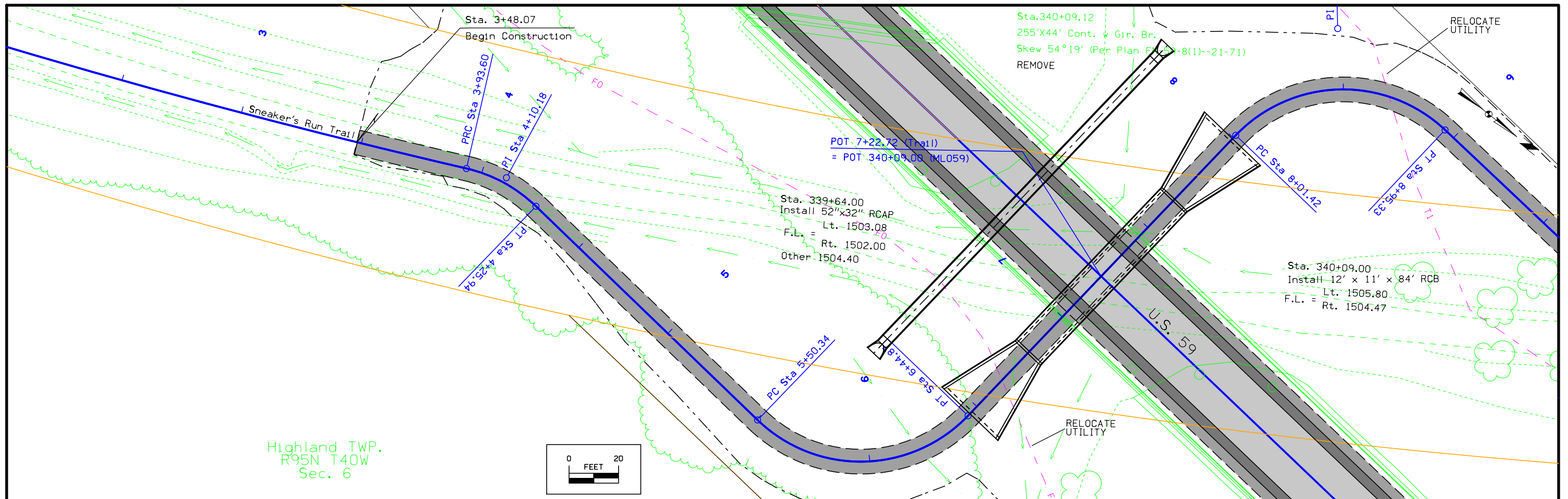


FILE NO.	ENGLISH	DESIGN TEAM	J1a \ Bartholomew \ DeWolf	O'BRIEN COUNTY	PROJECT NUMBER	BRFN-059-8(30)--39-71	SHEET NUMBER	D.2
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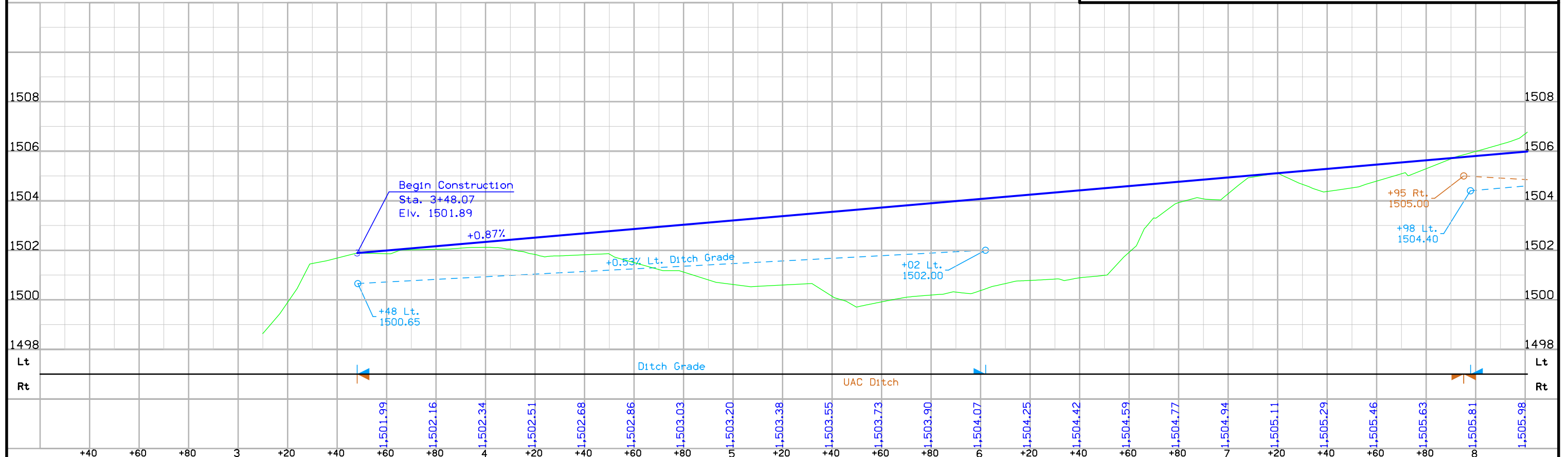


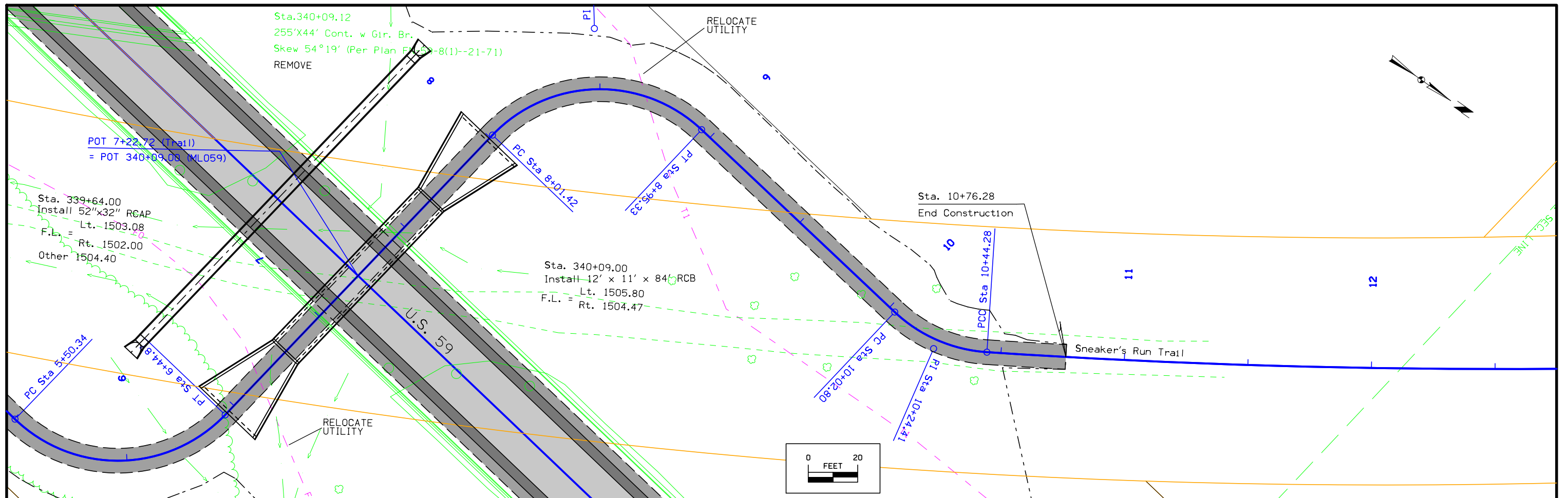
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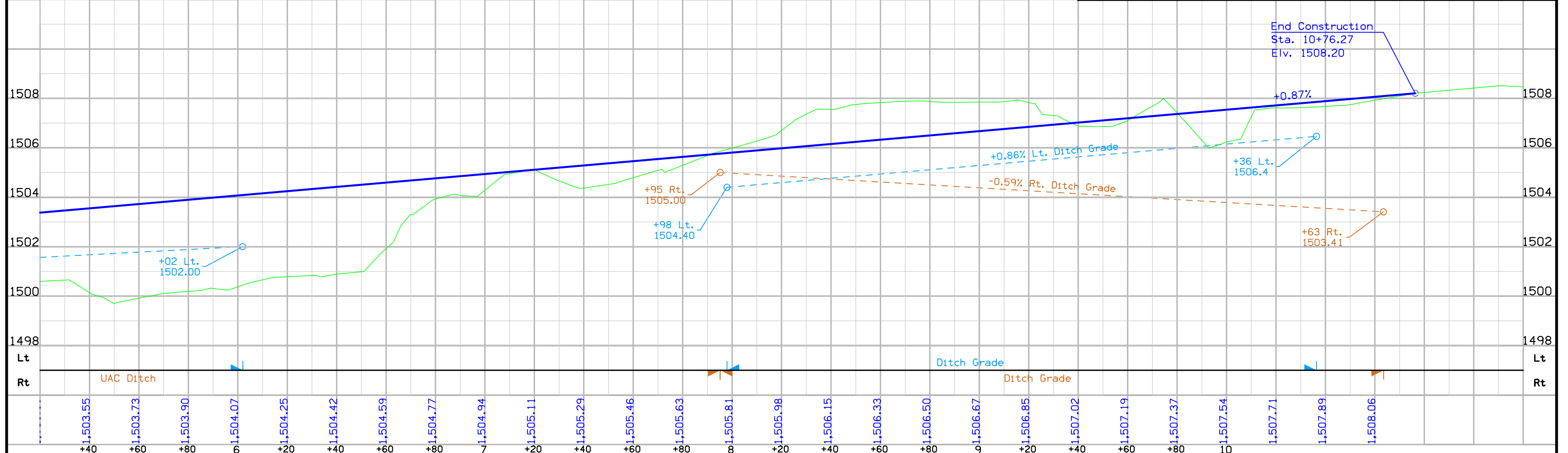


Sneaker's Run Trail



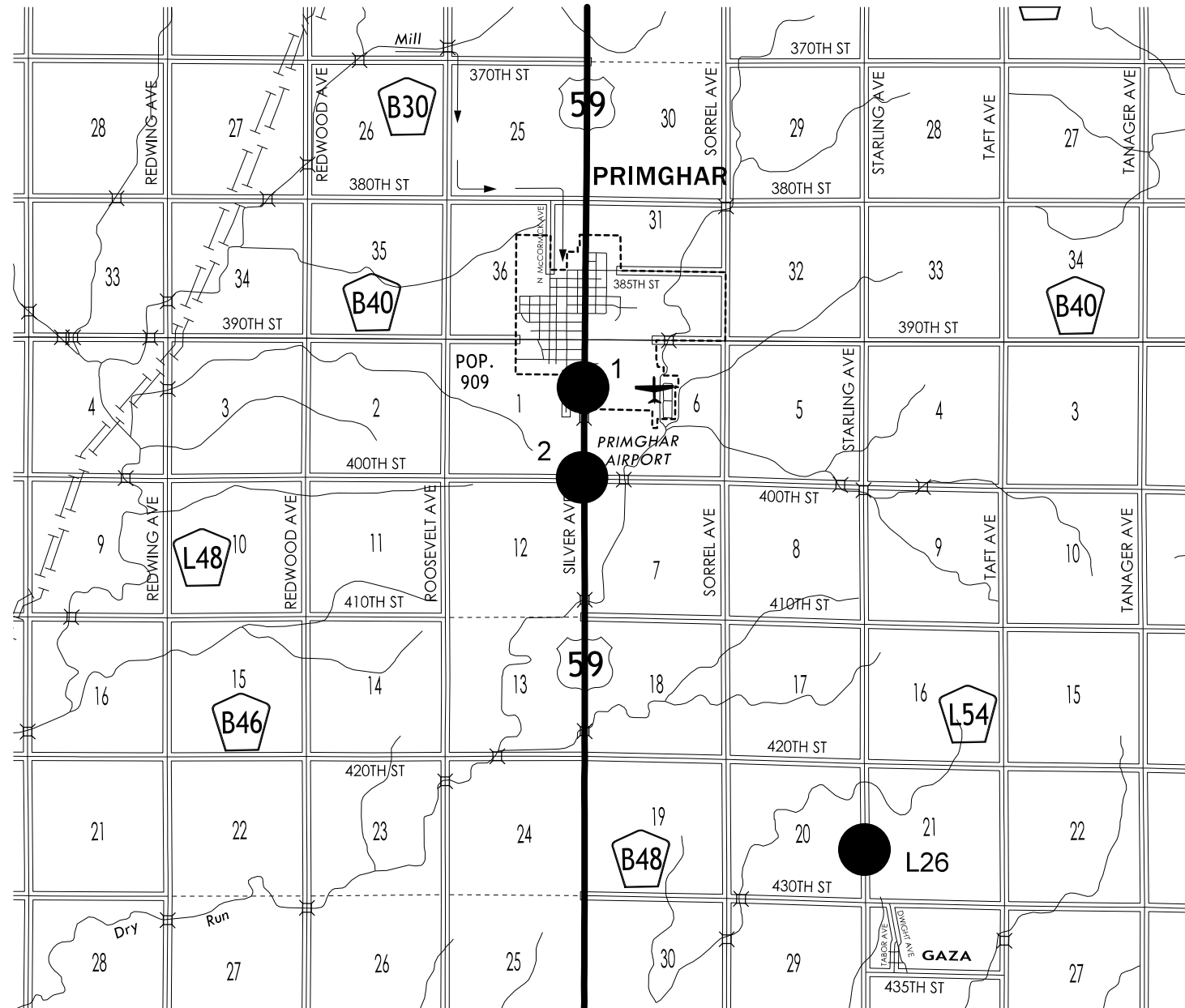


Sneaker's Run Trail



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 2013.00

VERT. DATUM: NAVD88

1a. Regional Coordinate System Zone 1

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 2013.00

VERT. DATUM: NAVD88

1a. Regional Coordinate System Zone 1

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.

Date TWP.
T95N R41W
Sec. 1

TEMPORARY EASEMENT
TO SHAPE



CITY OF PRIMGHAR

341+72±P
C183.89'

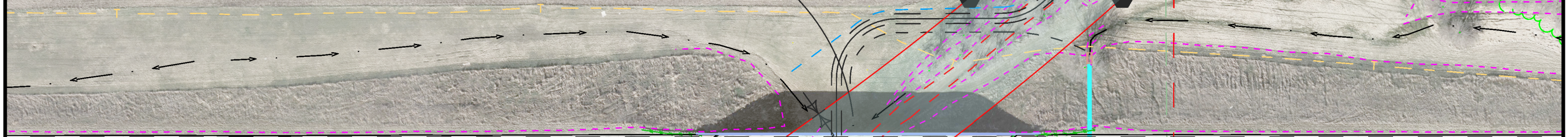
341+43±P
C160.00'

342+96±P
C160.00'

343+23±P
C184.05'

335

340



337+43±P
C115.00'

337+20±P
C128.29'

Sheaker's Run Trail

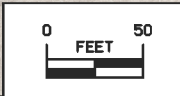
338+64±P
C159.87'

337+69±P
C215.13'

Highland TWP.
T95N R40W
Sec. 6

TEMPORARY EASEMENT
TO SHAPE

Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: HUGHES/CUVA	
ROW #: STPN-059-8(31)--2J-71	
Plan Date: 7/31/2018	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



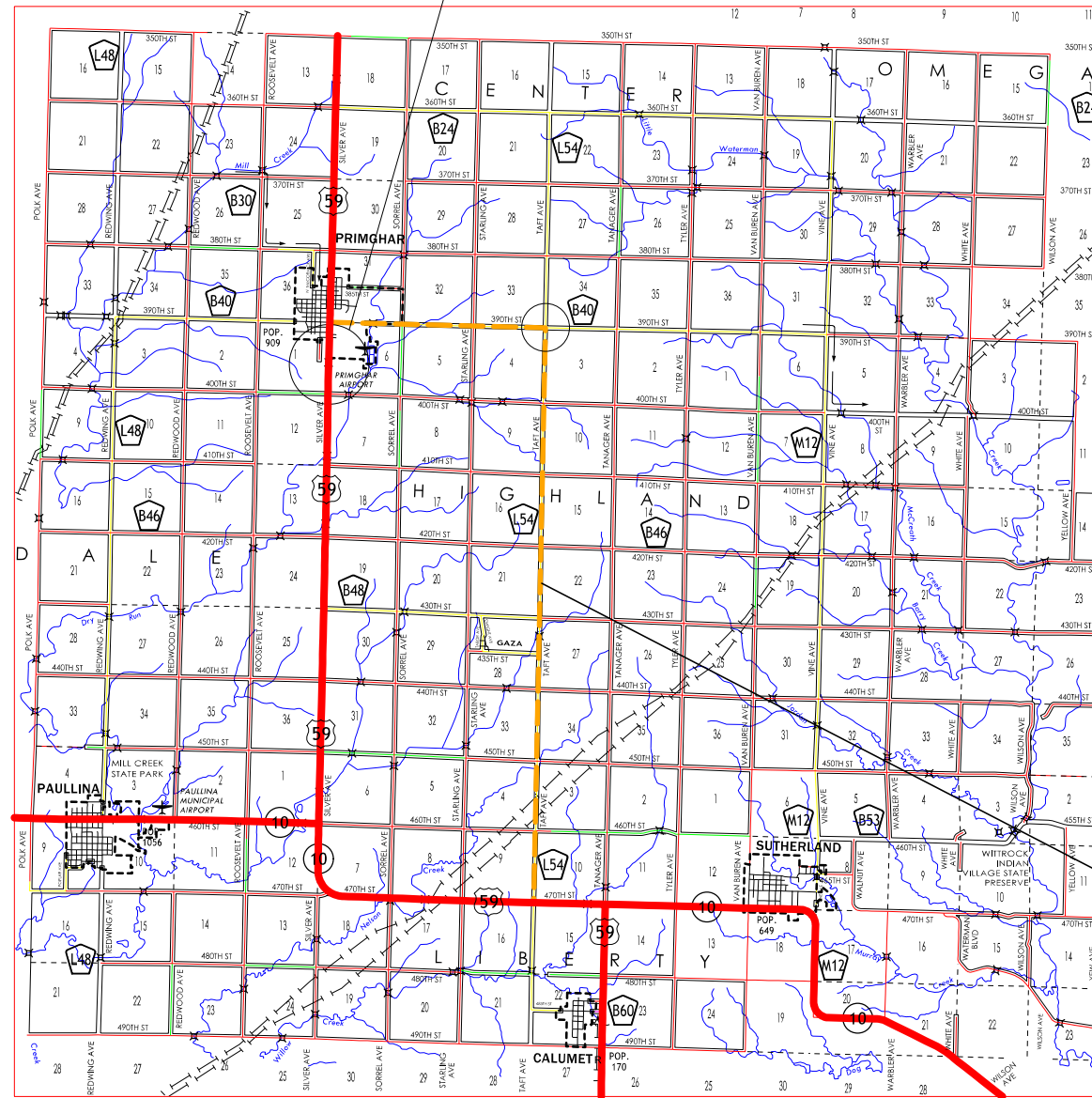
108-23A
08-01-08

TRAFFIC CONTROL PLAN

- a) U.S. 59 will be closed during construction. Through traffic on U.S. 59 will be detoured to County Road B40 and L54. Refer to sheet J.2 for the proposed detour. Detour signing will be installed and maintained by the Iowa DOT.
- b) Access to individual properties shall be maintained.
- c) Access to the recreational trail (Sneaker's Run) under the bridge will be closed.



O'BRIEN COUNTY

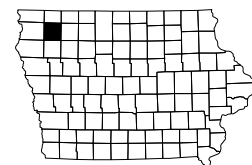
STA 340+17
 FHWA 38321
 MAINT.NO. 7185.4S059
 DESIGN 1669



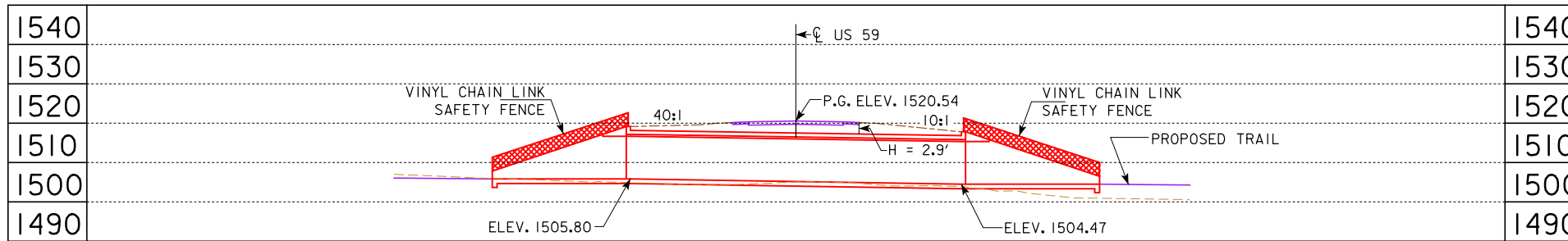
**DETOUR: Starting in Primghar, take
 County Road B40 east 3 miles to
 County Road L54 and head south 8 miles
 to the junction of US 59
 BRFN-059-8(30)-39-71
 PIN: 16-71-059-020**

DETOUR LEGEND

-  DETOUR ROUTE
-  INTERSECTION IMPROVEMENTS
NEEDED FOR DETOUR ROUTE
REFER TO B SHEETS FOR TYPICAL



CP NO. 2: NORTHING 9552902.814, EASTING 11399884.13, 1505.54,
 FD CONC MONUMENT 100FT NW OF SEC COR IN CL OF HWY, 80FT
 W OF C HWY, 68FT EAST OF CONC MON



G1 = +1.50% G2 = 0.00%

VPI STA = 337+00.00 VC = 1100.00'
 VPI ELEV = 1520.93

**PROPOSED PROFILE
 GRADE US 59**

G = +0.867%

VPI STA = 3+48.07 VPI STA = 10+76.27
 VPI ELEV = 1501.89 VPI ELEV = 1508.20

**PROPOSED PROFILE
 GRADE SNEAKERS RUN TRAIL**

NOTES:

1. A PRE-CAST OPTION SHALL BE OFFERED. FLARED HDWLS REQUIRED.
2. A 3'6" HEIGHT VINYL CHAIN LINK SAFTY FENCE SHALL BE PROVIDED FOR FALL PROTECTION ALONG WING, HEADWALL AND PARAPET.
3. FROST TROUGH NOT INCLUDED FOR CIP. LOWER CORNER HAUNCH NOT INCLUDED FOR PRECAST.
4. ACCOMMODATION FOR LIGHTING SHALL BE PROVIDED. THE INTENT IS THAT THE CITY WILL INSTALL AT A LATER DATE.
5. SPECIAL AESTHETIC TREATMENTS ARE NOT PROPOSED. ALLOW FOR TYPICAL TRAIL RCB DETAILS. INCLUDE ANTI-GRAFFITI COATING FOR HEADWALLS, BARREL WALLS AND TOP.

UTILITIES LEGEND:

FO - FIBER OPTIC - WINDSTREAM
 TI - TELEPHONE LINE - WINDSTREAM

TRAFFIC ESTIMATE

2018 AADT	1400	V.P.D.
2038 AADT	1700	V.P.D.
2021 DHV	-	V.P.H.
TRUCKS	18	%
TOTAL DESIGN ESALs	-	

LOCATION

US 59 OVER SNEAKERS RUN TRAIL
 T-95N R-41/40W
 SECTION 1/6
 DALE/HIGHLAND TOWNSHIP
 O'BRIEN COUNTY
 LATITUDE 43.076333°
 LONGITUDE -95.624335°

PRELIMINARY

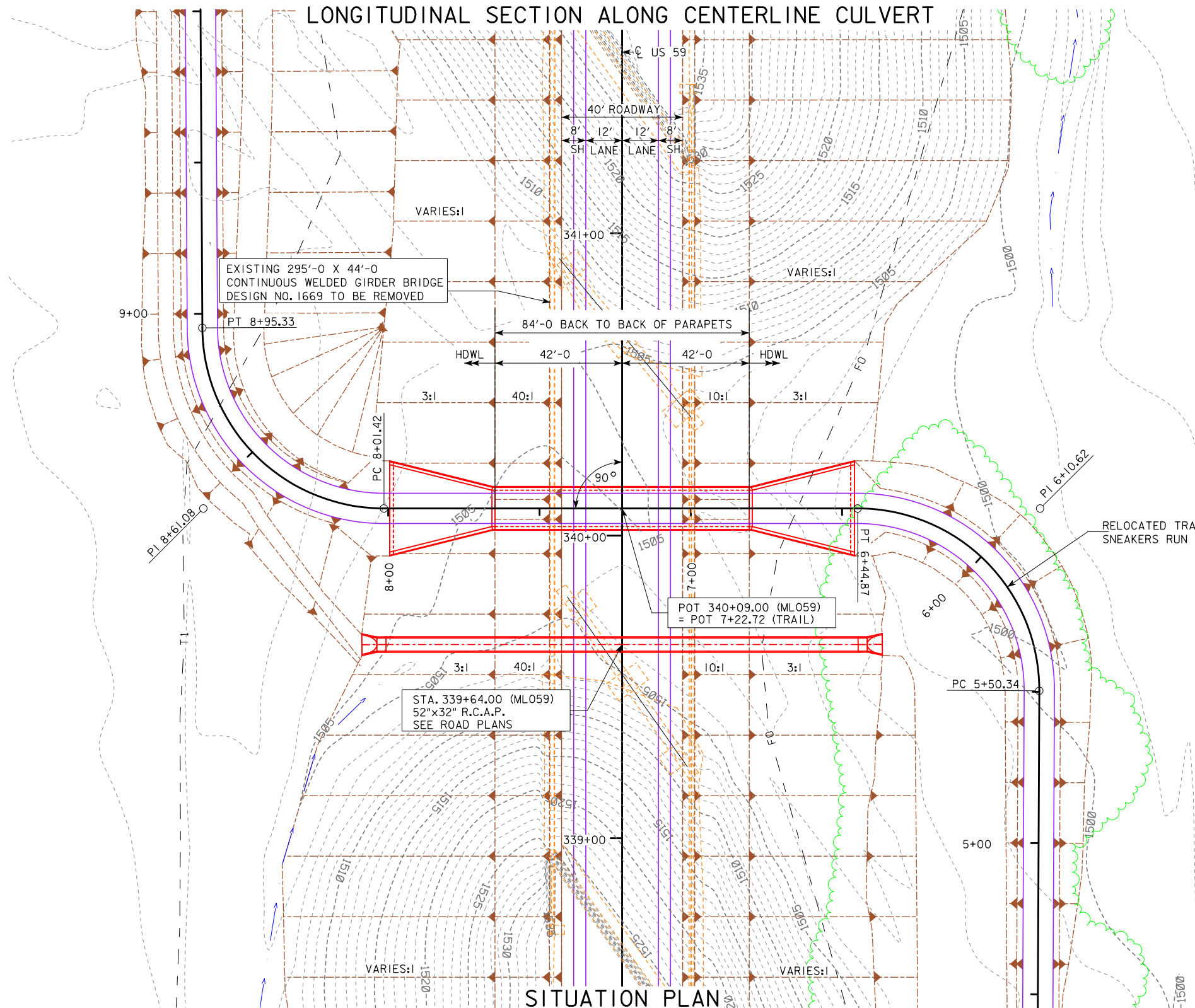
DESIGN FOR 0° SKEW
**12' x 11' x 84' REINFORCED
 CONCRETE BOX CULVERT**

SITUATION PLAN

STATION 340+09.00 (US 59) MARCH 2018

O'BRIEN COUNTY

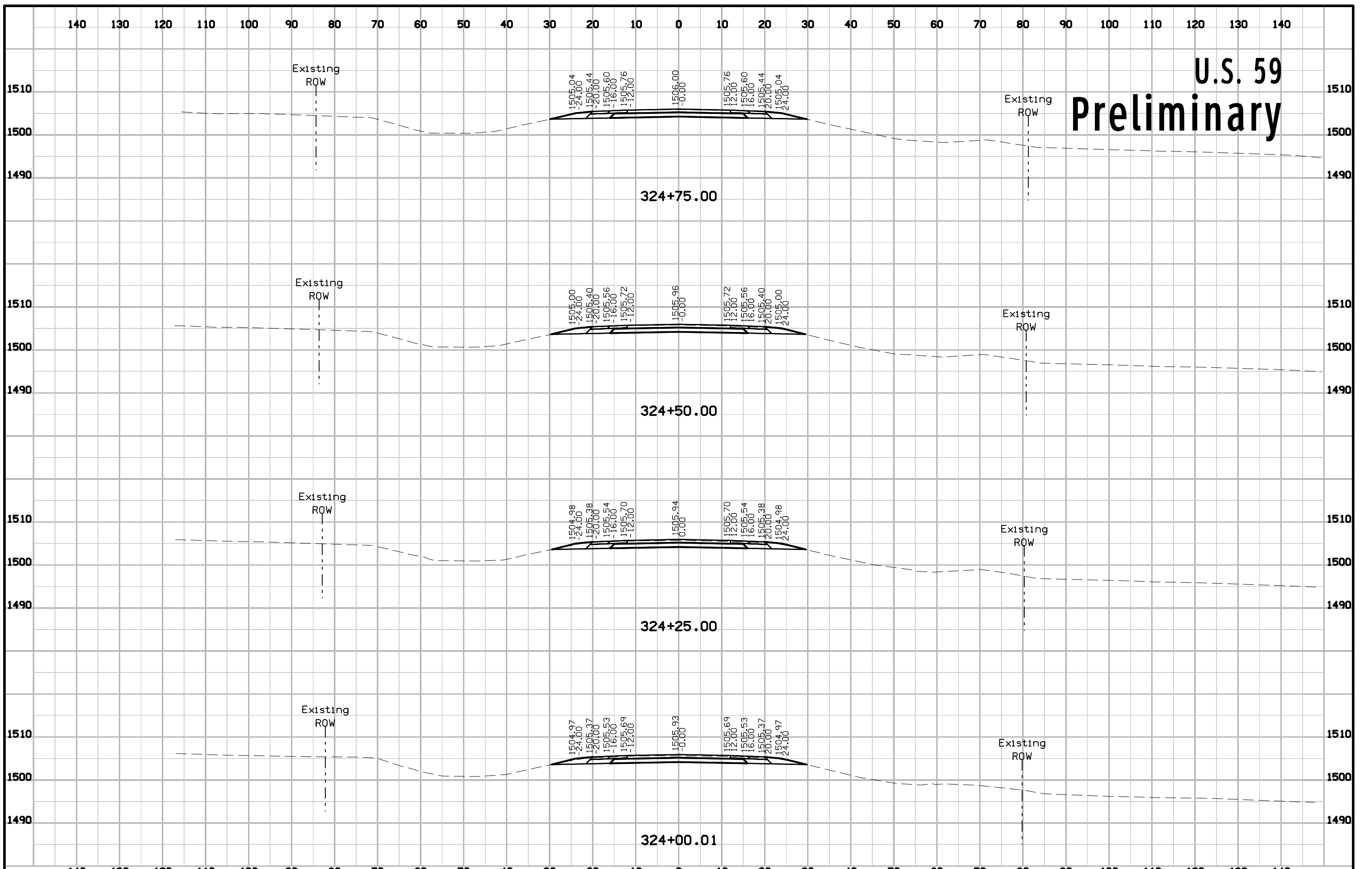
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 1 FILE NO. 31567 DESIGN NO. 221



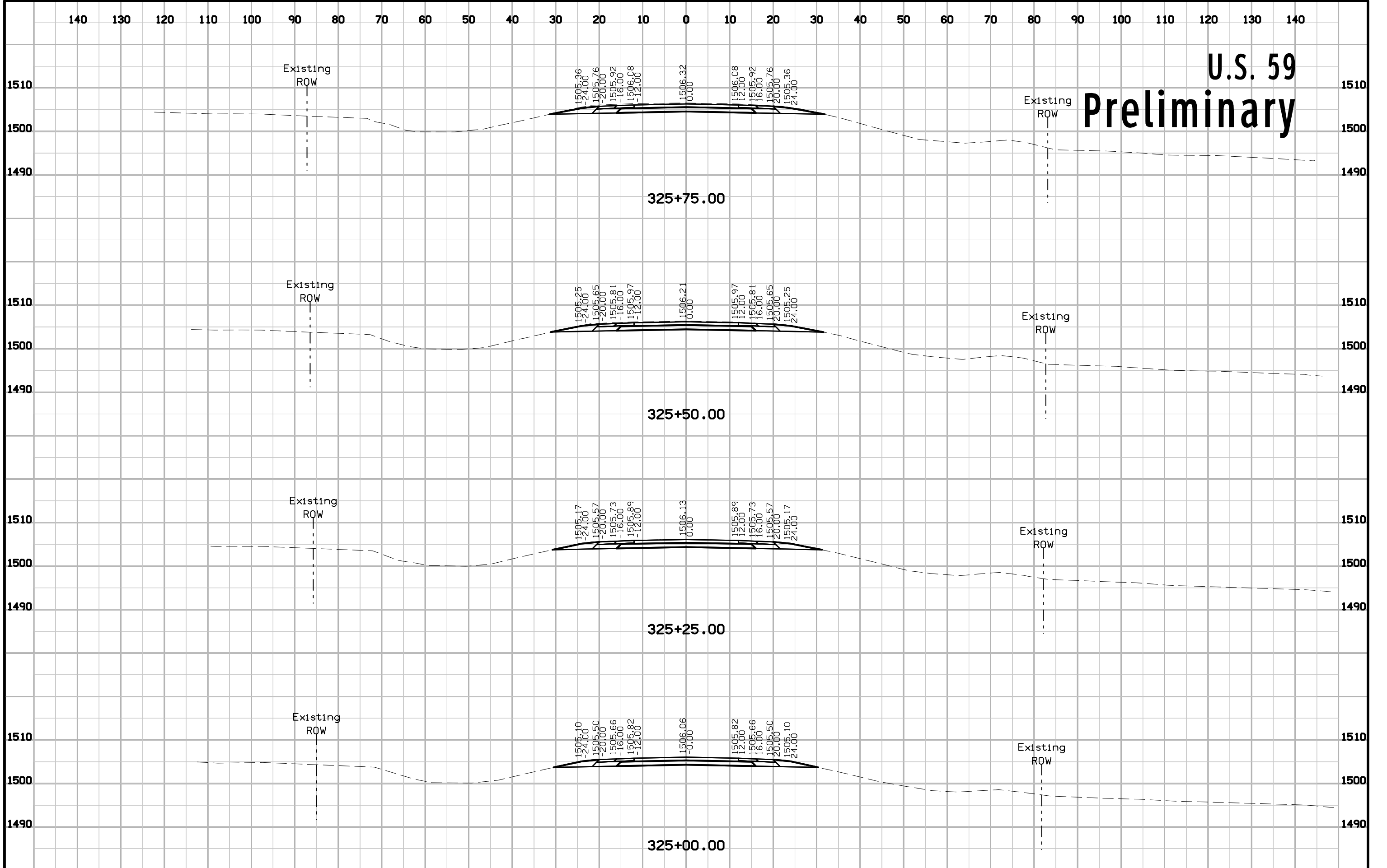
SITUATION PLAN

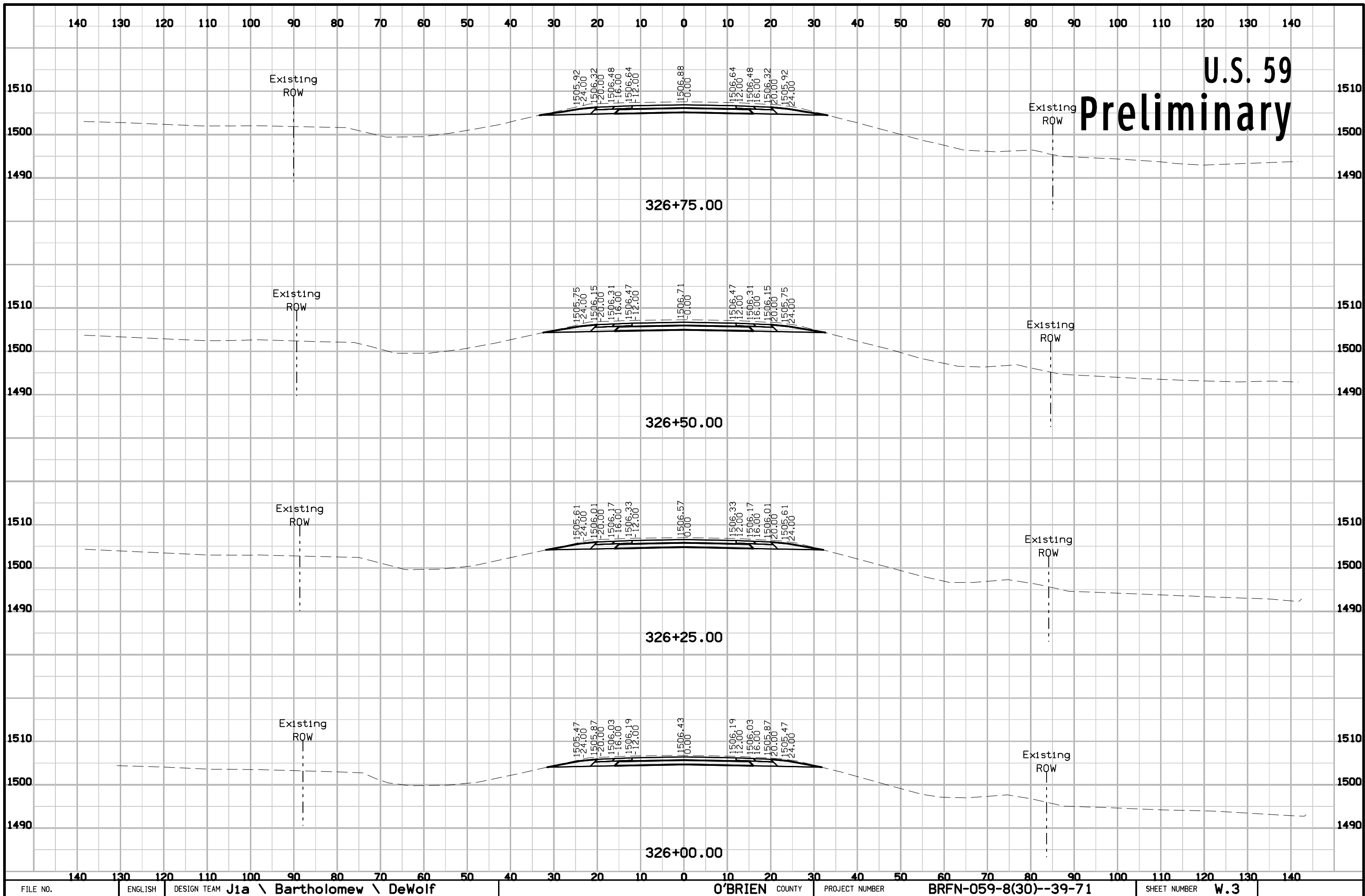


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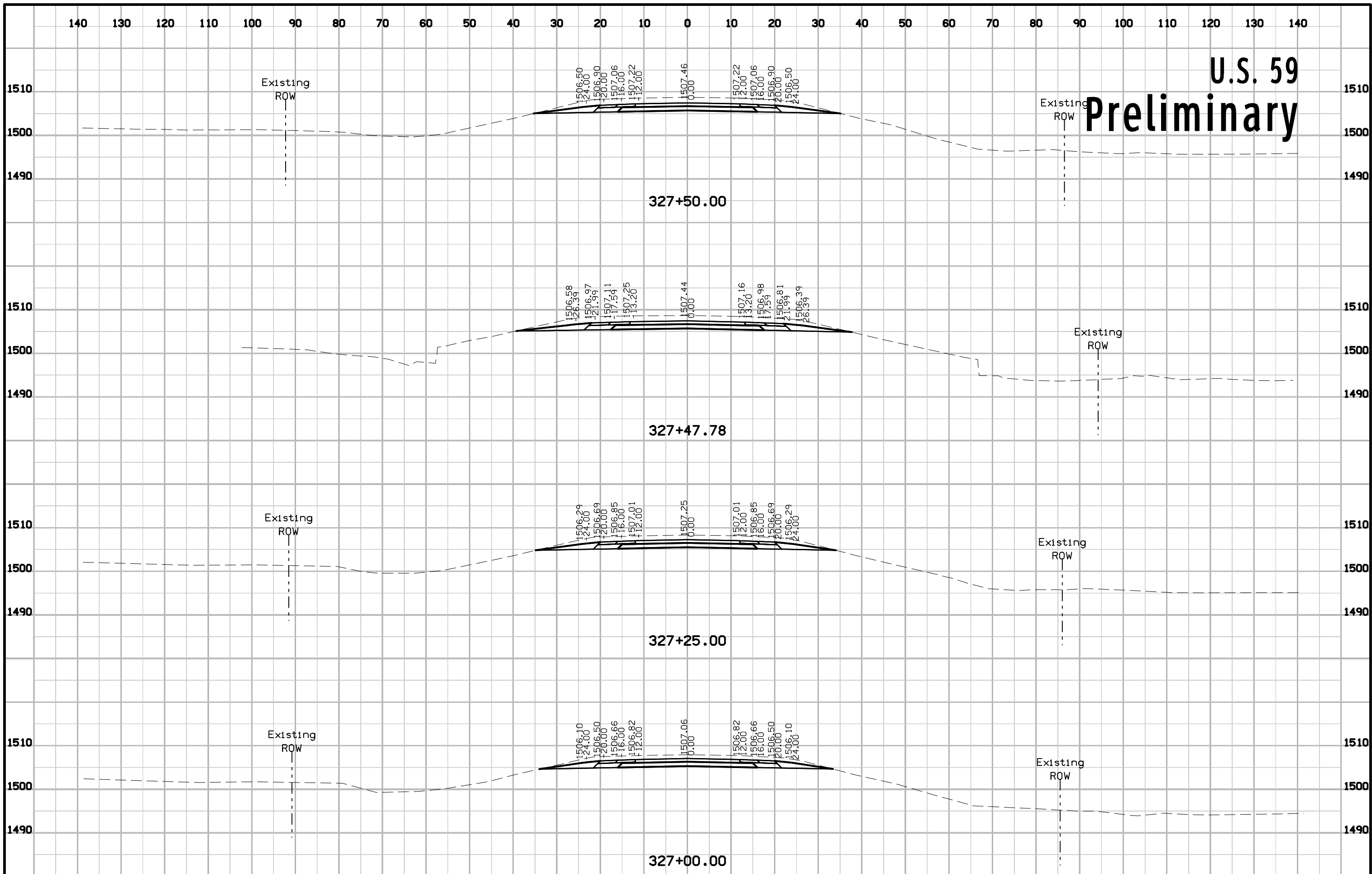


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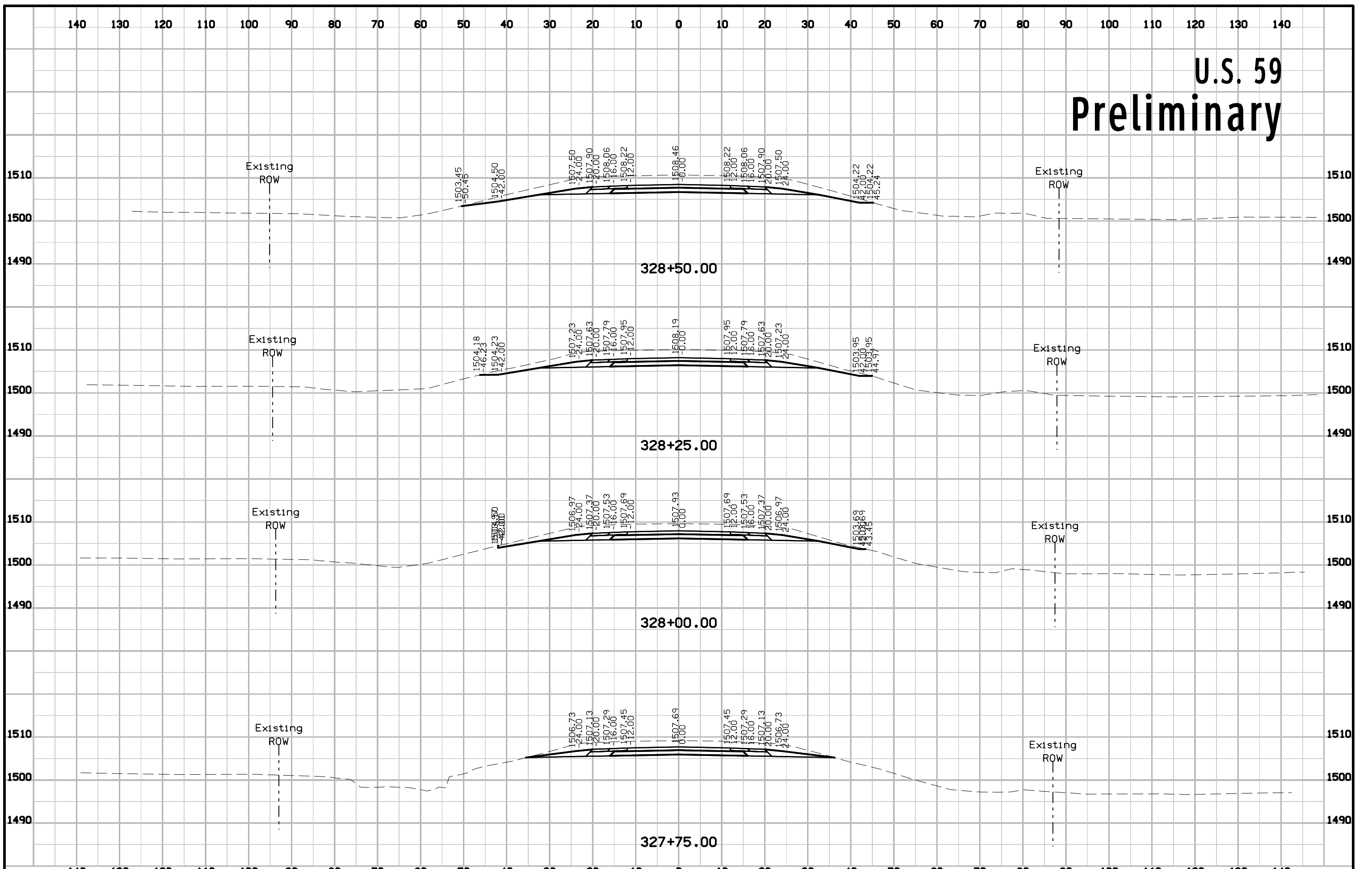




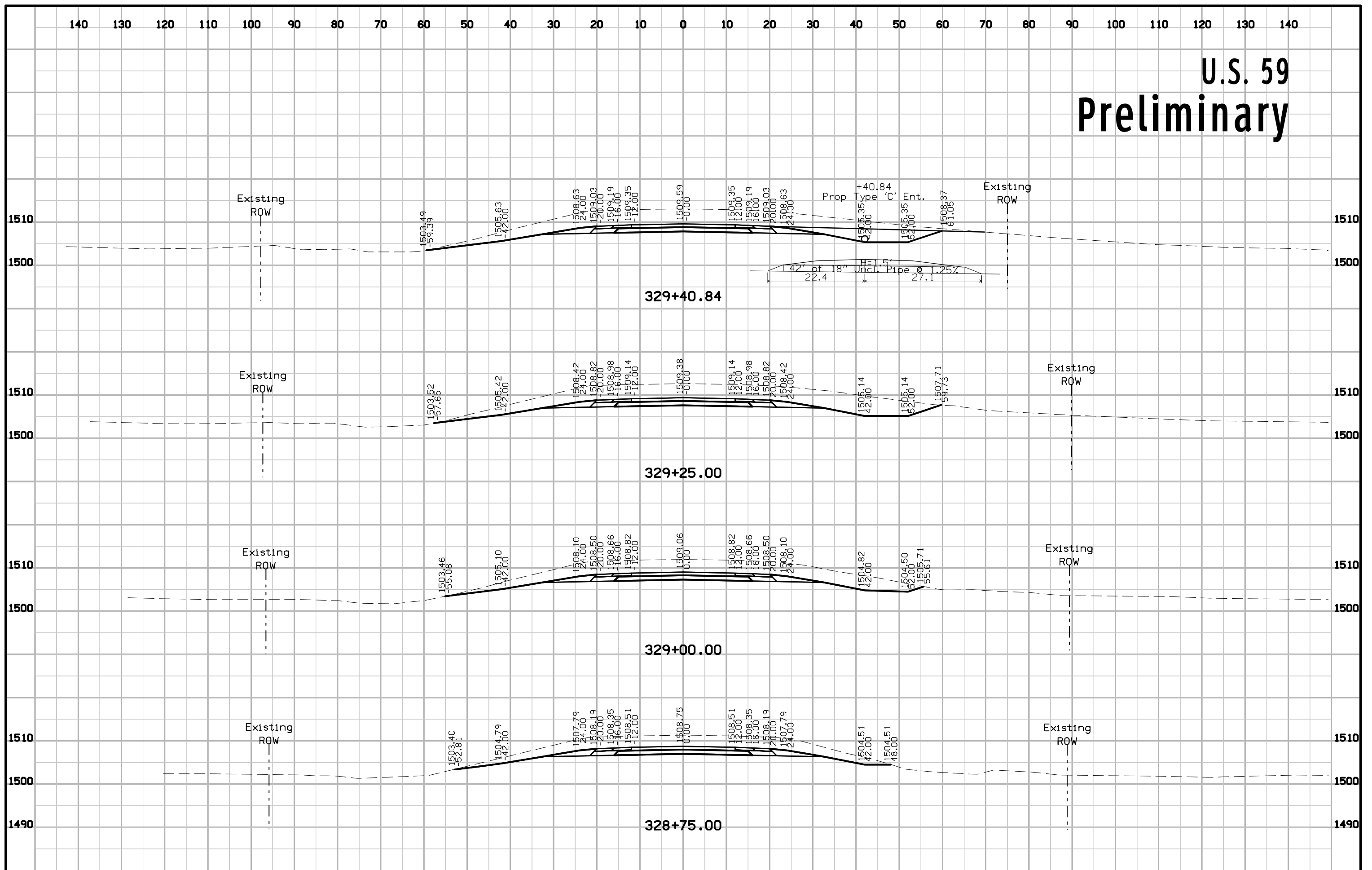
U.S. 59 Preliminary



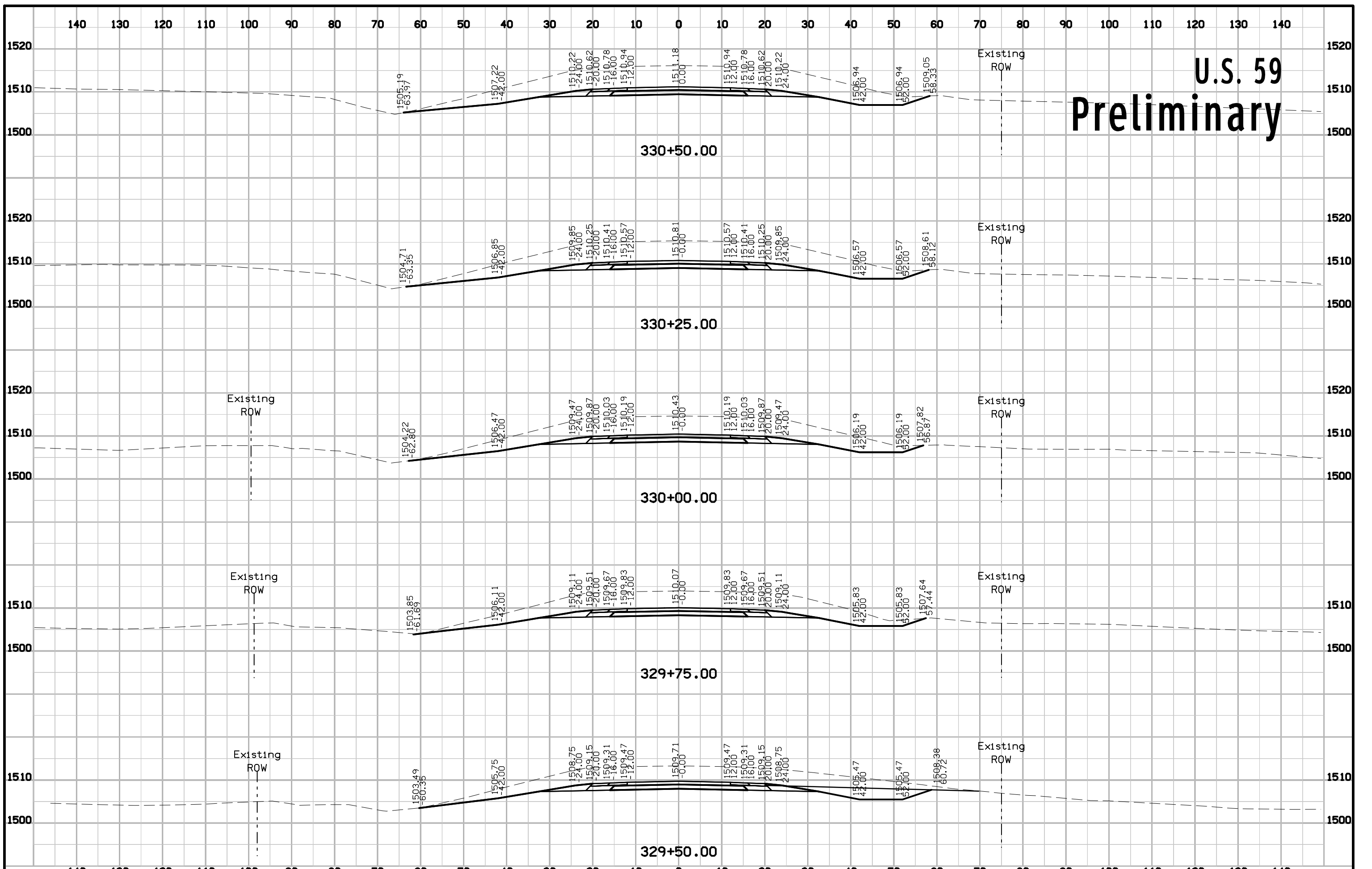
U.S. 59 Preliminary



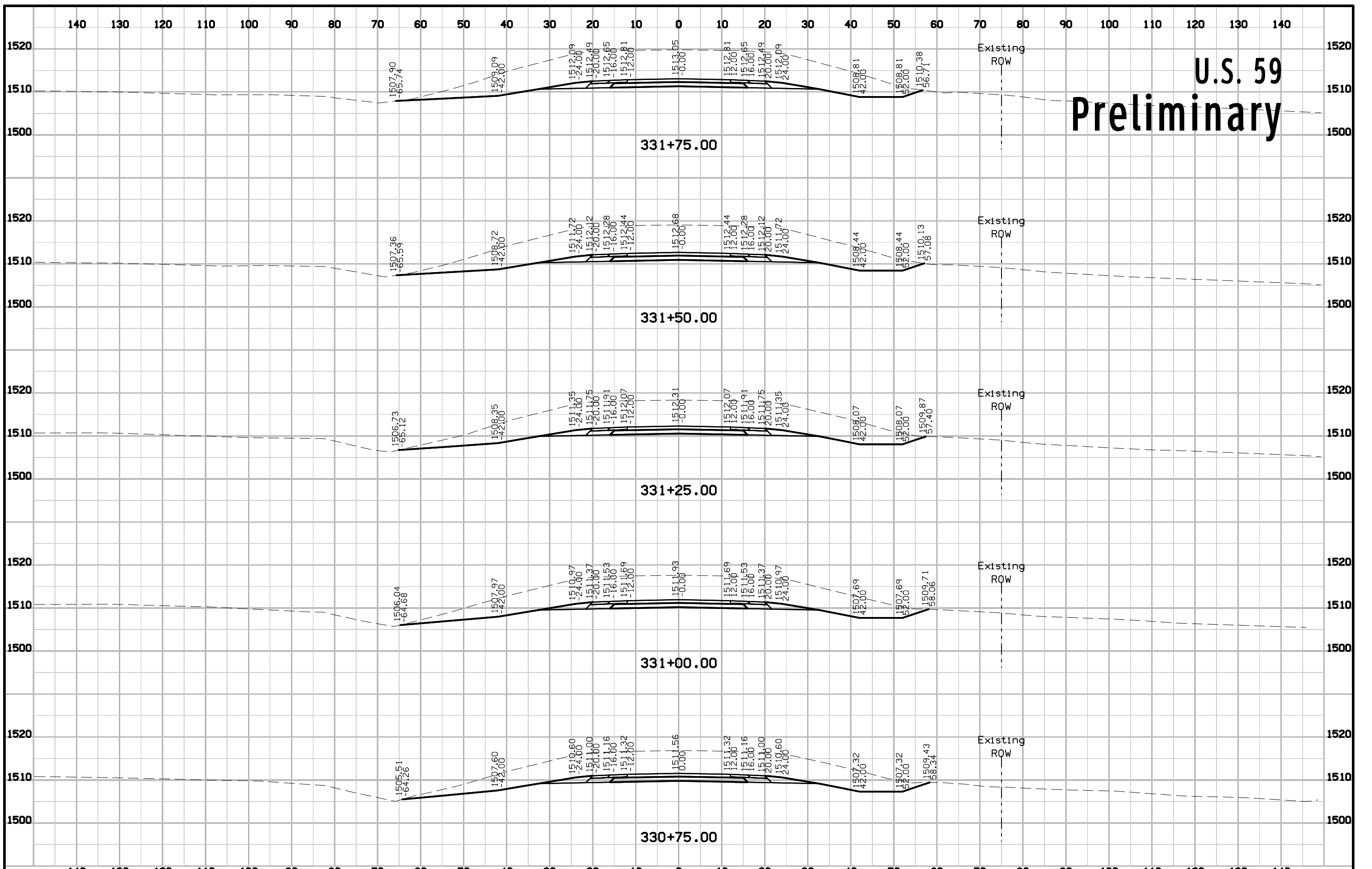
U.S. 59 Preliminary



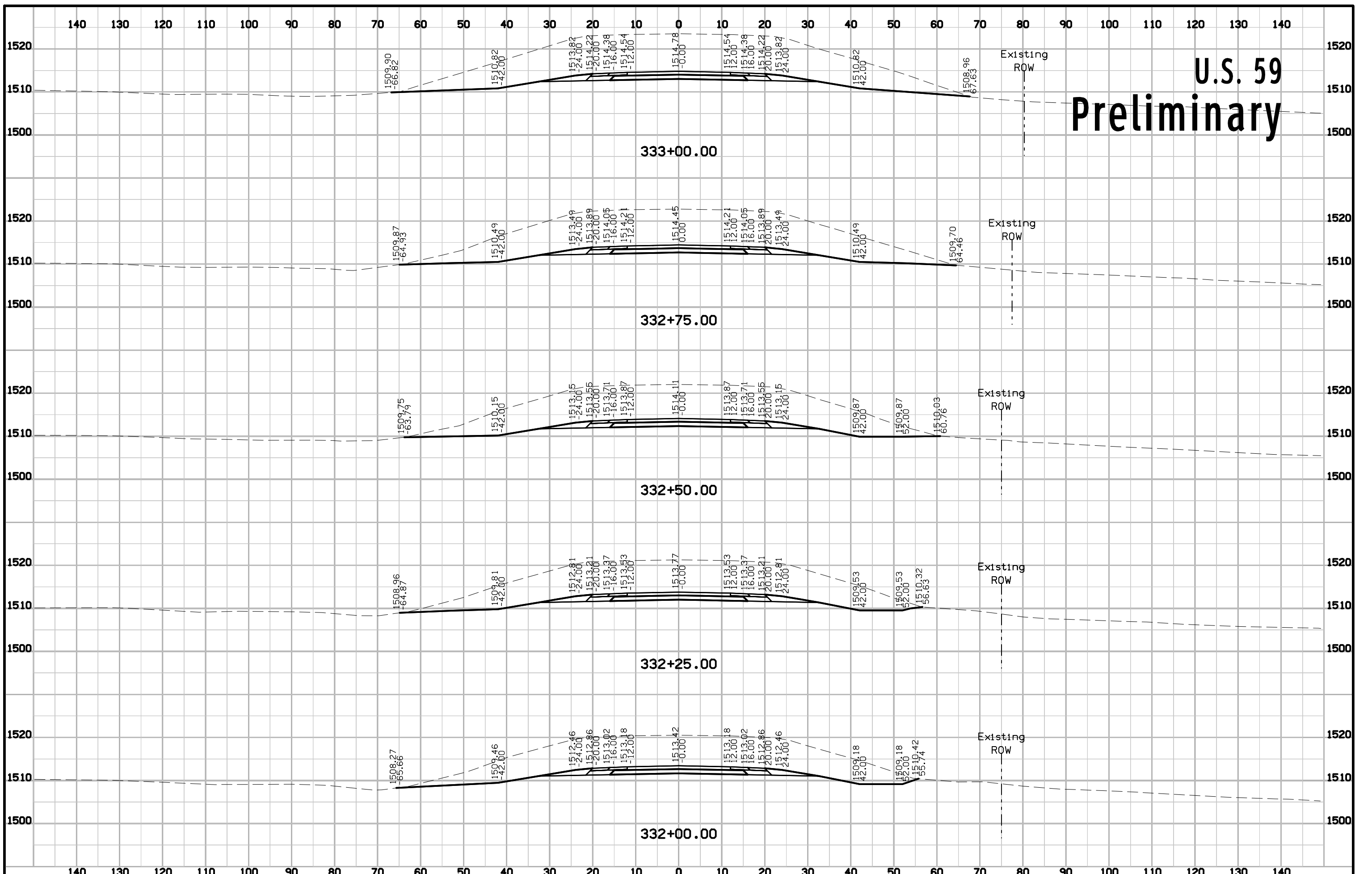
U.S. 59 Preliminary



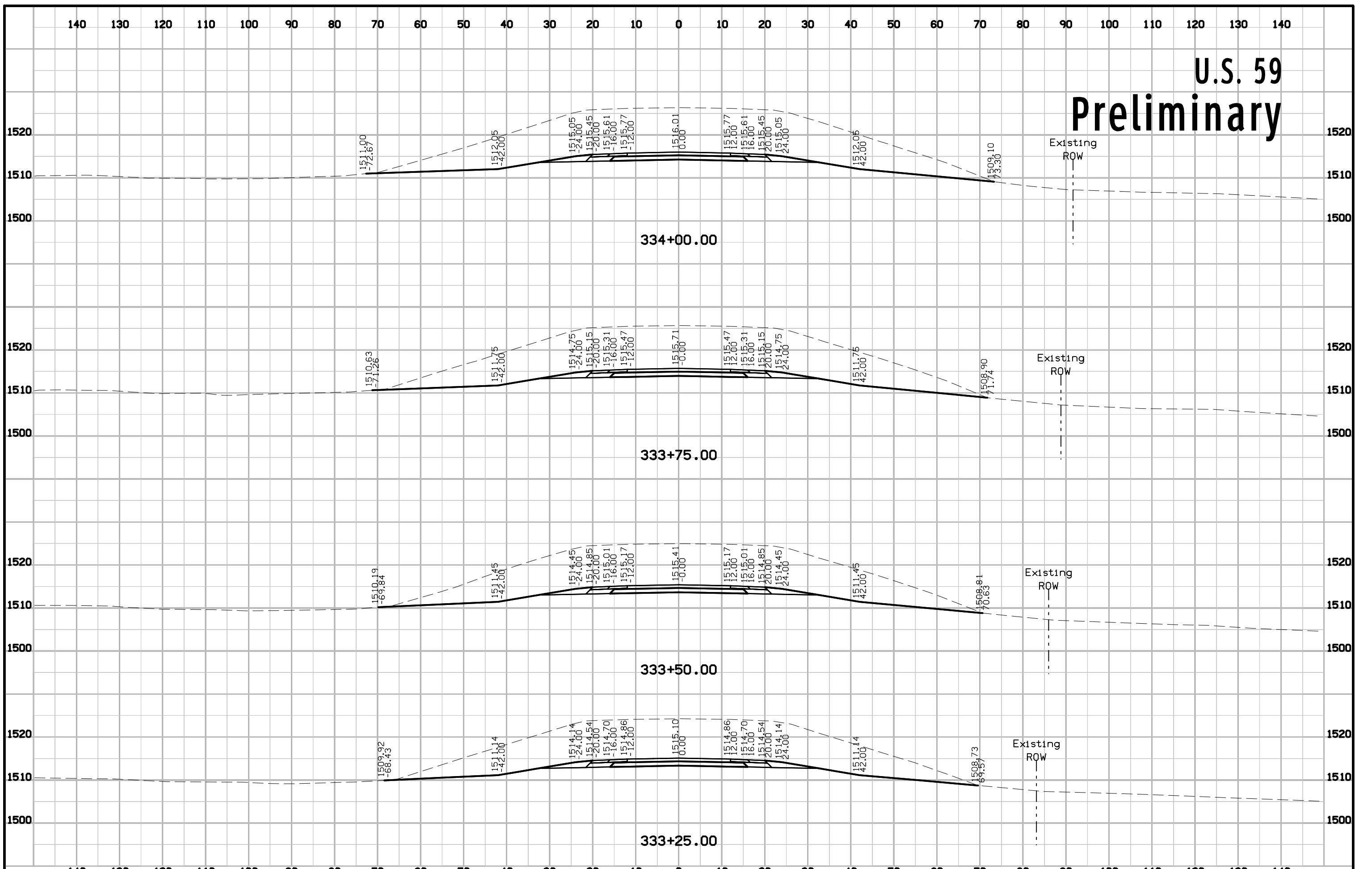
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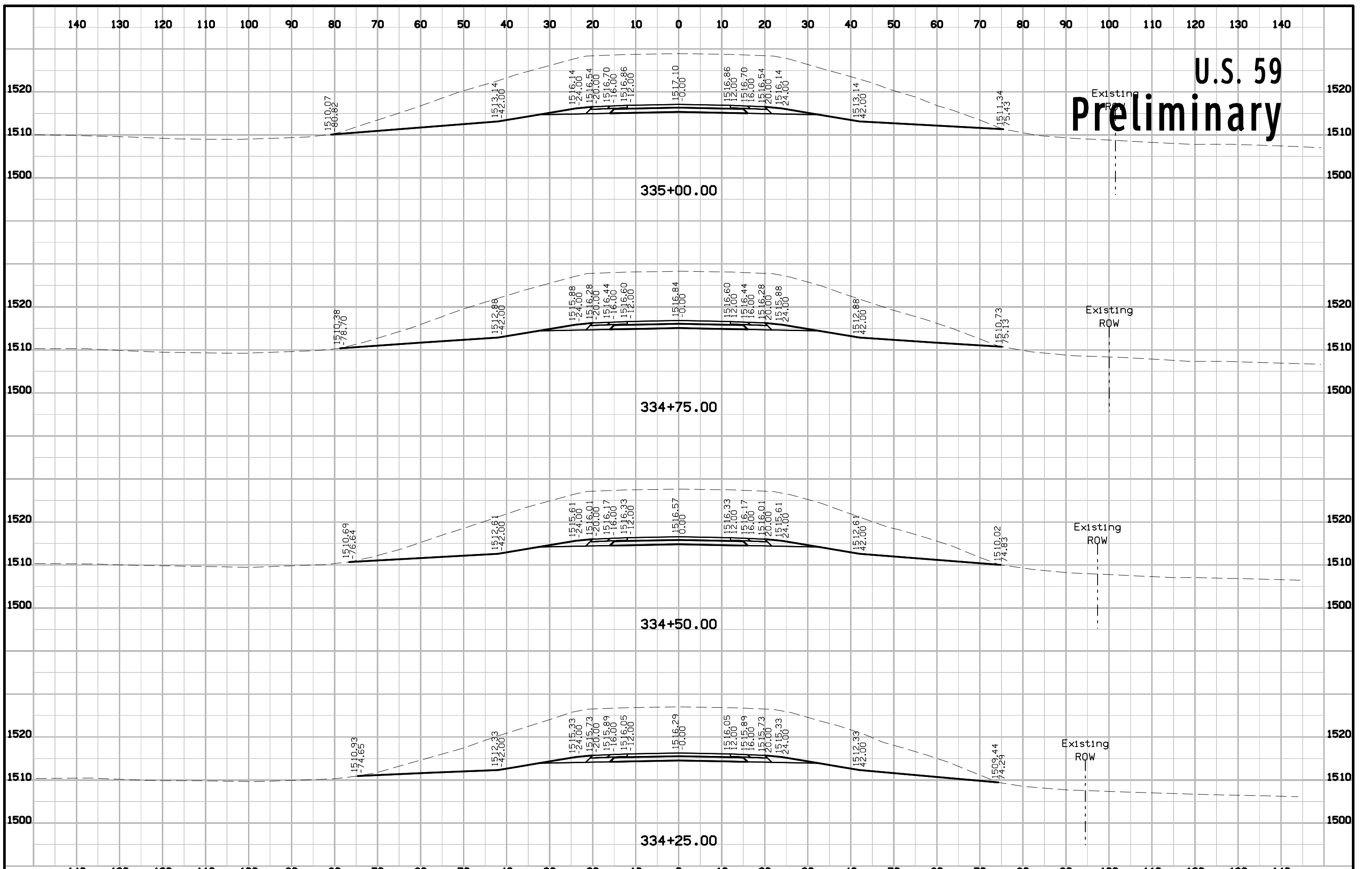
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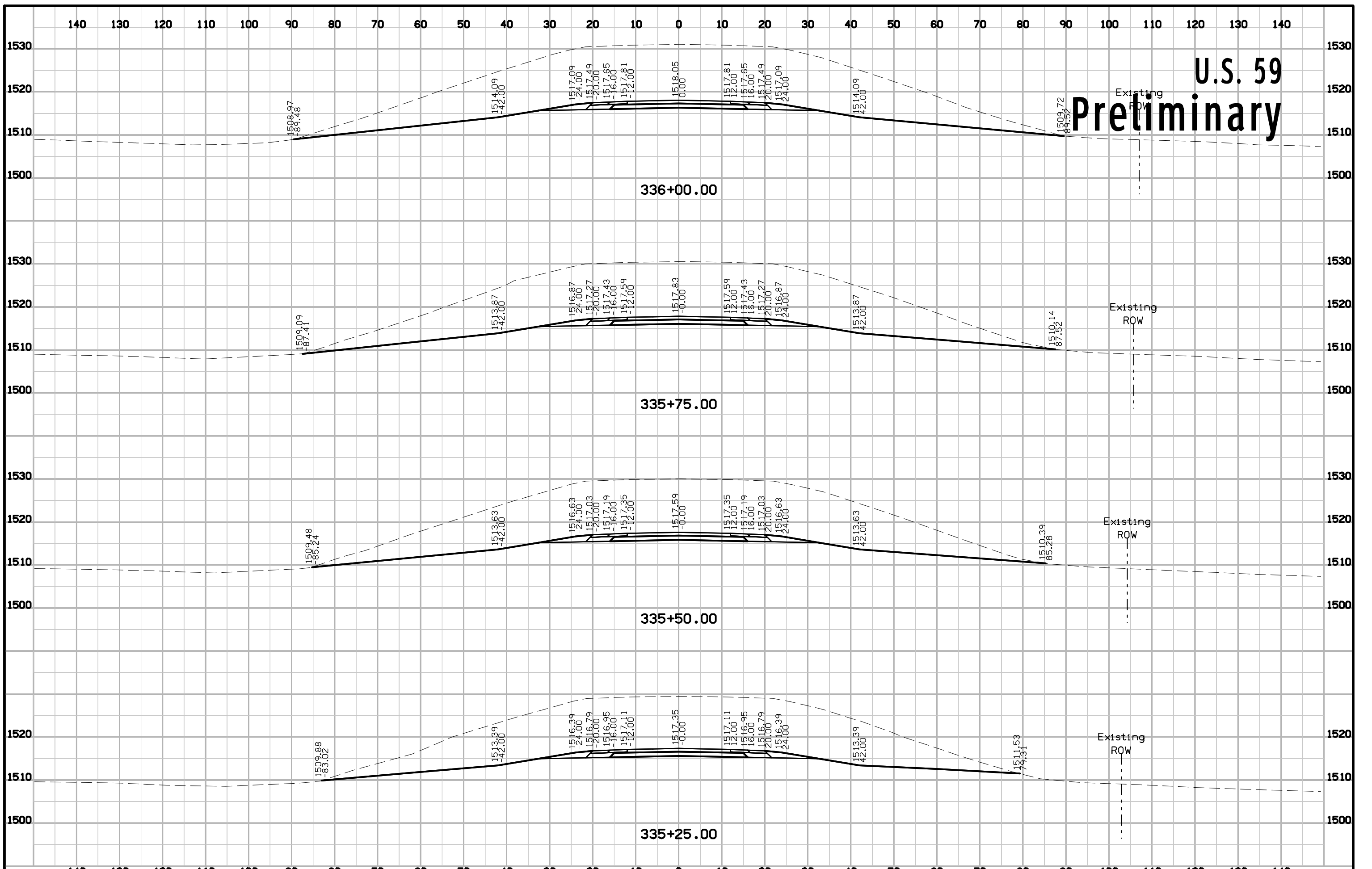
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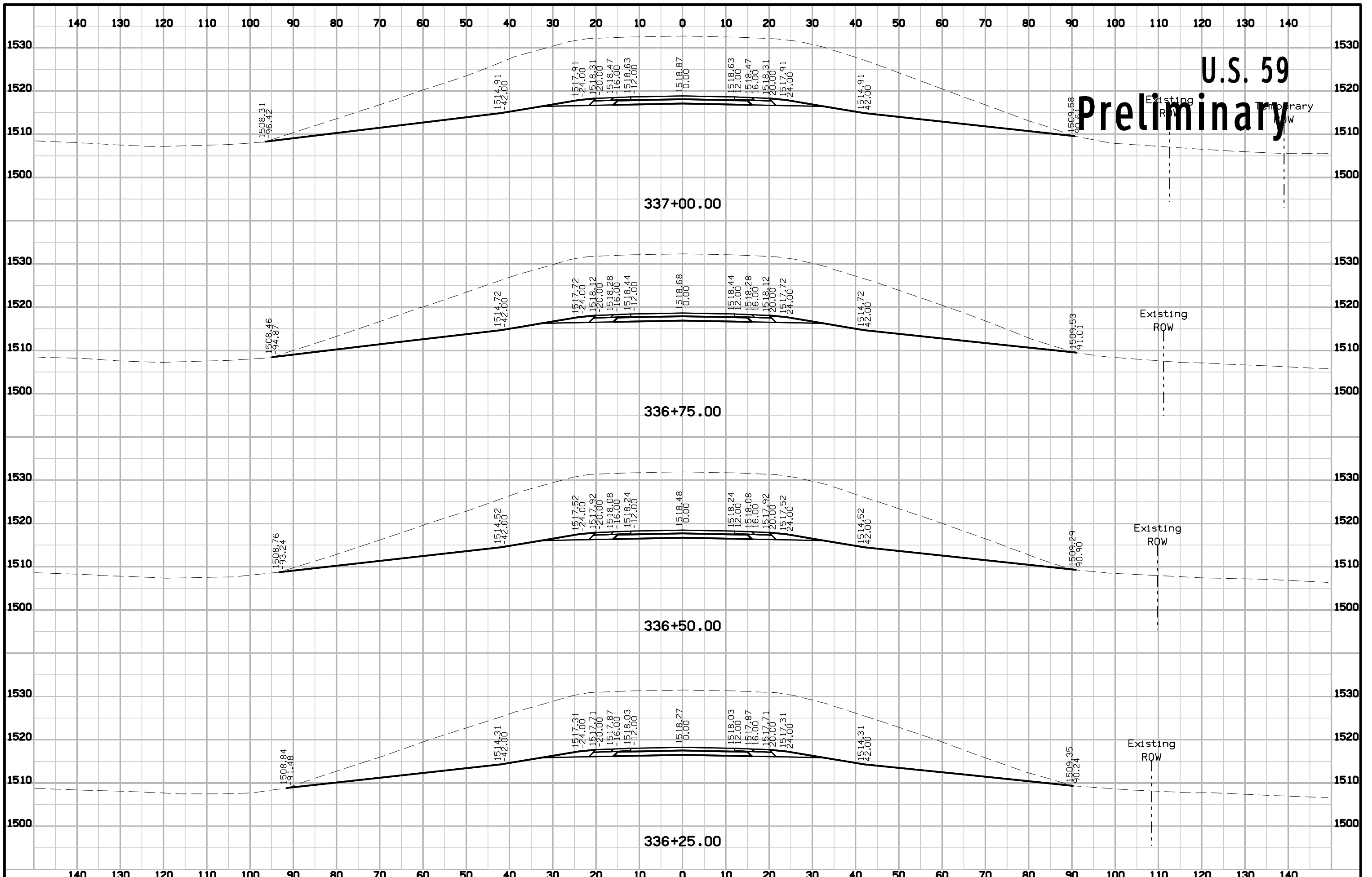


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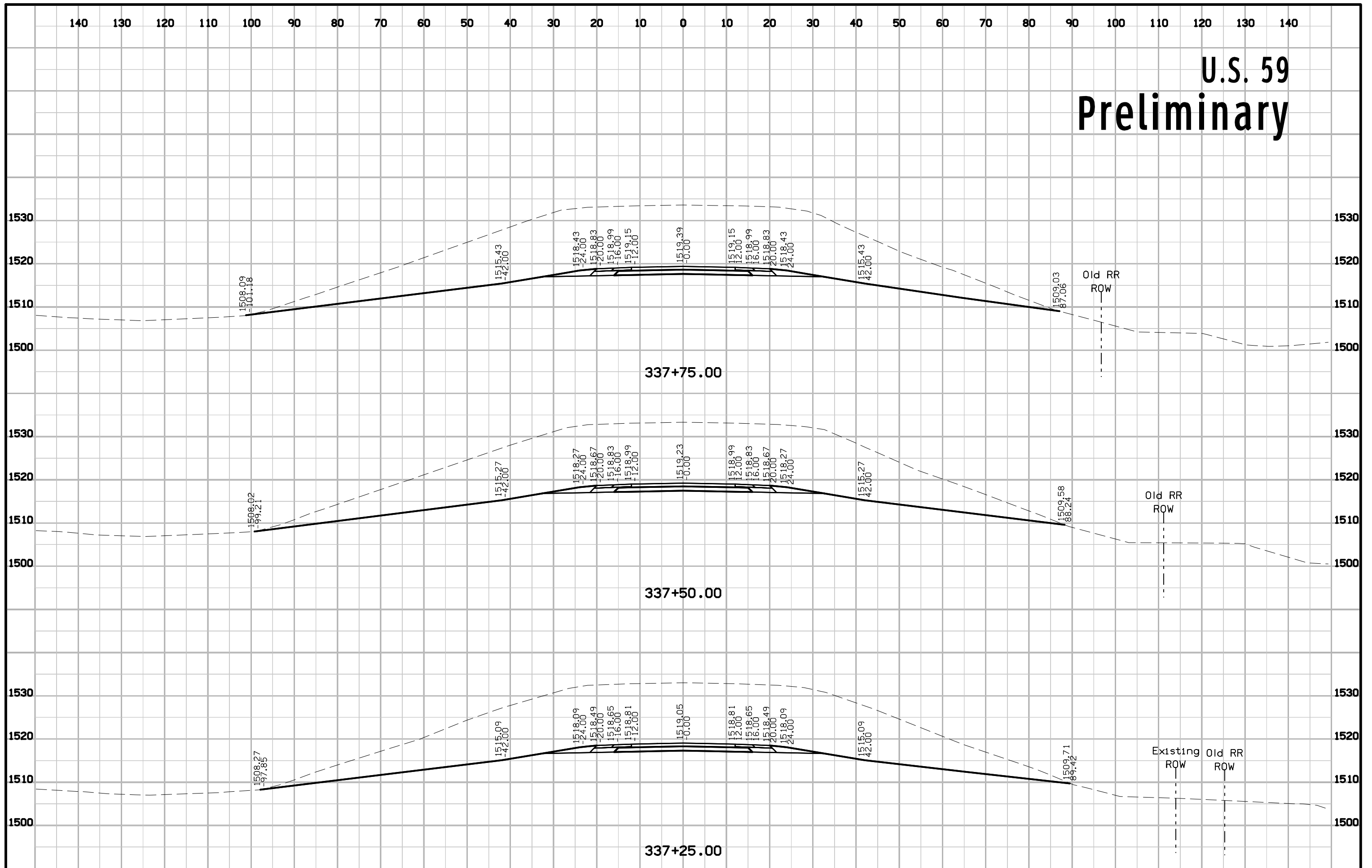


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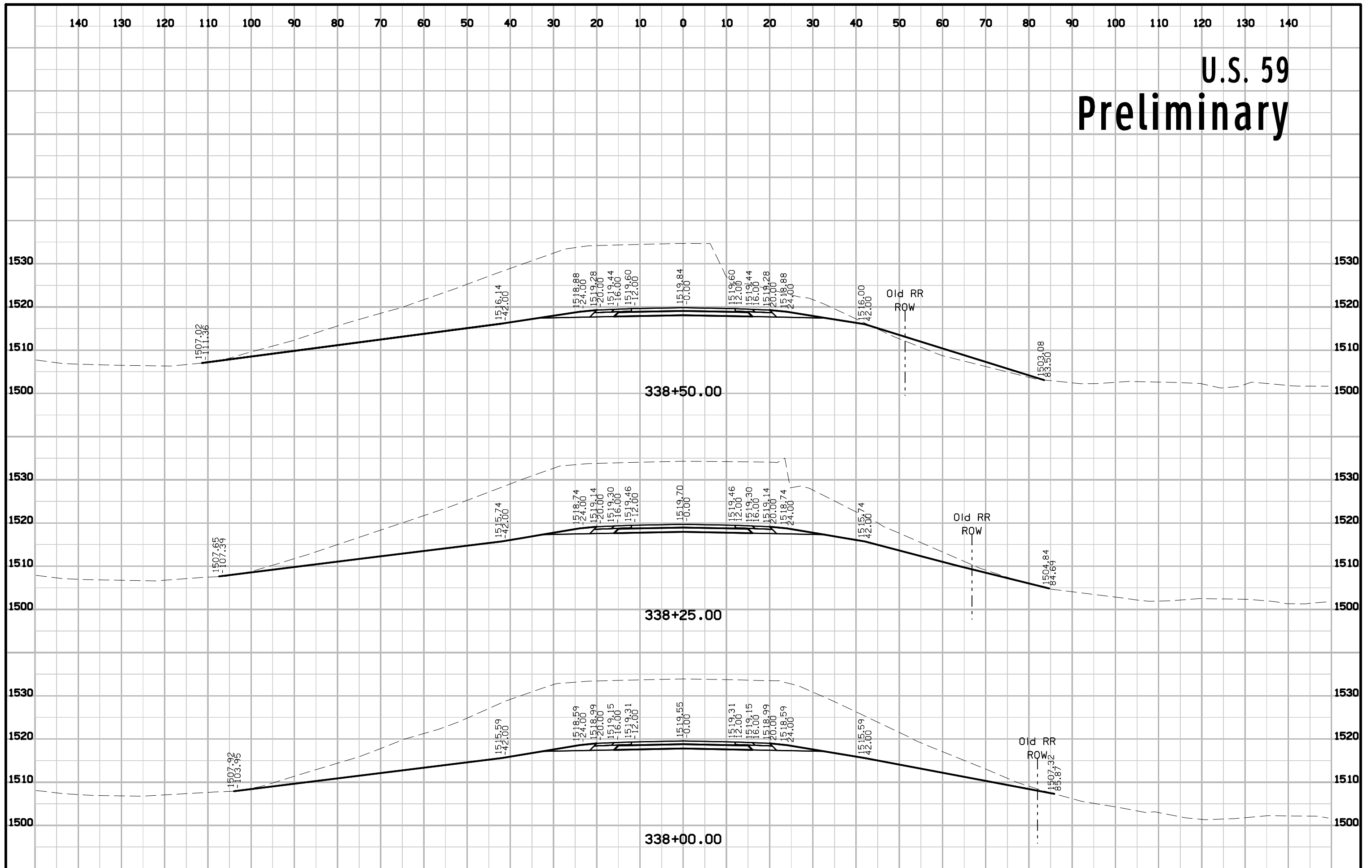




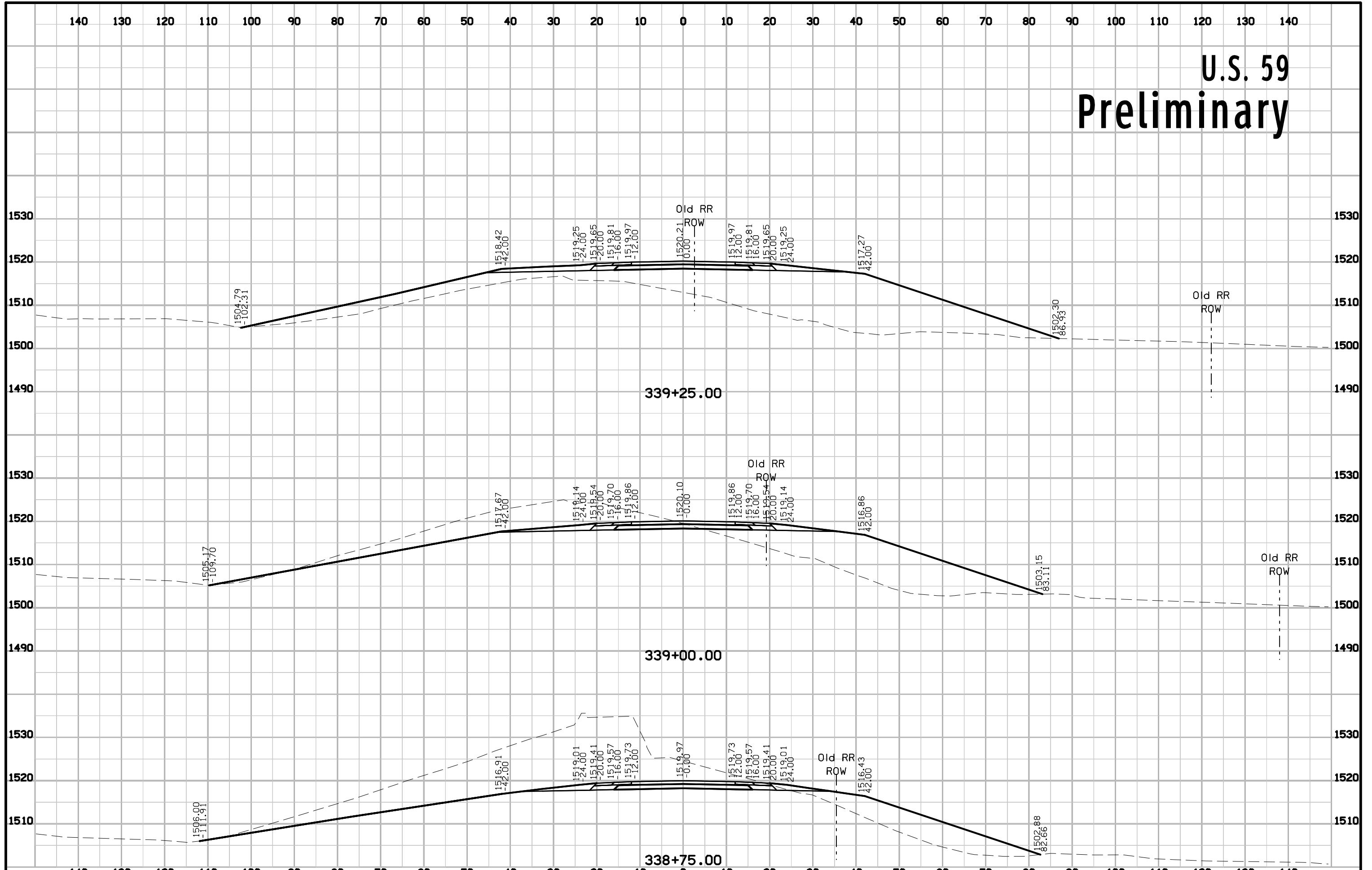
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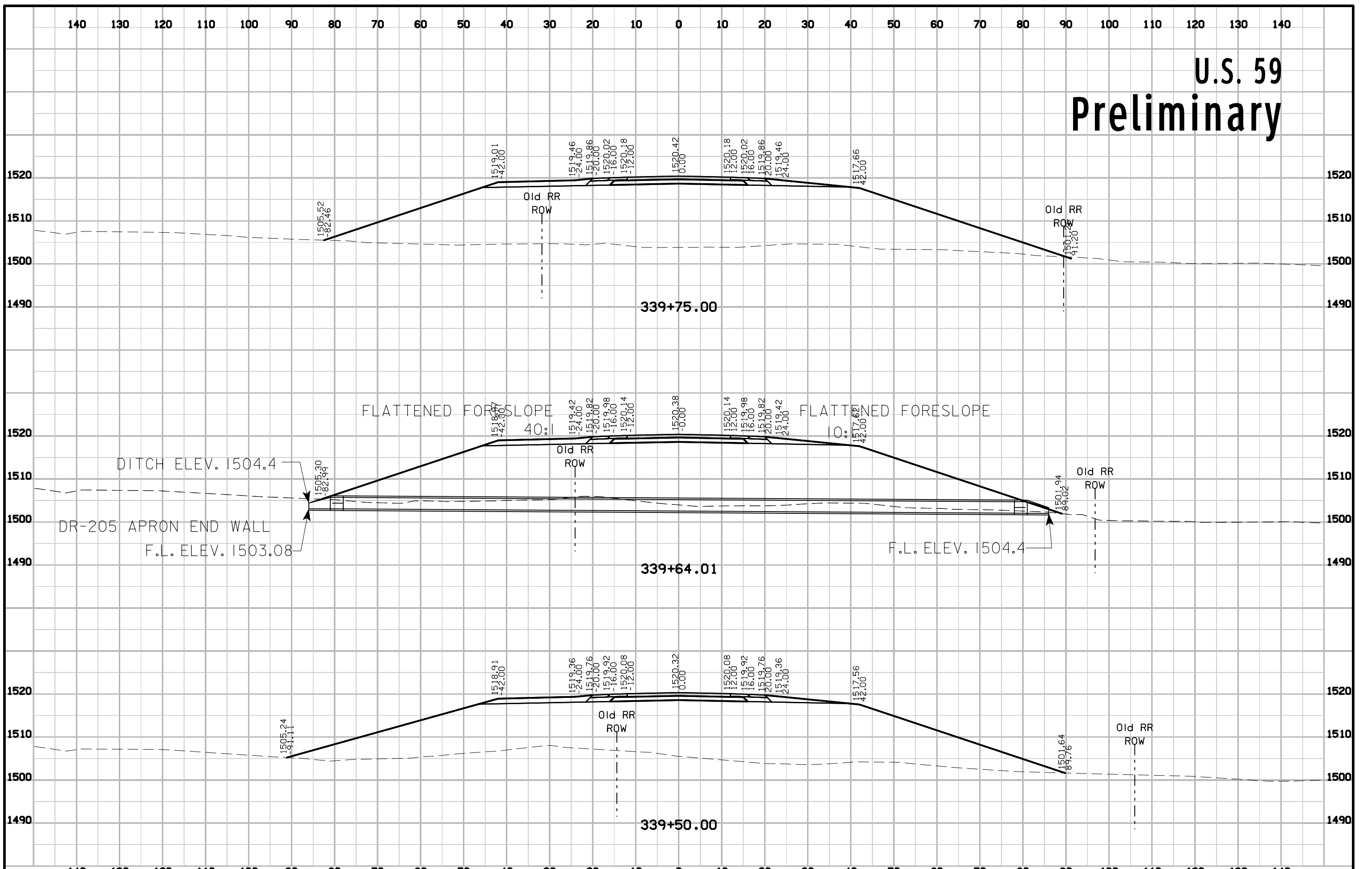
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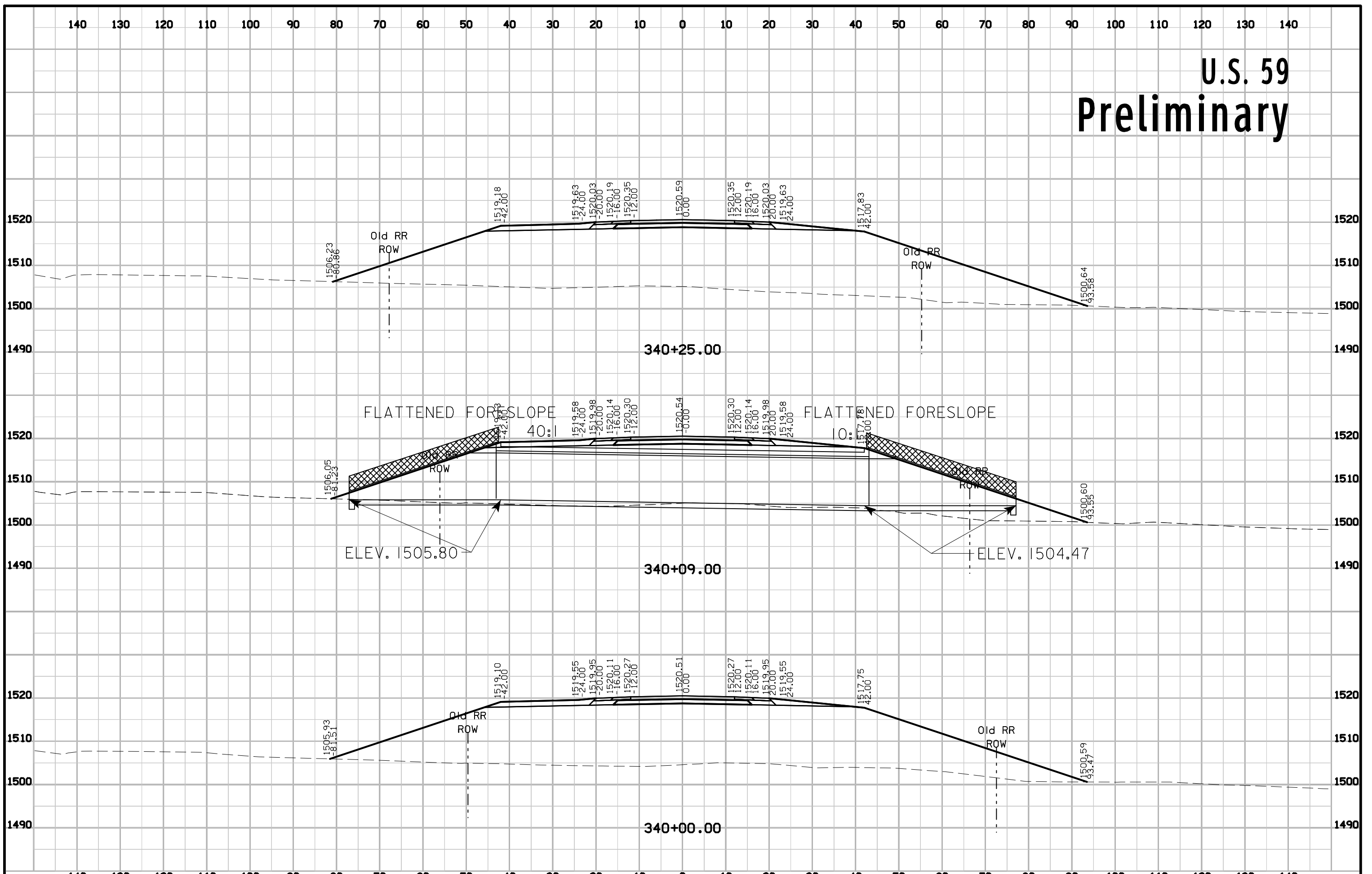
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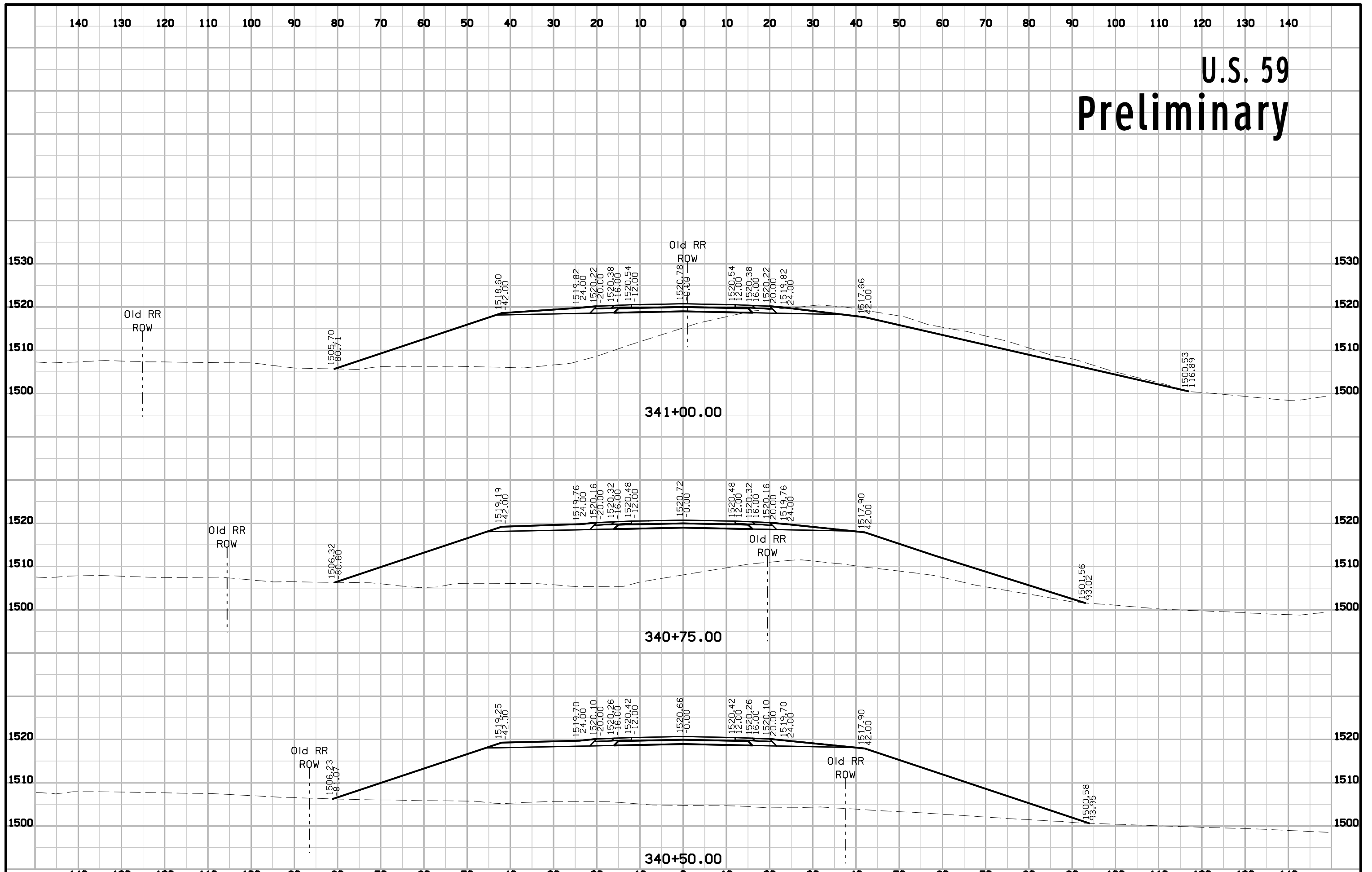
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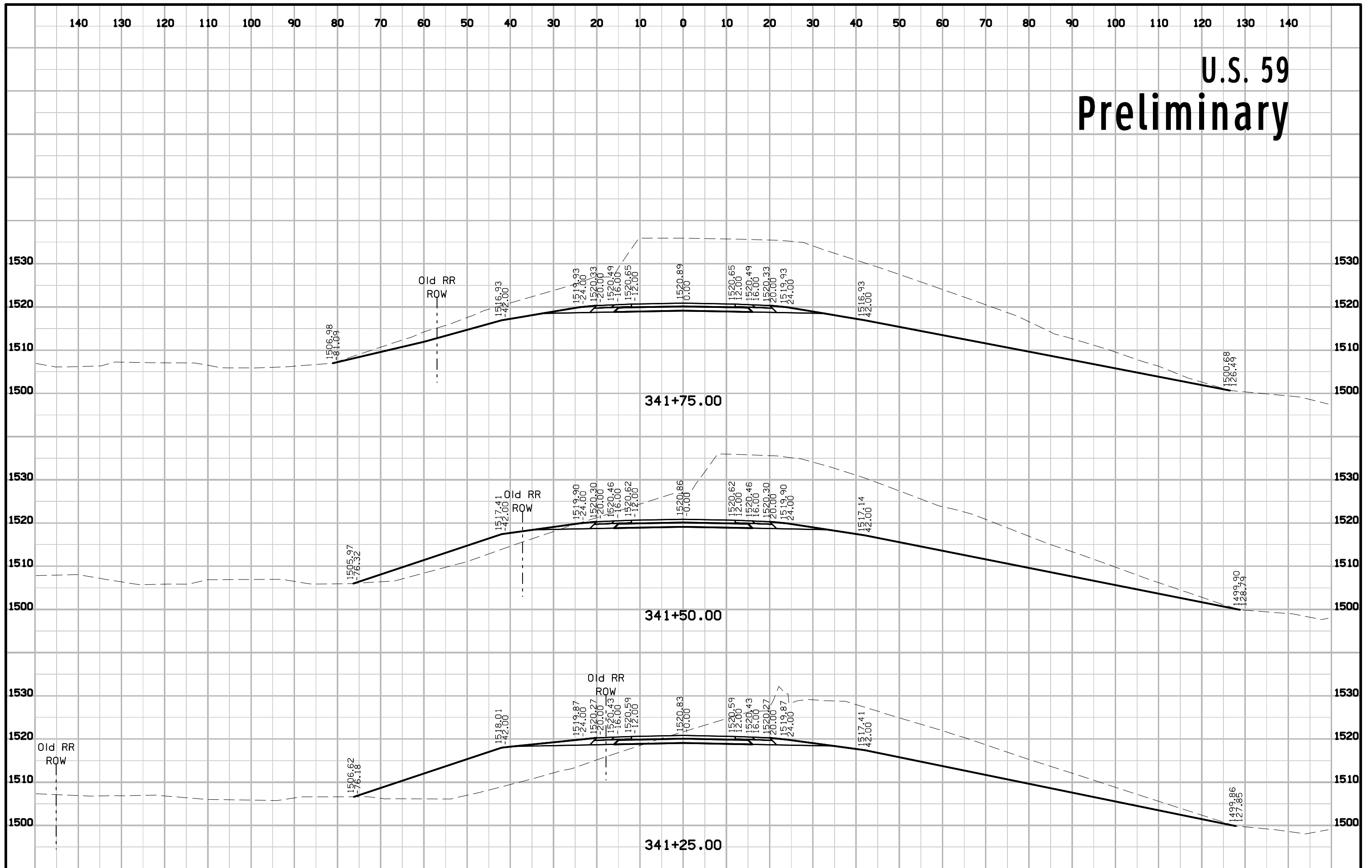
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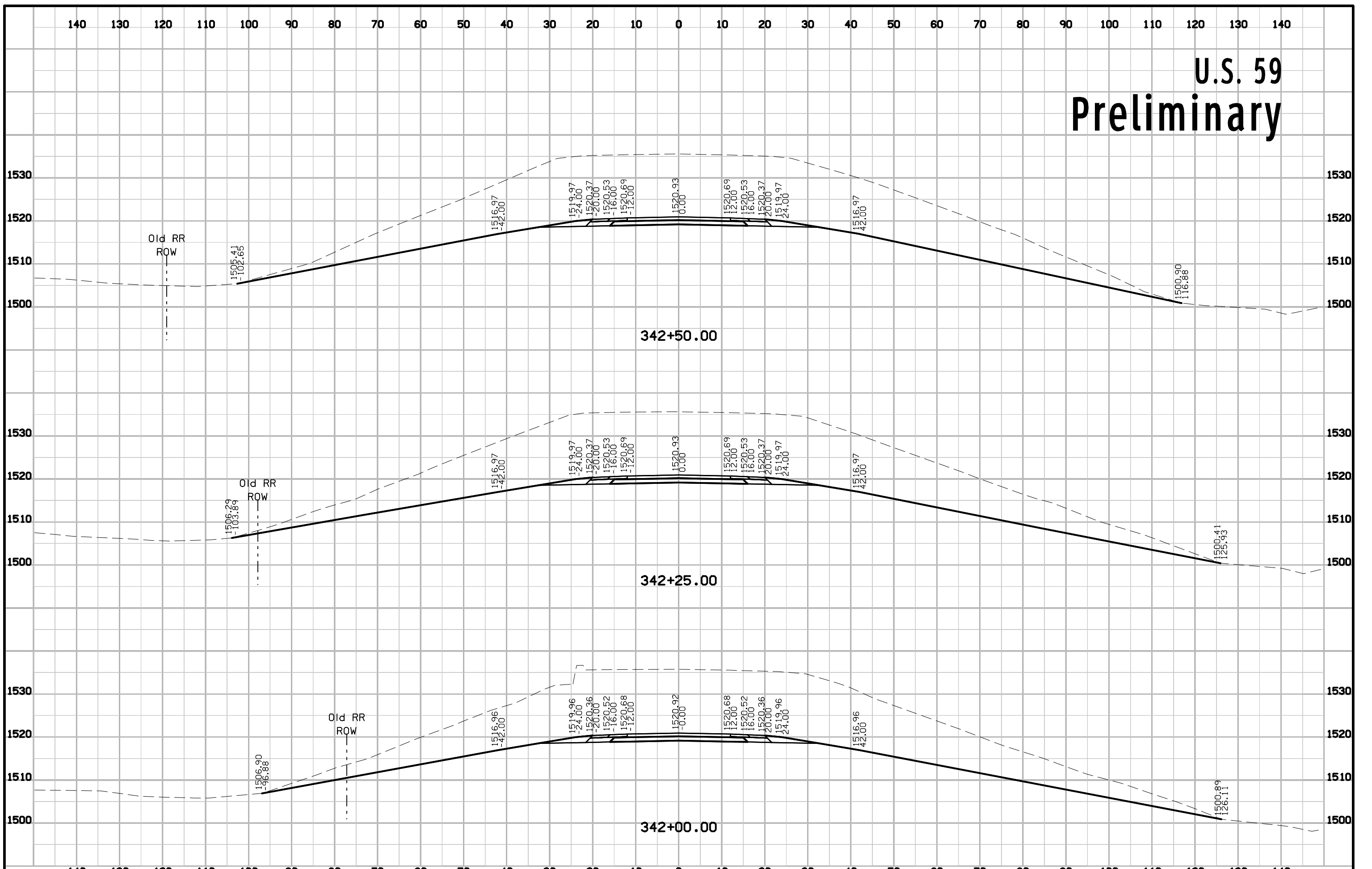
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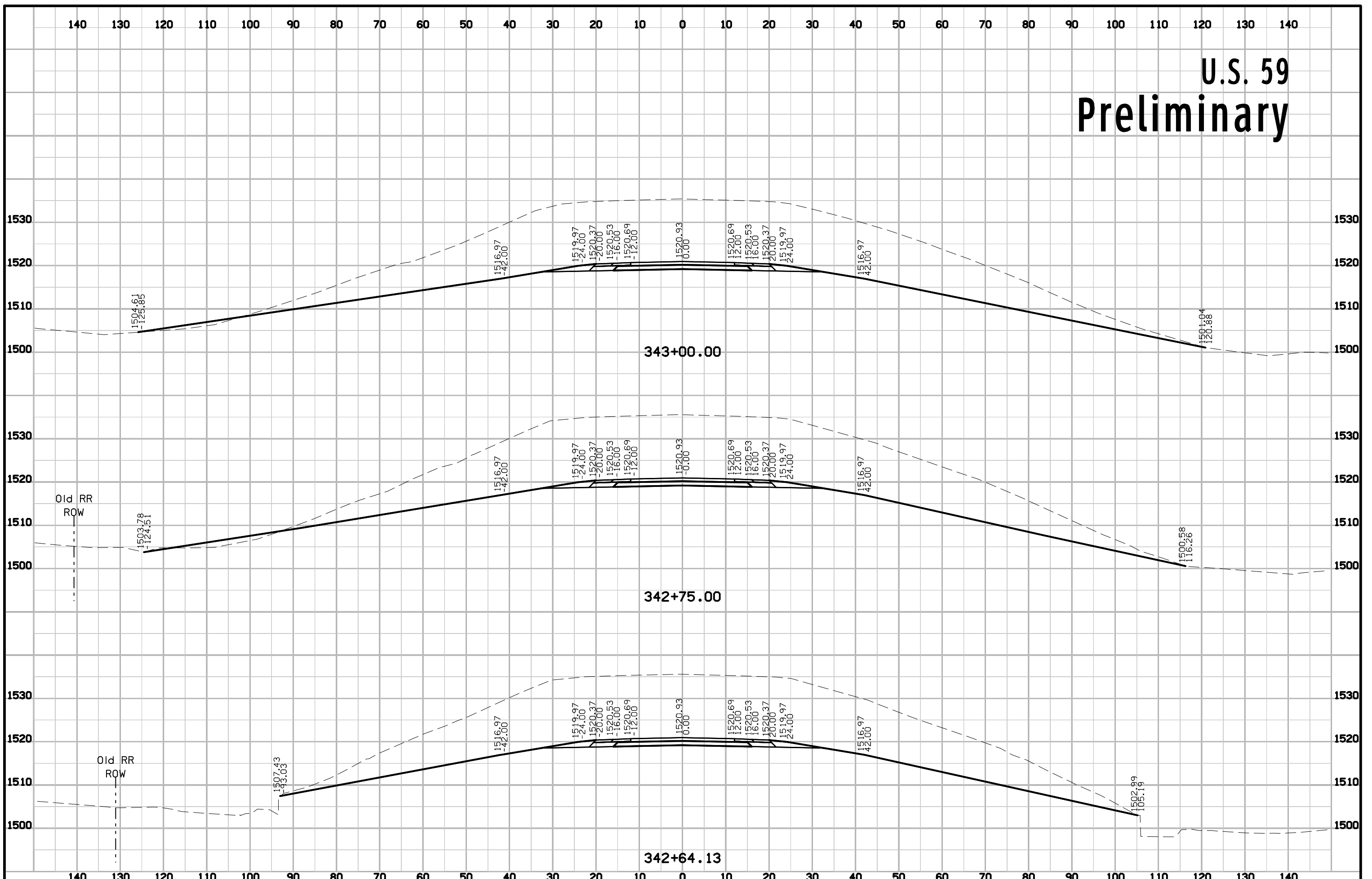
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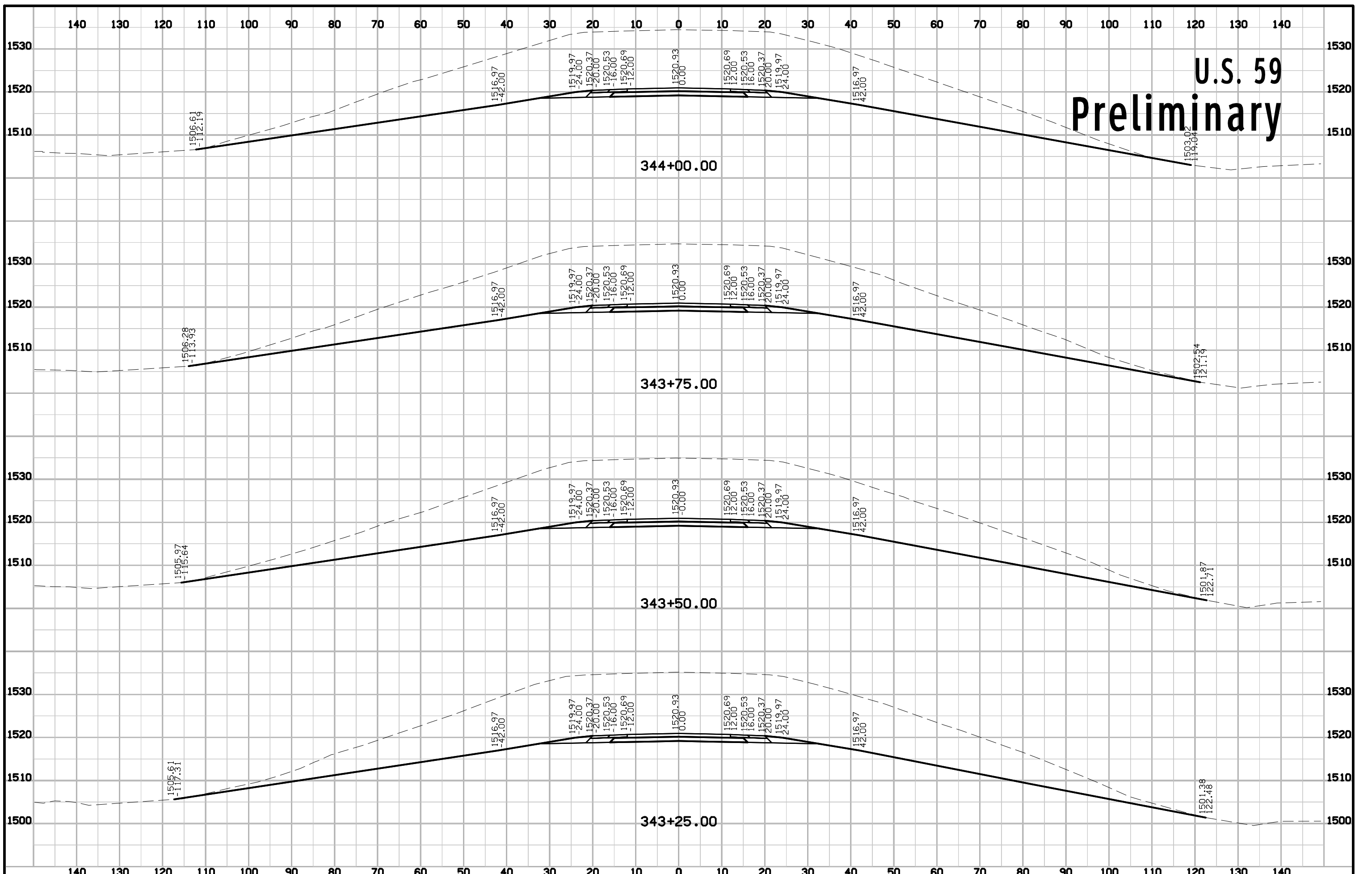
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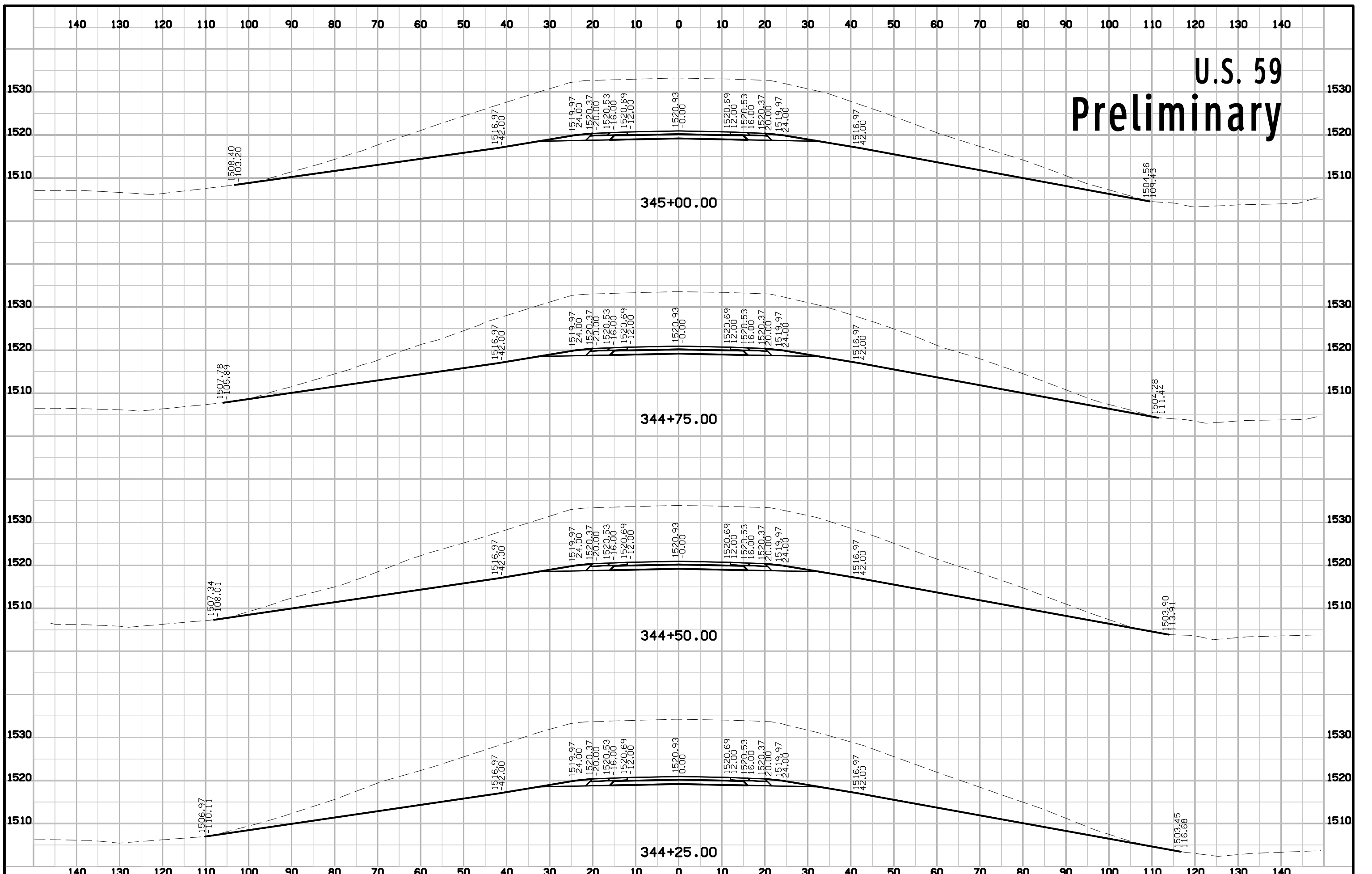
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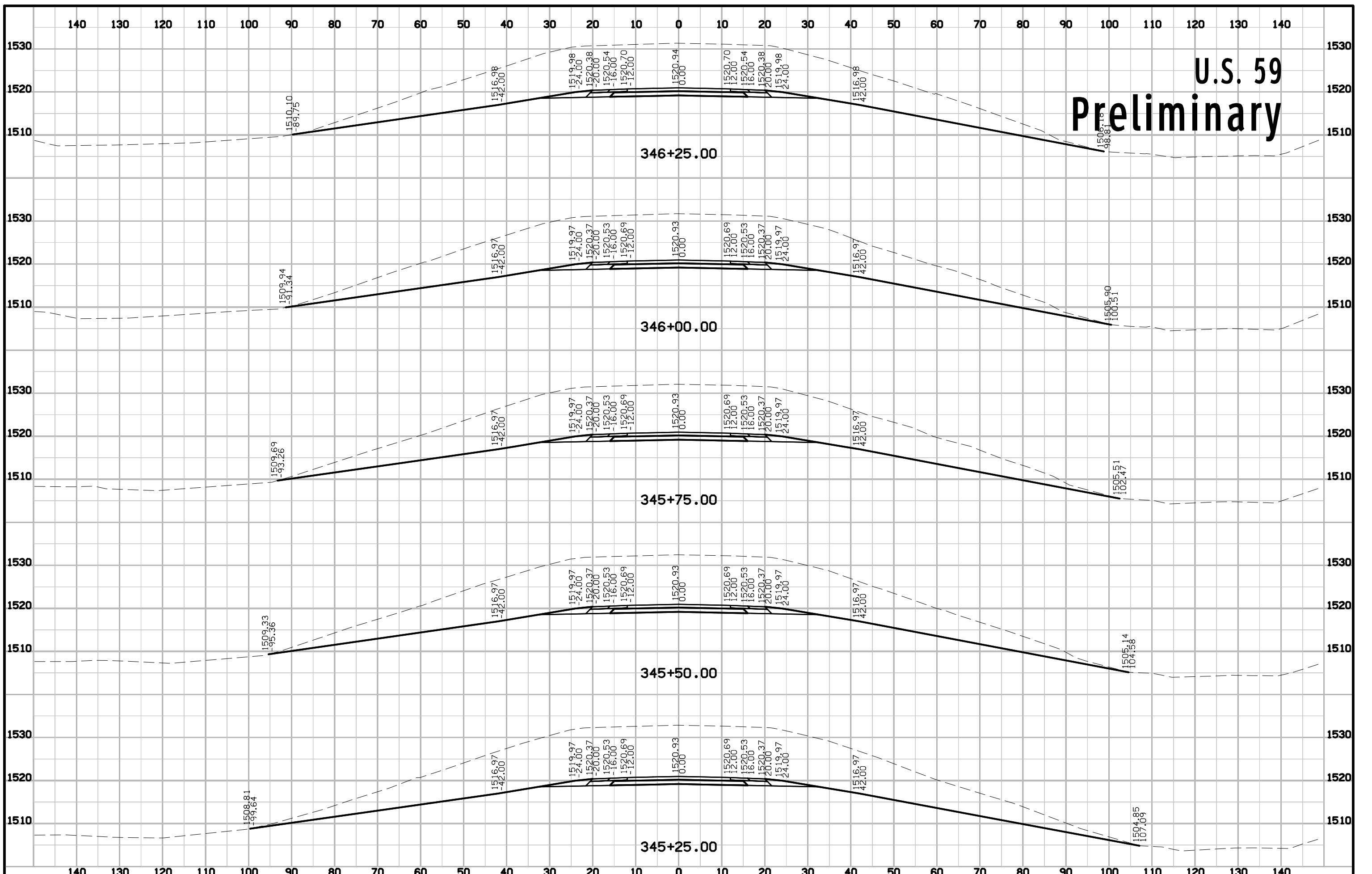
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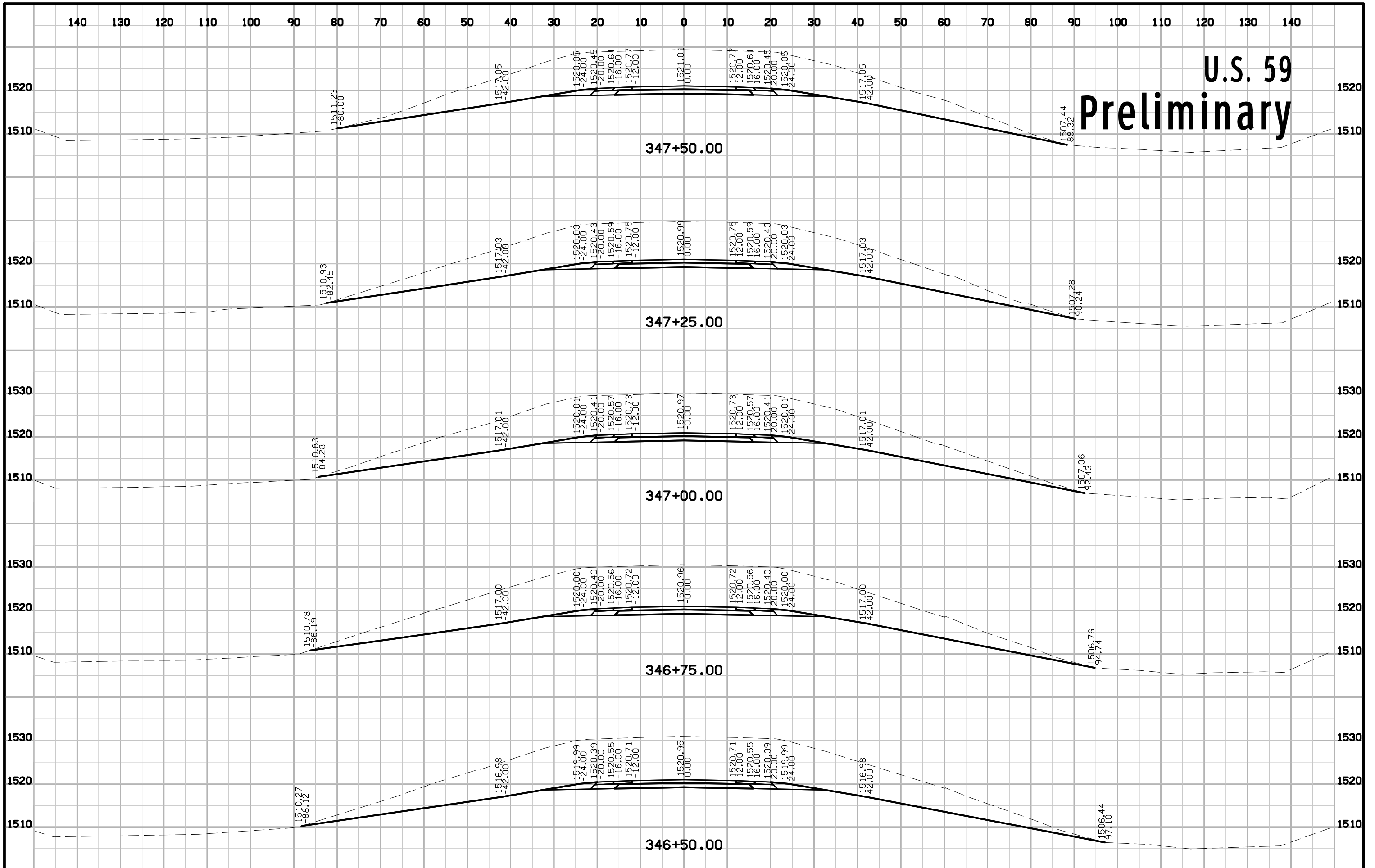
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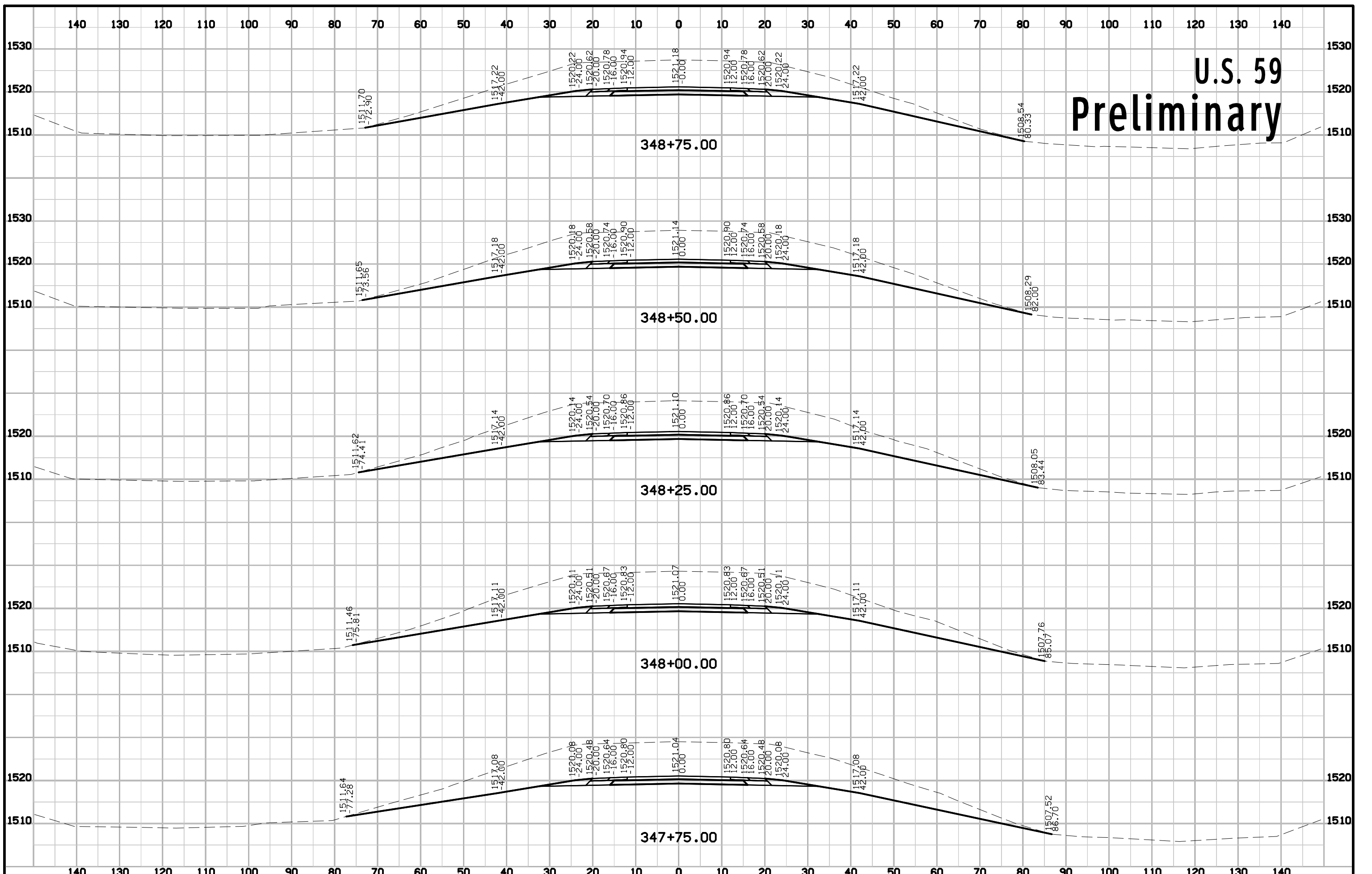
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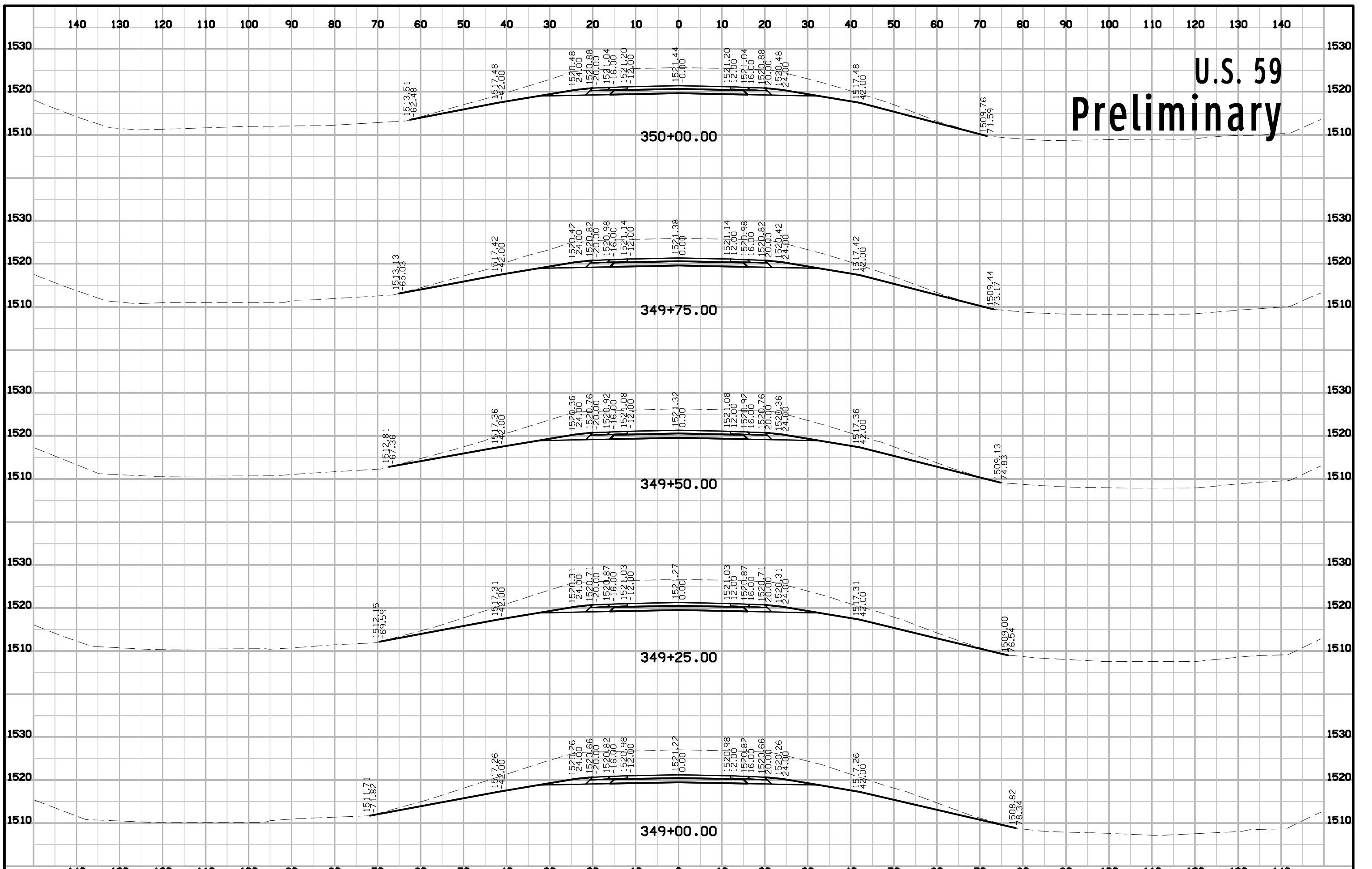
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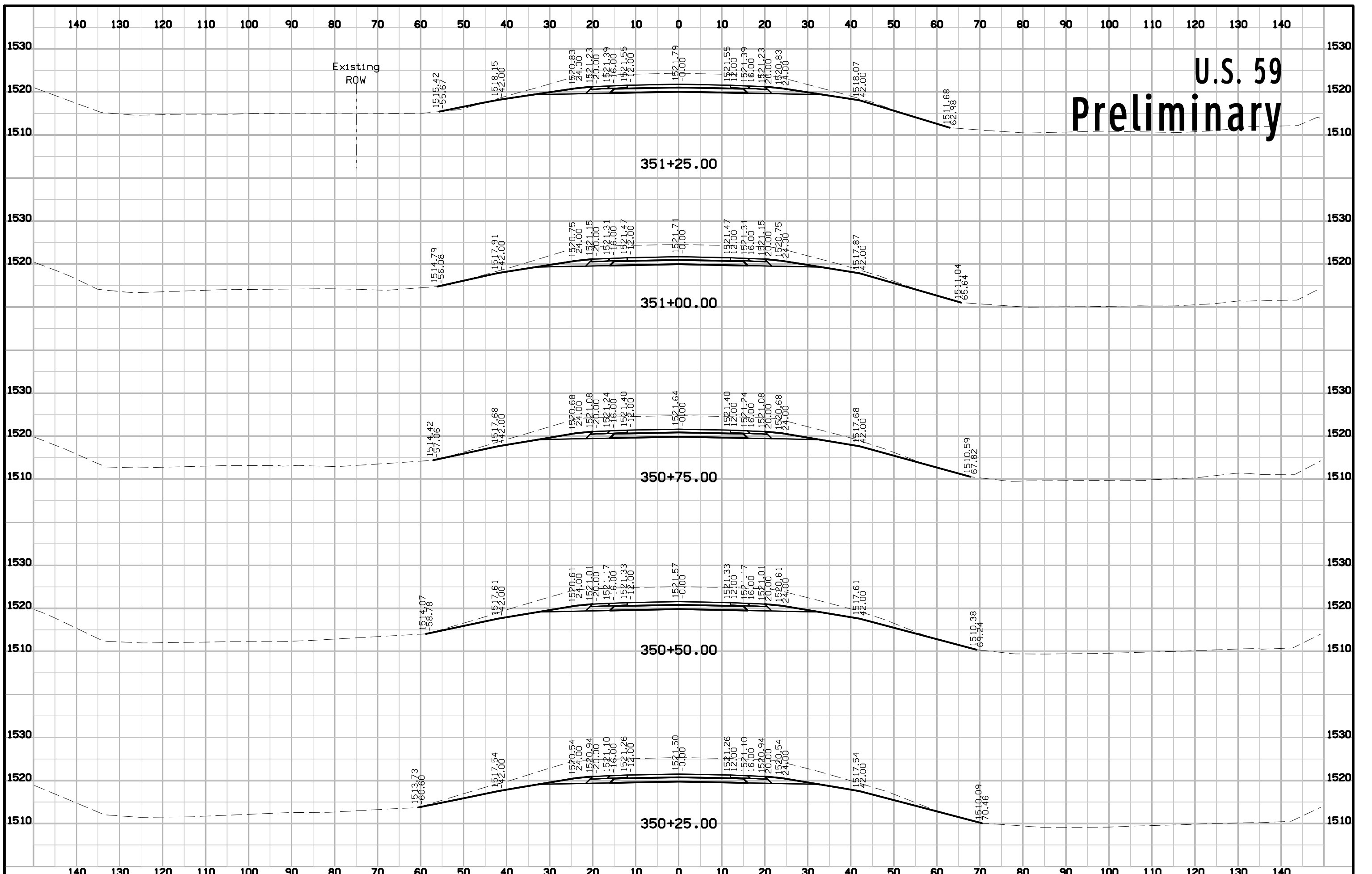
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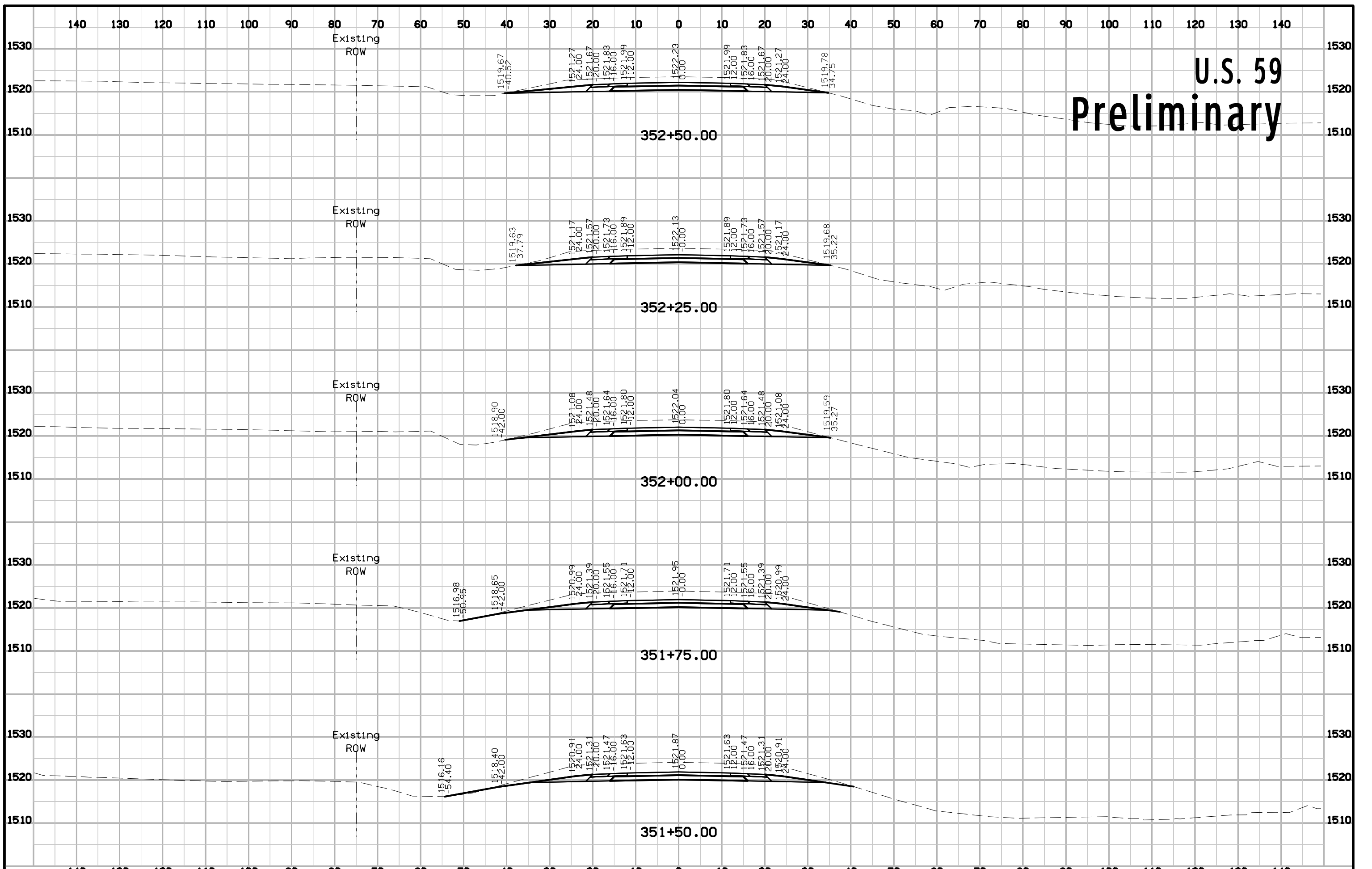
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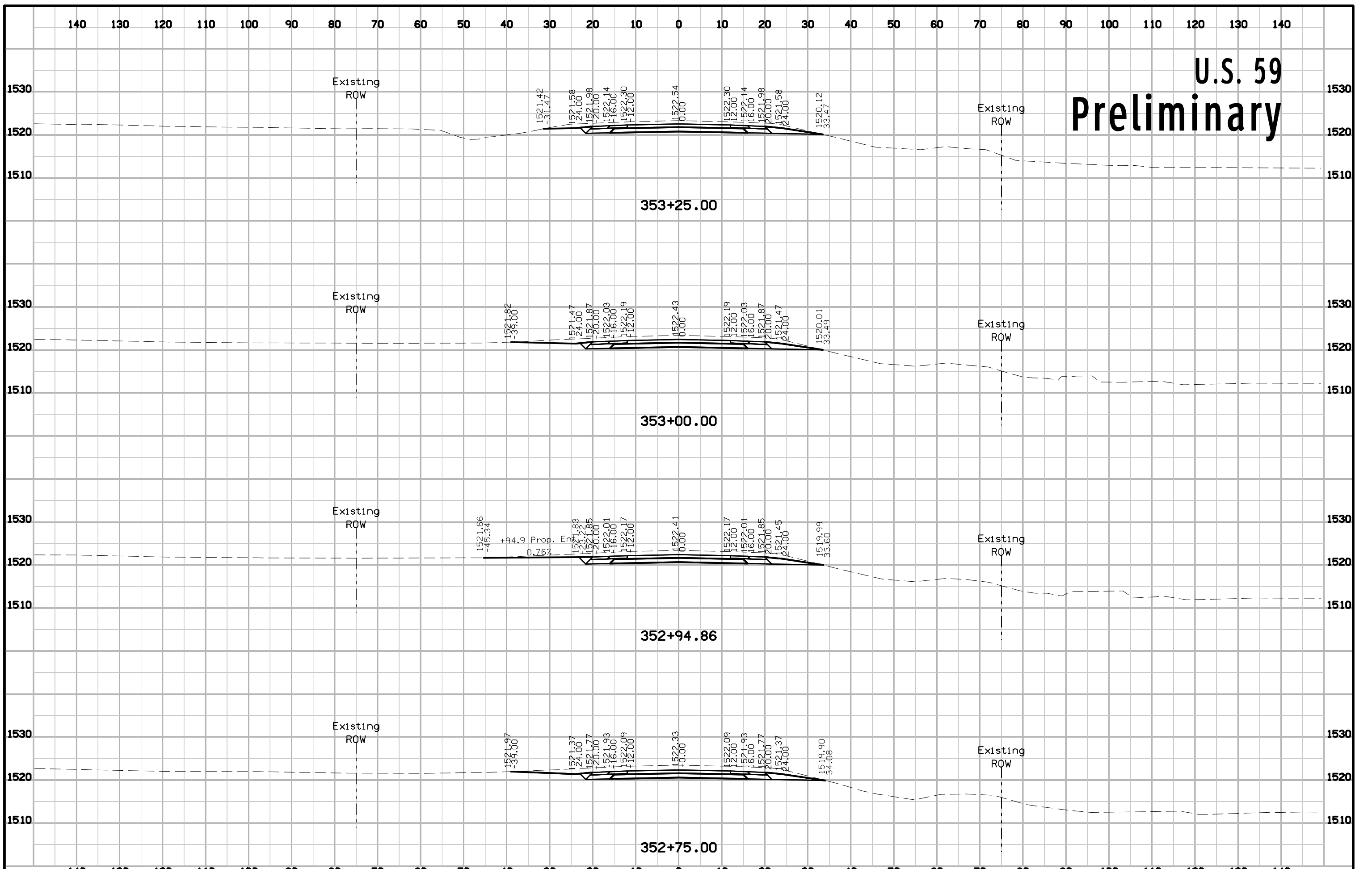
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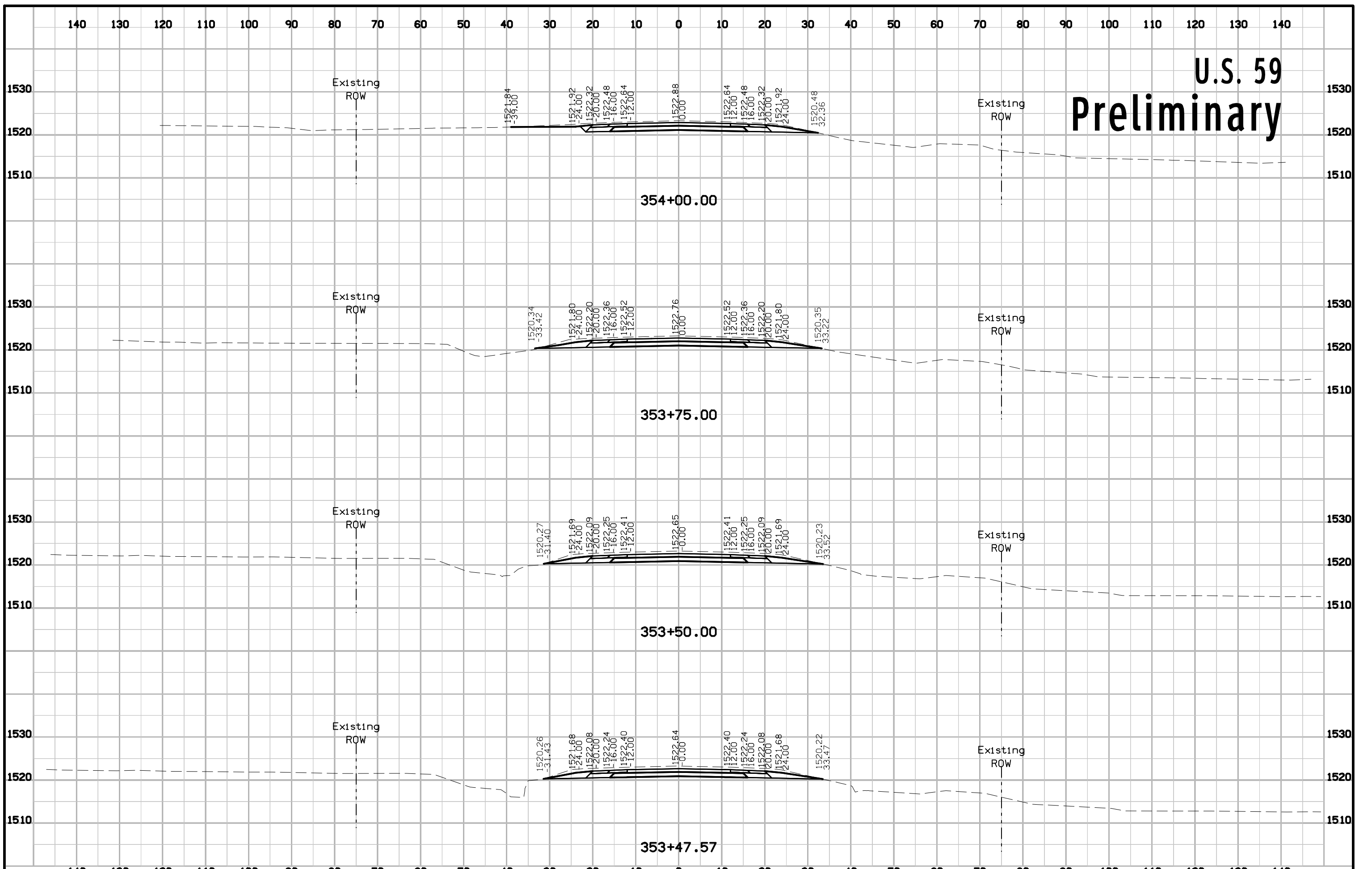
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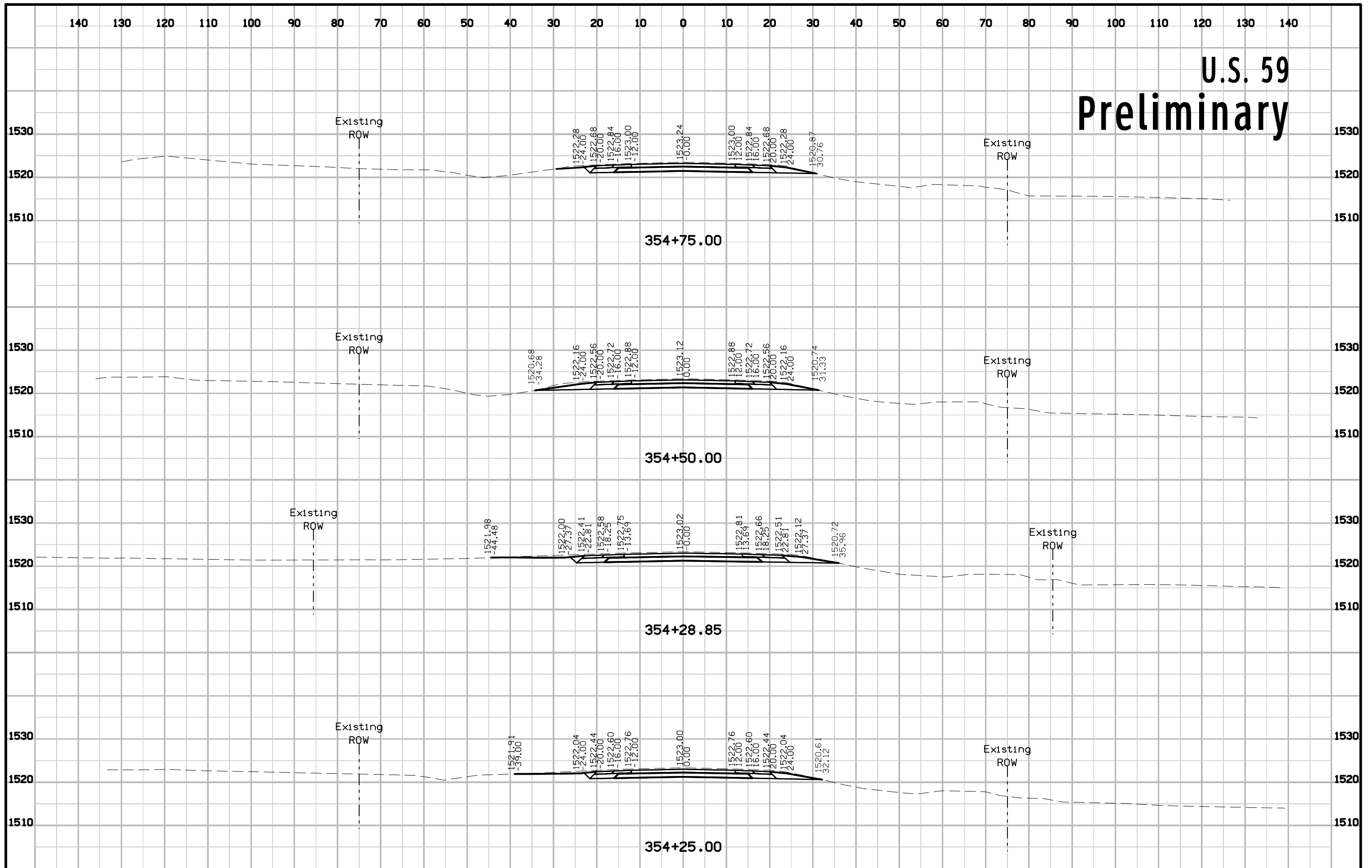
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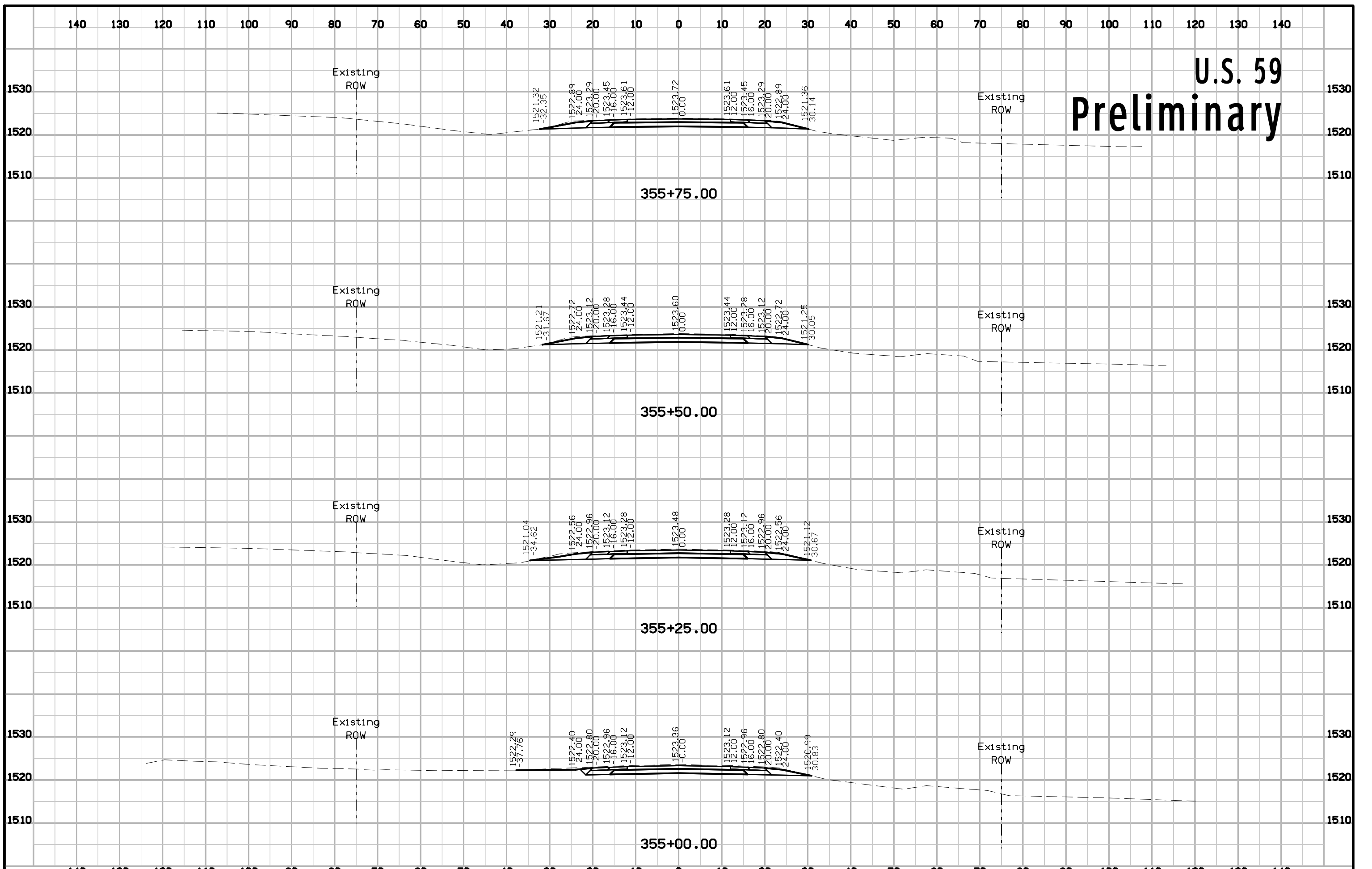
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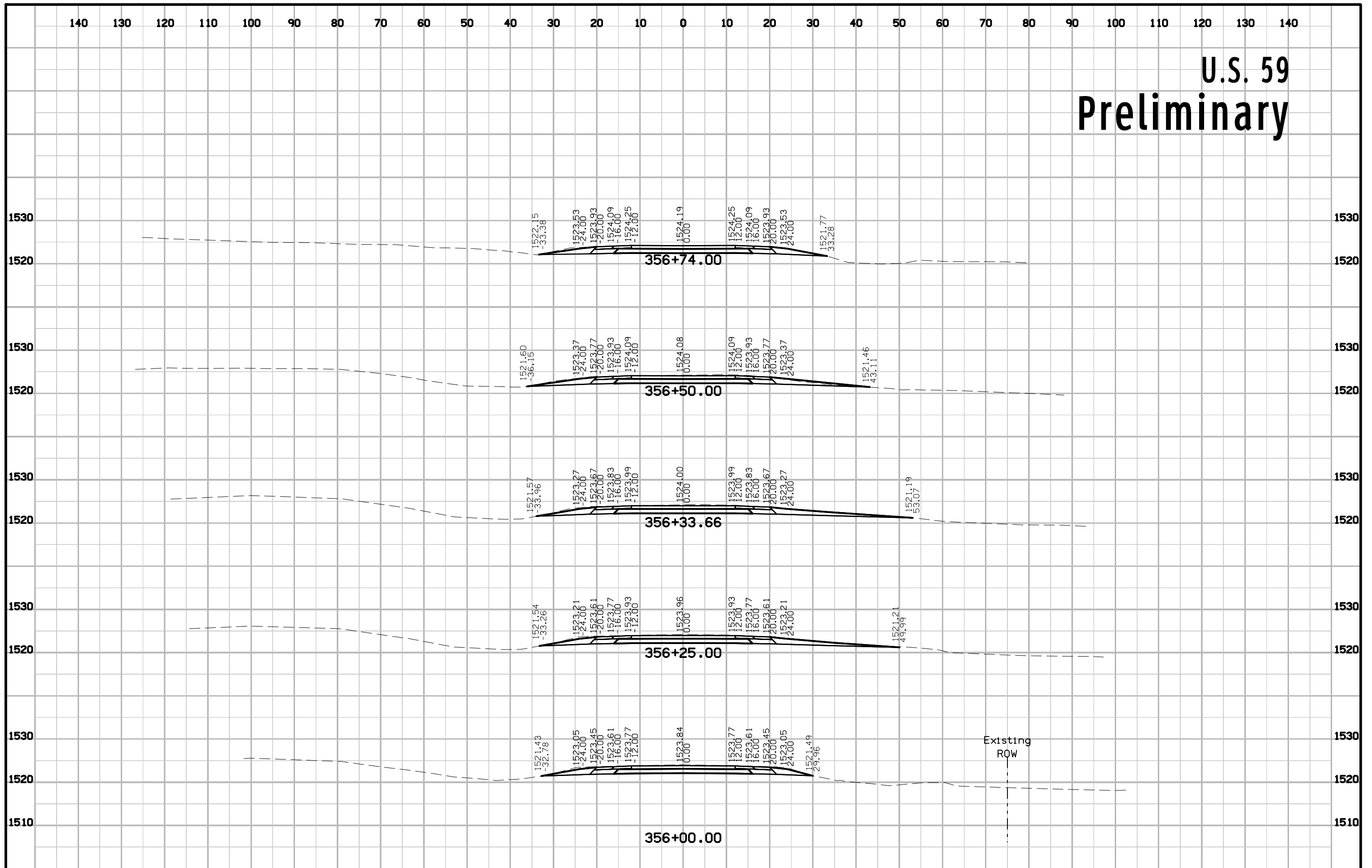
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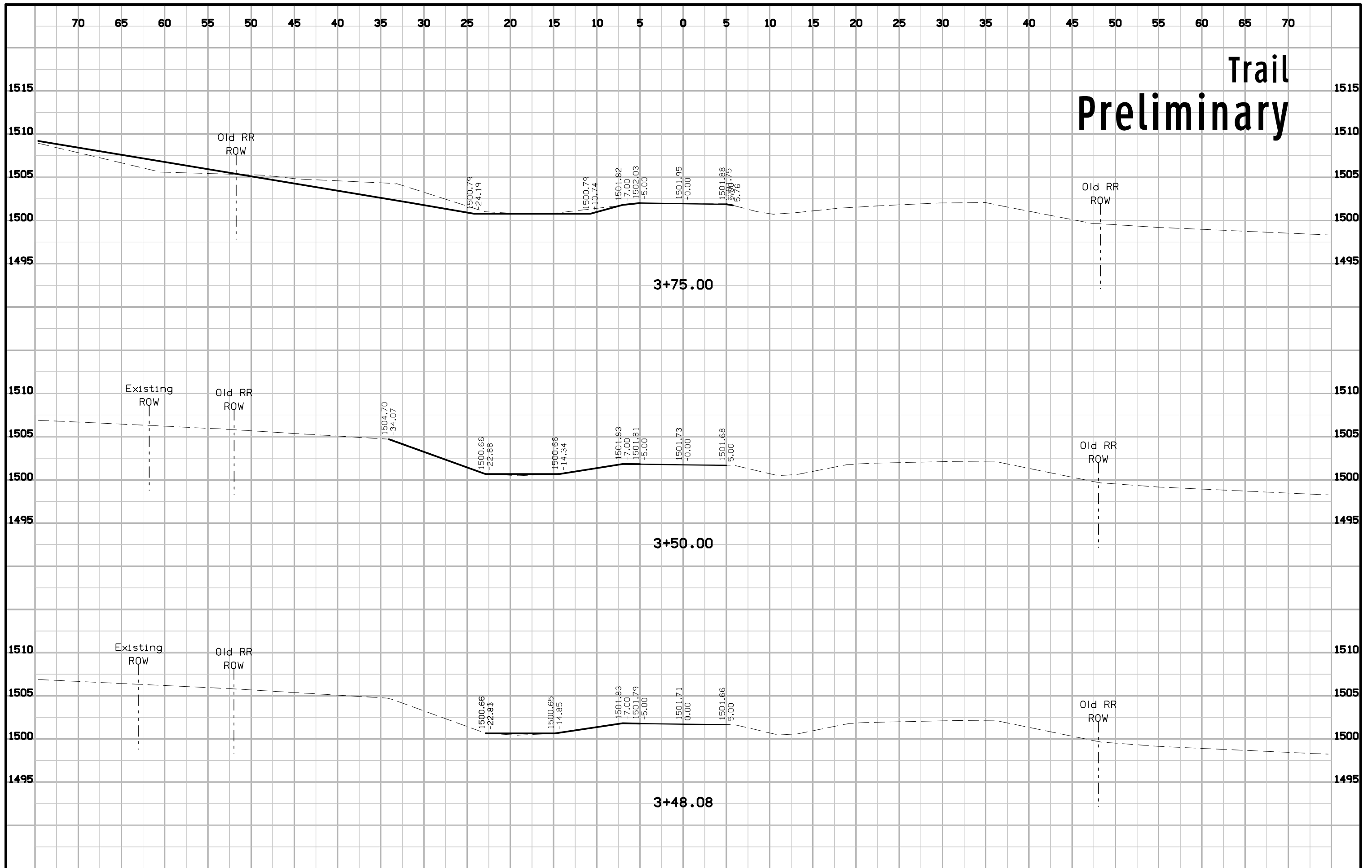
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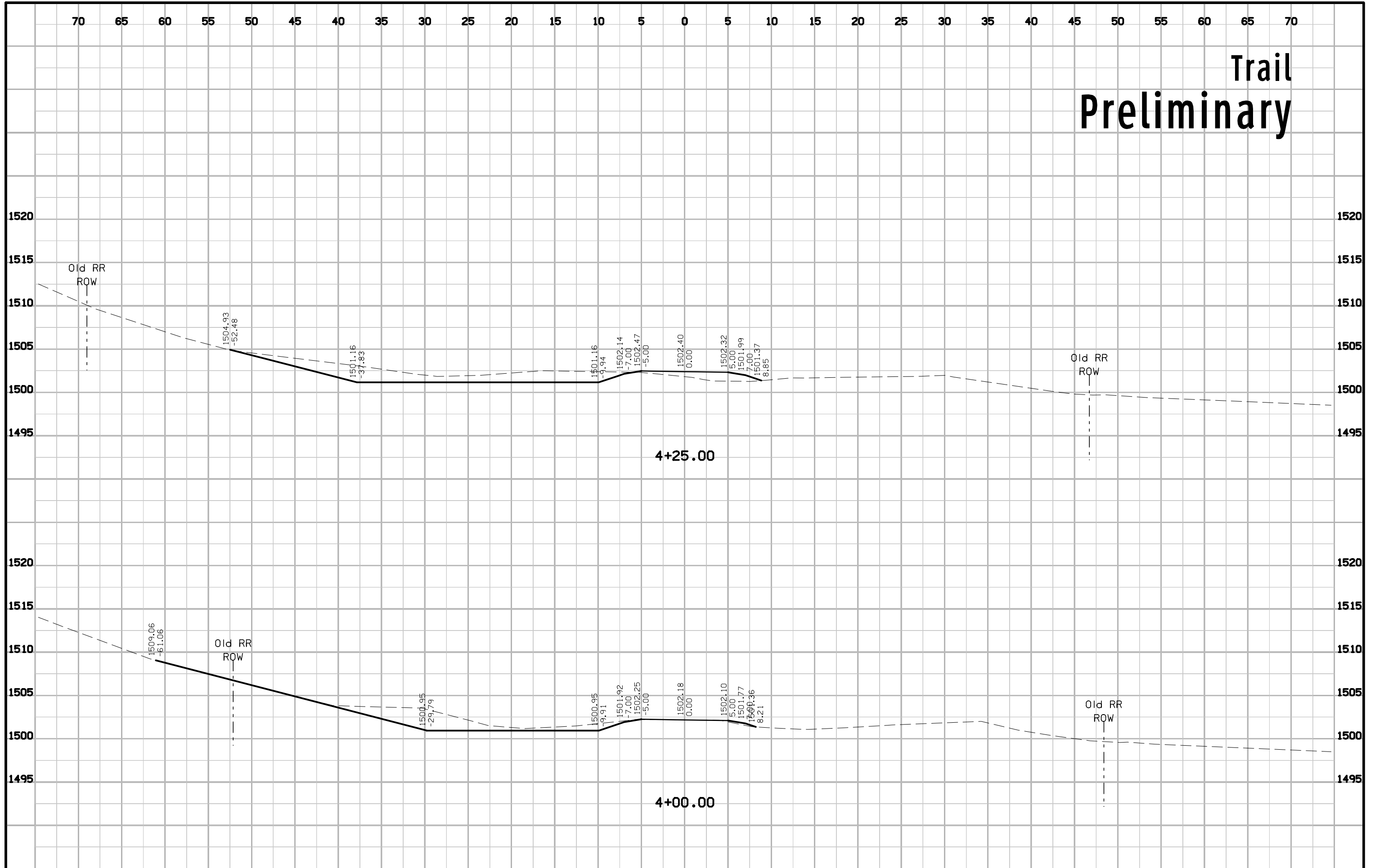
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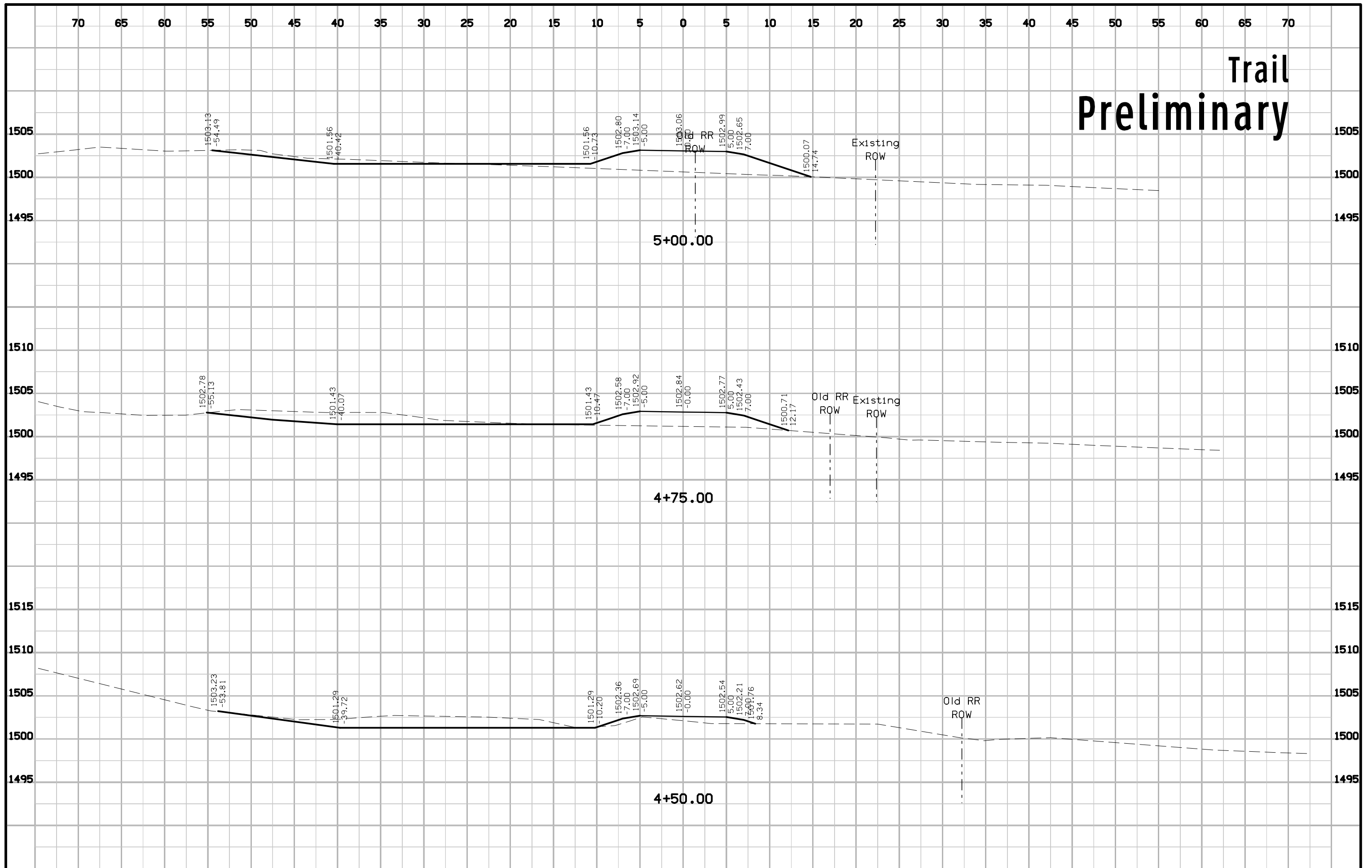
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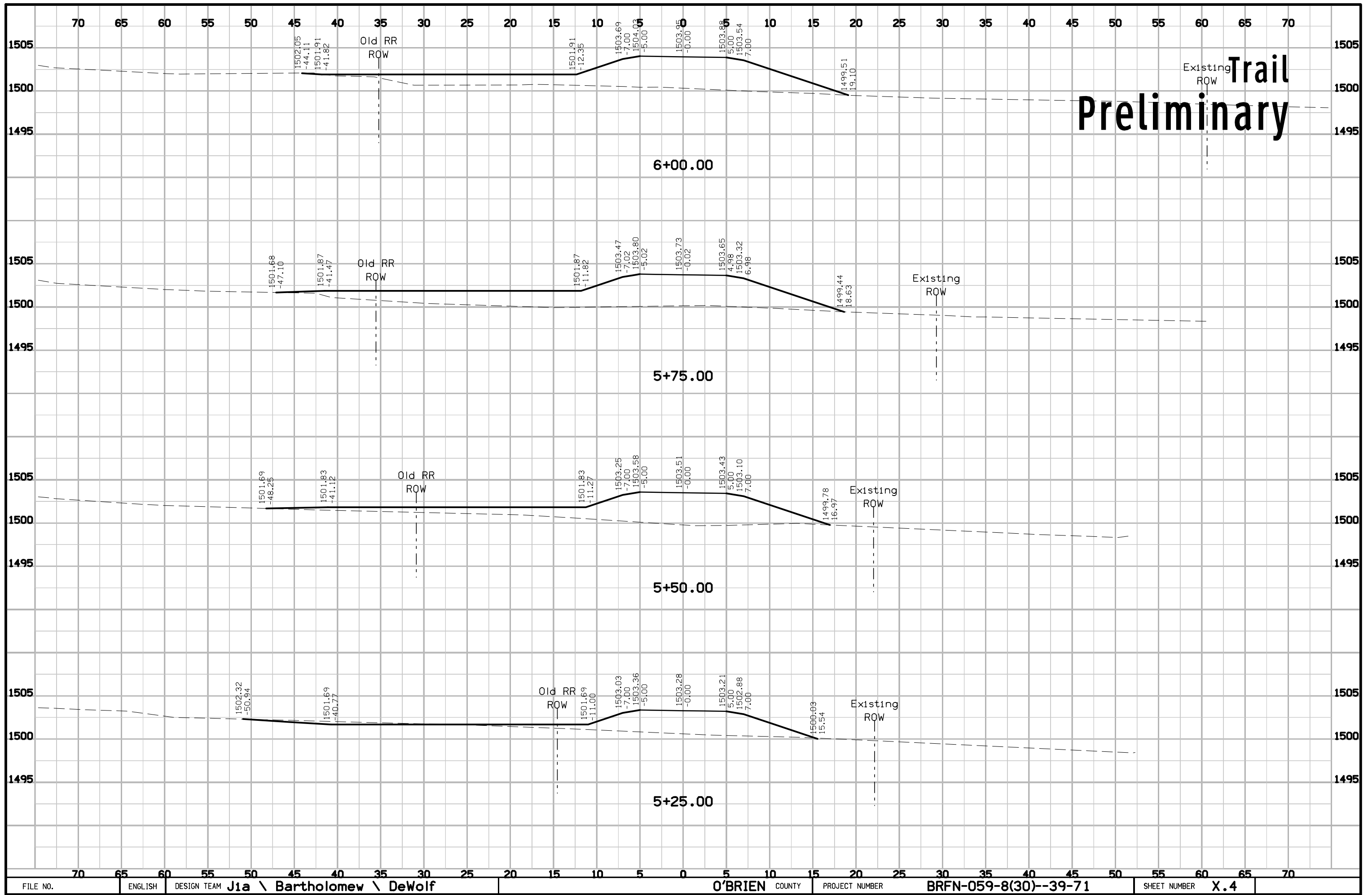


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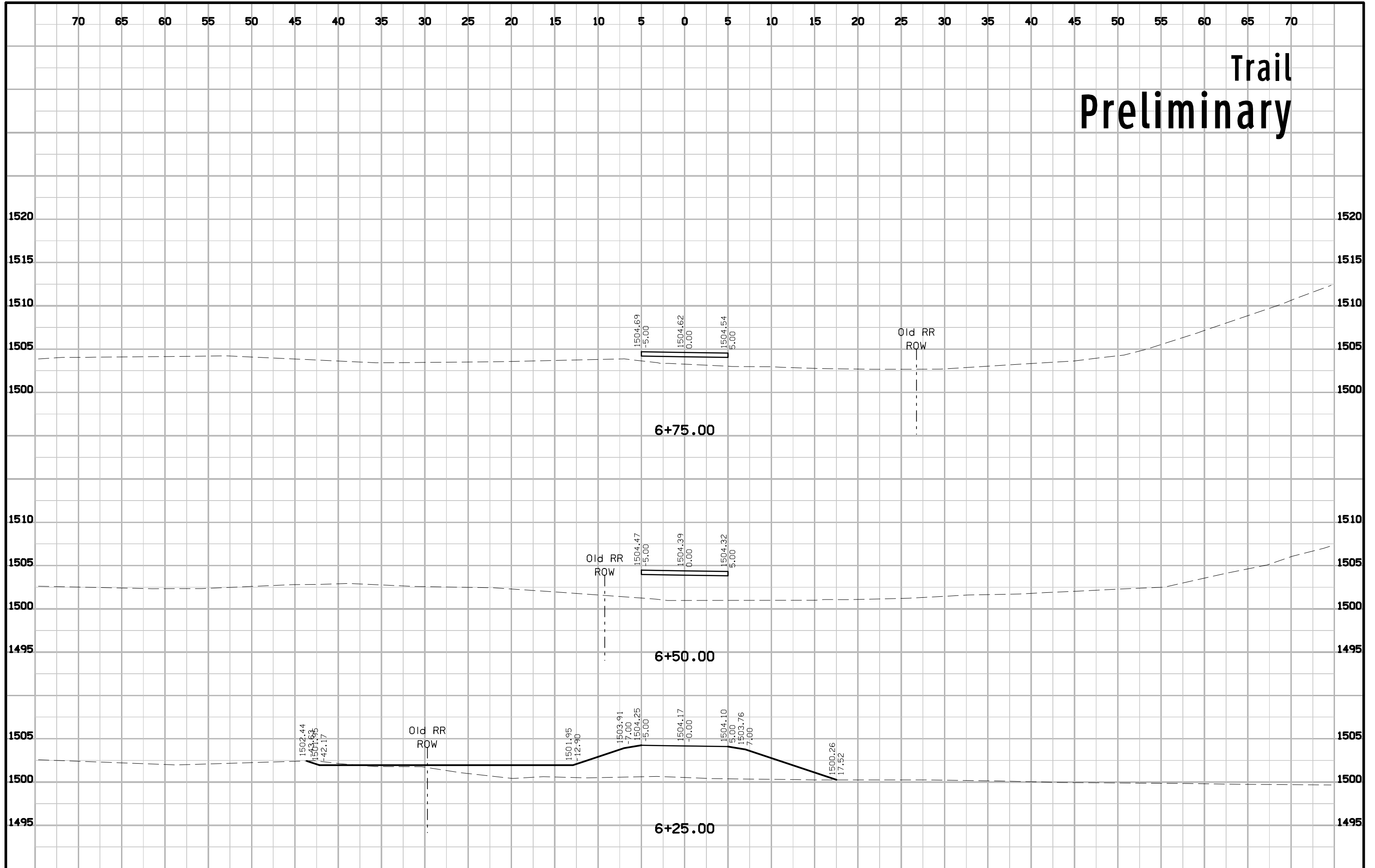


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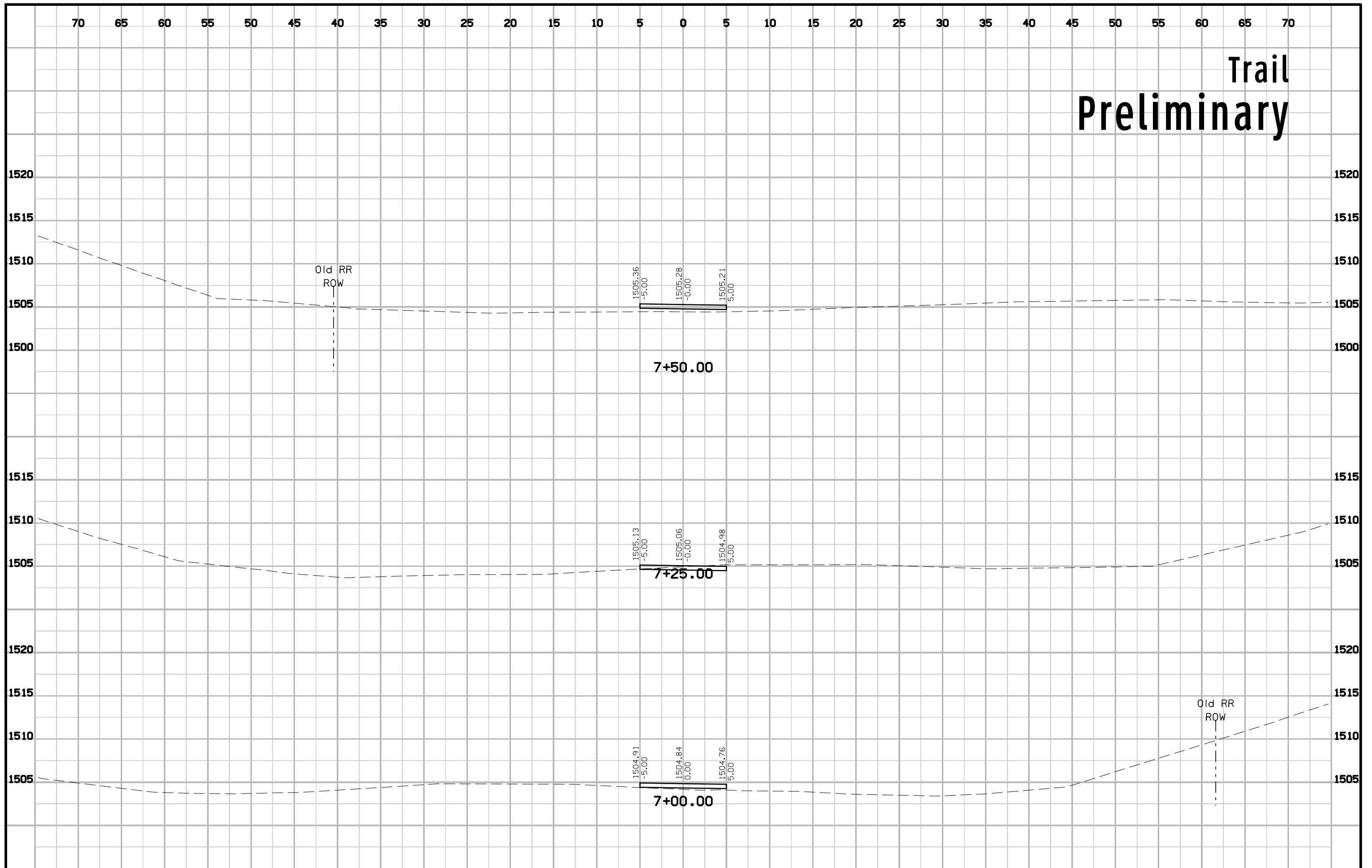




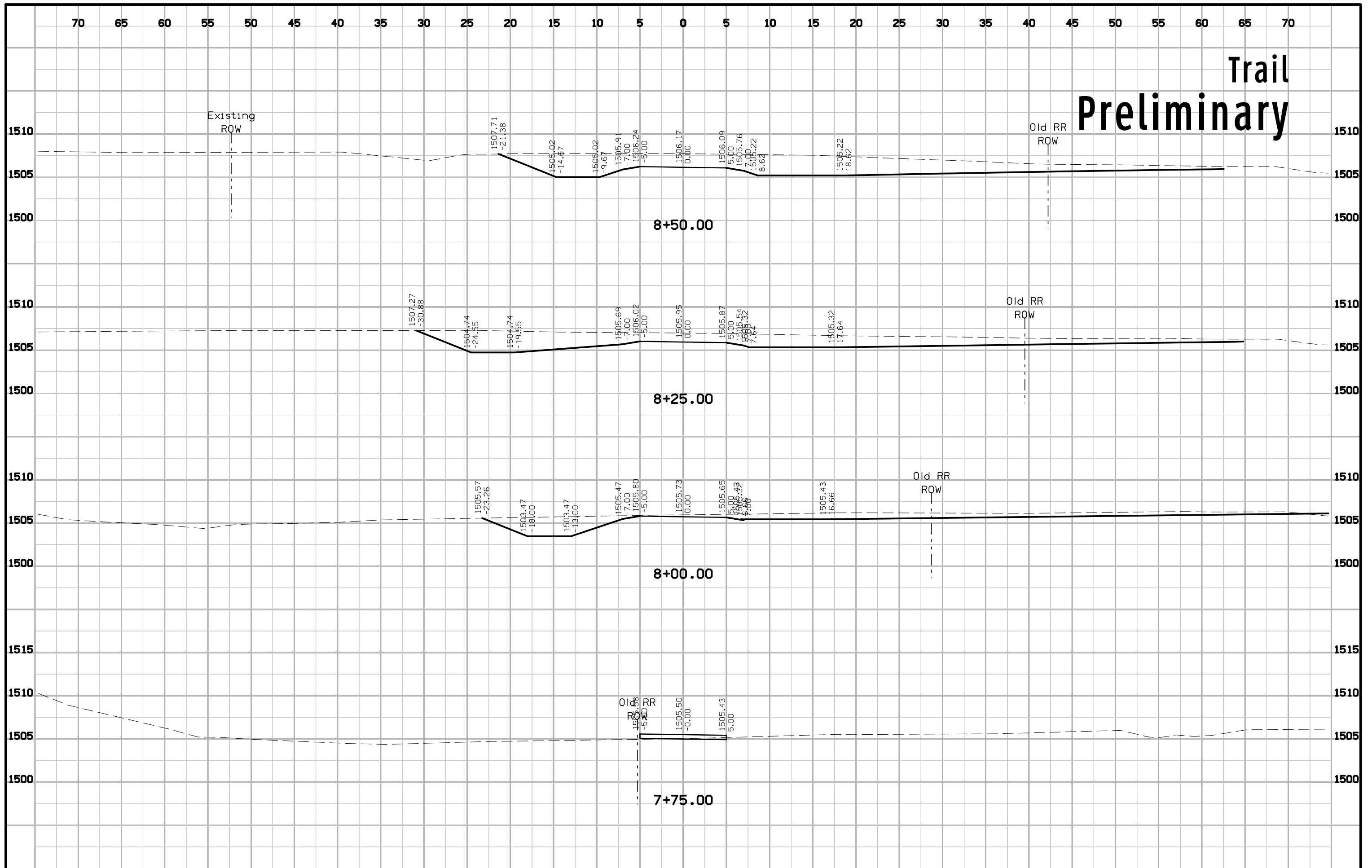
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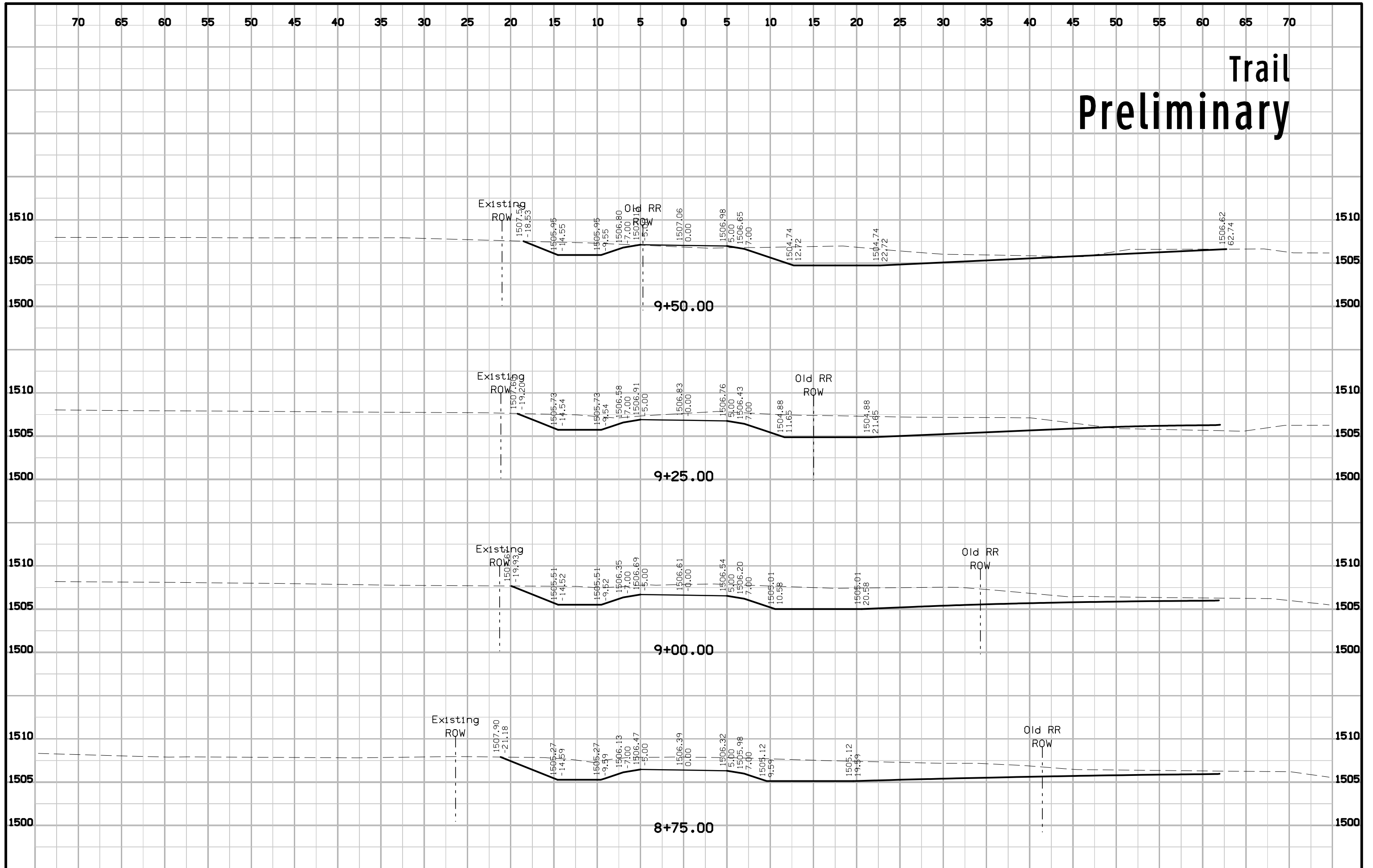
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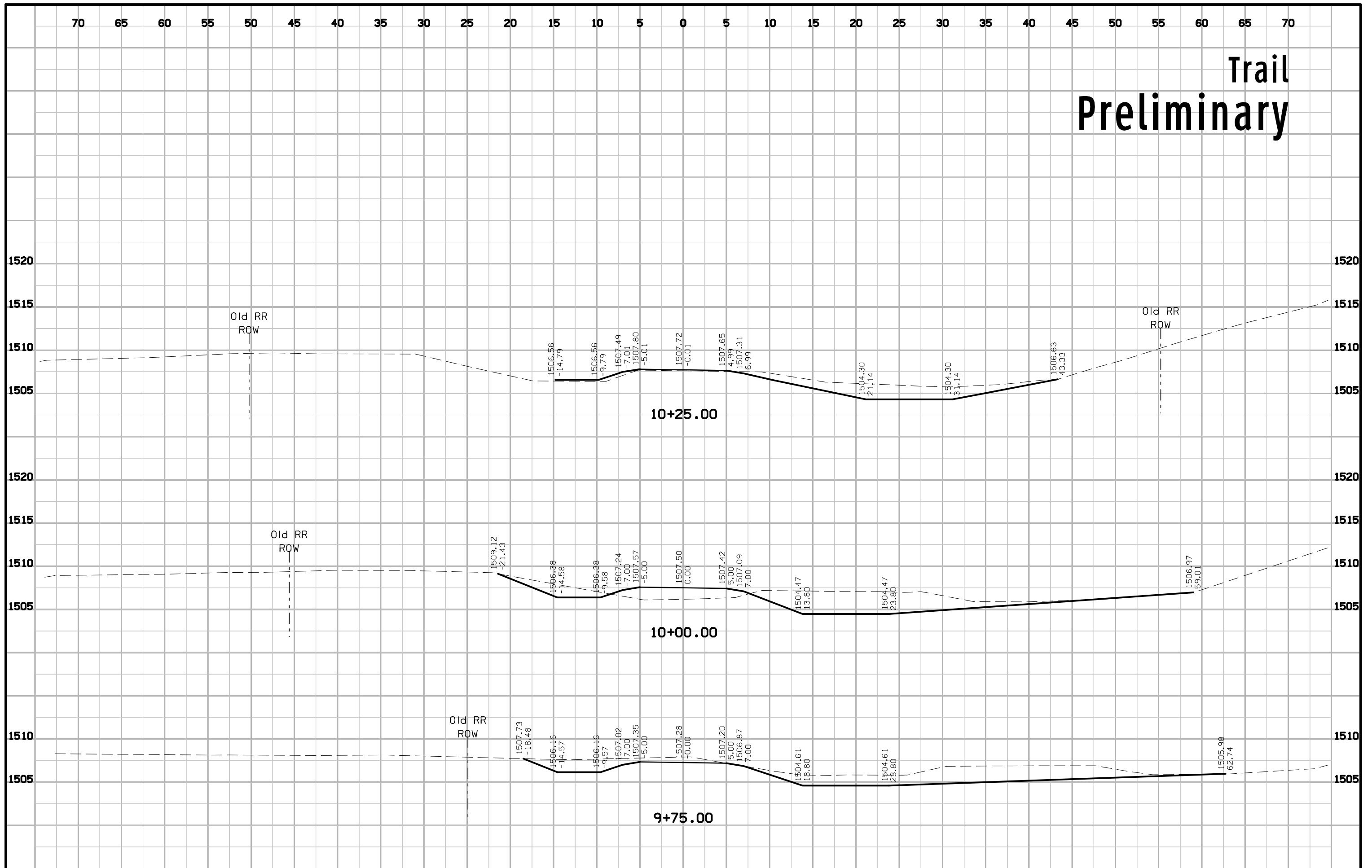
Trail Preliminary



Trail Preliminary



Trail Preliminary



Trail Preliminary

