

Horizontal and Vertical Geometry

At the proposed intersection of IA117/County Road F17 /US 65, 75° angles were used in order to minimize right-of-way (ROW) and impacts to the existing wetland mitigation site on the east side of IA117. The ownership for the wetland and woodland mitigation sites needs to be updated from Jasper County to Iowa DOT in the Field Exam plans.

Per the State's Access Control Policy, spacing between the northbound ramp terminals and the frontage roads should be 600' for rural interchanges. However, due to ROW restrictions and the wetland mitigation site east of IA117, the access was set at 325' to minimize impacts to those areas. The Iowa DOT will document the exception for this project.

At the location on IA117 where the proposed vertical alignment meets the existing road, there is a grade break of about 0.5%. As per the discussion at the field exam meeting, HDR will investigate alternatives for this design. One option would be to reduce the grade to 0.3% or approximate a vertical curve without creating a flat spot through the superelevation transition immediately beyond the tie-in.

Due to existing IA330 grades, Ramps B and C exceed the 4% preferred maximum grade per the current design criteria. However, these grades are within the acceptable 5% maximum grade design criteria.

Intersection sight distance is met for all intersections in the design except for trucks stopped on at the ramp terminals. Given the proximity of the ramp terminals to the US 65 T-intersection with IA 117 and County F-17 and generally slower speeds on US 65 through the interchange area, a reduced design speed exception for the horizontal intersection sight distances for these truck turning movements will be documented by the Iowa DOT.

The current proposed bridge vertical clearance is 17'-6". Per the project's current design criteria the minimum vertical clearance for the bridge is 16'-6", so with a 3" buffer, the recommended bridge height is 16'-9". Per the field exam discussion, HDR will lower the bridge to this height and also update the bridge type, size, and location sheets.

Drainage Design

In general, existing drainage patterns will be maintained throughout the project area. Existing culverts to be used as constructed will be checked for adequate design capacity and replaced as necessary. Reinforced Concrete Pipes (RCP) will be used in place of Reinforced Concrete Boxes (RCB). This includes new installations, replacements, and extensions; an extension of an RCB will be continued as RCP.

Since IA330 is being used as constructed, the infield ditches for Ramps B and C drain towards their respective gores. A Vertical Throat Area Intake (SW-562) will be installed at back of the gore to intercept drainage.

On Ramp A, the as-built information for the 5'x5' RCB does not match what is shown in the current field survey. The "Pink Sheets" provided by the District depict an RCP bend and extension of the RCB and a separate 36" RCP pipe tee, which the as-built plans do not show.

HDR will be requesting an additional field survey to verify the information. The 36" RCP will be left in place and extended to minimize the impact to the Tarnquist property due to ditch grading along Ramp A.

The current drainage design includes installing two new drainage pipes under IA 330. Instead of installing new pipe under the northbound lane at station 197+50, HDR will investigate using the existing median pipe draining to the NW side of Ramp A and extending that pipe with an elbow. In general, HDR will attempt to design drainage in an effort to minimize disruption to IA 330 traffic during construction.

Due to the ravine on the SE side of IA117 and County Road F17, some drainage pipes along these side roads will require letdown structures to accommodate for the extreme grade difference between the left and right roadway ditches. This will be accomplished using the let down structure in Road Design Detail 1603.

The current design outlets the interchange drainage into the ravine with an RCB located off IA117. This design has not been fully analyzed to date and HDR will investigate other options for draining into the ravine. HDR will coordinate/collaborate with Iowa DOT Preliminary Bridge section for general drainage design.

All existing pipes that are evaluated as undersized will not be replaced unless there is a history of drainage problems associated with the pipe. Similarly, pipe extensions will be proposed at the same diameter as existing pipes, unless there is a history of drainage problems at the subject location.

There are several places throughout the project that include ditch grades over 5%. In these areas, HDR will use a rock lined ditch for erosion protection. The rock ditch detail 4402 is included in the B sheets.

The inlet of the existing 18" CMP near the intersection of N 91st Ave W and existing US65 is plugged. A new pipe will be installed east of the existing pipe to capture drainage from the north ditch of N 91st Ave W. The existing 18" pipe at the intersection will be used as constructed.

HDR will fix the incorrectly labeled pipes along IA 330, on sheets D.2 and D.3. This includes pipes at Stations 1003+54.51, 1005+06.63, 159+00.34, 163+00.29 all labeled as UAC, but should be either removed or plugged and abandoned. The pipe through the west bridge berm will be extended once the grading around the bridge abutment is determined.

Side Road Closures

The design proposes 'hammerheads' for turnaround areas which double as entrances. Jasper County will have the opportunity to review side road closure details at the D5 plan level.

Construction Staging and Traffic Control

Construction of the project will occur in four major stages. In Stage 1, the portions of the following roads that are in the clear of existing roadways will be graded: proposed US 65, IA

117, and Ramps A-D. All gores will be graded up to the clear of IA330. N 91st Ave W near the intersection with realigned US 65 will be graded and temporary granular surfacing constructed to maintain traffic. Temporary widening will be constructed along the existing southbound shoulder on IA117 and along the existing westbound shoulder on County Road F17. It is estimated that Stage 1 will take one construction season to complete.

Stage 2 will occur in the second season of construction. In Stage 2, all areas graded in Stage 1 will be paved. The US 65 overpass bridge will be constructed. The outside lanes of IA 330 will be closed to traffic while remaining portions of interchange ramp grading and paving is constructed. The portion of County Road F17 that was graded and temporarily rocked in Stage 1 will be opened to traffic. Traffic will shift to the temporary pavement on IA 117 and County Road F17 that was placed in Stage 1. The west leg of existing County Road F17 will be permanently closed at the intersection with IA 330. The hammerhead turnaround on existing County Road F17 will be constructed, and the closed portion of the road will be obliterated. The connections to IA 117 in the northbound direction and County Road F17 in the eastbound direction will be graded and paved. Temporary widening will be constructed along the newly paved shoulders of IA 117 and County Road F17.

In Stage 3, Ramps A-D and US 65 to the north side of the intersection of N 91st Ave W will be opened to traffic. Traffic on IA 330 will be shifted to the outside lanes only, while the medians along IA330 are closed, saw cut, and removed, and the median ditches along IA 330 are re-graded and median shoulders constructed. Traffic on IA117 and County Road F17 will be shifted to the newly constructed connections and temporary widening placed in Stage 2. The temporary widening in Stage 1 will be removed and the shoulders of the southbound lane of IA 117 and the westbound lane of County Road F17 will be graded and paved. Existing US 65 at the tie-in to proposed US 65 will be closed and an off-site detour route will be used to redirect traffic around the construction. The entire connection of existing US 65 and proposed US 65 will be constructed in 10 working days and re-opened to traffic. The hammerhead turnarounds on existing US 65 will be constructed, and US 65 will be obliterated from station 1043+88 north to the tie-in.

In Stage 4, traffic along IA 330 will be moved to the inside lanes, and both lanes on IA117 and County Road F17 will be open to traffic. The temporary widening placed in Stage 2 will be removed, and the shoulders on the northbound lane of IA117 and the eastbound lane of County Road F17 will be constructed. Existing US 65 from the IA 330 intersection to the hammerhead constructed in Stage 3 will be obliterated. IA 117 and County Road F17 will be obliterated from the existing intersections with IA330 to the connections. The outside shoulders along IA330 will be constructed.

There are two full property acquisitions and two residential relocations for this project. One full acquisition is the Rhoads property between relocated County Road F17 and proposed Ramp D. The other full acquisition is the Calhoun property south of relocated County Road F17 near the tie in the existing County Road F17.

The house on the Armentrout property at the north tie-in of proposed US 65 and existing US 65 is inside the limits of construction. To minimize the impacts on that property and

potentially eliminate relocation of the house, HDR will investigate drainage alternatives through the Armentrout property.

The preliminary earthwork quantities indicate approximately 1,099,450 cubic yards of Class 10 fill with 178,000 cubic yards of borrow will be required for construction of the project. This project is currently scheduled for a FY 2017 letting. The estimated cost for the project shown in the concept is \$13,930,070. The current cost estimate in today's dollars is \$15,859,175. The estimate needs to be revised for the bridge located on US 65 over IA330. The estimated bridge cost is \$1,068,375.

No plans are included in this submittal; however, plan sheets were provided at the field exam and submitted electronically prior to the meeting. A mark up of the D2 plan set, reflecting the agreed upon Field Exam comments, is located in the Iowa DOT ProjectWise system under the "Design" folder:

[pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5006502012\Design\](pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5006502012\Design)

The S2 event date has been delayed due to lack of property access permissions to complete the soil borings. This will delay the S2 and, subsequently the draft D5 submittals until sometime after November 2014.

JJS/SDN/IRW

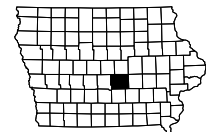
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J. Tibodeau
M. Dunn
J. Vortherms
K. Patel
T. Abbett
J. Lavine
M. J. Sankey
M. J. Kennerly
D. L. Maifield
K. D. Nicholson
J. E. Laaser-Webb
D. R. Tebben
M. A. Swenson
N. L. McDonald
G. A. Novey
S. P. Anderson
D. Zeimen
T. Abbet
J. Jurassic, FHWA

D. Claman
T. Gettings
M. Stephens
A. Tinken
M. Sloppy
E. Bowen
J. Clute
S. J. Gent
D. A. Widick
T. L. Gettings
R. L. Stanley
T. Crouch
M. D. Masteller
C. B. Brakke
D. A. Popp
Jeff McCollough
B. Hofer
D. R. Tebben
J. R. Schoenrock
W. N. Cameron

D. Wells
M. Gogerty
C. Hunter, HDR
J. Spradling, HDR
S. Nelson, HDR
J. P. Rost

J. Scott
W.A. Sorenson
E.C. Wright
S. C. Marler
V. Brewer
Donna Matulac
J. W. Smith
B. Bradley
S. Dumdei
C. Quick

Z. T. Bitting
D.E. Sprengeler



No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 11	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 4	IA 330
* D.5 - 8	US 65
E Sheets	Side Road Plan and Profile Sheets
* E.1 - 2	IA 117
* E.3 - 4	County Road F17
* E.5	N 91st Ave W
* E.6	Existing US 65
* E.7	Existing County Road F17
G Sheets	Survey Sheets
G.1 - 2	Reference Ties and Bench Marks
G.3 - 5	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
* J.1	Staging Notes
* J.2	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.3 - 7	Staging and Traffic Control Sheets Stage 1
* J.8 - 11	Staging and Traffic Control Sheets Stage 2
* J.12 - 14	Staging and Traffic Control Sheets Stage 3
* J.15 - 18	Staging and Traffic Control Sheets Stage 4
* J.19 - 22	Staging and Traffic Control Sheets Stage 5
K Sheets	Interchange Sheets
* K.1 - 2	Interchange Layout Sheets
* K.3 - 6	Ramp A-D Profile Sheets
U Sheets	500 Series, Mod. Stds, and Detail Sheets
U.1	Hammerhead Turnaround
V Sheets	Bridge and Culvert Situation Plans
V.1 - 8	Bridge Sketches
W Sheets	Mainline Cross Sections
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 53	IA 330 Cross Sections
W.54 - 96	US 65 Cross Sections
X Sheets	Side Road Cross Sections
X.1 - 45	IA 117 Cross Sections
X.46 - 87	County Road F17 Cross Sections
X.88 - 92	N 91st Ave W Cross Sections
Y Sheets	Ramp Cross Sections
Y.1 - 17	Ramp A Cross Sections
Y.18 - 29	Ramp B Cross Sections
Y.30 - 39	Ramp C Cross Sections
Y.40 - 57	Ramp D Cross Sections
	* Color Plan Sheets

IOWADOT

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

JASPER COUNTY

PCC PAVEMENT - GRADE AND NEW

IA 330 FROM NORTH OF EXISTING US65 TO COUNTY ROAD F17

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

MILEAGE SUMMARY			
		105-1	
		09-27-94	
Div.	Location	Lin. Ft.	Miles
1	IA 330:		
	Sta. 146+53.00 to Sta. 229+87.00	8334.00	1.578
	Total Length of IA 330	8334.00	1.578
1	US 65:		
	Sta. 1007+76.05 to Sta. 1058+13.01	5036.96	0.954
	Deduct Bridge at Sta. 1014+29.59 to Sta. 1017+01.59	272.00	0.052
	Total Length of US 65	4764.96	0.902
	Total Length of Roadway in Project	13370.96	2.532
	Total Length of Bridge in Project	272.00	0.052
	Total Length of Project	13098.96	2.481

For Project Location Map
Refer to Sheet A.2

DESIGN DATA RURAL

2017	AADT	8200	V.P.D.
2037	AADT	10800	V.P.D.
2037	DHV	1180	V.P.H.
	TRUCKS	13	%
	Total Design ESALs	--	

REVISIONS

TOTAL

308

PROJECT IDENTIFICATION NUMBER

12-50-065-020

PROJECT NUMBER

NHSN-65-4(139)--2R-50

R.O.W. PROJECT NUMBER



PRELIMINARY PLANS

Subject to change by final design.

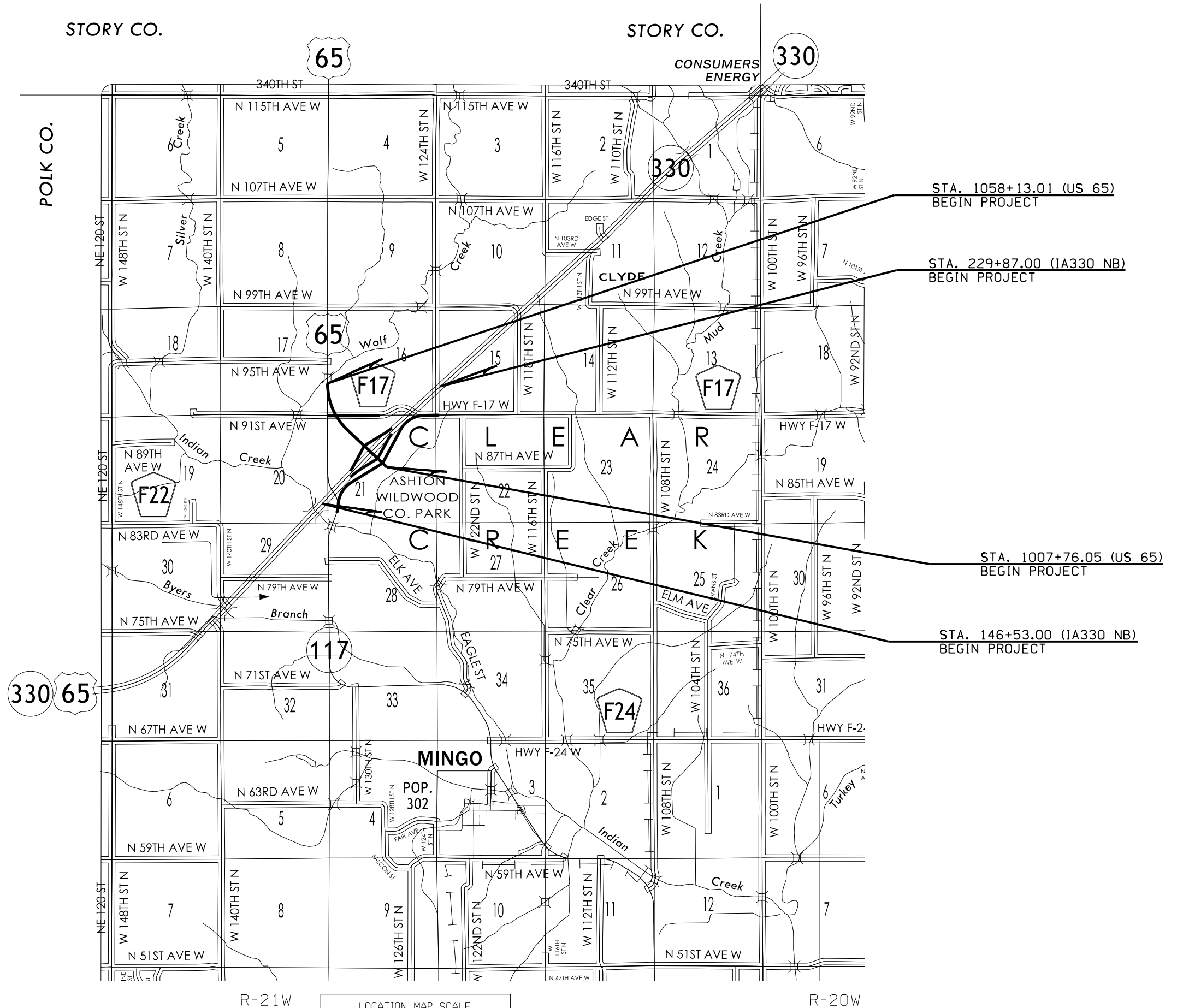
D2 PLAN - Date: 8/13/2014

STORY CO.

STORY CO.

T-81N

T-80N



330 65

65

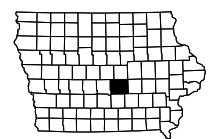
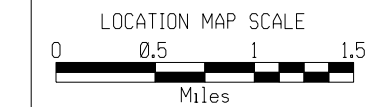
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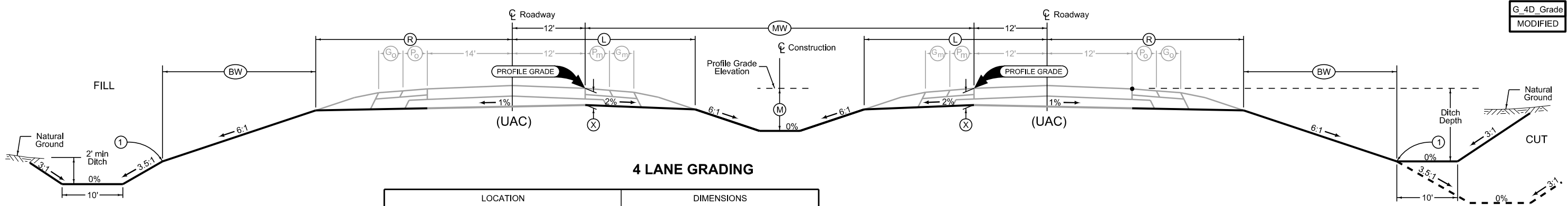
F17

F17

F22

F24





4 LANE GRADING

ROAD IDENTIFICATION	LOCATION		DIMENSIONS					
	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BW) Feet	(MW) Feet	(M) Feet
IA 330 NB	146+53.00	190+46.44					86	
IA 330 SB	155+99.00	190+46.44					86	
IA 330 NB	190+46.44	229+87.00					VAR.	
IA 330 SB	190+46.44	228+98.00					VAR.	

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

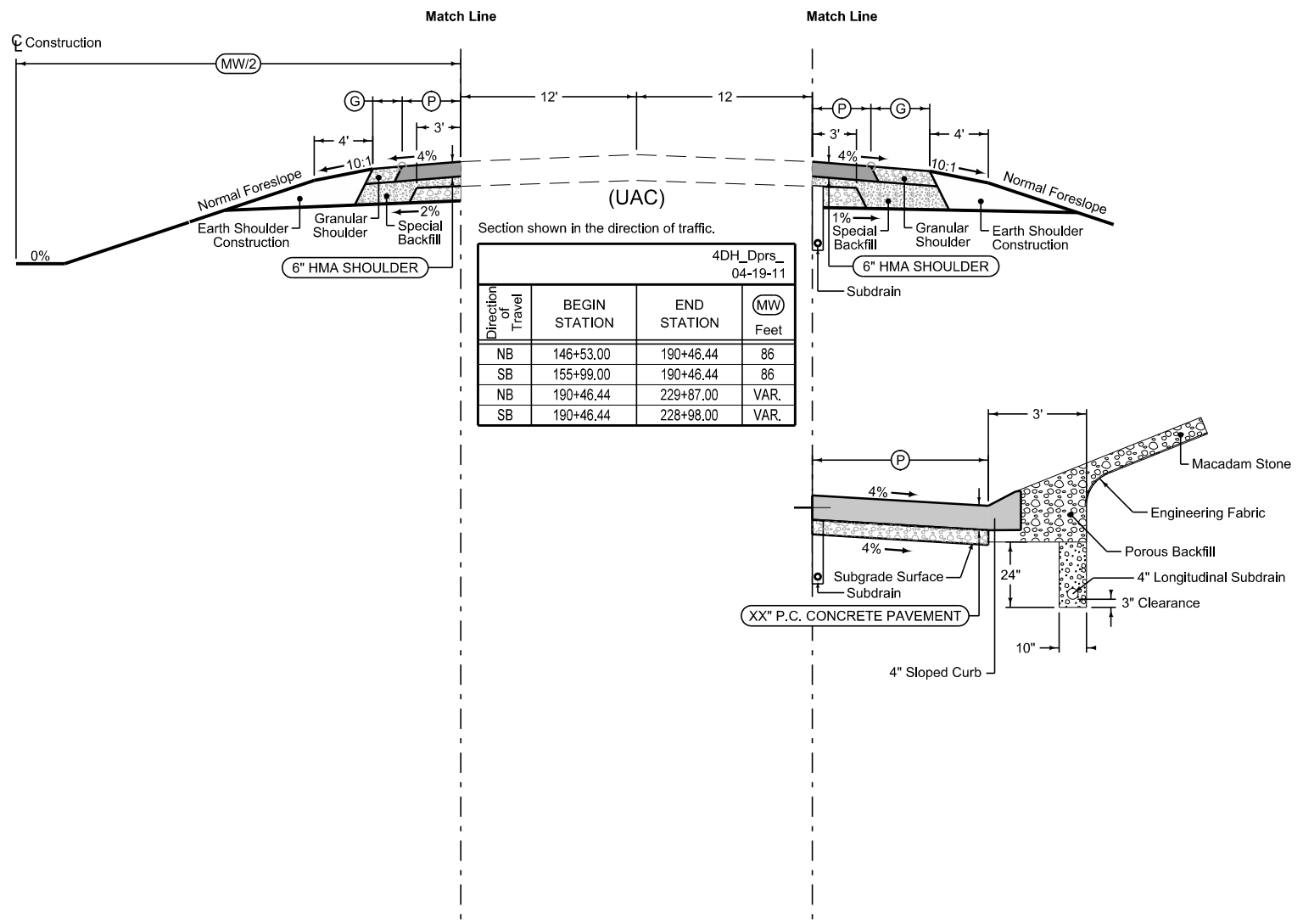
See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

① Refer to project plan and cross sections for specific location of foreslope change.

Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

Direction of Travel	BEGIN STATION	END STATION	4_C_ 10-15-13	
			(P) Feet	(G) Feet
NB	146+53.00	160+02.00	4	2
SB	155+99.00	169+55.00	4	2
NB	208+98.00	214+32.00	4	2
NB	211+10.00	216+63.00	4	2
NB	225+09.00	229+87.00	4	2
NB	228+03.00	228+98.00	4	2



Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

Direction of Travel	BEGIN STATION	END STATION	4_C_ 10-15-13	
			(P) Feet	(G) Feet
SB	156+22.00	158+95.84	6	4
NB	156+45.00	160+26.00	6	4
SB	210+00.00	213+70.00	6	4
NB	211+07.09	215+00.00	6	4

Curbed Shoulder

Shoulder Jointing:
Longitudinal joint: BT-2

Direction of Travel	STATION TO STATION	(P) Feet	Curb Type See PV-102
SB	184+35.21	185+15.21	15 6" SLOPED

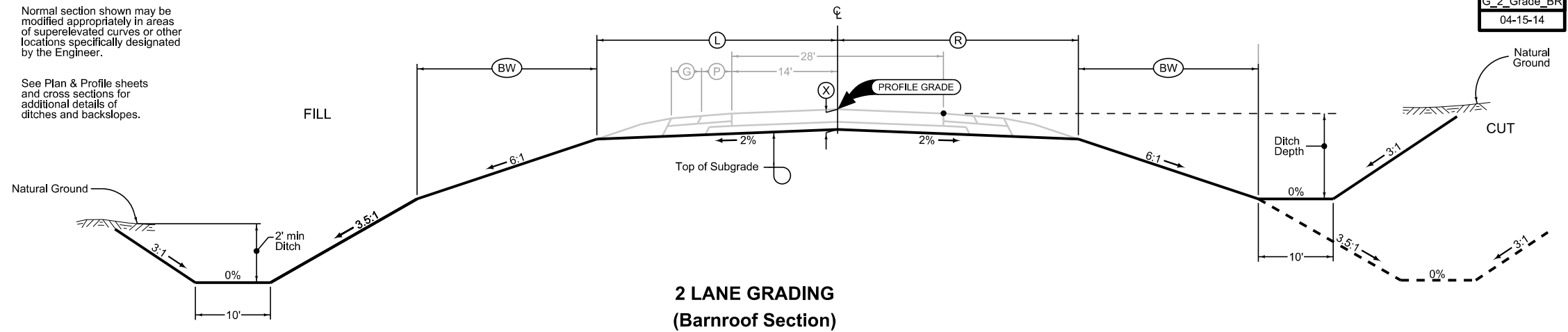
See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

IA 330 MAINLINE

LOCATION		DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION	Ⓐ Feet	Ⓑ Feet	Ⓒ Inches	Ⓓ Feet
US 65	1007+76.05 1014+29.59	30.11	30.11	16	11.89
US 65	1017+01.59 1058+13.01	30.11	30.11	16	11.89
IA 117	992+21.24 1029+36.78	30.11	30.11	16	5.89

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

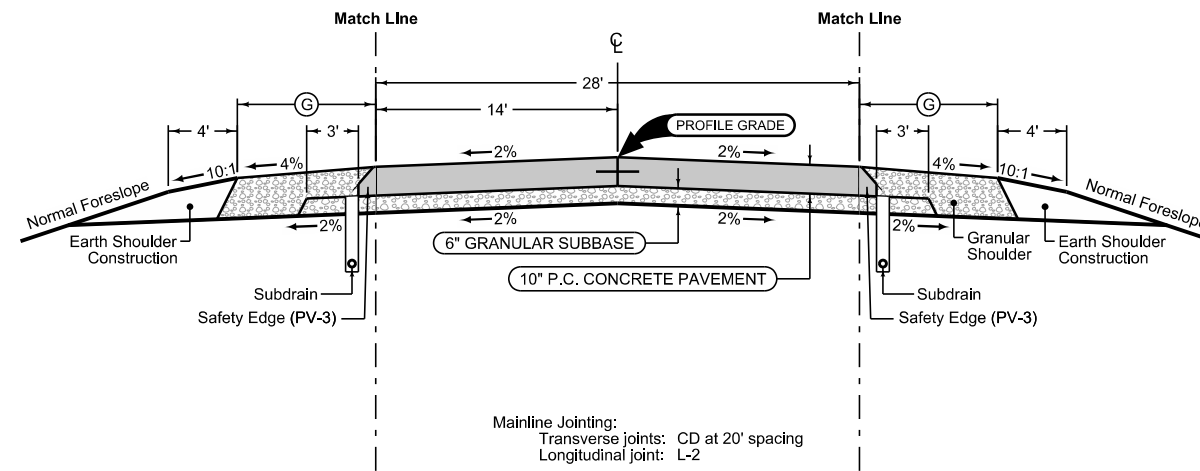
See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.



G_2_Grade_BR
04-15-14

Granular Shoulder with Safety Edge

STATION TO STATION		Ⓔ Feet
1007+76.05	1014+29.59	6
1017+01.59	1058+13.01	6



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

STATION TO STATION	
1007+76.05	1014+29.59
1017+01.59	1058+13.01

Granular Shoulder with Safety Edge

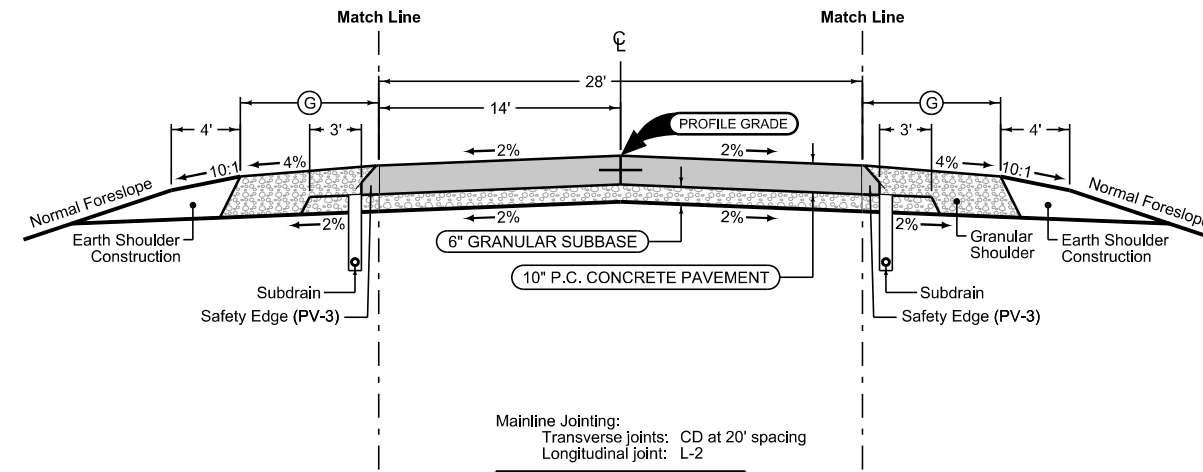
STATION TO STATION		Ⓔ Feet
1007+76.05	1014+29.59	6
1017+01.59	1058+13.01	6

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

US 65 MAINLINE

Granular Shoulder with Safety Edge

2_G_ Modified		
STATION TO STATION		(G) Feet
992+21.24	1029+36.78	6



Granular Shoulder with Safety Edge

2_G_ Modified		
STATION TO STATION		(G) Feet
992+21.24	1029+36.78	6

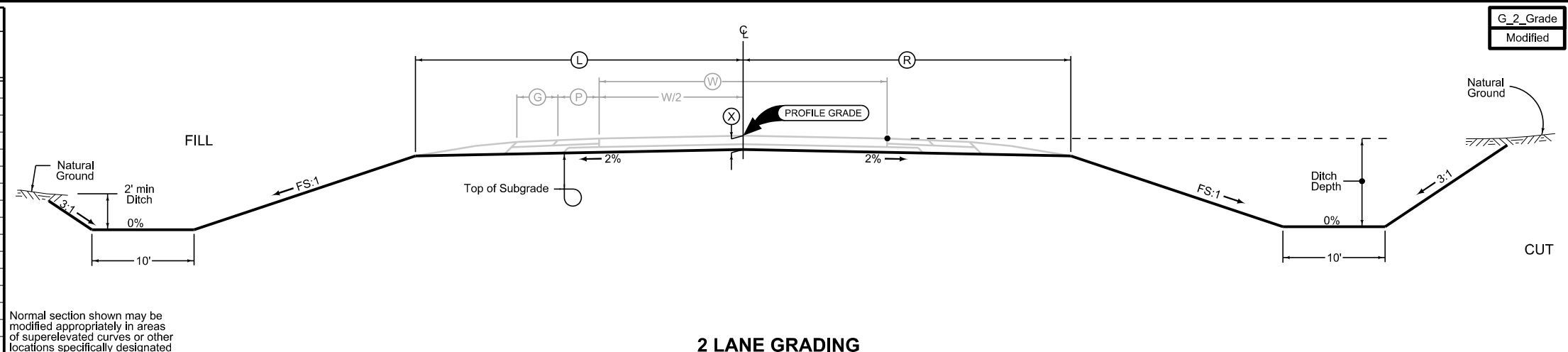
Mainline Jointing:
 Transverse joints: CD at 20' spacing
 Longitudinal joint: L-2

2P_ 10-19-10		
STATION TO STATION		
992+21.24	1029+36.78	

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

IA 117

LOCATION		DIMENSIONS				
ROAD IDENTIFICATION	STATION TO STATION	(W) Feet	(L) Feet	(R) Feet	(X) Inches	FS
County Road F17	1186+70.68 1220+75.16	24	23.35	23.35	14.5	3
N 91st Ave W	1171+50.00 1174+67.15	22	18.61	18.61	14.5	3
N 91st Ave W	1174+99.48 1180+00.00	22	18.61	18.61	14.5	3



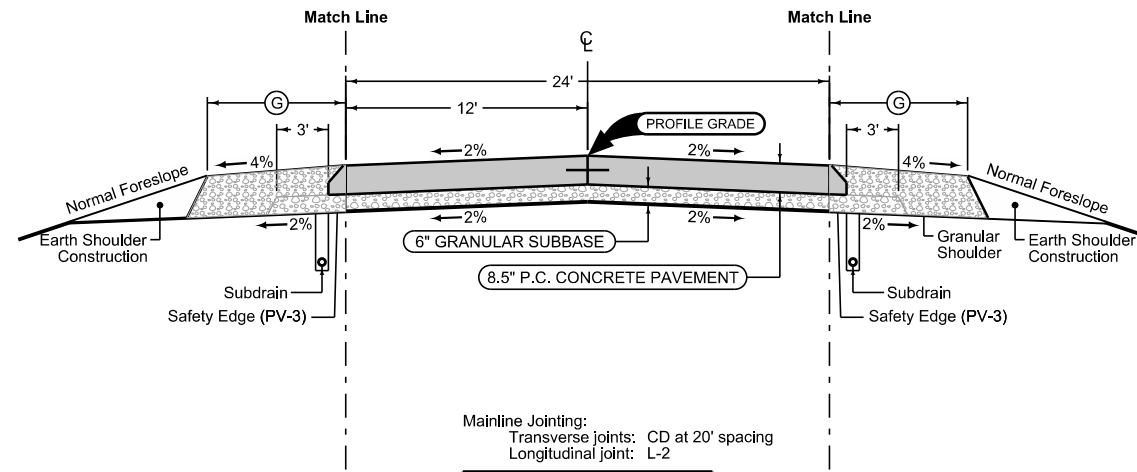
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

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

G_2_Grade Modified

Granular Shoulder with Safety Edge

STATION TO STATION		2_G_ Modified Feet
1186+70.68	1220+75.16	8



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

STATION TO STATION		2P_ 10-19-10 Feet
1186+70.68	1220+75.16	

Granular Shoulder with Safety Edge

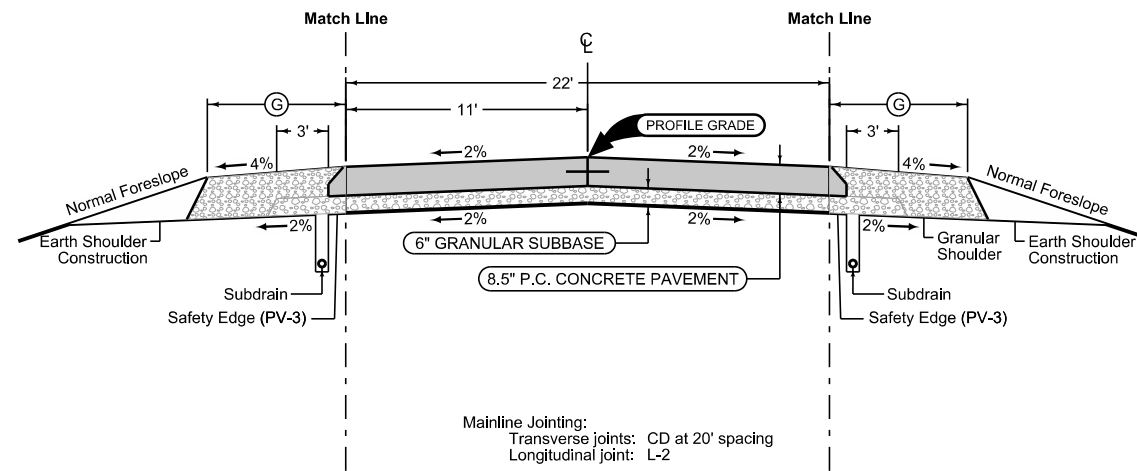
STATION TO STATION		2_G_ Modified Feet
1186+70.68	1220+75.16	8

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

COUNTY ROAD F17

Granular Shoulder with Safety Edge

STATION TO STATION		2_G_ Modified Feet
1171+50.00	1174+67.15	4
1174+99.48	1180+00.00	4



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

STATION TO STATION		2P_ 10-19-10 Feet
1171+50.00	1174+67.15	
1174+99.48	1180+00.00	

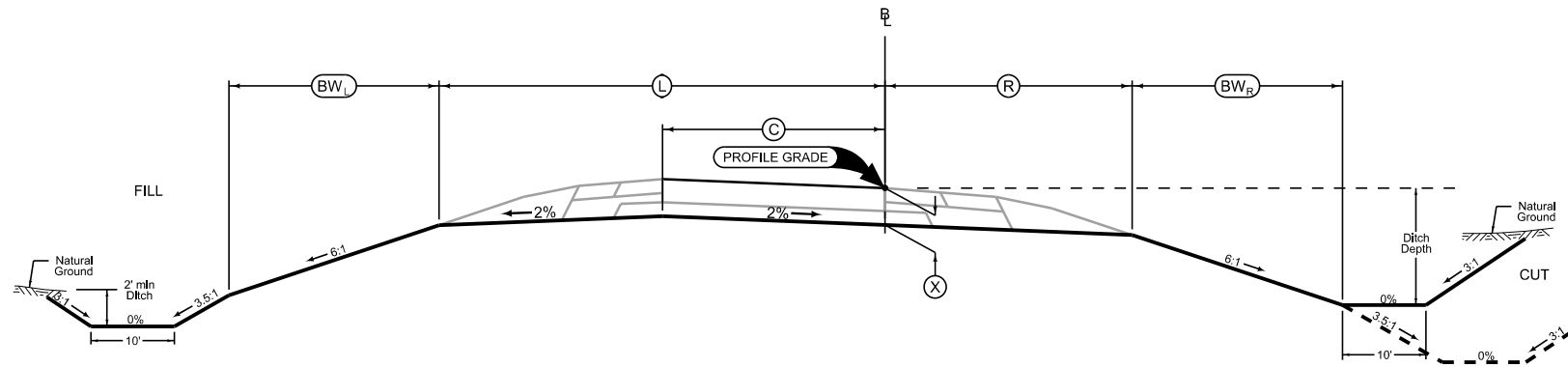
Granular Shoulder with Safety Edge

STATION TO STATION		2_G_ Modified Feet
1171+50.00	1174+67.15	4
1174+99.48	1180+00.00	4

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

N 91ST AVENUE

LOCATION				DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(C) Feet	(X) Inches	(BW _L) Feet	(BW _R) Feet
IA 330/US 65	A	11000+14.49	11016+03.04	30.36	16.09	16	16	9.64	7.91
IA 330/US 65	B	12000+00.00	12016+00.56	30.36	16.09	16	16	9.64	7.91
IA 330/US 65	C	13002+28.66	13016+09.07	30.36	16.09	16	16	9.64	7.91
IA 330/US 65	D	14000+14.49	14013+90.08	30.36	16.09	16	16	9.64	7.91

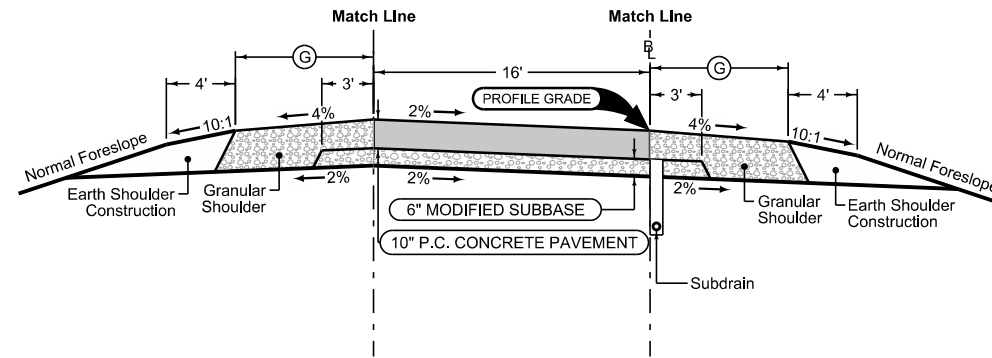


Section view is in direction of traffic.
 Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or super-elevated curves.

RAMP GRADING

Granular Shoulder

1R_G_ 10-19-10		
BEGIN STATION	END STATION	Ⓞ Feet
11000+14.49	11016+03.04	4



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 20' spacing.

1RP_ 10-19-10	
BEGIN STATION	END STATION
11000+14.49	11016+03.04

Granular Shoulder

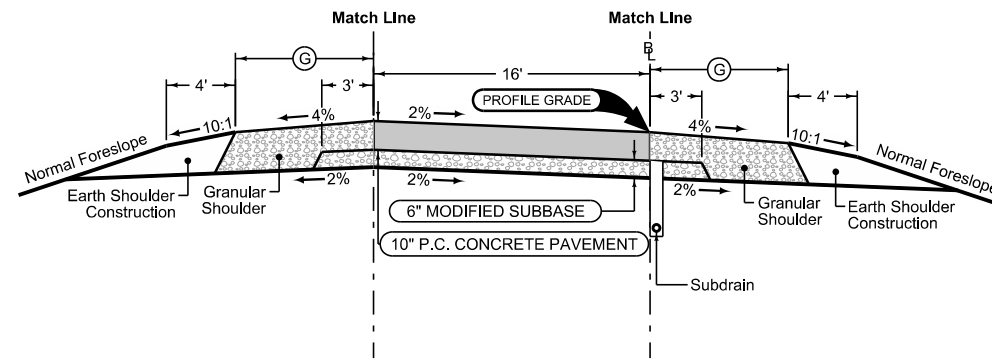
1R_G_ 10-19-10		
BEGIN STATION	END STATION	Ⓞ Feet
11000+14.49	11016+03.04	6

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

RAMP A

Granular Shoulder

1R_G_ 10-19-10		
BEGIN STATION	END STATION	Ⓞ Feet
12000+00.00	12016+00.56	4



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 20' spacing.

1RP_ 10-19-10	
BEGIN STATION	END STATION
12000+00.00	12016+00.56

Granular Shoulder

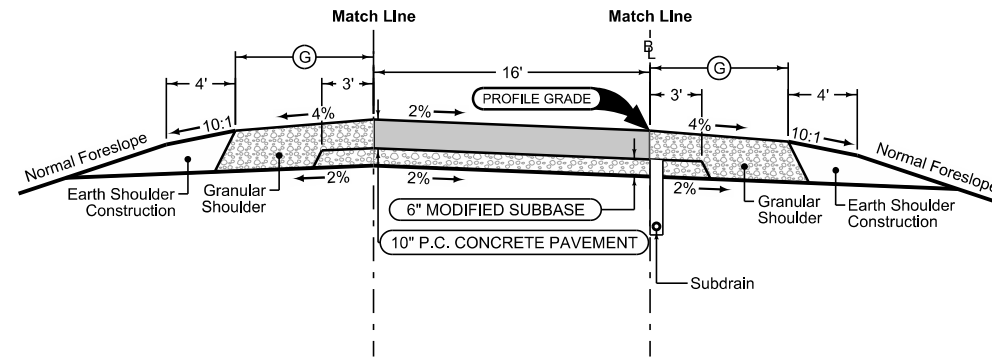
1R_G_ 10-19-10		
BEGIN STATION	END STATION	Ⓞ Feet
12000+00.00	12016+00.56	6

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

RAMP B

Granular Shoulder

1R_G_ 10-19-10		
BEGIN STATION	END STATION	Ⓞ Feet
13002+28.66	13016+09.07	4



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 20' spacing.

1RP_ 10-19-10	
BEGIN STATION	END STATION
13002+28.66	13016+09.07

Granular Shoulder

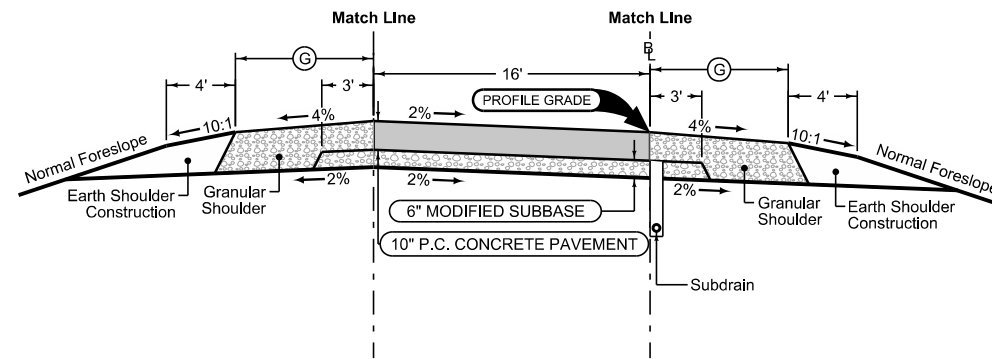
1R_G_ 10-19-10		
BEGIN STATION	END STATION	Ⓞ Feet
13002+28.66	13016+09.07	6

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

RAMP C

Granular Shoulder

1R_G_ 10-19-10		
BEGIN STATION	END STATION	Ⓞ Feet
14000+14.49	14013+90.08	4



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 20' spacing.

1RP_ 10-19-10	
BEGIN STATION	END STATION
14000+14.49	14013+90.08

Granular Shoulder

1R_G_ 10-19-10		
BEGIN STATION	END STATION	Ⓞ Feet
14000+14.49	14013+90.08	6

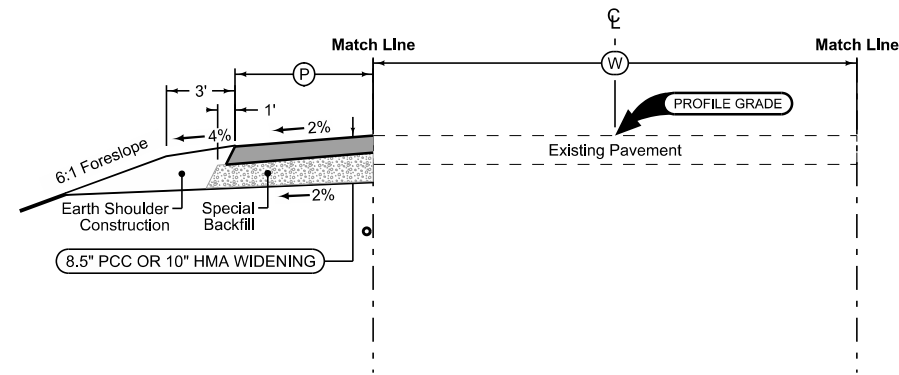
See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

RAMP D

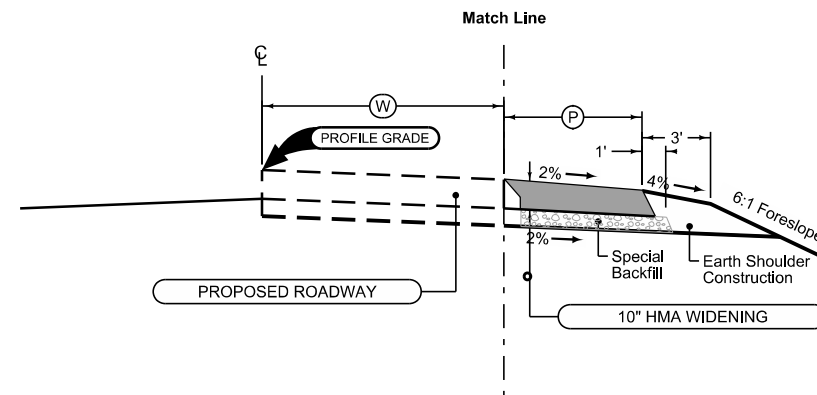
Widening Stage 2

Jointing for PCC Alternative:
 Transverse joint: See Standard Road Plan PV-121
 Longitudinal joint: See Standard Road Plan PV-121

ROAD IDENTIFICATION	LOCATION		DIMENSIONS	
	STATION TO STATION		(P) Feet	(W) Feet
Existing US 65	1050+26.08	1052+50.00	2' - 22"	24' ±
Existing US 65	1052+50.00	1058+20.00	22'	24' ±
Existing US 65	1058+20.00	1058+96.85	22' - 2"	24' ±
Existing IA 117	989+30.00	991+50.00	2' - 22"	24' ±
Existing IA 117	991+50.00	993+86.57	22'	24' ±
Existing IA 117	993+86.57	998+07.57	VAR	24' ±
Existing IA 117	998+07.57	999+00.00	22'	24' ±
Existing IA 117	999+00.00	1001+20.00	22' - 2"	24' ±
Existing County Road F17	1214+81.64	1217+00.00	2' - 24"	24' ±
Existing County Road F17	1217+00.00	1221+75.00	24'	24' ±
Existing County Road F17	1221+75.00	1224+13.30	24' - 2"	24' ±



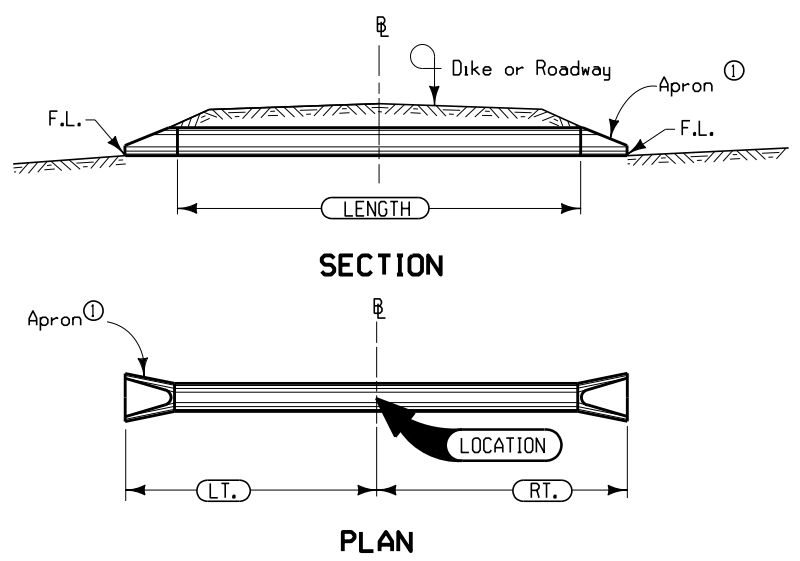
Widening Stage 3



ROAD IDENTIFICATION	LOCATION		DIMENSIONS	
	STATION TO STATION		(P) Feet	(W) Feet
US 65	1045+25.00	1047+50.00	4' - 20"	28' ±
US 65	1047+50.00	1058+20.00	20'	28' ±
US 65	1058+20.00	1058+93.55	20' - 4"	28' ±
IA 117	989+25.00	991+50.00	4' - 20"	28' ±
IA 117	991+50.00	1002+50.00	20'	28' ±
IA 117	1002+50.00	1004+75.00	20' - 4"	28' ±
County Road F17	1211+55.00	1214+00.00	4' - 24"	24' ±
County Road F17	1214+00.00	1221+75.00	24'	24' ±
County Road F17	1221+75.00	1224+20.00	24' - 4"	24' ±

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

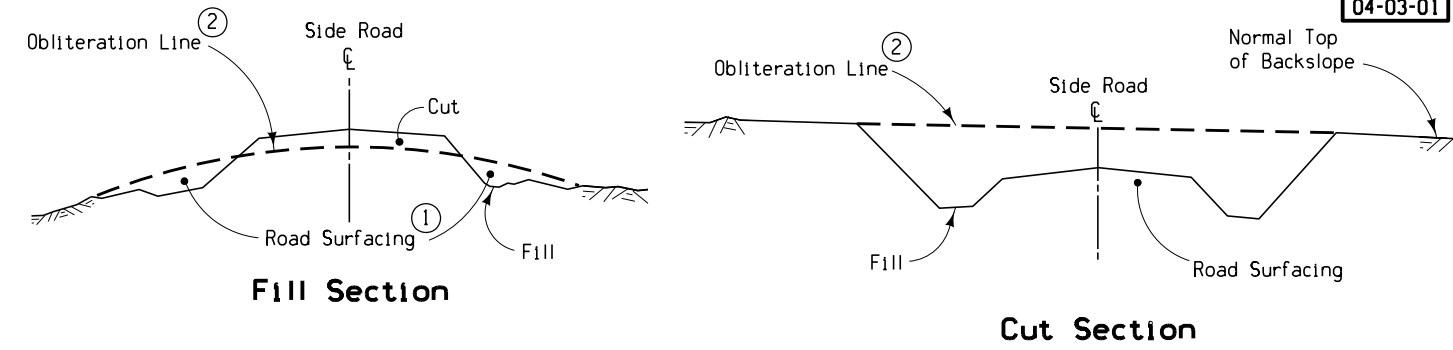
1101
04-30-02



Notes:
CL shall be CL of roadway, dike, survey, or other; as detailed on plans.
Skew angle is the angle which one end of the pipe is ahead (by stationing) of a line perpendicular to the CL (example skew Rt. ahead 30°).
Refer to tabular listing and other plans for additional information.
① See Standard Road Plan RF-3 For Conc. or RF-5 for Metal.

PIPE CULVERT

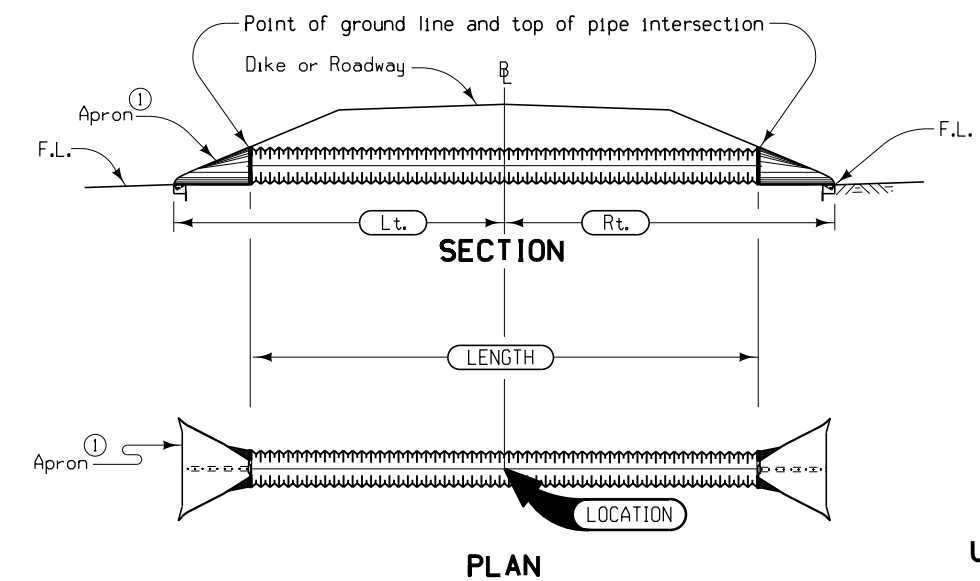
4302
04-03-01



① Existing road surfacing (granular material) shall be placed as shown unless otherwise directed by the Engineer or provided for in the detail project plans.
② When specified, the upper 1' to be suitable for vegetation (grass or crops).
Note:
The work of obliterating or reshaping old roadbeds shall be done at the direction of the Engineer.

TYPICAL DETAILS FOR OBLITERATION EXISTING ROADBED

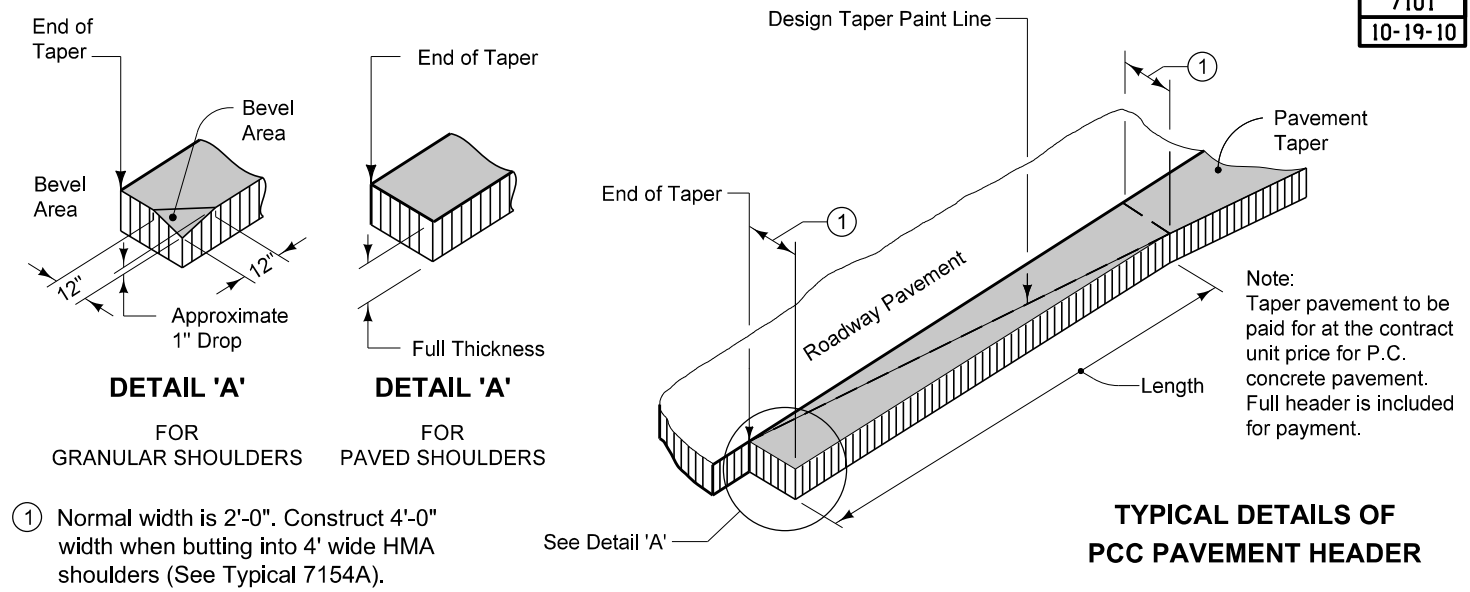
1601
10-16-12



CL shall be CL of roadway, dike, survey, or other; as detailed on plans.
Skew angle is the angle which one end of the pipe is ahead (by stationing) of a line perpendicular to the CL (example skew Rt. ahead 30 degrees).
① See Standard Road Plan RF-3 for Concrete or RF-5 for Metal and Polyethylene.

UNCLASSIFIED PIPE CULVERT

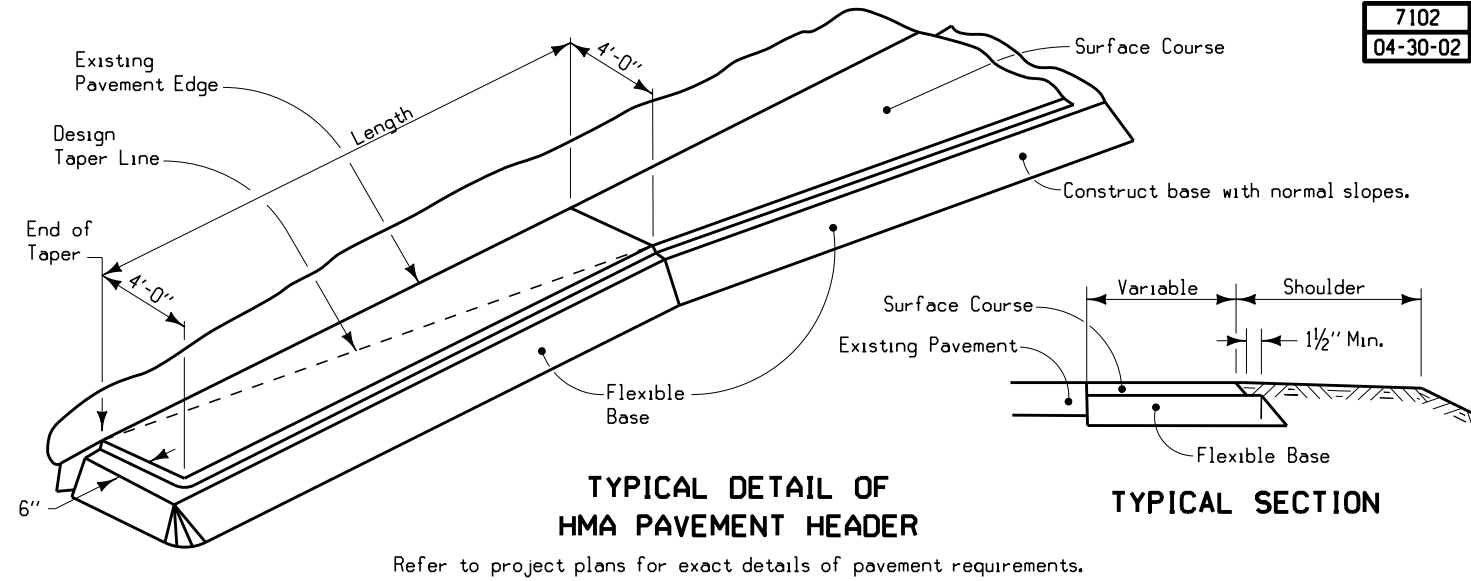
7101
10-19-10



① Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).

TYPICAL DETAILS OF PCC PAVEMENT HEADER

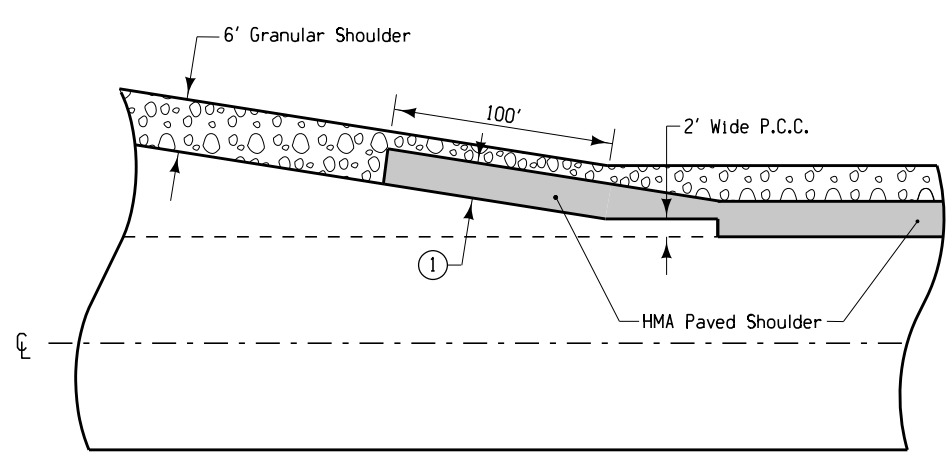
7102
04-30-02



TYPICAL DETAIL OF HMA PAVEMENT HEADER

TYPICAL SECTION

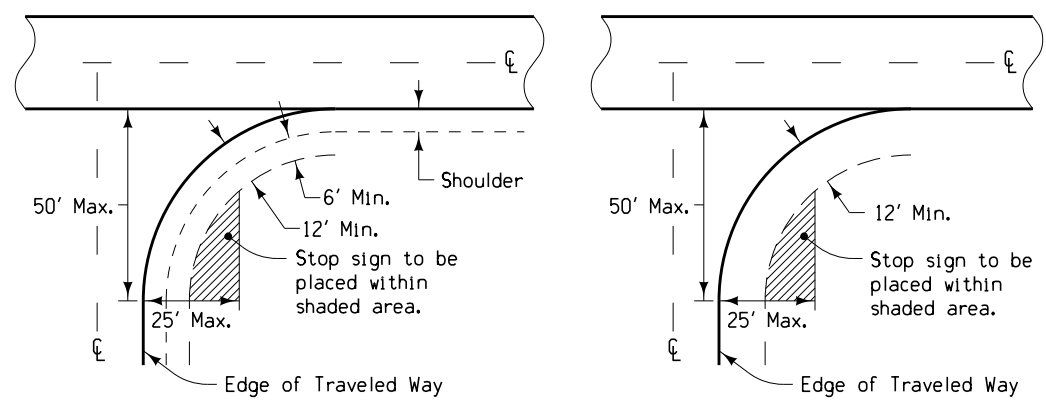
7154
04-20-10



① Width of paved shoulder on taper matches width of paved shoulder on mainline.

PAVED SHOULDER DETAIL AT RAMP TAPERS (Non-Interstate)

9503
07-15-97



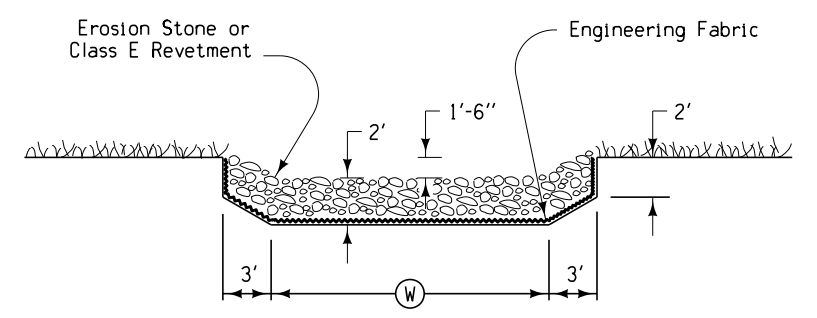
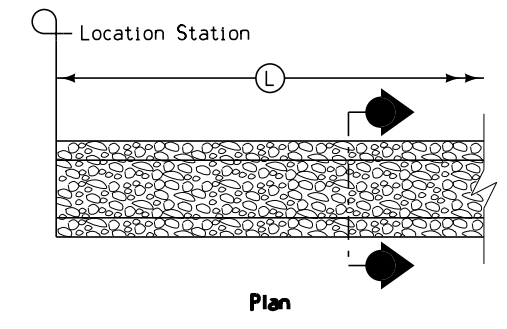
NOTES:
Stop signs should be confined to the shaded areas, but as close to the approach roadway as possible to provide the motorist with the best visual impact.
If possible, stop signs should be placed at the point where vehicles are to stop or as near as practical.
In rural areas, the lateral clearance should not be closer than 6' from the edge of a usable shoulder, or if none, 12' from edge of the traveled way.
In urban areas, stop signs should be placed a minimum of 6' from the near edge of the intersected street or a minimum of 4' in advance of the near edge of a marked crosswalk. Lateral clearance may be reduced to a minimum of 2' from the face of a curb.
Where the approach roadway consists of two lanes of traffic, a second stop sign should be placed where it is visible to traffic in the inner lane.
At channelized intersections, the additional stop sign may be placed on a channelized island or median.

CASE 'A'
WITH SHOULDER

CASE 'B'
WITHOUT SHOULDER

STOP SIGN PLACEMENT

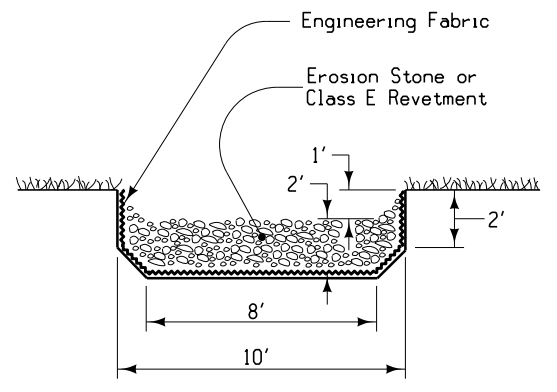
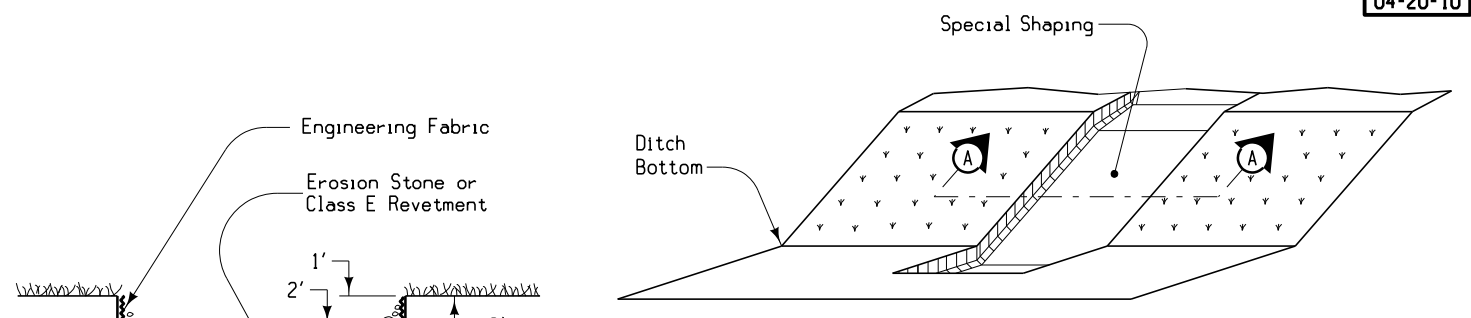
4402
04-16-13



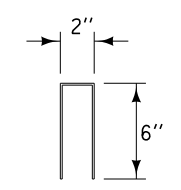
Refer to Tabulation 100-23 for additional information.

ROCK DITCH

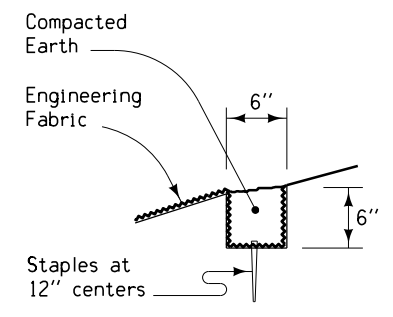
4403
04-20-10



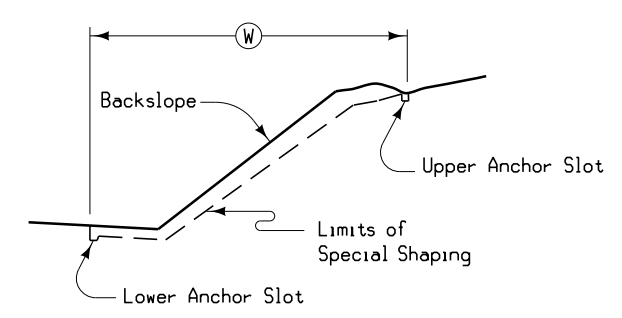
Isometric View



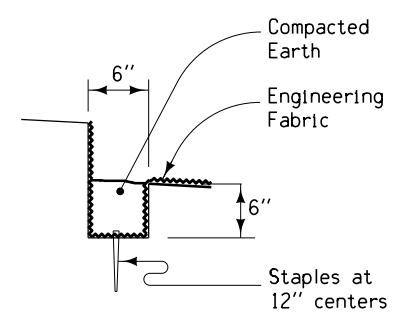
Staple
(No. 11 wire)



Upper Anchor Slot



Typical Section

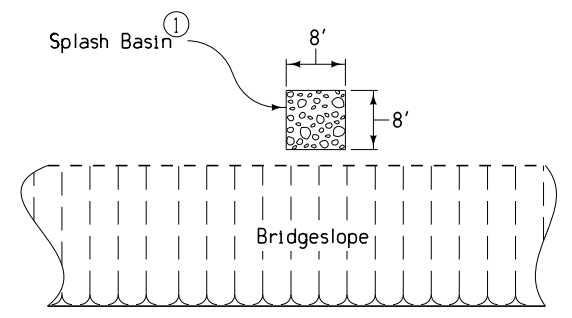


Lower Anchor Slot

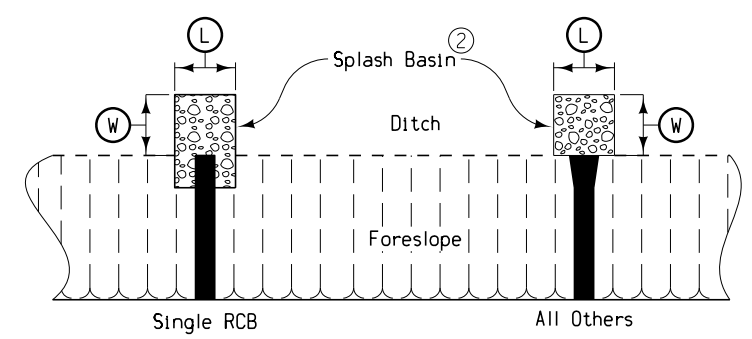
ROCK FLUME

Refer to Tabulation 100-23 for additional information.

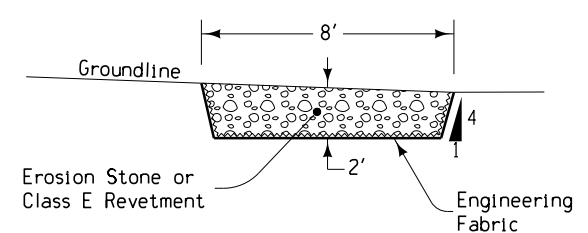
4404
10-16-12



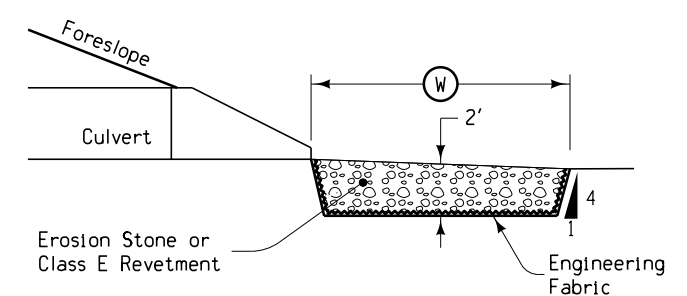
Splash Basin Under Bridge Drain
Plan View



Splash Basin at Culvert Outlet
Plan View



Splash Basin Under Bridge Drain
Typical Section

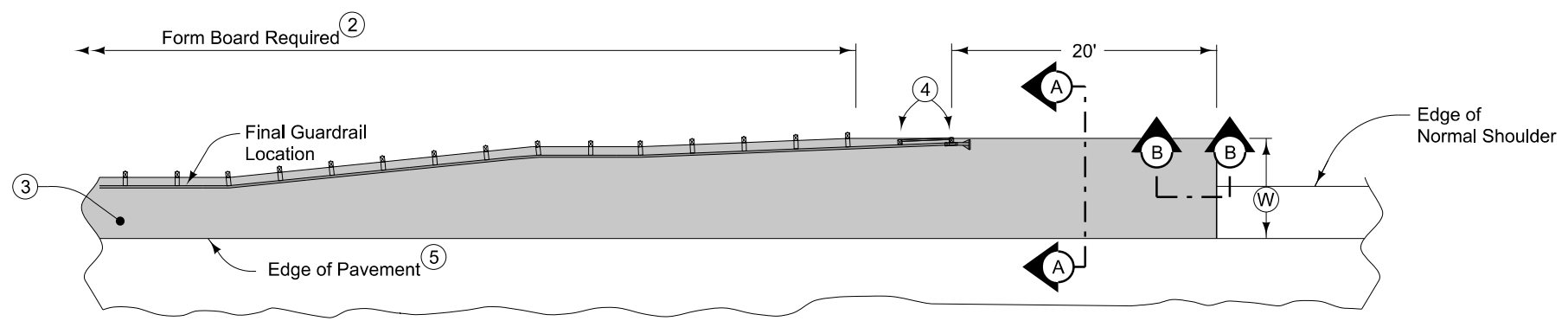


Splash Basin at Culvert Outlet
Typical Section

- ① Center splash basin directly under bridge drain.
- ② For single RCB, extend splash basin along the outside of the wings to the face of the parapet. Construct to a width of 3 feet and a depth of 2 feet.

Refer to Tabulation 100-23 for additional information.

ROCK SPLASH BASIN

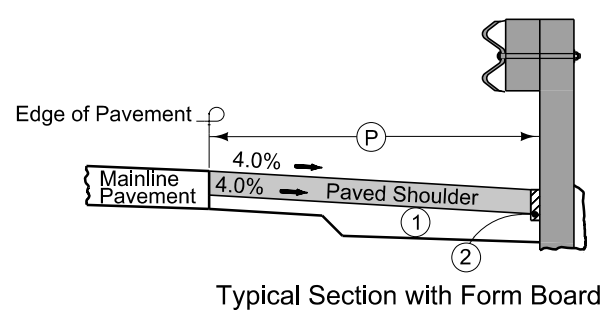


6" HMA Paved Shoulder at guardrail. 7" PCC may be substituted with the following jointing layout:

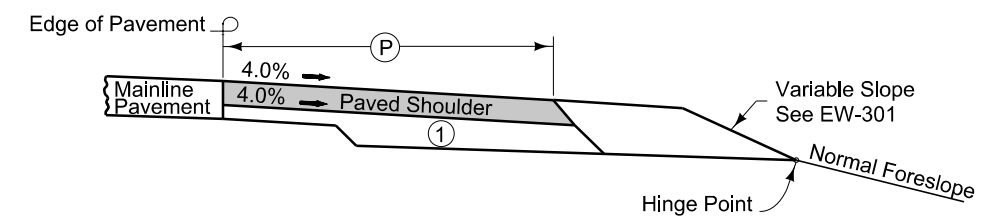
Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at W/2 from edge of mainline pavement when W is greater than 10' wide. Terminate longitudinal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

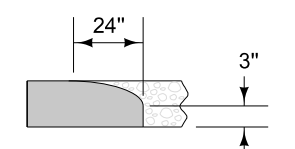
Refer to Shoulder tabulation (112-9) for quantities.



Typical Section with Form Board



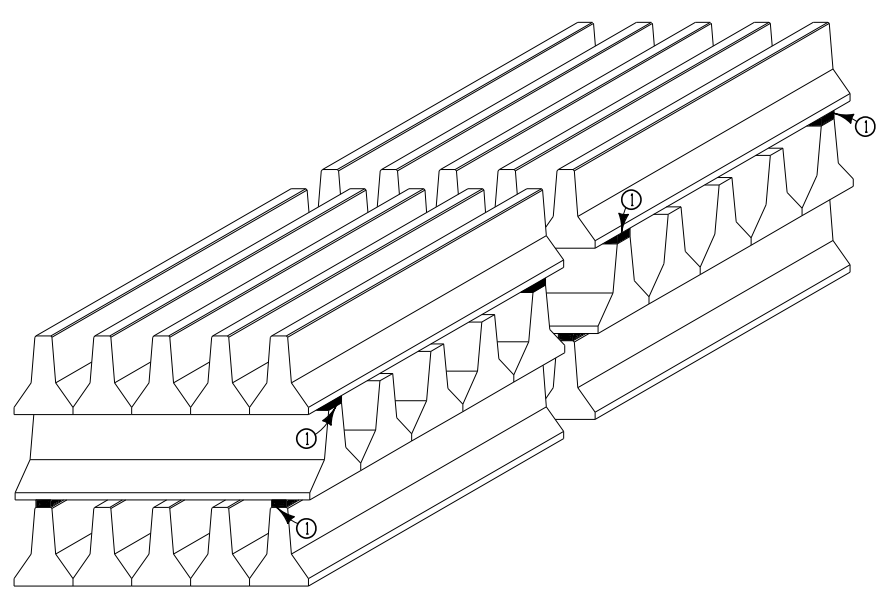
Section A-A



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

- 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.
- ⑤ 'KT-1' joint for PCC shoulder.
'B' joint for HMA shoulder.

PAVED SHOULDER AT GUARDRAIL



Notes:

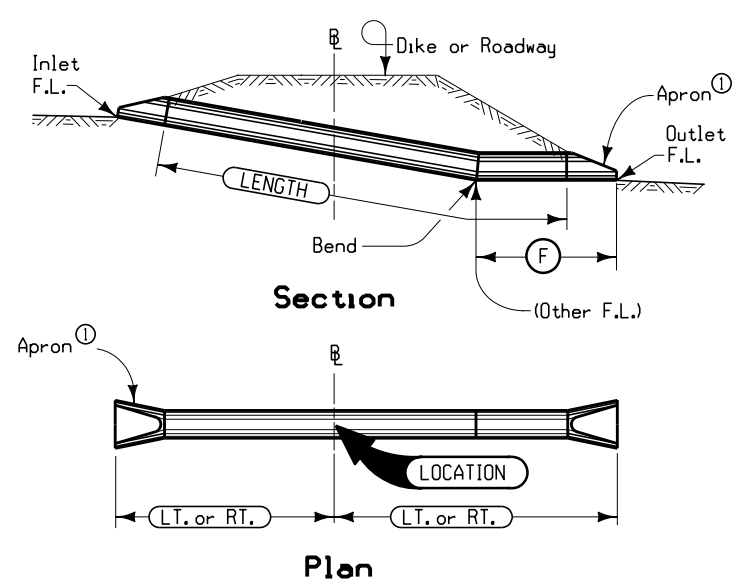
At the completion of the project, the contractor shall stack the temporary barrier rail at locations designated in the plans.

Barrier sections shall be stacked 3 high in alternating layers or as modified by the Engineer.

The cost of hauling and stacking the temporary barrier rail shall be incidental to the Item "Temporary Barrier Rail".

① 2x4 or scrap lumber.

STORAGE PLAN FOR BARRIER RAIL



B shall be C of roadway, dike, survey, or other; as detailed on plans.
"Bend" may be accomplished by use of metal elbow, Pipe Adapter (RF-2), Type "D" Section or Concrete Elbow (RF-13) as specified.

① See Standard Road Plan RF-3 For Conc. or RF-5 for Metal.

② F is from bend to end of outlet.

PIPE CULVERT LETDOWN STRUCTURE

SURVEY SYMBOLS

- PLG Location of General Photo
- OUT Tile Outlet
- COR Round Bridge Pier Column
- ⊕ MH Utility Access (Manhole)
- TP TPD Telephone Pedestal
- ⊗ INB Storm Sewer Beehive Intake
- ⦿ PPA Power Pole Co. 1
- ⊘ WEL Well
- ⊕ SEP Septic Tank
- Tile TIL Tile Line
- ▬▬▬▬▬▬ RET Retaining Walls
- x — FW Wire Fence
- ← DU Centerline Draw or Stream (Up)
- → D Centerline Draw or Stream (Down)
- T1 — TLA Underground Telephone Line Co. 1
- E1 — ELA Underground Electric Line Co. 1
- E2 — ELB Underground Electric Line Co. 2
- F0 — FOA Underground Fiber Optic Co. 1
- ⊙ TV Satellite TV Dish
- — — — — ENU Edge Unpaved Entrance & Parking
- * TEV Evergreen Tree
- ⊕ TDC Tree Deciduous
- LUM Luminaire
- ⊕ SHR Shrub
- ⊕ STP Stump
- SIGN SI Sign
- SIGN SI Sign
- ⊕ LP L.P. Tank
- — — — — EW Edge of Water
- — — — — SWP Swamp or Marsh
- ~~~~~ HDG Hedge Row
- ⋈ RIP Rip-Rap
- FWD Wood Fence
- — — — — GDL Guard Rail Steel
- ⊕ WM Wind Mill
- ▬▬▬▬▬▬ DIK Centerline of Dike or Dam
- # — FCL Chain Link and Security Fence
- Fig FLG Flag Poles

UTILITY LEGEND

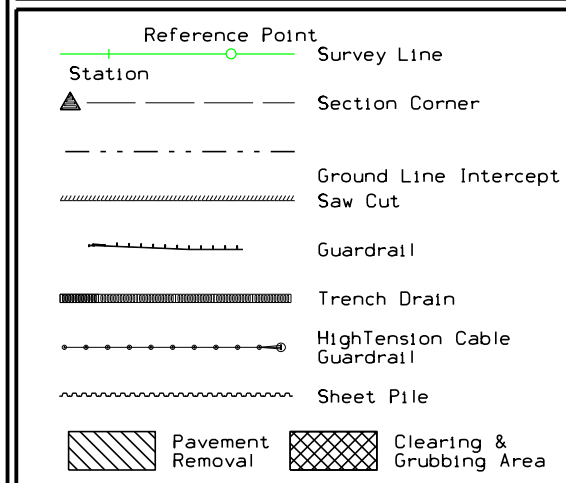
- T1 — Windstream
- E1 — Iowa Dept. of Transportation
- E2 — MidAmerican
- W — Central Iowa Water Association
- F0 — Lightcore (Digital Teleport)
- ⦿ PPA Power Pole Co. 1

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

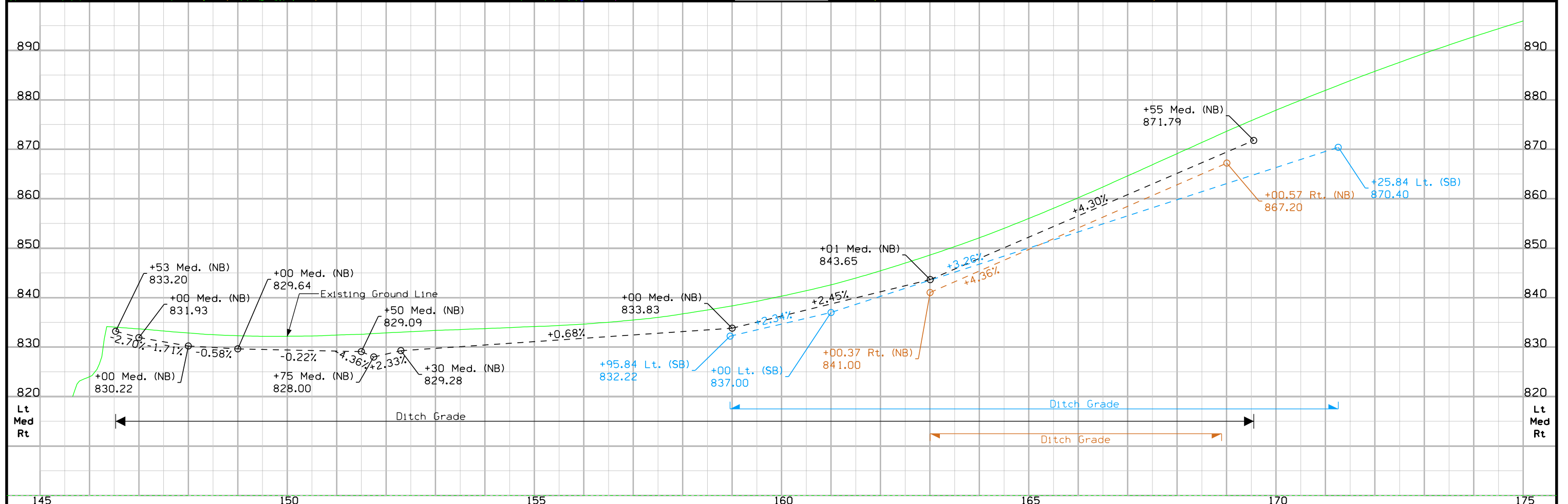
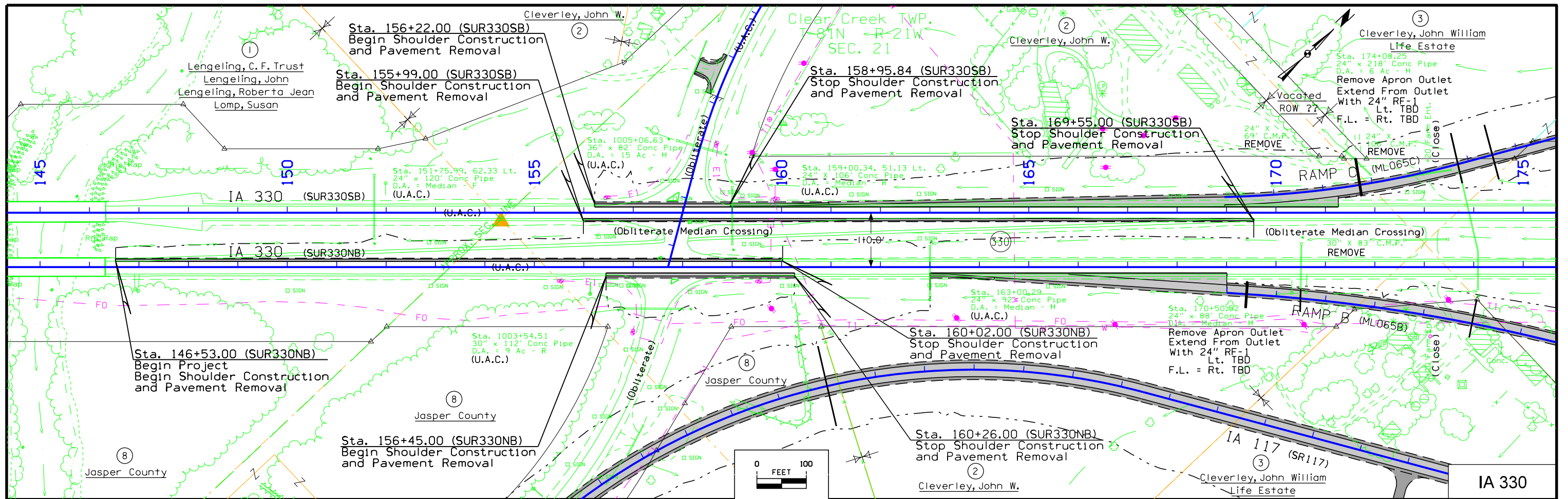
PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

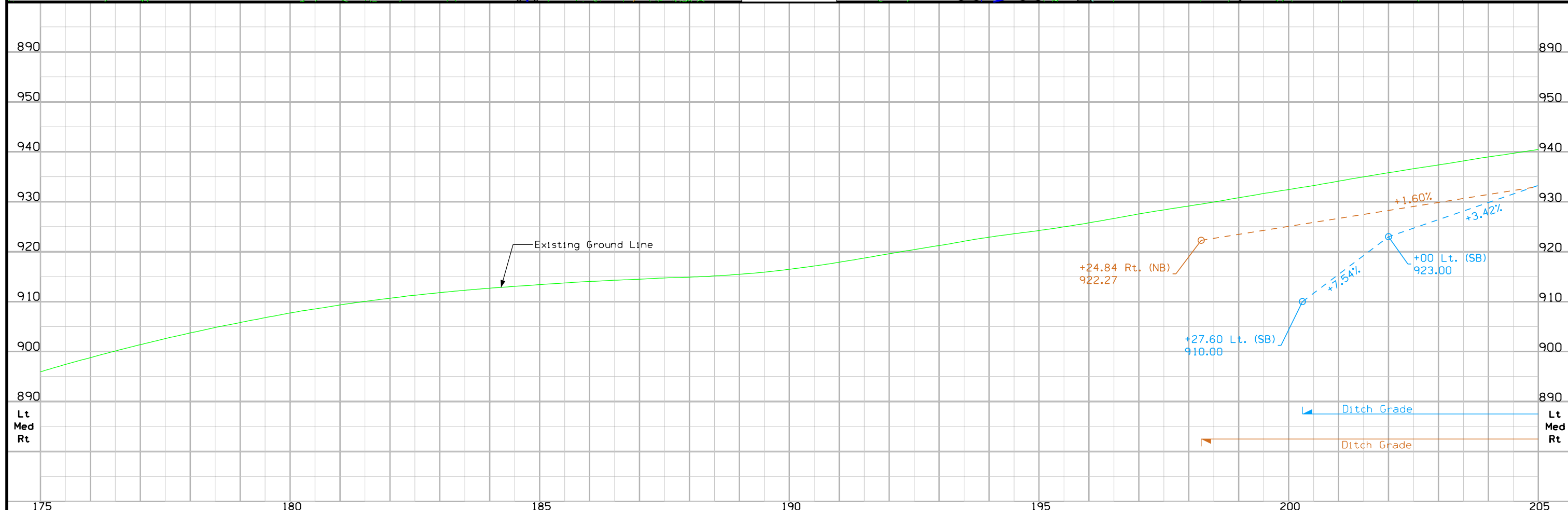
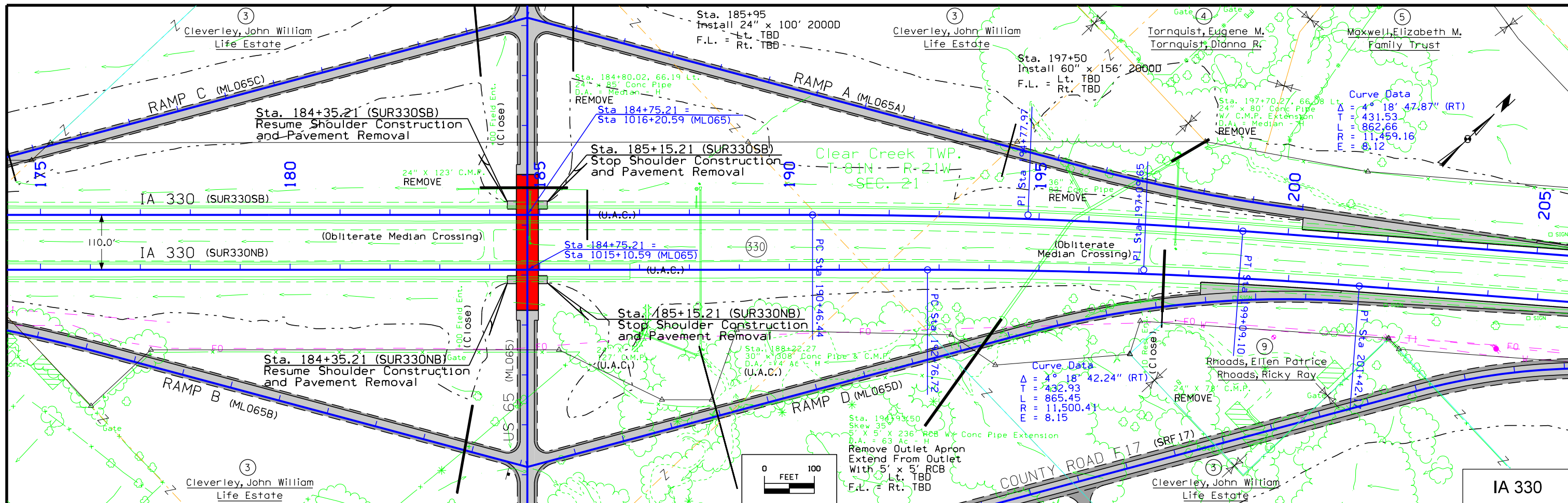
LINEWORK		Design Color No.	
Green	(2)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

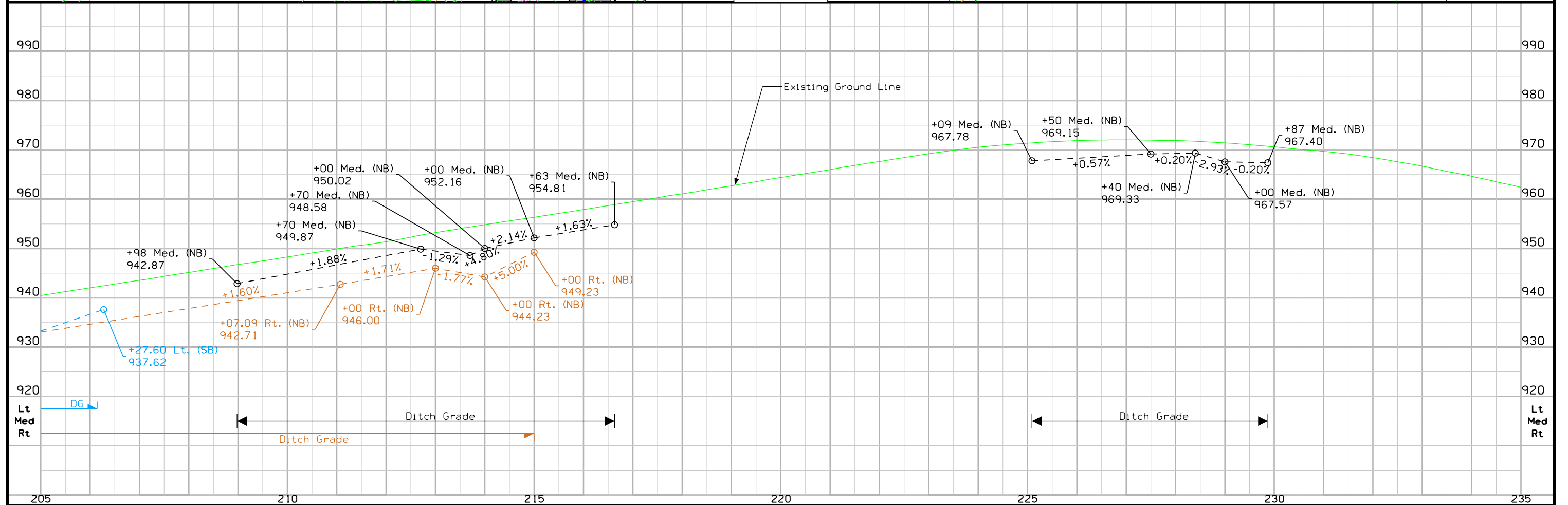
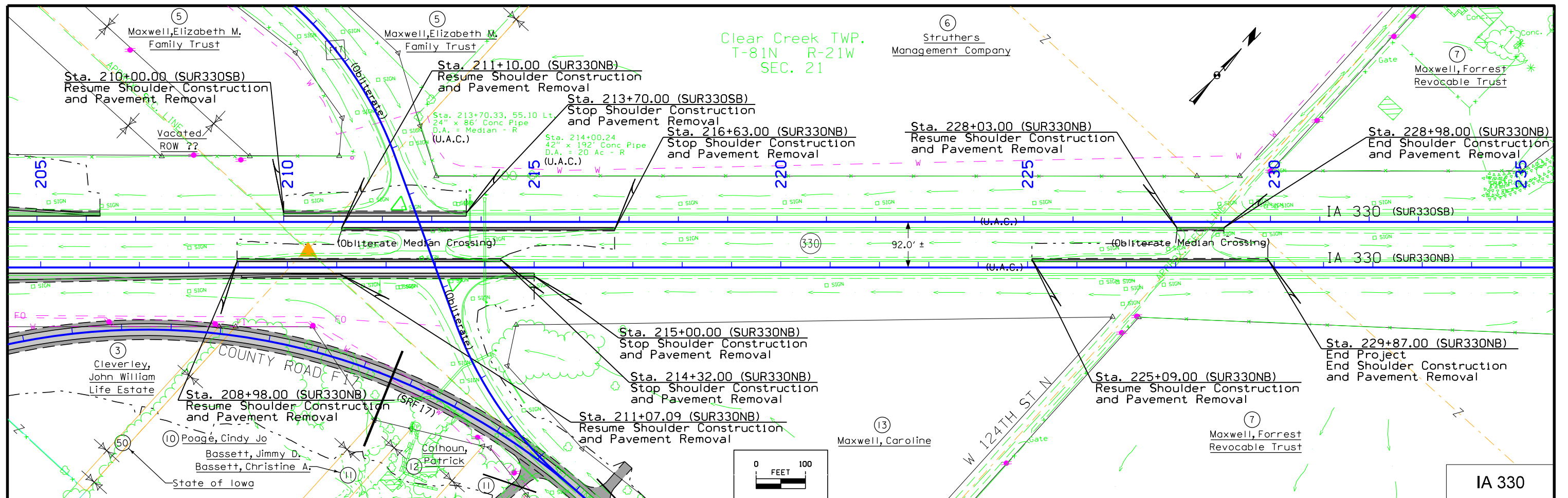


PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D, E, & K)







Clear Creek TWP.
T-81N R-21W
SEC. 21

Cleverley, John William
Life Estate

Cleverley, John William
Life Estate

Shirley, Charles
Shirley, Trudy S.
Revocable Trust

Sta. 1026+00.00
Install 18" Uncl. Ent. Pipe
F.L. = Lt. TBD
F.L. = Rt. TBD

Sta. 1034+00.00
Install 18" Uncl. Ent. Pipe
F.L. = Lt. TBD
F.L. = Rt. TBD

POT 1010+15.55 (ML065) =
PI 12016+15.05 (ML065B) =
PI 14000+00.00 (ML065D)

POT 1020+15.55 (ML065) =
PI 11000+00.00 (ML065A) =
PI 13016+24.20 (ML065C)

Sta. 1006+02
Install 5'x5' RCB x 240' 2000D
Skew = 18° Rt. Ahd.
F.L. = Lt. TBD
F.L. = Rt. TBD

Sta 1015+10.59 =
Sta 184+75.21 (SUR330NB)

Sta 1016+20.59 =
Sta 184+75.21 (SUR330SB)

Link, Gary A.

+00 Prop. Type "C" Ent.

Stop Sign
AM (PM)
31 (57)
28 (134)

Stop Sign
AM (PM)
22 (126)
0 (0)
24 (93)

Stop Sign
AM (PM)
121 (42)
33 (59)

Sta. 1007+90.55 (ML065)
Sta 1186+56.19 (SRF17)
Sta 1029+50.61 (SR117)
Begin US 65 Construction

Stop Sign
AM (PM)
102 (185)
16 (8)

Stop Sign
AM (PM)
143 (66)
138 (66)

Stop Sign
AM (PM)
9 (6)
0 (0)
17 (2)

Sta. 1016+75
Install 24" x 174' 2000D
F.L. = Lt. TBD
F.L. = Rt. TBD

Sta. 1023+55
Install 36" x 246' 2000D
Skew = 15° Lt. Ahd.
F.L. = Lt. TBD
F.L. = Rt. TBD

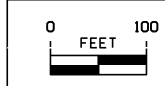
Sta. 1026+50.00
Install 18" Uncl. Ent. Pipe
F.L. = Lt. TBD
F.L. = Rt. TBD

Link, Gary A.

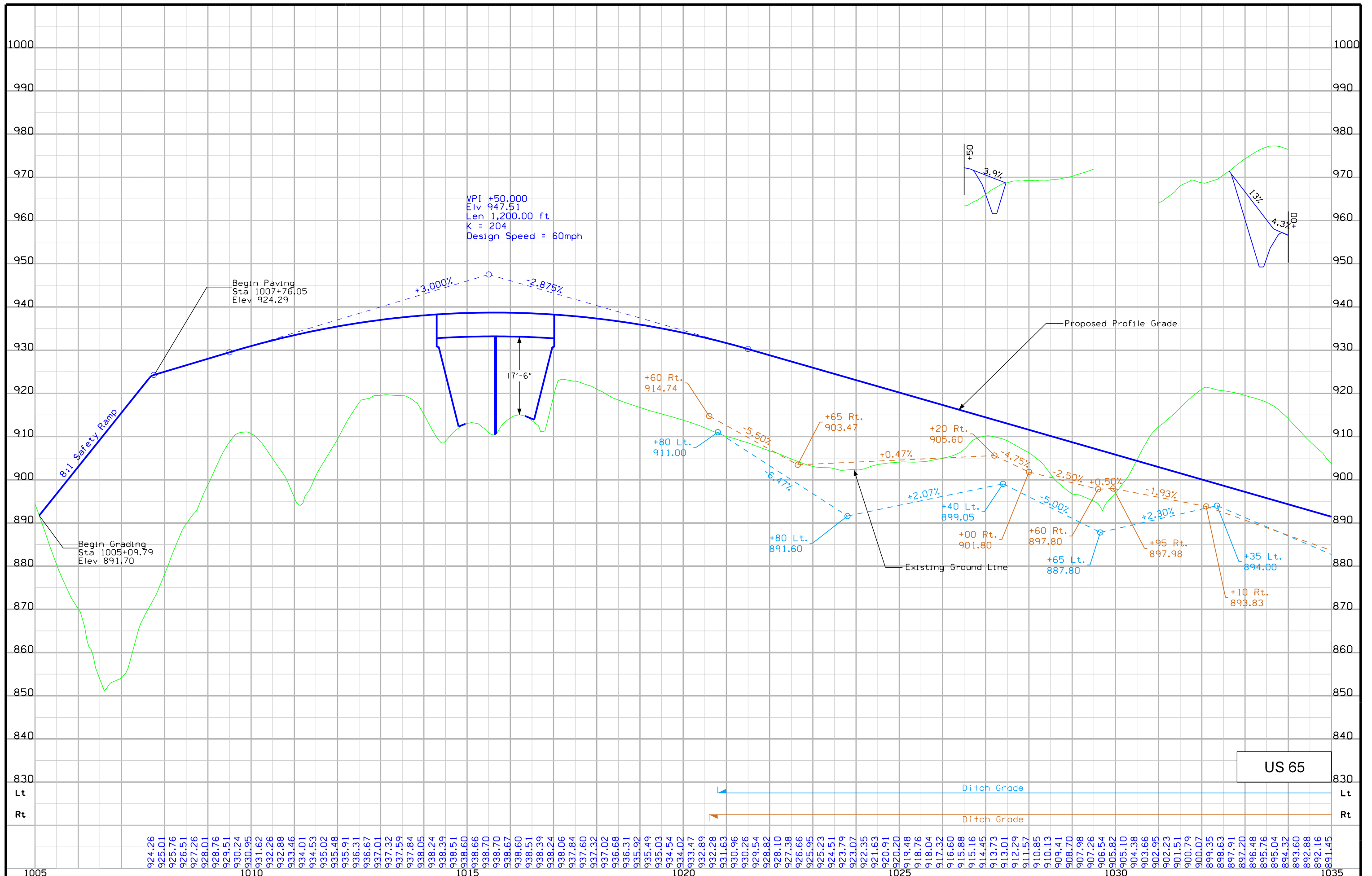
Cleverley, John William
Life Estate

Cleverley, John William
Life Estate

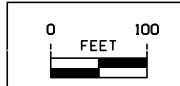
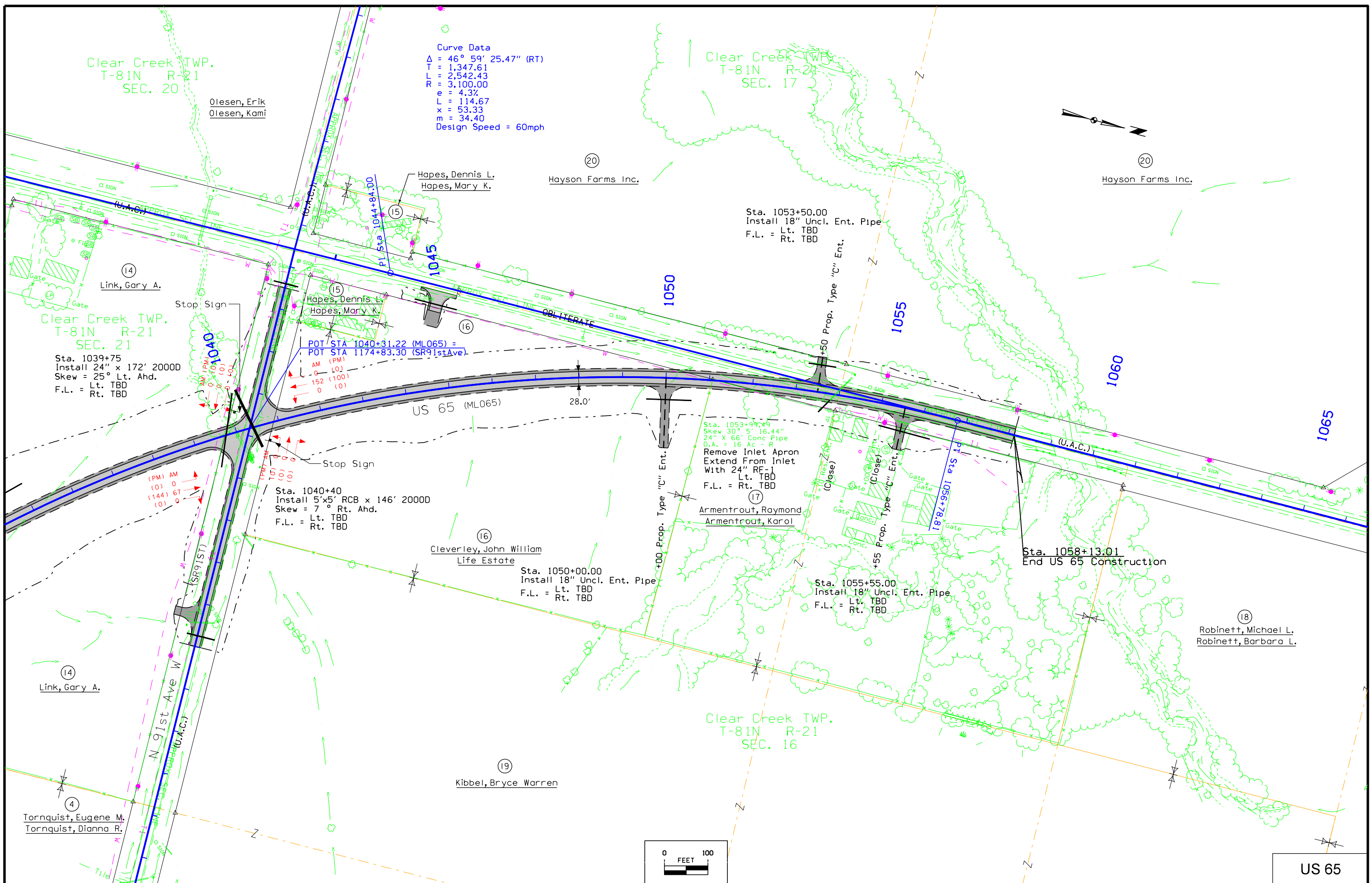
Tornquist, Eugene M.
Tornquist, Dianna R.



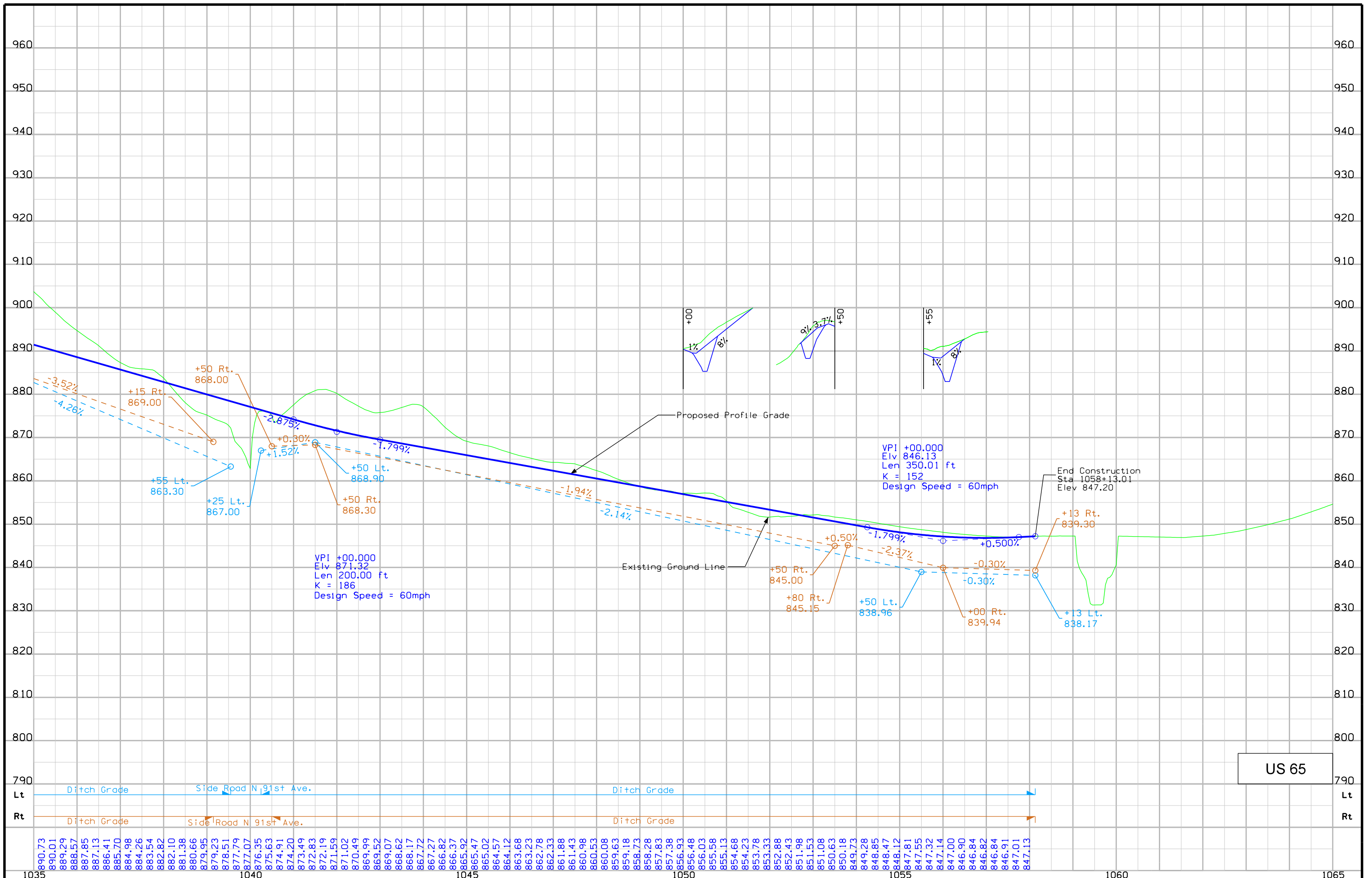
US 65



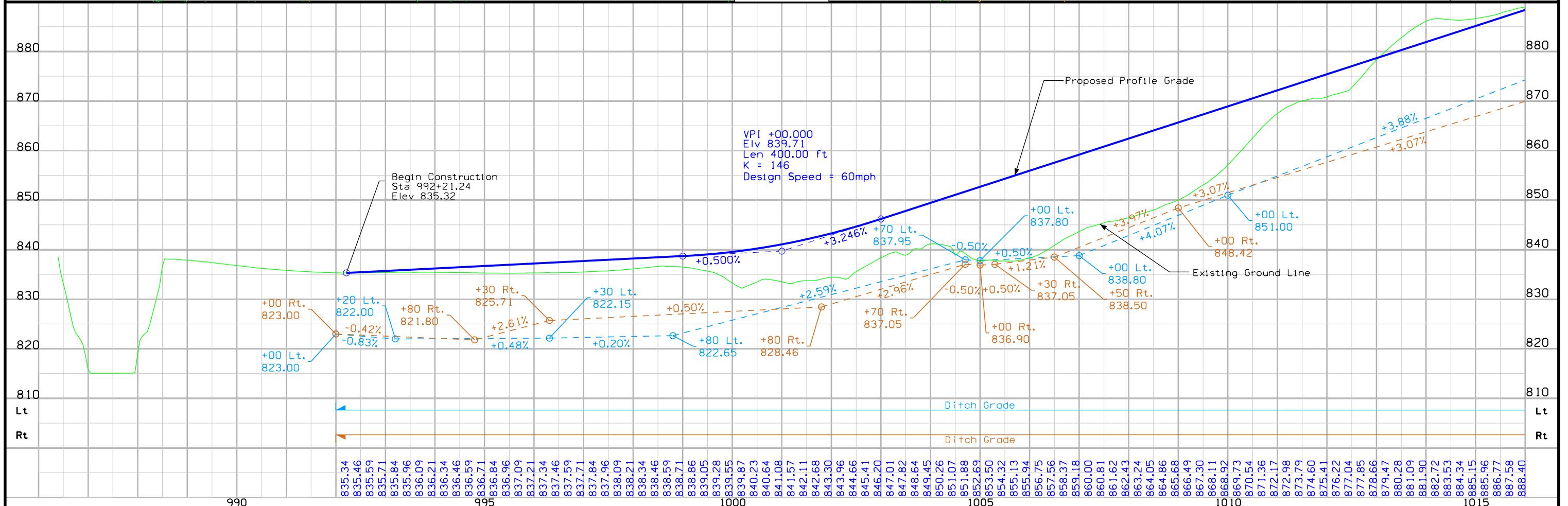
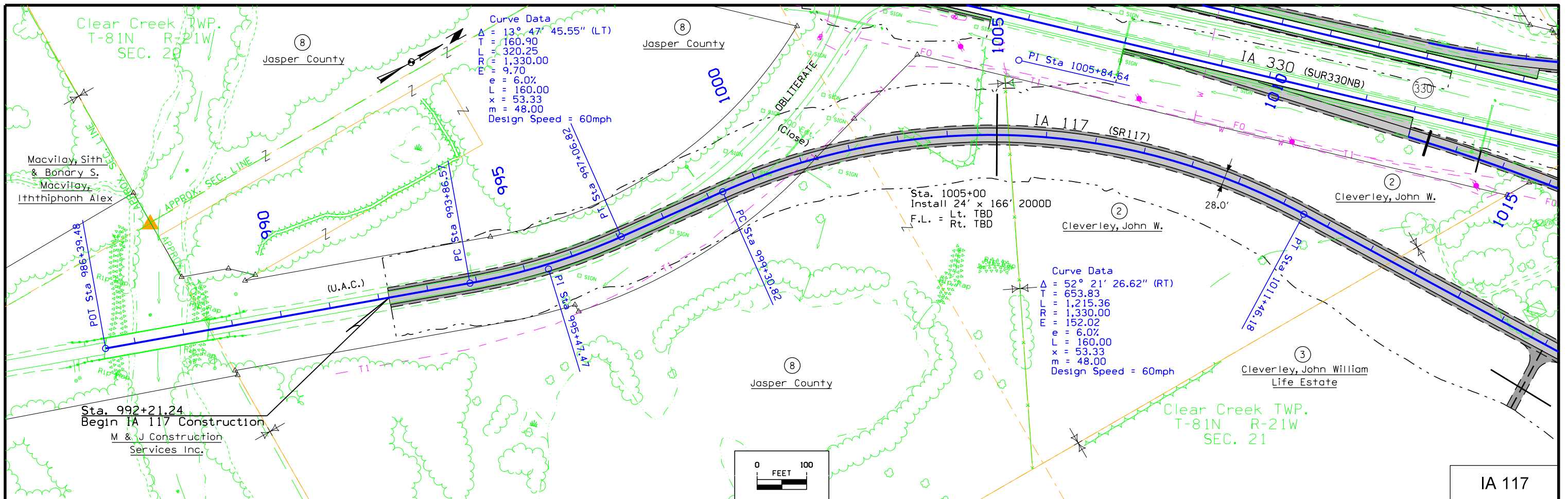
Curve Data
 $\Delta = 46^\circ 59' 25.47''$ (RT)
 T = 1,347.61
 L = 2,542.43
 R = 3,100.00
 e = 4.3%
 L = 114.67
 x = 53.33
 m = 34.40
 Design Speed = 60mph

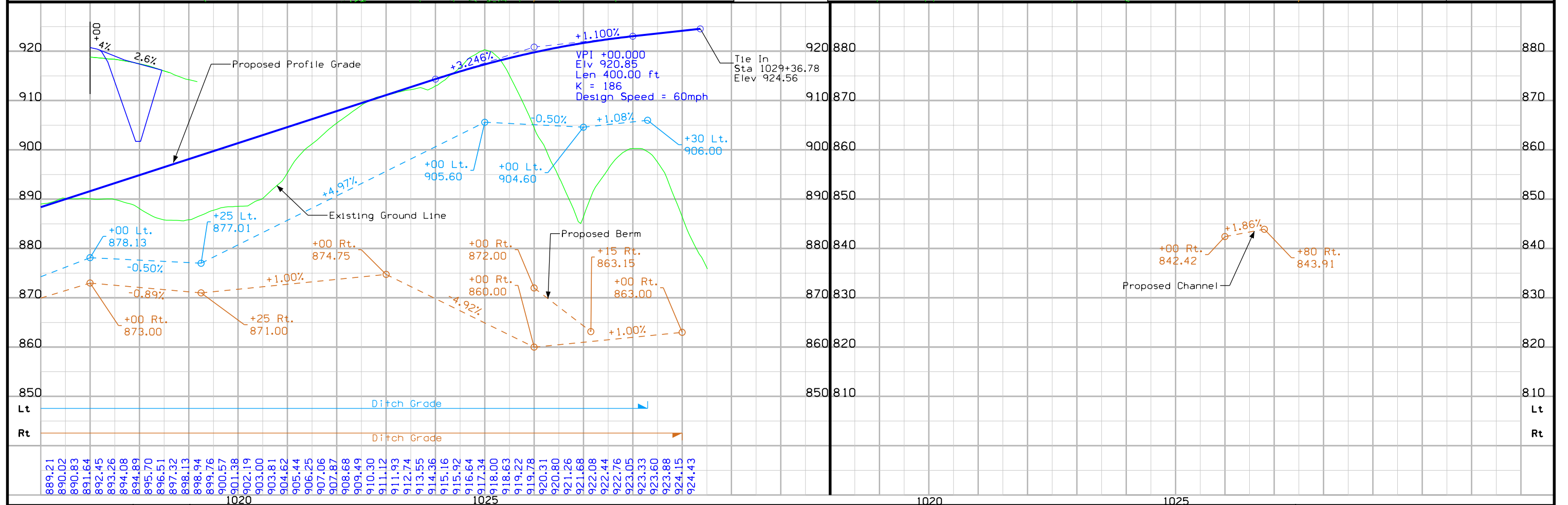
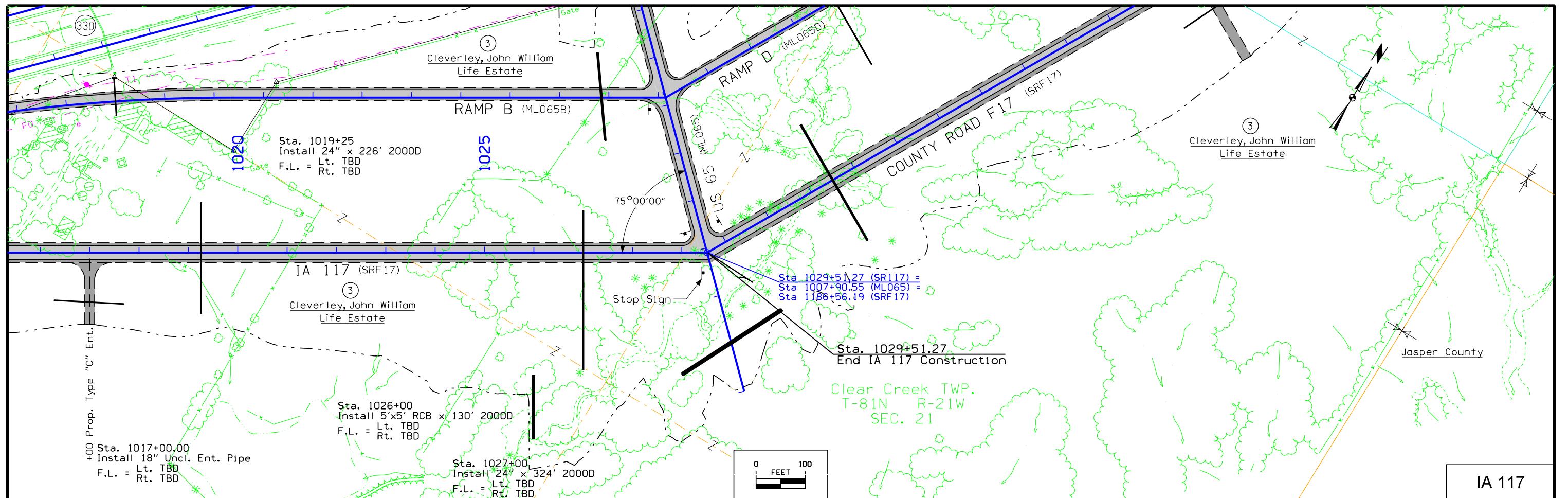


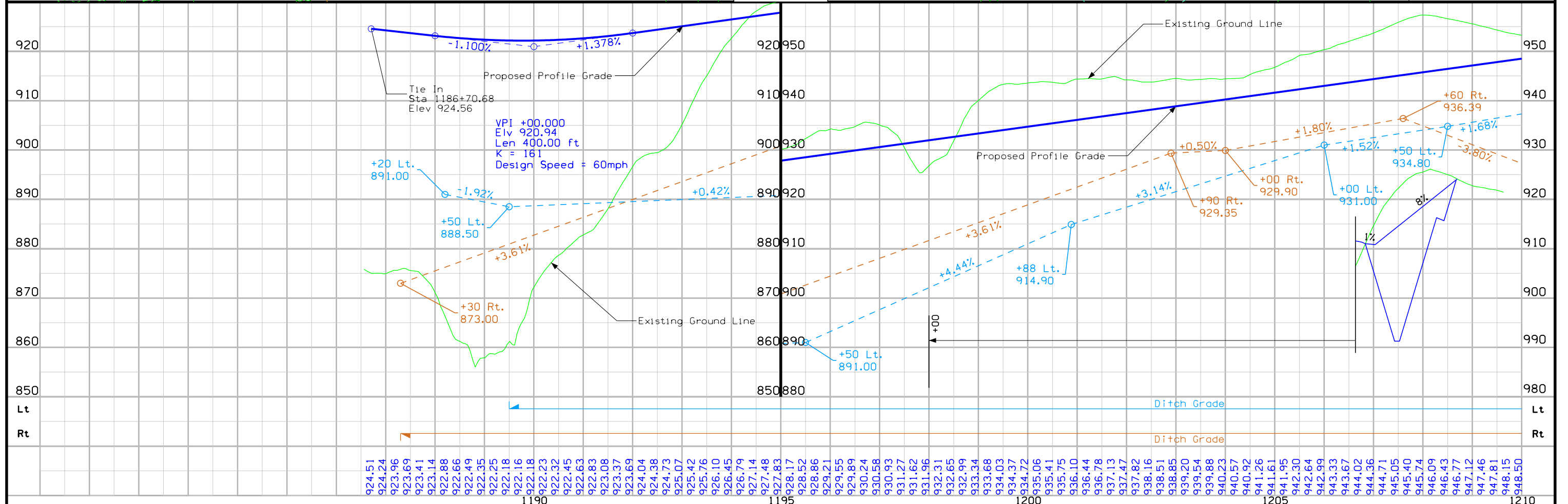
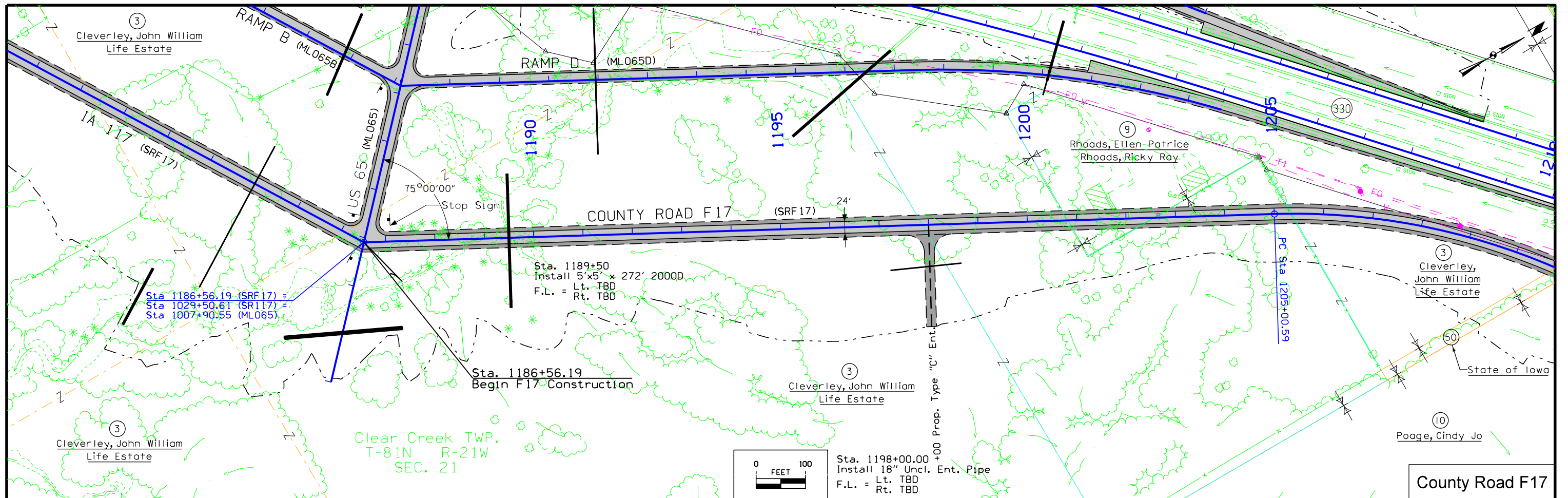
US 65

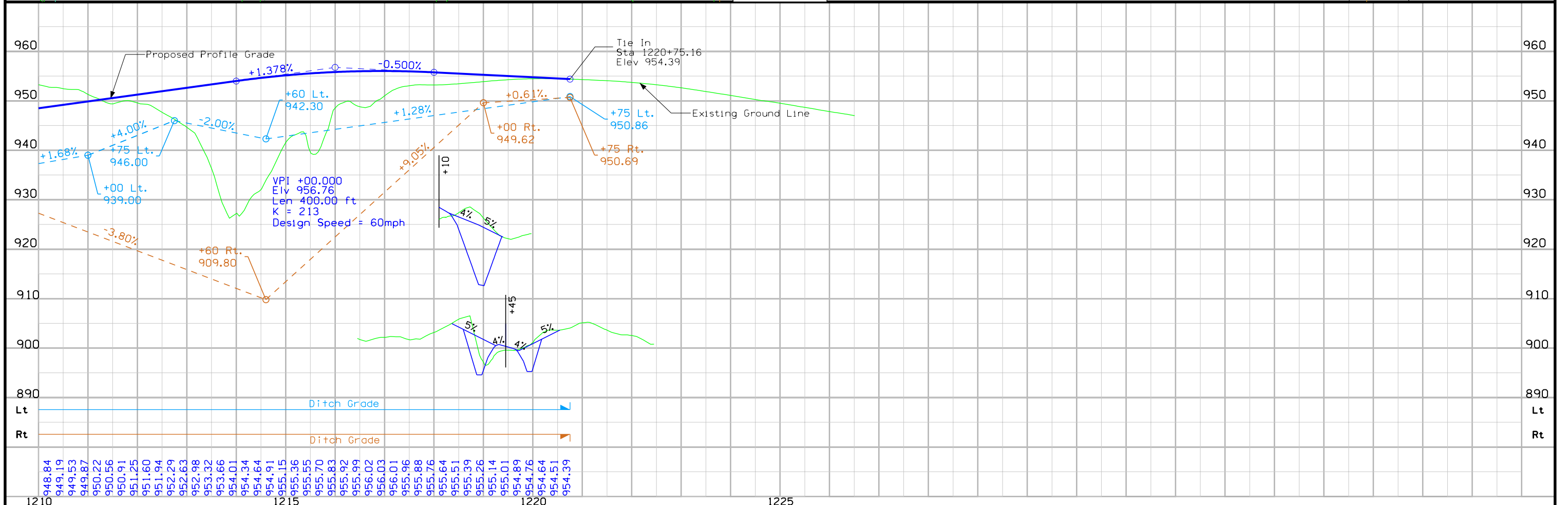
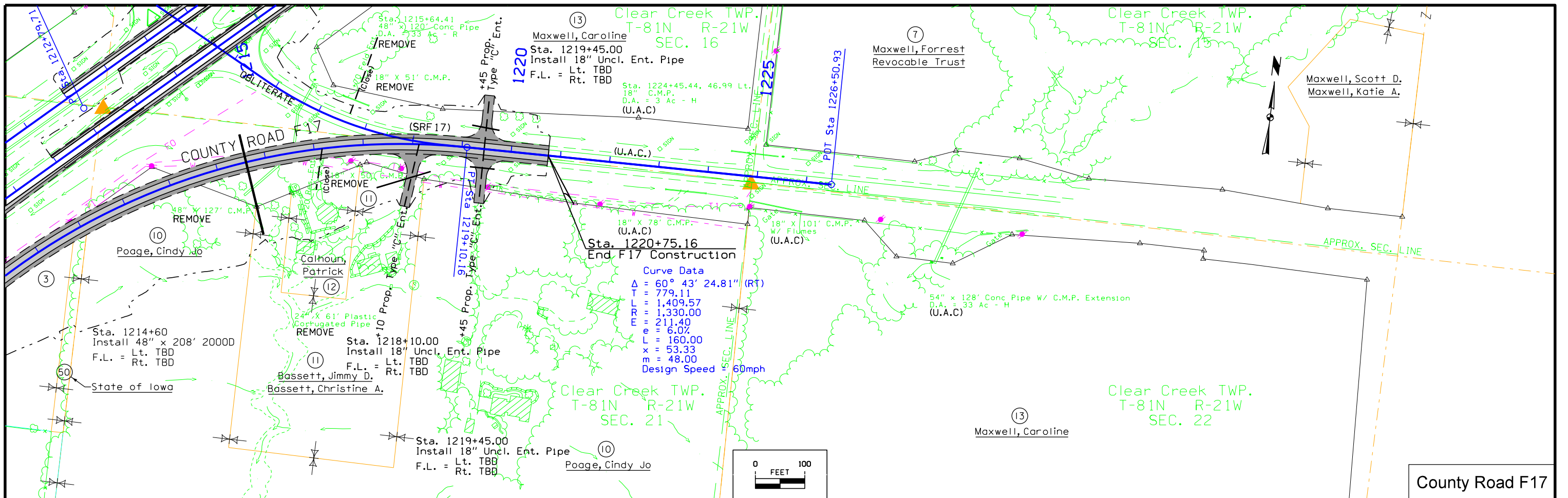


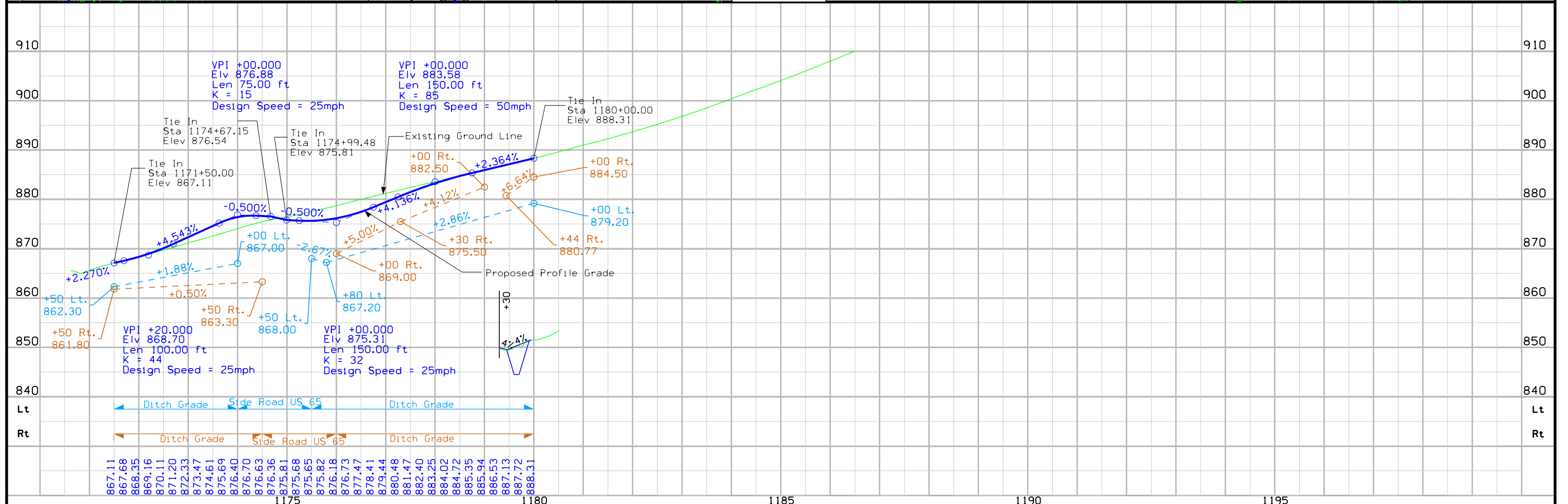
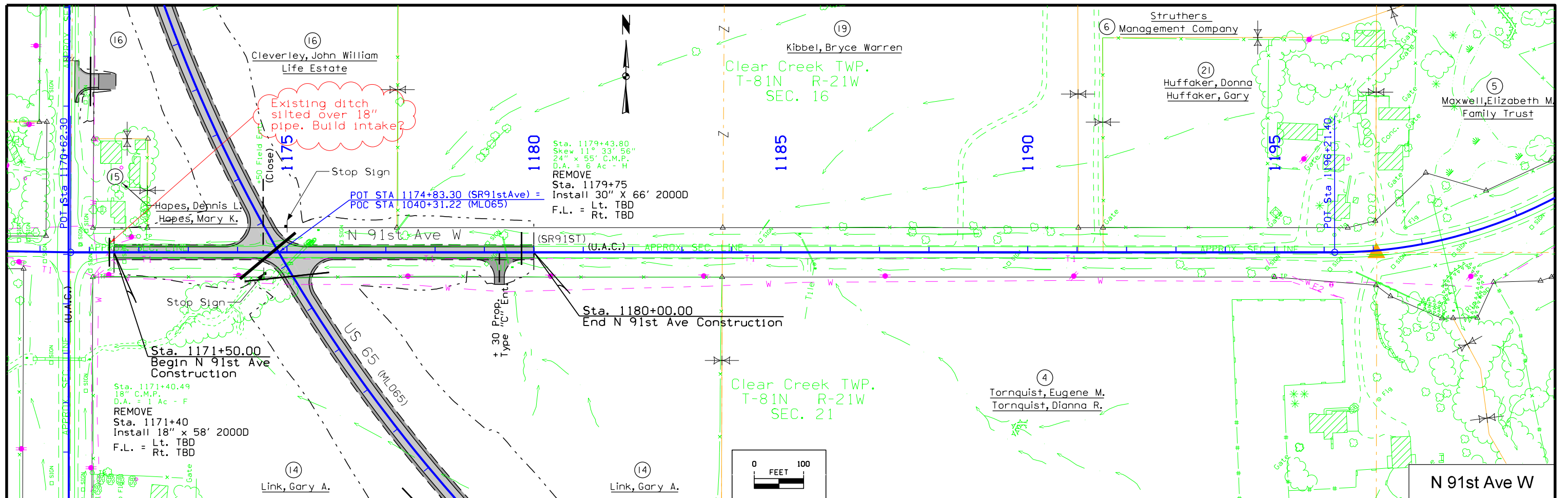
US 65

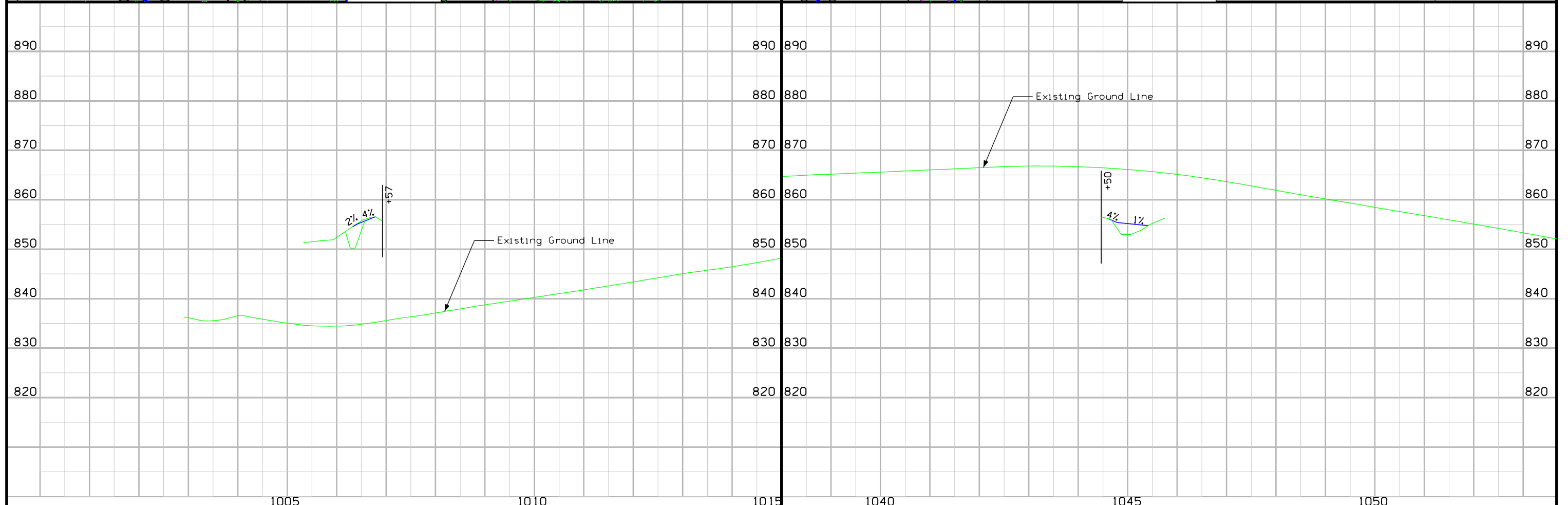
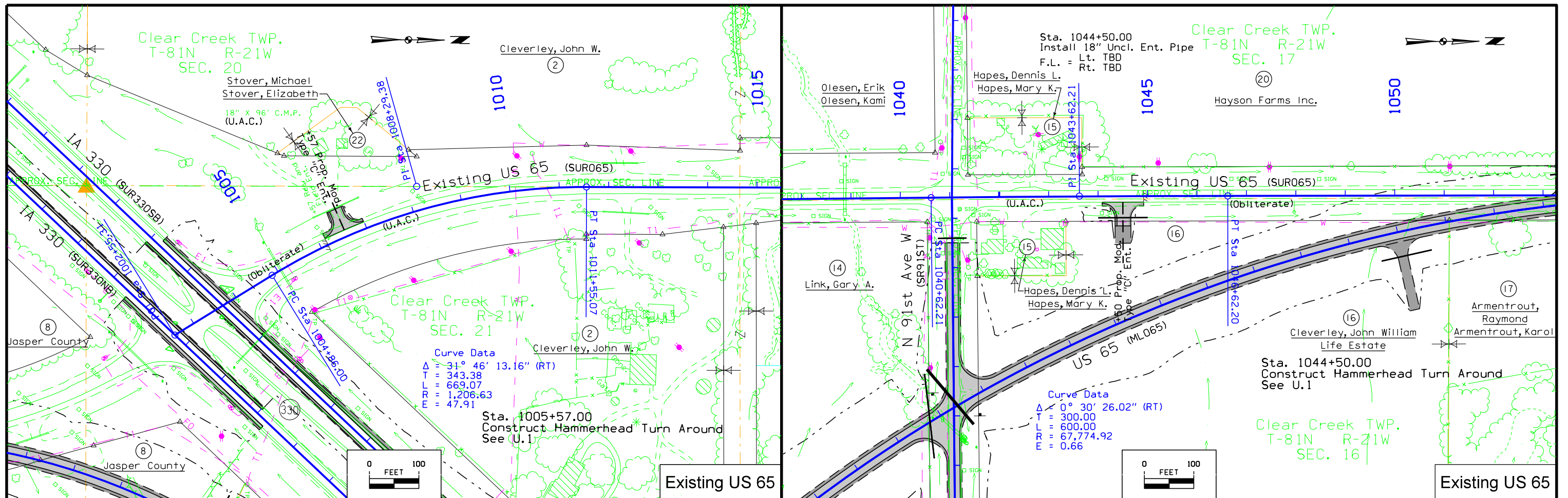


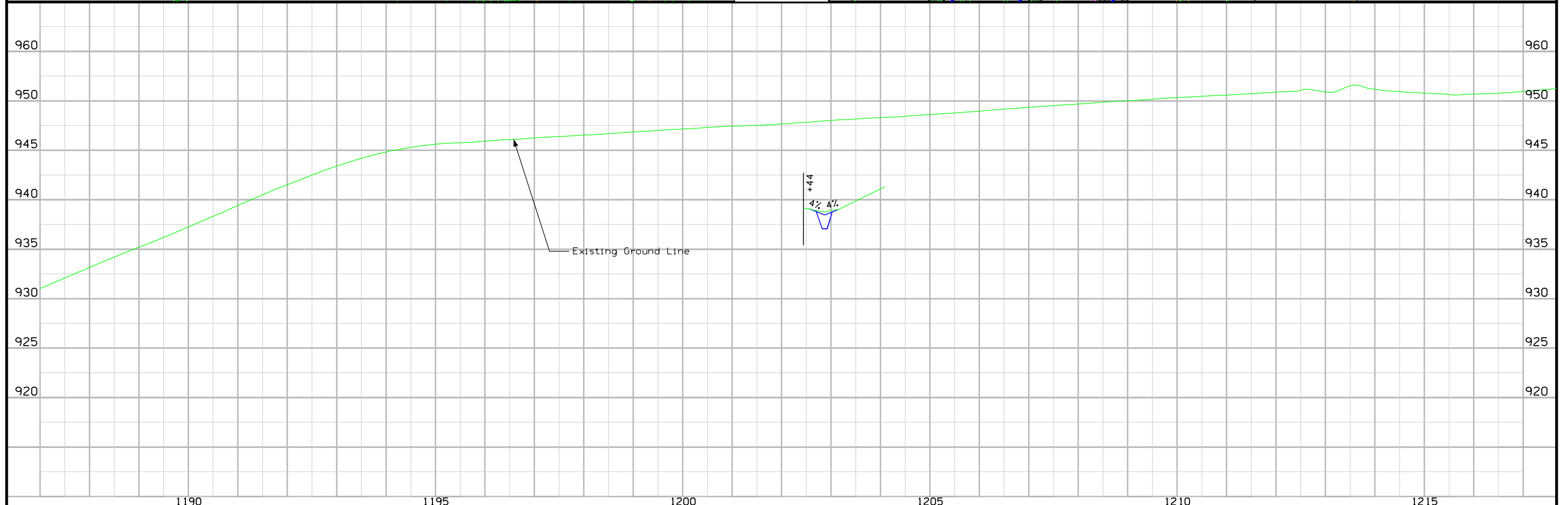
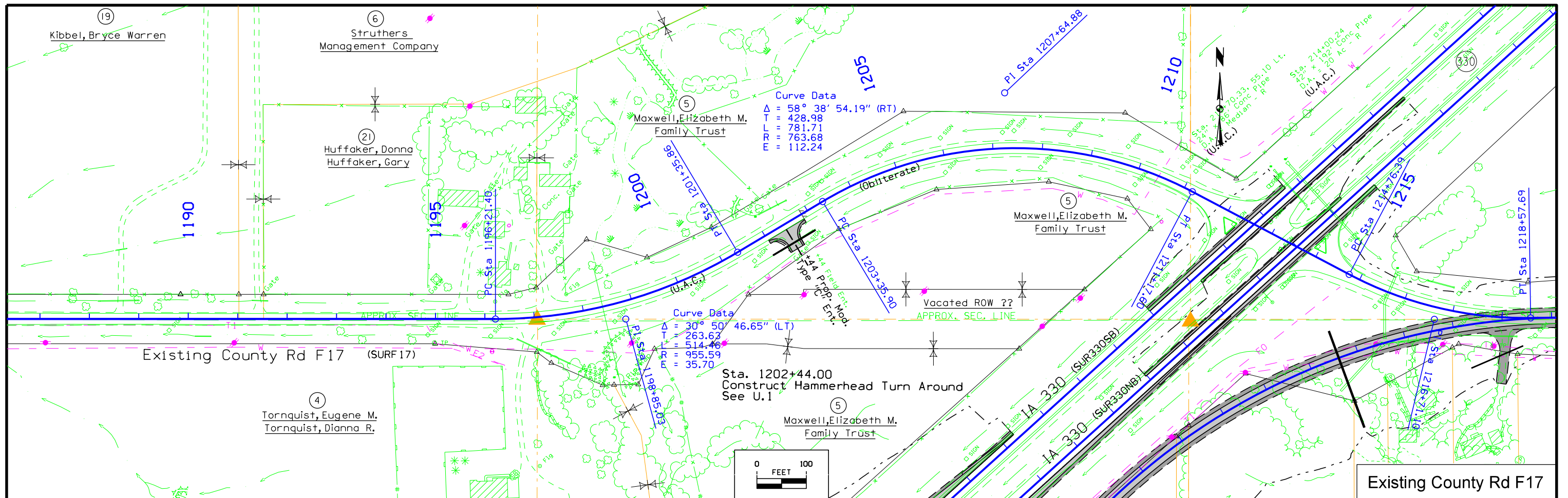












Survey Information

General Information

Measurement units for this survey are US survey feet. This survey is for a plan study for future improvement of the intersections. Project datum and control information is provided by Design Survey Office.

This is a partial DTM survey. The entire digital terrain model and topography in the corridor will be completed by supplemental aerial photography. Mobile lidar scanning produced a mapping file that was combined with field survey mapping. This combined mapping was forwarded for supplemental aerial mapping.

Vertical Control

Vertical datum for this survey is NAVD88 (Computed using Geoid12A) relative to the IARTN network 2013 adjustment. Jasper County Control monument designated E02 was observed several times. The observed height checked well with the published height. Additional benchmarks were placed throughout the project using a GNSS Base-Rover setups. A minimum of three observations were collected with 1 hour or greater time span between each observation.

This survey observed 1 As built plan height to compare with observed survey height:
 S. abutment S.B. Brg @ Indian Creek this survey Elev. = 831.3
 =S. abutment S.B. Brg @ Indian Creek Project # NHSX-65-4(96)—3H-50 Elev. = 831.4
 (Plan datum is not specified)

Horizontal Control

The project coordinate system for this survey is Iowa State Plane South Zone (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. Jasper County Control monument designated E02 was observed several times. The observed position checked well with the published position.

Two additional control points (Points # 10 & 11) were placed using 6+hours GPS static sessions.

Additional control points were placed throughout the project using GNSS Base-Rover setups. A minimum of three observations were collected with 1 hour or greater time span between each observation.

Alignment Information

IA Hwy 330

The alignment for this survey is a retrace of As-built Plans Project # NHSX-65-4(96)—3H-50. Survey stationing was equated to the plan at PI Sta. 197+09.65, and was run back and ahead without equation throughout the survey.

Equations are as follows:

CP Sta. 197+09.65 This Survey
 = PI Sta. 197+09.65 As-built Plans Project # NHSX-65-4(96)—3H-50

US Hwy 65

The alignment for this survey is a retrace of As-built Plans Project # 772 B 1, and NHSX-65-4(96)—3H-50. Survey stationing was equated to the plan at PI Sta. 1021+85.20, and was run back and ahead without equation throughout the survey.

Equations are as follows:

CP Sta. 1021+85.20 This Survey
 = PI Sta. 1021+85.20 As-built Plans Project # 772 B 1

CP Sta. 1008+29.38 This Survey
 = PI Sta. 1010+15.66 As-built Plans Project # NHSX-65-4(96)—3H-50

CP Sta. 1043+62.21 This Survey
 = PI Sta. 1043+63.0 As-built Plans Project # 772 B 1

CP Sta. 1074+30.07 This Survey
 = PI Sta. 1074+32.5 As-built Plans Project # 772 B 1

IA Hwy 117

The alignment for this survey is a retrace of As-built Plans Project # NHSX-65-4(96)—3H-50. Survey stationing was equated to the plan at PI Sta. 999+23.45, and was run back and ahead without equation throughout the survey.

Equations are as follows:

CP Sta. 999+23.45 This Survey
 = PI Sta. 999+23.45 As-built Plans Project # NHSX-65-4(96)—3H-50

Jasper County Hwy 17

The alignment for this survey is a retrace of As-built Plans Project # 772 B 1, and NHSX-65-4(96)—3H-50. Survey stationing was equated to the plan at PI Sta. 1198+85.03, and was run back and ahead without equation throughout the survey.

Equations are as follows:

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 = PI Sta. 1198+85.03 As-built Plans Project # NHSX-65-4(96)—3H-50

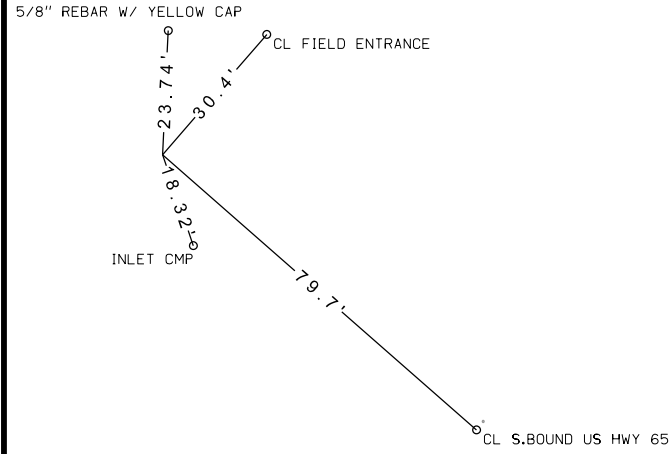
CP Sta. 1207+64.88 This Survey
 = PI Sta. 1207+65.27 As-built Plans Project # NHSX-65-4(96)—3H-50

CP Sta. 1216+71.11 This Survey
 = PI Sta. 1216+72.40 As-built Plans Project # NHSX-65-4(96)—3H-50

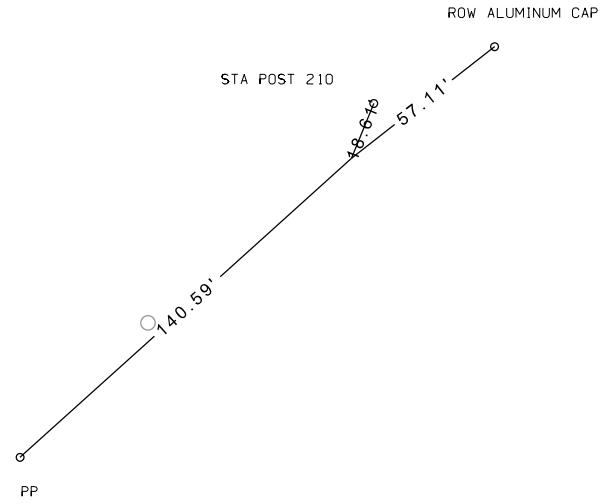
VERTICAL CONTROL

Point	Description	Station	Offset	North	East	Elevation
500	FD DOT BUTTON SW COR SB BRG IA HWY 330 @ INDIAN CREEK	144+06.21	-133.583	658545.151	1691617.063	838.964
501	FD DISK STAMPED GAUGE STATION	144+37.86	1101.947	657721.198	1692538.279	841.661
502	FD DOT BUTTON SE COR BRG US 65 @ WOLF CREEK	195+46.85	-4036.116	665029.127	1692368.071	849.756
503	FD BOLT INLET HDWL 3' X 3' RCB	164+77.83	-1041.866	660676.032	1692375.974	846.685

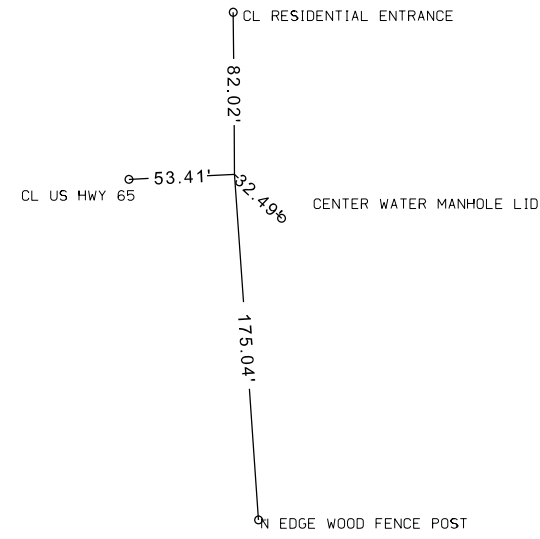
CP STA. 117+43.72, 174.32 Lt.
 CP 11, Set Feno Monument
 N=656634.687, E=1689762.173



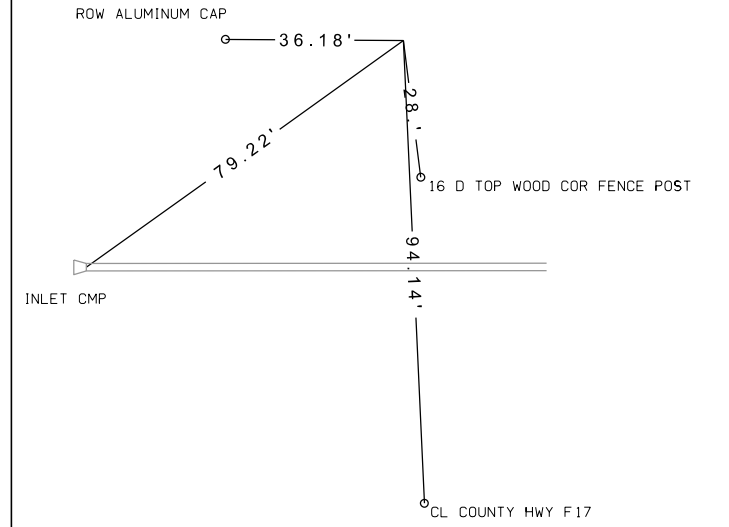
CP STA. 209+94.26, 115.51 Rt.
 CP G001, Fd. Feno Monument
 N=663096.057, E=1696376.698



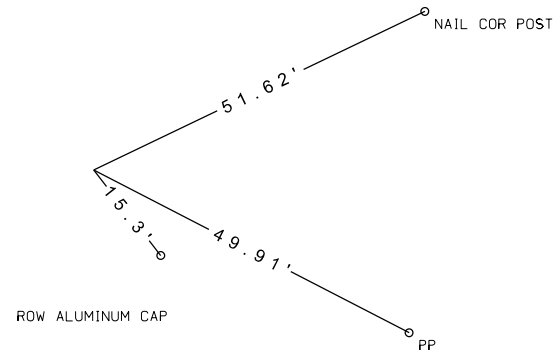
CP STA. 202+24.48, 4929.74 Lt.
 CP 10, Set Feno Monument
 N=666301.966, E=1692405.650



CP STA. 221+03.83, 786.85 Rt.
 CP E02, Fd. Disk in Conc
 N=663348.720, E=1697648.710



CP STA. 226+73.36, 84.94 Rt.
 CP G002, Fd. Feno Monument
 N=664251.080, E=1697595.820



ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
21000	US 65	1005+00.00	660,723.16	1,695,239.52															
21001	US 65							1031+36.39	662,530.51	1,693,320.13	1044+84.00	663,454.34	1,692,339.02	1056+78.81	664,801.94	1,692,345.33			
21002	US 65	1074+30.07	666,553.17	1,692,353.53															
210	IA 330 Northbound	53+64.32	651,870.75	1,685,515.76															
CUR7	IA 330 Northbound							192+76.72	661,999.49	1,695,053.24	197+09.65	662,314.68	1,695,350.03	201+42.17	662,606.66	1,695,669.67			
212	IA 330 Northbound	239+21.10	665,155.31	1,698,459.78															
20500	IA 330 Southbound	53+64.32	651,946.15	1,685,435.68															
20501	IA 330 Southbound							190+46.44	661,907.25	1,694,815.29	194+77.97	662,221.42	1,695,111.12	199+09.10	662,512.45	1,695,429.74			
20502	IA 330 Southbound	239+28.72	665,223.35	1,698,397.64															
30000	IA 117	986+39.48	657,741.50	1,692,522.95															
30001	IA 117							993+86.57	658,444.79	1,692,774.99	995+47.47	658,596.26	1,692,829.27	997+06.82	658,756.30	1,692,845.87			
30002	IA 117							999+30.82	658,979.11	1,692,868.97	1005+84.64	659,629.45	1,692,936.41	1011+46.18	659,973.23	1,693,492.57			
30003	IA 117	1029+51.27	660,922.34	1,695,027.99															
31000	County Road F17	1186+56.19	660,922.34	1,695,027.99															
31001	County Road F17							1205+00.59	662,546.63	1,695,901.77	1212+79.71	663,232.77	1,696,270.88	1219+10.16	663,246.35	1,697,049.87			
31002	County Road F17	1226+50.93	663,259.26	1,697,790.53															
32000	N 91st Ave W	1170+62.30	663,227.41	1,692,344.59															
32001	N 91st Ave W	1196+21.40	663,236.13	1,694,903.67															
34000	Ramp A	11000+00.00	661,762.13	1,694,136.14															
34001	Ramp A							11011+33.20	662,357.97	1,695,100.06	11013+43.37	662,468.47	1,695,278.82	11015+53.03	662,599.57	1,695,443.08			
34002	Ramp A	11016+03.04	662,630.77	1,695,482.17															
35000	Ramp B	12000+00.00	660,233.92	1,693,462.16															
35001	Ramp B							12000+50.00	660,267.96	1,693,498.78	12003+92.74	660,501.31	1,693,749.82	12007+33.31	660,681.52	1,694,041.36			
35002	Ramp B	12016+15.05	661,145.14	1,694,791.38															
36000	Ramp C	13000+00.00	660,363.46	1,693,317.67															
36001	Ramp C							13000+00.00	660,363.46	1,693,317.67	13002+42.99	660,543.66	1,693,480.68	13004+83.60	660,757.65	1,693,595.79			
36002	Ramp C	13016+24.20	661,762.13	1,694,136.14															
37000	Ramp D	14000+00.00	661,145.14	1,694,791.38															
37001	Ramp D							14010+35.97	662,057.48	1,695,282.17	14013+55.70	662,339.06	1,695,433.64	14016+70.08	662,559.38	1,695,665.36			
37002	Ramp D	14016+70.08	662,559.38	1,695,665.36															
216	Ex. US 65	1002+55.31	659,446.61	1,692,649.38															
CUR4	Ex. US 65							1004+86.00	659,642.80	1,692,528.04	1008+29.38	659,934.84	1,692,347.42	1011+55.07	660,278.22	1,692,347.62			
CUR5	Ex. US 65							1018+85.20	661,008.36	1,692,348.06	1021+85.20	661,308.36	1,692,348.24	1024+85.20	661,608.35	1,692,346.99			
CUR6	Ex. US 65							1040+62.21	663,185.34	1,692,340.42	1043+62.21	663,485.34	1,692,339.16	1046+62.20	663,785.34	1,692,340.57			
211	Ex. US 65	1074+30.07	666,553.17	1,692,353.53															
208	Ex. IA 117	986+39.48	657,741.50	1,692,522.95															
CUR9	Ex. IA 117							994+43.51	658,498.40	1,692,794.20	999+23.45	658,950.20	1,692,956.12	1003+38.06	659,358.48	1,692,703.83			
215	Ex. IA 117	1004+41.65	659,446.61	1,692,649.38															
219	Ex. County Rd F17	1157+62.89	663,244.06	1,691,045.28															
218	Ex. County Rd F17	1170+62.30	663,227.41	1,692,344.59															
CUR1	Ex. County Rd F17							1196+21.40	663,236.13	1,694,903.67	1198+85.03	663,237.02	1,695,167.30	1201+35.86	663,372.97	1,695,393.18			
CUR2	Ex. County Rd F17							1203+35.90	663,476.12	1,695,564.57	1207+64.88	663,697.32	1,695,932.12	1211+17.60	663,498.53	1,696,312.25			
CUR3	Ex. County Rd F17							1214+76.39	663,332.27	1,696,630.20	1216+71.10	663,242.04	1,696,802.74	1218+57.69	663,245.43	1,696,997.42			
205	Ex. County Rd F17	0+00.00	663,259.26	1,697,790.53															

SPIRAL OR CIRCULAR CURVE DATA

101-17
04-19-11

Name	Location	Δ_{scs}	Horizontal Alignment Data												Remarks										
			Spiral Data						Curve Data																
			θ_s	L_s	T_s	E_s	X_c	Y_c	L.T.	S.T.	Δ_c	T	L	R		E									
21001	US 65																								
CUR7	IA 330 Northbound																								
20501	IA 330 Southbound																								
30001	IA 117																								
30002	IA 117																								
31001	County Road F17																								
34001	Ramp A																								
35001	Ramp B																								
36001	Ramp C																								
37001	Ramp D																								
CUR4	Ex. US 65																								
CUR5	Ex. US 65																								
CUR6	Ex. US 65																								
CUR9	Ex. IA 117																								
CUR1	Ex. County Rd F17																								
CUR2	Ex. County Rd F17																								
CUR3	Ex. County Rd F17																								

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius FT	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
			%	FT	FT														
US 65		3100	4.3	114.67	53.33	PV-301	1030+02.79	1030+56.12	1031+09.45	1031+70.79			1031+36.39			1031+62.79	1031+62.79		
							1058+12.42	1057+59.09	1057+05.76	1056+44.42			1056+78.82			1056+52.42	1056+52.42		
IA 117		1330	6.0	160	53.33	PV-301	992+21.24	992+74.57	993+27.90	994+34.57			993+86.57			993+81.24	993+81.24		
								998+18.82	997+65.49	996+58.82			997+06.82			997+12.15	997+12.15		
IA 117		1330	6.0	160	53.33	PV-301		998+18.82	998+72.15	999+78.82			999+30.82			999+25.49	999+25.49		
							1013+11.51	1012+58.18	1012+04.85	1010+98.18			1011+46.18			1011+51.51	1011+51.51		
County Road F17		1330	6.0	160	53.33	PV-301	1203+35.26	1203+88.59	1204+41.92	1205+48.59			1205+00.59			1204+95.26	1204+95.26		
							1220+75.49	1220+22.16	1219+68.83	1218+62.16			1219+10.16			1219+15.49	1219+15.49		
Ramp A		3500	3.9	121.68	62.4	PV-303	11011+10.42		11011+33.20	11011+69.70									
							11015+75.80		11015+53.02	11015+16.52									
Ramp B		3500	3.9	121.68	62.4	PV-303	12000+27.22		12000+50.00	12000+86.50									
							12007+56.09		12007+33.31	12006+96.81									
Ramp C		2000	5.4	168.48	62.4	PV-303	12999+44.46		13000+00.00	13000+50.54					13000+06.86	13000+06.86			
							13005+39.14		13004+83.60	13004+33.06					13004+76.74	13004+76.74			
Ramp D		2000	5.4	168.48	62.4	PV-303	14009+80.43		14010+35.97	14010+86.51					14010+42.83	14010+42.83			
							14017+25.62		14016+70.08	14016+19.54					14016+63.22	14016+63.22			

STAGING NOTES

Stage 1

Traffic:

- Maintain two-way traffic on IA 330, US 65, and IA 117.
- Close a portion of existing County Road F17 from Station 1171+50 to Station 1180+00. Maintain two-way traffic for all remaining portions of existing County Road F17.

Construction:

- Grade and pave portions of proposed US 65, N 91st Ave W, Ramp A, Ramp B, Ramp C, Ramp D, IA 117, and County Road F17 that are in the clear of existing roadways.
- Construct bridge on US 65 over existing IA 330.

Stage 2

Traffic:

- Move IA 330 Northbound and Southbound traffic to the inside lanes.
- Maintain two-way traffic on IA 117.
- Open the portion of existing County Road F17 constructed in Stage 1.
- Close existing County Road F17 from Station 1202+47.65 to the intersection with IA 330.

Construction:

- Grade and pave ramp gores for Ramp A, Ramp B, Ramp C, and Ramp D.
- Saw cut and construct hammerhead turnaround on existing County Road F17 at Station 1202+47.65. Obliterate existing County Road F17 to the intersection with IA 330.
- Construct temporary widening along the existing southbound shoulder of IA 117.
- Construct temporary widening along existing the westbound shoulder of County Road F17.
- Construct temporary widening along the existing southbound shoulder of US 65.

Stage 3

Traffic:

- Open outside lane on IA 330 and maintain two way traffic.
- Shift IA 117 traffic over on to temporary widening placed in Stage 2.
- Shift County Road F17 traffic over on to temporary widening placed in Stage 2.
- Shift US 65 traffic over onto temporary widening placed in Stage 2.

Construction:

- Grade and pave the connection for IA 117 in the northbound direction. Place temporary widening along shoulder.
- Grade and pave the connection for County Road F17 in the eastbound direction. Place temporary widening along shoulder.
- Grade and pave the connection for US65 in the northbound direction. Place temporary widening along shoulder.

Stage 4

Traffic:

- Open newly constructed Ramps A-D and US 65.
- Close the existing intersection of US 65 with IA 330.
- Close the existing intersection of IA 117 with IA 330.
- Close the existing intersection of County Road F17 with IA 330.
- Close the median crossing of W 124th St N with IA 330.
- Move IA 330 Northbound and Southbound lanes to the outside lanes.
- Shift IA 117 traffic over on to newly constructed pavement and temporary widening placed in Stage 3.
- Shift County Road F17 traffic over on to newly constructed pavement and temporary widening placed in Stage 3.
- Close US 65 from the intersection with 91st Ave/F17 to the end of proposed US 65 construction.
- Shift US 65 traffic over onto newly constructed pavement and temporary widening placed in Stage 3.

Construction:

- Saw cut and remove median left turn lanes at the existing intersections on IA 330 with IA 117/ US 65 and County Road F17.
- Saw cut and remove median crossings at the existing intersections on IA 330 with IA 117/ US 65, County Road F17, and W 124th St N.
- Remove median crossings on IA 330 at Stations 173+15, 184+00, and 197+10.
- Regrade existing median ditch along IA 330 between the intersections of County Road F17, IA 117/US 65, and W 124th St N.
- Construct inside shoulders on IA 330 southbound and northbound.
- Remove temporary widening along the existing southbound shoulder of IA 117 placed in Stage 2.
- Grade and pave the connection for IA 117 in the southbound direction.
- Remove temporary widening along the existing the westbound shoulder of County Road F17 placed in Stage 2.
- Grade and pave the connection for County Road F17 in the westbound direction.
- Remove temporary widening along the existing southbound shoulder of US 65 placed in Stage 2.
- Grade and pave the connection for US65 in the southbound direction.
- Saw cut and construct hammerhead turnaround on existing US 65 at Station 1006+33.04.
- Saw cut and construct hammerhead turnaround on existing US 65 at Station 1043+88, and obliterate existing US 65 north to the tie in with existing US 65.

Stage 5

Traffic:

- Move IA 330 Northbound and Southbound traffic to the inside lanes.

Construction:

- Saw cut and remove intersection pavement on existing US 65 at the intersection with IA 330 Southbound.
- Obliterate existing US 65 from intersection with IA 330 Southbound to the hammerhead turnaround constructed in Stage 4.
- Saw cut and remove intersection pavement on existing IA 117 at the intersection with IA 330 Northbound.
- Obliterate existing IA 117 from the intersection along IA 330 Northbound to the proposed tie in with existing IA 117.










STAGING NOTES

- Saw cut and remove right turn lanes and intersection pavement on existing County Road F17 at the intersection with IA 330 Northbound.
- Obliterate County Road F17 from the intersection the IA 330 Northbound to the proposed tie in with existing F17.
- Remove temporary widening along the northbound shoulder of proposed IA 117, placed in Stage 3. Construct northbound shoulder and entrances.
- Remove temporary widening along the eastbound shoulder of proposed County Road F17, placed in Stage 3. Construct eastbound shoulder.
- Remove temporary widening along the northbound shoulder of proposed US65, placed in Stage 3. Construct northbound shoulder and entrances.
- Construct outside shoulders along IA 330 southbound and northbound.

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)	Proposed Granular Surface 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

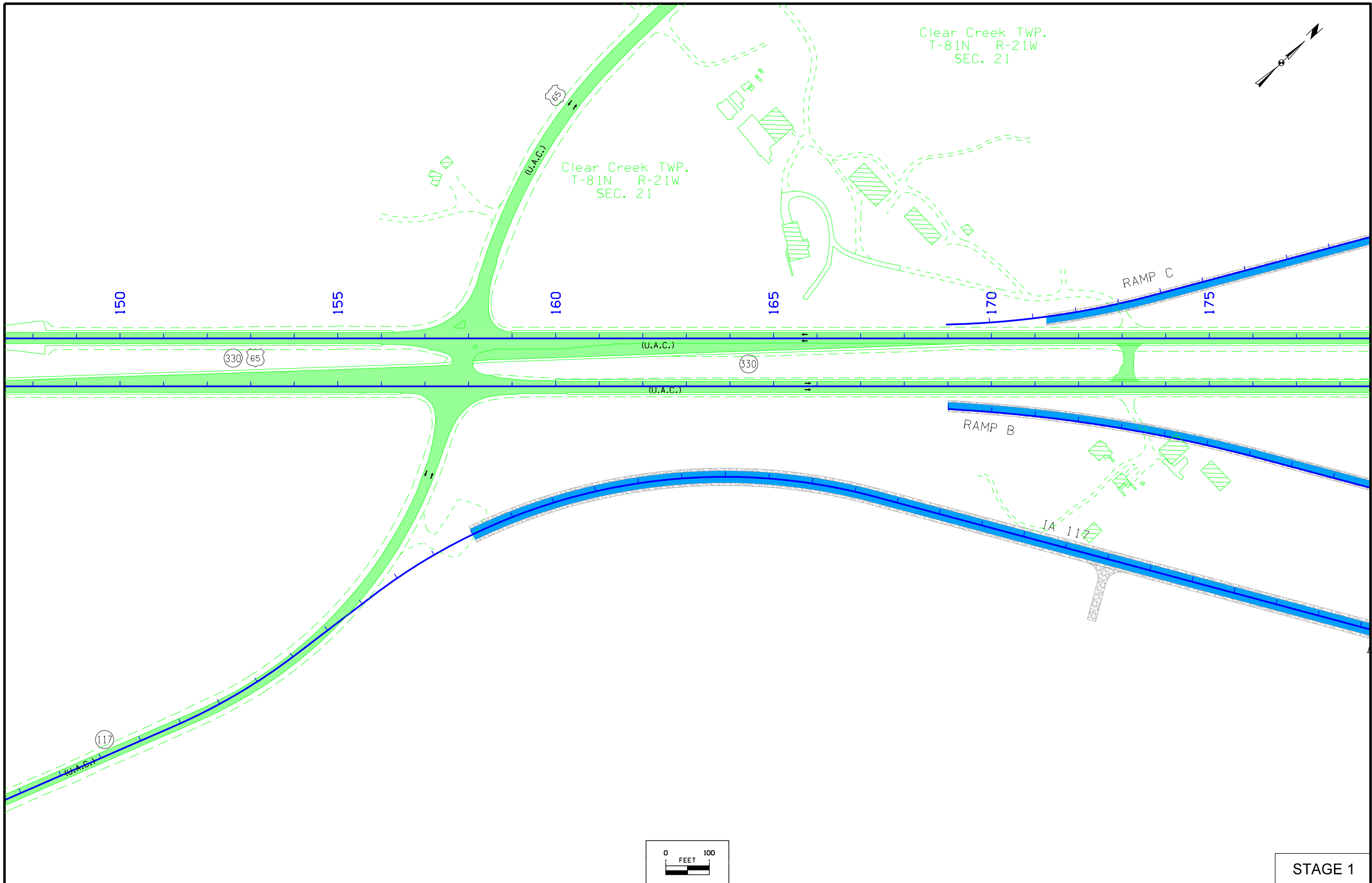
PLAN VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

	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
	Delineator		Type A Warning Light
	Temporary Barrier Rail		Direction of Traffic
	Pavement Removal		Safety Closure

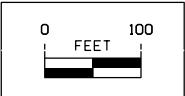
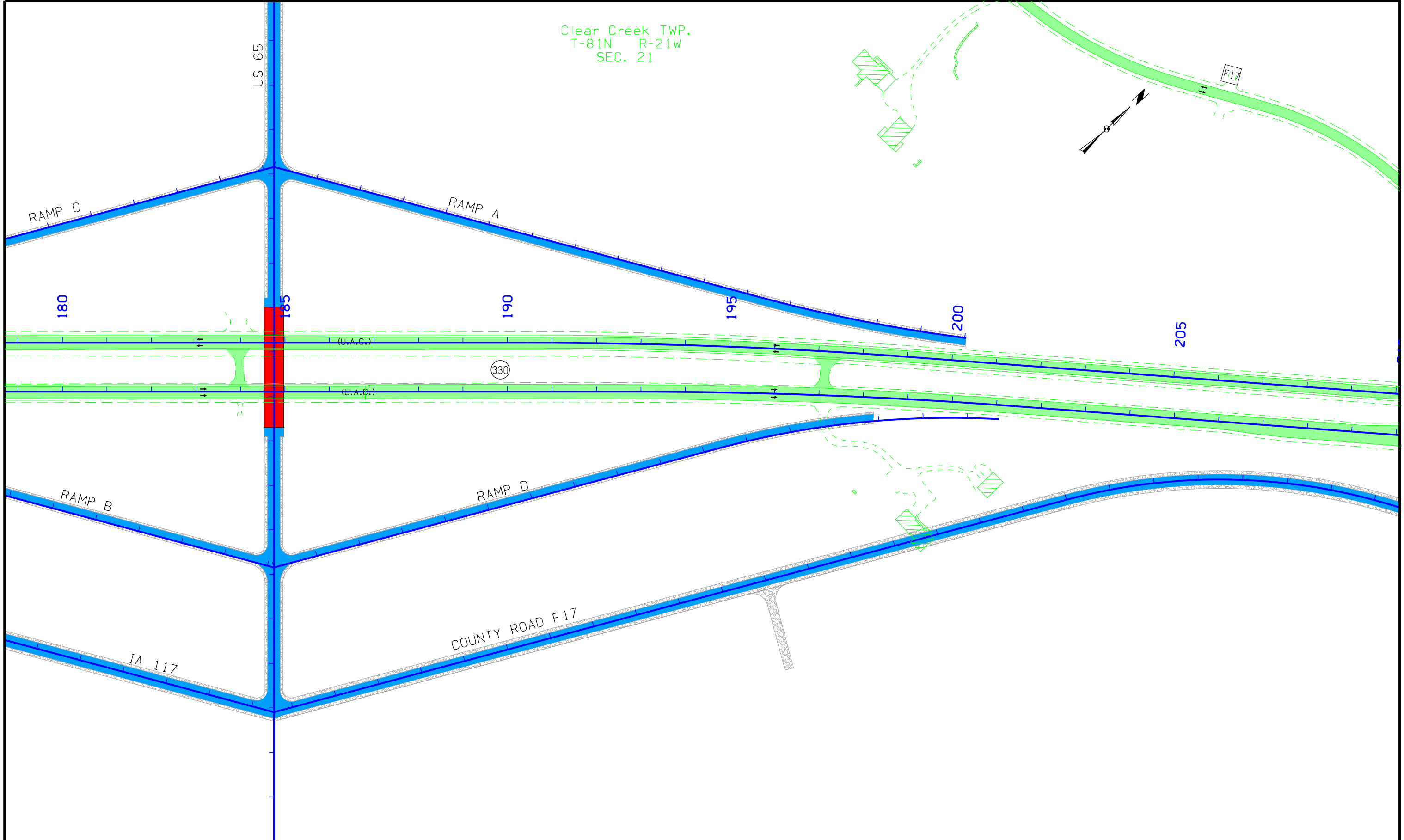
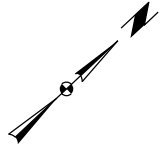
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

TRAFFIC CONTROL AND STAGING LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES J)

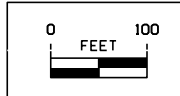
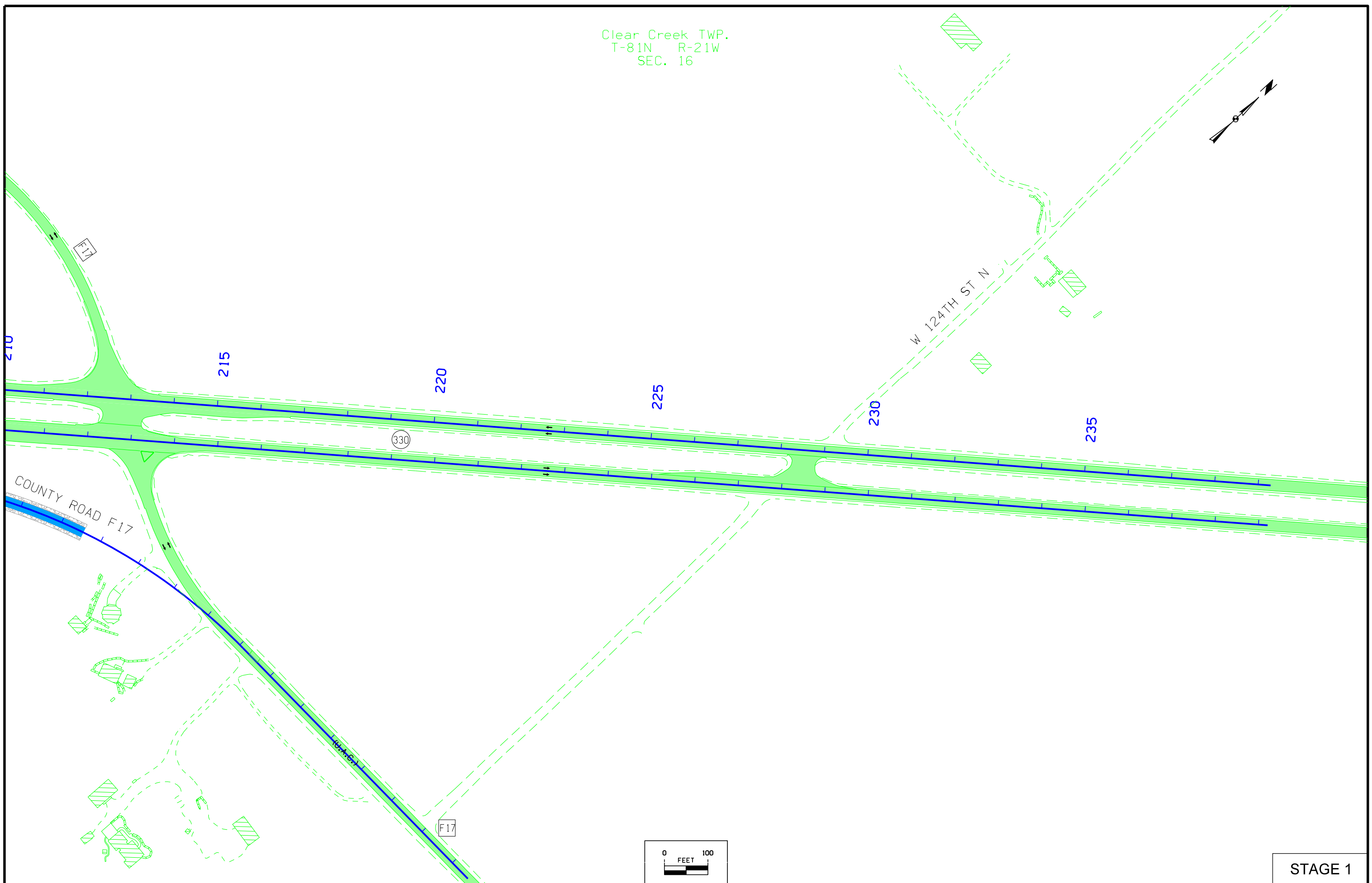
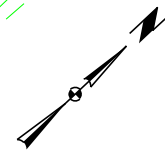


Clear Creek TWP.
T-81N R-21W
SEC. 21



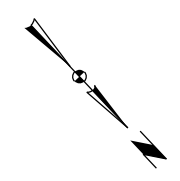
STAGE 1

Clear Creek TWP.
T-81N R-21W
SEC. 16



STAGE 1

Clear Creek TWP.
T-81N R-21W
SEC. 21



330

1005

IA 117

1010

RAMP B

1015

1020

RAMP C

1025

1030

1035

US 65

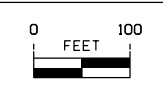
COUNTY ROAD F17

RAMP D

RAMP A

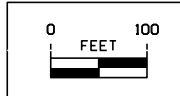
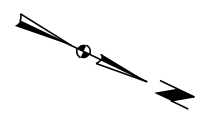
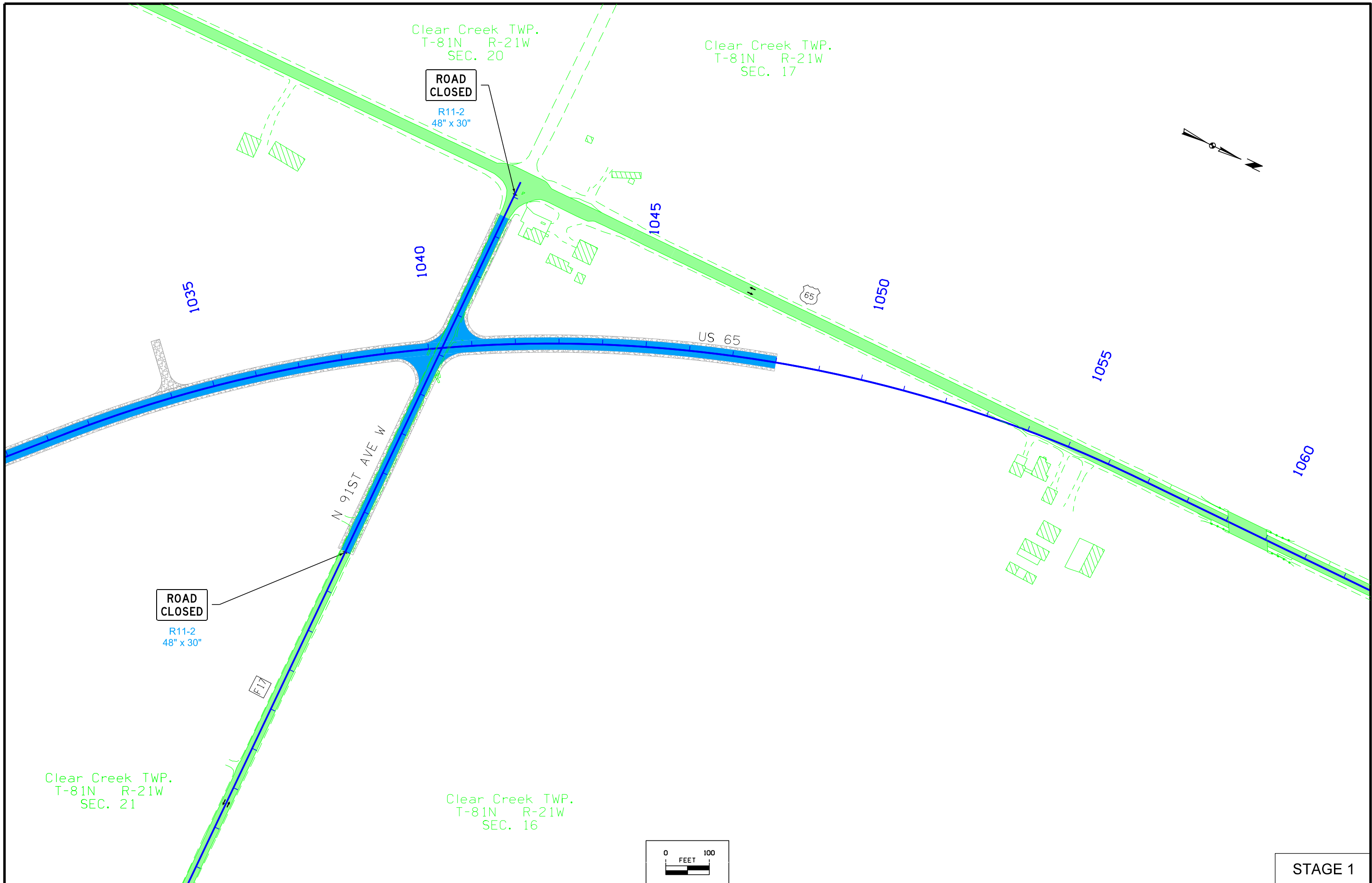
(U.A.C.)

(U.A.C.)

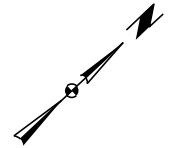


F17

STAGE 1

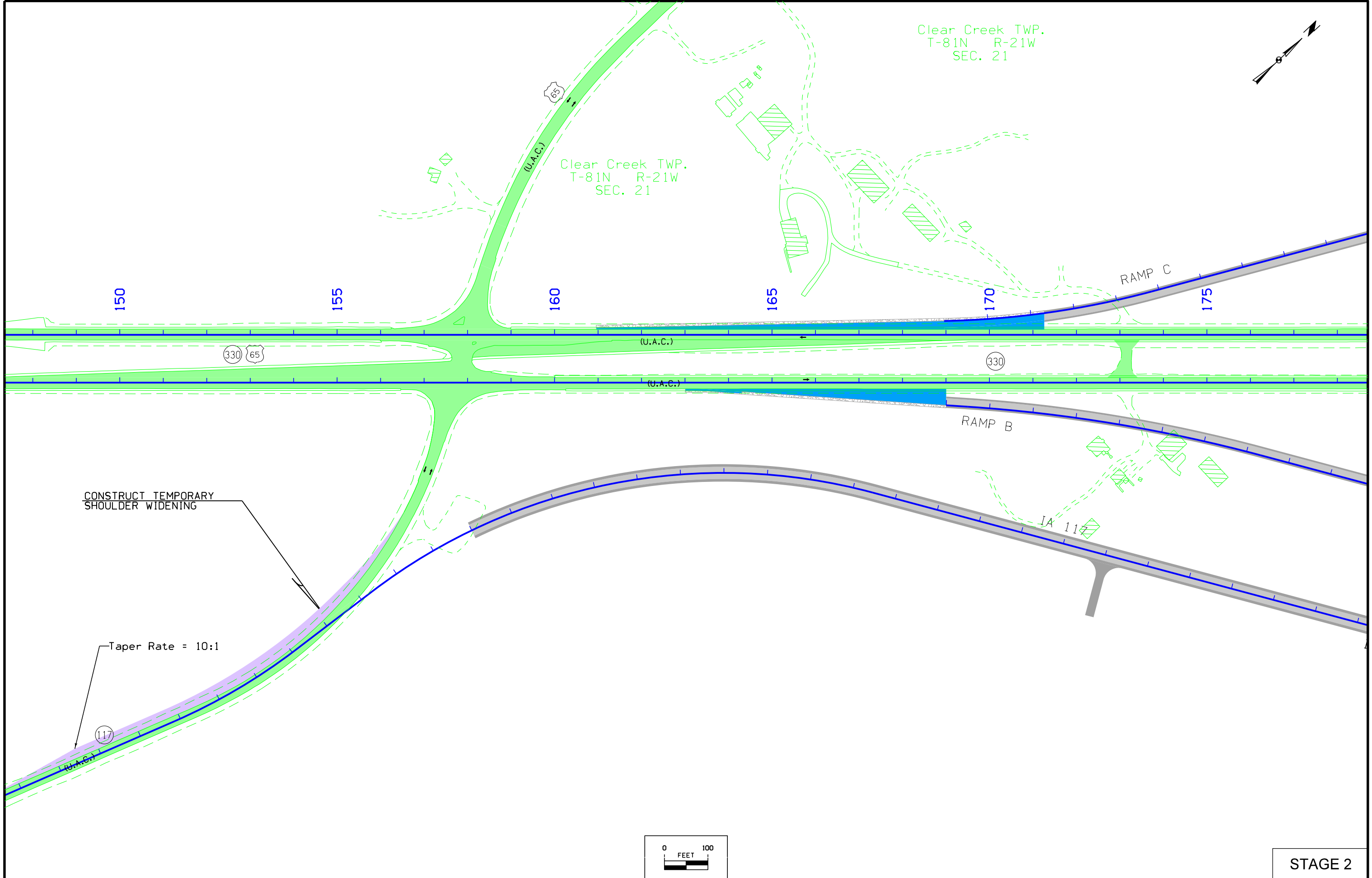


STAGE 1



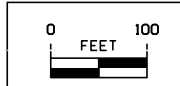
Clear Creek TWP.
T-81N R-21W
SEC. 21

Clear Creek TWP.
T-81N R-21W
SEC. 21

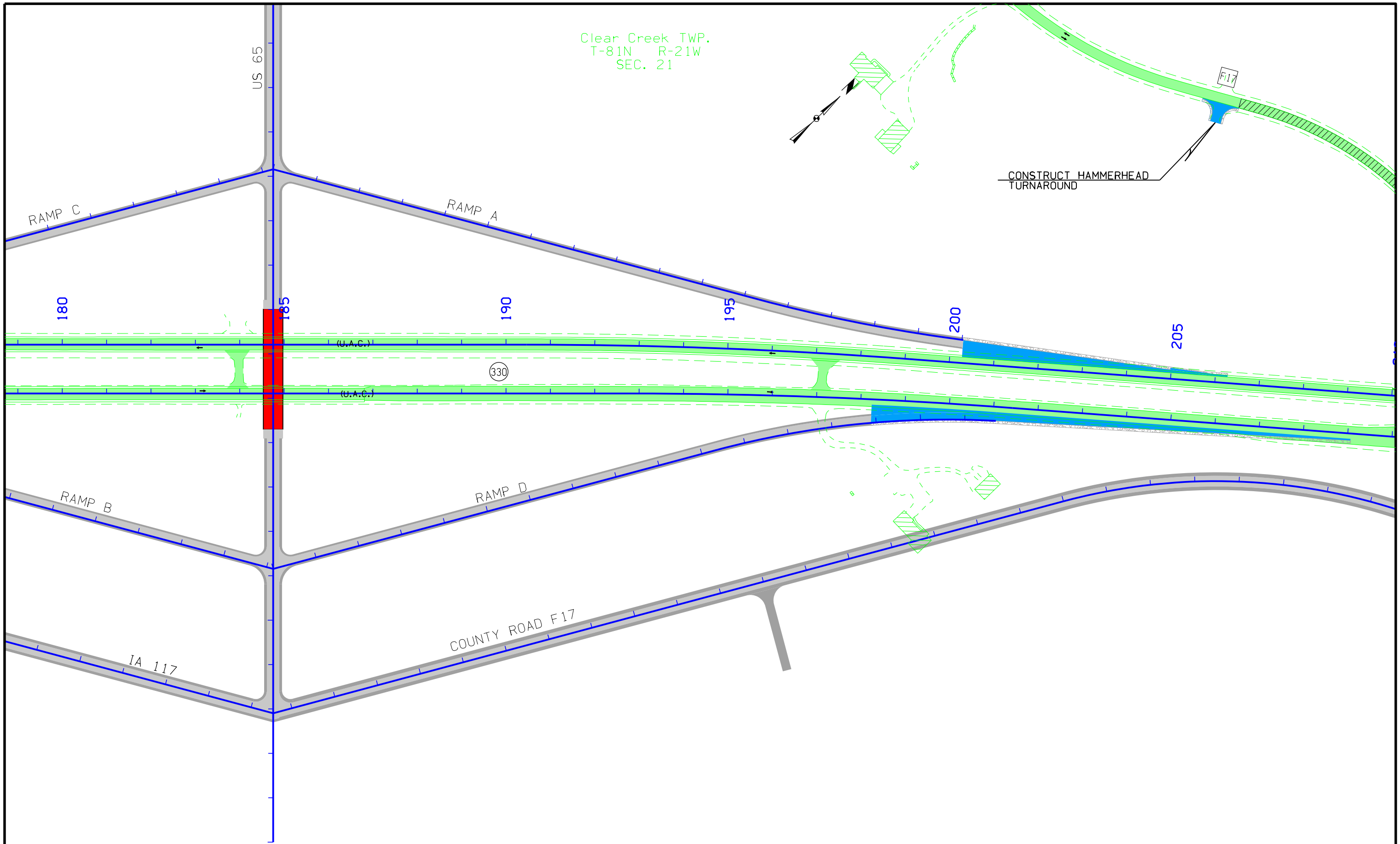


CONSTRUCT TEMPORARY
SHOULDER WIDENING

Taper Rate = 10:1

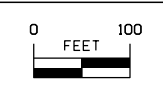


STAGE 2



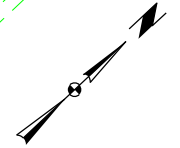
Clear Creek TWP.
T-81N R-21W
SEC. 21

CONSTRUCT HAMMERHEAD
TURNAROUND



STAGE 2

Clear Creek TWP.
T-81N R-21W
SEC. 16



ROAD
CLOSED

R11-2
48" x 30"

F17

Obliterate

215

220

225

230

235

W 124TH ST N

330

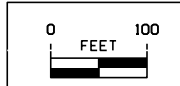
COUNTY ROAD F17

CONSTRUCT TEMPORARY
SHOULDER WIDENING

Taper Rate = 10:1

Clear Creek TWP.
T-81N R-21W
SEC. 21

Clear Creek TWP.
T-81N R-21W
SEC. 15



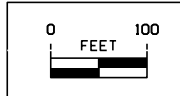
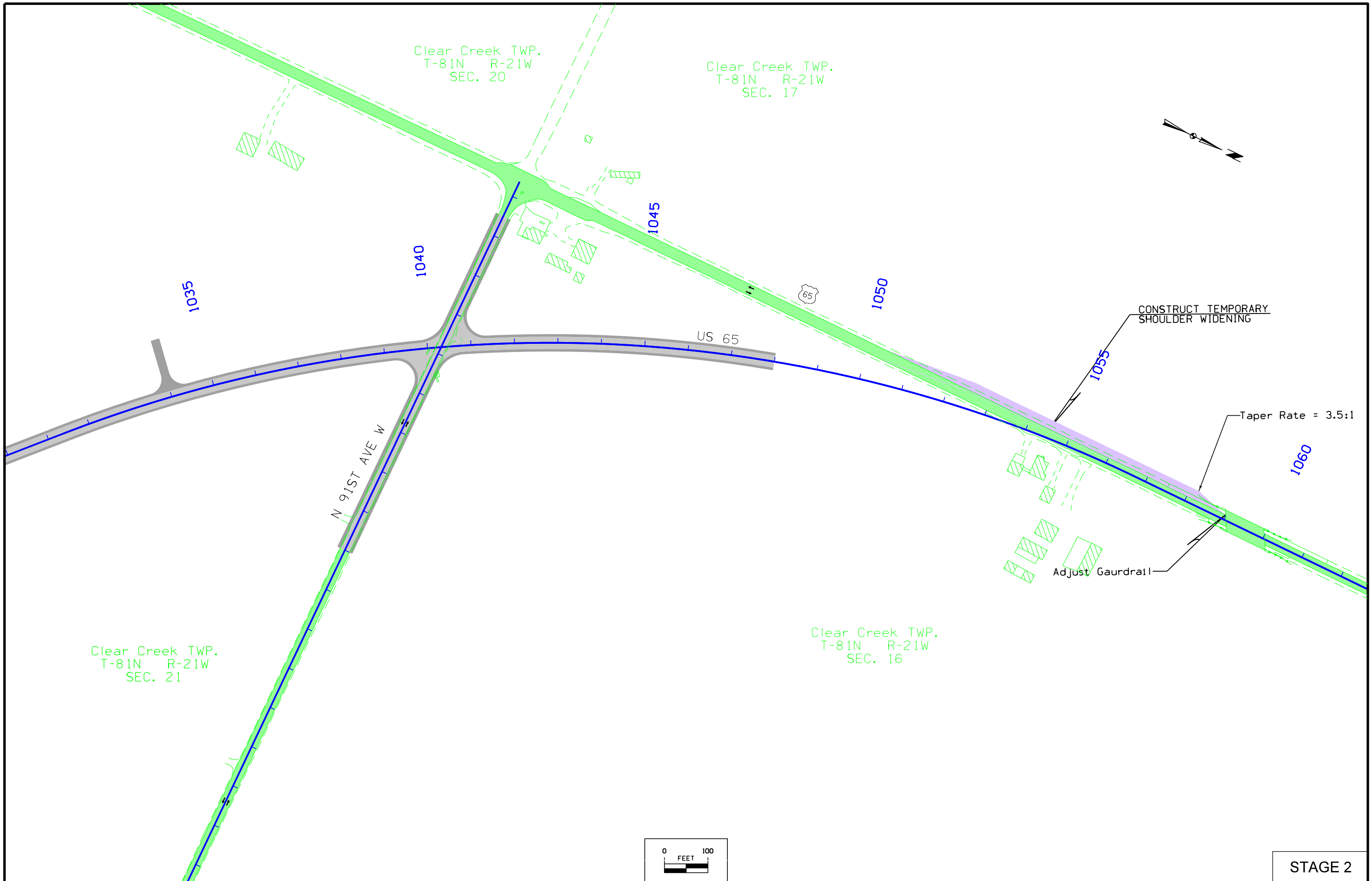
STAGE 2

Clear Creek TWP.
T-81N R-21W
SEC. 20

Clear Creek TWP.
T-81N R-21W
SEC. 17

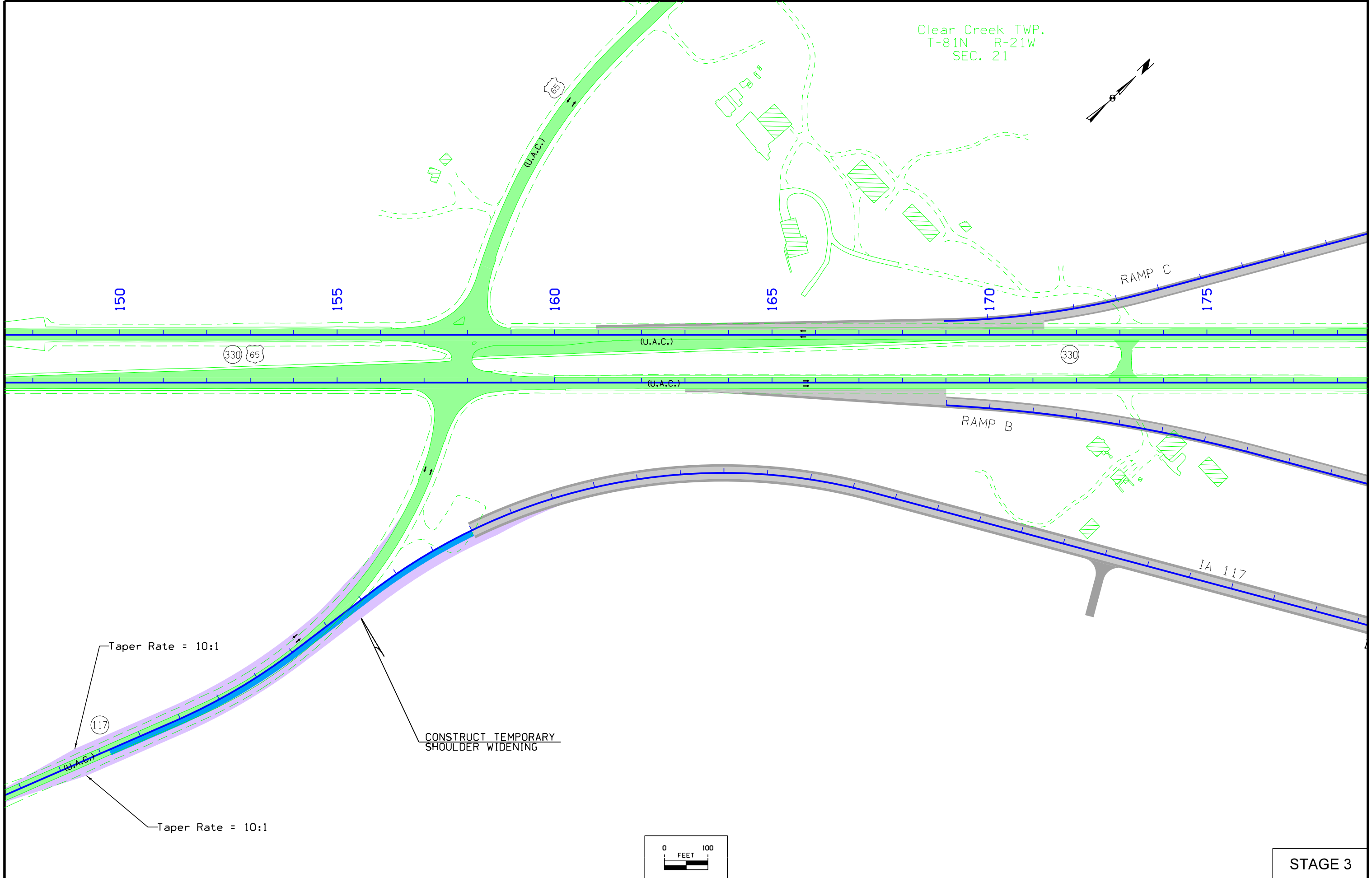
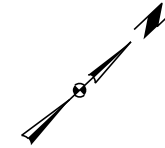
Clear Creek TWP.
T-81N R-21W
SEC. 21

Clear Creek TWP.
T-81N R-21W
SEC. 16



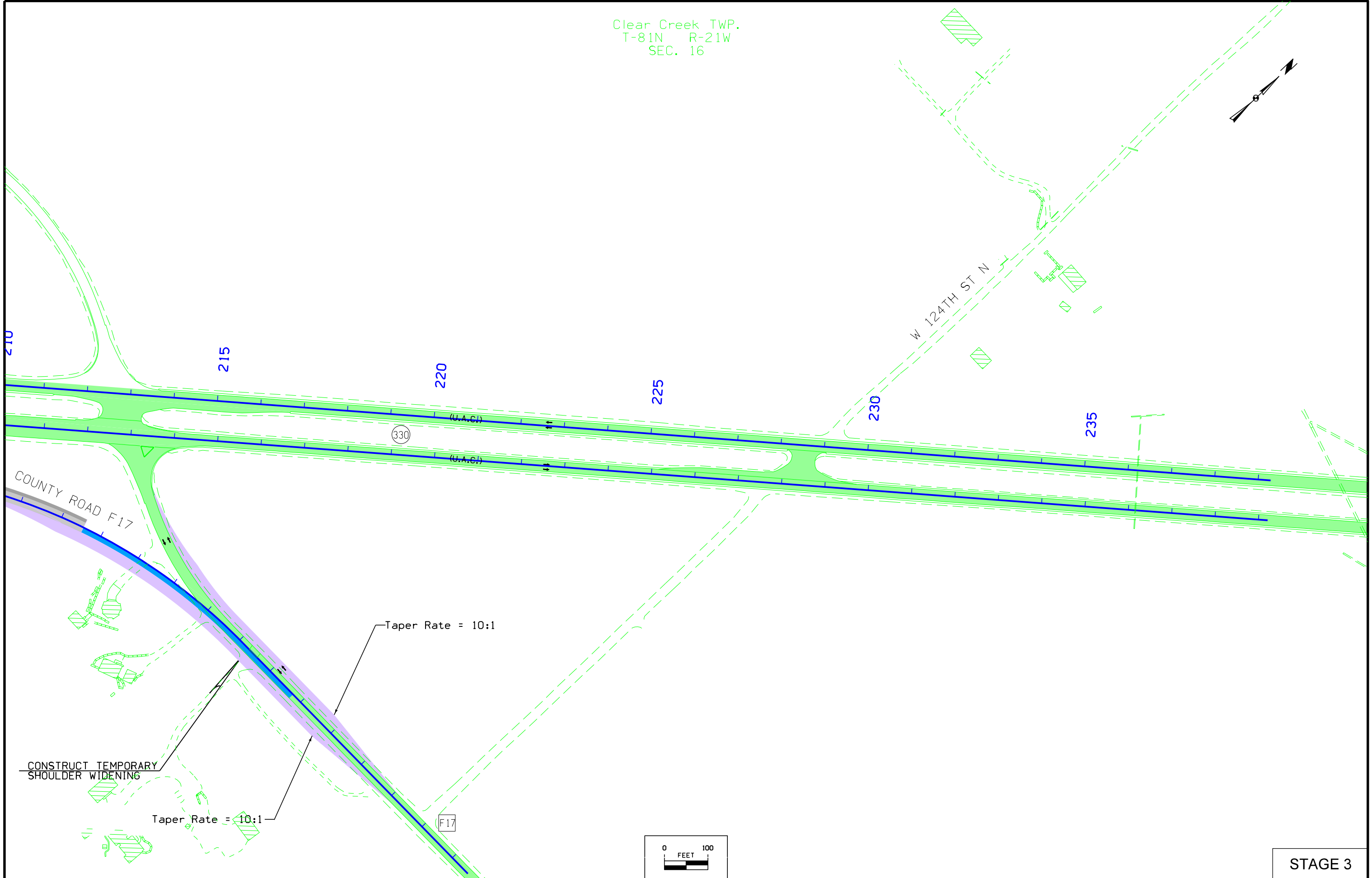
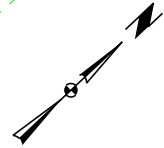
STAGE 2

Clear Creek TWP.
T-81N R-21W
SEC. 21



STAGE 3

Clear Creek TWP.
T-81N R-21W
SEC. 16



COUNTY ROAD F17

W 124TH ST N

U.A.C.

U.A.C.

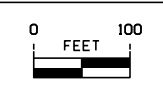
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F17

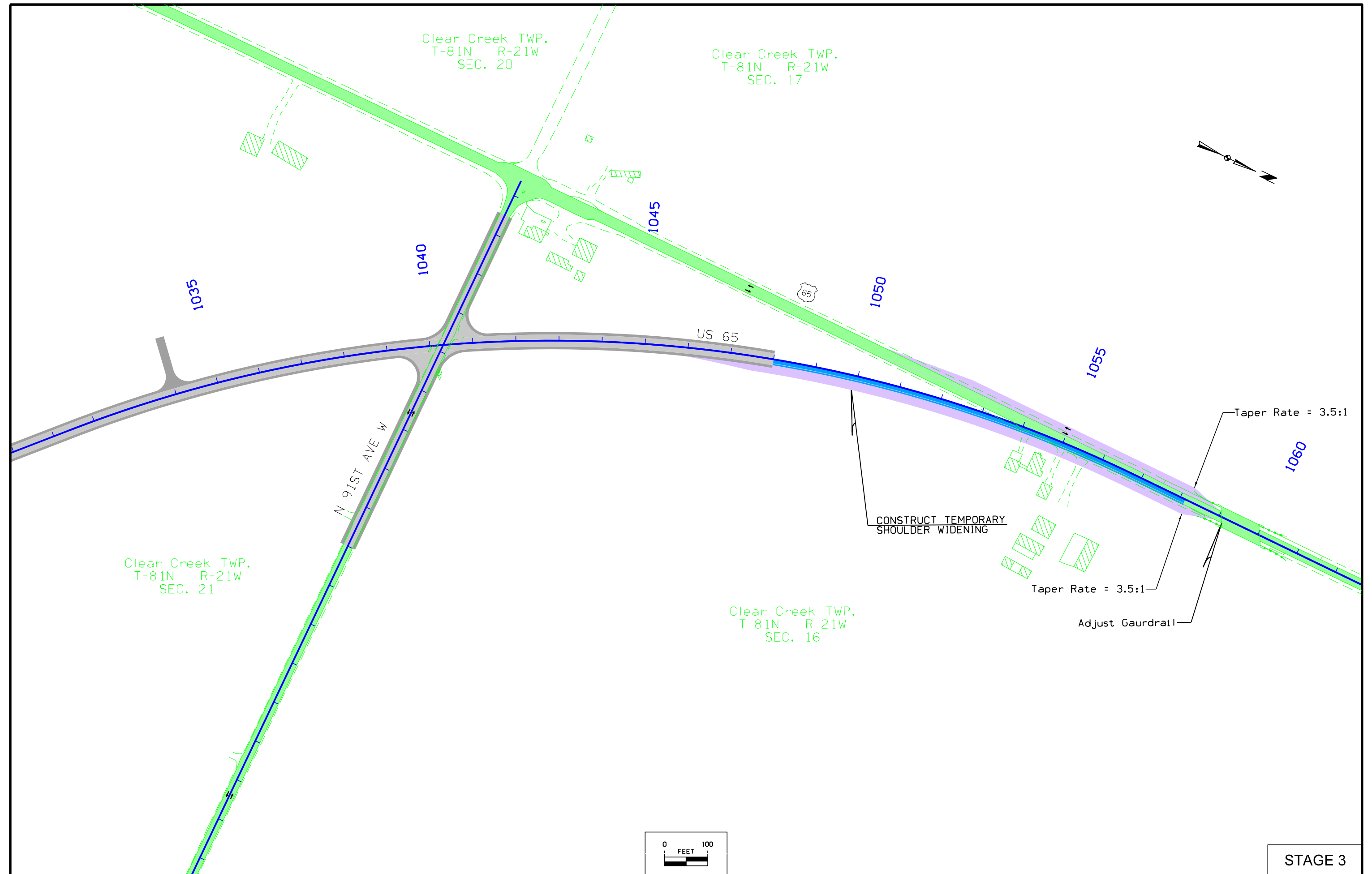
Taper Rate = 10:1

Taper Rate = 10:1

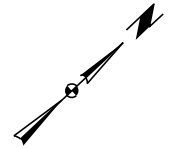
CONSTRUCT TEMPORARY SHOULDER WIDENING



STAGE 3



Clear Creek TWP.
T-81N R-21W
SEC. 21



CONSTRUCT HAMMERHEAD
TURNAROUND

REMOVE INTERSECTION

REMOVE MEDIAN CROSSING

ROAD
CLOSED

R11-2
48" x 30"

ROAD
CLOSED

R11-2
48" x 30"

150

155

160

165

170

175

330 65

330

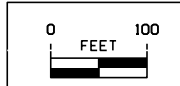
RAMP B

RAMP C

IA 117

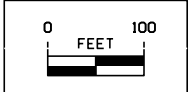
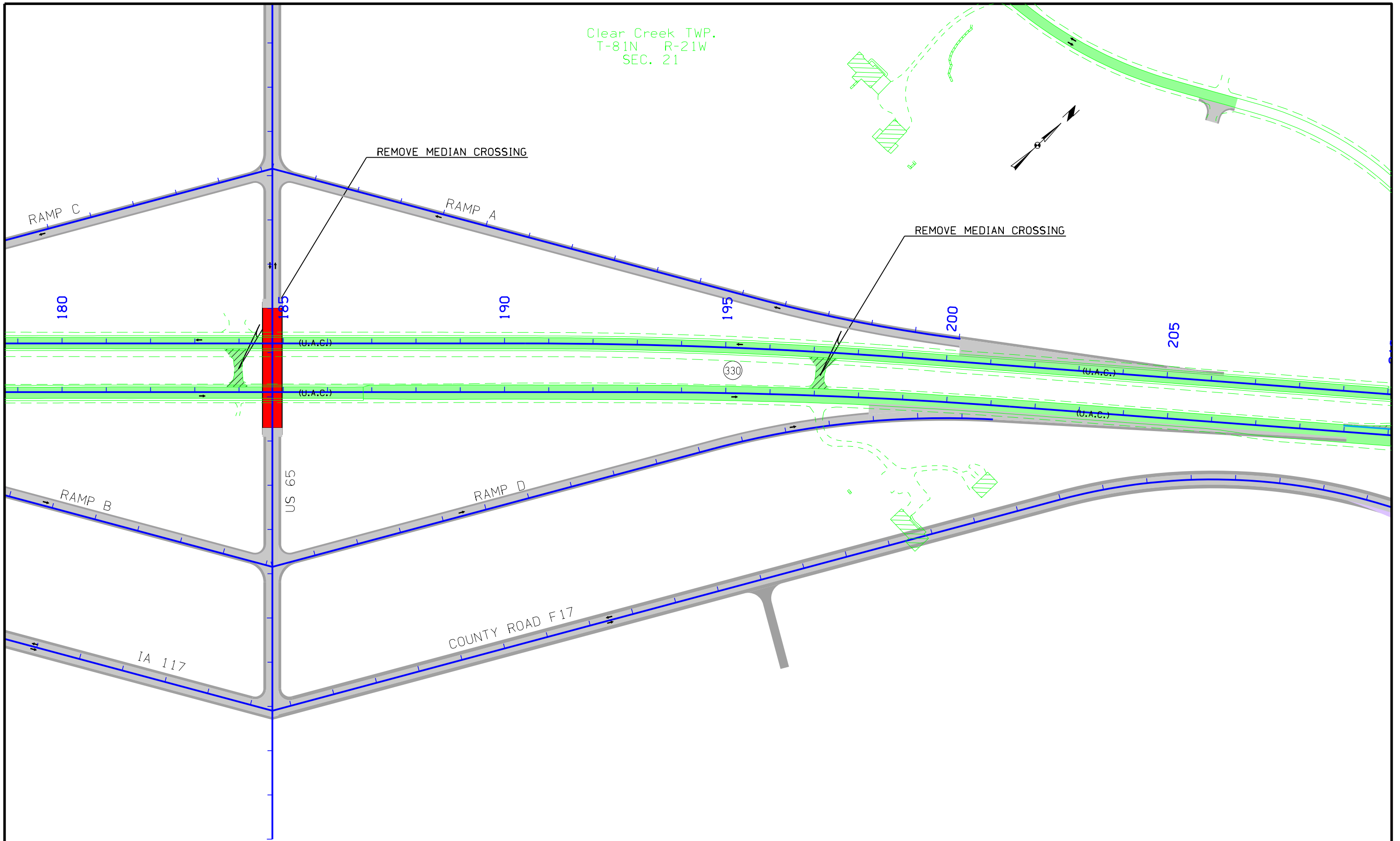
117

Taper Rate = 10:1



STAGE 4

Clear Creek TWP.
T-81N R-21W
SEC. 21



STAGE 4

Clear Creek TWP.
T-81N R-21W
SEC. 16

Clear Creek TWP.
T-81N R-21W
SEC. 21

Clear Creek TWP.
T-81N R-21W
SEC. 16

REMOVE INTERSECTION

REMOVE INTERSECTION

ROAD
CLOSED

R11-2
48" x 30"

Taper Rate = 10:1

W 124TH ST N

COUNTY ROAD F17

215

220

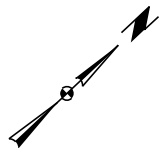
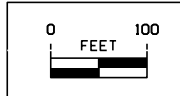
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230

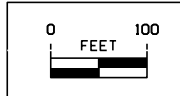
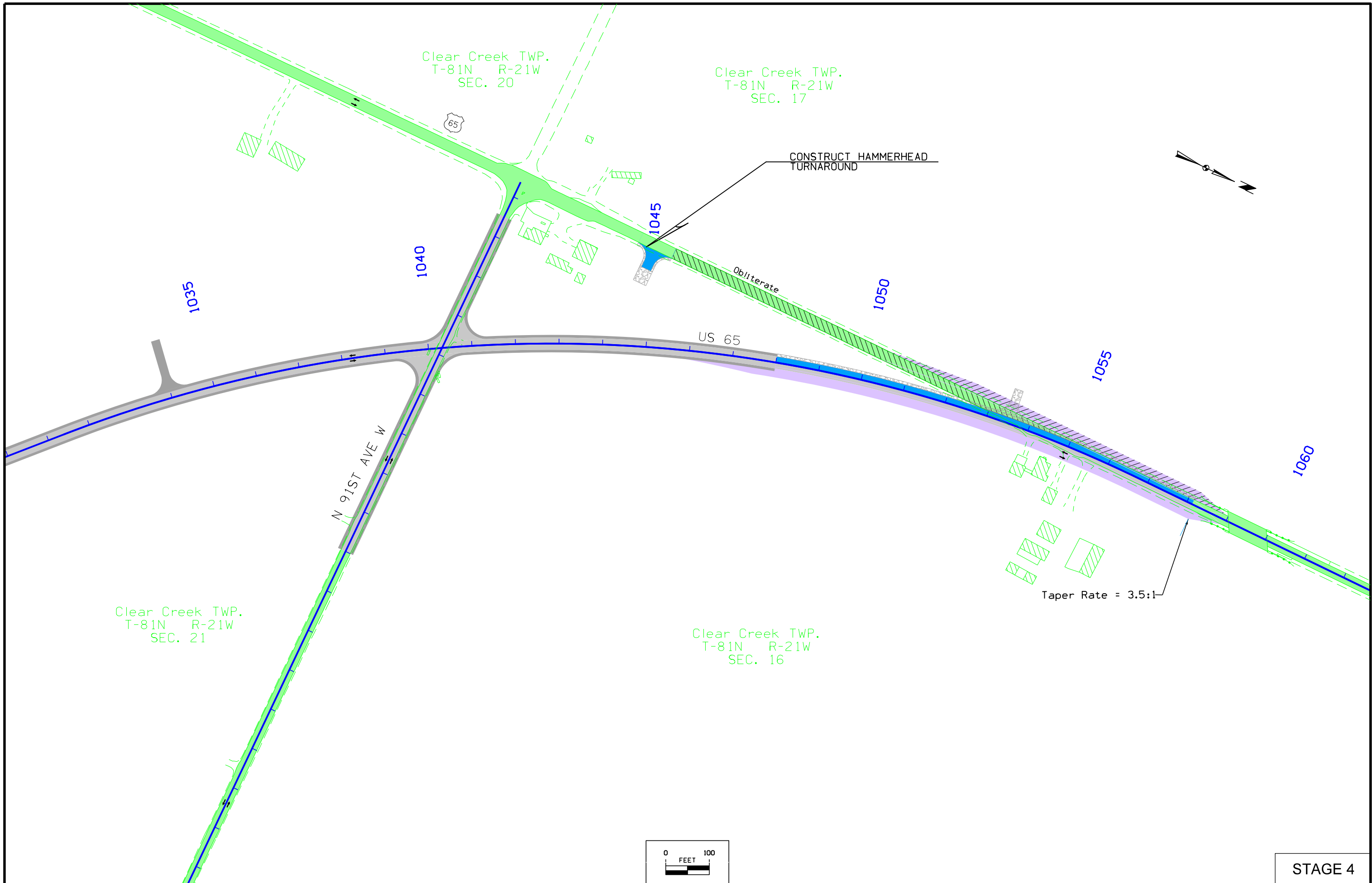
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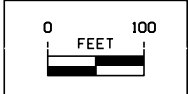
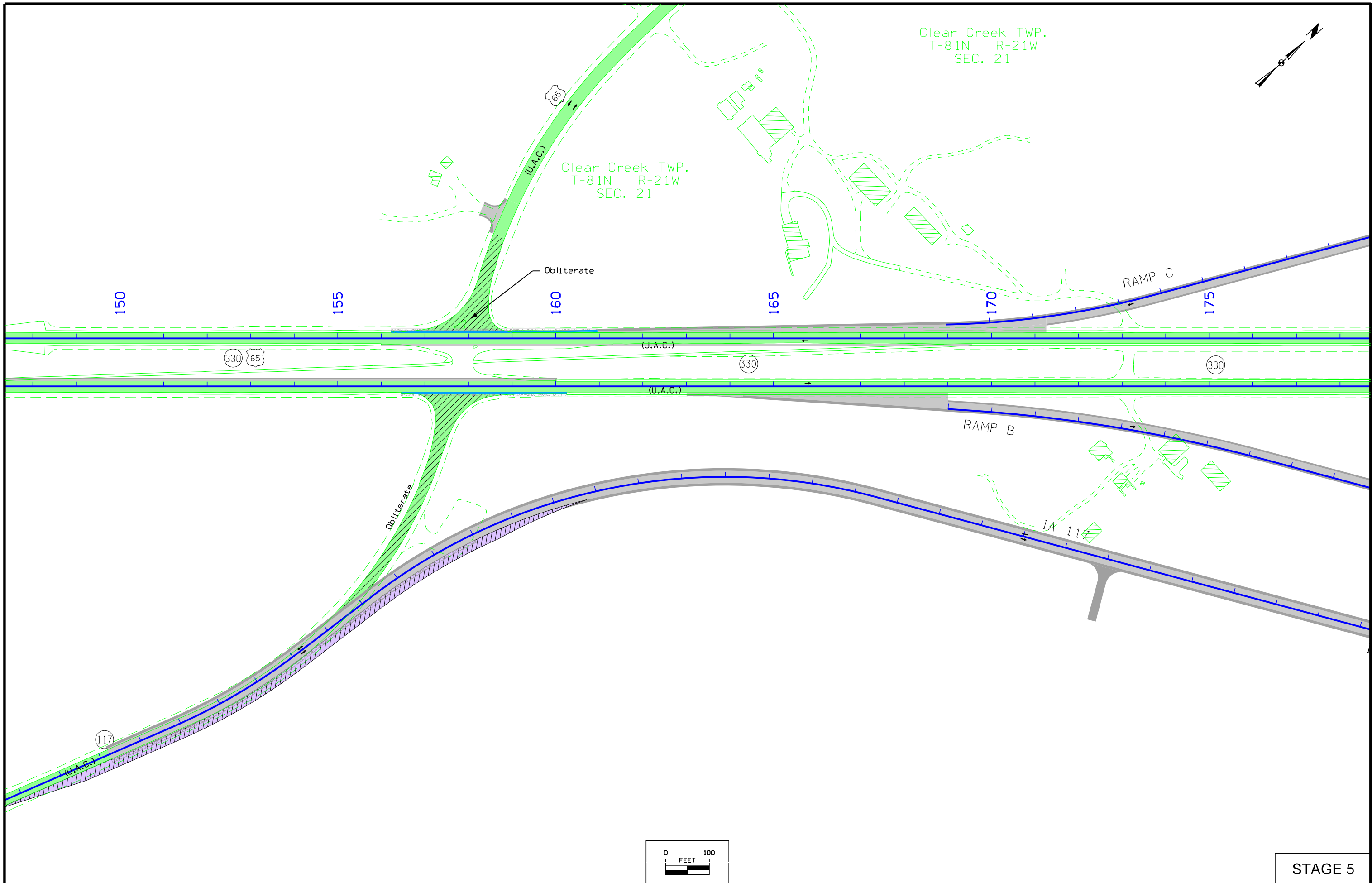
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F17



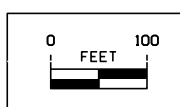
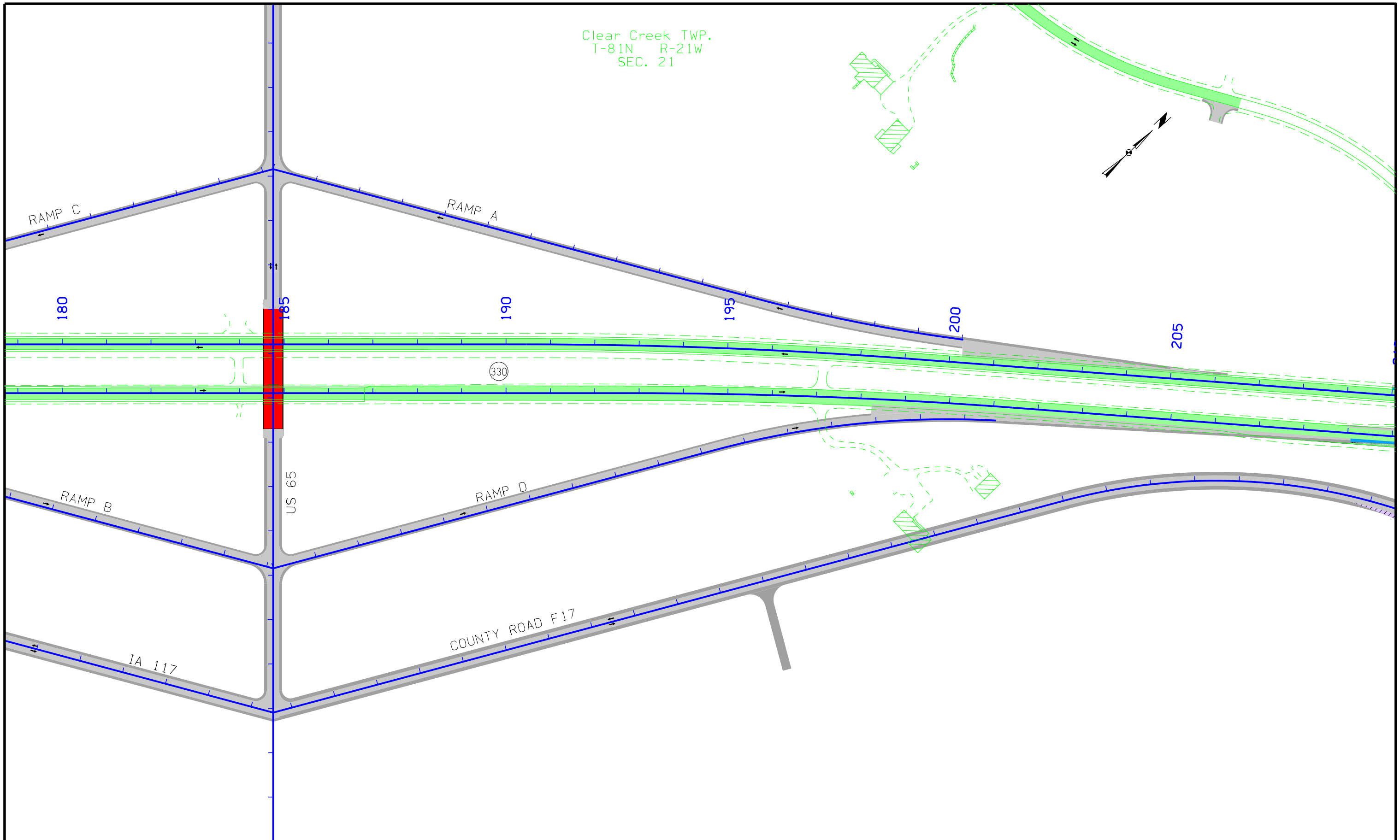
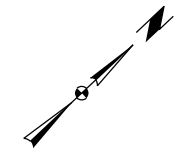
STAGE 4





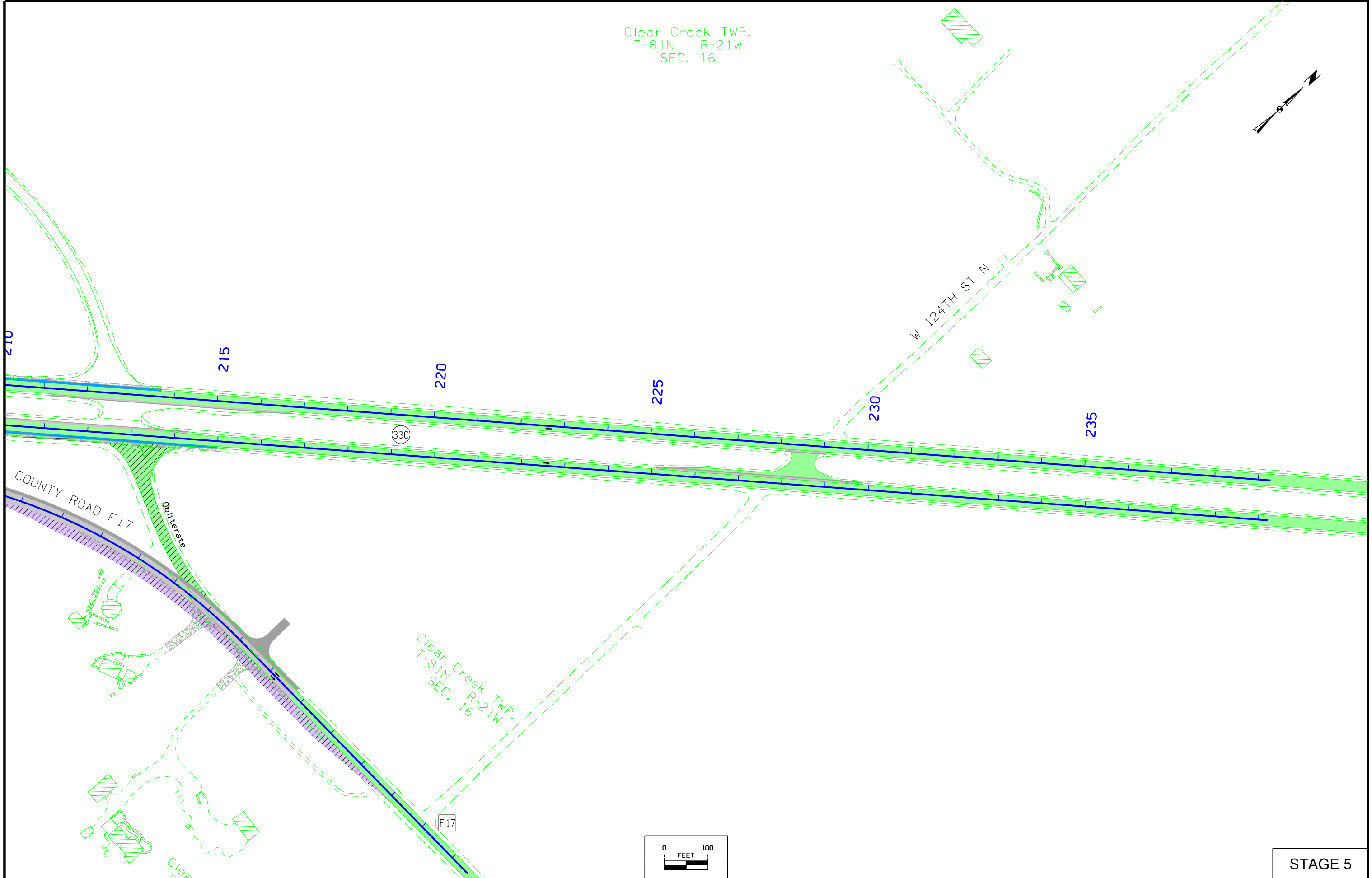
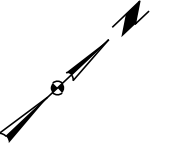
STAGE 5

Clear Creek TWP.
T-81N R-21W
SEC. 21

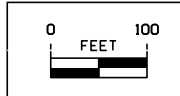


STAGE 5

Clear Creek TWP.
T-81N R-21W
SEC. 16



Clear Creek TWP.
T-81N R-21W
SEC. 16



STAGE 5

Clear Creek TWP.
T-81N R-21W
SEC. 20

Clear Creek TWP.
T-81N R-21W
SEC. 17

Clear Creek TWP.
T-81N R-21W
SEC. 21

Clear Creek TWP.
T-81N R-21W
SEC. 16

1040

1035

1045

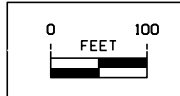
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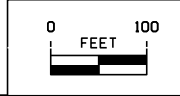
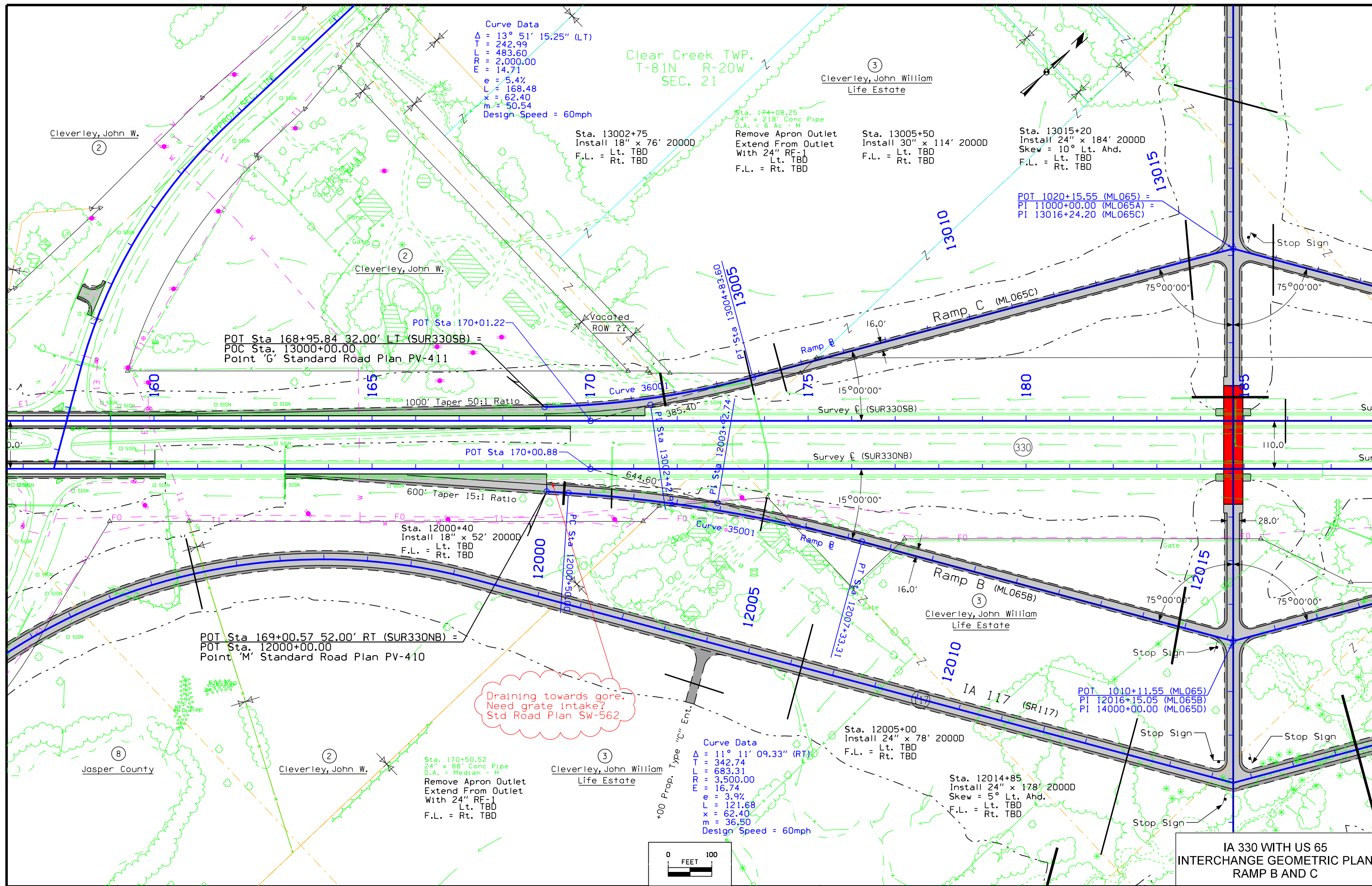
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N 91ST AVE W

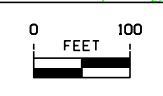
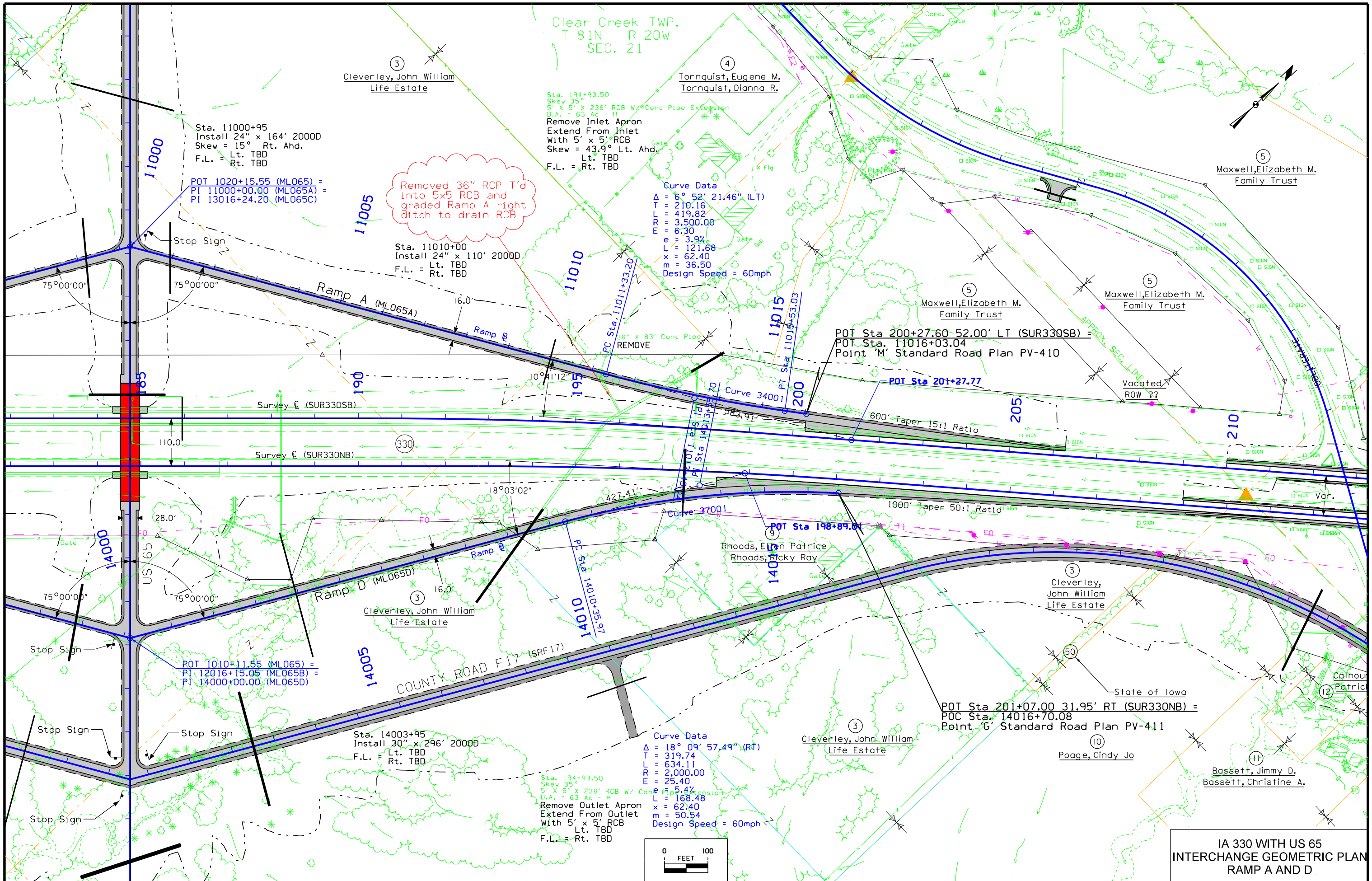
US 65



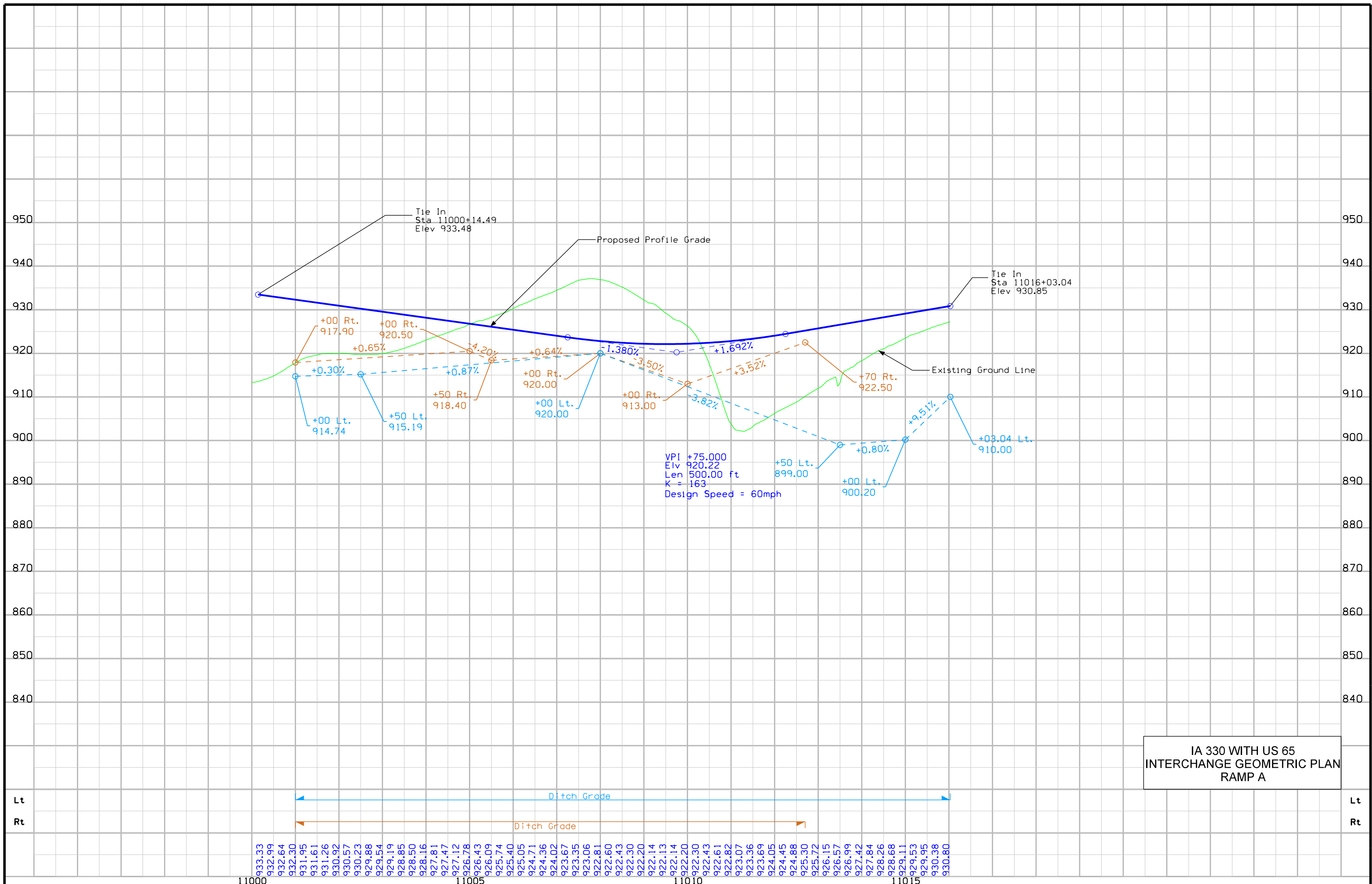
STAGE 5



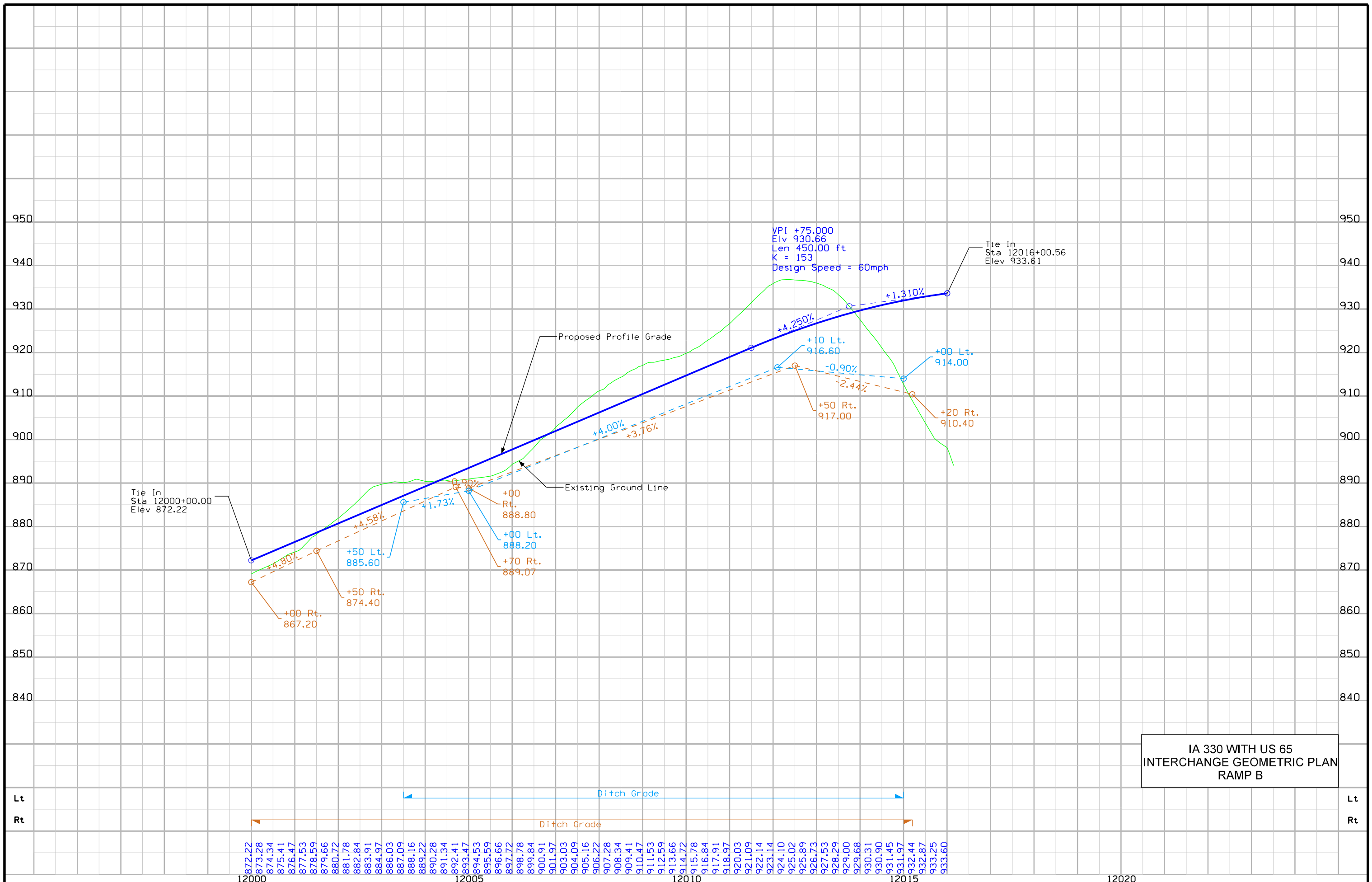
IA 330 WITH US 65
 INTERCHANGE GEOMETRIC PLAN
 RAMP B AND C



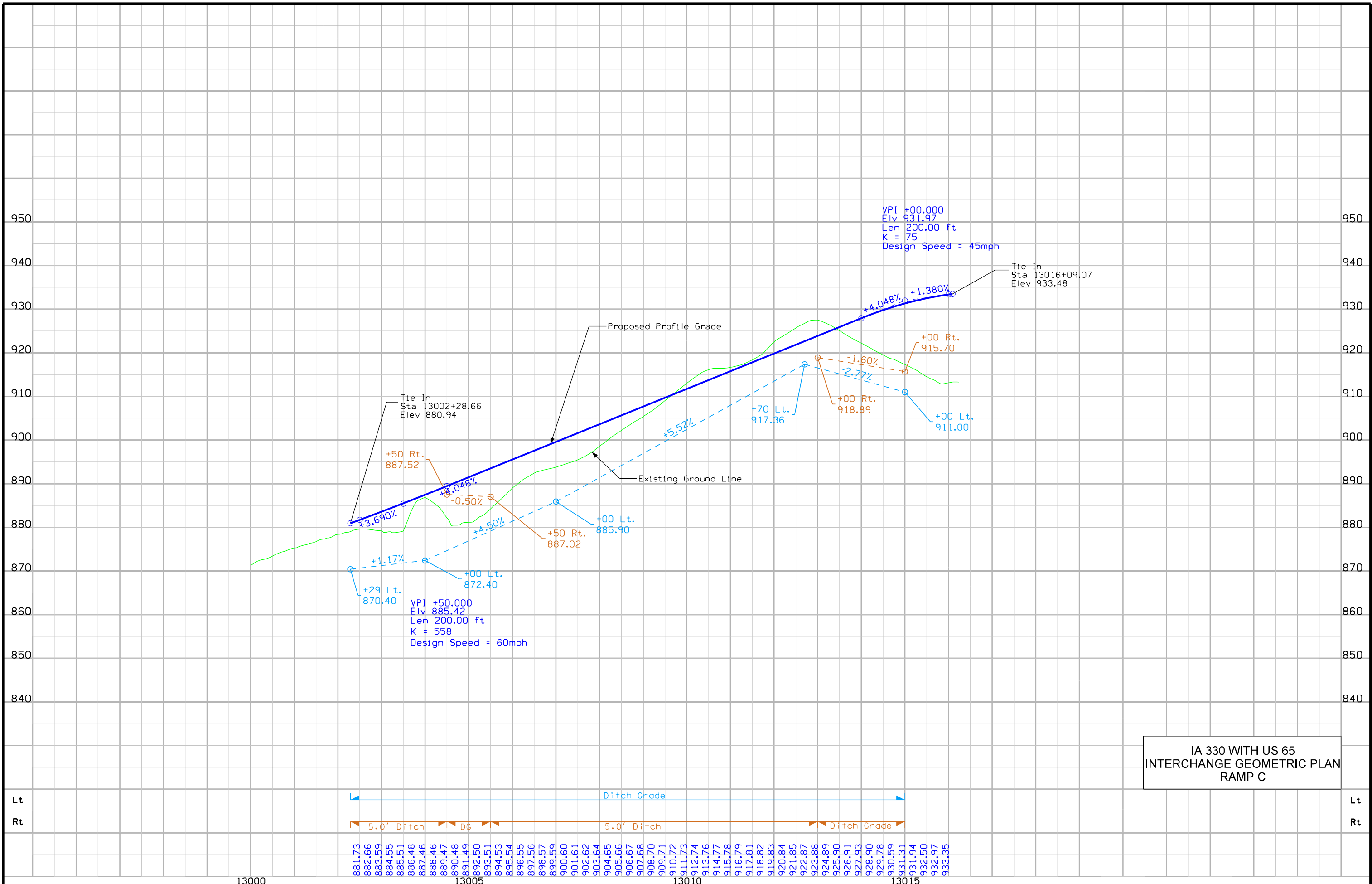
IA 330 WITH US 65 INTERCHANGE GEOMETRIC PLAN RAMP A AND D



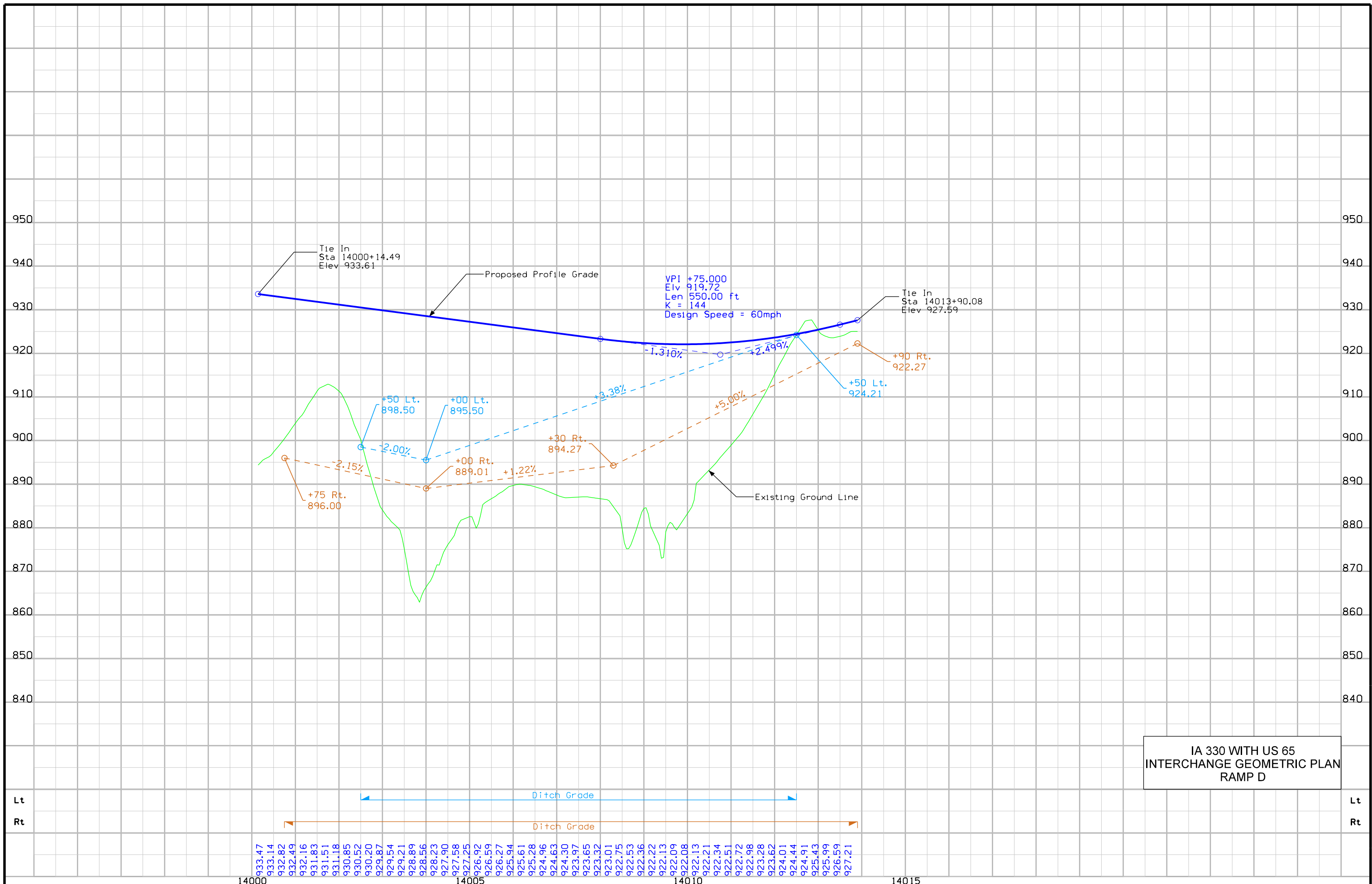
IA 330 WITH US 65
INTERCHANGE GEOMETRIC PLAN
RAMP A



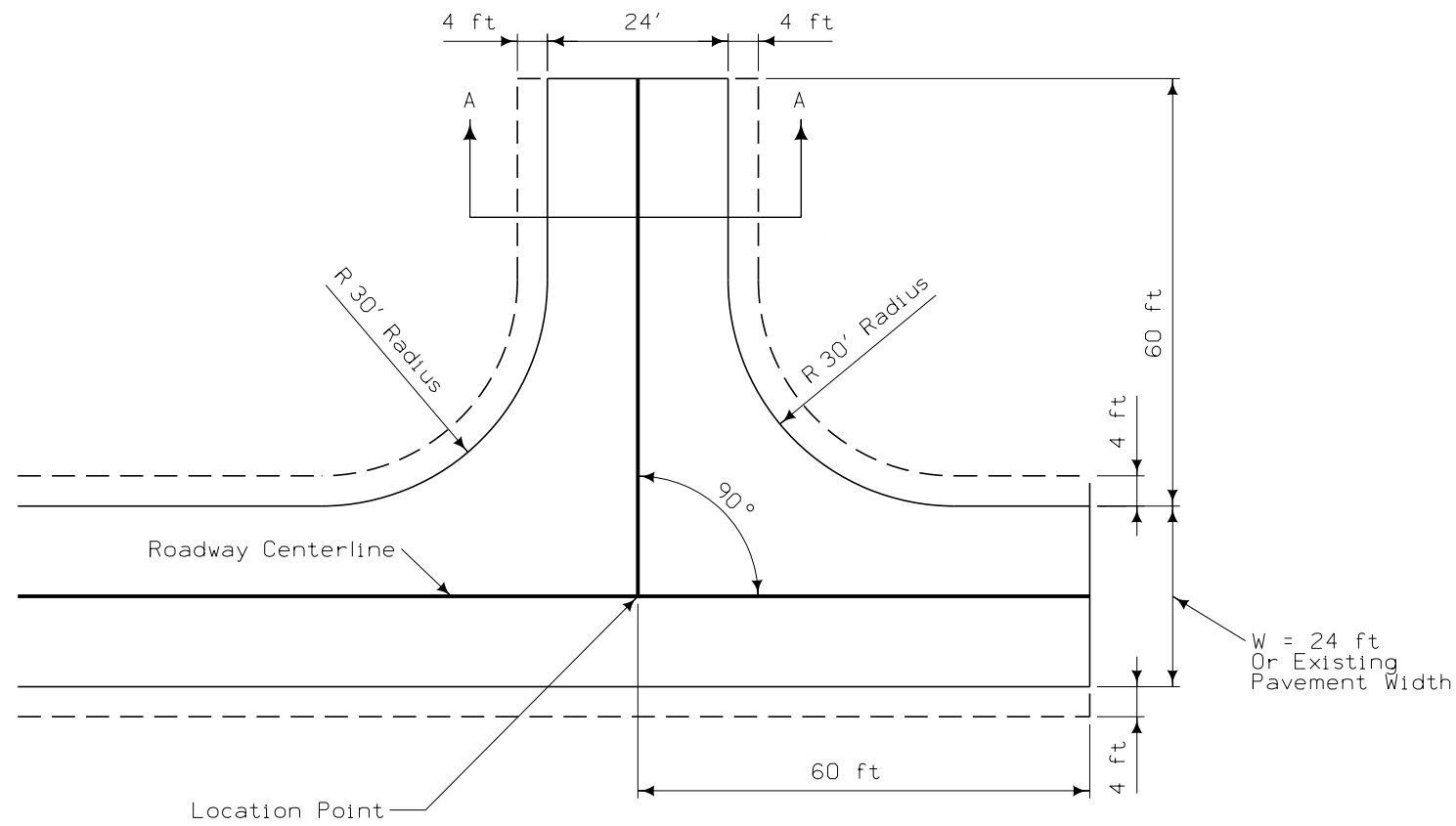
IA 330 WITH US 65
INTERCHANGE GEOMETRIC PLAN
RAMP B



IA 330 WITH US 65
 INTERCHANGE GEOMETRIC PLAN
 RAMP C



IA 330 WITH US 65
INTERCHANGE GEOMETRIC PLAN
RAMP D

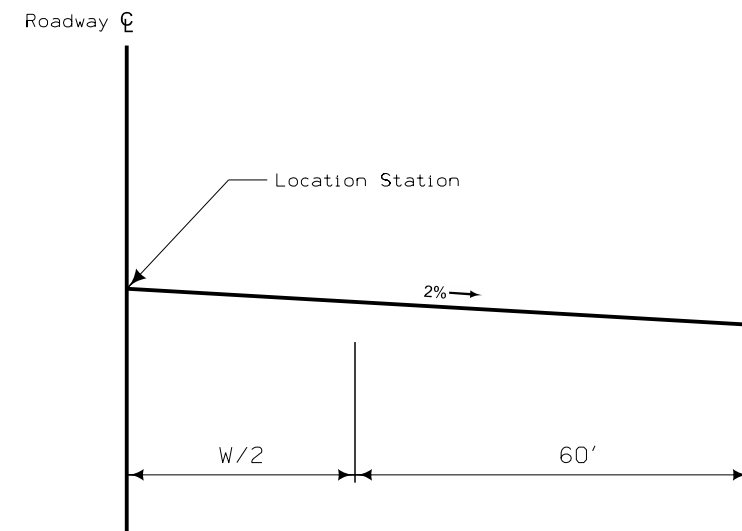


Typical Hammer Head Turnaround
No Scale

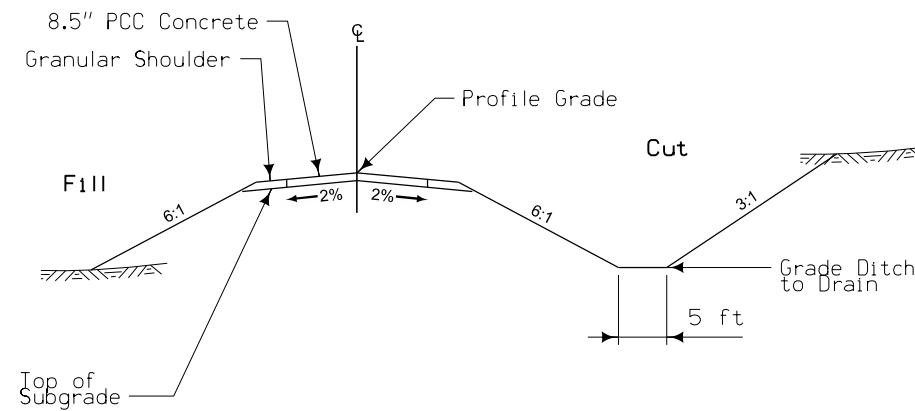
Notes:

Hammer Head Turnaround may be reversed to match Plan Sheet Configuration.

Granular Surfacing shall be placed at an application rate of 25 Tons/Sta.



Typical Hammer Head Profile
No Scale

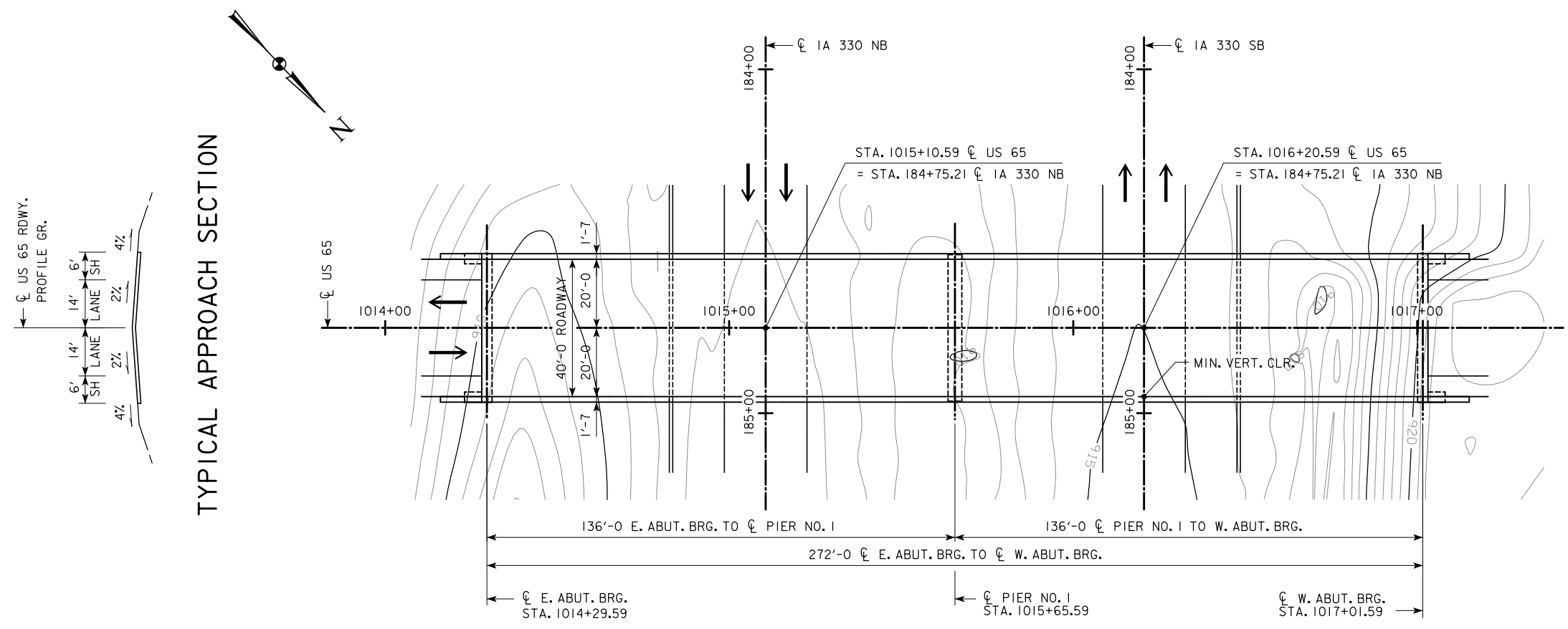


SECTION A-A
No Scale

HAMMER HEAD TURNAROUND DETAIL SHEET

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 1016+20.59, OFFSET 20'-0 RT.
 OVERHEAD ELEVATION = 938.22
 DEPTH OF SUPERSTRUCTURE = 5'-6 (BTD BEAM)
 EXISTING UNDERPASS ELEVATION = 915.20
 MINIMUM VERTICAL CLEARANCE = 17'-6



SITUATION PLAN

NOTES:
 ALL UNITS ARE IN FEET UNLESS NOTED OTHERWISE.
 SEE ROADWAY PLANS FOR VERTICAL PROFILE AND HORIZONTAL ALIGNMENT DATA.
 DISPOSITION OF UTILITIES TO BE DETERMINED IN FUTURE DESIGN PHASES.



PRELIMINARY
 DESIGN FOR 0° SKEW
272'-0 X 40'-0 PRESTRESSED CONCRETE BEAM BRIDGE
 BRIDGE PLAN - US65 OVER IA 330
 STATION 1015+65.59 AUGUST 2014
JASPER COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. ___ OF ___ FILE NO. ___ DESIGN NO. ___

PRELIMINARY PLAN
 NOT FINAL-SUBJECT TO CHANGE

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.

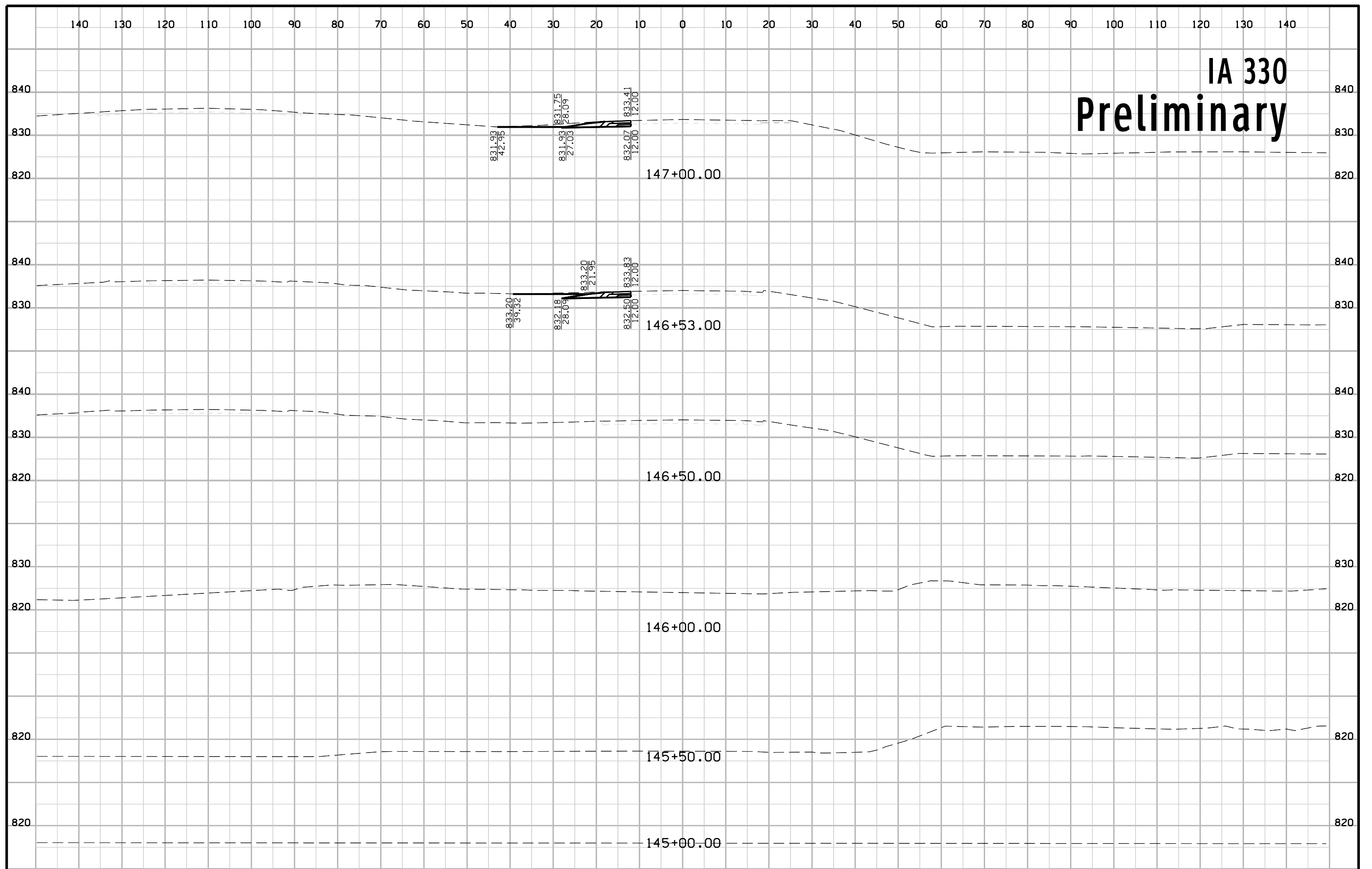
SYMBOL LEGEND OF CROSS SECTION SHEETS

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

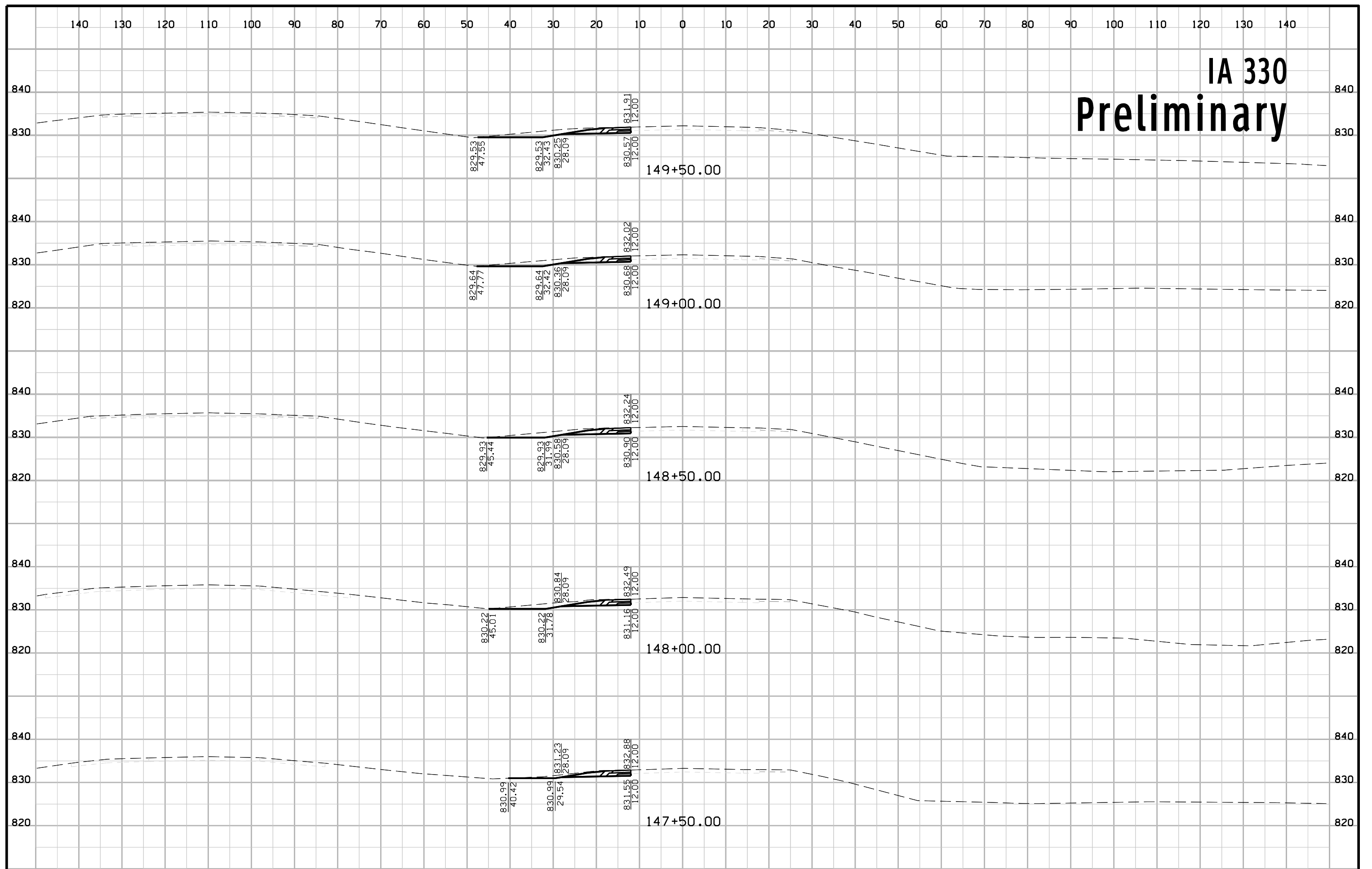
**CROSS SECTION
LEGEND AND SYMBOL
INFORMATION SHEET**

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

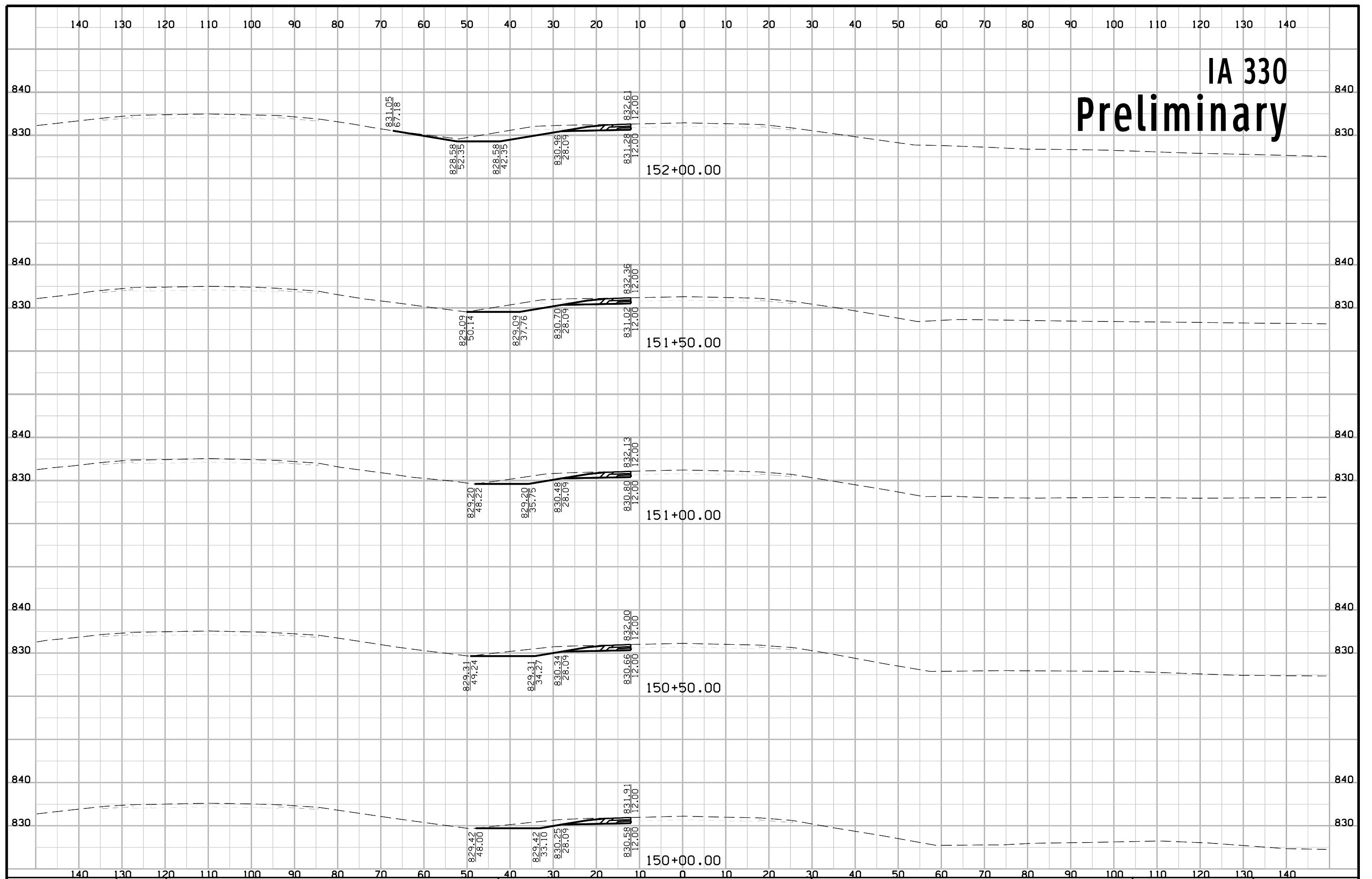
IA 330 Preliminary



IA 330 Preliminary



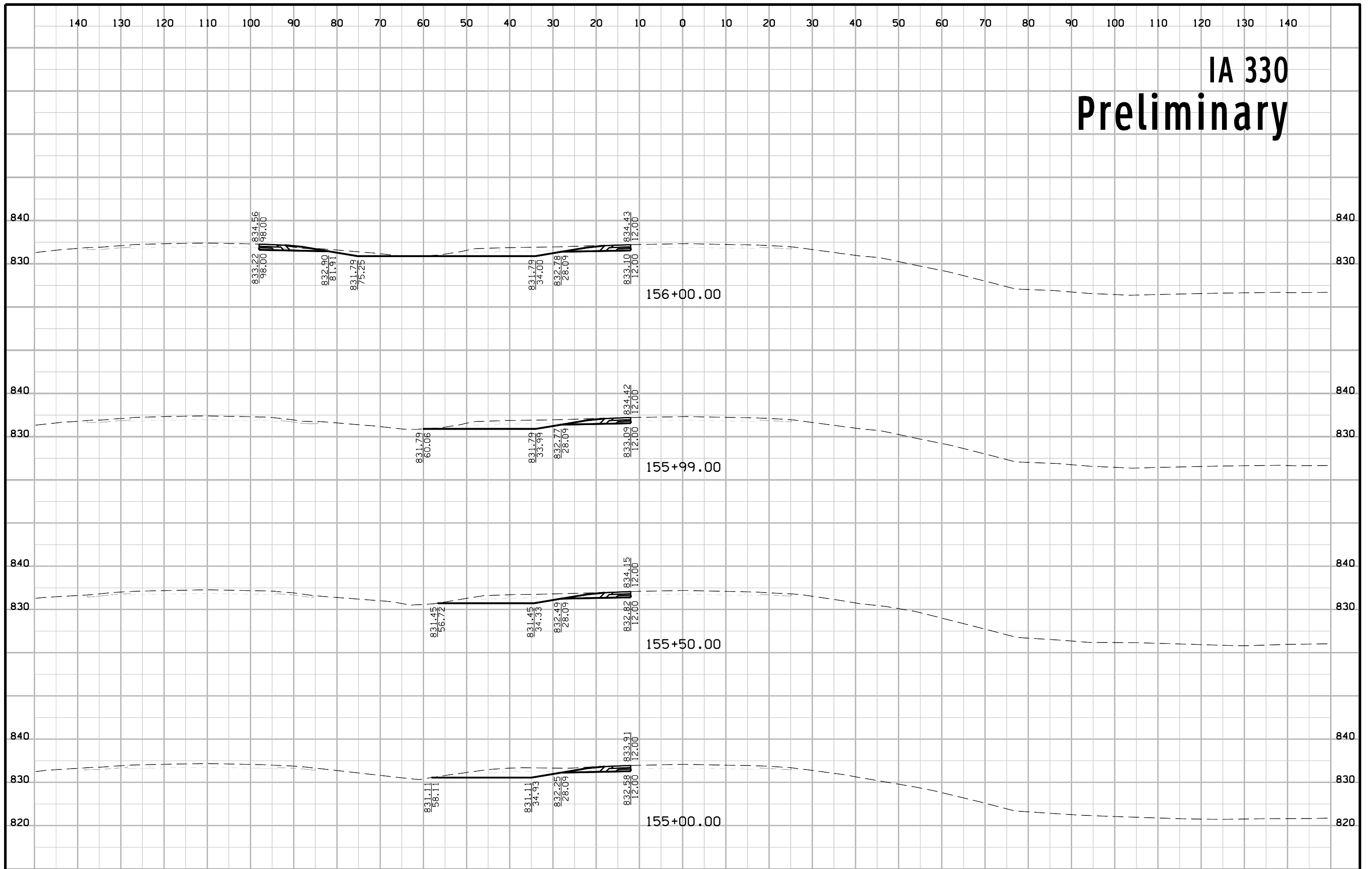
IA 330 Preliminary



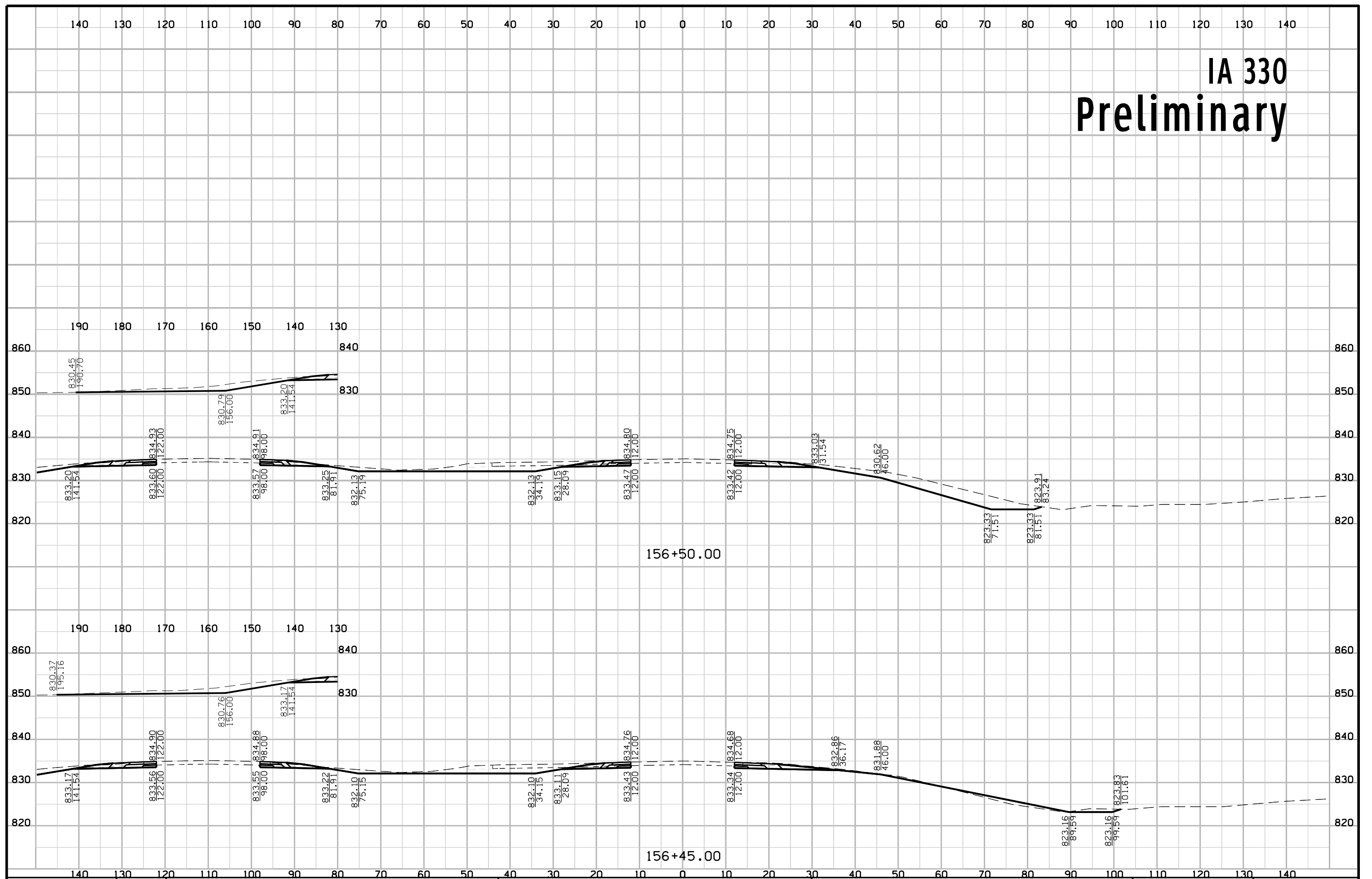
IA 330 Preliminary



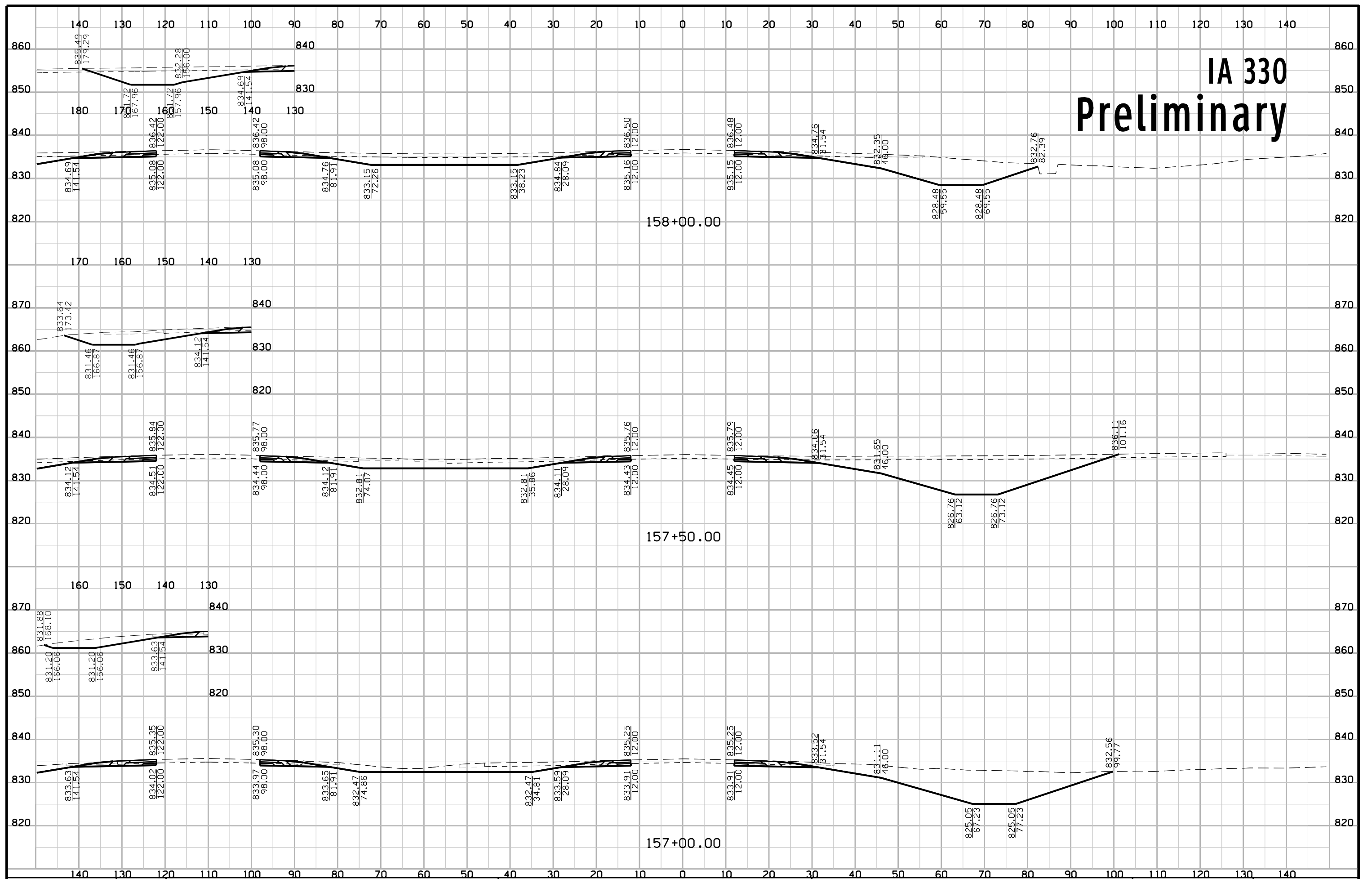
IA 330 Preliminary



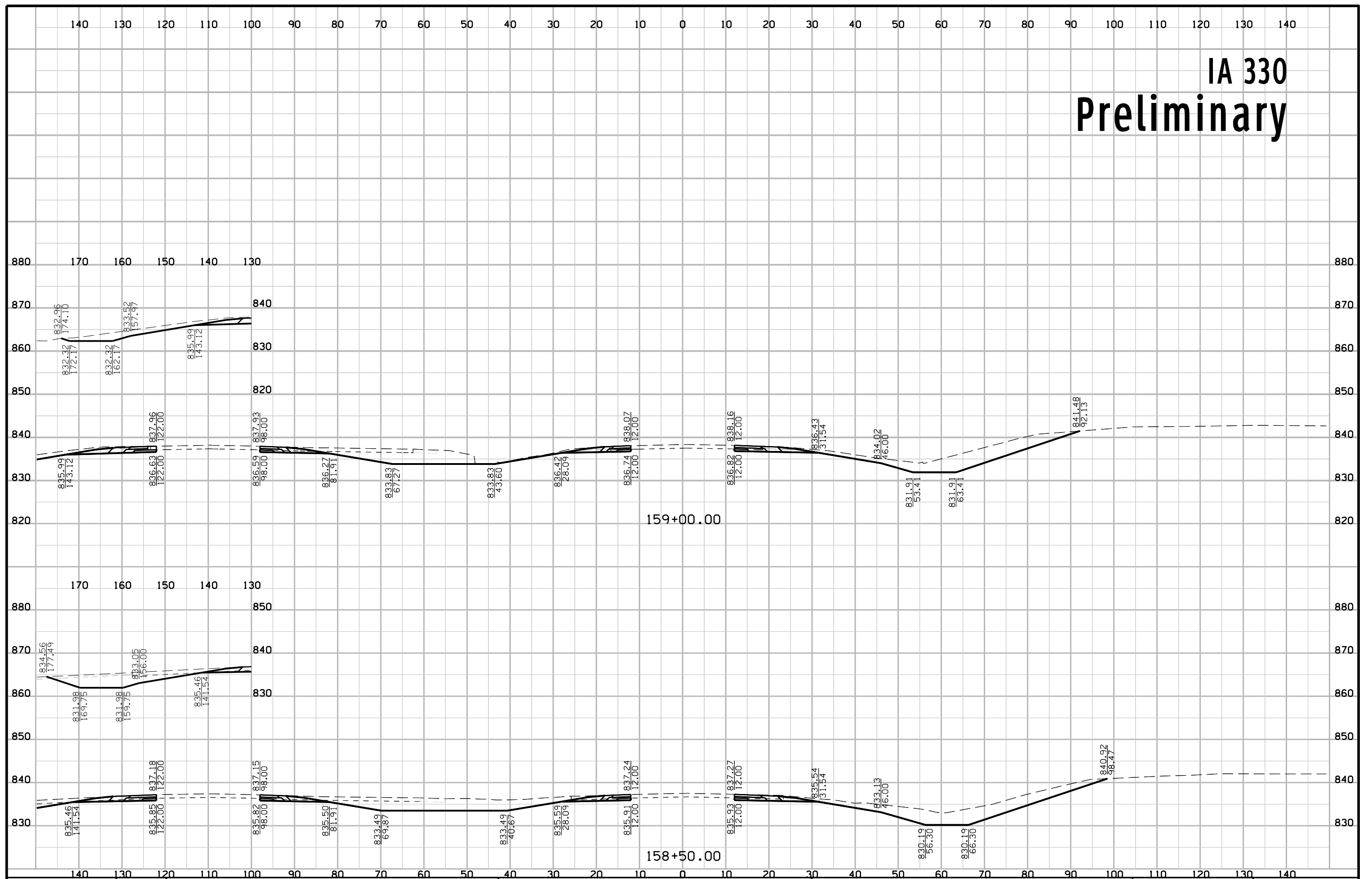
IA 330 Preliminary



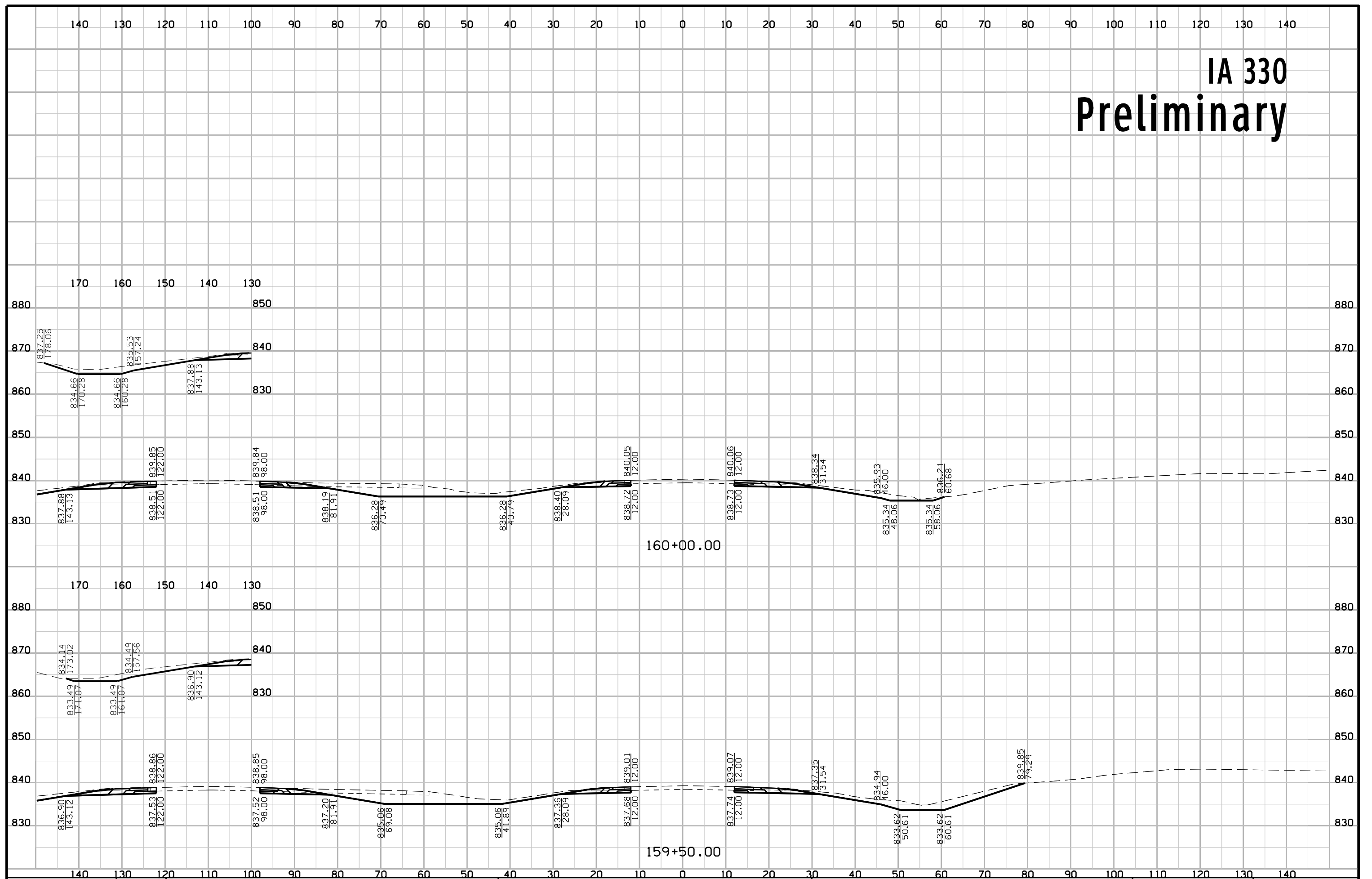
IA 330 Preliminary



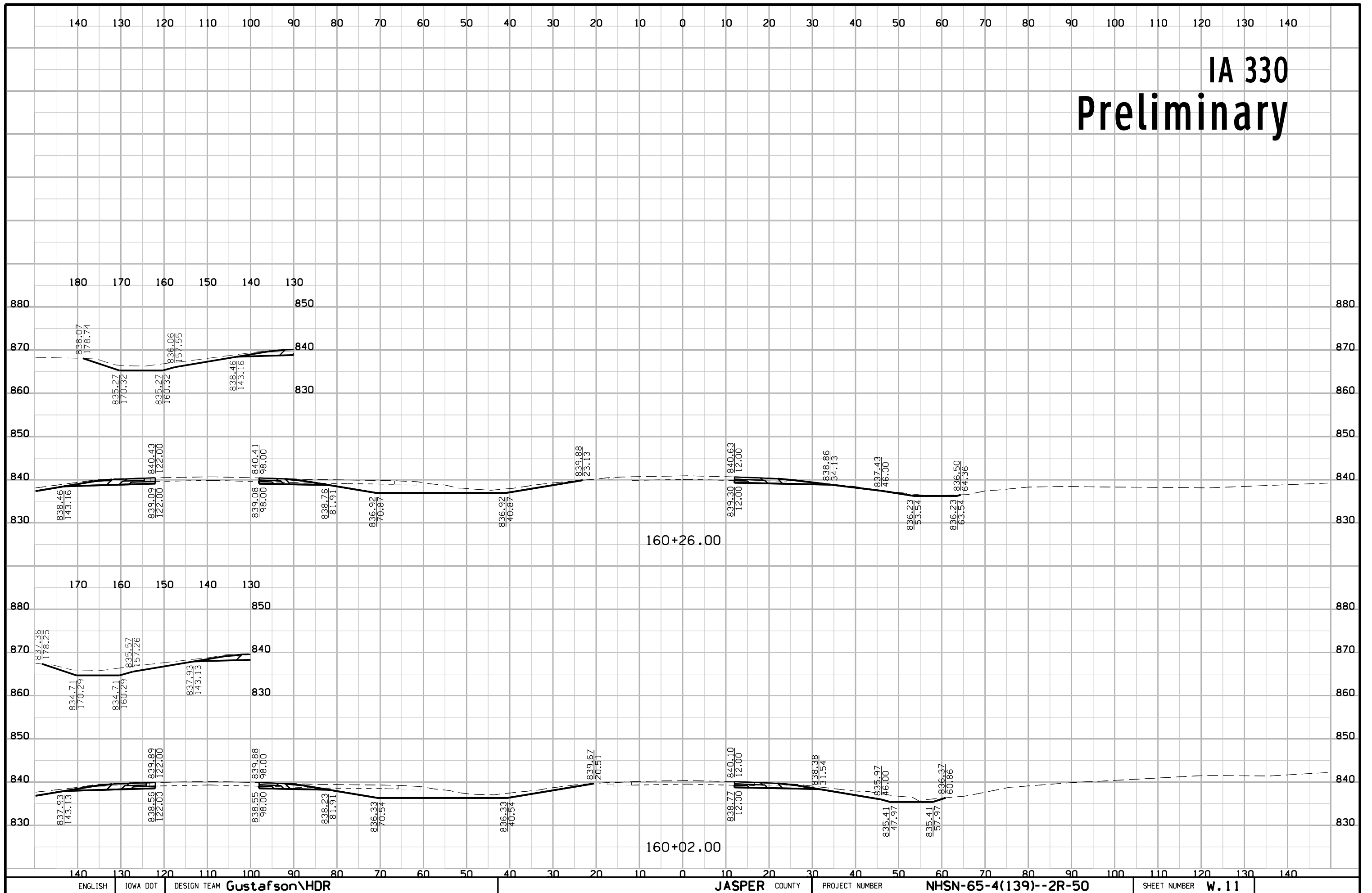
IA 330 Preliminary



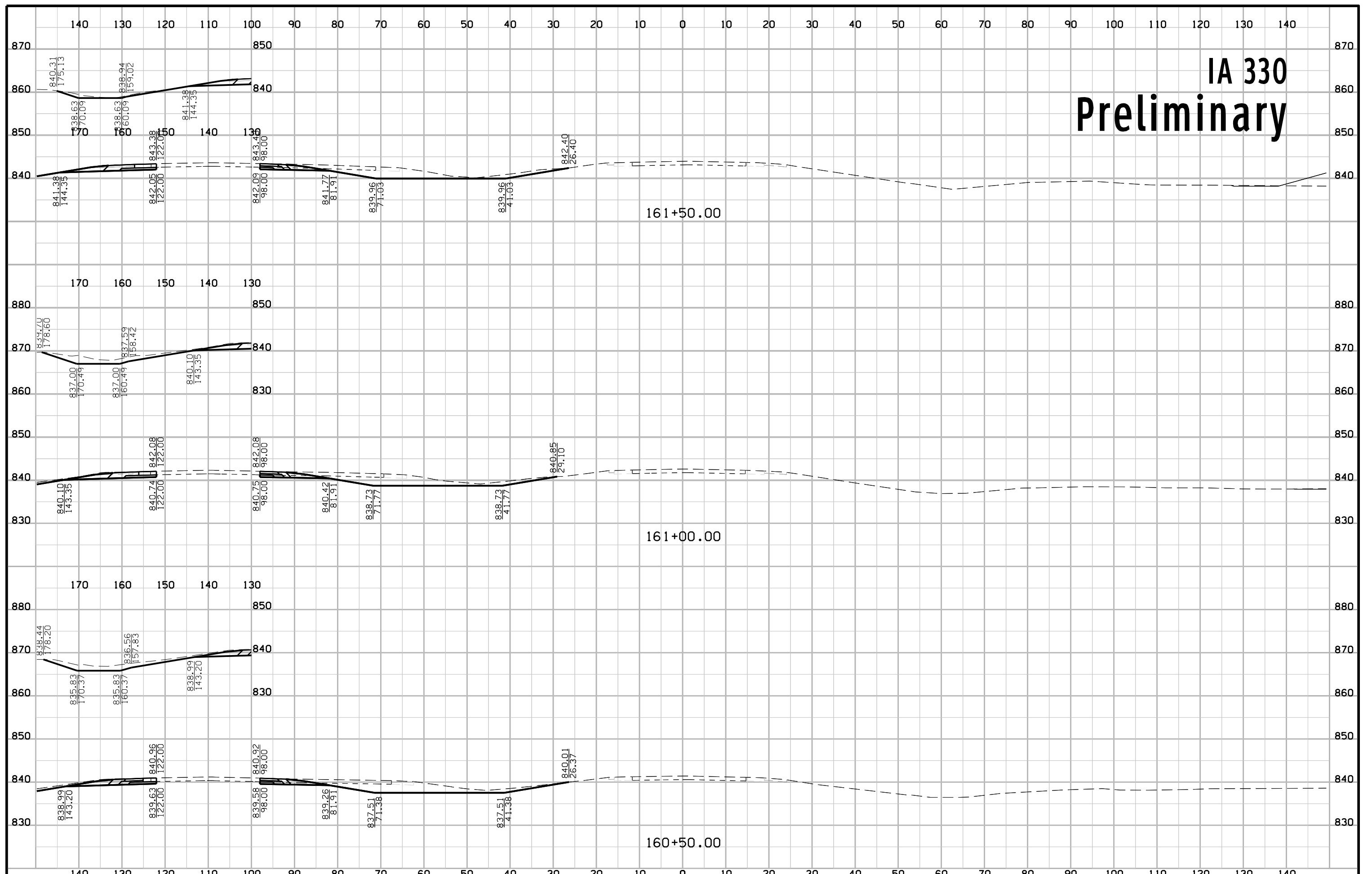
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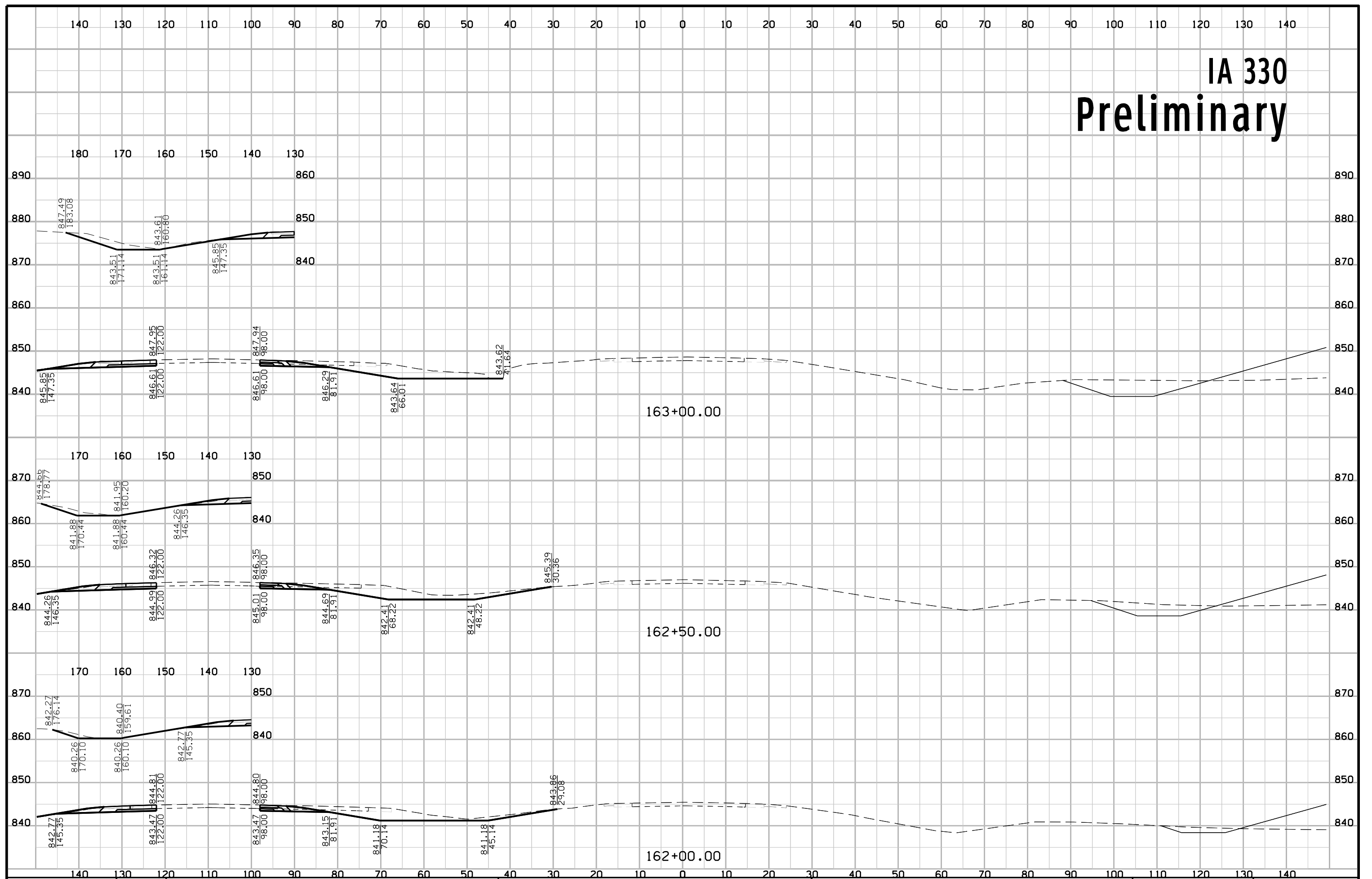
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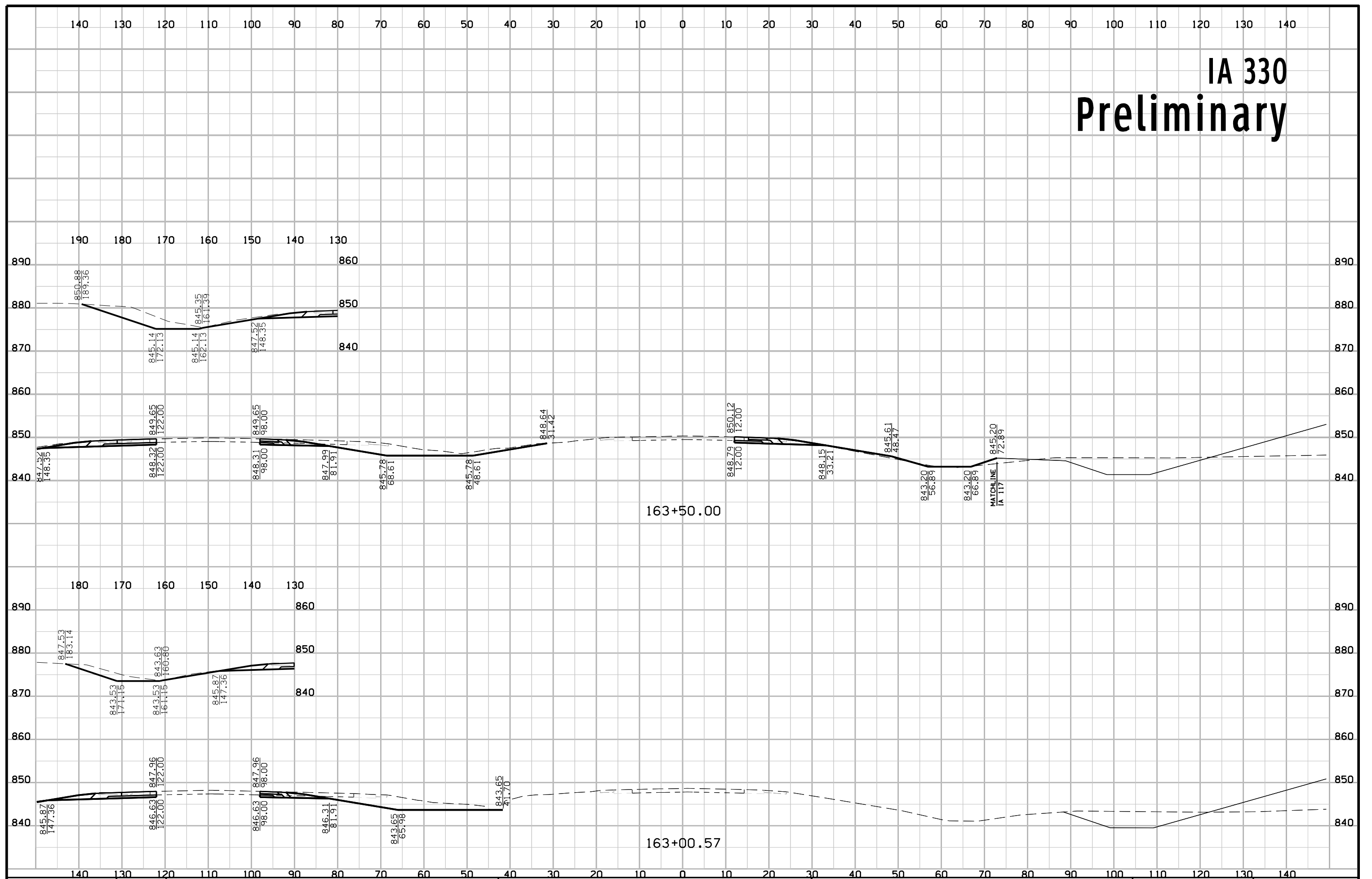
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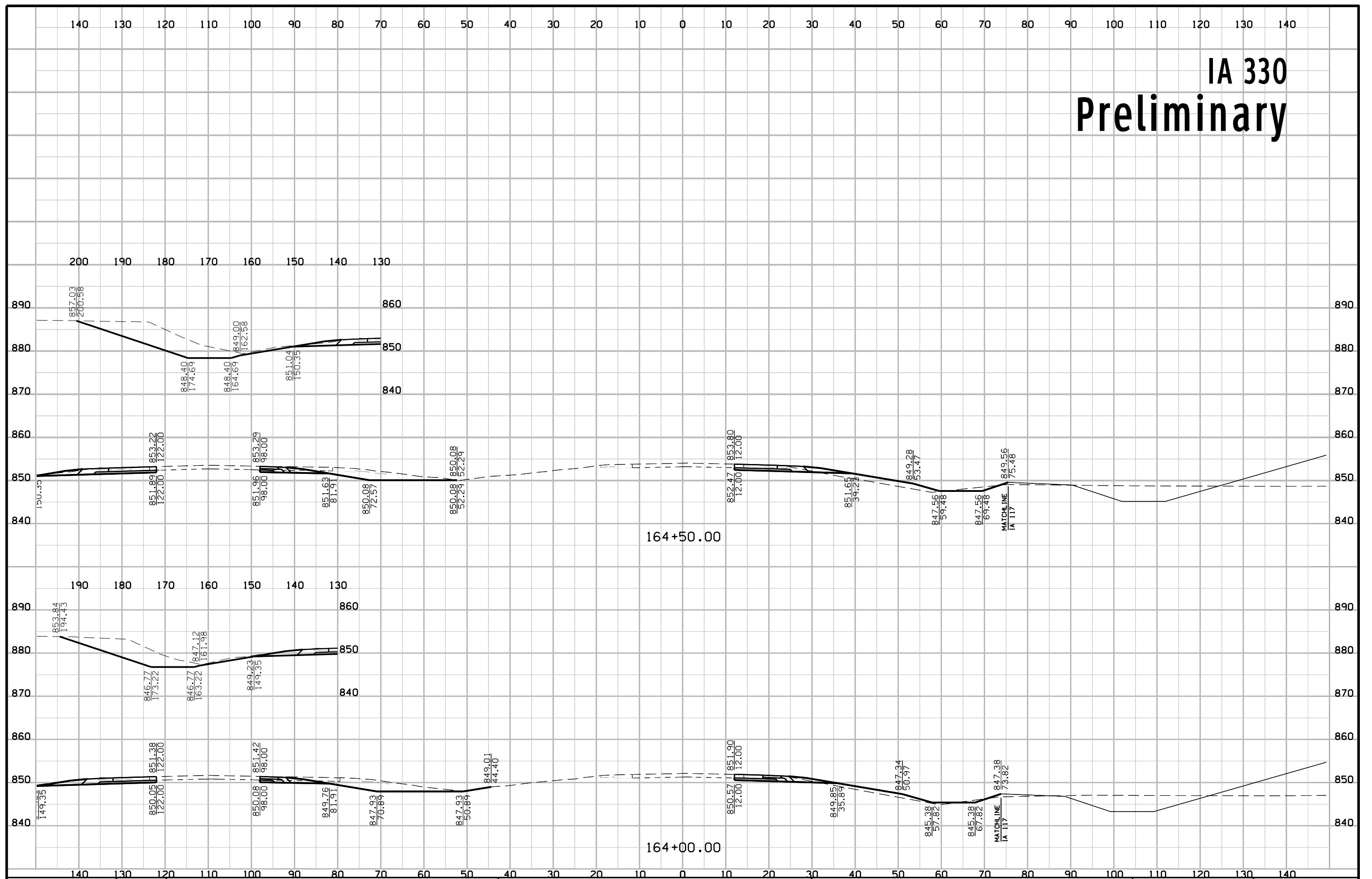
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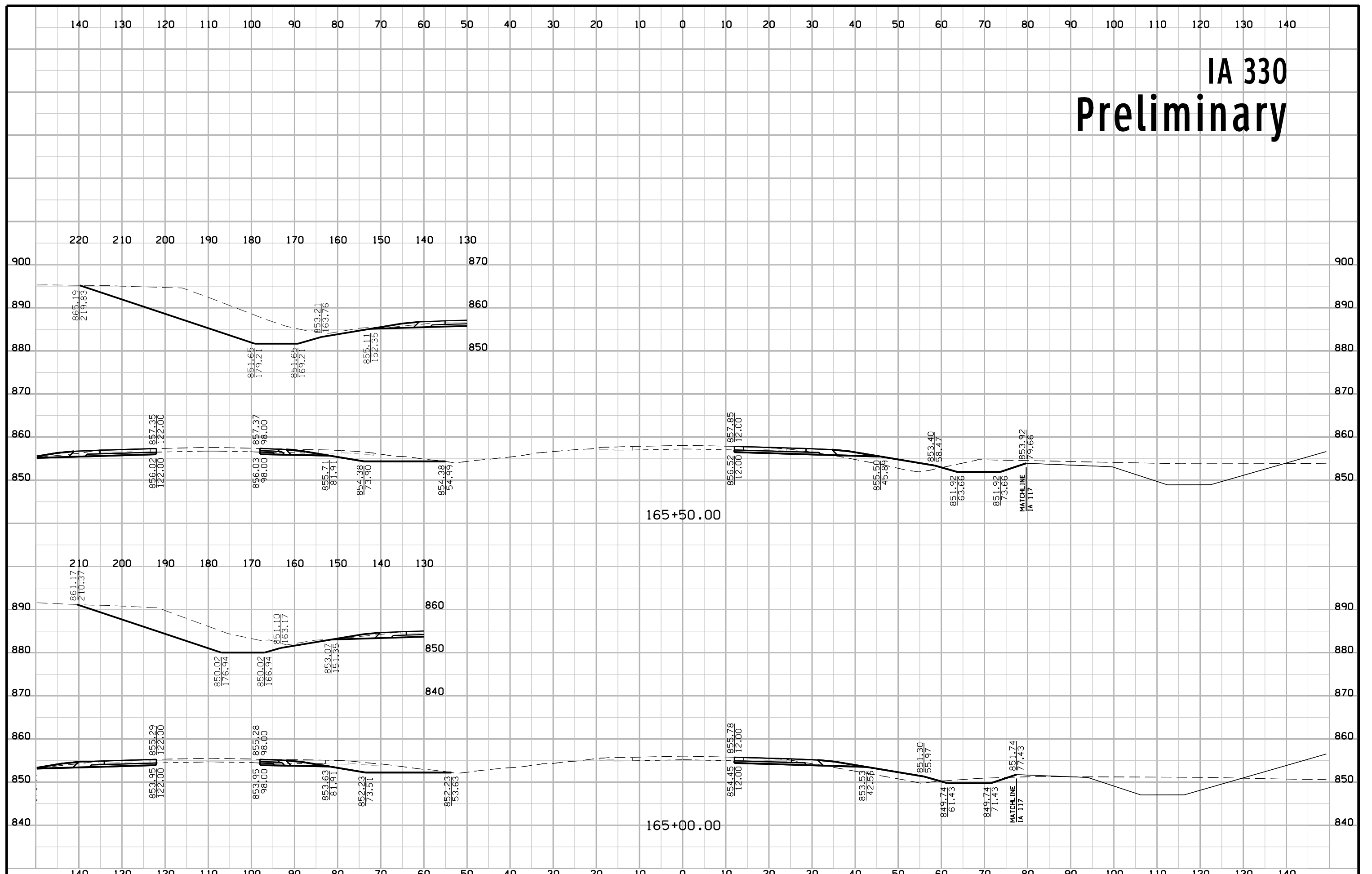
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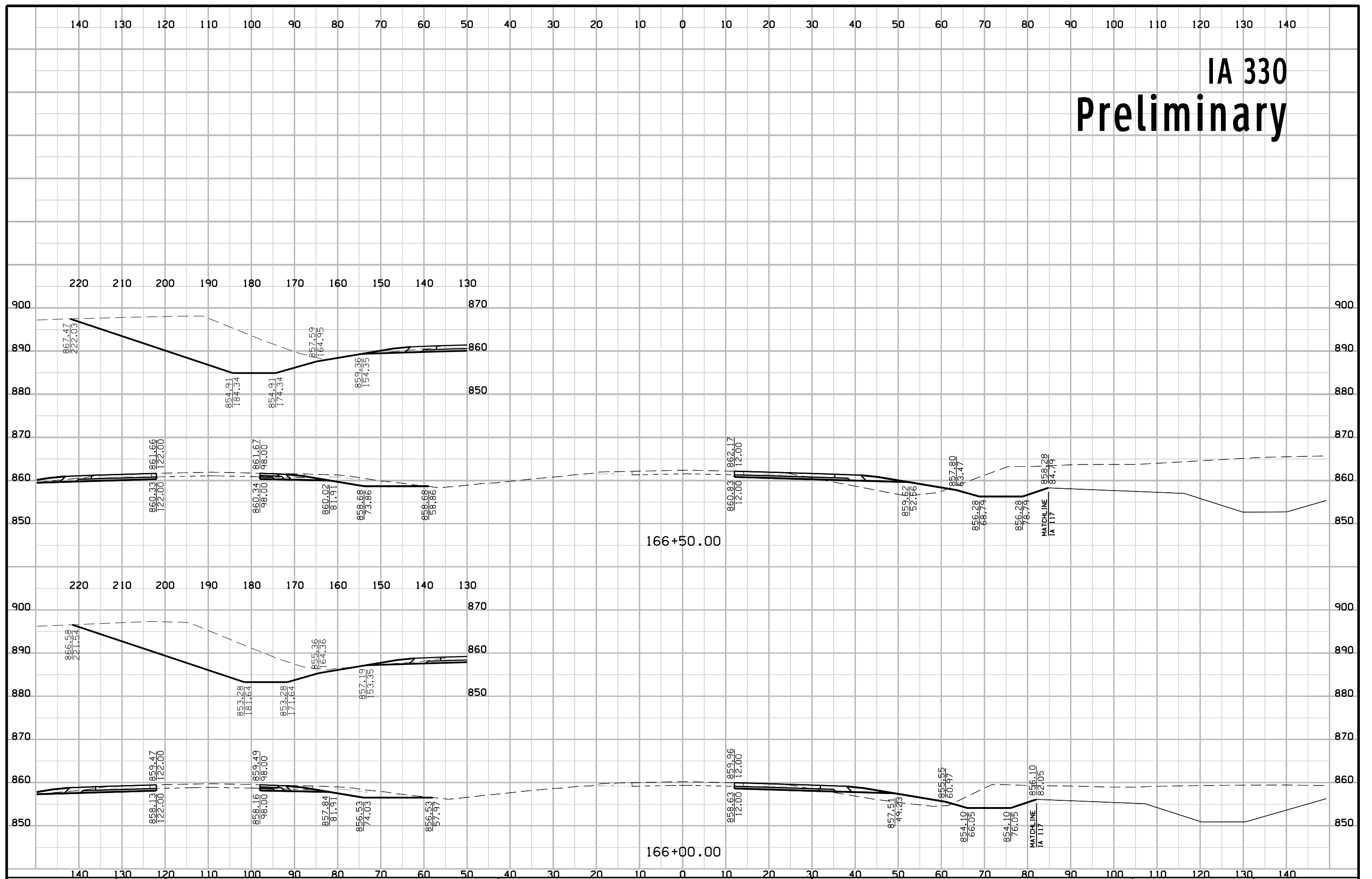
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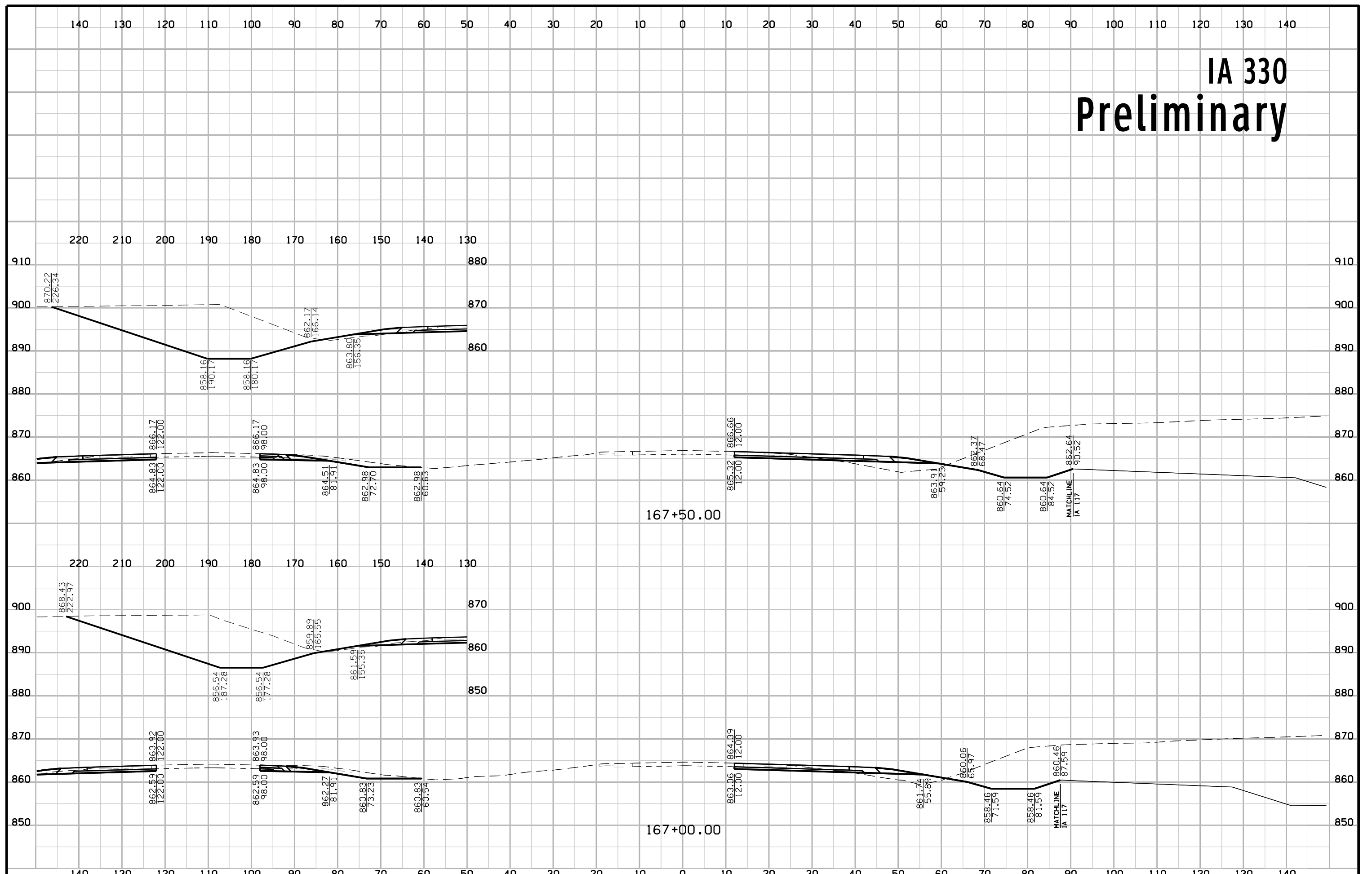
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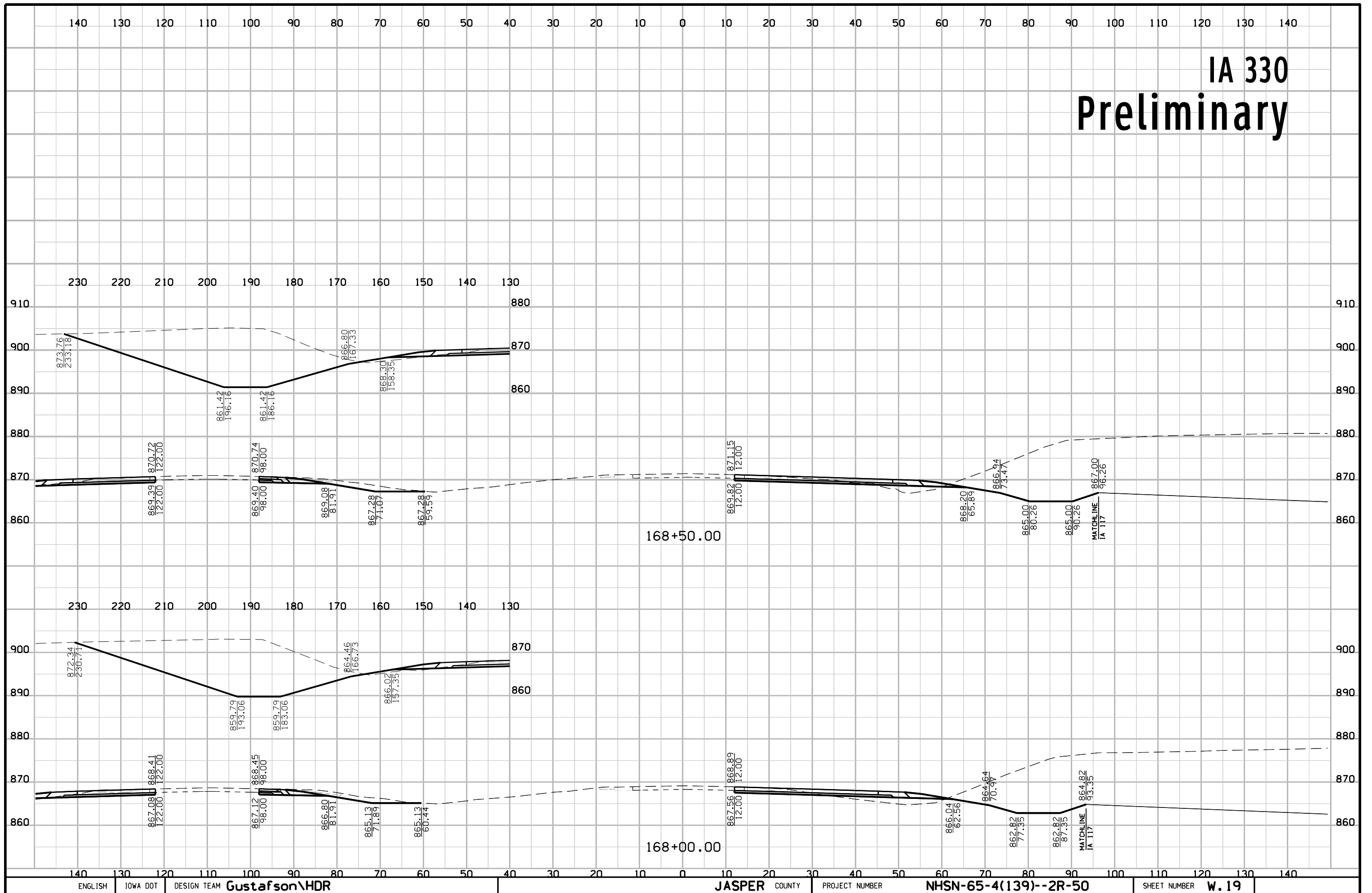
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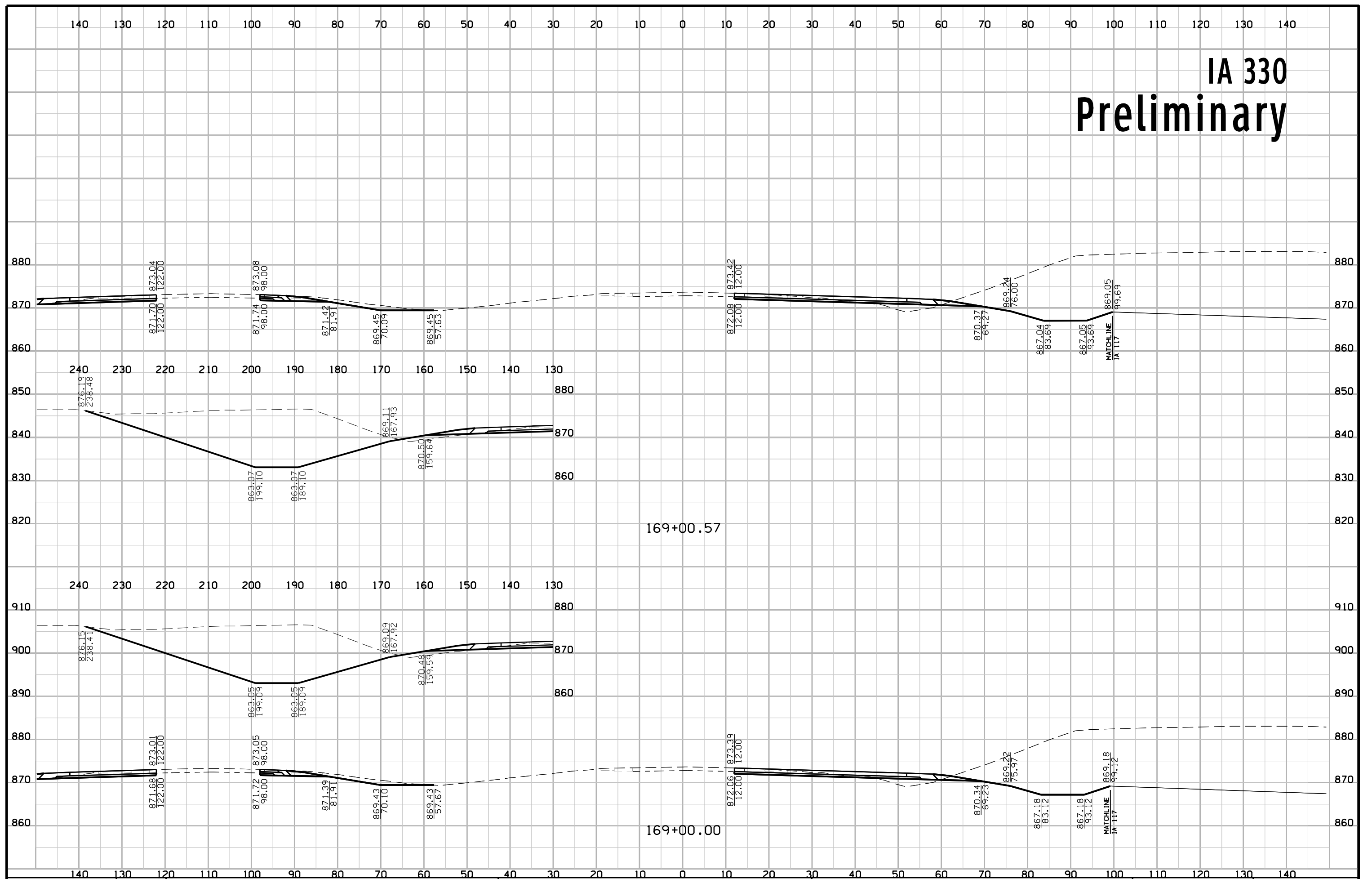
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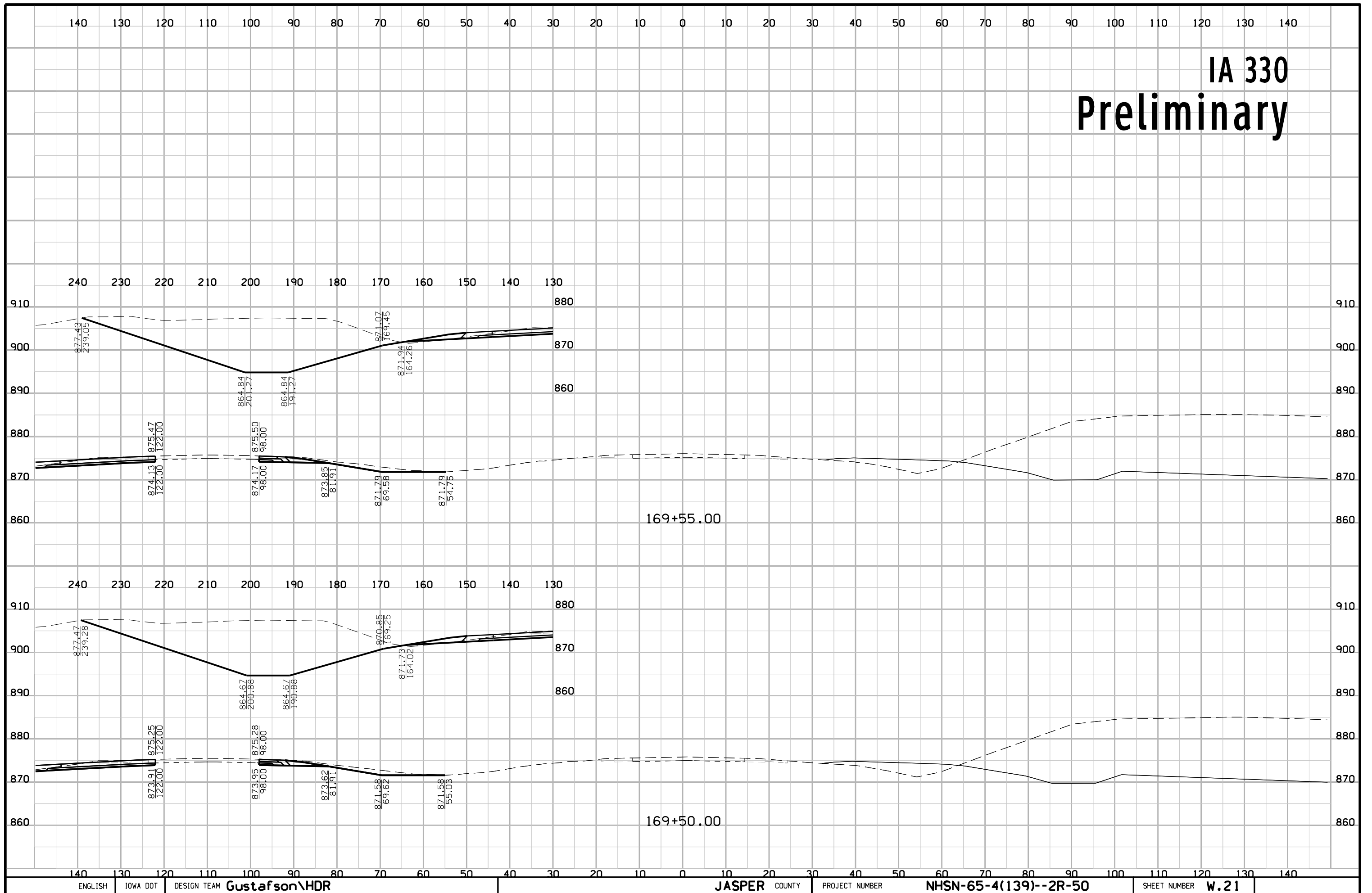
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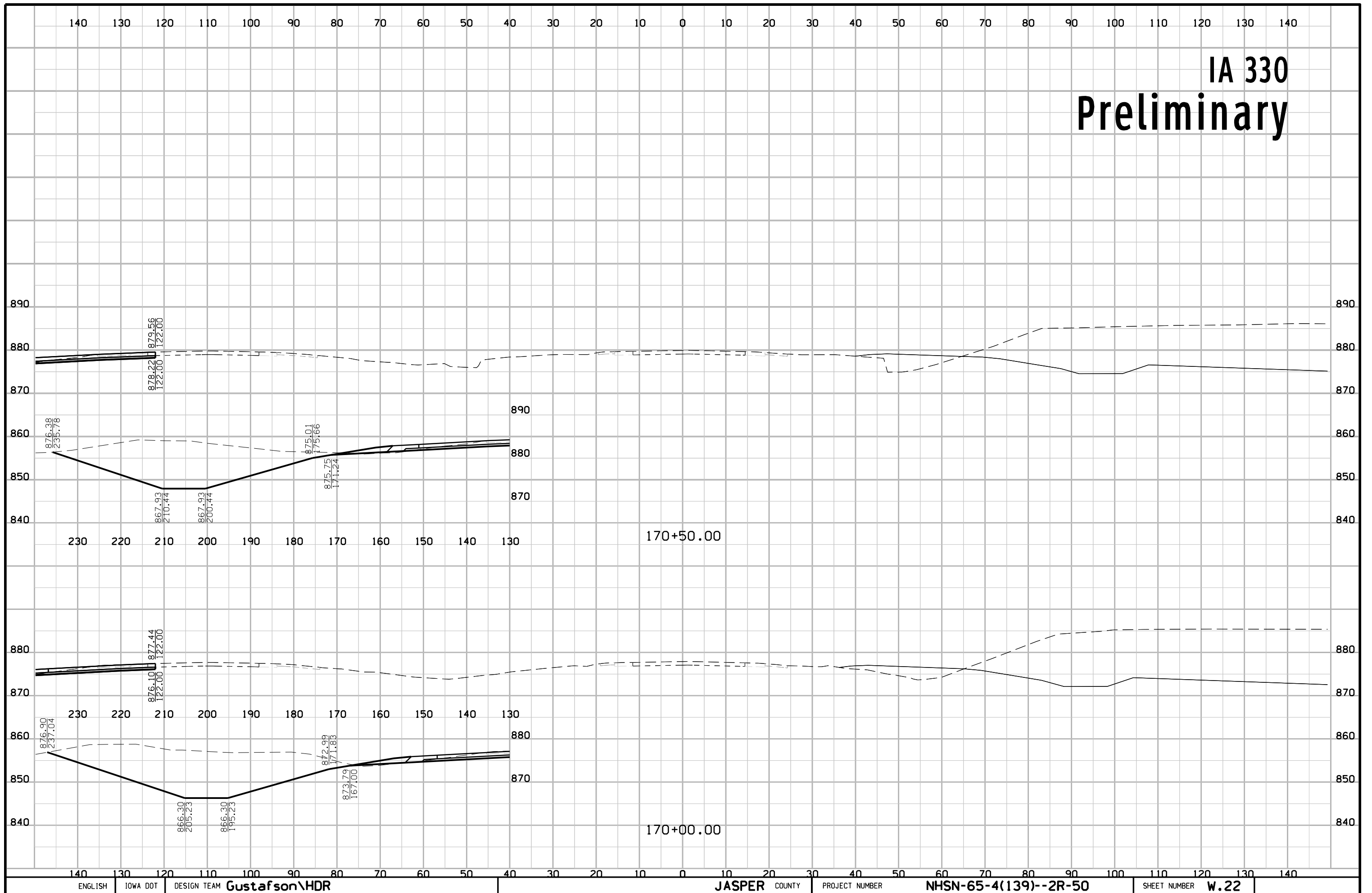
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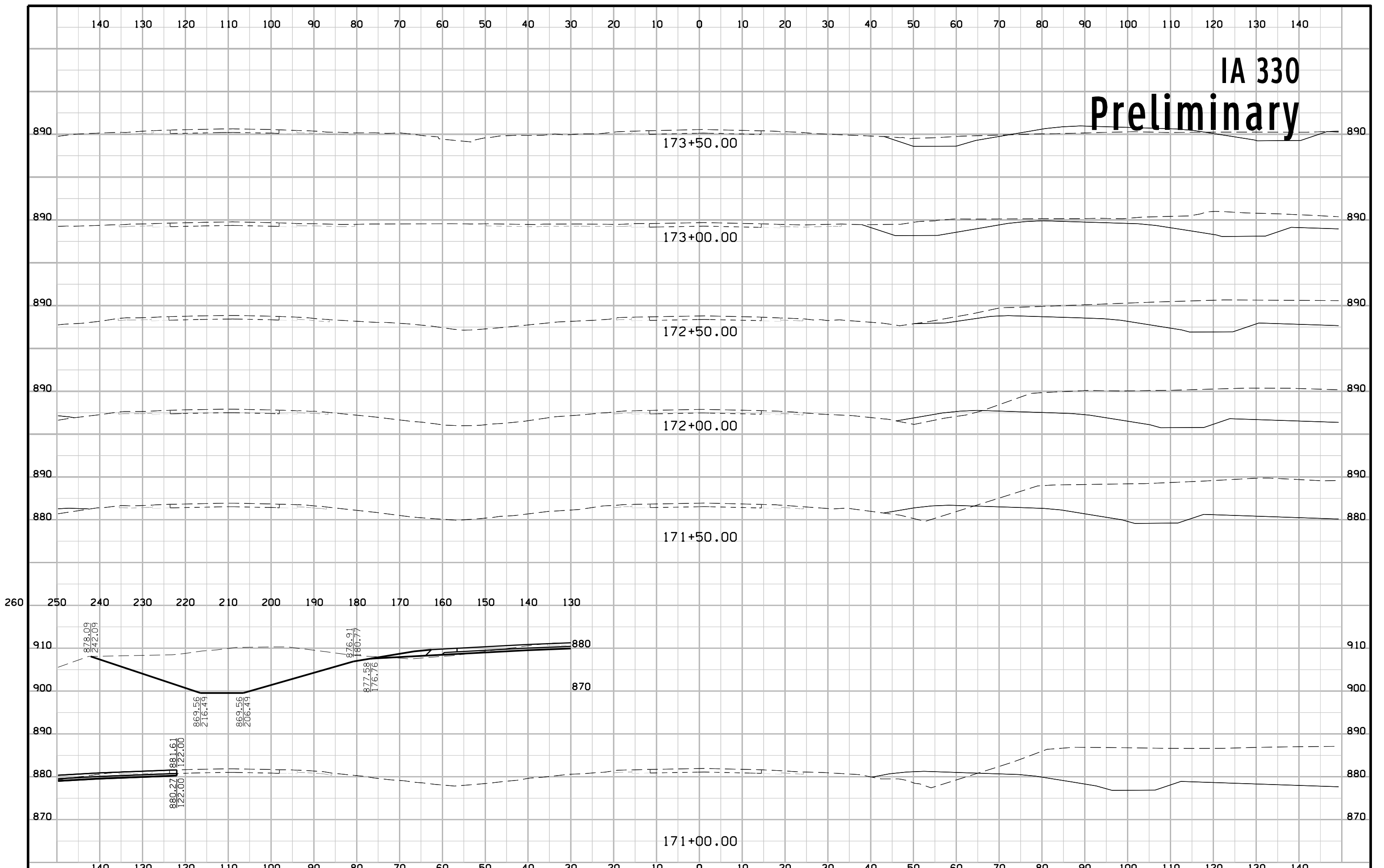
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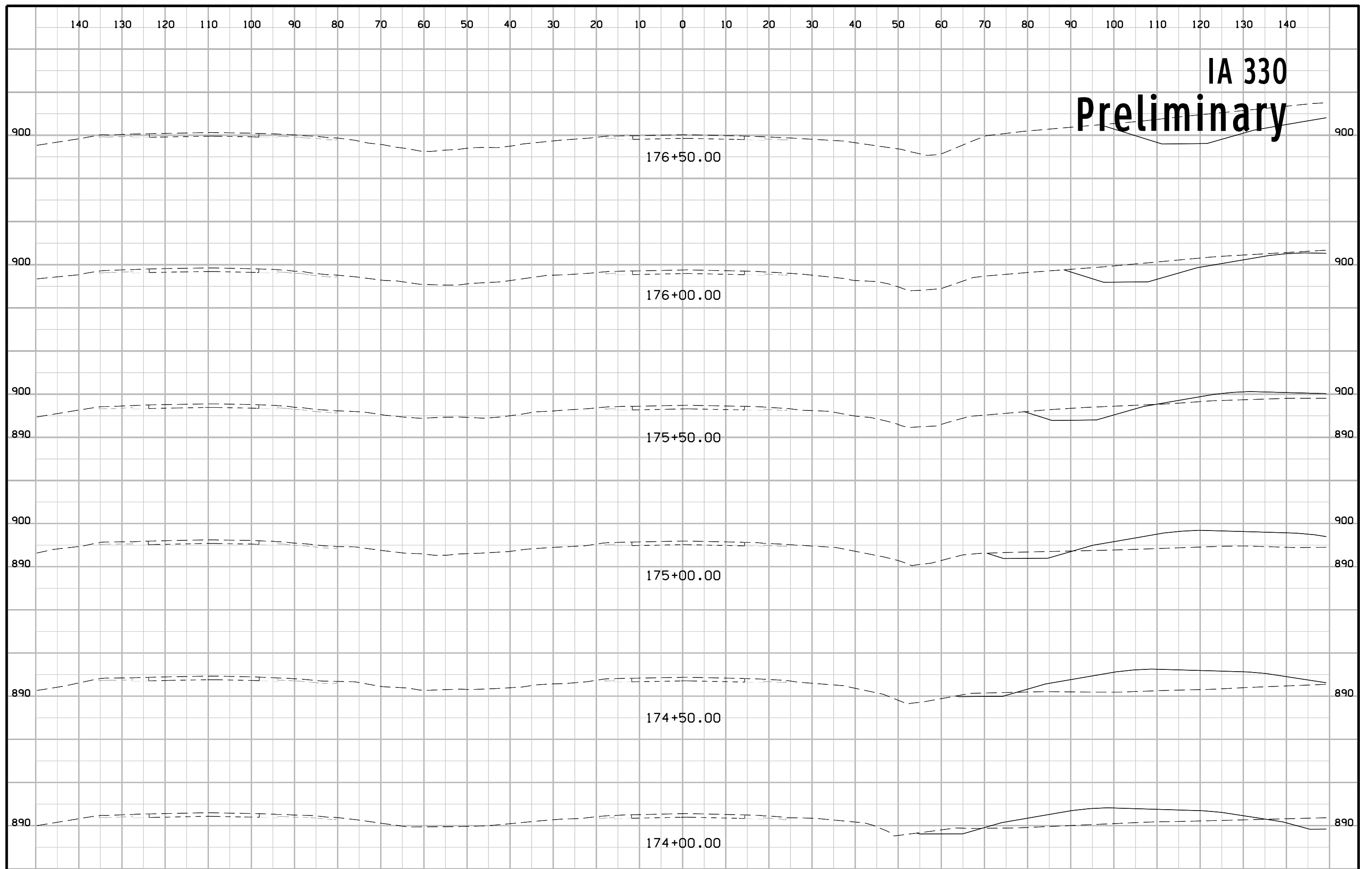
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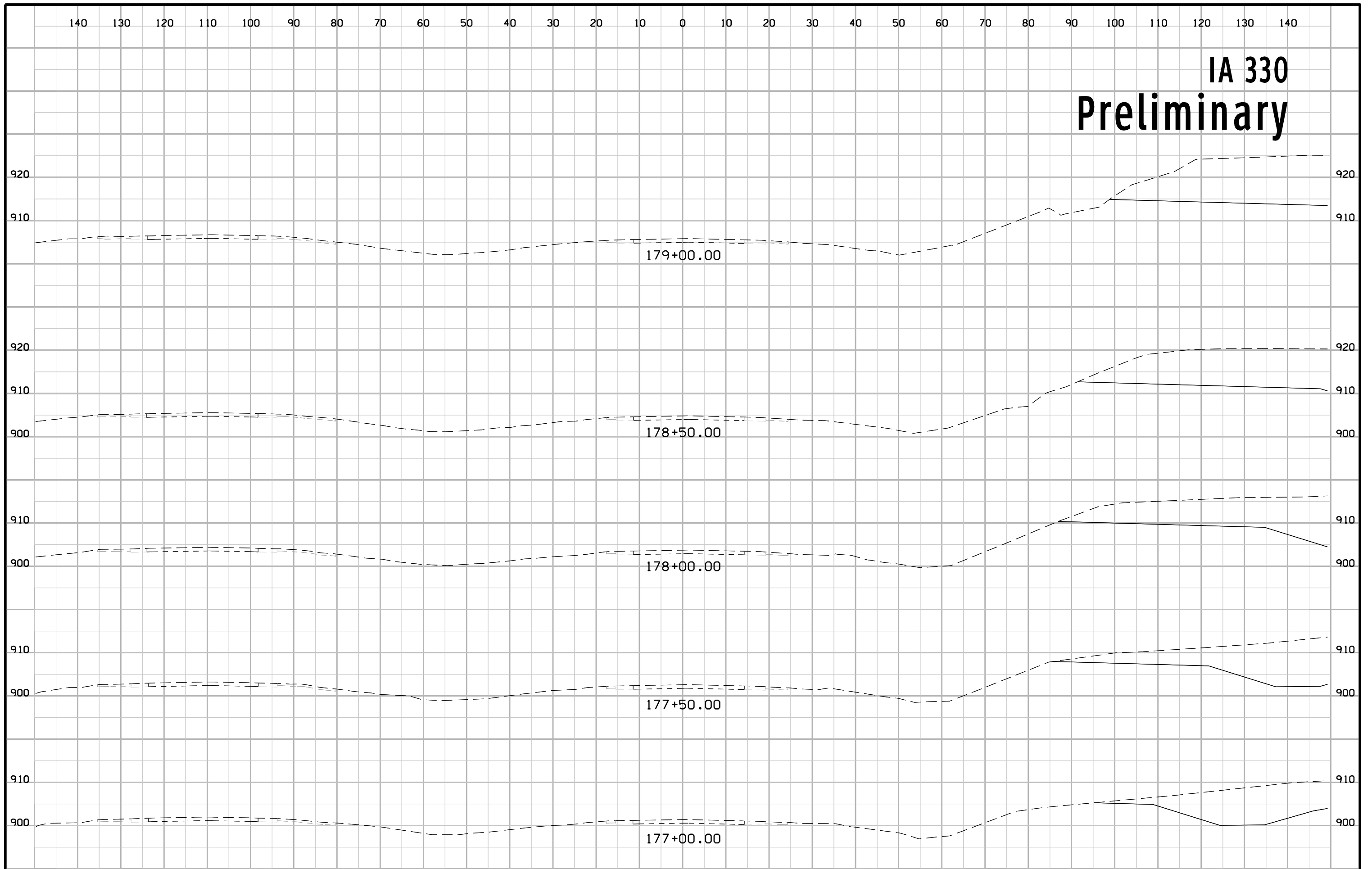
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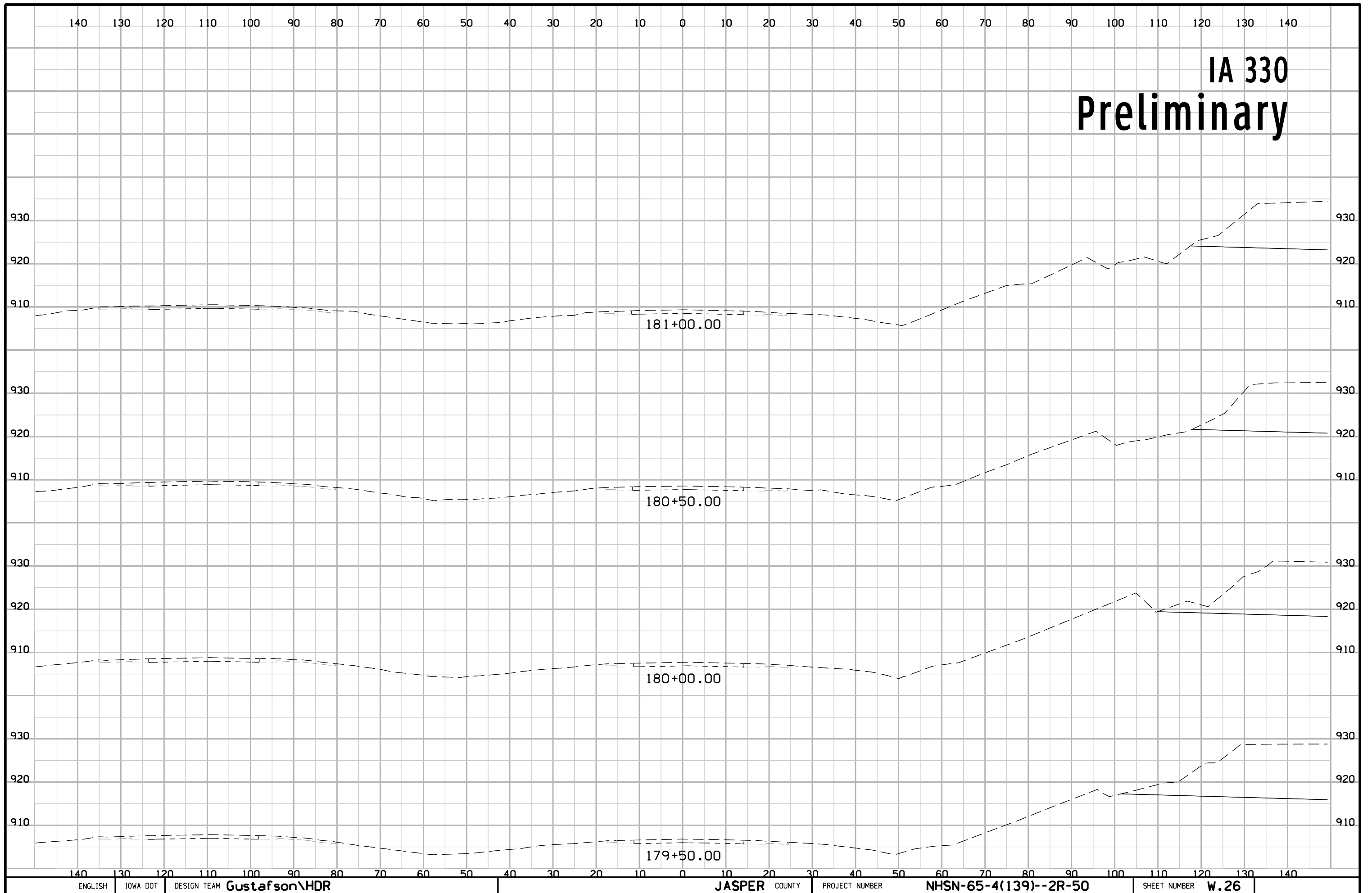
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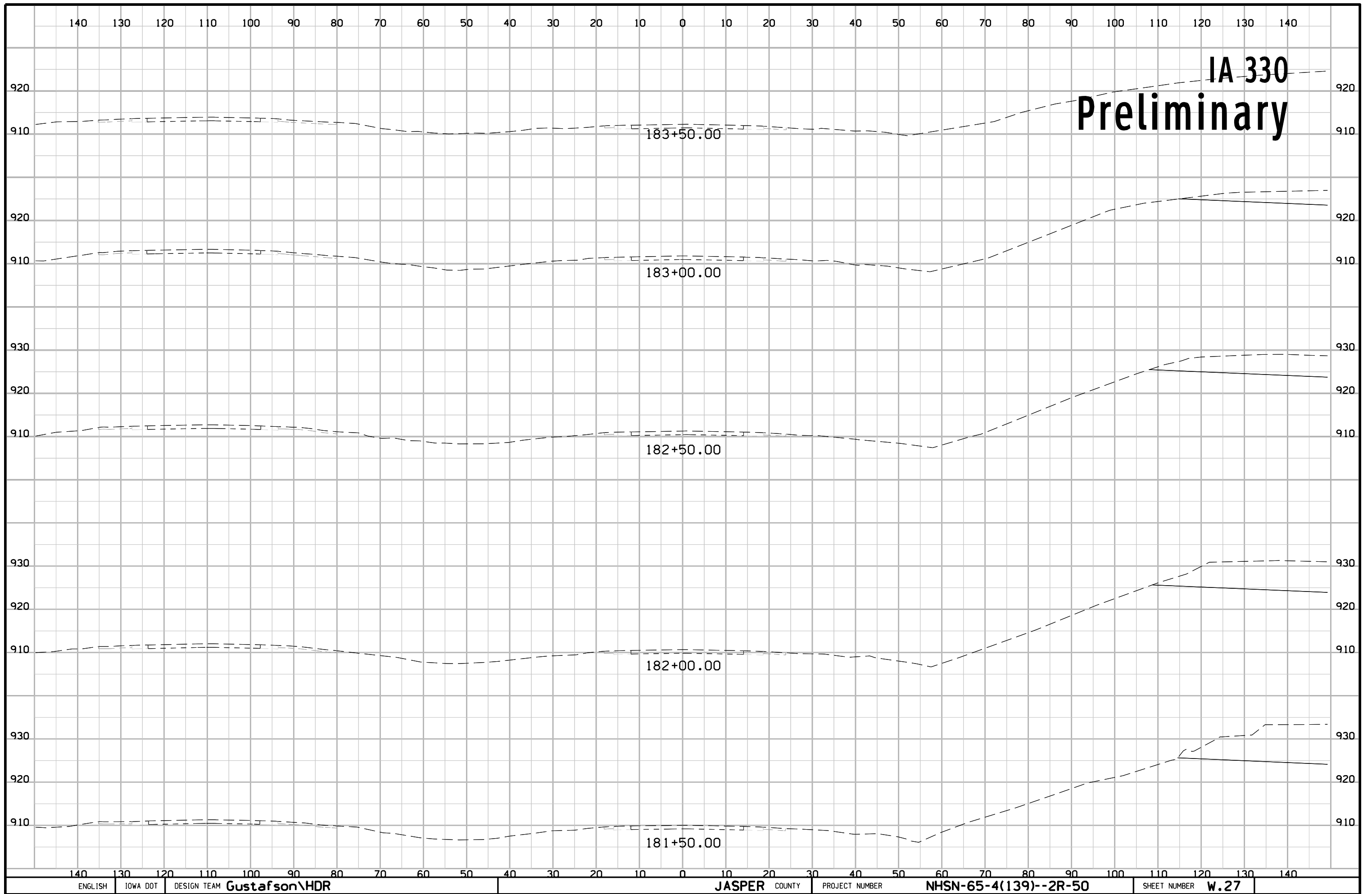


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IA 330 Preliminary





IA 330
Preliminary

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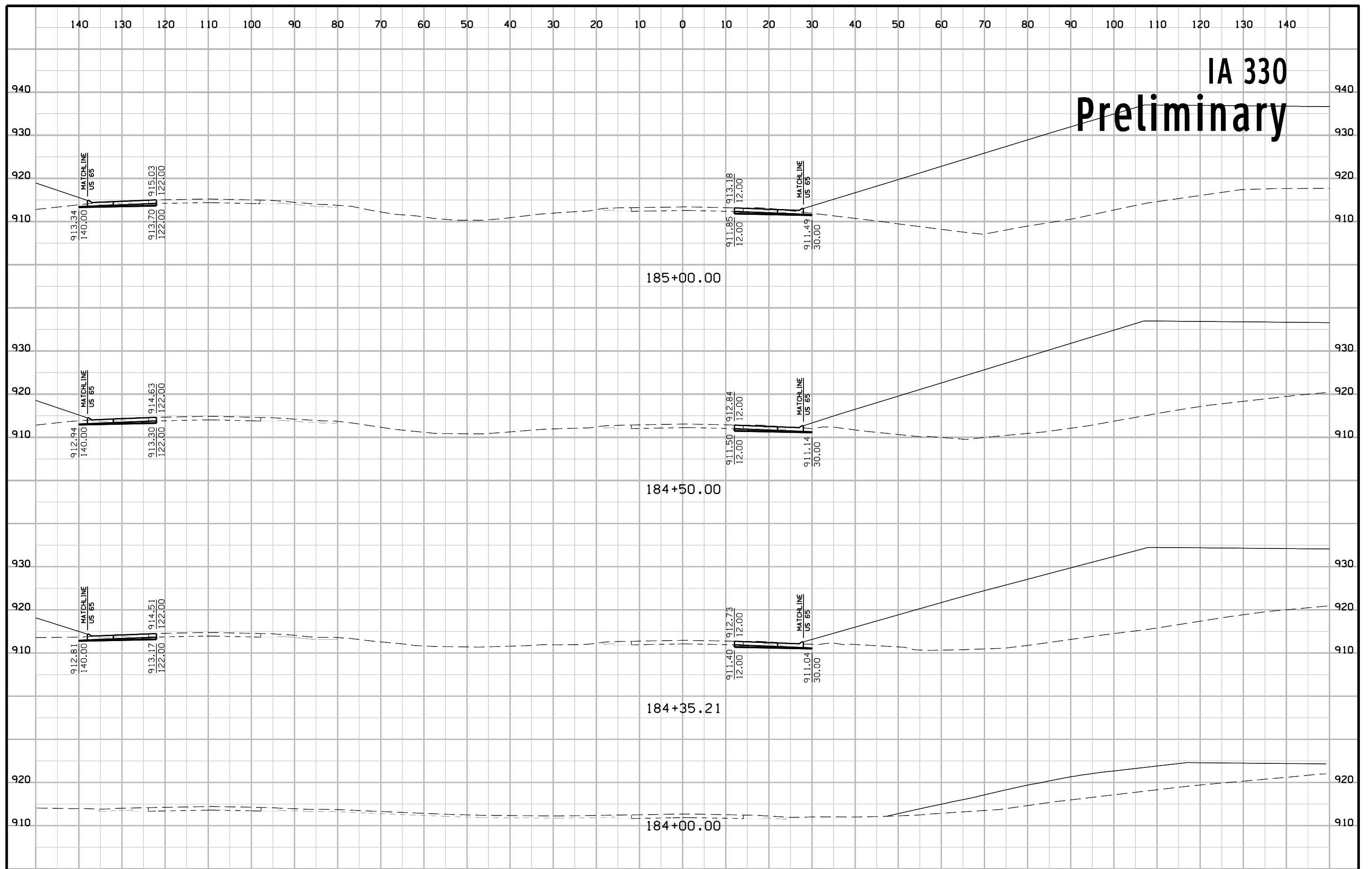
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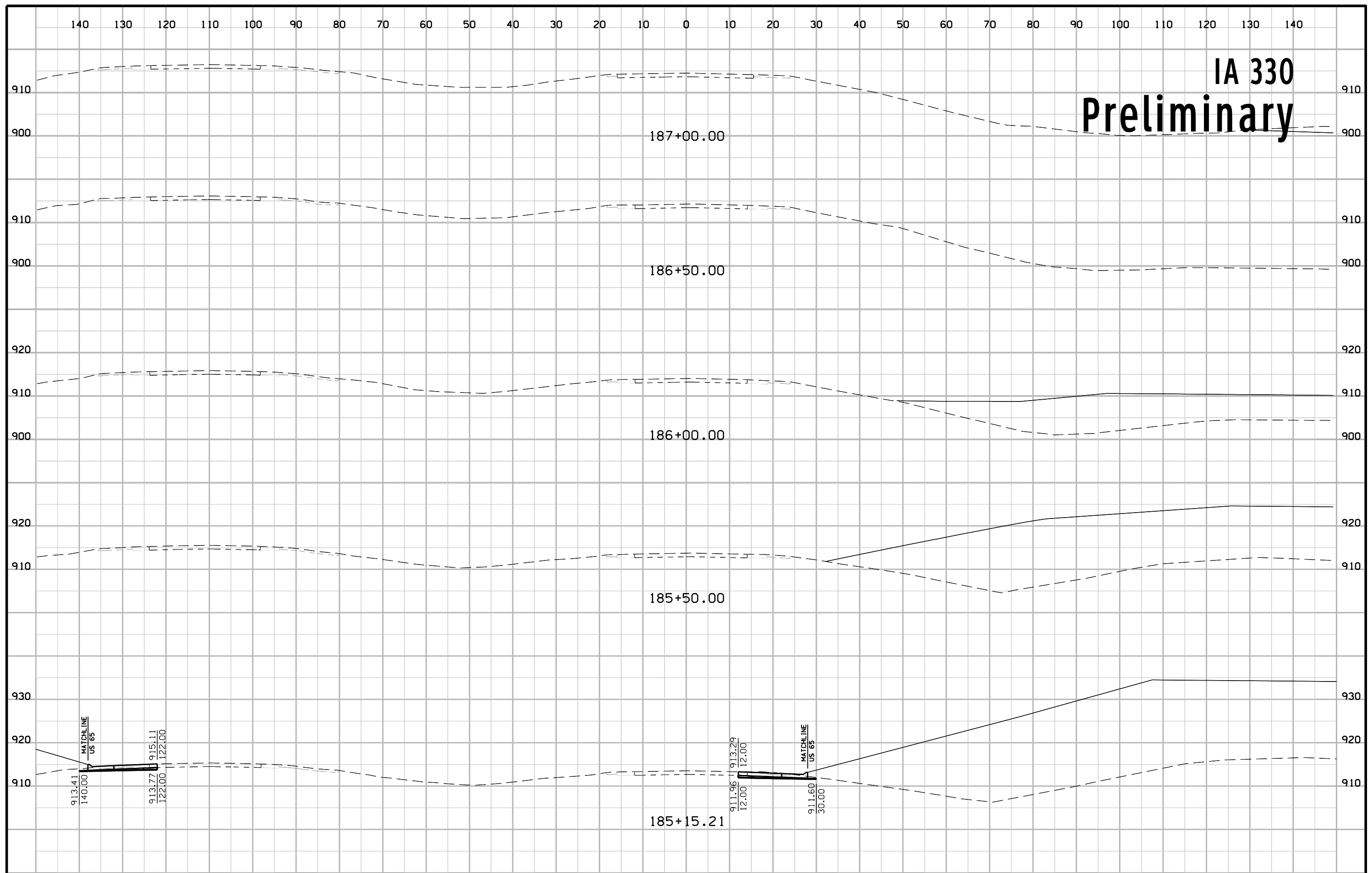
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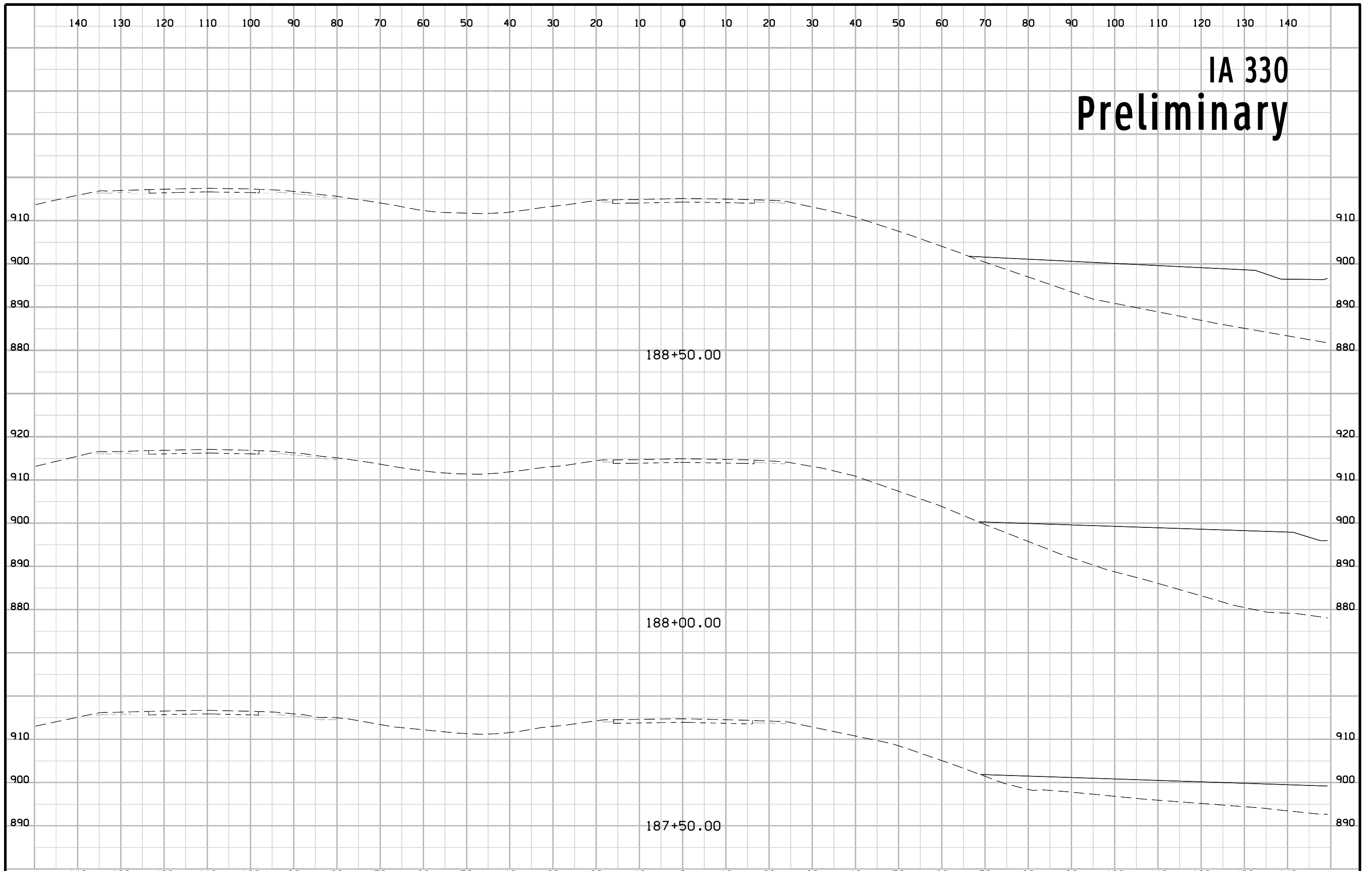
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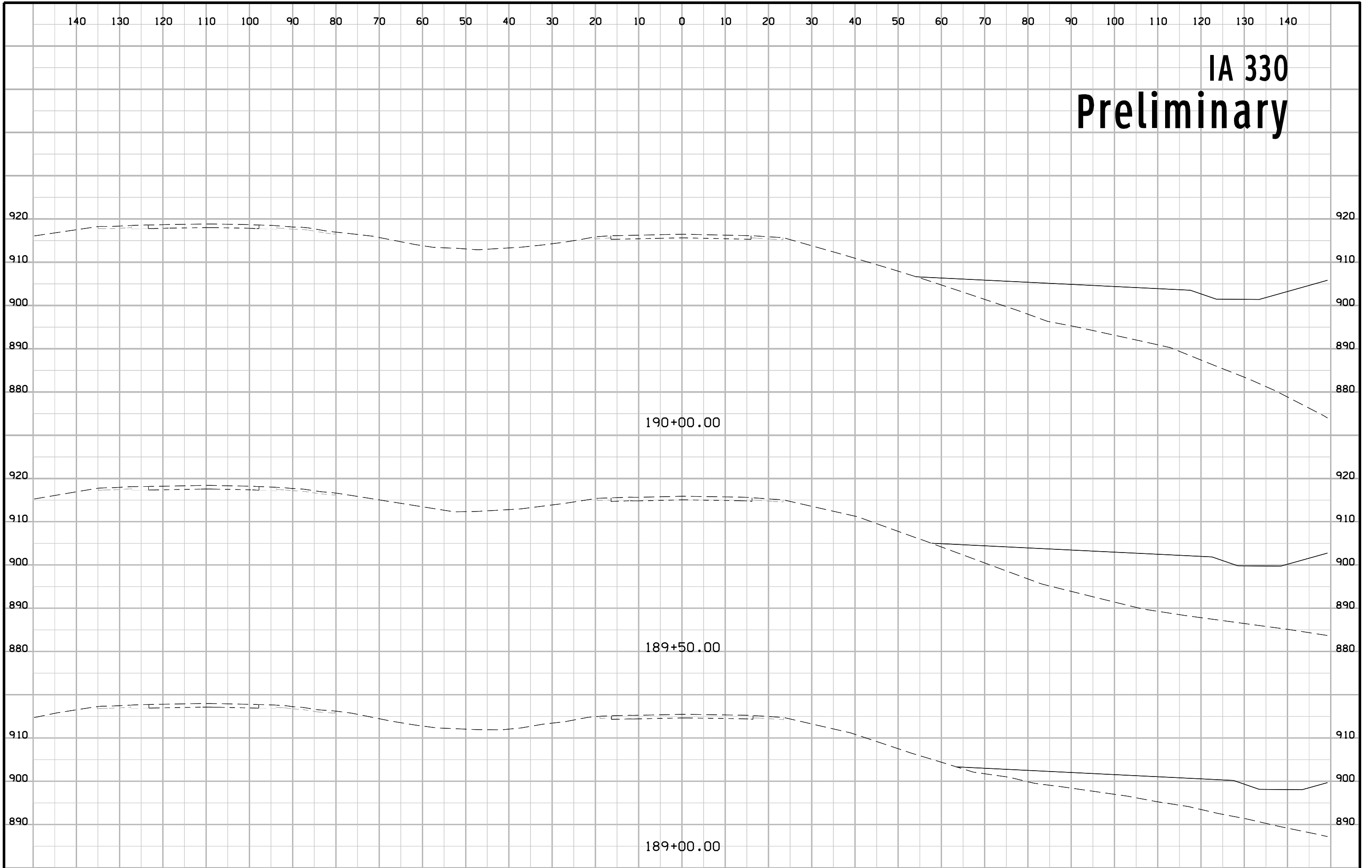
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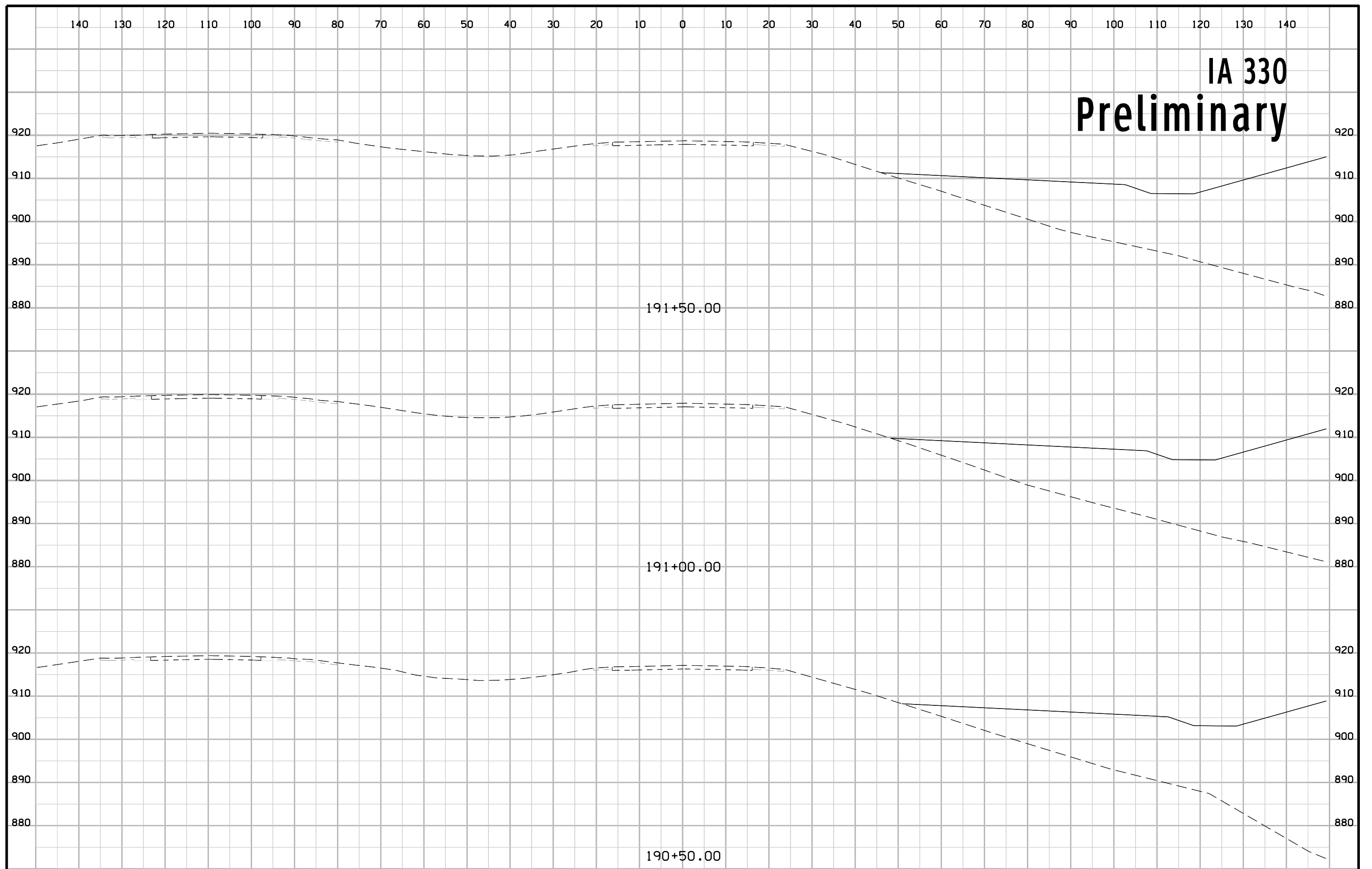
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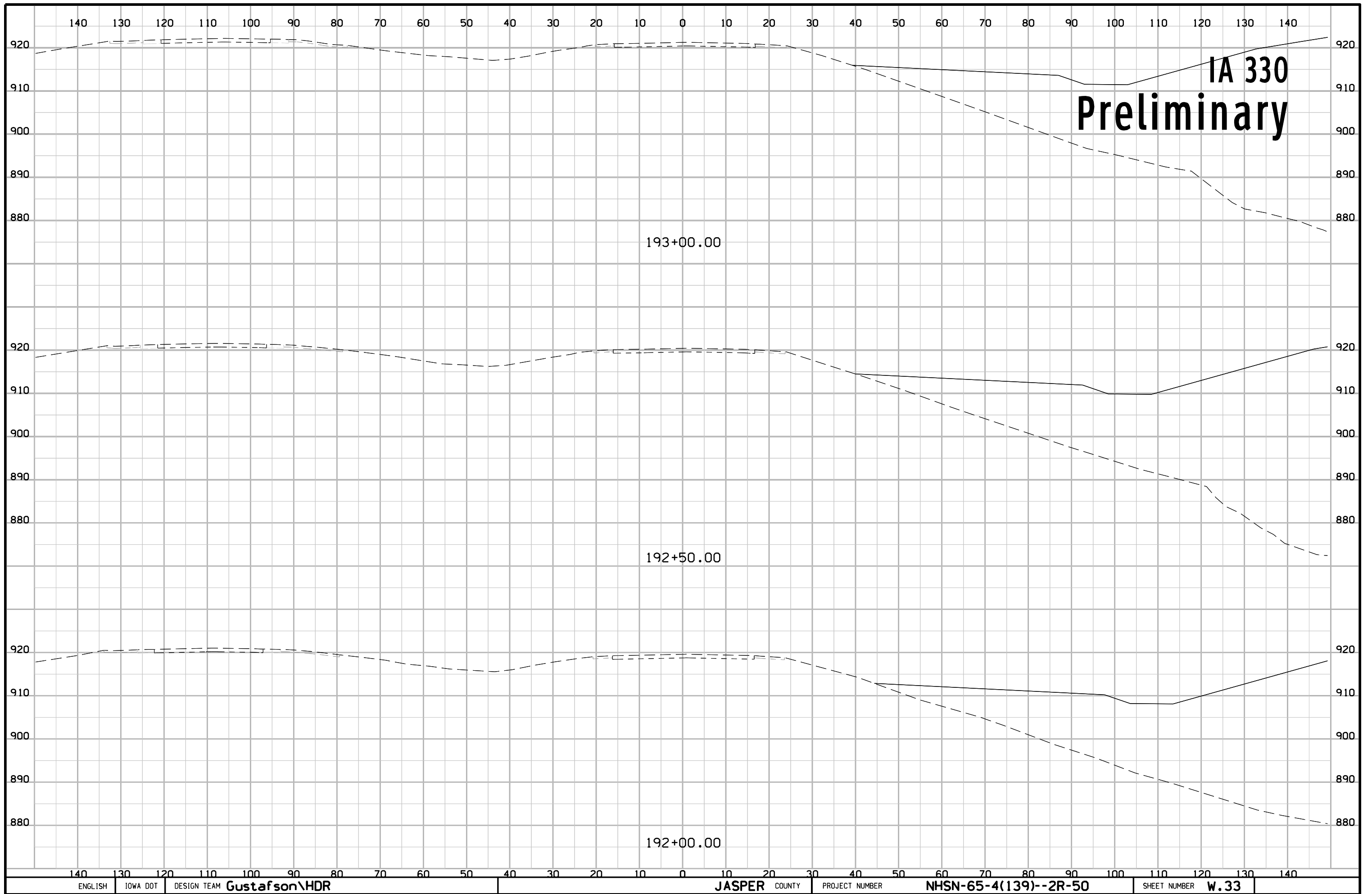


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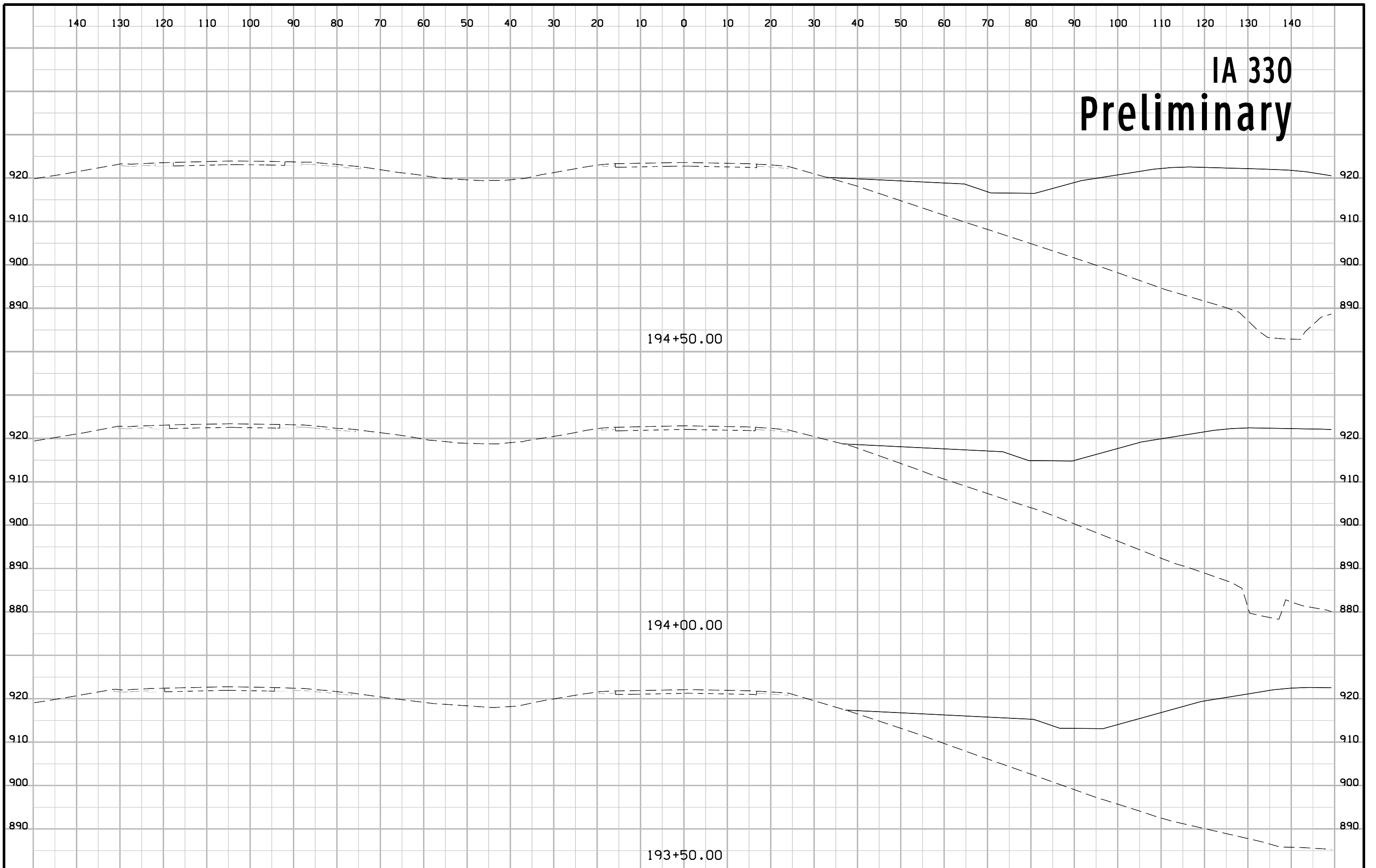


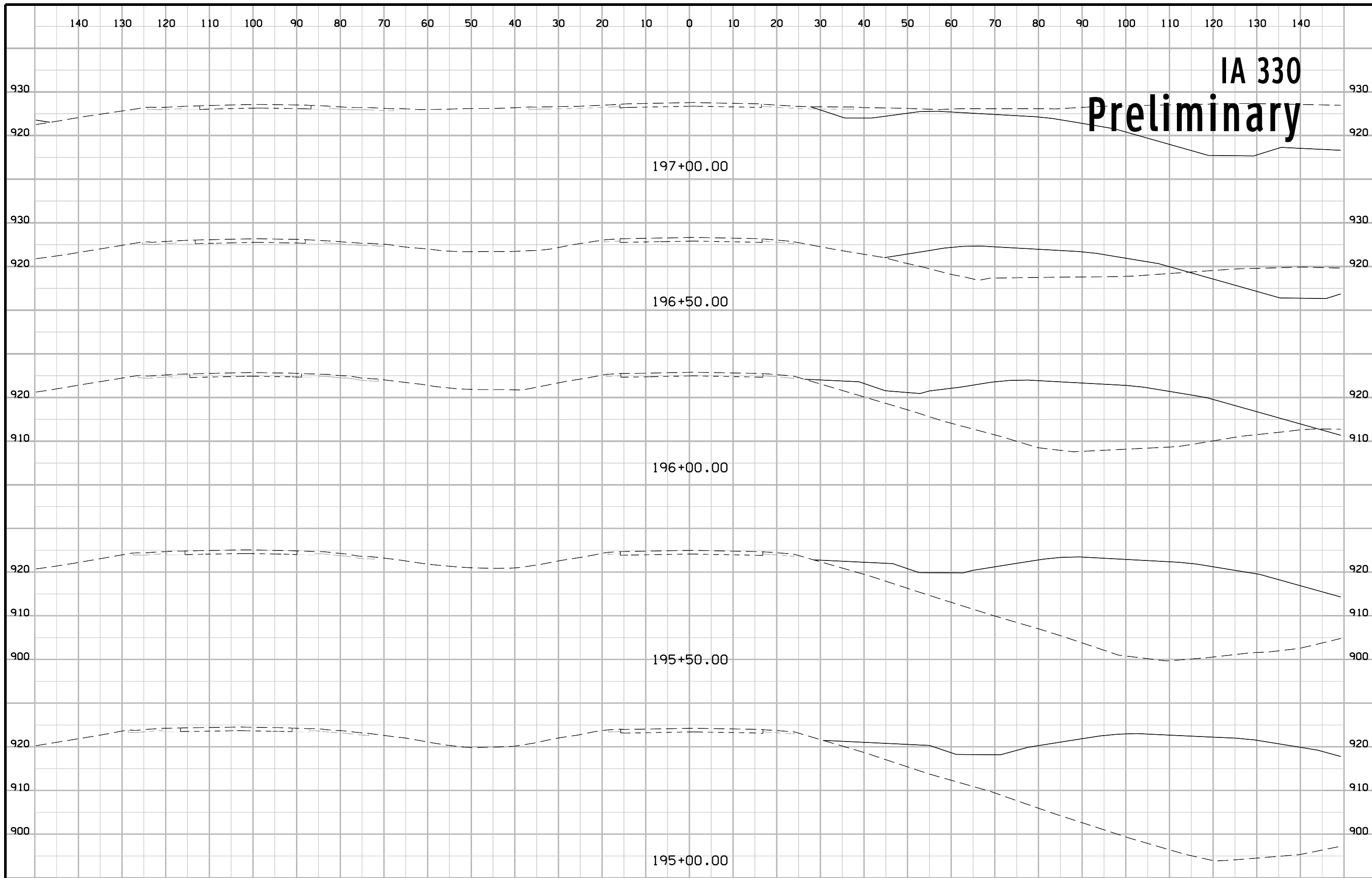
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IA 330 Preliminary





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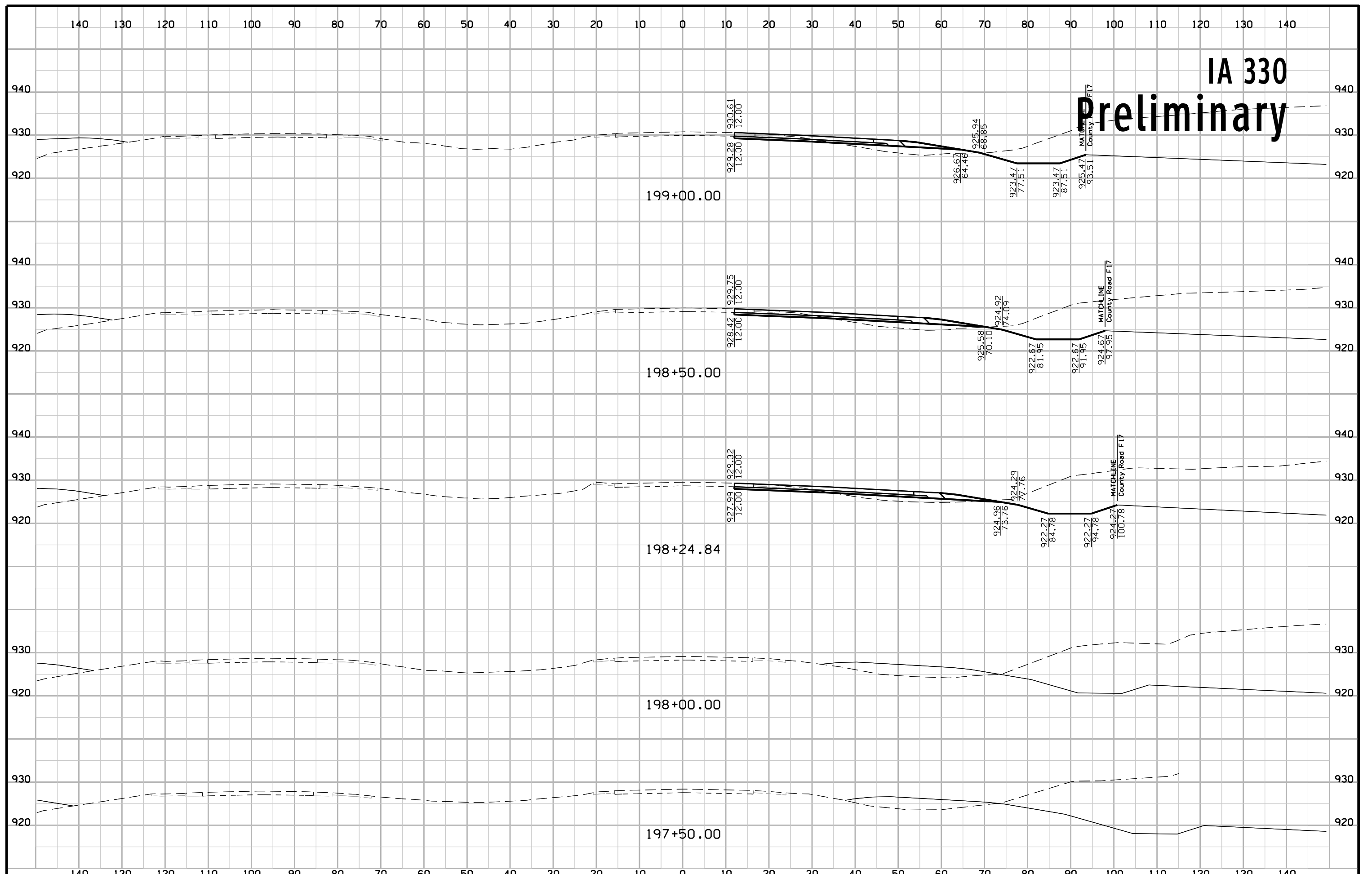
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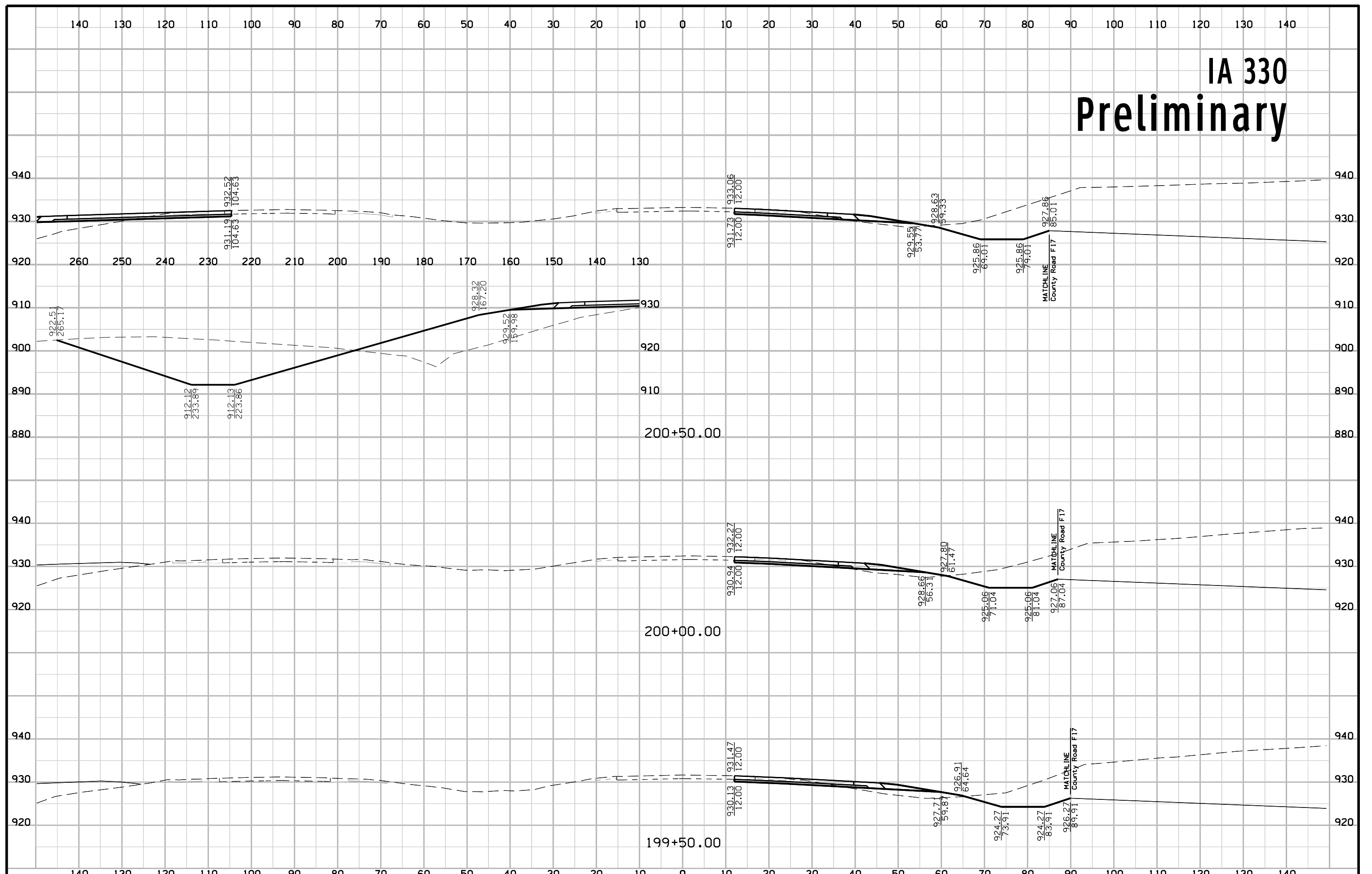
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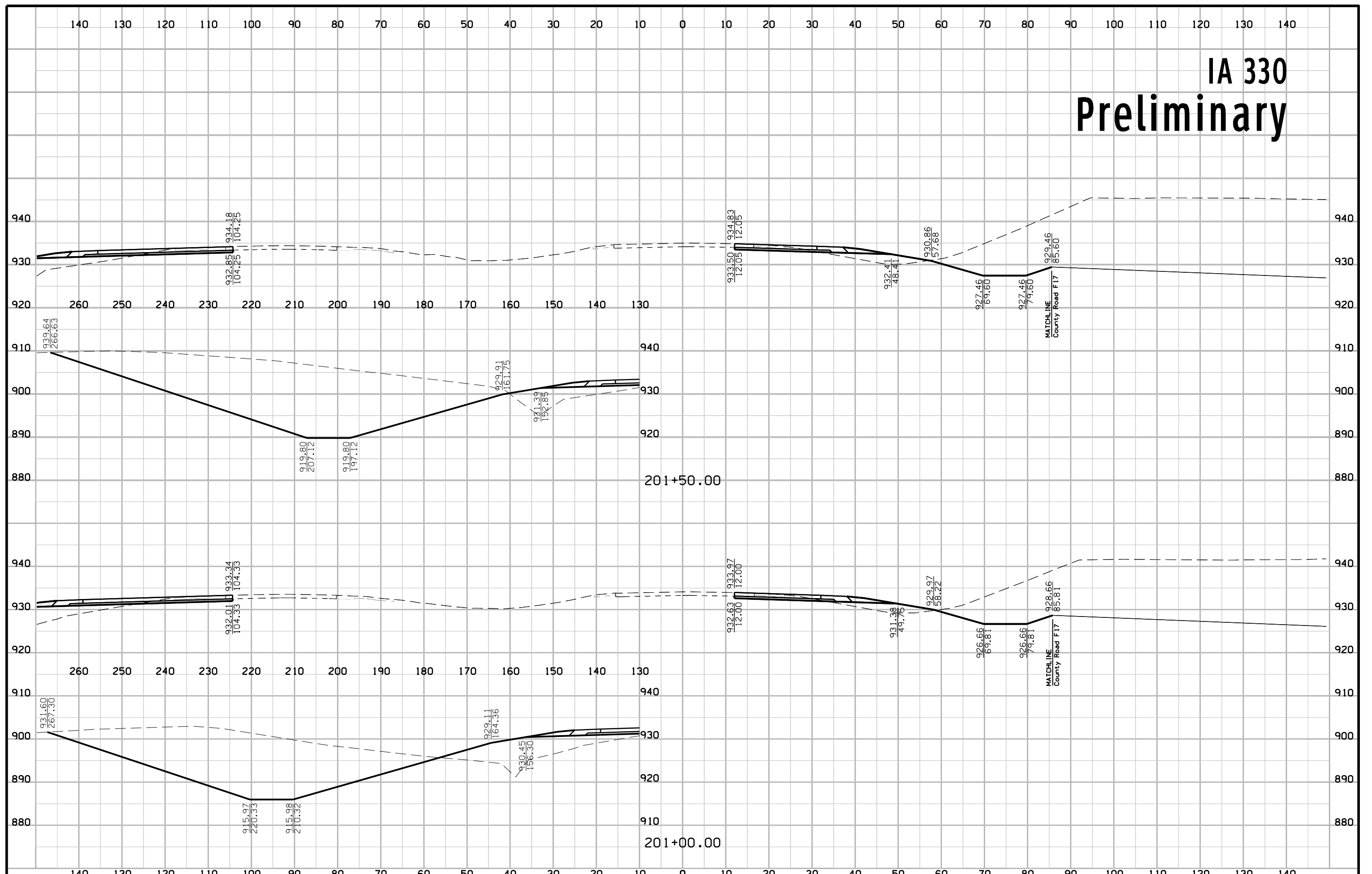
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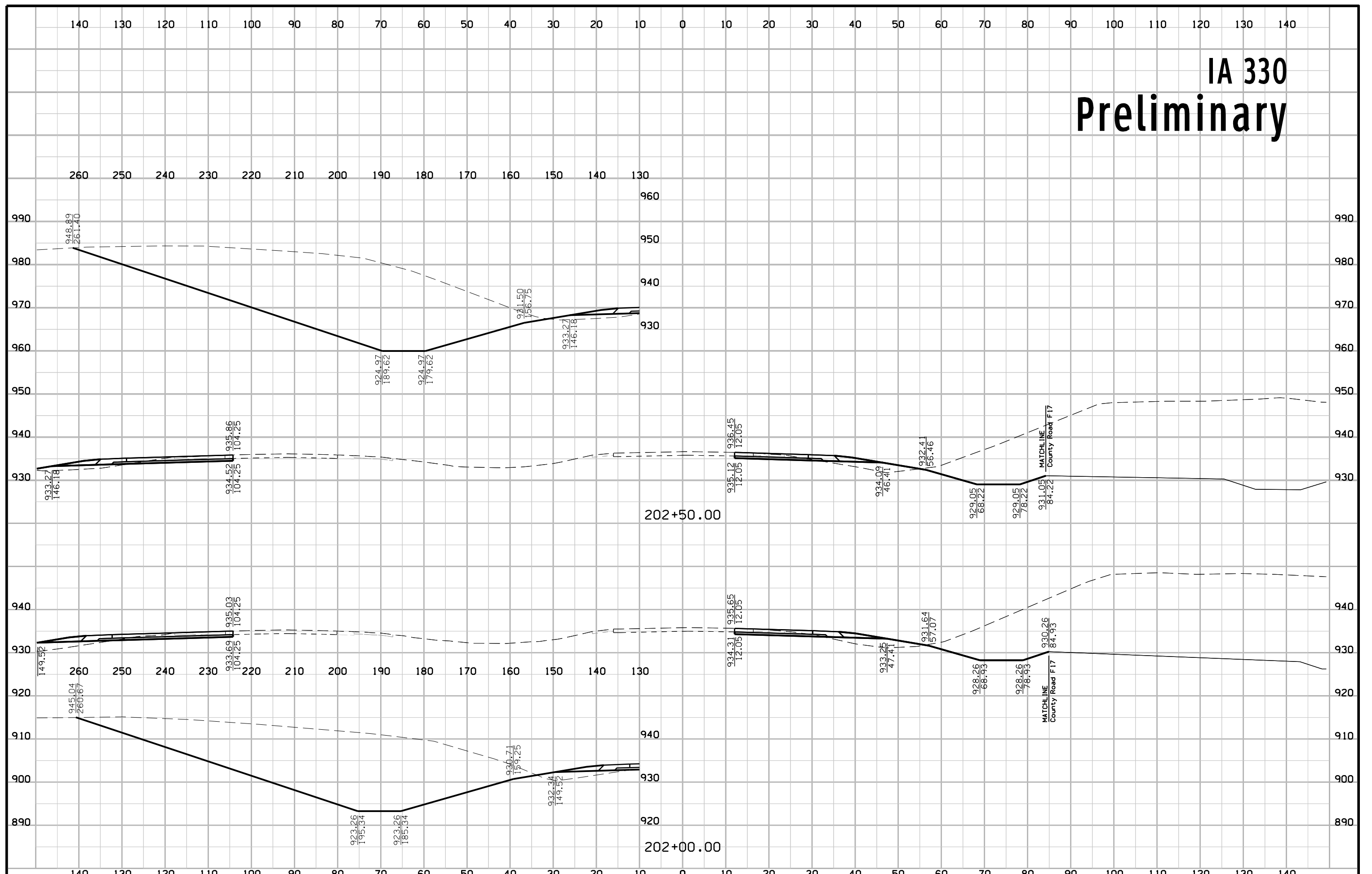
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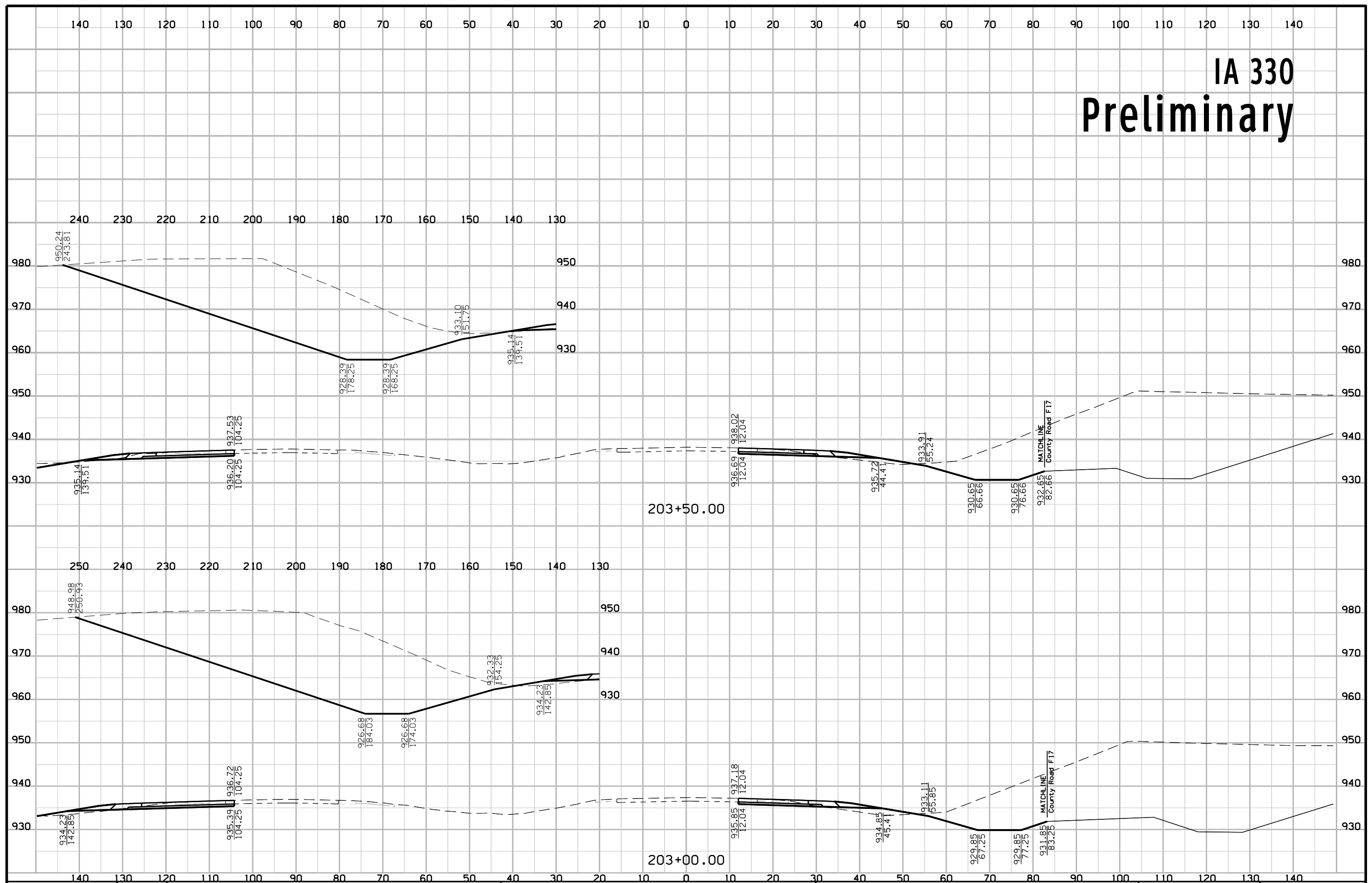
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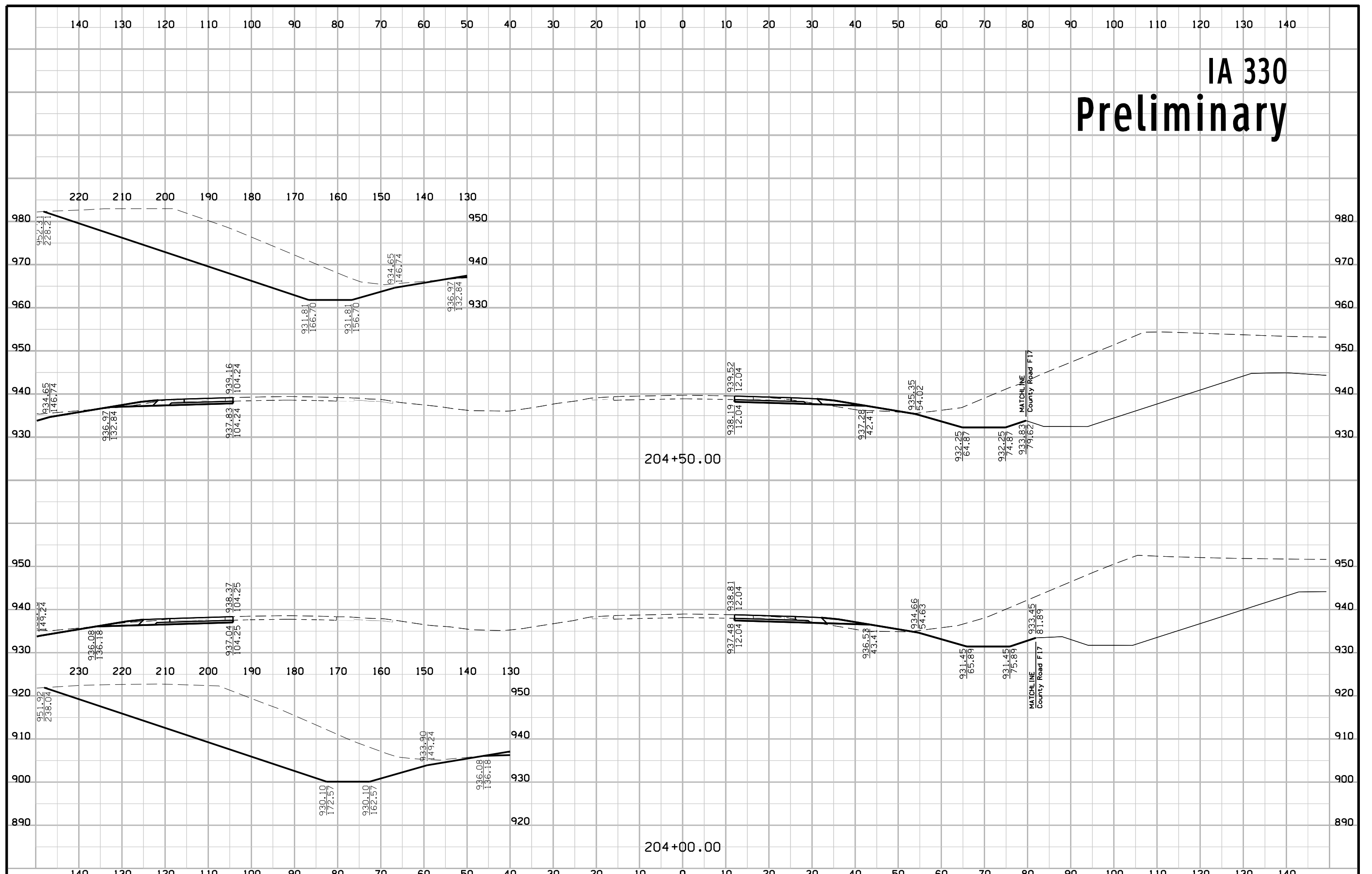
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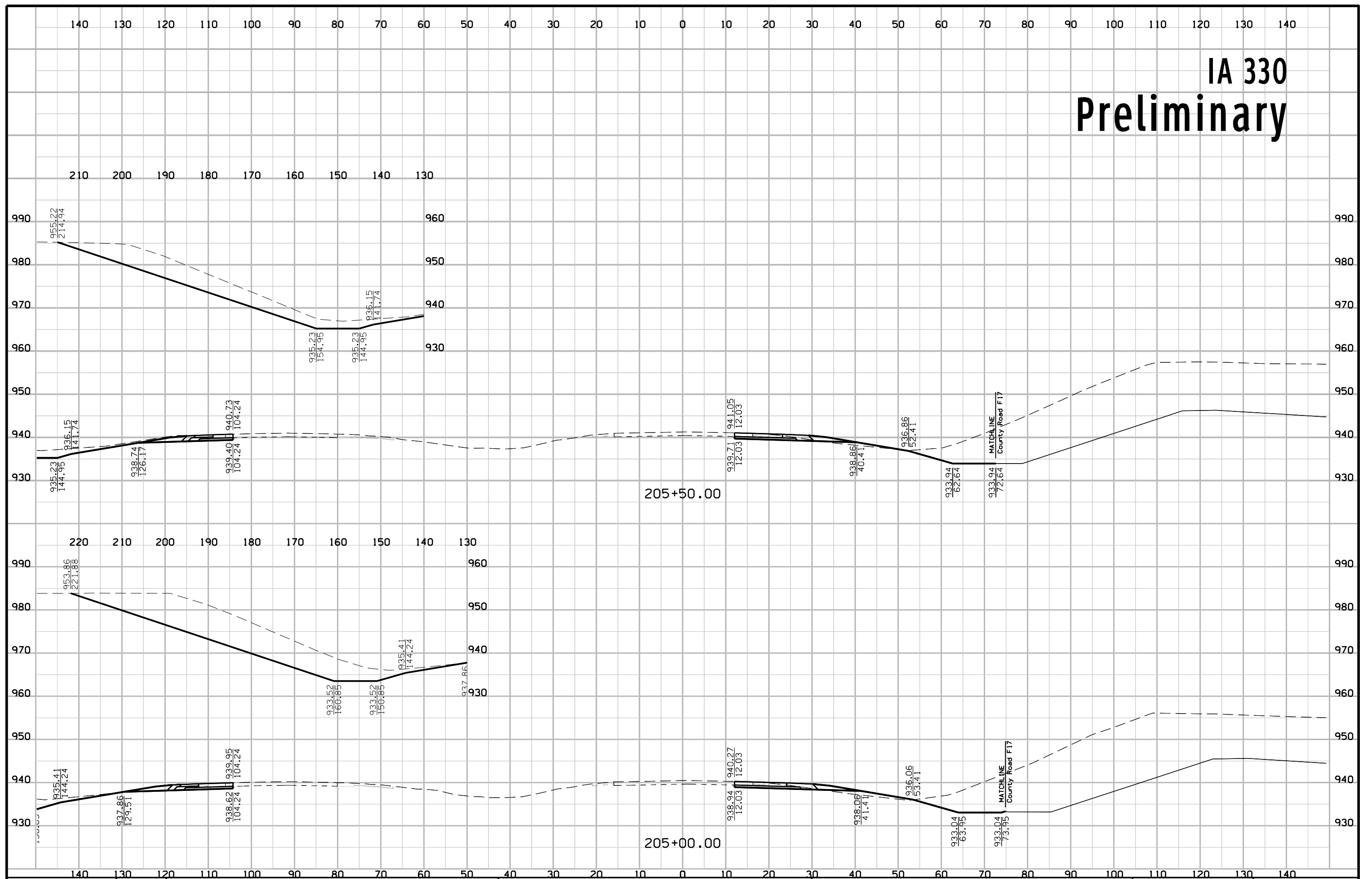
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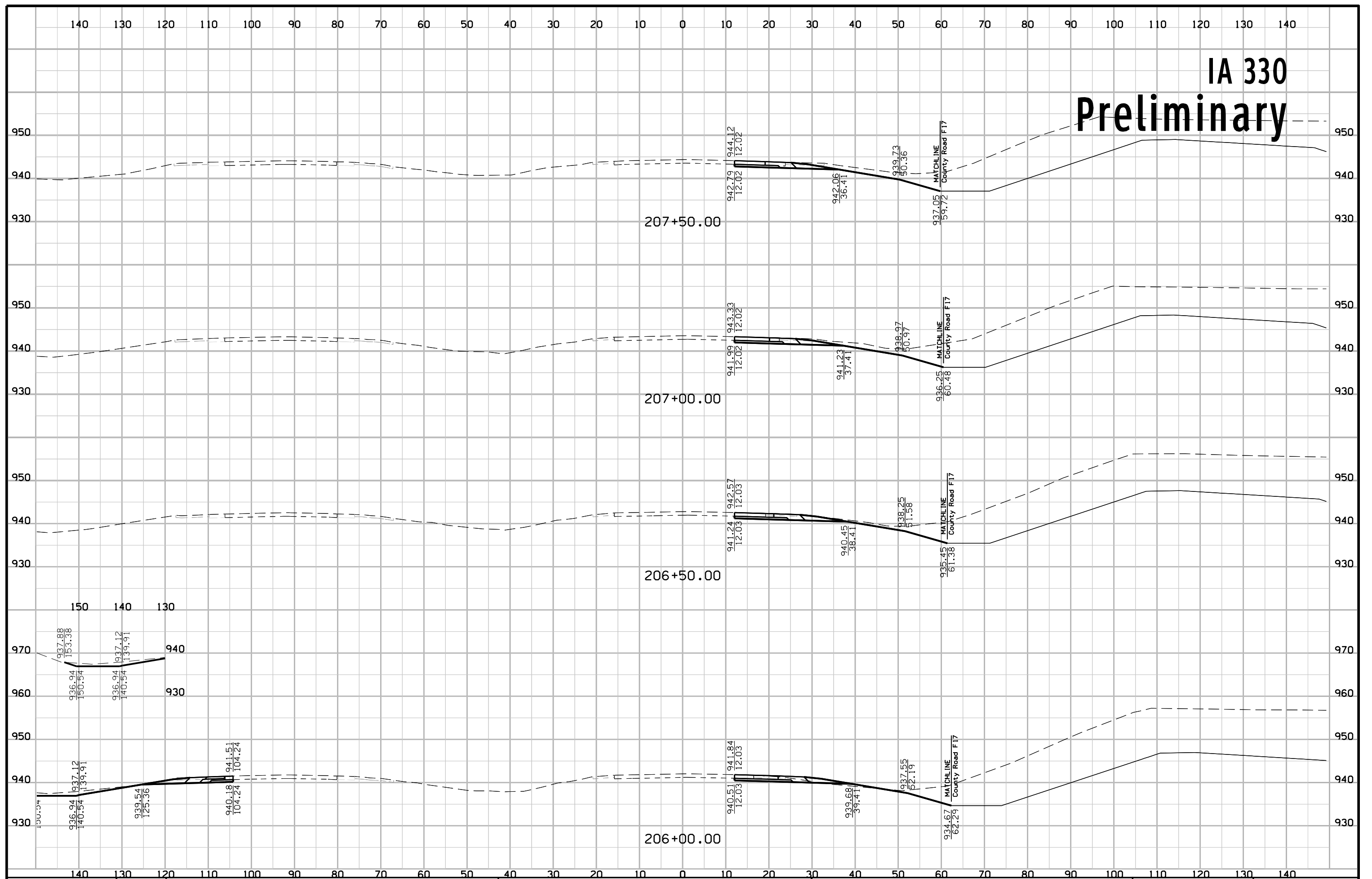
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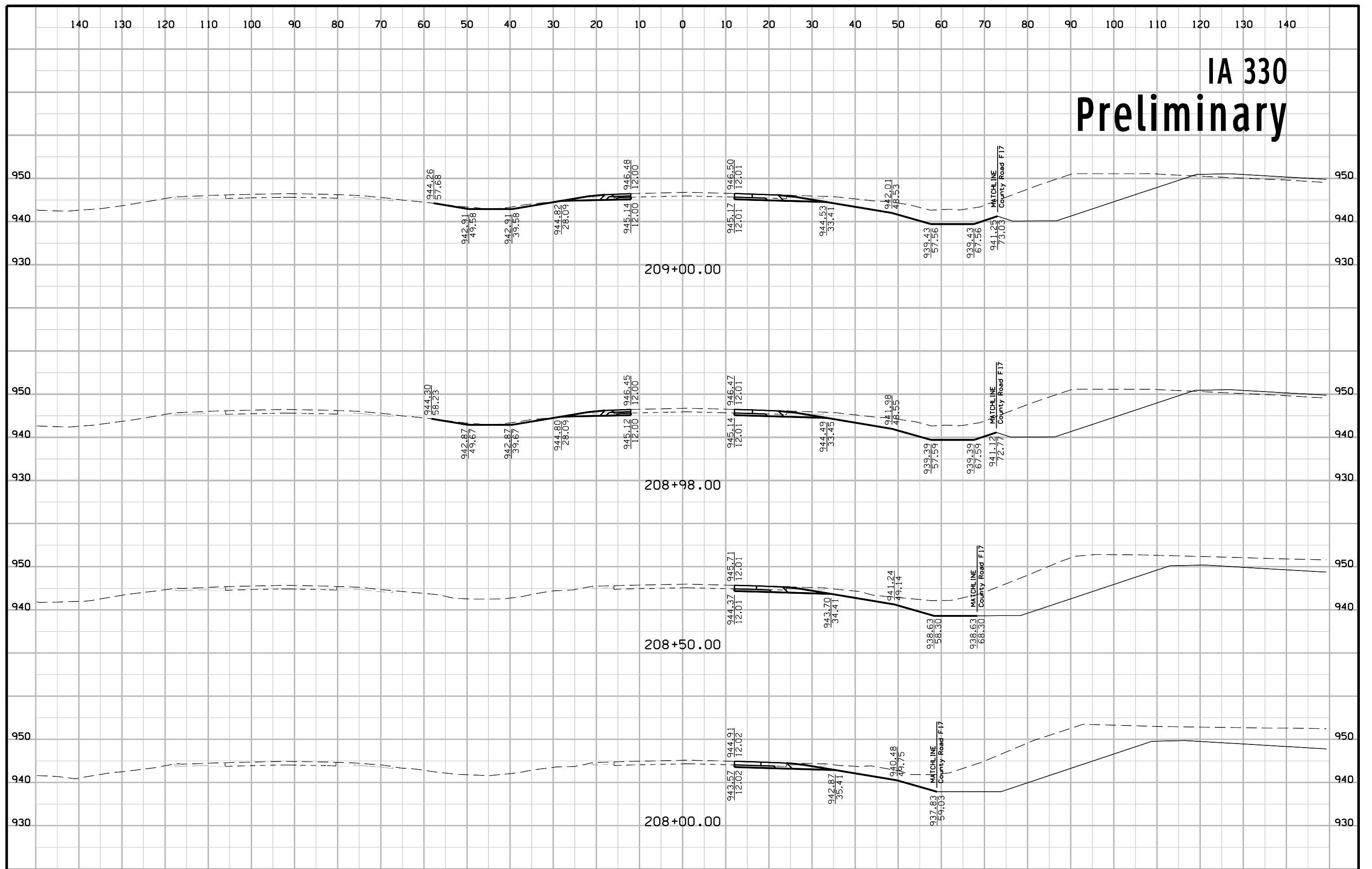
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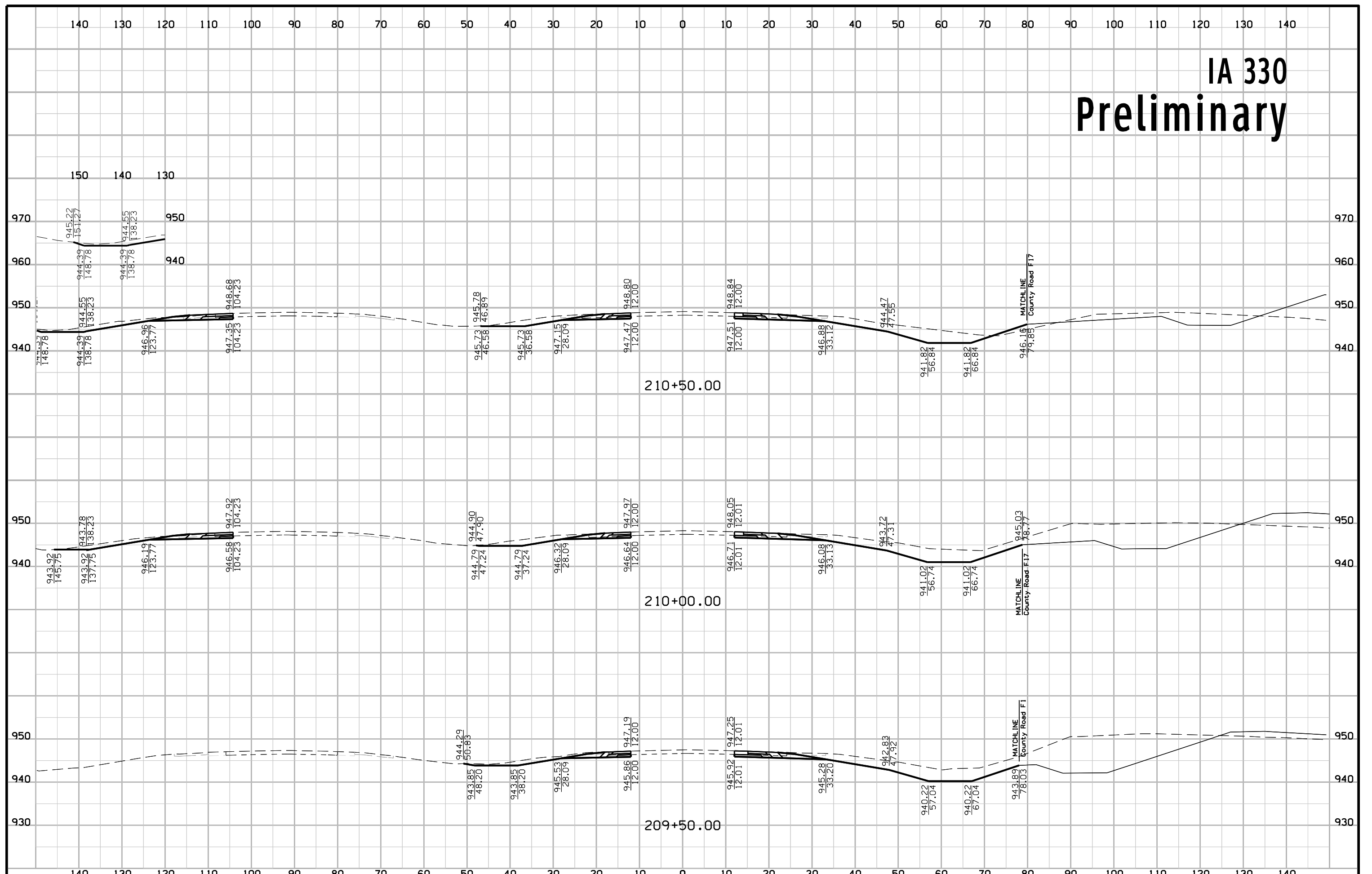
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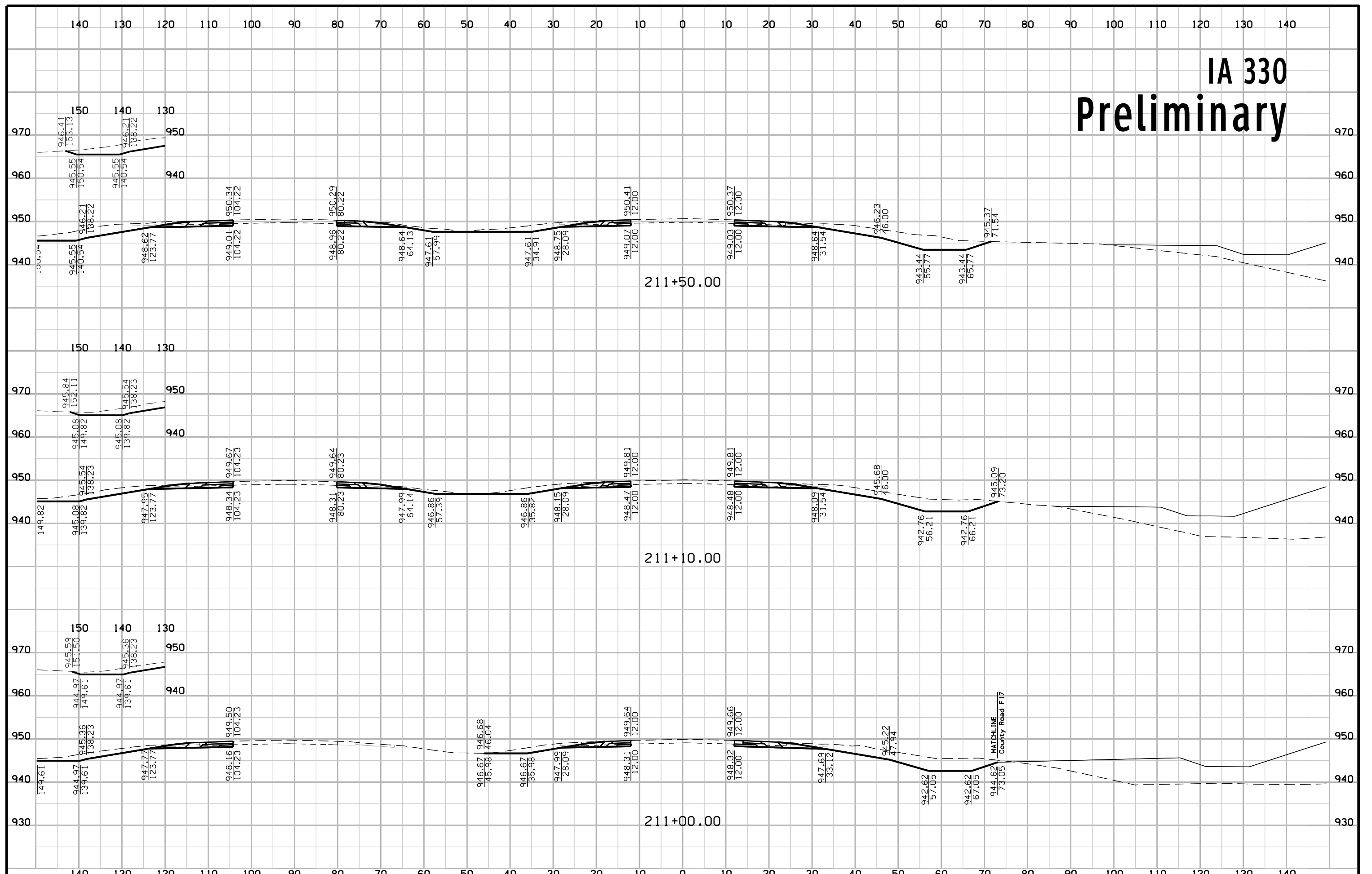
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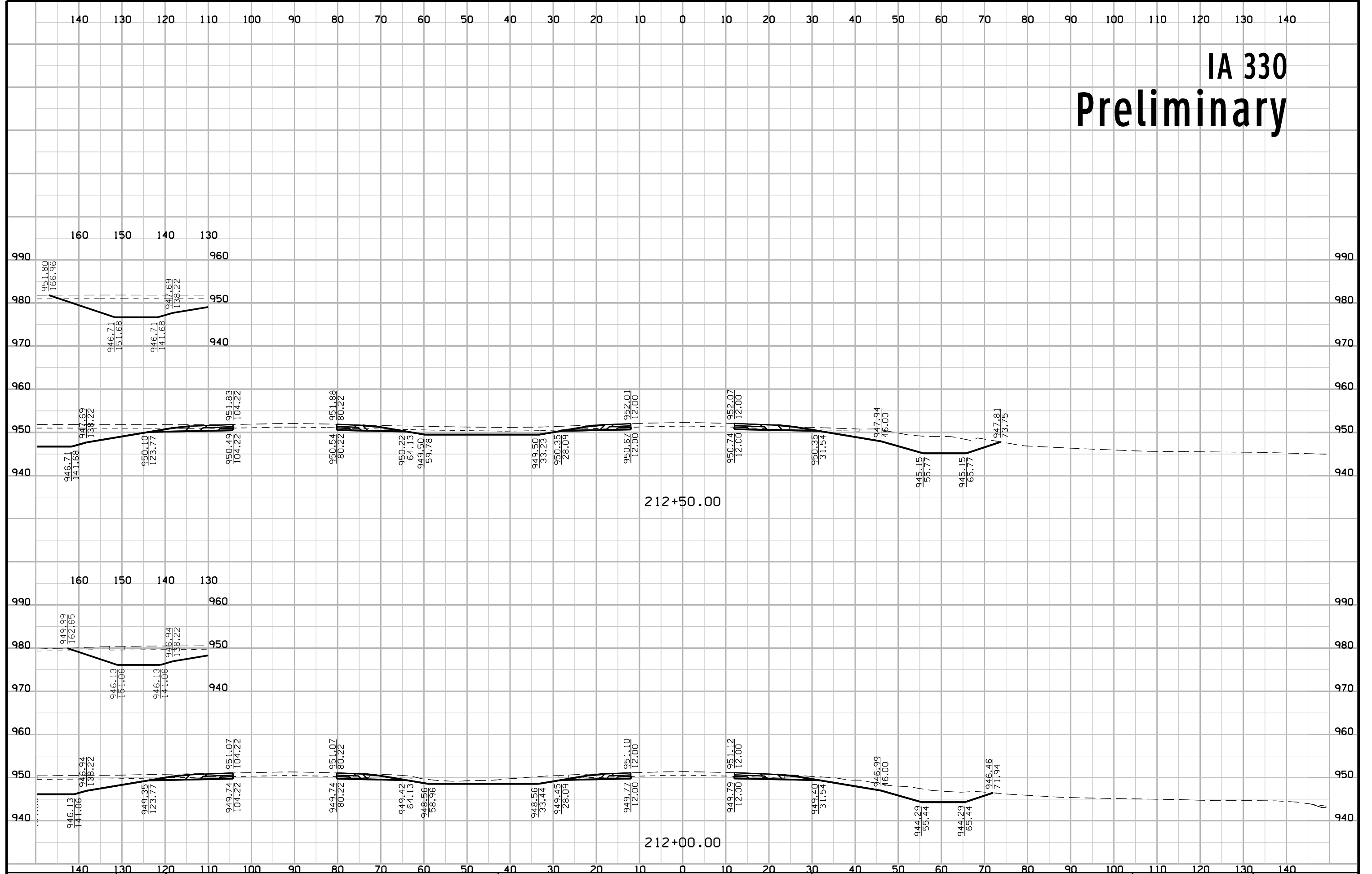
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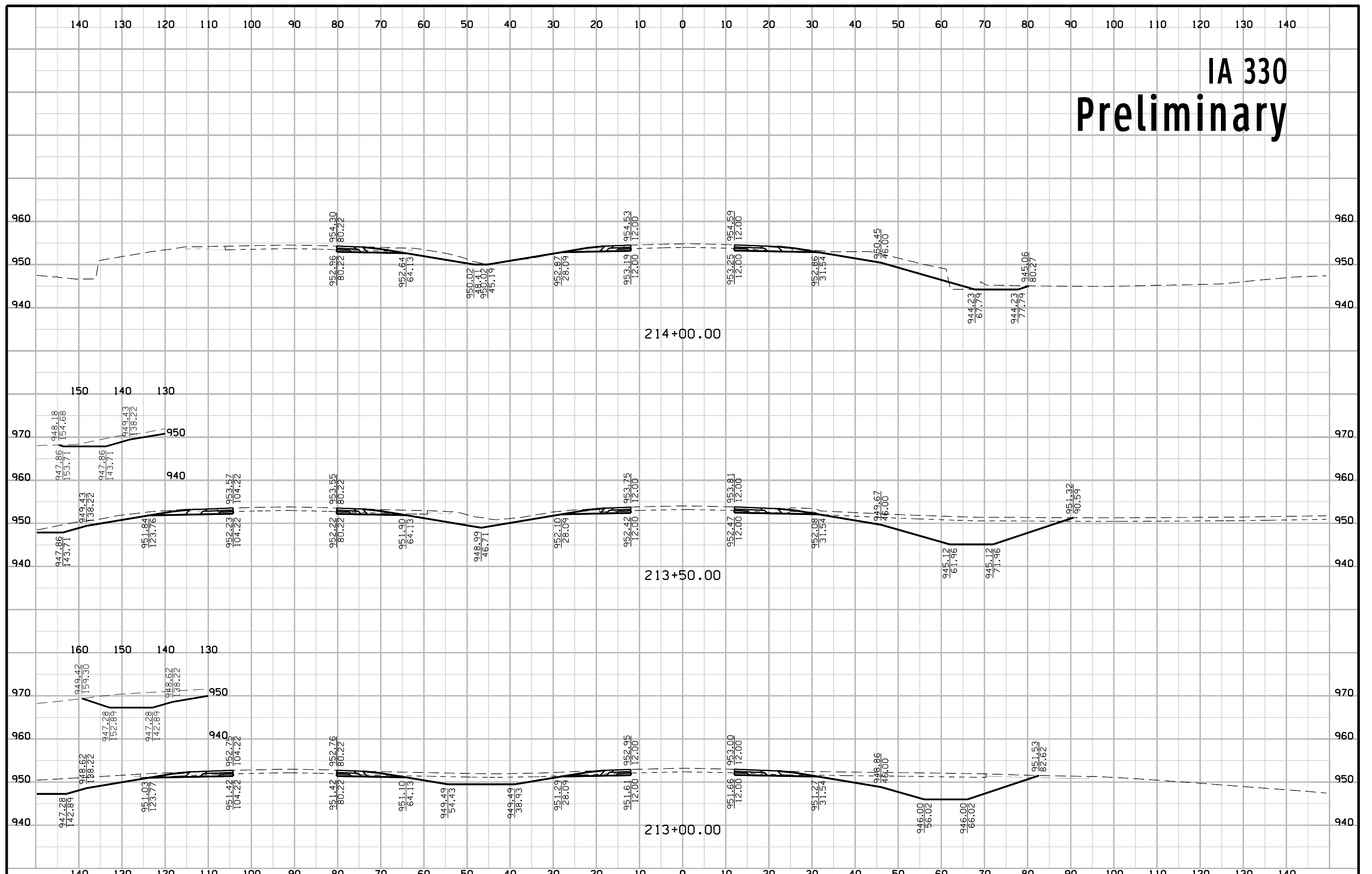
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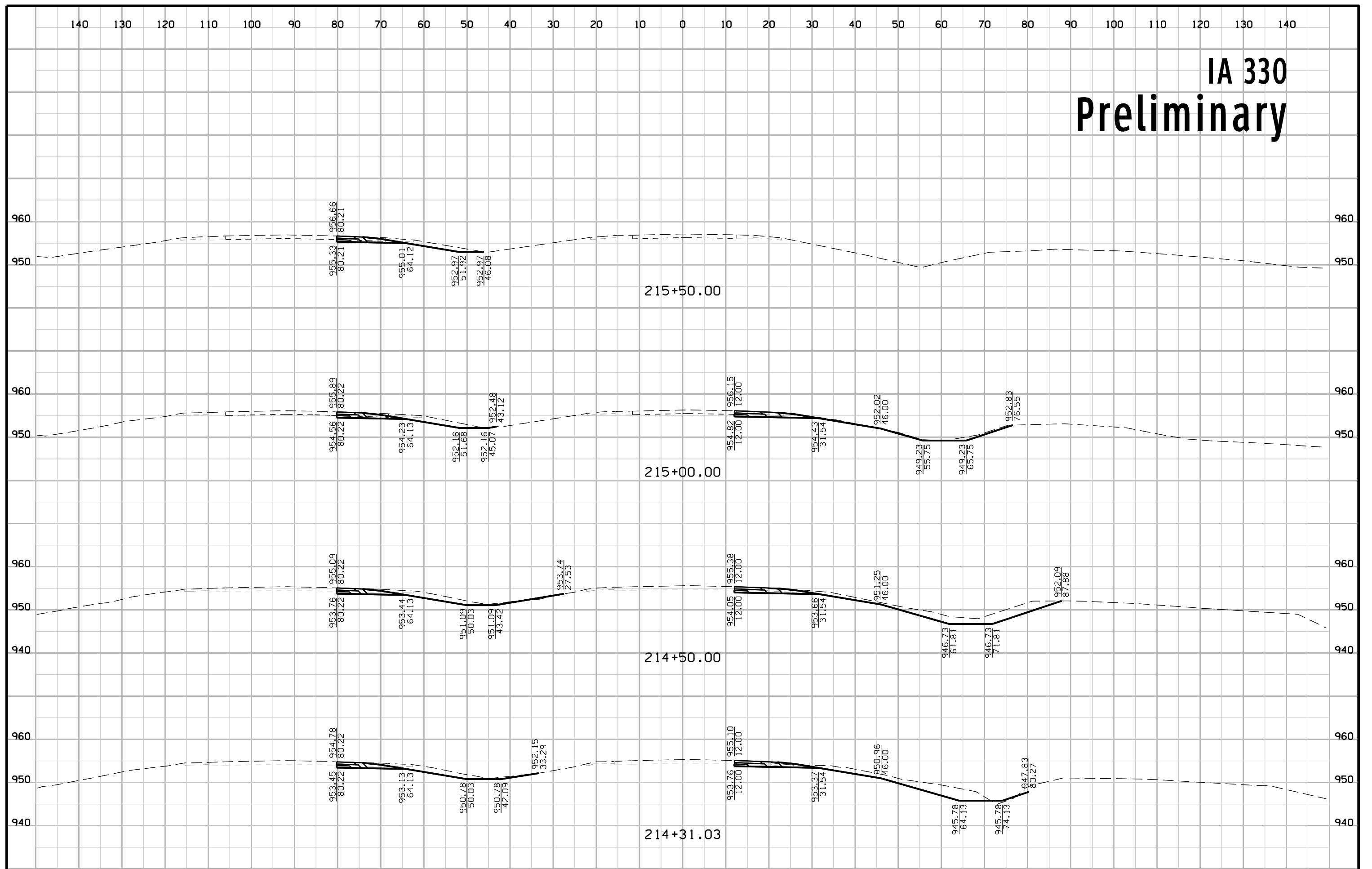
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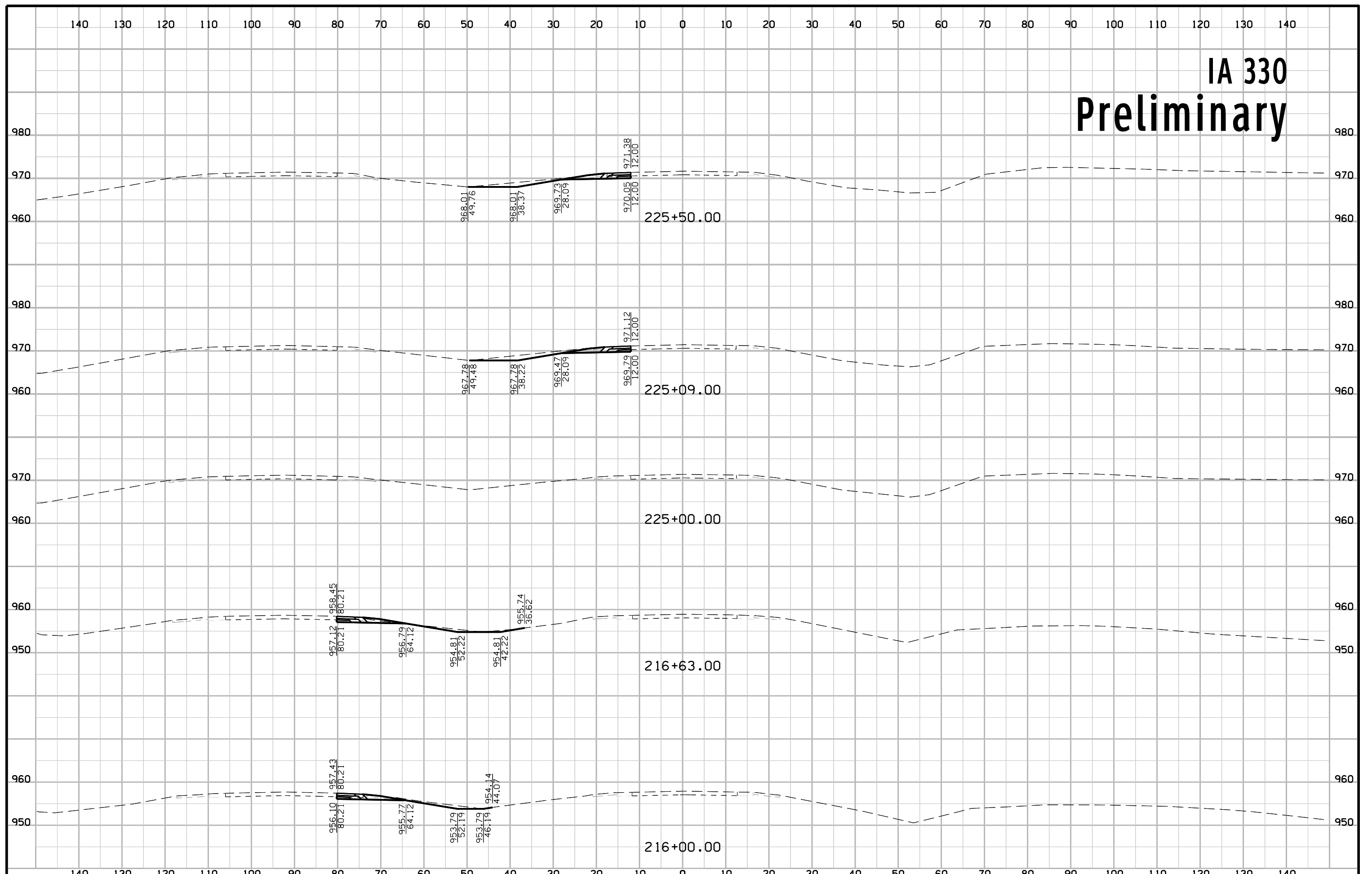
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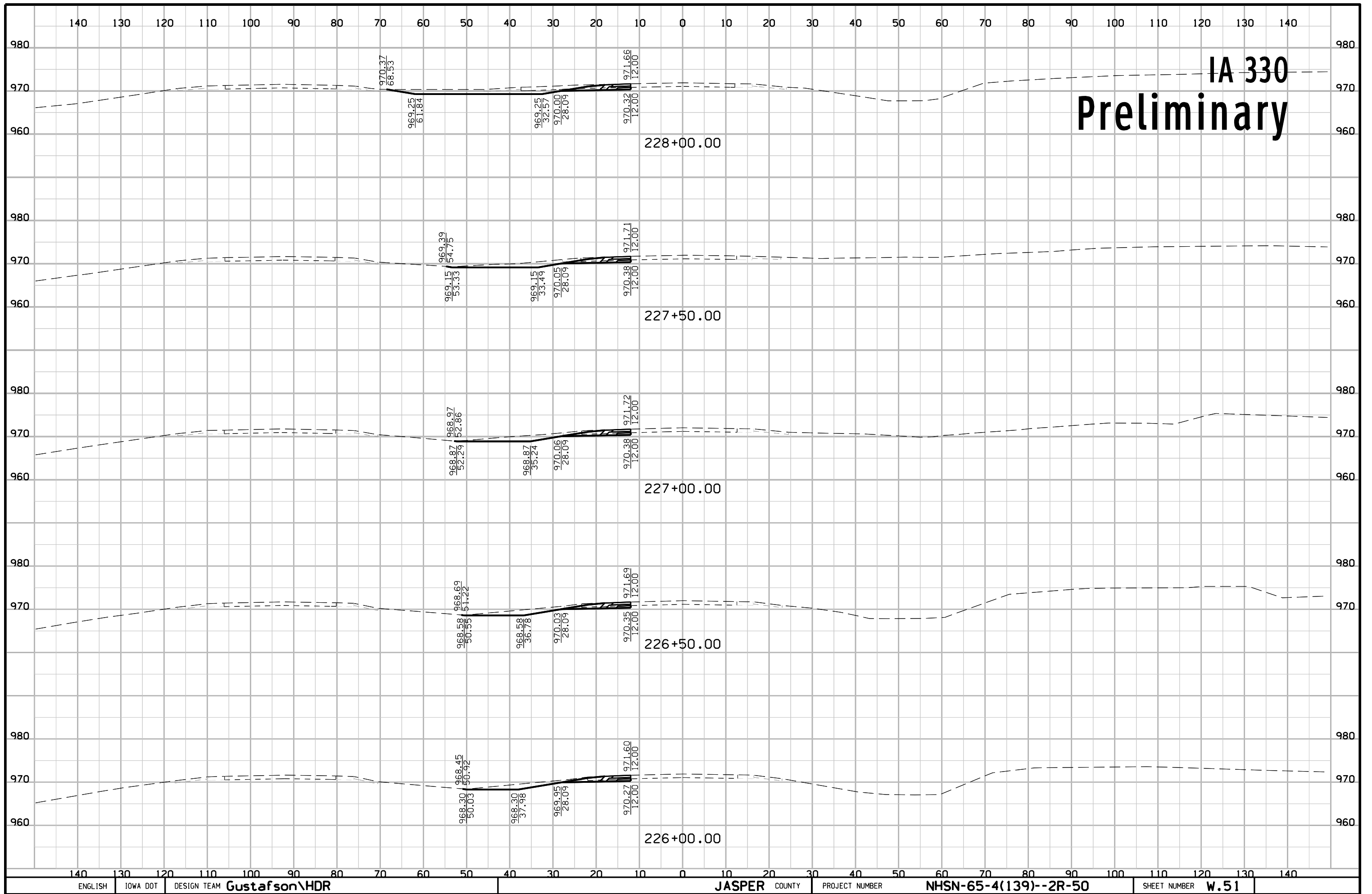


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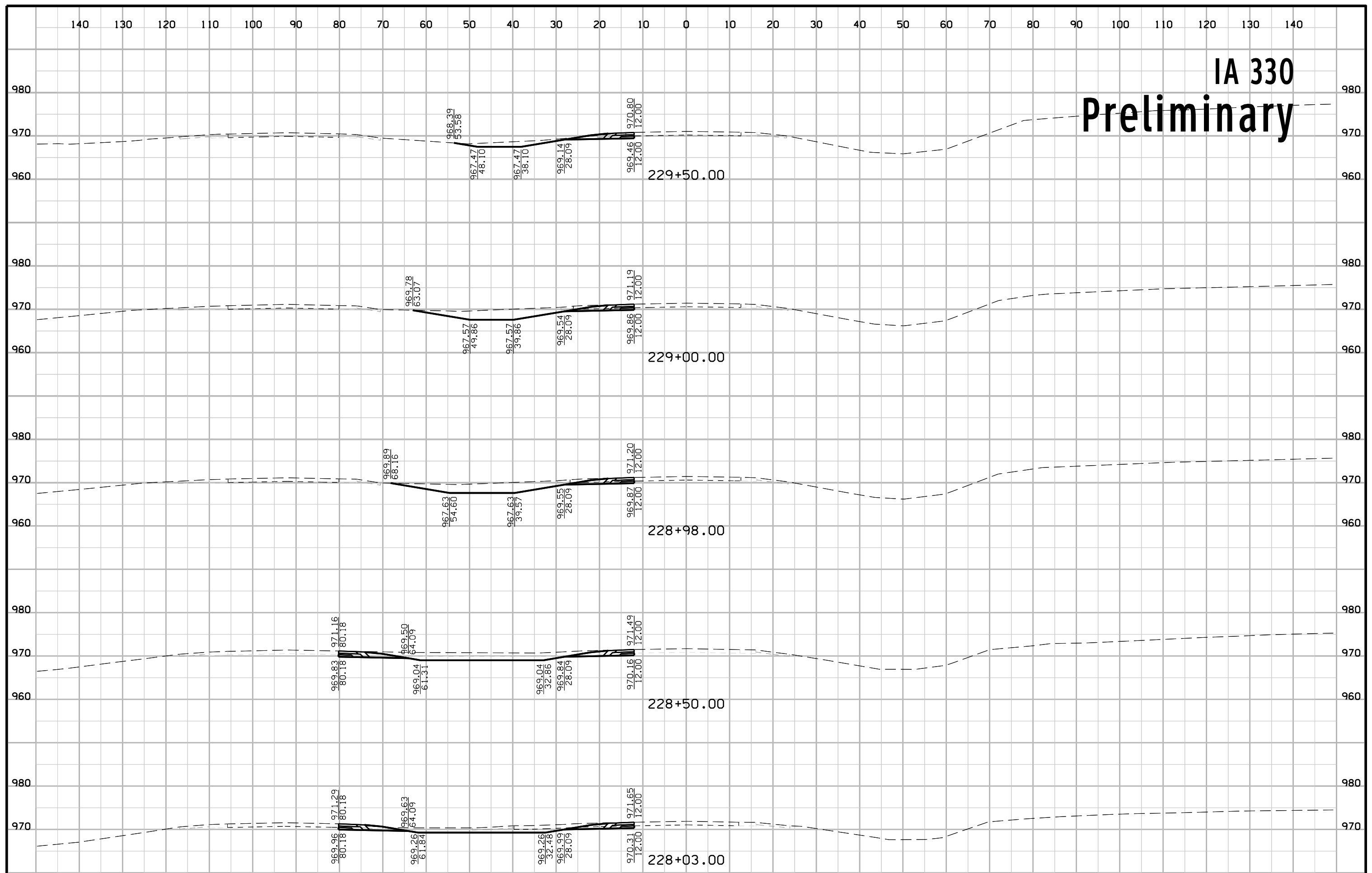
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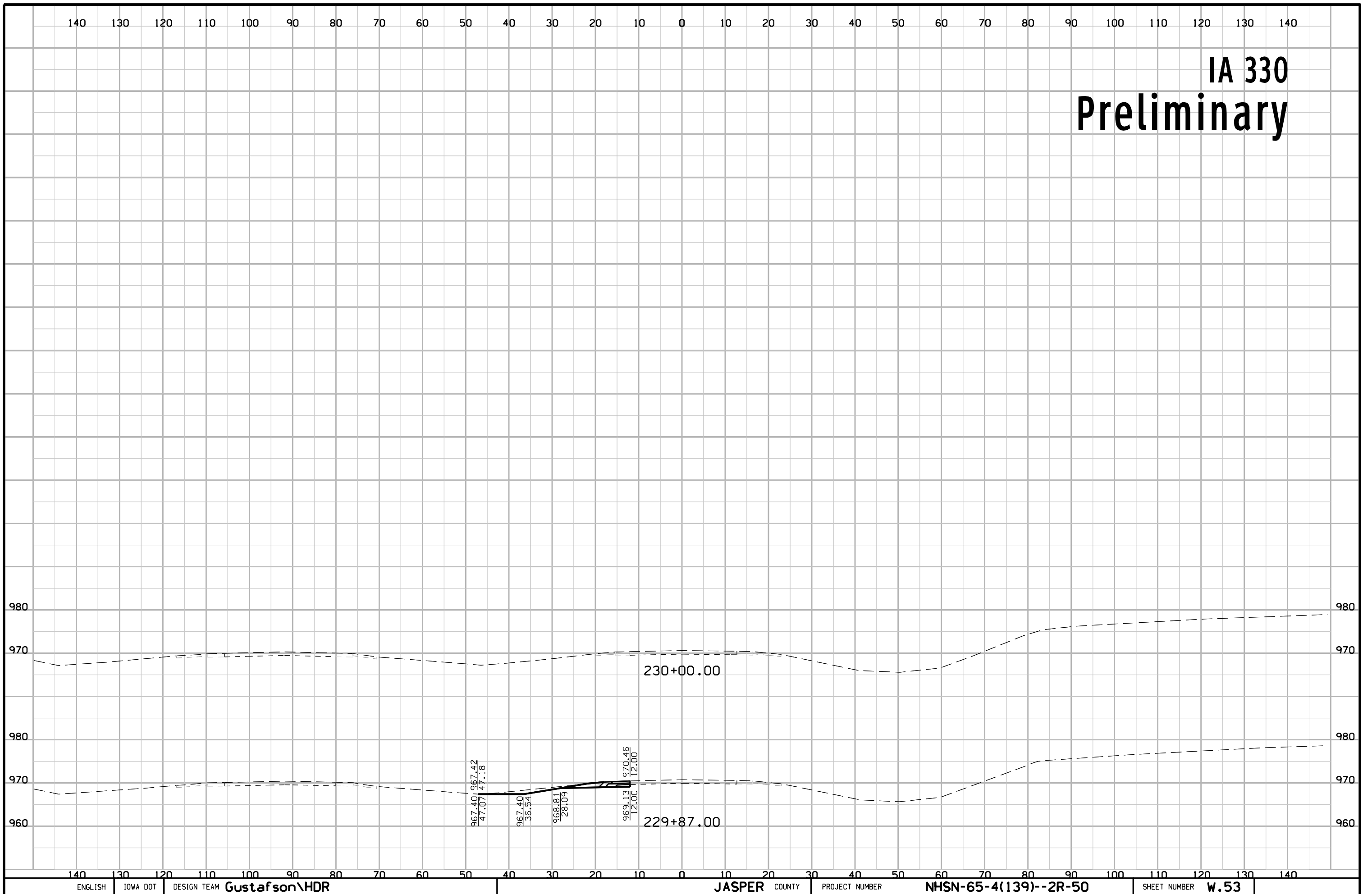


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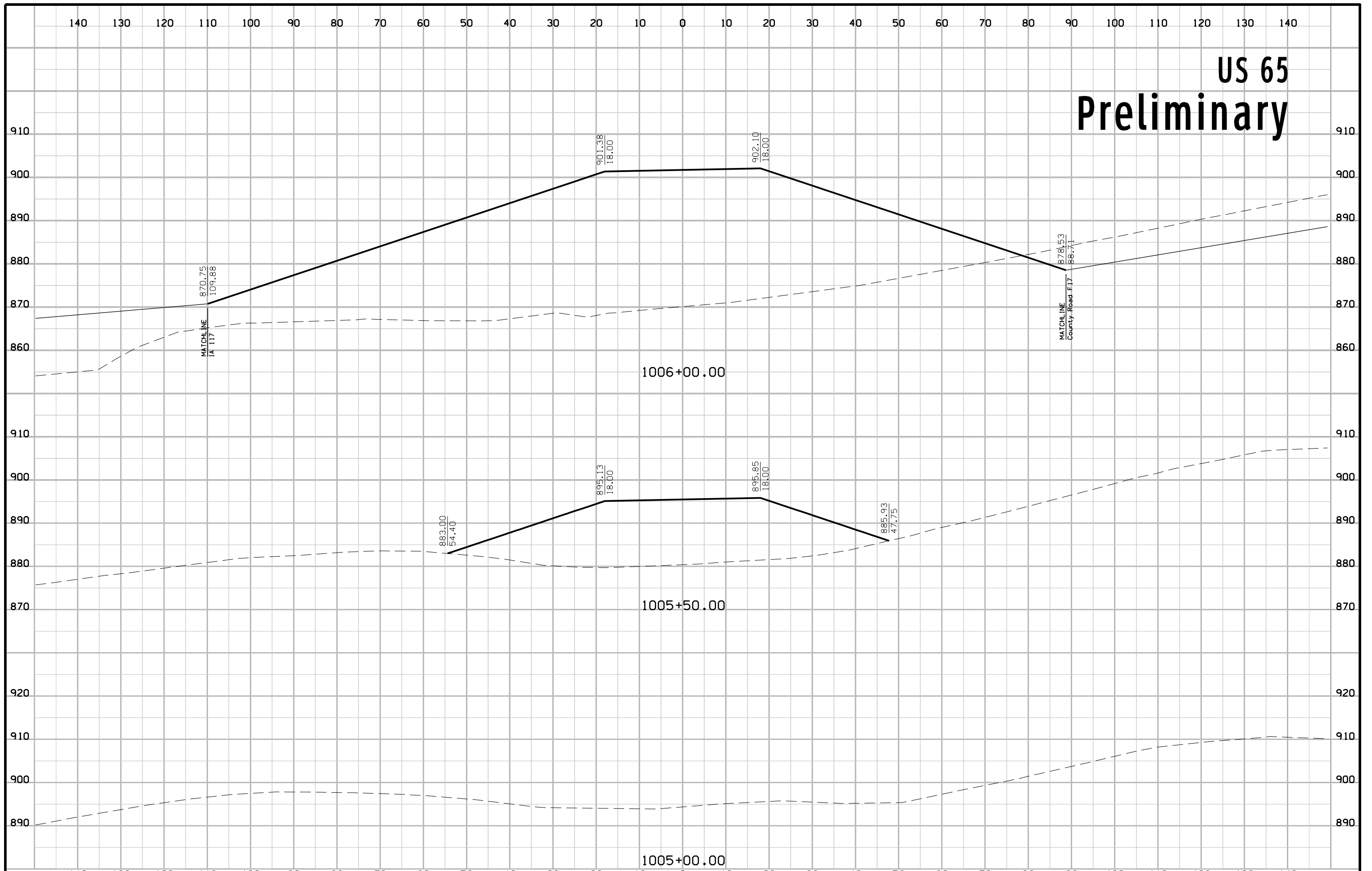
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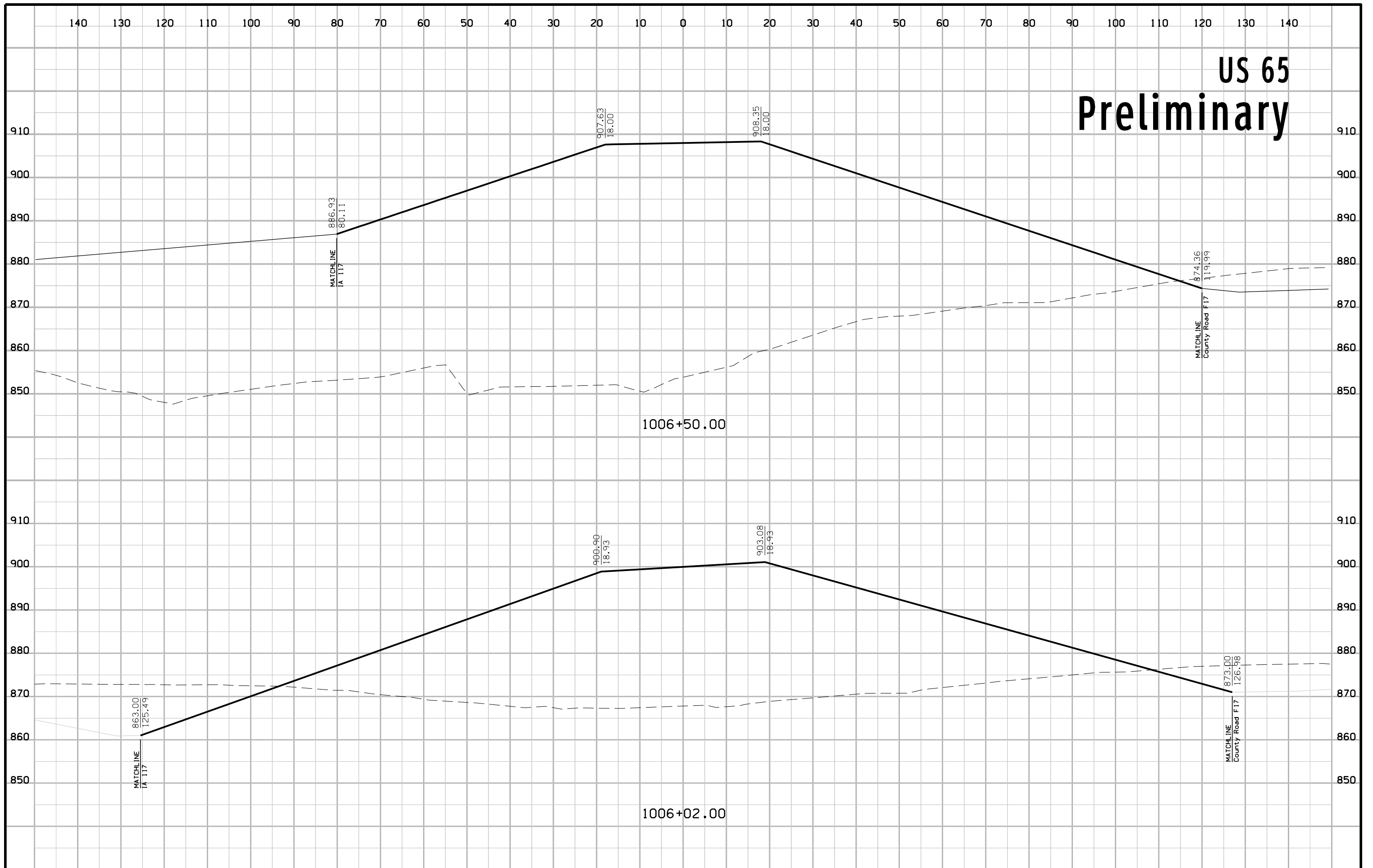
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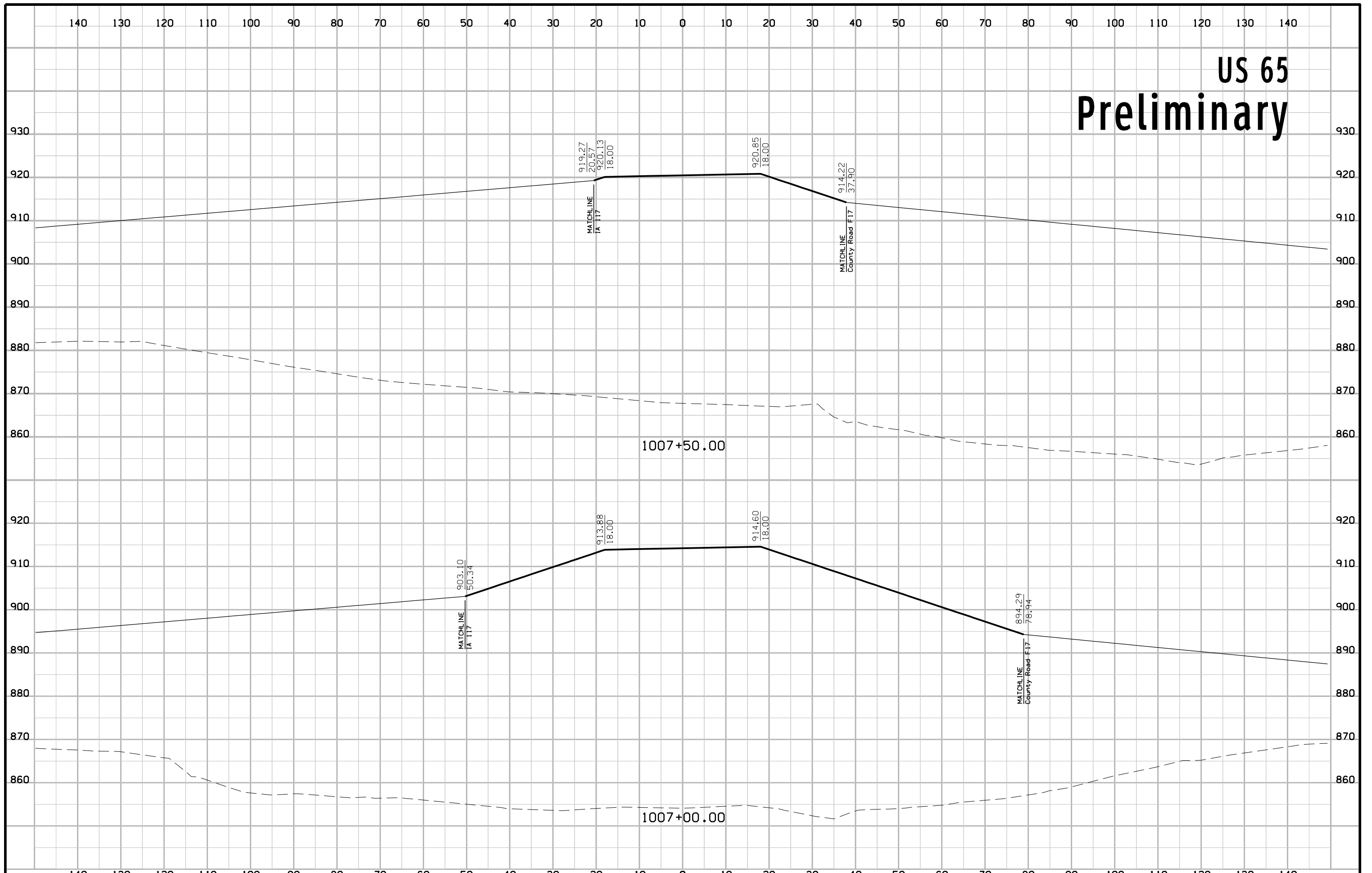
US 65 Preliminary



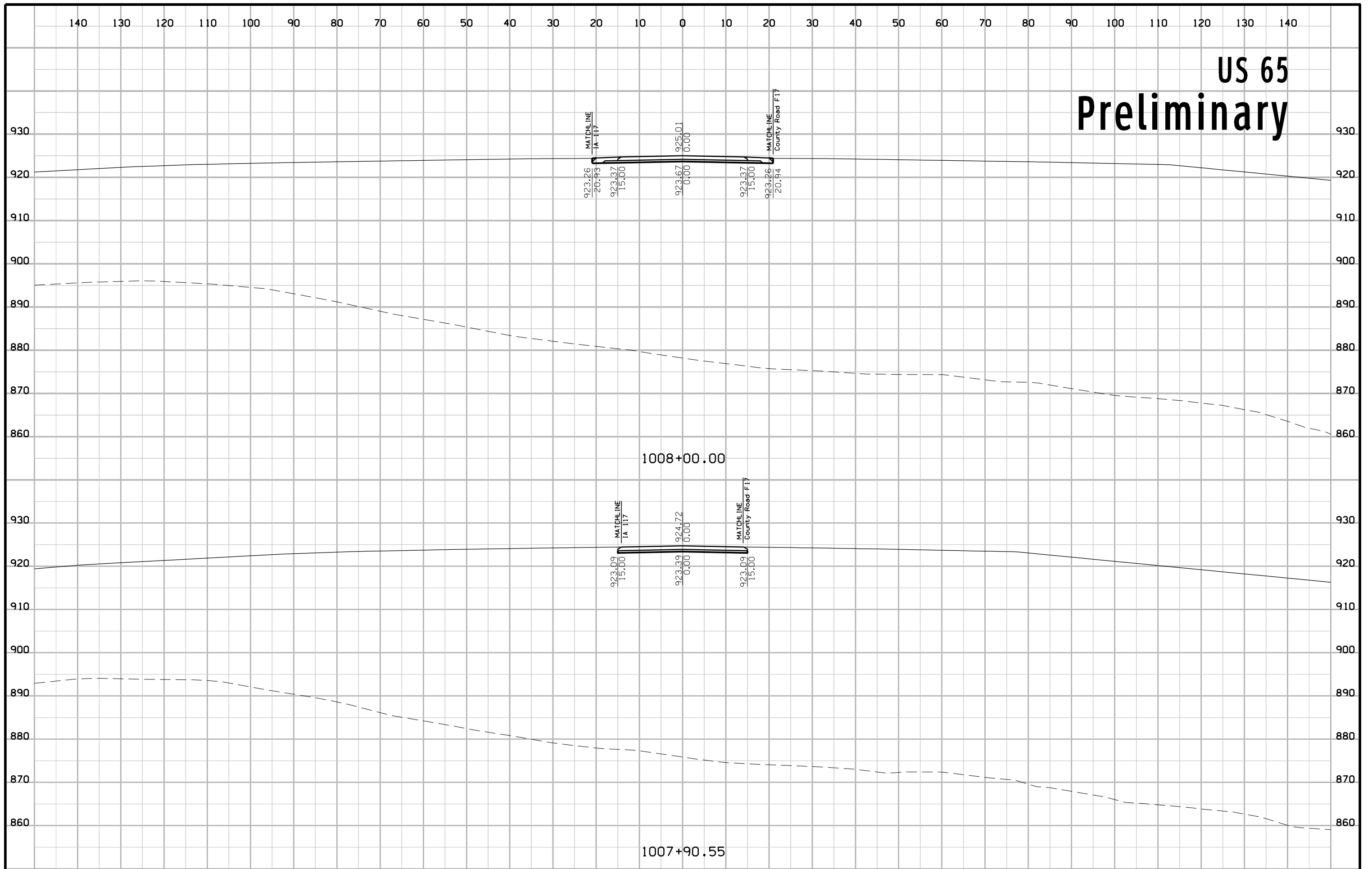
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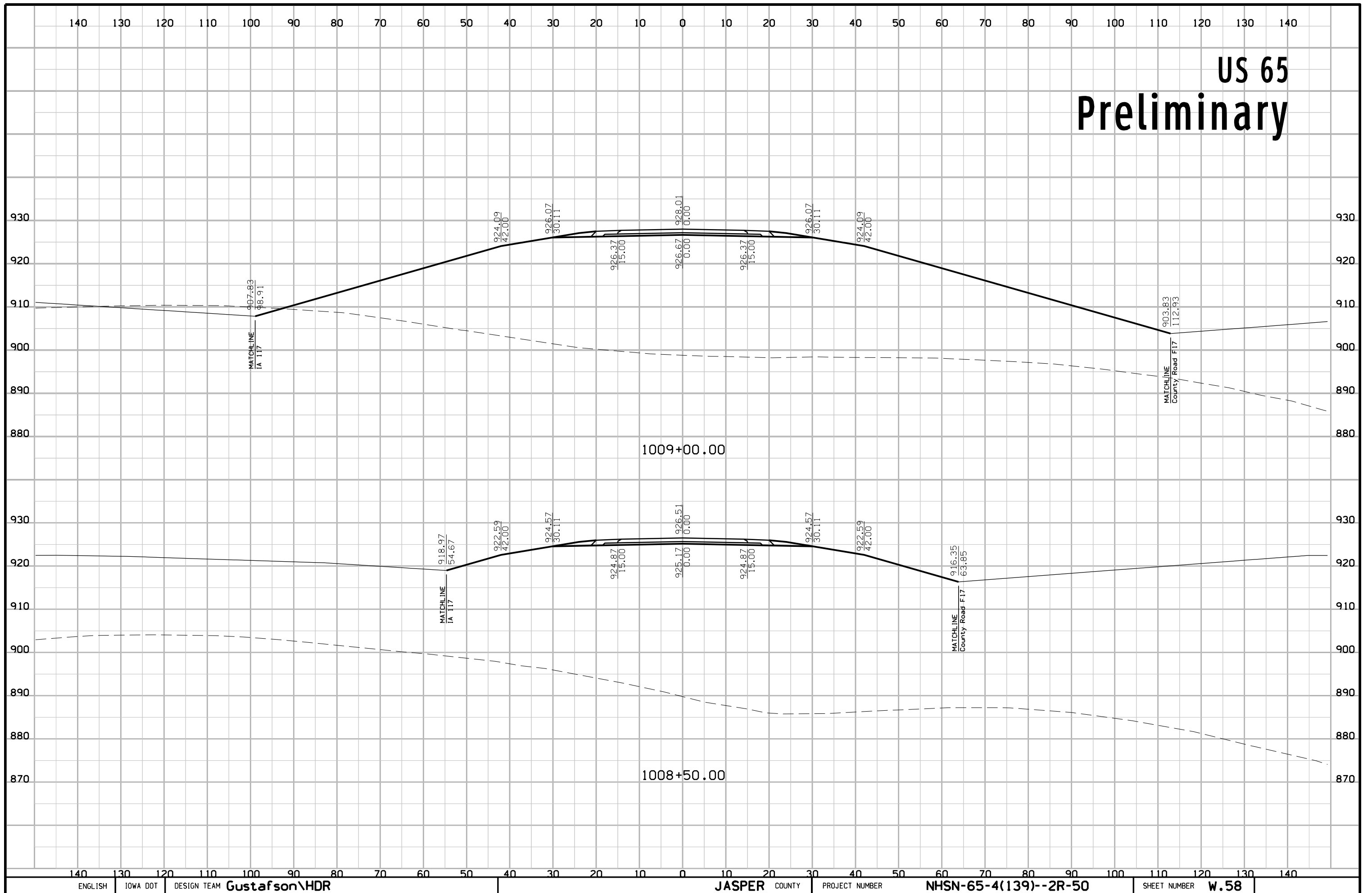
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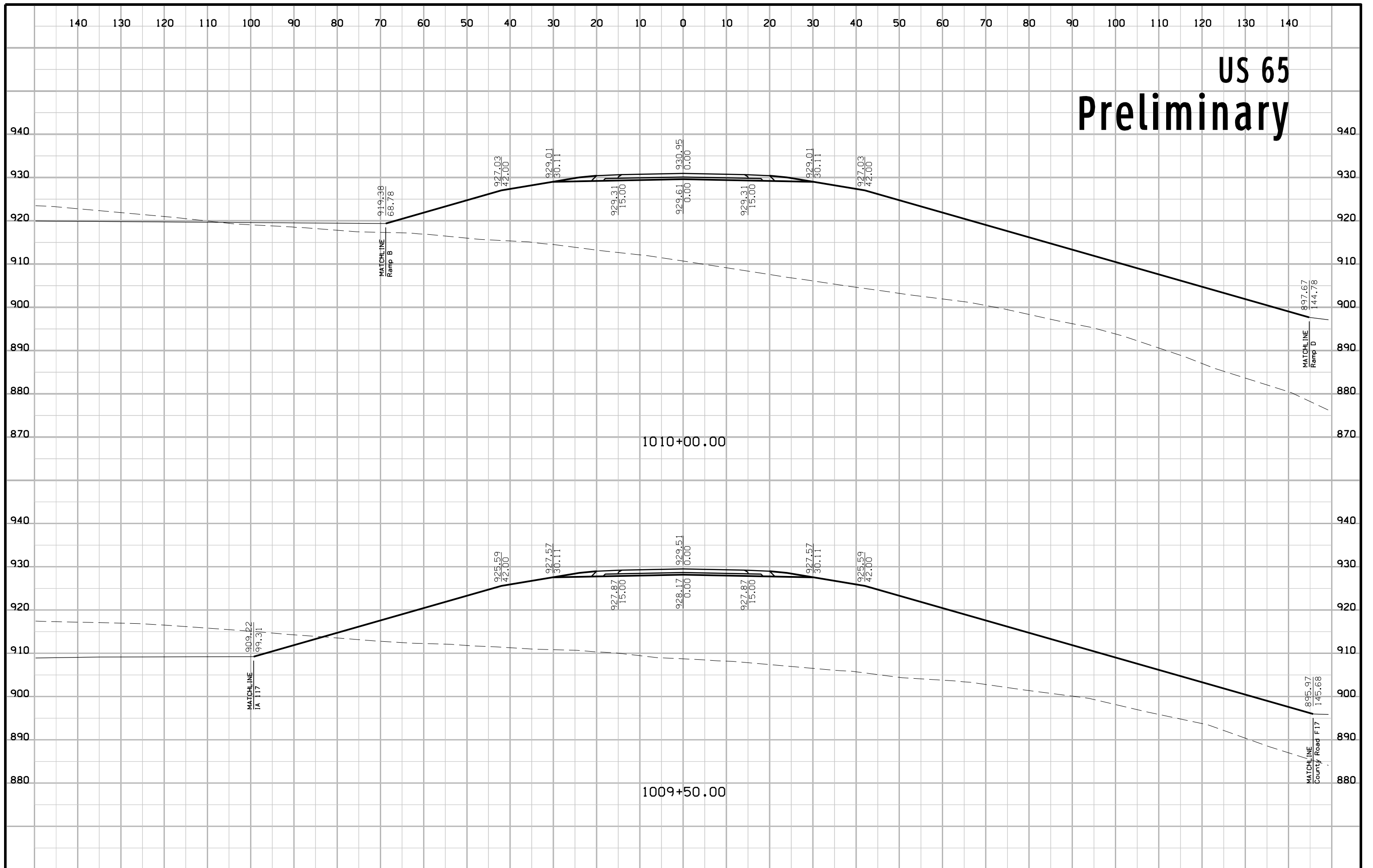
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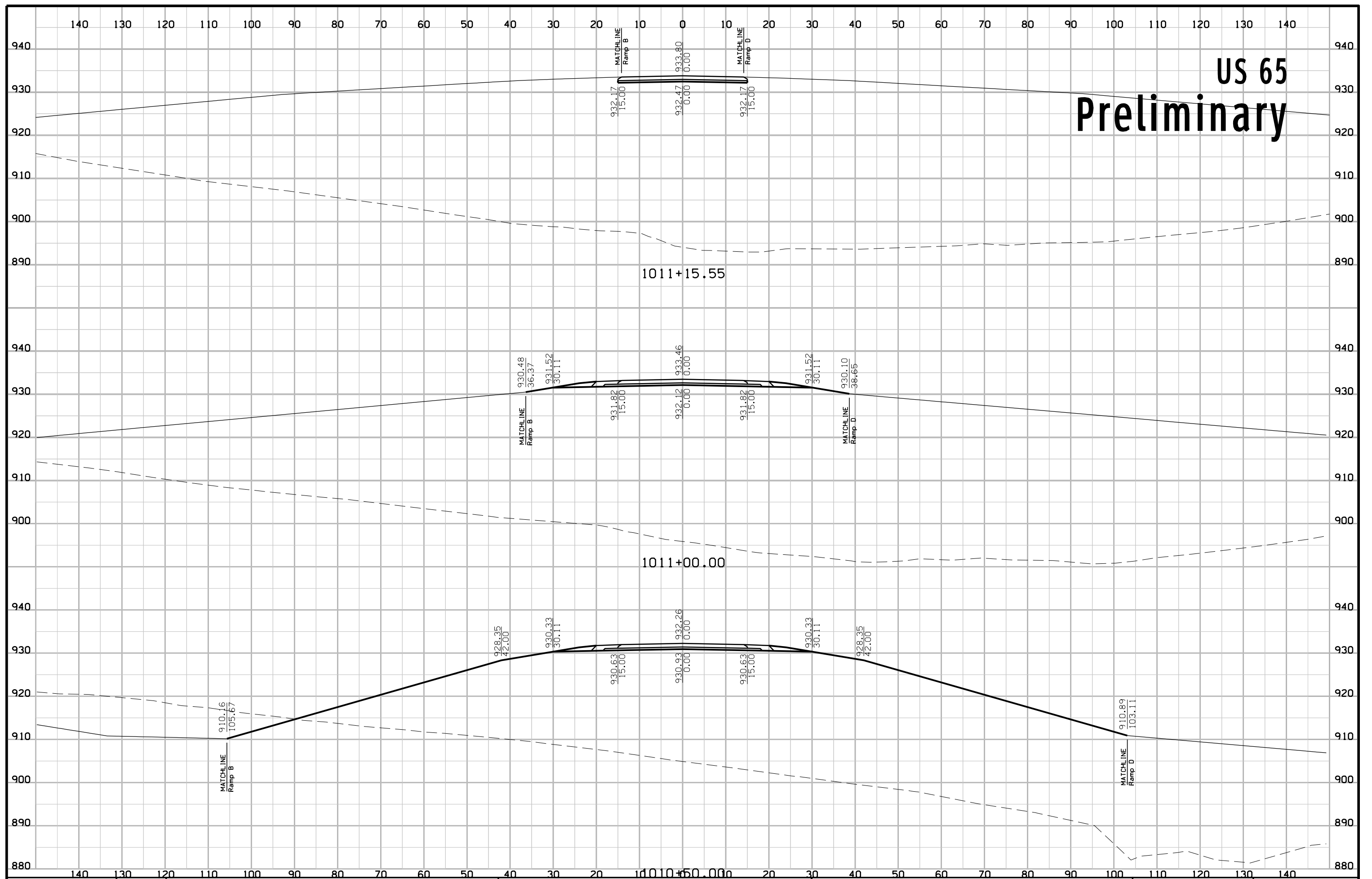
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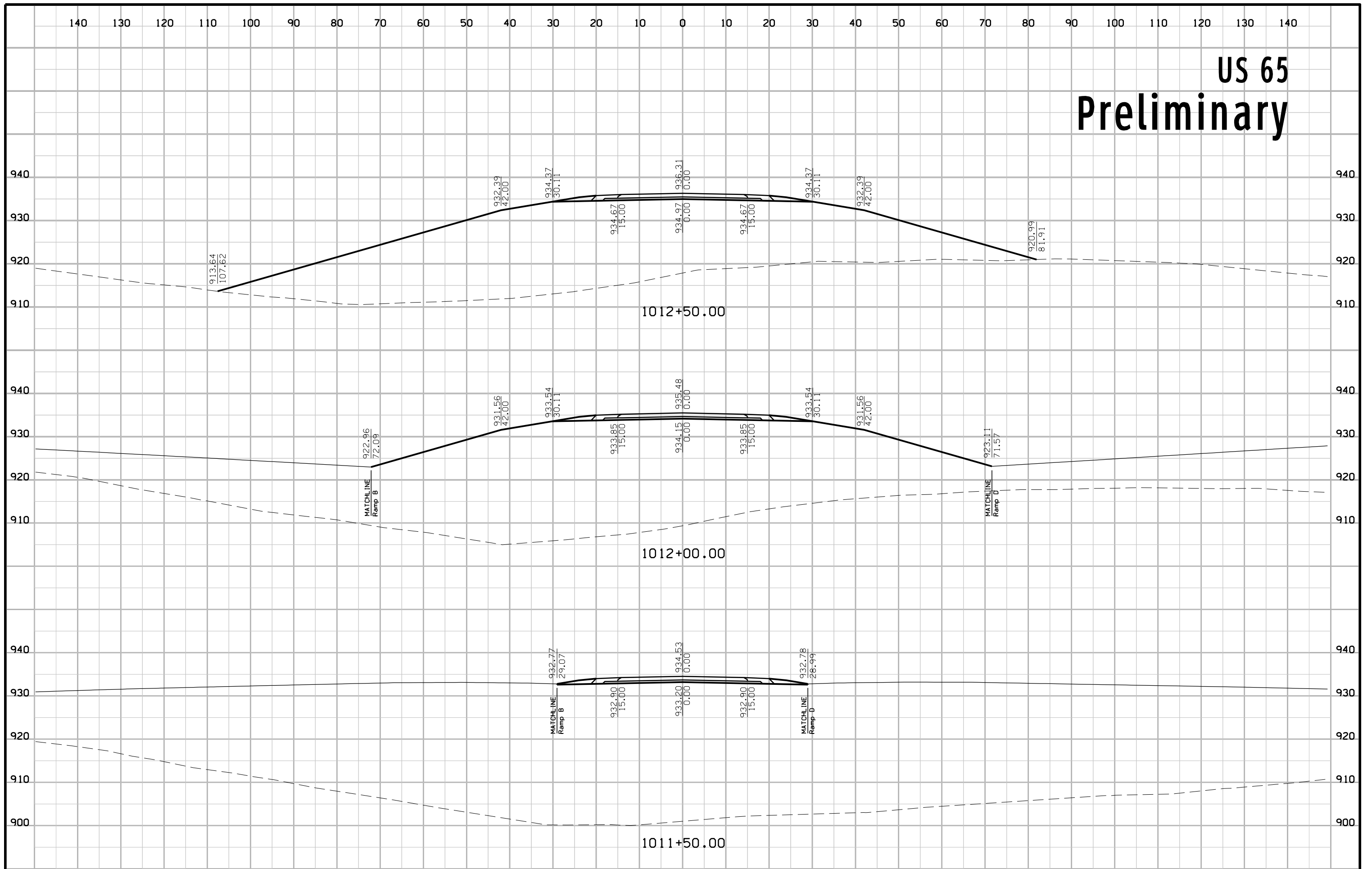
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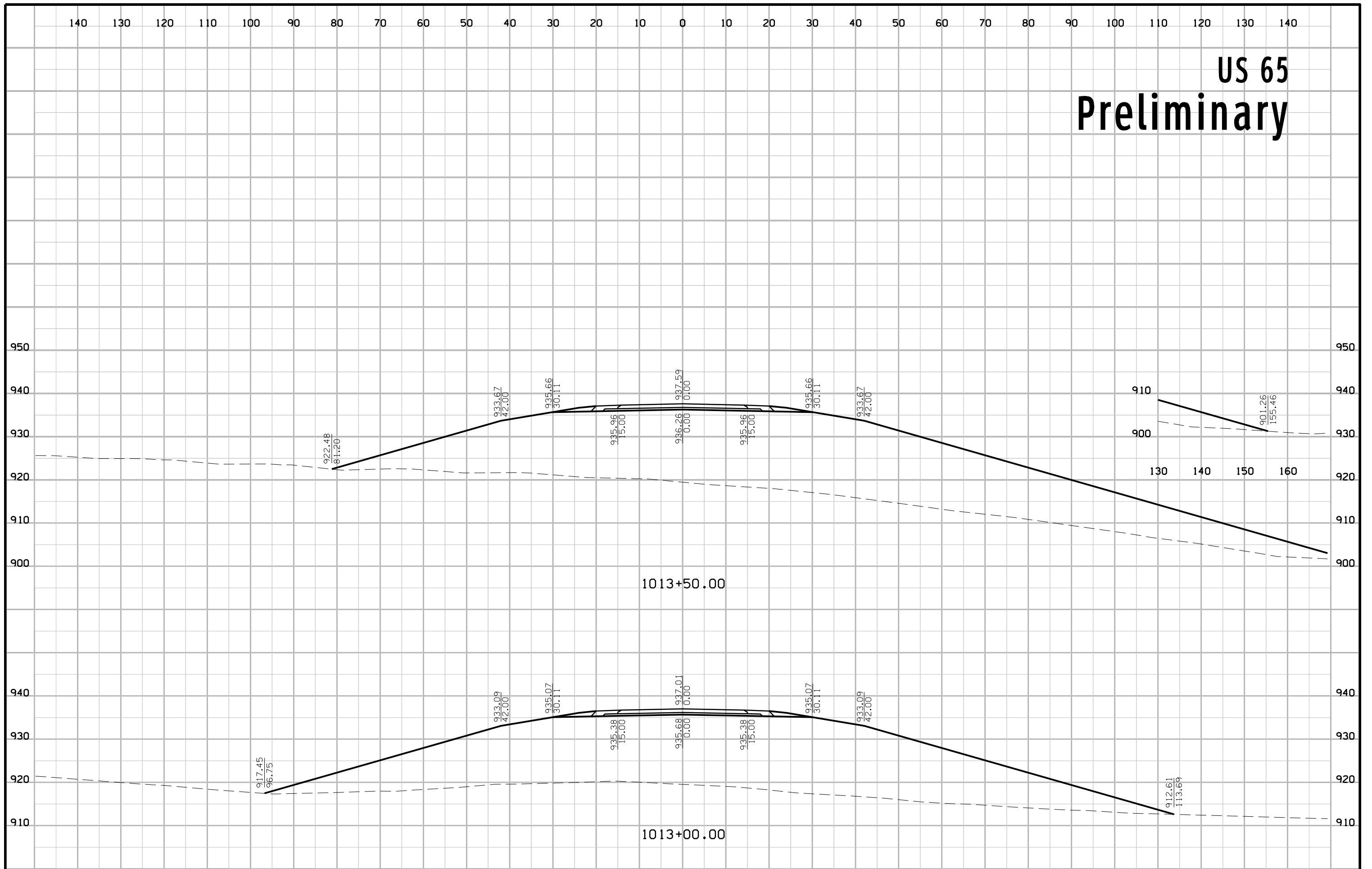
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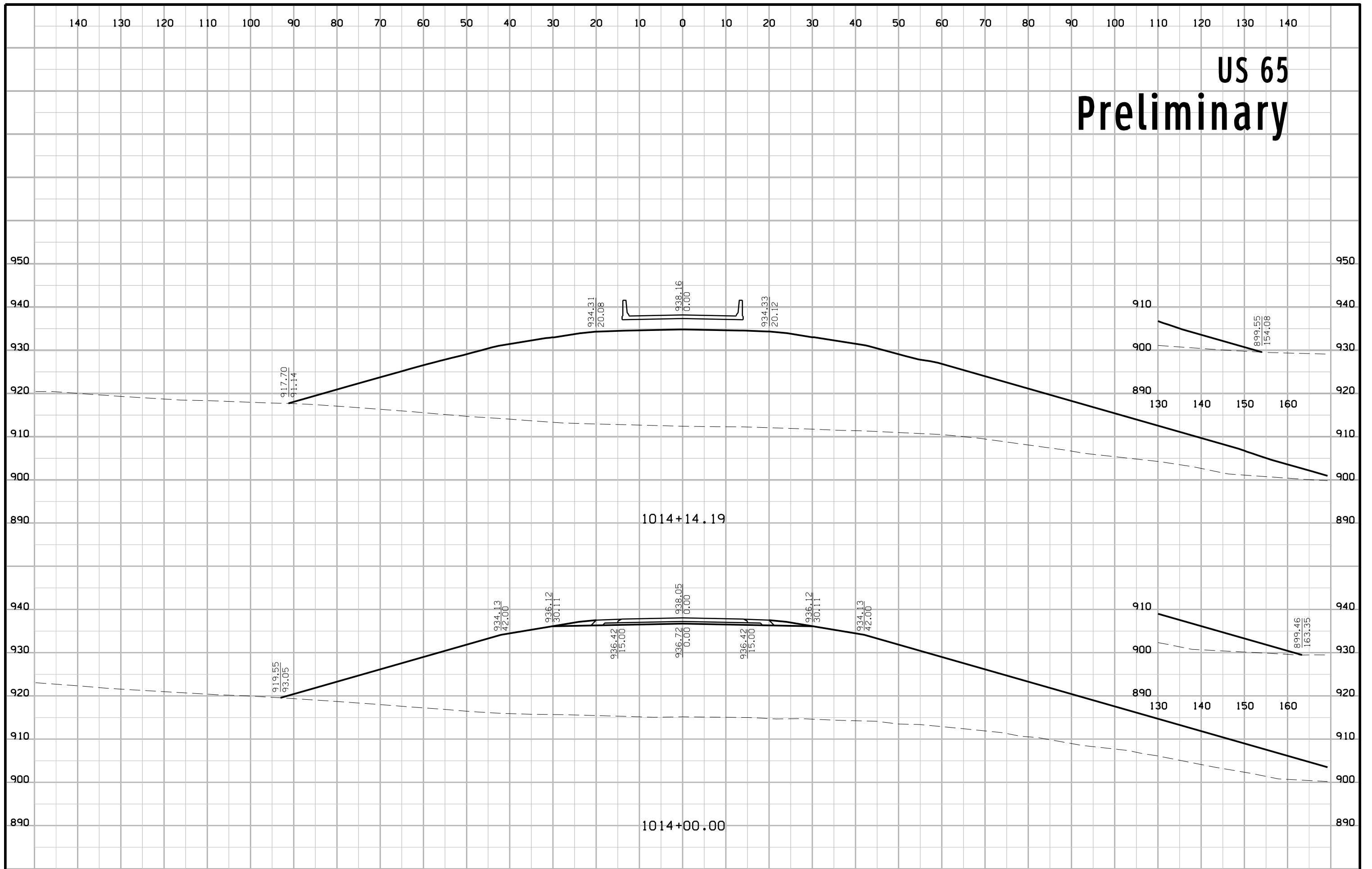
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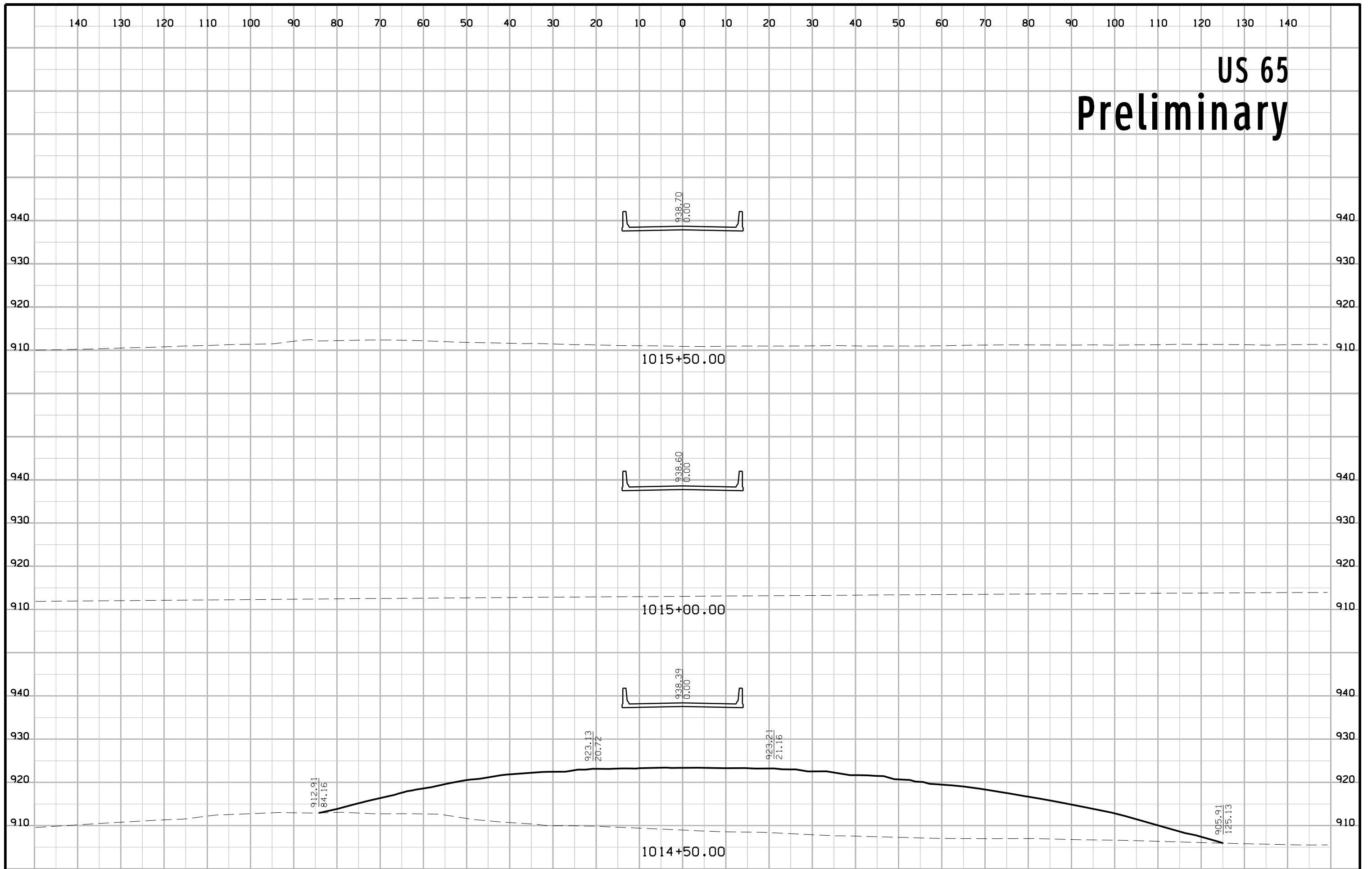
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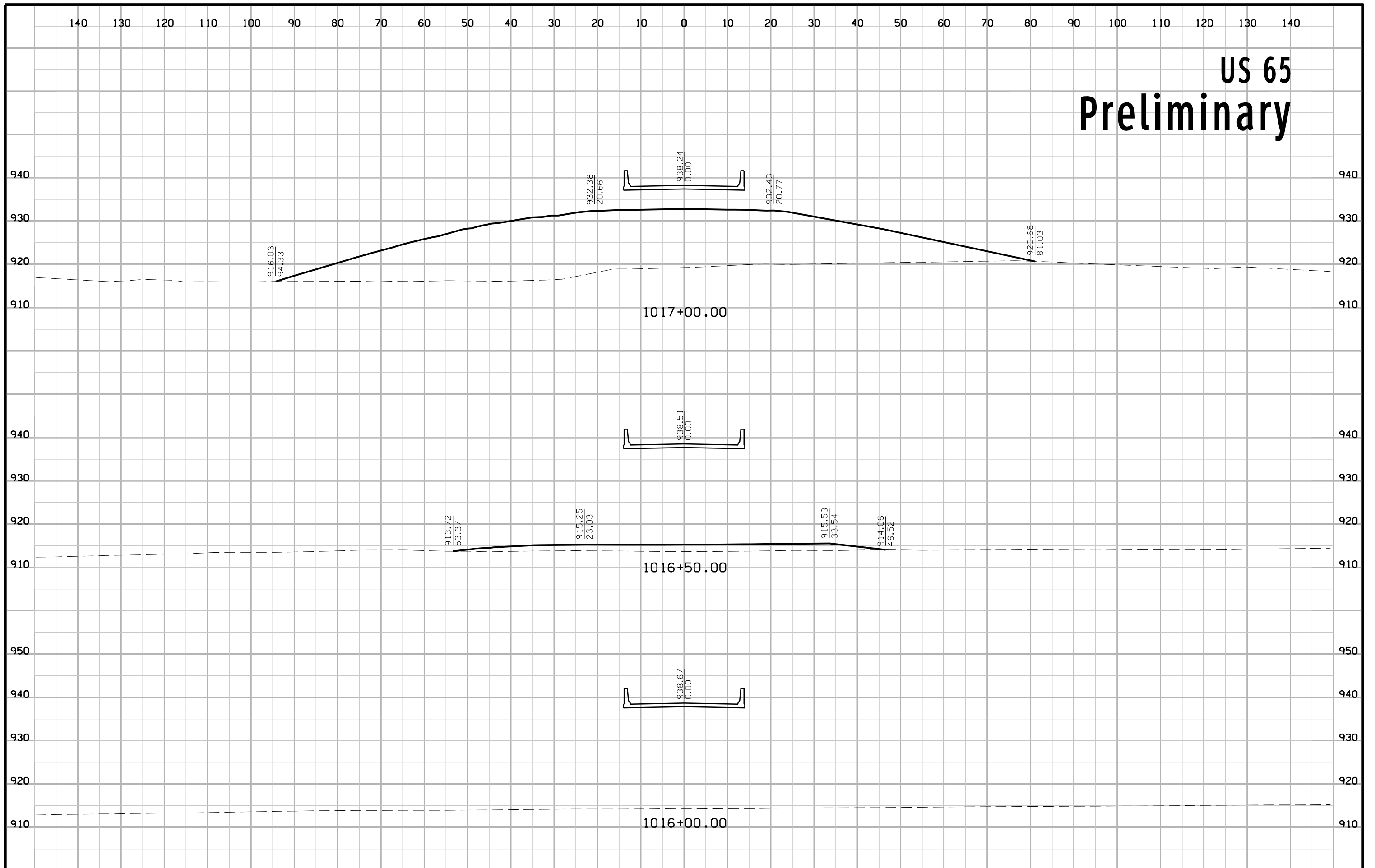
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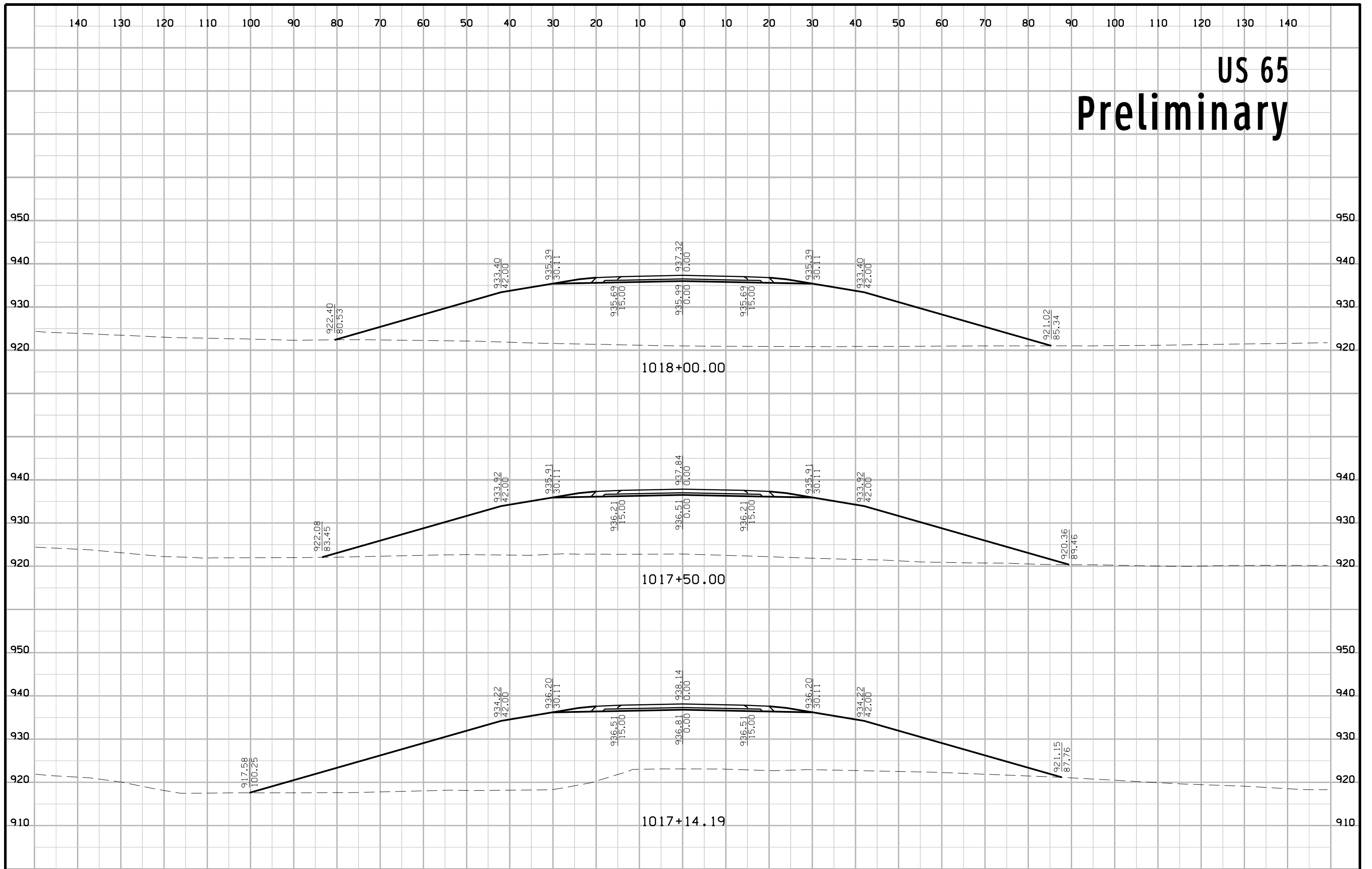
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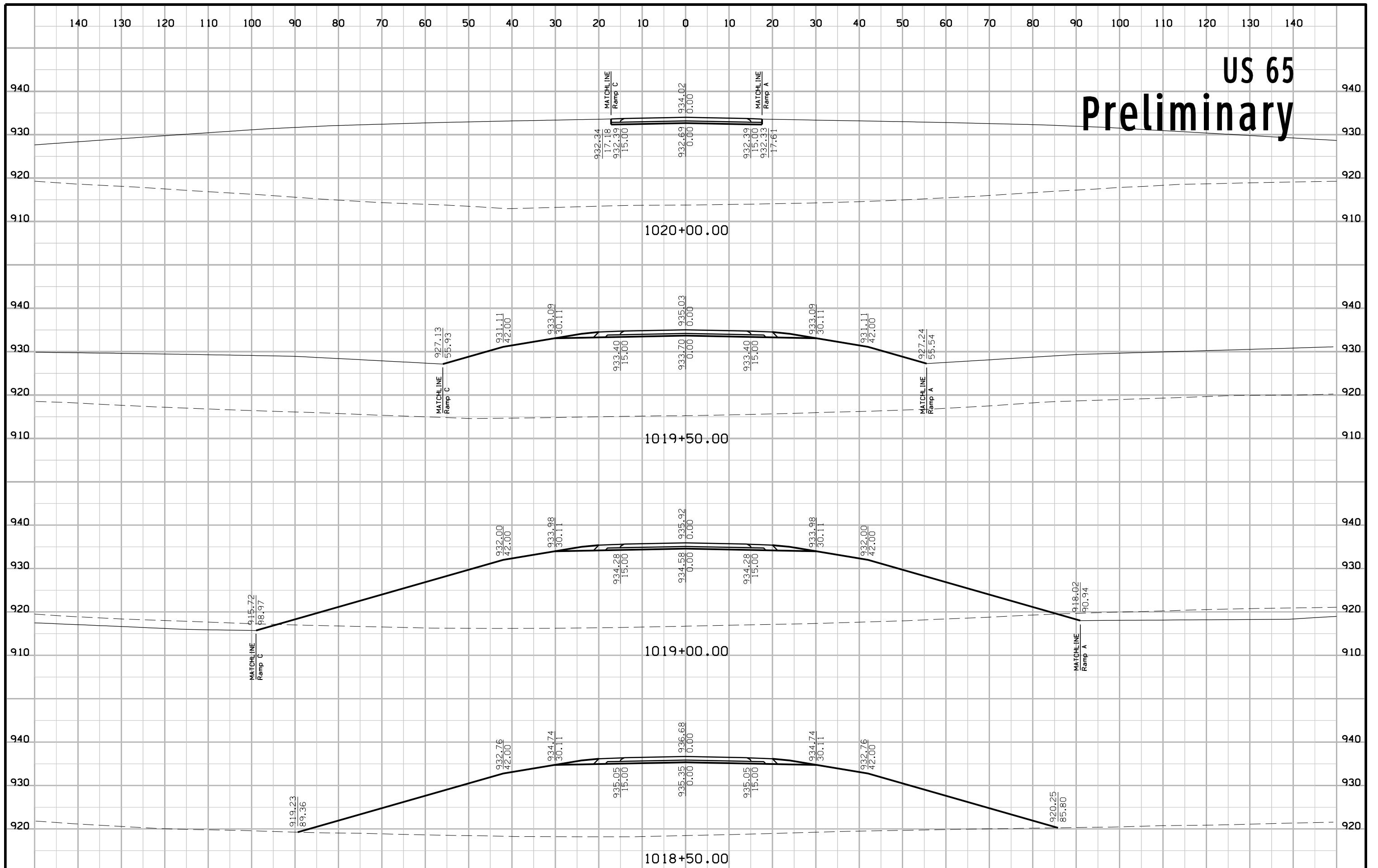
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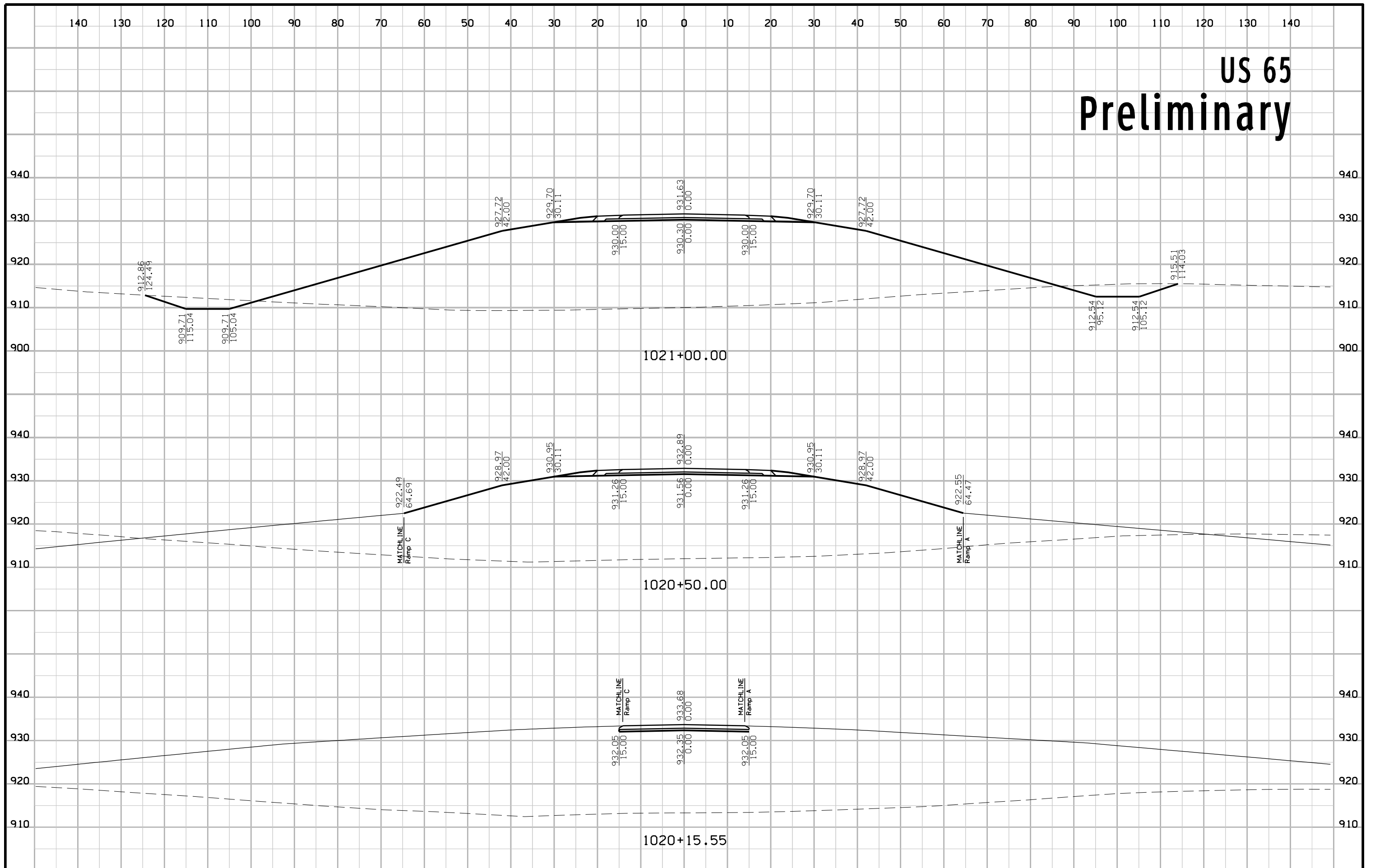
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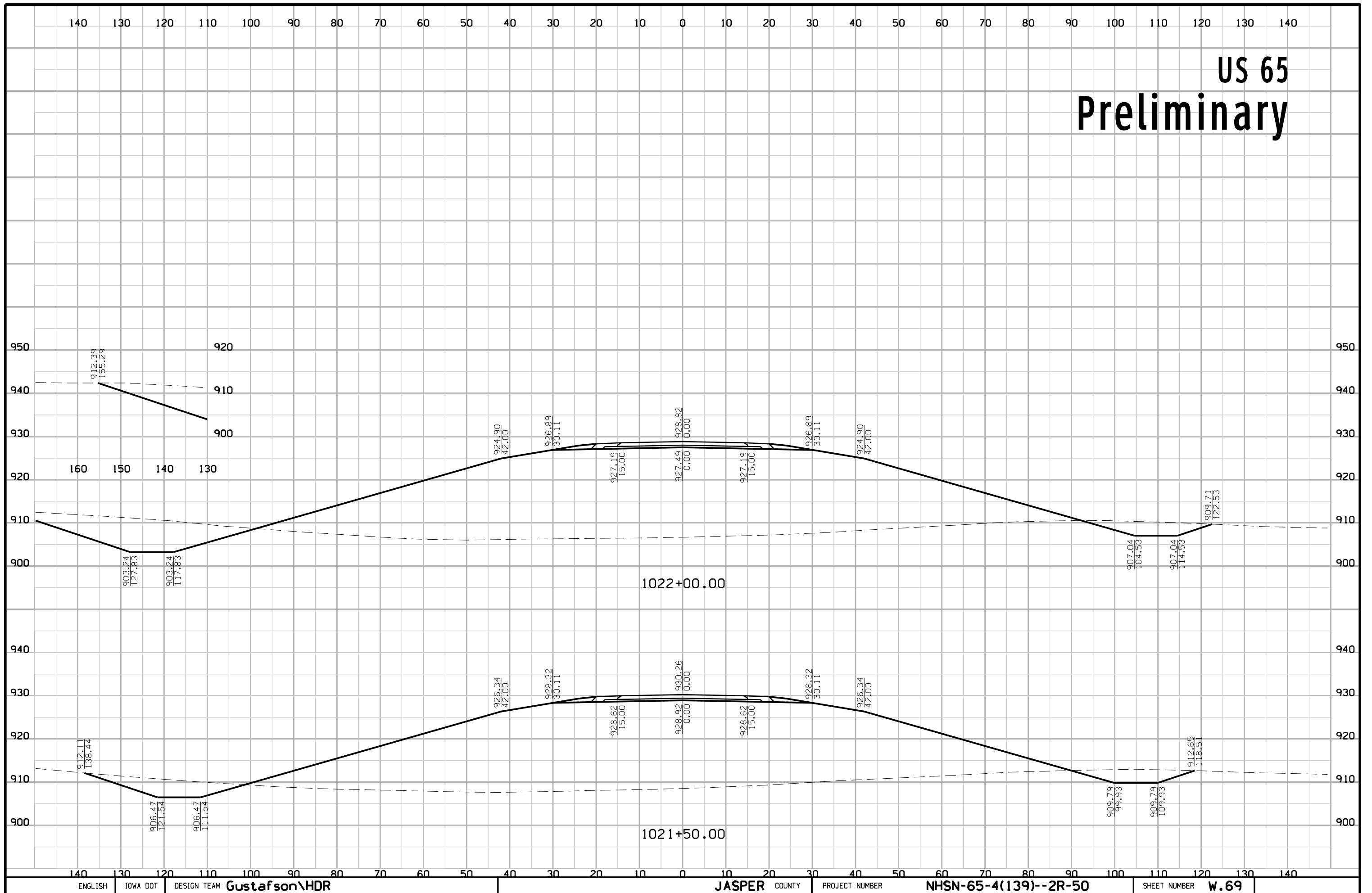
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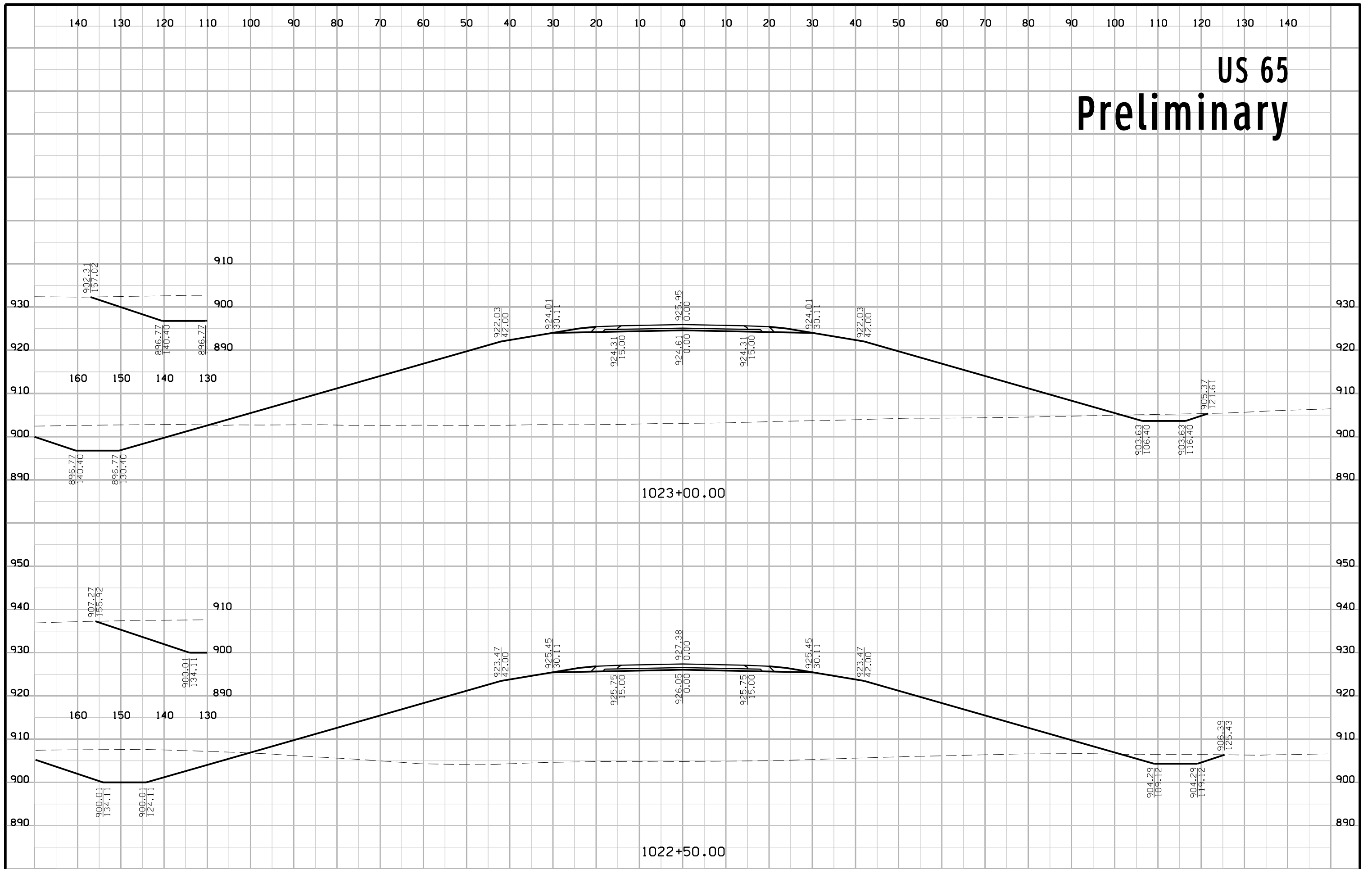
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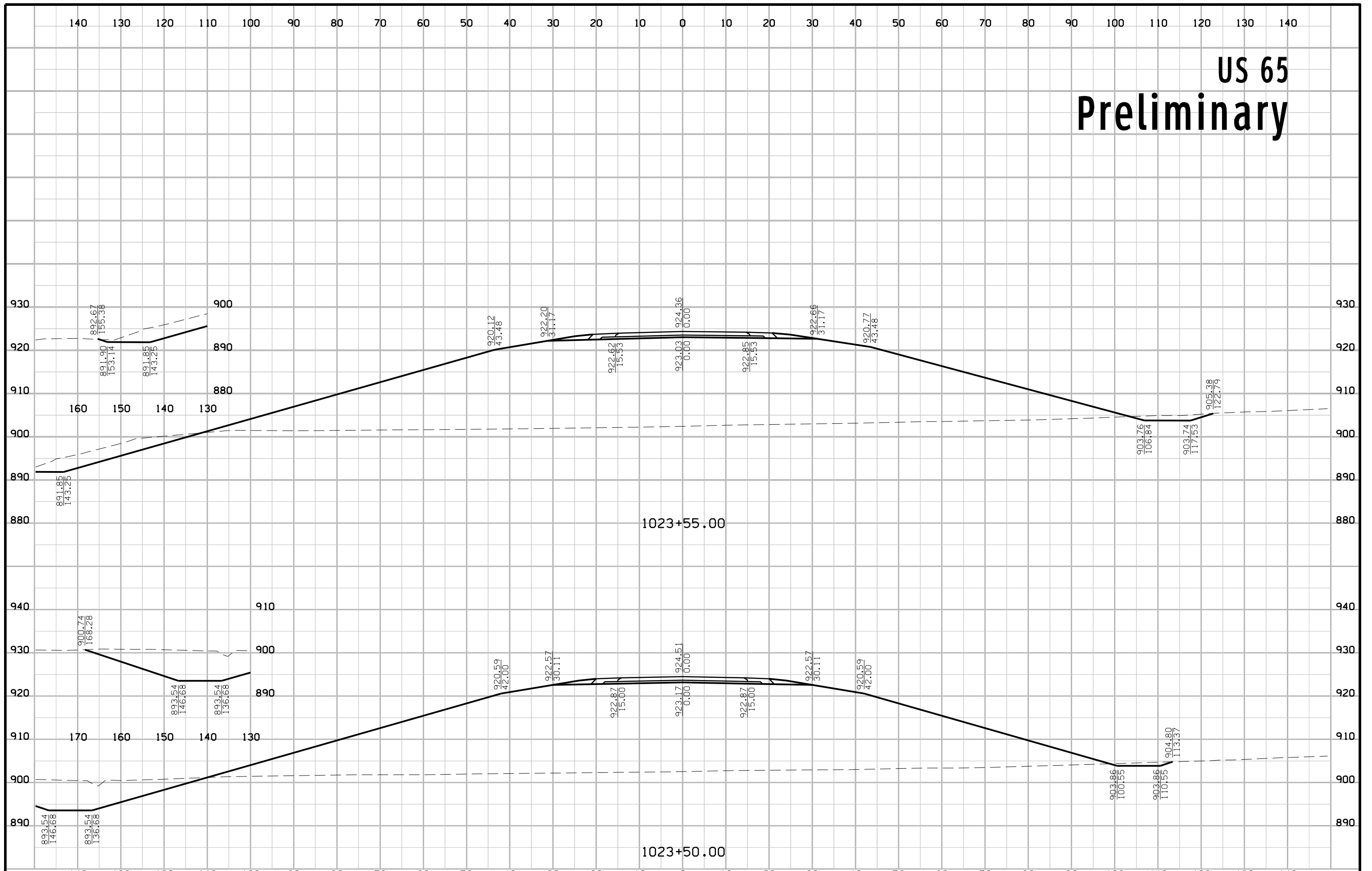
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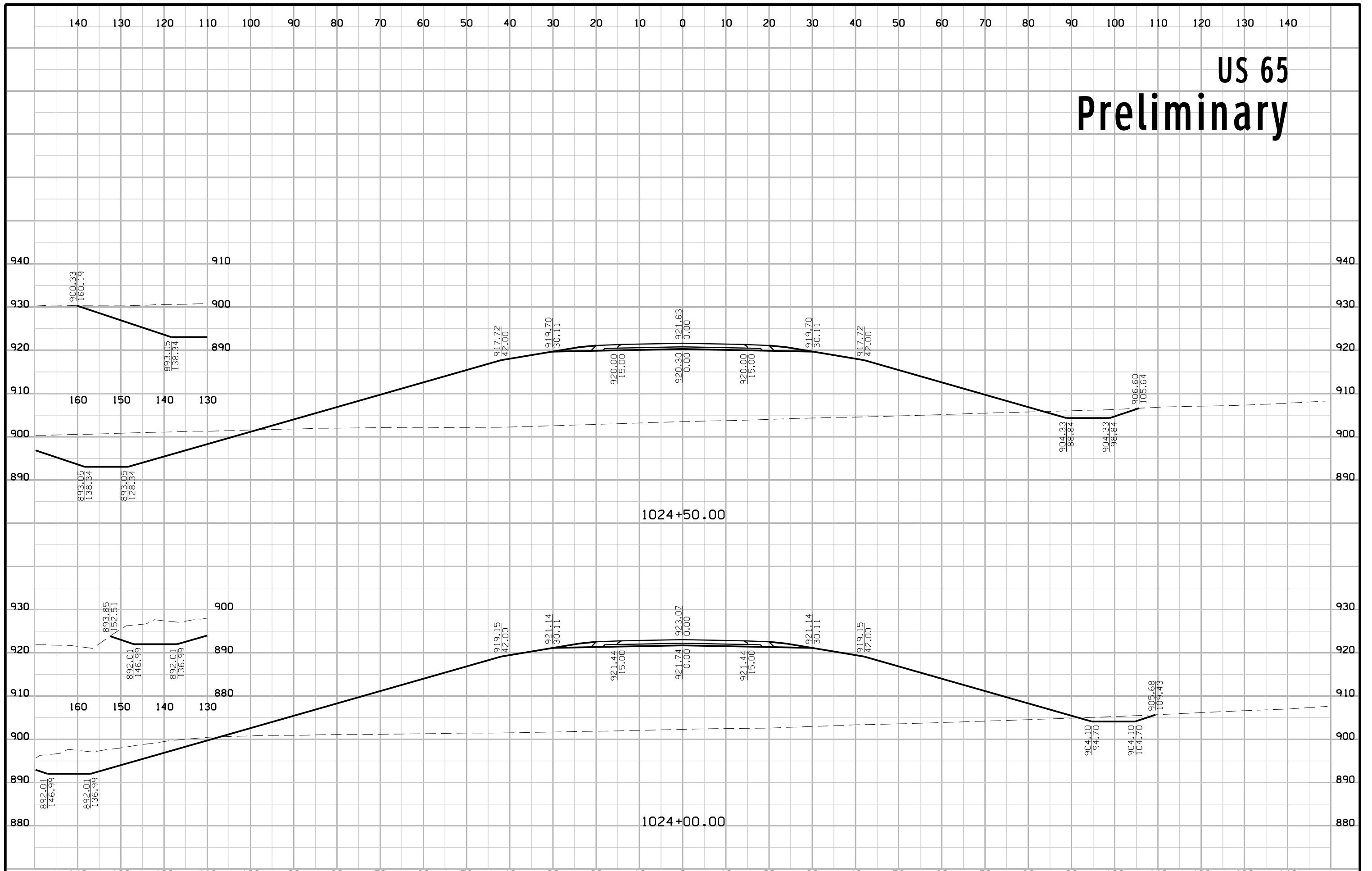
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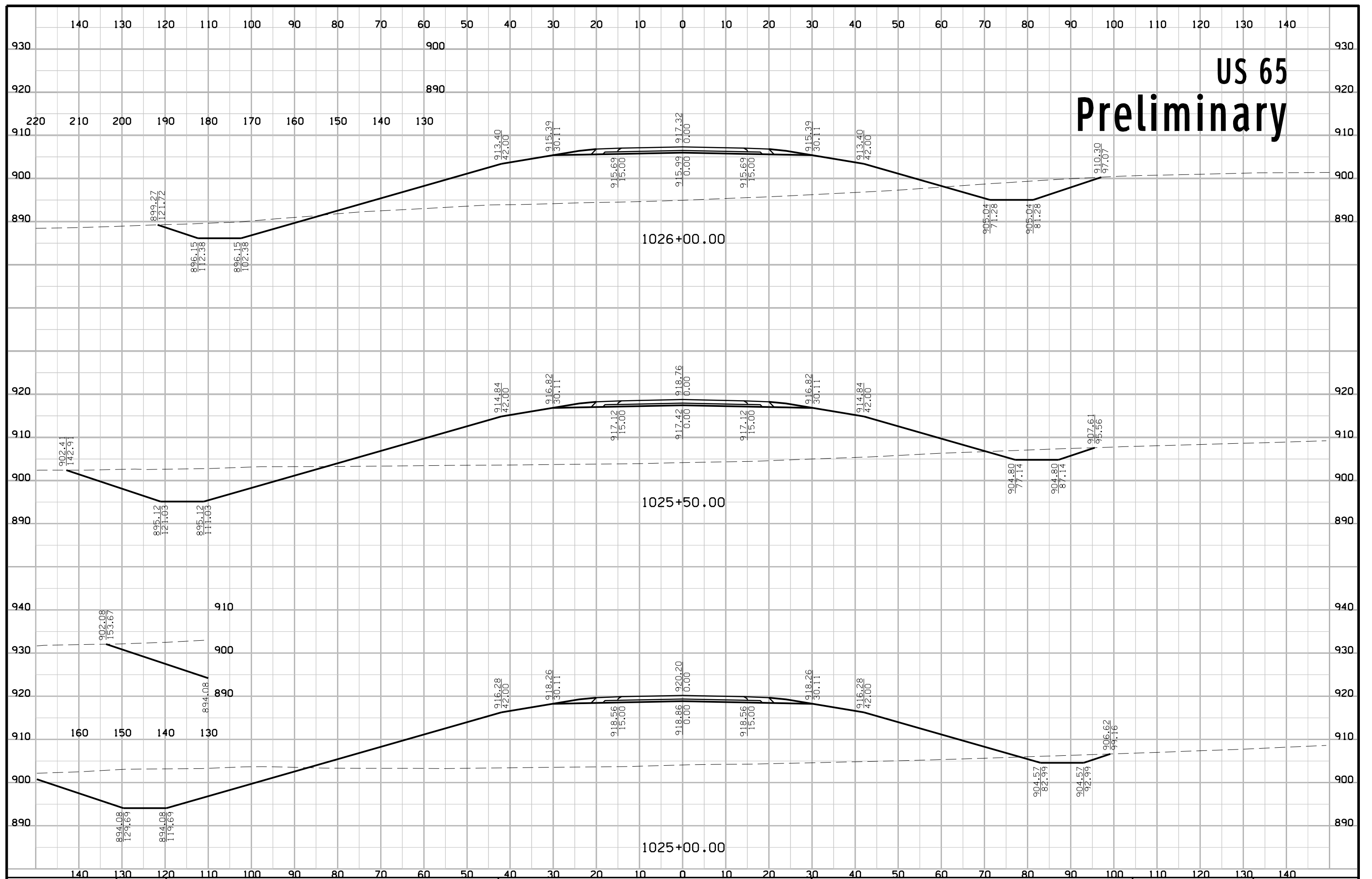
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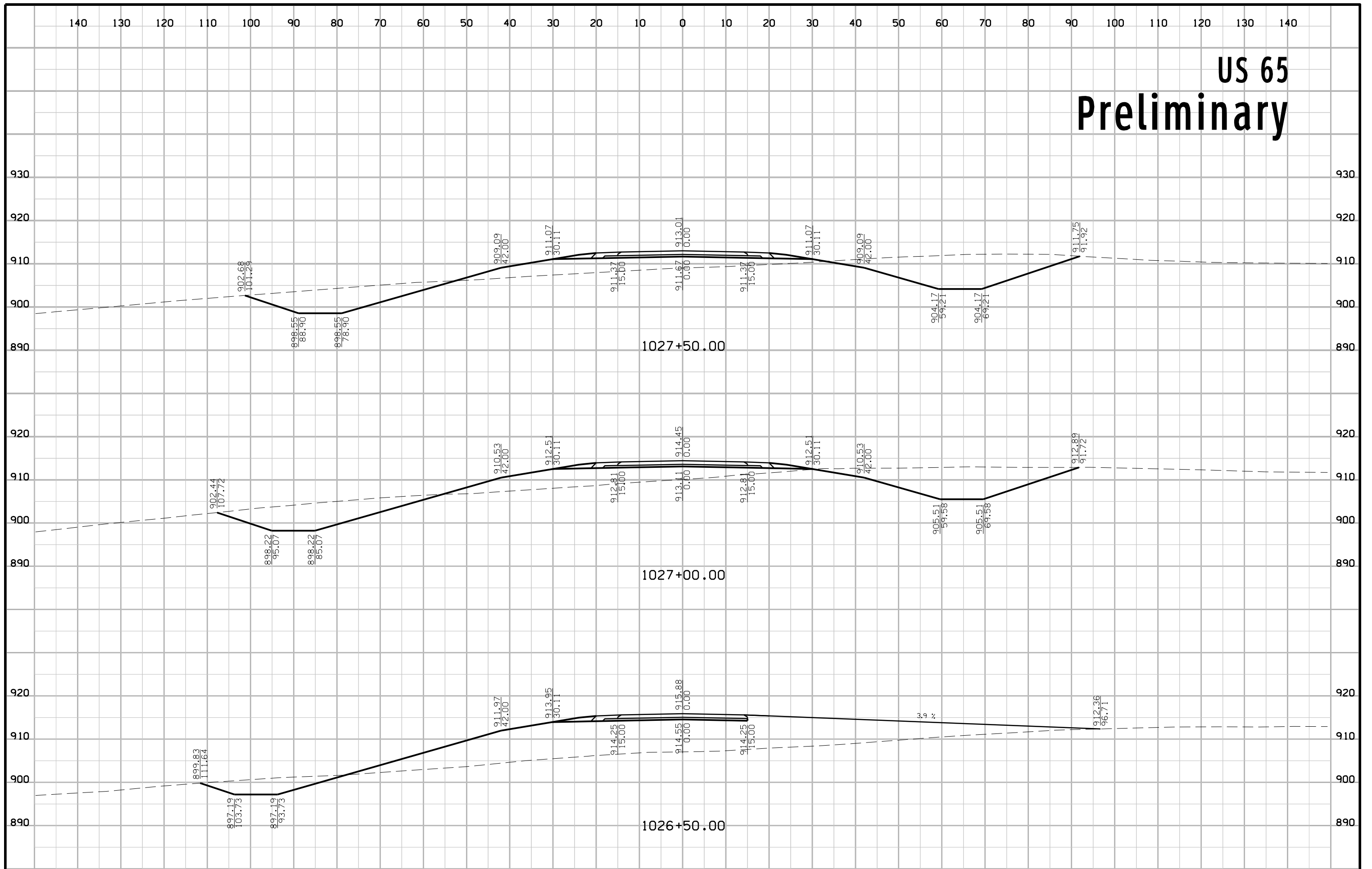
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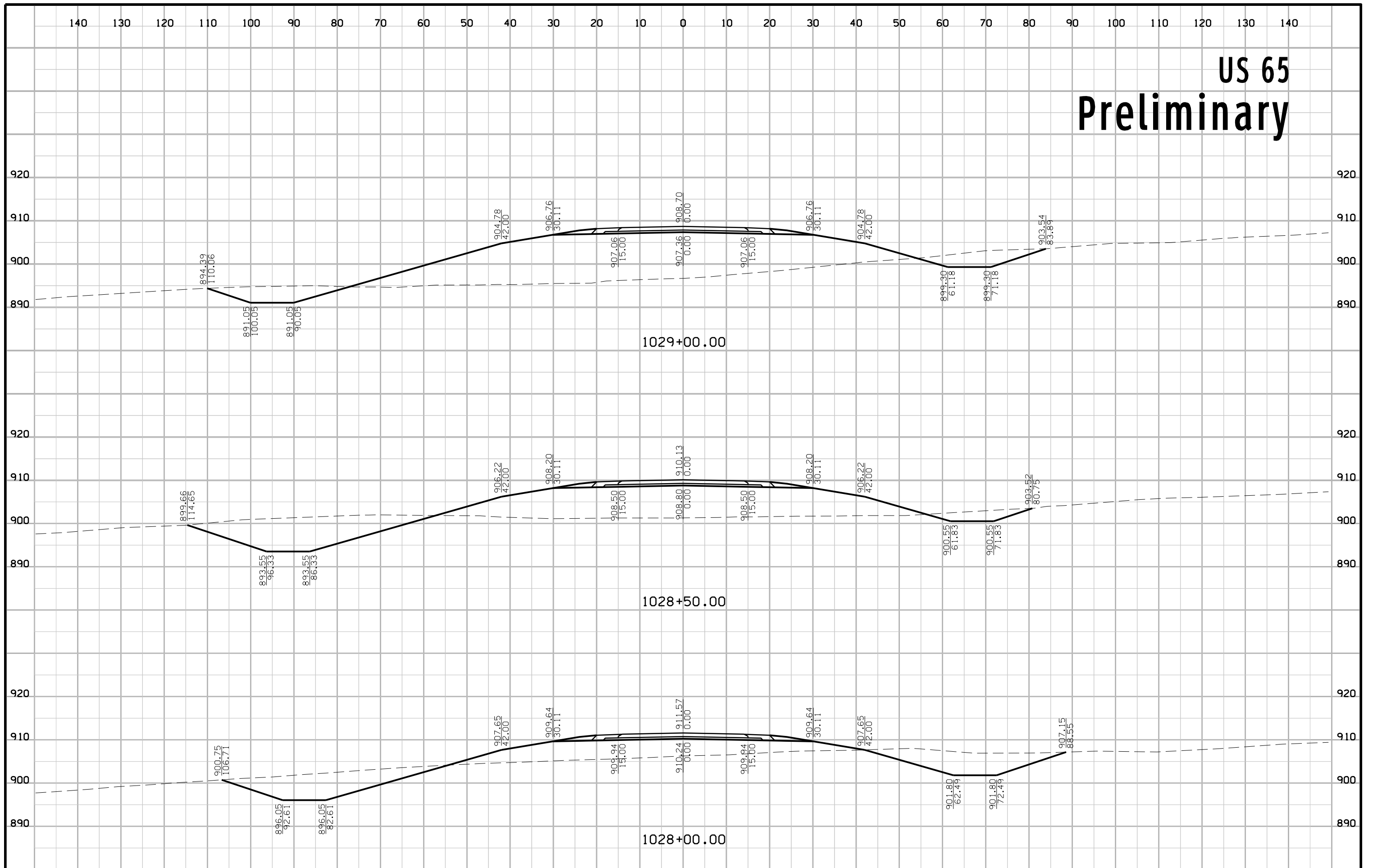
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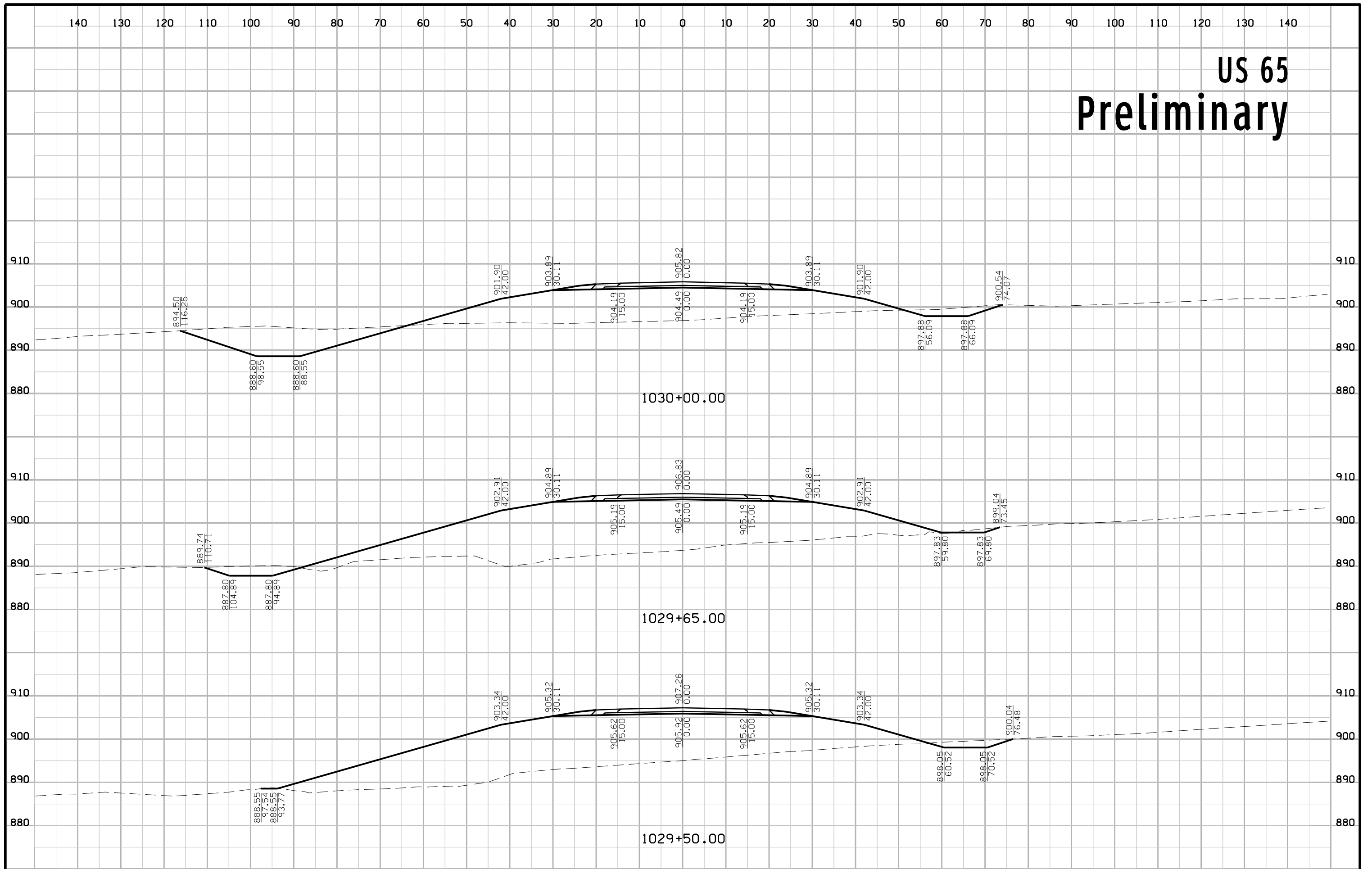
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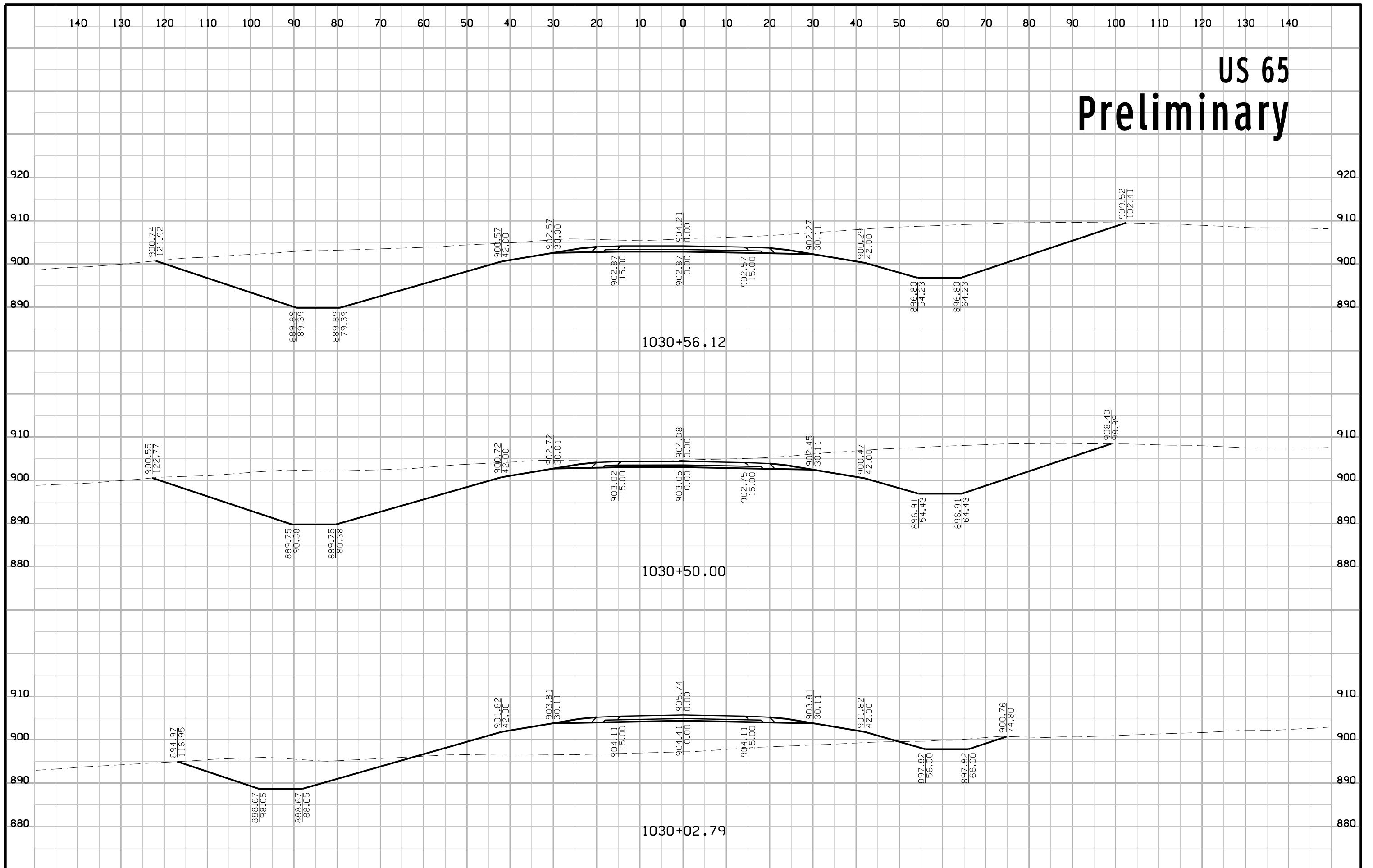
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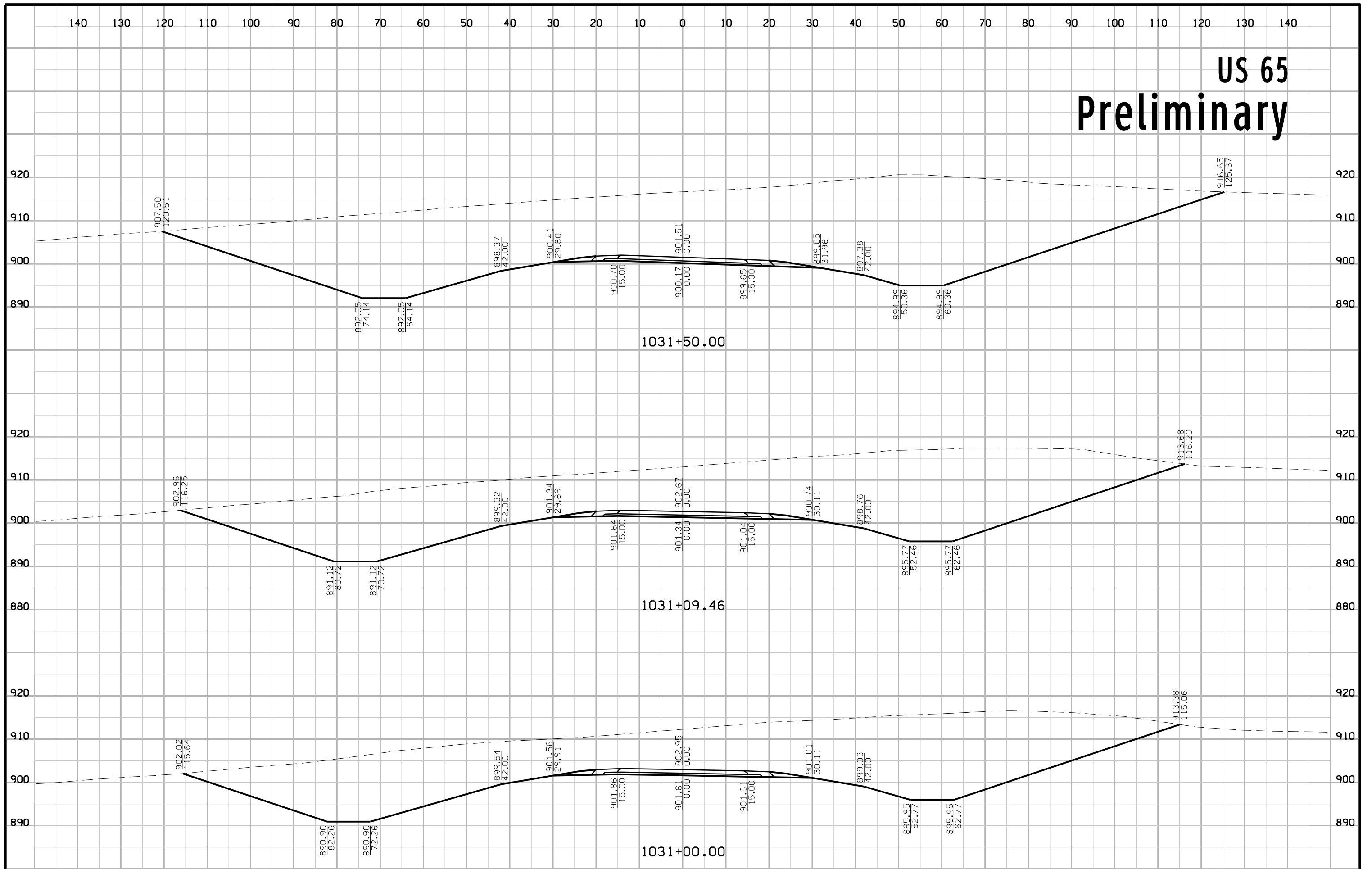
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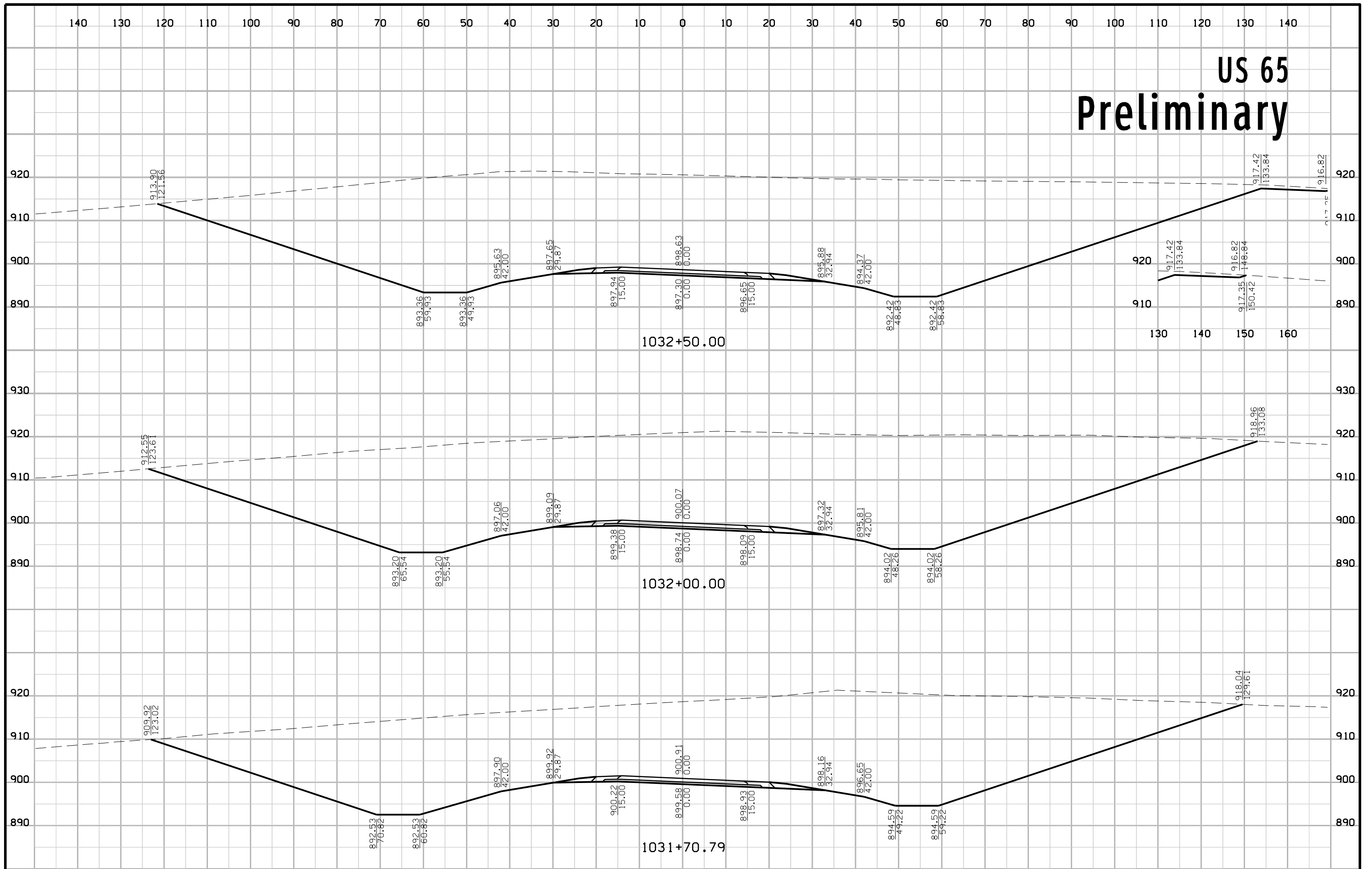
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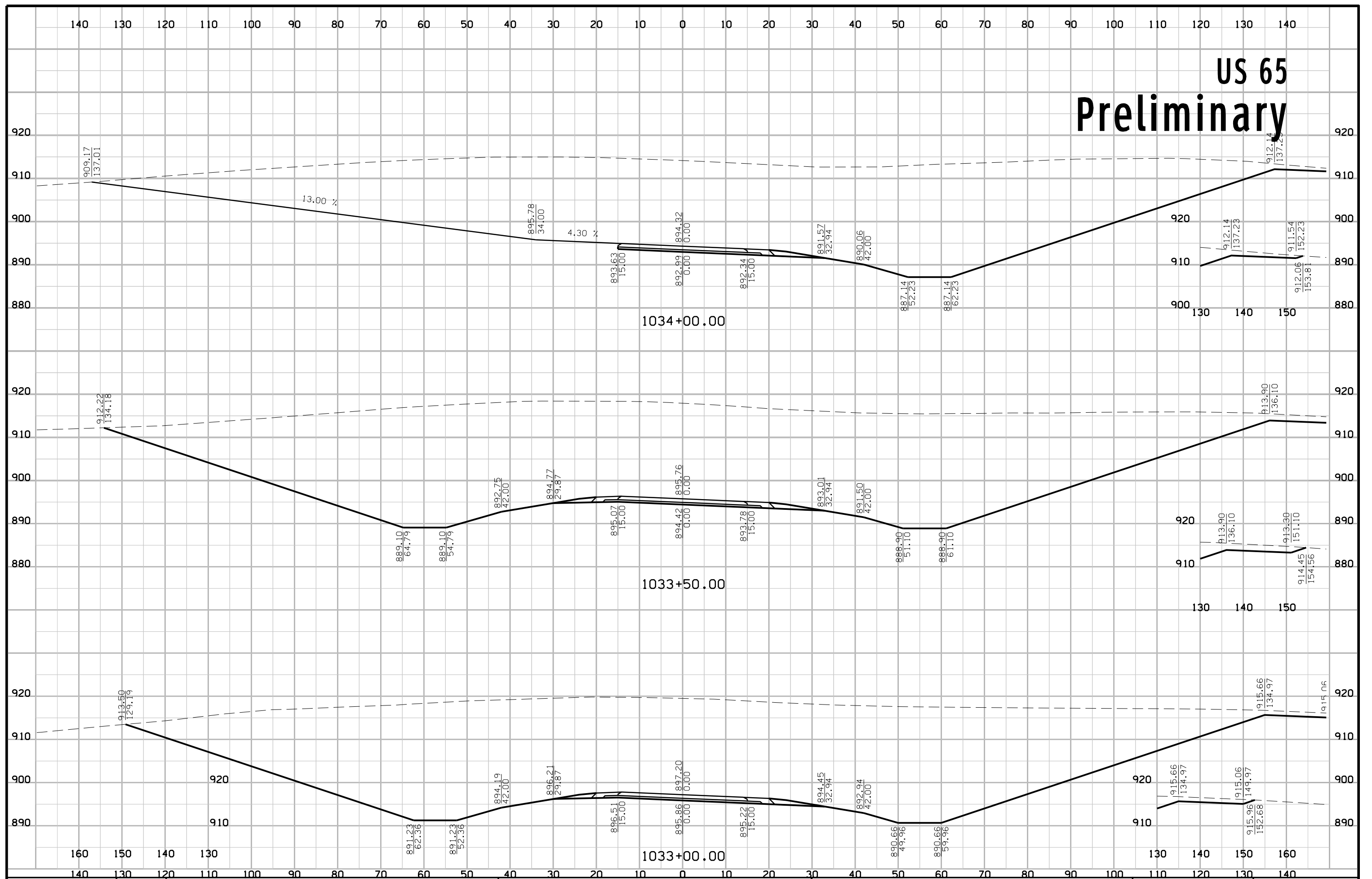
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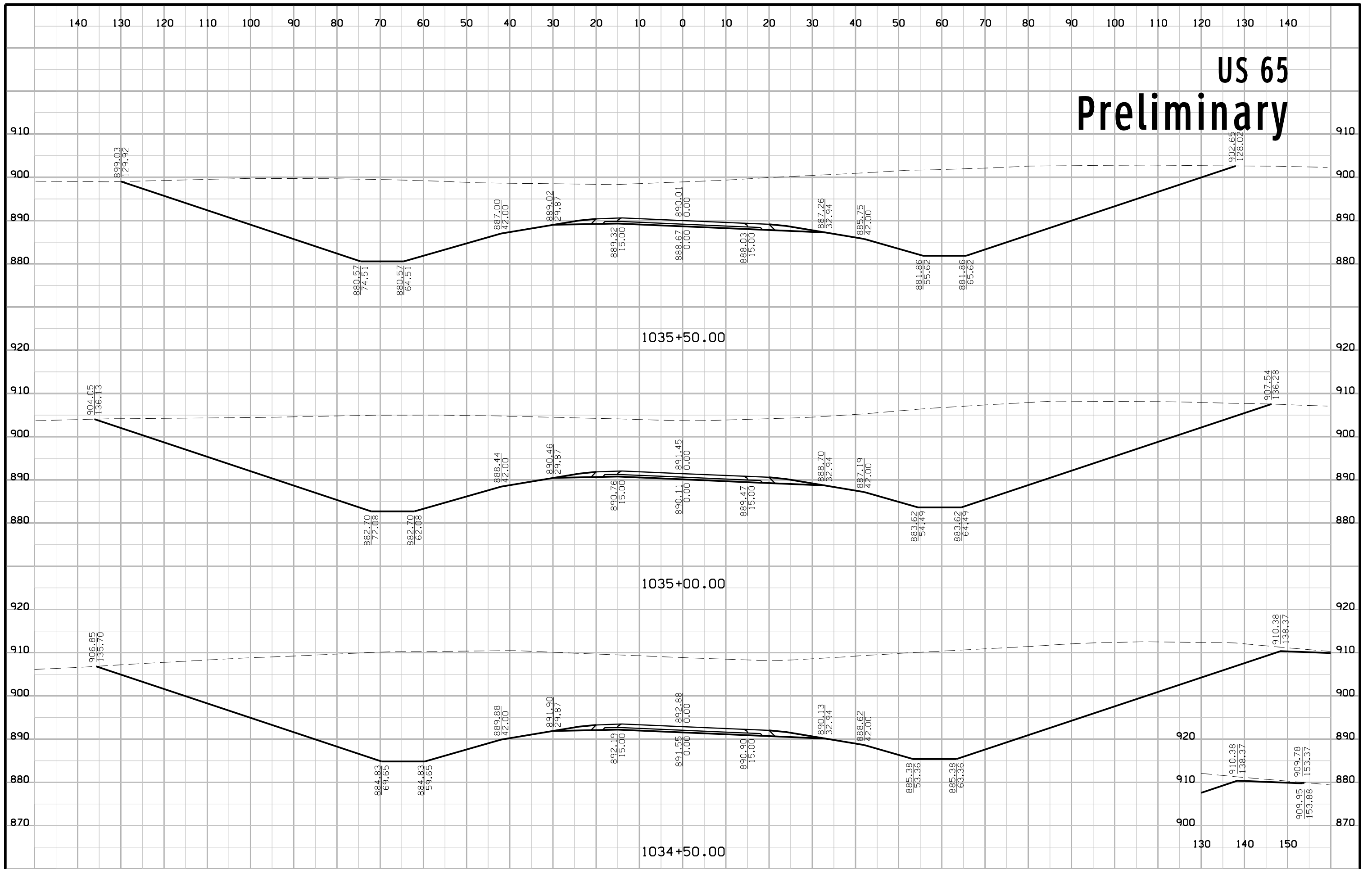
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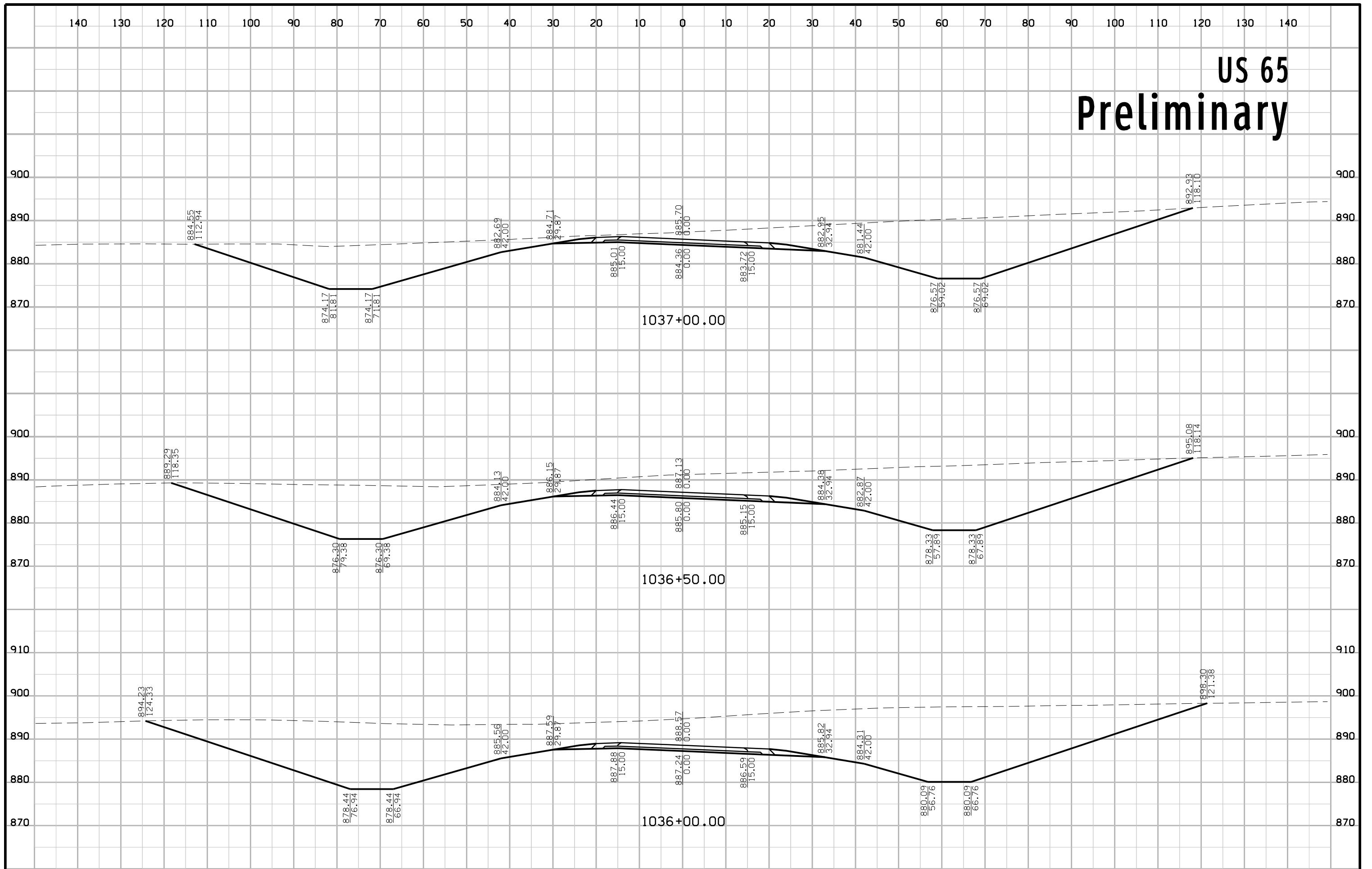
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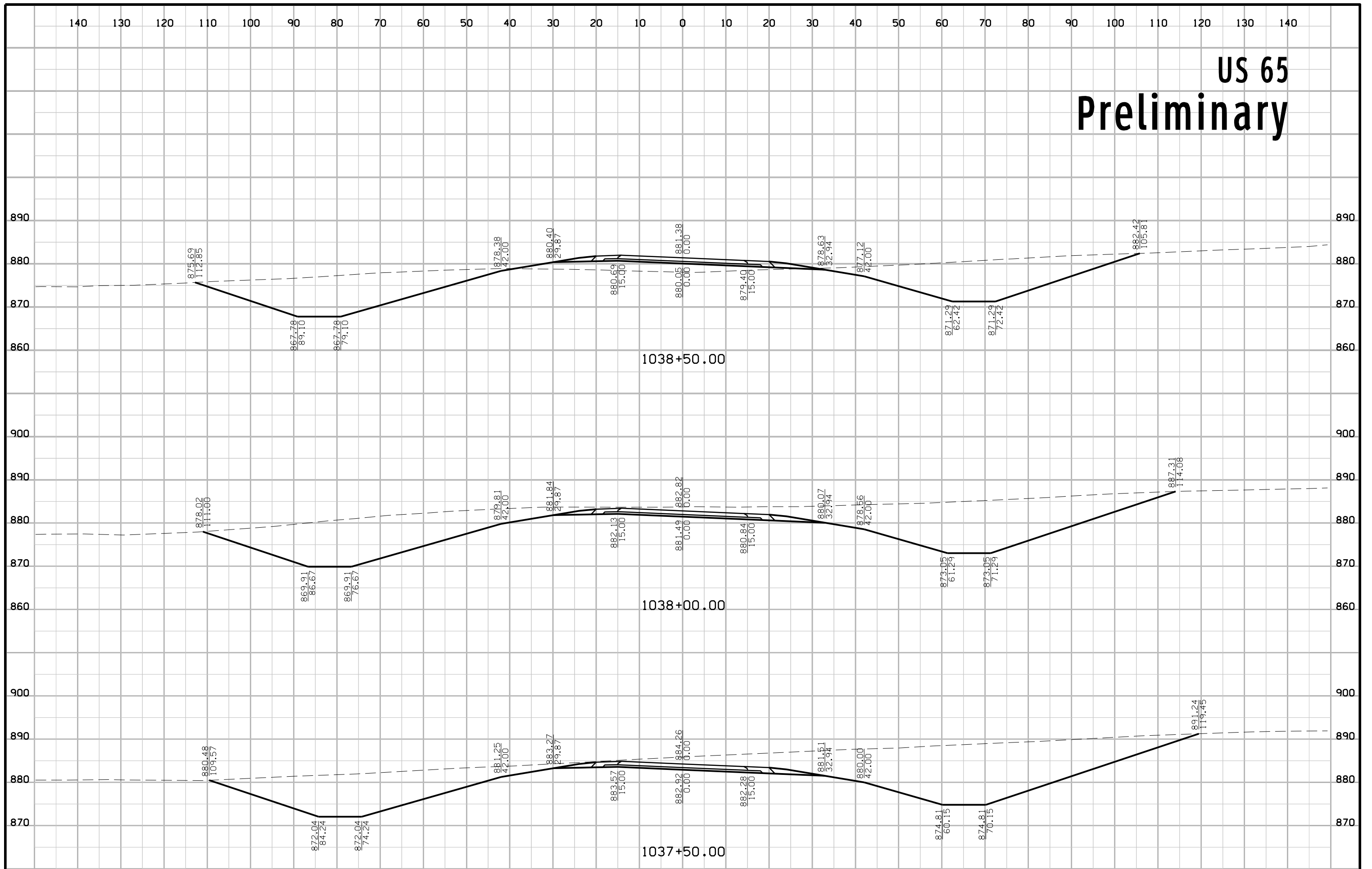
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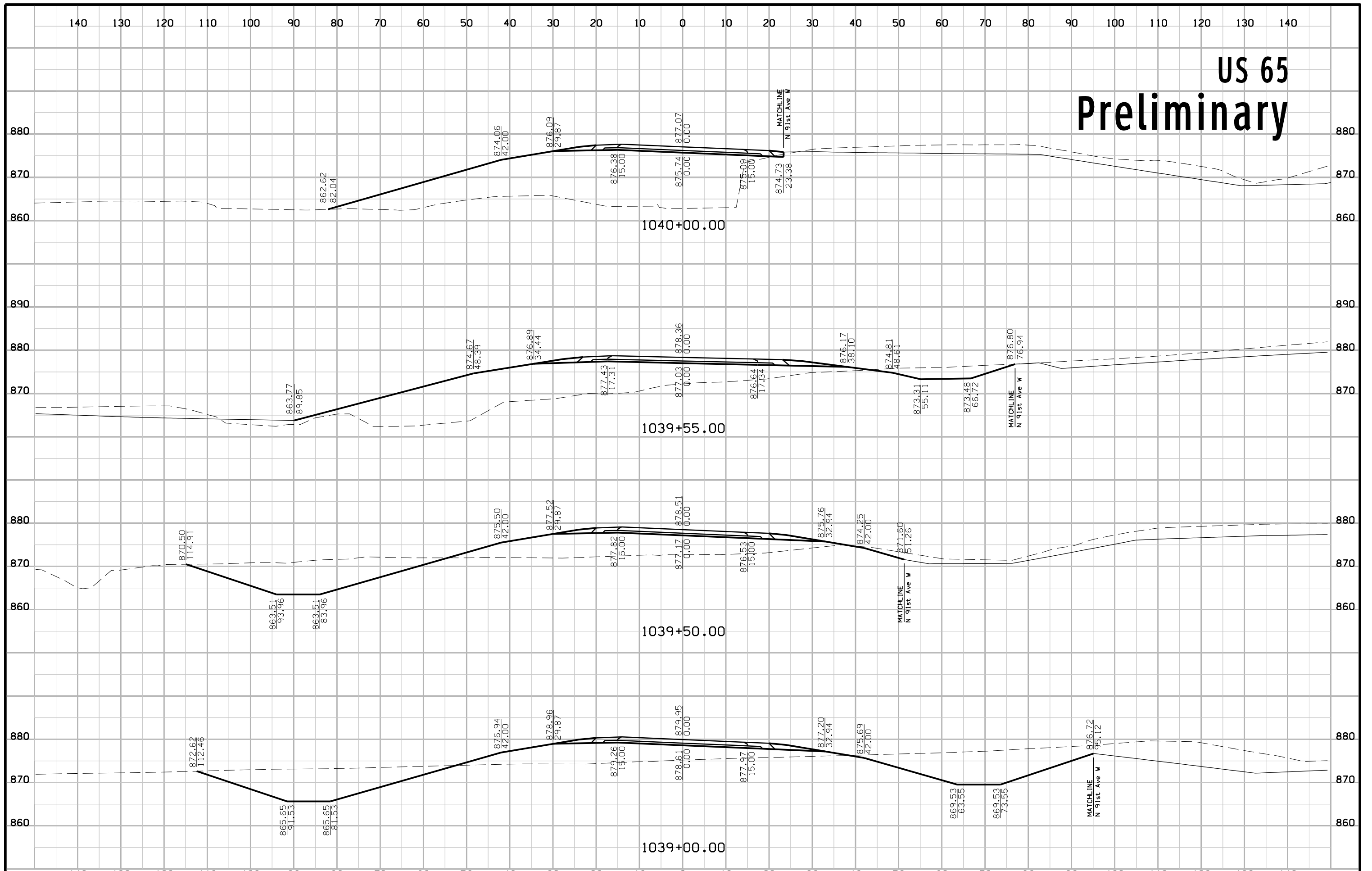
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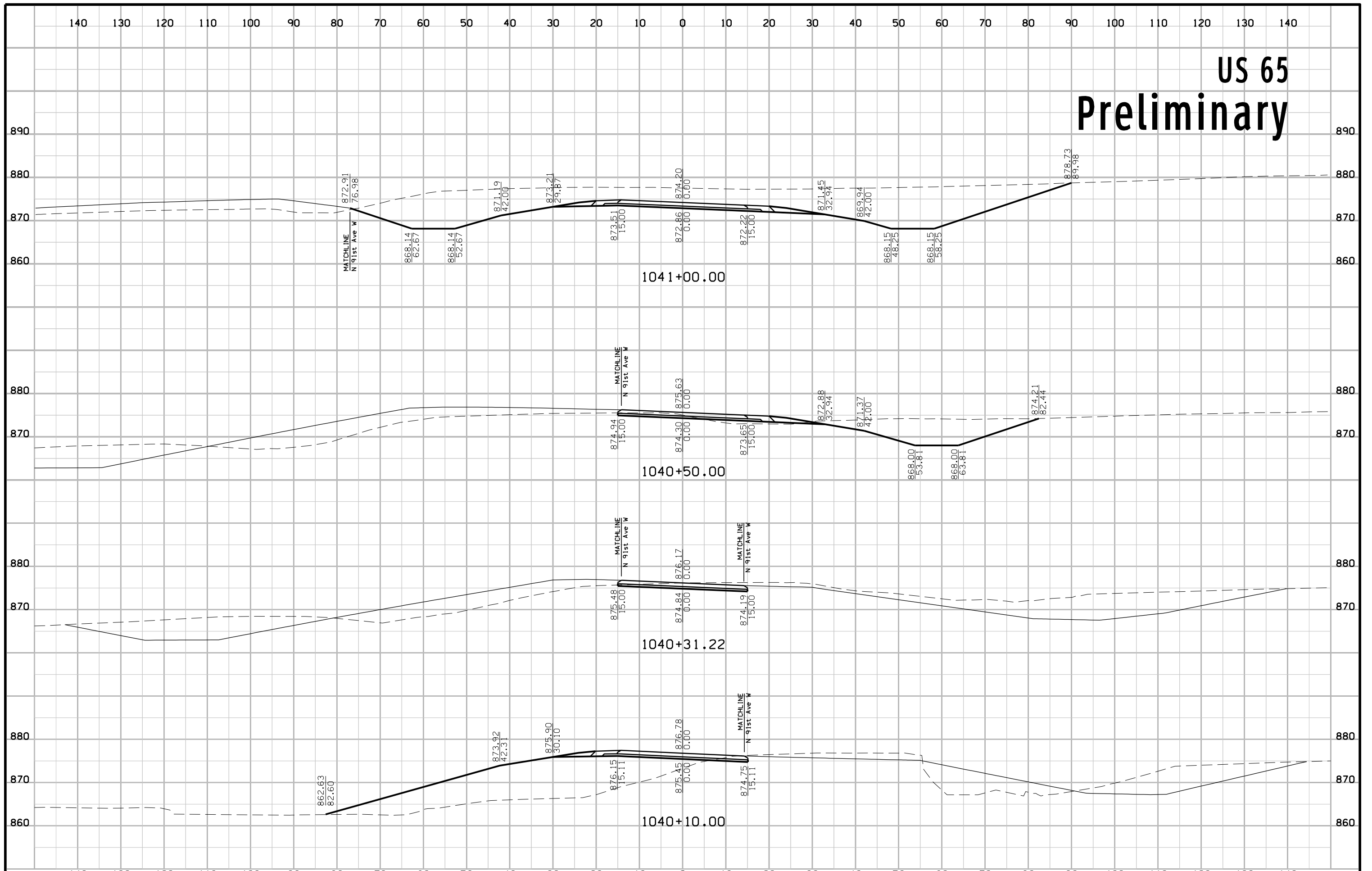
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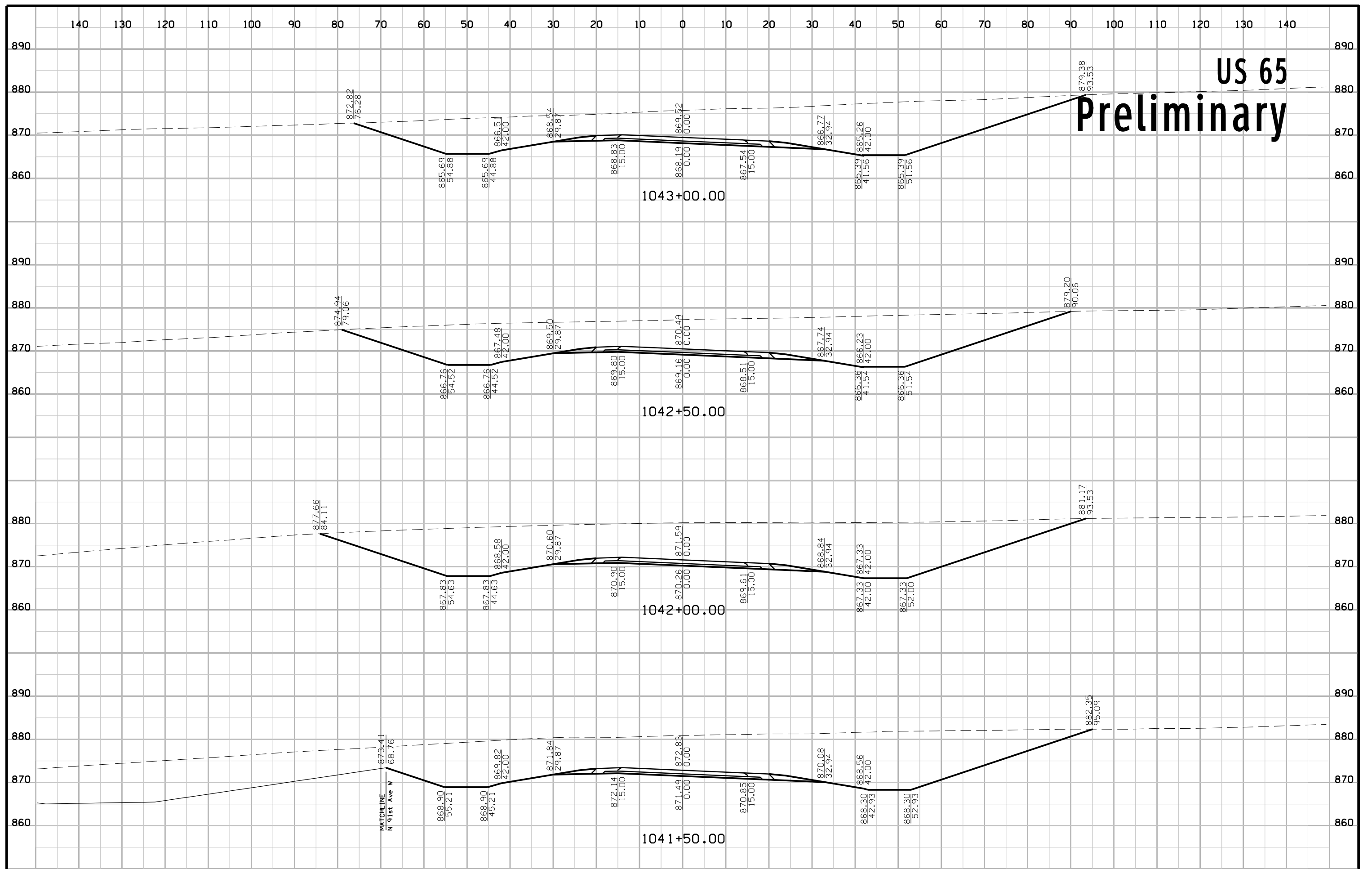
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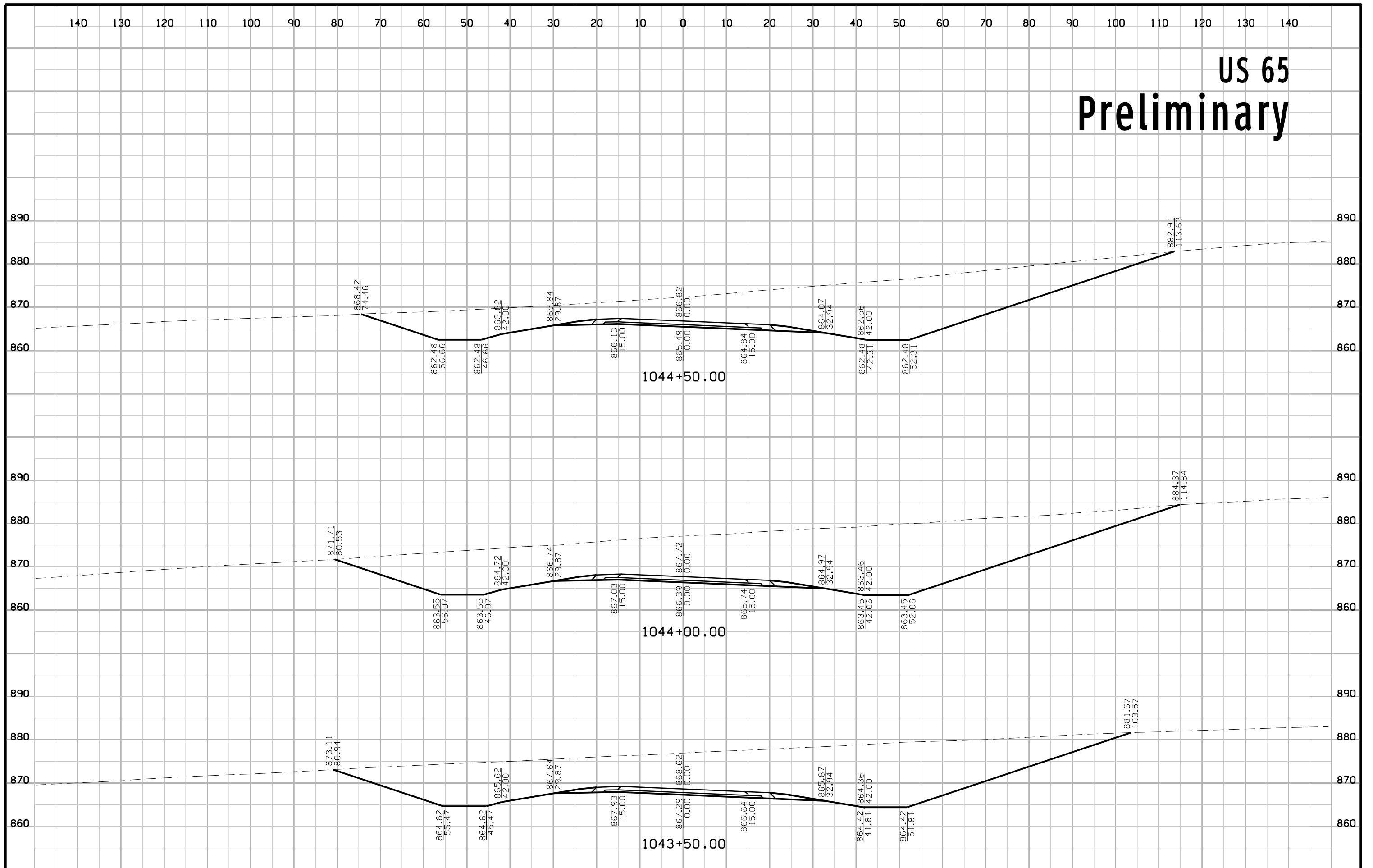
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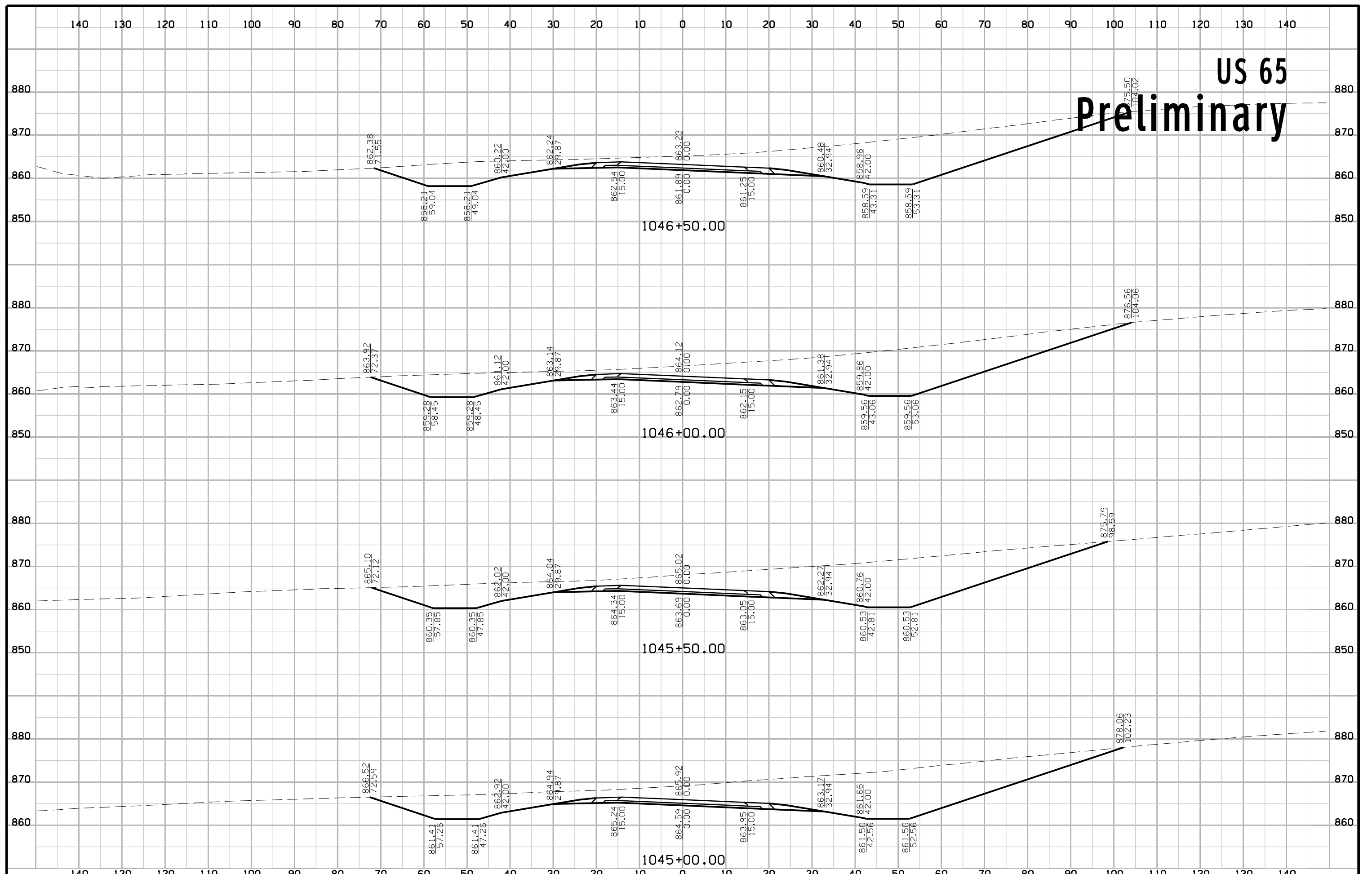
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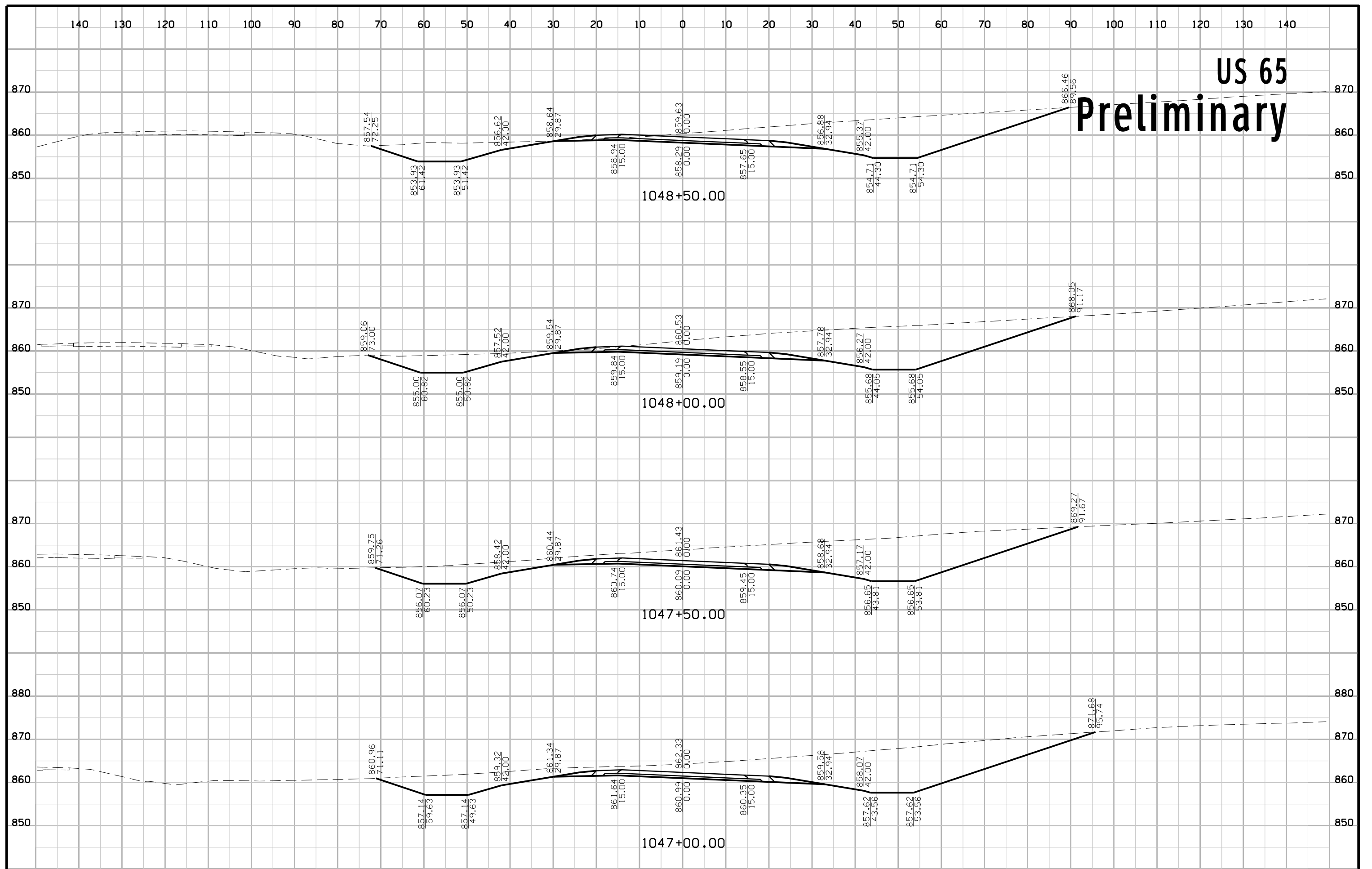
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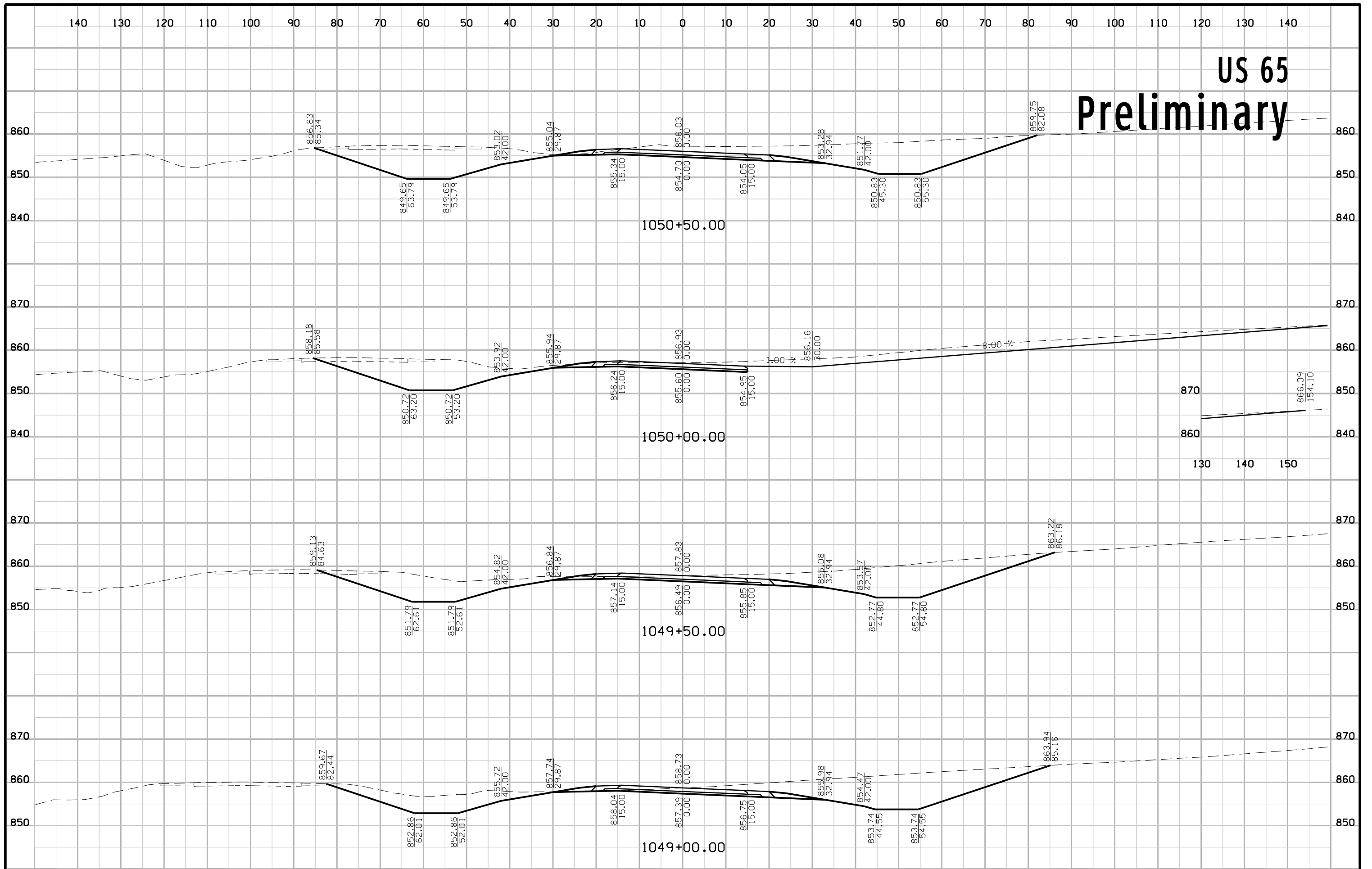
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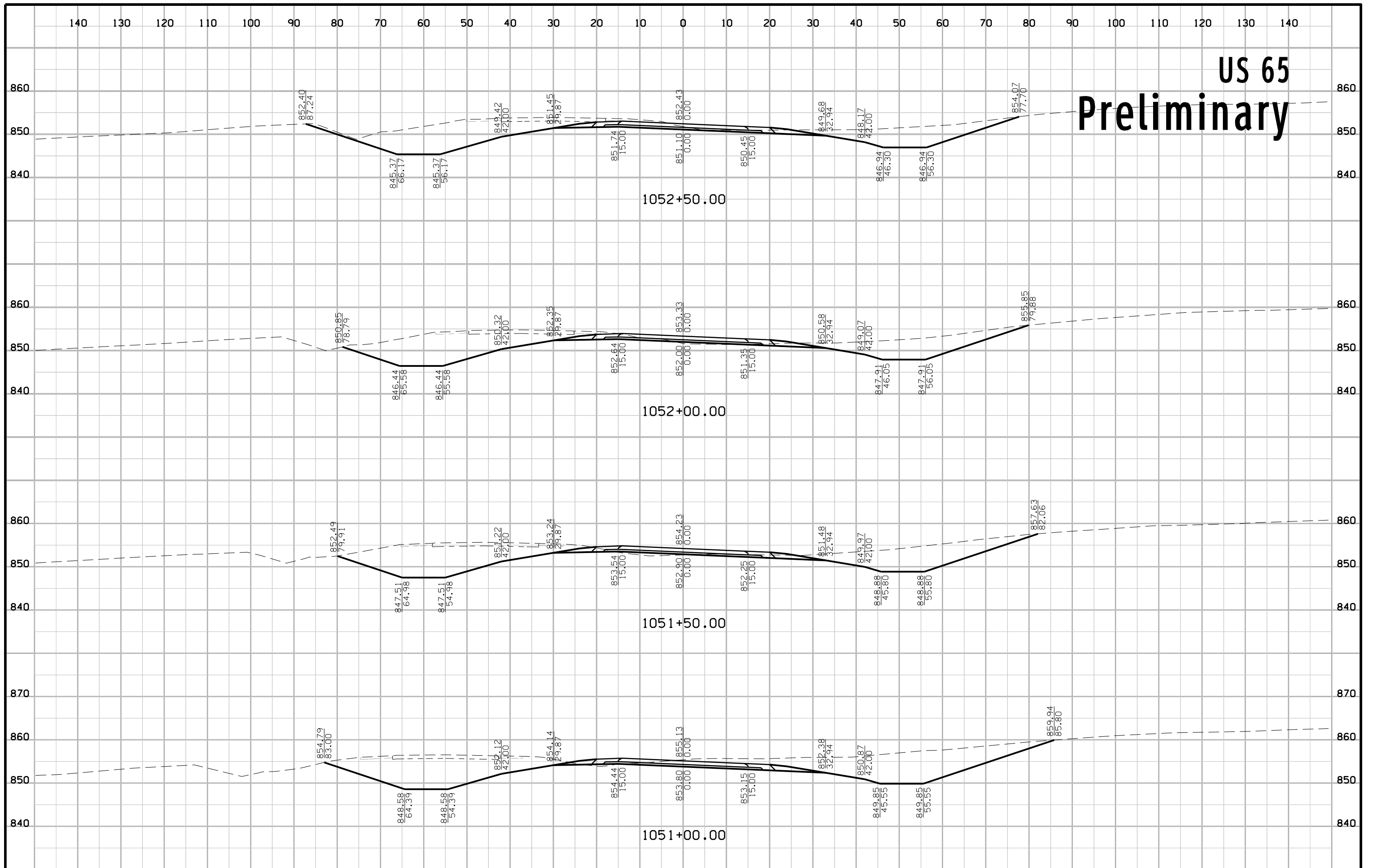
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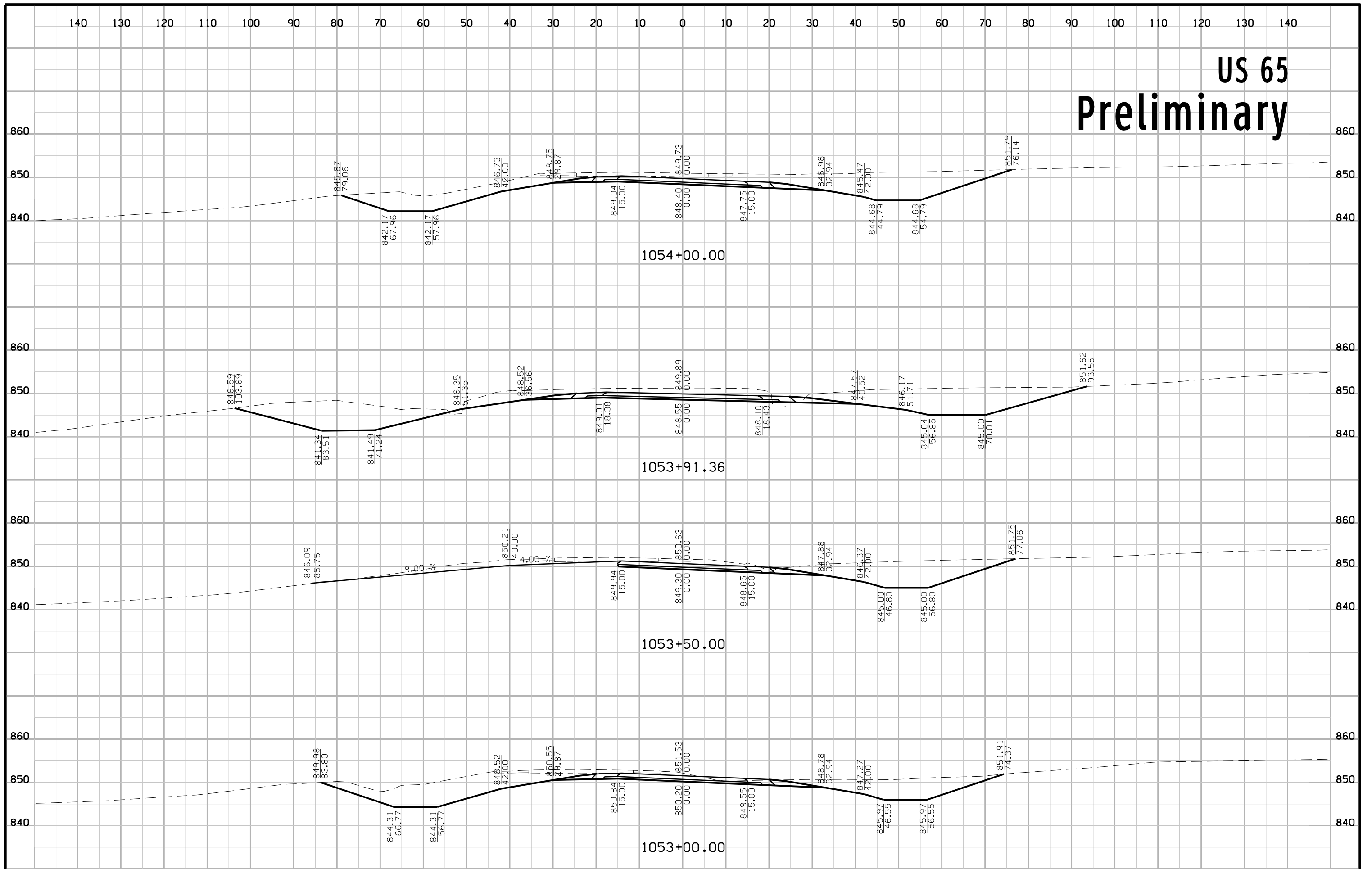
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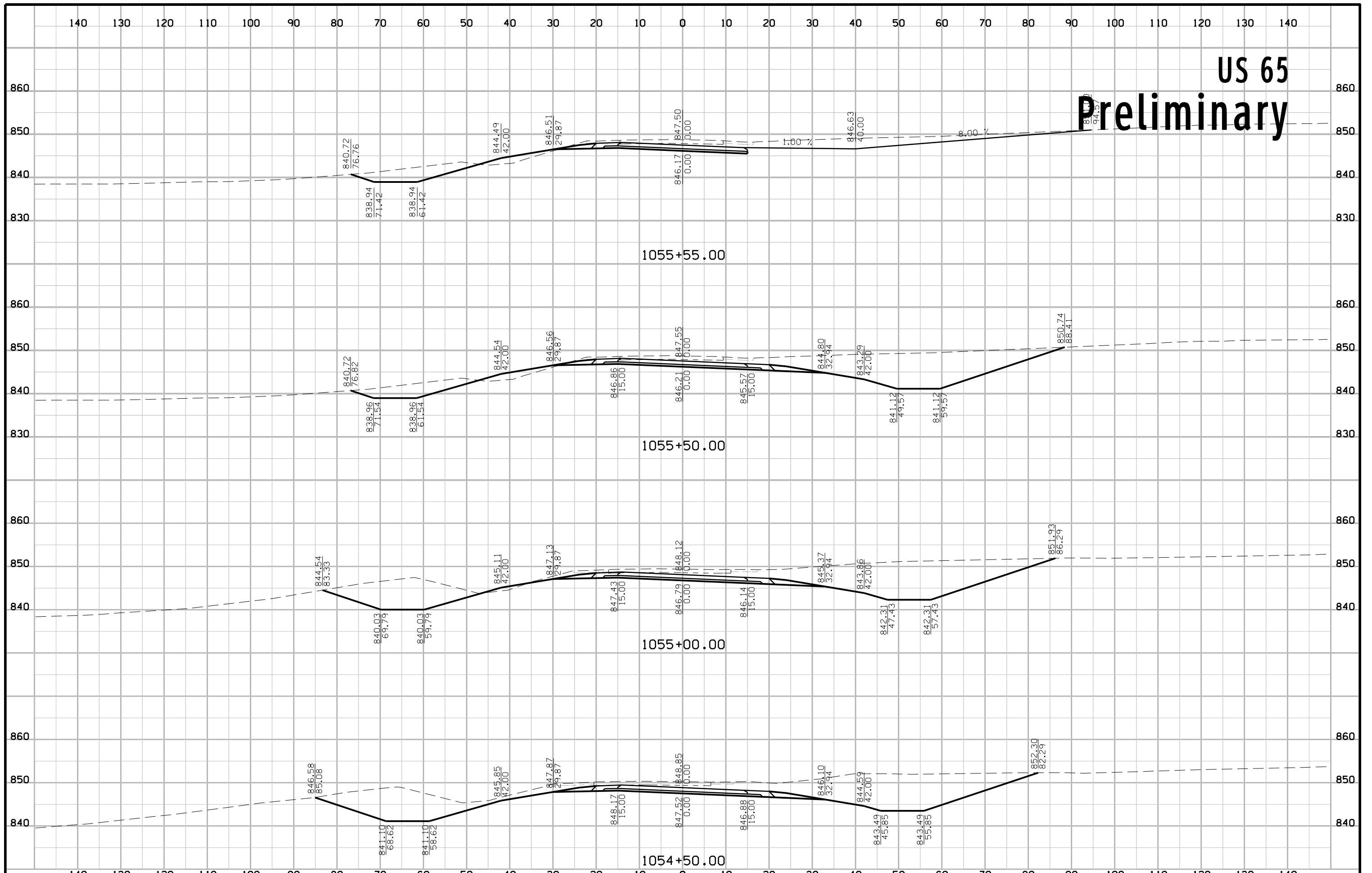
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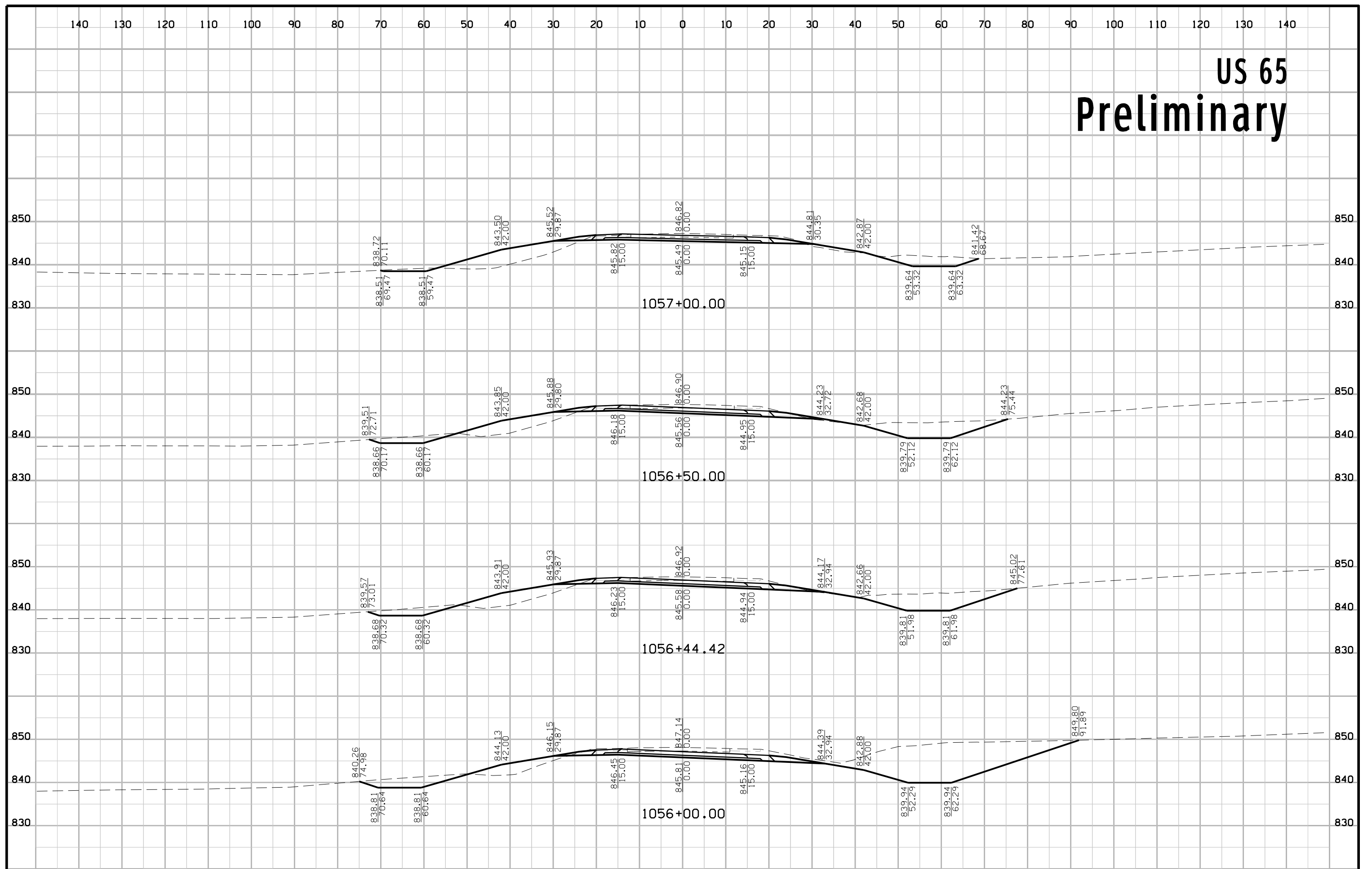
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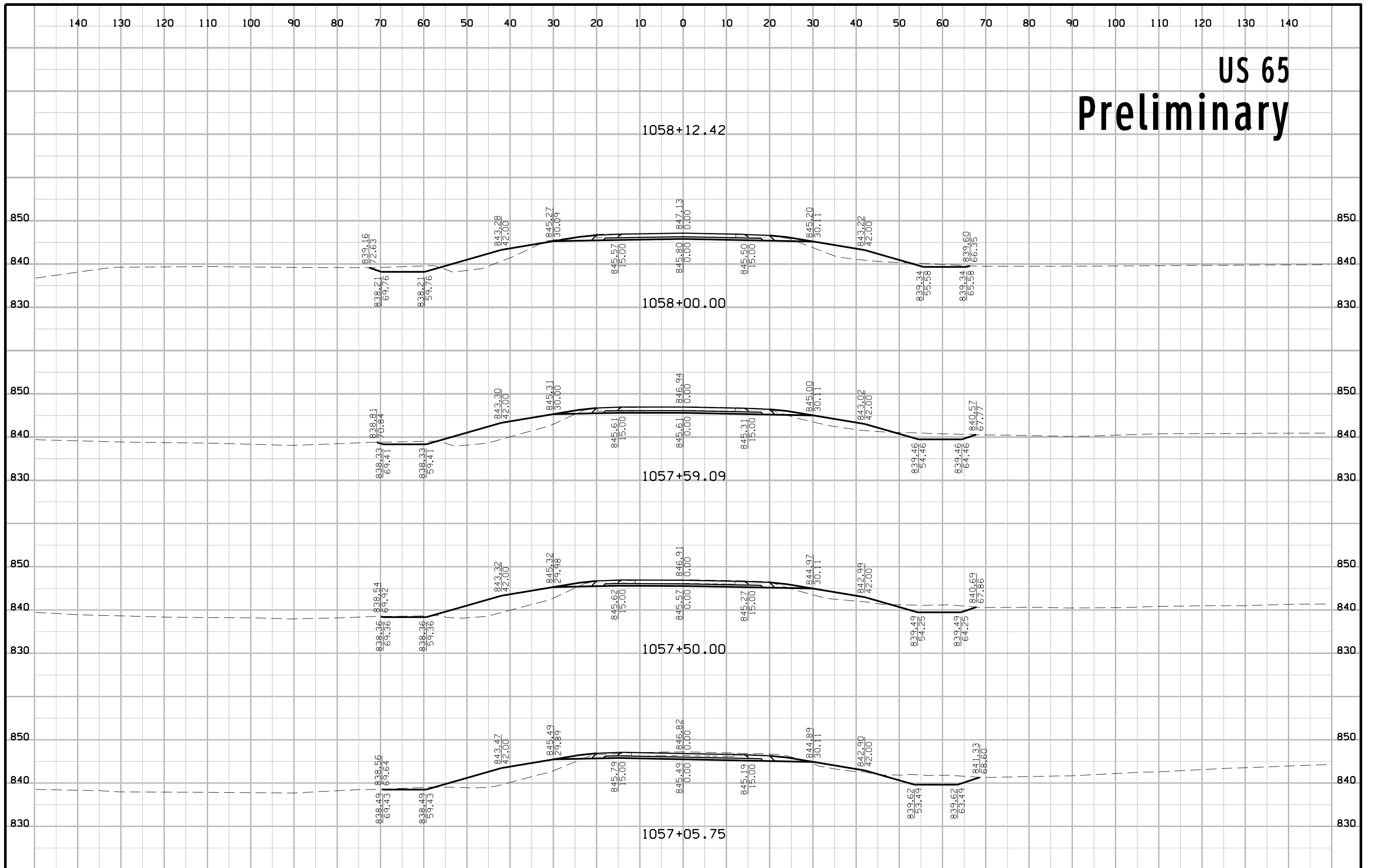
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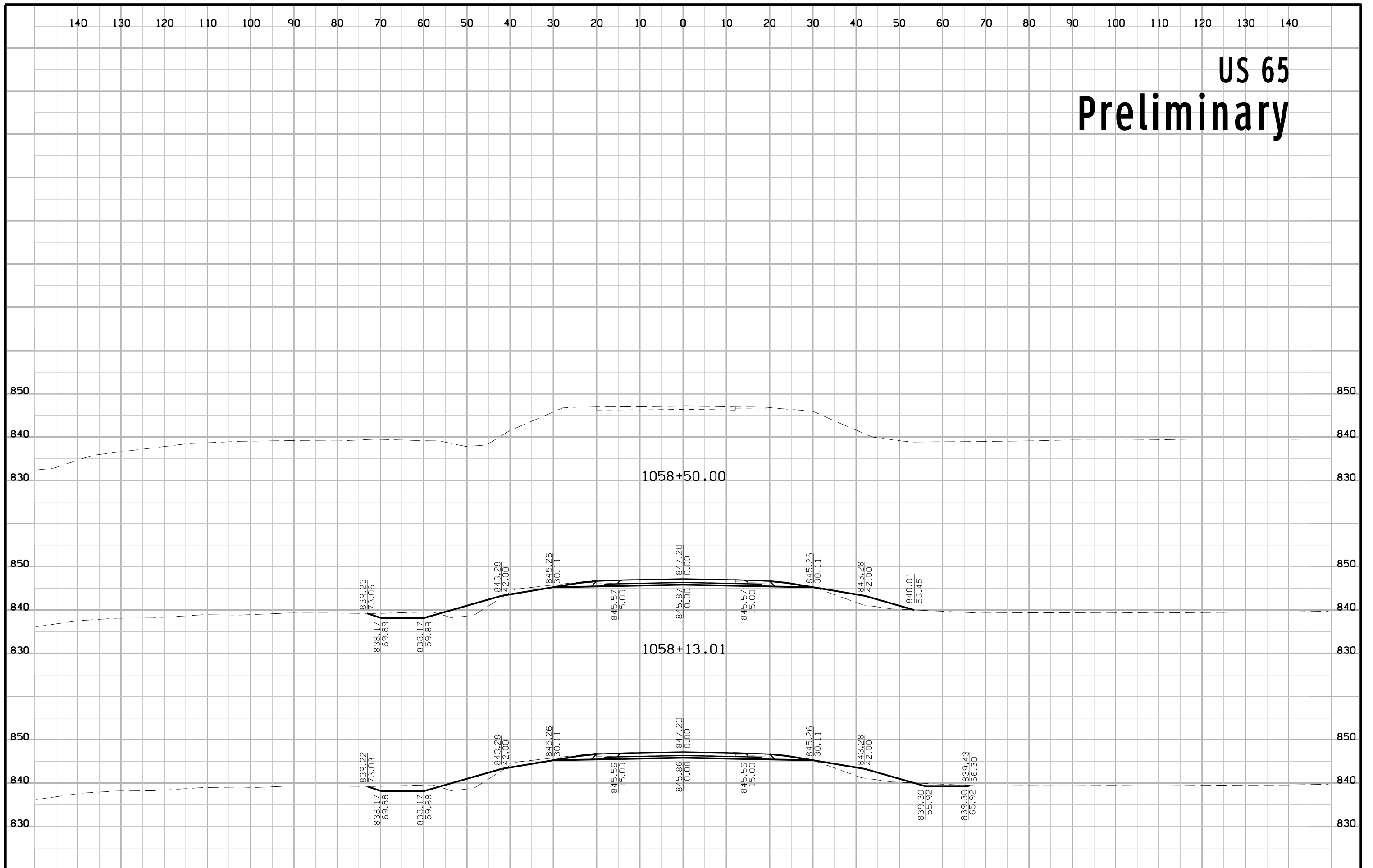
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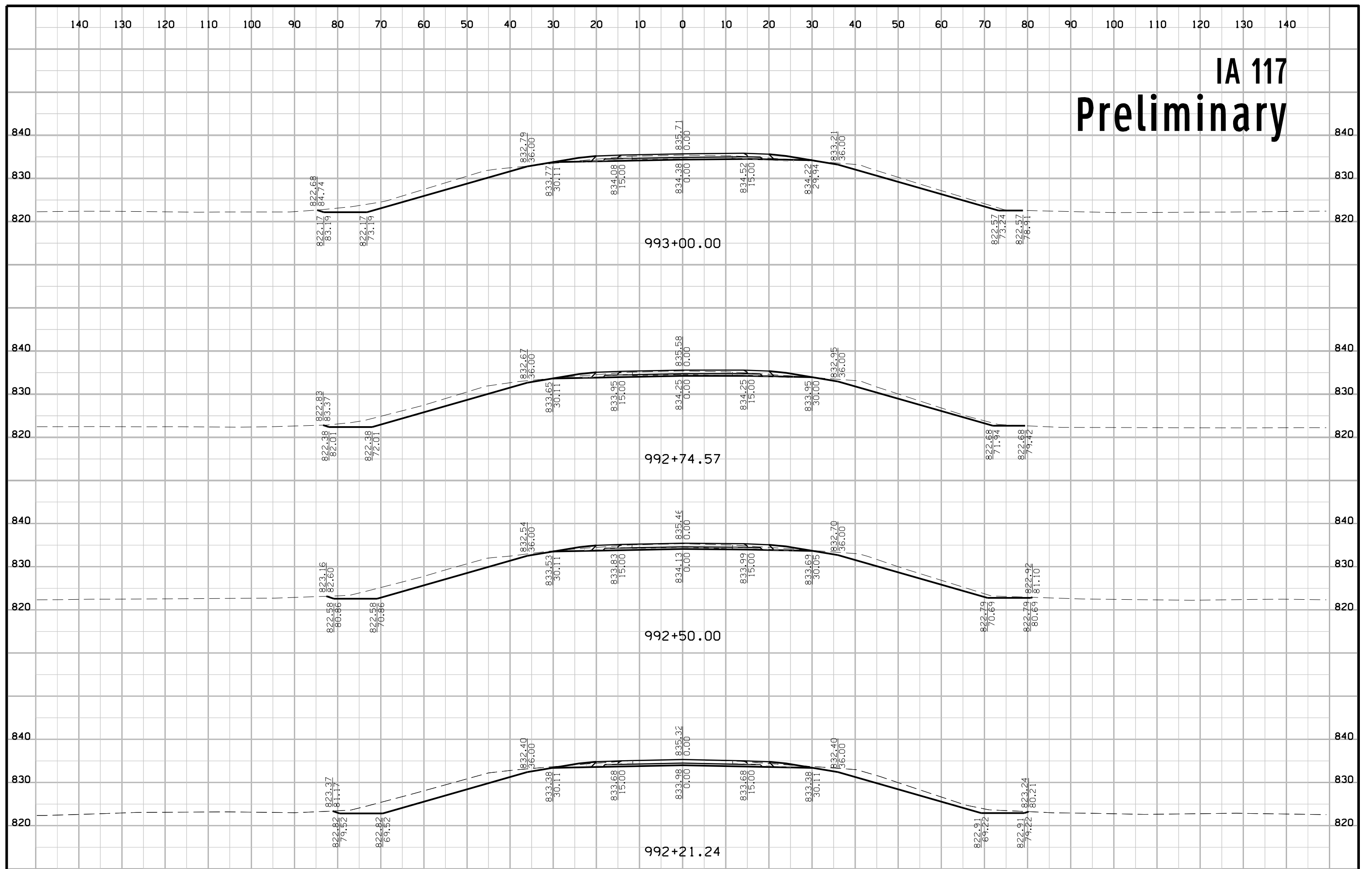
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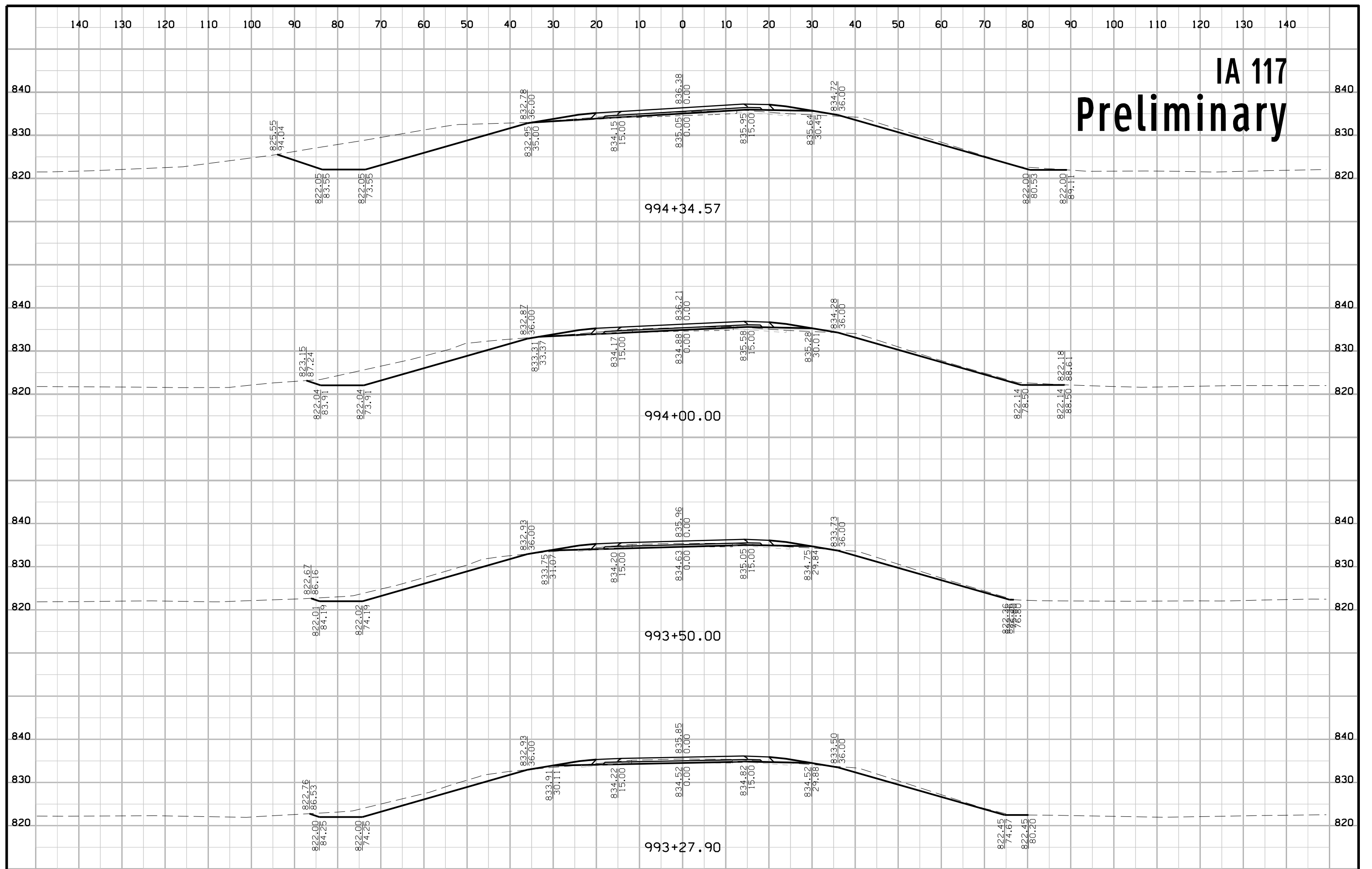
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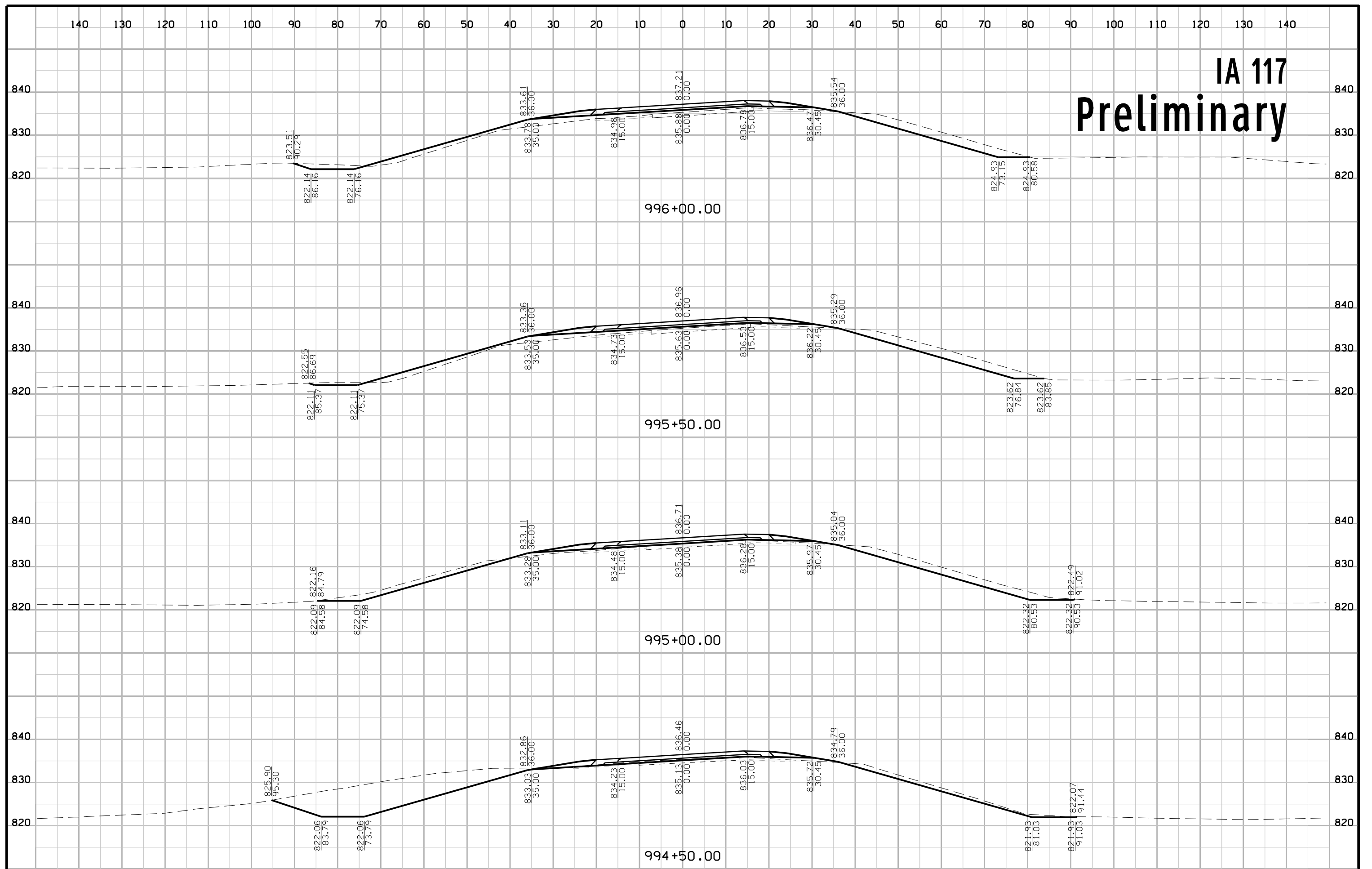
IA 117 Preliminary



IA 117 Preliminary

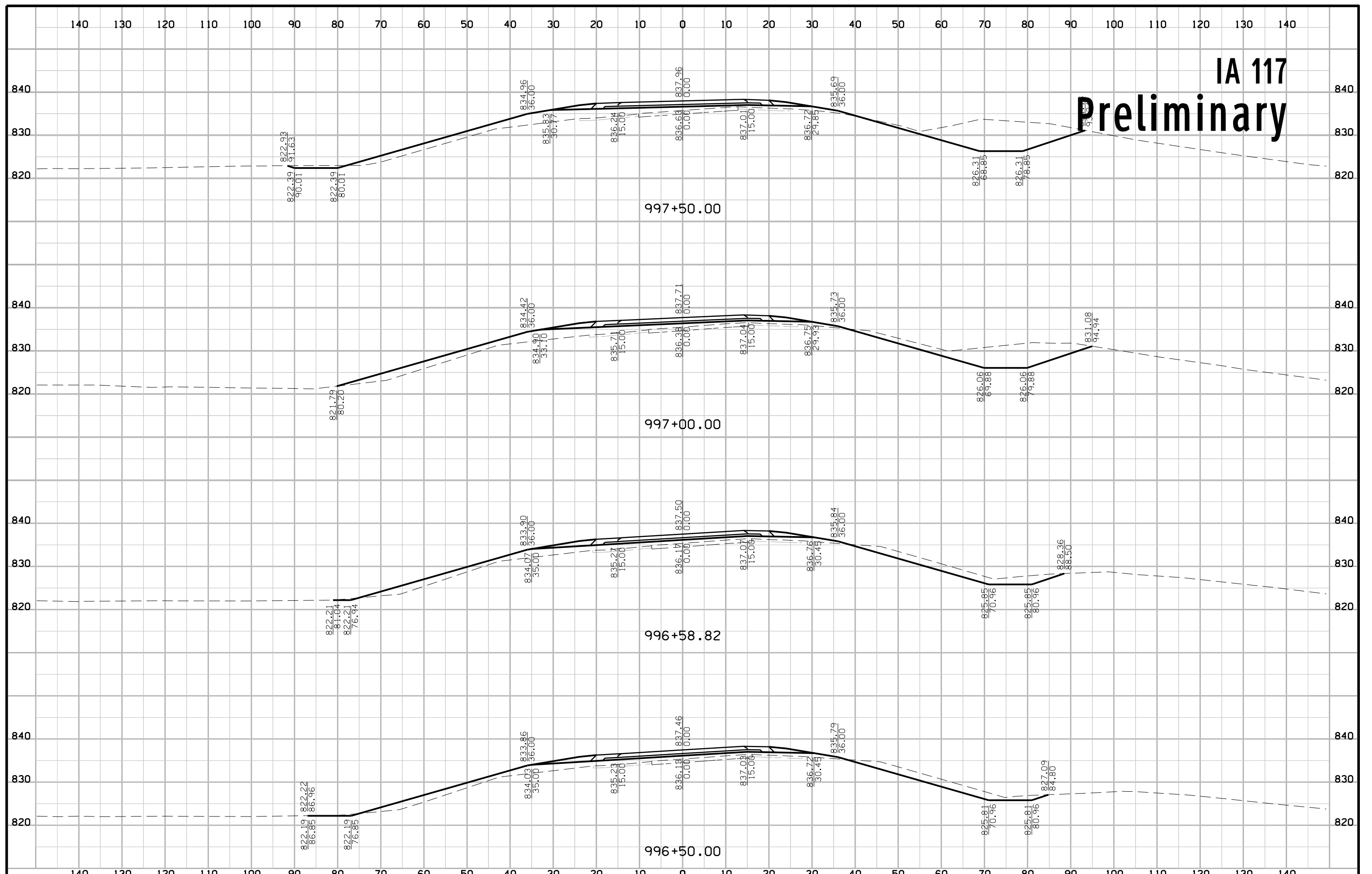


IA 117 Preliminary



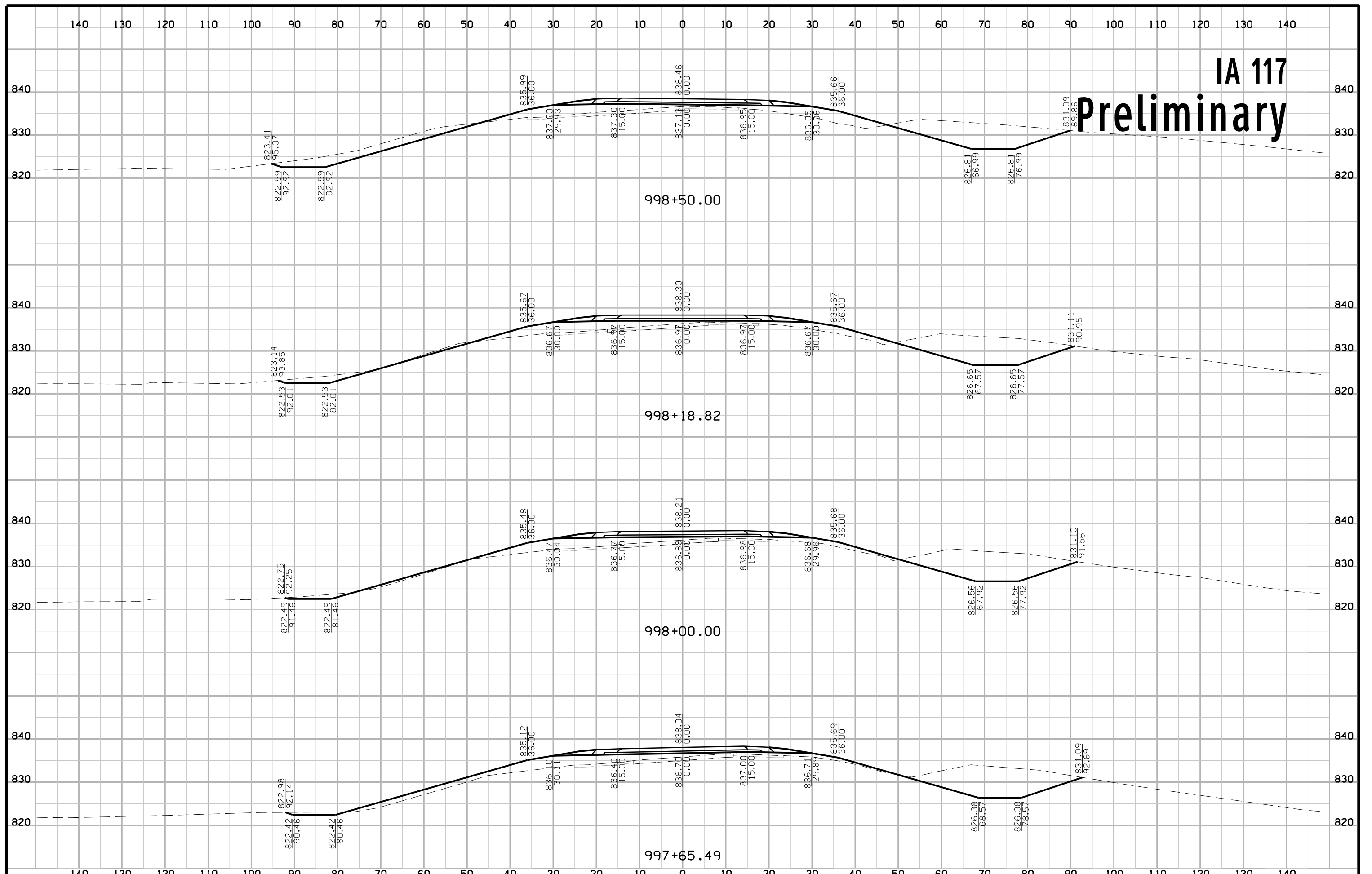
IA 117

Preliminary

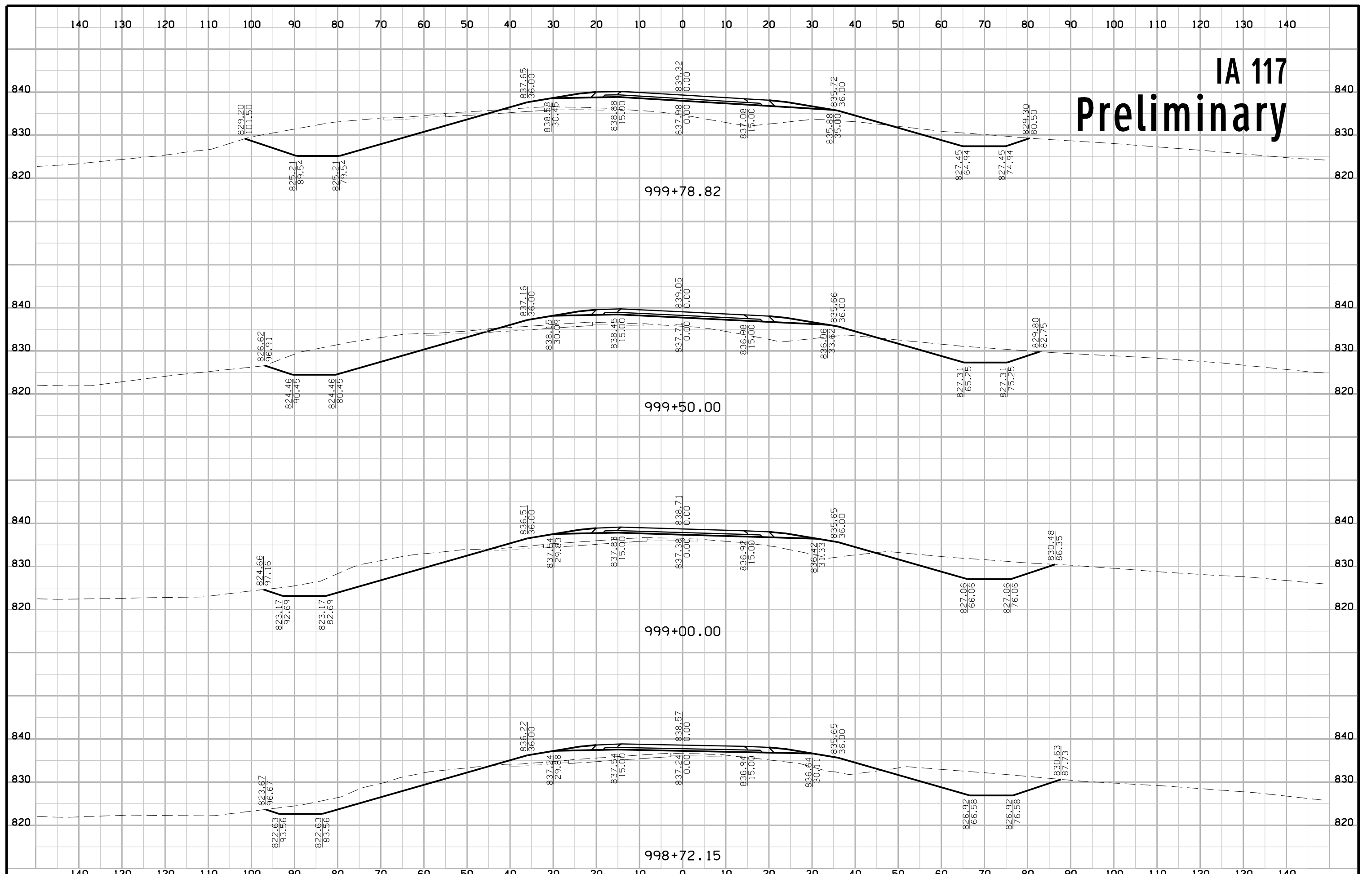


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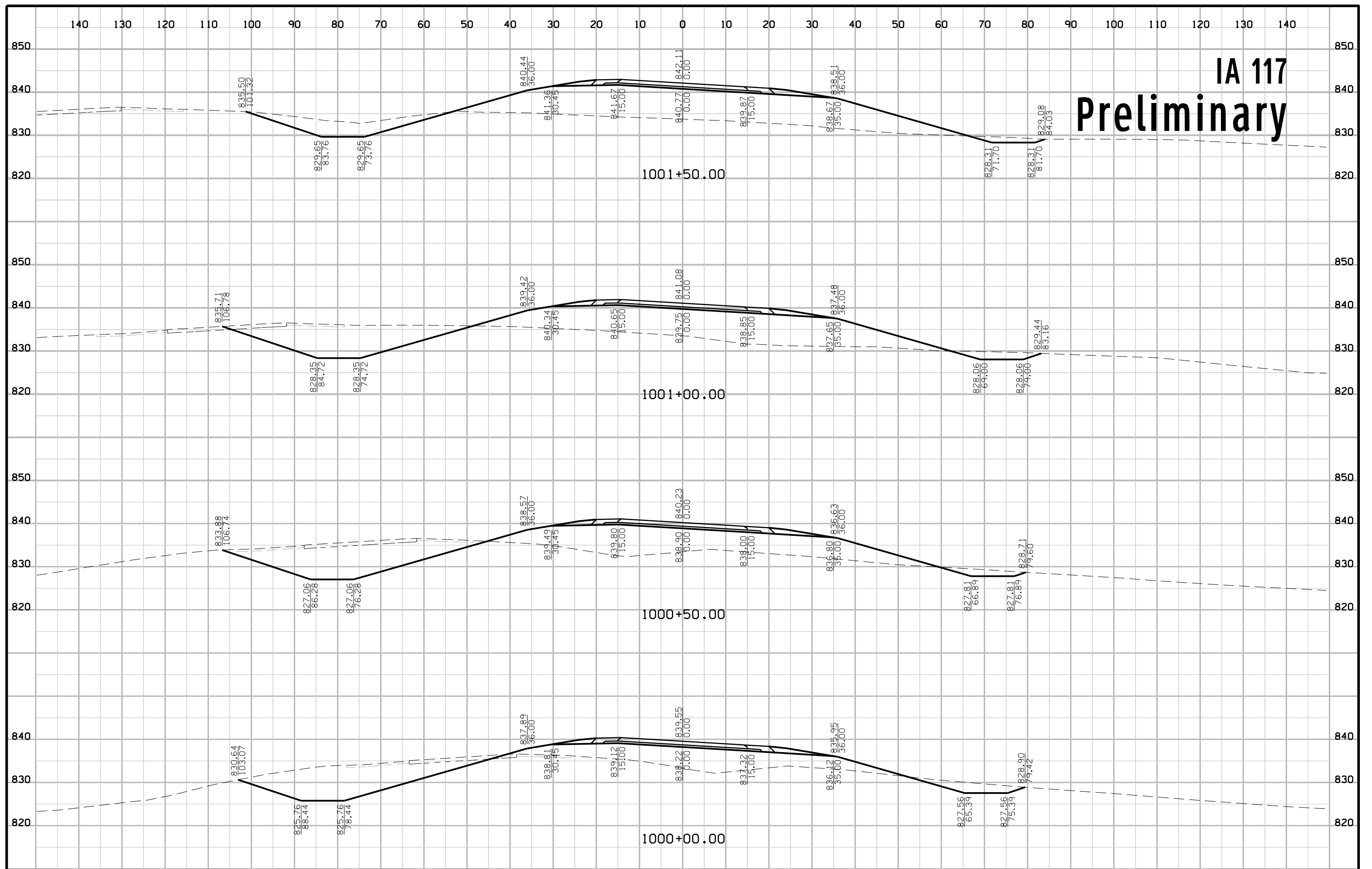
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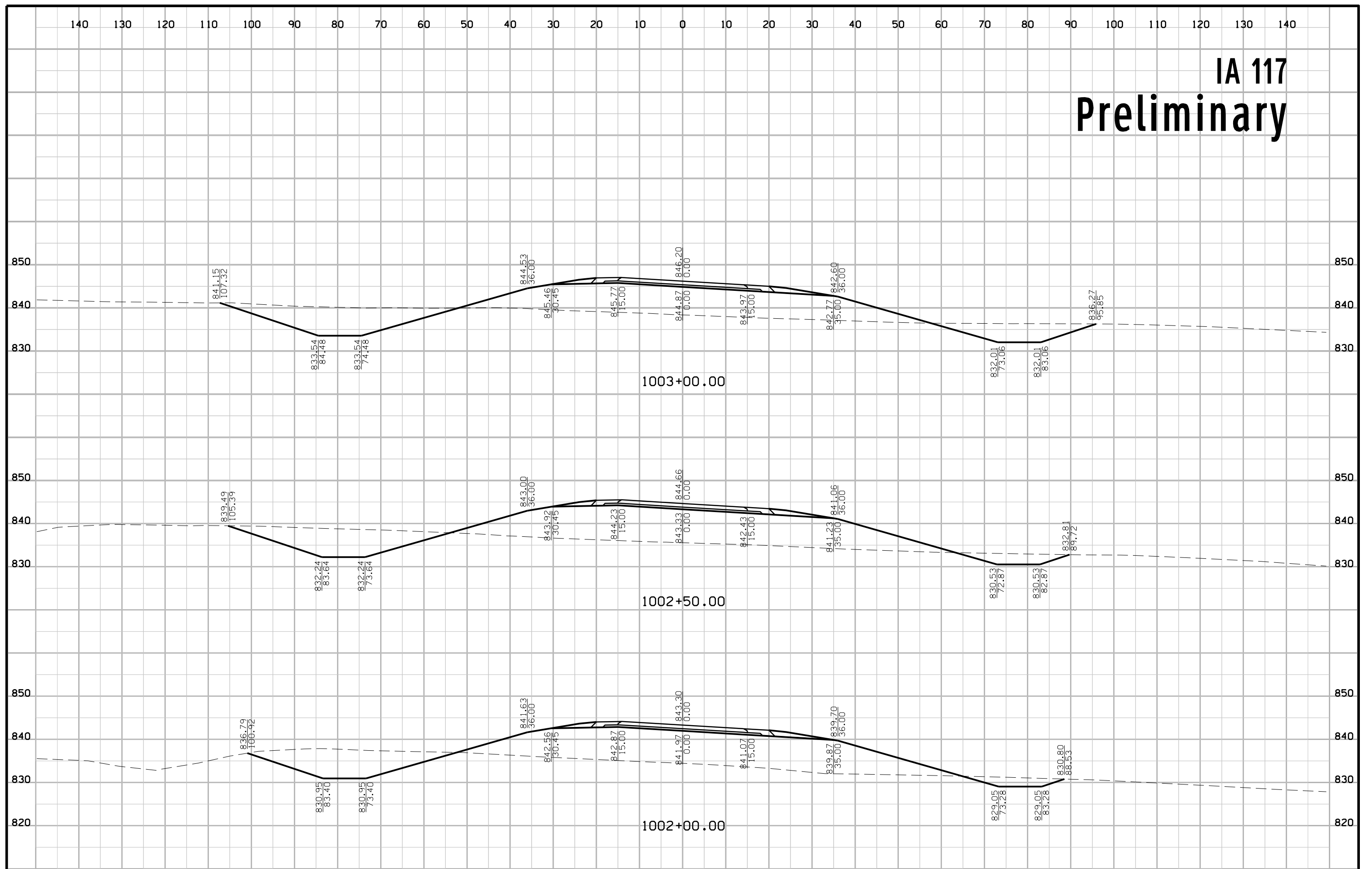
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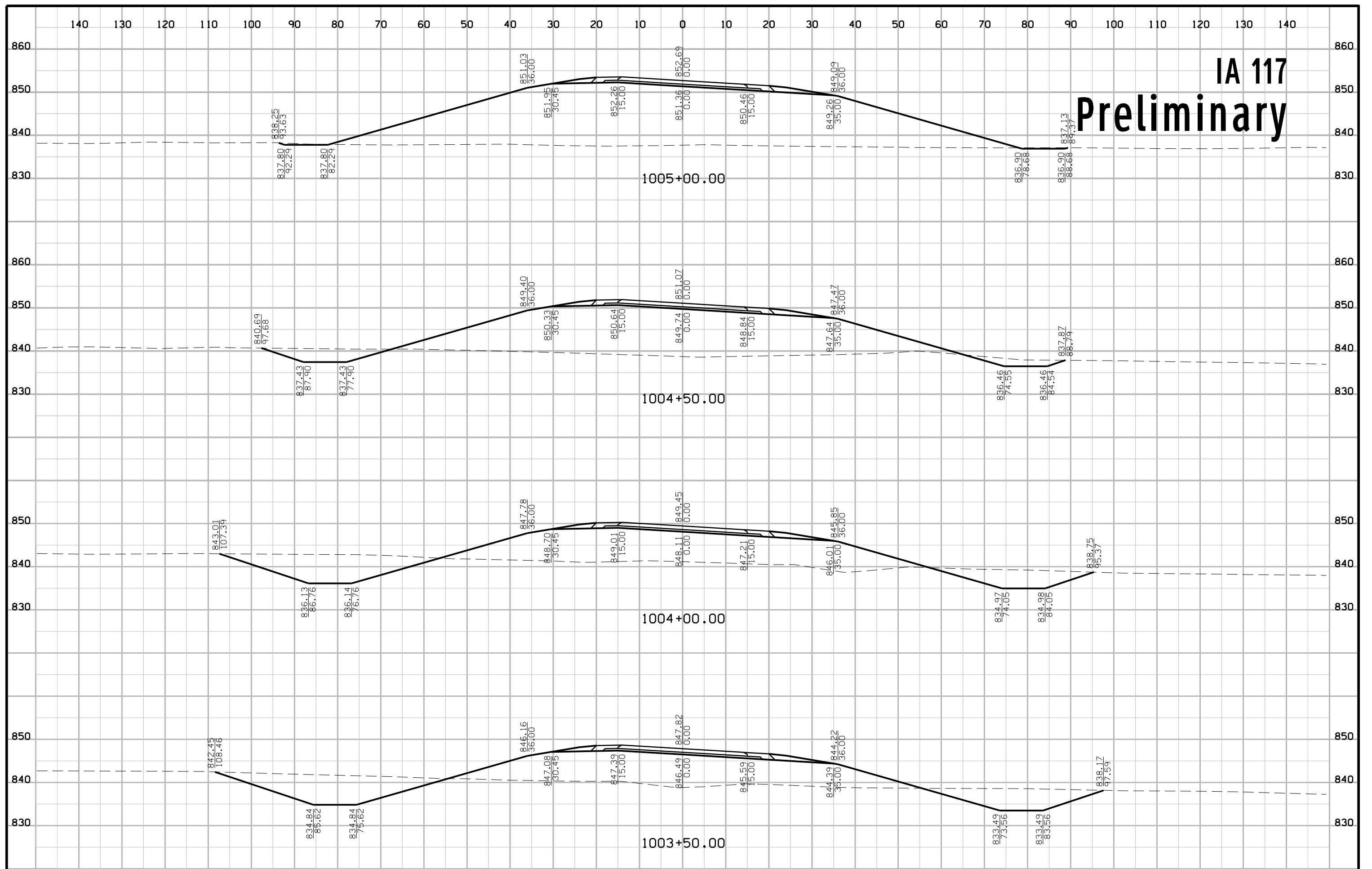
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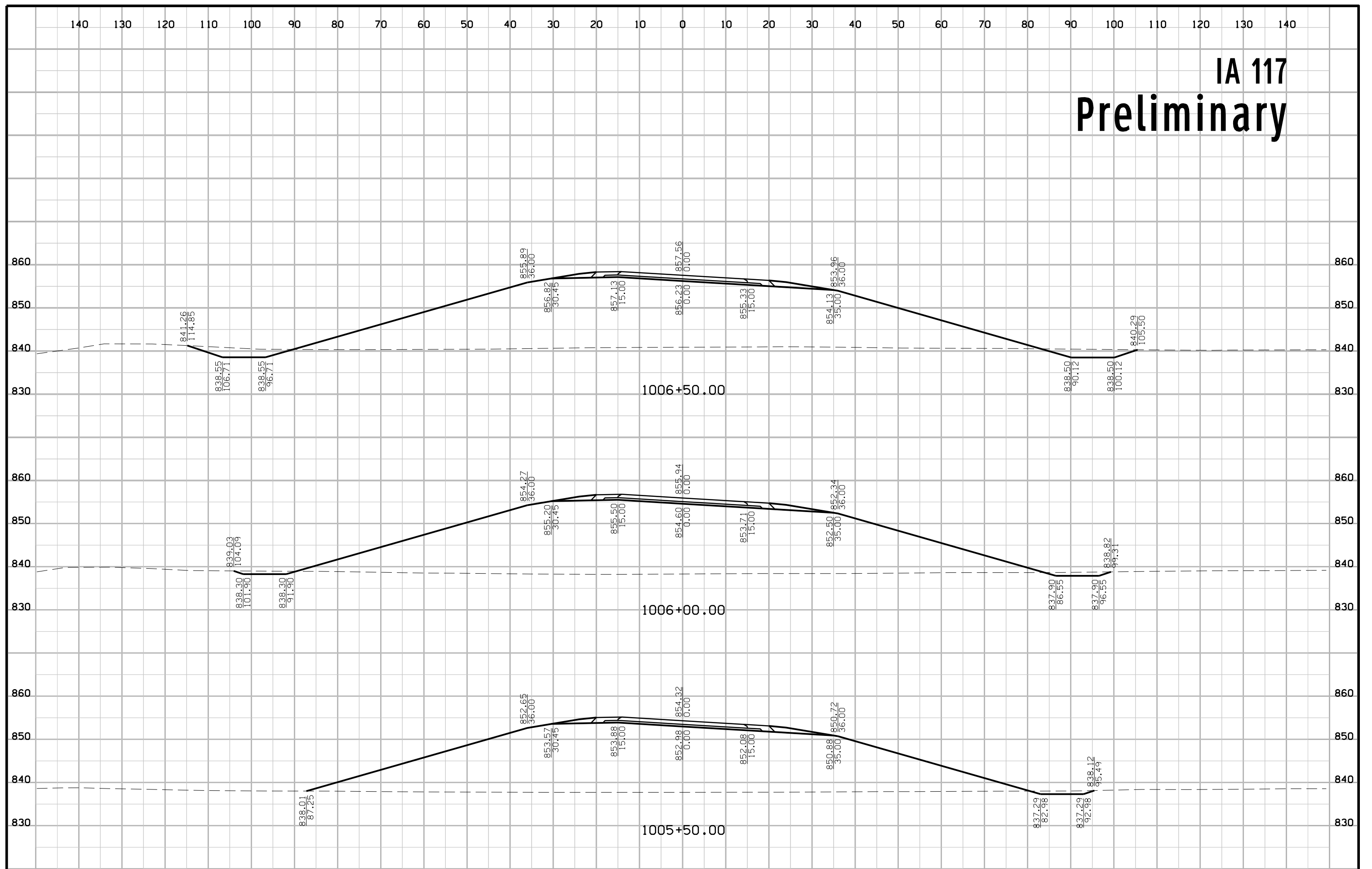
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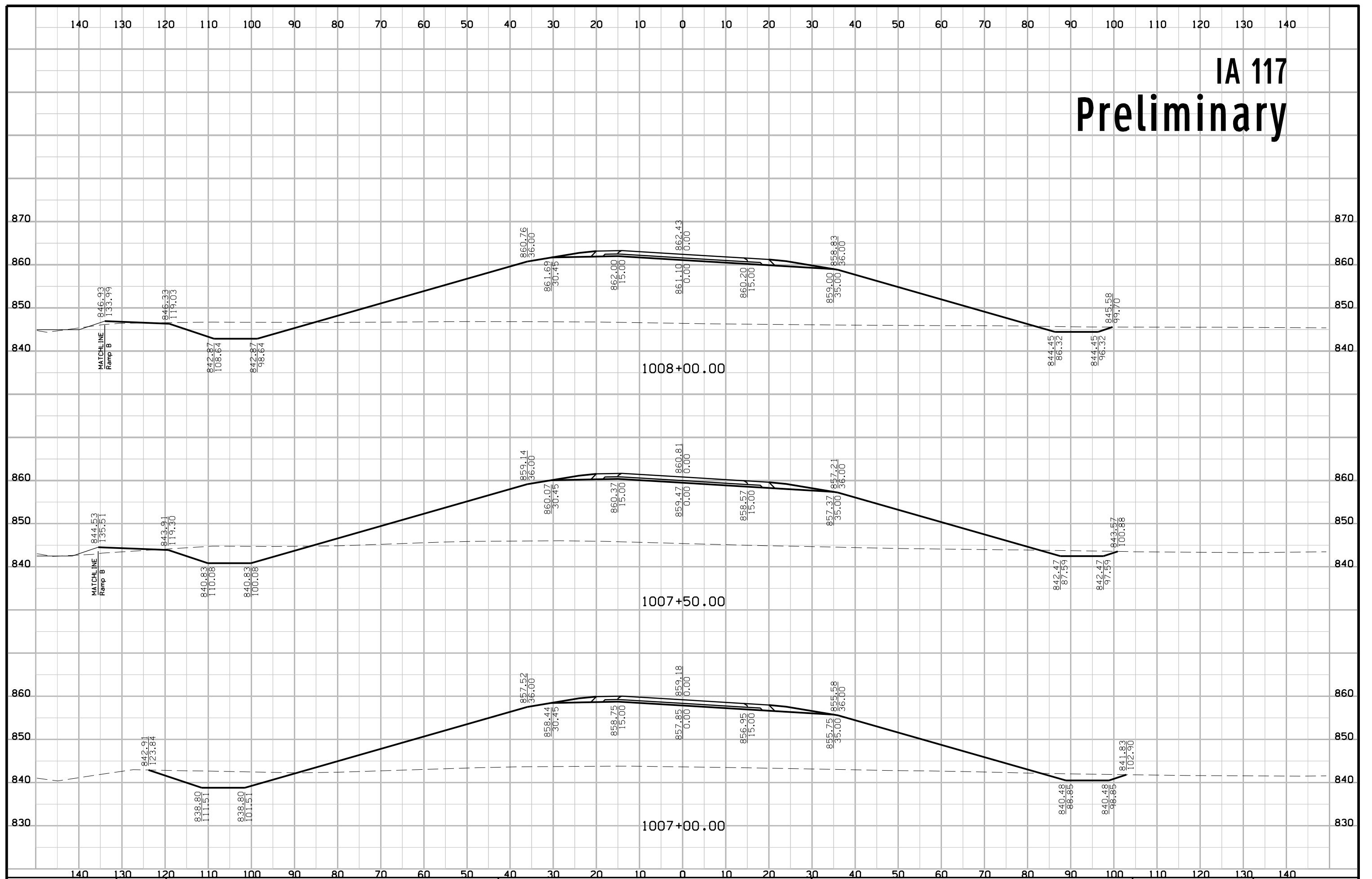
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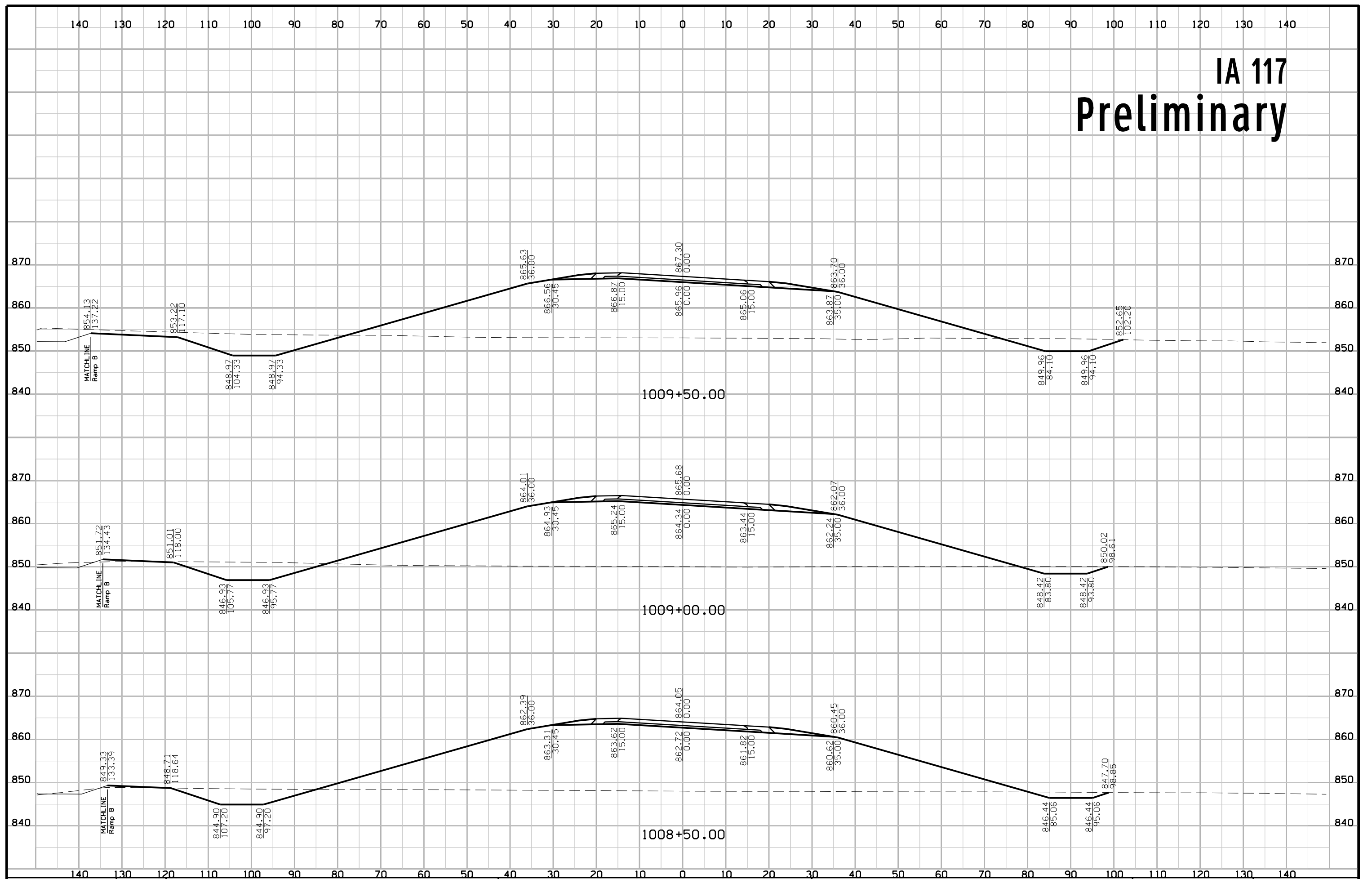
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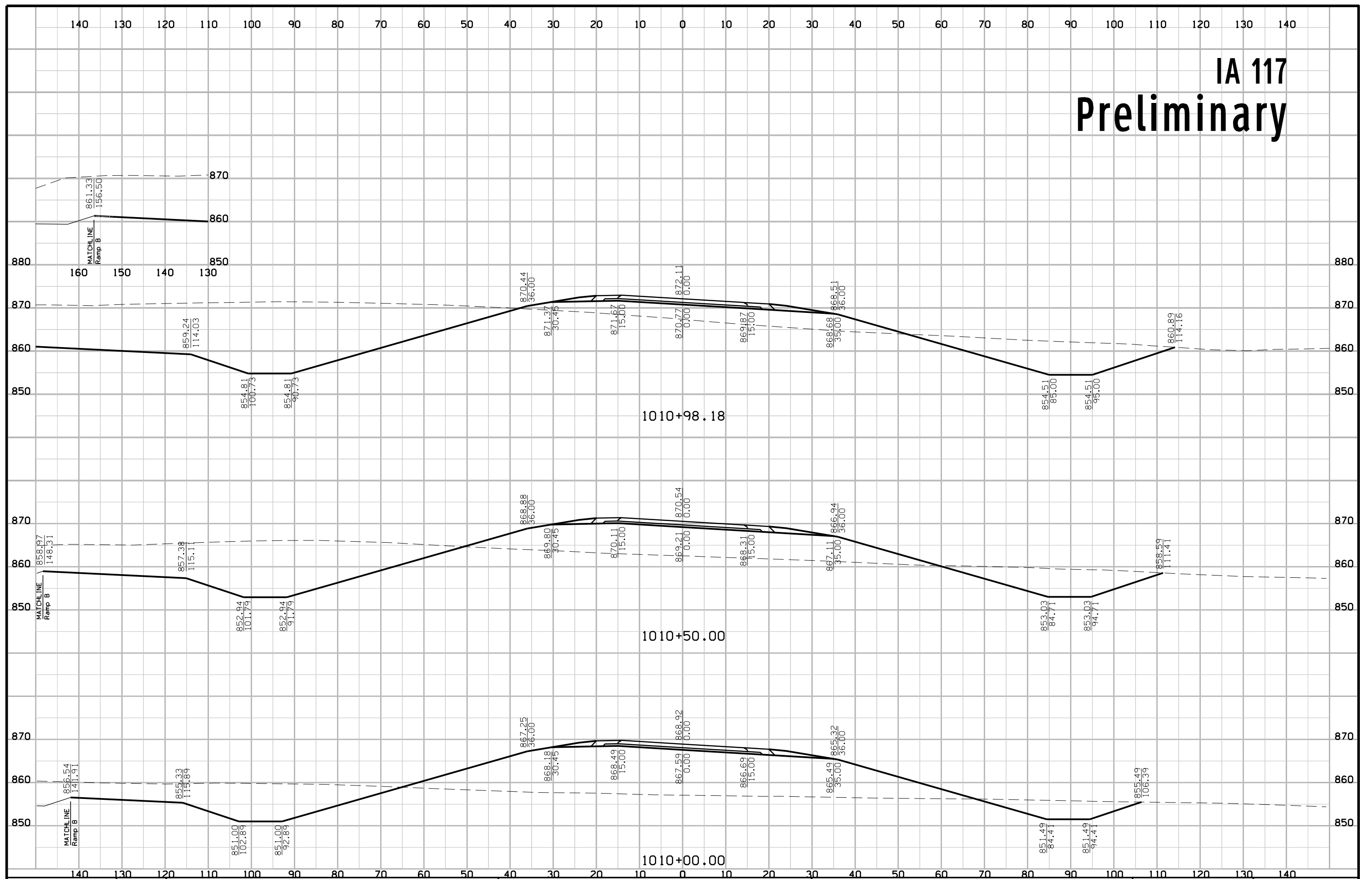
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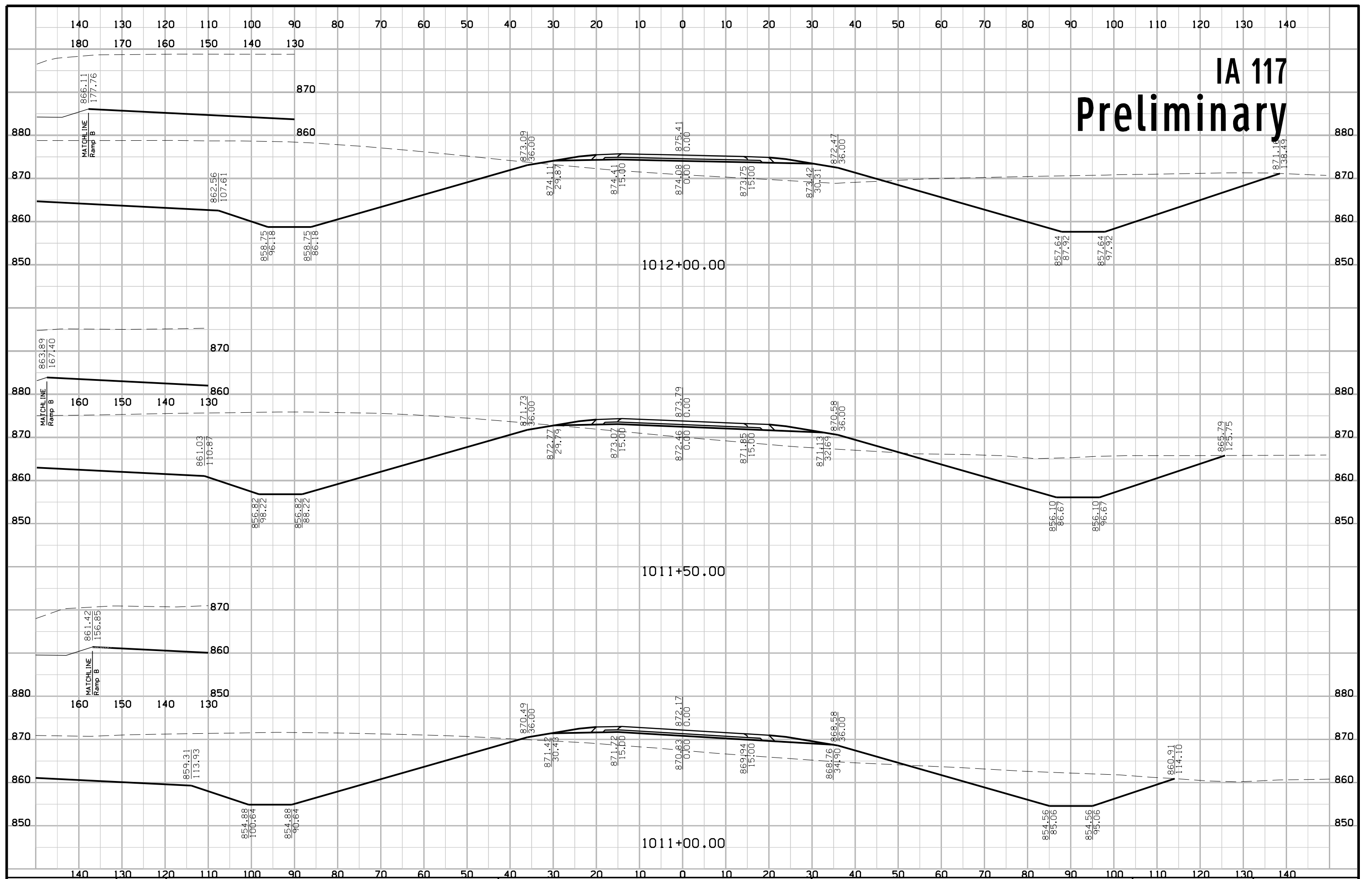
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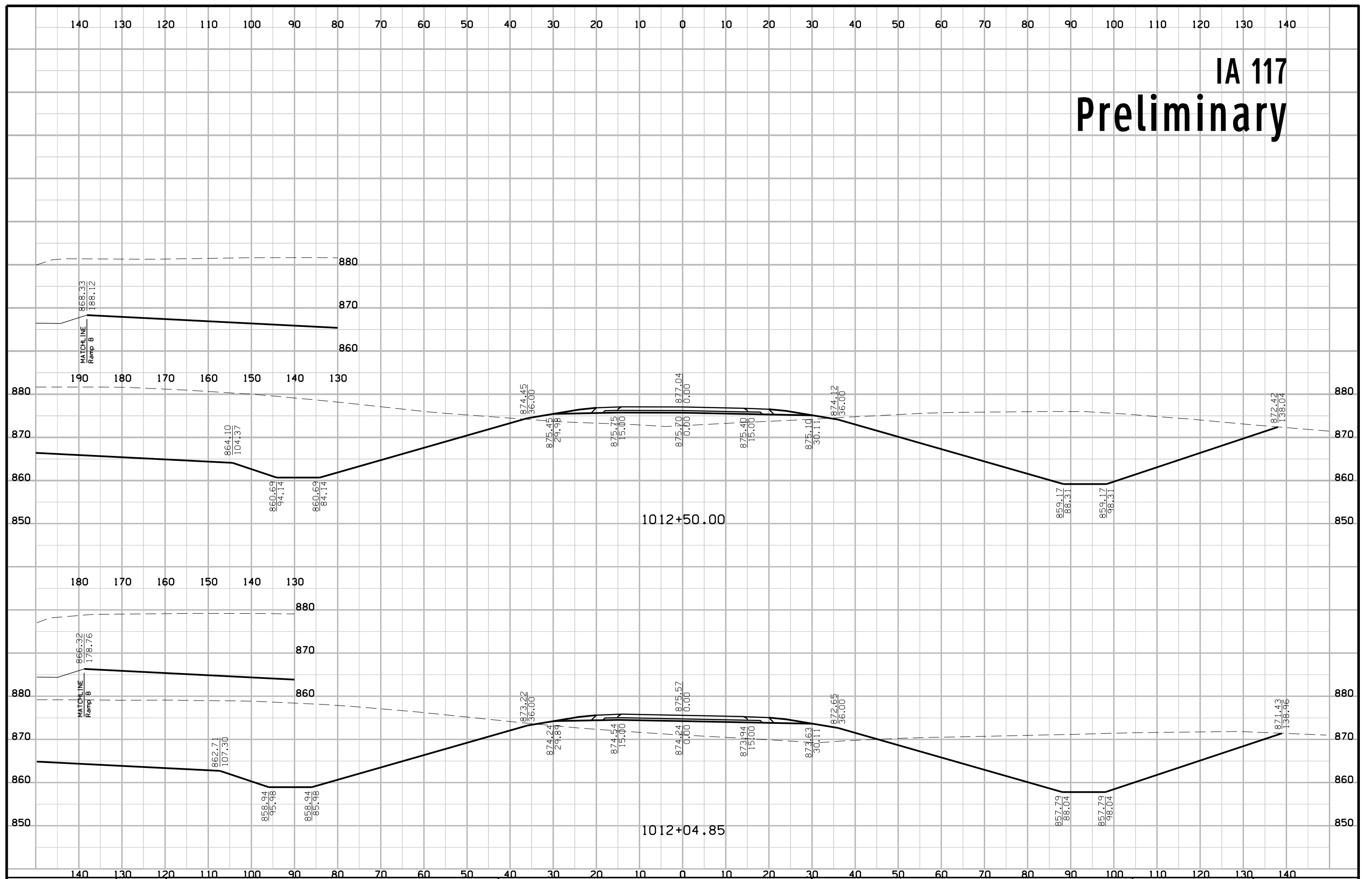
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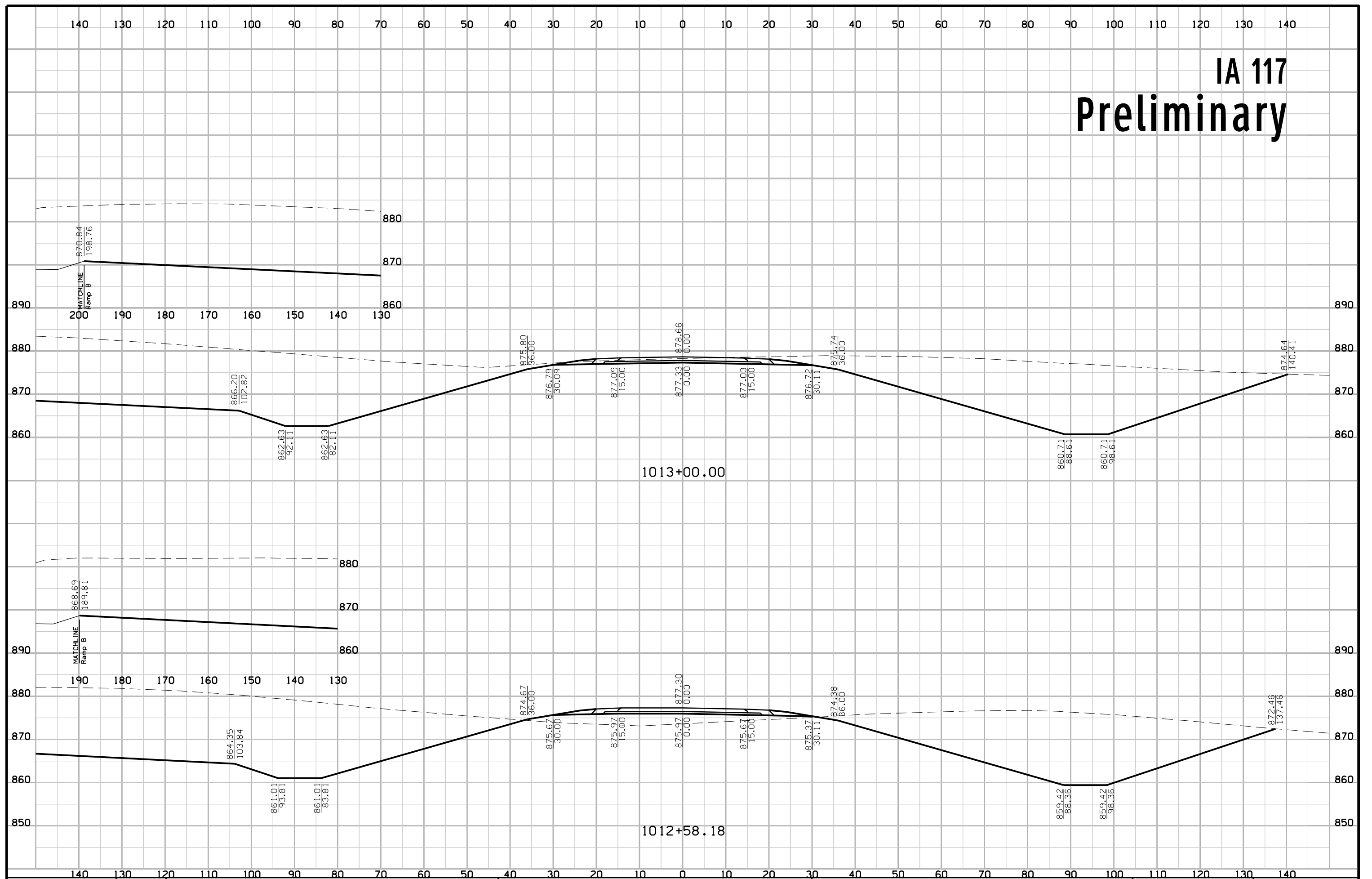
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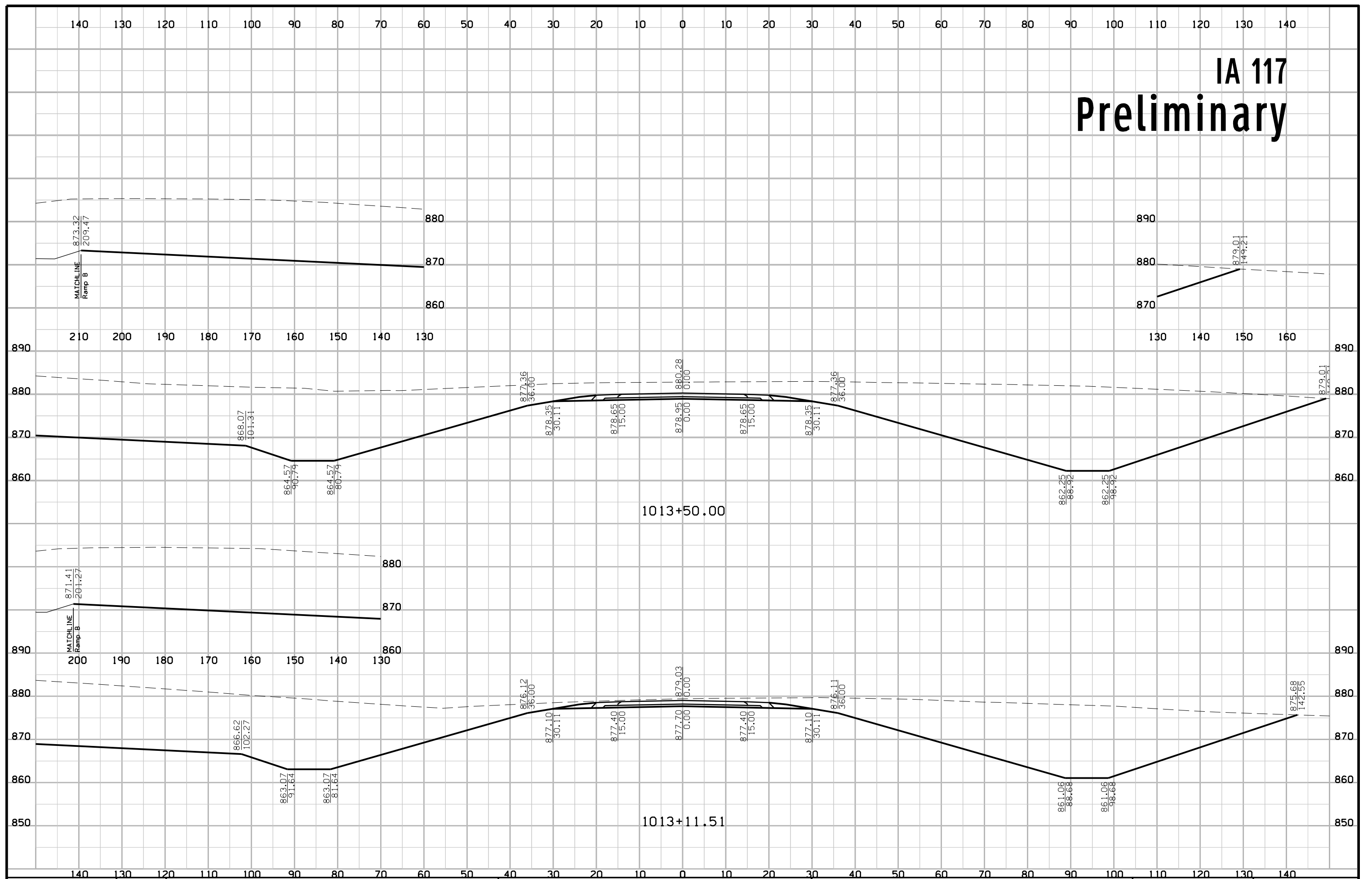
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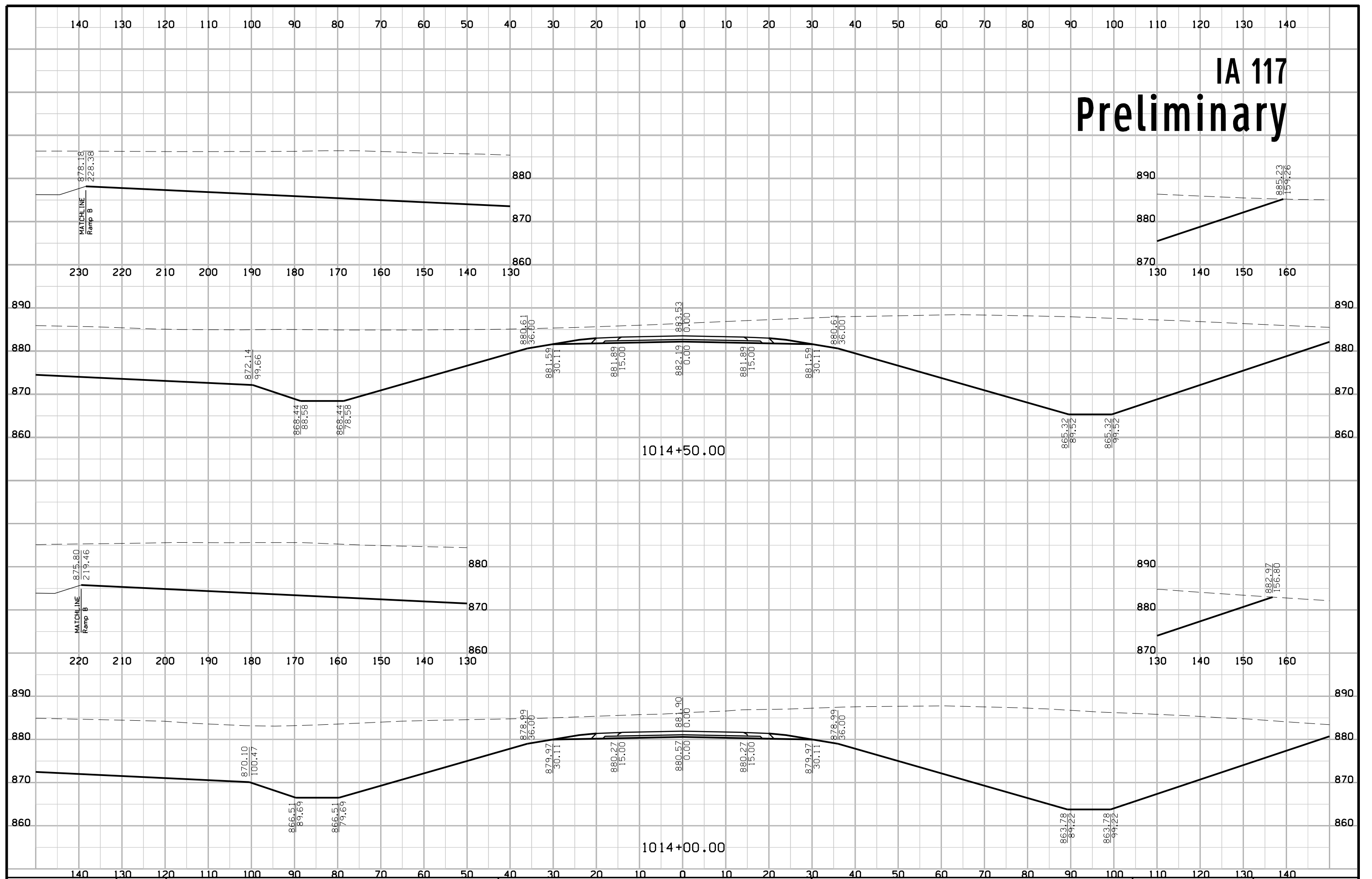
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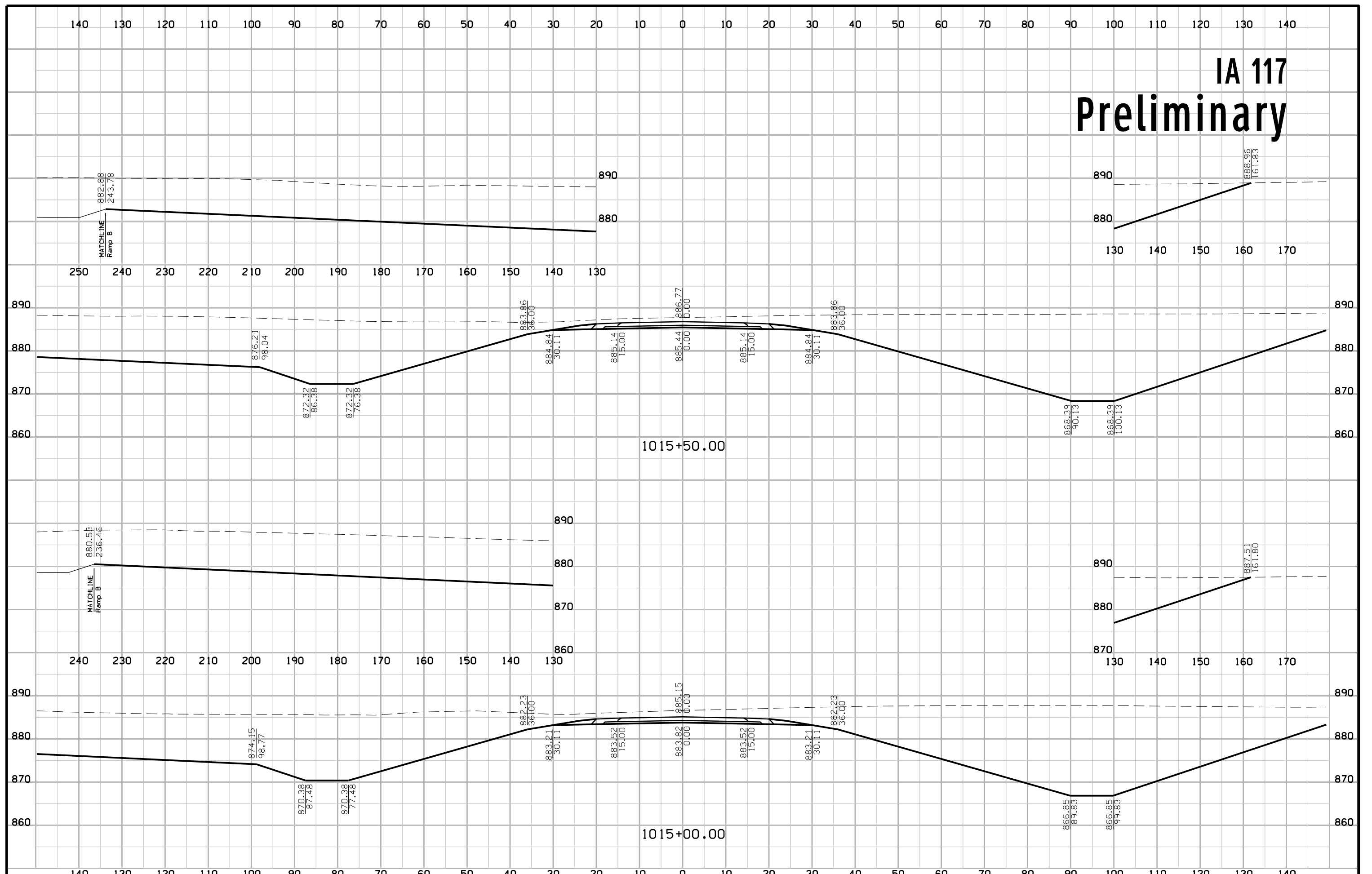
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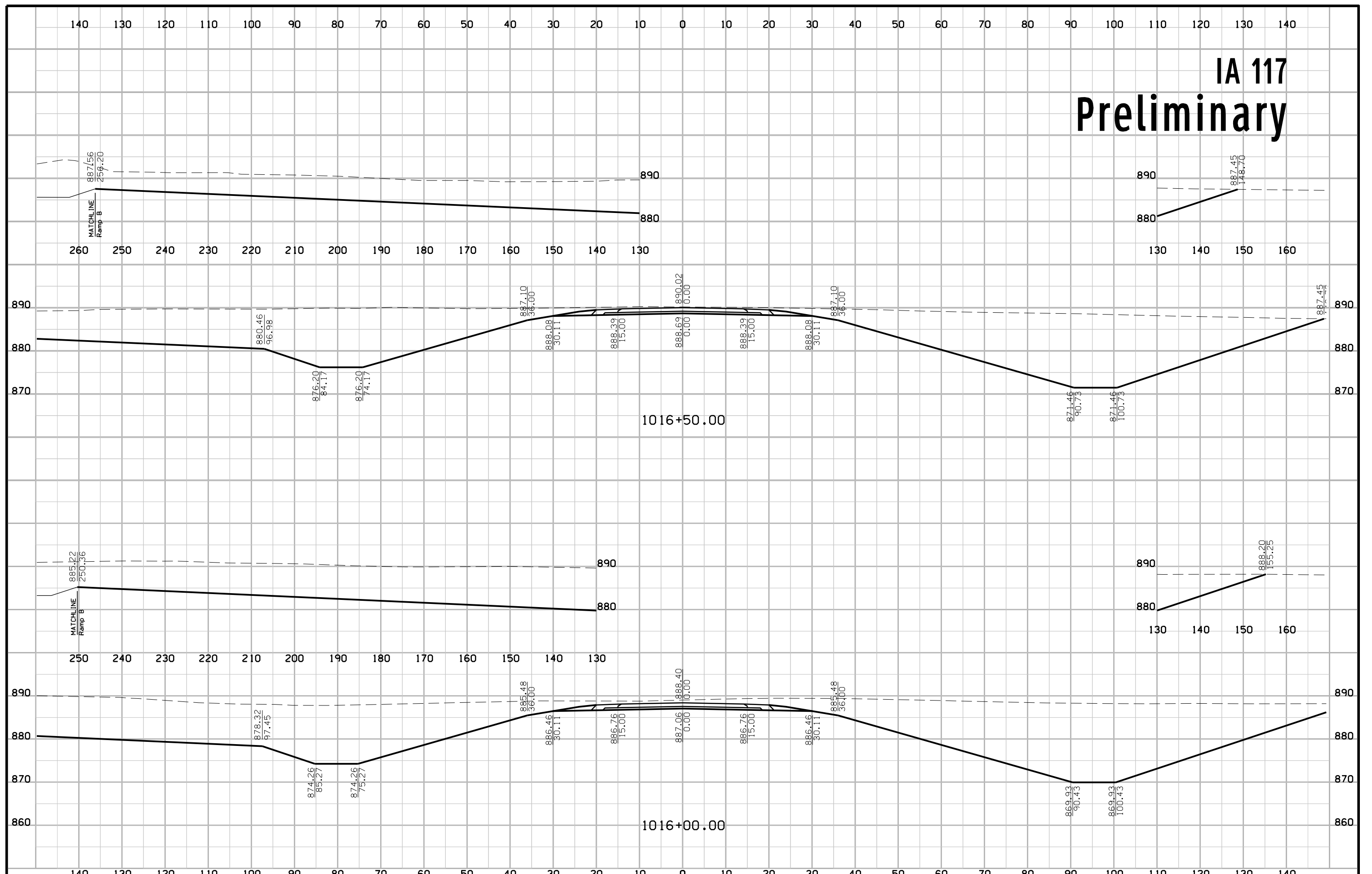
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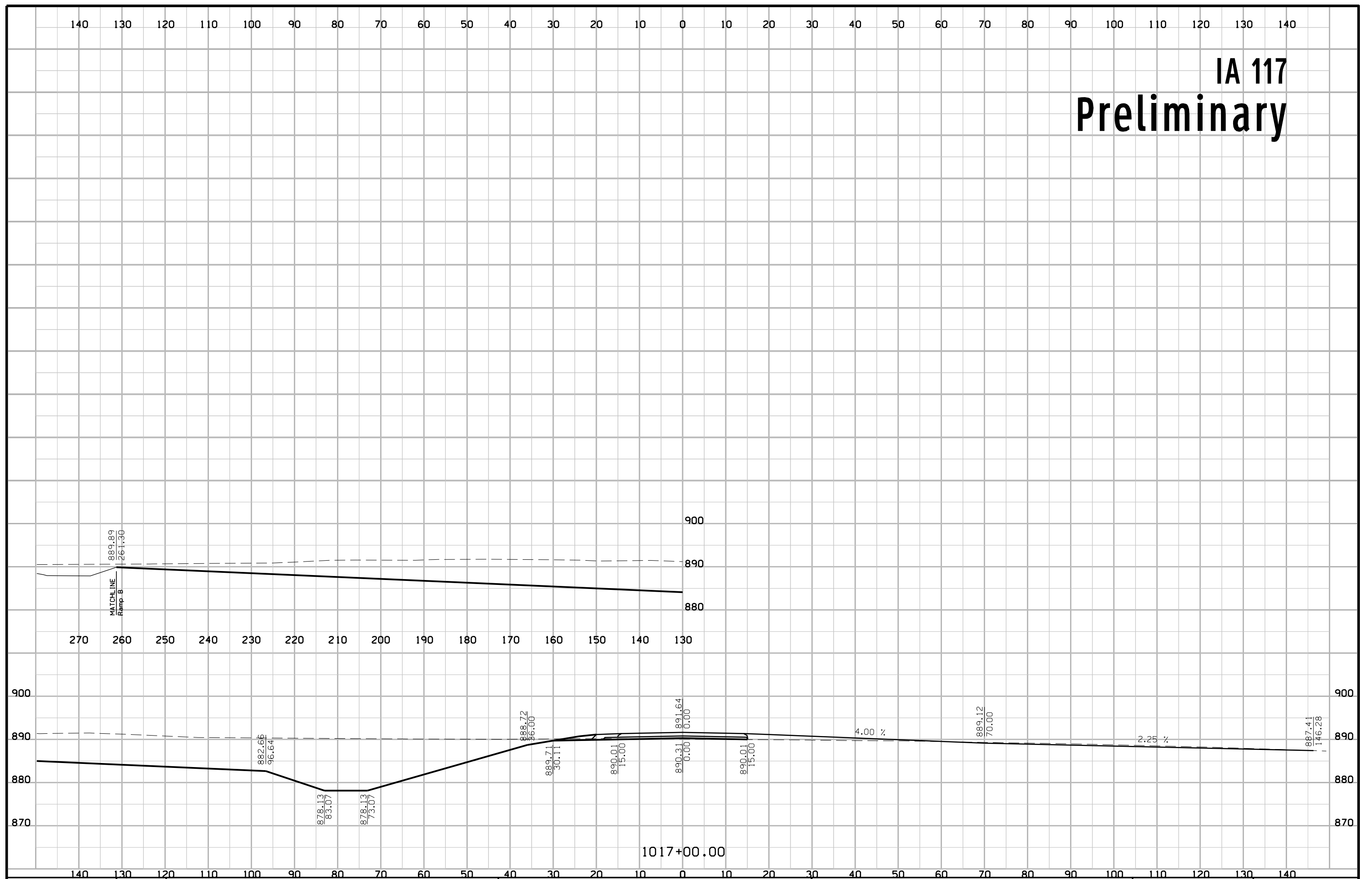
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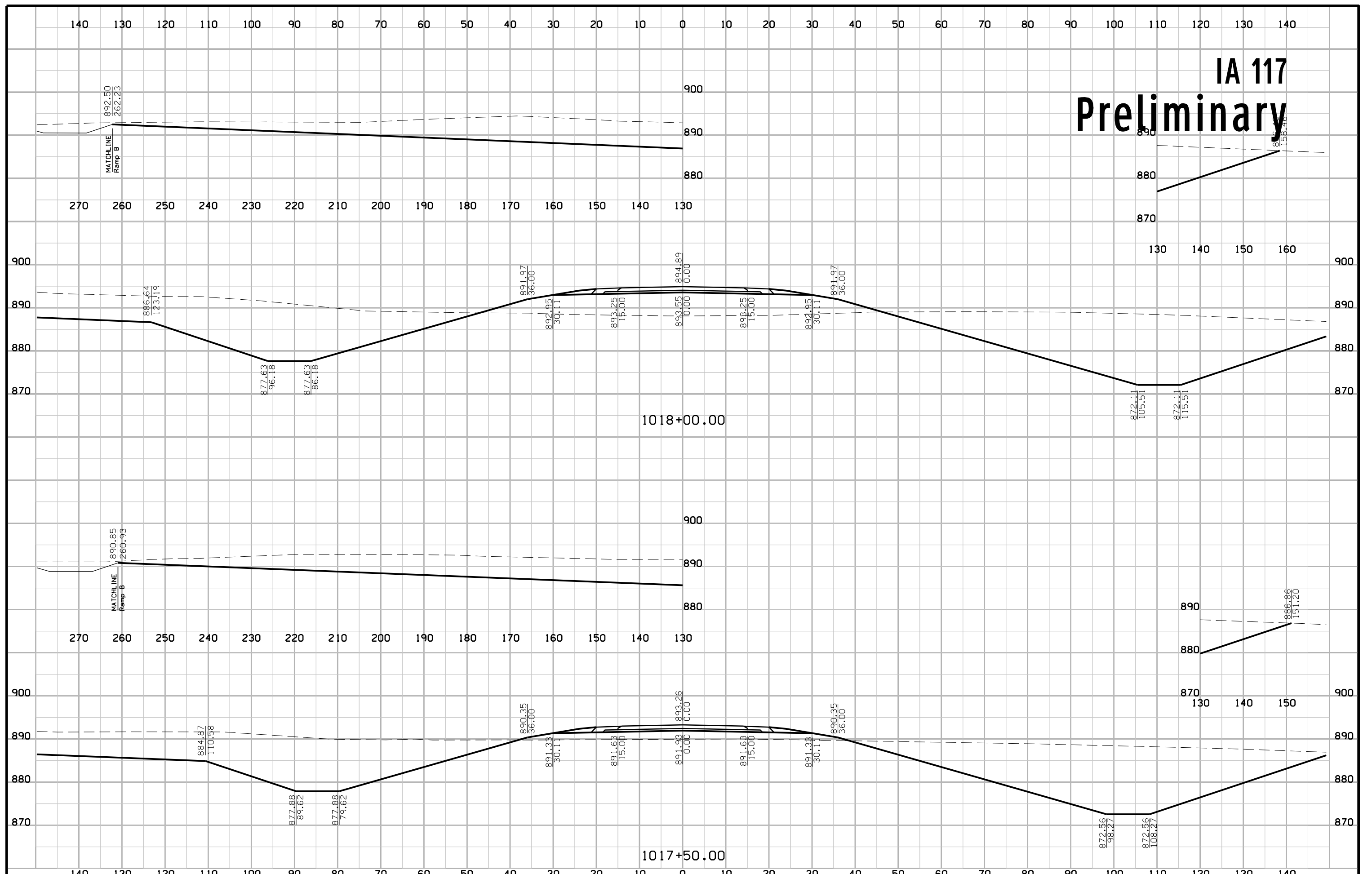
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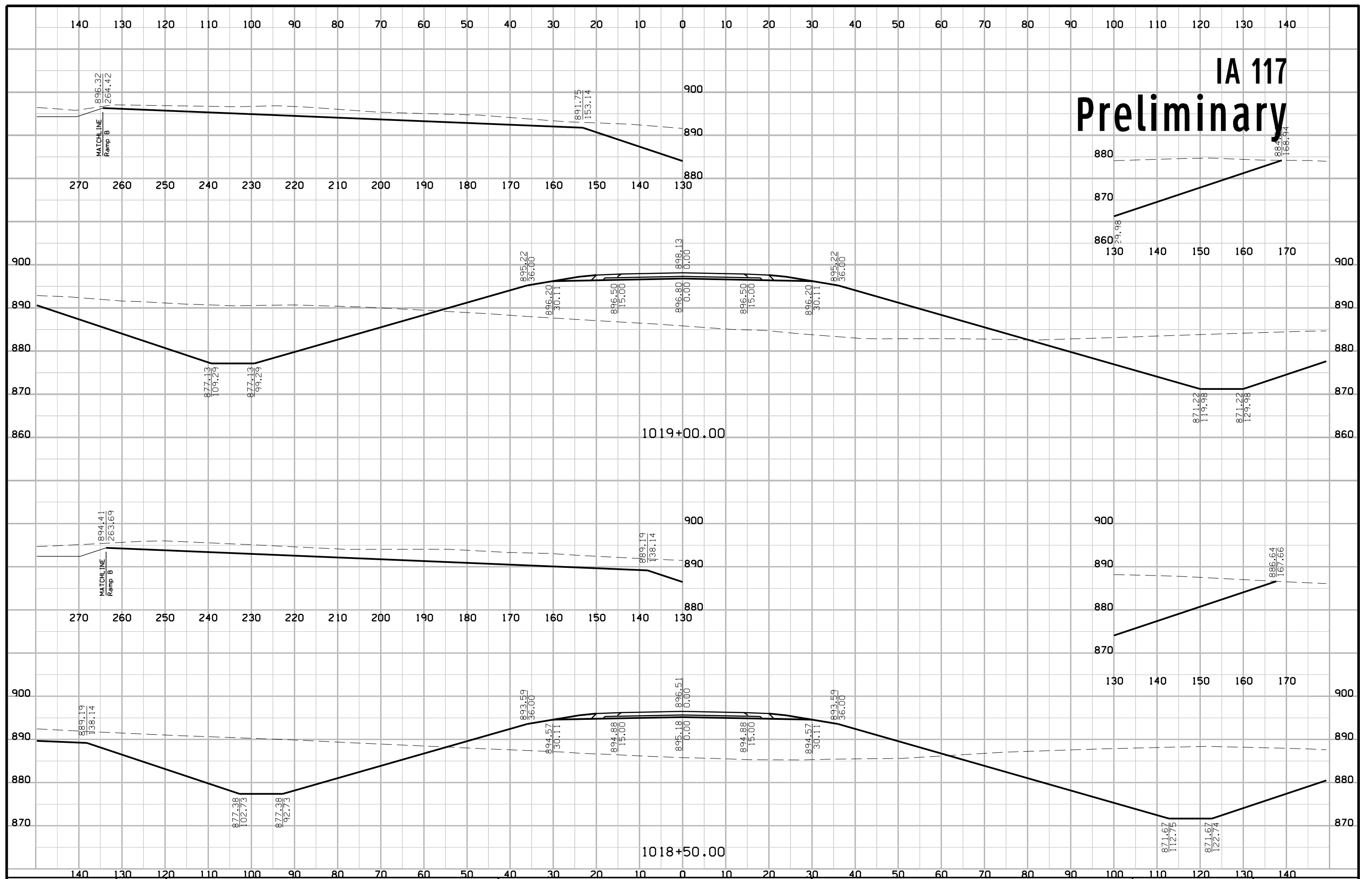
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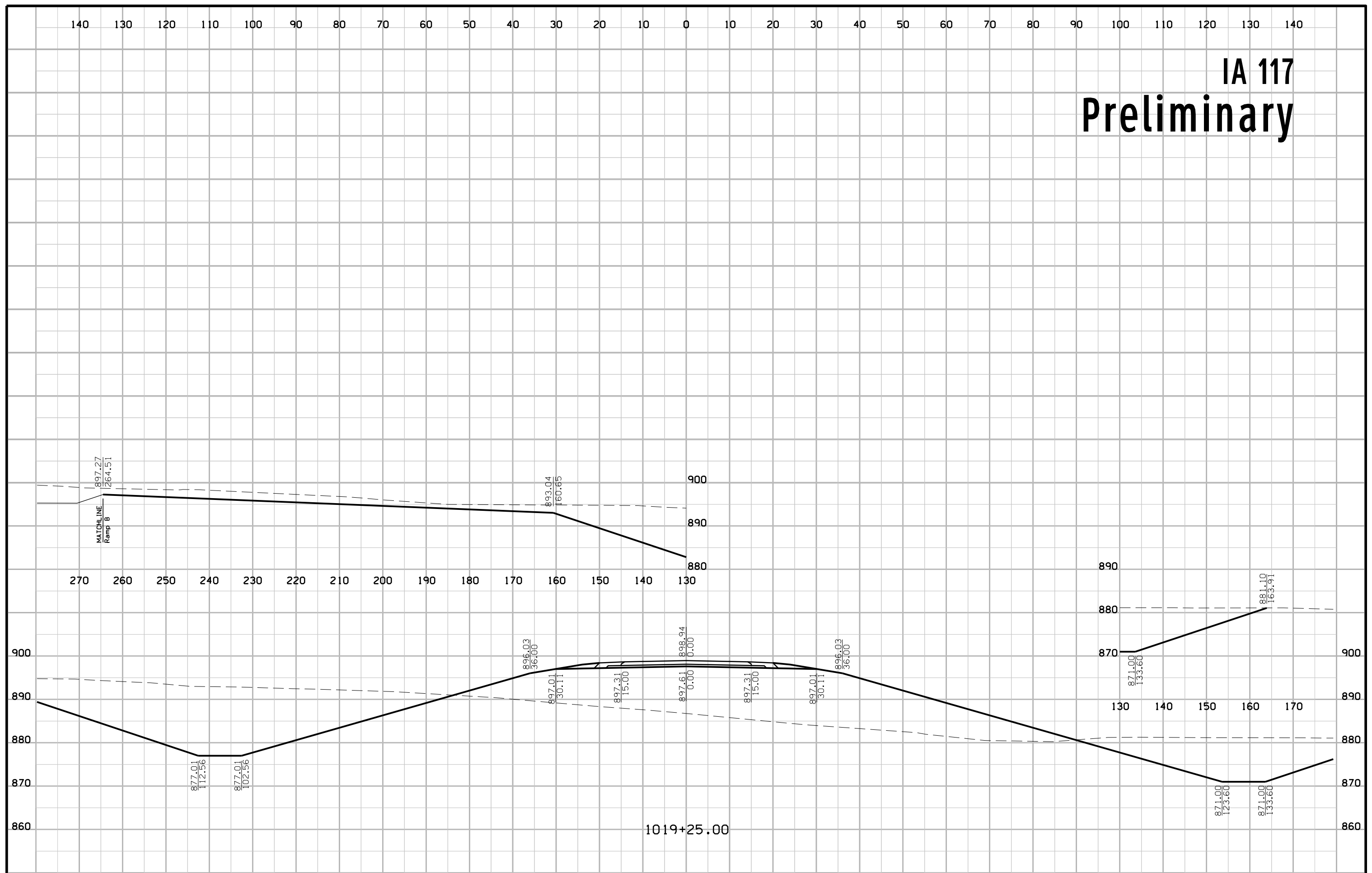
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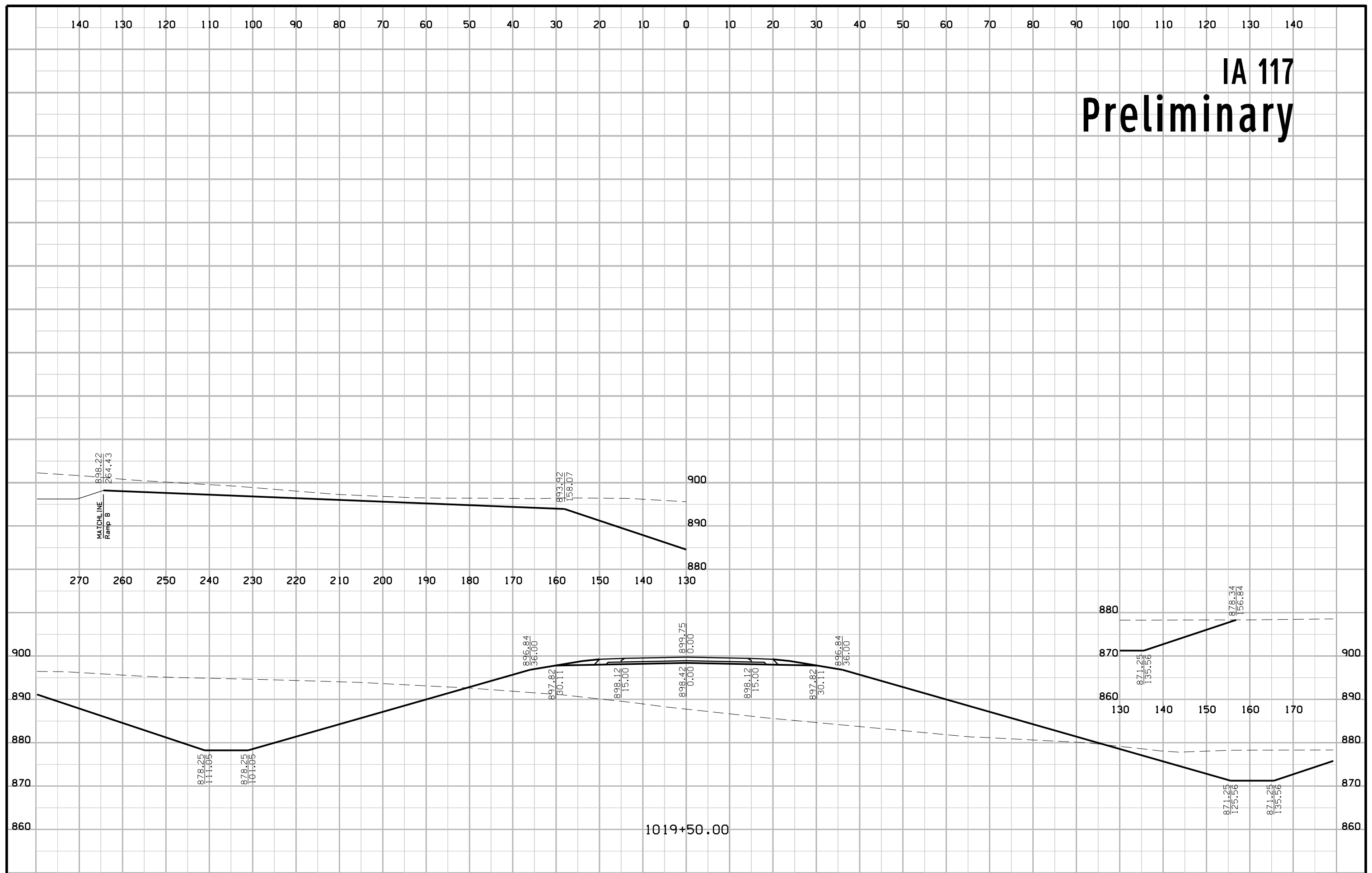


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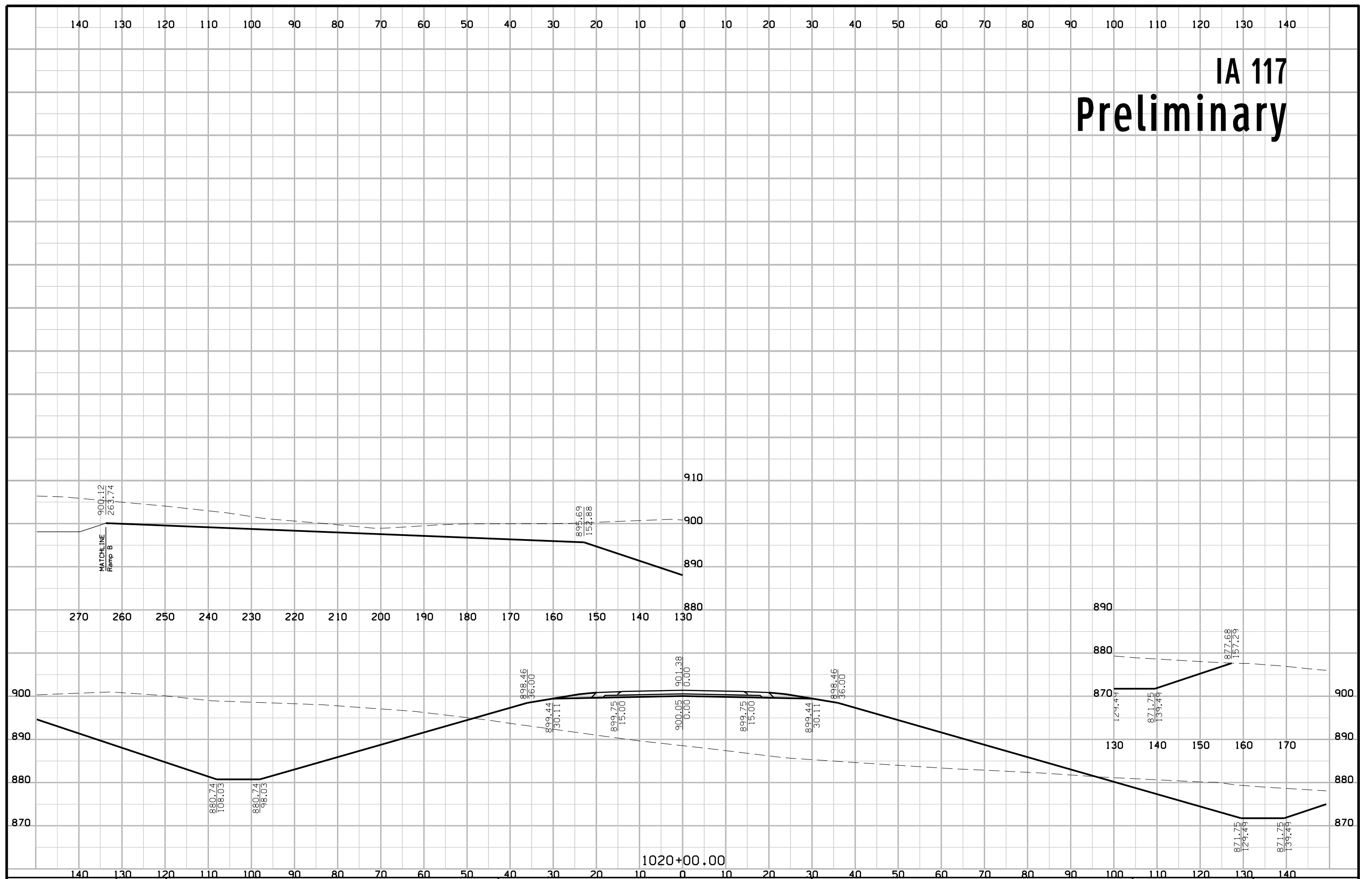
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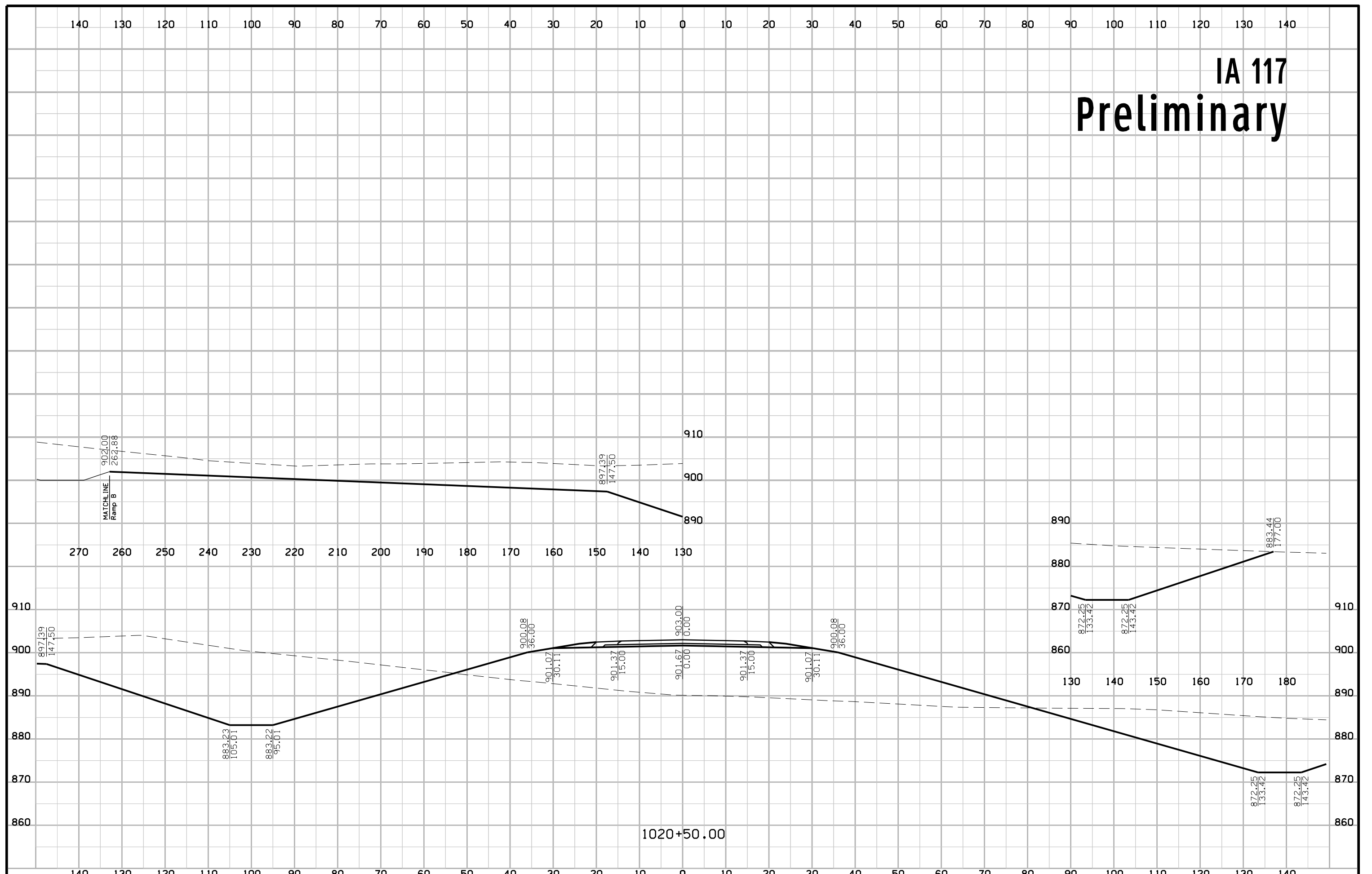


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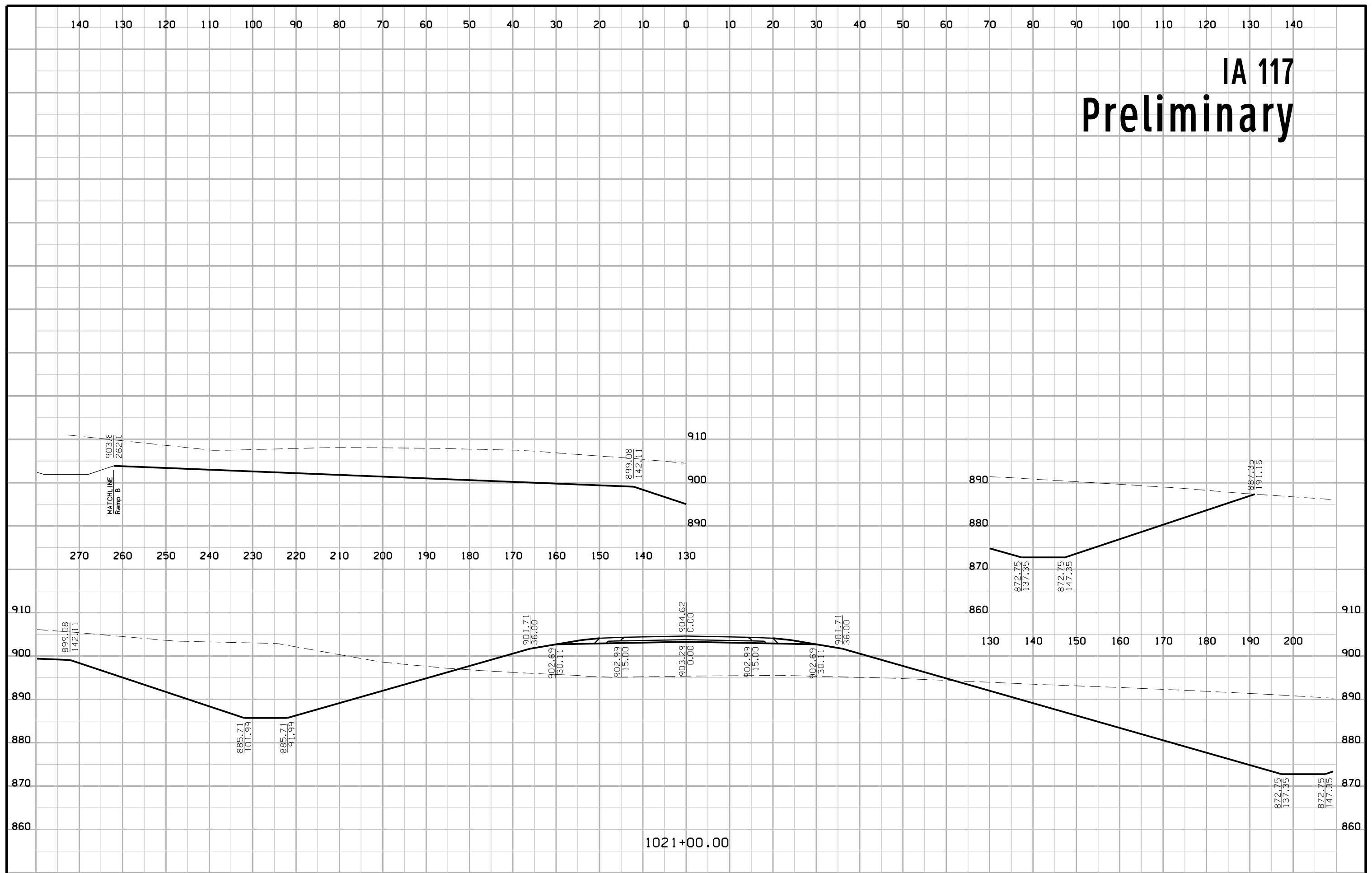


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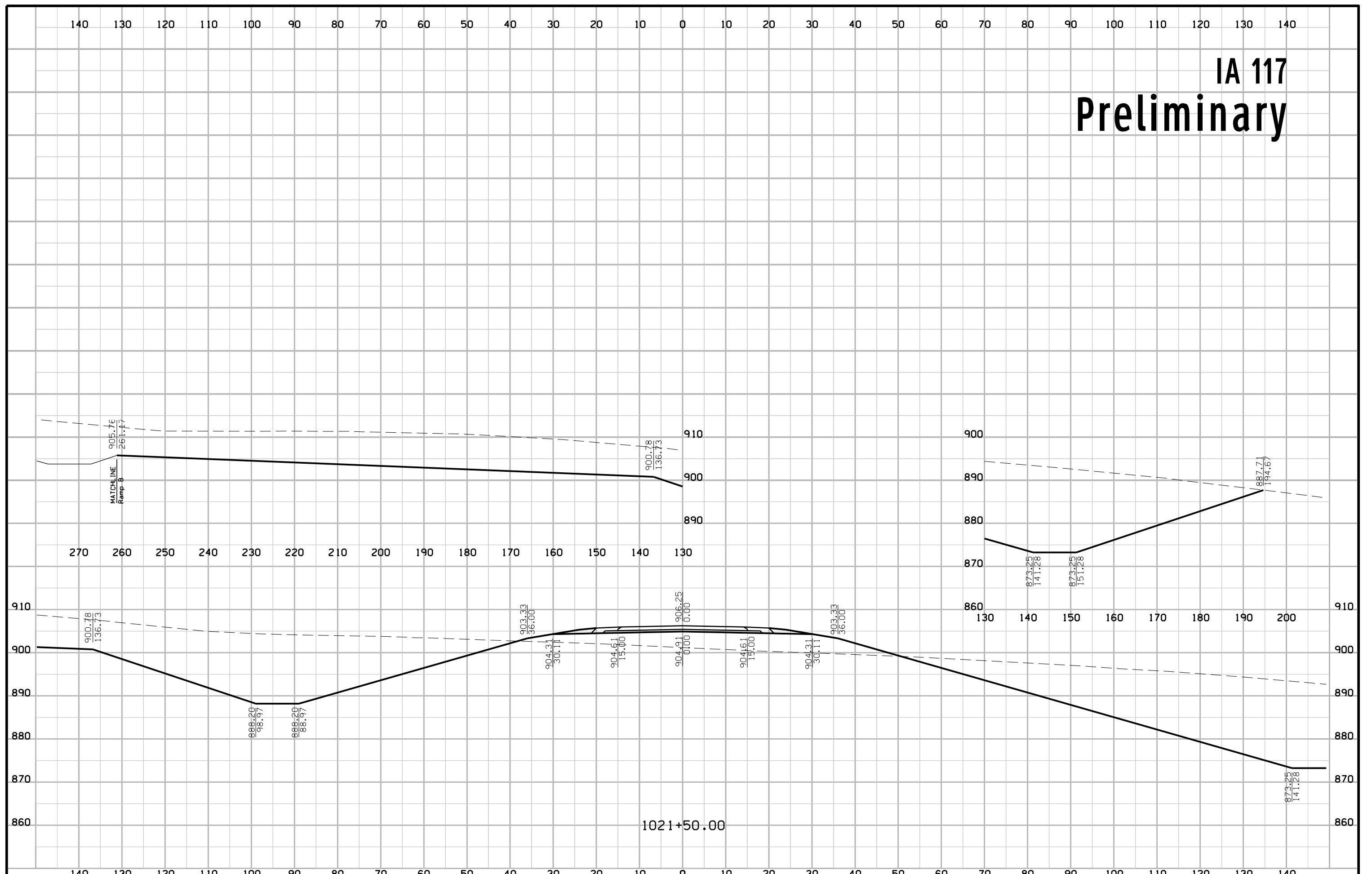
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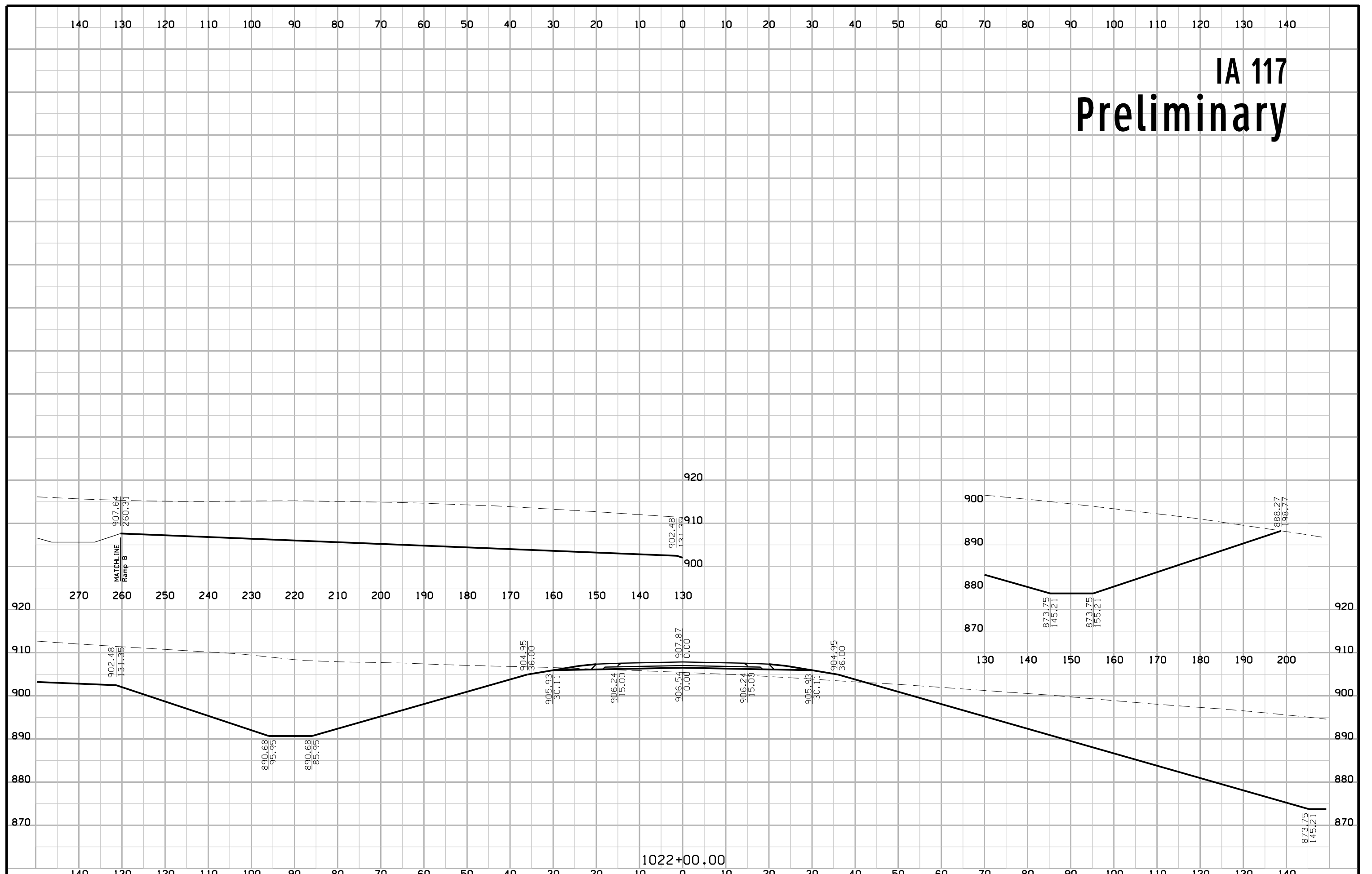
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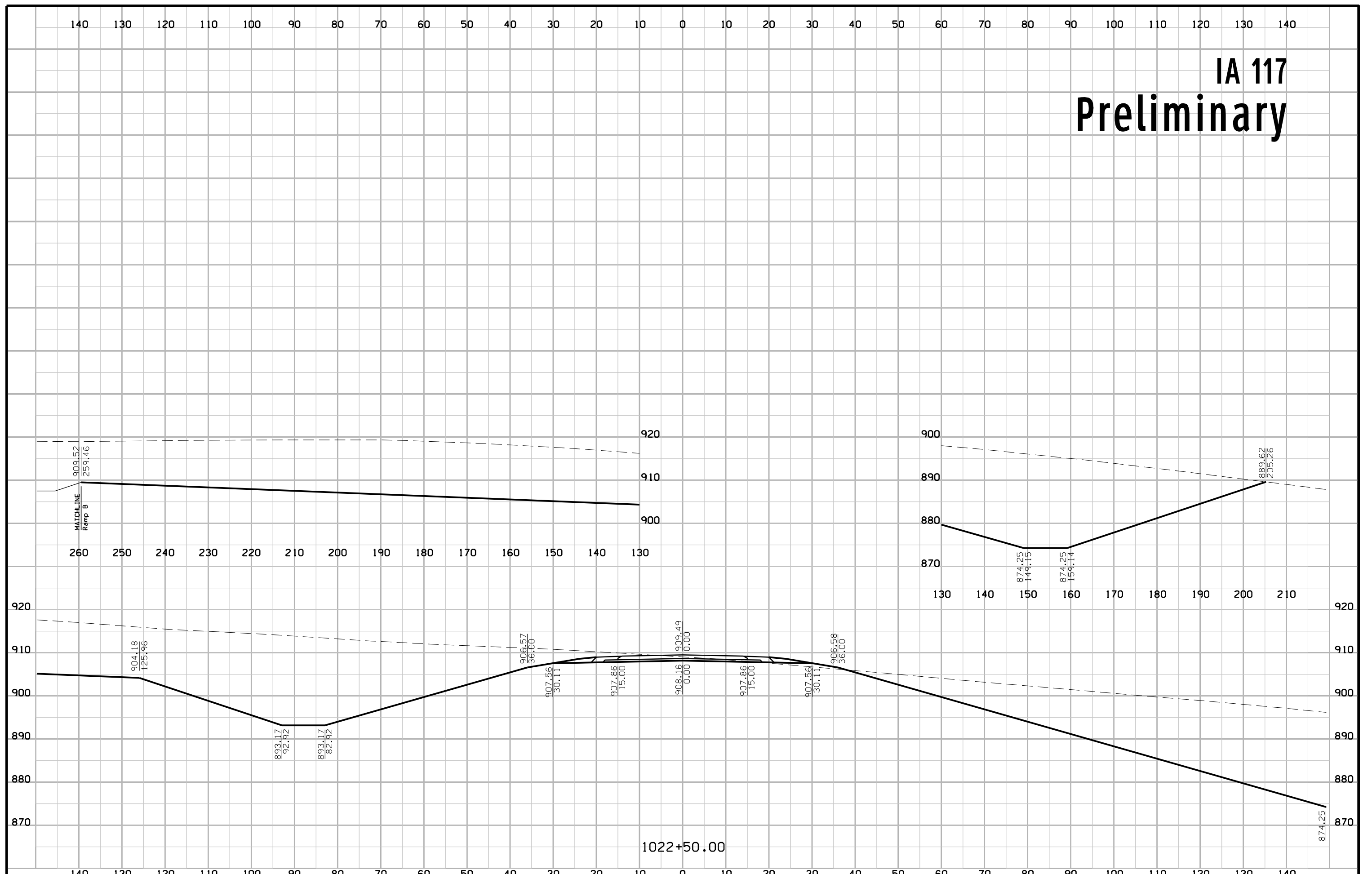


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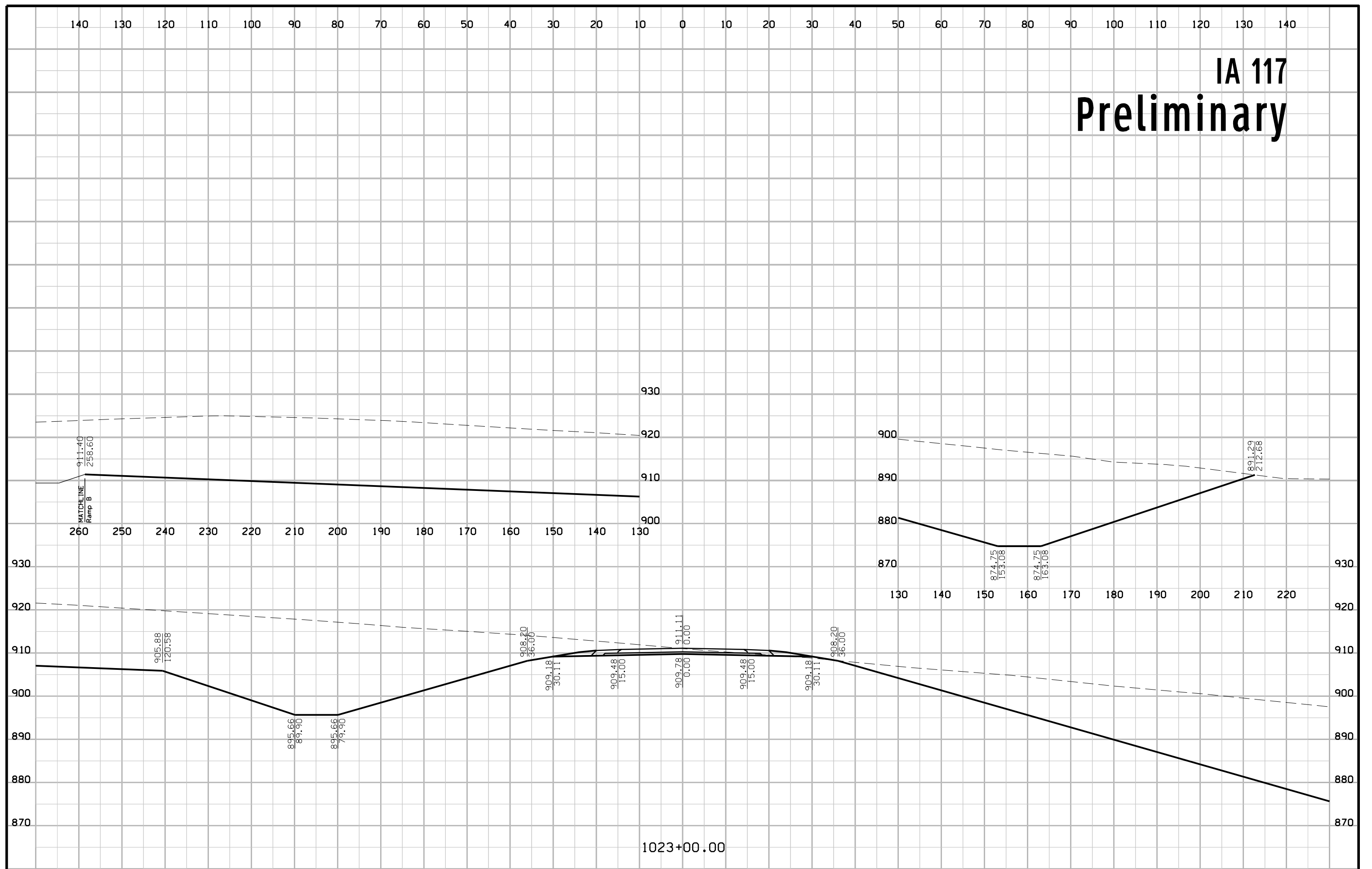


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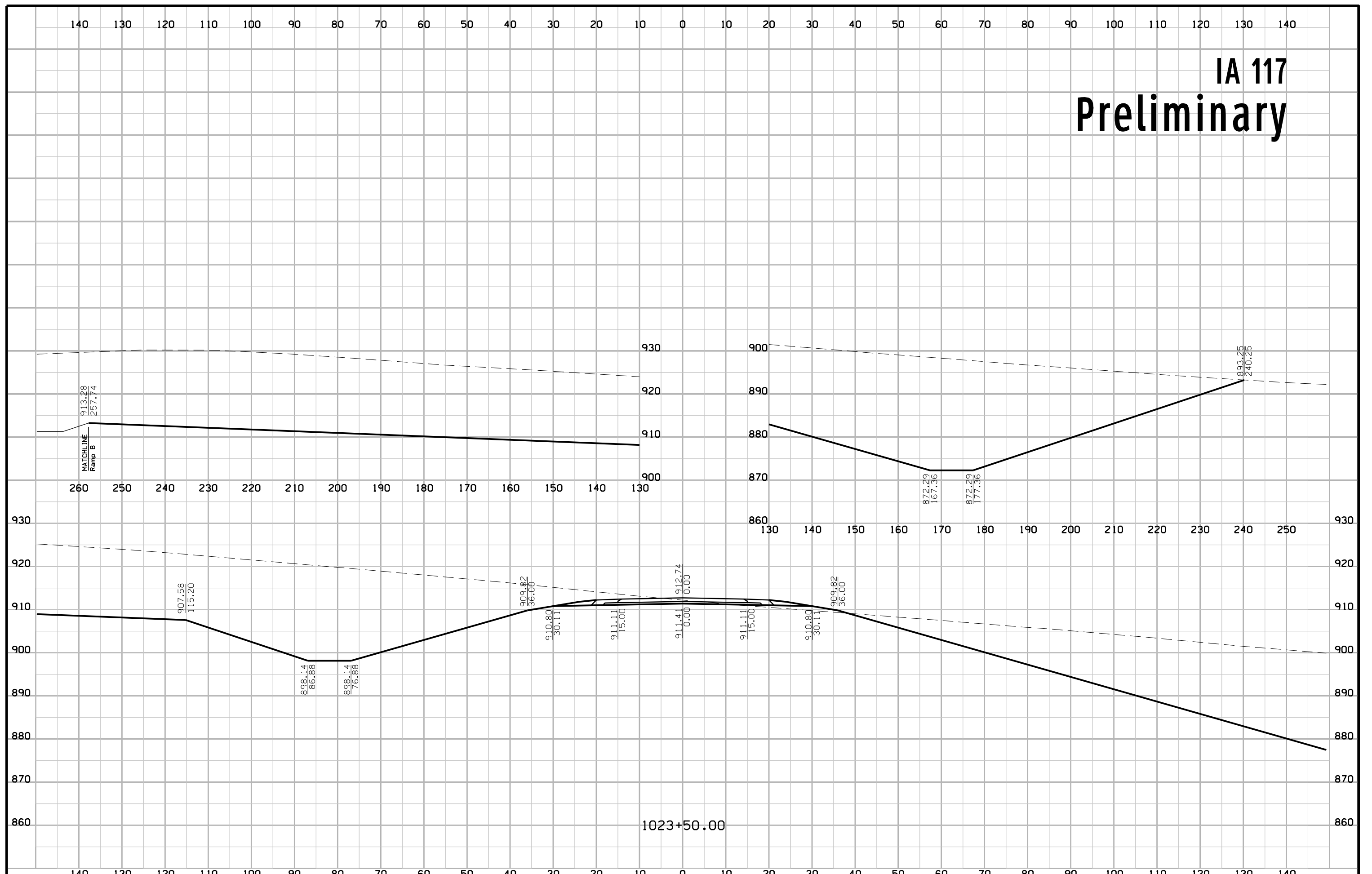
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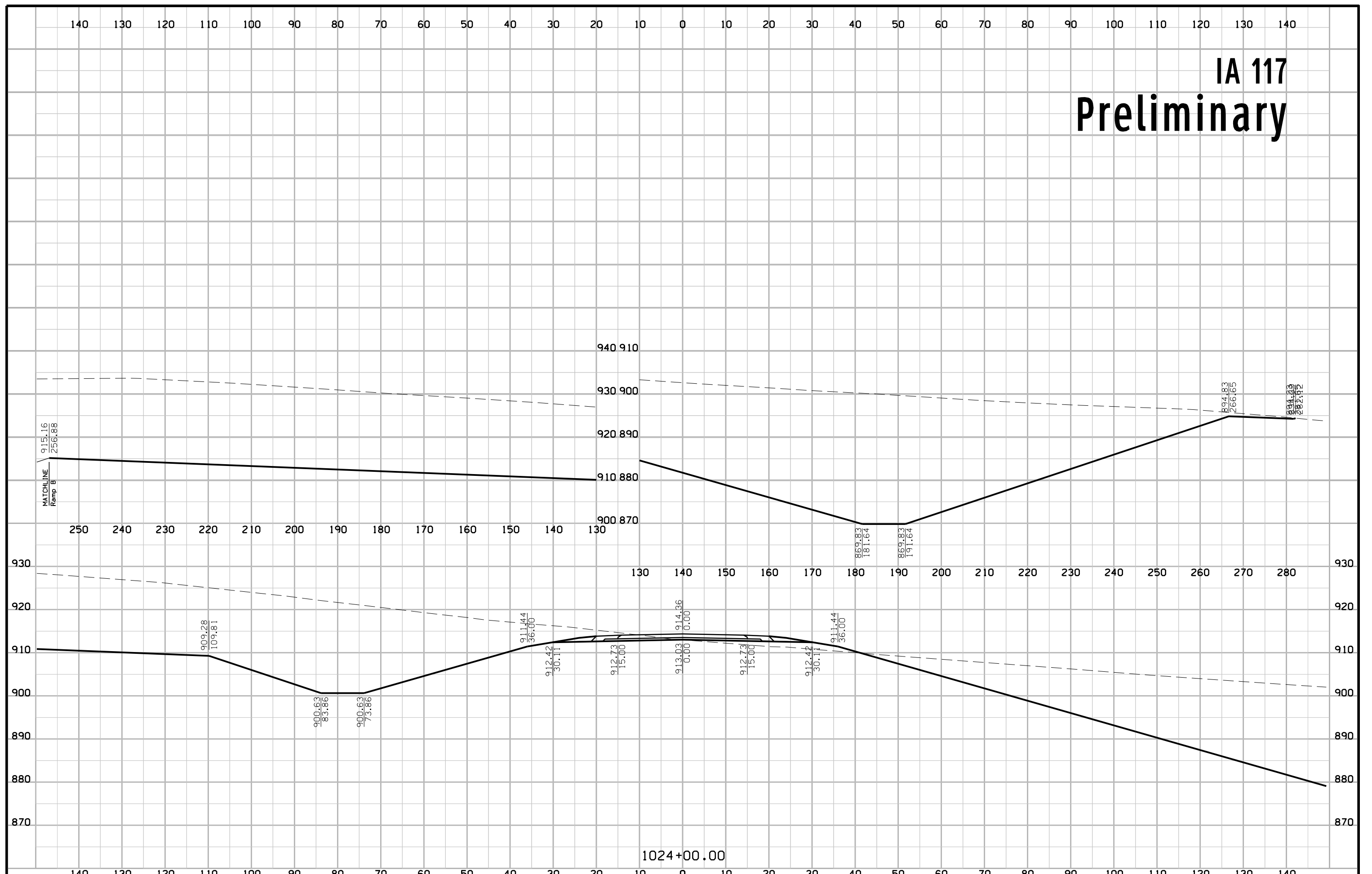


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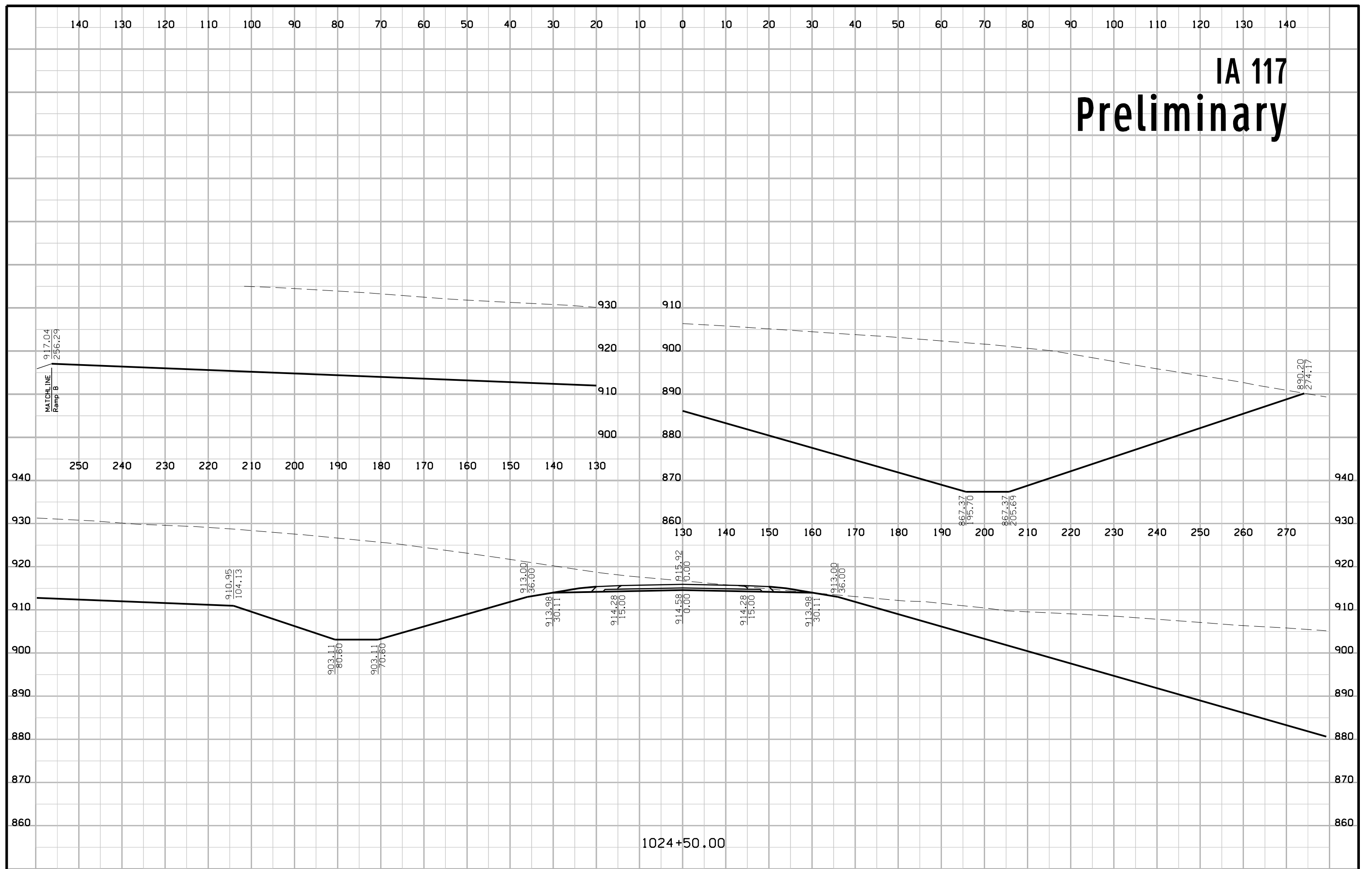


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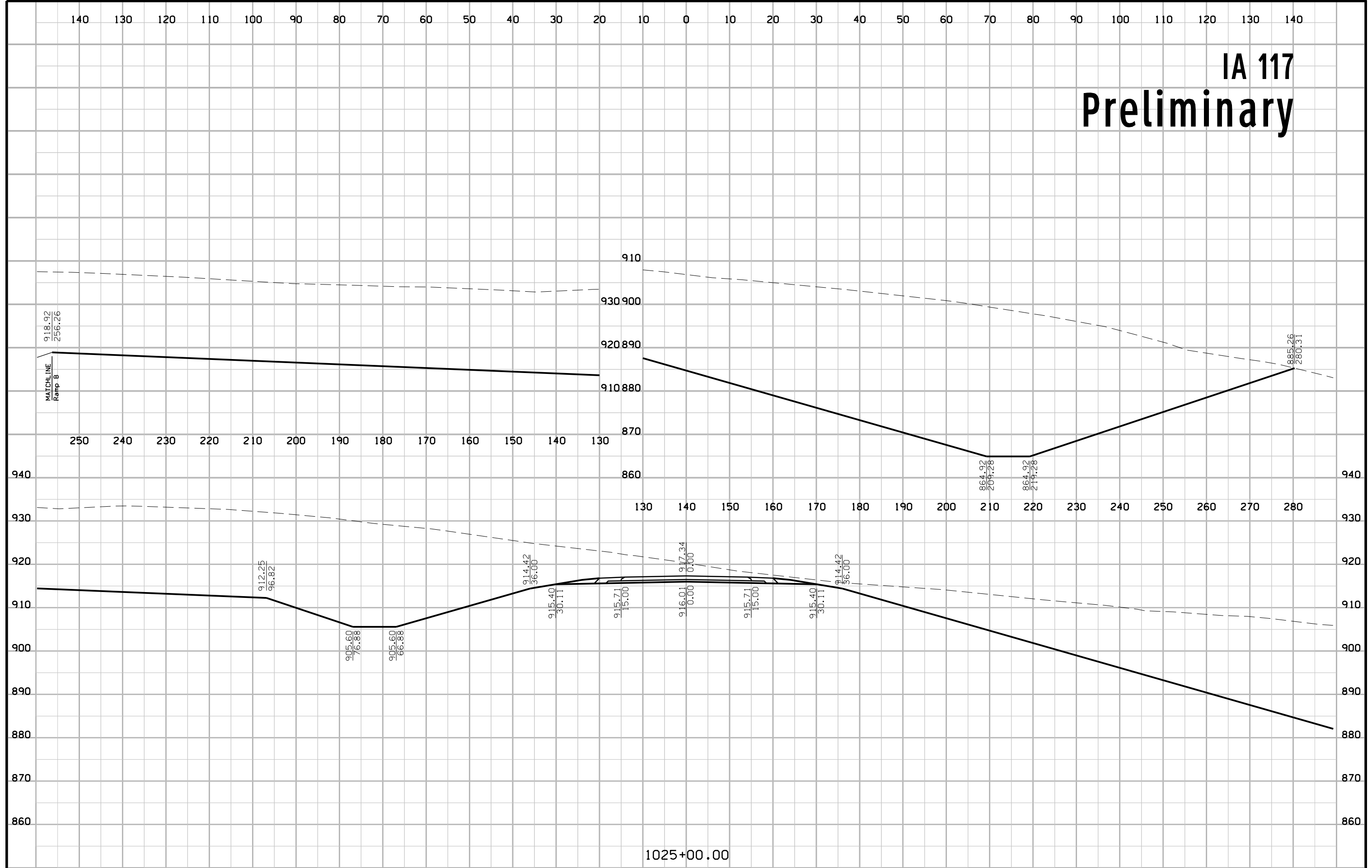
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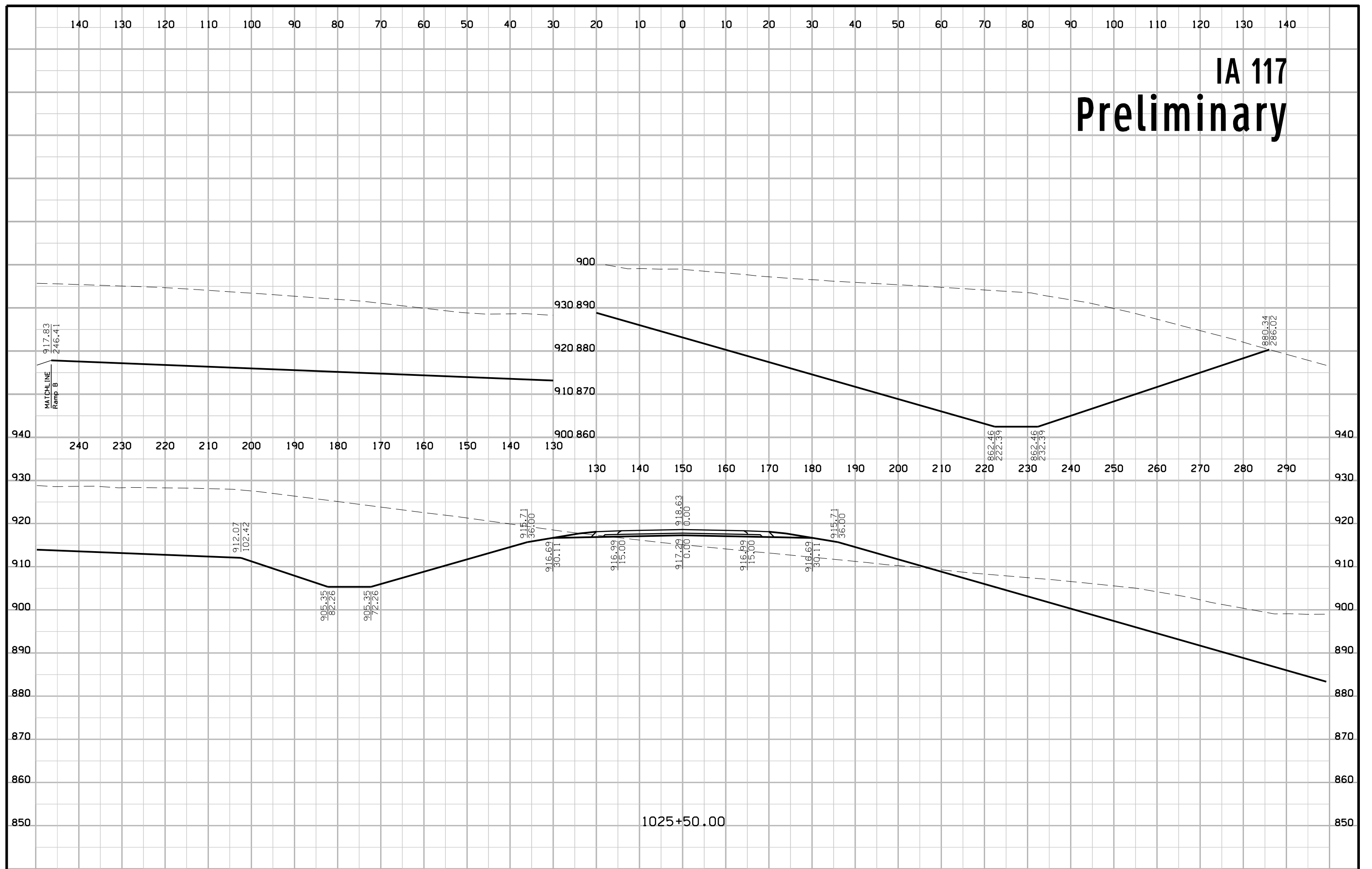
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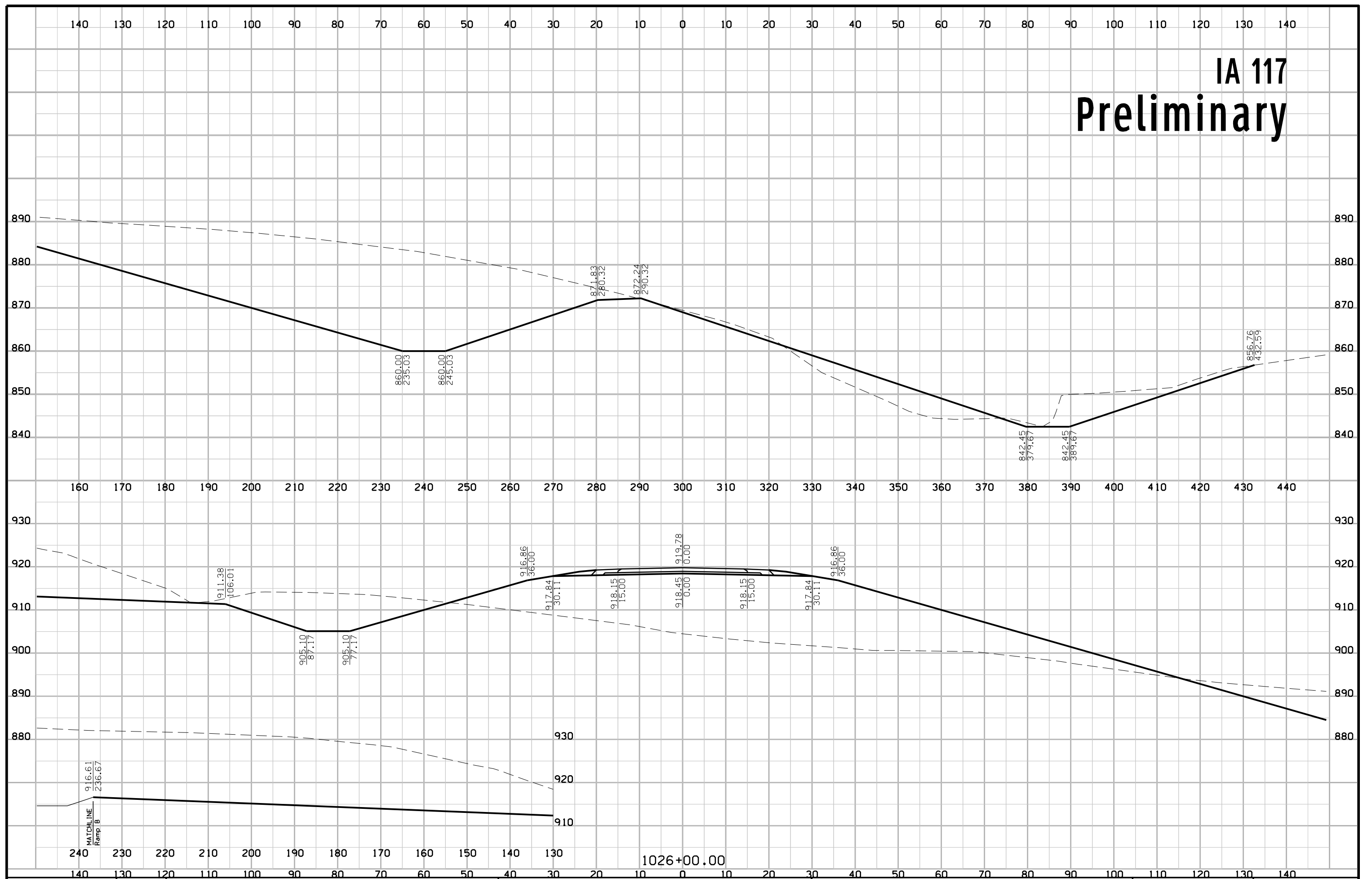
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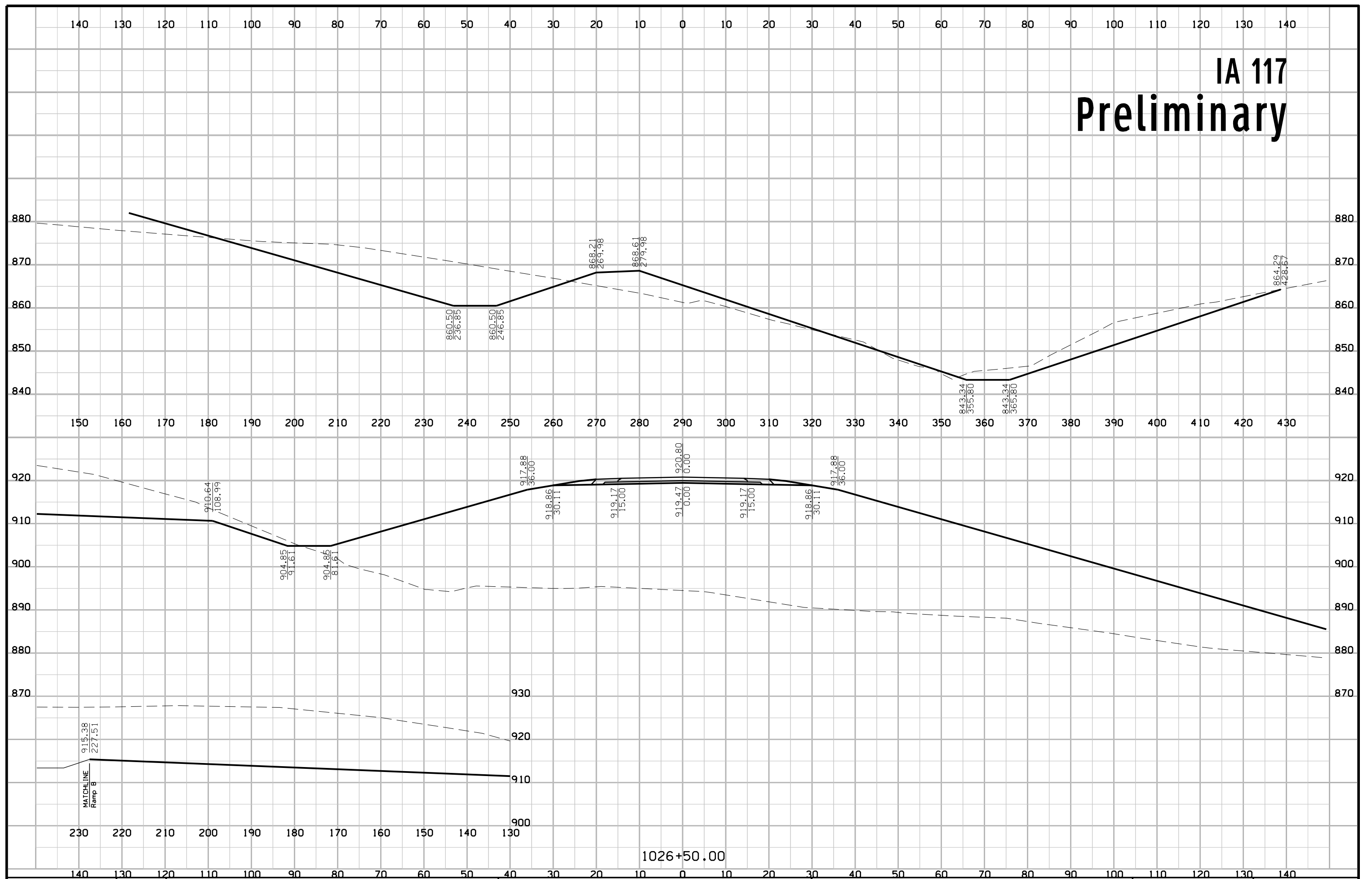


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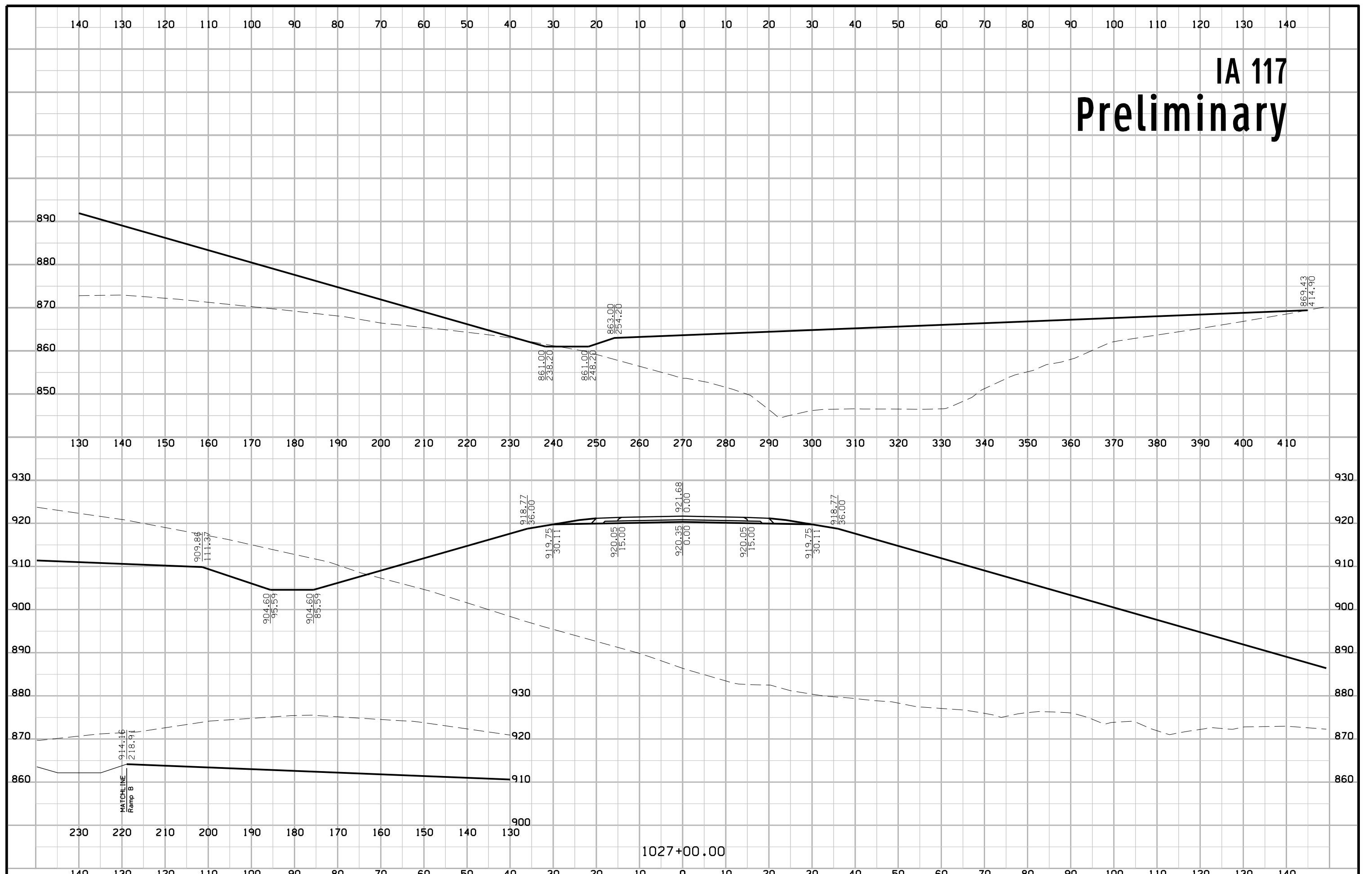


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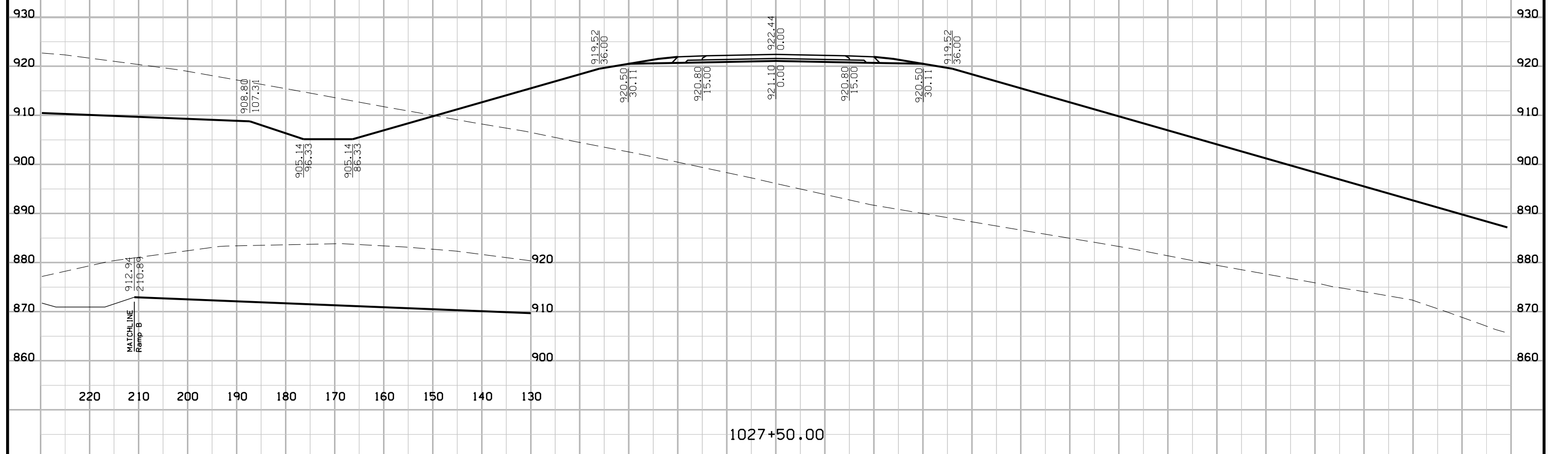
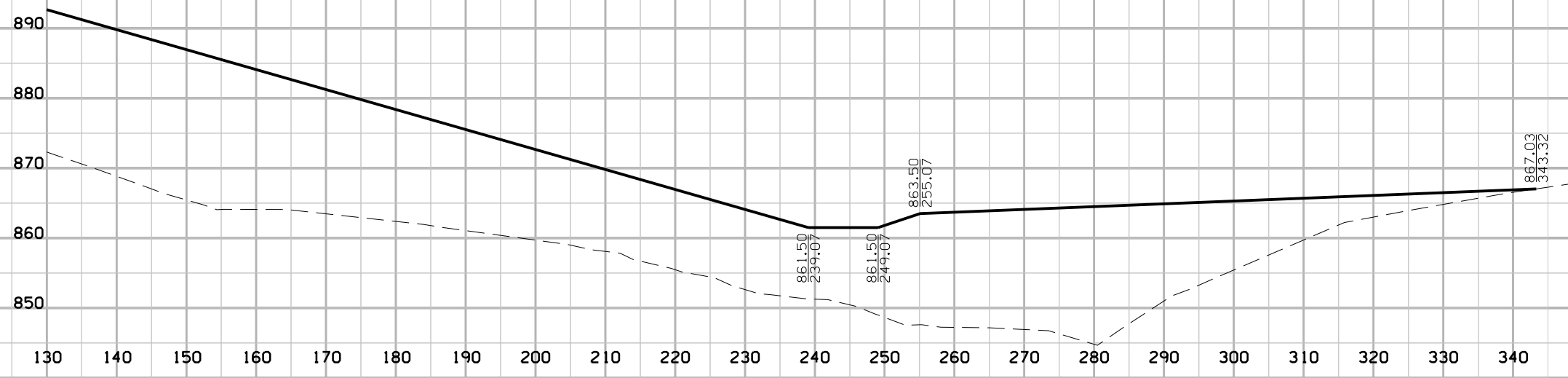


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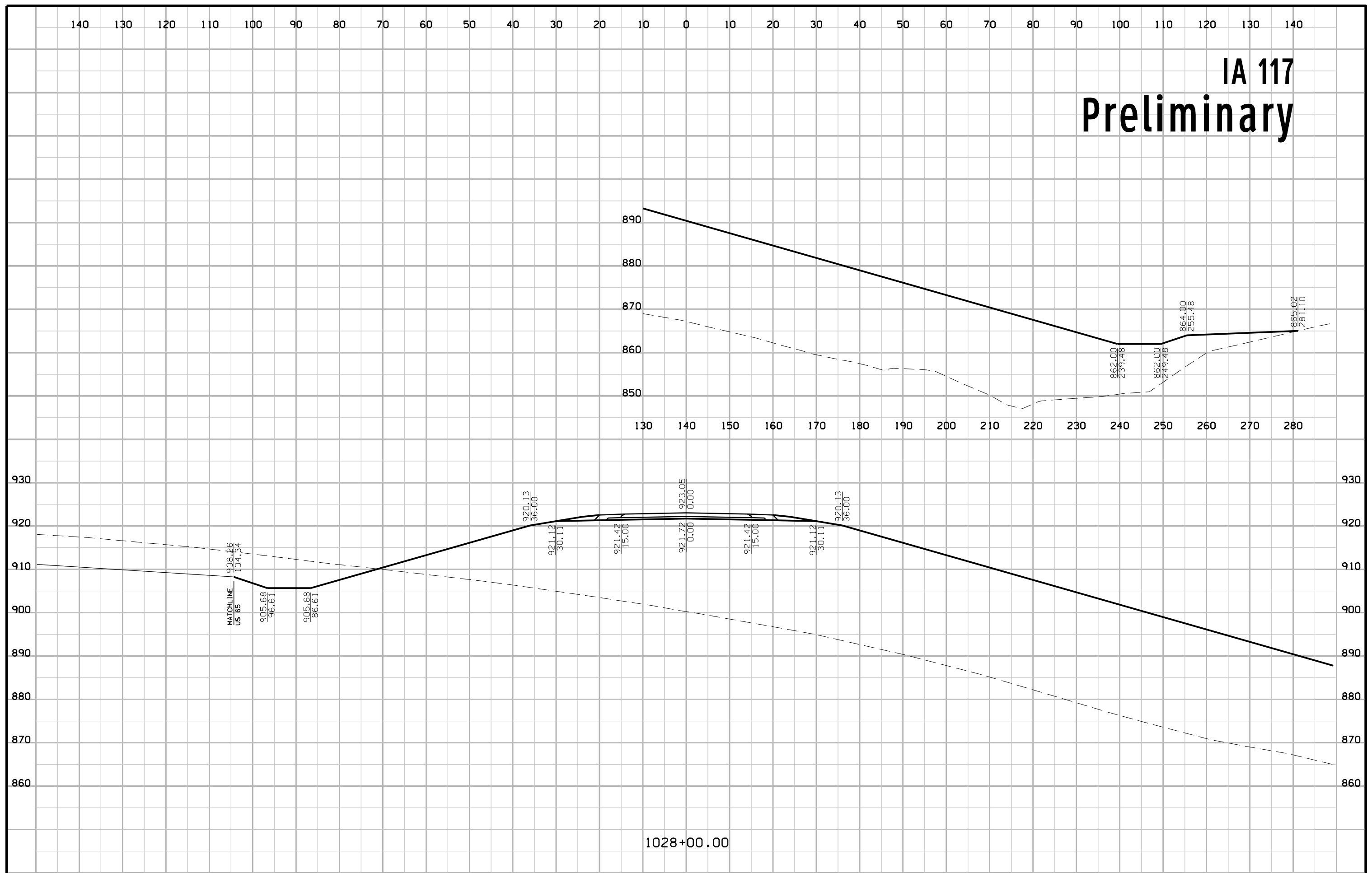
IA 117 Preliminary



IA 117 Preliminary

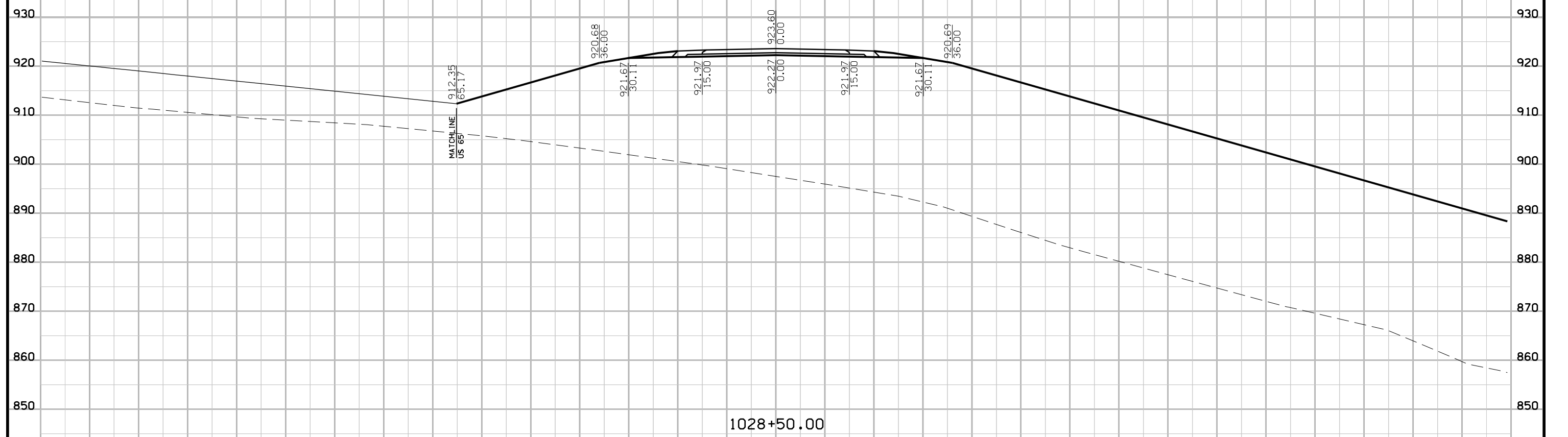
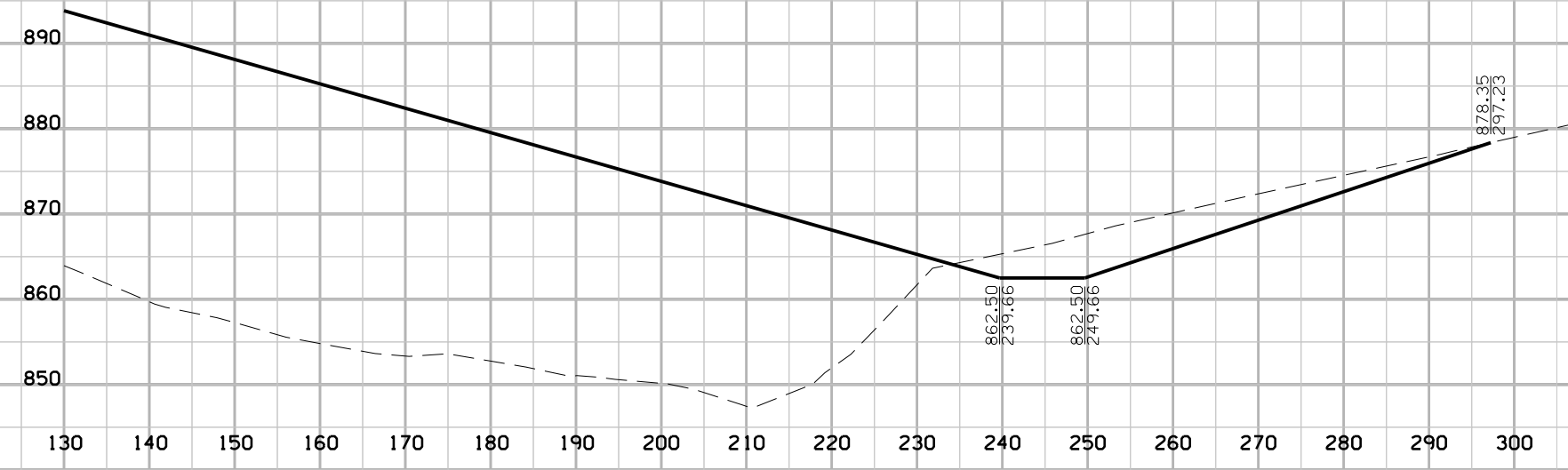


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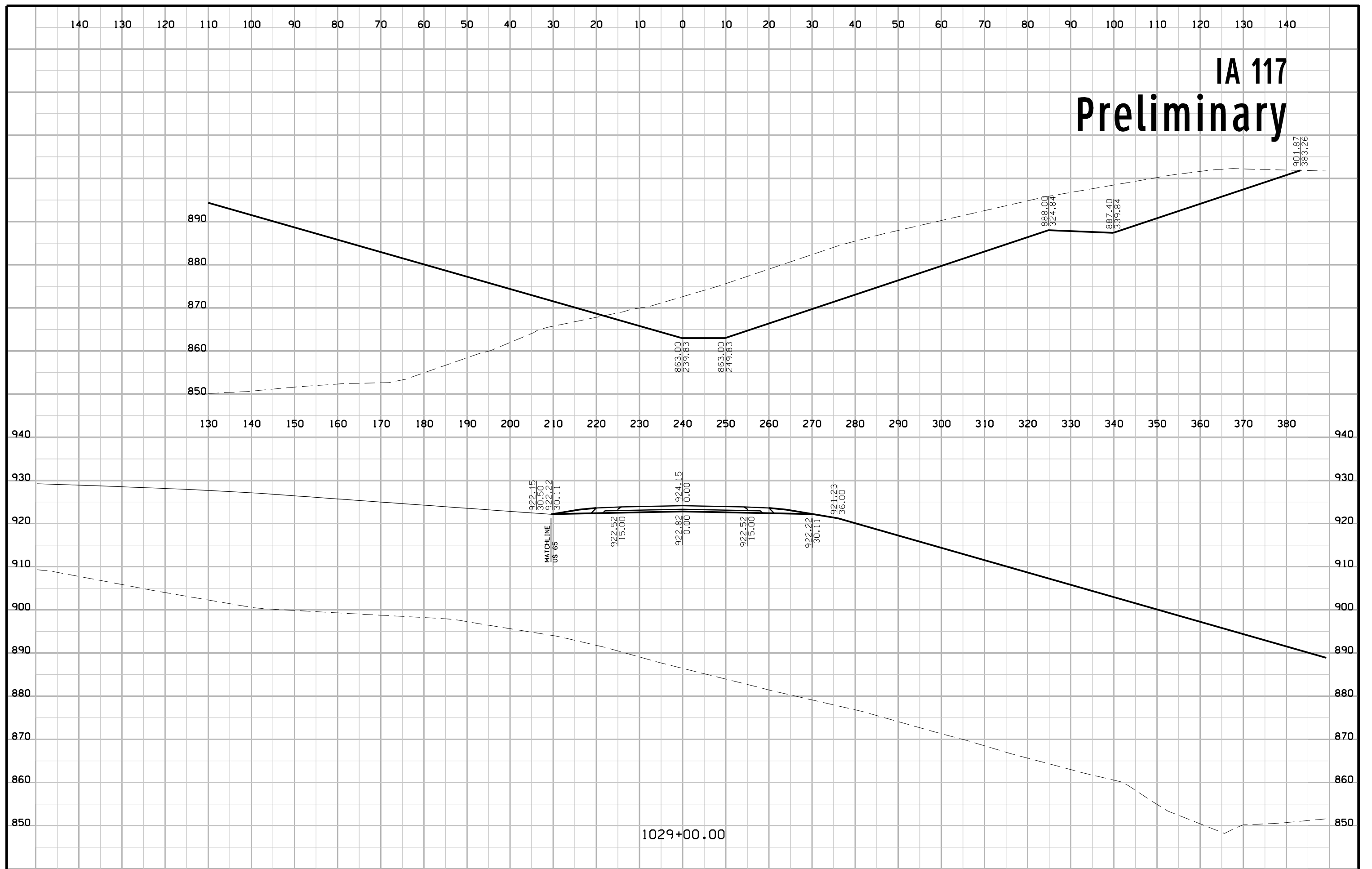


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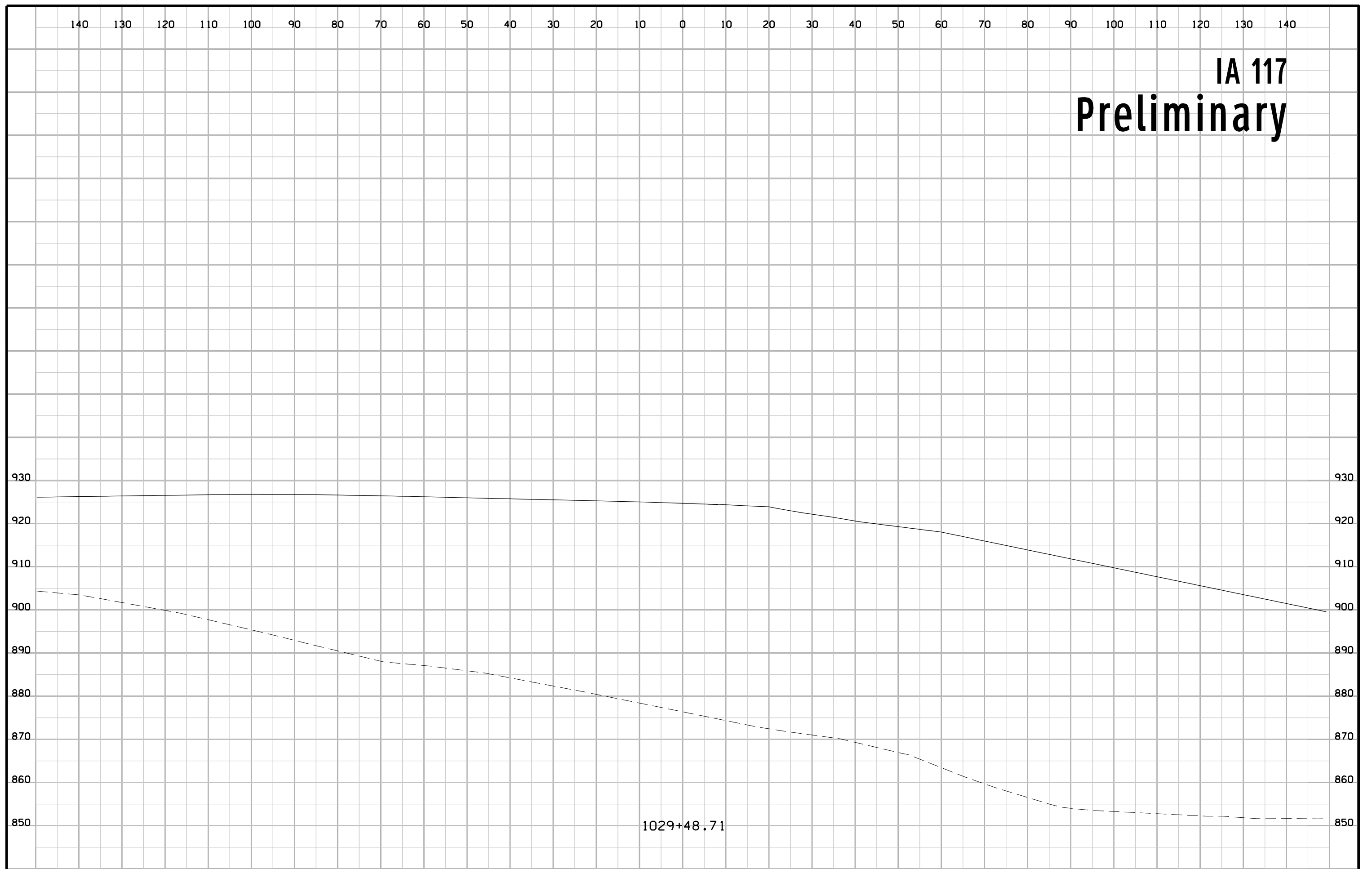
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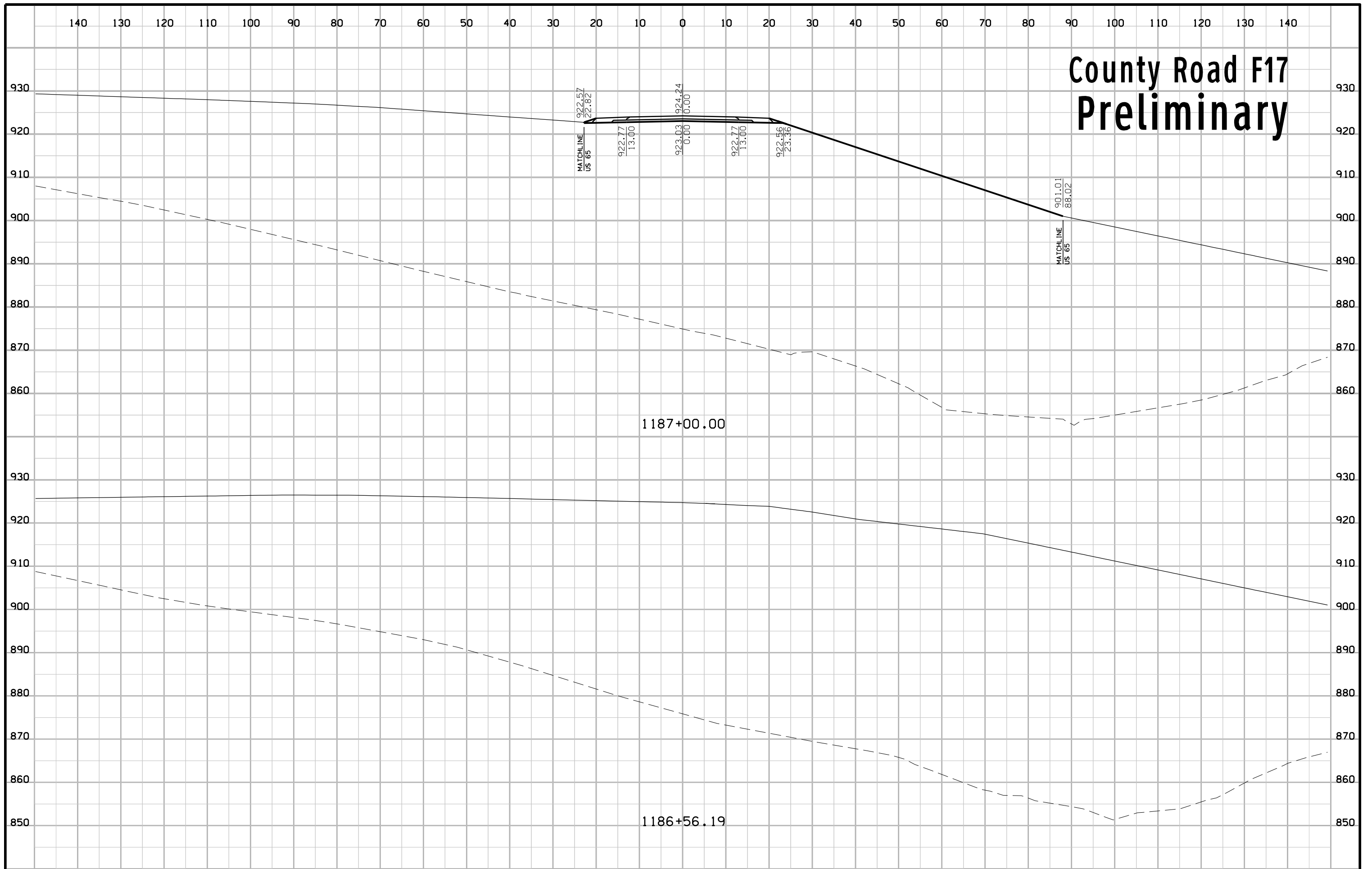
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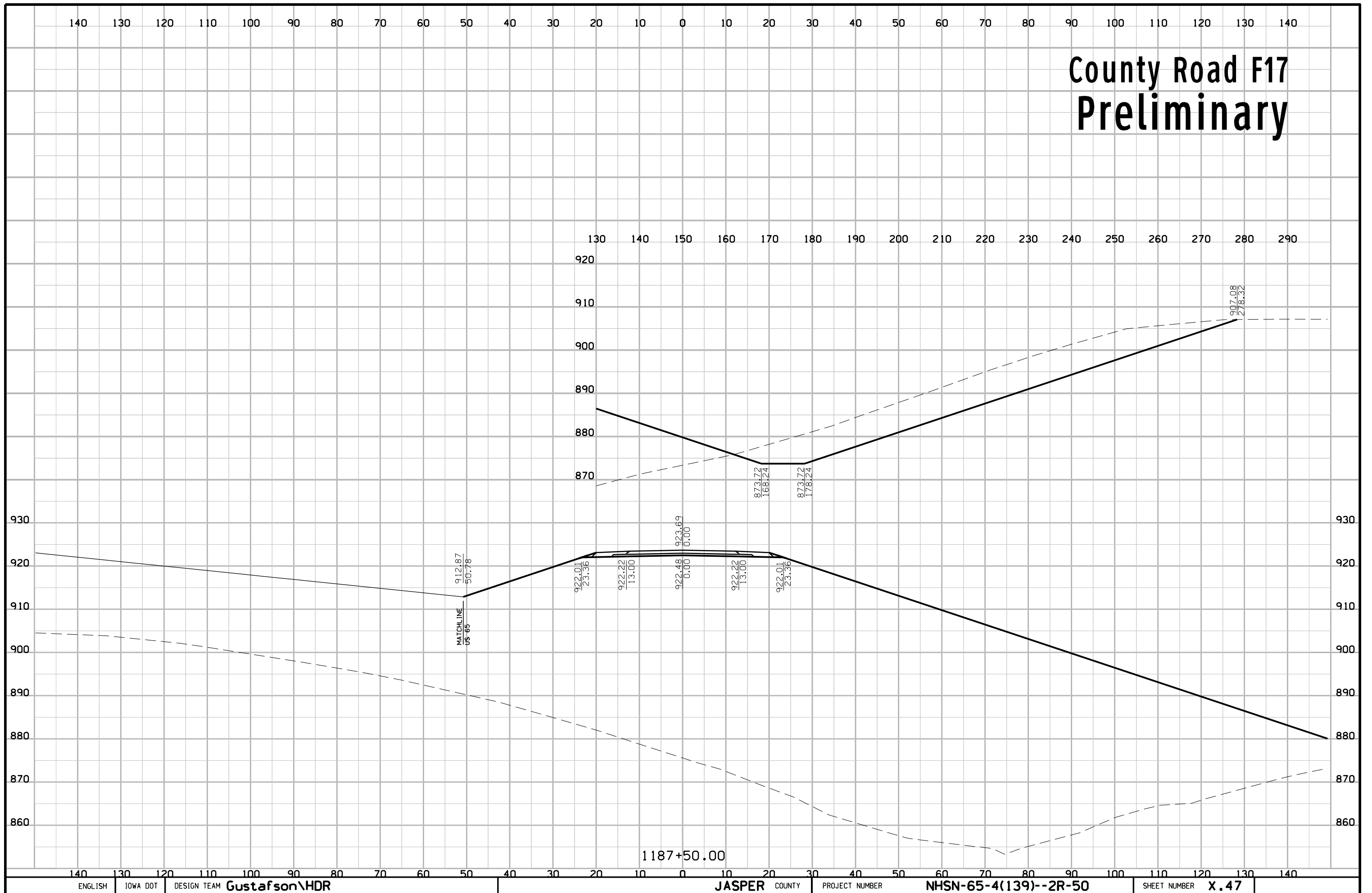
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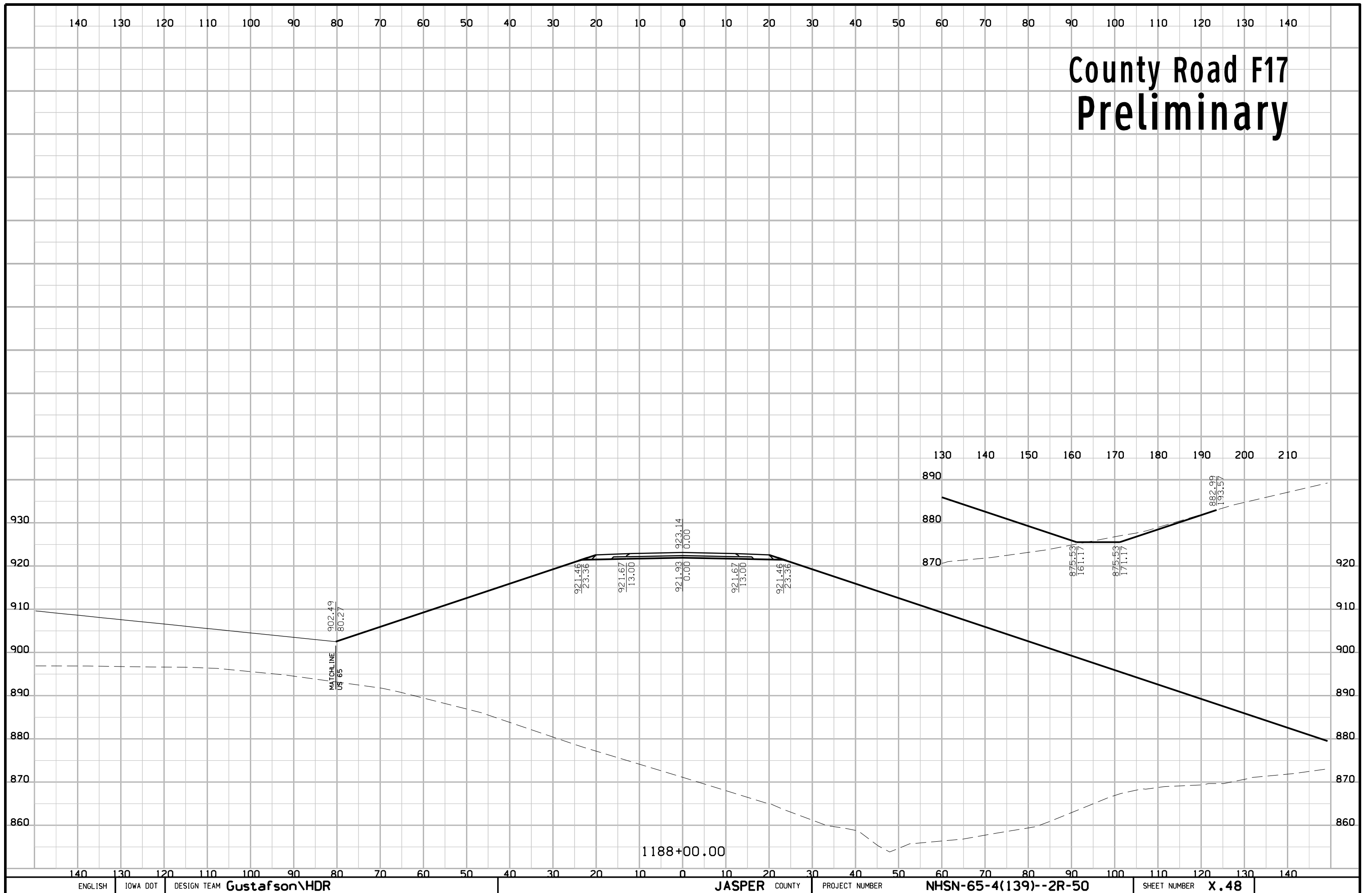
County Road F17 Preliminary



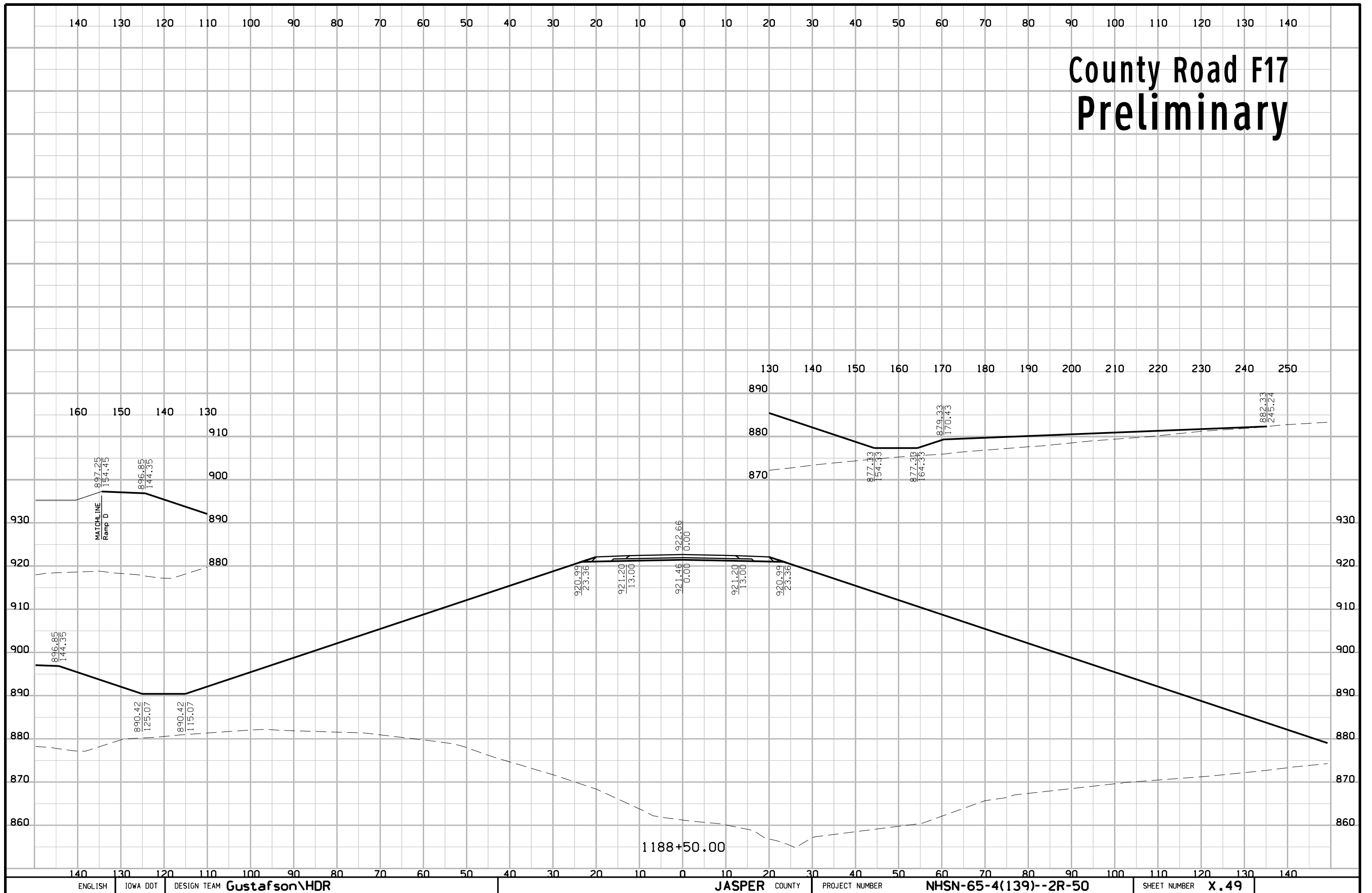
County Road F17 Preliminary



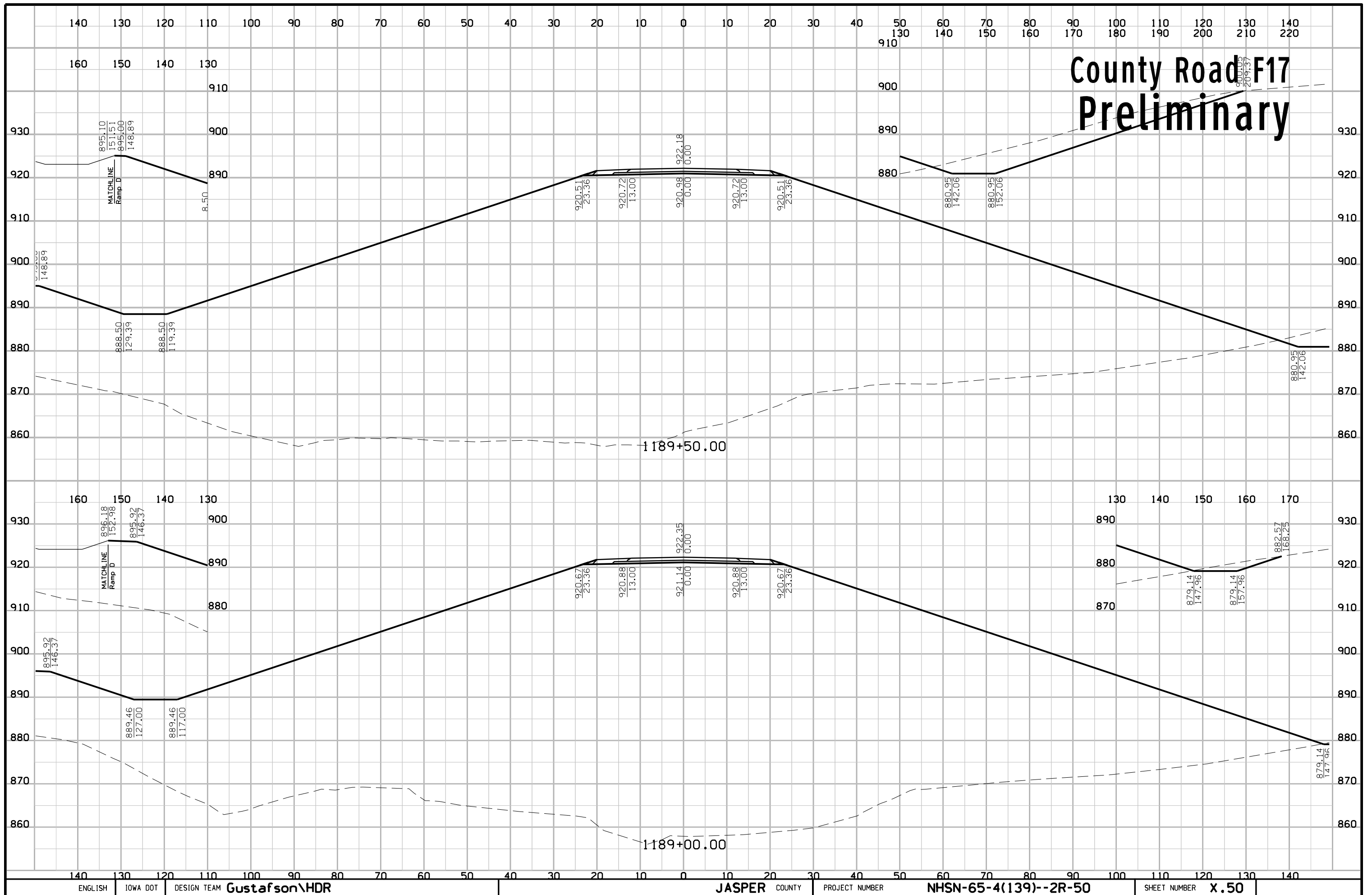
County Road F17 Preliminary



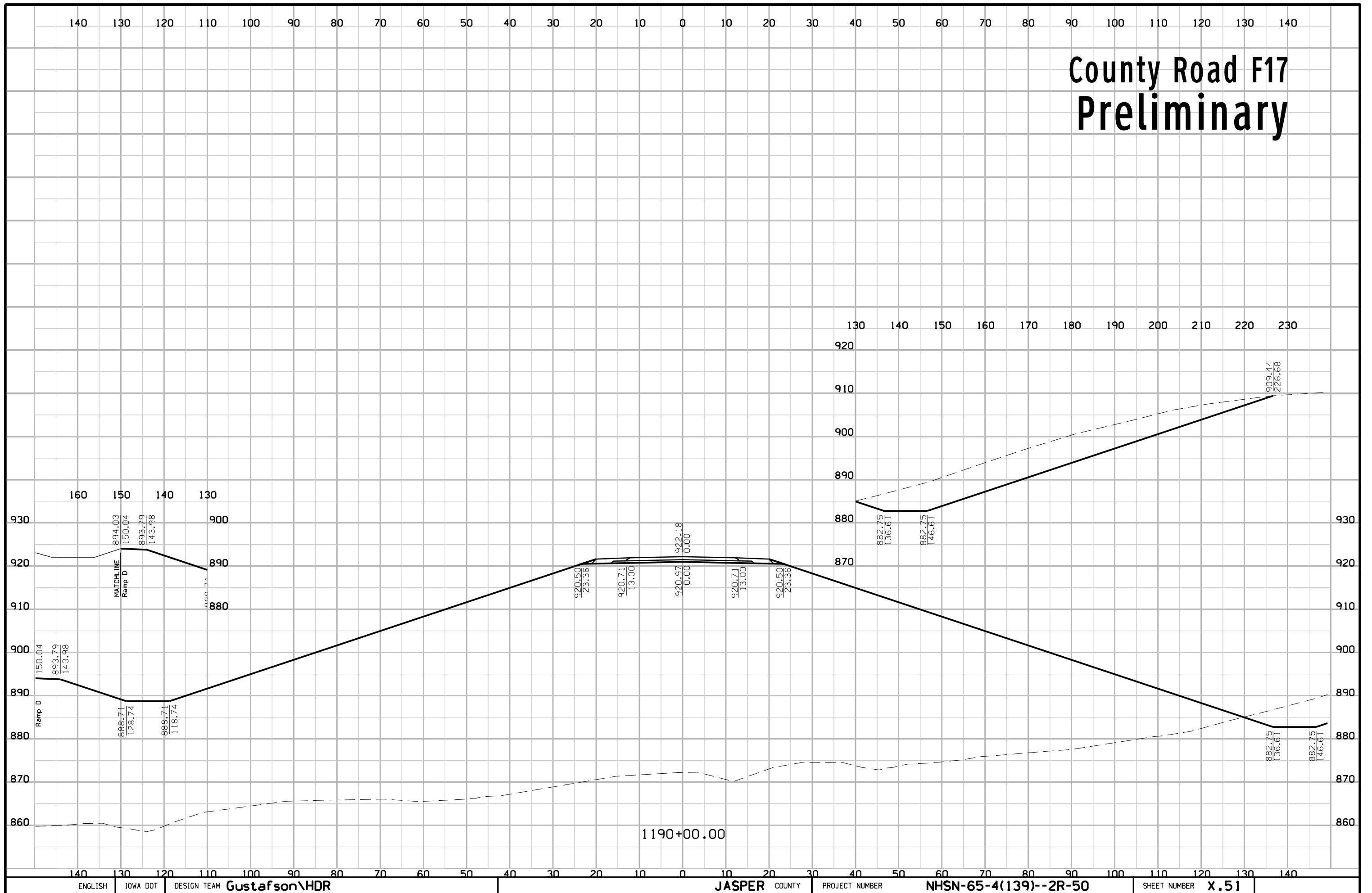
County Road F17 Preliminary



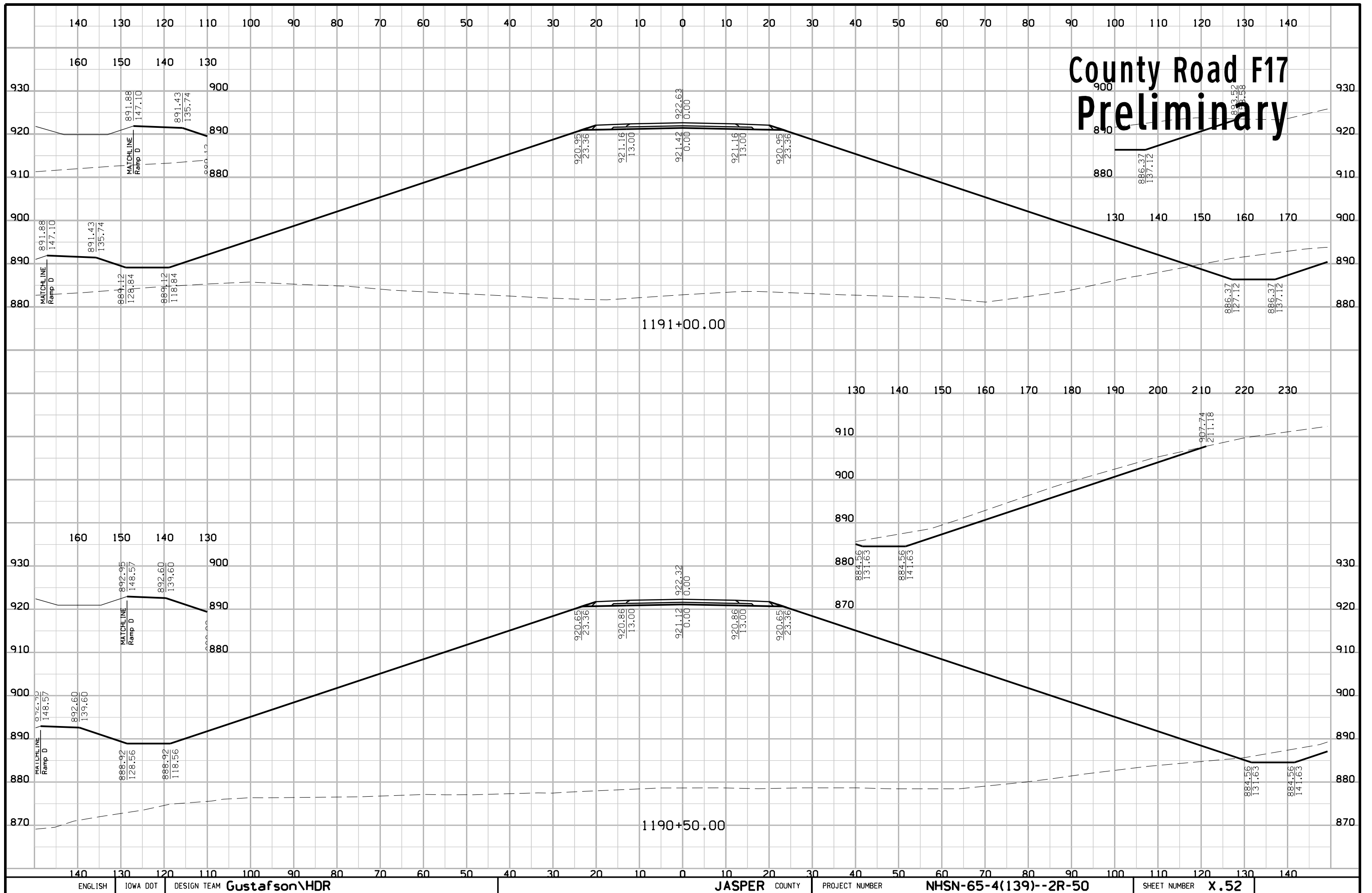
County Road F17 Preliminary



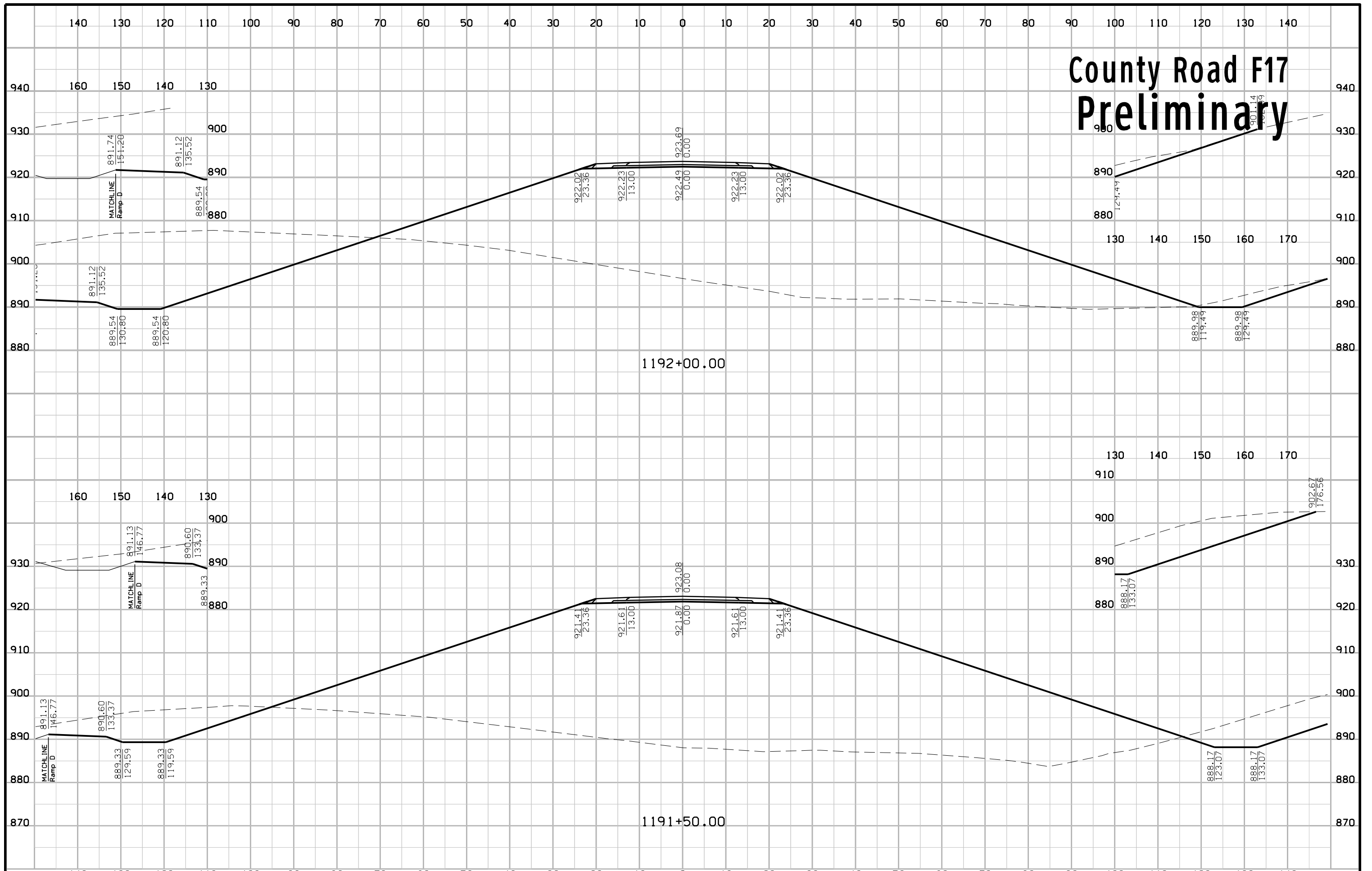
County Road F17 Preliminary



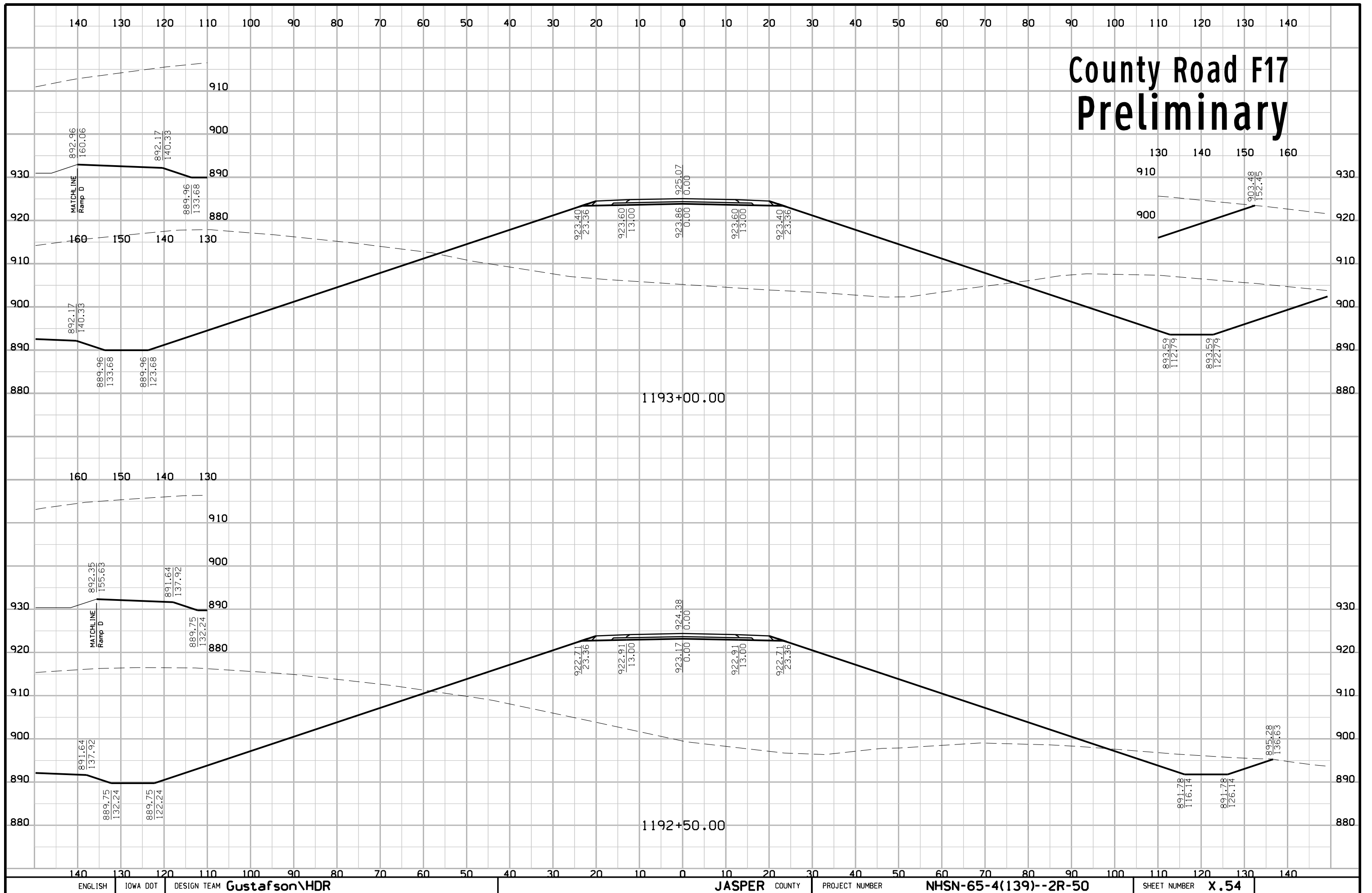
County Road F17 Preliminary



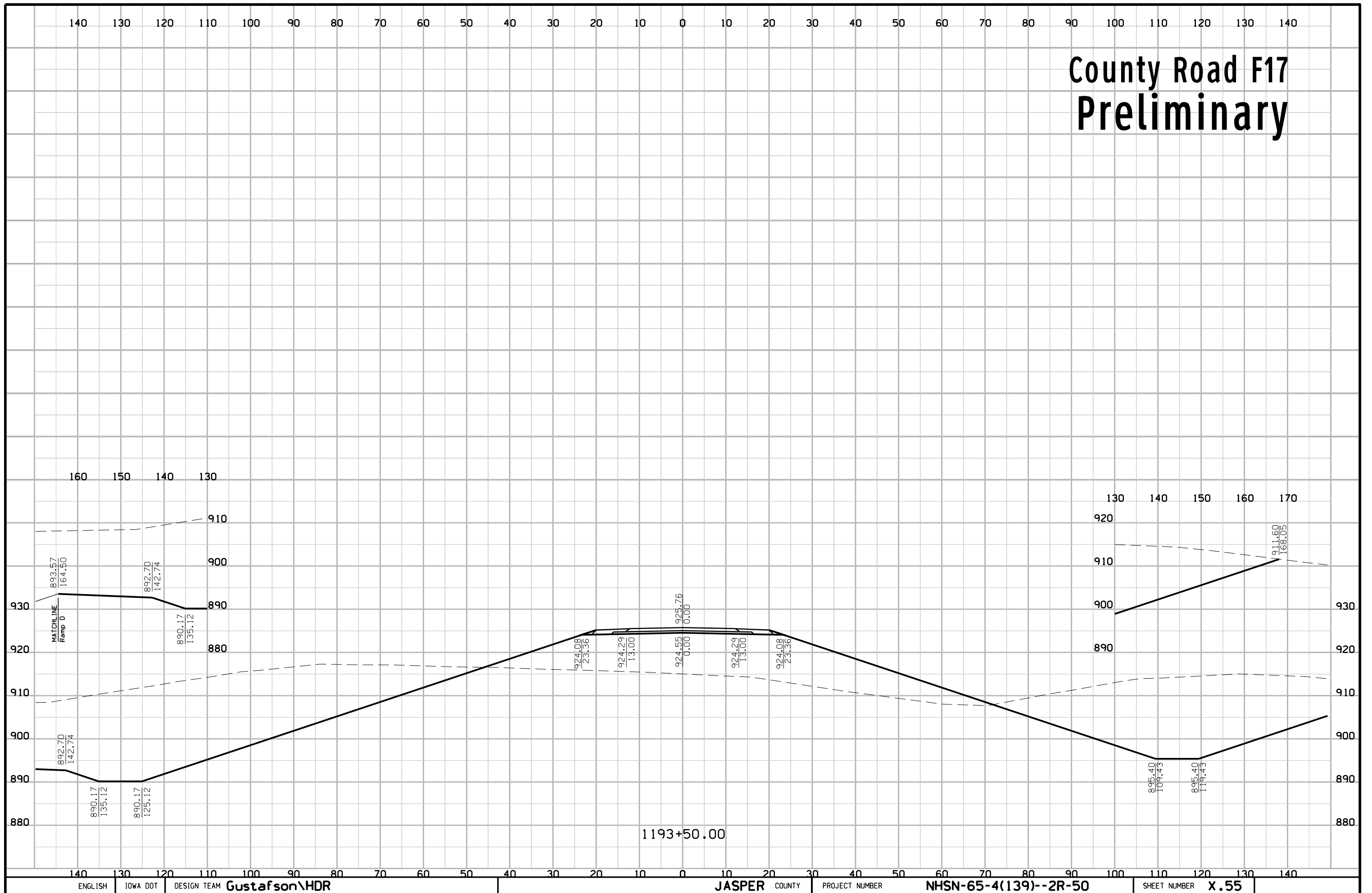
County Road F17 Preliminary



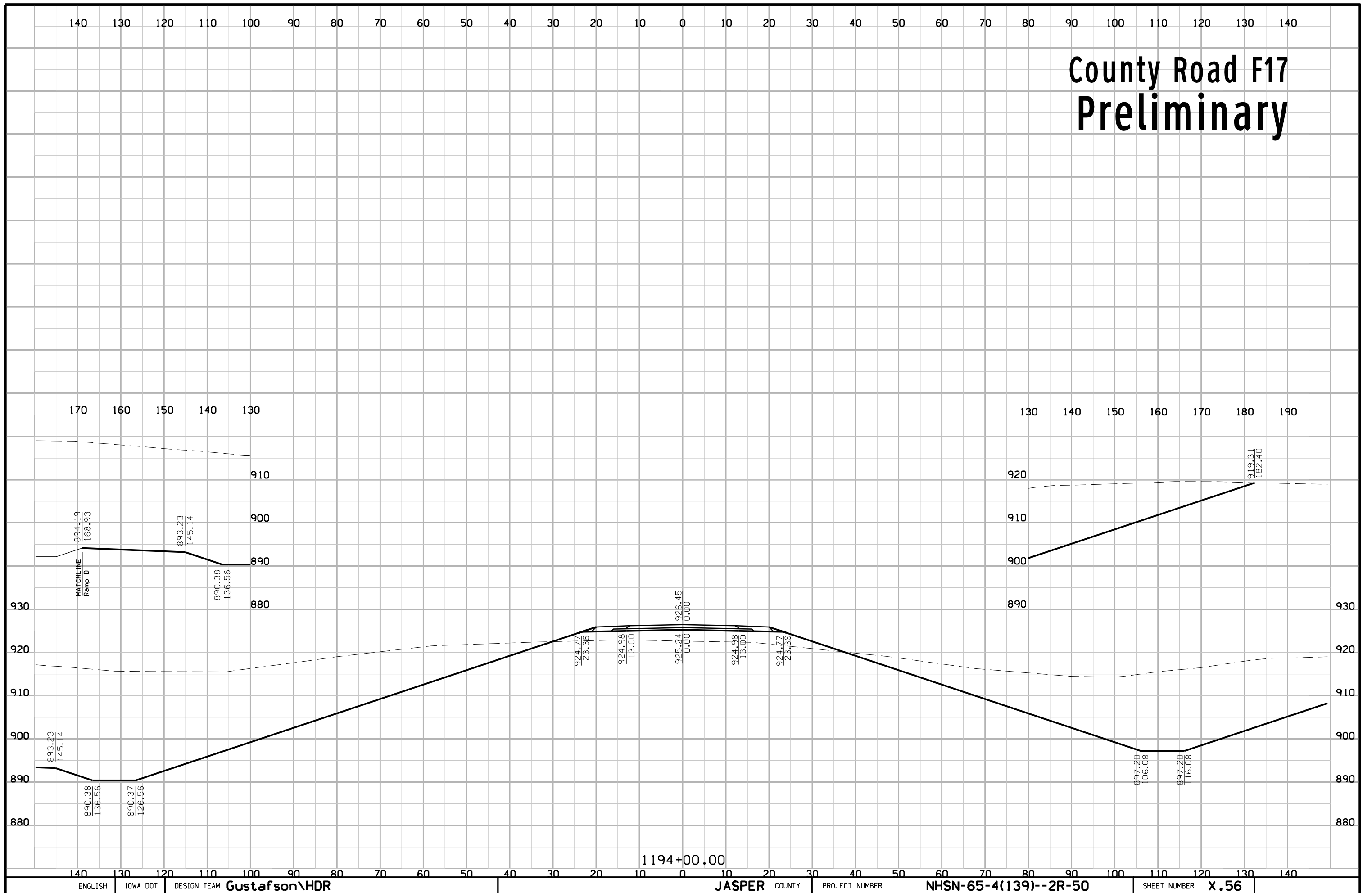
County Road F17 Preliminary



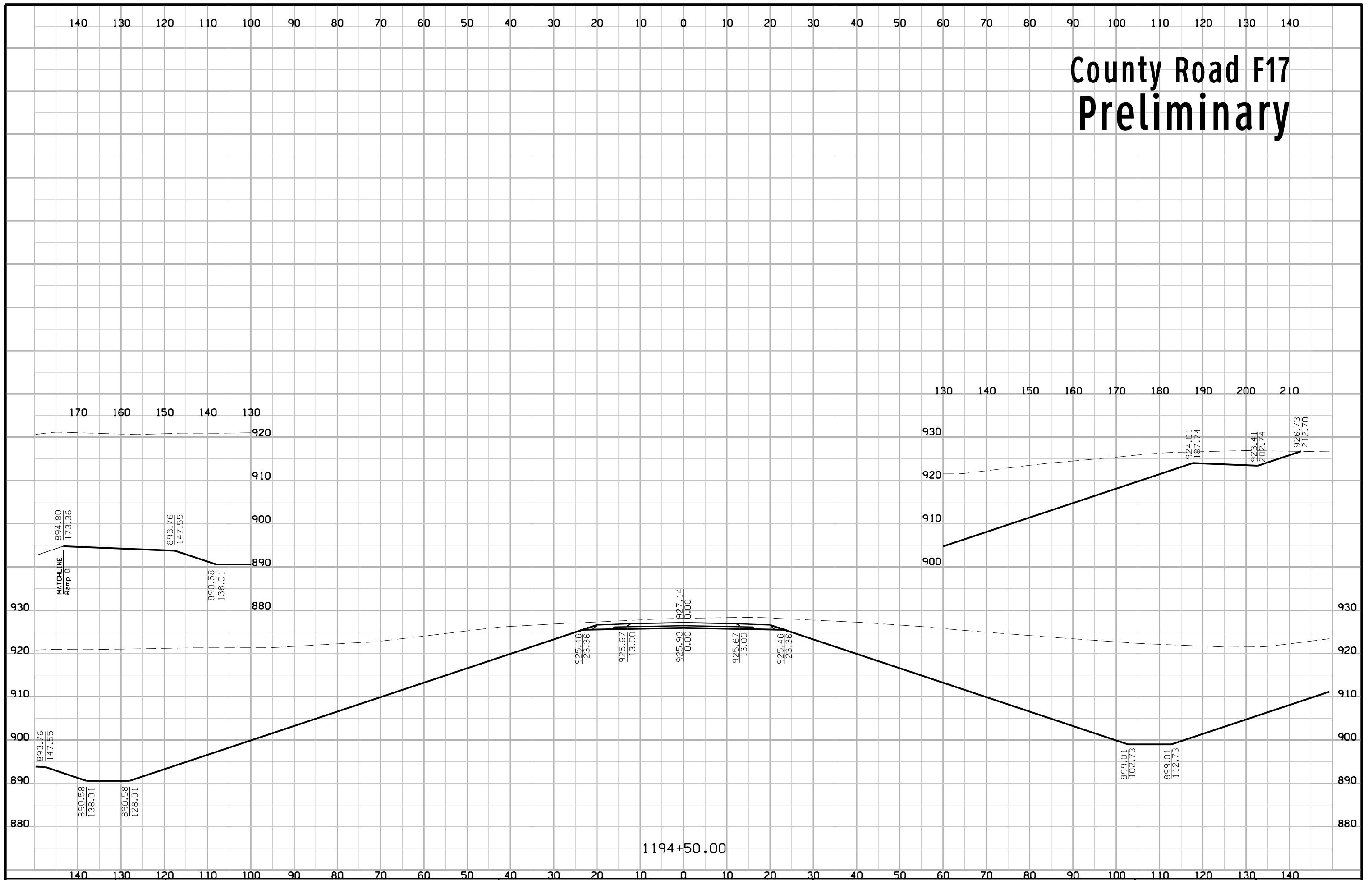
County Road F17 Preliminary



County Road F17 Preliminary

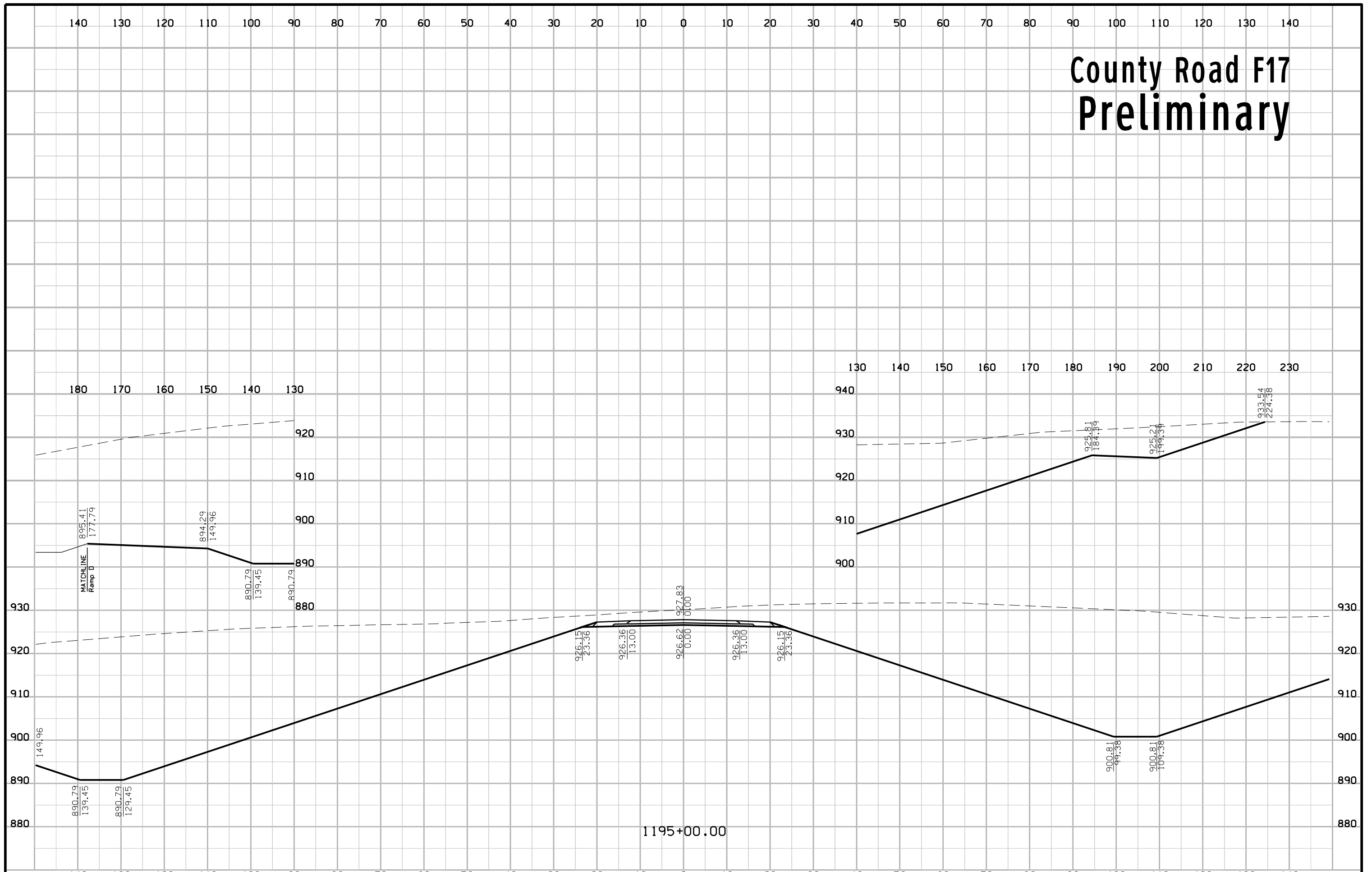


County Road F17 Preliminary

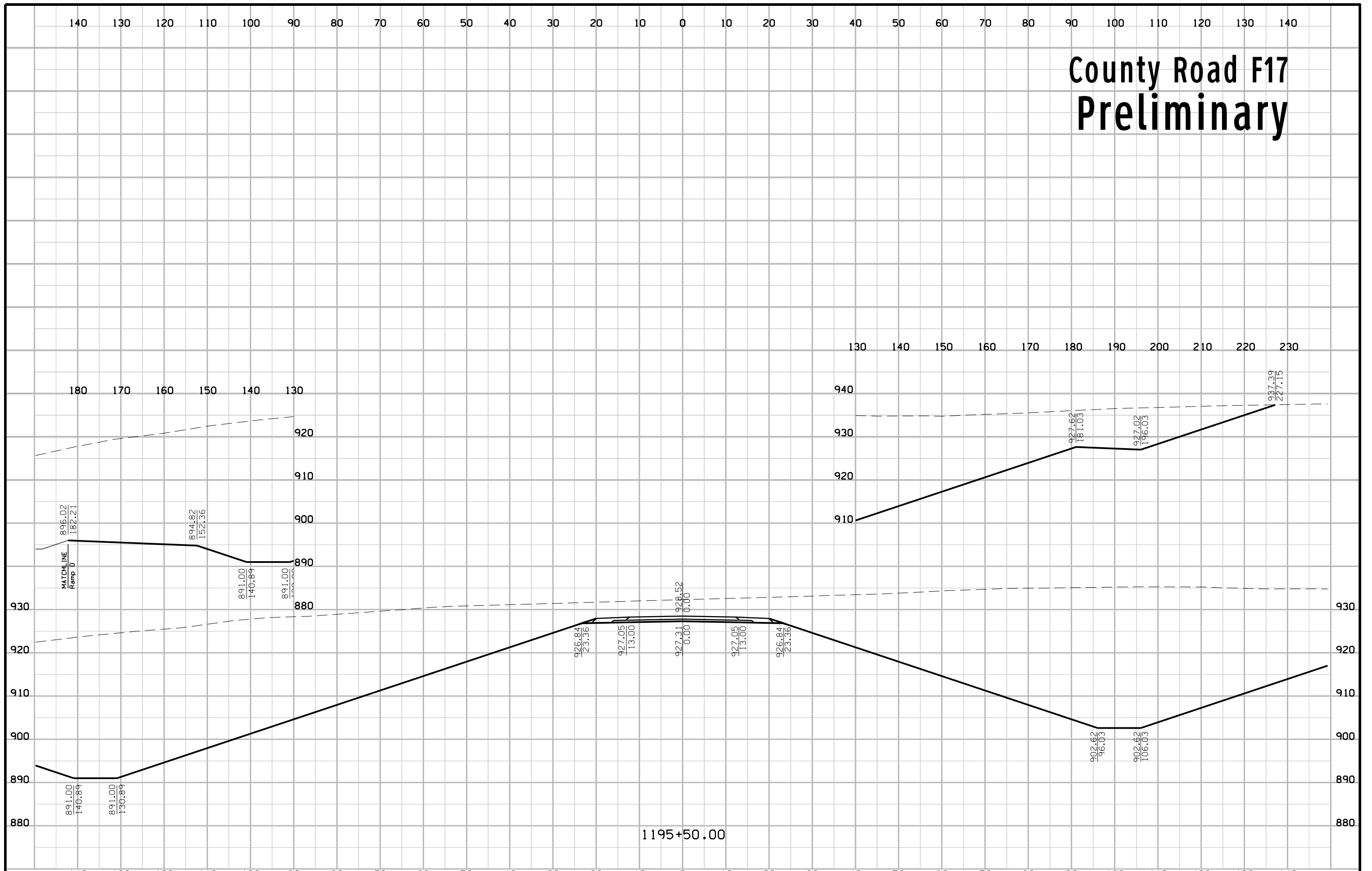


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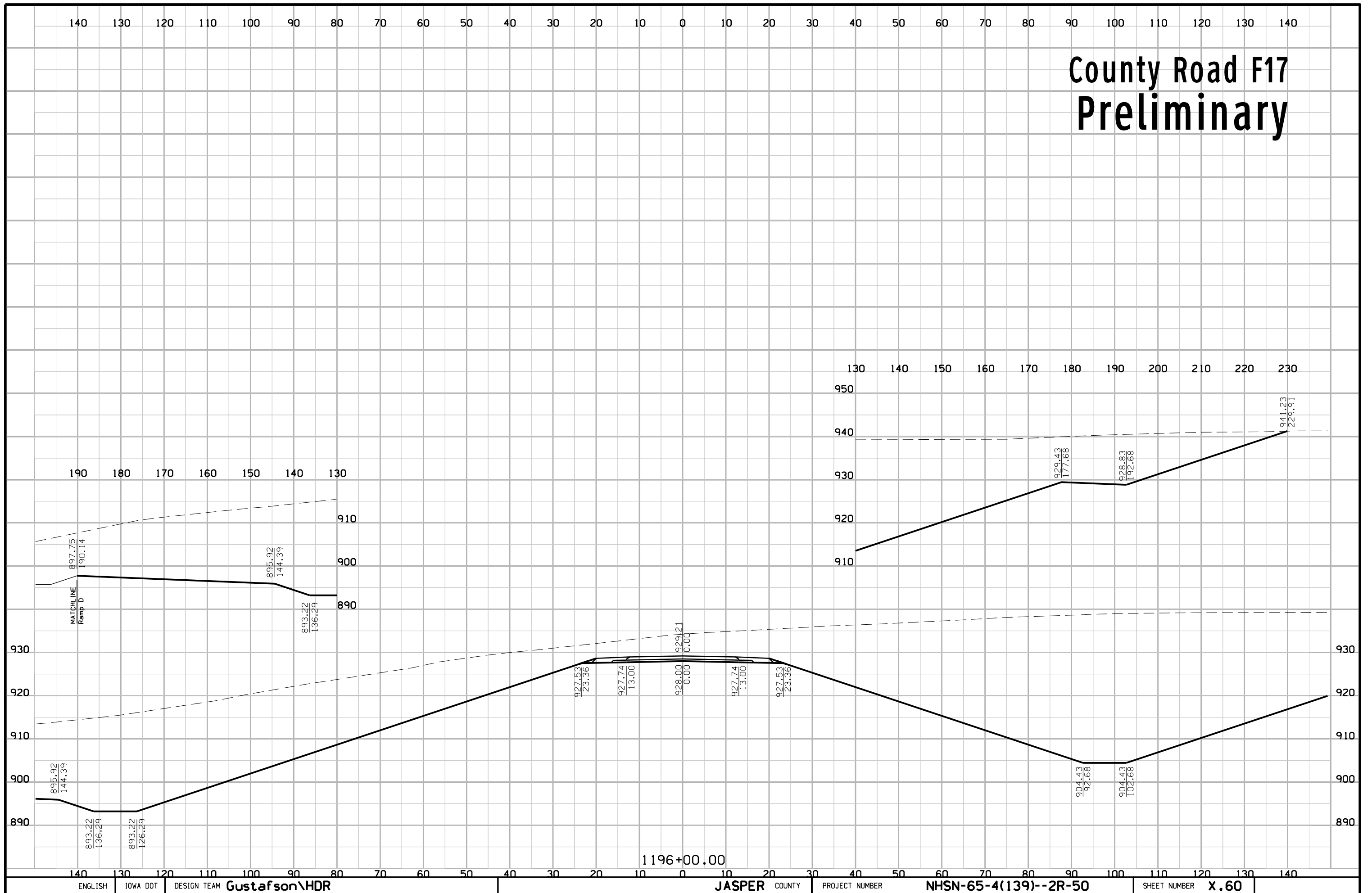
County Road F17 Preliminary



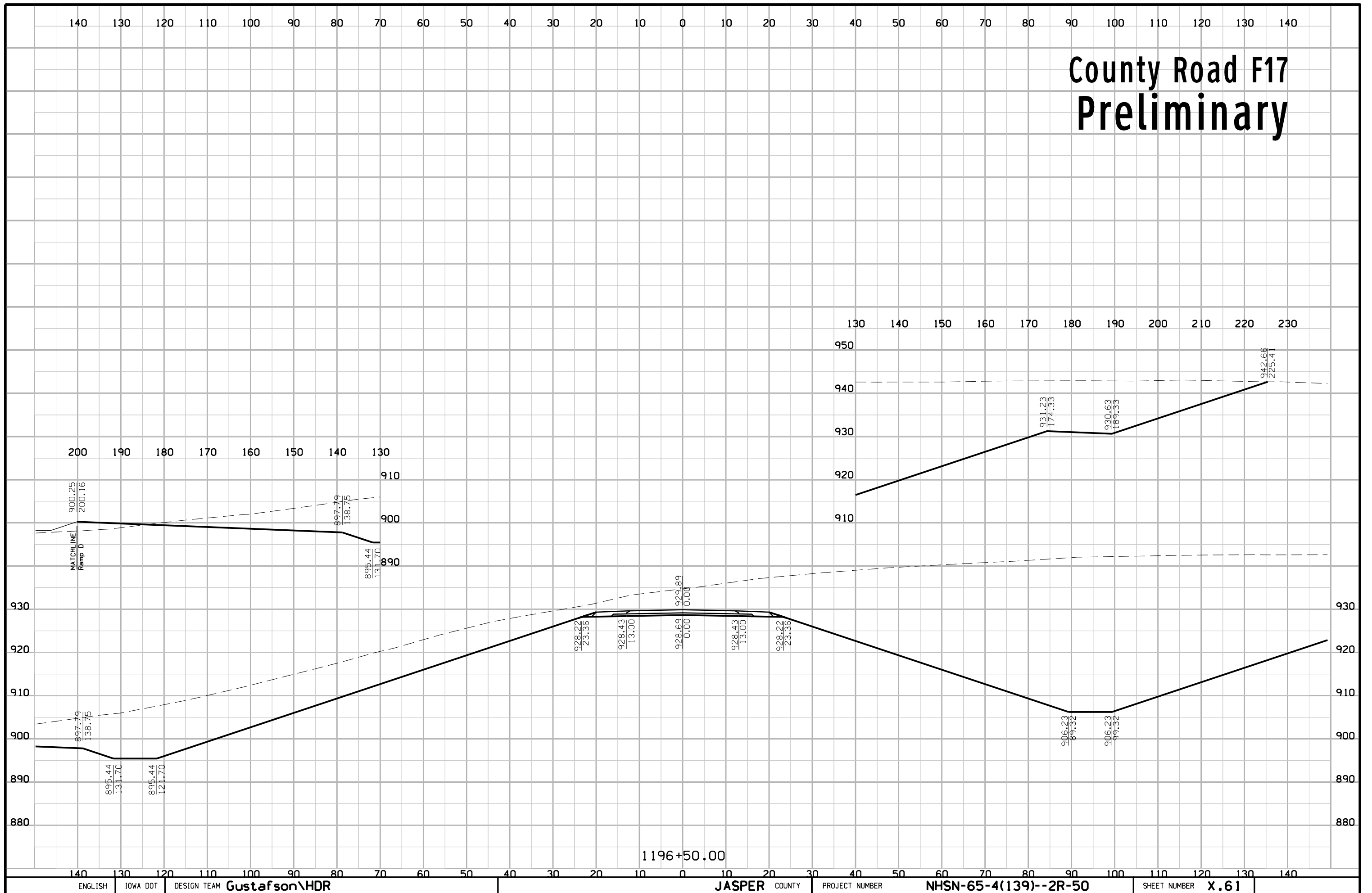
County Road F17 Preliminary



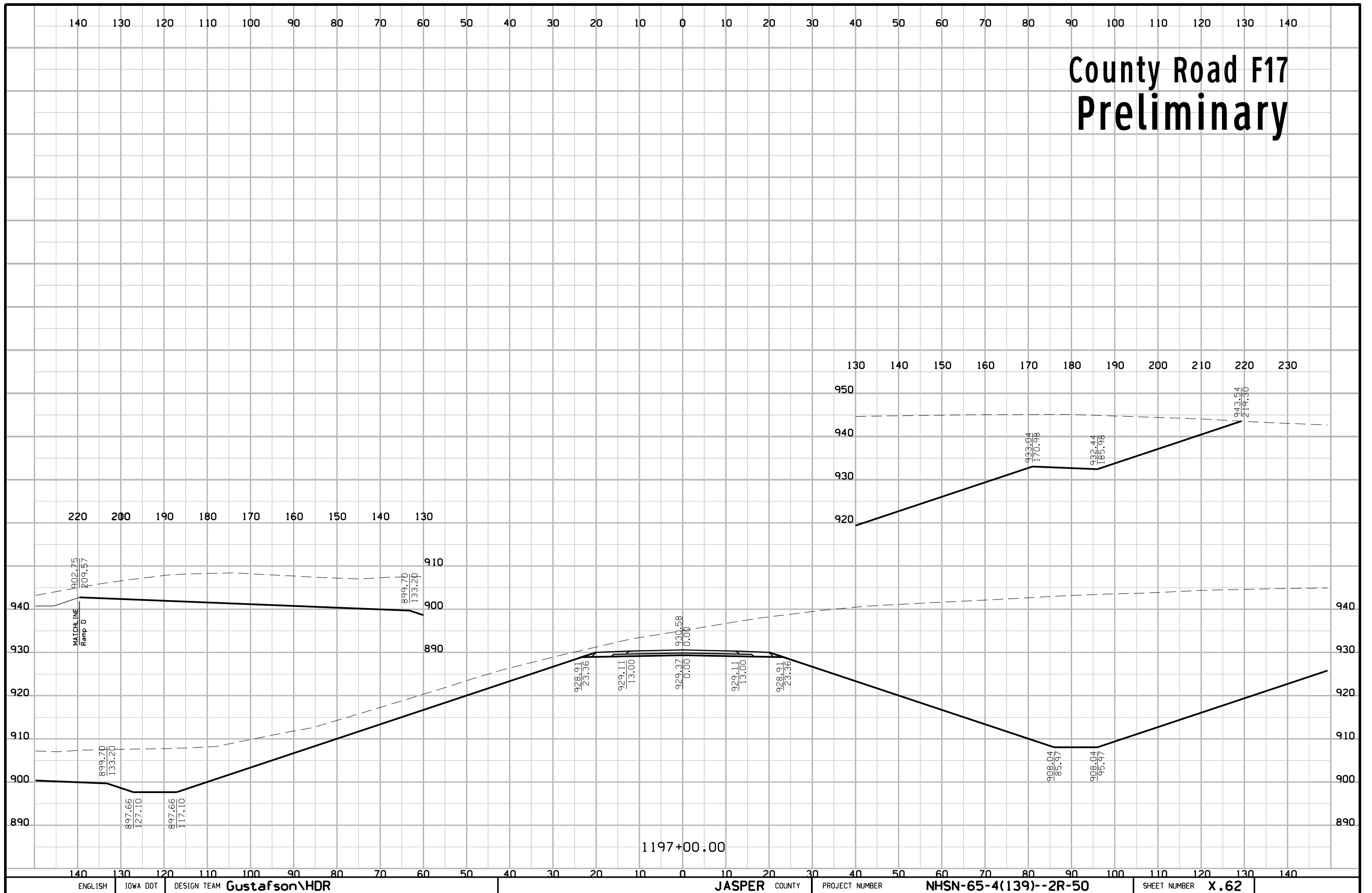
County Road F17 Preliminary



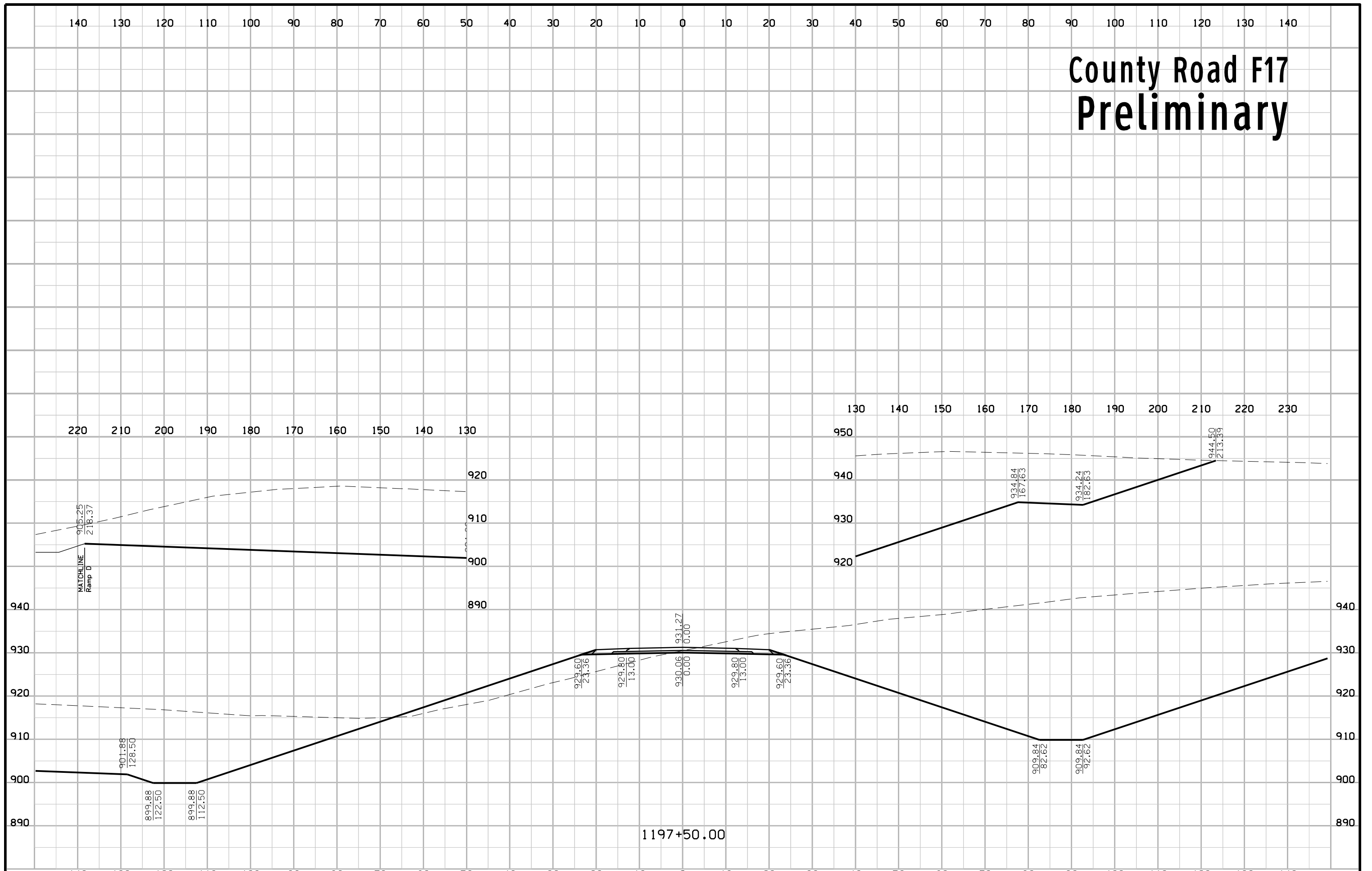
County Road F17 Preliminary



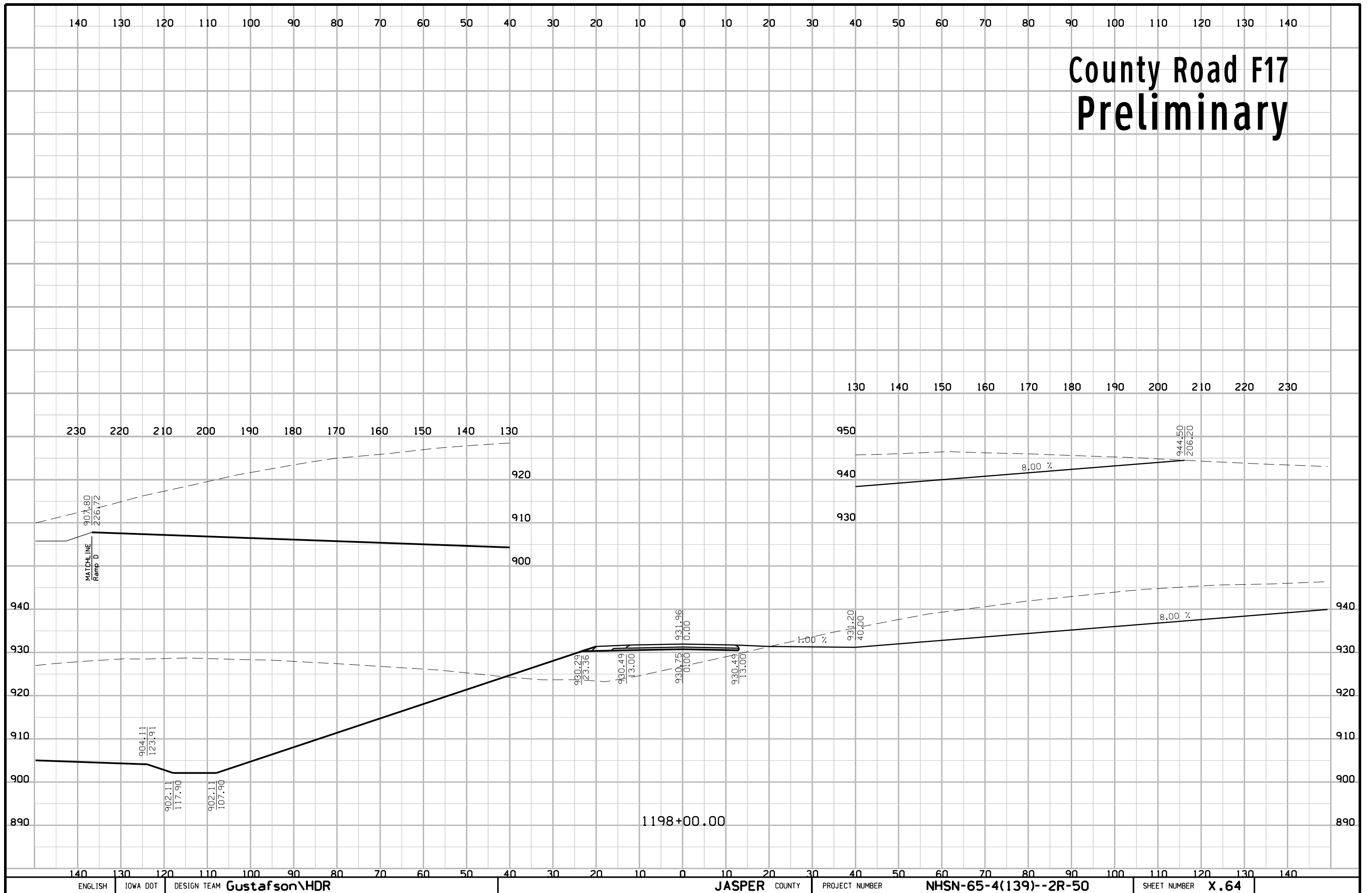
County Road F17 Preliminary



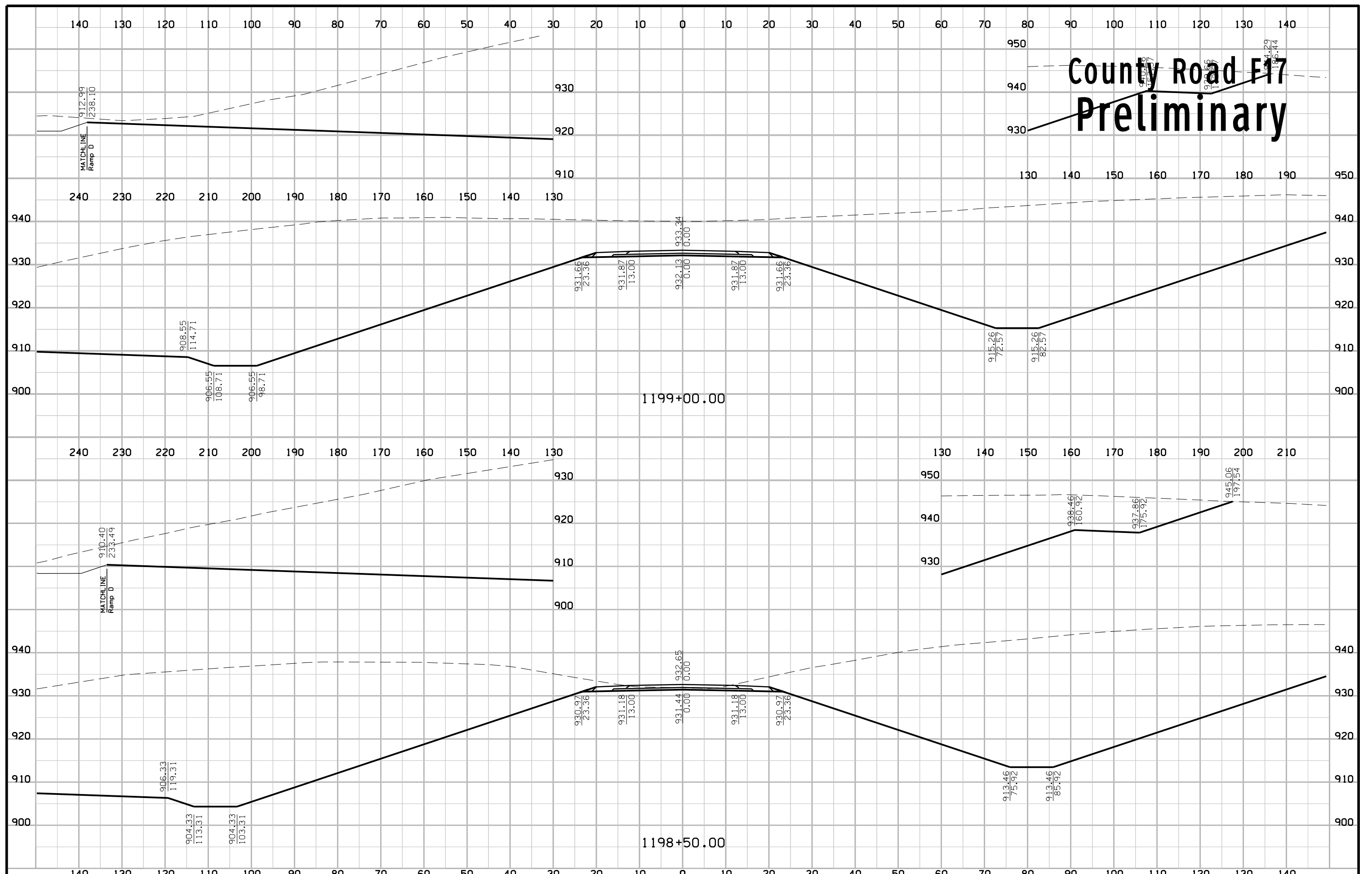
County Road F17 Preliminary



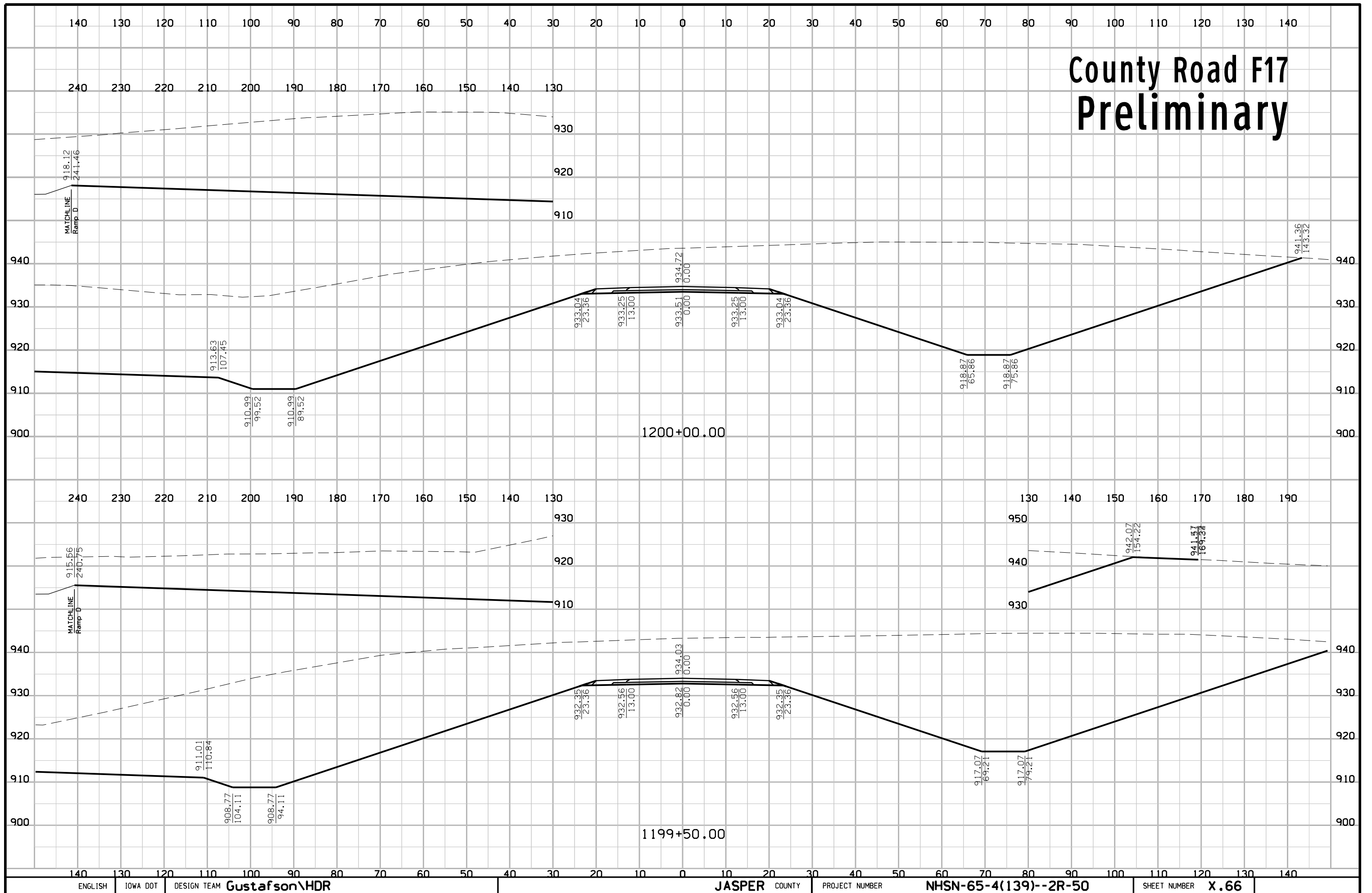
County Road F17 Preliminary



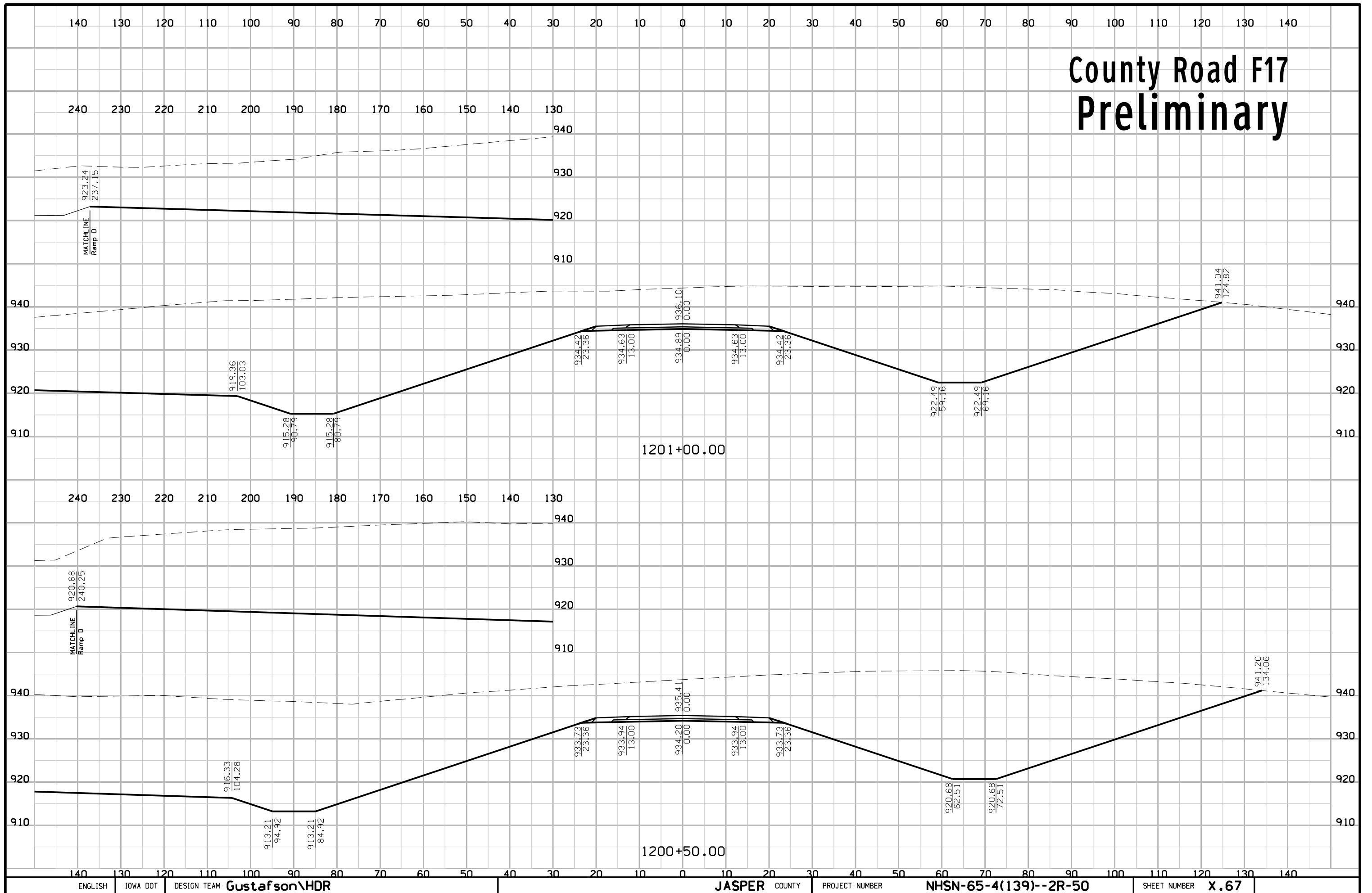
County Road F17 Preliminary



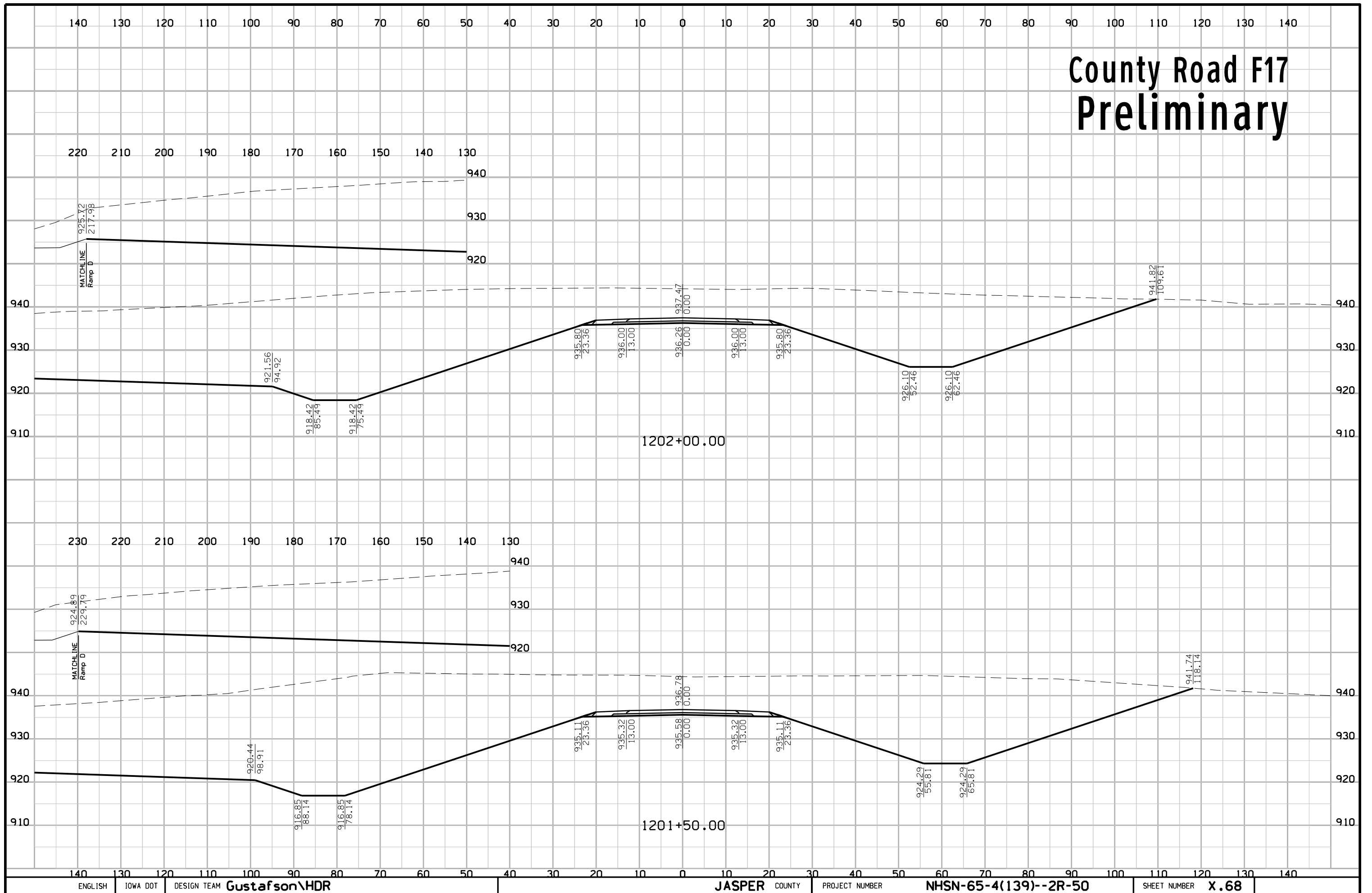
County Road F17 Preliminary



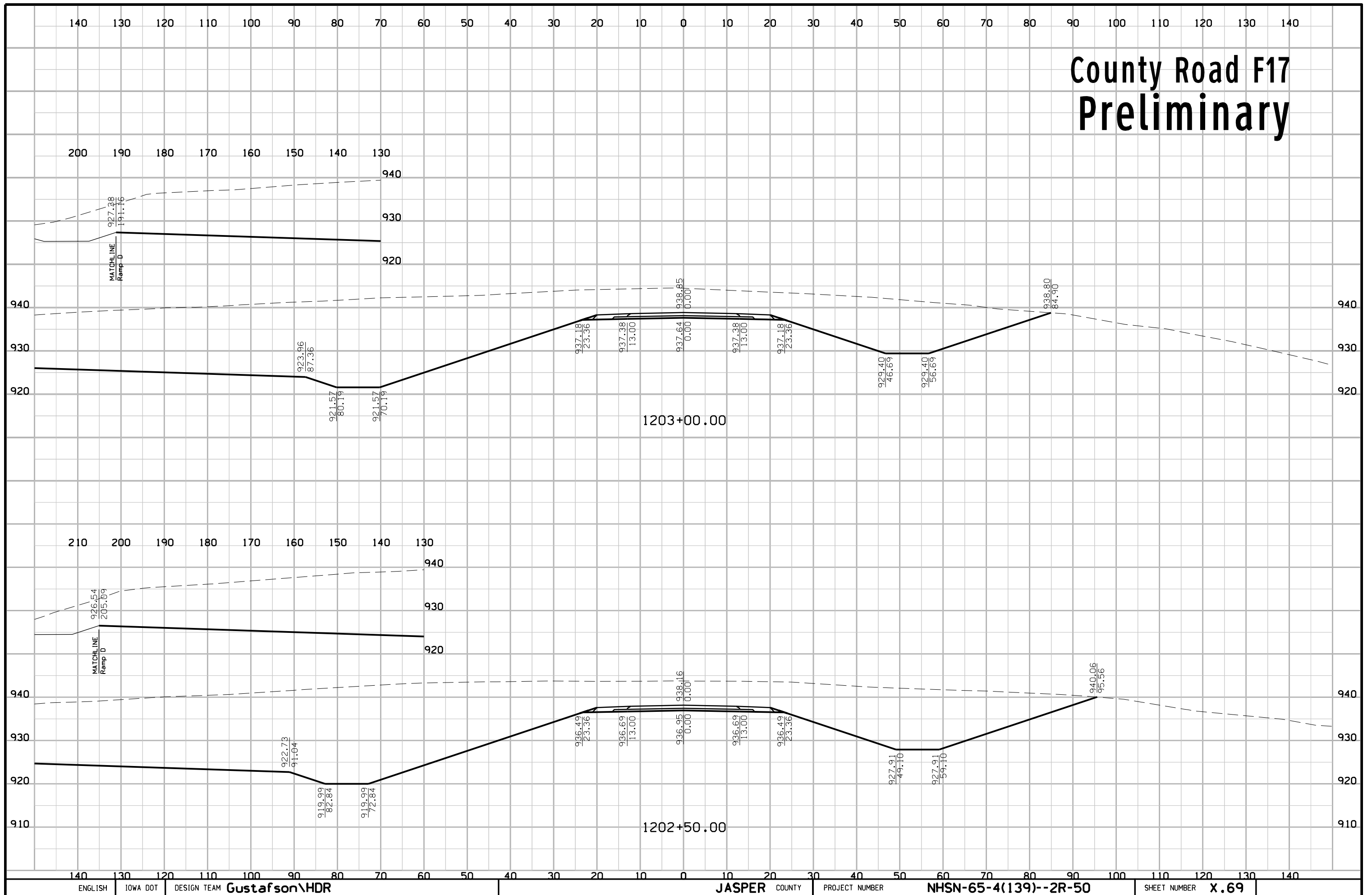
County Road F17 Preliminary



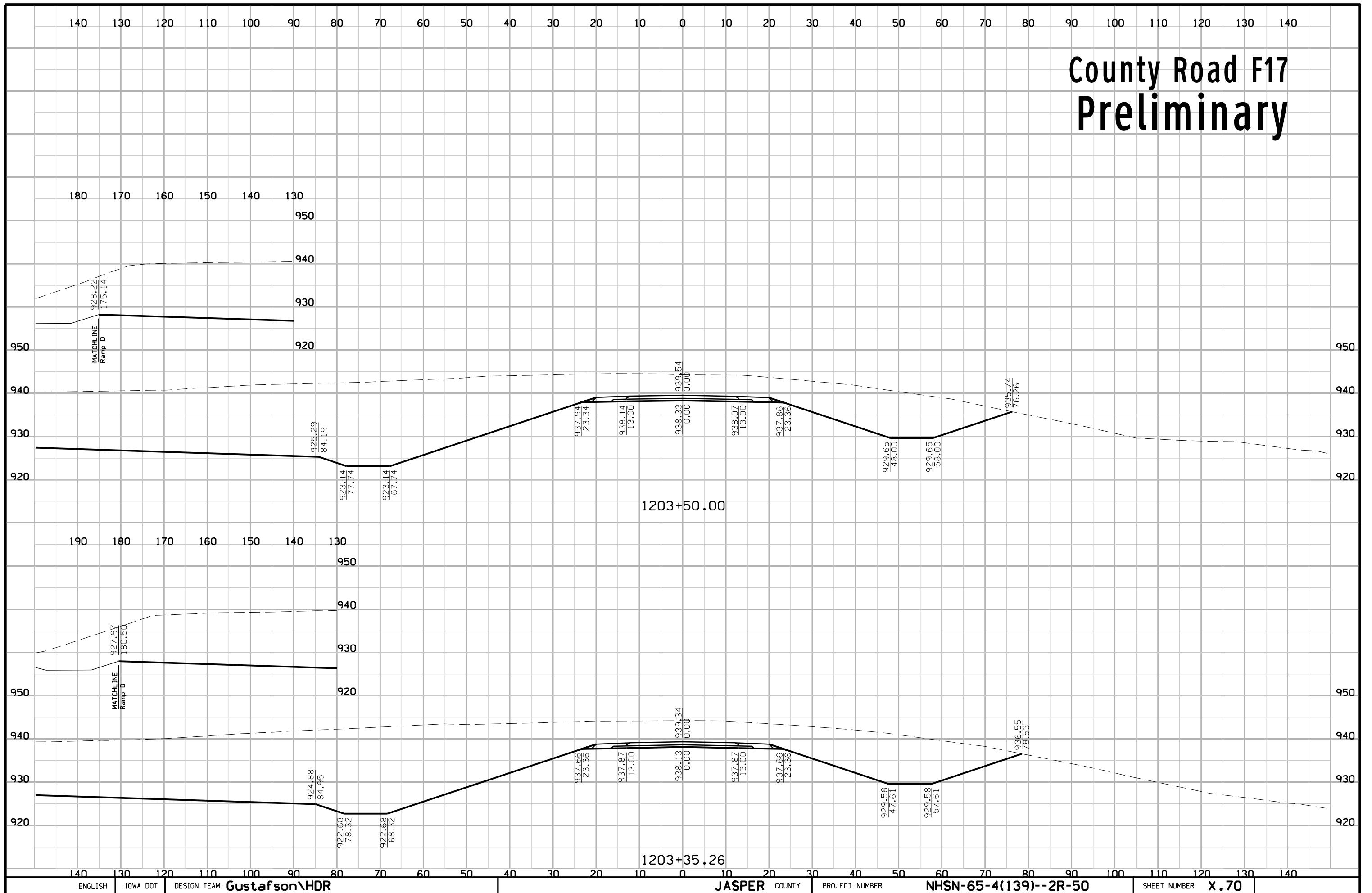
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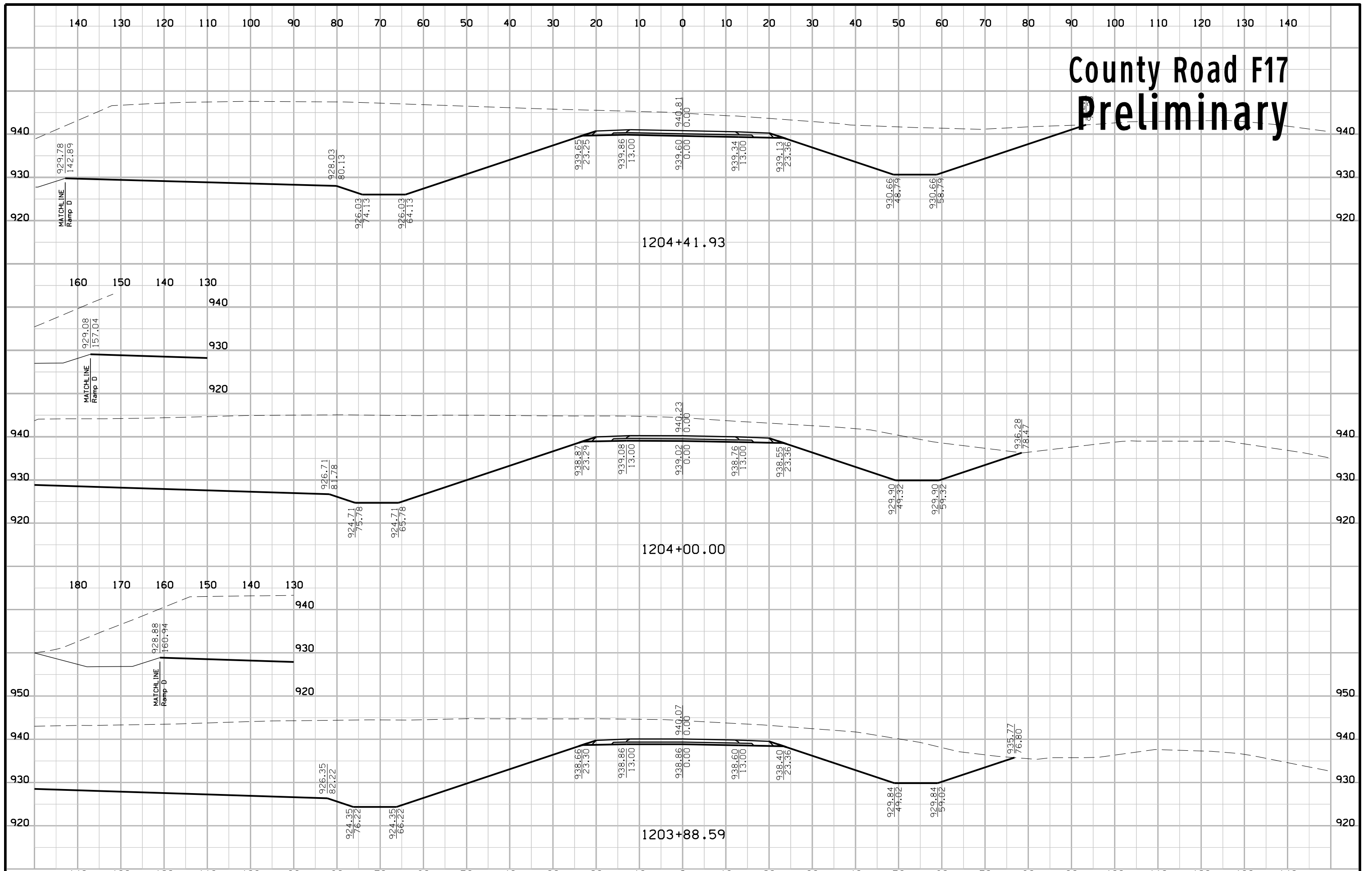
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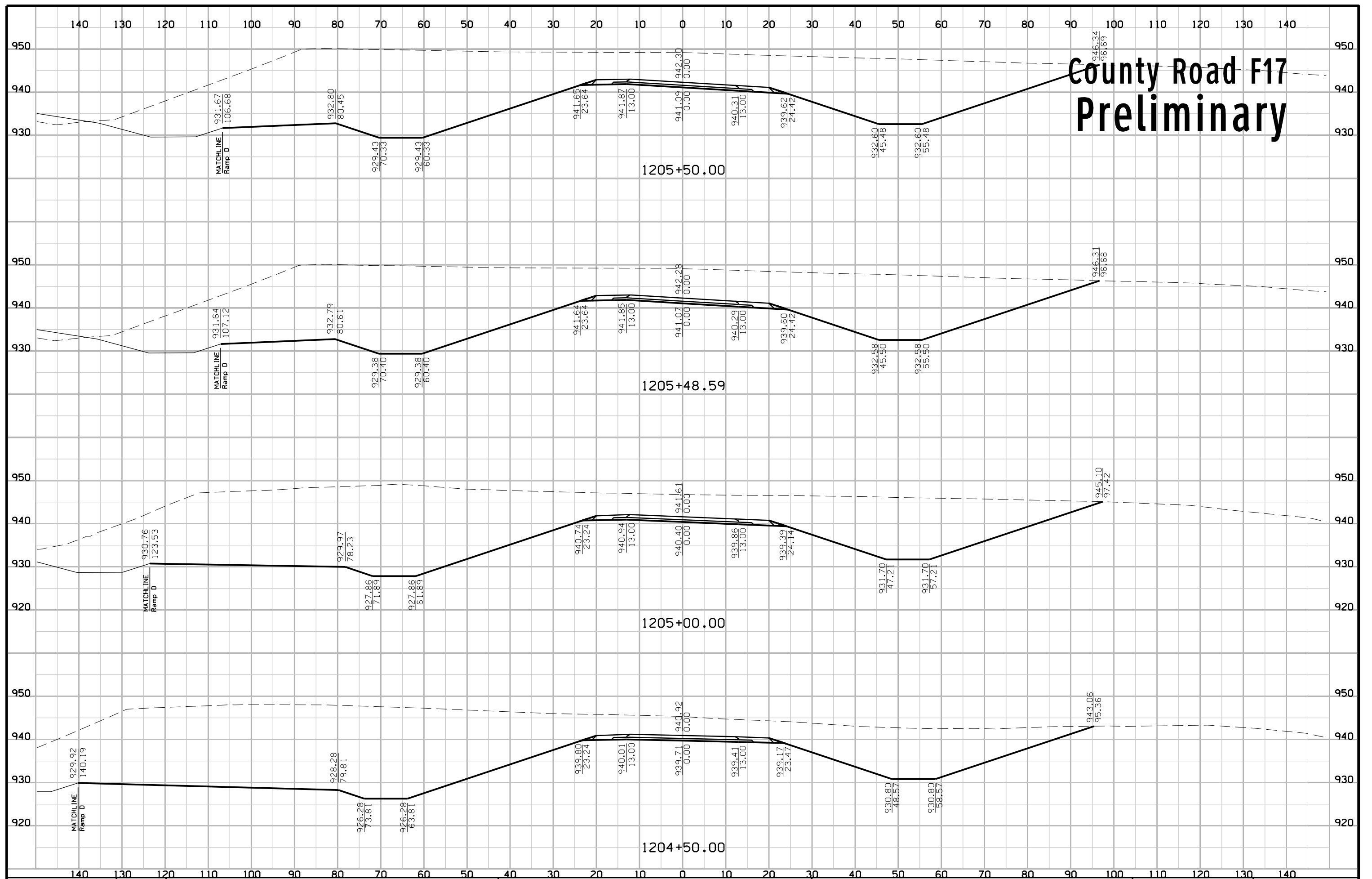
County Road F17 Preliminary



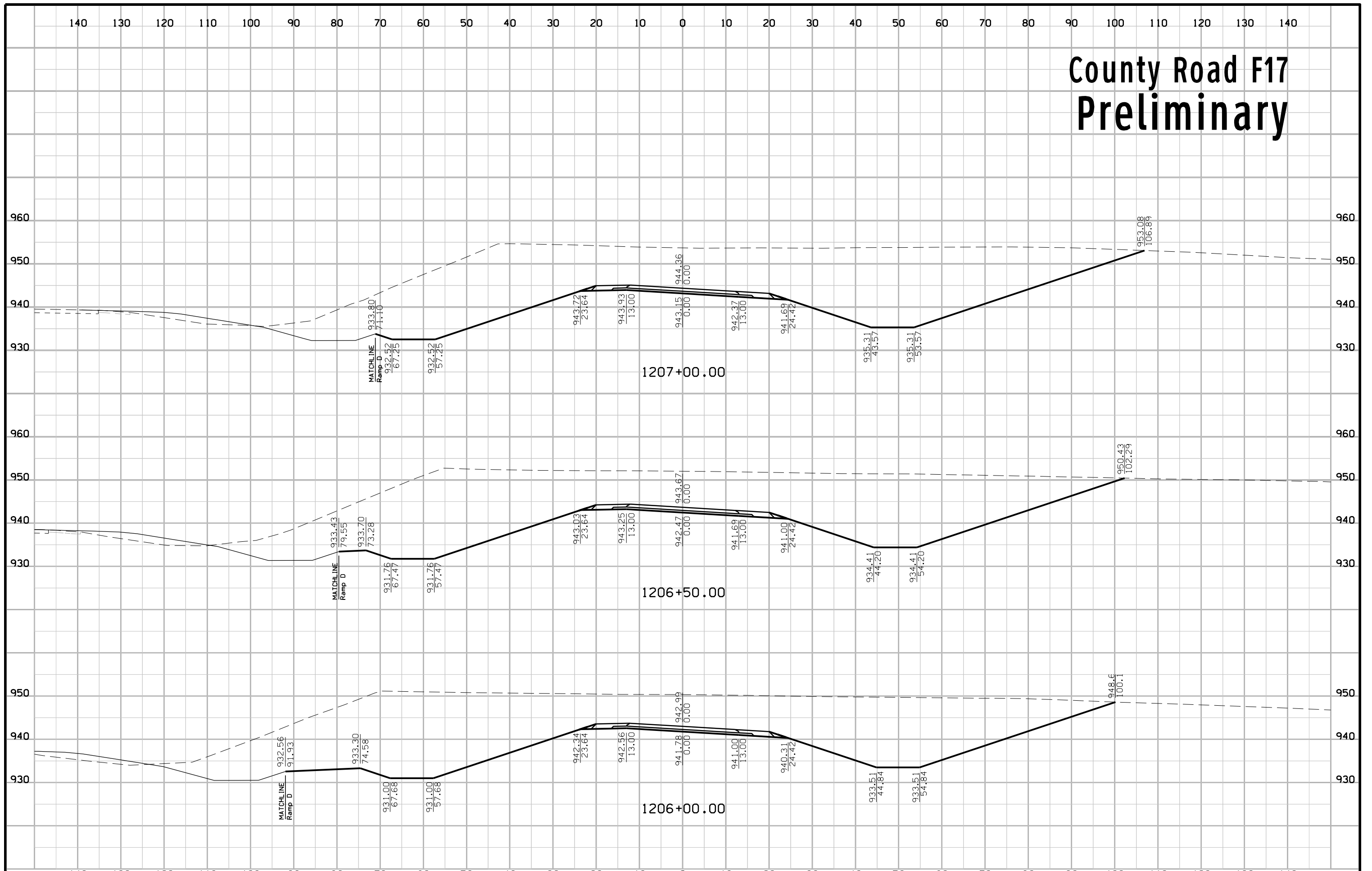
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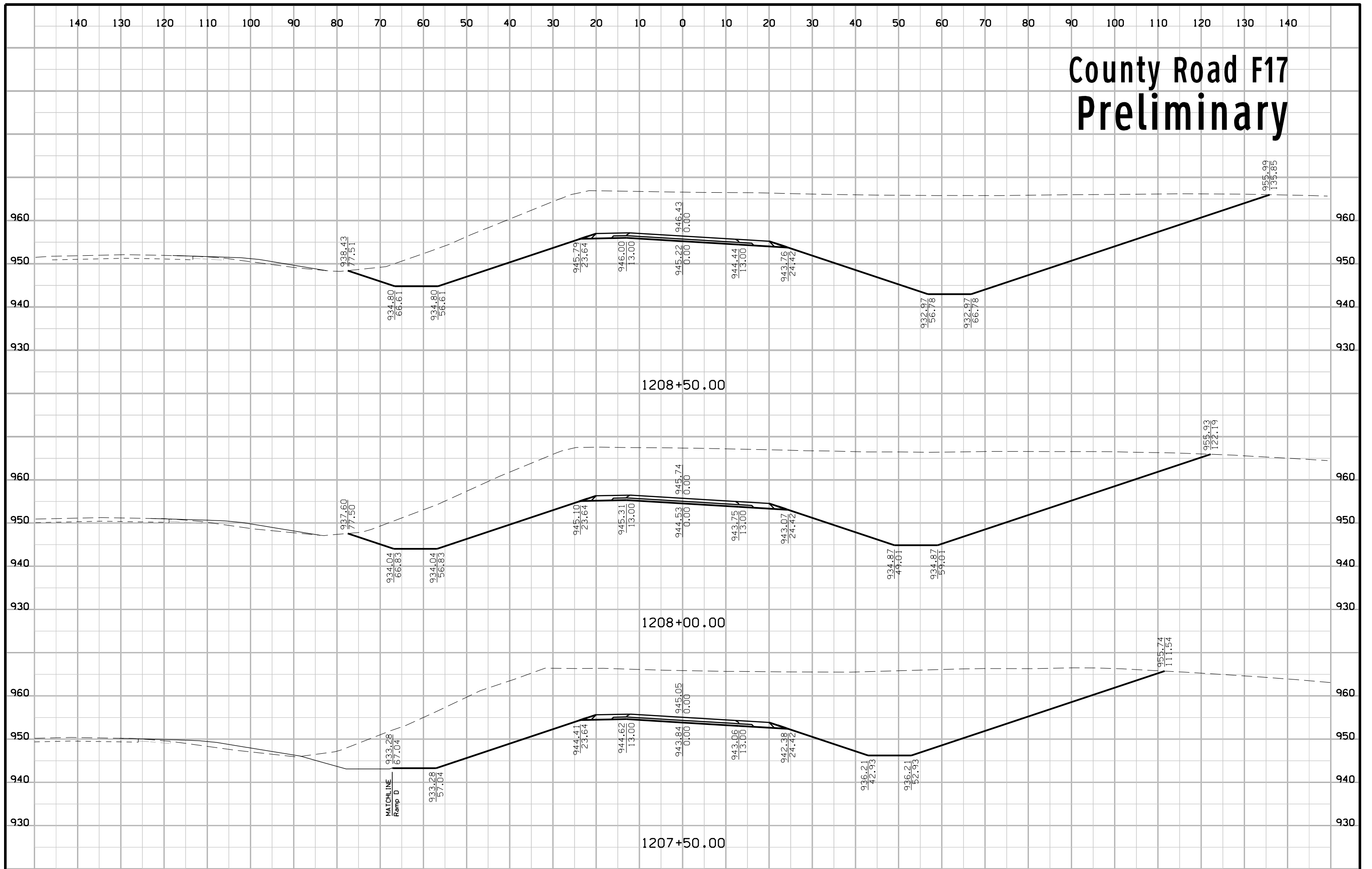
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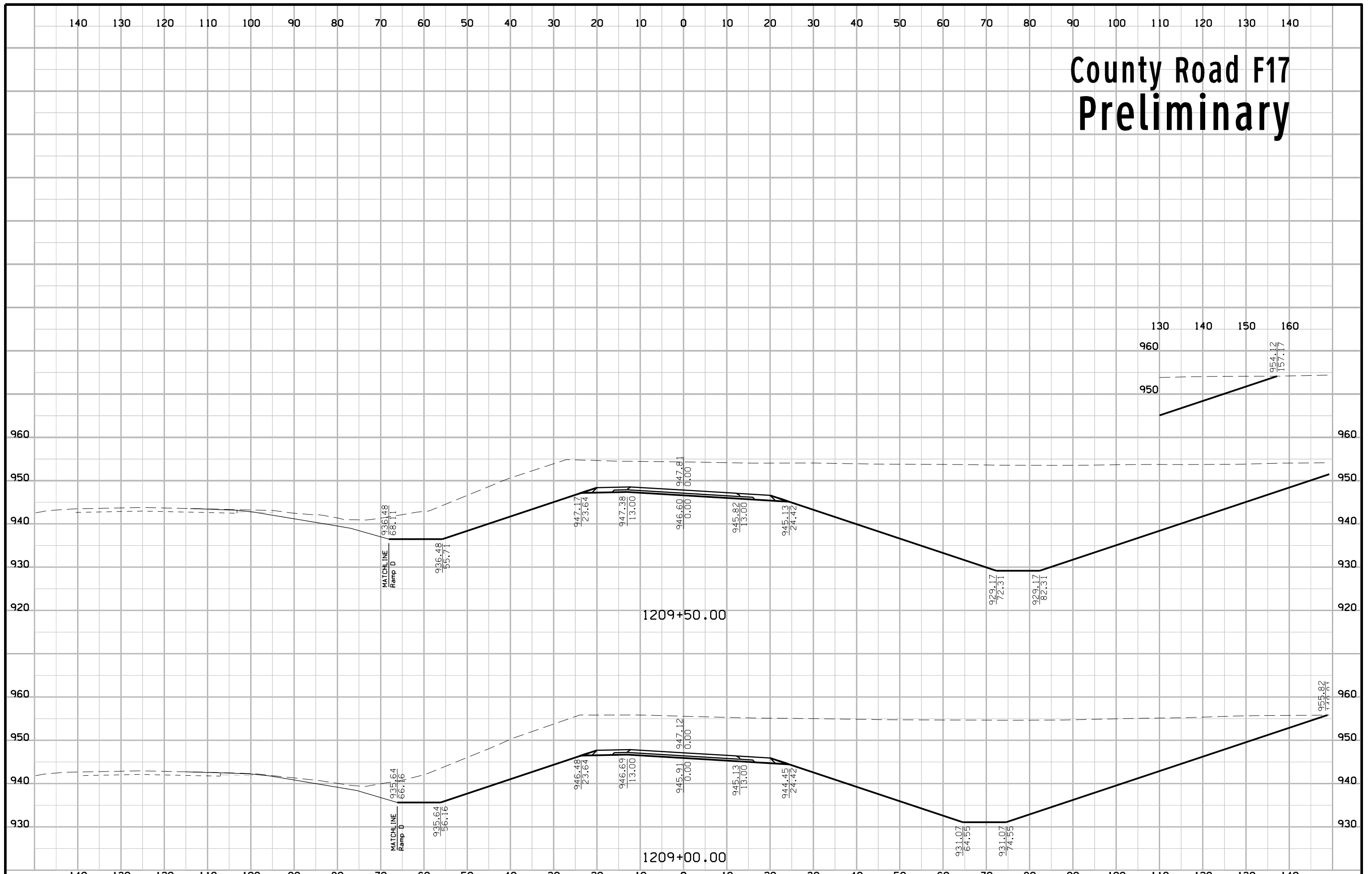
County Road F17 Preliminary



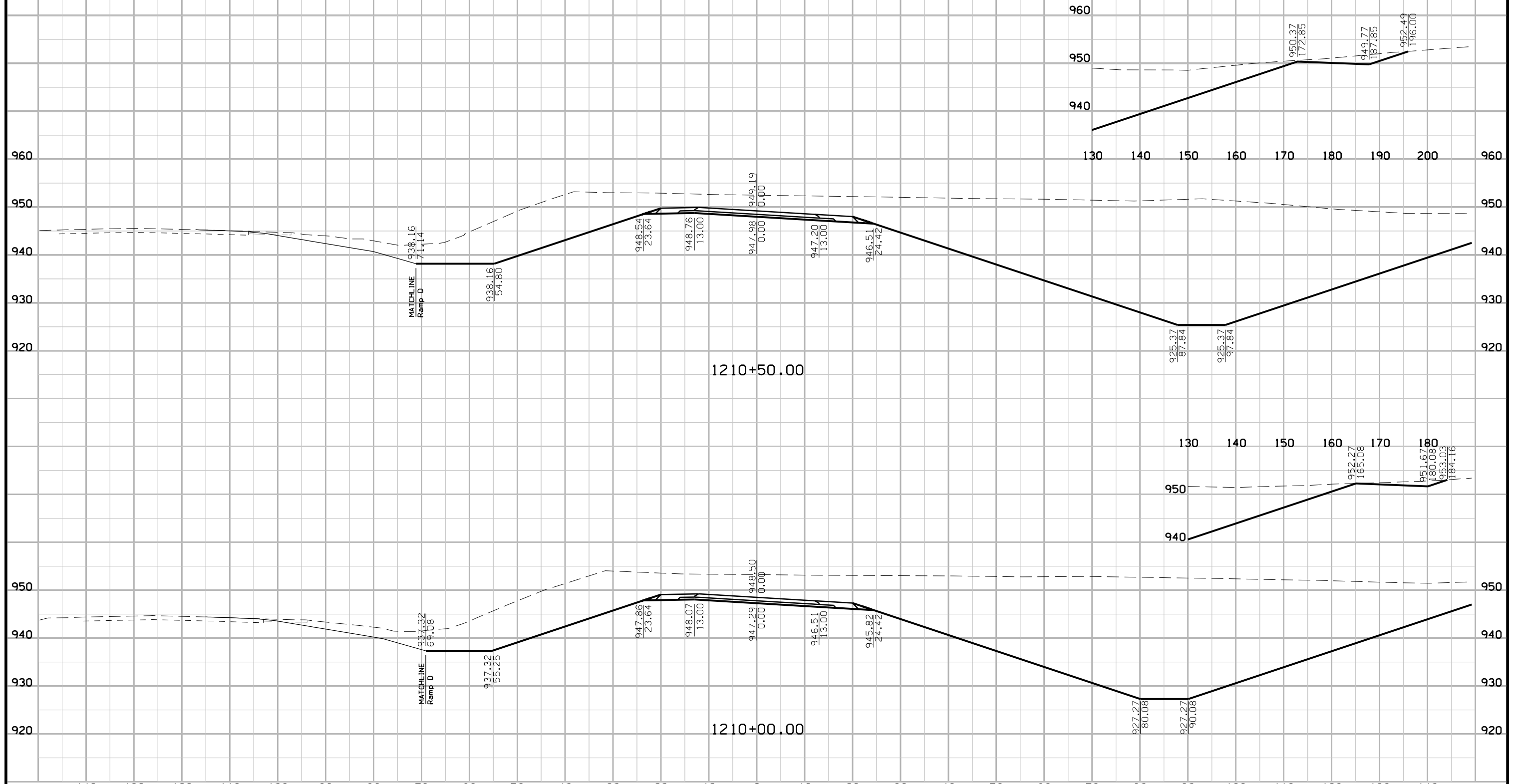
County Road F17 Preliminary



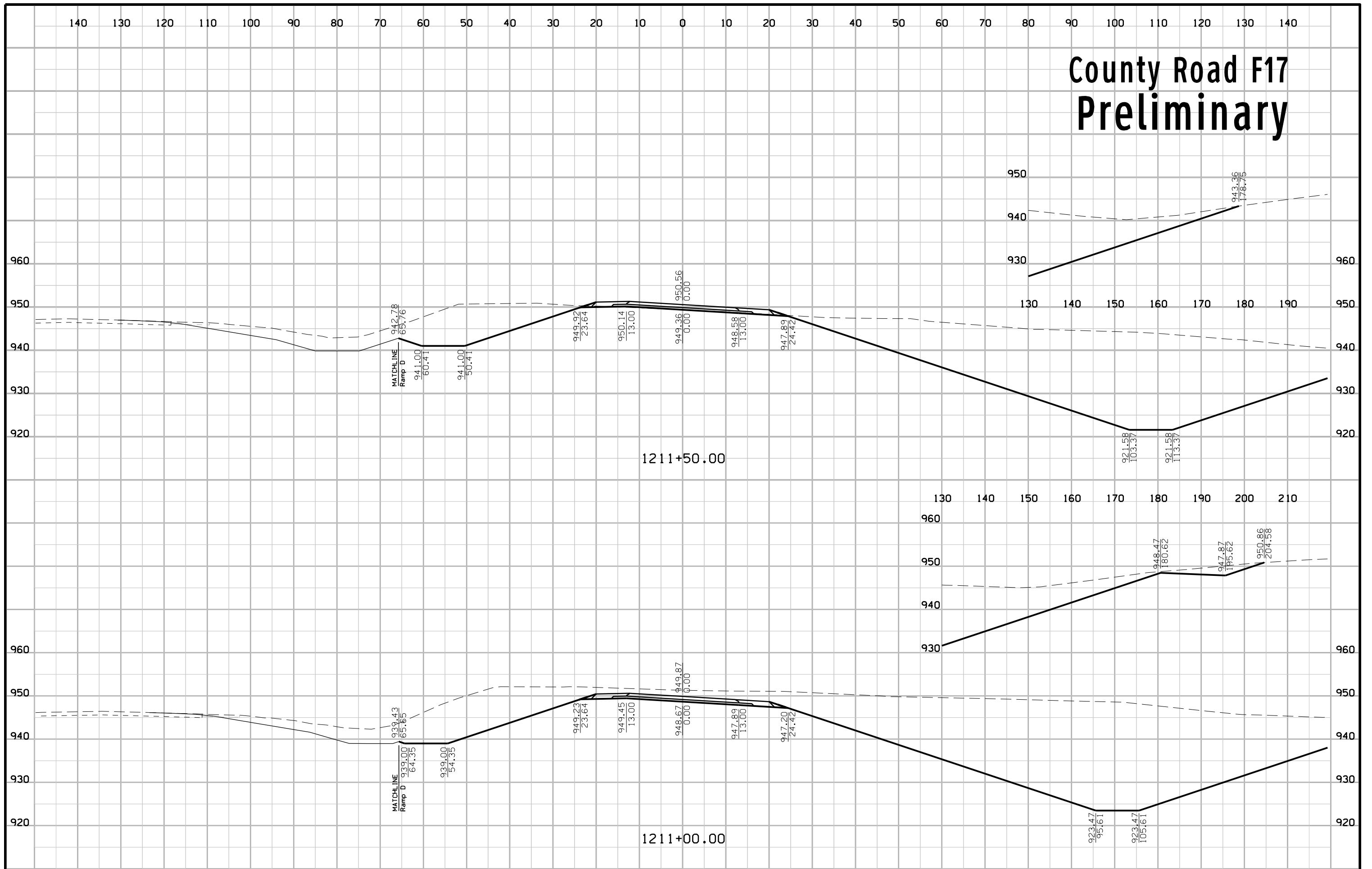
County Road F17 Preliminary



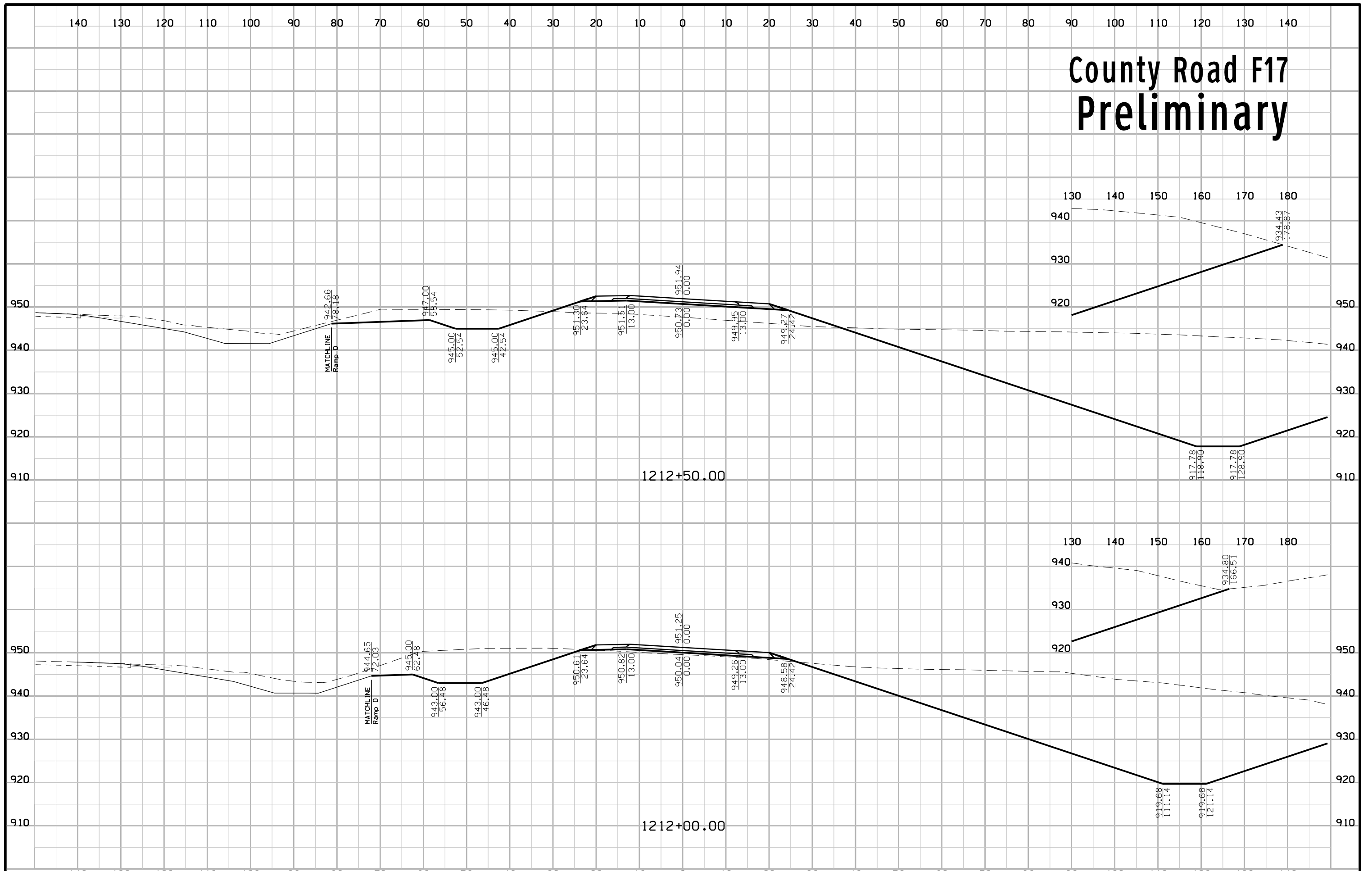
County Road F17 Preliminary



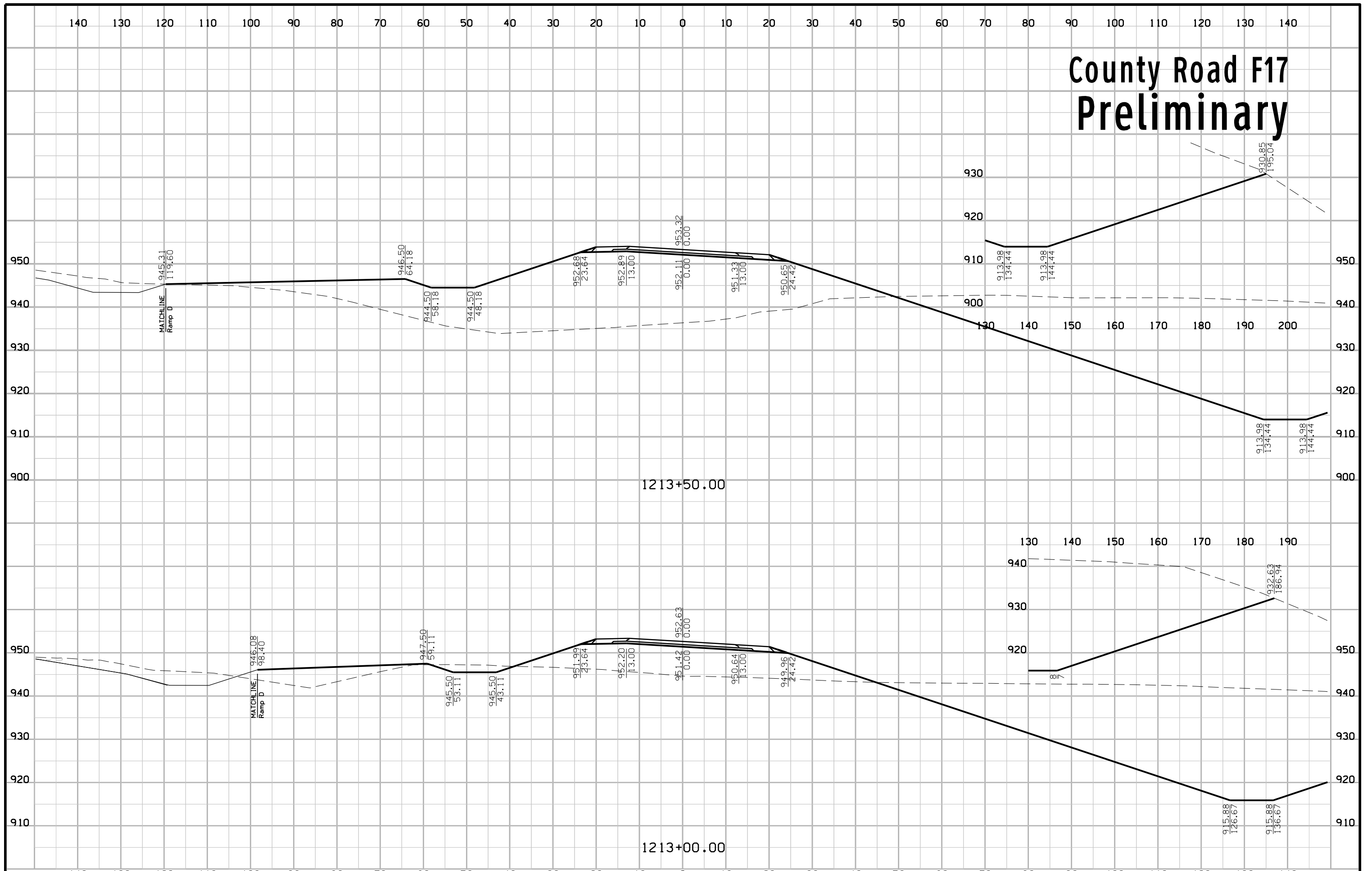
County Road F17 Preliminary



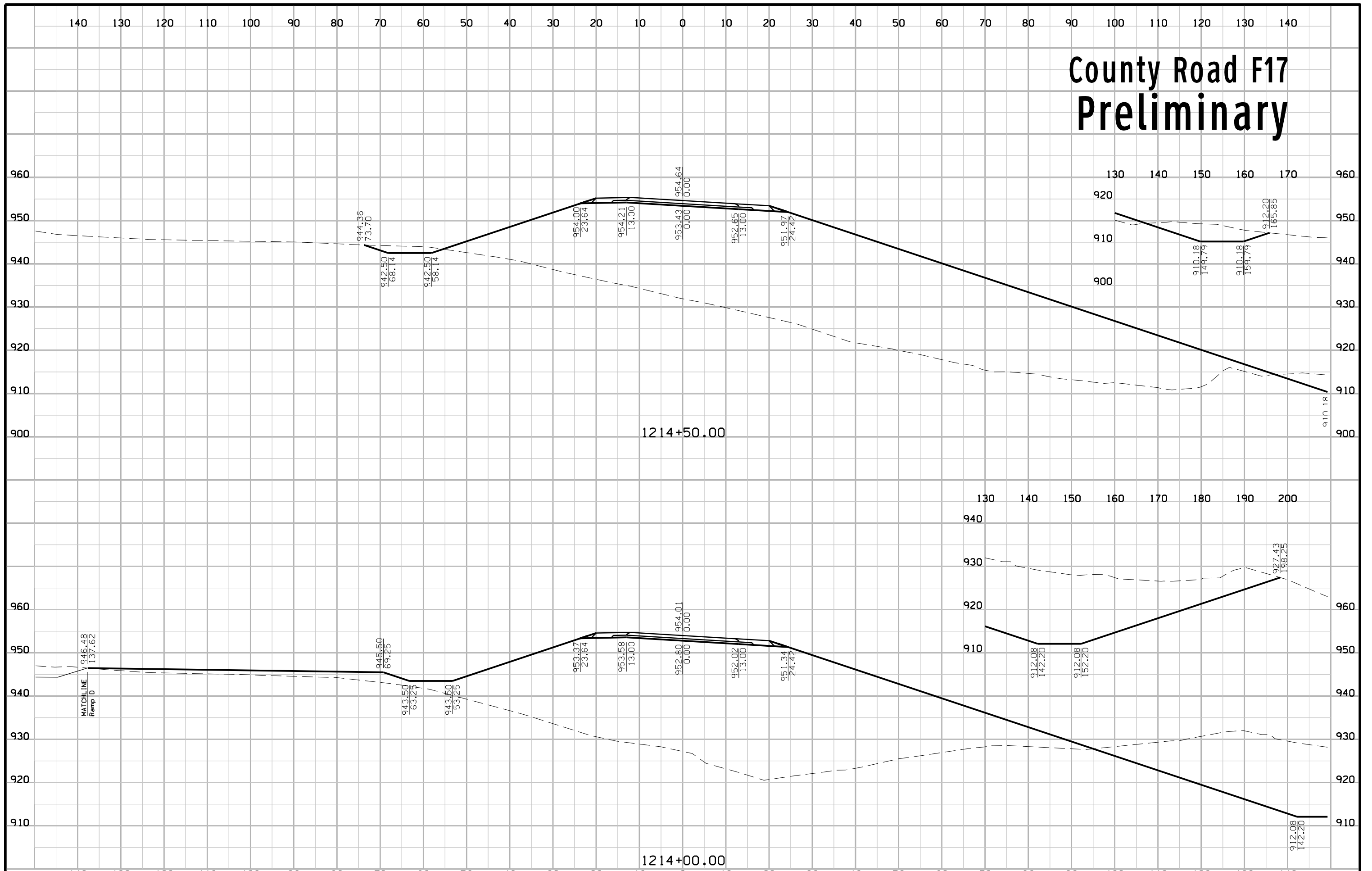
County Road F17 Preliminary



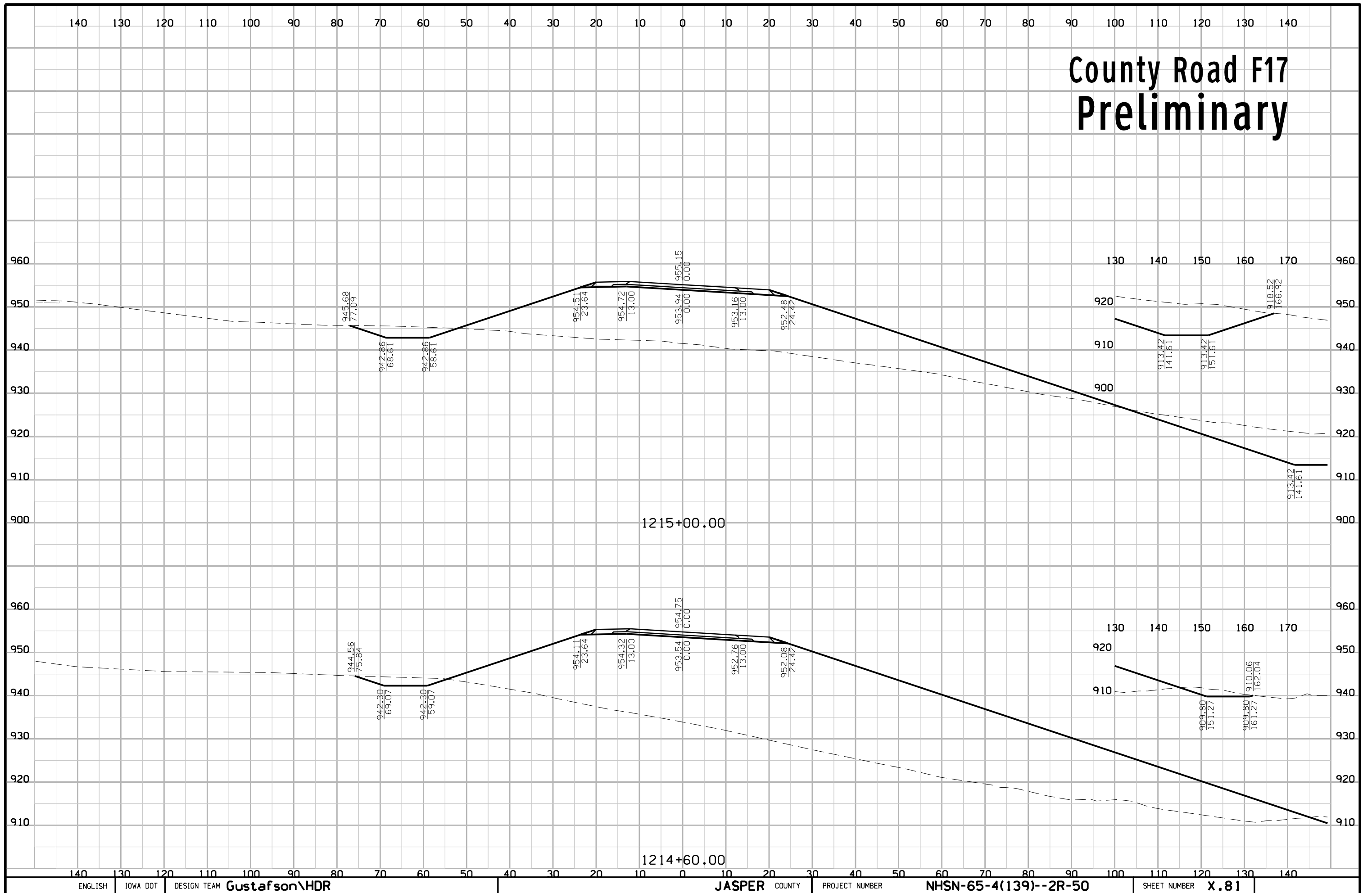
County Road F17 Preliminary



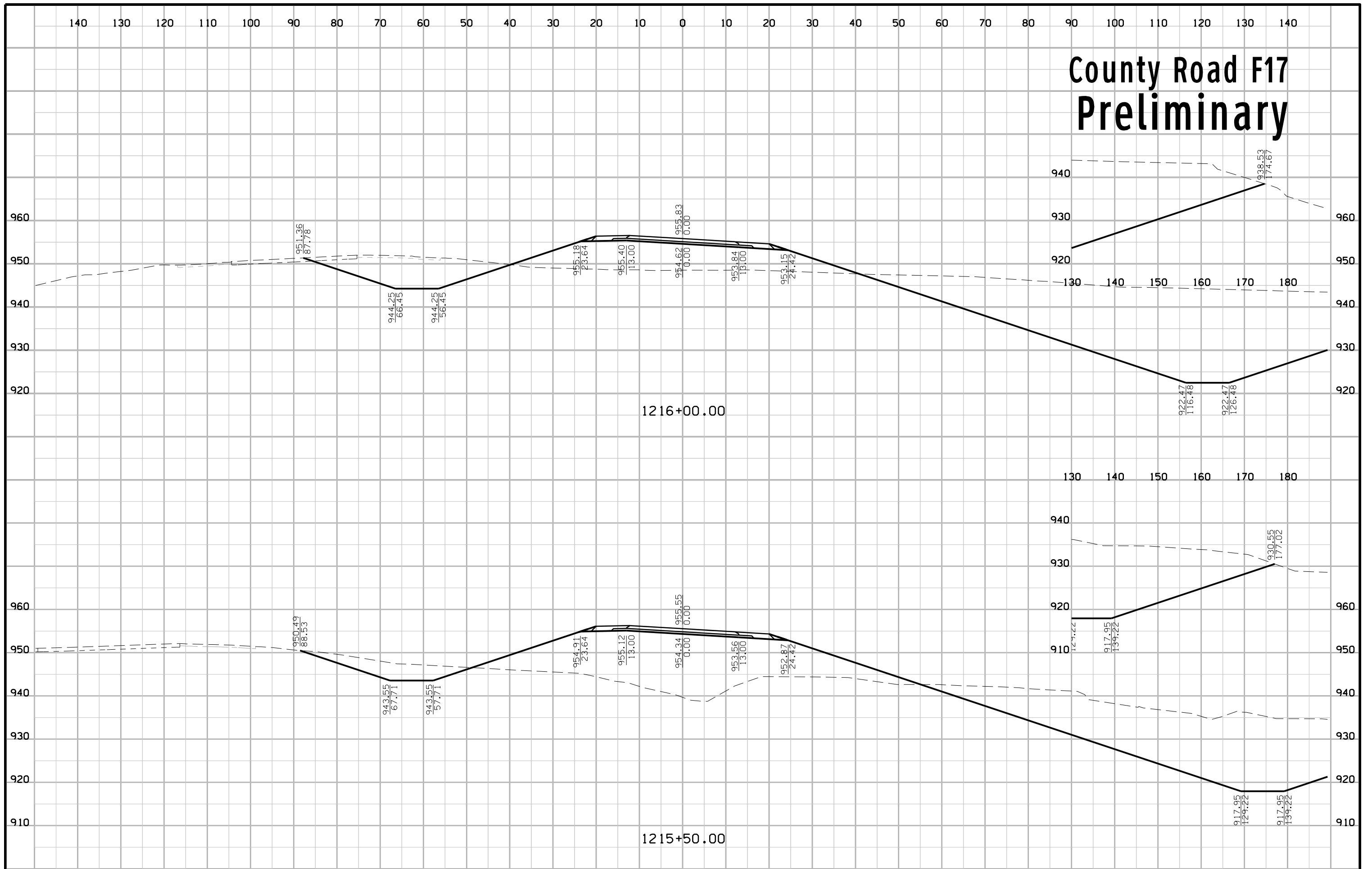
County Road F17 Preliminary



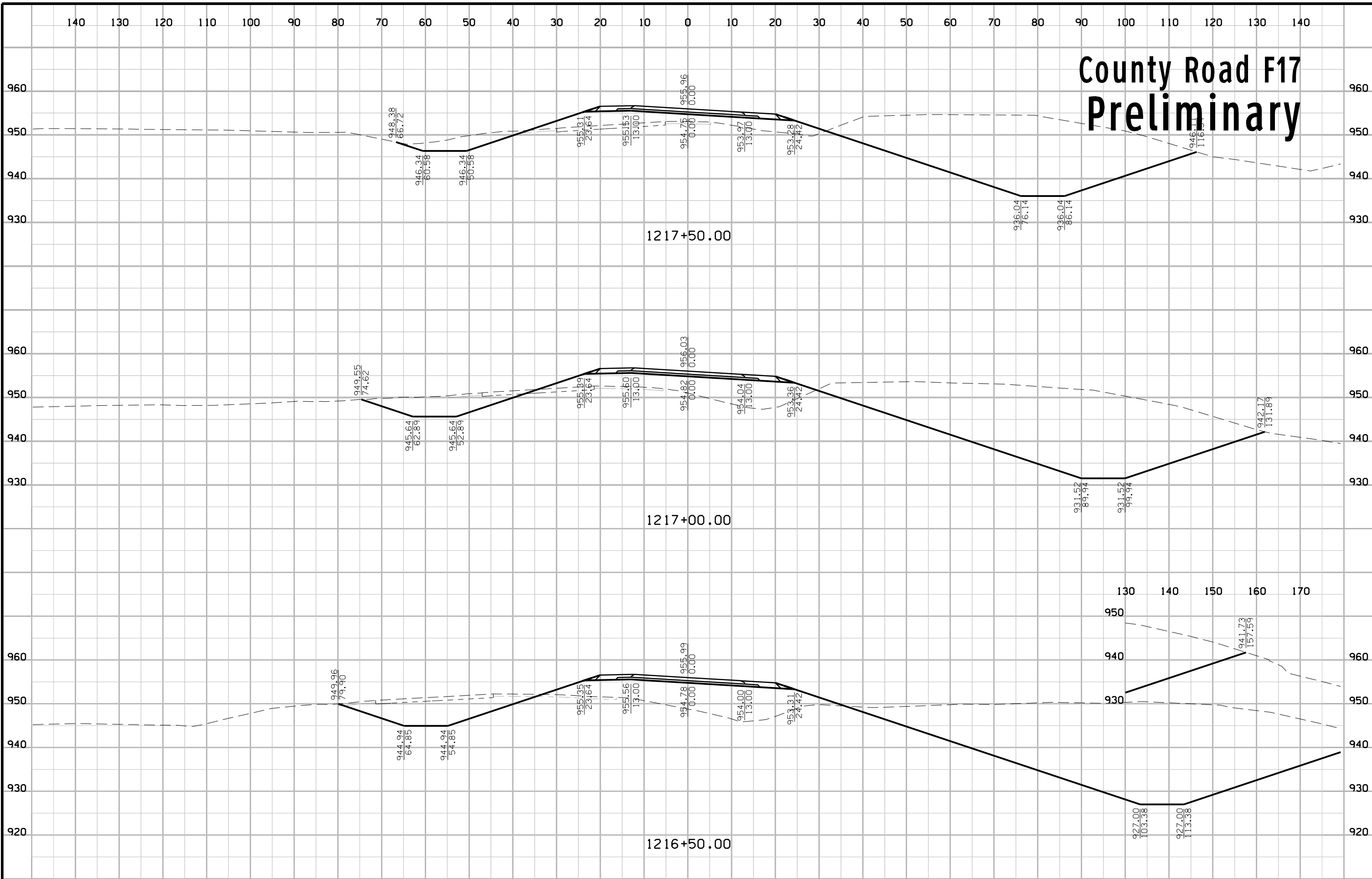
County Road F17 Preliminary



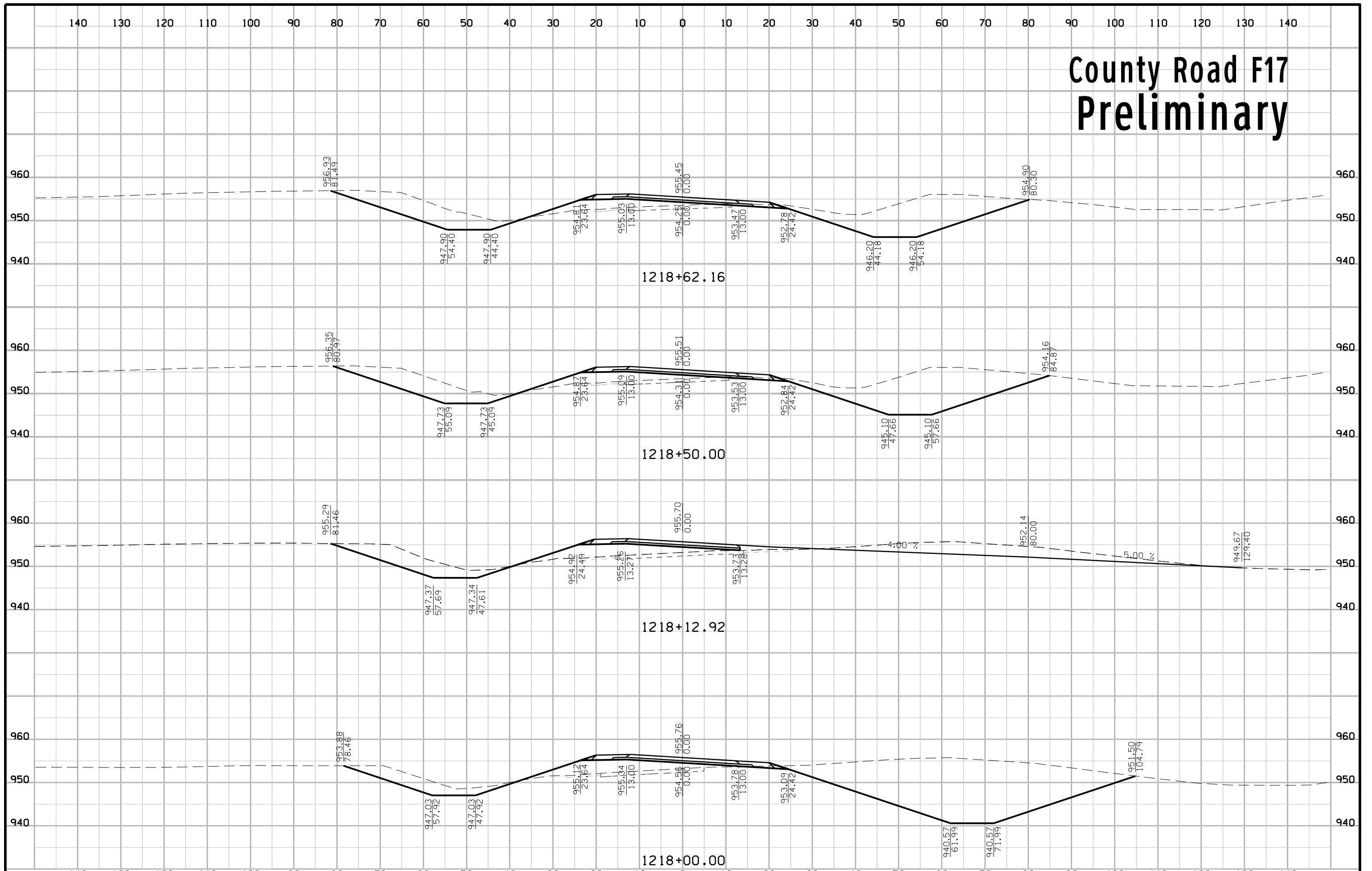
County Road F17 Preliminary



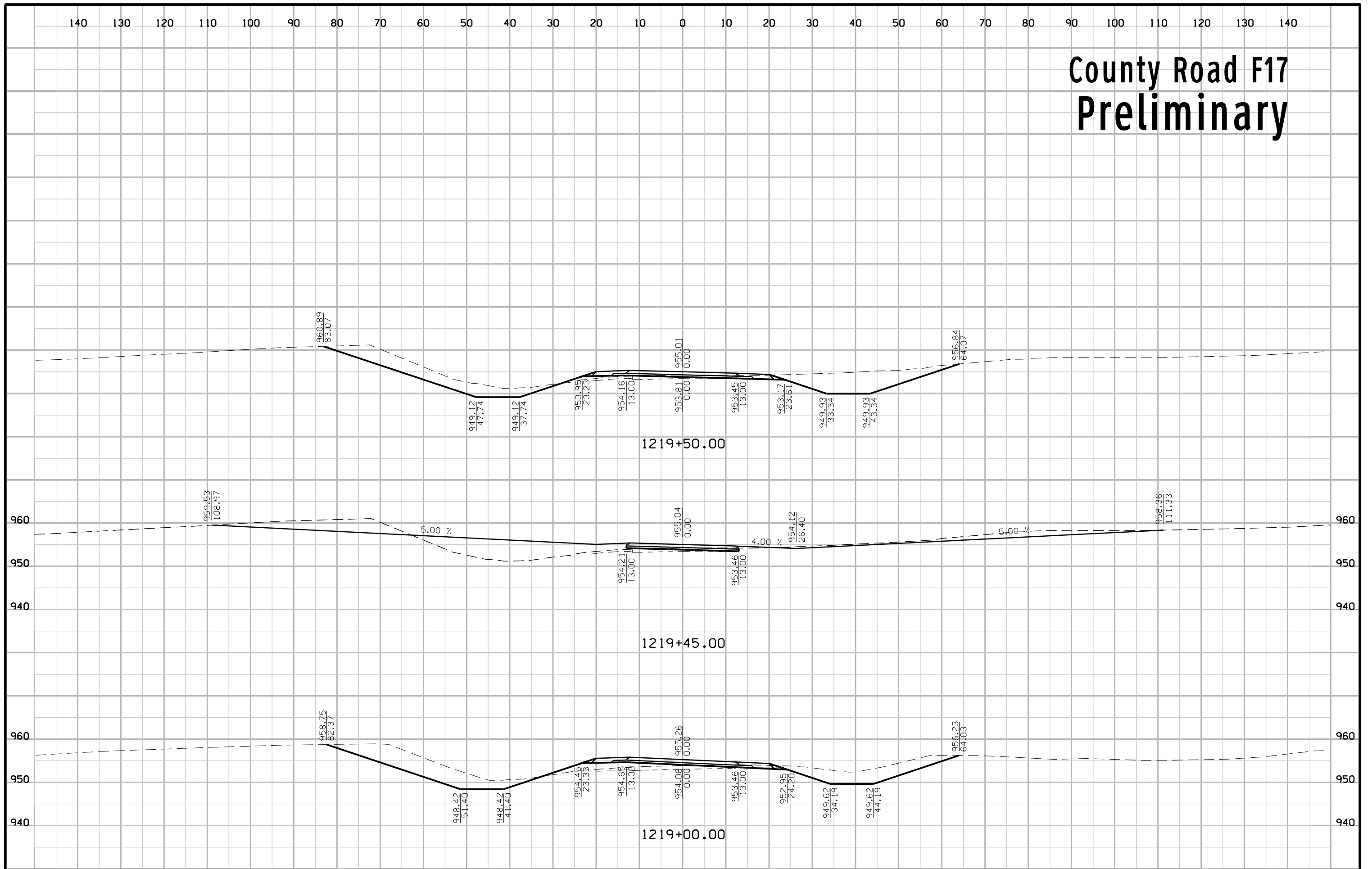
County Road F17 Preliminary



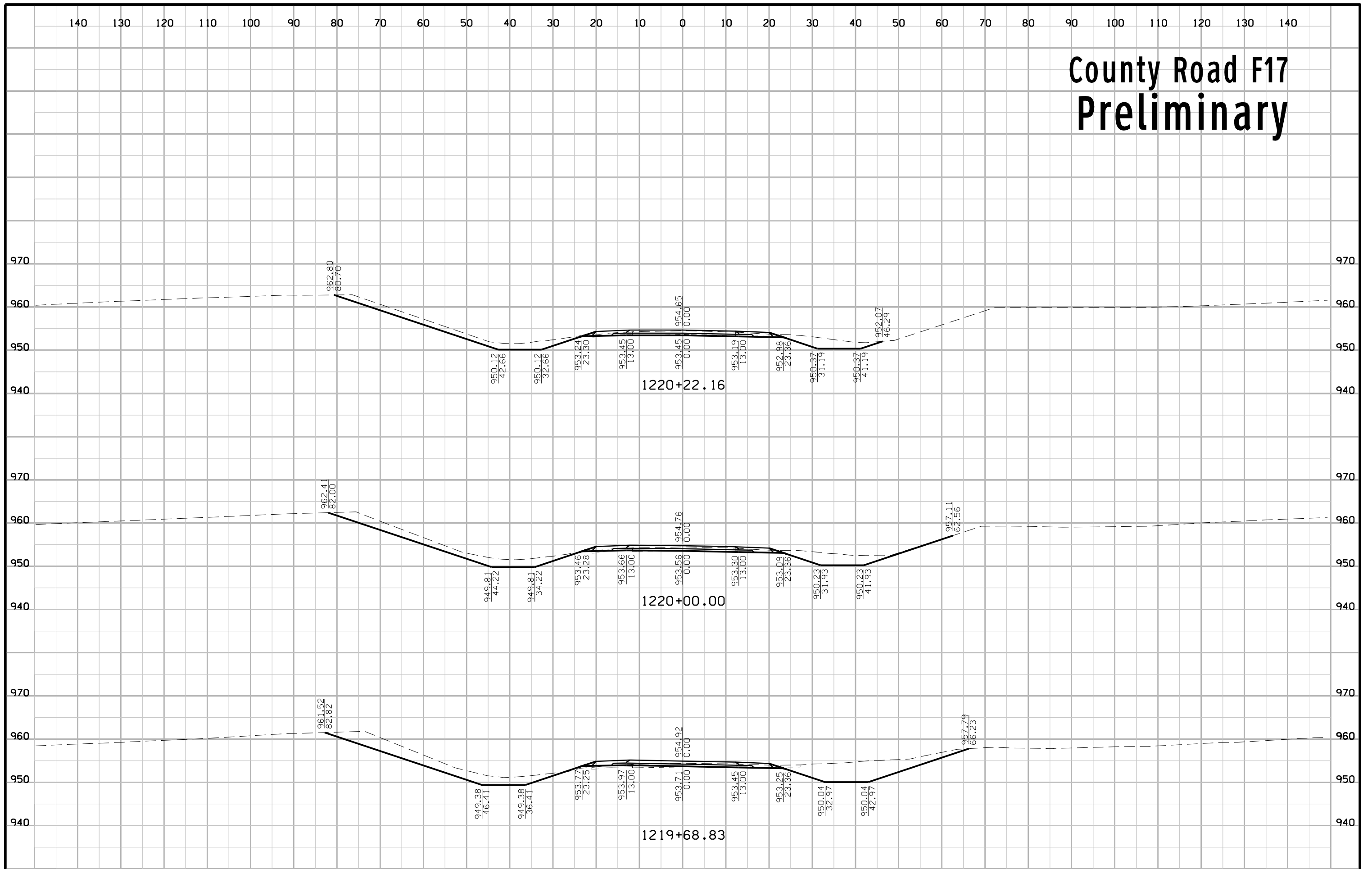
County Road F17 Preliminary



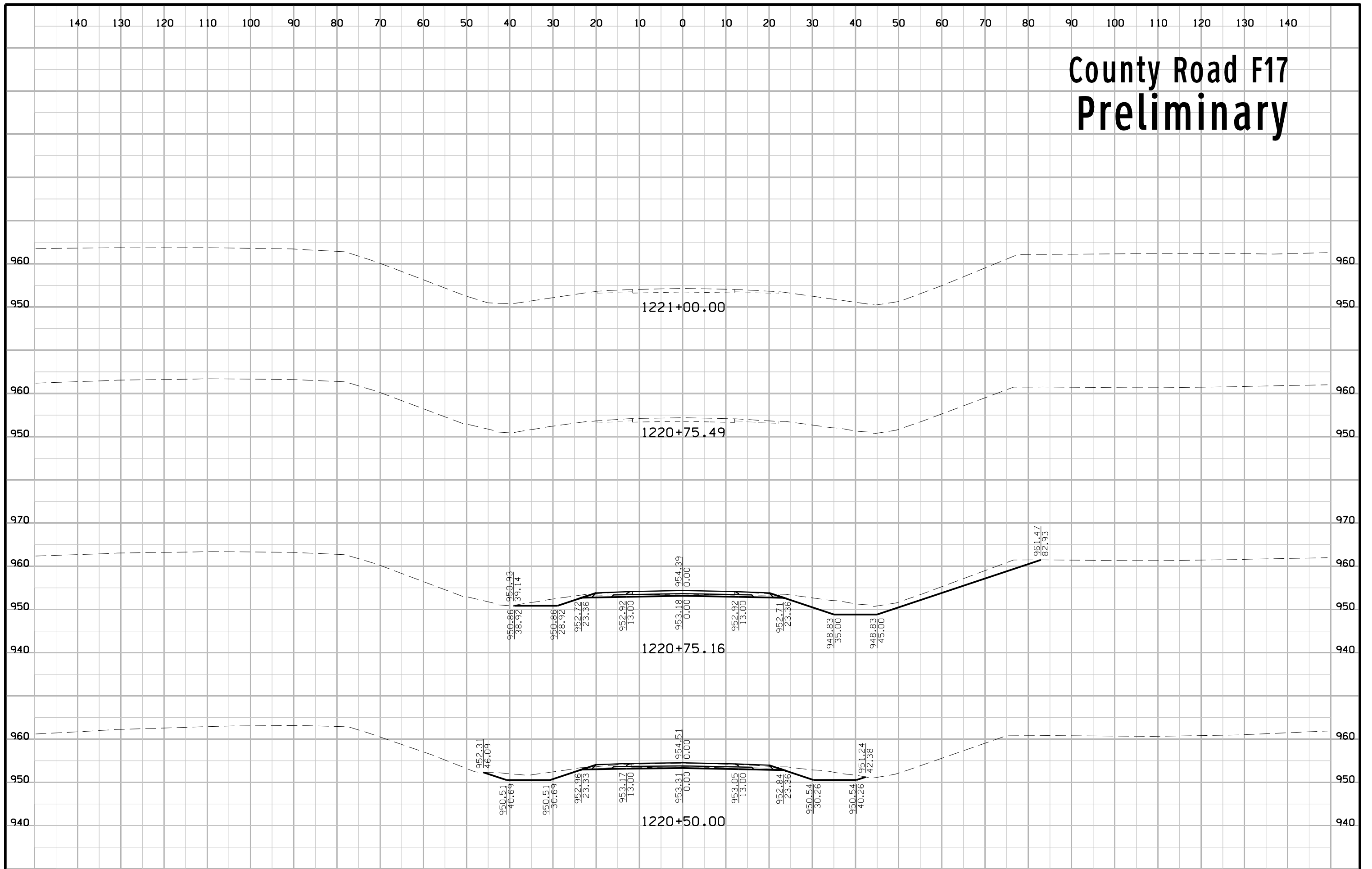
County Road F17 Preliminary



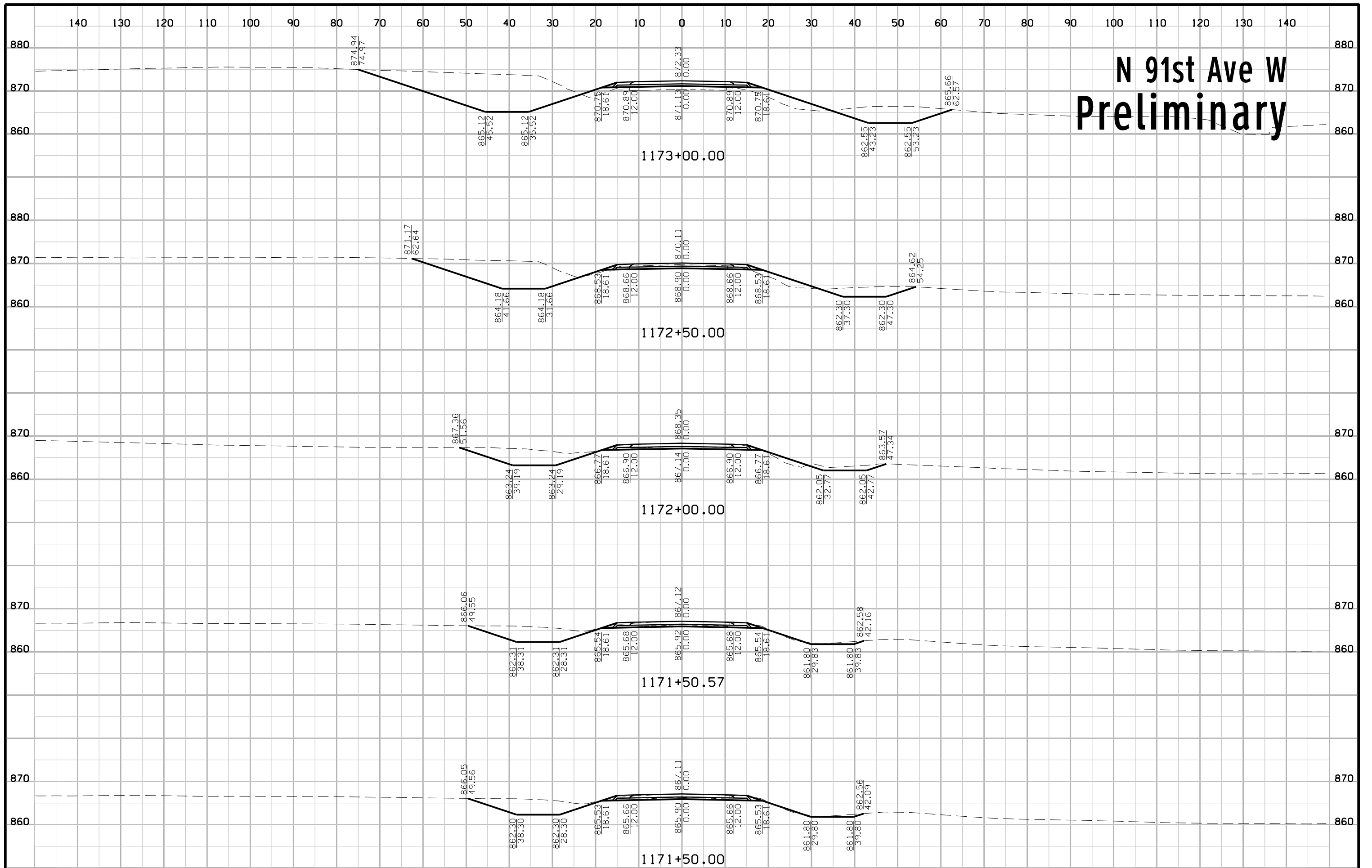
County Road F17 Preliminary



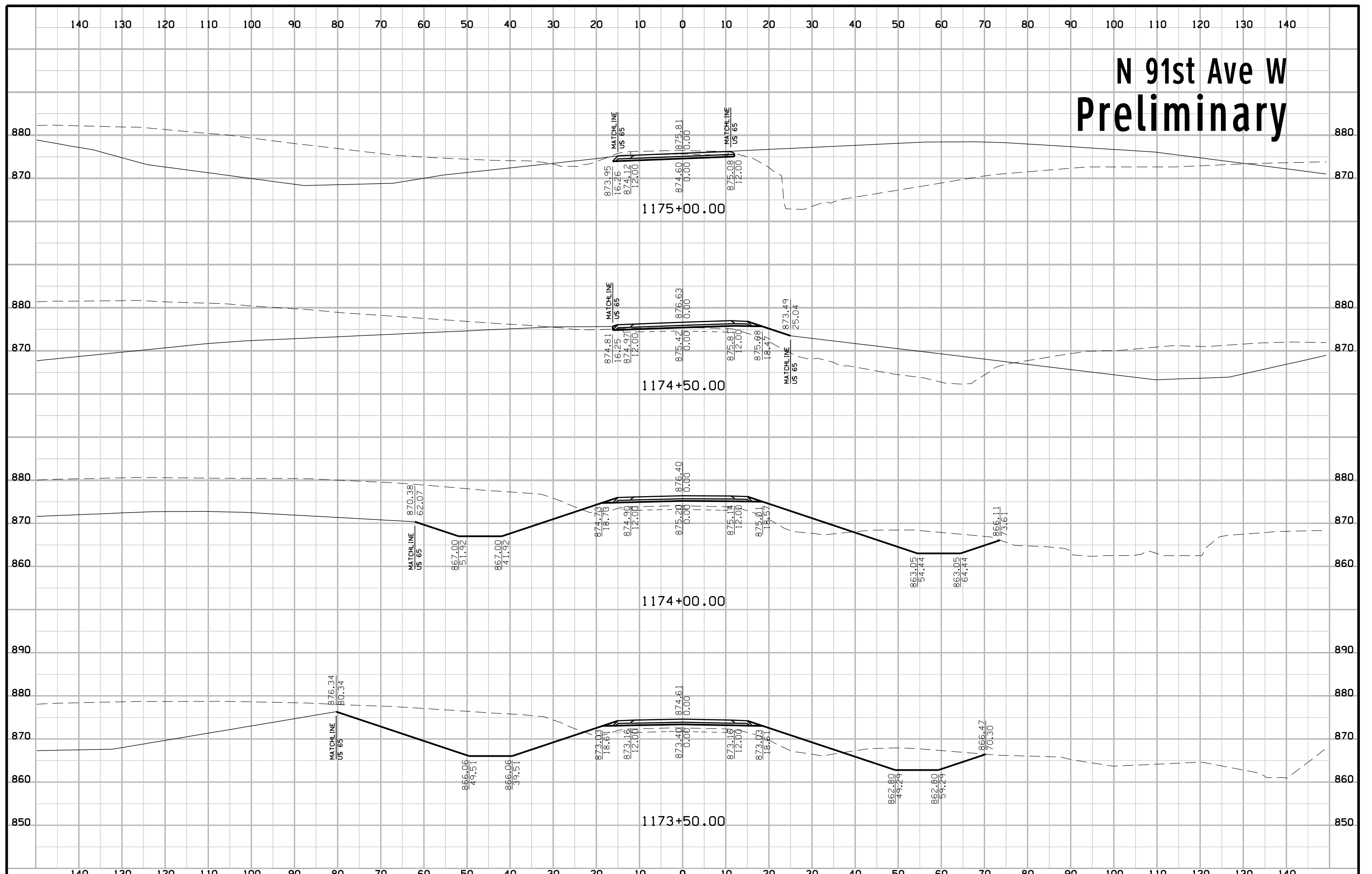
County Road F17 Preliminary



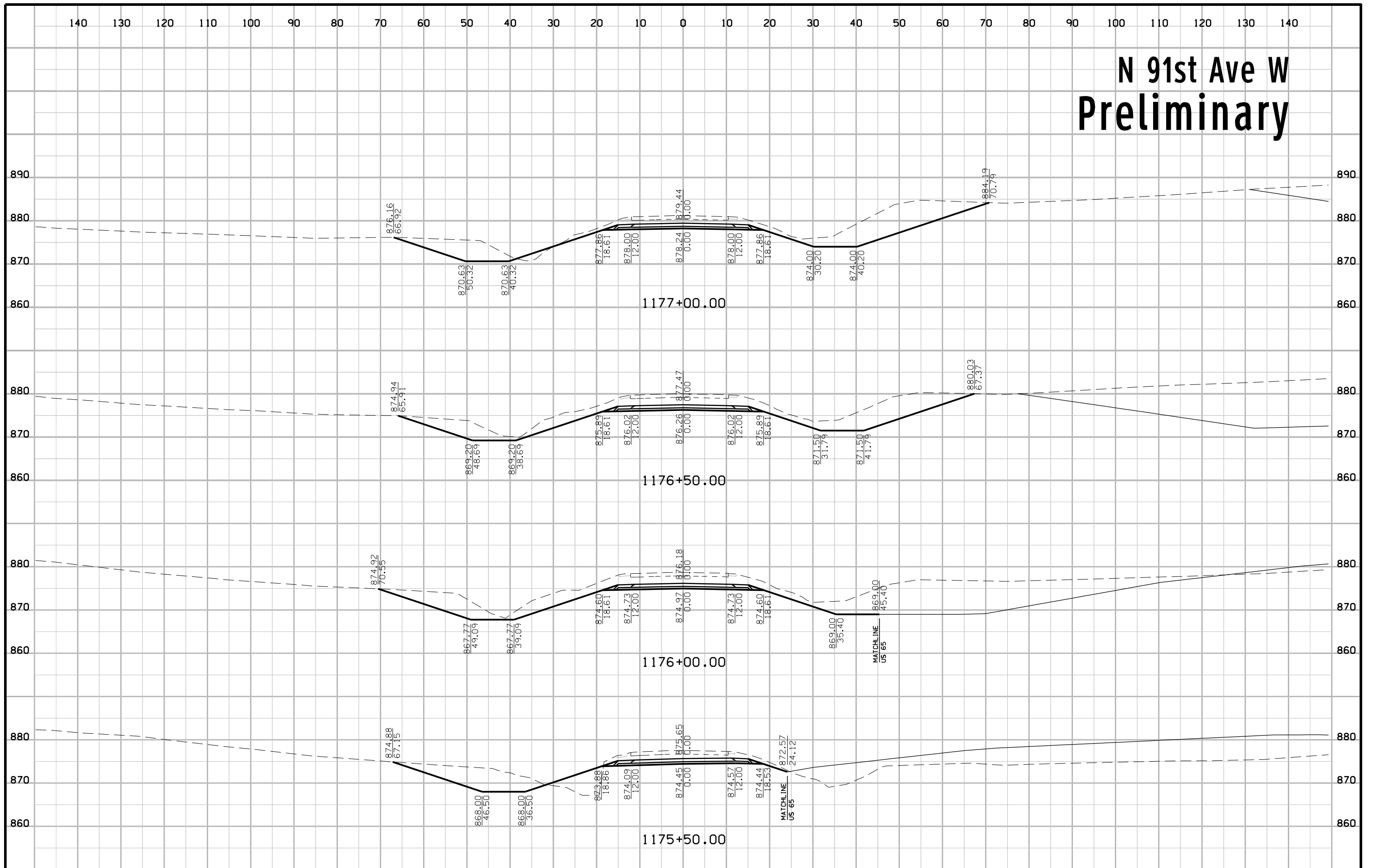
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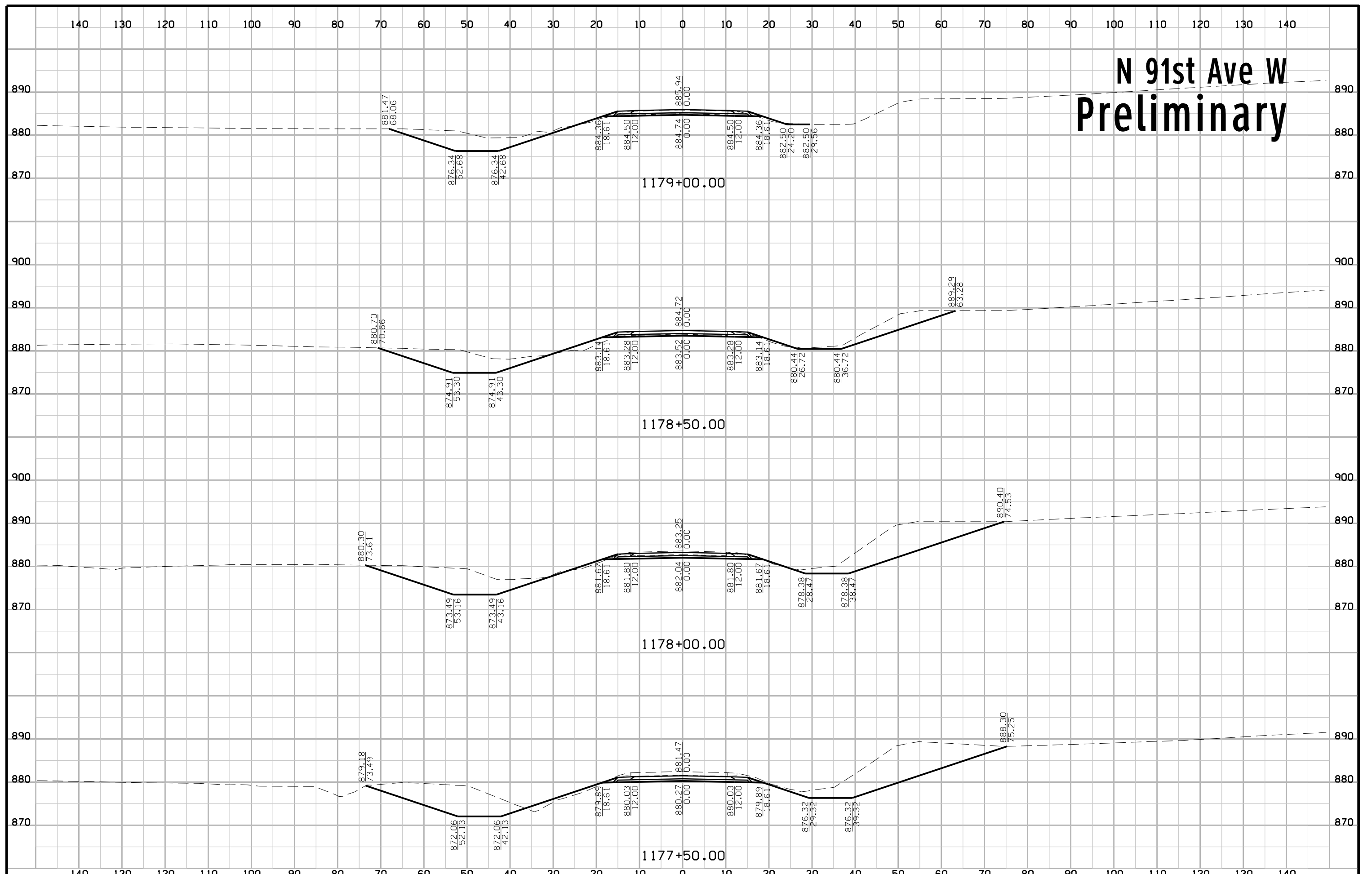
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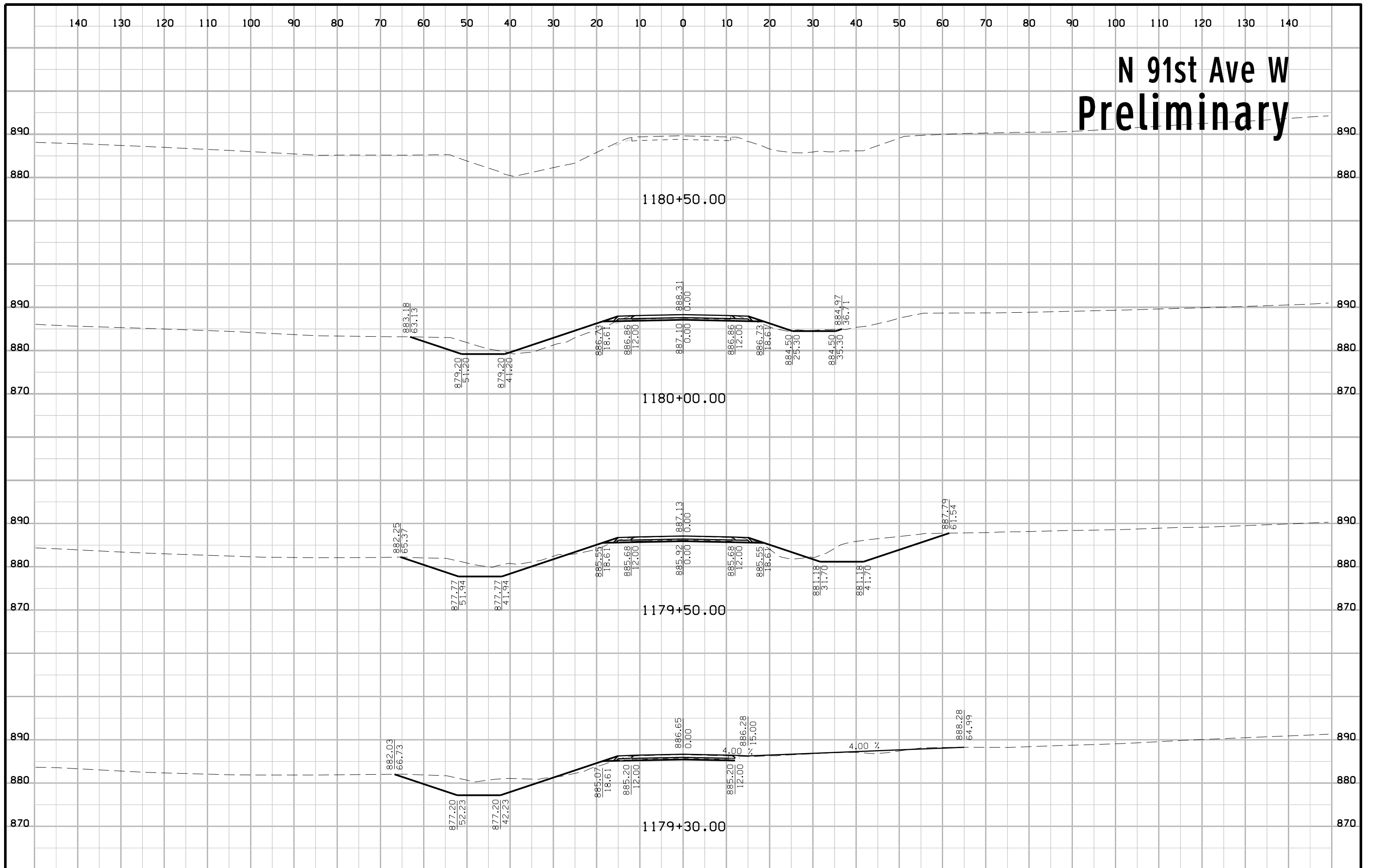
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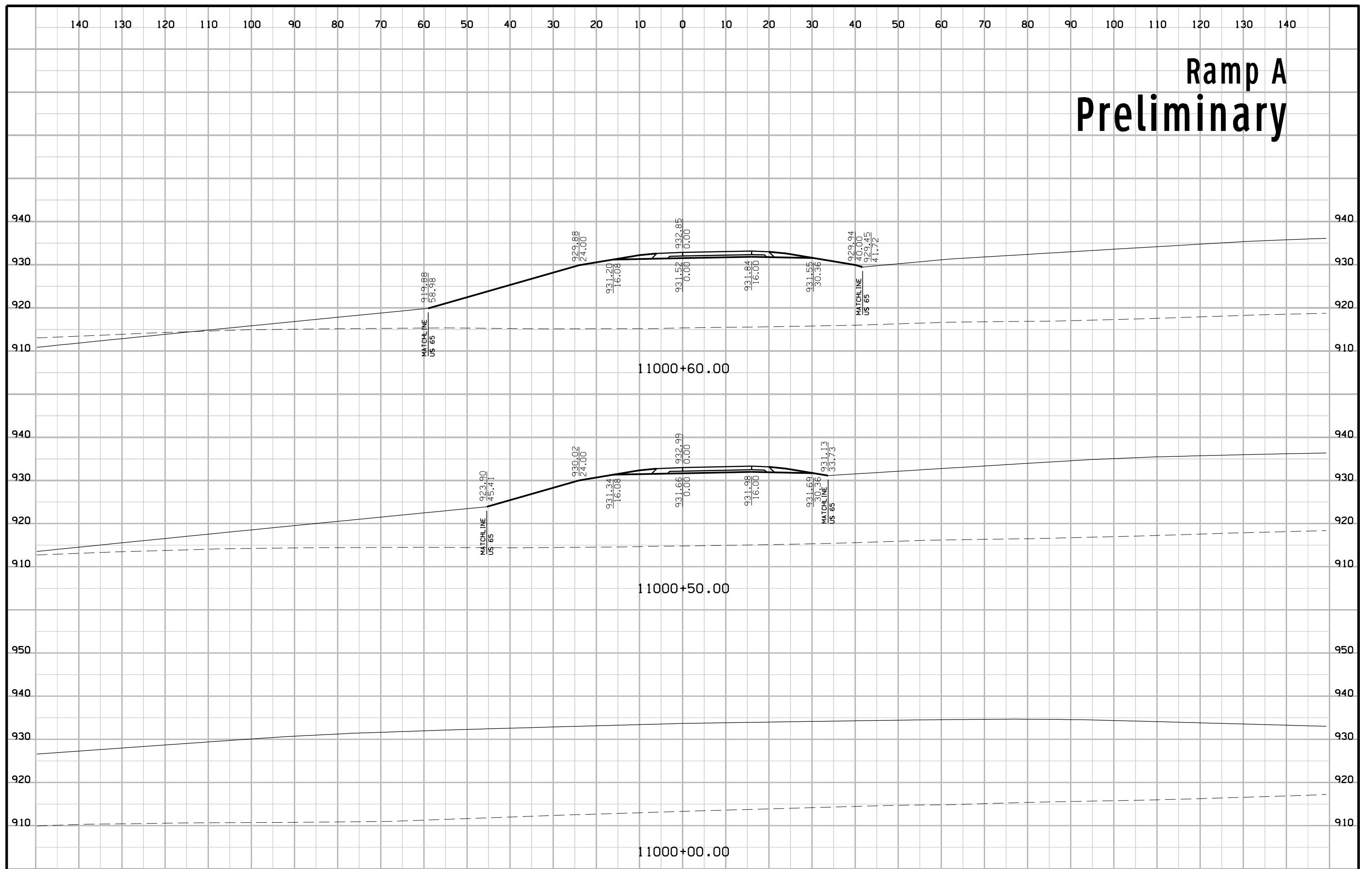
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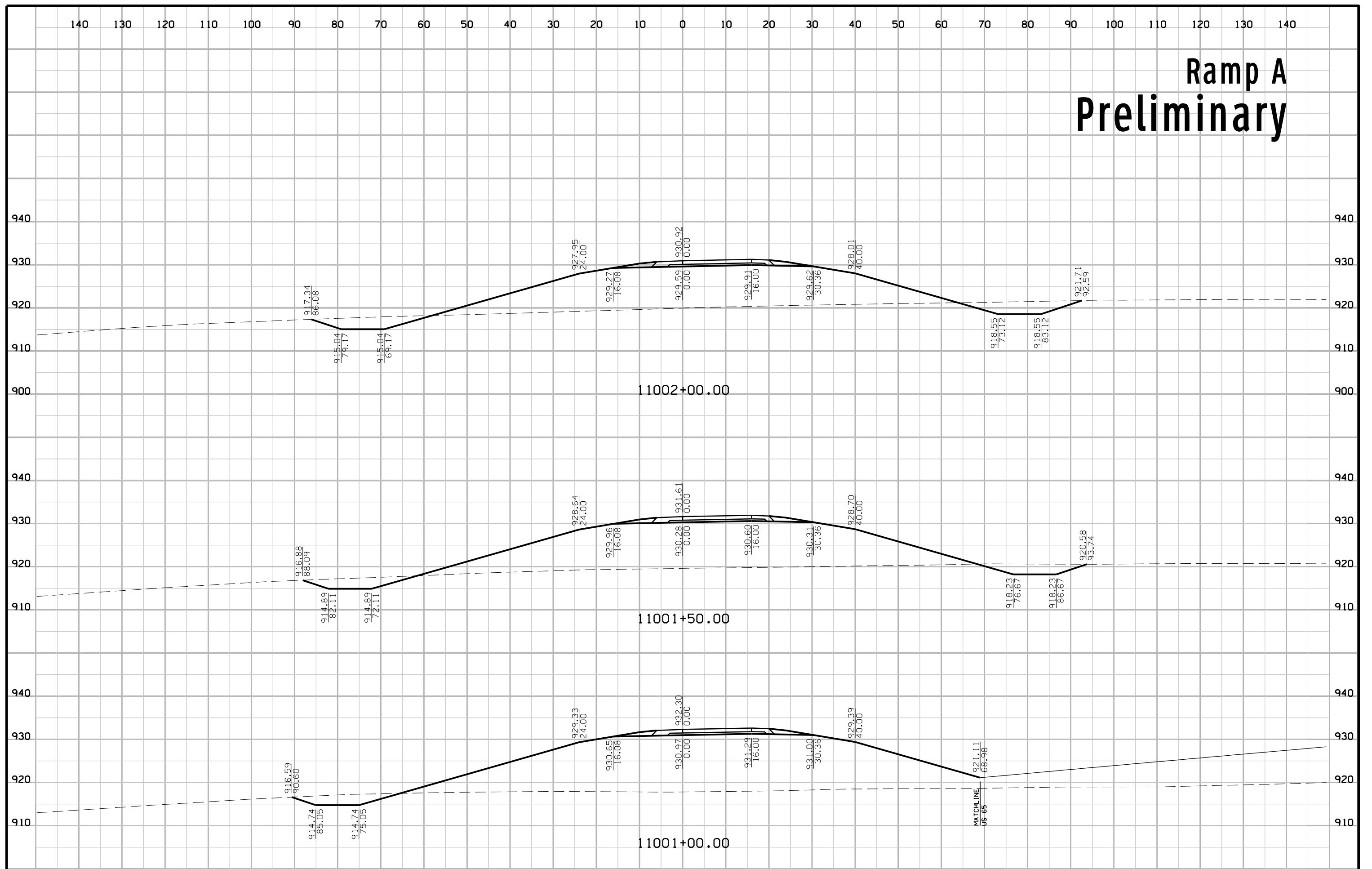
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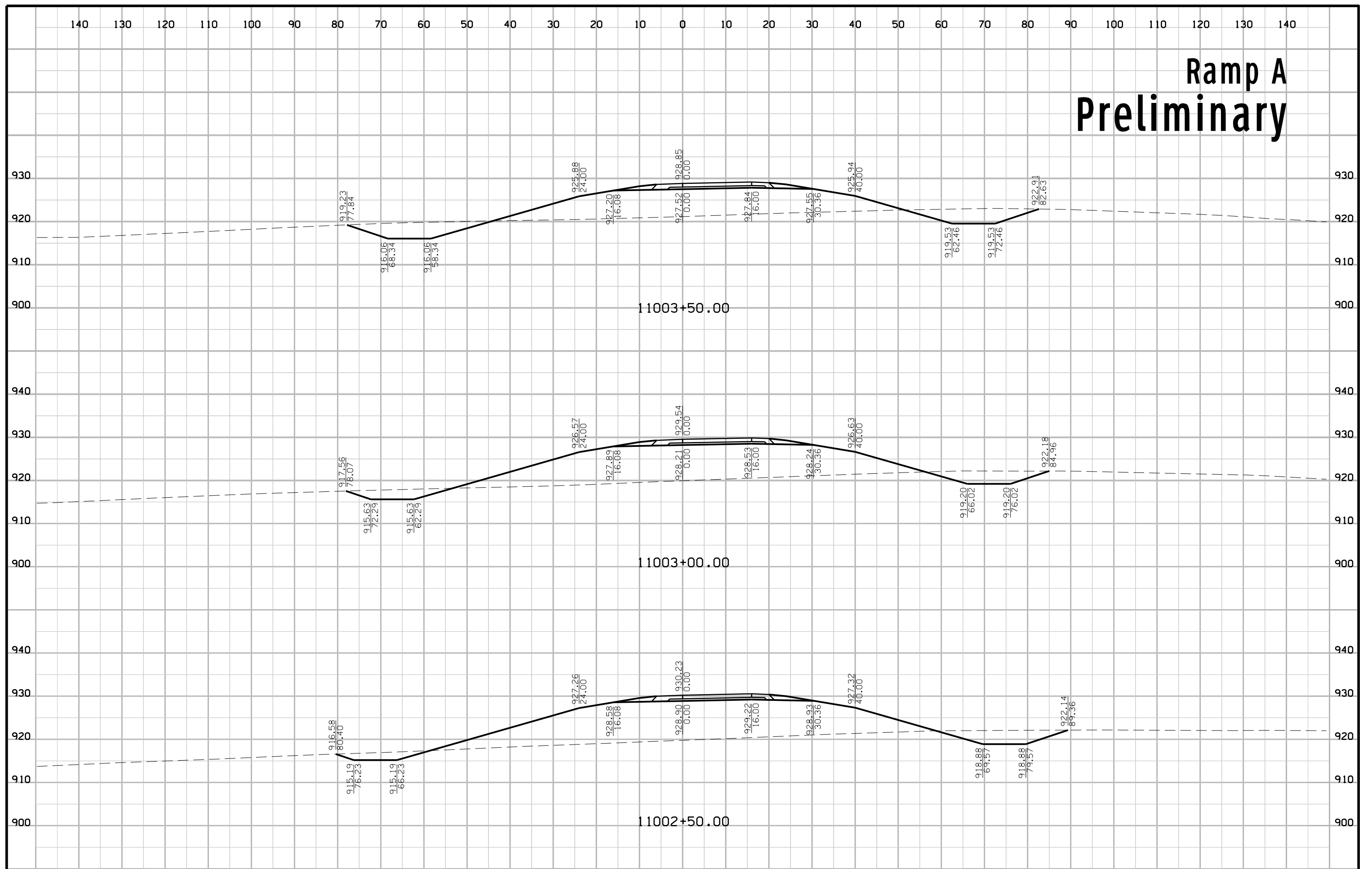
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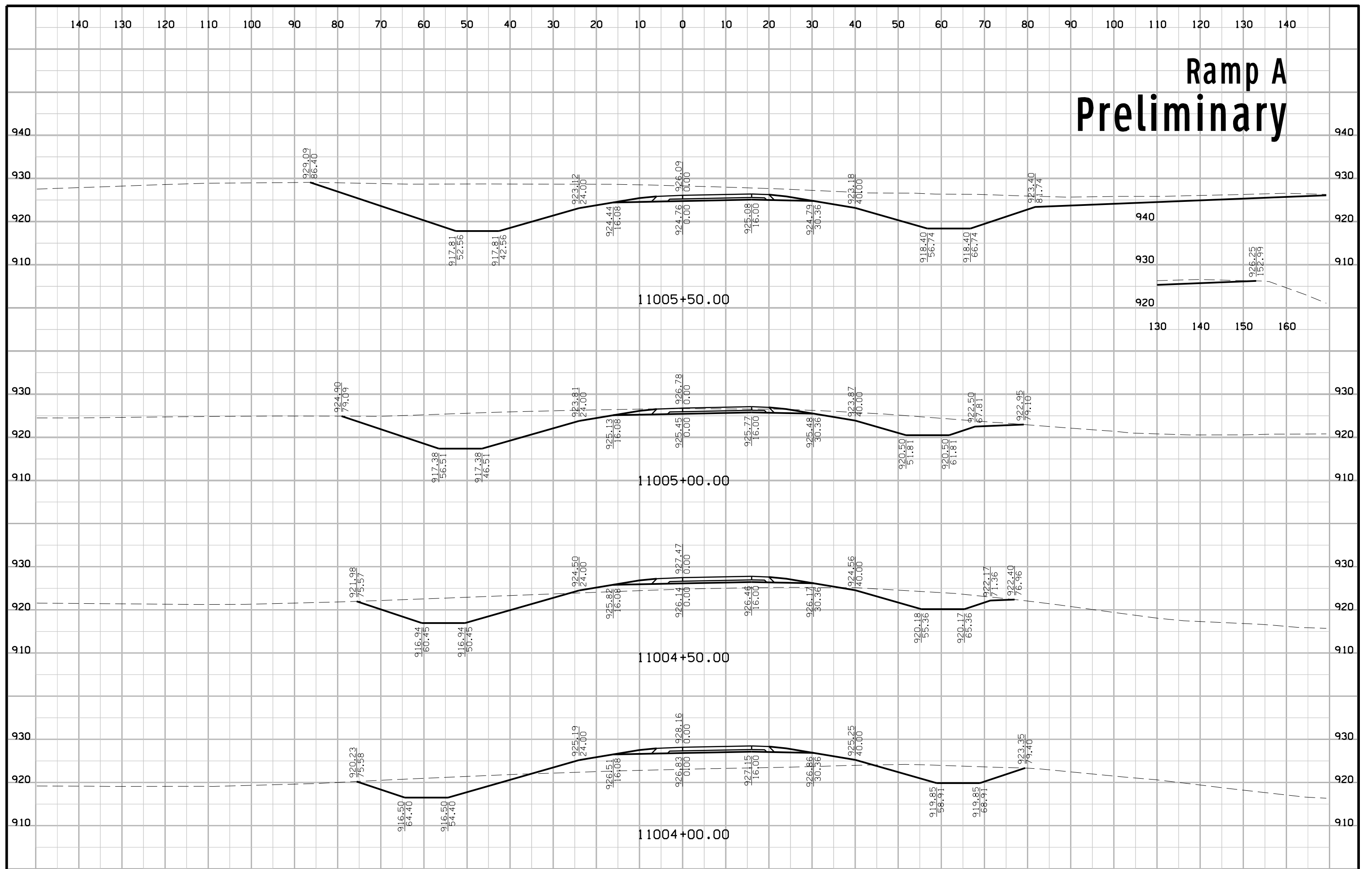
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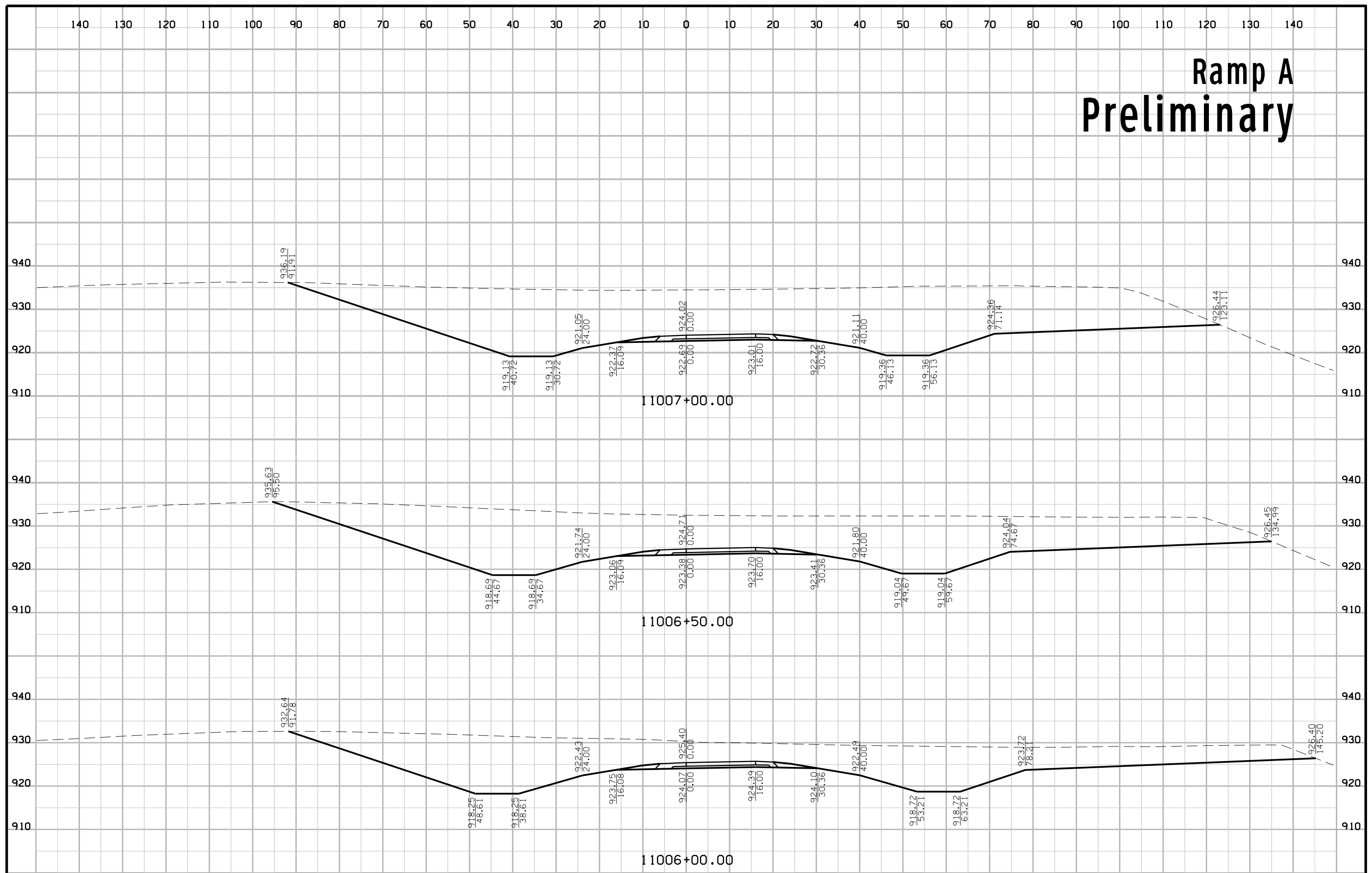
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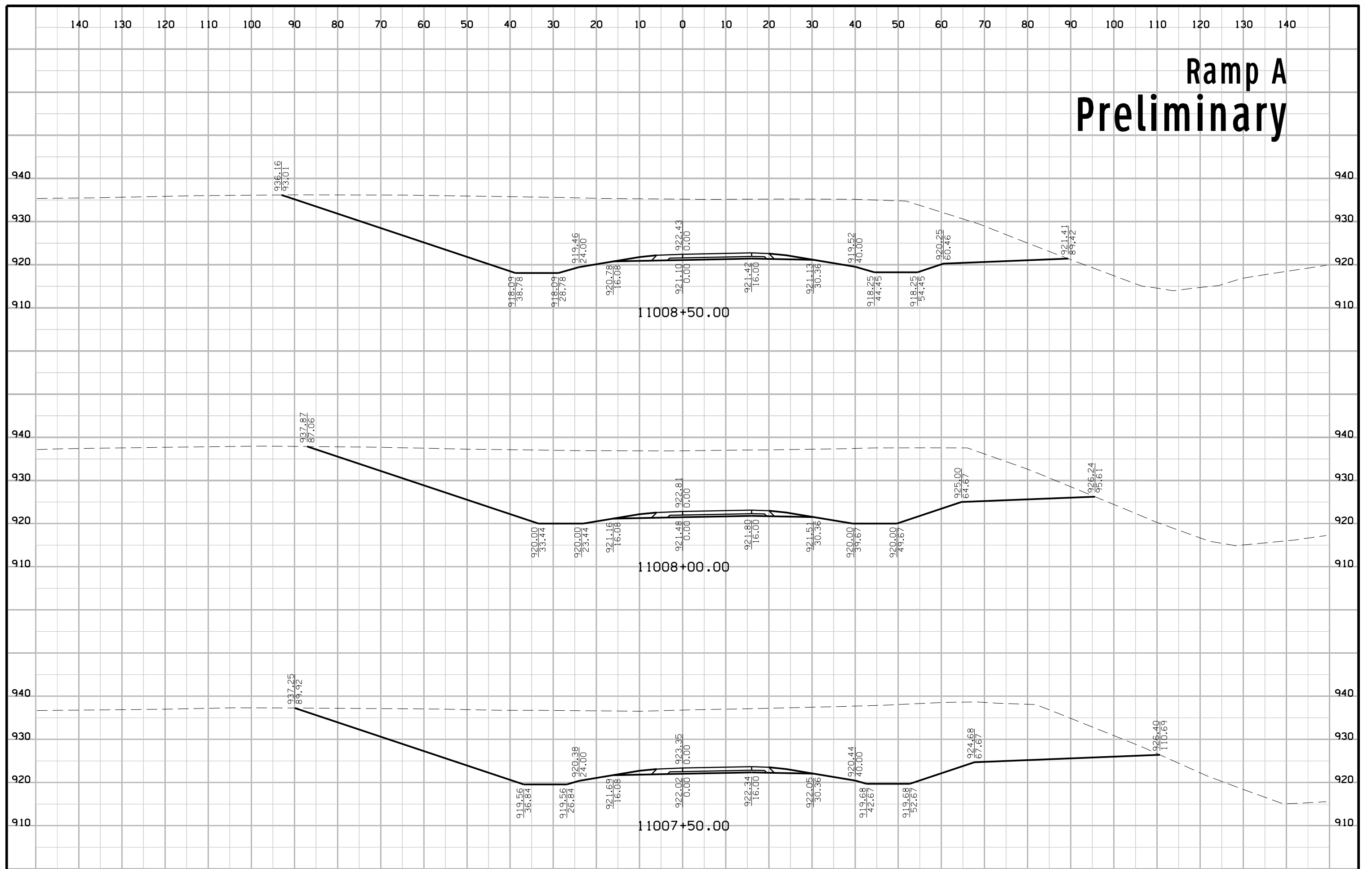
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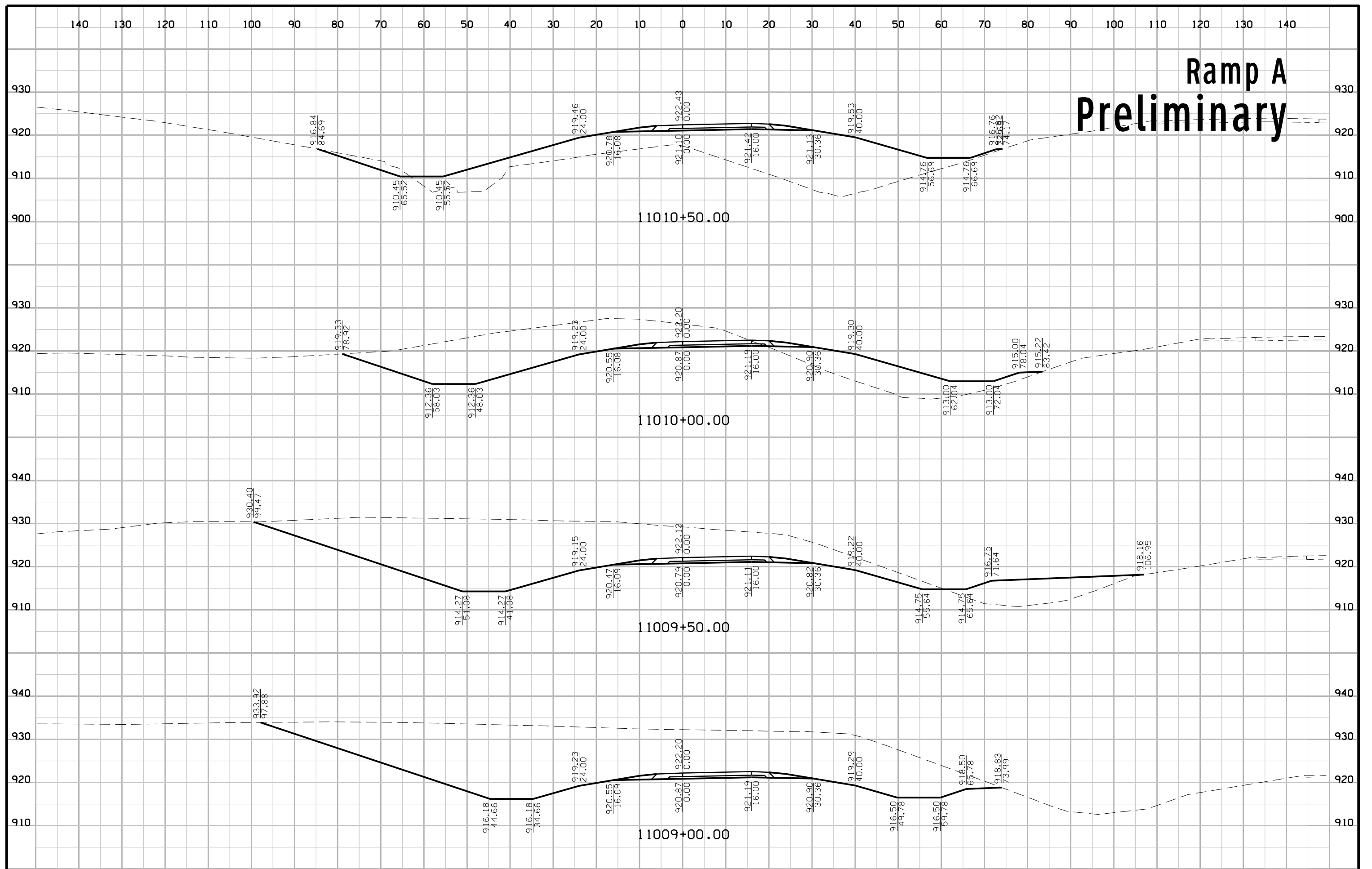
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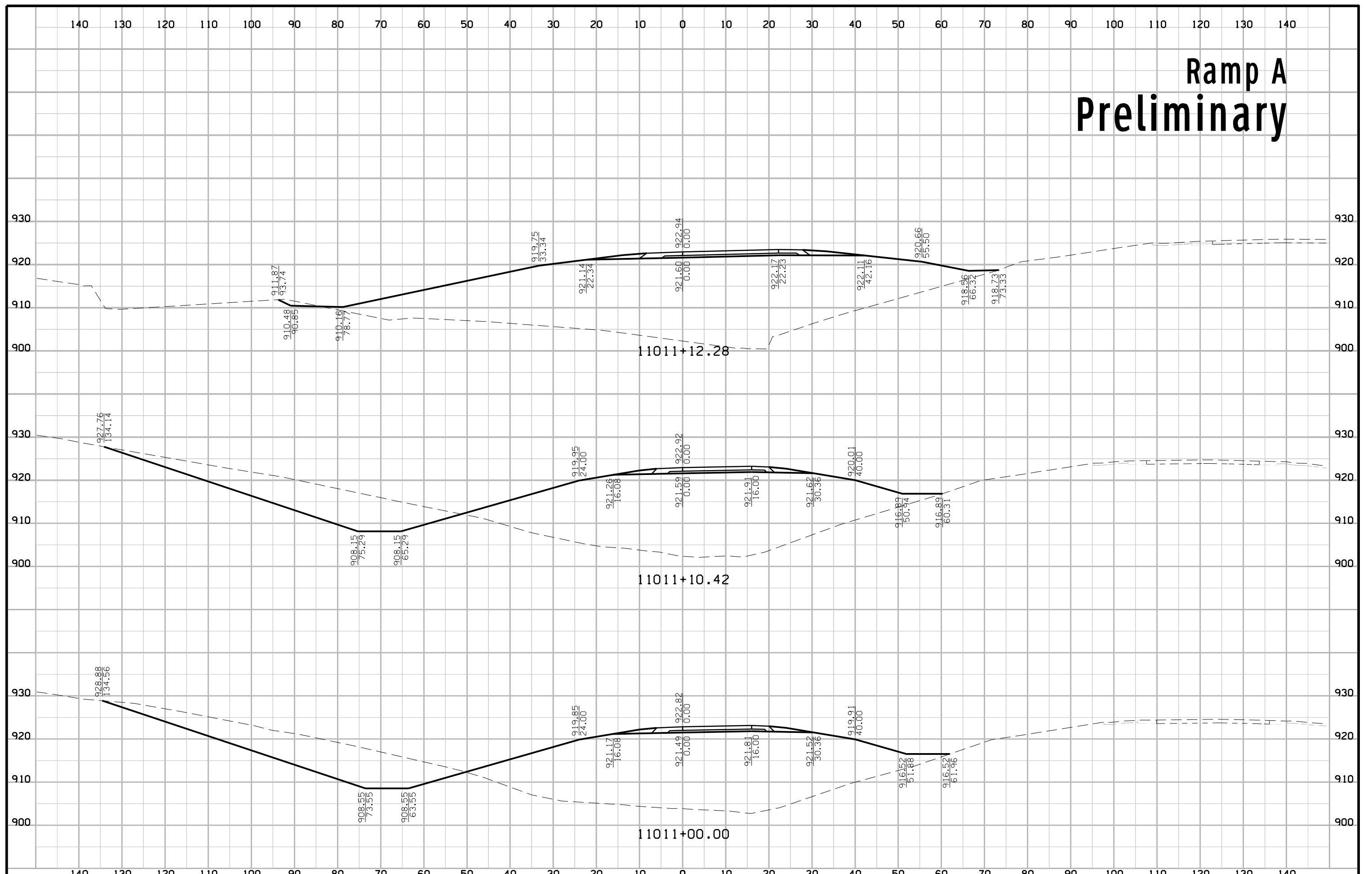
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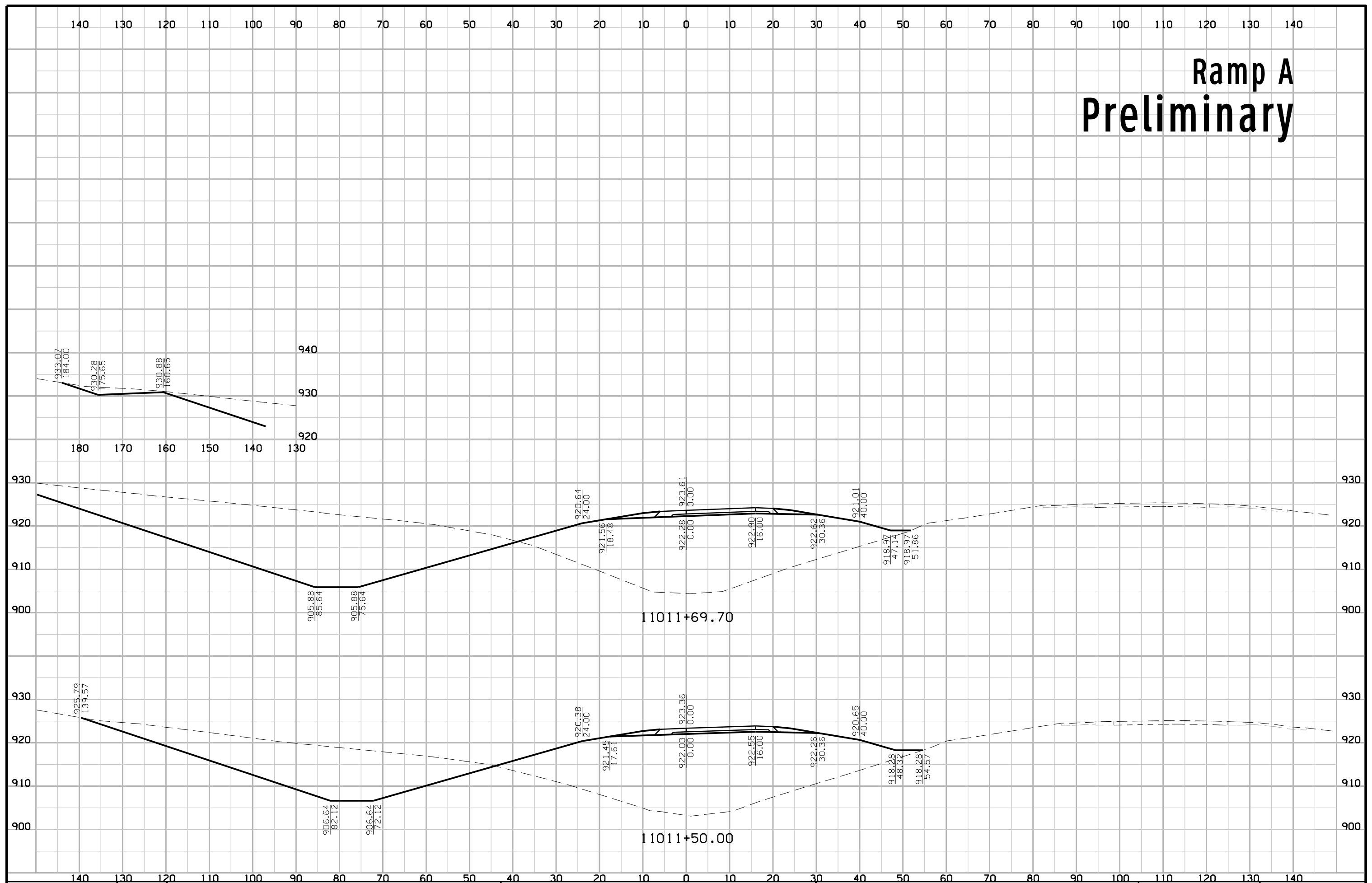
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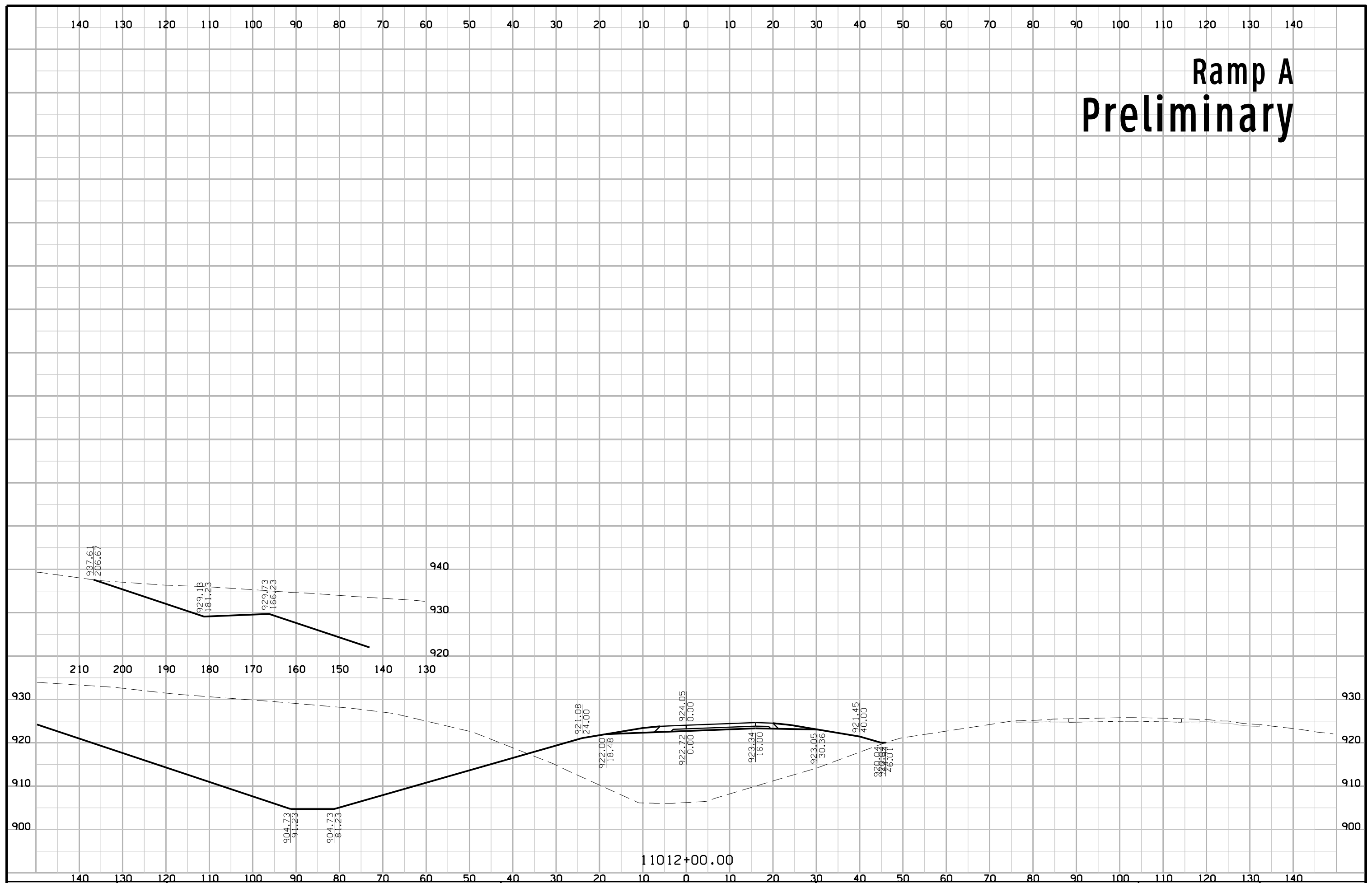
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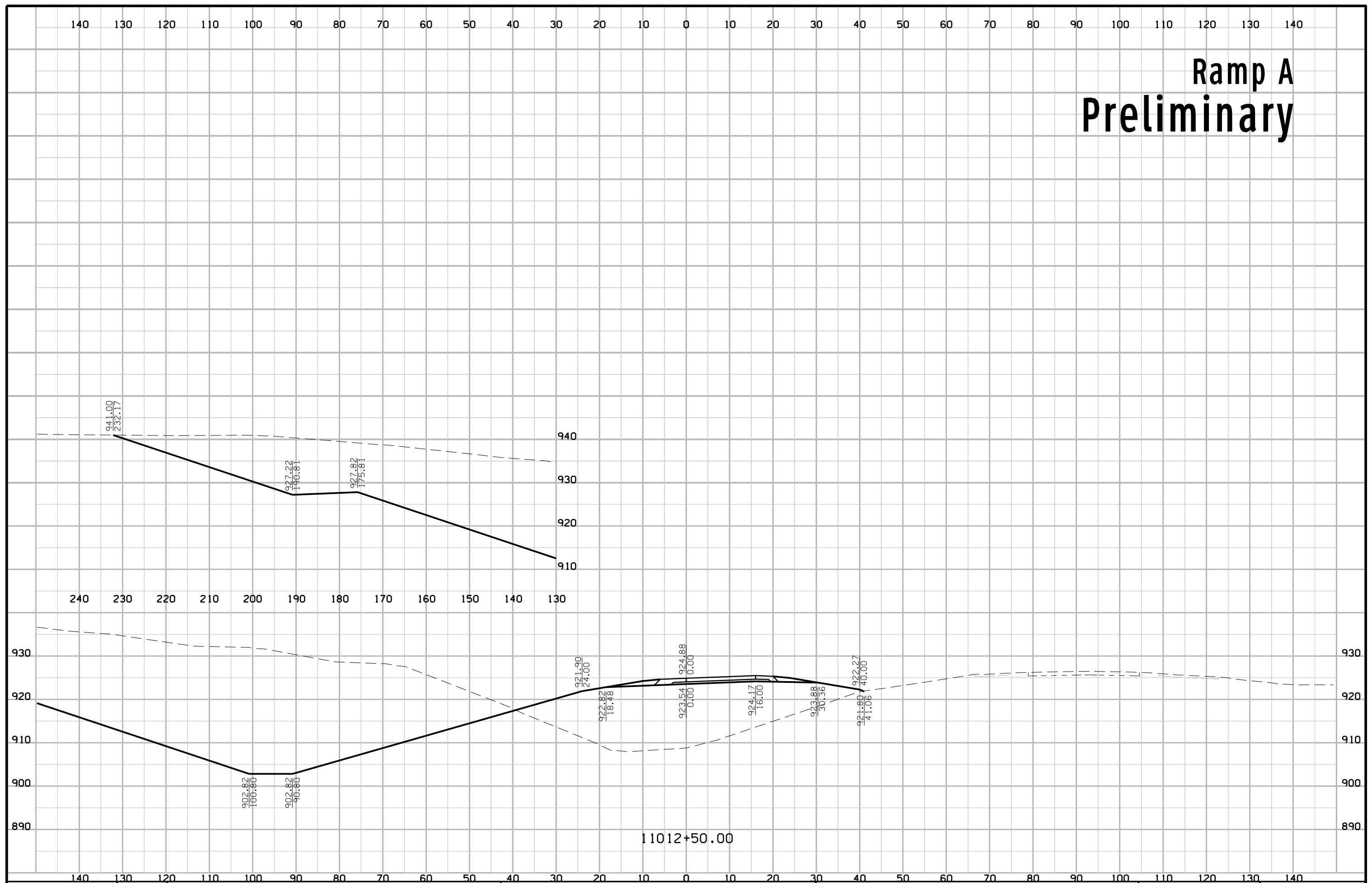
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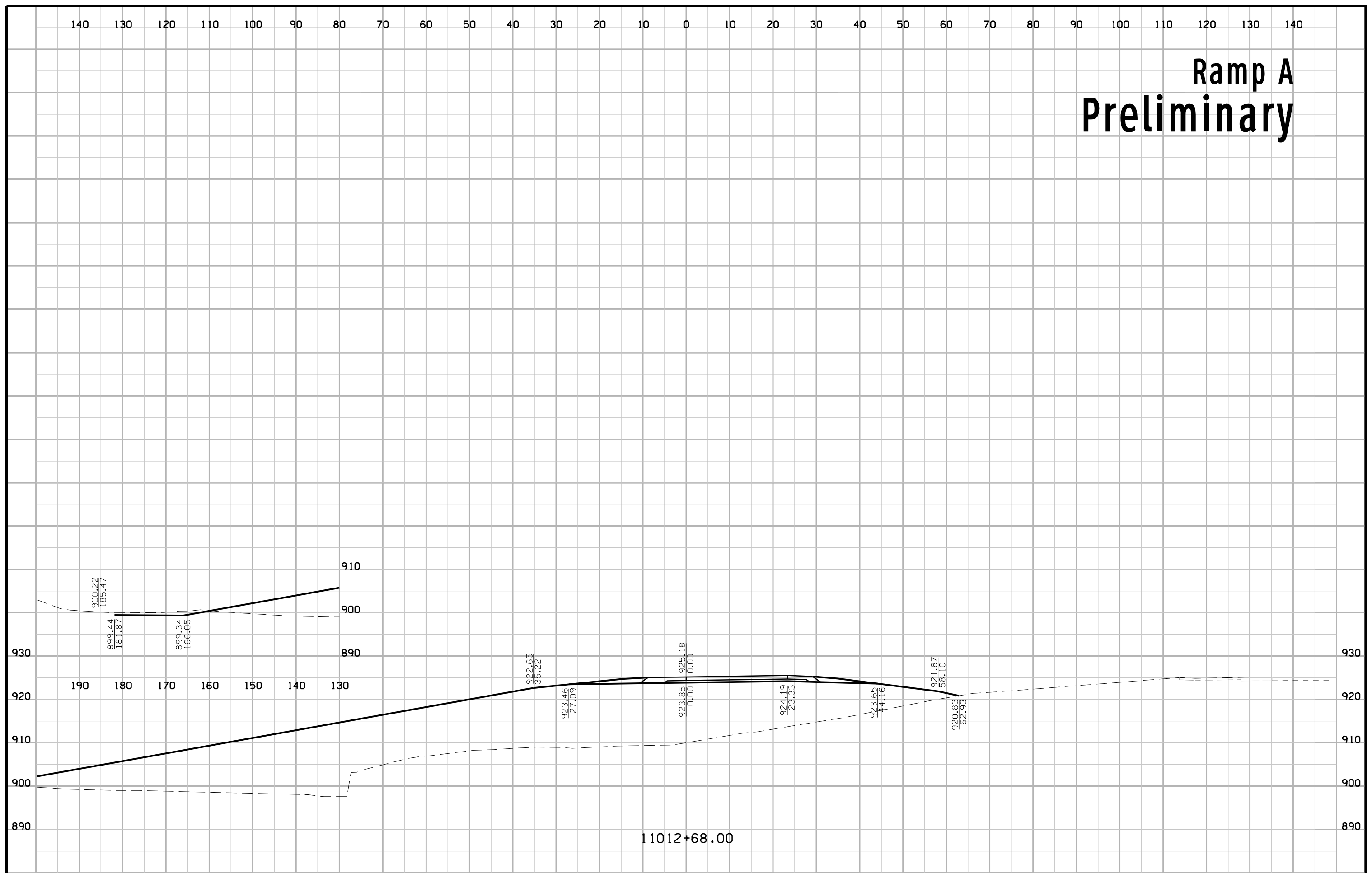


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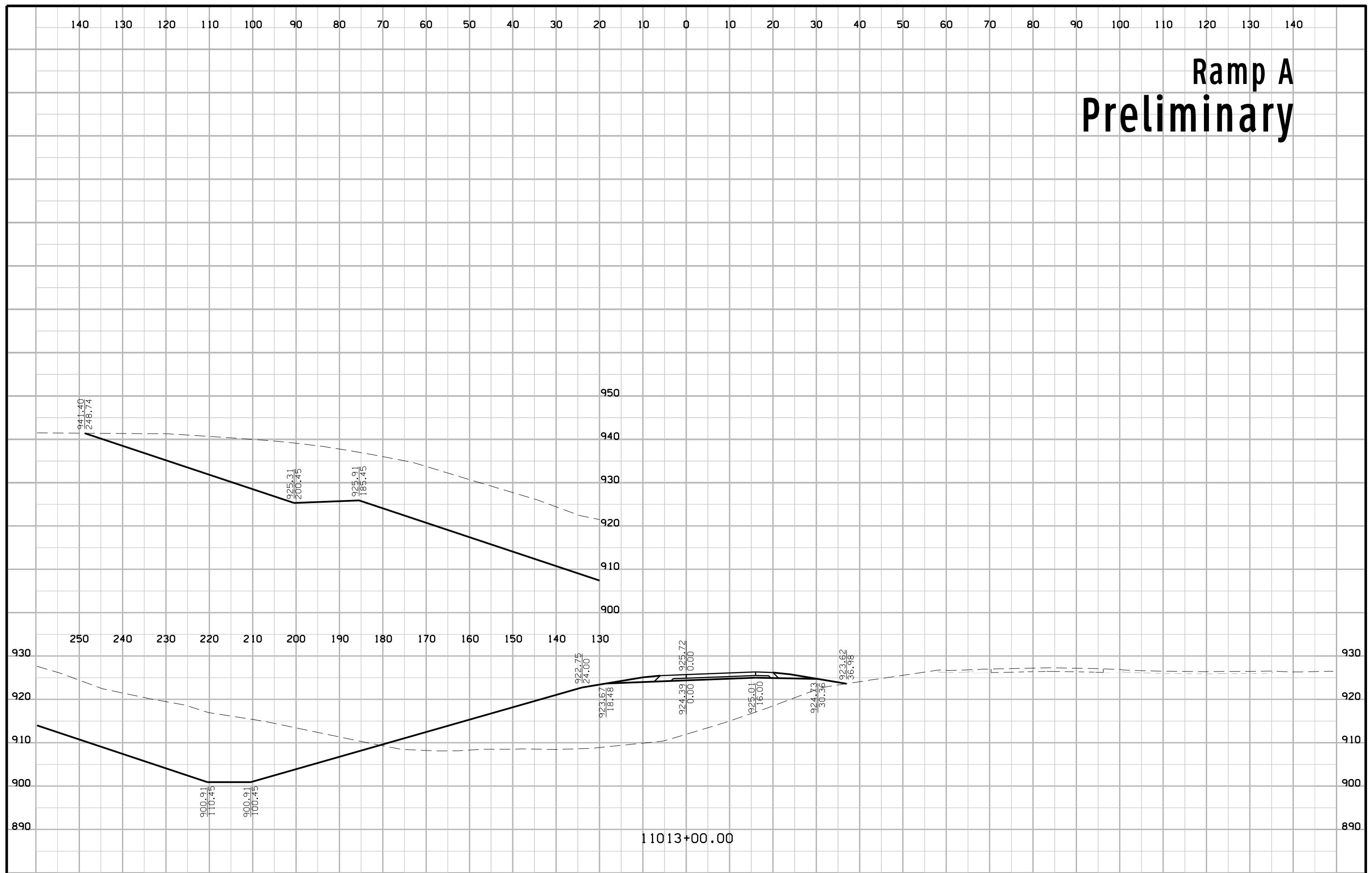
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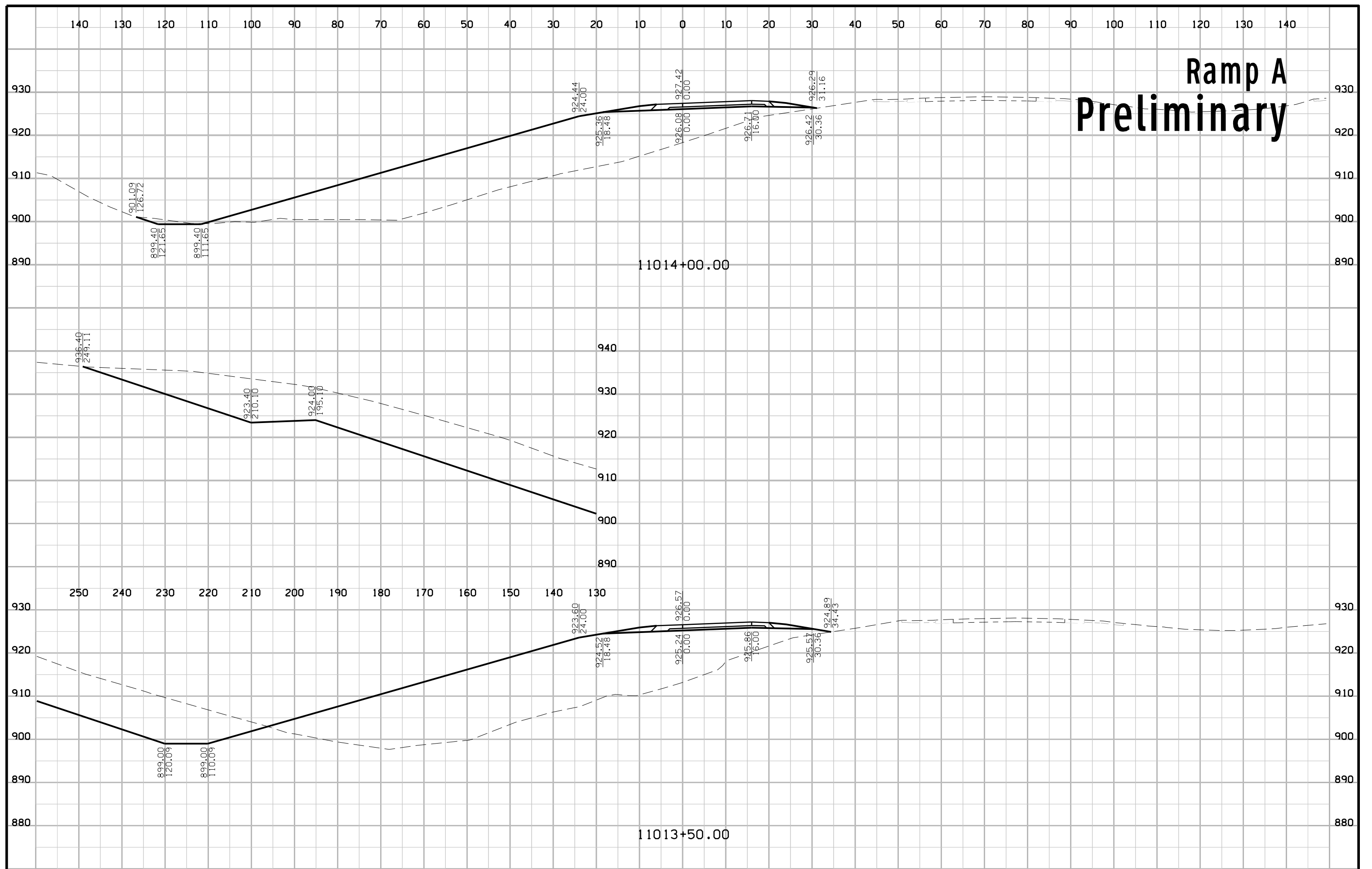
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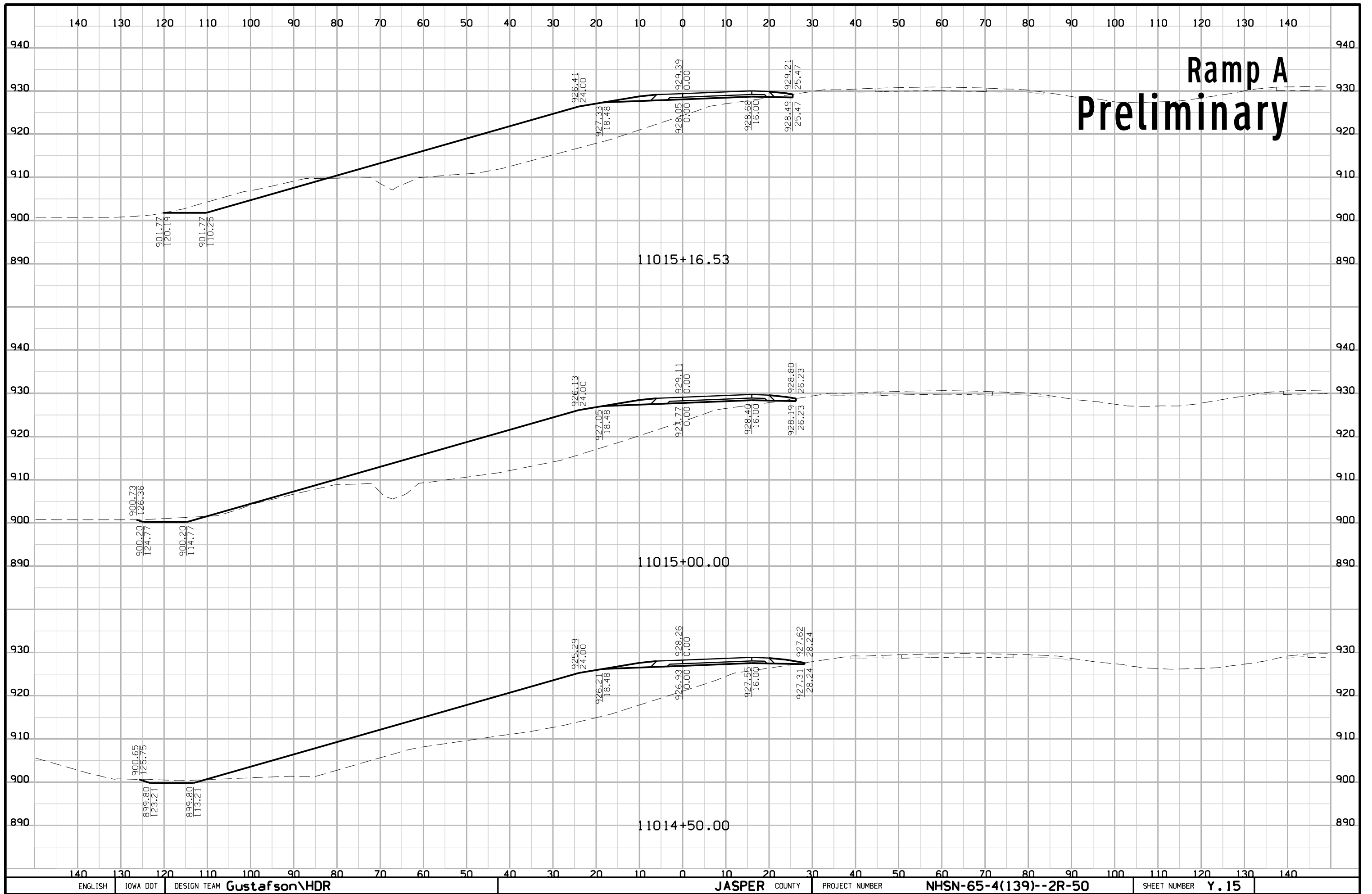
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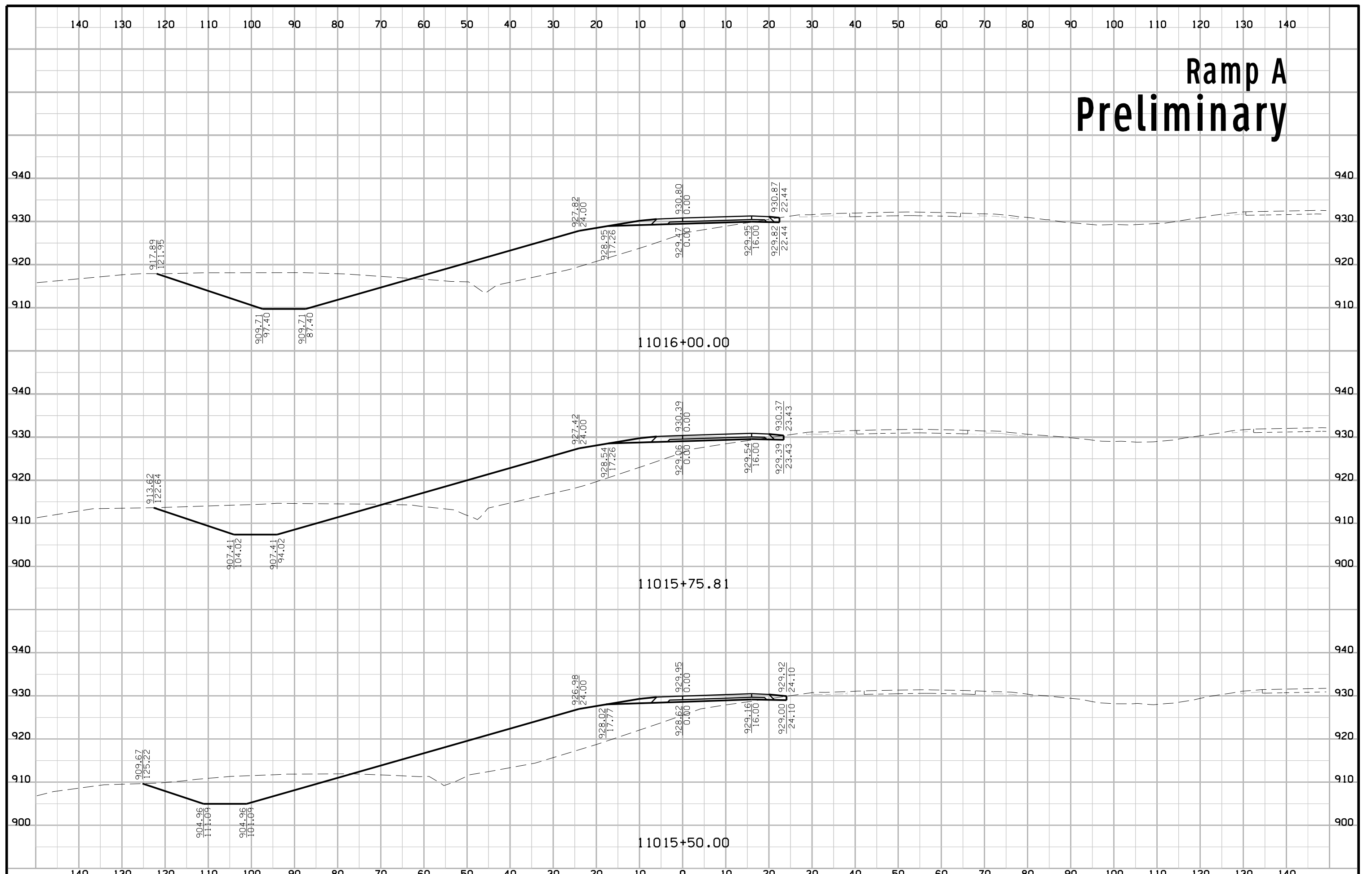
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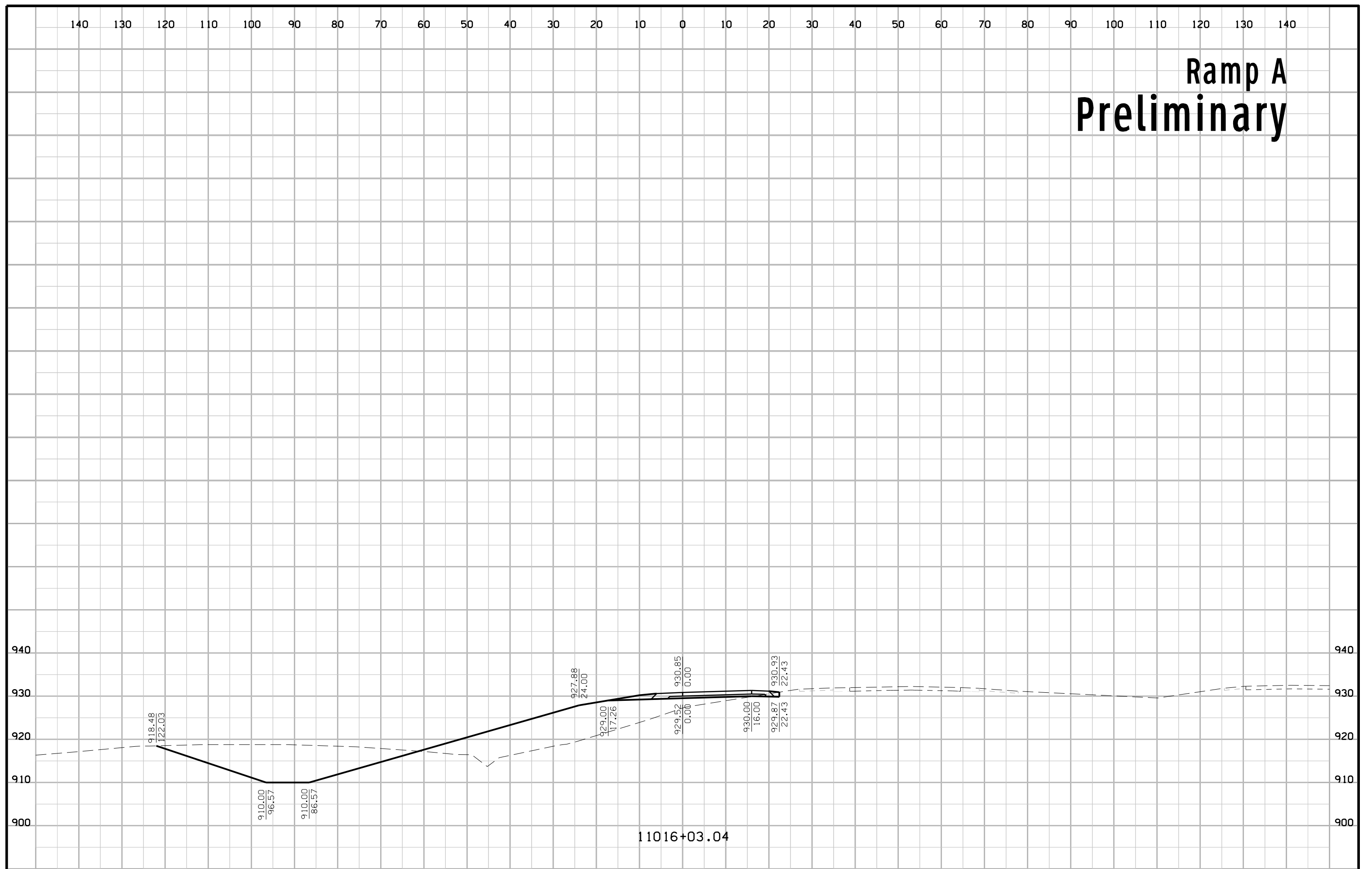




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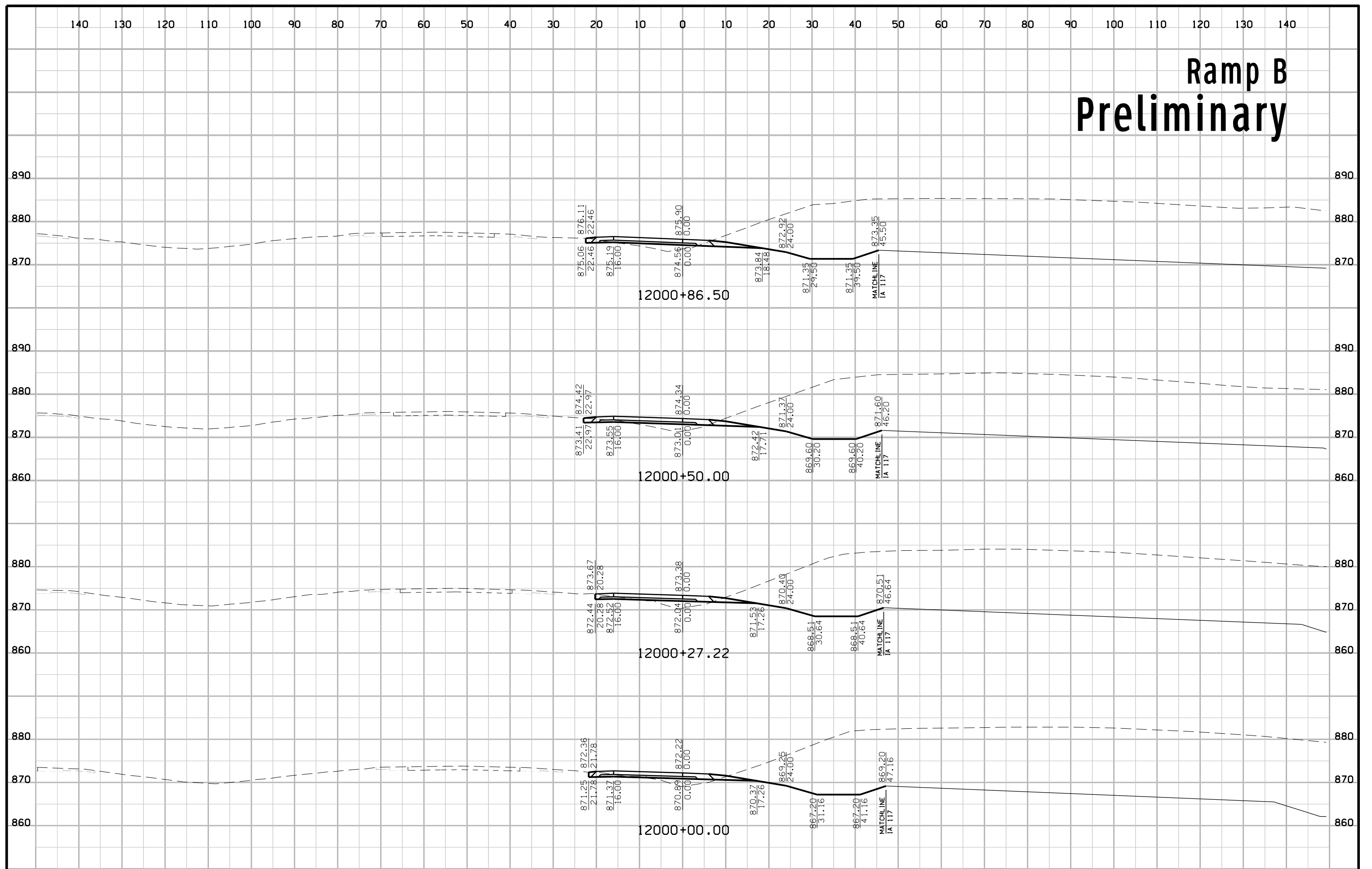


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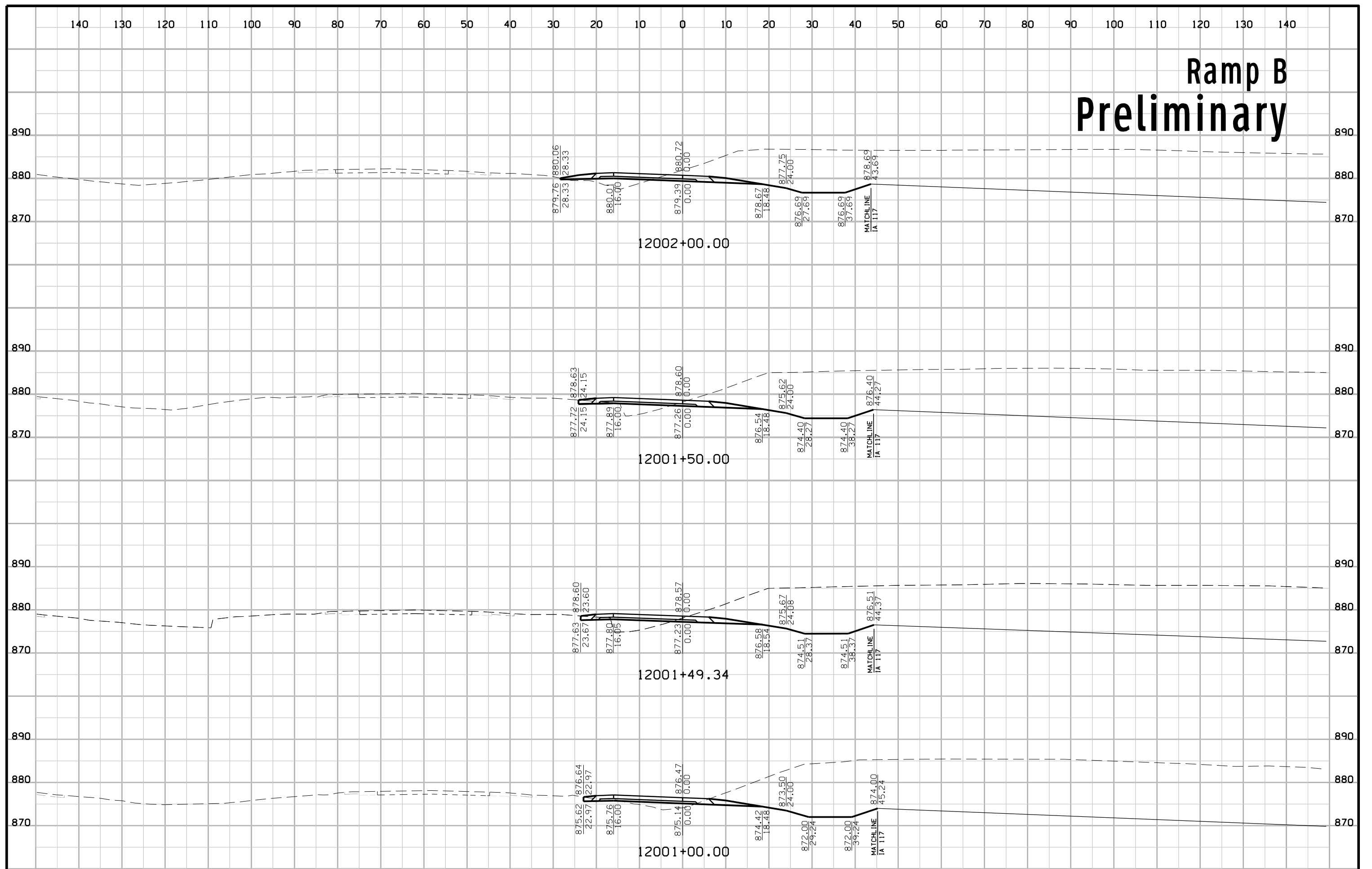


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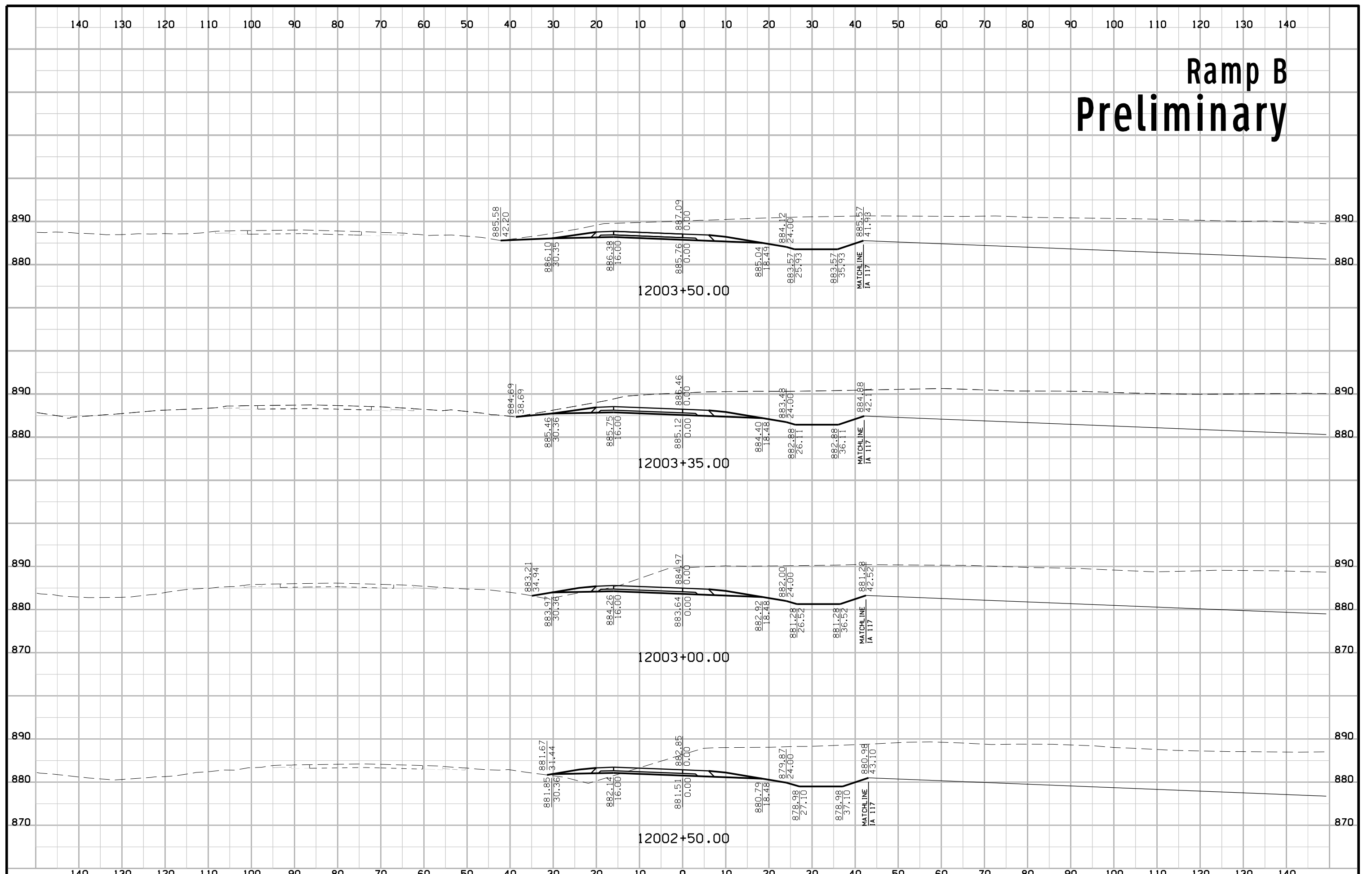
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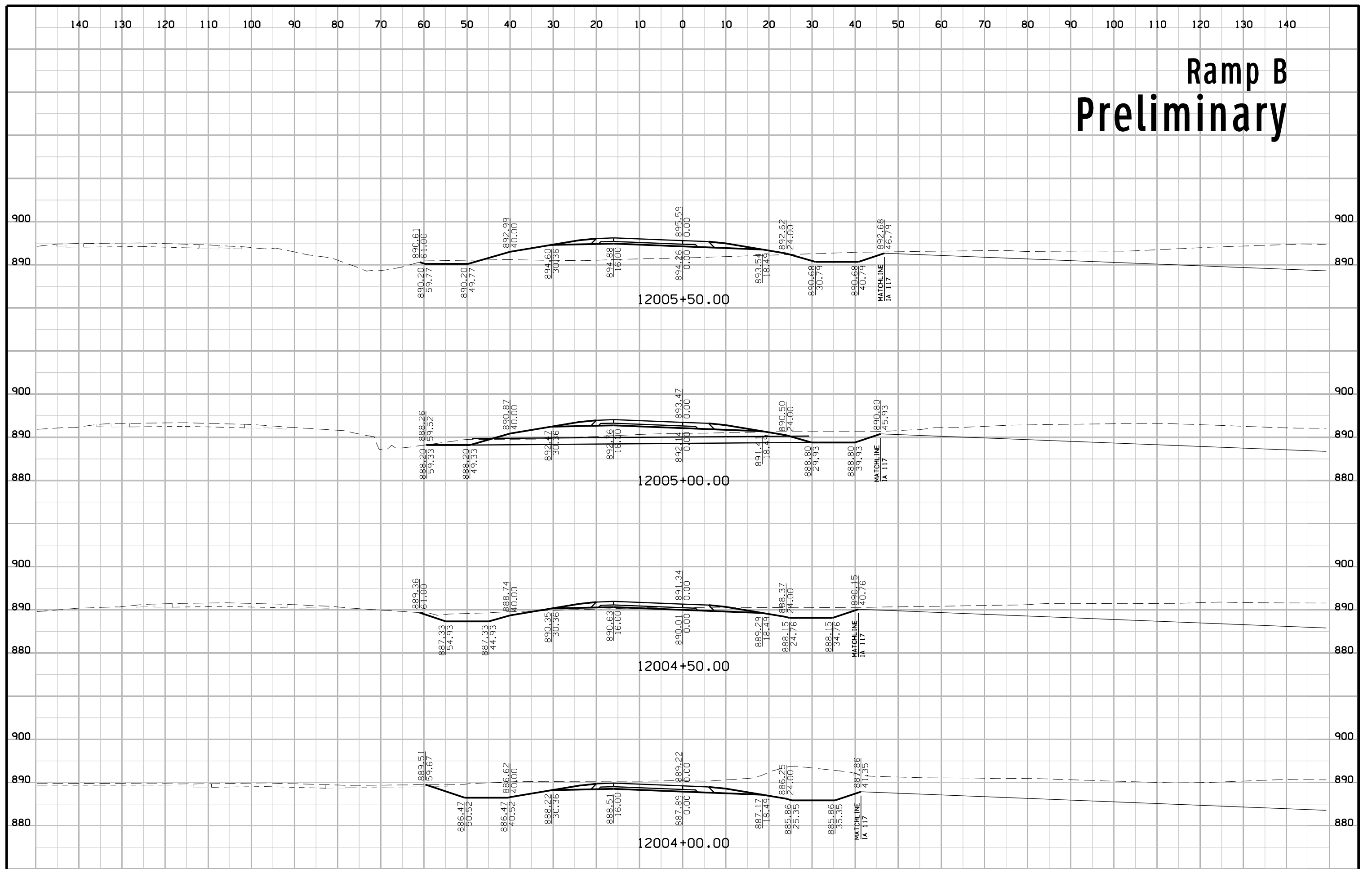
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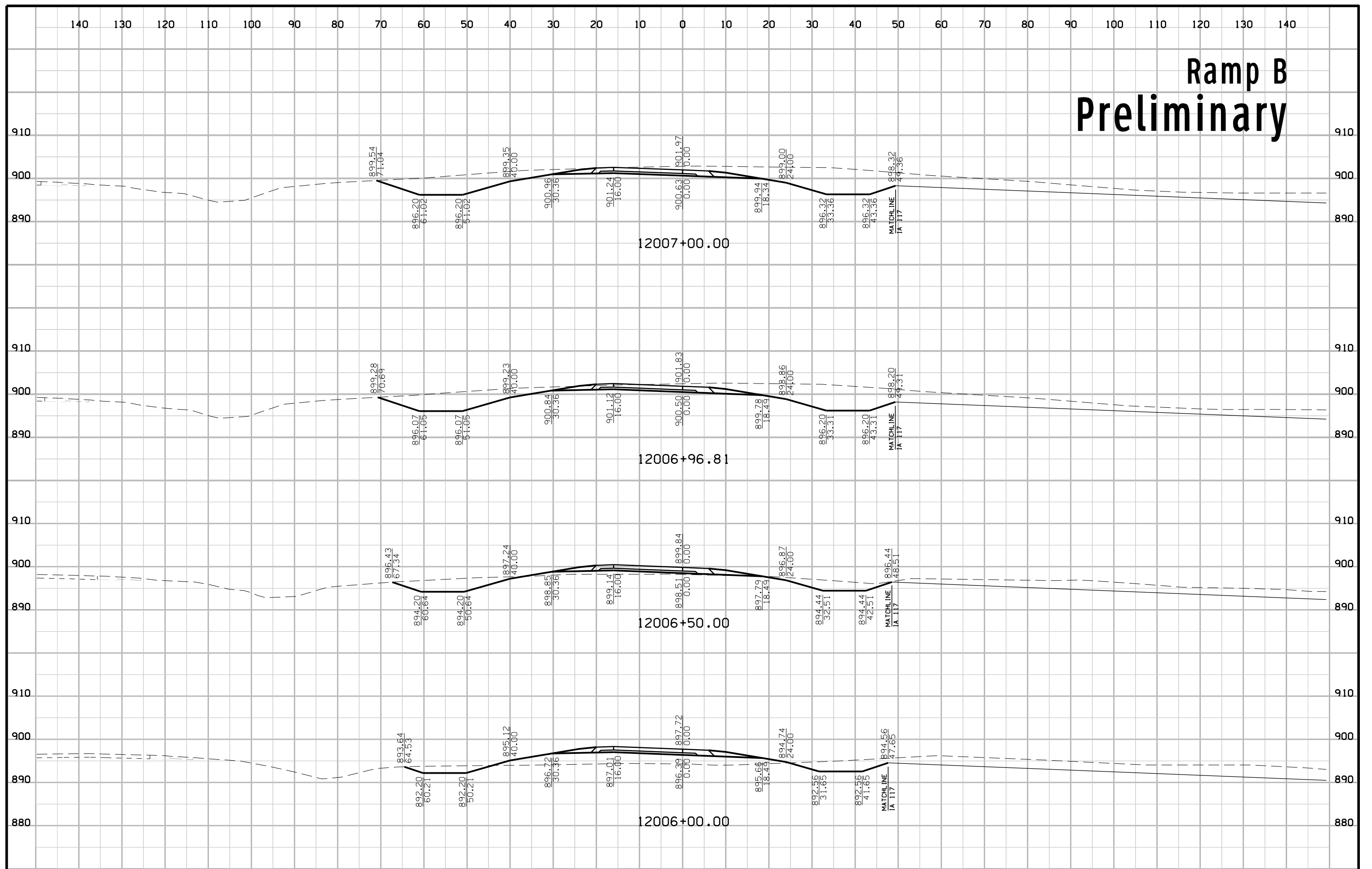
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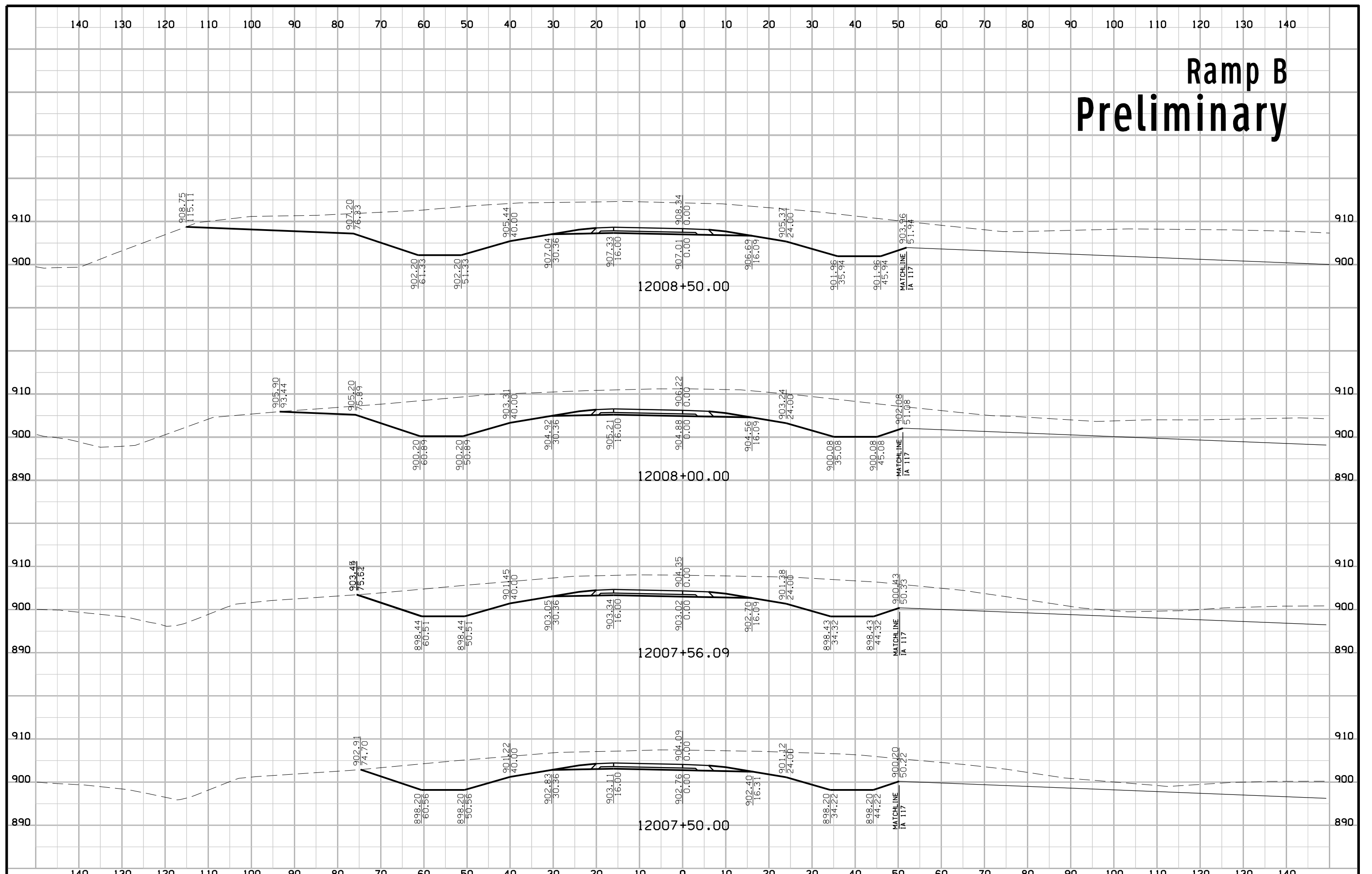
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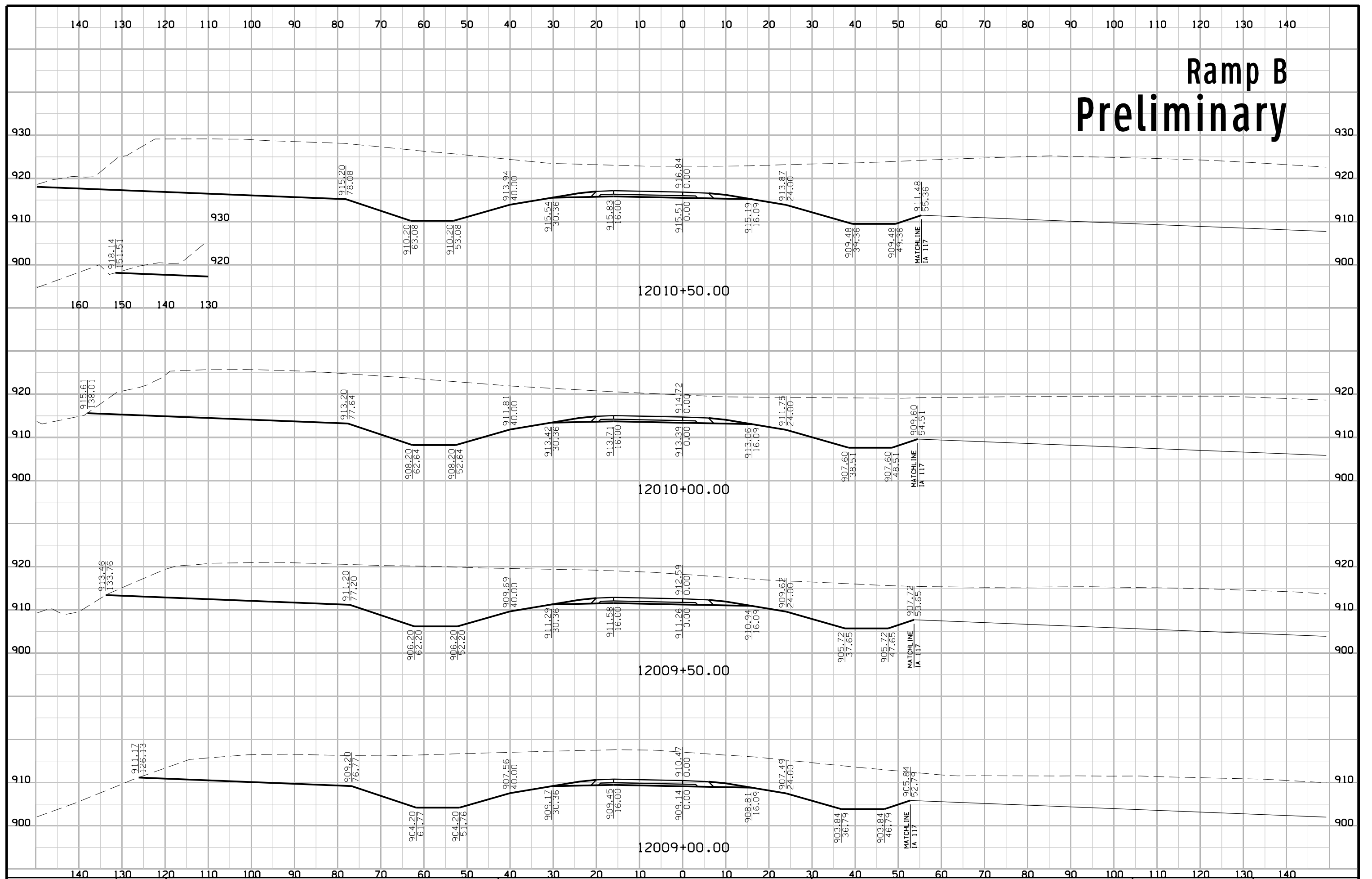
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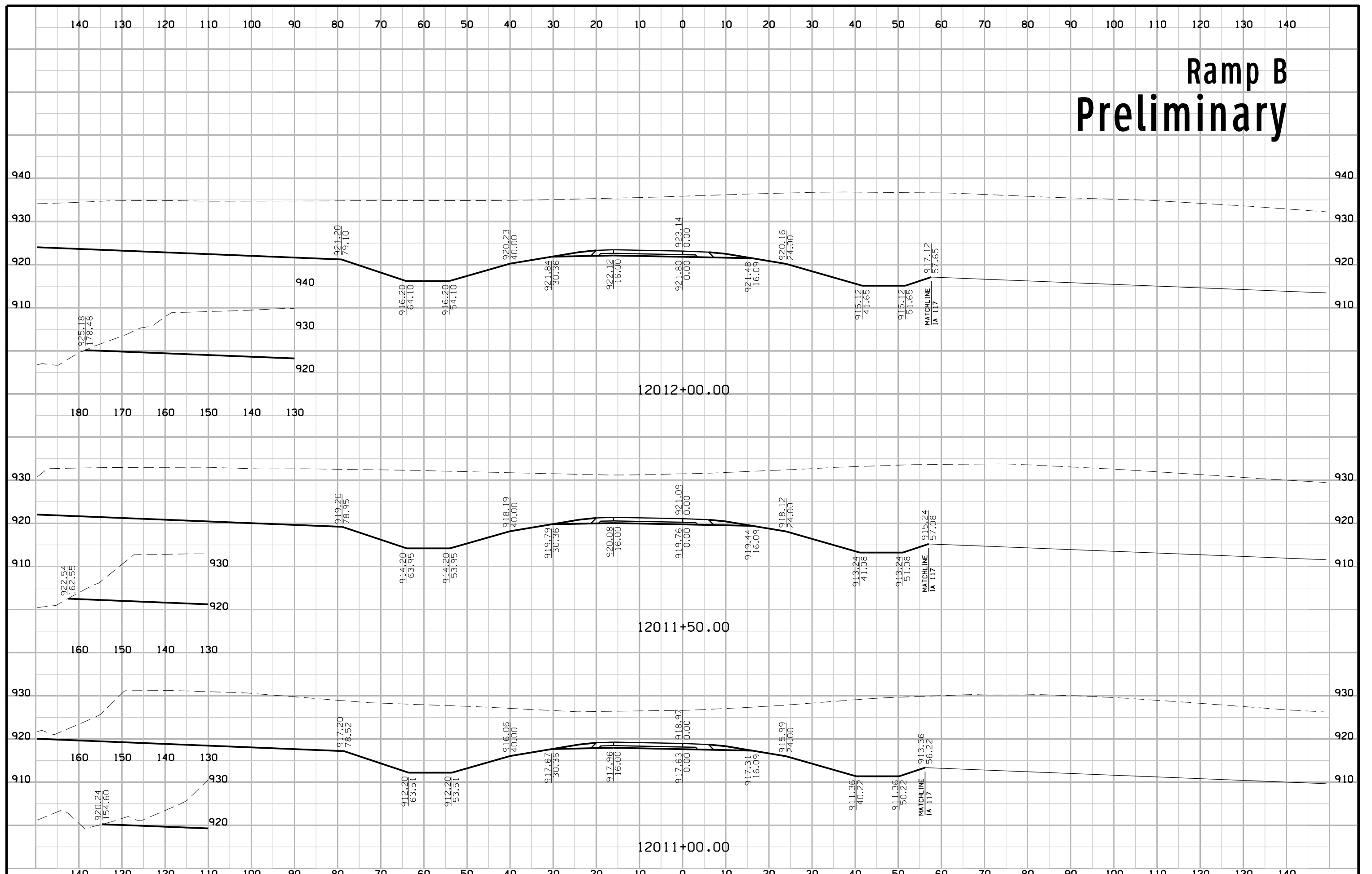
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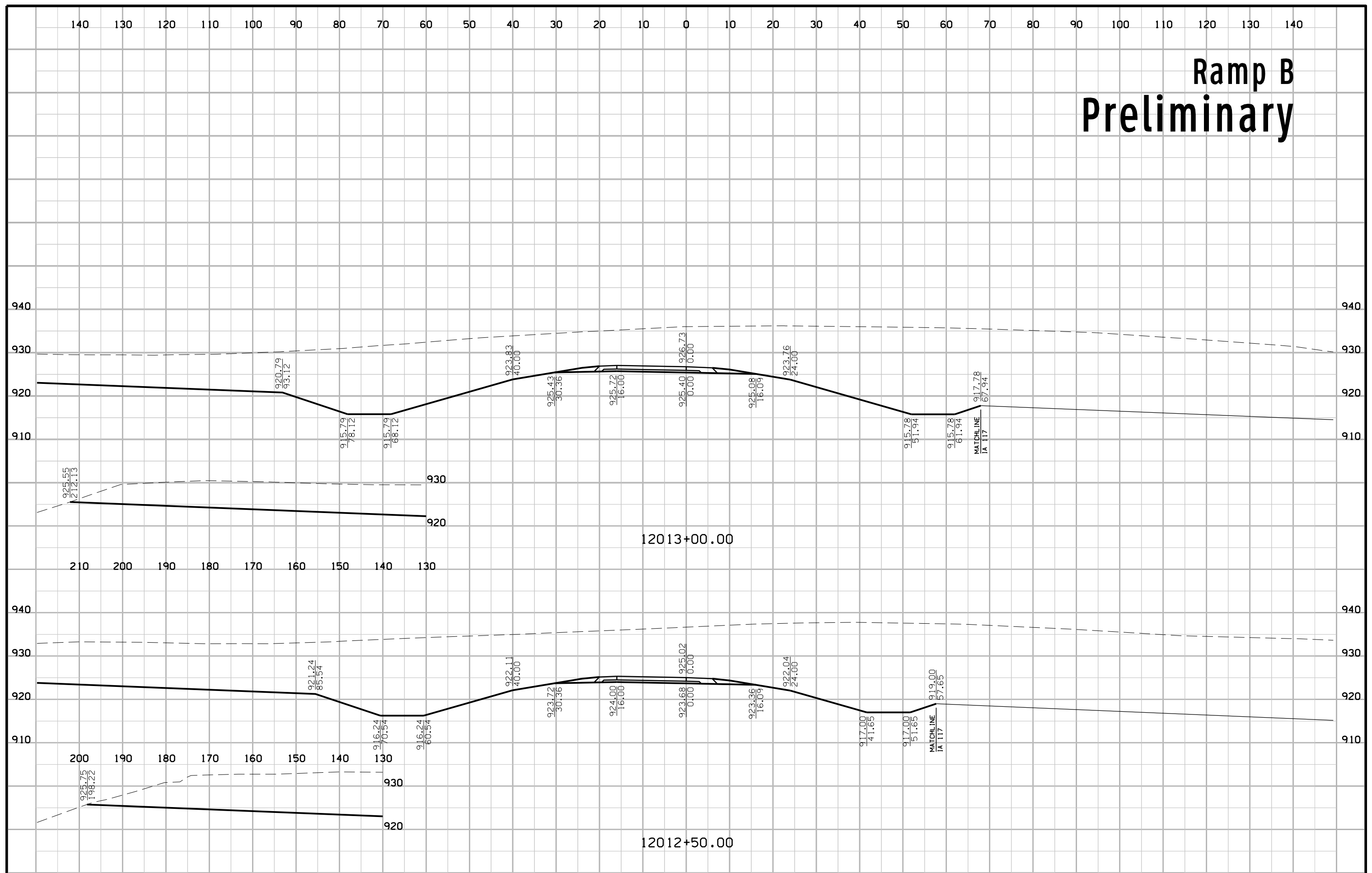
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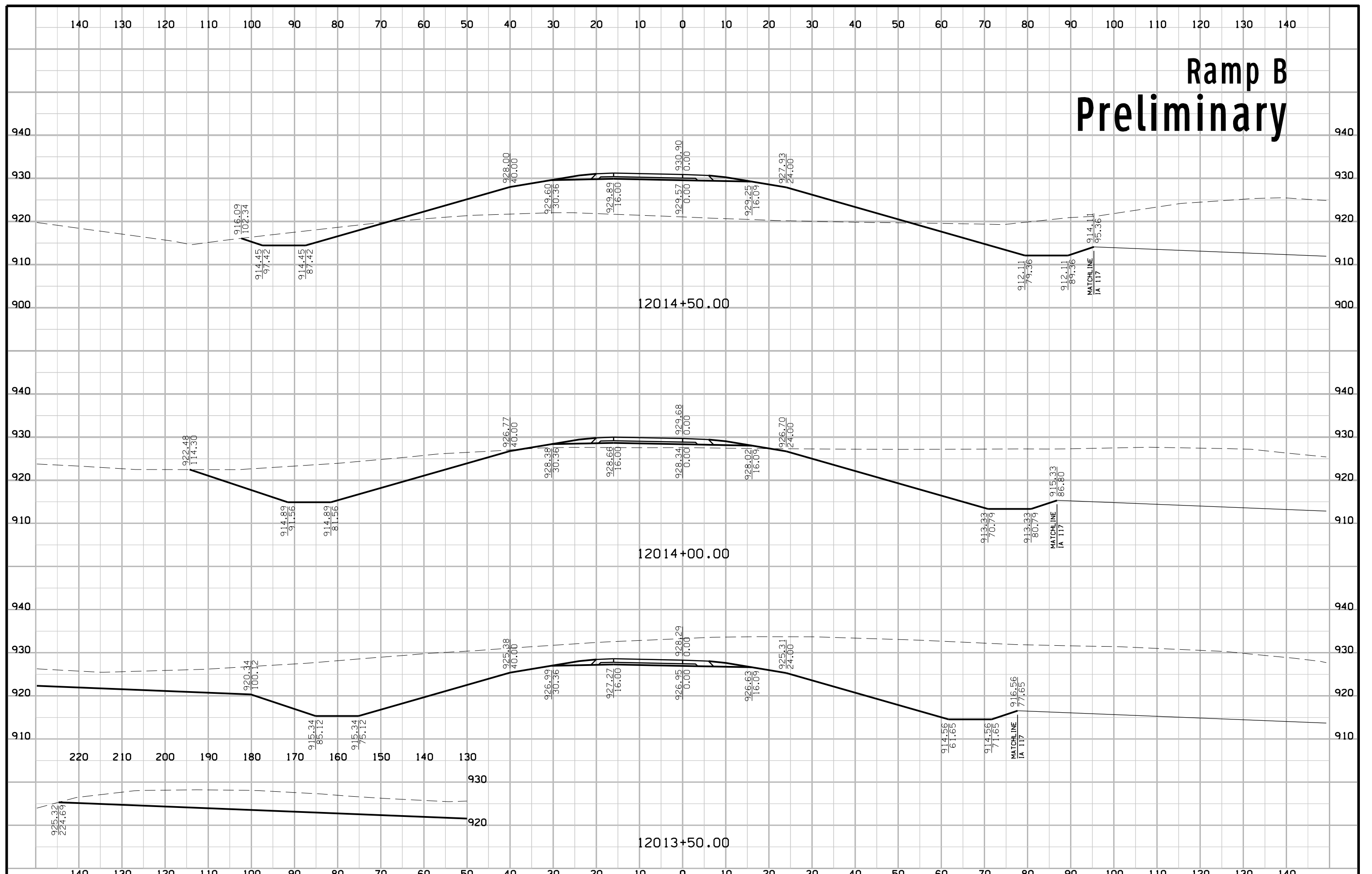
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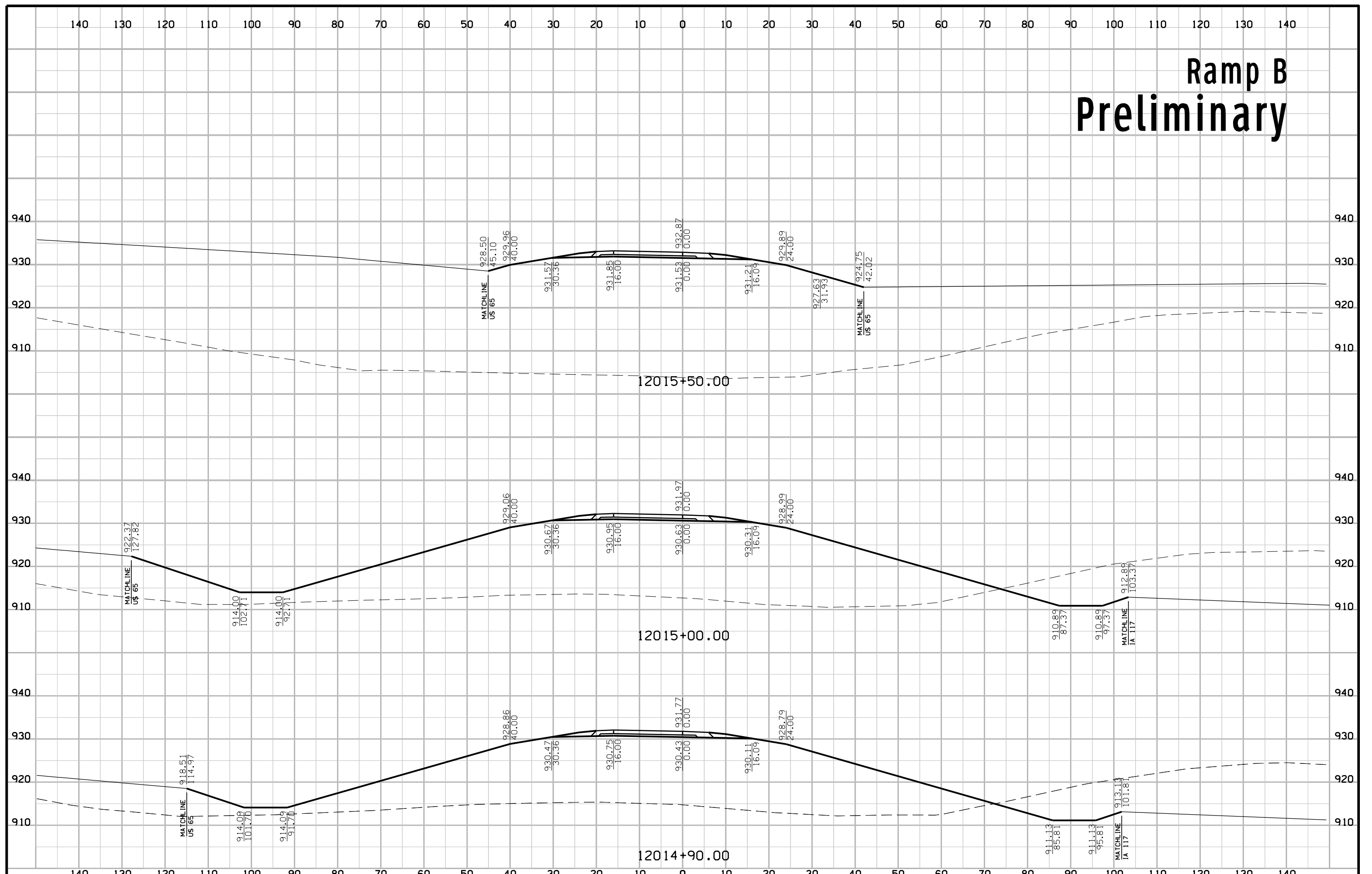
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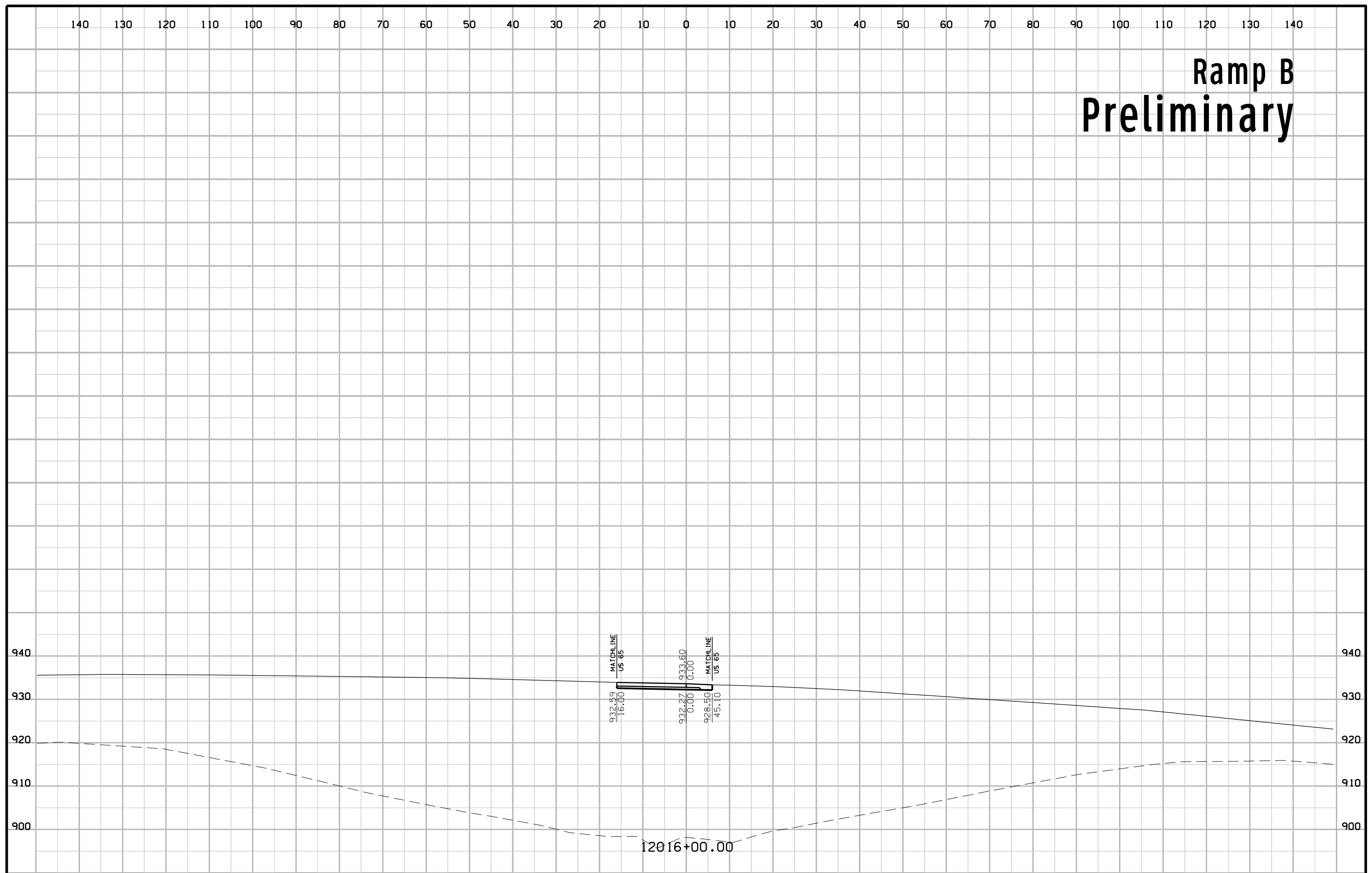
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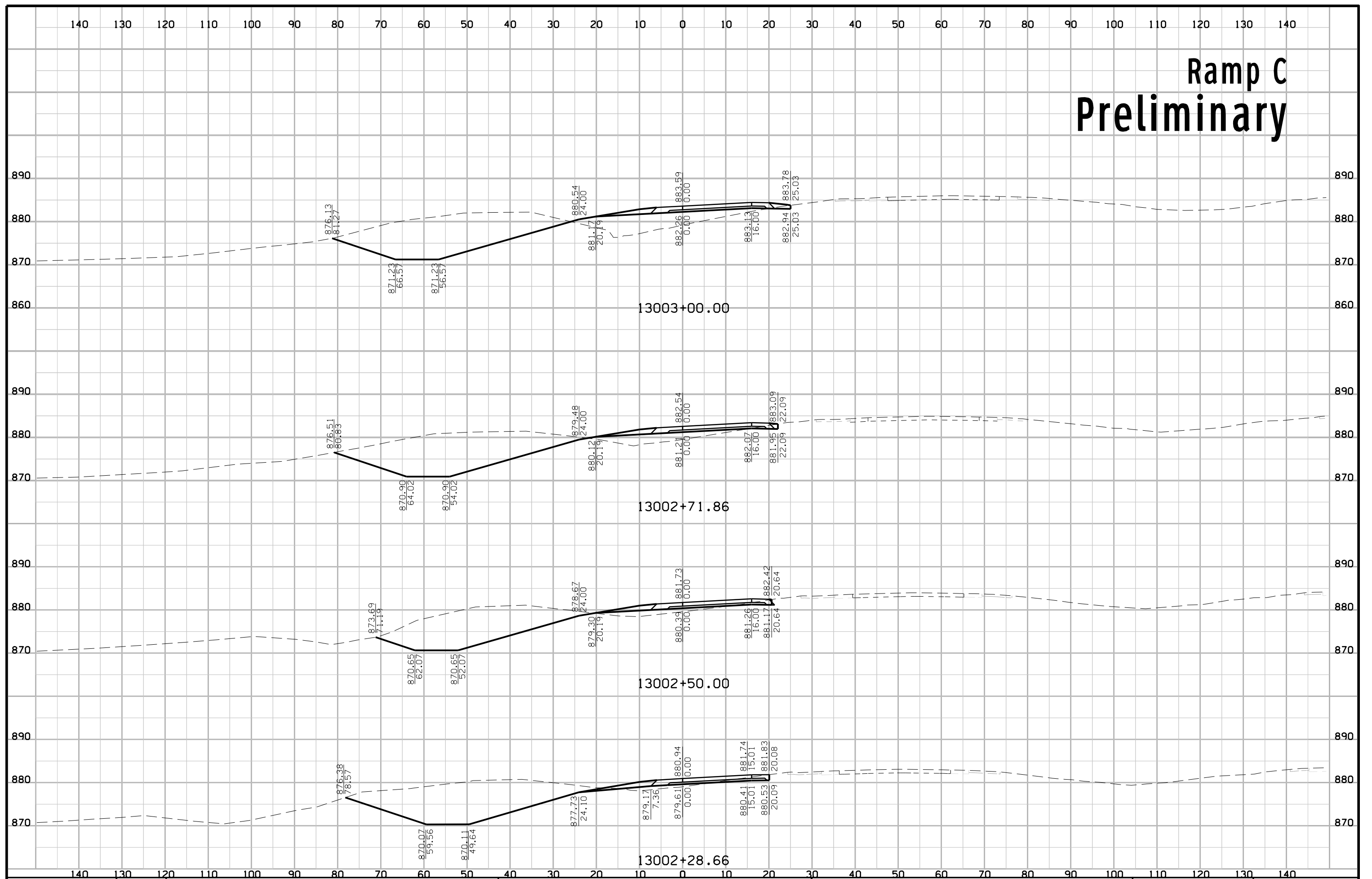
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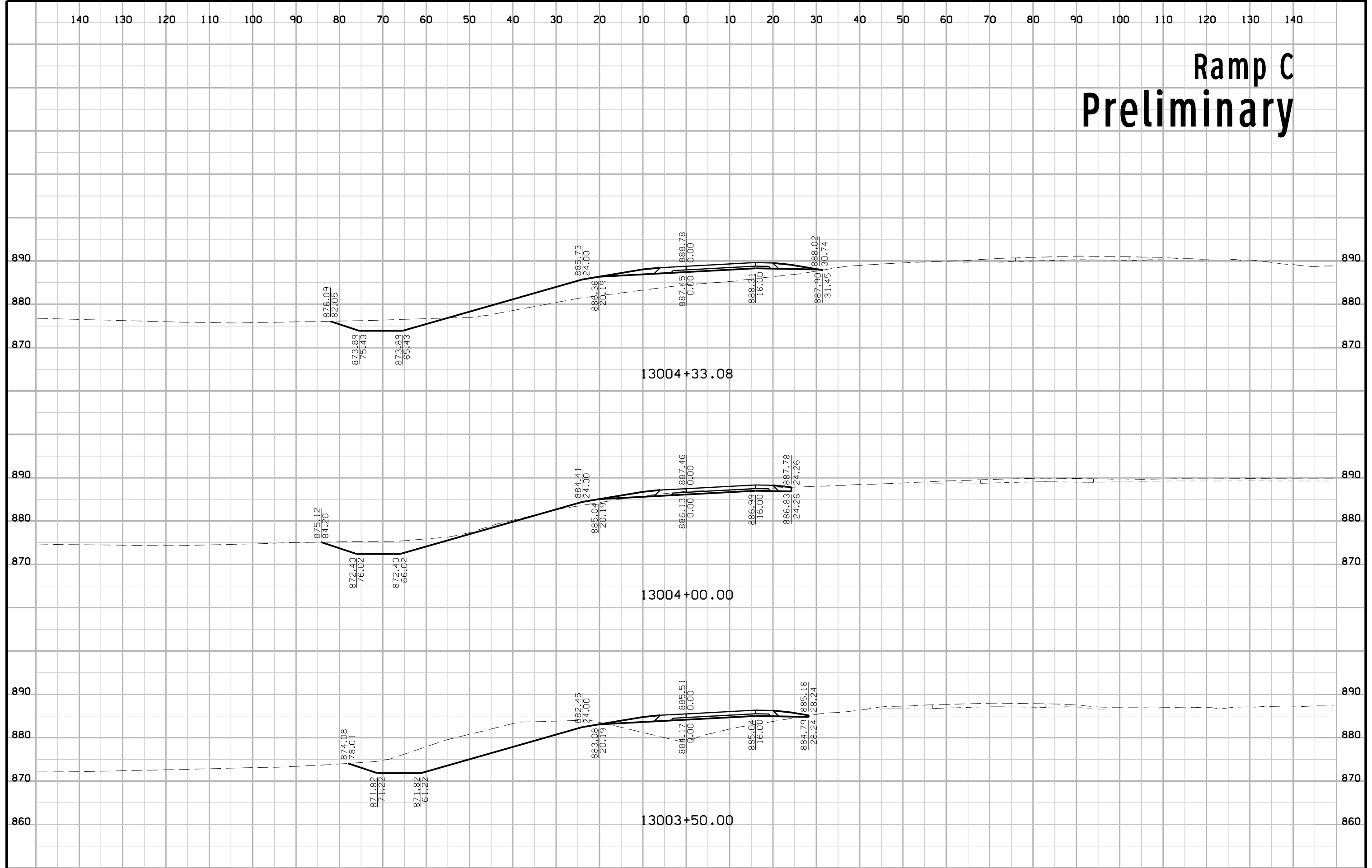
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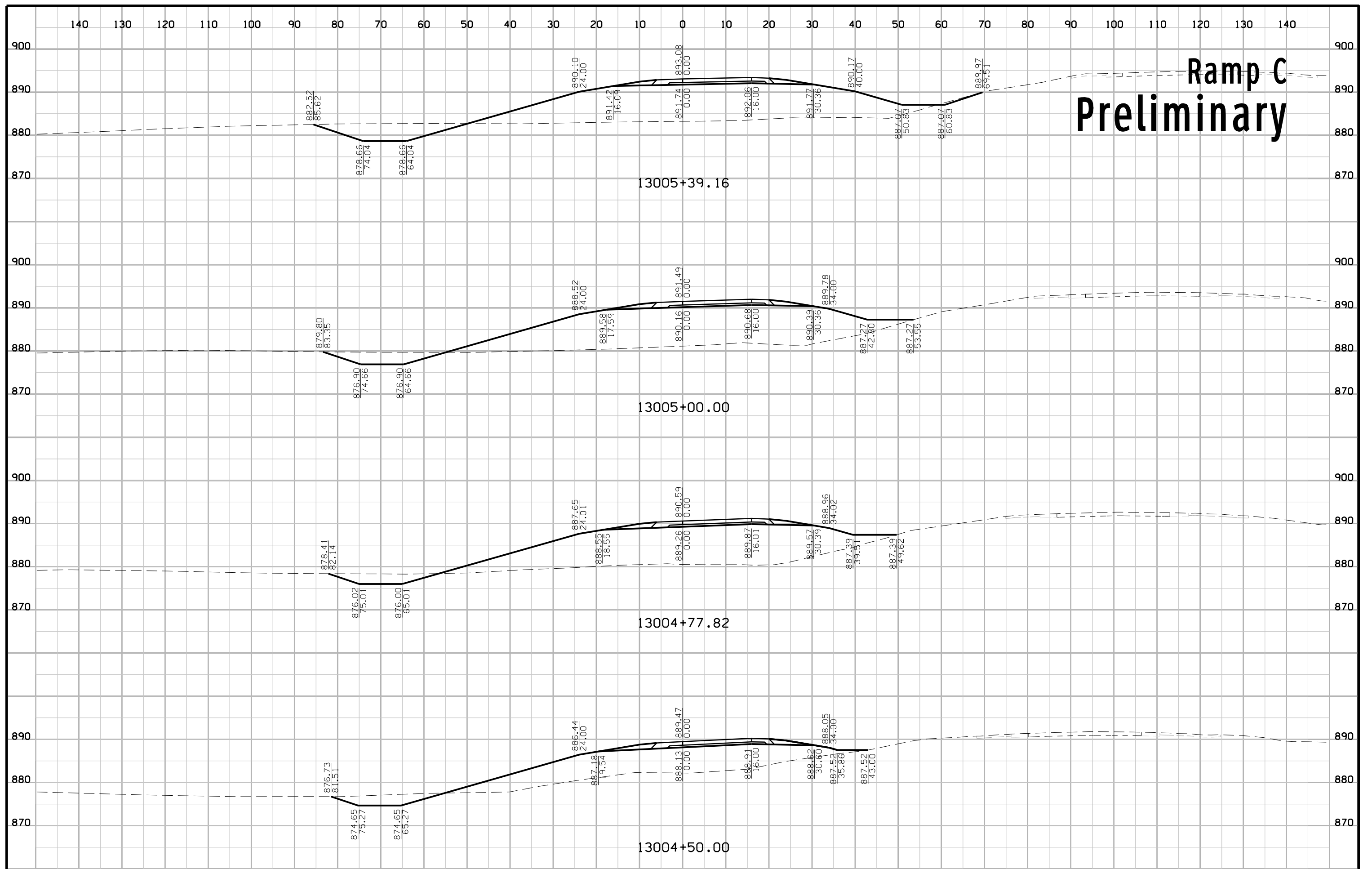
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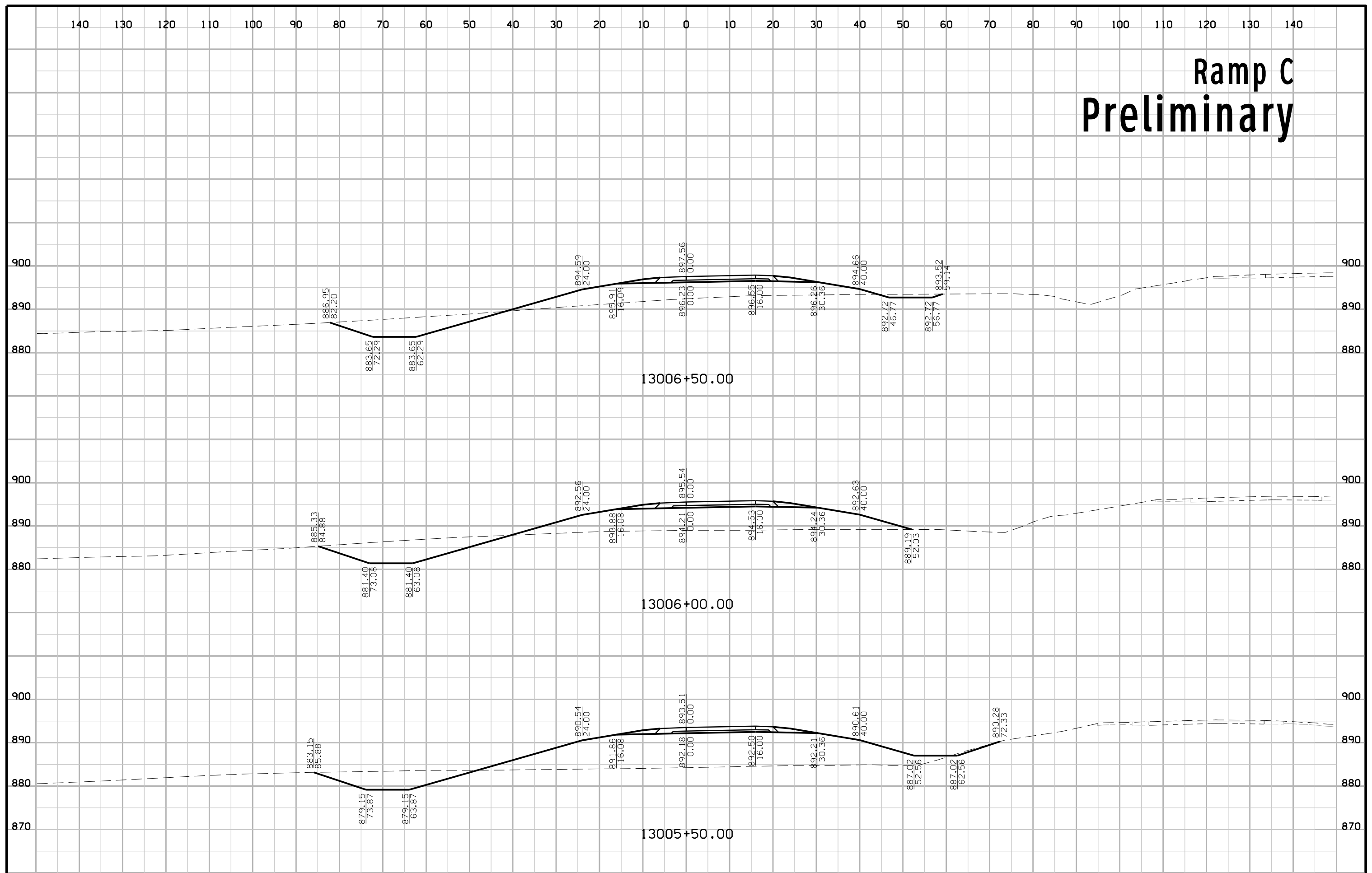
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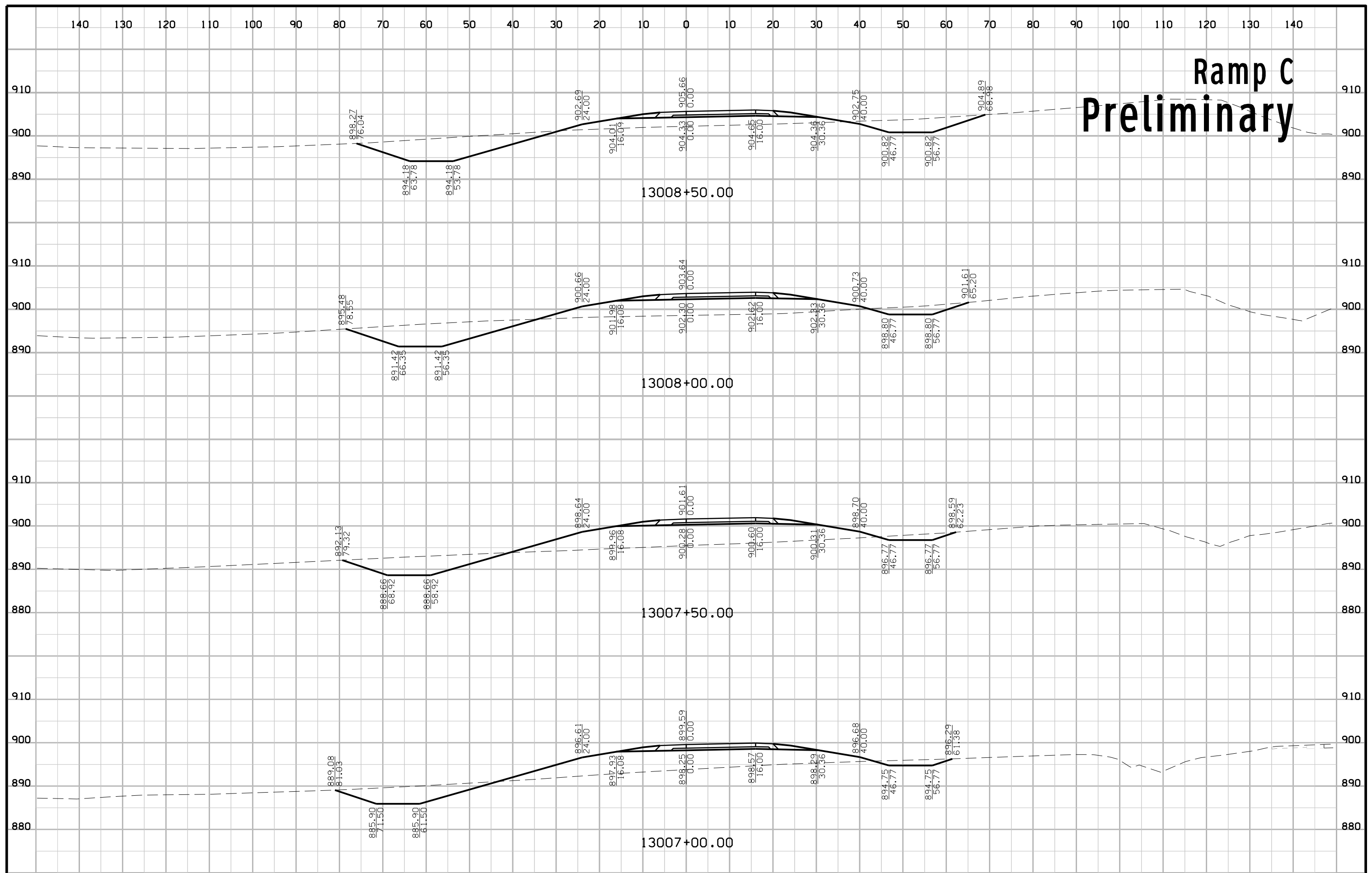
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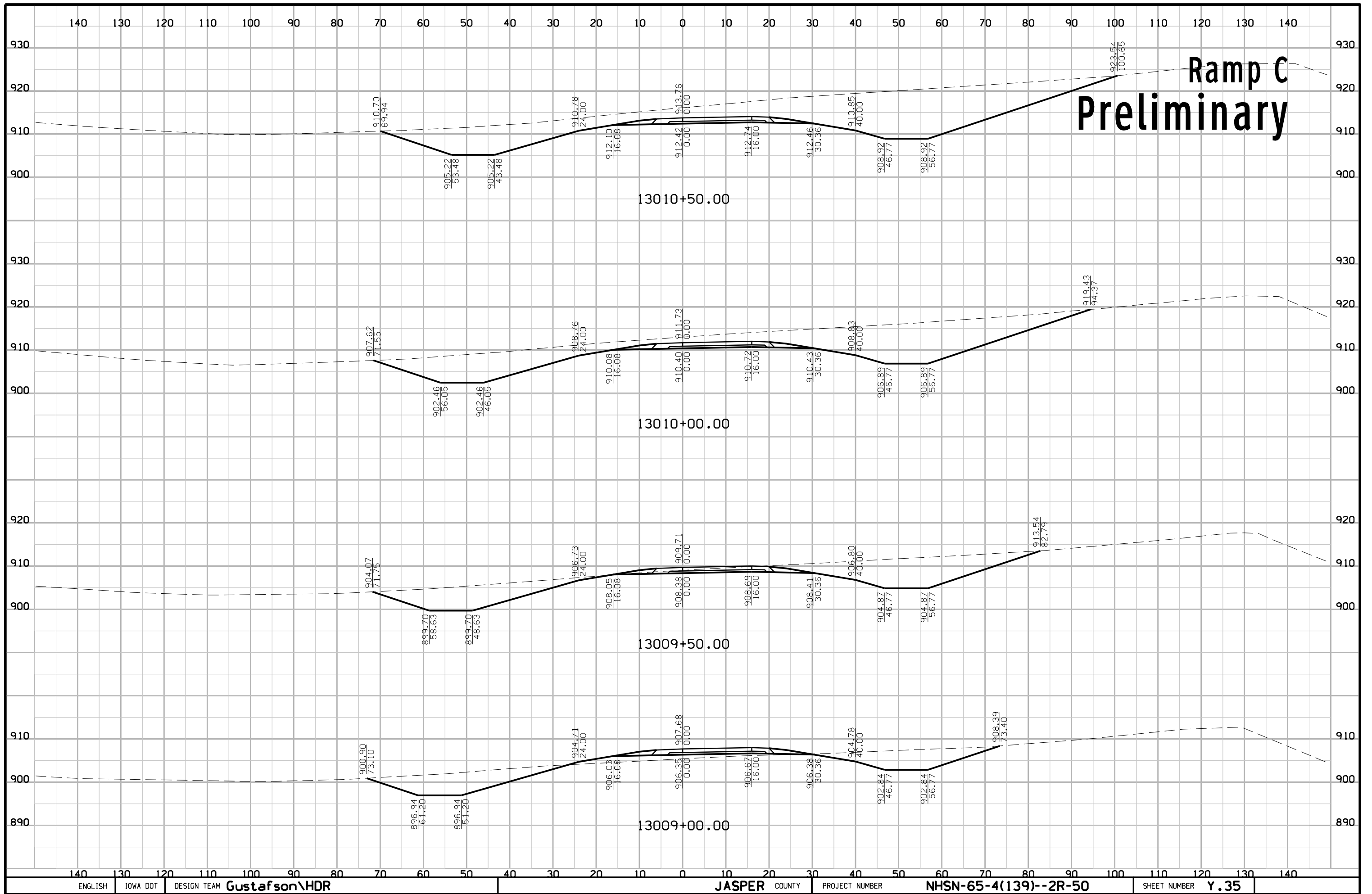


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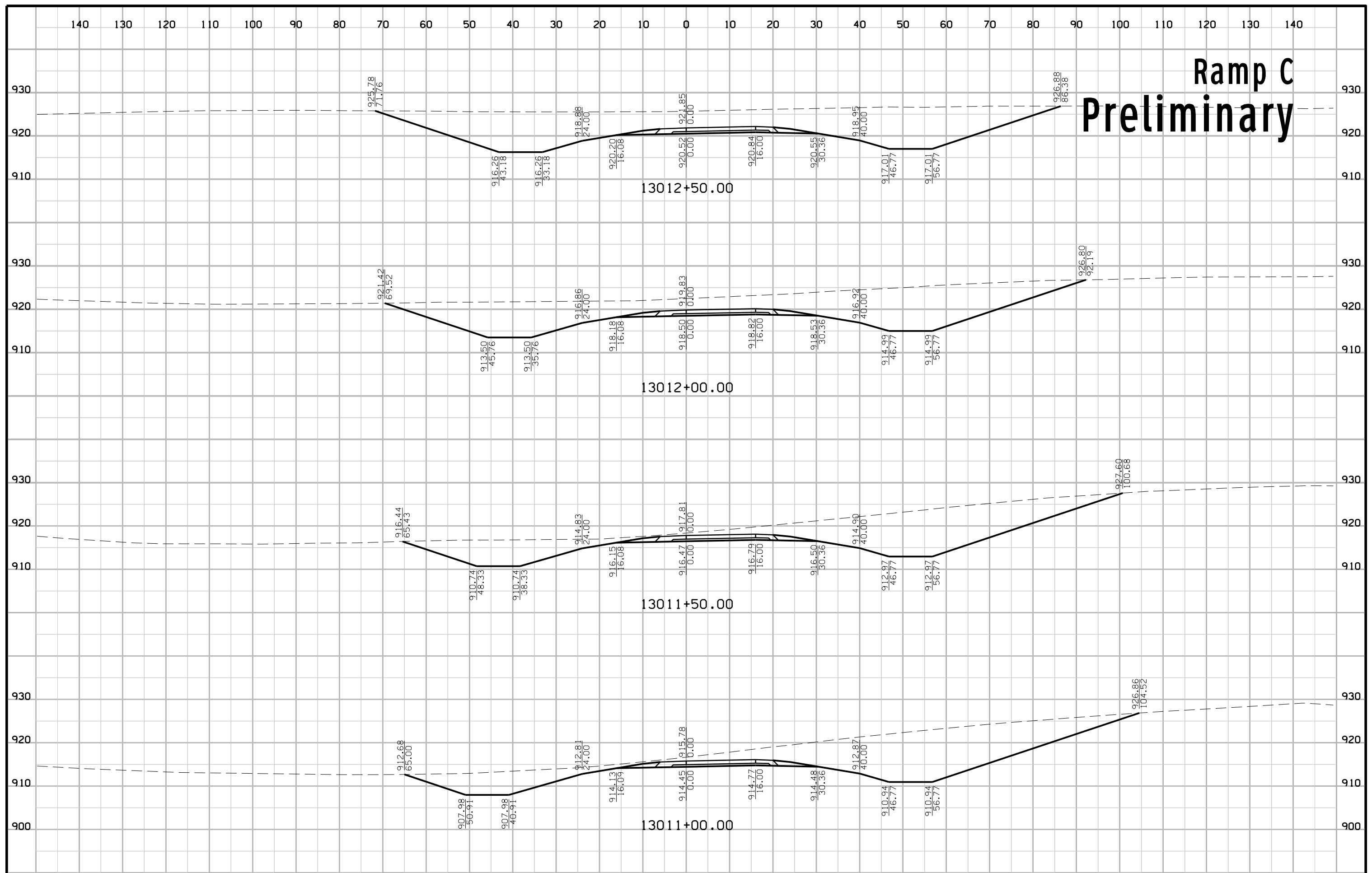


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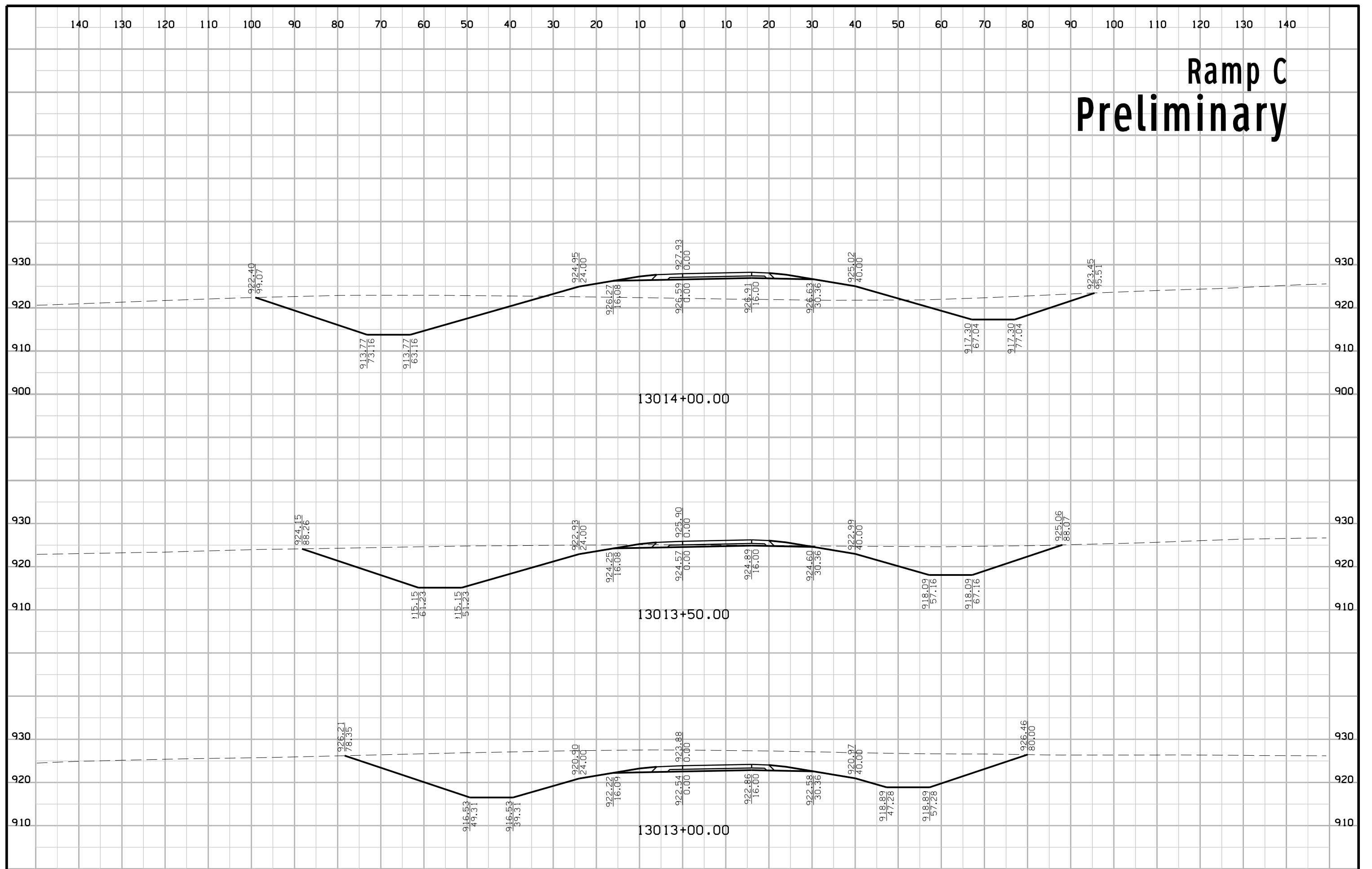




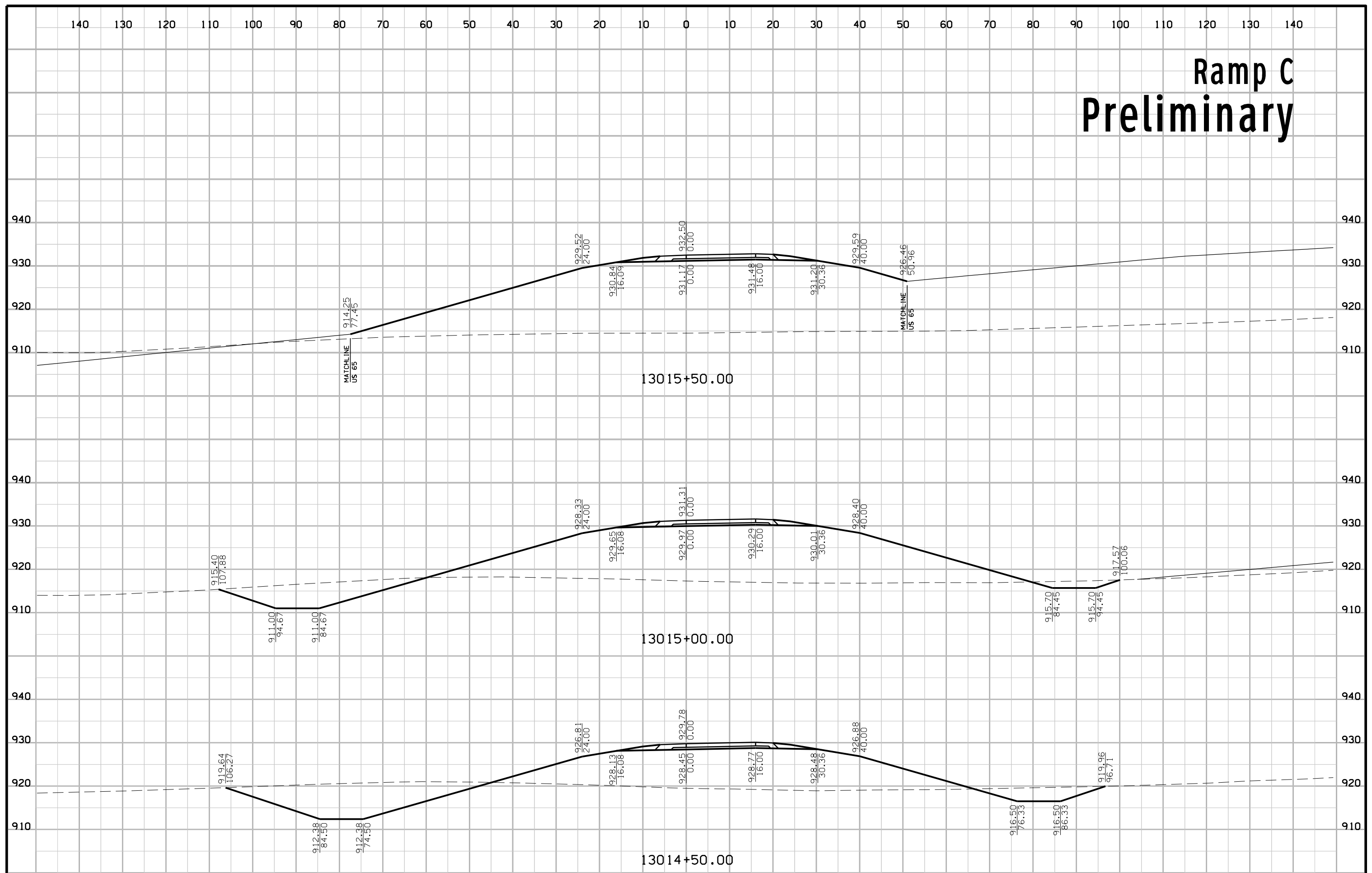
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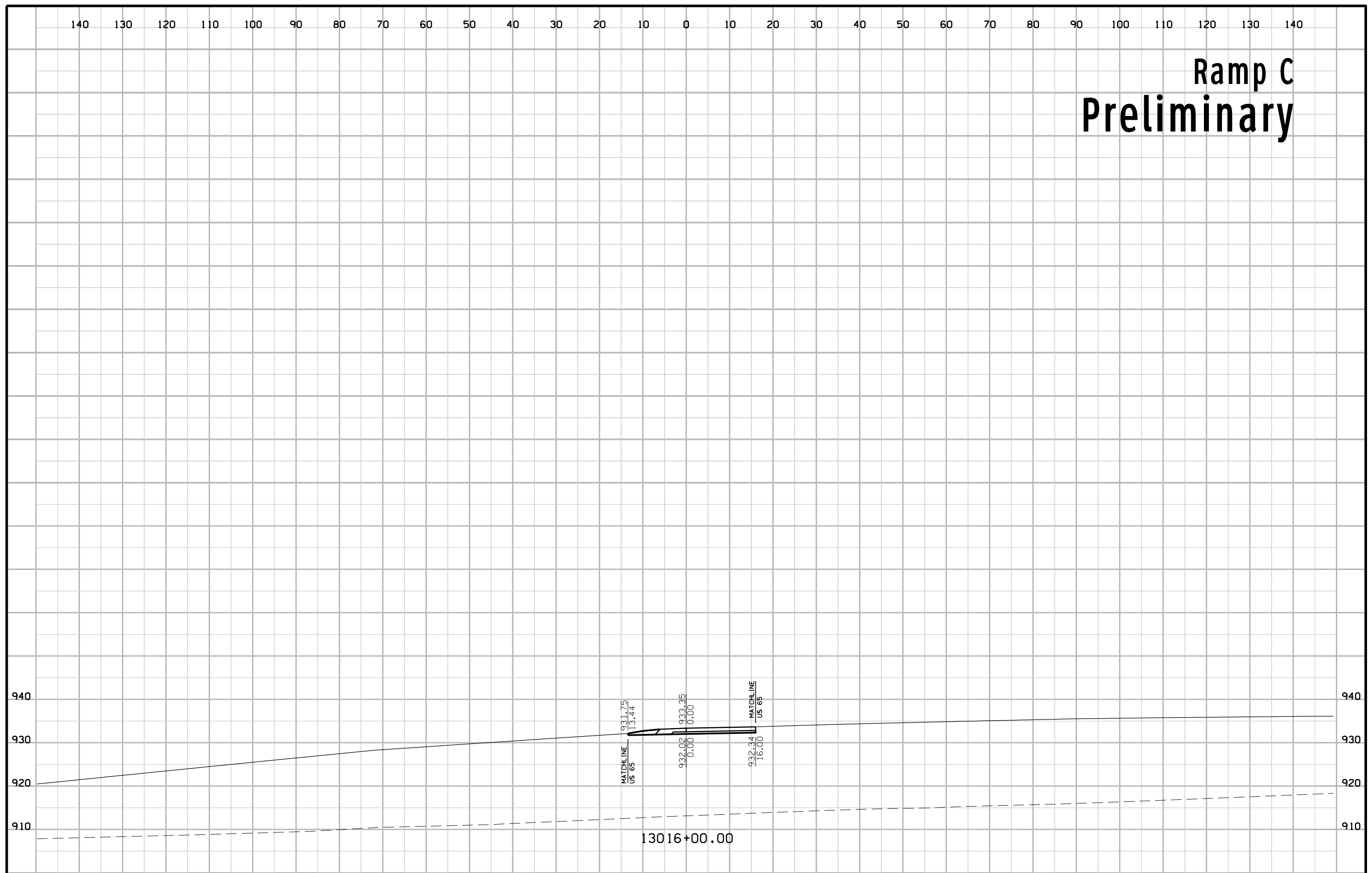
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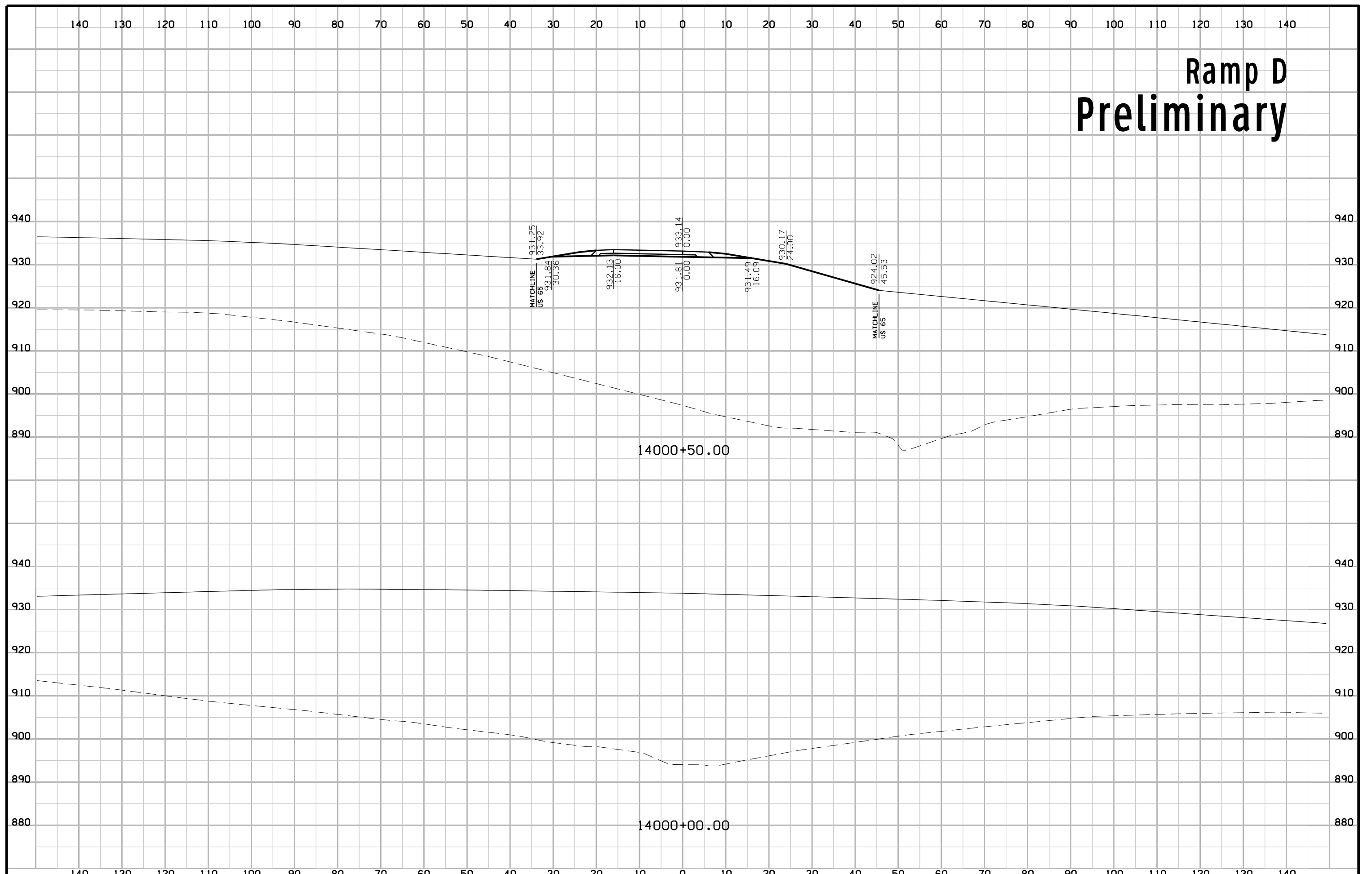
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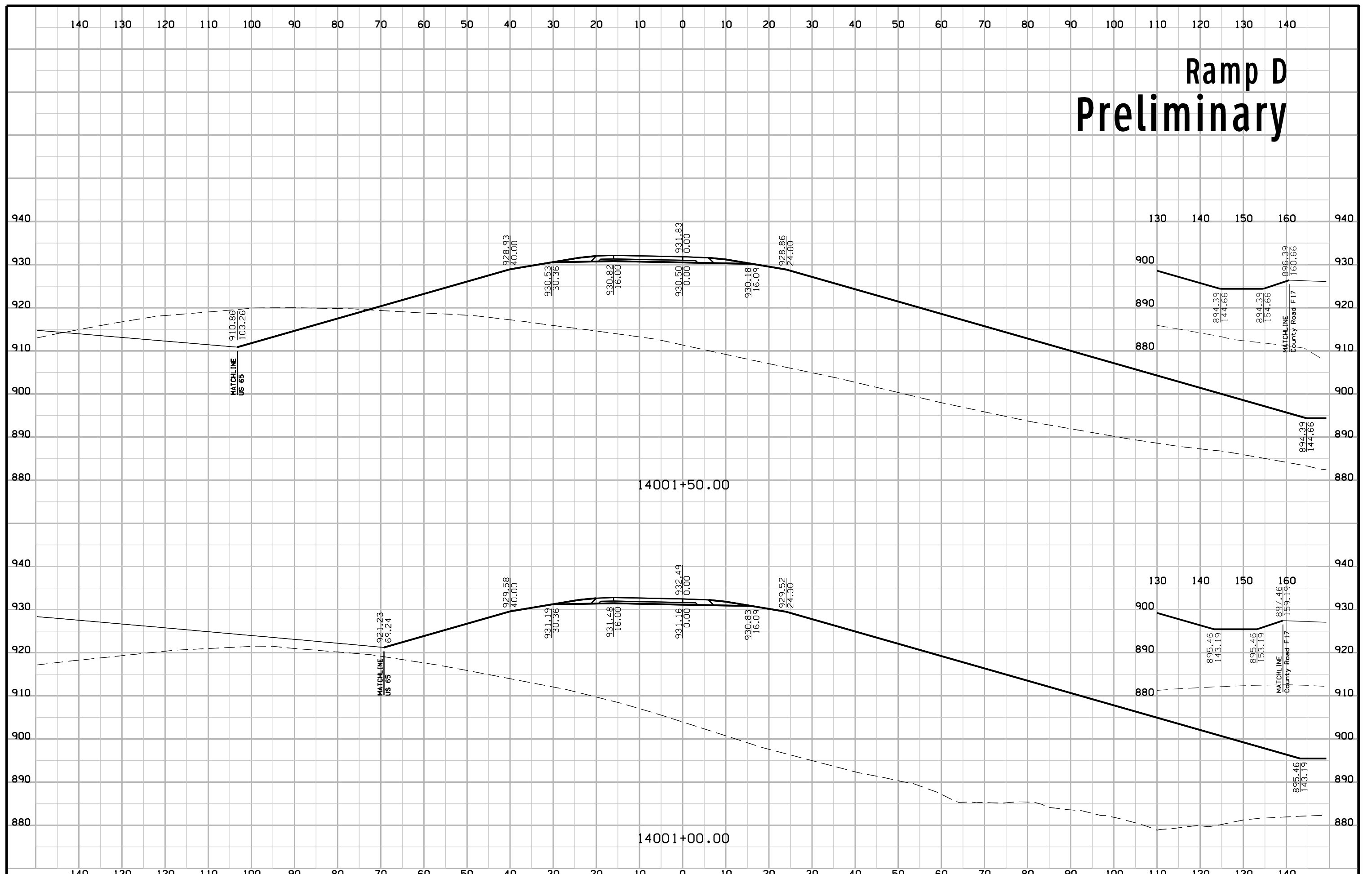
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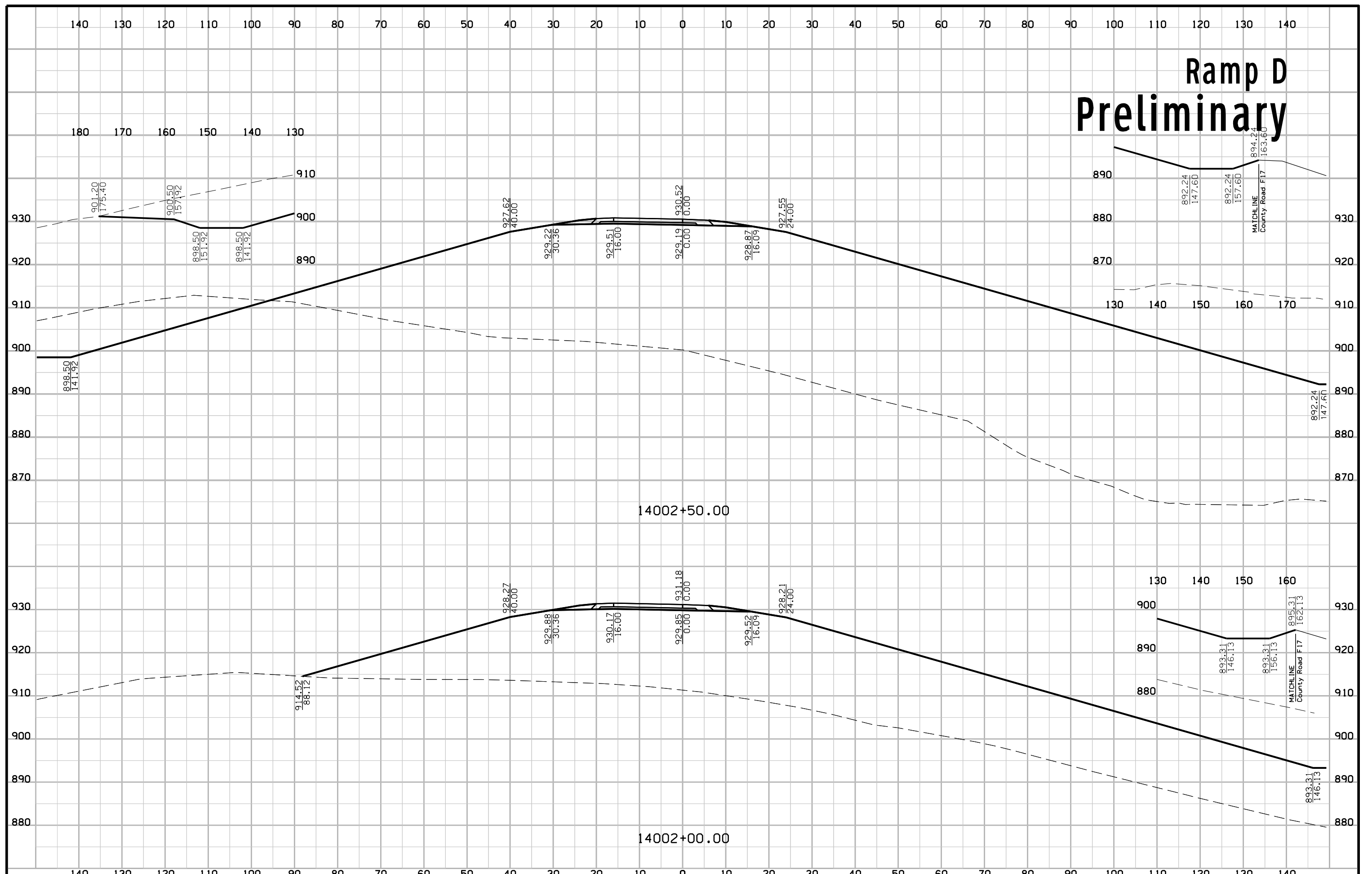
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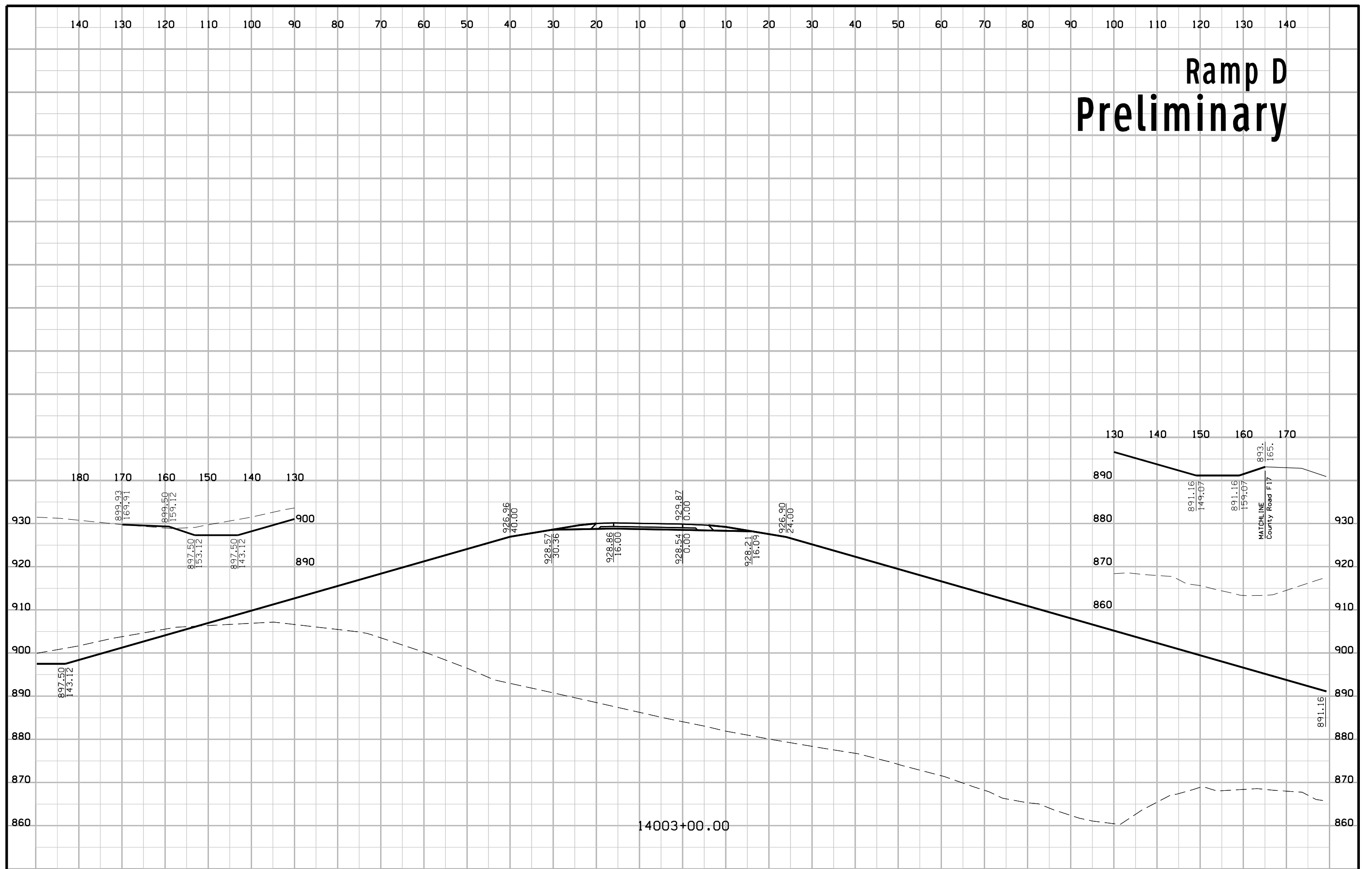
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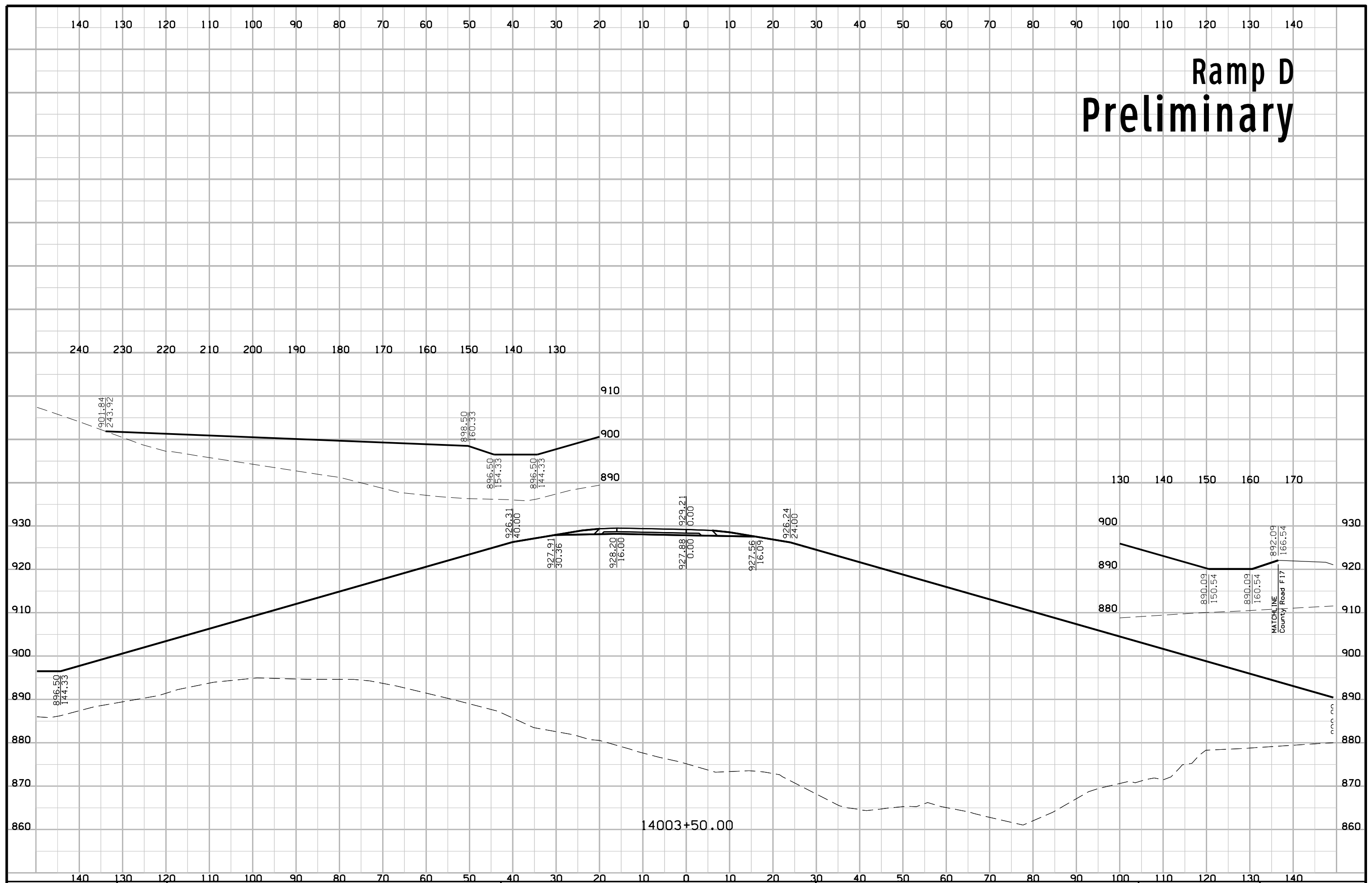
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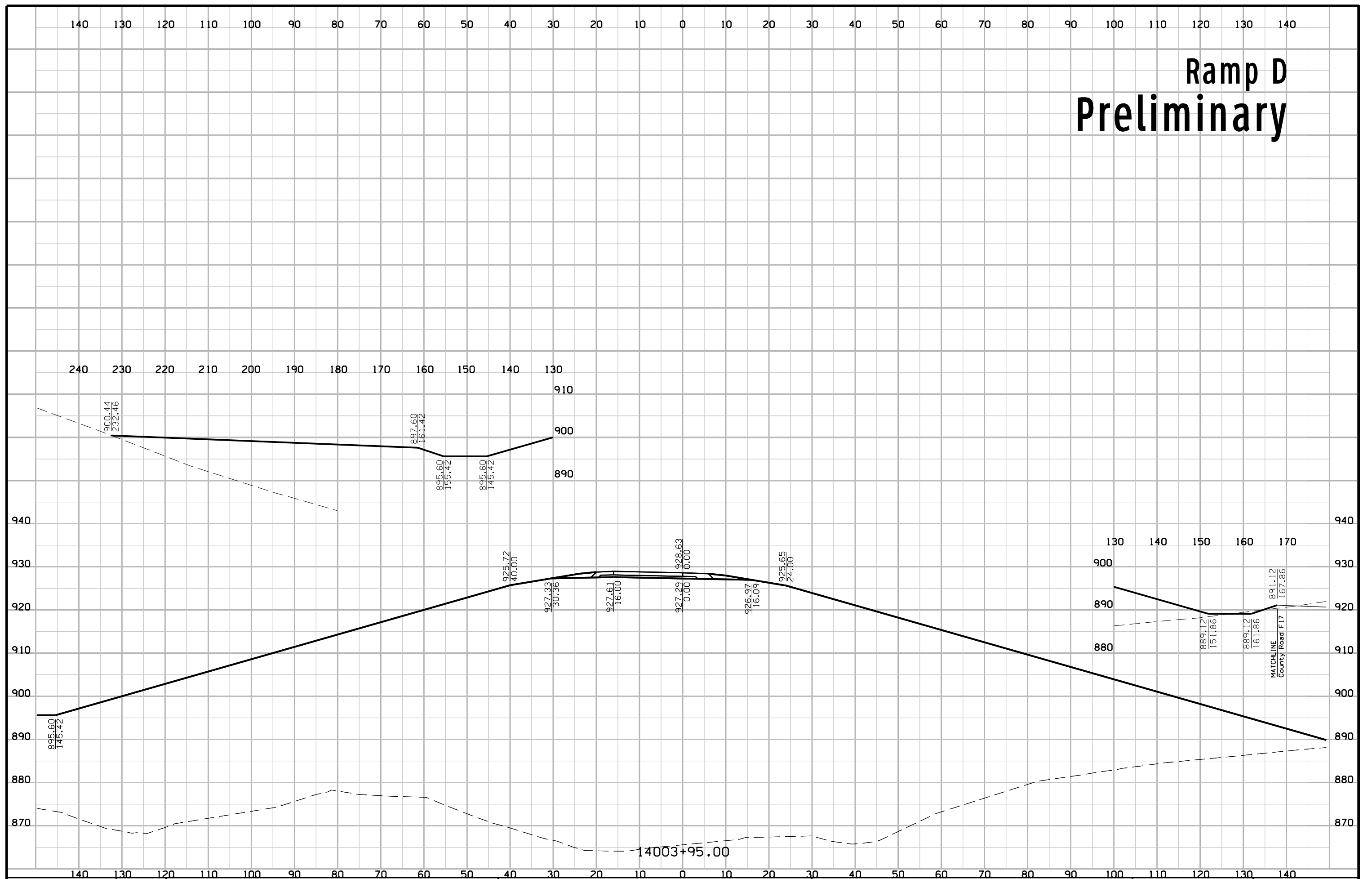
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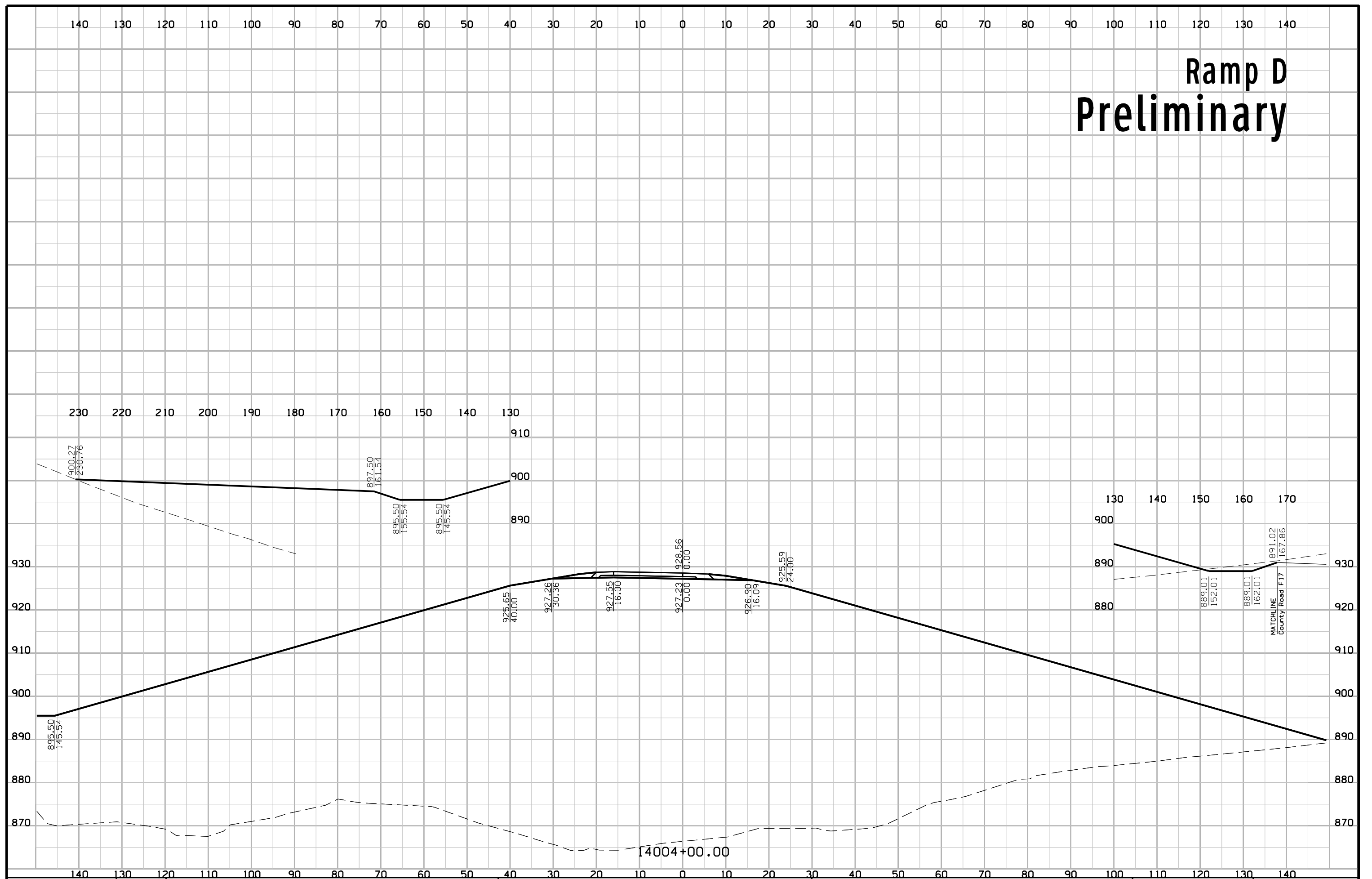
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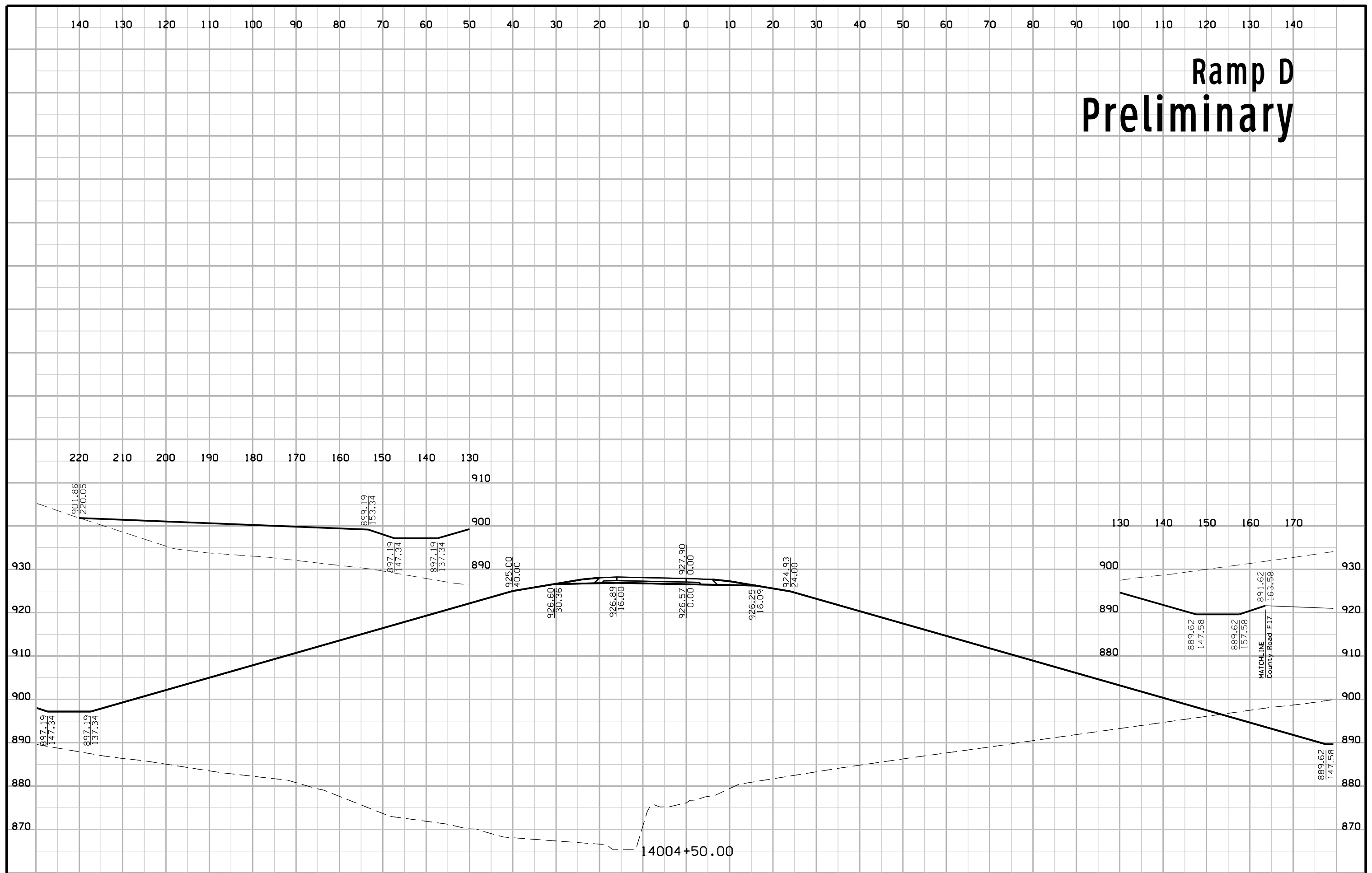
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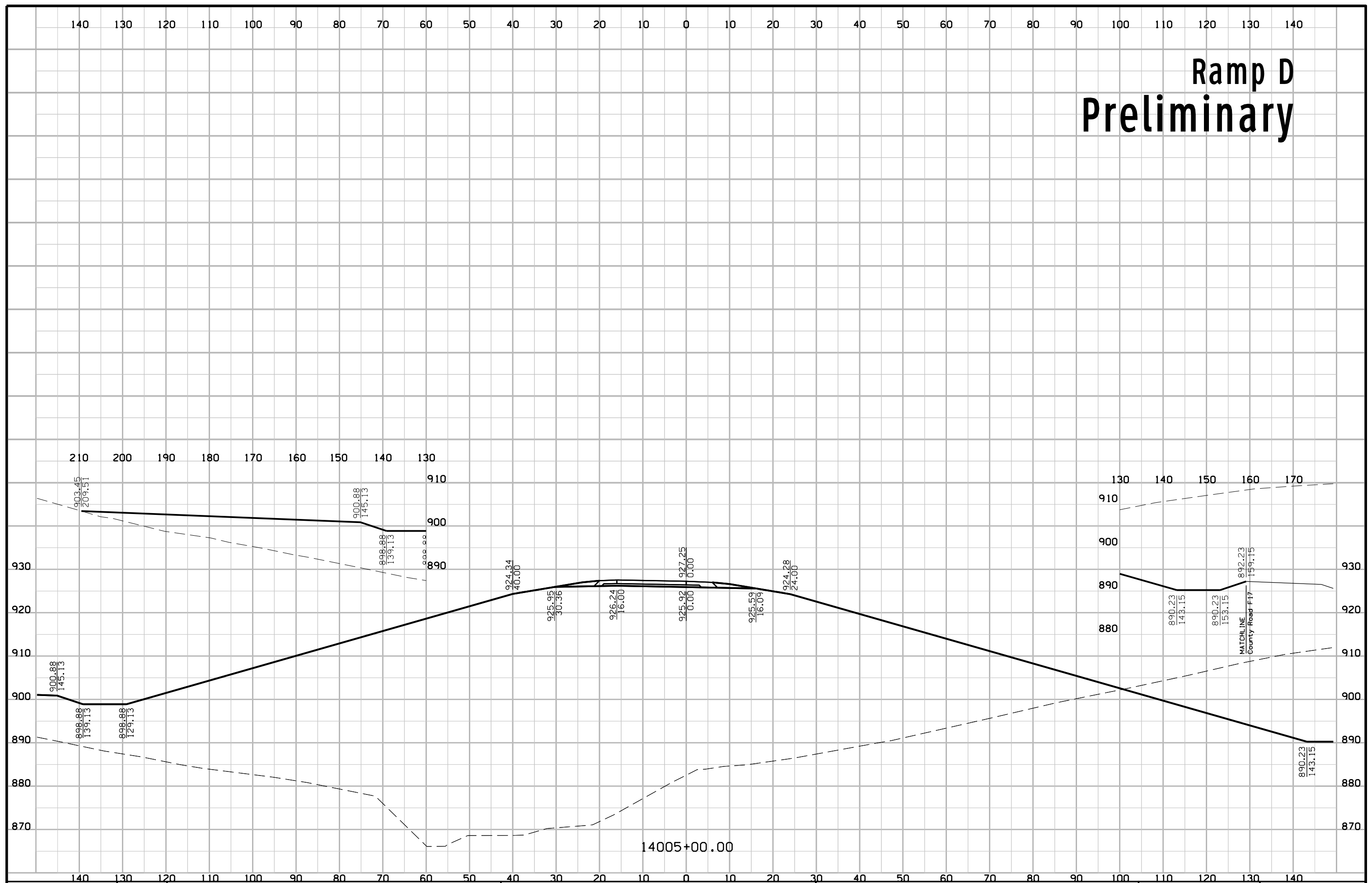
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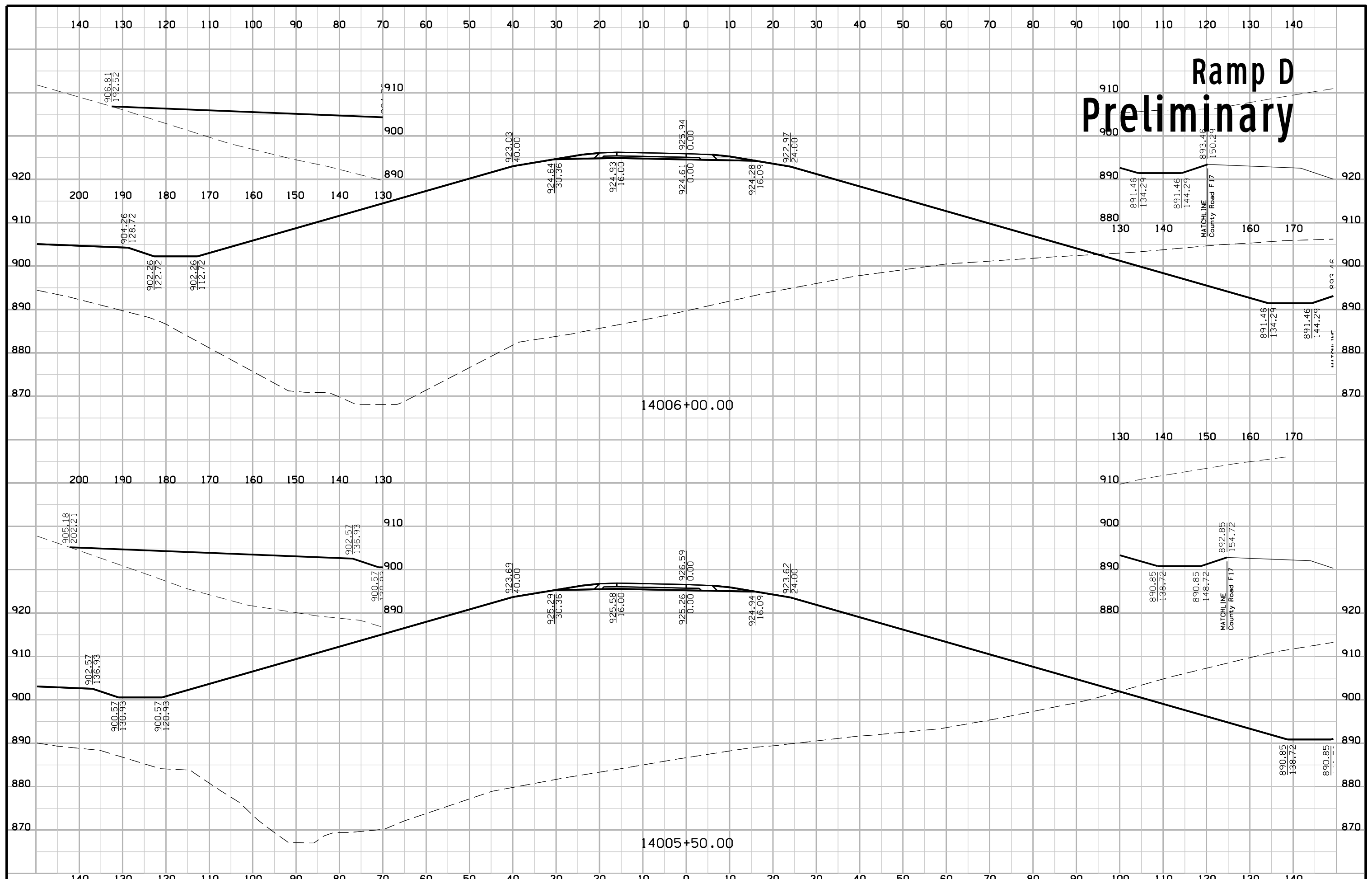
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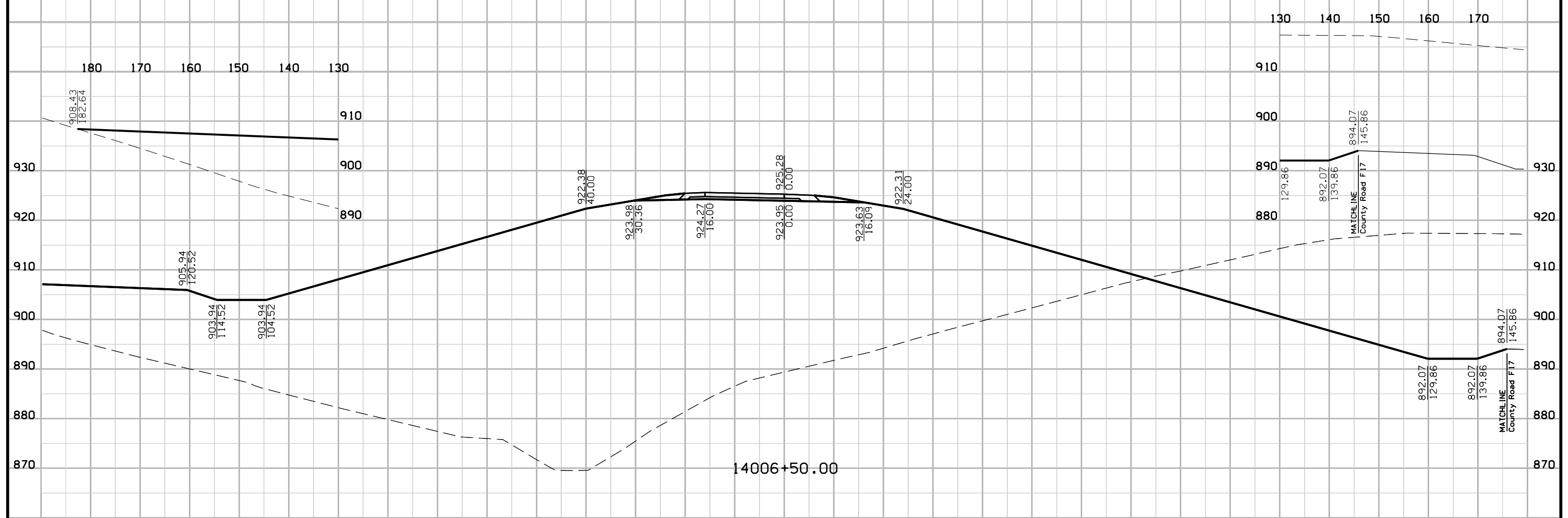
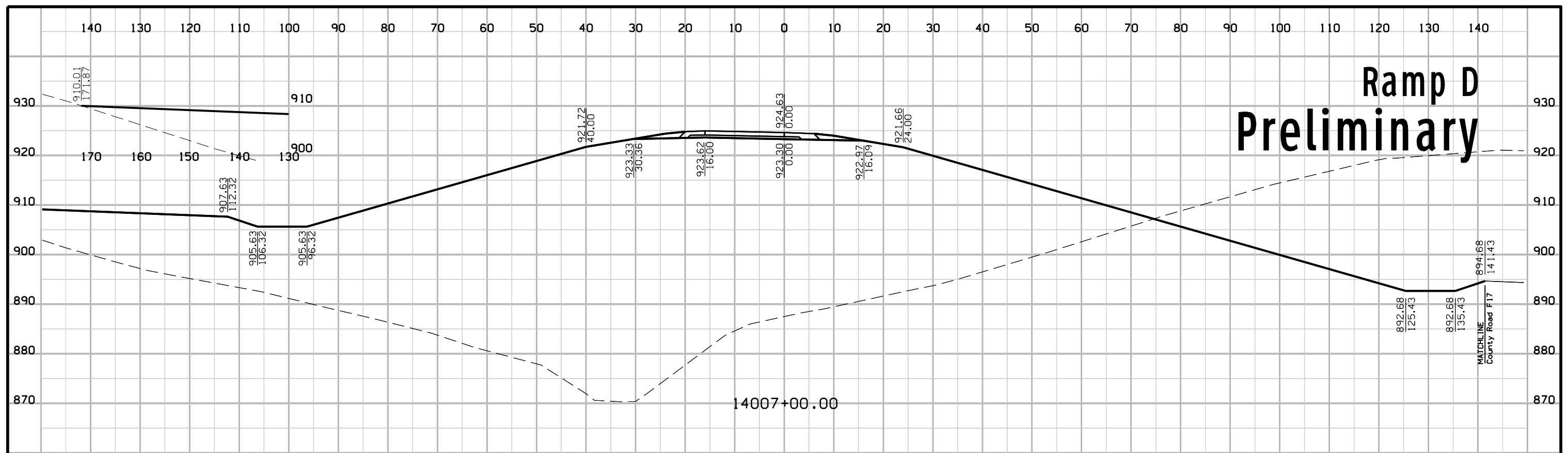
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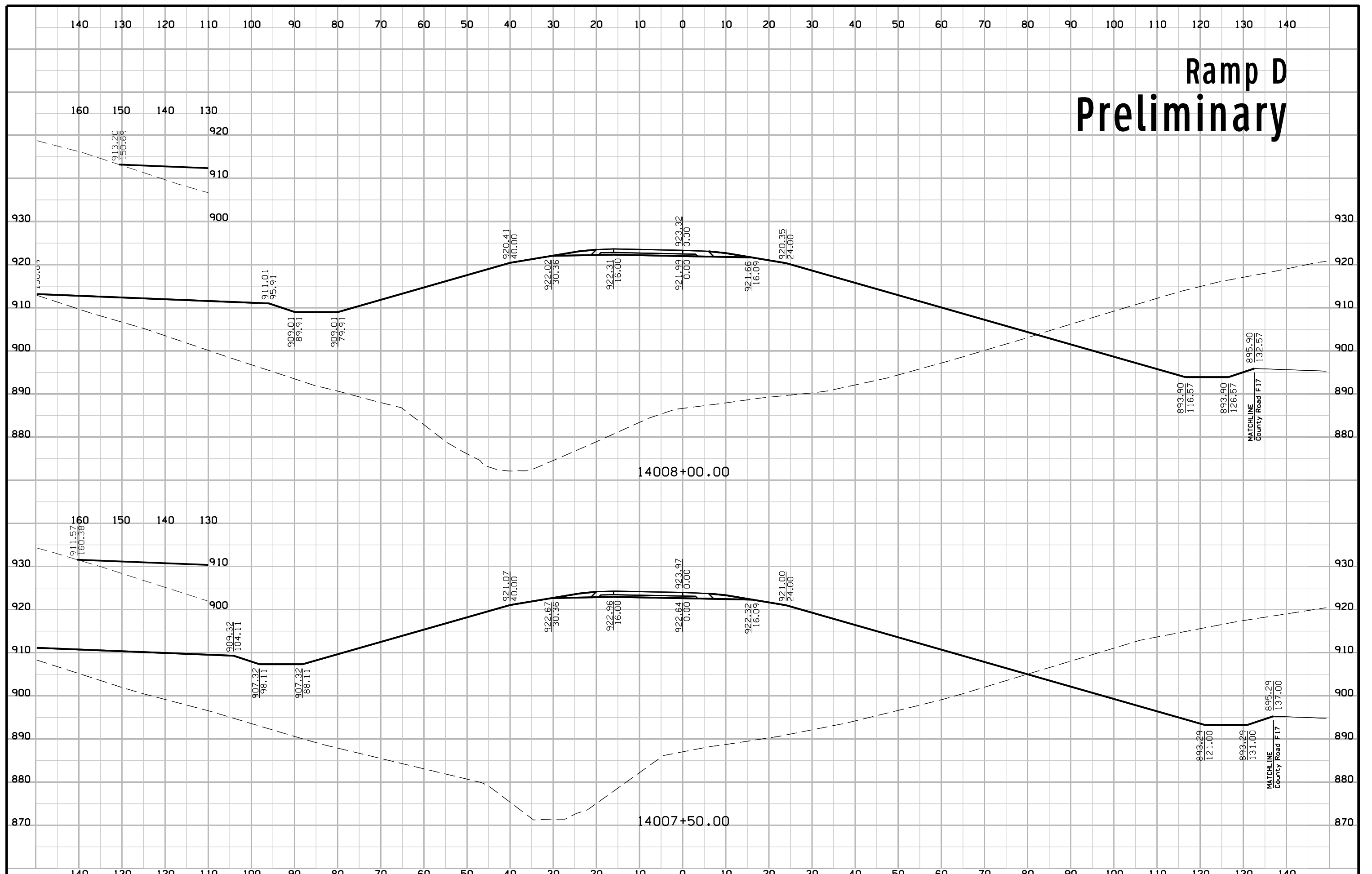
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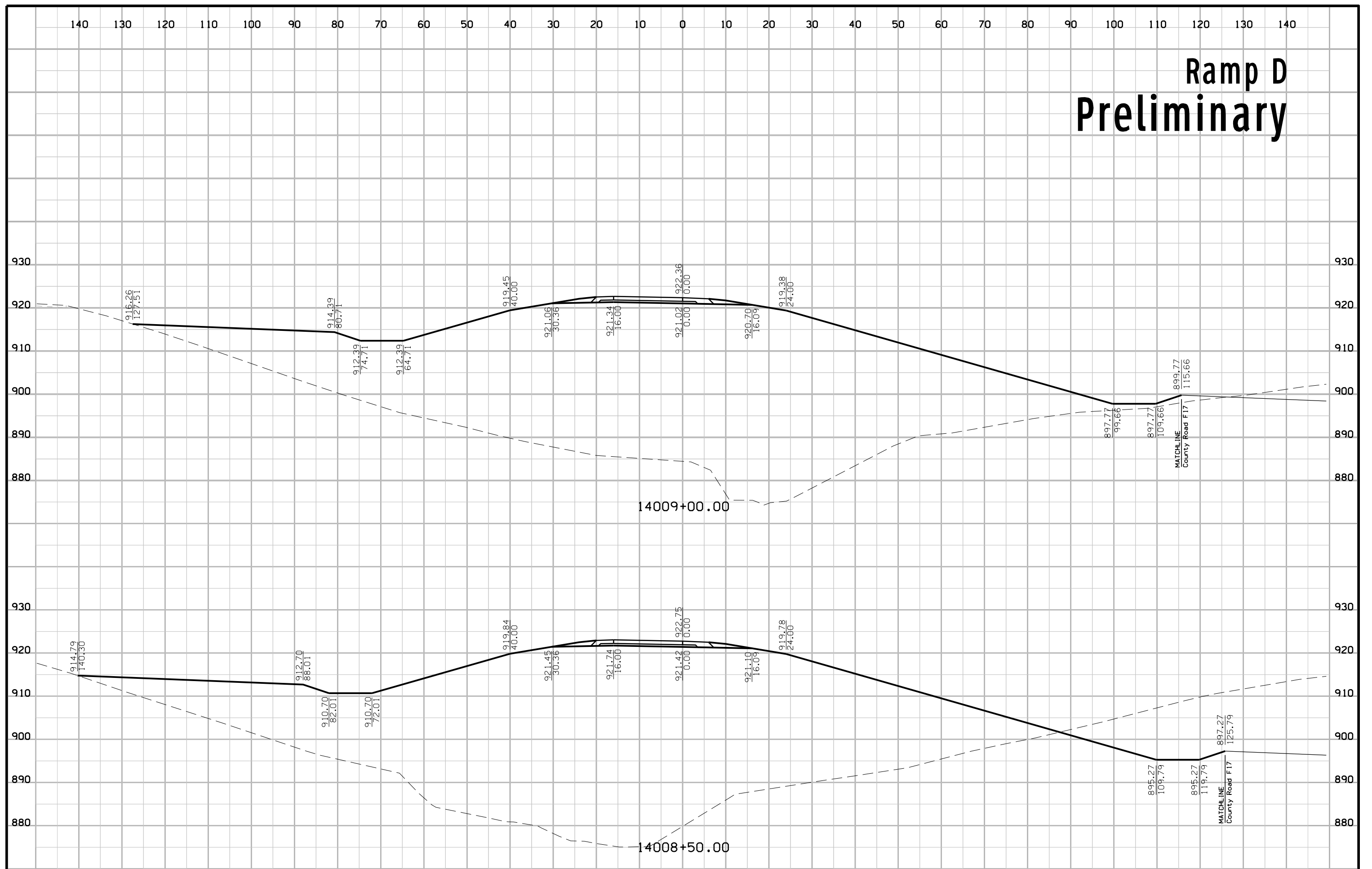
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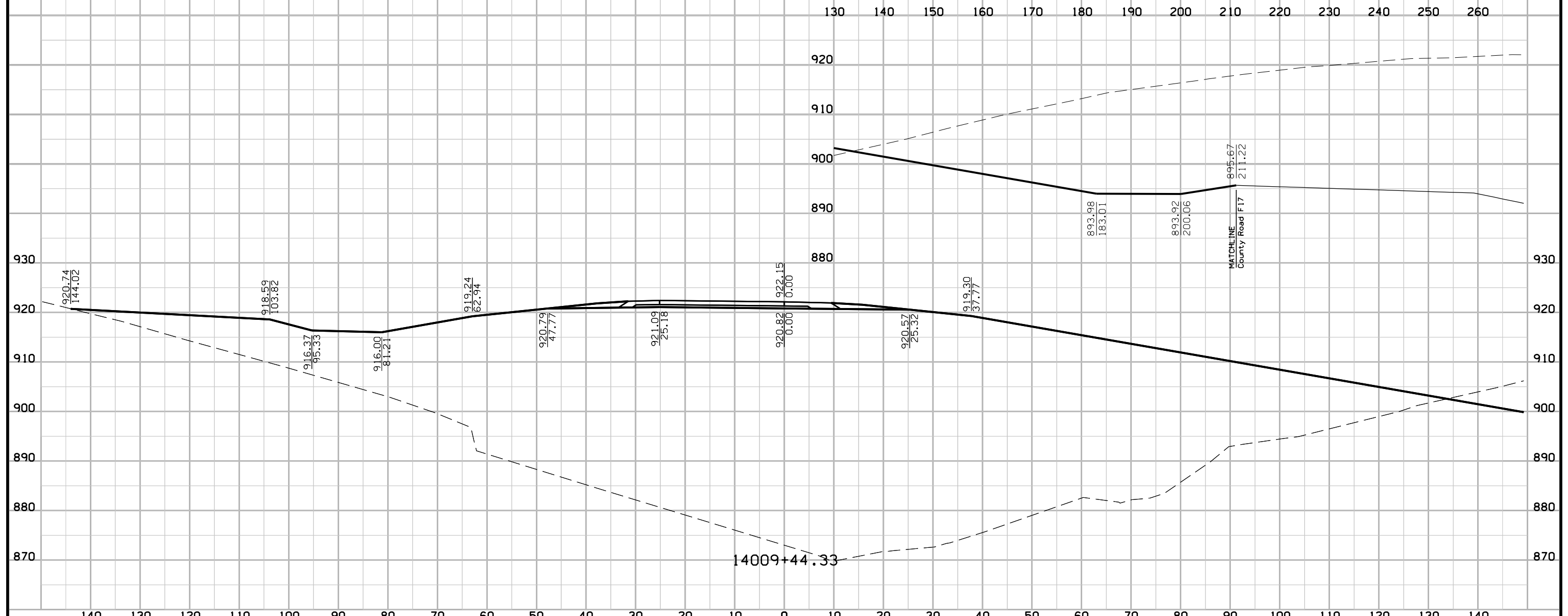
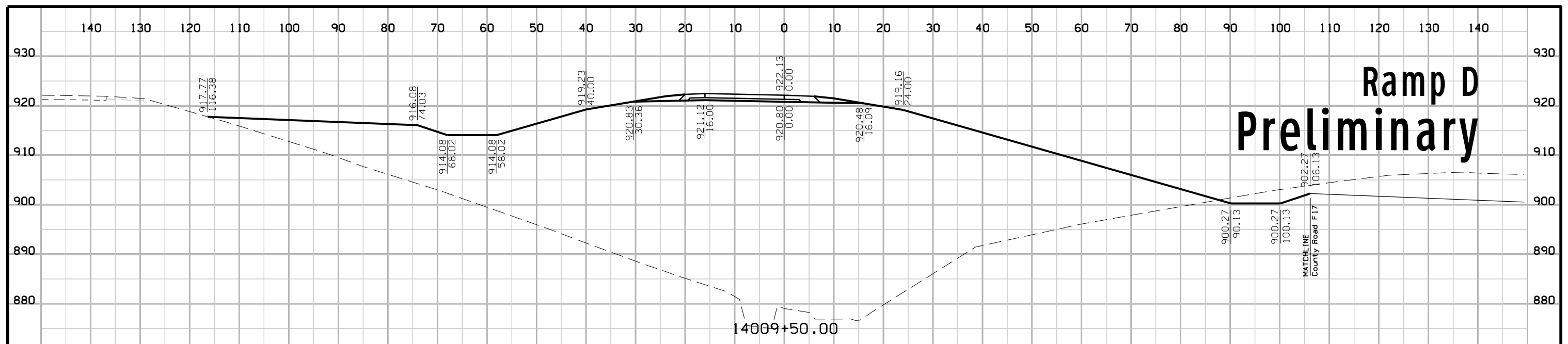
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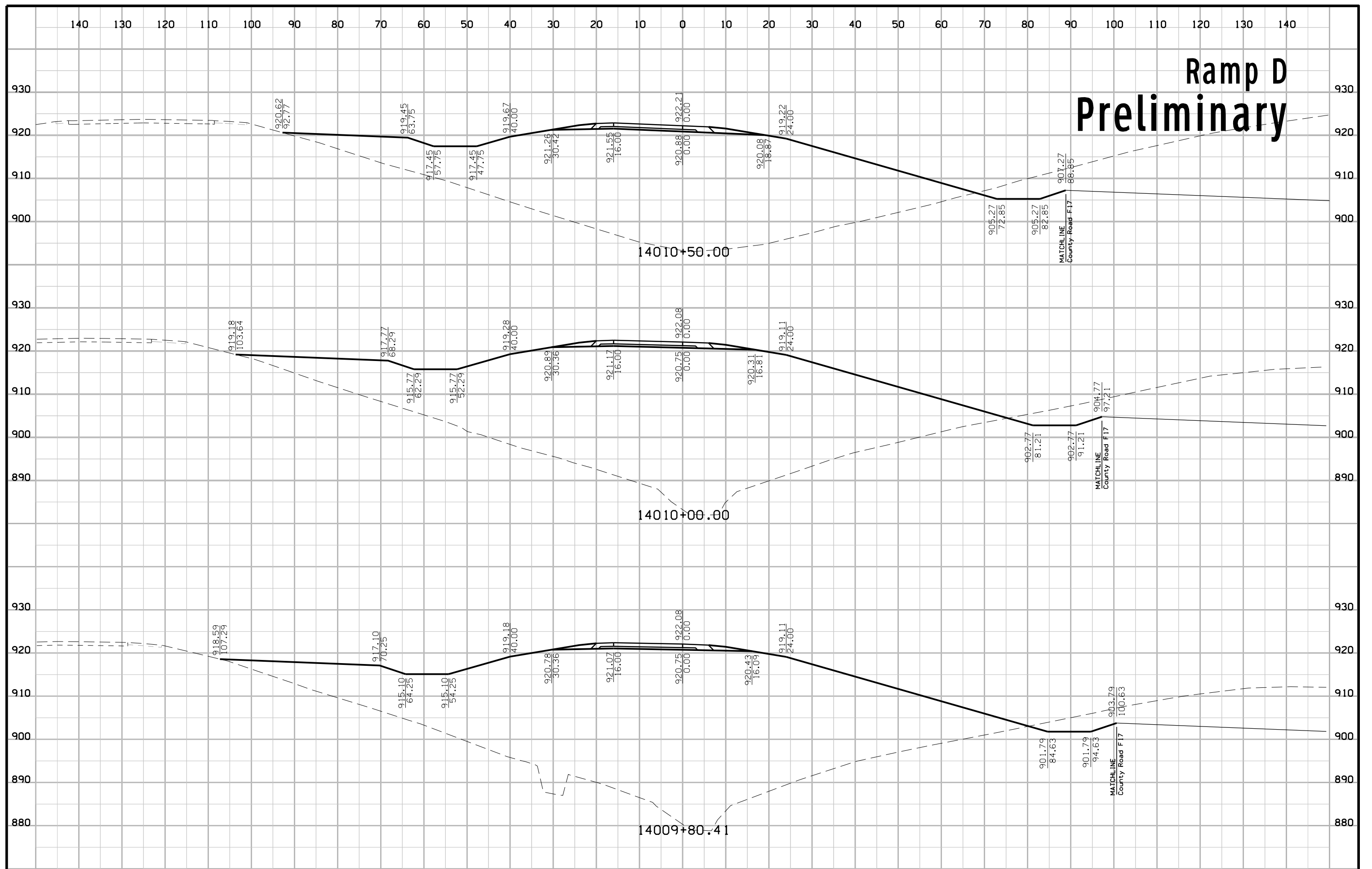
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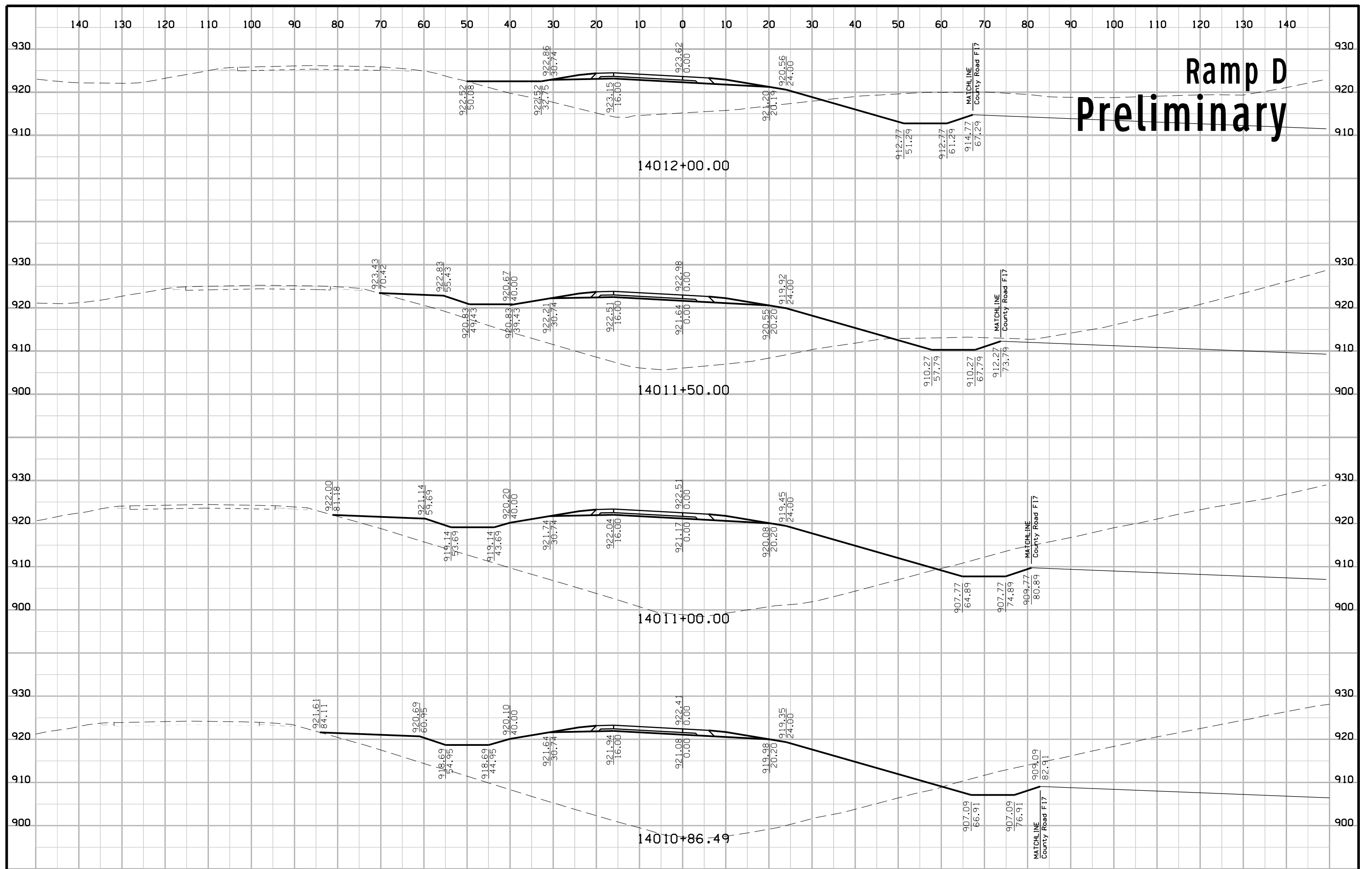
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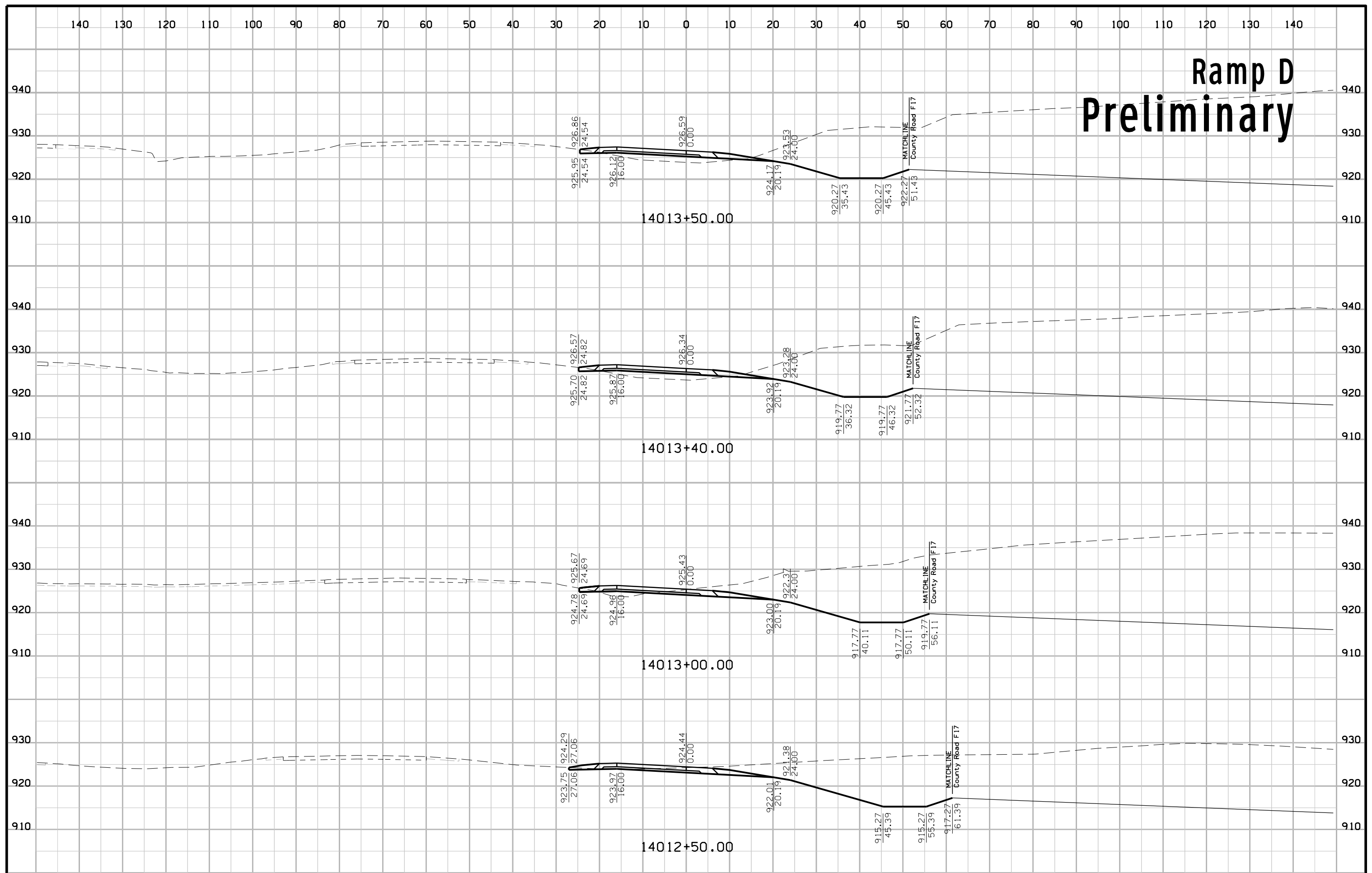
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Ramp D Preliminary



Ramp D Preliminary



Ramp D Preliminary

