

BRIDGE REPLACEMENT-STEEL GIRDER
BRF-030-3(43)--38-37
GREENE CO.

LETTING DATE
DEC. 16, 2014



Iowa Department of Transportation
Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM
GREENE COUNTY
 BRIDGE REPLACEMENT-STEEL GIRDER

US 30 over UP Railroad and 222nd Street
 1.3 miles E. of IA 144

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

NO MILEAGE SUMMARY



Borrow = 45,000 CY
 (Includes 30% Shrink)

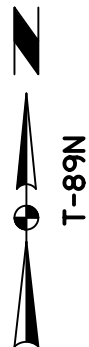
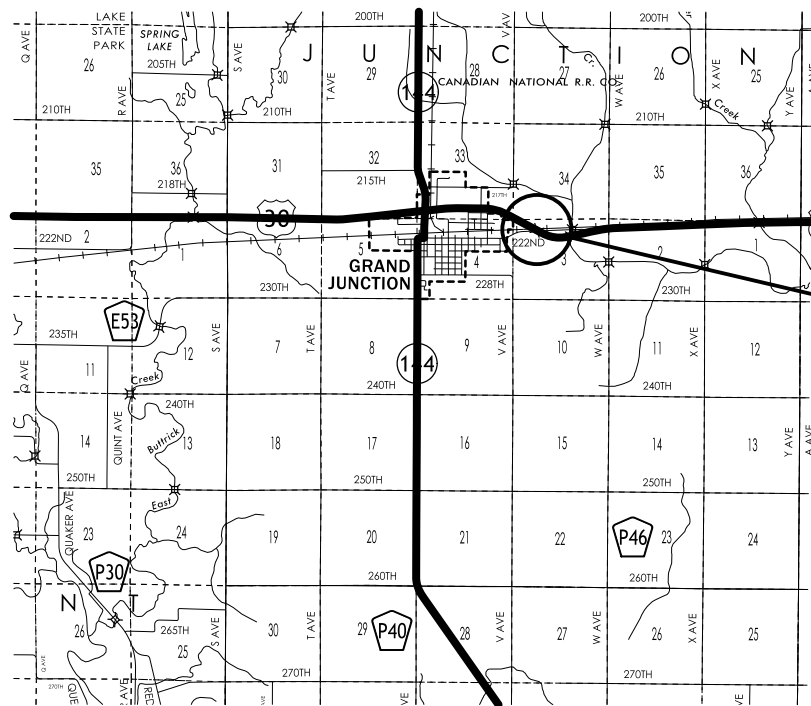
PROJECT SCHEDULE

EVENT	DATE
D2	4/04/13
D3	7/15/13
S2	7/15/13
B1	7/15/13
D5	8/22/13
S4	8/28/13

For Project Location Map
 Refer to Sheet A.2

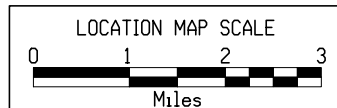
No.	DESCRIPTION
INDEX OF SHEETS	
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	Typical Cross Sections and Details
B.1	Typical Cross Sections and Details
C Sheets	Quantities and General Information
.	Project Description
.	Estimated Project Quantities
.	Estimate Reference Information
.	Standard Road Plans
.	Index of Tabulations
.	Pollution Prevention Plan
.	General Notes
.	Tabulations (beg. with tab. of incidentals if needed)
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 4	US 30 Plan and Profile
E Sheets	Side Road Plan and Profile Sheets
*	"Side Road Name"
F Sheets	Detour or Temporary Pavement Sheets
*	Detour Plan and Profile Sheets

No.	DESCRIPTION
INDEX OF SHEETS	
G Sheets	Survey Sheets
G.1	Survey Information and Vertical Control
G.2	Reference Ties and Bench Marks
G.3	Horizontal Control Tab. & Super for all Alignments
H Sheets	Right-of-Way Sheets
.	"Mainline Name"
.	"Side Road Name"
J Sheets	Traffic Control and Staging Sheets
* J.1	Traffic Control Plan / Staging Notes
*	Staging Notes Stage
*	Tabulation of Special Events
*	Traffic Control & Staging Legend & Symbol Info. Sheet
*	Staging and Traffic Control Sheets Stage
L Sheets	Geometric, Staking and Jointing Sheets
.	Geometric & Staking "Mainline or Side Road Name"
.	Edge Profiles "Mainline or Side Road Name"
.	Jointing "Mainline or Side Road Name"
M Sheets	Storm Sewer Sheets
.	Storm Sewer Tabulations
.	Storm Sewer Legend & Symbol Information Sheet
.	Storm Sewer Plan and Profile Sheets "ML or SR Name"
MIT Sheets	Wetland Sheets
.	Wetland Sheets
N Sheets	Traffic Signal Sheets
.	Traffic Signal Sheets "Mainline or Side Road Name"
P Sheets	Lighting Layout Sheets
.	Lighting Layout Sheets "Mainline or Side Road Name"
Q Sheets	Soils Sheets
.	Soils Legend & Symbol Information Sheet
.	Soils Sheets "Mainline or Side Road Name"
SPS Sheets	Bridge Plan Soils Sheets
.	Bridge Plan Soils Sheets
T Sheets	Earthwork Quantity Sheets
.	Earthwork Quantity Sheets
U Sheets	500 Series, Mod.Stds. and Detail Sheets
.	500 Series, Modified Standards and Detail Sheets
V Sheets	Bridge and Culvert Situation Plans
V.1 - 2	Bridge and Culvert Situation Plans
W Sheets	Mainline Cross Sections
W.1 - 28	Mainline Cross Sections
	* Color Plan Sheets



R-47W

R-46W



DESIGN DATA URBAN

2017 AADT	4,200	V.P.D.
2037 AADT	5,100	V.P.D.
2037 DHV	--	V.P.H.
TRUCKS	14	%
Total Design ESALs	--	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1		Primary Signature Block

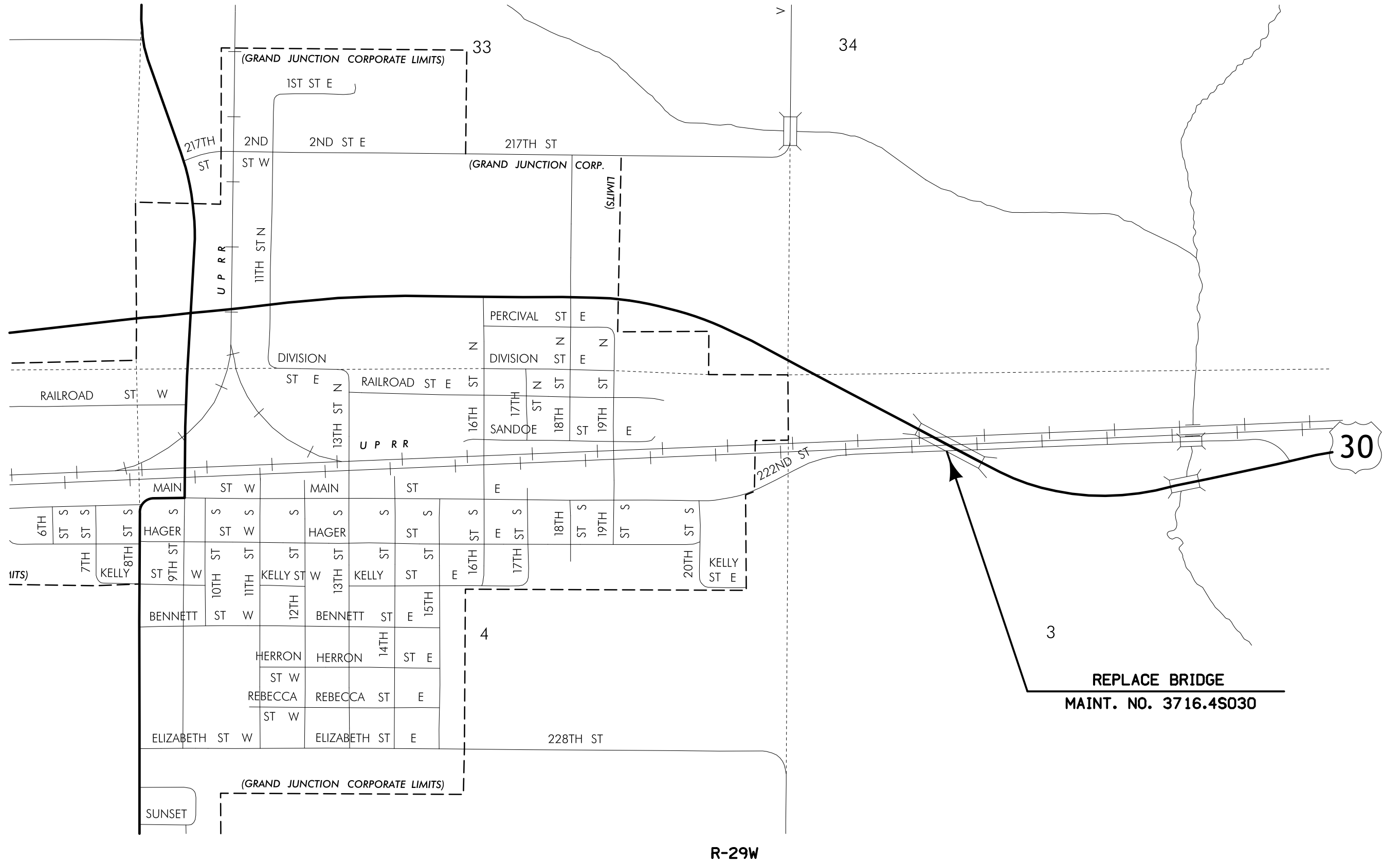
PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN - Date: Aug. 22, 2013

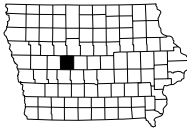


T-84N
T-83N

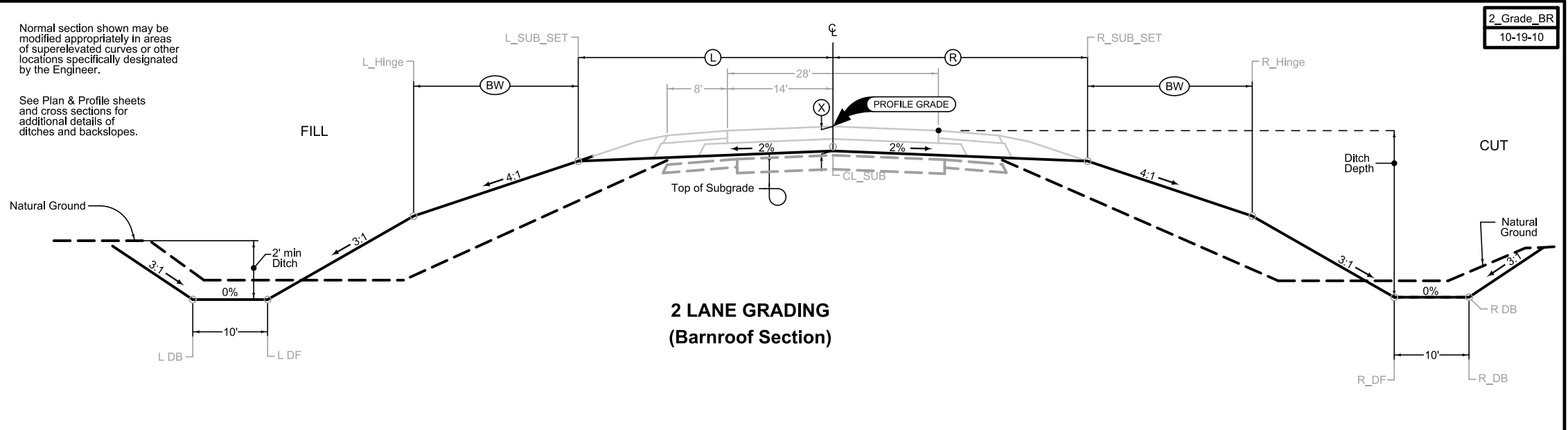


REPLACE BRIDGE
MAINT. NO. 3716.4S030

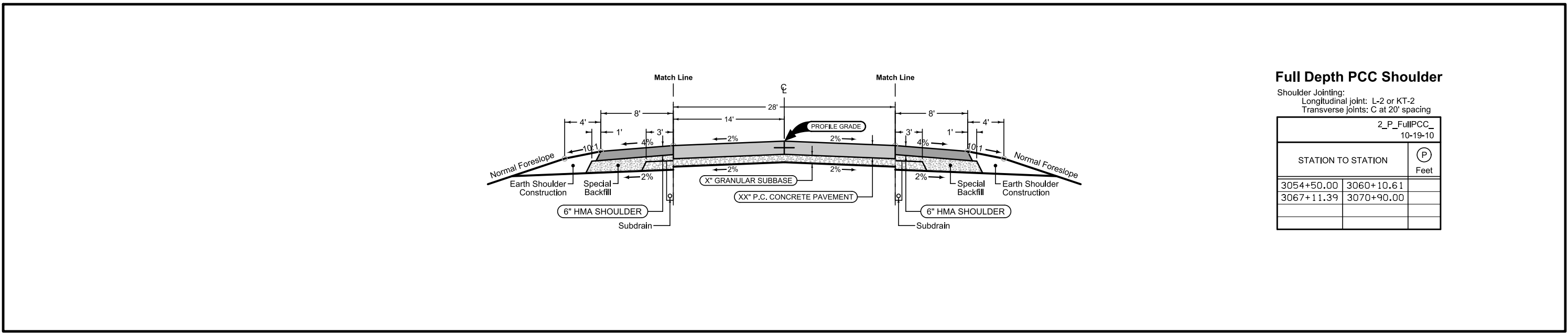
Location Map



LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BW) Feet
US 30	3054+50.00	3060+10.61	31.7	31.7	21.5	10.3
US 30	3067+11.39	3070+90.00	31.7	31.7	21.5	10.3



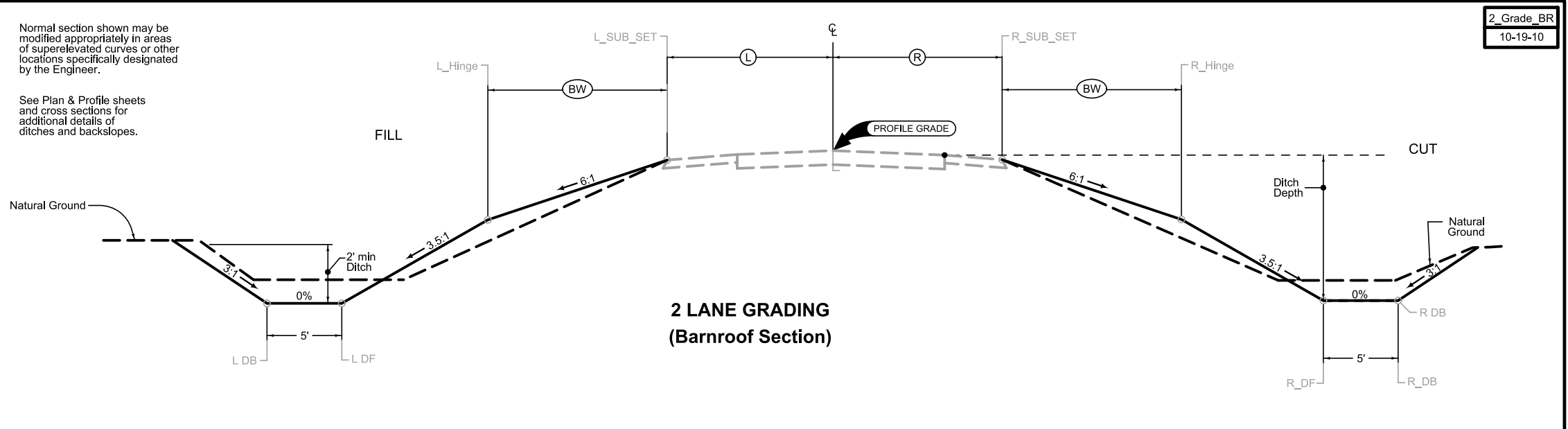
2_Grade_BR
10-19-10



2_P_FullPCC_10-19-10

STATION TO STATION		(P) Feet
3054+50.00	3060+10.61	
3067+11.39	3070+90.00	

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BW) Feet
US 30	3050+50.00	3054+50.00	22.0	22.0		20.0
US 30	3070+90.00	3082+00.00	22.0	22.0		20.0



2_Grade_BR
10-19-10

SURVEY SYMBOLS

- ENU edge of unpaved entrance&parking
- x- FW fence wire
- ← FLD Flowline of Ditch
- TOE toe of slope
- TB top of bank
- EP edge of paved roads
- C center of roadway
- OHE Overhead electric line
- PP power pole
- GW GW Guy Wire
- Default.Point Default Point Feature
- TP TPD telephone pedestal
- St.S. --- STA storm sewer 1st co.
- CMP corrugated metal pipes
- MB MB Mailbox
- SIGN SI sign
- RET retaining walls
- FWD wood fence
- ⊕ MHE Electrical Manhole
- T1 --- TLA buried telephone line 1st co.
- ⊕ CPT Control Point Temporary
- CC control check
- CS concrete slab
- GR Ground Field Survey
- PIP pipes(cast iron,steel,tile,etc)
- ⊕ MHSN Sanitary Manhole
- ⊕ CPS Control Point Set
- ⊕ CPF Control Point Found
- ⊕ TDC tree deciduous
- TLN tree line
- RCP reinforced conc.pipe
- ▲ SCR section corner
- ROW right of way rails
- HDG hedge
- LC LC lot corner
- SHG granular shoulder
- REF reference tie points
- BD Bridge Deck
- BCL bridge centerline
- EG edge of gravel road
- ⊕ SHR shrub
- SH shoulder
- CON concrete or a/c slab
- MIS miscellaneous
- SHP paved shoulder

UTILITY LEGEND

Where public utility fixtures are shown as existing on the plans or encountered within the construction area, it shall be the responsibility of the contractor to notify the owners of those utilities prior to the beginning of any construction. The Contractor shall afford access to these facilities for necessary modification of services. Underground facilities, structures and utilities have been plotted from available surveys and records, and therefore their locations must be considered approximate only. It is possible there may be others, the existence of which presently not known or shown. It is the Contractor's responsibility to determine their existence and exact location and to avoid damage thereto. No claims for additional compensation will be allowed to the Contractor for any interference or delay caused by such work.

The Contractor is required to utilize the utility One-Call service at (800) 292-8989 at least 48 hours prior to excavating anywhere on the project.

The following utility companies are known to have facilities on the project:

GRAND JUNCTION MUNICIPAL UTILITIES
 Dean Lyons
 515-738-2726
 gjmun@netins.net

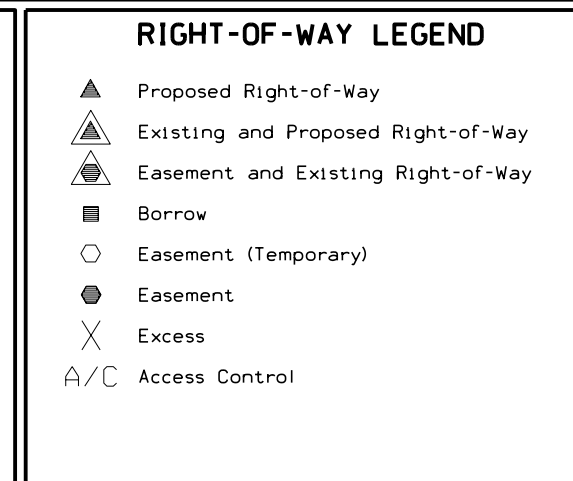
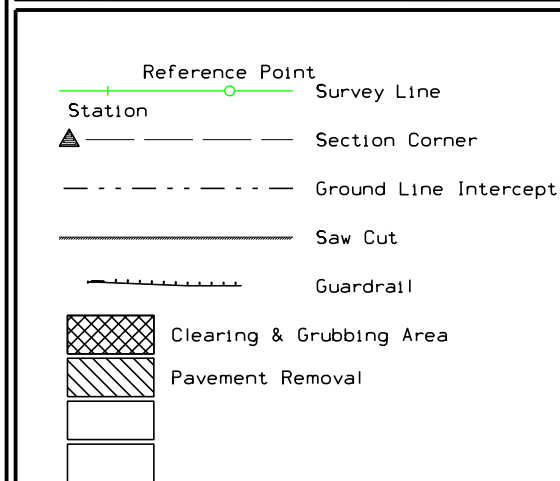
ICN
 Kent Freise
 515-725-4725
 icn-outsideplanstaff-dg@iowa.gov

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING		
Design Color No.		
Yellow	(4)	Highlight for Critical Notes or Features
Red	(3)	Delineates Restricted Areas
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading
Brown, Light	(236)	Grading Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

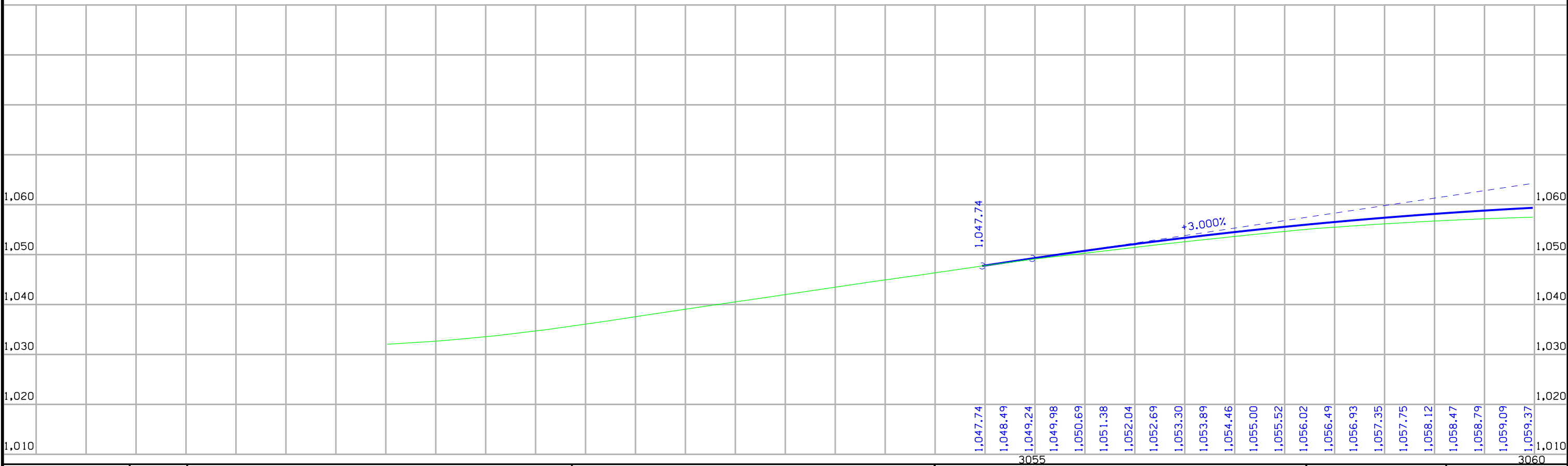
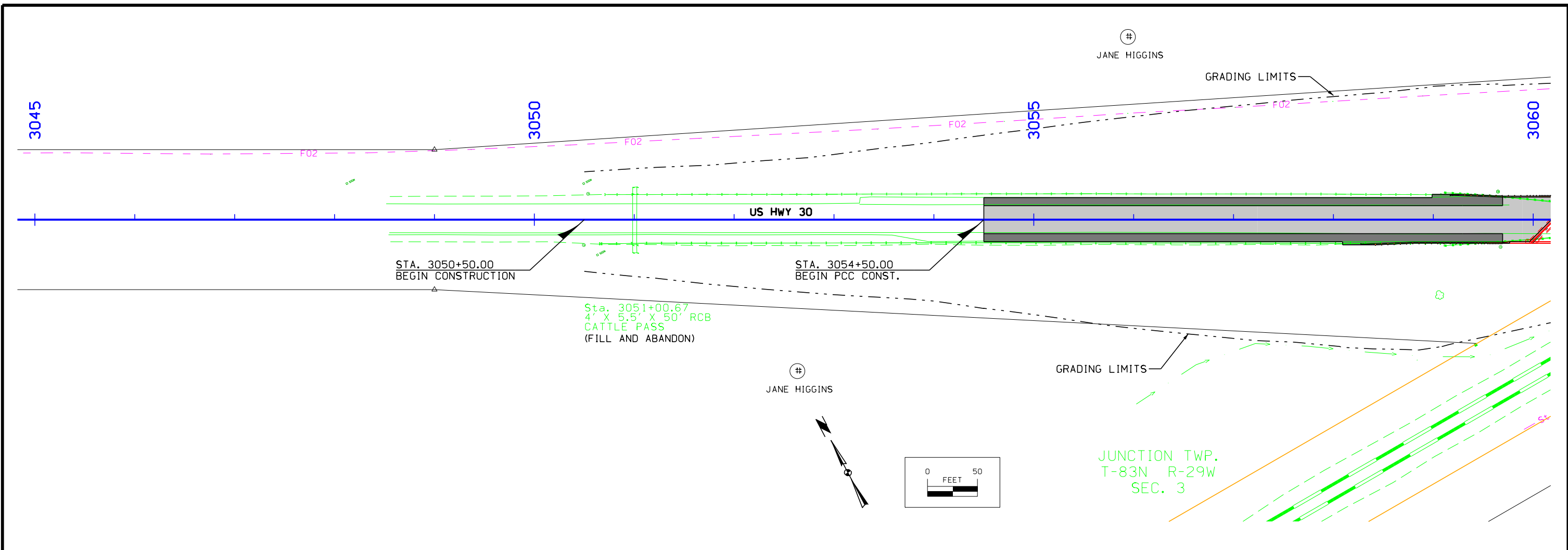
LINEWORK	Design Color No.	
Green	(2)	Existing Ground Line Profile
Blue	(1)	Proposed Profile and Annotation
Magenta	(5)	Existing Utilities
Blue, Light	(230)	Proposed Ditch Grades, Left
Black	(0)	Proposed Ditch Grades, Median
Rust	(14)	Proposed Ditch Grades, Right

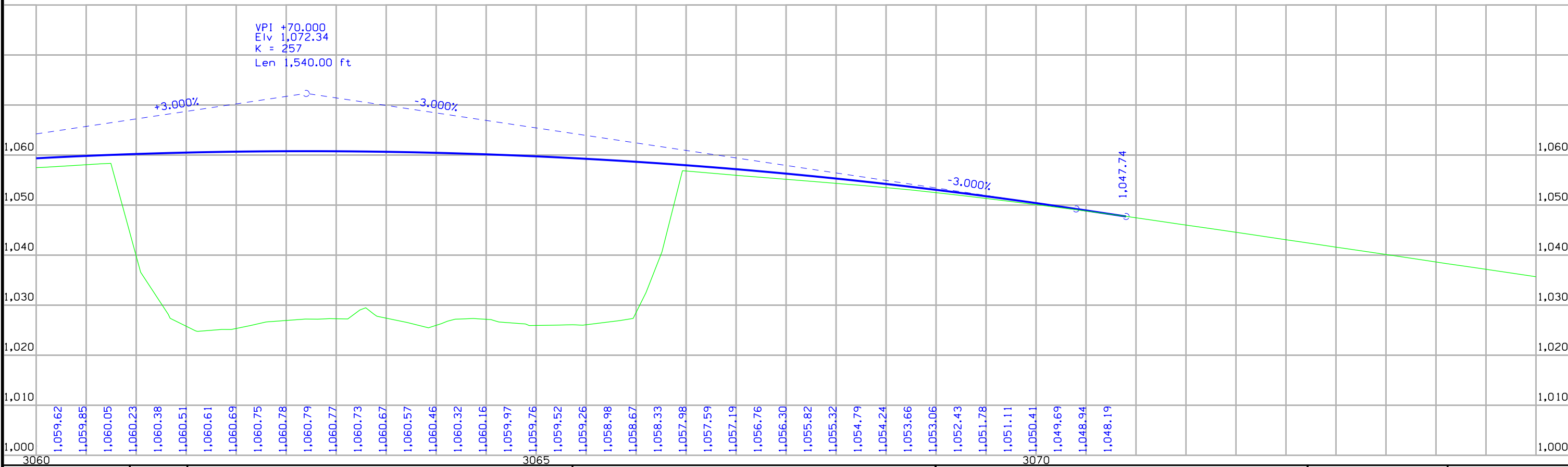
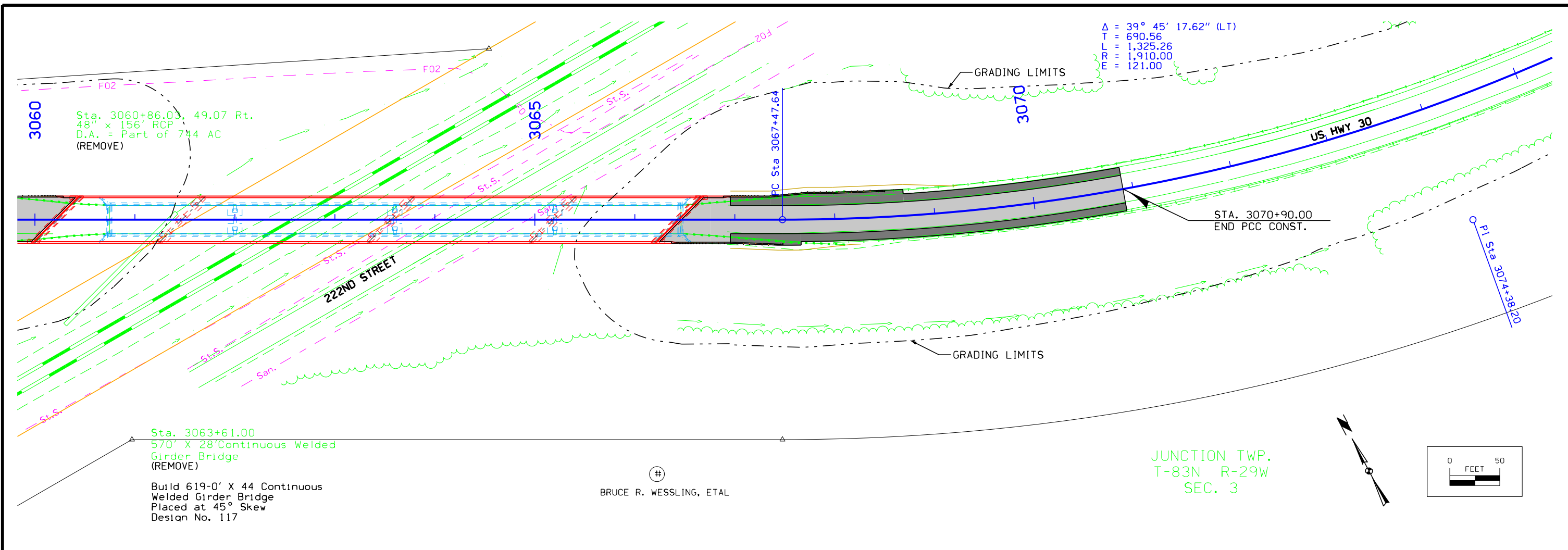


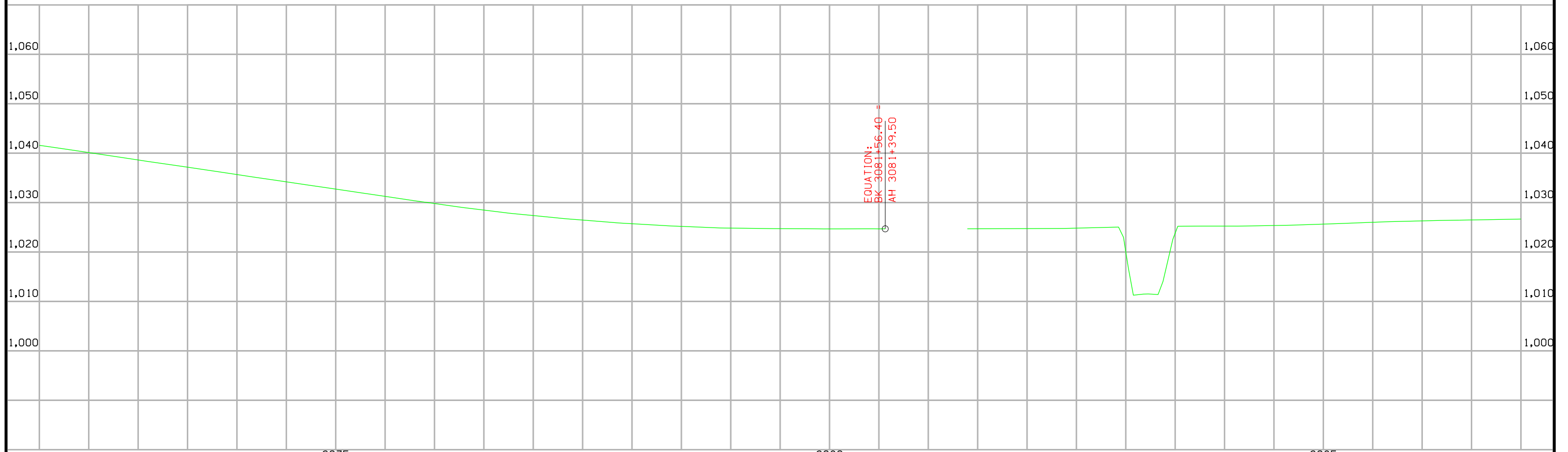
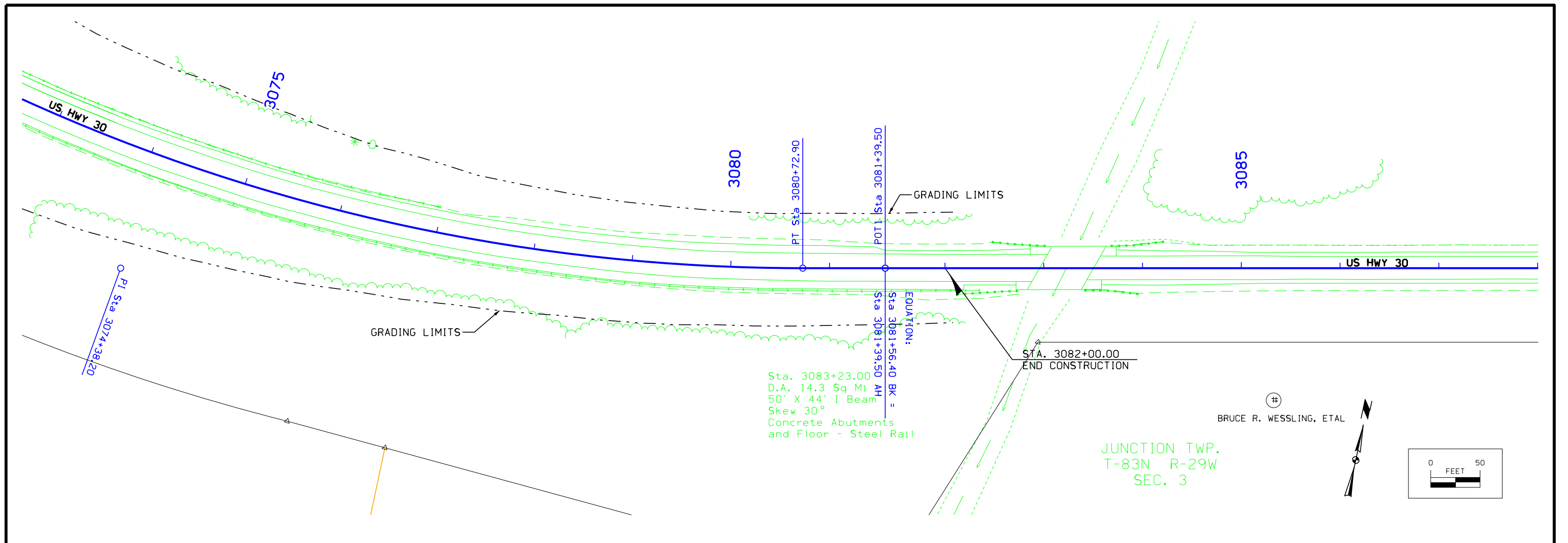
PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

IOWA 1-CALL# 1-800-292-8989







Survey Information

General Information

Measurement units for this survey are US survey feet. This survey is for proposed US 30 Bridge replacement over U.P.R.R. and 220th Street. Project datum and control information is provided by Design Survey Office. This project is a Partial DTM with Photo control. This survey request was for the X-30 corridor only.

Vertical Control

(3 Wire or Digital Level Example from Published Bench Mark)
Vertical datum for this survey is relative to NAVD88. A 3-wire level loop was run from BM #502 (NGS BM Y88) through the project benchmarks and returned to BM # Y88. The loop error met 3rd Order accuracy and the error was distributed proportionately among the project bench marks.

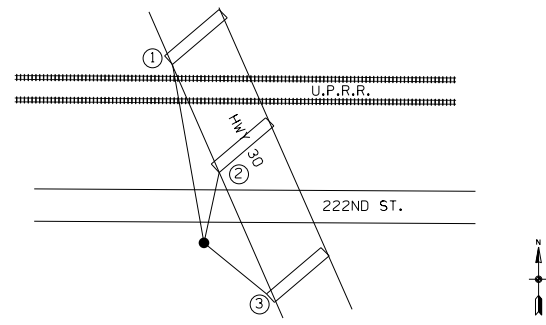
Horizontal Control

(Project Coordinates from Redundant IaRTN Observations)
The project coordinate system is modified Iowa State Plane North Zone (U.S. Survey Feet) scaled around Pt. G042 at 3476064.824N, 4725915.943E, 1057.052 EL. Horizontal datum is NAD83 (2011) for Epoch 2010.00. Additional control points were placed throughout the project using a GNSS Base-Rover setup relative to Pt. G042. A minimum of three observations with appropriate time spans between were averaged. The horizontal standard deviation of these observations was less than 0.25 ft. at 95% confidence level (2 sigma).

VERTICAL CONTROL

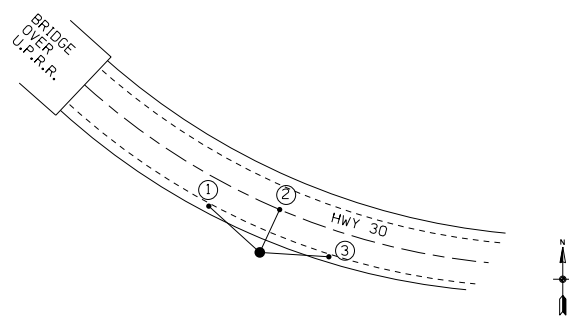
Point	North	East	Elevation	Station	Offset	Feature	Description
501	3475635.563	4728103.467	1027.602	3083+67.46	-23.23	BM	FND CUT X NE WINGWALL GUARDRAIL BRG EAST EDGE PROJECT
502	3475905.817	4725458.054	1028.807	3057+27.04	334.78	BM	FND NGS MONUMENT Y88
503	3476057.708	4725926.769	1059.152	3060+71.00	-18.00	BM	SET CUT X NW WINGWALL BRG ABUTMENT OEVER UPRR

CPS STA. 3064+20.88, RT. 49.76
 CPS 100, SET 5/8" REBAR
 N=3475834.735, E=4726204.782



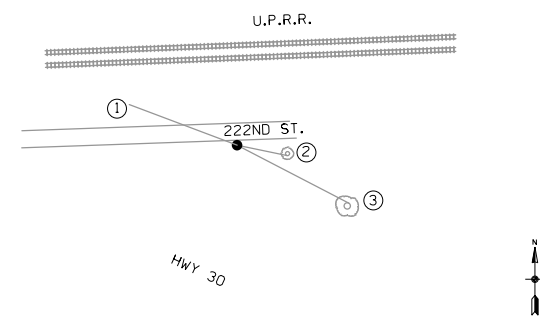
1. SW CORNER BRIDGE PIER= 222.00'
2. SW CORNER BRIDGE PIER= 70.20'
3. NW CORNER BRIDGE PIER= 105.16'

CPS STA. 3071+18.62, RT. 23.64
 CPS 101, SET 5/8" IRON ROD
 N=3475563.877, E=4726853.240



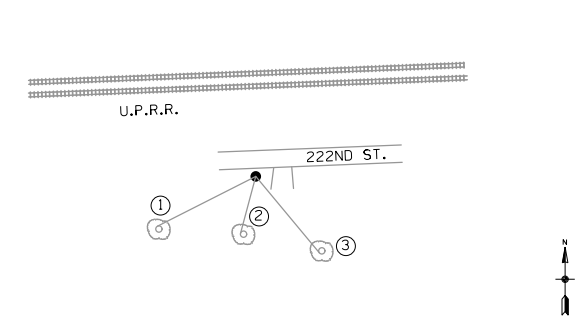
1. CUT "X" SHOULDER EBL HWY 30= 31.01'
2. CL HWY 30= 24.53'
3. CUT "X" SHOULDER HWY 30= 17.92'

CP STA. 3067+87.49, LT. 182.62
 CP 102, SET 5/8" IRON ROD
 N=3475871.648, E=4726634.238



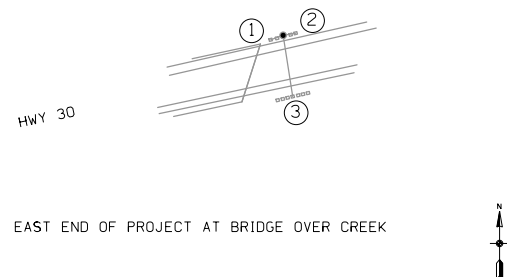
1. CUT "X" HEADWALL TILE OUTLET= 120.34'
2. PK NAIL 9" TEV= 49.04'
3. PK NAIL 15" TEV= 130.46'

CP STA. 3060+35.68, RT. 252.27
 CP 103, SET 5/8" IRON ROD
 N=3475835.024, E=4725769.592



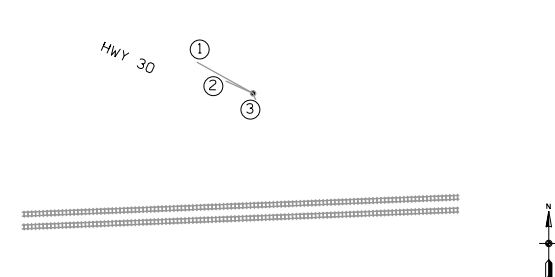
1. SET PK WEST FACE 10" TDC= 51.54'
2. SET PK WEST FACE 10" TDC= 31.48'
3. SET PK WEST FACE 10" TDC= 59.16'

CP STA. 3083+87.80 R 2, LT. 25.79
 CP 043, FND 5/8" IRON ROD
 N=3475642.289, E=4728122.835



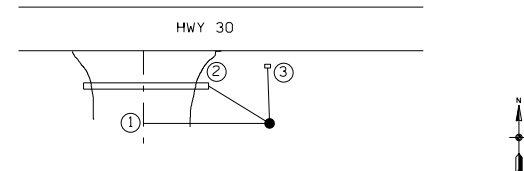
1. SET PK TOP OF GAURD POST= 12.23'
2. SET PK TOP OF GAURD POST= 9.50'
3. SET PK TOP OF GAURD POST= 52.21'

CP STA. 3060+58.11, LT. 19.25
 CP 042, FND 5/8" REBAR
 N=3476064.824, E=4725915.943



1. SET PK TOP OF GAURD POST= 66.21'
2. SET PK TOP OF GAURD POST= 28.84'
3. SET PK TOP OF GAURD POST= 5.14'

COUNTY MON. STA. 3044+94.36, RT. 60.79
 COUNTY MONUMENT 097, FND DISK
 N=3476722.587, E=4724495.011



1. CENTERLINE FIELD ENTRANCE= 47'
2. TOP CENTER CONC. PIPE= 22.6'
3. WOOD POST -NO LITTER- SIGN= 17.2'

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	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
US HWY 30 20001		3031+07.26	3477117.84	4723192.83												
CUR C1						3031+07.26	3477177.84	4723192.83	3038+01.48	3477111.44	4723887.03	3044+69.45	3476787.98	4724501.30		
CUR C2						3067+47.64	3475726.51	4726517.09	3074+38.20	3475404.77	4727128.12	308072.90	3475548.16	4727803.62		
20004		3103+21.28	3476018.55	4730019.52												

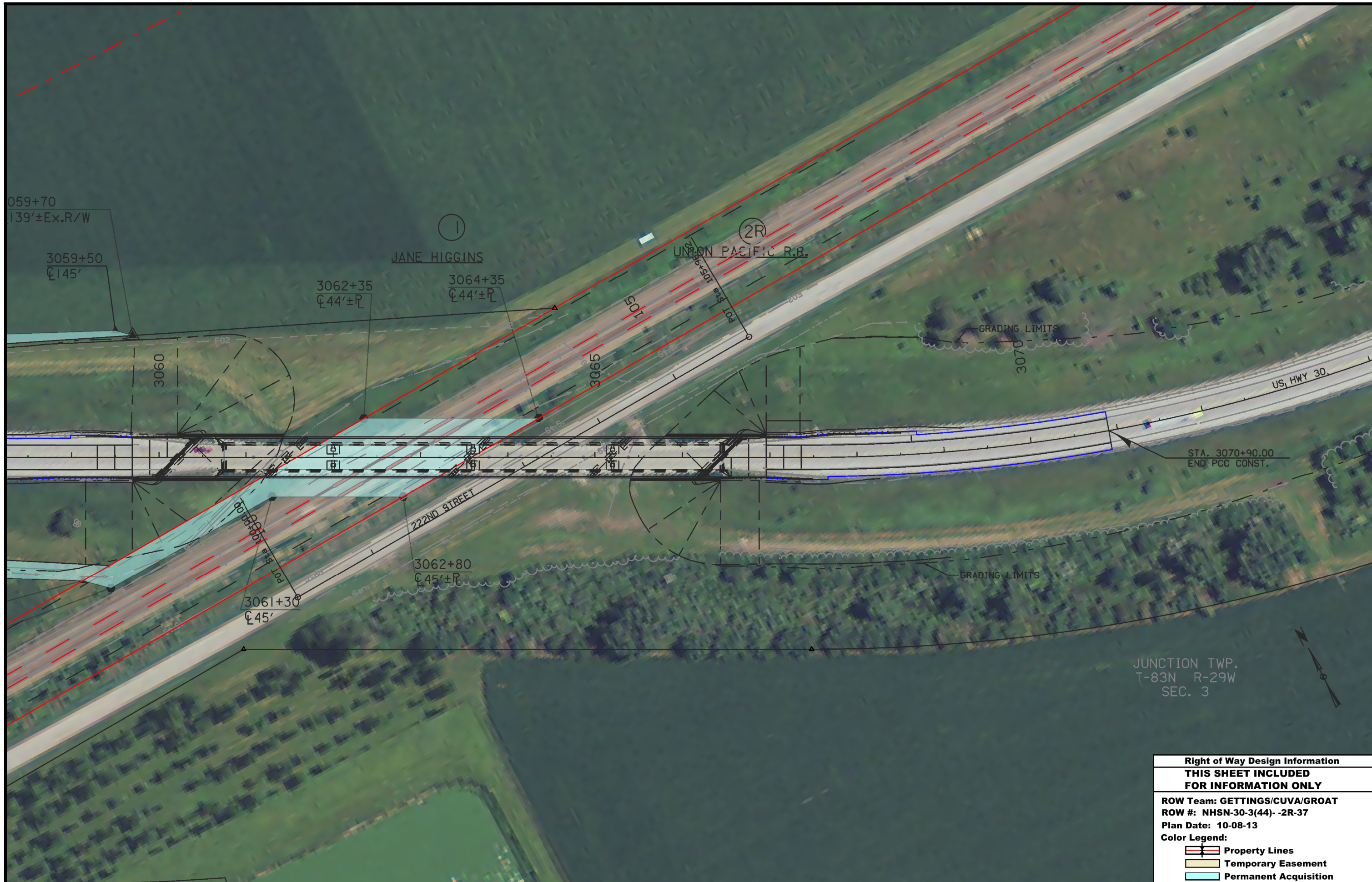
SPIRAL OR CIRCULAR CURVE DATA

101-17
04-19-11




Name	Location	Δ_{scs}	Horizontal Alignment Data													Remarks	
			Spiral Data						Curve Data								
			θ_s	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	Δ_c	T	L	R	E		
CUR C1																	
CUR C2																	



Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: GETTINGS/CUVA/GROAT	
ROW #: NHSN-30-3(44)-2R-37	
Plan Date: 10-08-13	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



JUNCTION TWP.
T-83N R-29W
SEC. 3

Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: GETTINGS/CUVA/GROAT	
ROW #: NHSN-30-3(44)-2R-37	
Plan Date: 10-08-13	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition

PARCEL CHECK LIST

10/08/13 15:57 HSL PRINT FOR S J GROAT PAGES: 1 - 1 GEN: 1

PARCEL CHECK BY PROJ UPDATED 10/08/13 15:56 PAGE: 1

R2360003 PARCEL CHECK LIST BY PROJECT NUMBER
 COUNTY : GREENE PROJECT NO. :NHSN-030-3(44)--2R-37 PIN: 12-37-030010-00
 CONSTRUCTION NO.:BRF-030-3(43)--38-37 ASSIGNED TO: NLC
 DESCRIPTION : Over UP R.R. 1.3 Miles E. Of Ia. 144

PARCEL	KEY	OWNER	TYPE	R/W W.D OR EASE.	BORROW W.D OR EASE.	HOUSE OR
0001	26868	JANE HIGGINS	FEE			
0002 R	26869	UNION PACIFIC RAILROAD	FEE			

2 TOTAL PARCELS ON PROJECT

108-26A
08-01-08

STAGING NOTES

108-23A
08-01-08

TRAFFIC CONTROL PLAN

U.S. 30 will be closed to traffic for the duration of the project. Traffic will be detoured via IA 144 north to County Road E-26, east on County Road E-26 to U.S. 169, and south on U.S. 169 to U.S. 30.

222nd Street will be closed to traffic for the duration of the project.

Detour signs shall be installed and maintained by the DOT District 1 office. Coordinate closures with the district office.

Road Closures shall be in accordance with Standard Road Plan TC-252. Refer to sheet J.2 for detour route map and additional information.

108-13A
08-01-08

SAFETY CLOSURES

Refer to Section 2518 of the Standard Specifications

Station	Closure Type		Remarks
	Road Qty.	Hazard Qty.	
		1	
	1	1	
	1		

111-01
04-17-12

COORDINATED OPERATIONS

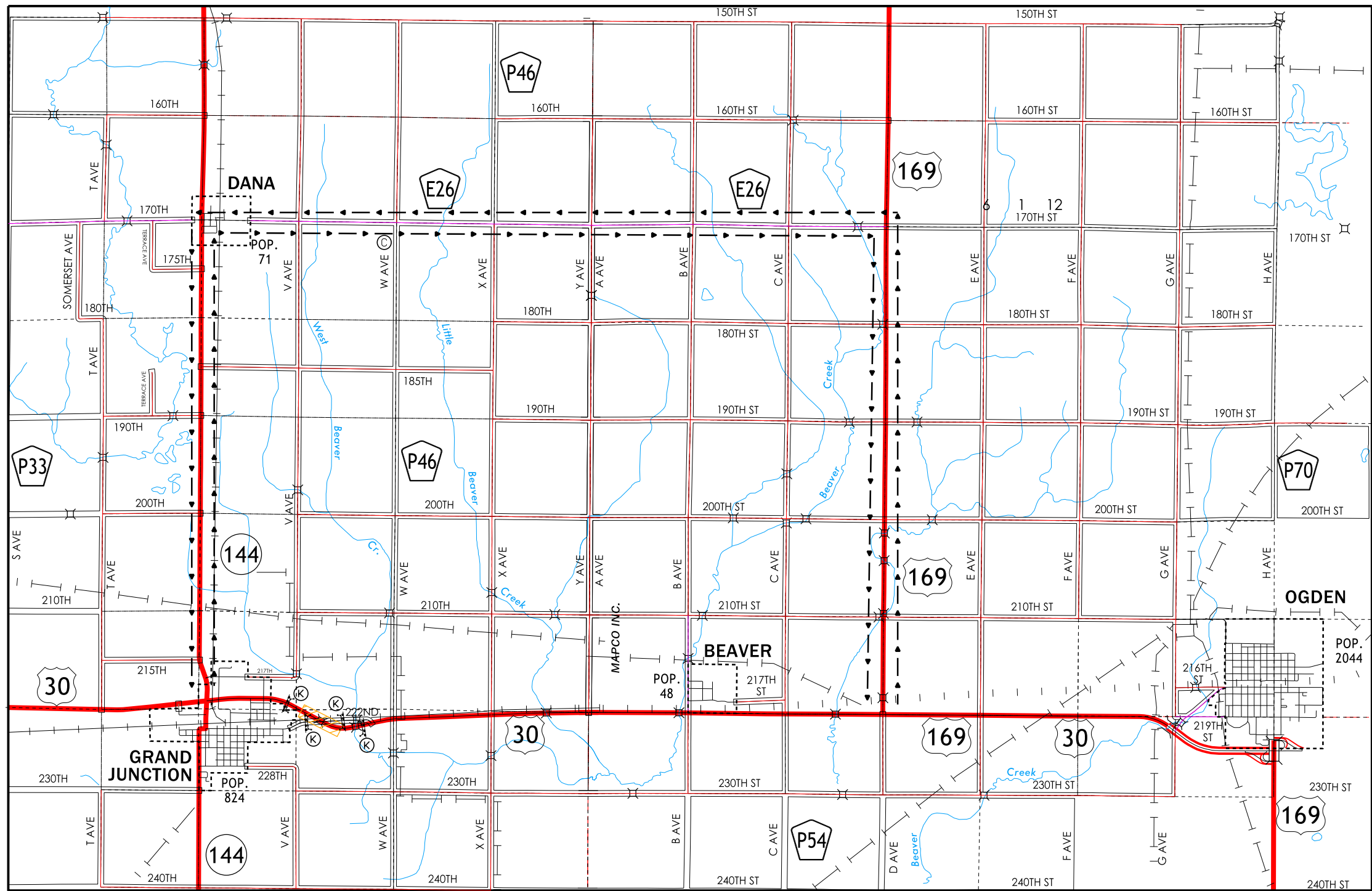
Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
BRF-030-3(45)--38-37	RCB Culvert Construction

102-15
08-01-08

TABULATION OF SPECIAL EVENTS






Event	Location	Date



PROPOSED DETOUR

NOTE: DETOUR SIGNING WILL BE INSTALLED AND MAINTAINED BY THE DISTRICT OFFICE. COORDINATE BRIDGE CLOSURE AND TRAFFIC CONTROL ITEMS WITH THE DISTRICT 1 OFFICE.

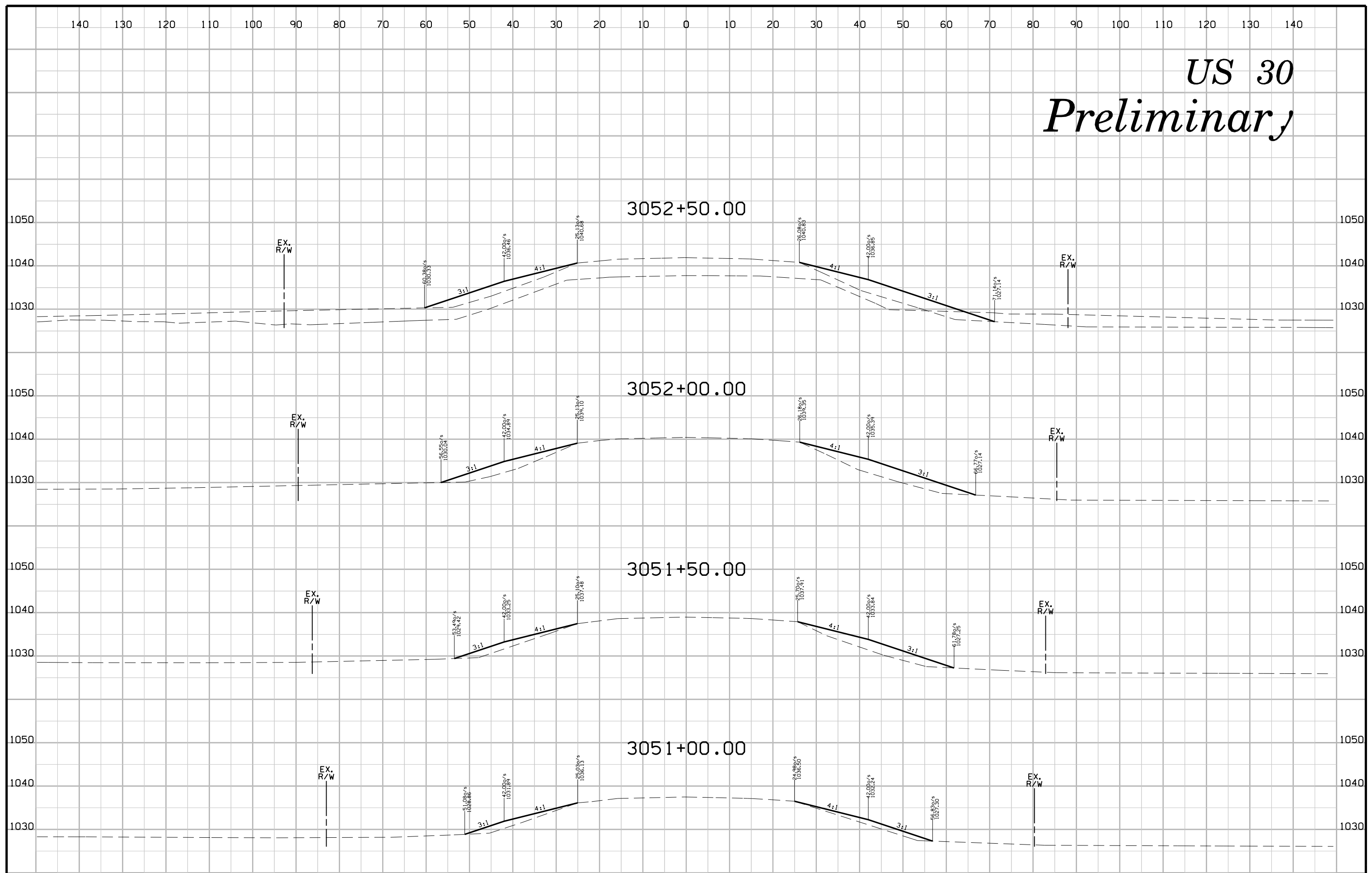
TRAFFIC CONTROL LEGEND

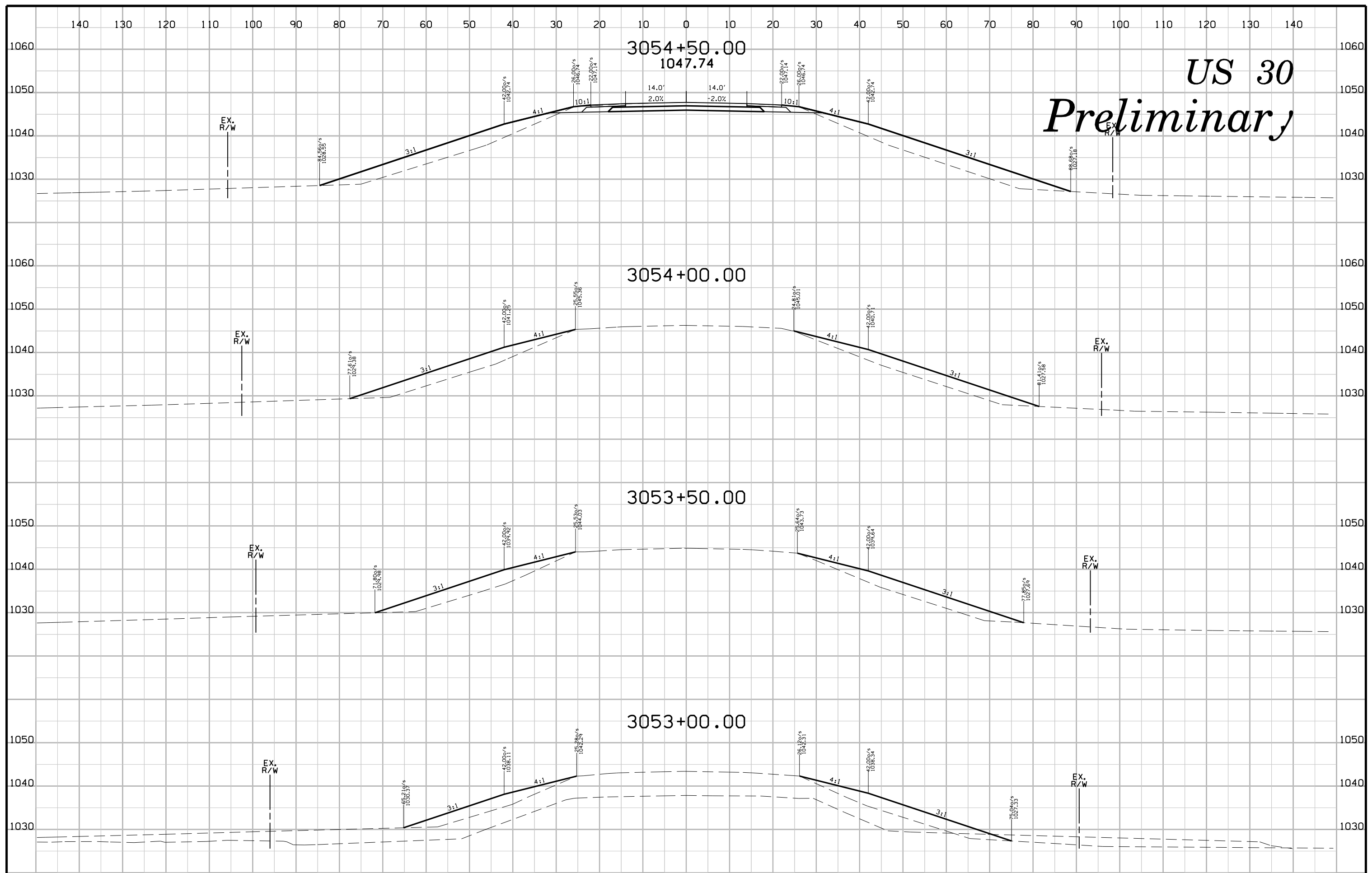
-  TRAFFIC SIGN
-  TYPE III BARRICADE
-  DETOUR ROUTE/DIRECTION OF TRAFFIC
-  WORK AREA
-  SAFETY FENCE

Ⓚ SAFETY CLOSURE W/ ORANGE SAFETY FENCE



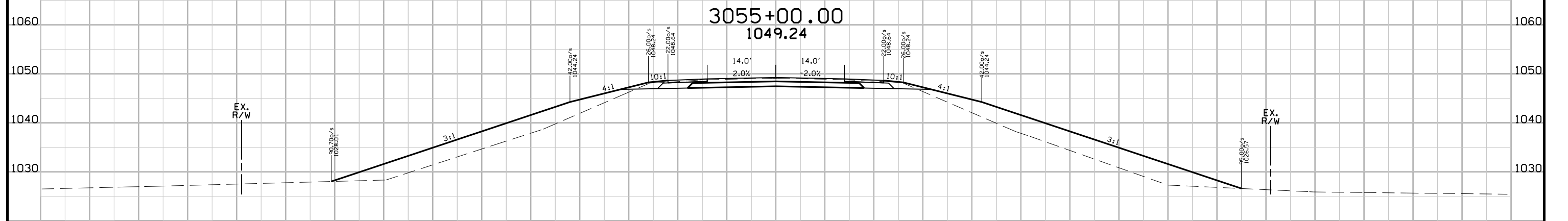
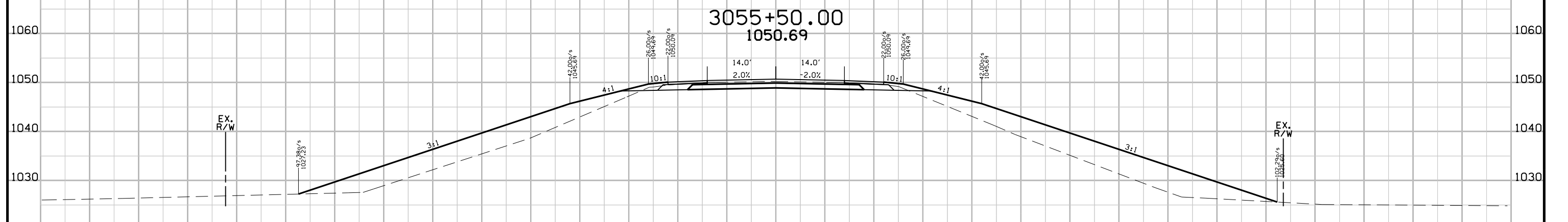
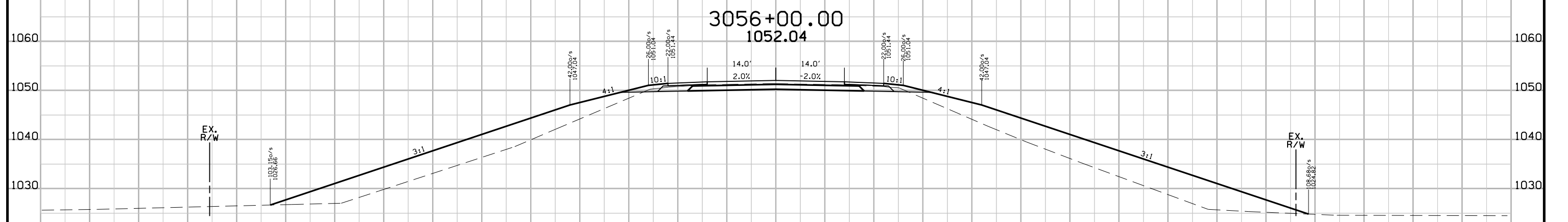
US 30 Preliminary



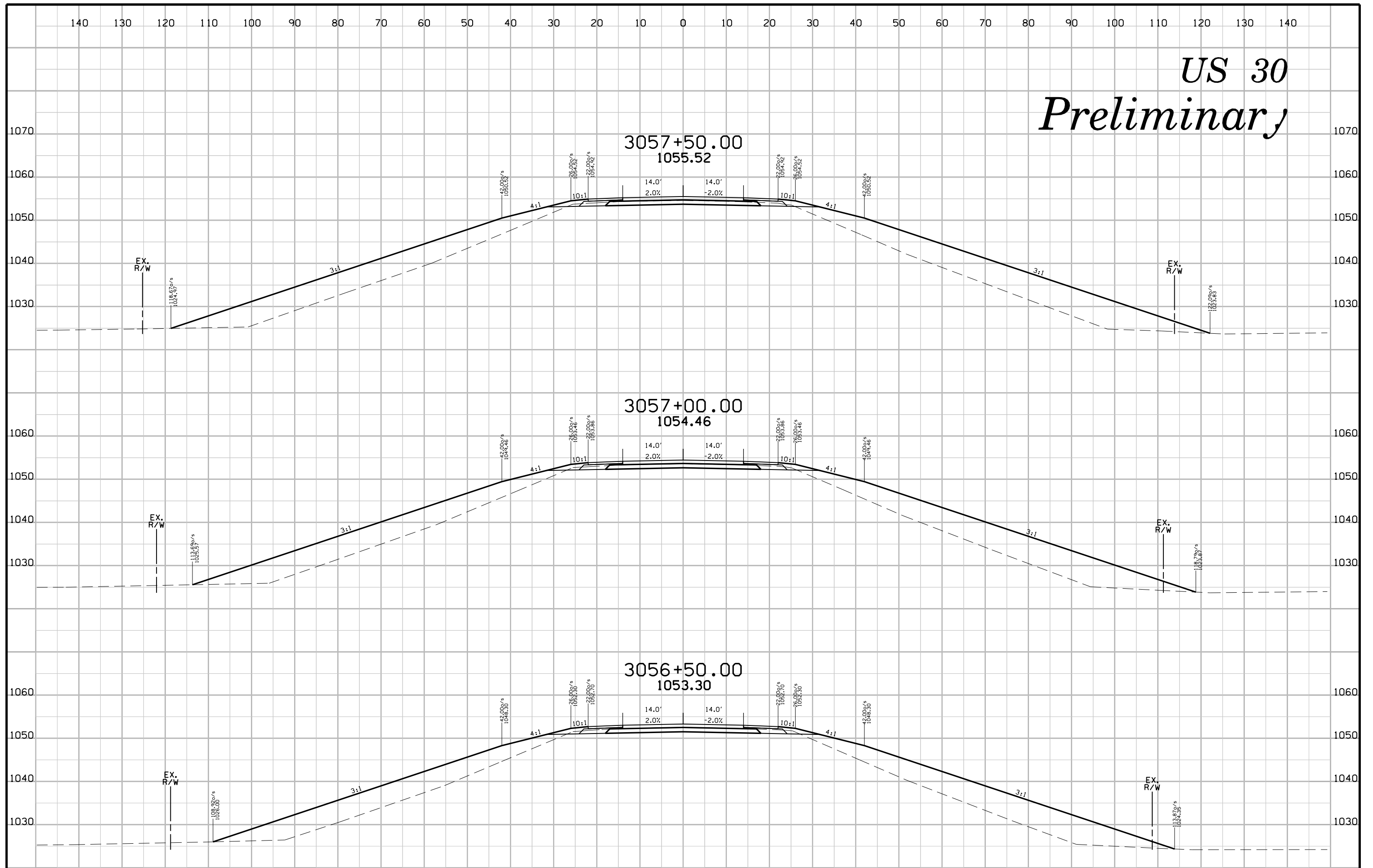


*US 30
Preliminary*

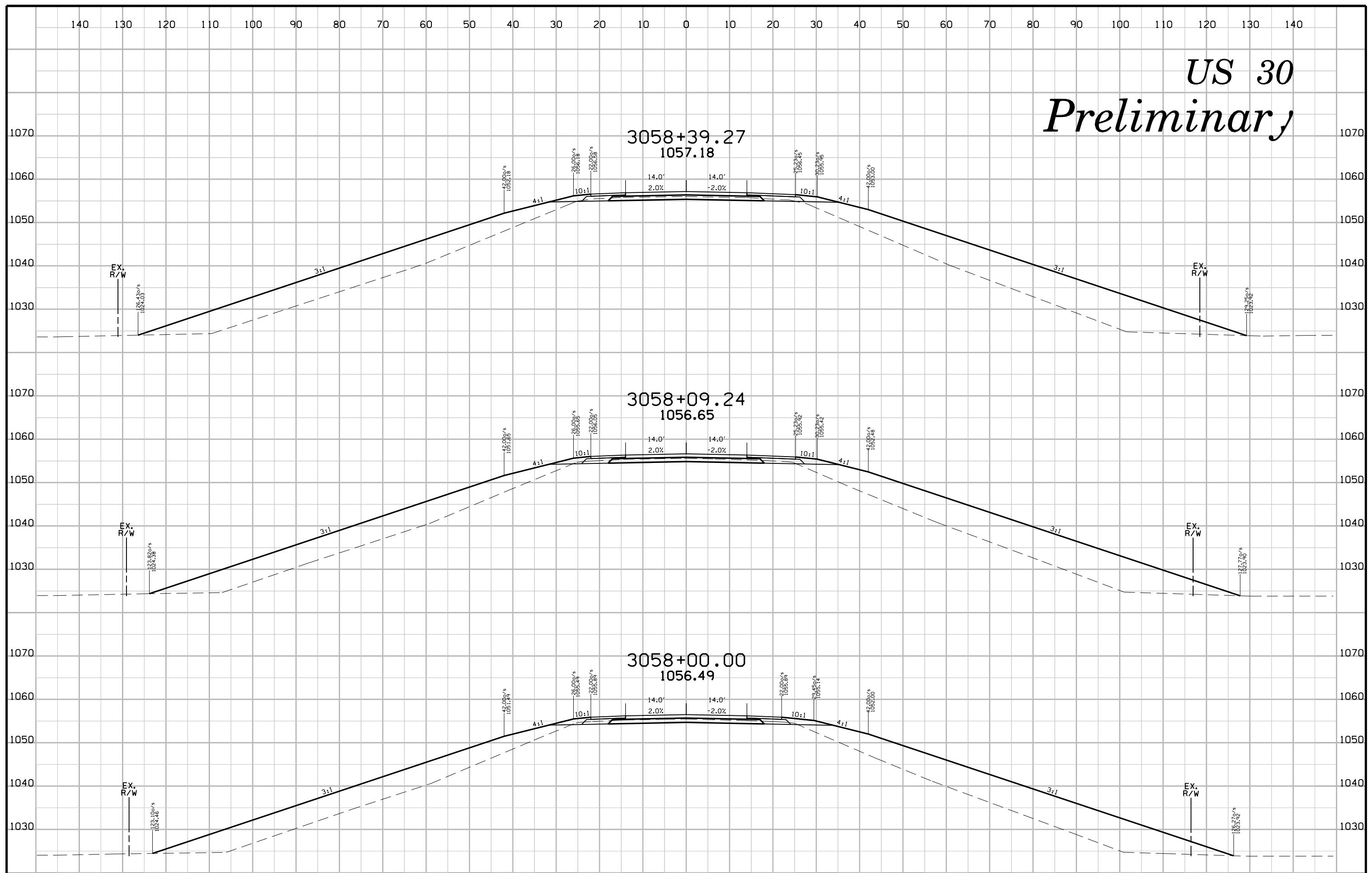
US 30 Preliminary



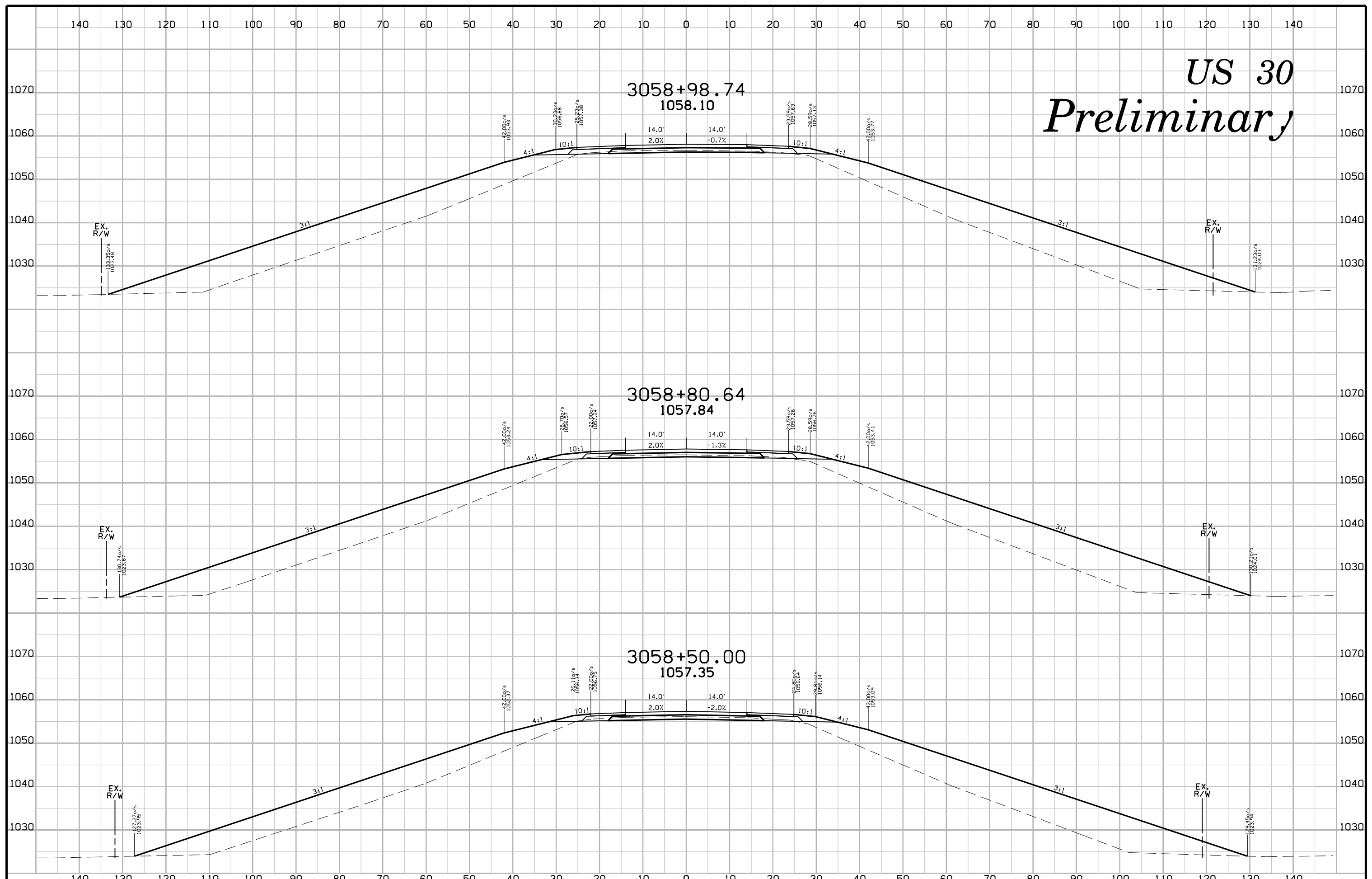
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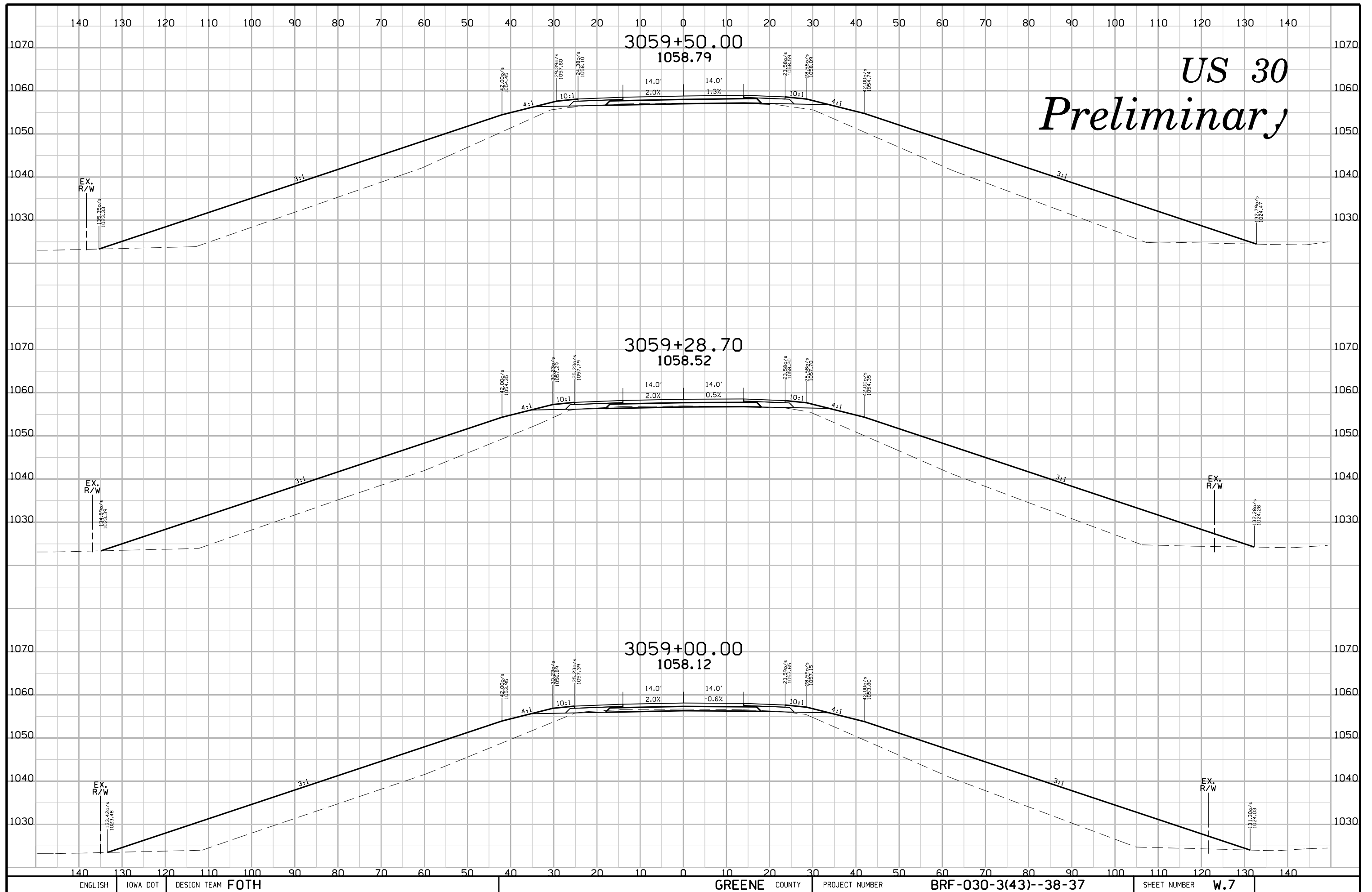


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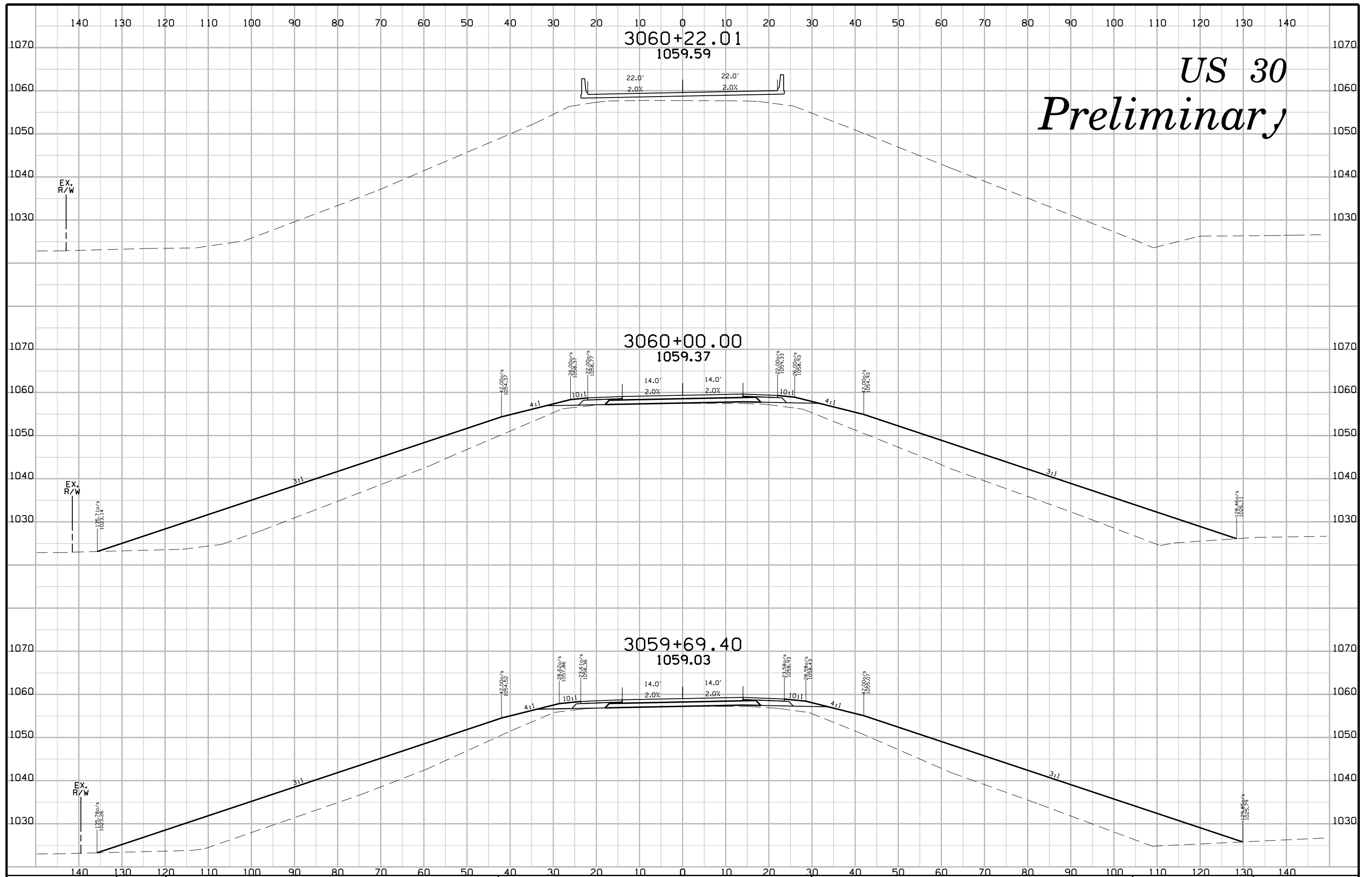


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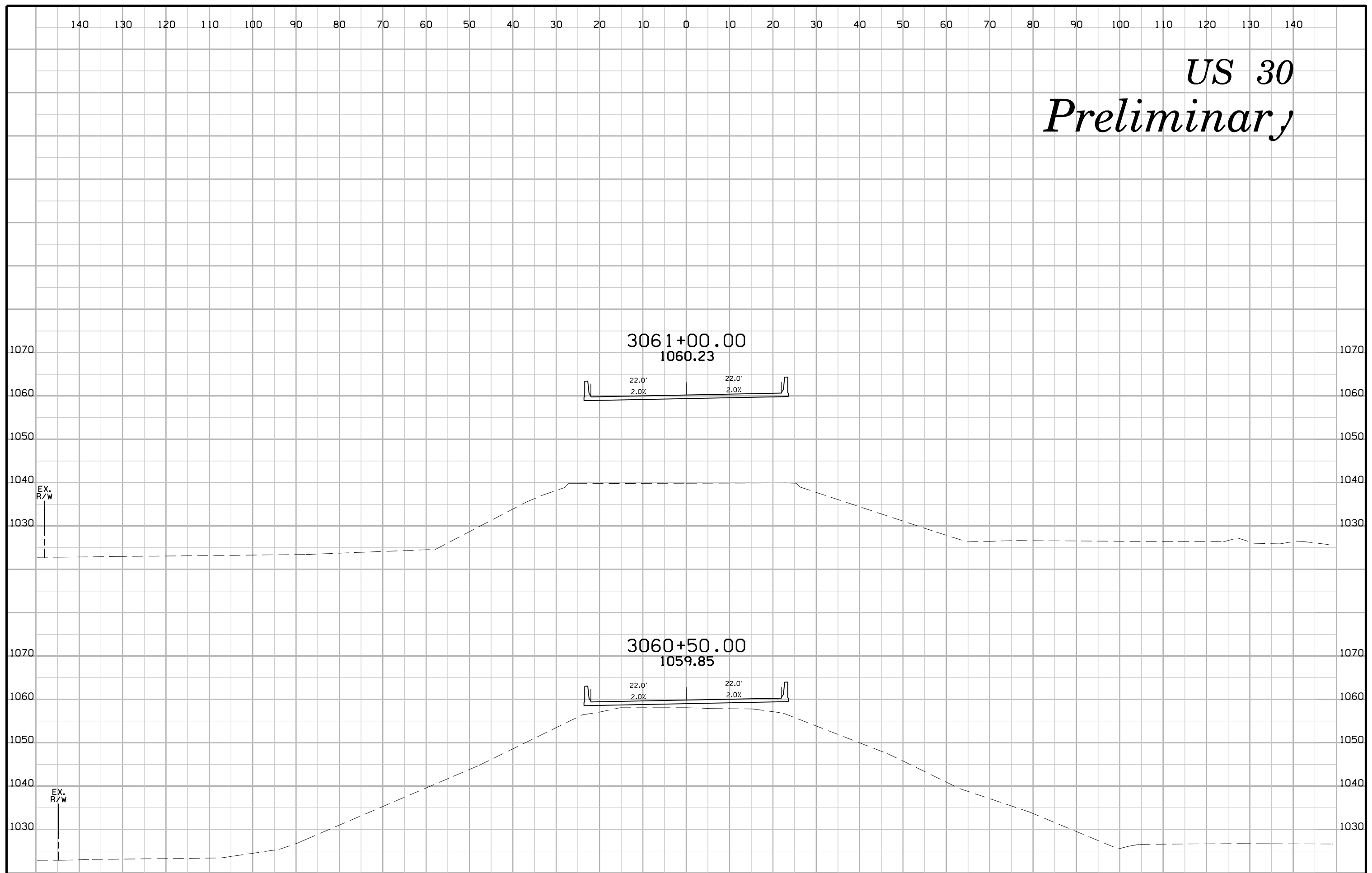




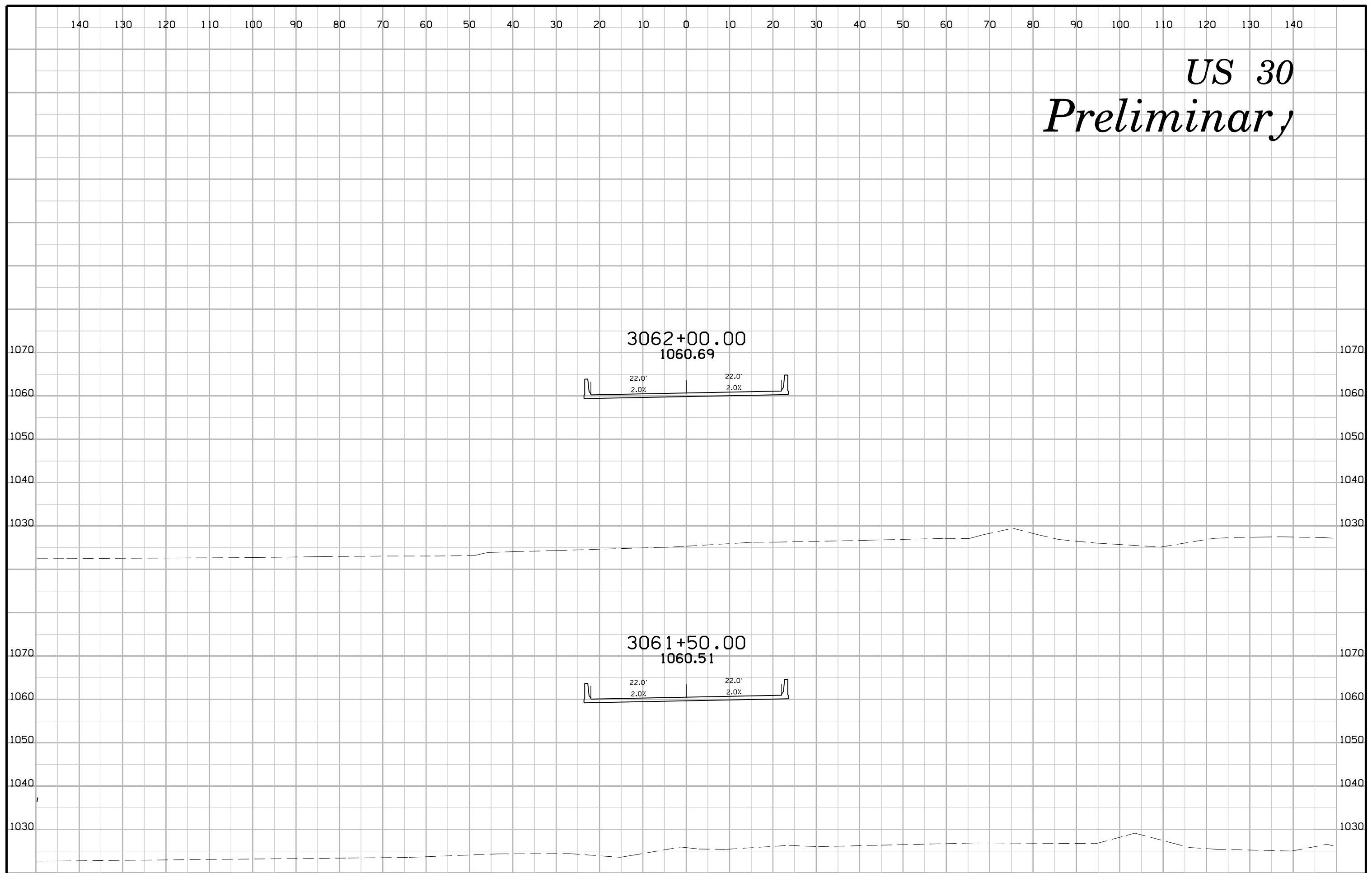
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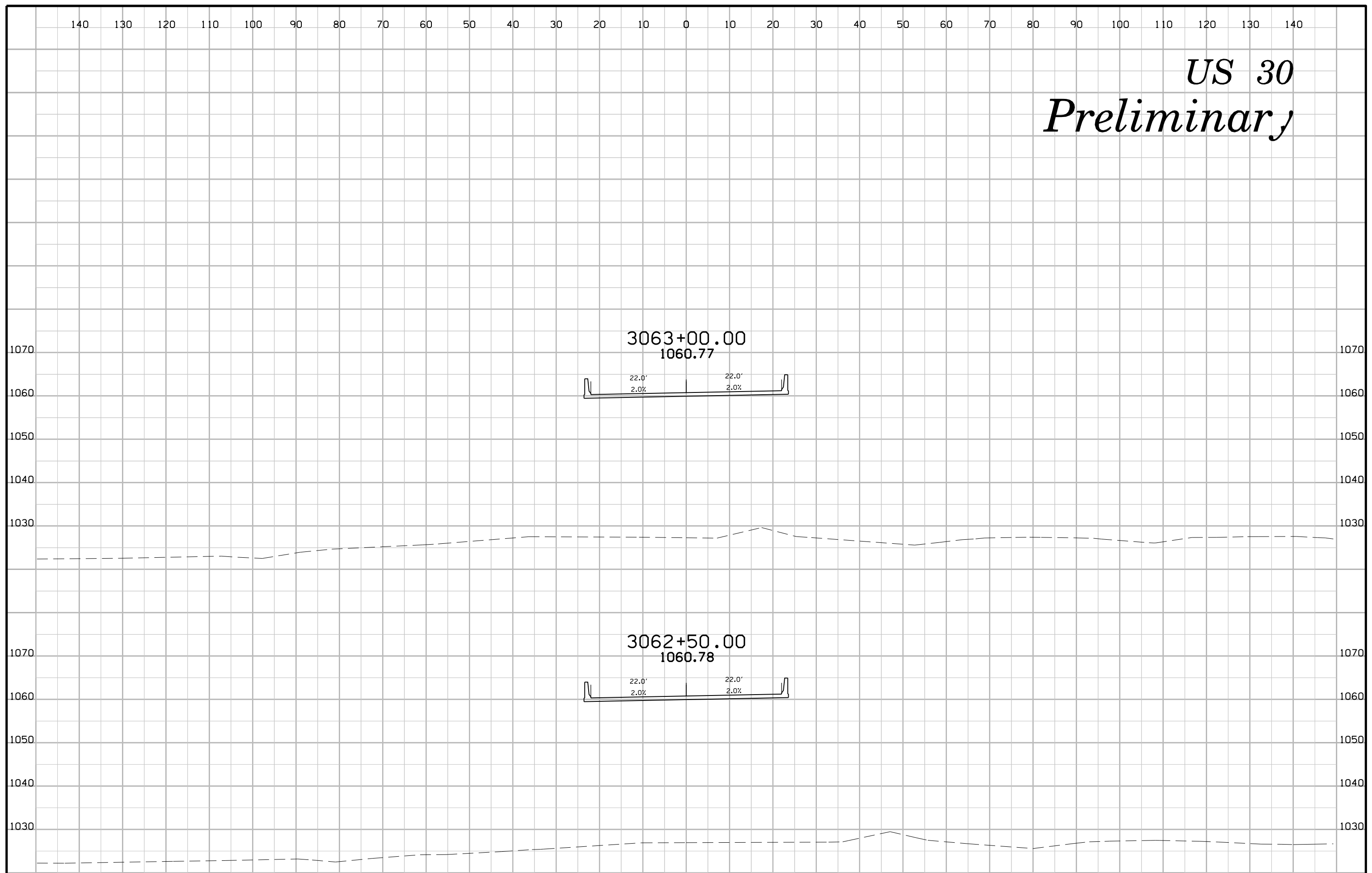
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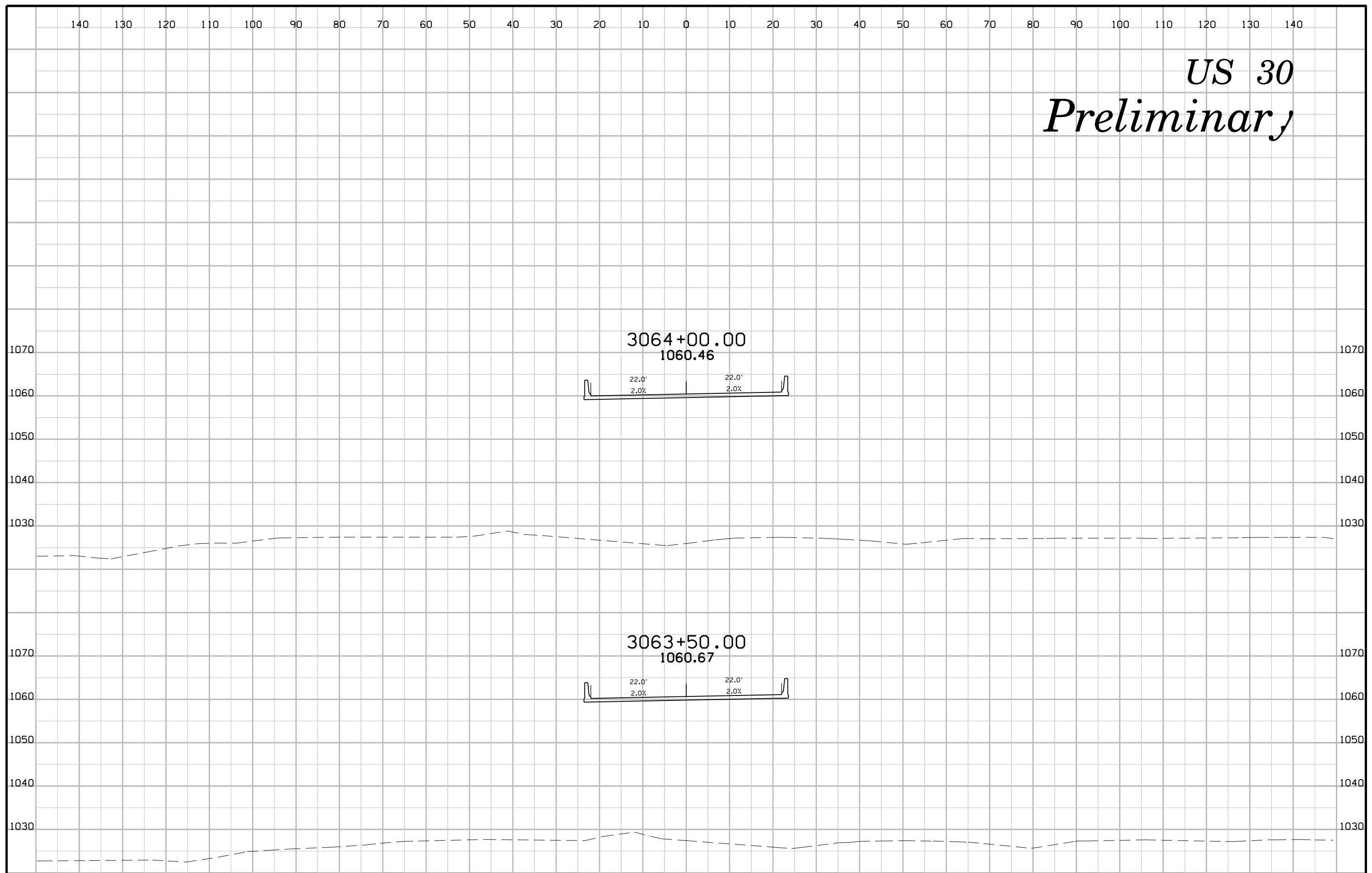
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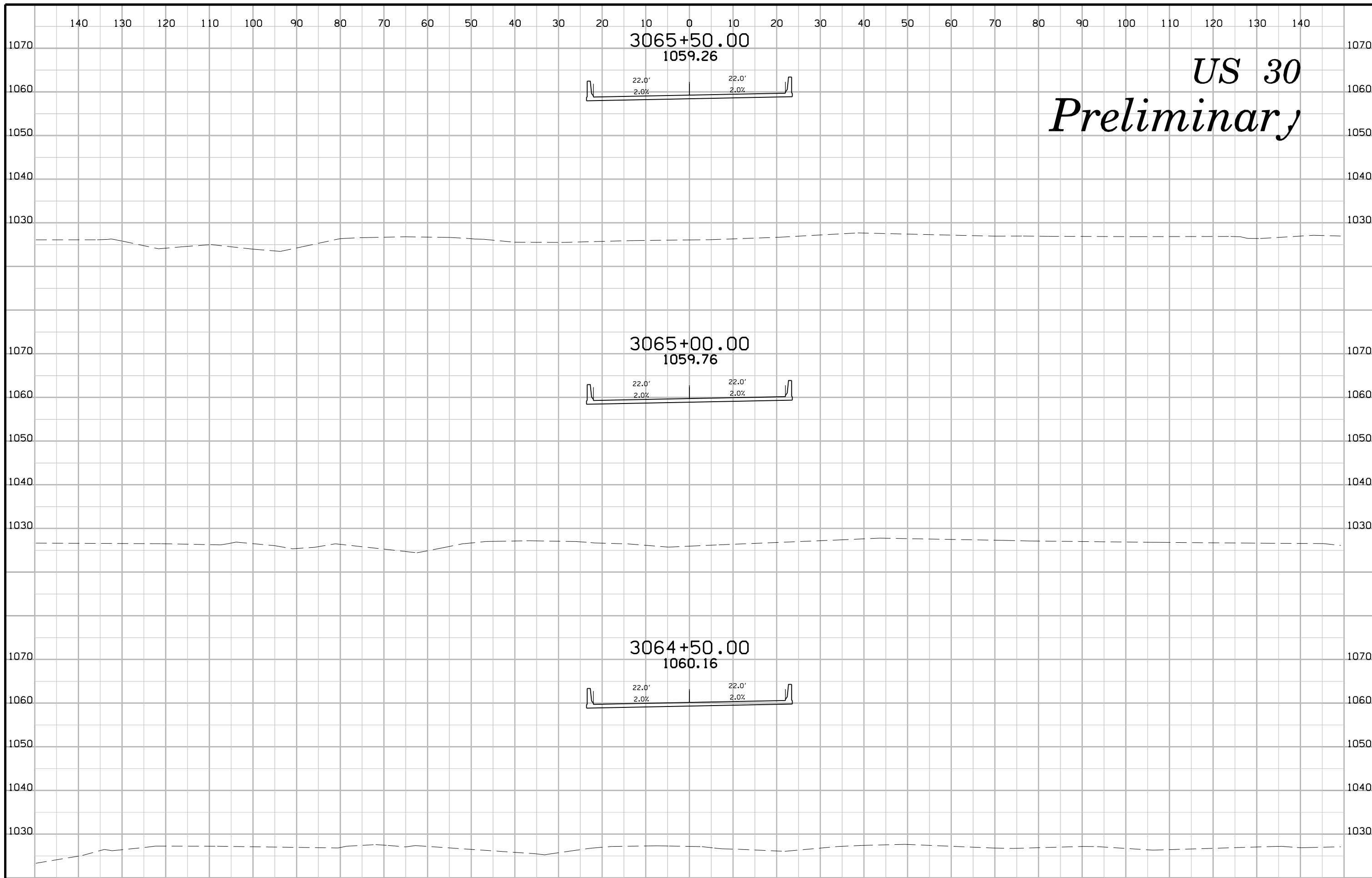


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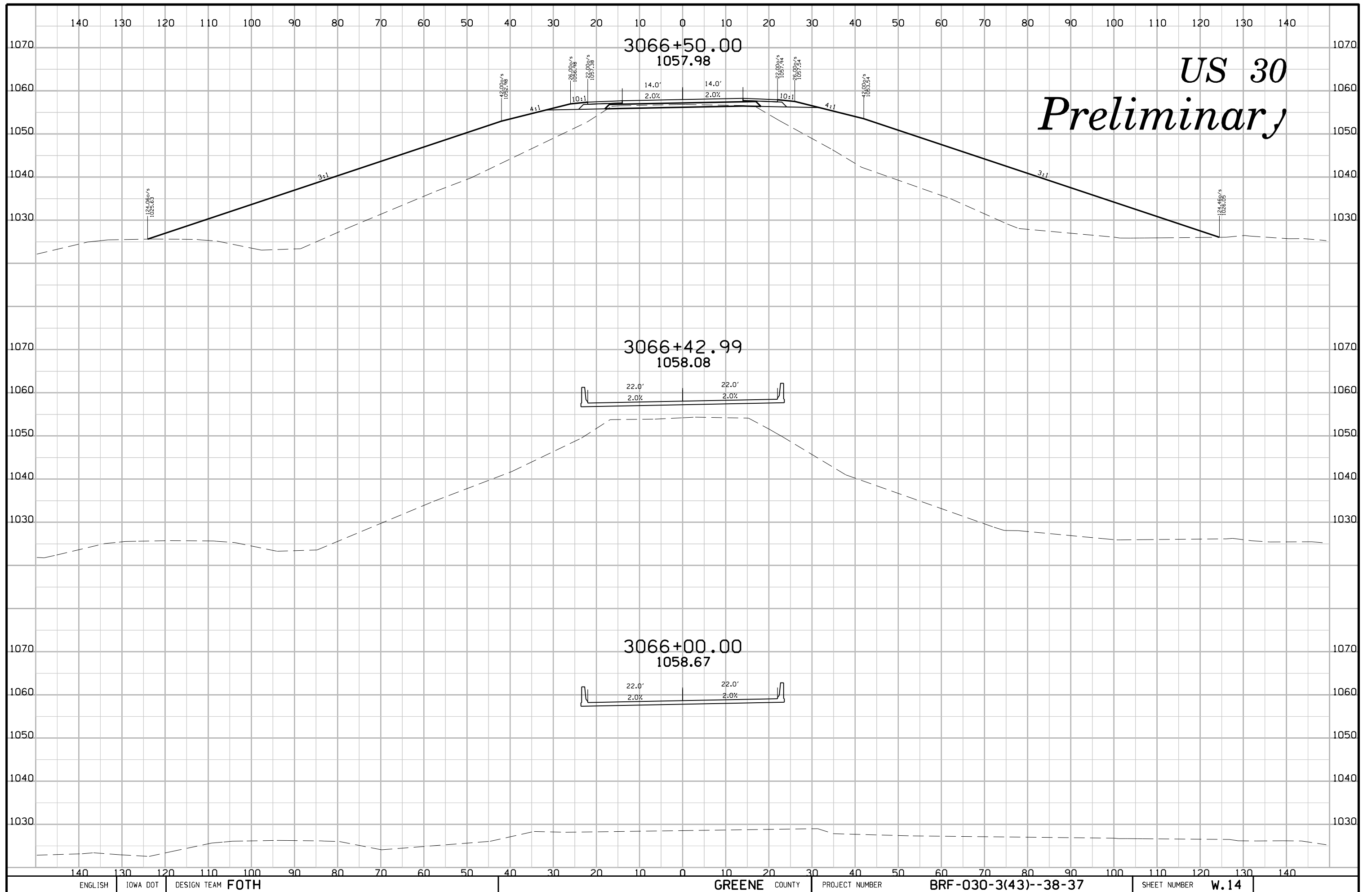


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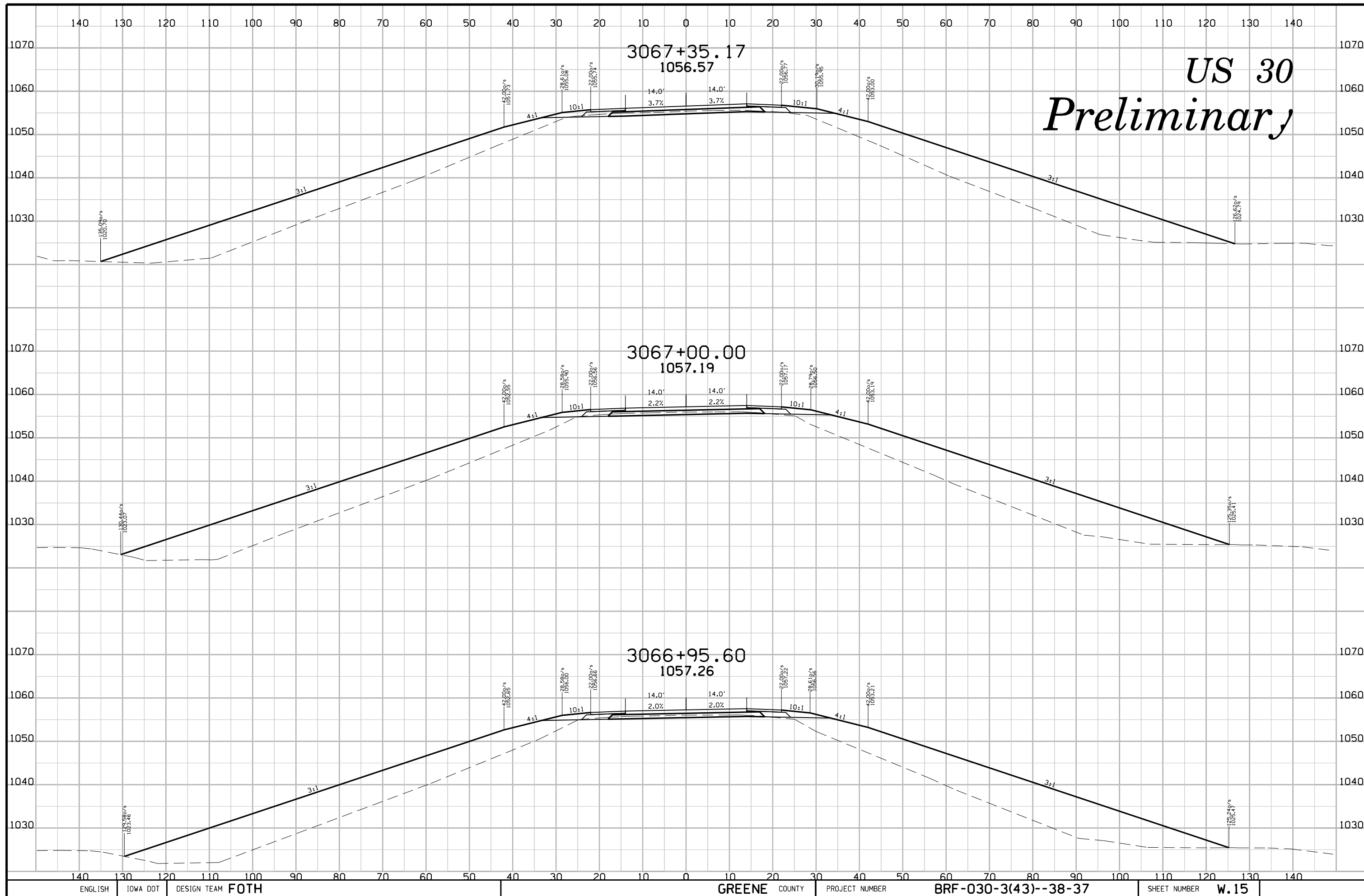




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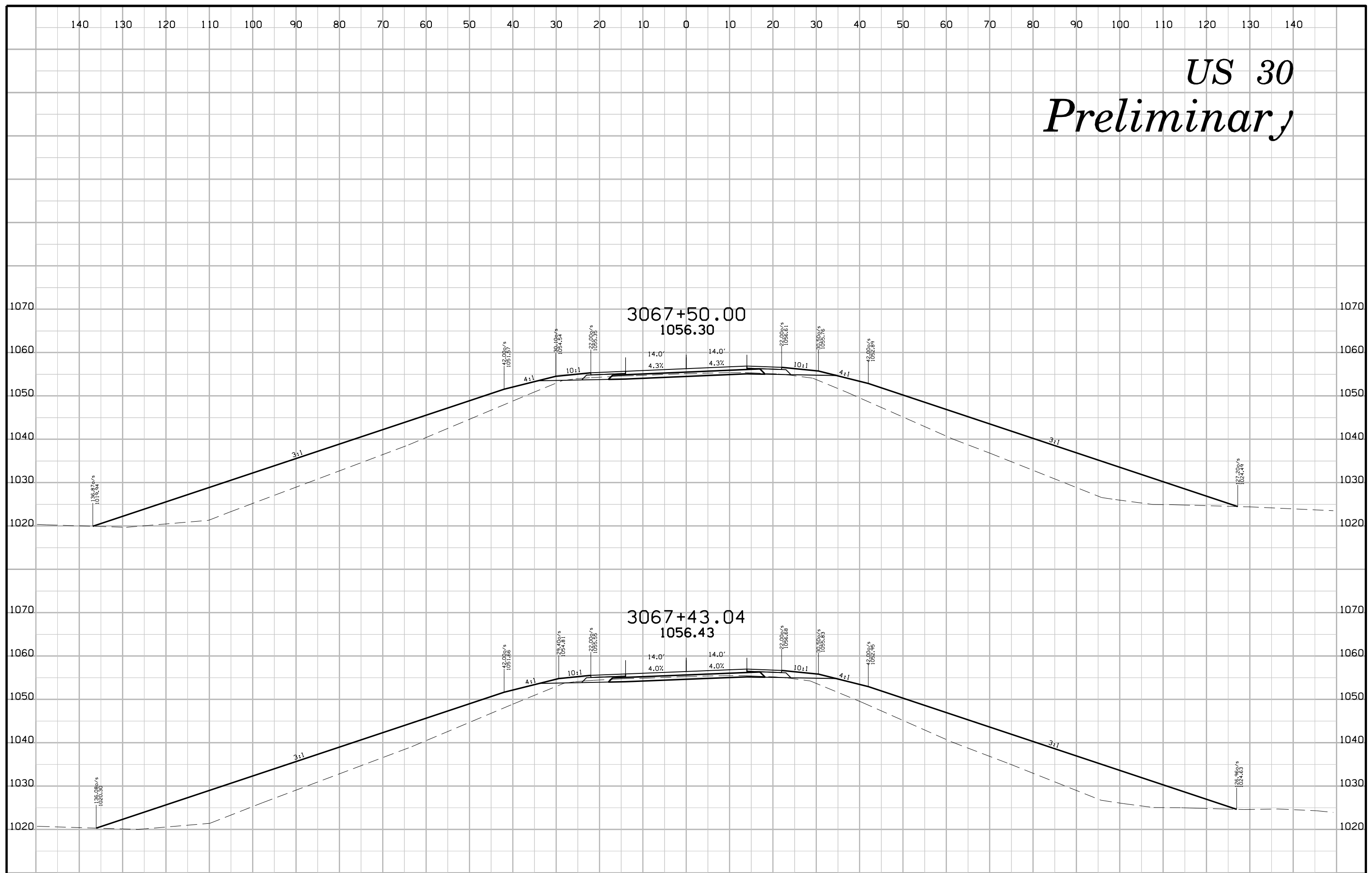


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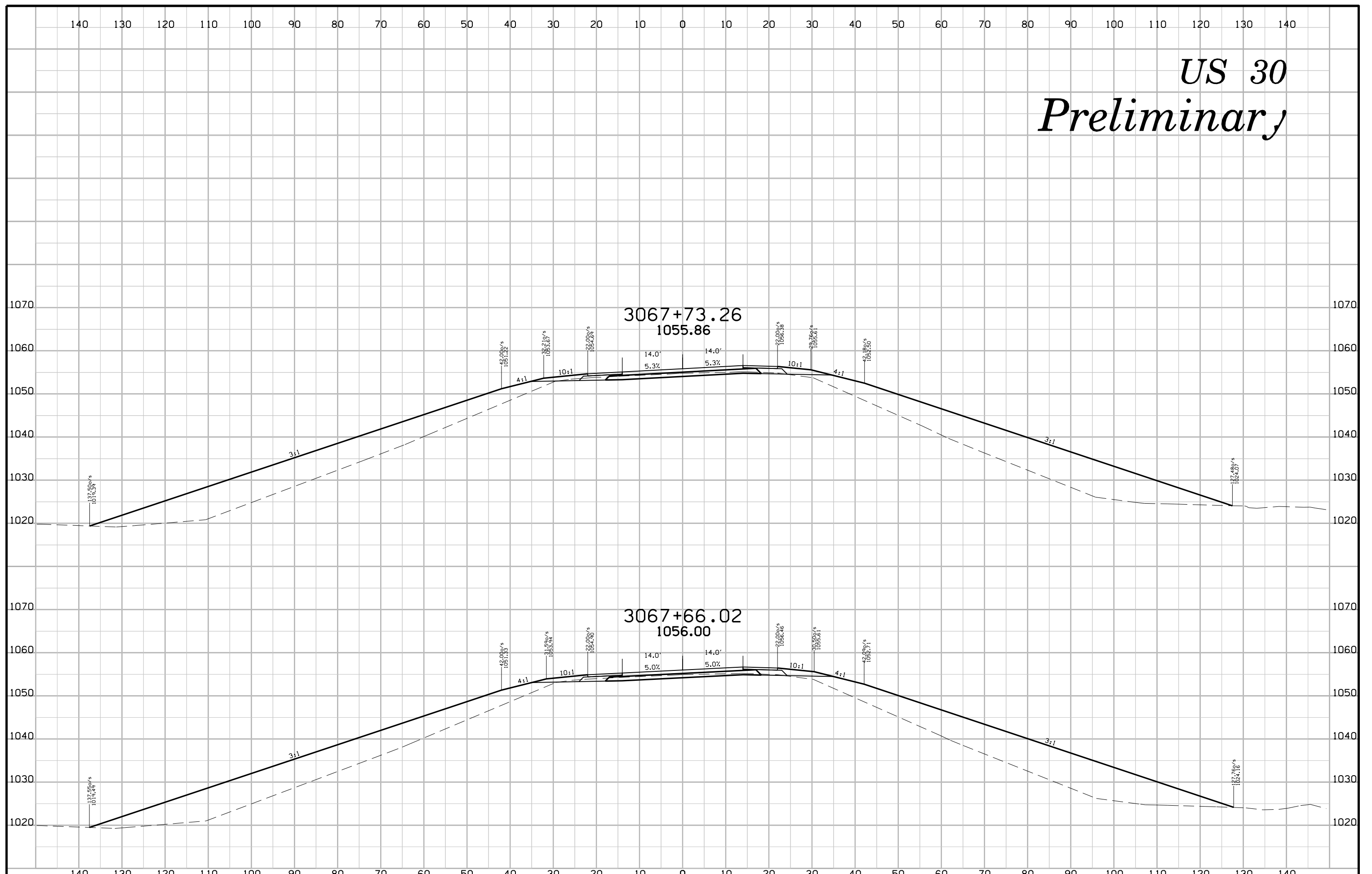


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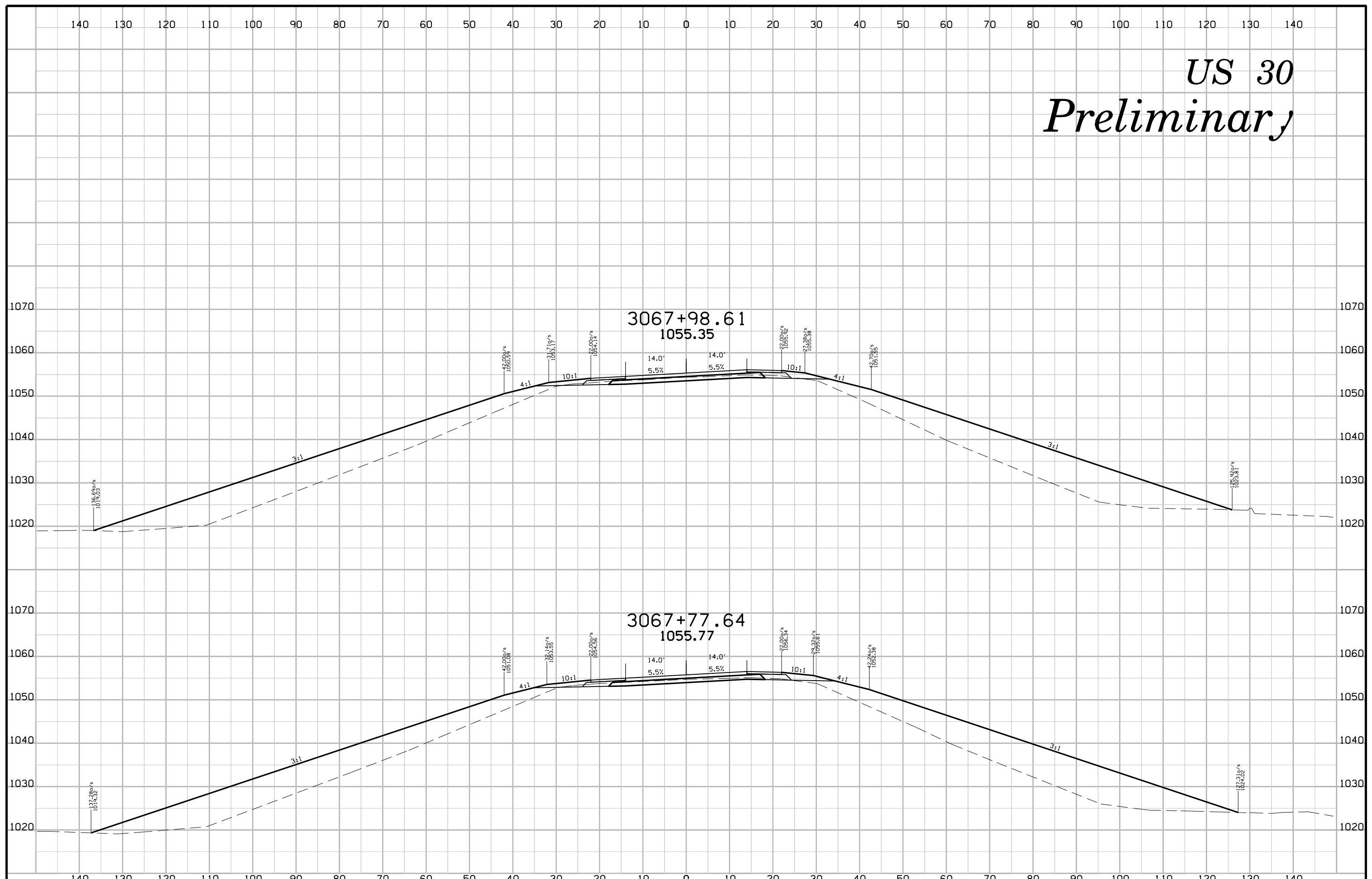
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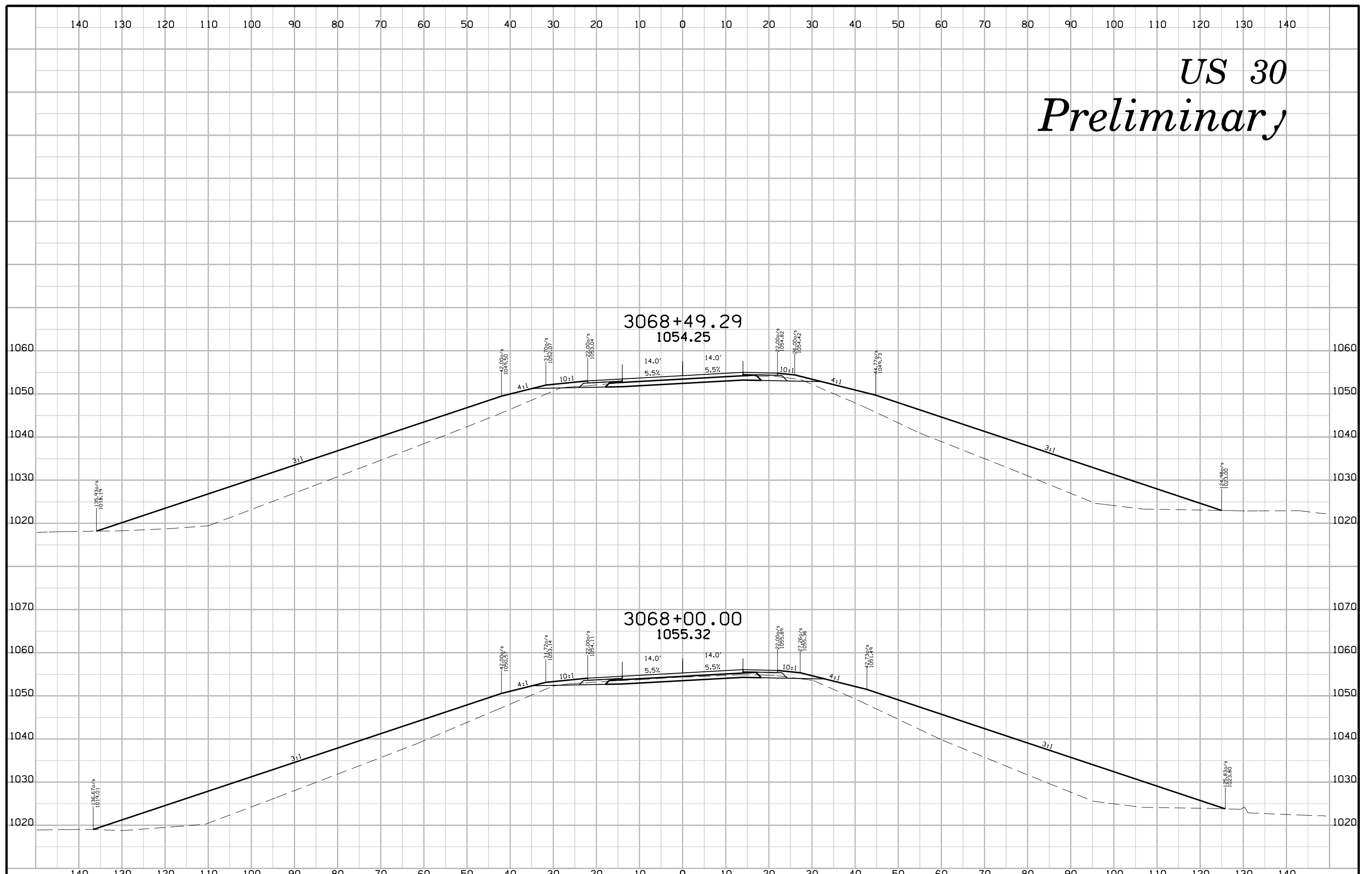
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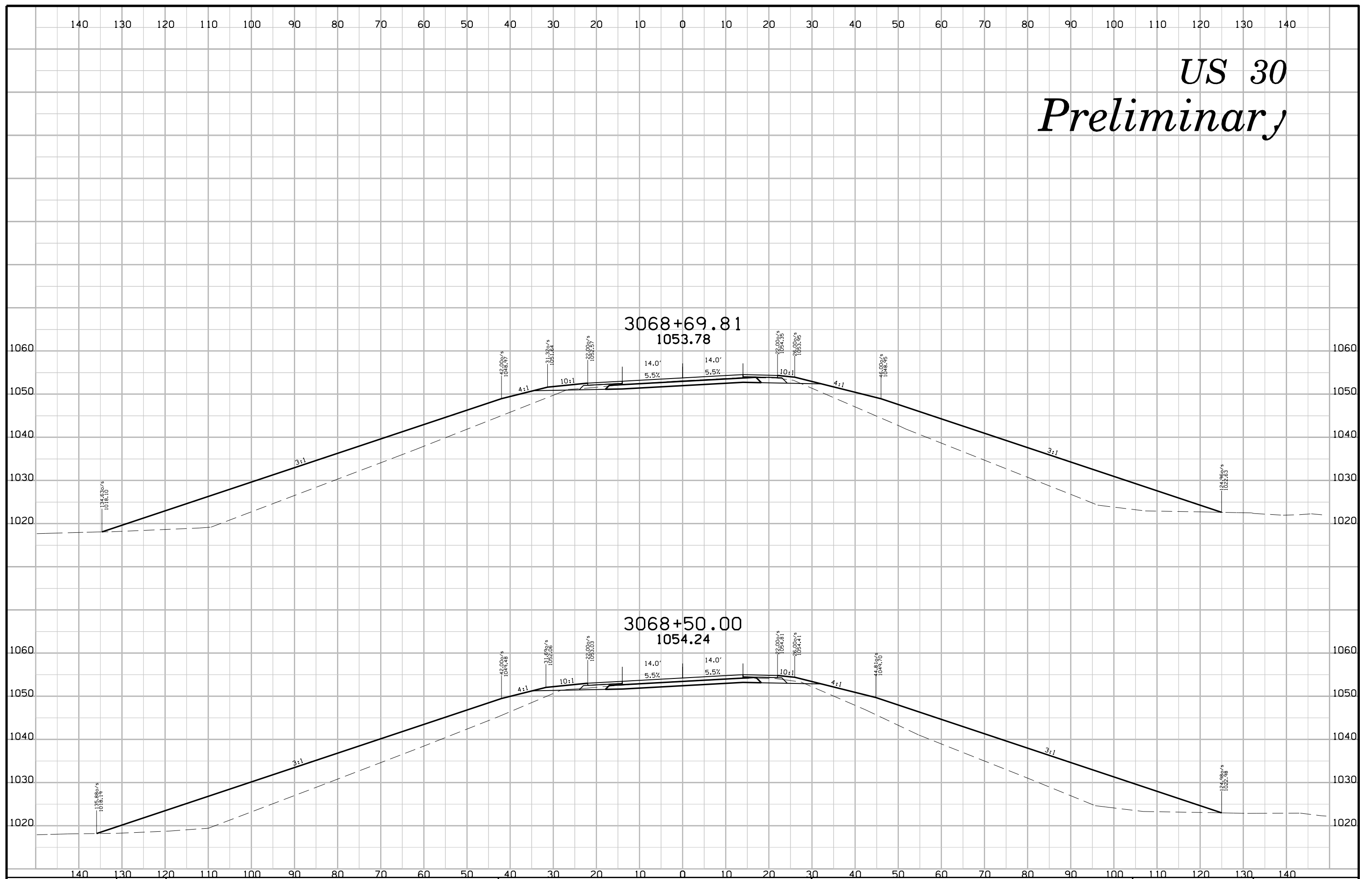
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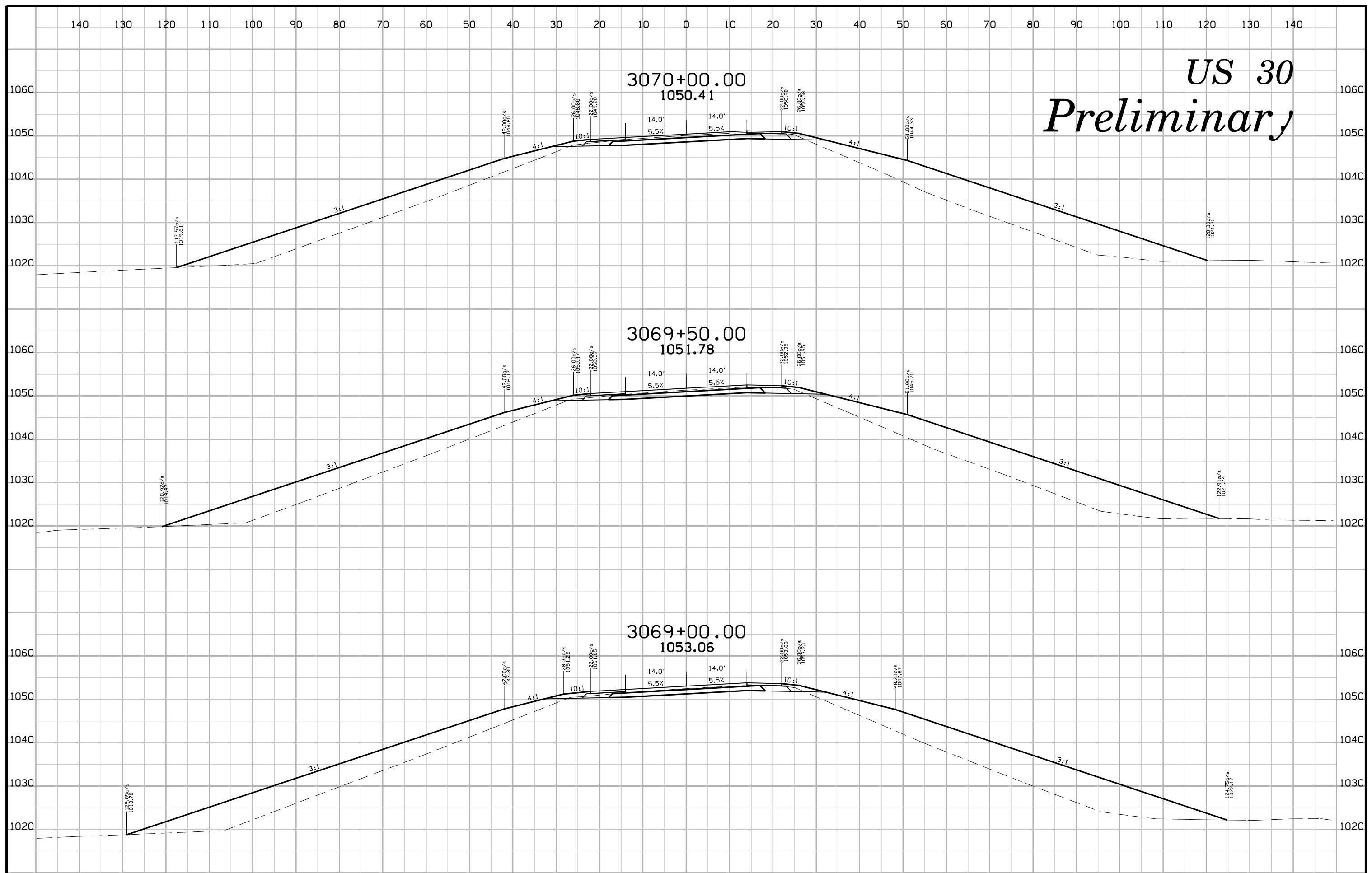
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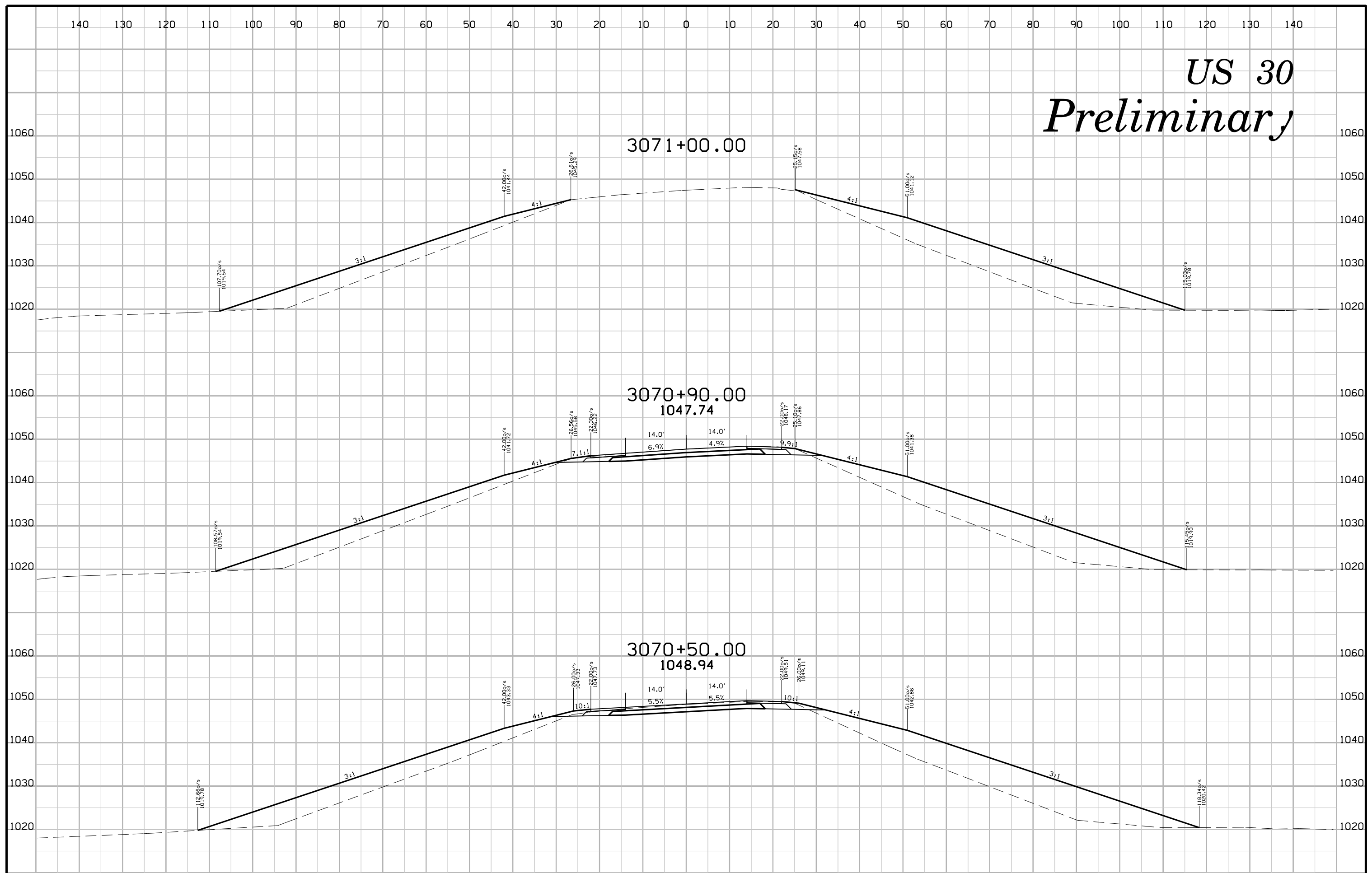
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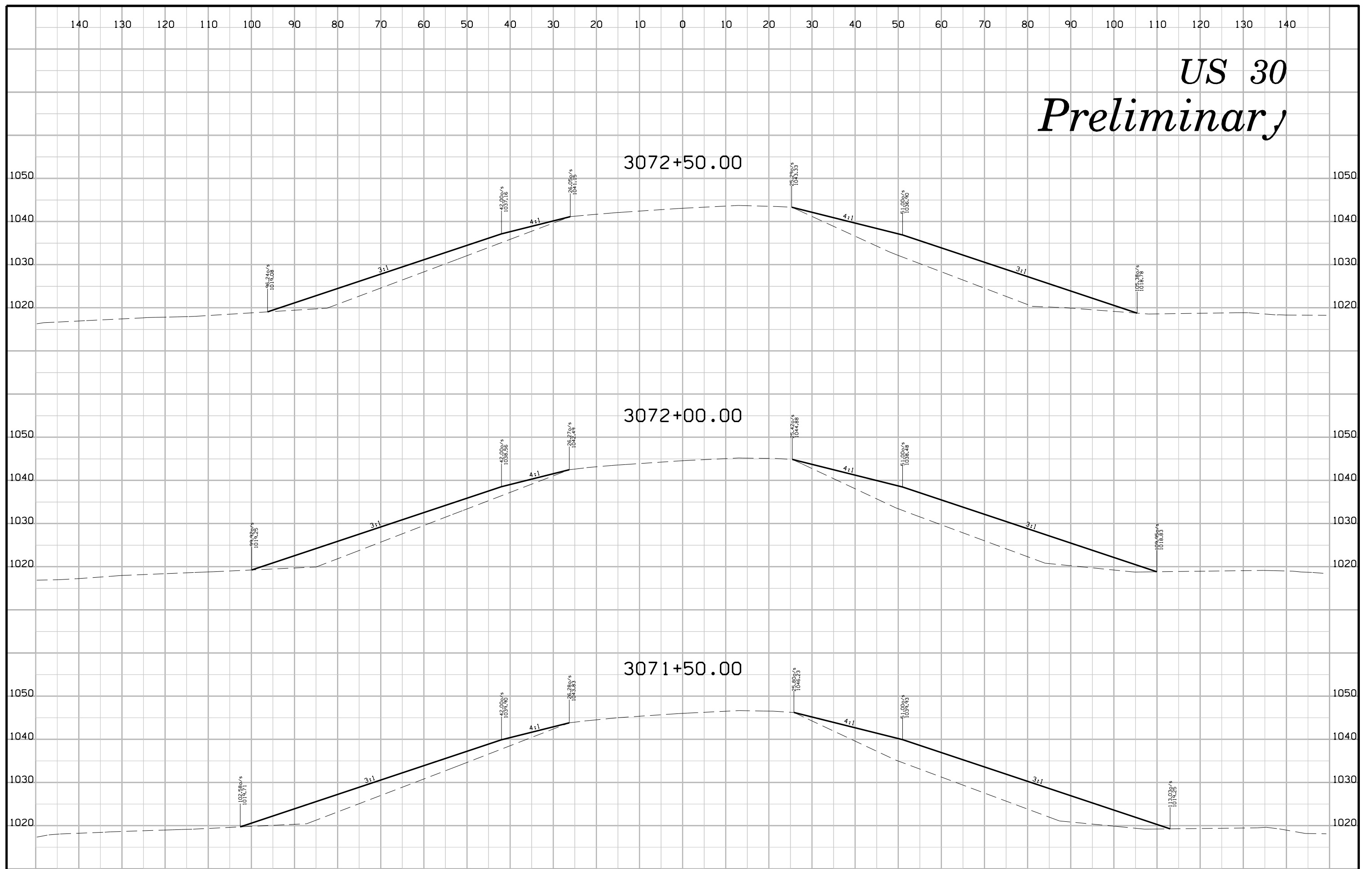
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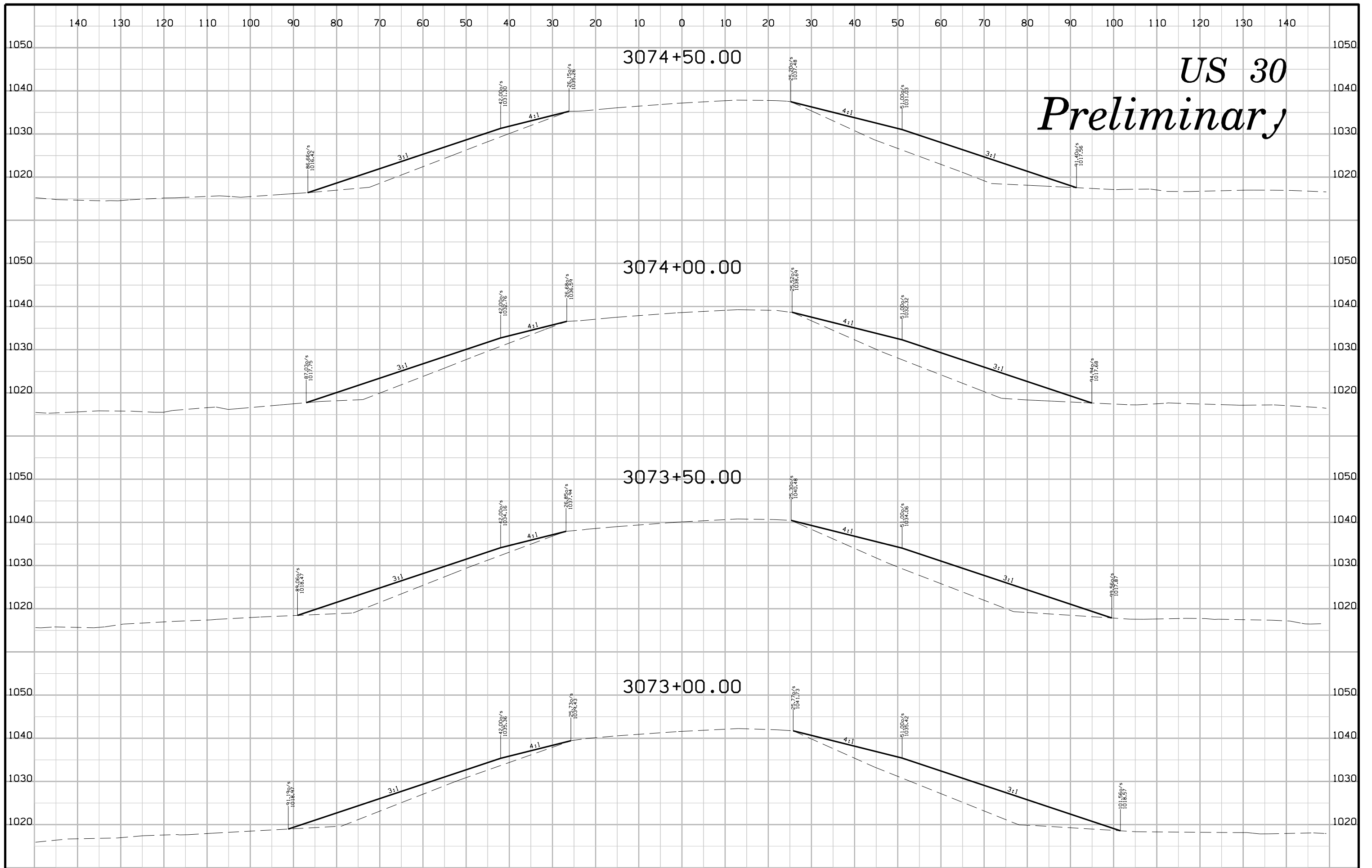
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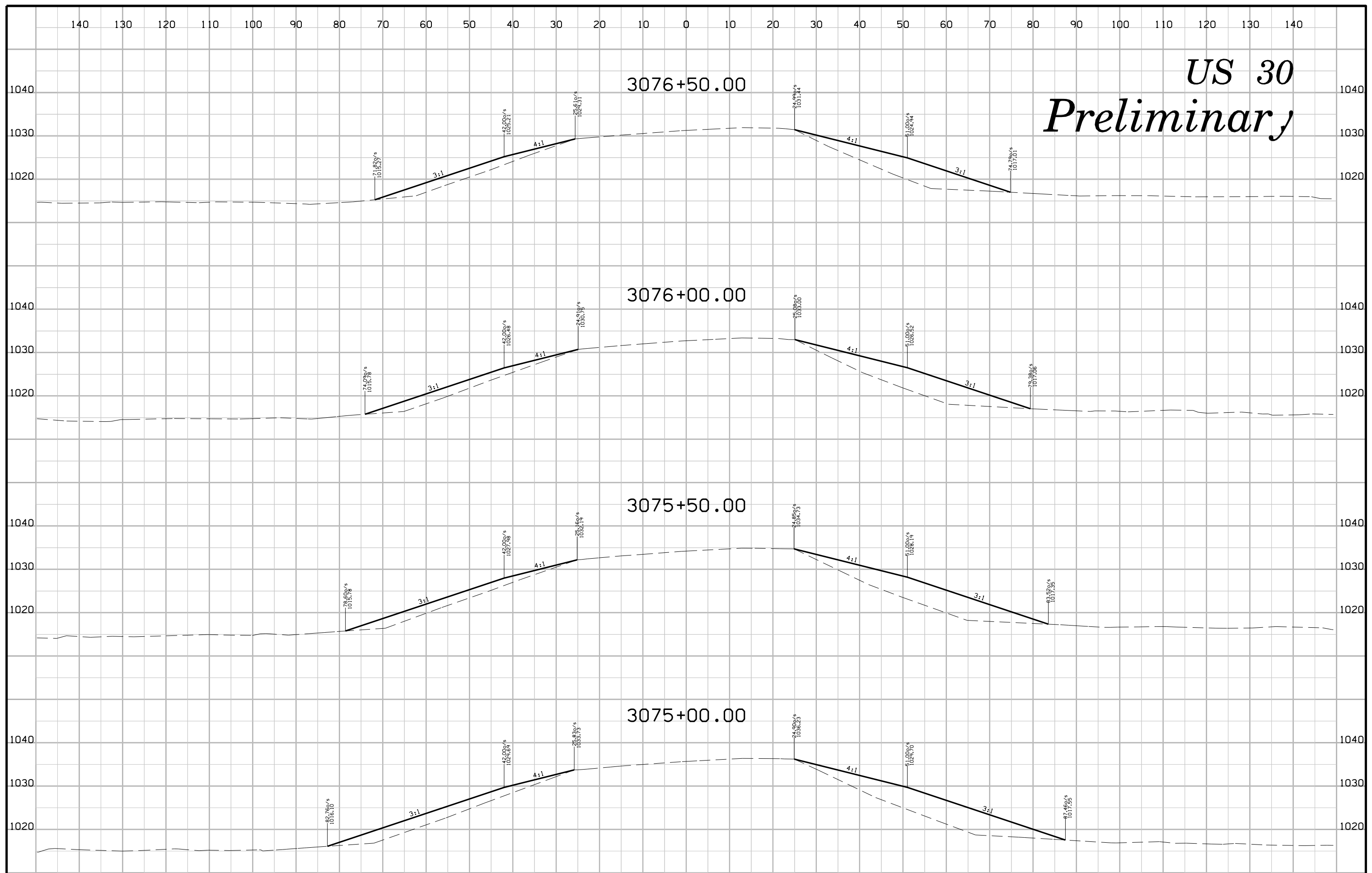
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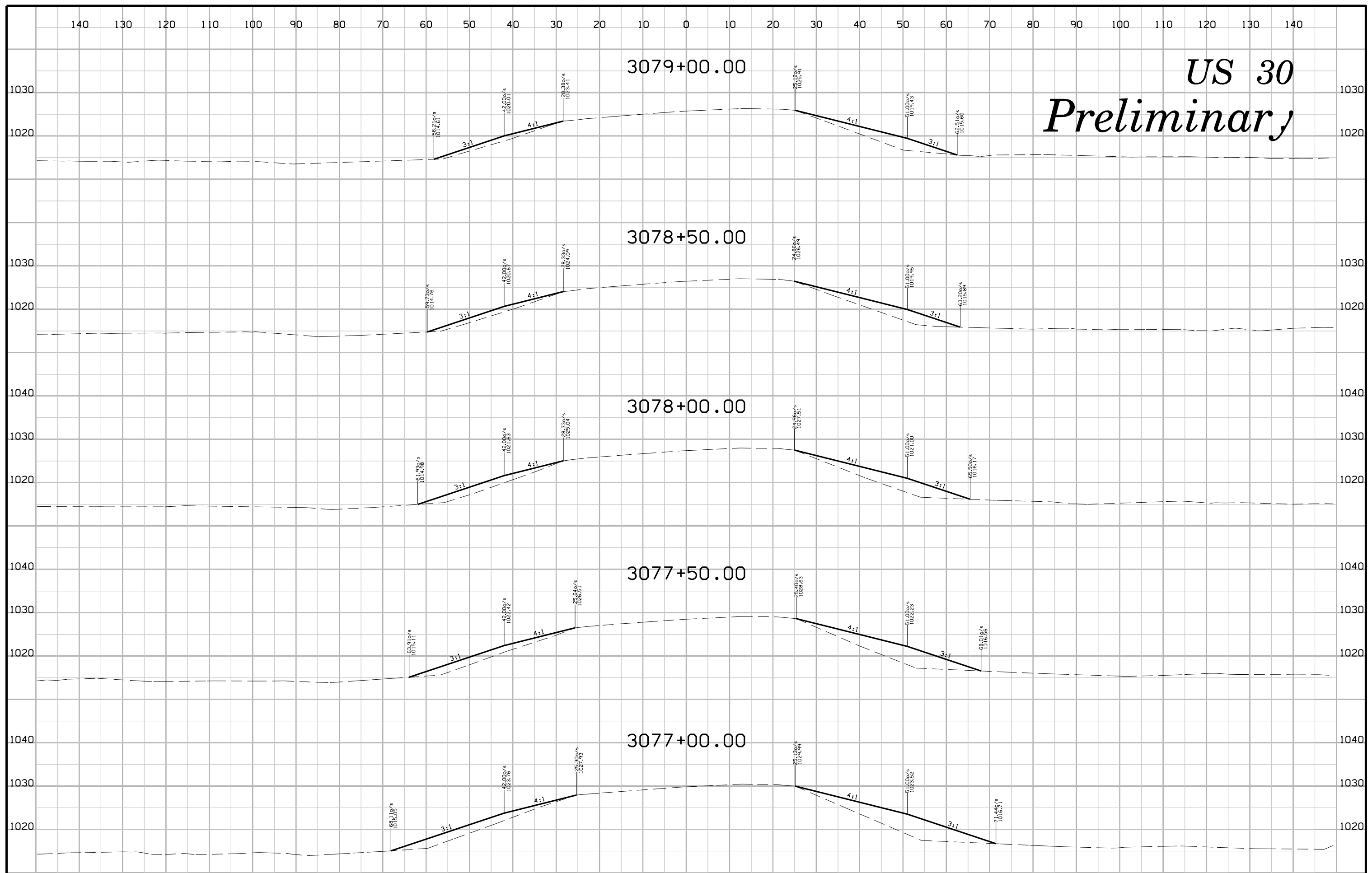
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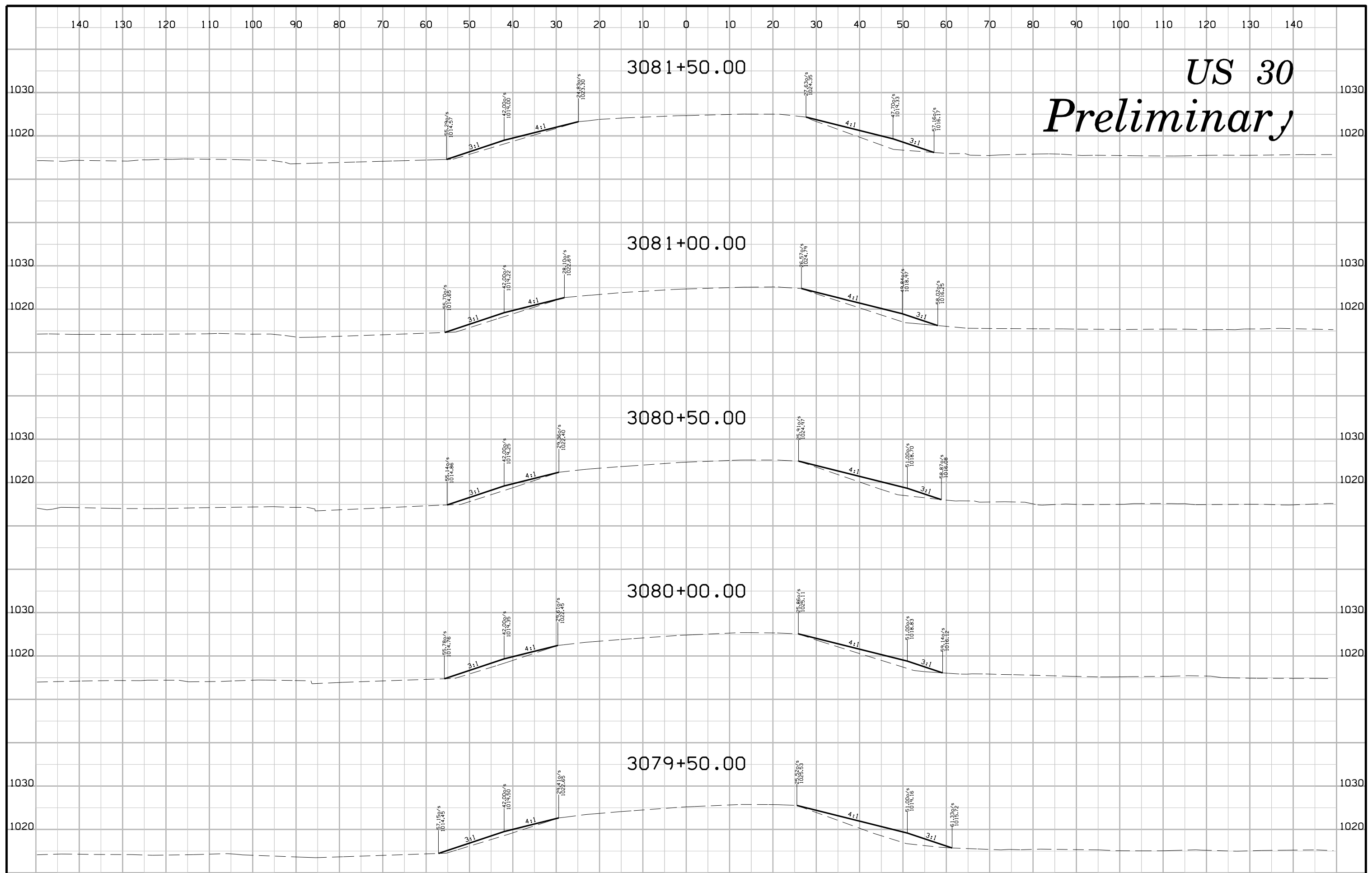
US 30 Preliminary



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