

WOODBURY CO.
GRADING
IMN-029-6(279)130-0E-97
 LETTING DATE
OCT. 16, 2018

| INDEX OF SHEETS | |
|-----------------|--|
| No. | DESCRIPTION |
| A Sheets | Title Sheets |
| A.1 | Title Sheet and Location Map |
| A.2 | Design Criteria Sheets |
| B Sheets | Typical Cross Sections and Details |
| B.1 | Typical Cross Sections and Details |
| C Sheets | C Sheets Quantities and General Information |
| C.1 | Tabulations |
| D Sheets | Mainline Plan and Profile Sheets |
| * D.1 | Plan & Profile Legend & Symbol Information Sheet |
| * D.2 | I-29 |
| E Sheets | Side Road Plan and Profile Sheets |
| * E.1 - 2 | County Road D-65 |
| G Sheets | Survey Sheets |
| G.1 - 3 | Survey and Alignment Sheets |
| H Sheets | Right-of-Way Sheets |
| H.1 - 2 | D-65 |
| J Sheets | Traffic Control and Staging Sheets |
| * J.1 | Staging, Traffic Control, & Project Coordination Notes |
| Q Sheets | Soils Sheets |
| Q.1 | Soils Legend & Symbol Information Sheet |
| Q.2 - 3 | Soils Sheets County Road D-65 |
| U Sheets | 500 Series, Mod.Stds. and Detail Sheets |
| U.1 - 2 | Grading Plans |
| W Sheets | Mainline Cross Sections |
| W.1 | Cross Sections Legend & Symbol Information Sheet |
| X Sheets | Side Road Cross Sections |
| X.1 - 25 | Side Road Cross Sections |
| | * Color Plan Sheets |



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
WOODBURY COUNTY
GRADING

County Road D-65/310th St. over I-29
 2.2 miles North of IA 141

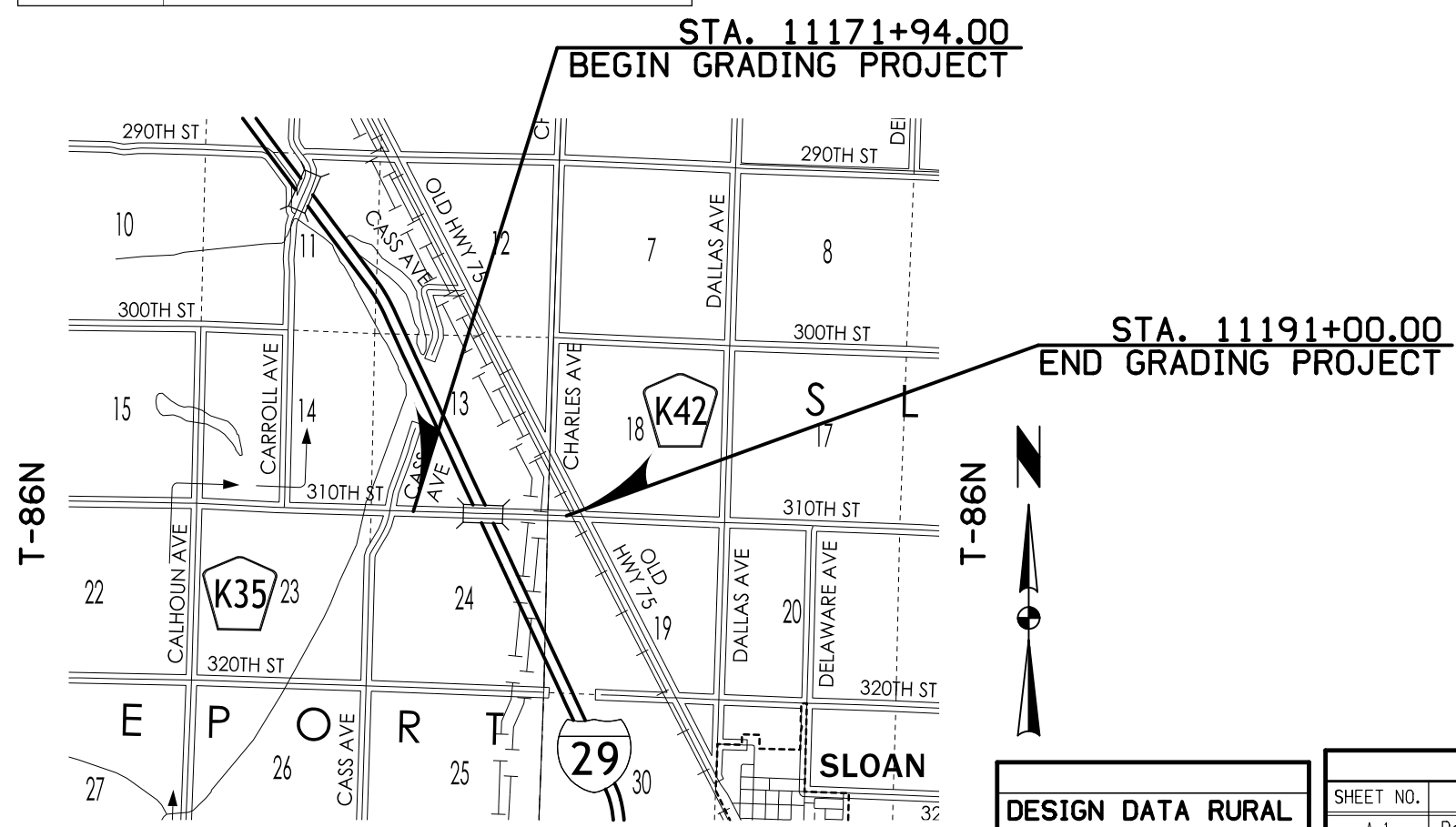
SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

REVISIONS

| TOTAL | |
|-------------------------------|-------------------------|
| 45 | |
| PROJECT IDENTIFICATION NUMBER | 16-97-029-040 |
| PROJECT NUMBER | IMN-029-6(279)130-0E-97 |
| R.O.W. PROJECT NUMBER | IMN-029-6(281)130-0E-97 |



| DESIGN DATA RURAL | | | |
|-------------------|--------------|-----|--------|
| 2016 | AADT | 90 | V.P.D. |
| 20-- | AADT | TBD | V.P.D. |
| 20-- | DHV | TBD | V.P.H. |
| | TRUCKS | TBD | % |
| Total | Design ESALs | TBD | |

| INDEX OF SEALS | | |
|----------------|-----------------|-------------------------|
| SHEET NO. | NAME | TYPE |
| A.1 | Daniel J. Smith | Primary Signature Block |
| | | |
| | | |
| | | |

ROADWAY DESIGN

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

Signature: **Daniel J. Smith, P.E.** Date: _____

Printed or Typed Name: **Daniel J. Smith, P.E.**

My license renewal date is December 31, 2018

Pages or sheets covered by this seal: A.1-A.2, B.1, C.1, D.1-D.2, E.1-E.2, G.1-G.3, H.1-H.2, J.1, Q.1-Q.3, U.1-U.2, W.1, X.1-X.25

PRELIMINARY PLANS

Subject to change by final design.

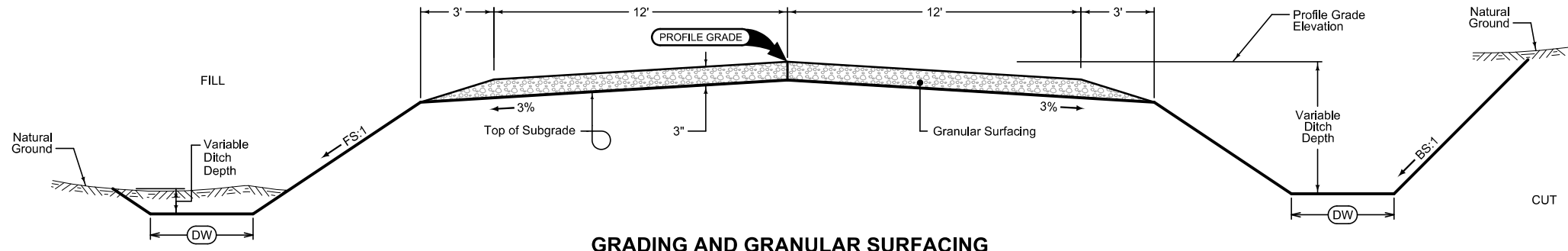
D5 PLAN - Date: Dec. 18, 2017

Design Criteria Worksheet

| | | | |
|---|---|---------------------------------------|----------------|
| Roadway | | | |
| PIN Number | 16-97-029-040 | Submittal Date | 9/15/2017 |
| Project Number | IMN-029-6(279)130-0E-97 | Revision Date | |
| District | District 3 | | |
| County | Woodbury | | |
| Route | D-65 | | |
| Location | County Road D-65/310th St. over I-29. 2.2 Miles North of IA 141 | | |
| Work Type | Bridge Raising and Grading | | |
| Segment Manager | | | |
| Designer | CH2M | | |
| Design year ADT = | 90 | | |
| Design Manual Section 1C-1 Last Updated: 05-26-17 | Secondary Roads | | |
| Design Elements | Project value | Local Systems I.M. 3.210 value | Remarks |
| Design speed (mph) | 50 | 50 | |
| Design lane width (ft.) | 12 (a) | 10 | |
| Shoulder width (ft.) | 3 (a) | 3 | |
| Bridge width - new (ft.) | NA | 24 | |
| Bridge width - existing (ft.) | 24 | 20 | |
| Maximum super elevation rate (%) | 8% | 8% | |
| Minimum radius (ft.) | 758 | 758 | |
| Stopping sight distance (ft.) | 425 | 425 | |
| Vertical curve length (ft.) | 150 (b) | 150 | |
| Minimum rate of vertical curvature (K) | Crest | 84 (c) | 84 |
| | Sag | 96 (c) | 96 |
| Minimum gradient (%) | 0.5% (b) | NA | |
| Maximum gradient (%) | 6% | 6 | |
| Foreslope | 3:1 (d) | 2:1 | |
| Backslope | 3:1 (f) | NA | |
| Traverse slopes | 8:1 (e) | NA | |
| Clearzone | 8-10 | 8-10 | See IM 3.215 |
| Notes: | | | |
| a) Based on existing roadway approach top width of 30' | | | |
| b) Per Iowa DOT Design Manual Chapter 2B-1 | | | |
| c) Per Iowa DOT Design Manual Chapter 6D-1 | | | |
| d) See Project Concept Statement | | | |
| e) Per Iowa DOT Design Manual Chapter 3F-3 | | | |
| f) Per Iowa DOT Design Manual Chapter 1C-1, Rural Two Lane: 3:1 preferred, 2.5:1 minimum acceptable | | | |
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| LOCATION | | DIMENSIONS | | |
|---------------------|-------------------------|------------|----|--------------|
| ROAD IDENTIFICATION | STATION TO STATION | FS | BS | (DW) Feet |
| D-65 | 11171+94.00 11191+00.00 | 3 | 3 | VARI |
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G_2_GradeGran
MODIFIED



GRADING AND GRANULAR SURFACING

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.

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of unclassified pipe calculated is based on using Corrugated Metal Pipe.

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

*Predetermined for access point not constructed with this project.

| Location | | Type | Length of Opening ① | | | Pipe Culvert ③ | | | Aprons | | Driveway Surface Area | | Driveway Surfacing Material | Remarks | | | | |
|--------------|------|---|---------------------|------------------|-----------------|----------------|----|------|--------|----------|-----------------------|---------|-----------------------------|---------|-----|-----|------|------|
| Station | Side | A, B, C, Safety Ramp, or Predetermined* | Case | 1½" Dropped Curb | 3" Dropped Curb | W | PR | SR | H | Size | Pipe Length | Lt. | Rt. | | No. | HMA | PCC | TON |
| | | | 1 or 2 | LF | LF | FT | FT | FT | FT | IN | LF | LF | LF | | LF | SY | SY | |
| 11173+23.00 | LT | C | | | | 16.0 | | 15.0 | 1.3 | 24 | 25.0 | 1072.27 | 1072.25 | | 2 | | | 14.9 |
| 11187+26.00 | LT | C | | | | 16.0 | | 15.0 | 2.4 | 36 | 32.0 | 1071.93 | 1071.88 | 2 | | | 30.2 | |
| 11189+90.00 | LT | C | | | | 16.0 | | 15.0 | 1.6 | 18 | 26.0 | 1071.65 | 1071.61 | 2 | | | 18.2 | |
| 11189+98.00 | RT | C | | | | 16.0 | | 15.0 | 1.0 | 24 | 23.0 | 1072.29 | 1072.22 | 2 | | | 18.2 | |
| Total | | | | | | | | | | 18" Uncl | 26.0 | | | 2 | | | 81.6 | |
| | | | | | | | | | | 24" Uncl | 48.0 | | | 4 | | | | |
| | | | | | | | | | | 36" Uncl | 32.0 | | | 2 | | | | |

SURVEY SYMBOLS

- CP Control Point
- BM Bench Mark
- EG Edge of Gravel Road
- GR Ground Shot
- BL Topo Breakline
- FWD Wood Fence
- D Centerline Draw or Stream (Down)
- PIP Pipe Culvert
- TDC Tree Deciduous
- TLNR Tree Line Right
- BRG Bridge
- GDC Guard Rail Cable
- EP Edge of Paved Roads (ML or SR)
- GDL Guard Rail Steel
- SIGN
- GU Gutter In Front of Curb
- CU Back of Curb
- BCL Bridge Centerline
- BD Bridge Deck
- SH Paved Shoulder
- C Centerline BL of Road (ML or SR)
- TLNL Tree Line Left
- FW Wire Fence
- EB Electrical Box
- Default_Point Default Point Feature
- GV Gas Valve
- BBB Bottom of Bridge Beam
- TOP Top of Bridge Pier
- BLS Bridge Low Steel
- SBR Size of Bridge
- Default_Chain Default Chain Feature

UTILITY LEGEND

- E(B) (Underground) Woodbury County Rural Electric Company
Contact: Nate Bauer
Phone: 712-873-3125
- G(B) Magellan Midstream Partners
Contact: Tim Kassen
Phone: 918-574-7351

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

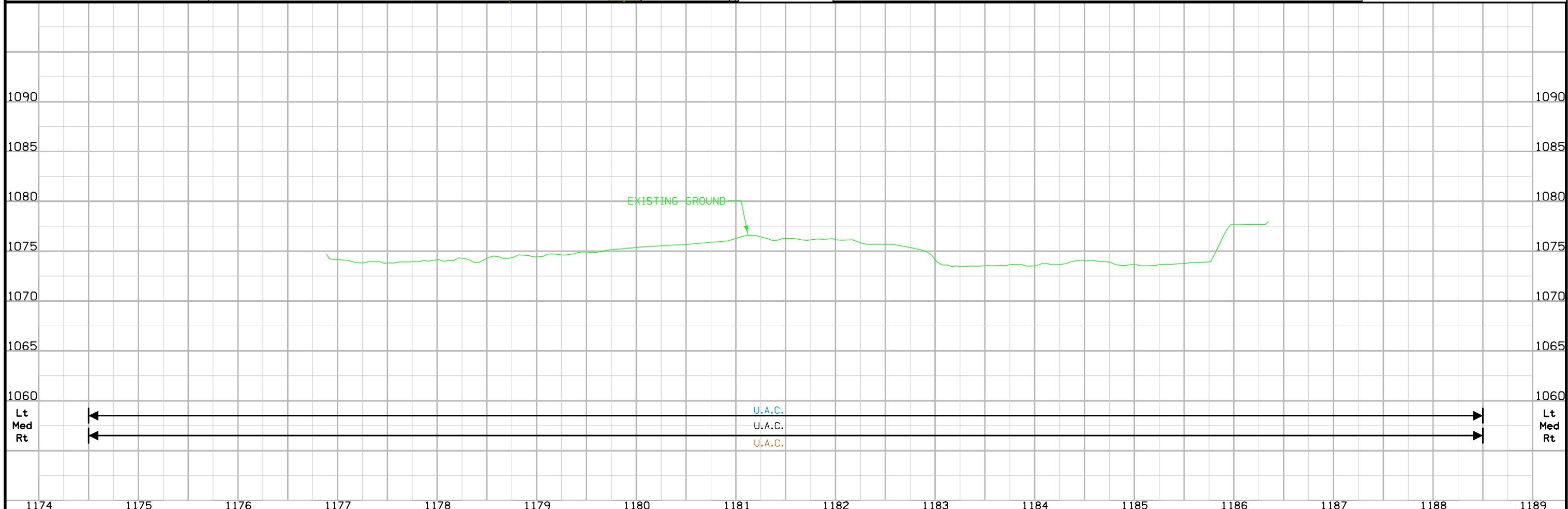
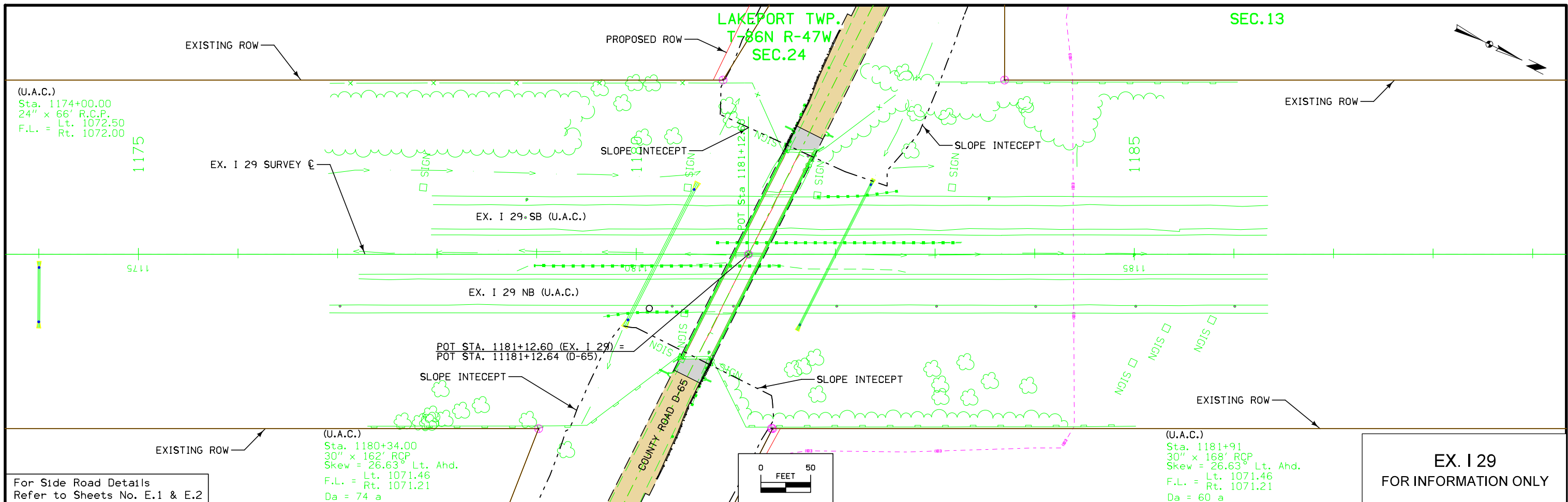
- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

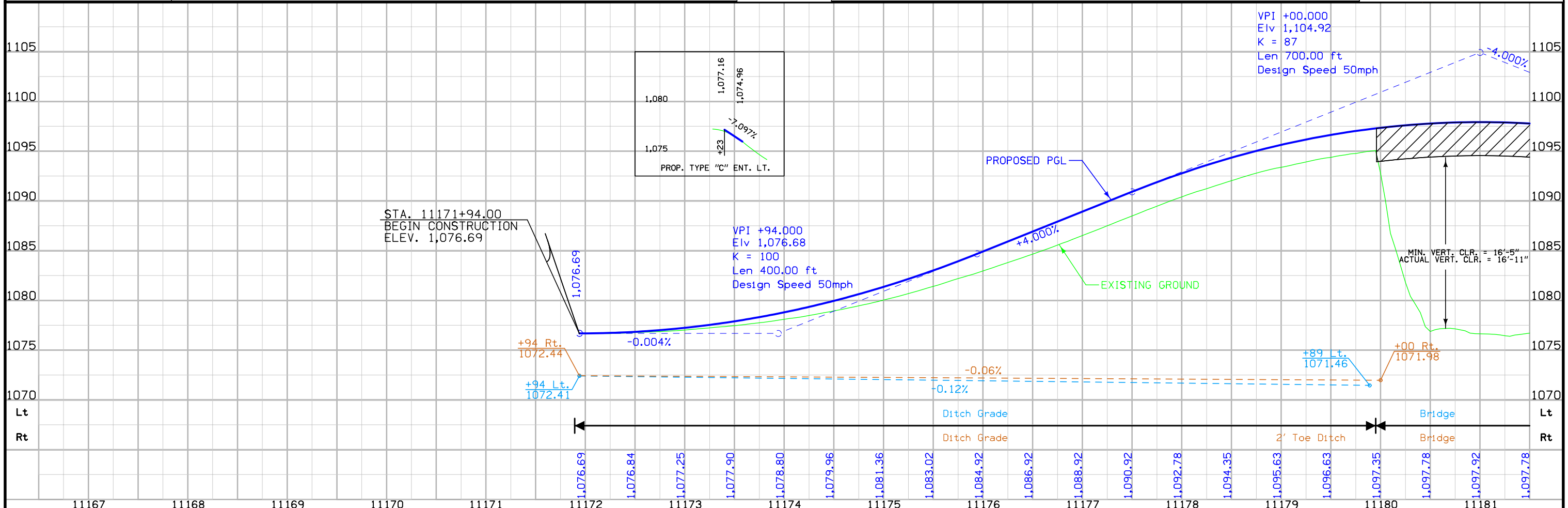
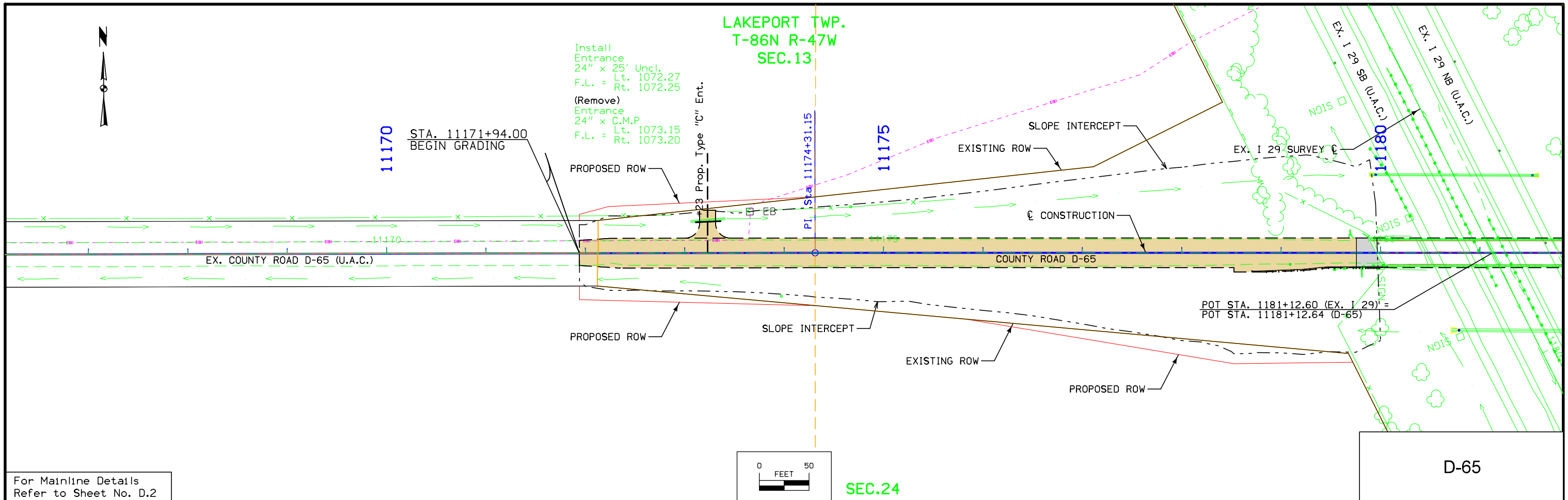
RIGHT-OF-WAY LEGEND

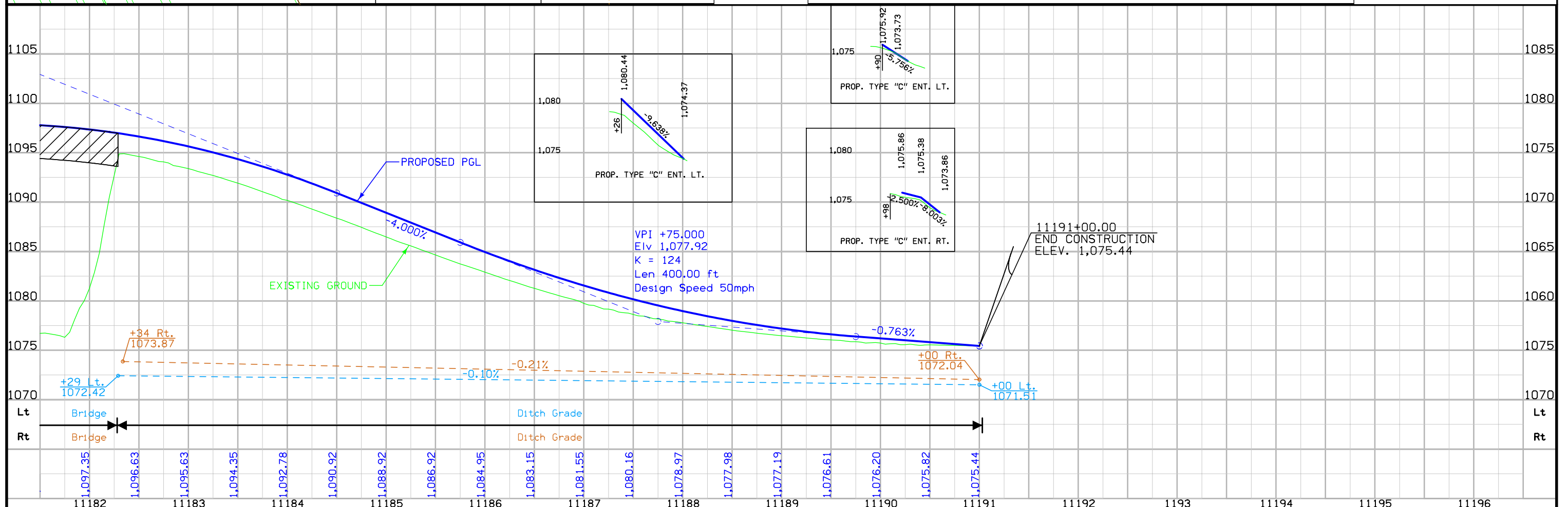
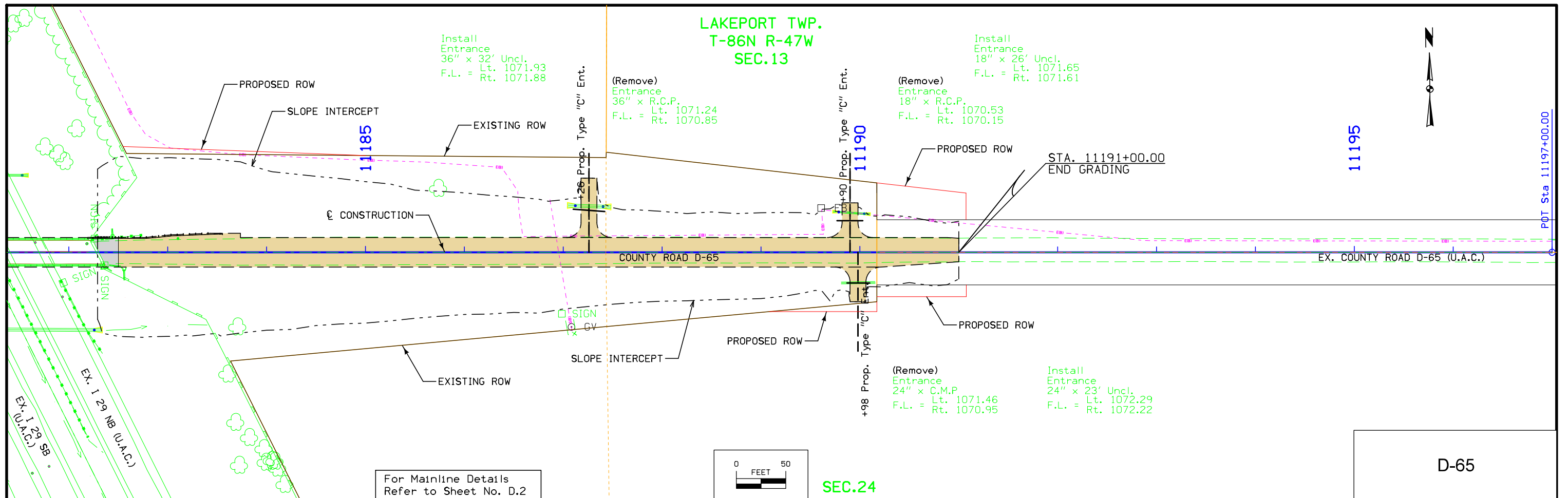
- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- Access Control
- Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D & E)







Survey Information

WOODBURY COUNTY
IMN-029-6(280)132-0E-97
290TH STREET AND CARROLL AVENUE K-35

General Information

Measurement units for this survey are US survey feet. This survey is for proposed Bridge reconstruction and reconstruction of County Road 310th Street over I-29. Project datum and control information is provided by Shive-Hattery, Inc..

Vertical Control

BENCH MARK SE COR BRIDGE WING WALL IHC CAP FROM IOWA DOT PLANS. VERTICAL DATUM: NAVD88

Horizontal Control

HORIZONTAL DATUM: NAD83(2011) EPOCH 2013.00
1a. Regional Coordinate System Zone 4

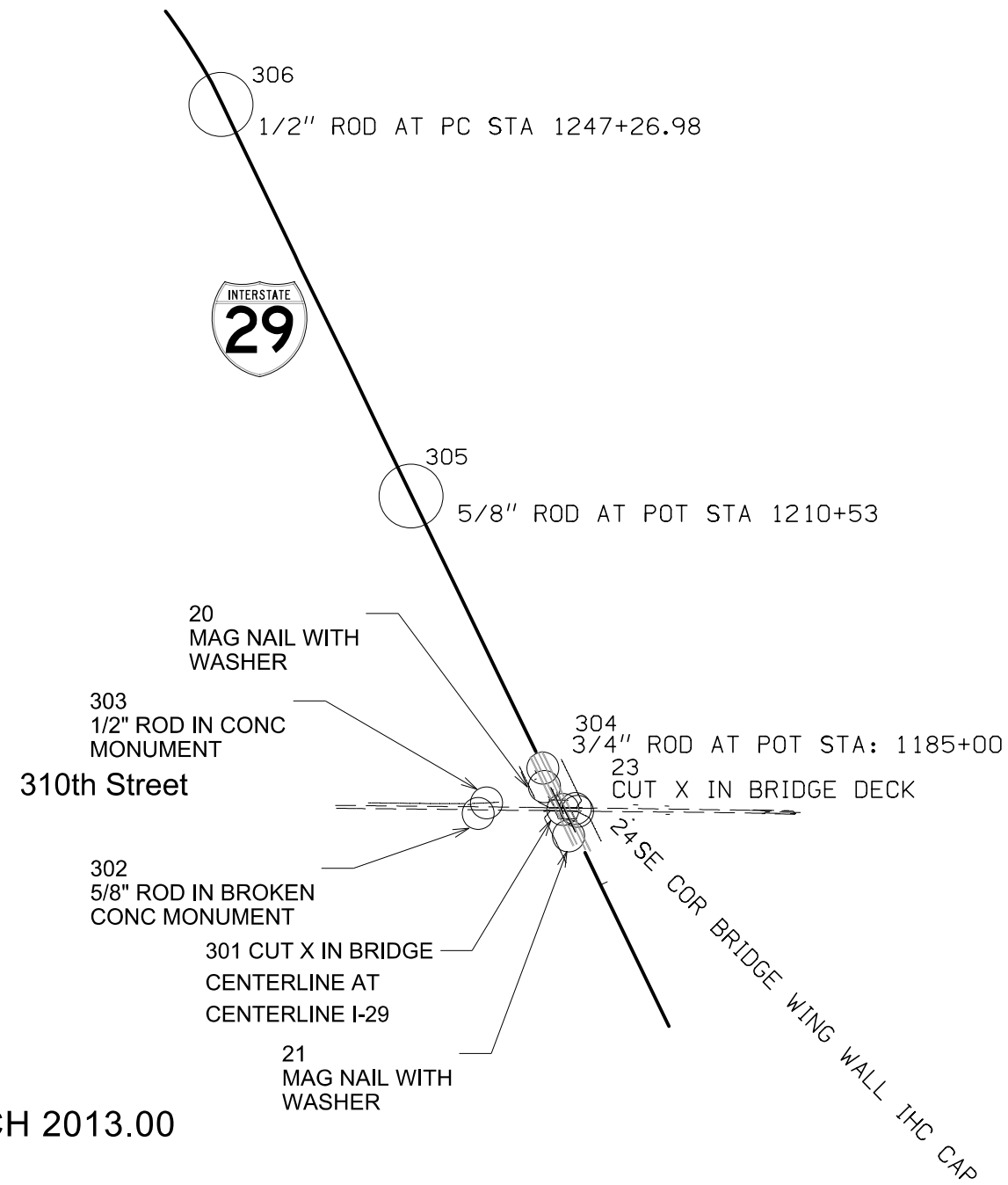
| Point Name | Northing | Easting | Elevation | Description |
|------------|--------------|---------------|-----------|---|
| 20 | 8503033.3205 | 14113991.0755 | 1077.0160 | CP20 MAG NAIL WITH WASHER |
| 21 | 8502616.1902 | 14114194.7504 | 1076.7860 | CP21 MAG NAIL WITH WASHER |
| 23 | 8502847.6320 | 14114252.8689 | 1095.0770 | CP23 CUT X IN BRIDGE DECK |
| 24 | 8502824.1546 | 14114270.0427 | 1095.5000 | BM24 SE COR BRIDGE WING WALL IHC CAP |
| 301 | 8502840.3174 | 14114147.3783 | 1095.9050 | CP301 CUT X IN BRIDGE CENTERLINE AT CENTERLINE I-29 |
| 302 | 8502806.0054 | 14113431.2650 | 1074.8460 | CP302 5/8" ROD IN BROKEN CONC MONUMENT |
| 304 | 8503189.0567 | 14113978.3282 | 1072.6140 | CP304 3/4" ROD AT POT STA: 1185+00 |
| 305 | 8505485.9126 | 14112864.1354 | 1074.5840 | CP305 5/8" ROD AT POT STA 1210+53 |
| 306 | 8508791.1188 | 14111260.1435 | 1074.6090 | CP306 1/2" ROD AT PC STA 1247+26.98 |

Alignment Information

No horizontal alignment was created for this project.

CONTROL POINT VICINITY MAP

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



HORIZ. DATUM: NAD83(2011) EPOCH 2013.00

VERT. DATUM: NAVD88

1a. Regional Coordinate System Zone 4

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

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2013.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 4

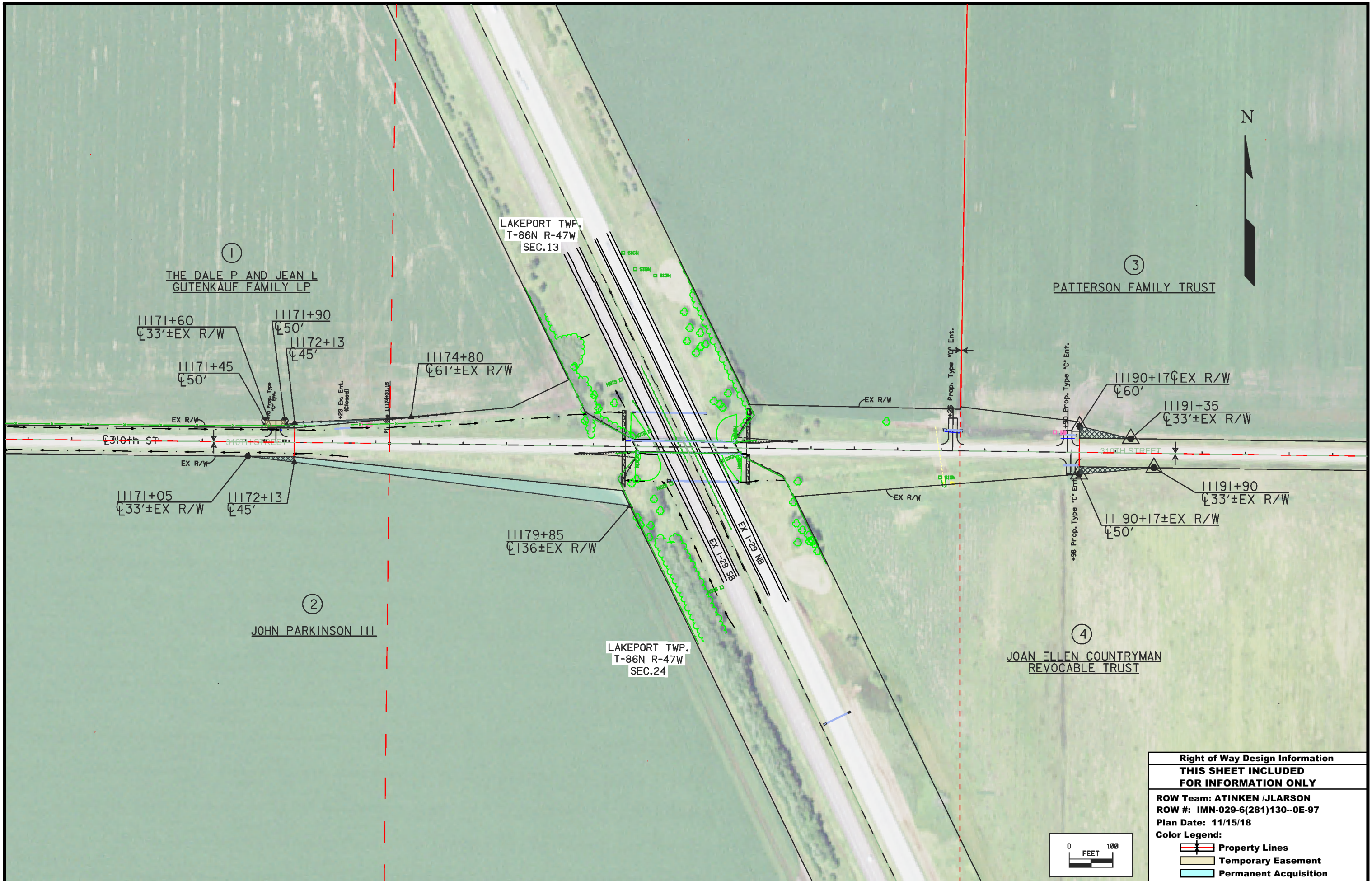
| Point Name | Northing | Easting | Elevation | Description |
|------------|--------------|---------------|-----------|---|
| 20 | 8503033.3205 | 14113991.0755 | 1077.0160 | CP20 MAG NAIL WITH WASHER |
| 21 | 8502616.1902 | 14114194.7504 | 1076.7860 | CP21 MAG NAIL WITH WASHER |
| 22 | 8494851.6364 | 14114158.9507 | 1095.0000 | CP22 CUT X IN BRIDGE DECK |
| 23 | 8502847.6320 | 14114252.8689 | 1095.0770 | CP23 CUT X IN BRIDGE DECK |
| 24 | 8502824.1546 | 14114270.0427 | 1095.5000 | BM24 SE COR BRIDGE WING WALL IHC CAP |
| 301 | 8502840.3174 | 14114147.3783 | 1095.9050 | CP301 CUT X IN BRIDGE CENTERLINE AT CENTERLINE I-29 |
| 302 | 8502806.0054 | 14113431.2650 | 1074.8460 | CP302 5/8" ROD IN BROKEN CONC MONUMENT |
| 304 | 8503189.0567 | 14113978.3282 | 1072.6140 | CP304 3/4" ROD AT POT STA: 1185+00 |
| 305 | 8505485.9126 | 14112864.1354 | 1074.5840 | CP305 5/8" ROD AT POT STA 1210+53 |
| 306 | 8508791.1188 | 14111260.1435 | 1074.6090 | CP306 1/2" ROD AT PC STA 1247+26.98 |




ALIGNMENT COORDINATES

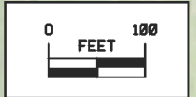
101-16
10-20-09

| 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) |
| SRD65 | D-65 | | | | | | | | | | | | | | | |
| SRD351 | | 11165+00.00 | 8,502,859.4411 | 14,112,534.7351 | | | | | | | | | | | | |
| SRD353 | | 11174+31.15 | 8,502,849.2610 | 14,113,465.8340 | | | | | | | | | | | | |
| SRD354 | | 11197+00.00 | 8,502,819.8193 | 14,115,734.4892 | | | | | | | | | | | | |
| ML029 | EX. I-29 | | | | | | | | | | | | | | | |
| 1009 | | 1123+01.60 | 8,497,612.2550 | 14,116,683.7990 | | | | | | | | | | | | |
| JS200 | | 1181+12.60 | 8,502,840.4177 | 14,114,147.2627 | | | | | | | | | | | | |
| 1008 | | 1247+26.66 | 8,508,791.0960 | 14,111,260.1850 | | | | | | | | | | | | |

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.



| | |
|---|-----------------------|
| Right of Way Design Information | |
| THIS SHEET INCLUDED FOR INFORMATION ONLY | |
| ROW Team: ATINKEN /JLARSON | |
| ROW #: IMN-029-6(281)130--0E-97 | |
| Plan Date: 11/15/18 | |
| Color Legend: | |
|  | Property Lines |
|  | Temporary Easement |
|  | Permanent Acquisition |



LAKEPORT TWP.
T-86N R-47W
SEC.13



①
GUTENKAUF,
JEAN & DALE

11170

STA. 11171+94.00
BEGIN GRADING

EX. COUNTY ROAD D-65 (U.A.C.)

11171+94
℄ 39'
11171+94
℄ 33'

11172+23
℄ 47'

11171+94
℄ 33'
11171+94
℄ 47'

11174+31
℄ 53'

11175

11175+83
℄ 67'

Sta. 11174+31.15
PI

EXISTING ROW

COUNTY ROAD D-65

℄ CONSTRUCTION

PROPOSED ROW

POT STA. 1181+12.60 (EX. I 29)
POT STA. 11181+12.64 (D-65)

11178+52
℄ 112'

11179+72
℄ 110'

②
PARKINSON, JOHN

SEC.24

EX. I 29 SURVEY ℄

□ SIGN

□ SIGN

□ SIGN

EX. I 29 SB (U.A.C.)

EX. I 29 NB (U.A.C.)

NOIS □

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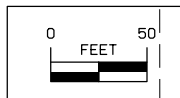
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For Sideroad Details
Refer to Sheet No. E.1



This Sheet
For Information Only

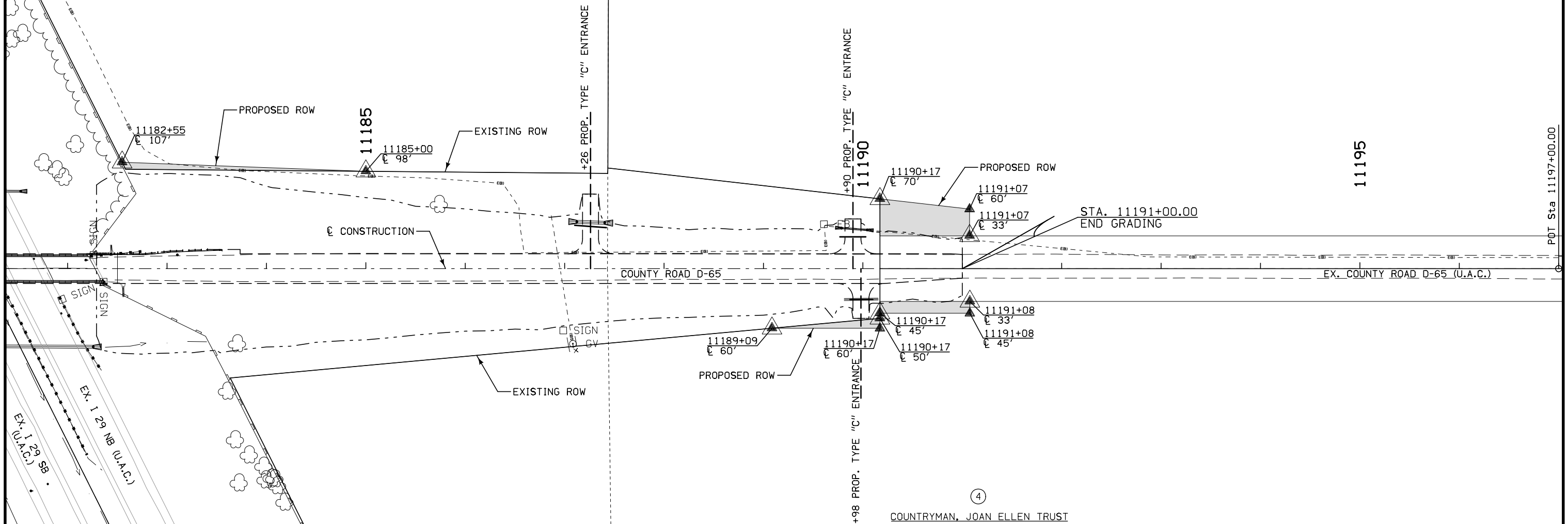
| Right of Way Design Information | |
|---------------------------------|-----------------------|
| ROW Team: Iowa DOT/CH2MHILL | |
| ROW #: IMN-029-6(281)130-OE-97 | |
| Plan Date: 10/16/2018 | |
| Color Legend: | |
| | Property Lines |
| | Temporary Easement |
| | Permanent Acquisition |

D-65

LAKEPORT TWP.
T-86N R-47W
SEC.13



③
PATTERSON FAMILY TRUST



SEC.24

11195

POT Sta 11197+00.00

STA. 11191+00.00
END GRADING

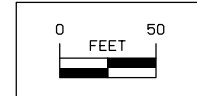
COUNTY ROAD D-65

EX. COUNTY ROAD D-65 (U.A.C.)

EX. I 29 SB
(U.A.C.)

EX. I 29 NB
(U.A.C.)

For Sideroad Details
Refer to Sheet No. E.2



This Sheet
For Information Only

| Right of Way Design Information | |
|---------------------------------|-----------------------|
| ROW Team: Iowa DOT/CH2MHILL | |
| ROW #: IMN-029-6(281)130-OE-97 | |
| Plan Date: 10/16/2018 | |
| Color Legend: | |
| | Property Lines |
| | Temporary Easement |
| | Permanent Acquisition |

D-65

511 TRAVEL RESTRICTIONS

| Route | Direction | County | Location Description | Feature Crossed | Object Type | Maint. Bridge No., Structure ID, or FHWA No. | Type of Restriction | Existing Measurement | Construction Measurement | Construction Measurement as Signed | Projected As Built Measurement | Remarks |
|-------|-----------|----------|---|-----------------|-------------|--|------------------------|-------------------------|-----------------------------|--|--------------------------------------|---------|
| D-65 | Both | Woodbury | D-65/310th St. Closed 2.2 miles north of IA 141 | I-29 | Bridge | 9729.80029 | | | | | | |

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1. Woodbury County Road D-65/310th Street will be closed from just east of Cass Avenue to just west of County Road K-45/Old Highway 75 during construction. Woodbury County will provide an off-site detour route for County Road D-65/310th Street.
2. Access to adjacent properties via an existing entrance located within the reconstruction limits of County Road D-65/310th Street shall be maintained at all times.
3. Traffic is to be maintained along I-29 northbound and southbound at all times. The inside northbound and southbound I-29 shoulder may be closed as needed to provide temporary barrier protection of the workzone within the existing I-29 median.
4. Traffic control shall be in accordance with Iowa DOT Standard Road Plans including TC-1, TC-202, TC-252, and TC-402. For additional traffic control information, refer to Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD) and the current Iowa DOT Standard Specifications.

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 |
|-------------------------|----------------|
| IMN-029-6(280)132-0E-97 | Bridge Raising |

108-26A
08-01-08

STAGING NOTES

PROPOSED SEQUENCE OF CONSTRUCTION

Stage 1

- Close County Road D-65/310th Street from just east of Cass Avenue to just west of County Road K-45/Old Highway 75.
- Remove existing I-29 overpass paved approach slabs and construct bridge repair and raising work.
- Construct approach roadway grading east and west of the I-29 crossing.

Stage 2

- Open County Road D-65/310th Street I-29 overpass to traffic.

SURVEY SYMBOLS

- CP Control Point
- BM Bench Mark
- EG Edge of Gravel Road
- GR Ground Shot
- BL Topo Breakline
- FWD Wood Fence
- D Centerline Draw or Stream (Down)
- PIP Pipe Culvert
- TDC Tree Deciduous
- TLNR Tree Line Right
- BRG Bridge
- GDC Guard Rail Cable
- EP Edge of Paved Roads (ML or SR)
- GDL Guard Rail Steel
- SIGN Sign
- GU Gutter In Front of Curb
- CU Back of Curb
- BCL Bridge Centerline
- BD Bridge Deck
- SH Paved Shoulder
- C Centerline BL of Road (ML or SR)
- TLNL Tree Line Left
- FW Wire Fence
- EB Electrical Box
- Default_Point Default Point Feature
- GV Gas Valve
- BBB Bottom of Bridge Beam
- TOP Top of Bridge Pier
- BLS Bridge Low Steel
- SBR Size of Bridge
- Default_Chain Default Chain Feature

UTILITY LEGEND

- E(B) (Underground) Woodbury County Rural Electric Company
Contact: Nate Bauer
Phone: 712-873-3125
- G(B) Magellan Midstream Partners
Contact: Tim Kassen
Phone: 918-574-7351

PLAN VIEW COLOR LEGEND OF SOILS SHEETS

| LINEWORK | Design Color No. | |
|------------------|------------------|---|
| Green | (2) | Existing Topographic Features and Labels |
| Purple (Halo) | (15) | Backslope Drains |
| Blue | (1) | Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation |
| SHADING | | |
| Design Color No. | | |
| Brown, Light | (236) | Core Out |

PROFILE VIEW COLOR LEGEND OF SOILS SHEETS

| LINEWORK | Design Color No. | |
|--------------|------------------|--|
| Blue | (1) | Proposed Alignment, Stationing, and Alignment Annotation |
| Green | (2) | Existing Ground Line Profile |
| Green, Med | (227) | Topsoil |
| Green, Med | (227) | Slope Dressing Only |
| Orange | (6) | Loam |
| Brown, Dark | (238) | Class 10 |
| Brown, Med | (237) | Sand |
| Red | (3) | Unsuitable A |
| Pink, Dark | (13) | Unsuitable B |
| Pink | (11) | Unsuitable C |
| Red | (3) | Shale |
| Red | (3) | Waste |
| Gray, Light | (48) | Broken and Weathered Rock |
| Gray, Med | (80) | Rock |
| Gray, V.Dark | (128) | Boulders |

PATTERN AND SYMBOL LEGEND OF SOILS SHEETS

| | | |
|------------|---------------------------|-----------------------|
| Drill | Dig/Core | Soils Book No. _____ |
| Water | Treatment | Date(s) Drilled _____ |
| Dry | Sand Blanket | Sandstone |
| Sample | Soil Remediation Area | Unsuitable A |
| Plugged | Select Soil | Unsuitable B |
| Moisture | Select Sand | Unsuitable C |
| Shelby | Slope Dressing Only | Sandy Soil |
| Blow Count | Broken and Weathered Rock | Boulders |
| Dens. Core | Rock | Shale |

| | |
|-----------------------|--------------------------|
| Reference Point | Survey Line |
| Station | Section Corner |
| Ground Line Intercept | Saw Cut |
| Guardrail | Clearing & Grubbing Area |
| Pavement Removal | Borrow |
| Easement (Temporary) | Easement |
| Excess | Access Control |

RIGHT-OF-WAY LEGEND

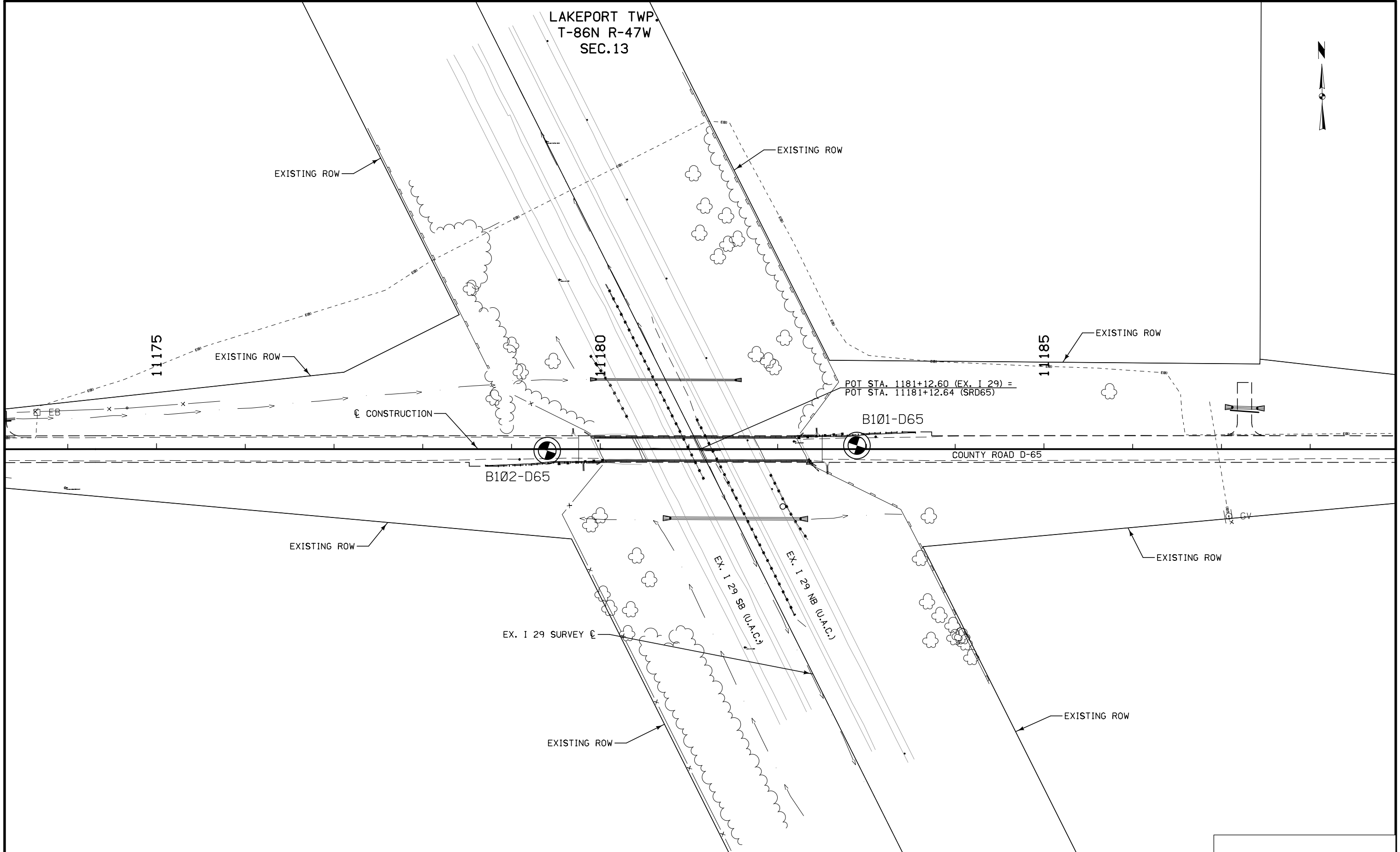
- Proposed Right-of-Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Borrow
- Easement (Temporary)
- Easement
- Excess
- Access Control

NOTE: Sounding and test boring data shown in the plans were accumulated for designing and estimating purposes. Their appearance on the plans does not constitute a guarantee that conditions other than those indicated will be encountered. Details and notes shown elsewhere shall be used for roadway and structure construction.

SOILS LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES Q & R)

LAKEPORT TWP.
T-86N R-47W
SEC. 13



POT STA. 1181+12.60 (EX. I 29) =
POT STA. 11181+12.64 (SRD65)

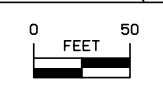
B101-D65

COUNTY ROAD D-65

B102-D65

EX. I 29 SB (U.A.C.)
EX. I 29 NB (U.A.C.)

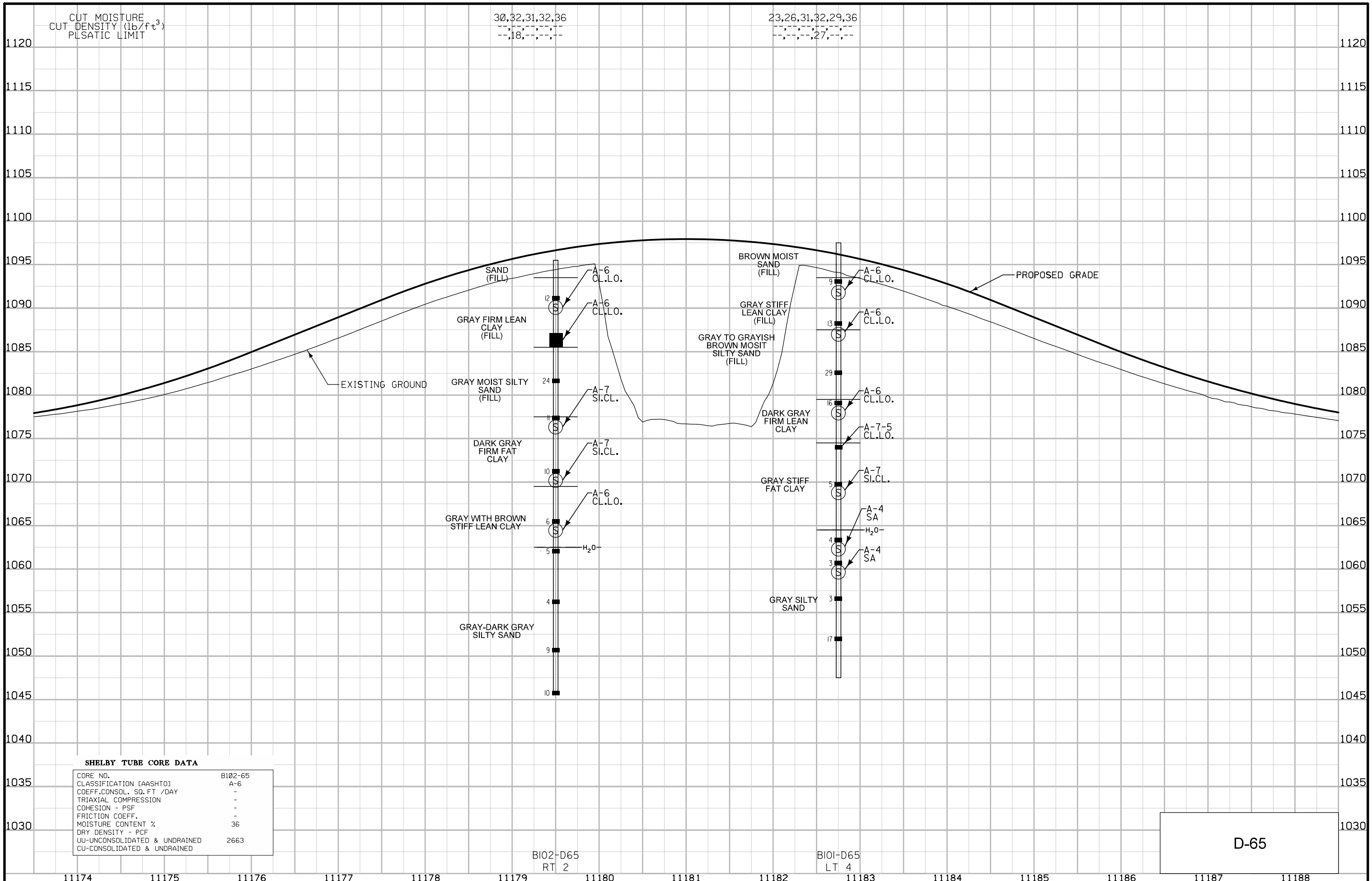
EX. I 29 SURVEY



SEC. 24

D-65

For Profile Refer
to Sheet No. Q.3



CUT MOISTURE
CUT DENSITY (lb/ft³)
PLSATIC LIMIT

30,32,31,32,36
--,18,--,-,--

23,26,31,32,29,36
--,-,27,-,--

SHELBY TUBE CORE DATA

| | |
|-------------------------------|---------|
| CORE NO. | B102-65 |
| CLASSIFICATION [AASHTO] | A-6 |
| COEFF. CONSOL. SQ. FT / DAY | - |
| TRIAxIAL COMPRESSION | - |
| COHESION - PSF | - |
| FRICTION COEFF. | - |
| MOISTURE CONTENT % | 36 |
| DRY DENSITY - PCF | - |
| UU-UNCONSOLIDATED & UNDRAINED | 2663 |
| CU-CONSOLIDATED & UNDRAINED | - |

B102-D65
RT 2

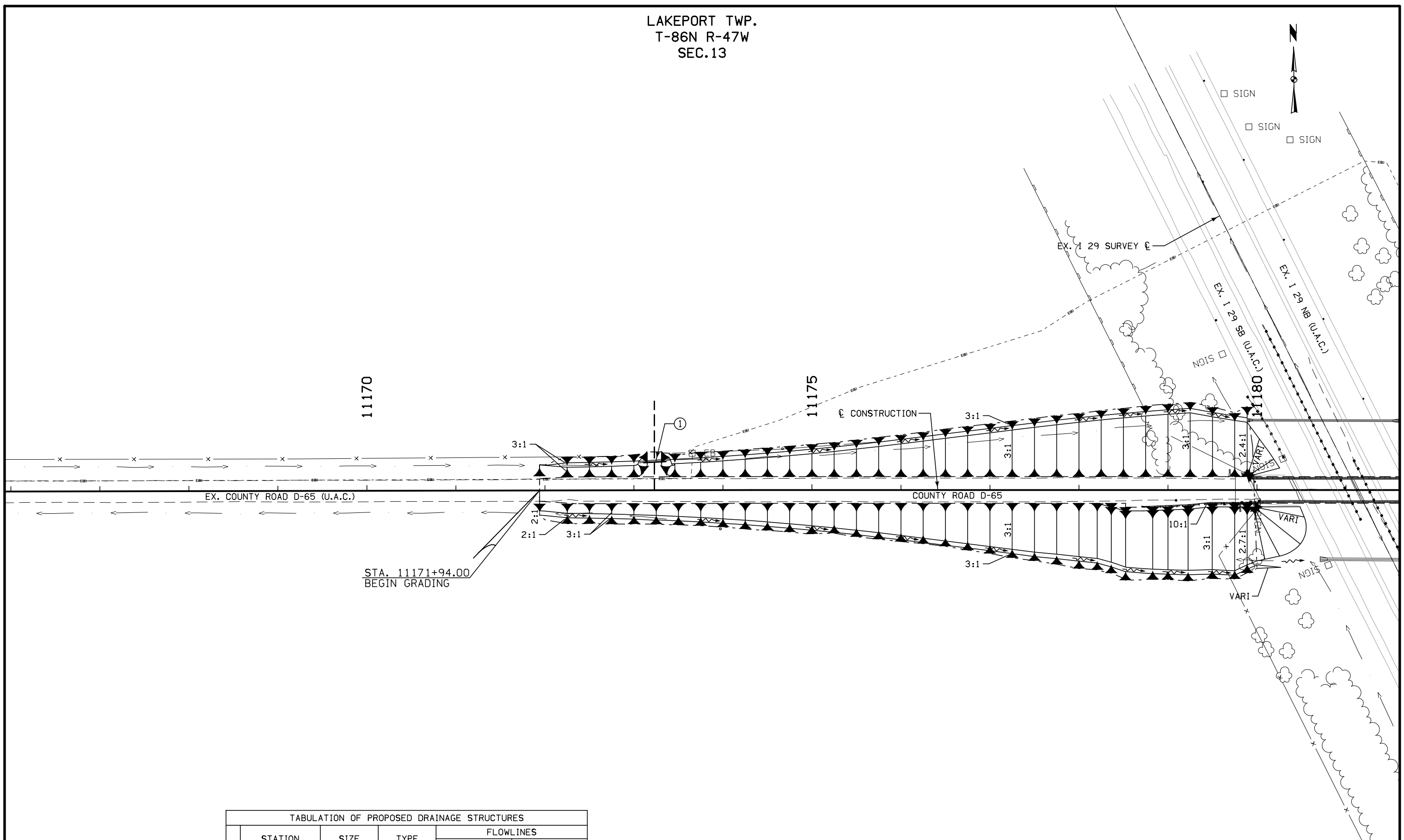
B101-D65
LT 4

D-65

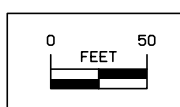
LAKEPORT TWP.
T-86N R-47W
SEC.13



□ SIGN
□ SIGN
□ SIGN



| TABULATION OF PROPOSED DRAINAGE STRUCTURES | | | | | |
|--|----------------------------|---------|--------|-----------|---------|
| | STATION | SIZE | TYPE | FLOWLINES | |
| | | | | LT. | RT. |
| 1 | 11173+23.00, 31.50' LT. | 24"x25' | DR-651 | 1072.27 | 1072.25 |



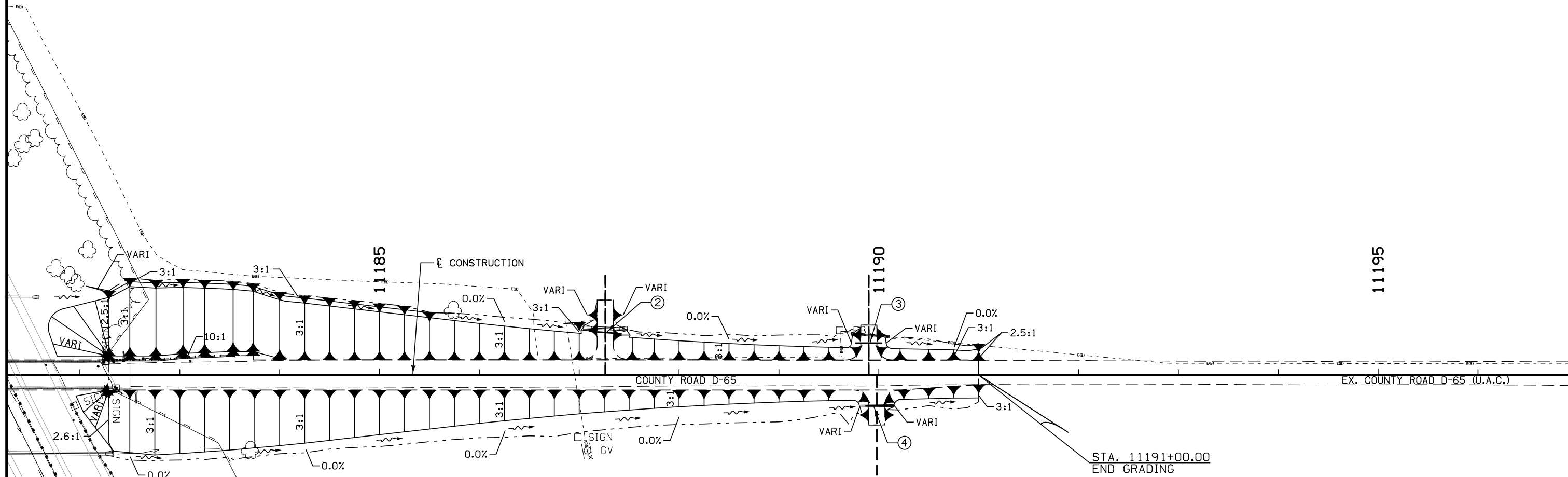
SEC.24

NOTE:
VARY GRADING AROUND BRIDGE ABUTMENTS
TO MATCH EXISTING GRADE.

D-65
GRADING DETAILS

For D-65 Details
Refer to Sheet No. E.1

LAKEPORT TWP.
T-86N R-47W
SEC.13



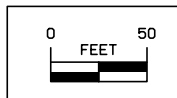
| TABULATION OF PROPOSED DRAINAGE STRUCTURES | | | | | |
|--|----------------------------|---------|--------|-----------|---------|
| | STATION | SIZE | TYPE | FLOWLINES | |
| | | | | LT. | RT. |
| 2 | 11187+26.00, 42.50' LT. | 36"x32' | DR-651 | 1071.93 | 1071.88 |
| 3 | 11189+90.00, 32.00' LT. | 18"x26' | DR-651 | 1071.65 | 1071.61 |
| 4 | 11189+98.00, 31.00' RT. | 24"x23' | DR-651 | 1072.29 | 1072.22 |

NOTE:

VARY GRADING AROUND BRIDGE ABUTMENTS
TO MATCH EXISTING GRADE.

**D-65
GRADING DETAILS**

For D-65 Details
Refer to Sheet No. E.2



SEC.24

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\R/CB
- Proposed Pipe\R/CB
- Proposed Dike
- All Elements Associated with Proposed Entrances

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- TS————— Topsoil (Class 10)
- SLOPE DRESSING — Slope Dressing Only
- CL 10————— Class 10 Materials
- SEL LO————— Select Loams And Clay-Loams
- SEL SA————— Select Sand
- UNS A————— Unsuitable Type A Disposal
- UNS B————— Unsuitable Type B Disposal
- UNS C————— Unsuitable Type C Disposal
- SHALE————— Shale
- WASTE————— Waste
- 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.

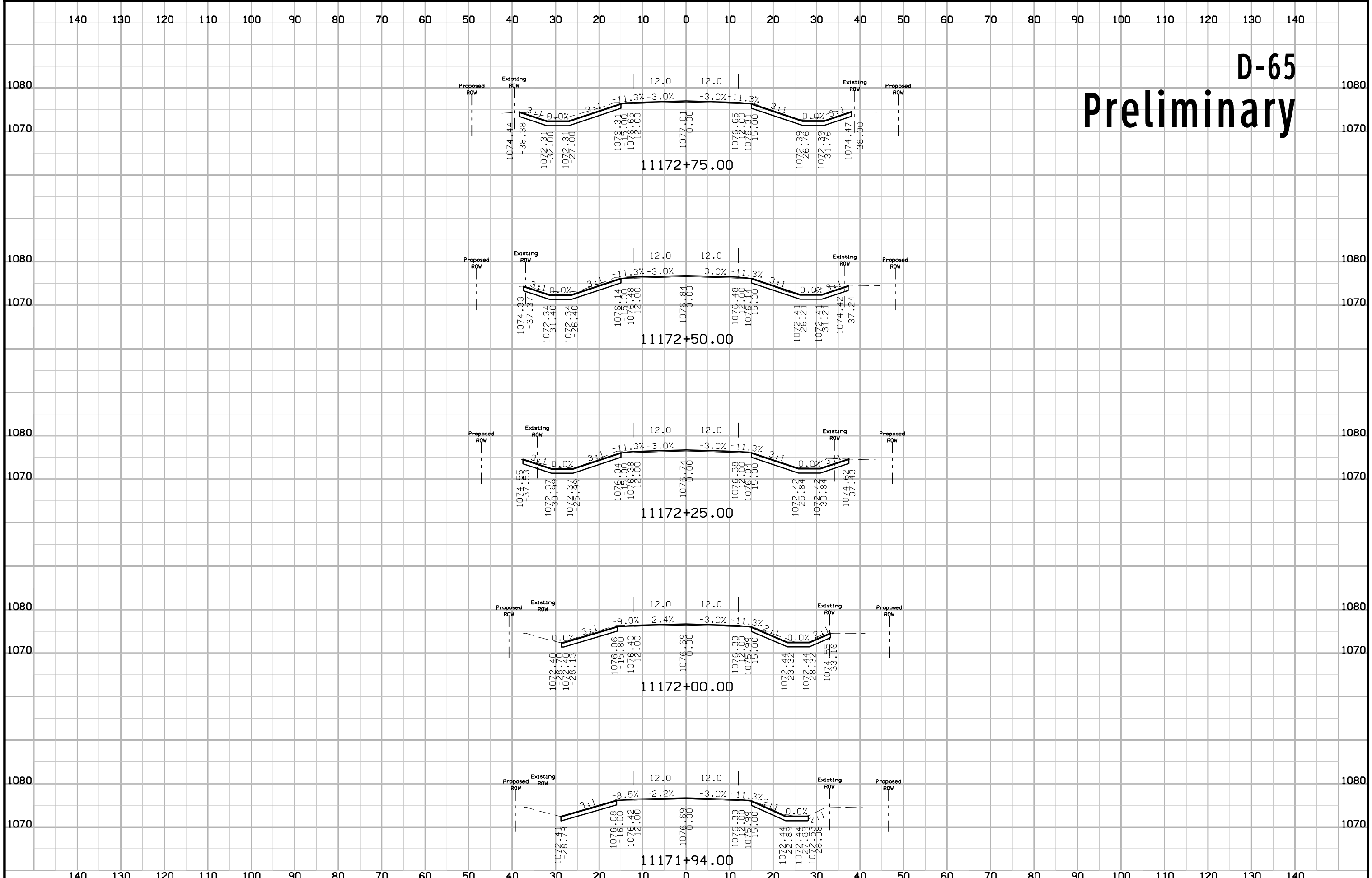
SYMBOL LEGEND OF CROSS SECTION SHEETS

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

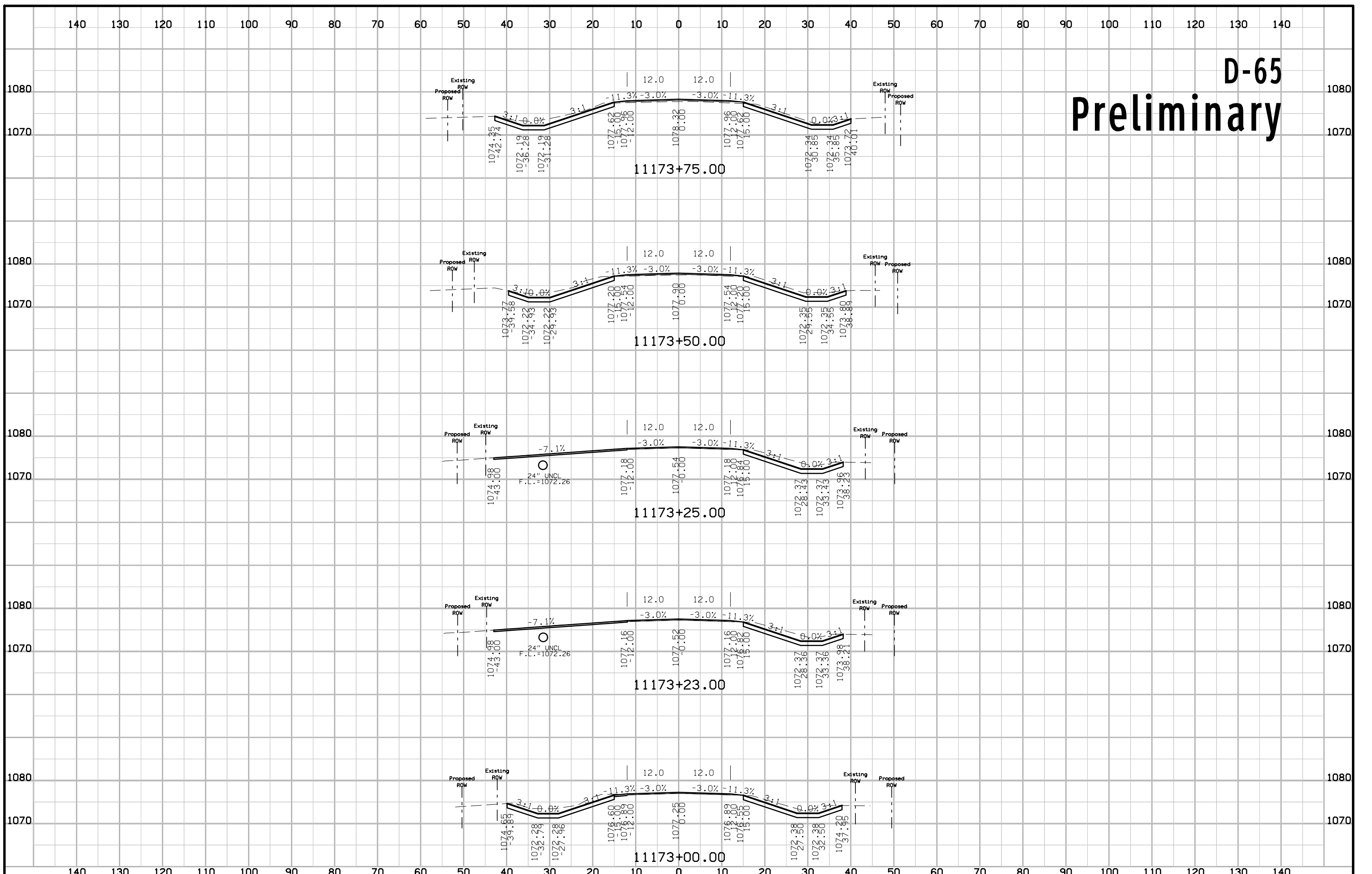
**CROSS SECTION
LEGEND AND SYMBOL
INFORMATION SHEET**

(COVERS SHEET SERIES W & X)

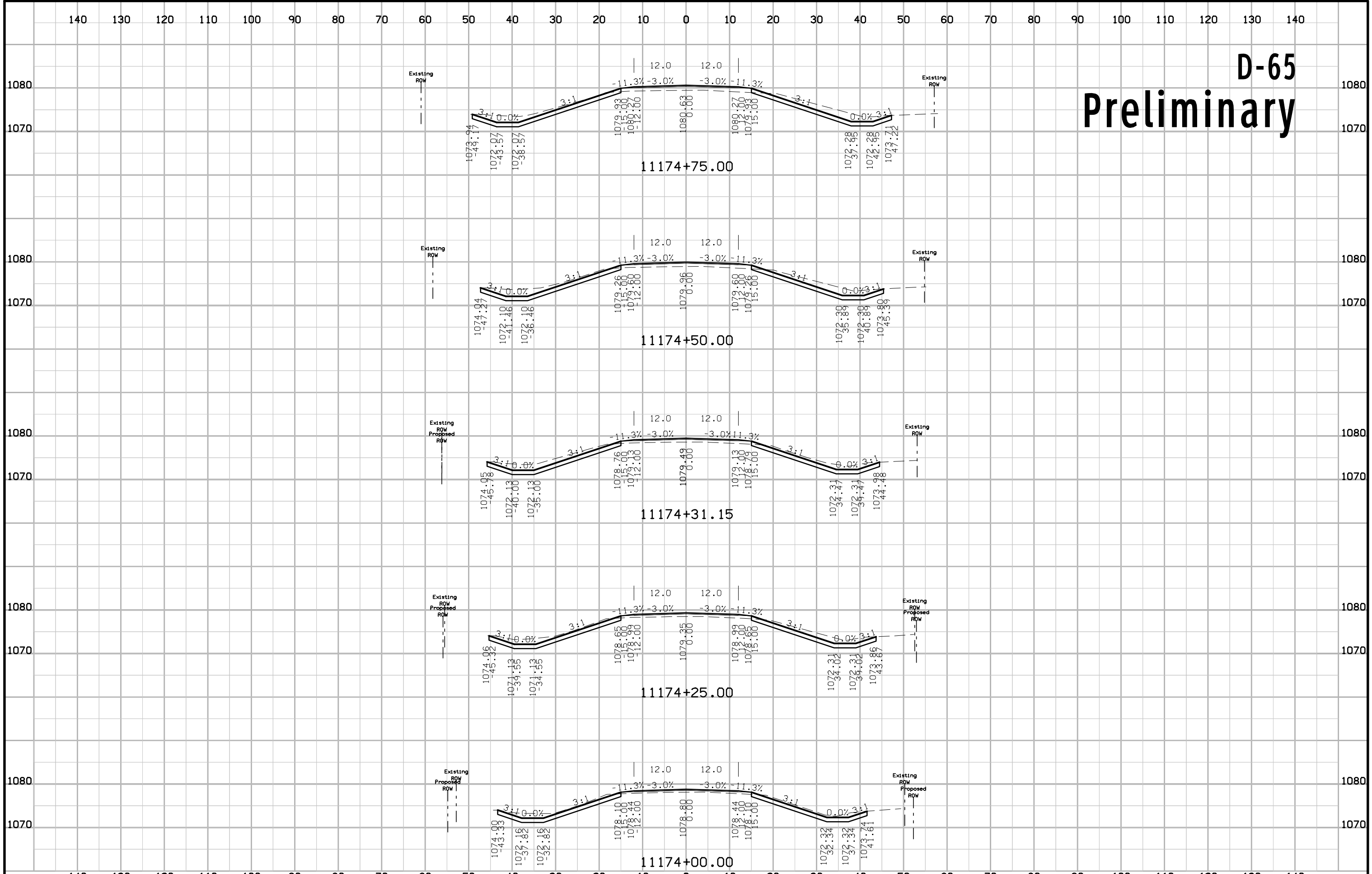
D-65 Preliminary



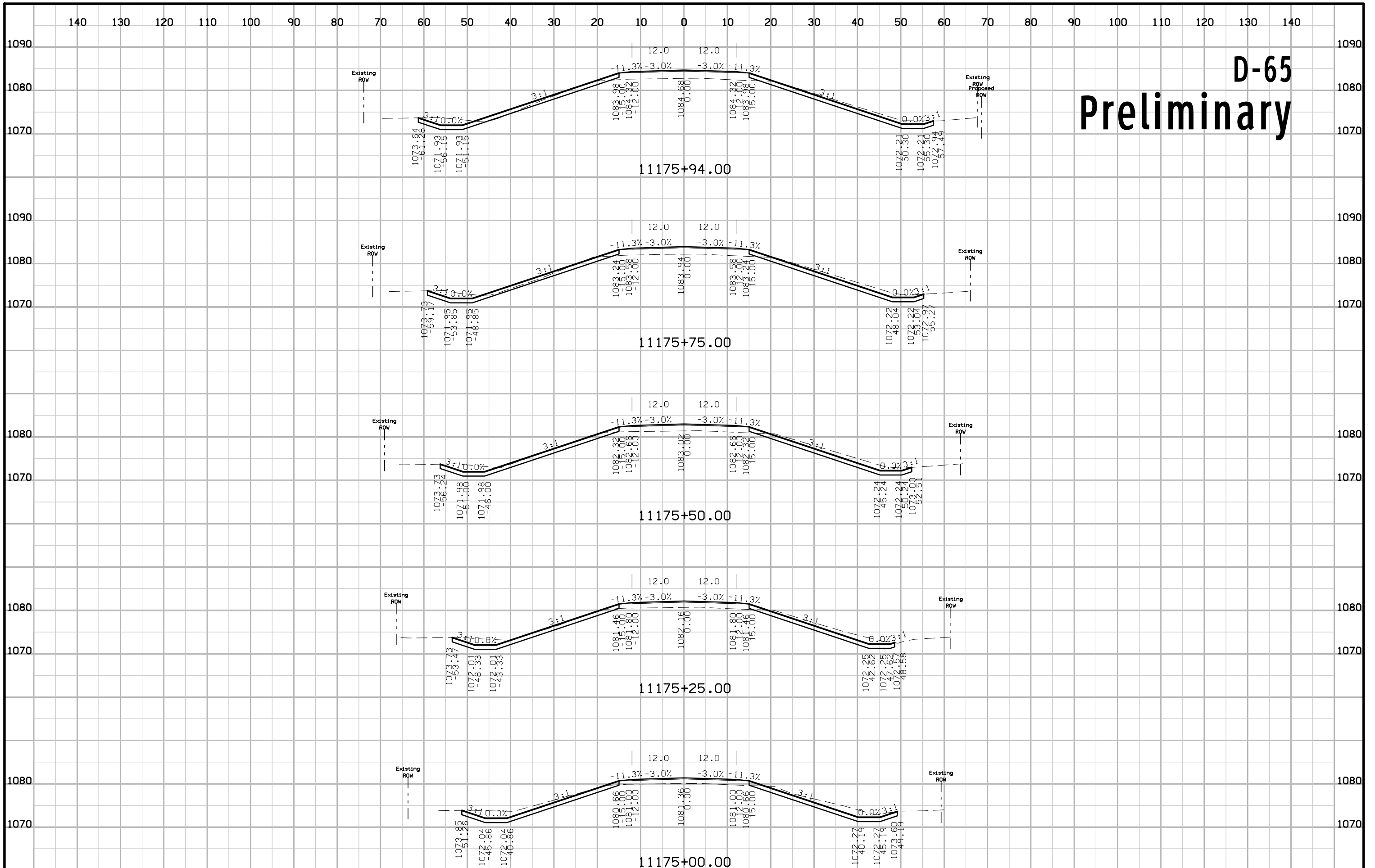
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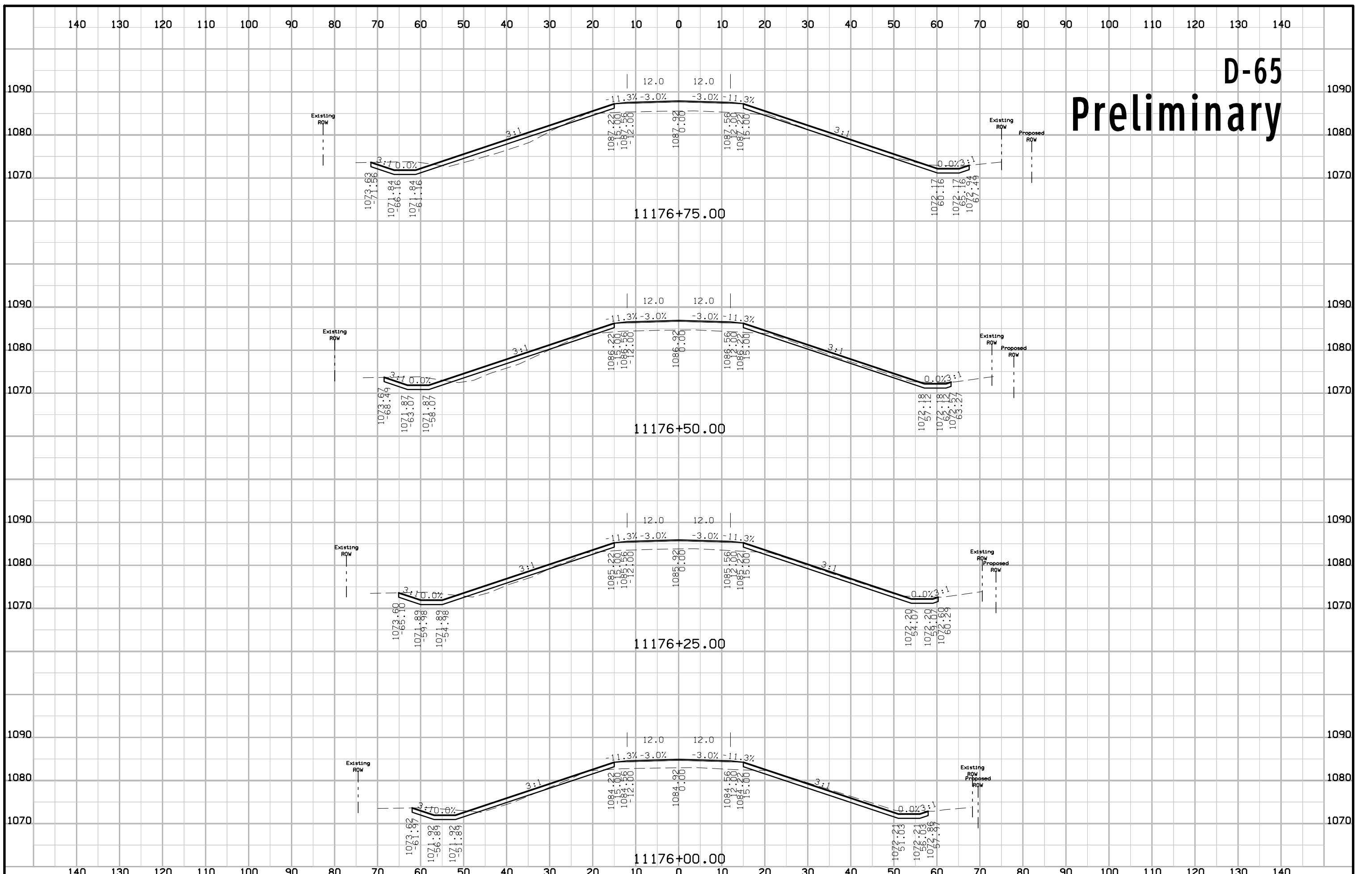
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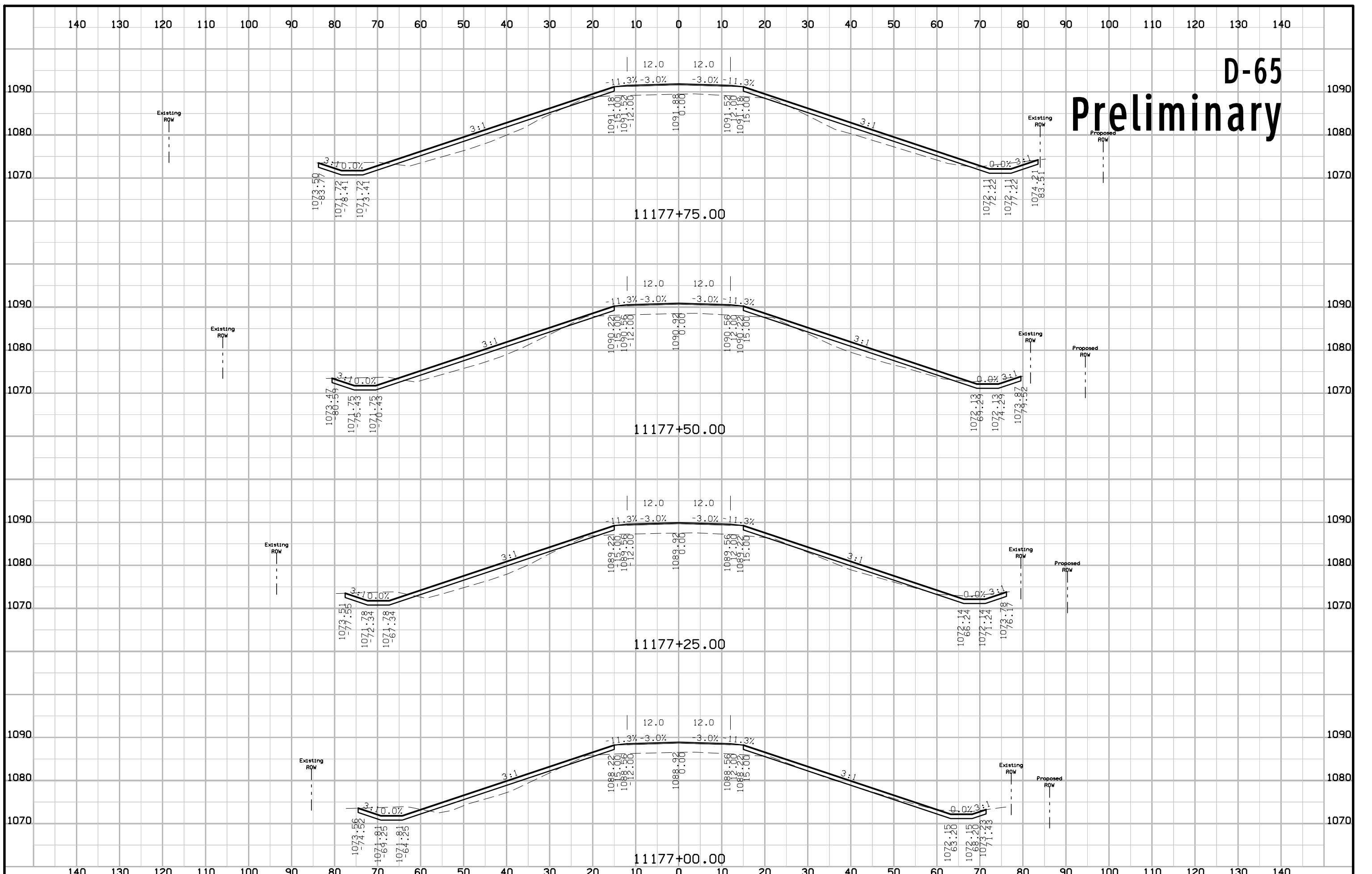
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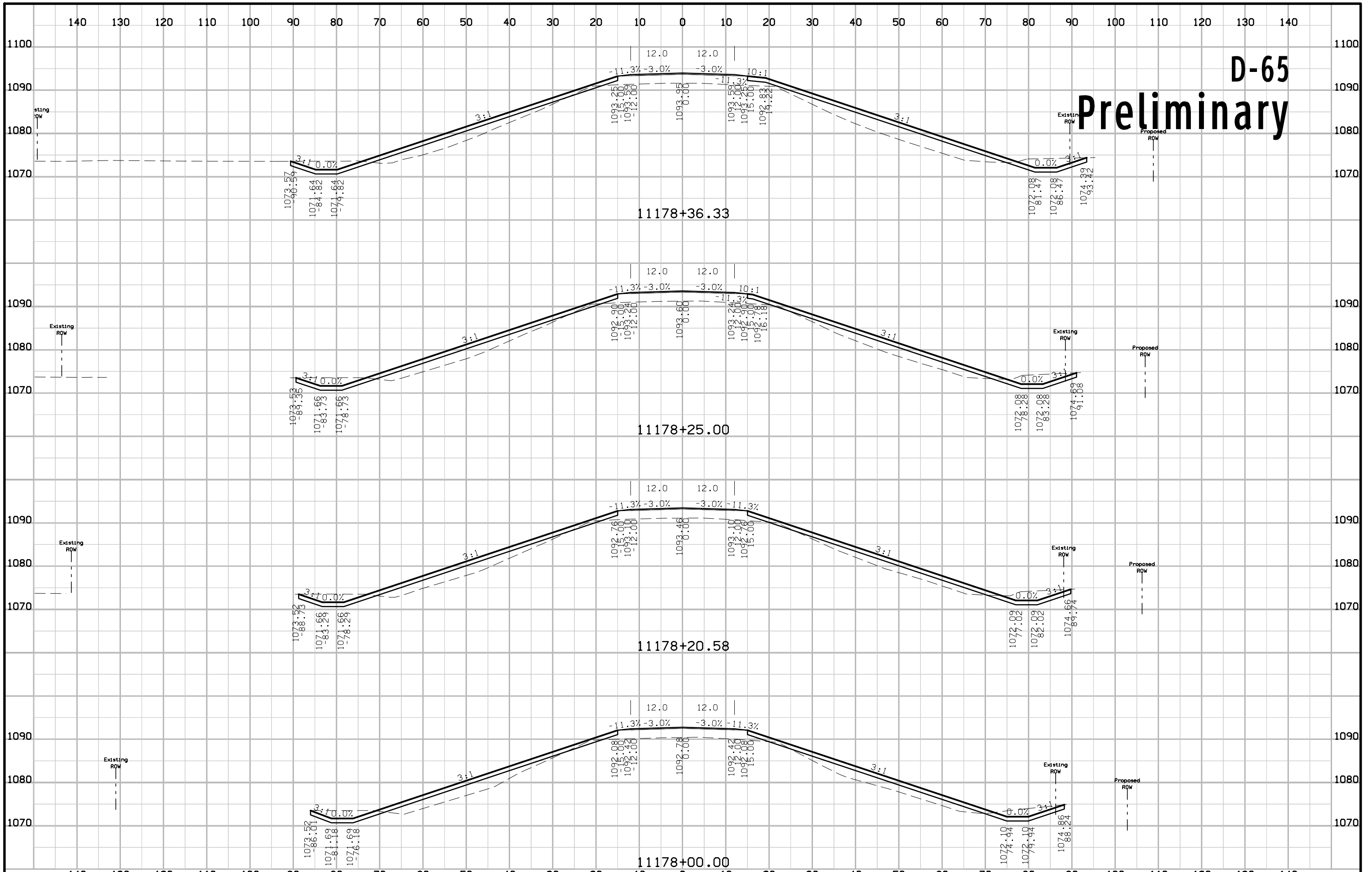
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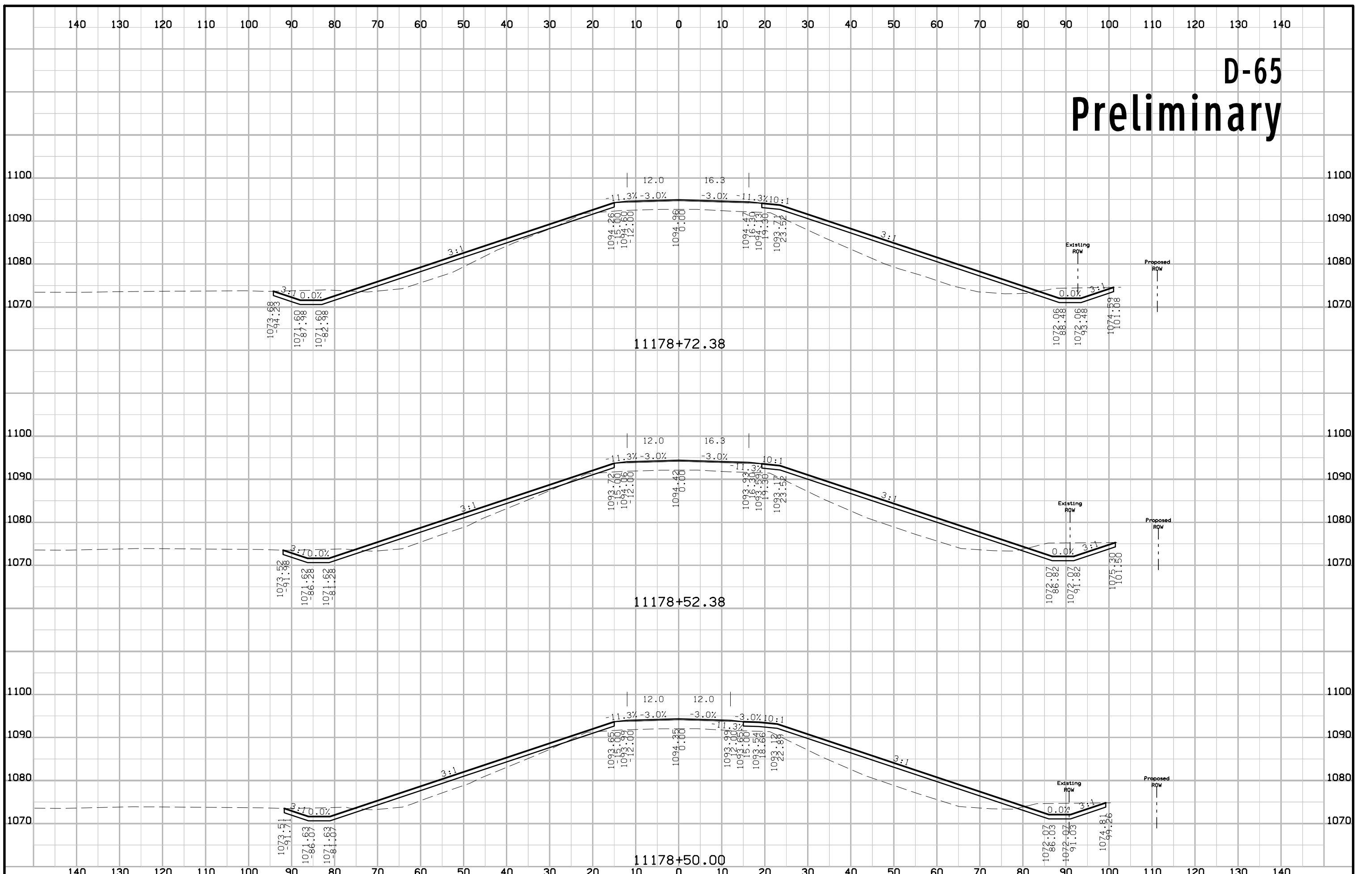
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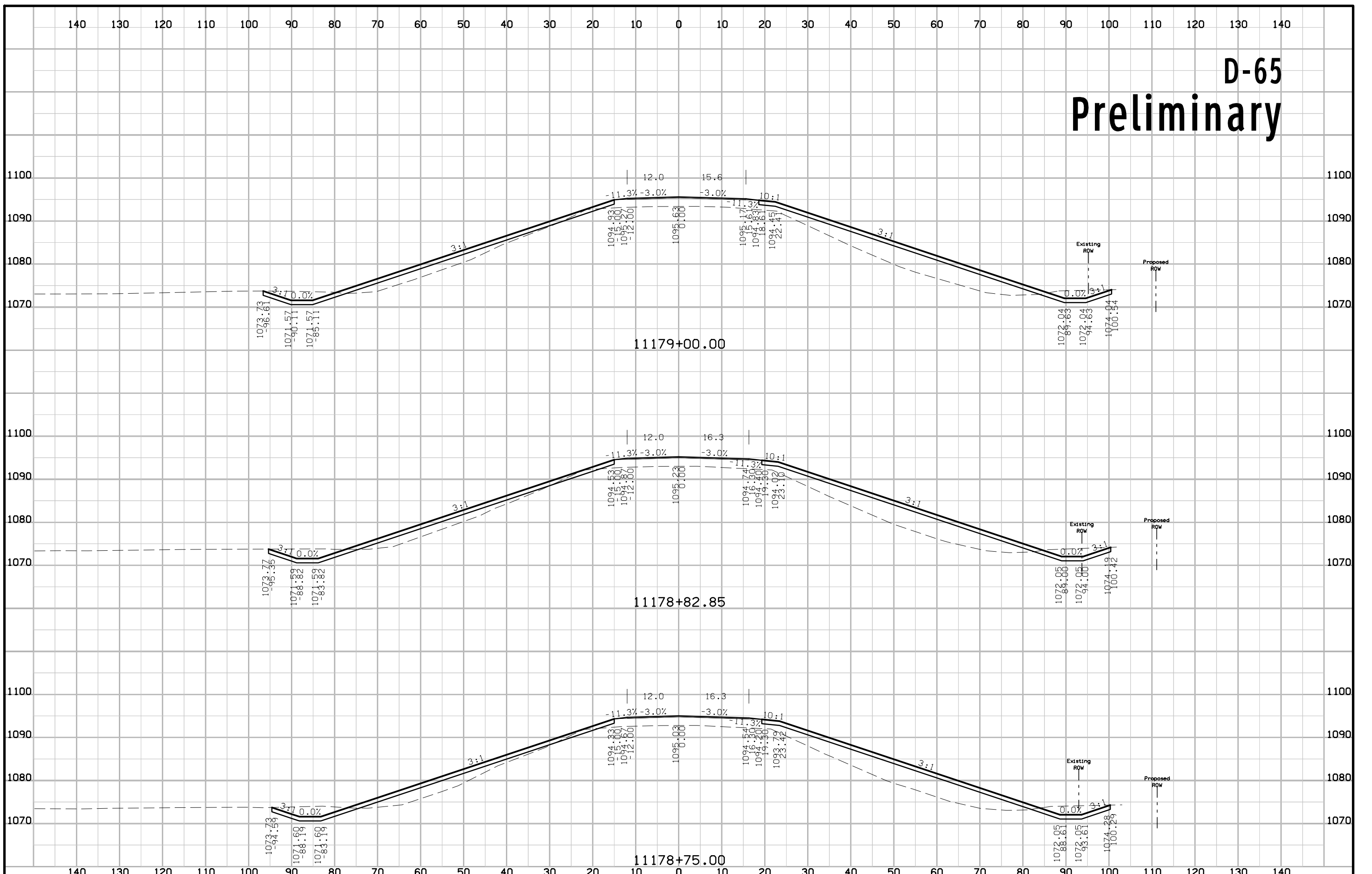
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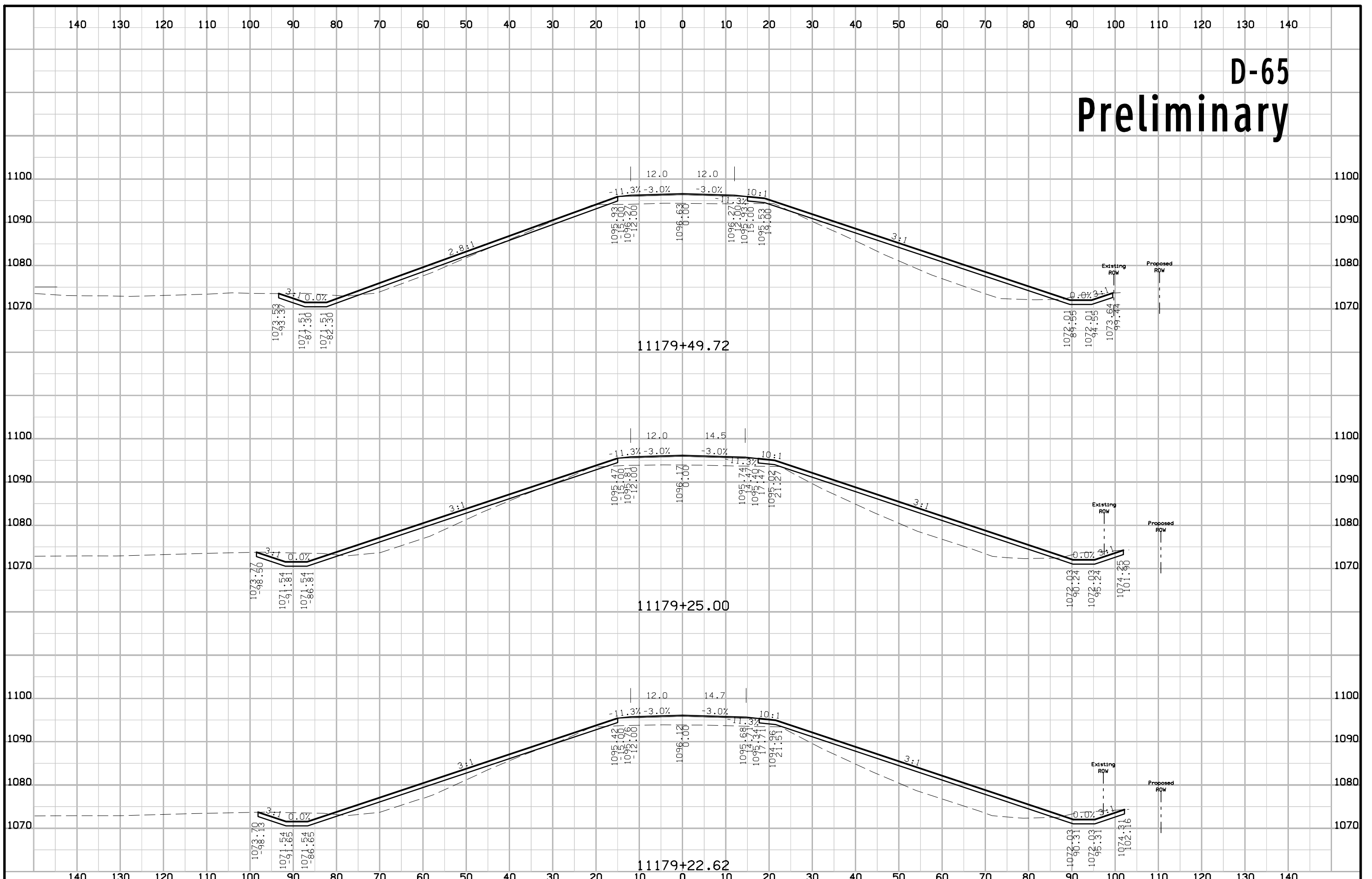
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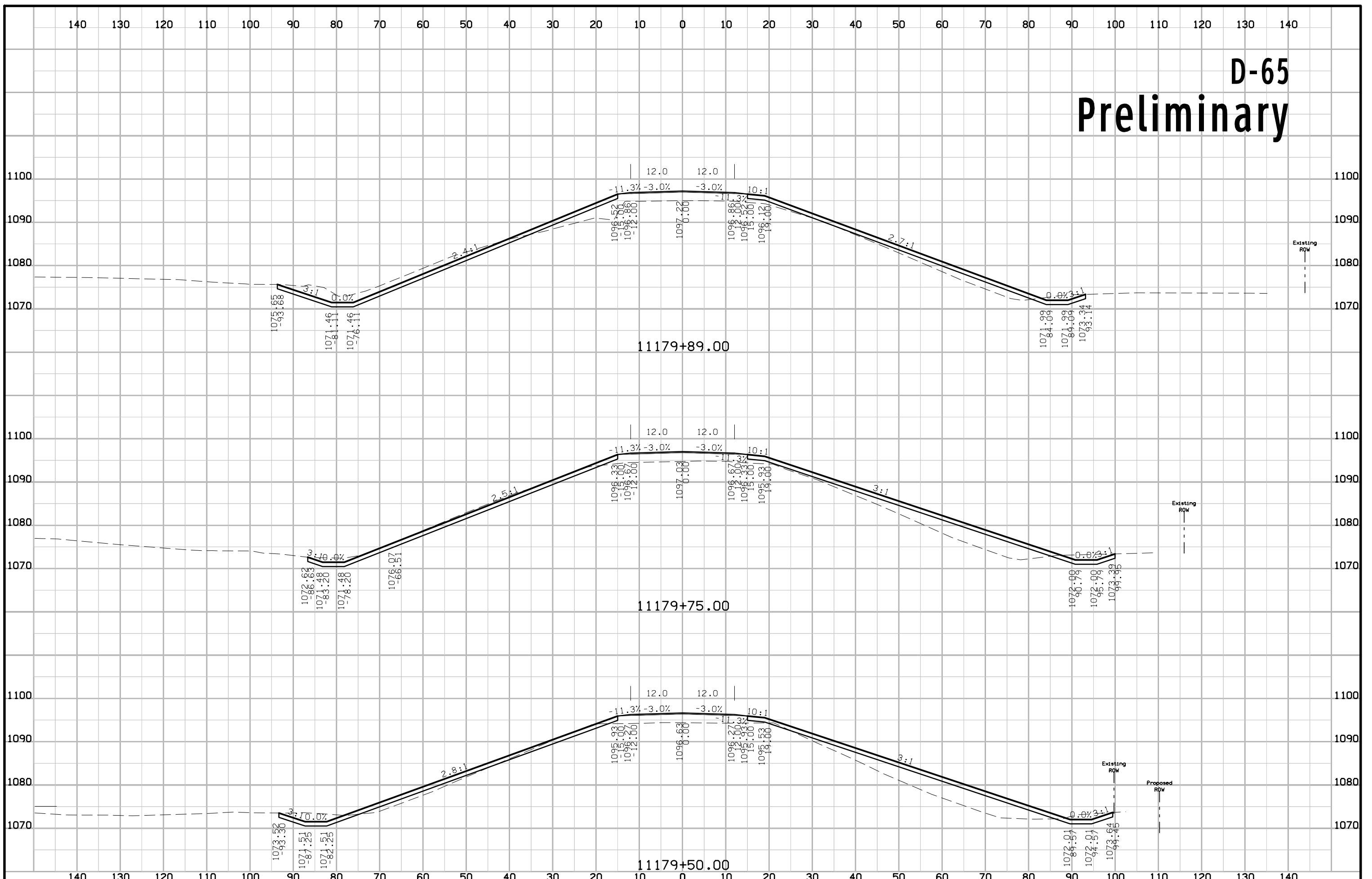
D-65 Preliminary



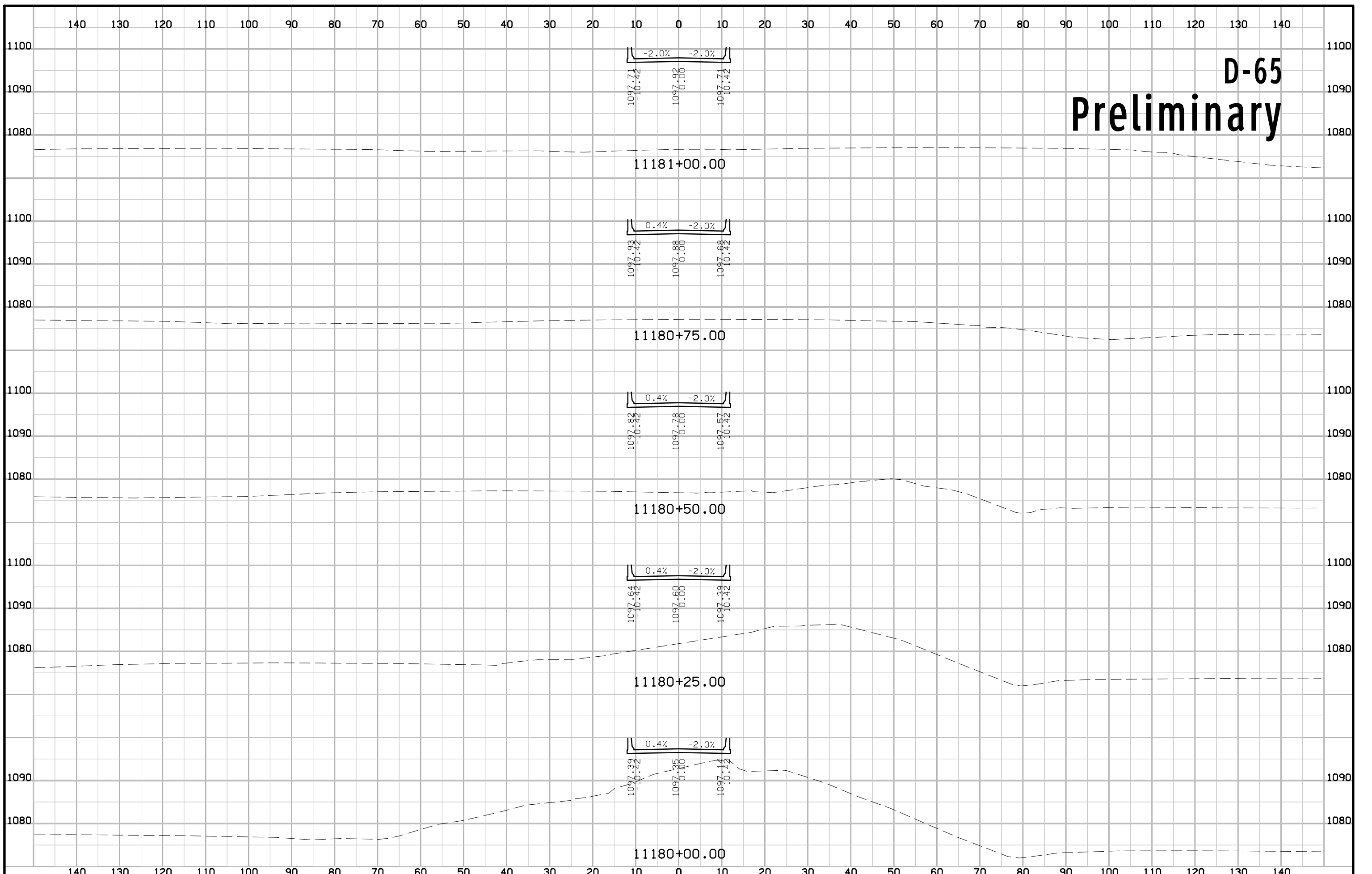
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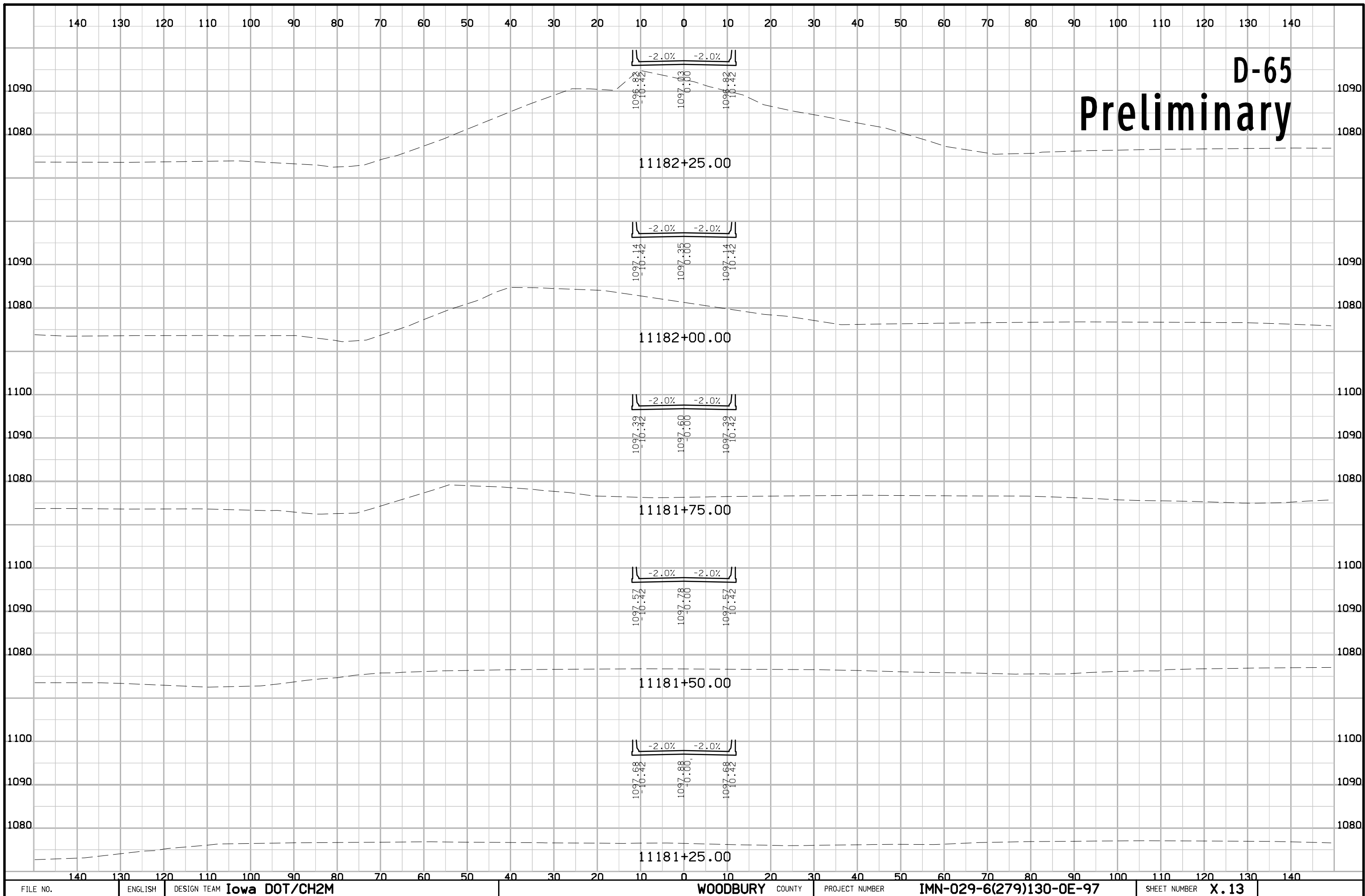


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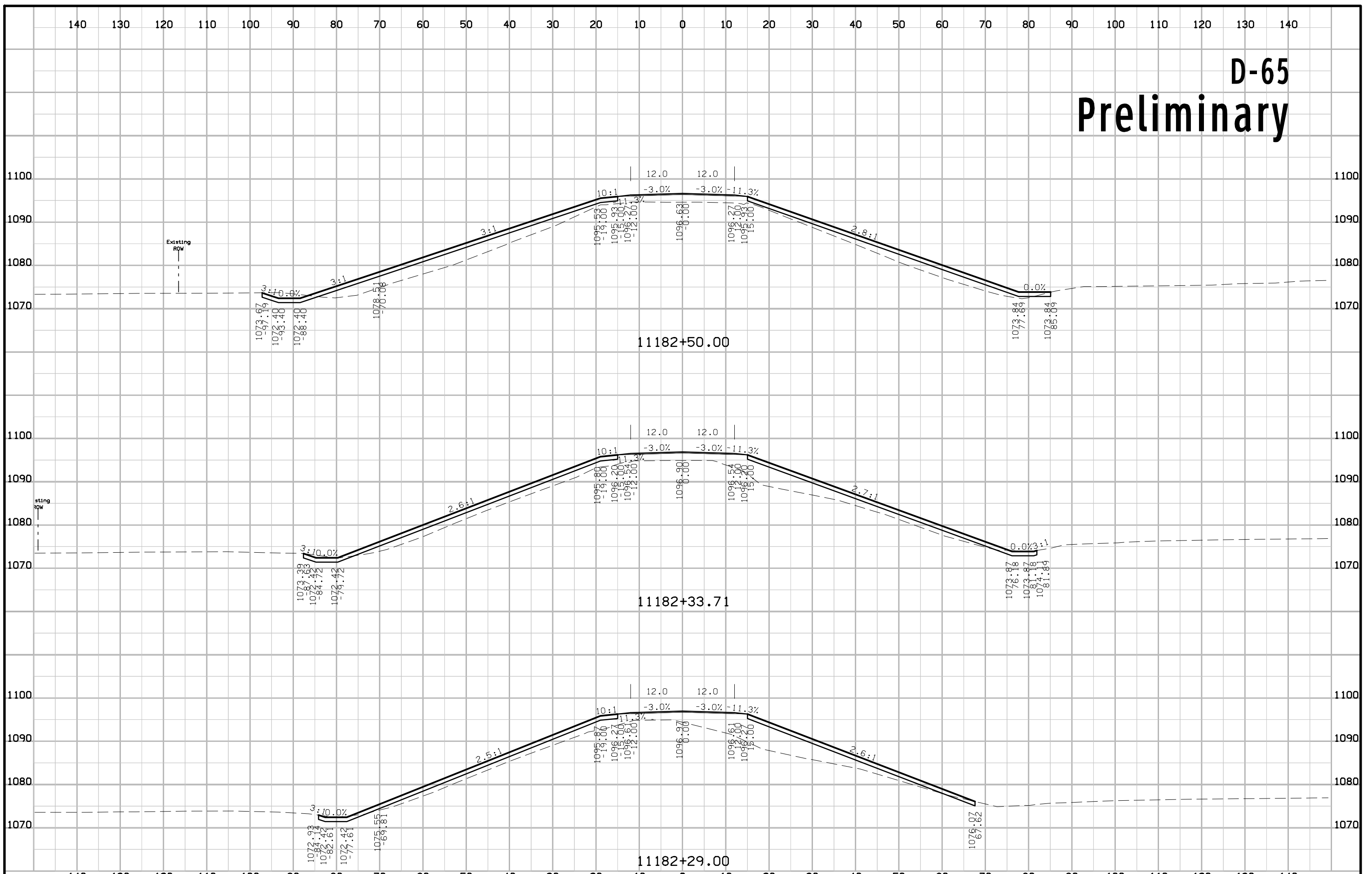


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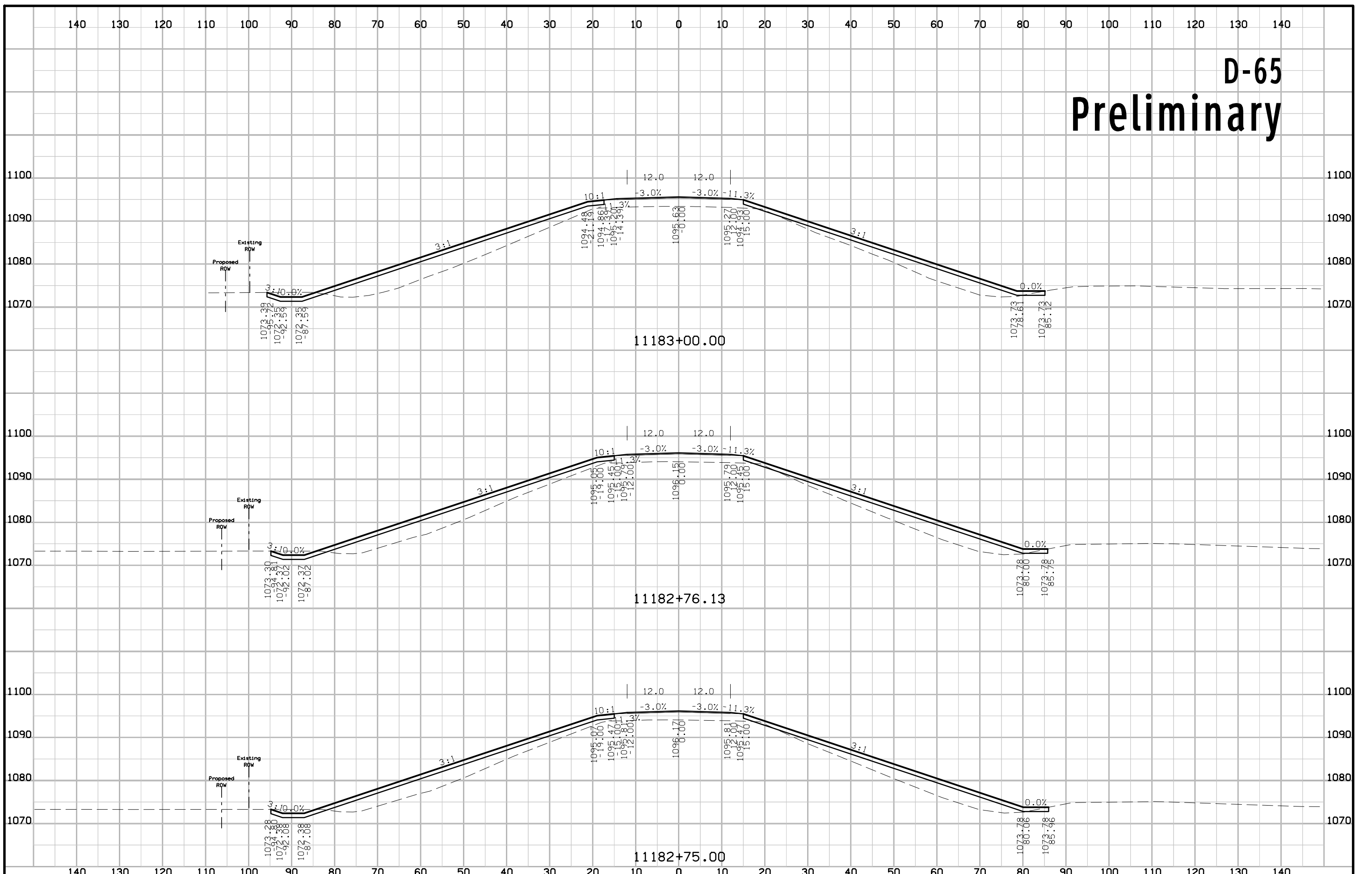




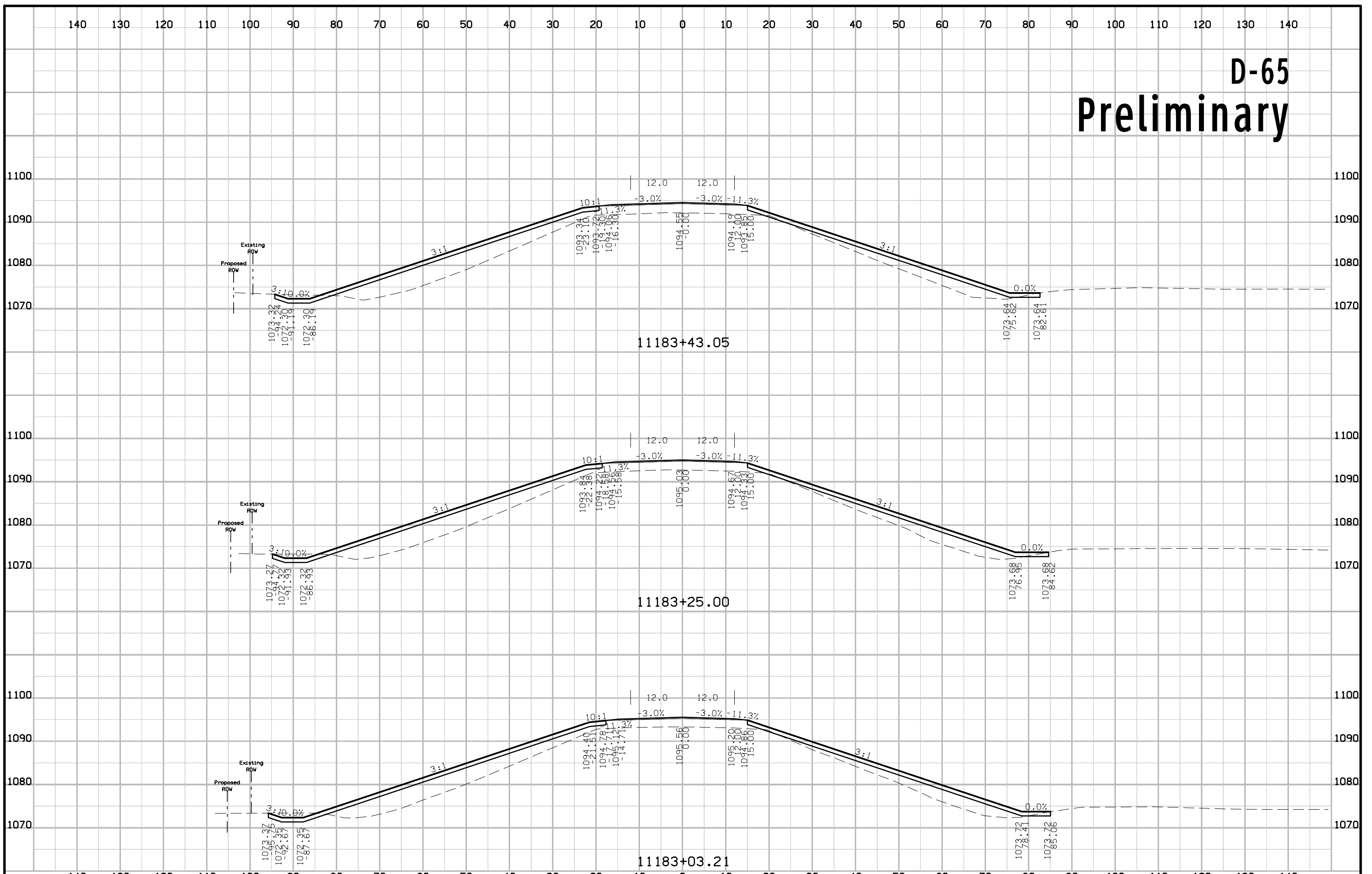
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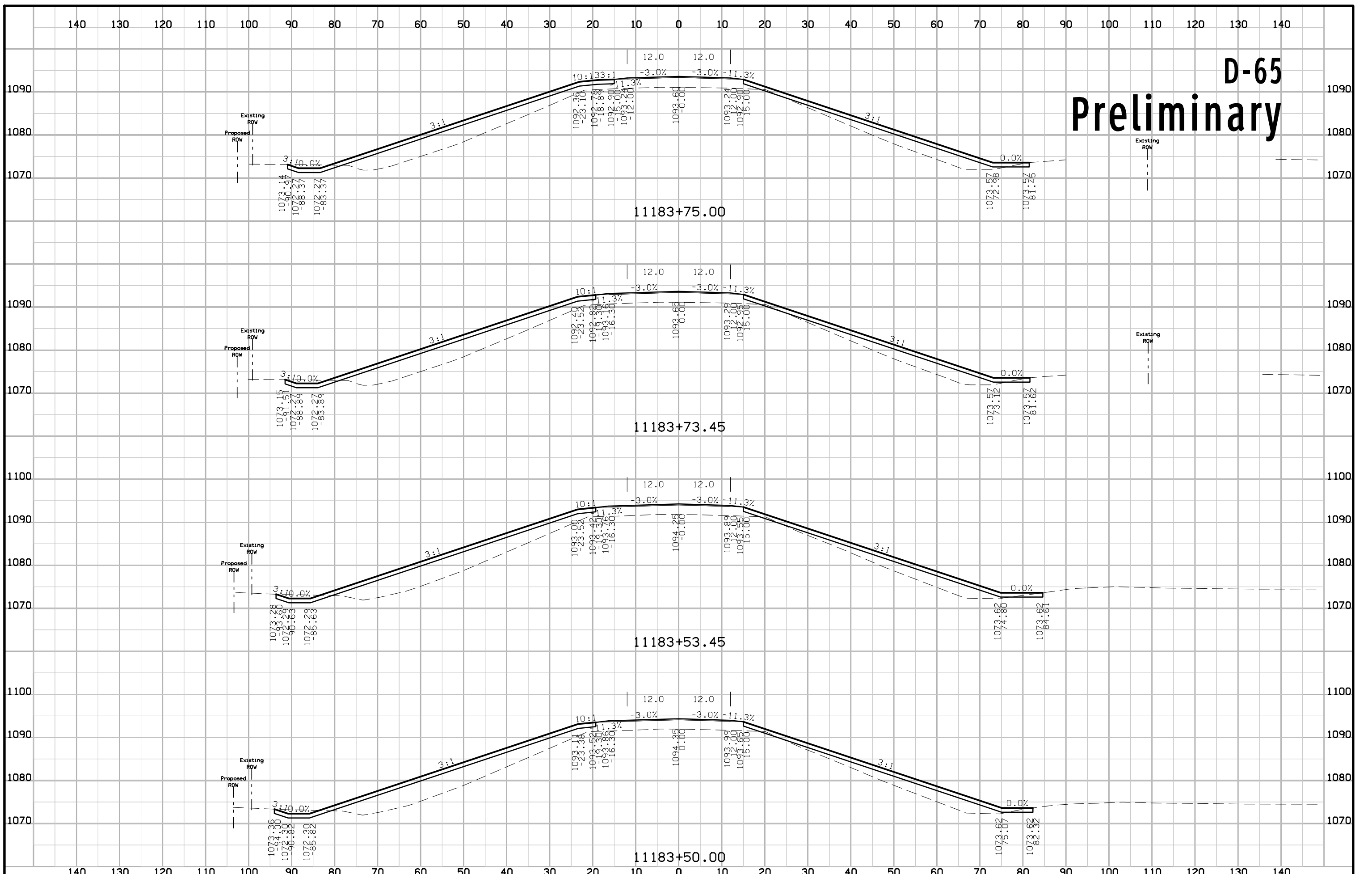
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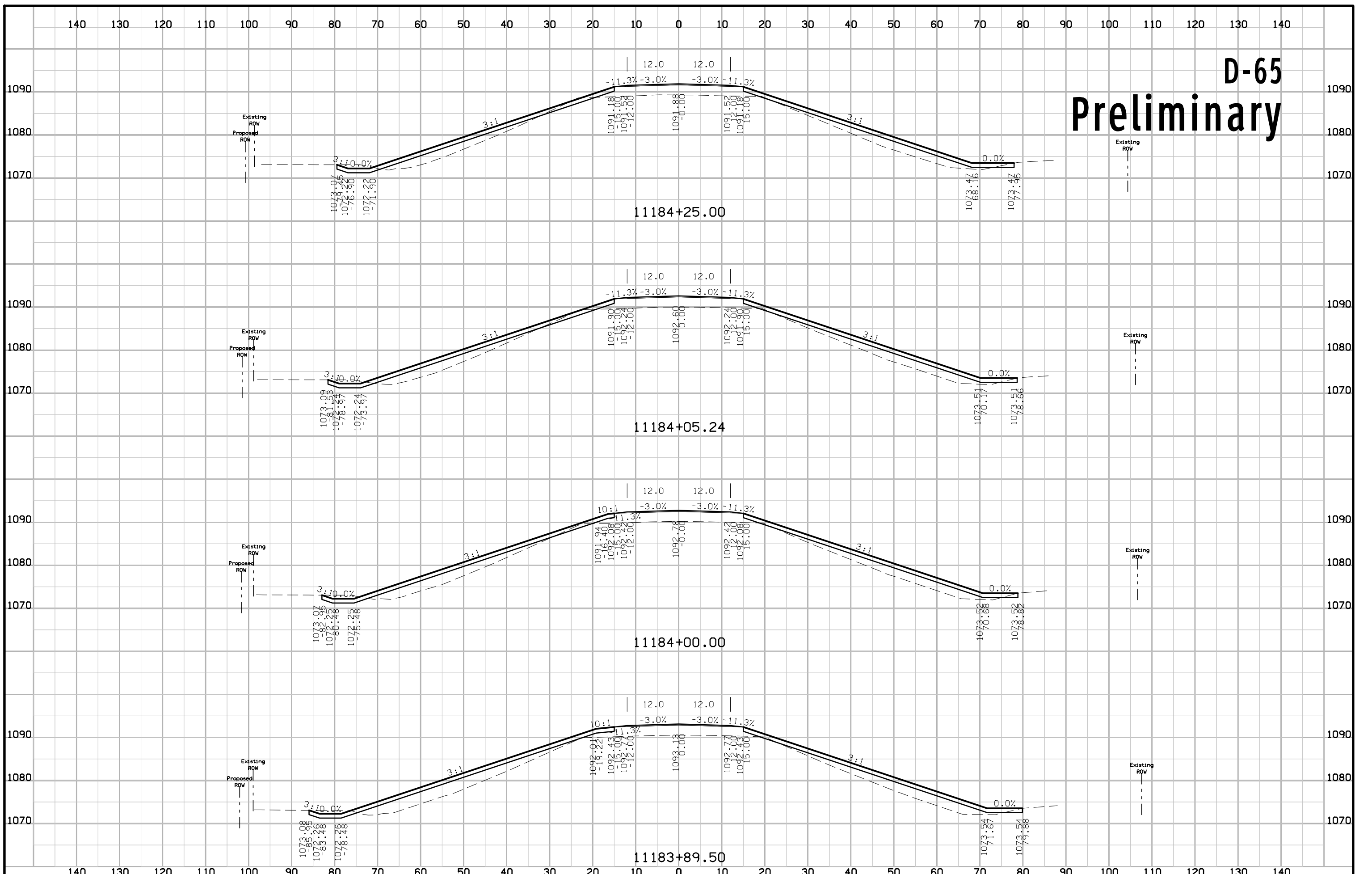
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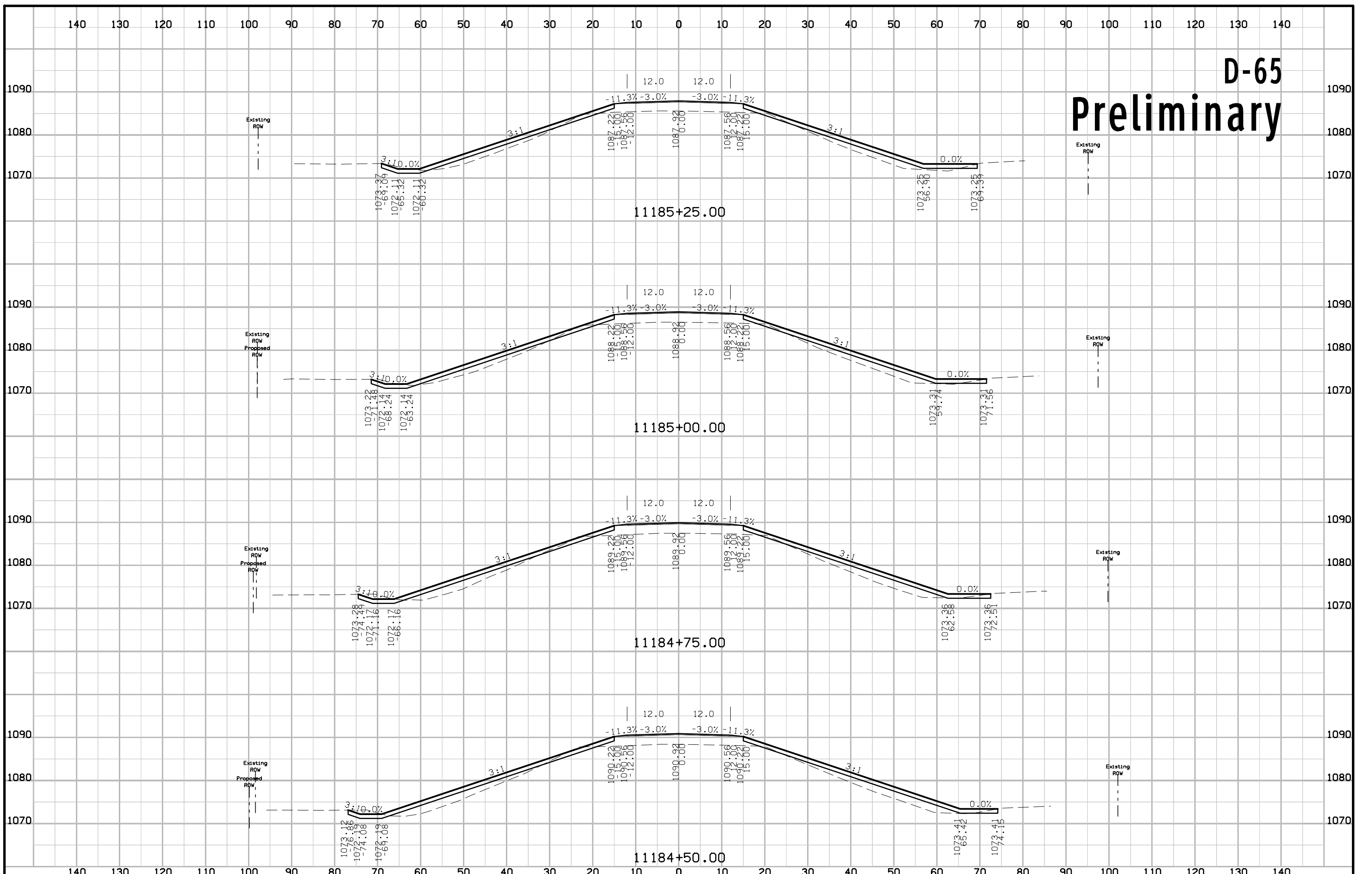
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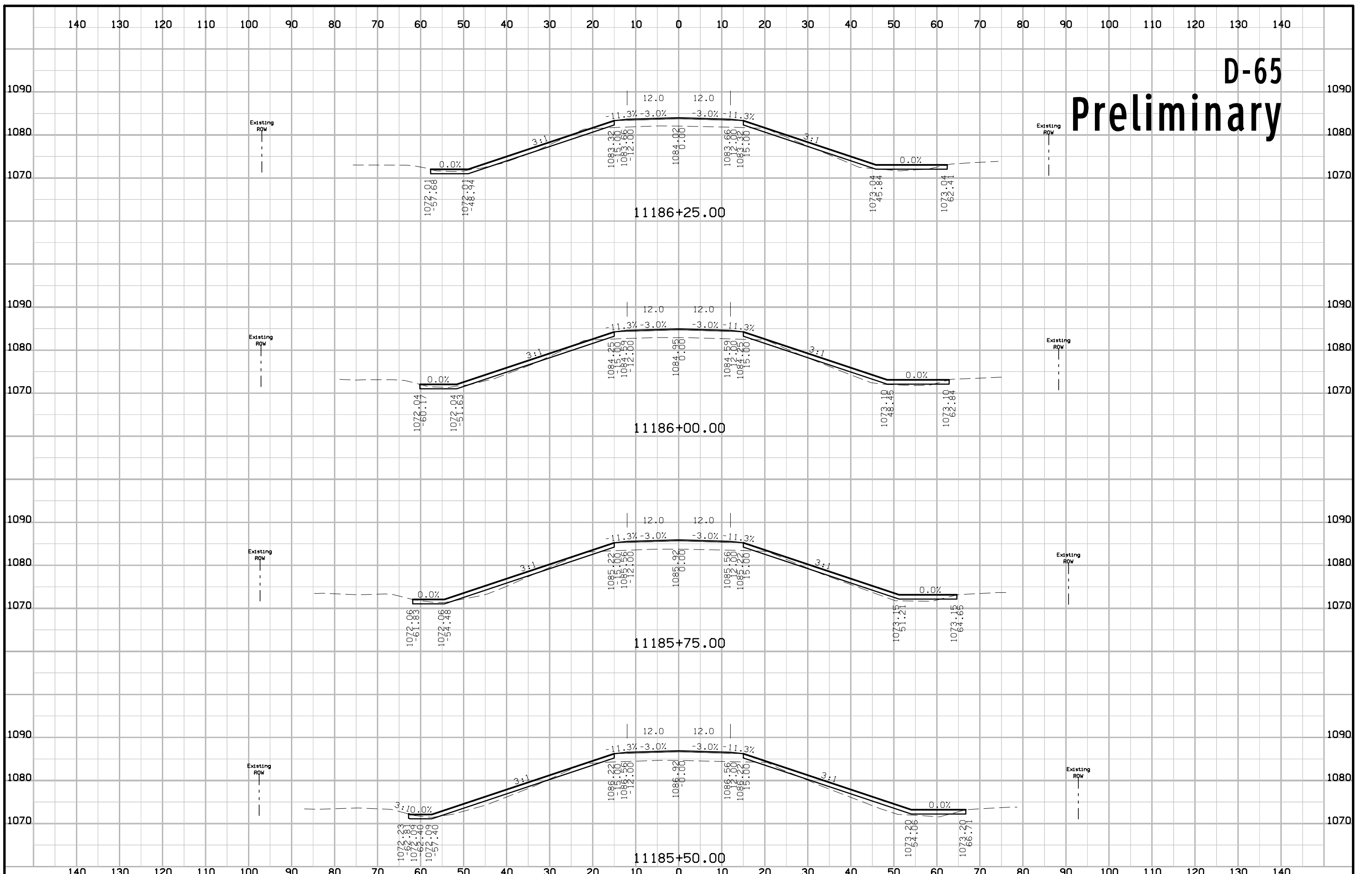
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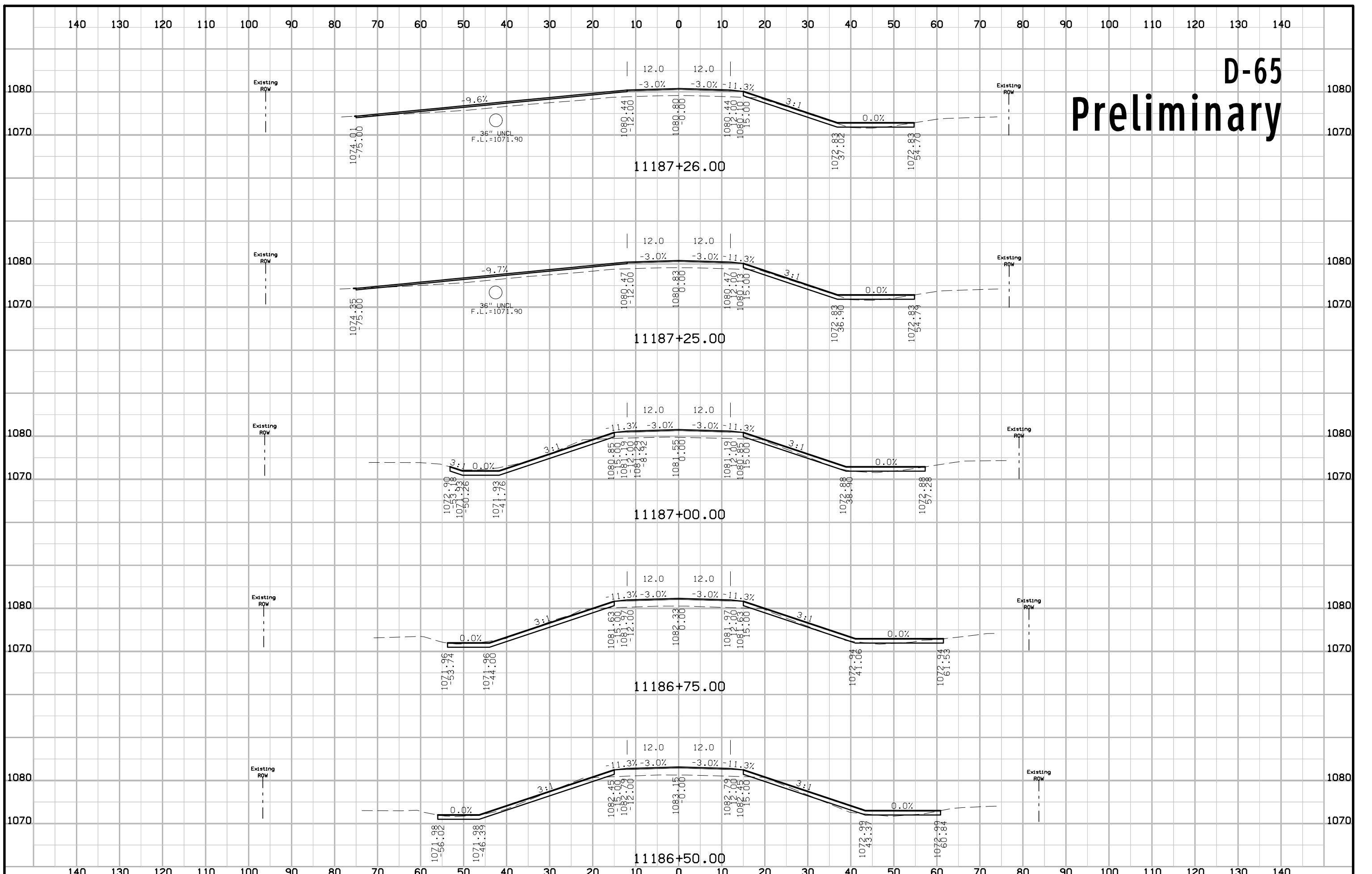
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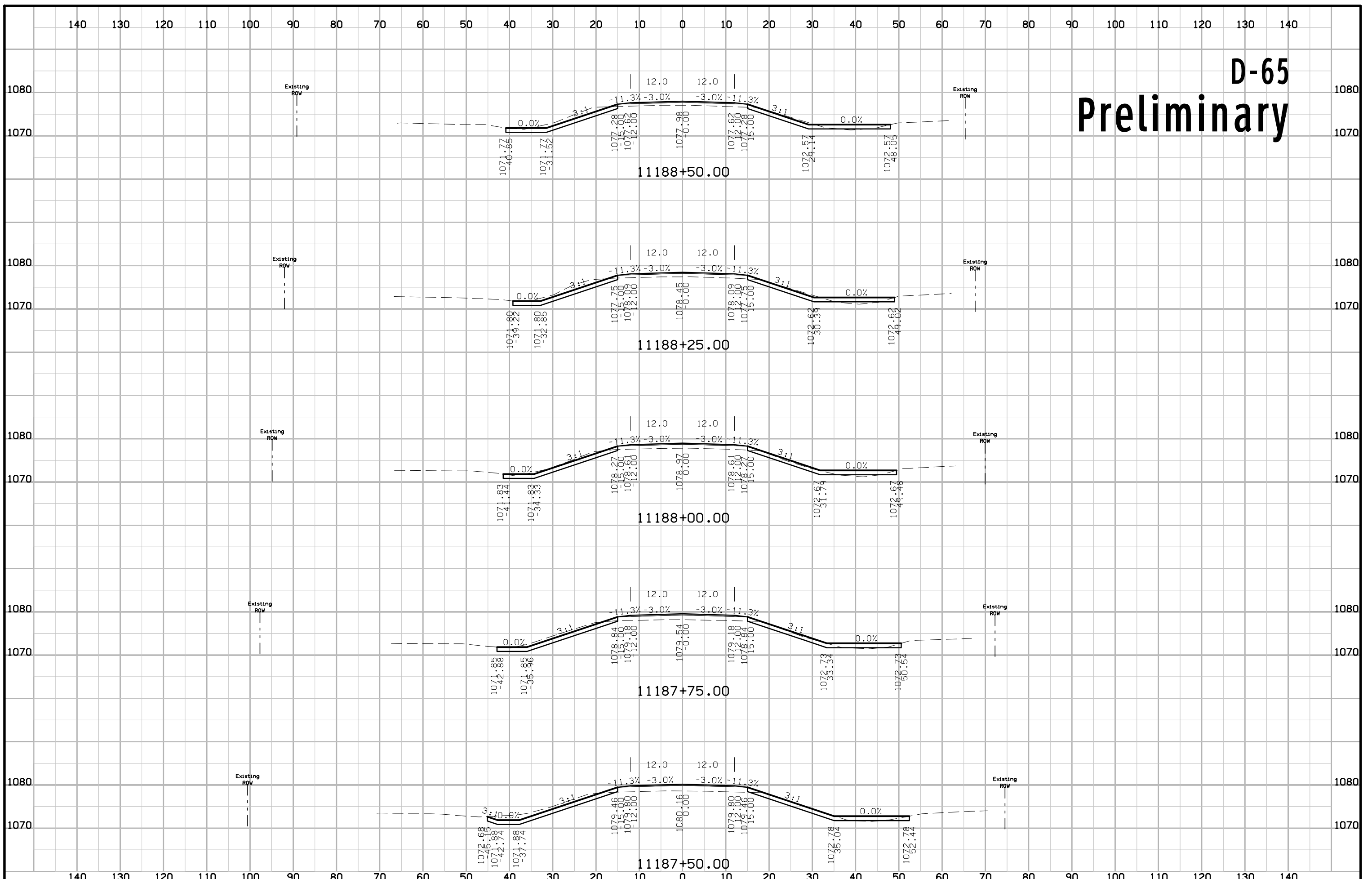
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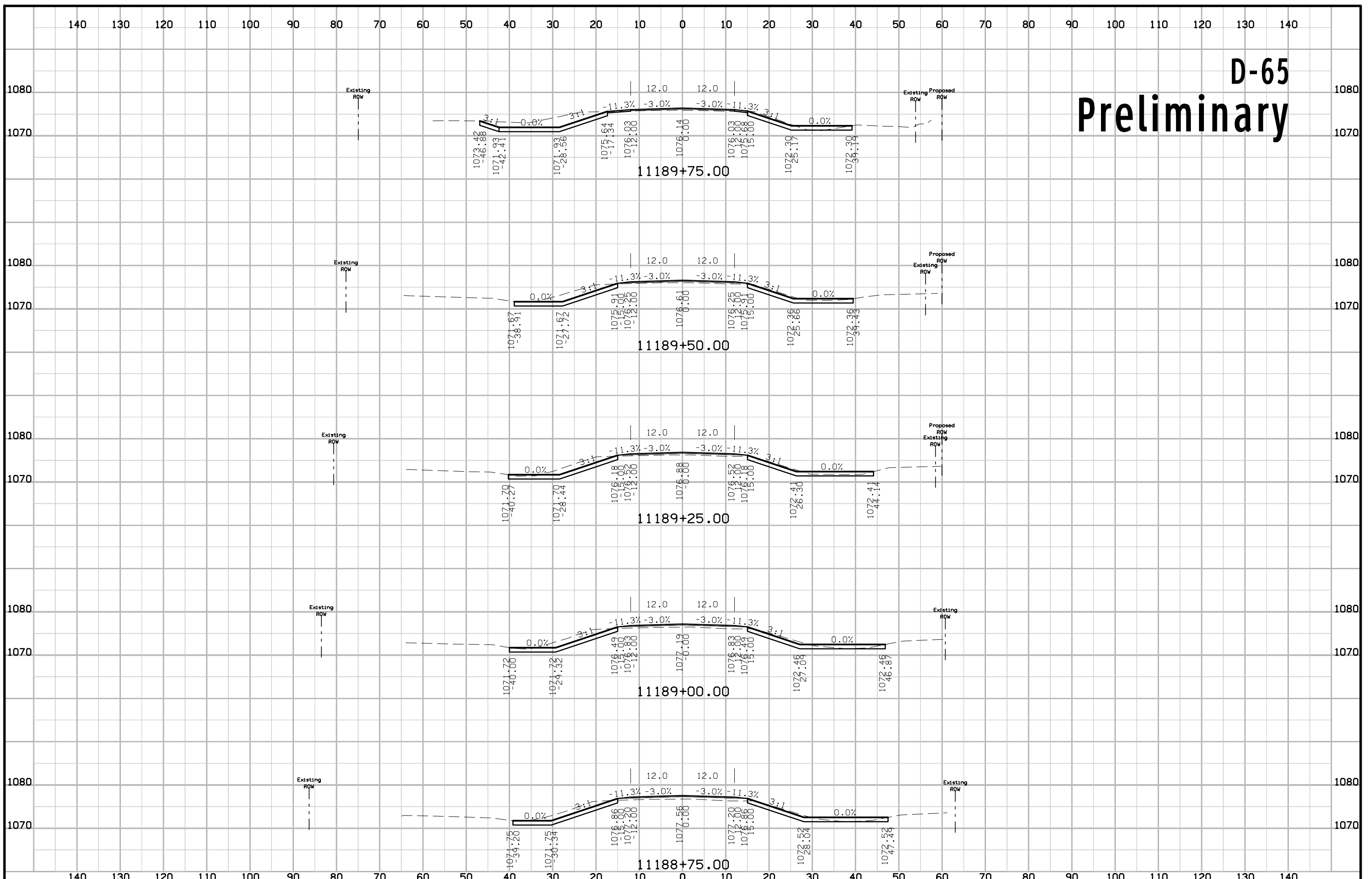
D-65 Preliminary



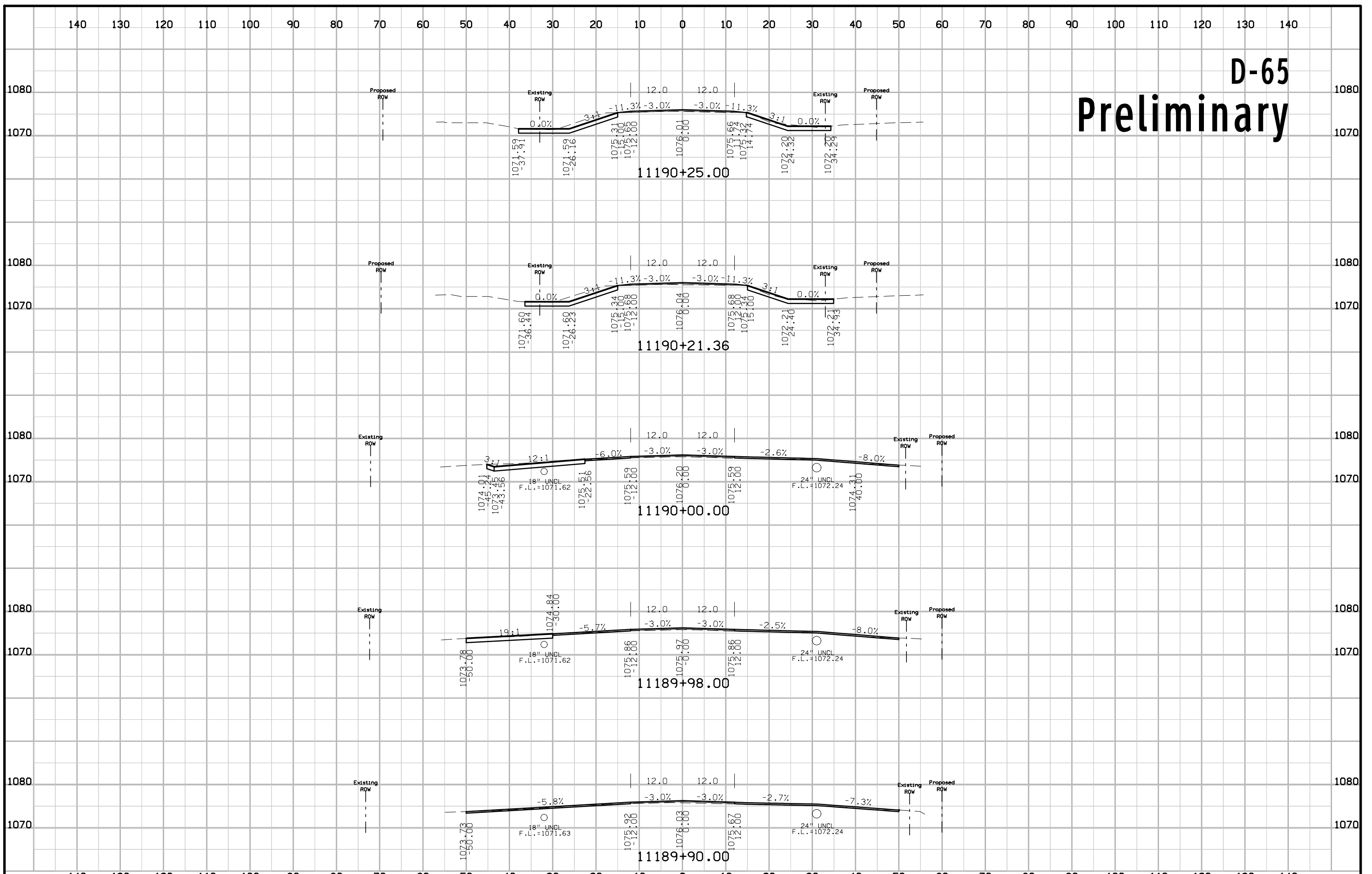
D-65 Preliminary



D-65 Preliminary



D-65 Preliminary



D-65 Preliminary

