



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

November 27, 2013

U. S. Army Corps of Engineers
Regulatory Field Office
69 Darlington Avenue
Wilmington, NC 28402-1890

ATTN: Mr. Ronnie Smith
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permits 23 and 33** for the NC 49 Intersection with SR 1144 (Mack Road) and connector road realignment with US 64 West in Randolph County, Federal Aid Project No. STPNHS-0049(30); Division 8; TIP No. U-5305

Dear Madam:

The North Carolina Department of Transportation (NCDOT) proposes to realign the NC 49 Intersection with SR 1144 (Mack Road) and the connector road with US 64 West. The connector road will be moved approximately 150 feet west of its current position to align with SR 1144. This intersection would then be signalized. This change will improve connectivity between NC 49 and US 64, relieve congestion at the intersection of NC 49 and SR 1144 and improve travel time for local residents. Traffic will be maintained during construction of the proposed project.

Please see enclosed copies of the Pre-Construction Notification (PCN), stormwater management plan, permit drawings and design plans for the above mentioned project. The Categorical Exclusion (CE) was completed in October 2012. Additional copies are available in the Environmental Docs folder at the NCDOT website under Quick Links>

Environmental Documents:

<https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598


TELEPHONE: 919-707-6000
FAX: 919-212-5785

WEBSITE: [NCDOT.GOV](http://www.ncdot.gov)

LOCATION:
CENTURY CENTER, BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

This project calls for a letting date of August 19, 2014 and a review date of July 1, 2014; however, the let date may advance as additional funding becomes available.

A copy of this permit application and its distribution list will be posted on the NCDOT website at <http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html>. If you have any questions or need additional information, please call Jason Dilday at (919) 707-6111 or jldilday@ncdot.gov.

Sincerely,

for Richard W. Hancock, P.E., Manager
Project Development and Environmental Analysis Unit

The "cc" List:

NCDOT Permit Application Standard Distribution List



Office Use Only:
 Corps action ID no. _____
 DWQ project no. _____
 Form Version 1.3 Dec 10 2008

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps: Section 404 Permit Section 10 Permit

1b. Specify Nationwide Permit (NWP) number: 23 33 or General Permit (GP) number:

1c. Has the NWP or GP number been verified by the Corps? Yes No

1d. Type(s) of approval sought from the DWQ (check all that apply):
 401 Water Quality Certification – Regular Non-404 Jurisdictional General Permit
 401 Water Quality Certification – Express Riparian Buffer Authorization

| | | |
|--|---|--|
| 1e. Is this notification solely for the record because written approval is not required? | For the record only for DWQ 401 Certification: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | For the record only for Corps Permit: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|--|---|--|

| | |
|---|---|
| 1f. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? If so, attach the acceptance letter from mitigation bank or in-lieu fee program. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|---|---|

| | |
|---|---|
| 1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|---|---|

| | |
|---|---|
| 1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|---|---|

2. Project Information

| | |
|--|--|
| 2a. Name of project: | NC 49 Intersection with SR 1144 (Mack Road) and the connector road with US 64 West |
| 2b. County: | Randolph |
| 2c. Nearest municipality / town: | Asheboro |
| 2d. Subdivision name: | <i>not applicable</i> |
| 2e. NCDOT only, T.I.P. or state project no.: | U-5305 |

3. Owner Information

| | |
|--|---|
| 3a. Name(s) on Recorded Deed: | North Carolina Department of Transportation |
| 3b. Deed Book and Page No. | <i>not applicable</i> |
| 3c. Responsible Party (for LLC if applicable): | <i>not applicable</i> |
| 3d. Street address: | 1598 Mail Service Center |
| 3e. City, state, zip: | Raleigh, NC 27699-1598 |
| 3f. Telephone no.: | (919) 707-6111 |
| 3g. Fax no.: | (919) 212-5785 |
| 3h. Email address: | jldilday@ncdot.gov |

| | |
|---|---|
| 4. Applicant Information (if different from owner) | |
| 4a. Applicant is: | <input type="checkbox"/> Agent <input type="checkbox"/> Other, specify: |
| 4b. Name: | <i>not applicable</i> |
| 4c. Business name (if applicable): | |
| 4d. Street address: | |
| 4e. City, state, zip: | |
| 4f. Telephone no.: | |
| 4g. Fax no.: | |
| 4h. Email address: | |
| 5. Agent/Consultant Information (if applicable) | |
| 5a. Name: | <i>not applicable</i> |
| 5b. Business name (if applicable): | |
| 5c. Street address: | |
| 5d. City, state, zip: | |
| 5e. Telephone no.: | |
| 5f. Fax no.: | |
| 5g. Email address: | |

| | |
|---|--|
| B. Project Information and Prior Project History | |
| 1. Property Identification | |
| 1a. Property identification no. (tax PIN or parcel ID): | <i>not applicable</i> |
| 1b. Site coordinates (in decimal degrees): | Latitude: 35.685810 (DD.DDDDDD) Longitude: - 79.837552 (-DD.DDDDDD) |
| 1c. Property size: | 50 acres |
| 2. Surface Waters | |
| 2a. Name of nearest body of water (stream, river, etc.) to proposed project: | Cedar Fork Creek |
| 2b. Water Quality Classification of nearest receiving water: | C |
| 2c. River basin: | Yadkin-Pee Dee |
| 3. Project Description | |
| 3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: Urban and Developed Land | |
| 3b. List the total estimated acreage of all existing wetlands on the property: <0.01 acre | |
| 3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 76 linear feet | |
| 3d. Explain the purpose of the proposed project: The purpose of the project is to improve connectivity between NC 49 and US 64, relieve congestion at the intersection of NC 49 and SR 1144 and improve travel time for local residents. | |
| 3e. Describe the overall project in detail, including the type of equipment to be used: The North Carolina Department of Transportation (NCDOT) proposes to realign the NC 49 Intersection with SR 1144 (Mack Road) and the connector road with US 64 West. The connector road will be relocated approximately 150 feet west of its current position to align with SR 1144. This intersection would then be signaled. Standard road building equipment, such as trucks, dozers, and cranes will be used. | |
| 4. Jurisdictional Determinations | |
| 4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown |
| 4b. If the Corps made the jurisdictional determination, what type of determination was made? | <input checked="" type="checkbox"/> Preliminary <input type="checkbox"/> Final |
| 4c. If yes, who delineated the jurisdictional areas? Name (if known): Sara Easterly | Agency/Consultant Company: Other: NCDOT |
| 4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. Field visit 2/7/2012, Preliminary JD document received 2/16/2012 by Ronnie Smith. | |
| 5. Project History | |
| 5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown |
| 5b. If yes, explain in detail according to "help file" instructions. | |
| 6. Future Project Plans | |
| 6a. Is this a phased project? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 6b. If yes, explain. | |

C. Proposed Impacts Inventory

1. Impacts Summary

1a. Which sections were completed below for your project (check all that apply):

- Wetlands Streams - tributaries Buffers
 Open Waters Pond Construction

2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

| 2a. Wetland impact number – Permanent (P) or Temporary (T) | 2b. Type of impact | 2c. Type of wetland (if known) | 2d. Forested | 2e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other) | 2f. Area of impact (acres) |
|---|-----------------------|-----------------------------------|--|---|-----------------------------------|
| Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T | Fill | Headwater Wetland | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | <input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ | <0.01 |
| Site 2 <input type="checkbox"/> P <input type="checkbox"/> T | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Corps <input type="checkbox"/> DWQ | |
| Site 3 <input type="checkbox"/> P <input type="checkbox"/> T | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Corps <input type="checkbox"/> DWQ | |
| Site 4 <input type="checkbox"/> P <input type="checkbox"/> T | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Corps <input type="checkbox"/> DWQ | |
| Site 1 <input type="checkbox"/> P <input type="checkbox"/> T Utility Impacts | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Corps <input type="checkbox"/> DWQ | |
| 2g. Total wetland impacts | | | | | <0.01 Permanent 0 Temporary |

2h. Comments: Wetland will be a total take due to fill slope of connector road.

3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

| 3a. Stream impact number - Permanent (P) or Temporary (T) | 3b. Type of impact | 3c. Stream name | 3d. Perennial (PER) or intermittent (INT)? | 3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other) | 3f. Average stream width (feet) | 3g. Impact length (linear feet) |
|---|-----------------------|------------------------|---|---|------------------------------------|------------------------------------|
| Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T | Pipe Extension | UT to Cedar Fork Creek | <input type="checkbox"/> PER <input checked="" type="checkbox"/> INT | <input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ | 2 | 14 |
| Site 2 <input type="checkbox"/> P <input checked="" type="checkbox"/> T | Pipe Extension | UT to Cedar Fork Creek | <input type="checkbox"/> PER <input checked="" type="checkbox"/> INT | <input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ | 2 | 15 |
| Site 3 <input type="checkbox"/> P <input type="checkbox"/> T | | | <input type="checkbox"/> PER <input type="checkbox"/> INT | <input type="checkbox"/> Corps <input type="checkbox"/> DWQ | | |
| Site 4 <input type="checkbox"/> P <input type="checkbox"/> T | | | <input type="checkbox"/> PER <input type="checkbox"/> INT | <input type="checkbox"/> Corps <input type="checkbox"/> DWQ | | |
| Site 5 <input type="checkbox"/> P <input type="checkbox"/> T | | | <input type="checkbox"/> PER <input type="checkbox"/> INT | <input type="checkbox"/> Corps <input type="checkbox"/> DWQ | | |
| Site 6 <input type="checkbox"/> P <input type="checkbox"/> T | | | <input type="checkbox"/> PER <input type="checkbox"/> INT | <input type="checkbox"/> Corps <input type="checkbox"/> DWQ | | |
| 3h. Total stream and tributary impacts | | | | | | 14 Perm 15 Temp |

3i. Comments: Stream impacts are due to pipe extension from the fill slope.

4. Open Water Impacts

If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.

| 4a. Open water impact number – Permanent (P) or Temporary (T) | 4b. Name of waterbody (if applicable) | 4c. Type of impact | 4d. Waterbody type | 4e. Area of impact (acres) |
|--|--|-----------------------|-----------------------|-------------------------------|
| O1 <input type="checkbox"/> P <input type="checkbox"/> T | | | | |
| O2 <input type="checkbox"/> P <input type="checkbox"/> T | | | | |
| O3 <input type="checkbox"/> P <input type="checkbox"/> T | | | | |
| O4 <input type="checkbox"/> P <input type="checkbox"/> T | | | | |
| 4f. Total open water impacts | | | | 0 Permanent 0 Temporary |

4g. Comments:

5. Pond or Lake Construction

If pond or lake construction proposed, then complete the chart below.

| 5a. Pond ID number | 5b. Proposed use or purpose of pond | 5c. Wetland Impacts (acres) | | | 5d. Stream Impacts (feet) | | | 5e. Upland (acres) |
|-----------------------|--|--------------------------------|--------|-----------|------------------------------|--------|-----------|-----------------------|
| | | Flooded | Filled | Excavated | Flooded | Filled | Excavated | Flooded |
| P1 | | | | | | | | |
| P2 | | | | | | | | |
| 5f. Total | | | | | | | | |

5g. Comments:

| | | | |
|---|------------------------------|-----------------------------|-----------------------|
| 5h. Is a dam high hazard permit required? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | If yes, permit ID no: |
| 5i. Expected pond surface area (acres): | | | |
| 5j. Size of pond watershed (acres): | | | |
| 5k. Method of construction: | | | |

6. Buffer Impacts (for DWQ)

If project will impact a protected riparian buffer, then complete the chart below. If yes, then individually list all buffer impacts below. If any impacts require mitigation, then you **MUST** fill out Section D of this form.

| | | | | | |
|--|--------------------------|--------------------|--|--|--|
| 6a. Project is in which protected basin? | | | <input type="checkbox"/> Neuse <input type="checkbox"/> Catawba | <input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Randleman | <input type="checkbox"/> Other: Jordan |
| 6b. Buffer impact number – Permanent (P) or Temporary (T) | 6c. Reason for impact | 6d. Stream name | 6e. Buffer mitigation required? | 6f. Zone 1 impact (square feet) | 6g. Zone 2 impact (square feet) |
| B1 <input type="checkbox"/> P <input type="checkbox"/> T | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| B2 <input type="checkbox"/> P <input type="checkbox"/> T | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| B3 <input type="checkbox"/> P <input type="checkbox"/> T | | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| 6h. Total buffer impacts | | | | | 0 |
| 6i. Comments: | | | | | |

| | | |
|---|--|----------|
| D. Impact Justification and Mitigation | | |
| 1. Avoidance and Minimization | | |
| 1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project. See Stormwater Management Plan. The project is a widening project in an urban setting, with a limited available corridor for project improvements. Impacts to surface water bodies are limited to one intermittent stream and one small riparian wetland (<0.01 acre) along the project. Grassed roadway ditches, meeting grass swale criteria, will be used to reduce velocities and promote infiltration. | | |
| 1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Best Management Practices for Surface Waters will be used during all phases of construction. | | |
| 2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State | | |
| 2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No No mitigation required per conversation with Ronnie Smith (USACE) on 11/18/2013. | |
| | <input type="checkbox"/> DWQ <input type="checkbox"/> Corps | |
| 2c. If yes, which mitigation option will be used for this project? | <input type="checkbox"/> Mitigation bank <input type="checkbox"/> Payment to in-lieu fee program <input type="checkbox"/> Permittee Responsible Mitigation | |
| 3. Complete if Using a Mitigation Bank | | |
| 3a. Name of Mitigation Bank: not applicable | | |
| 3b. Credits Purchased (attach receipt and letter) | Type | Quantity |
| 3c. Comments: | | |
| 4. Complete if Making a Payment to In-lieu Fee Program | | |
| 4a. Approval letter from in-lieu fee program is attached. | <input type="checkbox"/> Yes | |
| 4b. Stream mitigation requested: | 0 linear feet | |
| 4c. If using stream mitigation, stream temperature: | <input type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold | |
| 4d. Buffer mitigation requested (DWQ only): | 0 square feet | |
| 4e. Riparian wetland mitigation requested: | 0 acres | |
| 4f. Non-riparian wetland mitigation requested: | 0 acres | |
| 4g. Coastal (tidal) wetland mitigation requested: | 0 acres | |
| 4h. Comments: | | |
| 5. Complete if Using a Permittee Responsible Mitigation Plan | | |
| 5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan. | | |

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ

6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation? Yes No

6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.

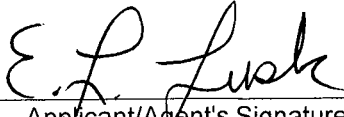
| Zone | 6c. Reason for impact | 6d. Total impact (square feet) | Multiplier | 6e. Required mitigation (square feet) |
|--|--------------------------|--------------------------------------|------------|---|
| Zone 1 | | | | |
| Zone 2 | | | | |
| 6f. Total buffer mitigation required: | | | | |

6g. If buffer mitigation is required, discuss what type of mitigation is proposed (e.g., payment to private mitigation bank, permittee responsible riparian buffer restoration, payment into an approved in-lieu fee fund).

6h. Comments:

| E. Stormwater Management and Diffuse Flow Plan (required by DWQ) | |
|---|---|
| 1. Diffuse Flow Plan | |
| 1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments: Buffer impact calculations not done, due to being a "grandfathered" project. | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 2. Stormwater Management Plan | |
| 2a. What is the overall percent imperviousness of this project? | N/A |
| 2b. Does this project require a Stormwater Management Plan? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 2c. If this project DOES NOT require a Stormwater Management Plan, explain why: | |
| 2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan: See attached. | |
| 2e. Who will be responsible for the review of the Stormwater Management Plan? | <input type="checkbox"/> Certified Local Government <input type="checkbox"/> DWQ Stormwater Program <input checked="" type="checkbox"/> DWQ 401 Unit |
| 3. Certified Local Government Stormwater Review | |
| 3a. In which local government's jurisdiction is this project? | not applicable |
| 3b. Which of the following locally-implemented stormwater management programs apply (check all that apply): | <input type="checkbox"/> Phase II <input type="checkbox"/> NSW <input type="checkbox"/> USMP <input type="checkbox"/> Water Supply Watershed <input type="checkbox"/> Other: |
| 3c. Has the approved Stormwater Management Plan with proof of approval been attached? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 4. DWQ Stormwater Program Review | |
| 4a. Which of the following state-implemented stormwater management programs apply (check all that apply): | <input type="checkbox"/> Coastal counties <input type="checkbox"/> HQW <input type="checkbox"/> ORW <input type="checkbox"/> Session Law 2006-246 <input type="checkbox"/> Other: |
| 4b. Has the approved Stormwater Management Plan with proof of approval been attached? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 5. DWQ 401 Unit Stormwater Review | |
| 5a. Does the Stormwater Management Plan meet the appropriate requirements? | <input type="checkbox"/> Yes NA <input type="checkbox"/> No NA |
| 5b. Have all of the 401 Unit submittal requirements been met? | <input type="checkbox"/> Yes NA <input type="checkbox"/> No NA |

| F. Supplementary Information | |
|---|--|
| 1. Environmental Documentation (DWQ Requirement) | |
| 1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) Comments: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 2. Violations (DWQ Requirement) | |
| 2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2b. Is this an after-the-fact permit application? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s): | |
| 3. Cumulative Impacts (DWQ Requirement) | |
| 3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 3b. If you answered "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description. An ICE assessment conducted in 2007 concluded that the project will not result in indirect effects in the form of change in land use or growth. The project will not result in cumulative impacts in the study area. | |
| 4. Sewage Disposal (DWQ Requirement) | |
| 4a. Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility. not applicable | |

| | | |
|---|---|--|
| 5. Endangered Species and Designated Critical Habitat (Corps Requirement) | | |
| 5a. Will this project occur in or near an area with federally protected species or habitat? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 5b. Have you checked with the USFWS concerning Endangered Species Act impacts? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 5c. If yes, indicate the USFWS Field Office you have contacted. | <input type="checkbox"/> Raleigh <input type="checkbox"/> Asheville | |
| 5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? N.C. Natural Heritage Program database; USFWS-Raleigh Field Office website; biological surveys for protected species listed for Randolph County, which include Cape Fear shiner and Schweinitz's sunflower. All species received a Biological Conclusion of "No Effect". No habitat is present for Cape Fear shiner. Marginal habitat is present for Schweinitz's sunflower, however surveys conducted of the study area (updated 9/12/2012) resulted in no specimens being found. No incidents of the species occur within one mile of the project area. | | |
| 6. Essential Fish Habitat (Corps Requirement) | | |
| 6a. Will this project occur in or near an area designated as essential fish habitat? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index | | |
| 7. Historic or Prehistoric Cultural Resources (Corps Requirement) | | |
| 7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation | | |
| 8. Flood Zone Designation (Corps Requirement) | | |
| 8a. Will this project occur in a FEMA-designated 100-year floodplain? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics Unit coordination with FEMA | | |
| 8c. What source(s) did you use to make the floodplain determination? FEMA Maps | | |
| Richard W. Hancock, P.E. Applicant/Agent's Printed Name |  Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.) | 12.2-13 Date |



North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR LINEAR ROADWAY PROJECTS



(Version 1.2; Released September 2011)

Project/TIP No.: U-5305 **County(ies):** Randolph **Page** 1 **of** 1

General Project Information

| | | | | | |
|---|--|--------------------------------|--------------------|--------------|------------|
| Project No.: | U-5305 | Project Type: | Roadway Relocation | Date: | 10/18/2013 |
| NCDOT Contact: | Stephen R. Morgan, PE | Contractor / Designer: | | | |
| Address: | 1020 Birch Ridge Road Raleigh, NC 27601 | Address: | | | |
| Phone: | (919) 707-6739 | Phone: | | | |
| Email: | smorgan@ncdot.gov | Email: | | | |
| City/Town: | | County(ies): | Randolph | | |
| River Basin(s): | Yadkin-Pee Dee | CAMA County? | No | | |
| Primary Receiving Water: | Unnamed Tributary of Cedar Fork Creek | NCDWQ Stream Index No.: | 13-2-3-3-2 | | |
| NCDWQ Surface Water Classification for Primary Receiving Water | | Primary: | Class C | | |
| | | Supplemental: | None | | |
| Other Stream Classification: | None | | | | |
| 303(d) Impairments: | None | | | | |
| Buffer Rules in Effect | N/A | | | | |

Project Description

| | | | |
|---|---|------------------------------|---|
| Project Length (lin. Miles or feet): | 0.260 miles | Surrounding Land Use: | rural residential, commercial developments, woodlands, and open space preserved |
| | Proposed Project | | Existing Site |
| Project Built-Upon Area (ac.) | ac. | | ac. |
| Typical Cross Section Description: | Four 12 foot lanes with 4 foot median, normal crown | | |
| Average Daily Traffic (veh/hr/day): | Design/Future: ADT 2040 = 5600 | Existing: | ADT = 4400 |

General Project Narrative:

The project is located in the Yadkin-Pee Dee River Basin. The proposed realignment is over Unnamed Tributary of Cedar Fork Creek which is classified as C. The surrounding land use is rural residential, commercial developments, woodlands, and open space preserved. Impacts resulting from the job include: 0.0035 acre fill in wetlands, 0.0016 acre of permanent surface water impacts and 0.006 acre of temporary surface water impacts. BMPs used on the job are primarily non-structural and consist of methods to attenuate and disperse stormwater before entering the receiving waters. The primary BMP on this project is the grassed roadway ditches (which meet grass swale criteria). Grass swales were used to reduce velocities and promote infiltration. Grass swales remove suspended solids, metals, and nutrients through sedimentation, vegetative filtration, infiltration, and biological uptake.

References

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

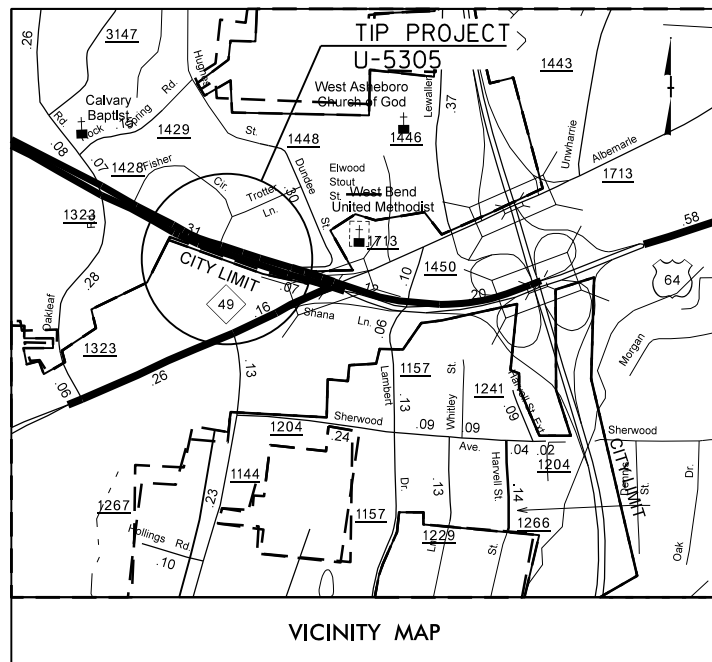
RANDOLPH COUNTY

LOCATION: ASHEBORO- NC 49 INTERSECTION WITH SR 1144 (MACK ROAD) AND CONNECTOR ROAD REALIGNMENT WITH US 64 WEST
TYPE OF WORK: GRADING, DRAINAGE, PAVING, CURB & GUTTER AND TRAFFIC SIGNALS

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | U-5305 | 1 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 47025.1.1 | STPNHS-0049(30) | PE | |
| 47025.2.1 | STPNHS-0049(30) | ROW | |
| 47025.2.U1 | STPNHS-0049(30) | UTL | |

Permit Drawing 1 of 4

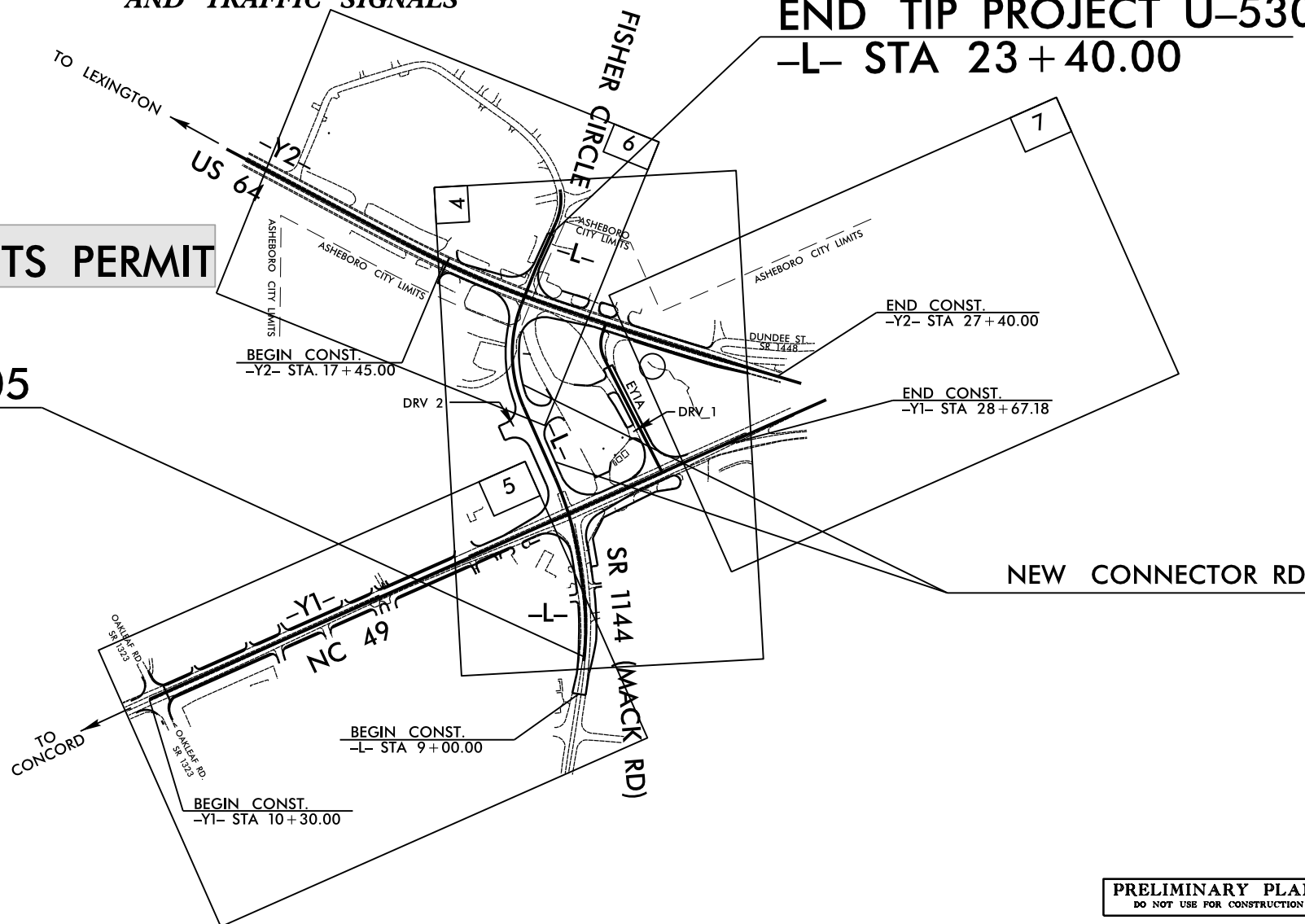
TIP PROJECT: U-5305



END TIP PROJECT U-5305
-L- STA 23 + 40.00

WETLAND AND SURFACE WATER IMPACTS PERMIT

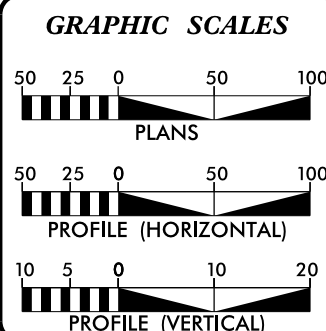
BEGIN TIP PROJECT U-5305
-L- STA 9 + 66.96



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF ASHEBORO.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:



DESIGN DATA

| | |
|---------------|-----------------|
| ADT 2015 = | 4400 |
| ADT 2040 = | 5600 |
| DHV = | 11 % |
| D = | 90 % |
| T = | 9 % * |
| V = | 35 MPH |
| * TTST = | 6% DUAL 3% |
| FUNC CLASS = | URBAN, ARTERIAL |
| REGIONAL TIER | |

PROJECT LENGTH

| | |
|-------------------------------------|-------------|
| LENGTH ROADWAY TIP PROJECT U-5305 = | 0.260 MILES |
| TOTAL LENGTH TIP PROJECT U-5305 = | 0.260 MILES |

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

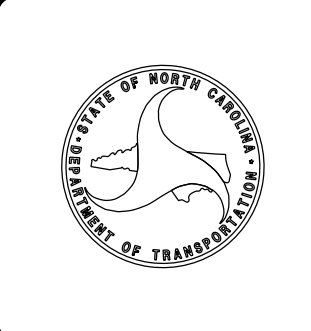
| 2012 STANDARD SPECIFICATIONS | |
|---------------------------------------|---|
| RIGHT OF WAY DATE: AUGUST 30, 2013 | JAMES A. SPEER, PE PROJECT ENGINEER |
| LETTING DATE: AUGUST 19, 2014 | ALLISON K. WHITE PROJECT DESIGN ENGINEER |

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



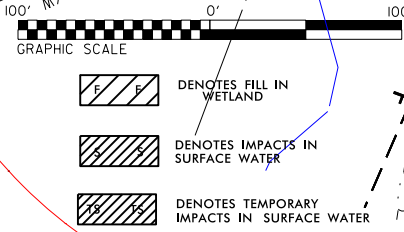
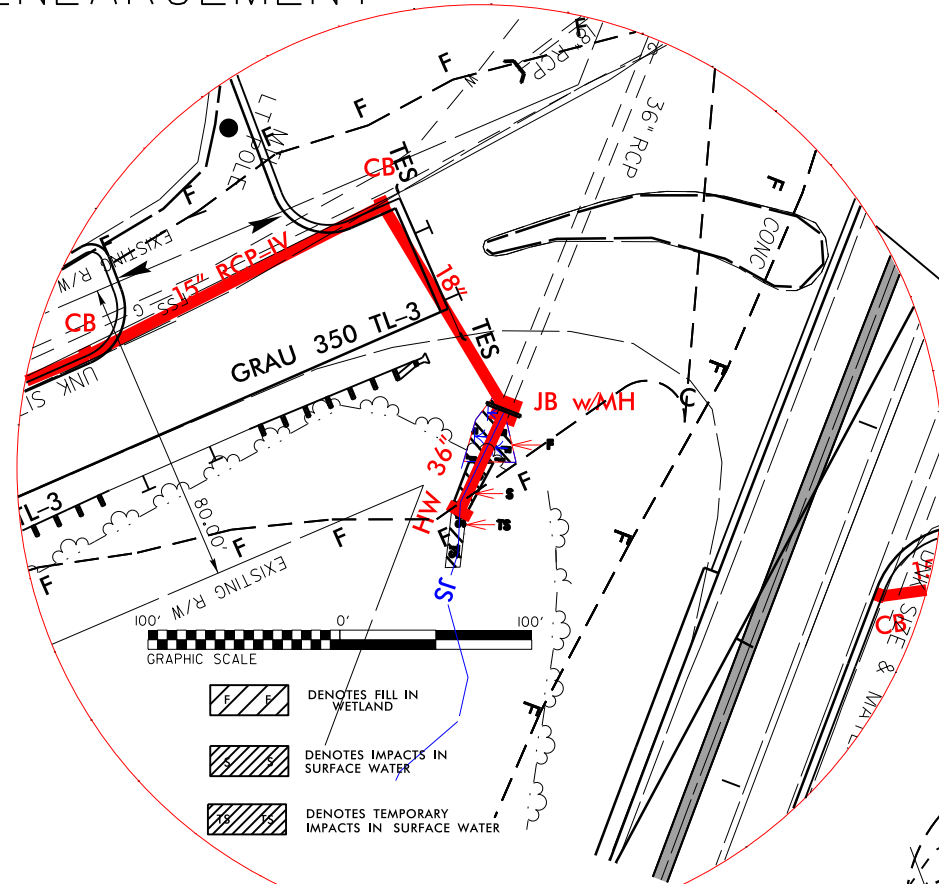
\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DDGN\$\$\$\$\$
\$\$\$\$\$SERNAME\$\$\$\$\$

WETLAND AND SURFACE WATER IMPACTS PERMIT

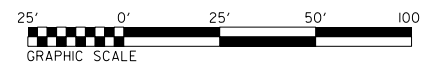
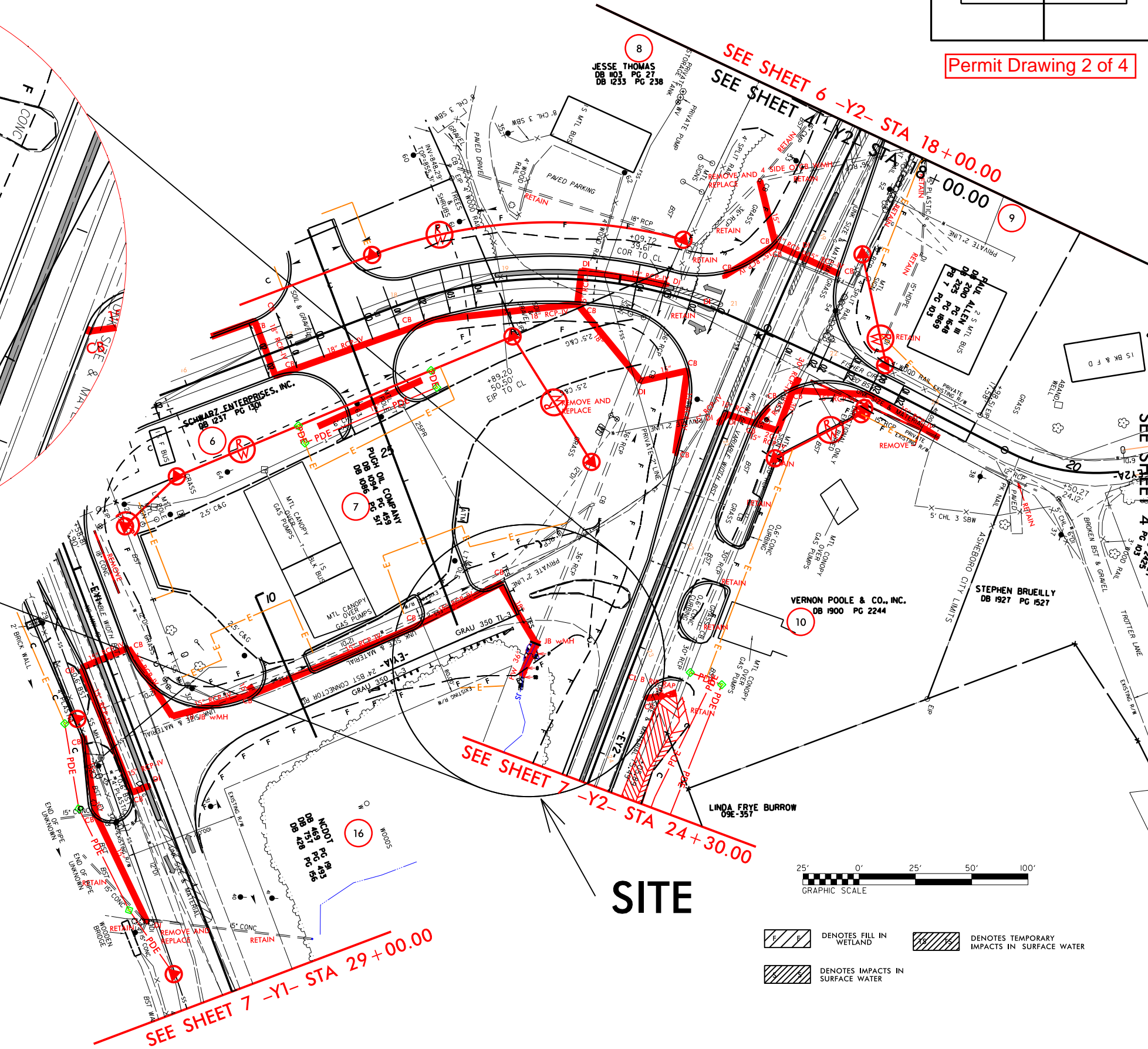
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|---|--|-----------------------|--|
| PROJECT REFERENCE NO. U-5305 | | SHEET NO. 4 | |
| RW SHEET NO. | | | |
| ROADWAY DESIGN ENGINEER | | HYDRAULICS ENGINEER | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | | | |

Permit Drawing 2 of 4

ENLARGEMENT



- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SITE

REVISIONS

8/17/99

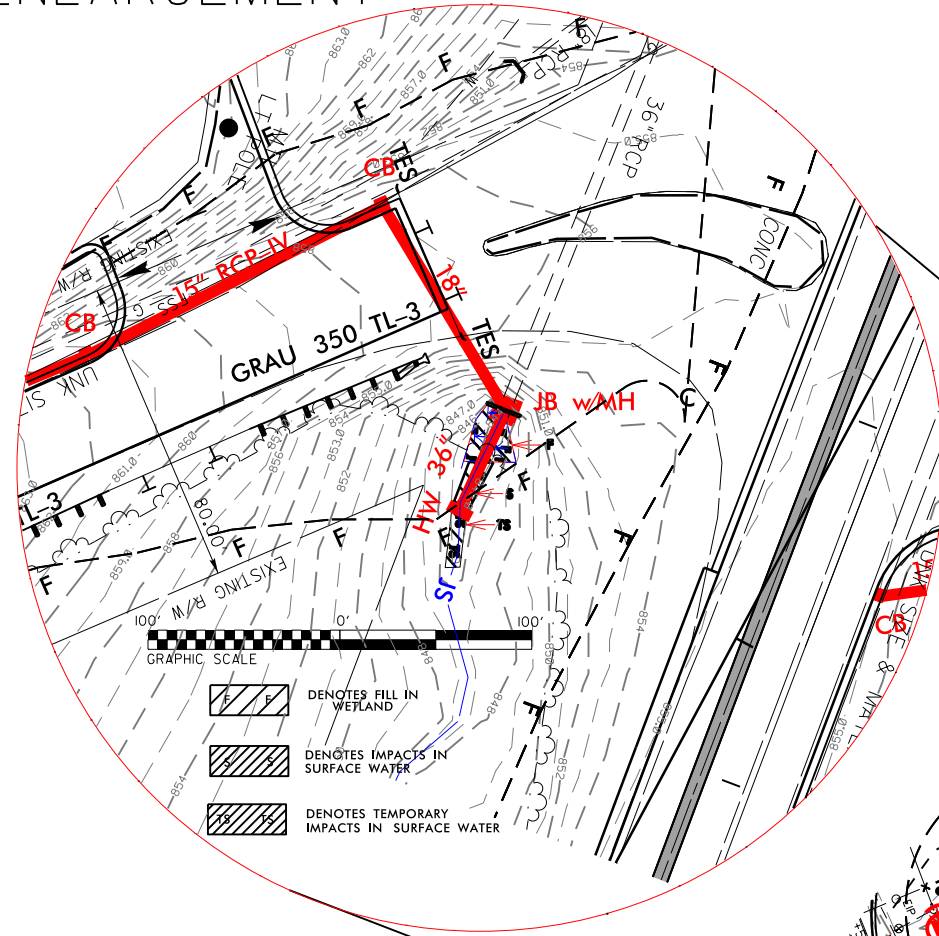
\$\$\$\$\$\$
 SYSTEMS DESIGN
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WETLAND AND SURFACE WATER IMPACTS PERMIT

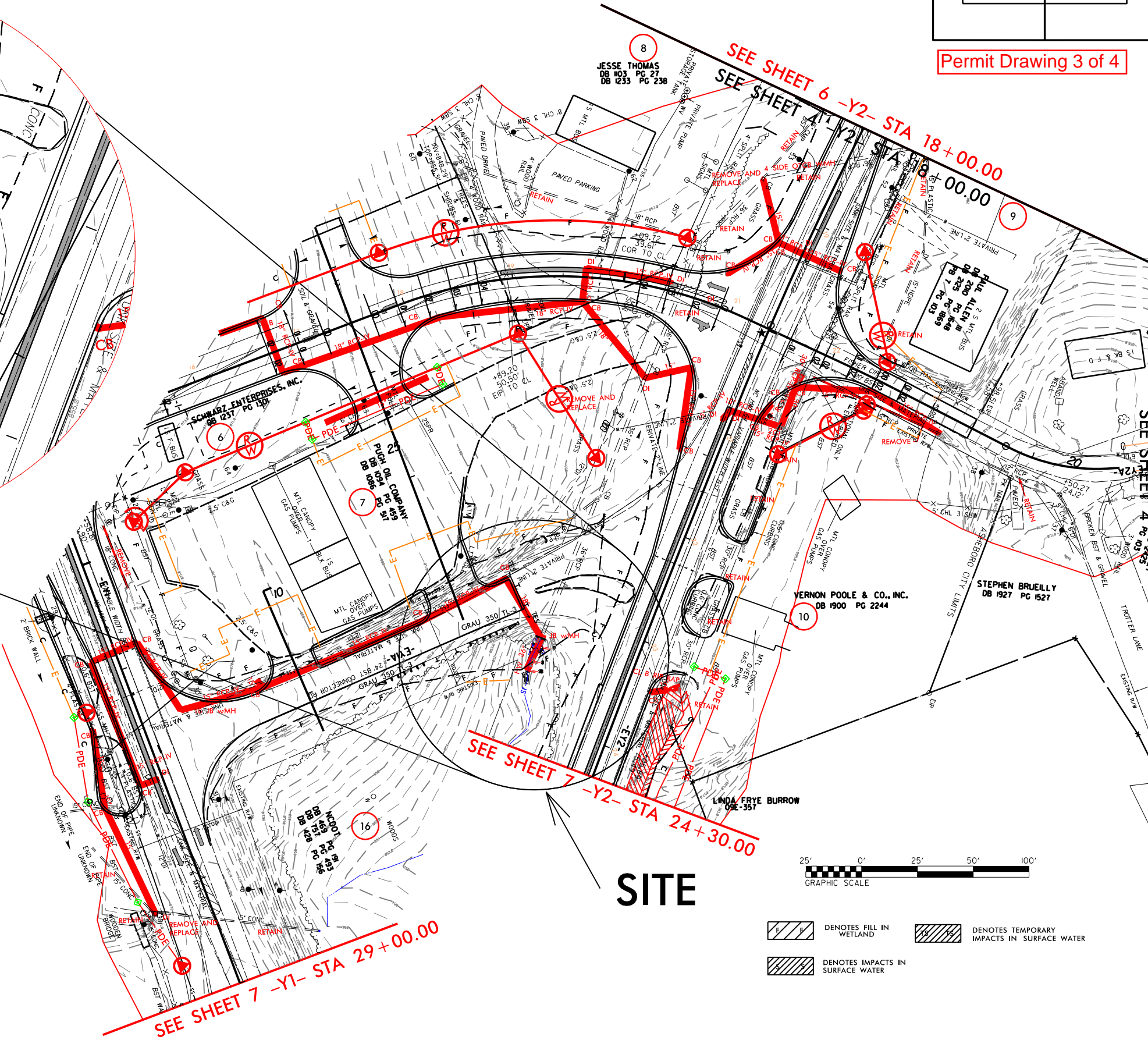
| | |
|---|---------------------|
| PROJECT REFERENCE NO. | SHEET NO. |
| U-5305 | 4 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |

Permit Drawing 3 of 4

ENLARGEMENT



- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



SITE

- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

REVISIONS

8/17/99

SYSTEMS DESIGN

WETLAND PERMIT IMPACT SUMMARY

| Site No. | Station (From/To) | Structure Size / Type | WETLAND IMPACTS | | | | | SURFACE WATER IMPACTS | | | | |
|----------------|-------------------|-------------------------|---------------------------------|-----------------------------|-----------------------------|--------------------------------------|--------------------------------|---------------------------|-----------------------|---|-------------------------------------|----------------------------|
| | | | Permanent Fill In Wetlands (ac) | Temp. Fill In Wetlands (ac) | Excavation in Wetlands (ac) | Mechanized Clearing in Wetlands (ac) | Hand Clearing in Wetlands (ac) | Permanent SW impacts (ac) | Temp. SW impacts (ac) | Existing Channel Impacts Permanent (ft) | Existing Channel Impacts Temp. (ft) | Natural Stream Design (ft) |
| 1 | EY1A STA 13+45 | 36" RCP Temp. Const. | <0.01 | | | | | <0.01 | <0.01 | 14 | 15 | |
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| TOTALS: | | | <0.01 | | | | | <0.01 | <0.01 | 14 | 15 | |

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

RANDOLPH COUNTY
WBS - 47025.1.1 (U5305)

Permit Drawing 4 of 4

See Sheet 1-A For Index of Sheets

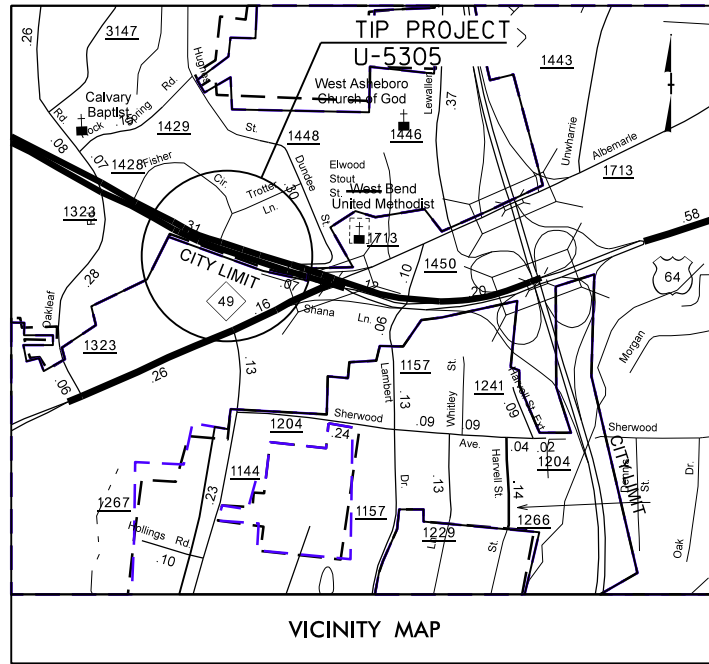
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

RANDOLPH COUNTY

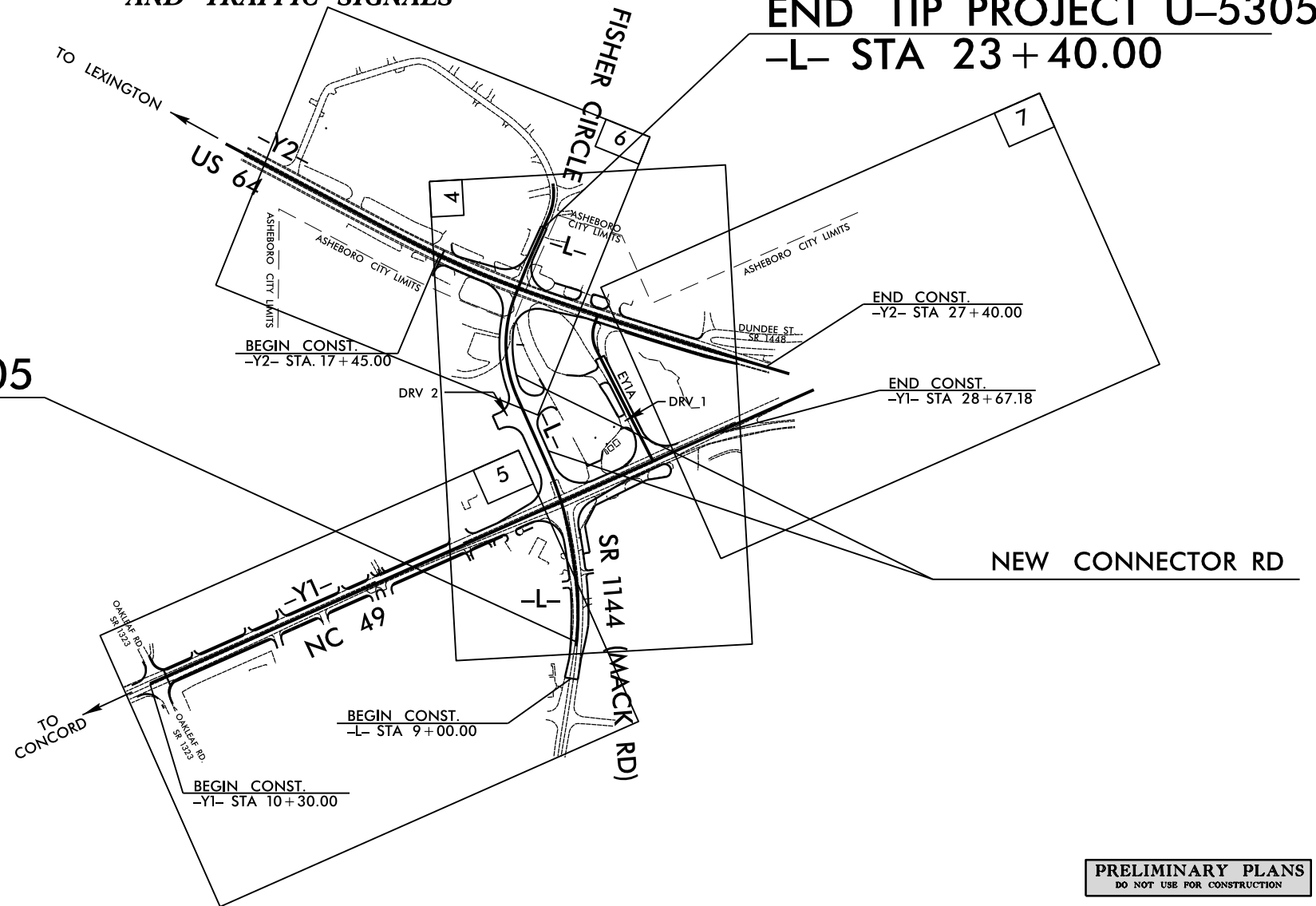
**LOCATION: ASHEBORO- NC 49 INTERSECTION WITH
SR 1144 (MACK ROAD) AND CONNECTOR
ROAD REALIGNMENT WITH US 64 WEST**
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, CURB & GUTTER
AND TRAFFIC SIGNALS**

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | U-5305 | 1 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 47025.1.1 | STPNHS-0049(30) | PE | |
| 47025.2.1 | STPNHS-0049(30) | ROW | |
| 47025.2.U1 | STPNHS-0049(30) | UTL | |
| | | | |
| | | | |
| | | | |

**END TIP PROJECT U-5305
-L- STA 23 + 40.00**



**BEGIN TIP PROJECT U-5305
-L- STA 9 + 66.96**



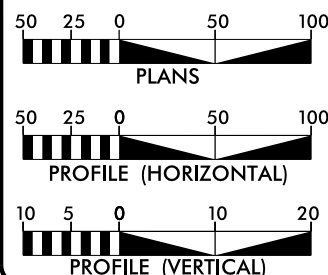
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF ASHEBORO.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

TIP PROJECT: U-5305

CONTRACT:

GRAPHIC SCALES



DESIGN DATA

ADT 2015 = 4400
ADT 2040 = 5600
DHV = 11 %
D = 90 %
T = 9 % *
V = 35 MPH
* TTST = 6% DUAL 3%
FUNC CLASS =
URBAN, ARTERIAL
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5305 = 0.260 MILES
TOTAL LENGTH TIP PROJECT U-5305 = 0.260 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
AUGUST 30, 2013

LETTING DATE:
AUGUST 19, 2014

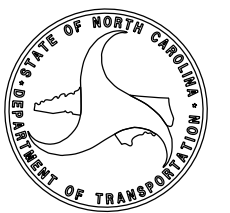
JAMES A. SPEER, PE
PROJECT ENGINEER

ALLISON K. WHITE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



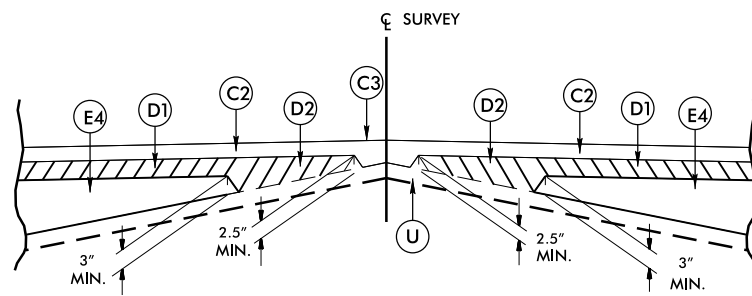
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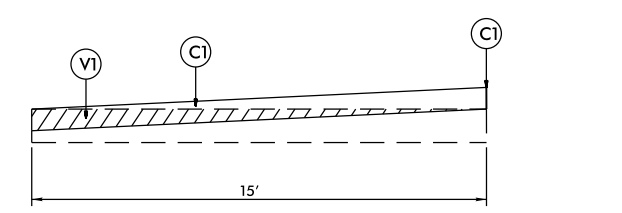
6/2/99

| PAVEMENT SCHEDULE | |
|-------------------|---|
| C1 | PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD. |
| C2 | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD. IN EACH OF TWO LAYERS. |
| C3 | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH. |
| D1 | PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD. |
| D2 | PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH. |
| E1 | PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD. |
| E2 | PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 827 LBS. PER SQ.YD. |
| E3 | PROP. APPROX. 7" ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 798 LBS. PER SQ.YD. |
| E4 | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH. |
| R1 | PROPOSED 2'-6" CONCRETE CURB AND GUTTER |
| R2 | PROPOSED 5" CONCRETE MONOLITHIC ISLAND |
| T | EARTH MATERIAL |
| U | EXISTING PAVEMENT. |
| V1 | MILLING BITUMINOUS PAVEMENT. 0" - 1.5" DEPTH. |
| V2 | MILLING BITUMINOUS PAVEMENT. 0" - 3.0" DEPTH. |
| W | VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL) |

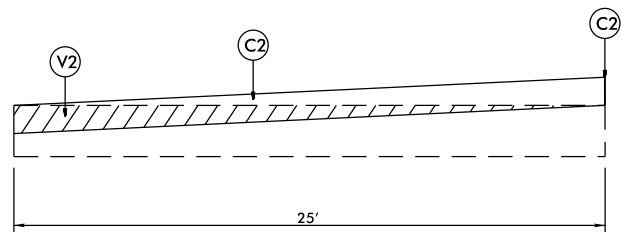
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



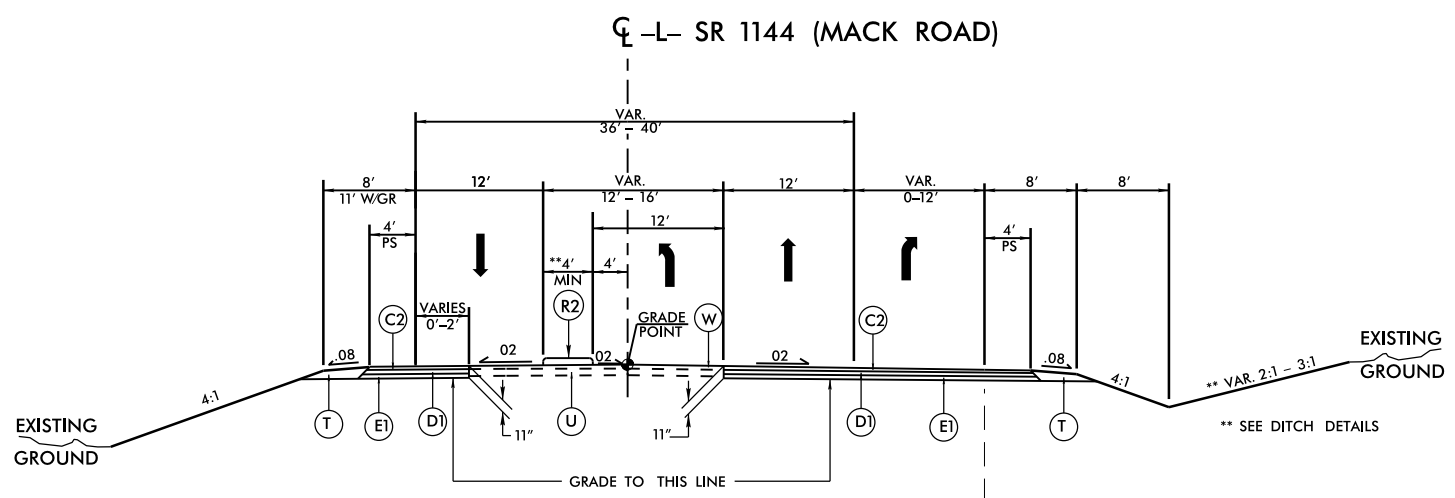
Detail Showing Method of Wedging on -L-, -Y1- and -Y2-



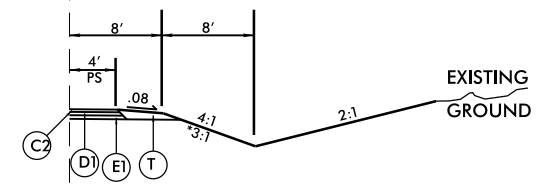
Milling Detail and Resurfacing (-Y2-)



Milling Detail and Resurfacing (-L- AND -Y1-)

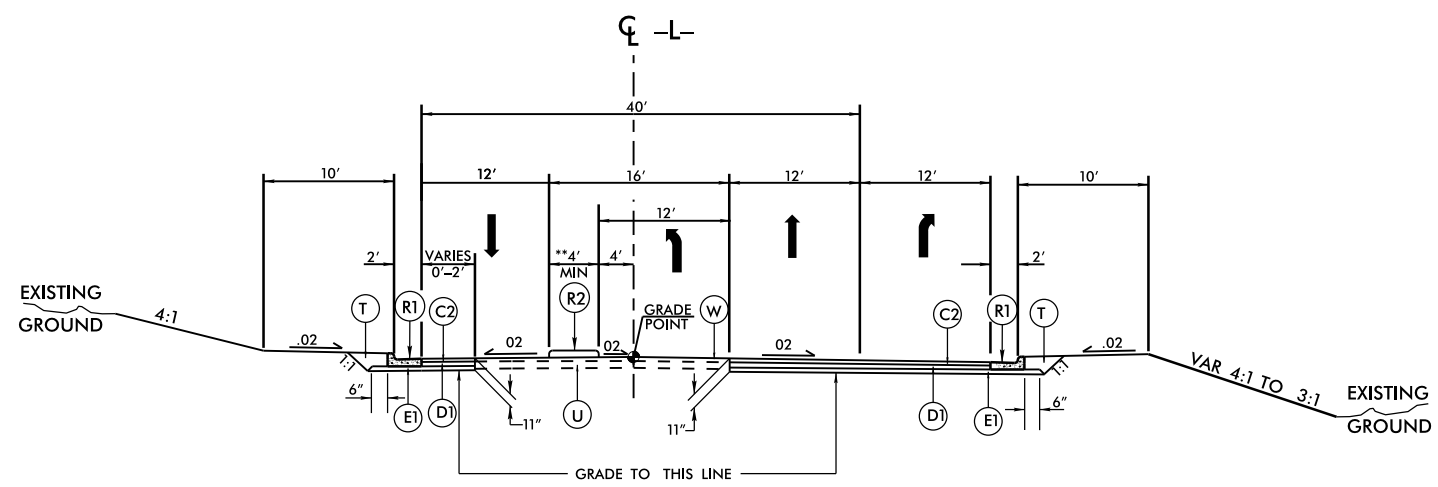


TYPICAL SECTION NO. 1



INSET NO. 1 **

USE WITH TYPICAL SECTIONS NO. 1, AND 2



TYPICAL SECTION NO. 2

| | |
|---|--------------------------|
| PROJECT REFERENCE NO. U-5305 | SHEET NO. 2 |
| ROADWAY DESIGN ENGINEER | PAVEMENT DESIGN ENGINEER |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |

TRANSITION FROM EXISTING TO TYPICAL NO. 1
-L- STA 9+00.00 TO STA 9+75.00

USE TYPICAL SECTION NO. 1 AS FOLLOWS

*SEE PLANS FOR ISLAND LOCATION
-L- STA. 9+75.00 TO STA 10+65.00

NOTE: PER DRAINAGE REC.S
* -L- STA 10+50.00 TO STA 12+00.00 RT
-L- STA 10+50.00 TO STA 12+00.00 LT

NOTE: MILL AND RESURFACE WITH V2 AND C2
-L- STA 9+00.00 TO STA 9+25.00

NOTE: RESURFACE WITH C2
-L- STA 9+25.00 TO STA 9+75.00

USE INSET NO. 1 AS FOLLOWS

* ISLAND LOCATED RIGHT OF CENTERLINE
-L- STA. 12+12.70 TO STA 14+12.80
* -L- STA. 14+79.24 TO STA 15+69.02
-L- STA. 18+89.95 TO STA 20+93.11

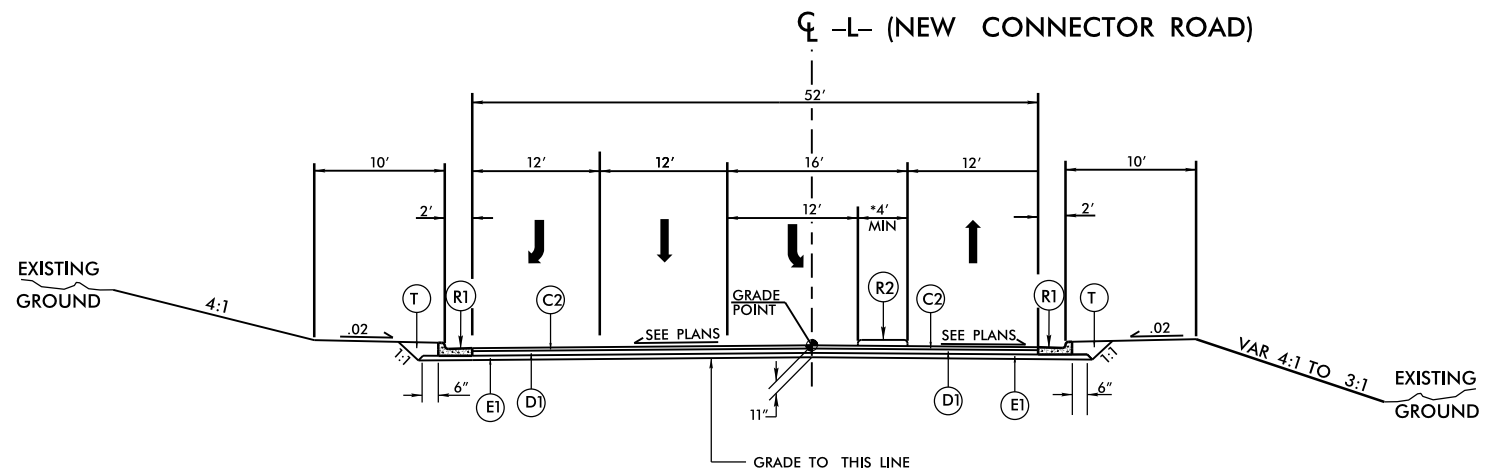
USE TYPICAL SECTION NO. 2 AS FOLLOWS

*SEE PLANS FOR ISLAND LOCATION
-L- STA. 10+65.00 TO STA 14+47.32

30-AUG-2013 15:59 R:\PROJECTS\U-5305-Rdy+typ.dgn

| PAVEMENT SCHEDULE | |
|-------------------|---|
| C1 | PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD. |
| C2 | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. IN EACH OF TWO LAYERS. |
| C3 | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH. |
| D1 | PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD. |
| D2 | PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH. |
| E1 | PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD. |
| E2 | PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ.YD. |
| E3 | PROP. APPROX. 7" ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 798 LBS. PER SQ.YD. |
| E4 | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH. |
| R1 | PROPOSED 2'-6" CONCRETE CURB AND GUTTER |
| R2 | PROPOSED 5" CONCRETE MONOLITHIC ISLAND |
| T | EARTH MATERIAL |
| U | EXISTING PAVEMENT. |
| V1 | MILLING BITUMINOUS PAVEMENT. 0" - 1.5" DEPTH. |
| V2 | MILLING BITUMINOUS PAVEMENT. 0" - 3.0" DEPTH. |
| W | VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL) |

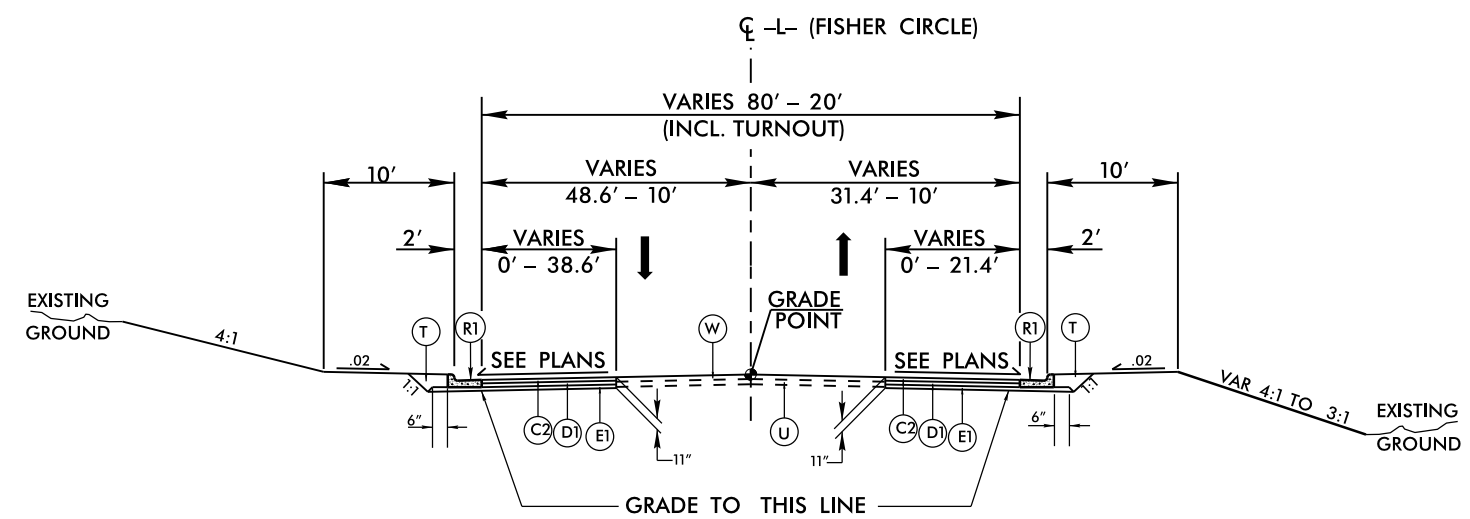
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3 AS FOLLOWS

*SEE PLANS FOR ISLAND LOCATION
-L- STA. 14+47.32 TO STA 21+37.65

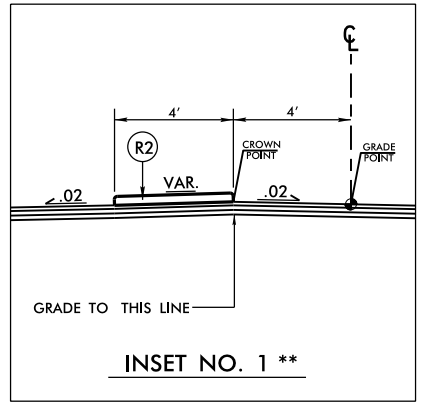


TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4 AS FOLLOWS

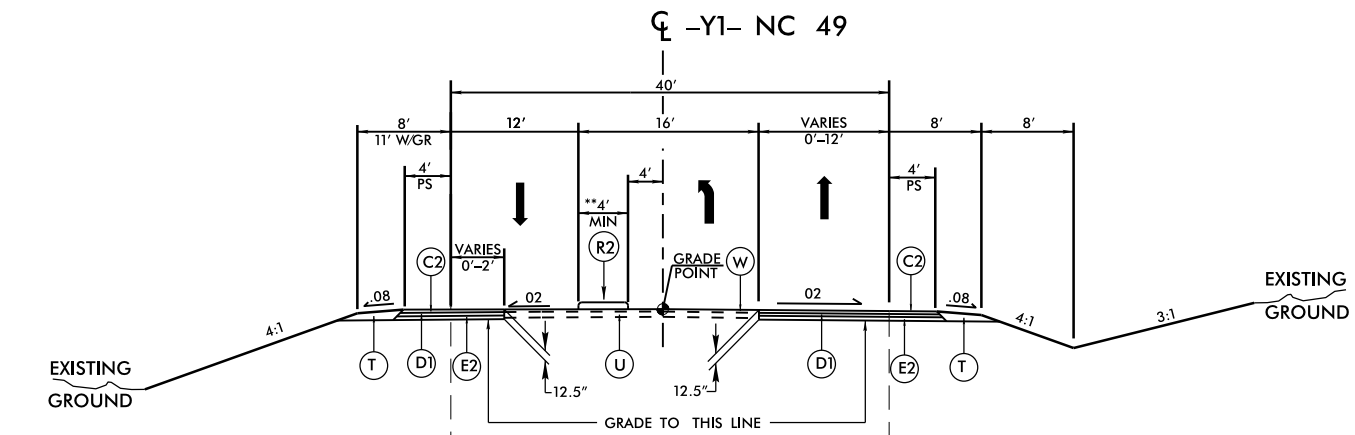
-L- STA. 21+37.65 TO STA 22+68.54

NOTE: RESURFACE EXISTING PAVEMENT WITH C2
-L- STA 22+68.84 TO STA 23+40.00 RT



INSET NO. 1 **

USE WITH TYPICAL SECTION NO. 3, AND 5



TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5 AS FOLLOWS

**SEE PLANS FOR ISLAND LOCATION
-Y1- STA. 10+80.00 TO STA 21+69.00

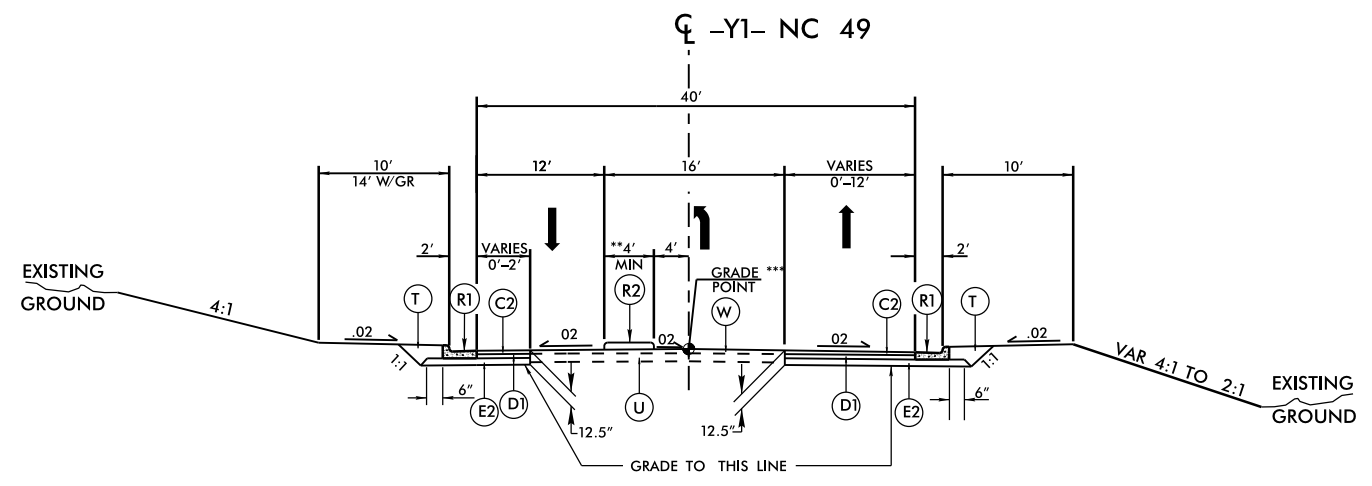
NOTE: USE 6' DITCH WIDTH FOR DRAINAGE
-Y1- STA 11+70 TO STA 13+25.00 RT

NOTE: INSTALL CURB AND GUTTER
-Y1- STA 20+75.00 TO STA 21+69.00 LT

NOTE: MILL AND RESURFACE WITH V2 AND C2
-Y1- STA 10+55.00 TO STA 10+80.00

| PAVEMENT SCHEDULE | |
|-------------------|---|
| C1 | PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD. |
| C2 | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD. IN EACH OF TWO LAYERS. |
| C3 | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH. |
| D1 | PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD. |
| D2 | PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH. |
| E1 | PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD. |
| E2 | PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ.YD. |
| E3 | PROP. APPROX. 7" ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 798 LBS. PER SQ.YD. |
| E4 | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH. |
| R1 | PROPOSED 2'-6" CONCRETE CURB AND GUTTER |
| R2 | PROPOSED 5" CONCRETE MONOLITHIC ISLAND |
| T | EARTH MATERIAL |
| U | EXISTING PAVEMENT. |
| V1 | MILLING BITUMINOUS PAVEMENT. 0" - 1.5" DEPTH. |
| V2 | MILLING BITUMINOUS PAVEMENT. 0" - 3.0" DEPTH. |
| W | VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL) |

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



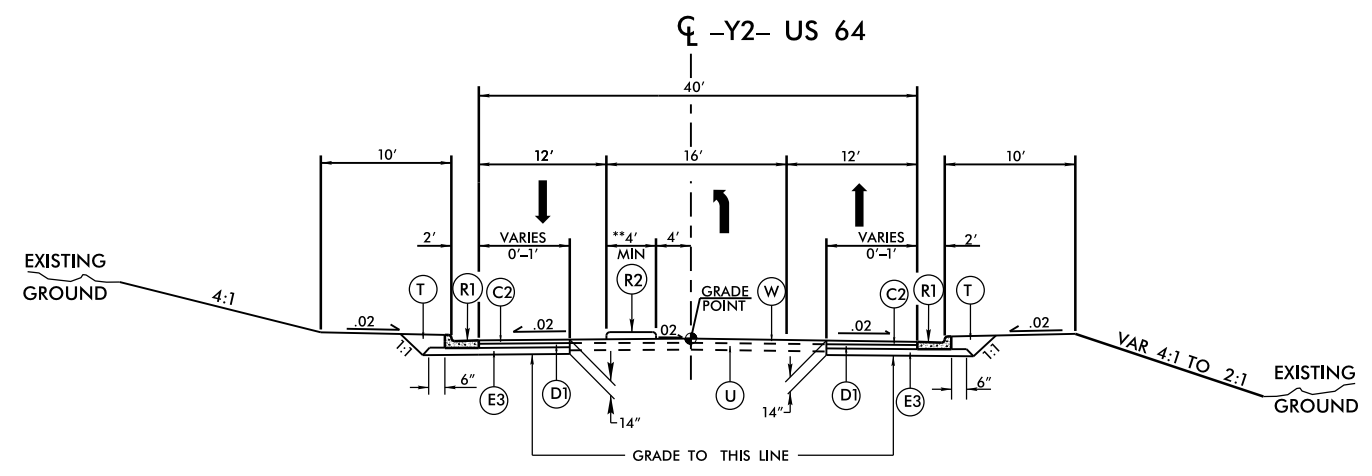
TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6 AS FOLLOWS

*SEE PLANS FOR ISLAND LOCATION
-Y1- STA. 21+69.00 TO STA 27+29.50

*** RESURFACE EXISTING PAVEMENT FROM -Y1- STA 27+29.50 TO 28+10.00

NOTE: MILL AND RESURFACE WITH V2 AND C2
-Y1- STA 28+10.00 TO STA 28+35.00

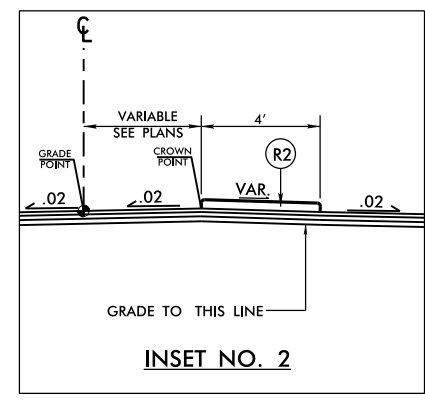


TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 7 AS FOLLOWS

*SEE PLANS FOR ISLAND LOCATION
-Y2- STA. 17+60.00 TO STA 27+10.00

NOTE: MILL AND RESURFACE WITH V1 AND C1
-Y2- STA 17+45.00 TO STA 17+60.00
-Y2- STA 27+10.00 TO STA 27+25.00

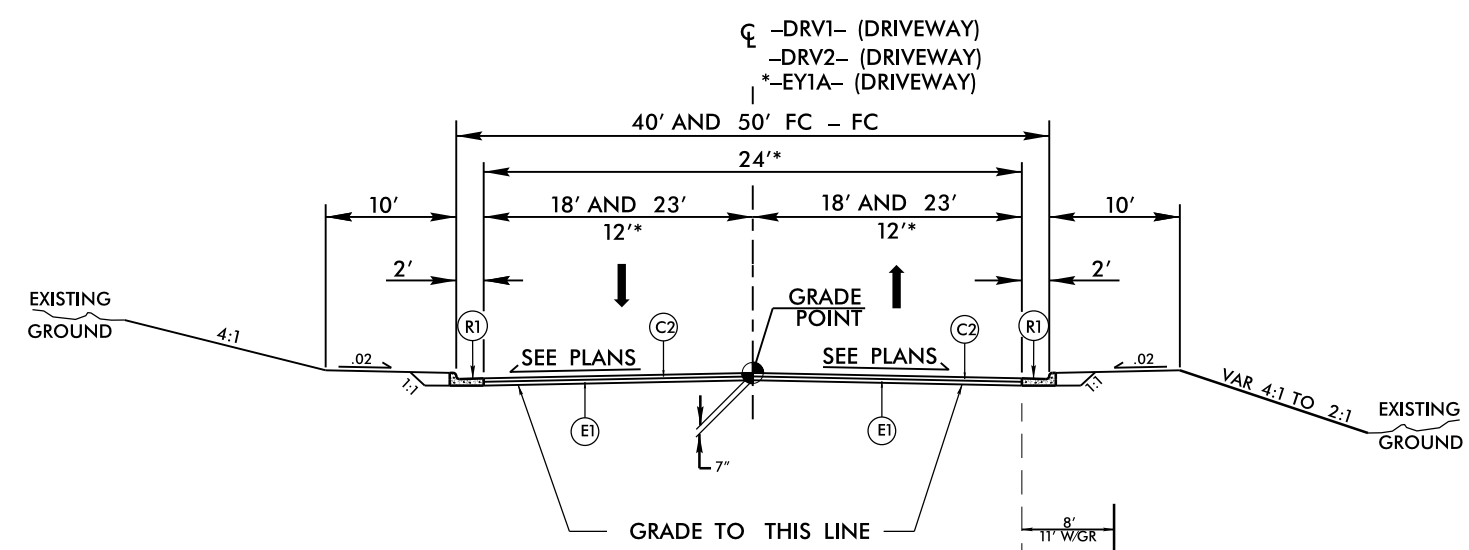


INSET NO. 2

USE WITH TYPICAL SECTION NO. 6, AND 7

USE INSET NO. 2

- *ISLAND LOCATED LEFT OF CENTERLINE
- Y1- STA. 10+78.80 TO STA 12+78.80
- * -Y1- STA. 19+95.93 TO STA 23+23.93
- Y1- STA. 24+05.21 TO STA 27+34.98
- * -Y2- STA. 15+59.94 TO STA 19+60.00
- Y2- STA. 20+24.98 TO STA 26+08.93



TYPICAL SECTION NO. 8

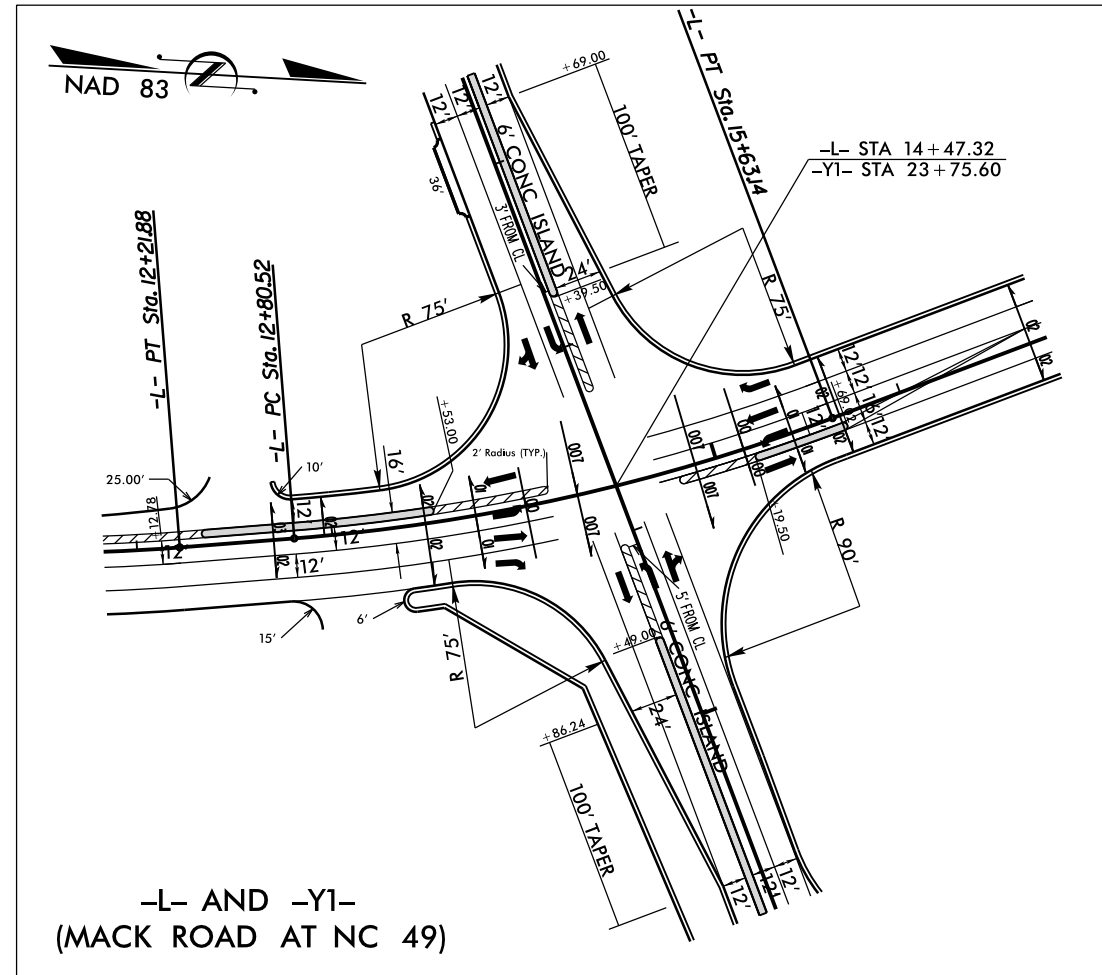
USE TYPICAL SECTION NO. 8 AS FOLLOWS

-DRV1- STA 10+43.20 TO STA. 10+84.26 (40' FC - FC)
-DRV2- STA. 10+68.00 TO STA. 12+45.46 (50' FC - FC)
*-EY1A- STA 10+12.00 TO STA. 13+47.78

*-EY1A- STA 10+12.00 RT TO STA. 13+47.78 RT

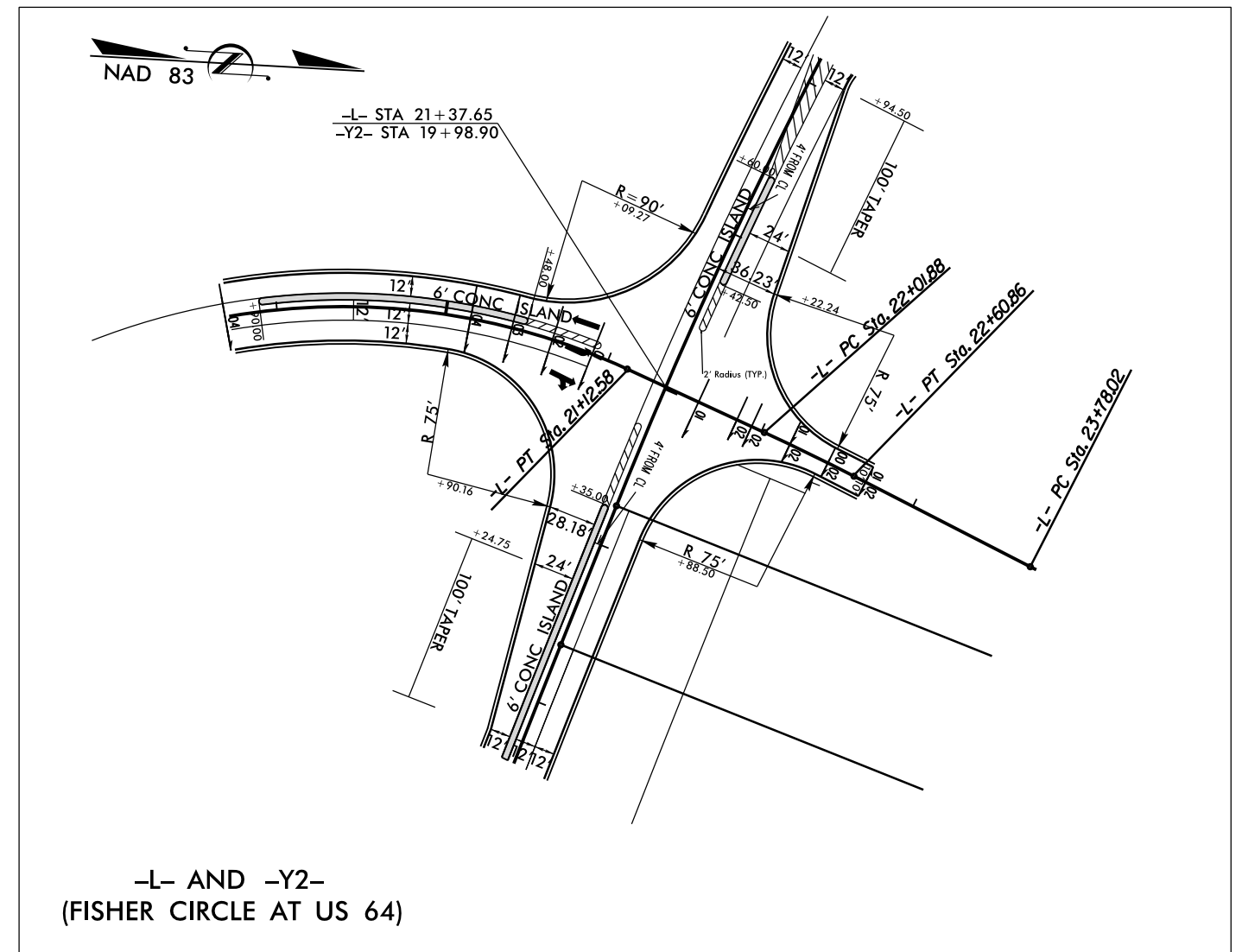
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| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |

INTERSECTION DETAIL SHEET



-L- AND -Y1-
(MACK ROAD AT NC 49)

PROPOSED PAINTED ISLAND



-L- AND -Y2-
(FISHER CIRCLE AT US 64)

REVISIONS

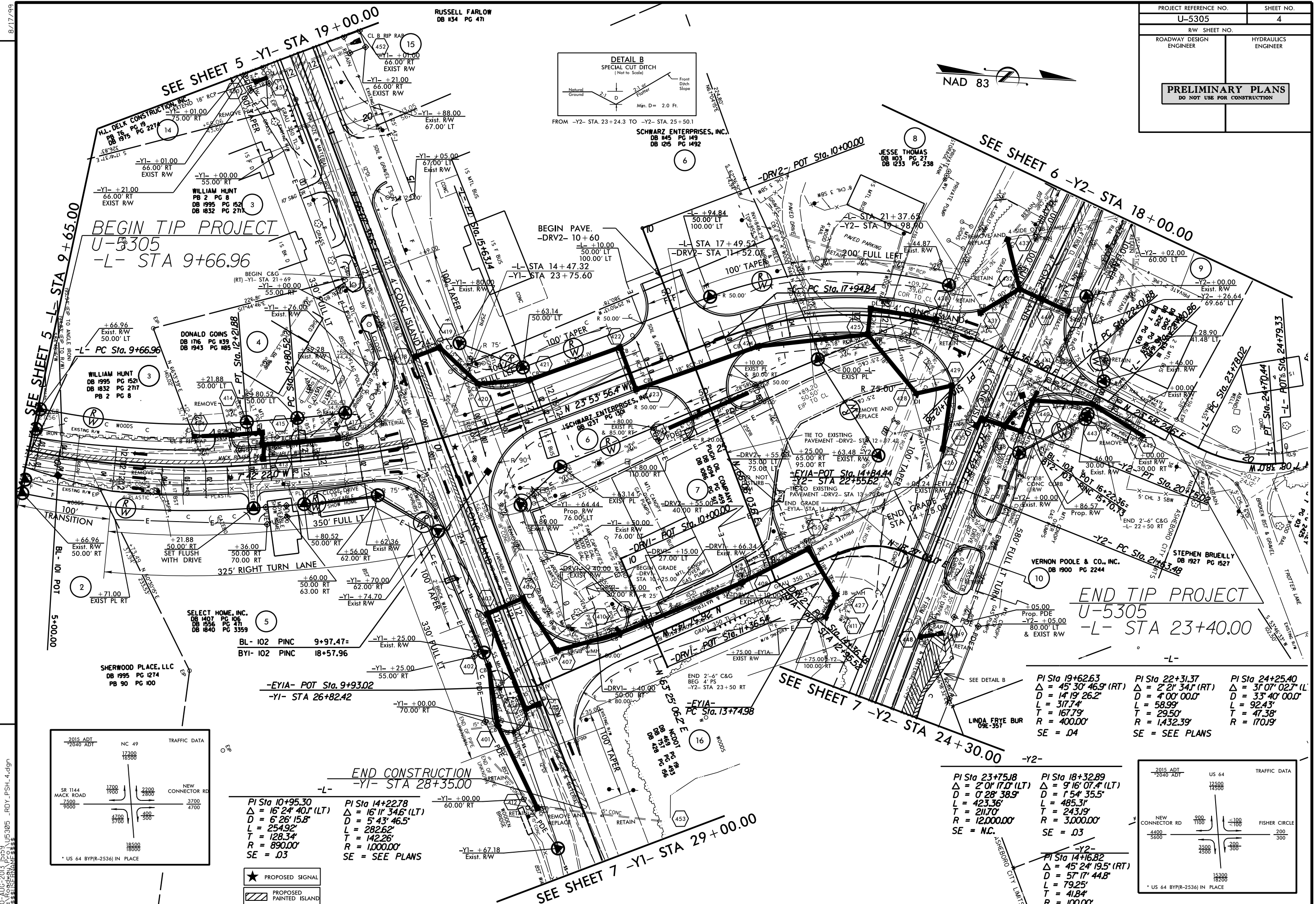
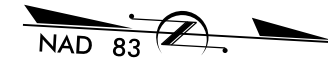
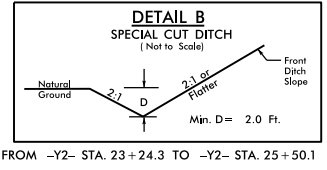
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8/17/09

8/17/99

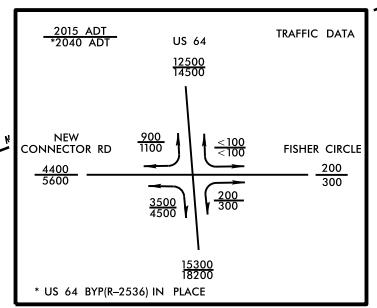
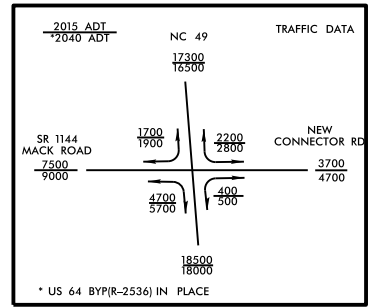
RUSSELL FARLOW
DB #34 PG 471

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| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER | | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | | | |



BEGIN TIP PROJECT
U-5305
-L- STA 9+66.96

END TIP PROJECT
U-5305
-L- STA 23+40.00



END CONSTRUCTION
-YI- STA 28+35.00

| | |
|--|--|
| PI Sta 10+95.30 Δ = 16' 24" 40.1" (LT) D = 6' 26" 15.8" L = 254.92' T = 128.34' R = 890.00' SE = .03 | PI Sta 14+22.78 Δ = 16' 11" 34.6" (LT) D = 5' 43" 46.5" L = 282.62' T = 142.26' R = 1,000.00' SE = SEE PLANS |
|--|--|

| | | |
|---|---|--|
| PI Sta 19+62.63 Δ = 45' 30" 46.9" (RT) D = 14' 19" 26.2" L = 317.74' T = 167.79' R = 400.00' SE = .04 | PI Sta 22+31.37 Δ = 2' 21" 34.1" (RT) D = 4' 00" 00.0" L = 58.99' T = 29.50' R = 1,432.39' SE = SEE PLANS | PI Sta 24+25.40 Δ = 31' 07" 02.7" (L) D = 33' 40" 00.0" L = 92.43' T = 47.38' R = 170.19' |
|---|---|--|

| | |
|---|---|
| PI Sta 23+75.18 Δ = 2' 01" 17.0" (LT) D = 0' 28" 38.9" L = 423.36' T = 211.70' R = 12,000.00' SE = N.C. | PI Sta 18+32.89 Δ = 9' 16" 07.4" (LT) D = 1' 54" 35.5" L = 485.31' T = 243.19' R = 3,000.00' SE = .03 |
|---|---|

| |
|---|
| PI Sta 14+16.82 Δ = 45' 24" 19.5" (RT) D = 57' 17" 44.8" L = 79.25' T = 41.84' R = 100.00' |
|---|

★ PROPOSED SIGNAL
▨ PROPOSED PAINTED ISLAND

REVISIONS

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8/17/99

BEGIN CONSTRUCTION
-YI- STA 10+30.00

CLEO MUNN
DB 1865 PG 1453

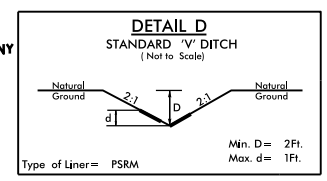
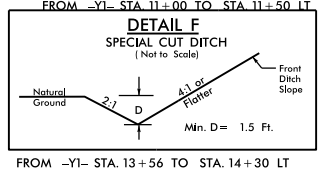
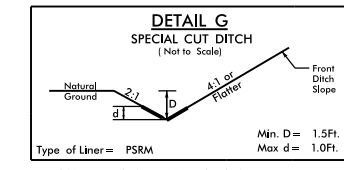
JEFFREY SCHWARZ
DB 1441 PG 1766
DB 1293 PG 383
DB 1408 PG 3

JESSE THOMAS
DB 1759 PG 1665

RUSSELL FARLOW
DB 1134 PG 471

YATES COUNTRY HAM, INC.
DB 1111 PG 975

-YI- POT Sta. 10+00.00



BEGIN RESURFACING
-YI- STA 10+55.00

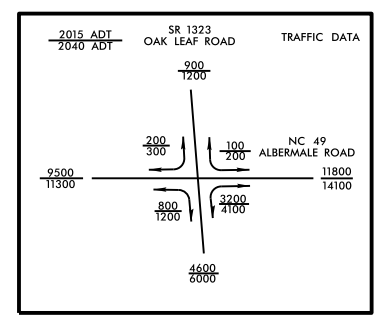
RANDOLPH BANK & TRUST COMPANY
DB 1576 PG 625
PB 56 PG 30

DARREN LUCAS
DB 2128 PG 1244
VOB3-16

JEFFREY SCHWARZ
DB 1222 PG 1637

WILLIAM LASSITER
DB 1246 PG 1797
DB 1249 PG 248
PB 2 PG 8

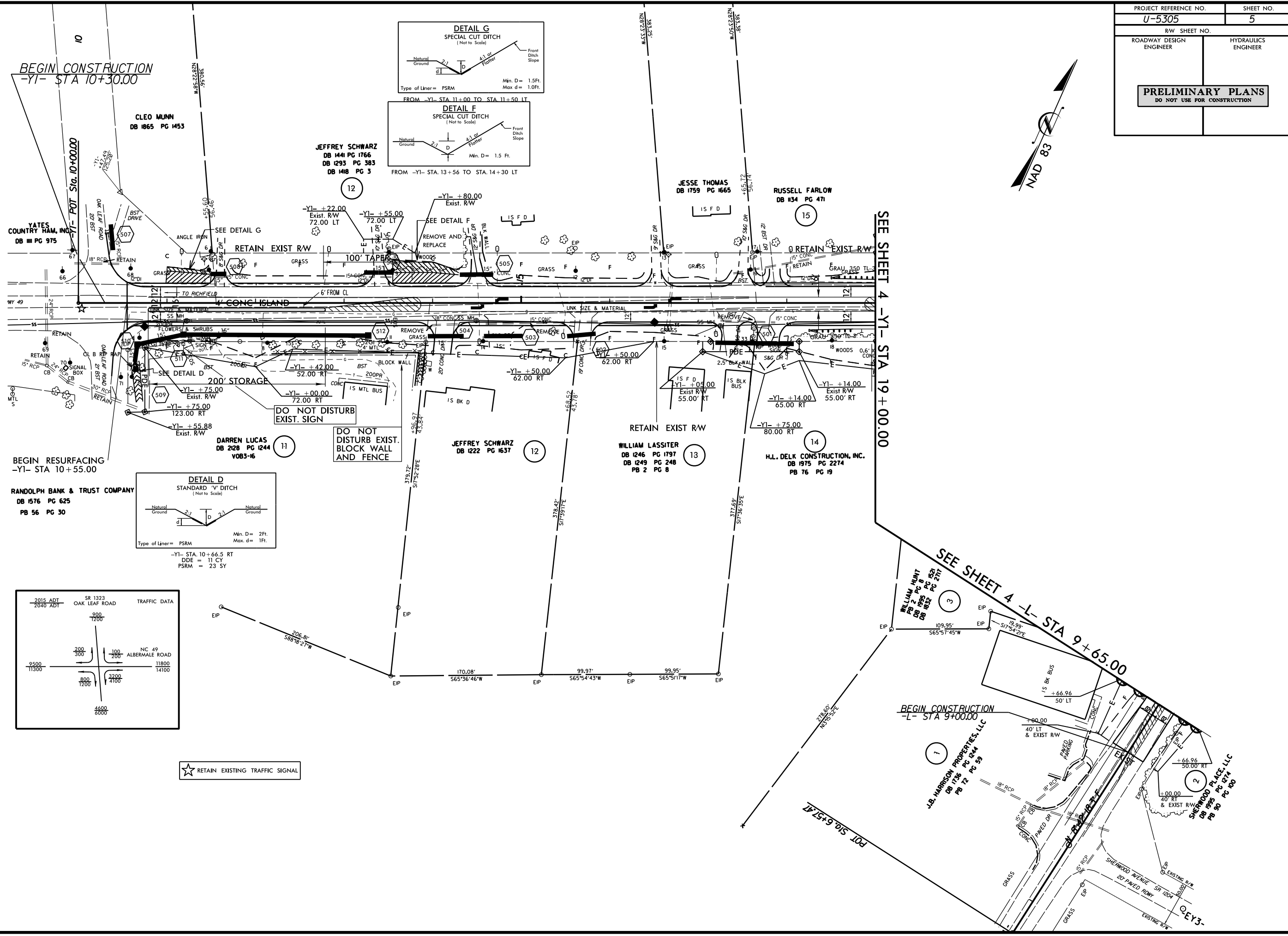
H.L. DELK CONSTRUCTION, INC.
DB 1975 PG 2274
PB 76 PG 19



★ RETAIN EXISTING TRAFFIC SIGNAL

REVISIONS

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SEE SHEET 4 -YI- STA 19+00.00

SEE SHEET 4 -L- STA 9+65.00

WILLIAM HUNT
DB 1598 PG 8
DB 1832 PG 277

BEGIN CONSTRUCTION
-L- STA 9+00.00

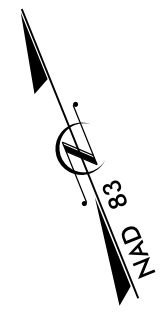
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DB 1236 PG 1244
PB 72 PG 59

SHERWOOD PLACE, LLC
DB 1995 PG 1274
PB 80 PG 100

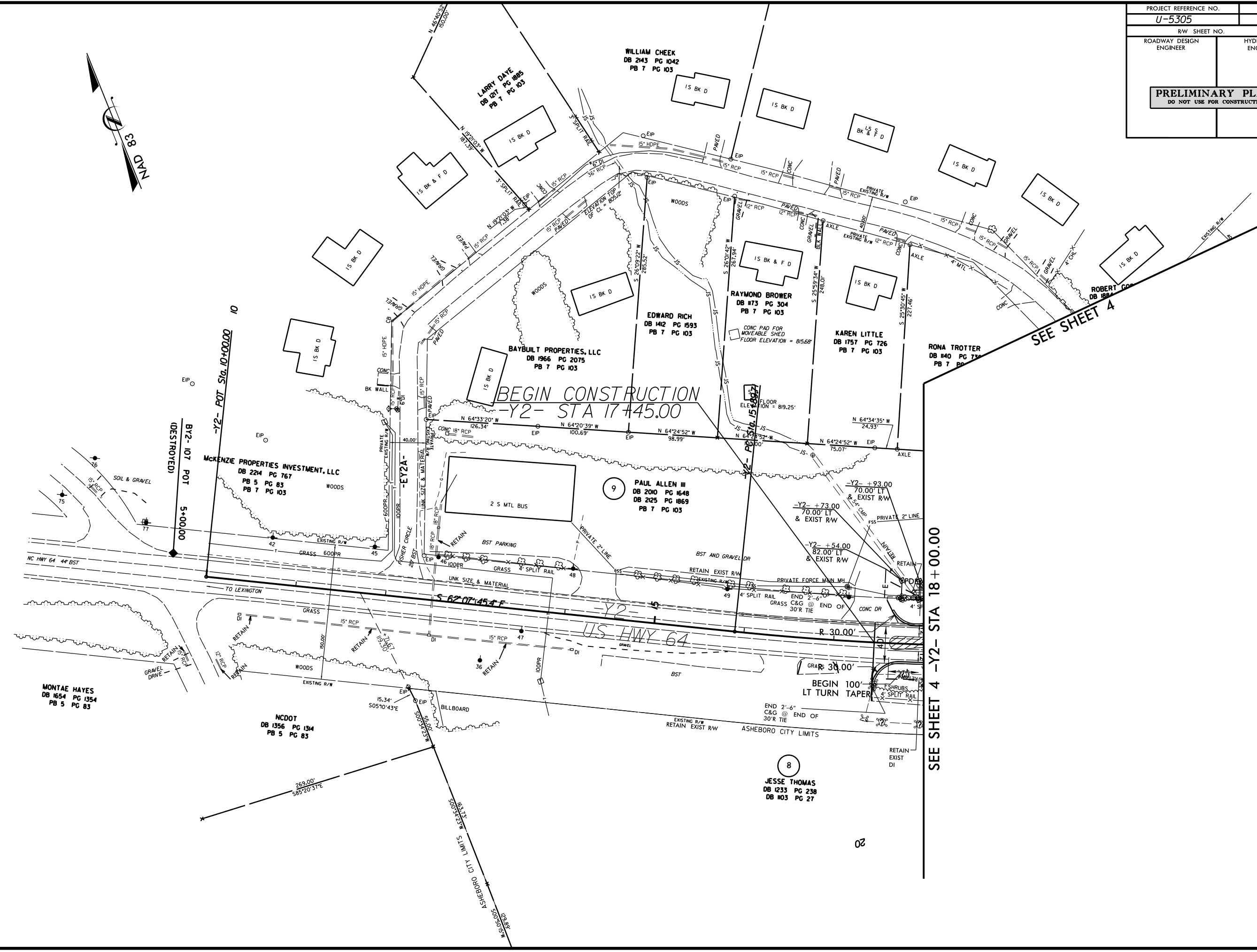
POT Sta. 6+57.47

OEY3-

8/17/99



REVISIONS



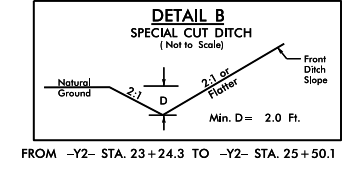
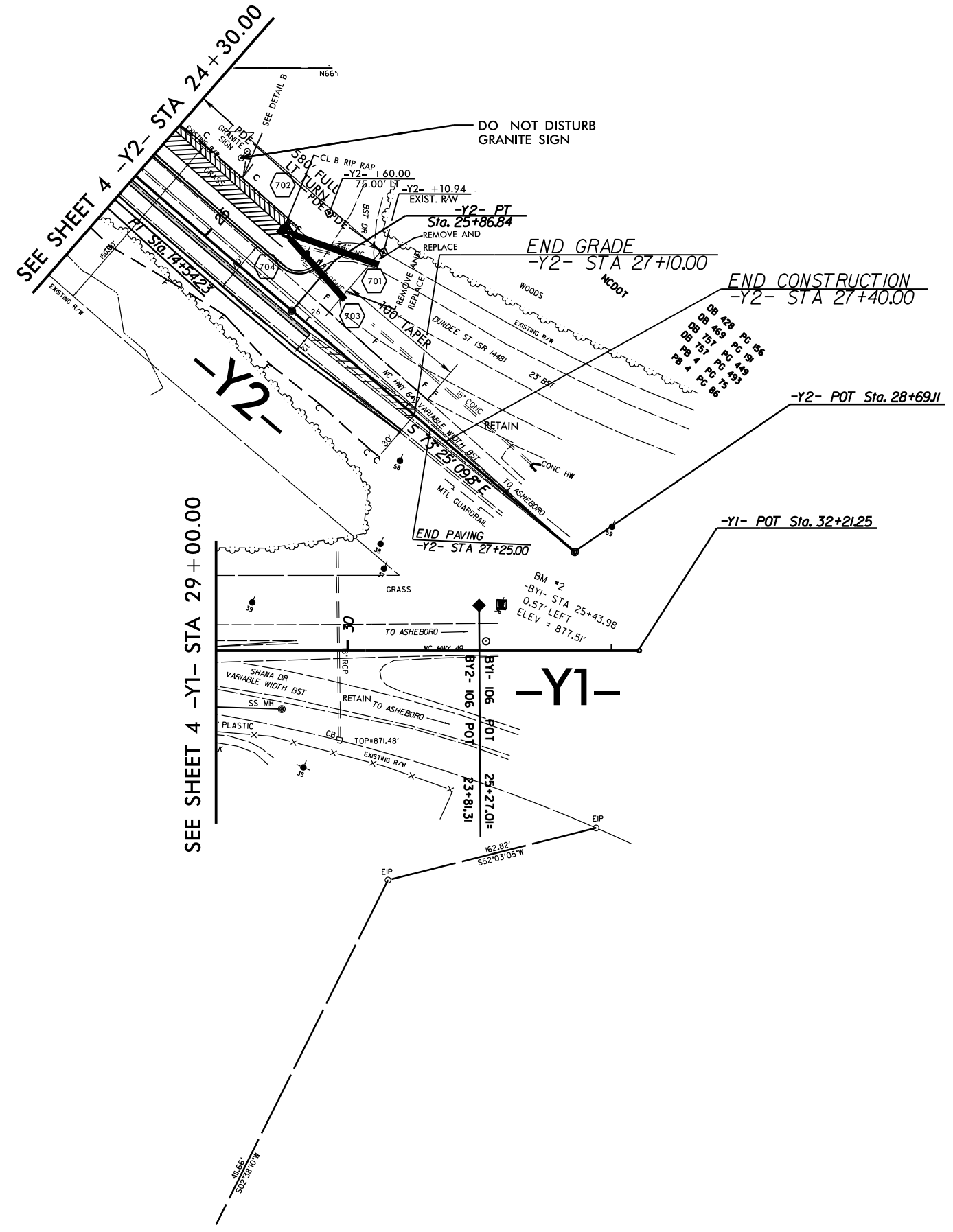
SEE SHEET 4 -Y2- STA 18+00.00

SEE SHEET 4

20

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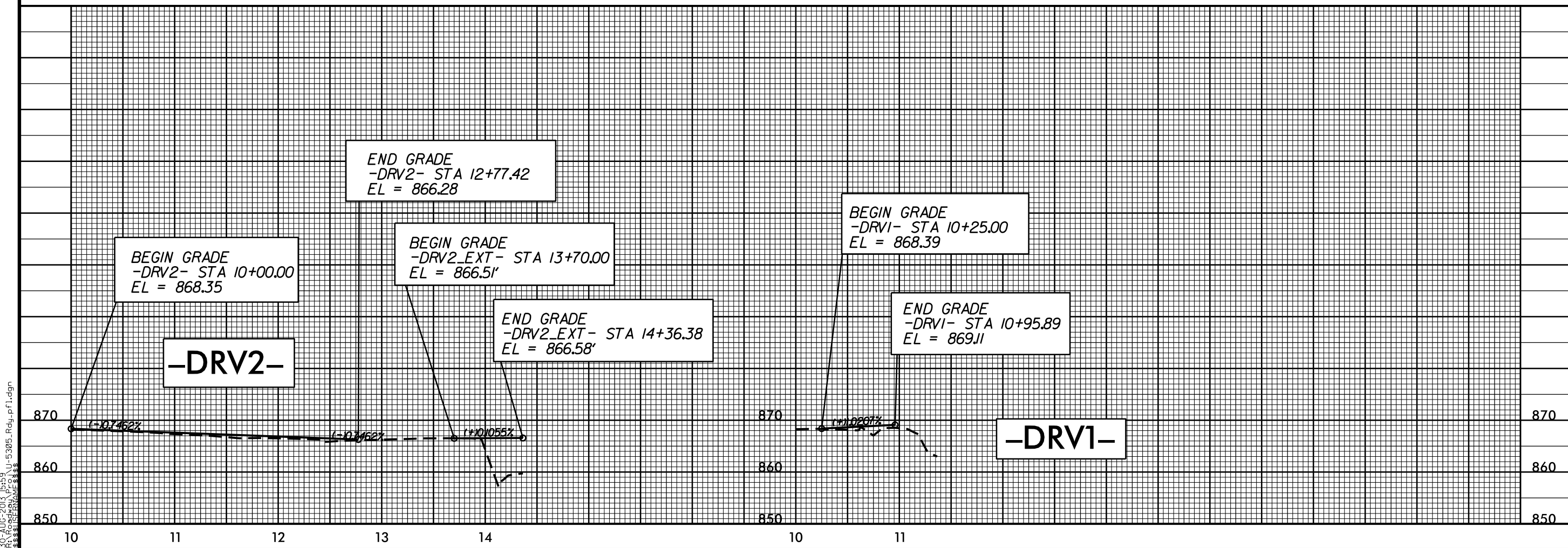
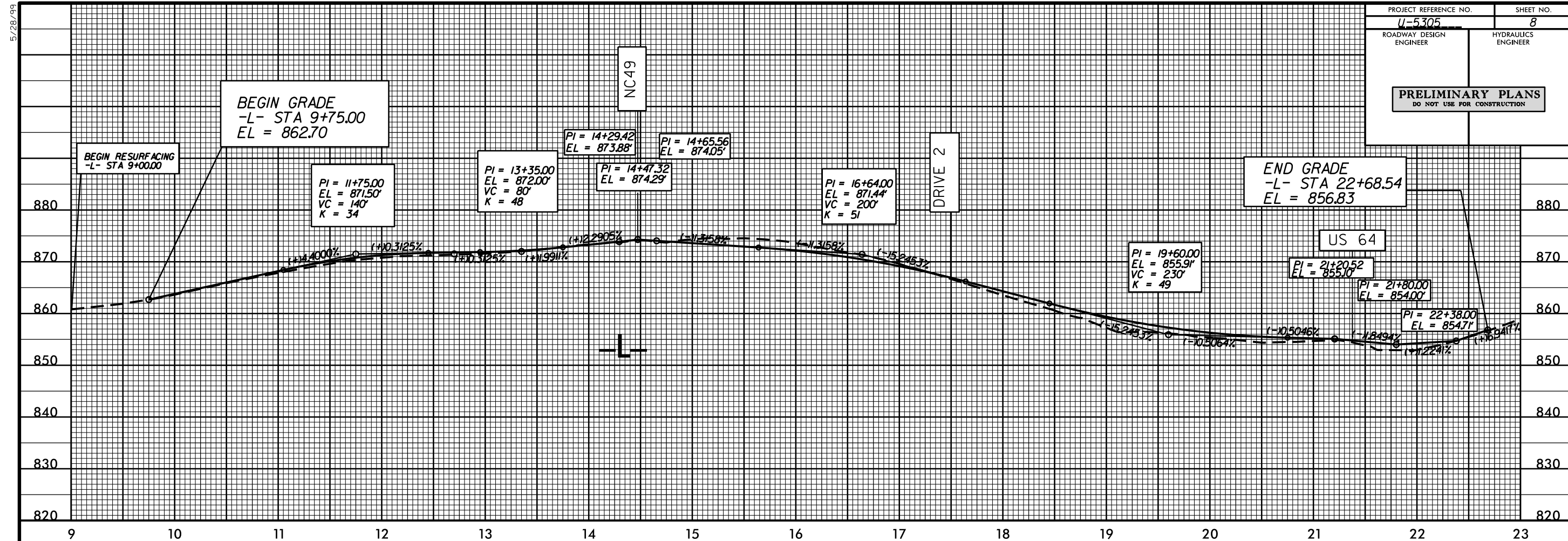
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| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |



REVISIONS

8/17/99

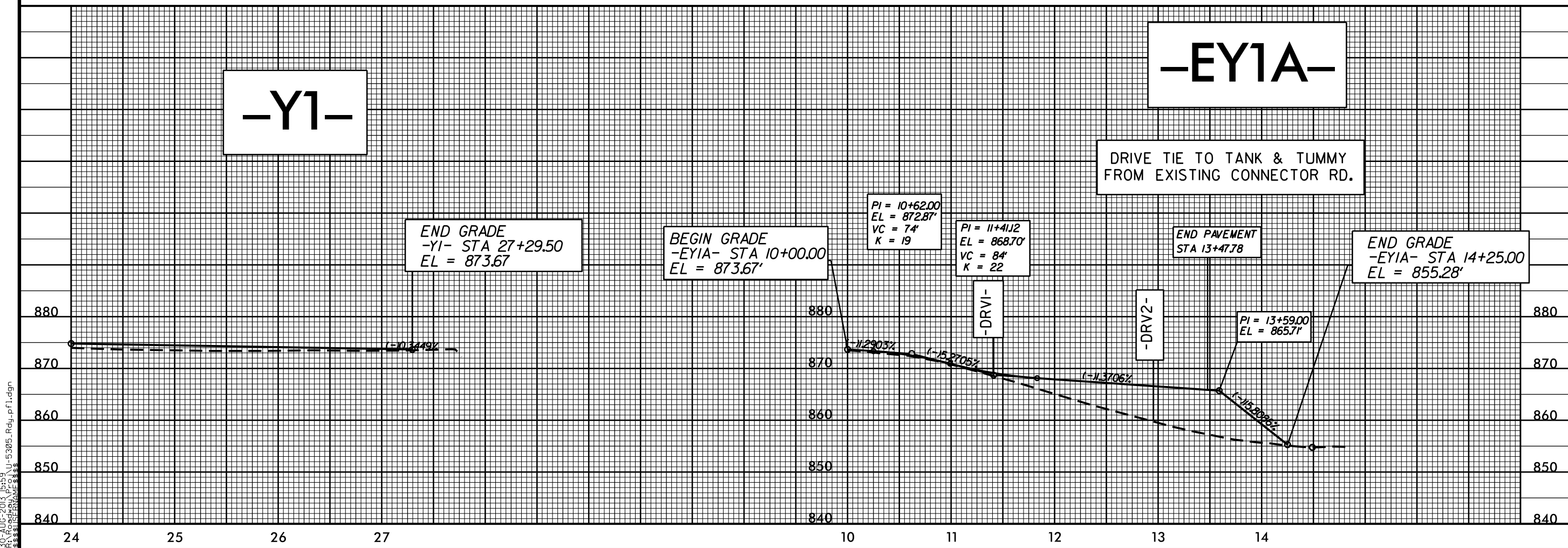
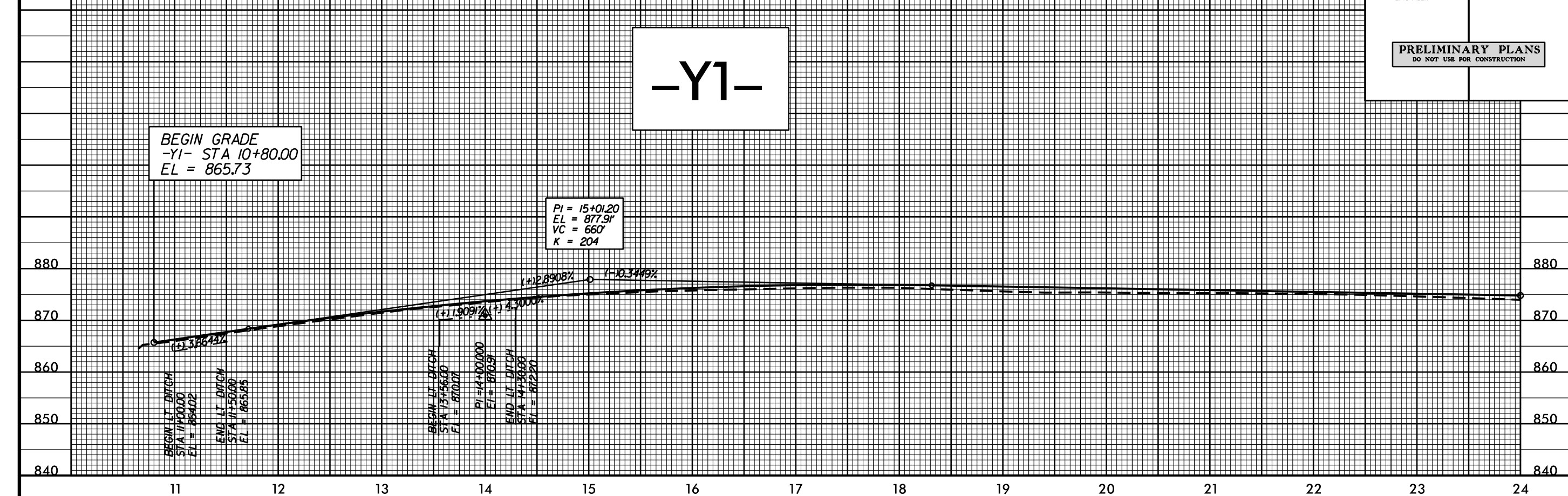
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5/28/99



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5/28/99

DITCH LEGEND

LEFT DITCH - - - - -

RIGHT DITCH - - - - -

PROJECT REFERENCE NO. SHEET NO.

U-5305 10

ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

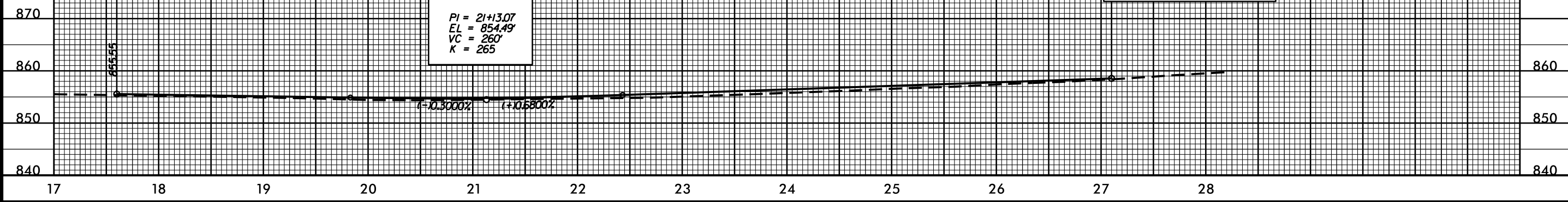
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y2-

BEGIN GRADE
-Y2- STA 17+60.00
EL = 855.55

END GRADE
-Y2- STA 27+10.00
EL = 858.55

PI = 21+13.07
EL = 854.49'
VC = 260'
K = 265



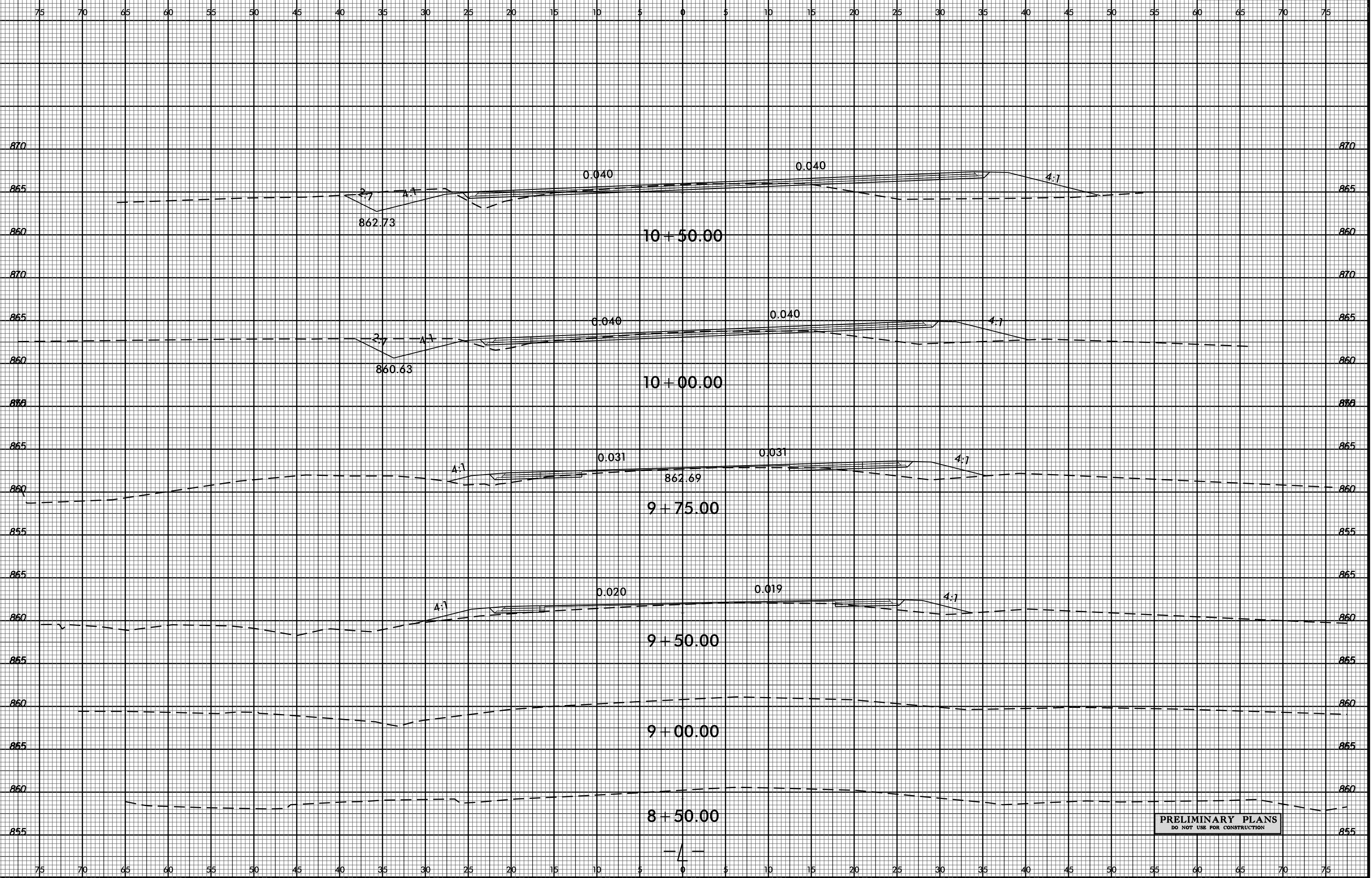
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PROJ. REFERENCE NO.
U-5305

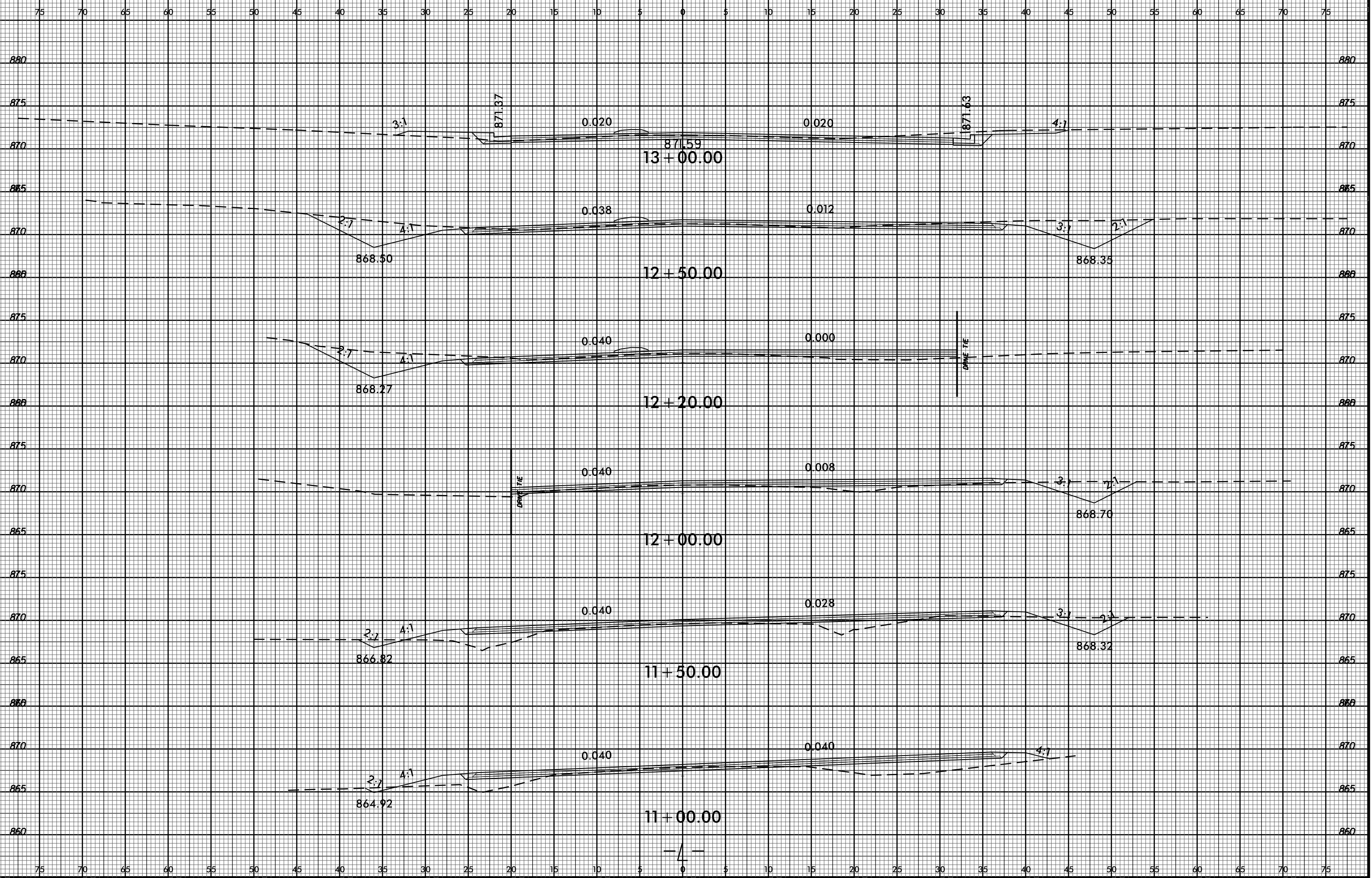
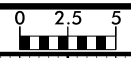
SHEET NO.
X-1



PRELIMINARY PLANS
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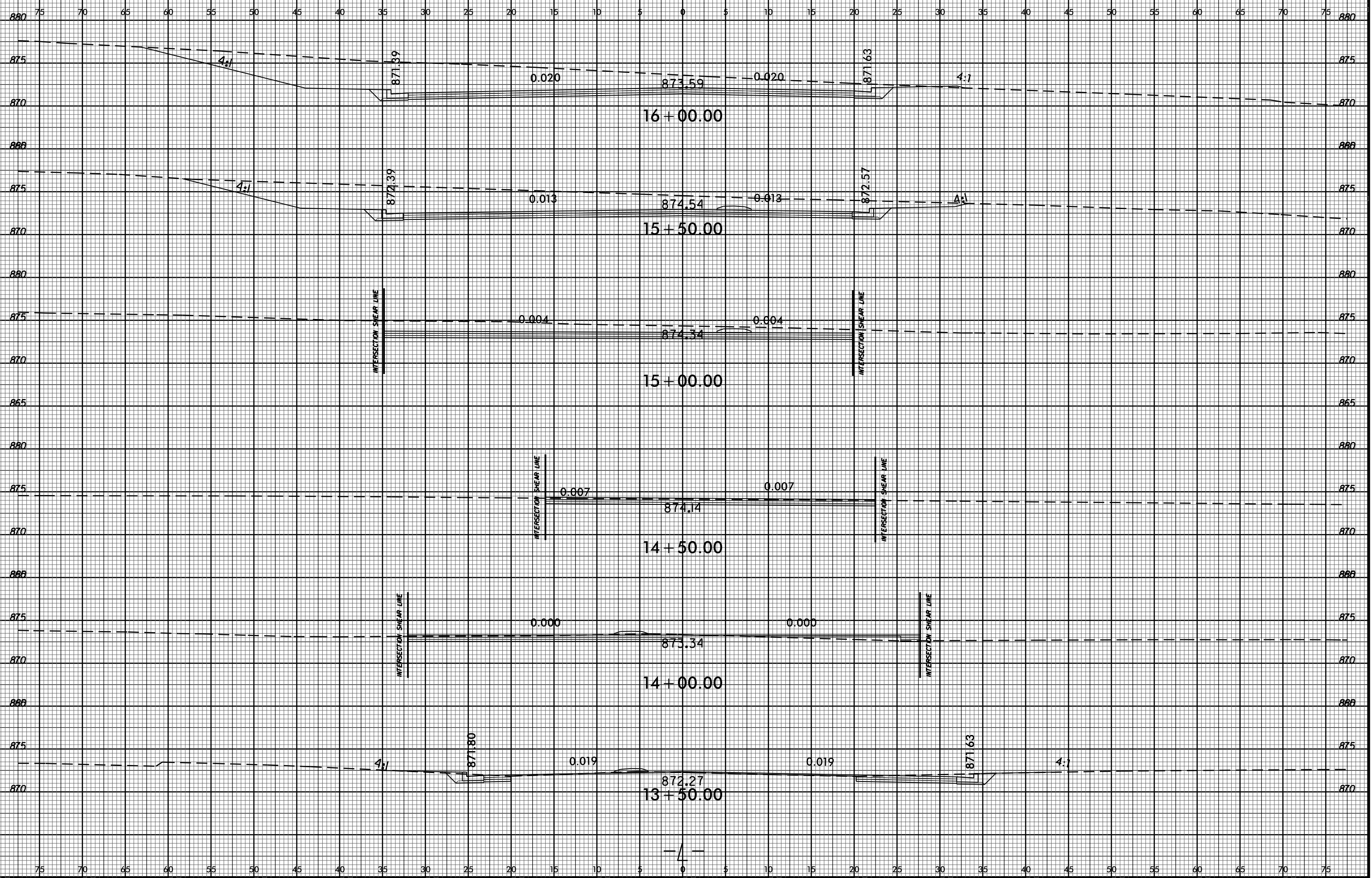
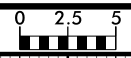
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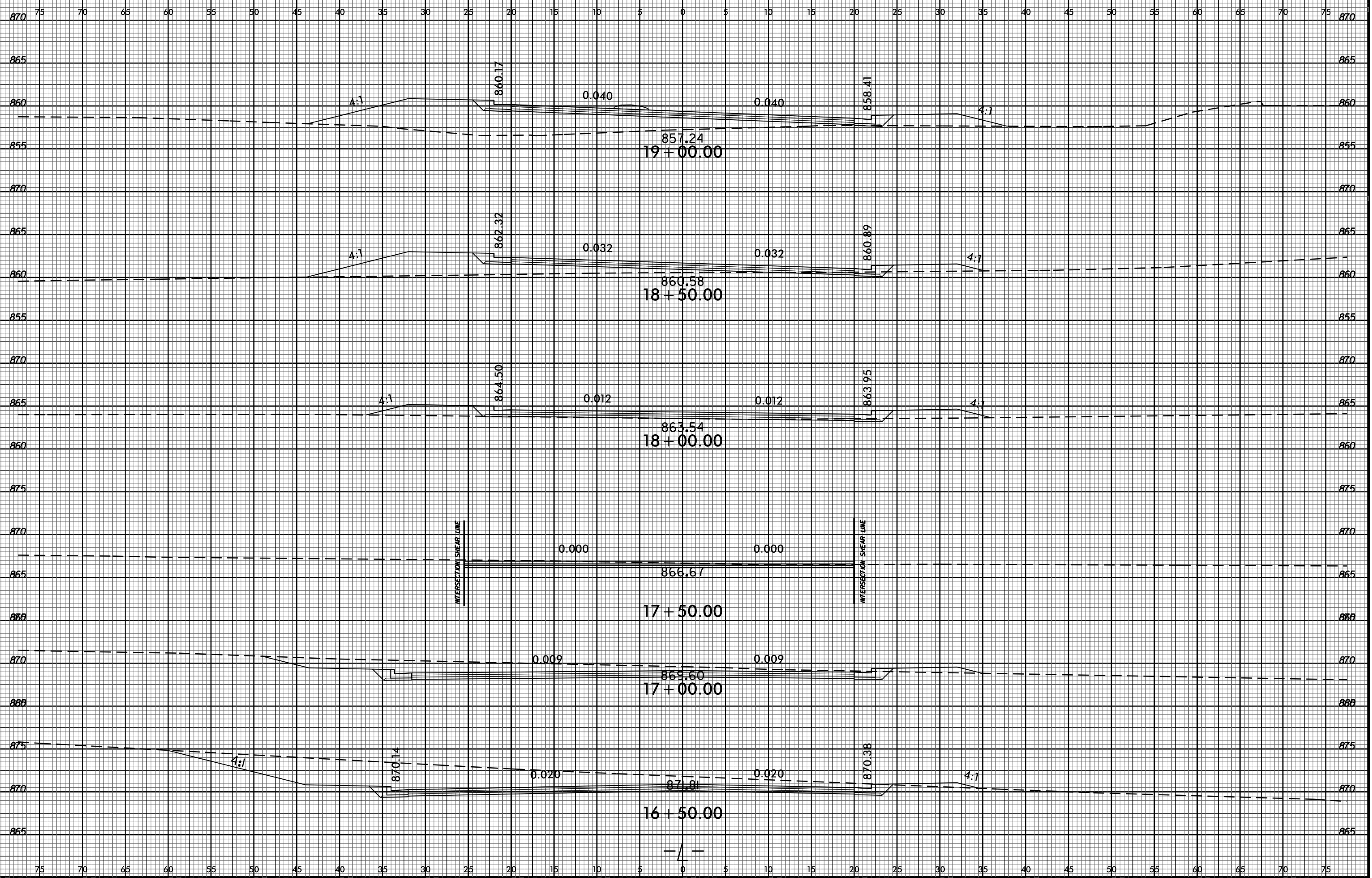
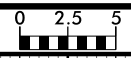
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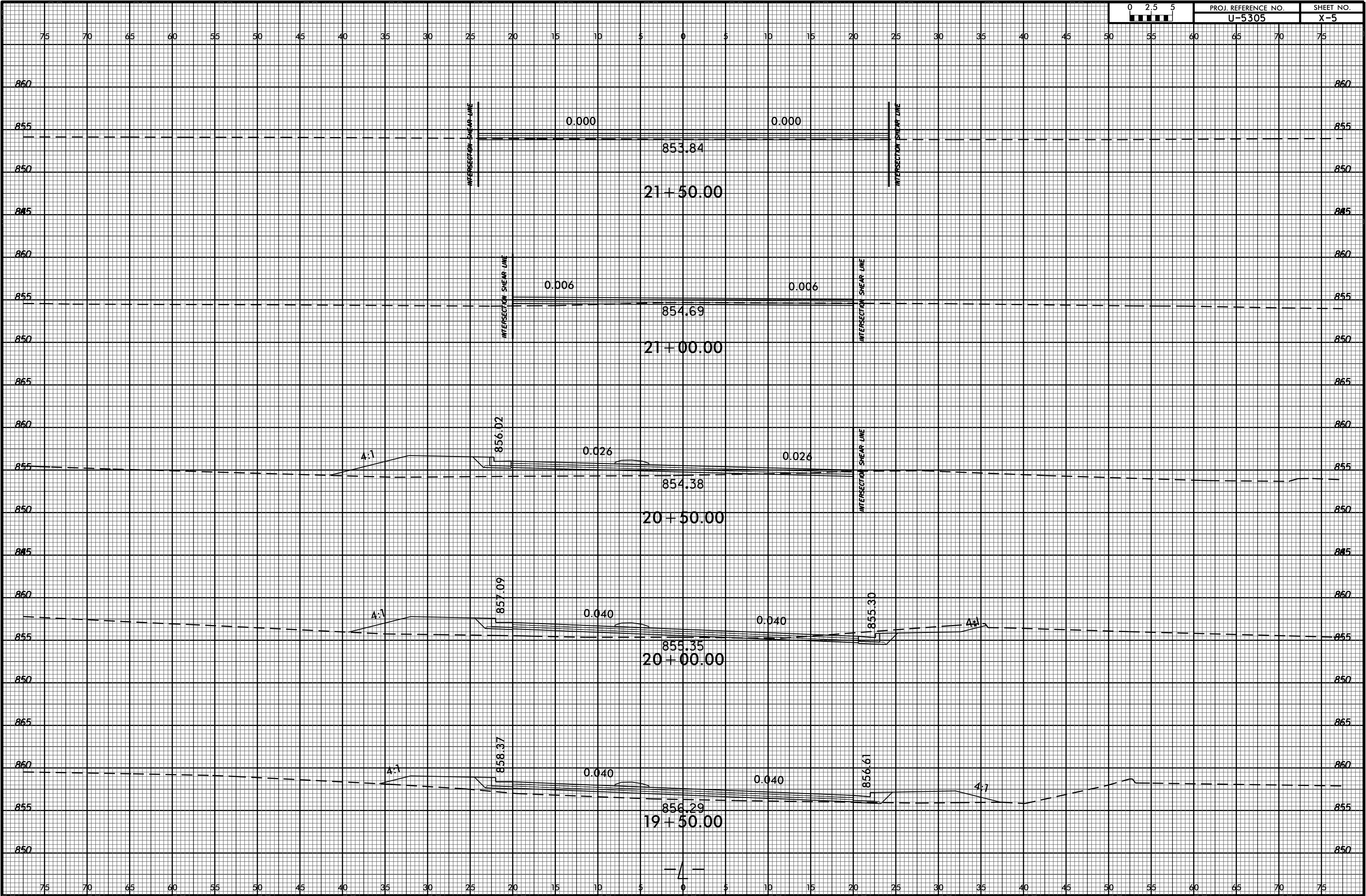


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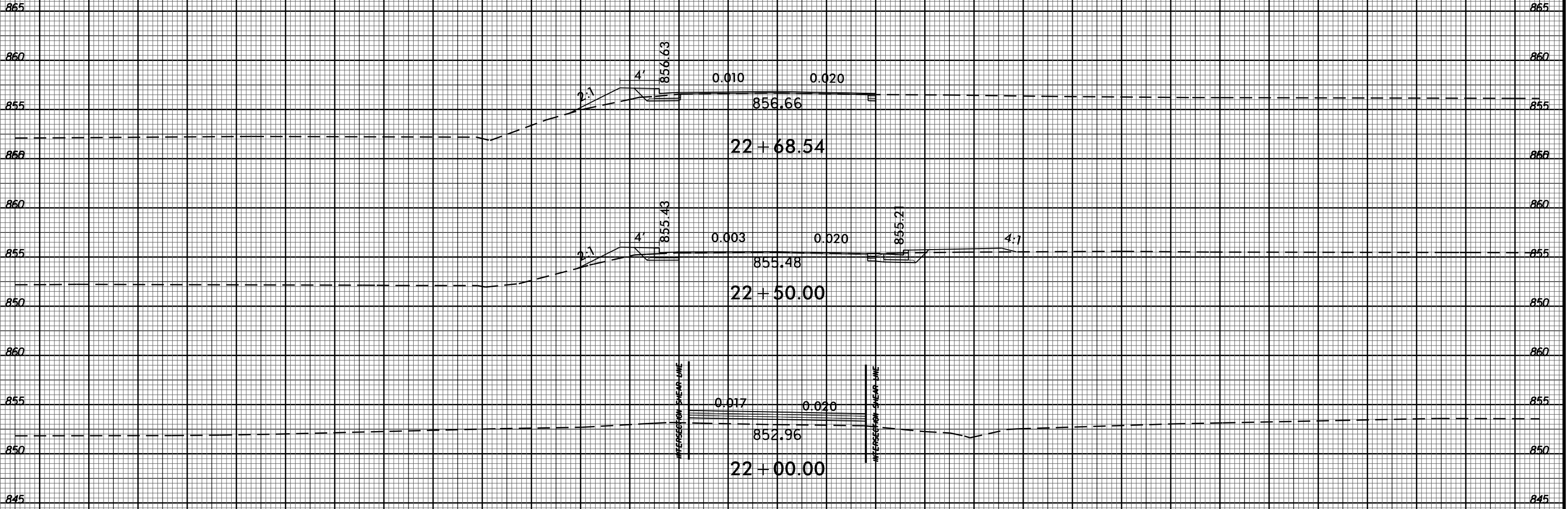
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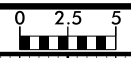


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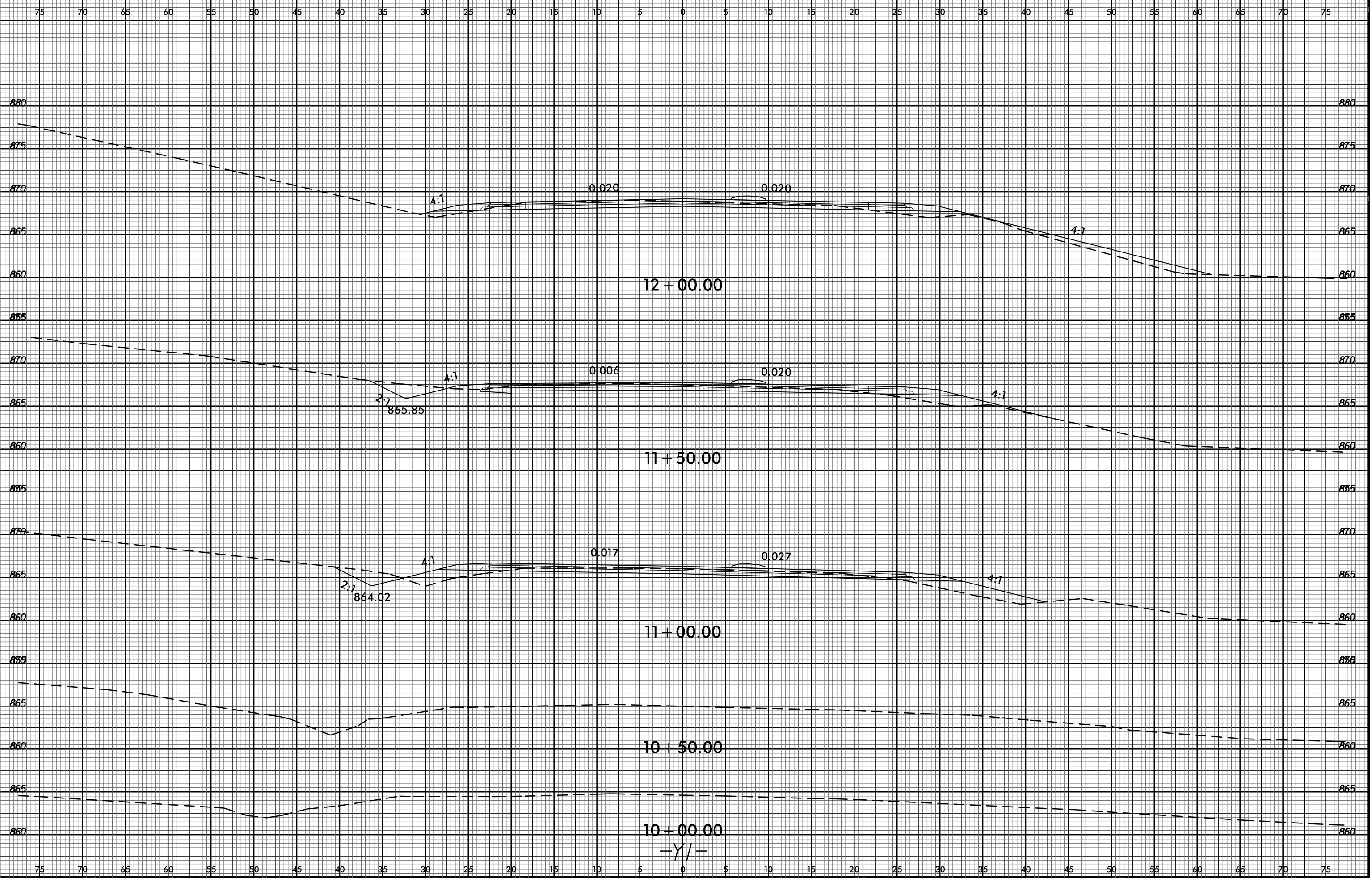


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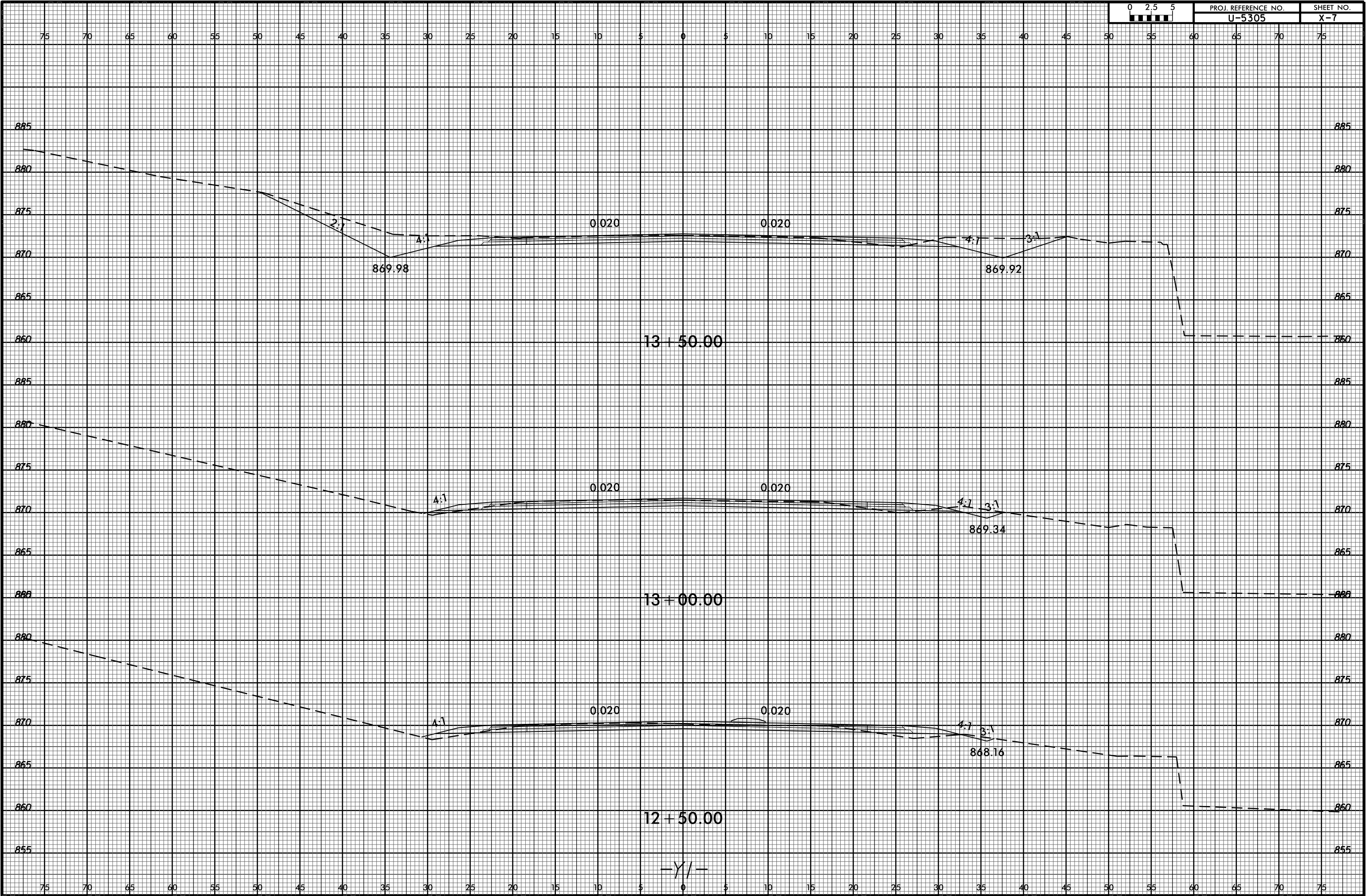
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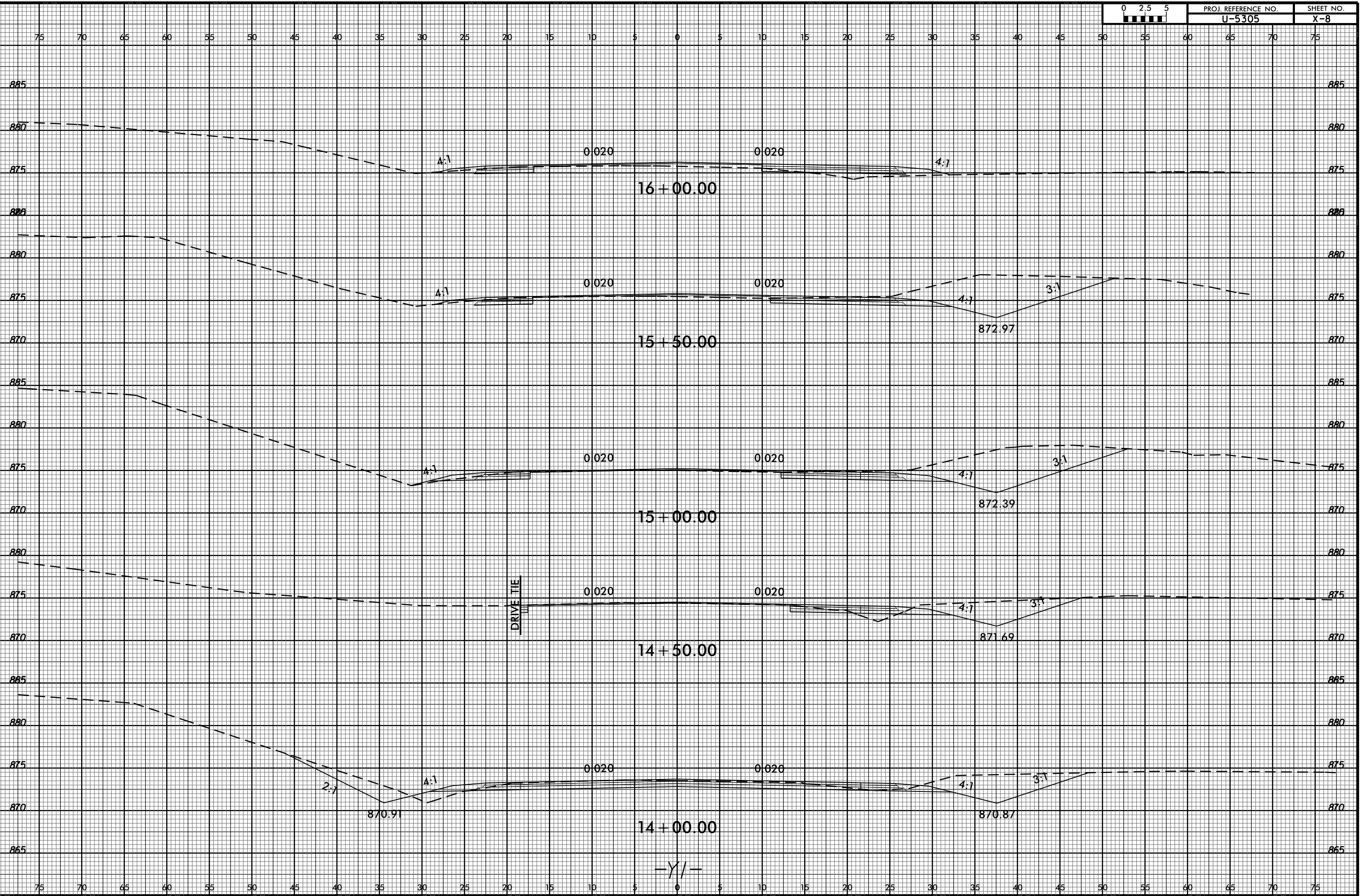
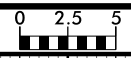
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| U-5305 | X-6 |



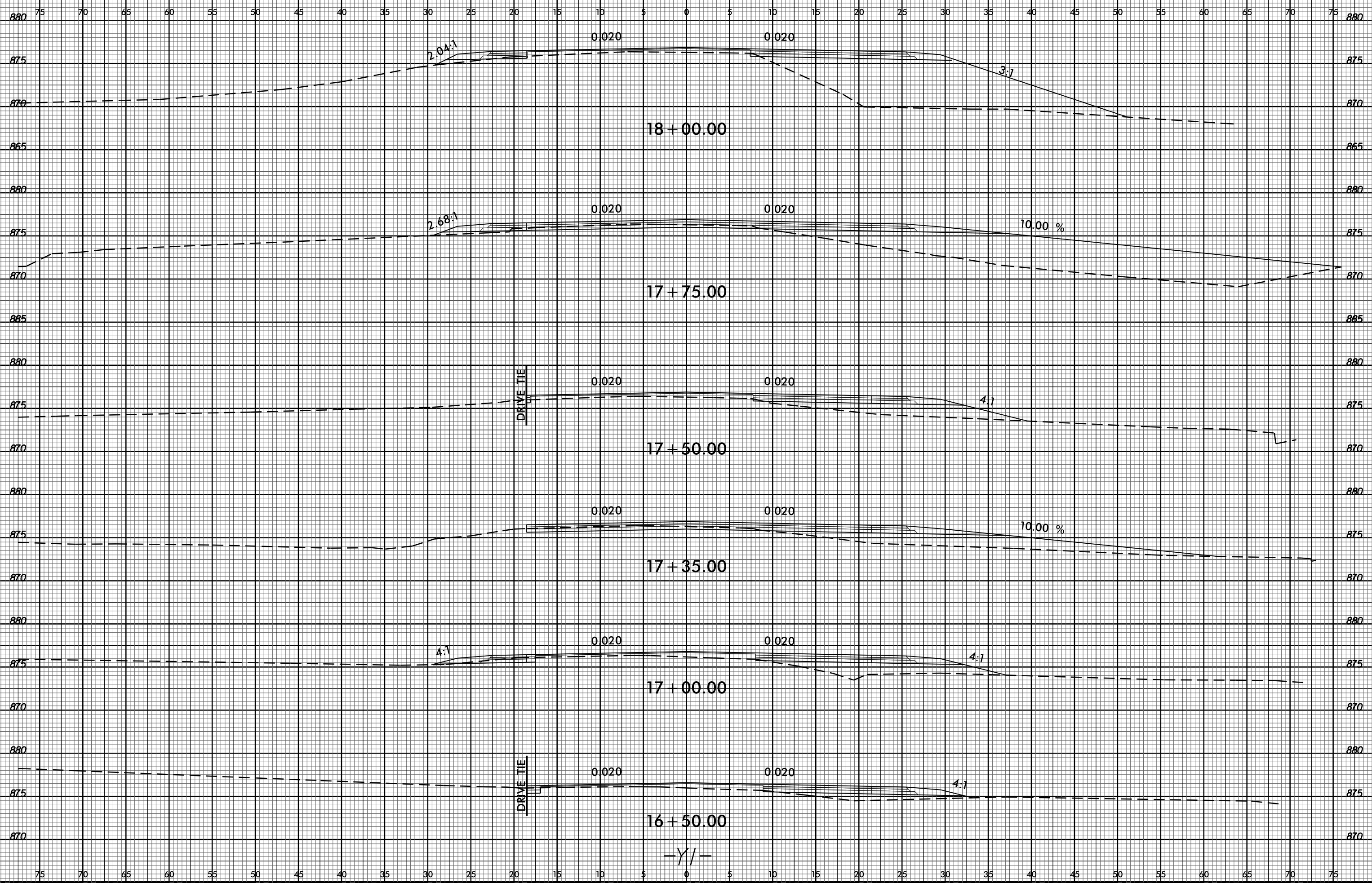
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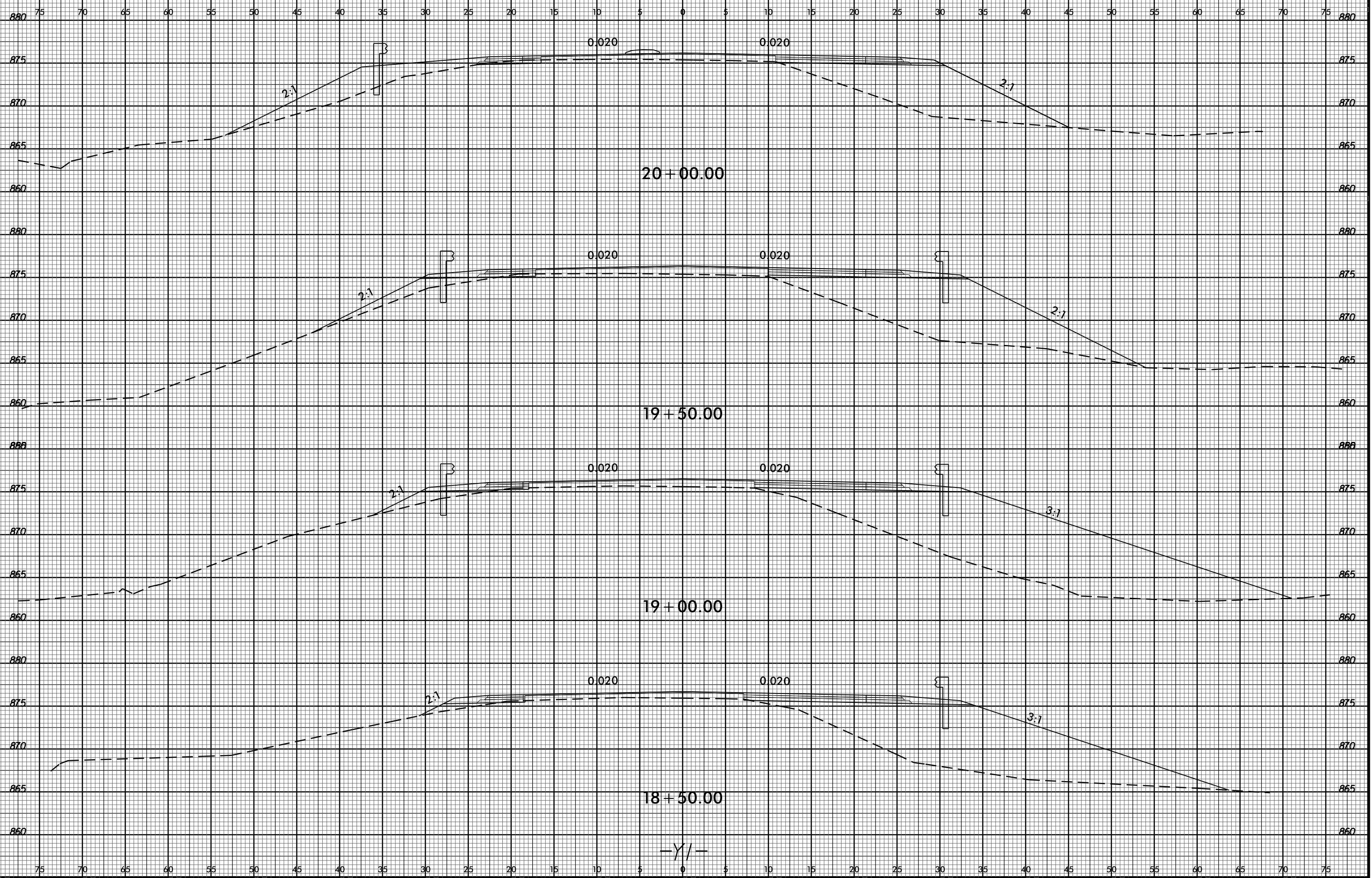


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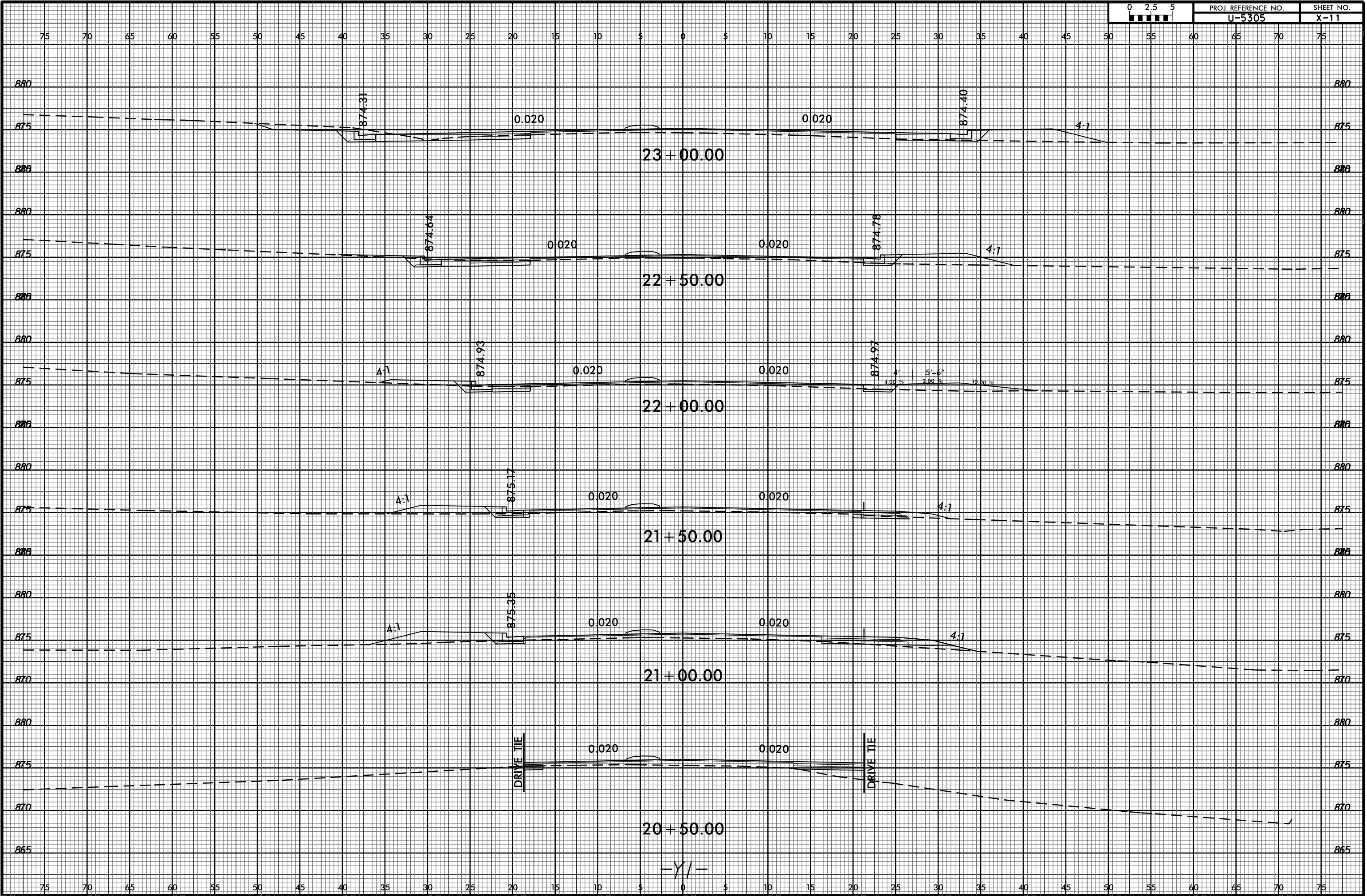


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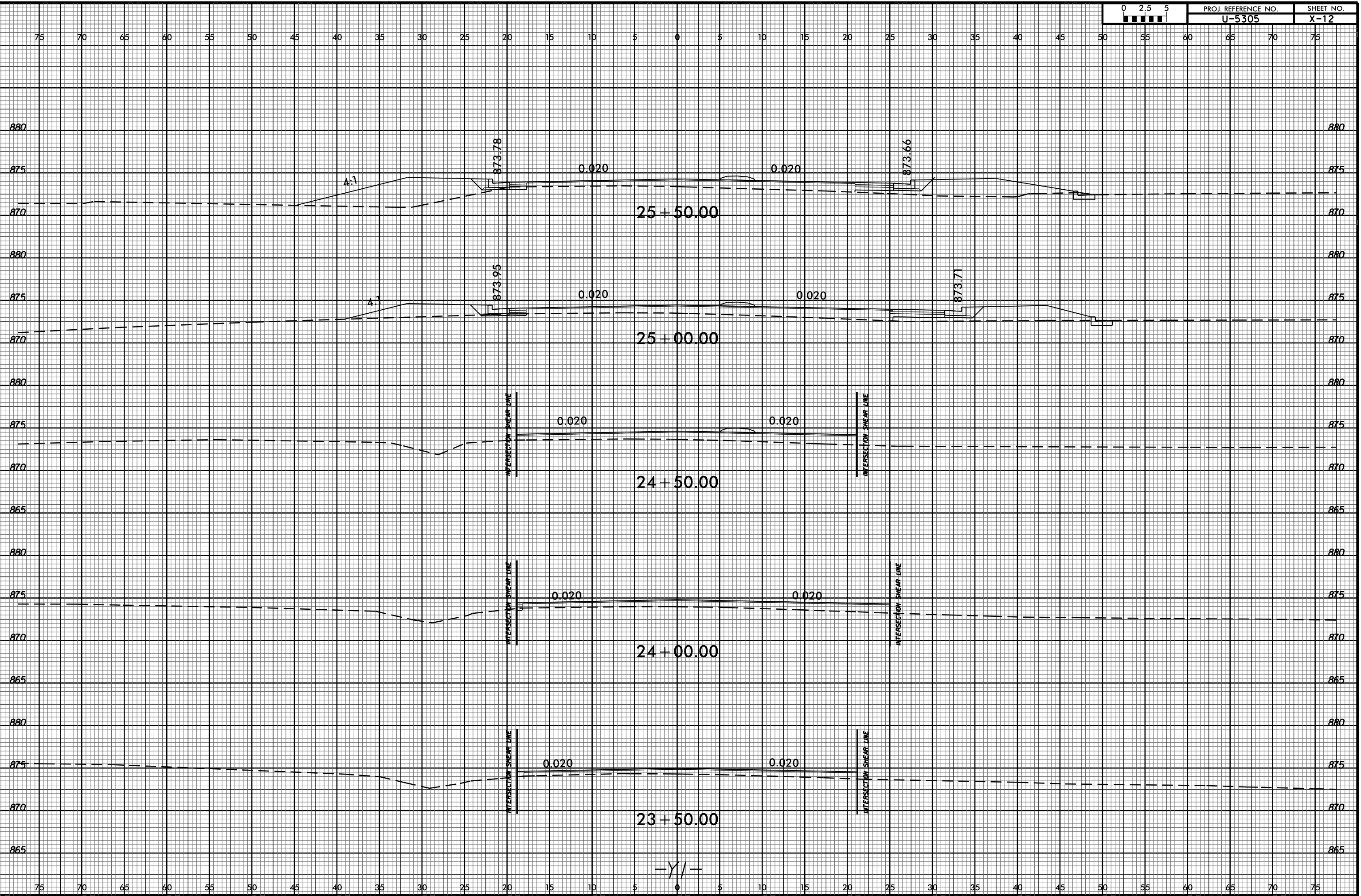
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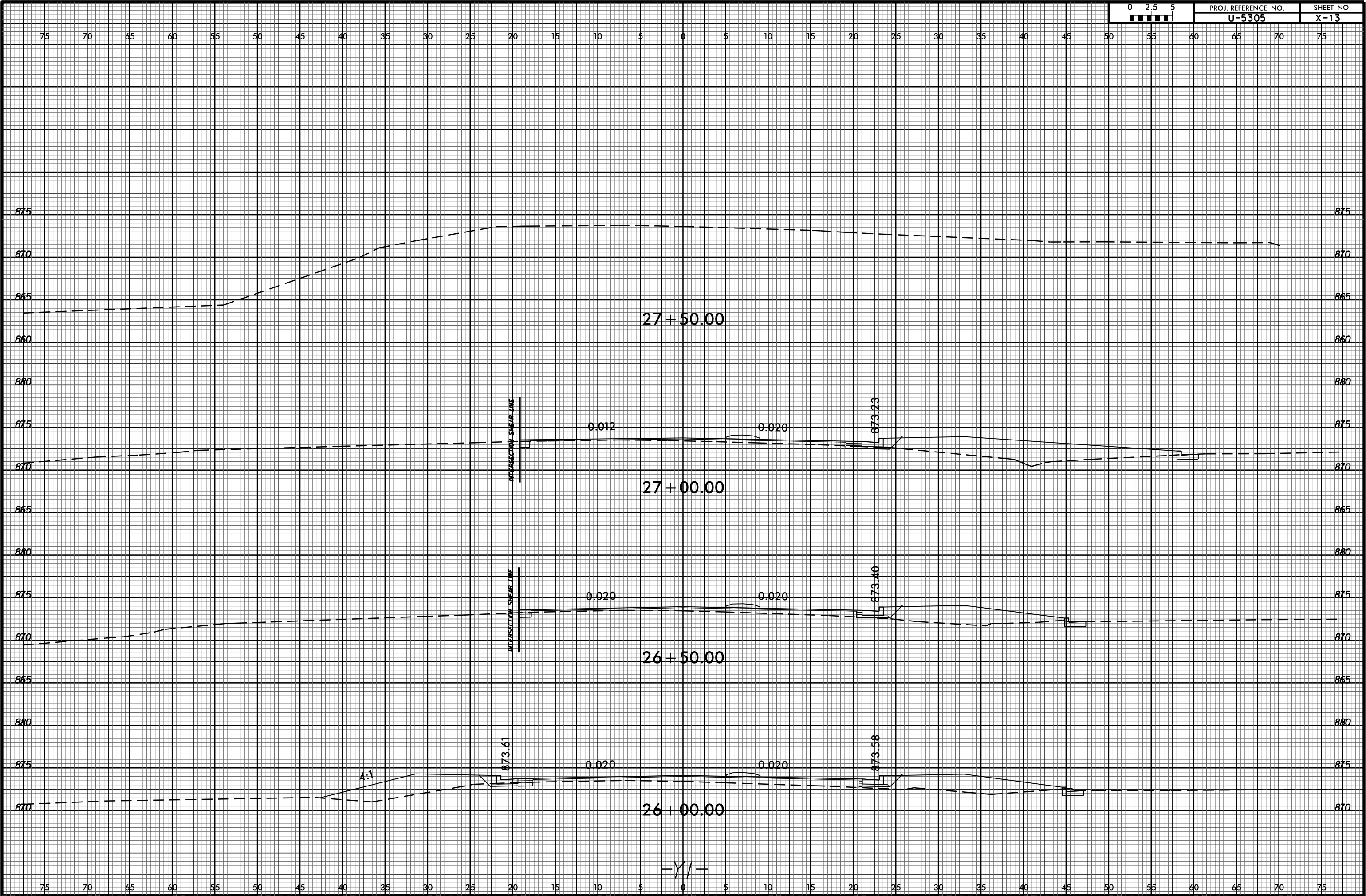
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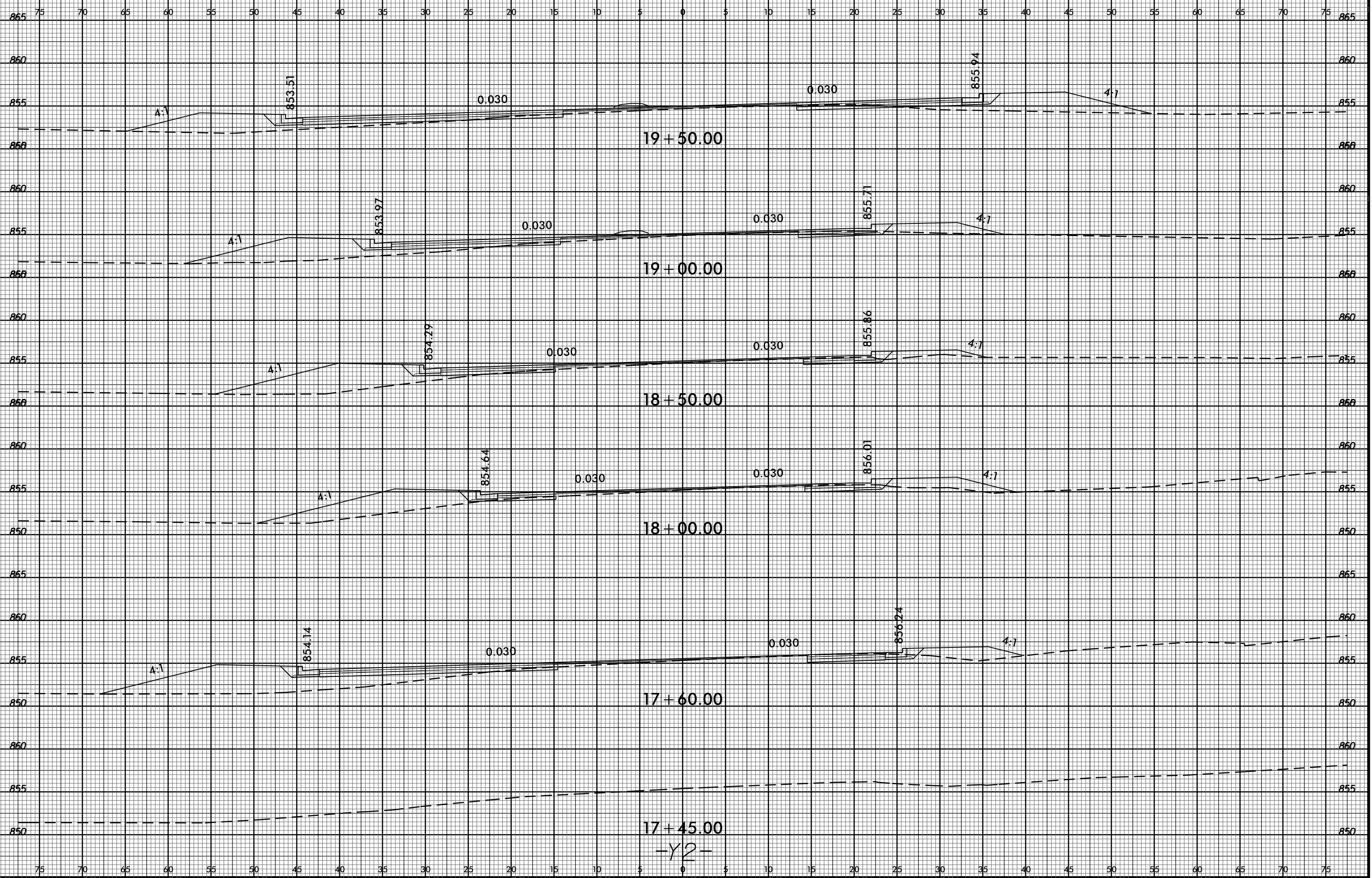
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-Y/-

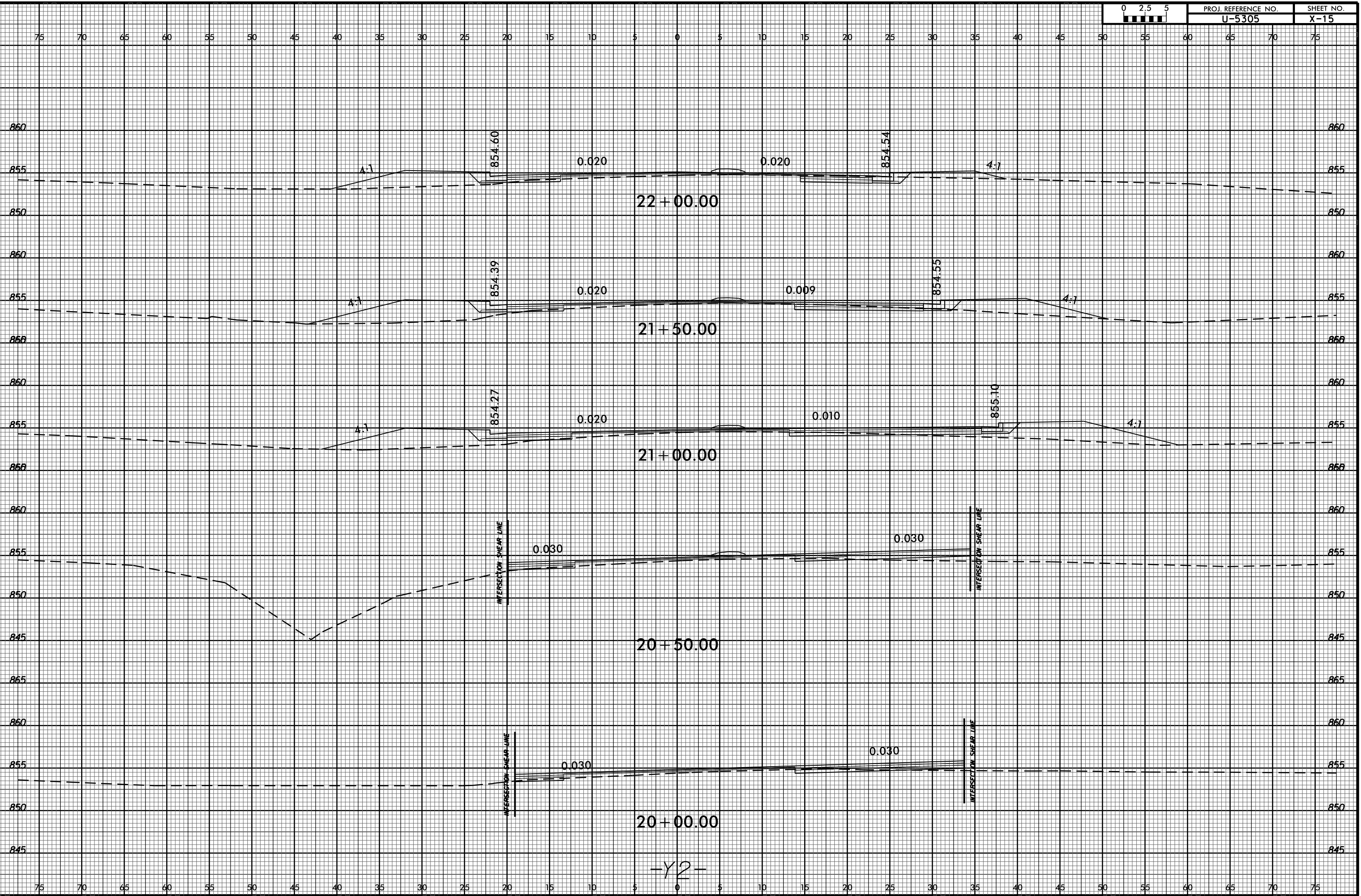
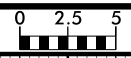




-Y/-



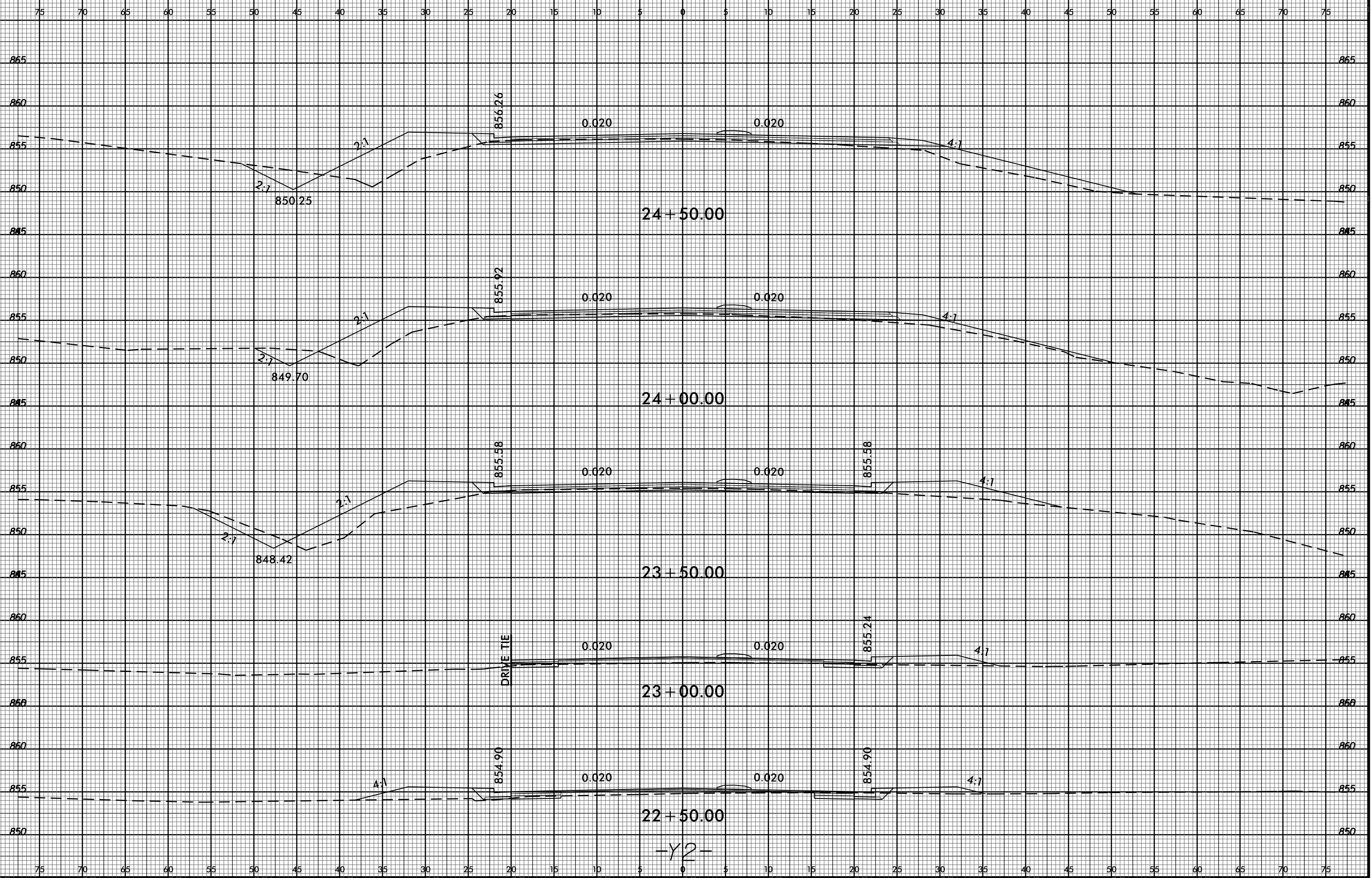
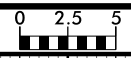
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-Y2-

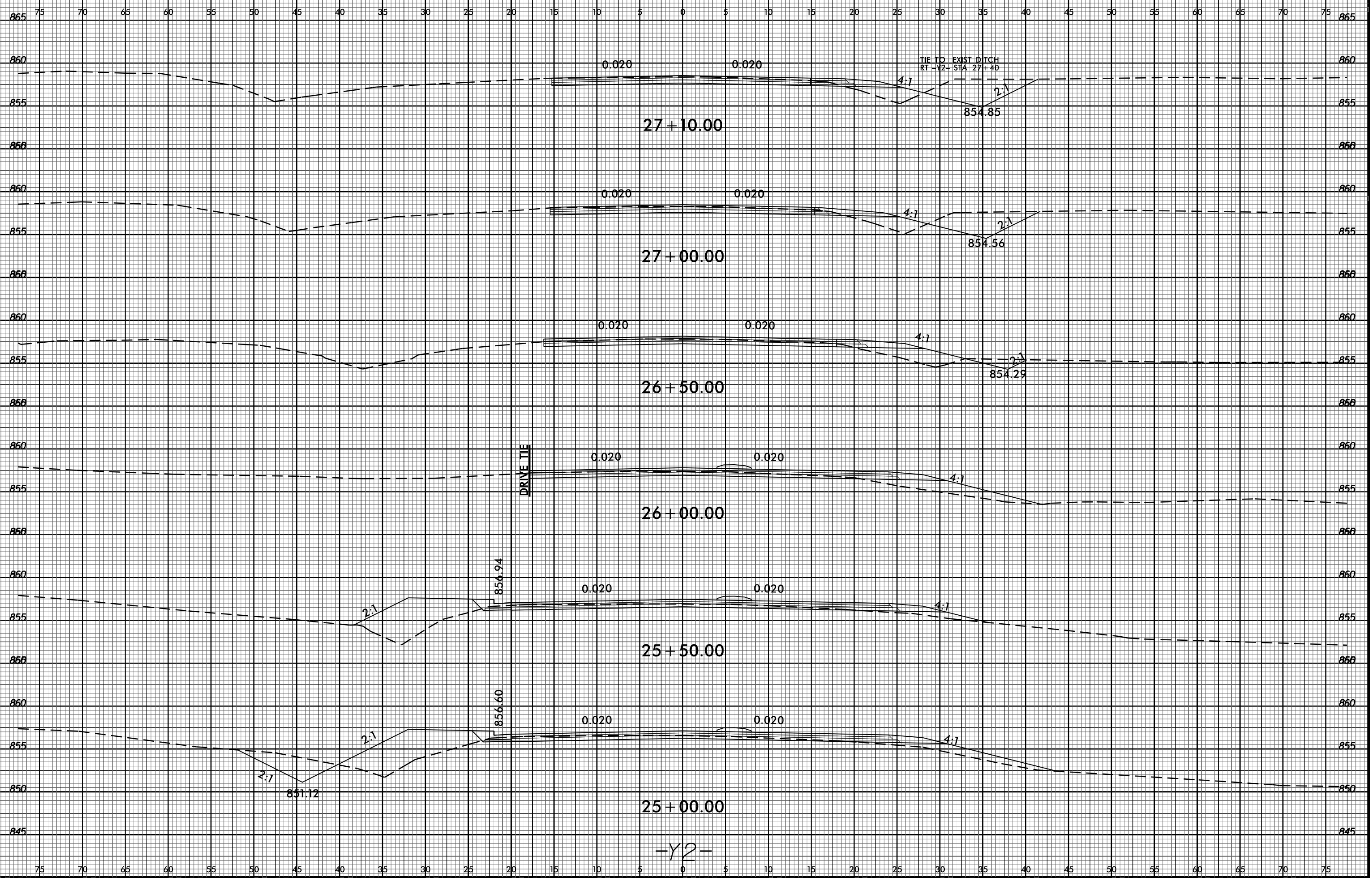
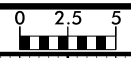
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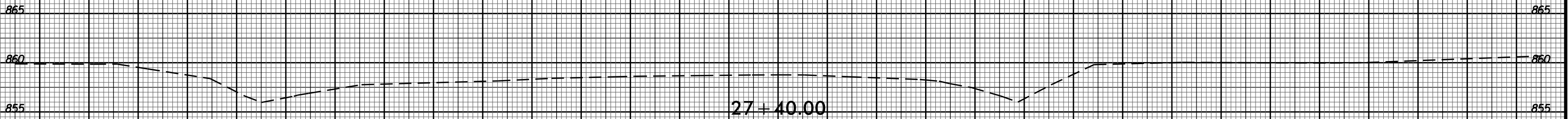


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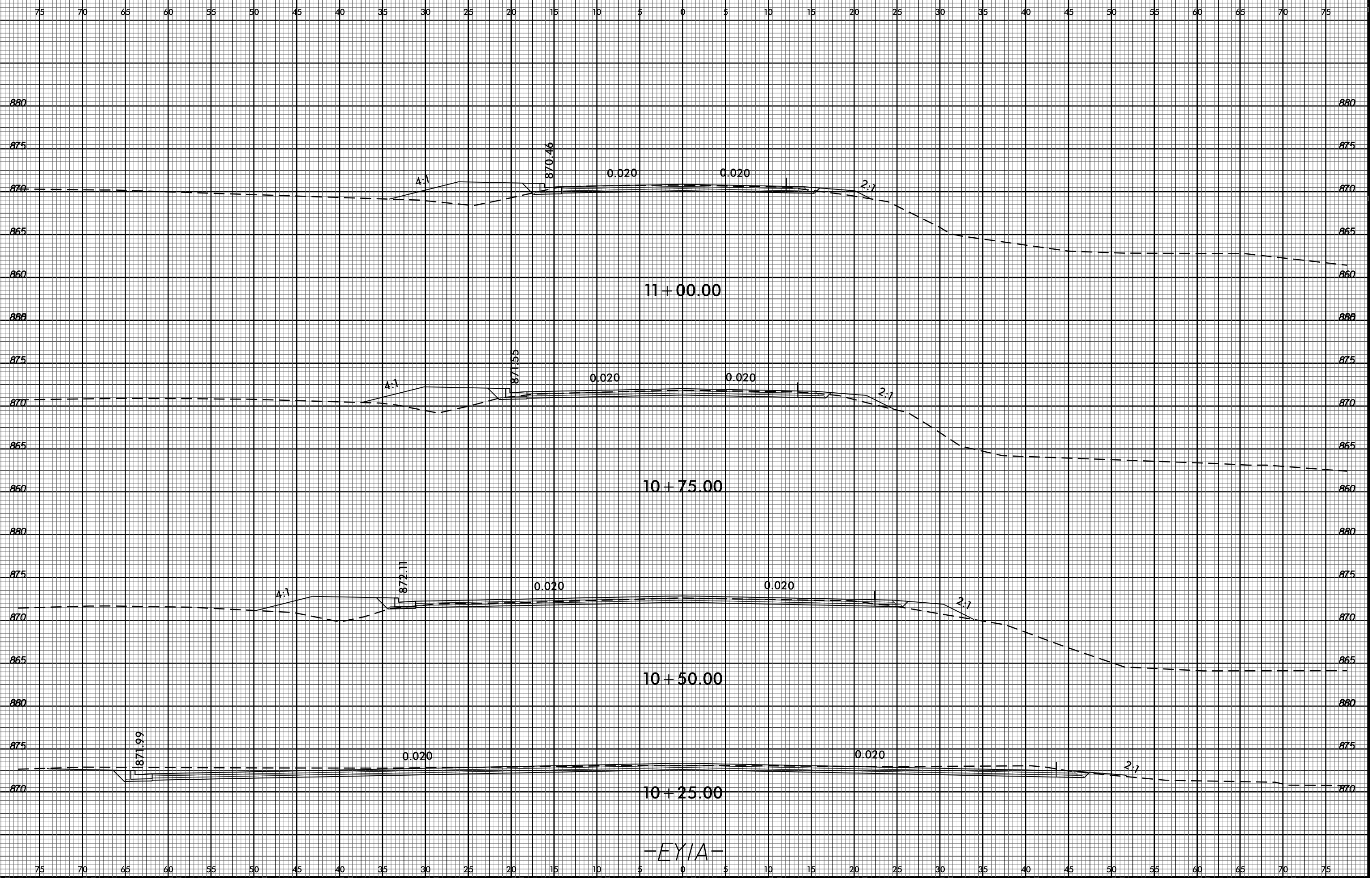
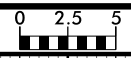
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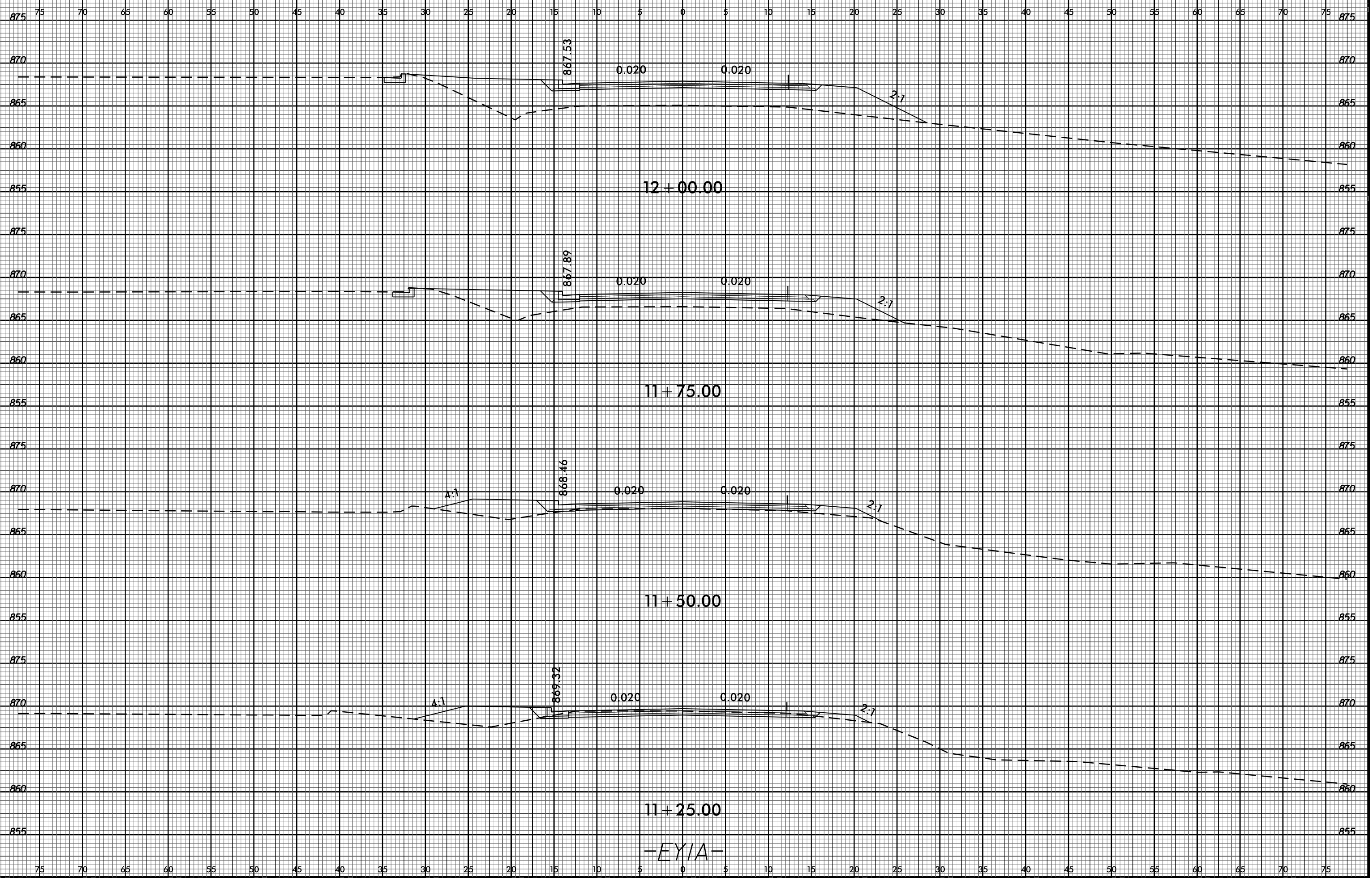
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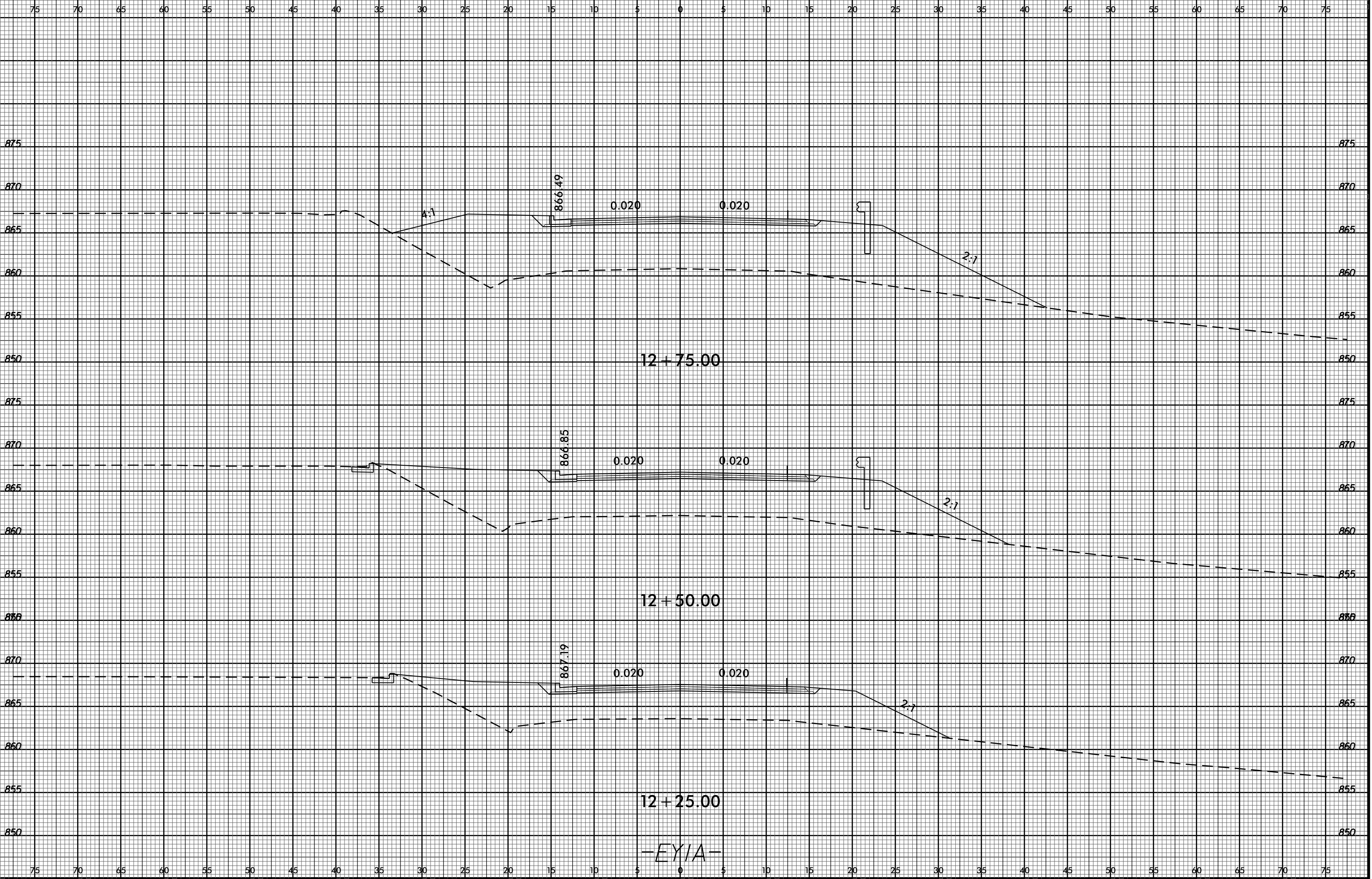


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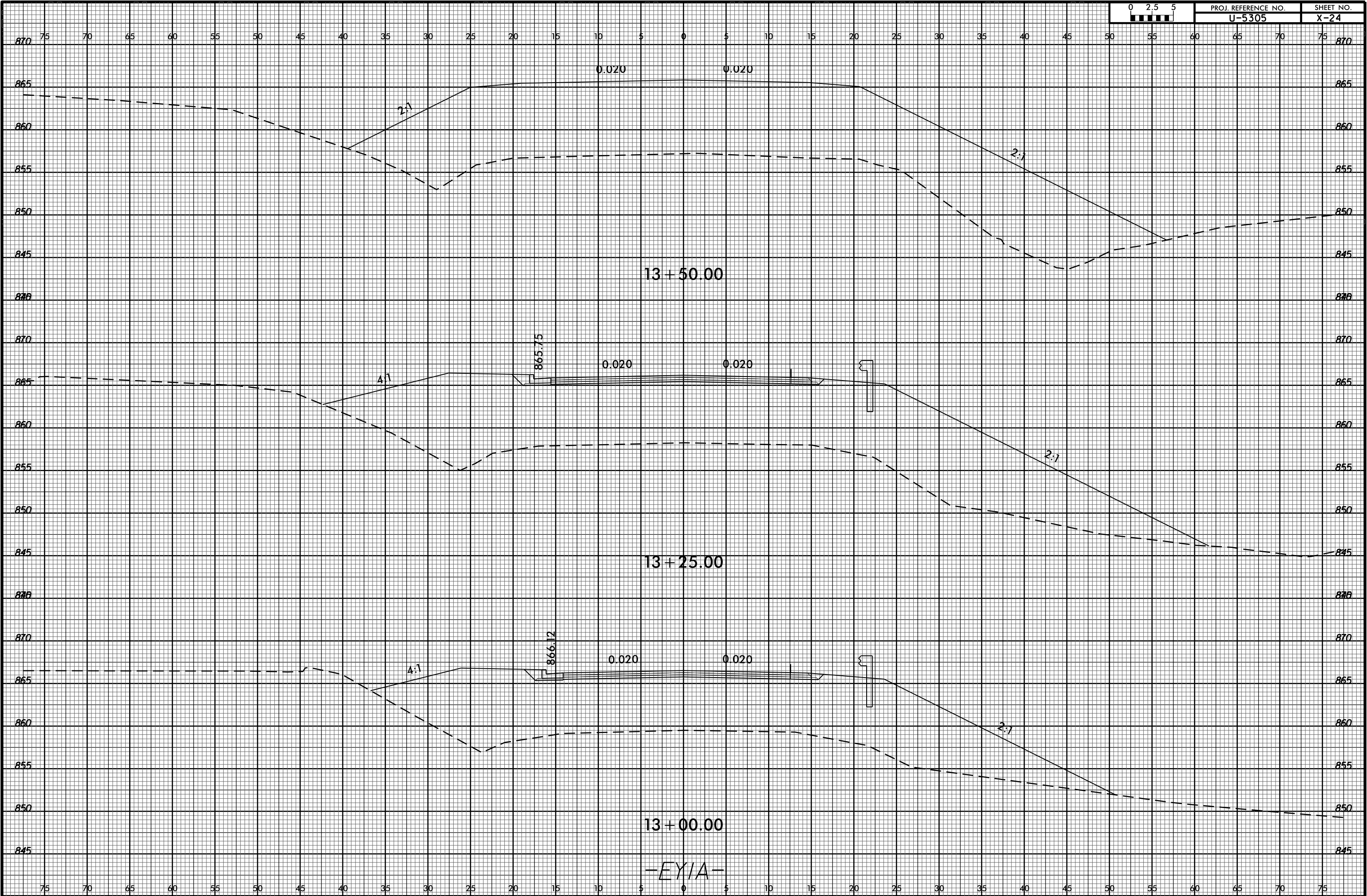
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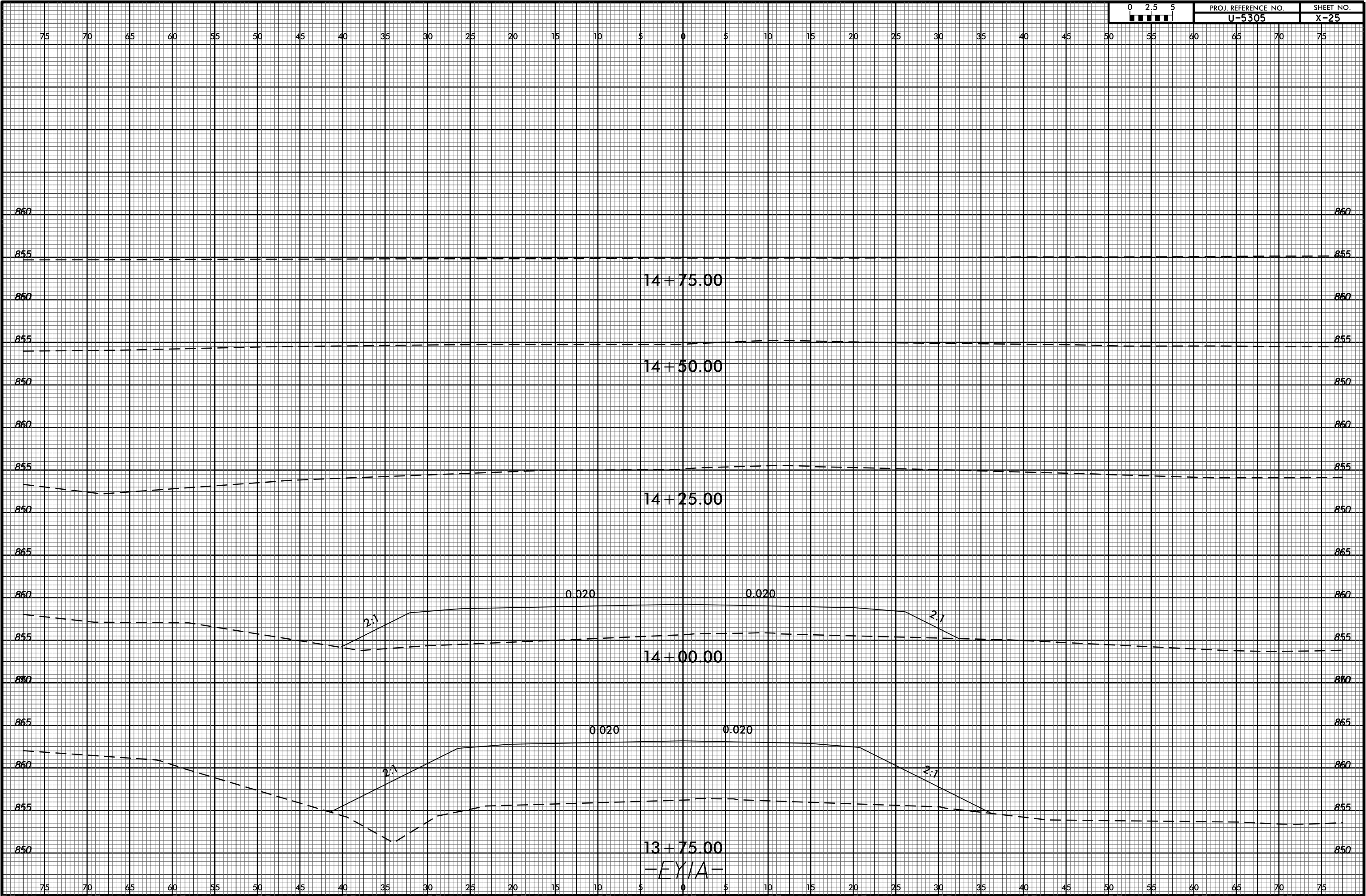


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