



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

EUGENE A. CONTI, JR.  
SECRETARY

BEVERLY HAVES PERDUE  
GOVERNOR

December 11, 2012

U. S. Army Corps of Engineers  
Regulatory Field Office  
151 Patton Avenue, Room 208  
Asheville, NC 28801-5006

ATTN: Ms. Liz Hair  
NCDOT Coordinator

Subject: Application for Section 404 Nationwide Permits 23 & 33 and Section 401  
Water Quality Certification for the proposed replacement of Bridge No. 24  
over Curl Tail Creek on NC 49 in Stanly County, Federal Aid Project  
No. BRNHS-49(22); Division 10; TTP No. B-4643, \$240.00 Debit Work  
Order WBS Element 38451.1.1.

Dear Madam:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 24 over Curl Tail Creek on NC 49 with a 4-span 255-foot pre-stressed concrete girder bridge that will span the creek on a new alignment to the north of the existing bridge. The realignment of the approach to the east of the existing bridge will necessitate the extension of an existing 8' x 8' reinforced concrete box culvert by 55 feet on UT to Curl Tail Creek. There will be a total of 113 linear feet of permanent impacts to surface waters which includes 58 feet of bank stabilization. In addition, 194 feet of temporary impacts to surface waters will result from fill for the temporary work bridge/causeway and 10 feet of temporary impacts will result from bank stabilization installation.

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

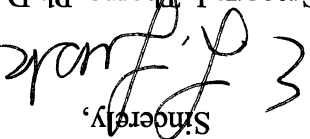
TELEPHONE: 919-707-6100  
FAX: 919-212-5785  
WEBSITE: WWW.NCDOT.ORG

LOCATION:  
1020 BIRCH RIDGE DRIVE  
RALEIGH NC 27610-4328

Please see enclosed copies of the Pre-Construction Notification (PCN), EEP Acceptance Letter, stormwater management plan, permit drawings, and design plans for the above-referenced project. The Categorical Exclusion (CE) was completed in November 2011 and was distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of June 18, 2013 and a review date of April 30, 2013; however, the let date may advance as additional funding becomes available.

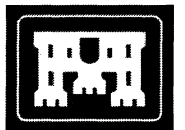
A copy of this permit application and its distribution list will be posted on the NCDOT website at: <http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html>. If you have any questions or need additional information, please e-mail Jeff Hemphill at [jhemphill@ncdot.gov](mailto:jhemphill@ncdot.gov).

Sincerely,  
  
for

Gregory J. Thorpe, Ph.D., Manager

Project Development & Environmental Analysis Unit

Cc: NCDOT Permit Application Standard Distribution List  
File



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

|                                                                                                                                                                                   |                                                                                                                    |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--|
| <b>Pre-Construction Notification (PCN) Form</b>                                                                                                                                   |                                                                                                                    |  |
| <b>A. Applicant Information</b>                                                                                                                                                   |                                                                                                                    |  |
| <b>1. Processing</b>                                                                                                                                                              |                                                                                                                    |  |
| 1a. Type(s) of approval sought from the Corps:                                                                                                                                    | <input checked="" type="checkbox"/> Section 404 Permit <input type="checkbox"/> 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?                                                                                                                          |                                                                                                                    |  |
| 1d. Type(s) of approval sought from the DWQ (check all that apply):                                                                                                               |                                                                                                                    |  |
| <input checked="" type="checkbox"/> 401 Water Quality Certification – Regular <input type="checkbox"/> Non-404 Jurisdictional General Permit                                      |                                                                                                                    |  |
| <input type="checkbox"/> 401 Water Quality Certification – Express <input type="checkbox"/> 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 |  |
| 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 checked="" type="checkbox"/> Yes <input 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                                                |  |
| <b>2. Project Information</b>                                                                                                                                                     |                                                                                                                    |  |
| 2a. Name of project:                                                                                                                                                              | Replacement of Bridge #24 over Curt Tail Creek on NC 49                                                            |  |
| 2b. County:                                                                                                                                                                       | Stanly                                                                                                             |  |
| 2c. Nearest municipality / town:                                                                                                                                                  | Richfield                                                                                                          |  |
| 2d. Subdivision name:                                                                                                                                                             | not applicable                                                                                                     |  |
| 2e. NCDOT only, T.I.P. or state project no:                                                                                                                                       | B-4643                                                                                                             |  |
| <b>3. Owner Information</b>                                                                                                                                                       |                                                                                                                    |  |
| 3a. Name(s) on Recorded Deed:                                                                                                                                                     | North Carolina Department of Transportation                                                                        |  |
| 3b. Deed Book and Page No.                                                                                                                                                        | not applicable                                                                                                     |  |
| 3c. Responsible Party (for LLC if applicable):                                                                                                                                    | not applicable                                                                                                     |  |
| 3d. Street address:                                                                                                                                                               | 1598 Mail Service Center                                                                                           |  |
| 3e. City, state, zip:                                                                                                                                                             | Raleigh, NC 27699-1598                                                                                             |  |
| 3f. Telephone no.:                                                                                                                                                                | (919) 707-6126                                                                                                     |  |
| 3g. Fax no.:                                                                                                                                                                      | (919) 212-5785                                                                                                     |  |
| 3h. Email address:                                                                                                                                                                | jhemphill@ncdot.gov                                                                                                |  |

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>B. Project Information and Prior Project History</b>                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                            |
| <b>1. Property Identification</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                            |
| 1a. Property identification no. (tax PIN or parcel ID):                                                                                                                                                                                                                                                                                                                                                                                                                                              | not applicable                                                                                             |
| 1b. Site coordinates (in decimal degrees):                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Latitude: 35.4787<br>(DD.DDDDD)<br>Longitude: - 80.2269<br>(-DD.DDDDD)                                     |
| 1c. Property size:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 12.4 acres                                                                                                 |
| <b>2. Surface Waters</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                            |
| 2a. Name of nearest body of water (stream, river, etc.) to proposed project:                                                                                                                                                                                                                                                                                                                                                                                                                         | Curl Tail Creek                                                                                            |
| 2b. Water Quality Classification of nearest receiving water:                                                                                                                                                                                                                                                                                                                                                                                                                                         | WS-IV; CA                                                                                                  |
| 2c. River basin:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yadkin-Pee Dee                                                                                             |
| <b>3. Project Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                            |
| 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:<br>Forestland interspersed with agriculture land and residential development                                                                                                                                                                                                                                                                               |                                                                                                            |
| 3b. List the total estimated acreage of all existing wetlands on the property:<br>0                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                            |
| 3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property:<br>552                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                            |
| 3d. Explain the purpose of the proposed project:<br>To replace a structurally deficient (and/ or) functionally obsolete bridge.                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                            |
| 3e. Describe the overall project in detail, including the type of equipment to be used:<br>The project involves replacing a 68-foot, two span bridge with a 255-foot, 4 span bridge on a new alignment to the north with the existing bridge serving as an on-site detour during construction. The new alignment will also necessitate the extension of an existing culvert to the east of the bridge by 55 feet. Standard road building equipment, such as trucks, dozers, and cranes will be used. |                                                                                                            |
| <b>4. Jurisdictional Determinations</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                            |
| 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?<br>Comments:                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No<br><input type="checkbox"/> Unknown |
| 4b. If the Corps made the jurisdictional determination, what type of determination was made?                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/> Preliminary<br><input type="checkbox"/> Final                                     |
| 4c. If yes, who delineated the jurisdictional areas?<br>Name (if known):                                                                                                                                                                                                                                                                                                                                                                                                                             | Agency/Consultant Company:<br>Other:                                                                       |
| 4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                            |
| <b>5. Project History</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                            |
| 5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No<br><input type="checkbox"/> Unknown |
| 5b. If yes, explain in detail according to "help file" instructions.                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                            |
| <b>6. Future Project Plans</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                            |
| 6a. Is this a phased project?                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No                                     |
| 6b. If yes, explain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                            |

|                                                                                                                                                                                                                 |                                                                  |                     |                        |                                                                      |                                                                        |                                                          |                                                             |     |                                                             |     |                             |     |                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------|------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------|-----|-------------------------------------------------------------|-----|-----------------------------|-----|-----------------------------|
| <b>C. Proposed Impacts Inventory</b>                                                                                                                                                                            |                                                                  |                     |                        |                                                                      |                                                                        |                                                          |                                                             |     |                                                             |     |                             |     |                             |
| <b>1. Impacts Summary</b>                                                                                                                                                                                       |                                                                  |                     |                        |                                                                      |                                                                        |                                                          |                                                             |     |                                                             |     |                             |     |                             |
| 1a. Which sections were completed below for your project (check all that apply):                                                                                                                                |                                                                  |                     |                        |                                                                      |                                                                        |                                                          |                                                             |     |                                                             |     |                             |     |                             |
| <input type="checkbox"/> Wetlands <input checked="" type="checkbox"/> Streams - tributaries <input type="checkbox"/> Buffers<br><input type="checkbox"/> Open Waters <input type="checkbox"/> Pond Construction |                                                                  |                     |                        |                                                                      |                                                                        |                                                          |                                                             |     |                                                             |     |                             |     |                             |
| <b>2. Wetland Impacts</b><br>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 type="checkbox"/> P <input type="checkbox"/> T            |                     |                        |                                                                      |                                                                        | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Corps <input type="checkbox"/> DWQ |     |                                                             |     |                             |     |                             |
| 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 5                                                                                                                                                                                                          | <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 6                                                                                                                                                                                                          | <input type="checkbox"/> P <input type="checkbox"/> T            |                     |                        |                                                                      |                                                                        | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Corps <input type="checkbox"/> DWQ |     |                                                             |     |                             |     |                             |
| <b>2g. Total wetland impacts</b>                                                                                                                                                                                |                                                                  |                     |                        |                                                                      |                                                                        |                                                          |                                                             |     |                                                             |     |                             |     |                             |
| 2h. Comments:                                                                                                                                                                                                   |                                                                  |                     |                        |                                                                      |                                                                        |                                                          |                                                             |     |                                                             |     |                             |     |                             |
| <b>3. Stream Impacts</b><br>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 type="checkbox"/> P <input checked="" type="checkbox"/> T | Workbridge/Causeway | Curt Tail Creek        | <input checked="" type="checkbox"/> PER <input type="checkbox"/> INT | <input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ | 22                                                       | 194                                                         |     |                                                             |     |                             |     |                             |
| Site 1                                                                                                                                                                                                          | <input checked="" type="checkbox"/> P <input type="checkbox"/> T | Bank Stabilization  | Curt Tail Creek        | <input checked="" type="checkbox"/> PER <input type="checkbox"/> INT | <input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ | 22                                                       | 28                                                          |     |                                                             |     |                             |     |                             |
| Site 2                                                                                                                                                                                                          | <input checked="" type="checkbox"/> P <input type="checkbox"/> T | Fill                | UT1 to Curt Tail Creek | <input checked="" type="checkbox"/> PER <input type="checkbox"/> INT | <input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ | 9                                                        | 55                                                          |     |                                                             |     |                             |     |                             |
| Site 2                                                                                                                                                                                                          | <input checked="" type="checkbox"/> P <input type="checkbox"/> T | Bank Stabilization  | UT1 to Curt Tail Creek | <input checked="" type="checkbox"/> PER <input type="checkbox"/> INT | <input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ | 9                                                        | 30                                                          |     |                                                             |     |                             |     |                             |
| Site 2                                                                                                                                                                                                          | <input type="checkbox"/> P <input checked="" type="checkbox"/> T | Bank Stabilization  | UT1 to Curt Tail Creek | <input checked="" type="checkbox"/> PER <input type="checkbox"/> INT | <input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ | 9                                                        | 10                                                          |     |                                                             |     |                             |     |                             |
| Site 2                                                                                                                                                                                                          | <input type="checkbox"/> P <input checked="" type="checkbox"/> T | Installation        | UT1 to Curt Tail Creek | <input checked="" type="checkbox"/> PER <input type="checkbox"/> INT | <input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ | 9                                                        |                                                             |     |                                                             |     |                             |     |                             |
| Site                                                                                                                                                                                                            | <input type="checkbox"/> P <input type="checkbox"/> T            |                     |                        | <input type="checkbox"/> PER <input type="checkbox"/> INT            | <input type="checkbox"/> Corps <input type="checkbox"/> DWQ            |                                                          |                                                             |     |                                                             |     |                             |     |                             |
| <b>3h. Total stream and tributary impacts</b>                                                                                                                                                                   |                                                                  |                     |                        |                                                                      |                                                                        |                                                          |                                                             |     |                                                             |     |                             |     |                             |
| 113 Perm 204 Temp                                                                                                                                                                                               |                                                                  |                     |                        |                                                                      |                                                                        |                                                          |                                                             |     |                                                             |     |                             |     |                             |
| 3i. Comments:                                                                                                                                                                                                   |                                                                  |                     |                        |                                                                      |                                                                        |                                                          |                                                             |     |                                                             |     |                             |     |                             |

|                                                                                                                                                                                                                              |                                                           |     |                                   |     |                         |     |                       |     |                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----|-----------------------------------|-----|-------------------------|-----|-----------------------|-----|------------------------|
| <b>4. Open Water Impacts</b><br>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) |
|                                                                                                                                                                                                                              | 01 <input type="checkbox"/> P <input type="checkbox"/> T  |     |                                   |     |                         |     |                       |     |                        |
|                                                                                                                                                                                                                              | 02 <input type="checkbox"/> P <input type="checkbox"/> T  |     |                                   |     |                         |     |                       |     |                        |
|                                                                                                                                                                                                                              | 03 <input type="checkbox"/> P <input type="checkbox"/> T  |     |                                   |     |                         |     |                       |     |                        |
|                                                                                                                                                                                                                              | 04 <input type="checkbox"/> P <input type="checkbox"/> T  |     |                                   |     |                         |     |                       |     |                        |
| 4f. Total open water impacts                                                                                                                                                                                                 |                                                           |     |                                   |     |                         |     |                       |     |                        |
| 4g. Comments:                                                                                                                                                                                                                |                                                           |     |                                   |     |                         |     |                       |     |                        |
| <b>5. Pond or Lake Construction</b><br>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 Impacts (acres) |
|                                                                                                                                                                                                                              | P1                                                        |     | Flooded                           |     | Flooded                 |     | Flooded               |     | Flooded                |
|                                                                                                                                                                                                                              | 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:                                                                                                                                                                                                  |                                                           |     |                                   |     |                         |     |                       |     |                        |

|                                                                                                                                                                                                                                                                            |                       |                 |                                                             |                                 |                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|-------------------------------------------------------------|---------------------------------|---------------------------------|
| <b>6. Buffer Impacts (for DWQ)</b><br>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 <b>MUST</b> fill out Section D of this form. |                       |                 |                                                             |                                 |                                 |
| 6a. Project is in which protected basin?<br><input type="checkbox"/> Neuse <input type="checkbox"/> Catawba <input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Randleman <input type="checkbox"/> Other:                                                        |                       |                 |                                                             |                                 |                                 |
| 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<br><input type="checkbox"/> No |                                 |                                 |
| B2 <input type="checkbox"/> P <input type="checkbox"/> T                                                                                                                                                                                                                   |                       |                 | <input type="checkbox"/> Yes<br><input type="checkbox"/> No |                                 |                                 |
| B3 <input type="checkbox"/> P <input type="checkbox"/> T                                                                                                                                                                                                                   |                       |                 | <input type="checkbox"/> Yes<br><input type="checkbox"/> No |                                 |                                 |
| 6h. Total buffer impacts                                                                                                                                                                                                                                                   |                       |                 |                                                             |                                 |                                 |
| 6i. Comments:                                                                                                                                                                                                                                                              |                       |                 |                                                             |                                 |                                 |

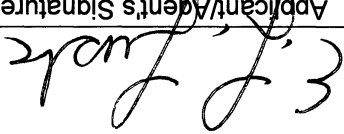


|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                         |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <b>D. Impact Justification and Mitigation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                         |          |
| <b>1. Avoidance and Minimization</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                         |          |
| <p>1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project.<br/>Deck drains eliminated over Curt Tail Creek and two hazardous spill basins are located near the new bridge and another near the extended culvert on UT1 to Curt Tail Creek. The new bridge will span the creek reducing permanent impacts from the project.</p> <p>1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques.<br/>Promotion of sheet flow and infiltration with grassed shoulders and swales on north side of bridge. Removal of road fill and abutments under existing bridge will improve bridge conveyance and reduce bridge opening velocities.</p> |                                                                                                                                                         |          |
| <b>2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                         |          |
| <p>2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?</p> <p><input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p>If no, explain:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>2b. If yes, mitigation is required by (check all that apply):</p> <p><input type="checkbox"/> DWQ      <input checked="" type="checkbox"/> Corps</p> |          |
| <p>2c. If yes, which mitigation option will be used for this project?</p> <p><input type="checkbox"/> Mitigation bank      <input checked="" type="checkbox"/> Payment to in-lieu fee program      <input type="checkbox"/> Permittee Responsible Mitigation</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                         |          |
| <b>3. Complete if Using a Mitigation Bank</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                         |          |
| 3a. Name of Mitigation Bank: not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                         |          |
| 3b. Credits Purchased (attach receipt and letter)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Type                                                                                                                                                    | Quantity |
| 3c. Comments:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                         |          |
| <b>4. Complete if Making a Payment to In-lieu Fee Program</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                         |          |
| 4a. Approval letter from in-lieu fee program is attached.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input type="checkbox"/> Yes                                                                                                                            |          |
| 4b. Stream mitigation requested:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 55 linear feet                                                                                                                                          |          |
| 4c. If using stream mitigation, stream temperature:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input checked="" type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold                                                    |          |
| 4d. Buffer mitigation requested (DWQ only):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | square feet                                                                                                                                             |          |
| 4e. Riparian wetland mitigation requested:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | acres                                                                                                                                                   |          |
| 4f. Non-riparian wetland mitigation requested:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | acres                                                                                                                                                   |          |
| 4g. Coastal (tidal) wetland mitigation requested:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | acres                                                                                                                                                   |          |
| 4h. Comments:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                         |          |
| <b>5. Complete if Using a Permittee Responsible Mitigation Plan</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                         |          |
| 5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                         |          |

|                                                                                                                                                                                                                             |                       |                                                                                                                                                                |                   |                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------|
| <b>6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ</b>                                                                                                                                       |                       |                                                                                                                                                                |                   |                                       |
| 6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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                                                                                                                                                                                                                      |                       |                                                                                                                                                                | 3 (2 for Catawba) |                                       |
| Zone 2                                                                                                                                                                                                                      |                       |                                                                                                                                                                | 1.5               |                                       |
| 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:                                                                                                                                                                                                               |                       |                                                                                                                                                                |                   |                                       |

|                                                                                                                                                          |                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>E. Stormwater Management and Diffuse Flow Plan (required by DWQ)</b>                                                                                  |                                                                                                                                                                                               |
| <b>1. Diffuse Flow Plan</b>                                                                                                                              |                                                                                                                                                                                               |
| 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<br><input checked="" type="checkbox"/> No                                                                                                                        |
| 1b. If yes, then is a diffuse flow plan included? If not, explain why.<br>Comments: If required from 1a, see attached buffer permit drawings.            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No                                                                                                                                   |
| <b>2. Stormwater Management Plan</b>                                                                                                                     |                                                                                                                                                                                               |
| 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<br><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:<br>See attached permit drawings. |                                                                                                                                                                                               |
| 2e. Who will be responsible for the review of the Stormwater Management Plan?                                                                            | <input type="checkbox"/> Certified Local Government<br><input type="checkbox"/> DWQ Stormwater Program<br><input checked="" type="checkbox"/> DWQ 401 Unit                                    |
| <b>3. Certified Local Government Stormwater Review</b>                                                                                                   |                                                                                                                                                                                               |
| 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<br><input type="checkbox"/> NSW<br><input type="checkbox"/> USMP<br><input type="checkbox"/> Water Supply Watershed<br><input type="checkbox"/> Other:      |
| 3c. Has the approved Stormwater Management Plan with proof of approval been attached?                                                                    | <input type="checkbox"/> Yes<br><input type="checkbox"/> No                                                                                                                                   |
| <b>4. DWQ Stormwater Program Review</b>                                                                                                                  |                                                                                                                                                                                               |
| 4a. Which of the following state-implemented stormwater management programs apply (check all that apply):                                                | <input type="checkbox"/> Coastal counties<br><input type="checkbox"/> HQW<br><input type="checkbox"/> ORW<br><input type="checkbox"/> Session Law 2006-246<br><input type="checkbox"/> Other: |
| 4b. Has the approved Stormwater Management Plan with proof of approval been attached?                                                                    | <input type="checkbox"/> Yes<br><input type="checkbox"/> No                                                                                                                                   |
| <b>5. DWQ 401 Unit Stormwater Review</b>                                                                                                                 |                                                                                                                                                                                               |
| 5a. Does the Stormwater Management Plan meet the appropriate requirements?                                                                               | <input type="checkbox"/> Yes<br><input type="checkbox"/> No N/A                                                                                                                               |
| 5b. Have all of the 401 Unit submittal requirements been met?                                                                                            | <input type="checkbox"/> Yes<br><input type="checkbox"/> No N/A                                                                                                                               |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| <b>F. Supplementary Information</b>                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                     |
| <b>1. Environmental Documentation (DWQ Requirement)</b>                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                     |
| 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.)<br>Comments:                                                                                                                                                                                                                                                                           | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| <b>2. Violations (DWQ Requirement)</b>                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                     |
| 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):                                                                                                                                                                                                                                                                                                                                                         |                                                                     |
| <b>3. Cumulative Impacts (DWQ Requirement)</b>                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                     |
| 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.<br>Due to the minimal transportation impact resulting from this bridge replacement, this project will neither influence nearby land uses nor stimulate growth. Therefore, a detailed indirect or cumulative effects study will not be necessary. |                                                                     |
| <b>4. Sewage Disposal (DWQ Requirement)</b>                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                     |
| 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.<br>not applicable                                                                                                                                                                                                                                                   |                                                                     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>5. Endangered Species and Designated Critical Habitat (Corps Requirement)</b>                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                  |
| 5a. Will this project occur in or near an area with federally protected species or habitat?                                                                                                                                                                                                                                                                                                                                                                                              | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No                                                                                                                                           |
| 5b. Have you checked with the USFWS concerning Endangered Species Act impacts?                                                                                                                                                                                                                                                                                                                                                                                                           | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No                                                                                                                                           |
| 5c. If yes, indicate the USFWS Field Office you have contacted.                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/> Raleigh<br><input type="checkbox"/> Asheville                                                                                                                                           |
| 5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat?<br>NCDOT field surveys for - 8/30/07 & 9/13/11 found no specimens and a review of the North Carolina Natural Heritage database on 12/04/12 determined No Effect. The NHP database also noted an occurrence of Bald Eagle on Tuckertown Lake but no nests were observed within 660 feet from the project study area. during a survey conducted 12/06/12. |                                                                                                                                                                                                                  |
| <b>6. Essential Fish Habitat (Corps Requirement)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                  |
| 6a. Will this project occur in or near an area designated as essential fish habitat?                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No                                                                                                                                           |
| 6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat?<br>NMFS County Index                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                  |
| <b>7. Historic or Prehistoric Cultural Resources (Corps Requirement)</b>                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                  |
| 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<br><input checked="" type="checkbox"/> No                                                                                                                                           |
| 7b. What data sources did you use to determine whether your site would impact historic or archeological resources?<br>NEPA Documentation                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                  |
| <b>8. Flood Zone Designation (Corps Requirement)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                  |
| 8a. Will this project occur in a FEMA-designated 100-year floodplain?                                                                                                                                                                                                                                                                                                                                                                                                                    | <input checked="" type="checkbox"/> Yes<br><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                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                  |
| Applicant/Agent's Printed Name<br><u>Dr. Gregory J. Thorpe, Ph D</u>                                                                                                                                                                                                                                                                                                                                                                                                                     | Applicant/Agent's Signature<br><br>(Agent's signature is valid only if an authorization letter from the applicant is provided.) |
| Date<br><u>12-12-12</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                  |



December 4, 2012

Mr. Gregory J. Thorpe, Ph.D.  
Manager, Project Development and Environmental Analysis Unit  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

B-4643, Replace Bridge Number 24 on NC 49 over Curl Tail Creek, Stanly County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory stream mitigation for the subject project. Based on the information supplied by you on November 29, 2012, the impacts are located in CU 03040103 of the Yadkin River basin in the Southern Piedmont (SP) Eco-Region, and are as follows:

| Yadkin<br>03040103<br>SP | Stream |      |      | Wetlands |                  |                  | Buffer (Sq. Ft.) |        |
|--------------------------|--------|------|------|----------|------------------|------------------|------------------|--------|
|                          | Cold   | Cool | Warm | Riparian | Non-<br>Riparian | Coastal<br>Marsh | Zone 1           | Zone 2 |
| Impacts<br>(feet/acre)   | 0      | 0    | 55   | 0        | 0                | 0                | 0                | 0      |

EEP commits to implementing sufficient compensatory stream mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the N.C. Department of Environment and Natural Resources' Ecosystem Enhancement Program In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

Suzanne Klimmek  
EEP Acting Director

cc: Ms. Liz Hair, USACE – Asheville Regulatory Field Office  
Ms. Amy Chapman, Division of Water Quality, Wetlands/401 Unit  
File: B-4643

*Restoring... Enhancing... Protecting Our State*



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



(Version 1.2, Released September 2011)

Project/TIP No.: B-4643 (38451.1.1) County(ies): Stanly Page 1 of 3

| General Project Information                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                         |                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------------|
| Project No.:                                                                                                                                                                                                                                                                                                                                                                             | B-4643 (38451.1.1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Project Type:           | Roadway Relocation                                   |
| NCDOT Contact:                                                                                                                                                                                                                                                                                                                                                                           | Galen Cail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Contractor / Designer:  | Amy Keeler                                           |
|                                                                                                                                                                                                                                                                                                                                                                                          | Address: 1020 Birch Ridge Dr.<br>Raleigh, N.C. 27610                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                         | Address: 1020 Birch Ridge Dr.<br>Raleigh, N.C. 27610 |
|                                                                                                                                                                                                                                                                                                                                                                                          | Phone: 919.707.6711                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                         | Phone: 919.707.6730                                  |
|                                                                                                                                                                                                                                                                                                                                                                                          | Email: gcal@ncdot.gov                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                         | Email: ameadows@ncdot.gov                            |
| City/Town:                                                                                                                                                                                                                                                                                                                                                                               | Richfield                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | County(ies):            | Stanly                                               |
| River Basin(s):                                                                                                                                                                                                                                                                                                                                                                          | Yadkin-Pee Dee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | CAMA County?            | No                                                   |
| Primary Receiving Water:                                                                                                                                                                                                                                                                                                                                                                 | Curl Tail Creek                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | NCDWQ Stream Index No.: | C                                                    |
| NCDWQ Surface Water Classification for Primary Receiving Water                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Water Supply IV (WS-IV) | None                                                 |
| Other Stream Classification:                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                         |                                                      |
| 303(d) Impairments:                                                                                                                                                                                                                                                                                                                                                                      | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                         |                                                      |
| Buffer Rules In Effect                                                                                                                                                                                                                                                                                                                                                                   | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                         |                                                      |
| Project Description                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                         |                                                      |
| Project Length (lin. Miles or feet):                                                                                                                                                                                                                                                                                                                                                     | 0.407 miles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Surrounding Land Use:   | Cultivated fields, Rural                             |
| Project Built-Upon Area (ac.)                                                                                                                                                                                                                                                                                                                                                            | 1.81                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Proposed Project        | Existing Site                                        |
| Typical Cross Section Description:                                                                                                                                                                                                                                                                                                                                                       | 12' Travel Lanes, 2' Paved Shoulder, 7' Grass Shoulders. Side Slopes varies 2:1-6:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ac.                     | 0.83                                                 |
| Average Daily Traffic (veh/hr/day):                                                                                                                                                                                                                                                                                                                                                      | Design/Future: 10900 (2030)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Existing:               | 5800 (2013)                                          |
| General Project Narrative:                                                                                                                                                                                                                                                                                                                                                               | The project consists of relocating Bridge# 24 on NC 49 over Curl Tail Creek with approximately 1100' of approach work on the west side of the structure and 800' on the east side. The approach work will consist of relocating the existing roadway and structure, extending the existing culvert to the north quadrant and providing grass shoulders and guardrails. The existing 2 span structure (68'-8" total length) will be replaced with a 4 span (1@45', 2@70', 1@70' -total 255' - 45" prestressed concrete girder with spill thru abutments. Reduces the number of bents in Hitchcock Creek from 1 to 0. |                         |                                                      |
| Best Mgmt. Practices:<br>-Promotion of sheet flow and infiltration with grassed shoulders and swales on the north side of bridge.<br>-Hazardous spill basins located at the end of grass swales on the north side of bridge.<br>-Eliminated Deck Drains over creek.<br>-Removal of existing road fill under bridge, will improve bridge conveyance and reduce bridge opening velocities. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                         |                                                      |
| References                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                         |                                                      |



(Version 1.2; Released September 2011)

305

[illegible]

Additional Comments

\* Equalizer Pipes to be noted as a minimization of impacts.

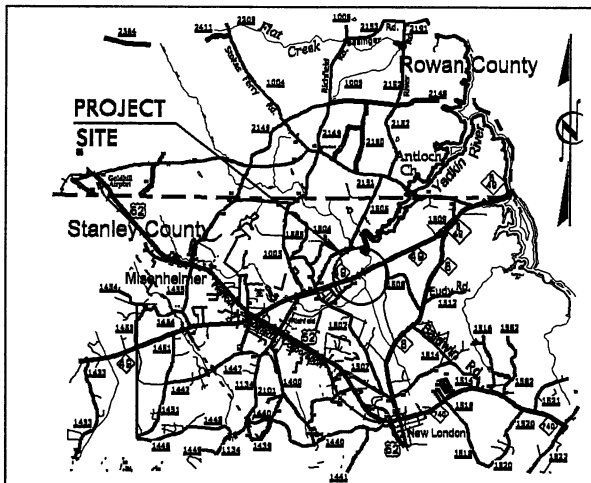


09/08/99

TIP PROJECT: B-4643

CONTRACT:

See Sheet 1-A For Index of Sheets



VICINITY MAP

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

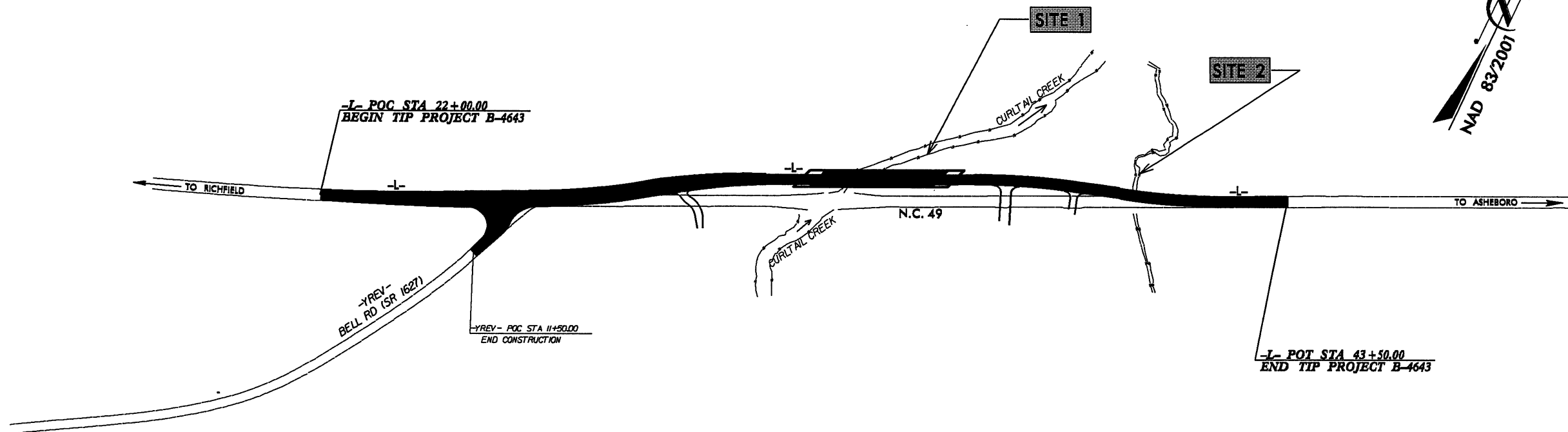
STANLY COUNTY

LOCATION: BRIDGE 24 AND APPROACHES ON NC 49  
OVER CURL TAIL CREEK

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURES

| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C.            | B-4643                      | 1           |              |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
| 38451.1.1       | BRNHS-49(22)                | P.E.        |              |
| 38451.2.1       | BRNHS-0049(22)              | RW & UTIL   |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |

SURFACE WATER IMPACTS PERMIT

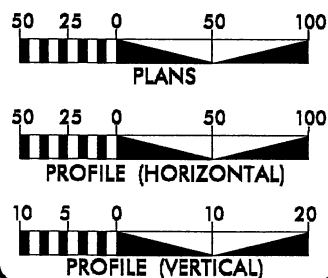


THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BONUNDARIES

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



DESIGN DATA

ADT 2013 = 5,800  
ADT 2030 = 10,900  
DHV = 12 %  
D = 55 %  
T = 14 % \*  
V = 60 MPH  
\* TTST = 10% DUAL 4%  
FUNC CLASS =  
ARTERIAL  
REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-4643 = 0.357 MILES  
LENGTH OF STRUCTURE TIP PROJECT B-4643 = 0.050 MILES  
TOTAL LENGTH OF TIP PROJECT B-4643 = 0.407 MILES

Prepared In the Office of:

DIVISION OF HIGHWAYS

1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
JUNE 15, 2012

LETTING DATE:  
JUNE 18, 2013

G.E. BREW, PE  
PROJECT ENGINEER

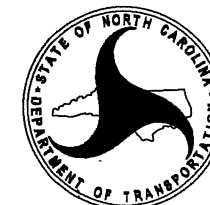
I.T. YOUNIS  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.  
ROADWAY DESIGN  
ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

DIVISION OF HIGHWAYS



STATE OF NORTH CAROLINA  
Permit Drawing

Sheet / of 9

# PROPERTY OWNERS

## NAMES AND ADDRESSES

PARCEL NO.

# NAMES

## ADDRESSES

7

APGI

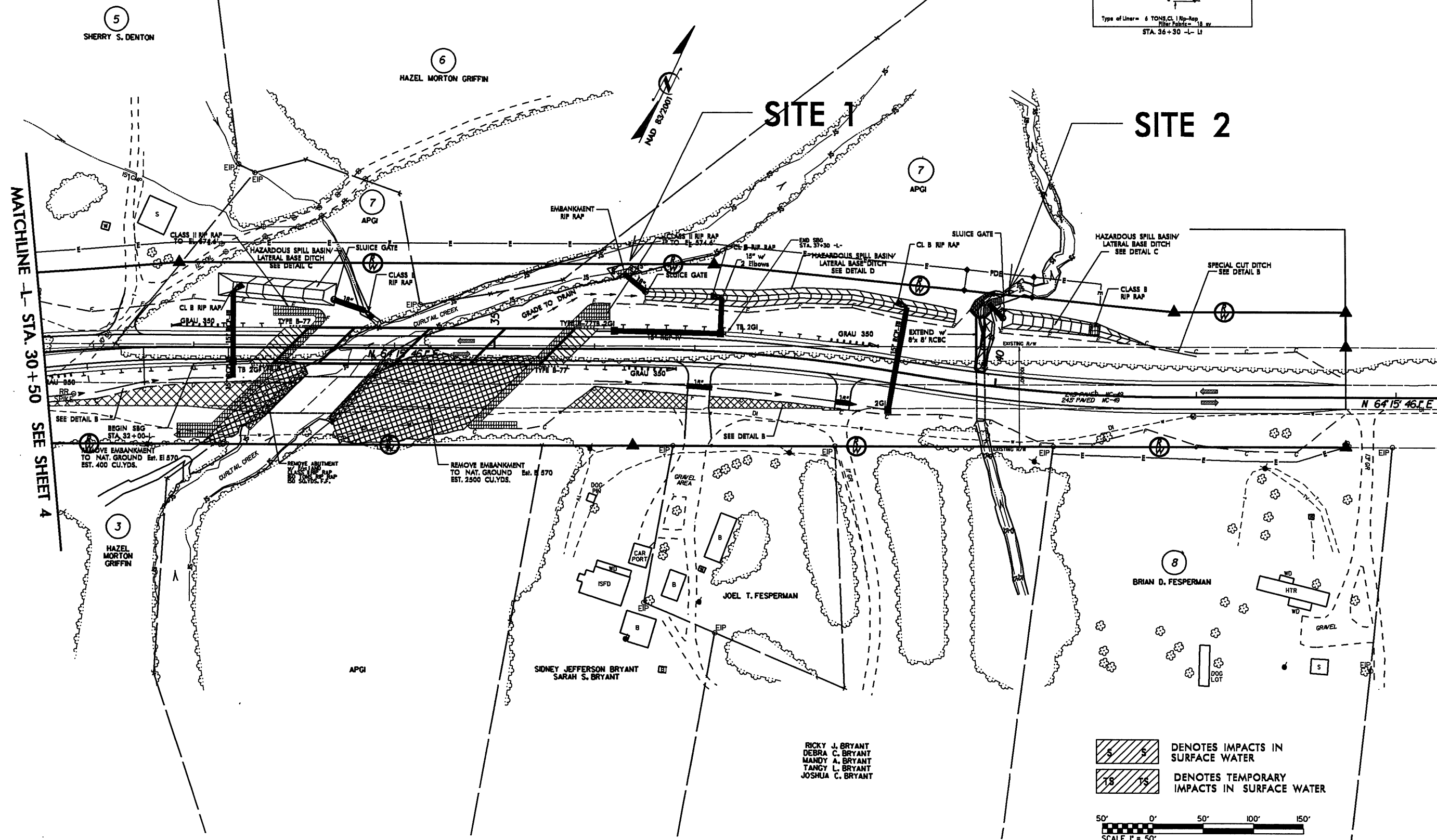
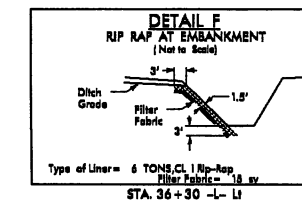
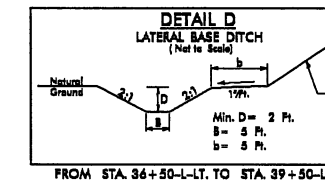
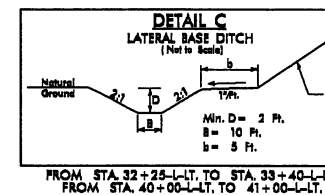
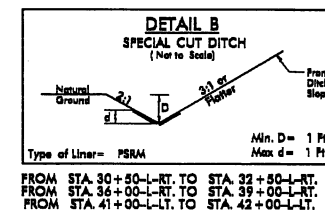
Isabella St.

Pittsburgh, PA 15212

## REVISIONS

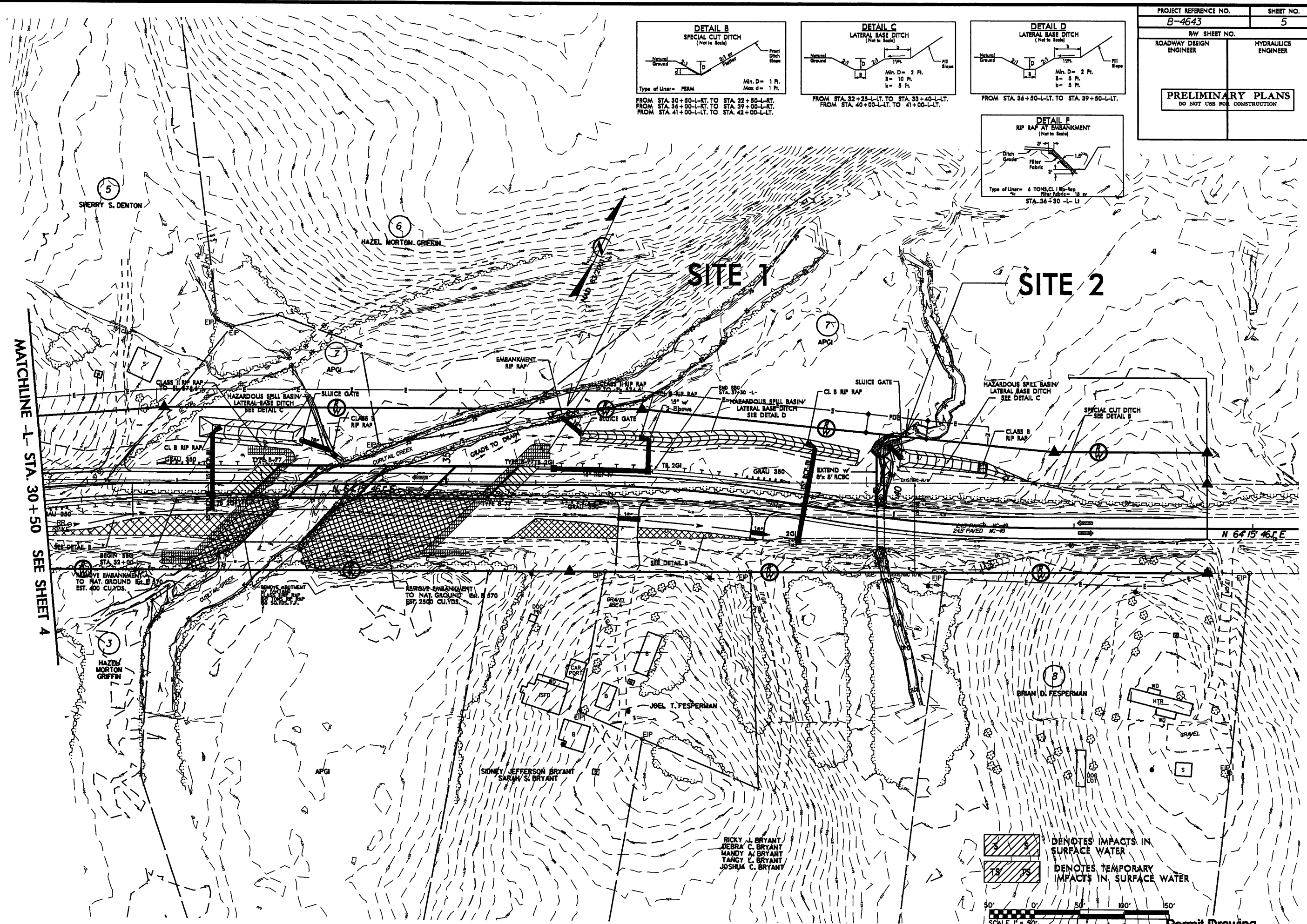
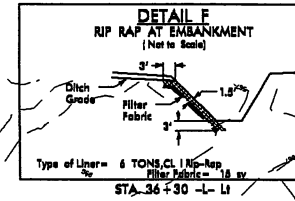
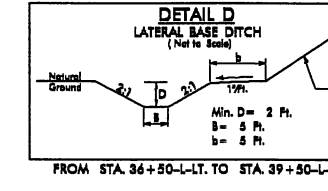
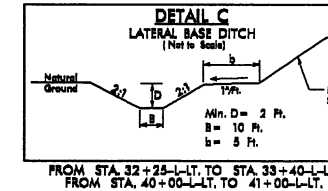
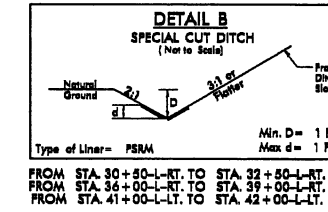
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arnkteeter  
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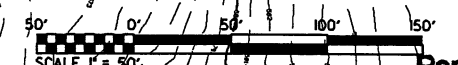


 DENOTES IMPACTS IN SURFACE WATER  
DENOTES TEMPORARY IMPACTS IN SURFACE WATER



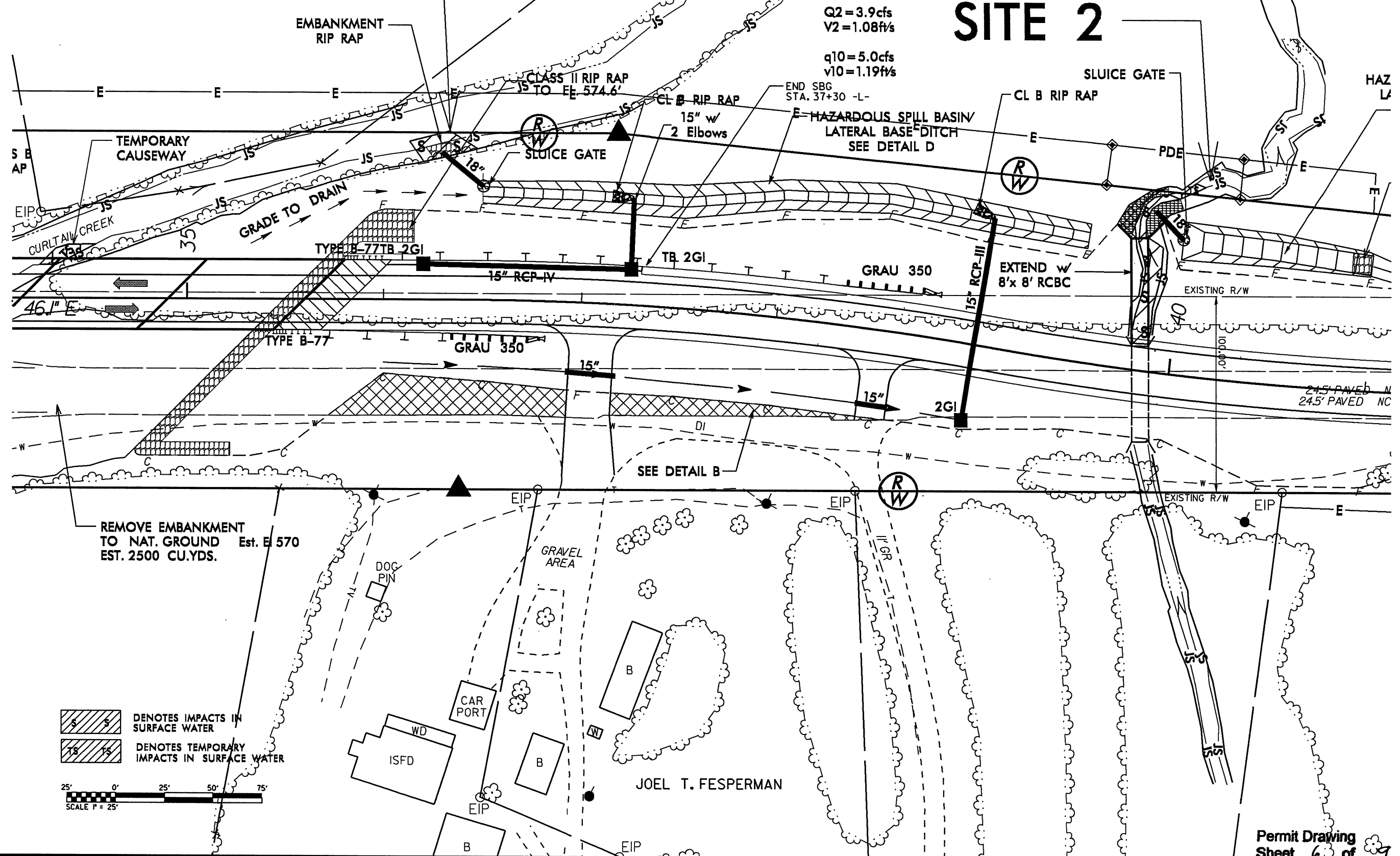



 DENOTES IMPACTS IN SURFACE WATER  
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER



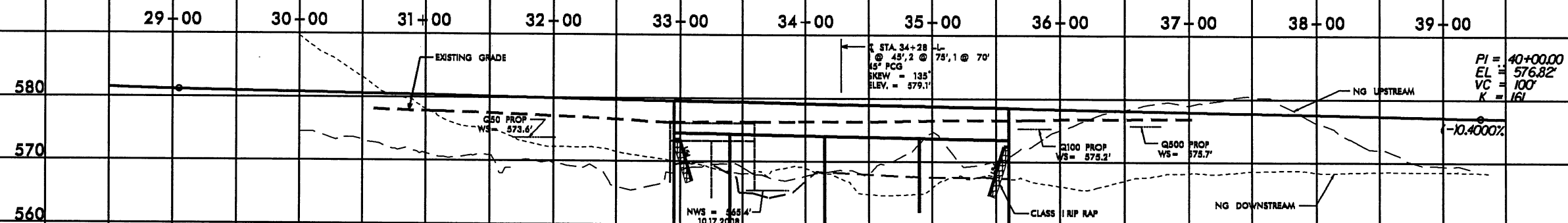
# SITE 1

## SITE 2



Permit Drawing  
Sheet 6 of 9





|                       |                     |                         |         |
|-----------------------|---------------------|-------------------------|---------|
| 6" DECK<br>STA. 35+20 | DRAINS AT<br>-L- TO | 6' CENTER<br>STA. 35+74 | -L- LT. |
| SPREAD = 3.4 ft       |                     |                         |         |
| SHOULDER WIDTH =      |                     | 8'                      |         |

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

200'

← EXISTING -L-

560

NG LT

NWS 566.1'—

ULTIMATE  
2:1

$$\text{INV.} = 563.2'$$
$$-INV. = 565.2'$$

- Q100 PROP WS= 575.1'

- Q50 PROP WS= 574.1' ✓

NG | LT

|      |    |
|------|----|
| — NG | RT |
|------|----|

6/28/2012 amkeeter

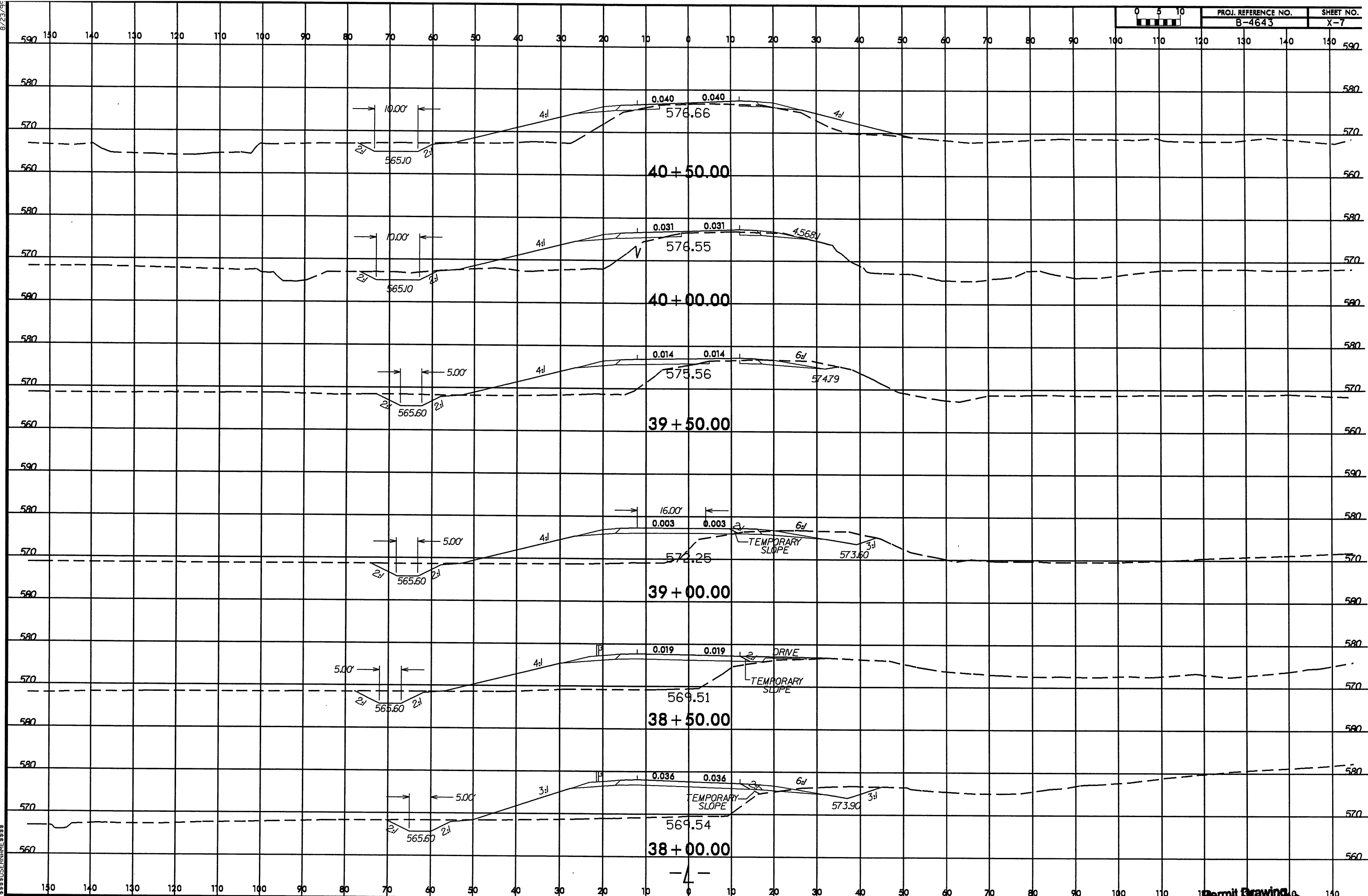
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|--------------------------------|
| Permit Drawing<br>Sheet 8 of 9 |
|--------------------------------|



6/28/2012

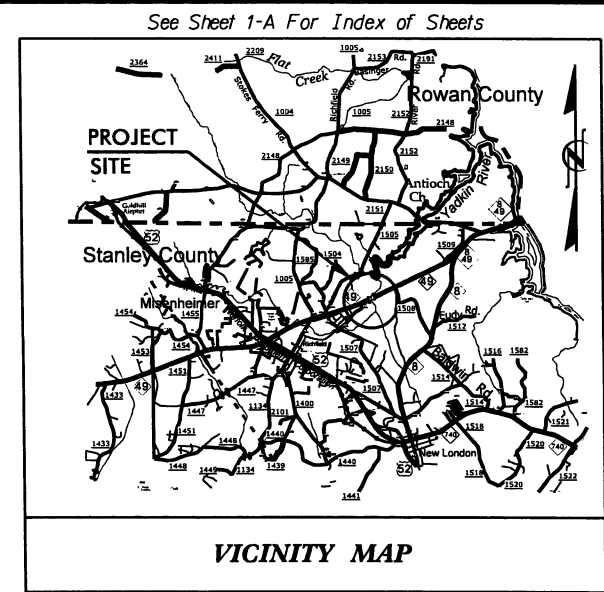
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8/23/98



05/08/99  
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TIP PROJECT: B-4643  
CONTRACT:



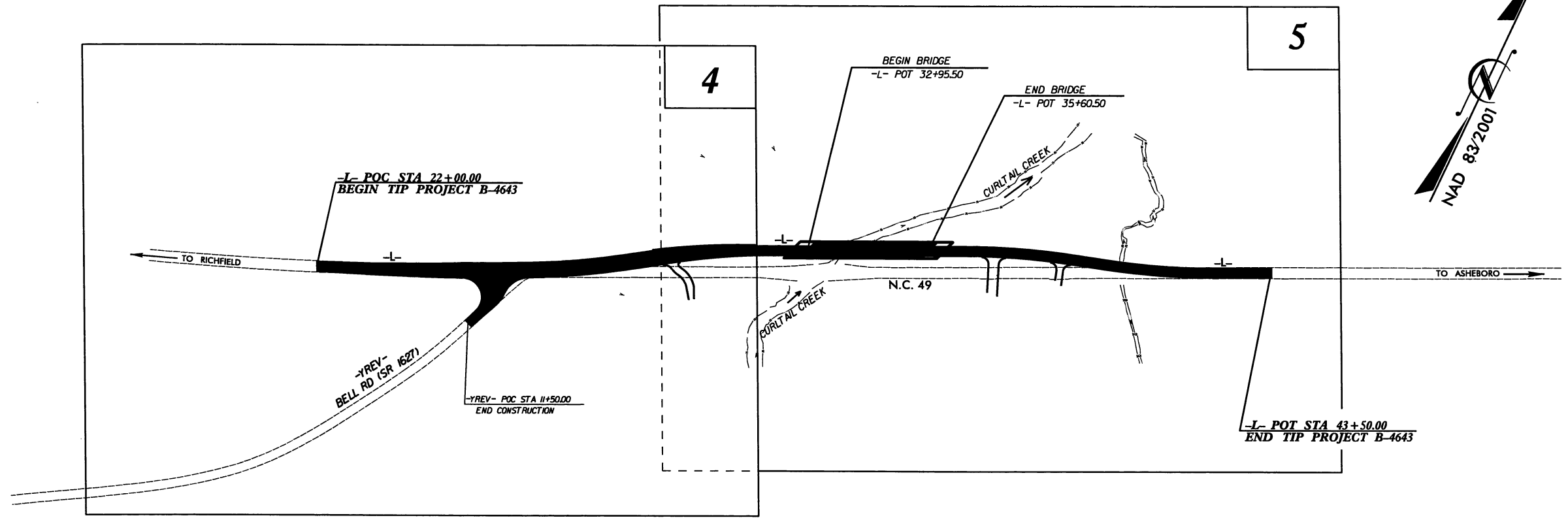
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# STANLY COUNTY

**LOCATION: BRIDGE 24 AND APPROACHES ON NC 49  
OVER CURL TAIL CREEK**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURES**

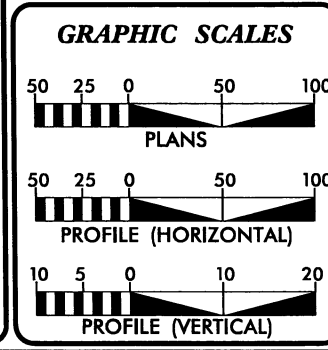
| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C.            | B-4643                      | 1           |              |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
| 38451.1.1       | BRNHS-49(22)                | P.E.        |              |
| 38451.2.1       | BRNHS-0049(22)              | RW & UTIL   |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BONUNDARIES

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION



**DESIGN DATA**

|               |   |             |
|---------------|---|-------------|
| ADT 2013      | = | 5,800       |
| ADT 2030      | = | 10,900      |
| DHV           | = | 12 %        |
| D             | = | 55 %        |
| T             | = | 14 % *      |
| V             | = | 60 MPH      |
| * TTST        | = | 10% DUAL 4% |
| FUNC CLASS    | = | ARTERIAL    |
| REGIONAL TIER | = |             |

**PROJECT LENGTH**

|                                        |   |             |
|----------------------------------------|---|-------------|
| LENGTH OF ROADWAY TIP PROJECT B-4643   | = | 0.357 MILES |
| LENGTH OF STRUCTURE TIP PROJECT B-4643 | = | 0.050 MILES |
| TOTAL LENGTH OF TIP PROJECT B-4643     | = | 0.407 MILES |

|                                                                                                      |                                        |
|------------------------------------------------------------------------------------------------------|----------------------------------------|
| Prepared In the Office of:<br><b>DIVISION OF HIGHWAYS</b><br>1000 Birch Ridge Dr., Raleigh NC, 27610 |                                        |
| 2012 STANDARD SPECIFICATIONS                                                                         |                                        |
| RIGHT OF WAY DATE:<br>JUNE 15, 2012                                                                  | G.E. BREW, PE<br>PROJECT ENGINEER      |
| LETTING DATE:<br>JUNE 18, 2013                                                                       | I.T. YOUNIS<br>PROJECT DESIGN ENGINEER |

|                         |
|-------------------------|
| HYDRAULICS ENGINEER     |
| SIGNATURE: _____ P.E.   |
| ROADWAY DESIGN ENGINEER |
| SIGNATURE: _____ P.E.   |

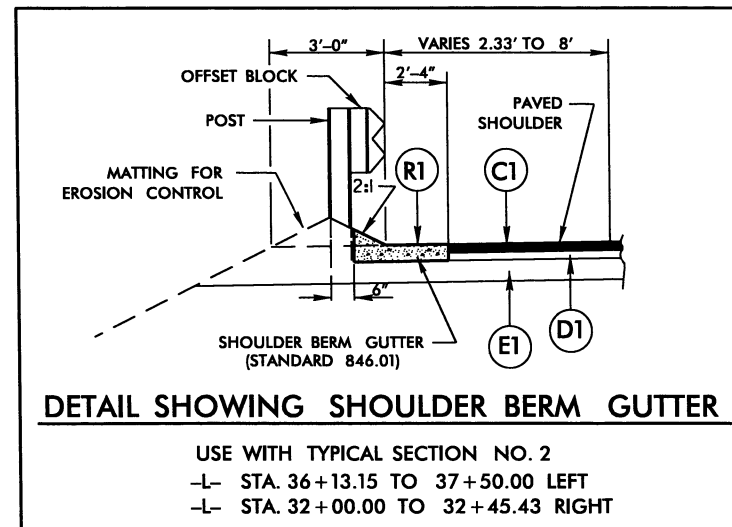
DIVISION OF HIGHWAYS

STATE OF NORTH CAROLINA

6/2/99

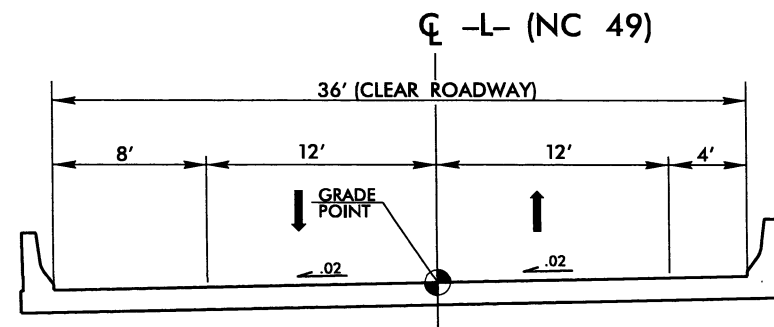
| FINAL PAVEMENT SCHEDULE |                                                                                                                                                                                                                |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C1                      | PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.                                                                                                   |
| C2                      | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.                                                                                |
| C3                      | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, 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 I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.                                                                                                 |
| D2                      | PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH. |
| E1                      | PROP. APPROX. 7" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD. IN EACH OF TWO LAYERS                                                                                   |
| E2                      | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, 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.         |
| J                       | PROP. 6" AGGREGATE BASE COURSE.                                                                                                                                                                                |
| T                       | EARTH MATERIAL.                                                                                                                                                                                                |
| U                       | EXISTING PAVEMENT.                                                                                                                                                                                             |
| W                       | VARIABLE DEPTH ASPHALT PAVEMENT.                                                                                                                                                                               |

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



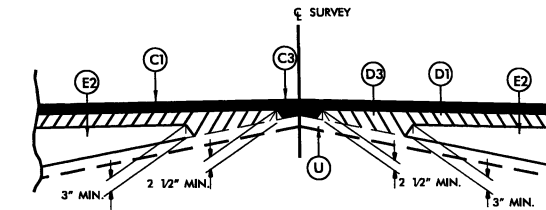
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| PROJECT REFERENCE NO.                                   | SHEET NO.                |
|---------------------------------------------------------|--------------------------|
| B-4643                                                  | 2                        |
| ROADWAY DESIGN ENGINEER                                 | PAVEMENT DESIGN ENGINEER |
| <b>PRELIMINARY PLANS</b><br>DO NOT USE FOR CONSTRUCTION |                          |

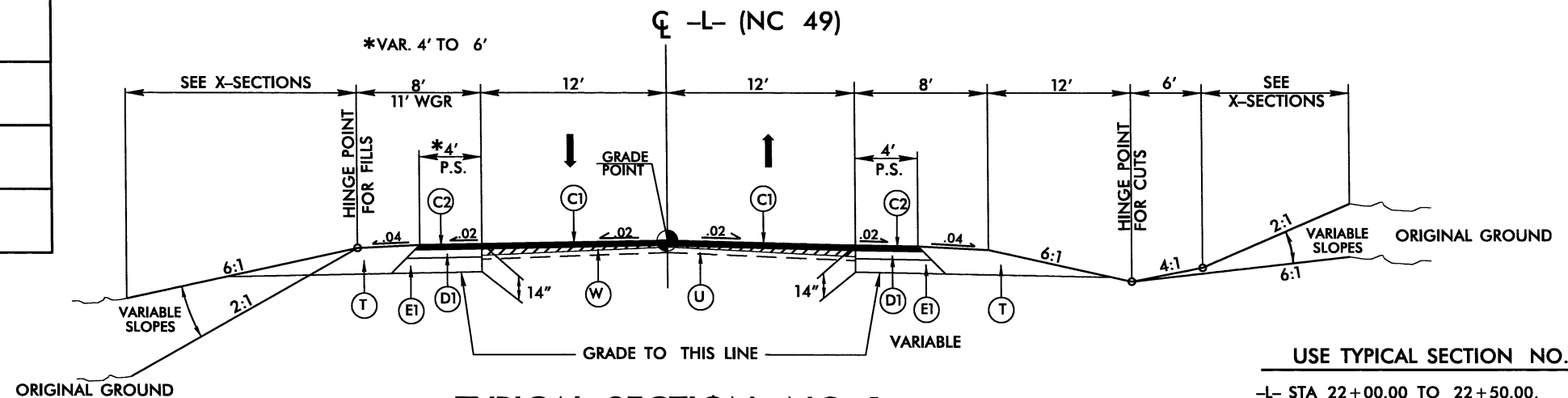


**TYPICAL SECTION ON STRUCTURE**

-L- STA. 32+95.50 TO 35+60.50



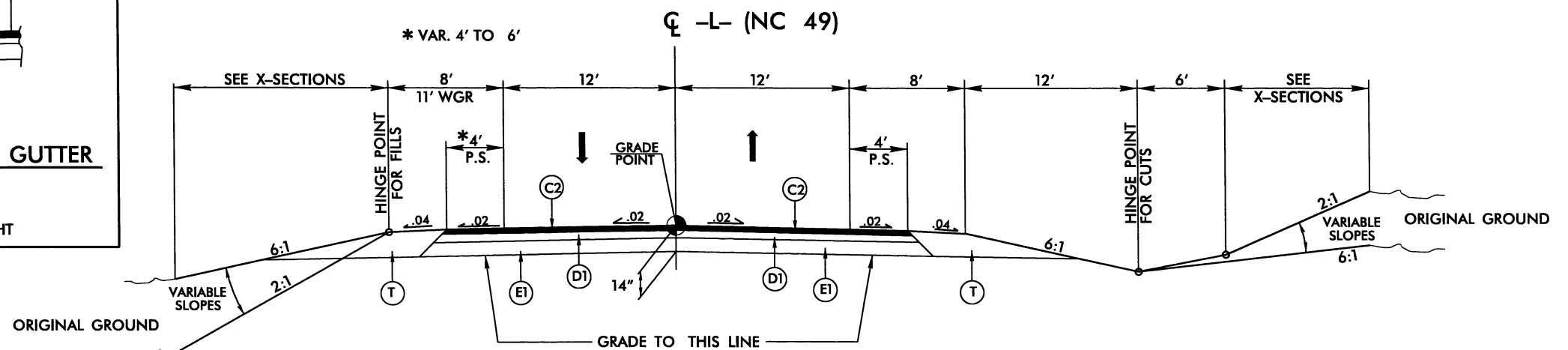
**Detail Showing Method of Wedging**



**TYPICAL SECTION NO. 1**

**USE TYPICAL SECTION NO. 1**

- L- STA 22+00.00 TO 22+50.00, TRANSITION FROM EXISTING TO T.S. 1
- L- STA 22+50.00 TO 27+00.00
- \* -L- STA 27+00.00 TO 28+50.00
- L- STA 40+00.00 TO 43+00.00
- L- STA 43+00.00 TO 43+50.00 TRANSITION FROM T.S. 1 TO EXISTING



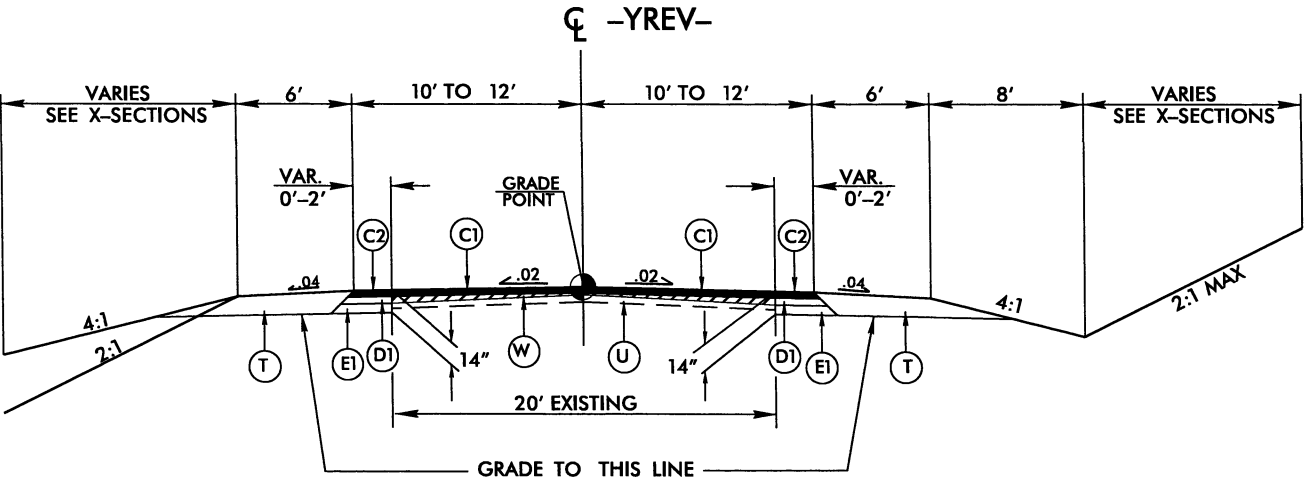
**TYPICAL SECTION NO. 2**

- \* -L- STA 28+50.00 TO 29+00.00
- L- STA 29+00.00 TO 32+95.50 (BEGIN BRIDGE)
- L- STA 35+60.50 (END BRIDGE) TO 40+00.00

6/2/99

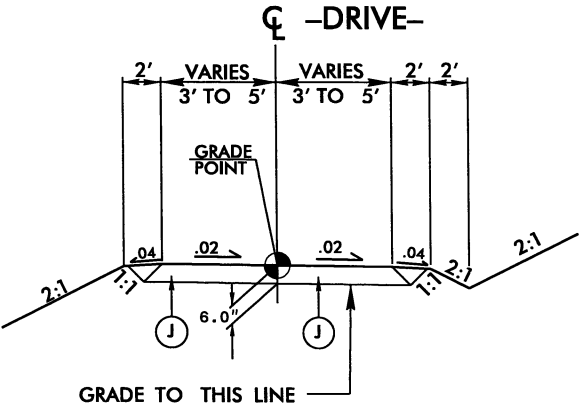
| PROJECT REFERENCE NO.                            | SHEET NO.                |
|--------------------------------------------------|--------------------------|
| B-4643                                           | 2-A                      |
| ROADWAY DESIGN ENGINEER                          | PAVEMENT DESIGN ENGINEER |
| PRELIMINARY PLANS<br>DO NOT USE FOR CONSTRUCTION |                          |

|    |                 |
|----|-----------------|
| C1 | 1.5" S9.5C      |
| C2 | 3" S9.5C        |
| D1 | 4" I19.0C       |
| E1 | 7" B25.0C       |
| J  | 6" ABC          |
| T  | EARTH MATERIAL  |
| U  | EXISTING PAV'T. |
| W  | WEDGING         |



**TYPICAL SECTION NO. 3**

-YREV- STA. 10+18.11 TO 11+50.00

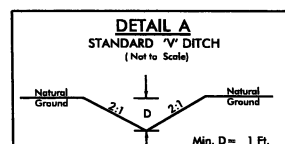


**TYPICAL SECTION NO. 4**

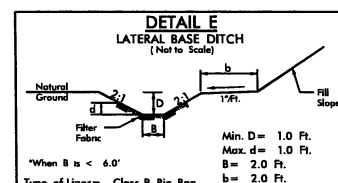
USE TYPICAL SECTION NO. 3

-DRIVE- STA 10+05 TO 11+09.49

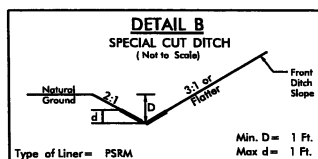
**TODD SHAD**  
**DB M7 PG 64B**



FROM STA. 25+00-1-RT. TO STA. 25+40-1-RT.



FROM STA. 27+00 TO STA. 28+25 -L- R-



FROM STA. 27+30-1-LT. TO STA. 29+00-1-LT.

**-L-PC Sta. 19+35.81**

4. 17+55.83

BL-4

BM#1  
ELEV. 602.75

2  
TODD SHAD  
DB 117 PG 648

**-YREV-**

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| PI Sta 12+76.84                      | PI Sta 10+51.24                      |
| $\Delta = 91^{\circ} 16' 45.4" (RT)$ | $\Delta = 42^{\circ} 28' 43.6" (RT)$ |
| $D = 432^{\circ} 50.2'$              | $D = 76^{\circ} 23' 39.7'$           |
| $L = 204.06'$                        | $L = 55.60'$                         |
| $T = 102.25'$                        | $T = 29.15'$                         |
| $R = 1260.00'$                       | $R = 75.00'$                         |

**-YREV- PT Sta.13+78.65**

~~END CONSTRUCTION~~  
~~-YREV- STA. 11+50.00~~  
~~-YREV-PC Sta. 11+74.59~~

-YREV- POT 10+00.00=  
-L- POC 26+26.94

-L-PCC Sta. 27+32.09

DONNIE G. SMITH  
DORIS E. SMITH  
DB 354 PG 810

**-DRIVE-**

$PI Sta = 10+31.55$   
 $\Delta = 14^{\circ} 10' 06.6" (RT)$   
 $D = 114^{\circ} 35' 29.6"$   
 $L = 12.36'$   
 $T = 6.2r$   
 $R = 50.00'$

POT Sta. 10+00.00

351  
100R  
SEE SHEET 3  
MATCHLINE -L- STA. 30 + 50

-DRIVE-POT II+09.49=  
-L- POC 29+18.44

**-YREV-PT Sta. 10+77.69**

3  
HAZEL MORTON GRIFFIN  
DB 308 PG 474  
DB 167 PG 487  
DB 344 PG 799

CARL E. BELL  
JANE L. BELL  
CARL EDWARD BELL, JR.  
ELIZABETH BELL BOYD  
DB 601PG 946  
DB #56 PG 305  
DB 1214 PG 053

~~-YREV-POT Sta. 15+25.40~~

8/17/99

## REVISIONS

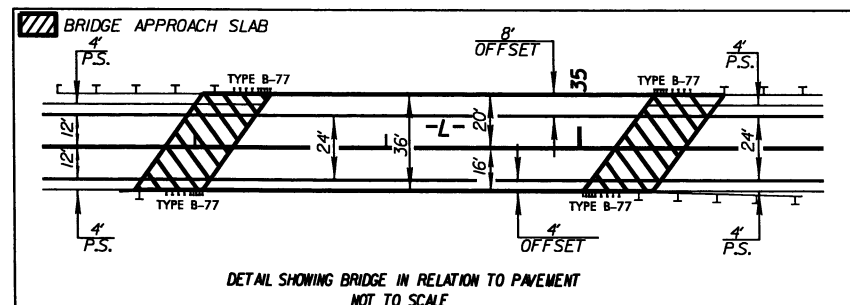
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8/17/99

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REVISIONS

NOTE: MAINTAIN TRAFFIC DURING CONSTRUCTION  
UTILIZING EXISTING ROADWAY



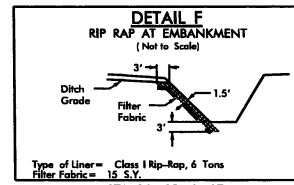
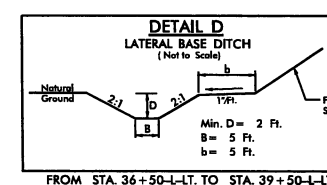
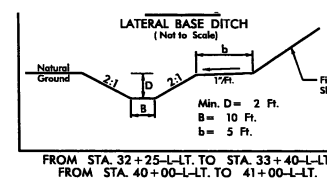
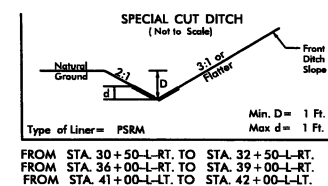
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| PROJECT REFERENCE NO.                            | SHEET NO.           |
| B-4643                                           | 5                   |
| R/W SHEET NO.                                    |                     |
| ROADWAY DESIGN ENGINEER                          | HYDRAULICS ENGINEER |
| PRELIMINARY PLANS<br>DO NOT USE FOR CONSTRUCTION |                     |

SEE SHEET 6 FOR PROFILE OF -L-

| -L-                                                                                                                    |                                                                                                                        |                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| PI Sta 30+59.72<br>Δ = 9°18'38.4" (RT)<br>D = 3°41'47.4"<br>L = 251.88'<br>T = 126.22'<br>R = 1550.00'<br>e = SEE PLAN | PI Sta 37+73.34<br>Δ = 9°58'43.9" (RT)<br>D = 3°41'47.4"<br>L = 269.95'<br>T = 135.32'<br>R = 1550.00'<br>e = SEE PLAN | PI Sta 40+43.29<br>Δ = 9°58'43.9" (LT)<br>D = 3°41'47.4"<br>L = 269.95'<br>T = 135.32'<br>R = 1550.00'<br>e = SEE PLAN |

5  
SHERRY S. DENTON  
DB 759 PG 862

6  
HAZEL MORTON GRIFFIN  
DB 132 PG 101



MATCHLINE -L- STA. 30+50  
SEE SHEET 4

3  
HAZEL MORTON GRIFFIN

BEGIN BRIDGE  
-L- POT 32+95.50  
END BRIDGE  
-L- POT 35+60.50  
END APPROACH SLAB  
-L- POT 35+84.09

APCI  
DB 734 PG 77  
DB 741 PG 936

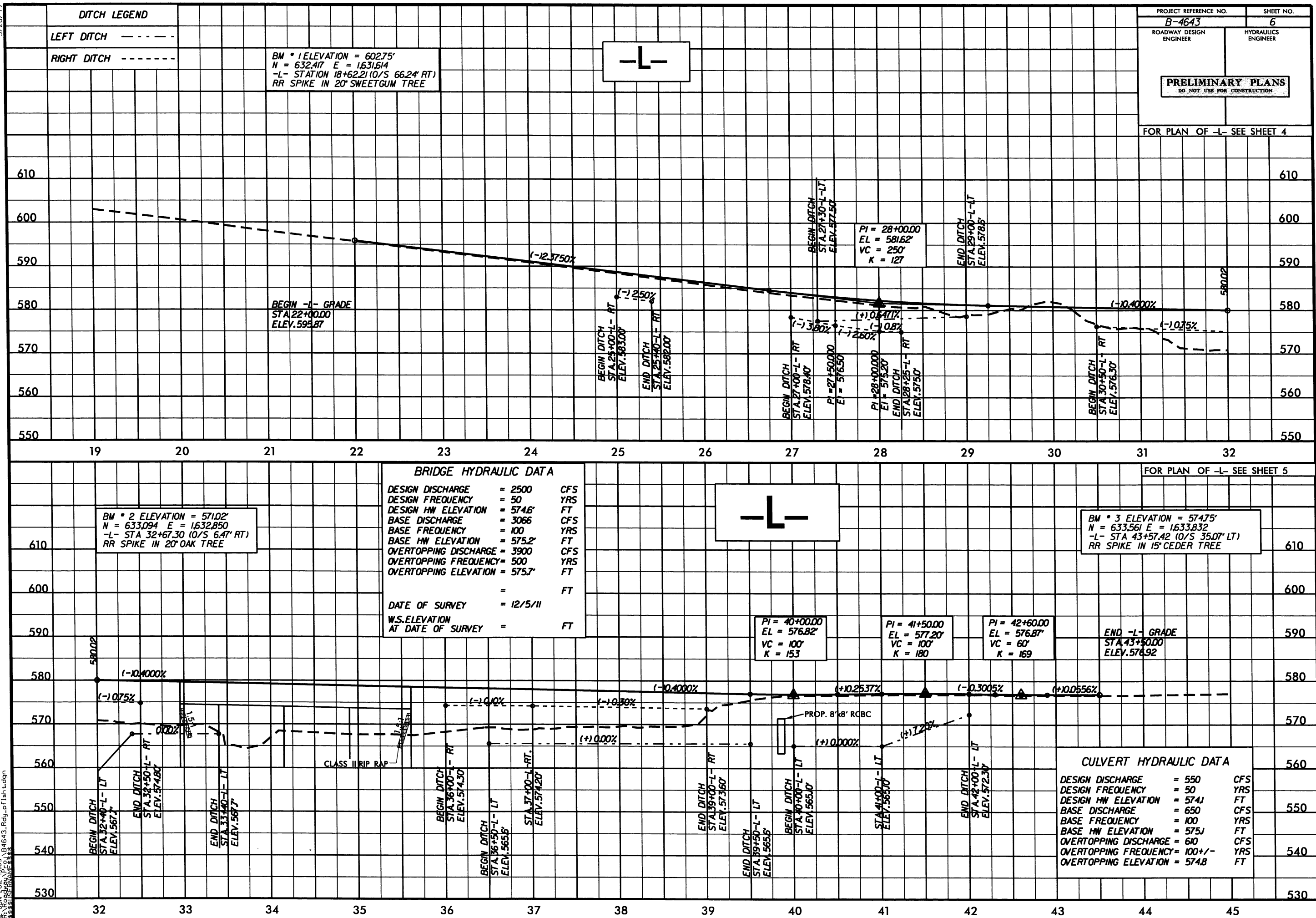
SIDNEY J. BRYANT  
SARAH S. BRYANT  
DB 361 PG 640  
DB 372 PG 423

RICKY J. BRYANT  
DEBRA C. BRYANT  
MANDY A. BRYANT  
TANGY L. BRYANT  
JOSHUA C. BRYANT  
DB 548 PG 89

8  
BRIAN D. FESPERMAN  
DB 366 PG 193

BL-6





FOR PLAN OF -YREV- SEE SHEET 4

-YREV-

BM \* 1 ELEVATION = 602.75'  
N = 632.417 E = 1631.614  
-L- STATION 18+62.21 (O/S 66.24' RT)  
RR SPIKE IN 20' SWEETGUM TREE

610

600

590

580

570

560

11

12

13

14

PI = 10+65.00  
EL = 587.82'  
VC = 80'  
K = 28

1+18+24.41  
1+15+01.3%

END -YREV- GRADE  
STA. 11+50.00  
ELEV. 592.67

BEGIN -YREV- GRADE  
STA. 10+18.11  
ELEV. 586.50

-DRIVE-

600

590

580

570

560

550

PI = 10+15.00  
EL = 593.38'  
VC = 15'

PI = 10+80.00  
EL = 581.04'  
VC = 15'

BEGIN -DRIVE- GRADE  
STA. 10+05.00  
ELEV. 593.98

1-16.00%

1-16.8553%

1+10+77.8%

END -DRIVE- GRADE  
STA. 11+09.49  
ELEV. 581.06

10

11

600

590

580

570

560

550

PROJECT REFERENCE NO.

B-4643

SHEET NO.

7

ROADWAY DESIGN  
ENGINEER

HYDRAULICS  
ENGINEER

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

FOR PLAN OF -DRIVE- SEE SHEET 4



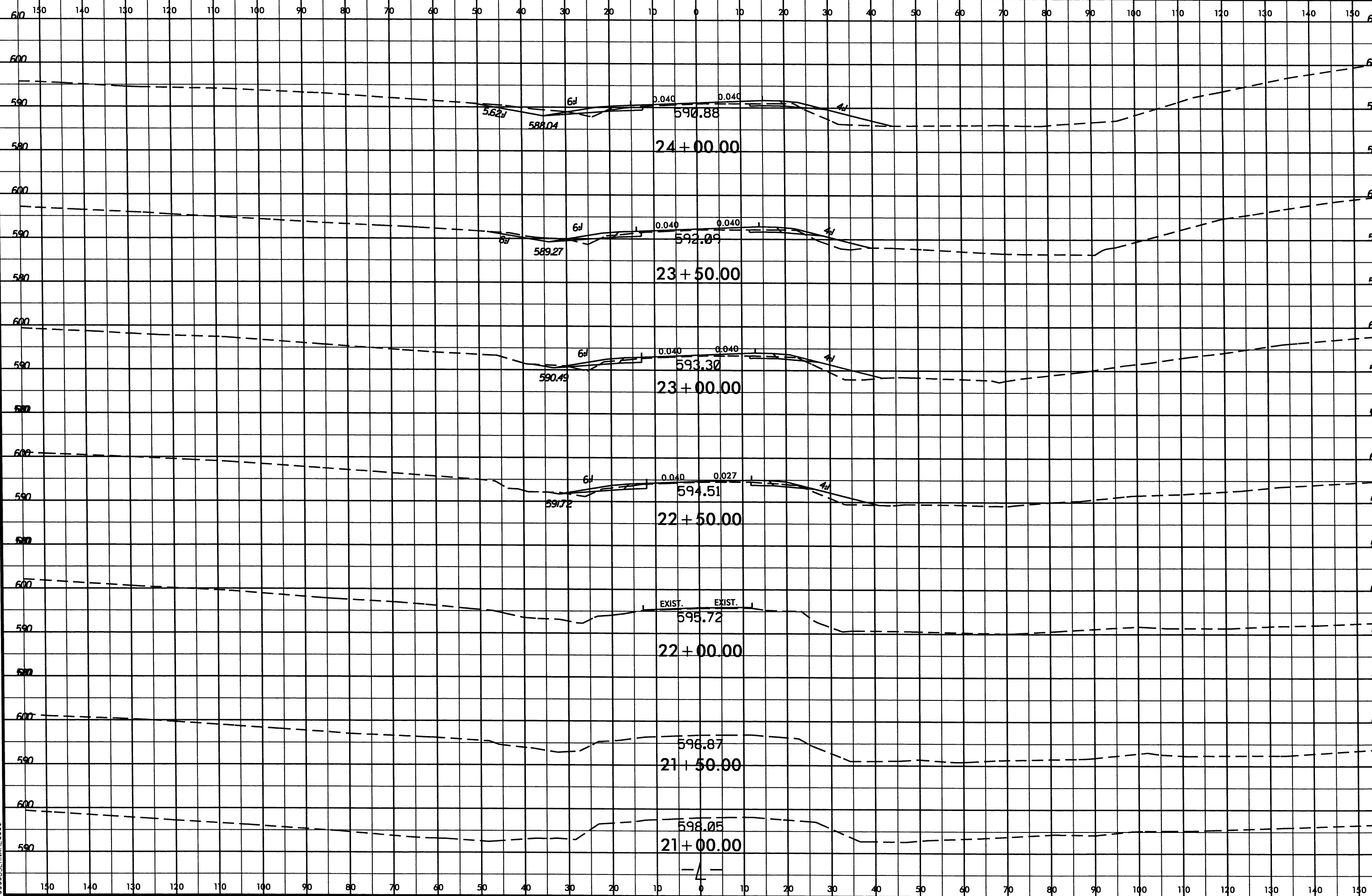
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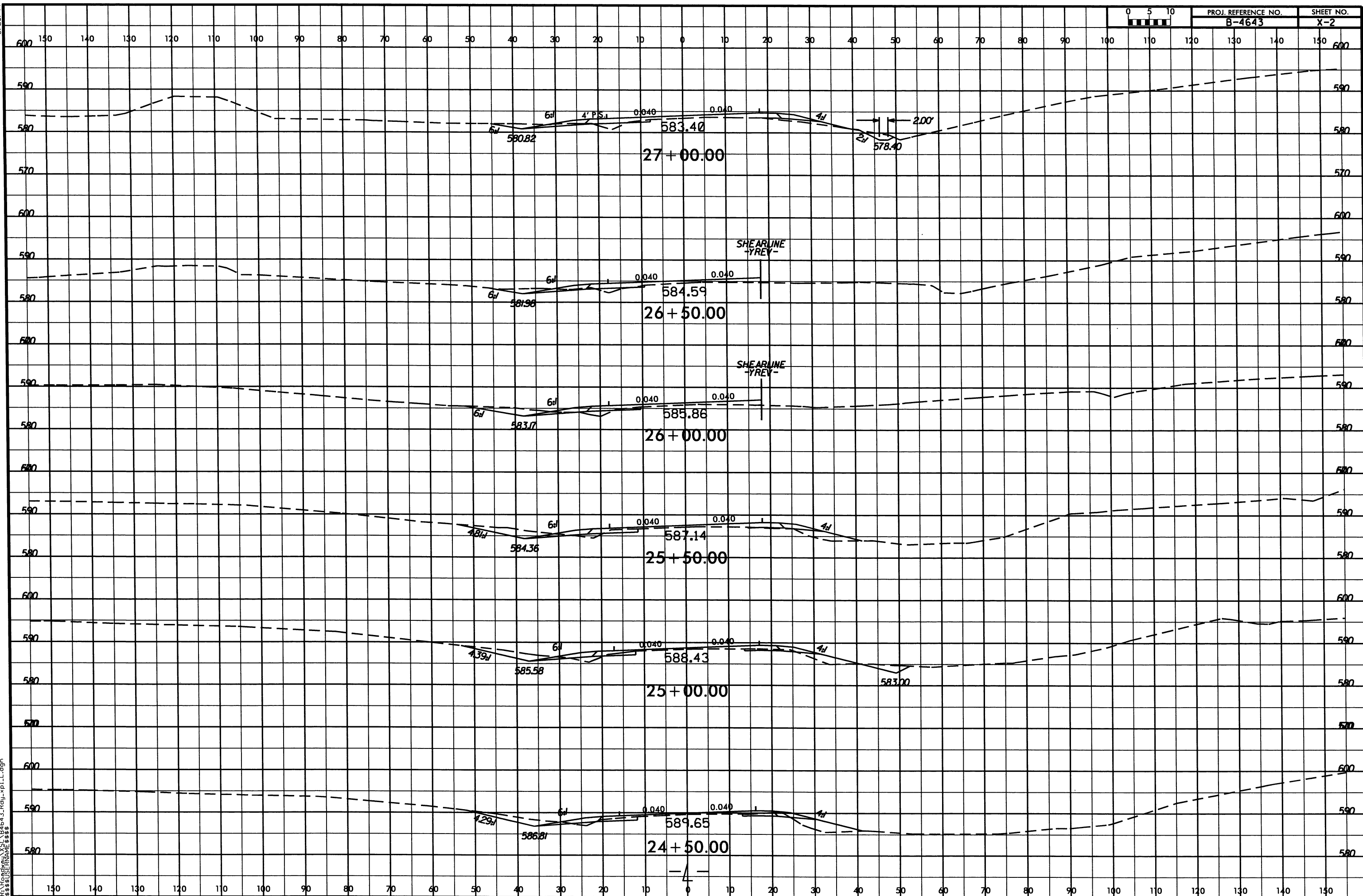
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B-4643

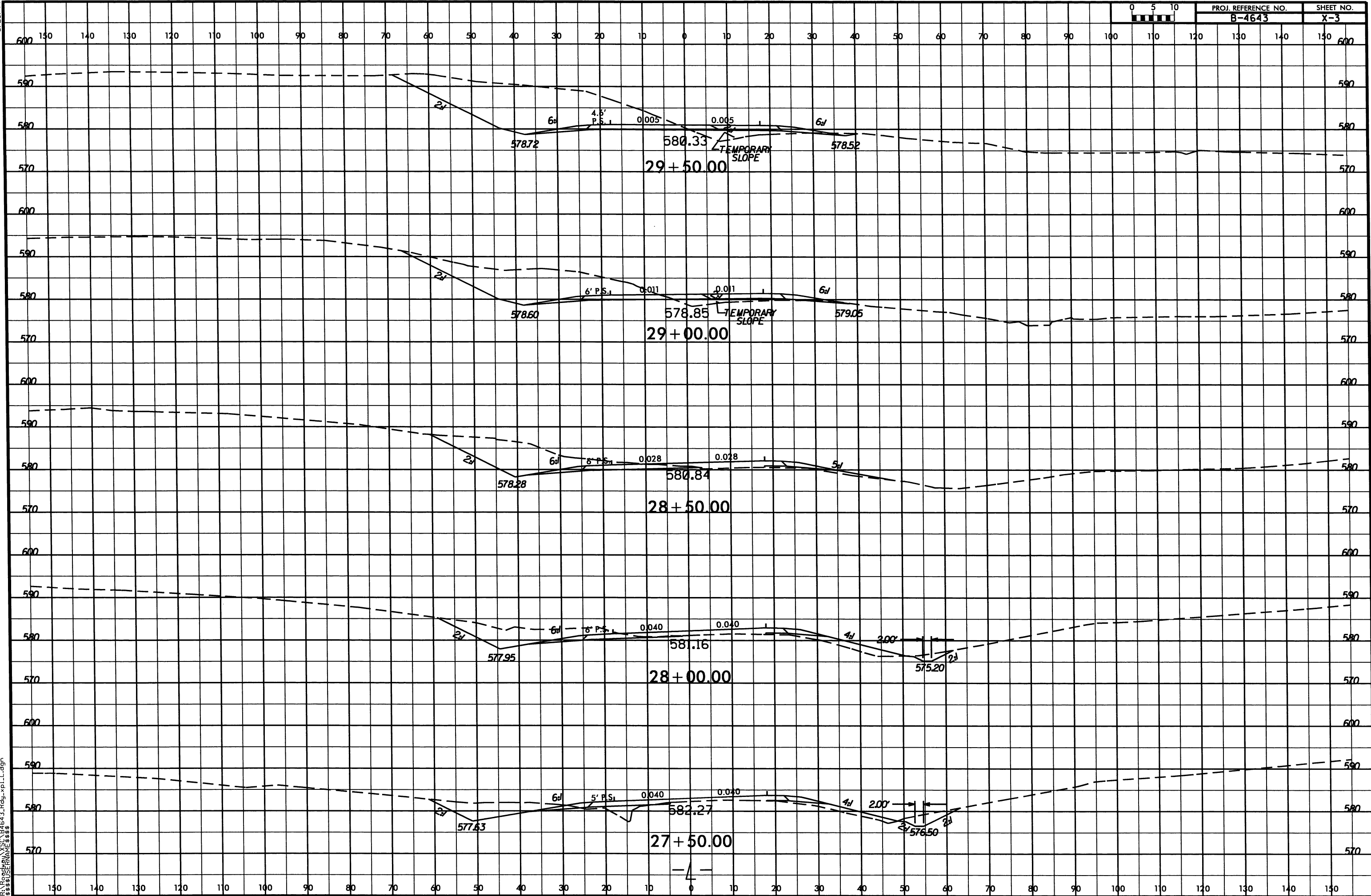
SHEET NO.  
X-1





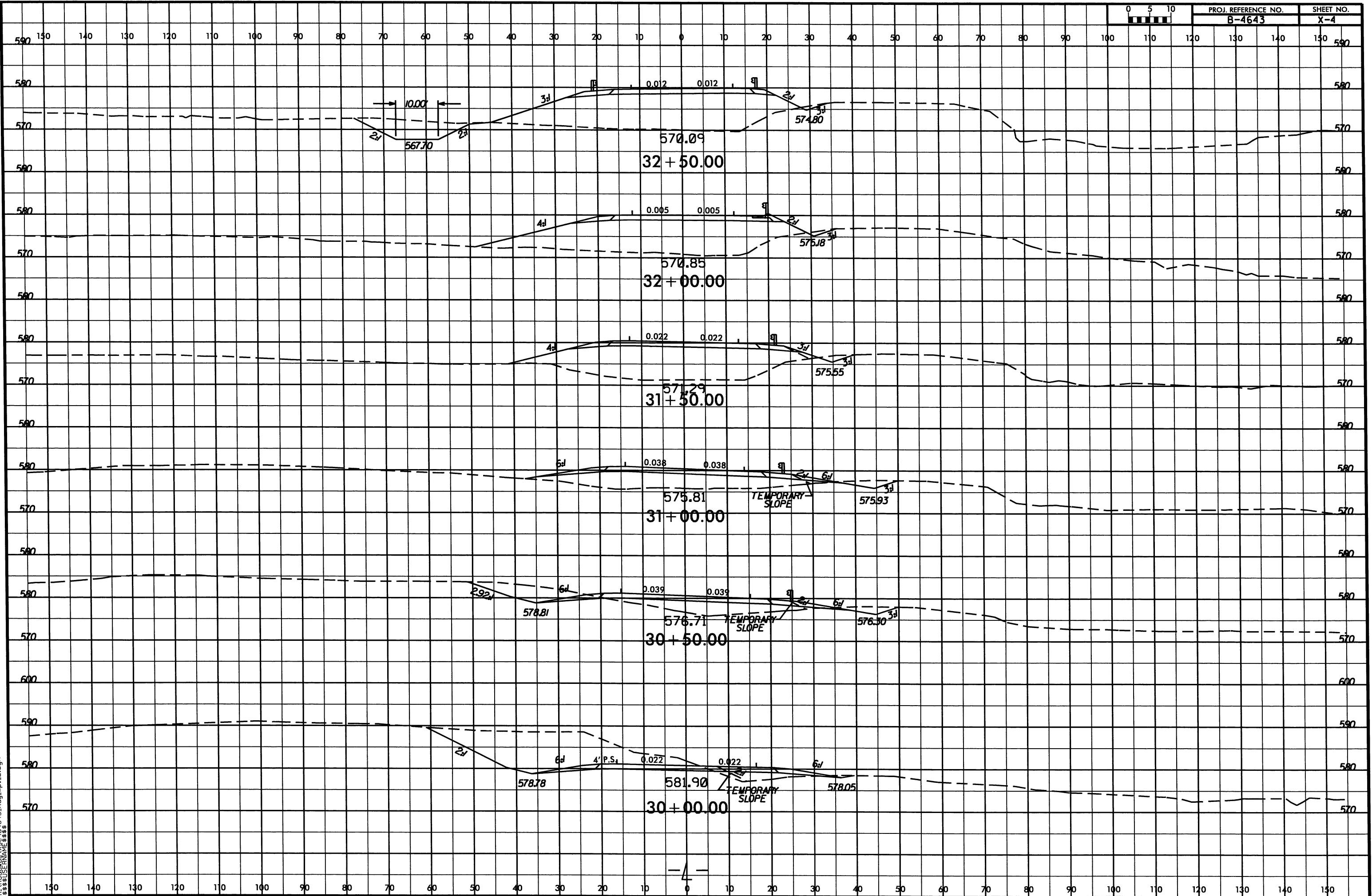
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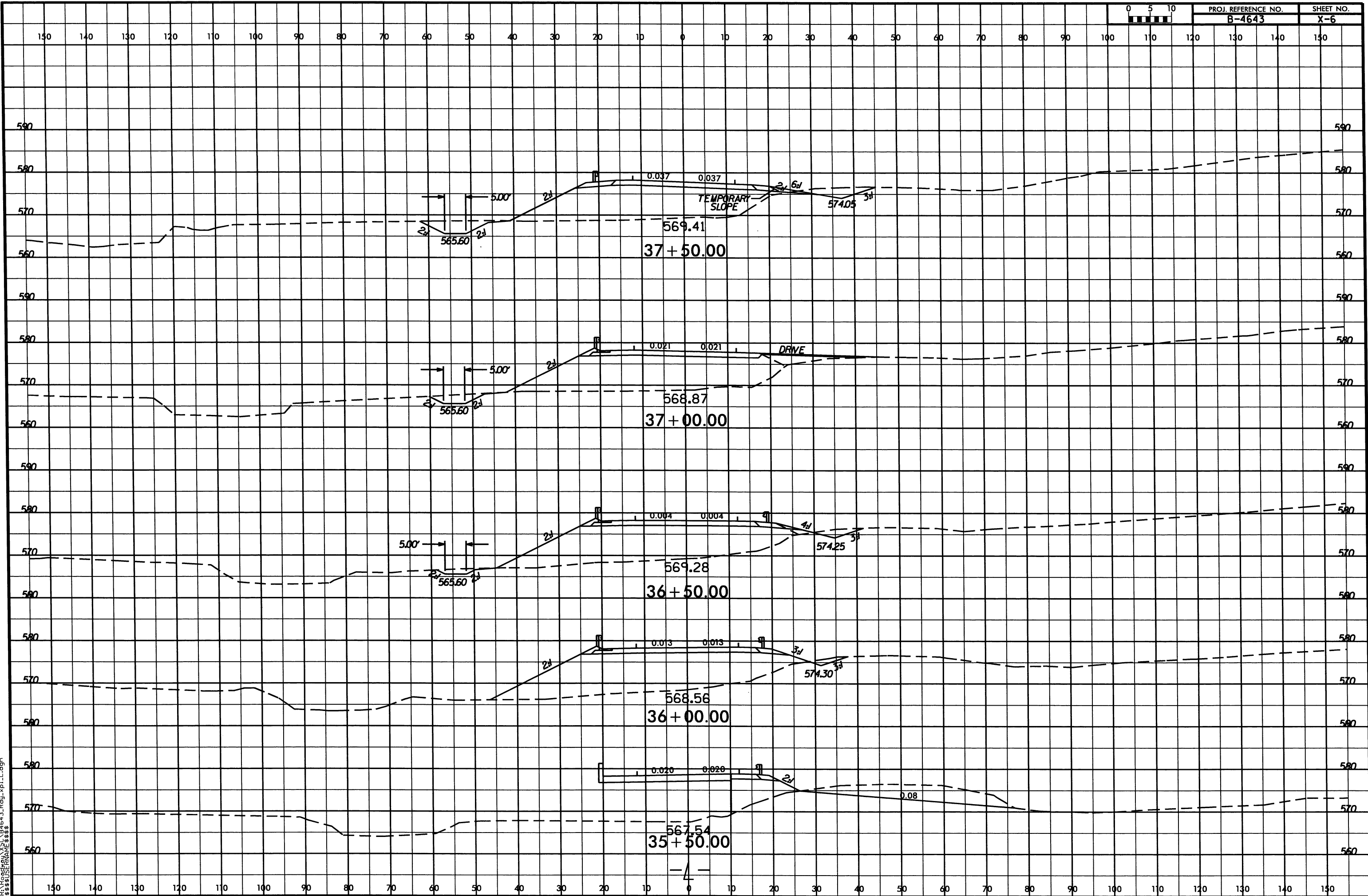


8/23/99

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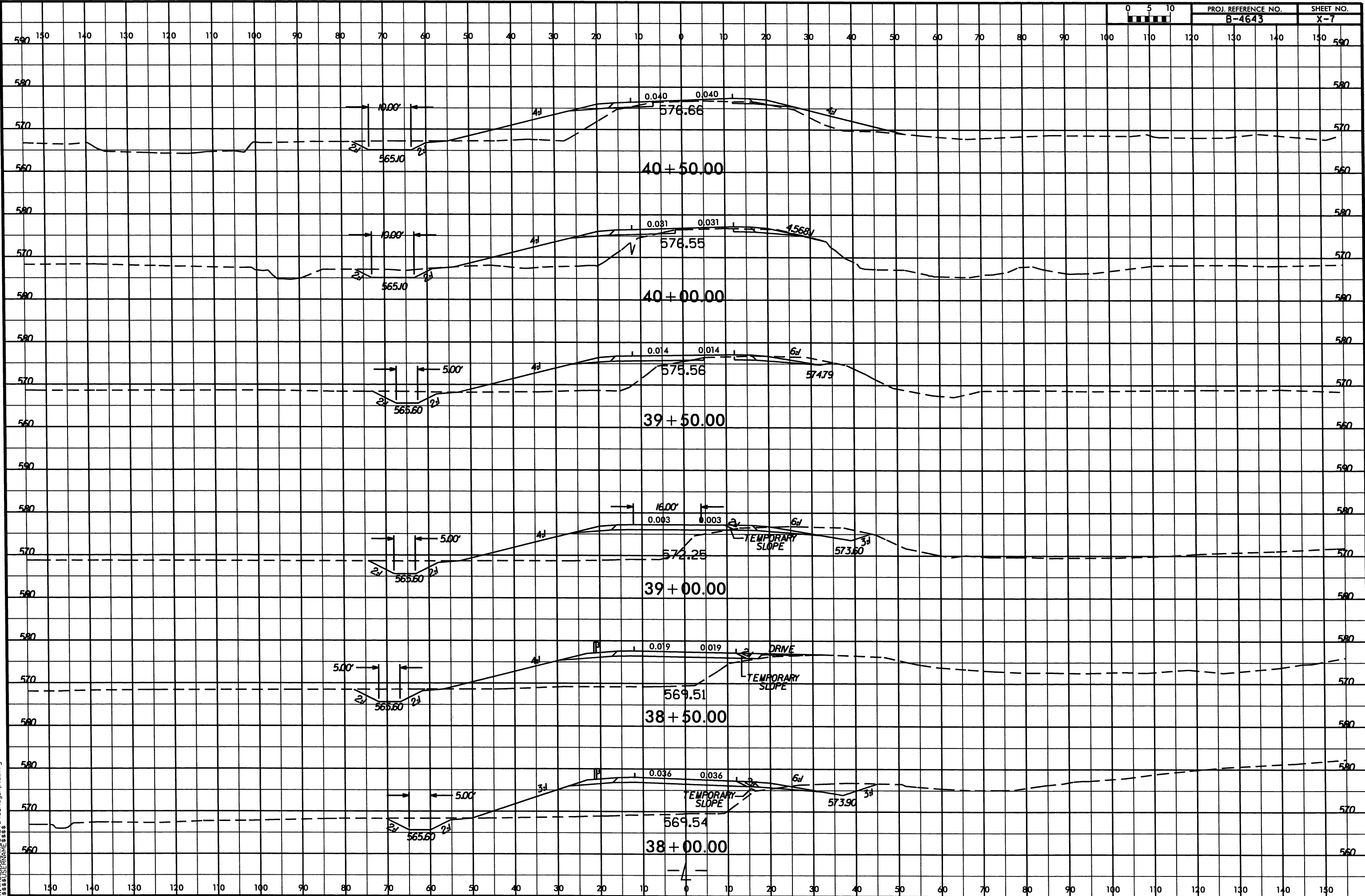






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| B-4643              | X-8       |

