STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

May 23, 2005

U. S. Army Corps of Engineers
Regulatory Field Office
Post Office Box 1000
Washington, NC 27889-1000

Attn: Mr. Bill Biddlecome
NCDOT Coordinator

Dear Sir:

Subject: **Revised Nationwide 23 & 33 Permit Application and Neuse Buffer Certification.** Replacement of Bridge No. 52 on SR 1101 (Claude Lewis Road) over Turkey Creek, Nash County. Federal Aid Project No. BRZ-1101(7), State Project No. 8.2322201, TIP Project No. B-3877.

The Division Construction Unit has requested revisions necessary for the construction of the new bridge. The width of temporary work bridge was originally shown as 20 ft., however a width of 30 ft. is needed. A platform (finger) from the proposed work bridge and a temporary workpad approximately 12 ft. from the existing bridge abutment has also been added. Hand clearing beneath the proposed bridge has been included. At end bents 1 & 2, an adjacent 10 ft. area (Method III) in the Neuse Riparian buffer will need to be cleared. Please reference the original application for the subject project dated May 2, 2005. Please replace the wetland permit drawings, the Neuse Riparian buffer drawings, and the Pre-Construction Notification provided in the original application with those included with this revised application. The Categorical Exclusion (CE) and roadway plans submitted with the previous application were not revised.

BRIDGE DEMOLITION

Bridge No. 52 is currently a 121-foot structure that consists of a superstructure composed of a timber floor on I-beams, timber piles with concrete caps, and a steel crutch. Bridge No. 52 will be removed without dropping any of the components into Waters of the United States. Approximately 0.001 acres of temporary impacts are anticipated due to temporary fill in Turkey Creek and adjacent wetlands for the bents supporting the temporary work bridge.

The NCDOT will adhere to appropriate guidelines for bridge demolition and removal including

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1548 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-733-3141
FAX: 919-733-9794

WEBSITE: WWW.DOH.DOT.STATE.NC.US

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

those presented in "Pre-Construction Guidelines for Bridge Demolition and Removal", "Policy: Bridge Demolition and Removal in Waters of the United States", "Best Management Practices for Bridge Demotion and Removal", and "Best Management Practices for the Protection of Surface Waters".

BRIDGE CONSTRUCTION

Bridge No. 52, a 121-foot long structure, will be replaced with a new structure approximately 180 feet in length consisting of a 36-inch prestressed concrete girder superstructure with two 65-foot spans and one 50-foot span. The substructure will consist of end bents on piles with the interior portion on drill piers. The Let Date is November 15, 2005 with a review date of September 27, 2005. The project involves replacing Bridge No. 52 approximately on the existing alignment. Traffic, during construction, will be maintained with an offsite detour using existing roads.

IMPACTS TO WATERS OF THE UNITED STATES

Permanent Impacts: Permanent fill impacts are not anticipated to occur in Turkey Creek, or jurisdictional waters, due to bridge demolition and construction activities. As part of the construction process, a directional bore will be made underneath Turkey Creek for placement of a utility line.

Temporary Impacts: 0.001 acres of temporary impacts are anticipated to due to temporary fill in Turkey Creek and adjacent wetland for the bents supporting the temporary work bridge. Temporary fill impacts are not anticipated to occur in Turkey Creek due to bridge demolition. Hand clearing of 0.007 ac is proposed beneath the proposed bridge. A proposed temporary workpad will impact 0.009 ac of surface water. The temporary work bridge and temporary workpad will be constructed prior to demolition of the existing bridge and removed when construction of the new bridge is completed.

TEMPORARY WORK BRIDGE

A temporary work bridge will be constructed to the south of the existing Bridge No. 52. This bridge will be required to minimize impacts to jurisdictional waters during bridge construction. Temporary work bridge pile types and driving methods will be determined during construction by the contractor. The work bridge will be constructed at the elevation and location as shown on the permit drawings. Non-mechanized clearing will occur prior to temporary work bridge construction. It is assumed that the contractor will begin construction of the proposed work bridge shortly after the date of availability for the project.

NEUSE RIPARIAN BUFFER RULES

This project is located in the Neuse River Basin (subbasin 03-04-07, NEU7 03020203), therefore the Neuse River Buffer Rules (15A NCAC 2B.0233) apply. Buffer impacts associated with this project total 7,156 sq. ft (0.16 acre) for Zone 1 and 5,010 sq. ft (0.12 acre) for Zone 2. All practicable measures to minimize impacts within buffer zones were followed in the bridge design. Measures used to minimize impacts to the buffer zone include using the current alignment. In addition, NCDOT proposes to remove the existing bridge abutment that was part of a previous bridge, along with existing fill, and plant native riparian vegetation. Buffer replacement associated with this project totals 2,971 sq. ft (0.068 acre) for Zone 1 and 358 sq. ft

(0.008 acre) for Zone 2. According to the buffer rules, bridges are ALLOWABLE. Uses designated as allowable may proceed within the riparian buffer provided that there are no practical alternatives to the requested use pursuant to Item (8) of this Rule. These uses require written authorization from the Division of Water Quality, or the delegated local authority. Therefore, NCDOT requests written authorization for a Buffer Certification from the Division of Water Quality.

REGULATORY APPROVALS

Section 404 Permit: It is anticipated that the temporary work bridge and temporary work pad will be authorized under Section 404 Nationwide Permit 33 (Temporary Construction Access and Dewatering). We are, therefore, requesting the issuance of a Nationwide Permit 33 authorizing a temporary work bridge and temporary work pad. All other aspects of this project are being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR § 771.115(b). The NCDOT requests that these activities be authorized by a Nationwide Permit 23 (67FR, pages 2020-2095; January 15, 2002).

Section 401 Permit: We anticipate 401 General Certifications numbers 3403 and 3366 will apply to this project. In accordance with 15A NCAC 02H .0501(a) we are providing two copies of this application to the North Carolina Department of Environmental and Natural Resources, Division of Water Quality, for their records.

Neuse Riparian Buffer Rules: In accordance with 15A NCAC 02H .0501(a), NCDOT is providing copies of this application to the NC Department of Environment and Natural Resources (NCDENR), Division of Water Quality (DWQ) for review and issuance of a Neuse Buffer Certification for impacts to Neuse Buffers in compliance with the Neuse Buffer Rules.

A copy of this permit application will be posted on the DOT website at: http://www.ncdot.org/planning/pe/naturalunit/Permit.html. If you have any questions or need additional information, please contact Chris Rivenbark at crivenbark@dot.state.nc.us or (919) 715-1460.

Sincerely,

Gregory J. Thorpe, Ph.D. Environmental Management Director,
Project Development and Environmental Analysis Branch

cc: w/attachment
Mr. John Hennessy, NCDWQ (7 copies)
Mr. Travis Wilson, NCWRC
Mr. David Chang, P.E., Hydraulics
Mr. Greg Perfetti, P.E., Structure Design
Mr. Jim Trogdon, PE, Division 4 Engineer
Mr. Jamie Shern, DEO, Division 4
Mr. Mark Staley, Roadside Environmental

w/o attachment
Mr. David Franklin, USACE, Wilmington
Mr. Jay Bennett, P.E., Roadway Design
Mr. Omar Sultan, Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Mr. David Franklin, USACE, Wilmington
Mr. Bill Goodwin, P.E., PDEA

Office Use Only: Form Version May 2002

USACE Action ID No. _____ **DWQ No.** _____

(If any particular item is not applicable to this project, please enter "Not Applicable" or "N/A".)

I. Processing

1. Check all of the approval(s) requested for this project:
   - ☒ Section 404 Permit
   - ☐ Section 10 Permit
   - ☒ 401 Water Quality Certification
   - ☒ Riparian or Watershed Buffer Rules
   - ☐ Isolated Wetland Permit from DWQ

2. Nationwide, Regional or General Permit Number(s) Requested: Nationwide 23 and 33

3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here: ☐

4. If payment into the North Carolina Wetlands Restoration Program (NCWRP) is proposed for mitigation of impacts (verify availability with NCWRP prior to submittal of PCN), complete section VIII and check here: ☐

5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here: ☐

II. Applicant Information

1. Owner/Applicant Information
   Name: North Carolina Department of Transportation
   Mailing Address: 1548 Mail Service Center, Raleigh, NC 27699
   Telephone Number: 919-523-7844 Fax Number: 919-715-1501
   E-mail Address:

2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)
   Name: N/A
   Company Affiliation:
   Mailing Address:
   Telephone Number: Fax Number:
   E-mail Address:

III. Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. Also provide a detailed **site plan** showing property boundaries and development plans in relation to surrounding properties. Both the vicinity map and site plan must include a scale and north arrow. The specific footprints of all buildings, impervious surfaces, or other facilities must be included. If possible, the maps and plans should include the appropriate USGS Topographic Quad Map and NRCS Soil Survey with the property boundaries outlined. Plan drawings, or other maps may be included at the applicant's discretion, so long as the property is clearly defined. For administrative and distribution purposes, the USACE requires information to be submitted on sheets no larger than 11 by 17-inch format; however, DWQ may accept paperwork of any size. DWQ prefers full-size construction drawings rather than a sequential sheet version of the full-size plans. If full-size plans are reduced to a small scale such that the final version is illegible, the applicant will be informed that the project has been placed on hold until decipherable maps are provided.

1. Name of project: Replacement of Bridge No. 52 on SR 1101 (Claude Lewis Road) over Turkey Creek, Nash County

2. T.I.P. Project Number or State Project Number (NCDOT Only): B-3877

3. Property Identification Number (Tax PIN): N/A

4. Location
   County: Nash Nearest Town: Bailey
   Subdivision name (include phase/lot number):
   Directions to site (include road numbers, landmarks, etc.): Located on SR 1101 approximately ½ mile north of Nash/Wilson County line, southwest of Bailey over Turkey Creek

5. Site coordinates, if available (UTM or Lat/Long): N35° 45.10' , W78° 09.59'
   (Note – If project is linear, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)

6. Property size (acres): N/A

7. Nearest body of water (stream/river/sound/ocean/lake): Turkey Creek

8. River Basin: Neuse River
   (Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at http://h2o.enr.state.nc.us/admin/maps/.)

9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application SR 1101 is classified as a Rural Local Route, with agricultural land dominant and scattered low density residential development.

10. Describe the overall project in detail, including the type of equipment to be used: Three span, 180-foot long bridge replacement using mechanical highway construction equipment.

11. Explain the purpose of the proposed work: Investigations by the Bridge Maintenance Unit indicate that rehabilitation of the existing structures is not feasible due to current deterioration and costs. Bridge No. 52 carries a sufficiency rating of 38.7 out of a possible 100. The bridge deck is only 19.1 feet wide. Replacement of the bridge will result in safer and more efficient traffic operations.

IV. Prior Project History

If jurisdictional determinations and/or permits have been requested and/or obtained for this project (including all prior phases of the same subdivision) in the past, please explain. Include the USACE Action ID Number, DWQ Project Number, application date, and date permits and certifications were issued or withdrawn. Provide photocopies of previously issued permits, certifications or other useful information. Describe previously approved wetland, stream and buffer impacts, along with associated mitigation (where applicable). If this is a NCDOT project, list and describe permits issued for prior segments of the same T.I.P. project, along with construction schedules.

A Nationwide Permit 23, 33, and Neuse Riparian Buffer Authorization was applied for on May 2, 2005. This Pre-Construction Notification has been edited to included revisions needed for the construction of the proposed project.

V. Future Project Plans

Are any future permit requests anticipated for this project? If so, describe the anticipated work, and provide justification for the exclusion of this work from the current application.

N/A

VI. Proposed Impacts to Waters of the United States/Waters of the State

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. The applicant must also provide justification for these impacts in Section VII below. All proposed impacts, permanent and temporary, must be listed herein, and must be clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) must be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

Provide a written description of the proposed impacts: 0.001 acres of temporary impacts are anticipated to occur due to temporary fill in wetlands for the bends supporting the temporary work bridge with this project. Hand clearing of 0.007 ac is proposed beneath the proposed bridge. A proposed temporary workpad will impact 0.009 ac of surface water.

1. Individually list wetland impacts below:

Wetland Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Located within 100-year Floodplain** (yes/no)	Distance to Nearest Stream (linear feet)	Type of Wetland***
1 (24+84.38 to 25+00)	Temporary Fill	0.001	Yes	65	Coastal Plain Bottomland Hardwood
1 (25+12 to 25+22-L- LT&RT	Hand clearing	0.007	Yes	65	Coastal Plain Bottomland Hardwood

* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

** 100-Year floodplains are identified through the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM), or FEMA-approved local floodplain maps. Maps are available through the FEMA Map Service Center at 1-800-358-9616, or online at http://www.fema.gov.

*** List a wetland type that best describes wetland to be impacted (e.g., freshwater/saltwater marsh, forested wetland, beaver pond, Carolina Bay, bog, etc.) Indicate if wetland is isolated (determination of isolation to be made by USACE only).

List the total acreage (estimated) of all existing wetlands on the property: N/A

Total area of wetland impact proposed: 0.008 acres (temporary)

2. Individually list all intermittent and perennial stream impacts below:

Stream Impact Site Number (indicate on map)	Type of Impact*	Length of Impact (linear feet)	Stream Name**	Average Width of Stream Before Impact	Perennial or Intermittent? (please specify)
N/A					

* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: culverts and associated rip-rap, dams (separately list impacts due to both structure and flooding), relocation (include linear feet before and after, and net loss/gain), stabilization activities (cement wall, rip-rap, crib wall, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included.

** Stream names can be found on USGS topographic maps. If a stream has no name, list as UT (unnamed tributary) to the nearest downstream named stream into which it flows. USGS maps are available through the USGS at 1-800-358-9616, or online at www.usgs.gov. Several internet sites also allow direct download and printing of USGS maps (e.g., www.topozone.com, www.mapquest.com, etc.).

Cumulative impacts (linear distance in feet) to all streams on site. 0

3. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.) below:

Open Water Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Name of Waterbody (if applicable)	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)
1 (26+04 to 26+20 –L- RT	Temp. fill	0.009	Turkey Creek	stream

* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: fill, excavation, dredging, flooding, drainage, bulkheads, etc.

4. Pond Creation
   If construction of a pond is proposed, associated wetland and stream impacts should be included above in the wetland and stream impact sections. Also, the proposed pond should be described here and illustrated on any maps included with this application.
   Pond to be created in (check all that apply): ☐ uplands ☐ stream ☐ wetlands
   Describe the method of construction (e.g., dam/embankment, excavation, installation of draw-down valve or spillway, etc.): N/A
   Proposed use or purpose of pond (e.g., livestock watering, irrigation, aesthetic, trout pond, local stormwater requirement, etc.):
   Size of watershed draining to pond:_____ Expected pond surface area:_____

VII. Impact Justification (Avoidance and Minimization)

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts.

Best Management Practices for Bridge Demolition and Removal will be implemented. Bridge No. 52 will be removed without dropping any components into Waters of the United States. During removal, old fill and abutment will be removed and the area will be replanted with native vegetation.

VIII. Mitigation

DWQ - In accordance with 15A NCAC 2H .0500, mitigation may be required by the NC Division of Water Quality for projects involving greater than or equal to one acre of impacts to freshwater wetlands or greater than or equal to 150 linear feet of total impacts to perennial streams.

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on March 9, 2000, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

If mitigation is required for this project, a copy of the mitigation plan must be attached in order for USACE or DWQ to consider the application complete for processing. Any application lacking a required mitigation plan or NCWRP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ's Draft Technical Guide for Stream Work in North Carolina, available at http://h2o.enr.state.nc.us/ncwetlands/strmgide.html.

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.
   The temporary work bridge and temporary work pad will be removed when construction of the new bridge is completed. The existing bridge abutment and existing fill will be removed and native riparian vegetation will be planted to serve as buffer replacement.

2. Mitigation may also be made by payment into the North Carolina Wetlands Restoration Program (NCWRP). Please note it is the applicant's responsibility to contact the NCWRP at (919) 523-5208 to determine availability and to request written approval of mitigation prior to submittal of a PCN. For additional information regarding the application process for the NCWRP, check the NCWRP website at http://h2o.enr.state.nc.us/wrp/index.htm. If use of the NCWRP is proposed, please check the appropriate box on page three and provide the following information:

   Amount of stream mitigation requested (linear feet): N/A
   Amount of buffer mitigation requested (square feet): N/A
   Amount of Riparian wetland mitigation requested (acres): N/A
   Amount of Non-riparian wetland mitigation requested (acres): N/A
   Amount of Coastal wetland mitigation requested (acres): N/A

Environmental Documentation (required by DWQ)

Does the project involve an expenditure of public (federal/state) funds or the use of public (federal/state) land?

Yes ☒ No ☐

If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)? Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 523-5083 to review current thresholds for environmental documentation.

Yes ☒ No ☐

If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter.

Yes ☒ No ☐

IX. Proposed Impacts on Riparian and Watershed Buffers (required by DWQ)

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to required state and local buffers associated with the project. The applicant must also provide justification for these impacts in Section VII above. All proposed impacts must be listed herein, and must be clearly identifiable on the accompanying site plan. All buffers must be shown on a map, whether or not impacts are proposed to the buffers. Correspondence from the DWQ Regional Office may be included as appropriate. Photographs may also be included at the applicant's discretion.

Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify_____)?

Yes ☒ No ☐ If you answered "yes", provide the following information:

Identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

Zone*	Impact (square feet)	Multiplier	Required Mitigation
1	7,156		
2	5,010		
Total	12,166		

* Zone 1 extends out 30 feet perpendicular from near bank of channel; Zone 2 extends an additional 20 feet from the edge of Zone 1.

If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Conservation Easement, Riparian Buffer Restoration / Enhancement, Preservation or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0260.

N/A

X. Stormwater (required by DWQ)

Describe impervious acreage (both existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property.

N/A

XI. Sewage Disposal (required by DWQ)

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.

N/A

XII. Violations (required by DWQ)

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?

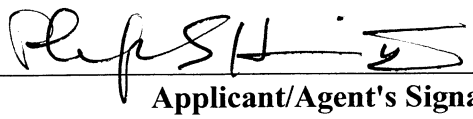
Yes ☐ No ☒

Is this an after-the-fact permit application?

Yes ☐ No ☒

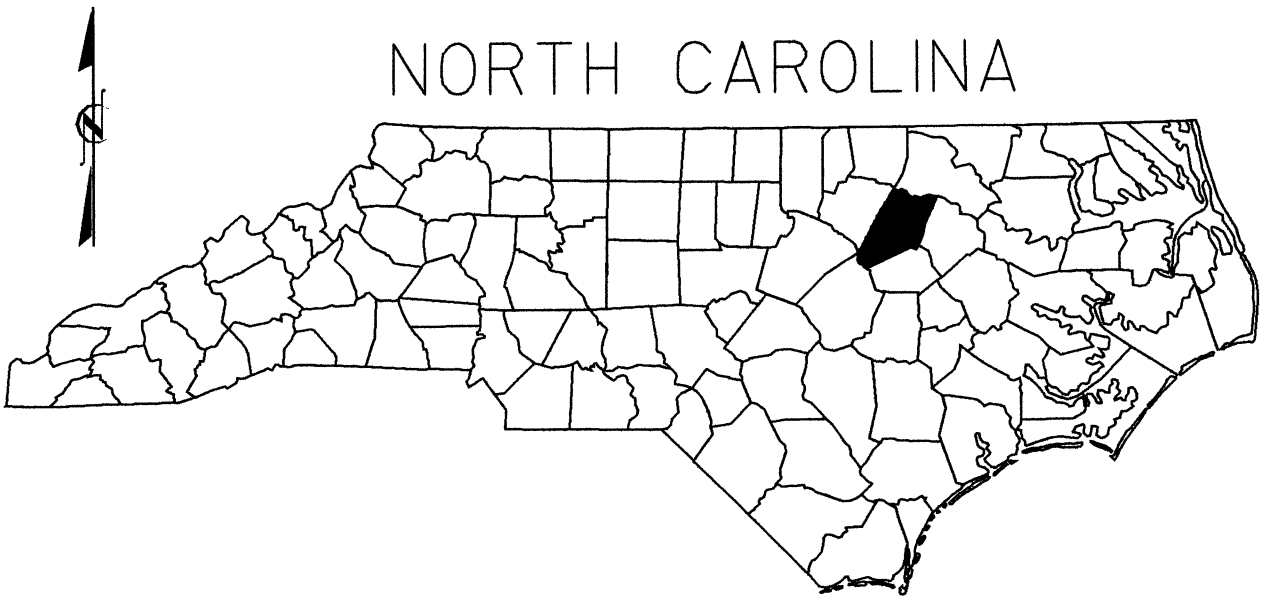
XIII. Other Circumstances (Optional):

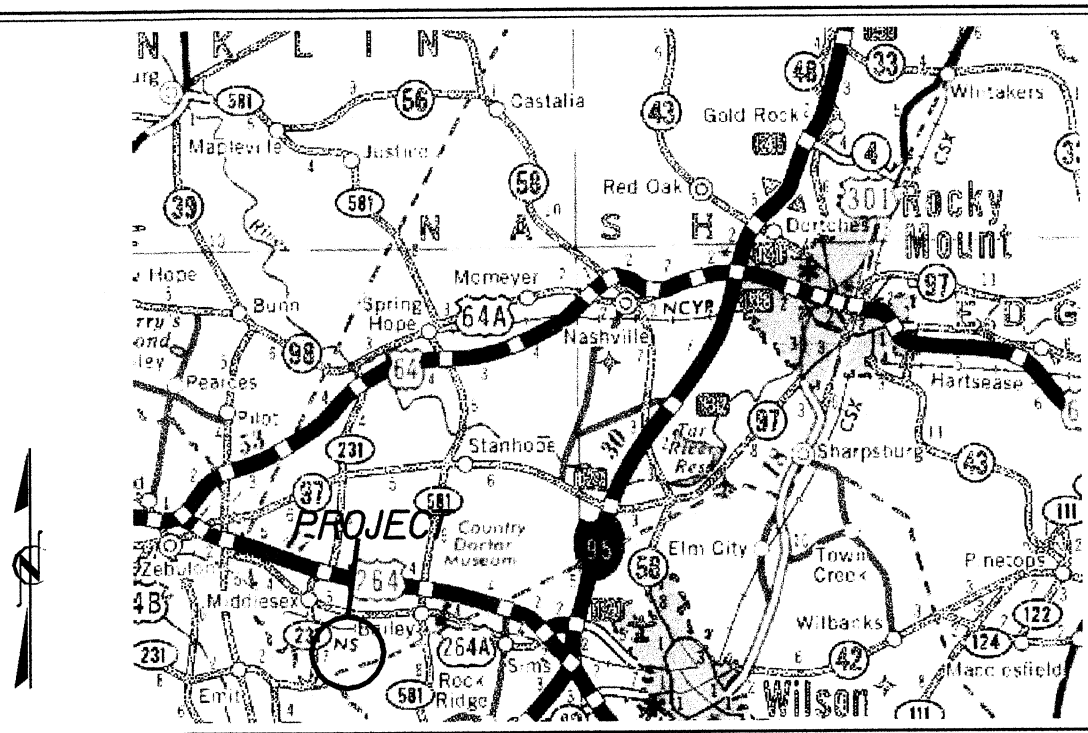
It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g., draw-down schedules for lakes, dates associated with Endangered and Threatened Species, accessibility problems, or other issues outside of the applicant's control).



Applicant/Agent's Signature 5/23/05 **Date**

(Agent's signature is valid only if an authorization letter from the applicant is provided.)



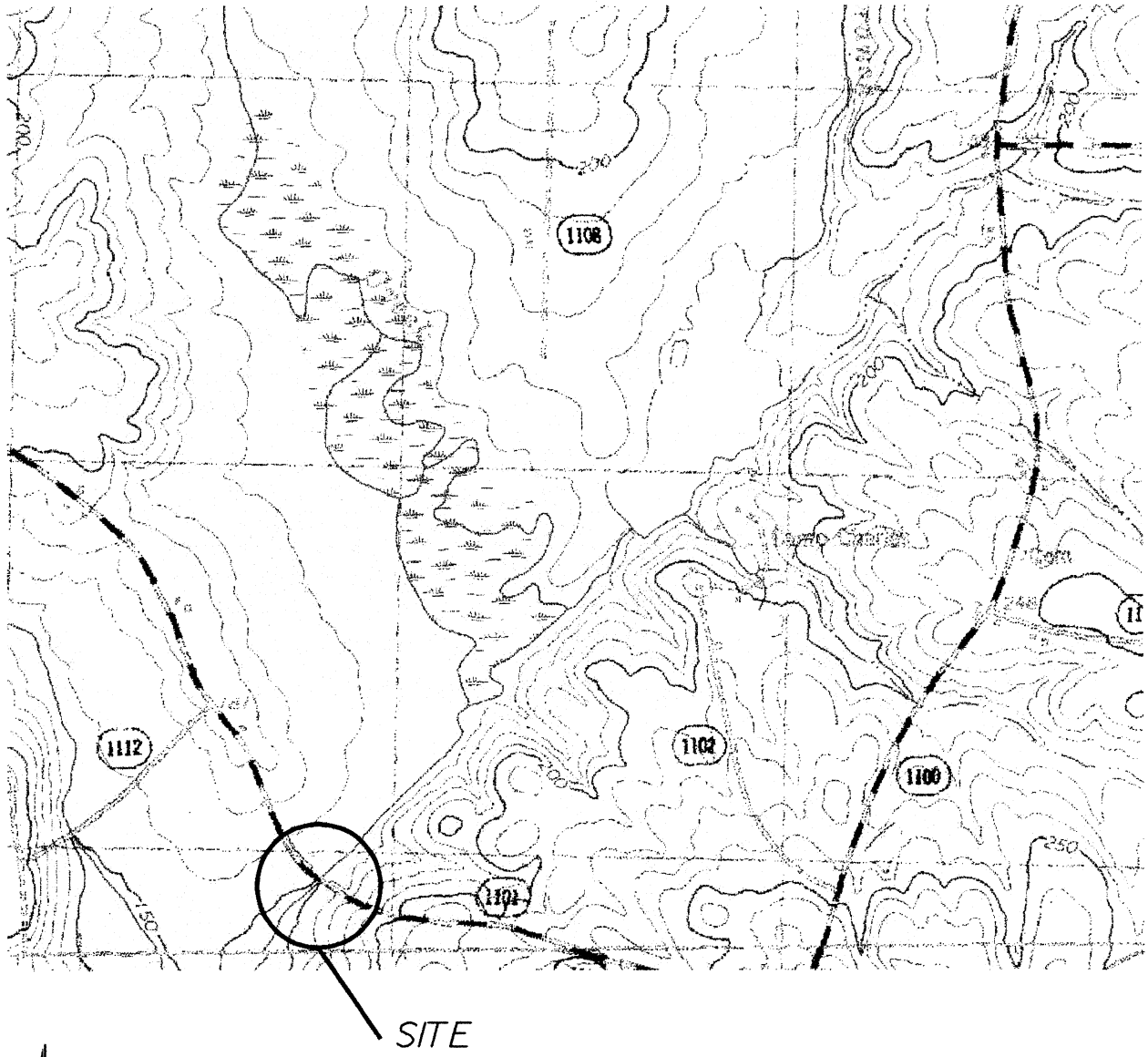


VICINITY MAPS

NCDOT

DIVISION OF HIGHWAYS
NASH COUNTY
PROJECT: 8.2322201 (B-3877)
REPLACE BRIDGE NO. 52
OVER TURKEY CREEK
ALONG SR 1101
(CLAUDE LEWIS RD.)

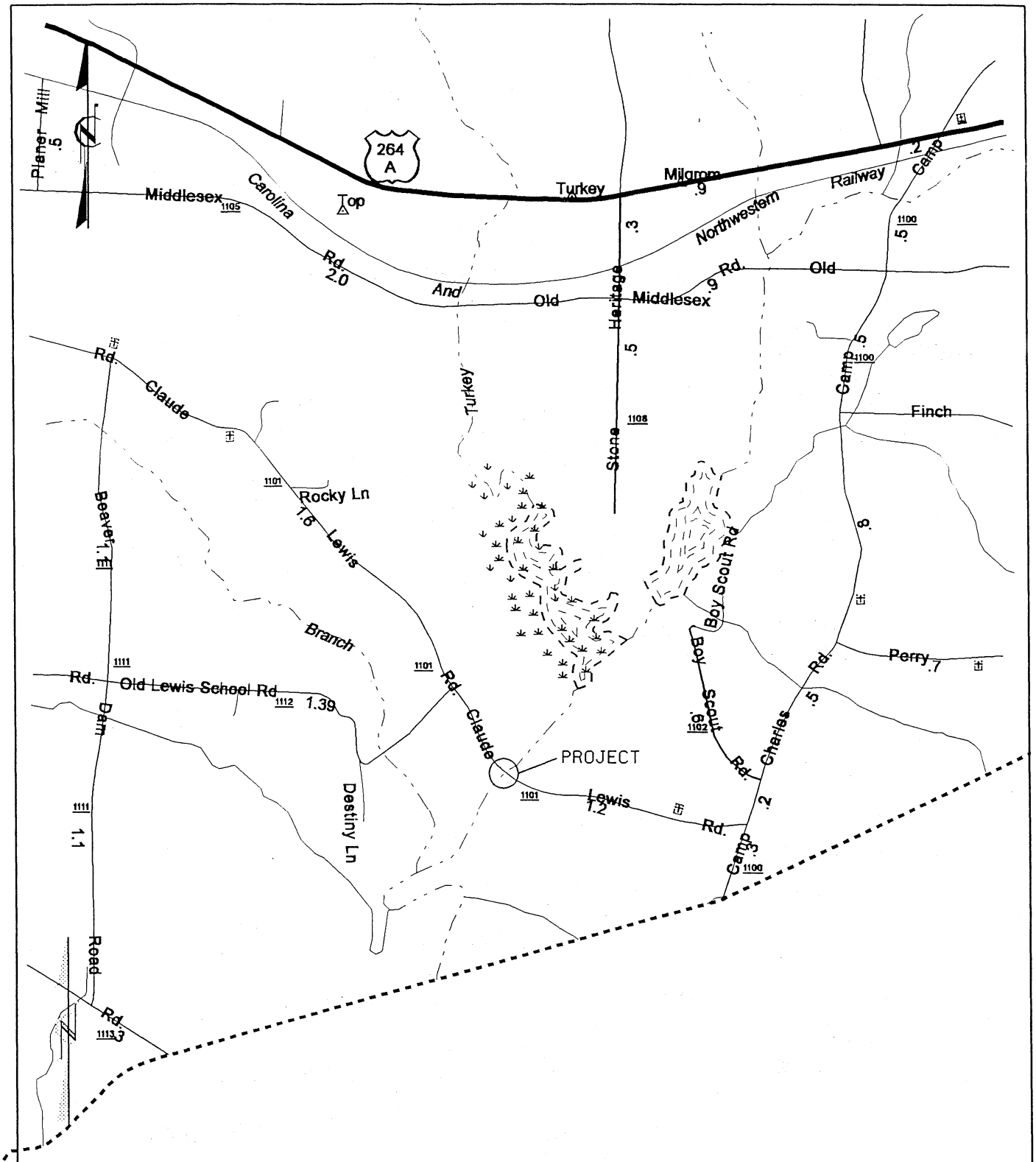
SHEET 1 **OF** 7 **11/18/04**



TOPOGRAPHIC MAP

NCDOT

DIVISION OF HIGHWAYS
NASH COUNTY
PROJECT: 8.2322201 (B-3877)
REPLACE BRIDGE NO. 52
OVER TURKEY CREEK
ALONG SR 1101
(CLAUDE LEWIS RD.)



LOCATION MAPS

NCDOT

DIVISION OF HIGHWAYS

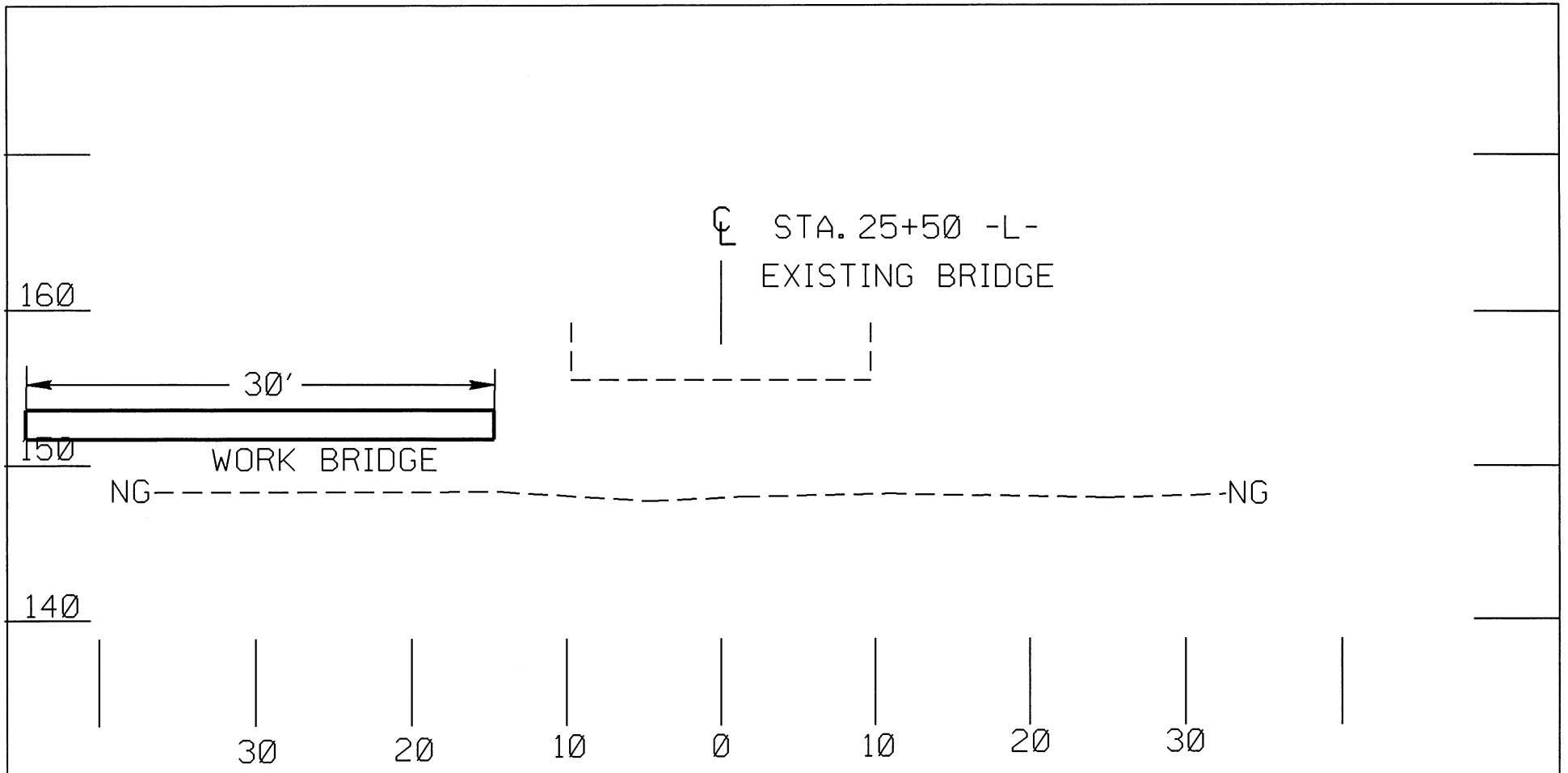
NASH COUNTY

PROJECT: 8.2322201 (B-3877)

REPLACE BRIDGE NO. 52
OVER TURKEY CREEK
ALOND SR 11901
(CLAUDE LEWIS RD.)

SHEET 3 OF 7

11/18/04



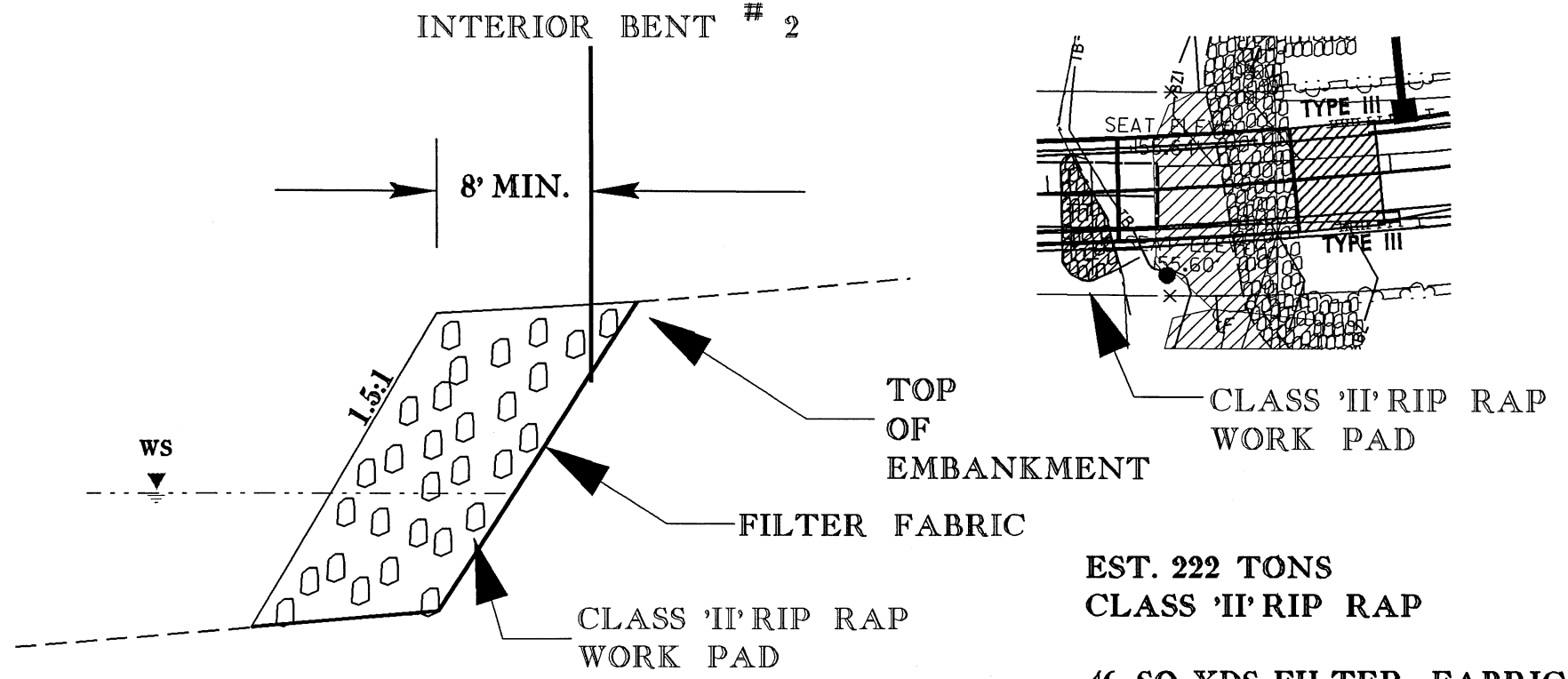
PROFILE

NEUSE RIVER
BUFFER ZONE

NCDOT

DIVISION OF HIGHWAYS
NASH COUNTY
PROJECT: 8.232220101 (B-3877)
REPLACE BRIDGE NO. 52
OVER TURKEY CREEK
ALONG SR 1101
(CLAUDE LEWIS RD.

SHEET 4 **OF** 7 **05/17/05**



EST. 222 TONS
CLASS 'II' RIP RAP

46 SQ. YDS. FILTER FABRIC

TYPICAL SECTION
CLASS 'II' RIP RAP
WORK PAD

(NOT TO SCALE)

NCDOT

DIVISION OF HIGHWAYS
NASH COUNTY
PROJECT: 8.2322201 (B-3877)
REPLACE BRIDGE NO. 52
OVER TURKEY CREEK
ALONG SR 1101
(CLAUDE LEWIS RD.)

SHEET 5 **OF** 7 **05 / 17 / 05**

Prope Owner Contact Report

TIP # L 77

Owner Last Name/ Business	wner t Name	Address	City/Town	State	Zip Code	Contact/ Relationship		Home Phone	Contacted By	Contact Date	How Contacted	Comments
(3) Boston	iane S.	1109 Windemere Dr.	Wilson	NC	27896	Diane S. Boston	Self	(252) 291-2269	R.T.Poythress, Jr.	06-12-02	Phone/Letter	
Lewis	h Isaac	9309 Wakefield Oak Grove	Zebulon	NC	27597	Joseph Lewis	Self	(919) 404-2114	K.E.Honeycutt	6-18-02	Letter	
(4) Willoughby	ie Melvin	P.O.Box 191	Middlesex	NC	27557	Jonnie	Self	(252) 235-3618	R.T.Poythress, Jr.	06-12-02	Phone/Letter	Glad bridge being replaced. Mad at City of Wilson for taking some of his land.
(1) Wilson (2)	ity of	P.O.Box 10	Wilson	NC	27894	City of Wilson	Self		K.E.Honeycutt	06-14-02	Letter	

sheet 6 of 7

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS				SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation In Wetlands (ac)	Mechanized Clearing (Method III) (ac)	Fill In SW (Natural) (ac)	Fill In SW (Pond) (ac)	Temp. Fill In SW (ac)	Existing Channel Impacted (ft)	Natural Stream Design (ft)
1	24+90 TO	WORK BRIDGE	0	0	0	0	0	0	0	0	0
	25+82 -L- LT										
	26+04 TO	WORK PAD	0	0	0	0	0	0	0.009	0	0
	26+20 -L- RT	CL. 'II' RIP RAP									
TOTALS:			0	0	0	0	0	0	0.009	0	0

THERE WILL BE 0.007 AC. OF HAND CLEARING FROM STA. 25+12 TO 25+22 -L- LT & RT UNDER THE PROPOSED BRIDGE.

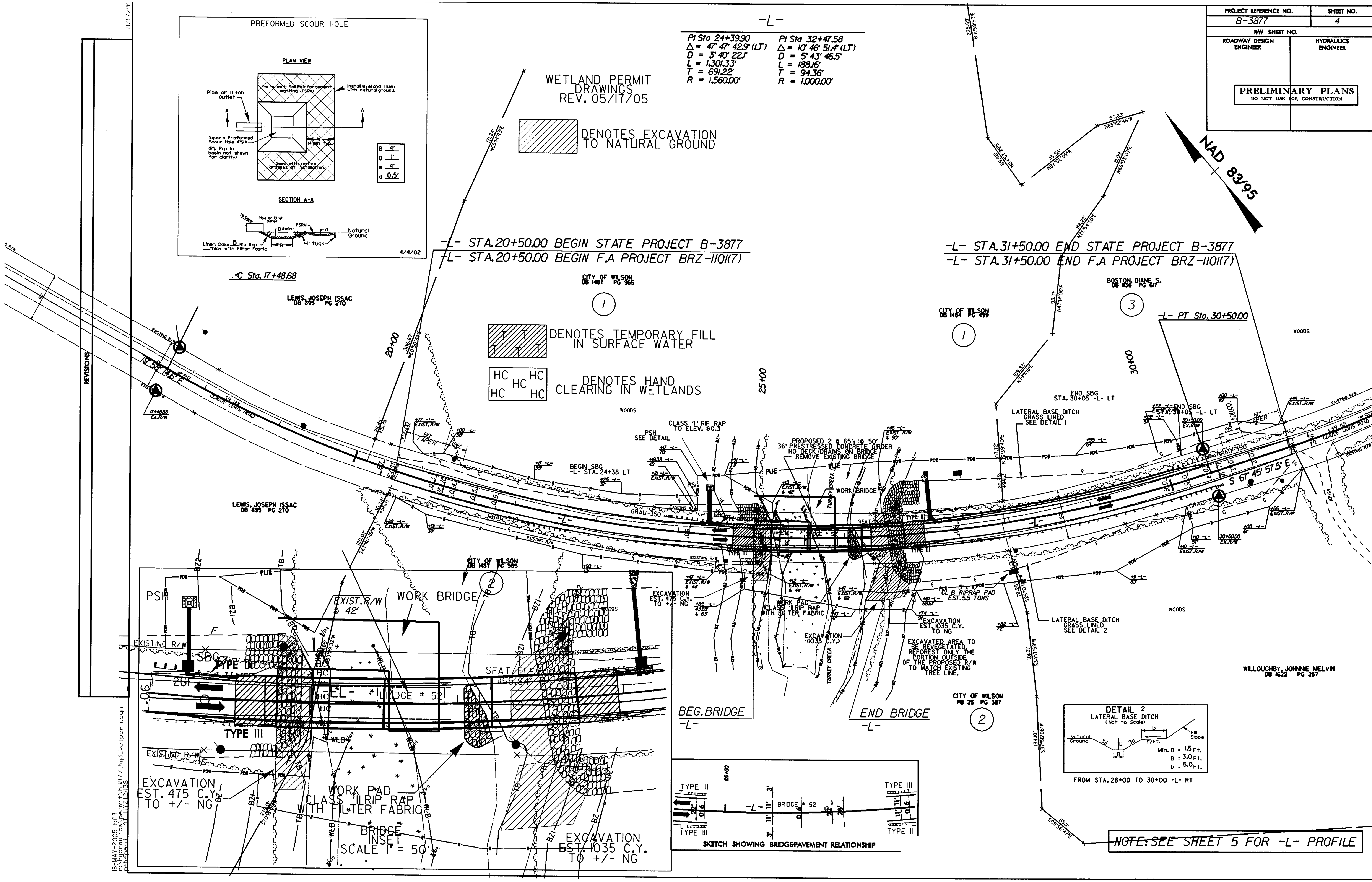
NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

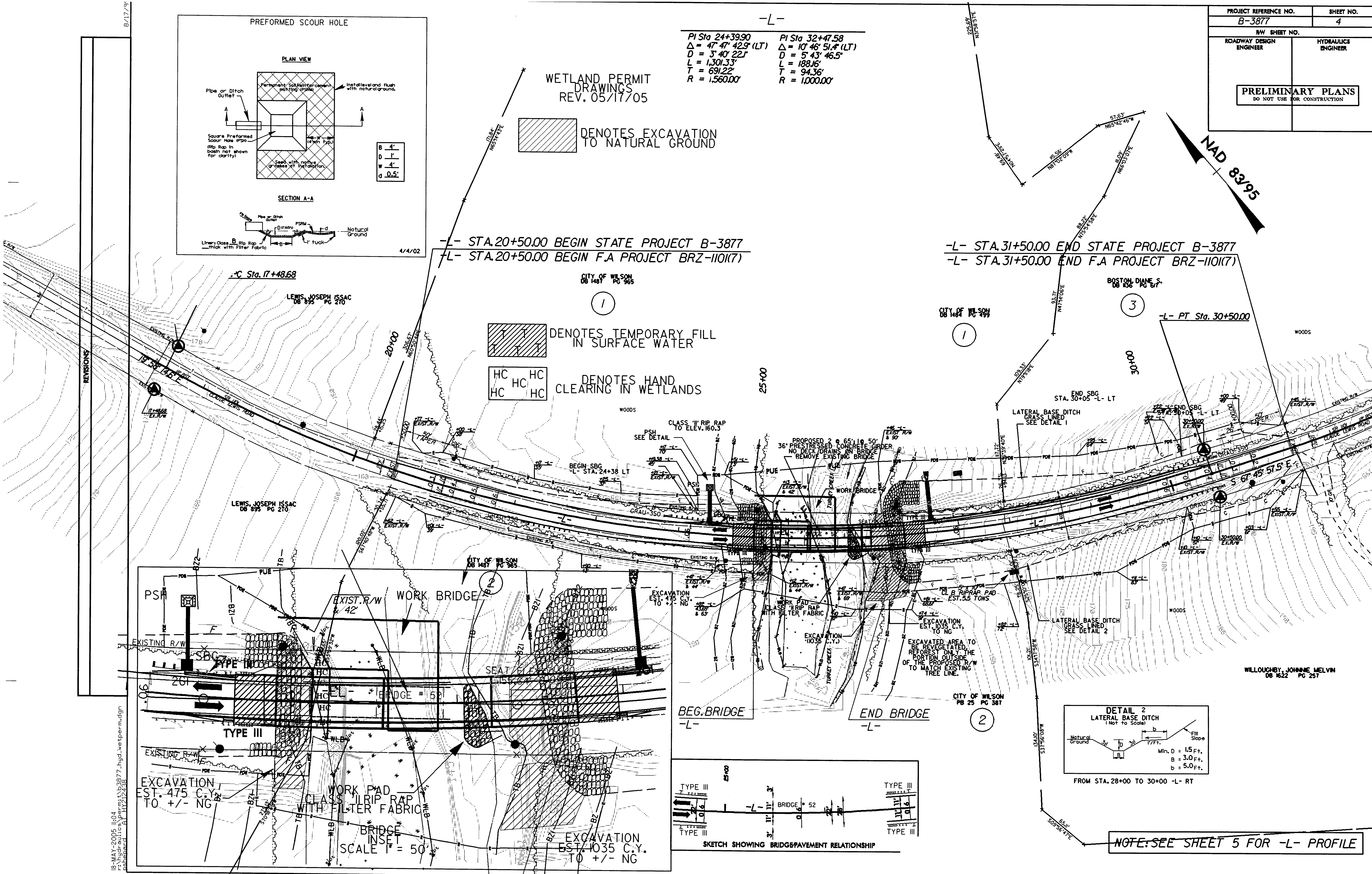
NASH COUNTY
PROJECT: 8.2322201 (B-3877)

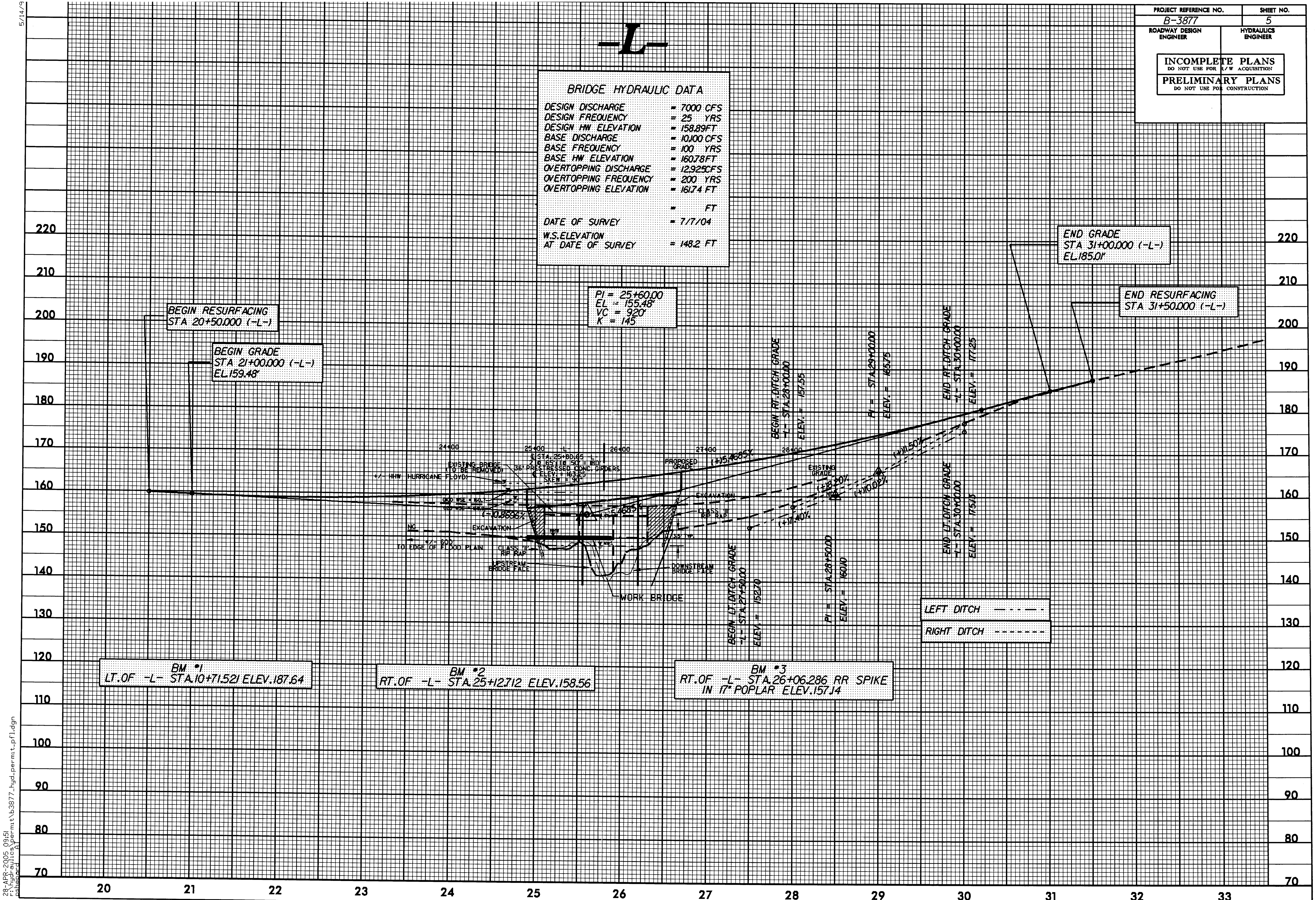
SHEET 7 OF 7

REV. 05/17/05
11/18/2004

Form Revised 3/22/01


PROJECT REFERENCE NO.
B-3877
SHEET NO.
4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
NAD 83/95
PREFORMED SCOUR HOLE
PLAN VIEW
SECTION A-A
4/4/02
-L-
PI Sta 24+39.90
△ = 47° 47' 42.9" (LT)
D = 3° 40' 22.1"
L = 1,301.33'
T = 691.22'
R = 1,560.00'
PI Sta 32+47.58
△ = 10° 46' 51.4" (LT)
D = 5° 43' 46.5"
L = 188.16'
T = 94.36'
R = 1,000.00'
WETLAND PERMIT DRAWINGS
REV. 05/17/05
DENOTES EXCAVATION TO NATURAL GROUND
DENOTES TEMPORARY FILL IN SURFACE WATER
DENOTES HAND CLEARING IN WETLANDS
-L- STA.20+50.00 BEGIN STATE PROJECT B-3877
-L- STA.20+50.00 BEGIN F.A PROJECT BRZ-1101(7)
-L- STA.31+50.00 END STATE PROJECT B-3877
-L- STA.31+50.00 END F.A PROJECT BRZ-1101(7)
-L- PT Sta. 30+50.00
CITY OF WILSON DB 1487 PG 965
CITY OF WILSON DB 1484 PG 499
BOSTON, DIANE S. DB 1136 PG 617
LEWIS, JOSEPH ISSAC DB 895 PG 270
WILLOUGHBY, JOHNNIE MELVIN DB 1622 PG 257
CITY OF WILSON PB 25 PG 387
PROPOSED 2 @ 65', 1 @ 50' 36" PRESTRESSED CONCRETE GIRDER NO DECK DRAINS ON BRIDGE
REMOVE EXISTING BRIDGE
CLASS 'II' RIP RAP TO ELEV. 160.3
PSH SEE DETAIL
BEGIN SBG -L- STA. 24+38 LT
END SBG STA. 30+05 -L- LT
LATERAL BASE DITCH GRASS LINED SEE DETAIL 1
LATERAL BASE DITCH GRASS LINED SEE DETAIL 2
EXCAVATION EST. 475 C.Y. TO +/- NG
EXCAVATION EST. 1035 C.Y. TO NG
EXCAVATED AREA TO BE REVEGETATED. REFOREST ONLY THE PORTION OUTSIDE OF THE PROPOSED R/W TO MATCH EXISTING TREE LINE.
WORK PAD CLASS 'II' RIP RAP WITH FILTER FABRIC
CL B RIPRAP PAD EST. 5.5 TONS
BEG. BRIDGE -L-
END BRIDGE -L-
TURKEY CREEK
WORK BRIDGE
WOODS
DETAIL 2
LATERAL BASE DITCH (Not to Scale)
Min. D = 1.5 Ft.
B = 3.0 Ft.
b = 5.0 Ft.
FROM STA. 28+00 TO 30+00 -L- RT
SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP
BRIDGE INSET SCALE 1" = 50'
EXCAVATION EST. 475 C.Y. TO +/- NG
EXCAVATION EST. 1035 C.Y. TO +/- NG
NOTE: SEE SHEET 5 FOR -L- PROFILE
REVISIONS
18-MAY-2005 11:03
8/17/99


PROJECT REFERENCE NO. B-3877
SHEET NO. 4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
NAD 83/95
PREFORMED SCOUR HOLE
PLAN VIEW
SECTION A-A
4/4/02
WETLAND PERMIT DRAWINGS REV. 05/17/05
DENOTES EXCAVATION TO NATURAL GROUND
DENOTES TEMPORARY FILL IN SURFACE WATER
DENOTES HAND CLEARING IN WETLANDS
-L-
PI Sta 24+39.90
Δ = 47° 47' 42.9" (LT)
D = 3° 40' 22.1"
L = 1,301.33'
T = 691.22'
R = 1,560.00'
PI Sta 32+47.58
Δ = 10° 46' 51.4" (LT)
D = 5° 43' 46.5"
L = 188.16'
T = 94.36'
R = 1,000.00'
-L- STA. 20+50.00 BEGIN STATE PROJECT B-3877
-L- STA. 20+50.00 BEGIN F.A PROJECT BRZ-1101(7)
-L- STA. 31+50.00 END STATE PROJECT B-3877
-L- STA. 31+50.00 END F.A PROJECT BRZ-1101(7)
-L- PT Sta. 30+50.00
CITY OF WILSON DB 1487 PG 965
CITY OF WILSON DB 1484 PG 499
BOSTON, DIANE S. DB 1136 PG 617
LEWIS, JOSEPH ISSAC DB 895 PG 270
WILLOUGHBY, JOHNNIE MELVIN DB 1622 PG 257
CITY OF WILSON PB 25 PG 387
CLASS 'II' RIP RAP TO ELEV. 160.3
PSH SEE DETAIL
PROPOSED 2 @ 65' / 1 @ 50' 36" PRESTRESSED CONCRETE GIRDER NO DECK DRAINS ON BRIDGE REMOVE EXISTING BRIDGE
WORK BRIDGE
BEGIN SBG -L- STA. 24+38 LT
END SBG STA. 30+05 -L- LT
LATERAL BASE DITCH GRASS LINED SEE DETAIL 1
LATERAL BASE DITCH GRASS LINED SEE DETAIL 2
EXCAVATION EST. 475 C.Y. TO +/- NG
EXCAVATION EST. 1035 C.Y. TO +/- NG
WORK PAD CLASS 'II' RIP RAP WITH FILTER FABRIC
CL B RIPRAP PAD EST. 5.5 TONS
EXCAVATED AREA TO BE REVEGETATED. REFOREST ONLY THE PORTION OUTSIDE OF THE PROPOSED R/W TO MATCH EXISTING TREE LINE.
BEG. BRIDGE -L-
END BRIDGE -L-
S 67° 45' 57.5" E
BRIDGE INSET SCALE 1" = 50'
BRIDGE # 52
TYPE III
SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP
DETAIL 2 LATERAL BASE DITCH (Not to Scale)
Min. D = 1.5 Ft.
B = 3.0 Ft.
b = 5.0 Ft.
FROM STA. 28+00 TO 30+00 -L- RT
NOTE: SEE SHEET 5 FOR -L- PROFILE
REVISIONS
18-MAY-2005 11:04


PROJECT REFERENCE NO. B-3877
SHEET NO. 5
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION
-L-
BRIDGE HYDRAULIC DATA
DESIGN DISCHARGE = 7000 CFS
DESIGN FREQUENCY = 25 YRS
DESIGN HW ELEVATION = 158.89 FT
BASE DISCHARGE = 10,100 CFS
BASE FREQUENCY = 100 YRS
BASE HW ELEVATION = 160.78 FT
OVERTOPPING DISCHARGE = 12,925 CFS
OVERTOPPING FREQUENCY = 200 YRS
OVERTOPPING ELEVATION = 161.74 FT
= FT
DATE OF SURVEY = 7/7/04
W.S. ELEVATION AT DATE OF SURVEY = 148.2 FT
PI = 25+60.00
EL = 155.48'
VC = 920'
K = 145
BEGIN RESURFACING STA 20+50.000 (-L-)
BEGIN GRADE STA 21+00.000 (-L-) EL.159.48'
END GRADE STA 31+00.000 (-L-) EL.185.01'
END RESURFACING STA 31+50.000 (-L-)
BEGIN RT. DITCH GRADE -L- STA. 28+00.00 ELEV. = 157.55
PI = STA. 29+00.00 ELEV. = 165.75
END RT. DITCH GRADE -L- STA. 30+00.00 ELEV. = 177.25
END LT. DITCH GRADE -L- STA. 30+00.00 ELEV. = 175.13
BEGIN LT. DITCH GRADE -L- STA. 27+50.00 ELEV. = 152.70
PI = STA. 28+50.00 ELEV. = 160.10
EXISTING BRIDGE (TO BE REMOVED)
+/- HHW HURRICANE FLOYD
36" PRESTRESSED CONC. GIRDERS
PROPOSED GRADE
EXISTING GRADE
EXCAVATION
CLASS "I" RIP RAP
TO EDGE OF FLOOD PLAIN
UPSTREAM BRIDGE FACE
DOWNSTREAM BRIDGE FACE
WORK BRIDGE
(+)5.4685%
(-)0.8696%
(+)11.50%
(+)8.20%
(+)10.02%
(+)7.40%
LEFT DITCH
RIGHT DITCH
BM #1 LT. OF -L- STA. 10+71.521 ELEV. 187.64
BM #2 RT. OF -L- STA. 25+12.712 ELEV. 158.56
BM #3 RT. OF -L- STA. 26+06.286 RR SPIKE IN 17" POPLAR ELEV. 157.14
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
20
21
22
23
24
25
26
27
28
29
30
31
32
33
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5/14/9

8/23/

0 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3877	X-1

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

160
155

4:1
0.0600
0.0600
158.73
4:1

22100.00

160
155

4.3:1
0.0492
0.0492
158.95
5.8:1

21150.00

160

3.3:1
0.0300
0.0300
159.32
3:1

21100.00

160

EXIST.
EXIST.
159.88

20150.00

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

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anmcord

PRELIMIN

8/23/

0 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3877	X-2

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

160
155

0.0600 0.0600
3:1
157.94
3:1

24+00.00

160
155

0.0600 0.0600
3:1
158.19
4:1

23+50.00

160
155

0.0600 0.0600
4.6:1
158.32
4:1

23+00.00

160
155

0.0600 0.0600
4:1
158.54
4:1

22+50.00

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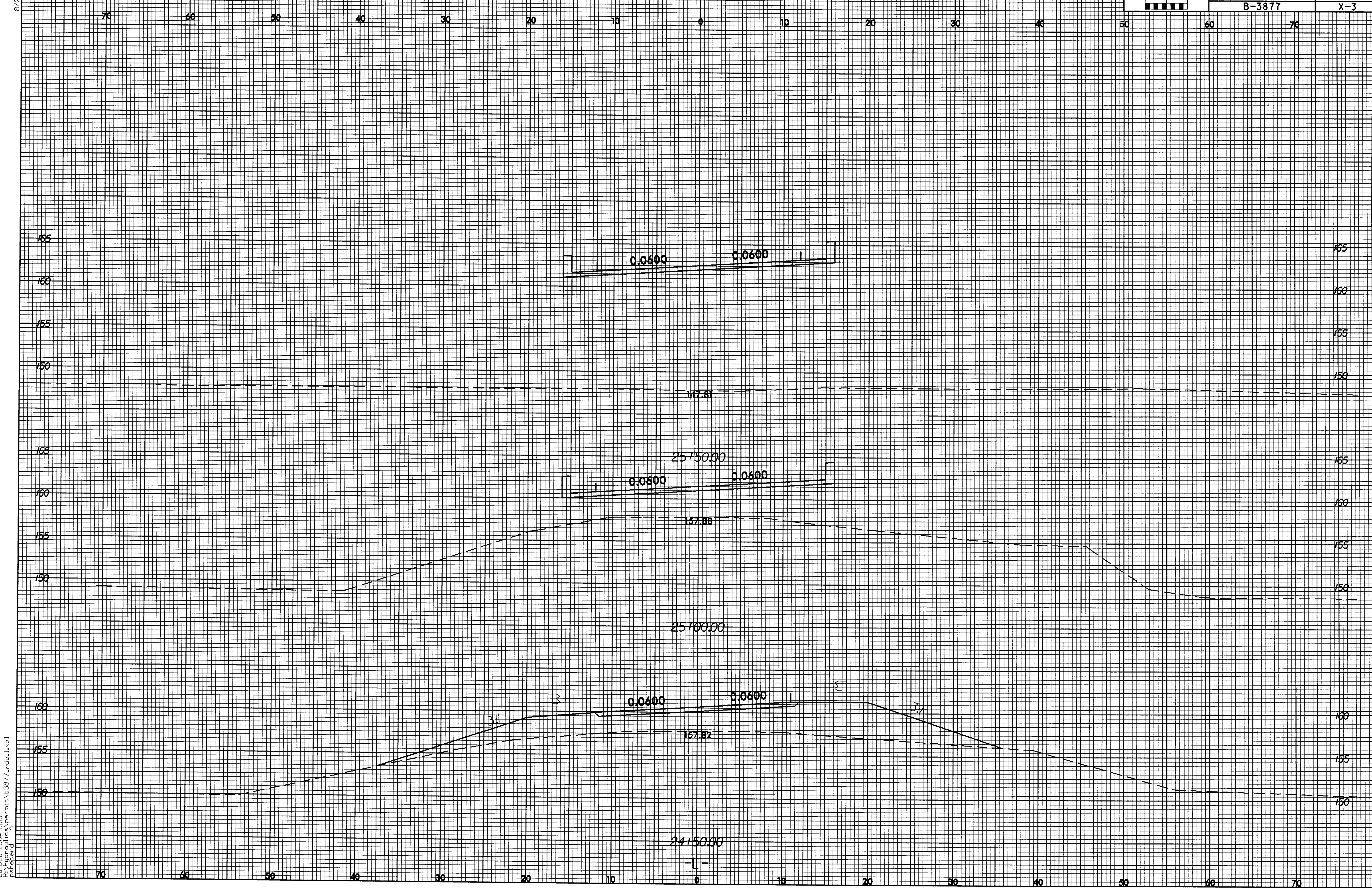

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pshepard AT

0 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3877	X-4

8/23/

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

170 165 160 155

0.0600 0.0600

2:1 2:1

158.76

27+00.00

0.0600 0.0600

158.01

150

26+50.00

0.0600 0.0600

160 155 150 145

142.93

26+00.00

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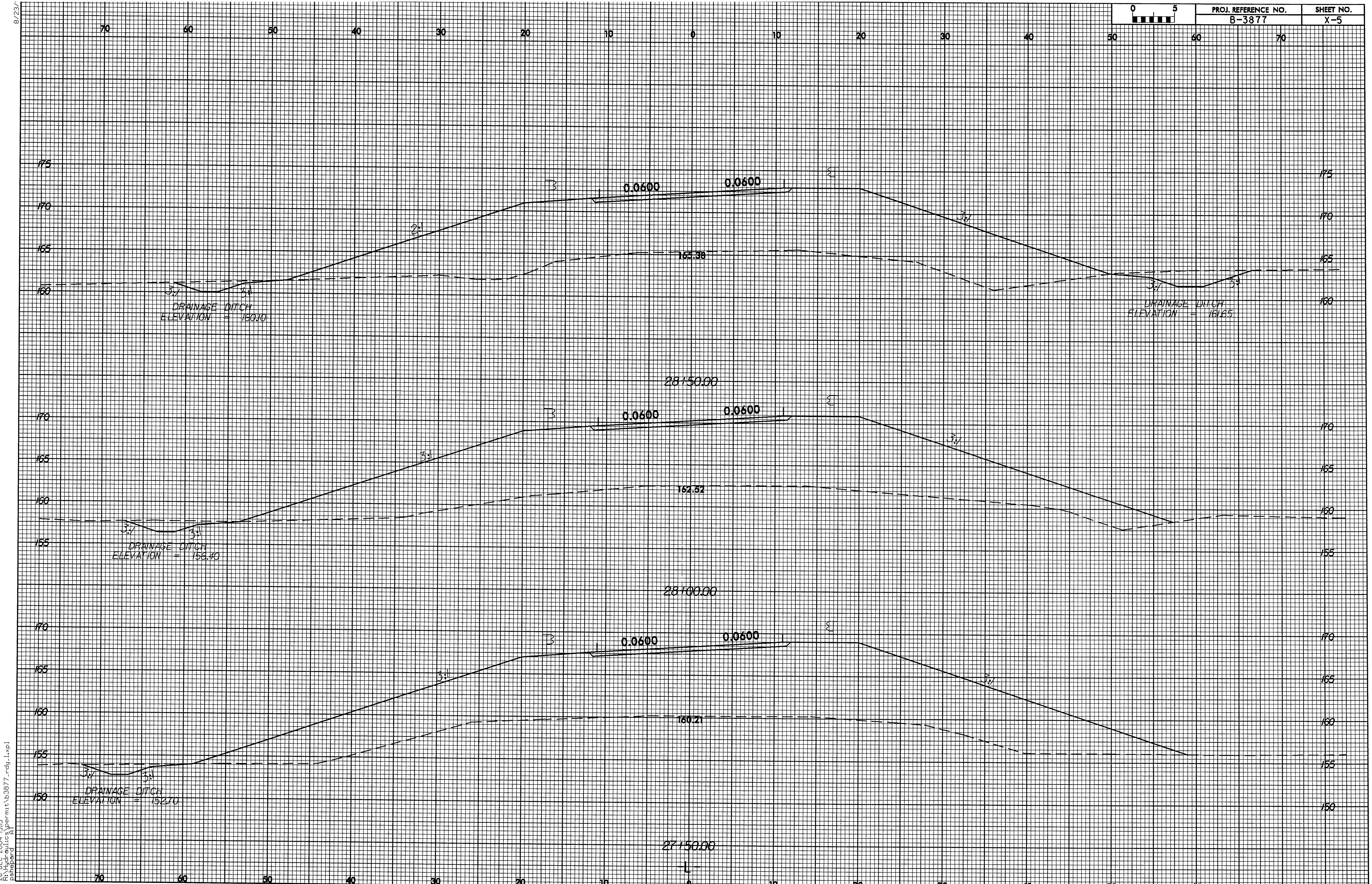
PROJ. REFERENCE NO.	SHEET NO.
B-3877	X-5



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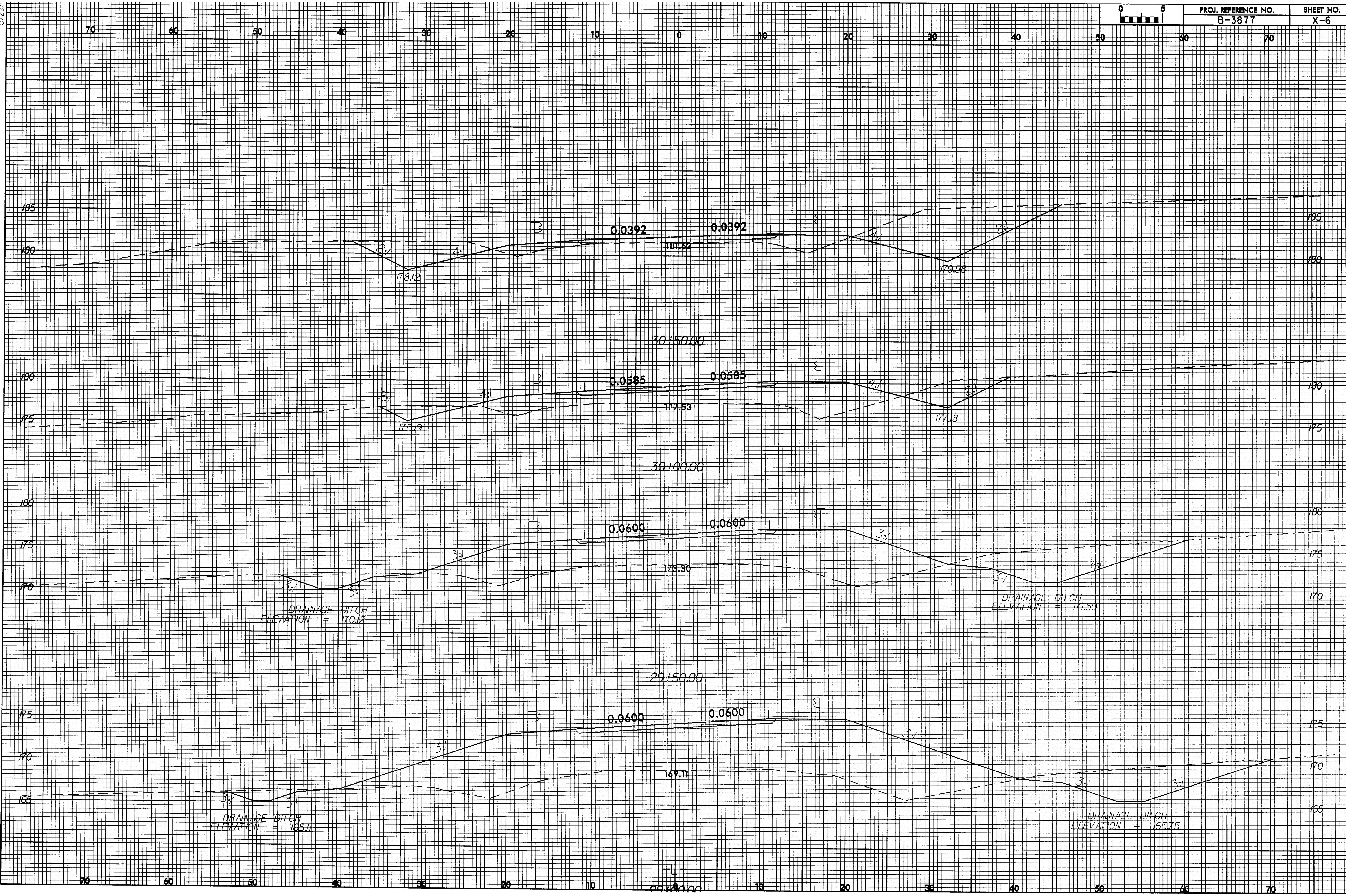
pshepard AT

PROJ. REFERENCE NO.	SHEET NO.
B-3877	X-6



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pshepard AT

8/23/

0 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3877	X-7

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

195 190 185 190 185

EXIST. EXIST.

187.56

311+50.00

190 185 190 185

0.0200 0.0200

184.85

2:1 4:1 4:1 2:1

181.31 181.99

180 180

311+00.00

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

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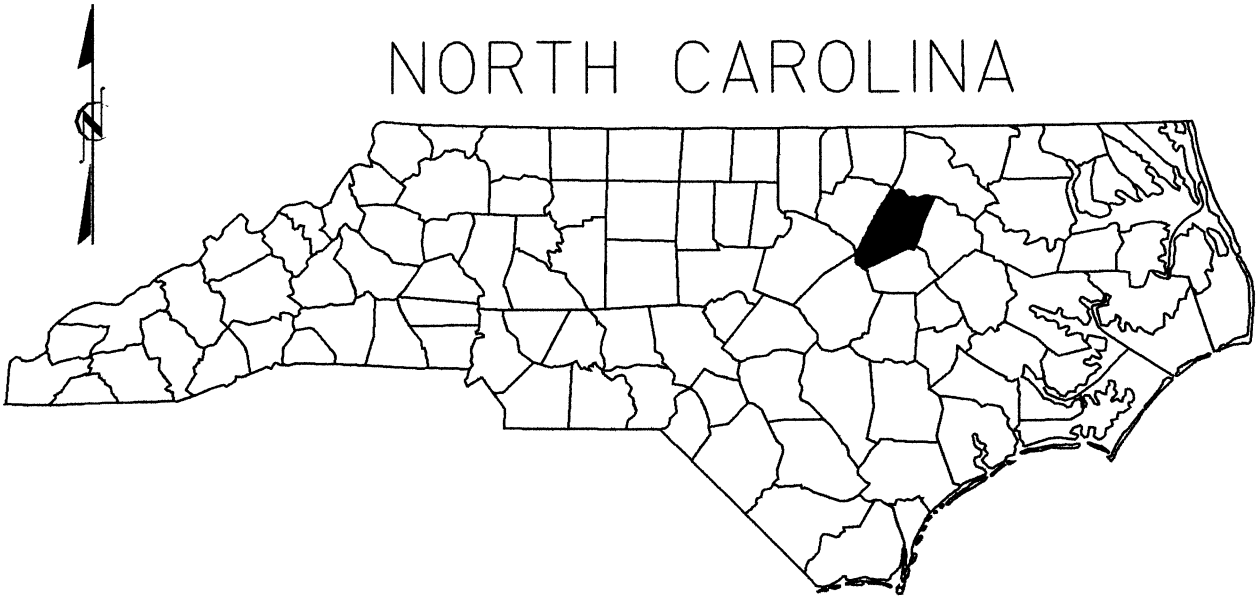
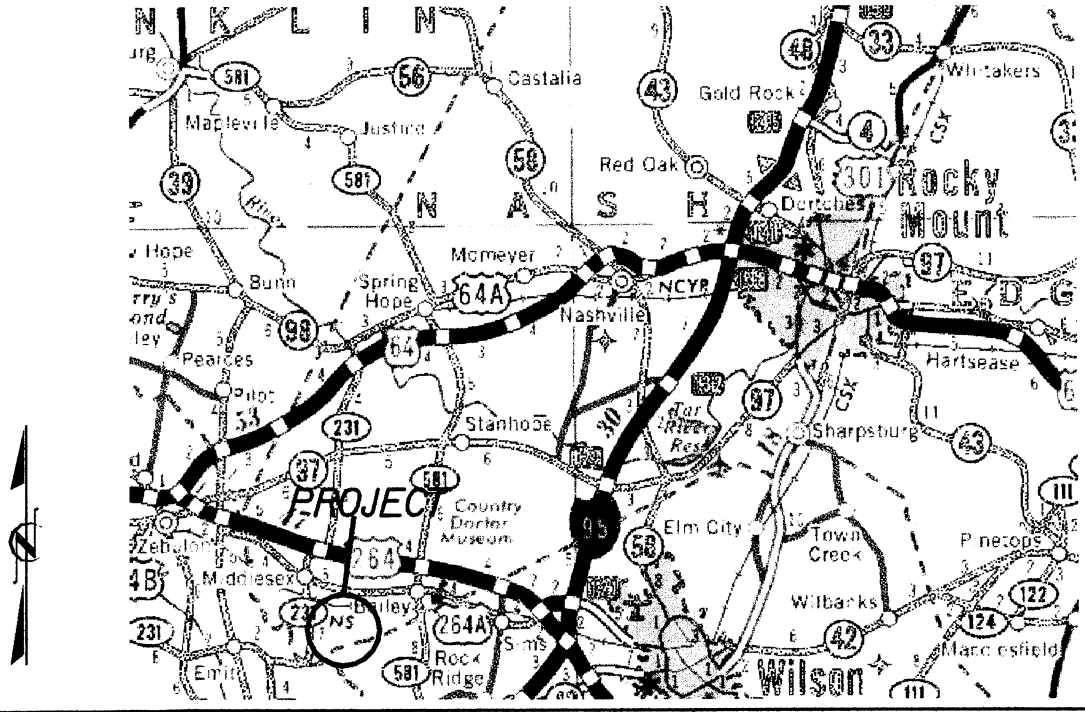
pshepard





VICINITY MAPS NEUSE RIVER BUFFER ZONE

NCDOT

DIVISION OF HIGHWAYS

NASH COUNTY

PROJECT: 8.2322201 (B-3877)

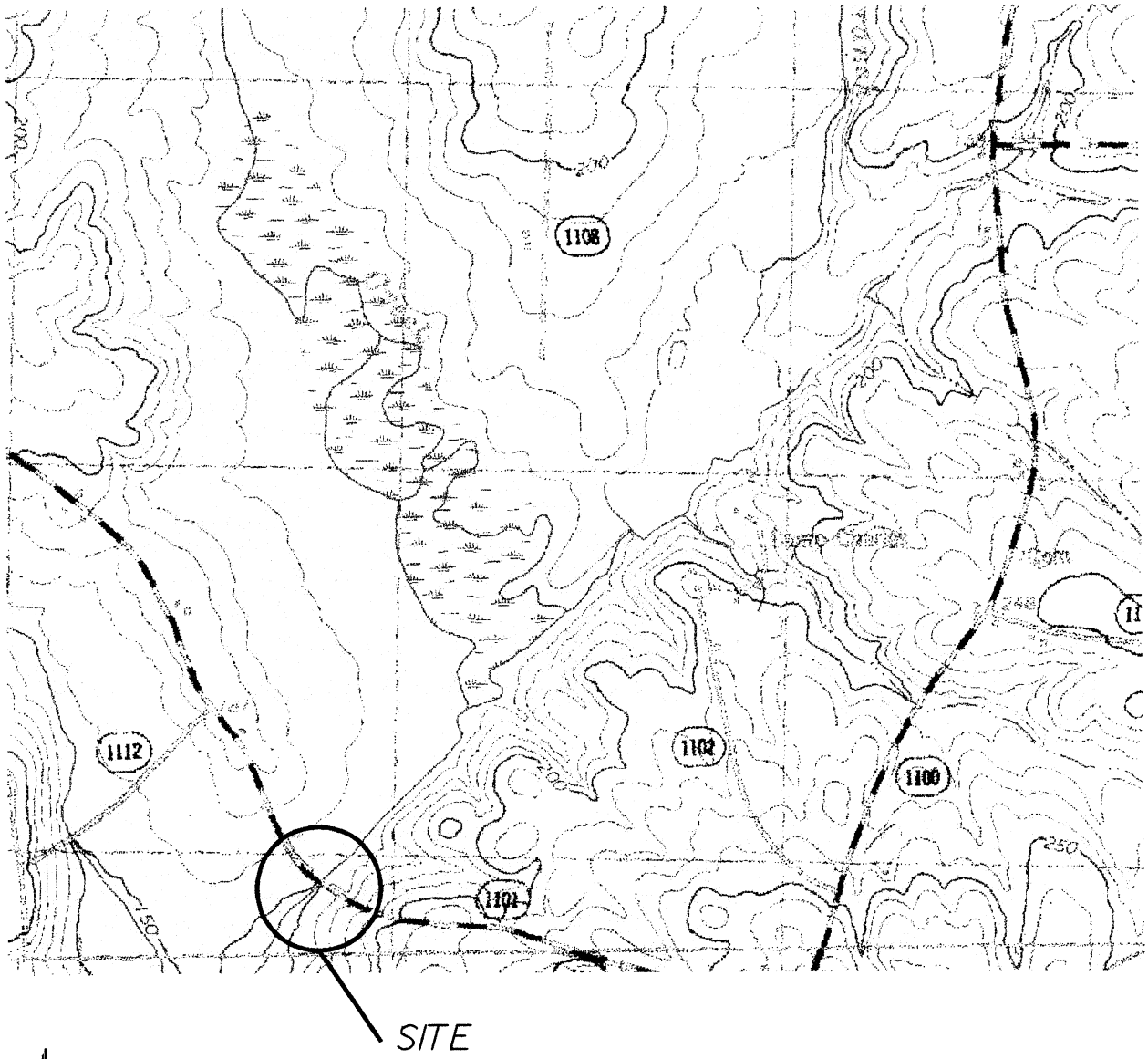
REPLACE BRIDGE NO. 52

OVER TURKEY CREEK

ALONG SR 1101

(CLAUDE LEWIS RD.)

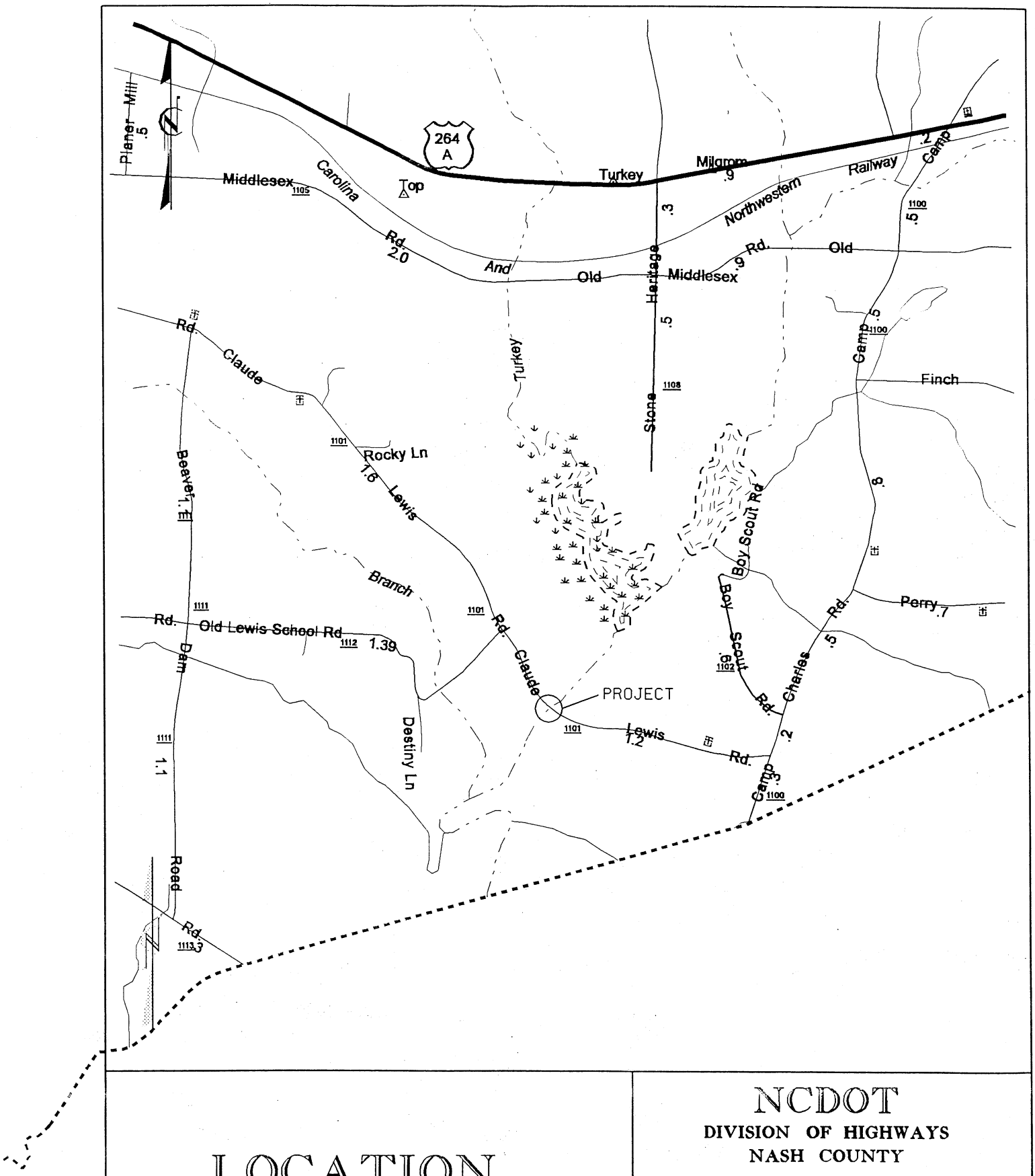
SHEET 1 OF 7 **11/18/04**



TOPOGRAPHIC MAP NEUSE RIVER BUFFER ZONE

NCDOT
DIVISION OF HIGHWAYS
NASH COUNTY
PROJECT: 8.2322201 (B-3877)
REPLACE BRIDGE NO. 52
OVER TURKEY CREEK
ALONG SR 1101
(CLAUDE LEWIS RD.)

SHEET 2 **OF** 7 **11/18/04**

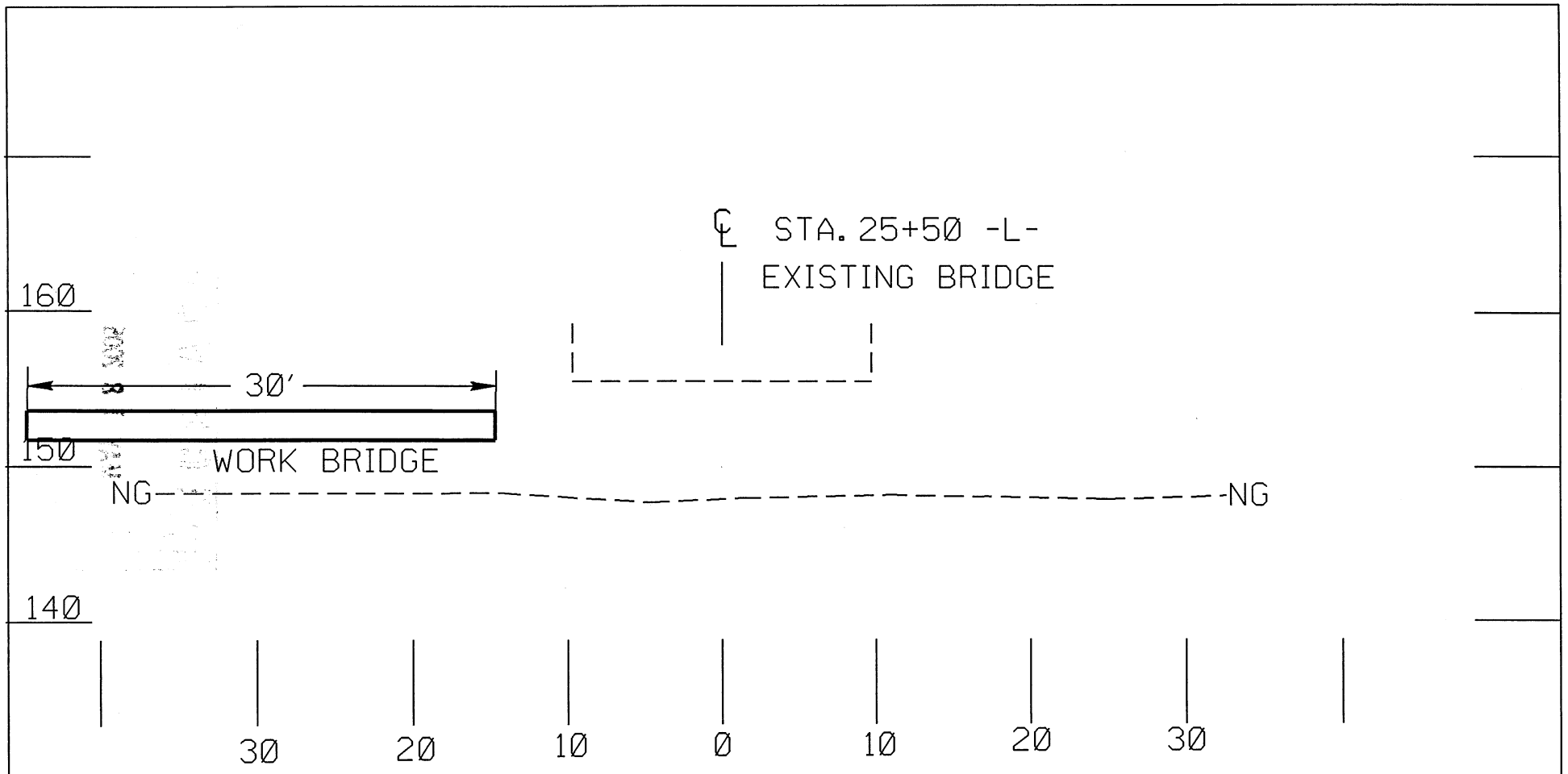


LOCATION MAP

NCDOT

DIVISION OF HIGHWAYS
NASH COUNTY
PROJECT: 8.2322201 (B-3877)
REPLACE BRIDGE NO. 52
OVER TURKEY CREEK
ALOND SR 11901
(CLAUDE LEWIS RD.)

11/18/04



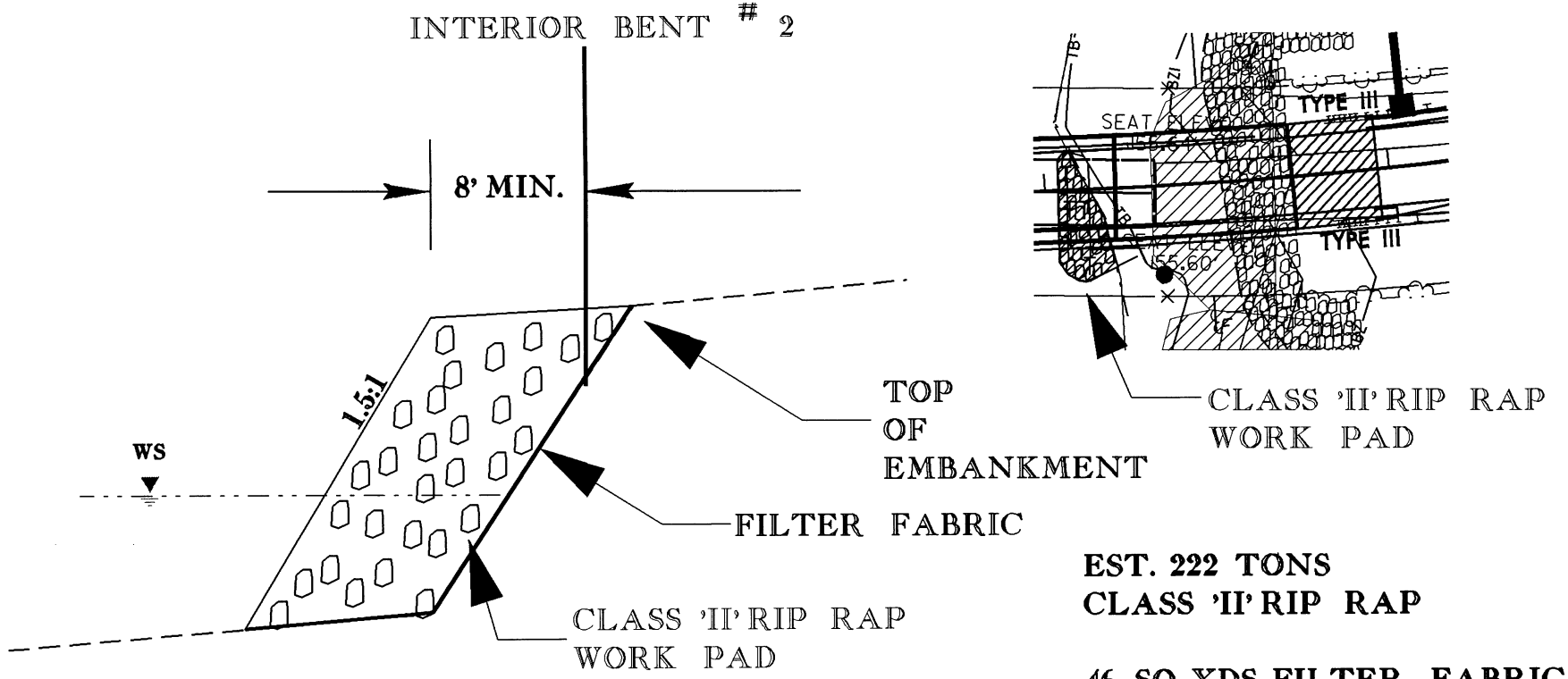
PROFILE

NEUSE RIVER
BUFFER ZONE

NCDOT

DIVISION OF HIGHWAYS
NASH COUNTY
PROJECT: 8.232220101 (B-3877)
REPLACE BRIDGE NO. 52
OVER TURKEY CREEK
ALONG SR 1101
(CLAUDE LEWIS RD.

SHEET 4 **OF** 7 **05/17/05**



EST. 222 TONS
CLASS 'II' RIP RAP

46 SQ. YDS. FILTER FABRIC

TYPICAL SECTION
CLASS 'II' RIP RAP
WORK PAD

(NOT TO SCALE)

NCDOT

DIVISION OF HIGHWAYS
NASH COUNTY
PROJECT: 8.2322201 (B-3877)
REPLACE BRIDGE NO. 52
OVER TURKEY CREEK
ALONG SR 1101
(CLAUDE LEWIS RD.)

SHEET 5 **OF** 7 **05 / 17 / 05**

Property Owner Contact Report

TIP # B-3877

Owner Last Name/ Business	Owner First Name	Address	City/Town	State	Zip Code	Contact/ Relationship		Home Phone	Contacted By	Contact Date	How Contacted	Comments
3 Bo	Diane S.	1109 Windemere Dr.	Wilson	NC	27896	Diane S. Boston	Self	(252) 291-2269	R.T.Poythress, Jr.	06-12-02	Phone/Letter	
Le	Joseph Isaac	9309 Wakefield Oak Grove	Zebulon	NC	27597	Joseph Lewis	Self	(919) 404-2114	K.E.Honeycutt	6-18-02	Letter	
4 Will	Jonnie Melvin	P.O.Box 191	Middlesex	NC	27557	Jonnie	Self	(252) 235-3618	R.T.Poythress, Jr.	06-12-02	Phone/Letter	Glad bridge being replaced. Mad at City of Wilson for taking some of his land.
1 W	City of	P.O.Box 10	Wilson	NC	27894	City of Wilson	Self		K.E.Honeycutt	06-14-02	Letter	
2												

BUFFER IMPACTS SUMMARY

			IMPACT								BUFFER REPLACEMENT	
			TYPE		ALLOWABLE			MITIGABLE				
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	ROAD CROSSING	PARALLEL IMPACT	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1	Bridge	24+41 TO	X	X	3406	1792	5198	0	0	0	583	0
		25+12 -L-										
		26+07 TO	X	X	3750	3218	6968	0	0	0	2391	358
		26+93 -L-										
TOTAL:					7156	5010	12166	0	0	0	2971	358

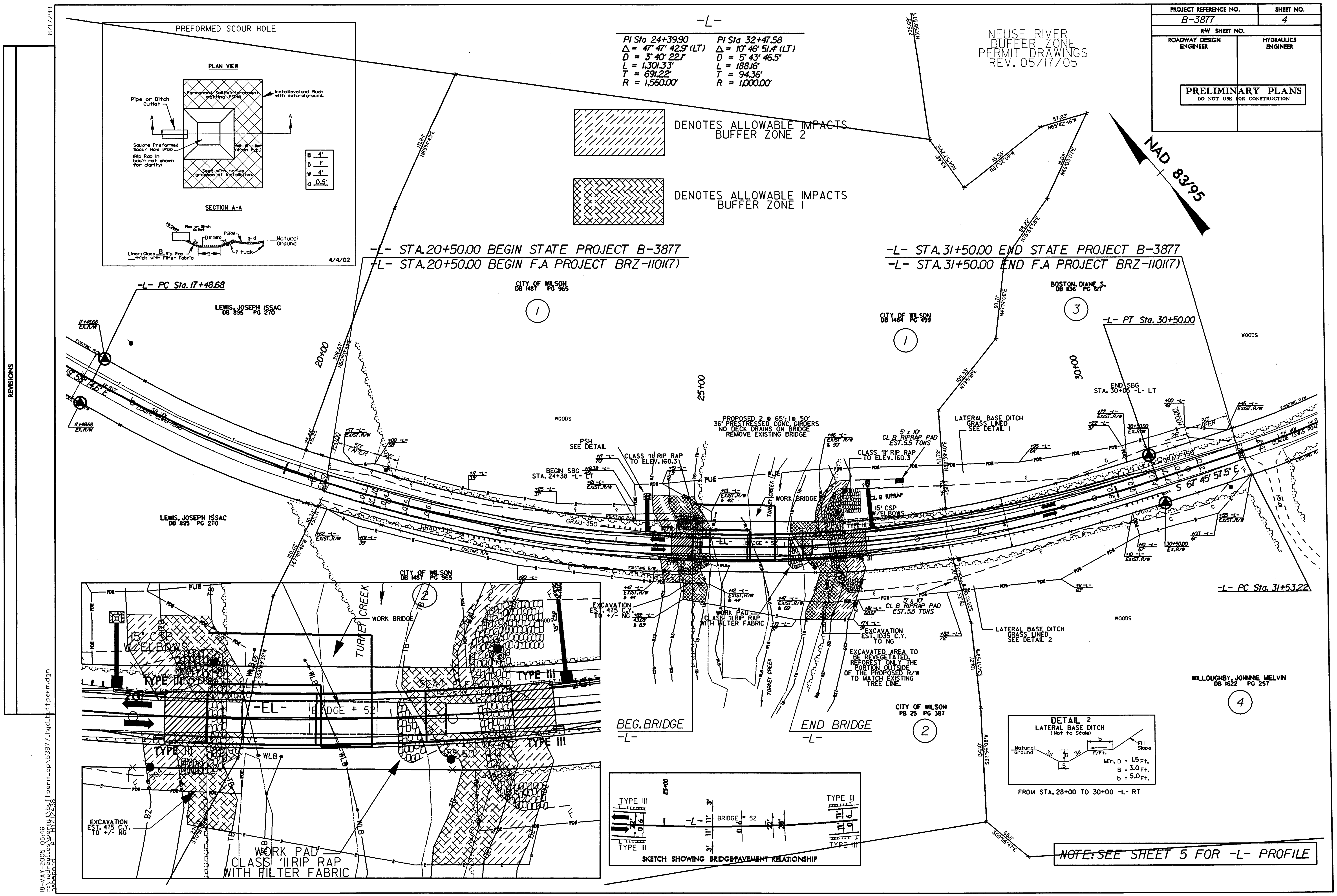
NOTE: AREAS OF BUFFER REPLACEMENT INCLUDE EXISTING BRIDGE ABUTMENT REMOVAL AND EXCAVATION OF EXISTING FILL (EMBANKMENT).

SEE PROFILE SHEET

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

NASH COUNTY
PROJECT: 8.2232201 (B-3877)

REV. 05/17/05
11/18/2004
SHEET 7 OF 7


PROJECT REFERENCE NO. B-3877
SHEET NO. 4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
NEUSE RIVER
BUFFER ZONE
PERMIT DRAWINGS
REV. 05/17/05
NAD 83/95
-L-
PI Sta 24+39.90
Δ = 47° 47' 42.9" (LT)
D = 3° 40' 22.1"
L = 1,301.33'
T = 691.22'
R = 1,560.00'
PI Sta 32+47.58
Δ = 10° 46' 51.4" (LT)
D = 5° 43' 46.5"
L = 188.16'
T = 94.36'
R = 1,000.00'
DENOTES ALLOWABLE IMPACTS BUFFER ZONE 2
DENOTES ALLOWABLE IMPACTS BUFFER ZONE 1
PREFORMED SCOUR HOLE
PLAN VIEW
SECTION A-A
4/4/02
-L- STA. 20+50.00 BEGIN STATE PROJECT B-3877
-L- STA. 20+50.00 BEGIN F.A PROJECT BRZ-1101(7)
-L- STA. 31+50.00 END STATE PROJECT B-3877
-L- STA. 31+50.00 END F.A PROJECT BRZ-1101(7)
-L- PC Sta. 17+48.68
-L- PT Sta. 30+50.00
-L- PC Sta. 31+53.22
LEWIS, JOSEPH ISSAC DB 895 PG 270
CITY OF WILSON DB 1487 PG 965
CITY OF WILSON DB 1484 PG 499
BOSTON, DIANE S. DB 1136 PG 617
CITY OF WILSON PB 25 PG 387
WILLOUGHBY, JOHNNIE MELVIN DB 1622 PG 257
WOODS
PROPOSED 2 @ 65'; 1 @ 50'
36" PRESTRESSED CONC. GIRDERS
NO DECK DRAINS ON BRIDGE
REMOVE EXISTING BRIDGE
PSH SEE DETAIL
BEGIN SBG STA. 24+38 -L- LT
END SBG STA. 30+00 -L- LT
CLASS 'II' RIP RAP TO ELEV. 160.3
5' x 10' CL B RIPRAP PAD EST. 5.5 TONS
LATERAL BASE DITCH GRASS LINED SEE DETAIL 1
LATERAL BASE DITCH GRASS LINED SEE DETAIL 2
15" CSP W/ELBOWS
WORK BRIDGE
TURKEY CREEK
BRIDGE # 52
EXCAVATION EST. 475 C.Y. TO +/- NG
EXCAVATION EST. 1035 C.Y. TO NG
WORK PAD CLASS 'II' RIP RAP WITH FILTER FABRIC
EXCAVATED AREA TO BE REVEGETATED. REFOREST ONLY THE PORTION OUTSIDE OF THE PROPOSED R/W TO MATCH EXISTING TREE LINE.
BEG. BRIDGE -L-
END BRIDGE -L-
S 67° 45' 57.5" E
DETAIL 2
LATERAL BASE DITCH (Not to Scale)
Min. D = 1.5 Ft.
B = 3.0 Ft.
b = 5.0 Ft.
FROM STA. 28+00 TO 30+00 -L- RT
SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP
TYPE III
NOTE: SEE SHEET 5 FOR -L- PROFILE
REVISIONS
8/17/99
18-MAY-2005 08:46
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PROJECT REFERENCE NO.	SHEET NO.
B-3877	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NEUSE RIVER
BUFFER ZONE
PERMIT DRAWINGS
REV. 05/17/05

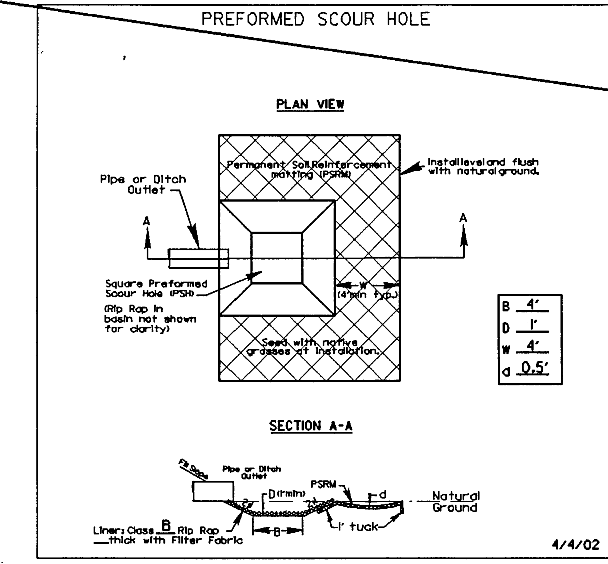
-L-

PI Sta 24+39.90	PI Sta 32+47.58
Δ = 47° 47' 42.9" (LT)	Δ = 10° 46' 51.4" (LT)
D = 3° 40' 22.1"	D = 5° 43' 46.5"
L = 1,301.33'	L = 188.16'
T = 691.22'	T = 94.36'
R = 1,560.00'	R = 1,000.00'

DENOTES ALLOWABLE IMPACTS BUFFER ZONE 2

DENOTES ALLOWABLE IMPACTS BUFFER ZONE 1

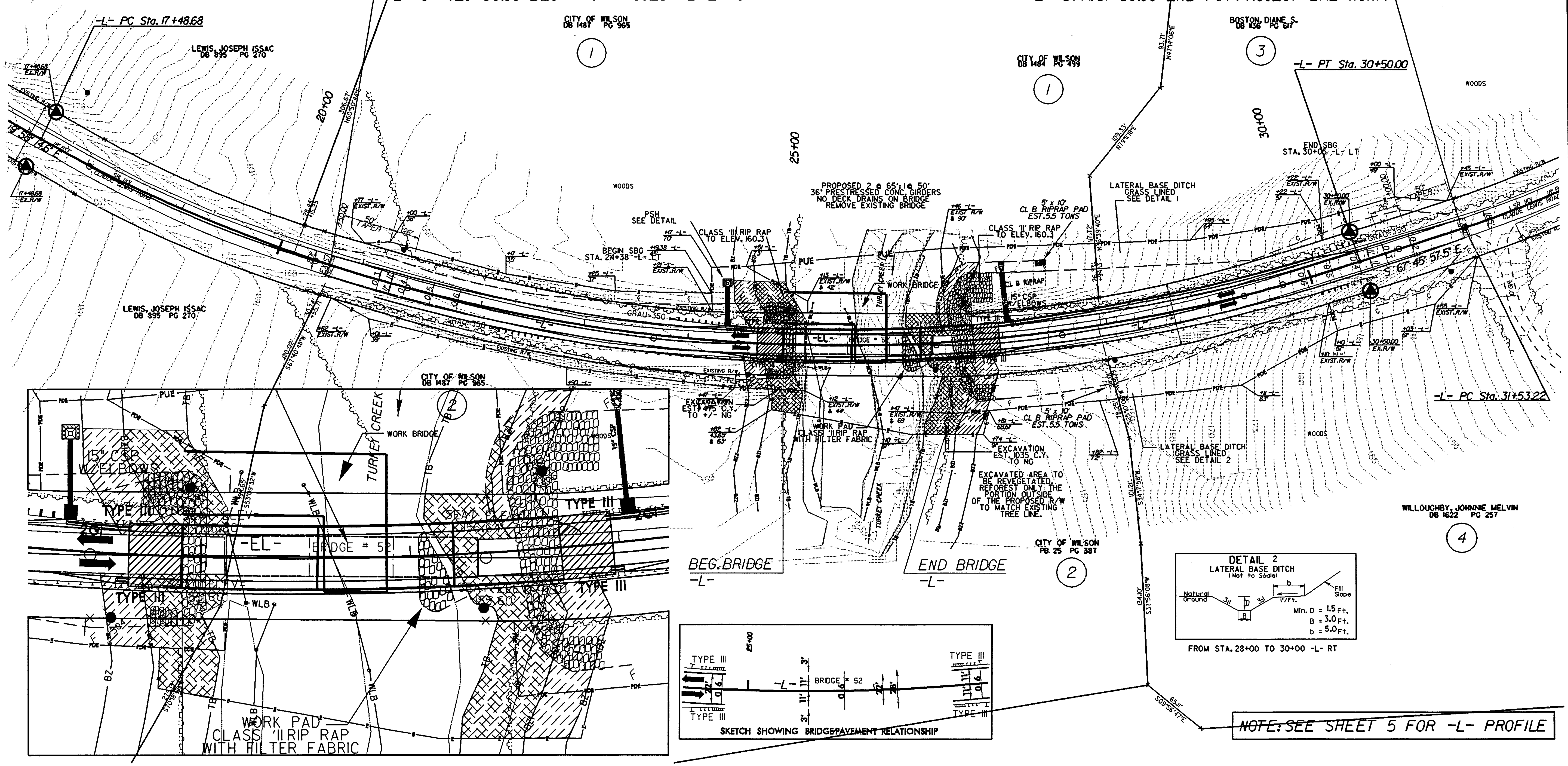
NAD 83/95



PREFORMED SCOUR HOLE
PLAN VIEW
Pipe or Ditch Outlet
Permanent Soil Reinforcement matting (PSRM)
Install level and flush with natural ground.
Square Preformed Scour Hole (PSH)
(Rip Rap in basin not shown for clarity)
Seed with native grasses at installation.
B 4'
D 1'
W 4'
d 0.5'
SECTION A-A
Natural Ground
Liner: Class B Rip Rap thick with Filter Fabric
4/4/02

-L- STA. 20+50.00 BEGIN STATE PROJECT B-3877
-L- STA. 20+50.00 BEGIN F.A PROJECT BRZ-1101(7)

-L- STA. 31+50.00 END STATE PROJECT B-3877
-L- STA. 31+50.00 END F.A PROJECT BRZ-1101(7)



-L- PC Sta. 17+48.68
CITY OF WILSON DB 1487 PG 965
LEWIS, JOSEPH ISSAC DB 895 PG 270
CITY OF WILSON DB 1484 PG 499
BOSTON, DIANE S. DB 1136 PG 617
-L- PT Sta. 30+50.00
WOODS
PROPOSED 2 @ 65' 1 @ 50' 36" PRESTRESSED CONC. GIRDERS NO DECK DRAINS ON BRIDGE REMOVE EXISTING BRIDGE
PSH SEE DETAIL
BEGIN SBG STA. 24+38 -L- LT
CLASS 'II' RIP RAP TO ELEV. 160.3
5' x 10' CL B RIPRAP PAD EST. 5.5 TONS
LATERAL BASE DITCH GRASS LINED SEE DETAIL 1
END SBG STA. 30+05 -L- LT
S 67° 45' 57.5" E
TURKEY CREEK
WORK BRIDGE
15" CSP W/ELBOWS
TYPE III
BRIDGE # 52
EXCAVATION EST. 475 C.Y. TO +/- NG
WORK PAD CLASS 'II' RIP RAP WITH FILTER FABRIC
EXCAVATION EST. 1035 C.Y. TO NG
EXCAVATED AREA TO BE REVEGETATED. REFOREST ONLY THE PORTION OUTSIDE OF THE PROPOSED R/W TO MATCH EXISTING TREE LINE.
LATERAL BASE DITCH GRASS LINED SEE DETAIL 2
-L- PC Sta. 31+53.22
CITY OF WILSON PB 25 PG 387
WILLOUGHBY, JOHNNIE MELVIN DB 1622 PG 257
BEG. BRIDGE -L-
END BRIDGE -L-
DETAIL 2
LATERAL BASE DITCH (Not to Scale)
Natural Ground
Fill Slope
Min. D = 1.5 Ft.
B = 3.0 Ft.
b = 5.0 Ft.
FROM STA. 28+00 TO 30+00 -L- RT
SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

NOTE: SEE SHEET 5 FOR -L- PROFILE

REVISIONS

18-MAY-2005 08:39
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8/17/99

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-3877	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-L-

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 7000 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 158.89FT
BASE DISCHARGE	= 10,100 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 160.78FT
OVERTOPPING DISCHARGE	= 12,925CFS
OVERTOPPING FREQUENCY	= 200 YRS
OVERTOPPING ELEVATION	= 161.74 FT
	= FT
DATE OF SURVEY	= 7/7/04
W.S.ELEVATION AT DATE OF SURVEY	= 148.2 FT

PI = 25+60.00
EL = 155.48'
VC = 920'
K = 145

BEGIN RESURFACING
STA 20+50.000 (-L-)

BEGIN GRADE
STA 21+00.000 (-L-)
EL.159.48'

END GRADE
STA 31+00.000 (-L-)
EL.185.01'

END RESURFACING
STA 31+50.000 (-L-)

BEGIN RT. DITCH GRADE
-L- STA.28+00.00
ELEV. = 157.55

PI = STA.29+00.00
ELEV. = 165.75

END RT. DITCH GRADE
-L- STA.30+00.00
ELEV. = 177.25

BEGIN LT. DITCH GRADE
-L- STA.27+50.00
ELEV. = 152.70

PI = STA.28+50.00
ELEV. = 160.10

END LT. DITCH GRADE
-L- STA.30+00.00
ELEV. = 175.15

24+00 25+00 -L- 26+00 27+00 28+00

EXISTING BRIDGE (TO BE REMOVED)

+/- HW HURRICANE FLOYD

STA. 25+80.65 -L-
@ 90° SKEW
36" PRESTRESSED CONC GIRDERS
ELEV. = 163.25
SKEW = 90°

PROPOSED GRADE

EXISTING GRADE

(+)15.435%

(+)11.50%

(+)8.20%

(+)10.00%

(+)7.40%

(-)0.860%

EXCAVATION

CLASS II RIP RAP

EXCAVATION

CLASS II RIP RAP

SOD TO EDGE OF FLOOD PLAIN

UPSTREAM BRIDGE FACE

DOWNSTREAM BRIDGE FACE

LEFT DITCH — - - — -

RIGHT DITCH - - - - - - -

BM #1
LT. OF -L- STA. 10+71.521 ELEV. 187.64

BM #2
RT. OF -L- STA. 25+12.712 ELEV. 158.56

BM #3
RT. OF -L- STA. 26+06.286 RR SPIKE IN 17" POPLAR ELEV. 157.14

220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70

20 21 22 23 24 25 26 27 28 29 30 31 32 33

28-APR-2005 10:04
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asiegrd

8/23/99

0 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3877	X-1

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

160 155

4:1 0.0600 0.0600 158.73 4:1

22+00.00

160 155

4.3:1 0.0492 0.0492 158.93 5.8:1

21+50.00

160

3.3:1 0.0300 0.0300 159.32 3:1

21+00.00

160

EXIST. EXIST. 159.88

20+50.00

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

28-DEC-2004 13:10
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pshepard
AT

9/23/96

0 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3877	X-2

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

160
155

0.0600 0.0600
157.94
5:1
3:1

24100.00

0.0600 0.0600
158.19
3:1
4:1

23150.00

0.0600 0.0600
158.32
4:1
4:1

23100.00

0.0600 0.0600
158.54
4:1
4:1

22150.00

28-DEC-2004 13:11
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dshepard A1

8/23/94

0 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3877	X-3

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

165
160
155
150

0.0600 0.0600

147.81

25+50.00

0.0600 0.0600

157.88

25+00.00

3:1 3:1

0.0600 0.0600

157.82

24+50.00

28-DEC-2004 13:12
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pshepard A1

8/23/9

PROJ. REFERENCE NO.	SHEET NO.
B-3877	X-4

0 5

27+00.00

0.0600 0.0600

158.76

26+50.00

0.0600 0.0600

158.01

26+00.00

0.0600 0.0600

142.93

28-DEC-2004 13:14
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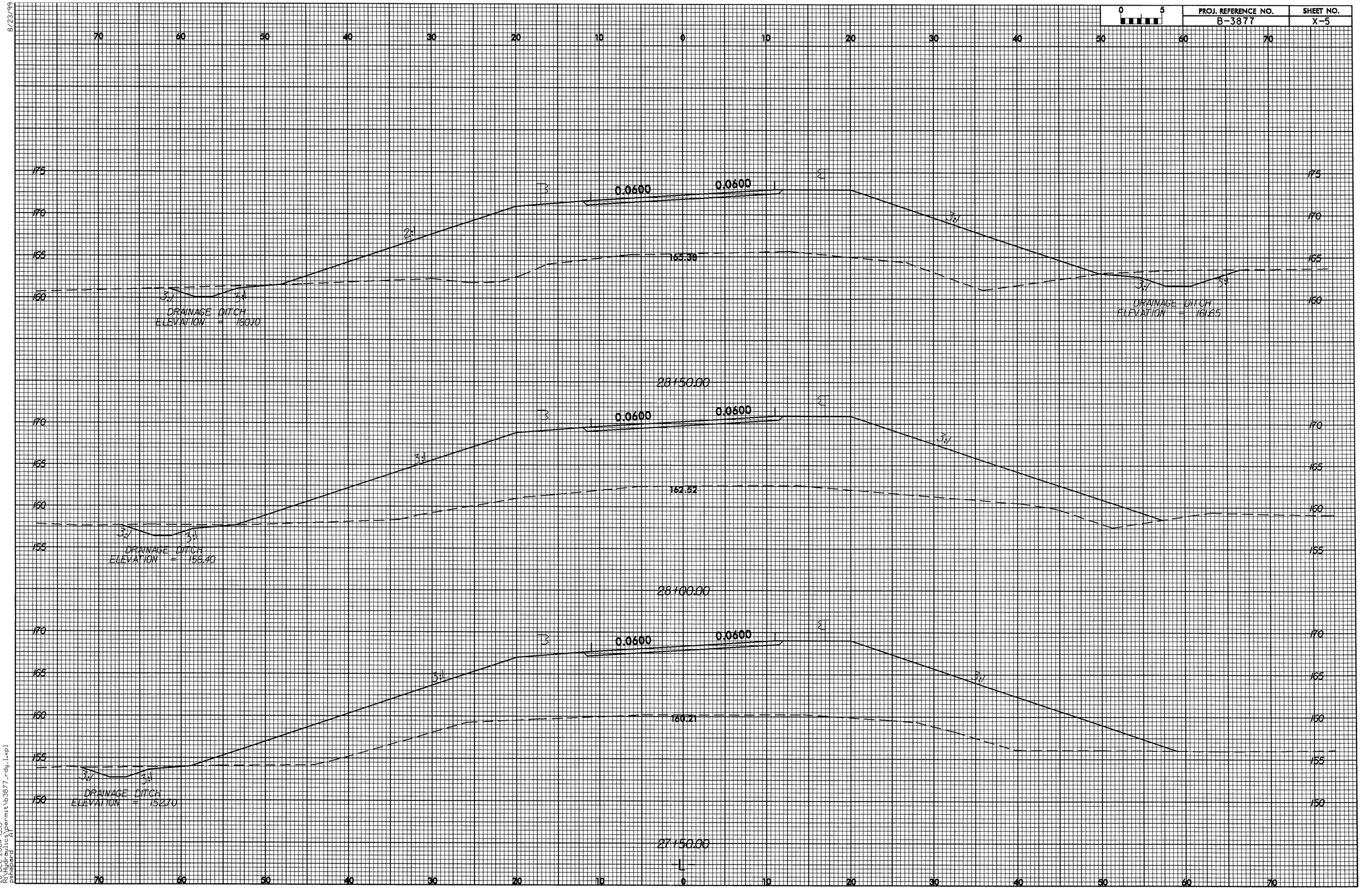
pshepard A1

8/23/99

0 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3877	X-5



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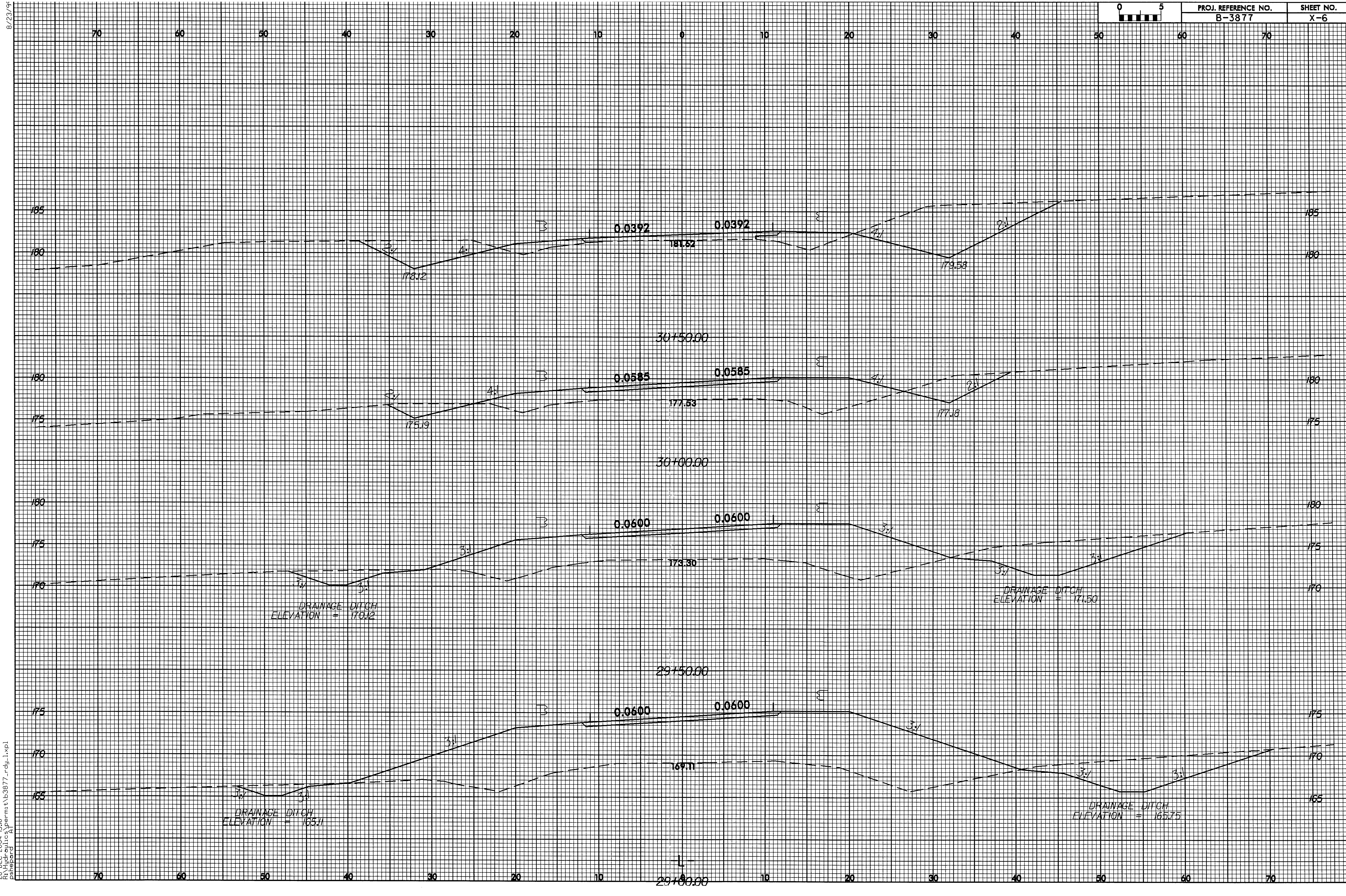
PROJ. REFERENCE NO.	SHEET NO.
B-3877	X-6



0 5
70 60 50 40 30 20 10 0 10 20 30 40 50 60 70
185
180
0.0392
0.0392
181.52
2:1
4:1
4:1
2:1
178.12
179.58
30+50.00
180
175
0.0585
0.0585
177.53
2:1
4:1
4:1
2:1
175.19
177.18
30+00.00
180
175
170
0.0600
0.0600
173.30
3:1
3:1
3:1
3:1
3:1
3:1
DRAINAGE DITCH
ELEVATION = 170.12
DRAINAGE DITCH
ELEVATION = 171.50
29+50.00
175
170
165
0.0600
0.0600
169.11
3:1
3:1
3:1
3:1
3:1
3:1
DRAINAGE DITCH
ELEVATION = 165.11
DRAINAGE DITCH
ELEVATION = 165.75
29+00.00

28-DEC-2004 13:16
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psheppard AT

8/23/9

8/23/99

0 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3877	X-6

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

185
180

2:1 4:1 4:1 2:1

0.0392 0.0392

181.62

178.12 179.58

30+50.00

180
175

2:1 4:1 4:1 2:1

0.0585 0.0585

177.53

175.19 177.18

30+00.00

180
175
170

3:1 3:1 3:1 3:1

0.0600 0.0600

173.30

DRAINAGE DITCH
ELEVATION = 170.12

DRAINAGE DITCH
ELEVATION = 171.50

29+50.00

175
170
165

3:1 3:1 3:1 3:1

0.0600 0.0600

169.11

DRAINAGE DITCH
ELEVATION = 165.11

DRAINAGE DITCH
ELEVATION = 165.75

29+00.00

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

28-DEC-2004 13:19
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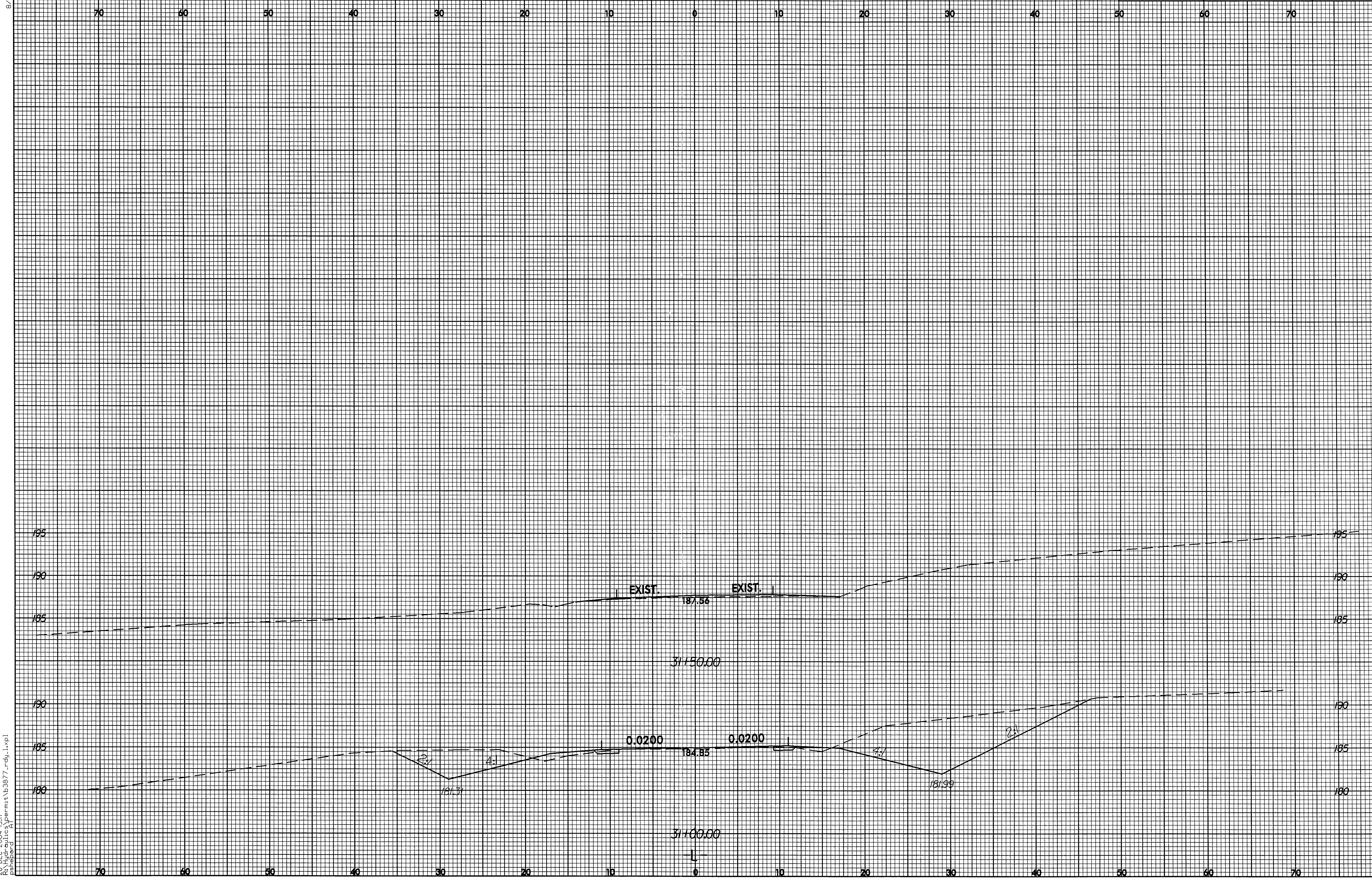
plotgard

8/23/99

0 5	PROJ. REFERENCE NO.	SHEET NO.
	B-3877	X-7



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pshepard AT