



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

September 14, 2004

US Army Corps of Engineers  
Regulatory Field Office  
P.O. Box 1000  
Washington, NC 27889-1000

ATTENTION: Mr. Mike Bell  
NCDOT Coordinator

Dear Sir:

Subject: **Nationwide 12 & 33 Permit Application and Buffer Certification Modification** for the replacement of Bridge No. 30 over Green Mill Run on SR 1703 in Pitt County, Division 2. Federal Project No. BRSTP-1703(1), State Project No. 8.2221601, T.I.P. No. B-3685.

Please reference the Nationwide 23 application dated June 9, 2004, the subsequent Nationwide 23 Permit (Action ID 200411508, July 5, 2004), and NCDOT's response to the on hold letter from the Division of Water Quality dated August 2, 2004. Due to permanent and temporary utility impacts associated with project B-3685, NCDOT is requesting a Nationwide 12 and 33, and buffer certification for the associated impacts.

**Utility Impacts/ Avoidance and Minimization**

Bridge No. 30 has several utilities attached to the current structure. Before construction can begin, it is necessary to relocate a 16" water line, an 8" water line, a 6" gas line, and an 8" sewer line which are in conflict with the replacement of Bridge No. 30, and are shown in the attached drawings.

The 8" and 16" water lines cannot be installed using a directional bore method for the following reasons:

- Greenville Utilities Commission (GUC) does not allow the use of High Density Polyethylene (HDPE) Pipe in their system. This is the most commonly used pipe for directional bore because of its flexibility. Their preference is to use Ductile Iron Restrained Joint Pipe which is less flexible.
- The steep slope on one side of the stream, limited R/W and buildings on the west side of the bridge restrict the area we have to install the water lines. In this situation, a directional bore is impractical due to the horizontal and vertical restrictions placed on the pipe during installation.
- GUC also requires all ductile iron pipes to be wrapped with polyethylene. It would be difficult to directional bore ductile iron pipe without damaging this wrap.

- It is difficult to perform a directional bore in loose sand, which is present on this project.

The 6" gas lines cannot be installed using a directional bore method for the following reasons:

- A high pressure gas main requires the use of steel welded pipe. This material limits flexibility thus increasing the difficulty of a directional bore installation within the limits of the right of way.
- The gas main must be epoxy coated and taped at the joints. There is a significant chance that damage to the coating and joints will occur during the directional bore drilling operation.
- It is difficult to perform a directional bore in loose sand which is present on this project.

Therefore, these utilities must be installed using an open trench method. It is expected that the installation of these utilities will temporarily impact 29 linear feet per utility of Green Mill Run. The phasing of this installation is as follows:

1. An impervious dike will be installed to divert stream flow during installation.
2. After installation, the trenches in the buffer zones and stream will be backfilled with the same soil removed.
3. Install seed, mulch and coir fiber matting in buffer zone 1, (see special provisions in drawings). Install seed and mulch in buffer zone 2 over trench.
4. Remove impervious dike and follow steps 1-3 to complete stream crossing to install utility lines.

The 8" gravity sewer line will be installed as an aerial crossing over the stream. The concrete piers were designed to be spaced 40 feet apart, which will minimize the impact to the stream. Temporary dewatering of 0.04 acre of Green Mill Run will be necessary to construct these piers using the following phasing method:

1. An impervious dike will be installed to divert stream flow during installation.
2. After installation, the trenches in the buffer zones and stream will be backfilled with the same soil removed
3. Install seed, mulch and coir fiber matting in buffer zone 1, (see special provisions in drawings). Install seed and mulch in buffer zone 2 over trench.

### **Tar-Pamlico Basin Buffer Rules**

This project is located in the Tar-Pamlico River Basin (subbasin 03-03-05, TAR2 03020103), therefore the regulations pertaining to the Tar-Pamlico River Buffer Rules (15A NCAC 2B.0259) apply. All practicable measures to minimize impacts within buffer zones were followed. The following table summarizes the buffer impacts for project B-3685:

<b>Type of Impact</b>	<b>Zone 1 Impacts (ft2)</b>	<b>Zone 2 Impacts (ft2)</b>	<b>Total Impacts (ft2)</b>
Bridge	4373.0	1957.0	6330.0
Utilities	2997.0	1924.0	4921.0
Total	7370.0	3881.0	11251.0

According to the buffer rules, bridges and utilities 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 or the delegated local authority. Therefore, NCDOT requests written authorization for a Buffer Certification from the Division of Water Quality.

## Regulatory Approvals

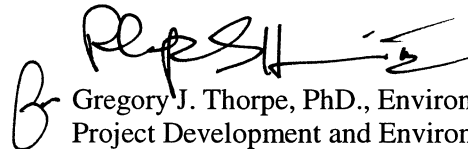
Section 404 Permit: It is anticipated that the temporary dewatering of Greenmill Run will be authorized under Section 404 Nationwide Permit 33 (Temporary Construction Access and Dewatering). We are, therefore, requesting the issuance of a Nationwide Permit 33 authorizing the temporary dewatering of Green Mill Run. It is also anticipated that the relocation of utilities will be authorized under Section 404 Nationwide Permit 12 (Utility Line Activities; Activities required for the construction, maintenance, and repair of utility lines and associated facilities). 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 (FR number 10, pages 2020-2095; January 15, 2002).

Section 401 Permit: We anticipate 401 General Certifications numbers 3374, 3366 and 3403 will apply to this project. In accordance with 15A NCAC 2H .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.

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 Mr. Michael Turchy at [maturchy@dot.state.nc.us](mailto:maturchy@dot.state.nc.us) or (919) 715-1468.

Sincerely,



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

cc:

W/attachment

- Mr. John Hennessy, Division of Water Quality (7 copies)\*\*\*
- Mr. Travis Wilson, NCWRC
- Mr. Gary Jordan, USFWS
- Mr. David Chang, P.E., Hydraulics
- Mr. Greg Perfetti, P.E., Structure Design
- Mr. C. E. Lassiter, P.E. (Div. 2), Division Engineer
- Mr. Jay Johnson (Div. 2), DEO

W/o attachment

- Mr. Jay Bennett, P.E., Roadway Design
- Mr. Omar Sultan, Programming and TIP
- Mr. Art McMillan, P.E., Highway Design
- Mr. Mark Staley, Roadside Environmental
- Mr. David Franklin, USACE, Wilmington
- Mr. John Wadsworth, PDEA Project Planning Engineer

\*\*\*During a meeting with Nikki Thompson from DWQ on 8/26/2004, larger plansheets were provided at NC DWQ's request.

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: NW 12 & 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: Gregory J. Thorpe, Ph.D., Environmental Management Director  
 Mailing Address: 1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Telephone Number: (919) 733-3141 Fax Number: (919) 733-9794  
 E-mail Address: maturchy@dot.state.nc.us

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: \_\_\_\_\_  
 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: B-3685 Replacement of Bridge No. 30 over Green Mill Run
2. T.I.P. Project Number or State Project Number (NCDOT Only): B-3685
3. Property Identification Number (Tax PIN): N/A
4. Location  
County: Pitt Nearest Town: Greenville  
Subdivision name (include phase/lot number): \_\_\_\_\_  
Directions to site (include road numbers, landmarks, etc.): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. Site coordinates, if available (UTM or Lat/Long): 35° 36' 18"N, 77° 20' 28"W  
Greenville SE  
(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): Green Mill Run
8. River Basin: Tar-Pamlico  
(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: Urban, University  
\_\_\_\_\_  
\_\_\_\_\_

10. Describe the overall project in detail, including the type of equipment to be used: Replace Bridge No. 30 Over Green Mill Run. This project will also require the relocation of 2 water lines, one sewer line and a gas line. Heavy utility construction equipment will be used.

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11. Explain the purpose of the proposed work: Relocate utilities which are in conflict with the replacement of Bridge No. 30.

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**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.

Nationwide 23 Action ID# 200411508 dated 7/5/2004, issued for the same structure replacement. Now that utilities are involved we are requesting a Nationwide 12 & 33.

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**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.

None

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**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.

1. Provide a written description of the proposed impacts: Please see attached cover letter.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

2. 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***
No Wetland	Impacts				

- \* 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: \_\_\_\_\_  
 Total area of wetland impact proposed: \_\_\_\_\_

3. 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)
See Cover Letter					

- \* 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](http://www.usgs.gov). Several internet sites also allow direct download and printing of USGS maps (e.g., [www.topozone.com](http://www.topozone.com), [www.mapquest.com](http://www.mapquest.com), etc.).

Cumulative impacts (linear distance in feet) to all streams on site: 87'

4. 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.)
No Open Water	Impacts			

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

5. 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.): \_\_\_\_\_

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.

See attached cover letter.

**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.

No mitigation required

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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) 733-5208 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): \_\_\_\_\_

Amount of buffer mitigation requested (square feet): \_\_\_\_\_

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

**IX. 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) 733-5083 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

**X. 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	2997	3	N/A
2	1924	1.5	N/A
Total	4921		N/A

\* 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.

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**XI. 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

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**XII. 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

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**XIII. 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

**XIV. 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).

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**Applicant/Agent's Signature**

**Date**

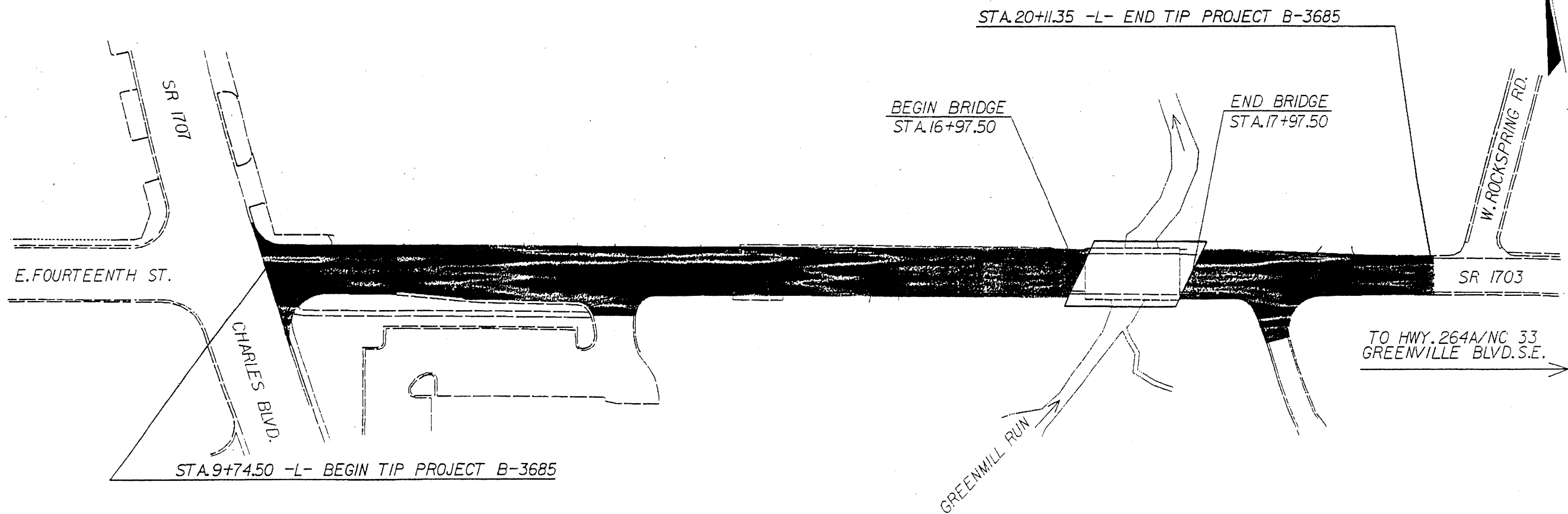
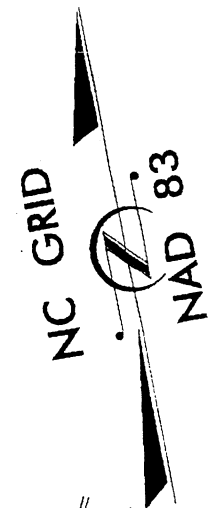
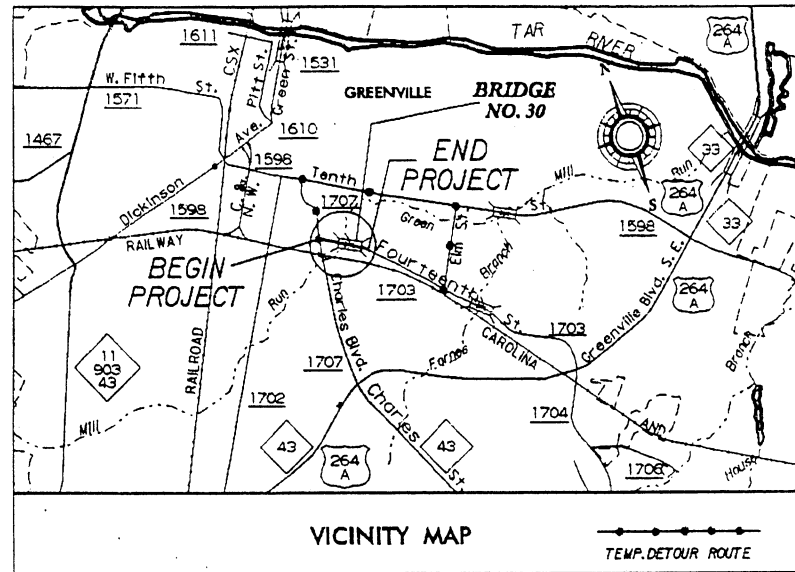
(Agent's signature is valid only if an authorization letter from the applicant is provided.)

# UTILITY CONSTRUCTION PLANS PITT COUNTY

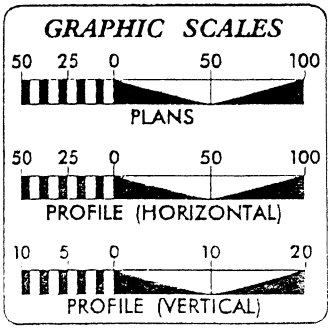
Sheet 1 of 9

LOCATION: BRIDGE NO. 30 OVER GREENMILL RUN  
ON SR 1703 (14th STREET)

TYPE OF WORK: RELOCATION OF GAS, WATER, AND SEWER LINES



TIP: B-3685

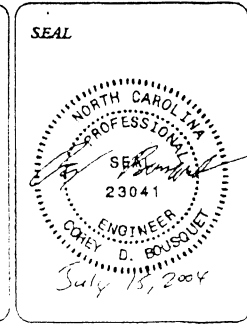


INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY CONSTRUCTION PLAN SHEET
UC-3	PROFILE SHEET
UC-4 AND UC-5	DETAIL SHEETS

WATER AND SEWER OWNERS ON PROJECT

(1) GAS, WATER, AND SEWER : GREENVILLE UTILITIES COMMISSION



PREPARED IN THE OFFICE OF:  
DIVISION OF HIGHWAYS  
PROJECT SERVICES  
UTILITY SECTION

1591 MAIL SERVICES CENTER  
RALEIGH NC 27699-1591  
PHONE (919) 256-4128  
FAX (919) 256-4119

Roger Worthington, P.E. UTILITIES SECTION ENGINEER  
Corey Bousquet, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER  
Doug Jorner UTILITIES PROJECT DESIGNER

09/08/99  
15-1-2004 11:44  
R:\Utilities\Plan\UC-1\B-3685.uc-1.dgn  
D:\Projects\B-3685\B-3685.dwg





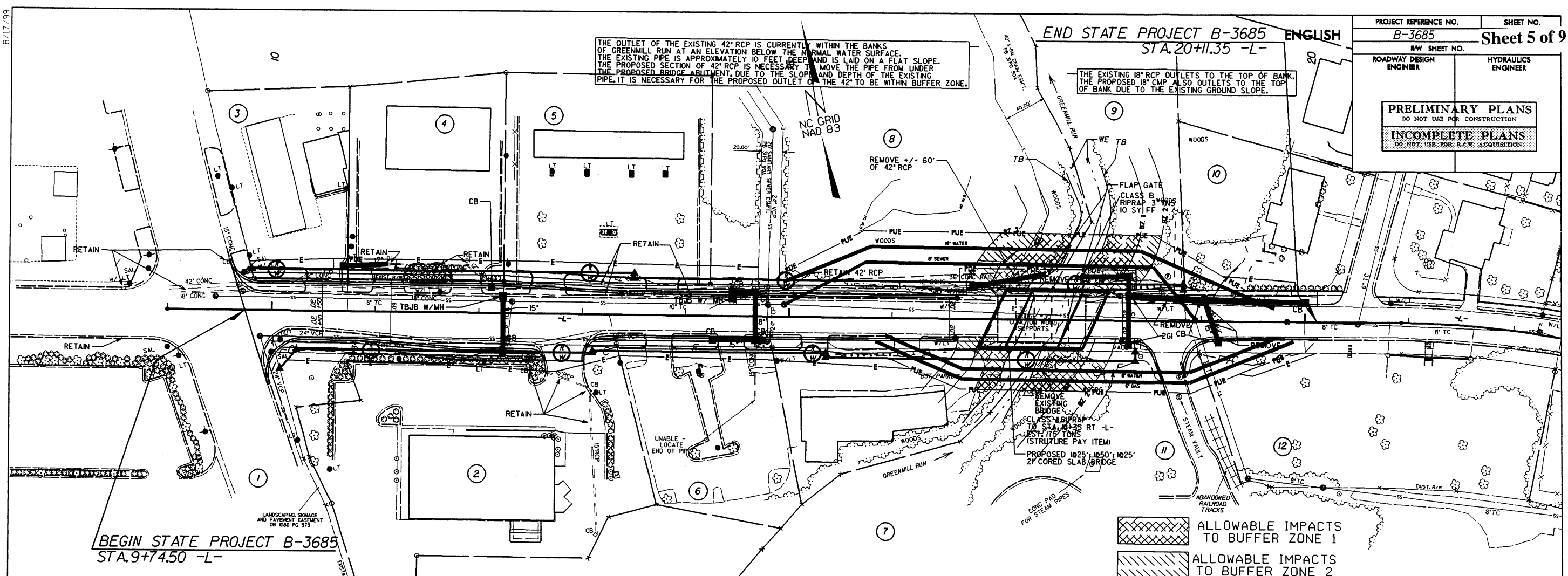


8/17/99

PROJECT REFERENCE NO. B-3685	SHEET NO. Sheet 5 of 9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION <b>INCOMPLETE PLANS</b> DO NOT USE FOR R.F.W. ACQUISITION	

THE OUTLET OF THE EXISTING 42" RCP IS CURRENTLY WITHIN THE BANKS OF GREENMILL RUN AT AN ELEVATION BELOW THE NORMAL WATER SURFACE. THE EXISTING PIPE IS APPROXIMATELY 10 FEET DEEP AND IS LAID ON A FLAT SLOPE. THE PROPOSED SECTION OF 42" RCP IS NECESSARY TO MOVE THE PIPE FROM UNDER THE PROPOSED BRIDGE ABUTMENT. DUE TO THE SLOPE AND DEPTH OF THE EXISTING PIPE, IT IS NECESSARY FOR THE PROPOSED OUTLET OF THE 42" TO BE WITHIN BUFFER ZONE.

THE EXISTING 18" RCP OUTLETS TO THE TOP OF BANK. THE PROPOSED 18" CMP ALSO OUTLETS TO THE TOP OF BANK DUE TO THE EXISTING GROUND SLOPE.



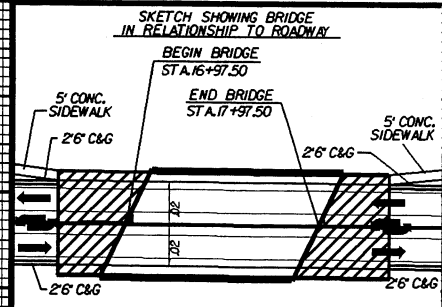
BEGIN STATE PROJECT B-3685 STA. 9+74.50 -L-

ALLOWABLE IMPACTS TO BUFFER ZONE 1  
 ALLOWABLE IMPACTS TO BUFFER ZONE 2

**DATUM DESCRIPTION**

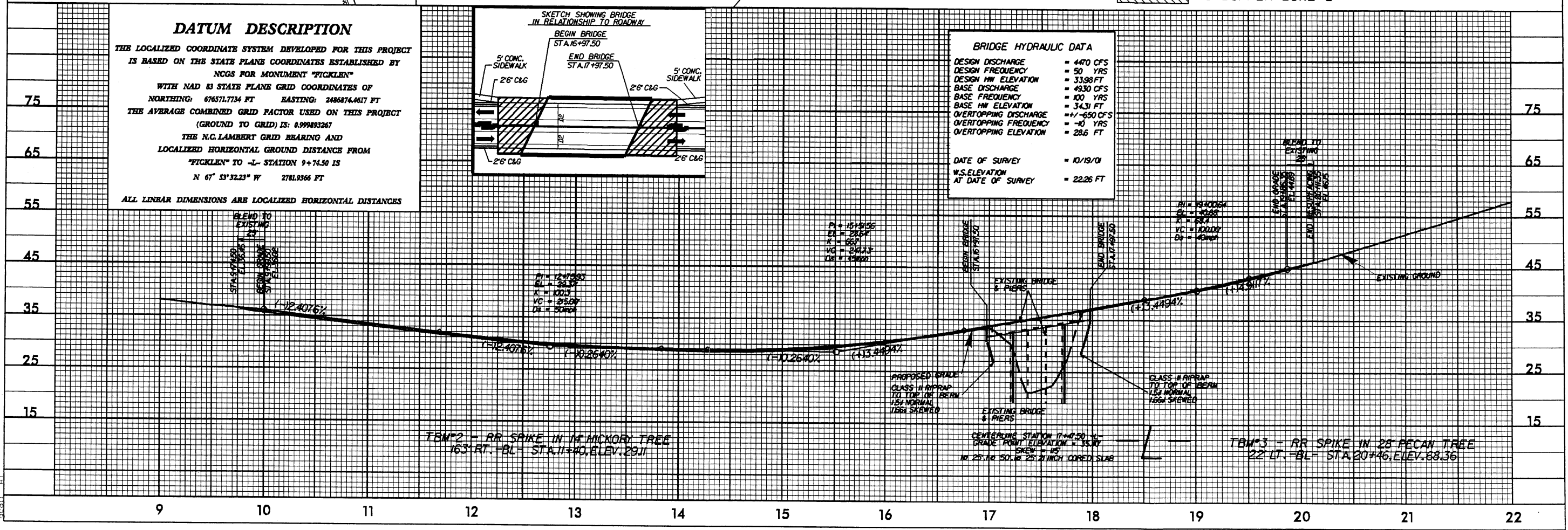
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "TICKLEN" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 676371.734 FT EASTING: 2486874.4617 FT THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999893267 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "TICKLEN" TO -L- STATION 9+74.50 IS N 67° 53' 32.23" W 27819366 FT

ALL LINER DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES



**BRIDGE HYDRAULIC DATA**

DESIGN DISCHARGE	= 4470 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 33.98 FT
BASE DISCHARGE	= 4930 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 34.31 FT
OVERTOPPING DISCHARGE	= +/- 650 CFS
OVERTOPPING FREQUENCY	= 10 YRS
OVERTOPPING ELEVATION	= 28.6 FT
DATE OF SURVEY	= 10/19/01
W.S. ELEVATION AT DATE OF SURVEY	= 22.26 FT



02-SEP-2004 12:35 W:\PROJECTS\3685\design\B-3685\_r.dwg\_psh.dgn



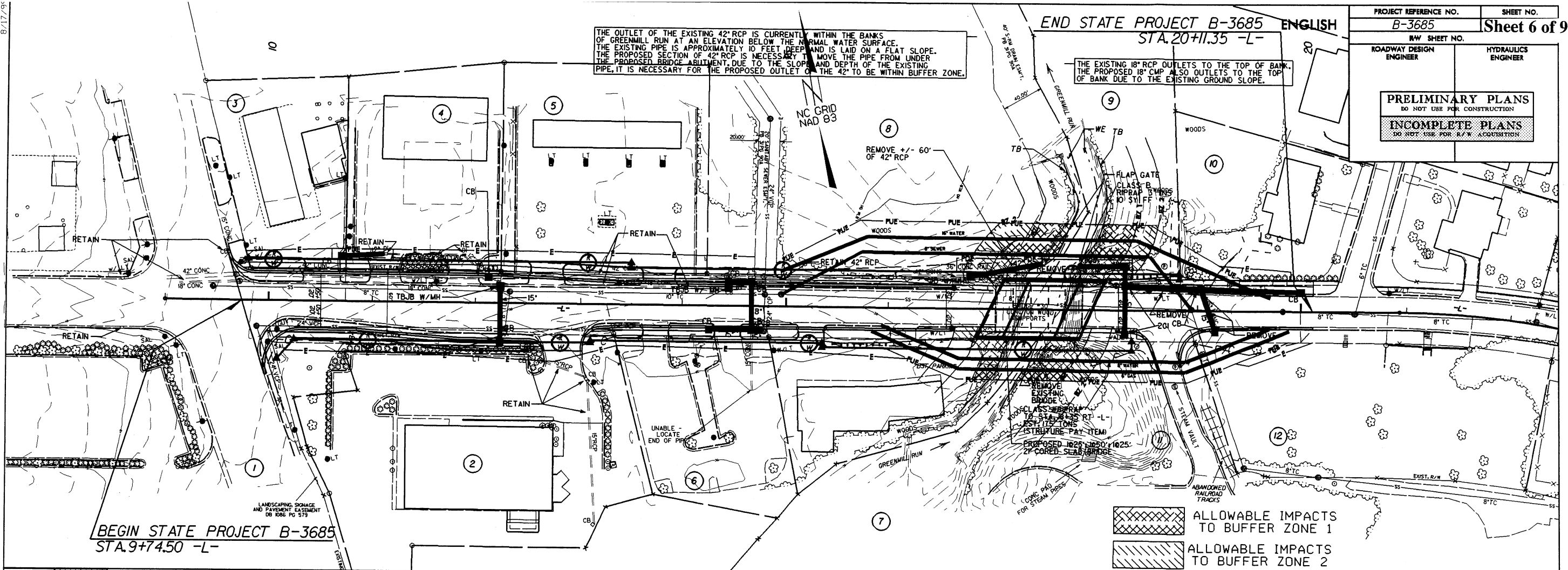
8/17/95

# END STATE PROJECT B-3685 ENGLISH STA. 20+11.35 -L-

PROJECT REFERENCE NO. B-3685	SHEET NO. Sheet 6 of 9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION <b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	

THE OUTLET OF THE EXISTING 42" RCP IS CURRENTLY WITHIN THE BANKS OF GREENMILL RUN AT AN ELEVATION BELOW THE NORMAL WATER SURFACE. THE EXISTING PIPE IS APPROXIMATELY 10 FEET DEEP AND IS LAID ON A FLAT SLOPE. THE PROPOSED SECTION OF 42" RCP IS NECESSARY TO MOVE THE PIPE FROM UNDER THE PROPOSED BRIDGE ABUTMENT. DUE TO THE SLOPE AND DEPTH OF THE EXISTING PIPE, IT IS NECESSARY FOR THE PROPOSED OUTLET OF THE 42" TO BE WITHIN BUFFER ZONE.

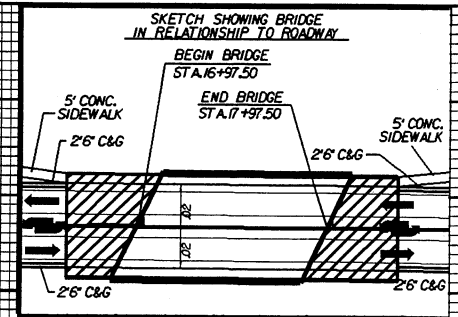
THE EXISTING 18" RCP OUTLETS TO THE TOP OF BANK. THE PROPOSED 18" CMP ALSO OUTLETS TO THE TOP OF BANK DUE TO THE EXISTING GROUND SLOPE.



BEGIN STATE PROJECT B-3685  
STA. 9+74.50 -L-

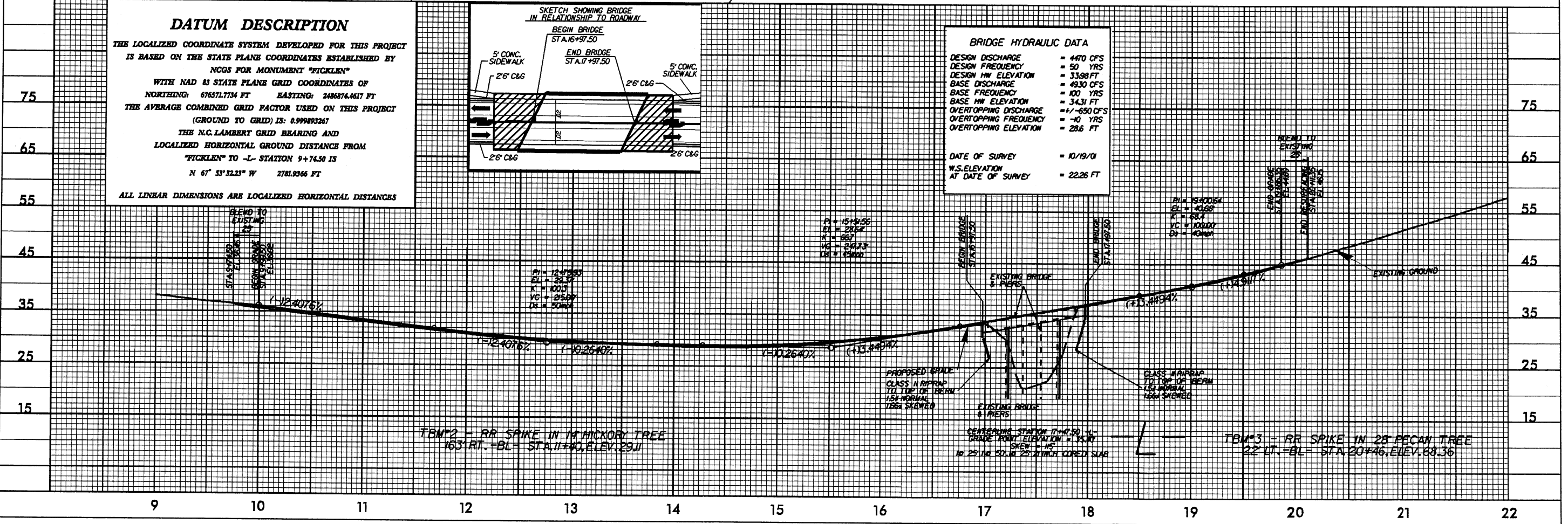
### DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "TICKLEN" WITH NAD 83 STATE PLANE GRID COORDINATES OF  
 NORTHING: 676571.7734 FT    EASTING: 2486876.4617 FT  
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999893267  
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "TICKLEN" TO -L- STATION 9+74.50 IS  
 N 67° 53' 52.23" W    2781.9366 FT  
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES



### BRIDGE HYDRAULIC DATA

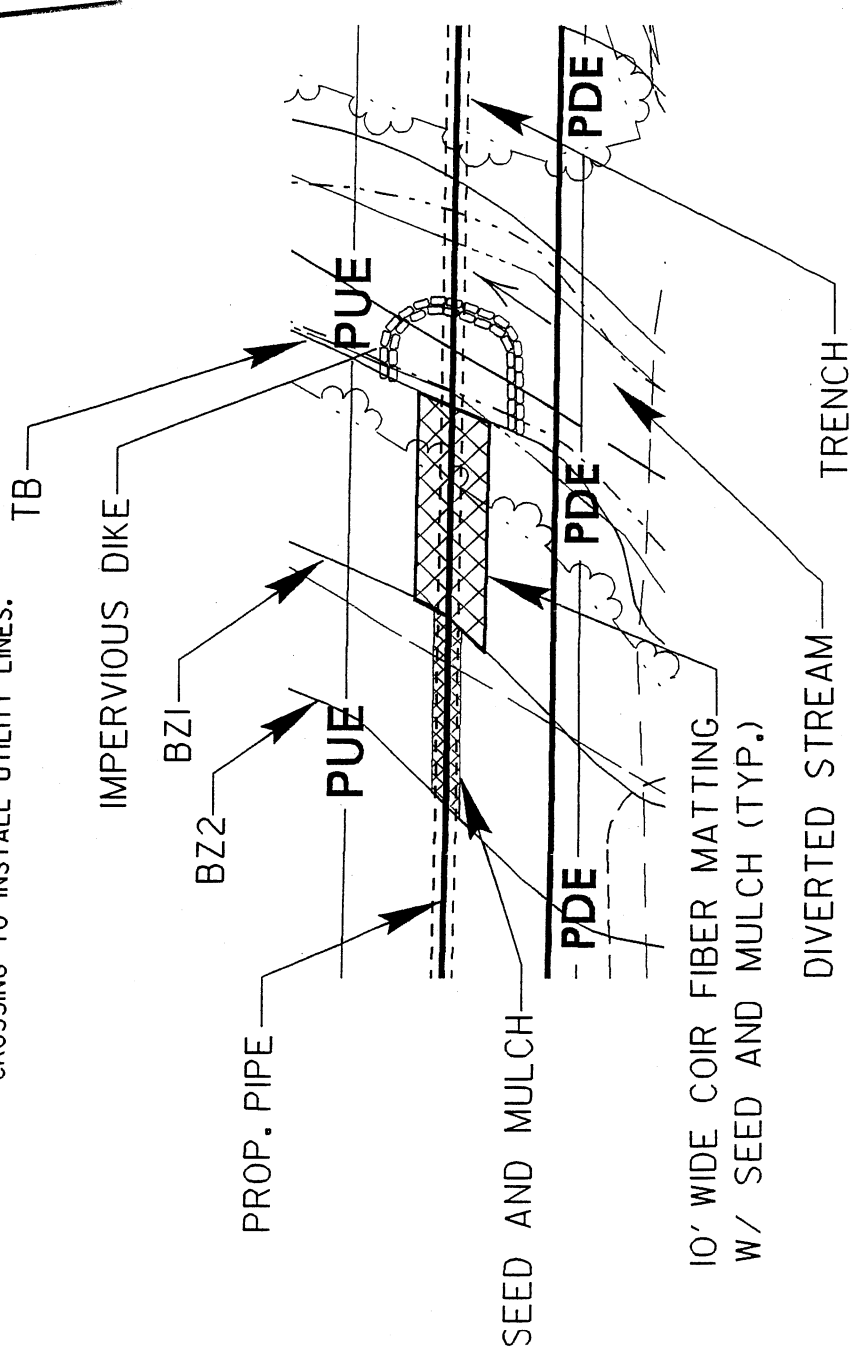
DESIGN DISCHARGE	= 4470 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 33.98 FT
BASE DISCHARGE	= 4930 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 34.31 FT
OVERTOPPING DISCHARGE	= +/- 650 CFS
OVERTOPPING FREQUENCY	= 40 YRS
OVERTOPPING ELEVATION	= 28.6 FT
DATE OF SURVEY	= 10/19/01
W.S. ELEVATION AT DATE OF SURVEY	= 22.26 FT



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 8/17/95

PHASING:

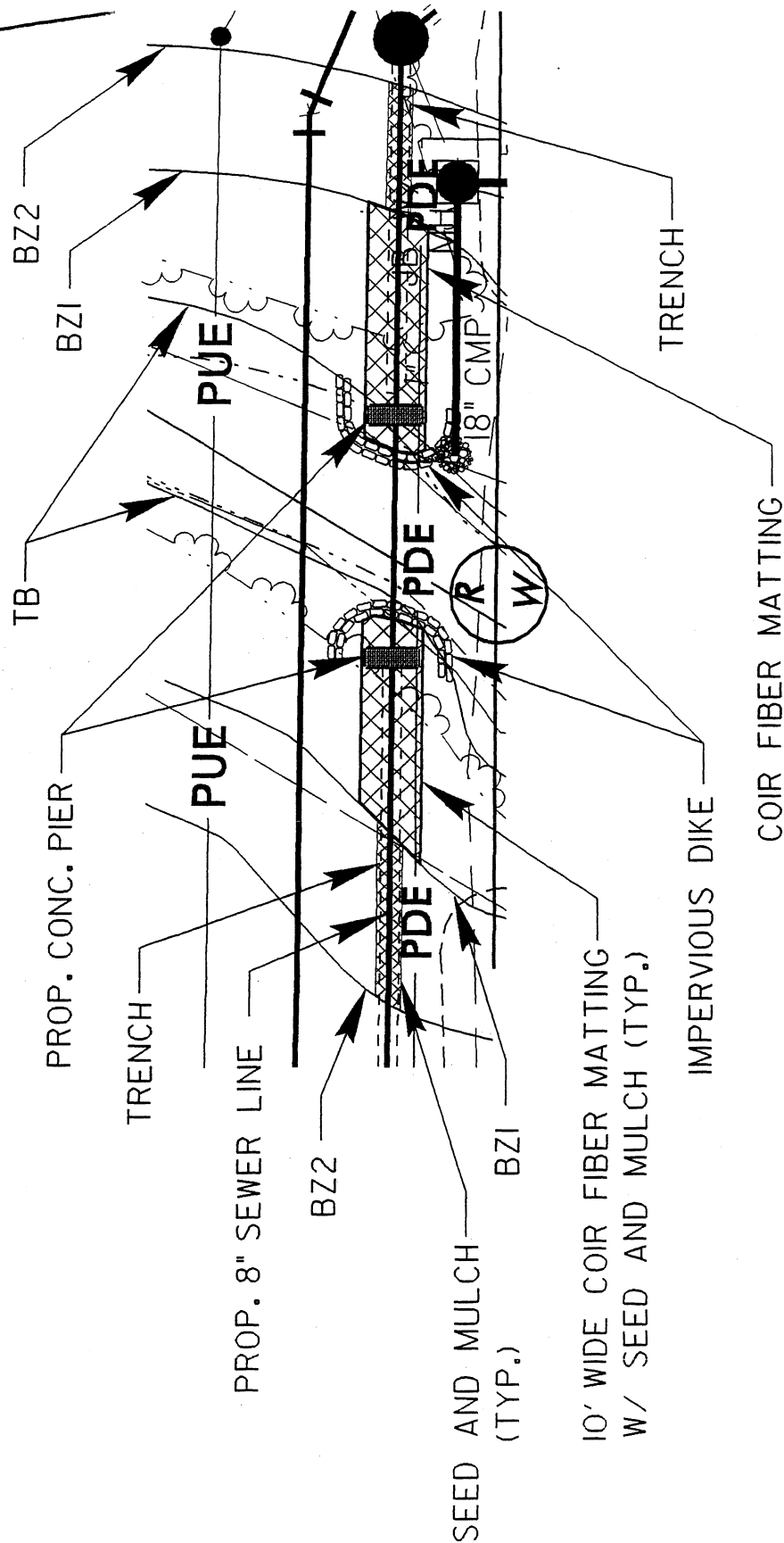
- STEP 1: INSTALL IMPERVIOUS DIKE TO DIVERT THE STREAM DURING INSTALLATION OF THE UTILITY LINES.
- STEP 2: AFTER INSTALLING THE PIPES IN THE BUFFER ZONES AND STREAM, BACKFILL WITH THE SAME SOIL REMOVED.
- STEP 3: INSTALL SEED, MULCH AND COIR FIBER MATTING IN BUFFER ZONE 1, SEE SPECIAL PROVISIONS. INSTALL SEED AND MULCH IN BUFFER ZONE 2 OVER TRENCH.
- STEP 4: REMOVE IMPERVIOUS DIKE AND FOLLOW STEPS 1-3 TO COMPLETE STREAM CROSSING TO INSTALL UTILITY LINES.



16" WATER LINE, 8" WATER LINE, AND  
6" GAS LINE STREAM CROSSING DETAIL

PHASING:

- STEP 1: INSTALL IMPERVIOUS DIKE TO DIVERT THE STREAM DURING INSTALLATION OF THE CONCRETE PIERS.
- STEP 2: AFTER INSTALLING CONCRETE PIERS AND PIPE IN THE BUFFER ZONES, BACKFILL WITH THE SAME SOIL REMOVED.
- STEP 3: INSTALL SEED, MULCH AND COIR FIBER MATTING IN BUFFER ZONE 1, SEE SPECIAL PROVISIONS. INSTALL SEED AND MULCH IN BUFFER ZONE 2 OVER TRENCH.



STREAM PROTECTION FOR CONSTRUCTION OF 8" SEWER LINE CONCRETE PIERS DETAIL





STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

September 15, 2004

NC Division of Water Quality  
Transportation Permitting Unit  
1650 Mail Service Center  
Raleigh, NC 27699-1650

ATTN: Mr. John Hennessy  
NCDOT Coordinator

**SUBJECT: Response to the § 401 Water Quality Certification (DWQ Project No. 040995) requesting more information, TIP No. B-3685.**

Dear Sir:

On June 9, 2004, the NCDOT requested an Individual § 401 Water Quality Certification for the subject project. The NCDOT is in receipt of a letter placing the project on hold from your office dated July 29, 2004. A copy attached for your convenience. A meeting was held with NC DWQ representative Nikki Thompson, and NCDOT Hydraulic, Utilities and Natural Environment representatives on August 26, 2004. The following concerns were addressed at this meeting.

***NCDWQ Deficiency:** The permit drawing plans are very difficult to read and therefore, this office cannot make an appropriate permit determination. Please supply a better set of plan drawings that more clearly depict the bridge replacement preferably a larger plan sheet.*

**NCDOT Response:** During a meeting with Nikki Thompson from DWQ clearer, larger, plansheets were provided.

***NCDWQ Deficiency:** There is a proposed direct discharge into Green Mile Run without first providing diffuse flow a non-erosive velocities through the buffer. Please change your designs to rectify this issue.*

**NCDOT Response:** There is direct discharge into Green Mill Run from West and East of the crossing. There is no means to get treatment for site drainage. The concern is how to diffuse flow. It was determined no practical alternatives could improve the existing site drainage based on the following:

West Side -An existing 42" trunkline just North of 14th Street conveys flow down to Green Mill Run. At the sag in the road approximately 250' West of the crossing the invert of the existing 42" is 23.0'. From here the 42" traverses to the stream to an elevation of 22.4' (slope = 0.24%). The natural ground elevation in the area of the sag is approximately 28.5' and at the outlet is approximately 26.0'. South of 14th Street is parking lot. Therefore, the only available area to diffuse flow is in the Northwest quad and this would require excavation (4') in the Green Mill Run floodplain. It is estimated the floodplain and roadway overtop in less than the 2 yr storm. So any excavation would be frequently inundated. Also, excavation would require the removal of trees, which are already scarce at this site. (the Northwest corner of the Green Mill Run crossing contains about the only significant stand of trees at the project site) Also, the additional stormwater generated from the project is negligible. Although there is widening, mainly on the West side of the crossing, there is additional grassed channelization.

East Side -An existing 18" trunkline just North of 14th Street conveys flow down to Green Mill Run. Due to the steep banks on this side of the crossing it was decided to outlet the 18" as the existing. There is a low area in the Southeast quad where an outlet was considered. However, water exiting a scour hole at this location would have to go down a steep embankment which would potentially create more erosion/sediment concerns than an outlet at the stream. Also, any scour hole would be frequently inundated.

Therefore, due to the frequent high water in Green Mill Run, the lack of area for attenuaters and the negligible increase in impervious area, it was determined the best (least erosive and maintenance intensive) means to outlet site drainage would be to outlet the systems as existing. The outlets will be submerged even under nominal storm frequencies and therefore outlet velocities will be less significant.

***NCDWQ Deficiency:** There are 2 structures on the north and south sides of the bridge that extend beyond the bridge. The north side structures start at approximately STA. 15+00 and extend to approximately STA. 20+010. The south side structures start at approximately STA. 16+00 and extend to approximately STA. 20+00. What are these structures?*

**NCDOT Response:** The structures shown on each side of 14th Street are proposed utility relocations. They consist of the relocation of a 16" water and 8" sewer on the North side and a 8" water and 6" gas on the South side.

***NCDWQ Deficiency:** The permit drawings show an excess of impacts and fill in the buffer zones to the north and south of the bridge replacement. What is the purpose of these extra impacts and fill?*

**NCDOT Response:** The additional buffer impacts are due to the utility construction. An additional Nationwide 33 permit addresses these impacts under separate cover.

***NCDWQ Deficiency:** The permit shows a bridge bent within the stream channel. What is the location of the existing bridge bent? DWQ prefers that bridge bents are not present in the stream channel. Is it possible to move this bridge bent?*

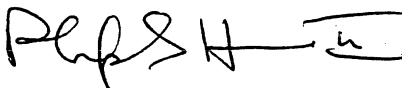
**NCDOT Response:** All bents have been removed form the stream channel.

*NCDWQ Deficiency: There has been some preliminary communication regarding the need to change the installation method for the piles of the bridge. DWQ respectfully reminds NCDOT that any change to the permit design, including construction design, require a permit modification with the appropriate fees and copies. In addition, NCDOT will need to appropriately demonstrate avoidance and minimization techniques in the application as well as calculate all associated temporary and permanent impacts related to this construction design change.*

**NCDOT Response:** All bents have been removed form the stream channel.

NCDOT requests that the "on hold" status be lifted and that processing of the § 401 Water Quality Certification resume as soon as possible. If you have any questions or would like additional information, please contact Mr. Michael Turchy of my staff at (919) 715-1468.

Sincerely,

  
A handwritten signature in black ink, appearing to read "Gregory J. Thorpe".

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

Cc:

W/attachment  
Mr. John Hennessy, Division of Water Quality (7 copies)  
Mr. Mike Bell, USACE  
Mr. Travis Wilson, NCWRC  
Mr. Gary Jordan, USFWS  
Mr. David Chang, P.E., Hydraulics  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. C. E. Lassiter, P.E. (Div. 2), Division Engineer  
Mr. Jay Johnson (Div. 2), DEO  
Mr. Jay Bennett, P.E., Roadway Design  
Mr. Omar Sultan, Programming and TIP  
Mr. Art McMillan, P.E., Highway Design  
Mr. Mark Staley, Roadside Environmental  
Mr. David Franklin, USACE, Wilmington  
Mr. John Wadsworth, PDEA Project Planning Engineer



North Carolina Department of Environment and Natural Resources  
Division of Water Quality

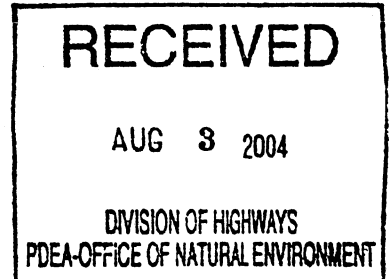
Michael F. Easley, Governor

William G. Ross, Jr., Secretary  
Alan W. Klimek, P.E., Director

July 29, 2004

**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

Dr. Gregory J. Thorpe, PhD, Manager  
Planning and Environmental Branch  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina, 27699-1548



**Re: Permit Application for proposed replacement of Bridge No. 30 over Green Mill Run on SR 1703 in Pitt County, Division2, TIP No. B-3685, DWQ No. 040995**

Dear Dr. Thorpe:

The Division of Water Quality has reviewed your submittal for a 401 Water Quality Certification for the aforementioned project. Review of your application revealed it lacking necessary information required for making an informed permit decision. The permit application was deficient in the following areas:

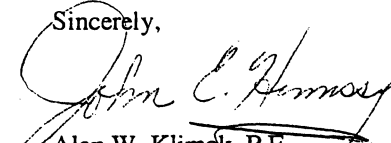
- ✓ The permit drawing plans are very difficult to read and therefore, this office cannot make an appropriate permit determination. Please supply a better set of plan drawings that more clearly depict the bridge replacement, preferably a larger plan sheet.
- There is a proposed direct discharge into Green Mile Run without first providing diffuse flow at nonerosive velocities through the buffer. Please change your designs to rectify this issue.
- ✓ There are 2 structures on the north and south sides of the bridge that extend beyond the bridge. The north side structures start at approximately STA. 15+00 and extend to approximately STA. 20+00. The south side structures start at approximately STA. 16+00 and extend to approximately STA. 20+00. What are these structures?
- ✓ The permit drawings show an excess of impacts and fill in the buffer zones to the north and south of the bridge replacement. What is the purpose of these extra impacts and fill?
- ✓ The permit shows a bridge bent within the stream channel. What is the location of the existing bridge bent? DWQ prefers that bridge bents are not present in the stream channel. Is it possible to move this bridge bent?
- ✓ There has been some preliminary communication regarding the need to change the installation method for the piles for the bridge. DWQ respectfully reminds NCDOT that any changes to the permit design, including construction design, require a permit modification with the appropriate fees and copies. In addition, NCDOT will need to appropriately demonstrate avoidance and minimization techniques in the application as well as calculate all associated temporary and permanent impacts related to this construction design change.



Therefore, pursuant to 15A NCAC 2H .0507(a)(5), we will have to place the permit application on hold until we are supplied the necessary information. Furthermore, until the NC Division of Water Quality receives the information, we request (by copy of this letter) that the US Army Corps of Engineers place the permit application on hold.

Hopefully, we can work together to expedite the processing of your permit application. If you have any questions or require additional information, please contact Nicole Thomson at 919-715-3415.

Sincerely,

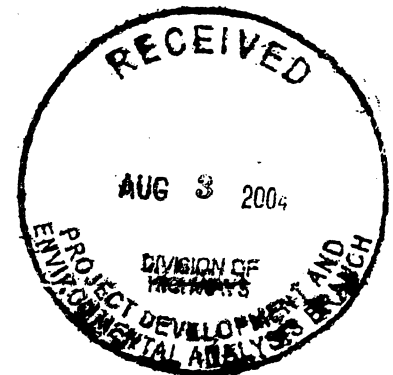


Alan W. Klimek, P.E.  
Director

JEH/njt

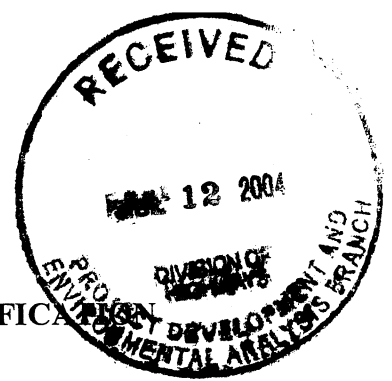
cc: Wilmington District US Army Corps of Engineers  
Mr. Mike Bell, US Army Corps of Engineers, Washington Field Office  
Mr. Travis Wilson, NCWRC  
Mr. C.E. (Neil) Lassiter, Jr., P.E., NCDOT, Division 2 Engineer, PO Box 1587, Greenville, NC 27835  
Mr. Jay Johnson, NCDOT, Division 2 Environmental Officer, PO Box 1587, Greenville, NC 27835  
Mr. Michael Turchy, NCDOT, Office of Natural Environment, 1598 MSC, Raleigh, NC 27699-1598  
Mr. Jay Bennett, P.E., NCDOT, Roadway Design, 1582 MSC, Raleigh, NC 27699-1582  
Mr. Omar Sultan, NCDOT, Project Management/Scheduling Unit, 1534 MSC, Raleigh, NC 27699-1534  
Mr. Art McMillan, P.E., NCDOT, Highway Design, 1584 MSC, Raleigh, NC 27699-1584  
Mr. David Chang, P.E., NCDOT, Hydraulics, 1590 MSC, Raleigh, NC 27699-1590  
Mr. Greg Perfetti, P.E., NCDOT, Structure Design, 1581 MSC, Raleigh, NC 27699-1581  
Mr. Mark Staley, EI, NCDOT, Soil & Water Operations, 1557 MSC, Raleigh, NC 27699-1557  
Mr. Mike Thomas, NCDWQ, Washington Regional Office  
Central Files  
File Copy

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manley

U.S. ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT



Action ID. 200411508

County: Pitt

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Property Owner: North Carolina Department of Transportation  
Address: Project Development and Environmental Analysis, 1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Telephone No.: (919) 733-3141

Size and location of project (water body, road name/number, town, etc.): Project involves the demolition and reconstruction of Bridge No. 30 over Green Mill Run on SR 1703 in Pitt County, North Carolina, TIP Project No. B-3685. DD Cord. 35.6007N and -77.3684W.

Description of activity: Proposed impacts are those associated with the placement of fill to accommodate the replacement of Bridge No. 30 with a new 100-foot long bridge on existing alignment. All excavated materials will be removed from the site. 0.001 acres of non-tidal wetlands will be impacted by the site.

Applicable Law:  Section 404 (Clean Water Act, 33 USC 1344)  
 Section 10 (Rivers and Harbors Act, 33 USC 403)

Authorization: Regional General Permit Number: \_\_\_\_\_  
Nationwide Permit Number: 23

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached conditions and your submitted plans. If your activity is subject to Section 404 of the Clean Water Act (as indicated above), before beginning work you must receive a Section 401 water quality certification from the N.C. Division of Water Quality (telephone (919) 733-1786). For any activity within the twenty coastal counties subject to regulation under the Coastal Area Management Act (CAMA), prior to beginning work you must contact the N.C. Division of Coastal Management in Washington, NC, at (252) 946-6481.

Please read and comply with the attached conditions and the following special condition.  
**Special Condition: No in-stream activities will occur during the spring migration period between February 15 to June 30.**

Any violation of these conditions may subject the permittee to a stop work order, a restoration order and/or appropriate legal action.

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits.

If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact Michael F. Bell at (252) 975-1616 ext. 26.

Corps Regulatory Official Michael F. Bell Date: 07/05/2004

Expiration Date of Verification: 07/05/2006

SURVEY PLATS, FIELD SKETCH, WETLAND DELINEATION FORMS, PROJECT PLANS, ETC., MUST BE ATTACHED TO THE FILE COPY OF THIS FORM, IF REQUIRED OR AVAILABLE.

