




STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

December 13, 2004

MEMORANDUM TO: Mr. Jon G. Nance, P.E.
Division 5 Engineer

FROM: Philip S. Harris, III, P.E., Manager
Office of the Natural Environment
Project Development and
Environmental Analysis Branch 

SUBJECT: Wake County; Division 5; Replace Bridge No. 174 over SR 2320 (Riley Hill Road) over Buffalo Creek; State Project No. 8.2407701; TIP Project No. B-3530

Attached is the Division of Water Quality 401 Water Quality Certification. All environmental permits have been received for the construction of this project.

PSH/gyb

Attachment

cc: Mr. Art McMillan, P.E.
Mr. Omar Sultan
Mr. Jay Bennett, P.E.
Mr. David Chang, P.E.
Mr. Randy Garris, P.E.
Mr. Greg Perfetti, P.E.
Mr. Mark Staley
Mr. John F. Sullivan, III, FHWA
Mr. Chris Murray, Division 5 DEO
Ms. Cathy Houser, PE

PROJECT COMMITMENTS:

**Wake County
SR 2320 (Riley Hill Road)
Bridge No. 174 over Buffalo Creek
Federal Project No. BRZ-2320 (2)
State Project No. 82407701
TIP No. B-3530**

All standard procedures and measures, including NCDOT's Best Management Practices for Protection of Surface Waters, Guidelines for Best Management Practices for Bridge Demolition and Removal, will be implemented, as applicable, to avoid or minimize environmental impacts. In addition to the standard Buffer Certification Conditions, the following special commitments have been agreed to by NCDOT:

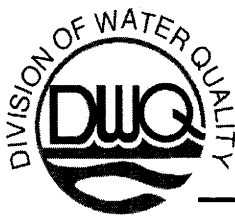
Commitments Developed Through Project Development and Design

Project Development and Environmental Analysis Branch

The stream impacts associated with the project will likely be lower than the 150 linear foot threshold. If it becomes apparent during final design that more than 150 linear feet of stream will be impacted, mitigation measures will be considered. *Note: The project does not impact the stream. The only impact is to the buffer area. The buffer impacts are allowable for this project.*

Commitments Developed Through Buffer Certification

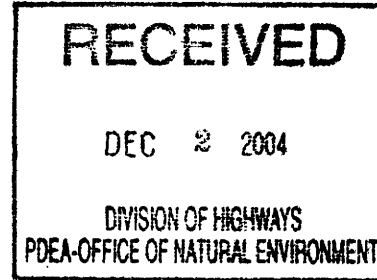
No commitments were made during the project's permit process.



DR

November 30, 2004
Wake County
DWQ No. 041#720

B-3530



APPROVAL of 401 Water Quality Certification

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

Dear Dr. Thorpe:

You have our approval, in accordance with the conditions listed below, to impact 2,613 square feet (1,742 square feet of Zone 1 and 871 square feet of Zone 2) of protected Neuse riparian buffer for the purpose of replacing Bridge No. 174 over Buffalo Creek on SR 2320 (Riley Road) in Wake County. This approval shall act as your Authorization Certificate as required within the Neuse River Riparian Buffer Rules (15A NCAC 2B .0233). In addition, you should get any other required federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control.

This approval is only valid for the purpose and design that you described in your application dated received on October 25, 2004. If you change your project, you must notify us and you may be required to send us a new application. If the property is sold, the new owner must be given a copy of this authorization and approval letter and is thereby responsible for complying with all conditions. For this approval to be valid, you must follow the conditions listed below. If total wetland fills for this project (now or in the future) exceed one acre, or if total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed in the attached certification.

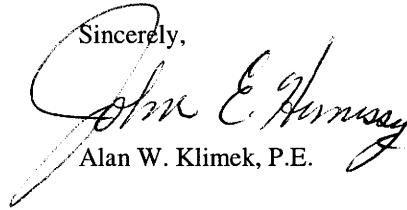
- 1.) Upon completion of the project, the NCDOT shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the 401 Certification has been completed. The responsible party shall complete the attached form and return it to the 401/Wetlands Unit of the Division of Water Quality upon completion of the project.
- 2.) All stormwater runoff shall be directed to sheetflow through stream buffers at nonerosive velocities, unless approved otherwise by this certification.
- 3.) During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers.
- 4.) When the old bridge is removed, no discharge of bridge material into surface waters is preferred. Strict adherence the Corps of Engineers guidelines for bridge demolition will be a condition of the 401 Water Quality Certification.
- 5.) Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.

- 6.) The dimension, pattern and profile of the stream above and below the crossing should not be modified by widening the stream channel or reducing the depth of the stream. Disturbed floodplains and streams should be restored to natural geomorphic conditions.
- 7.) Any riprap used must not interfere with thalweg performance and aquatic life passage during low flow conditions.
- 8.) All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.
- 9.) Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
- 10.) The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.
- 11.) There shall be no excavation from or waste disposal into jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit. Should waste or borrow sites be located in wetlands or streams, compensatory mitigation will be required since it is a direct impact from road construction activities.
- 12.) Pursuant to NCAC15A 2B.0233(6), sediment and erosion control devices shall not be placed in Zone 1 of any Neuse Buffer without prior approval by the NCDWQ. At this time, the NCDWQ has approved no sediment and erosion control devices in Zone 1, outside of the approved project impacts, anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised and that discharge is released as diffuse flow.
- 13.) Heavy equipment must be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into the stream.
- 14.) No live or fresh concrete shall come into contact with waters of the state until the concrete has hardened.
- 15.) The presence of equipment in the channels must be minimized. Under no circumstances must rock, sand or other materials be dredged from the wetted stream channel under authorization of this permit, except in the immediate vicinity of the culverts.
- 16.) All work shall be performed during low or normal flow conditions.
- 17.) All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1.
- 18.) A copy of this Water Quality Certification shall be posted on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.
- 19.) All protected riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated with native woody species upon completion of the project construction. A post-construction as-built with the restoration activities included shall be submitted to the DWQ no later than 60 days after the project is closed out by the Department of Transportation.

If you do not accept any of the conditions of this certification, you may ask for an adjudicatory hearing. You must act within 60 days of the date that you receive this letter. To ask for a hearing, send a written petition that conforms to Chapter 150B of the North Carolina General Statutes to the Office of Administrative Hearings, P.O. Box 27447, Raleigh, N.C. 27611-7447. This certification and its conditions are final and binding unless you ask for a hearing.

This letter completes the review of the Division of Water Quality under Section 401 of the Clean Water Act. If you have any questions, please contact Nicole Thomson at 919-715-3415.

Sincerely,



Alan W. Klimek, P.E.

JEH/njt

Attachment

cc:

Wilmington District, US Army Corps of Engineers
Mr. Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office
Mr. Jon G. Nance, P.E., Division 5 Engineer, 2612 North Duke Street, Durham, NC 27704
Mr. Chris Murray, Division 5 Environmental Officer, 2612 North Duke Street, Durham, NC 27704
NC DWQ Raleigh Regional Office
Central Files
File Copy

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DWQ Project No.: _____ County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401/Wetlands Unit, North Carolina Division of Water Quality, 1621 Mail Service Center, Raleigh, NC, 27699-1621. This form may be returned to DWQ by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Engineer's Certification

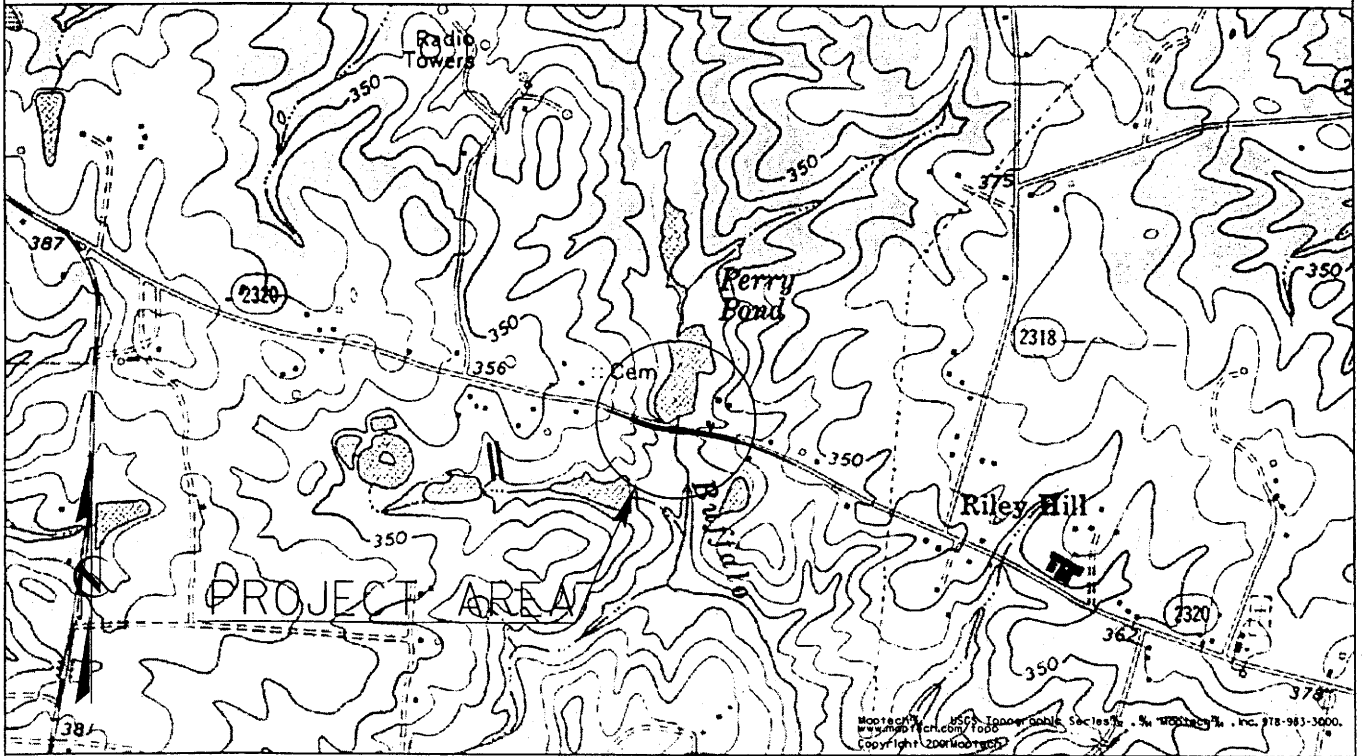
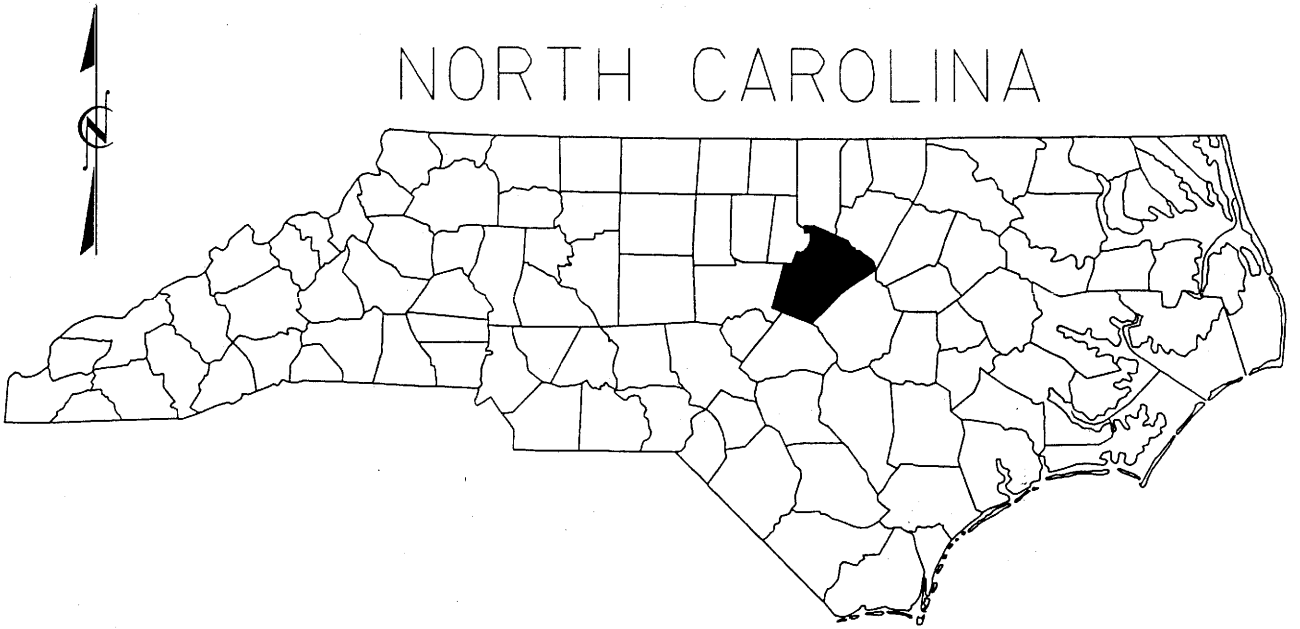
_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project, for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No. _____

Date _____

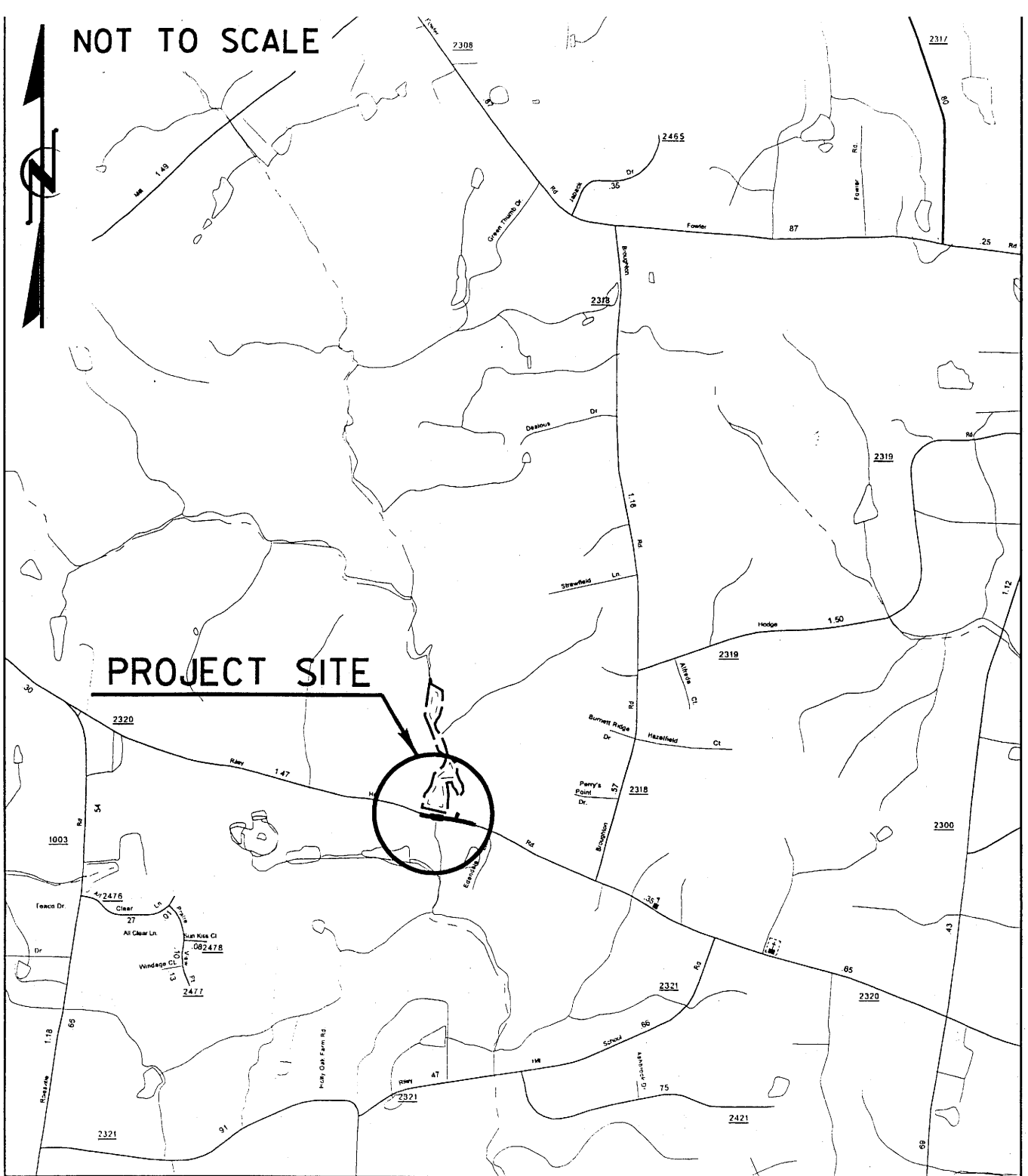
NORTH CAROLINA



VICINITY MAP

NCDOT
 DIVISION OF HIGHWAYS
 WAKE COUNTY
 PROJECT: 8.2407701 (B-3530)
 BRIDGE #174 ON
 SR 2320 (RILEY HILL ROAD)
 OVER BUFFALO CREEK

NOT TO SCALE



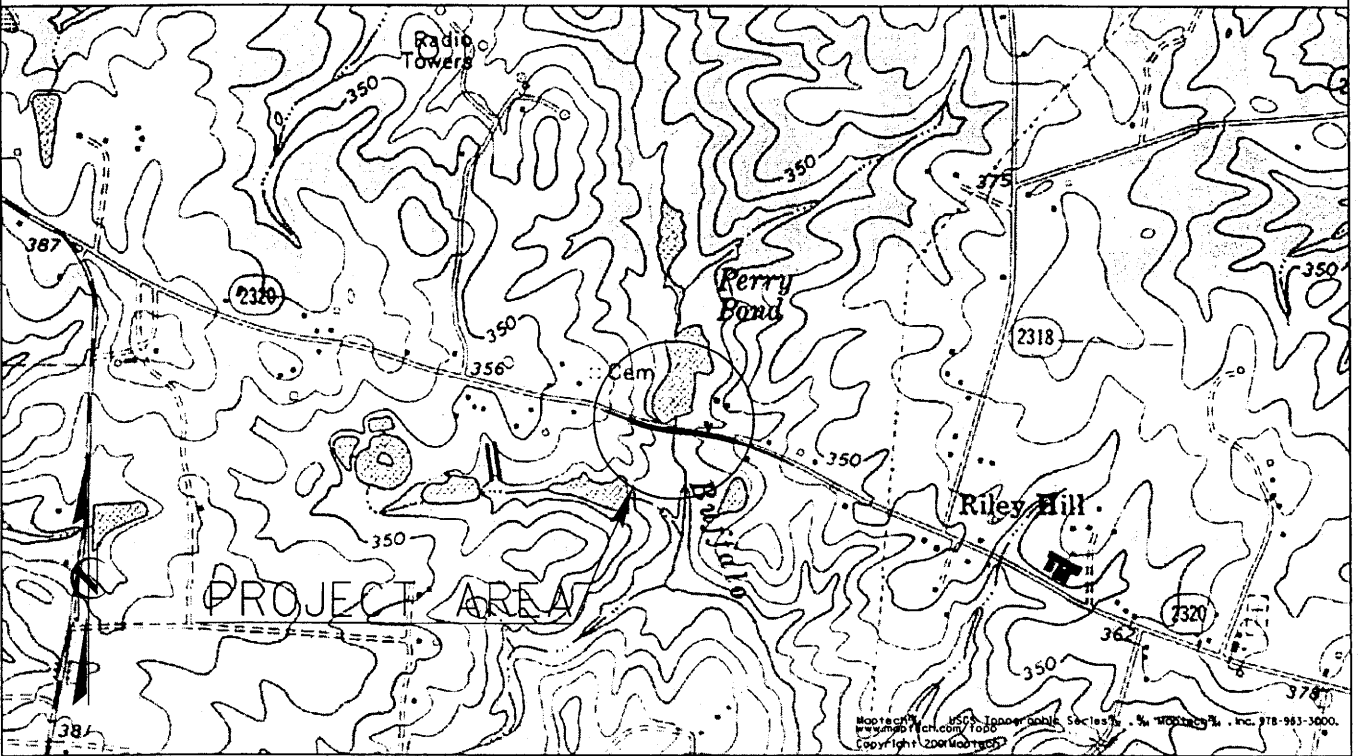
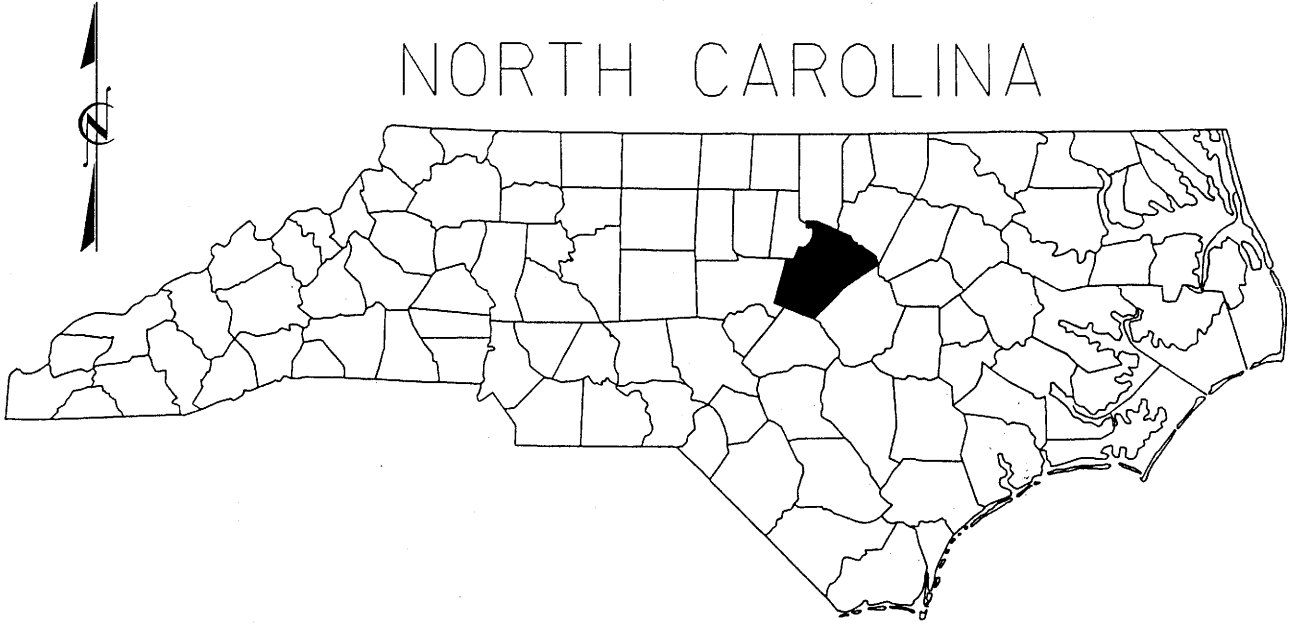
PROJECT SITE

NEUSE RIVER BUFFER

**LOCATION
MAP**

NCDOT
DIVISION OF HIGHWAYS
WAKE COUNTY
PROJECT: 8.2407701 (B-3530)
BRIDGE #174 ON
SR 2320 (RILEY HILL ROAD)
OVER BUFFALO CREEK

NORTH CAROLINA



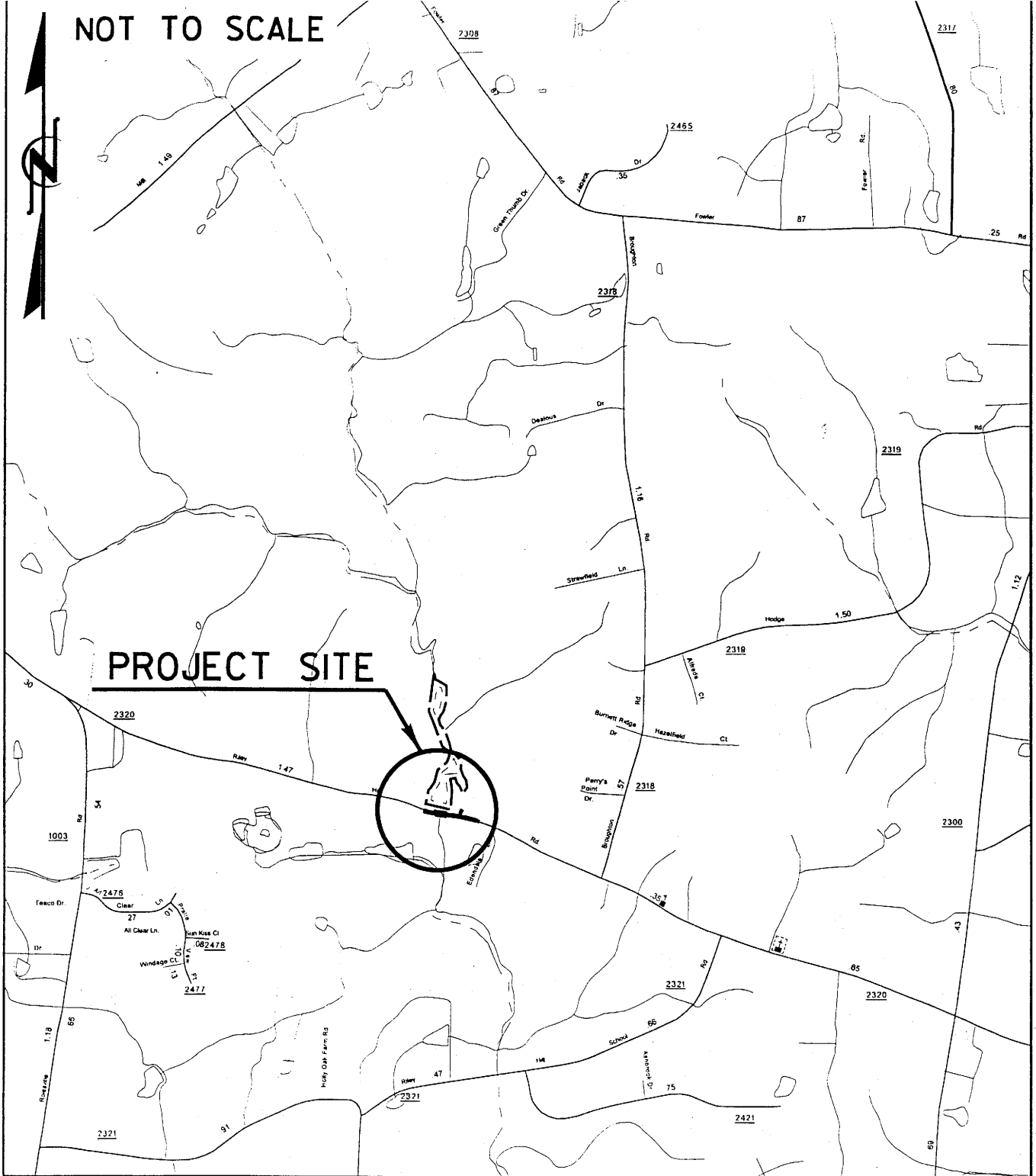
VICINITY MAP

NCDOT
 DIVISION OF HIGHWAYS
 WAKE COUNTY

PROJECT: 8.2407701 (B-3530)

BRIDGE #174 ON
 SR 2320 (RILEY HILL ROAD)
 OVER BUFFALO CREEK

NOT TO SCALE



NEUSE RIVER BUFFER

LOCATION MAP

NCDOT

DIVISION OF HIGHWAYS

WAKE COUNTY

PROJECT: 8.2407701 (B-3530)

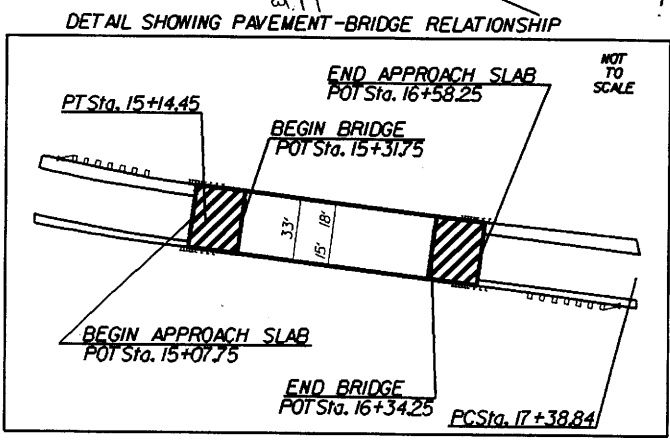
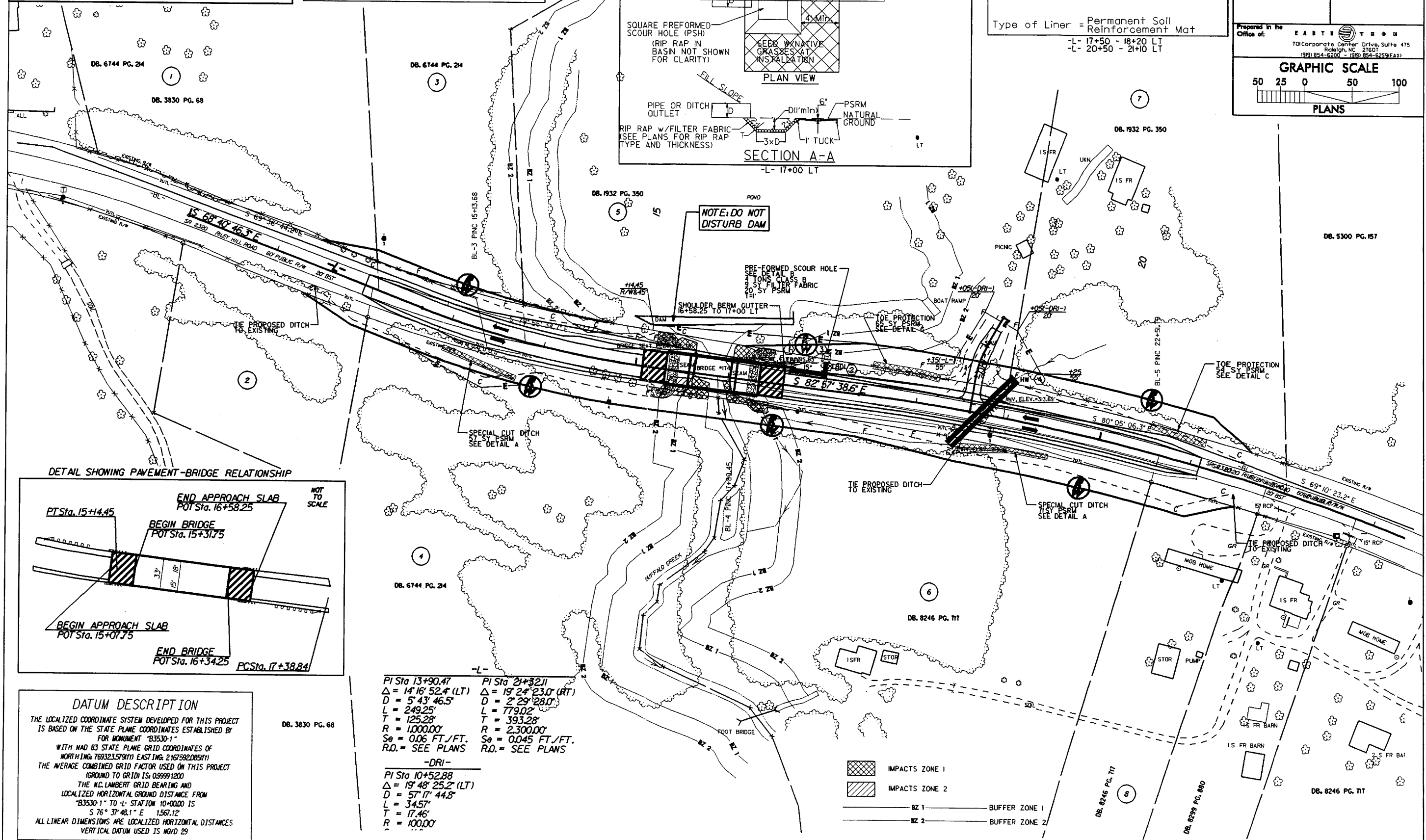
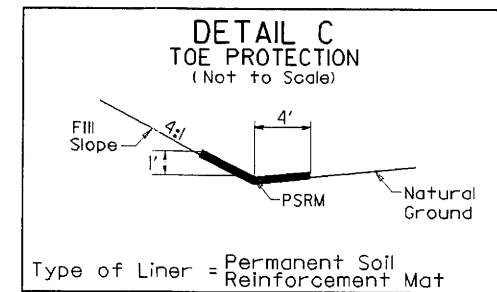
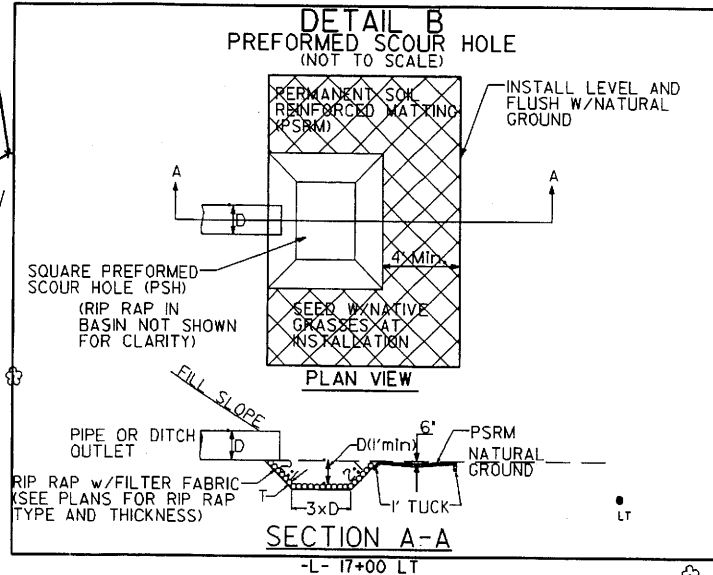
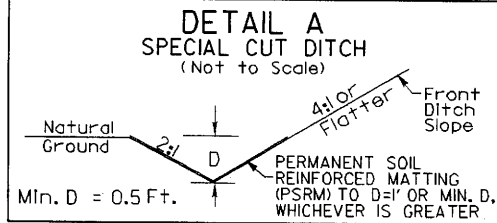
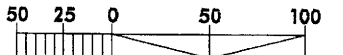
BRIDGE #174 ON

SR 2320 (RILEY HILL ROAD)

OVER BUFFALO CREEK

SHEET 2 OF 7

9/19/03



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY FOR MONUMENT "B3530-1"

WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 769323.579(11) EASTING: 2167592.085(11)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99991200

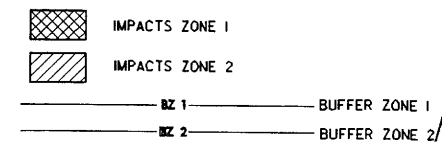
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B3530-1" TO -L- STATION 10+00.00 IS S 76° 37' 48.1" E 1,567.12'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES. VERTICAL DATUM USED IS MVD 29

PI Sta 13+90.47 Δ = 14° 16' 52.4" (LT)
D = 5' 43' 46.5"
L = 249.25'
T = 125.28'
R = 1,000.00'
Se = 0.06 FT./FT.
R.O. = SEE PLANS

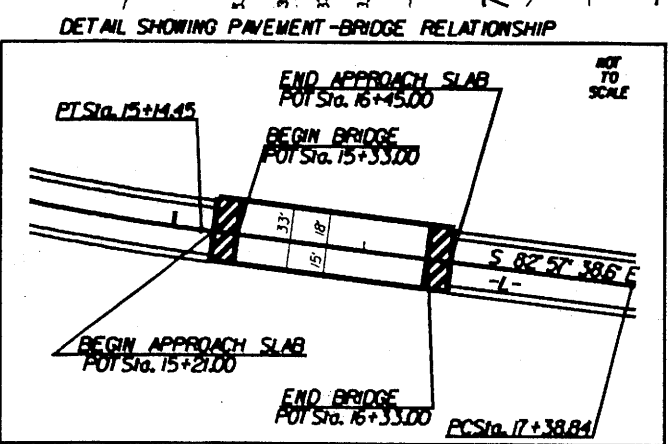
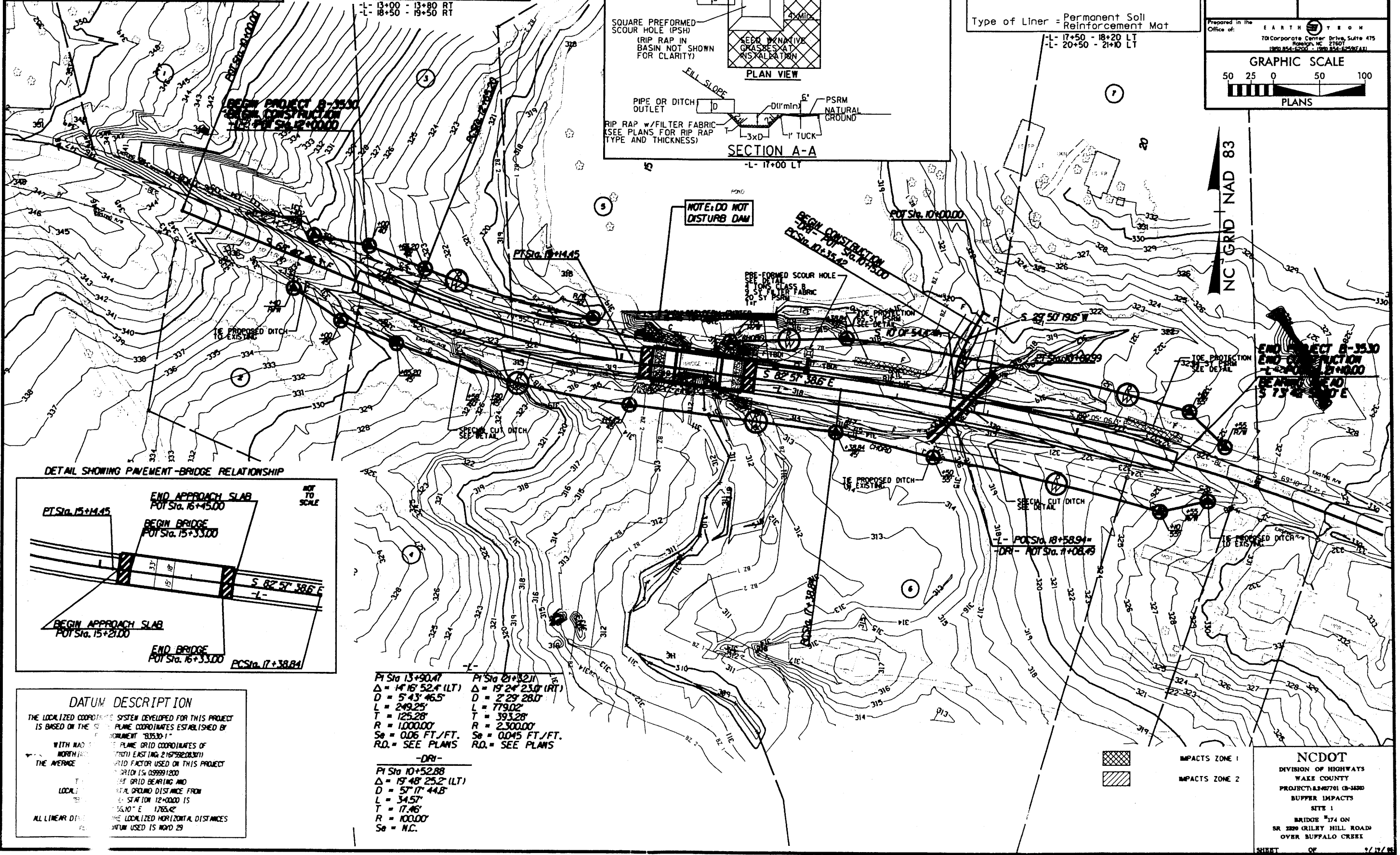
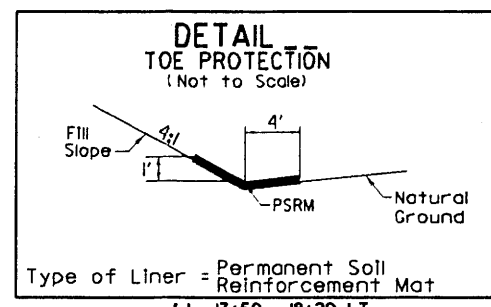
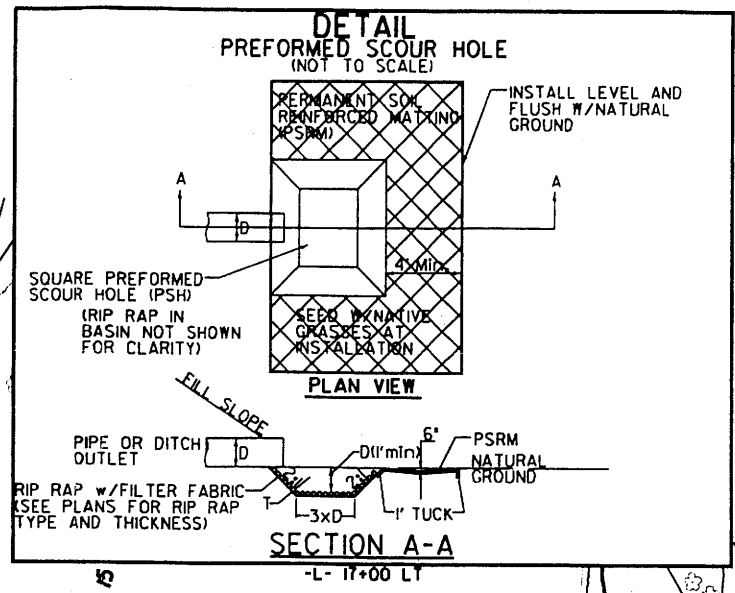
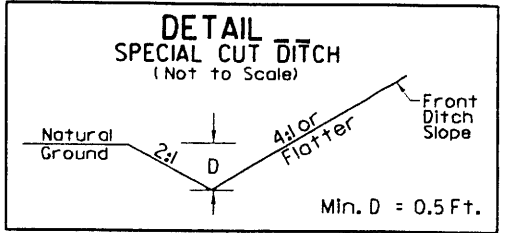
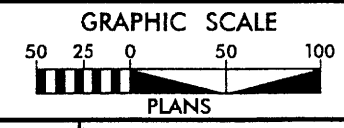
PI Sta 24+32.11 Δ = 19° 24' 23.0" (RT)
D = 2' 29' 28.0"
L = 779.02'
T = 393.28'
R = 2,300.00'
Se = 0.045 FT./FT.
R.O. = SEE PLANS

-DRI-
PI Sta 10+52.88 Δ = 19° 48' 25.2" (LT)
D = 57' 17' 44.8"
L = 34.57'
T = 17.46'
R = 100.00'



PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

Prepared in the Office of: EARTH SYSTEMS 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 (919) 854-6200 FAX



DATUM DESCRIPTION THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE PLANE COORDINATES ESTABLISHED BY INSTRUMENT '83530-1' WITH NAD 83 PLANE GRID COORDINATES OF NORTHING 1267011.000 (EASTING 2167520.000) THE AVERAGE GRID FACTOR USED ON THIS PROJECT IS 0.99991200. THE GRID BEARING AND LOCAL DISTANCE FROM STATION 12+00.00 IS 126.10° E 1265.42'. ALL LINEAR DISTANCES LOCALIZED HORIZONTAL DISTANCES DATUM USED IS NVD 29.

PI Sta 13+90.47 Δ = 14° 16' 52.4" (LT) D = 543.465 L = 249.25 T = 125.28 R = 1000.00 Se = 0.06 FT./FT. R.O. = SEE PLANS
PI Sta 21+32.11 Δ = 19° 24' 23.0" (RT) D = 229.280 L = 779.02 T = 393.28 R = 2300.00 Se = 0.045 FT./FT. R.O. = SEE PLANS
PI Sta 10+52.88 Δ = 19° 48' 25.2" (LT) D = 5717.445 L = 34.57 T = 17.46 R = 100.00 Se = N.C.

DATE: 8/22/00 FILE: 83530

NCDOT DIVISION OF HIGHWAYS WAKE COUNTY PROJECT B-3530 BUFFER IMPACTS SITE 1 BRIDGE #174 ON SR 220 RILEY HILL ROAD OVER BUFFALO CREEK SHEET 4 OF 17

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
4	ROBERT A. PERRY	(Mailing Address) 5404 Riley Hill Road Wendell, NC 27591 (Property Address) 5501 Riley Hill Road Wendell, NC 27591
5	TWIN ACRES COUNTRY CLUB INC.	101 Blalock Court Knightdale, NC 27545
6	BENJAMIN FRANKLIN PERRY JR.	(Mailing Address) 5608 Riley Hill Road Wendell, NC 27591 (Property Address) 5632 Riley Hill Road Wendell, NC 27591

NCDOT

DIVISION OF HIGHWAYS

WAKE COUNTY

PROJECT: 8.2407701 (B-3530)

BRIDGE #174 ON

SR 2320 (RILEY HILL ROAD)

OVER BUFFALO CREEK

SHEET

5 OF 7

9/19/03

WETLAND PERMIT IMPACT SUMMARY															
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS				SURFACE WATER IMPACTS								
			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	-L- Sta 15+33 TO 16+33	100' LONG BRIDGE (36' WIDE)							0		0				
TOTALS:			0	0	0	0	0	0	0	0	0	0	0	0	0

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 WAKE COUNTY
 PROJECT 8.2407701 B-3530
 SHEET 6 OF 7
 9/19/2003

BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT						BUFFER REPLACEMENT			
			TYPE		Hand Clearing		Allowable		ZONE 1 (sq ft)	ZONE 2 (sq ft)	TOTAL (sq ft)	
			ROAD CROSSING	PARALLEL IMPACT	ZONE 1 (sq ft)	ZONE 2 (sq ft)	TOTAL (sq ft)	ZONE 1 (sq ft)	ZONE 2 (sq ft)	TOTAL (sq ft)		
1	100' Three Span Bridge	L- Sta 15+33 TO 16+33	X				1742	871	2613	0	0	0
TOTAL:							1742	871	2613	0	0	0

N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 WAKE COUNTY
 PROJECT: 8.2407701 (B-3530)
 10/1/2003
 SHEET 7 OF 7