



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

July 21, 2004

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

ATTN: Mr. Bill Biddlecome  
NCDOT Coordinator

SUBJECT: Bertie County. Windsor Bypass. US 17 from US 13-17 to east of SR 1503.  
TIP R-2404A. State Project No. 6019001T. USACE Action ID No.  
199400453

Dear Sir,

The North Carolina Department of Transportation (NCDOT) is proposing to improve existing U.S. Highway 17 (US 17) to a high speed, multi-lane facility that bypasses the Town of Windsor. This new route will include a crossing of the Cashie River. Therefore, geotechnical test borings will need to be done so that the new bridge structure and foundation recommendations can be made. A private engineering firm (PEF) will be conducting the investigation with up to 57 soil borings to be performed in the area of the bridges. Of these, 47 borings will be performed in the area shown as wetland or open water on the attached site map.

The borings will be performed from an amphibious tracked carrier with a fully loaded ground pressure of 2 psi or less which should minimize the impacts on the wetland. The borings and probes will consist of turning or driving 3-inch to 8-inch diameter steel casing into the ground creating up to a 2-foot radius of disturbance around each boring for a total disturbance area of 590.6 square feet in jurisdictional areas. Other drilling tools will be inserted into the steel casing to sample the sediments and advance the hole. When the boring is completed, the steel casing will be removed.

Tracks on this vehicle may temporarily flatten vegetation in the wetland; however, complete recovery is expected by the next growing season. It may be necessary to remove some vegetation (5 inches in diameter or less) to provide access for the vehicle. This clearing will be done by hand and will be limited.

The consultant will use rotary-wash techniques while recirculating the drilling fluids between a “mud tub” and the inside of the casing. This will isolate the drilling mud and cuttings and contain them in the boring and the “mud tub”. The borings will be backfilled with the cuttings and then sealed with bentonite hole plug. The excess drilling mud and cuttings will be disposed of in the upland areas away from the wetlands and the Cashie River.

At the request of the NCWRC, a full moratorium of any in stream work from February 15 to September 30 will be observed. This moratorium also prohibits any construction in the wetlands adjacent to the Cashie River.

The NCDOT anticipates that these activities will be authorized by a Nationwide Permit No. 06. NCDOT will follow the conditions set by a Nationwide Permit No. 6 and by NCDWQ Water Quality Certification #3376. If you have any questions or would like additional information, please contact Mr. Chris Rivenbark at (919) 715-1460 or [crivenbark@dot.state.nc.us](mailto:crivenbark@dot.state.nc.us). Thank you in advance for your help in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Gregory J. Thorpe", with a date "3/17" written below it.

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

W/attachment

Mr. John Hennessy, Division of Water Quality (7 copies)  
Mr. Travis Wilson, NCWRC  
Ms. Cathy Brittingham, NCDOT  
Ms. Lynn Mathis, NCDOT  
Mr. David Chang, P.E., Hydraulics  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Njoroge W. Wainaina, P.E., Geotechnical Unit  
Mr. Don Conner, P.E., Division Engineer  
Mr. Clay Willis, DEO

W/o attachment

Mr. David Franklin, USACE, Wilmington (Cover Letter Only)  
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  
Ms. Stacy Baldwin, P.E., PDEA

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

Riparian or Watershed Buffer Rules

Section 10 Permit

Isolated Wetland Permit from DWQ

401 Water Quality Certification

2. Nationwide, Regional or General Permit Number(s) Requested: Nationwide 6

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: 919-733-7844 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: \_\_\_\_\_

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: **Windsor Bypass – US 17 from US 13-17 to east of SR 1503**
  
2. T.I.P. Project Number or State Project Number (NCDOT Only): **R-2404A**
  
3. Property Identification Number (Tax PIN): \_\_\_\_\_
  
4. Location  
County: **Bertie** Nearest Town: **Windsor**  
Subdivision name (include phase/lot number): \_\_\_\_\_  
Directions to site (include road numbers, landmarks, etc.): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
5. Site coordinates, if available (UTM or Lat/Long): **36° 00' 48.5014" / 76° 56' 51.5314"**  
(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): \_\_\_\_\_
  
7. Nearest body of water (stream/river/sound/ocean/lake): **Cashie River**
  
8. River Basin: **Roanoke**  
(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: **Forested**  
\_\_\_\_\_  
\_\_\_\_\_

10. Describe the overall project in detail, including the type of equipment to be used: The borings will be performed from an amphibious tracked carrier with a fully loaded ground pressure of 2 psi or less. The borings and probes will consist of turning or driving 3-inch to 8-inch diameter steel casing into the ground creating up to a 2-foot radius of disturbance around each boring. Other drilling tools will be inserted into the steel casing to sample the sediments and advance the hole.
11. Explain the purpose of the proposed work: The Geotechnical Unit is in the process of planning a site characterization investigation for the foundation design for a new bridge on new alignment for US 17 bypass. A contractor will be conducting the investigation with up to 57 soil borings to be performed in the area of the bridges. Of these, 47 borings will be performed in the area shown as wetland or open water on the attached site map.

#### **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.

Action ID No. 199400453. Dates of verification for streams (October 30, 2001, November 9, 2001), dates of verification for wetlands (September 6, 2001, October 30, 2001).

Action ID No. 199400838 Section B completed on 01/03/01 , Section C completed on 05 18 00

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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.

It is anticipated that an Individual Permit will be required for impacts to 130 ac of jurisdictional wetlands and 613 linear feet of stream impacts due to the proposed improvements to existing U.S. Highway 17 (US 17) to a high speed, multi-lane facility that bypasses the Town of Windsor. The project study area consists of a single corridor that extends for approximately 9.1 miles through the coastal county of Bertie around the Town of Windsor

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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: \_\_\_\_\_  
A contractor will be conducting the investigation with up to 57 soil borings to be performed in the area of the bridges. Of these, 47 borings will be performed in the area shown as wetland or open water on the attached site map.

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***
See attached sheet					

\* 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 attached sheet					

\* 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: \_\_\_\_\_

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.)
See attached sheet				

\* 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.

When the boring is completed, the steel casing will be removed. The contractor will use rotary-wash techniques while recirculating the drilling fluids between a “mud tub” and the inside of the casing. This will isolate the drilling mud and cuttings and contain them in the boring and the “mud tub”. The borings will be backfilled with the cuttings and then sealed with bentonite hole plug. The excess drilling mud and cuttings will be disposed of in the upland areas away from the wetlands and the Cashie River.

### 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.

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N/A

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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): N/A

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



Amount of Riparian wetland mitigation requested (acres): \_\_\_\_\_  
 Amount of Non-riparian wetland mitigation requested (acres): \_\_\_\_\_  
 Amount of Coastal wetland mitigation requested (acres): \_\_\_\_\_

**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		3	
2		1.5	
Total			

\* 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.

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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.

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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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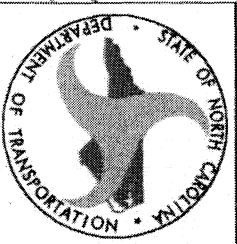
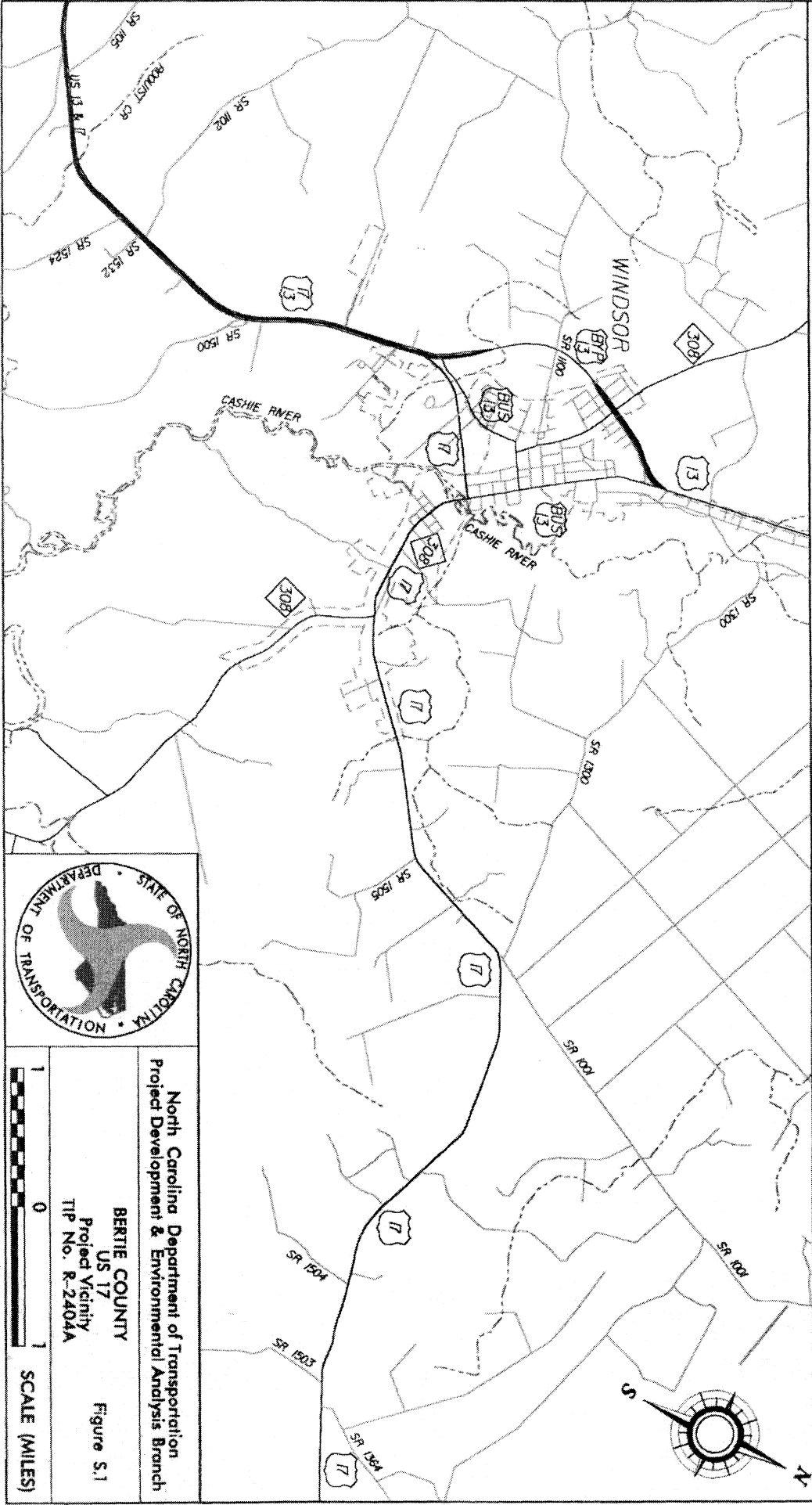
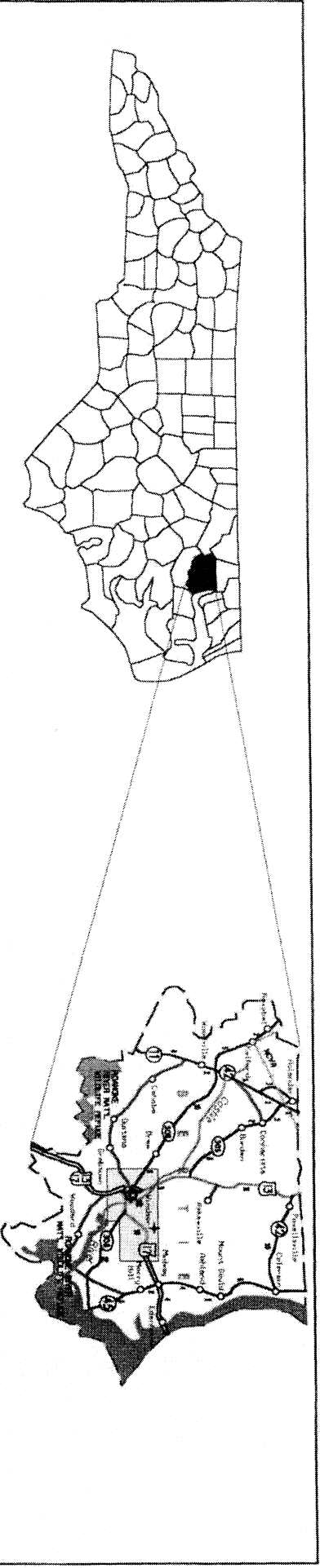
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Applicant/Agent's Signature

  
Date

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



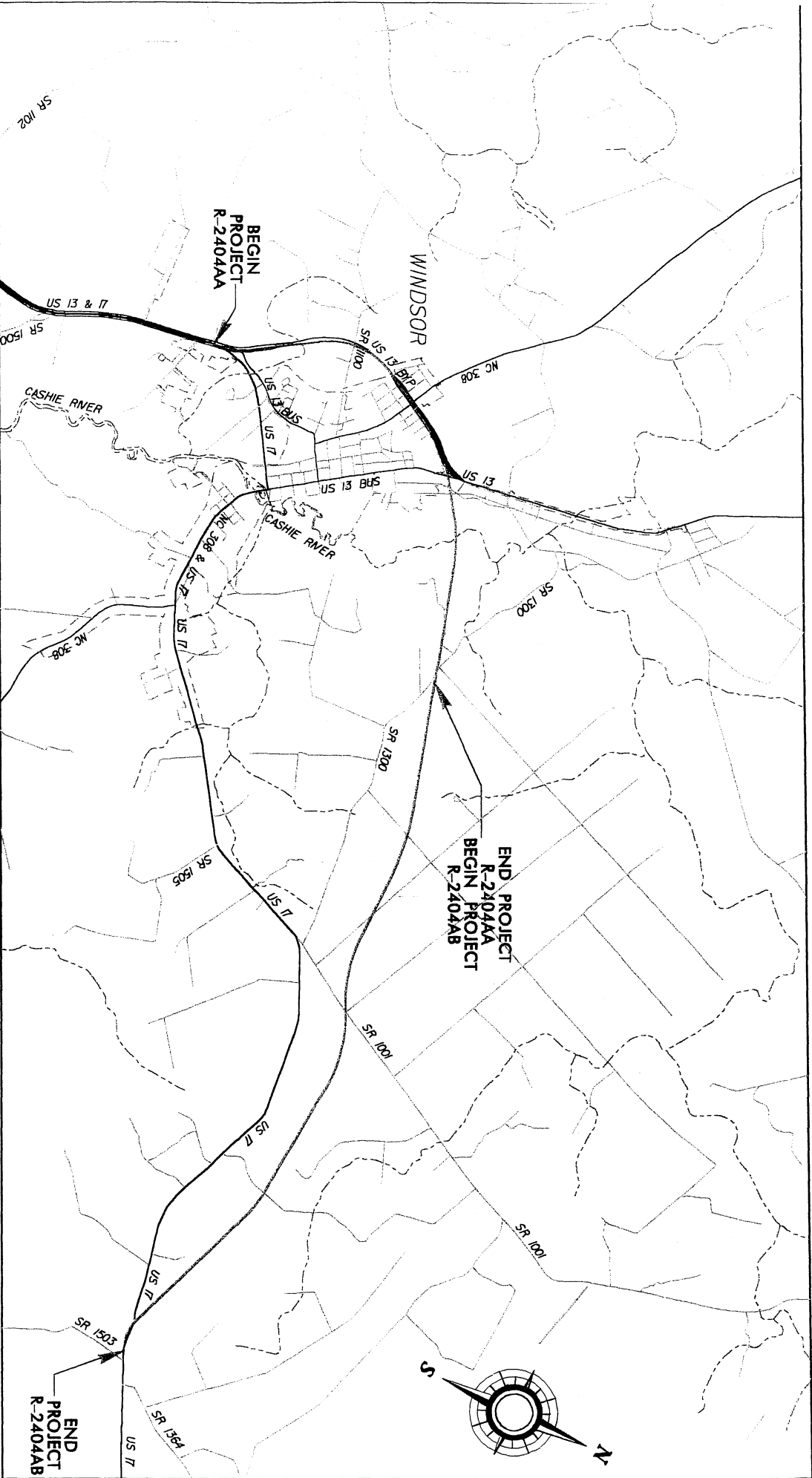
North Carolina Department of Transportation  
 Project Development & Environmental Analysis Branch

BERTIE COUNTY  
 US 17  
 Project Vicinity  
 TIP No. R-2404A

Figure S.1



SCALE (MILES)



- LEGEND**
- PROPOSED WINDSOR BYPASS
  - SECONDARY ROADS
  - PRIMARY ROUTES
  - CITY LIMITS
  - RIVERS & STREAMS



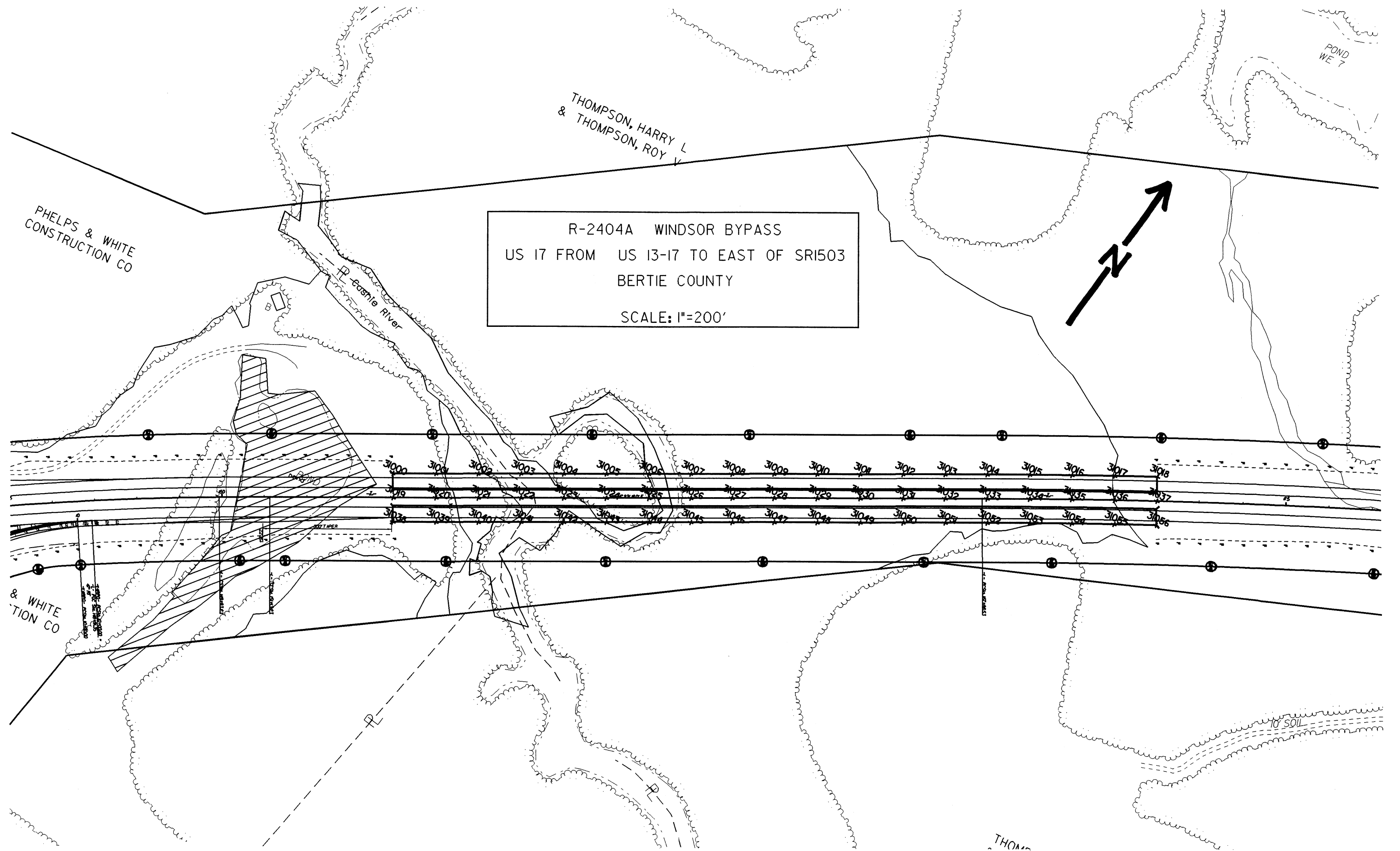
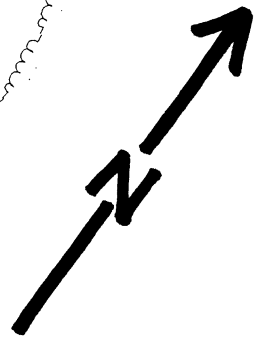
North Carolina Department of Transportation  
 Project Development & Environmental Analysis Branch

BERTIE COUNTY  
 US 17  
 Alternative C2  
 TIP No. R-2404A

April, 2002

Figure 1

R-2404A WINDSOR BYPASS  
US 17 FROM US 13-17 TO EAST OF SRI503  
BERTIE COUNTY  
SCALE: 1"=200'



PHELPS & WHITE  
CONSTRUCTION CO

THOMPSON, HARRY L  
& THOMPSON, ROY V

POND  
WE 7

& WHITE  
TION CO

THOM

Copyright -2000 GEOPAK Corporation =====  
 All rights reserved GEOPAK  
 Project: r-2404a  
 Subject:  
 Job No. 04A Operator: DH  
 Date: Wednesday June 2, 2004 1:53 pm  
 SYSTEM FIX 4 ASEC 2 BEAR PRI

\* 4 lay off cha l1 31000-31056

Point	North	East	Station	Offset	Reg.	Lat	Long
31000	830,129.21	2,606,917.42	154+00.00	-57			
31001	830,169.26	2,607,009.05	155+00.00	-57			
31002	830,209.32	2,607,100.68	156+00.00	-57			
31003	830,249.37	2,607,192.31	157+00.00	-57			
31004	830,289.42	2,607,283.93	158+00.00	-57			
31005	830,329.48	2,607,375.56	159+00.00	-57			
31006	830,369.53	2,607,467.19	160+00.00	-57			
31007	830,409.58	2,607,558.82	161+00.00	-57			
31008	830,449.64	2,607,650.45	162+00.00	-57			
31009	830,489.69	2,607,742.07	163+00.00	-57			
31010	830,529.74	2,607,833.70	164+00.00	-57			
31011	830,569.80	2,607,925.33	165+00.00	-57			
31012	830,609.85	2,608,016.96	166+00.00	-57			
31013	830,649.90	2,608,108.59	167+00.00	-57			
31014	830,689.97	2,608,200.26	168+00.00	-57			
31015	830,729.80	2,608,292.40	169+00.00	-57			
31016	830,769.01	2,608,384.80	170+00.00	-57			
31017	830,807.61	2,608,477.46	171+00.00	-57			
31018	830,845.59	2,608,570.38	172+00.00	-57			
31019	830,076.98	2,606,940.25	154+00.00	0		36 00 48.5014	76 56 51.5314
31020	830,117.03	2,607,031.88	155+00.00	0			
31021	830,157.09	2,607,123.51	156+00.00	0			
31022	830,197.14	2,607,215.14	157+00.00	0			
31023	830,237.19	2,607,306.76	158+00.00	0			
31024	830,277.25	2,607,398.39	159+00.00	0			
31025	830,317.30	2,607,490.02	160+00.00	0			
31026	830,357.36	2,607,581.65	161+00.00	0			
31027	830,397.41	2,607,673.28	162+00.00	0			
31028	830,437.46	2,607,764.91	163+00.00	0			
31029	830,477.52	2,607,856.53	164+00.00	0			
31030	830,517.57	2,607,948.16	165+00.00	0			
31031	830,557.62	2,608,039.79	166+00.00	0			
31032	830,597.68	2,608,131.42	167+00.00	0			
31033	830,637.73	2,608,223.05	168+00.00	0			
31034	830,677.40	2,608,314.84	169+00.00	0			
31035	830,716.47	2,608,406.89	170+00.00	0			

Point	North	East	Station	Offset	Reg.	
31036	830,754.92	2,608,499.20	171+00.00	0		
31037	830,792.75	2,608,591.77	172+00.00	0	36 00 55.2403	76 56 31.2521
31038	830,024.75	2,606,963.08	154+00.00	57		
31039	830,064.81	2,607,054.71	155+00.00	57		
31040	830,104.86	2,607,146.34	156+00.00	57		
31041	830,144.91	2,607,237.97	157+00.00	57		
31042	830,184.97	2,607,329.60	158+00.00	57		
31043	830,225.02	2,607,421.22	159+00.00	57		
31044	830,265.07	2,607,512.85	160+00.00	57		
31045	830,305.13	2,607,604.48	161+00.00	57		
31046	830,345.18	2,607,696.11	162+00.00	57		
31047	830,385.23	2,607,787.74	163+00.00	57		
31048	830,425.29	2,607,879.36	164+00.00	57		
31049	830,465.34	2,607,970.99	165+00.00	57		
31050	830,505.40	2,608,062.62	166+00.00	57		
31051	830,545.45	2,608,154.25	167+00.00	57		
31052	830,585.48	2,608,245.84	168+00.00	57		
31053	830,625.01	2,608,337.28	169+00.00	57		
31054	830,663.92	2,608,428.98	170+00.00	57		
31055	830,702.23	2,608,520.95	171+00.00	57		
31056	830,739.92	2,608,613.16	172+00.00	57		