STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

June 30, 2005

U.S. Army Corp of Engineers
Regulatory Field Office
6508 Falls of the Neuse Road, Suite 120
Raleigh, NC 27615

ATTN: Mr. John T. Thomas
NCDOT Coordinator

Subject: **Nationwide 23 and 33 Permit Applications** for the Replacement of Bridge No. 75 on SR 3003 (West Meadow Road), over Smith River in Rockingham County. State Project No. 8.1511701, Federal Aid Project No. BRSTP-700 (1), WBS Element 33122.1.1, Division 7, TIP No. B-3509

Dear Sir:
Please find enclosed a copy of the Categorical Exclusion (CE) Document, Pre-construction Notification (PCN), design plan sheets, and permit drawings for the above mentioned project. The North Carolina Department of Transportation (NCDOT) proposes to replace the 340-foot Bridge No. 75 over Smith River with a four-span 345-foot long bridge over the existing alignment. The cross section of the travel way across the new structure includes two 14-foot travel lanes and provides 2-foot shoulders with 5.5-foot sidewalks on each side. The proposed approach roadway from the west consists of a curb and gutter facility providing two 14-foot lanes and 5-foot sidewalks. The approach roadway from the east within the project limit will provide 14-foot travel lanes and a combination of curb and gutter and shoulder section. Traffic will use an onsite detour structure located north of the existing structure during construction. Permanent impacts to the Smith River total 86 ft^2 (0.002 ac) and temporary impacts total approximately 0.001 ac.

IMPACTS TO WATERS OF THE UNITED STATES

The project study area is located within the subbasin 03-02-03 of the Roanoke River Basin and is part of U.S. Geologic Survey (USGS) hydrologic unit 03010103. The North Carolina Department of Water Quality (NCDWQ) Stream Index Numbers (SIN) for the Smith River in the project area include both 22-40-(2.5) and 22-40-(3). The Smith River is incorrectly classified in the CE and the proper classification is WS-IV upstream of bridge and C, downstream of the bridge. Smith River is listed on the 2002 List of Impaired Waters [303(d)] for the Roanoke River Basin due to urban runoff and storm sewer sources outside of state jurisdiction. There are no wetlands present in the project area.

NCWRC has requested a moratorium from April 1 to June 30 for the presence of darters. However, due to the low water quality in the Smith River in the vicinity of this bridge and due to the lack of statutory regulations requiring this moratorium, NCDOT does not believe that this moratorium is warranted.

Permanent Impacts: Smith River will be spanned by a 345-foot bridge. Permanent impacts from bridge bents will total 86 ft^2 (0.002 ac).

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

TELEPHONE: 919-715-1500
FAX: 919-715-1501

WEBSITE: WWW.NCDOT.ORG.

LOCATION:
2728 CAPITAL BLVD
PLB SUITE 168
RALEIGH, NC 27604

Temporary Impacts: A temporary detour structure will be constructed and a temporary work bridge will be used to construct the detour bridge and replace the existing bridge. The work bridge and detour bridge will result in approximately 0.001 acre of temporary impacts to Smith River due to the bents in the channel.

Utility Impacts: No utility impacts are anticipated for this project.

Bridge Demolition: Bridge No. 75 is an eight-span structure that consists of reinforced concrete deck girders with an asphalt wearing surface. The substructure consists of reinforced concrete abutments and piers. In order to protect the water quality and aquatic life in the area affected by this project, the NCDOT and all potential contractors will adhere to the Best Management Practices for Bridge Demolition and Removal. No fill from bridge demolition is expected.

Schedule: The project calls for a letting date of November 15, 2005 with a date of availability of December 27, 2005. It is anticipated that the contractor will begin construction shortly after the date of availability.

Restoration Plan: Following construction of the bridge, all material used in the construction of the structure will be removed. The existing approach fill will be removed to natural grade and the area will be revegetated according to NCDOT guidelines. Class II riprap and filter fabric will be used for bank stabilization. Pre-project elevations will be restored. Fill for temporary detour will be restored back to natural conditions.

Removal and Disposal Plan: The contractor will be required to submit a reclamation plan for removal and disposal of all material off-site at an upland location. The contractor will use excavation equipment for removal of any earthen material. The material used for installation of the temporary work bridge will be removed after the new bridge is built. The temporary fill areas will be restored to their original contours and replanted with native species. After the temporary detour is no longer needed, the contractor will remove all materials. All material will become the property of the contractor.

FEDERALLY PROTECTED SPECIES

Plants and animals with federal classifications of Endangered, Threatened, Proposed Endangered, and Proposed Threatened are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. As of January 29, 2003 USFWS lists two federally protected species for Rockingham County, the smooth coneflower (*Echinacea laevigata*) and the James spinymussel (*Pleurobema collina*).

Open habitat is available for the smooth coneflower within the project area. No individuals were observed when field work was conducted on July 29, 1999 or July 18, 2002, and a biological conclusion of No Effect was rendered. The North Carolina Natural Heritage Program (NCNHP) records indicate no occurrences of smooth coneflower within the project area or vicinity. Surveys will be conducted prior to project construction.

A survey for James spinymussel was conducted on September 6, 2001 by Tim Savidge to determine if this species or habitat is present within the project area. No habitat was determined to be available because no mussel species were found, therefore a biological conclusion of No Effect was rendered.

AVOIDANCE, MINIMIZATION, and MITIGATION

There are no wetlands in the project area and the surface water impacts are due to the placement of bridge bents, therefore no mitigation will be required.

The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts, and to provide full compensatory mitigation of all remaining, unavoidable jurisdictional impacts. Avoidance measures were taken during the planning and NEPA compliance stages; minimization measures were incorporated as part of the project design.

According to the Clean Water Act (CWA) Section 404(b)(1) guidelines, NCDOT must avoid, minimize, and mitigate, in sequential order, impacts to Waters of the U.S. The following is a list of the project's jurisdictional stream avoidance/minimization activities proposed or completed by NCDOT:

Avoidance/Minimization:

- Bridge deck drains will not discharge directly to the Smith River.
- A work bridge will be used instead of causeways to reduce impacts to Smith River.
- Standard NCDOT Best Management Practices for the Protection of Surface Waters and Best Management Practices for Bridge Demolition and Removal will be followed

Mitigation:

- Due to the nature of the impacts, no mitigation is proposed

REGULATORY APPROVALS

Section 404 Permit: This project is being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). We are requesting the issuance of Nationwide Permits 23 and 33 for impacts associated with the construction of this project.

Section 401 Permit: We anticipate 401 General Certification numbers 3403 and 3366 will apply to this project. All general conditions of the Water Quality Certifications will be met. Therefore, in accordance with 15A NCAC 2H, Section .0500(a) and 15A NCAC 2B.0200 we are providing two copies of this application to the North Carolina Department of Environment and Natural Resources, Division of Water Quality, for their notification.

Thank you for your assistance with this project. A copy of this permit application will be posted on the NCDOT website at: http://www.ncdot.org/planning/pe/naturalunit/Permit.html. If you have any questions or need additional information, please contact Mr. Brett Feulner, NCDOT – Office of Natural Environment, at (919) 715-1488 or bmfeulner@dot.state.nc.us.

Sincerely,

Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA

Cc: w/attachment
Mr. John Hennessy, NCDWQ (2 copies)
Mr. Travis Wilson, NCWRC
Mr. Gary Jordan, USFWS
Dr. David Chang, P.E., Hydraulics
Mr. Greg Perfetti, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. J. M. Mills, P.E., Division Engineer
Mr. Jerry Parker, DEO

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

Office Use Only: Form Version May 2002

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

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

I. Processing

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

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

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

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

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

II. Applicant Information

1. Owner/Applicant Information
   Name: North Carolina Department of Transportation (NCDOT)
   Mailing Address: Project Development and Environmental Analysis
   1598 Mail Service Center
   Raleigh, NC 27699-1598

   Telephone Number: 919-733-3141 Fax Number: 919-733-9794
   E-mail Address: gthorpe@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: Bridge No. 75 Replacement

2. T.I.P. Project Number or State Project Number (NCDOT Only): B-3509

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

4. Location
   County: Rockingham Nearest Town: Eden
   Subdivision name (include phase/lot number): N/A
   Directions to site (include road numbers, landmarks, etc.): Bridge No. 75 on SR 3003 (West Meadow Road), over Smith River (please refer to attached maps)

5. Site coordinates, if available (UTM or Lat/Long):
   (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): Please refer to attached drawings

7. Nearest body of water (stream/river/sound/ocean/lake): Smith River

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

9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: Development in the area is industrial, commercial, and residential. Spray Industrial Historical District, a district listed on the National Register of Historic Places, is located west of Bridge No. 75.

10. Describe the overall project in detail, including the type of equipment to be used: Replace Bridge No. 75 over Smith River with a new bridge. The new bridge will be 345 feet long and 43 feet wide. The cross section includes two 14-foot travel lanes to accommodate bicycle traffic and provide 2-foot shoulders with 5.5-foot sidewalks on each side. The west approach will include two 14-foot lanes and 5-foot sidewalks. The east approach will include 14-foot travel lanes and a combination of curb and gutter and shoulder section. Construction equipment will consist of heavy duty trucks, earth moving equipment, cranes, etc.

11. Explain the purpose of the proposed work: Bridge No. 75 is considered structurally deficient and functionally obsolete. The replacement of this inadequate structure will result in safer and more efficient traffic operations.

IV. Prior Project History

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

N/A

V. Future Project Plans

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

N/A

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

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

mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts: Permanent impacts associated with this project total 0.002 acres due to the bridge bents. A temporary detour bridge and temporary work bridge will also be built on-site. The temporary work bridge will result in approximatley 0.001 acres of fill of temporary impacts to Smith River due to the bents located in the channel.

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***
N/A					

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

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

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

List the total acreage (estimated) of all existing wetlands on the property: N/A
Total area of wetland impact proposed: N/A

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)
Temp. work bridge	work bridge bents	NA	Smith River	200-300 ft.	perennial
Permanent Bridge	Bridge bents	NA	Smith River	200-300 ft.	perennial

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

** Stream names can be found on USGS topographic maps. If a stream has no name, list as UT (unnamed tributary) to the nearest downstream named stream into which it flows. USGS maps are available through the USGS at 1-800-358-9616, or online at

www.usgs.gov. Several internet sites also allow direct download and printing of USGS maps (e.g., www.topozone.com, www.mapquest.com, etc.).

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

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.)
N/A				

* 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.
In order to protect the water quality and aquatic life in the area affected by this project, the NCDOT and all potential contractors will follow BMP for the protection of Surface Waters and Bridge Demolition and Removal. A work bridge will be used instead of a causeway to reduce impacts to Smith 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.
   Mitigation is not expected to be needed for the proposed alternative.

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): N/A
   Amount of Riparian wetland mitigation requested (acres): N/A
   Amount of Non-riparian wetland mitigation requested (acres): N/A

Amount of Coastal wetland mitigation requested (acres): N/A

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.

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

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

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 ☒

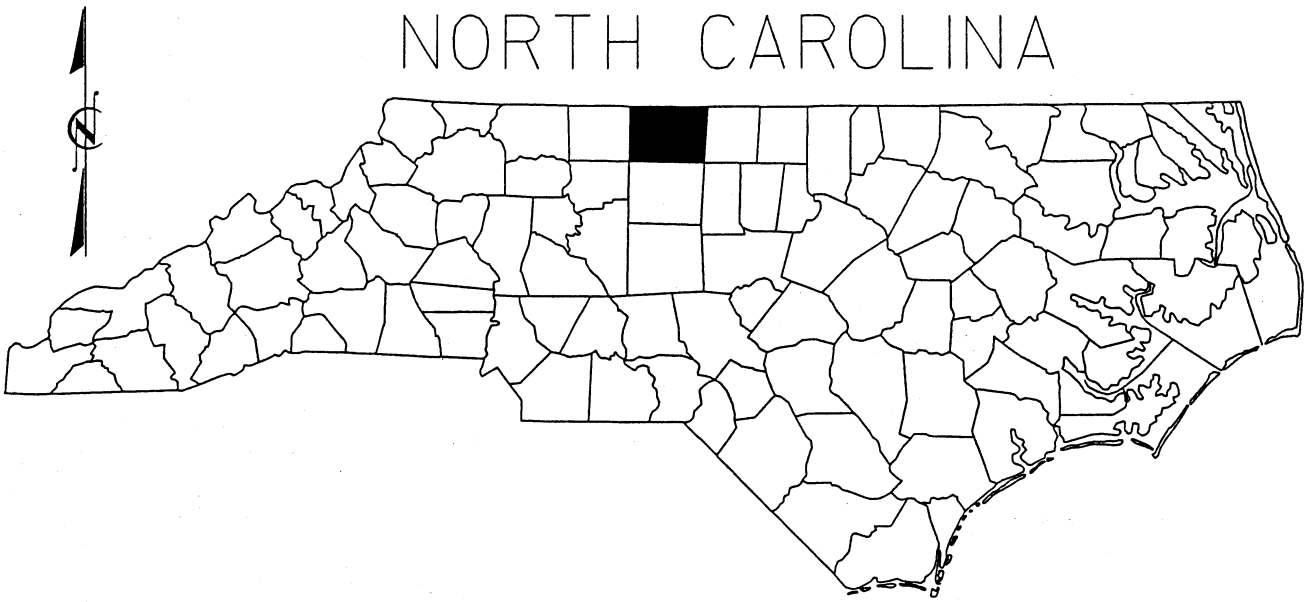
XIV. Other Circumstances (Optional):

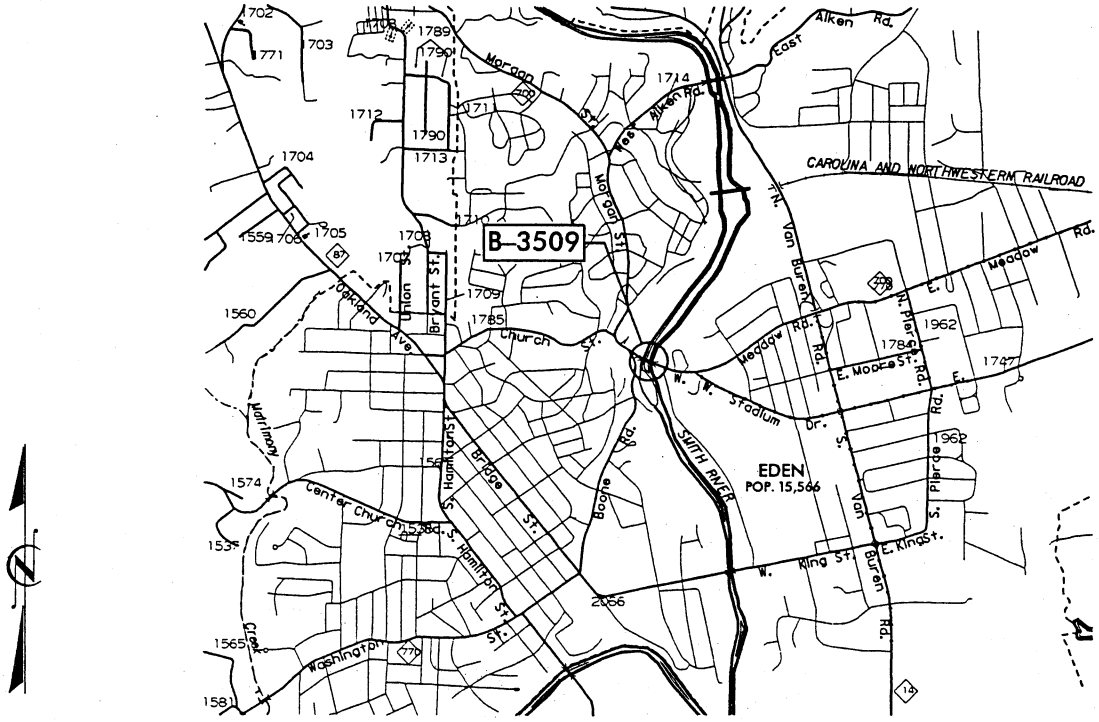
It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g.,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

6/30/05

Applicant/Agent's Signature **Date**

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





VICINITY MAPS

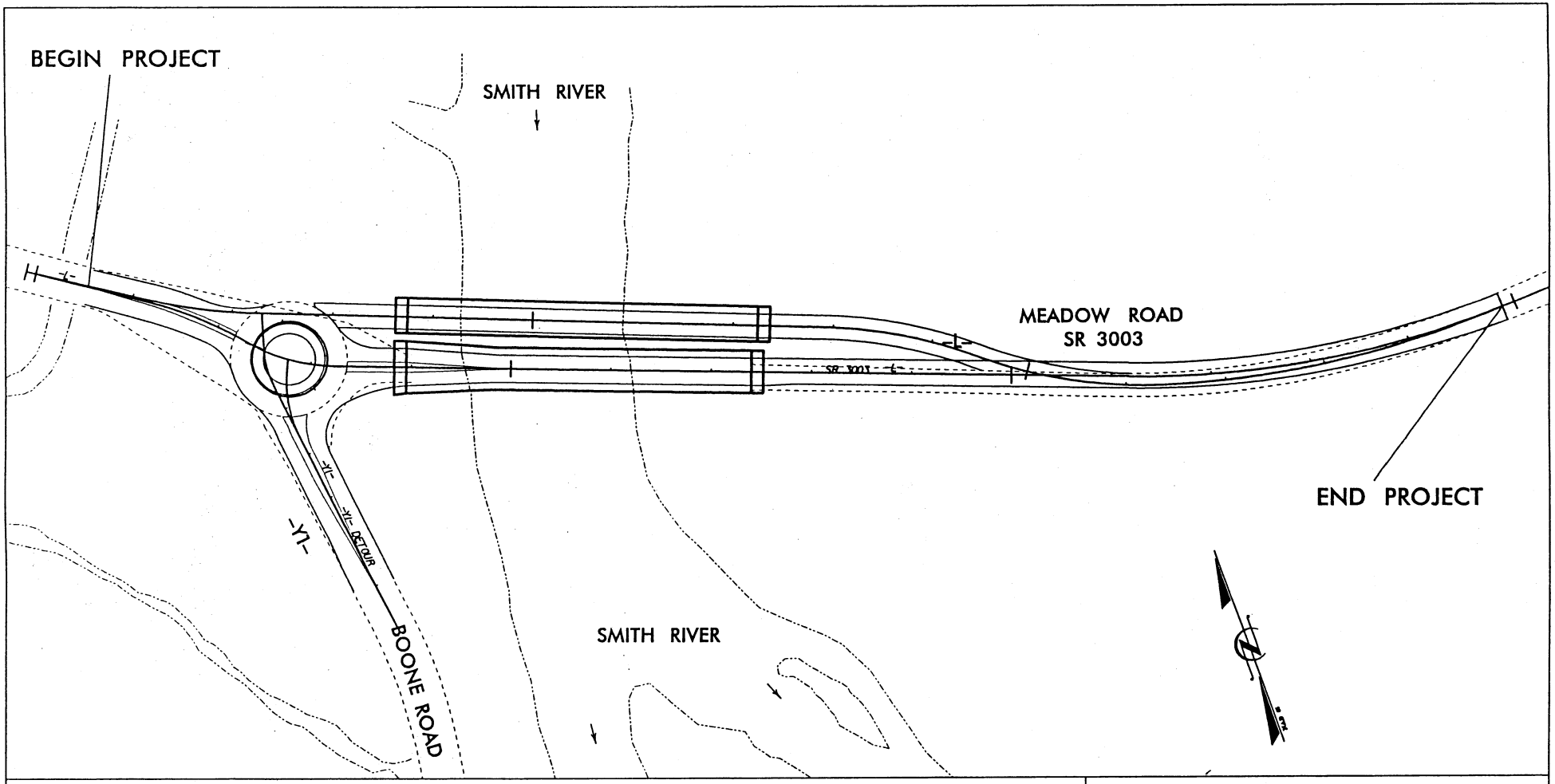
NCDOT

DIVISION OF HIGHWAYS
ROCKINGHAM COUNTY
PROJECT: 8.1511701 (B-3509)

BRIDGE NO. 75 ON SR 3003
(MEADOW RD.) OVER
SMITH RIVER

SHEET 1 OF 7

9/7/04



SITE MAP

NCDOT

DIVISION OF HIGHWAYS
ROCKINGHAM COUNTY

PROJECT: 8.1511701 (B-3509)

BRIDGE NO. 75 ON SR 3003
(MEADOW RD.) OVER
SMITH RIVER

SHEET 2 OF 7

9/7/04

PROJECT REFERENCE NO.	SHEET NO.
B-3509	4
HYDRAULICS ENGINEER	HIGHWAY DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

MULKEY ENGINEERS & CONSULTANTS

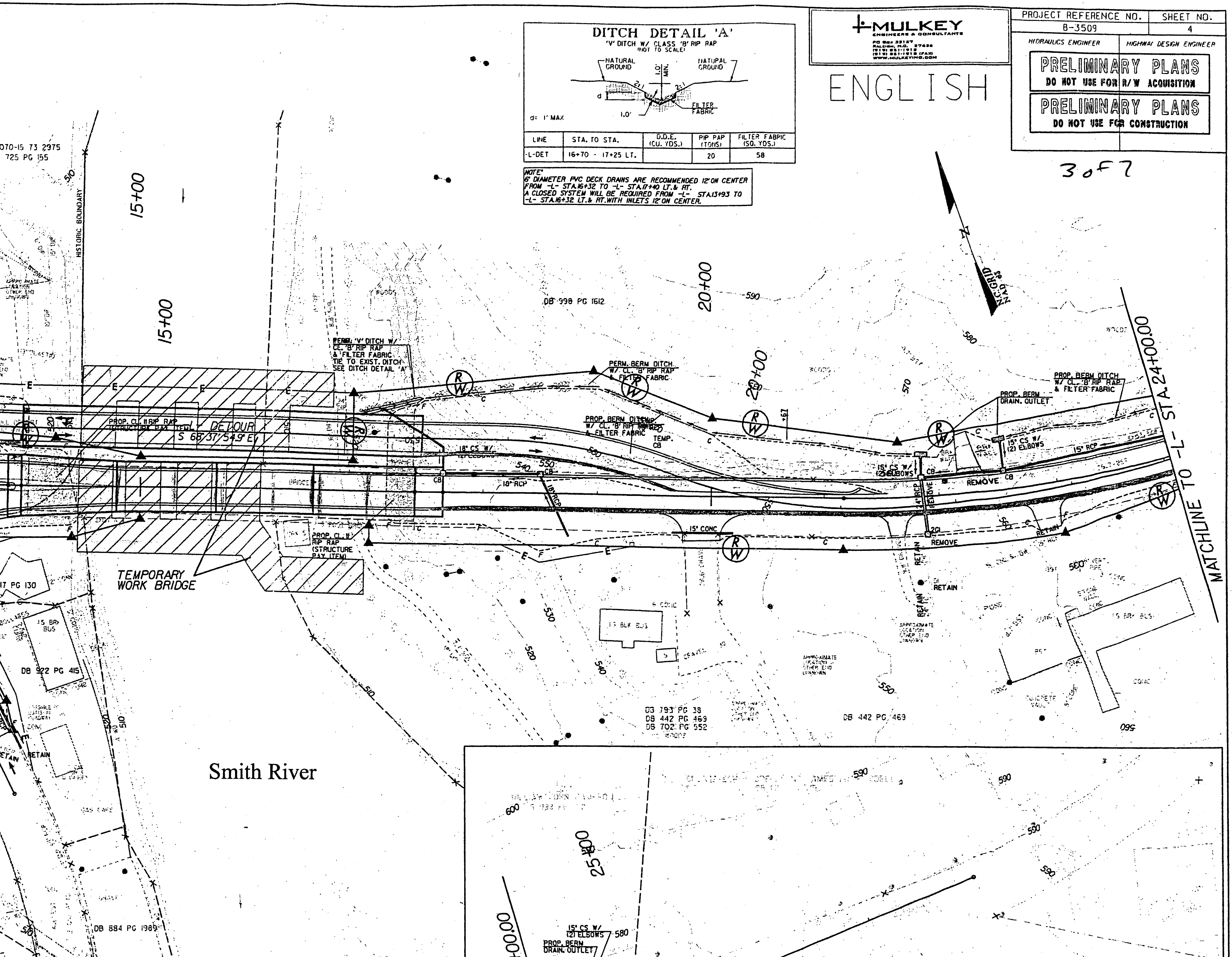
ENGLISH

3 of 7

DITCH DETAIL 'A'
'V' DITCH W/ CLASS 'B' RIP RAP (NOT TO SCALE)

LINE	STA. TO STA.	D.D.E. (CU. YDS.)	RIP RAP (TONS)	FILTER FABRIC (SQ. YDS.)
-L-DET	16+70 - 17+25 LT.		20	58

NOTE: 6" DIAMETER PVC DECK DRAINS ARE RECOMMENDED 12' ON CENTER FROM -L- STA.16+32 TO -L- STA.17+40 LT. & RT. A CLOSED SYSTEM WILL BE REQUIRED FROM -L- STA.13+93 TO -L- STA.16+32 LT. & RT. WITH INLETS 12' ON CENTER.



NATURAL GROUND
1.0' MIN.
2:1
FILTER FABRIC
d= 1' MAX
N
NC GRID NAD 83
MATCHLINE TO -L- STA.24+00.00
15+00
20+00
25+00
DB 998 PG 1612
PERM. 'V' DITCH W/ CL. 'B' RIP RAP & FILTER FABRIC TIE TO EXIST. DITCH SEE DITCH DETAIL 'A'
PERM. BERM DITCH W/ CL. 'B' RIP RAP & FILTER FABRIC
PROP. BERM DITCH W/ CL. 'B' RIP RAP & FILTER FABRIC
PROP. BERM DRAIN. OUTLET
15" CS W/ (2) ELBOWS
15" RCP
18" CS W/ (2) ELBOWS
18" RCP
24" RCP
15" CONC
TEMP. CB
REMOVE
RETAIN
PROP. CL. II RIP RAP (STRUCTURE PAY ITEM)
DETOUR
S 68°37'54.9" E
TEMPORARY WORK BRIDGE
HISTORIC BOUNDARY
Smith River
15 BLK BUS
15 BRK BUS
DB 793 PG 38
DB 442 PG 469
DB 702 PG 552
DB 442 PG 469
DB 922 PG 415
DB 884 PG 1989

REVISIONS

DITCH DETAIL 'A'

'V' DITCH W/ CLASS 'B' RIP RAP
(NOT TO SCALE)

d= 1' MAX

LINE	STA. TO STA.	D.D.E. (CU. YDS.)	RIP RAP (TONS)	FILTER FABRIC (SQ. YDS.)
-L-DET	16+70 - 17+25 LT.		20	58

NOTE:
6" DIAMETER PVC DECK DRAINS ARE RECOMMENDED 12'ON CENTER FROM -L- STA.16+32 TO -L- STA.17+40 LT.& RT.
A CLOSED SYSTEM WILL BE REQUIRED FROM -L- STA.13+93 TO -L- STA.16+32 LT.& RT.WITH INLETS 12'ON CENTER.

MULKEY
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PO Box 33127
RALEIGH, N.C. 27636
(919) 851-1312
(919) 851-1918 (FAX)
WWW.MULKEYINC.COM

PROJECT REFERENCE NO.	SHEET NO.
B-3509	4

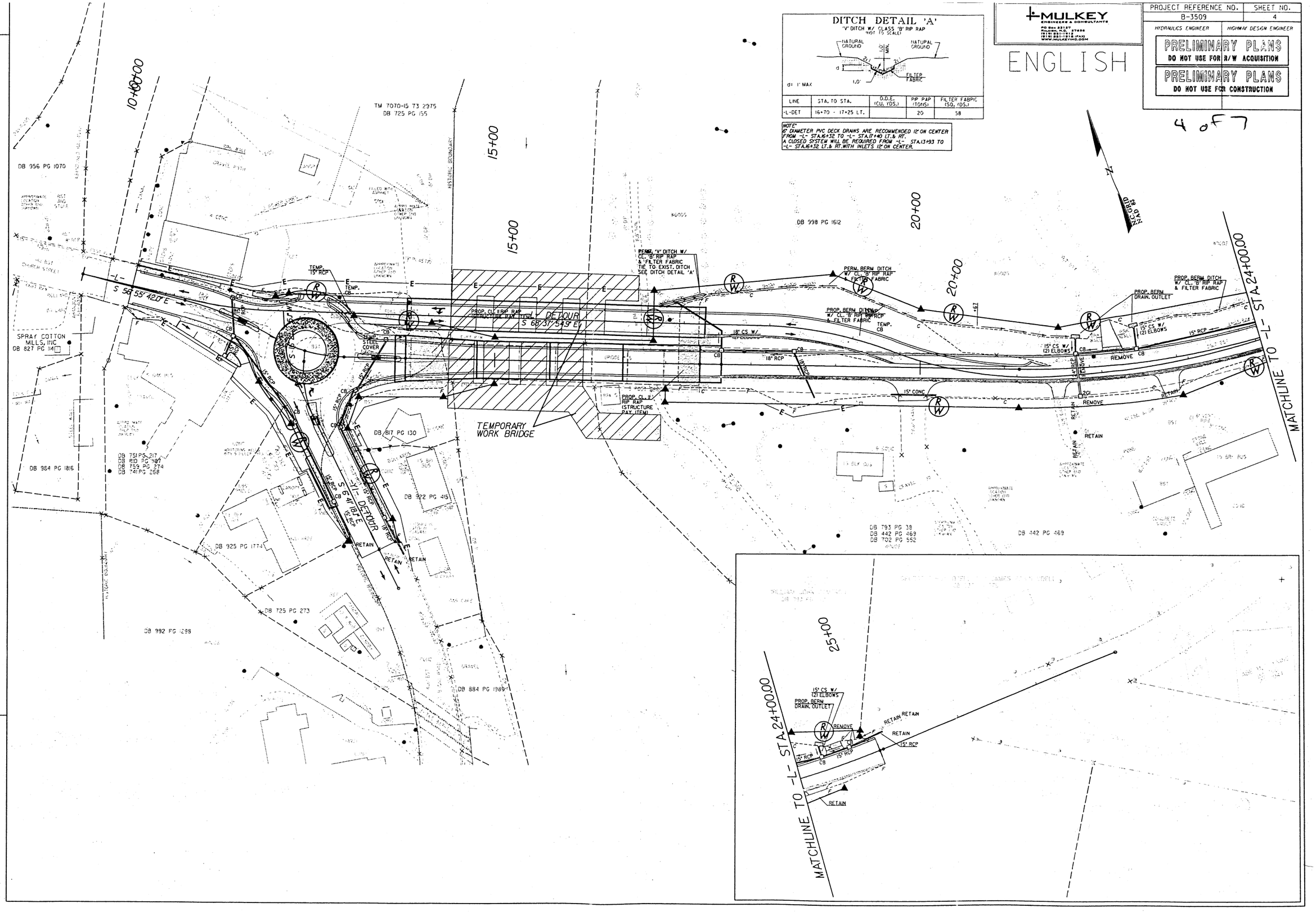
HYDRAULICS ENGINEER | HIGHWAY DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

ENGLISH

4 of 7



MULKEY
ENGINEERS & CONSULTANTS

PROJECT REFERENCE NO. | SHEET NO.
B-5709 | 5

HIGHWAY ENGINEER | HIGHWAY DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

50f7

REVISIONS

PI STA 11+60.00
EI = 533.04
VC = 100.00
K = 80
D.S. = 45 mph

EXISTING ROAD GRADE

(-) 17.0001%
(-) 16.4520%
(-) 6.9000%
(-) 2.1024%
(-) 11.5311%

NG U/S
NG D/S

6" DIA PVC DECK DRAINS TO BE PLACED 12 FT. ON-CENTER FROM -L- STA 16+32 TO EOB LT & RT. A CLOSED SYSTEM WILL BE REQUIRED FROM -L- STA 13+95 TO 16+32 WITH INLETS SPACED 12 FT. ON-CENTER.

℄ STA 15+67.5 -L-
SKEW = 90°
ELEV = 532.65'
1 @ 90' & 3 @ 85', 54" PRESTRESSED GIRDERS

REMOVE EXISTING BRIDGE

(+) 3.4394%

PROPOSED ROAD GRADE

PI STA 20+00.00
EI = 547.53
VC = 400.00
K = 238

NG U/S
NG D/S
(+) 5.1182%

LSR CLASS 'B' RIP RAP

EXIST 100 yr ELEV = 526.8

NATURAL GROUND @ ℄

PROP 50 yr ELEV = 524.6
EXIST 50 yr ELEV = 524.9
PROP 100 yr ELEV = 526.6

ELEVATIONS FROM HEC-RAS SECTION *

TEMPORARY WORK BRIDGE

MINIMUM CHORD = 510.0'

50.9' NWS (PER DTM)

DENOTES AREA TO BE EXCAVATED
DDE = 400 CY

100-YR SCOUR
OVERTOPPING SCOUR

-L-

BLEND TO EXIST.

-L- STA 24+00.00
END GRADE
EL= 568.00

-L- STA 25+00.00
END CONSTRUCTION

-L- GRADE

(+) 5.1182%

-L- EXIST GROUND

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00

PI STA 10+96.00
EI = 523.64
VC = 52.00
K = 5
D.S. = N/A

-L- ROUNDABOUT GRADE

(+) 4.4570%
(-) 6.2291%

-L- ROUNDABOUT EXIST. GROUND

-L- ROUNDABOUT POC 12+38.76 LT =
-L- ROUNDABOUT POC 10+00.00 LT =
-L- POC 12+39.90
BEGIN GRADE, EL= 528.76

PI STA 12+35.77
EI = 529.87
VC = 80.00
K = 7
D.S. = N/A

-L- ROUNDABOUT POC 10+71.75 =
-Y1- POC 10+37.95 =
EL= 525.11

-L- ROUNDABOUT POC 11+26.71 =
-L- POC 13+16.05
EL= 525.01

-L- ROUNDABOUT POC 12+38.76 LT =
-L- ROUNDABOUT POC 10+00.00 LT =
END GRADE, EL= 528.76

PI STA 12+35.77
EI = 529.87
VC = 80.00
K = 7
D.S. = N/A

-L- ROUNDABOUT

10+00 11+00 12+00

CIRCULATORY ROADWAY

PI STA 11+20.00
EI = 521.14
VC = 100.00
K = 20
D.S. = 20 mph

-Y1- STA 10+37.95 =
-L- ROUNDABOUT STA 10+77.75
(INSIDE EOP)
EL= 525.11

-Y1- STA 10+88.41 =
-L- ROUNDABOUT STA 10+75.20
(OUTSIDE EOP)
BEGIN GRADE, EL= 524.95

BLEND TO EXIST.

-Y1- GRADE

(-) 11.0753%
(-) 16.1893%
(-) 1.2500%

-Y1- EXIST. GROUND

-Y1- STA 11+15.00
END GRADE, EL= 520.45

-Y1- STA 12+50.00
END CONSTRUCTION

-Y1-

10+00 11+00 12+00 13+00

5/7/2014
C:\Projects\B5709_PDP_PFL_Permit.dgn
e3503 Pw

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
3	CAMERON, WILLIAM JOHN	351 MEADOW RD. EDEN, NC 27288
4	SPRAY COTTON MILL	P. O. BOX 3207 EDEN, NC 27289

NCDOT

DIVISION OF HIGHWAYS
ROCKINGHAM COUNTY

PROJECT: 8.1511701 (B-3509)

BRIDGE NO. 75 ON SR 3003
(MEADOW RD.) OVER
SMITH RIVER

9/10/04

WETLANDS IMPACT PERMIT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation In Wetlands (ac)	Mechanized Clearing (Method III) (ac)	Fill In SW (Natural) (ac)	Fill In SW (Pond) (ac)	Temp. Fill In SW (ac)	Existing Channel Impacted (ft)	Natural Stream Design (ft)
1	15+67 -L-	345' 54" PRESTRESSED GIRDER	0	0	0	0	0	0	0	0	0
TOTALS:			0	0	0	0	0	0	0	0	0

Bridge bents in Water - 86 ft²
Temp Work Bridge/Detour - 0.001 Ac

NCDOT

DIVISION OF HIGHWAYS
ROCKINGHAM COUNTY
PROJECT 8.1511701 (B-3509)
BRIDGE NO.75 ON SR 3003
(MEADOW RD.) OVER
SMITH RIVER

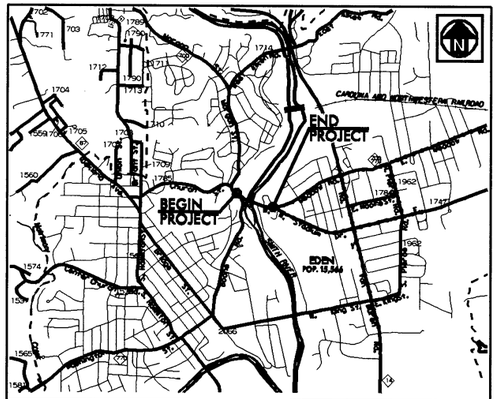
SHEET 7 OF 7 9/13/04

Form Revised 3/22/01

TIP: B-3509

CONTRACT: C201290

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP
(NOT TO SCALE)

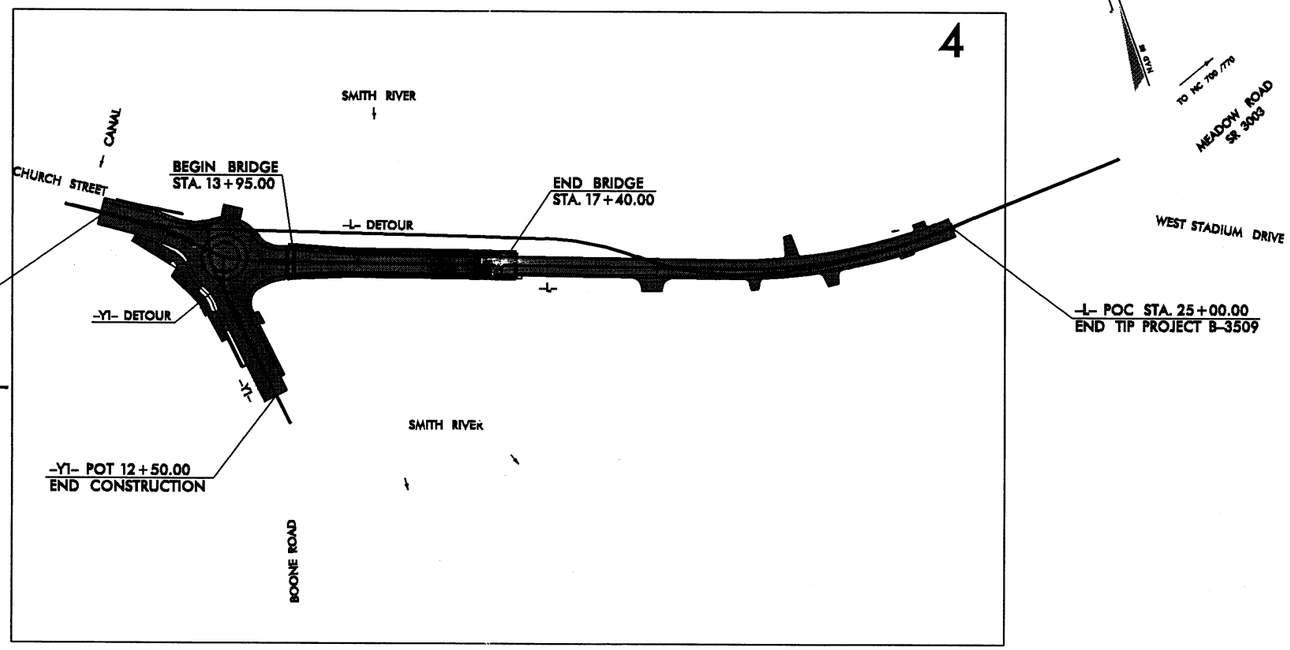
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROCKINGHAM COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3509	1	
T.I.P. NO.	F.A. PROJ. NO.	DESCRIPTION	
33122.1.1	BRSTP-700(1)	P.E.	
33122.2.1	BRSTP-700(1)	R/W, UTIL	

LOCATION: BRIDGE NO. 75 OVER SMITH RIVER AND APPROACHES ON SR 3003 (MEADOW ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURE, AND TEMPORARY SIGNAL



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GRAPHIC SCALE

PLANS
25' 0 50'

PROFILE (HORIZONTAL)
25' 0 50'

PROFILE (VERTICAL)
5' 0 10'

DESIGN DATA

ADT 2005 = 13,985
ADT 2025 = 17,835
DHV = 12%
D = 60%
T = 4% *
V = 40 mph

* (Duals=3%+TTST=1%)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-3509 = 0.207 MILE

LENGTH STRUCTURES TIP PROJECT B-3509 = 0.065 MILE

TOTAL LENGTH TIP PROJECT B-3509 = 0.272 MILE

Prepared in the Office of:
Mulkey Engineers & Consultants
FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: SEPTEMBER 30, 2004

LETTING DATE: SEPTEMBER 20, 2005

J. R. BANKS
MULKEY E & C
PROJECT MANAGER

T. S. HAYES, PE
MULKEY E & C
PROJECT DESIGN ENGINEER

NCDOT CONTACT: CATHY S. HOUSER, P.E.
ROADWAY DESIGN - PROJECT ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: PE

ROADWAY DESIGN

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SIGNATURE: PE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PE
STATE HIGHWAY ENGINEER - DESIGN

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED FOR
DIVISION ADMINISTRATOR DATE

STREET
DATE
FILE

MULKEY ENGINEERS & CONSULTANTS

PROJECT REFERENCE NO.	SHEET NO.
B-3509	2
PAVEMENT DESIGN ENGINEER	HIGHWAY DESIGN ENGINEER

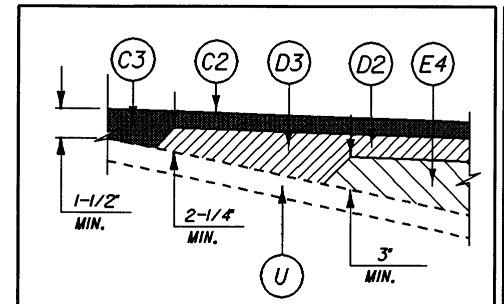
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

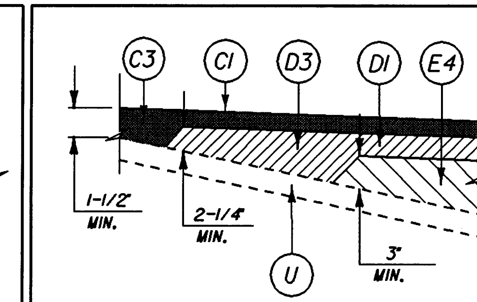
PAVEMENT SCHEDULE

A1	7" JOINTED CONCRETE PAVEMENT
C1	PROPOSED APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD
C2	PROPOSED APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD IN EACH OF 2 LAYERS
C3	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YARD, PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1½" OR GREATER THAN 2 ¼" IN DEPTH
D1	PROPOSED APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YARD
D2	PROPOSED APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD
D3	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 ¼" OR GREATER THAN 4" IN DEPTH.
E1	PROPOSED APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD
E2	PROPOSED APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YARD
E3	PROPOSED APPROX. 7" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YARD IN EACH OF 2 LAYERS
E4	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 ½" IN DEPTH.
J1	8" AGGREGATE BASE COURSE
J2	VARIABLE DEPTH AGGREGATE BASE COURSE
R1	2'- 6" CONCRETE CURB AND GUTTER
R2	SPECIAL 2'- 6" CONCRETE CURB AND GUTTER
R3	SPECIAL 1' - 6" CONCRETE CURB
R4	SPECIAL 8" x 24" CONCRETE CURB
R5	5" MONOLITHIC CONCRETE ISLAND
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W1	WEDGING (SEE WEDGING DETAIL)
W2	WEDGING (SEE WEDGING DETAIL)

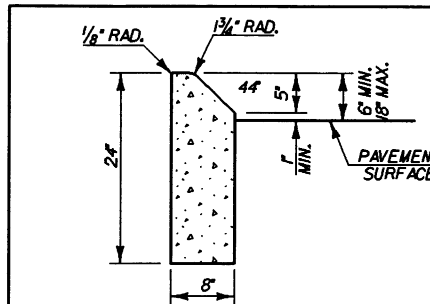
NOTE: ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE SHOWN.



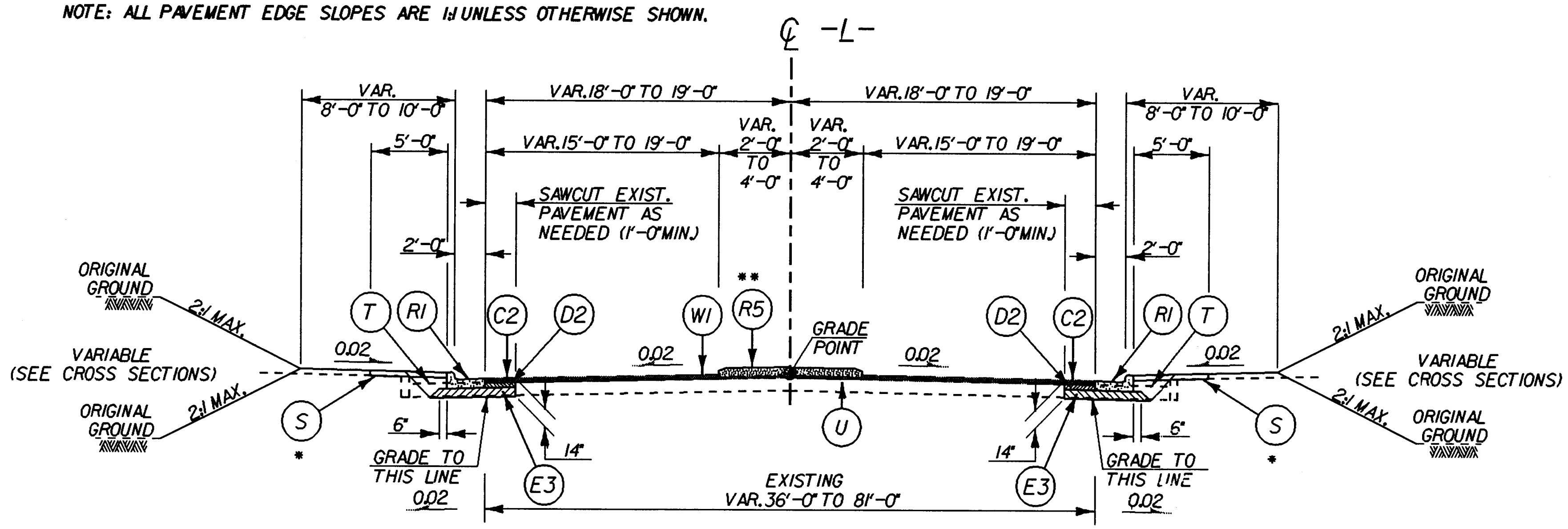
WEDGING DETAIL (W1)



WEDGING DETAIL (W2)



DETAIL OF SPECIAL 8" X 24" CONCRETE CURB
(SEE PLANS FOR LOCATIONS)
SEE RDWY. STD. DRAWING 846.01, SHEET 1 OF 3, FOR GENERAL NOTES

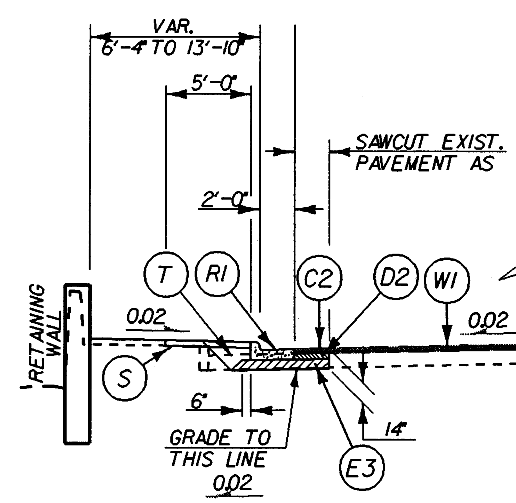


TYPICAL SECTION NO. 1

* SIDEWALK AT LOCATIONS NOTED IN PLANS

** 5" MONO. CONCRETE ISLAND AT LOCATIONS NOTED IN PLANS

TRANSITION FROM EXISTING TO T.S. No. 1 FROM -L- STA. 10+60.00 TO -L- STA. 11+00.00
USE TYPICAL SECTION No. 1 AS FOLLOWS:
FROM -L- STA. 11+00.00 TO -L- STA. 12+19.78
FROM -L- STA. 13+36.31 TO -L- STA. 13+95.00 (BEGIN BRIDGE)



INSET NO. 1

TO BE USED IN CONJUNCTION WITH TYPICAL SECTION NO. 1 AS FOLLOWS :
FROM -L- STA. 10+79.50 TO -L- STA. 11+85.00 LT.

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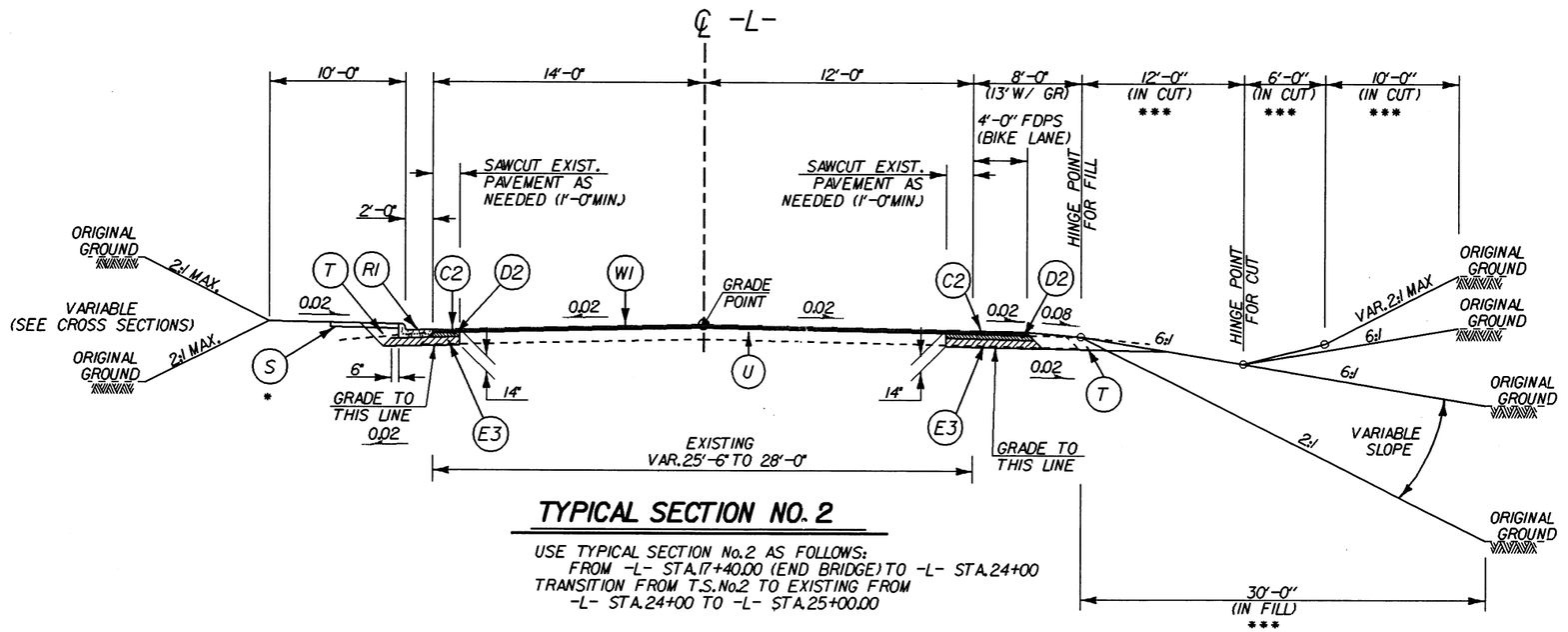
RALEIGH, NC 27626
WWW.MULKEYENGR.COM

PROJECT REFERENCE NO.	SHEET NO.
B-3509	2-A
PAVEMENT DESIGN ENGINEER	HIGHWAY DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS



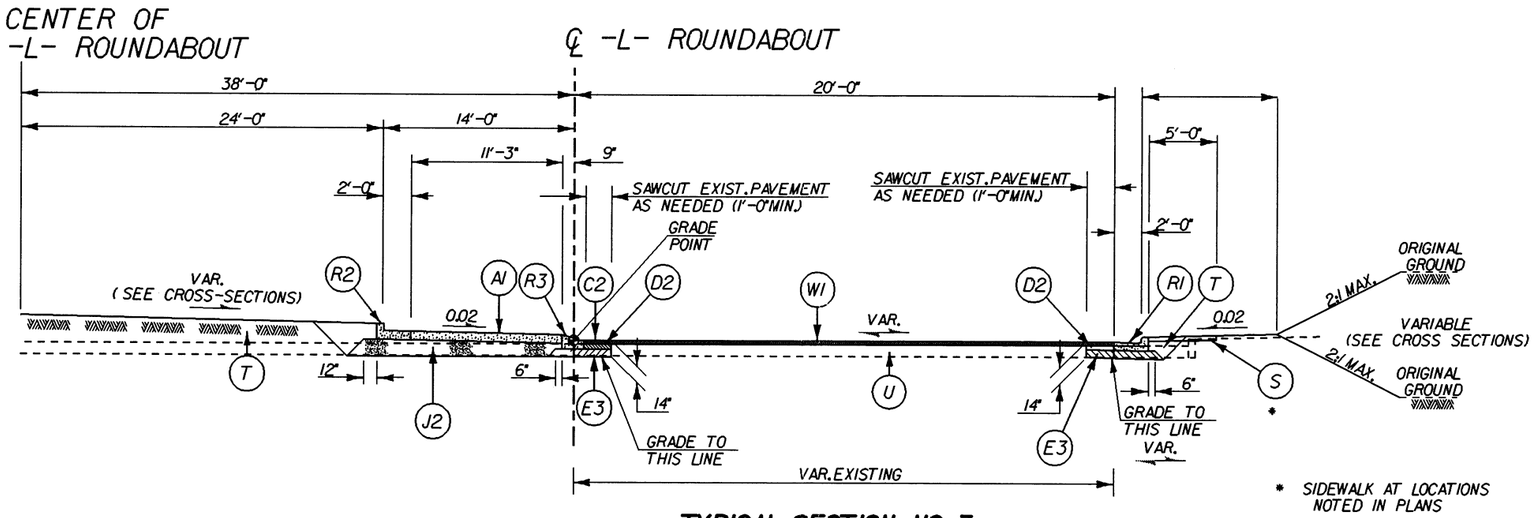
TYPICAL SECTION NO. 2

USE TYPICAL SECTION No.2 AS FOLLOWS:
FROM -L- STA.17+40.00 (END BRIDGE) TO -L- STA.24+00
TRANSITION FROM T.S. No.2 TO EXISTING FROM
-L- STA.24+00 TO -L- STA.25+00.00

*** WHEN THESE DISTANCES INDICATE SLOPES OUTSIDE THE LIMITS OF 6:1 TO 2:1, THE DISTANCE BECOMES VARIABLE AND THE MAXIMUM OR MINIMUM SLOPE MAINTAINED.

A1	7" JOINTED CONC. PAVEMENT
C1	1½" S9.5C
C2	3" S9.5C
C3	VAR. DEPTH S9.5C
D1	3" I19.0C
D2	4" I19.0C
D3	VAR. DEPTH I19.0C
E1	4" B25.0C
E2	5" B25.0C
E3	7" B25.0C
E4	VAR. DEPTH B25.0C
J1	8" ABC
J2	VAR. DEPTH ABC
R1	2'-6" CONC. C&G
R2	SPECIAL 2'-6" CONC. C&G
R3	SPECIAL 1'-6" CONC. CURB
R4	SPECIAL 8" x 24" CONC. CURB
R5	5" MONO. CONC. ISLAND
S	4' CONC. SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W1	WEDGING
W2	WEDGING

NOTE:
1. SEE SHEET 2 FOR DETAILED DESCRIPTION OF PAVEMENT SCHEDULE.
2. ALL PAVEMENT EDGES ARE ⊥ UNLESS OTHERWISE NOTED.



TYPICAL SECTION NO. 3

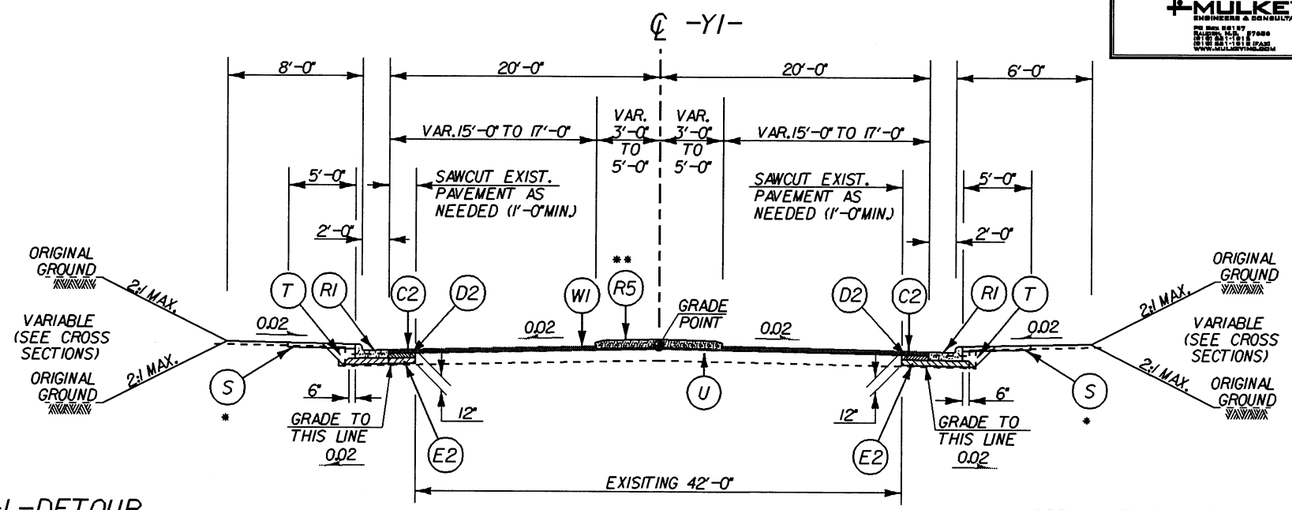
USE TYPICAL SECTION No.3 AS FOLLOWS:
FROM -L-ROUNDABOUT STA.10+00.00 TO -L-ROUNDABOUT STA.12+38.76

* SIDEWALK AT LOCATIONS NOTED IN PLANS

MULKEY
ENGINEERS & CONSULTANTS

PROJECT REFERENCE NO.	SHEET NO.
B-3509	2-B
PAVEMENT DESIGN ENGINEER	HIGHWAY DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



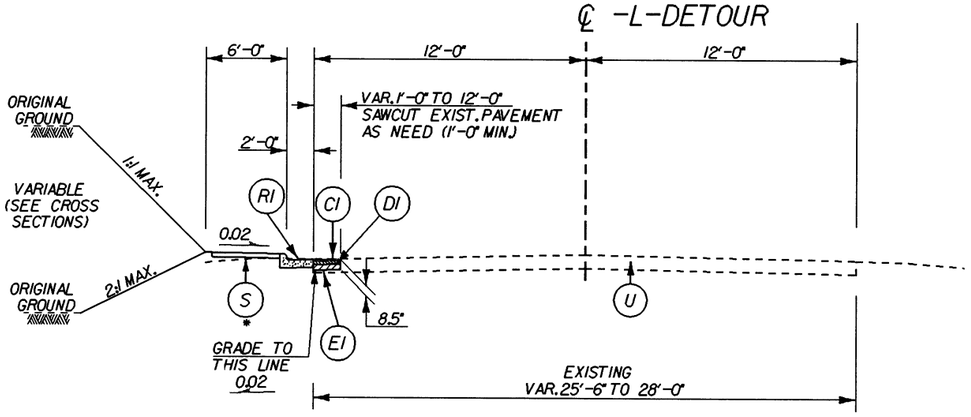
TYPICAL SECTION NO. 4

USE TYPICAL SECTION No.4 AS FOLLOWS:

FROM -Y1- STA.10+58.41 TO -Y1- STA.11+75.00
TRANSITION FROM T.S.No.3 TO EXISTING FROM
-Y1- STA.11+75.00 TO -Y1- STA.12+50.00

* SIDEWALK AT LOCATIONS NOTED IN PLANS

** 5" MONO.CONCRETE ISLAND AT LOCATIONS NOTED IN PLANS



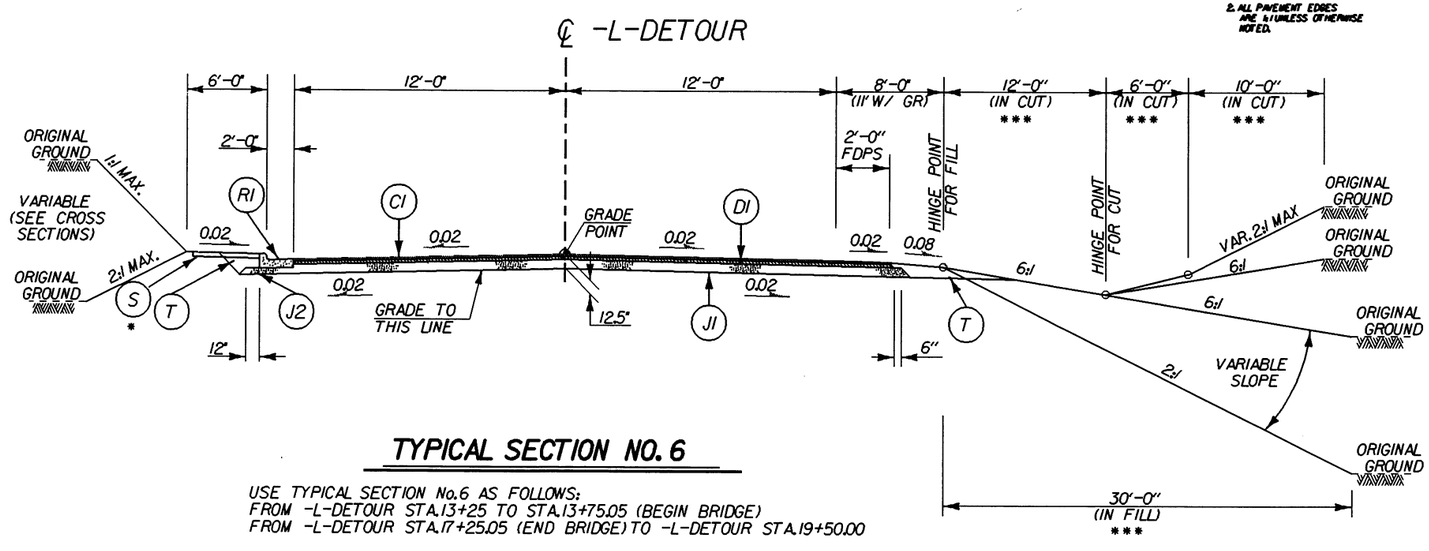
* SIDEWALK AT LOCATIONS NOTED IN PLANS

TYPICAL SECTION NO. 5

USE TYPICAL SECTION No.5 AS FOLLOWS:
TRANSITION FROM EXISTING TO T.S.No.5 FROM
-L-DETOUR STA.11+92.03 TO -L-DETOUR STA.12+76.63
FROM -L-DETOUR STA.12+76.63 TO -L-DETOUR STA.13+25
FROM -L-DETOUR STA.19+50 TO -L-DETOUR STA.20+00.00
TRANSITION FROM T.S.No.5 TO EXISTING FROM
-L-DETOUR STA.20+00.00 TO -L-DETOUR STA.21+41.72

A1	7" JOINTED CONC.PAVEMENT
C1	1½" S9.5C
C2	3" S9.5C
C3	VAR.DEPTH S9.5C
D1	3" 119.0C
D2	4" 119.0C
D3	VAR.DEPTH 119.0C
E1	4" B25.0C
E2	5" B25.0C
E3	7" B25.0C
E4	VAR.DEPTH B25.0C
J1	8" ABC
J2	VAR.DEPTH ABC
R1	2'-6" CONC.C&G
R2	SPECIAL 2'-6" CONC.C&G
R3	SPECIAL 1'-6" CONC.CURB
R4	SPECIAL 8" x 24" CONC.CURB
R5	5" MONO. CONC.ISLAND
S	4" CONC.SIDEWALK
T	EARTH MATERIAL
U	EXIST.PAVEMENT
W1	WEDGING
W2	WEDGING

NOTE:
1. SEE SHEET 2 FOR DETAILED DESCRIPTION OF PAVEMENT SCHEDULE.
2. ALL PAVEMENT EDGES ARE 6:1 UNLESS OTHERWISE NOTED.



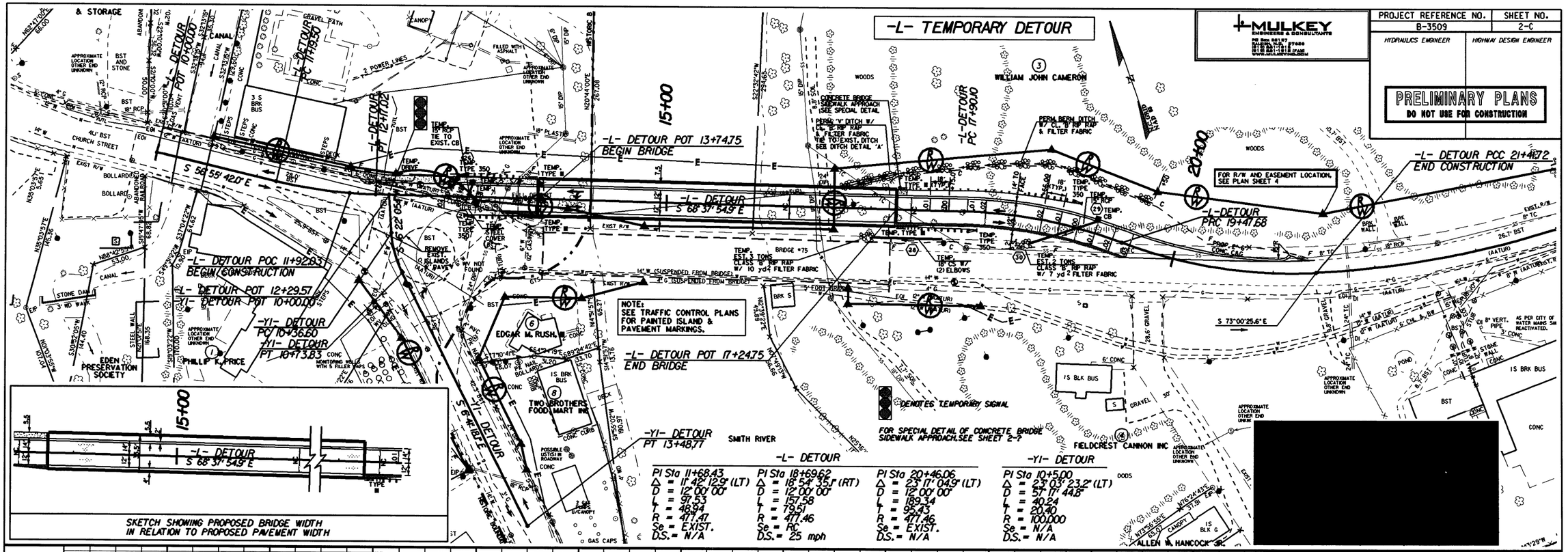
TYPICAL SECTION NO. 6

USE TYPICAL SECTION No.6 AS FOLLOWS:
FROM -L-DETOUR STA.13+25 TO STA.13+75.05 (BEGIN BRIDGE)
FROM -L-DETOUR STA.17+25.05 (END BRIDGE) TO -L-DETOUR STA.19+50.00

*** WHEN THESE DISTANCES INDICATE SLOPES OUTSIDE THE LIMITS OF 6:1 TO 2:1, THE DISTANCE BECOMES VARIABLE AND THE MAXIMUM OR MINIMUM SLOPE MAINTAINED.

REVISIONS

DATE
BY



PROJECT REFERENCE NO.	SHEET NO.
B-3509	2-C

HYDRAULICS ENGINEER

HIGHWAY DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

MULKEY
ENGINEERS & CONSULTANTS

-L- TEMPORARY DETOUR

[redacted]

-L- DETOUR			-YI- DETOUR
PI Sta 11+68.43	PI Sta 18+69.62	PI Sta 20+46.06	PI Sta 10+5.00
Δ = 11°42' 12.9" (LT)	Δ = 18°54' 35.1" (RT)	Δ = 23°17' 04.9" (LT)	Δ = 23°03' 23.2" (LT)
D = 12°00' 00"	D = 12°00' 00"	D = 12°00' 00"	D = 57°17' 44.8"
L = 97.53	L = 157.58	L = 189.34	L = 40.24
T = 48.94	T = 79.51	T = 95.43	T = 20.40
R = 477.47	R = 477.46	R = 477.46	R = 100.000
Se = EXIST.	Se = RC	Se = EXIST.	Se = N/A
D.S.= N/A	D.S.= 25 mph	D.S.= N/A	D.S.= N/A

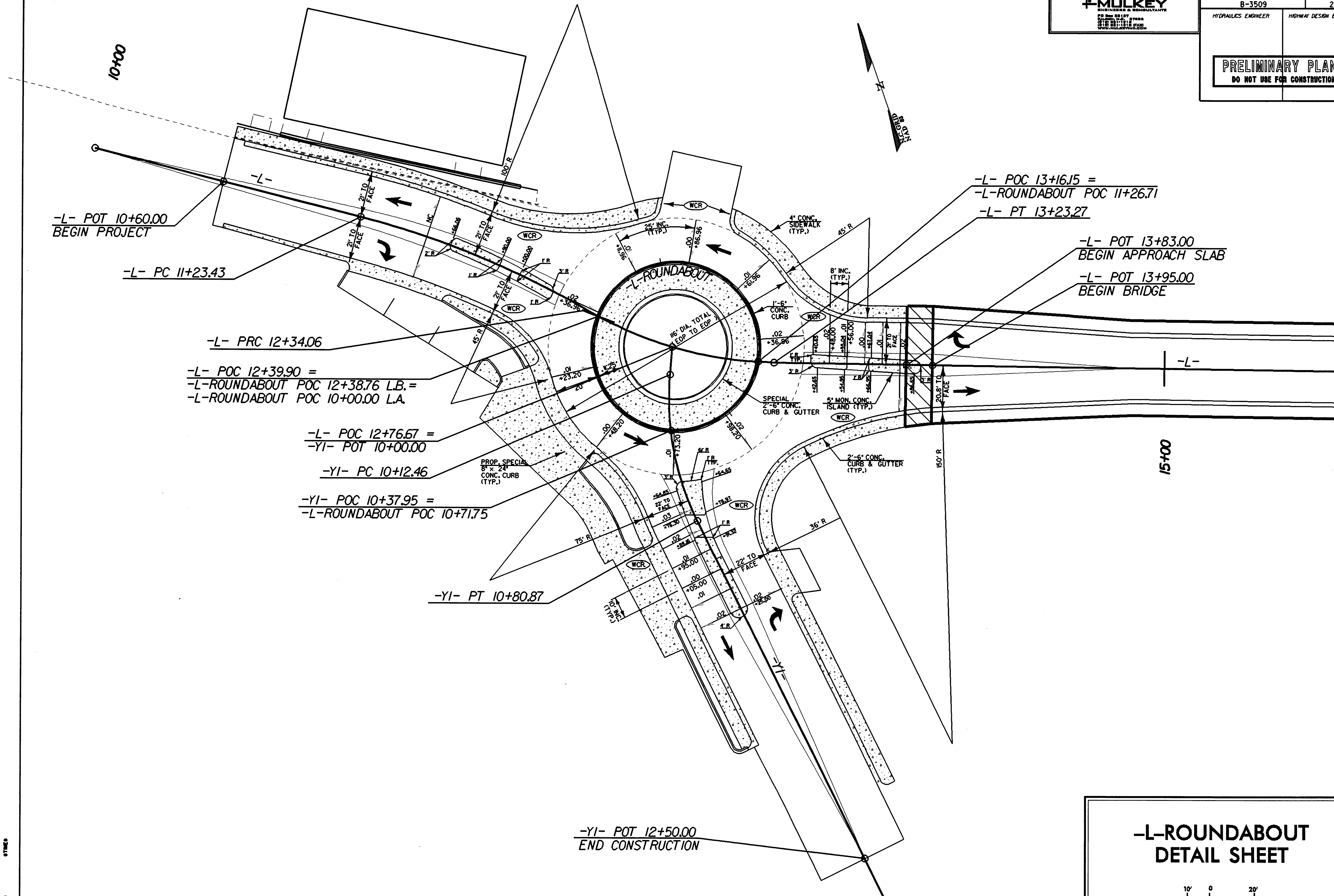
-L- DETOUR STA. 15+49.75

DRAINAGE AREA	538 SQ. MILES
DESIGN FREQUENCY	10 YRS
DESIGN DISCHARGE	49000 CFS
DESIGN H.W. ELEV.	520.8'
Q100 DISCHARGE	80000 CFS
Q100 H.W. ELEV.	526.5'
OVERTOPPING FREQUENCY	50+ YR
OVERTOPPING DISCHARGE	70500 CFS
OVERTOPPING ELEV.	524.8'

MULKEY ENGINEERS & CONSULTANTS

PROJECT REFERENCE NO.	SHEET NO.
B-3509	2-D
HYDRAULICS ENGINEER	HIGHWAY DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



10+00
15+00
-L-
-Y1-
-L- POT 10+60.00
BEGIN PROJECT
-L- PC 11+23.43
-L- PRC 12+34.06
-L- POC 12+39.90 =
-L-ROUNDABOUT POC 12+38.76 L.B.=
-L-ROUNDABOUT POC 10+00.00 L.A.
-L- POC 12+76.67 =
-Y1- POT 10+00.00
-Y1- PC 10+12.46
-Y1- POC 10+37.95 =
-L-ROUNDABOUT POC 10+71.75
-Y1- PT 10+80.87
-Y1- POT 12+50.00
END CONSTRUCTION
-L- POC 13+16.15 =
-L-ROUNDABOUT POC 11+26.71
-L- PT 13+23.27
-L- POT 13+83.00
BEGIN APPROACH SLAB
-L- POT 13+95.00
BEGIN BRIDGE
-L-ROUNDABOUT
116' DIA. TOTAL EOP TO EOP
1'-6" CONC. CURB
SPECIAL 2'-6" CONC. CURB & GUTTER
5" MON. CONC. ISLAND (TYP.)
2'-6" CONC. CURB & GUTTER (TYP.)
4" CONC. SIDEWALK (TYP.)
PROP. SPECIAL 8" x 24" CONC. CURB (TYP.)
25' INC. (TYP.)
8' INC. (TYP.)
10' INC. (TYP.)
21' TO FACE
22' TO FACE
20.8' TO FACE
100' R
45' R
75' R
36' R
150' R
WCR
N

-L-ROUNDABOUT DETAIL SHEET

PROJECT REFERENCE NO.	SHEET NO.
B-3509	4

HYDRAULICS ENGINEER — HIGHWAY DESIGN ENGINEER

MULKEY ENGINEERS & CONSULTANTS

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-L-

PI Sta 11+79.10
Δ = 15° 50' 47.7" (RT)
D = 14° 19' 26.2"
L = 110.63
T = 55.67
R = 400.000
Se = NC
D.S. = N/A

PI Sta 12+79.66
Δ = 29° 12' 21.3" (LT)
D = 32° 44' 25.6"
L = 89.20
T = 45.59
R = 175.000
Se = NC
D.S. = N/A

PI Sta 23+13.50
Δ = 23° 12' 51.2" (LT)
D = 06° 00' 00"
L = 386.90
T = 196.14
R = 954.930
Se = .04
D.S. = 40 mph

-L-ROUNDABOUT

PI Sta 10+52.48
Δ = 108° 10' 56.7" (LT)
D = 150° 46' 42.1"
L = 71.75
T = 52.48
R = 38.00
Se = .02
D.S. = N/A

PI Sta 11+05.29
Δ = 82° 52' 28.0" (LT)
D = 150° 46' 42.1"
L = 54.96
T = 33.55
R = 38.00
Se = .02
D.S. = N/A

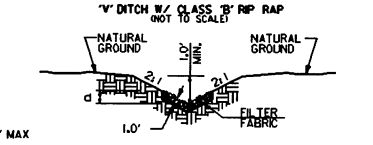
PI Sta 15+19.32
Δ = 168° 56' 35.2" (LT)
D = 150° 46' 42.1"
L = 112.05
T = 392.60
R = 38.00
Se = .02
D.S. = N/A

-Y1-

PI Sta 10+47.54
Δ = 31° 21' 21.5" (LT)
D = 45° 50' 11.8"
L = 68.41
T = 35.08
R = 125.000
Se = NC
D.S. = N/A

DITCH DETAIL 'A'

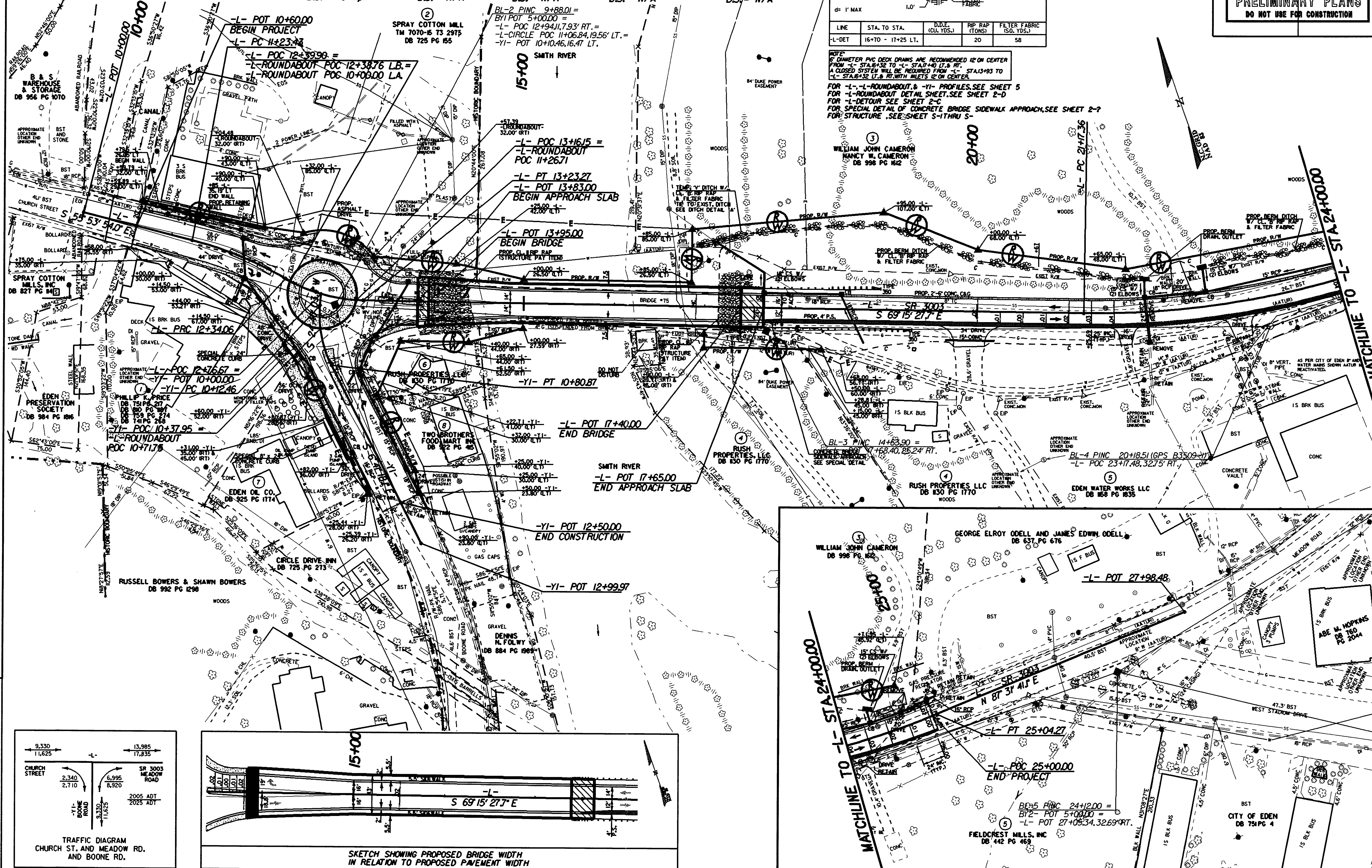
"V" DITCH W/ CLASS 'B' RIP RAP (NOT TO SCALE)



LINE	STA. TO STA.	D.D.E. (CU. YDS.)	RIP RAP (TONS)	FILTER FABRIC (SQ. YDS.)
-L-DET	16+70 - 17+25 LT.		20	58

NOTE:
6" DIAMETER PVC DECK DRAINS ARE RECOMMENDED 12' ON CENTER FROM -L- STA16+32 TO -L- STA17+40 LT.& RT.
A CLOSED SYSTEM WILL BE REQUIRED FROM -L- STA13+93 TO -L- STA16+32 LT.& RT. WITH INLETS 12' ON CENTER.

FOR -L-,-L-ROUNDABOUT,& -Y1- PROFILES, SEE SHEET 5
FOR -L-ROUNDABOUT DETAIL SHEET, SEE SHEET 2-D
FOR -L-DETOUR SEE SHEET 2-C
FOR SPECIAL DETAIL OF CONCRETE BRIDGE SIDEWALK APPROACH, SEE SHEET 2-?
FOR STRUCTURE, SEE SHEET S-1 THRU S-



REVISIONS

R/W REVISION DATE: PARCELS 4, 5, AND 6; CHANGES TO THE PROPERTY OWNERS AND DEED REFERENCES
R/W REVISION DATE: PARCEL 1; ADDED DRIVEWAY
R/W REVISION DATE: PARCEL 3 & 5; REVISED PROP. ROW TO TIE TO REVISED EXIST. ROW

MULKEY
ENGINEERS & CONSULTANTS

PROJECT REFERENCE NO.	SHEET NO.
B-3509	5

HYDRAULICS ENGINEER | HIGHWAY DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

TBM #2 -L- STA.14+36.83, 48.70' RT.
RAILROAD SPIKE IN BASE OF 18" DOUBLE ELM
ELEV.= 558.26'

-L- STA. 15+67.5

DRAINAGE AREA	538 SQ. MILES
DESIGN FREQUENCY	50 YRS
DESIGN DISCHARGE	69000 CFS
DESIGN H.W. ELEV.	529.6
0100 DISCHARGE	80000 CFS
0100 H.W. ELEV.	526.6'
OVERTOPPING FREQUENCY	50+ YR
OVERTOPPING DISCHARGE	73700 CFS
OVERTOPPING ELEV.	525.2'

CL -L- STA.15+67.5
SKEW = 90°
ELEV.= 532.65'
1090.3@85.54' PRESTRESSED GIRDERS

-L- STA.10+60.00
BEGIN CONSTRUCTION
EL.= 539.31

PI STA 11+60.00
EI = 533.04
VC = 100.00
K = 80
D.S. = 45 mph

-L- STA.11+39.00
BEGIN GRADE
EL.= 537.65

-L- GRADE

(-) 7.000%

EXIST. GROUND

(-) 6.450%

(-) 2.102%

CIRCULATORY ROADWAY

CENTRAL ISLAND

-L- STA.12+19.18
-L- ROUNDABOUT
(OUTSIDE EOP)
END GRADE EL.= 529.18

-L- STA.12+39.90
-L- ROUNDABOUT
(INSIDE EOP)
EL.= 528.76

-L- STA.12+37.76
-L- STA.14+00.00

-L- STA.13+16.15
-L- ROUNDABOUT
(INSIDE EOP)
EL.= 525.07

-L- STA.13+36.31
-L- ROUNDABOUT
(OUTSIDE EOP)
BEGIN GRADE EL.= 524.70

-L- STA.14+28.52
-L- STA.15+00.00

(+) 5.377%

(+) 5.439%

PI STA 20+00.00
EI = 547.33
VC = 100.00
K = 238
D.S. = 80 mph

(+) 5.182%

(+) 3.409%

-L- GRADE

EXIST. GROUND

BLEND TO EXIST.

-L- STA.21+00.00
END GRADE
EL.= 558.00

-L- STA.21+50.00
END CONSTRUCTION

(+) 5.182%

-L- GRADE

EXIST. GROUND

-L-

PI STA 10+96.00
EI = 563.64
VC = 52.00
K = 5
D.S. = N/A

-L- ROUNDABOUT GRADE

(+) 4.457%

(-) 6.290%

-L- ROUNDABOUT EXIST. GROUND

PI STA 12+35.77
EI = 529.87
VC = 80.00
K = 7
D.S. = N/A

-L- ROUNDABOUT POC 10+70.75
-L- ROUNDABOUT POC 12+39.90
-L- ROUNDABOUT BEGIN GRADE EL.= 529.76

-L- ROUNDABOUT POC 11+28.87
-L- ROUNDABOUT EL.= 525.07

-L- ROUNDABOUT POC 12+38.76
-L- ROUNDABOUT POC 13+00.00
-L- ROUNDABOUT END GRADE EL.= 529.76

-L-ROUNDABOUT

CIRCULATORY ROADWAY

PI STA 11+20.00
EI = 521.14
VC = 100.00
K = 20
D.S. = 20 mph

-Y1- STA.10+73.95
-Y1- ROUNDABOUT
(INSIDE EOP)
EL.= 525.15

-Y1- STA.10+94.11
-Y1- ROUNDABOUT
(OUTSIDE EOP)
BEGIN GRADE EL.= 524.95

BLEND TO EXIST.

-Y1- STA.11+39.20
END GRADE EL.= 520.45

-Y1- STA.12+50.00
END CONSTRUCTION

(-) 12.753%

(-) 7.693%

-Y1- GRADE

(-) 1.425%

-Y1- EXIST. GROUND

-Y1-

Rockingham County
Bridge No. 75 on SR 3003 (West Meadow Road)
over Smith River
Federal Aid Project BRSTP-700(1)
State Project 8.1511701
W.B.S. 33122.1.1
T.I.P. No. B-3509

CATEGORICAL EXCLUSION

AND

FINAL SECTION 4(F) EVALUATION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

APPROVED:

06/08/04
DATE

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

6/18/04
DATE

for John F. Sullivan, III, P.E.
Division Administrator
Federal Highway Administration

Rockingham County
Bridge No. 75 on SR 3003 (West Meadow Road)
over Smith River
Federal Aid Project BRSTP-700(1)
State Project 8.1511701
W.B.S. 33122.1.1
T.I.P. No. B-3509

CATEGORICAL EXCLUSION

AND

FINAL SECTION 4(F) EVALUATION

June 2004

Document Prepared By:
Mulkey Engineers & Consultants

6/4/04
Date

Pamela R. Williams
Project Manager

6/4/04
Date

W. S. Hood, P.E.
Principal-in-Charge

Document Prepared For:
North Carolina Department of Transportation

6-8-2004
Date

John Wadsworth, P.E.
Project Manager

PROJECT COMMITMENTS

Rockingham County
Bridge No. 75 on SR 3003 (West Meadow Road)
over Smith River
Federal Aid Project BRSTP-700(1)
W.B.S. 33122.1.1
State Project 8.1511701
T.I.P. No. B-3509

In addition to the standard Nationwide Permit No. 23 Conditions, the General Nationwide Permit Conditions, Section 404 Only Conditions, Regional Conditions, State Consistency Conditions, NCDOT's Best Management Practices for Protection of Surface Waters, Erosion and Sediment Control Guidelines for Contract Construction, NCDOT's Guidelines for Best Management Practices for Bridge Demolition and Removal, General Certification Conditions, and Section 401 Conditions of Certification, the following special commitments have been agreed to by NCDOT:

Design Services, Structures, Hydraulics and Division Engineer

An in-stream construction moratorium will be in effect from April 1 to June 30. This moratorium is required due to the size of the river and the good population of fish in the project area.

Bridge deck drains will not discharge directly into the Smith River.

The existing waterline attached to the bridge will be relocated.

Texas "classic" bridge railing will be provided on the proposed bridge.

Maintain continuous access to Spray Cotton Mills.

Removal and restoration of area occupied by temporary detour.

PDEA/Design Services/Structure Design

The following measures will be carried out for the replacement of Bridge No. 75 per the approved Memorandum of Agreement (Appendix B):

1. Photo Documentation: NCDOT shall record Bridge No. 75 and the adjacent buildings in the (expanded) Spray Industrial Historic District in accordance with a Historic Structures Recordation Plan.

2. Replacement Bridge Design: NCDOT shall consult with the City of Eden and North Carolina State Historic Preservation Office (HPO) on the design for the replacement bridge and provide the HPO an opportunity to comment upon the Preliminary Design plans for the replacement bridge. Texas "classic" bridge railing will be provided.

Rockingham County
Bridge No. 75 on SR 3003 (West Meadow Road)
over Smith River
Federal Aid Project BRSTP-700(1)
State Project 8.1511701
T.I.P. No. B-3509

INTRODUCTION: Replacement of Bridge No. 75 is included in the North Carolina Department of Transportation (NCDOT) 2004-2010 Transportation Improvement Program and in the Federal-Aid Bridge Replacement Program. The location is shown in Figure 1. No substantial environmental impacts are anticipated. The project is classified as a Federal "Categorical Exclusion."

I. PURPOSE AND NEED STATEMENT

The purpose of this project is to replace a bridge that is considered structurally deficient and functionally obsolete within the same transportation corridor. Bridge Maintenance Unit records indicated the bridge has a sufficiency rating of 45.2 out of a possible 100 for a new structure. The replacement of this inadequate structure will result in a safer and more efficient shared use facility.

II. EXISTING CONDITIONS

The project is located within the city limits of Eden in Rockingham County, approximately 0.8 miles (1.29 kilometers) west of NC 14 (Figure 1). Development in the area is industrial, commercial, and residential in nature. Spray Industrial Historical District, a district listed on the National Register of Historic Places, is located west of Bridge No. 75.

SR 3003 (W. Meadow Road) is classified as an urban minor arterial in the Statewide Functional Classification System and is a Federal-Aid Highway. However, this section of road is classified as a major thoroughfare on the Eden Thoroughfare Plan adopted on December 6, 1996. This route is not a designated bicycle route.

In the vicinity of the bridge, SR 3003 has a 22-foot (6.7-meter) pavement width with 6-foot (1.8-meter) grass shoulders. The roadway is on a 3.5% grade across the bridge with a sag vertical curve on the west approach. The existing bridge is on a tangent that extends 300 feet (91.4 meters) east of the structure. There is an asphalt roundabout at the west end of the structure with yield control for the intersection of Church Street, SR 3003 and SR 3002 (Boone Street). The roadway is situated approximately 35 feet (10.7 meters) above the river bed.

Bridge No. 75 is an eight-span structure that consists of reinforced concrete deck girders with an asphalt wearing surface. The substructure consists of reinforced concrete abutments and piers. The existing bridge (Figure 3) was constructed in 1954. The overall length of the structure is 340 feet (104 meters). The clear roadway width is 28.0 feet (8.4 meters) with 5-foot (1.5 meter) sidewalks provided on both sides of the bridge. Bridge No. 75 currently has posted weight limits of 19 tons (17.2 metric tons) for single vehicle (SV) and 32 tons (29 metric tons) for truck-tractor semi trailer (TTST).

There are numerous utilities in the area of Bridge No. 75 including a 4-inch (100-millimeter) gas line and a 14-inch (360-millimeter) water line attached to the existing bridge. There is an 18-

inch (460-millimeter) sanitary sewer line along the east bank of the Smith River that passes under the existing bridge. There is a smaller sewer line along the north side of SR 3003 that intersects the 18-inch (460-millimeter) line north of the bridge. There is a 24-inch (600-millimeter) sanitary sewer line along the west bank of the river that passes under SR 3003 off the west end of the existing bridge. There are several water lines under SR 3003 and SR 3002 at the west end of the bridge. Overhead power lines are along and across SR 3003 at both ends of the existing bridge. Utility impacts are anticipated to be high.

The traffic volume for the current year of 2004 is 19,100 vehicles per day (VPD) and is expected to increase to 22,900 VPD by the year 2025. The projected volume includes 3% truck-tractor semi-trailer (TTST) and 4% dual-tired vehicles (DT). The posted speed limit is 35 miles (60 kilometers) per hour in the project area.

Four accidents have been reported in the vicinity of Bridge No. 75 during the period from June 2000 to May 2003. Three of the accidents resulted in property damage and no injuries. One accident resulted in property damage and non-fatal injuries.

There are currently 16 school buses crossing the bridge a total of 59 times daily.

III. ALTERNATIVES

A. Project Description

The recommended replacement structure consists of a bridge approximately 350 feet (107 meters) in length and 43 feet (12.9 meters) wide with Texas "Classic" bridge railing. This structure will consist of two 14-foot (4.2-meter) travel lanes to accommodate bicycle traffic and provide 2-foot (0.6-meter) shoulders with 5.5-foot (1.65-meter) sidewalks on each side (Figure 4).

The proposed approach roadway from the west consists of a curb and gutter facility providing two 14-foot (4.2-meter) lanes and 5-foot (1.5-meter) sidewalks (Figure 4). The approach roadway from the east within the project limit will provide 14-foot (4.2-meter) travel lanes and a combination of curb and gutter and shoulder section.

The recommended bridge length is based on a preliminary hydraulic analysis. The elevation of the new structure will be approximately the same as the existing grade at this location. The length of the new structure may be increased or decreased as necessary to accommodate peak flows as determined by more detailed hydrologic studies during the final design phase. Causeways are anticipated for the construction of the proposed bridge and temporary detour structure.

B. Build Alternatives

The three build alternatives studied for replacing Bridge No. 75 are described below. Alternative 5 is the NCDOT's preferred alternative. Final selection was made after completion of the public involvement process and receipt of comments on the Draft Section 4(f) Evaluation.

Alternative 3 replaces Bridge No. 75 at the existing location (Figure 2A). During construction, traffic will be routed along SR 3002 (Boone Road), SR 2066 (West King Highway), SR 1387 (South Van Buren Road) and SR 1747 (Stadium Drive). The estimated detour route is approximately 3.5 miles (5.6 kilometers) in length and will be in place approximately 2 years. Alternative 3 was eliminated due to strong opposition from city officials and citizens. They believe that rerouting traffic will have a negative economic impact on the community.

Alternative 5 (preferred) replaces Bridge No. 75 at the existing location (Figure 2B). During construction, traffic will be maintained by a temporary detour structure north of the existing bridge. The existing asphalt roundabout will be upgraded to current design standards. The intersection of Church Street, SR 3002 and SR 3003 will be controlled by a temporary traffic signal during the construction of the new bridge and revised roundabout.

Alternative 8 replaces Bridge No. 75 on new alignment north of the existing structure (Figure 2C). During construction, traffic will be maintained through phased construction of the new bridge. Phase 1 maintains traffic on two lanes on the existing bridge during the removal of the sidewalk on the north side and building of the proposed bridge. Phase 2 shifts the traffic to the new bridge with temporary traffic signal control and finalizes construction of the proposed structure and roundabout. Phase 3 will shift traffic to the permanent traffic pattern. Alternative 8 is not recommended because it will require shifting the structure north, adding reverse curves to the horizontal alignment, impacting the property on the northeast approach and the existing Spray Industrial Historic District more than Alternative 5.

C. Alternatives Eliminated From Further Study

Alternative 1 involves replacement of the structure on new location approximately 850 feet (260 meters) south (downstream) of the existing bridge (Figure 2D). This alignment follows a proposed realignment of SR 3003 shown on the Eden Thoroughfare Plan. Existing Bridge No. 75 will serve to maintain traffic on-site during construction. The new alignment will be approximately 2400 feet (730 meters) in length. The proposed bridge will be 525 feet (160 meters) in length. Alternative 1 was eliminated due to citizens' negative input, impacting 4(f) properties due to the required improvements on Early Street, because it is not within the same transportation corridor and it does not meet the purpose and need.

Alternative 2 involves replacement of the structure on new location approximately 50 feet (15 meters) north (upstream) of the existing bridge. The existing Bridge No. 75 will serve to maintain traffic on-site during construction. The new alignment will be approximately 2200 feet (670 meters) in length. Alternative 2 was eliminated due to the opposition from the community to a T-intersection design in lieu of a roundabout. Citizens and the City of Eden local officials strongly prefer a roundabout. A T-intersection will not provide an acceptable level of service (LOS) due to the high volume of traffic and a two-lane bridge.

Alternative 4 involves replacement of the bridge on new alignment south (downstream) of the existing bridge utilizing an upgraded roundabout. During construction, traffic will be maintained on the existing bridge.

Alternative 6 involves replacement of the bridge at the existing location utilizing an upgraded roundabout. During construction, traffic will be maintained on a temporary bridge located south (downstream) of the existing bridge.

Alternative 7 involves replacement of the bridge with the centerline alignment shifted approximately 40 feet (12 meters) south utilizing an upgraded roundabout. During construction, traffic will be maintained through phased construction of the new bridge. Phase 1 maintains traffic on two lanes on the existing bridge and constructs approximately 27 feet (8.2 meters) of the proposed bridge. During Phase 2, traffic will be shifted to the new bridge, the existing bridge removed and the additional 12.5 feet (3.8 meters) of the new bridge built.

Alternatives 4, 6 and 7 were eliminated due to recommendation from the Limited Soil Assessment Report. Any alternative that will shift the alignment and/or the construction south of the existing bridge is not recommend due to the contaminated soil and the landfill debris that is located south of the bridge. The pump house, a Section 4(f) resource located on the southeast corner of the bridge, will be demolished with Alternatives 4, 6, and 7.

The "do-nothing" alternative will eventually necessitate closure of the bridge. This is not acceptable due to the traffic service and community connectivity provided by SR 3003 (W. Meadow Road) and Bridge No. 75.

"Rehabilitation" of this bridge is not feasible due to its age and deteriorated condition.

D. Preferred Alternative

Alternative 5, replacement of the bridge at the existing location with an on-site detour, was selected as the preferred alternative. This alternative was selected as the preferred because it allows traffic to be maintained on-site and has a minimal impact on adjacent properties. The project will include upgrading the existing roundabout to new design standards.

The Division Engineer and the Eden Historic Preservation Commission concurs with the selection of Alternative 5 as the preferred alternative.

IV. ESTIMATED COSTS

The estimated costs for the studied alternatives, based on current prices, are as follows:

	Alternative 3	Alternative 5 (preferred)	Alternative 8
Structures	$1,128,800	$1,168,100	$1,364,300
Roadway Approaches	75,400	284,100	425,200
Detour Structure & Approaches	0	975,000	- 0 -
Structure Removal	108,500	108,500	135,600
Retaining Wall	0	0	833,800
Misc. & Mob.	587,300	704,400	869,900
Eng. & Contingencies	300,000	335,000	421,300
Total Construction Cost	$2,200,000	$3,575,000	$4,050,000
Right-of-way Costs	335,100	522,625	521,300
Total Project Cost	$2,535,100	$4,097,625	$4,571,300

The estimated cost of the project shown in the 2004-2010 NCDOT Transportation Improvement Program is $1,945,000, including $385,000 for right-of-way and $1,560,000 for construction.

V. NATURAL RESOURCES

A. Methodology

Information sources used to prepare this report include: USGS Northwest Eden, NC 7.5 minute series topographic map (1978); USGS Northeast Eden, NC 7.5 minute series topographic map (1983); USGS Southwest Eden, NC 7.5 minute series topographic map (1994); USGS Southeast Eden, NC 7.5 minute series topographic map (1994); Soil Conservation Service (SCS) Soil Survey of Rockingham County, NC (February 1992); United States Fish and Wildlife Service (USFWS) National Wetlands Inventory map (Northwest Eden, NC, 1990); Endangered, Threatened, and Candidate Species and Federal Species of Concern in North Carolina (USFWS) via the Internet; North Carolina Natural Heritage Program (NCNHP) computer database, via the Internet, of rare species and unique habitats (www.ncsparks.net/nhp/elements.html); and NCDOT aerial photography of the study area. Research using these resources was undertaken prior to the field investigation.

A general field survey was conducted along the proposed project corridor on September 18, 1998. On November 24, 1998, a field survey was conducted to investigate an additional proposed alternative on new alignment south of the bridge. A third visit was made to the site on July 29, 1999 to investigate a shift in the proposed alternative south of the bridge. Plant communities and their associated wildlife were identified using a variety of observation techniques including active searching, and identifying characteristic signs of wildlife such as sounds, tracks, scats, and burrows.

Impact calculations were based on the worst-case scenario using the full right-of-way limits for each individual alternate, the width of the replacement structure, and the length of the project approaches. The actual construction impacts should be less, but without specific replacement structure design information, the worst case was assumed for the impact calculations.

B. Topography and Soils

The proposed project lies within the Piedmont Physiographic Province, which includes all parts of North Carolina west of the Fall Line and east of the Blue Ridge Escarpment. This province is underlain by igneous, crystalline metamorphic, or occasionally, sedimentary rocks. The topography of the project vicinity can be characterized as moderately rolling to steeply sloped. Elevations in the project vicinity range from approximately 510 to 680 feet (155 to 208 meters) above mean sea level (msl). Current land use in the project vicinity is mainly industrial, commercial, and residential.

The Mayodan-Stoneville soil classification dominates the project area (USDA-SCS, 1992). Soils in the Mayodan-Stoneville classification are well drained and gently sloping to moderately steep upland soils, with a loamy surface layer and loamy and clayey subsoil. Field conditions appeared to generally conform to the soil survey mapping in the project area. Individual soil types found in the project area are described below.

Congaree loam is located along both sides of the river. It is characterized as well drained or moderately well drained and is typically found on wide flood plains. This soil is sometimes

flooded for brief periods in winter and spring. Chewacla and Wehadkee soils may be included in the Congaree soil classification. Both inclusions (USDA-SCS, 1992) are listed as hydric (USDA-SCS, 1991) and may occur in small depressions at the contact between flood plains and upland areas. Chewacla soils are somewhat poorly drained, moderately permeable, and have a seasonal high water table 0.5 to 1.5 feet (0.1 to 0.45 meters) below the surface. Wehadkee soils are poorly drained, moderately permeable, and have a seasonal high water table at or near the surface.

Urban land is shown north and south of the western approaches for all alternatives. This soil type consists of areas where more than 85 percent of the surface is covered by buildings, pavement, or other impervious material. The natural characteristics of the soils and land surfaces have been altered or destroyed, and runoff is very rapid.

Ayersville gravelly loam, 15 to 45 percent slopes is located east of the river in a narrow strip adjacent to the Congaree loam. This soil is well drained to excessively drained and occurs on convex side slopes. Erosion is a severe hazard in areas where the surface of this soil is exposed or unprotected. Surface runoff can be rapid. Included with this soil are small areas of Stoneville and Mayodan soils on the smoother parts of the landscape, and Leaksville and Spray soils at the lower elevations. Neither Ayersville nor any of its inclusions are hydric soils (USDA-SCS, 1991; USDA-SCS, 1992).

Ayersville gravelly loam, 4 to 15 percent slopes is adjacent to the Ayersville gravelly loam, 15 to 45 percent slopes on the north side of the eastern approach. This soil is well drained to excessively drained and permeability is moderate. Erosion is a moderate to severe hazard in areas where the soil surface is exposed. Included soils, which make up about 10 to 20 percent of the soil type, consist of Stoneville, Mayodan, Leaksville, Spray, and Eden soils (USDA-SCS, 1992). None of the soils reportedly found within this map unit are hydric (USDA-SCS, 1991).

Mayodan sandy loam, 8 to 15 percent slopes is located within the project area south of the eastern approach. This well drained soil is on slightly convex side slopes on uplands. Permeability and shrink swell potential are moderate. Erosion is a severe hazard in areas where the surface is exposed or unprotected. Concentrations of aluminum in the subsoil may restrict rooting depth. Included with this soil are small areas of Stoneville, Pinkston, and Ayersville soils (USDA-SCS, 1992). Mayodan sandy loam is not a hydric soil, nor are any of the inclusions found within it (USDA-SCS, 1991).

Mayodan-Urban land complex, 2 to 10 percent slopes is found north and south of the eastern approaches. This soil complex is about 50 percent Mayodan soil, 35 percent urban land, and 15 percent included soils. Permeability and shrink swell potential are moderate and surface runoff is higher than that of other Mayodan soils because of the areas that are covered by impermeable materials. Included in this soil type are a few areas of Pinkston, Ayersville, and Stoneville soils (USDA-SCS, 1992). None of the soils found within this map unit are listed as hydric (USDA-SCS, 1991).

C. Water Resources

1. Water Resource Characteristics

The proposed project falls within the Roanoke River Basin, with a subbasin designation of ROA3 (03-02-03) and a federal hydrologic unit designation of 03010103. The Smith River is a relatively wide, moderately flowing river which discharges into the Dan River approximately 1.7 miles (2.7 kilometers) south of the project study area. The Smith River flows in a southerly direction through the proposed project area with a width of approximately 200 to 300 feet (60 to 90 meters). The depth on the days of the site investigations ranged from approximately 1 to 4 feet (0.3 to 1.2 meters).

The Smith River has a Class C rating from the North Carolina Department of Environment and Natural Resources (NCDENR). A Class C designation indicates the river's suitability for aquatic life propagation and survival, fishing, wildlife, secondary recreation, and agriculture. The Classification Date and Index for this portion of the river is 9/1/57, 22-40-(3).

There are four major and fourteen minor permitted point-source discharges in subbasin 03-02-03. Point-source discharges located throughout North Carolina are permitted through the National Pollutant Discharge Elimination System (NPDES) program. None of the permitted discharges noted above are on the Smith River.

Non-point source refers to runoff that enters surface waters through storm water flow or no defined point of discharge. In the project study area, storm water runoff from SR 3003 (Meadow Road) and other urban surfaces may cause water quality degradation.

Benthic macroinvertebrates are organisms that live in and on the bottom substrates of rivers and streams. The North Carolina Division of Water Quality (NCDWQ) uses data on these organisms as a tool to monitor water quality since benthic macroinvertebrates are sensitive to subtle changes in water quality. Formerly, the NCDWQ used the Benthic Macroinvertebrate Ambient Network (BMAN) as a primary tool for water quality assessment, but phased this method out several years ago and has converted to a basin wide assessment sampling protocol. Each river basin in the state is sampled once every five years and the number of sampling stations has been increased within each basin. Each basin is sampled for biological, chemical and physical data.

The DWQ includes the North Carolina Index of Biotic Integrity (NCIBI) as another method to determine general water quality in the basin wide sampling. The NCIBI is a modification of the Index of Biotic Integrity initially proposed by Karr (1981) and Karr, et al. (1986). The NCIBI method was developed for assessing a stream's biological integrity by examining the structure and health of its fish community. The Index incorporates information about species richness and composition, trophic composition, fish abundance, and fish condition. The NCIBI summarizes the effects of all classes of factors influencing aquatic faunal communities (water quality, energy source, habitat quality, flow regime, and biotic interactions).

According to the NCDWQ, (NCDWQ, October 1, 1998) there is a sampling station located at NC 14 on the Smith River north of the project area. This station was last sampled in September of 1994. The NCIBI rating of the river at this location was determined to be fair.

2. Anticipated Impacts to Water Resources

General Impacts

Neither High Quality Waters (HQW), Water Supplies (WS-I: undeveloped watershed, or WS-II: predominately undeveloped watersheds) nor Outstanding Resource Waters (ORW) occur within 1 mile (1.6 kilometers) of project study area. The new replacement structure construction and approach work will likely increase sediment loads in the river in the short term. Construction related sedimentation can be harmful to local populations of invertebrates, which are an important part of the aquatic food chain. Potential adverse effects will be minimized through the use of the NCDOT's Best Management Practices for Protection of Surface Waters (BMPs) and the use of erosion and sediment control measures as specified in the Erosion and Sediment Control Guidelines for Contract Construction, as applicable.

Impacts Related to Bridge Demolition and Removal

In order to protect the water quality and aquatic life in the area affected by this project, the NCDOT and all potential contractors will follow appropriate guidelines for bridge demolition and removal. These guidelines are presented in three NCDOT documents entitled "Pre-Construction Guidelines for Bridge Demolition and Removal", "Policy: Bridge Demolition and Removal in Waters of the United States", and "Best Management Practices for Bridge Demolition and Removal" (all documents dated 9/20/99). Guidelines followed for bridge demolition and removal are in addition to those implemented for Best Management Practices for the Protection of Surface Waters.

Dropping any portion of the structure to be removed into waters of the United States should be attempted only if no other practical method of removal is feasible. In the event that no other practical method is available, a worst-case scenario is assumed for calculations of fill entering the water. The maximum potential fill calculated for Bridge No. 75 is 584 cubic yards (446 cubic meters). The superstructure of the bridge consists of reinforced concrete deck girders. The substructure consists of reinforced concrete abutments and post and beam interior bents.

The river substrate in the project area has a silty surface, however many large rocks are also scattered throughout. Due to the nature of the substrate, increased sedimentation will occur if the bridge were dropped into the water during the demolition and removal process. Where it is possible to do so, a turbidity curtain is recommended to be used to contain sediments. Aquatic life which is not very mobile could be harmed when components of the bridge enter the water. Species which filter feed, as well as those species that feed upon them, could be negatively impacted by increased sedimentation. Sedimentation could negatively impact submerged aquatic vegetation by obstructing or reducing the amount of sunlight entering the water. In addition, compaction to the stream bed will occur from dropping bridge components into the water.

Under the guidelines presented in the NCDOT documents noted above, work conducted in the water for this project will fall under Case 2, which indicates that no work will be done in the water during moratorium periods associated with fish migration, spawning, and larvae recruitment into nursery areas. This conclusion is based upon the classification of the waters within the project area and vicinity, as well as comments received during the reporting process from the NCWRC (memorandum to NCDOT dated January 12, 1999). NCWRC requested that no in-water work be performed from April 1 to June 30.

D. Biotic Resources

Living systems described in the following sections include communities of associated plants and animals in the project area. Classification of natural plant communities is based on the system used by the NCNHP (Schafale and Weakley 1990). Scientific nomenclature and common names (when applicable) are used for the plant and animal species described. Subsequent references to the same species include the common name only. Vascular plant names follow nomenclature found in Radford et al. (1968) unless more current information is available. Terrestrial and aquatic wildlife were determined through field observations, evaluation of habitat, and review of field guides and other documentation.

1. Terrestrial Communities

Terrestrial communities found within the project study area include Man-Dominated, Piedmont Acidic Cliff, and Mesic Mixed Hardwood Forest (Piedmont Subtype). Faunal components associated with these areas will be discussed in the community descriptions below.

Man-Dominated Community

This highly disturbed community encompasses the majority of the project area and includes the road shoulders and embankments, the sewer line easements north and south of the eastern approach and commercial properties. An unpaved road under the bridge on the east bank follows the sewer line easement.

Road shoulders in the project area are variable, ranging from paved to vegetated. The western approach is all urban area, dominated by parking lots, sidewalks, and various commercial properties. Road shoulders along the eastern approach include areas of gravel, exposed soil, and weedy vegetation. The shoulder on the north side of the road includes foxtail (*Setaria* sp.), maintained grass, and areas of exposed soil. A ditch extends along the shoulder and grades into a very steep embankment with areas of visible bedrock. Species clinging to the embankment include tree-of-heaven (*Ailanthus altissima*), sweet-gum (*Liquidambar styraciflua*), pokeweed (*Phytolacca americana*), sycamore (*Platanus occidentalis*), boxelder (*Acer negundo*), and ironwood (*Ostrya virginiana*).

Areas directly adjacent to the west end of the bridge are steeply sloped down to the river and reinforced with rock for stabilization. Vegetation in this area includes sycamore, boxelder, green ash (*Fraxinus pennsylvanica*), elm (*Ulmus rubra*), and black locust (*Robinia pseudo-acacia*).

A narrow floodplain with an unpaved road and sewer line extending through it is located on the east side of the river. Disturbance is such that it has been included within the Man-Dominated community, however many species found here are typical of floodplain areas and adjacent ridges and terraces. Vegetation includes boxelder, poison ivy (*Toxicodendron radicans*), river birch (*Betula nigra*), paw paw (*Asimina triloba*), river oats (*Chasmanthium (=Uniola) latifolium*), bitternut hickory (*Carya cordiformis*), knotweed (*Polygonum* sp.), spotted touch-me-not (*Impatiens capensis*), and greenbriar (*Smilax* sp.).

Racoon (*Procyon lotor*) tracks were noted in the Man-Dominated community along the river shore near small piles of Asiatic clam shells (*Corbicula fluminia*) on which the raccoon apparently fed. Virginia opossum (*Didelphis virginiana*) may find this habitat suitable for nesting and feeding upon earthworms, snails, insects and various plant materials. Some species of skinks (*Eumeces* sp.) may reside in this community near the floodplain area. Birds that favor

disturbed habitats could find shelter and feed within the weedy sections or floodplain area of this Man-Dominated community.

Piedmont Acidic Cliff

This west-facing cliff is found adjacent to the floodplain area on the northwest side of the bridge. The area is mostly barren of vegetation and is shaded by the more mature trees of the floodplain. Shafale and Weakley (1990) note that soils in this type of community range from bare rock to accumulations of organic or mineral matter in crevices, to thin and rocky soils. They state that soil series are generally not mapped for these sites and hydrology and vegetation are variable, depending upon aspect, geographic location, and elevation.

Mesic Mixed Hardwood Forest (Piedmont Subtype)

This community is located east of the Smith River. The topography is sloping and the dominant tree is beech (*Fagus grandifolia*). Other vegetation in this community includes sweet-gum, northern red oak (*Quercus rubra*), chestnut oak (*Quercus prinus*), white oak (*Quercus alba*), scarlet oak (*Quercus coccinea*), and pignut hickory (*Carya glabra*). Near a drainage that separates this area from the Man-Dominated community north of it there are a few yellow-poplars (*Liriodendron tulipifera*) and scattered Christmas fern (*Polystichum acrostichoides*).

A tufted titmouse (*Parus bicolor*) was observed in this community during the site investigation. The eastern chipmunk (*Tamias striatus*) and gray squirrel (*Sciurus carolinensis*) could reside in the Mesic Mixed Hardwood Forest, utilizing the mast producing species for food. Various species of birds could find nesting habitat here as well. Species that are found along edge habitat between wooded areas and more open sites may also benefit from this community.

2. Aquatic Communities

The aquatic community in the project study area exists within the Smith River. Within the project study area of Bridge No. 75, the Smith River flows in a southerly direction and is approximately 200 to 300 feet (60 to 90 meters) wide. On the day of the field investigation, the river had a moderately swift current and a depth of approximately 1 to 4 feet (0.3 to 1.2 meters). Sediment load was low and algae was visible on underwater rocks near the surface. Abundant riffle habitat was observed, as well as small scattered grassy islands of vegetation near the center of the river.

A cursory search of the shoreline was conducted for evidence of mussel and clam species. Asiatic clam shells were found along the riverbanks, but no other signs of mollusks were observed. Unidentified waterfowl (order Anseriformes) were seen in the river near shore areas where overhanging vegetation was abundant, and Canada geese (*Branta canadensis*) were observed in the water near the northwest corner of the bridge.

According to the North Carolina Wildlife Resources Commission (NCWRC), (NCWRC, September 25, 1998), fish found in the river from a 1981 survey in the vicinity of the bridge include stoneroller (*Campostoma anomalum*), bluehead chub (*Nocomis leptocephalus*), bull chub (*Nocomis raneyi*), several species of shiner (*Notropis* spp.), white sucker (*Catostomus commersoni*), northern hogsucker (*Hypentelium nigricans*), three species from the *Moxostoma* genus, three species from the *Ictalurus* genus, margined madtom (*Noturus insignis*), redbreast sunfish (*Lepomis auritus*), bluegill (*Lepomis macrochirus*), largemouth bass (*Micropterus salmoides*), and three species of darter of the *Etheostoma* and *Percina* genera. NCWRC had no

specific recommendations for this area of the Smith River. The NCWRC, in a memorandum to the NCDOT dated January 12, 1999, requested that no in-water work be performed from April 1 to June 30 due to the size of the river and the good population of fish in the project area.

3. Anticipated Impacts to Biotic Communities

Biotic community impacts resulting from project construction are addressed separately as terrestrial impacts and aquatic impacts. Table 1 details the anticipated impacts to the various community types.

a. Terrestrial Communities

The Man-Dominated Community is the only terrestrial community impacted by the proposed alternatives. The Piedmont Acidic Cliff community appears to be impacted below the proposed structures, however the proposed detour and replacement bridges will be elevated above this community.

Alternative 3, which involves replacing the bridge in-place and detouring traffic off-site, will have the least amount of impacts to the Man-Dominated Community. Alternative 8 will have the highest amount of permanent impacts. Since this community is common and highly disturbed, and no rare species are known to be present, these impacts are not considered substantial.

Table 1
Anticipated Impacts to Terrestrial Communities

Bridge No. 75 Alternatives	Man-Dominated Community acre (ha)	Piedmont Acidic Cliff acre (ha)	Combined Total acre (ha)
Alternative 3	0.55 (0.22)	0.0 (0.0)	0.55 (0.22)
Alternative 5 (Preferred)	1.29 (0.52)	0.0 (0.0)	1.29 (0.52)
Alternative 5 (Preferred) Temporary Detour	0.63 (0.25)	0.0 (0.0)	0.63 (0.25)
Alternative 8	1.79 (0.72)	0.0 (0.0)	1.79 (0.72)

Table 1 Notes:

- Existing roadways were not considered as part of the total impacts where alternatives overlapped the existing alignment.
- Impacts were calculated to 10 feet (3 meters) outside slope stakes.
- Actual construction impacts may be less than those indicated above. Calculations were based upon the worst-case scenario.

b. Aquatic Communities

Table 2.1 Anticipated Temporary Impacts to Aquatic Communities		
Bridge No. 75 Alternatives	**Smith River acre (ha)**	**Smith River linear feet (meters)**
Alternative 3	0.058 (0.023)	40.00 (12.2)
Alternative 5 (Preferred)	0.058 (0.023)	40.00 (12.2)
Alternative 5 (Preferred) Temporary Detour	0.060 (0.024)	75.50 (23.0)
Alternative 8	0.058 (0.023)	40.00 (12.2)

Table 2.2 Anticipated Permanent Impacts to Aquatic Communities		
Bridge No. 75 Alternatives	**Smith River acre (ha)**	**Smith River linear feet (meters)**
Alternative 3	0.002 (0.0007)	43.0 (13.1)
Alternative 5 (Preferred)	0.002 (0.0007)	43.0 (13.1)
Alternative 5 (Preferred) Temporary Detour	0.00 (0.00)	0.00 (0.00)
Alternative 8	0.002 (0.0007)	43.0 (13.1)

Tables 2.1 and 2.2 Notes:

- Surface water area impacts were calculated by estimating the footprint of the bridge piers in water. Assumptions include 6, 4-foot (1.2 meter) diameter drilled piers in the water. Linear impacts were calculated by measuring the proposed width of the bridge over water, and by considering the width of temporary causeways (see below for further details).

The replacement of Bridge No. 75 will result in up to 0.118 acres (0.047 hectares) of temporary aquatic community impacts (Table 2.1) and up to 0.002 acres (0.0007 hectares) of permanent aquatic community impacts (Table 2.2). These calculations are derived from measuring the width of the bridge over water times the length of the bridge over water. This represents worst-case conditions; actual disturbed area will be less, however more detailed construction information is not available at this point.

Temporary aquatic community impacts in Table 2.1 reflect the temporary causeways to construct the detour and replacement bridges. Alternative 5's temporary detour impacts are highest due to the temporary detour bridge and causeways needed for the construction of both the temporary and permanent bridges.

Additional downstream impacts beyond the project study area are possible. In particular, river banks are very steep in the project area and care will be taken to prevent erosion during construction. Construction of the bridge and approach work as well as the removal of trees can result in an increase in sediment loads and water temperature, and a decrease in dissolved oxygen in the short term. Construction activities can also increase the possibility of toxins, such as engine fluids and particulate rubber, entering the waterways and impacting aquatic organisms. These factors can potentially cause the displacement and mortality of fish and local populations of invertebrates which inhabit these areas. BMPs for the protection of surface waters will be strictly enforced to minimize potential adverse impacts due to this project.

E. Special Topics

1. "Waters of the United States": Jurisdictional Issues

Wetlands and surface waters fall under the broad category of "waters of the United States" as defined in 33 CFR Section 328.3 and in accordance with provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344). Waters of the United States are regulated by the United States Army Corps of Engineers (USACE).

Investigation into wetland occurrence in the project study area was conducted using methods of the 1987 USACE Wetland Delineation Manual. No wetlands were found within the project study area.

Project construction cannot be accomplished without infringing on jurisdictional surface waters. Anticipated surface water impacts fall under the jurisdiction of the USACE and DWQ. Up to 158.5 feet (48.3 meters) linear or 0.12 acres (0.048 hectares) of jurisdictional surface waters impacts may occur due to the proposed replacement of Bridge No. 75.

2. Permits

In accordance with Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344.), a permit is required from the USACE for projects of this type for the discharge of dredged or fill material into waters of the United States. The USACE issues two types of permits for these activities. A general permit may be issued on a nationwide or regional basis for a category or categories of activities when: those activities are substantially similar in nature and cause only minimal individual and cumulative environmental impacts, or when the general permit will result in avoiding unnecessary duplication or regulatory control exercised by another Federal, state, or local agency provided that the environmental consequences of the action are individually and cumulatively minimal. If a general permit is not appropriate for a particular activity, then an individual permit must be utilized. Individual permits are authorized on a case-by-case evaluation of a specific project involving the proposed discharges.

It is anticipated that this project will fall under Nationwide Permit 23, which is a type of general permit. Nationwide Permit 23 is relevant to approved Categorical Exclusions. Activities under this permit are categorically excluded from environmental documentation because they are included within a category of activities which neither individually nor cumulatively have a substantial effect on the human environment. Activities authorized under nationwide permits must satisfy all terms and conditions of the particular permit.

A Section 401 Water Quality Certification from the state is necessary for projects that require Section 404 Permits. The state has General Certifications which will match the permit type authorized by the USACE. Although a single form is utilized to request both the 404 Permit and the 401 Certification, the state must issue the 401 Certification before the USACE will issue the 404 Permit. Written concurrence/notification is not always required by the state, and varies depending upon the General Certification. If this project qualifies under Nationwide Permit 23, the DWQ must be notified, however written concurrence from the DWQ is not required.

If no practical alternative exists to remove the current bridge other than to drop it into the water, prior to removal of debris off-site, fill related to demolition procedures will be considered during the permitting process. A worst-case scenario will be assumed with the understanding that if there is any other practical method available, the bridge will not be dropped into the water. Permitting will be coordinated such that any permit needed for bridge construction will also address issues related to bridge demolition.

3. Mitigation

The USACE has adopted through the Council on Environmental Quality (CEQ) a wetland mitigation policy which embraces the concept of "no net loss of wetlands". The purpose of this policy is to restore and maintain the chemical, biological, and physical integrity of waters of the United States, specifically wetlands. Mitigation of wetland impacts has been defined by the CEQ to include: avoiding impacts to wetlands, minimizing impacts, and rectifying impacts (40 CFR 1508.20). Each of these three aspects (avoidance, minimization, and compensatory mitigation) must be considered sequentially.

The USACE usually requires compensatory mitigation for activities authorized under Section 404 of the Clean Water Act if unavoidable impacts to waters of the United States total more than 0.10 acre (0.04 hectare).

The DWQ may require compensatory mitigation for activities authorized under Section 401 of the Clean Water Act if unavoidable impacts to waters of the United States total more than 1 acre (0.45 hectares) of wetlands and/or 150 linear feet (45.7 linear meters) of perennial streams.

Mitigation is not expected to be needed for any of the proposed alternatives. There are no known wetlands in the project area and the surface water impacts are below the standard area and linear thresholds for mitigation requirements.

F. Rare and Protected Species

Some populations of plants and animals have been or are in the process of decline due to reasons such as natural forces, competition from introduced species, or habitat destruction. Rare and protected species listed for Rockingham County, and any likely impacts to these species as a result of the proposed project construction, are discussed in the following sections.

1. Federally Protected Species

Plants and animals with federal classification of Endangered (E), Threatened (T), Proposed Endangered (PE) and Proposed Threatened (PT) are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. The USFWS lists two

federally protected species for Rockingham County as of February 25, 2003 (Table 3)(search perform via web site on March 31, 2004). Information pertinent to these species and the possibility of impact due to the proposed project is listed below.

TABLE 3
FEDERALLY PROTECTED SPECIES
IN ROCKINGHAM COUNTY

Scientific Name	Common Name	Status
Echinacea laevigata	(Smooth coneflower)	E
Pleurobema collina	(James spinymussel)	E

NOTES:
E Denotes Endangered (a species that is in danger of extinction throughout all or a significant portion of its range)

Species: Smooth coneflower
Family: Asteraceae
Date Listed: 10/8/92

Smooth coneflower is a rhizomatous perennial herb that reaches a height of approximately 5 feet (1.5 meters). Basal leaves are larger than mid-stem leaves, often measuring 8 inches (20 centimeters) in length and 3 inches (7.5 centimeters) in width. Leaves are elliptical or broadly lanceolate in shape and flower heads are usually solitary. Flowers are light pink to purplish with drooping rays. Flowering occurs from May through July.

Habitat for smooth coneflower includes open woods, roadsides, and power line rights-of-way. This species prefers areas with low competition and abundant sunlight and is often associated with magnesium and calcium rich soils. Some form of disturbance is needed in order to maintain the open habitat necessary for the coneflower.

BIOLOGICAL CONCLUSION: NO EFFECT

Open habitat is available in the Man-Dominated Community for this species within the project area. Initial field work was conducted during the growing season, and no *Echinacea* spp. was located in the project area. All open areas of potential habitat were searched thoroughly. In addition, upon the return visit to the site on July 29, 1999, which is during the flowering time for this species, the coneflower was not observed. NCDOT biologists also conducted a survey on July 18, 2002. No specimens of smooth coneflower were found. NCNHP records indicate no occurrences of smooth coneflower within the project area or vicinity. This project will not affect the smooth coneflower.

Species: James spinymussel
Family: Unionidae
Date Listed: July 22, 1988

This species reaches a length of approximately 3 inches (7.6 centimeters). It has a dark brown epidermis with prominent growth rings, and sometimes has short bilateral spines on the dorsal surface of the valves. The nacre is white with occasional bluish areas.

Habitat for the James spinymussel consists of runs with moderate currents and sand, gravel, and cobble substrates. Extirpated populations were known to reside in large streams with a swift current and sandy bottom.

BIOLOGICAL CONCLUSION: NO EFFECT

A survey was conducted on September 6, 2001 by qualified mussel biologists (NCDOT and NCWRC) to determine if this species is present within the project area. No mussel species were found. An examination of Smith River revealed suitable habitat is not present for mussel species. This project will not affect the James spinymussel.

2. Federal Species of Concern

Federal Species of Concern (FSC) are not legally protected under the Endangered Species Act and are not subject to any of its provisions, including Section 7, until they are formally proposed or listed as Threatened or Endangered. Species designated as FSC are defined as taxa which may or may not be listed in the future. These species were formerly Candidate 2 (C2) species or species under consideration for listing for which there is insufficient information to support listing.

Some of these species are listed as Endangered, Threatened, or Special Concern by the NCNHP database of rare plant and animal species and are afforded state protection under the State Endangered Species Act and the North Carolina Plant Protection and Conservation Act of 1979. Table 4 provides the Federal Species of Concern in Rockingham County and their state classifications. The most recent North Carolina Natural Heritage Program (NCNHP) list for Rockingham County (via web site, list updated January 2003, search performed March 31, 2004) was reviewed to obtain information on state status for the FSC's.

TABLE 4 NORTH CAROLINA STATUS OF FEDERAL SPECIES OF CONCERN IN ROCKINGHAM COUNTY			
Scientific Name	**(Common Name)**	**North Carolina Status**	**Habitat Present**
Lotus helleri	(Heller's trefoil)	SR-T	No
Lasmigona subviridis	(Green Floater)	E	No

Notes:
SR Significantly Rare. Species which are very rare in North Carolina but generally more common elsewhere.
T Threatened. Species which could become Endangered in the foreseeable future.
E Endangered (a species that is in danger of extinction throughout all or a significant portion of its range).

3. Summary of Anticipated Impacts

Open habitat similar to that preferred by the federally protected species smooth coneflower is present within the project area. All areas of potential habitat were thoroughly searched and the species was not located. The NCNHP reports no recorded occurrences of smooth coneflower within the project vicinity. Habitat is not present for the federally protected species James spinymussel. A survey was conducted to determine if the species is present in the project area. No specimens of James spinymussel were located. There are no other areas of concern for the project at this time.

VI. CULTURAL RESOURCES

A. Compliance Guidelines

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, implemented by the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, codified at Title 36 CFR Part 800. Section 106 requires Federal agencies to take into account the effect of their undertakings (federally-funded, licensed, or permitted) on properties included in or eligible for the National Register of Historic Places and to afford the Advisory Council a reasonable opportunity to comment on such undertakings.

B. Historic Architecture

A field survey of the Area of Potential Effects (APE) was conducted on August 6, 1998. All structures over 50 years of age within the APE were photographed, and later reviewed by the North Carolina State Historic Preservation Office (HPO). A Historic Architecture Survey Report was prepared for the project's APE and submitted to the HPO for their comments.

In a memorandum dated May 25, 2000, the State Historic Preservation Officer (SHPO) concurred with the report's findings that the Spray Industrial Historic District is listed in the National Register of Historic Places and that the proposed expansion should include Price-Lewis-Hawkins House, the Leaksville Township Municipal Building, the Central Filter Plant and the Pump House as contributing resources. Bridge No. 75 is within the proposed expansion area, but is considered a non-contributing resource. A copy of this memorandum is included in Appendix C. In a meeting between NCDOT, FHWA, and HPO on February 6, 2002 all parties

signed a concurrence form stating that the project will have an adverse effect on the Spray Industrial Historic District. A copy of the concurrence form is included in Appendix C.

In accordance with Section 106 of the National Preservation Act, since the alternatives have adverse effects on the Spray Industrial Historic District, the HPO and the Federal Highway Administration entered into a Memorandum of Agreement (MOA). The City of Eden and NCDOT have reviewed and concurred with the MOA (Appendix B).

C. Archaeology

The North Carolina State Historic Preservation Officer (SHPO), in a memorandum dated December 3, 1998 stated that "there are no recorded archaeological sites located within the project area and given the narrow floodplain in the vicinity of the existing bridge, it is unlikely that significant sites may be affected by the proposed project. However, we would like information concerning the location of the bridge replacement and any necessary detour structures or new rights-of-way needed for the project as soon as it is available." Preliminary plans with the proposed alignment and detour alignment were provided to HPO on January 29, 2003. In a memorandum dated March 9, 2003, the HPO was stated that "there is no need for an archaeological survey". Copies of the SHPO memorandums are included in Appendix C.

VII. FINAL SECTION 4(F) EVALUATION

Section 4(f) of the Department of Transportation Act of 1966, as amended, states in part "The Secretary may approve a transportation project or program requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge, or land of a historic site of national, state, or local significance (as determined by the Federal, State or local officials having jurisdiction over the park, recreation area, refuge, or site) only if -

1) There is no prudent and feasible alternative to using that land; and

2) The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from such use."

It is anticipated that the proposed project will require the use of property listed on or eligible for listing on the National Register of Historic Places, the Spray Industrial Historic District and boundary expansion. Therefore, the project must proceed within the requirements of Section 4(f) of the United States Department of Transportation Act and Section 138 of the Highway Act, as amended, see the Final Section 4(f) Evaluation.

VIII. ENVIRONMENTAL EFFECTS

The project is expected to have an overall positive impact. Replacement of an inadequate bridge will result in safer traffic operations.

The project is considered to be a Federal "Categorical Exclusion" due to its limited scope and lack of substantial environmental consequences.

The bridge replacement will not have an adverse effect on the quality of the human or natural environment with the use of the current North Carolina Department of Transportation standards and specifications.

The project is not in conflict with any plan, existing land use, or zoning regulation. No change in land use is expected to result from the construction of the project.

No adverse impact on families or communities is anticipated. Right-of-way acquisition will be limited. No residents or businesses are expected to be relocated with the implementation of the proposed alternative.

No adverse effect on public facilities or services is expected. The project is not expected to adversely affect social, economic, or religious opportunities in the area.

This project has been coordinated with the United States Natural Resources Conservation Service. The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the potential impact to prime farmland of all land acquisition and construction projects. The project falls within the urban boundary of the City of Eden, therefore, further consideration under the Farmland Protection Policy Act is not required.

This project is an air quality "neutral" project, so it is not required to be included in the regional emission analysis (if applicable) and a project level CO analysis is not required.

This project is located in Rockingham County, which has been determined to be in compliance with the National Ambient Air Quality Standards. 40 CFR Part 51 is not applicable, because the proposed project is located in an attainment area. This project is not anticipated to create any adverse effects on the air quality of this attainment area.

The traffic volumes will not increase or decrease because of this project. There are no receptors located in the immediate project area. The project's impact on noise and air quality will not be substantial.

Noise levels could increase during construction but will be temporary. If vegetation is disposed of by burning, all burning shall be done in accordance with applicable local laws and regulations of the North Carolina SIP for air quality in compliance with 15 NCAC 2D.0520. This evaluation completes the assessment requirements for highway traffic noise (23 CFR Part 772) and for air quality (1990 CAAA and NEPA) and no additional reports are required.

In compliance with Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations) a review was conducted to determine whether minority or low-income populations were receiving disproportionately high and adverse human health or environmental impacts as a result of this project. The investigation determined the project would not disproportionately impact any minority or low-income populations.

An examination of records at the North Carolina Department of Environment and Natural Resources, Division of Water Quality, Groundwater Section and the North Carolina Division of Solid Waste Management revealed no hazardous waste sites in the project area. A Limited Soil Assessment Report was prepared since there was evidence that gas stations had been operating in the project area since the early 1930's. One facility with the possibility of underground storage tanks (UST) was identified in the project area (the Edgar Rush property)

in the southwest quadrant of the bridge. No evidence of other USTs was identified within the current roundabout or within the existing right-of-way along Boone Road.

Rockingham County is a participant in the National Flood Insurance Regular Program. The project site on Smith River is within a detailed study area (Figure 5). However, it is not anticipated that a floodway modification will be required since the bridge will be an "in kind" replacement. Since the proposed bridge will be a structure similar in length and waterway opening size, it is not anticipated that this project will have any substantial impact on the existing floodplain or floodway.

On the basis of the above discussion, it is concluded that no substantial adverse environmental impacts will result from implementation of the project.

IX. PUBLIC INVOLVEMENT

Efforts were undertaken early in the planning process to contact local officials and residents to involve them in the project development. Three Local Officials Meetings and three Citizens Informational Workshops were held at the Eden City Hall in Eden, North Carolina.

The first Citizens Informational Workshop was held May 13, 2000. Three preliminary alternatives, Alternative 1, 2, and 3, were presented. The public voiced their concern that rerouting the traffic permanently or temporarily will have detrimental economical effects on the businesses at the west end of Bridge No. 75, and noted how important it is to them to keep the traffic circle/roundabout.

A second Citizens Informational Workshop was held June 18, 2001. Seven preliminary alternatives, Alternatives 1, 2, 3, 4, 5, 6, and 7, were presented. NCDOT explained the regulations of Section 106 of the National Historic Preservation Act of 1966 to the local officials and why NCDOT must avoid and minimize impacts to contributing elements of the Historic District.

A third Citizens Informational Workshop was held May 28, 2002. Three build alternatives, Alternatives 3, 5, and 8, were presented. Approximately 20 citizens attended this workshop. Ten (10) comment sheets were received at the workshop and all comment sheets recommended Alternative No. 5 as the preferred.

A small group meeting was held on August 27, 2002 with a Spray Cotton Mills representative to review the required truck assess points for the mill's proposed use.

In October 2002 a newsletter was mailed to local officials and citizens on the mail list to update them on the status of the alternative selection. The newsletter informed them that Alternative 5 was the preferred alternative and that the project will include a roundabout.

X. AGENCY COMMENTS

All comments from federal and state regulatory and resource agencies and local government are addressed elsewhere in this document. However, the Tri-River Cycling Club requested that bicycle facilities be provided for a future east/west route. In response to this request and further evaluation the project will provide 14 foot (4.2 meter) lanes within the project area to accommodate the future bicycle route.

Rockingham County
Bridge No. 75 on SR 3003 (West Meadow Road)
over Smith River
Federal Aid Project BRSTP-700(1)
State Project 8.1511701
W.B.S. 33122.1.1
T.I.P. No. B-3509

FINAL SECTION 4(F) EVALUATION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

APPROVED:

06/08/04
DATE

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

6/18/04
DATE

for John F. Sullivan, III, P.E.
Division Administrator
Federal Highway Administration

FINAL SECTION (4) EVALUATION
(SPRAY INDUSTRIAL HISTORIC DISTRICT AND PROPOSED EXPANSION)

A. Purpose and Need

Bridge No. 75 provides a vital link for the community and source of income for the businesses in the project area. The need for this project is to replace Bridge No. 75 within the existing transportation corridor and an objective is to maintain the economical stability of the community. The propose action will replace the structurally deficient and functionally obsolete structure with a safer and more efficient shared use structure and improve flow of traffic through the roundabout. The current sufficiency rating of the bridge is 45.2 out of 100 for a new structure. Because of the structural deficiency of the existing bridge, the North Carolina Board of Transportation approved this project as part of the Federal Bridge Replacement Program.

Bridge No. 75 was constructed in 1954. The existing structure is 340 feet (104 meters) in length and has a clear roadway width of 28 feet (8.4 meters). Bridge No. 75 is an eight-span tangent structure that consists of reinforced concrete deck girders. The substructure of the existing bridge consists of reinforced concrete abutments and piers. The intersection of West Meadow Road, Church Street and Boone Road is yield controlled with a roundabout approximately 80 feet (24 meters) from the west end of Bridge No. 75. The roundabout has a diameter of approximately 50 feet (15 meters). The clear roadway width surrounding the roundabout ranges from 28 to 34 feet (8.4 to 10.2 meters) wide.

Bridge No. 75 is located east of the Spray Industrial Historic District, listed on the National Register of Historic Places, and connects the proposed district expansion boundaries to the district. Additional properties that are eligible for listing in the project area include the Price-Lewis-Hawkins House, the Leaksville Township Municipal Building, the Central Filter Plant, and the Pump House. They are considered contributing resources to the proposed Historic Boundary Addition. Bridge No. 75 is within the proposed expansion area, but is considered a non-contributing resource.

B. Proposed Action

NCDOT proposes to replace Bridge No. 75 on SR 3003 (West Meadow Road) over Smith River in Eden with a new structure on the existing alignment. The roundabout at the west end of the bridge will be upgraded to current design standards. Approximately three of the ten on-street parking spaces on Church Street in the project area will remain.

Traffic will be maintained by an on-site detour structure located north of Bridge No. 75 during construction. The intersection of Church Street, SR 3002 (Boone Road) and SR 3003 (West Meadow Road) will be controlled by a temporary traffic signal through the construction of the new bridge and revised roundabout.

This project will replace a deteriorating bridge with a new structure within the same transportation corridor that will accommodate bicycle and pedestrian traffic, shown as Alternative 5, Figure 2B, Appendix A. The proposed project length is approximately 1440 feet (440 meters).

C. Description of Section 4(f) Resource

The Section 4(f) resources are located in the project area on West Meadow Road, Church Street and Boone Road in the City of Eden (Figure 6, Appendix A).

Bridge No. 75 spans the Smith River and provides access to the commercial and industrial district of Spray, one of three communities (Spray, Leaksville and Draper) merged in 1967 to form the City of Eden. This area of Spray lies within the boundary of **Spray Industrial Historic District** listed in the National Register in 1986 and located west of Bridge No. 75. The extensive industrial district of Spray was listed under Criterion A for commerce, exploration/settlement, industry and invention. Under Criterion B, the district has significance for its association with several prominent North Carolina industrialists and under Criterion C for architecture. Ninety-four resources (eighty contributing and fourteen non-contributing) are included in the Spray Industrial Historic District, which as the nomination states, "...contains one of the greatest concentrations of intact and continuously operating late nineteenth and early twentieth century textile mill complexes in the North Carolina Piedmont and the entire Southeast" (Brown 1986: 8-1). The Spray Industrial Historic District has undergone little alteration since its listing in the National Register. The most notable alternation has been the loss of the Leaksville Cotton and Woolen Mills at 422 Church Street, just west of the project terminus.

The proposed historic boundary expansions for the Spray Industrial Historic District are shown on Figure 6, Appendix A.

The amended boundaries will add five resources (four contributing and one non-contributing) to the historic district. The expanded boundary will include the Price-Lewis-Hawkins House, the (Former) Leaksville Township Municipal Building, the Central Filter Plant and the Pump House as contributing resources to an enlarged Spray historic district. Bridge No. 75 is located between the existing district and one area of the proposed expansion. As previously noted the bridge (built in 1954) is considered to be within the expanded district but is a non-contributing element.

The Price-Lewis-Hawkins House, a two story, vernacular picturesque dwelling, was one of several houses erected circa 1910 by the Spray Water Power and Land Company for its executive personnel. Like other mill company-built houses in the historic district, the Price-Lewis-Hawkins House contributes to the district under Criterion A for industry and community planning and under Criterion C for architecture.

The (Former) Leaksville Township Municipal Building, constructed in 1942, housed a branch of the county courthouse and the county health department as well as the other local governmental offices. Influenced by the International Style, the two story, concrete block building has a smooth, stuccoed exterior, steel casement windows, a float parapet roof and a cornice detailed with geometric ornamentation. The building has a replacement metal and glass entrance, but otherwise survives intact. Illustrating the changing relationship between the company and the town, the municipal building contributes to the historic district under Criterion A for politics/government and industry, and with its International Style design, under Criterion C for architecture.

The Central Filter Plant and its associated riverside **pump house** are located on the south side of West Meadow Road and east of Bridge No. 75 and the Smith River. This public works system was not only a vital part of the vast industrial complex of Spray, but also underscores

the continued interconnection between mill and town. The simple, one story brick building has a raised, concrete basement, a flat roof and glass block windows. The pump house is a small structure built on the riverbanks next to Bridge No. 75. The filtration plant and pump house were built circa 1940, and the facility appears on the 1930-1954 Sanborn Fire Insurance Company map. They were built as part of the public works/industrial infrastructure of the mills and the town and contribute under Criterion A for industry.

The existing historic district roughly forms a long spine, primarily along the west bank of the Smith River. The proposed boundary amendment will extend the southern border to Early Street, to incorporate the Leaksville Township Municipal Building, and turn west along Early Street to include the Price-Lewis-Hawkins House at the corner of Chestnut and Early Streets. A small portion of the eastern boundary will also be extended across the river to include the adjacent pump house, and the filtration plant, which are located on the south side of West Meadow Road.

D. Alternatives

Build Alternatives

During the course of the project study, a number of alternatives were considered and are described and discussed in Section III. Only three build alternatives studied to replace Bridge No. 75 will meet the project purpose and need and minimize impacts to the historic district. Each alternative requires acquisition of right-of-way and construction easement within the historic district and proposed boundary expansion and will have adverse effects on the existing historic district and proposed expansion. These alternatives are described as Alternatives 3, 5, and 8 in Section III of the Categorical Exclusion document.

Avoidance Alternatives

Three alternatives that will not require taking or use of land in the historic district and expanded boundary were evaluated and described below.

a. No-build

The no-build alternative will not require new construction. Bridge No. 75 will remain and State Bridge Maintenance forces will continue to make necessary periodic repairs to keep the bridge in service. However, the bridge will eventually deteriorate beyond repair and necessitate closure and removal of the bridge. Eventual removal of the bridge will cause negative economical ramifications to the Spray community located west of Bridge No. 75 and increase trip time for over fifty-nine daily trips by school buses. The no-build alternative, while avoiding impacts to the existing historic district and eligible resources, is not considered to be a reasonable and prudent solution and does not meet the need for the project.

b. Rehabilitation

The existing bridge is both structurally and geometrically deficient with a sufficiency rating of only 45.2 of a possible 100. Since the structure has deteriorated, major structural elements would need to be repaired and/or replaced. This would require the structure to be taken out of service for the duration of the repairs and an acceptable detour route found. Closure of the structure for any length of time will cause negative

economical ramifications to the Spray community located west of Bridge No. 75 and increase trip time for over fifty-nine daily trips by school buses. Rehabilitation of the existing bridge is not feasible due to the very poor condition of the existing concrete deck and substructure and was dismissed as an alternative.

c. Relocation outside the district

The location of the bridge provides connectivity for the historic district and direct access for the community. Moving the bridge location to a point either upstream or downstream of the current location to avoid impacts to the proposed expanded historic district will negatively impact the district by disrupting the connectivity of the setting for the district. Alternative 1 (Figure 2D) was studied which involved replacement of the structure on new location approximately 850 feet (260 meters) south (downstream) of the existing bridge. This alignment follows a proposed realignment of SR 3003 shown on the Eden Thoroughfare Plan. The existing Bridge No. 75 would serve to maintain traffic on-site during construction. The new alignment would have a design speed of 40 miles per hour (60 kilometers per hour) and would be approximately 2400 feet (730 meters) in length. The proposed bridge would be 525 feet (160 meters) in length. Alternative 1 was eliminated due to citizens and local officials' opposition to relocating the bridge. Also, Early Street would have to be upgraded which would have an adverse effect on the proposed expanded Spray Industrial Historic District. Alterative 1 is not within the same transportation corridor and does not meet the purpose and need for the project, which is to connect the historic community west of the bridge with the historic and other properties east of the bridge.

Therefore, locating the bridge outside of the Spray Industrial Historic District and the proposed boundary expansion is not a prudent alternative.

E. Impact on the Section 4(f) Properties

Unavoidable impacts on the historic district are required for replacing the proposed structure and upgrading the roundabout to current design standards. The impact of the bridge and roundabout will be minimized to the greatest extent practicable. The proposed right-of-way and construction easement will not affect any structures in the historic district except the removal of Bridge No. 75.

Estimated impacts associated with right-of-way acquisition for each alternative are listed below and shown in Figure 7.

Section 4(f) Properties	Alternative 3 acre (hectare)	Alternative 5 acre (hectare) (Preferred)	Alternative 8 acre (hectare)
Spray Industrial Historic District	0.073 (0.029)	0.073 (0.029)	0.176 (0.071)
Proposed Historic District Boundary Expansion	0.188 (0.076)	0.188 (0.076)	0.000 (0.000)
Total --acre (hectare)	0.261 (0.105)	0.261 (0.105)	0.176 (0.071)

The preferred alternative will meet the projects need, will avoid unfavorable economic consequences, minimizes impacts to the existing historic district and maintains the traffic pattern the community is use to.

F. Measures to Minimize Harm

The following measures have been developed through a Memorandum of Agreement (Appendix B) and coordination between the NCDOT, FHWA, the State Historic Preservation Office and the City of Eden to minimize harm to the National Register historic district and boundary expansion.

a. Design

- The new bridge will be designed to provide Texas "classic" bridge railings.
- The proposed roundabout will be upgraded to current design standards.
- Maintain continuous access to Spray Cotton Mills.
- Removal and restoration of area occupied by temporary detour.

b. The following measures will be performed:

I. Recordation: Prior to the initiation of work, NCDOT shall record Bridge No. 75 and the adjacent buildings in the (expanded) Spray Industrial Historic District in accordance with the attached Historic Structures Recordation Plan (Appendix B).

II. Replacement Bridge Design: NCDOT shall consult with the CITY and North Carolina SHPO on the design for the replacement bridge and provide the SHPO an opportunity to comment upon the Preliminary Design plans for the replacement bridge.

III. Dispute Resolution: Should the North Carolina SHPO object within thirty (30) days to any plans or documentation provided for review pursuant to this agreement, FHWA shall consult with the North Carolina SHPO to resolve the objection. If FHWA or the North Carolina SHPO determines that the objection cannot be resolved, FHWA shall forward all documentation relevant to the dispute to the Advisory Council on Historic Preservation (Council). Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

A. Provide FHWA with recommendations which FHWA will take into account in reaching a final decision regarding the dispute, or

B. Notify FHWA that it will comment pursuant to 36 CFR Section 800.7(c)) and proceed to comment. Any Council comment provided in response to such a request will be taken into account by FHWA in accordance with 36 CFR Section 800.7(c) (4) with reference to the subject of the dispute.

Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; FHWA's responsibility to carry out all the actions under this agreement that is not the subject of the dispute will remain unchanged.

G. Coordination

The proposed project was coordinated with the City of Eden's local officials and citizens. Three public meetings were conducted and comments concerning the proposed project were considered in selecting the preferred alternative. The local officials and citizens selected

Alternative 5 as their preferred because it provides the least amount of permanent impacts to the historic district, maintains a roundabout in the intersection at the west end of the bridge, and maintains traffic within the same transportation corridor.

Coordination and on-going discussions between NCDOT, FHWA, and SHPO have occurred during the course of the project. The North Carolina State Historic Preservation Office (HPO) was contacted early in the study process. A survey of historic architectural resources was conducted in the area of potential effect of the project, in accordance with Section 106 of the Historic Preservation Act. A memorandum dated May 25, 2000, documenting SHPO concurrence with the expansion boundary of the Spray Industrial Historic District is included in Appendix C of this document.

Coordination between the above agencies has served to ensure that all reasonable planning has been accomplished to minimize any substantial or adverse impacts to these Section 4(f) resources.

H. Conclusion

The analysis of alternatives to avoid impacts to the Spray Historic District, Section 4(f) resource, has determined that the No-build, the rehabilitation alternative, and the new location alternative do not meet and satisfy the project purpose and need. There are unique problems involved in the use of alternatives that avoid these properties within the historic district or expanded boundary.

Although, Alternative 3, Figure 2A Appendix A, meets the need to replace the structure in the same transportation corridor and impacts slightly less area in the historic district, it does not maintain traffic flow in the community during the construction and creates an unstable economy for the community in the project area.

Alternative 8, Figure 2C Appendix A, meets the purpose and need of the project and maintains traffic in the project area. The citizens opposed shifting the proposed bridge and roundabout north and impacting more area in the existing historic district.

The proposed Alternative 5, Figure 2B Appendix A, meets all the goals of the proposed action. The propose alternative replaces the deteriorated structure, improves traffic flow by improving the roundabout, provides for the accommodations of bicycles, incorporates the community's concerns, and provides an economically sensitive approach to the necessary improvements by maintaining traffic on site during construction. The selection of Alternative 5 as the preferred alternative was supported by the local citizens and the Eden Historic Preservation Commission.

1. Agency comments to Draft Categorical Exclusion

The Draft Categorical Exclusion and Draft Section 4(f) Evaluation were circulated to the following federal, state, and local agencies for review and comments. An asterisk (*) indicates a response was received from the agency. Copies of the correspondence follow this evaluation.

* Eden Preservation Commission
* U.S. Department of the Interior (Secretary of Interior)
* N.C. Department of Cultural Resources (State Historic Preservation Office)
  City of Eden City Manager

a. Comments Received

Written comments on the Draft Categorical Exclusion and Draft Section 4(f) Evaluation were received from three agencies. The following are excerpts of the comments with responses, as appropriate:

N.C. Department of Cultural Resources (State Historic Preservation Office)

Comment: "We believe the CE adequately addresses our concerns for historic resources."

Response: So noted.

Eden Preservation Commission

Comment: "We are gratified that our very strong preference for Alternative 5 is shared by the DOT."

Response: So noted.

Comment: "...request that the preliminary design plans be made available to us very early in the process."

Response: A meeting was held with the Eden Historic Preservation Commission and a NCDOT representative on October 20, 2003 to review the preliminary design plan and answer questions as applicable.

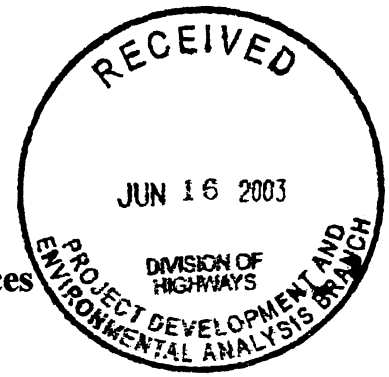
United States Department of the Interior

Comment: With regard to the Draft Section 4(f) Evaluation, the FWS has no comments.

Response: So noted.

2. Conclusion Summary

Based upon the above considerations, there is no feasible and prudent alternative to the use of land from the Spray Historic District and Expanded Boundary and the proposed action includes all possible planning to minimize harm to the Spray Industrial Historic District resulting from such use.



North Carolina Department of Cultural Resources

State Historic Preservation Office

David L. S. Brook, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Division of Historical Resources
David J. Olson, Director

June 12, 2003

MEMORANDUM

TO: Gregory J. Thorpe, Manager
Project Development and Environmental Analysis Branch
Division of Highways
Department of Transportation

FROM: David Brook DSB for David Brook

SUBJECT: Bridge 75 on SR 3003 over the Smith River, B-3509, ER99-7717 Rockingham County

Thank you for your letter of May 15, 2003 transmitting the Categorical Exclusion (CE) for the above project. We believe the CE adequately addresses our concerns for historic resources.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above-referenced tracking number.

cc: Nicholas Graf

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, D.C. 20240

NOV 13 2003

ER 03/745

Gregory J. Thorpe, Ph.D.
Environmental Management Director
Project Development and Environmental
Analysis Branch
NC Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

The Department of the Interior has reviewed the April 2003 Draft Categorical Exclusion and Draft Section 4(f) Evaluation for **Replacement of Bridge No. 75 on SR-3003 (West Meadow Road) over Smith River**, Rockingham County, North Carolina. We have the following comments on the Categorical Exclusion concerning U.S. Fish and Wildlife Service (FWS) issues.

The project will occur on Smith River, a tributary of the Dan River, in suburban and previously disturbed habitat, minimizing our concerns about new adverse impacts to fish and wildlife resources.

A survey was conducted for James spiny mussel (*Pleurobema collina*) on September 6, 2001. Although no specimens were found, the survey is now over two years old. Another survey should be conducted. The FWS recommends that the North Carolina Department of Transportation and the Federal Highway Administration not make a "no effect" conclusion until the new survey for the James spiny mussel is complete.

Surveys for smooth coneflower were conducted on July 29, 1999, and July 18, 2002. No smooth coneflowers were observed during the surveys. We do not have any data that would lead us to disagree with your "no effect" determination.

The final Categorical Exclusion should incorporate the appropriate conclusions. With regard to the Draft Section 4(f) Evaluation, the FWS has no comments.

Subject: Rockingham County B-3509
Date: Mon, 18 Apr 2005 14:17:10 -0400
From: Gary_Jordan@fws.gov
To: bmfeulner@dot.state.nc.us

Brett,

Based on additional information that NCDOT provided to us, the Service supports the biological conclusion of "No Effect" for the James spinymussel for B-3509. No additional surveys are needed and section 7 consultation is not required, unless new information becomes available.

Gary Jordan
US Fish and Wildlife Service
PO Box 33726
Raleigh, NC 27636-3726

Phone (919) 856-4520 ext. 32
Fax (919) 856-4556
gary_jordan@fws.gov

City of Eden

August 14, 2003

Gregory J. Thorpe, PHD
Environmental Management Director
NCDOT
Project Development & Environmental Branch
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Thorpe:

The Eden Preservation Commission spent a large part of its regular June meeting going over the document you recently submitted to us.

The consensus at the meeting was that we appreciate the sensitivity and openness that the Department of Transportation has so far shown toward our special concerns with the new bridge #75 soon to be built over the Smith River here in Eden.

We are gratified that our very strong preference for alternative #5 is shared by the DOT, and we look forward to its implementation.

A few items in the voluminous document did raise questions, however. One of these is the tension over fitting a traffic circle designed to standards for regular highway situations into the space available in the Spray historical district. It appears that parking spaces will be severely reduced in number, a fact which is of great concern to the businesses affected. The Commission is of the opinion that the present 55 foot traffic circle is working quite well, and urges that flexibility be shown in the application standards in this unique situation involving a historic district. Certainly there is ample justification for special consideration, and I am told that there is precedent for special handling in other states faced with the same problem.

308 East Stadium Drive • Eden, NC 27288-3523 • (336) 623-2110 • Fax (336) 623-4041

We are extremely interested to see the preliminary design as soon as it is available, since this is the only way we can see for ourselves how this and other questions may be resolved. Thus we urgently request that the preliminary design plans be made available to us very early in the process.

Another matter that concerns us is our continuing dissatisfaction with the historical survey that was done at the beginning of the study process for the bridge. We as a commission have no interest in the filter plant and pump house as eligible to be included in the National Register District, whereas we have strong interest in Rivermont, the house now owned by Mr. and Mrs. John Cameron.

Again we appreciate the consideration given our Commission as it has expressed its views about the new bridge and its environs. We also have a renewed appreciation of the voluminous research about both the built and the natural environment that seems to be necessary in a project of this kind. We look forward to a successful outcome in the form of a handsome new bridge in a much improved and beautiful neighborhood.

We apologize for the delay in responding you your request for comments. The commission did not hold a July meeting.

Yours sincerely,

Marianne S. Aiken, IV

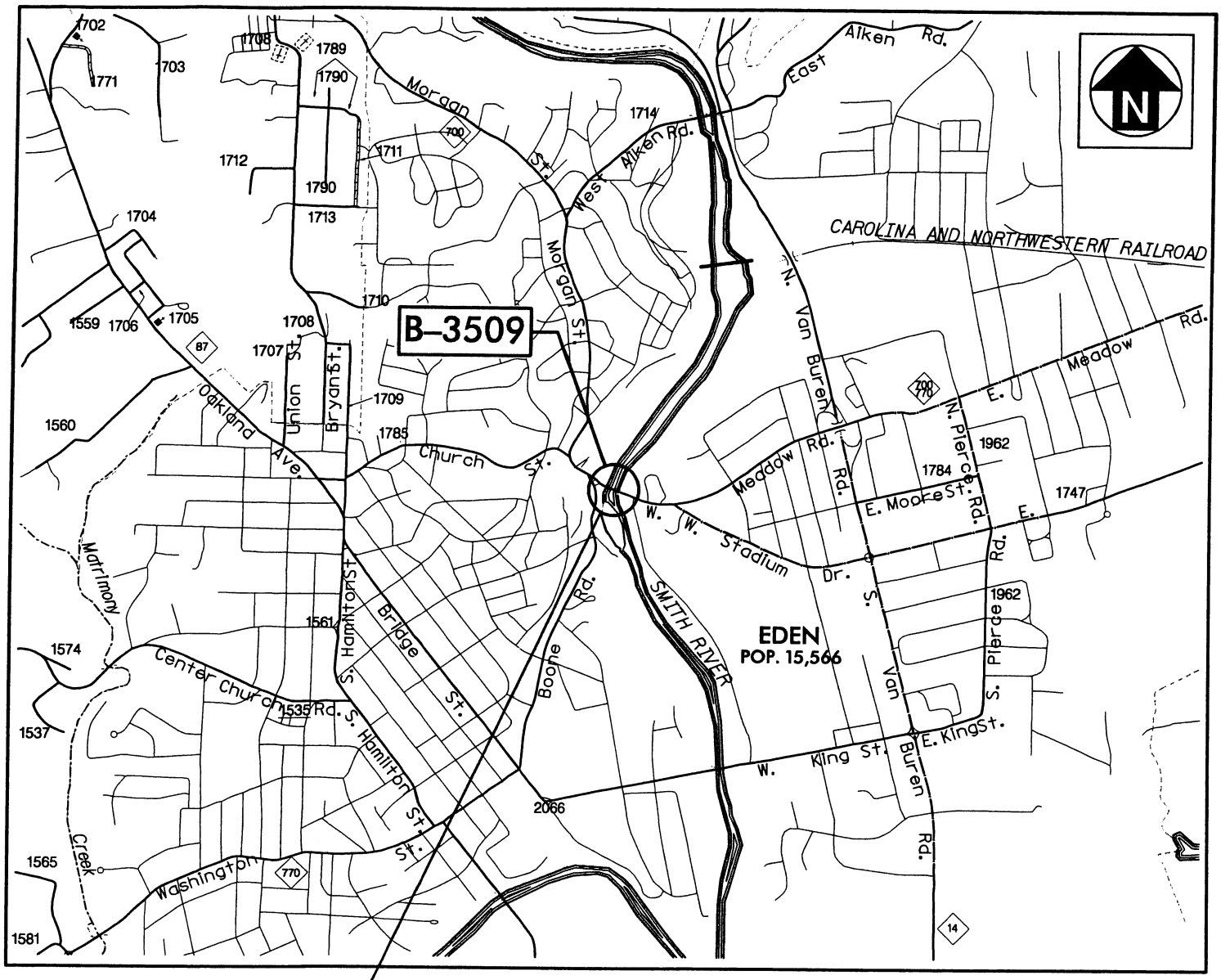
Marianne S. Aiken, Chair
Eden Historic Preservation Commission

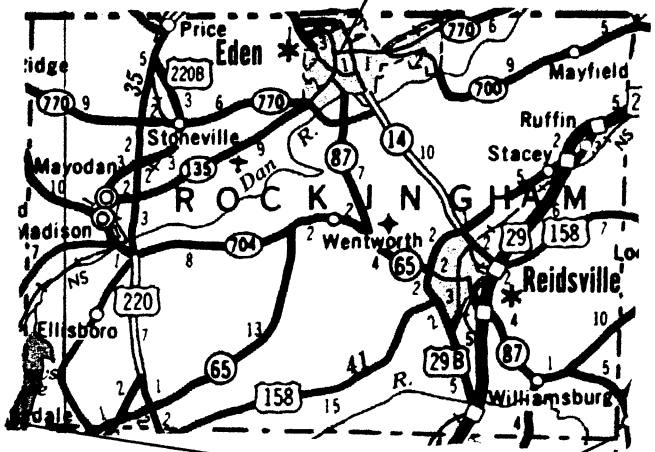
MSA:kmd

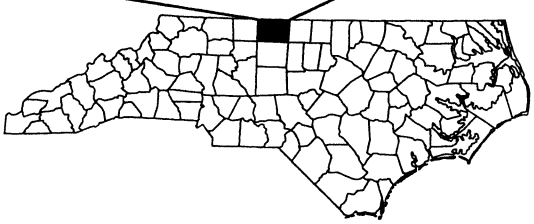
cc: Stacy Harris

APPENDIX A

FIGURES





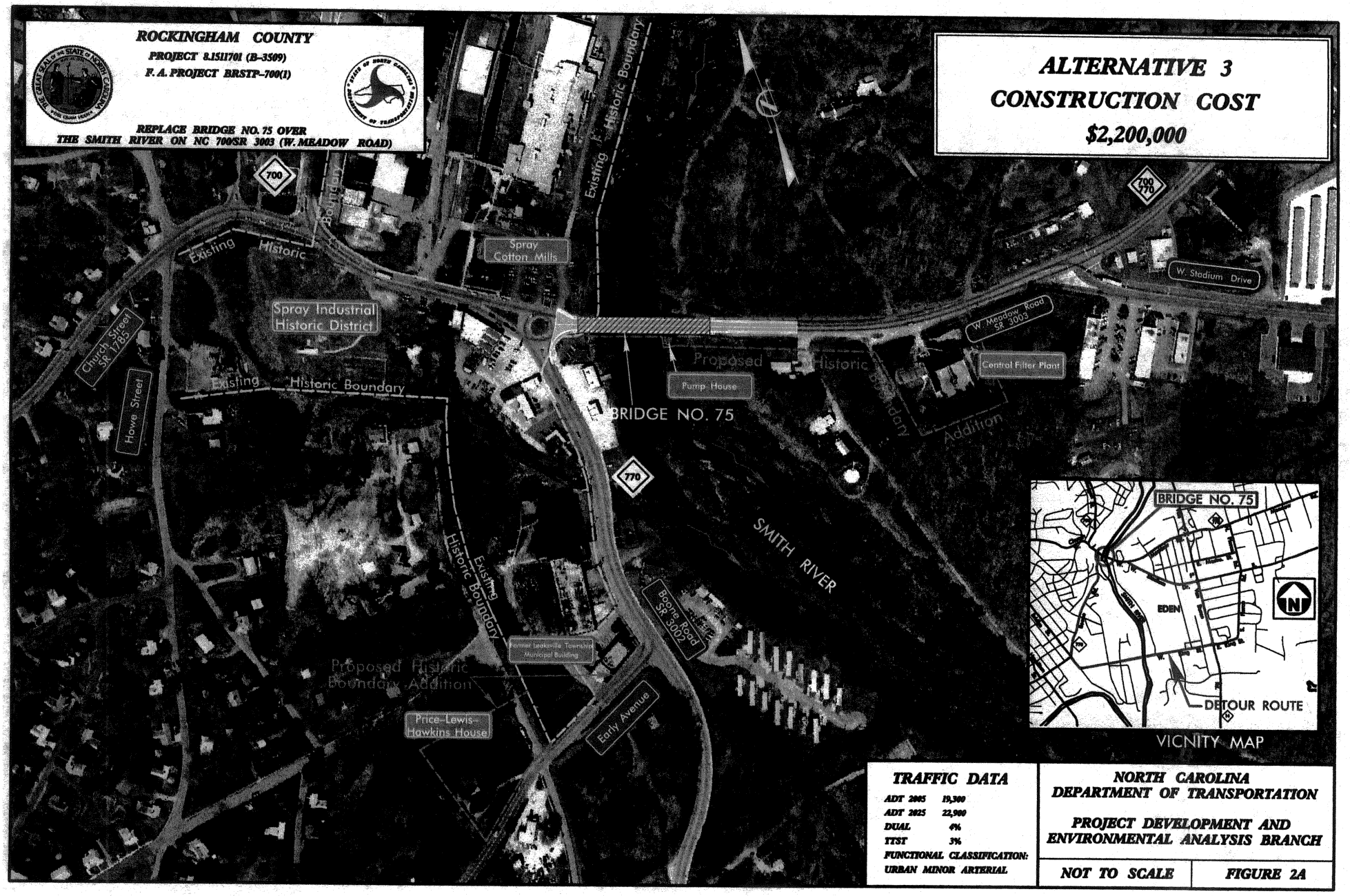


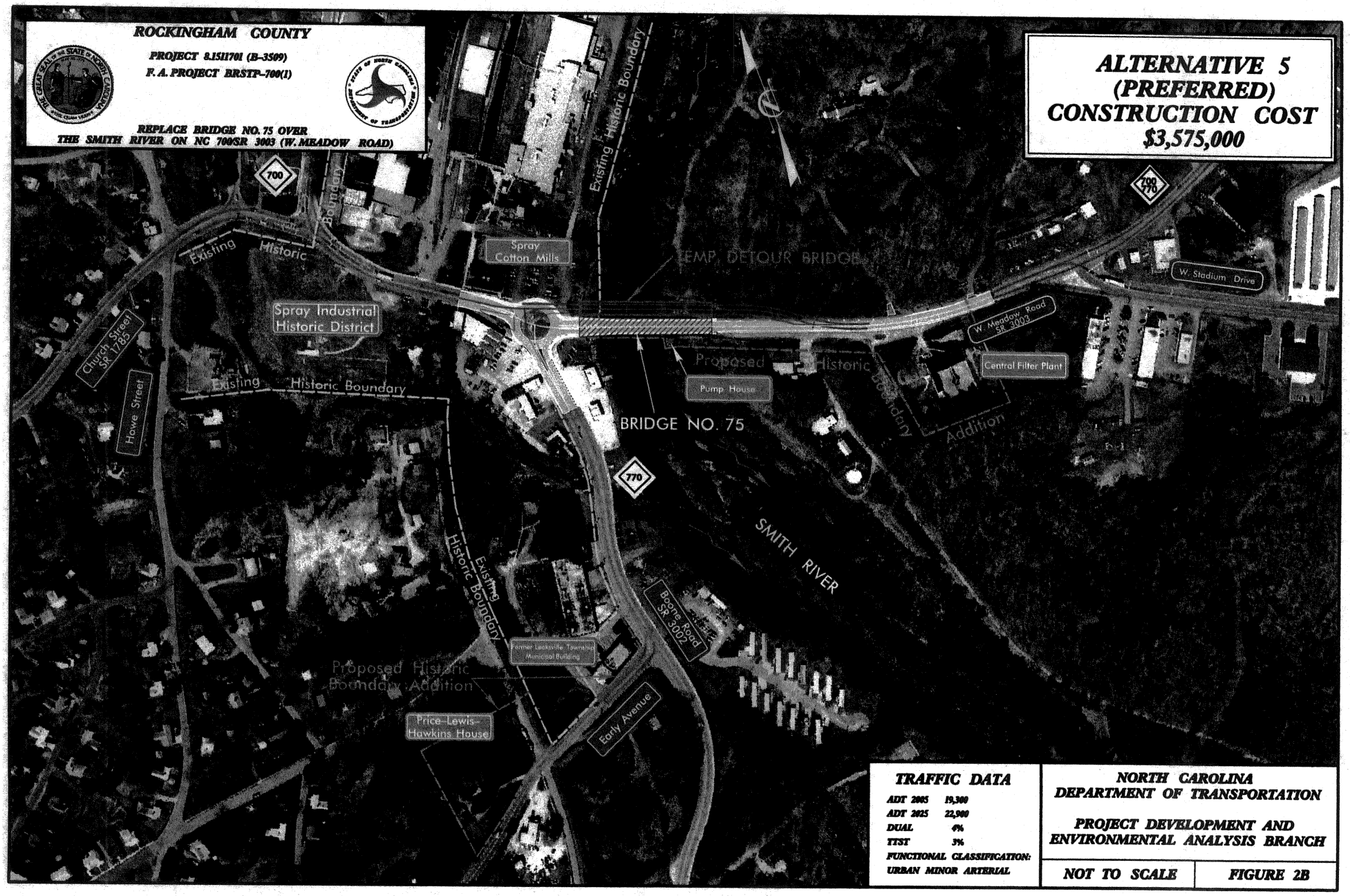
North Carolina Department Of Transportation
Project Development & Environmental Analysis

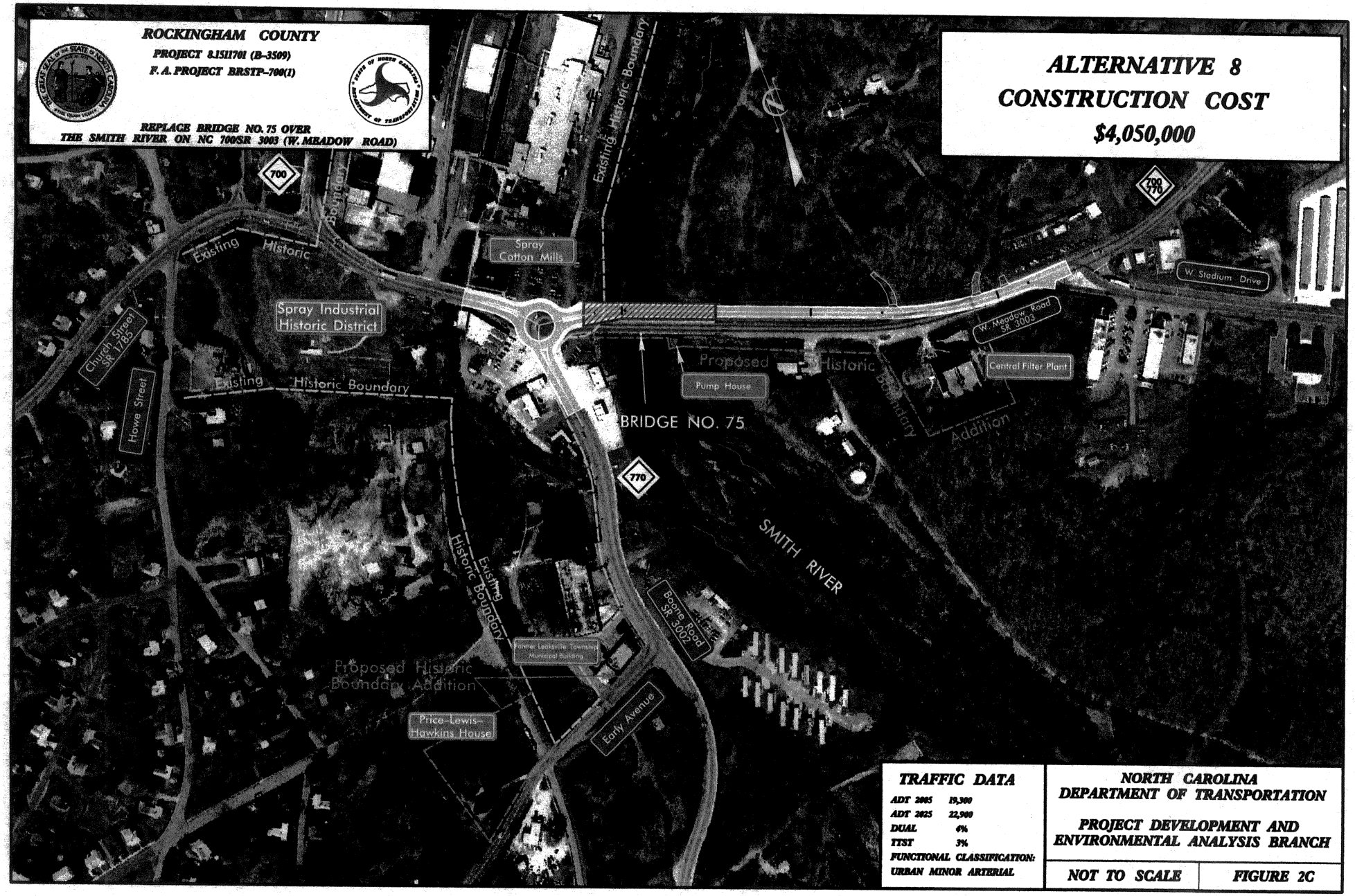
ROCKINGHAM COUNTY
BRIDGE NO. 75 ON SR 3003
(W. MEADOW RD.)
OVER THE SMITH RIVER
B-3509

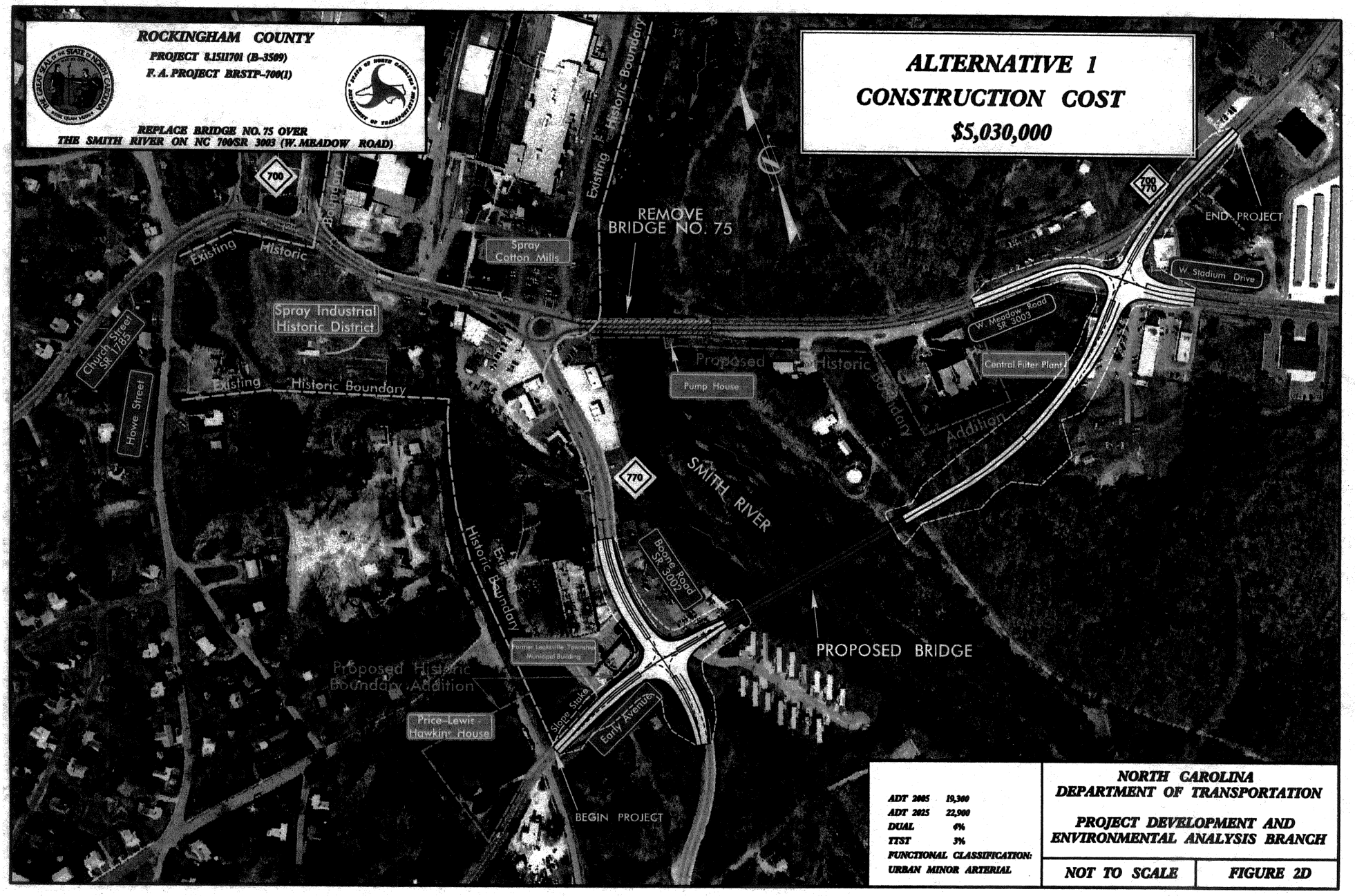
0 kilometers 0.8 kilometers 1.6
0 miles 0.5 miles 1.0

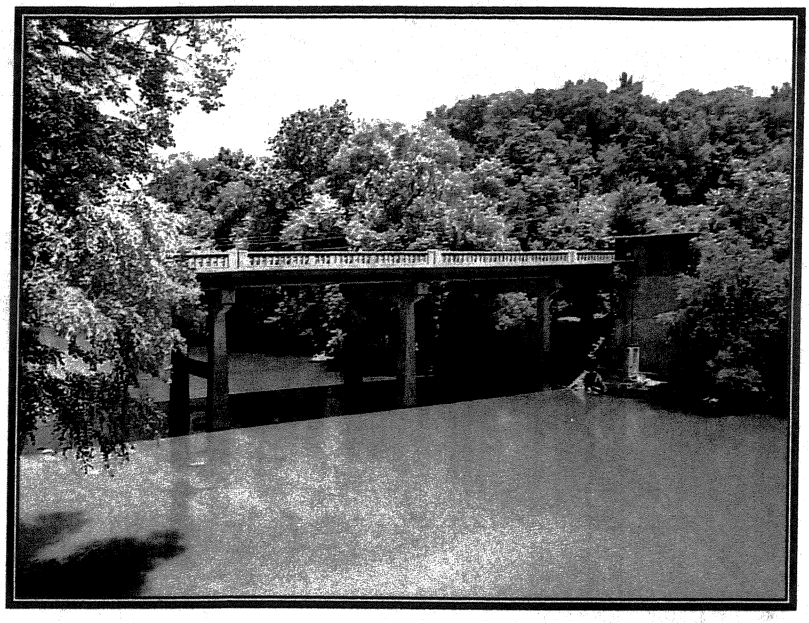
FIGURE 1


ROCKINGHAM COUNTY
PROJECT 8.1511701 (B-3509)
F. A. PROJECT BRSTP-700(1)
REPLACE BRIDGE NO. 75 OVER
THE SMITH RIVER ON NC 700/SR 3003 (W. MEADOW ROAD)
ALTERNATIVE 3
CONSTRUCTION COST
$2,200,000
700
Existing Historic Boundary
Spray Cotton Mills
Existing Historic Boundary
Spray Industrial Historic District
Church Street SR 1785
Howe Street
Existing Historic Boundary
Proposed Historic Boundary Addition
Price-Lewis-Hawkins House
Former Leaksville Township Municipal Building
Existing Historic Boundary
Boone Road SR 3002
Early Avenue
BRIDGE NO. 75
770
SMITH RIVER
Proposed Historic Boundary Addition
Pump House
Central Filter Plant
W. Meadow Road SR 3003
W. Stadium Drive
220/770
BRIDGE NO. 75
EDEN
DETOUR ROUTE
VICNITY MAP
TRAFFIC DATA
ADT 2005 19,300
ADT 2025 22,900
DUAL 4%
TTST 3%
FUNCTIONAL CLASSIFICATION:
URBAN MINOR ARTERIAL
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS BRANCH
NOT TO SCALE
FIGURE 2A

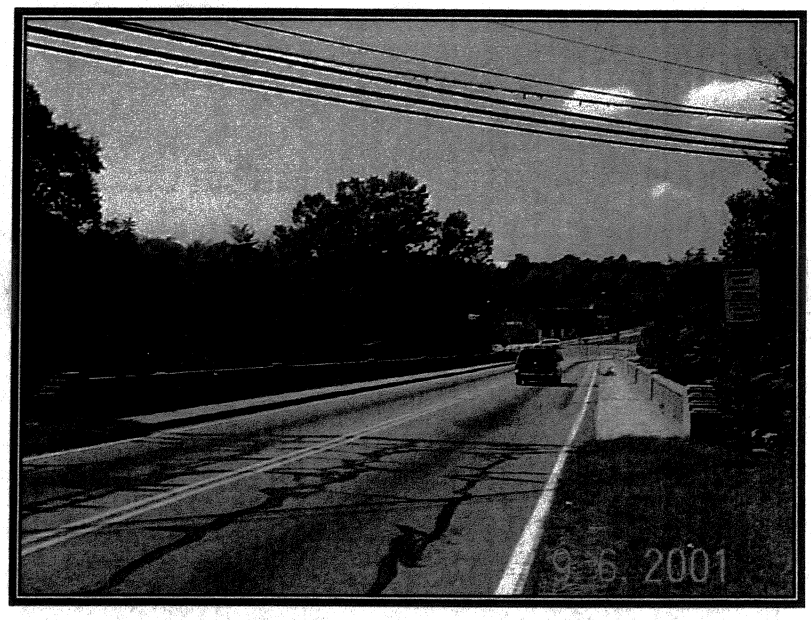

ROCKINGHAM COUNTY
PROJECT 8.1511701 (B-3509)
F. A. PROJECT BRSTP-709(1)
REPLACE BRIDGE NO. 75 OVER
THE SMITH RIVER ON NC 700SR 3003 (W. MEADOW ROAD)
ALTERNATIVE 5
(PREFERRED)
CONSTRUCTION COST
$3,575,000
700
Existing Historic Boundary
Spray Cotton Mills
TEMP. DETOUR BRIDGE
W. Stadium Drive
Spray Industrial Historic District
Church Street SR 1785
Howe Street
Existing Historic Boundary
W. Meadow Road SR 3003
Central Filter Plant
Proposed Historic Boundary Addition
Pump House
BRIDGE NO. 75
770
SMITH RIVER
Boone Road SR 3002
Former Leaksville Township Municipal Building
Proposed Historic Boundary Addition
Price-Lewis-Hawkins House
Early Avenue
TRAFFIC DATA
ADT 2005 19,300
ADT 2025 22,900
DUAL 4%
TTST 5%
FUNCTIONAL CLASSIFICATION:
URBAN MINOR ARTERIAL
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS BRANCH
NOT TO SCALE
FIGURE 2B


ROCKINGHAM COUNTY
PROJECT 8.1511701 (B-3509)
F. A. PROJECT BRSTP-700(1)
REPLACE BRIDGE NO. 75 OVER
THE SMITH RIVER ON NC 700/SR 3003 (W. MEADOW ROAD)
ALTERNATIVE 8
CONSTRUCTION COST
$4,050,000
700
Existing Historic Boundary
Spray Cotton Mills
Existing Historic Boundary
Spray Industrial Historic District
Church Street SR 1785
Howe Street
Existing Historic Boundary
Proposed Historic Boundary Addition
Price-Lewis-Hawkins House
Former Leaksville Township Municipal Building
Existing Historic Boundary
BRIDGE NO. 75
770
Proposed Historic Boundary Addition
Pump House
Central Filter Plant
W. Meadow Road SR 3003
W. Stadium Drive
700/770
SMITH RIVER
Boone Road SR 3002
Early Avenue
TRAFFIC DATA
ADT 2005 19,300
ADT 2025 22,900
DUAL 4%
TTST 3%
FUNCTIONAL CLASSIFICATION:
URBAN MINOR ARTERIAL
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS BRANCH
NOT TO SCALE
FIGURE 2C

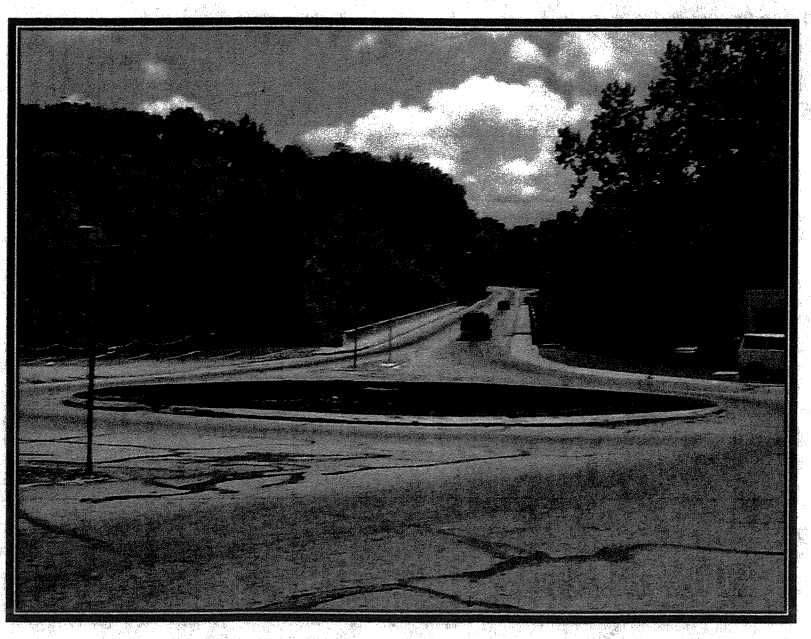

ROCKINGHAM COUNTY
PROJECT 8.1511701 (B-3509)
F. A. PROJECT BRSTP-700(1)
REPLACE BRIDGE NO. 75 OVER
THE SMITH RIVER ON NC 700/SR 3003 (W. MEADOW ROAD)
ALTERNATIVE 1
CONSTRUCTION COST
$5,030,000
700
Existing Historic Boundary
REMOVE
BRIDGE NO. 75
Spray
Cotton Mills
Spray Industrial
Historic District
Church Street
SR 1785
Howe Street
Existing Historic Boundary
Proposed Historic Boundary Addition
Pump House
Central Filter Plant
W. Meadow Road
SR 3003
W. Stadium Drive
700
770
END PROJECT
770
SMITH RIVER
Boone Road
SR 3002
Former Leaksville Township
Municipal Building
Proposed Historic
Boundary Addition
Price-Lewis
Hawkins House
Slope Stake
Early Avenue
PROPOSED BRIDGE
BEGIN PROJECT
ADT 2005 19,300
ADT 2025 22,900
DUAL 4%
TTST 3%
FUNCTIONAL CLASSIFICATION:
URBAN MINOR ARTERIAL
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS BRANCH
NOT TO SCALE
FIGURE 2D



South side of Bridge
No. 75 and Pump House



Looking west across
Bridge No. 75 into Spray
Industrial Historic District

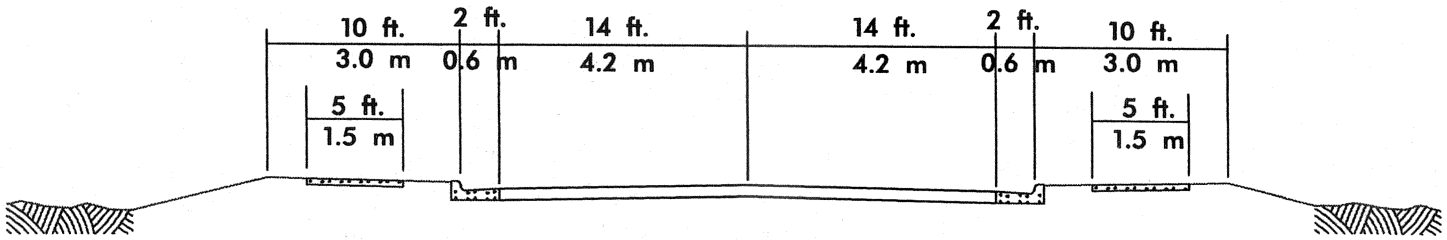


Looking east from Church Street & roundabout intersection

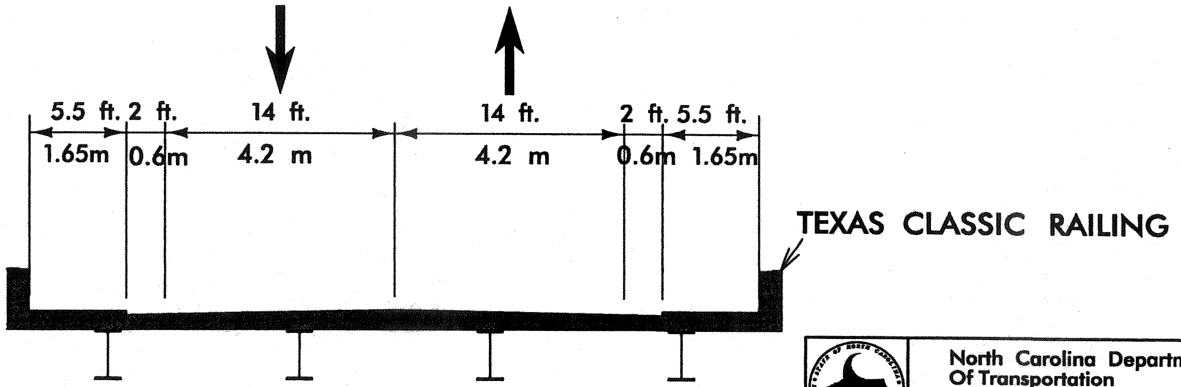
B-3509
Replacement of Bridge
No. 75 on
SR 3003 (W. Meadow Road)
Over Smith River
Rockingham County

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

FIGURE 3



TYPICAL ROADWAY WEST APPROACH SECTION
(PROPOSED)



TYPICAL SECTION ON STRUCTURE
(PROPOSED)

TRAFFIC DATA

ADT 2004 18,600
ADT 2030 22,300
FUNCTIONAL CLASSIFICATION:
URBAN MINOR ARTERIAL

North Carolina Department
Of Transportation
Project Development &
Environmental Analysis

ROCKINGHAM COUNTY
BRIDGE NO. 75 ON SR 3003
(W. MEADOW ROAD)
OVER SMITH RIVER
B-3509

FIGURE 4

B-3509
Rockingham County
Bridge No. 75
On SR 3003 (W. Meadow Road) Over Smith River in Eden

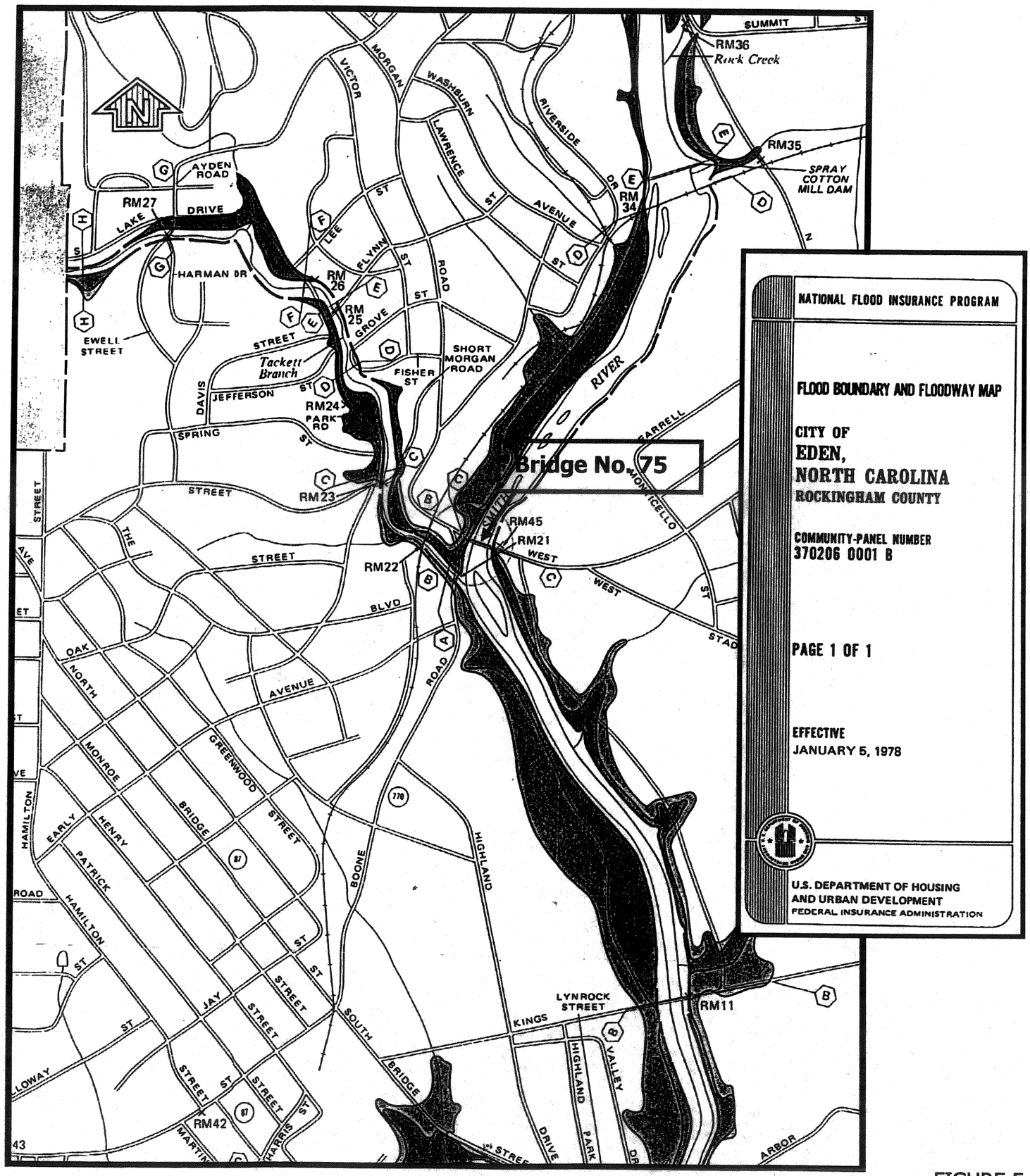
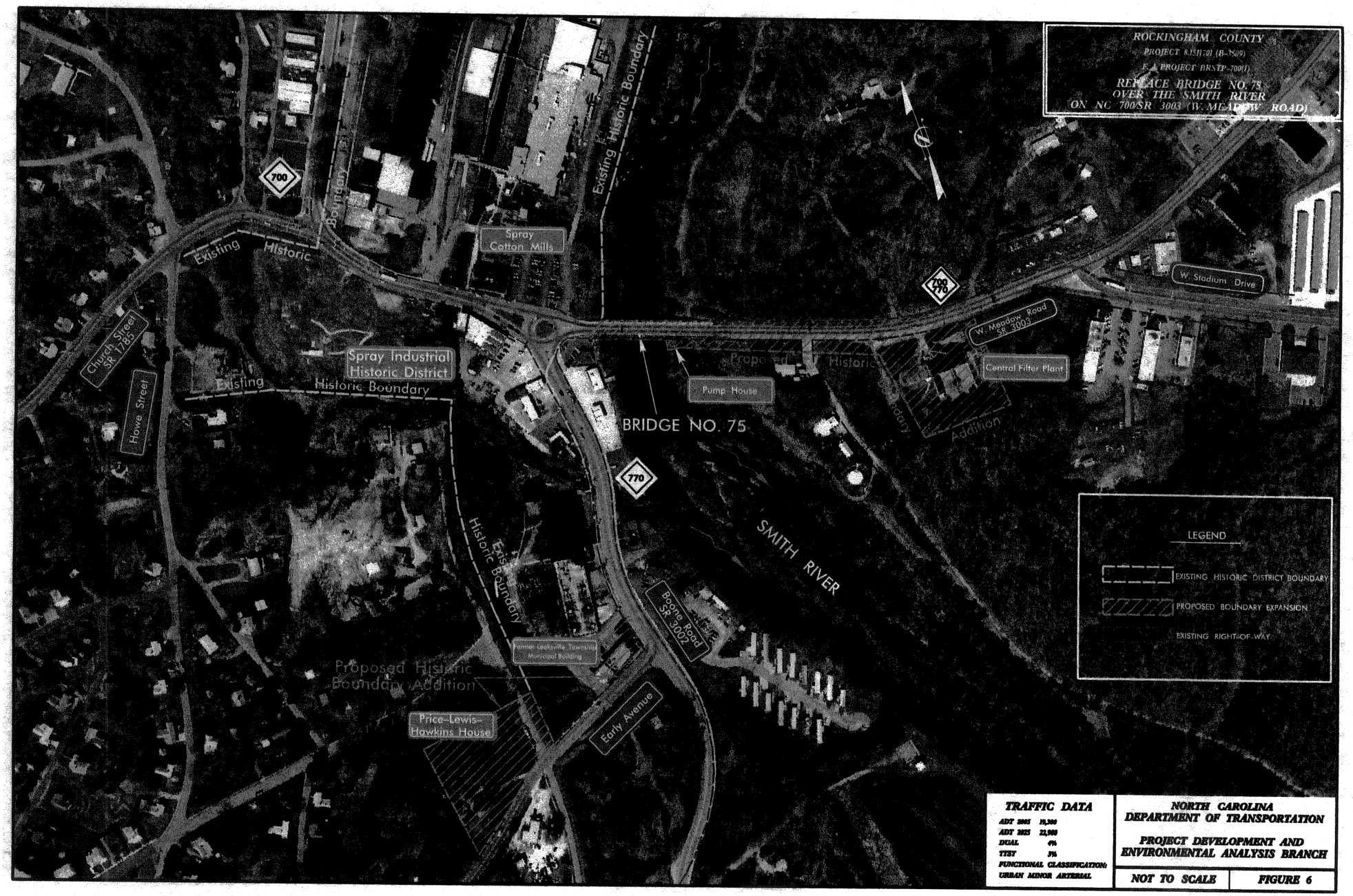


FIGURE 5
FEMA 100 YEAR FLOOD MAP



TRAFFIC DATA	
ADT 2005	19,300
ADT 2025	23,900
DUAL	4%
T25T	5%
FUNCTIONAL CLASSIFICATION:	
URBAN MINOR ARTERIAL	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

NOT TO SCALE	FIGURE 6

ROCKINGHAM COUNTY

PROJECT 8.1511701 (B-3509)

F. A. PROJECT BRSTP-700(1)

REPLACE BRIDGE NO. 75
OVER THE SMITH RIVER
ON NC 700/SR 3003 (W. MEADOW ROAD)

Spray Cotton Mills

Existing Historic Boundary

Spray Industrial Historic District

Historic Boundary

Existing Historic Boundary

Proposed Addition

Pump House

Central Filter Plant

W. Meadow Road SR 3003

700 770

BRIDGE NO. 75

SMITH RIVER

770

Boone Road SR 3002

LEGEND

- EXISTING HISTORIC DISTRICT BOUNDARY
- PROPOSED BOUNDARY EXPANSION
- EXISTING RIGHT-OF-WAY
- ALTERNATIVE 3 & 5 PERMANENT IMPACTS
- ALTERNATIVE 8 PERMANENT IMPACTS

TRAFFIC DATA

ADT 2005	19,300
ADT 2025	22,900
DUAL	4%
TTST	3%

FUNCTIONAL CLASSIFICATION:
URBAN MINOR ARTERIAL

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH

IMPACTS	FIGURE 7

APPENDIX B

MEMORANDUM OF AGREEMENT

MEMORANDUM OF AGREEMENT
AMONG
THE FEDERAL HIGHWAY ADMINISTRATION
AND
NORTH CAROLINA HISTORIC PRESERVATION OFFICER
FOR
THE REPLACEMENT OF BRIDGE NO. 75
ON NC 700/SR 3003 OVER THE SMITH RIVER IN EDEN,
ROCKINGHAM COUNTY, NORTH CAROLINA

WHEREAS, the Federal Highway Administration (FHWA) has determined that the replacement of Bridge No. 75 on NC 700/SR 3003 over the Smith River in Eden, Rockingham County, North Carolina (the undertaking) will have an effect upon the expansion of the Spray Industrial Historic District, a property determined eligible for listing in the National Register of Historic Places, and has consulted with the North Carolina State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the North Carolina Department of Transportation (NCDOT) and the City of Eden (CITY) have participated in the consultation and been invited to concur in this Memorandum of Agreement;

NOW, THEREFORE, FHWA and the North Carolina SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take in to account the effect of the undertaking on the historic properties.

STIPULATIONS

FHWA will ensure that the following measures are carried out:

I. Recordation: Prior to the initiation of work, NCDOT shall record Bridge No. 75 and the adjacent buildings in the expanded Spray Industrial Historic District in accordance with the attached Historic Structures Recordation Plan (Appendix A).

II. Replacement Bridge Design: NCDOT shall consult with the CITY and North Carolina SHPO on the design for the replacement bridge and provide the SHPO an opportunity to comment upon the Preliminary Design plans for the replacement bridge.

III. Dispute Resolution: Should the North Carolina SHPO object within thirty (30) days to any plans or documentation provided for review pursuant to this agreement, FHWA shall consult with the North Carolina SHPO to resolve the objection. If FHWA or the North Carolina SHPO determines that the objection cannot be resolved, FHWA shall forward all documentation relevant to the

dispute to the Advisory Council on Historic Preservation (Council). Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

A. Provide FHWA with recommendations which FHWA will take into account in reaching a final decision regarding the dispute, or

B. Notify FHWA that it will comment pursuant to 36 CFR Section 800.7(c)) and proceed to comment. Any Council comment provided in response to such a request will be taken into account by FHWA in accordance with 36 CFR Section 800.7(c)(4) with reference to the subject of the dispute.

Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; FHWA's responsibility to carry out all the actions under this agreement that are not the subject of the dispute will remain unchanged.

Execution of this agreement by FHWA and the North Carolina SHPO, its subsequent filing with the Advisory Council on Historic Preservation, and implementation of its terms evidence that FHWA has afforded the Council an opportunity to comment on the replacement of Bridge No. 75 on NC 700/SR 3003 over the Smith River in Eden and its effects on the expanded Spray Industrial Historic District, and that FHWA has taken into account the effects of the undertaking on the historic property.

AGREE:

FEDERAL HIGHWAY ADMINISTRATION — 1/8/03 DATE

NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICER — 12/18/02 DATE

CONCUR:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION — 10/15/02 DATE

CITY OF EDEN — 11/6/02 DATE

FILED BY:

ADVISORY COUNCIL ON HISTORIC PRESERVATION — DATE

APPENDIX A

Historic Structures Recordation Plan
For the Replacement of Bridge No. 75 on NC 700/SR 3003 over
The Smith River in Eden,
Rockingham County, North Carolina

Photographic Requirements

Selected photographic views of Bridge No. 75 as a whole, and views of the bridge and the adjacent buildings in the expanded Spray Industrial Historic District, including:

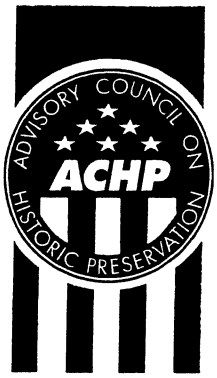
- Overall views of the bridge (elevations and oblique views)
- Overall views of the project area, showing the relationship of the structure to adjacent buildings and its setting

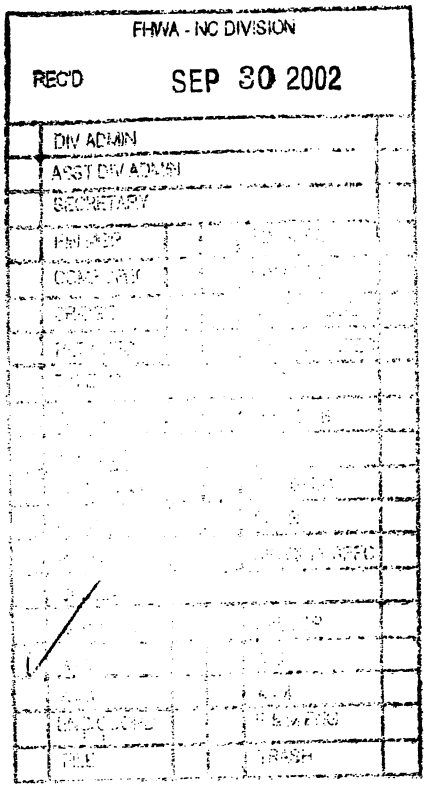
Photographic Format

- Color slides (all views)
- 35 mm or larger black and white negatives (all views)
- Two (2) black and white contact sheets (all views)
- All processing to be done to archival standards
- All photographs, slides, and negatives to be labeled according to Division of Archives and History standards

Copies and Curation

One (1) set of all photographic documentation will be deposited with the North Carolina Division of Archives and History/State Historic Preservation Office to be made a permanent part of the statewide survey and iconographic collection. One contact sheet will be deposited in the files of the Historic Architecture Section of NCDOT.





September 23, 2002

Mr. Nicholas L. Graf, P.E.
Division Administrator
Federal Highway Administration
310 New Bern Avenue
Raleigh, NC 27601

REF: Proposed Replacement of Bridge No. 75 over Smith River
Eden, Rockingham County, North Carolina

Dear Mr. Graf:

On September 10, 2002, the Council received your notification and supporting documentation regarding the adverse effects of the referenced project on the Spray Industrial Historic District, which is eligible for listing on the National Register of Historic Places. Based upon the information you provided, we do not believe that our participation in consultation to resolve adverse effects is needed. However, should circumstances change and you determine that our participation is required, please notify us. Pursuant to 36 CFR 800.6(b)(iv), you will need to file the final Memorandum of Agreement and related documentation at the conclusion of the consultation process. The filing of the Agreement with the Council is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require the further assistance of the Council, please contact us at 202-606-8505.

Sincerely,

Raymond V. Wallace

Raymond V. Wallace
Historic Preservation Technician
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 809 • Washington, DC 20004
Phone: 202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov

North Carolina Department of Cultural Resources
State Historic Preservation Office
David L. S. Brook, Administrator

Division of Historical Resources
David J. Olson, Director

:hael F. Easley, Governor
)eth C. Evans, Secretary
rey J. Crow, Deputy Secretary

September 30, 2002

OCT - 4 2002

MEMORANDUM

TO: Greg Thorpe, Manager
Project Development and Environmental Analysis Branch
NCDOT Division of Highways

FROM: David Brook

SUBJECT: Adverse Effect Finding, Replace Bridge No. 75 on NC 700/SR 3003 over Smith River in Eden, B-3509, Rockingham County, ER 99-7717

Thank you for your letter of August 26, 2002, transmitting the Adverse Effect Finding Documentation concerning the above project.

We have reviewed the Finding of Adverse Effect Documentation and concur that this undertaking will adversely effect the (expanded) Spray Industrial Historic District, eligible for the National Register.

We look forward to future consultation regarding mitigation measures for this property.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr
Eden HDC

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, NC 27601

September 6, 2002

IN REPLY REFER TO:
HO-NC

Mr. Don Klima, Director
Eastern Office of Project Review
Advisory Council on Historic Preservation
The Old Post Office Building
1100 Pennsylvania Ave., N.W. No. 809
Washington, D.C. 20004

Subject: Notification of Adverse Effect Finding, Replace Bridge No. 75 on NC 700/SR 3003 over Smith River in Eden, Rockingham County, North Carolina, TIP No. B-3509, State Project No. 8.1511701, Federal Aid No. BRZ-700(1)

Dear Mr. Klima:

After consultation with the North Carolina State Historic Preservation Office, it was determined that the subject project would have an adverse effect on the (expanded) Spray Industrial Historic District, an area eligible for listing in the National Register of Historic Places. Subsequently, the North Carolina Department of Transportation has prepared the accompanying supplementary documentation specified by the Council in Part 800.11(e). This documentation does not proffer a formal invitation to the Council for participation in the consultation because none of the circumstances specified in Part 800.6(a)(1)(i)(A)-(C) exist for this project.

Please review the attached documentation pursuant to 36 CFR Part 800.6(a)(1). If you have any questions concerning the accompanying information, please contact Felix Davila at (919) 856-4350 ext. 106.

Sincerely yours,

For Nicholas L. Graf, P.E.
Division Administrator

Attachment

cc: Ms. Stacy Harris, PE, NCDOT
Mr. David Brook, SHPO
Mr. Carl B. Goode, NCDOT

APPENDIX C

CORRESPONDENCE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

December 2, 1998

Mr. William D. Gilmore, P.E., Manager
Planning and Environmental Branch
North Carolina Department of Transportation
Division of Highways
P.O. Box 25201
Raleigh, NC 27611-520

Dear Mr. Gilmore:

Thank you for your letter of November 2, 1998, requesting information from the U.S. Fish and Wildlife Service (Service) for the purpose of evaluating the potential environmental impacts of the following proposed bridge replacement projects:

1. B-3157, Davidson County, Replace Bridge Nos. 74 and 76 on US 29, 64, 70 and I-85 Bus. over SR 1242 and Michael Creek,

2. B-3174, Guilford County, Replace Bridge No. 306 on US 29, 70, 220 and 421 over NC 6;

3. B-3422, Cabarrus County, Replace Bridge No. 47 on SR 1002 (Cabarrus Ave.) over Three Mile Branch;

4. B-3424, Cabarrus County, Replace Bridge No. 264 on SR 1745 (Oakwood Ave.) over Branch Irish Buffalo Creek;

5. B-3447, Davidson County, Replace Bridge No. 420 on SR 2031 over Southern Railroad;

6. B-3505, Randolph County, Replace Bridge No. 434 on SR 2261 (Old Liberty Road) over Deep River; and,

7. B-3509, Rockingham County, Replace Bridge No. 75 on NC 700 over Smith River.

This report provides scoping information and is provided in accordance with provisions of the Fish and Wildlife Coordination Act (FWCA) (16 U.S.C. 661-667d) and Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543). This report also serves as initial scoping comments to federal and state resource agencies for use in their

permitting and/or certification processes for these projects. The following is applicable only to items 2, 6, and 7. Items 1, 3, 4, and 5 are in areas of the state under the jurisdiction of the Service's Asheville Office. They should be contacted for resource information pertinent to these projects.

The mission of the Service is to provide leadership in the conservation, protection, and enhancement of fish and wildlife, and their habitats, for the continuing benefit of all people. Due to staffing limitations, we are unable to provide you with detailed site-specific comments at this time. However, the following recommendations are provided to assist you in your planning process and to facilitate a thorough and timely review of the project.

Generally, the Service recommends that wetland impacts be avoided and minimized to the maximum extent practical as outlined in Section 404 (b)(1) of the Clean Water Act Amendments of 1977. In regard to avoidance and minimization of impacts, we recommend that proposed highway projects be aligned along or adjacent to existing roadways, utility corridors, or previously developed areas in order to minimize habitat fragmentation and encroachment. Areas exhibiting high biodiversity or ecological value important to the watershed and/or region should be avoided. Crossings of streams and associated wetland systems should use existing crossings and/or occur on a structure wherever feasible. Where bridging is not feasible, culvert structures that maintain natural water flows and hydraulic regimes without scouring, or impeding fish and wildlife passage, should be employed. Highway shoulder and median widths should be reduced through wetland areas. Roadway embankments and fill areas should be stabilized by using appropriate erosion control devices and/or techniques. Wherever appropriate, construction in sensitive areas should occur outside fish spawning and migratory bird nesting seasons.

The National Wetlands Inventory (NWI) maps of the appropriate 7.5 Minute Quadrangles for each site should be consulted to determine if wetlands may be impacted by the respective projects. However, while the NWI maps are useful for providing an overview of a given area, they should not be relied upon in lieu of a detailed wetland delineation by trained personnel using an acceptable wetland classification methodology.

We reserve the right to review any required federal or state permits that may be required for these projects at the public notice stage. We may have no objection, provide recommendations for modification of the project, or recommend denial. Therefore, it is important that resource agency coordination occur early in the planning process in order to resolve any conflicts that may arise and minimize delays in project implementation.

In addition to the above guidance, we recommend that the environmental documentation for each project include the following in sufficient detail to facilitate a thorough review of the action:

1. A clearly defined purpose and need for each proposed project, including a discussion of the projects's independent utility;

2. A description of the proposed action with an analysis of all alternatives being considered, including the upgrading of existing bridges, new bridges on existing alignments, new bridges on new alignments, and a "no action" alternative;

3. A description of the fish and wildlife resources, and their habitats, within the project impact areas that may be directly or indirectly affected;

4. The extent and acreage of waters of the U.S., including wetlands, that are to be impacted by filling, dredging, clearing, ditching, and/or draining. Acres of wetland impact should be differentiated by habitat type based on the wetland classification scheme of the National Wetlands Inventory (NWI). Wetland boundaries should be determined by using the 1987 Corps of Engineers Wetlands Delineation Manual and verified by the U.S. Army Corps of Engineers (Corps);

5. The anticipated environmental impacts, both temporary and permanent, that would be likely to occur as a direct result of the proposed project. The assessment should also include the extent to which the proposed project would result in secondary impacts to natural resources, and how this and similar projects contribute to cumulative adverse effects;

6. Design features and/or construction techniques which would be employed to avoid or minimize the fragmentation or direct loss of wildlife habitat value;

7. Design features, construction techniques, and/or any other mitigation measures which would be employed at wetland crossings and stream channel relocations to avoid or minimize impacts to waters of the United States; and,

8. If unavoidable wetland impacts are proposed, we recommend that every effort be made to identify compensatory mitigation sites in advance. Project planning should include a detailed compensatory mitigation plan for offsetting unavoidable wetland impacts. Opportunities to protect mitigation areas in perpetuity, preferably via conservation easement, should be explored at the outset.

The attached pages identify the federally-listed endangered, threatened, and candidate species that are known to occur in the respective Counties. Habitat requirements for any federally-listed species that occur in the project impact areas should be compared with the available habitat at the project site. If suitable habitat is present within the action area of the project, field surveys for the species should be performed. A listed species, the smooth coneflower (*Echinacea laevigata*), is known to occur in the vicinity B-3509 at the City of Eden, Rockingham County.

Habitat for smooth coneflower is open woods, cedar barrens, roadsides, clearcuts, dry limestone bluffs, and power line rights-of-way, usually on magnesium- and calcium-rich soils associated with gabbro or diabase in North Carolina. Optimal sites are characterized by abundant sunlight and

little competition in the herbaceous layer.

Environmental documentation should include survey methodologies and results. In addition to this guidance, the following information should be included in the document regarding protected species:

1. A map and description of the specific area used in the analysis of direct, indirect, and cumulative impacts;

2. A description of the biology and status of the listed species and the habitat of the species that may be affected by the action, including the results of any onsite inspections;

3. An analysis of the "effects of the action" on the listed species and associated habitat which includes consideration of:

   a. The environmental baseline which is an analysis of the effects of past and ongoing human and natural factors leading to the current status of the species and its habitat;

   b. The impacts of past and present federal, state, and private activities in the project area and cumulative impacts area;

   c. The direct and indirect impacts of the proposed action. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur;

   d. The impacts of interrelated actions (those that are part of a larger action and depend on the larger action for their justification) and interdependent actions (those that have no independent utility apart from the action under consideration); and,

   e. The cumulative impacts of future state and private activities (not requiring federal agency involvement) that will be considered as part of future Section 7 consultation;

4. A description of the manner in which the action may affect any listed species or associated habitat including project proposals to reduce/eliminate adverse effects. Direct mortality, injury, harassment, the loss of habitat, and/or the degradation of habitat are all ways in which listed species may be adversely affected;

5. A summary of evaluation criteria to be used as a measure of potential effects. Criteria may include post-project population size, long-term population viability, habitat quality, and/or habitat quantity; and,

6. Based on evaluation criteria, a determination of whether the project is not likely to adversely affect or may affect threatened and endangered species.

Candidate species are those plant and animal species for which the Service has sufficient information on their biological status and threats to their survival to propose them as endangered or threatened under the ESA. Although candidate species receive no statutory protection under the ESA, Federal agencies are required to informally confer with the Service on actions likely to jeopardize the continued existence of these species or that may destroy or modify proposed critical habitat.

Federal species of concern (FSC) include those species for which the Service does not have enough scientific information to support a listing proposal or species which do not warrant listing at the present time. These species receive no statutory protection under the ESA, but could become candidates in the future if additional scientific information becomes available indicating that they are endangered or threatened. Formal listing places the species under the full protection of the ESA, and necessitates a new survey if its status in the project area is unknown. Therefore, it would be prudent for the North Carolina Department of Transportation (NCDOT) to avoid any adverse impacts to candidate species or their habitat. The North Carolina Natural Heritage Program should be contacted for information on species under state protection.

The Service appreciates the opportunity to comment on these projects. Please continue to advise us during the progression of the planning process, including your official determination of the impacts of this project. If you have any questions regarding these comments, please contact Tom McCartney at 919-856-4520, ext. 32.

Sincerely,

John M. Hefner
Ecological Services Supervisor

Enclosures

FWS/R4:TMcCartney:TM:12/1/98:919/856-4520 extension 32:\7-bridge.rpl

cc:
Eric Alsmeyer, COE, Raleigh, NC
David Cox, DNR, Creedmoor, NC
Cyndi Bell, NCDWQ, Raleigh, NC
Nicholas Graf, FHWA, Raleigh, NC
Ted Bisterfield, EPA, Atlanta, GA

Mapping Symbols for Threatened and Endangered Species

Birds


Bald Eagle


Peregrine Falcon


Piping Plover


Red-cockaded Woodpecker


Roseate Tern


Wood Stork

Fish


Cape Fear Shiner


Waccamaw Silverside

Mussels


Dwarf-wedge Mussel


Tar Spinymussel

Mammals


Eastern Cougar

Red Wolf

Plants


American Chaffseed


Harperella


Michaux's Sumac


Pondberry


Rough-leaved Loosestrife


Schweinitz's Sunflower

Seabeach Amaranth


Sensitive Joint-vetch

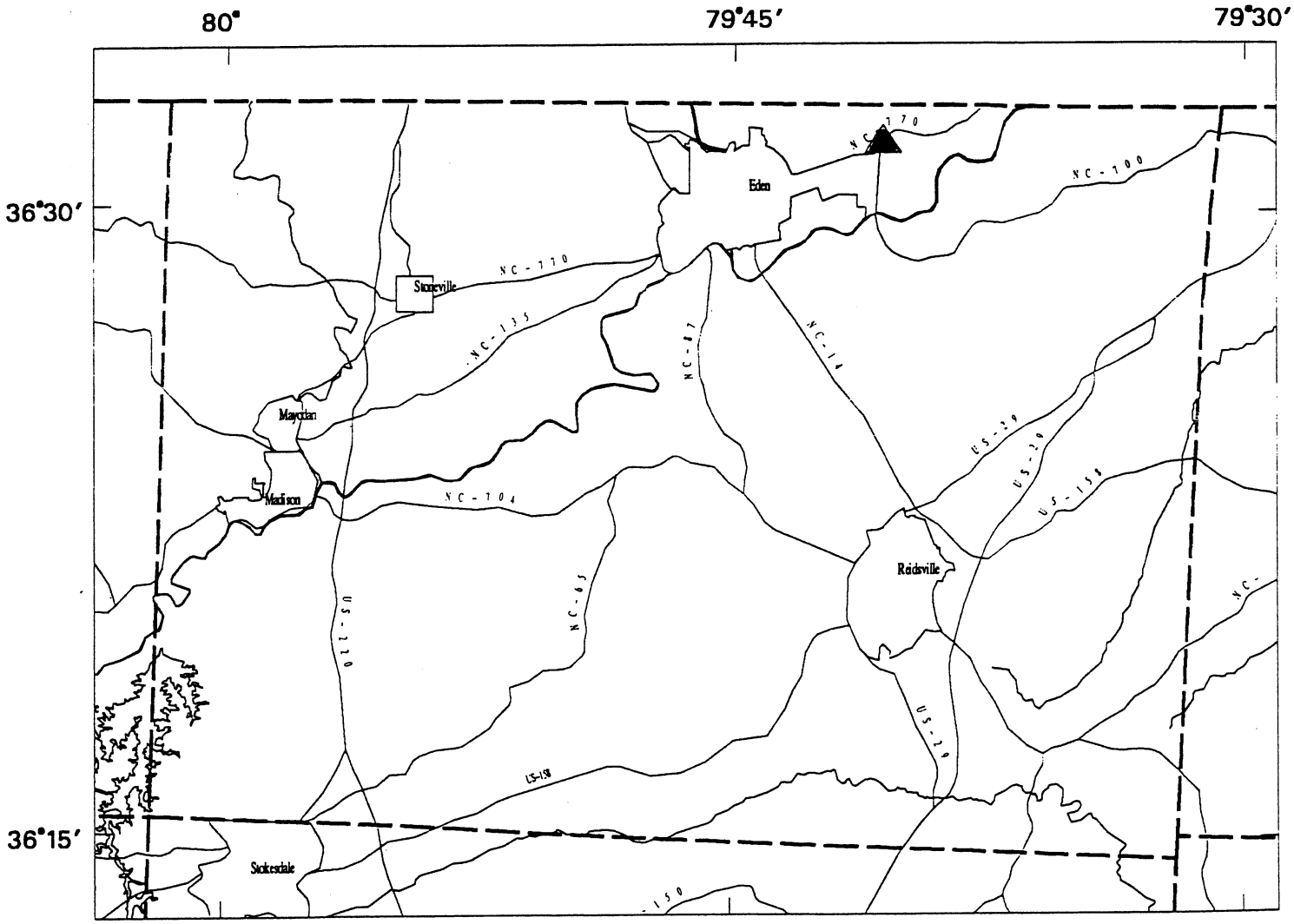

Small Whorled Pogonia


Smooth Coneflower

Seaturtles are seasonally ubiquitous along coastal regions, and therefore, are not labeled. Shortnosed Sturgeon and Manatees are seasonally ubiquitous in estuarine areas and are also not labeled.

Accounts of Selected Federally Listed Species In ROCKINGHAM County

Data represented on these maps are not based on comprehensive inventories of this county. Lack of data must not be construed to mean that listed species are not present.



Prepared by U.S. Fish and Wildlife Service
based on data provided by NC Natural Heritage Program
D. Newcomb, K. Tripp 1/15/98

0 1 2 3 4 5 MILES
0 1 2 3 4 5 KILOMETERS

expires 1/31/99

North Carolina Wildlife Resources Commission

512 N. Salisbury Street, Raleigh, North Carolina 27604-1188, 919-733-3391
Charles R. Fullwood, Executive Director

MEMORANDUM

TO: Stacy Baldwin, Project Planning Engineer
Planning & Environmental Branch, NCDOT

FROM: David Cox, Highway Project Coordinator
Habitat Conservation Program

DATE: January 12, 1999

SUBJECT: NCDOT Group XV Bridge Replacements in Cabarrus, Davidson, Guilford, Randolph and Rockingham counties, North Carolina. TIP Nos. B-3157, B-3174, B-3422, B-3424, B-3447, B-3505, and B-3509.

Biologists with the N. C. Wildlife Resources Commission (NCWRC) have reviewed the information provided and have the following preliminary comments on the subject project. Our comments are provided in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended: 16 U.S.C. 661-667d).

On bridge replacement projects of this scope our standard recommendations are as follows:

1. We generally prefer spanning structures. Spanning structures usually do not require work within the stream and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allows for human and wildlife passage beneath the structure, does not block fish passage, and does not block navigation by canoeists and boaters.

2. Bridge deck drains should not discharge directly into the stream.

3. Live concrete should not be allowed to contact the water in or entering into the stream.

4. If possible, bridge supports (bents) should not be placed in the stream.

5. If temporary access roads or detours are constructed, they should be removed back to original ground elevations immediately upon the completion of the project. Disturbed areas should be seeded or mulched to stabilize the soil and native tree species should be planted with a spacing of not more than 10'x10'. If possible, when using temporary structures the area should be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact, allows the area to revegetate naturally and minimizes disturbed soil.

6. A clear bank (riprap free) area of at least 10 feet should remain on each side of the steam underneath the bridge.

7. In trout waters, the N.C. Wildlife Resources Commission reviews all U.S. Army Corps of Engineers nationwide and general '404' permits. We have the option of requesting additional measures to protect trout and trout habitat and we can recommend that the project require an individual '404' permit.

8. In streams that contain threatened or endangered species, NCDOT biologist Mr. Tim Savidge should be notified. Special measures to protect these sensitive species may be required. NCDOT should also contact the U.S. Fish and Wildlife Service for information on requirements of the Endangered Species Act as it relates to the project.

9. In streams that are used by anadromous fish, the NCDOT official policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997)" should be followed.

10. In areas with significant fisheries for sunfish, seasonal exclusions may also be recommended.

If corrugated metal pipe arches or concrete box culverts are used:

1. The culvert must be designed to allow for fish passage. Generally, this means that the culvert or pipe invert is buried at least 1 foot below the natural stream bed. If multiple cells are required the second and/or third cells should be placed so that their bottoms are at stream bankful stage (similar to Lyonsfield design). This will allow sufficient water depth in the culvert or pipe during normal flows to accommodate fish movements. If culverts are long, baffle systems are required to trap gravel and provide resting areas for fish and other aquatic organisms.

2. If multiple pipes or cells are used, at least one pipe or box should be designed to remain dry during normal flows to allow for wildlife passage.

3. Culverts or pipes should be situated so that no channel realignment or widening is required. Widening of the stream channel at the inlet or outlet of structures usually causes a decrease in water velocity causing sediment deposition that will require future maintenance.

4. Riprap should not be placed on the stream bed.

In most cases, we prefer the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to

avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure should be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed down to the natural ground elevation. The area should be stabilized with grass and planted with native tree species. If the area that is reclaimed was previously wetlands, NCDOT should restore the area to wetlands. If successful, the site may be used as wetland mitigation for the subject project or other projects in the watershed.

Project specific comments:

1. B-3157 – Michael Creek is small and degraded at this site. NCDOT should use Best Management Practices to protect downstream resources.

2. B-3174 – No comment.

3. B-3422 – No specific concerns. NCDOT should use Best Management Practices to protect downstream resources.

4. B-3424 - No specific concerns. NCDOT should use Best Management Practices to protect downstream resources.

5. B-3447 – No comment.

6. B-3505 – The bridge crossing is in the upper section of the Cox Lake Hydroelectric impoundment. We have no specific fishery concerns at this site.

7. B-3509 – This section of the Smith River supports a diverse fish population. Due to the size of the river and the good population of fish, we request that no in-water work be performed from April 1 to June 30.

We request that NCDOT routinely minimize adverse impacts to fish and wildlife resources in the vicinity of bridge replacements. The NCDOT should install and maintain sedimentation control measures throughout the life of the project and prevent wet concrete from contacting water in or entering into these streams. Replacement of bridges with spanning structures of some type, as opposed to pipe or box culverts, is recommended in most cases. Spanning structures allow wildlife passage along streambanks, reducing habitat fragmentation and vehicle related mortality at highway crossings.

If you need further assistance or information on NCWRC concerns regarding bridge replacements, please contact me at (919) 528-9886. Thank you for the opportunity to review and comment on these projects.

United States
Department of
Agriculture

Natural
Resources
Conservation
Service

4405 Bland Rd.
Suite 205
Raleigh, NC 27609

919) 873-2134

November 10, 1998

Mr. D. Gilmore, P. E., Manager
Planning and Environmental Branch
NCDOT
P. O. Box 25201
Raleigh, NC 27511-5201

Dear Mr. Gilmore:

Thank you for the opportunity to provide comments on Group XV Bridge Replacement Projects, B-3157 and B-3447, Davidson County, B-3174, Guilford County, B-3422 and B-3424, Cabarrus County, B-3505, Randolph County and B-3509, Rockingham County.

The Natural Resources Conservation Service does not have any comments at this time.

Sincerely,

Mary T. Kollstedt
State Conservationist

North Carolina Department of Cultural Resources
State Historic Preservation Office
David L. S. Brook, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Division of Historical Resources
David J. Olson, Director

March 9, 2003

MEMORANDUM

TO: Gregory J. Thorpe, Ph.D.
Environmental Management Director
Project Development and Environmental Analysis Branch
Division of Highways
Department of Transportation

FROM: David Brook BJZ for David Brook
Deputy State Historic Preservation Officer

SUBJECT: New alignment mapping for replacement of Bridge 75 over Smith River, B-3509, Rockingham County, ER 99-7717

Thank you for your letter of January 29, 2003, transmitting the additional mapping that we requested. Having reviewed the plans for the on-site detour, we believe there is no need for an archaeological survey.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above-referenced tracking number.

DB:dah

cc: Matt Wilkerson/NCDOT
John Wadsworth/NCDOT

Federal Aid # **BRSTP-700(1)** *TIP* # **B-3509** *County*: **Rockingham**

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: Replace Bridge No. 75 on SR 3003 over Smith River

On 2/6/02, representatives of the

- [x] North Carolina Department of Transportation (NCDOT)
- [x] Federal Highway Administration (FHWA)
- [x] North Carolina State Historic Preservation Office (HPO)
- [ ] Other

Reviewed the subject project and agreed

- [ ] There are no effects on the National Register-listed property/properties located within the project's area of potential effect and listed on the reverse.
- [ ] There are no effects on the National Register-eligible property/properties located within the project's area of potential effect and listed on the reverse.
- [x] There is an effect on the National Register-listed property/properties located within the project's area of potential effect. The property/properties and the effect(s) are listed on the reverse.
- [x] There is an effect on the National Register-eligible property/properties located within the project's area of potential effect. The property/properties and effect(s) are listed on the reverse.

Signed:

Mary Pope Furr — 2/6/02
Representative, NCDOT — Date

Michael C. Bruner — 2/6/02
FHWA, for the Division Administrator, or other Federal Agency — Date

Renee Gledhill-Earley — 2/6/02
Representative, HPO — Date

David Brook — 2/6/02
State Historic Preservation Officer — Date

Presumptive.
County
RF

Federal Aid # **BRSTP-700(1)** *TIP* # **B-3509** *County*: **Rockingham**

Properties within the area of potential effect for which there is no effect. Indicate if property is National Register-listed (NR) or determined eligible (DE).

Properties within the area of potential effect for which there is an effect. Indicate property status (NR or DE) and describe the effect.

Spray Historic District (NR & DE) - adverse effect for Alts. 3, 5, 8

Reason(s) why the effect is not adverse (if applicable).

Initialed: NCDOT MPB FHWA [illegible] HPO [illegible]

North Carolina Department of Cultural Resources

State Historic Preservation Office

David L. S. Brook, Administrator

James B. Hunt Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
Jeffrey J. Crow, Director

May 25, 2000

MEMORANDUM

TO: William D. Gilmore, P.E., Manager
Project Development and Environmental Analysis Branch
Division of Highways
Department of Transportation

FROM: David Brook
Deputy State Historic Preservation Officer

SUBJECT: Replace Bridge no. 75 on NC 700 over Smith River, TIP No. B-3509, Rockingham County, ER 99-7717

Thank you for your letter of April 6, 2000, transmitting the survey report by Mattson, Alexander and Associates concerning the above project.

For purposes of compliance with Section 106 of the National Historic Preservation Act, we concur that the following properties are eligible for the National Register of Historic Places under the criterion cited:

Spray Industrial Historic District - this district is listed in the National Register of Historic Places. The boundaries depicted in Figure 4 of the report are those listed in the National Register.

Proposed Expansion of Spray Industrial Historic District - the proposed expansion would include the Price-Lewiis-Hawkins House, the Leaksville Township municipal Building, the Central , the Filter Plant, and the Pump House as contributing resources. Bridge No. 75 is within the proposed expansion area, but is considered a non-contributing resource. We concur with the boundaries as shown in Figure 5 of the report.

The following determined not eligible for listing in the National Register of Historic Places:

Rosemont

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

cc: B. Church

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount St., Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-4763 • 733-8653
ARCHAEOLOGY	421 N. Blount St., Raleigh NC	4619 Mail Service Center, Raleigh NC 27699-4619	(919) 733-7342 • 715-2671
RESTORATION	515 N. Blount St., Raleigh NC	4613 Mail Service Center, Raleigh NC 27699-4613	(919) 733-6547 • 715-4801
SURVEY & PLANNING	515 N. Blount St., Raleigh NC	4618 Mail Service Center, Raleigh NC 27699-4618	(919) 733-6545 • 715-4801

Harris

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601

April 6, 2000

IN REPLY REFER TO
HO-NC

Mr. David Brook
Deputy State Historic Preservation Officer
Department of Cultural Resources
109 East Jones Street
Raleigh, NC 27601

Subject: Historic Architectural Resources Survey Report for the Replacement of Bridge No. 75 on N.C. 700 over the Smith River, Rockingham County, NC; Federal Aid No. BRSTP-700(1), State Project No. 8.2860401, TIP No. B-3509

Dear Mr.Brook:

The North Carolina Department of Transportation (NCDOT) is conducting studies for the subject project. Attached are three (3) copies of the Historic Architectural Resources Survey Report prepared by Mattson, Alexander and Associates, Inc. as part of these studies. The report concludes that there is one National Register-listed Historic District and there are four National Register-eligible properties within the area of potential effects (APE). In addition, the report is proposing revised boundaries for the Historic District.

We are requesting your review and concurrence with our findings. As per our recently approved programmatic agreement, you may respond directly to NCDOT with a copy to this office.

Sincerely yours,

Roy C Shelton

For Nicholas L. Graf, P.E.
Division Administrator

Enclosures

cc: William Gilmore, PE, NCDOT

Harris

North Carolina Department of Cultural Resources

State Historic Preservation Office

David L. S. Brook, Administrator

James B. Hunt Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
Jeffrey J. Crow, Director

December 23, 1999

MEMORANDUM

TO: William D. Gilmore, P.E., Manager
Project Development and Environmental Analysis Branch
Division of Highways
Department of Transportation

FROM: David Brook By David Brook
Deputy State Historic Preservation Officer

SUBJECT: Bridge Replacement Project TIP No. B-3509, Bridge No. 75 on NC 700 over Smith River, Rockingham County, Federal Aid No. BRSTP-700 (1), ER 99-7717

On October 21, 1999, we sent a letter to you concerning the above referenced project. We stated that we were aware of no historic properties that would be affected by the project and therefore had no comment on the project as currently proposed. Unfortunately, that was a misstatement.

We are aware of historic properties in the project area and are in consultation with NCDOT architectural historians regarding a Historic Structures Survey Report for the Spray Historic District. We apologize for any confusion and inconvenience this may have caused and look forward to further consultation on this project.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

cc: Roy Shelton, FHWA
B. Church

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount St., Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919) 733-4763 • 733-8653
ARCHAEOLOGY	421 N. Blount St., Raleigh NC	4619 Mail Service Center, Raleigh NC 27699-4619	(919) 733-7342 • 715-2671
RESTORATION	515 N. Blount St., Raleigh NC	4613 Mail Service Center, Raleigh NC 27699-4613	(919) 733-6547 • 715-4801
SURVEY & PLANNING	515 N. Blount St., Raleigh NC	4618 Mail Service Center, Raleigh NC 27699-4618	(919) 733-6545 • 715-4801

Federal Aid #BRSTP-700(1) *TIP* #B-3509 *County*: Rockingham

CONCURRENCE FORM FOR PROPERTIES NOT ELIGIBLE FOR THE NATIONAL REGISTER OF HISTORIC PLACES

Project Description: Replace Bridge No. 75on NC 700 over Smith River

On December 16, 1999, representatives of the

- [x] North Carolina Department of Transportation (NCDOT)
- [ ] Federal Highway Administration (FHWA)
- [x] North Carolina State Historic Preservation Office (SHPO)

Reviewed the subject project at

- [ ] a scoping meeting
- [x] photograph review session/consultation
- [ ] other

All parties present agreed

- [ ] there are no properties over fifty years old within the project's area of potential effect.
- [x] there are no properties less than fifty years old which are considered to meet Criterion Consideration G within the project's area of potential effect.
- [x] there are properties over fifty years old (list attached) within the project's area of potential effect, but based on the historical information available and the photographs of each property, properties identified as Props #336 are considered not eligible for the National Register and no further evaluation of them is necessary.
- [x] there are no National Register-listed properties located within the project's area of potential effect.

Signed:

Mary Pope Furr — 12.16.99
Representative, NCDOT — Date

Mary C Shelton — 12/22/99
FHWA, for the Division Administrator, or other Federal Agency — Date

Representative, SHPO — 12/16/99
Date

David Brook — 12/29/99
State Historic Preservation Officer — Date

If a survey report is prepared, a final copy of this form and the attached list will be included.

North Carolina Department of Cultural Resources

James B. Hunt Jr., Governor
Betty Ray McCain, Secretary

Division of Archives and History
Jeffrey J. Crow, Director

December 3, 1998

MEMORANDUM

TO: William D. Gilmore, PE, Manager
Planning and Environmental Branch
North Carolina Department of Transportation

FROM: David Brook
Deputy State Historic Preservation Officer

SUBJECT: Bridge Group XV, Bridge 75 on NC 700 over Smith River, B-3509, Rockingham County, ER 99-7717

Thank you for your memorandum of November 2, 1998, concerning the above project.

We have conducted a search of our maps and files and have located the following property of historical or architectural importance within the general area of the project:

Spray Industrial Historic District (RK 281). This district is listed in the National Register of Historic Places.

We look forward to meeting with an architectural historian from the North Carolina Department of Transportation to review the aerial and photographs of the project area so we can make our survey recommendation.

There are no recorded archaeological sites located within the project area and given the narrow floodplain in the vicinity of the existing bridge, it is unlikely that significant sites may be affected by the proposed project. However, we would like information concerning the location of the bridge replacement and any necessary detour structures or new rights-of-way needed for the project as soon as it is available. After receipt of this information we will complete our review.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763.

DB:slw

cc: N. Graf
B. Church
T. Padgett

Federal Aid # BRSTP-700(1) TIP # B-3509 County Rockingham

CONCURRENCE FORM FOR PROPERTIES NOT ELIGIBLE FOR THE NATIONAL REGISTER OF HISTORIC PLACES

Brief Project Description Replace Bridge # 75 on NC700 over Smith River Br. Group XV

On Nov. 13, 1998, representatives of the

✓ North Carolina Department of Transportation (NCDOT)
___ Federal Highway Administration (FHwA)
✓ North Carolina State Historic Preservation Office (SHPO)
___ Other ___

reviewed the subject project at

___ A scoping meeting
✓ Historic architectural resources photograph review session/consultation
___ Other ___

All parties present agreed

___ there are no properties over fifty years old within the project's area of potential effects.

✓ there are no properties less than fifty years old which are considered to meet Criterion Consideration G within the project's area of potential effects.

✓ there are properties over fifty years old (list attached) within the project's area of potential effects, but based on the historical information available and the photographs of each property, properties identified as Property # 8 are considered not eligible for National Register and no further evaluation of them is necessary.

___ there are no National Register-listed properties within the project's area of potential effects.

Signed:

Mary Pope [signature] 11.13.98
Representative, NCDOT Date

[signature] 11/25/98
FHwA, for the Division Administrator, or other Federal Agency Date

[signature] 11/13/98
Representative, SHPO Date

[signature] 12/30/98
State Historic Preservation Officer Date

If a survey report is prepared, a final copy of this form and the attached list will be included.

City of Eden

June 7, 2002

Ms. Stacy Harris, P.E.
Project Development & Environmental Analysis Branch
North Carolina Department Of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Ms. Harris:

I wanted to thank you for the Citizens Informational Workshop you held in Eden on May 28, 2002 in reference to the build alternatives for the replacement of Bridge No. 75 over the Smith River on W. Meadow Road (NC 700/SR 3003).

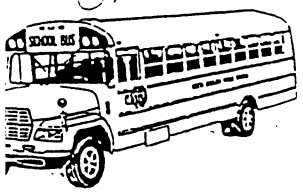
At this same time, we would like to take this opportunity to express our complete opposition to build alternative 3. As you are aware, this alternative would include a detour route that is approximately 3.5 miles in length and which would be in place for approximately two years. This build alternative would have a devastating effect on our local economy and would most assuredly lead to the elimination of several existing businesses that are vibrant and eager to still do business. Although the construction cost is lower we feel the economic ramifications of this decision on the Eden economy and in turn the North Carolina economy would far outweigh the difference in construction costs.

We would respectfully request that build alternative 3 be eliminated from any further consideration. Thank you in advance for your assistance with this important matter. With best wishes, I remain,

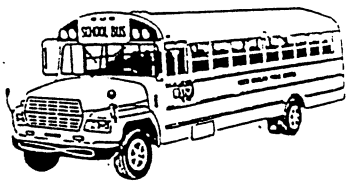
Sincerely,

Brad Corcoran
City Manager

308 East Stadium Drive • Eden, NC 27288-3523 • (336) 623-2110 • Fax (336) 623-4041



Rockingham County Schools
School Bus Garage
433 County Home Road
Reidsville, N.C. 27320
Phone (910) 634-3275
Fax (910) 634-3277



November 16, 1998

William D. Gilmore
Planning and Environmental Branch Manager
Department of Transportation
P.O. Box 25201
Raleigh, N.C. 27611-5201

Dear Mr. Gilmore:

The information you requested in regards to the replacement of Bridge No. 75 on NC 700 over Smith River, Rockingham County, TIP No.B-3509.

We currently have sixteen buses that cross this bridge fifty-nine times daily.

If I can be of further assistance please do not hesitate to contact me here at the School Bus Garage.

Sincerely,

Jim Scott, Transportation Director

JS/jt

B3509

Planning & Inspections Department

308 East Stadium Drive * Eden, North Carolina 27288-3523 * (910) 623-2110 * Fax (910) 623-4057

November 18, 1998

Ms. Stacey Baldwin
North Carolina Department of Transportation
Planning and Environmental Branch
P.O. Box 25201
Raleigh, NC 27611

Re: Highway 700 Bridge

Dear Ms. Baldwin:

As per our conversation this morning concerning the bridge on NC 700 at the traffic circle, please proceed with the study of this bridge replacement based upon the city's thoroughfare plan. If department staff can provide any assistance, please give me a call.

Thank you for your kind attention.

Sincerely,

Kelly K. Stultz, AICP
Director