STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

August 2, 2006

U. S. Army Corps of Engineers
Regulatory Field Office
6508 Falls of the Neuse Road
Raleigh, NC 27615-6814

ATTENTION: Mr. John Thomas
NCDOT Coordinator

Dear Sir:

SUBJECT: **Nationwide Permit 33 Application** for the proposed replacement of Bridge No. 338 on SR 1320 (Roaring Fork Road) over Roaring Fork Creek, Ashe County. Federal Aid Project No. BRZ-1320(4), State Project No. 8271230, WBS No. 33381.1.1, Division 11, TIP No. B-4013.

Please find enclosed three copies of the Categorical Exclusion (CE) Document, as well as, the Pre-construction Notification Form, permit summary sheets, and ½ size plans for the above referenced project completed by the North Carolina Department of Transportation (NCDOT). The agency proposes to replace Bridge No. 338 with a new 85-foot single span bridge on the realignment of SR 1320, north of the existing bridge. There are no jurisdictional wetlands within the project study area and no bents will be placed into Waters of the United States.

Impacts to Waters of the United States

General Description

Roaring Fork Creek is located in the New River Basin (sub-basin 05-07-02), and is approximately 15 feet wide within the project study area. The NCDWQ classifies Roaring Fork Creek as Class "C Tr +". The Wildlife Resource Commission also classifies Roaring Fork Creek as a trout stream, therefore a moratorium is being observed from October 15 – April 15 to protect natural trout propagation and stocked trout. Since this stream is designated as a trout water, it is also designated as a High Quality Water and therefore Design Standards for Sensitive Watersheds will be adhered to. There are no Water Supplies (WS-I or WS-II), or Outstanding Resource Waters occurring within 1.0 mile of the project study area. Roaring Fork Creek is not designated as a National Wild and Scenic River or a State Natural and Scenic River.

Permanent Impacts: There are no permanent impacts associated with this project.

Temporary Impacts: There are 0.002 acre of temporary fill in surface water associated with this project because of a 24" reinforced concrete pipe that is being tied into Roaring Fork Creek. Once complete, the banks will be stabilized and re-vegetated.

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:
PARKER-LINCOLN BUILDING
CAPITAL BLVD
RALEIGH, NC

There are no utility impacts associated with this project.

Bridge Demolition

The existing Bridge No. 338 was constructed in 1967. The single span structure has a clear roadway width of 24.8 feet which includes two travel lanes over the bridge. The superstructure consists of an asphalt wearing surface over a timber deck on I-beams and the substructure consists of timber caps and piles. The removal of this bridge will deposit no fill into Waters of the United States.

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 July 31, 2006 the Fish and Wildlife Service (FWS) lists seven federally protected species for Ashe County.

Federally Protected Species for Ashe County

Common Name	Scientific Name	Habitat	Status	Biological Conclusion
Bog turtle	*Clemmys muhlenbergii*	No	T(S/A)	N/A
Spreading avens	*Geum radiatum*	No	E	No Effect
Swamp pink	*Helonias bullata*	No	T	No Effect
Roan mountain bluet	*Houstonia montana*	No	E	No Effect
Heller's blazing star	*Liatris helleri*	No	T	No Effect
Virginia spiraea	*Spiraea virginiana*	Yes	T	No Effect

E-denotes Endangered, T-denotes Threatened, T(S/A) denotes threatened due to similarity of appearance therefore no biological conclusion is required.

Virginia spiraea was originally surveyed on June 24, 2004 and listed as May Affect, Not Likely to Adversely Affect because there was possible habitat within the project area. However, after review by the US Fish and Wildlife Service on November 5, 2004 the biological conclusion was changed to No Effect. A re-survey was performed on July 17, 2006 and no species were found.

Avoidance, Minimization, and Mitigation

Avoidance and Minimization: Avoidance examines all appropriate and practicable possibilities of averting impacts to "Waters of the United States." The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts; minimization measures were incorporated as part of the project design. The use of best management practices for construction should reduce impacts to plant communities.

- The entire stream is being spanned, therefore eliminating any permanent impacts.
- The existing bridge is being used to maintain traffic until the new bridge is complete, therefore eliminating the need for a temporary on-site detour.

Mitigation: There is no mitigation since there are no permanent impacts.

Regulatory Approvals

Section 404 Permit: All other aspects of this project are being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR § 771.115(b). The

NCDOT requests that the temporary fill associated with the installation of a 24" reinforced concrete pipe be authorized by a Nationwide Permit 33.

Section 401 Permit: We anticipate 401 General Certification number 3366 will apply to this project. In accordance with 15A NCAC 2H .0501(a) we are providing two copies of this application to the North Carolina Department of Environmental and Natural Resources, Division of Water Quality, for their records.

We also anticipate that comments from the North Carolina Wildlife Resources Commission (NCWRC) will be required prior to authorization by the Corps of Engineers. By copy of this letter and attachment, NCDOT hereby requests NCWRC review. NCDOT requests that NCWRC forward their comments to the Corps of Engineers.

Thank you for your assistance with this project. If you have any questions or need additional information, please contact Megan Willis at mswillis@dot.state.nc.us or (919) 715-1341.

Sincerely,

E. L. Lusk

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

cc:

w/attachment

Mr. John Hennessy, NCDWQ (2 copies)
Ms. Marla Chambers, NCWRC
Ms. Marella Buncick, USFWS
Dr. David Chang, P.E., Hydraulics
Mr. Mark Staley, Roadside Environmental
Mr. Greg Perfetti, P.E., Structure Design
Mr. Michael A. Pettyjohn, P.E. Division 11 Engineer
Mr. Heath Slaughter, Division 11 Environmental Officer

w/o attachment

Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Ms. Jennifer Evans, P.E., PDEA Engineer
Mr. Scott McLendon, USACE, Wilmington

Office Use Only: Form Version March 05

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
   - ☐ Express 401 Water Quality Certification

2. Nationwide, Regional or General Permit Number(s) Requested: Nationwide 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 Ecosystem Enhancement Program (NCEEP) is proposed for mitigation of impacts, attach the acceptance letter from NCEEP, complete section VIII, and check here: ☐

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

II. Applicant Information

1. Owner/Applicant Information
   Name: Gregory J. Thorpe, Ph.D., Environmental Management Director
   Mailing Address: 1598 Mail Service Center
   _____
   _____
   _____
   Telephone Number: (919) 733-3141 Fax Number: (919) 733-9794
   E-mail Address: mswillis@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. 338 over Roaring Fork Creek

2. T.I.P. Project Number or State Project Number (NCDOT Only): B-4013

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

4. Location
   County: Ashe Nearest Town: Roten
   Subdivision name (include phase/lot number): N/A
   Directions to site (include road numbers/names, landmarks, etc.): SR 1320, Roaring Fork Road

5. Site coordinates (For linear projects, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)
   Decimal Degrees (6 digits minimum): 81'39'00' °N 36'29'00' °W

6. Property size (acres): N/A

7. Name of nearest receiving body of water: Laurel Creek

8. River Basin: New River Basin
   (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: Residential

10. Describe the overall project in detail, including the type of equipment to be used:
Standard Bridge Construction Equipment

11. Explain the purpose of the proposed work: Improve the safety of travelers along SR 1320.

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. Each impact must be listed separately in the tables below (e.g., culvert installation should be listed separately from riprap dissipater pads). Be sure to indicate if an impact is temporary. All proposed impacts, permanent and temporary, must be listed, and must be labeled and clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) should 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: 0.002 acre of impacts to a jurisdictional stream as a result of a reinforced concrete pipe tie-in.

2. Individually list wetland impacts. Types of 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.

Wetland Impact Site Number (indicate on map)	Type of Impact	Type of Wetland (e.g., forested, marsh, herbaceous, bog, etc.)	Located within 100-year Floodplain (yes/no)	Distance to Nearest Stream (linear feet)	Area of Impact (acres)
Total Wetland Impact (acres)					0

3. List the total acreage (estimated) of all existing wetlands on the property: 0

4. Individually list all intermittent and perennial stream impacts. Be sure to identify temporary impacts. Stream impacts include, but are not limited to placement of fill or culverts, dam construction, flooding, relocation, stabilization activities (e.g., cement walls, rip-rap, crib walls, 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. To calculate acreage, multiply length X width, then divide by 43,560.

Stream Impact Number (indicate on map)	Stream Name	Type of Impact	Perennial or Intermittent?	Average Stream Width Before Impact	Impact Length (linear feet)	Area of Impact (acres)
2	Roaring Fork	Temp	Perennial	15 ft		0.002
Total Stream Impact (by length and acreage)						0.002

5. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.). Open water impacts include, but are not limited to fill, excavation, dredging, flooding, drainage, bulkheads, etc.

Open Water Impact Site Number (indicate on map)	Name of Waterbody (if applicable)	Type of Impact	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)	Area of Impact (acres)

Total Open Water Impact (acres)	0

6. List the cumulative impact to all Waters of the U.S. resulting from the project:

Stream Impact (acres):	0.002
Wetland Impact (acres):	0
Open Water Impact (acres):	0
Total Impact to Waters of the U.S. (acres)	0.002
Total Stream Impact (linear feet):	

7. Isolated Waters
   Do any isolated waters exist on the property? ☐ Yes ☒ No
   Describe all impacts to isolated waters, and include the type of water (wetland or stream) and the size of the proposed impact (acres or linear feet). Please note that this section only applies to waters that have specifically been determined to be isolated by the USACE.

8. 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.):_____
   Current land use in the vicinity of the pond:_____
   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.The entire width of the stream will be spanned. There will be no bents in the water. Traffic will be maintained on the current bridge until the new bridge can be tied into the realigned road and the old bridge removed.

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 January 15, 2002, 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 NCEEP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ's Draft Technical Guide for Stream Work in North Carolina, available at http://h2o.enr.state.nc.us/ncwetlands/strmgide.html.

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.
   No mitigation is required.

2. Mitigation may also be made by payment into the North Carolina Ecosystem Enhancement Program (NCEEP). Please note it is the applicant's responsibility to contact the NCEEP at (919) 715-0476 to determine availability, and written approval from the NCEEP indicating that they are will to accept payment for the mitigation must be attached to this form. For additional information regarding the application process for the NCEEP, check the NCEEP website at http://h2o.enr.state.nc.us/wrp/index.htm. If use of the NCEEP is proposed, please check the appropriate box on page five and provide the following information:

   Amount of stream mitigation requested (linear feet): 0
   Amount of buffer mitigation requested (square feet): 0
   Amount of Riparian wetland mitigation requested (acres): 0

Amount of Non-riparian wetland mitigation requested (acres): 0
Amount of Coastal wetland mitigation requested (acres): 0

IX. Environmental Documentation (required by DWQ)

1. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? Yes ☒ No ☐

2. 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 ☐

3. 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.

1. Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 02B .0243 (Catawba) 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify_____)? Yes ☐ No ☒

2. If "yes", 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 for Catawba)	
2		1.5	
Total			

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

3. If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Riparian Buffer Restoration / Enhancement, or Payment into the

Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0244, or .0260. _____

_____

_____

XI. Stormwater (required by DWQ)

Describe impervious acreage (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. If percent impervious surface exceeds 20%, please provide calculations demonstrating total proposed impervious level._____

_____

_____

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. Cumulative Impacts (required by DWQ)

Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? Yes ☐ No ☒
If yes, please submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent North Carolina Division of Water Quality policy posted on our website at http://h2o.enr.state.nc.us/ncwetlands. If no, please provide a short narrative description:_____

_____

_____

XV. 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).

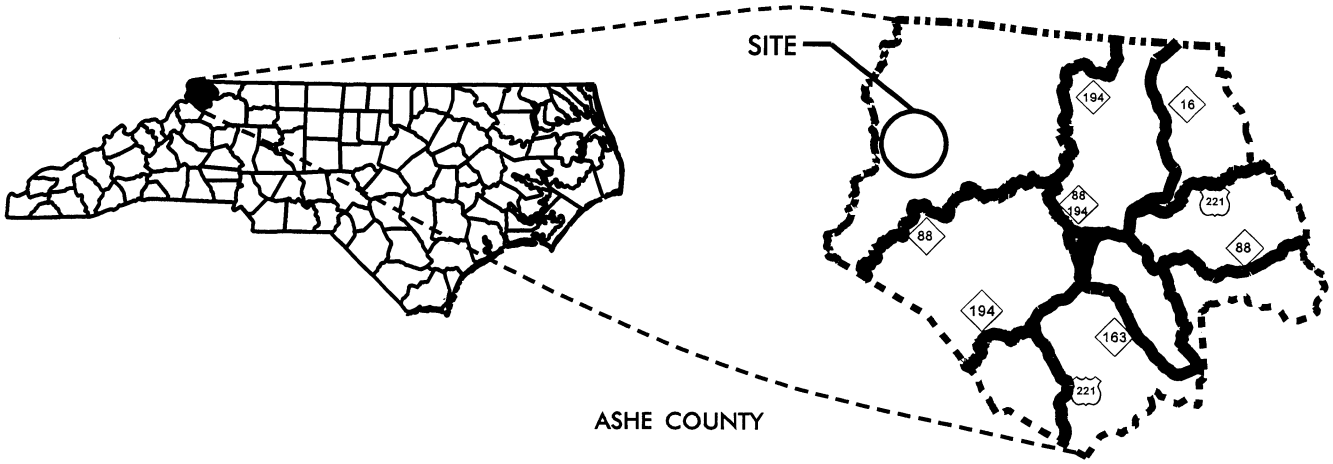
_____

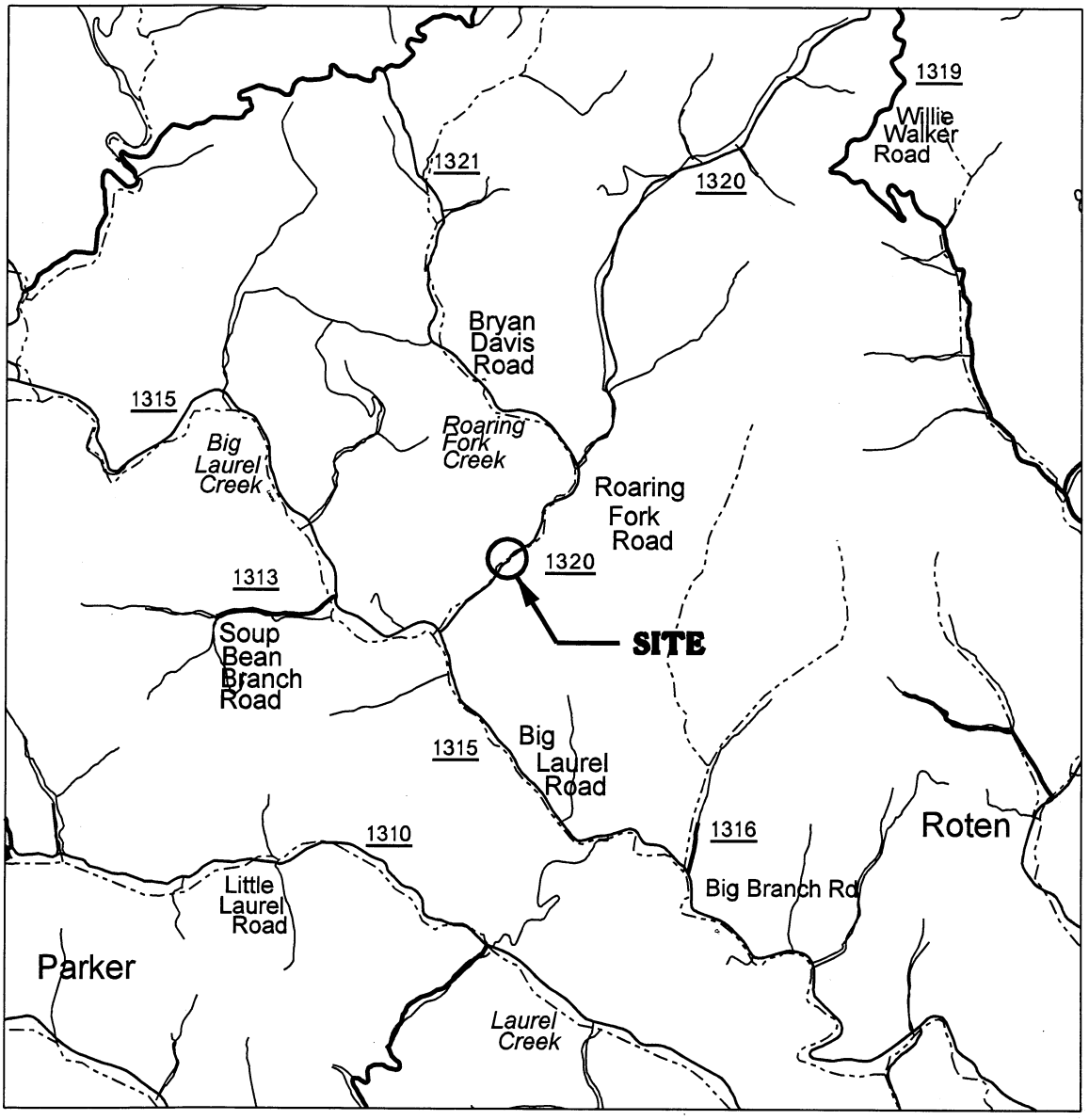
_____

E. L. Lusk 8.7.06

Applicant/Agent's Signature **Date**

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





N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

ASHE COUNTY

B-4013
ON SR 1320
BETWEEN SR 1315 AND SR 1321

SHEET 1 OF 3

List of Property Owners:

PARCEL #	PROPERTY OWNER	ADDRESSES
3	James Mahaffey	534 Roaring Fork Road Creston, NC 28615

NC DEPARTMENT OF TRANSPORTION
DIVISION OF HIGHWAYS
Ashe County
33381.1.1 (B-4013)
Replace Br # 338 Over
Roaring Fork Creek
Sheet 2 of 3

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	13+25/14+21 -L-	BRIDGE	0.000					0.000	0.000	0	0	
2	12+70 -L- LT	24" RCP							0.002			
TOTALS:			0.000					0.000	0.002	0	0	

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ASHE COUNTY
WBS - 33381.1.1 (B-4013)

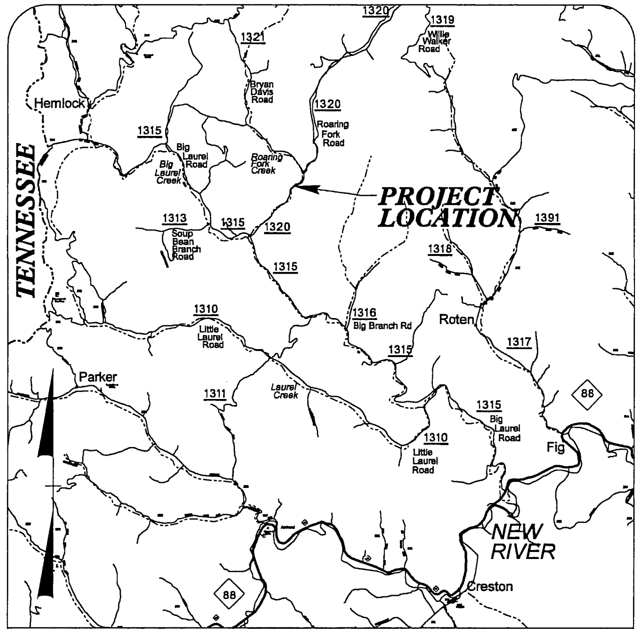
SHEET 3 of 3 12/2/2005

ATN Revised 3/31/05

TIP PROJECT: B-4013

CONTRACT:

See Sheet 1-A For Index of Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

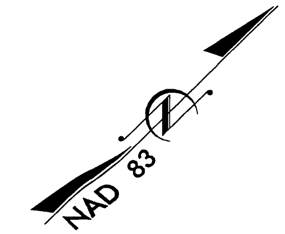
ASHE COUNTY

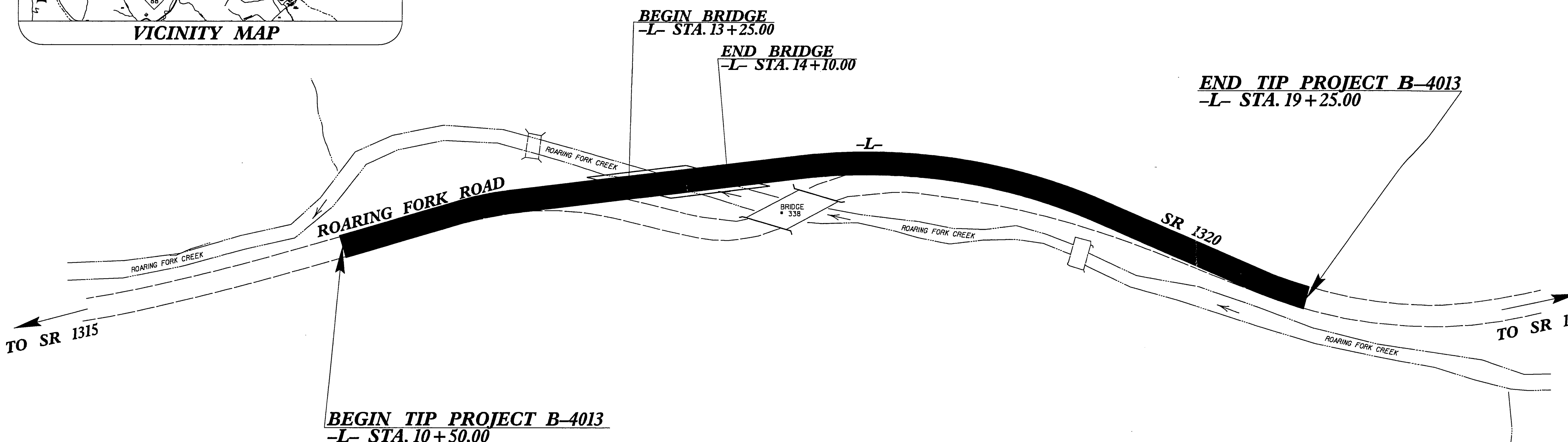
LOCATION: ***BRIDGE NO. 338 OVER ROARING FORK CREEK ON SR 1320 (ROARING FORK RD.)***

TYPE OF WORK: ***GRADING, DRAINAGE, PAVING & STRUCTURE***

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4013	1	4

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33381.1.1	BRZ-1320(4)	PE





INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

** A DESIGN EXCEPTION IS REQUIRED FOR THE HORIZONTAL ALIGNMENT.*
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ____.

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2006 = 465
ADT 2025 = 700
DHV = 12 %
D = 60 %
T = 3 % *
V = 30 MPH

* TTST 1% DUAL 2%

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4013 = 0.150 MILES
LENGTH STRUCTURE TIP PROJECT B-4013 = 0.016 MILES
TOTAL LENGTH TIP PROJECT B-4013 = 0.166 MILES

WETHERILL ENGINEERING

Prepared for the North Carolina Department of Transportation in the Office of:
559 JONES FRANKLIN ROAD
SUITE 164
Raleigh, N.C. 27606
Bus: 919 851 8077
Fax: 919 851 8107

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: AUGUST 19, 2005

LETTING DATE: AUGUST 15, 2006

NCDOT CONTACT

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

BOB A. MAY, PE
PROJECT DESIGN ENGINEER

SCOTT D. BLEVINS, PE
ROADWAY DESIGN - STATE ENGINEERING COORDINATOR

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR *DATE*

09/08/99

$$$$$$$$SYSTIME$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4013	2 of 4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

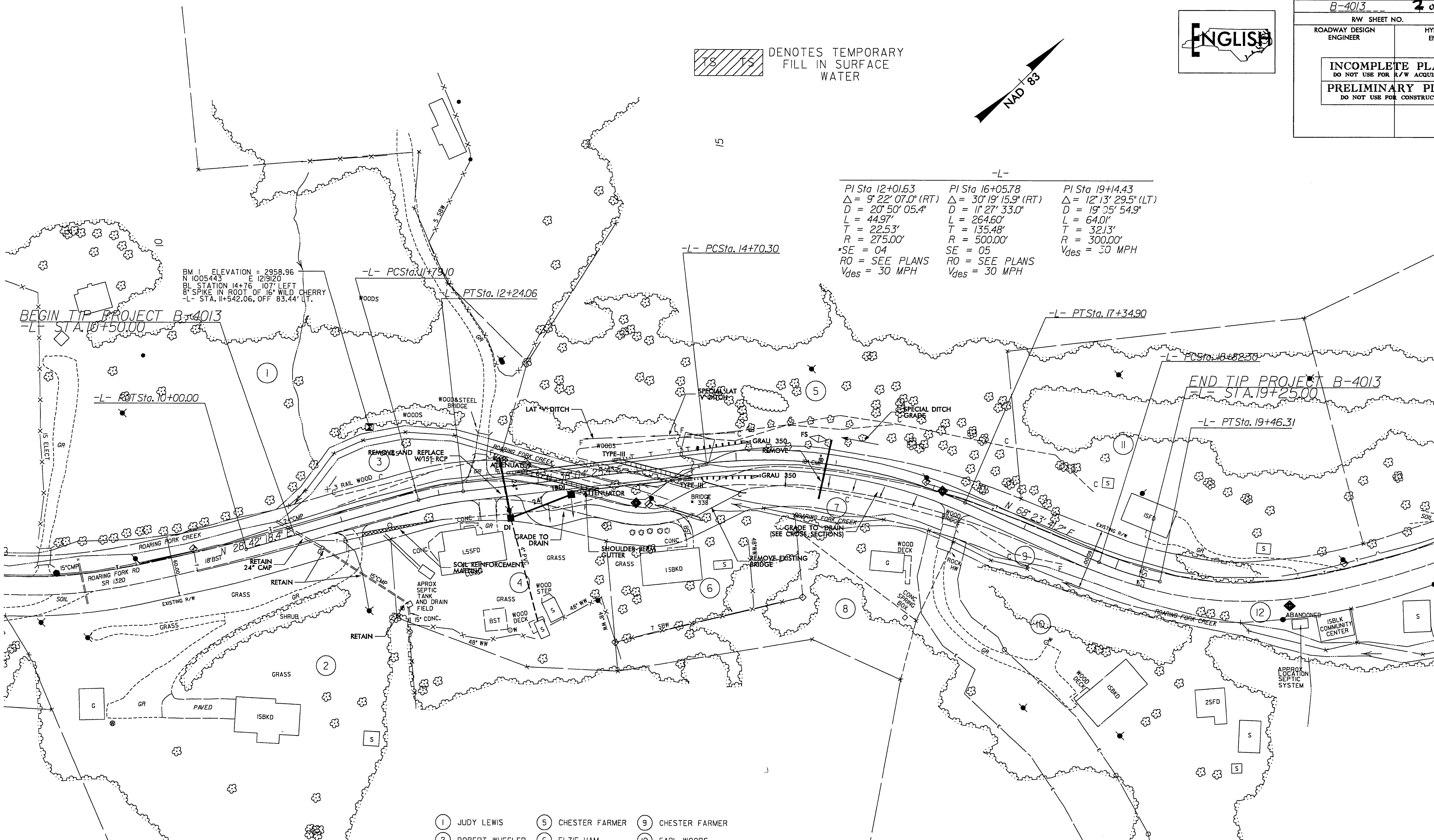
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

ENGLISH

8/17/99

REVISIONS

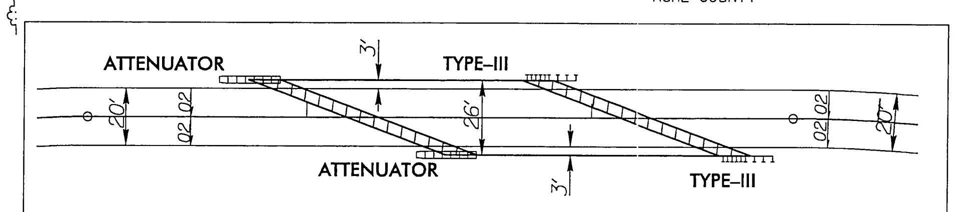


(1) JUDY LEWIS	(5) CHESTER FARMER	(9) CHESTER FARMER
(2) ROBERT WHEELER	(6) ELZIE HAM	(10) EARL WOODS
(3) JAMES MAHAFFEY	(7) CHESTER FARMER	(11) EDGAR FARMER
(4) JAMES MAHAFFEY	(8) EARL WOODS	(12) LAUREL VOTING HOUSE ASHE COUNTY

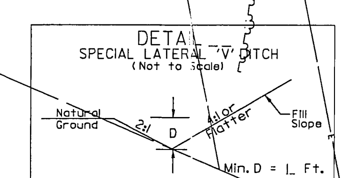
DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS B4013-2" WITH NAD 1983 STATE PLANE GRID COORDINATES OF NORTHING: 1005118.725(ft) EASTING: 1219004.295(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99996769 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4013-2" TO -L- STATION 10+00.00 IS

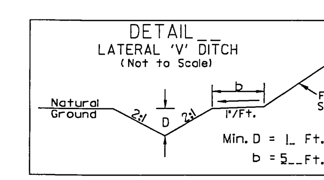
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



SKETCH SHOWING PAVEMENT IN RELATION TO BRIDGE



STA 14+00 – 15+00 -L- LT



STA 13+50 – 14+00 -L- LT

*NOTE: A DESIGN EXCEPTION IS REQUIRED FOR HORIZONTAL ALIGNMENT.

SEE SHEET 5 FOR -L- PROFILE

$$$$$$$$SYSTIME$$$$$$$$$$$$$$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$$DGN$$$$$$$$

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
B-4013	3 of 4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

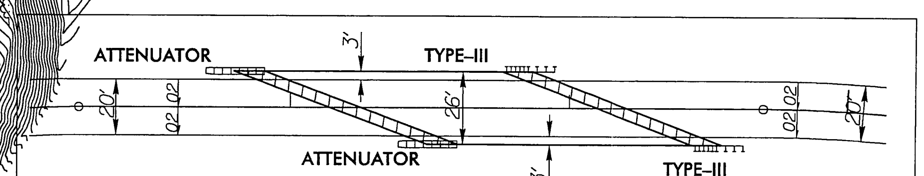
ENGLISH

TS DENOTES TEMPORARY FILL IN SURFACE WATER

DATUM DESCRIPTION

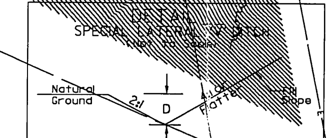
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS B4013-2" WITH NAD 1983 STATE PLANE GRID COORDINATES OF NORTHING: 1005118.725(ft) EASTING: 1219004.295(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99996769 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4013-2" TO -L- STATION 10+00.00 IS

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



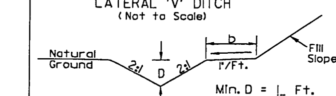
SKETCH SHOWING PAVEMENT IN RELATION TO BRIDGE

DETAIL
SPECIAL LATERAL 'V' DITCH



STA 14+00 - 15+00 -L- LT

DETAIL
LATERAL 'V' DITCH
(Not to Scale)



STA 13+50 - 14+00 -L- LT

*NOTE: A DESIGN EXCEPTION IS REQUIRED FOR HORIZONTAL ALIGNMENT.

SEE SHEET 5 FOR -L- PROFILE

$$$$$$$$$SYSTIME$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$
$$$$$$$USERNAME$$$$$

5/14/99

BM #1 ELEVATION = 2958.96
N 1005443.2186 E 1219119.5604
BL STA 14+76 107' LEFT
8" SPIKE IN ROOT OF 16" WILD CHERRY
-L-STA 11+52.06, OFF 83.44' LT.

BM #2 ELEVATION = 3011.36
N 1006510.9150 E 1220094.0870
8" SPIKE IN ROOT OF 36" MAPLE

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

4 of 4

END GRADE
-L- STA.19+00.00
EL = 2984.31
(INCLUDE 1.25" RESURF.)

BEGIN GRADE
-LT STA.10+75.00
EL = 2958.92
(INCLUDE 1.25" RESURF.)

-L- STA. 13+67.50
1 @ 85' ON STEEL I-BEAMS & VERT ABUTS

PI = 11+50.00
EL = 2960.85'
VC = 140'
K = 37

PI = 12+60.00
EL = 2967.40'
VC = 65'
K = 20

PI = 14+75.00
EL = 2973.45'
VC = 60'
K = 20

PI = 15+75.00
EL = 2973.22'
VC = 110'
K = 38

PI = 17+92.00
EL = 2979.00'
VC = 155'
K = 69

2958.92

2984.31

(+)2.3067%
(+)16.1364%
(+)2.8140%
(+)2.8140%
(−)0.2300%
(−)0.2300%
(+)2.6636%
(+)2.6636%
(+)4.9167%

WSE 12.0804
& WWSE 2962.5

END BRIDGE
-L- STA.14+10.00

BEGIN BRIDGE
-L- STA.13+25.00

25' TO TAPER AND FEATHER FROM EXISTING PAVEMENT

25' TO TAPER AND FEATHER TO EXISTING PAVEMENT

3,000
2,990
2,980
2,970
2,960
2,950
2,940
2,930
2,920
2,910
2,900

10 11 12 13 14 15 16 17 18 19 20

SEE SHEET 4 FOR PLAN VIEW

$$$$SYSTIME$$$$
$$$$USERNAME$$$$

Ashe County
Bridge No. 338 On SR 1320 (Roaring Fork Road)
Over Roaring Fork Creek
Federal-Aid Project BRZ-1320 (4)
State Project 8.2712301
WBS 33381.1.1
TIP Project B-4013

Categorical Exclusion

US Department of Transportation
Federal Highway Administration
and
NC Department of Transportation

Approved:

7/29/04
Date:

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

7/29/04
Date

for John F. Sullivan, III, PE
Division Administrator, FHWA

Ashe County
Bridge No. 338 On SR 1320 (Roaring Fork Road)
Over Roaring Fork Creek
Federal-Aid Project BRZ-1320 (4)
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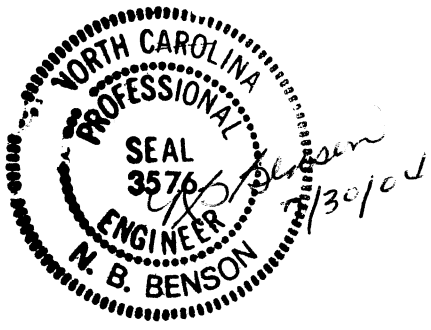
TIP Project B-4013

Categorical Exclusion

US Department of Transportation
Federal Highway Administration
and
NC Department of Transportation

July 2004

Document Prepared
by
Wetherill Engineering, Inc.



Nathan B. Benson, PE

in coordination with
North Carolina Department of Transportation

Mary Alice Dickens, PE, Project Manager
Project Development and Environmental Analysis Branch

Ashe County
Bridge No. 338 On SR 1320 (Roaring Fork Road)
Over Roaring Fork Creek
Federal-Aid Project BRZ-1320 (4)
State Project 8.2712301
WBS 33381.1.1
TIP Project B-4013

PROJECT COMMITMENTS

Roadside Environmental and Design Services

Sedimentation and Erosion Control measures will be implemented according to design standards for sensitive watersheds (15A NCAC 4B.0124) and will be incorporated into the design and followed during the construction of this project.

Division 11 and Design Services

Roaring Fork Creek is Designated Public Mountain Trout Water. Wild brown trout and brook trout are found in this stream; therefore, in-stream construction is prohibited from November 1 to April 15 to avoid impacts on trout reproduction.

Project Development and Environmental Analysis

Since Roaring Fork Creek is classified as trout waters the NCWRC will be given the opportunity to review the project for additional measures to protect trout and trout habitat prior to the issuance of the Section 404 permit.

Design Services

Impact attenuators will be installed on both sides of the south end of the bridge instead of guardrail. This will avoid taking the access of the properties located adjacent to the southern project limits.

Ashe County
Bridge No. 338 On SR 1320 (Roaring Fork Road)
Over Roaring Fork Creek
Federal-Aid Project BRZ-1320 (4)
State Project 8.2712301
WBS 33381.1.1
TIP Project B-4013

INTRODUCTION: The replacement of Bridge No. 338 is included in the 2004-2010 North Carolina Department of Transportation (NCDOT) 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" (CE).

I. PURPOSE AND NEED STATEMENT

The existing bridge, built in 1967, is structurally deficient. According to the NCDOT Bridge Maintenance Unit, at the time the bridge was last inspected on June 24, 2002, the sufficiency rating of the bridge was 34.3 out of a possible 100. The bridge is posted with a weight limit of 13 tons for a single vehicle and 16 tons for the legal gross weight for truck tractor semi-trailers (TTST). The replacement of this inadequate structure will result in a wider and safer bridge. The restricted posted load limits will also be removed from the bridge.

II. EXISTING CONDITIONS

SR 1320 (Roaring Fork Road) is a two-lane highway. The functional classification of SR 1320 is rural local. The speed limit along SR 1320 is not posted. The project vicinity is rural with residential development. Two residences are located in close proximity to the bridge.

The bridge is located between two curves, which switch sides of the creek. The paved portion of the approach roadway is an 18-foot roadway. The width of the grass shoulders is approximately 3-4 feet. The right of way width is 60 feet, symmetrical about the centerline of the existing roadway.

The existing bridge was completed in 1967. The superstructure consists of a timber floor on I-beams. The substructure consists of timber posts and caps. It is 51 feet long and provides a clear roadway width of 24.8 feet between the bridge rails. This width provides for two 9-foot travel lanes and 3.4-foot offsets to the bridge rails. The bridge on SR 1320 crosses the creek at an approximate 45^{o} angle. Photographs of the existing bridge are shown on Figures 2A and 2B.

The Average Annual Daily Traffic (AADT) volume for the year 2002 is estimated to be 400 vehicles per day (VPD) and is projected to increase to 700 VPD in the year 2025. The percentages of tractor-truck-semi-trailer (TTST) and dual tired trucks (DTT) are estimated to be 1 and 2 percent, respectively.

No accidents in the vicinity of the bridge have been recorded in a recent three-year period.

The Ashe County School Transportation Director has been contacted in regard to the replacement. The Director advised that closure of SR 1320 and detouring traffic to SR 1319 (Willie Walker Road) would result in a lengthy and hazardous detour (see letter in Appendix A). Two school buses (four daily crossings) are routed on the bridge. The Ashe County Emergency Management Coordinator advised that the closure would increase the response time for emergency response/emergency medical services an estimated 10 minutes (see letter in Appendix A).

Overhead power and telephone lines are located in proximity of the bridge and may be affected by the proposed project.

The land use in the project vicinity is rural with scattered residential.

Research of public records and an on-site inspection did not indicate any evidence of the presence of hazardous/toxic material in the immediate project area.

III. ALTERNATIVES

A. Project Description

Bridge No. 338 will be replaced with a new structure on a new alignment located downstream (north) of the existing bridge. The proposed project extends approximately 250 feet beyond the ends of the bridge. The grade on SR 1320 may be raised approximately 1 to 2 feet. The new bridge will be approximately 70 feet in length and 26 feet wide. This width is measured from the inside of the bridge rails. The 26-foot width includes a 20-foot travelway with three-foot offsets to the rail, which is in conformance with NCDOT's Bridge Policy for rural local roads carrying 400 to 1500 vehicles per day. The bridge typical section is shown on Figure 3.

The roadway approaches to the bridge will consist of two 10-foot lanes (paved) with four-foot grass shoulders. The typical sections for the roadway portion of the project are shown in Figure 3.

Traffic will be maintained on-site during construction via the existing bridge.

B. Build Alternatives

Two build alternatives have been identified in the planning for TIP project B-4013. A comparison of the cost for the two build alternatives is provided in Item V. Estimated Cost.

Alternative 1 (see Figure 4) consists of a replacement of the bridge on a realignment of SR 1320 approximately 100 feet downstream (north) of the existing bridge. The existing bridge would provide for the on-site detour during construction and would be removed upon completion of the new bridge and roadway approaches. Alternative 1 would eliminate access to three properties and would require two residential relocations. One of the three properties, a 46-acre tract of land located on the north side of the road, is currently vacant. No construction would occur within the stream banks, as a spanning structure would be provided.

Alternative 1-Revised- (Preferred Alternative) (see Figure 5) consists of replacing the existing bridge with a bridge on an alignment approximately 65 feet on the downstream (north side) of the existing bridge. This alignment will require a design exception for the horizontal curvature. The preferred alternative's design has been modified to include impact attenuators to be installed on both sides of the south end of the bridge. This alignment, with the impact attenuators on the bridge, best minimizes impacts to the human environment by allowing access to the three affected properties to remain. This alignment would also allow sufficient spacing between the new structure and the existing bridge so it could provide traffic service during construction and be removed upon completion of the new alignment. Based on preliminary design, it appears a three span (2 @ 20 feet & 1 @ 30 feet) bridge may be appropriate. The center 30-foot span will clear span the creek bank to bank. Alternative 1-Revised will not require any relocation of residences. A more detailed map of Alternative 1-Revised (Preferred) is shown on Figure 6.

The NCDOT Division 11 Engineer has reviewed the proposed project and concurs with the recommended alternative.

The local officials have been made aware of the project and concur with the recommended alternative.

C. Alternatives Eliminated from Further Study

The following build alternatives were eliminated from further study.

1) Replacing the bridge with a culvert on the same realignment of SR 1320 as Alternative 1 was investigated. The culvert would consist of a triple barrel, 12-foot by 7-foot reinforced-concrete box culvert. The culvert would be replaced at the grade of the existing roadway and the grade of the new roadway would be raised approximately two feet to provide minimum cover over the culvert. This alternative was eliminated from further consideration because it would eliminate access to one of the affected properties, an occupied residence, and therefore require its relocation; and, would adversely affect trout that exist in the stream. This alternative was estimated to cost approximately $196,000 more than an alternative with a bridge. This additional cost is due to the skew of the stream crossing which would require a longer culvert than a bridge and, also, would require a residential relocation.

A bottomless culvert was also investigated which would provide for a spanning structure and avoid adverse effects to trout. However, subsequent subsurface testing indicated the stream banks material would not allow a suitable foundation design for construction of a bottomless culvert.

2) Replacement of the bridge on new alignment approximately 50 feet downstream (north) of the existing bridge was investigated. This alignment would eliminate or restrict access to (and possibly relocate) the same three properties while reducing the

length of the west approach to approximately 100 feet. Due to the proximity of the new structure and roadway to the existing bridge, the existing bridge would not be able to provide traffic service during construction and an offsite detour would be required. A detour route exists which would use SR 1319 and SR 1317. The total length of this detour would be approximately 15.5 miles in length. In addition to this circuitous route, the portion of the detour using SR 1319 would involve travel on unpaved and narrow roads with steep mountain grades. Division 11 staff investigated this detour and advised a satisfactory detour was not available. For these reasons, this alternative was eliminated from further consideration.

3) An alternative that would have replaced the bridge in the existing location by detouring traffic off-site was considered and eliminated from further study due to the lack of a satisfactory detour (as discussed above) being available for this site. Also, it would be disruptive to county school bus operation (four trips per day). It would also require the relocation of a residence located in proximity to the existing bridge. Retaining the sharp curvature on both ends of the existing bridge would not meet acceptable design standards.

Rehabilitation of the existing deteriorating bridge is neither practical nor economically feasible. It would require significant repairs to the substructure and superstructure because of their overall poor condition.

The "do-nothing" alternative is not feasible. This will require the closing of the road as the existing bridge deteriorates to a point where it is unsafe at any posted weight limits.

D. Preferred Alternative

Alternative 1-Revised, replacing the existing bridge on new alignment, is the preferred alternative. Bridge No. 338 will be replaced with a new bridge on the realignment of SR

1320 just north of the existing bridge over Roaring Fork Creek (see Figures 5 and 6). Alternative 1-Revised is located closer to the existing bridge than Alternative 1 and as close as practical without eliminating the capability to maintain traffic on the existing bridge during construction. This alignment also allows attenuators to be provided on both south ends of the bridge to completely eliminate the three access problems associated with Alternative 1. Alternative 1-Revised will also provide additional frontage to the creek for the property located just northwest of the existing bridge, in response to a comment at the Citizens Informational Workshop. Traffic will be maintained on the existing bridge during construction. Traffic will be re-routed to the revised alignment upon completion and the existing bridge removed. Alternative 1-Revised was selected because it maintains access to all abutting properties, a concern expressed at the Citizens Informational Workshop, provides for the maintenance of traffic on-site, and meets the project's need for improved and continuous traffic operation on this section of SR 1320. Alternative 1-Revised is estimated to be the most cost-effective alternative. Alternative 1-Revised is estimated to cost $498,300. A breakdown of the estimated cost is shown in Item V, Estimated Costs.

The proposed design speed is 30 miles per hour. The speed limit on SR 1320 is not posted.

IV. DESIGN EXCEPTIONS

A design exception will be required for the horizontal curvature.

V. ESTIMATED COST

TABLE 1

Item	Alternative 1	Alternative 1-Revised Preferred Alternative
Structure (Bridge)	$157,200	$157,200
Mobilization and clearing and grubbing	$91,300	$91,300
Removal of existing bridge	$15,600	$15,600
Roadway and misc. costs (including pavement removal, detour traffic control, construction surveys)	$104,900	$104,900
Engineering & contingencies	$60,000	$60,000
Total Construction Cost	$429,000	$429,000
Right of way	$296,500	$69,300
Total Cost	**$725,500**	**$498,300**

The estimated cost in the 2004-2010 TIP is $525,000 including $50,000 for right of way costs.

VI. NATURAL RESOURCES

A. General

A study was performed to inventory and describe the various natural resources likely to be impacted by the proposed action. Assessments of the nature and severity of probable impacts to these natural resources are provided, along with recommendations for measures that will minimize resource impacts. This study is included in the natural system technical report on the subject bridge replacement prepared by Stantec Consulting Services, Inc., dated March 12, 2002.

This report identifies areas of particular concern that may have affected the selection of a preferred alignment or may necessitate changes in design criteria. Such environmental concerns have been addressed during the preliminary planning stages of the proposed project in order to maintain environmental quality in the most efficient and effective manner. The analyses contained in this document are relevant only in the context of the existing preliminary project boundaries. It may become necessary to conduct additional field investigations should design criteria change.

1. Methodology

Prior to the field investigation, published resource information pertaining to the project study area was gathered and reviewed. The information sources used to prepare this report include:

- U.S. Geological Survey (USGS) quadrangle map (Baldwin Gap);
- Soil Survey of Ashe County, North Carolina (1985);
- United States Fish and Wildlife Service (USFWS) National Wetlands Inventory Map;
- USFWS list of protected species (February 25, 2003);

- North Carolina Natural Heritage Program (NCNHP) database of rare species and unique habitats (May 2003);
- North Carolina Department of Transportation (NCDOT) aerial photography of the project study area (1 in. =100 ft.); and
- North Carolina Division of Water Quality (DWQ) water resource data.

A general field survey was conducted within the project study area on July 25, 2001. Water resources were identified and their physical characteristics were recorded. Terrestrial community classifications generally follow Schafale and Weakley (1990) where possible, and plant taxonomy follows Radford, *et al.* (1968). Vegetative communities were mapped utilizing aerial photography of the project site. Wildlife were identified using a variety of observation techniques including active searching, visual observations with binoculars, and identifying characteristic signs of wildlife (sounds, tracks, scat, and burrows). Cursory surveys for aquatic organisms, including tactile searches for benthic macroinvertebrates, were performed as well.

Investigation into wetland occurrence in the project study area was conducted using methods outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987).

The project study area consists of an area approximately 800 feet long and ranging from 50 to 200 feet wide.

C. Physical Resources

1. Physiography and Soils

The project lies within the Blue Ridge Mountain Physiographic Province. The topography of the project vicinity is characterized as rolling hills with moderate to steeply sloping banks along the major streams. Elevations in the project vicinity range from approximately 2,960 to 4,000 feet above mean sea level (msl). The elevation in the project study area varies from approximately 2,960 to 3,000 feet above msl.

According to the general soil map for Ashe County (USDA, 1985), the project study area is found within the Edneyville-Ashe soil association. The soils in this association are described as moderately steep to very steep, well-drained soils that have loamy subsoil and are found on uplands at elevations of 3,000 to 4,000 feet. Soil series found within the project study area are described below.

Colvard fine sandy loam is located throughout the project study area. This soil is a nearly level, well-drained soil found along the major streams in the county. Permeability is moderately rapid and surface runoff is slow. The seasonal high water table is below a depth of 48 inches. This soil is subject to occasional flooding for very brief periods. This mapping unit is not listed on the hydric soils list.

2. Water Resources

The proposed project falls within the New River Basin, with a subbasin designation of 05-07-02. Waters within the project study area include Roaring Fork.

a. Water Resource Characteristics

Roaring Fork flows southwest through the proposed project study area with a width of approximately 15 feet. The flow was moderate on the day of the field investigation. The substrate consisted of cobbles, gravel, and sand. The water was clear on the day of the site visit. Water depth ranged from a few inches in the riffles to over one foot in the pools.

Streams have been assigned a best usage classification by the North Carolina Division of Water Quality (DWQ) [formerly the Division of Environmental Management (DEM)], which reflects water quality conditions and potential resource usage. Within the project study area, the classification for Roaring Fork (Index No. 10-2-14-7, 2/1/93) is "C Tr +". Class "C" waters are suitable for secondary recreation, fishing, wildlife, fish and aquatic life propagation and survival, and agriculture. "Tr" denotes trout waters, which is a supplemental classification to protect freshwaters for natural trout propagation and survival of stocked trout. The "+" symbol identifies waters subject to a special management strategy in order to protect downstream waters that are designated Outstanding Resource Waters (ORW).

No waters classified as High Quality Waters (HQW), Water Supplies (WS-I: undeveloped watershed, or WS-II: predominately undeveloped watersheds), or ORW occur within one mile of the project study area.

Point sources, such as wastewater discharges, located throughout North Carolina are permitted through the National Pollutant Discharge Elimination System (NPDES) program. No NPDES permitted facilities are located within one mile of the project study area.

Non-point source refers to runoff that enters surface waters through stormwater flow or no defined point of discharge. Stormwater runoff from SR 1320 and the surrounding residential properties may reach Roaring Fork and cause water quality degradation through the addition of fertilizers, oil or gas residuals, particulate rubber, or other sources of contamination.

The Basinwide Monitoring Program, managed by the DWQ, is part of an ongoing ambient water quality-monitoring program that addresses long-term trends in water quality. The program monitors ambient water quality by sampling at fixed sites for selected benthic macroinvertebrates, which are sensitive to water quality conditions. Samples are evaluated based on the number of taxa present of intolerant groups [Ephemeroptera, Plecoptera, Trichoptera (EPT)] and a taxa richness value (EPT S) is calculated. A biotic index value is also calculated for the sample that summarizes tolerance data for all species in each collection. The two rankings are given equal weight in final site classification. The biotic index and taxa richness values primarily reflect the effects of chemical pollution and are a poor measure of the effects of such physical pollutants as sediment. Stream and river reaches are assigned a final bioclassification of Excellent, Good, Good/Fair, Fair, or Poor.

According to the information obtained from the New River Basinwide Water Quality Management Plan (NCDENR, 2000), the DWQ does not have a sampling station on Roaring Fork; the closest station is located approximately six miles downstream of the project study area on Big Laurel Creek at NC 88. The station was last sampled in August 1998 and received a rating of Excellent.

b. Anticipated Impacts to Water Resources

Impacts to water resources in the project study area are likely to result from activities associated with project construction, such as clearing and grubbing on streambanks, riparian canopy removal, instream construction, fertilizers and pesticides used in revegetation, and pavement construction. The following impacts to surface water resources are likely to result from the above-mentioned construction activities:

- Increased sedimentation and siltation downstream of the crossing and increased erosion in the project study area;
- Changes in light incidence and water clarity due to increased sedimentation and vegetation removal;
- Alteration of water levels and flows due to interruptions and/or additions to surface and ground water flow from construction;
- Changes in and destabilization of water temperature due to vegetation removal;
- Changes in dissolved oxygen (DO) levels;
- Increased nutrient loading during construction via runoff from exposed areas;
- Increased concentrations of toxic compounds in roadway runoff;
- Increased potential for release of toxic compounds such as fuel and oil from construction equipment and other vehicles; and
- Alteration of stream discharge due to silt loading and changes in surface and groundwater drainage patterns.

In order to minimize potential impacts to water resources in the project study area, NCDOT's Best Management Practices (BMPs) for the Protection of Surface Waters will be strictly enforced during the construction phase of the

project. Impacts can be further reduced by limiting instream activities and revegetating stream banks immediately following the completion of grading.

D. Biotic Resources

Living systems described in the following sections include communities of associated plants and animals. These descriptions refer to the dominant flora and fauna in each community and the relationship of these biotic components. Classification of plant communities is based on a system used by the NCNHP (Schafale and Weakley, 1990). If a community is modified or otherwise disturbed such that it does not fit into an NCNHP classification, it is given a name that best describes current characteristics. 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.

1. Terrestrial Communities

The predominant terrestrial community found in the project study area is the maintained/disturbed community. Dominant faunal components associated with these terrestrial areas are discussed in each community description. Many species are adapted to the entire range of habitats found within the project study area but may not be mentioned separately in each community description.

a. Maintained/Disturbed Community

The maintained/disturbed community includes the road shoulders, power line right of way, and residential properties. A dilapidated shed surrounded by an overgrown field is located on the west side of the bridge. Many plant species are adapted to these disturbed and regularly maintained areas. The dominant species within the project study area include fescue (*Festuca* sp.), ryegrass (*Lolium* sp.), white clover (*Trifolium repens*), red clover (*Trifolium pratense*),

Queen Anne's lace (*Daucus carota*), thistle (*Cirsium* sp.), panic grass (*Panicum* sp.), aster (*Aster* sp.), chicory (*Cichorium intybus*), blackberry (*Rubus* sp.), poison ivy (*Toxicodendron radicans*), and plantain (*Plantago* sp.). Scattered trees in the area include black walnut (*Juglans nigra*), tree-of-heaven (*Ailanthus altissima*), white poplar (*Populus alba*), and apple (*Malus pumila*). A small corn (*Zea maize*) field is located north of the bridge.

The animal species present in these disturbed habitats are opportunistic and capable of surviving on a variety of resources, ranging from vegetation (flowers, leaves, fruits, and seeds) to both living and dead faunal components. An American Goldfinch (*Carduelis tristis*), Mourning Dove (*Zenaida macroura*), Gray Catbird (*Dumetella carolinensis*), Blue Jay (*Cyanocitta cristata*), American Robin (*Turdus migratorius*), Cedar Waxwing (*Bombycilla cedrorum*), Carolina Chickadee (*Poecile carolinensis*), Carolina Wren (*Thryothorus ludovicianus*), Indigo Bunting (*Passerina cyanea*), American Crow (*Corvus brachyrhynchos*), and Song Sparrow (*Melospiza melodia*) were observed during the site visit. Other species such as Eastern chipmunk (*Tamias striatus*), Eastern mole (*Scalopus aquaticus*), and garter snake (*Thamnophis sirtalis*) are often attracted to these disturbed habitats.

2. Aquatic Communities

The aquatic community in the project study area includes Roaring Fork. Vegetation along the creek banks includes sycamore (*Platanus occidentalis*), sweet birch (*Betula lenta*), sugar maple (*Acer saccharum*), white poplar, black walnut, cottonwood (*Populus deltoides*), blackberry, and pale jewelweed (*Impatiens pallida*). A Louisiana Waterthrush (*Seiurus motacilla*) was observed along the creek. Stoneflies (Plecoptera), mayflies (Ephemeroptera), and caddisflies (Trichoptera) were found under stones and woody debris in the creek.

According to Mr. Kevin Hining, District 7 Assistant Fisheries Biologist for the North Carolina Wildlife Resource Commission (NCWRC), Roaring Fork contains wild brown trout (*Salmo trutta*) and brook trout (*Salvelinus fontinalis*).

3. Summary of Anticipated Impacts to Biotic Communities

Biotic community impacts resulting from project construction are addressed separately as terrestrial impacts and aquatic impacts. Impacts to terrestrial communities, particularly in locations exhibiting slopes, can result in the aquatic community receiving heavy sediment loads as a consequence of erosion. As a result, construction impacts may not be restricted to the communities in which the construction activity occurs.

a. Terrestrial Communities

The maintained/disturbed community serves as nesting, foraging, and shelter habitat for fauna. Removal of plants and other construction related activities would result in the displacement and mortality of faunal species in residence. Individual mortalities are likely to occur to terrestrial animals from construction machinery used during clearing activities.

Project construction will result in clearing and degradation of portions of these communities. Often, project construction does not require the use of the entire right of way; therefore, actual impacts may be considerably less.

b. Aquatic Communities

Impacts to the aquatic community of Roaring Fork will result from the replacement of Bridge No. 338. Impacts are likely to result from the physical disturbance of aquatic habitat. Activities such as the removal of trees, as well

as the construction of the bridge and approach work will likely result in an increase in sediment loads and water temperatures and a decrease in dissolved oxygen. Construction activities can also increase the possibility of toxins, such as engine fluids and particulate rubber, entering the waterways. The combination of these factors can potentially cause the displacement and mortality of fish and local populations of invertebrates that inhabit these areas.

Impacts to aquatic communities can be minimized by strict adherence to BMPs.

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 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 impact area was conducted using methods outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987). No jurisdictional 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.

2. Permits

In accordance with Section 404 of the Clean Water Act (33 U.S.C. 1344), a permit may be required from the USACE for projects of this type for the discharge of dredged or fill material into "Waters of the United States".

A Nationwide Permit 23 is likely to be applicable for all impacts to Waters of the United States resulting from the proposed project. This permit authorizes activities undertaken, assisted, authorized, regulated, funded or financed, in whole or part, by another federal agency or department where that agency or department has determined, pursuant to the Council on Environmental Quality (CEQ) Regulation for the Implementing the Procedural Provisions of the National Environmental Policy Act:

(1) that the activity, work, or discharge is categorically excluded from environmental documentation because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the environment, and

(2) the office of the Chief of Engineers has been furnished notice of the agency's or department's application for the categorical exclusion and concurs with that determination.

A 401 Water Quality Certification, administered through the DWQ, will also be required. This certification is issued for any activity that may result in a discharge into waters for which a federal permit is required.

a. Bridge Demolition

NCDOT's BMPs for Bridge Demolition (Case 2) will be implemented. The existing bridge consists of timber and steel.

b. 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" and sequencing. 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, minimizing impacts, rectifying impacts, reducing impacts over time, and compensating for impacts (40 CFR 1508.20). Each of these three aspects (avoidance, minimization, and compensatory mitigation) must be considered sequentially.

Avoidance - Avoidance examines all appropriate and practicable possibilities of averting impacts to Waters of the United States. According to a 1990 Memorandum of Agreement (MOA) between the Environmental Protection Agency (EPA) and the USACE, in determining "appropriate and practicable" measures to offset unavoidable impacts, such measures should be appropriate to the scope and degree of those impacts and practicable in terms of cost, existing technology, and logistics in light of overall project purposes.

Minimization - Minimization includes examination of appropriate and practicable steps to reduce adverse impacts to Waters of the United States. Implementation of these steps will be required through project modifications and permit conditions. Minimization typically focuses on decreasing the

footprint of the proposed project through reduction of median widths, right of way widths, fill slopes and/or road shoulder widths.

Compensatory Mitigation - Compensatory mitigation is not normally considered until anticipated impacts to Waters of the United States have been avoided and minimized to the maximum extent possible. It is recognized that "no net loss of wetlands" functions and values may not be achieved in each and every permit action. Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts which remain after all, appropriate and practicable minimization has been required. Compensatory actions often include restoration, creation and enhancement of Waters of the United States. Such actions should be undertaken in areas adjacent to or contiguous with the discharge site.

Compensatory mitigation is required for those projects authorized under Section 404 Nationwide Permits that result in the fill or alteration of more than 0.5 acre of wetlands and/or 300 linear feet of streams.

3. Rare and Protected Species

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

a. 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 United States Fish and Wildlife Service (USFWS) list seven federally protected species for Ashe County as of the January 29, 2003 listing (Table 2).

A review of the NCNHP database of rare species and unique habitats showed no recorded occurrences of any federally protected species in the project vicinity.

TABLE 2

FEDERALLY-PROTECTED SPECIES FOR ASHE COUNTY

Scientific Name (Common Name)	**Status**
Clemmys muhlenbergii (Bog turtle)	T(S/A)
Geum radiatum (Spreading avens)	E
Helonias bullata (Swamp pink)	T
Houstonia montana (Roan mountain bluet)	E
Liatris helleri (Heller's blazing star)	T
Spiraea virginiana (Virginia spiraea)	T
Gymnoderma lineare (Rock gnome lichen)	E

NOTES:

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

T Threatened (a species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range).

T(S/A) Threatened Due to Similarity of Appearance (a species that is threatened due to similarity of appearance with other rare species and is listed for its protection).

Clemmys muhlenbergii	(Bog turtle)	T(S/A)
Family:	Emydidae	
Date Listed:	November 4, 1997	

Bog turtles are small (three to 4.5 inches) semiaquatic turtles that have a dark brown carapace and black plastrons. They usually exhibit distinctive orange or yellow blotches on each side of the head and neck.

The bog turtle inhabits shallow, spring fed fens, sphagnum bogs, swamps, marshy meadows, pastures which have soft, muddy bottoms, and clear, cool, slow-flowing water, often forming a network of rivulets. Bog turtles inhabit damp grassy fields, bogs, and marshes in the mountains and upper Piedmont.

The bog turtle is not biologically endangered or threatened and is not subject to Section 7 consultation.

Geum radiatum	(Spreading avens)	E
Family:	Rosaceae	
Date Listed:	April 5, 1990	

Spreading avens is a perennial herb topped with an indefinite cyme of large, bright, yellow flowers. Its leaves are mostly basal with large terminal lobes and small laterals, and they arise from horizontal rhizomes. Plant stems grow eight to 20 inches tall. Flowering occurs from June to September, and the fruits are produced from August to October.

Spreading avens inhabits high elevation cliffs, outcrops, and steep slopes

which are exposed to full sun. It is also found in thin, gravelly soils or grassy balds near summit outcrops. The adjacent spruce/fir forests (generally found above 5,500 feet in elevation) are dominated by red spruce and Fraser fir. The substrate at all the population sites is composed of various igneous, metamorphic, and sedimentary rocks.

No habitat is located in the project study area for this species; the project study area is approximately 2,960 feet above msl, which is well below the elevation for suitable habitat. A search of the NCNHP database showed no recorded occurrences of this species within the project vicinity. It can be concluded that the construction of the proposed project will not impact spreading avens.

BIOLOGICAL CONCLUSION: NO EFFECT

Helonias bullata	(Swamp pink)	T
Family:	Liliaceae	
Date Listed:	September 9, 1988	

The **swamp pink** is a perennial plant that blooms in early spring. Its flowers are pink and occur in a cluster of 30 to 50. The flowers are located at the tip of the stem in a bottlebrush shape. Dark green, lance-shaped, and parallel-veined leaves form a basal rosette around a stout, hollow stem. The stem can grow eight to 35 inches during flowering and up to five feet during seed maturation.

Swamp pink occurs in a variety of wetland habitats that are saturated but not flooded. These include southern Appalachian bogs and swamps, Atlantic white cedar swamps, swampy forested wetlands which border small streams, boggy meadows, and spring seepage areas. It is commonly associated with

evergreen trees such as white cedar, pitch pine, American larch, and black spruce.

Habitat is not present in the project study area; no wetlands are located within the project study area. A search of the NCNHP database showed no recorded occurrences of this species within the project vicinity. It can be concluded that the construction of the proposed project will not impact swamp pink.

BIOLOGICAL CONCLUSION: NO EFFECT

Houstonia montana	(Roan mountain bluet)	E
Family:	Rubiaceae	
Date Listed:	April 5, 1990	

Roan mountain bluet is a perennial herb with erect or ascending, unbranched or weakly terminally branched stems up to 8.5 inches tall. Its inflorescence is a few-flowered cyme with bright, deep purple flowers. Flowering occurs from late May through August, with peak flowering usually in June and July. This variety is distinguished from other bluets by its relatively large reddish purple flowers, compact stature and clump-forming growth habit, and its exposed mountaintop habitat.

Roan mountain bluet inhabits high elevation (4,200 to 6,300 feet) cliffs, outcrops, and steep slopes, which are exposed to full sunlight.No habitat is located in the project study area for Roan mountain bluet; the project study area is located at approximately 2,960 feet above msl, which is well below the elevation for suitable habitat. A search of the NCNHP database showed no recorded occurrences of this species within the project vicinity. It can be

concluded that the construction of the proposed project will not impact Roan mountain bluet.

BIOLOGICAL CONCLUSION: NO EFFECT

Liatris helleri	(Heller's blazing star)	T
Family:	Asteraceae	
Date Listed:	November 19, 1987	

Heller's blazing star is a perennial herb with one or more erect or arching stems, which arise from a tuft of narrow pale green basal leaves. Its stems reach up to 16 inches in height and are topped by a showy spike of lavender flowers (three to eight inches long), which are present from July through September. Fruits are present from September through October.

Heller's blazing star is endemic to the northern Blue Ridge Mountains where it occurs on high elevation rocky summits. It grows in shallow, acidic soils, which are exposed to full sunlight.

No habitat is located in the project study area for Heller's blazing star; the project study area is located at approximately 2,640 feet above msl, is well below the summit, and contains no rocky outcrops. A search of the NCNHP database showed no recorded occurrences of this species within the project vicinity. It can be concluded that the construction of the proposed project will not impact Heller's blazing star.

BIOLOGICAL CONCLUSION: NO EFFECT

Spiraea virginiana	(Virginia spiraea)	T
Family:	Rosaceae	
Date Listed:	June 15, 1990	

Virginia spiraea is a shrub growing from two to 10 feet tall with arching, upright stems and cream-colored flowers. The leaves are alternate and of different sizes and shapes. The flowers are found on branched and flat-topped axes. Spiraea spreads clonally and forms dense clumps that spread in rock crevices and around boulders.

Virginia spiraea occurs along rocky, flood-scoured riverbanks in gorges or canyons. Flood scouring is essential to this plant's survival because it eliminates taller woody competitors and creates riverwash deposits and early successional habitats. These conditions are apparently essential for this plant's colonization of new sites. The bedrock underlying spiraea habitat is primarily sandstone and soils are acidic and moist. Spiraea grows best in full sun, but it can tolerate some shade. Spiraea is found in thickets with common woody vine associates including fox grape (*Vitis labrusca*), summer grape (*Vitis aestivalis*), riverbank grape (*Vitis riparia*), and muscadine (*Vitis rotundifolia*). Other plant associates include royal fern (*Osmunda regalis*), wing-stem (*Actinomeris alternifolia*), ninebark (*Physocarpus opulifolius*), smooth alder (*Alnus serrulata*), and shrubby yellowroot (*Xanthorrhiza simplicissima*).

Habitat does exist in the project study area along Roaring Fork Creek for this species. A survey was conducted on July 25, 2001 to determine the presence or absence of this species. No specimens were found during the survey. A search of the NCNHP database showed no recorded occurrences of this

species within the project vicinity. A survey for Virginia spiraea was most recently conducted on June 24, 2004 by NCDOT biologists. No plants were observed within or adjacent to the banks of Roaring Creek. However, since habitat exists for these plants a "May Affect, Not Likely to Adversely Affect" conclusion has been issued.

BIOLOGICAL CONCLUSION: MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT

No Effect

Gymnoderma lineare	(Rock gnome lichen)	E
Family:	Cladoniaceae	
Date Listed:	January 18, 1995	

Rock gnome lichen is a squamulose lichen in the reindeer moss family. It occurs in dense colonies of narrow straps (squamules) that are blue-grey on the upper surface and generally shiny-white on the lower surface; near the base they grade to black. The squamules are nearly parallel to the rock surface, but the tips curl away from the rock, approaching or reaching a perpendicular orientation to the rock surface. The fruiting bodies (found from July through September) are borne at the tips of the squamules and are black.

Rock gnome lichen occurs only in areas of high humidity, either at high elevations, where it is frequently bathed in fog, or in deep river gorges at lower elevations. It is primarily limited to vertical rock faces where seepage water from forest soils above the cliff flows at, and only at, very wet times. Most populations occur above an elevation of 5,000 feet.

Habitat does not exist in the project study area for this species; the project study area is approximately 2,960 feet above msl, which is located well below the elevation for suitable habitat. A search of the NCNHP database showed no recorded occurrences of this species within the project vicinity. It can be concluded that the construction of the proposed project will not impact rock gnome lichen.

BIOLOGICAL CONCLUSION: NO EFFECT

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b. 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 of Endangered. FSC are defined as species that are 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 list 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 3 includes listed FSC species for Ashe County and their state classifications (May 2003).

A review of the NCNHP database of rare species and unique habitats showed no recorded occurrences of any FSC species in the project vicinity.

TABLE 3

FEDERAL SPECIES OF CONCERN FOR ASHE COUNTY

Scientific Name (Common Name)	North Carolina Status	Habitat Present
Thryomanes bewickii altus (Appalachian Bewick's Wren)	E	Yes
Sylvilagus obscurus (Appalachian cottontail)	SR	Yes
Phenacobius teretulus (Kanawha minnow)	SC	Yes
*Speyeria diana** (Diana fritillary butterfly)	SR	Yes
Stenelmis gammoni (Gammon's stenelmis riffle beetle)	SR	No
Lasmigona subviridus (Green floater)	E	Yes
Ophiogomphus howei (Pygmy snaketail)	SR	No
*Speyeria idalia** (Regal fritillary butterfly)	SR	No
Gymnocarpium appalachianum (Appalachian oak fern)	E	No
Poa paludigena (Bog bluegrass)	E	No
Juglans cinerea (Butternut)	W5	No
Saxifraga caroliniana (Carolina saxifrage)	C	No
Euphorbia purpurea (Glade spurge)	C	No
Lilium grayi (Gray's lily)	T-SC	No

Scientific Name (Common Name)	North Carolina Status	Habitat Present
Delphinium exaltatum (Tall larkspur)	E-SC	No
Cladonia psoromica (Bluff Mountain reindeer lichen)	C	No
Pycnanthemum torrei (Torrey's Mountain-mint)	SR-T	No

NOTES:

C	Candidate (species for which population monitoring and conservation action is recommended).
E	Endangered (species which are afforded protection by state laws).
T	Threatened (species which are afforded protection by state laws).
SC	Special Concern (species which are afforded protection by state laws).
SR	Significantly Rare (species for which population monitoring and conservation action is recommended).
W	Watch list (any other species believed to be rare and of conservation concern in the state but not warranting active monitoring at this time)
*	Historic record - the species was last observed in the county more than 50 years ago (USFWS)

c. Summary of Anticipated Impacts

Habitat is present in the project study area for Virginia spiraea. A search for this plant was conducted in the project study area on July 25, 2001; no specimens were found. The field survey determined that no habitat is present for any other federally protected species. Additionally, there have been no recorded occurrences of any rare or protected species within the project vicinity according to the NCNHP. Therefore, no impacts to either federal or state listed species are anticipated.

NCDOT biologists most recently surveyed the project area on June 24, 2004. Biological conclusions of "No Effect" were found for the Bog turtle, Spreading avens, Swamp pink, Heller's blazing star, Roan mountain bluet and Rock gnome lichen due to lack of suitable habitat. However, the project

and Rock gnome lichen due to lack of suitable habitat. However, the project area contains habitat suitable for Virginia spiraea. A search of the NCNHP files indicated no occurrence of Virginia spiraea in the project vicinity or within a mile of the project area. Survey windows for these plants are from May to October. No plants were observed within or adjacent to the banks of the Roaring Creek on June 24, 2004. However, since habitat exists for these plants, a "May Affect, Not Likely to Adversely Affect" conclusion has been issued.

VII. 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 for Compliance with Section 106, codified as 35 CFR Part 800. Section 106 requires that for federally funded, licensed, or permitted projects having an effect on properties listed in or eligible for the National Register of Historic Places, the Advisory Council on Historic Preservation be given the opportunity to comment.

B. Historic Architecture

A field survey of the Area of Potential Effects (APE) was conducted during June 2002. All structures within the APE were photographed, and later reviewed by the State Historic Preservation Office (SHPO). A concurrence form from SHPO, dated November 8, 2002 is attached in Appendix A. One property, the Laurel Hill Baptist Church, was identified as needing further evaluation. A historic architectural resources survey and report was conducted by Circa, Inc. The survey report is dated April 2003. The Laurel Hill Baptist Church was evaluated and determined not eligible for the National Register. The SHPO

concurred that Laurel Hill Baptist Church was not eligible for the National Register in a memorandum dated June 15, 2003 (see Appendix A).

C. Archaeology

The State Historic Preservation Officer (SHPO), in a memorandum dated June 15, 2003 did not include a recommendation for archaeological investigation to be conducted in connection with this project. A copy of the SHPO memorandum is included in the Appendix A.

VIII. ENVIRONMENTAL EFFECTS

The project will have the following benefits: The proposed improvements will replace, cost effectively, the structurally deficient bridge with a sound bridge. The load restriction will be removed from the bridge for truck traffic. The new bridge will provide improved safety due to the improved sight distance. The design of the new bridge will not change the visual character of the area and should be aesthetically acceptable to the residences in proximity to the bridge. The proposed improvement will require additional right of way. No relocation of residences will occur with the proposed replacement. A detour route of reasonable length is not available particularly for the school bus traffic. In summary, the project is expected to have an overall positive impact. Replacement of the inadequate bridge and construction of safety improvements will result in safer and overall more efficient traffic operations.

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.

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 and low income populations were receiving disproportionately high and adverse human

health and environmental impacts as a result of this project. The investigation determined that the project would not disproportionately impact any minority or low income populations.

The studied route does not contain any bicycle accommodations, nor is it a designated bicycle route; therefore, no bicycle accommodations have been included as part of this project.

There are no publicly owned parks, recreational facilities, or wildlife and waterfowl refuges of national, state or local significance in the immediate vicinity of the project.

No adverse effects to air quality are expected to result from this project. This project is an air quality "neutral" project, so it is not required to be included in the regional emissions analysis (if applicable), and a project level CO analysis is not required. Since the project is located in an attainment area, 40 CFR Part 51 is not applicable. If vegetation or wood debris is disposed of by open burning, it shall be done in accordance with applicable local laws and regulations of the North Carolina State Implementation Plan (SIP) for air quality in compliance with 15 NCAC2D.0520 and 1990 Clean Air Act Amendments and the National Environmental Policy Act. This evaluation completes the assessment requirements for air quality, and no additional reports are required.

Ambient noise levels may increase during the construction of this project; however this increase will be only temporary and usually confined to daylight hours. There should be no notable change in traffic volumes after this project is completed. Therefore, this project will have no adverse effect on existing noise levels. Noise Receptors in the project area will not be impacted by this project. This evaluation completes the assessment requirements for highway noise set forth in 23 CFR Part 772. No additional reports are required.

The proposed project is not likely to adversely affect threatened or endangered species.

The bridge replacement will not have an adverse effect on the quality of the human or natural environment with the use of current NCDOT 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 construction of the project.

No adverse impact on families or communities is anticipated.

The proposed project will not involve lands protected by Section 4(f) of the U.S. Department of Transportation Act of 1966.

No geodetic survey markers will be impacted.

The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the potential impacts to prime and important farmland soils by all land acquisition and construction projects. Since the bridge will be replaced at the existing location, the Farmland Protection Policy Act does not apply.

An examination of records at the North Carolina Department of Environment and Natural Resources, Division of Water Quality, Groundwater Section and the North Carolina Department of Human Resources, Solid Waste Management Section, revealed no underground storage tanks or hazardous waste sites in the project area.

Ashe County is a participant in the National Flood Insurance Program. The bridge is within a Approximate Study Area. The new structure will be designed to match or lower the existing 100-year storm elevation upstream of the roadway. Since the proposed replacement for the bridge will be a structure similar in waterway opening size, it is not anticipated to have any significant adverse impact on the existing floodplain and floodway. Additional hydraulic information is included in the technical memorandum prepared by Sungate Design Group, P.A. dated September 11, 2002.

All borrow and solid waste sites will be the responsibility of the Contractor. Solid waste will be disposed of in strict adherence to the NC Division of Highways "Standard Specifications for Roads and Structures." The Contractor will observe and comply with all laws, ordinances, regulations,

orders, and decrees regarding the disposal of solid waste. Solid waste will not be placed into any existing land disposal site that is in violation of state or local rules and regulations. Waste and debris will be disposed of in areas that are outside the right of way and provided by the Contractor.
On the basis of the above discussion, it is concluded that no significant adverse environmental effects will result from the implementation of this project. The project is a Federal "Categorical Exclusion" due to its limited scope and lack of significant environmental consequences.

IX. PUBLIC INVOLVEMENT

A mailing list was developed to include property owners located near the bridge. The mailing list included approximately 25 names. Newsletters, mailed in early March, announced that two alternatives for replacing Bridge No. 338 were being studied. The newsletter was also made available to the local news media. The newsletter also included an announcement of a Citizens Informational Workshop to obtain public comments on Alternatives 1 (bridge) and 2 (culvert). A copy of the newsletter is included in Appendix B. The workshop was held on March 25, 2003 at Riverview Community Center in the community of Creston. A copy of the handout presented at the workshop is included in Appendix B. Approximately 15 citizens attended. Some property owners expressed concern about access to their property being eliminated. Another property owner said that the project as designed would eliminate his property's creek frontage. The property owners requested that Alternatives 1 and 2 be shifted closer to the existing location and the roadbed location be changed as little as possible in order to preserve their access and increase frontage to the creek. Subsequently, Alternative 1-Revised was developed to respond to these comments and concerns received at the workshop. (Alternative 1-Revised [Preferred Alternative] does not eliminate access to the existing properties and has increased the frontage of the creek to the property located just northwest of the bridge.)

A local public officials meeting was held on March 25, 2003 at 10:00 a.m. at the Ashe County Court House. Alternatives 1 and 2 were shown. Additional copies of the newsletter, previously sent to those on the mailing list, as well as copies of the workshop handout, were made available to those

attending. The county manager and planning director attended and voiced no objections to the proposed project.

X. AREAS OF CONTROVERSY

No areas of controversy are anticipated.

XI. AGENCY COMMENTS

Scoping comments were sent to the following agencies. Agencies that responded are marked with an asterisk. Comment letters are included in Appendix A.

Federal Agencies

US Fish and Wildlife Service-Asheville*
US Army Corps of Engineers-Asheville
US Army Corps of Engineers-Wilmington
Environmental Protection Agency-Raleigh

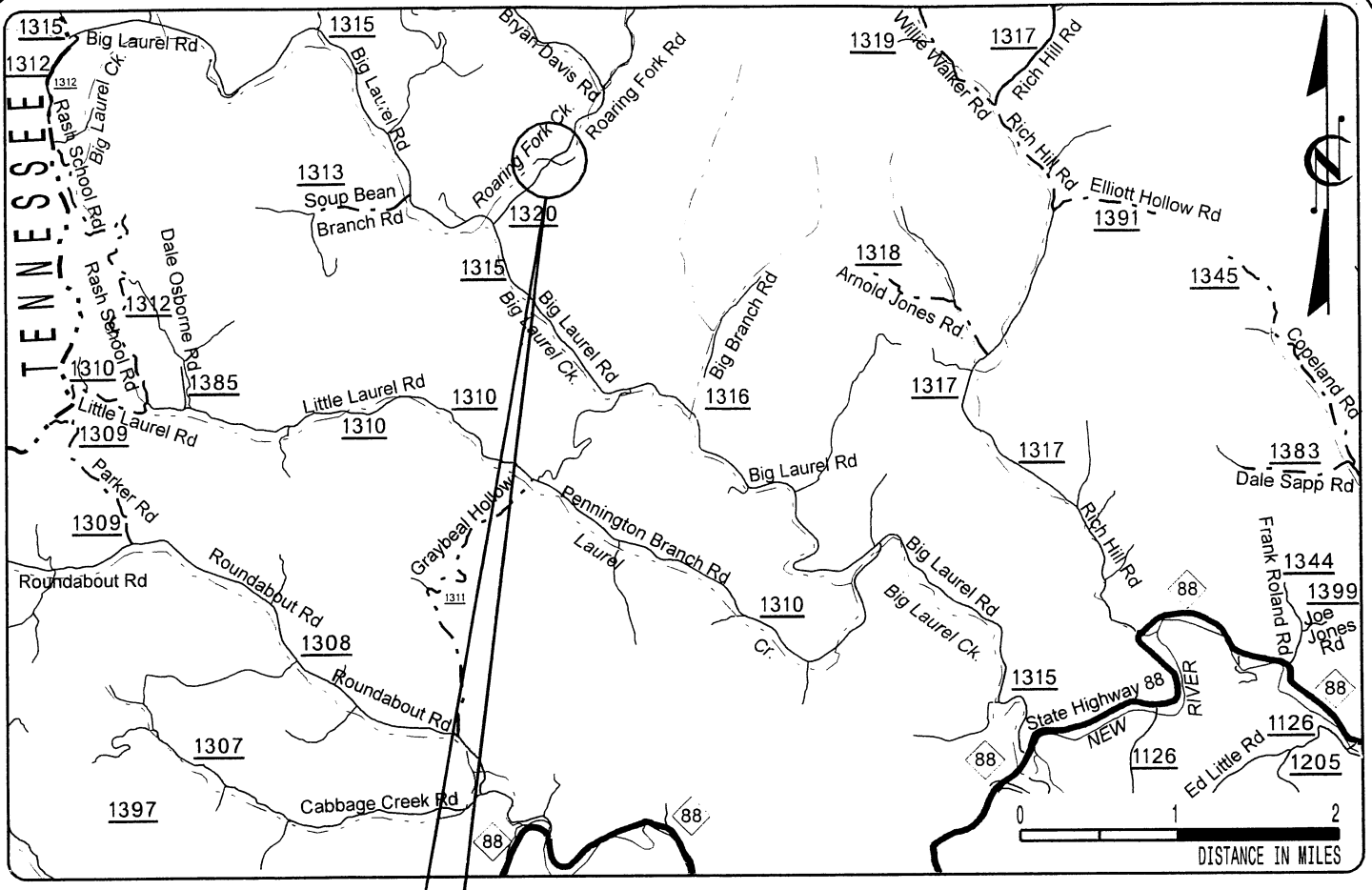
State Agencies

NC Wildlife Resources Commission*
NC Department of Environment and Natural Resources*
Division of Water Quality/Wetlands*
Division of Archives and History*
The Eastern Band of Cherokee Indians, Tribal Historic Preservation Office*
State Clearinghouse
Department of Public Instruction

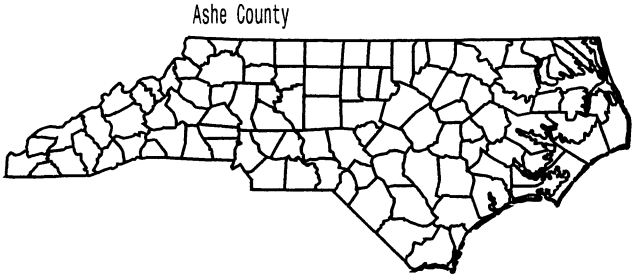
Regional and Local Agencies

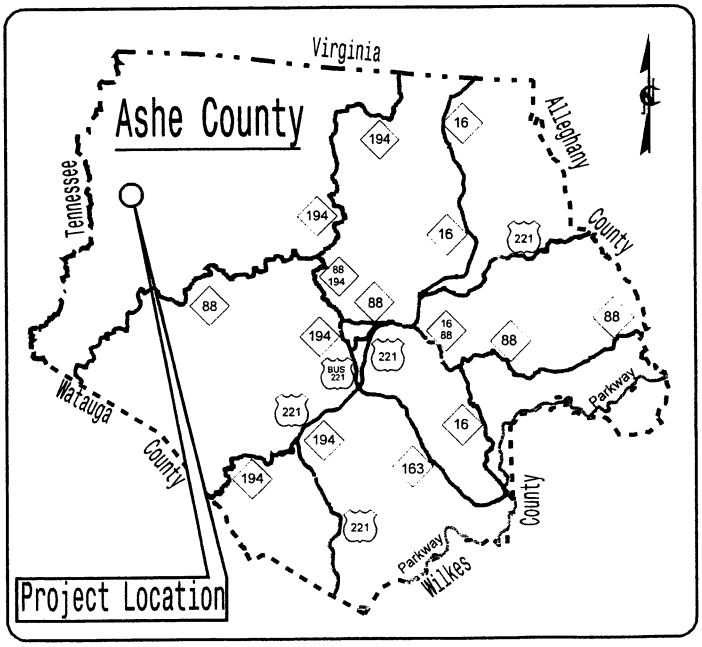
Region D Council of Government
Ashe County Commissioner, chairperson
Ashe County /Emergency Management Coordinator*
Ashe County Board Of Education*

FIGURES



PROJECT LOCATION





SR 1320
(ROARING FORK ROAD)
REPLACE BRIDGE NO. 338 over ROARING FORK CREEK

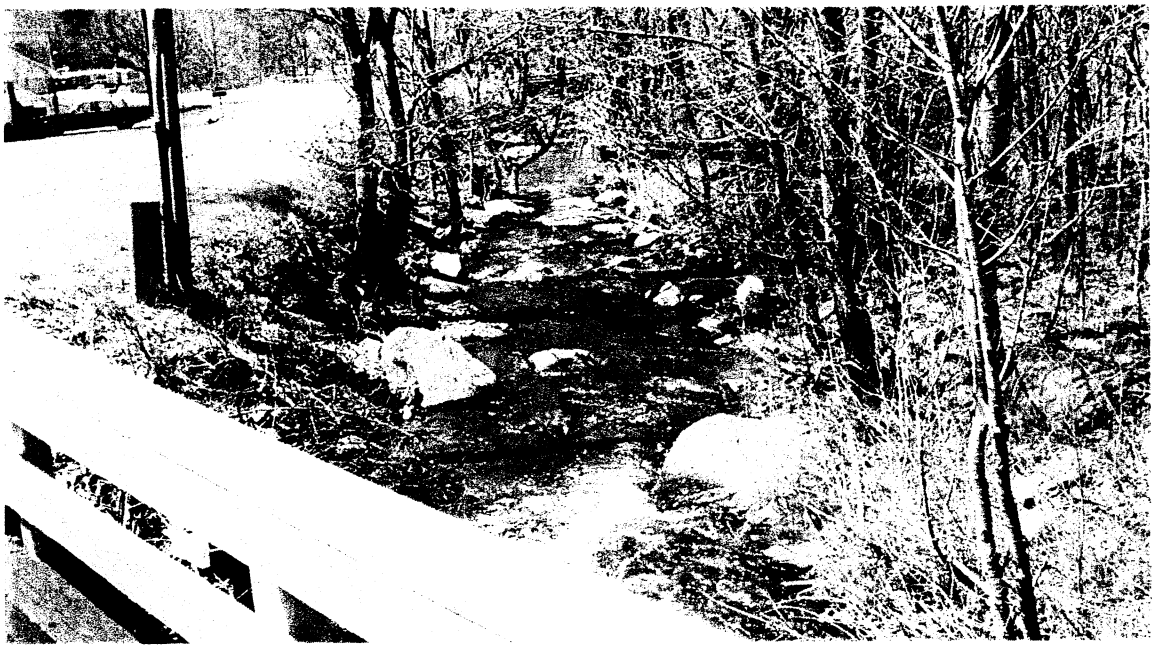
B-4013

Ashe County, North Carolina

PROJECT VICINITY

Figure 1

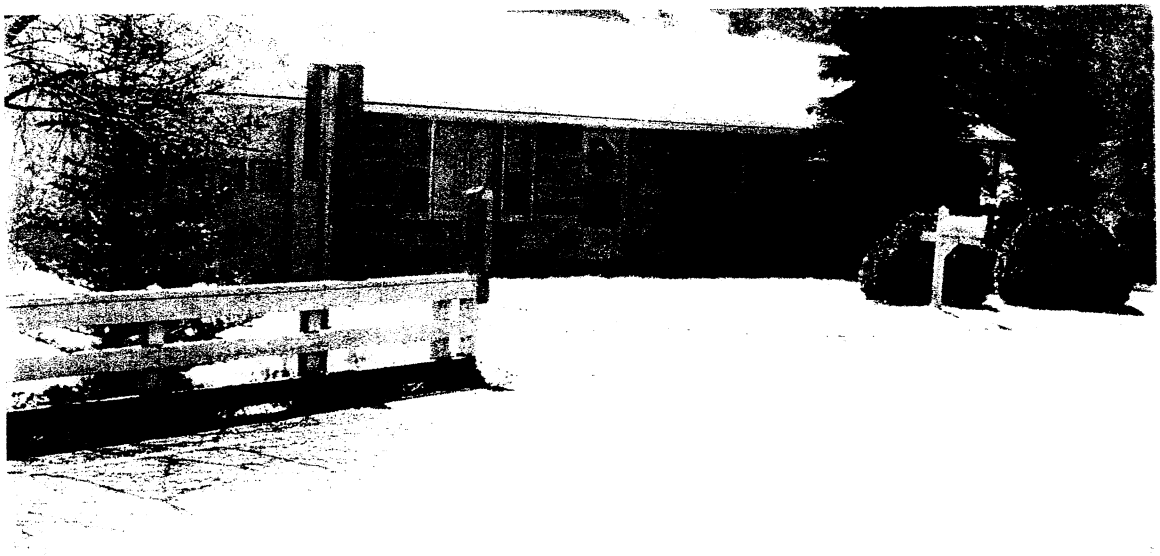
R:\NCDOT\BR_GROUP*40\B4013\Planning\B-4013_Fig1.PSH



B-4013 ASHE COUNTY, VIEW FROM BRIDGE OF ROARING FORK CREEK, LOOKING SOUTH

B-4013, ASHE COUNTY, VIEW UNDER BRIDGE NO. 338

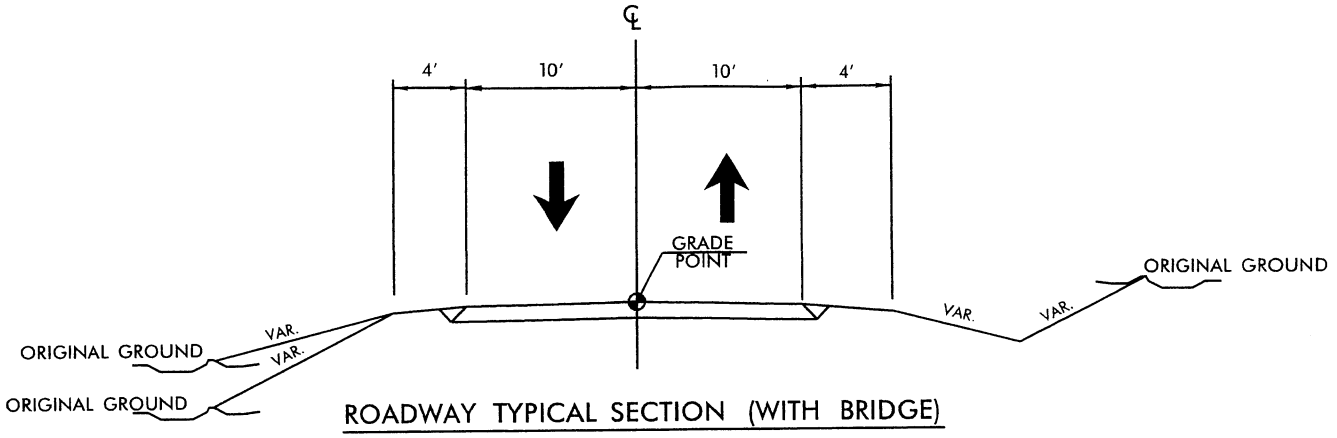
FIGURE 2 A



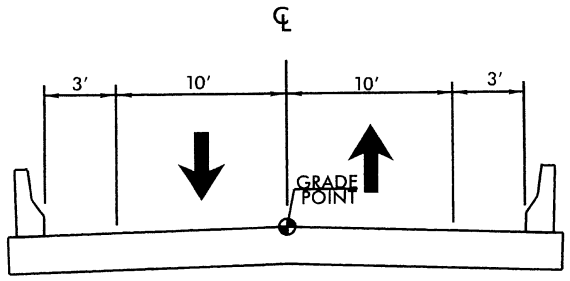
B-4012, ASHE COUNTY, VIEW OF RESIDENCE LOCATED AT THE SOUTH END OF THE BRIDGE

B-4013, ASHE COUNTY, VIEW OF ROARING FORK CREEK LOOKING NORTH

FIGURE 2 B



ROADWAY TYPICAL SECTION (WITH BRIDGE)



BRIDGE TYPICAL SECTION

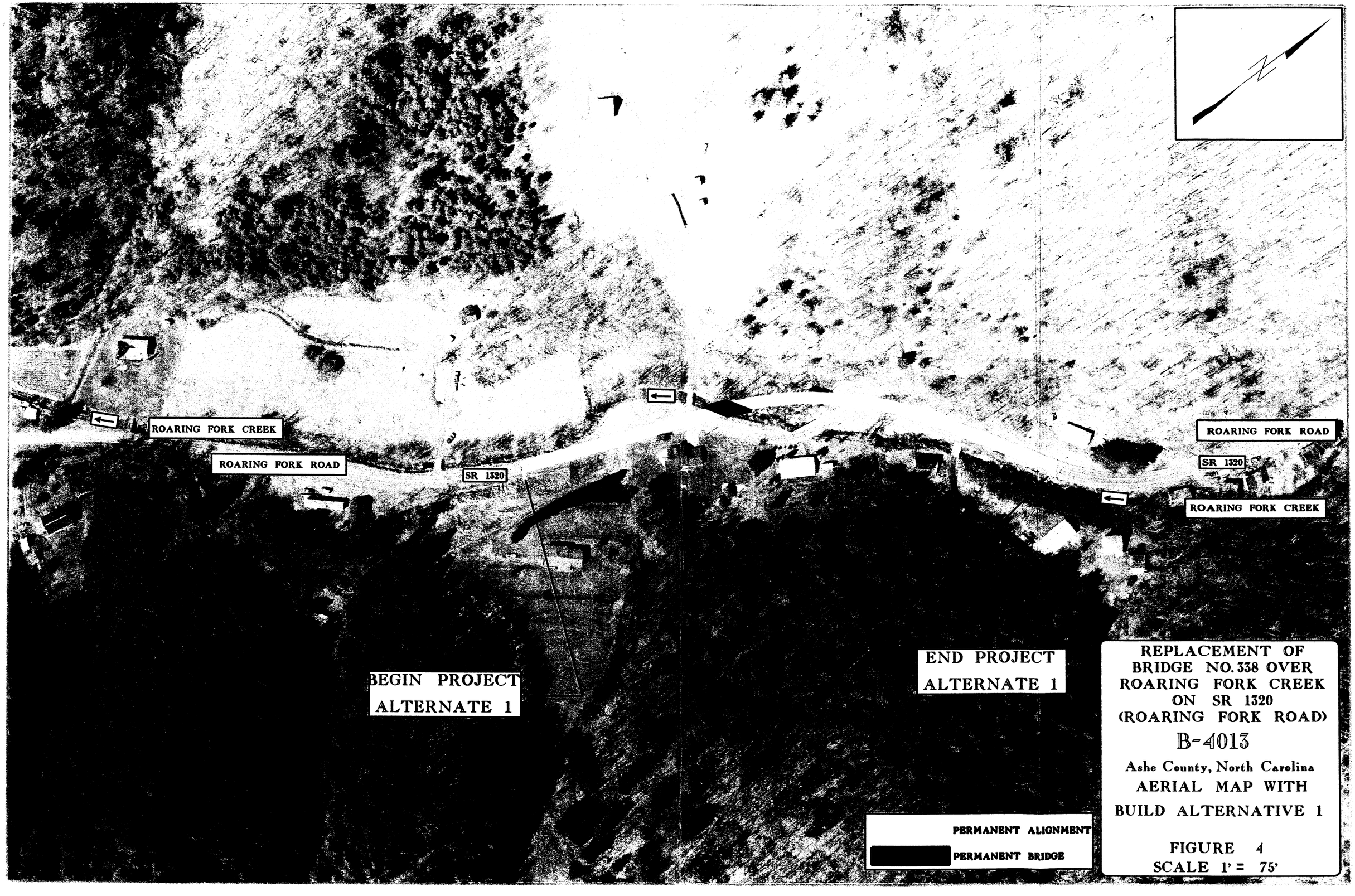
REPLACEMENT OF
BRIDGE NO. 338 OVER
ROARING FORK CREEK
ON SR 1320
(ROARING FORK ROAD)

B-4013

Ashe County, North Carolina

TYPICAL SECTIONS FOR
ALTERNATIVES 1 & 1-REV

FIGURE 3



REPLACEMENT OF BRIDGE NO. 338 OVER ROARING FORK CREEK ON SR 1320 (ROARING FORK ROAD)

B-4013

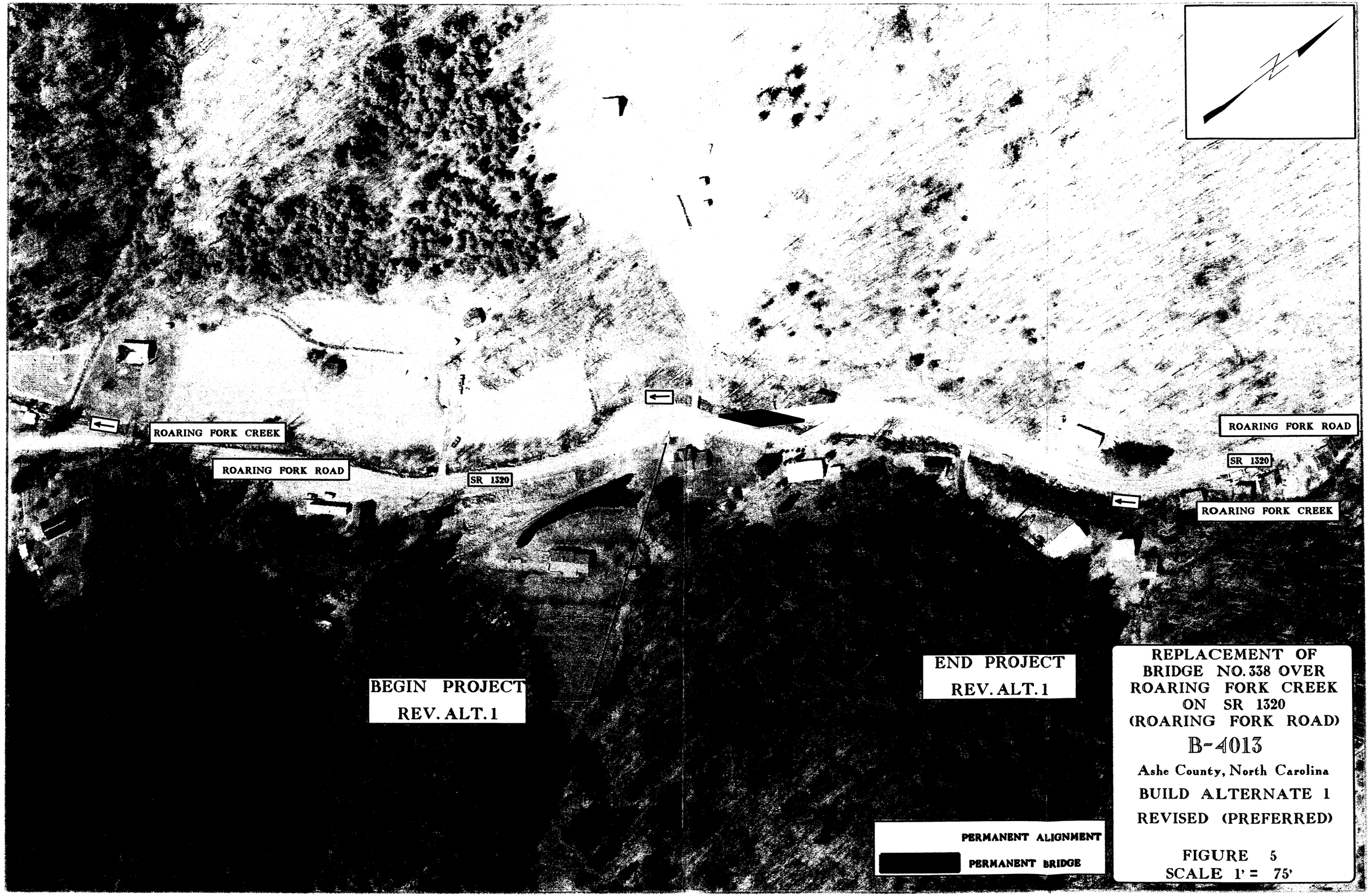
Ashe County, North Carolina

AERIAL MAP WITH

BUILD ALTERNATE 1

FIGURE 4

SCALE 1' = 75'



REPLACEMENT OF BRIDGE NO. 338 OVER ROARING FORK CREEK ON SR 1320 (ROARING FORK ROAD)

B-4013

Ashe County, North Carolina

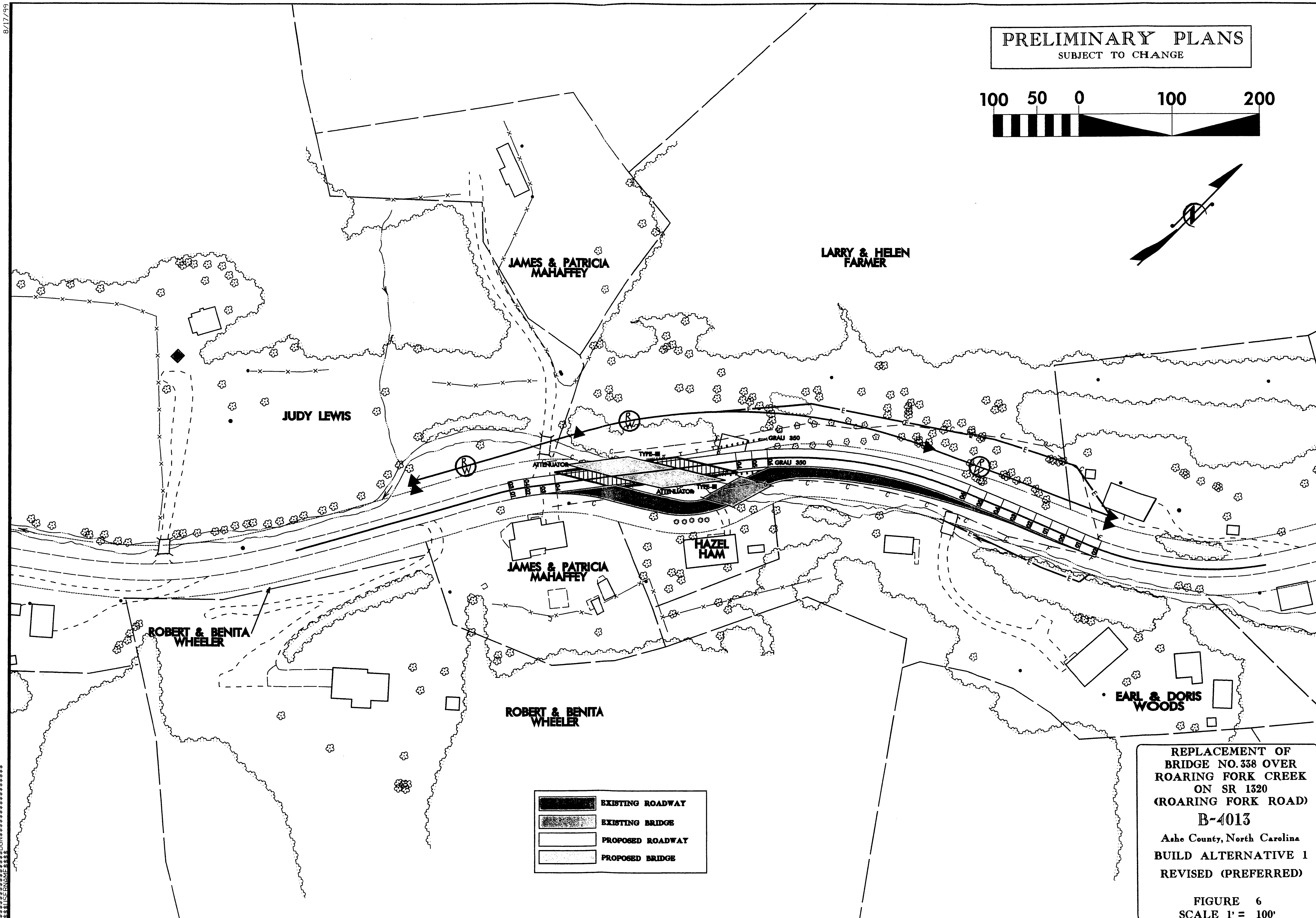
BUILD ALTERNATE 1

REVISED (PREFERRED)

FIGURE 5

SCALE 1' = 75'

8/17/99



REPLACEMENT OF BRIDGE NO. 338 OVER ROARING FORK CREEK ON SR 1320 (ROARING FORK ROAD)

B-4013

Ashe County, North Carolina

BUILD ALTERNATIVE 1 REVISED (PREFERRED)

FIGURE 6
SCALE 1' = 100'

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

ASHE COUNTY
BRIDGE NO. 338
ON SR 1320 (ROARING FORK ROAD)
OVER ROARING FORK CREEK
TIP PROJECT B-4013
100 YEAR FLOODPLAIN MAP
FIGURE 7

LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

ZONE A	No base flood elevations determined.
ZONE AE	Base flood elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE A99	To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
ZONE V	Coastal flood with velocity hazard (wave action); no base flood elevations determined.
ZONE VE	Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

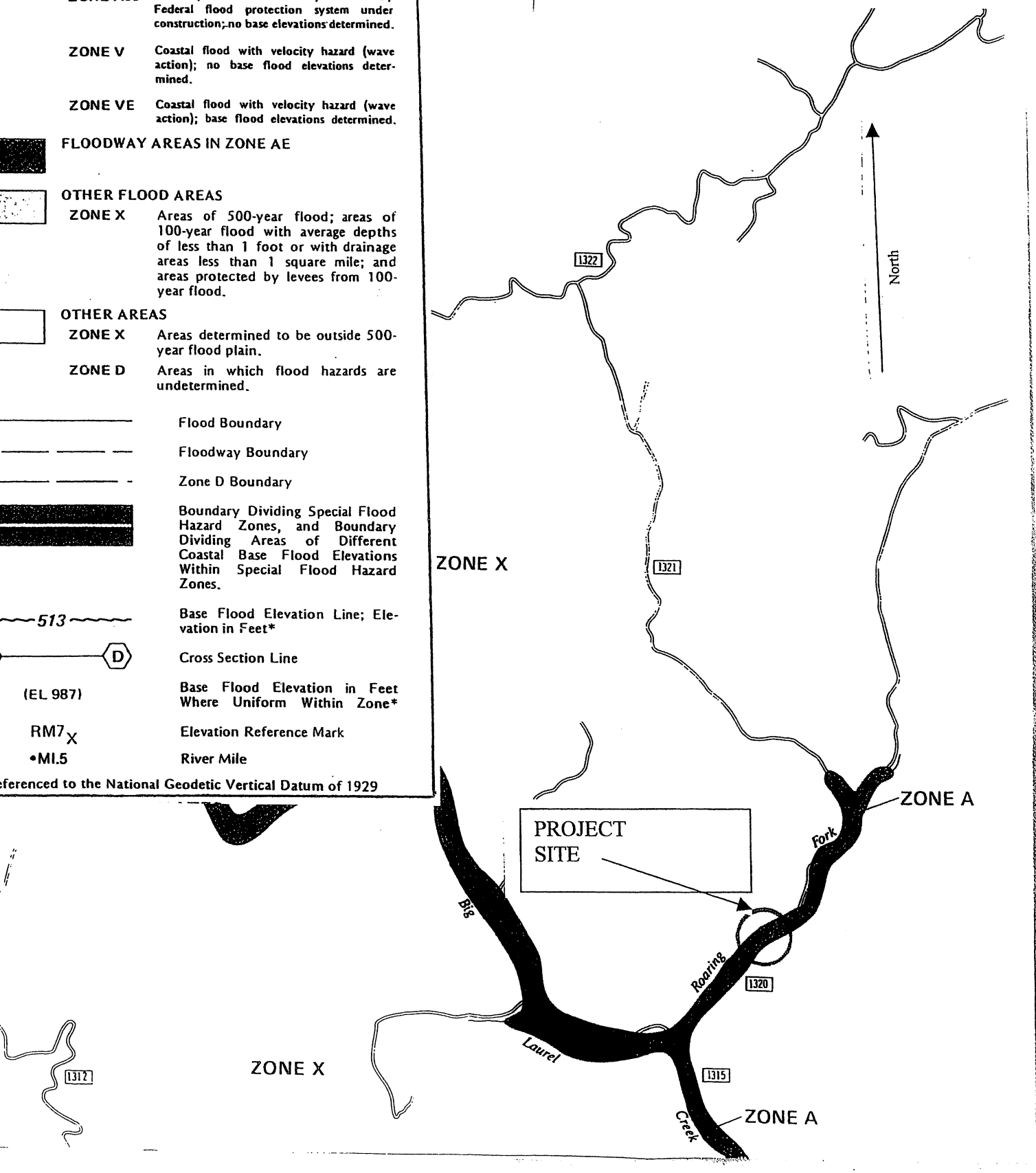
ZONE X	Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

ZONE X	Areas determined to be outside 500-year flood plain.
ZONE D	Areas in which flood hazards are undetermined.

- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
- 513 — Base Flood Elevation Line; Elevation in Feet*
- D — Cross Section Line
- (EL 987) — Base Flood Elevation in Feet Where Uniform Within Zone*
- $RM7_X$ — Elevation Reference Mark
- •MI.5 — River Mile

*Referenced to the National Geodetic Vertical Datum of 1929



APPENDIX A

US Fish and Wildlife Service

160 Zillicoa Street
Asheville, NC 28801
Phone 828-258-3939 Ext 237, Fax 828-258-5330

MEMO FOR: William T. Goodwin, P.E. **DATE:** June 27, 2002

FROM: Marella Buncick

SUBJECT: Review of NCDOT 2005 Bridge Program

I have completed initial review of the approximately 70 proposed bridge replacements for NCDOT Divisions 9-14 for the year 2005. I would like to commend NCDOT for obtaining the natural resource information up front and allowing the agencies to review the proposals and provide comments so early in the process. It was a large volume of work for everyone involved but I feel that the input will be much more meaningful at this early planning stage.

Attached is a spreadsheet with specific comments for each project reviewed. All of the projects have been assigned a Green, Yellow, or Red ranking depending on the resources affected and the need for future consultation. As you will note, the majority of the projects received a Yellow ranking. This is due in large part to the fact that there are unresolved issues related to listed species. Many of these projects likely will become Green projects after further field review. However, obligations under Section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered, (2) actions are subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is determined that may be affected by the identified action.

I also have general comments regarding the process and reports. My general comments follow.

Report Content and Organization

1. The reports would be more easily handled if they were not spiral or otherwise bound.
2. Maps need to be much better. Without a significant landmark-- highway, larger town, other feature – it sometimes took a long time to figure out the location of the project within a county.
3. The reports were organized somewhat similarly, but more consistency would aid in the review process. Perhaps a table that has the significant features ---stream width, depth, DWQ class, etc.--also would help.

4. For listed species, it often was difficult to tell whether field surveys had been conducted or whether the information was limited to a database search.
5. In the future, I would appreciate having the Rosgen stream classification included as part of the information.

Listed Species Surveys

Projects currently ranked as Yellow will need to be reviewed in the future after the stated issues are resolved. For those reports with unresolved issues related to listed species, I would recommend that NCDOT wait until closer to implementation time to conduct final surveys. In general, after three to five years we need updated information regarding the project and listed species. Additionally, when aquatic species are involved (particularly mussels) several surveys may be required to adequately determine presence or absence.

The three projects receiving a Red ranking will need to be followed very closely to determine future consultation requirements. These include B-4287 (actually 2 bridge replacements), B-4286, and B-4282. These projects were ranked as Red because of the significance of the number of listed resources potentially affected and the river (either main stem or tributary) involved.

I would encourage NCDOT to require consultants to at least assess habitat for the bog turtle. While the bog turtle technically does not require Section 7 consultation, it is a species of concern and NCDOT is actively managing mitigation sites or parts of sites for this species. Additionally, the Wildlife Resources Commission considers this animal rare in NC and participates actively in surveys and conservation efforts on its behalf.

Bridge Design and Construction Practices

I am assuming that FWS comments/recommendations in the past regarding bridge design, demolition, and construction practices will be folded into each of these projects. Since NCDOT is also working on a BMP manual that covers these practices, I think it would be redundant to state them again. However, if any questions arise, please let me know. I would like to emphasize that we prefer off-site detours wherever possible, to minimize effects to resources.

Each of these projects has been assigned a log number. Please refer to these numbers in future requests regarding the subject projects. Thank you again for the opportunity to provide these comments. If you have questions, please let me know.

PDE	TIP	County	Rank	Reason for Rank	FWS Log Number
SH	B-2988	Haywood	Y	unresolved for listed species, FWS requests review of bridge design	4-2-02-391
MD	B-4011	Ashe	Y	FWS requests resurvey for spiraea, assessment for bog turtle and green floater, review bridge plans	4-2-02-405
MD	B-4012	Ashe	Y	FWS requests resurvey for spiraea and habitat assessment for bog turtle	4-2-02-404
MD	B-4013	Ashe	Y	FWS requests resurvey for spiraea and habitat assessment for bog turtle, review bridge design	4-2-02-403
MD	B-4015	Ashe	Y	FWS requests resurvey for spiraea and habitat assessment for bog turtle, review bridge design	4-2-02-402
MD	B-4016	Ashe	Y	FWS requests resurvey for spiraea and habitat assessment for bog turtle, review bridge design	4-2-02-401
SH	B-4032	Buncombe	G	FWS requests review of bridge design	4-2-02-387
SH	B-4036	Buncombe	Y	unresolved for mussels, FWS requests review of bridge design	4-2-02-395
SH	B-4037	Buncombe	Y	unresolved for mussels, FWS requests review of bridge design	4-2-02-396
DW	B-4038	Burke	Y	unresolved for listed species, be careful of downstream effects	4-2-02-379
DW	B-4039	Burke	Y	unresolved for heartleaf	4-2-02-380
RY	B-4040	Burke	Y	FWS requests resurvey for heartleaf	4-2-02-381
DW	B-4041	Burke	Y	FWS requests resurvey for heartleaf	4-2-02-382
RY	B-4043	Burke	Y	FWS requests mussel survey, requests bridge to bridge and review of bridge design	4-2-02-383
RY	B-4044	Burke	Y	FWS requests resurvey for heartleaf and pogonia, bridge to bridge	4-2-02-384
RY	B-4045	Burke	Y	FWS requests resurvey for heartleaf, new occurrence w/in 1 mile	4-2-02-385
RY	B-4046	Burke	Y	unresolved for pogonia, FWS requests resurvey for heartleaf, request bridge for high quality stream	4-2-02-408
RY	B-4047	Burke	Y	unresolved for heartleaf	4-2-02-386
MD	B-4052	Caldwell	Y	unresolved for heartleaf, be careful of the USGS gaging station at this location	4-2-02-407
JJ	B-4059	Cawtaba	Y	Need survey for heartleaf--habitat assessment inadequate	4-2-02-409
DW	B-4060	Cawtaba	Y	Need survey for heartleaf--habitat assessment inadequate	4-2-02-410
RY	B-4067	Cherokee	Y	unresolved for listed species, close coordination w/USFS, high quality stream	4-2-02-394
DW	B-4070	Cherokee	Y	all listed species unresolved, FWS requests special consideration here for sicklefin redhorse	4-2-02-371
JJ	B-4076	Cleveland	Y	Need survey for heartleaf--habitat assessment inadequate	4-2-02-413
SH	B-4103	Davidson	Y	FWS requests mussel survey, requests bridge to bridge because of stream quality	4-2-02-370
JJ	B-4116	Gaston	Y	Need resurvey for heartleaf	4-2-02-416
DW	B-4123	Graham	Y	unresolved for listed species, Indiana Bat, close coordination w/USFS, high quality stream	4-2-02-393
SH	B-4144	Haywood	Y	unresolved for listed species, FWS requests review of bridge design	4-2-02-392
DP	B-4155	Iredell	G	FWS requests survey for bog turtle	4-2-02-412
DP	B-4158	Iredell	G	FWS requests survey for bog turtle, contractor suggested survey for heartleaf, FWS requests bridge	4-2-02-417
DW	B-4161	Jackson	Y	unresolved for listed species, FWS requests review of bridge design	4-2-02-388
JJ	B-4177	Lincoln	Y	Need resurvey for heartleaf	4-2-02-414
DW	B-4178	Lincoln	Y	Need resurvey for heartleaf	4-2-02-415
DW	B-4179	Macon	Y	unresolved for listed species, FWS requests review of bridge design	4-2-02-389
RY	B-4180	Macon	Y	unresolved for listed species, FWS requests bridge to bridge, consideration for green salamander	4-2-02-390
RY	B-4183	Madison	**These 2 bridge replacements are part of R-2518 and 2519 merger process, review by merger team**		

PDE	TIP	County	Rank	Reason for Rank	FWS Log Number
DW	B-4192	McDowell	Y	Need to assess pogonia	4-2-02-418
JJ	B-4194	McDowell	Y	Need to assess pogonia	4-2-02-419
JJ	B-4195	McDowell	Y	Need to assess pogonia	4-2-02-420
JJ	B-4196	McDowell	Y	Need to assess pogonia	4-2-02-421
DW	B-4197	McDowell	Y	Need to assess pogonia, FWS requests mussel surveys, bridge to bridge for high quality stream	4-2-02-422
JJ	B-4198	McDowell	Y	Need to assess pogonia	4-2-02-423
DW	B-4199	McDowell	Y	Need to assess pogonia	4-2-02-424
DW	B-4202	Mitchell	Y	Unresolved for Elktoe, FWS requests bridge to bridge, **NO SURVEY NEEDED FOR INDIANA BAT**	4-2-02-417
DW	B-4239	Polk	Y	unresolved for small-whorled pogonia and heartleaf	4-2-02-369
DW	B-4240	Polk	Y	unresolved for small-whorled pogonia and heartleaf	4-2-02-361
SH	B-4255	Rowan	G	may need resurvey for Schweinitz's sunflower	4-2-02-375
SH	B-4258	Rutherford	Y	unresolved for small-whorled pogonia	4-2-02-362
RY	B-4259	Rutherford	Y	unresolved for small-whorled pogonia, FWS requests another heartleaf survey	4-2-02-363
RY	B-4260	Rutherford	Y	unresolved for small-whorled pogonia	4-2-02-364
SH	B-4261	Rutherford	Y	unresolved for small-whorled pogonia and heartleaf	4-2-02-365
RY	B-4264	Rutherford	Y	unresolved for small-whorled pogonia, FWS requests another survey for heartleaf	4-2-02-368
RY	B-4265	Rutherford	Y	unresolved for small-whorled pogonia, FWS requests another survey for heartleaf and irisette	4-2-02-366
RY	B-4266	Rutherford	Y	unresolved for small-whorled pogonia, FWS requests another survey for heartleaf	4-2-02-367
	note for Rutherford Co projects--No survey is required for Indiana bat because the record is a winter record.				
SH	B-4282	Stokes	R	unresolved for cardamine and James spiny mussel, FWS concerned about bridge design	4-2-02-376
DP	B-4284	Surry	Y	unresolved for pogonia, FWS requests assessment for bog turtle and brook floater, bridge to bridge	4-2-02-426
DP	B-4285	Surry	Y	unresolved for pogonia, FWS requests assessment for bog turtle and brook floater	4-2-02-425
RY	B-4286	Swain	R	unresolved for listed species, esp. Indiana bat, FWS concerned with bridge design	4-2-02-378
DW	B-4287	Swain	R	unresolved for listed species, esp. Indiana bat, FWS concerned with bridge design	4-2-02-377
RY	B-4288	Transylvania	Y	unresolved for listed species, FWS requests survey for bunched arrowhead	4-2-02-374
SH	B-4290	Transylvania	Y	unresolved for listed species	4-2-02-373
SH	B-4291	Transylvania	Y	need mussel surveys	4-2-02-372
MD	B-4316	Watauga	Y	FWS requests bridge to bridge for high quality stream, FWS requests survey for green floater	4-2-02-39
JJ	B-4317	Watauga	G	FWS requests bridge to bridge for high quality stream	4-2-02-39
MD	B-4318	Watauga	G	FWS requests bridge to bridge for high quality stream, FWS requests survey for green floater	4-2-02-40
MD	B-4322	Wilkes	G	FWS requests bridge to bridge for high quality stream, assessment for bog turtle	4-2-02-40
DW	B-4330	Yancey	Y	unresolved for elktoe, FWS requests resurvey for Spiraea, be careful of downstream effects	4-2-02-39

North Carolina Wildlife Resources Commission

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

TO: William T. Goodwin, Jr., PE, Unit Head
Bridge Replacement & Environmental Analysis Branch

FROM: Ron Linville, Habitat Conservation Coordinator
Habitat Conservation Program

DATE: May 9, 2002

SUBJECT: NCDOT Bridge Replacements:
Catawba County – Bridge No. 79, SR1156, Anthony Creek, B-4059
Catawba County – Bridge No. 17, SR1486, Wlyle Creek, B-4060
Caldwell County – Bridge No. 7, NC268, Yadkin River, B-4052
Lincoln County – Bridge No. 33, SR1357, Dellinger Creek, B-4178
Lincoln County – Bridge No. 142, SR1193, Howards Creek, B-4177
Gaston County – Bridge No. 148, SR1618, Beaver Dam Creek, B-4116
Cleveland County – Bridge No. 156, SR1804, Buffalo Creek, B-4076
Surry County – Bridge No. 221, SR1625, Pauls Creek, B-4285
Surry County – Bridge No. 29, SR1322, Mill Creek, B-4284
Iredell County – Bridge No. 116, SR1521, Third Creek, B-4155
Watauga County – Bridge No. 320, SR1153, Beech Creek, B-4316
Watauga County – Bridge No. 16, SR1541, MF SF New River, B-4317
Watauga County – Bridge No. 321, SR1598, Watauga River, B-4318
Wilkes County – Bridge No. 71, SR1167, Stony Fork Creek, 4322
Ashe County – Bridge No. 85, SR1106, Mill Creek, B-4011
Ashe County – Bridge No. 117, SR1118, NF New River, B-4012
Ashe County – Bridge No. 338, SR1320, Roaring River, B-4013
Ashe County – Bridge No. 165, SR1362, Big Horse Creek, B-4015
Ashe County – Bridge No. 273, SR1347, Big Horse Creek, B-4016
Iredell County – Bridge No. 228, SR1854, Rocky Creek, B-4158

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).

Our standard recommendations for bridge replacement projects of this scope 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.

11. Sedimentation and erosion control measures sufficient to protect aquatic resources must be implemented prior to any ground disturbing activities. Structures should be maintained regularly, especially following rainfall events.

12. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 15 days of ground disturbing activities to provide long-term erosion control.

13. All work in or adjacent to stream waters should be conducted in a dry work area. Sandbags, rock berms, cofferdams, or other diversion structures should be used where possible to prevent excavation in flowing water.

14. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams.

15. Only clean, sediment-free rock should be used as temporary fill (causeways), and should be removed without excessive disturbance of the natural stream bottom when construction is completed.

16. During subsurface investigations, equipment should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

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

1. The culvert must be designed to allow for aquatic life and fish passage. Generally, the culvert or pipe invert should be buried at least 1 foot below the natural streambed (measured from the natural thalweg depth). If multiple barrels are required, barrels other than the base flow barrel(s) should be placed on or near stream bankfull or floodplain bench elevation (similar to Lyonsfield design). These should be reconnected to floodplain benches as appropriate. This may be accomplished by utilizing sills on the upstream and downstream ends to restrict or divert flow to the base flow barrel(s). Silled barrels should be filled with sediment so as not to cause noxious or mosquito breeding conditions. Sufficient water depth should be provided in the base flow barrel(s) during low flows to accommodate fish movement. If culverts are longer than 40-50 linear feet, alternating or notched baffles should be installed in a manner that mimics existing stream pattern. This should enhance aquatic life passage: 1) by depositing sediments in the barrel, 2) by maintaining channel depth and flow regimes, and 3) by providing resting places for fish and other aquatic organisms. In essence, base flow barrel(s) should provide a continuum of water depth and channel width without substantial modifications of velocity.

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 along the existing channel alignment whenever possible to avoid channel realignment. Widening the stream channel must be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.

4. Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be professionally designed, sized, and installed.

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 reclaimed was previously wetlands, NCDOT should restore the area to wetlands. If successful, the site may be utilized as mitigation for the subject project or other projects in the watershed.

Project specific comments:

1. Catawba County – Bridge No. 79, SR1156, Anthony Creek, B-4059, GREEN LIGHT
No special concerns indicated. Standard requirements should apply.

2. Catawba County – Bridge No. 17, SR1486, Wlyle Creek, B-4060, GREEN LIGHT
No special concerns indicated. Standard requirements should apply.

3. Caldwell County – Bridge No. 7, NC268, Yadkin River, B-4052, YELLOW LIGHT
Warmwater species including small mouth bass. Some brown trout. Moratorium during , NEW spanning bridge preferred.

4. Lincoln County – Bridge No. 33, SR1357, Dellinger Creek, B-4178, GREEN LIGHT
No special concerns indicated. Standard requirements should apply.

5. Lincoln County – Bridge No. 142, SR1193, Howards Creek, B-4177, GREEN LIGHT
No special concerns indicated. Standard requirements should apply.

6. Gaston County – Bridge No. 148, SR1618, Beaver Dam Creek, B-4116, GREEN LIGHT
Warmwater fishery moratorium? No special concerns indicated. Standard requirements should apply.

7. Cleveland County – Bridge No. 156, SR1804, Buffalo Creek, B-4076, GREEN LIGHT
Warmwater fishery moratorium? No special concerns indicated. Standard requirements should apply.

8. Surry County – Bridge No. 221, SR1625, Pauls Creek, B-4285, GREEN LIGHT
Warmwater fishery moratorium? No special concerns indicated. Standard requirements should apply.

9. Surry County – Bridge No. 29, SR1322, Mill Creek, B-4284, YELLOW/RED LIGHT
Warmwater fishery moratorium? Check for brook floater (*Alasmidonta varicose*) due to proximity to Mitchell River.

10. Iredell County – Bridge No. 116, SR1521, Third Creek, B-4155, GREEN LIGHT
Warmwater fishery moratorium? No special concerns indicated. Standard requirements should apply.

11. Watauga County – Bridge No. 320, SR1153, Beech Creek, B-4316, YELLOW/RED LIGHT
Rainbow trout moratorium. NEW spanning bridge preferred.

12. Watauga County – Bridge No. 16, SR1541, MF SF New River, B-4317, RED LIGHT
Rainbow trout moratorium. NEW spanning bridge preferred. Many listed fish and mussels in SF New River. Surveys recommended.

13. Watauga County – Bridge No. 321, SR1598, Watauga River, B-4318, YELLOW LIGHT
Rainbow and Brown trout. NEW spanning bridge preferred.

14. Wilkes County – Bridge No. 71, SR1167, Stony Fork Creek, 4322, YELLOW LIGHT
Rainbow and Brown trout. NEW spanning bridge preferred.

15. Ashe County – Bridge No. 85, SR1106, Mill Creek, B-4011, YELLOW LIGHT
Brown trout moratorium. NEW spanning bridge preferred.

16. Ashe County – Bridge No. 117, SR1118, NF New River, B-4012, YELLOW LIGHT
Rainbow and Brown trout moratorium. NEW spanning bridge preferred.

17. Ashe County – Bridge No. 338, SR1320, Roaring River, B-4013, GREEN LIGHT
Rainbow and Brown trout. NEW spanning bridge preferred.

18. Ashe County – Bridge No. 165, SR1362, Big Horse Creek, B-4015, GREEN LIGHT
Rainbow trout moratorium. NEW spanning bridge preferred.

19. Ashe County – Bridge No. 273, SR1347, Big Horse Creek, B-4016, GREEN LIGHT
Small mouth bass moratorium. NEW spanning bridge?

20. Iredell County – Bridge No. 228, SR1854, Rocky Creek, B-4158, GREEN LIGHT
No special concerns indicated. Standard requirements should apply.

NCDOT should routinely minimize adverse impacts to fish and wildlife resources in the vicinity of bridge replacements. Restoring previously disturbed floodplain benches should narrow and deepen streams previously widened and shallowed during initial bridge installation. 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 and reduce habitat fragmentation.

If you need further assistance or information on NCWRC concerns regarding bridge replacements, please contact me at (336) 769-9453. Thank you for the opportunity to review and comment on these projects.

Cc: David Cox, WRC

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 18, 2003

MEMORANDUM

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

FROM: David Brook DB for David Brook

SUBJECT: Historic Architectural Resources Survey Report, Replacement of Bridge No. 338 on SR 1362 over Roaring Fork Creek, B-4013, Ashe County, ER02-8493

Thank you for your letter of May 6, 2003, transmitting the survey report by Circa, Inc.

We concur that there are no properties within the Area of Potential Effect (APE) that are eligible for listing in the National Register.

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: Circa, Inc.
Mary Pope Furr, NCDOT

m dickens

Federal Aid # BRZ-1320(4) *TIP* # B-4013 *County*: Ashe

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

Project Description: Replace Bridge No. 338 on SR 1320 over Roaring Fork Creek

On 11/05/2002, 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 at

- [ ] Scoping meeting
- [x] 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.
- [x] There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- [x] There are properties over fifty years old within the project's Area of Potential Effects (APE), but based on the historical information available and the photographs of each property, the property identified as I-5 37 is considered not eligible for the National Register and no further evaluation of it is necessary.
- [x] There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- [ ] All properties greater than 50 years of age located in the APE have been considered at this consultation, and based upon the above concurrence, all compliance for historic architecture with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.
- [ ] There are no historic properties affected by this project. (*Attach any notes or documents as needed*)

Signed:

Mary Pope Furr — 11.05.02
Representative, NCDOT — Date

Michael C Norman — 11/5/02
FHWA, for the Division Administrator, or other Federal Agency — Date

Clara V Swallow — 11-5-02
Representative, HPO — Date

David Brook BJS — 11-8-02
State Historic Preservation Officer — Date

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

The Eastern Band of Cherokee Indians
Tribal Historic Preservation Office
P.O. Box 455, Cherokee, NC 28719
(828) 497-1594 / Fax (828) 497-1590

October 28, 2003

Greg Thorpe, PhD, Manager
Project Development and Environmental Analysis Branch
NC Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

RE: **Wilkes County, Bridge No. 71 on SR 1167 Over Fork Creek, Federal-Aid Project BRZ-1167(1), State Project 8.2761301, TIP No. B-4322**

Caldwell County, Bridge No. 7 on NC 268 Over Yadkin River, Federal Aid Project BRSTP-0268 (9), State Project 8.1731801, TIP No. B-4052

Ashe County, Bridge No. 338 on SR 1320 Over Roaring Fork Creek, Federal Aid Project BRZ-1320 (4), State Project 8.2712301, TIP No. B-4013

Ashe County, Bridge No. 273 on SR 1347 Over Big Horse Creek, Federal Aid Project BRZ-1347 (1), State Project 8.2712501, TIP No. B-4016

Ashe County, Bridge No. 165 on SR 1362 Over Big Horse Creek, Federal Aid Project BRZ-1362 (1), State Project 8.2712401, TIP No. B-4015

Bridge No. 117 on SR 1118 North Folk New River, Federal-Aid Project BRZ-1118(3), State Project 8.2712201, TIP No. B-4012

Watauga County, Bridge No. 320 on SR 1153 Over Beech Creek, Federal Aid Project BRZ-1153 (6), State Project 8.2752301, TIP No. B-4316

Dear Dr. Thorpe,

The Eastern Band of Cherokee Indians appreciates the invitation to participate as a consulting party in compliance with 36CFR800. According to the information you provided, the EBCI THPO is unaware of any known cultural resources or archaeological sites in the project area significant to our Tribe, or any known cultural resources or archaeological sites eligible for the National Register of Historic Places. However, should any cultural resources or human remains be encountered during the proposed project's activities, work should cease and this office should be contacted immediately.
As a consulting party we request that you send all information pertaining to cultural resources within the above-referenced project(s) area of potential effect (APE) for our review and comment. If you have any questions, please direct them to me at (828) 497-1589. Thank you.

Sincerely,

Mi li

Michelle Hamilton
Tribal Historic Preservation Specialist
Eastern Band of Cherokee Indians

Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E. Director
Division of Water Quality

November 12, 2002

MEMORANDUM

TO: Missy Dickens, P.E., Project Development Engineer
NCDOT, Project Development & Environmental Analysis

FROM: Cynthia F. Van Der Wiele, NCDOT Coordinator CVDW

SUBJECT: Scoping Comments for Ashe County, SR 1320, Bridge No. 338 over Roaring Fork Creek, F.A. Project No. BRZ-1320(4), State Project No. 8.2712301,TIP Project B-4013.

This letter is in response to your request for comments on the above-referenced project. Roaring Fork Creek (index 10-2-14-7; HU 050702) is classified as C trout +. The "+" symbol identifies waters that are subject to a special management strategy specified in 15A NCAC 2B .0225, the Outstanding Resources Waters (ORW) rule, in order to protect downstream waters designated as ORW.

During 1998 basinwide monitoring, DWQ aquatic biologists reported streambank erosion and sedimentation throughout the New River basin that was moderate to severe. The Wildlife Resources Commission's *Fisheries Management Direction for the New River Basin* also lists sedimentation of the New River and tributary streams as one of three major concerns in the basin (NCWRC, May 1998). Substantial amounts of erosion can be prevented by planning to minimize the amount and time the land is exposed. Care should be taken to prevent loss of material into Roaring Fork Creek during construction.

The NC Division of Water Quality staff has the following recommendations:

- Due to the excellent quality of the resource, NCDWQ highly endorses the replacement of this structure with a bridge rather than a culvert.
- The bridge should be designed as a single span with *no piers* in the stream.
- Storm water shall be designed to be carried across the bridge (no deck drains over the stream) and diverted through grass-lined ditches, vegetated buffers or directed to a storm water collection device prior to entering Roaring Fork Creek.
- Use *Sedimentation and Erosion Control Guidelines for Sensitive Watersheds* [15A NCAC 4B .0124(a)-(d)] prior to any ground-disturbing activities to minimize impacts to downstream aquatic resources.
- Temporary or permanent herbaceous vegetation shall be planted on all bare soil *within 5 days* of ground-disturbing activities to provide long term erosion control.
- Use a turbidity curtain or other methods (BMPs) proven to prevent violation of the turbidity standard for trout waters.
- Use BMPs for bridge demolition and removal, Case 1 (9-20-99 NCDOT policy; see http://www.ncdot.org/planning/pe/bmp.pdf).

Thank you for requesting our input at this time. The DOT is reminded that issuance of a §401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact Cynthia Van Der Wiele at (919) 733.5715.

pc: John Thomas, USACE Raleigh Field Office
Chris Militscher, USEPA
Marla Chambers, NCWRC
File Copy

North Carolina Division of Water Quality, 401 Wetlands Certification Unit,
1650 Mail Service Center, Raleigh, NC 27699-1650 (Mailing Address)
2321 Crabtree Blvd., Raleigh, NC 27604-2260 (Location)
919-733-1786 (phone), 919-733-6893 (fax), http://h2o.enr.state.nc.us/ncwetlands/

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

Michael Easley, Governor
Bill Ross, Secretary
Alan Klimek, Director

NCDENR
NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

June 18, 2002

Memorandum To: William T. Goodwin, Jr., PE, Unit Head
Bridge Replacement Planning Unit
Project Development and Environmental Analysis Branch

Through: John Dorney
NC Division of Water Quality, 401 Unit

From: Robert Ridings
NC Division of Water Quality, 401 Unit

Subject: Review of Natural Systems Technical Reports for bridge replacement projects scheduled for construction in CFY 2005: "Yellow Light" Projects: B-4037, B-4076, B-4116, B-4016, B-4052, B-4015, B-4013, B-4012, B-4011, B-4202, B-4199, B-4196, B-4195, B-4322, B-4317, B-4316, B-4285, & B-4028.

On all projects, use of proper sediment and erosion control will be needed. Sediment and erosion control measures should not be placed in wetlands. Sediment should be removed from any water pumped from behind a cofferdam before the water is returned to the stream. Sedimentation and Erosion Control Guidelines for Sensitive Watersheds (15A NCAC 4B .0024) must be implemented prior to any ground-disturbing activities to minimize impacts to downstream aquatic resources. Temporary or permanent herbaceous vegetation must be planted on all bare soil *within 10 days* of ground-disturbing activities to provide long term erosion control.

This office would prefer bridges to be replaced with new bridges. However if the bridge must be replaced by a culvert and 150 linear feet or more of stream is impacted, a stream mitigation plan will be needed prior to the issuance of a 401 Water Quality Certification. While the NCDWQ realizes that this may not always be practical, it should be noted that for projects requiring mitigation, appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.

Any proposed culverts shall be installed in such a manner that the original stream profile is not altered (i.e. the depth of the channel must not be reduced by a widening of the streambed). Existing stream dimensions are to be maintained above and below locations of culvert extensions.

Public Schools of North Carolina

DEC - 2 2002

NC Department of Public Instruction
School Planning, Division of School Support
6322 Mail Service Center
Raleigh, NC 27699-6322

Phone: (919) 807-3554
Fax: (919) 807-3558
Www.schoolclearinghouse.org

November 25, 2002

MEMORANDUM

TO: Gregory J. Thorpe, Ph.D.
Project Development and Environmental Analysis Branch

FROM: J. David Edwards, Section Chief, School Planning d

SUBJECT: Ashe County, SR 1118, Replace Bridge No. 117 Over North Fork New River, Federal-Aid Project No. BRZ 1118(3), State Project No. 8.2712201, TIP No. B-4012

Ashe County, SR 1320, Replace Bridge No. 338 over Roaring Fork Creek, Federal-Aid No. BRZ-1320(4), State Project No. 8.2712301, TIP No. B-4013

Ashe County, SR 1362, Replace Bridge No. 165 over Big Horse Creek, Federal-Aid Project BRZ-1362(1), State Project No. 8.2712401, TIP No. B-4015

Ashe County, SR 1347, Replace Bridge No. 273 over Big Horse Creek, Federal-Aid Project No. BRZ-1347(1), State Project No. 8.2712501, B-4016

Enclosed is a response from Ashe County Schools in regard to the National Environmental Policy Act inquiry.

/ed
Enclosure

Ashe County Board of Education

PO Box 604, 320 South Street • Courier No. 15-65-01 • Jefferson, North Carolina 28640

(336) 246-7175 • (336) 246-7609 Fax

October 28, 2002

Mr. Gerald H. Knott, Section Chief
School Planning
Department of Public Instruction

Mr. Knott:

In regard to your letter concerning the replacement of bridge No. 338 over Roaring Fork Creek on SR 1320 and the impact on an existing or proposed school site or bus routes.

We currently have two buses routed in this area that pass through both the a.m. and the p.m. hours. Closure of SR 1320 would result in a lengthy and hazardous detour. Willie Walker Road (SR 1319) is a road that we try to avoid if possible.

There is not any impact on an existing or proposed school site in the immediate area. I hope this information is beneficial. If I can be of further assistance, please contact me at (336) 246-9103.

Sincerely,

Stan Douglas
Transportation Director
Ashe County School Bus Garage

Ashe County Board of Education

Donnie R. Johnson, *Superintendent* • **Charles L. King**, *Chairman* • **Charles B. Jones, Jr.**, *Vice Chairman* • **Dr. Lee Beckworth** • **Richard Blackburn** • **Dorothy Witherspoon**

PO Box 604, 320 South Street • Courier No. 15-65-01 • Jefferson, North Carolina 28640

(336) 246-7175 • (336) 246-7609 Fax

November 6, 2001

Davis Moore
Project Development & Environmental
Analysis Branch
NC Department of Transportation
1548 mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Moore:

The following information is in response to your letter addressing TIP projects.

Bridge No. 85 on Highway SR 1106 B-4011
We (Ashe County Board of Education) currently have two buses crossing this bridge twice daily. These buses can be rerouted around this bridge.

Bridge No. 117 on Highway SR 1118 B-4012
We (ACBE) currently have one bus crossing this bridge twice daily. Two students live across the bridge, one near the bridge and one one-half mile away. They could walk to the bridge and catch the bus or parents could bring them out to meet the bus. The distance would be too great to reroute through Watauga County. Route time would be one hour plus.

Bridge No. 338 on Highway SR 1320 B-4013
We (ACBE) currently have two buses crossing this bridge twice daily. It would be difficult to reroute for this bridge. Route time would be forty-five minutes plus, with additional ride time. More in the winter.

Bridge No. 165 on Highway SR 1362 B-4015
We (ACBE) currently have two buses crossing this bridge twice daily. Rerouting around this bridge would take thirty minutes plus. More in the winter.

Bridge No. 273 on Highway SR 1347 B-4016
We (ACBE) currently have one bus crossing this bridge twice daily. There would be no problem rerouting for this bridge.

If you have any questions concerning this information, please contact me at (336) 246-9103.

Sincerely,

Stan Douglas
Director of Transportation
Ashe County Board of Education

Pll

B-4013

County of Ashe

Jefferson
North Carolina
28640

June 7, 2001

Davis Moore
NC Department of Transportation
Project Development & Environmental Analysis Branch
1548 Mail Service Center
Raleigh, NC 27699-1548

RE: Proposed Replacement of Bridges 85, 117, 165, 273 and 338

Dear Mr. Moore,

In regard to the proposed NCDOT bridge replacements, we offer the following information on how emergency response/emergency medical services will be affected by the proposed projects:

1. Replacement of Bridge No. 85 on SR 1106, over Creek, Ashe County, Federal Aid Project No. BRZ-1106(4), State Project No. 8.2712101, TIP No. B-4011: Closure of this bridge could be handled by re-routing and would add an estimated 10 minute additional response time for emergency response/emergency medical services.

2. Replacement of Bridge No. 117 on SR 1118 over Hoskin Fork Creek, Ashe County, Federal Aid Project No. BRZ-1118(3), State Project No. 8.2712201, TIP No. B-4012: Closure of this bridge would create an unworkable situation for for emergency response/emergency medical services as there is no other route to access the upper portion of Sutherland Road (SR 1118).

3. Replacement of Bridge No. 165 on SR 1362 over Big Horse Creek, Ashe County, Federal Aid Project No. BRZ-1362(1), State Project No. 8.2712401, TIP No. B-4015: Closure of this bridge could be handled by re-routing and would add an estimated 10-15 minute additional response time for emergency response/emergency medical services.

4. Replacement of Bridge No. 273 on SR 1347 over Big Horse Creek, Ashe County, Federal Aid Project No. BRZ-1347(1), State Project No. 8.2712501, TIP No. B-4016: Closure of this bridge could be handled by re-routing and would add an estimated 10-15 minute additional response time for emergency response/emergency medical services.

5. Replacement of Bridge No. 338 on SR 1320(4), State Project No. 8.2712301, TIP No. B-4013: Closure of this bridge could be handled by re-routing and would add an estimated 10 minute additional response time for emergency response/emergency medical services.

For further information, please contact my office at (336) 219-2521, or emc@ashecountygov.com.

Sincerely,

Patty McMeans

Patty McMeans,
Emergency Management Coordinator,
County of Ashe
150 Government Circle Suite 2400
Jefferson, NC 28640

APPENDIX B

ROARING FORK ROAD (1320) BRIDGE OVER ROARING FORK CREEK - NEWSLETTER

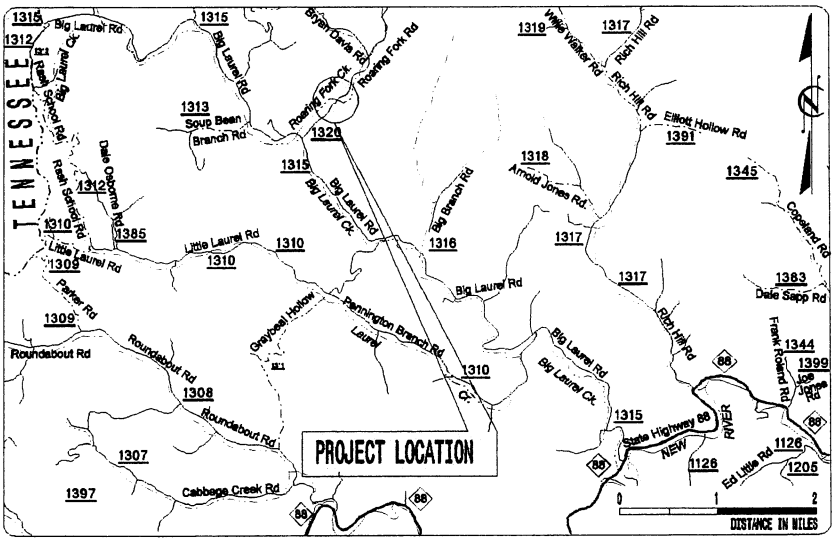
TRANSPORTATION IMPROVEMENT PROGRAM PROJECT B-4013

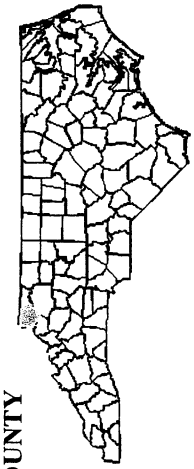
March 2003

North Carolina Department of Transportation

NCDOT has begun the project planning studies to replace Bridge #338 on Roaring Fork Road (SR 1320) over Roaring Fork Creek, Ashe County (Transportation Improvement Program Project B-4013)

You are invited to a WORKSHOP to be held at the Riverview Community Cener on March 25, 2003. Drop-in anytime between 4-7 pm.





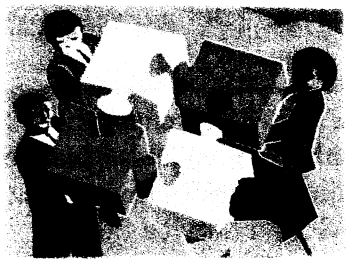
ASHE COUNTY

BRIDGE TO BE REPLACED

Bridge No. 338 on Roaring Fork Road over Roaring Fork Creek (SR 1320) was built in 1967. The bridge is narrow and does not meet current design standards. NCDOT is studying two alternatives that would replace the old, narrow bridge with a new, wider bridge or box culvert at the same location. Traffic on Roaring Fork Road will be maintained at the site during construction. Construction of the new bridge should take about one year. Additional right of way will be required near the bridge.

CITIZENS INFORMATIONAL WORKSHOP

NCDOT will host a Citizens Informational Workshop on March 25, 2003 from 4 pm to 7 pm at the Riverview Community Center, 11719 NC Highway 88 West, Creston. This will be an open house format; drop by anytime between 4 pm and 7 pm to see the alternatives being studied and to offer comments and suggestions.



NCDOT appreciates and encourages input and comments from local citizens. If you have comments or concerns or know of any issues that may help us in our planning, please attend the Citizens Informational Workshop or contact us (see back page).

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ASHE COUNTY
SR 1320 (ROARING FORK CREEK ROAD)
BRIDGE NO. 338
OVER ROARING FORK CREEK
Federal-Aid Project BRZ-1320 (1)
State Project 8.2712301

TIP PROJECT B-4013
MARCH 25, 2003

Citizens Informational Workshop

RIVERVIEW COMMUNITY CENTER
11719 NC HIGHWAY 88
CRESTON

Citizens Informational Workshop

ASHE COUNTY
SR 1320 (ROARING FORK CREEK ROAD)
BRIDGE NO. 338
OVER ROARING FORK CREEK
Federal-Aid Project BRZ-1320 (1)
State Project 8.2712301
TIP PROJECT B-4013
MARCH 25, 2003

PURPOSE

This Citizens Informational Workshop is being held in order to involve the public in the project planning process. We welcome all suggestions and comments. **Attached to the handout is a comment sheet for you to write down your opinions or concerns for our consideration.**

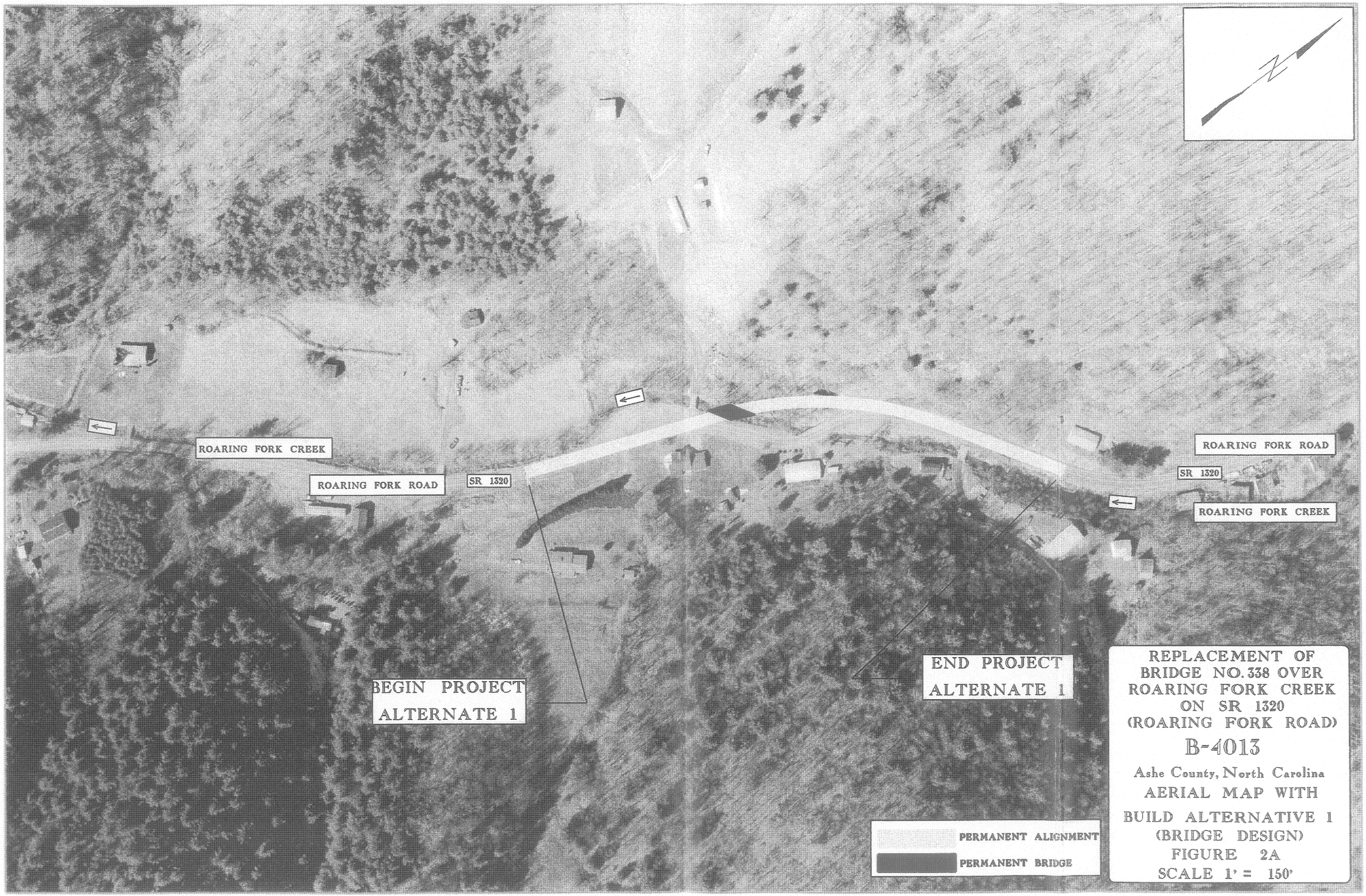
Even if you have no comments, you may provide us with your name and address so that we can include you on the project mailing list.

If you wish to comment further on this project, please contact:

Nate Benson, PE, Wetherill Engineering, Inc., 559 Jones Franklin Road, Suite 164, Raleigh, North Carolina, 27606, 919-851-8077, nbenson@wetherilleng.com

OR

Missy Dickens, PE, North Carolina Department of Transportation, Project Development and Environmental Analysis Branch, 1548 Mail Service Center, Raleigh, North Carolina, 27699-1548, Phone (919) 733-7844 ext.218, mdickens@dot.state.nc.us



REPLACEMENT OF
BRIDGE NO. 338 OVER
ROARING FORK CREEK
ON SR 1320
(ROARING FORK ROAD)

B-4013

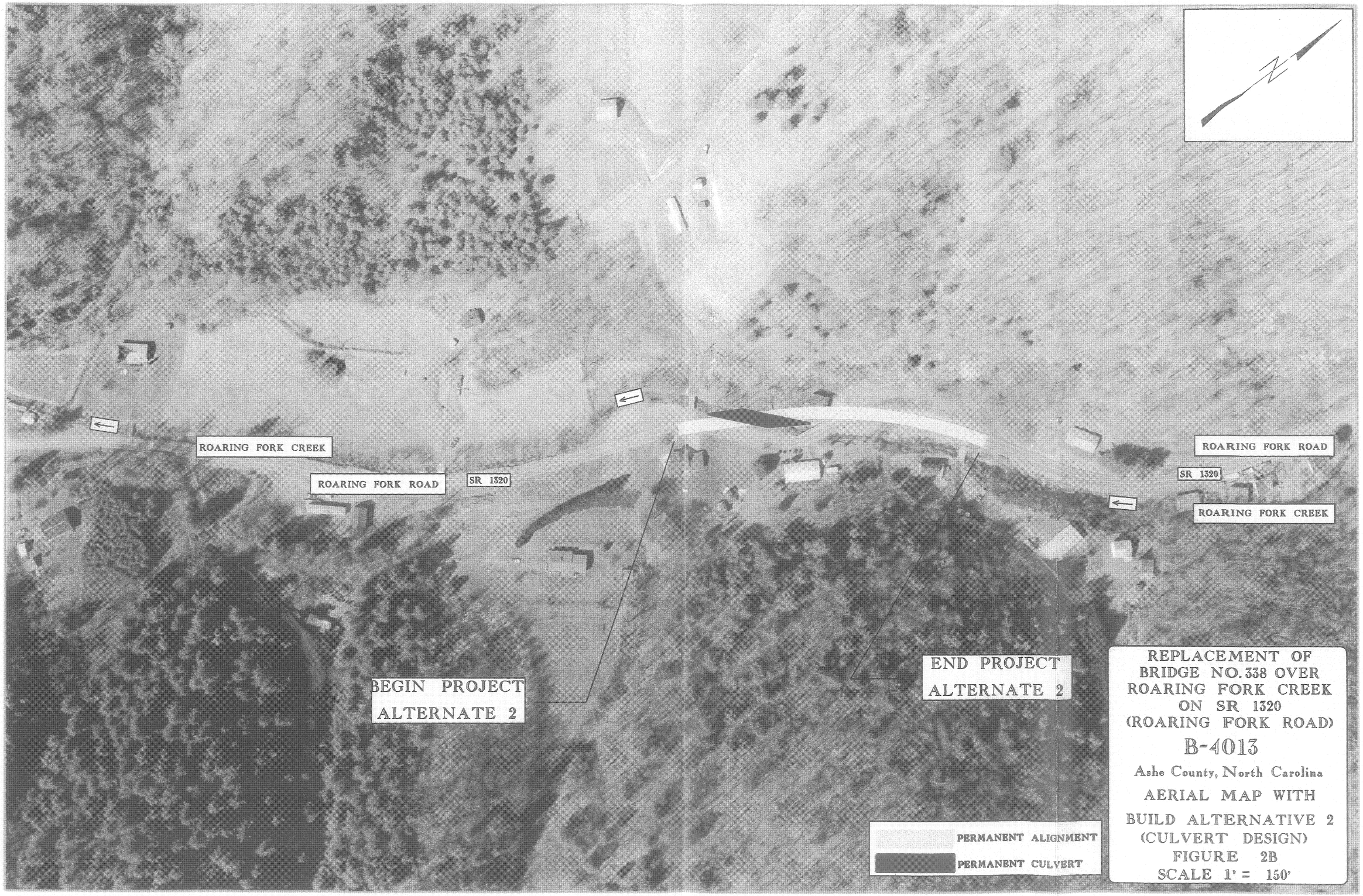
Ashe County, North Carolina

AERIAL MAP WITH

BUILD ALTERNATIVE 1
(BRIDGE DESIGN)

FIGURE 2A

SCALE 1" = 150'



REPLACEMENT OF
BRIDGE NO. 338 OVER
ROARING FORK CREEK
ON SR 1320
(ROARING FORK ROAD)

B-4013

Ashe County, North Carolina

AERIAL MAP WITH
BUILD ALTERNATIVE 2
(CULVERT DESIGN)
FIGURE 2B
SCALE 1' = 150'

DESCRIPTION OF ALTERNATIVES

- Two alternates for replacing the bridge are shown on Figures 2a and 2b. (It is anticipated that one of these alternates will be selected as the preferred alternate for replacement.)
- Alternate 1 includes a bridge and Alternate 2 includes a box culvert.
- The proposed alternates will begin approximately 400 feet south of the bridge and end approximately 250 feet north of the bridge.
- Additional right of way will be required to contain the improvements. A residence located near the end of the existing bridge may be affected.
- A major change in the elevation of the roadway is not anticipated.
- The proposed roadway and bridge cross sections are shown in Figure 3.
- Traffic will be maintained on-site (that is, the road will remain open during construction).
- The construction period is anticipated to be one year.
- Traffic on the bridge is estimated to be 400 vehicles per day in the year 2002 and is projected to increase to 700 vehicles per day in the year 2025. Approximately 3 percent of this traffic is trucks.

SUMMARY OF BENEFITS

- The proposed improvements will replace the structurally obsolete bridge with a wider bridge or a box culvert.
- The load restriction will be removed for truck traffic.

WHAT HAPPENS NEXT

An environmental document–a federal categorical exclusion–is being developed. Preparation of this document includes an analysis of impacts to the human and natural environment. Information gathered during this analysis, as well as cost estimates and public comment, will be used to select the preferred alternate. This document will be made available to the public later this year. Right of way acquisition is scheduled to begin in 2004 and construction in 2005.

Citizens Informational Workshop

COMMENT SHEET

ASHE COUNTY
SR 1320 (ROARING FORK CREEK ROAD)
BRIDGE NO. 338
OVER ROARING FORK CREEK
Federal-Aid Project BRZ-1320 (1)
State Project 8.2712301
TIP PROJECT B-4013
MARCH 25, 2003

NAME

ADDRESS:

COMMENTS, CONCERNS AND/OR QUESTIONS REGARDING PROJECT B-4013:

PLEASE FORWARD YOUR COMMENTS TO:

Nate Benson, PE, Wetherill Engineering, Inc., 559 Jones Franklin Road, Suite 164, Raleigh, North Carolina, 27606

OR

Missy Dickens, PE, North Carolina Department of Transportation, Project Development and Environmental Analysis Branch, 1548 Mail Service Center, Raleigh, North Carolina, 27699-1548