



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

May 17, 2004

U. S. Army Corps of Engineers
Regulatory Field Office
151 Patton Avenue, Room 208
Asheville, NC 28801-5006

ATTN: Mr. Steve Lund
NCDOT Coordinator

Dear Sir,

SUBJECT: **Nationwide Permit Applications 23 and 33** for the proposed replacement of Bridge No. 328 on SR 1001 (Bailey's Branch Road/Meadows Town Road) over the French Broad River, Madison County in Division 13. Federal Project No. BRZ-1001(14), State Project No. 8.2860401, T.I.P. No. B-2583.

NCDOT plans to replace Bridge No. 328 with two separate bridges. The first bridge will cross the French Broad River (DWQ Index # 6-(67.5), Class "C") from the Town of Marshall west of the existing structure. The second bridge (school bridge) will extend from SR 1001 to Blannahassett Island. The first bridge will be 647-feet long and 34.5-feet wide. The second bridge will be 187-feet long and 39-feet wide. Improvements to the approach roadways will be required for approximately 230-feet to the north and 328-feet to the south of the existing structure.

The existing bridge will continue to maintain traffic during the construction period and will be removed when construction is complete.

Impacts to Waters of the United States

There will be no permanent surface water impacts due to the replacement of Bridge No. 328. Temporary impacts are anticipated and are described in the Temporary Causeways/Workpads section below. There will be no impacts to jurisdictional wetlands.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1548 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-733-3141
FAX: 919-733-9794
WEBSITE: WWW.DOH.DOT.STATE.NC.US

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

Bridge Demolition

Bridge No. 328 in Madison County was built in 1957. The existing bridge is a 616-foot long, 14-span structure consisting of a reinforced concrete deck on steel I-beams. Three of the spans form a T-section that connects to Blannahassett Island. The substructure consists of reinforced concrete abutments and piers. The height of the structure above the streambed is approximately 30-feet. Since the deck and substructure are composed of concrete, there is potential for components of the bridge to be dropped into Waters of the United States during bridge removal. All measures will be taken to avoid any temporary fill from entering Waters of the U.S.

This project is classified as a Case 3 situation. No special restrictions are required for in-water work other than those outlined in the North Carolina Department of Transportation guidelines, "Best Management Practices for Protection of Surface Waters". General Best Management Practices will be followed for this project as well as those specific to removing the piles.

Bridge Construction

Bridge No. 328 will be replaced with two separate structures. The 647-foot long bridge will consist of an 11-span, prestressed girder superstructure with drilled pier bents. The substructure will be pile end bents. The 187-foot long bridge will be a three span structure consisting of a prestressed girder superstructure with drilled pier bents, one pile endbent, and one drilled pier end bent. Construction of these bridges will require temporary causeways.

Temporary Causeways/Workpads

Temporary dewatering is necessary for the construction of five temporary causeways needed to allow construction equipment access to the project site. There will be 0.523 acres of temporary impacts in the French Broad River from the construction of temporary causeways for the replacement of existing Bridge No. 328. Temporary causeways of Class II Rip Rap topped with 0.3-meters of Class B Rip Rap will be required to provide access to the site for construction equipment. The temporary dewatering will occur at the elevations and locations as shown in the permit drawings.

No permanent fill will result from the subject activity. The materials used as temporary fill in the construction of the workpads will be removed. Temporary fill areas will be restored to their original contours. Filter fabric will be placed under the causeway material to limit river bottom disturbance and facilitate causeway removal. Please see sheet 12 of 13 for the construction sequence of temporary causeways.

Federally-Protected Species

Plants and animals with federal classifications of Endangered, Threatened, Proposed Endangered, and Proposed Threatened are protected under Endangered Species Act §§7 and 9. As of January 29, 2003, the US Fish and Wildlife Service (USFWS) lists 3 federally protected species for Madison County (Table 1).

Biological conclusions of “No Effect” were reached for all listed in the CE Document dated June 26, 2002. The status of the oyster mussel was subsequently updated in February 2004, retaining a Biological Conclusion of “No Effect”. Previous Biological Conclusions for the spotfin chub and gray bat remain valid.

Table 1. Federally Protected Species for Madison County

| SCIENTIFIC NAME | COMMON NAME | STATUS | BIOLOGICAL CONCLUSION |
|--------------------------------|---------------|--------|-----------------------|
| <i>Hybopsis monacha</i> | Spotfin chub | T | No Effect |
| <i>Myotis grisescens</i> | Gray bat | E | No Effect |
| <i>Epioblasma capsaeformis</i> | Oyster mussel | E | No Effect |

KEY:

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

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

Regulatory Approvals

Section 404 Permit: It is anticipated that the temporary dewatering of French Broad River will be authorized under Section 404 Nationwide Permit 33 (Temporary Construction Access and Dewatering). We are, therefore, requesting the issuance of a Nationwide Permit 33 authorizing the temporary dewatering of French Broad River. All other aspects of this project are being processed by the Federal Highway Administration as a “Categorical Exclusion” in accordance with 23 CFR § 771.115(b). The NCDOT requests that these activities be authorized by a Nationwide Permit 23 (FR number 10, pages 2020-2095; January 15, 2002).

Section 401 Permit: We anticipate 401 General Certifications numbers 3403 and 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 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 request NCWRC review. NCDOT requests that NCWRC forward their comments to the Corps of Engineers.

TVA: This project is located within the jurisdiction of the Tennessee Valley Authority (TVA). Therefore, an approval under Section 26a of the TVA Act will be required.

If you have any questions or need additional information, please contact Mr. Chris Manley at (919) 715-1487 or cdmanley@dot.state.nc.us.

Sincerely,



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

cc: Mr. John Hennessy, Division of Water Quality (7 copies)
Ms. Marella Buncick, USFWS
Ms. Marla Chambers, NCWRC
Mr. Harold Draper, TVA
Mr. Jay Bennett, P.E., Roadway Design
Mr. Omar Sultan, Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Mr. David Chang, P.E., Hydraulics
Mr. Greg Perfetti, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. John F. Sullivan, III, FHWA
Mr. J. J. Swain, P.E., Division Engineer
Mr. Roger Bryan, DEO
Mr. David Franklin, USACE, Wilmington (Cover Letter only)

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

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

I. Processing

1. Check all of the approval(s) requested for this project:

Section 404 Permit Riparian or Watershed Buffer Rules
 Section 10 Permit Isolated Wetland Permit from DWQ
 401 Water Quality Certification

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

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

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

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

II. Applicant Information

1. Owner/Applicant Information

Name: Gregory J.Thorpe

Mailing Address: NCDOT

1548 Mail Service Center

Raleigh, NC 27699

Telephone Number: 919-715-1500 Fax Number: 919-715-1501

E-mail Address: _____

2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)

Name: N/A

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. 328 replacement on SR 1001 over the French Broad River.
2. T.I.P. Project Number or State Project Number (NCDOT Only): B-2583
3. Property Identification Number (Tax PIN): N/A
4. Location
County: Madison Nearest Town: Marshall
Subdivision name (include phase/lot number): N/A
Directions to site (include road numbers, landmarks, etc.): Located on SR 1001 (Bailey's Branch Road/Meadows Town Road) over the French Broad River.

5. Site coordinates, if available (UTM or Lat/Long): N35 47.797', W82 41.084'
(Note – If project is linear, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)
6. Property size (acres): N/A
7. Nearest body of water (stream/river/sound/ocean/lake): French Broad River
8. River Basin: French Broad
(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: Rural minor collector, with light commercial, industrial, residential, and government land present.

10. Describe the overall project in detail, including the type of equipment to be used: Replacing fourteen-span bridge with 2 separate multi-span bridges using heavy mechanical highway/bridge construction equipment.

11. Explain the purpose of the proposed work: Bridge No. 328 carries a sufficiency rating of 24.3 out of a possible 100. This structure is considered functionally obsolete and structurally deficient. Replacement of the bridge will result in safer traffic operations.

IV. Prior Project History

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

N/A

V. Future Project Plans

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

N/A

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

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

evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts: There will be only temporary surface water impacts as a result of fill for the temporary causeways. _____

2. Individually list wetland impacts below:

| Wetland Impact Site Number (indicate on map) | Type of Impact* | Area of Impact (acres) | Located within 100-year Floodplain** (yes/no) | Distance to Nearest Stream (linear feet) | Type of Wetland*** |
|--|-----------------|------------------------|---|--|--------------------|
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* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

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

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

List the total acreage (estimated) of all existing wetlands on the property: N/A

Total area of wetland impact proposed: _____

3. Individually list all intermittent and perennial stream impacts below:

| Stream Impact Site Number (indicate on map) | Type of Impact* | Length of Impact (linear feet) | Stream Name** | Average Width of Stream Before Impact | Perennial or Intermittent? (please specify) |
|---|-----------------|--------------------------------|---------------|---------------------------------------|---|
| | | | | | |
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* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: culverts and associated rip-rap, dams (separately list impacts due to both structure and flooding), relocation (include linear feet before and after, and net loss/gain), stabilization activities (cement wall, rip-rap, crib wall, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included.

** Stream names can be found on USGS topographic maps. If a stream has no name, list as UT (unnamed tributary) to the nearest downstream named stream into which it flows. USGS maps are available through the USGS at 1-800-358-9616, or online at www.usgs.gov. Several internet sites also allow direct download and printing of USGS maps (e.g., www.topozone.com, www.mapquest.com, etc.).

Cumulative impacts (linear distance in feet) to all streams on site: N/A

4. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.) below:

| Open Water Impact Site Number (indicate on map) | Type of Impact* | Area of Impact (acres) | Name of Waterbody (if applicable) | Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.) |
|---|-----------------|------------------------|-----------------------------------|--|
| #1 Causeway 1 & 2 | Temporary Fill | 0.64 | French Broad River | river |
| #1 Causeway 3 & 4 | Temporary Fill | 0.50 | French Broad River | river |
| #1 Causeway 5 | Temporary Fill | 0.15 | French Broad River | river |
| | | | | |
| | | | | |

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

5. Pond Creation

If construction of a pond is proposed, associated wetland and stream impacts should be included above in the wetland and stream impact sections. Also, the proposed pond should be described here and illustrated on any maps included with this application.

Pond to be created in (check all that apply): uplands stream wetlands

Describe the method of construction (e.g., dam/embankment, excavation, installation of draw-down valve or spillway, etc.): N/A

Proposed use or purpose of pond (e.g., livestock watering, irrigation, aesthetic, trout pond, local stormwater requirement, etc.): _____

Size of watershed draining to pond: _____ Expected pond surface area: _____

VII. Impact Justification (Avoidance and Minimization)

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts.

The selected design was chosen because it minimizes impacts to the Marshall Commercial Historic District and maintains access to the school and the water treatment plant on Blannahassett Island throughout construction. Temp. causeway construction is phased to reduce total amount of fill in the river at any one time.

VIII. Mitigation

DWQ - In accordance with 15A NCAC 2H .0500, mitigation may be required by the NC Division of Water Quality for projects involving greater than or equal to one acre of impacts to freshwater wetlands or greater than or equal to 150 linear feet of total impacts to perennial streams.

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on March 9, 2000, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

If mitigation is required for this project, a copy of the mitigation plan must be attached in order for USACE or DWQ to consider the application complete for processing. Any application lacking a required mitigation plan or NCWRP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ's Draft Technical Guide for Stream Work in North Carolina, available at <http://h2o.enr.state.nc.us/ncwetlands/strmguide.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.

N/A

2. Mitigation may also be made by payment into the North Carolina Wetlands Restoration Program (NCWRP). Please note it is the applicant's responsibility to contact the NCWRP at (919) 733-5208 to determine availability and to request written approval of mitigation prior to submittal of a PCN. For additional information regarding the application process for the NCWRP, check the NCWRP website at <http://h2o.enr.state.nc.us/wrp/index.htm>. If use of the NCWRP is proposed, please check the appropriate box on page three and provide the following information:

Amount of stream mitigation requested (linear feet): _____

Amount of buffer mitigation requested (square feet): _____
Amount of Riparian wetland mitigation requested (acres): _____
Amount of Non-riparian wetland mitigation requested (acres): _____
Amount of Coastal wetland mitigation requested (acres): _____

IX. Environmental Documentation (required by DWQ)

Does the project involve an expenditure of public (federal/state) funds or the use of public (federal/state) land?

Yes No

If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)?
Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation.

Yes No

If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter.

Yes No

X. Proposed Impacts on Riparian and Watershed Buffers (required by DWQ)

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to required state and local buffers associated with the project. The applicant must also provide justification for these impacts in Section VII above. All proposed impacts must be listed herein, and must be clearly identifiable on the accompanying site plan. All buffers must be shown on a map, whether or not impacts are proposed to the buffers. Correspondence from the DWQ Regional Office may be included as appropriate. Photographs may also be included at the applicant's discretion.

Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify _____)?

Yes No If you answered "yes", provide the following information:

Identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

| Zone* | Impact (square feet) | Multiplier | Required Mitigation |
|-------|-------------------------|------------|------------------------|
| 1 | | 3 | |
| 2 | | 1.5 | |
| Total | | | |

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

If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Conservation Easement, Riparian Buffer Restoration / Enhancement, Preservation or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0260.

XI. Stormwater (required by DWQ)

Describe impervious acreage (both existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property.

N/A

XII. Sewage Disposal (required by DWQ)

Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.

N/A

XIII. Violations (required by DWQ)

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?

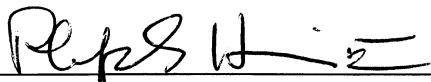
Yes No

Is this an after-the-fact permit application?

Yes No

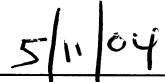
XIV. Other Circumstances (Optional):

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

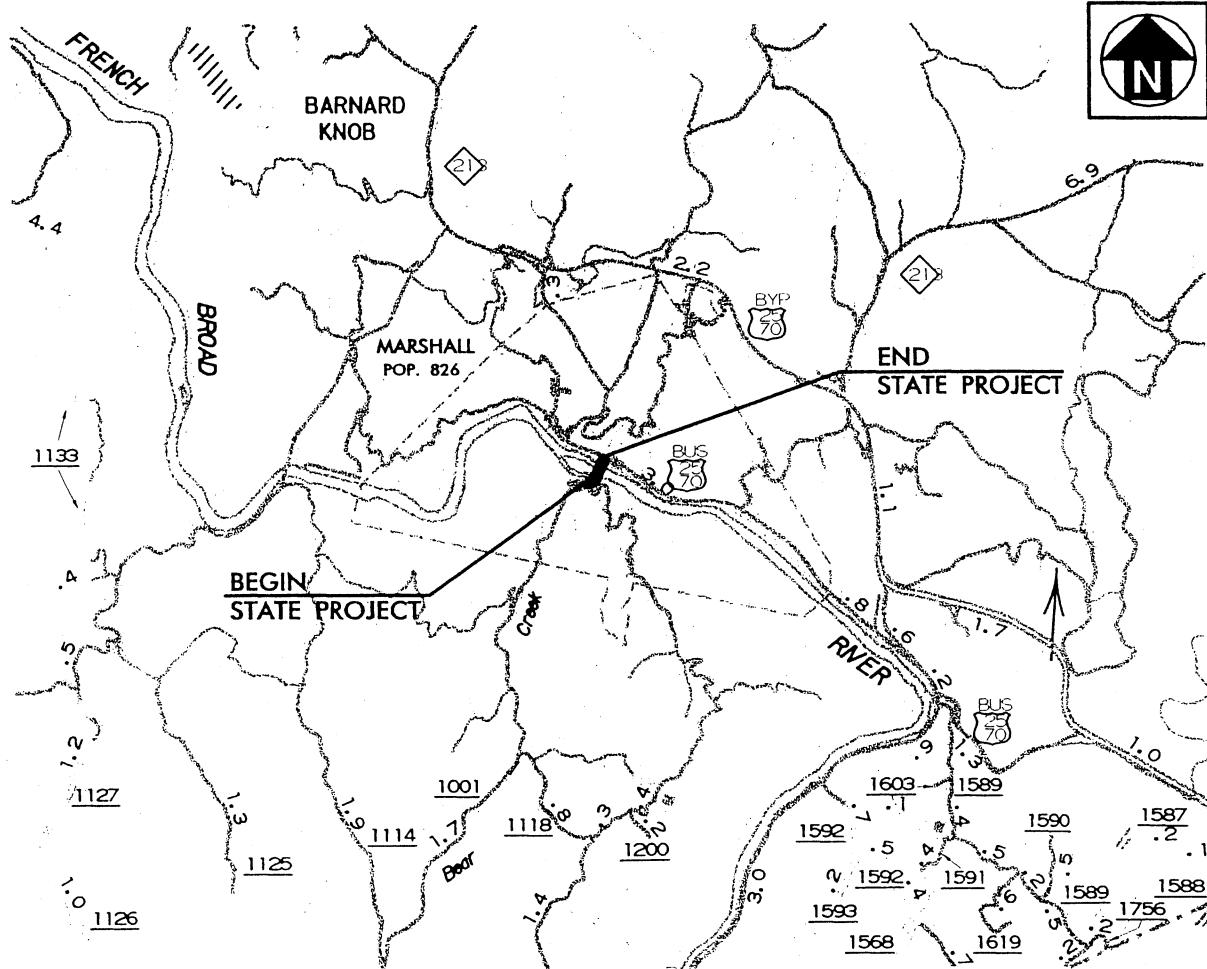
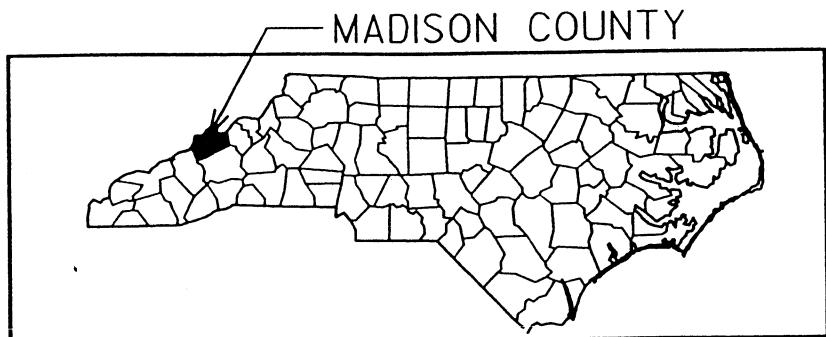


Applicant/Agent's Signature

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



Date



VICINITY MAPS

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
MADISON COUNTY

PROJECT: 8.2860401 (B-2583)
BRIDGE NO. 328 OVER
FRENCH BROAD RIVER
ON SR 1001

LEGEND

| | |
|-------|---|
| —WLB— | WETLAND BOUNDARY |
| | WETLAND |
| | DENOTES FILL IN WETLAND |
| | DENOTES FILL IN SURFACE WATER |
| | DENOTES FILL IN SURFACE WATER (POND) |
| | DENOTES TEMPORARY FILL IN WETLAND |
| | DENOTES EXCAVATION IN WETLAND |
| | DENOTES TEMPORARY FILL IN SURFACE WATER |
| | DENOTES MECHANIZED CLEARING |
| ← → | FLOW DIRECTION |
| —TB— | TOP OF BANK |
| —WE— | EDGE OF WATER |
| —C— | PROP. LIMIT OF CUT |
| —F— | PROP. LIMIT OF FILL |
| ▲ | PROP. RIGHT OF WAY |
| —NG— | NATURAL GROUND |
| —PL— | PROPERTY LINE |
| —TDE— | TEMP. DRAINAGE EASEMENT |
| —PDE— | PERMANENT DRAINAGE EASEMENT |
| —EAB— | EXIST. ENDANGERED ANIMAL BOUNDARY |
| —EPB— | EXIST. ENDANGERED PLANT BOUNDARY |
| | WATER SURFACE |

| | |
|---|--|
| | LIVE STAKES |
| | BOULDER |
| — — — | COIR FIBER ROLLS |
| | ADJACENT PROPERTY OWNER OR PARCEL NUMBER |
| | PROPOSED BRIDGE |
| | PROPOSED BOX CULVERT |
| | PROPOSED PIPE CULVERT |
| (DASHED LINES DENOTE EXISTING STRUCTURES) | |
| | SINGLE TREE |
| | WOODS LINE |
| | DRAINAGE INLET |
| | ROOTWAD |
| | VANE |
| | RIP RAP |
| | RIP RAP ENERGY DISSIPATOR BASIN |

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
MADISON COUNTY

PROJECT: 8.2860401 (B-2583)
BRIDGE NO. 328 OVER
FRENCH BROAD RIVER
ON SR 1001

WETLAND PERMIT IMPACT SUMMARY

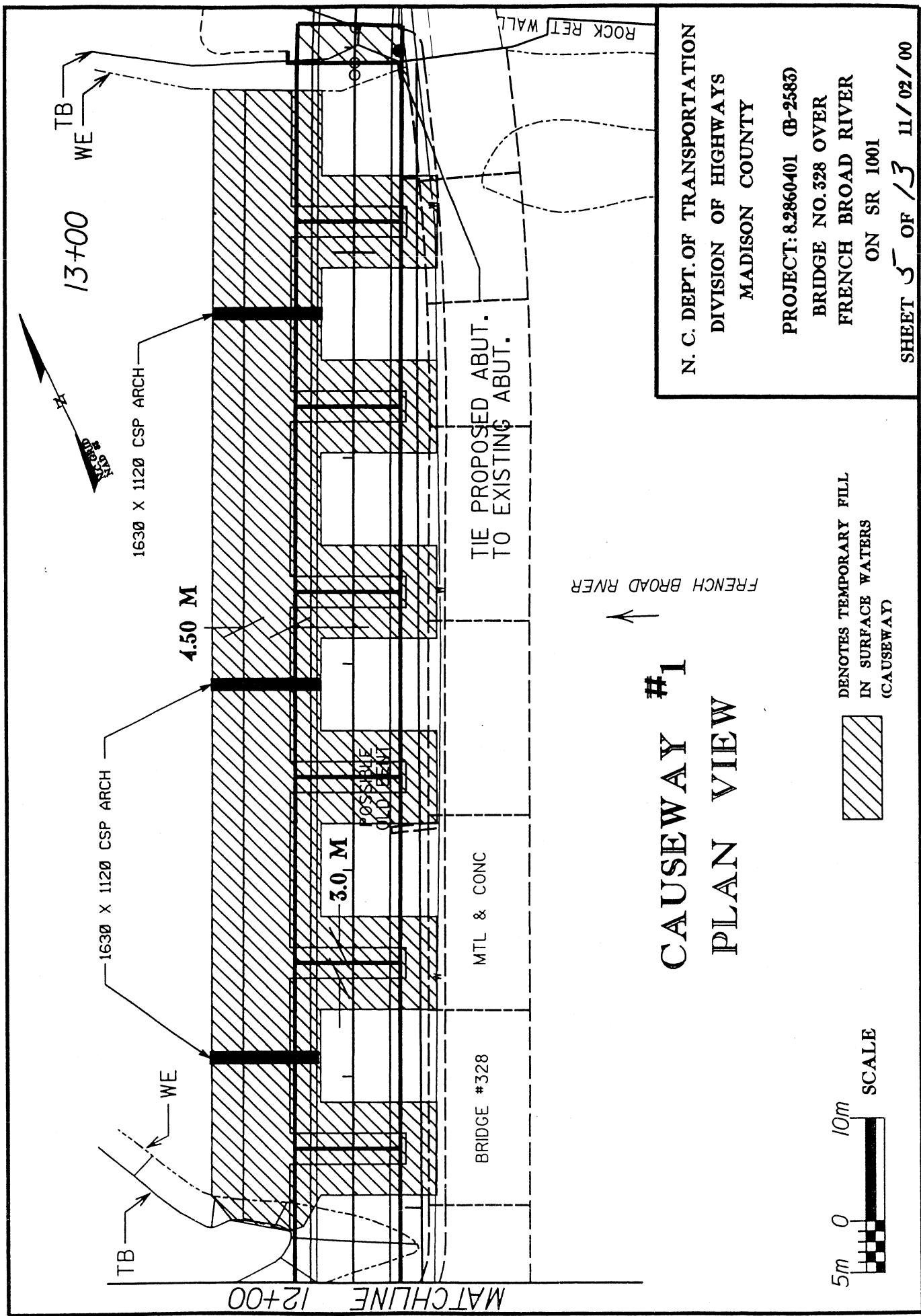
NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

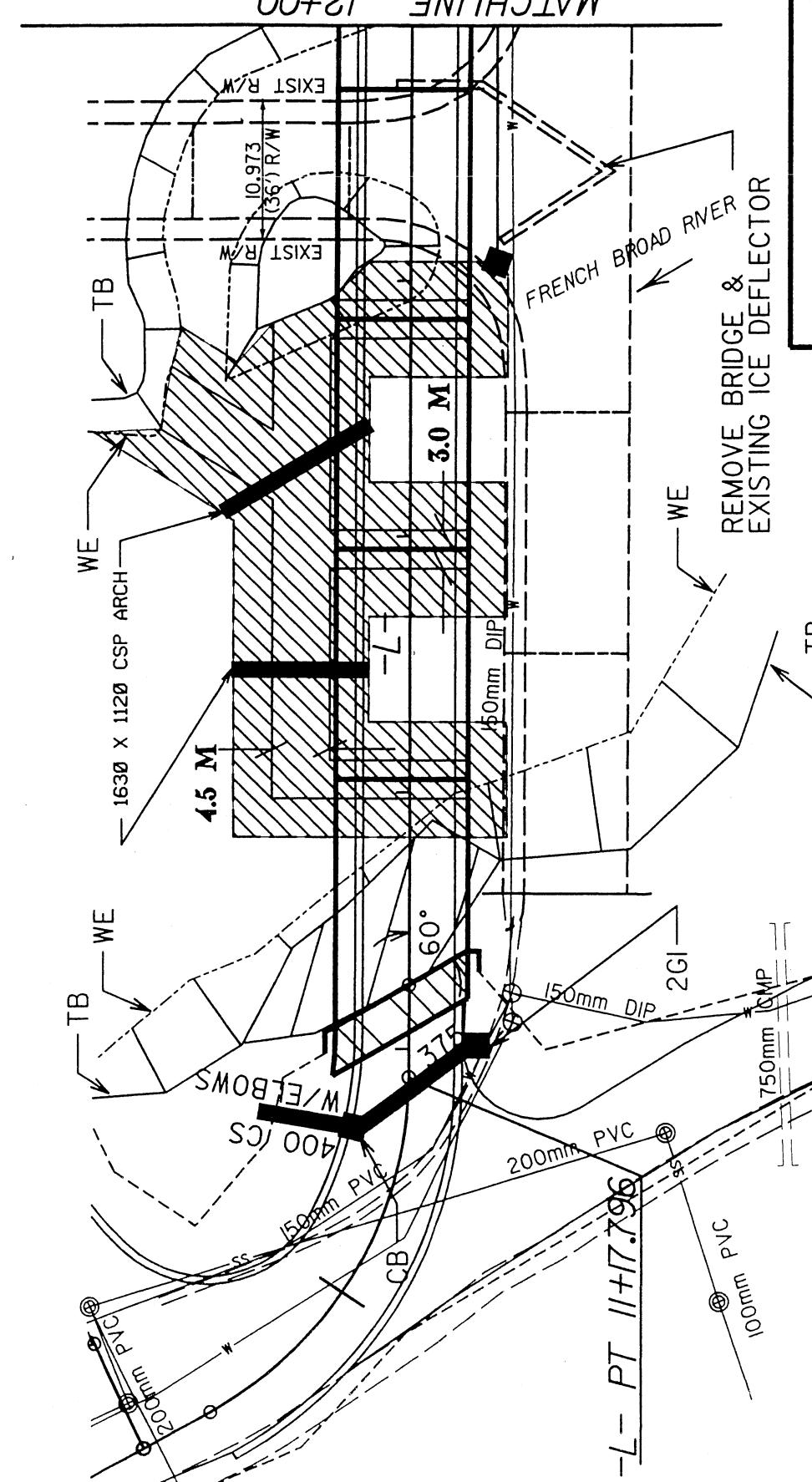
WAKE COUNTY
PROJECT 8.2406901 B3529

SHEET

Form Revised 3/22/01

B-25583





CAUSEWAY #2 PLAN VIEW

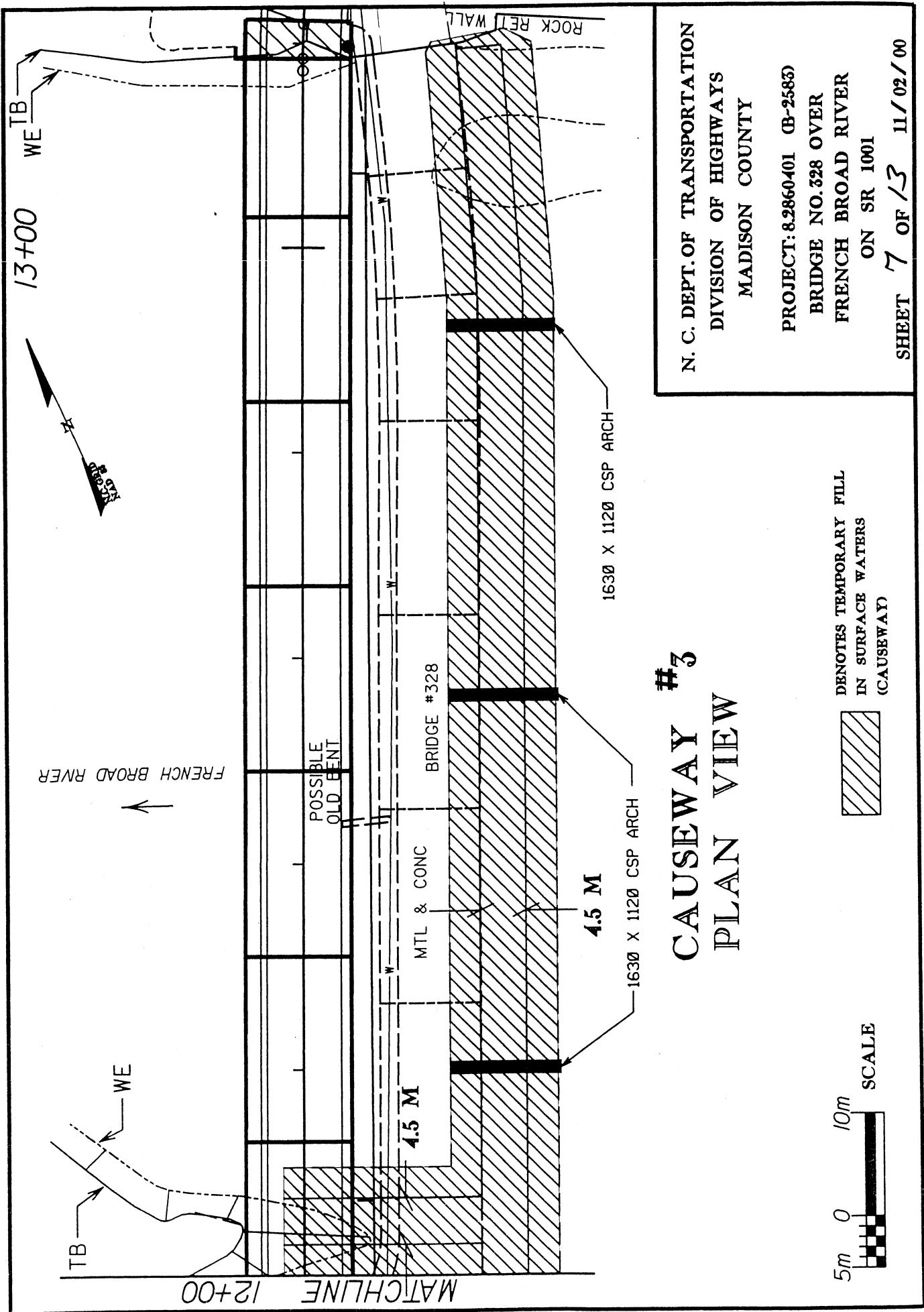
DENOTES TEMPORARY FILL
IN SURFACE WATERS
(CAUSEWAY)

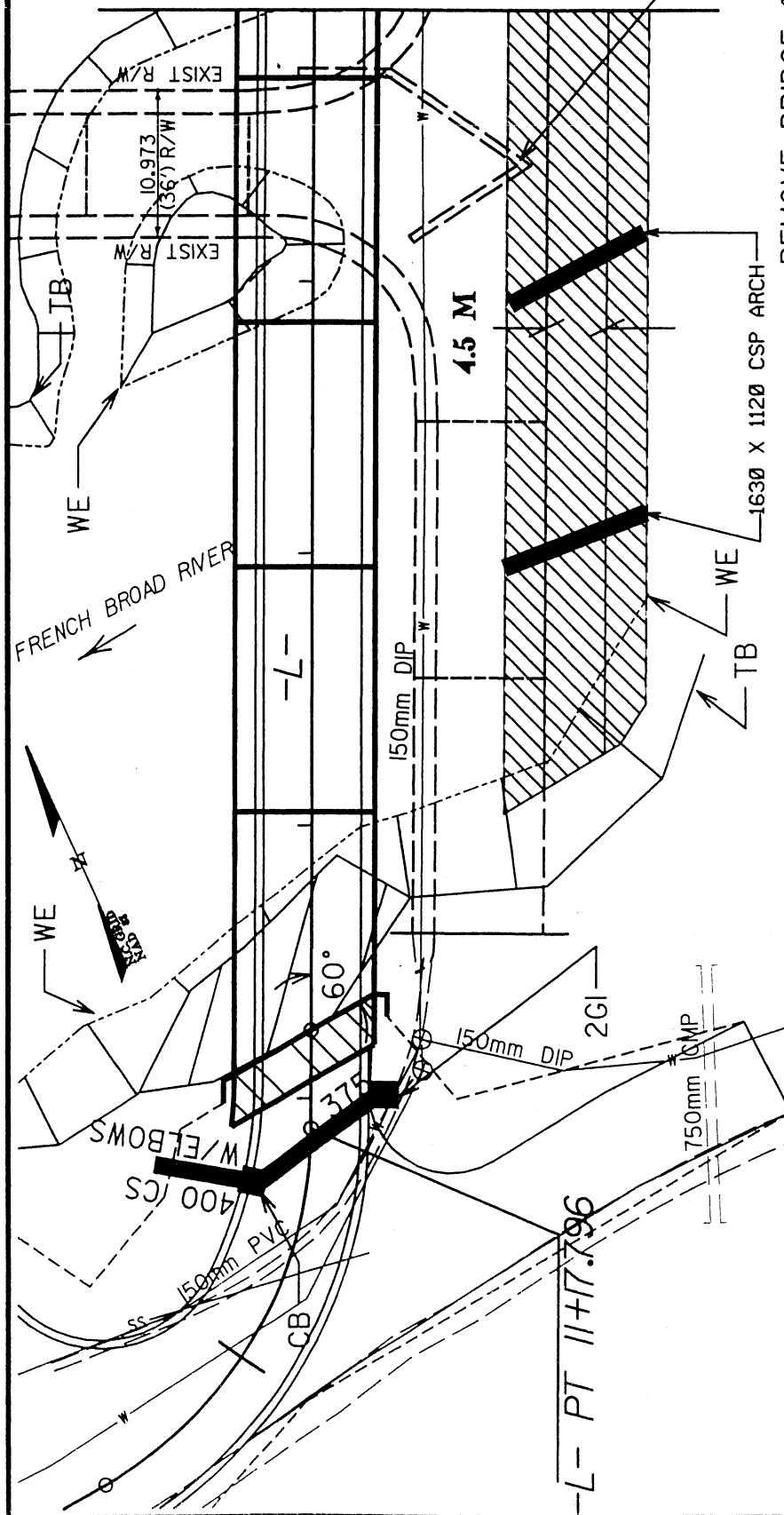


N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
MADISON COUNTY

PROJECT: 8.2860401 (B-2583)
BRIDGE NO. 328 OVER
FRENCH BROAD RIVER

ON SR 1001
SHEET 4 OF 7 11/02/00





CAUSEWAY #4
PLAN VIEW

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
MADISON COUNTY

PROJECT: 82860401 QB-2583
BRIDGE NO. 328 OVER
FRENCH BROAD RIVER
ON SR 1001

SHEET 8 OF 13 11/02/00

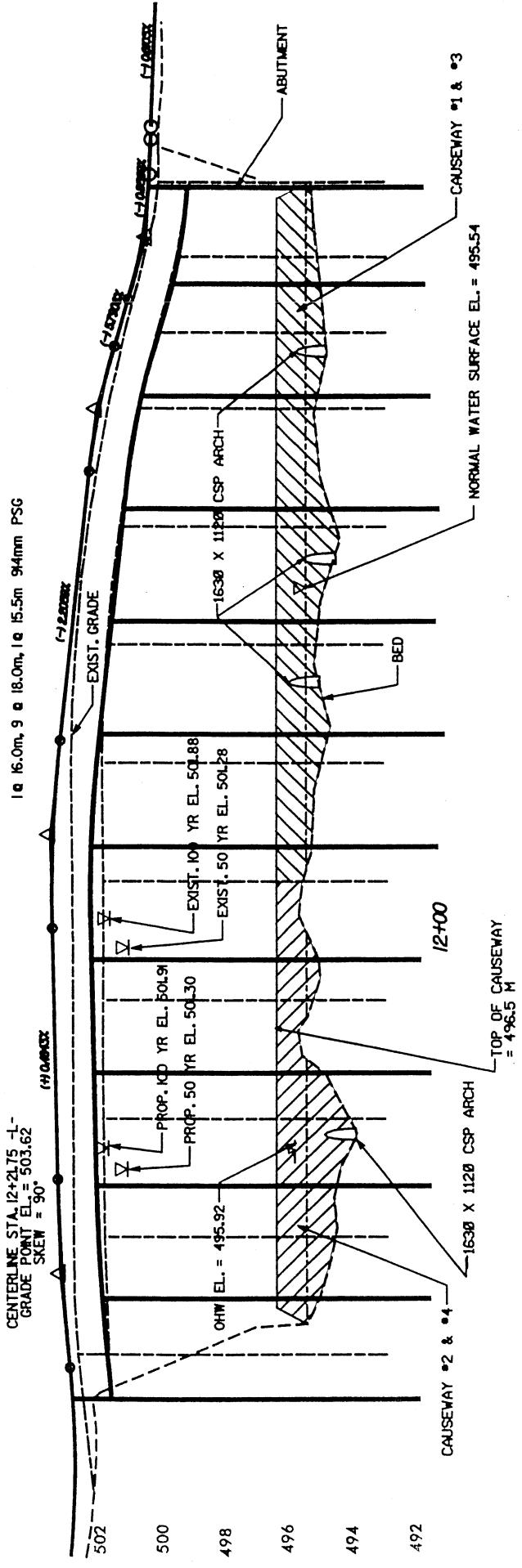
DENOTES TEMPORARY FILL
IN SURFACE WATERS
(CAUSEWAY)

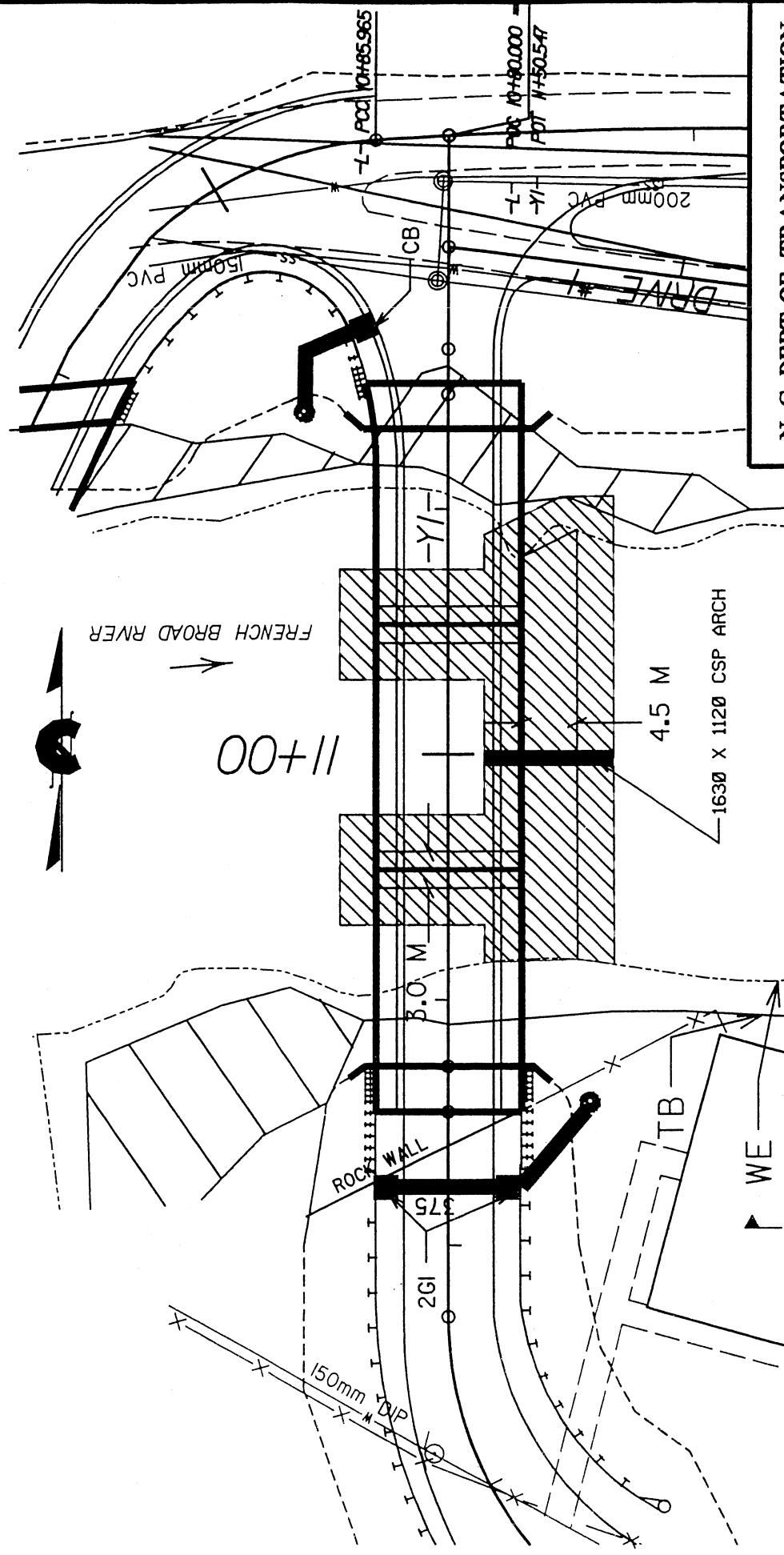


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N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

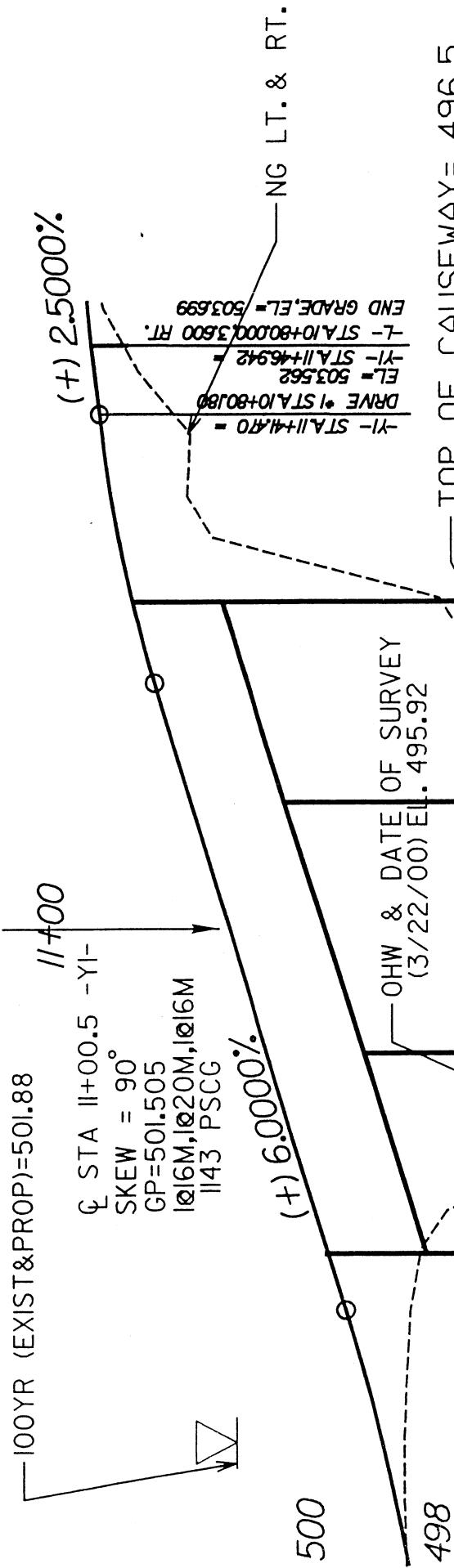
MADISON COUNTY
PROJECT: 82860401 (B-2583)
BRIDGE NO. 328 OVER
FRENCH BROAD RIVER

SHEET 10 OF 3 11/02/00

CAUSEWAY #5 PLAN VIEW

 DENOTES TEMPORARY FILL
SURFACE WATERS
CAUSEWAY

A scale bar with two markings. The top marking is labeled '10m' and the bottom marking is labeled '5m'. The scale bar is divided into smaller, unlabeled segments.



494
492



DENOTES TEMPORARY FILL IN
SURFACE WATERS

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
MADISON COUNTY
PROJECT: 82860401 B-2583
FRENCH BROAD RIVER
ON SR 1001
SHEET // OF /3 11 / 02 / 00

CONSTRUCTION SEQUENCE

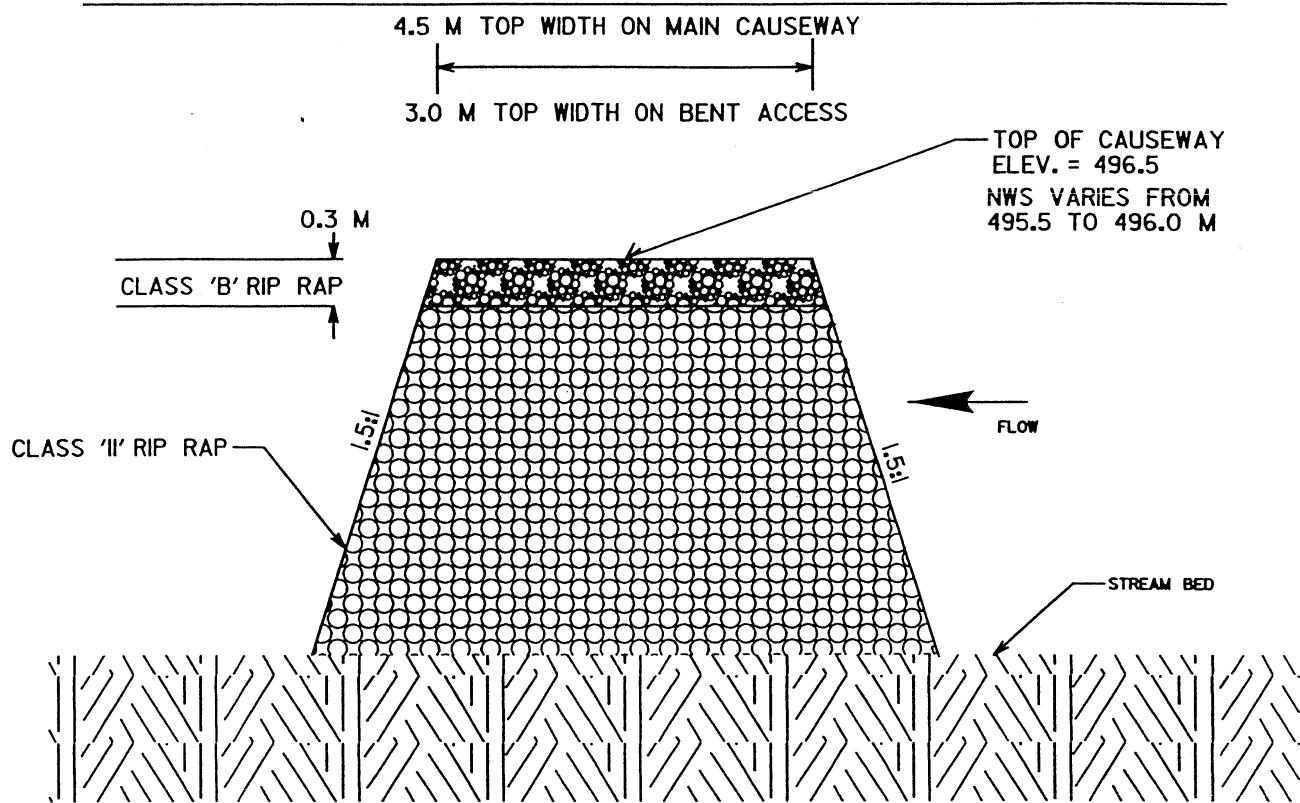
- 1) CONSTRUCT CAUSEWAY $\#_1$
- 2) CONSTRUCT PROPOSED -L- BRIDGE FROM ISLAND TO THE TOWN (NORTH SIDE OF THE RIVER.
- 3) REMOVE CAUSEWAY $\#_1$
- 4) CONSTRUCT CAUSEWAY $\#_2$
- 5) CONSTRUCT -L- BRIDGE FROM ISLAND TO SOUTH SIDE OF RIVER.
- 6) REMOVE CAUSEWAY $\#_2$
- 7) CONSTRUCT CAUSEWAY $\#_3$ FOR REMOVAL OF AS MUCH AS POSSIBLE OF THE EXISTING BRIDGE.
- 8) REMOVE CAUSEWAY $\#_3$
- 9) CONSTRUCT CAUSEWAY $\#_4$ FOR REMOVAL OF THE REMAINDER OF THE EXISTING -L- BRIDGE.
- 10) CONSTRUCTION AND REMOVAL OF CAUSEWAY $\#_5$ SHOULD BE ACCOMPLISHED BEFORE OR AFTER THE CONSTRUCTION OF ALL OTHER CAUSEWAYS.

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
MADISON COUNTY

PROJECT: 82860401 (B-2583)
BRIDGE NO. 328 OVER
FRENCH BROAD RIVER
ON SR 1001

SHEET /2 OF /3 11/02/00

DETAIL OF CAUSEWAY



(NOT TO SCALE)

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
MADISON COUNTY

PROJECT: 8.2860401 (B-2583)
BRIDGE NO. 328 OVER
FRENCH BROAD RIVER
ON SR 1001

SHEET 13 OF 13

11 / 02 / 00

Madison County
Bridge No. 328 on SR 1001
Over French Broad River
Federal Aid Project No. BRZ-1001(14)
State Project No. 8.2860401
T.I.P. No. B-2583

DRAFT CATEGORICAL EXCLUSION

AND

DRAFT SECTION 4(F) EVALUATION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

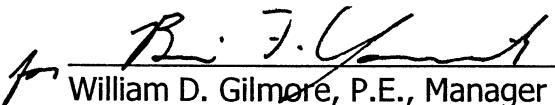
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

APPROVED:

6.26.02

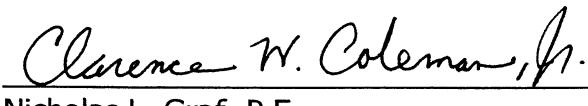
DATE


William D. Gilmore, P.E., Manager

Project Development and Environmental Analysis Branch, NCDOT

6/26/02

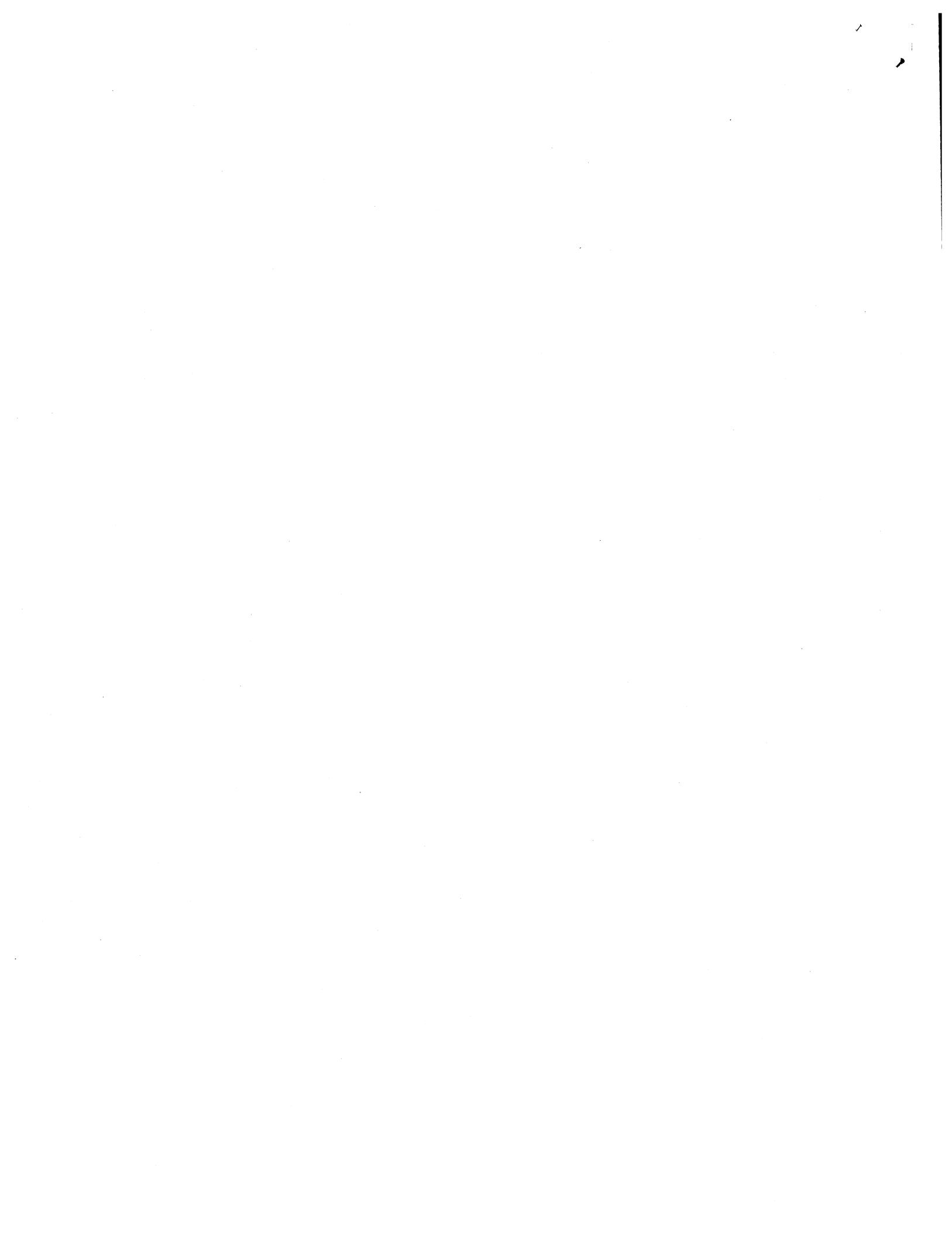
DATE


Clarence W. Coleman, Jr.

Nicholas L. Graf, P.E.

Division Administrator, FHWA

Comments must be received by Ms. L. Gail Grimes, P.E., Assistant Branch Manager of Project Development and Environmental Analysis Branch, NCDOT, 1548 Mail Service Center, Raleigh, NC 27699-1548 by: SEP 13 2002



Madison County
Bridge No. 328 on SR 1001
Over French Broad River
Federal Aid Project No. BRZ-1001(14)
State Project No. 8.2860401
T.I.P. No. B-2583

DRAFT CATEGORICAL EXCLUSION

AND

DRAFT SECTION 4(F) EVALUATION

June 2002

Documentation Prepared by:
Barbara H. Mulkey Engineering, Inc.

Pamela R. Williams

Pamela R. Williams
Project Manager

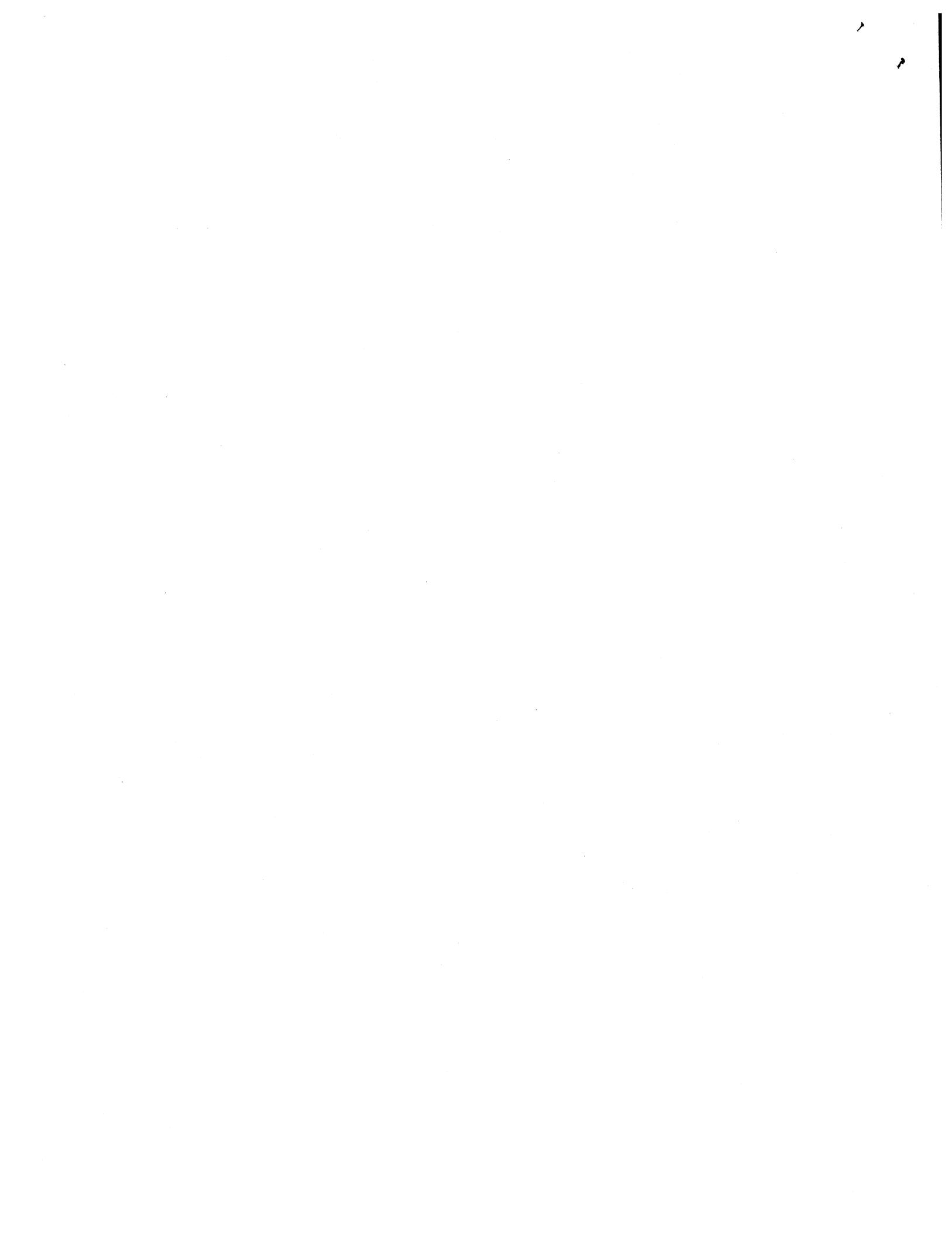
W. S. Hood
W. S. Hood, P.E.
Principal- In- Charge



6/18/02
Date

For the North Carolina Department of Transportation

Stacy B. Harris
Stacy B. Harris, PE
Project Manager
Consultant Engineering Unit



PROJECT COMMITMENTS

Madison County
Bridge No. 328 on SR 1001
Over French Broad River
Federal Aid Project No. BRZ-1001(14)
State Project No. 8.2860401
T.I.P. No. B-2583

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

Hydraulics Unit, Design Services

This project will be reviewed under Section 26a of the Tennessee Valley Authority (TVA) Act. The preliminary plans, hydraulic analysis with the effects of the replacement structure on the 100-year flood elevation, and notice of compliance with the Historic Preservation Act of 1966 will be forwarded to TVA for approval.

Structure Design Unit/Design Services

The new bridges will be designed to have "Texas Classic" bridge railings with square openings.

The long bridge on Bailey Branch Road (SR 1001) over the French Broad River will contain an electrical conduit such that the Town of Marshall can add lighting to the bridge in the future.

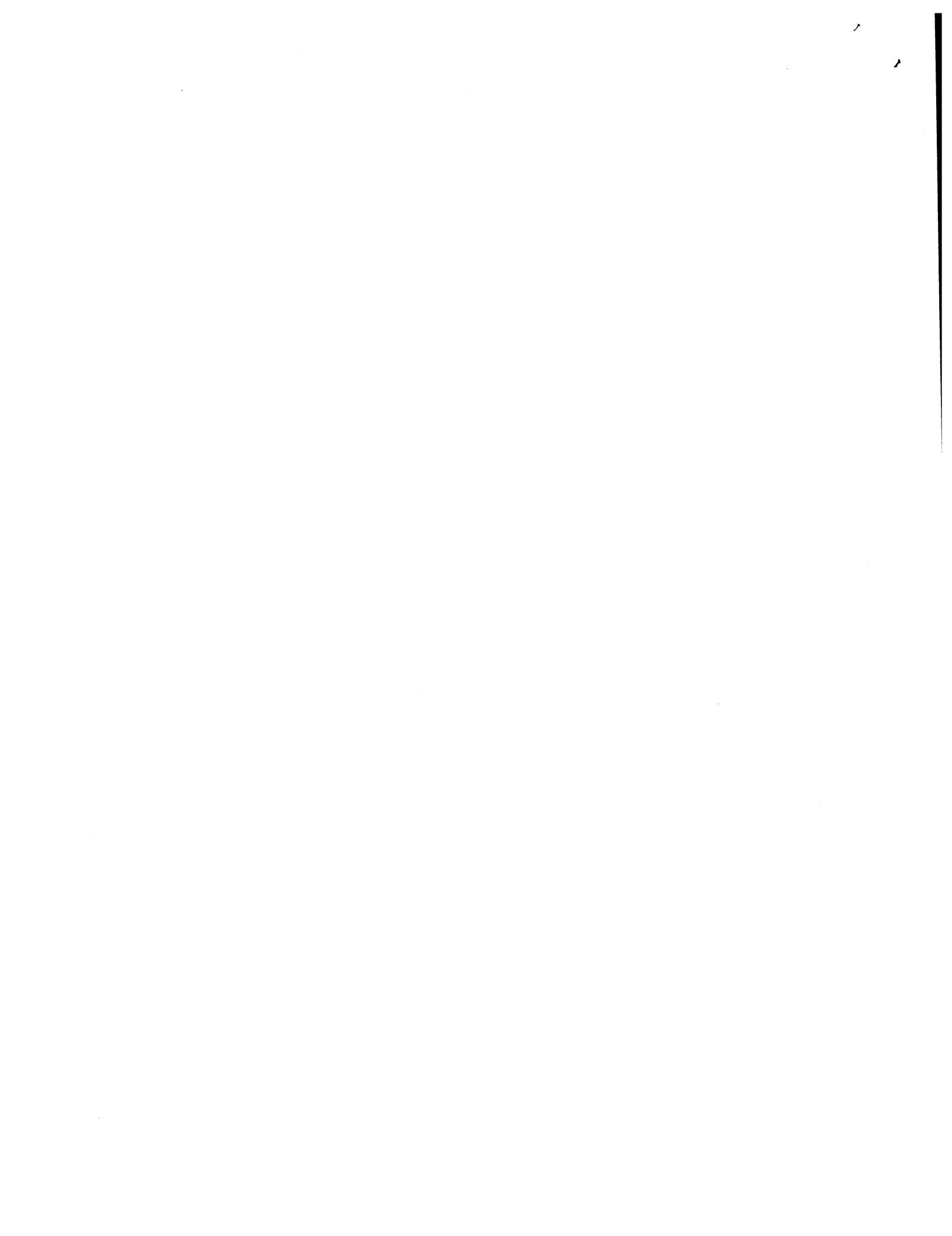
A fire line will be attached to the long bridge on Bailey Branch Road (SR 1001) on the upstream side of the proposed bridge.

Project Development & Environmental Analysis (PDEA) / Design Services / Structure Design

TVA will be sent a copy of the Draft Categorical Exclusion document and right of way plans.

The following measures will be carried out for the replacement of Bridge No. 328 per the approved Memorandum of Agreement:

1. **Recordation:** Prior to the initiation of work, NCDOT shall record two (2) buildings within the Marshall Commercial Historic District (32 Bailey Branch Road and 38 Bailey Branch Road) as well as the (Former) Marshall High School and their surroundings in accordance with the attached Historic Structures and Landscape Recordation Plan (Appendix B).



PROJECT COMMITMENTS

Madison County
Bridge No. 328 on SR 1001
Over French Broad River
Federal Aid Project No. BRZ-1001(14)
State Project No. 8.2860401
T.I.P. No. B-2583

2. Replacement Bridge Design: NCDOT will consult with the Town of Marshall and the Madison County Board of Education on the designs for the replacement bridge and once NCDOT completes the preliminary general drawings for the structures, then NCDOT shall consult with the North Carolina SHPO and the Town of Marshall and the Madison County Board of Education and allow each an opportunity to comment on the preliminary general structure plans as well as the Right-of-Way plans for the project.



Madison County
Bridge No. 328 on SR 1001
Over French Broad River
Federal Aid Project No. BRZ-1001(14)
State Project No. 8.2860401
T.I.P. No. B-2583

INTRODUCTION: The replacement of Bridge No. 328 is included in the North Carolina Department of Transportation (NCDOT) draft 2004-2010 Transportation Improvement Program and in the Federal-Aid Bridge Replacement Program. The location is shown in Figure 1. No substantial environmental impacts are anticipated. The project is classified as a Federal "Categorical Exclusion."

I. PURPOSE AND NEED

Bridge Maintenance Unit records indicate the bridge has a sufficiency rating of 24.3 out of a possible 100 for a new structure. The bridge is considered functionally obsolete and structurally deficient. The replacement of this inadequate structure will result in safer traffic operations.

II. EXISTING CONDITIONS

The project is located on Bailey Branch Road (SR 1001) within the limits of the Town of Marshall in Madison County, approximately 230 feet (70 meters) southwest of US 25/70 Business (Main Street), as illustrated in Figure 1 and 2, Appendix A. Development in the area is light commercial, industrial, residential, and governmental in nature. In the center of Bridge No. 328, a T-section is formed that connects to an island in the river, named Blannahassett Island. A water treatment plant and the (Former) Marshall High School are located on Blannahassett Island.

SR 1001 is classified as a rural minor collector in the Statewide Functional Classification System and is not a Federal-aid highway. This road is not a designated bicycle route.

In the vicinity of the bridge, SR 1001 has a 20-foot (6.0-meter) pavement width with 2-foot (0.6-meter) grass shoulders.

The 2002 estimated traffic volume is 2,800 vehicles per day (VPD) and is expected to increase to 5,100 VPD by the year 2025. The projected volume includes one percent truck-tractor semi-trailer (TTST) and three percent dual-tired (DT) vehicles. From the beginning of the project to the railroad tracks the speed limit is 35 miles per hour (mph) (60 kilometer/hour (km/h)) and from the railroad tracks to the end of the project the speed limit is 20 mph (30 km/h).

Bridge No. 328 is a fourteen-span structure that consists of a reinforced concrete deck on steel I-beams. Three of the spans of Bridge No. 328 form a T-section that connects to Blannahassett Island. The substructure of the existing bridge consists of reinforced concrete abutments and piers. The existing bridge (Figure 3, Appendix A) was constructed in 1957. The existing structure is 616 feet (188 meters) in length and has a clear roadway width of 24 feet (7.2 meters) with a 5-foot (1.5 meter) sidewalk on one side. The T-section is 118 feet (36 meters) in length and has a clear roadway width of 24 feet (7.2 meters) with 5-foot (1.5 meter) sidewalks on both sides. The existing bridge is on a tangent for most of its length with curves

on the structure at both ends. The roadway is situated approximately 30.0 feet (9.0 meters) above the riverbed. The posted weight limit on this bridge is 31 tons (31.5 metric tons) for single vehicles and 35 tons (35.5 metric tons) for truck-tractors semi-trailers (TTST).

There is a 6-inch (150 millimeter) insulated waterline attached to the west side of the existing structure and a large pipe that extends through the northern abutment wall discharging storm water runoff into the river. Utility impacts are anticipated to be high.

No accidents were reported in the vicinity of Bridge No. 328 during the period from January 1, 1997 to December 31, 2000.

Seven school buses cross the bridge daily on their morning and afternoon routes.

III. ALTERNATIVES

A. Project Description

Two structures will replace the existing T-bridge. The first structure will span from the Town of Marshall south on SR 1001 across the French Broad River. This structure will provide two 12-foot (3.6-meter) lanes with a two-foot (0.6-meter) shoulder and 5.5-foot (1.65-meter) sidewalk on the west side and a three-foot (1.0-meter) shoulder on the east side for a total deck width of 34.5 feet (10.45 meters) as illustrated on Figure 4, Appendix A.

The second structure will span from SR 1001 north to Blannahassett Island over the French Broad River, providing access to the school. This structure will provide two 12-foot (3.6-meter) lanes with 2-foot (0.6-meter) shoulders and 5.5-foot (1.65-meter) sidewalks on both sides for a total deck width of 39 feet (11.70 meters) as illustrated on Figure 4, Appendix A.

The proposed approach roadway to the school bridge will provide for two 12-foot (3.6-meter) lanes with curb and gutter including sidewalks on both sides of the roadway. The approaches to the bridge on SR 1001 will provide for two 12-foot (3.6-meter) travel lanes and the shoulder section varies with curb and gutter and shoulder section for connecting into the existing roadway.

The recommended bridge lengths are based on preliminary hydraulic analyses. The final design of the bridges will be such that the backwater elevation will not encroach beyond the current 100-year floodplain limits. The length of the new structures may be increased or decreased as necessary to accommodate peak flows as determined by further hydrologic studies.

B. Alternatives

The two build alternatives for replacing Bridge No. 328 are described below.

Alternative 2 involves replacement of the existing structure with two separate structures. The first bridge will be approximately 605 feet (184 meters) in length and 34.5 feet (10.45 meters) wide. It will carry SR 1001 over the French Broad River east of the existing bridge. The second bridge (school bridge) will be approximately 180 feet (55 meters) in length and 39 feet (11.7 meters) wide and will stretch from SR 1001, on the south side of the river, to the island. Improvements to the approach roadways will be required for a distance of approximately 230 feet (70 meters) to the north and 200 feet (61 meters) to the south of the existing structure.

The existing bridge will continue to maintain traffic during the construction period. The design speed is 20 miles (30 kilometers) per hour. Alternative 2 is not recommended because of the impacts to the Town's pump station, relocation of the County Jail (built 1920's), and because it will produce an undesirable skew condition with the at-grade railroad crossing.

Alternative 3 (Preferred) involves replacement of the existing structure with two separate structures (Figure 2, Appendix A). The bridge from the Town of Marshall across the French Broad will be approximately 647 feet (194 meters) in length and 34.5 feet (10.45 meters) wide. It will carry SR 1001 over the French Broad River west of the existing bridge. The second bridge (school bridge) from SR 1001 to Blannahassett Island will be approximately 187 feet (57 meters) in length and 39 feet (11.7 meters) wide and will stretch from SR 1001, on the south side of the river, to the island. Improvements to the approach roadways will be required for approximately 230 feet (70 meters) to the north and 328 feet (100 meters) to the south of the existing structure. The existing bridge will continue to maintain traffic during the construction period. The design speed is 20 miles (30 kilometers) per hour. Two one-story commercial buildings sited just north of the railroad tracks, on the west side of Bailey Branch Road, will be demolished.

C. Alternatives Eliminated From Further Study

Alternative 1 involves replacement of the structure on an alignment west of the existing bridge and replacement of the existing T-intersection in its current location. The new bridge will be approximately 645 feet (196 meters) in length and 34.5 feet (10.45 meters) wide. The T-section of the new structure will be 90 feet (27 meters) in length and 39 feet (11.7 meters) wide. Improvements to the approach roadways will be required for a distance of approximately 230 feet (70 meters) to the north and 190 feet (58 meters) to the south of the structure. In order to maintain traffic during construction of the new T-intersection, a temporary bridge approximately 178 feet (54 meters) in length would be constructed from SR 1001 on the south side of the river to the island. During construction of the main section of the new bridge, traffic will continue to use the existing bridge. Two one-story commercial buildings sited just north of the railroad tracks, on the west side of Bailey Branch Road, will be demolished. The design speed of the proposed bridge is 20 miles (30 kilometers) per hour. This alternative was eliminated because maintaining a safe and continuous access to the island would be difficult and transferring traffic from the old bridge to the new bridge could not be accomplished prior to the beginning of the school year.

Alternative 4 involves phase construction of the replacement structure along an alignment west of the existing structure. The new bridge will be approximately 643 feet (196 meters) in length and 34.5 feet (10.45 meters) wide. It will have a T-intersection to connect the main part of the bridge to the island. This T-section of the new structure will be 90 feet (27 meters) in length and 39 feet (11.7 meters) wide and will be shifted north of the existing T-intersection. Improvements to the approach roadways will be required for a distance of approximately 230 feet (70 meters) to the north and 220 feet (67 meters) to the south of the structure. The existing bridge will continue to maintain traffic during the construction and during one phase traffic will be shifted to the northern portion of the new structure with the design speed of 20 miles (30 kilometers) per hour. Two one-story commercial buildings located just north of the railroad tracks, on the west side of Bailey Branch Road, will be demolished. This alternative was eliminated because maintaining safe and continuous access to the island will be difficult and transferring traffic from the old bridge to the new bridge could not be accomplished prior to the beginning of the school year.

The "do-nothing" alternative will eventually necessitate closure of the bridge. This is not acceptable due to the traffic service provided by SR 1001.

Rehabilitation of the existing bridge is not feasible due to the very poor condition of the existing concrete deck and substructure. In addition, the existing deck is only 30.8 feet (9.4 meters) wide and is functionally obsolete. The NCDOT Bridge Policy requires a deck width of 34.5 feet (10.45 meters) based on the traffic volumes and design speed along the existing alignment.

D. Preferred Alternative

Alternative 3, replacing Bridge No. 328 west of the existing structure and providing a separate bridge to Blannahassett Island from south of the river as shown in Figure 2, was selected as the preferred alternative. Alternative 3 is recommended because it minimizes impacts on the Marshall Commercial Historic District and maintains access to the school and the water treatment plant on Blannahassett Island throughout construction.

The NCDOT Division 13 Engineer concurs with Alternative 3 as the preferred alternative. The Town of Marshall and the Madison County Board of Education concurs with Alternative 3 as the preferred alternative.

The railroad crossing will be equipped with automatic flashing light crossing signals, gates similar to the existing crossing, and a cement panel crossing.

IV. ESTIMATED COSTS

The estimated costs for the two build alternatives are as follows:

| | Alternative 2 | Alternative 3 Preferred |
|-------------------------|----------------------|------------------------------------|
| Structures | \$ 2,021,250 | \$ 2,270,400 |
| Roadway Approaches | \$ 271,600 | \$ 860,830 |
| Structure Removal | \$ 168,150 | \$ 220,770 |
| Utility Relocation | \$ 100,000 | \$ 100,000 |
| Misc. & Mob. | \$ 1,179,000 | \$ 897,000 |
| Eng. & Contingencies | \$ 560,000 | \$ 651,000 |
| Total Construction Cost | \$ 4,300,000 | \$ 5,000,000 |
| Right-of-way Costs | \$ 185,000 | \$ 129,500 |
| Total Project Cost | \$ 4,485,000 | \$ 5,129,500 |

The estimated cost of the project, as shown in the draft 2004-2010 Transportation Improvement Program, is \$5,010,000, including \$10,000 for right-of-way and \$5,000,000 for construction.

V. NATURAL RESOURCES

Biologists visited the project site on May 21, 1998 to verify documented information and gather field data for a thorough assessment of potential impacts that could be incurred by a proposed bridge replacement project.

The investigation examined the vegetation surrounding the highway bridge in order to 1) search for federally protected plant and animal species; 2) identify unique or prime-quality communities; 3) describe the current vegetation and wildlife habitats; 4) identify wetlands; and 5) provide information to assess (and minimize) adverse environmental effects of the proposed bridge replacement.

A. Methodology

Informational sources used to prepare this report include: USGS Marshall, NC 7.5 minute series topographic map (1990); Natural Resources Conservation Service (NRCS) Soil Survey Field Sheet, Madison County, NC (1989); United States Fish and Wildlife Service (USFWS) National Wetlands Inventory map (Marshall, NC, 1995); USFWS Endangered Species, Threatened Species, and Federal Species of Concern list (<http://nc-es.fws.gov/es/cntylist/madison.html>, updated 3/7/2002); North Carolina Natural Heritage Program (NCNHP) computer database of rare species and unique habitats (last updated January 2002); and NCDOT aerial photography of the study area. Research using these resources was conducted prior to the field investigation.

Plant communities and their associated wildlife were identified using a variety of observation techniques, including active searching, and identifying characteristic signs of wildlife such as sounds, tracks, scats, and burrows.

Quantitative impact calculations were based on the worst-case scenario using the full 60-foot (18-meter) wide right-of-way limits and the width of the replacement structure, the width of the river for aquatic impacts, and the length of the project approaches. The actual construction impacts should be less, but without specific replacement structure design information the worst-case was assumed for the impact calculations.

B. Physiography and Soils

The proposed project lies within the Mountain Physiographic Province, which includes all parts of North Carolina west of the Blue Ridge Escarpment. The topography of the project vicinity can be characterized as rolling to steeply sloped, with flatter areas on ridge tops or adjacent to the river. Elevation in the project vicinity ranges from approximately 1680 to 2040 feet (512 to 622 meters) above mean sea level (msl). The elevation in the project area is about 1680 feet (512 meters) above msl. Current land use in the project vicinity is a mixture of rural residential, agriculture, undeveloped, and commercial properties.

A county soil survey had not been published at the time of the field investigation. A soil survey field sheet was available from the Natural Resources Conservation Service (NRCS) to assess the project area. The field sheet indicates that soil classifications within the project area include Udorthents-Urban Land complex, Rock outcrop-Oteen complex, and Biltmore fine sandy loam.

Udorthents-Urban Land complex, 0 to 5 percent slopes, is located in the northern quadrants of the project area, as well as on the island. Udorthents consist of areas where fill material has been placed in part of the floodplain to prevent flooding. Fill areas are used as construction sites, mainly for commercial buildings and industries. Surface runoff in exposed areas is generally rapid. Urban land includes areas covered by streets, buildings, parking lots, and other urban structures.

Rock outcrop-Oteen complex, 30 to 95 percent slopes, is located in the southern quadrants of the project area. Since the soil survey was not published at the time of the investigation, published surveys from other mountain counties were consulted for information on this soil classification, however it was not listed elsewhere. Even though the field sheet indicates that this soil extends to the river's edge south of the bridge, soils adjacent to the river and the bridge appeared to be consistent with Biltmore fine sandy loam. There is a large rock outcrop just south of the bridge on the south side of SR 1001.

Biltmore fine sandy loam, 0 to 3 percent slopes, is very deep alluvial soil which is well-drained with rapid permeability and slow surface run-off. Flooding is common.

C. Water Resources

1. Waters Impacted

The proposed project falls within the French Broad River Basin, with a subbasin designation of FRB4 (04-03-04) and a federal hydrologic unit designation of French Broad-06010105. The French Broad River is approximately 2 to 12 feet (0.6 to 3.6 meters) deep and over 400 feet (122 meters) wide at the bridge crossing. The river has a Class C rating from the North Carolina Department of Environment and Natural Resources (NCDENR). A Class C designation indicates the river's suitability for aquatic life propagation and survival, fishing, wildlife, secondary recreation, and agriculture. The Classification Date and Index for this portion of the river are 8/3/92 and 6-(67.5).

Point-source discharges located throughout North Carolina are permitted through the National Pollutant Discharge Elimination System (NPDES) program. According to the French Broad River Basin Wide Water Quality Plan (<http://h20.enr.state.nc.us/basinwide/index.html>), subbasin 04-03-04 contains no permitted major dischargers and eleven permitted minor dischargers (listed below). Only the Town of Marshall Wastewater Treatment Plant monitors effluent under its NPDES permit.

| Permit No. | Facility | County | Type | Ownership | Stream |
|------------|--|----------|-------|---------------|--------------------|
| NC0080659 | Madison County Middle School | Madison | Minor | Non-Municipal | Brush Ck. |
| NC0021733 | Marshall, Town of - WWTP | Madison | Minor | Municipal | French Broad R. |
| NC0025836 | Hot Springs, Town of - WWTP | Madison | Minor | Municipal | French Broad R. |
| NC0027545 | CP&L Marshall Hydroelectric Plant | Madison | Minor | Non-Municipal | French Broad R. |
| NC0049620 | Hot Springs Housing Authority | Madison | Minor | Non-Municipal | French Broad R. |
| NC0057151 | Mars Hill, Town - WWTP | Madison | Minor | Municipal | Gabriel Ck. |
| NC0061468 | Skistok, Inc - Wolf Laurel Resort | Madison | Minor | Non-Municipal | Hampton Ck. |
| NC0039152 | Ohio Electric Motors / HBD Industries | Buncombe | Minor | Non-Municipal | Paint Fork Ck. |
| NC0034207 | Madison Co BOE / Laurel Elem | Madison | Minor | Non-Municipal | Shelton Laurel Ck. |
| NC0076431 | Carolina Water Service / Blue Mountain | Madison | Minor | Non-Municipal | Wolf Laurel Br. |
| NC0082716 | English Wolf Lodge - WWTP | Madison | Minor | Non-Municipal | Wolf Laurel Branch |

Non-point source refers to runoff that enters surface waters through storm water flow or no defined point of discharge. In the project study area, storm water runoff from SR 1001 and surrounding urban areas may cause water quality degradation.

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

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

According to the DWQ, there is a sampling station located on SR 1001 at Bridge No. 328 on the French Broad River. This station was last sampled in July of 1997, with a DWQ sampling identification number of 7336. The NCIBI rating of the French Broad River at this location was determined to be Good-Fair.

2. Anticipated Impacts

Neither High Quality Waters (HQW), Water Supplies (WS-I: undeveloped watershed, or WS-II: predominately undeveloped watersheds) nor Outstanding Resource Waters (ORW) occur within one mile (1.6 kilometers) of project study area. The proposed bridge replacement will result in the disturbance of up to 0.67 acres (0.26 hectares) of river bottom (this represents "worst case" conditions; actual disturbance may be less). In the short term, the new replacement structure construction and approach work will likely increase sediment loads in the river.

Construction related sedimentation can be harmful to local populations of invertebrates which are an important part of the aquatic food chain. Potential adverse effects will be minimized through the implementation of the NCDOT's Best Management Practices for Protection of Surface Waters (BMPs), as applicable, and the use of erosion and sediment control measures as specified in the State-approved Erosion and Sediment Control Program (ESCP). The following are some methods to reduce sedimentation and water quality impacts included in an ESCP:

- Reduction and elimination of direct and non-point discharge into the water bodies.
- Placement of temporary ground cover or re-seeding of disturbed sites to reduce runoff and decrease sediment loading.
- Minimization of clearing and grubbing along the riverbank.

3. Impacts Related to Bridge Demolition and Removal

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

Dropping any portion of the structure to be removed into "Waters of the United States" will be allowed only if no other practical method of removal is feasible. The existing bridge has a superstructure which consists of a concrete deck on steel I-beams. The substructure consists of reinforced concrete abutments and concrete post and beam interior bents. Since the deck and substructure are composed of concrete, there is potential for components of the bridge to be dropped into "Waters of the United States" during bridge removal. Maximum potential temporary fill for this bridge is calculated to be approximately 677 cubic yards (518 cubic meters).

This project is classified as a Case 3 situation. No special restrictions are required for in-water work other than those outlined in the North Carolina Department of Transportation guidelines, "Best Management Practices for Protection of Surface Waters." General best management practices for bridge demolition and removal will be followed for this project as well as those specific to removing the piles. If removal of the substructure will create disturbance in the riverbed, a turbidity curtain is recommended to address sediment concerns.

D. Biotic Resources

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

1. Terrestrial Communities

Two distinct plant community types occur within the immediate area of the proposed project. Plant community descriptions are provided below.

a. Man-Dominated Community

This community includes all parts of the project study area except the outer portion of the southwest quadrant adjacent to the river. The central section of the town of Marshall is located north of the bridge. The project area in this locality is urban, consisting of sidewalks, buildings, parking lots, and a railroad track. Near the center of the river, a T-bridge connects the main structure to Blannahassett Island, which is the site of a school. Herbaceous vegetation is scattered throughout the sandy areas adjacent to the T-bridge. It appears that this area is often affected by the rise and fall of water levels in the river. It is eroded and an abundance of debris was present on the day of the investigation.

A commercial property is located near the southeast corner of the bridge. The lawn is maintained down to the edge of the river and to within approximately 15 to 25 feet (4.6 to 7.6 meters) of the bridge. Vegetation in the area that is not regularly maintained next to the bridge consists of blackberry (*Rubus argutus*), kudzu (*Pueraria lobata*), honeysuckle (*Lonicera japonica*), and sapling size sycamore (*Platanus occidentalis*) and black locust (*Robinia pseudoacacia*). Mixed grasses, plantain (*Plantago* sp.), and clover (*Trifolium* sp.) are adjacent to the southwest corner of the bridge.

b. Piedmont/Mountain Alluvial Forest

This community is small and occurs in the southwest quadrant of the project area. It appears that it is influenced at least occasionally by the rise and fall of water levels in the river. Erosion, scouring, and debris are evident in this area. The gradient is somewhat steep and there did not seem to be a large enough area to distinguish this as a levee forest, since it grades fairly quickly upslope into the road and a rock outcrop. Vegetation in this community consists of river birch (*Betula nigra*), sycamore, box elder (*Acer negundo*), red ash (*Fraxinus pennsylvanica*), mulberry (*Morus alba*), ironwood (*Carpinus caroliniana*), poison ivy (*Toxicodendron (Rhus) radicans*), and violet (*Viola* sp.).

2. Wildlife

a. Terrestrial Communities

Wildlife noted in this community on the day of the site investigation included swallows (Hirundinidae family) and several common grackles (*Quiscalus quiscula*). Since vegetation in the Man-Dominated community is sparse, other species of wildlife may rarely be found there. Animals such as the Norway rat (*Rattus norvegicus*) and the rock dove (*Columba livia*), which frequent urban areas, may find this community acceptable to forage and reside in.

A blue jay (*Cyanocitta cristata*) was seen in the Piedmont/Mountain Alluvial Forest on the day of the site investigation. Although this community is somewhat small, some species may be able to utilize it for food and shelter, especially those that could be adaptable to the disturbance of the nearby Man-Dominated community. Birds such as the cardinal (*Cardinalis cardinalis*),

summer tanager (*Piranga rubra*), and robin (*Turdus migratorius*) might find this habitat useful for nesting and feeding. The eastern garter snake (*Thamnophis sirtalis*) could reside here, finding shelter under stones and debris, and feeding on earthworms and aquatic species in the river. Mammals such as the Virginia opossum (*Didelphis virginiana*) and raccoon (*Procyon lotor*) might utilize this habitat for shelter and feeding on a variety of vegetable and animal matter and aquatic organisms.

b. Aquatic Communities

The aquatic community in the project study area exists within the French Broad River. Within the project study area of Bridge No. 328, the French Broad River flows northwest and is approximately 400 feet (122 meters) wide. The French Broad River and SR 1001 cross at this location perpendicular to each other, however the road curves sharply east just beyond the bridge on the southern end. On the day of the field investigation the river had a moderate flow and moderate sediment load. The depth of the river ranged from approximately 2 to 12 feet (0.6 to 3.6 meters) and the substrate was sand with a few boulders and a layer of silt. Banks were undercut in several areas and debris was scattered about.

A cursory search of the shoreline was conducted for evidence of mussel and clam species. Asiatic clam (*Corbicula fluminea*) shells were abundant along the river banks, but no other signs of mollusks or bi-valves were revealed. Unidentified minnows and a mallard (*Anas platyrhynchos*) were observed in the river. Larvae of aquatic species was noted under rocks near the shore, however dip-netting along the river banks did not yield any other species.

According to the District 9 Biologist for the North Carolina Wildlife Resources Commission (WRC), the following freshwater fish species are found within the French Broad River: muskellunge (*Esox masquinongy*), brown bullhead (*Ameiurus nebulosus*), channel catfish (*Ictalurus punctatus*), smallmouth bass (*Micropterus dolomieu*), and largemouth bass (*Micropterus salmoides*). The WRC had no special concerns or requested moratoriums associated with this project.

3. Anticipated Impacts to Biotic Communities

Biotic community impacts resulting from project construction are addressed separately as terrestrial impacts and aquatic impacts. Table 1 details the anticipated impacts to terrestrial and aquatic communities by habitat type.

TABLE 1
ANTICIPATED IMPACTS TO TERRESTRIAL and AQUATIC COMMUNITIES

| Bridge No. 328 Replacement Impacts | Man-Dominated Community acre (ha) | Piedmont/Mountain Alluvial Forest acre (ha) | Aquatic Community acre (ha) | Total acre (ha) |
|---|--|--|--|----------------------------|
| Alternative 2 | 0.46 (0.19) | 0.09 (0.04) | 0.008 (0.003) | 0.56 (0.23) |
| Alternative 3 | 0.64 (0.26) | 0.44 (0.18) | 0.008 (0.003) | 1.09 (0.44) |

NOTES:

- Existing roadways were not considered as part of the total impacts where alternatives overlapped the existing alignment.
- Actual construction impacts may be less than those indicated above.
- Linear aquatic impacts are expected to be no more than the widths of the replacement structures noted in the alternatives descriptions. The main bridge width is proposed to be 34.5 feet (10.45 meters) and the school bridge width is proposed to be 39 feet (11.7 meters).

a. Terrestrial Communities

Alternative 3 will have the largest impact to terrestrial communities. The Man-Dominated Community impacts are not of high concern from a natural resources perspective since this disturbed community type is abundant in the project area and region and is not known to contain any rare species. The Piedmont/Mountain Alluvial Forest is small and fragmented, but could provide habitat for some wildlife species; therefore, it is preferable to leave as much of the natural vegetation as possible in this area. The NCDOT's Best Management Practices for Protection of Surface Waters will be implemented, as applicable, to reduce sedimentation and water quality impacts downstream.

b. Aquatic Communities

Aquatic impacts are very small for all alternatives. Any potential adverse effects to the aquatic community will be minimized by using best management practices during bridge removal and construction.

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

Project construction cannot be accomplished without infringing on jurisdictional surface waters. Anticipated surface water impacts fall under the jurisdiction of the USACE. Up to 64 linear feet (19.5 meters) of jurisdictional surface water impacts may occur due to the proposed temporary causeways to replace Bridge No. 328.

2. Permits

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

It is anticipated that this project will fall under Nationwide Permit 23, which is a type of general permit. Nationwide Permit 23 is relevant to approved Categorical Exclusions. Activities under this permit are categorically excluded from environmental documentation because they are included within a category of activities that neither individually nor cumulatively have a significant effect on the human environment. Activities authorized under nationwide permits must satisfy all terms and conditions of the particular permit. Since Madison County is a North Carolina trout county, concurrence with the nationwide permit will also be required from the North Carolina Wildlife Resources Commission.

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

If no practical alternative exists to remove the current bridge other than to drop it into the water, prior to removal of debris off-site, fill related to demolition procedures will need to be considered during the permitting process. A worst-case scenario should be assumed with the understanding that if there is any other practical method available, the bridge will not be dropped into the water. Permitting should be coordinated such that any permit needed for bridge construction should also address issues related to bridge demolition. Since the deck and substructure are composed of concrete and steel, there is potential for components of the bridge to be dropped into "Waters of the United States" during bridge removal.

The replacement of Bridge No. 328 will require the approval of the Tennessee Valley Authority under Section 26a of the TVA Act.

A Section 6 Permit will be required for any foundation investigations that are necessary on this project. The investigation will include test borings in soil and/or rock for in-site testing as well as obtaining samples for laboratory testing. This may require test borings in rivers.

3. Mitigation

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

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

The DWQ may require compensatory mitigation for activities authorized under Section 401 of the Clean Water Act if unavoidable impacts to waters of the United States total more than 1 acre (0.41 hectare) of wetlands and/or 150 linear feet (45.7 linear meters) of perennial streams.

F. Protected Species

Some populations of plants and animals are in the process of decline either due to natural forces or due to their inability to coexist with man. Rare and protected species listed for Madison County, and any likely impacts to these species as a result of the proposed project construction, are discussed in the following sections.

1. Federally Protected Species

Plants and animals with federal classification of Endangered (E), Threatened (T), Proposed Endangered (PE) and Proposed Threatened (PT) are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. The United States Fish and Wildlife Service list three federally protected species for Madison County (updated 3/7/2002). These species are listed in Table 2.

TABLE 2
FEDERALLY-PROTECTED SPECIES FOR MADISON COUNTY

| Scientific Name | (Common Name) | Status |
|--------------------------------|-----------------|------------|
| <i>Epioblasma capsaeformis</i> | (Oyster mussel) | Endangered |
| <i>Hybopsis monacha*</i> | (Spotfin chub) | Threatened |
| <i>Myotis griseescens</i> | (Gray bat) | Endangered |

NOTES:

* The species was last observed in the county more than 50 years ago.
Threatened A species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
Endangered A species that is in danger of extinction throughout all or a significant portion of its range.

Species: Oyster mussel

Family: Unionidae

Date Listed: January 10, 1997

The oyster mussel is a small freshwater mussel with a yellowish-green periostracum with narrow green rays. The nacre is bluish-white to creamy colored. Males are elliptical in shape and females have a swollen posterior end that is dark green. Fish host species for the oyster mussel include spotted darter (*Etheostoma maculatum*), redline darter (*Etheostoma rufilineatum*), dusky darter (*Percina sciera*), and banded sculpin (*Cottus carolinus*).

Habitat for this species consists of medium to large rivers. It usually inhabits shoals and riffles in coarse sand, gravel, or cobble substrate. Water depth is most often less than 3 feet (0.9 meters).

BIOLOGICAL CONCLUSION: NO EFFECT

Habitat exists for this species within the project area. Qualified mussel biologists surveyed upstream of the project area on several occasions to search for mussels, in particular the oyster mussel. The most recent date was June 14, 2001 (Appendix B). The species was not located during the surveys. In addition to these surveys, the North Carolina Wildlife Resources Commission, USFWS, United States Geological Survey, and Tennessee Valley Authority conducted several other surveys within the project area on the

French Broad River. No specimens of the oyster mussel were found during these surveys. It is concluded that this mussel species has apparently been extirpated from the French Broad River within the project area, and that project construction will not impact the oyster mussel.

Species: Spotfin chub

Family: Cyprinidae

Date Listed: September 9, 1977

The spotfin chub is a small species growing to a maximum size of 4 inches (92 millimeters) standard length. The body is elongate and the mouth is inferior. The scales are somewhat small in size and a distinctive large black spot is present in the caudal region. Juveniles and adult females are olive above with the sides silvery and the underparts white. Males have brilliant turquoise-royal blue coloring on the back, side of the head, and along the mid-lateral part of the body.

The spotfin chub is restricted to the Tennessee River drainage and presently is only known in North Carolina in the Little Tennessee River. The spotfin chub inhabits moderate to large streams with an average width of 49 to 230 feet (15 to 70 meters). Conditions include clear water with moderate current over gravel, boulders, and bedrock. The streams have pools frequently alternating with riffles.

BIOLOGICAL CONCLUSION: NO EFFECT

The French Broad River within the project area does not meet habitat conditions listed above for this species. The WRC District Biologist did not list this species as occurring in the French Broad River, and it has not been observed in the county in more than fifty years. This project will not affect the spotfin chub.

Species: Gray bat

Family: Vespertilionidae

Date Listed: April 28, 1976

The gray bat is gray colored above and gray frosted with white on the underside. The attachment of the wing membrane to the ankle rather than to the base of the toe is a distinguishing feature. The bat mates in September and October, however the young are not born until May to early June.

The gray bat is a year-round cave resident, usually occupying different caves in the summer and winter. It forages along rivers and lake shores for mayflies, which are a major part of its diet; however, it often feeds on other insects as well.

BIOLOGICAL CONCLUSION: NO EFFECT

There are no caves in the project area that would provide the year-round habitat requirements for this species. Since this species feeds along rivers and lakes, foraging habitat is present in the project area. The bridge replacement is not expected to adversely affect foraging habitat of the bat

since there is abundant area to feed along the river and the area of construction will be confined to a relatively small portion of the river. This project will not affect the gray bat.

2. Federal Species of Concern

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

Some of these species are listed as Endangered, Threatened or Special Concern by the NCNHP database of rare plant and animal species and are afforded state protection under the State Endangered Species Act and the North Carolina Plant Protection and Conservation Act of 1979. Table 3 provides FSCs currently listed for Madison County. The most recent North Carolina Natural Heritage Program (NCNHP) list for Madison County (via web site, list updated January 2002, search performed February 1, 2002) was also reviewed.

The NCNHP database showed no recorded occurrences of FSC in the project area; however two FSCs are listed as occurring in the project vicinity. The hellbender (*Cryptobranchus alleganiensis*) has been observed in the French Broad River approximately 0.3 miles (0.5 kilometers) downstream from the proposed project, and Rafinesque's big-eared bat (*Corynorhinus (Plecotus) rafinesquii*) has been observed approximately 0.2 miles (0.3 kilometers) north of the bridge area. Observance of the bat is considered a historic record, since it was last seen in the county more than 50 years ago.

Table 3
NORTH CAROLINA STATUS OF FEDERAL SPECIES OF CONCERN IN MADISON COUNTY

| Scientific Name | (Common Name) | North Carolina Status | Habitat Present |
|---|------------------------------|-----------------------|-----------------|
| <i>Acipenser fulvescens*</i> | (lake sturgeon) | Special Concern | Yes |
| <i>Buckleya distichophylla</i> | (piratebush) | Endangered | No |
| <i>Corynorhinus rafinesquii*</i> | (Rafinesque's big-eared bat) | Special Concern | Yes |
| <i>Cryptobranchus alleganiensis</i> | (hellbender) | Special Concern | Yes |
| <i>Erimystax insignis#</i> | (blotched chub) | SR | No |
| <i>Euphorbia purpurea</i> | (glade spurge) | SR-Threatened | No |
| <i>Juglans cinerea</i> | (butternut) | Not Listed | No |
| <i>Neotoma floridana haematoreia</i> (southern Appalachian woodrat) | | Special Concern | Yes |
| <i>Paravitrea ternaria</i> | (sculpted supercoil) | Threatened | Yes |
| <i>Percina squamata</i> | (olive darter) | Special Concern | Yes |
| <i>Polyodon spathula*</i> | (paddlefish) | Endangered | No |
| <i>Saxifraga caroliniana</i> | (Carolina saxifrage) | SR-Threatened | No |
| <i>Silene ovata</i> | (mountain catchfly) | SR-Threatened | No |

NOTES: Threatened Species which are afforded protection by state laws.
 Endangered Species which are afforded protection by state laws.
 Not Listed Species whose status is not listed at this time.
 Special Concern Species which are afforded protection by state laws.
 * Last seen in the county more than 50 years ago.
 SR Significantly Rare. Species which are very rare in North Carolina but generally more common elsewhere.
 # Obscure record at NCNHP. Date the element was last observed in the county is uncertain.

3. Summary of Anticipated Impacts

Habitat exists in the project area for the oyster mussel. Searches have been performed by qualified mussel biologists and agency representatives and the species was not located in the area. Habitat is present in the project area for six FSC species; however three of these species have not been seen in the county in more than fifty years.

VI. CULTURAL RESOURCES

A. Compliance Guidelines

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and with the Advisory Council on Historic Preservation's regulations for compliance with Section 106, codified at 36 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 on December 18, 1997. All structures within the APE were photographed, and later reviewed by the North Carolina State Historic Preservation Office (HPO). Several of the properties photographed were considered eligible for the National Register so a Final Identification and Evaluation Report was prepared and submitted to FHWA and HPO. In a memorandum dated October 11, 1999 the State Historic Preservation Officer (SHPO) concurred with the report's findings and the Marshall Commercial Historic District and (Former) Marshall High School was determined eligible for the National Register. In a meeting between NCDOT, FHWA, and HPO on November 5, 1999 all parties signed a concurrence form stating that the project will have an adverse effect on the Marshall Commercial Historic District and (Former) Marshall High School. A copy of the concurrence form and the memorandum are included in the Appendix B.

C. Archaeology

The State Historic Preservation Officer (SHPO), in a memorandum dated October 6, 1998 recommended, "that no archaeological investigations be conducted in connection with this project." A copy of the SHPO memorandum is included in Appendix B.

VII. DRAFT SECTION 4(F) EVALUATION

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

- 1) There is no prudent and feasible alternative to using that land; and
- 2) The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from such use."

Since it is anticipated that the proposed project will require the use of property from two National Register eligible historic resources, the Marshall Commercial Historic District and the

(Former) Marshall High School, a Section 4(f) Evaluation is required. See Section XI for the Draft Section 4(f) Evaluation.

VIII. ENVIRONMENTAL EFFECTS

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

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

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

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

No adverse impact on families or communities is anticipated. Right-of-way acquisition will be limited. Two businesses will be relocated with implementation of the preferred Alternative 3.

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.

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

This project has been coordinated with the United States Natural Resources Conservation Service. The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the potential impact to prime farmland of all land acquisition and construction projects. There are no soils classified as prime, unique, or having state or local importance in the vicinity of the project. Therefore, the project will not involve the direct conversion of farmland acreage within these classifications.

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

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

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

Noise levels could increase during construction but will be temporary. If vegetation is disposed of by burning, all burning shall be done in accordance with applicable local laws and regulations of the North Carolina State Implementation Plan (SIP) for air quality in compliance with 15 NCAC 2D.0520. This evaluation completes the assessment requirements for highway traffic

noise of Title 23, Code of Federal Regulation (CFR), Part 772 and for air quality (1990 Clean Air Act Amendments and the National Environmental Policy Act) and no additional reports are required.

An examination of records at the North Carolina Department of Environment and Natural Resources, Division of Environmental Management, 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.

Madison County is a participant in the National Flood Insurance Regular Program. The approximate 100-year floodplain in the project area is shown in Figure 5, Appendix A. There are no practicable alternatives to crossing the floodplain area. Any shift in alignment will result in a crossing of about the same magnitude. All reasonable measures will be taken to minimize any possible harm. The project is not anticipated to increase the level or extent of the upstream flood hazard.

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

IX. PUBLIC INVOLVEMENT

A local officials meeting and Citizens Informational Workshop was held on April 6, 1999 at the Marshall Town Hall in Marshall, North Carolina. The project development process and alternative evaluation factors were explained and three bridge replacement alternatives were presented for comment. A fourth alternative was developed during the course of the day's meetings. Approximately 20 citizens attended the workshop. Most officials and citizens indicated that Alternative 1 was the locally preferred alternative for replacing the existing bridge. Most also indicated that a cathedral or "Texas Classic" rail treatment of some type would increase the aesthetics of the new bridge.

A second local officials meeting and Citizens Informational Workshop was held on October 26, 1999 at the Marshall Town Hall in Marshall, North Carolina. The project development process and alternative evaluation factors were explained and the two reasonable and feasible alternatives were presented for comment. A photo rendering of Alternative 3 was also presented to illustrate the view of the Madison County Courthouse across the proposed bridge. Citizens were informed that Alternative 1 and Alternative 4 were removed from consideration due to safety concerns and constructability difficulties. Most officials and citizens indicated that Alternative 3 was the locally preferred alternative for replacing the existing bridge. Most citizens indicated that a cathedral rail treatment of some type would increase the aesthetics of the new bridge.

A small group meeting was held on February 4, 2002, with the Mayor of the Town of Marshall and the Board of Education of Madison County to present the preferred Alternative 3. After reviewing the proposed design plans and impacts to the 4(f) resources, the Memorandum of Agreement was signed.

X. AGENCY COMMENTS

NORFOLK SOUTHERN CORPORATION

In a February 14, 2000 letter to NCDOT, Norfolk Southern Corporation requested that the Department consider installing automatic flashing light crossing signals and gates at the relocated railroad crossing and they noted that the existing crossing is so equipped. They also asked for consideration of a prefabricated concrete or rubber grade crossing surface at the relocated crossing.

Response: Since the existing crossing is equipped with automatic flashing light crossing signals and gates, the relocated crossing will be similarly equipped. A prefabricated concrete/cement panel grade crossing will be provided at this location. This is standard NCDOT practice to provide the prefabricated cement panel grade crossing for TIP projects.

TOWN OF MARSHALL

In a December 9, 1999 letter to NCDOT, the Town of Marshall requested that the Department include a conduit in the proposed bridge rail for the new bridge so the Town can install lights once the new bridge is complete. The Town asked that the Department consider transferring any excess right-of-way properties to the Town for use in providing parks or greenways as appropriate. A third item mentioned by the Town was its desire to retain the last span or two of the bridge to Blannahassett Island for use by the Town as an outdoor stage.

Response: Provisions for adding a conduit to the rail of the proposed bridge can be made during the final design of the bridge. A project special commitment is included in this document noting the need for a conduit in the rail of the proposed bridge spanning the French Broad River to Marshall.

At this point in project development there is no indication that there will be any uneconomic remnants of right-of-way available as a result of right-of-way acquisition. If such parcels of property were available, the property owner would have a role in the disposition of the property. This situation can be evaluated at the time of right-of-way acquisition to see if the Department will be left with property that might be suitable for the Town to use as a park.

The majority of the T-bridge to Blannahassett Island will have to be removed in order to build the new bridge across the river. During a telephone conversation on September 25, 2001, with Mayor Dodson and a representative of NCDOT, and in a follow up letter dated September 27, 2001, it was agreed that retaining a portion of the T-bridge was not feasible or safe due to the location of the school to the bridge.

In a letter dated June 6, 2002 to NCDOT, the Town of Marshall requested that NCDOT provide a fire line attached to the new bridge on the upstream side. The fire department will use this line to draw water from the river in lieu of drawing from the town water supplies in fighting fires.

Response: NCDOT will provide a fire line attached to the upstream side of the bridge, this is included as a commitment. The Town of Marshall will reimburse NCDOT the cost of the new utility at the completion of the bridge replacement project.

OTHER COMMENTS

All other comments from federal and state regulatory and resource agencies and local government are addressed elsewhere in this document.

XI. SECTION 4(F) EVALUATION; MARSHALL COMMERCIAL HISTORIC DISTRICT AND (FORMER) MARSHALL HIGH SCHOOL

1. Proposed Action

NCDOT proposes to replace Bridge No. 328 on Bailey Branch Road (SR 1001) over the French Broad River with a wider structure on new alignment. The current sufficiency rating of the bridge is 24.3 out of 100. Because of the structural deficiency and operational inadequacy of the existing bridge and alignment, the North Carolina Board of Transportation approved this project as part of the Federal Bridge Replacement Program. This project will replace a deteriorated and substandard bridge with new structures that provide standard travel ways and improve safety of the river crossing.

The recommended alternative is located west of the existing bridge and will include a second bridge to provide access to Blannahassett Island from the south side of the river as shown as Alternative 3, Figure 2, Appendix A. The project length is approximately 1,600 feet (487 meters) including both bridges.

Traffic will be maintained on the existing bridge during construction of the bridge to access Blannahassett Island. Once the new bridge is completed and access provided to the island, the T- section on the existing bridge will be removed. Traffic will be maintained on the existing structure crossing the French Broad River and the proposed bridge from the Town of Marshall south will be constructed. Traffic will then be routed onto the second new bridge and the existing bridge will be removed.

Bridge No. 328 is a fourteen-span structure that consists of a reinforced concrete deck on steel I-beams. The substructure of the existing bridge consists of reinforced concrete abutments and piers. The existing bridge (Figure 3, Appendix A), constructed in 1957, is 616 feet (188 meters) in length and has a clear roadway width of 24 feet (7.2 meters). Near the south end of Bridge No. 328, three of the spans form a T-section that connects to an island in the river, named Blannahassett Island. A wastewater treatment plant and a school are located on the island. The northern approach to Bridge No. 328 is located within the down town portion of the Town of Marshall. The existing bridge is on a tangent for most of its length with curves at both ends of the structure.

Bridge No. 328 is located immediately outside the limits of the proposed Marshall Commercial Historic District and provides access to the (Former) Marshall High School. Both properties are eligible for listing in the National Register of Historic Places. The four studied alternatives, including the recommended alternative, require taking land and/or buildings within the district and/or school site. Therefore, the project must proceed within the requirements of Section 4(f) of the USDOT Act and Section 138 of the Highway Act, as amended.

2. Description of Section 4(f) Resource

The Section 4(f) resources are located in the project area on SR 1001 (Bailey Branch Road) and US 25/70 Business (Main Street) in the Town of Marshall and on Blannahassett Island (Figure 6, Appendix A).

On the north side of the river, the project approach is along of Bailey Branch Road, a block-long street of early-twentieth-century, brick commercial and civic buildings that terminates at the 1907 Madison County Courthouse (NR 1979) on Main Street. In striking fashion, the county courthouse faces south towards Bailey Branch Road and across Bridge No. 328 (Figure 3, Appendix A). Located at the north end of the project, the courthouse is sited at the base of the wooded mountainside that flanks the north side of Main Street and the river. While this rugged topography has restricted development north of Main Street, dwellings sited on narrow, twisting roads dot the steep terrain above the business district and the river. Among these houses is the rock-faced 1903 James H. White House (NR 1981), which stands directly behind (and above) the courthouse.

On the north side the project area includes all of the buildings along Bailey Branch Road and terminates at the Madison County Courthouse. All of these buildings are located within the proposed Marshall Commercial Historic District. Concentrated primarily along Main Street, this district retains a significant collection of buildings dating primarily from the early to mid twentieth century. The area is characterized by contiguous blocks of substantially intact two- and three-story buildings embellished with simple classical and Italianate elements. Notable among the Main Street commercial architecture are the three-story Roberts Building (1922) and the 1947 stone-veneered Rock Café (SL 1997). The Bailey Branch Road buildings include the 1905 County sheriff's department/jail (east side) and the three commercial buildings on the west side. The sheriff's department/jail and the two southernmost commercial buildings on the west side of Bailey Branch Road are considered contributing resources to the historic district. The one non-contributing building on Bailey Branch Road is the two-story warehouse located just north of the two contributing resources on the west side. The architectural integrity of this 1920s masonry structure has been compromised by a 1960s renovation that included a replacement brick front façade. The Historic District follows the French Broad River for approximately 540 feet (165 meters) downstream and approximately 1660 feet (505 meters) upstream of the bridge. The district's width varies between approximately 400 feet (122 meters) and 700 feet (213 meters).

On the south side of the project area, Bridge No. 328 passes just east of Blannahassett Island, and is connected to the island by a concrete spur (T-bridge). Blannahassett Island is approximately 12 acres (4.84 hectares) in size and contains the (Former) Marshall High School (erected 1925) and a modern waste treatment plant. The island is the property of Madison County Board of Education. The school complex, which includes a 1960s classroom building sited in front of the original 1925 facility, is located within the project area and is eligible for the National Register. The modern classroom building is currently used as an elementary school. A scenic pedestrian walkway is located on the north side of the island from the parking lot to the waste treatment plant. The landscaped gravel pathway is approximately 800 feet (240 meters) in length with wooden pedestrian bridges and informational sign describing the French Broad River Basin.

The eligible boundaries for the two historic resources are shown on Figure 6, Appendix A.

Located just outside the proposed Marshall Commercial Historic District and (Former) Marshall High School boundaries, Bridge No. 328 is a fourteen-span, steel, deck-girder structure with reinforced concrete, post-and-lintel piers, and reinforced concrete abutments and wingwalls. Built in 1957, Bridge No. 328 is not considered eligible for the National Register under any criteria.

The Marshall Commercial Historic District was determined eligible for the National Register under Criterion A for community development and planning, and transportation; and Criterion C for architecture. In its unique and historic setting and range of well-preserved architectural resources, Marshall ranks among the most significant small towns in the region. Restricted by the narrow gorge of the French Broad River, Marshall illustrates the geographical demands that shaped the development of towns throughout the mountain counties. The imposing courthouse flanked by the compact commercial district, the mountainside houses overlooking Main Street and the river, the dam and riverside textile mill opposite downtown, the school on Blannahassett Island – these resources and their evocative setting epitomize Marshall's banner years of growth. Moreover, the town's single long main street and railroad tracks that run parallel to the river are part of historic transportation routes through the rugged Blue Ridge terrain. Marshall's development along the Buncombe Turnpike and Western North Carolina Railroad remain vividly expressed.

The (Former) Marshall High School was determined eligible for the National Register of Historic Places under Criterion A for education and Criterion C for architecture. Erected in 1925, the sizable facility clearly represents the school consolidation movement that swept North Carolina and Madison County between the 1920's and World War II. Its striking island setting enhances the school's significance. Although the 1960's classroom building, the 1950's gymnasium and the modern pumping station on the island are non-contributing resources, they do not detract substantially from the property's historical and architectural importance.

3. Impact on the 4(f) Property

The four build alternatives studied to replace Bridge No. 328 will have adverse effects on the proposed historic district and school site. Each alternative requires acquisition of right-of-way and construction within both historic sites. These alternatives are described as Alternatives 1, 2, 3, and 4 in Section III of this Categorical Exclusion document.

Impacts associated with each alternative follow:

Alternative 1:

1. Two one-story buildings in the northwest quadrant that are considered contributing resources to the historic district will be demolished.
2. Use of approximately 2150 square feet (200 square meters) of property for permanent right of way on Blannahassett Island, (Former) Marshall High School property.
3. Use of approximately 1450 square feet (135 square meters) of property for permanent right-of-way in the Marshall Commercial Historic District.
4. Approximately 350 square feet (32 square meters) of surface waters will be impacted due to placement of the piers. Approximately 1.29 acres (0.523 hectares) of surface waters will be impacted for temporary causeways to construct the permanent bridge.
5. Providing a temporary access bridge to Blannahassett Island and the elementary school will impact approximately 7000 square feet (650 square meters) on the resource property and approximately 50 square feet (5 square meters) of surface waters of the French Broad River.

Alternative 2:

1. Town pump station will require relocation.
2. County Jail (1920) in the northeast quadrant, considered a contributing resources to the historic district will be relocated.

3. The aesthetic view of the courthouse coming across the French Broad River will be impaired. The local officials and the citizens consider this undesirable.
4. Use of approximately 4850 square feet (450 square meters) of property for permanent right of way on Blannahassett Island, (Former) Marshall High School property. Approximately 4740 square feet (440 square meters) of existing right of way will be returned and restored from removal of existing bridge and roadway.
5. Use of approximately 1370 square feet (127 square meters) of property for permanent right of way in Marshall Commercial Historic District.
6. Approximately 350 square feet (32 square meters) of surface waters will be impacted due to placement of the piers. Approximately 1.29 acres (0.523 hectares) of surface waters will be impacted for temporary causeways to construct the permanent bridges.

Alternative 3:

1. Two one-story buildings in the northwest quadrant that are considered a contributing resource to the historic district will be demolished.
2. Use of approximately 5700 square feet (530 square meters) of property for permanent right of way on Blannahassett Island, (former) Marshall High School property. Approximately 5000 square feet (465 square meters) of property will be returned and restored from removal of existing bridge and roadway.
3. Use of approximately 1450 square feet (135 square meters) of property for permanent right of way in the Marshall Commercial Historic District.
4. Approximately 350 square feet (32 square meters) of surface waters will be impacted due to placement of the piers. Approximately 1.29 acres (0.523 hectares) of surface waters will be impacted for temporary causeways to construct the permanent bridges.

Alternative 4:

1. Continuous access to Blannahassett Island will not be available during construction. This situation is considered unacceptable since vehicular access must be provided to elementary school and waste treatment plant.
2. Two one-story buildings in the northwest quadrant that are considered contributing resources to the historic district will be demolished.
3. Use of approximately 3770 square feet (350 square meters) of property for permanent right of way on Blannahassett Island, (Former) Marshall High School property. Approximately 1625 square feet (151 square meters) of property will be returned from removal of existing bridge and roadway.
4. Use of approximately 1450 square feet (135 square meters) of property for permanent right of way in Marshall Commercial Historic District.
5. Approximately 350 square feet (32 square meters) of surface waters will be impacted due to placement of the piers. Approximately 1.29 acres (0.523 hectares) of surface waters will be impacted for temporary causeways to construct the permanent bridge.

4. Avoidance Alternatives

There are three alternatives that would not require taking land in the proposed historic district.

- a. No-build

The no-build alternative would not require new construction. Existing Bridge No. 328 would remain and State Bridge Maintenance forces would continue to make necessary periodic repairs to keep the bridge in service. However, the bridge would eventually

deteriorate beyond repair and necessitate closure and removal of the bridge. This alternative will result in loss of vehicular access to Blannahassett Island. Loss of access will necessitate the relocation of the elementary school and associated facilities and wastewater treatment facility. Eventual removal of the bridge will also eliminate vehicular access across the French Broad River to the Town of Marshall. Based on all of the above reasons, the no-build alternative, while avoiding impacts to the two eligible resources, is not considered to be a reasonable and prudent solution.

b. Rehabilitation

The existing bridge is both structurally and geometrically deficient with a sufficiency rating of only 24.3 of a possible 100. Rehabilitation of the existing bridge is not feasible due to the very poor condition of the existing concrete deck and substructure. Rehabilitation of the existing bridge would maintain the existing substandard horizontal clearances since widening is not feasible. Although there have been no accidents in close vicinity of the bridge within the last three years, use of a substandard width bridge by existing traffic including fourteen daily trips by school buses is not desirable or safe.

c. Relocation outside the district

The location of the bridge is a factor in the setting for the historic district. The layout of Marshall is based on the crossing of the French Broad River intersecting Main Street opposite the site of the County Courthouse. Moving the bridge location to a point either upstream or downstream of the current location to avoid impacts to the proposed Historic District would negatively impact the district by disrupting a major element of the setting for the district. Relocation of the structure outside the historic district would also eliminate the direct connection between the major portion of the Town from the elementary school and associated facilities and its wastewater facility on Blannahassett Island. In order to completely avoid the historic district, the new bridge would have to be relocated approximately 1660 feet (505 meters) east or approximately 1400 feet (427 meters) west of its present location. Therefore, locations for the bridge outside of the proposed Historic District are not considered either reasonable or advantageous to the district as a whole.

Since vehicular access to Blannahassett Island is required for the continued use of the existing school and Town facilities, an avoidance alternative for the island resource is not considered feasible.

5. **Measures to Minimize Harm**

The following measures have been developed through coordination between the NCDOT, FHWA, the State Historic Preservation Office and the Town of Marshall to minimize harm to the two National Register eligible resources.

a. Recordation

Prior to the initiation of work, NCDOT shall record two (2) buildings within the Marshall Commercial Historic District (32 Bailey Branch Road and 38 Bailey Branch Road) as well as the (Former) Marshall High School and their surroundings in accordance with the attached Historic Structures and Landscape Recordation Plan (Appendix B).

b. Design of Replacement Bridges

NCDOT will consult with the Town of Marshall and Madison County Board of Education on the designs for the replacement bridge and once NCDOT completes the preliminary general drawings for the structures, then NCDOT shall consult with the North Carolina SHPO, the Town of Marshall, Madison County Board of Education, and allow each an opportunity to comment on the preliminary general structure plans as well as the right-of-way plans for the project.

c. Design

The new bridges will be designed to have "Texas Classic" bridge railings with square openings.

The long bridge on Bailey Branch Road over the French Broad River will contain an electrical conduit such that the Town of Marshall can add lighting to the bridge in the future.

In the areas where the existing bridge and/or approaches will be removed, the areas will be reshaped and landscaped. This work will be coordinated with the Town of Marshall and/or the Madison County Board of Education.

d. Waterline

The insulated waterline attached to the existing bridge will be relocated and/or replaced on the new bridge. This work will be coordinated with the Town of Marshall.

6. Coordination

The proposed project has been coordinated with the Town of Marshall and the Madison County Board of Education. Two public meetings were conducted and comments concerning the proposed projects were considered in reaching the decision regarding the preferred alternative. The local officials selected Alternative 3 as their preferred because it provides an aesthetic view of the Madison County Courthouse crossing the bridge.

The North Carolina State Historic Preservation Office (HPO) was contacted early in the study process. A survey of historic architectural resources was conducted in the area of potential effect of the project, in accordance with Section 106 of the Historic Preservation Act. The letter documenting SHPO concurrence with the eligibility of the Marshall Commercial Historic District and (Former) Marshall High School is included in Appendix B of this document.

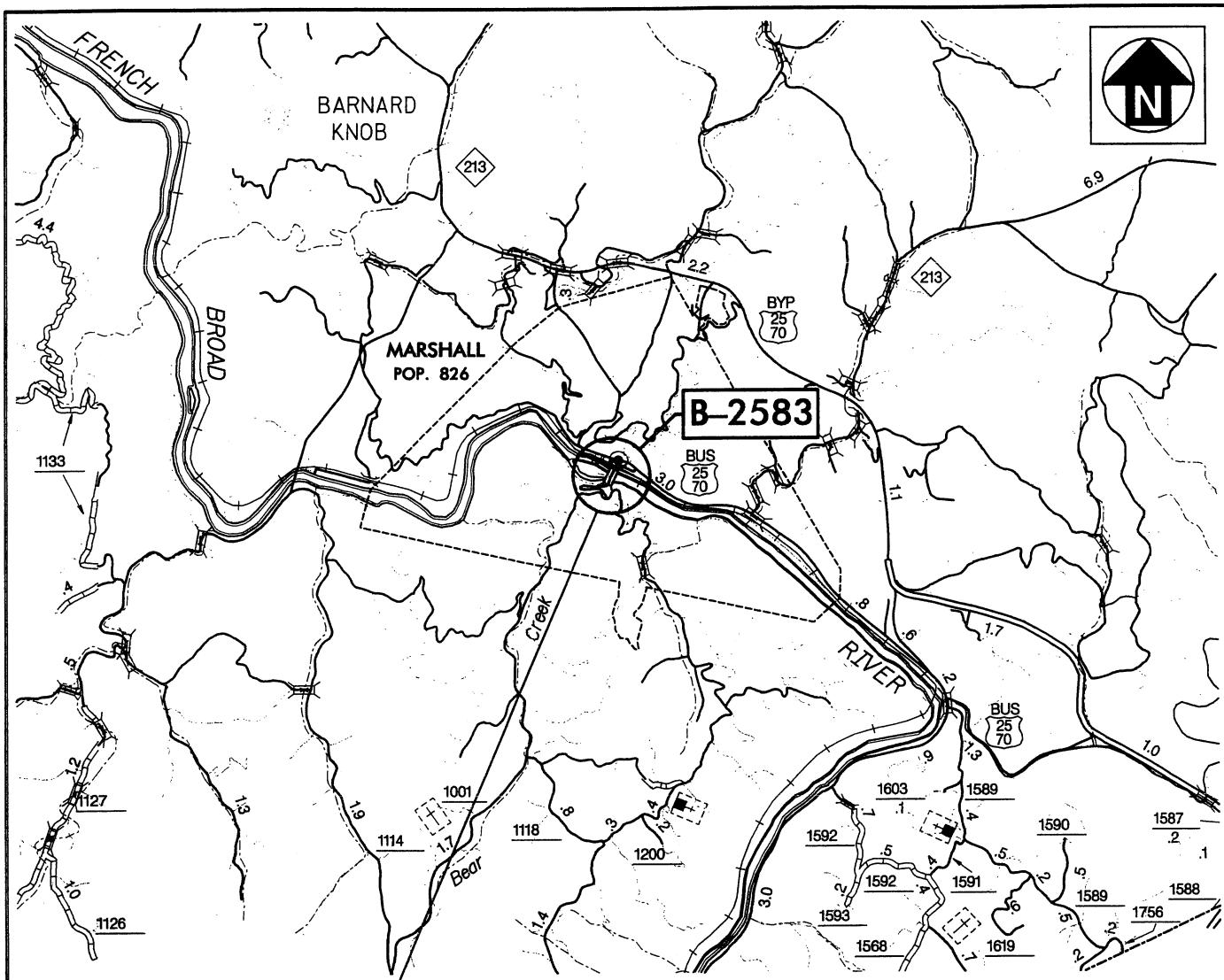
A finding of adverse effect has been determined for the Marshall Commercial Historic District and (Former) Marshall High School. The SHPO concurrence form is included in Appendix B.

In accordance with Section 106 of the National Preservation Act, since the alternatives have an adverse effect on the Marshall Commercial Historic District and (Former) Marshall High School, NCDOT has entered into a Memorandum of Agreement (MOA) with the State Historic Preservation Office (SHPO), the Federal Highway Administration, the Town of Marshall, the Madison County Board of Education and the Advisory Council on Historic Preservation (ACHP).

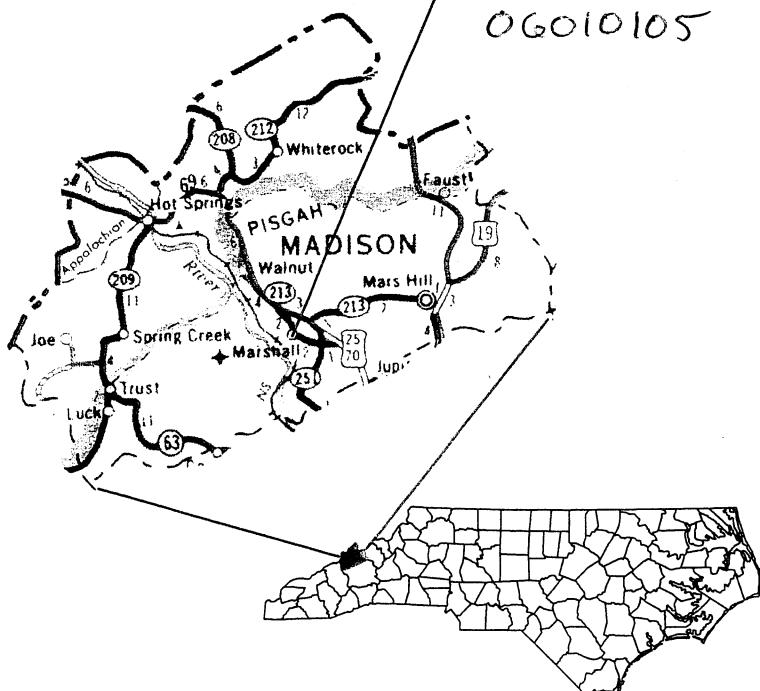
The FHWA, SHPO, the Madison County Board of Education and the Town of Marshall have reviewed and accepted the MOA, Appendix B.

APPENDIX A

FIGURES



06010105



North Carolina
Department of Transportation
Project Development & Environmental Analysis

**MADISON COUNTY
BRIDGE NO. 328 ON SR 1001
OVER FRENCH BROAD RIVER**

B-2583

0 Kilometers 1.6 Kilometers 3.2 Kilometers
0 miles 1.0 miles 2.0 miles

FIGURE 1



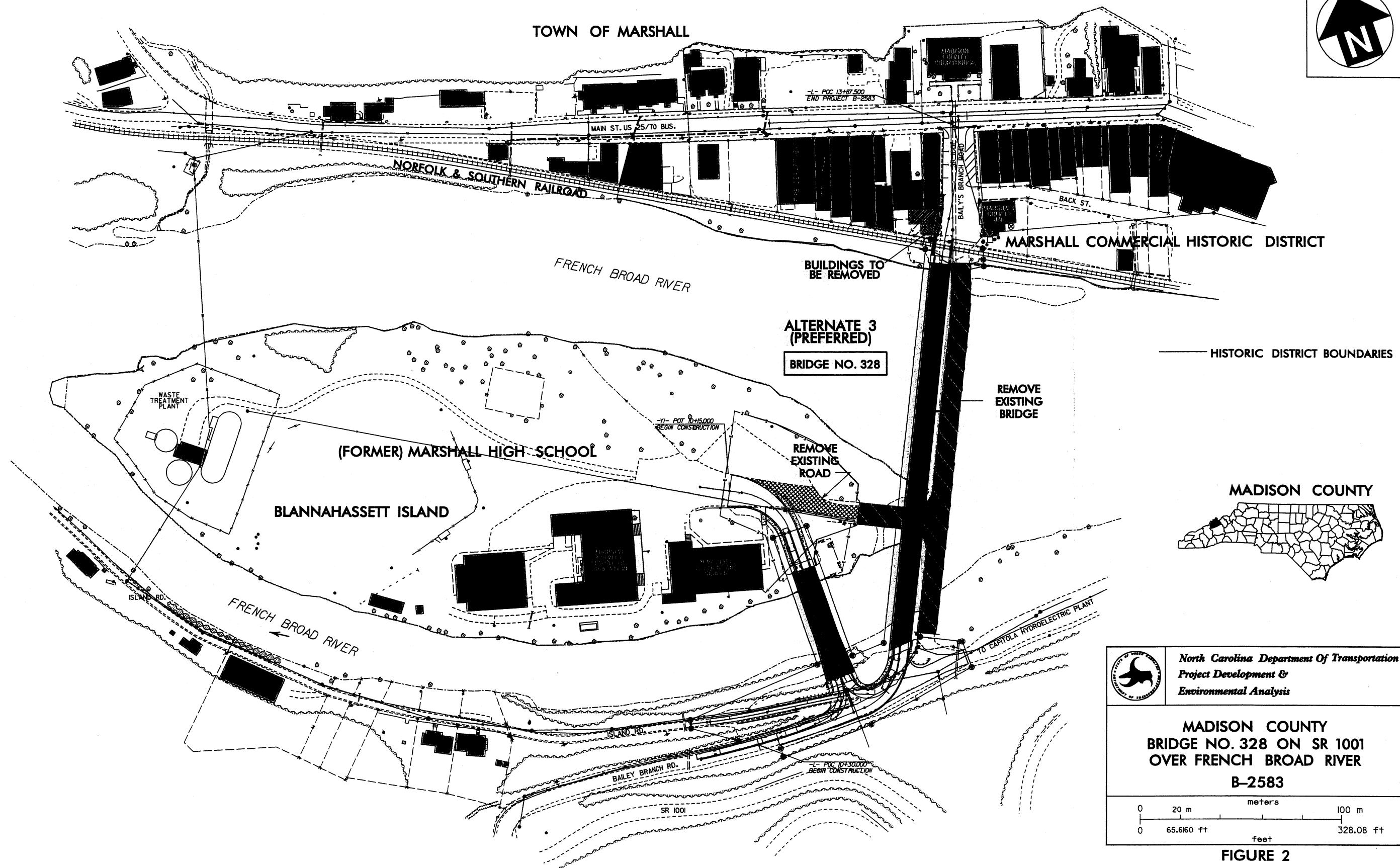
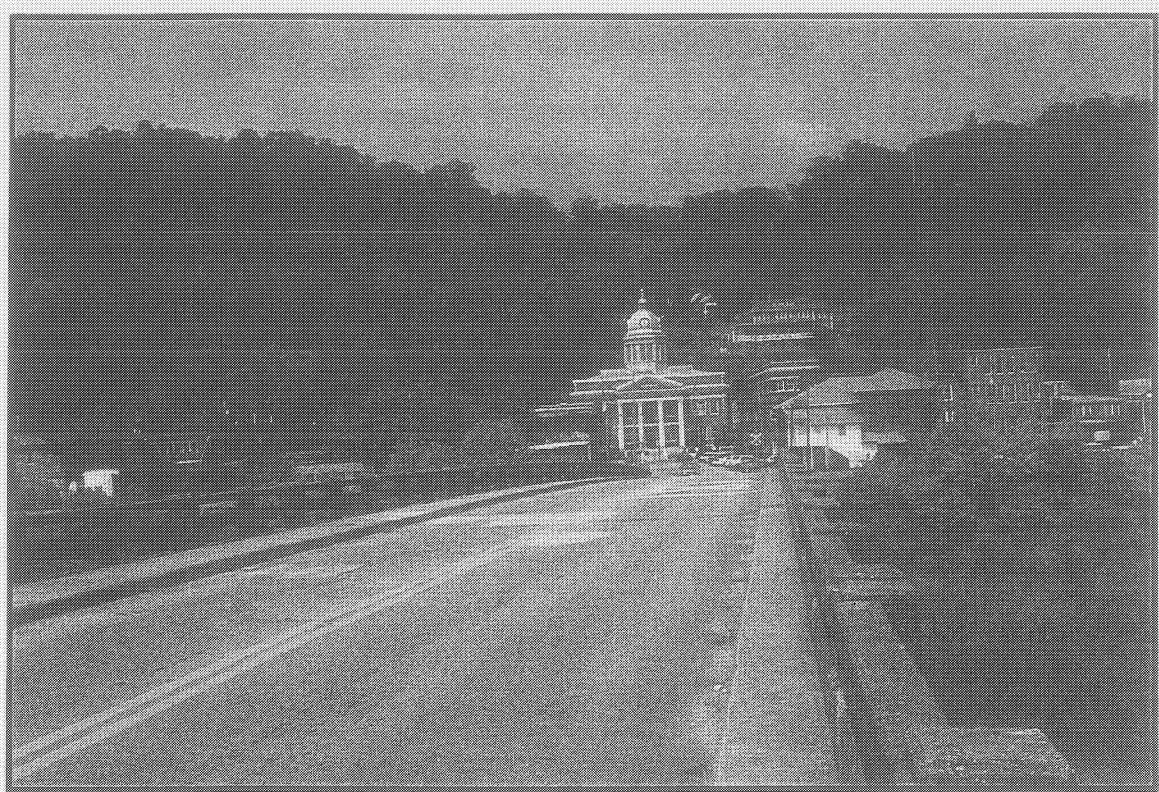


FIGURE 2

B-2583
Madison County



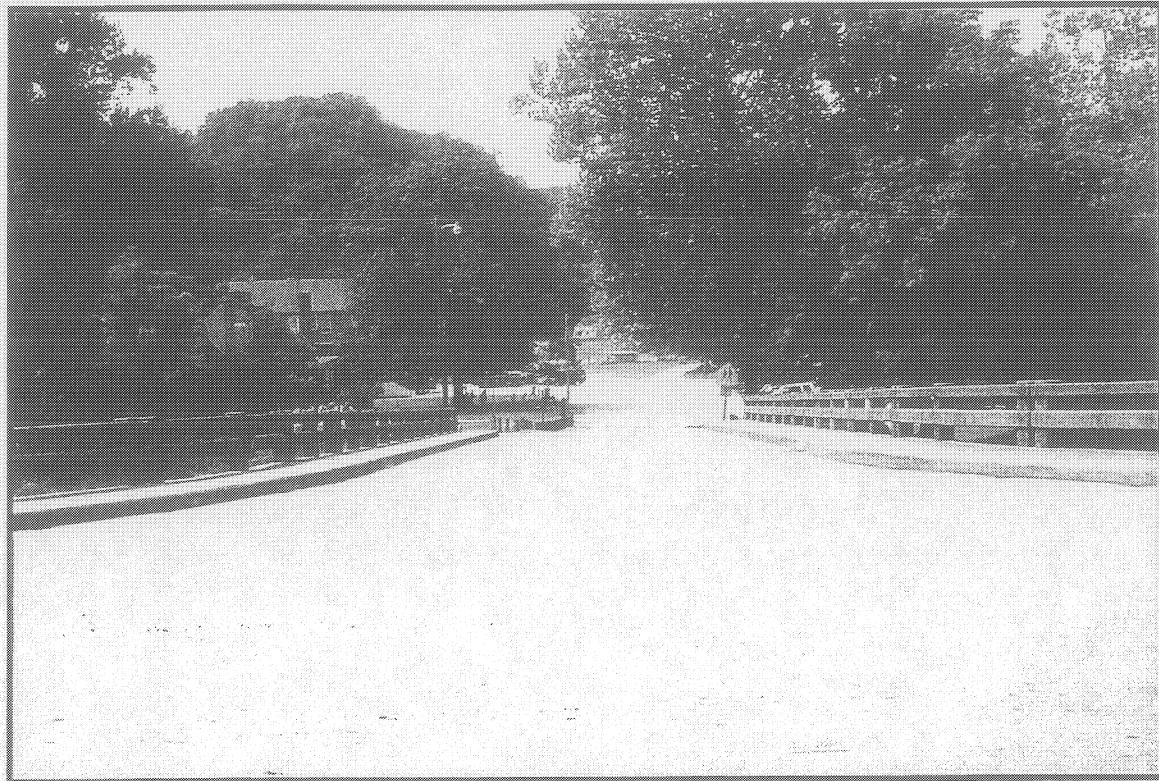
Bridge No. 328 looking north to the Town of Marshall



From Blannahassett Island looking at west side of Bridge No. 328

FIGURE 3

B-2583
Madison County

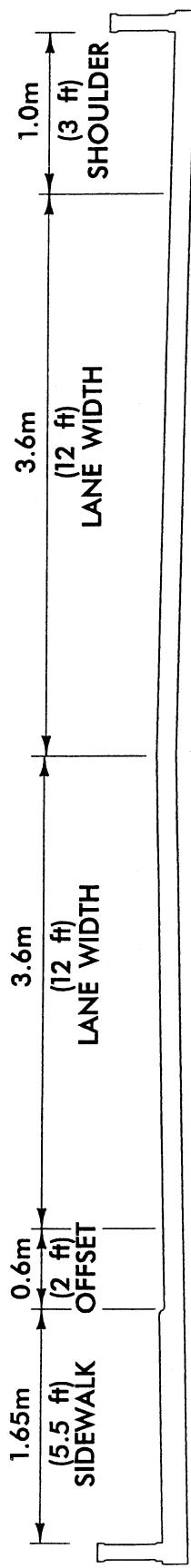


At T-intersection on Bridge No. 328 looking west to Blannahassett Island (school on left)

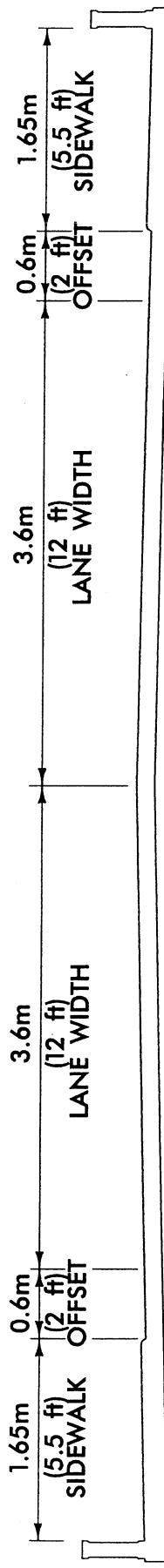


From Blannahassett Island looking east to Bridge No. 328 and T-intersection

FIGURE 3



TYPICAL BRIDGE SECTION
(Bridge on SR 1001)



TYPICAL BRIDGE SECTION
(School Bridge)

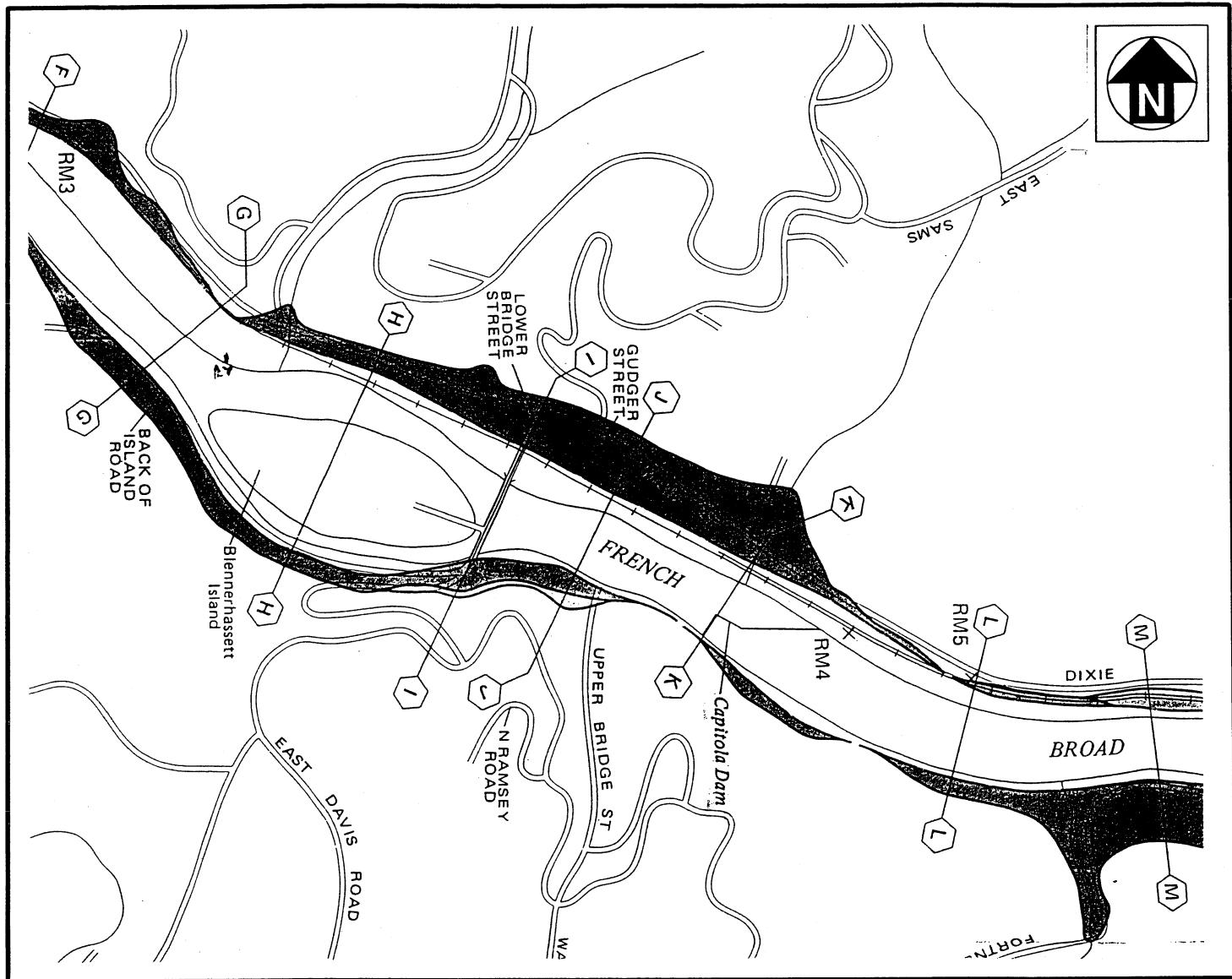
FUNCTIONAL CLASSIFICATION : RURAL MINOR COLLECTOR

AVERAGE DAILY TRAFFIC

(EXISTING) 2002 = 2,800
(CONST. YR.) 2003 = 3,000 (LOS C)
(DESIGN YR.) 2025 = 5,080 (LOS C)

| | |
|--|---|
| | North Carolina Department Of Transportation Project Development & Environmental Analysis |
| | MADISON COUNTY BRIDGE NO. 328 ON SR 1001 OVER THE FRENCH BROAD RIVER B-2583 |

FIGURE 4



FEMA – Floodplain Map of Project Area



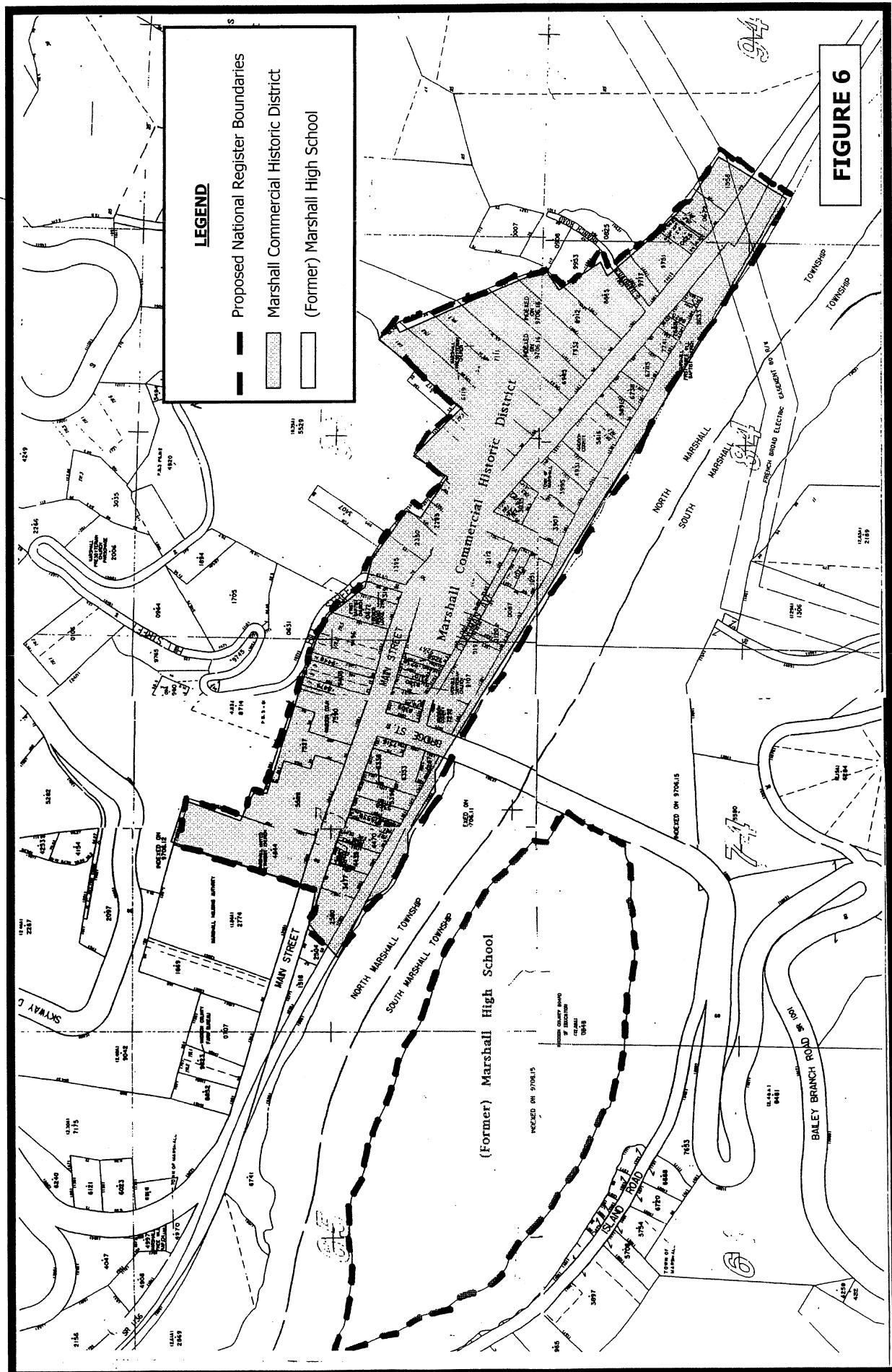
North Carolina Department of
Transportation
Project Development &
Environmental Analysis

**MADISON COUNTY
BRIDGE NO. 328 ON SR 1001
OVER FRENCH BROAD RIVER**

B-2583

0 kilometers 1.6 kilometers 3.2 kilometers
0 miles 1.0 miles 2.0 miles

FIGURE 5



APPENDIX B

MEMORANDUM OF AGREEMENT



Jennifer Harris

**North Carolina Department of Cultural Resources
State Historic Preservation Office**

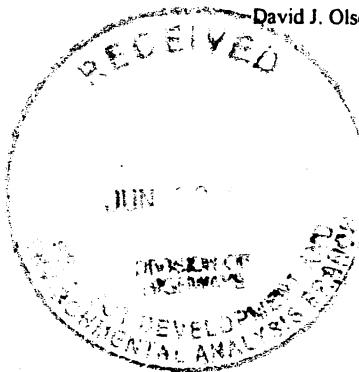
David L. S. Brook, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary
Office of Archives and History

Division of Historical Resources
David J. Olson, Director

June 6, 2002

Nicholas L. Graf
Federal Highway Administration
310 New Bern Avenue
Raleigh, NC 27601



Re: New MOA for replacement of Bridge 382 on SR 1001 over French Broad River, Marshall, Madison County, B-2583, ER 01-9893

Dear Mr. Graf:

We have received the signed new Memorandum of Agreement for the above referenced project and apologize for the delay in our response. The agreement addresses our concerns for the historic properties affected by the undertaking. I have signed the agreement and am forwarding it to you for to the Advisory Council on Historic Preservation.

We have also received the documentation required in the agreement and look forward to working with the North Carolina Department of Transportation and Town of Madison to implement the remaining terms of the agreement. If you have any questions concerning this matter, please contact Renee Gledhill-Earley at 733-4763. Thank you.

Sincerely,

Jeffrey J. Crow

Jeffrey J. Crow

Enclosure

cc: William Gilmore, NCDOT
Advisory Council

Location

507 N. Blount St, Raleigh, NC
515 N. Blount St, Raleigh, NC
515 N. Blount St, Raleigh, NC

Mailing Address

4617 Mail Service Center, Raleigh 27699-4617
4613 Mail Service Center, Raleigh 27699-4613
4618 Mail Service Center, Raleigh 27699-4618

Telephone/Fax

(919) 733-4763 • 733-8653
(919) 733-6547 • 715-4801
(919) 733-4763 • 715-4801

**MEMORANDUM OF AGREEMENT
AMONG
THE FEDERAL HIGHWAY ADMINISTRATION
AND
NORTH CAROLINA HISTORIC PRESERVATION OFFICER
FOR
THE REPLACEMENT OF BRIDGE NO. 328
ON SR 1001 OVER THE FRENCH BROAD RIVER IN MARSHALL,
MADISON COUNTY, NORTH CAROLINA**

WHEREAS, the Federal Highway Administration (FHWA) has determined that the replacement of Bridge No. 328 on SR 1001 over the French Broad River in Marshall, Madison County, North Carolina (the undertaking) will have an effect upon the Marshall Commercial Historic District and the (former) Marshall High School, two (2) properties determined eligible for listing in the National Register of Historic Places, and has consulted with the North Carolina State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the North Carolina Department of Transportation (NCDOT), representatives of the Town of Marshall, and representatives of the Madison County Board of Education have participated in the consultation and been invited to concur in this Memorandum of Agreement; and

WHEREAS, the design plans for the replacement structure have been altered and a new the MOA is necessary to replace the MOA of June 2001; and

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

STIPULATIONS

FHWA will ensure that the following measures are carried out:

I. Recordation: Prior to the initiation of work, NCDOT shall record two (2) buildings within the Marshall Commercial Historic District (32 Bailey's Branch Road and 38 Bailey's Branch Road) as well as the (former) Marshall High School and their surroundings in accordance with the attached Historic Structures and Landscape Recordation Plan (Appendix A).

II. Replacement Bridge Design: NCDOT will consult with the Town of Marshall and the Madison County Board of Education on the designs for the replacement bridge and once NCDOT completes the preliminary general drawings for the structure, then NCDOT shall consult with the North Carolina SHPO and the Town of Marshall and the Madison County Board of Education and allow each an

opportunity to comment on the preliminary general structure plans as well as the Right-of-Way plans for the project.

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

- A. Provide FHWA with recommendations which FHWA will take into account in reaching a final decision regarding the dispute, or
- B. Notify FHWA that it will comment pursuant to 36 CFR Section 800.7(c)) and proceed to comment. Any Council comment provided in response to such a request will be taken into account by FHWA in accordance with 36 CFR Section 800.7(c)(4) with reference to the subject of the dispute.

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

Execution of this agreement by FHWA and the North Carolina SHPO, its subsequent filing with the Advisory Council on Historic Preservation, and implementation of its terms evidence that FHWA has afforded the Council an opportunity to comment on the replacement of Bridge No. 328 on SR 1001 over the French Broad River in Marshall and its effects on the Marshall Commercial Historic District and the (former) Marshall High School, and that FHWA has taken into account the effects of the undertaking on the historic properties.

AGREE:

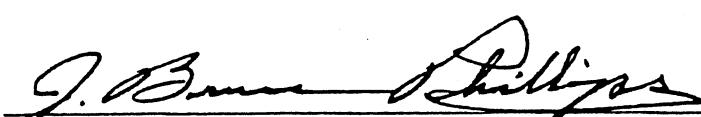

FEDERAL HIGHWAY ADMINISTRATION 1/16/02
DATE


NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICER 6/6/02
DATE

CONCUR:


NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 12/19/2001
DATE


TOWN OF MARSHALL 02-04-02
DATE


MADISON COUNTY BOARD OF EDUCATION 2-4-02
DATE

FILED BY:

ADVISORY COUNCIL ON HISTORIC PRESERVATION DATE

APPENDIX A

Historic Structures and Landscape Recordation Plan For the Replacement of Bridge No. 328 on SR 1001 over The French Broad River in Marshall, Madison County, North Carolina

Landscape

Site plan sketch of the existing conditions of the two (2) buildings within the Marshall Commercial Historic District (32 Bailey's Branch Road and 38 Bailey's Branch Road) as well as the (former) Marshall High School and their surroundings.

Photographic Requirements

Selected photographic views of the two (2) buildings within the Marshall Commercial Historic District (32 Bailey's Branch Road and 38 Bailey's Branch Road) as well as the (former) Marshall High School as a whole, and views of the individual structures and their settings, including:

- ◆ Overall views of the structures (elevations and oblique views)
- ◆ Overall views of the project area, showing the relationship of the structures to their settings

Photographic Format

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

Copies and Curation

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



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

December 19, 2001

Mr. Nicholas L. Graf, P.E.
Division Administrator
Federal Highway Administration
Department of Transportation
310 New Bern Avenue
Raleigh, North Carolina 27601

Dear Mr. Graf:

RE: New Memorandum of Agreement, Replacement of Bridge No.328 on SR 1001 over the French Broad River River, Madison County, TIP No. B-2583, State Project No. 8.2860401, Federal Aid No. BRZ-1001(14)

The above-referenced project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and implemented by the Advisory Council on Historic Preservation's regulations for compliance codified at 36 CFR Part 800. Enclosed is a new Memorandum of Agreement (MOA) among the Federal Highway Administration and the North Carolina State Historic Preservation Officer. Design changes and the addition of one consulting party negated the previous MOA (signed June 2001), therefore a new MOA was required.

After consultation with the North Carolina State Historic Preservation Office, it was determined that the subject project would have an adverse effect on the Marshall Commercial Historic District and the (former) Marshall High School, both properties eligible for listing in the National Register of Historic Places. Subsequently, a MOA has been drafted to mitigate the effects of the proposed undertaking on these properties. Please review and sign the MOA and forward it to the State Historic Preservation Officer for his signature.

If you have any questions concerning the accompanying information, please contact Mary Pope Furr, Historic Architecture Section, at (919) 733-7844 extension 300.

Sincerely,

William D. Gilmore, P.E., Manager
Project Development & Environmental Analysis Branch

WDG/mpf
Attachments

cc: Lubin Prevatt, P.E., Assistant Branch Manager
Carl Goode, P.E. Assistant Branch Manager

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1548 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-733-3141
FAX: 919-733-9794

WEBSITE: WWW.DOH.DOT.STATE.NC.US

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC



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

James B. Hunt Jr., Governor
Betty Ray McCain, Secretary
June 14, 2001

Division of Archives and History
Jeffrey J. Crow, Director

Nicholas L. Graf
Federal Highway Administration
310 New Bern Avenue
Raleigh, NC 27601

Re: MOA for replacement of Bridge 382 on SR 1001 over French Broad River,
Marshall, Madison County, B-2583, ER01-9893

Dear Mr. Graf:

We have received the signed Memorandum of Agreement for the above referenced project from the North Carolina Department of Transportation. The agreement addresses our concerns for the historic properties affected by the undertaking. I have signed the agreement and am forwarding it to you for signature and transmittal to the Advisory Council on Historic Preservation.

We look forward to working with the North Carolina Department of Transportation and Town of Madison to implement the terms of the agreement. If you have any questions concerning this matter, please contact Renee Gledhill-Earley at 733-4763. Thank you.

Sincerely,

A handwritten signature in black ink that reads "Jeffrey J. Crow".

Jeffrey J. Crow
State Historic Preservation Officer

Enclosure

cc: William Gilmore, NCDOT
Advisory Council

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

Advisory Council On Historic Preservation

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

MAP 19 2001

Mr. Nicholas L. Graf
Division Administrator
Federal Highway Administration
310 New Barn Avenue, Suite 410
Raleigh, NC 27601

REF: Proposed Replacement of Bridge No. 328 at French Broad River
Madison County, North Carolina

Dear Mr. Graf:

On March 1, 2001, we received your notification and supporting documentation regarding the adverse effects of the proposed undertaking on properties listed on and eligible for listing on the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800) does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed.

Pursuant to 36 CFR 800.6(b)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the North Carolina State Historic Preservation Officer (SHPO), and related documentation at the conclusion of the consultation process. The filing of this MOA with the Council is required in order for the Federal Highway Administration to complete its compliance responsibilities under Section 106 of the National Historic Preservation Act. We will retain a copy of the MOA for our files as requirements of the completion of the Section 106 process.

If you have any questions or require the further assistance of the Council, please contact Laura Dean at 202-606-8505 or via eMail at ldean@achp.gov.

Sincerely,

Tom Klima

h

Don L. Klima
Director
Office of Planning and Review

| | |
|---|-------------|
| FHWA - NC DIVISION | |
| RECD | MAP 19 2001 |
| SECTION 106 | |
| APPENDIX A | |
| CRITERIA FOR | |
| COUNCIL INVOLVEMENT | |
| IN REVIEWING INDIVIDUAL SECTION 106 CASES | |
| 36 CFR PART 800 | |
| FEDERAL HIGHWAY ADMINISTRATION | |
| U.S. DEPARTMENT OF TRANSPORTATION | |
| U.S. GOVERNMENT | |
| FEB 2001 | |
| Cuk | |



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601
February 27, 2001

IN REPLY REFER TO
HO-NC

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

Subject: Finding of Adverse Effect Documentation, Replacement of Bridge No. 328 on SR 1001 over the French Broad River in Marshall, Madison County, Federal-Aid No. BRZ-1001(14), TIP No. B-2583, State Project No. 8.2860401

Dear Mr. Klima:

As required by 36 CFR 800.6(a)(1), we are submitting the enclosed notification of adverse effect finding that was determined by the North Carolina Department of Transportation (NCDOT) in consultation with the North Carolina State Historic Preservation Officer and the Federal Highway Administration for the subject project. The recommended alternative for the proposed project has adverse effects on the Marshall Commercial Historic District and the (former) Marshall High School, both of which are eligible for listing in the National Historic Register of Historic Places. Currently, no alternatives avoiding the historic properties have been studied for this project as part of the Section 106 compliance process. However, at least one avoidance alternative will be studied to comply with the Section 4(f) process.

Due to the adverse effect determination for this project, we request your review of the documentation and concurrence with the proposed action. Questions concerning this submittal may be directed to Christopher Gatchell of this office at (919) 856-4350, extension 104.

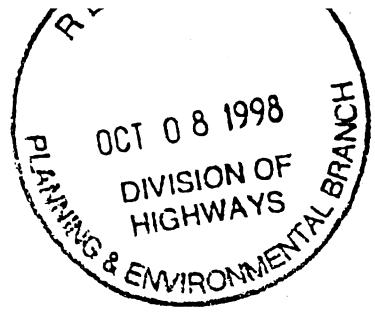
Sincerely yours,

/s/ John C. Wadsworth

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

Enclosure

File: BRZ-1001(14)
Reading File: 1b27op01.cwg
CWGatchell:dkr:02/27/01



North Carolina Department of Cultural Resources

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

Division of Archives and History
Jeffrey J. Crow, Director

October 6, 1998

MEMORANDUM

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

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

SUBJECT: Bridge Group XV, Bridge 328 on SR 1001 over
French Broad River, Madison County, B-2583, ER
99-7415

Thank you for your letter of July 17, 1998, concerning the above project. We apologize for the delay in responding.

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

Marshall Historic District. This district is included on the state study list.

Madison County Courthouse (MD 1). This property is listed in the National Register of Historic Places.

Rock Cafe (MD 44). This property is included on the state study list.

Samantha Lee Mill

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

There are no known archaeological sites within the proposed project area. Based on our present knowledge of the area, it is unlikely that any archaeological resources which may be eligible for inclusion in the National Register of Historic Places will be affected by the project construction. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

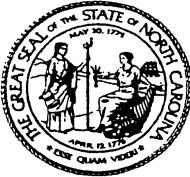


The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

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

DB:slw

cc: N. Graf
B. Church
T. Padgett
Doug MacKenzie, P.O. Box 489, Marshall NC 28753



**North Carolina Department of Cultural Resources
State Historic Preservation Office**

David L. S. Brook, Administrator

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

Division of Archives and History
Jeffrey J. Crow, Director

October 11, 1999

MEMORANDUM

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

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

RE: Replace Bridge No. 328 on SR 1001 over French
Broad River TIP No. B-2583, State No. 8.2860401,
Federal Aid No. BRZ-1001(14), Marshall, Madison
County, ER 00-7566

Thank you for transmitting the survey report by Mattson, Alexander and Associates, Inc., concerning the above project.

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

Marshall Commercial Historic District. The Marshall Commercial Historic District is considered eligible for listing on the National Register under Criterion A for community Development and Planning as it illustrates the geographical demands that shaped the development of towns throughout the mountain counties. The district is also eligible under Criterion A for Transportation as its single long main street and railroad tracks, both of which run parallel to the river are part of historic transportation routes through the region.

The Marshall Commercial Historic District is also eligible for listing in the National Register under Criterion C for Architecture as it retains a variety of well preserved building types and architectural styles exemplary of prosperous county seats in western North Carolina during the late nineteenth and early twentieth centuries.

(Former) Marshall High School. The (Former) Marshall High School is eligible for listing in the National Register under Criterion A for Education as representative of the school consolidation movement that swept North Carolina and Madison County between the 1920s and World War II.

William D. Gilmore
ER 00-7566
October 13, 1999
Page 2

The (Former) Marshall High School is also eligible for listing in the National Register under Criterion C for architecture as a well-preserved example of 1920s school architecture in North Carolina, a simple mix of Tudor and Colonial motifs.

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

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

DB:ldb

cc: B.Church
ACOE

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: Replacement of Bridge No. 328 on SR 1001 over French Broad River in Marshall

On November 5, 1999, representatives of the

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

reviewed the subject project and agreed

there are no effects on the National Register-listed property/properties located within the project's area of potential effect and listed on the reverse.

there are no effects on the National Register-eligible property/properties located within the project's area of potential effect and listed on the reverse.

there is an effect on the National Register-listed property/properties located within the project's area of potential effect. The property/properties and the effect(s) are listed on the reverse.

there is an effect on the National Register-eligible property/properties located within the project's area of potential effect. The property/properties and effect(s) are listed on the reverse.

Signed:

Mary Pope

11.5.99

Representative, NCDOT

Date

Mark C. Brown

11/5/99

FHWA, for the Division Administrator, or other Federal Agency

Date

Paul Alper

11/5/99

Representative, SHPO

Date

David A. Cook, Deputy

11/6/99

State Historic Preservation Officer

Date

Federal Aid # BRZ-1001(14)

TIP # B-2583

County: Madison

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

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

Marshall Commercial HD (DE) -adverse
(former) Marshall High School (DE) adverse

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

Initialed: NCDOT MPt

FHWA MM(j)

SHPO AT

WDB
AT

APPENDIX C

CORRESPONDENCE





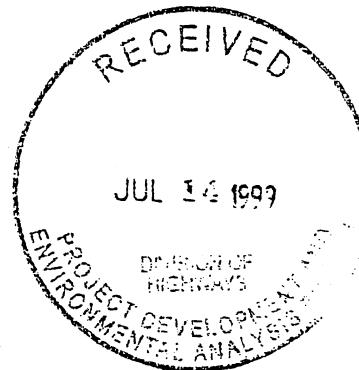
DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1890
WILMINGTON, NORTH CAROLINA 28402-1890

IN REPLY REFER TO

July 12, 1999

Planning Services Section

Mr. William D. Gilmore, P.E., Manager
Project Development and
Environmental Analysis Branch
North Carolina Department of Transportation
Post Office Box 25201
Raleigh, North Carolina 27611-5201



Dear Mr. Gilmore:

This is in response to a letter from your office dated July 18, 1998, addressed to Mr. Steve Lund of our Asheville Regulatory Field Office, and faxed to Mr. Lund on May 13, 1999, requesting comments on six proposed bridge replacements in five western North Carolina counties. These counties and TIP Nos. are Madison – B-2583, Haywood – B-3187 and B-3660, Henderson – B-3191, Jackson – B-3196, and Rutherford – B-3238, (Regulatory Division Action ID Nos. 199930825, 199930826, 199930830, 199930827, 199930828, and 199930829, respectively).

Our comments involve impacts to flood plains and jurisdictional resources that include waters, wetlands, and U.S. Army Corps of Engineers projects. Enclosed are our comments on these issues.

We appreciate the opportunity to comment on these projects. If we can be of further assistance, please contact us.

Sincerely,

W. Coleman Long
Chief, Technical Services Division

Enclosure

U.S. ARMY CORPS OF ENGINEERS, WILMINGTON DISTRICT, COMMENTS ON:

Six Bridge Replacements in Five Western North Carolina Counties

1. FLOOD PLAINS: POC - Bobby L. Willis, Planning Services Section, at
(910) 251-4728

Henderson County does not participate in the National Flood Insurance Program (NFIP). However, we recommend that the proposed crossing improvement in that county be designed so as not to significantly increase upstream water surface elevations. The remaining four counties are participants in the NFIP. The crossing in Madison County is located within the jurisdictional limits of the town of Marshall, which is also a participant in the NFIP. Of these, the crossing of the West Fork Pigeon River in Haywood County and, possibly, the French Broad River crossing in the town of Marshall involve detailed study streams with 100-year flood elevations determined and floodways defined. The crossings of Fines Creek in Haywood County and West Fork Tuckasegee River in Jackson County are on approximately mapped streams, which do not have 100-year flood elevations shown. We do not have flood maps in our office that cover the French Broad River crossing in Marshall and the Second Broad River crossing in Rutherford County. We refer you to the community and county for possible flood ordinance requirements relative to these crossings. A summary of flood plain information that we have pertaining to the bridges in the NFIP participating counties is contained in the following table. This information was taken from the pertinent Flood Insurance Rate Map (FIRM).

| <u>Bridge No.</u> | <u>Route No.</u> | <u>County</u> | <u>Study Stream</u> | <u>BFE*</u> | <u>Date Of FIRM</u> |
|-------------------|------------------|---------------|---------------------|-------------|---------------------|
| 328 | SR 1001 | Madison | French Broad R. | * | 5/78* |
| 79 | SR 1112 | Haywood | W. Fk. Pigeon R. | 2687** | 8/98 |
| 204 | SR 1334 | Haywood | Fines Creek | Approx. | 7/84 |
| 193 | SR 1157 | Jackson | W. Fk. Tuckasegee | Approx. | 5/89 |

* Flood map not in our office. Refer to town of Marshall for ordinance requirements.

** Base (100-year) Flood Elevation in feet N.G.V.D.

1. **FLOOD PLAINS: (Continued)**

For the detail study stream crossings, reference is made to the Federal Emergency Management Agency's (FEMA's) "Procedures for 'No Rise' Certification for Proposed Developments in Regulatory Floodways", copies of which have been furnished previously to your office. Improvements to the bridges should be designed to meet the requirements of the NFIP, administered by the FEMA, and be in compliance with all local ordinances. Specific questions pertaining to community flood plain regulations or developments should be referred to the local building official.

Except for Rutherford County, all of the affected counties are within the planning jurisdiction of the USAED, Nashville District. The Nashville District does not currently have projects that would be affected by the proposed bridge projects. Mr. Harry Blazek may be contacted at (615) 736-5948 for further information and comments from the Nashville District.

2. **WATERS AND WETLANDS: POC - Steve Lund, Project Manager, Asheville Field Office, Regulatory Division, at (828) 271-4857**

All work restricted to existing high ground will not require prior Federal permit authorization. However, U.S. Department of the Army (DA) permit authorization pursuant to Section 404 of the Clean Water Act of 1977, as amended, will be required for the discharge of excavated or fill material in waters of the United States or any adjacent and/or isolated wetlands in conjunction with your proposed bridge replacements, including disposal of construction debris. Specific permit requirements will depend on design of the projects, extent of fill work within waters of the United States, including wetlands (dimensions, fill amounts, etc.), construction methods, and other factors.

Although these projects may qualify as a Categorical Exclusion, in order for the proposal to be considered for authorization under Nationwide Permit No.23, the project planning report should contain sufficient information to document that the proposed activity does not have more than a minimal individual or cumulative impact on the aquatic environment. Please be reminded that, prior to utilization of nationwide permits within any of the 25 designated mountain trout counties, the North Carolina Department of Transportation (NCDOT) should provide a letter of notification to the Asheville Regulatory Field Office and the appropriate North Carolina Wildlife Resources Commission office with reference to impacts to mountain trout water habitat. The mountain trout designation carries discretionary authority for the utilization of nationwide permits.

2. WATERS AND WETLANDS: (Continued)

Our experience has shown that replacing bridges with culverts often results in sufficient adverse impacts to consider the work as having more than minimal impacts on the aquatic environment. Accordingly, the following items need to be addressed in the project planning report:

- a. The report should contain the amount of permanent and temporary impacts to waters and wetlands as well as a description of the type of habitat that will be affected.
- b. Offsite detours are always preferable to onsite (temporary) detours in wetlands. If an onsite detour is the recommended action, justification should be provided.
- c. Project commitments should include the removal of all temporary fills from waters and wetlands and "time-of-the-year" restrictions on in-stream work if recommended by the North Carolina Wildlife Resources Commission. In addition, if undercutting is necessary for temporary detours, the undercut material should be stockpiled to be used to restore the site.
- d. All restored areas should be planted with endemic vegetation, including trees, if appropriate.
- e. The report should provide an estimate of the linear feet of new impacts to streams resulting from construction of the project.
- f. If a bridge is proposed to be replaced with a culvert, NCDOT must demonstrate that the work will not result in more than minimal impacts on the aquatic environment, specifically addressing the passage of aquatic life, including anadromous fish. In addition, the report should address the impacts that the culvert would have on recreational navigation.
- g. In addition, to be considered for authorization, discharge of demolition material into waters and wetlands and associated impacts must be disclosed and discussed in the project planning report.

At this point in time, construction plans are not available for review. When final plans are complete, including the extent and location of any work within waters of the United States and wetlands, our Regulatory Division would appreciate the opportunity to review those plans for a project-specific determination of DA permit requirements.

If you have questions or need further information, please contact Mr. Lund.



Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902-1499

October 22, 1998



Mr. William D. Gilmore, P.E., Manager
Planning and Environmental Branch
North Carolina Department of Transportation
Post Office Box 25201
Raleigh, North Carolina 27611-5201

Dear Mr. Gilmore:

GROUP XV BRIDGE REPLACEMENT PROJECTS, FRENCH BROAD RIVER, WEST FORK PIGEON RIVER, SOUTH MILLS RIVER, WEST FORK TUCKASEGEE RIVER, AND FINES CREEK, HAYWOOD, HENDERSON, JACKSON, AND MADISON COUNTIES, NORTH CAROLINA

TVA has reviewed the scoping notice for the following proposed bridge replacements in western North Carolina:

- B-2583, SR 1001 over French Broad River, Madison County
- B-3187, SR 1112 over West Fork Pigeon River, Haywood County
- B-3660, SR 1334 over Fines Creek, Haywood County
- B-3191, SR 1338 over South Mills River, Henderson County
- B-3196, SR 1157 over West Fork Tuckasegee River (Thorpe Dam Spillway), Jackson County

The environmental document prepared for these projects should note that approvals under Section 26a of the TVA Act would be required for the bridge replacements and structure modifications. TVA would hope to use the Federal Highway Administration Categorical Exclusion documents as support for its environmental review of the same actions. Therefore, the inclusion of information related to wetlands and potential mitigation, Floodplain Management Executive Order, National Historic Preservation Act compliance, and Endangered Species Act compliance would lower TVA's review costs and greatly facilitate TVA's eventual approval of the projects. Other issues to be discussed would vary according to project location and impacts but may include, as appropriate, state-listed species (biodiversity impacts) and visual impacts.

Please invite TVA to any interagency meetings, if any are found to be necessary. Please send a copy of the completed environmental documents to TVA.

Should you have any questions, please contact Harold M. Draper at (423) 632-6889 or hmdraper@tva.gov.

Sincerely,

Jon M. Draper, Manager
Environmental Management

REPRINTED
MAY 28 1999
1999



North Carolina Wildlife Resources Commission

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

MEMORANDUM

TO: William D. Gilmore, P.E., Manager
Project Development and Environmental Analysis Branch, NCDOT

FROM: Mark S. Davis, Mountain Region Coordinator *Mark S. Davis*
Habitat Conservation Program

DATE: May 24, 1999

SUBJECT: Comments on Group XV Bridge Replacement Projects in Haywood, Henderson, Jackson and Madison Counties.

This memorandum responds to your request for our concerns regarding impacts on fish and wildlife resources resulting from the subject projects. The North Carolina Wildlife Resources Commission (NCWRC) has reviewed the proposed projects, and 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).

The proposed work involves 5 bridge replacement projects in western North Carolina (listed below). Construction impacts on wildlife and fisheries resources will depend on the extent of disturbance in the streambed and surrounding floodplain areas. We prefer bridge designs that do not alter the natural stream morphology or impede fish passage. Bridge designs should also include provisions for the deck drainage to flow through a vegetated upland buffer prior to reaching the subject surface waters. We are also concerned about impacts to designated Public Mountain Trout Waters (PMTW) and environmental documentation for these projects should include description of any streams or wetlands on the project site and surveys for any threatened or endangered species that may be affected by construction.

B-2583 - Madison County, Bridge No. 328 on SR 1001 over French Broad River

We have not identified any special concerns associated with this project.

B-3187 - Haywood County, Bridge No. 79 on SR 1112 over West Fork Pigeon River

The West Fork Pigeon River is designated Hatchery Supported PMTW. The river also supports a wild trout population in the project area. We would prefer that the existing bridge be replaced with another spanning structure. In reference to the Bridge Demolition Form, the moratorium required by NCWRC should read instream work should **not** be conducted between November 1 and April 15.

B-3191 - Henderson County, Bridge No. 6 on SR 1338 over South Mills River

The South Mills River is not designated PMTW at the project site; however, the stream supports a wild trout population. We would prefer that the existing bridge be replaced with another spanning structure. In reference to the Bridge Demolition Form, the moratorium required by NCWRC should read instream work should **not** be conducted between November 1 and April 15.

B-3196 - Jackson County, Bridge No. 193 on SR 1157 over Thorpe Dam Spillway

We have not identified any special concerns associated with this project.

B-3660 - Haywood County, Bridge No. 204 on SR 1334 over Fines Creek

Fines Creek is not designated PMTW at the project site; however, the stream supports a wild trout population. We would prefer that the existing bridge be replaced with another spanning structure. In reference to the Bridge Demolition Form, the moratorium required by NCWRC should read instream work should **not** be conducted between November 1 and April 15.

Because all of the above counties are recognized as "trout water counties" by the Corps of Engineers (COE), the NCWRC will review any nationwide or general 404 permits for the proposed projects. The following conditions are likely to be placed on the subject 404 permits:

1. Adequate sedimentation and erosion control measures must be implemented and maintained on the project site to avoid impacts to downstream aquatic resources. Structures should be inspected and maintained regularly, especially following rainfall events.
2. 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.
3. 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.
4. If concrete is used during construction, a dry work area must be maintained to prevent direct contact between curing concrete and stream water. Uncured concrete affects water quality and is highly toxic to fish and other aquatic organisms.
5. Grading and backfilling should be minimized, and tree and shrub growth should be retained if possible to ensure long term availability of shoreline cover for gamefish and wildlife.
6. **In trout waters, instream construction is prohibited during the trout spawning period of November 1 to April 15 to avoid impacts on trout reproduction.**
7. 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.
8. If multi-celled reinforced concrete box culverts are utilized, they should be designed so that all water flows through a single cell (or two if necessary) during low flow conditions. This could be accomplished by constructing a low sill on the upstream end of the other cells that will divert low flows to another cell. This will facilitate fish passage at low flows.

9. Notched baffles should be placed in reinforced concrete box culverts at 15 foot intervals to allow for the collection of sediments in the culvert, reduce flow velocities, and to provide resting places for fish moving through the structure.
10. Only clean, sediment-free rock should be used as temporary fill (causeways), and should be removed without excessive disturbance of the natural river bottom when construction is completed.
11. 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.

Thank you for the opportunity to review and comment during the early stages of these projects. If you have any questions regarding these comments, please contact me at (828) 452-2546.

cc: Mr. Steven Lund, NCDOT Coordinator, COE, Asheville
Ms. Stacy Baldwin, P.E., PD & EA Branch, NCDOT, Raleigh
Mr. Kevin Austin, P.E., Barbara H. Mulkey Engineering, Inc., Raleigh



NORFOLK
SOUTHERN

Norfolk Southern Corporation
175 Spring Street, S.W.
Atlanta, Georgia 30303
404 658-2250
404 658-2331 FAX

73 13

W. H. Duncan
Chief Engineer
Design & Construction

February 14, 2000

Re: **MARSHALL, NORTH CAROLINA** – Proposed replacement of bridge No. 328 on SR-1001 over the French Broad River, Madison County, TIP No. B-2583. Proposed relocation of the SR-1001, Bridge Street, grade crossing on the north end of the bridge near Milepost S-163.6, AAR/DOT No. 730 312X.

File: 120-1-5790 PND/ct

Mr. William D. Gilmore, P.E.
Manager
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
P. O. Box 25201
Raleigh, North Carolina 27611-5201

Dear Mr. Gilmore:

Reference is made to your letter dated January 4, 2000 to Chief Engineer, Bridges and Structures C. T. Goewey concerning the subject project. Your letter and plan have been forwarded to this office for our response.

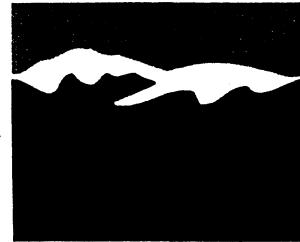
Having the existing and proposed bridge structure in such close proximity to the track, we will, of course, be interested in reviewing structural detail and construction sequencing plans as they are developed in order to assure the integrity of the track and the safety of our operations. We are not aware of any track or other changes anticipated in the area of the proposed bridge construction, other than normal track maintenance activities.

We note that the existing grade crossing is equipped with automatic flashing light signals. I ask that the Department consider the installation of automatic flashing light crossing signals and gates at the relocated crossing. The installation of a prefabricated concrete or rubber grade crossing surface at this location should also be considered. We would expect the department to bear all costs associated with the changes.

Please contact Phil Decker at 404/658-2262 should you have questions.

Sincerely,

W.H. Duncan
W. H. Duncan
Ex-04/01



TOWN OF MARSHALL

MAYOR: John A. Dodson

ALDERMEN: David Allen, R.B. McDevitt, Edward Morton, Joe Penland, Jr., Mary Jane Wallin

December 09, 1999

Ms. Stacy Harris, PE
Project Development & Environment Analysis
North Carolina Department of Transportation
Post Office Box 25201
Raleigh, North Carolina 27611

Subject: Replacement of Bridge #328

Dear Ms. Harris:

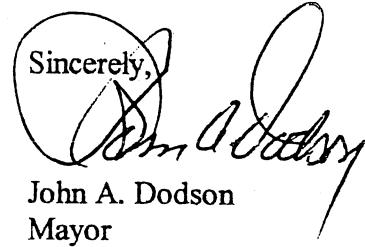
At the October 26, 1999 citizens information meeting Mr. Doug Mackenzie spoke on behalf of the Town and asked if the North Carolina Department of Transportation would be willing to provide conduit in the new bridge rail so as to allow the Town to provide lights upon completion of the bridge. Mr. Mackenzie also requested that any excess right-of-way properties be deeded to the Town for use as greenways, etc.

On Monday, December 06, 1999 the Board of Aldermen in regular session voted to formally ask that the North Carolina Department of Transportation consider these requests. The Board believes that the placement of lights along the bridge will further enhance the beautification efforts our Town is undergoing.

As you are aware the Town of Marshall sits along the French Broad River with limited space to expand. The Town would also request that the North Carolina Department of Transportation consider that the disposition of any excess right-of-way properties be made to the Town of Marshall. The Town is interested in possibly placing small parks, greenways, etc. on these properties.

The Town has asked its attorney to explore the liabilities that would be associated with the acceptance of the existing T-section of the bridge. If the attorney finds that it would be acceptable for the Town to take possession of this section, the Board will then instruct him to prepare a resolution stating so.

If you have any questions regarding this request please feel free to contact me. We look forward to your response.

Sincerely,

John A. Dodson
Mayor

OWN OF MARSHALL

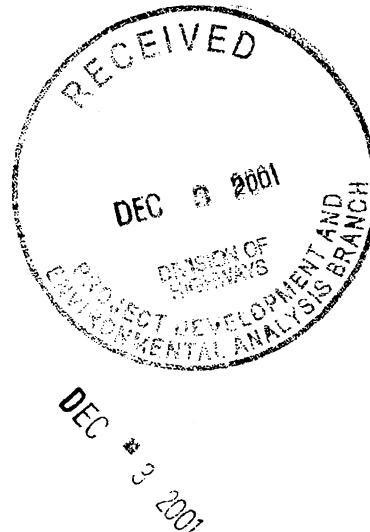
AYOR: JOHN A. DODSON

DERMEN: DAVID ALLEN, R.B. McDEVITT, EDWARD A. MORTON, JOE PENLAND, JR., MARY JANE WALLIN

Harris

P.O. BOX 548
MARSHALL, NC 28753
(828) 649-3031
FAX (828) 649-3413

November 29, 2001



William D. Gilmore
Project Development and Environmental Analysis
NC Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina

Dear Mr. Gilmore:

Subject: Replacement of Bridge No. 328 on SR 1001 over the French Broad River
in Marshall, Madison County, TIP No. B-2583

This letter is in response to your letter dated September 27, 2001. The Town of Marshall agrees with all specifications and details of the replacement of Bridge No.328 stated in said letter. However, to be sure of no misunderstanding, the lighting conduit will only be needed on the larger bridge section, not the separate bridge that will come from the south of the river.

All other conditions are favorable, and the Town of Marshall agrees to the terms set forth.

Sincerely,

John A. Dodson, Mayor

Bill Goodwin

TOWN OF MARSHALL

MAYOR: John Dodson

ALDERMEN: David Allen, Randy Hensley, Edward A. Morton, Mary Jane Wallin, Yates Ward



P.O. Box 548
Marshall, N.C. 28753
(828) 649-3031
FAX (828) 649-3413

June 4, 2002

**Mr. William D. Gilmore, PE, Manager
Project Development & Environmental Analysis
State of North Carolina
Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548**

Dear Mr. Gilmore:

**On behalf of the Board of Aldermen and the Marshall Community
Volunteer Fire Department I am requesting that the fire line be
attached to the new bridge on the upstream side.**

**The fire department will use this line to draw water from the river
rather than drawing on the town water supplies in fighting fires.**

**Thank you for your cooperation. If you have any questions or concerns
please contact me at 828-649-3031.**

Sincerely,

John A. Dodson

**John A. Dodson, Mayor
Town of Marshall**

Madison County Schools

2 Blannahassett Island Road ~ Marshall, NC 28753-9006
Phone 828-649-9276 ~ Fax 828-649-9334

Sue Cantrell
Superintendent

TO: Stacy Baldwin.
FROM: Susie Peek
RE: Buses traveling Bridge No. 328 on SR 1001
DATE: September 24, 1998

In Madison County we have 7 buses traveling the bridge over the French Broad River, in Madison County, T.I.P. No B-2583.

Madison County Schools

Board of Education:
Bruce Phillips, Chairman
Ruby Gayle Anderson
Craig Goforth
J.C. Wallin
Louie Zimmerman



"CHILDREN ARE OUR BUSINESS"



Ronald Wilcox, Ed. D., Superintendent

Theresa Banks, Ed. D.
Associate Superintendent
Deborah B. Frisby
Assistant Superintendent
115 Blannahassett Island
Marshall, NC 28753-9006
Phone: 828-649-9276
Fax: 828-649-9334
Email: madison.k12.nc.us

TO: Pam Williams

FAX NO.: (919) 851-1918

FROM: Ronald Wilcox, Superintendent

Ronald Wilcox

DATE: December 11, 2001

SUBJECT: Bridge at Marshall

The contract that you referred to in your letter dated November 26, 2001, will need a place for our School Board Chairman, Dr. J. Bruce Phillips, to sign. I would like for you to come speak to our Board about the bridge or at least put in writing all the ramifications that will be a part of the construction.

RW/mc

RELOCATION REPORT

North Carolina Department of Transportation
AREA RELOCATION OFFICE

E.I.S. CORRIDOR DESIGN

| | | | | | | | | |
|-----------|--------|--------------|---------|-----------|---|----|---|-------------|
| PROJECT: | | COUNTY | Madison | Alternate | 1 | of | 3 | Alternate |
| I.D. NO.: | B-2583 | F.A. PROJECT | | | | | | ALTERNATE 1 |

DESCRIPTION OF PROJECT: Replace Bridge No. 328 on SR 1001 over French Broad River on an alignment to the west of the exist. location. During const., traffic will be maintained on existing structure & temp. bridge from SR 1001 to island

| ESTIMATED DISPLACED | | | | | INCOME LEVEL | | | | | | | |
|----------------------|--------|--|-------|------------|--|---------|----------|----------|---------|---|----------|---|
| Type of Displacees | Owners | Tenants | Total | Minorities | 0-15M | 15-25M | 25-35M | 35-50M | 50 UP | | | |
| Residential | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Businesses | 0 | 0 | 0 | 0 | | | | | | | | |
| Farms | 0 | 0 | 0 | 0 | | | | | | | | |
| Non-Profit | 0 | 0 | 0 | 0 | | | | | | | | |
| ANSWER ALL QUESTIONS | | | | | VALUE OF DWELLING | | | | | | | |
| Yes | No | Explain all "YES" answers. | | | Owners | Tenants | For Sale | For Rent | | | | |
| | X | 1. Will special relocation services be necessary? | | | 0-20M | 0 | \$ 0-150 | 0 | 0-20M | 0 | \$ 0-150 | 0 |
| | X | 2. Will schools or churches be affect by displacement? | | | 20-40M | 0 | 150-250 | 0 | 20-40M | 0 | 150-250 | 0 |
| X | | 3. Will business services still be available after project? | | | 40-70M | 0 | 250-400 | 0 | 40-70M | 0 | 250-400 | 0 |
| | X | 4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc. | | | 70-100M | 0 | 400-600 | 0 | 70-100M | 0 | 400-600 | 0 |
| | X | 5. Will relocation cause a housing shortage? | | | 100 UP | 0 | 600 UP | 0 | 100 UP | 0 | 600 UP | 0 |
| | X | 6. Source for available housing (list). | | | TOTAL | 0 | | 0 | | 0 | | 0 |
| | X | 7. Will additional housing programs be needed? | | | REMARKS (Respond by Number) | | | | | | | |
| | X | 8. Should Last Resort Housing be considered? | | | 3. Will not be disrupted due to the project | | | | | | | |
| | X | 9. Are there large, disabled, elderly, etc. families? | | | 6. N/A | | | | | | | |
| | X | 10. Will public housing be needed for project? | | | 11. Madison County Housing Authority, Marshall | | | | | | | |
| X | | 11. Is public housing available? | | | 12. N/A | | | | | | | |
| X | | 12. Is it felt there will be adequate DSS housing available during relocation period? | | | 14. N/A | | | | | | | |
| | X | 13. Will there be a problem of housing within financial means? | | | | | | | | | | |
| X | | 14. Are suitable business sites available (list source). | | | | | | | | | | |
| | | 15. Number months estimated to complete relocation? | | | 12 | | | | | | | |

Janice L. Zere 4/20/99 *D. R. Clark* 4-26-99
Right of Way Agent Date Approved by Date

RELOCATION REPORT

North Carolina Department of Transportation
AREA RELOCATION OFFICE

E.I.S. CORRIDOR DESIGN

| | | | | | | | | |
|-----------|--------|--------------|---------|-----------|-------------|----|---|-----------|
| PROJECT: | | COUNTY | Madison | Alternate | 2 | of | 3 | Alternate |
| I.D. NO.: | B-2583 | F.A. PROJECT | | | ALTERNATE 2 | | | |

DESCRIPTION OF PROJECT: Replace Bridge No. 328 on SR 1001 over French Broad River on an alignment to the east of the exist. location. During const., traffic will be maintained on existing structure

| ESTIMATED DISPLACED | | | | | INCOME LEVEL | | | | | | | |
|----------------------|--------|--|-------|------------|---|---------|----------|--------|----------|---|----------|---|
| Type of Displacees | Owners | Tenants | Total | Minorities | 0-15M | 15-25M | 25-35M | 35-50M | 50 UP | | | |
| Residential | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Businesses | 0 | 0 | 0 | 0 | VALUE OF DWELLING | | | | | | | |
| Farms | 0 | 0 | 0 | 0 | Owners | Tenants | For Sale | | For Rent | | | |
| Non-Profit | 0 | 0 | 0 | 0 | 0-20M | 0 | \$ 0-150 | 0 | 0-20M | 0 | \$ 0-150 | 0 |
| ANSWER ALL QUESTIONS | | | | | 20-40M | 0 | 150-250 | 0 | 20-40M | 0 | 150-250 | 0 |
| Yes | No | Explain all "YES" answers. | | | 40-70M | 0 | 250-400 | 0 | 40-70M | 0 | 250-400 | 0 |
| | X | 1. Will special relocation services be necessary? | | | 70-100M | 0 | 400-600 | 0 | 70-100M | 0 | 400-600 | 0 |
| | X | 2. Will schools or churches be affect by displacement? | | | 100 UP | 0 | 600 UP | 0 | 100 UP | 0 | 600 UP | 0 |
| X | | 3. Will business services still be available after project? | | | TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | X | 4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc. | | | REMARKS (Respond by Number) | | | | | | | |
| | X | 5. Will relocation cause a housing shortage? | | | 3. Will not be disrupted due to the project | | | | | | | |
| | X | 6. Source for available housing (list). | | | 6. N/A | | | | | | | |
| | X | 7. Will additional housing programs be needed? | | | 11. Madison County Housing Authority, Marshall | | | | | | | |
| | X | 8. Should Last Resort Housing be considered? | | | 12. N/A | | | | | | | |
| | X | 9. Are there large, disabled, elderly, etc. families? | | | 14. N/A | | | | | | | |
| | X | 10. Will public housing be needed for project? | | | There are no structures, residential or business, that appear to be acquired on this alternate. | | | | | | | |
| X | | 11. Is public housing available? | | | | | | | | | | |
| X | | 12. Is it felt there will be adequate DSS housing available during relocation period? | | | | | | | | | | |
| | X | 13. Will there be a problem of housing within financial means? | | | | | | | | | | |
| X | | 14. Are suitable business sites available (list source). | | | | | | | | | | |
| | | 15. Number months estimated to complete relocation? | | | 12 | | | | | | | |

| | | | |
|----------------------|---------|-------------------|---------|
| <i>James R. Bent</i> | 4/20/99 | <i>J. R. Bent</i> | 4-26-99 |
| Right of Way Agent | Date | Approved by | Date |

RELOCATION REPORT

North Carolina Department of Transportation
AREA RELOCATION OFFICE

E.I.S. CORRIDOR DESIGN

| | | | | | | | | |
|-------------------------|--------|--|---------|-----------|-------------|----|---|-----------|
| PROJECT: | | COUNTY | Madison | Alternate | 3 | of | 3 | Alternate |
| I.D. NO.: | B-2583 | F.A. PROJECT | | | ALTERNATE 3 | | | |
| DESCRIPTION OF PROJECT: | | Replace Bridge No. 328 on SR 1001 over French Broad River with two structures, one on an alignmt to the west of the exist. location & one from SR 1001 to island. During const. traffic will be maintained on exist. structure | | | | | | |

| ESTIMATED DISPLACED | | | | | INCOME LEVEL | | | | |
|--|--------|---------|-------|------------|--|----------|----------|----------|----------|
| Type of Displacees | Owners | Tenants | Total | Minorities | 0-15M | 15-25M | 25-35M | 35-50M | 50 UP |
| Residential | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Businesses | 0 | 0 | 0 | 0 | VALUE OF DWELLING | | | | |
| Farms | 0 | 0 | 0 | 0 | Owners | Tenants | For Sale | For Rent | |
| Non-Profit | 0 | 0 | 0 | 0 | 0-20M | \$ 0-150 | 0 | 0-20M | \$ 0-150 |
| | | | | | 20-40M | 150-250 | 0 | 20-40M | 150-250 |
| | | | | | 40-70M | 250-400 | 0 | 40-70M | 250-400 |
| | | | | | 70-100M | 400-600 | 0 | 70-100M | 400-600 |
| | | | | | 100 UP | 600 UP | 0 | 100 UP | 600 UP |
| | | | | | TOTAL | 0 | 0 | 0 | 0 |
| | | | | | REMARKS (Respond by Number) | | | | |
| 1. Will special relocation services be necessary? | | | | | 3. Will not be disrupted due to the project | | | | |
| 2. Will schools or churches be affect by displacement? | | | | | 6. N/A | | | | |
| 3. Will business services still be available after project? | | | | | 11. Madison County Housing Authority, Marshall | | | | |
| 4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc. | | | | | 12. N/A | | | | |
| 5. Will relocation cause a housing shortage? | | | | | 14. N/A | | | | |
| 6. Source for available housing (list). | | | | | | | | | |
| 7. Will additional housing programs be needed? | | | | | | | | | |
| 8. Should Last Resort Housing be considered? | | | | | | | | | |
| 9. Are there large, disabled, elderly, etc. families? | | | | | | | | | |
| 10. Will public housing be needed for project? | | | | | | | | | |
| 11. Is public housing available? | | | | | | | | | |
| 12. Is it felt there will be adequate DSS housing available during relocation period? | | | | | | | | | |
| 13. Will there be a problem of housing within financial means? | | | | | | | | | |
| 14. Are suitable business sites available (list source). | | | | | | | | | |
| 15. Number months estimated to complete relocation? | | | | | 12 | | | | |

| | | | |
|---------------------|---------|------------------|---------|
| <i>Janice Burns</i> | 4/20/99 | <i>J.R. West</i> | 4-26-99 |
| Right of Way Agent | Date | Approved by | Date |

RELOCATION REPORT

North Carolina Department of Transportation
AREA RELOCATION OFFICE

E.I.S. CORRIDOR DESIGN

| PROJECT: | 8.2860401 | COUNTY | Madison | Alternate | 4 | of | 4 | Alternate | | | | |
|--|-----------|--|---------|--------------|---|---------|------------------------|-------------|---------|---------|---------|---|
| I.D. NO.: | B-2583 | F.A. PROJECT | | | | | | ALTERNATE 4 | | | | |
| DESCRIPTION OF PROJECT: Replace Bridge No. 328 on SR 1001 over French Broad River on an alignment to the west of existing. location. The new bridge will be const. in two phases. During const. traffic will be maintained on exist. structure | | | | | | | | | | | | |
| ESTIMATED DISPLACED | | | | INCOME LEVEL | | | | | | | | |
| Type of Displacees | Owners | Tenants | Total | Minorities | 0-15M | 15-25M | 25-35M | 35-50M | 50 UP | | | |
| Residential | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Businesses | 0 | 1 | 1 | 0 | VALUE OF DWELLING | | DSS DWELLING AVAILABLE | | | | | |
| Farms | 0 | 0 | 0 | 0 | Owners | Tenants | For Sale | For Rent | | | | |
| Non-Profit | 0 | 0 | 0 | 0 | 0-20M | 0 | \$0-150 | 0 | 0-150 | 0 | | |
| ANSWER ALL QUESTIONS | | | | 20-40M | 0 | 150-250 | 0 | 20-40M | 0 | 150-250 | 0 | |
| Yes | No | Explain all "YES" answers. | | | 40-70M | 0 | 250-400 | 0 | 40-70M | 0 | 250-400 | 0 |
| | X | 1. Will special relocation services be necessary? | | | 70-100M | 0 | 400-600 | 0 | 70-100M | 0 | 400-600 | 0 |
| | X | 2. Will schools or churches be affect by displacement? | | | 100 UP | 0 | 600 UP | 0 | 100 UP | 0 | 600 UP | 0 |
| X | | 3. Will business services still be available after project? | | | TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| X | | 4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc. | | | REMARKS (Respond by Number) | | | | | | | |
| | X | 5. Will relocation cause a housing shortage? | | | 3. Yes. Bus. services will not be interrupted due to project. | | | | | | | |
| | X | 6. Source for available housing (list). | | | 4. Madison County Magistrate's Office 614 SF, County Office, 2 empl, No min. | | | | | | | |
| | X | 7. Will additional housing programs be needed? | | | 11. Madison County Housing Authority, Marshall | | | | | | | |
| | X | 8. Should Last Resort Housing be considered? | | | 12. N/A. No residential displacees on this alternate. | | | | | | | |
| | X | 9. Are there large, disabled, elderly, etc. families? | | | 14. Yes. Per Frank Fox with Ledford Realty in Mars Hill | | | | | | | |
| | X | 10. Will public housing be needed for project? | | | MAY 1999 RIGHT OF WAY BRANCH | | | | | | | |
| X | | 11. Is public housing available? | | | MAY 1999 RIGHT OF WAY BRANCH | | | | | | | |
| X | | 12. Is it felt there will be adequate DSS housing available during relocation period? | | | N.C. DEPT. OF TRANSPORTATION | | | | | | | |
| | X | 13. Will there be a problem of housing within financial means? | | | | | | | | | | |
| X | | 14. Are suitable business sites available (list source). | | | | | | | | | | |
| | | 15. Number months estimated to complete relocation? | | | 12 | | | | | | | |

| | | | | | |
|-------------------------|--|---------|---|-------------------|---------|
| <i>Janice G. Rogers</i> | | 5/28/99 |  | <i>D. R. Reed</i> | 6-10-99 |
| Right of Way Agent | | Date | | Approved by | Date |

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

*S.U.E. = SUBSURFACE UTILITY ENGINEER

ROADS & RELATED ITEMS

| | |
|-------------------------|----------|
| Edge of Pavement | — — — |
| Curb | — — — |
| Prop. Slope Stakes Cut | C |
| Prop. Slope Stakes Fill | F |
| Prop. Woven Wire Fence | ○ ○ |
| Prop. Chain Link Fence | □ □ |
| Prop. Barbed Wire Fence | ◇ ◇ |
| Prop. Wheelchair Ramp | (WCR) |
| Exist. Guardrail | — + + |
| Prop. Guardrail | — + + |
| Equality Symbol | ○ |
| Pavement Removal | ████████ |

RIGHT OF WAY

| | |
|--|-------|
| Right of Way Marker | ▲ |
| Exist. Right of Way Line w/Marker | ▲— |
| Prop. Right of Way Line (by others) | —▲— |
| Prop. Right of Way Line (by contract) | —▲— |
| Exist. Control of Access Line | —○— |
| Prop. Control of Access Line | —○— |
| Exist. Easement Line | —E— |
| Prop. Temp. Construction Easement Line | —E— |
| Prop. Temp. Drainage Easement Line | —TDE— |
| Prop. Perm. Drainage Easement Line | —POE— |

HYDROLOGY

| | |
|-----------------------------------|-----------|
| Stream or Body of Water | — — — |
| Flow Arrow | — → |
| Disappearing Stream | —○— |
| Spring | ○○ |
| Swamp Marsh | ✚ |
| Shoreline | — — — |
| Falls, Rapids | — — |
| Prop. Lateral, Tail, Head Ditches | — — FLOW |

STRUCTURES

| | |
|--|---------|
| MAJOR | |
| Bridge, Tunnel, or Box Culvert | CONC |
| Bridge Wing Wall, Head Wall and End Wall | CONC WW |

CONVENTIONAL SYMBOLS

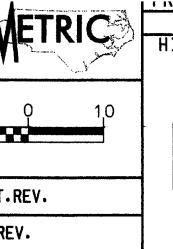
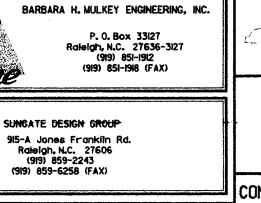
MINOR

| | |
|--------------------|----------|
| Head & End Wall | CONC HW |
| Pipe Culvert | ████████ |
| Footbridge | — — — |
| Drainage Boxes | CB |
| Paved Ditch Gutter | — — — |

UTILITIES

| | |
|-----------------------------|-----|
| Exist. Pole | • |
| Exist. Power Pole | • |
| Prop. Power Pole | ○ |
| Exist. Telephone Pole | • |
| Prop. Telephone Pole | ○ |
| Exist. Joint Use Pole | ▲ |
| Prop. Joint Use Pole | ○ |
| Telephone Pedestal | □ |
| Cable TV Pedestal | □ |
| Hydrant | ◊ |
| Satellite Dish | ○ |
| Exist. Water Valve | ⊗ |
| Sewer Clean Out | ⊕ |
| Power Manhole | ○ |
| Telephone Booth | ■ |
| Water Manhole | ○ |
| Light Pole | ○ |
| H-Frame Pole | —●— |
| Power Line Tower | ☒ |
| Pole with Base | □ |
| Gas Valve | ◊ |
| Gas Meter | ◊ |
| Telephone Manhole | ○ |
| Power Transformer | ■ |
| Sanitary Sewer Manhole | ● |
| Storm Sewer Manhole | ○ |
| Tank; Water, Gas, Oil | ○ |
| Water Tank With Legs | ○ |
| Traffic Signal Junction Box | S |
| Fiber Optic Splice Box | F |
| Television or Radio Tower | ○ |

| | |
|-----------------------------|----------------------------|
| State Line | — — — |
| County Line | — — — |
| Township Line | — — — |
| City Line | — — — |
| Reservation Line | — — — |
| Property Line | — — — |
| Property Line Symbol | P |
| Exist. Iron Pin | ○ |
| Property Corner | — + — |
| Property Monument | □ |
| Property Number | ECM (123) |
| Parcel Number | ○ 6 |
| Fence Line | — X — X — X — WW & ISBW |
| Existing Wetland Boundaries | — WLB — |
| Proposed Wetland Boundaries | — WLB — |
| Existing Wetland Boundaries | — EAB — |
| Existing Wetland Boundaries | — EPB — |



| | |
|--|---------------------|
| PROJECT REFERENCE NO. B-2583 | SHEET NO. 1B |
| HIGHWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |
| CONST. REV. | R/W REV. |

BUILDING & OTHER CULTURE

| | |
|-------------------------------|----------|
| Buildings | ████ |
| Foundations | ████ |
| Area Outline | — — — |
| Gate | — + — |
| Gas Pump Vent or U/G Tank Cap | ○ |
| Church | + |
| School | ▶ |
| Park | — — — |
| Cemetery | — — — |
| Dam | — — — |
| Sign | ○ |
| Well | ○ |
| Small Mine | ❖ |
| Swimming Pool | ████████ |

TOPOGRAPHY

| | |
|------------------------|-------|
| Loose Surface | — — — |
| Hard Surface | — — — |
| Change in Road Surface | — — — |
| Curb | — — — |
| Right of Way Symbol | R/W |
| Guard Post | ○ GP |
| Paved Walk | — — — |
| Bridge | — — — |
| Box Culvert or Tunnel | — — — |
| Ferry | — — — |
| Culvert | — — — |
| Footbridge | — — — |
| Trail, Footpath | — — — |
| Light House | ★ |

VEGETATION

| | |
|--------------|-----------|
| Single Tree | ○ |
| Single Shrub | ○ |
| Hedge | — — — |
| Woods Line | — — — |
| Orchard | ○ ○ ○ ○ ○ |
| Vineyard | ○ ○ ○ ○ ○ |
| VINEYARD | — — — |

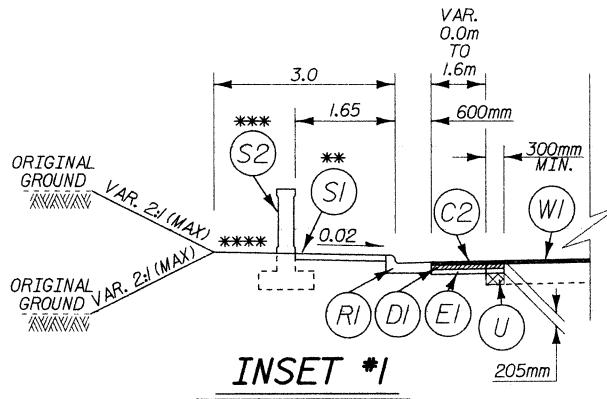
RAILROADS

| | |
|--------------------|-------|
| Standard Gauge | — — — |
| RR Signal Milepost | ○ |
| Switch | — — — |
| CSX TRANSPORTATION | — — — |
| MILEPOST 35 | — — — |
| SWITCH | — — — |

PAVEMENT SCHEDULE

| | |
|----|--|
| C1 | PROP. APPROX. 30mm ASPHALT CONC. SURFACE COURSE, TYPE S9.5A, AT AN AVERAGE RATE OF 72kg PER SQ. METER. |
| C2 | PROP. APPROX. 60mm ASPHALT CONC. SURFACE COURSE, TYPE S9.5A, AT AN AVERAGE RATE OF 72kg PER SQ. METER IN EACH OF TWO LAYERS. |
| C3 | PROP. VAR. DEPTH ASPHALT CONC. SURFACE COURSE, TYPE S9.5A, AT AN AVERAGE RATE OF 2.4kg PER SQ. METER PER 1mm DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 30mm OR GREATER THAN 40mm IN DEPTH. |
| DI | PROP. APPROX. 65mm ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 159kg PER SQ. METER. |
| D2 | PROP. VAR. DEPTH ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 2.45kg PER SQ. METER PER 1mm DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 55mm OR GREATER THAN 110mm IN DEPTH. |
| E1 | PROPOSED APPROXIMATELY 80mm ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 196 kg PER SQUARE METER. |
| E2 | PROPOSED VARIABLE DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 2.45 kg PER SQUARE METER PER 1mm DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 75 mm NOR GREATER THAN 140mm IN DEPTH. |
| RI | 750mm CONCRETE CURB AND GUTTER (AS NOTED ON PLANS) |
| SI | 100mm CONCRETE SIDEWALK |
| S2 | CLASSIC BRIDGE RAIL W/ RECTANGULAR BLOCKOUTS |
| T | EARTH MATERIAL |
| U | EXISTING PAVEMENT |
| WI | WEDGING (SEE WEDGING DETAIL THIS SHEET) |

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



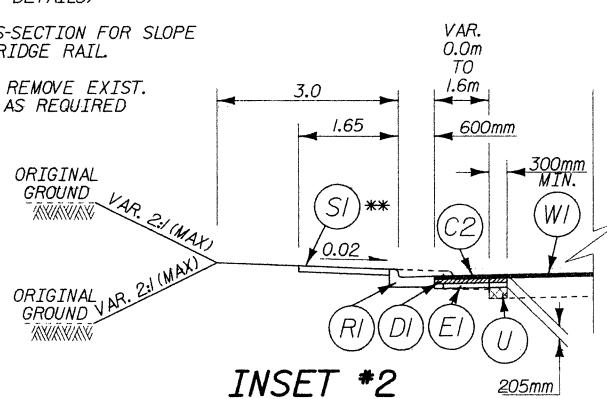
TO BE USED IN CONJUNCTION WITH
TYPICAL SECTION NO. 1 AS FOLLOWS:
FROM -L STA. 10+90.000 TO -L STA. 11+14 LT.

** SIDEWALK AT LOCATIONS
SHOWN IN PLANS.

*** CLASSIC BRIDGE RAIL AT LOCATIONS
SHOWN IN PLANS. (SEE STRUCTURE
PLANS FOR DETAILS)

**** SEE CROSS-SECTION FOR SLOPE
BEHIND BRIDGE RAIL

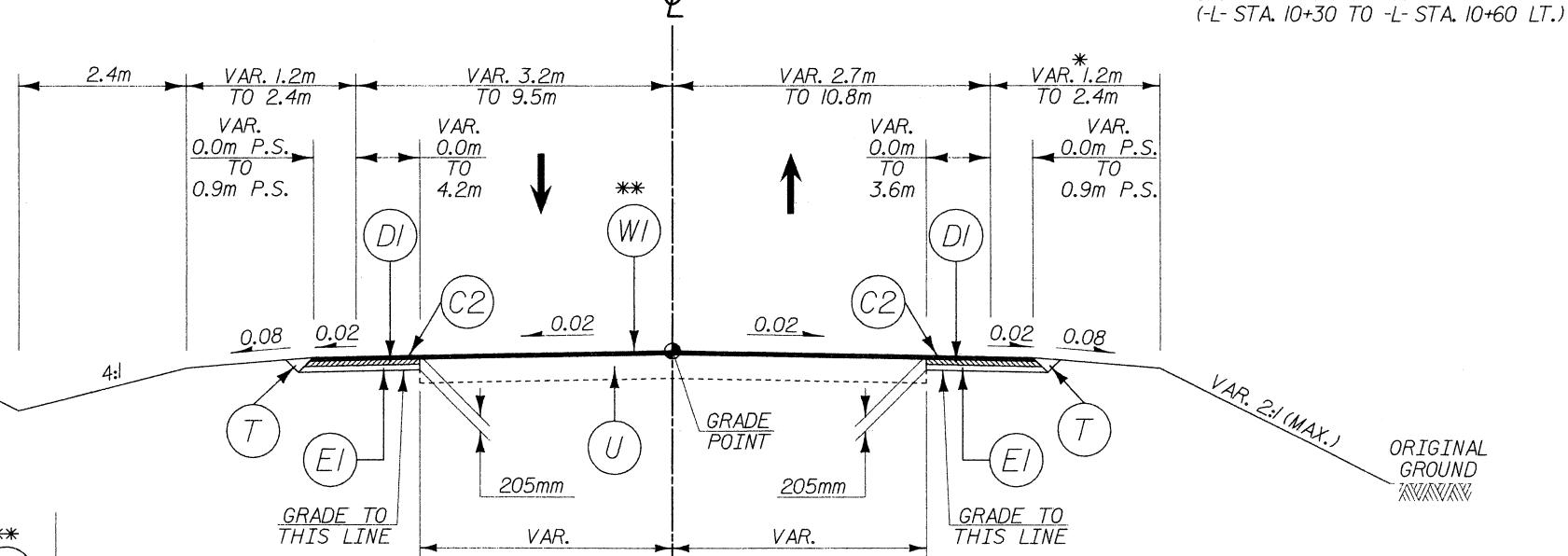
SAW-CUT & REMOVE EXIST.
PAVEMENT AS REQUIRED



TO BE USED IN CONJUNCTION WITH
TYPICAL SECTION NO. 1 AS FOLLOWS:
FROM -L STA. 13+31.7 TO -L STA. 13+52.7 LT.



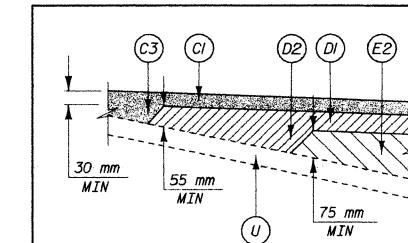
TO BE USED IN CONJUNCTION WITH
TYPICAL SECTION NO. 1 AS FOLLOWS:
FROM -L STA. 13+52.7 TO -L STA. 13+87.50 LT.
FROM -L STA. 13+31.7 TO -L STA. 13+87.50 RT.



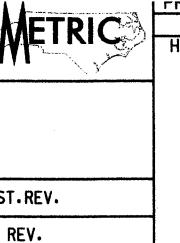
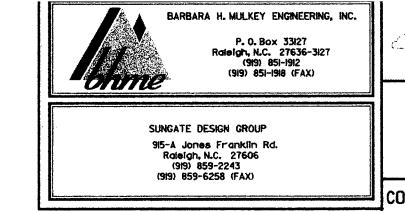
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 AS FOLLOWS:
FROM -L STA. 10+40.000 TO -L STA. 11+14
FROM -L STA. 13+31.7 TO -L STA. 13+87.500

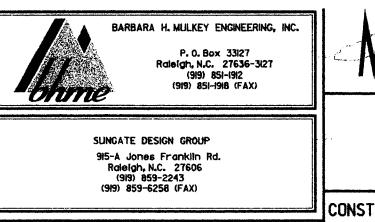
** MATCH EXIST. SUPER ELEVATION
W/ NO WEDGING
-L STA. 13+60 TO -L STA. 13+87.50



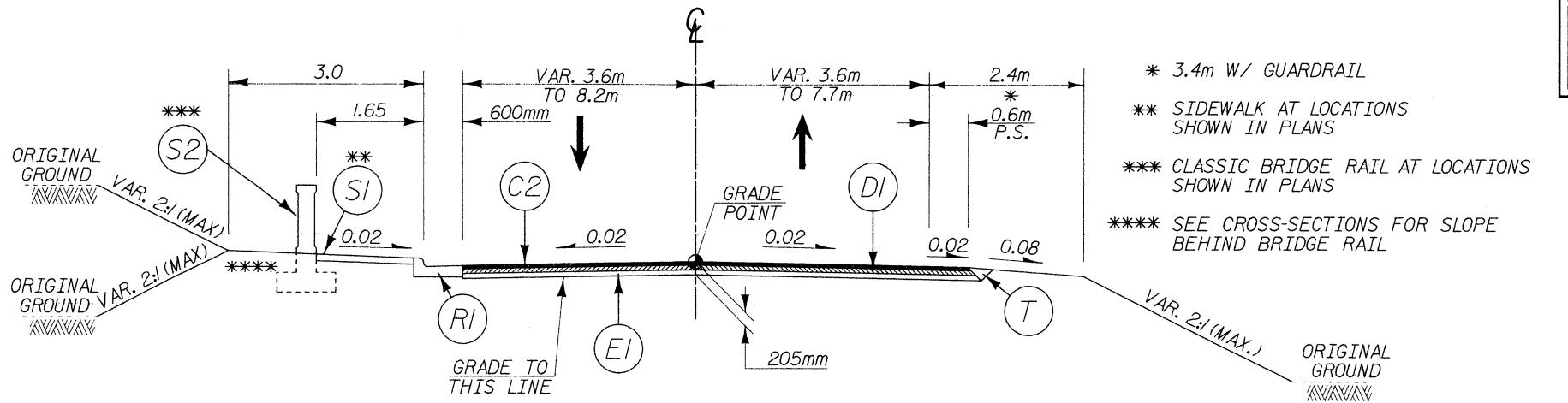
WEDGING DETAIL (WI)



| | |
|--|--------------------------|
| PROJECT REFERENCE NO. B-2583 | 2 |
| HIGHWAY DESIGN ENGINEER | PAVEMENT DESIGN ENGINEER |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |
| CONST. REV. | R/W REV. |



METRIC
 CONST. REV.
 R/W REV.



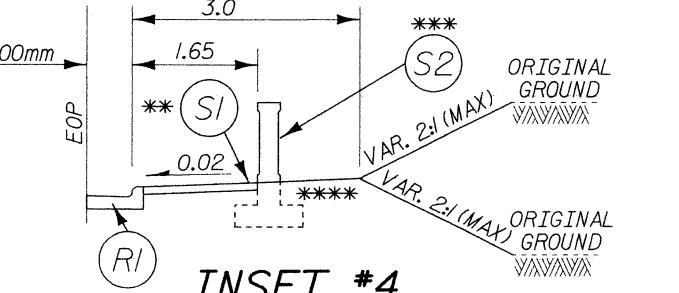
TYPICAL SECTION NO. 2

USE TYPICAL SECTION No. 2 AS FOLLOWS:
 FROM -L- STA. II+14 TO -L- STA. II+24.75 (BEGIN BRIDGE)
 FROM -L- STA. I3+18.22 (END BRIDGE) TO -L- STA. I3+31.7
 FROM -YI- STA. I0+15 TO -YI- STA. I0+74.50 (BEGIN BRIDGE)
 FROM -YI- STA. II+31.50 (END BRIDGE) TO -YI- STA. II+46.942

| | |
|----|---------------------------|
| C1 | 30mm S9.5A |
| C2 | 60mm S9.5A |
| C3 | VAR. DEPTH S9.5A |
| DI | 65mm I-9.0B |
| D2 | VAR. DEPTH I-9.0B |
| EI | 80mm B25.0B |
| E2 | VAR. DEPTH B25.0B |
| RI | 750mm CONC. CURB & GUTTER |
| SI | 100mm SIDEWALK |
| S2 | CLASSIC BRIDGE RAIL |
| T | EARTH MATERIAL |
| U | EXIST. PAVEMENT |
| WI | WEDGING |

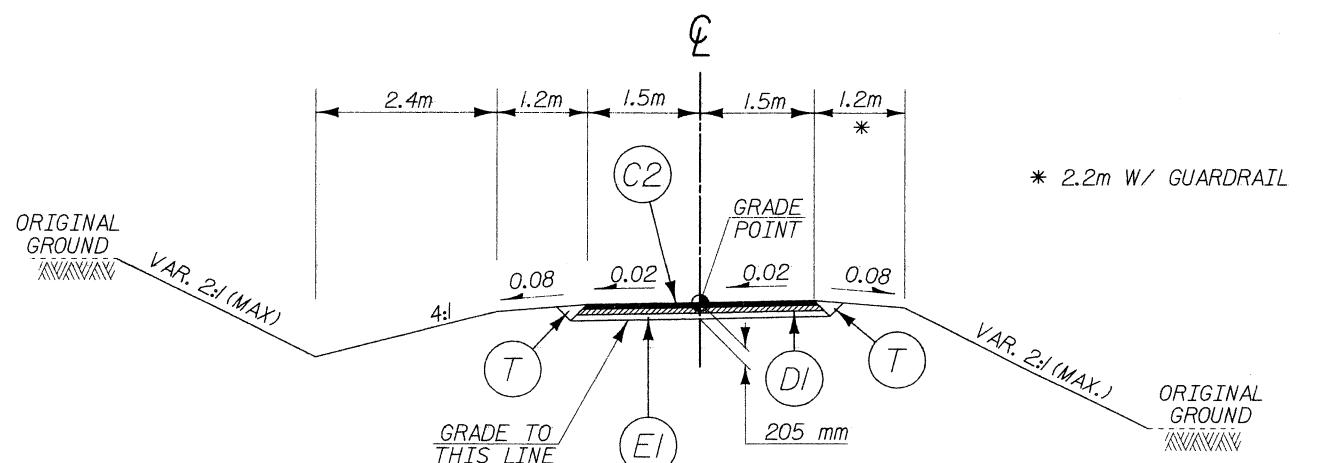
NOTE:
 1. SEE SHEET 2 FOR DETAILED DESCRIPTION OF PAVEMENT SCHEDULE

2. ALL PAVEMENT EDGE SLOPES ARE 1:0 UNLESS OTHERWISE SHOWN.



INSET #4

TO BE USED IN CONJUNCTION WITH TYPICAL SECTION NO. 2 AS FOLLOWS:
 FROM -YI- STA. I0+15 TO -YI- STA. I0+74.50 (BEGIN BRIDGE) RT.
 FROM -YI- STA. II+31.50 (END BRIDGE) TO -YI- STA. II+46.942 RLT.



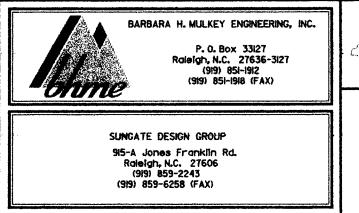
TYPICAL SECTION NO. 3

USE TYPICAL SECTION No. 3 AS FOLLOWS:
 FROM DRIVE #1 STA. I0+0.000 TO DRIVE #1 STA. I0+73.655

COMPUTED BY: JB DATE: 11/00
CHECKED BY: WSH DATE: 10/00

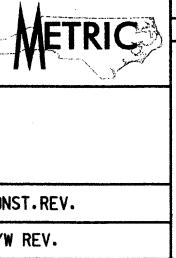
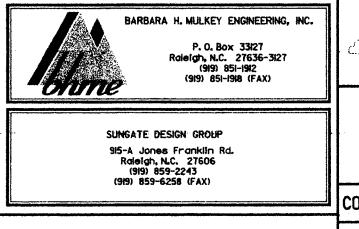
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

RIGHT OF WAY AREA DATA SHEET



| | |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| B-2583 | 3-A |

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

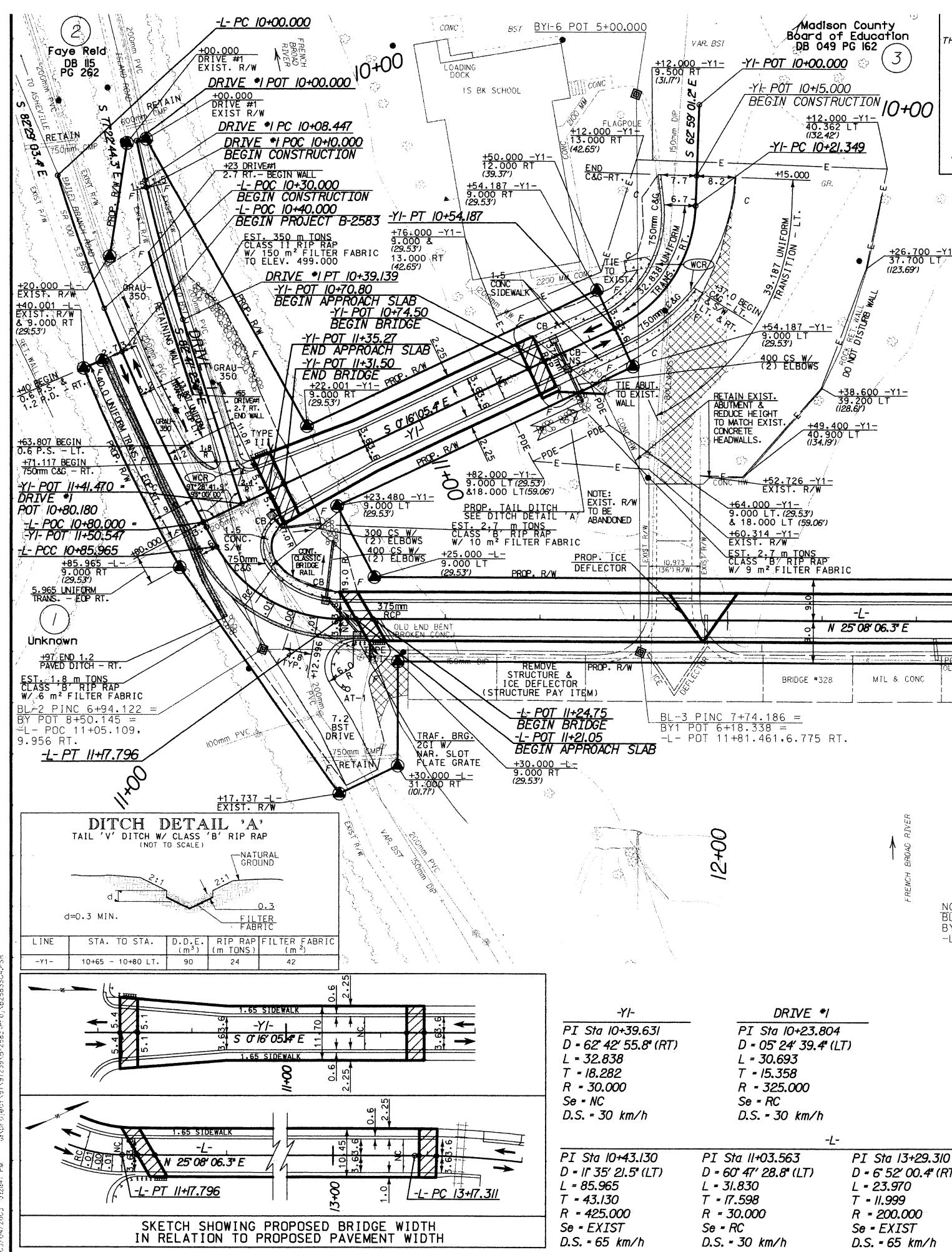


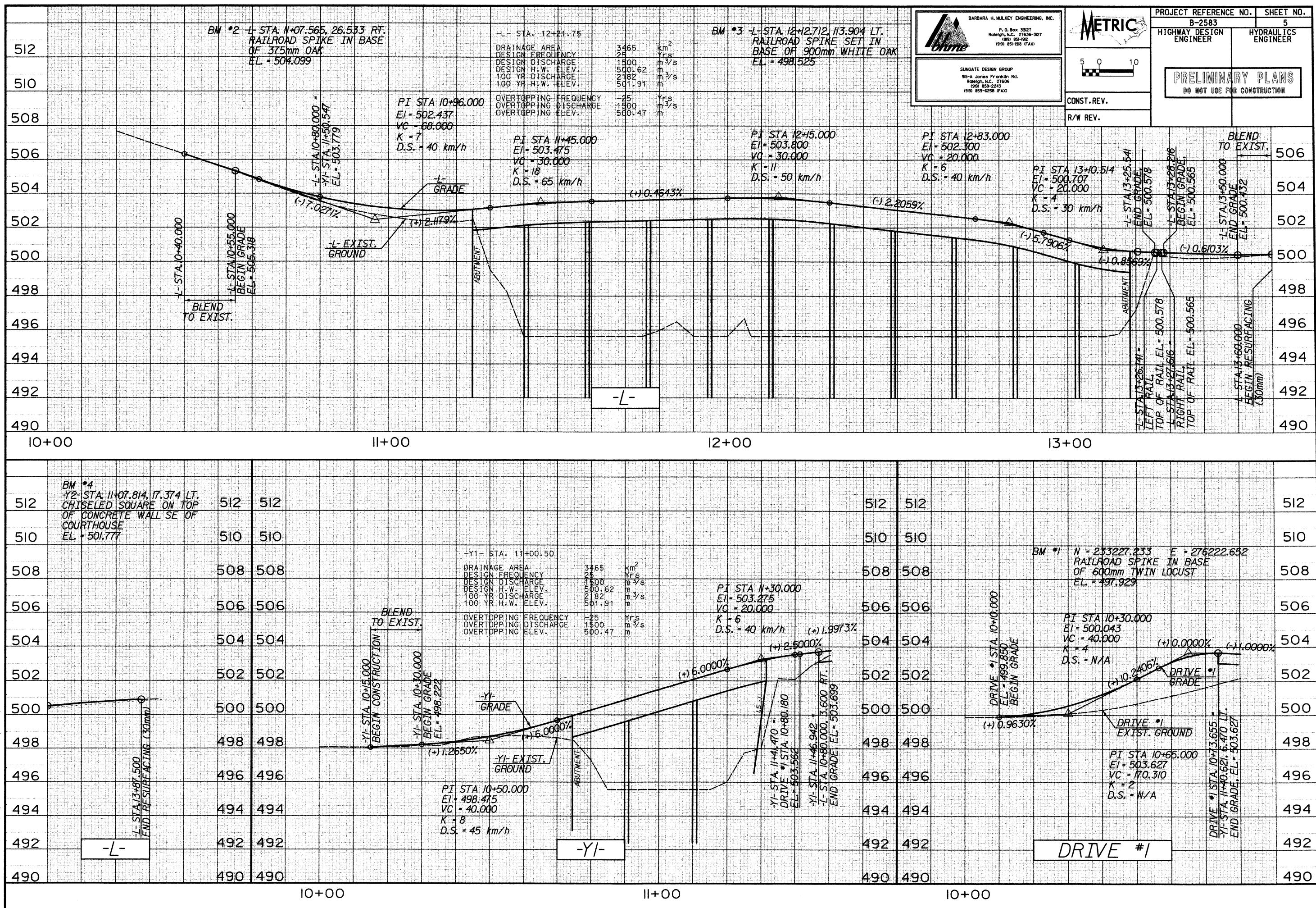
SUMMARY OF EARTHWORK

(IN CUBIC METERS)

| | STATION | STATION | UNCLASSIFIED | UNDERCUT | EMBANKMENT + % | BORROW | WASTE |
|--|-----------|-----------|--------------|----------|-------------------|--------|-------|
| -L- W/ DRIVE #1 | 10+40.000 | 11+24.75 | 4 | | 1,524 | 1,520 | |
| BRIDGE | | | | | | | |
| -L- | 13+18.22 | 13+87.50 | 178 | | 256 | 78 | |
| -Y1- | 10+15.00 | 10+74.50 | 118 | | 112 | | 6 |
| BRIDGE | | | | | | | |
| -Y1- | 11+31.50 | 11+46.942 | 0 | | 194 | 194 | |
| | | | | | | | |
| SUBTOTAL | | | 300 | | 2,086 | 1,792 | 6 |
| EST. LOSS DUE TO CLEARING AND GRUBBING | | | | | | | |
| EST. LOSS DUE TO PAVEMENT REMOVAL | | | | | | | |
| PROJECT TOTALS | | | 300 | | 2,086 | 1,792 | 6 |
| USE WASTE IN LEAU OF BORROW | | | | | | | |
| EST. 5% FOR REPLACING TOP SOIL ON BORROW PITS | | | | | | | |
| GRAND TOTALS | | | 300 | | 2,086 | 1,875 | 6 |
| SAY | | | 300 | | | 1,875 | |

NOTE: APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW
EXCAVATION, CLEARING AND GRUBBING, AND REMOVAL OF EXISTING
PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR
"GRADING". (SEE PROJECT SPECIAL PROVISIONS.)





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DRIVE #1
STA. 10+11.447 R/W
1.5 1.5
492.867

PROP. R/W

EX. R/W

TOP

TOP

TOP

10+10.000

NOTE: APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, CLEARING AND GRUBBING, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING. (SEE PROJECT SPECIAL PROVISIONS.)

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

0 2 4 6
30 (METRIC UNITS)

30

0

30

METRIC

| | | | |
|--------------------------|---------|-------|---------------|
| STATE | PROJECT | SHEET | 101 SHEETS |
| NC | B-2583 | X-2 | |
| SR 1001 - MADISON COUNTY | | | |

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496

10+20.000

DRIVE #1
STA 10+21.03 RM

EX. R/W EX. R/W
1.5 1.5
0.025
499.9

VAR. VAR.

EX. R/W EX. R/W

499.9

C-0.0

F-0.31

0 2 4 6
30 (METRIC UNITS)

-L-

30

11

114

ET ~~10A~~ SHEETS

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— 10 —

PROPER NOUN

0+40.000

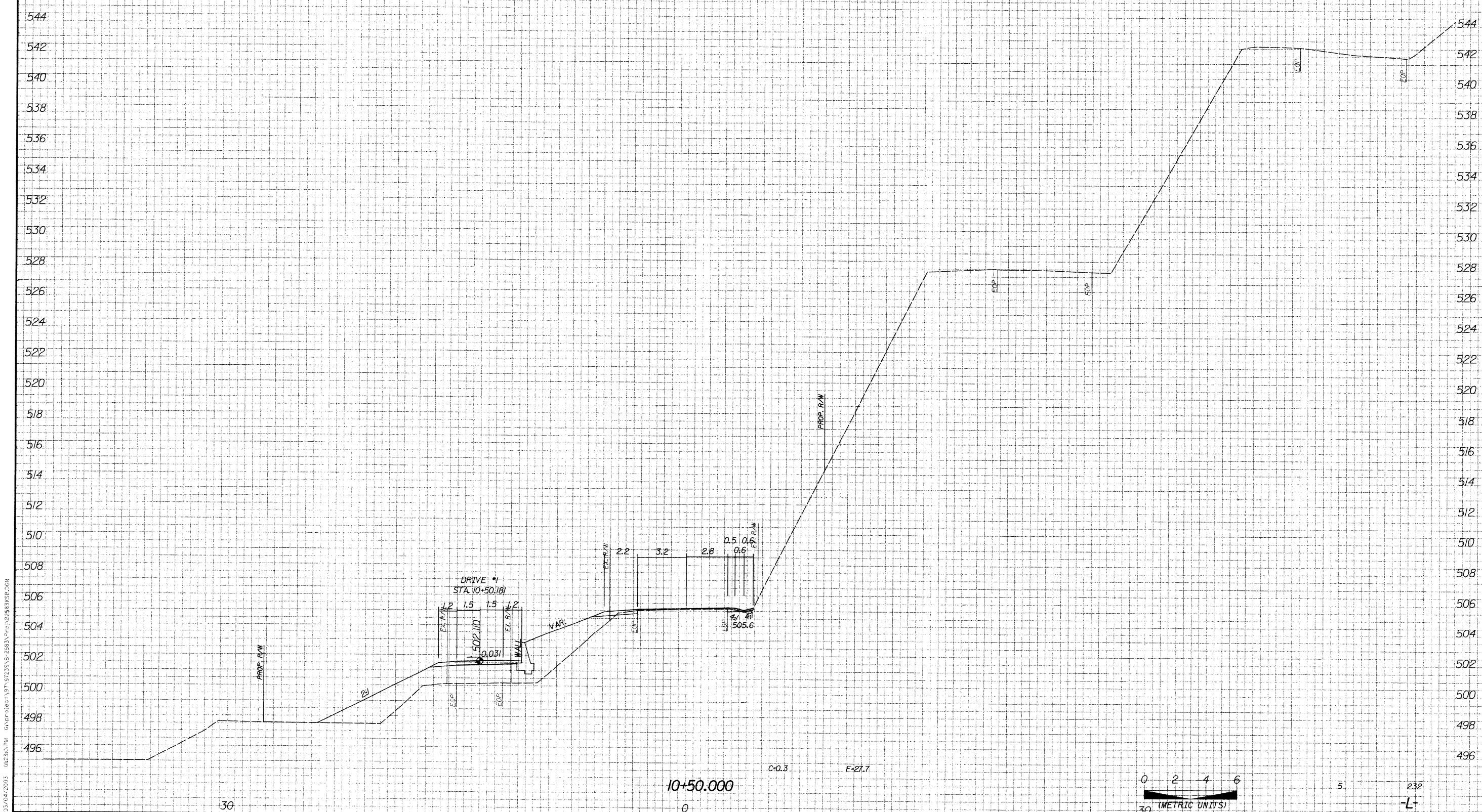
305

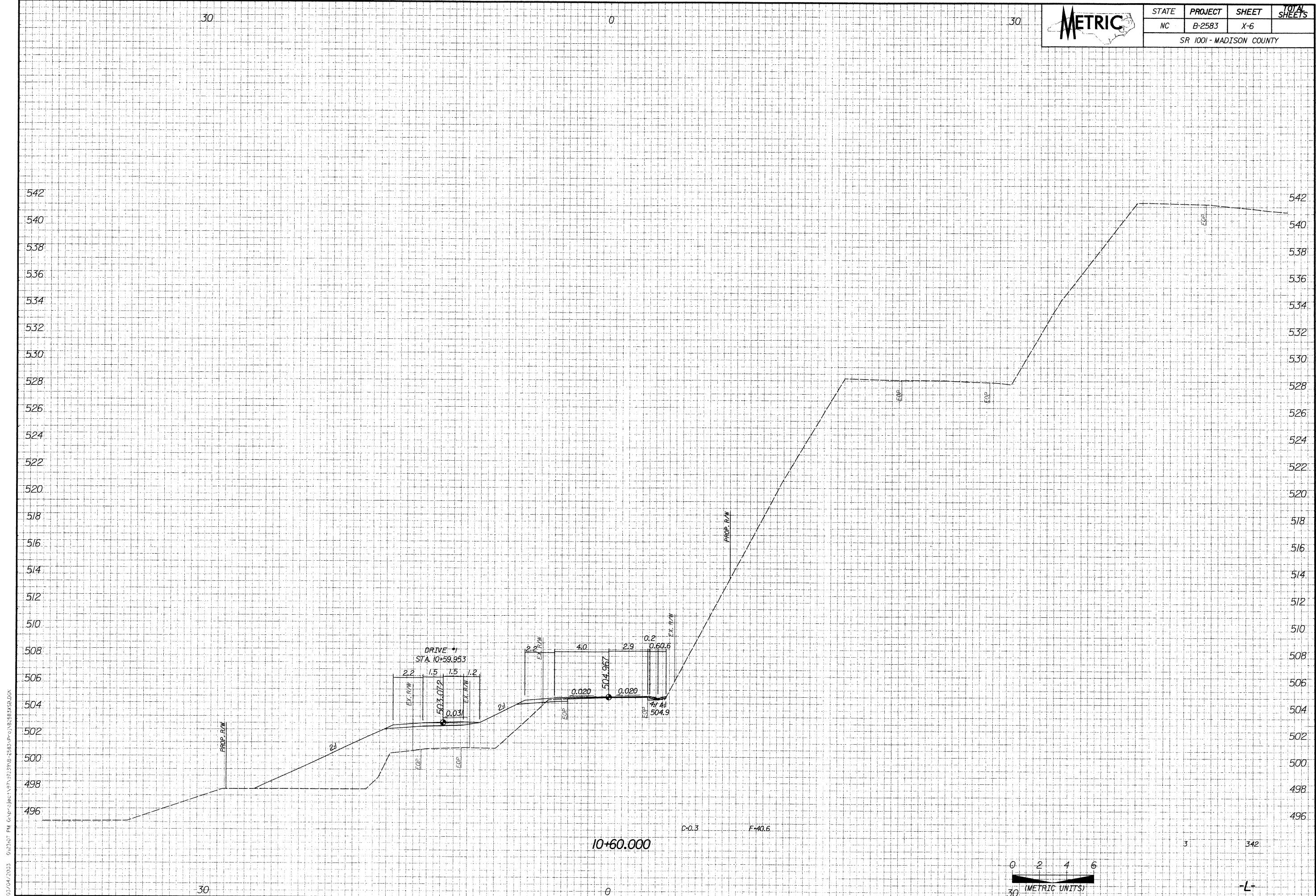
F-186

110

(METRIC UNITS)

10





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10+80.000

0-0.0

F-0.1

