



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

June 6, 2007

North Carolina Division of Water Quality  
Winston-Salem Regional Office  
585 Waughtown St.  
Winston-Salem, NC 27107

Attention: Ms. Sue Homewood

Subject: **Application for General Major Variance and Randleman Buffer Certification** for the replacement of Bridge No. 73 over Bull Run Creek on SR 1549, Guilford County. Federal Aid Project No. BRZ-1549(4), State Project No. 8.2497601, WBS Element No. 33481.1.1, Division 7, T.I.P. No. B-4128.

Please see the enclosed Categorical Exclusion (CE), Pre-Construction Notification, stormwater management plan, General Major Variance Application Form, permit drawings, design plans, and Ecosystem Enhancement Program (EEP) acceptance letter for the subject project. The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 73 over Bull Run Creek with a new single span, plate girder bridge approximately 100-feet in length. This will provide for two 12-foot lanes, two 14-foot lanes, and 5.6-foot sidewalks. The approaches will be widened to 52 feet to provide for two 12-foot lanes, two 14-foot lanes, and a 2-foot curb and gutter section. Ten foot (14-foot where guardrail is required) grass shoulders will be provided on each side. The project involves replacing the current bridge in its existing location, using a temporary on-site detour bridge located north of the existing bridge to maintain traffic during construction.

### IMPACTS TO WATERS OF THE UNITED STATES

The project is located in the Cape Fear River Basin (sub-basin 03-06-08) in Guilford County. This area is within the Randleman Lake watershed and is part of Hydrologic Cataloging Unit 03030003 of the South Atlantic-Gulf Coast Region. Bull Run Creek is the only water resource within the project area.

Bull Run Creek is a perennial stream, with a width of approximately 15 feet. The average depth ranges between 1 and 2 feet. The substrate is composed of cobble, silt, and sand. Bull Run Creek has been assigned Stream Index Number 17-5-(1) by the N.C. Division of Water Quality (NCDWQ) from its source to Swift Creek. Bull Run Creek has a best usage classification of WS-IV.

No designated Outstanding Resource Waters (ORW), High Quality Waters (HQW), Water Supply I (WS-I), or Water Supply II (WS-II), waters occur within 1.0 mile of the study corridor. Bull Run Creek is not listed on the 2004 List of impaired waters [Section 303(d)] for the Cape Fear River Basin nor does it drain into any 303(d) waters within 1-mile of the project area.

There are no wetlands located within the project area.

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

TELEPHONE: 919-715-1334 or  
919-715-1335

FAX: 919-715-5501

WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

**LOCATION:**  
2728 CAPITAL BLVD, SUITE 240  
RALEIGH NC 27604

The replacement of Bridge No. 73 will result in no permanent or temporary impacts to jurisdictional streams.

### RANDLEMAN BUFFER IMPACTS

The proposed project will impact areas protected by the Randleman buffer regulations. Under the Randleman buffer regulations bridges (Buffer Site 1A), road crossings (Buffer Site 1A), and utility crossings (Utilities Site 1 and 2) are generally exempt from riparian area protection requirements. However, because construction of the proposed project requires a major variance and the impacts associated with these activities exceed 150 linear feet, they are considered allowable with mitigation.

An on-site detour bridge will be used to maintain traffic during construction (Buffer Site 1B). Impacts associated with the temporary bridge are exempt from riparian area protection requirements.

**Table 1. Randleman Buffer Impacts to Bull Run Creek (Square Feet)**

Impact	Bridge Construction*	Road Crossing Impacts (approach fill)*	Standard Base Ditch*	Temporary Detour Bridge	Utility Crossing*
Zone 1 Impact (sq. ft)	3238	1408	1307	4411	568
Zone 2 Impact (sq. ft)	0	2684	781	2425	144
<b>Totals (sq. ft.)</b>	<b>3238</b>	<b>4092</b>	<b>2088</b>	<b>6836</b>	<b>712</b>
Mitigation requirements (exempt, allowable, or allowable with mitigation)	Allowable with mitigation	Allowable with mitigation	Allowable with mitigation	Allowable	Allowable with mitigation

\*Mitigation is proposed for these impacts (total impacts not associated with the temporary detour are 172 linear feet and 0.24 acre).

The inability to disperse concentrated runoff into sheet flow prior to entering the buffers will require a variance. The proposed bridge replacement will require the use of two standard base ditches to convey concentrated flow to Bull Run Creek and prevent erosion of the riparian buffers. One standard base ditch will be permanently located east of Bull Run Creek, north of the bridge (Buffer Site 1C). A second standard base ditch associated with the temporary detour bridge will be located west of Bull Run Creek, north of the bridge. Following the removal of the temporary detour bridge, a preformed scour hole, located outside of the buffer area, will be used to reduce stormwater impact (see attached stormwater management plan).

#### **Utility Impacts**

The proposed project will impact power, telephone, cable, water, gas, and sewer utilities within the project area. Relocation of the existing utilities will require the placement of a pole within buffer zone 1. The pole will be utilized temporarily by telephone and cable television lines and permanently by power lines.

Existing overhead telephone and cable television lines north of the existing bridge will be removed. During construction a series of temporary overhead telephone and cable television lines will be necessary. Prior to construction of the detour bridge, temporary overhead lines will be installed south of the existing bridge (Move 1). After the traffic is placed on the detour bridge, the lines will be temporarily installed north of the detour and crossing the detour and crossing east of the new bridge (Move 2). Finally, after completion of the new bridge, the permanent overhead lines will be located on the south side of the bridge (Move 3). Move 2 will require placement of a utility pole within buffer zone 1 (Utility Site 2). The proposed pole will be also be utilized by the permanent overhead power lines.

Existing overhead power lines located east of the existing bridge will be removed and relocated. Prior to construction of the detour, a temporary overhead power line will be installed further east of the existing line. After completion of the new bridge, the permanent overhead power line will be installed close to the east end of the new bridge and joining the permanent overhead telephone and cable television lines located southeast of the new bridge. The permanent power lines will cross the Mackay Road and connect to the pole placed within buffer zone 1 during Move 2.

The existing underground gas, fiber optic, sewer, and water lines on the south side of the existing bridge will be abandoned. New gas, fiber optic cable, and water lines will be directionally bored on the south side of the new bridge. The existing 18-inch sanitary sewer line will be relocated beneath the new bridge. The relocation of the sanitary sewer line will result in impacts to riparian buffers (Utility Site 1).

#### ***No Practical Alternative Analysis***

The project area has been evaluated and there are no practical alternatives to establish sheet flow prior to entering the riparian buffers. Due to the steep topography of the project area and right of way constraints, there are no practicable methods of treatment or attenuation of the stormwater runoff before it enters the buffer. Therefore, the General Major Variance request is attached as part of the buffer certification application.

### **MITIGATION OPTIONS**

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

- Best Management Practices for Protection of Surface Waters will be implemented.
- Design Standards in Sensitive Watersheds will be implemented and revegetation of the riparian buffers will occur within 15 working days of completion of the project.
- Bridge No. 73 will be replaced on its existing alignment, minimizing impacts to the riparian buffers.
- The proposed bridge will span the creek with no bents placed in the water.
- Storm drainage is being discharge as far away from the stream as possible.
- Preformed scour holes are being used to reduce stormwater impact to Bull Run Creek.
- The proposed bridge will be 60 feet longer than the existing bridge, increasing the floodplain under the bridge.

#### **Compensatory Mitigation:**

NCDOT has avoided and minimized impacts to jurisdictional resources to the greatest extent possible as described above. As discussed with NCDWQ representatives Sue Homewood and John Hennessey on October 20 and November 16, 2006, the major variance requires mitigation for all impacts, except those associated with the detour bridge (Buffer Site 2A), exceeding 150 linear feet or 1/3 acre. Mitigation will be required for unavoidable impacts of 10,130 square feet associated with the construction of the bridge and approaches (Buffer Site 1A), eastern standard base ditch (Buffer Site 1C), and utility relocations (Utility Sites 1 and 2). Compensatory mitigation will be provided through the EEP. All non-maintained riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated with native woody species. The EEP acceptance letter is attached.

### **SCHEDULE**

At this time the project is scheduled to let December 18, 2007 (review date November 20, 2007) with a date of availability of January 29, 2008. It is expected that the contractor will choose to start construction in January.


### REGULATORY APPROVAL

This project has been designed to comply with the Randleman Riparian Buffer Regulations (15A NCAC 2B.0250). NCDOT requests written authorization for a Randleman Riparian Buffer Authorization and a General Major Variance from the Division of Water Quality. Five copies of the permit application are provided for your review. This project has been reviewed for jurisdiction under the Federal Clean Water Act (CWA). There are no impacts to Waters of the US, therefore none of the actions of this project fall under jurisdiction of the CWA. Therefore, no permits pursuant to the CWA are required.

A copy of this permit application will be posted on the NCDOT website at: <http://www.ncdot.org/doh/preconstruct/pe/>. If you have any questions or need additional information, please call Erica McLamb at 715-1521.

If you have any questions or need additional information, please call Erica McLamb at 715-1521.

Sincerely,

*for* 

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

w/attachment

John Hennessey, NCDWQ (5 Copies)  
Ms. Sue Homewood, NCDWQ  
Mr. Travis Wilson, NCWRC  
Dr. David Chang, P.E., Hydraulics  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Victor Barbour, P.E., Project Services Unit  
Mr. Mark Staley, Roadside Environmental  
Mr. J. M. Mills, P.E., Division 7 Engineer  
Mr. Jerry Parker, Division 7 Environmental Officer

w/o attachment

Mr. Jay Bennett, P.E., Roadway Design  
Mr. Majed Alghandour, P. E., Programming and TIP  
Mr. Art McMillan, P.E., Highway Design  
Mr. John Conforti, PDEA  
Mr. Scott McLendon, USACE, Wilmington  
Ms. Beth Harmon, EEP  
Mr. Todd Jones, NCDOT External Audit Branch



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: Replacement of Bridge No. 73 over Bull Run Creek on SR1549
2. T.I.P. Project Number or State Project Number (NCDOT Only): B-4128
3. Property Identification Number (Tax PIN): N/A
4. Location  
County: Guilford Nearest Town: Greensboro  
Subdivision name (include phase/lot number): \_\_\_\_\_  
Directions to site (include road numbers/names, landmarks, etc.): see map in permit drawings
5. Site coordinates (For linear projects, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)  
Decimal Degrees (6 digits minimum): 36.0179 °N 79.9125 °W
6. Property size (acres): N/A
7. Name of nearest receiving body of water: Deep River
8. River Basin: Cape Fear  
(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: The project is located in a residential community consisting of primarily residential and disturbed areas with some forested area.

10. Describe the overall project in detail, including the type of equipment to be used: Bridge No. 73 will be replaced on existing location with an onsite detour. Heavy duty excavation equipment will be used such as trucks, dozers, cranes and other various equipment necessary for roadway construction.

11. Explain the purpose of the proposed work: To replace a deteriorating bridge

#### IV. **Prior Project History**

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

#### V. **Future Project Plans**

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

N/A

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

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. Each impact must be listed separately in the tables below (e.g., culvert installation should be listed separately from riprap dissipater pads). Be sure to indicate if an impact is temporary. All proposed impacts, permanent and temporary, must be listed, and must be labeled and clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) should be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts: none

2. Individually list wetland impacts. Types of impacts include, but are not limited to mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

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

3. List the total acreage (estimated) of all existing wetlands on the property: none

4. Individually list all intermittent and perennial stream impacts. Be sure to identify temporary impacts. Stream impacts include, but are not limited to placement of fill or culverts, dam construction, flooding, relocation, stabilization activities (e.g., cement walls, rip-rap, crib walls, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included. To calculate acreage, multiply length X width, then divide by 43,560.

Stream Impact Number (indicate on map)	Stream Name	Type of Impact	Perennial or Intermittent?	Average Stream Width Before Impact	Impact Length (linear feet)	Area of Impact (acres)
Total Stream Impact (by length and acreage)						0



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

Open Water Impact Site Number (indicate on map)	Name of Waterbody (if applicable)	Type of Impact	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)	Area of Impact (acres)
Total Open Water Impact (acres)				0

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

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

7. Isolated Waters

Do any isolated waters exist on the property?  Yes  No

Describe all impacts to isolated waters, and include the type of water (wetland or stream) and the size of the proposed impact (acres or linear feet). Please note that this section only applies to waters that have specifically been determined to be isolated by the USACE.

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8. Pond Creation

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

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

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

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

Current land use in the vicinity of the pond: \_\_\_\_\_

Size of watershed draining to pond: \_\_\_\_\_ Expected pond surface area: \_\_\_\_\_

**VII. Impact Justification (Avoidance and Minimization)**

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

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**VIII. Mitigation**

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

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on January 15, 2002, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

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

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.

Mitigation is proposed for impacts to riparian buffers associated with construction of the bridge, roadway approaches, eastern standard base ditch, and utility relocations.

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

Amount of stream mitigation requested (linear feet): 0  
Amount of buffer mitigation requested (square feet): 24977 sq. ft.  
Amount of Riparian wetland mitigation requested (acres): 0  
Amount of Non-riparian wetland mitigation requested (acres): 0  
Amount of Coastal wetland mitigation requested (acres): 0

#### **IX. Environmental Documentation (required by DWQ)**

1. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? Yes  No
2. If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)?  
Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation.  
Yes  No
3. If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter. Yes  No

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

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

1. Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 02B .0243 (Catawba) 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify \_\_\_\_\_)? Yes  No
2. If "yes", identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

Zone*	Impact (square feet)	Multiplier	Required Mitigation
1	10,932	3 (2 for Catawba)	19563
2	6,034	1.5	5414
Total	16,966		24977

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

3. If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Riparian Buffer Restoration / Enhancement, or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0244, or .0260. Mitigation will be conducted through EEP.

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**XI. Stormwater (required by DWQ)**

Describe impervious acreage (existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property. If percent impervious surface exceeds 20%, please provide calculations demonstrating total proposed impervious level. N/A

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**XII. Sewage Disposal (required by DWQ)**

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

**XIII. Violations (required by DWQ)**

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?  
Yes  No

Is this an after-the-fact permit application? Yes  No

**XIV. Cumulative Impacts (required by DWQ)**

Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? Yes  No

If yes, please submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent North Carolina Division of Water Quality policy posted on our website at <http://h2o.enr.state.nc.us/newetlands>. If no, please provide a short narrative description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**XV. Other Circumstances (Optional):**

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

None  
\_\_\_\_\_  
\_\_\_\_\_

*E. L. Lusk*

6.6.07

**Applicant/Agent's Signature**

**Date**

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

**DRAFT VERSION 2**

**02/26/02**

OFFICE USE ONLY: Date Received	Request #
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State of North Carolina, Department of Environment and Natural Resources, Division of Water Quality

**“General” Major Variance Application Form –**

*From the Randleman Lake Water Supply Watershed: Protection and Maintenance of Riparian Areas Rule (Randleman Buffer Rule) for PUBLIC ROAD CONSTRUCTION, IMPROVEMENT & MAINTENANCE ACTIVITIES (As approved by the Water Quality Committee of the Environmental Management Commission on February 14, 2002)*

**NOTE:**

**To constitute a complete application, all of the information requested in this form must be provided. Incomplete applications will be returned to the applicant. The original and two copies of the completed “General” Variance Application Form and any attachments must be sent to the DWQ 401/Wetlands Certification Unit, 1650 Mail Service Center, Raleigh, NC 27699-1650, (919) 733-1786 and one copy needs to be sent to the Piedmont Triad Regional Water Authority (PTRWA), 2216 W. Meadowview Rd., Wilmington Bldg., Suite 204, Greensboro, NC 27407, (336) 547-8437 to constitute a complete submittal. This form may be photocopied for use as an original.**

**Part 1: General Information**

*(Please include attachments if the room provided is insufficient.)*

1. Applicant's name (the Division Engineer, project manager, person responsible for project): Gregory Thorpe, Ph.D., Environmental Mangement Director  
1598 Mail Service Center  
Raleigh, NC 27699-1548
2. Print Owner/Signing Official (person legally responsible for the property and its compliance)  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Street address: \_\_\_\_\_  
City, State, Zip: \_\_\_\_\_  
Telephone: (\_\_\_\_) \_\_\_\_\_  
Fax: (\_\_\_\_) \_\_\_\_\_
3. Contact person who can answer questions about the proposed project:  
Name: Erica McLamb  
Telephone: (919) 715-1521  
Fax: (919) 715-5501  
Email: emclamb@dot.state.nc.us
4. Project Name (Subdivision, facility, or establishment name - consistent with project name on plans, specifications, letters, operation and maintenance agreements, etc.):  
B-4128 Guilford County

2/26/02

5. Project Location:  
 Street address: SR 1549  
 City, State, Zip: Greensboro, NC  
 County: Guilford  
 Latitude/longitude: 36° 01' 79° 55'

6. Directions to site from nearest major intersection (Also, attach an 8 1/2 x 11 copy of the portion of the USGS topographic map and soil survey indicating the location and boundaries of the site):  
 Take SR 1546 south from I-40 approximately 3 miles. Turn left onto SR 1549. Project is approximately 0.75 miles from intersection.

7. Stream to be impacted by the proposed activity:  
 Stream name (for unnamed streams label as "UT" to the nearest named stream):  
Bull Run  
 Stream classification [as identified within the Schedule of Classifications 15A NCAC 2B .0311 (Cape Fear River Basin)]: WS IV

8. Which of the following permits/approvals will be required or have been received already for this project?

*Handwritten notes:*  
 Pen think so  
 E as recs

Required:	Received:	Date received:	Permit Type:
<u>X</u>	_____	_____	401 Certification/404 Permit
<u>X</u>	_____	_____	Others (specify) <u>Buffer Permit</u>

**Part 2: Proposed Activity**

*(Please include attachments if the room provided is insufficient.)*

1. Description of proposed activity [Also, please attach a map of sufficient detail (such as construction or site plans) to accurately delineate the boundaries of the land to be utilized in carrying out the activity, the location and dimension of any disturbance in the riparian buffers associated with the activity, and the extent of riparian buffers on the land. **Include the area of buffer impact in ft<sup>2</sup> for each zones.**]  
 This project involves the widening of SR 1549 from a two lane shoulder section to a four lane curb and gutter section. Buffer Impacts: 12,811 sq. ft. Zone 1, 8,039 sq. ft. Zone 2.

2. State reasons why this plan for the proposed activity cannot be practically accomplished, reduced or reconfigured to better minimize or eliminate disturbance to the riparian buffers:  
A four lane facility is needed in this area due to present and proposed traffic volumes.

2/26/02

- 3. If sheet flow of concentrated runoff cannot be achieved prior to entering the buffers, then please provide information on any on-site stormwater management facilities (e.g., grassed swales, extended detention wetlands, etc.) that will be used to control nutrients and attenuate flow (attach construction details and site locations of these plans):

Sheet flow of concentrated runoff cannot be achieved prior to entering the buffers on the east side of Bull Run due to topographical and right of way constraints. It is proposed to construct a ditch through the buffer to convey the concentrated flow to the stream. \_\_\_\_\_

- 4. How do you intend to provide mitigation if required under Condition No. 7 of the variance? (Attach a Mitigation Plan if you intend to satisfy the mitigation requirement through the restoration of riparian buffers.)

Compensatory mitigation will be provided through EEP.

**Please provide an explanation of the following:**

- (1) The practical difficulties or hardships that would result from the strict application of this Rule.

The difficulty that would result from the strict application of this rule is that there are no practicable methods of treatment or attenuation of the stormwater runoff before it enters the buffer.

- (2) How these difficulties or hardships result from conditions that are unique to the property involved.

The difficulties in treating the runoff from the east side of this project arise from the steep terrain and the right of way constraints. The close proximity of houses and apartment buildings to the proposed roadway eliminates the possibility of using grassed swales to treat the runoff before entering the buffer. The topography in this area is also a limiting factor as the proposed grade in this area is between 5% and 6.5% which is too steep to get the velocities necessary for treatment. There is difficulty also in putting a device adjacent to the buffer to treat and attenuate the runoff before entering the buffer because the natural ground is sloping toward and into the buffer at a 20% grade.

**Part 3: Agent Authorization**

If you wish to designate submittal authority to another individual or firm so that they may provide information on your behalf, please complete this section:

Designated agent (individual or firm): \_\_\_\_\_  
 Mailing address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_



2/26/02

**Part 4: Applicant's Certification**

I, \_\_\_\_\_ (print or type name of person listed in Part I, Item 2), certify that the information included on this permit application form is correct, that the project will be constructed in conformance with the approved plans.

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Title: \_\_\_\_\_

NC Division of Water Quality (DWQ)  
401 Wetlands Certification Unit  
2321 Crabtree Blvd. (LOCATION)  
1650 Mail Service Center (MAILING ADDRESS)  
Raleigh, NC 27699-1650  
(919) 733-1786

Piedmont Triad Regional Water Authority (PTRWA)  
2216 W. Meadowview Rd.  
Wilmington Bldg., Suite 204  
Greensboro, NC 27407  
(336) 547-8437

# STORMWATER MANAGEMENT PLAN

B-4128, State Project 33481.1.1

Date: 2/07/06

Guilford County

Hydraulics Project Engineer: R.C. Henegar, PE

## ***ROADWAY DESCRIPTION***

The project involves replacing Bridge No. 73 over Bull Run on SR 1549 in Greensboro. The overall length of the project is 0.338 miles. The existing 19-foot paved road is a two-lane road with 4-foot grass shoulders. The existing structure is a 40 ft single span bridge with 25 feet of clear roadway width of 25 feet. The project will be a four-lane, 56-foot face to face, curb and gutter section. All sections include 14-foot outside lanes to accommodate bicycle travel and sidewalks on both sides of the road. The proposed bridge will be a 100 foot single span structure with a clear roadway width of 64 feet. An on site detour with an 85 foot detour bridge is proposed for this project.

## ***ENVIRONMENTAL DESCRIPTION***

This project is located in the lower Randleman Reservoir watershed, part of the Cape Fear River Basin. There is one stream crossing on this project, which has a WS IV classification. No wetlands will be impacted by the proposed project.

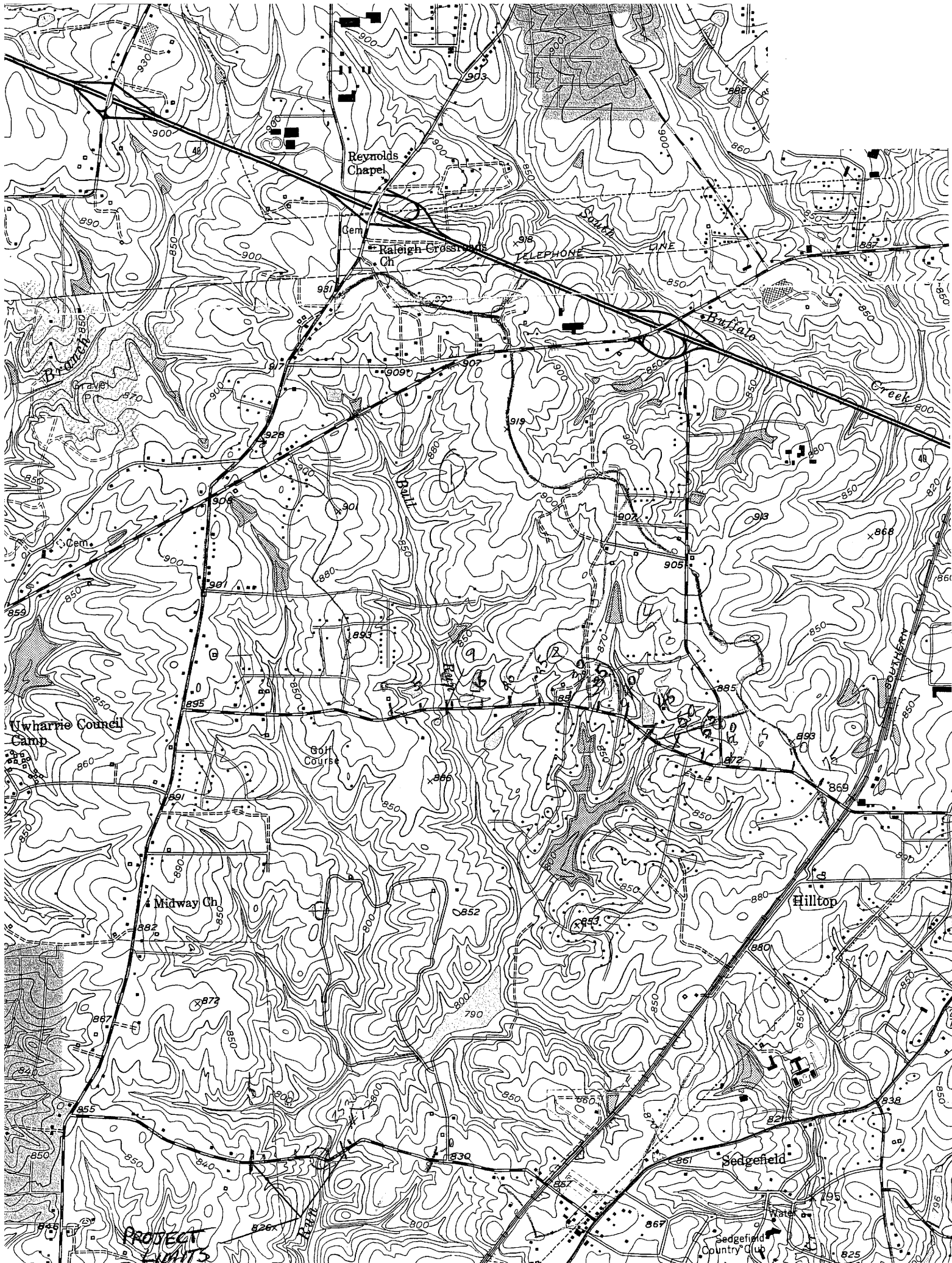
## ***BEST MANAGEMENT PRACTICES AND MAJOR STRUCTURES***

The Best Management Practice (BMP) and measure used on the project to reduce the stormwater impact was a preformed scour holes. The proposed bridge is a single span structure eliminating the need for a bridge bent in the creek. There will be no deck drains on the proposed structure. Also the storm drainage is being discharged as far away from the stream as practicable.

The following summarizes where the BMPs will be used on the project:

## **PREFORMED SCOUR HOLES**

The north side of the roadway at station 23+10 -L-



Reynolds Chapel

Raleigh Cross Church

Wharfedale Council Camp

Midway Church

Hilltop

Sedgefield

Sedgefield Country Club

PROTECT  
LIMITS

TELEPHONE LINE

Wharfedale

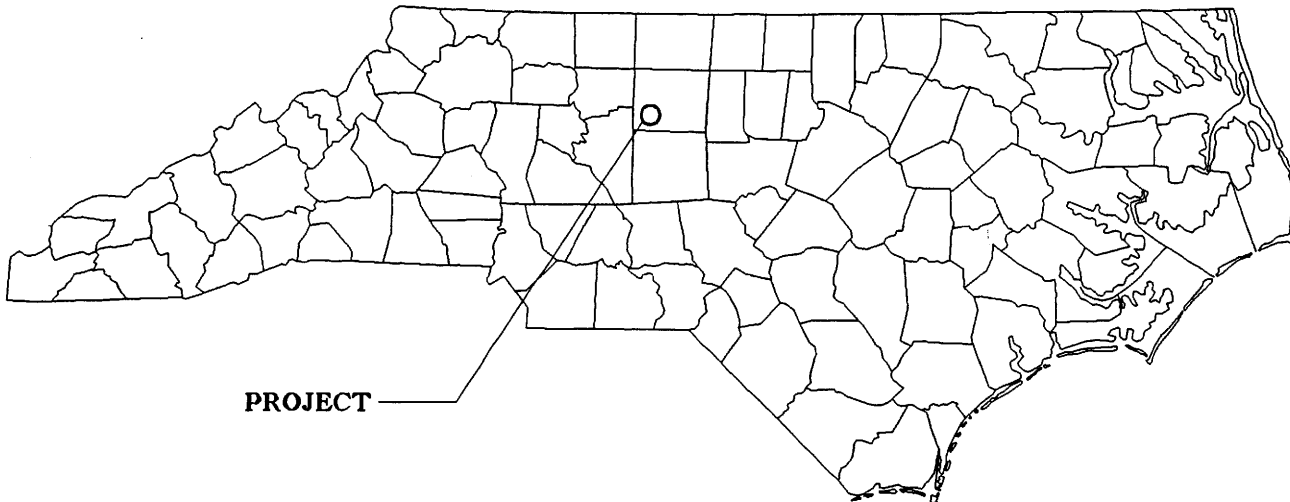
Creek

RAILWAY

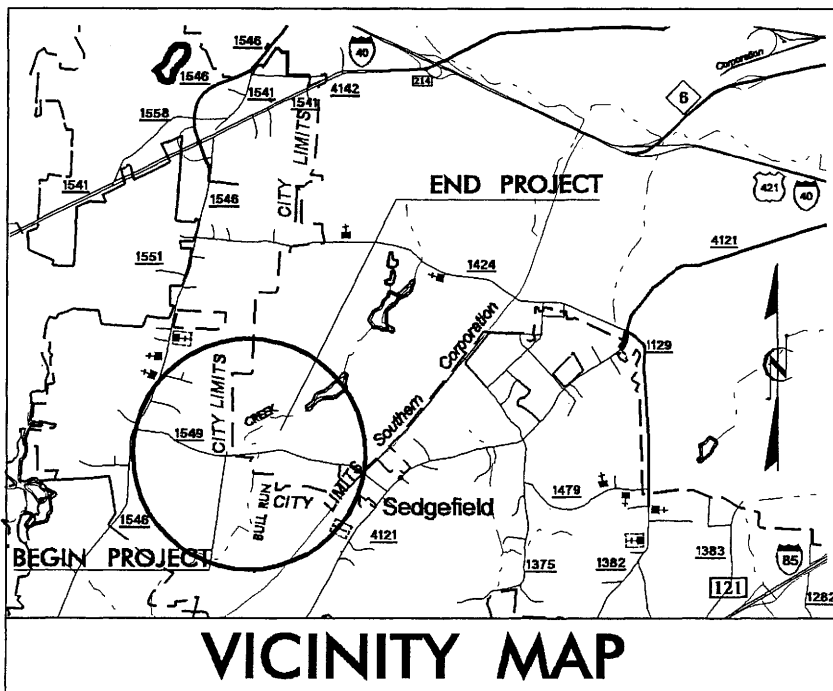
Golf Course

Water

# NORTH CAROLINA



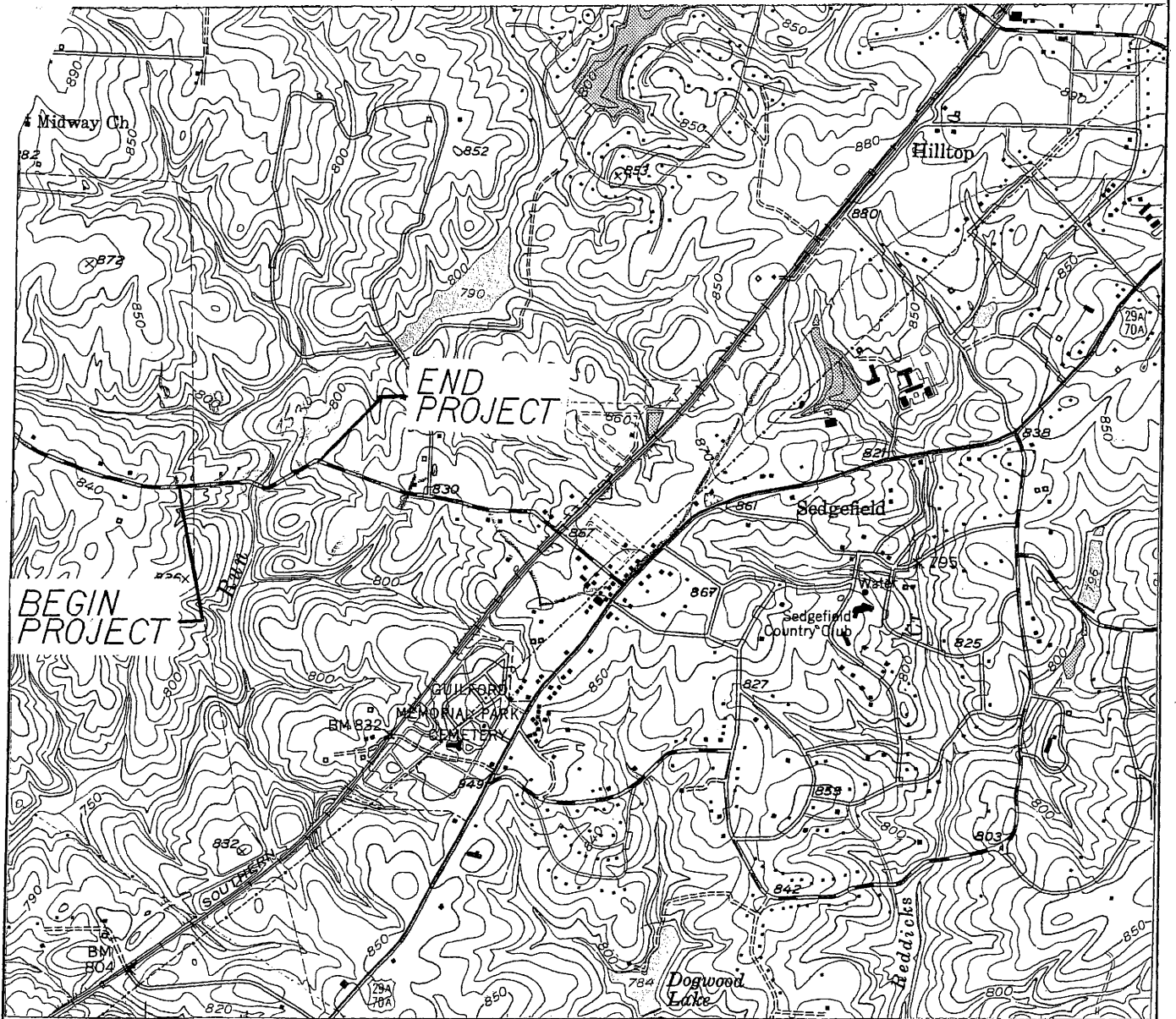
PROJECT



## VICINITY MAP

### Utility VICINITY MAPS

NCDOT  
DIVISION OF HIGHWAYS  
GUILFORD COUNTY  
PROJECT: 33481.1 (B-4128)  
BRIDGE No. 73 OVER  
BULL RUN CREEK ON  
SR 1549 IN GREENSBORO



Utility  
VICINITY  
MAPS

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GUILFORD COUNTY  
PROJECT: 33481.1 (B-4128)  
BRIDGE No. 73 OVER  
BULL RUN CREEK ON  
SR 1549 IN GREENSBORO

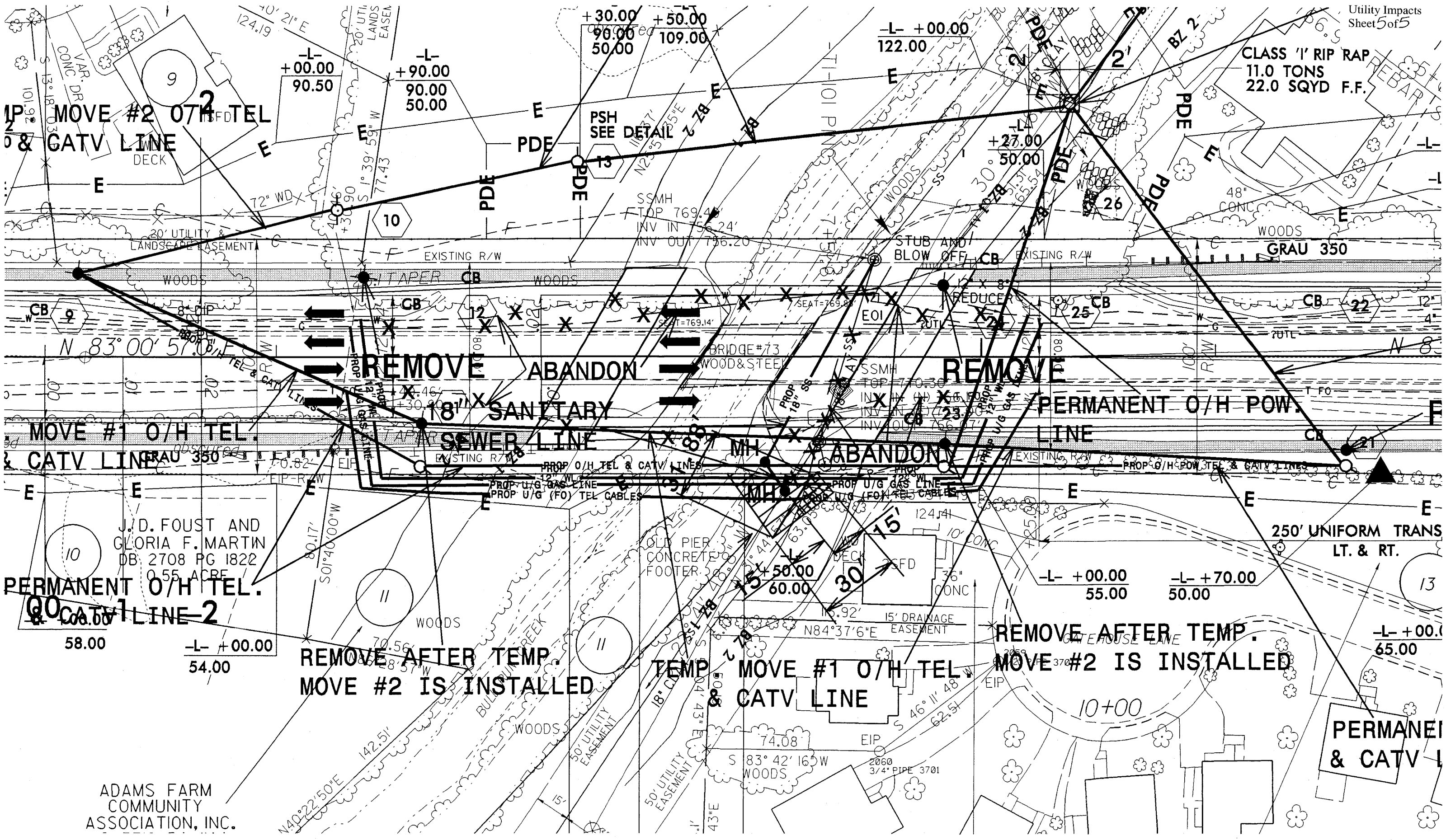
## UTILITY BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT						MITIGABLE		BUFFER REPLACEMENT	
			TYPE		ALLOWABLE		TOTAL (ft <sup>2</sup> )	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft <sup>2</sup> )						
1	Sanitary Sewer Line	24+18 RT					564.0	144.0	708.0			
2	Power Pole	25+30 LT				4.0		4.0				
<b>TOTAL:</b>							568.0	144.0	712.0			

N.C. DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 Guilford County  
 PROJECT: 33481.1.1 (B-4128)

2/15/2007  
 SHEET 3 OF 5





MP MOVE #2 O/H TEL  
& CATV LINE

MOVE #1 O/H TEL  
& CATV LINE

PERMANENT O/H TEL.  
& CATV LINE-2

REMOVE AFTER TEMP.  
MOVE #2 IS INSTALLED

TEMP. MOVE #1 O/H TEL.  
& CATV LINE

REMOVE AFTER TEMP.  
MOVE #2 IS INSTALLED

PERMANENT  
& CATV LINE

ADAMS FARM  
COMMUNITY  
ASSOCIATION, INC.

CLASS '1' RIP RAP  
11.0 TONS  
22.0 SQYD F.F.

GRAU 350

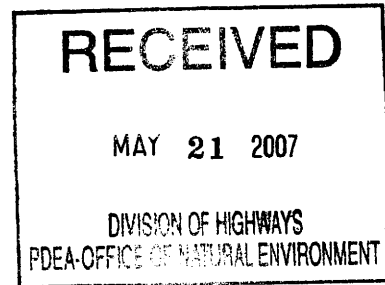
250' UNIFORM TRANS  
LT. & RT.

J. D. FOUST AND  
GLORIA F. MARTIN  
DB 2708 PG 1822  
0.55 ACRE

OLD PIER  
CONCRETE  
FOOTER

2060  
3/4" PIPE 3701





May 14, 2007

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

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

**B-4128**, Replace Bridge Number 73 over the Bull Run Creek on  
SR 1549, Guilford County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the buffer mitigation for the subject project. Based on the information supplied by you on May 7, 2007, the impacts are located in CU 03030003 of the Cape Fear River Basin in the Central Piedmont (CP) Eco-Region, and are as follows:

Zone 1 Buffer:	6,521 square feet
Zone 2 Buffer:	3,609 square feet

If the buffer impacts or the amount of mitigation required for this project increases, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required.

All buffer mitigation requests and approvals are administrated through the Riparian Restoration Buffer Fund. The NCDOT will be responsible to ensure that appropriate compensation for the buffer mitigation will be provided in the agreed upon method of fund transfer. Upon receipt of the NCDWQ's Buffer Authorization Certification, EEP will transfer funds from Tri-Party MOA Fund into the Riparian Restoration Buffer Fund. Upon completion of transfer payment, NCDOT will have completed its riparian buffer mitigation responsibility for TIP B-4128. Subsequently, EEP will conduct a review of current MOA mitigation projects in the river basin to determine if available buffer mitigation credits exist. If there are buffer mitigation credits

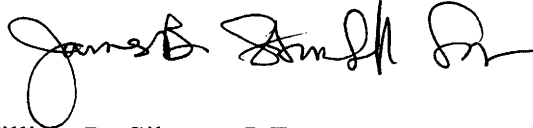
*Restoring... Enhancing... Protecting Our State*



available, then the Riparian Restoration Buffer Fund will purchase the appropriate amount of buffer mitigation credits from Tri-Party MOA Fund.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

A handwritten signature in black ink, appearing to read "James B. Gilmore". The signature is stylized with a large initial "G" and a long horizontal stroke at the end.

William D. Gilmore, P.E.  
EEP Director

cc: Mr. Andy Williams, USACE-Raleigh  
Mr. John Hennessy, Division of Water Quality, Wetlands/401 Unit  
File: B-4128 Revised



May 14, 2007

Mr. John Hennessy  
N. C. Division of Water Quality  
Mail Service Center 1650  
Raleigh, North Carolina 27699-1650

Dear Mr. Hennessy:

Subject: EEP Mitigation Acceptance Letter:

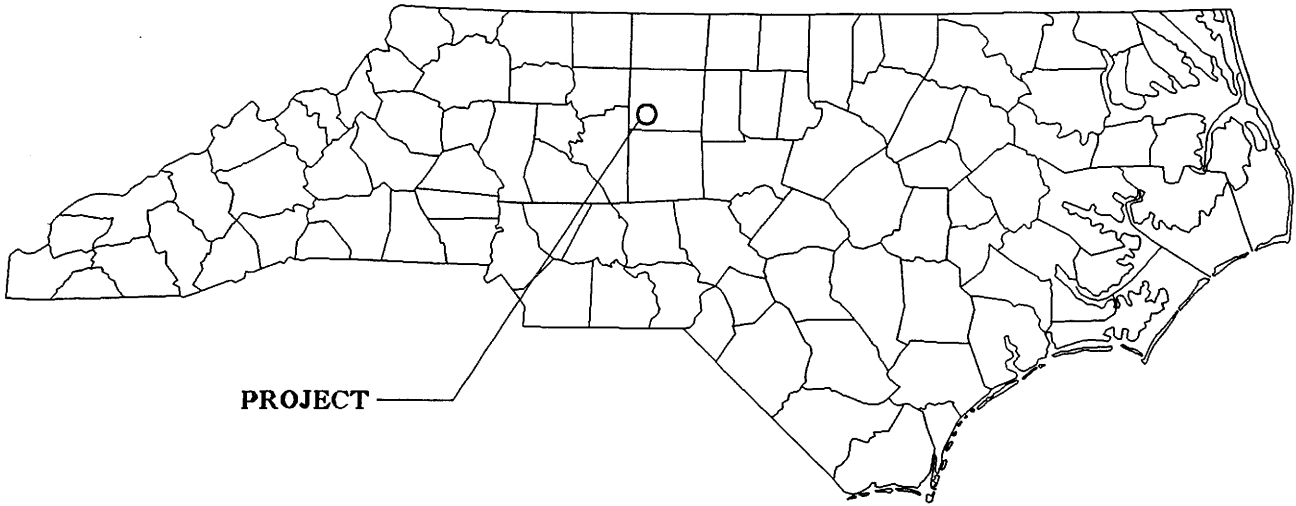
**B-4128**, Replace Bridge Number 73 on SR 1549 over Bull Run  
Creek, Guilford County, Cape Fear River Basin (Cataloging Unit  
03030003)

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the buffer mitigation required for the subject project. The buffer impacts associated with this project are located in Cataloging Unit 03030003 of the Cape Fear River Basin. **This mitigation acceptance letter replaces the mitigation acceptance letter issued on May 2, 2006.** As indicated in the NCDOT's mitigation request dated May 7, 2007, the project will impact buffers only. The buffer impacts have decreased from the previous acceptance to 6,521 square feet in Zone 1 and 3,609 square feet in Zone 2.

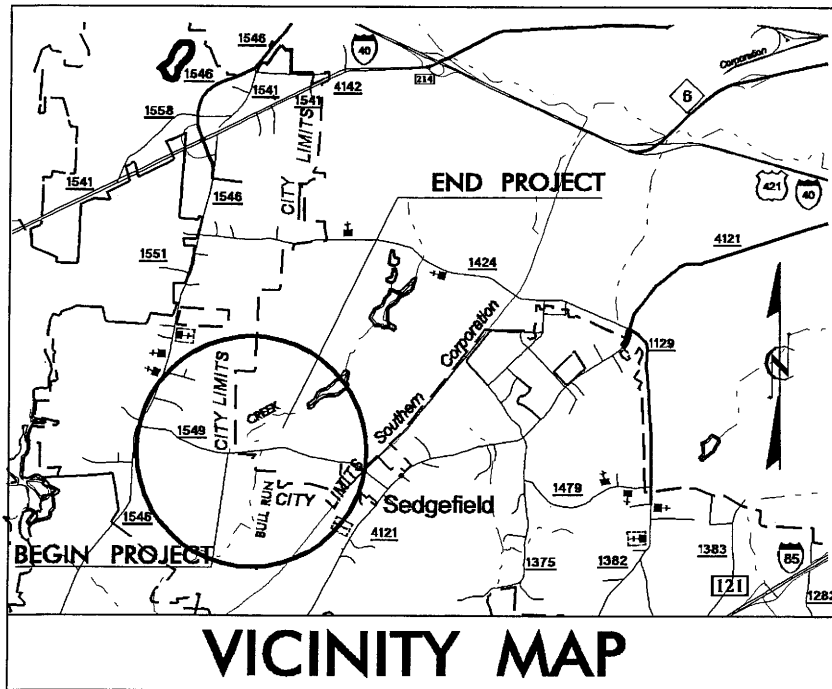
If the buffer impacts or the amount of mitigation required from EEP increases or decreases for this project, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required. All buffer mitigation requests and approvals are administrated through the Riparian Restoration Buffer Fund (Fund 2982).

The NCDOT will be responsible to ensure that the appropriate compensation for the buffer mitigation will be provided in the agreed upon method of fund transfer. Upon receipt of the NCDWQ's Buffer Authorization Certification, EEP will transfer funds from Fund 2984 (Tri-Party MOA Account) into Fund 2982 and commit to provide the appropriate buffer mitigation to offset the impacts associated with this project.

# NORTH CAROLINA



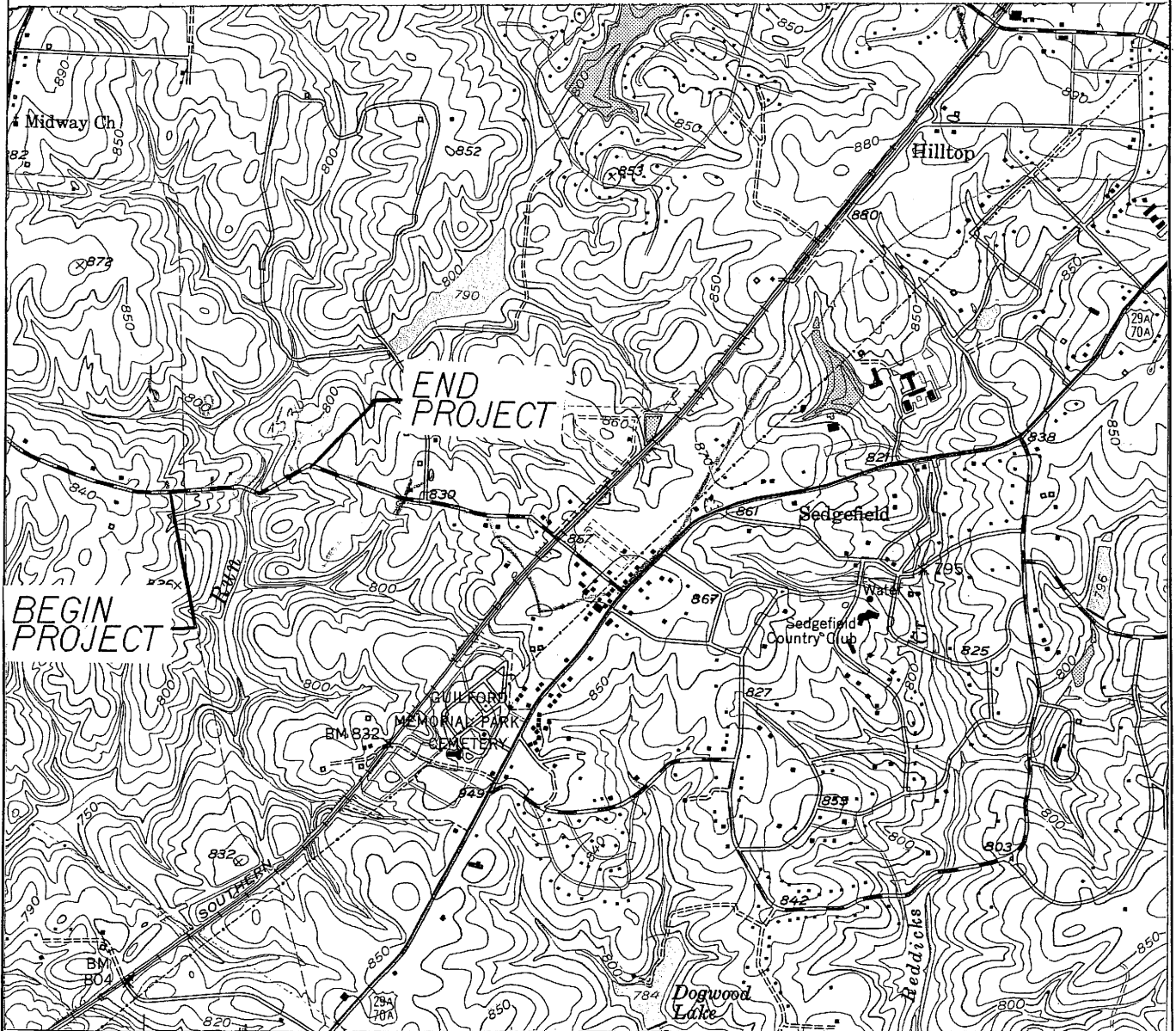
PROJECT



## VICINITY MAP

RANDLEMAN BUFFER  
VICINITY  
MAPS

NCDOT  
DIVISION OF HIGHWAYS  
GUILFORD COUNTY  
PROJECT: 33481.1 (B-4128)  
BRIDGE No. 73 OVER  
BULL RUN CREEK ON  
SR 1549 IN GREENSBORO



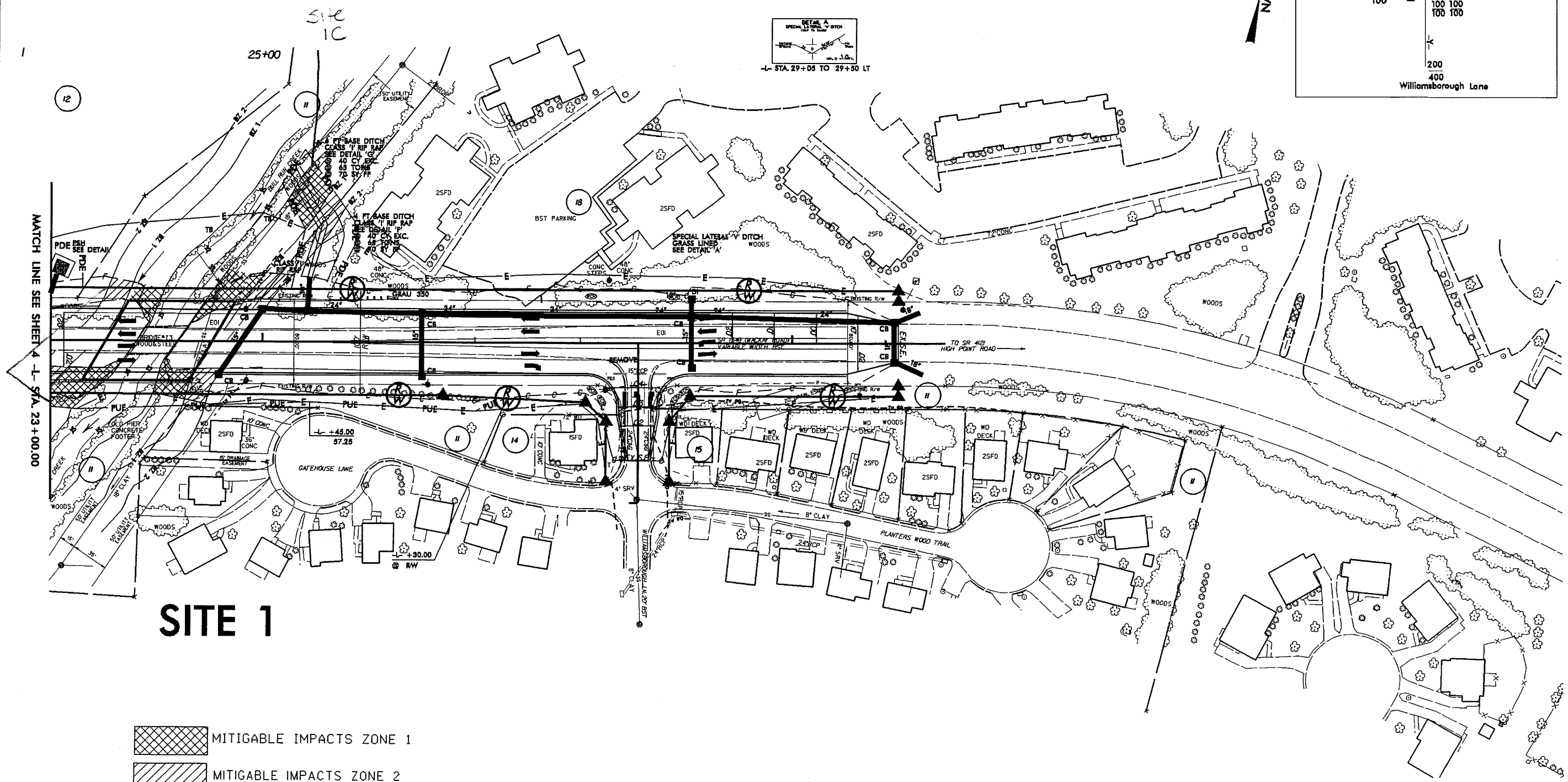
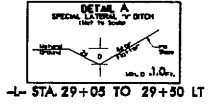
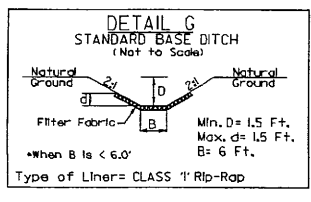
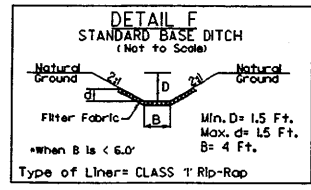
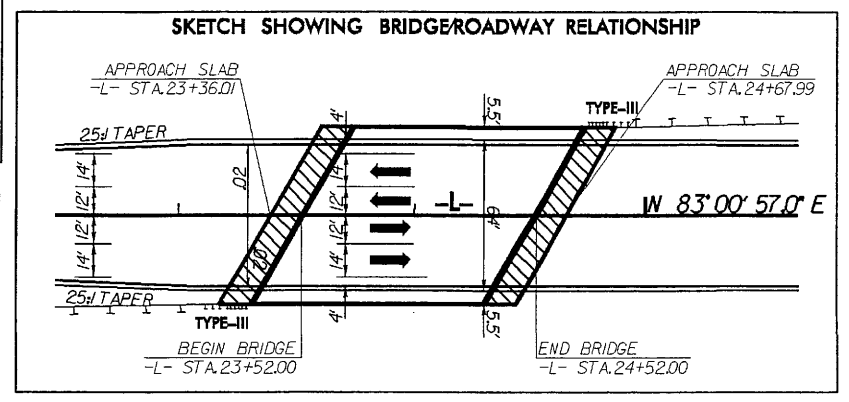
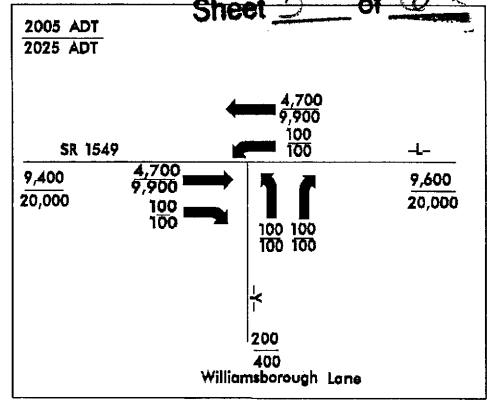
RANDLEMAN BUFFER  
VICINITY  
MAPS

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GUILFORD COUNTY  
PROJECT: 33481.1 (B-4128)  
BRIDGE No. 73 OVER  
BULL RUN CREEK ON  
SR 1549 IN GREENSBORO





Buffer Drawing  
 Sheet 5 of 10



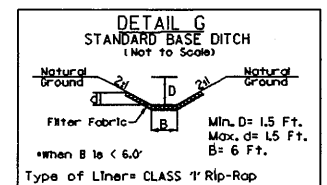
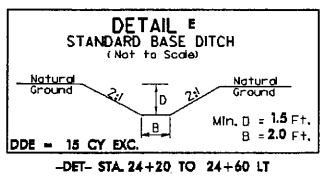
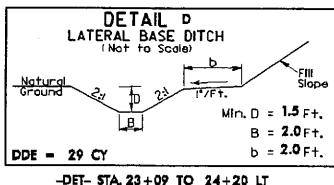
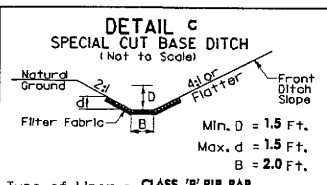
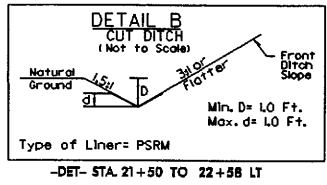
MITIGABLE IMPACTS ZONE 1  
 MITIGABLE IMPACTS ZONE 2

SEE SHEET 7 FOR -L- PROFILE  
 SEE SHEET 7 FOR -Y- PROFILE

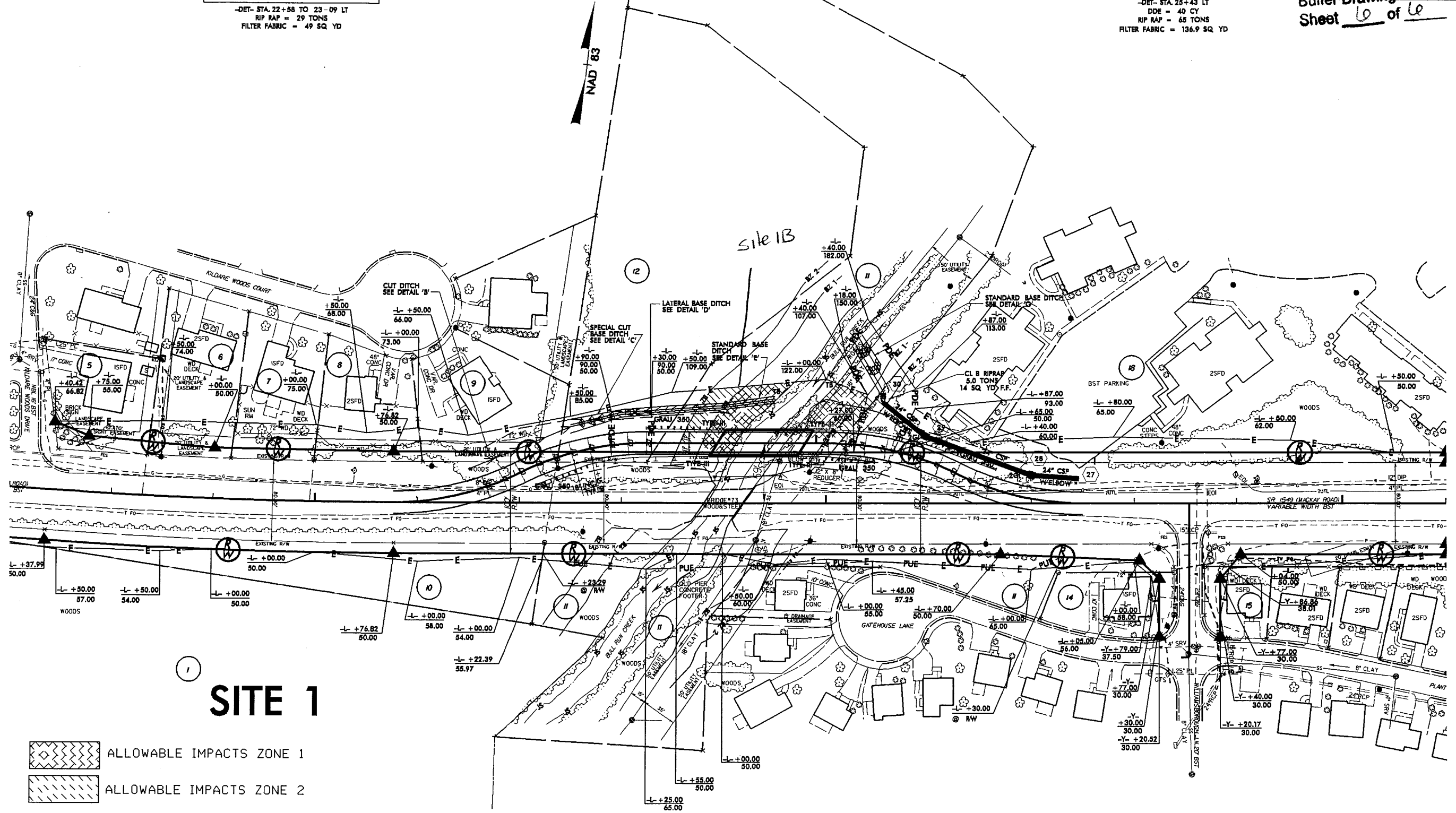
8/17/97  
 REVISIONS  
 02-APR-2007 10:32  
 C:\hydr-a\ics\csdd\4128\_hyd.prm\buff\_psh\_5.dgn  
 11/21/07



Buffer Drawing  
Sheet 6 of 6



REVISIONS  
RAW REVISIONS: 1/11/06 DUC PROPERTY OWNER NAME CHANGES, ADDED PUSES AND OFFSETS FOR MONUMENTS.



02-APR-2007 0:35  
r:\niger-sullivan\0205\B4128\_hyd\_prm\_buff\_psh\_b.dgn  
11/24/07



Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# CONVENTIONAL PLAN SHEET SYMBOLS

### BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Property Corner	-----
Property Monument	□ ENL
Parcel/Sequence Number	②③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	-o-o-o-
Proposed Chain Link Fence	-□-□-□-
Proposed Barbed Wire Fence	-◇-◇-◇-
Existing Wetland Boundary	---W.S.
Proposed Wetland Boundary	---W.S.
Existing High Quality Wetland Boundary	---HQ W.S.
Existing Endangered Animal Boundary	---E.A.B.
Existing Endangered Plant Boundary	---E.P.B.

### BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or UG Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	⊗
Foundation	□
Area Outline	□
Cemetery	⊕
Building	□
School	□
Church	⊕
Dam	▬

### HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	-----
River Basin Buffer	---RBB---
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Swamp Marsh	⊕
Proposed Lateral, Tail, Head Ditch	-----
False Sump	-----

### RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ CSX TRANSPORTATION MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

### RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite Marker	-----
Existing Control of Access	⊕
Proposed Control of Access	⊕
Existing Easement Line	E
Proposed Temporary Construction Easement	E
Proposed Temporary Drainage Easement	TDE
Proposed Permanent Drainage Easement	PDE
Proposed Permanent Utility Easement	PUE

### ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	C
Proposed Slope Stakes Fill	F
Proposed Wheel Chair Ramp	⊕ WCR
Curb Cut for Future Wheel Chair Ramp	⊕ CCR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	⊗

### VEGETATION:

Single Tree	⊕
Single Shrub	⊕
Hedge	-----
Woods Line	-----
Orchard	⊕
Vineyard	⊕ Vineyard

### EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	----- CONC
Bridge Wing Wall, Head Wall and End Wall	----- CONC WW
MINOR:	
Head and End Wall	----- CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊕
Storm Sewer	-----

### UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊗
Power Transformer	⊕
UG Power Cable Hand Hole	⊕
H-Frame Pole	●
Recorded UG Power Line	-----
Designated UG Power Line (S.U.E.*)	-----

### TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	⊕
Telephone Pedestal	⊕
Telephone Cell Tower	⊕
UG Telephone Cable Hand Hole	⊕
Recorded UG Telephone Cable	-----
Designated UG Telephone Cable (S.U.E.*)	-----
Recorded UG Telephone Conduit	-----
Designated UG Telephone Conduit (S.U.E.*)	-----
Recorded UG Fiber Optics Cable	-----
Designated UG Fiber Optics Cable (S.U.E.*)	-----

### WATER:

Water Manhole	⊕
Water Meter	⊕
Water Valve	⊕
Water Hydrant	⊕
Recorded UG Water Line	-----
Designated UG Water Line (S.U.E.*)	-----
Above Ground Water Line	----- A/G Water

### TV:

TV Satellite Dish	⊕
TV Pedestal	⊕
TV Tower	⊕
UG TV Cable Hand Hole	⊕
Recorded UG TV Cable	-----
Designated UG TV Cable (S.U.E.*)	-----
Recorded UG Fiber Optic Cable	-----
Designated UG Fiber Optic Cable (S.U.E.*)	-----

### GAS:

Gas Valve	⊕
Gas Meter	⊕
Recorded UG Gas Line	-----
Designated UG Gas Line (S.U.E.*)	-----
Above Ground Gas Line	----- A/G Gas

### SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
UG Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
Recorded SS Forced Main Line	-----
Designated SS Forced Main Line (S.U.E.*)	-----

### MISCELLANEOUS:

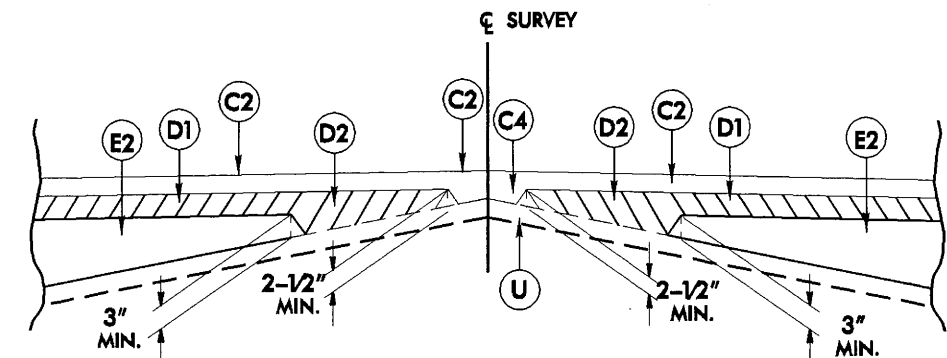
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown UG Line	-----
UG Tank; Water, Gas, Oil	□
AG Tank; Water, Gas, Oil	□
UG Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

6/27/99

**PAVEMENT SCHEDULE**

C1	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS	J1	PROP. 10" AGGREGATE BASE COURSE.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R1	2' - 6" CONCRETE CURB AND GUTTER
C3	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	S	4" CONCRETE SIDEWALK
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	T	EARTH MATERIAL.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0B, AT AN AVERAGE RATE OF 458 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH	V	VARIABLE MILLING
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 458 LBS. PER SQ. YD.	W	WEDGING DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 6 1/2" IN DEPTH		NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

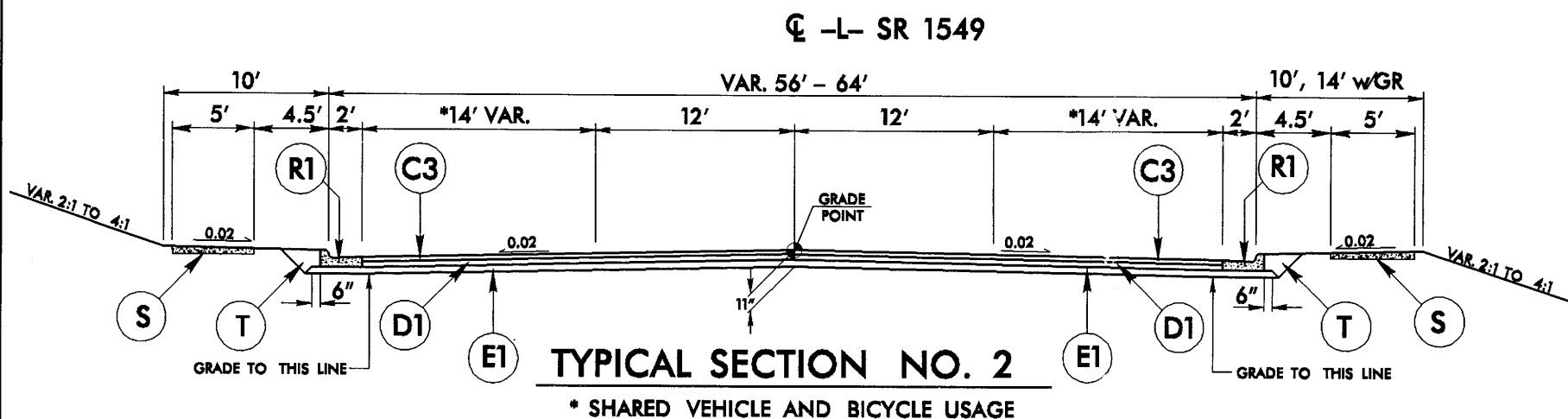
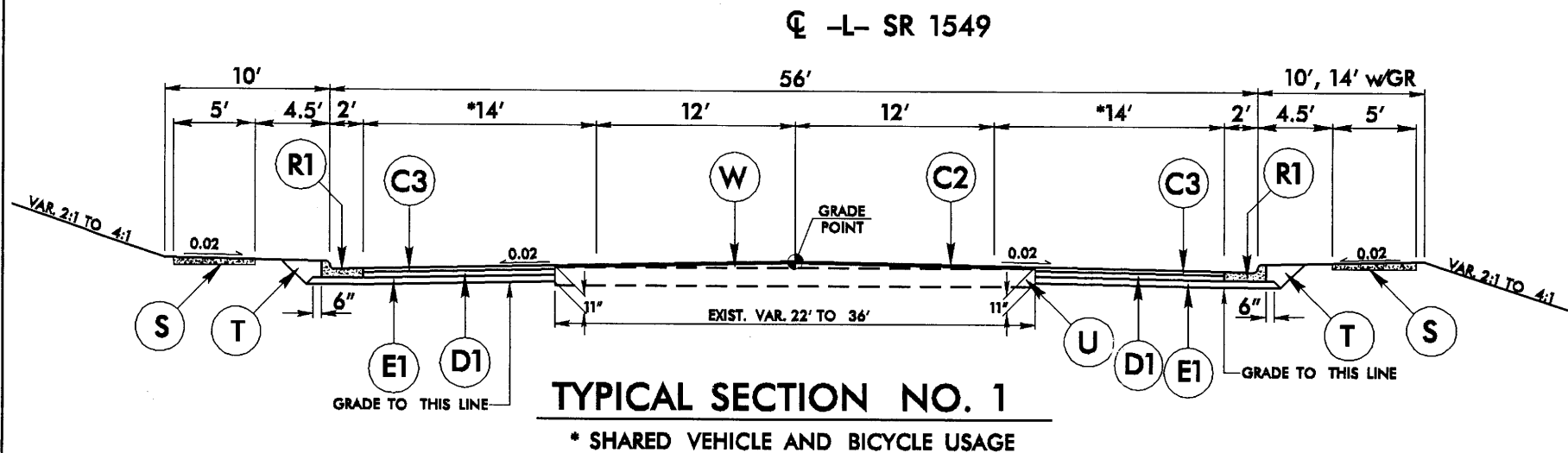
PROJECT REFERENCE NO. B-4128	SHEET NO. 2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	



**Detail Showing Method of Wedging**

NOTE: TRANSITION FROM EXISTING TO T.S. NO.1 FROM -L- STA.13+18.00 TO STA.16+18.00

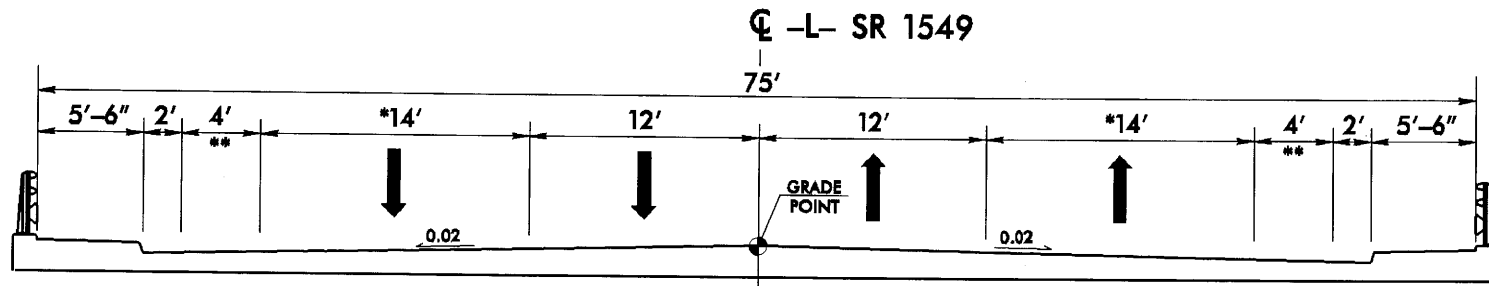
USE TYPICAL SECTION NO. 1  
-L- STA. 16+18.00 TO STA. 20+00.00



USE TYPICAL SECTION NO. 2  
-L- STA. 20+00.00 TO STA. 23+52.00 (BEGIN BRIDGE)  
-L- STA. 24+52.00 (END BRIDGE) TO STA. 25+25.00  
TRANSITION FROM T.S. NO. 2 TO T.S. NO. 3  
-L- STA. 25+25.00 TO 27+75.00

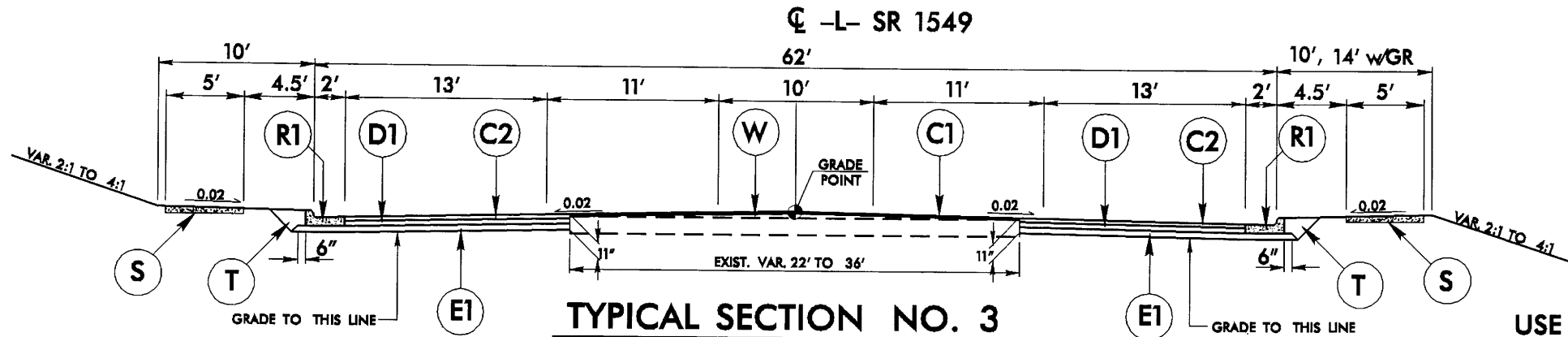
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PROJECT REFERENCE NO. B-4128	SHEET NO. 2-A
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	



**TYPICAL SECTION ON STRUCTURE**  
 -L- STA. 23+52.00 TO STA. 24+52.00  
 \* SHARED VEHICLE AND BICYCLE USAGE  
 \*\* WIDTH FOR HYDRAULIC DESIGN SPREAD

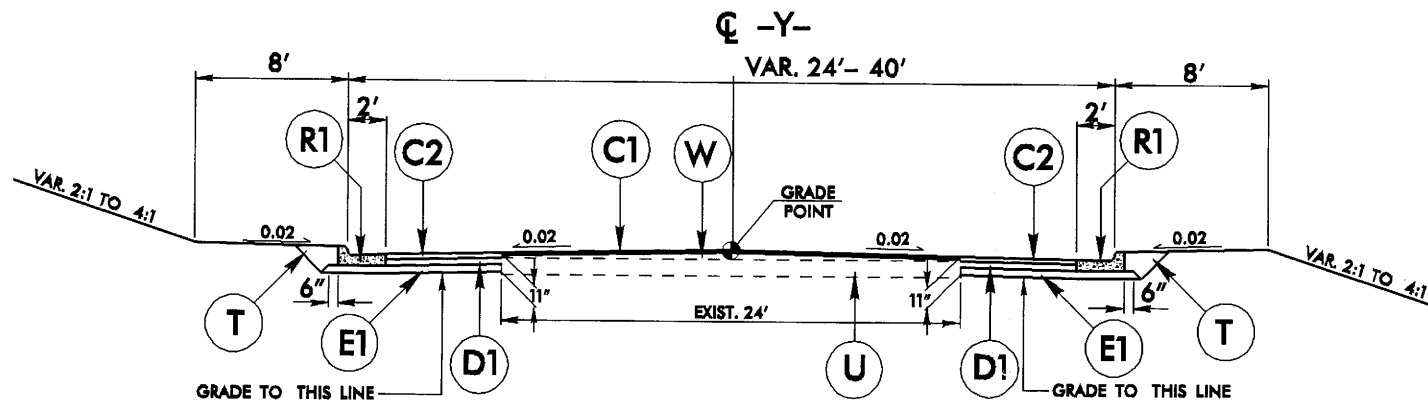
PAVEMENT SCHEDULE	
C1	1.5" S9.5B
C2	3.0" S9.5B
C3	VAR. DEPTH S9.5B
D1	4.0" I19.0B
D2	VAR. DEPTH I19.0B
E1	4.0" B25.0B
E2	VAR. DEPTH B25.0B
J1	8.0" ABC
P	PRIME COAT
R1	2' - 6" CONC. C&G
S	4" CONC. SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING
W	WEDGING



**TYPICAL SECTION NO. 3**

USE TYPICAL SECTION NO. 3

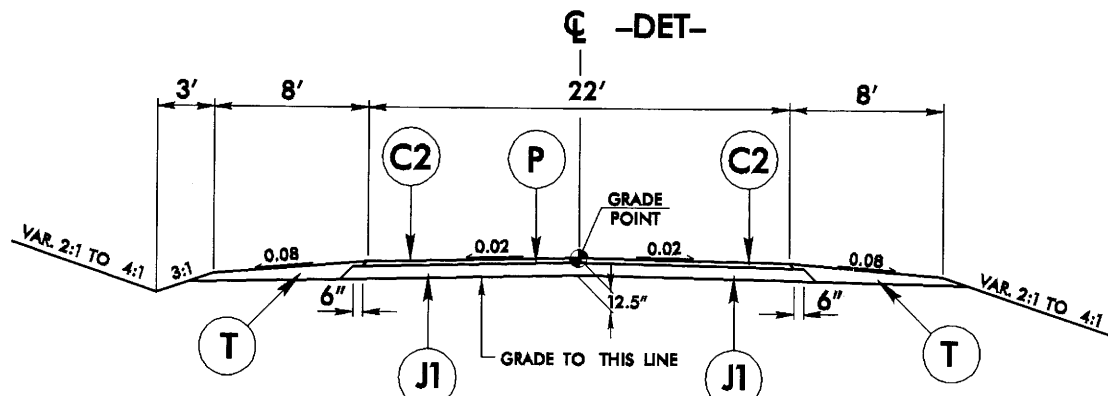
-L- STA. 27+75.00 TO STA. 30+50.00  
 TRANSITION FROM T.S. NO. 3 TO EXISTING  
 -L- STA. 30+50.00 TO 31+00.00



**TYPICAL SECTION NO. 4**

USE TYPICAL SECTION NO. 4

-Y- STA. 10+40.00 TO STA. 10+91.96

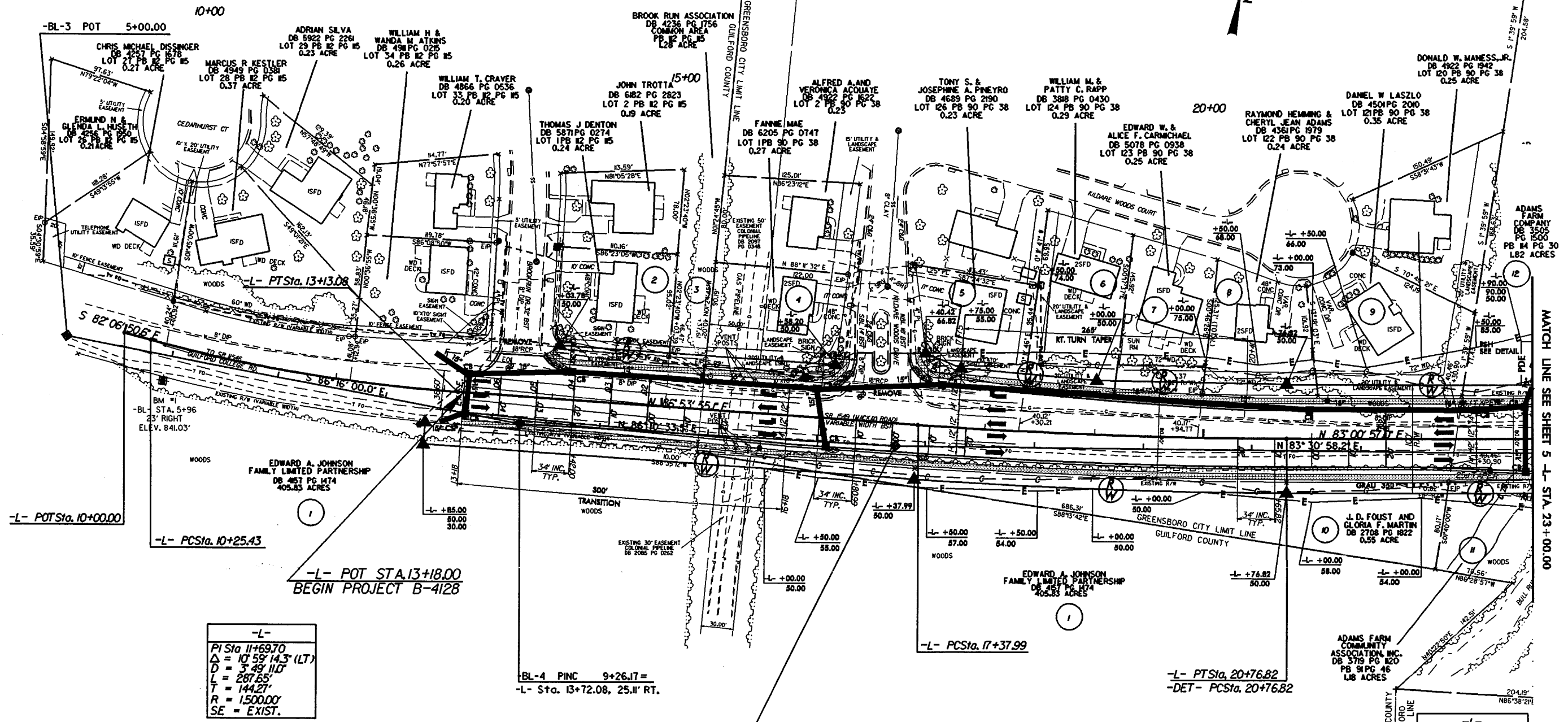
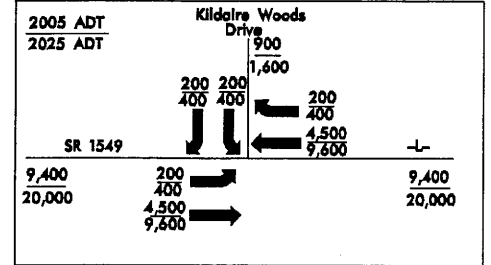


**TYPICAL SECTION NO. 5**

USE TYPICAL SECTION NO. 5

-DET- STA. 21+56.38 TO STA. 24+04.00 (BEGIN BRIDGE)  
 -DET- STA. 24+89.00 (END BRIDGE) TO STA. 26+89.36

PROJECT REFERENCE NO. B-4128		SHEET NO. 4	
HW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			



-L-

PI Sta 11+69.70
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$D = 3' 49' 11.0''$
$L = 287.65'$
$T = 144.27'$
$R = 1500.00'$
SE = EXIST.

BL-4 PINC 9+26.17=  
-L- Sta. 13+72.08, 25.11' RT.

BL-5 PINC 12+72.62=  
-L- Sta. 17+18.51, 20.74' RT.

-L-

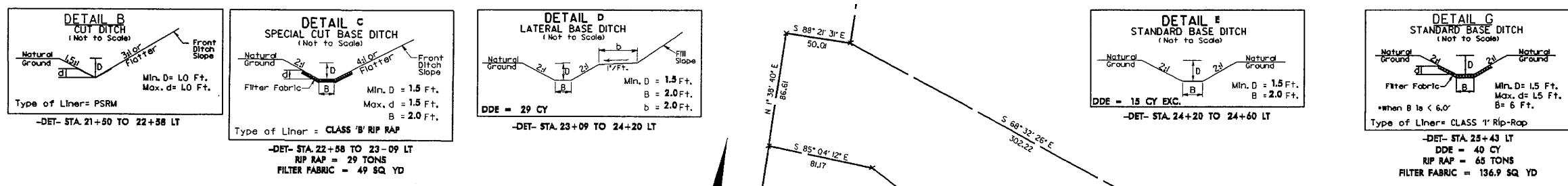
PI Sta 19+07.47
$\Delta = 3' 52' 58.7''$ (LT)
$D = 1' 08' 45.3''$
$L = 338.84'$
$T = 169.48'$
$R = 5000.00'$
SE = 0.02

REVISIONS  
RAW REVISIONS: 5/01/06 D.G.; REVISED DETOUR SLOPE STAKES AND TCE ON PARCELS B.9 AND 12.

02-MAY-2006 10:15  
B:\PROJECTS\B-4128\rdy\_psh\_4.dgn

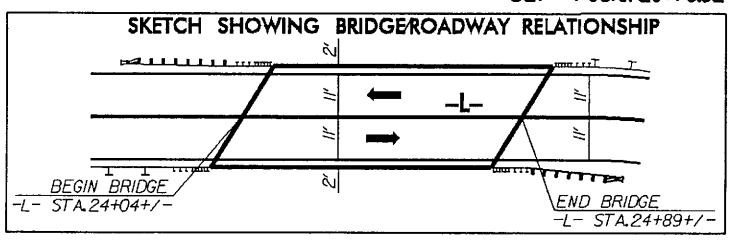
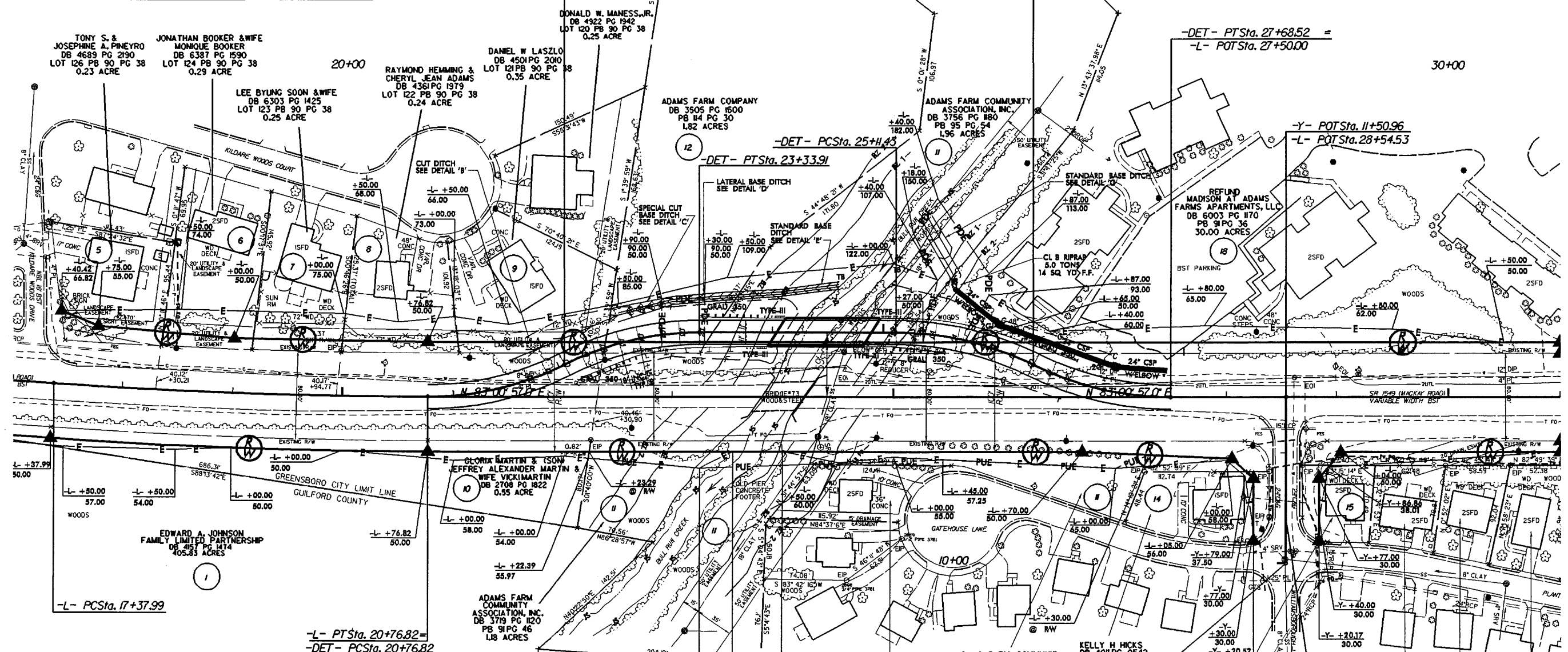
SEE SHEET 7 FOR -L- PROFILE





-DET-	-DET-
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L = 128.54'	L = 128.54'
T = 65.47'	T = 65.47'
R = 275.00'	R = 275.00'
SE = SEE PLANS	SE = SEE PLANS

-DET-	-DET-
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T = 65.47'	T = 65.47'
R = 275.00'	R = 275.00'
SE = SEE PLANS	SE = SEE PLANS



-L-
PI Sta 19+07.47
$\Delta = 3' 52' 58.1''$ (LT)
D = 1' 08' 45.3"
L = 338.84'
T = 169.48'
R = 5,000.00'
SE = 0.02

-Y- POT STA. 10+40.00  
 BEGIN CONSTRUCTION

SEE SHEET B FOR -DET- PROFILE

R/W REVISIONS 8/21/06 TRM-CHANGED PROPERTY OWNER NAMES ON PARCEL NO. 4.6.7. AND 10.

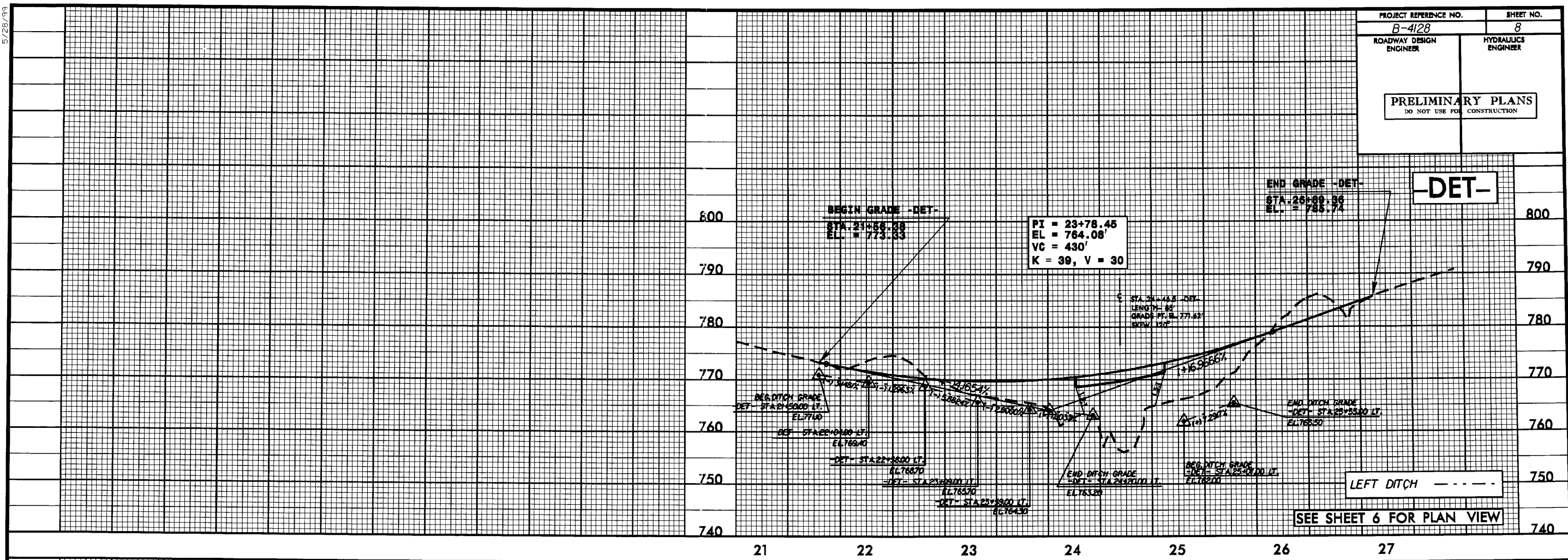
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5/28/99

PROJECT REFERENCE NO. B-4128	SHEET NO. 8
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



RECEIVED

FEB 17 2005

DIVISION OF HIGHWAYS  
PDEA-OFFICE OF NATURAL ENVIRONMENT

**Guilford County  
Bridge No. 73 on SR 1549  
Over Bull Run Creek  
Federal Aid Project No. BRZ-1549(4)  
State Project No. 8.2497601  
W.B.S. No. 33481.1.1  
T.I.P. No. B-4128**

CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

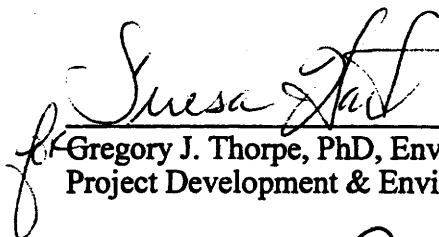
AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

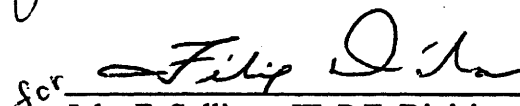
DIVISION OF HIGHWAYS

Approved:

2/11/05  
DATE

  
for Gregory J. Thorpe, PhD, Environmental Manager  
Project Development & Environmental Analysis Branch

2/14/05  
DATE

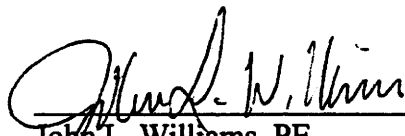
  
for John F. Sullivan, III, P.E. Division Administrator  
Federal Highway Administration

**Guilford County  
Bridge No. 73 on SR 1549  
Over Bull Run Creek  
Federal Aid Project No. BRZ-1549(4)  
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W.B.S. No. 33481.1.1  
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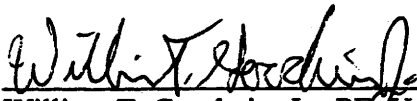
**CATEGORICAL EXCLUSION**

**February 2005**

**Documentation Prepared in  
Project Development and Environmental Analysis Branch By:**



John L. Williams, PE  
Bridge Replacement Planning Unit



William T. Goodwin, Jr., PE, Unit Head  
Bridge Replacement Planning Unit

**PROJECT COMMITMENTS:**

**Guilford County  
Bridge No. 73 on SR 1549  
Over Bull Run Creek  
Federal Aid Project No. BRZ-1549(4)  
State Project No. 8.2497601  
W.B.S. No. 33481.1.1  
T.I.P. No. B-4128**

**Office of Natural Environment, Hydraulics Unit – Randleman Buffer Rules**

**Bull Run Creek is located within the lower Randleman Reservoir watershed and all appropriate buffer rules are applicable.**

**Guilford County**  
**Bridge No. 73 on SR 1549**  
**Over Bull Run Creek**  
**Federal Aid Project No. BRZ-1549(4)**  
**State Project No. 8.2497601**  
**W.B.S. No. 33481.1.1**  
**T.I.P. No. B-4128**

**INTRODUCTION:** Bridge No. 73 is included in the 2004-2010 North Carolina Department of Transportation (NCDOT) Transportation Improvement Program and is eligible for the Federal-Aid Bridge Replacement and Rehabilitation Program. The location is shown in Figure 1. No substantial environmental impacts are anticipated. The project is classified as a Federal "Categorical Exclusion".

**I. PURPOSE AND NEED STATEMENT**

Bridge No. 73 has a one-span superstructure composed of a one-inch asphalt-wearing surface, a timber deck on steel I-beams. The substructure includes timber caps and piles behind a timber bulkhead.

Bridge Maintenance Unit records indicate the bridge has a sufficiency rating of 7.0 out of a possible 100 for a new structure. According to FHWA guidelines, the bridge is both structurally deficient with a structural appraisal of 2 out of 9 and functionally obsolete with a deck geometry appraisal of 2 out of 9. The combination of all these factors indicates the bridge is qualified for FHWA's Highway Bridge Replacement and Rehabilitation Program.

Wear and tear resulting from increasing traffic, aging (42-year-old) timber bridge components, a narrow cross section and increasing maintenance costs warrant replacement of this bridge.

**II. EXISTING CONDITIONS**

The project is located in the southwest corner of the City of Greensboro. The area has mixed development with homes, apartment complexes and businesses.

SR 1549 (Mackay Road) is classified as an urban major collector in the Statewide Functional Classification System and it is not a National Highway System Route. This route is not a designated bicycle route.

In the vicinity of the bridge, SR 1549 has a 19-foot pavement width with 4-foot grass shoulders. The bridge is located in a sag vertical curve. There are no horizontal curves within the project limits. The roadway is situated approximately 16 feet above the streambed.

The existing bridge (see Figure 3) was constructed in 1962. The length of the structure is 40 feet. The clear roadway width is 25 feet. The bridge is posted with weight restrictions of 17 tons for single vehicles and 21 tons for truck-tractor semi-trailers.

Utility impacts are anticipated to be moderate. The City of Greensboro has a 12" water line along the north side of SR 1549 east of the existing bridge. The line reduces to an 8" line west of the bridge. The City of Greensboro has an 18" sewer outfall that parallels the eastern side of Bull Run Creek. The sewer crosses SR 1549 just east of the bridge. Overhead utility lines are located along the south side of SR 1549. The lines cross SR 1549 just east of the bridge. Overhead telephone lines are located on the north side of SR 1549. Fiber optic markers indicate underground cable located along the south side of SR 1549.

The current traffic volume of 7800 vehicles per day (VPD) is expected to increase to 20000 VPD by the year 2025 assuming the eventual widening of Mackay Road. The projected volume includes one-percent truck-tractor semi-trailer (TTST) and two-percent dual-tired vehicles (DT). There is 40 mile per hour posted speed limit in the project area. The School Bus Transportation Director has indicated there are thirty-five school bus crossings per day.

There were no accidents reported in the vicinity of Bridge No. 73 during a check of a recent three-year period.

### **III. ALTERNATIVES**

#### **A. Project Description**

The replacement structure will consist of a 100-foot long bridge on the existing alignment. NCDOT has coordinated details of this project's typical section with Greensboro Department of Transportation (GDOT) to accommodate for potential future widening.

The roadway grade of the new structure will be approximately the same as the existing facility. The bridge will be of sufficient width to provide for two 12-foot lanes, two 14-foot lanes, and 5.6-foot sidewalks. Roadwork will begin approximately 1050 feet to the west of the existing bridge and extend approximately 730 feet east of the existing bridge.

The existing roadway approaches will be widened to 52 feet to provide two 12-foot lanes, two 14-foot lanes and a 2-foot curb and gutter section. Ten-foot (14-foot where guardrail is required) grass shoulders will be provided on each side. This project is being designed with a 40 mile per hour design speed.

A design exception will be required for vertical sight distance. To improve beyond the proposed becomes impractical considering impacts that would result to multiple apartment buildings surrounding the bridge and in consideration of the fact that there is no indication of an accident history resulting from the alignment.

## **B. Reasonable and Feasible Alternatives**

There are two build alternatives considered to be feasible. Both replace the bridge on approximately the existing location with a four-lane curb and gutter typical section.

Alternate 1 maintains traffic using phased construction (See Figure 2A). Asymmetrically widened to the north.

Alternate 2 maintains traffic with an onsite detour (See Figure 2B). Symmetrically widened on the centerline of the existing alignment.

## **C. Alternatives Eliminated From Further Consideration**

The “do-nothing” alternative will eventually necessitate closure of the bridge. This is not acceptable due to the traffic service currently provided by SR 1767 and due to increasing traffic demand.

Timber bridge components typically do not last beyond 30 to 40 years due to the natural deterioration rates of wood. Past a certain degree of deterioration, structures with timber piles become impractical to maintain or rehabilitate and are programmed for replacement, as is the case for this bridge. In addition maintenance/ rehabilitation does not meet the increasing traffic demand.

There is not an acceptable offsite detour. Traffic on all area roads is highly congested. Attempting to detour traffic offsite would amplify the situation creating unacceptable delays and safety concerns to Emergency Services, School Busses and road users. Given there are no particular environmental concerns with maintaining traffic onsite, an offsite detour was eliminated from further consideration.

## **D. Preferred Alternative**

Bridge No. 73 will be replaced on the existing alignment with a four-lane curb and gutter typical section. Traffic will be maintained with an onsite detour during construction as proposed in Alternate 2.

There were five primary factors considered in selecting the proposed alternative:

- Maintenance of traffic onsite is required.
- The onsite detour represented fewer construction complexities.
- The onsite detour posed far fewer safety concerns to construction personnel.
- Both alternatives have similar costs.
- While phased construction would have a smaller footprint during construction, there are no particular environmental concerns with the footprint of the onsite detour.

NCDOT Division 7 concurs with this proposed recommendation.



#### IV. ESTIMATED COSTS

The estimated costs for the build alternative is as follows:

Item	Alternate 1	(Preferred) Alternate 2
Structure	\$ 702,000	\$ 585,000
Structure Removal	10,000	10,000
Onsite Detour (Construction & Removal)	N/A	194,000
Roadway Approaches	662,000	557,000
Utility Construction	132,000	131,000
Mobilization & Miscellaneous	319,000	323,000
Eng. & Contingencies	275,000	300,000
<b>Total Construction Cost</b>	<b>\$ 2,100,000</b>	<b>\$ 2,100,000</b>
<b>Right-of-way Costs</b>	<b>\$ 166,000</b>	<b>\$ 170,000</b>
<b>Total Project Cost</b>	<b>\$ 2,266,000</b>	<b>\$ 2,270,000</b>

**Note:** The cost estimate includes sidewalks on both sides assuming the City will participate.

#### V. NATURAL RESOURCES

##### A. Physical Resources

###### Water Resources

The proposed project is situated in NCDWQ Sub-basin 01-00-30 and the Hydrologic Unit Code (HUC) is 03030003 of the Cape Fear River Basin. The project study area contains approximately 452 linear feet of Bull Run. Bull Run is a perennial stream that flows north to south underneath the bridge proposed for replacement. No other tributaries or water resources are located within the project study area.

The best usage classification of Bull Run is class "WS-IV" waters. No High Quality Waters (HQW), Water Supplies (WS-I or WS-II), or Outstanding Resource Waters (ORW) occur within the project vicinity. Bull Run is not listed on the DWQ 2000 Draft 303 (d) list of impaired waters.

###### Biotic Resources

Three plant communities were observed in the project study area: piedmont alluvial forest, mesic mixed hardwood forest, and a utility right-of-way. Also, located within the project study area are maintained-disturbed areas that include the grassed shoulders on both sides of SR 1549 and residential lawns. The following table describes the acreage of plant communities within the project study area; however, actual impact acreage within the construction limits will be less.

**Land Use within the Project Study Area.**

<b>Community Type</b>	<b>Acres (Hectares)</b>	<b>Percentage of Project Study Area</b>
Piedmont Alluvial Forest	2.1 (0.8)	8%
Mesic Mixed Hardwood Forest	5.5 (2.2)	20%
Utility Right-of-Way	1.3 (0.5)	5%
Maintained-Disturbed Area	18.8 (7.6)	67%

**B. Jurisdictional Topics**

**Surface Waters and Wetlands**

Bull Run is a jurisdictional surface waters under Section 404 of the Clean Water Act (CWA). No jurisdictional wetlands were identified within the project study area. It is anticipated that the bridge replacement over Bull Run Creek will likely impact less than 150 linear feet of stream and mitigation will not be required.

**Currently, the only buffer regulations in the Cape Fear River Basin apply to the Randleman Reservoir (15A NCAC 2B .0250 – Randleman Rules and Water Supply Buffer Requirements). Bull Run is located within the lower Randleman Reservoir watershed.**

**Bridge Demolition**

Bridge No. 73 is composed of timber, steel and concrete. It is likely that the bridge can removed without dropping components into the water.

**Permits**

In accordance with the Federal Register (January 15, 2002), Part II, Volume 67, Number 10, the project will likely require authorization under a Section 404 Nationwide Permit #23 (Approved Categorical Exclusions). A Nationwide Permit # 33 (Temporary Construction, Access, and Dewatering) may be needed for temporary construction access if that is not addressed in the NEPA document. A final permitting strategy cannot be developed until a design alternative is selected.

Section 401 General Water Quality Certifications for NWP #23 and #33 are No. 3361 and 3366, respectively. Written concurrence from the N.C. Division of Water Quality (DWQ) is not required provided all standard conditions of these Certifications are met. Final determination of permit applicability lies with USACE. NCDOT will coordinate with the USACE after the completion of final design to obtain the necessary permits.

**Mitigation**

In accordance with 15A NCAC 2H.0506(h) and 40 CFR 1508.20, mitigation will be required for impacts to jurisdictional streams when these impacts are equal to or greater than 150 linear feet per stream. It is anticipated that the bridge replacement over Bull Run will likely impact less than 150 linear feet of stream and mitigation will not be required.

## **Federally-Protected Species**

Plants and animals with federal classifications of Endangered (E), Threatened (T), Proposed Endangered (PE), and Proposed Threatened (PT) are protected under Section 9 of the Endangered Species Act. According to the current USFWS listing, there is one federally listed species for Guilford County.

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### **BALD EAGLE**

### **THREATENED**

Bull Run Creek has a narrow channel with some tree cover that occludes access to the stream channel. No suitable habitat was observed within the project study area. No known bald eagle nests occur within the project study area and no individuals were observed roosting, foraging, or in flight during field surveys.

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### **BIOLOGICAL CONCLUSION:**

### **NO EFFECT**

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## **VI. CULTURAL RESOURCES**

### **A. Compliance Guidelines**

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

### **B. Historic Architecture**

The North Carolina Department of Cultural Resources has reviewed this project and determined that no structures of historic significance will be affected by the project (see attached letter).

### **C. Archaeology**

The North Carolina Department of Cultural Resources has reviewed this project and determined that there are no likely archaeological resources of historic significance that could be affected by the project (see attached letter) and a survey is not required.

## **VII. PUBLIC INVOLVEMENT**

All property owners affected by the proposed project have been contacted and no comments have been received to date. A public workshop was not deemed necessary for this project in consideration of accommodations made to maintain traffic onsite, minimal inconvenience to road users and no relocatees.

## **VIII. GENERAL ENVIRONMENTAL EFFECTS**

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

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

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

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

No adverse impact on families or communities is anticipated. Right-of-Way acquisition will be limited. No relocatees are expected with implementation of the proposed alternative.

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

The proposed project will not require right-of-way acquisition or easement from any land protected under Section 4(f) of the Department of Transportation Act of 1966.

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 to be affected by the project.

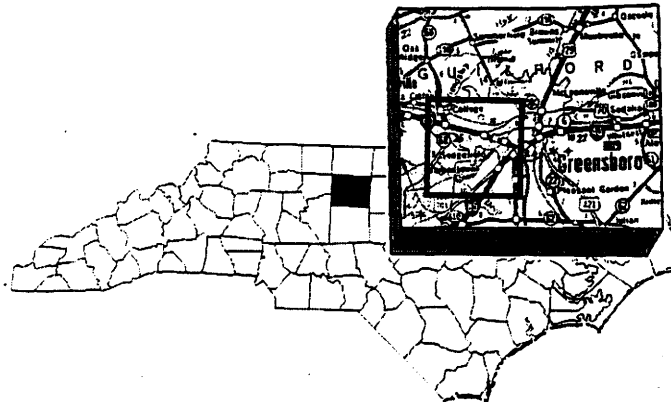
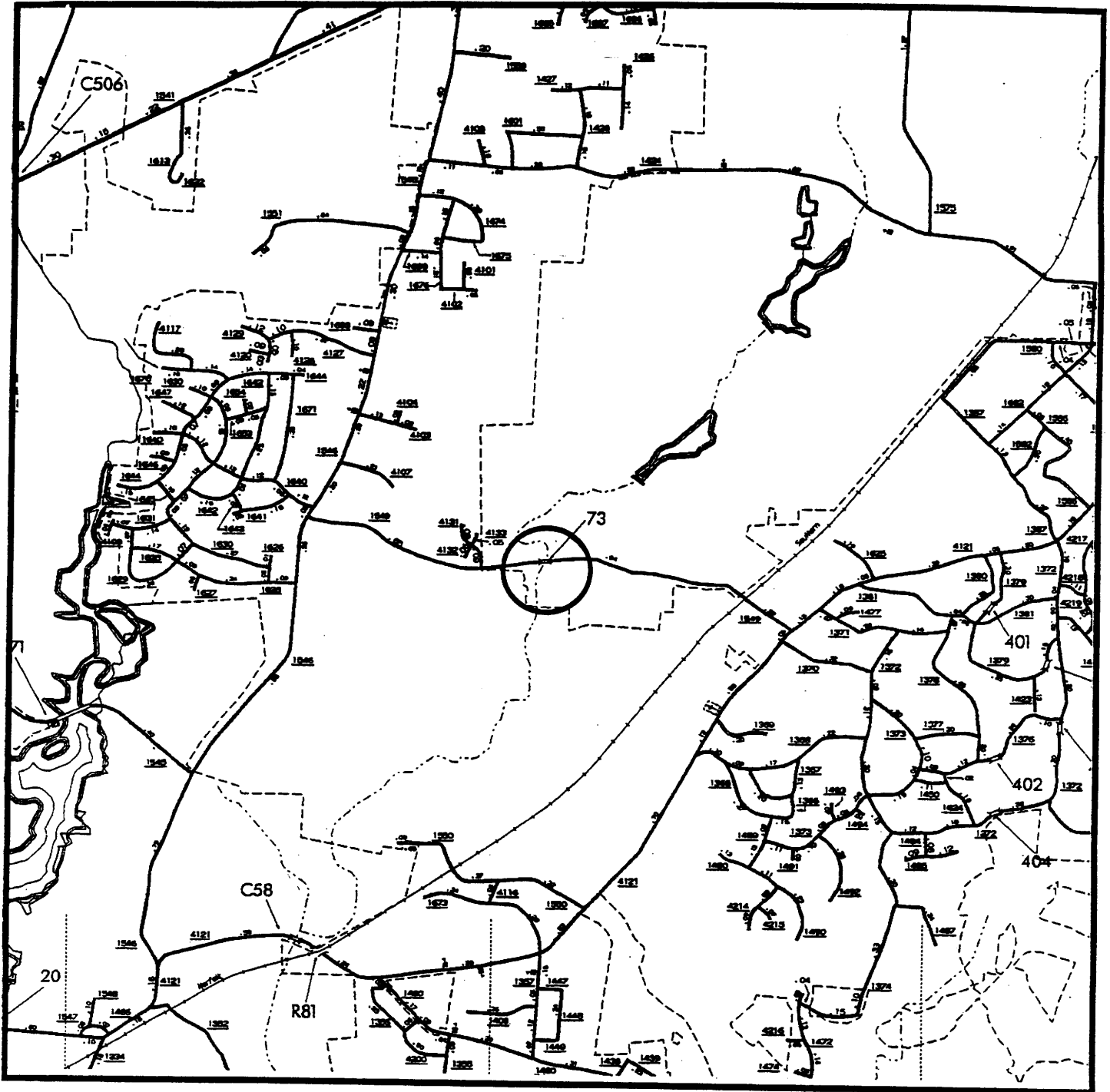
This project is an air quality "neutral" project, so it is not required to be included in the regional emissions analysis and a project level CO analysis is not required. If vegetation is disposed of by burning, all burning shall be done in accordance with applicable local laws and regulations of the North Carolina State Implementation Plan (SIP) for air quality in compliance with 15 NCAC 2D.0520.

Noise levels could increase during construction but will be temporary. 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.**

**Guilford County is a participant in the National Flood Insurance Program. There are no practical alternatives to crossing the floodplain area. Any shift in alignment will result in an impact area of about the same magnitude. The proposed project is not anticipated to increase the level or extent of upstream flood potential.**

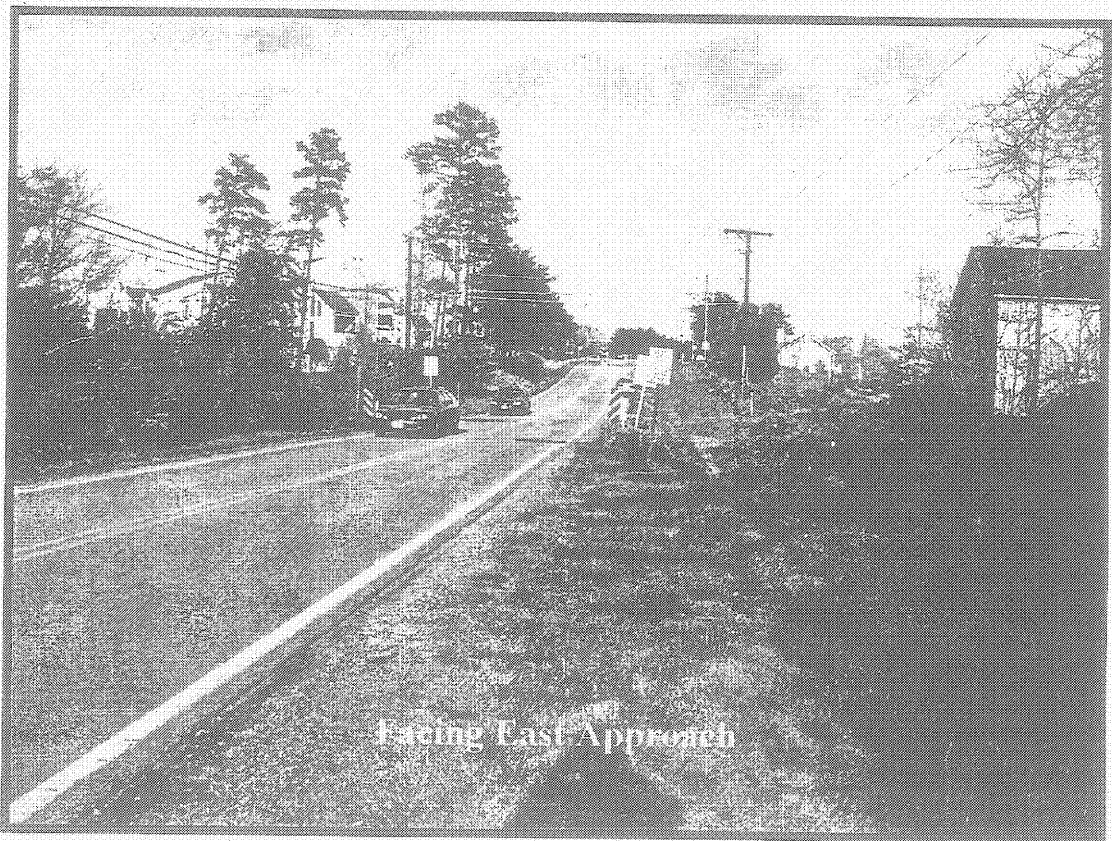
**On the basis of the above discussion, it is concluded that no substantial adverse environmental impacts will result from implementation of the project.**



	<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PROJECT DEVELOPMENT &amp; ENVIRONMENTAL ANALYSIS BRANCH</p>
<p><b>GUILFORD COUNTY</b> <b>REPLACE BRIDGE NO. 73 ON SR 1549</b> <b>OVER BULL RUN</b> <b>B-4128</b></p>	
<p>Figure 1</p>	

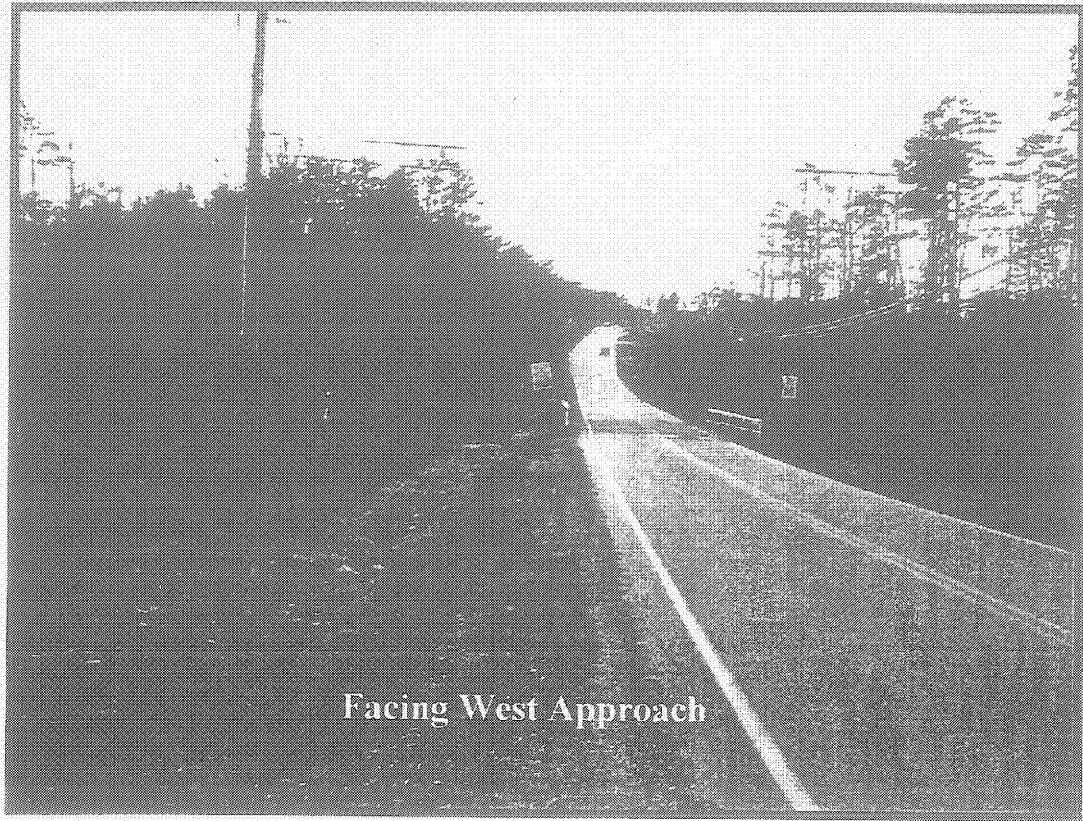


South Face of Bridge



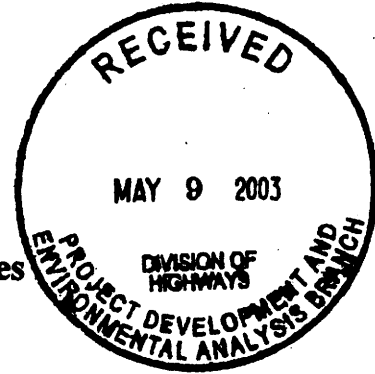
Facing East Approach

Figure 3



Facing West Approach





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

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

Division of Historical Resources  
David J. Olson, Director

May 5, 2003

MEMORANDUM

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

FROM: David Brook *for David Brook*

SUBJECT: Replacement of Bridge No. 73 on SR 1549 over Bull Run Creek, B-4128,  
Guilford County, ER03-0938

Thank you for your memorandum of April 7, 2003, concerning the above project.

We have conducted a review of the proposed undertaking and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the undertaking as proposed.

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

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

cc: Mary Pope Furr

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	Location	Mailing Address	Telephone/Fax
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