



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

April 23, 2008

MEMORANDUM TO: Mr. Barry Moose, PE
Division Ten Engineer

FROM: Philip S. Harris, III, P.E., Unit Head
Natural Environment Unit
Project Development and Environmental Analysis Branch

SUBJECT: Stanly County, US 52 Extension; From existing US 52
approximately 0.5 miles north of SR 1785 (Johns Road) to
the intersection of US 52, NC 24-27-73, and NC 138; T.I.P.
No. R-2320G; Federal Aid Project No. NHF-52(10); State
Project 8.1680401

E. P. Fick

Attached are the U.S. Army Corps of Engineers Section 404 Individual Permit and N.C. Division of Water Quality Section 401 Individual Water Quality Certification for the above referenced project. All environmental permits have been received for the construction of this project.

PSH/gyb

Attachment

Cc:

Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Jay Bennett, P.E., Roadway Design
Dr. David Chang, P.E., Hydraulics
Mr. Randy Garris, P.E. State Contract Officer
Mr. Art McMillan, P.E., Highway Design
Mr. Greg Perfetti, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. John F. Sullivan, FHWA
Ms. Beth Harmon, EEP
Ms. Teresa Hart, P.E., PDEA Western Region Unit Head
Mr. Larry Thompson , RS, PWS, Division Environmental Officer

PROJECT COMMITMENTS

US 52 Extension

From existing US 52 approximately 0.5 miles north of SR 1785 (Johns Road)
to the intersection of US 52, NC 24-27-73, and NC 138

Albemarle, Stanly County

Federal Aid Project No. NHF-52(10)

State Project No. 8.1680401

WBS No. 34422.1.1

T.I.P. Project No. R-2320G

Commitments Developed During Project Development:

Project Development and Environmental Analysis Branch and Design Services Unit

The Hatley Farm property (potentially eligible for listing on the National Register of Historic Places under Criterion A for agriculture) is located near the intersection of existing US 52 and the proposed US 52 Extension. The State Historic Preservation Office (SHPO) has concurred that the project will have no effect on the Hatley Farm property provided the following condition is met:

- No right of way including temporary or permanent easements will be purchased from or encroach onto the Hatley Farm property for this project.

Design Services Unit

The five-lane typical section includes 14-foot outside lanes for bicycle accommodations.

Division 10

NCDOT Division 10 will coordinate with the Southside Volunteer Fire Department for the following items:

- NCDOT Traffic Control Unit and Division 10 will coordinate with the fire department during construction to allow access to either Quail Ridge Road (SR 1907) or Southside Road (SR 1906).
- After the right of way plans are developed, the Division 10 traffic engineer will coordinate with the fire department to determine what the signage and/or signals can be installed at the proposed Southside Road (SR 1906) intersection.

Design Services Unit and the City of Albemarle

The city of Albemarle supports the inclusion of sidewalks in the design of the project along the five-lane typical section. Sidewalks will not be included on the four-lane divided section with control of access.

Commitments Developed During Project Permitting:

Division 10 Construction

A rock cross vane shall be constructed in the outlet end of the culvert of Permit Site No. 2 as depicted on Sheet 11 and Sheet 2-K included in the additional information submittal received by the DWQ on January 11, 2008.

Floodplain benches (as depicted on Sheet 11, "Channel Outlet Detail") shall be constructed on the outlet end of the culvert at Permit Site No. 2 from the end of the culvert to the rock cross vane in order to maintain the natural stream dimension.

Division 10 Construction and Roadside Environmental Unit (REU)

The banks at the outlet end of the culvert at Permit Site No. 2 shall be graded and woody, native vegetation installed on the banks (for approximately distance of 130 linear feet downstream of the riprap bank stabilization area) in order to provide stream stability. Bank stabilization on this section of stream is required since this area of impact is part of a future widening of this road and the date of this future widening has not been determined by NCDOT. **A revegetation plan shall be submitted to and approved by the DWQ prior to construction.**

Project Development & Environmental Analysis

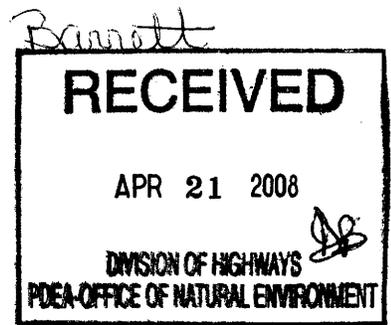
Compensatory mitigation for the unavoidable impacts to 948 linear feet of stream associated with the proposed project shall be provided by the North Carolina Ecosystem Enhancement Program (EEP) as outlined in the letter dated August 21, 2007 from William D. Gilmore, EEP Director, Pursuant to Section X of the EEP Memorandum of Agreement (MOA) between the State of North Carolina and the US Army Corps of Engineers signed on July 22, 2003, the EEP will provide 1,896 linear feet of warm water stream channel restoration in the Yadkin River Basin, Hydrologic Cataloging Unit 03040105.



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

IN REPLY REFER TO

April 17, 2008



Regulatory Division

Subject: Action ID: SAW-2007-03531-384; TIP No. R-2320 G

Gregory J. Thorpe, Ph. D.
Environmental Manager Director
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Dr. Thorpe:

Enclosed is a Department of the Army permit to impact 948 linear feet of stream channel and 0.19 acres of man-made pond in and adjacent to the waters of Rock Creek and unnamed tributaries associated with the proposed relocation of US Highway 52 from a point approximately 0.5 miles north of SR 1785 (Johns Road) to the intersection with NC 24-27 at Albemarle, Stanley County, North Carolina (TIP No. R-2320 G, State Project No. 8.1680401).

Any deviation in the authorized work will likely require modification of this permit. If a change in the authorized work is necessary, you should promptly submit revised plans to the Corps showing the proposed changes. You may not undertake the proposed changes until the Corps notifies you that your permit has been modified.

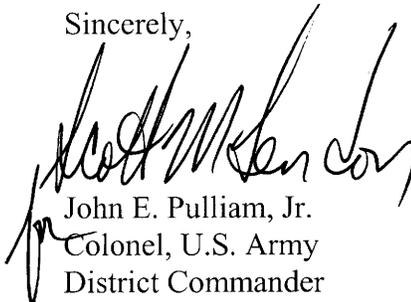
Carefully read your permit. The general and special conditions are important. Your failure to comply with these conditions could result in a violation of Federal law. Certain significant conditions require that:

- a. You must complete construction before December 31, 2013.
- b. You must allow representatives from this office to make periodic visits to your worksite as deemed necessary to assure compliance with permit plans and conditions.

You must notify this office in advance as to when you intend to commence and complete work.

You should address all questions regarding this authorization to Mr. Steven Lund at the Asheville Regulatory Field Office, telephone (828) 271-7980, extension 223.

Sincerely,

A handwritten signature in black ink, appearing to read "John E. Pulliam, Jr.", is written over the typed name and title.

John E. Pulliam, Jr.
Colonel, U.S. Army
District Commander

Enclosures

Copy furnished (with enclosures):

Chief, Source Data Unit
NOAA/National Ocean Service
ATTN: Sharon Tear N/CS261
1315 East-West Hwy., Rm 7316
Silver Spring, MD 20910-3282

Copies furnished (with special conditions and plans):

Mr. Ronald J. Mikulak, Chief
Wetlands Regulatory Section
61 Forsyth Street
Atlanta, Georgia 30303

Mr. Pete Benjamin
U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726

Mr. Ron Sechler
National Marine Fisheries Service
Pivers Island
Beaufort, North Carolina 28516

Mr. Doug Huggett
Division of Coastal Management
North Carolina Department of
Environment and Natural Resources
400 Commerce Avenue
Morehead City, North Carolina 28557

Mr. David Rackley
National Marine Fisheries Service
219 Fort Johnson Road
Charleston, South Carolina 29412-9110

DEPARTMENT OF THE ARMY PERMIT

RECEIVED

APR 14 2008

REGULATORY
WILM.FLD.OFC.

Permittee **North Carolina Department of Transportation**

Permit No. **2007-3531**

Issuing Office **CESAW-RG-A**

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: **to impact 948 linear feet of stream channel and 0.19 acres of man-made ponds in and adjacent to the waters of Rock Creek and unnamed tributaries associated with the proposed relocation of US Highway 52 from a point approximately 0.5 miles north of SR 1795 (Johns Road) to the intersection with NC Highway 24-27.**

Project Location: **Albemarle, Stanly County, North Carolina**

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **April 7, 2013**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit,

Special Conditions:

SEE ATTACHED SPECIAL CONDITIONS

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
 - Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
 - Section 404 of the Clean Water Act (33 U.S.C. 1344).
 - Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
 - a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
 - b. This permit does not grant any property rights or exclusive privileges.
 - c. This permit does not authorize any injury to the property or rights of others.
 - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
 - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
 - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
 - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - d. Design or construction deficiencies associated with the permitted work.

- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. You fail to comply with the terms and conditions of this permit.
 - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
 - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit, Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

E. L. L. Luet 4-11-08
 (PERMITTEE) **NORTH CAROLINA DEPARTMENT OF TRANSPORTATION** (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

John E. Pulliam, Jr. 18 April 2008
 (DISTRICT COMMANDER) **JOHN E. PULLIAM, JR, COLONEL** (DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

 (TRANSFEEE) (DATE)

SPECIAL CONDITIONS

1. All work must be performed in strict compliance with the attached plans, which are a part of this permit. Any modifications to the permit plans must be approved by the Corps of Engineers prior to implementation.
2. Failure to institute and carry out the details of the following special conditions will result in a directive to cease all ongoing and permitted work within waters and/or wetlands associated with the permitted project or such other remedies and/or fines as the District Engineer or his authorized representatives may seek.
3. The permittee will ensure that the construction design plans for this project do not deviate from the permit plans attached to this authorization. Written verification shall be provided that the final construction drawings comply with the attached permit drawings prior to any active construction in waters of the United States, including wetlands. Any deviation in the construction design plans will be brought to the attention of the Corps of Engineers, Asheville Regulatory Field Office prior to any active construction in waters and wetlands.
4. The permittee shall schedule a preconstruction meeting between their representatives, the contractor and the Corps of Engineers, Asheville Regulatory Field Office, NCDOT Regulatory Project Manager prior to any work in jurisdictional waters and wetlands to ensure that there is a mutual understanding of all terms and conditions contained in this DA permit. The permittee shall provide the Corps of Engineers, Regulatory Project Manager with a copy of the final plans at least two weeks prior to the pre-construction meeting along with a description of any changes that have been made to the project's design, construction methodology or construction timeframe. The permittee shall schedule the pre-construction meeting for a time when the Corps of Engineers and North Carolina Division of Water Quality (NCDWQ) Project Managers can attend. The permittee shall notify the Corps of Engineers and NCDWQ Project Managers a minimum of thirty (30) days in advance of the meeting.
5. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit, and any authorized modifications. A copy of this permit and any authorized modifications, including all conditions, shall be available at the project site during construction and maintenance of this project.
6. Except as authorized by this permit or any Corps of Engineers approved modification to this permit, no excavation, fill or mechanized land clearing activities shall take place at any time in the construction or maintenance of this project within waters or wetlands nor shall any activities take place that cause the degradation of waters or wetlands. In addition, except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project in such a manner as to

impair normal flows and circulation patterns within, into or out of waters and wetlands or to reduce the reach of waters or wetlands.

7. To ensure that all borrow and waste activities occur on uplands and do not result in the degradation of adjacent waters and wetlands, except as authorized by this permit, the permittee shall require its contractors and/or agents to identify all areas to be used to borrow material or to dispose of dredged, fill or waste material. The permittee shall provide the Corps of Engineers with appropriate maps indicating the locations of proposed borrow or waste sites as soon as such information is available. The permittee will coordinate with the Corps of Engineers before approving any borrow or waste sites that are within 400 feet of any stream or wetland. All jurisdictional wetland delineations on borrow and waste areas shall be verified by the Corps of Engineers and shown on the approved reclamation plans. The permittee shall ensure that all such areas comply with the **preceding condition** of this permit and shall require and maintain documentation of the location and characteristics of all borrow and disposal sites associated with this project. This documentation will include data regarding soils, vegetation and hydrology sufficient to clearly demonstrate compliance with the **preceding condition**. All information will be available to the Corps of Engineers upon request. The permittee shall require its contractors to complete and execute reclamation plans for each waste and borrow site and provide written documentation that the reclamation plans have been implemented and all work is completed. This documentation will be provided to the Corps of Engineers within 30 days of the completion of the reclamation work.

8. Adequate sedimentation and erosion control measures must be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. These measures must be inspected and maintained regularly, especially following rainfall events. All fill material must be adequately stabilized at the earliest practicable date to prevent sediment from entering into adjacent waters or wetlands.

9. The permittee shall remove all sediment and erosion control measures placed in waters or wetlands, and shall restore natural grades in those areas prior to project completion.

10. During the clearing phase of the project, heavy equipment must not be operated in surface waters or stream channels. Temporary stream crossings will be used to access the opposite sides of stream channels. All temporary diversion channels and stream crossings will be constructed of non-erodible materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.

11. The permittee shall take measures to prevent live or fresh concrete from coming into contact with any surface waters until the concrete has hardened.

12. All authorized culverts will be installed to allow the passage of low stream flows and the continued movement of fish and other aquatic life as well as to prevent head-cutting of the streambed. For all box culverts and for pipes greater than 48 inches in diameter, the bottom of

the pipe will be buried at least one foot below the bed of the stream unless such burial would be impractical and the Corps of Engineers has waived this requirement. For culverts 48 inches in diameter or smaller, the bottom of the pipe must be buried below the bed of the stream to a depth equal to or greater than 20 percent of the diameter of the culvert. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in the disequilibrium of wetlands, streambeds or stream banks adjacent to, upstream of or downstream of the structures. In order to allow for the continued movement of bed load and aquatic organisms, existing stream channel widths and depths will be maintained at the inlet and outlet ends of culverts. Riprap armoring of streams at culvert inlets and outlets shall be minimized above ordinary high water elevation in favor of bioengineering techniques such as bank sloping, erosion control matting and revegetation with deep-rooted woody plants.

13. Unless authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities) or unsightly debris will not be used.

14. All mechanized equipment operating near surface waters shall be regularly inspected and maintained to prevent contamination of streams and wetlands from leakage of fuels, lubricants, hydraulic fluids or other toxic materials. No equipment staging or storage of construction material will occur in wetlands. Hydroseeding equipment will not be discharged or washed out into any surface waters or wetlands. In the event of a spill of petroleum products or any other hazardous waste, the permittee shall immediately report it to the NC Division of Water Quality at (919) 733-5083 or (800) 662-7956 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

MITIGATION

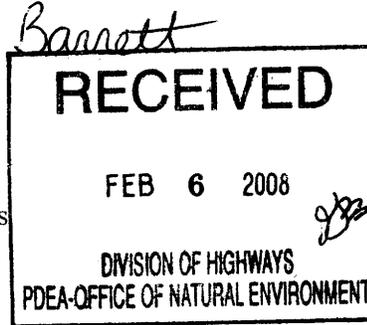
15. Compensatory mitigation for the unavoidable impacts to 948 linear feet of stream associated with the proposed project shall be provided the North Carolina Ecosystem Enhancement Program (EEP) as outlined in the letter dated August 21, 2007 from William D. Gilmore, EEP Director. Pursuant to Section X of the EEP Memorandum of Agreement (MOA) and as revised on March 8, 2007, between the State of North Carolina and the US Army Corps of Engineers signed on July 22, 2003, the EEP will provide 1896 linear feet of warm water stream channel restoration in the Yadkin River Basin, Hydrologic Cataloging Unit 03040105.

16. The permittee will report any violations of the above conditions and any violation of Section 404 of the Clean Water Act from unauthorized work in writing to the Wilmington District, US Army Corps of Engineers within 24 hours of the permittee's discovery of the violation.



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

Coleen H. Sullins, Director
Division of Water Quality



February 1, 2008

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

Subject: 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with **ADDITIONAL CONDITIONS** for the Proposed Extension of US 52 from the Existing Intersection of NC24-27-73, NC 138 and US 52 to the Existing Intersection of SR 1785 (Johns Road) and US 52 in Albemarle in Stanly County, Federal Aid Project No. NHF-52(10), State Project No. 8.1680401, TIP R-2320G, DWQ No. 07-1774

Dear Dr. Thorpe:

Attached hereto is a copy of Certification No. 3728 issued to the North Carolina Department of Transportation (NCDOT) dated February 1, 2008.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

for Coleen H. Sullins
Director

Attachments

cc: Steve Lund, US Army Corps of Engineers, Asheville Field Office
Chris Militscher, Environmental Protection Agency
Marla Chambers, NC Wildlife Resources Commission
Marella Buncick, US Fish and Wildlife Service
William Gilmore, Ecosystem Enhancement Program
Polly Lespinasse, DWQ Mooresville Regional Office
William Barrett, PDEA, NCDOT
File Copy

**401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with
ADDITIONAL CONDITIONS**

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (DWQ) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to permanently impact 948 linear feet of jurisdictional streams and 0.19 acres of open water (ponds) in Stanly County. The project shall be constructed pursuant to the application received October 19, 2007 and additional information received January 11, 2008. The authorized impacts are as described below:

Stream Impacts in the Yadkin River Basin

Site and Station No.	Permanent Fill in Perennial Stream (linear feet)	Temporary Fill in Perennial Stream (acres)	Stream Impacts Requiring Mitigation (linear feet)
Site No. 2 Station -L- 118+00 to 120+50	469	0.02	469
Site No. 3 Station -L- 137+95	414	<0.01	414
Site No. 4 Station -Y4- 9+10	65	0.01	65

Total Stream Impacts for Project: 948 linear feet

Open Water (Pond) Impacts in the Yadkin River Basin

Site and Station No.	Permanent Fill in Open Waters (acres)	Temporary Fill in Open Waters (acres)	Total Fill in Open Waters
Site No. 1 Station -L- 94+00 to 95+25	0.19	0	0.19

Total Open Water (Ponds) Impacts for Project: 0.19 acres

The application provides adequate assurance that the discharge of fill material into the waters of the Yadkin River Basin in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your application dated received October 19, 2007, and additional information received January 11, 2008. Should your project change, you are required to notify the DWQ and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If any additional wetland or stream impacts, for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal,

state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Conditions of Certification:

1. Placement of culverts and other structures in waters, streams, and wetlands shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures, including temporary erosion control measures, shall not be conducted in a manner that may result in dis-equilibrium of wetlands, streambeds or banks, adjacent to and upstream and downstream of the structures. The applicant is required to provide evidence that the equilibrium is being maintained if required in writing by the Division of Water Quality (DWQ). If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the DWQ for guidance on how to proceed and to determine whether a permit modification will be required.
2. Where multiple pipes or barrels are used, they shall be designed to mimic natural stream cross sections as closely as possible, including pipes or barrels at floodplain elevation and/or sills where appropriate. Widening of the stream channel shall be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life.
3. A rock cross vane shall be constructed at the outlet end of the culvert of Permit Site No. 2 as depicted on Sheet 11 and Sheet 2-K included in the additional information submittal received by this office on January 11, 2008.
4. Floodplain benches (as depicted on Sheet 11, "Channel Outlet Detail") shall be constructed on the outlet end of the culvert at Permit Site No. 2 from the end of the culvert to the rock cross vane in order to maintain the natural stream dimension.
5. The banks at the outlet end of the culvert at Permit Site No. 2 shall be graded and woody, native vegetation installed on the banks (for an approximate distance of 130 linear feet downstream of the riprap bank stabilization area) in order to provide stream stability. Bank stabilization on this section of stream is required since this area of impact is part of a future widening of this road and the date of this future widening has not been determined by NCDOT. **A revegetation plan shall be submitted to and approved by this agency prior to construction.**
6. Compensatory mitigation for 948 linear feet of impacts to perennial streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Ecosystem Enhancement Program (EEP) and that the EEP has agreed to implement the mitigation for this project. EEP has indicated in a letter dated August 21, 2007, that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above referenced project, in accordance with the Tri-Party MOA signed on July 22, 2003, and the Dual-Party MOA signed on April 12, 2004.
7. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.

8. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pretreated through site appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices*.
9. During construction of the project, no staging of equipment, of any kind, is permitted in waters of the U.S. or protected riparian buffers.
10. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
11. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams should be restored to natural geomorphic conditions.
12. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of the NCDOT Construction and Maintenance Activities Manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
13. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream.
14. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.
15. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this Certification.
16. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
17. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this Certification.
18. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this Certification.
19. Native riparian vegetation must be re-established within the construction limits of the project by the end of the growing season following completion of construction.
20. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated this permit without appropriate modification. Should waste or borrow sites be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.

21. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface water standards:
 - a. The erosion and sediment control measures for the project must be designed, installed, operated and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
 - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
 - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
 - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
22. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor owned or leased borrow pits associated with the project. The reclamation measures and implementation must comply with the requirements of the Sedimentation Pollution Control Act.
23. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.
24. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.
25. A copy of this Water Quality Certification shall be posted on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.
26. Upon completion of the project, the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the 401 Certification has been completed.
27. The permittee and its authorized agents shall conduct its activities in a manner consistent with State Water Quality Standards [including any requirements resulting from compliance with 303(d) of the Clean Water Act] and any other appropriate requirements of State and Federal law. If DWQ determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use), that State or Federal law is being violated, or that further conditions are necessary to assure compliance, DWQ may re-evaluate and modify this certification.

Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit.

If this Certification is unacceptable to you have the right to an adjudicatory hearing upon written request within sixty (60) days following receipt of this Certification. This request must be in the form of a written petition conforming to Chapter 150B of the North Carolina General Statutes and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699-6714. If modifications are made to an original Certification, you have the right to an adjudicatory hearing on the modifications upon written request within sixty (60) days following receipt of the Certification. Unless such demands are made, this Certification shall be final and binding.

This the 1st day of February 2008

DIVISION OF WATER QUALITY

A handwritten signature in black ink, appearing to read 'B. L. W.', with a long horizontal line extending to the right.

Coleen H. Sullins
Director

WQC No. 3728



DWQ Project No.: _____ County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401/Wetlands Unit, North Carolina Division of Water Quality, 1621 Mail Service Center, Raleigh, NC, 27699-1621. This form may be returned to DWQ by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Engineer's Certification

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project, for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature _____

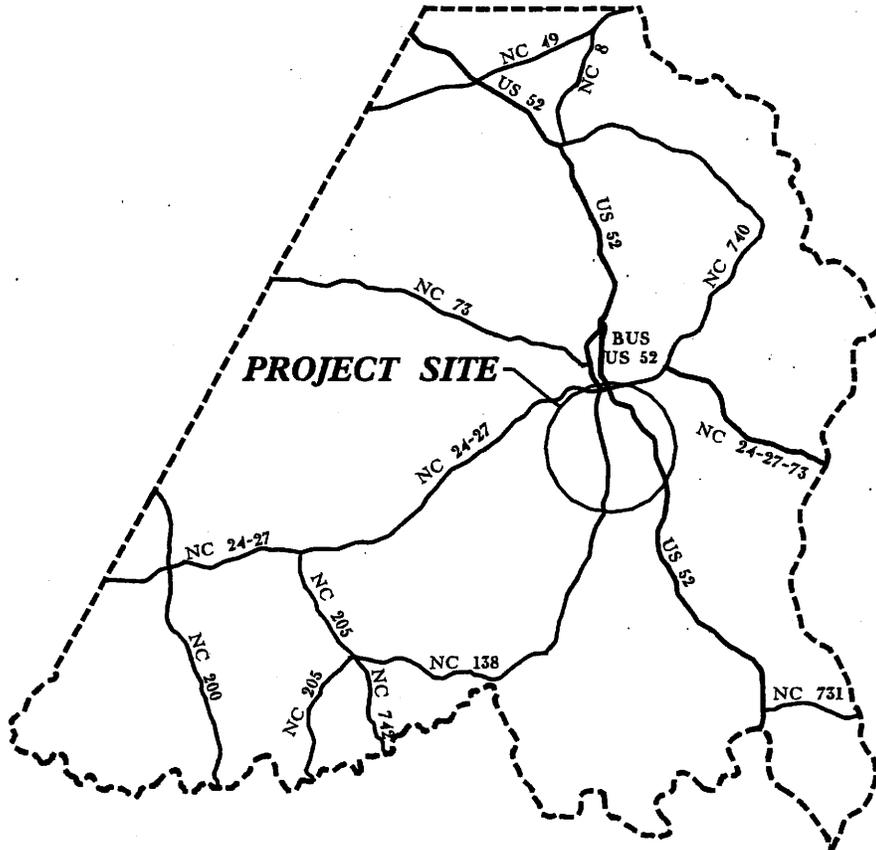
Registration No. _____

Date _____

NORTH CAROLINA



STANLY COUNTY



WETLAND
&
SURFACE WATERS

VICINITY
MAP

NCDOT

DIVISION OF HIGHWAYS
STANLY COUNTY

PROJECT: 34422.1.1 (R-2320G)

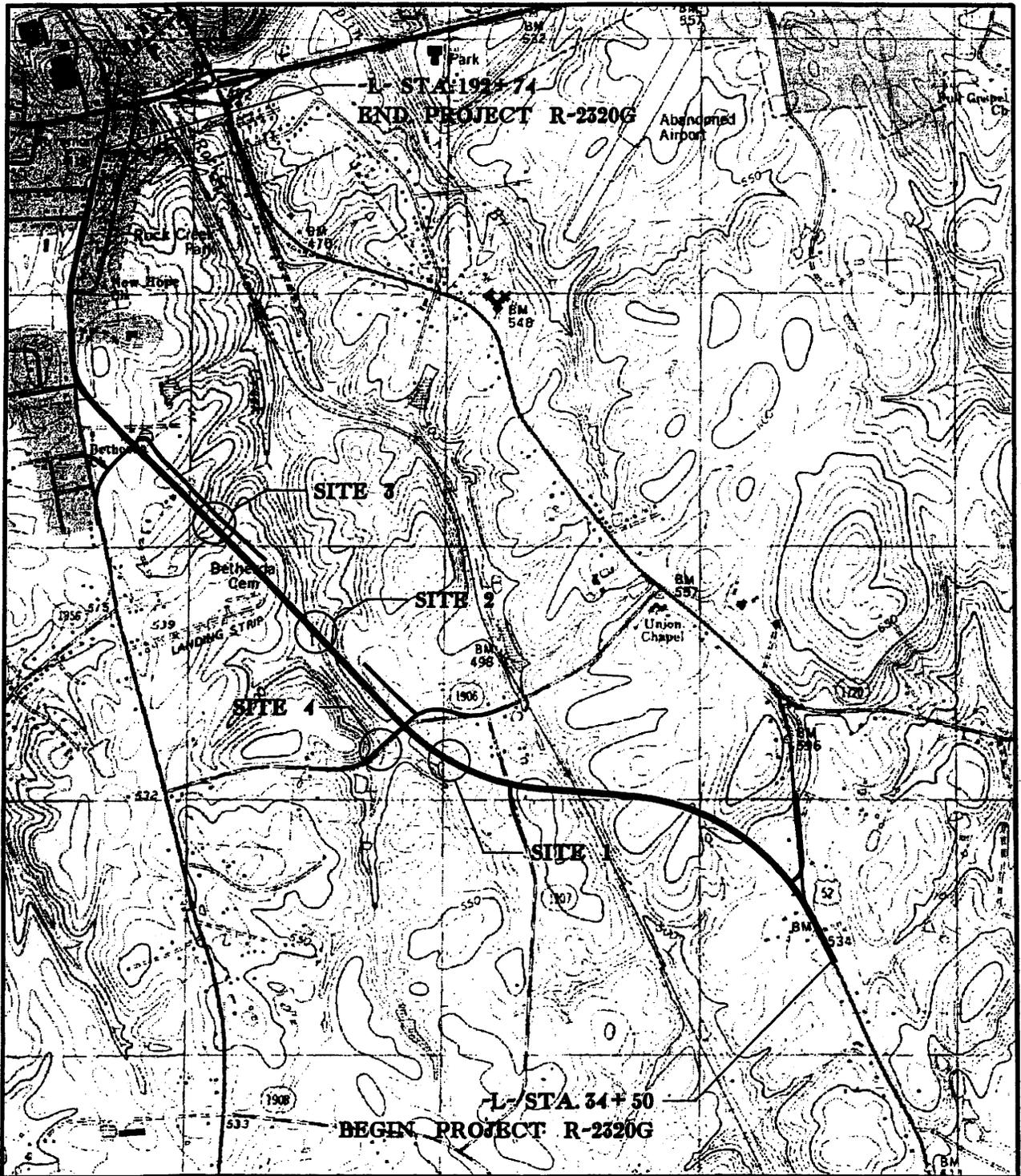
US 52 EXT. - ALBEMARLE

FROM US 52, NC 73, NC 24-27 & NC 138
TO SR 1785

Permit Drawing
Sheet 1 of 13
SHEET 1 OF 13

7 / 27 / 07

7/30/2007 1:54:58 PM Stanly_VicinityMap.dwg -dj-vicinity.dgn
No. 032001255 P.C.



SITE MAP



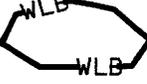
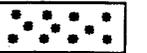
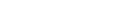
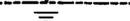
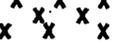
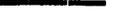
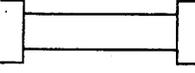
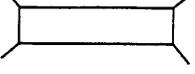
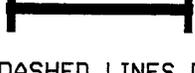
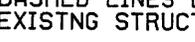
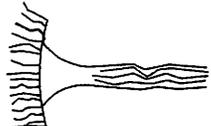
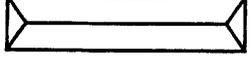
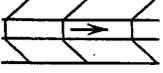
Permit Drawing
Sheet **2** of **13**

NCDOT
 DIVISION OF HIGHWAYS
 STANLY COUNTY
 PROJECT: 34422.11 (R-2320G)
 US 52 EXT. - ALBEMARLE
 FROM US 52, NC 73, NC 24-27 & NC 138
 TO SR 1785

SHEET  **7 / 27 / 07**

7/30/2007
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 K & Associates, P.C.

WETLAND LEGEND

-  WLB WETLAND BOUNDARY
-  WLB WETLAND
-  DENOTES FILL IN WETLAND
-  DENOTES PERMANENT SURFACE WATER IMPACT
-  DENOTES PERMANENT SURFACE WATER IMPACT (POND)
-  DENOTES TEMPORARY FILL IN WETLAND
-  DENOTES EXCAVATION IN WETLAND
-  DENOTES TEMPORARY SURFACE WATER IMPACT
-  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
-  PROPOSED BRIDGE
-  PROPOSED BOX CULVERT
-  PROPOSED PIPE CULVERT
12'-48'
PIPES
54" PIPES
& ABOVE
-  (DASHED LINES DENOTE EXISTING STRUCTURES)
-  SINGLE TREE
-  WOODS LINE
-  DRAINAGE INLET
-  ROOTWAD
-  RIP RAP
-  5 ADJACENT PROPERTY OWNER OR PARCEL NUMBER IF AVAILABLE
-  PREFORMED SCOUR HOLE
-  LEVEL SPREADER (LS)
-  DITCH / GRASS SWALE

7/30/2007 2:42:45 PM R:\Hydro\ca\ca\Permits\2320G\rdy_v\ca\rdy_v\dgn

NCDOT
 DIVISION OF HIGHWAYS
 STANLY COUNTY
 PROJECT: 34422.11 (R-2320G)
 US 52 EXT. - ALBEMARLE
 FROM US 52, NC 73, NC 24-27 & NC 138
 TO SR 1785

Permit Drawing
 Sheet 3 of 13

~~SHEET 5 OF 14~~

7 / 27 / 07

WETLAND PERMIT IMPACT SUMMARY

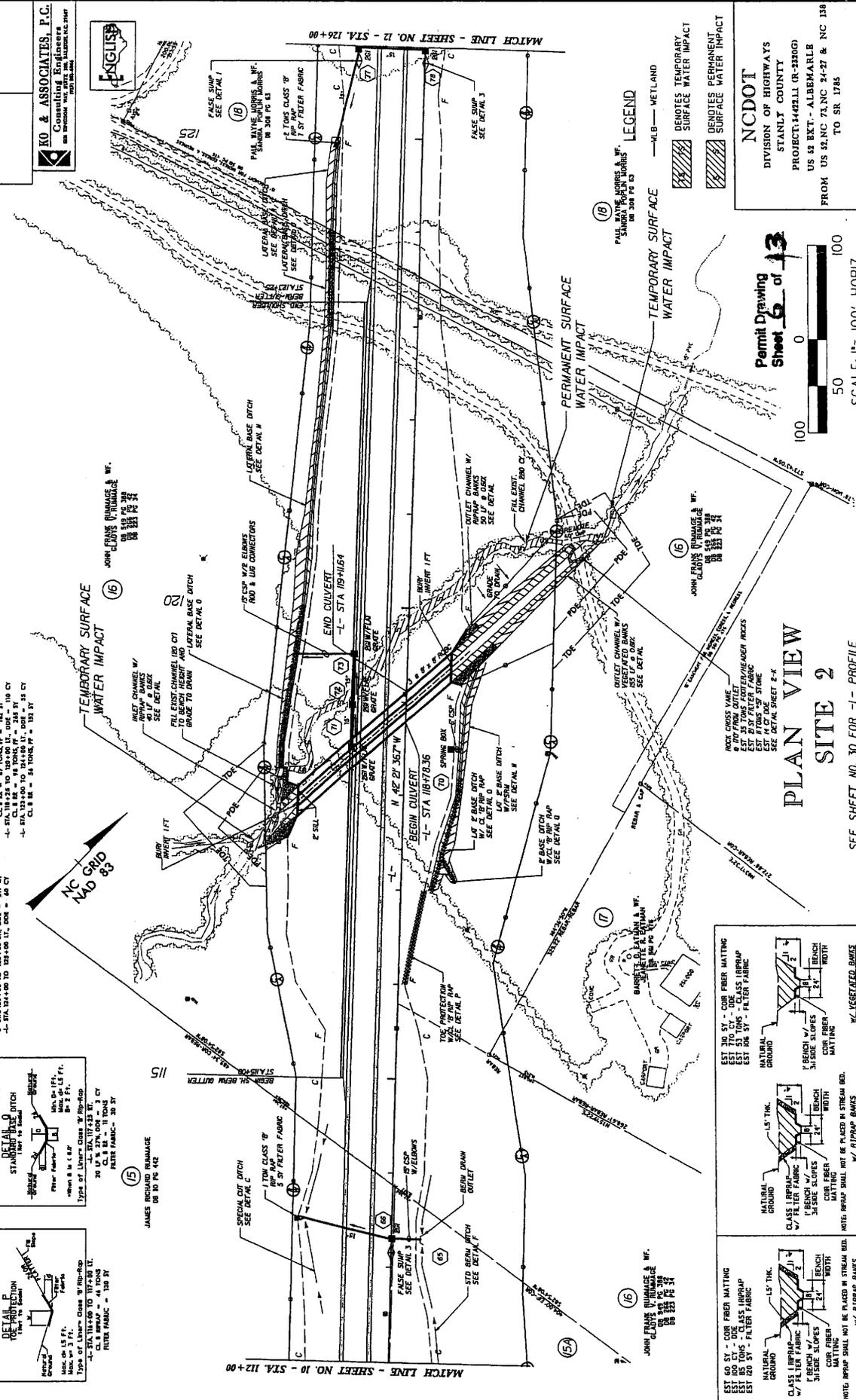
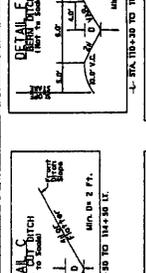
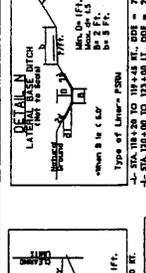
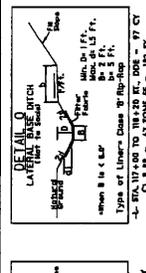
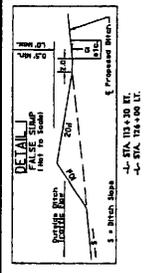
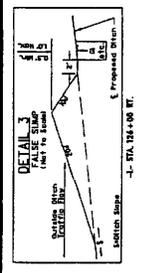
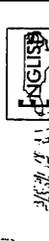
Site No.	Rdwy Sht No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS						SURFACE WATER IMPACTS							
				Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW Impacts (ac)	Temp. SW Impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)				
1	9	-L- 94+00 - 95+25	ROADWAY FILL														
2	11	-L- 118+00 - 120+50	3@ 8'x8' RCBC							0.19							
3	12	-L- 137+95	60" RCP							0.08					117		
4	19	-Y4- 9+10	10'x8' RCBC							0.03					72		
										0.01					72		
TOTALS:				0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.03	0.03	948	261	0		

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 STANLY COUNTY
 PROJECT: 34422.1.1 (R-2320G)
 7/27/2007

Permit Drawing
 Sheet 4 of 13

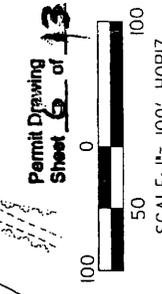
PROJECT REFERENCE NO. **F-23206**
 DRAWING NO. **10**
 DATE **11/15/11**
 DESIGNED BY **W. W. WILSON**
 CHECKED BY **W. W. WILSON**
 ENGINEER

KO & ASSOCIATES, P.C.
 Consulting Engineers
 100 W. WILSON WAY, SUITE 100, WILSON, NC 27157
 (704) 241-1111



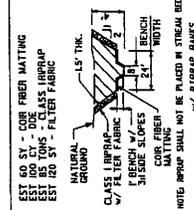
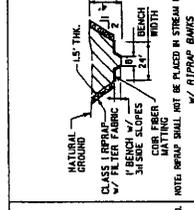
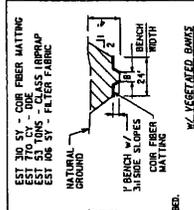
LEGEND
 DENOTES TEMPORARY SURFACE WATER IMPACT
 DENOTES PERMANENT SURFACE WATER IMPACT
 M.B. — METLAND

NC DOT
 DIVISION OF HIGHWAYS
 STANLY COUNTY
 PROJECT: 4442111 (R-2300)
 US 52 EXT. - ALBEMARLE
 FROM US 52, NC 71, NC 24-27 & NC 138
 TO SR 1785



PLAN VIEW SITE 2
 PERMIT DRAWING
 Sheet 6 of 13

SEE SHEET NO. 30 FOR L-L PROFILE



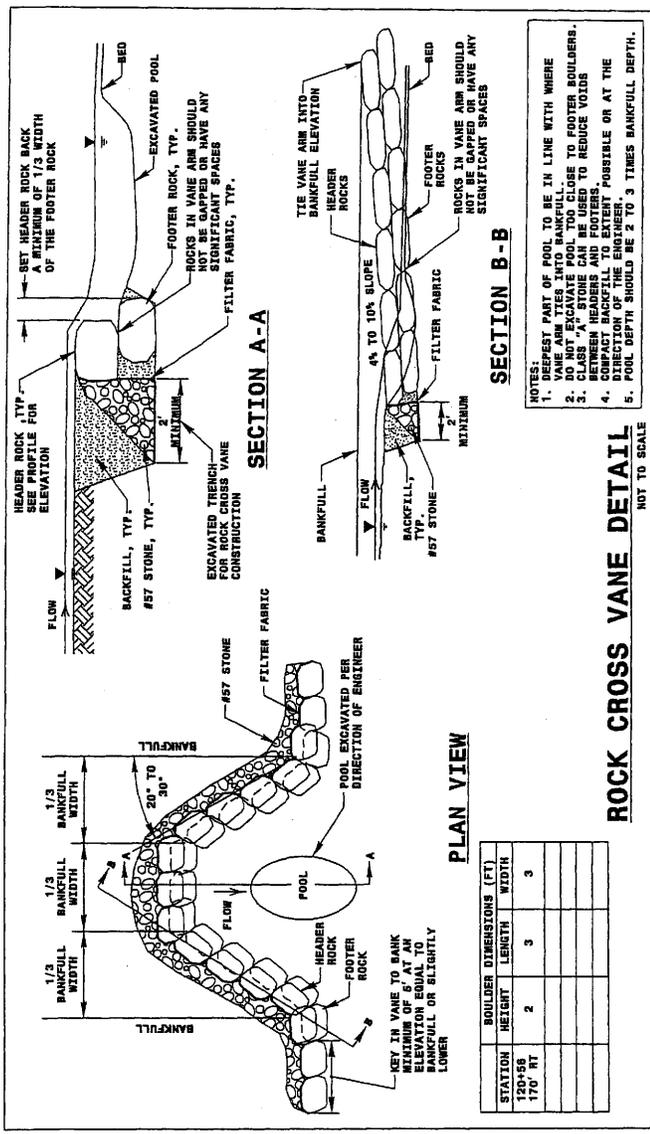
REVISIONS

PROJECT REFERENCE NO. R-23200
 ROADWAY DESIGN NUMBER
 SHEET NO. 2-K
 HYDRAULICS DIVISION

KO & ASSOCIATES, P.C.
 CONSULTING ENGINEERS
 1000 W. HARRIS ST., SUITE 200
 RALEIGH, N.C. 27601



NC DOT
 DIVISION OF HIGHWAYS
 STANLY COUNTY
 PROJECT: 442811 CR-23200
 US 32 EXT. - ALBEMARLE
 FROM US 32 NC 73 NC 24-27 & NC 118
 TO SR 1785

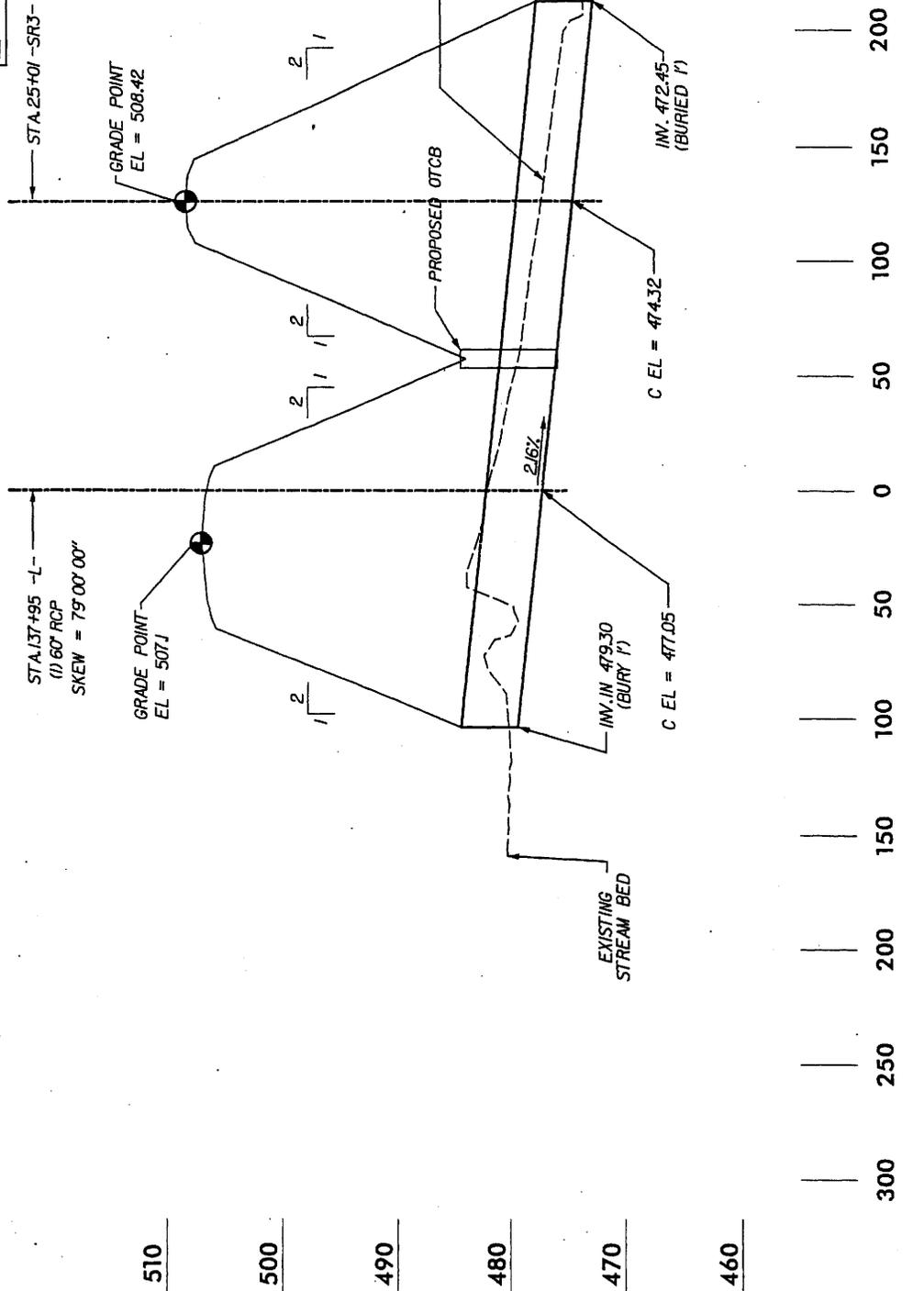


Permit Drawing
 12

PROJECT REFERENCE NO. R-2300
 SHEET NO. 10
 ROADWAY DESIGN
 HYDRAULICS
 ENGINEER

NO & ASSOCIATES, P.C.
 Consulting Engineers
 1000 W. HARRIS ST.
 RALEIGH, NC 27601

PRELIMINARY PLANS
 FOR THE
 CONSTRUCTION



PROFILE ALONG STRUCTURE
SITE 3

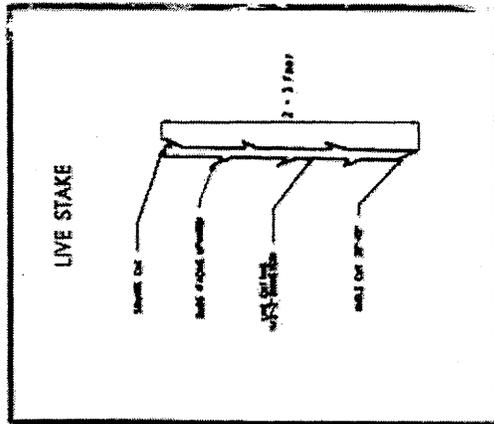
SCALE:
 1" = 50' HORIZONTAL
 1" = 10' VERTICAL



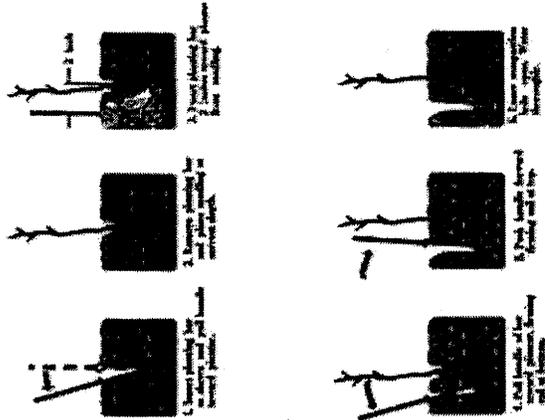
NCDOT
 DIVISION OF HIGHWAYS
 STANLEY COUNTY
 PROJECT 3442ELL (R-2300)
 US 52 EXT. - ALBEMARLE
 FROM US 52, NC 74, NC 34-27 & NC 158
 TO SR 1785

PLANTING DETAILS

LIVE STAKES PLANTING DETAIL



BARROOF PLANTING DETAIL
DIBBLE PLANTING METHOD
USING THE REC PLANTING BAR



PLANTING NOTES:

PLANTING BAR
The planting bar is used to dig holes in the soil. The bar is inserted into the soil and pushed down to the desired depth. The bar is then pulled out, leaving a hole in the soil.

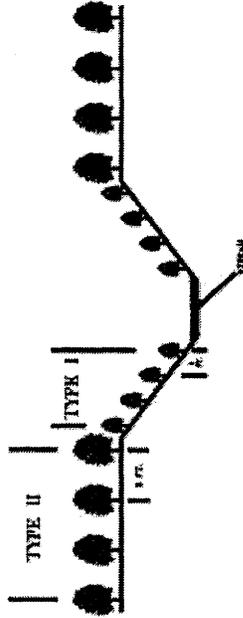
DO NOT PLANTING BAR
The planting bar is not to be used for planting seedlings. It is only used for digging holes in the soil.

POST PLANTING
After planting the seedlings, the soil should be firm around the base of the seedling. The seedlings should be watered regularly.

- TYPE 1 STREAMBANK REFORESTATION SHALL BE PLANTED 3 FT. TO 5 FT. ON CENTER, RANDOM SPACING, AVERAGING 4 FT. ON CENTER, APPROXIMATELY 2724 PLANTS PER ACRE.
- TYPE 2 STREAMBANK REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 650 PLANTS PER ACRE.

NOTE TYPE 1 AND TYPE 2 STREAMBANK REFORESTATION SHALL BE PAID FOR AS "STREAMBANK REFORESTATION"

STREAMBANK REFORESTATION TYPICAL



STREAMBANK REFORESTATION

VEGETATION TYPE SIZE AND FURNISH SHALL CONFORM TO THE FOLLOWING:

TYPE 1

- 50% SALIX NIGRA BLACK WILLOW 2 ft - 3 ft LIVE STAKES
- 50% CORNUS AMOMUM SILKY DOGWOOD 2 ft - 3 ft LIVE STAKES

TYPE 2

- 25% PLATANUS OCCIDENTALIS AMERICAN Sycamore 12 in - 15 in BR
- 25% QUERCUS RUBRA NORTHERN RED OAK 12 in - 18 in BR
- 25% LIRIODENDRON TULIPIFERA YELLOW POPLAR 12 in - 18 in BR
- 25% QUERCUS ALBA WHITE OAK 12 in - 18 in BR

SEE PLAN SHEETS FOR AREAS TO BE PLANTED

R-23206

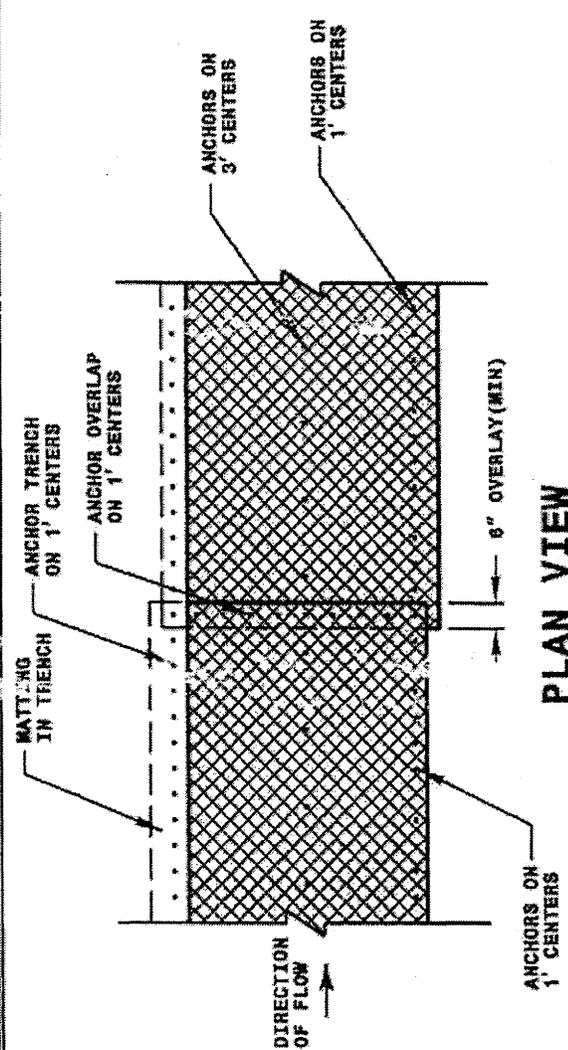
SHEET 12 OF 13

STREAMBANK REFORESTATION

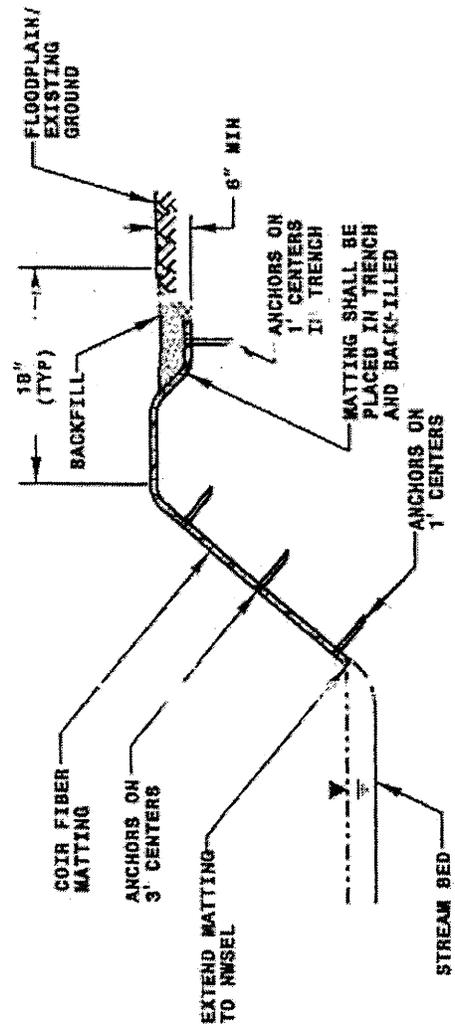
DETAIL SHEET 1 OF 2

MCAMBY, MOLLER ENGINEERING CONSULTANTS

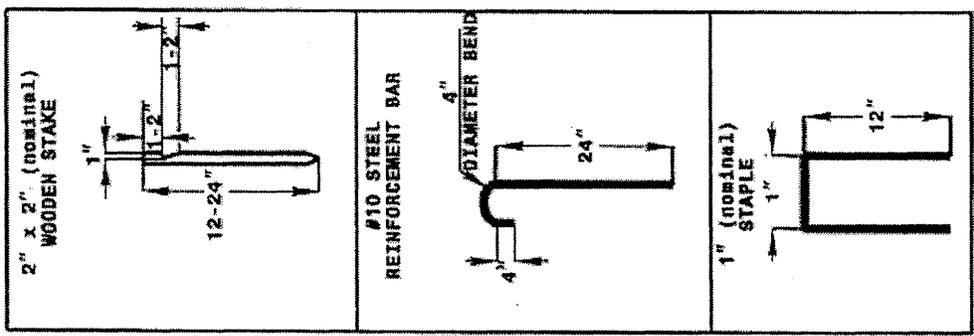
DATE	BY



PLAN VIEW



TYPICAL CROSS SECTION



ANCHOR OPTIONS

STREAMBANK REFORESTATION
 DETAIL SHEET 2 OF 2
SCALE: AS SHOWN

COIR FIBER MATTING DETAIL
 NOT TO SCALE
R 23206
SHEET 13 OF 13