




STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

December 21, 2006

MEMORANDUM TO: Mr. Tim Johnson, PE
Division Eight Engineer

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

SUBJECT: Scotland County, Replace Bridge No.61 and Bridge No. 62
on SR 1108(X-Way Road) over Gum Swamp Creek; T.I.P.
Number B-3373 (A&B); Federal Aid Project BRSTP-
1108(4); State Project 8.2590401

Attached is the U. S. Army Corps of Engineers Regional General Permit No. 31 and the general conditions for the 401 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 Garriss, 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
Mr. Eric Midkiff, P.E., PDEA Central Region Unit Head
Mr. Art C. King, Division Environmental Officer

PROJECT COMMITMENTS:

**Scotland County
Bridge No. 61 and Bridge No. 62 on SR 1108 (X-Way Road)
over Gum Swamp Creek
Federal Aid Project No. BRSTP-1108 (4)
W.B.S. No. 33021.1.1
State Project No. 8.2590401
T.I.P. No. B-3373 (A & B)**

All standard procedures and measures, including NCDOT's Best Management Practices for Protection of Surface Waters, Guidelines for Best Management Practices for Bridge Demolition and Removal, will be implemented, as applicable, to avoid or minimize environment impacts. The following special commitments have been agreed to by NCDOT:

Commitments Developed through Project Development and Design

PD & EA - Natural Environment Unit – Bridge Demolition

Both bridges are constructed of timber and steel. Therefore, it is unlikely that there will be any temporary fill resulting from bridge demolition.

Bridge Maintenance Unit

To minimize the amount of wetland impacts, the new structure shall be designed to accommodate a grade elevation change of approximately 0.8 feet or less. In addition, the bridge and roadway widths shall be kept to the minimum widths appropriate for this roadway section. 2:1 side slopes shall also be utilized in environmentally sensitive areas.

All work shall be designed along the existing alignment.

The proposed structure shall be designed and detailed to include the parapet and 2 bar metal rail.

Division 8 Construction

The use of onsite detour structures shall not be allowed for this project.

Turbine machinery from the Turbine House is to be salvaged and preferably remain within the X-Way Milling Company property.

The dam breach shall be conducted in accordance to the breach plans approved by the North Carolina Department of Environment and Natural Resources – Division of Land Resources.

Hydraulics Unit

NCDOT shall coordinate with the Federal Emergency Management Agency (FEMA) to provide the appropriate information concerning the draining of the pond.

PD & EA – Archaeology Unit

NCDOT Archaeology Group, in coordination with the Office of State Archaeology, plans to monitor the pond during the draw-down period based on the following stipulations.

- The contractor will inform the NCDOT Archaeology Group (919-715-1561 and/or 919-715-1555) as to when the draw-down period for Lytch's Pond is anticipated.
- The contractor will provide seventy-two (72) hours notice to the NCDOT Archaeology Group prior to the draw-down period. The 72-hour period will begin upon acknowledgment by the NCDOT Archaeology Supervisor that they have received contact from the contractor.
- A representative from the NCDOT Archaeology Group will be on site during the draw-down period in order to monitor activities within Lytch's Pond. Monitoring activities may include but not be limited to: 1) cleaning and photographing areas exposed during the draw-down period, 2) mapping both plan and profile views of open trenches, and 3) collecting materials or artifacts exposed during the draw-down period. The NCDOT Archaeology Group representative will have the authority to halt all work within Lytch's Pond in order to assess the need for further archaeological excavations.
- As determined by the NCDOT Archaeology Group representative, should archaeological resource(s) considered eligible for the National Register of Historic Places (NRHP) be discovered, then all work will be halted within the limits of the NRHP resource and the State Historic Preservation Office (HPO) will be contacted.
- The HPO will consult with the NCDOT Archaeology Group representative (on site if necessary) in order to develop appropriate protection/mitigation measures for the resource(s). Appropriate measures for the resource(s) may include but not be limited to: 1) preservation in place, 2) photographing and mapping, and/or 3) additional archaeological excavations.
- Both the HPO and the NCDOT Archaeology Group representative will agree upon and provide to the contractor a written description of the measures required for the resource(s). The description will include a schedule for implementing and completing the measures. Upon receipt of written confirmation from the contractor that the resource measures have been completed, activities may resume in the location containing the resource(s).

Commitments Developed through Permitting

PD & EA - Natural Environment Unit/ Roadside Environmental Unit

A sufficient number of hydrologic monitoring wells shall be installed and developed along established transects within the pond area immediately following draw down. Hydrographs will be developed from the collected data to ascertain the extent of hydrologic regime change resulting from the draw down. Vegetation monitoring shall be conducted along the same transects to determine changes in vegetation communities within the pond area. At least two normal rainfall years of monitoring shall be accomplished with a report of the results provided to the U.S. Army Corps of Engineers within 30 days following the completion of the monitoring. A longer monitoring period may be required if normal rainfall years data can not be acquired. The report shall also provide an assessment, based on collected data, of the affect the draining has had on the extent of the wetlands within the pond area.

PD & EA - Natural Environment Unit

Compensatory mitigation is required for impacts to 18.86 acres of riverine wetlands. The permittee shall comply with the on-site wetland mitigation plan submitted on October 24, 2006. Prior to the start of hydrologic monitoring, a hydrologic monitoring plan shall be submitted in writing to and approved by the Division of Water Quality. The hydrologic monitoring plan shall include maps showing the proposed number and location of the monitoring gauges.

Hydrologic success of the sites will be attained by restoration of a hydrologic regime that results in inundation or saturation of the soils within 12 inches of the ground surface for at least 12.5 percent of the growing season. The hydrologic monitoring shall persist for a total of five (5) years. A survey of the hydrology during the growing season shall be conducted annually over the five-year monitoring period and submitted to the NC Division of Water Quality. After the five-year monitoring period, if the monitoring requirements are not met, the site may still be declared successful at the discretion of and with written approval from the NC Division of Water Quality. If the hydrologic monitoring data shows that less than 18.86 acres of wetland are restored, DOT will be required to obtain additional wetland mitigation to satisfy the compensatory mitigation needs of the project.

Roadside Environmental Unit

For the wetland mitigation sites shown in Figure 1 of the wetland mitigation plan outlined in blue, the permittee shall plant 680 stems/acre. Vegetation success shall be measured by survivability over a 5-year monitoring period. Survivability will be based on 320 stems/acre after three (3) years and 260 stems after five (5) years. A survey of vegetation during the growing season shall be conducted annually over the five-year monitoring period and submitted to the NC Division of Water Quality. If the surviving vegetation densities are below the required thresholds after the five-year monitoring period, the site may still be declared successful at the discretion of and with written approval from the NC Division of Water Quality.

Division 8 Construction / PD & EA - Natural Environment Unit

This approval will expire with the accompanying federal 404 permit issued by the Corps of Engineers. This condition supercedes condition No. 19 of General Water Quality Certification Number 3404.

Division 8 Construction

All work authorized by this permit must be performed in strict compliance with the attached plans, which are a part of this permit. Final plans for Phase two shall be submitted to the U.S. Army Corps of Engineers for review and approval 60 days prior to the awarding of any construction contract or the start of work, whichever would occur first. Written verification shall be provided by the applicant to the U.S. Army Corps of Engineers that the final construction drawings for each phase comply with the attached or phase two submitted permit drawings prior to any active construction in waters of the United States, including wetlands. The permittee shall ensure that the construction design plans for this project do not deviate from the

permit plans associated with this authorization. Any deviation in the construction design plans shall be brought to the attention of the U.S. Army Corps of Engineers, Mr. Richard Spencer, Wilmington Regulatory Field Office prior to any active construction in waters or wetlands and any modification to the permit plans must be approved by the U.S. Army Corps of Engineers prior to implementation.

Dewatering of the construction site shall be accomplished by pumping to a maintained silt bag or approved silting basin. All connections and hose lines shall be inspected for proper coupling fit and leaks before the commencement of the daily work. Used silt bags shall be changed out in accordance with manufacture's specifications and not allowed to overcharge and release sediment to the surface waters and/or wetlands. Silt bags will not be located within any wetland or surface water.

The pond water level shall be lowered at a rate of no greater than 1-foot a day to a final water surface elevation of 164 feet mean sea level.

Measures shall be taken to prevent the sluicing of sediment from the pond during the draw down phase. The applicant shall provide the U.S. Army Corps of Engineers, Mr. Richard Spencer, Wilmington Regulatory Field Office with a final plan indicating measures that will be taken to prevent sediment sluicing prior to the commencement of pond draw down.

All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification.

Structure Design / Division 8 Construction / Hydraulics Unit

Bridge bents shall not be located within any jurisdictional area.

Hydraulics Unit

NCDOT shall coordinate with the Federal Emergency Management Agency (FEMA) to provide the appropriate information concerning the draining of the pond.

U.S. ARMY CORPS OF ENGINEERS

WILMINGTON DISTRICT

Action ID: 2006-40679-83 TIP No: B-3373 State Project No: 8.2590401 County: Scotland

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Applicant: North Carolina Department of Transportation

Address: Gregory J. Thorpe, Ph.D.
Environmental Management Director
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Telephone Number: (910) 733-3141

Size and Location of project (waterway, road name/number, town, etc.): Bridge No. 61 and 62 on SR 1108 (X-Way Road) at Gun Swamp Creek in Scotland County, North Carolina.

Description of Activity: (Phase I) Install sheeting on both the upstream and downstream sides of the dam breach construction site. Construct a permanent breach of the SR 1108 roadway/dam at the location of the original stream channel impacting 0.33 acre of waters of the United States. Construct a temporary 100-foot long bridge over the breach and control draw down Lytch's Pond water surface elevation to a final water surface elevation of 164 feet mean sea level. Perform necessary repairs to bridge #62 to allow the reopening of SR 1108. (Phase II) Existing Bridges #61 and #62 will be removed in their entirety and the opening filled to road grade with suitable road fill material. The temporary bridge at the breach will be removed and replaced with an 84-foot long single span box beam bridge. The causeway (approach) will be widened to current roadway standards impacting 0.22 acre of waters of the United States. Traffic will be detoured onto existing roadways during all phases of construction. All temporary fill is to be placed on filter fabric and removed from the waterway in its entirety upon completion of the construction.

Applicable Law: X Section 404 (Clean Water Act, 33 U.S.C. 1344)
 Section 10 (River and Harbor Act of 1899)

Authorization: Nationwide Permit Number
 31 Regional General Permit Number

Your work is authorized by this Regional General (RGP) or Nationwide (NWP) Permit provided it is accomplished in strict accordance with the attached conditions and your submitted plans. If your activity is subject to Section 404 (if Section 404 block above is checked), before beginning work you must also receive a Section 401 water quality certification from the N.C. Division of Environmental Management, telephone (919) 733-1786

Please read and carefully comply with the attached conditions of the RGP or NWP. Any violation of the conditions of the RGP or NWP referenced above may subject the permittee to a stop work order, a restoration order, and/or appropriate legal action.

This Department of the Army RGP or NWP verification does not relieve the permittee of the responsibility to obtain any other required Federal, State, or local approvals/permits. The permittee may need to contact appropriate State and local agencies before beginning work.

This verification will remain valid until 31 August 2008 unless the regional general permit authorization is modified, reissued or revoked. If, prior to 31 August 2008 the regional general permit authorization is reissued and/or modified, this verification will remain valid until 31 August 2008, provided it complies with all modifications. If the regional general permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the regional general permit, will remain authorized provided the activity is completed within twelve months of the date of the regional general permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization

If there are any questions regarding this authorization or any of the conditions of the RGP or NWP, please contact the Corps Regulatory Official specified below.

Date 15 November 2006

/S/

Corps Regulatory Official Richard K. Spencer **Telephone No.** (910) 251-4172

CF: Art King, DEO, NCDOT

Timothy Johnson, P.E., Division Engineer, NCDOT

John Hennessy, NCDWQ

Ken Averrett, NCDWQ

Susan Thebert, PDEA

GENERAL PERMIT SPECIAL CONDITIONS

1. Failure to institute and carry out the details of the following special conditions below will result in a directive to cease all ongoing and permitted work within waters of the United States, including wetlands, associated with the permitted project, or such other remedies and/or fines as the U.S. Army Corps of Engineers District Commander or his authorized representatives may seek.
2. All work authorized by this permit must be preformed in strict compliance with the attached plans, which are a part of this permit. Final plans for Phase two shall be submitted to the U.S. Army Corps of Engineers for review and approval 60 days prior to the awarding of any construction contract or the start of work, which every would occur first. Written verification shall be provided by the applicant to the U.S. Army Corps of Engineers that the final construction drawings for each phase comply with the attached or phase two submitted permit drawings prior to any active construction in waters of the United States, including wetlands. The permittee shall ensure that the construction design plans for this project do not deviate from the permit plans associated with this authorization. Any deviation in the construction design plans shall be brought to the attention of the U.S. Army Corps of Engineers, Mr. Richard Spencer, Wilmington Regulatory Field Office prior to any active construction in waters or wetlands and any modification to the permit plans must be approved by the U.S. Army Corps of Engineers prior to implementation.
3. A set of as-built or record drawings of each phase of the project and certificate stating that the work has been completed in accordance with the permit drawings shall be filed with the U.S. Army Corps of Engineers, Wilmington Regulatory Field office no later than 90 calendar days following completion of each phase of construction.
4. The permittee shall schedule a preconstruction meeting between its representatives, the contractor's representatives, and the U.S. Army Corps of Engineers, Mr. Richard Spencer, Wilmington Regulatory Field Office, prior to any work within jurisdictional waters and wetlands for each phase to ensure that there is a mutual understanding of all of the terms and conditions contained within this Department of the Army authorization. The permittee shall notify the U.S. Army Corps of Engineers Project Manager a minimum of thirty (30) days in advance of the scheduled meetings in order to provide the project manager with ample opportunity to schedule and participate in the required meetings. One copy of the final half-size construction drawings shall be furnished to the U.S. Army Corps of Engineers, Mr. Richard Spencer, Wilmington Regulatory Field Office prior to the pre-construction 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. Copies of this permit and any modifications authorized by the U.S. Army Corps of Engineers shall be available for review at the construction site at all times. All violations, including non-compliance of these conditions, of the authorized permit shall

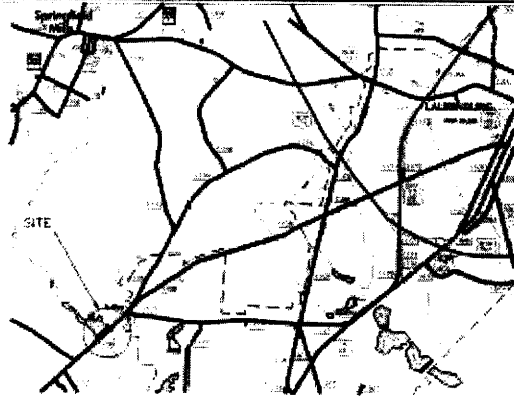
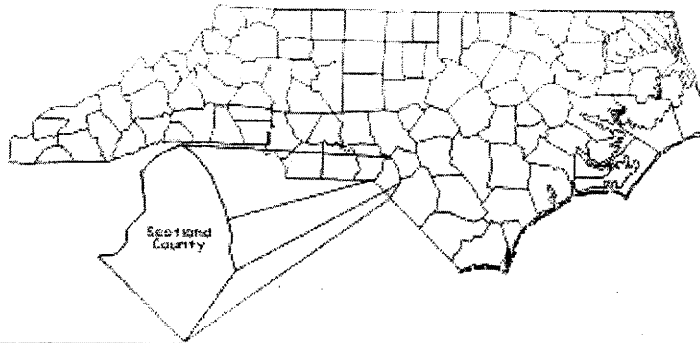
be reported to the U.S. Army Corps of Engineers, District Commander within 24 hours of the violation.

6. Except as authorized by this permit or any U.S. Army 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, or 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 or wetlands.
7. To ensure that all borrow and waste activities occur on high ground and do not result in loss or the degradation of adjacent wetlands and streams, 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 ensure that all such areas comply with the preceding condition (#6) 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 information will include data regarding soils, vegetation and hydrology sufficient to clearly demonstrate compliance with the preceding condition (#6). All information will be available to the U.S. Army Corps of Engineers upon request.
8. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area.
9. The permittee shall use appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" to assure compliance with the appropriate turbidity water quality standard. 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 assure compliance with the appropriate turbidity water quality standards. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4). 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.
10. All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. No equipment staging or storage of construction material will occur in wetlands. Hydro-seeding equipment or concrete 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

N.C. 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.

11. Every effort shall be taken to control and detain all demolition debris before it can enter the waterway or wetlands. No demolition debris shall be intentionally allowed to enter the waterway or wetlands. Any incidental demolition debris shall be removed from the waterway and/or wetlands in its entirety upon completion of that day's demolition.
12. This permit does not authorize the use of explosives in the demolition of any existing structures.
13. Dewatering of the construction site shall be accomplished by pumping to a maintained silt bag or approved silting basin. All connections and hose lines shall be inspected for proper coupling fit and leaks before the commencement of the daily work. Used silt bags shall be changed out in accordance with manufacture's specifications and not allowed to overcharge and release sediment to the surface waters and/or wetlands. Silt bags will not be located within any wetland or surface water.
14. Construction equipment shall work from the existing causeway and not be allowed within any unauthorized areas.
15. All temporary fill material shall be placed on filter fabric and removed in its entirety upon completion of construction. The area shall be restored to preconstruction contours and stabilized at the earliest practicable date to prevent sediment from entering into adjacent waters or wetlands.
16. Bridge bents shall not be located within any jurisdictional area.
17. The pond water level shall be lowered at a rate of no greater than 1-foot a day to a final water surface elevation of 164 feet mean sea level.
18. Measures shall be taken to prevent the sluicing of sediment from the pond during the draw down phase. The applicant shall provide the U.S. Army Corps of Engineers, Mr. Richard Spencer, Wilmington Regulatory Field Office with a final plan indicating measures that will be taken to prevent sediment sluicing prior to the commencement of pond draw down.
19. A sufficient number of hydrologic monitoring wells shall be installed and developed along established transects within the pond area immediately following draw down. Hydrographs will be developed from the collected data to ascertain the extent of hydrologic regime change resulting from the draw down. Vegetation monitoring shall be conducted along the same transects to determine changes in vegetation communities within the pond area. At least two normal rainfall years of monitoring shall be accomplished with a report of the results provided to the U.S. Army Corps of Engineers within 30 days following the completion of the monitoring. A longer monitoring period may be required if normal rainfall years data can not be acquired. The report shall also provide an assessment, based on collected data, of the affect the draining has had on the extent of the wetlands within the pond area.

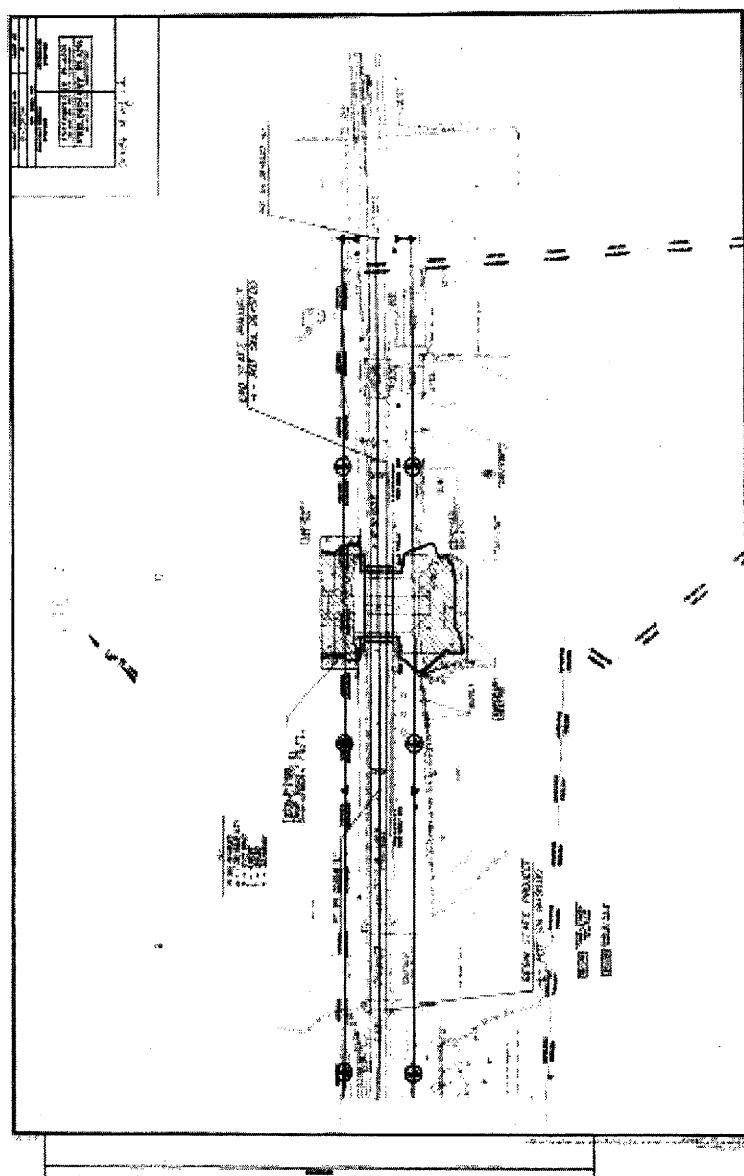
NORTH CAROLINA

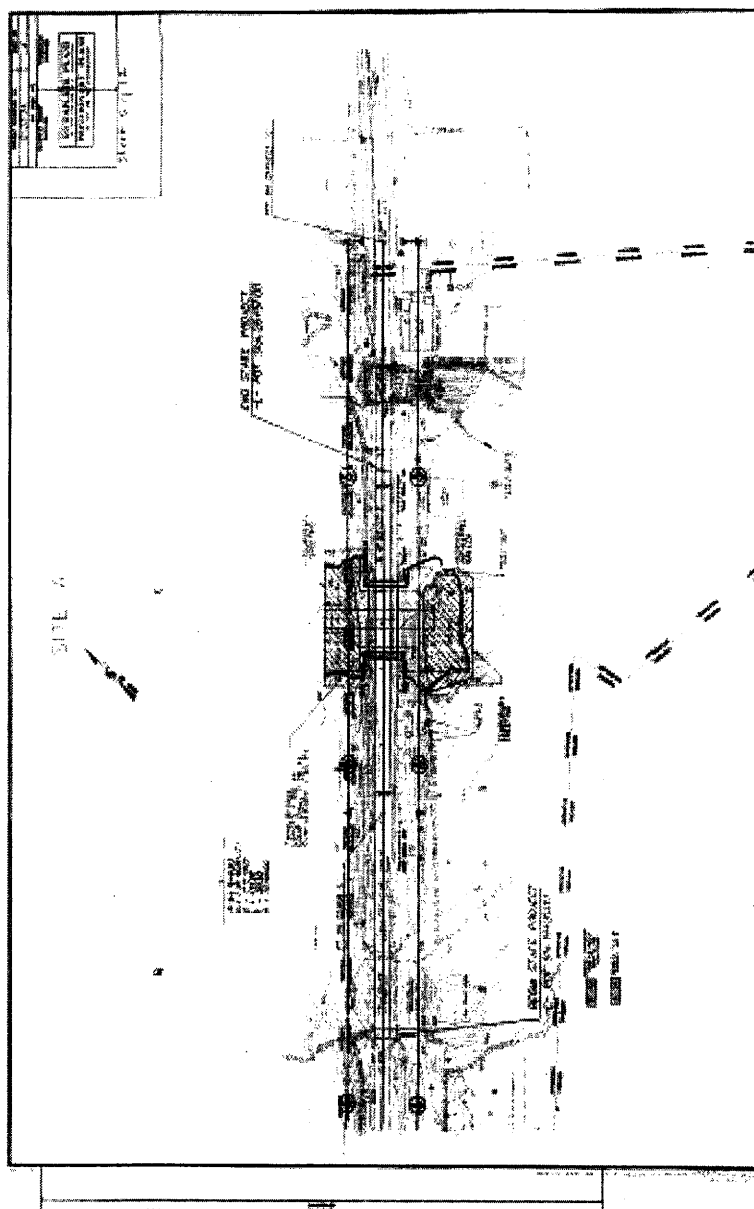


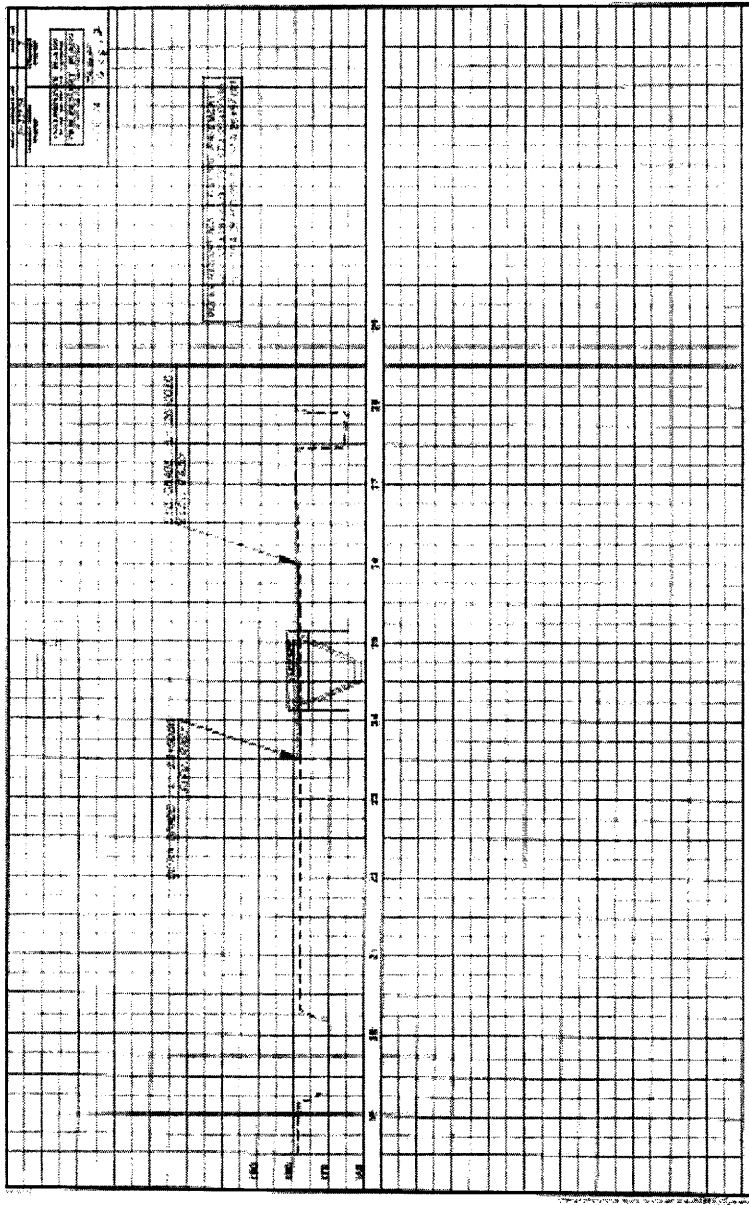
VICINITY MAPS

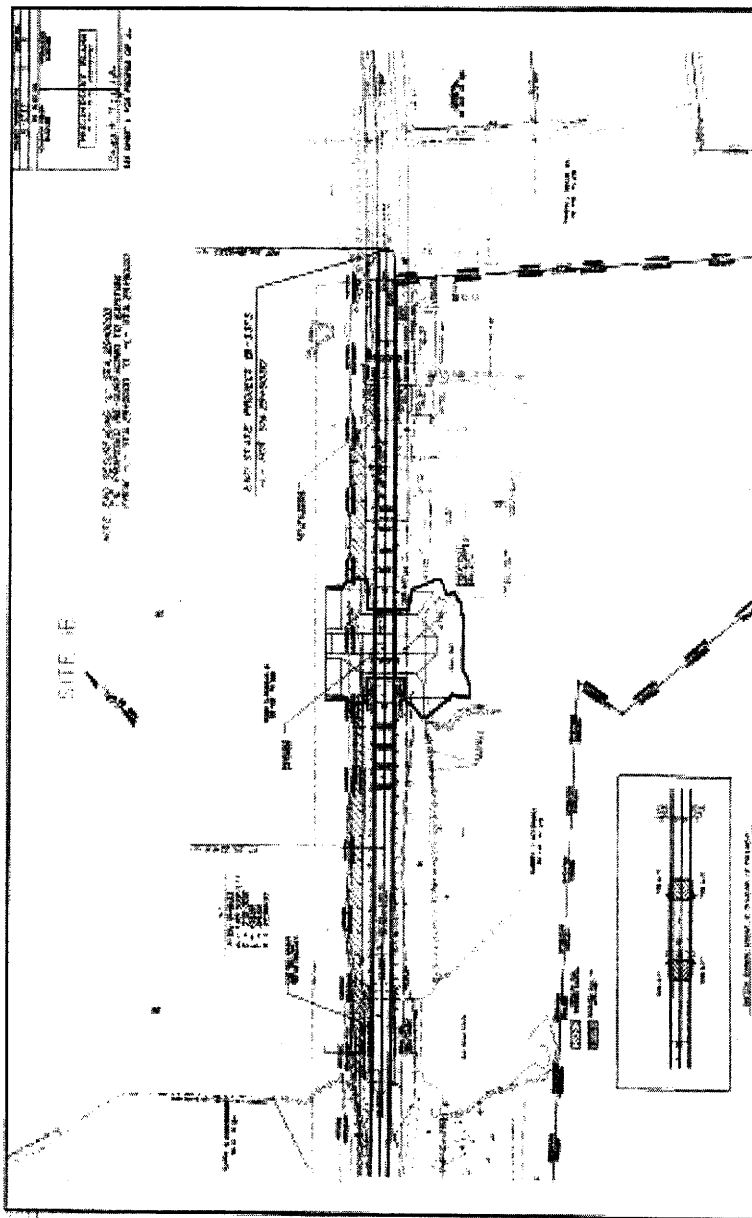
NCDOT
DIVISION OF HIGHWAYS
SCOTLAND COUNTY
PROJECT: 82399401 (B-3272)
BRIDGE NO. 62 OVER GUM SWAMP
CREEK SPILLWAY ON SR 1100

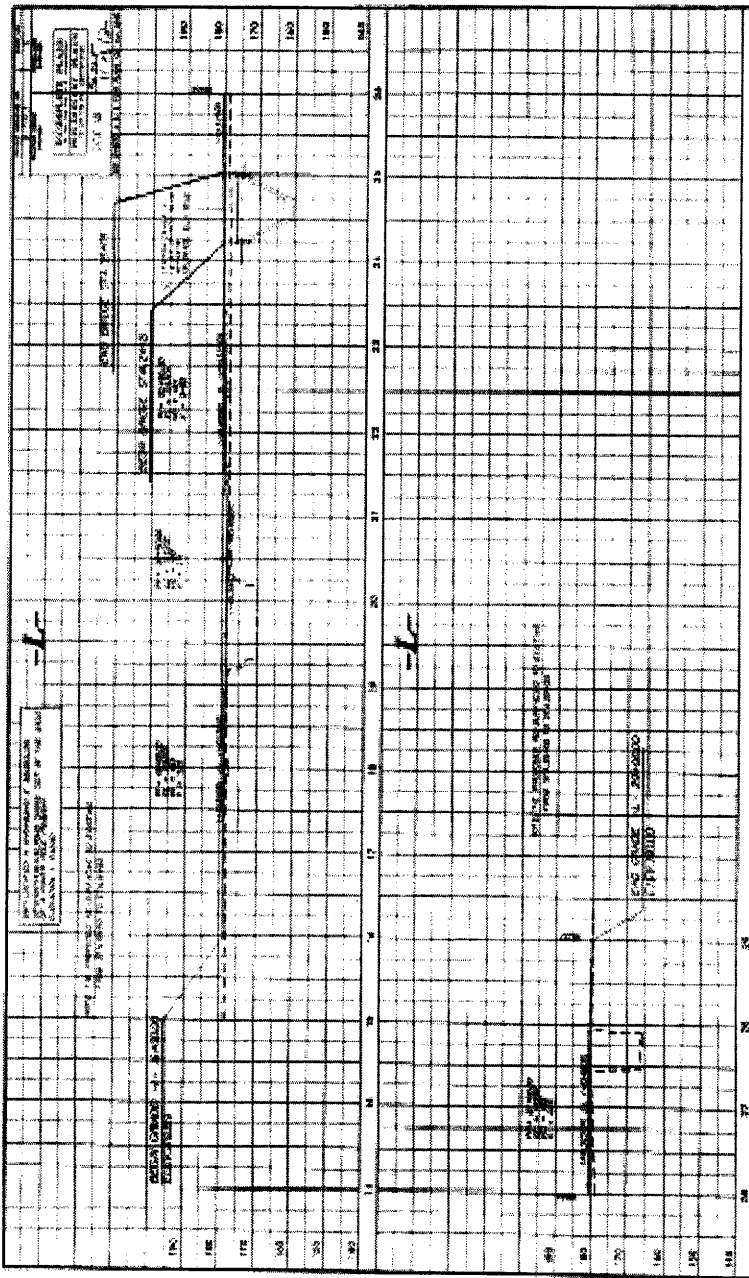
SHEET 1 OF 12 10/15/2004

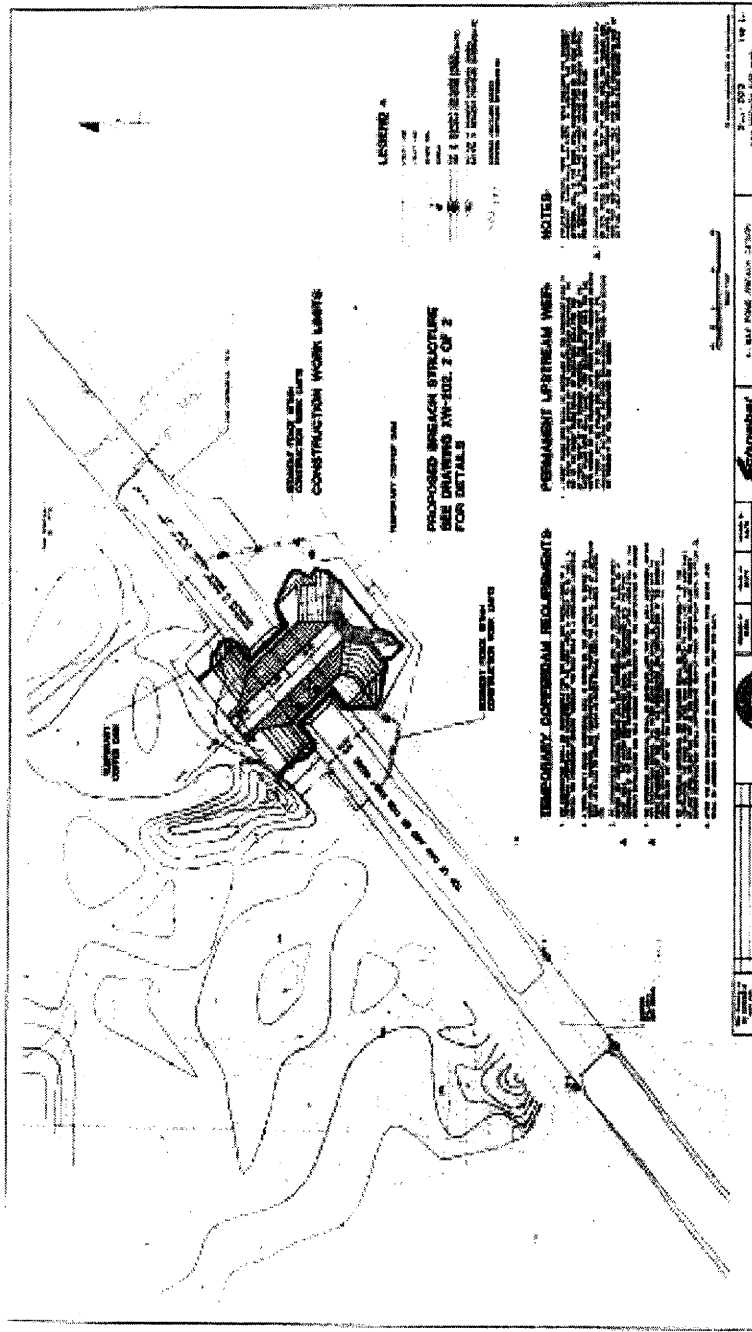


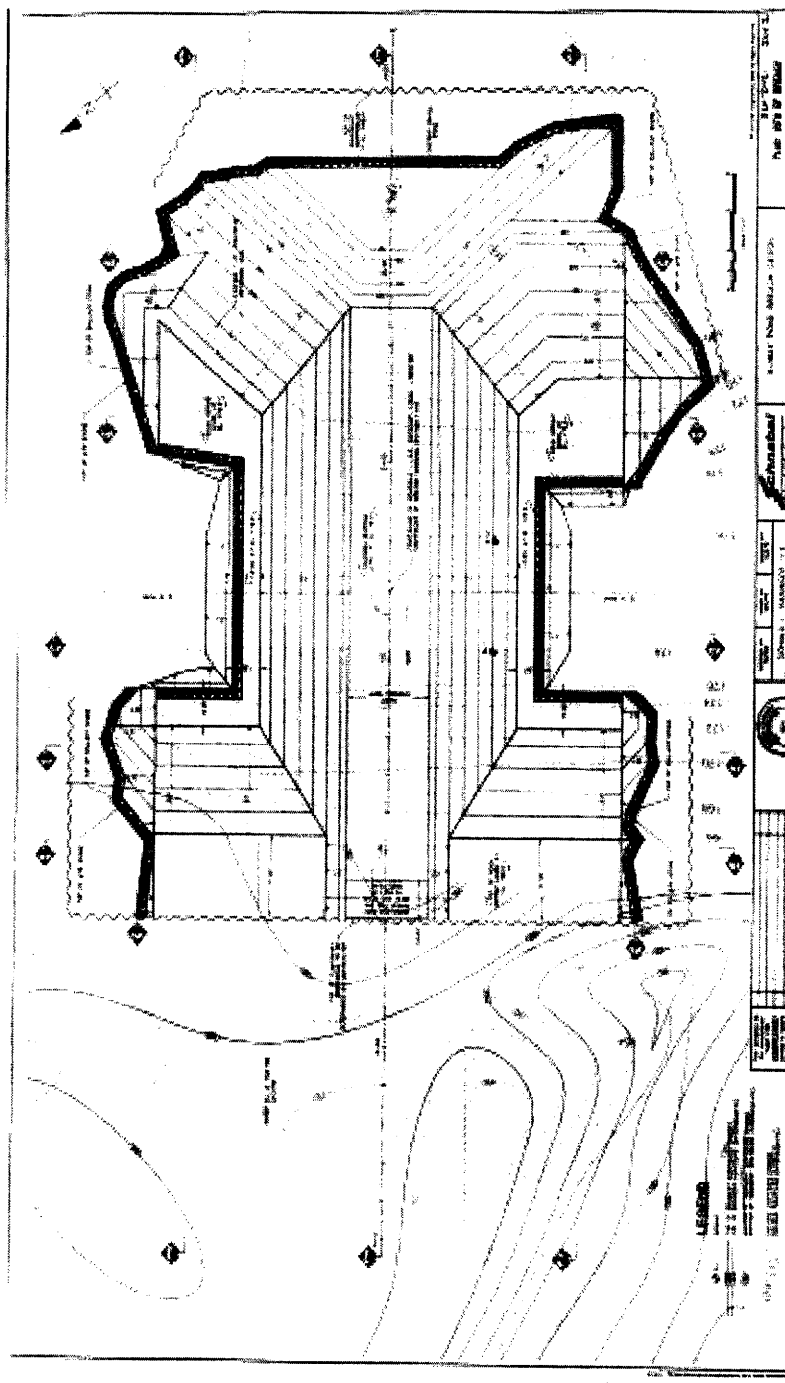


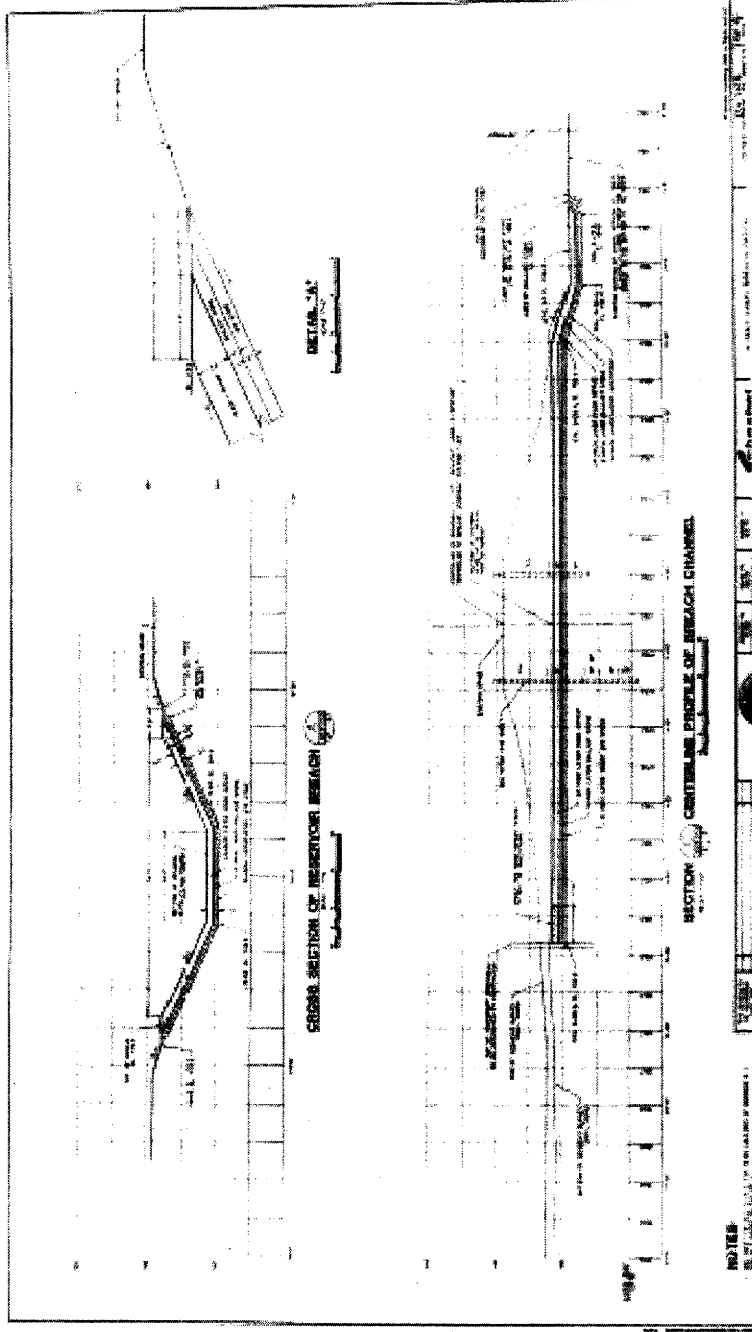












NOTES

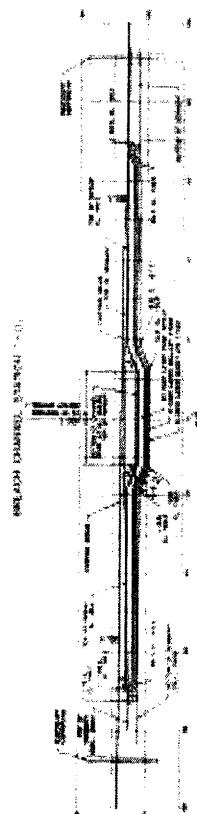
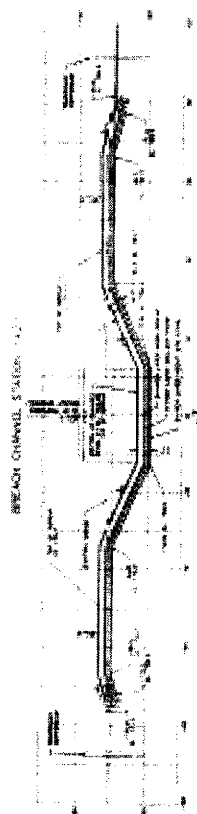
1. THE CHANNEL SHALL BE CONSTRUCTED TO THE FOLLOWING DIMENSIONS:

2. THE CHANNEL SHALL BE CONSTRUCTED TO THE FOLLOWING DIMENSIONS:

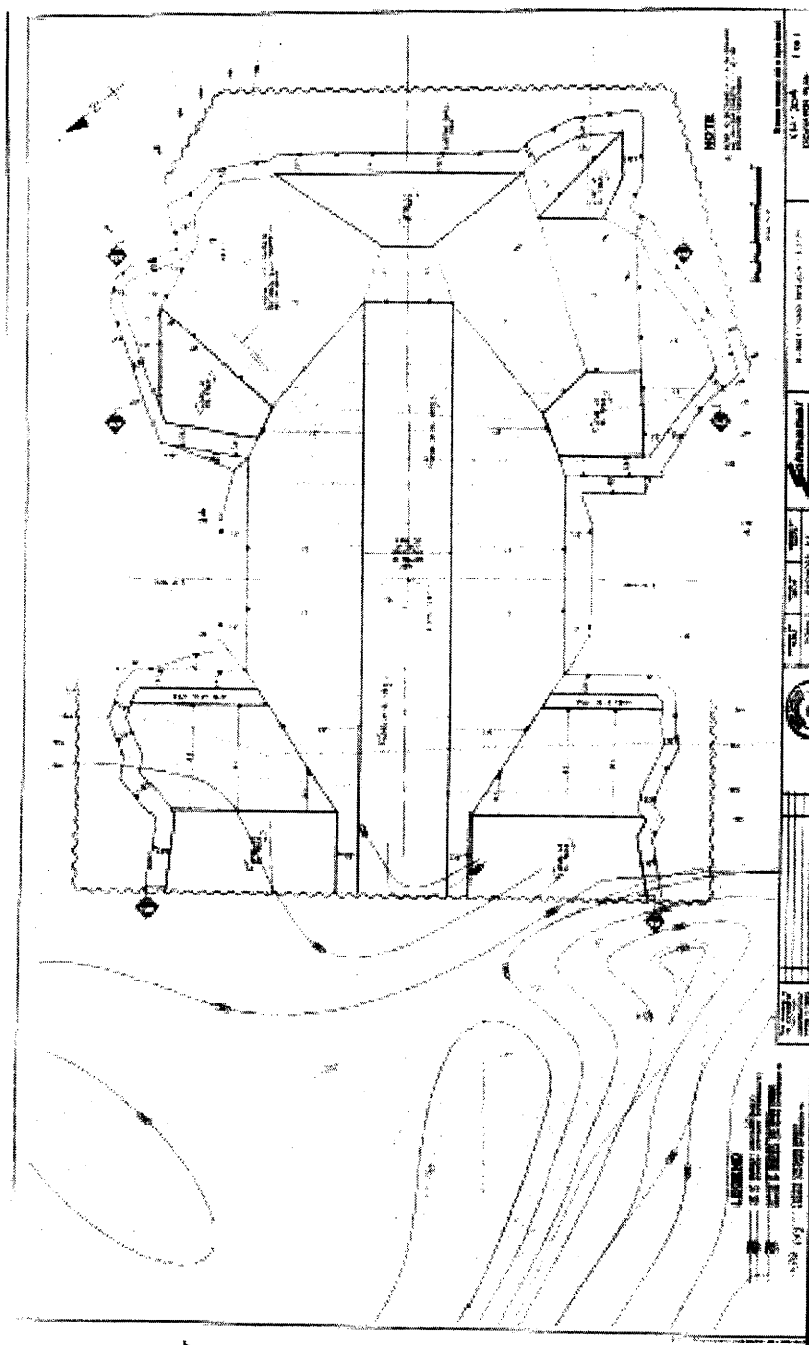
3. THE CHANNEL SHALL BE CONSTRUCTED TO THE FOLLOWING DIMENSIONS:

4. THE CHANNEL SHALL BE CONSTRUCTED TO THE FOLLOWING DIMENSIONS:

5. THE CHANNEL SHALL BE CONSTRUCTED TO THE FOLLOWING DIMENSIONS:



| |
|---|
| 1. NAME 2. DATE 3. TIME 4. LOCATION 5. REMARKS 6. INITIALS 7. SIGNATURE 8. DATE 9. TIME 10. LOCATION 11. REMARKS 12. INITIALS 13. SIGNATURE 14. DATE 15. TIME 16. LOCATION 17. REMARKS 18. INITIALS 19. SIGNATURE 20. DATE 21. TIME 22. LOCATION 23. REMARKS 24. INITIALS 25. SIGNATURE 26. DATE 27. TIME 28. LOCATION 29. REMARKS 30. INITIALS 31. SIGNATURE 32. DATE 33. TIME 34. LOCATION 35. REMARKS 36. INITIALS 37. SIGNATURE 38. DATE 39. TIME 40. LOCATION 41. REMARKS 42. INITIALS 43. SIGNATURE 44. DATE 45. TIME 46. LOCATION 47. REMARKS 48. INITIALS 49. SIGNATURE 50. DATE 51. TIME 52. LOCATION 53. REMARKS 54. INITIALS 55. SIGNATURE 56. DATE 57. TIME 58. LOCATION 59. REMARKS 60. INITIALS 61. SIGNATURE 62. DATE 63. TIME 64. LOCATION 65. REMARKS 66. INITIALS 67. SIGNATURE 68. DATE 69. TIME 70. LOCATION 71. REMARKS 72. INITIALS 73. SIGNATURE 74. DATE 75. TIME 76. LOCATION 77. REMARKS 78. INITIALS 79. SIGNATURE 80. DATE 81. TIME 82. LOCATION 83. REMARKS 84. INITIALS 85. SIGNATURE 86. DATE 87. TIME 88. LOCATION 89. REMARKS 90. INITIALS 91. SIGNATURE 92. DATE 93. TIME 94. LOCATION 95. REMARKS 96. INITIALS 97. SIGNATURE 98. DATE 99. TIME 100. LOCATION 101. REMARKS 102. INITIALS 103. SIGNATURE 104. DATE 105. TIME 106. LOCATION 107. REMARKS 108. INITIALS 109. SIGNATURE 110. DATE 111. TIME 112. LOCATION 113. REMARKS 114. INITIALS 115. SIGNATURE 116. DATE 117. TIME 118. LOCATION 119. REMARKS 120. INITIALS 121. SIGNATURE 122. DATE 123. TIME 124. LOCATION 125. REMARKS 126. INITIALS 127. SIGNATURE 128. DATE 129. TIME 130. LOCATION 131. REMARKS 132. INITIALS 133. SIGNATURE 134. DATE 135. TIME 136. LOCATION 137. REMARKS 138. INITIALS 139. SIGNATURE 140. DATE 141. TIME 142. LOCATION 143. REMARKS 144. INITIALS 145. SIGNATURE 146. DATE 147. TIME 148. LOCATION 149. REMARKS 150. INITIALS 151. SIGNATURE 152. DATE 153. TIME 154. LOCATION 155. REMARKS 156. INITIALS 157. SIGNATURE 158. DATE 159. TIME 160. LOCATION 161. REMARKS 162. INITIALS 163. SIGNATURE 164. DATE 165. TIME 166. LOCATION 167. REMARKS 168. INITIALS 169. SIGNATURE 170. DATE 171. TIME 172. LOCATION 173. REMARKS 174. INITIALS 175. SIGNATURE 176. DATE 177. TIME 178. LOCATION 179. REMARKS 180. INITIALS 181. SIGNATURE 182. DATE 183. TIME 184. LOCATION 185. REMARKS 186. INITIALS 187. SIGNATURE 188. DATE 189. TIME 190. LOCATION 191. REMARKS 192. INITIALS 193. SIGNATURE 194. DATE 195. TIME 196. LOCATION 197. REMARKS 198. INITIALS 199. SIGNATURE 200. DATE 201. TIME 202. LOCATION 203. REMARKS 204. INITIALS 205. SIGNATURE 206. DATE 207. TIME 208. LOCATION 209. REMARKS 210. INITIALS 211. SIGNATURE 212. DATE 213. TIME 214. LOCATION 215. REMARKS 216. INITIALS 217. SIGNATURE 218. DATE 219. TIME 220. LOCATION 221. REMARKS 222. INITIALS 223. SIGNATURE 224. DATE 225. TIME 226. LOCATION 227. REMARKS 228. INITIALS 229. SIGNATURE 230. DATE 231. TIME 232. LOCATION 233. REMARKS 234. INITIALS 235. SIGNATURE 236. DATE 237. TIME 238. LOCATION 239. REMARKS 240. INITIALS 241. SIGNATURE 242. DATE 243. TIME 244. LOCATION 245. REMARKS 246. INITIALS 247. SIGNATURE 248. DATE 249. TIME 2 |
|---|





DEPARTMENT OF THE ARMY
Wilmington District, Corps of Engineers
Post Office Box 1890
Wilmington, North Carolina 28402-1890

Regional General Permit No. 198200031

Name of Permittee: General Public

Effective Date: September 1, 2003

Expiration Date: August 31, 2008

**DEPARTMENT OF THE ARMY
REGIONAL GENERAL PERMIT**

A regional general permit (RGP) to perform work in or affecting navigable waters of the United States and waters of the United States, upon recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of March 3, 1899 (33 U.S.C. 403), and Section 404 of the Clean Water Act (33 U.S.C. 1344), is hereby modified and re-issued by authority of the Secretary of the Army by the

District Engineer
U.S. Army Engineer District, Wilmington
Corps of Engineers
Post Office Box 1890
Wilmington, North Carolina 28402-1890

TO AUTHORIZE THE DISCHARGE OF DREDGED OR FILL MATERIAL IN WATERS OF THE UNITED STATES, INCLUDING WETLANDS, ASSOCIATED WITH THE CONSTRUCTION, MAINTENANCE AND REPAIR OF BRIDGES, INCLUDING COFFERDAMS, ABUTMENTS, FOUNDATION SEALS, PIERS, APPROACH FILLS, DETOUR FILLS, BOX CULVERT INSTALLATION AND TEMPORARY CONSTRUCTION AND ACCESS FILLS, IN WATERS OF THE UNITED STATES AS PART OF WORK CONDUCTED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) OR OTHER STATE, FEDERAL OR LOCAL GOVERNMENTAL ENTITY, IN THE STATE OF NORTH CAROLINA.

1. Special Conditions.

a. Written confirmation that the proposed work complies with this RGP must be received from the Wilmington District Engineer prior to the commencement of any work. To enable this determination to be made, the permittee must furnish the Wilmington District Engineer a pre-construction notification with the following information:

-
- (1) A map indicating the location of the work.
 - (2) Plans of the proposed work showing all pertinent structures, elevations, dimensions and quantities of materials and locations of all structures and/or fill in wetlands or waterward of the normal/high water elevation contours.
 - (3) A brief discussion of the affected aquatic resources, including streams and wetlands. The discussion shall include the identification and types of vegetation present.
 - (4) Approximate commencement and completion dates.
 - (5) A description of methods to be employed to avoid and/or minimize permanent and temporary impacts to aquatic resources caused by the proposed work.
 - (6) Plans, including timetables and techniques, for construction, stabilization and removal of all unavoidable temporary fills.
 - (7) Names and addresses of adjoining property owners.

b. In the case of fills of one acre or less, including permanent approach fills, detour fills and fills associated with culvert installation, the Corps of Engineers' Project Manager will determine, after appropriate onsite visits and review of plans, if the impacts on aquatic resources, including streams and wetlands, are likely to be such as to require review by Federal and State agencies. If it is determined that impacts are minimal or can be made minimal by changes agreed to by the applicant, a letter of authorization to proceed will be provided. If it is determined that review by Federal and State agencies is necessary to fully evaluate impacts, copies of all plans and materials will be forwarded to the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), the U.S. Environmental Protection Agency (EPA) and the North Carolina Department of Environment and Natural Resources (NCDENR). These agencies will furnish comments to the Wilmington District Engineer within thirty (30) days.

c. In cases of fills greater than one acre, copies of all plans and materials will be forwarded to the USFWS, the NMFS, the EPA and the NCDENR. These agencies will furnish comments to the Wilmington District Engineer in thirty (30) days. In cases of land disturbing activities comprising more than one acre, a Sedimentation/Erosion Control Plan will be filed with the North Carolina Division of Land Resources, Land Quality Section, thirty (30) days prior to commencing work.

d. Where work is proposed within the twenty (20) coastal counties, as defined by the North Carolina Division of Coastal Management, the applicant shall forward a copy of the pre-construction notification to:

**National Marine Fisheries Service
101 Pivers Island Road
Beaufort, North Carolina 28516**

The counties in which this condition applies are:

| | | | | |
|-------------|------------|---------|----------|------------|
| Beaufort | Hertford | Bertie | Hyde | Brunswick |
| New Hanover | Camden | Onslow | Carteret | Pamlico |
| Chowan | Pasquotank | Craven | Pender | Currituck |
| Perquimans | Dare | Tyrrell | Gates | Washington |

e. In the event that any Federal agency maintains an objection or any required State authorization is outstanding, no notice to proceed will be given until objections are resolved and State authorizations are issued.

f. No work will proceed until after the applicant has received written notice to proceed from the Wilmington District Engineer. This notice may include additional conditions and/or restrictions. Copies of the notice to proceed will be furnished to the USFWS, the NMFS, the EPA and the NCDENR with a brief description of the work, including the area of wetlands affected and the quantity of fill material.

g. Upon completion of any work authorized by this RGP, all temporary fills will be completely removed and the area reestablished as a wetland by restoring natural hydrology and native vegetation. Stream contours and riparian vegetation will be reestablished upon the removal of temporary culverts. In such instances, a restoration plan will be submitted to the Wilmington District Engineer for approval. Information in the restoration plan will be in accordance with special condition i. below.

h. Appropriate soil and erosion control measures must be established and maintained during construction. All fills, temporary and permanent, must be adequately stabilized at the earliest practicable date to prevent erosion of fill material into adjacent waters or wetlands.

i. In cases where new alignment approaches are to be constructed and the existing wetland approach fill is to be abandoned and no longer to be maintained as a roadway, the abandoned fill shall be removed and the area reestablished as a wetland. In such instances, a restoration plan will be submitted to the Wilmington District Engineer for approval. Information in the restoration plan will be in accordance with special condition i. below.

j. Discharges of dredged or fill material into waters of the United States, including wetlands, must be minimized or avoided to the maximum extent practicable. In reviewing an activity, the Wilmington District Engineer will first determine whether the activity will result in more than minimal adverse environmental affects. For activities that are determined to have more than minimal impacts, compensatory mitigation will be required. To expedite the process, the applicant will provide a mitigation plan with the request for authorization. Site specific mitigation proposals will include, but are not necessarily limited to, a description of work, a

schedule of work and a monitoring plan, and they will be in accordance with currently approved Wilmington District and/or Corps-wide mitigation guidelines. The applicant may propose other forms of mitigation, such as mitigation bank credits or in-lieu fee mitigation with the notification, which in some situations and at the discretion of the Wilmington District, may be considered acceptable mitigation.

k. Activities in any North Carolina designated "Mountain Trout Waters" must comply with all pH, temperature and turbidity criteria established for such waters by the North Carolina Wildlife Resources Commission (NCWRC) and/or the North Carolina Division of Water Quality (NCDWQ). Work that may result in the sedimentation of trout waters will generally be prohibited from October 15 to April 15, of any year, to avoid impacts on trout spawning.

l. Before discharging dredged or fill material into waters of the United States, including wetlands, in the twenty-five (25) mountain counties of North Carolina that contain trout waters, the applicant will obtain and provide a letter of comments and recommendations from the North NCWRC on the proposed activities. A discussion of alternatives to working in the mountain trout waters and why alternatives were not selected, and a plan to provide compensatory mitigation for all unavoidable adverse impacts to the mountain trout waters shall also be submitted with the letter from NCWRC. To facilitate coordination with the NCWRC, the proponent may provide a copy of the notification to the NCWRC concurrent with the notification to the District Engineer. The NCWRC will respond both to the proponent and directly to the Corps of Engineers.

The applicant should contact:

North Carolina Wildlife Resources Commission
Habitat Conservation Program Manager
1721 Mail Service Center
Raleigh, North Carolina 27699-1721
Telephone (919) 733-7638

The counties in which this condition applies are:

| | | | | |
|--------------|----------|------------|----------|-------------|
| Alleghany | Ashe | Avery | Buncombe | Burke |
| Caldwell | Cherokee | Clay | Graham | Haywood |
| Henderson | Jackson | Macon | Madison | McDowell |
| Mitchell | Polk | Rutherford | Stokes | Surry Swain |
| Transylvania | Watauga | Wilkes | Yancey | |

m. This permit does not authorize the use of culverts in areas designated as anadromous fish spawning areas by the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC).

n. Discharges into Waters of the United States designated by either the North Carolina Division of Marine Fisheries (NCDMF) or the NCWRC as anadromous fish spawning area are prohibited during the period between February 15 and June 30, without prior written approval

from NCDMF or NCWRC and the Corps. Discharges into waters of the United States designated by NCDMF as primary nursery areas and discharges into waters of the United States designated by NCWRC as inland nursery areas shall be coordinated with NCDMF and NCWRC prior to being authorized by this RGP. Coordination with NCDMF and NCWRC may result in a required construction moratorium during periods of significant biological productivity or critical life stages.

The Applicant should contact:

NC Division of Marine Fisheries
3441 Arendell Street
Morehead City, NC 28557
Telephone 252-726-7021
or 800-682-2632

North Carolina Wildlife Resources Commission
Habitat Conservation Program Manager
1721 Mail Service Center
Raleigh, NC 27699-1721
Telephone (919) 733-7638

o. No activity may result in substantial permanent disruption of the movement of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area.

p. This permit generally allows the permanent installation of culverts to 100 feet in length. For culverts longer than 100 feet, the proposed application will be closely evaluated to determine if unacceptable impacts on movement of aquatic organisms would result. In such cases, approval may not be provided.

q. If the project is located within the twenty (20) counties of North Carolina designated as coastal counties by the Coastal Area Management Act (CAMA), then all pipe and culvert inverts will be buried at least one foot below normal bed elevation when they are placed within the Public Trust Area of Environmental Concern (AEC) and/or the Estuarine Waters AEC as designated by CAMA, and/or all streams appearing as blue lines on United States Geological Survey (USGS) quad sheets. If the project is not located within the twenty (20) counties of North Carolina designated as coastal counties by CAMA, then culvert inverts will be buried at least one foot below the bed of the stream for culverts greater than 48 inches in diameter. For culverts 48 inches in diameter or smaller, culverts 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. Bottomless arch culverts will satisfy this condition. A waiver from the depth specifications in this condition may be requested in writing. The waiver will only be issued if it can be demonstrated that the impacts of complying with this condition would result in more adverse impacts to the aquatic environment.

r. All activities authorized by this RGP shall, to the extent practicable, be conducted "in the dry", with barriers installed between work areas and aquatic habitat to protect that habitat from cement or other pollutants. Where concrete is utilized, measures will be taken to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with waters of the state until the concrete has hardened. Water in the work area will be pumped to holding and settling ponds as practicable, and water will not be allowed to re-enter the water column until decanted.

s. If the project authorized by this RGP is proposed by a Federal or State agency, and is located within the twenty (20) counties of North Carolina designated as coastal counties by the CAMA, then prior to project initiation the proponent must obtain a determination of consistency with the state's coastal management program from the N.C. Division of Coastal Management (DCM). A copy of the state's consistency determination must be provided to the appropriate Wilmington District Regulatory Office at the following address:

Wilmington Regulatory Field Office
P.O. Box 1890
Wilmington, NC 28402

Washington Regulatory Field Office
P.O. Box 1000
Washington, NC 27889

The state's consistency determination will be conveyed in the form of a CAMA permit if the project is located within a designated CAMA Area of Environmental Concern (AEC), and will be conveyed in the form of a Consistency Determination letter from DCM if the project is not located within a designated CAMA AEC.

t. No work shall be authorized by the RGP within the twenty coastal counties, as defined by the North Carolina Division of Coastal Management, without prior consultation with NOAA Fisheries. For each activity reviewed by the Corps of Engineers where it is determined that the activity may affect Essential Fish Habitat (EFH) for Federally managed species, an EFH Assessment shall be prepared by the applicant and forwarded to the Corps of Engineers and NOAA Fisheries for review and comment prior to authorization of work.

u. All work will comply with Water Quality Certification No. 3404, issued by the NCDWQ on 28 March 2003.

v. The activity must be designed to maintain preconstruction downstream flow conditions (e.g., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows and the structure or discharge of dredged or fill material must withstand expected high flows

2. General Conditions.

a. All activities authorized by this RGP that involve the discharge of dredged or fill material in waters of the United States will be consistent with applicable water quality standards, effluent limitations and standards of performance, prohibitions, pre-treatment standards and management practices established pursuant to the Clean Water Act (33 U.S.C. 1344) and applicable State and local law. If the proposed activity involves the discharge of dredged or fill material in waters of the United States, prior to the commencement of any work, the applicant will satisfy the NCDWQ regarding the need for a Water Quality Certification pursuant to Section 401 of the Clean Water Act.

b. There will be no unreasonable interference with navigation or the right of the public to riparian access by the existence or use of activities authorized by this RGP.

c. A permittee, upon receipt of written notice from the Wilmington District Engineer of failure to comply with the terms or conditions of this RGP, will, within 60 days, without expense to the U.S. Government, and in such manner as the Wilmington District Engineer may direct, affect compliance with the terms and conditions or return the worksite to a pre-work condition.

d. The permittee must make every reasonable effort to perform the work authorized herein in a manner so as to minimize any adverse impact on fish, wildlife and natural environmental values.

e. The permittee must perform the work authorized herein in a manner so as to minimize any degradation of water quality. The activity will be conducted in such a manner as to prevent a significant increase in turbidity outside the area of construction or construction-related discharge. Increases such that the turbidity in the water body is 50 NTU's or less in all rivers not designated as trout waters by the North Carolina Division of Environmental Management (NCDENM), 25 NTU's or less in all saltwater classes and in all lakes and reservoirs, and 10 NTU's or less in trout waters, are not considered significant.

f. The permittee will permit the Wilmington District Engineer or his representative to make periodic inspections at any time deemed necessary in order to assure that the activity is being performed or maintained in strict accordance with the Special and General Conditions of this permit.

g. This RGP **does not** convey any rights, either in real estate or material, or any exclusive privileges; and it does not authorize any injury to property or invasion of rights or any infringement of Federal, State or local laws or regulations, nor does it obviate the requirement to obtain State or local assent required by law for the activity authorized herein. These may include, but are not necessarily limited to, a Dredge and/or Fill Permit (N.C.G.S. 113-229), a CAMA Permit (N.C.G.S. 113A-118), an Easement to Fill (N.C.G.S. 146-12) and a Water Quality Certification pursuant to Section 401 of the Clean Water Act.

h. Authorization provided by this RGP may be modified, suspended or revoked in whole or in part if the Wilmington District Engineer, acting on behalf of the Secretary of the Army, determines that such action would be in the best public interest. Unless subject to modification, suspension or revocation, the term of this RGP shall be five years. Any modification, suspension or revocation of this authorization will not be the basis for any claim for damages against the U.S. Government.

i. This RGP does not authorize the interference with any existing or proposed Federal project and the permittee will not be entitled to compensation for damages or injury to the structures or work authorized herein which may be caused by or results from existing or future operations undertaken by the United States in the public interest.

j. This RGP will not be applicable to proposed construction when the Wilmington District Engineer determines that the proposed activity would significantly affect the quality of the human environment and determines that an Environmental Impact Statement (EIS) must be prepared.

k. This RGP will not be applicable to proposed construction when the Wilmington District Engineer determines, after any necessary investigations, that the proposed activity would adversely affect areas that possess historic, cultural, scenic, conservation or recreational values. Application of this exemption applies to:

(1) Rivers named in Section 3 of the Wild and Scenic Rivers Act (15 U.S.C. 1273), those proposed for inclusion as provided by Sections 4 and 5 of the Act and wild, scenic and recreational rivers established by State and local entities.

(2) Historic, cultural or archeological sites listed in or eligible for inclusion in the National Register of Historic Places as defined in the National Historic Preservation Act of 1966 as amended, the Abandoned Shipwreck Act of 1987 and the Native American Graves Protection and Repatriation Act.

(3) Sites included in or determined eligible for listing in the National Registry of Natural Landmarks.

(4) Endangered or threatened species or critical habitat of such species as determined by the Secretaries of Interior or Commerce and concerned in accordance with the Endangered Species Act (16 U.S.C. 1531).

(5) NOAA designated marine sanctuaries, National Estuarine Research Reserves, and coral reefs.

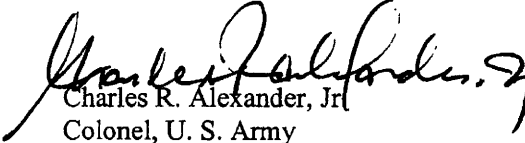
l. Permittees are advised that activities in or near a floodway may be subject to the National Flood Insurance Program, which prohibits any activities, including fill within a floodway that results in any increase in base flood elevations.

m. At his discretion, the Wilmington District Engineer may determine that this RGP will not be applicable to a specific construction proposal. In such case, the procedure for processing an individual permit in accordance with 33 CFR 325 will be available.

n. The permittee or the permittee's successors will maintain the authorized work in good condition and in conformance with the terms and conditions of the RGP.

o. The discharge of dredged or fill material shall consist of suitable material free from toxic pollutants in toxic amounts.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:


Charles R. Alexander, Jr.
Colonel, U. S. Army
District Engineer



REPLY TO
ATTENTION OF:

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

Permit Number: SAW-2006-40679-083/RGP31/Scotland County

Permittee: NCDOT/B-3373

Issuance: 15 November 2006

Project Manager: Richard K. Spencer

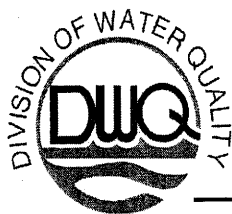
Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

**Wilmington Regulatory Field Office
US Army Corps of Engineers
Post Office Box 1890
Wilmington, NC 28402-1890**

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee



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

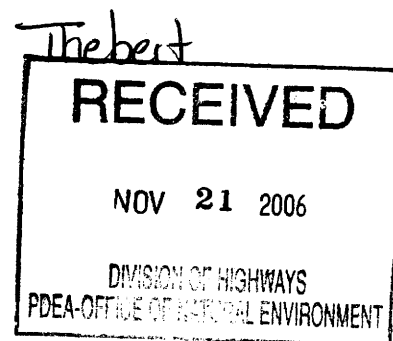
Alan W. Klimek, P.E. Director
Division of Water Quality

November 17, 2006

Scotland County
Bridge Nos. 61 and 62 on SR 1108
DWQ Project No. 20061674
B-3373

APPROVAL of 401 Water Quality Certification

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



Dear Dr. Thorpe:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of replacing Bridges Nos. 61 and 62 over Gum Swamp Creek on SR 1108 in Scotland County:

Wetland Impacts in the Lumber River Basin

| Site | Fill (ac) | Fill (temporary) (ac) | Drainage (ac) | Total Wetland Impact (ac) |
|--------------|--------------|-----------------------------|------------------|------------------------------|
| 1B | 0.22 | 0.07 | 0 | 0.29 |
| Millpond | 0 | 0 | 18.57 | 18.57 |
| Total | 0.22 | 0.07 | 18.57 | 18.86 |

Total Wetland Impact for Project: 18.86 acres.

Open Water Pond Impacts in the Lumber River Basin

| Site | Permanent Fill in Open Waters (ac) | Temporary Fill in Open Waters (ac) | Permanent Drainage of Open Waters (ac) | Total Fill in Open Waters (ac) |
|--------------|--|---------------------------------------|--|-----------------------------------|
| 1A | 0.33 | 0 | 0 | 0.33 |
| Millpond | 0 | 0 | 32.22 | 32.22 |
| Total | 0.33 | 0 | 32.22 | 32.55 |

Total Open Water Impact for Project: 32.55 acres.

The project shall be constructed in accordance with your application dated received October 24, 2006. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 3404. This certification corresponds to the General Permit 31 issued by the Corps of Engineers. In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must 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 total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed in the attached certification.

Conditions of Certification:

1. Compensatory mitigation is required for impacts to 18.86 acres of riverine wetlands. The permittee shall comply with the on-site wetland mitigation plan submitted on October 24, 2006. Prior to the start of hydrologic monitoring, a hydrologic monitoring plan shall be submitted in writing to and approved by the Division of Water Quality. The hydrologic monitoring plan shall include maps showing the proposed number and location of the monitoring gauges.

For the wetland mitigation sites shown in Figure 1 of the wetland mitigation plan outlined in blue, the permittee shall plant 680 stems/acre. Vegetation success shall be measured by survivability over a 5-year monitoring period. Survivability will be based on 320 stems/acre after three (3) years and 260 stems after five (5) years. A survey of vegetation during the growing season shall be conducted annually over the five-year monitoring period and submitted to the NC Division of Water Quality. If the surviving vegetation densities are below the required thresholds after the five-year monitoring period, the site may still be declared successful at the discretion of and with written approval from the NC Division of Water Quality.

Hydrologic success of the sites will be attained by restoration of a hydrologic regime that results in inundation or saturation of the soils within 12 inches of the ground surface for at least 12.5 percent of the growing season. The hydrologic monitoring shall persist for a total of five (5) years. A survey of the hydrology during the growing season shall be conducted annually over the five-year monitoring period and submitted to the NC Division of Water Quality. After the five-year monitoring period, if the monitoring requirements are not met, the site may still be declared successful at the discretion of and with written approval from the NC Division of Water Quality. If the hydrologic monitoring data shows that less than 18.86 acres of wetland are restored, DOT will be required to obtain additional wetland mitigation to satisfy the compensatory mitigation needs of the project.

2. This approval will expire with the accompanying federal 404 permit issued by the Corps of Engineers. This condition supercedes condition No. 19 of General Water Quality Certification Number 3404.
3. Placement of culverts and other structures in waters, streams, and wetlands shall be placed 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 or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by DWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NC DWQ for

guidance on how to proceed and to determine whether or not a permit modification will be required.


4. If concrete is used during construction, a dry work area should be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete should not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
5. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers.
6. The dimension, pattern and profile of the stream above and below the crossing should not be modified. Disturbed floodplains and streams should be restored to natural geomorphic conditions.
7. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage.
8. 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 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.
9. 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.
10. Heavy equipment may be operated within the stream channels however, its usage shall be minimized.
11. 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.
12. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.
13. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
14. 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) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, DWQ may reevaluate and modify this certification.
15. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification..

16. 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.
17. 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.
18. 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.
19. Native riparian vegetation (ex. list trees and shrubs native to your geographic region) must be reestablished 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 with 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. 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 waters 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.
21. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, they shall be removed and the natural grade restored upon completion of the project.
22. 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.

Dr. Thorpe
B-3373
November 17, 2006

If you do not accept any of the conditions of this certification, you may ask for an adjudicatory hearing. You must act within 60 days of the date that you receive this letter. To ask for a hearing, send a written petition that conforms to Chapter 150B of the North Carolina General Statutes to the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699. This certification and its conditions are final and binding unless you ask for a hearing. This letter completes the review of the Division of Water Quality under Section 401 of the Clean Water Act. If you have any questions, please Brian Wrenn at 919-733-5715.

Sincerely,



for Alan W. Klimek, P.E.

Attachment

cc: Tim Johnson, Division 8, District Engineer, NC DOT
Richard Spencer, Army Corps of Engineers Wilmington Regulatory Field Office
Ken Averitte, DWQ Fayetteville Regional Office
Travis Wilson, NC WRC
Gary Jordan, US FWS
Chris Militscher, US EPA
Kathy Matthews, US EPA
File Copy

WQC #3404

**GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR CORPS OF ENGINEERS
NATIONWIDE PERMIT NUMBER 14 (ROAD CROSSINGS) AND REGIONAL GENERAL
PERMIT 198200031 (WORK ASSOCIATED WITH BRIDGE CONSTRUCTION, MAINTENANCE
OR REPAIR CONDUCTED BY NCDOT OR OTHER GOVERNMENT AGENCIES)
AND RIPARIAN AREA PROTECTION RULES (BUFFER RULES)**

This General 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 15A NCAC 2H, Section .0500 and 15A NCAC 2B .0200 for the discharge of fill material to waters and adjacent wetland areas or to wetland areas that are not a part of the surface tributary system to interstate waters or navigable waters of the United States (i.e., isolated wetlands) as described in 33 CFR 330 Appendix A (B) (14) of the Corps of Engineers regulations (Nationwide Permit No. 14 and Regional General Permit 198200031) and for the Riparian Area Protection Rules (Buffer Rules) in 15A NCAC 2B .0200. The category of activities shall include any fill activity for road crossings and is limited to fill less than one-third acre in tidal waters and less than one-half acre in non-tidal waters. This Certification replaces Water Quality Certification Number 2177 issued on November 5, 1987, Water Quality Certification Number 2666 issued on January 21, 1992, Water Quality Certification Number 2732 issued on May 1, 1992, Water Quality Certification Number 3103 issued on February 11, 1997, Water Quality Certification Number 3289 issued on June 1, 2000 and Water Quality Certification Number 3375 issued March 18, 2002. This WQC is rescinded when the Corps of Engineers re-authorizes Nationwide Permit 14 or Regional General Permit 198200031 or when deemed appropriate by the Director of DWQ.

The State of North Carolina certifies that the specified category of activity will not violate applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Conditions of Certification:

1. Enumerating and Reporting of Impacts:

- Streams - Impacts to streams as determined by the Division of Water Quality shall be measured as length of the centerline of the normal flow channel. Permanent and/or temporary stream impacts shall be enumerated on the entire project for all impacts regardless of which 404 Nationwide Permits are used. Stream relocations and stream bed and/or bank hardening are considered to be permanent stream impacts. Any activity that results in a loss of use of stream functions including but not limited to filling, relocating, flooding, dredging and complete shading shall be considered stream impacts. Enumeration of impacts to streams shall include streams enclosed by bottomless culverts, bottomless arches or other spanning structures when a 404 Permit is used anywhere in a project unless the entire structure (including construction impacts) spans the entire bed and both banks of the stream, is only used for a road, driveway or path crossing, and is not mitered to follow the stream pattern. Impacts for dam footprints and flooding will count toward the threshold for stream impacts, but flooding upstream of the dam will not (as long as no filling, excavation, relocation or other modification of the existing stream dimension, pattern or profile occurs) count towards mitigation requirements.
- Wetlands - Impacts to wetlands as determined by the Division of Water Quality shall be measured as area. Permanent and/or temporary wetland impacts shall be enumerated on the entire project for all impacts regardless of which 404 Nationwide Permits are used. Any activity that results in a loss of use of wetland functions including but not limited to filling, draining, and flooding shall be considered wetland impacts. Enumeration of impacts to wetlands shall include activities that change the hydrology of a wetland when a 404 Permit is used anywhere in a project.

WQC #3404

- Lakes and Ponds – Lake and Pond Impacts Enumeration- Impacts to waters other than streams and wetlands as determined by the Division of Water Quality shall be measured as area. Permanent and/or temporary water impacts shall be enumerated on the entire project for all impacts proposed regardless of which 404 Nationwide Permits are used. Any activity that results in a loss of use of aquatic functions including but not limited to filling and dredging shall be considered waters impacts;
2. Proposed fill or substantial modification of wetlands or waters (including streams) under this General Certification requires application to and prior written concurrence from the Division of Water Quality;
 3. Application to and payment of a fee to DWQ is not required for construction of a driveway to a single family lot as long as the driveway impacts less than 25 feet of stream channel including any in-stream stabilization needed for the crossing;
 4. Impacts to any stream length in the Neuse, Tar-Pamlico or Randleman River Basins (or any other major river basins with Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) requires written concurrence for this Certification from DWQ in accordance with 15A NCAC 2B.0200. Activities listed as “exempt” from these rules do not need to apply for written concurrence under this Certification. New development activities located in the protected 50-foot wide riparian areas (whether jurisdictional wetlands or not) within the Neuse and Tar-Pamlico River Basins shall be limited to “uses” identified within and constructed in accordance with 15A NCAC 2B .0200. All new development shall be located, designed, constructed, and maintained to have minimal disturbance to protect water quality to the maximum extent practicable through the use of best management practices;
 5. Irrespective of other application thresholds in this General Certification, all impacts to perennial waters and their associated buffers require written approval from DWQ since such impacts are allowable as provided in 15A NCAC 2B. 0212 (WS-I), 2B .0213 (WS-II), 2B .0214 (WS-III) and 2B .0215 (WS-IV). Only water dependent activities, public projects and structures with diminimus increases in impervious surfaces will be allowed as outlined in those rules. All other activities require a variance from the delegated local government and/or the NC Environmental Management Commission before the 401 Water Quality Certification can be processed. In addition, a 30 foot wide vegetative buffer for low density development or a 100 foot wide vegetative buffer for high density development must be maintained adjacent to all perennial waters except for allowances as provided under the Water Supply Watershed Protection Rules. For the purposes of this condition, perennial waters are defined as those shown as perennial waters on the most recent USGS 1:24,000 topographic map or as otherwise determined by local government studies;
 6. Additional site-specific stormwater management requirements may be added to this Certification at DWQ's discretion on a case by case basis for projects that have or are anticipated to have impervious cover of greater than 30 percent. Site-specific stormwater management shall be designed to remove 85% TSS according to the latest version of DWQ's Stormwater Best Management Practices manual at a minimum.

Additionally, in watersheds within one mile and draining to 303(d) listed waters, as well as watersheds that are classified as nutrient sensitive waters (NSW), water supply waters (WS), trout waters (Tr), high quality waters (HQW), and outstanding resource waters (ORW), the Division shall require that extended detention wetlands, bio-retention areas, and ponds followed by forested filter strips (designed according to latest version of the NC DENR Stormwater Best Management Practices Manual) be constructed as part of the stormwater management plan when a site-specific stormwater management plan is required.

WQC #3404

Alternative designs may be requested by the applicant and will be reviewed on a case-by-case basis by the Division of Water Quality.

Approval of stormwater management plans by the Division of Water Quality's other existing state stormwater programs including appropriate local programs are sufficient to satisfy this Condition as long as the stormwater management plans meet or exceed the design requirements specified in this condition. This condition applies unless more stringent requirements are in effect from other state water quality programs.

- Unless specified otherwise in the approval letter, the final, written stormwater management plan shall be approved in writing by the Division of Water Quality's Wetlands Unit before the impacts specified in this Certification occur.
 - The facilities must be designed to treat the runoff from the entire project, unless otherwise explicitly approved by the Division of Water Quality.
 - Also, before any permanent building or other structure is occupied at the subject site, the facilities (as approved by the Wetlands Unit) shall be constructed and operational, and the stormwater management plan (as approved by the Wetlands Unit) shall be implemented.
 - The structural stormwater practices as approved by the Wetlands Unit as well as drainage patterns must be maintained in perpetuity.
 - No changes to the structural stormwater practices shall be made without written authorization from the Division of Water Quality.
7. Compensatory stream mitigation shall be required at a 1:1 ratio for not only perennial but also intermittent stream impacts that require application to DWQ in watersheds classified as ORW, HQW, Tr, WS-I and WS-II unless the project is a linear, publicly-funded transportation project, which has a 150-foot per-stream impact allowance;
8. In accordance with North Carolina General Statute Section 143-215.3D(e), any application for a 401 Water Quality Certification must include the appropriate fee. If a project also requires a CAMA Permit, one payment to both agencies shall be submitted through the Division of Coastal Management and will be the higher of the two fees;
9. In accordance with 15A NCAC 2H .0506 (h) compensatory mitigation may be required for impacts to 150 linear feet or more of streams and/or one acre or more of wetlands. For linear public transportation projects, impacts equal to or exceeding 150 feet per stream may require mitigation. In addition, buffer mitigation may be required for any project with Buffer Rules in effect at the time of application for buffer impacts resulting from activities classified as "allowable with mitigation" within the "Table of Uses" section of the Buffer Rules or require a variance under the Buffer Rules. A determination of buffer, wetland and stream mitigation requirements shall be made for any Certification for this Nationwide Permit. The most current design and monitoring protocols from DWQ shall be followed and written plans submitted for DWQ approval as required in those protocols. When compensatory mitigation is required for a project, the mitigation plans must be approved by DWQ in writing before the impacts approved by the Certification occur, unless otherwise specified in the approval letter. The mitigation plan must be implemented and/or constructed before any permanent building or structure on site is occupied. In the case of public road projects, the mitigation plan must be implemented before the road is opened to the travelling public. Projects may also be implemented once payment is made to a private mitigation bank or other in-lieu fee program, as specified in the written concurrence of 401 Certification for a project. Please note that if a stream relocation is conducted as a stream restoration as defined in *The Internal Technical Guide for Stream Work in North Carolina*, April 2001, the restored length can be used as compensatory mitigation for the impacts resulting from the relocation;

WQC #3404

10. For any project involving re-alignment of streams, a stream relocation plan must be included with the 401 application for written DWQ approval. Relocated stream designs should include the same dimensions, patterns and profiles as the existing channel, to the maximum extent practical. The new channel should be constructed in the dry and water shall not be turned into the new channel until the banks are stabilized. Vegetation used for bank stabilization shall be limited to native woody species, and should include establishment of a 30 foot wide wooded and an adjacent 20 foot wide vegetated buffer on both sides of the relocated channel to the maximum extent practical. A transitional phase incorporating coir fiber and seedling establishment is allowable. Also, rip-rap may be allowed if it is necessary to maintain the physical integrity of the stream, but the applicant must provide written justification and any calculations used to determine the extent of rip-rap coverage requested. If suitable stream mitigation is not practical on-site, then stream impact will need to be mitigated elsewhere;
11. Placement of culverts and other structures in waters, streams, and wetlands must be placed below the elevation of the streambed to allow low flow passage of water and aquatic life unless it can be shown to DWQ that providing passage would be impractical. Design and placement of culverts including open bottom or bottomless arch culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in aggradation, degradation or significant changes in hydrology of wetlands or stream beds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium shall be maintained if requested to do so in writing by DWQ. Additionally, when roadways, causeways or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges must be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in aggradation, degradation or significant changes in hydrology of streams or wetlands;
12. That appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" or the "North Carolina Surface Mining Manual" whichever is more appropriate (available from the Division of Land Resources (DLR) in the DENR Regional or Central Offices) shall be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to assure compliance with the appropriate turbidity water quality standard;
13. All sediment and erosion control measures placed in wetlands and waters shall be removed and the original grade restored within two months after the Division of Land Resources has released the project;
14. That additional site-specific conditions may be added to projects proposed under this Certification in order to ensure compliance with all applicable water quality and effluent standards;
15. Measures shall be taken to prevent live or fresh concrete from coming into contact with freshwaters of the state until the concrete has hardened;
16. If an environmental document is required, this Certification is not valid until a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is issued by the State Clearinghouse;
17. If this Certification is used to access building sites, all lots owned by the applicant must be buildable without additional fill beyond that explicitly allowed under other General

WQC #3404

Certifications. For road construction purposes, this Certification shall only be utilized from natural high ground to natural high ground;

18. When written concurrence is required, the applicant is required to use the most recent version of the Certification of Completion form to notify DWQ when all work included in the 401 Certification has been completed;
19. Concurrence from DWQ that this Certification applies to an individual project shall expire three years from the date of the cover letter from DWQ or on the same day as the expiration date of the corresponding Nationwide Permit 14 or Regional General Permit 198200031, whichever is sooner.

Non-compliance with or violation of the conditions herein set forth by a specific fill project may result in revocation of this Certification for the project and may also result in criminal and/or civil penalties.

The Director of the North Carolina Division of Water Quality may require submission of a formal application for Individual Certification for any project in this category of activity that requires written concurrence under this certification, if it is determined that the project is likely to have a significant adverse effect upon water quality or degrade the waters so that existing uses of the wetland or downstream waters are precluded.

Public hearings may be held for specific applications or group of applications prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Quality.

Effective date: March 2003

DIVISION OF WATER QUALITY

By

Alan W. Klimek, P.E.

Director

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

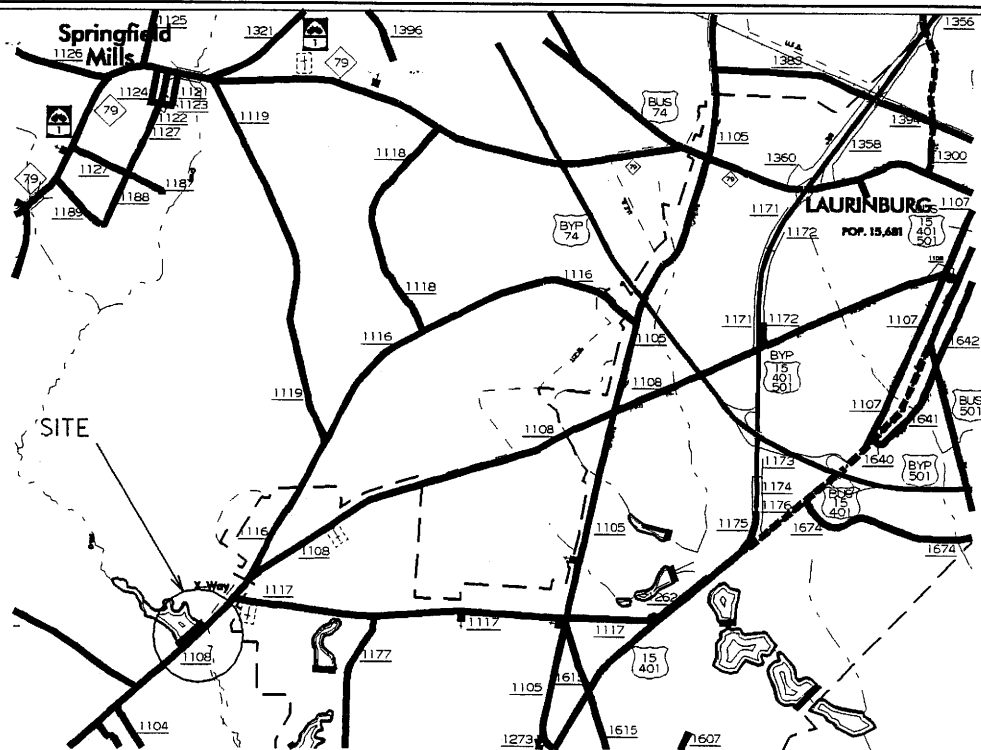
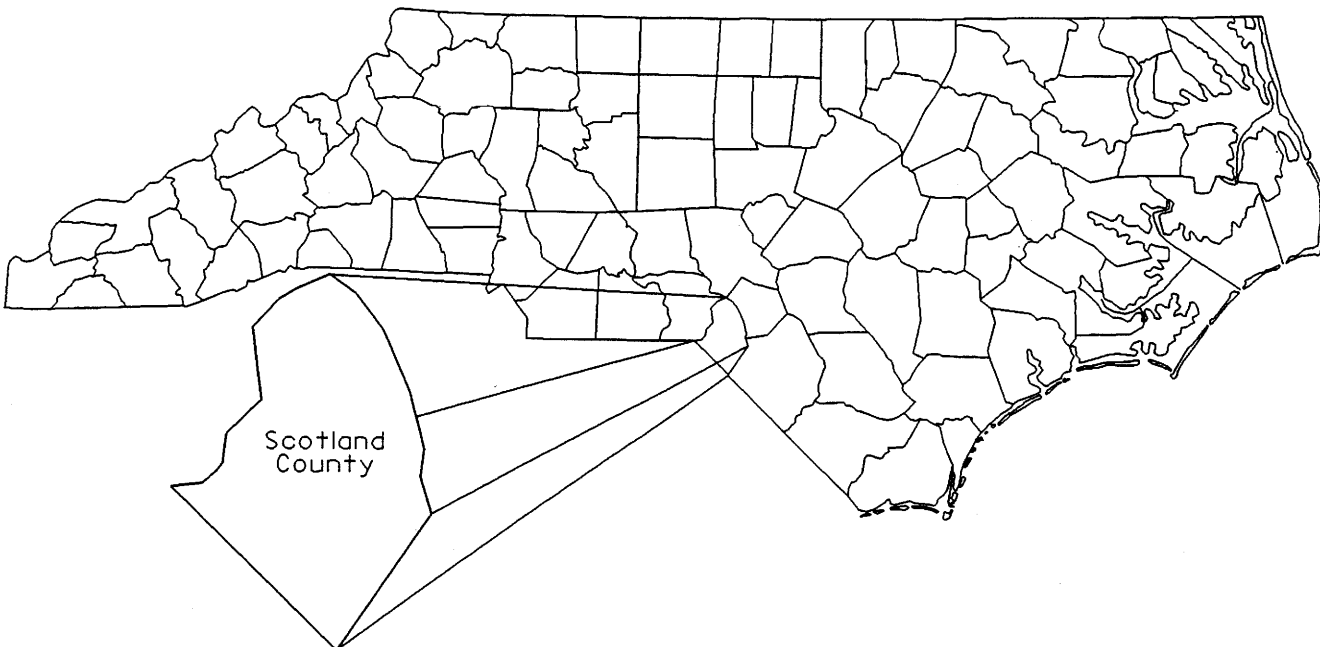
_____ Partial _____ Final

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



VICINITY MAPS

NCDOT
DIVISION OF HIGHWAYS
SCOTLAND COUNTY
PROJECT: 8.2590401 (B-3373)
BRIDGE NO.62 OVER GUM SWAMP
CREEK SPILLWAY ON SR 1108

PROPERTY OWNERS

NAME _____

ADDRESS

Wade S. Dunbar III

816 West Covington Street
Lauringburg, NC 28352

Aubrey L. McCormick

P. O. Box 1165

Lauringburg, NC 28352

Gloria H. Coughenour

603 West Blvd

Lauringburg, NC 28352

Randall M. Gibson, Sr

10981 X-Way Rd

Lauringburg, NC 28352

N. C. DEPT. OF TRANSPORTATION

DIVISION OF HIGHWAYS

SCOTLAND COUNTY

PROJECT: 8.2590401 (B-3373)

BRIDGE NO.62 OVER GUM SWAMP
CREEK SPILLWAY SR 1108

SHEET 2 OF 12

10 // 16 // 2006

IMPACT SUMMARY

[illegible]

TEMPORARY SURFACE WATER IMPACTS FOR DEWATERING

0.05 Ac Rt.
0.04 Ac Lt.

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

SCOTLAND COUNTY
PROJECT No.: 8.2590401 (B-3373)
BRIDGE No.: 62 OVER GUM SWAMP CREEK SPILLWAY
ON SR 1108

SHEET OF

10/15/2006

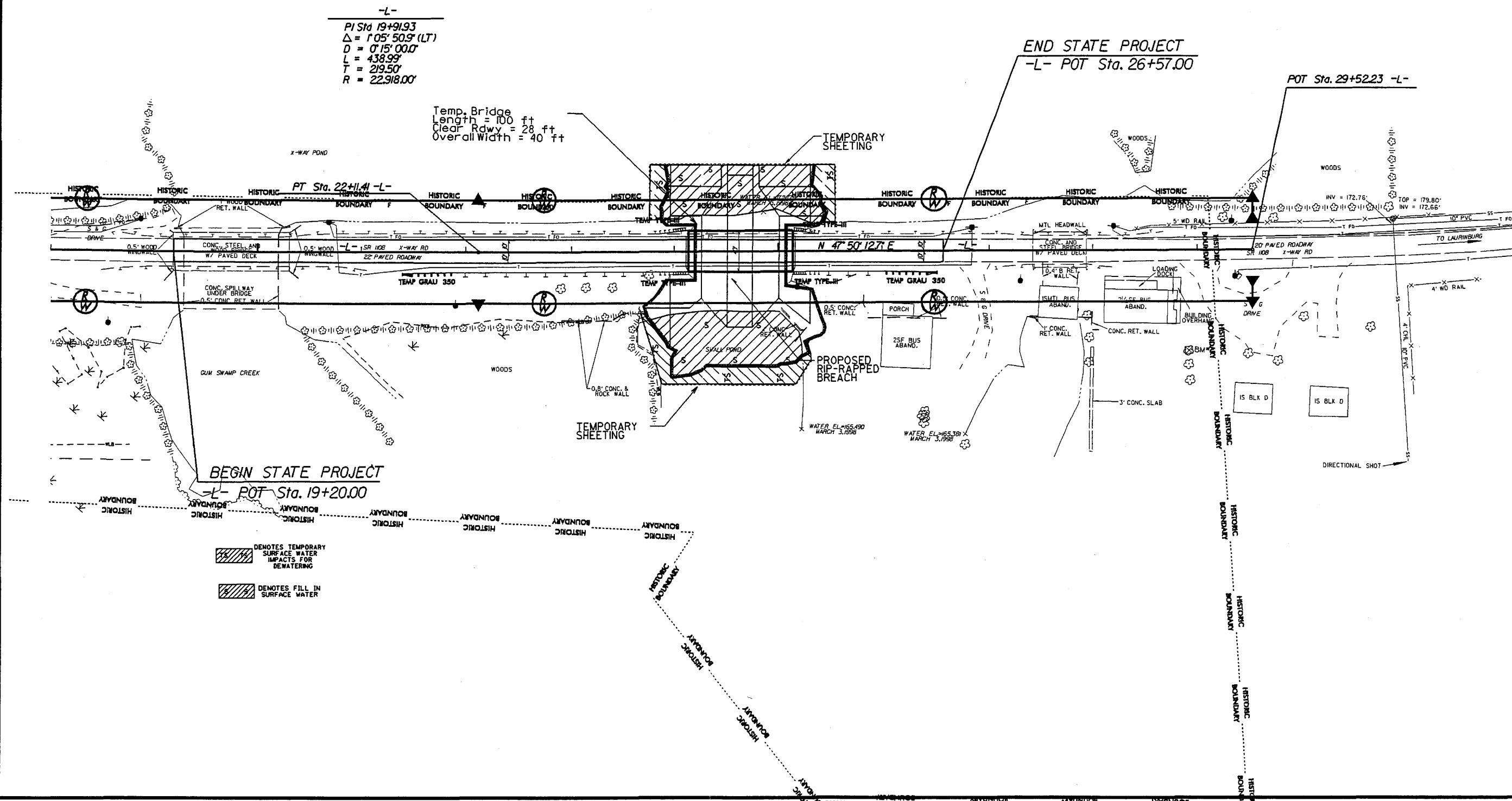


B-3373

Bridge 62 over Gum Swamp Ck Spillway

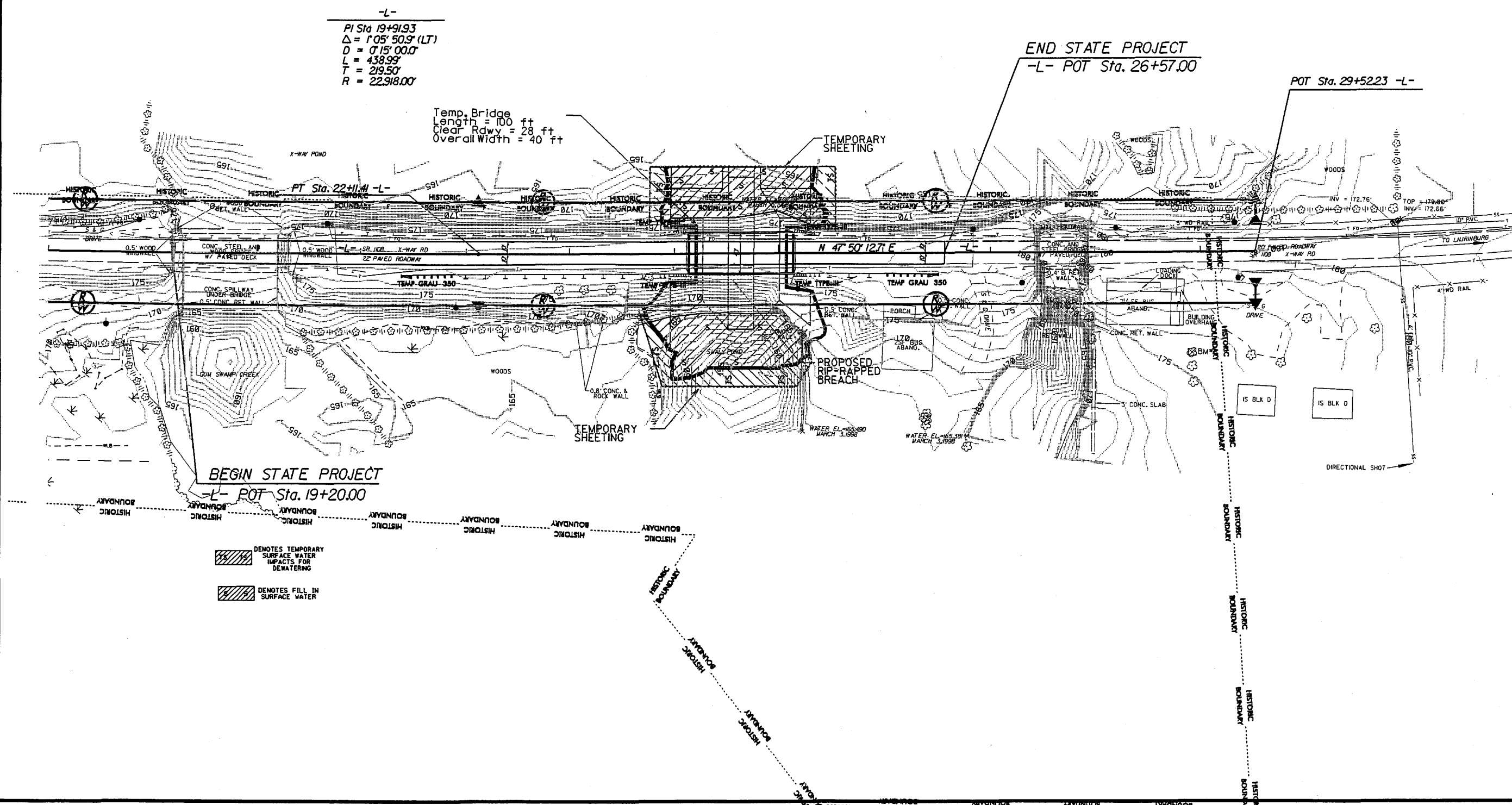
Figure 1

SITE 1A



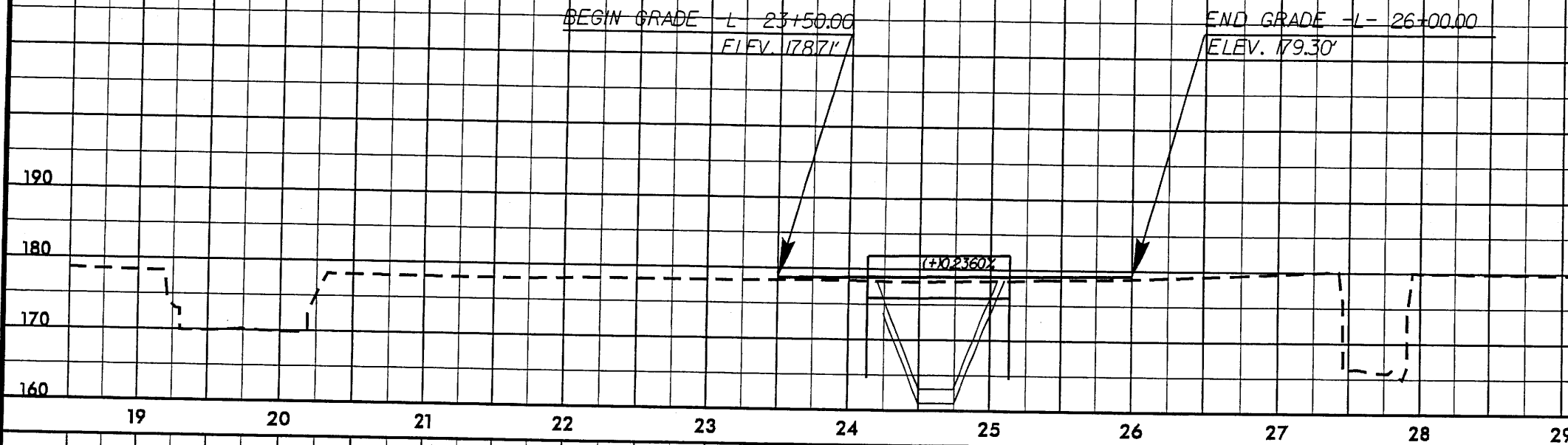
Sheet 5 of 12

SITE 1A



5/28/9

| | | | |
|--|--|------------------------|--|
| PROJECT REFERENCE NO. B-3373A | | SHEET NO. 5 | |
| ROADWAY DESIGN ENGINEER | | HYDRAULICS ENGINEER | |
| INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION | | | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | | | |
| SITE 1A | | Sheet 6 of 12 | |



8/23/95

SITE 1A

24 inch Riprapped
Paving in Breech

24+00.00

23+50.00

23+00.00

22+50.00

22+00.00

8/23/99
12-OCT-2006 11:01
C:\Users\user\Documents\prelim\prelim\B-3373\hyd\B-3373-hyd\B-3373-hyd.dgn
B-3373-hyd.dgn

Sheet 8 of 12

0 5 10

PROJ. REFERENCE NO.
B-3373

SHEET NO.
4

SITE 1A

26+00.00

25+50.00

25+00.00

24+50.00

TOP OF TEMP. COFFERDAM
TO BE DETERMINED BY CONTRACTOR

TOP OF TEMP.
COFFERDAM TO EL. 168.0

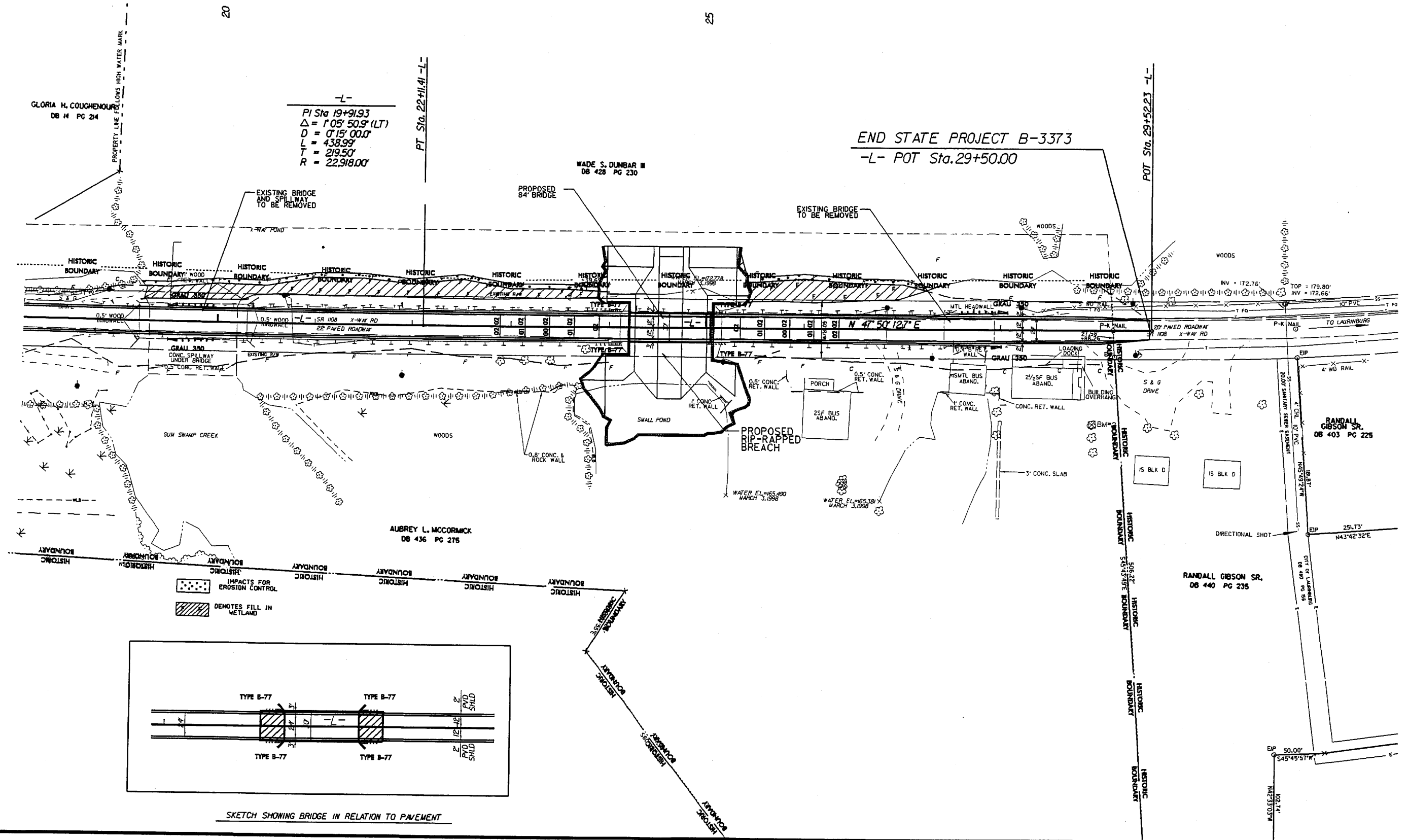
24" TO 36" LAYER OF
RIP RAP

8" TO 12" LAYER
BALLAST STONE

9" TO 12" LAYER
NO. 57 STONE

EXISTING BOTTOM OF BASIN APPROX. E. 158
IF BASIN IS LOWER EXTEND THE ROCK
RIPRAP TO THE BOTTOM OF THE BASIN.

NOTE: END RESURFACING -L- STA. 29+00.00
TIE PROPOSED RE-SURFACING TO EXISTING
FROM -L- STA. 29+00.00 TO -L- STA. 29+50.00



SKETCH SHOWING BRIDGE IN RELATION TO PAVEMENT

12-OCT-2006 14:45
r:\hydraulics\codd\prelim_permit\b3373-hyd-pr
belam_01\HY221521\wet_impacts-1bps-h5.dgn

SITE IB

NOTE: END RESURFACING -L- STA. 29+00.00
TIE PROPOSED RE-SURFACING TO EXISTING
FROM -L- STA. 29+00.00 TO -L- STA. 29+50.00

20

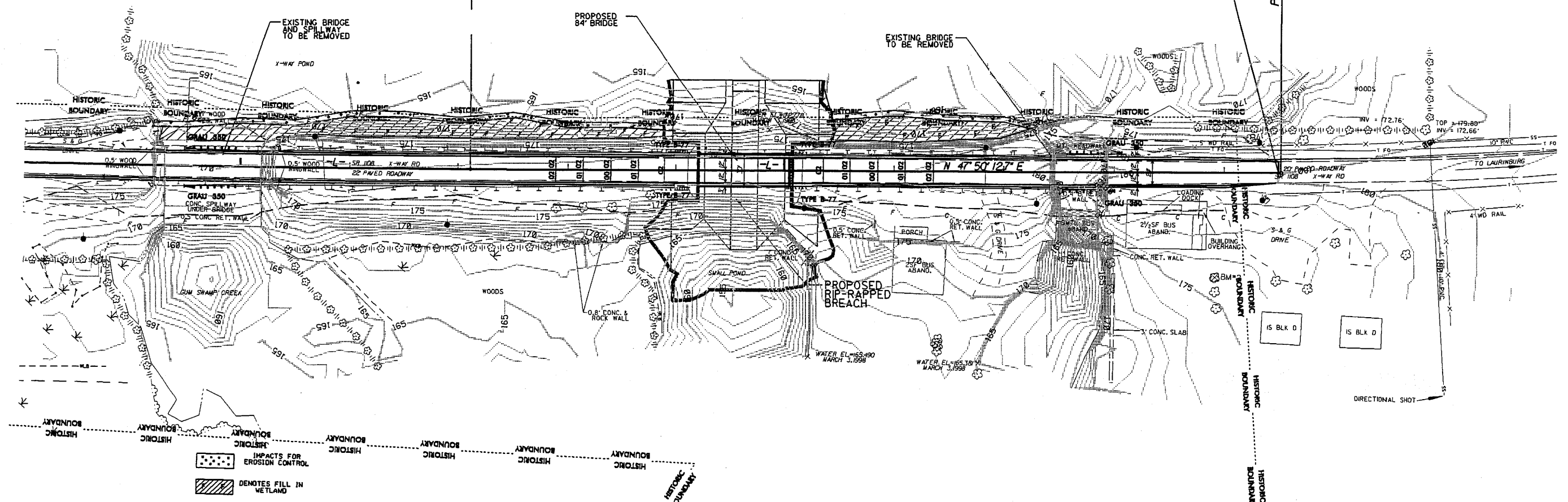
25

-L-
PI Sta 19+91.93
 $\Delta = 1'05''50.9''$ (LT)
D = 0'15'00.0"
L = 438.99'
T = 219.50'
R = 22,918.00'

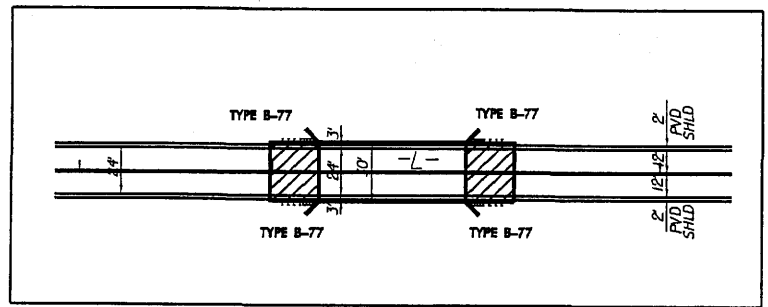
PT Sta. 22+11.41 -L-

END STATE PROJECT B-3373
-L- POT Sta. 29+50.00

POT Sta. 29+52.23 -L-



IMPACTS FOR EROSION CONTROL
DENOTES FILL IN WETLAND



SKETCH SHOWING BRIDGE IN RELATION TO PAVEMENT

REVISIONS

8/17/99
13-OCT-2006 10:17
C:\Users\jg\Documents\prelim\perm\3373\hyd-pr\wet\impacts\lps\5.dgn

5/28/99

BM#1 LOCATED: N 1840416.843 E 361293.376
DESCRIPTION: RAILROAD SPIKE SET IN THE BASE
OF A POWER POLE (#6AV64)
ELEVATION = 174640

-L-

NOTE: TIE PROPOSED RE-SURFACING TO EXISTING
FROM STA.15+50 TO STA.16+00

END BRIDGE STA.25+05

BEGIN BRIDGE STA.24+21

BEGIN GRADE -L- 16+00.00
ELEV.178.59

PI = 18+00.00
EI = 179.02'
VO = 180'
K = 525

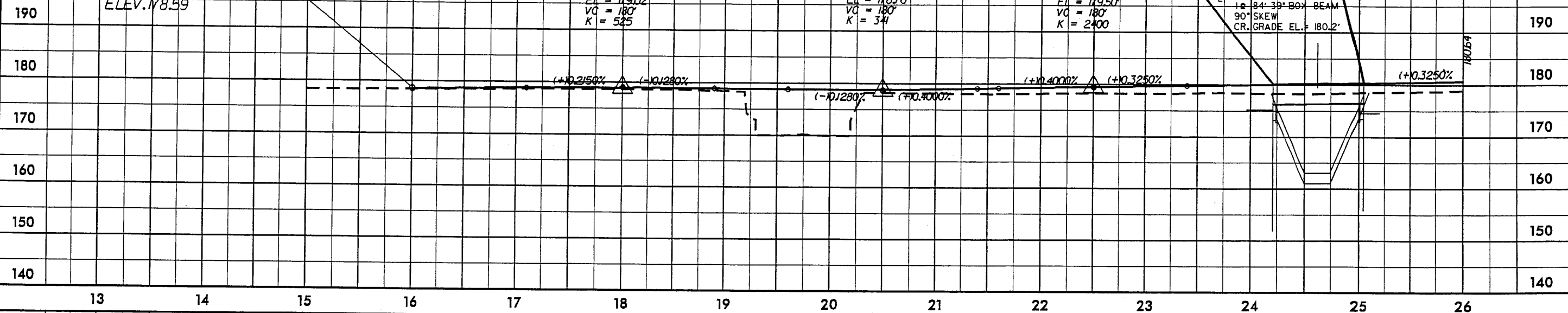
PI = 20+50.00
EI = 178.70'
VO = 180'
K = 344

PI = 23+50.00
EI = 179.50'
VO = 180'
K = 2400

STATION 24+68 -L-
12' 84" 39" BOX BEAM
90° SKEW
CR. GRADE EL. = 180.2'

SEE SHEETS 4 & 5 FOR PLAN OF -L- LINE

| | | | |
|--|--|------------------------|--|
| PROJECT REFERENCE NO. B-3373 | | SHEET NO. 6 | |
| ROADWAY DESIGN ENGINEER | | HYDRAULICS ENGINEER | |
| INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION | | | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | | | |
| SITE 1B | | Sheet 11 of 12 | |

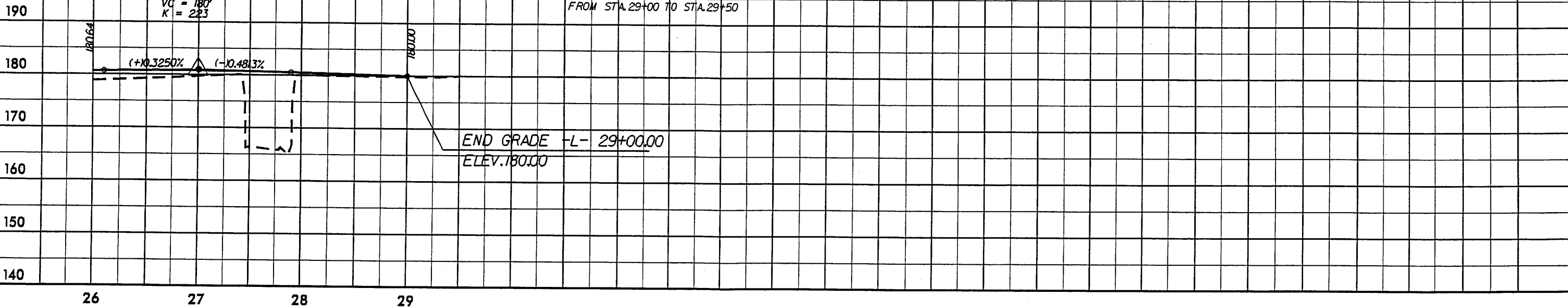


-L-

NOTE: TIE PROPOSED RE-SURFACING TO EXISTING
FROM STA.29+00 TO STA.29+50

PI = 27+00.00
EI = 180.96'
VO = 180'
K = 223

END GRADE -L- 29+00.00
ELEV.180.00



12-OCT-2006 13:44
C:\Hydro\ou\p\3373\p\prelim\p\3373_rdu.pfl.dgn

8/23/99

Phase 1B

25+50.00

25+00.00

24+50.00

24+00.00

23+50.00

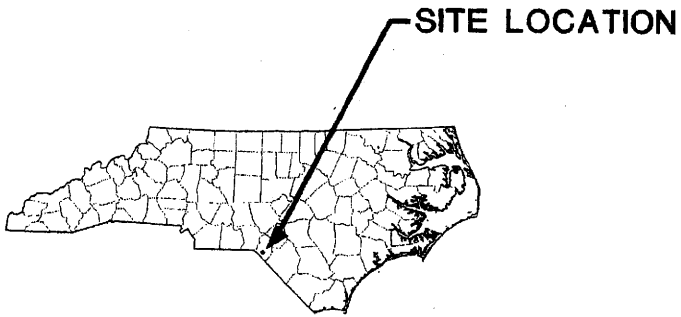
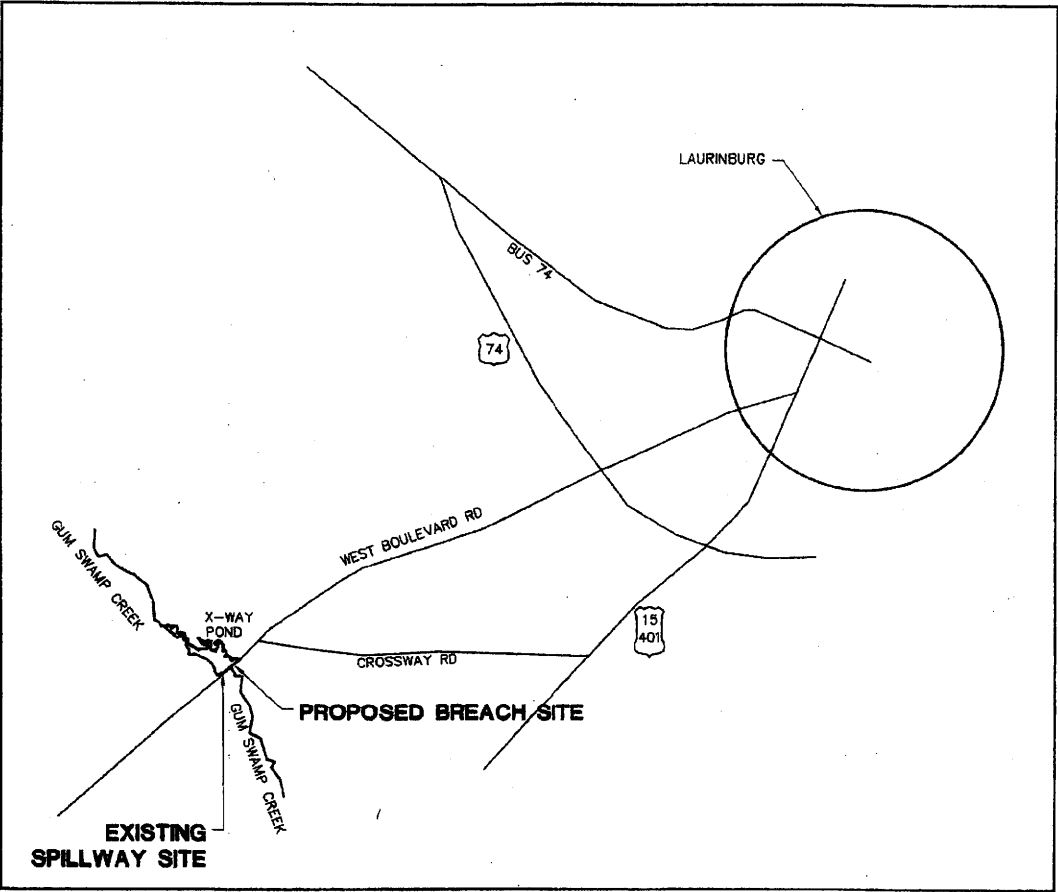
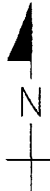
24 inch Riprapped
Piling for Breach

24 inch Riprapped
Piling for Breach

X-WAY POND DAM BREACH INSTALLATION SCOTLAND COUNTY, NORTH CAROLINA

PREPARED FOR
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
BY
SCHNABEL ENGINEERING

RECEIVED
AUG 07 2006
DIVISION OF HIGHWAYS
HYDRAULICS UNIT



SITE LOCATION MAP

PROJECT DESCRIPTION

THIS PROJECT IS FOR THE INSTALLATION OF A PERMANENT BREACH IN THE X-WAY POND DAM IN SCOTLAND COUNTY, NORTH CAROLINA. THE WORK INCLUDES THE INSTALLATION OF TEMPORARY STEEL SHEETPIILING (OR OTHER TYPE) COFFERDAM UPSTREAM AND DOWNSTREAM OF THE PLANNED BREACH AREA, INSTALLATION OF A PERMANENT STEEL SHEETPIILING WEIR AT THE UPSTREAM END OF THE BREACH CHANNEL, EXCAVATION OF A SECTION OF THE EARTHFILL DAM, AND INSTALLATION OF LAYERS OF NCDOT #78 STONE, BALLAST STONE AND CLASS I ROCK RIPRAP. THE COMPLETED WORK WILL INCLUDE A 24-FOOT BOTTOM WIDTH CHANNEL AND THE UPSTREAM 10 FEET OF THE CHANNEL ROCK RIPRAP LINING WILL BE GROUTED.

INDEX OF DRAWINGS

| | |
|----------|--|
| XW-201 | COVER SHEET |
| XW-202 | (SHT. 1 OF 2) SITE MAP |
| XW-202 | (SHT. 2 OF 2) PLAN VIEW OF BREACH |
| XW-203 | (SHT. 1 OF 4) CROSS SECTION OF BREACH AND CENTERLINE PROFILE OF BREACH CHANNEL |
| XW-203 | (SHT. 2 OF 4) SECTIONS B AND D |
| XW-203 | (SHT. 3 OF 4) SECTIONS E AND F |
| XW-203 | (SHT. 4 OF 4) SECTIONS G, H, AND J |
| XW-204 | EXCAVATION PLAN |
| △ XW-205 | TEMPORARY STOCKPILE AND EROSION CONTROL DETAILS |

SITE VICINITY MAP

1" = APPROXIMATELY 3000'

| | | | | | |
|--|--|--|--|--|--|
| This drawing to be considered "NOT FOR CONSTRUCTION" unless it bears | | | | | |
|--|--|--|--|--|--|

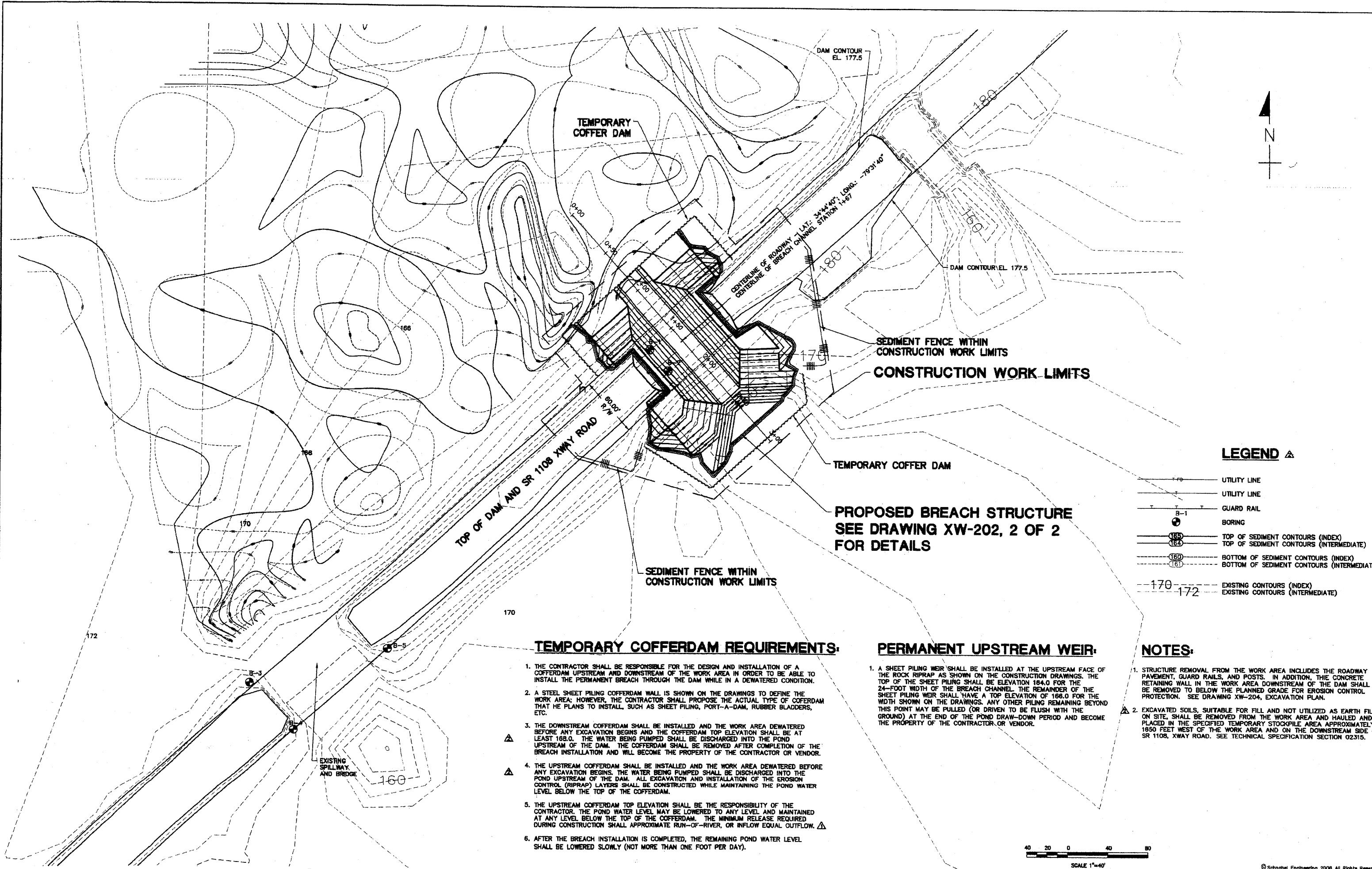


DESIGNED BY: DONALD L. BASINGER, P.E.
DRAWN BY: CCH/PR
CHECKED BY: DLS/TM



X-WAY POND BREACH DESIGN

COVER SHEET



TEMPORARY COFFERDAM REQUIREMENTS:

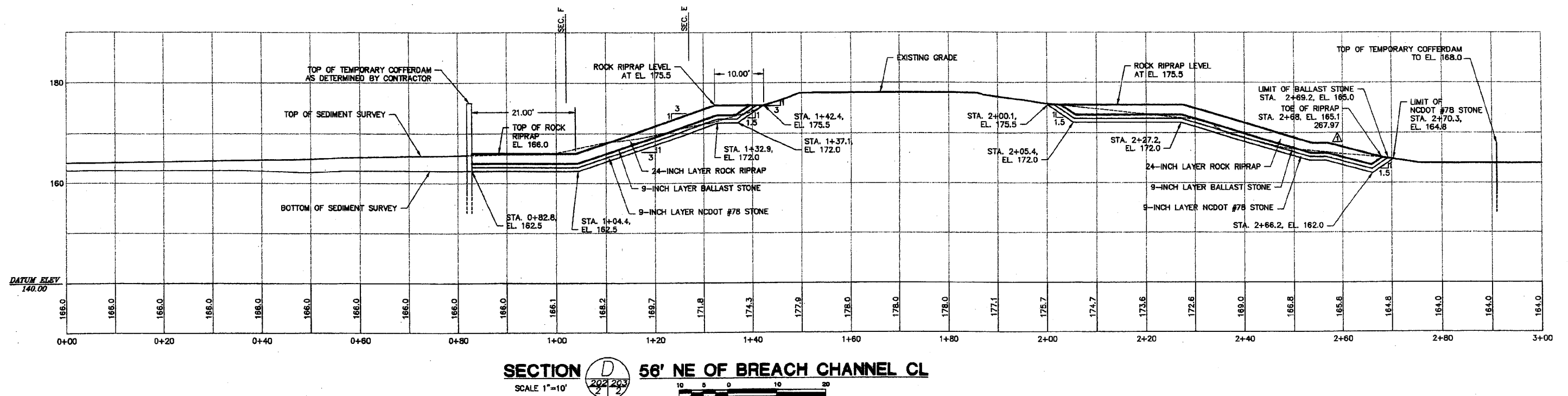
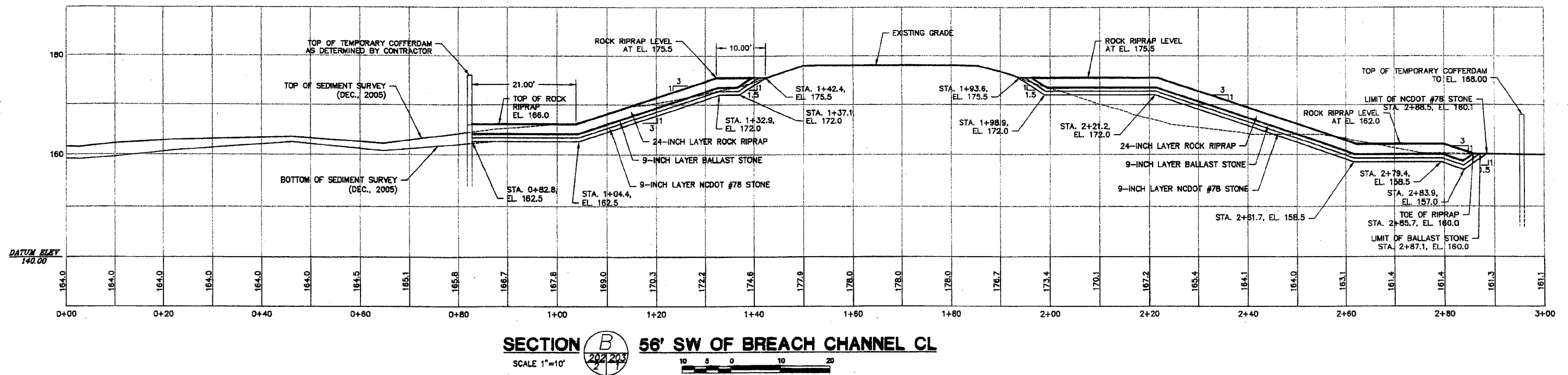
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF A COFFERDAM UPSTREAM AND DOWNSTREAM OF THE WORK AREA IN ORDER TO BE ABLE TO INSTALL THE PERMANENT BREACH THROUGH THE DAM WHILE IN A DEWATERED CONDITION.
2. A STEEL SHEET PILING COFFERDAM WALL IS SHOWN ON THE DRAWINGS TO DEFINE THE WORK AREA; HOWEVER, THE CONTRACTOR SHALL PROPOSE THE ACTUAL TYPE OF COFFERDAM THAT HE PLANS TO INSTALL, SUCH AS SHEET PILING, PORT-A-DAM, RUBBER BLADDERS, ETC.
3. THE DOWNSTREAM COFFERDAM SHALL BE INSTALLED AND THE WORK AREA DEWATERED BEFORE ANY EXCAVATION BEGINS AND THE COFFERDAM TOP ELEVATION SHALL BE AT LEAST 168.0. THE WATER BEING PUMPED SHALL BE DISCHARGED INTO THE POND UPSTREAM OF THE DAM. THE COFFERDAM SHALL BE REMOVED AFTER COMPLETION OF THE BREACH INSTALLATION AND WILL BECOME THE PROPERTY OF THE CONTRACTOR OR VENDOR.
4. THE UPSTREAM COFFERDAM SHALL BE INSTALLED AND THE WORK AREA DEWATERED BEFORE ANY EXCAVATION BEGINS. THE WATER BEING PUMPED SHALL BE DISCHARGED INTO THE POND UPSTREAM OF THE DAM. ALL EXCAVATION AND INSTALLATION OF THE EROSION CONTROL (RIPRAP) LAYERS SHALL BE CONSTRUCTED WHILE MAINTAINING THE POND WATER LEVEL BELOW THE TOP OF THE COFFERDAM.
5. THE UPSTREAM COFFERDAM TOP ELEVATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE POND WATER LEVEL MAY BE LOWERED TO ANY LEVEL AND MAINTAINED AT ANY LEVEL BELOW THE TOP OF THE COFFERDAM. THE MINIMUM RELEASE REQUIRED DURING CONSTRUCTION SHALL APPROXIMATE RUN-OF-RIVER, OR INFLOW EQUAL OUTFLOW.
6. AFTER THE BREACH INSTALLATION IS COMPLETED, THE REMAINING POND WATER LEVEL SHALL BE LOWERED SLOWLY (NOT MORE THAN ONE FOOT PER DAY).

PERMANENT UPSTREAM WEIR:

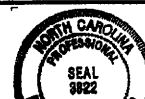
1. A SHEET PILING WEIR SHALL BE INSTALLED AT THE UPSTREAM FACE OF THE ROCK RIPRAP AS SHOWN ON THE CONSTRUCTION DRAWINGS. THE TOP OF THE SHEET PILING SHALL BE ELEVATION 164.0 FOR THE 24-FOOT WIDTH OF THE BREACH CHANNEL. THE REMAINDER OF THE SHEET PILING WEIR SHALL HAVE A TOP ELEVATION OF 166.0 FOR THE WIDTH SHOWN ON THE DRAWINGS. ANY OTHER PILING REMAINING BEYOND THIS POINT MAY BE PULLED (OR DRIVEN TO BE FLUSH WITH THE GROUND) AT THE END OF THE POND DRAW-DOWN PERIOD AND BECOME THE PROPERTY OF THE CONTRACTOR OR VENDOR.

NOTES:

1. STRUCTURE REMOVAL FROM THE WORK AREA INCLUDES THE ROADWAY PAVEMENT, GUARD RAILS, AND POSTS. IN ADDITION, THE CONCRETE RETAINING WALL IN THE WORK AREA DOWNSTREAM OF THE DAM SHALL BE REMOVED TO BELOW THE PLANNED GRADE FOR EROSION CONTROL PROTECTION. SEE DRAWING XW-204, EXCAVATION PLAN.
2. EXCAVATED SOILS, SUITABLE FOR FILL AND NOT UTILIZED AS EARTH FILL ON SITE, SHALL BE REMOVED FROM THE WORK AREA AND HAULED AND PLACED IN THE SPECIFIED TEMPORARY STOCKPILE AREA APPROXIMATELY 1850 FEET WEST OF THE WORK AREA AND ON THE DOWNSTREAM SIDE OF SR 1108, XWAY ROAD. SEE TECHNICAL SPECIFICATION SECTION 02.315.



This drawing to be considered "NOT FOR CONSTRUCTION" unless it bears the seal AND

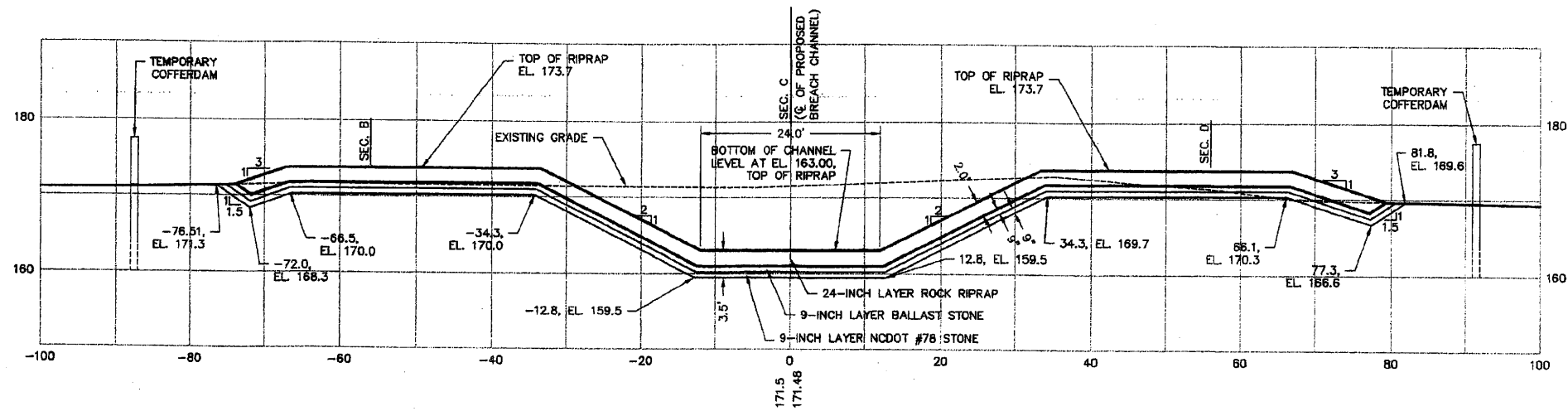


DESIGNED BY: TS/DLS
DRAWN BY: CMH/PK
CHECKED BY: DLS/TM
DONALD L. BASINGER, P.E.
10/10/2008



X-WAY POND BREACH DESIGN
SCOTLAND COUNTY, NORTH CAROLINA

BREACH CHANNEL STATION 1+27

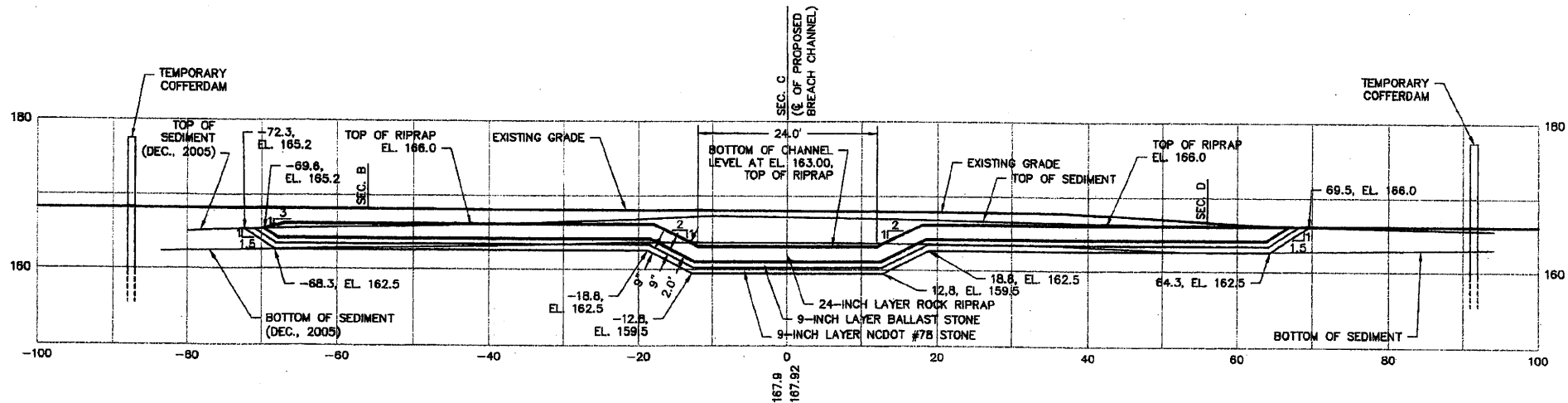


SECTION E (LOOKING UPSTREAM)

SCALE 1"=10'



BREACH CHANNEL STATION 1+02



SECTION F (LOOKING UPSTREAM)

SCALE 1"=10'



This drawing to be considered "NOT FOR CONSTRUCTION" unless it bears the seal and

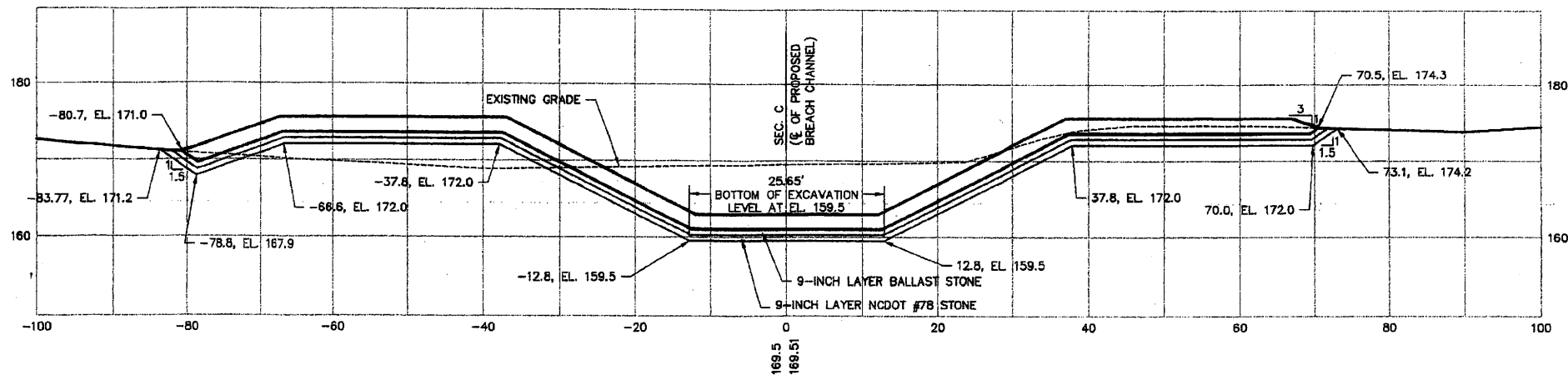


DESIGNED BY: TOL/LS
 DRAWN BY: GSH/PA
 CHECKED BY: DLS/PA
 DONALD L. BASINGER, P.E.

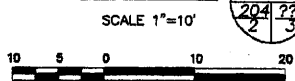


X-WAY POND BREACH DESIGN
 SCOTLAND COUNTY, NORTH CAROLINA

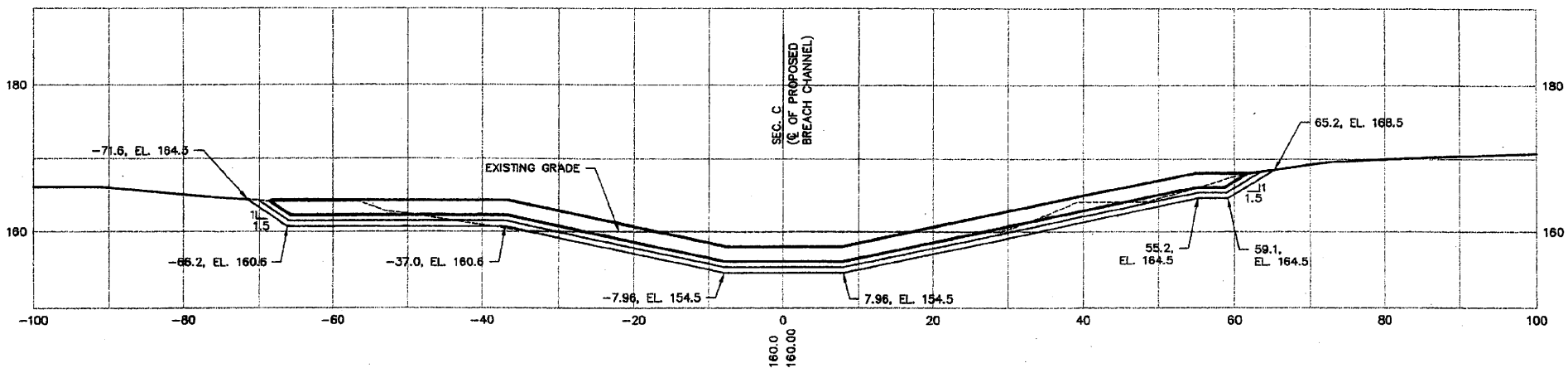
BREACH CHANNEL STATION 2+11.50



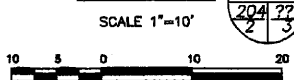
SECTION G (LOOKING UPSTREAM)



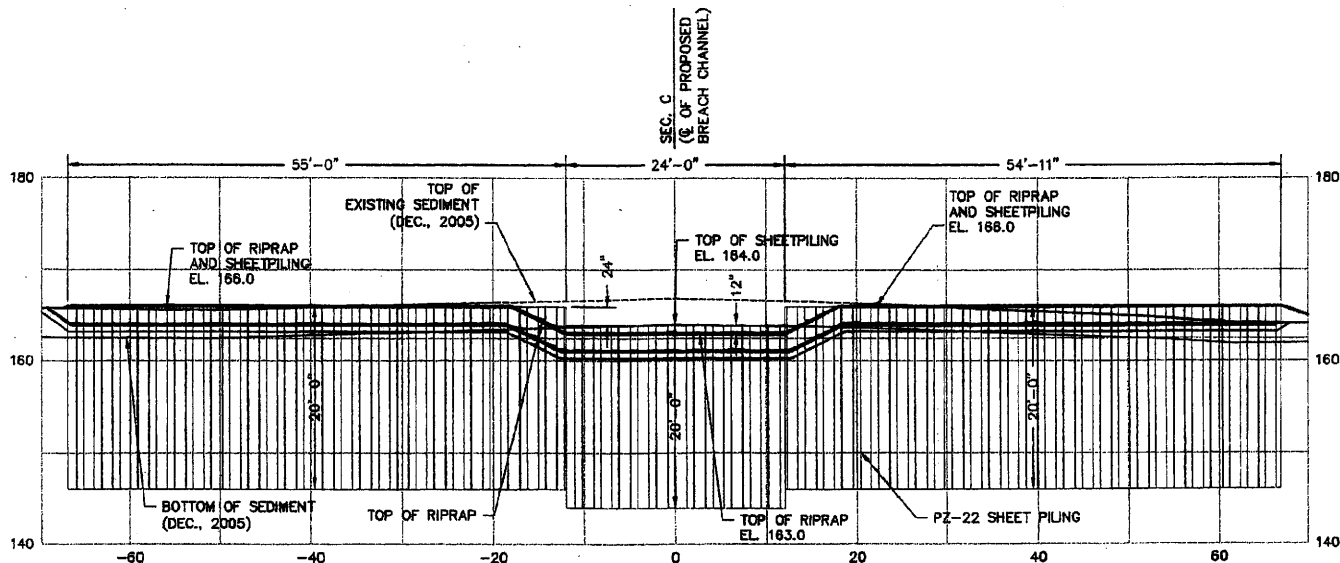
BREACH CHANNEL STATION 2+55.8



SECTION H (LOOKING UPSTREAM)

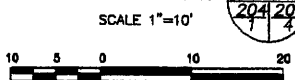


BREACH CHANNEL STATION 0+83.8



NOTE: THE SHEET PILING WEIR SHALL BE PZ-22, 20 FEET IN LENGTH, EXCEPT THAT THE SHEET PILING WEIR MAY BE THE MODIFIED COFFER DAM IF THE CONTRACTOR USES STEEL SHEET PILING FOR THE TEMPORARY COFFER DAM.

SECTION J ALONG SHEET PILING WEIR (LOOKING UPSTREAM)



| | | | | | |
|--|--|--|--|--|--|
| This drawing to be considered "NOT FOR CONSTRUCTION" unless it bears | | | | | |
|--|--|--|--|--|--|



| | | |
|--------------------------|-----------|-------------|
| DESIGNED BY: | DRAWN BY: | CHECKED BY: |
| DONALD L. BASINGER, P.E. | | |



X-WAY POND BREACH DESIGN
SCOTLAND COUNTY, NORTH CAROLINA

12/1/08 (10:07 AM) C:\Users\j\Documents\12-08 - Excavation Plan 2-14-08

LEGEND

- 165 TOP OF SEDIMENT CONTOURS (INDEX)
- 164 TOP OF SEDIMENT CONTOURS (INTERMEDIATE)
- 160 BOTTOM OF SEDIMENT CONTOURS (INDEX)
- 161 BOTTOM OF SEDIMENT CONTOURS (INTERMEDIATE)

- 170-172 EXISTING CONTOURS (INDEX)
- 170-172 EXISTING CONTOURS (INTERMEDIATE)

This drawing to be considered "NOT FOR CONSTRUCTION" unless it bears the seal of a Professional Engineer.

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |



DESIGNED BY: TD/DLB
DRAWN BY: CDH/PK
CHECKED BY: DLB/TM
DONALD L. BASINGER, P.E.

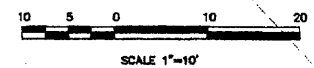


X-WAY POND BREACH DESIGN
SOUTH AND COUNTY, NORTH CAROLINA

XW-204 1 OF 1
EXCAVATION PLAN

NOTE

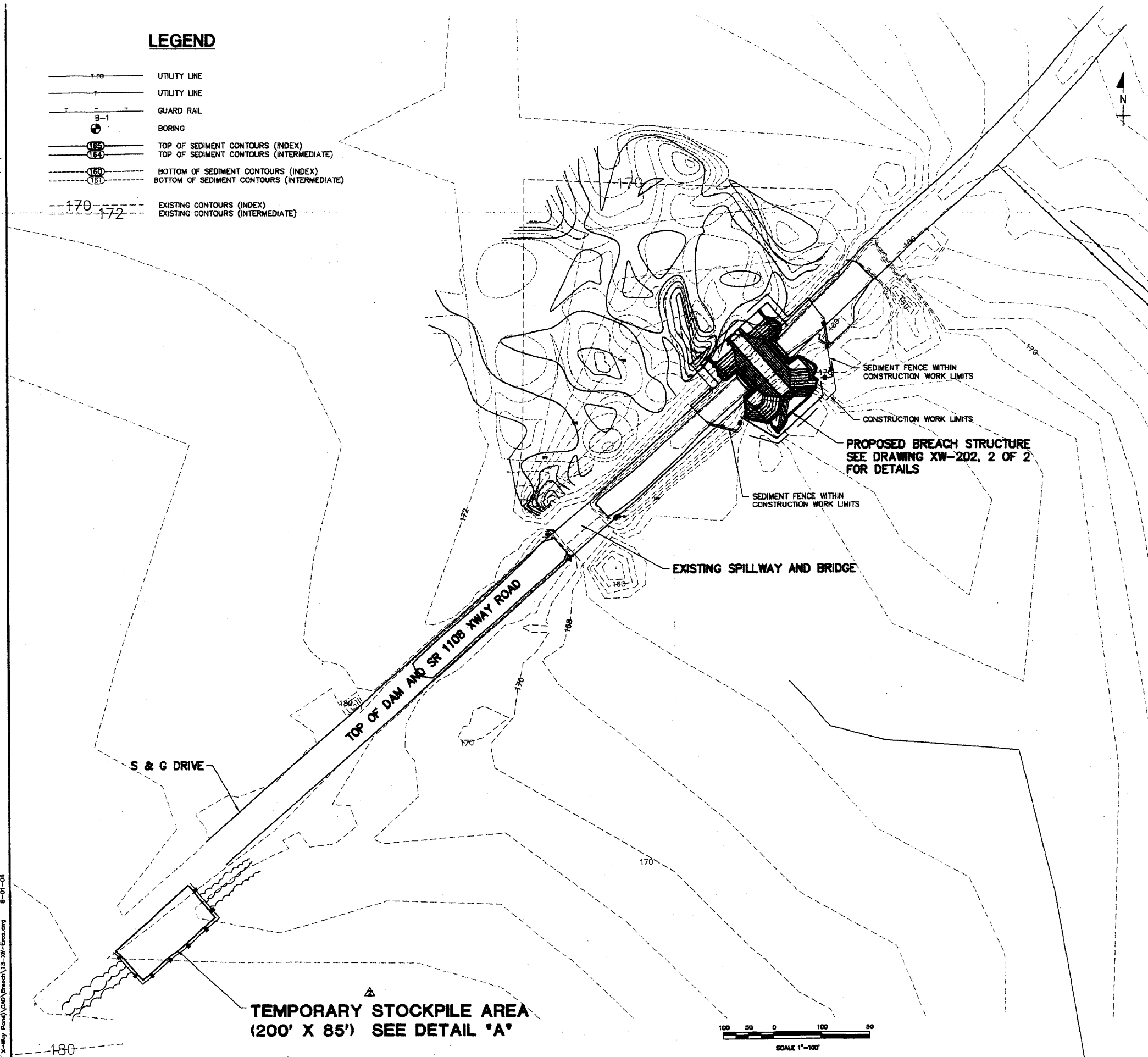
- REFER TO SECTIONS A - H ON DRAWING NO. XW-203 (SHEETS 1 - 4) FOR EXCAVATION ELEVATIONS.



© Schnabel Engineering 2008 All Rights Reserved

LEGEND

| | |
|-----------|--|
| —T-FG— | UTILITY LINE |
| —T— | UTILITY LINE |
| —B— | GUARD RAIL |
| ⊙ | BORING |
| —165— | TOP OF SEDIMENT CONTOURS (INDEX) |
| —164— | TOP OF SEDIMENT CONTOURS (INTERMEDIATE) |
| —160— | BOTTOM OF SEDIMENT CONTOURS (INDEX) |
| —161— | BOTTOM OF SEDIMENT CONTOURS (INTERMEDIATE) |
| ---170--- | EXISTING CONTOURS (INDEX) |
| ---172--- | EXISTING CONTOURS (INTERMEDIATE) |



SEDIMENT FENCE CONSTRUCTION SPECIFICATIONS

MATERIALS

1. USE A SYNTHETIC FILTER FABRIC OR A PERVIOUS SHEET OF POLYPROPYLENE, NYLON, POLYESTER, OR POLYETHYLENE YARN, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS SHOWN IN THE TABLE BELOW.

| PHYSICAL PROPERTY | REQUIREMENTS |
|-------------------------------|-----------------------------------|
| FILTERING EFFICIENCY | 85% (MIN) |
| TENSILE STRENGTH AT 20% (MAX) | STAN. STRENGTH-30 LB/LIN IN (MIN) |
| ELONGATION | EX. STRENGTH-50% (MIN) |
| SLURRY FLOW RATE | 0.3 GAL/SQ FT/MIN (MIN) |

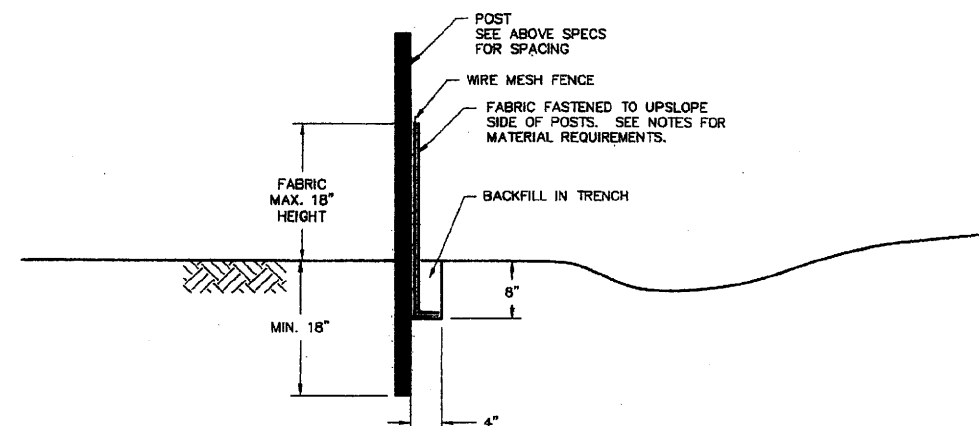
2. POSTS FOR SEDIMENT FENCES SHALL BE 4 INCH DIAMETER PINE, 2 INCH DIAMETER OAK, OR 1.33 LB/LINEAR FT STEEL WITH A MINIMUM LENGTH OF 4 FT. POSTS SHALL HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.
3. FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MINIMUM 14 GAUGE AND A MAXIMUM MESH SPACING OF 6 INCHES. EXTRA STRENGTH FILTER FABRIC DOES NOT REQUIRE THE USE OF WIRE FENCE.

CONSTRUCTION

1. CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.
2. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 18 INCHES ABOVE THE GROUND SURFACE.
3. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH OVERLAP TO THE NEXT POST.
4. SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG, OR TIE WIRES. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH.
5. SPACE POSTS A MAXIMUM OF 8 FT APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND TO A MINIMUM OF 18 INCHES.
6. EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
7. BACKFILL THE TRENCH WITH COMPACTED SOIL OR GRAVEL PLACED OVER THE FILTER FABRIC.

SEDIMENT FENCE MAINTENANCE

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE.
4. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REFER TO CONSTRUCTION SPECIFICATIONS SECTION 01565, POLLUTION CONTROL FOR EROSION CONTROL DEVICE MAINTENANCE.



SILT FENCE DETAIL

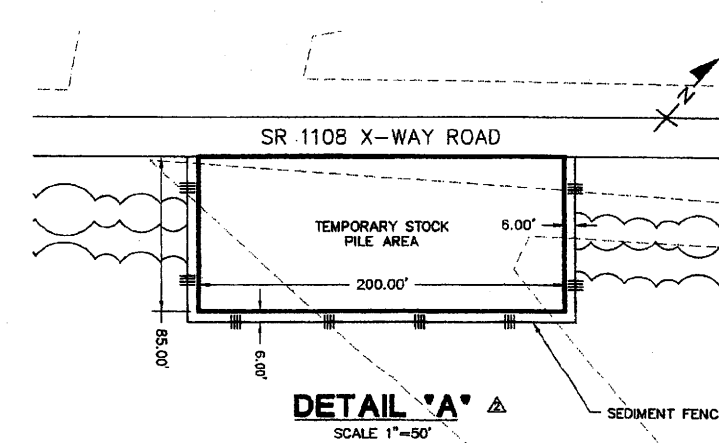
SCALE: 1" = 1'

TEMPORARY SEEDING

TEMPORARY SEEDING WILL BE PLACED ON ANY CLEARED, VEGETATED, OR SPARSELY, VEGETATED SOIL SURFACE WHERE VEGETATIVE COVER IS NEEDED FOR LESS THAN 1 YEAR, INCLUDING THE TEMPORARY STOCKPILE AND STOCKPILES. SEE TECHNICAL SPECIFICATION SECTION 02936.

PERMANENT SEEDING

ALL DISTURBED AREAS WILL BE SEEDED WITH COMMON BERMUDA GRASS DURING APRIL - JULY. SEE TECHNICAL SPECIFICATION 02936.



© Schnabel Engineering 2008 All Rights Reserved

| | |
|---|--|
| This drawing to be considered "NOT FOR CONSTRUCTION" unless it bears the seal AND | |
| ADDITION OF TEMP STOCKPILE AREA AND | |



| | | |
|--------------------------|---------------------|-----------------------|
| DESIGNED BY: TO/DLS | DRAWN BY: CDH/PK | CHECKED BY: DLS/TM |
| DONALD L. BASINGER, P.E. | | |



X-WAY POND BREACH DESIGN
SCOTLAND COUNTY, NORTH CAROLINA

XW-205 1 OF 1
TEMPORARY STOCKPILE LOCATION AND
EROSION CONTROL DETAIL