



ROY COOPER
Governor

MICHAEL L. HOLDER
Acting Secretary

January 12, 2017

MEMORANDUM TO: Mr. Mike Mills, PE
Division 7 Engineer

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

SUBJECT: Guilford County; Greensboro Eastern Loop from US 70
Relocation to SR 2303 (Lawndale Drive);
WBS No. 38421.1.1; **TIP U-2525B & C.**

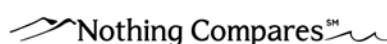
A handwritten signature in blue ink, likely belonging to Philip S. Harris, III, P.E.

Attached are modifications to the US Army Corps of Engineers Section 404 Individual Permit, the NC Division of Water Resources Section 401 Water Quality Certification, and the Jordan Lake Buffer Rules. Except as revised here, the permit conditions of the original U-2525 permits and subsequent modifications remain valid.

A copy of this permit modification package will be posted on the NCDOT website at: <https://connect.ncdot.gov/resources/Environmental>, under *Quick Links > Issued Permits*

cc: w/o attachment (see website for attachments)

Mr. Randy Garris, P.E. State Contract Officer
Mr. Jerry Parker, Division Environmental Officer
Dr. Majed Al-Ghandour, P. E., Program Dev. and TIP
Mr. Clarence Coleman, FHWA
Ms. Brenda Moore, P.E., Roadway Design
Mr. Matt Lauffer, P.E., Hydraulics
Mr. Tom Koch, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. Barry Whitaker, Utilities Unit
Mr. Ron Hancock, P.E., State Roadway Construction Engineer
Mr. Kevin Bowen, P.E., State Bridge Construction Engineer
Mr. Jay McInnis, P.E., PDEA
Ms. Beth Harmon, NCDMS
Mr. Phillip Ayscue, Office of Inspector General



PROJECT COMMITMENTS

TIP Project No. U-2525B and U-2525C
Greensboro Eastern Loop from US 70 Relocation
to SR 2303 (Lawndale Drive)
Guilford County
WBS Element 34821.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Project Development and Environmental Analysis Unit/ Human Environment Section

Noise abatement measures will continue to be considered throughout the design phase of the project.

NOTES: Based on the noise wall survey results, the noise wall at the SR 2827 (Four Mile Loop Road) – Relocated US 70(Burlington Road) interchange will not be built. Landscape screening will be utilized instead of a noise wall. The landscape plans will be developed and planting will occur after the roadway construction is completed. Also, based on the noise analyses performed for the SR 2568 (Assembly Road) area at the US 29 interchange, the results showed that there are no anticipated noise impacts in accordance with NCDOT's Traffic Noise Abatement Policy. Noise abatement is not required for Quail Oaks subdivision.

The Kerenoff neighborhood service road redesign developed in 2011 was reviewed, and noise abatement is not required for Kerenoff subdivision.

The southeast quadrant of the US 29/Greensboro Loop interchange was reviewed since this interchange quadrant was not included in previous studies. A noise barrier was predicted to provide at least a 5 dB (A) noise reduction for three receptors, and as much as a 7 dB (A) noise level reduction for one front row receptor. However, the total area of the barrier per predicted benefited receptor was above the allowable square footage per benefit; therefore, a noise barrier in this location would not be reasonable and is not recommended for construction.

Sidewalks will be incorporated into the project. Further coordination is needed with the City of Greensboro regarding the specific sidewalk locations. A municipal agreement will be executed for Greensboro's participation.

NOTES: According to NCDOT's Pedestrian Policy guidelines, any pedestrian facilities that the City of Greensboro wishes to incorporate into the project plans must be sent in writing to NCDOT by the Project Final Field Inspection (FFI) date.

The City of Greensboro has verbally requested that sidewalks be incorporated into all proposed curb and gutter construction along –Y- lines. NCDOT will provide the City with cost estimates to initiate the municipal agreement process.

Response to NOTES: The municipal agreement is currently being finalized for signatures.

Hydraulics Unit

The final designs will be coordinated with appropriate state and local officials and the Federal Emergency Management Agency (FEMA) to assure compliance with FEMA, state, and local floodway and floodplain regulations.

NOTE: Standard Commitment.

The design of any necessary drainage structures at greenways will be coordinated with the Guilford County Parks and Recreation Department.

NOTE: There are no greenways located within the U-2525B project limits.

Bridges will be considered during the design phase at major waterway and floodplain crossings.

NOTE: Bridges span North Buffalo Creek and the bridge at SR 2825 (Camp Burton Road) was lengthened to span an unnamed tributary of North Buffalo Creek and wetlands.

Location & Survey Unit

Geodetic survey control monuments will be located during design and the U.S. Coastal and Geodetic Survey and North Carolina Geodetic Survey will be notified of their location.

NOTE: Standard commitment.

Roadside Environmental Unit, Hydraulics Unit, and Division 7

NCDOT's "Best Management Practices for Protection of Surface Waters" will be implemented, where applicable, including hazardous spill catch basins in water supply watershed critical areas where the roadway crosses a water supply.

NOTE: Standard commitment.

Geotechnical Unit and Division 7

Any underground storage tanks discovered during construction will be reported to the North Carolina Division of Environmental Management.

NOTE: Standard Commitment.

Project Development and Environmental Analysis Unit

Mitigation for unavoidable wetland loss will be provided through implementation of a wetland mitigation plan developed during the permitting phase of the project.

NOTE: Standard Commitment.

Recommendations to restore stream segments to resemble the destroyed habitat will be considered where practicable. Banks and beds of relocated channels will be stabilized with vegetation or other protective devices as practicable, including consideration of using logs to line banks.

NOTE: NCDOT plans to use on-site stream mitigation, including relocation, restoration, and enhancement to offset unavoidable impacts to existing streams caused by the Greensboro Eastern Loop construction.

Response to NOTE: The on-site mitigation commitment has been fulfilled. NCDOT has provided 2,055 LF of on-site stream mitigation at three sites through stream relocation and restoration. The remainder of the mitigation will be provided by the Ecosystem Enhancement Program (EEP).

Surveys for small whorled pogonia will be required for U-2525B due to the presence of potential, but limited, habitat. These surveys will be conducted within two to three years of the project Let date.

NOTE: Small whorled pogonia surveys will be conducted within the project area later this year (2012) in the appropriate season.

Response to NOTE: Surveys for small whorled pogonia were conducted by Atkins, Inc. biologists on June 13-15 and June 18-19, 2012 in areas of suitable habitat. No specimens were found. A review of the North Carolina Natural Heritage Program (NCNHP) database on November 13, 2013, indicated no occurrences of small whorled pogonia within one mile of the project study area. Therefore, the biological conclusion of 'No Effect' was determined for small whorled pogonia which will remain valid for five years.

A combined Screening ICE and ICE Land Use Scenario Assessment will be completed prior to obtaining permits for the project.

NOTE: The ICE and ICE Land Use Scenario Assessment report was completed on October 30, 2009.

NCDOT will mitigate for all of the wetland and stream impacts contained within Quadrant D of the US 29 interchange including areas not directly impacted by construction.

NOTE: The permit included this mitigation.

U-2525 B and C will be permitted together using a phased permit. Preliminary plans for U-2525 C will need to be submitted when permit drawings for U-2525 B are submitted.

NOTE: The permit included this commitment.

Project Development and Environmental Analysis Unit and Division 7
Historic Architecture Stipulations:

1. *Recordation:*
Prior to the initiation of construction, NCDOT will record the existing condition of the Schoolfield-Hatcher Farm and its surroundings in accordance with the attached Historic Structures and Landscape Recordation Plan.

NOTE: The Schoolfield-Hatcher Farm Historic Structures and Landscape Recordation Plan was completed in October 2010.

2. *Landscape Plan:*
In consultation with SHPO and the property owner, NCDOT will develop a landscape plan for the Schoolfield-Hatcher property. Installation of plantings will be limited to the non-wooded areas of the parcel north and east of the roadway. As the installed plantings mature, they are intended to form a natural buffer between the roadway and the farm's primary structures. NCDOT will replace in kind any landscape elements which die within two years of installation.

NOTE: The Schoolfield-Hatcher Farm landscape plan was developed and approved by the State Historic Preservation Office on January 21, 2014. See Appendix A for the landscape plan. A separate contract for landscaping will be developed by Division 7, and the landscaping will be installed after the roadway construction is completed. NCDOT will replace in kind any landscape elements planted as a buffer for the Schoolfield-Hatcher property which die within two years of installation.

3. *Shifted Roadway Alignment:*
The original middle alternative alignment (ALT-1) will be shifted away from the farm's primary structures as described in the shifted alternative (ALT-2).

NOTE: The alignment was shifted as described in the shifted alternative (ALT-2) to reduce impacts to the Schoolfield-Hatcher Farm.

4. *Access:*
The new transportation facility with control-of-access fencing will divide the farm into two discontinuous parcels. Access to the first parcel, containing the house and primary farm structures, will be retained via the current driveway. NCDOT will provide a cul-de-sac to allow access to the second parcel.

NOTE: The driveway and cul-de-sac are included in the U-2525B final design plans.

Project Development and Environmental Analysis Unit, Division 7 and Project Services Unit

Archaeological Commitments:

1. Archaeological Monitoring

*The NCDOT will monitor initial ground-disturbing activities within the property limits of Sites 31GF452** (Schoolfield-Hatcher Farm, U-2525B) and 31GF466 (Site in SE Quadrant of the proposed SR 2352 (North Elm Street) interchange, U-2525C) in accordance with the attached Archaeological Monitoring Plan.*

Archaeological Monitoring Plan (to be included in the construction contract proposal)

NCDOT (Archaeology Group) Contact Information: Matt Wilkerson, 919-707-6089.

- *The contractor will contact the NCDOT (Archaeology Group) when ground-disturbing activities are anticipated within the property limits of Site 31GF452** (Schoolfield-Hatcher Farm) and Site 31GF466 (i.e., SE quadrant of Elm Street Interchange).*
- *The contractor will provide 48-hours' notice to the NCDOT (Archaeology Group) prior to ground-disturbing activities within the property limits of Site 31GF452** (Schoolfield-Hatcher Farm) and Site 31GF466 (i.e., SE quadrant of Elm Street Interchange). The 48-hour period will begin upon acknowledgment by the NCDOT (Archaeology Group) that the contractor has contacted them.*
- *The NCDOT (Archaeology Group) will be on-site during ground-disturbing activities in order to monitor said activities within the property limits of Site 31GF452** (Schoolfield-Hatcher Farm) and Site 31GF466 (i.e., SE quadrant of Elm Street Interchange). Monitoring activities may include, but not be limited to: 1) cleaning and photographing areas exposed during construction, 2) mapping both plan and profile views of open trenches, and 3) collecting materials or artifacts exposed during construction. The NCDOT (Archaeology Group) will have the authority to halt all construction work within the property limits of Site 31GF452** (Schoolfield-Hatcher Farm) and Site 31GF466 (i.e., SE quadrant of Elm Street Interchange) in order to assess the need for further archaeological excavations.*
- *Should archaeological resource(s) deemed eligible for the National Register of Historic Places (NRHP) be discovered during the monitoring phase as determined by the NCDOT (Archaeology Group), then all work will be halted within the limits of the NRHP resource and the State Historic Preservation Office will be contacted. As per the Memorandum of Agreement (MOA), the SHPO will consult with the NCDOT (Archaeology Group), on-site if necessary, in order to develop appropriate protection/mitigation measures for the resource(s). Appropriate measures for the resource(s) may include preservation in place, photographing and mapping, and/or additional archaeological excavations.*
- *Both the SHPO and the NCDOT (Archaeology Group) 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 NCDOT (Archaeology Group) that the resource measures have been completed, construction activities may resume in the location containing the resource.*

2. *Archaeological Data Recovery*
Sites 31GF456 (Site near Summit Avenue, U-2525C) and 31GF466 (Site in SE Quadrant of the proposed SR 2352 (North Elm Street) interchange, U-2525C) are recommended as eligible for the National Register of Historic Places (NRHP). Both archaeological sites will be avoided by the Undertaking as currently designed; however, if design plans change prior to construction thereby causing an adverse impact to either of these sites, the NCDOT, in consultation with the SHPO and USACE will develop archaeological Data Recovery Plans (DRPs) in order to mitigate the adverse impact(s) to these sites. Given their proximity to the Undertaking, a visual barrier will be placed along the proposed ROW in order to avoid and prevent any disturbance(s) to these sites.

NOTE: Both sites are located within the U-2525C project limits and will be reviewed during future consultations for U-2525C.

3. *Cemetery Removal and Relocation*
*The May/Hudson Cemetery (Site 31GF445** in the NE quadrant of the proposed interchange at SR 2770 (Huffine Mill Road), U-2525 B) cannot be avoided and will be relocated in accordance with the provisions of NCGS Chapter 65.*
4. *Access-Denied Areas*
Of the five (5) areas not surveyed during the study due to denial of access, only the Louise Coble parcel (15.64 acres within the proposed SR 2770 (Huffine Mill Road) interchange, U-2525 B) is to be affected by the Undertaking and will require additional investigations once access has been granted or ROW has been acquired and prior to any construction activities.

NOTE: The Coble Parcel archaeological survey was completed in January 2014 and identified one archaeological site and two isolated finds with unknown prehistoric lithic components. None of the sites are recommended eligible for the NRHP, and no further archaeological investigation is recommended for this project as it is currently defined.

Project Development and Environmental Analysis Unit, Roadside Environmental Unit and Division 7

NCDOT will adhere to Design Standards for Sensitive Watersheds in the areas of the 5 unnamed tributaries (UTs) of South Buffalo Creek that drain into a section of the creek designated as Section 303(d) waters due to turbidity.

NOTE: Since South Buffalo Creek and its UTs are not listed on the 2012 303(d) Final List of Impaired Waters of North Carolina for turbidity or sedimentation, NCDOT will not need to adhere to Design Standards for Sensitive Watersheds as previously mentioned.

COMMITMENTS FROM PERMITTING

Division 7, Natural Environment Section, and Hydraulics Unit

This permit only authorizes work on Section B of TIP U-2525. Construction on Section C of TIP U-2525 shall not commence until final design has been completed for this section, the permittee has minimized impacts to waters and wetlands to the maximum extent practicable, any modifications to the plans, and a compensatory mitigation plan, have been approved by the US Army Corps of Engineers (the Corps). Preliminary plans for U-2525C were provided with the August 28, 2013 application (Sheets 1-89) however, these plans are not to be used for construction purposes.

When final design plans are completed for U-2525C, a modification to the 401 Water Quality Certification shall be submitted with two copies and fees to the NC Division of Water Quality. Final designs shall reflect all appropriate avoidance, minimization, and mitigation for impacts to wetlands, streams, and other surface waters, and buffers. No construction activities that impact any wetlands, streams, surface waters, or buffers located in U-2525C shall begin until after the permittee applies for, and receives a written modification of the 401 Water Quality Certification from the NC Division of Water Quality.

Natural Environment Section and Division 7

The Permittee shall fully implement the compensatory mitigation plan, entitled, Mitigation Plan Greensboro Eastern Loop, Guilford County North Carolina T.I.P Number U-2525B dated August 12, 2013 and revised March 17, 2014. The mitigation plan includes 14 plan sheets received on August 28, 2013 (OSM-1, OSM-1A, OSM-1B, OSM-2, OSM-2A, OSM-2B, OSM-2C, OSM-2D, OSM-2E, OSM-2F, OSM-3, OSM-4, OSM-5, OSM-6, OSM-7). These mitigation plans are for the unavoidable impacts to 2,055 linear feet of streams. Activities prescribed by this plan shall be initiated prior to, or concurrently with, commencement of any construction activities within jurisdictional areas authorized by this permit. The permittee shall relocate and restore 2,055 linear feet of streams in accordance with the plan with the following conditions:

- a) The permittee, NCDOT, is the party responsible for the implementation, performance and long term management of the compensatory mitigation project.
- b) Any changes or modifications to your mitigation plan shall be approved by the Corps.
- c) The permittee shall maintain the entire mitigation site in its natural condition, as altered by the work in the mitigation plan, in perpetuity. Prohibited activities within the mitigation site specifically include, but are not limited to: Filling; grading; excavating; earth movement of any kind; construction of roads, walkways, buildings, signs, or any other structure; any activity that may alter the drainage patterns on the property; the destruction, cutting, removal, mowing, or other alteration of vegetation on the property; disposal or storage of any garbage, trash, debris or other waste material; graze or water animals, or use for any agricultural or horticultural purpose;

or any other activity which would result in the property being adversely impacted or destroyed, except as specifically authorized by this permit.

d) All mitigation areas shall be monitored for a minimum of 5 years or until deemed successful by the Corps in accordance with the monitoring requirements included in the mitigation plan.

Compensatory mitigation for impacts to 8,083 linear feet of streams at a replacement ratio of 1:1 is required. Partial compensatory mitigation for impacts to jurisdictional streams shall be provided by onsite stream relocations of 2,055 linear feet of stream. The onsite stream relocation shall be constructed in accordance with the design submitted in the August 27, 2013 application. All on-site mitigation sites shall be protected in perpetuity by a conservation easement or through NCDOT fee simple acquisition and recorded in the NCDOT Natural Environment Section mitigation geodatabase. Please be reminded that as-builts for the completed streams shall be submitted to the North Carolina Division of Water Resources 401 Wetlands Unit with the as-builts for the rest of the project. If the parameters of this condition are not met, then the permittee shall supply additional stream mitigation for the 2,055 linear feet of impacts. All channel relocations shall be allowed to stabilize for an entire growing season. All stream relocations shall have a 50-foot wide native wooded buffer planted on both sides of the stream unless otherwise authorized by this Certification. A transitional phase incorporating rolled erosion control product (RECP) and appropriate temporary ground cover is allowable. The stream mitigation site shall be monitored annually for five years or until success criteria are satisfied. Monitoring protocols shall follow the Monitoring Level I outlined in the Stream Mitigation Guidelines, April 2003. Success of the mitigation site shall be determined by the NCDWR during an on-site visit at or near the end of the monitoring period.

Human Environment Section and Division 7

The Permittee shall fully implement the Archaeological Monitoring Plan, which was one of the environmental commitments agreed to by NCDOT, and is listed on Page 5 of 8 of this Greensheet.

Permit Modification:

As a result of the 401 and 404 permit modifications issued March 18, 2016, the following special conditions were added due to modifications made near Permit Site 37 on U-2525B:

401 Condition 1: Downstream bi-monthly monitoring reports as described in the [March 9, 2016] application shall be submitted to NCDWR for review as soon as is practicable or within 15 days following the monitoring event.

404 Condition x: Within three days of the conclusion of bank stabilization installation described herein, the temporary wetland impact area shown on permit drawing Sheet 38A2 must be restored by re-establishing the pre-impact grade and contour, ameliorating

areas of soil compaction by disking or similar means, and seeding with wetland seed mix comprised of native species.

404 Condition xx: NCDOT shall monitor the bank stabilization area described herein, as well as the stream bank within 200 feet up and downstream of the bank stabilization area, for further stream bank instability. Monitoring reports shall be submitted to the Corps beginning within two weeks of the conclusion of bank stabilization installation described herein, and continuing on a bi-monthly basis for a period of six months. These monitoring reports shall include geo-referenced color photographs of the bank stabilization area as well as the entire stream bank within 200 feet up and downstream of the bank stabilization area. In addition, the monitoring reports shall include narrative descriptions of the relative stability of the stream bank monitoring area and detailed descriptions of any stream bank erosion occurring within this area.

404 Condition xxx: In the event that stream bank erosion occurs within the stream bank monitoring area during the monitoring period, NCDOT shall provide a stream bank restoration or contingency plan for Corps review and approval.



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

December 19, 2016

Regulatory Division/1200A

Action ID No. SAW-2005-21386

Mr. Philip S. Harris III, P.E., C.P.M.
Natural Environment Section Head
North Carolina Department of Transportation
Division of Highways
1598 Mail Service Center
Raleigh, North Carolina 27699-1598



Dear Mr. Harris:

Reference the Department of the Army (DA) permit issued on April 15, 2014, to Ms. Deborah Barbour of the North Carolina Department of Transportation, for impacts associated with the project identified as U-2525BC. The project is a 9.7 mile, four-lane/six-lane divided facility on new location extending from the US 70 relocation to SR 2303 (Lawndale Drive) in Greensboro, Guilford County, North Carolina. Section B of this project begins at the US 70 relocation and terminates at US 29, and Section C begins at US 29 and ends at SR 2303 (Lawndale Drive). Coordinates (in decimal degrees) for the site are: 36.089772° North, -79.697302° West for the eastern terminus and 36.141773° North, -79.825120° West for the western terminus. The site contains portions of four (4) unnamed tributaries to South Buffalo Creek, twenty (20) unnamed tributaries to North Buffalo Creek, five (5) unnamed tributaries to an unnamed tributary at Camp Herman, fourteen (14) unnamed tributaries to Reedy Fork, a portion of Richland Creek, and ten (10) unnamed tributaries to Richland Creek, as well as 50 (50) adjacent wetland areas and five (5) open water ponds in the Cape Fear River Basin (8-Digit Cataloging Unit 03030002).

Impacts authorized by the permit as well as subsequent permit modifications dated June 18, 2014, October 31, 2014, December 4, 2014, March 12, 2015, July 24, 2015, March, 18, 2016, and August 11, 2016 include: 1) The permanent placement of fill material into 23,467 linear feet of jurisdictional stream channel, 9.95 acres of adjacent riparian wetlands, and 2.32 acres of jurisdictional open waters and, 2) the temporary placement of fill material into 785 linear feet of jurisdictional stream channel and 0.31 acre of adjacent riparian wetlands associated with construction access and the relocation of utility lines. Compensatory mitigation was implemented for the unavoidable impacts by payment into the North Carolina Ecosystem Enhancement Program, now known as the North Carolina Division of Mitigation Services (NCDMS), as well as permittee responsible mitigation referenced in the permit special conditions.

Also reference your "Request for Modification..." letter dated November 28, 2016, proposing the following, itemized by permit site:

- 1) Permit Site 1 - Authorization of a permanent discharge of dredged or fill material into 46 linear feet of stream channel and 0.08 acre of riparian non riverine wetlands, as well as the temporary discharge of fill material into 5 linear feet (0.01 acre) of stream channel, related to:
 - a. Extending an existing 60" concrete pipe into 41 linear feet of stream channel (permanent loss of waters), adding 5 linear feet of rip rap bank stabilization below the pipe, and requiring 5 linear feet of impacts for temporary construction access and dewatering, and;
 - b. Adding new roadway slopes needed to incorporate a lengthened collector/distributor lane requiring 0.03 acre of permanent wetland fill, 0.02 acre of excavation to relocate the existing roadside ditch, and 0.03 acre of mechanized clearing for installation of sediment and erosion control measures. A portion (0.02 acre) of the 0.03 acre of permanent wetland impacts is a result of the potential lateral wetland drainage from the new lateral base ditch;
 - c. Note that Permit Site 1 occurs outside of the original project area, and no impacts to Stream SBV or Wetland WBU2, conceptual or otherwise, were authorized via the April 15, 2014 DA Permit or seven subsequent modifications.
- 2) Permit Site 2 - Authorization of a permanent discharge of dredged or fill material into 362 linear feet of stream channel and 0.46 acre of riparian non riverine wetlands, related to constructing a ramp in the northwest quadrant of the US 29 interchange:
 - a. This modification requests a release of Permit Site 2 TIP U-2525C for construction per Special Condition 2 of the DA permit issued on April 15, 2014, as these impacts were already conceptualized and authorized;
 - b. This action involves impacting the remaining portion of wetland WE, including 0.43 acre of permanent wetland fill and 0.03 acre of excavation. Note that a portion (0.15 acre) of this permanent fill was previously permitted as mechanized clearing as part of U-2525B, Site 21.
- 3) Permit Site 3 - Authorization of a permanent discharge of dredged or fill material into 61 linear feet of stream channel, the temporary discharge of fill material into 10 linear feet (0.01 acre) of stream channel, related to constructing a ramp of the US 29 interchange:
 - a. This modification requests a release of Permit Site 3 TIP U-2525C for construction per Special Condition 2 of the DA permit issued on April 15, 2014, as these impacts were already conceptualized and authorized;

- b. This action involves extending an existing 54" concrete pipe into 61 linear feet of stream channel (permanent loss of waters), and requiring 10 linear feet of impacts for temporary construction access and dewatering;

Following a request for comments sent to federal and state agencies on December 2, 2016 via e-mail, and upon evaluation of the information submitted in your modification proposal, the U.S. Army Corps of Engineers, Wilmington District has determined that it is appropriate and reasonable, is not contrary to the public interest, and no public notice is required for this modification. Therefore, the permit is modified to authorize Permit Site 1 and to release Permit Sites 2 and 3 of TIP U-2525C for construction, as described in the Wetland & Surface Water Impacts Permit drawings for U-2525C (Permit Drawing Sheets 1-14) submitted in the "Request for Modification ..." letter dated November 28, 2016.


In addition, the following special condition has been incorporated:

x) PHASED PERMIT: This permit modification only authorizes work on Permit Sites 1-3 of Section C of TIP U-2525. Construction on the remaining Permit Sites of Sections C of TIP U-2525 shall not commence until final design has been completed for these Sites, the permittee has minimized impacts to waters and wetlands to the maximum extent practicable, any modifications to the plans, and a compensatory mitigation plan, have been approved by the US Army Corps of Engineers. Preliminary plans for U-2525C were provided with the August 28, 2013 application (sheets 1-89) however, these plans are not to be used for construction purposes.

Since impacts to waters of the US for U-2525C were originally permitted as a conceptual sum, addition of impacts to Site 1 and refinement of impacts to Sites 2 and 3 cannot be used to further update the total impact amount for the entire U-2525BC project. Rather, upon evaluation of a future modification request to release the remainder of U-2525C for construction, the impacts authorized by this modification will be added to the total proposed impacts for the entirety of the C section and compared with the originally permitted conceptual impact sum. Similarly, the original permit required compensatory mitigation for all of U-2525BC, including the use of the conceptual sum of stream and wetland impacts. This modification, concerning only Permit Sites 1-3, takes into account a compensatory mitigation requirement for losses of waters of the US, including 464 linear feet of stream and 0.54 acre of wetlands, via purchase of appropriate stream and wetland credits from NCDMS at a 2:1 mitigation to impact ratio. Since the above compensatory mitigation requirement falls below the amount of compensatory mitigation required in the original permit, any future change in the compensatory mitigation requirement will be based on the wetland and stream impacts proposed in the future modification request to release the remainder of U-2525C for construction.

All other conditions of the permit and subsequent modifications, including the permit expiration date of December 31, 2019, remain in effect as written. Should you have questions, contact Mr. David E. Bailey, Raleigh Regulatory Field Office at telephone (919) 554-4884, Extension 30 or David.E.Bailey2@usace.army.mil.

Sincerely,


for/ Kevin P. Landers
Colonel, U.S. Army
District Commander

Attachment

Copies Furnished with Attachment:

Mr. Dave Wanucha
Transportation Permitting Unit
Division of Water Resources
North Carolina Department of
Environment and Natural Resources
450 West Hanes Mill Road, Suite 300
Winston-Salem, North Carolina 27105

Ms. Erin Cheely
North Carolina Department of Transportation
Division of Highways
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Mr. Jerry Parker
Division Environmental Supervisor, Division 7
North Carolina Department of Transportation
Post Office Box 14996
Greensboro, North Carolina 27415

Copies Furnished without Attachment:

Mr. Rodger Rochelle, P.E.
Technical Services Administrator
North Carolina Department of Transportation
1516 Mail Service Center
Raleigh, North Carolina 27699-1516

U.S. Fish and Wildlife Services
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 28516

Ms. Cynthia Van Der Wiele
U.S. Environmental Protection Agency
Region 4 NEPA Program Office
c/o USEPA-RTP
109 T.W. Alexander Drive
Mail Code: E143-08
Research Triangle Park, North Carolina 27709

Mr. Travis Wilson
North Carolina Wildlife Resources Commission
1718 Hwy 56 West
Creedmoor, North Carolina 27522



PAT MCCRORY
Governor
DONALD R. VAN DER VAART
Secretary
JAY ZIMMERMAN
DWR Director

December 20, 2016

Mr. Philip S. Harris, III, P.E., CPM
Natural Environment Section Head
Project Development and Environmental Analysis
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act and Jordan Lake BUFFER RULES with ADDITIONAL CONDITIONS for Proposed Greensboro Eastern Loop from US 70 Relocation to SR 2303 (Lawndale Drive) in Guilford County; WBS Element No. 34821.1.1; TIP U-2525BC. NCDWR Project No. 20130918 v.9; Certification No. 3978.

Dear Mr. Harris:

Attached hereto is a modification of Certification No. 3978 issued to The North Carolina Department of Transportation (NCDOT) originally dated February 6, 2014 with subsequent modifications on the following dates: June 24, October 15, December 11, 2014; March 18 and July 21, 2015; and, March 18 and August 12, 2016. This modification will be version 9.

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

Sincerely,

A handwritten signature in blue ink that reads 'S. Jay Zimmerman'.

S. Jay Zimmerman, Director
Division of Water Resources

Attachments

Electronic copy only distribution:

Dave Bailey, US Army Corps of Engineers, Raleigh Field Office
Jerry Parker, Division 7 Environmental Officer
Erin Cheely, NCDOT PDEA (ekcheely@ncdot.gov)
Nicole Thomson, NCDOT Division 7, Environmental Assistant
Rodger Rochelle, NC Department of Transportation
Colin Mellor, NC Department of Transportation
Carla Dagnino, NC Department of Transportation
Dr. Cynthia Van Der Wiele, US Environmental Protection Agency
Gary Jordan, US Fish and Wildlife Service
Travis Wilson, NC Wildlife Resources Commission
Beth Harmon, Division of Mitigation Services
Dave Wanucha, NC Division of Water Resources Winston Salem Regional Office
File Copy



State of North Carolina | Environmental Quality
1611 Mail Service Center | Raleigh, North Carolina 27699-1611
919-707-9000

**Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act
and Jordan Lake Watershed BUFFER RULES with ADDITIONAL CONDITIONS**

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500 and 15A NCAC 2B .0267. This certification authorizes the NCDOT to impact an additional 0.54 acres of jurisdictional wetlands, 484 linear feet of jurisdictional streams and 4,434 square feet of protected riparian buffers in Guilford County. The project shall be constructed pursuant to the modification dated received November 28, 2016. The authorized impacts are as described below:

Stream Impacts in the Cape Fear River Basin

U-2525 C Section Site	Permanent Fill in Intermittent Stream (linear ft) Culvert	Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)		Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
			Culvert	Bank Stabilization			
1	-	-	41	5	5	51	-
2	-	-	362 (Fill)	-		362	362
3	61	10	-	-		71	-
Totals	61	10	408		5	484	362

Total Stream Impact for Modification: 484 linear feet

Wetland Impacts in the Cape Fear River Basin (riverine/riparian)

U-2525 C Section Site	Fill (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Wetland Impacts Requiring Mitigation (ac)
1	0.03	0.02	0.03	-	0.08	0.08
2	0.43	0.03	-	-	0.46	0.46
Totals	0.46	0.05	0.03	-	0.54	0.54

Notes: For Site 2, 0.15 acres were originally permitted as mechanized clearing in U-2525B Section, Site 21.

Total Wetland Impact for Modification: 0.54 acres.

Jordan Lake Riparian Buffer Impacts

U-2525 C Section Site	Zone 1 Impact (sq ft)	<i>minus</i> Wetlands in Zone 1 (sq ft)	= Zone 1 Buffer Impacts (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sq ft)	<i>minus</i> Wetlands in Zone 2 (sq ft)	= Zone 2 Buffer Impacts (sq ft)	Zone 2 Buffer Mitigation Required (sq ft) (using 1.5:1 ratio)
1	2,848	1,079	1,799	-	1,586	418	1,168	142 (213)
Totals	2,848	1,079	1,799	-	1,586	418	1,168	142 (213)

Notes: Project was exempt from Jordan Lake Buffer Rules. New mitigation requirements for this modification arise from impacts that exist outside of the original project area.

Total Buffer Impact for Modification: 4,434 square feet.

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

This approval is only valid for the purpose and design that you submitted in your modified application dated received November 28, 2016. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated February 6, 2014 with subsequent modifications on June 24, October 15, December 11, 2014; March 18 and July 21, 2015; and, March 18 and August 12, 2016, still apply except where superseded by this certification. Should your project change, you are required to notify the NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). Additional buffer impacts may require compensatory mitigation as described in 15A NCAC 2B .0267. For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Condition(s) of Certification:

1. This modification is applicable only to the additional proposed activities. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated February 6, 2014 with subsequent modifications on June 24, October 15, December 11, 2014; March 18 and July 21, 2015; and, March 18 and August 12, 2016, still apply except where superseded by this certification.
2. All stormwater runoff shall be directed as sheetflow through stream buffers at non-erosive velocities, unless otherwise approved by this certification (15A NCAC 2B .0267).
3. All riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated. Maintained buffers shall be permanently revegetated with non-woody species by the end of the growing season following completion of construction. For the purpose of this condition, maintained buffer areas are defined as areas within the transportation corridor that will be subject to regular NCDOT maintenance activities including mowing. The area with non-maintained buffers shall be permanently revegetated with native woody species before the next growing season following completion of construction (15A NCAC 2B .0267).
4. Pursuant to 15A NCAC 2B .0267, sediment and erosion control devices shall not be placed in Zone 1 of any Jordan Lake Watershed Riparian Buffer without prior approval by the NCDWR. At this time, the NCDWR has approved no sediment and erosion control devices in Zone 1, outside of the approved project impacts, anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised and that discharge is released as diffuse flow.
5. Any modifications to this 401 Water Quality Certification that propose additional stream impacts or increased impervious surface requiring additional stormwater management may be subject the Jordan Lake Water Supply Nutrient Strategy (15A NCAC 02B .0267). The NCDOT shall coordinate with the NCDWR prior to submitting a modification request to determine the applicability of the Jordan Water Supply Nutrient Strategy. This condition does not apply to major modifications for additional sections of the project that were covered under the Finding of No Significant Impact or approved in the Avoidance and Minimization stage of the project.
6. Compensatory mitigation for impacts to 142 square feet of protected riparian buffers in Zone 2 shall be required. We understand that you have chosen to perform compensatory mitigation for impacts to protected buffers through use of the North Carolina Division of Mitigation Services (DMS) (formerly NCEEP). Mitigation for unavoidable impacts to Jordan Lake Watershed Riparian Buffers shall be provided in the Cape Fear River Basin and done in accordance with 15A NCAC .02B .0295. The DMS has indicated in a letter dated November 18, 2016 that they will assume responsibility for satisfying the compensatory mitigation requirements for the above-referenced project, in accordance with DMS's Mitigation Banking Instrument signed June 14, 2016.

7. Compensatory mitigation for 362 linear feet of impact to streams and 0.54 acres of riverine/riparian wetlands is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Division of Mitigation Service (DMS) (formerly NCEEP), and that the DMS has agreed to implement the mitigation for the project. The DMS has indicated in a letter dated November 18, 2016 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the DMS Mitigation Banking Instrument signed July 28, 2010.

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

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission.
The mailing address for the Office of Administrative Hearings is:

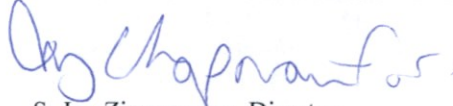
Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919) 431-3000, Facsimile: (919) 431-3100

A copy of the petition must also be served on DEQ as follows:

Mr. Sam M. Hayes, General Counsel
Department of Environmental Quality
1601 Mail Service Center

This the 20th day of December 2016

DIVISION OF WATER RESOURCES


S. Jay Zimmerman, Director

WQC No. 3978



PAT MCCRORY
Governor
DONALD R. VAN DER VAART
Secretary
JAY ZIMMERMAN
DWR Director

NCDWR 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 Transportation Permitting Unit, North Carolina Division of Water Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR 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 _____




CONTRACT:

GRAPHIC SCALES

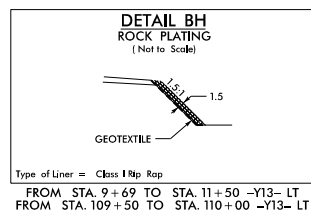
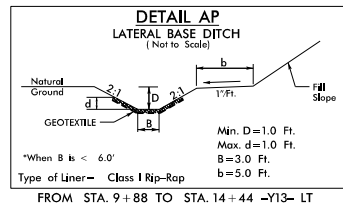
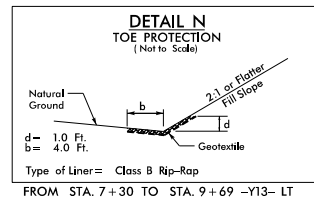
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PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

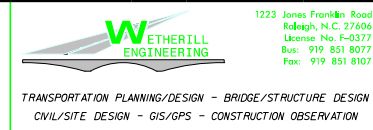
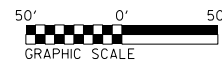
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PROFILE (VERTICAL)

The seal of the North Carolina Department of Transportation is a circular emblem. It features a stylized, flowing line that forms a shape reminiscent of a road or a ribbon, winding through the center. The words "STATE OF NORTH CAROLINA" are inscribed along the top inner edge, and "DEPARTMENT OF TRANSPORTATION" is inscribed along the bottom inner edge, separated by small dots.

8/17/99

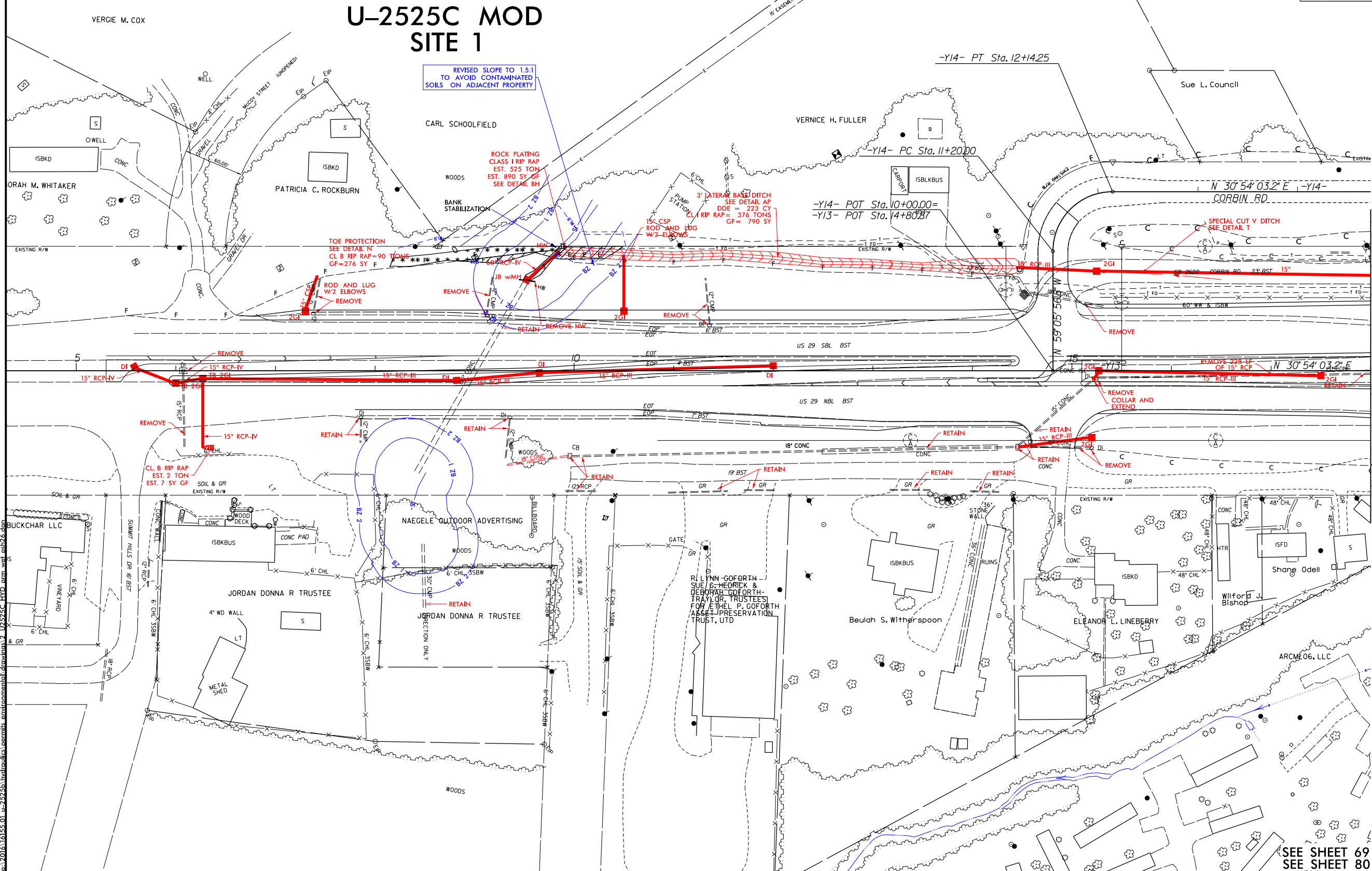


- DENOTES FILL IN WETLAND
- DENOTES EXCAVATION IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES MECHANIZED CLEARING



PROJECT REFERENCE NO. U-2525C		SHEET NO. 26	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PERMIT DRAWING SHEET 2 OF 14			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

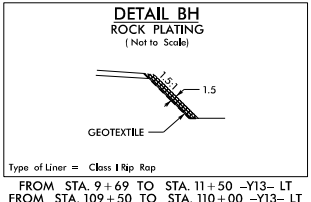
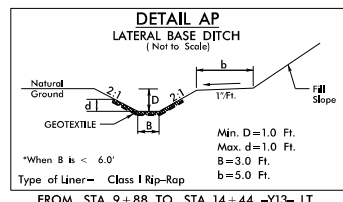
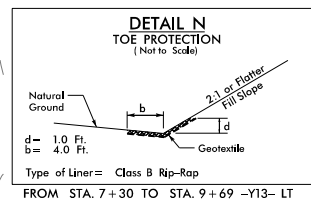
U-2525C MOD SITE 1



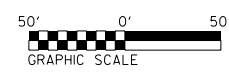
SEE SHEET 69 FOR -Y13- PROFILE
SEE SHEET 80 FOR -Y14- PROFILE

11/16/2016
10:05
p:201616155.01 U-2525C HYD perm wet est26.dgn

8/17/99



- DENOTES FILL IN WETLAND
- DENOTES EXCAVATION IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES MECHANIZED CLEARING



WETHERILL ENGINEERING

1223 Jones Franklin Road
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. <i>U-2525C</i>		SHEET NO. <i>26</i>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PERMIT DRAWING SHEET 3 OF 14			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

U-2525C MOD SITE 1

REVISED SLOPE TO 1.5:1
TO AVOID CONTAMINATED
SOILS ON ADJACENT PROPERTY

ROCK PLATING
CLASS I RIP RAP
EST. 528 TON
EST. 890 SY GF
SEE DETAIL BH

3' LATERAL BASE DITCH
SEE DETAIL AP
DDE = 223 CY
CL RIP RAP = 376 TONS
GF = 790 SY

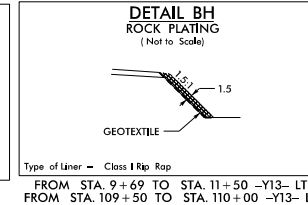
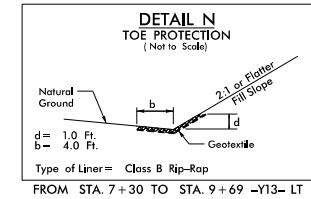
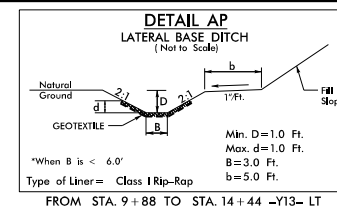
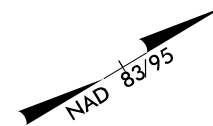
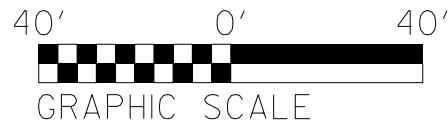
TOE PROTECTION
SEE DETAIL N
CL B RIP RAP-90 TON
GF=276 SY

ROD AND LUG
W/2 ELBOWS
REMOVE

SPECIAL CUT-Y DITCH
SEE DETAIL F

MATCHLINE -Y13- STA. 18+00.00 SEE SHEET 27

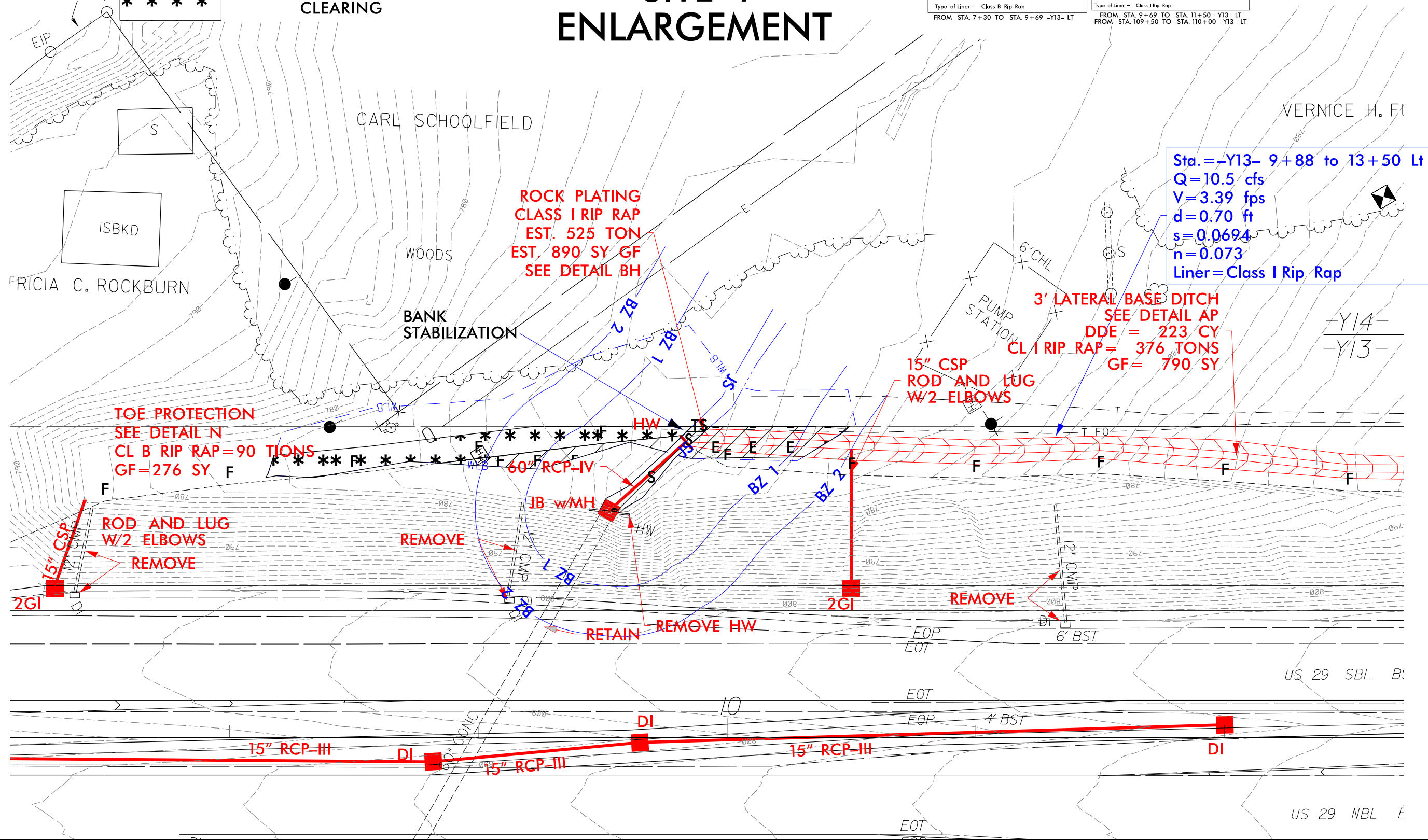
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DENOTES FILL IN WETLAND		
	E	E
DENOTES EXCAVATION IN WETLAND		
	S	S
DENOTES IMPACTS IN SURFACE WATER		
	TS	TS
DENOTES TEMPORARY IMPACTS IN SURFACE WATER		
	*	*
DENOTES MECHANIZED CLEARING		



PROJECT REFERENCE NO. U-2525C		SHEET NO. 26
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	

PERMIT DRAWING
SHEET 4 OF 14

U-2525C MOD SITE 1 ENLARGEMENT



Sta. = -Y13- 9+88 to 13+50 Lt
Q=10.5 cfs
V=3.39 fps
d=0.70 ft
s=0.0694
n=0.073
Liner= Class I Rip Rap

3' LATERAL BASE DITCH
SEE DETAIL AP
DDE = 223 CY
CL I RIP RAP = 376 TONS
GF = 790 SY

ROCK PLATING
CLASS I RIP RAP
EST. 525 TON
EST. 890 SY GF
SEE DETAIL BH

TOE PROTECTION
SEE DETAIL N
CL B RIP RAP = 90 TONS
GF = 276 SY

ROD AND LUG
W/2 ELBOWS
REMOVE

REMOVE

RETAIN REMOVE HW

REMOVE

8/23/99

11/16/2016
tdeyja
8/23/2016 16:15:55.01 u-2525b\hydr-aules\permits.environmental\drawings\5 u2525c-HYD.prm.xpl Y13.dgn

WETLAND AND SURFACE WATER IMPACTS PERMIT

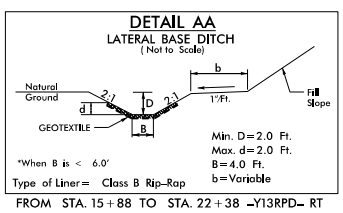
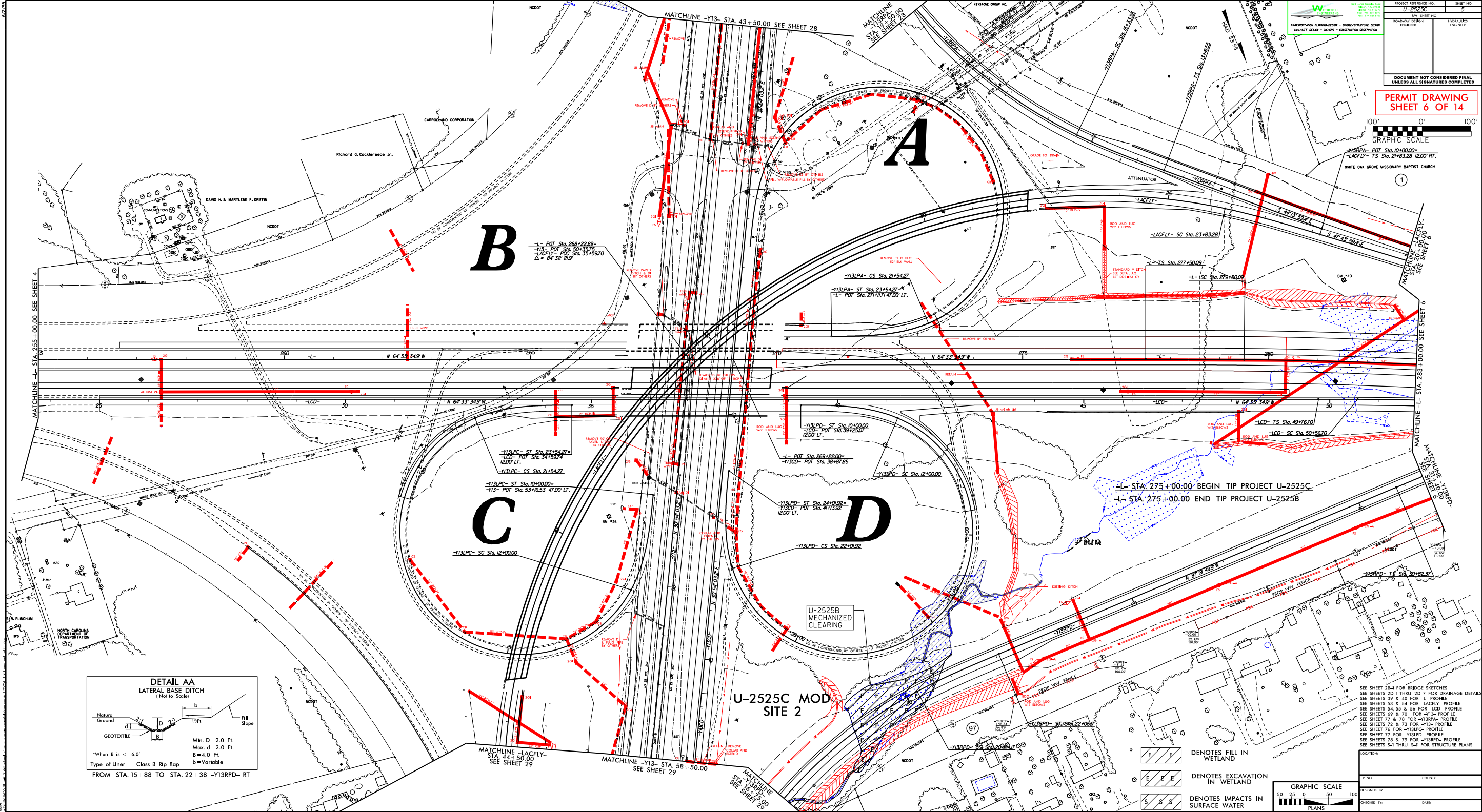
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	U-2525B	X-301

PERMIT DRAWING
SHEET 5 OF 14

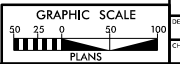


10 + 00.00

-Y13-

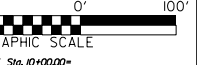


- DENOTES FILL IN WETLAND
- DENOTES EXCAVATION IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER



PROJECT REFERENCE NO. U-2525C	SHEET NO. 6
RDW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 6 OF 14



WHITE OAK GROVE MESSY BAPTIST CHURCH

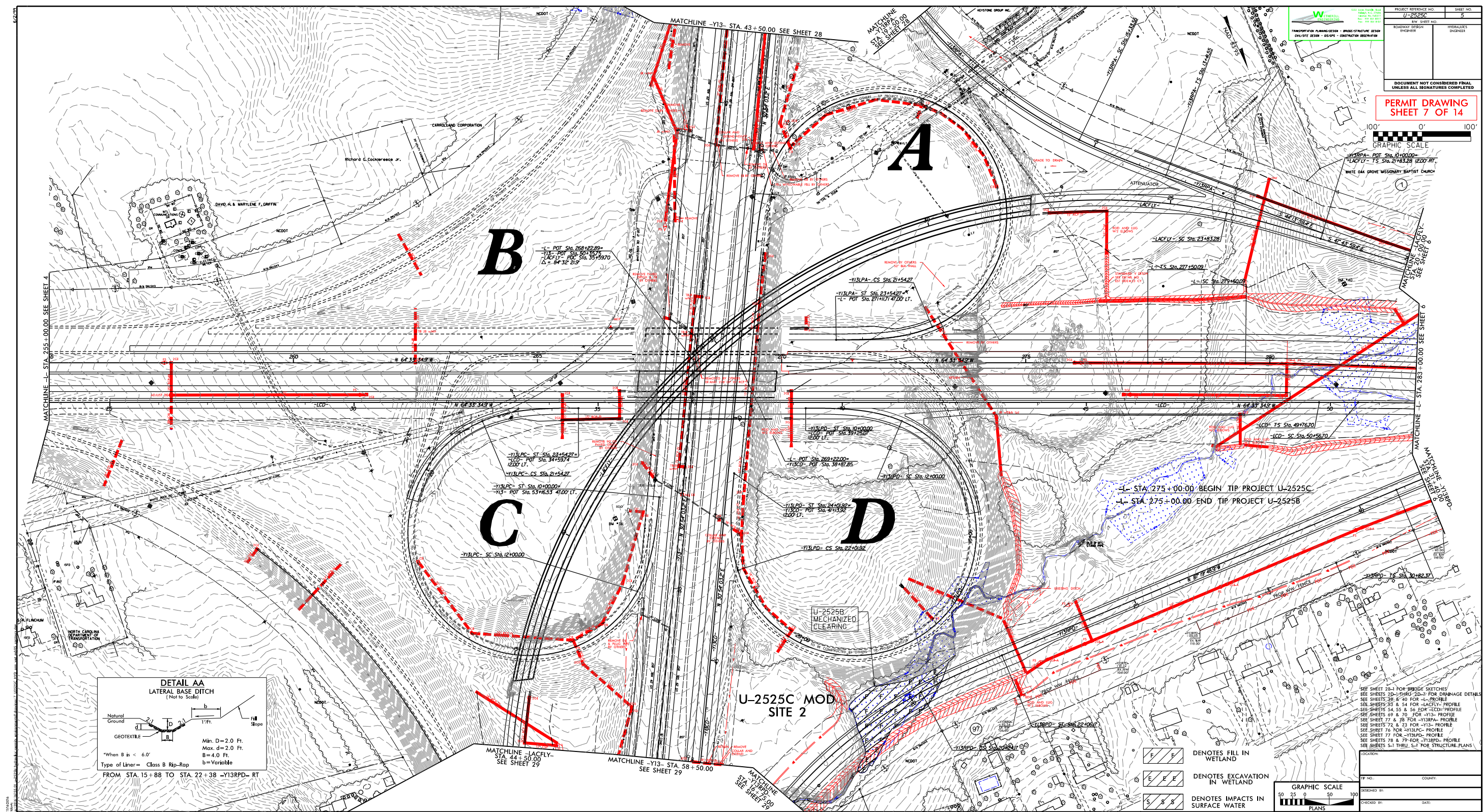
SEE SHEET 28-1 FOR BRIDGE SKETCHES
SEE SHEETS 29 & 40 FOR -L- PROFILE
SEE SHEETS 53 & 54 FOR -LACFLY- PROFILE
SEE SHEETS 54, 55 & 56 FOR -LCD- PROFILE
SEE SHEETS 69 & 70 FOR -Y13- PROFILE
SEE SHEET 77 & 78 FOR -Y13RPA- PROFILE
SEE SHEETS 72 & 73 FOR -Y13- PROFILE
SEE SHEET 76 FOR -Y13LPC- PROFILE
SEE SHEET 77 FOR -Y13LPO- PROFILE
SEE SHEETS 78 & 79 FOR -Y13RPA- PROFILE
SEE SHEETS S-1 THRU S-7 FOR STRUCTURE PLANS

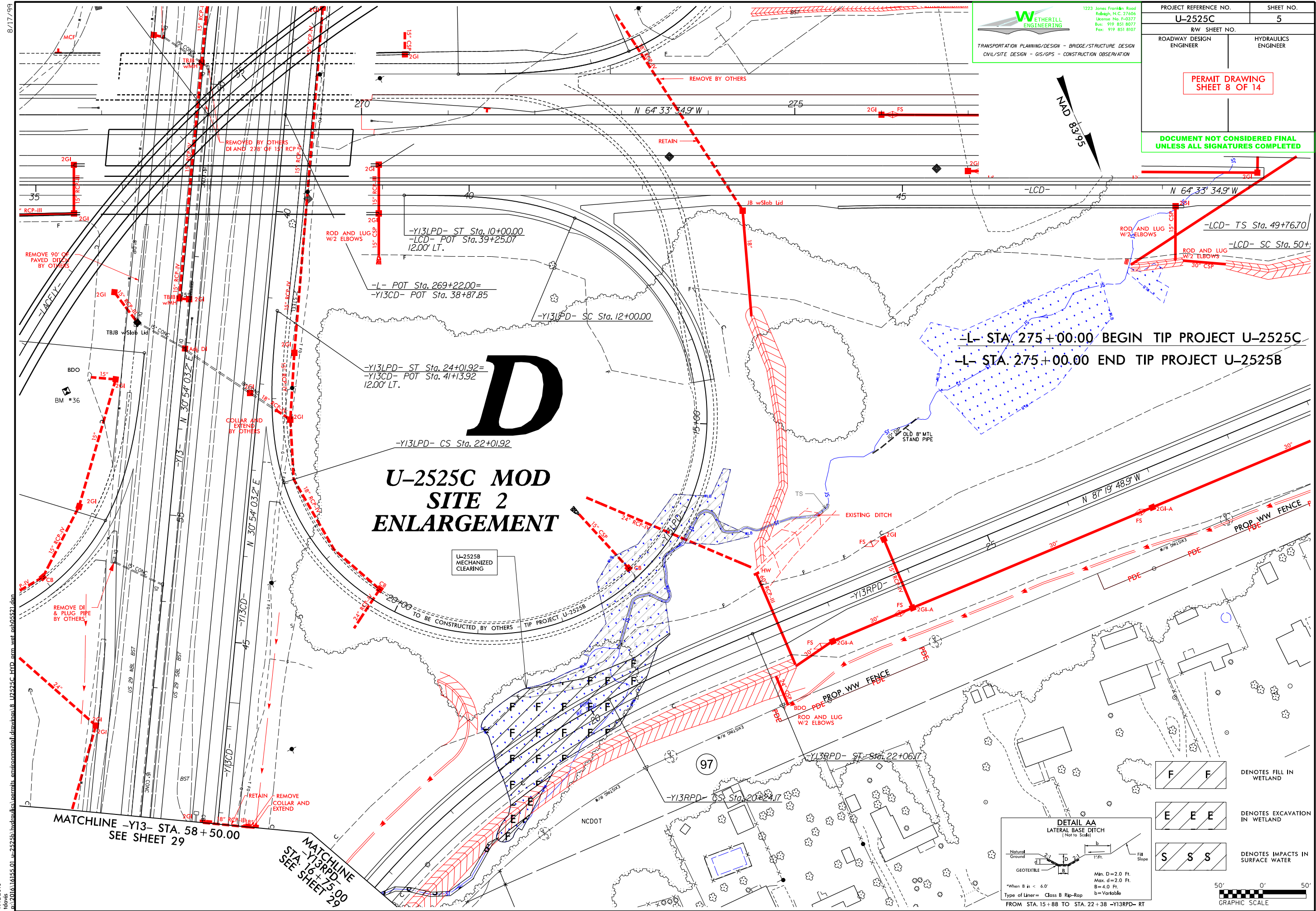
LOCATION: _____

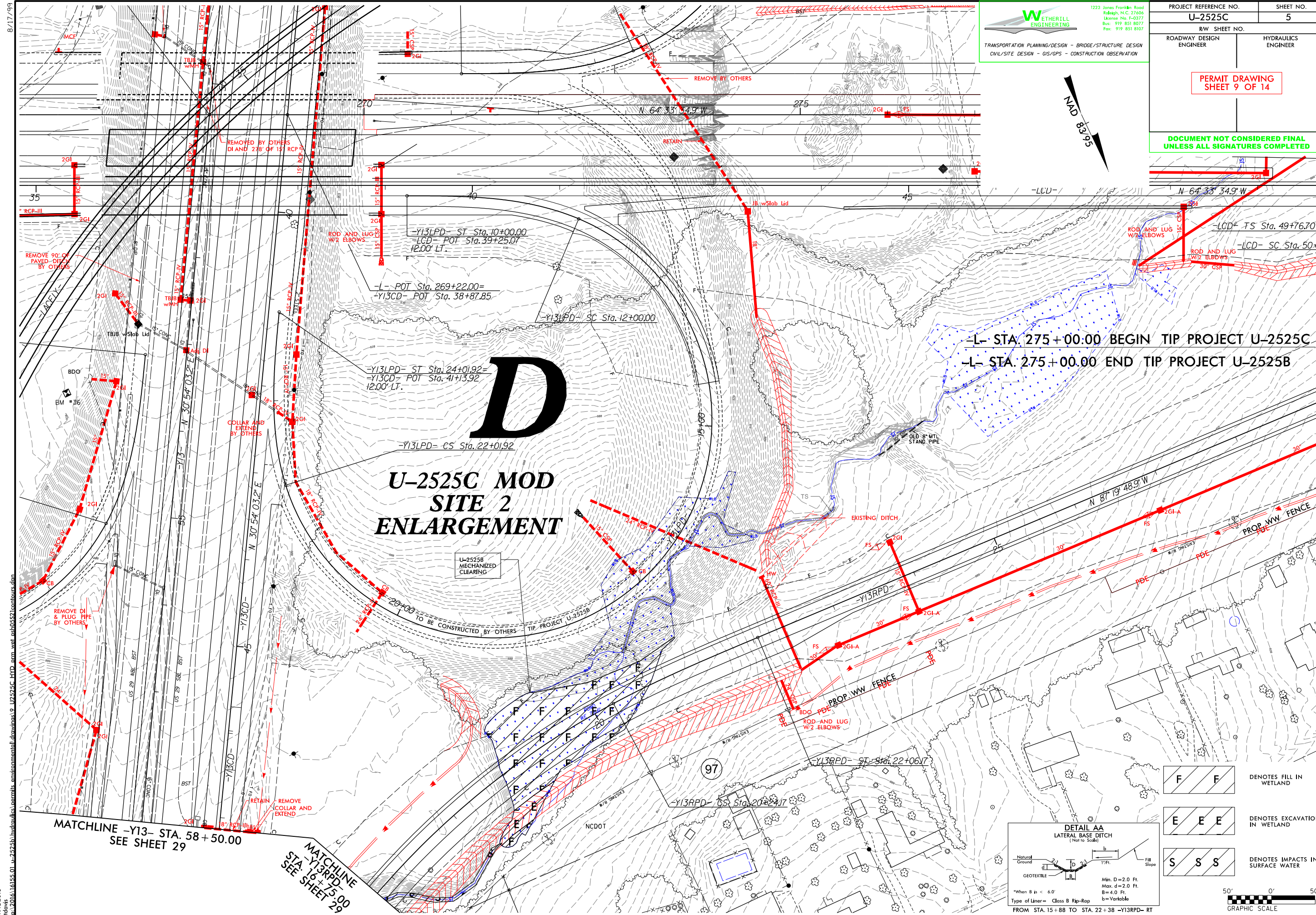
TIP NO.: _____ COUNTY: _____

DESIGNED BY: _____

CHECKED BY: _____ DATE: _____







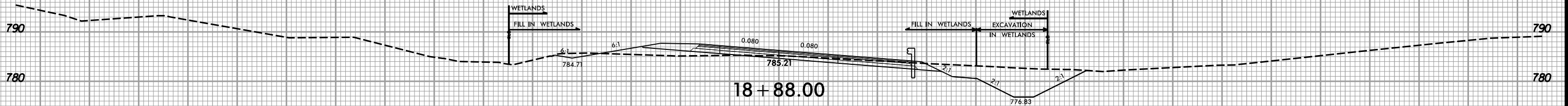
8/23/99

WETLAND AND SURFACE WATER IMPACTS PERMIT

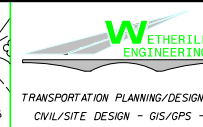
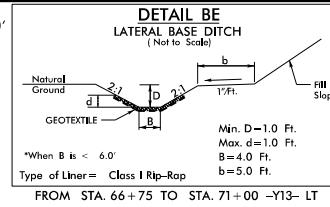
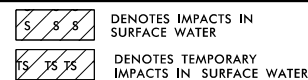
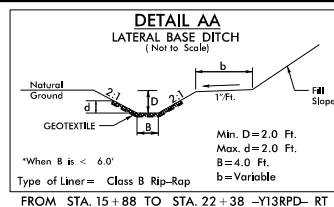


PROJ. REFERENCE NO.	SHEET NO.
U-2525C	

PERMIT DRAWING
SHEET 10 OF 14



-Y13RPD-



1223 Jones Franklin Road
Raleigh, N.C. 27606
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Bus: 919 851 8077
Fax: 919 851 8102

PROJECT REFERENCE NO.	SHEET NO
-----------------------	----------

U-25250

29

RW SHEET NO.

ROADWAY DESIGN
ENGINEER

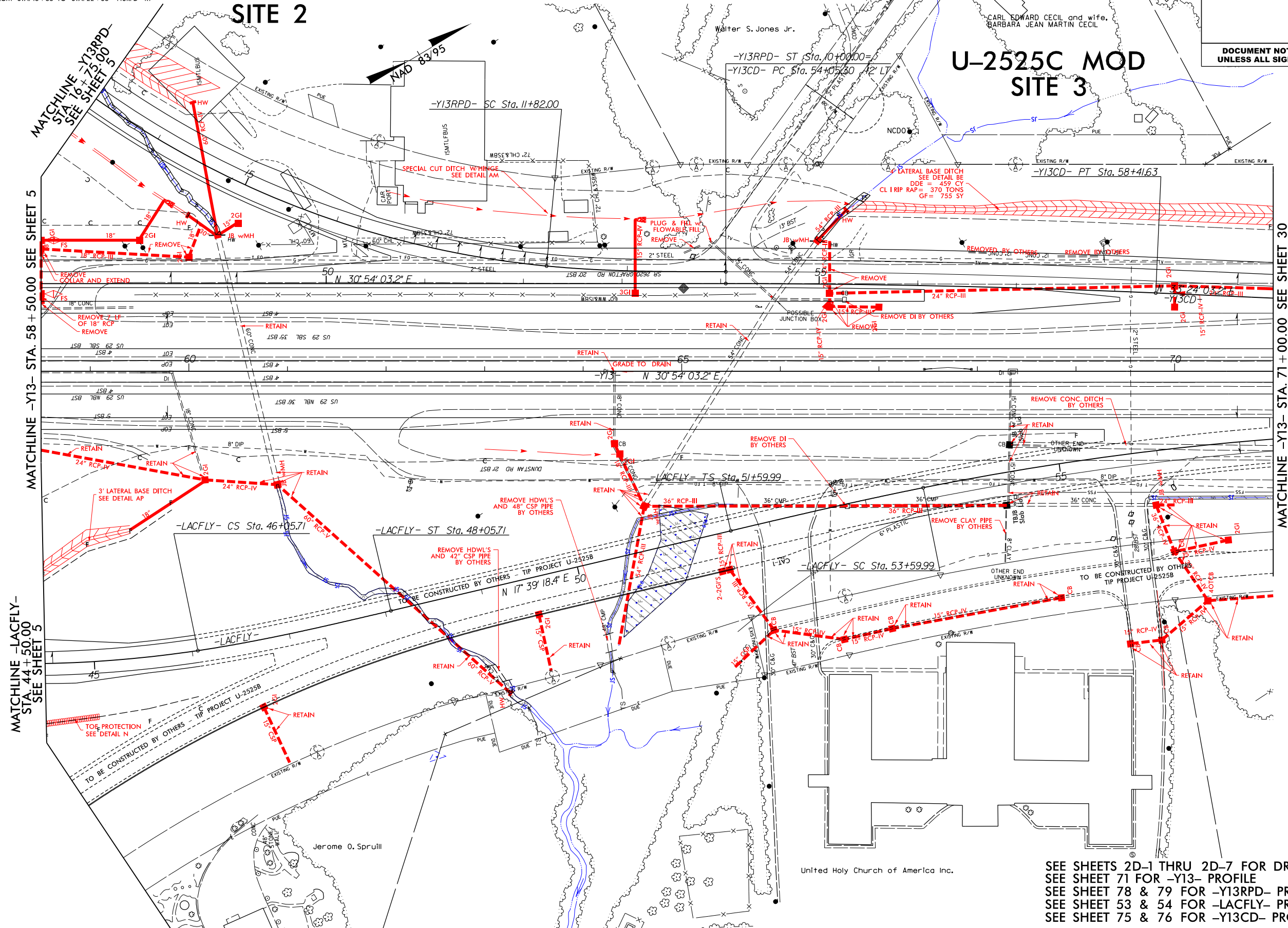
HYDRAULICS
ENGINEER

PERMIT DRAWING
SHEET 11 OF 14

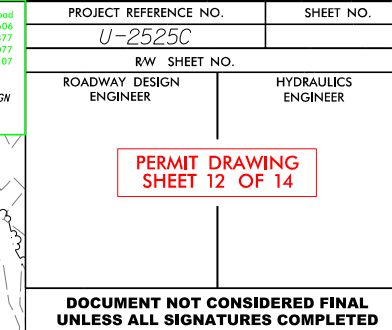
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETE**

U-2525C MOD
SITE 2

U-2525C MOD
SITE 3



SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS
SEE SHEET 71 FOR -Y13- PROFILE
SEE SHEET 78 & 79 FOR -Y13RPD- PROFILE
SEE SHEET 53 & 54 FOR -LACFLY- PROFILE
SEE SHEET 75 & 76 FOR -Y13CD- PROFILE



U-2525C MOD
SITE 2

U-2525C MOD
SITE 3

MATCHLINE -Y13- STA. 58 + 50.00 SEE SHEET 5

MATCHLINE -LACFLY-
STA. 44+50.00
SEE SHEET 5

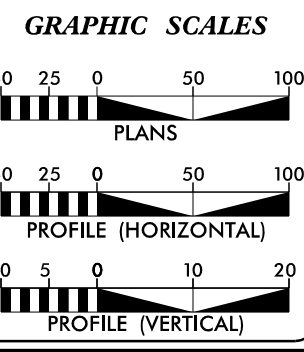
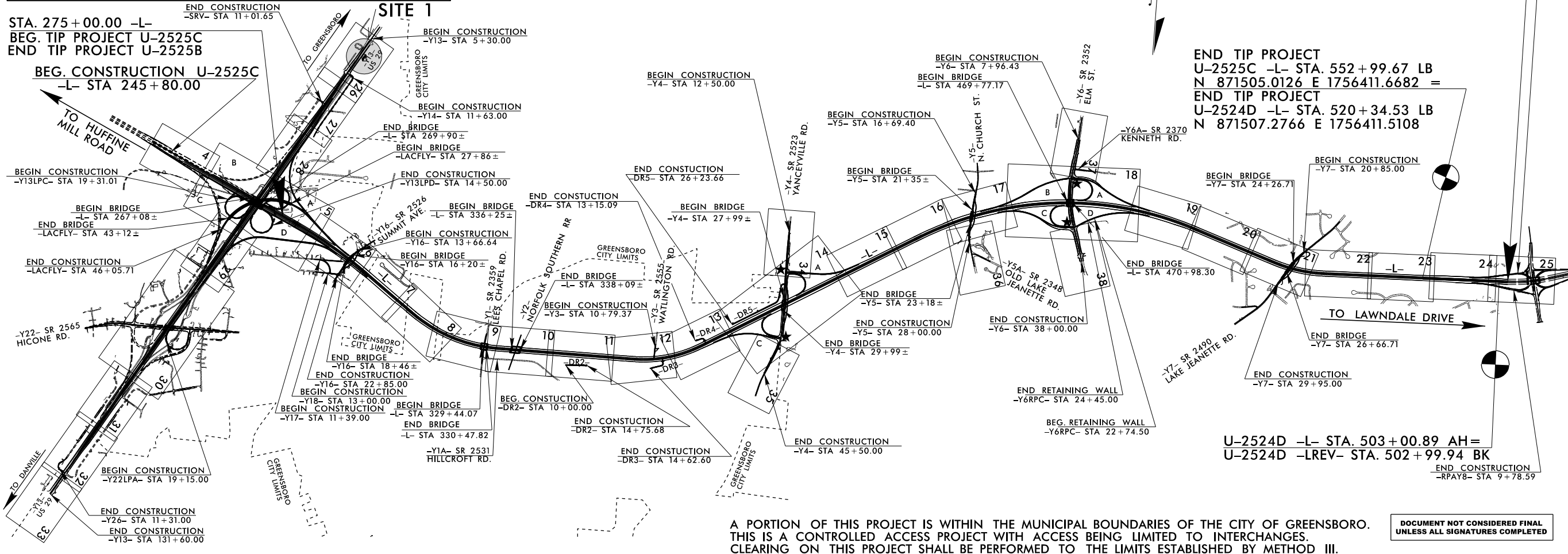
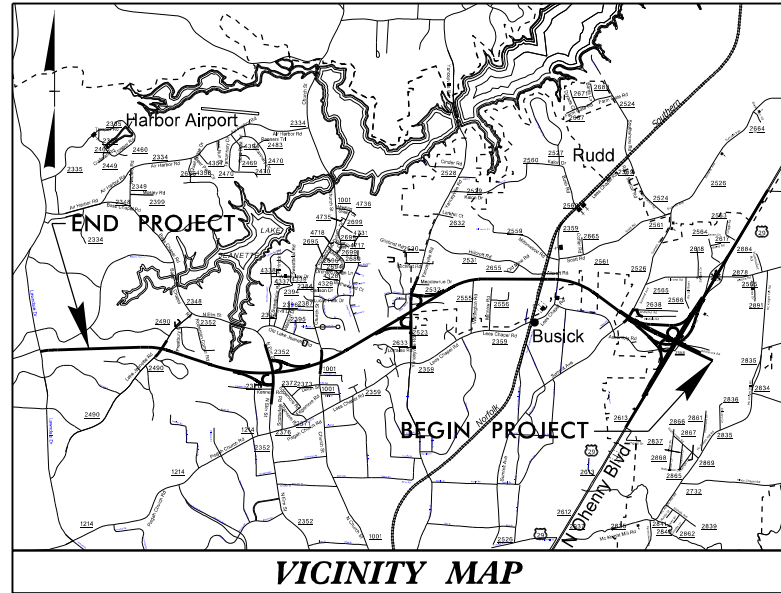
MATCHLINE -Y13- STA 71+00.00 SEE SHEET 30

SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS
SEE SHEET 71 FOR -Y13- PROFILE
SEE SHEET 78 & 79 FOR -Y13RPD- PROFILE
SEE SHEET 53 & 54 FOR -LACFLY- PROFILE
SEE SHEET 75 & 76 FOR -Y13CD- PROFILE

TIP PROJECT: U-2525C

CONTRACT:

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Plan Sheet Symbols
See Sheet 1C-1 - 1C-4 For Survey Control Sheet

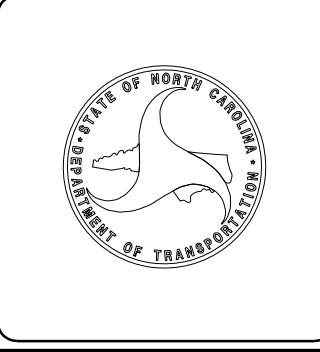


DESIGN DATA	
ADT 2018 =	63160
ADT 2040 =	96400
K =	10 %
D =	60 %
T =	14 % *
V =	70 MPH
* TTST=8%	DUAL=6%
FUNC CLASS=INTERSTATE "STATEWIDE TIER"	

PROJECT LENGTH	
LENGTH ROADWAY TIP PROJECT U-2525C =	5.127 MILES
LENGTH STRUCTURE TIP PROJECT U-2525C =	0.138 MILES
TOTAL LENGTH OF TIP PROJECT U-2525C =	5.265 MILES

Prepared for the North Carolina Department of Transportation in the Office of:	
EDWARD G. WETHERILL, PE PROJECT ENGINEER	
BOB A. MAY, PE PROJECT DESIGN ENGINEER	
TATIA L. WHITE, PE, PLS ROADWAY DESIGN: PROJECT DESIGN ENGINEER	

HYDRAULICS ENGINEER	
SIGNATURE:	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE:	P.E.



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

LOCATION: GREENSBORO LOOP FROM US 29 NORTH OF
GREENSBORO TO EAST OF LAWNDALE DRIVE

TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS,
CULVERTS, AND STRUCTURES

BUFFER IMPACTS PERMIT
MODIFIED SEPTEMBER 2016

NOTE: THIS PROJECT IS LOCATED IN THE JORDAN LAKE WATERSHED. HOWEVER, THIS PROJECT IS EXEMPT FROM THE 2009 JORDAN LAKE RIPARIAN BUFFER RULES DUE TO FONSI OR CONCURRENCE POINT 4A APPROVAL PRIOR TO THE ADOPTION OF THE JORDAN LAKE RIPARIAN BUFFER RULES. SITE 1 WAS LOCATED AFTER THE 4A APPROVAL AND WILL BE SUBJECT TO THE JORDAN LAKE BUFFER RULES.

BUFFER DRAWING
SHEET 1 OF 5

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2525C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34821.1.5		PE	
34821.2.4		RW, UTIL.	

★ PROPOSED SIGNAL

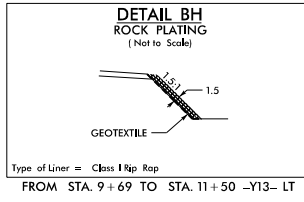
END CONSTRUCTION U-2525C
(U-2524D) -LREV- STA. 501+00.00

END TIP PROJECT
U-2525C -L- STA. 552+99.67 LB
N 871505.0126 E 1756411.6682 =
END TIP PROJECT
U-2524D -L- STA. 520+34.53 LB
N 871507.2766 E 1756411.5108

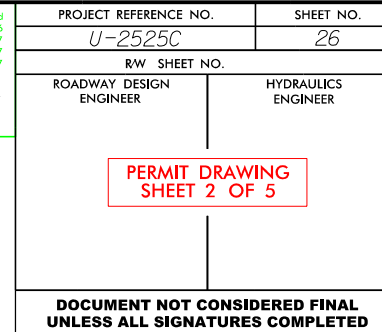
U-2524D -L- STA. 503+00.89 AH=
U-2524D -LREV- STA. 502+99.94 BK

A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF GREENSBORO. THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

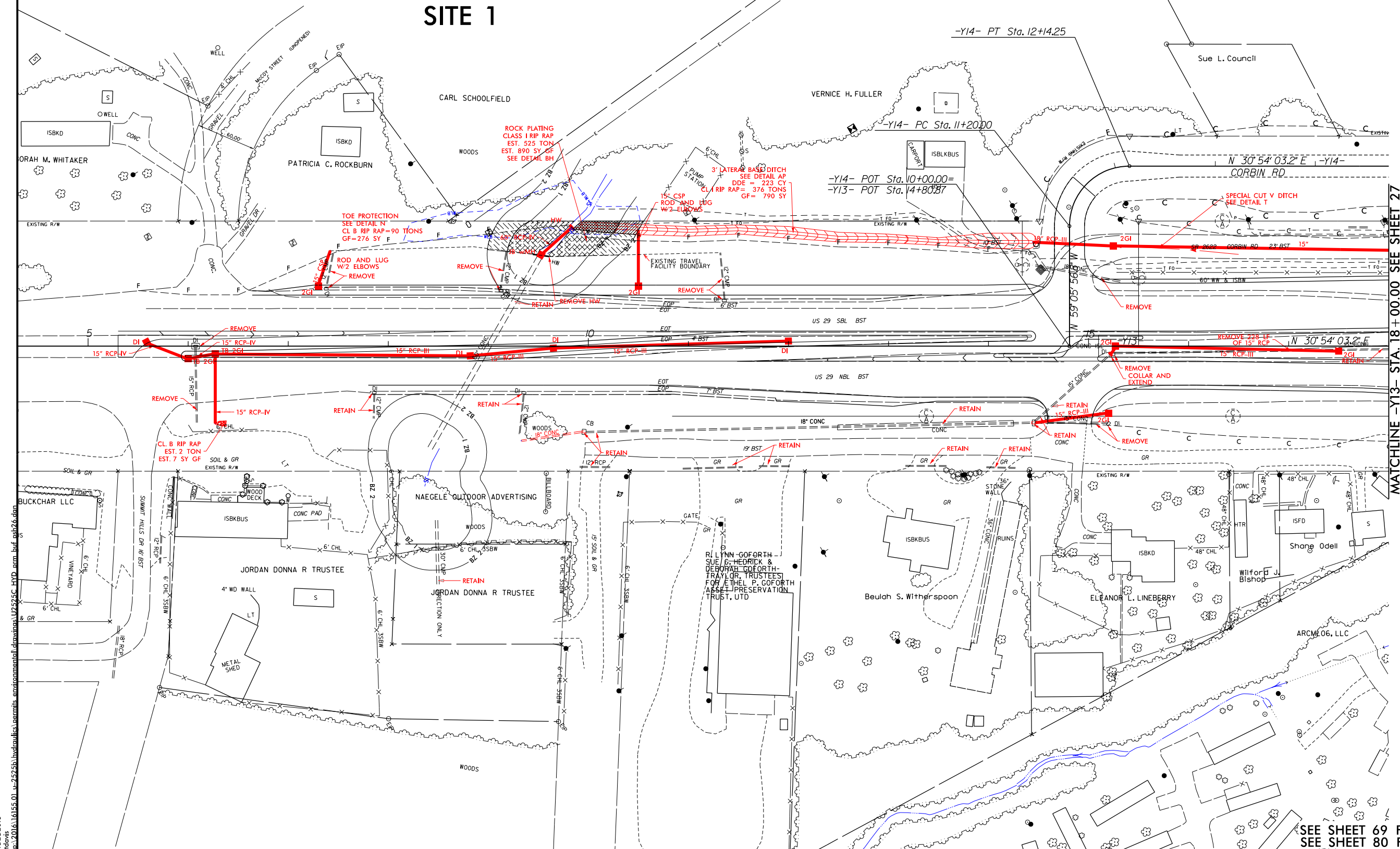
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



- 50' 0' 50'
- 
- GRAPHIC SCALE



NAD 83/95



SEE SHEET 69 FOR -Y13- PROFILE
SEE SHEET 80 FOR -Y14- PROFILE

BUFFER IMPACTS SUMMARY	
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[illegible]

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

GUILFORD COUNTY
WSB - 34821.1.5 (U-2525C)

9/28/2019
SHEET 4 OF 5

WETLANDS IN BUFFER IMPACTS SUMMARY

			ALLOWABLE WETLANDS IN BUFFERS		MITIGABLE WETLANDS IN BUFFERS	
SITE NO.	STATION (FROM/TO)		ZONE 1 (ft ²)	ZONE 2 (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)
1	9+00 to 10+50 -Y13-	60" RCP	627	270	422	148
TOTAL:			627	270	422	148

N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

GUILFORD COUNTY
WSB - 34821.15 (U-2525C)

9/28/2019
SHEET 5 OF 5