



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

July 24, 2014

MEMORANDUM TO: Mr. Greg Burns, P.E.  
Division 6 Engineer

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

A handwritten signature in black ink, appearing to read "PSH", followed by a horizontal line and a small mark.

SUBJECT: Cumberland County, Fayetteville Outer Loop; Federal Aid Project  
No. DPR-0100(001); WBS No. 34817.1.1;  
**TIP Project U-2519 CB and DA**

Attached are modifications to the U.S. Army Corps of Engineers (USACE) Section 404 Individual permit and the N.C. Division of Water Resources (DWR) Section 401 Water Quality Certification. All environmental permits have been received for the construction of this project.

A copy of this permit package 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. James J. Rerko, Division Environmental Officer  
Mr. Majed Alghandour, P.E., Programming and TIP  
Mr. Glen Mumford, P.E., Roadway Design Unit  
Mr. Dewayne Sykes, P.E. Utilities Unit  
Mr. Jay Twisdale, P.E., Hydraulics Unit  
Mr. Greg Perfetti, P.E., Structure Design Unit  
Mr. Mark Staley, Roadside Environmental Unit  
Mr. Ron Hancock, P.E., State Roadway Construction Engineer  
Mr. Mike Robinson, P.E., State Bridge Construction Engineer  
Mr. Rob Hanson, P.E., PDEA  
Mr. Phillip Ayscue, Office of Inspector General  
Mr. Clarence Coleman, P.E., FHWA

# PROJECT COMMITMENTS

U-2519 and X-0002 B & C Green Sheet  
FAYETTEVILLE OUTER LOOP  
Cumberland, Hoke, and Robeson Counties  
Federal Aid No.: DPR-0100(001) and DPR-0100(002)  
State Project No. 8.2441301

## COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

All commitments developed during the project development and design phase have been incorporated into the design and were standard commitments. Current status, changes, or additions to the project commitments as shown in the Draft Environmental Impact Statement for the project are printed in *italic* font.

### **PDEA/Roadway Design/Hydraulics**

Impacts to watershed areas and the water quality of all receiving waters will be minimized by strict adherence to NCDOT's "Best Management Practices for Protection of Surface Waters," March 1997. Additionally, every effort will be made to minimize natural water body impacts during final design. The proposed Fayetteville Outer Loop would cross Little Cross Creek and Cross Creek above Bonnie Doone Lake and Rose Lake. Although these waters are part of the Fayetteville public drinking water supply, the proposed outer loop would not be located within the critical watershed area of either creek. The proposed outer loop would be located approximately 3.5 miles upstream of the critical watershed areas. During the design phase of the study, hazardous spill basins will be considered to prevent stream contamination from spill runoff.

*This commitment was implemented during design.*

### **PDEA/Roadway Design**

Areas containing protected species will be avoided if possible during the design phase of the project. Section 7 consultation with the US Fish and Wildlife Service will be completed prior to signing the Final Environmental Impact Statement for circulation. Additionally, habitat fragmentation mitigation will be further evaluated during the design phase of the study. Field surveys for all federally listed endangered species known to inhabit Cumberland, Hoke, and Robeson counties were performed. Measures to minimize impacts to the protected species were incorporated into the preliminary designs and coordinated with the Merger Team.

*A Biological Assessment (BA) was prepared to assess impacts to federally listed plant species and a butterfly. In addition, a separate BA was prepared for impacts to the redcockaded woodpecker. The Section 7 consultation was completed April 28, 2005.*

### **PDEA/Right of Way**

NCDOT will work with the members of the North Carolina Sandhills Conservation Partnership (NCSCP), with a reasonable effort, to acquire one piece of property in accordance with NCDOT and FHWA policies and procedures for property acquisition, the area identified as the Northern Corridor (see Figure 3 on page 31 of the Biological Opinion [April 28, 2005]). The identified property will contain approximately 75 acres of habitat that does or can support a southern yellow pine-dominated overstory and can be reasonably managed to create/maintain foraging habitat for the red-cockaded woodpecker.

*This commitment was implemented prior to permitting.*



**PDEA**

NCDOT will coordinate with Fort Bragg and the US Fish and Wildlife Service to establish and implement the best strategy for minimizing direct impacts of tree clearing and highway construction to red-cockaded woodpecker (RCW) Cluster FB 65, its resident RCW group and residual foraging and nesting habitat.

*This commitment was coordinated with Fort Bragg..*

**PDEA/Structure Design/Roadway Design/Division 6**

Wetland avoidance is considered during all phases of the project. If wetlands cannot be avoided, every effort will be made to minimize the impacts through the location and design of the roadway facility within the selected corridor. Mitigation of unavoidable wetland impacts will be coordinated through the appropriate state and federal agencies.

*This commitment was implemented during design.*

**PDEA/Roadway Design**

Sound barriers corresponding to the preferred alternative will be investigated in more detail in the design study phase of the project.

*This commitment was implemented during design.*

**Hydraulics**

For floodway encroachments, the North Carolina Department of Transportation will coordinate with the community and with the Federal Emergency Management Agency during the design phase of the project. Adherence to the North Carolina Department of Transportation's "Stream Crossing Guidelines for Anadromous Fish Passage" would allow movement of anadromous fish.

*North Carolina Department of Transportation will comply with a moratorium for anadromous fish of "no in-water work" from February 15 to June 30 on Rockfish Creek. This commitment will be implemented during construction.*

**Geotechnical Design**

When the final proposed centerline is established and right of way determined, a hazardous materials site assessment will be performed to the degree necessary to determine levels of contamination at any potential hazardous materials sites along the preferred alternate. The assessment will be made prior to right of way acquisition. Resolution of problems associated with contamination will be coordinated with appropriate agencies.

*This commitment was implemented prior to Right of Way.*

**Roadside Environmental/Roadway Design**

Measures to minimize visual impacts will be taken into consideration during design of the roadway. Overall, visual impacts may be mitigated through a variety of actions such as alignment modifications during design, landscaping, screening, embankments, and selective clearing of natural materials.

*The commitment was implemented during design.*

## **PDEA**

If a build alternate is selected as the Preferred Alternative, a detailed archaeological survey of the preferred corridor will be conducted. This survey will be coordinated with the State Historic Preservation Office.

*In coordination with the State Historic Preservation Office (HPO), detailed archaeological studies of the preferred corridor were conducted from 2001 to 2004. The specific findings of the initial survey are documented in “Dimensions of Fall Line Site Function: Surveying and Testing the West Fayetteville North Carolina Outer Loop,” Technical Report #992 by New South Associates (2002). In coordination with the HPO and the Fort Bragg Cultural Resources Program (FBCRP), three additional intensive archaeological surveys were prepared for expanded coverage of the Preferred Alternative. The specific findings of these surveys are documented in three separate addenda: 1) “Cultural Resources Survey of 284 Acres South of Cliffdale Road, West Fayetteville Outer Loop, Cumberland and Hoke Counties, North Carolina,” 2) “Cultural Resources Survey of 534 Acres North of Cliffdale Road, West Fayetteville Outer Loop, Cumberland County, North Carolina,” and 3) “Cultural Resources Survey of 31 Additional Land Parcels of the Proposed West Fayetteville Outer Loop, Cumberland and Robeson Counties, North Carolina,” all of which will be integrated into one appendix to be attached to the original 2002 survey report by New South Associates. A summary of the findings and impacts can be found in Section 6 of this document. These reports conclude that the Preferred Alternative will impact ten archaeological sites within the area of potential effects, eight of which are considered eligible for the National Register of Historic Places (31CD64, 31CD65, 31CD871, 31CD874, 31CD882, 31CD962, 31CD965, and 31RB485). The remaining two sites are cemeteries (31CD967/967\*\* and 31CD976\*\*). Therefore, the NCDOT will prepare a Memorandum of Agreement for the recovery or relocation efforts on these ten sites and will implement a satisfactory data recovery program. A Memorandum of Agreement regarding the implementation of mitigation efforts for all ten archaeological sites was signed in March 2005. One cemetery (31CD976\*\*) will need to be relocated per applicable State statutes (i.e. NC GS 65 or NC GS 70.3) after consultation with the Office of State Archaeology. The prehistoric archaeological component of 31CD967/967\*\* will not be impacted by the proposed project, but its historic cemetery component requires a GPR survey in order to determine the locations of unmarked burials that may or may not be impacted by the proposed project. If burials associated with 31CD967/967\*\* are to be impacted by the proposed project, then such burials will be relocated per applicable State statutes (i.e. NC GS 65 or NC GS 70.3) after consultation with the Office of State Archaeology. Since Sites 31CD64, 31CD65, and 31CD871, all of which will be affected by the subject project, are located within the Fort Bragg Military Reservation, the NCDOT will develop mitigation plans in consultation with both the HPO and the Fort Bragg Cultural Resources Program.*

## **Roadside Environmental/Division 6**

Borrow and solid waste operations would be managed through the North Carolina Department of Transportation's, “Best Management Practices for Protection of Surface Waters,” March 1997. Additionally, any solid waste generated during construction would be temporary and would either be hauled away to landfills or disposed of on-site by controlled burning, in compliance with all local, state, and federal regulations.

*This commitment will be implemented during construction of the project.*

## **PDEA/Roadway Design/Roadside Environmental**

A retaining wall and vegetative screening will be provided adjacent to the Keithville Rental Units to avoid right-of-way acquisition and minimize visual impacts. These will be located at the northwest corner of the property adjacent to the Bragg Boulevard/Fayetteville Outer Loop interchange (quadrant D).

*This commitment was implemented during design.*

**PDEA/Roadway Design**

To minimize harm to the Shaw-Gillis Historic District, Raeford Road will be closed and landscaping will be provided adjacent to the roadway. In addition, access to the property from US 401 will be maintained, and the exterior of the Shaw-Gillis house will be painted following construction.

*This commitment was negotiated during design and will be implemented during construction.*

**PDEA/Roadway Design/Right of Way**

NCDOT will provide funds or construct and replace Fort Bragg's perimeter fence impacted by the proposed project. NCDOT will coordinate with Fort Bragg to provide perimeter roads and tank trails along the proposed project. The criteria and construction of visual screening to eliminate the line of sight to facilities located along the project will be coordinated with Fort Bragg. NCDOT will provide resources and/or construct new Access Check Point facilities in coordination with Fort Bragg at Reilly Road, Canopy Road, and Bragg Boulevard. The design of the Yadkin Road overpass will be coordinated with Fort Bragg to incorporate the new roadway grade into the Access Check Point facilities. Smith Lake Access Road off Murchison Road will be closed and relocated off Honeycutt Road in coordination with Fort Bragg. The new access will incorporate the current facilities and minimize harm to existing pine trees.

*These commitments were addressed during design and will be negotiated as part of the Right of Way settlement with Fort Bragg.*

**PDEA/Roadway Design/Hydraulics**

NCDOT will provide a bridge or box culvert at the existing wetland at the rear of Pine Forest High School to allow for a pedestrian crossing in coordination with a proposed Cumberland County greenway.

*The commitment was implemented during design.*

**PDEA**

Several systematic surveys of all potentially-suitable habitats for American chaffseed, Michaux's sumac, pondberry, rough-leaved loosestrife, and the Saint Francis' Satyr butterfly were conducted by biologists from May 2001 through August 2004. No individuals of any of the species were observed during the surveys. A re-survey will be conducted one year prior to construction, during the appropriate survey window, within the project limits to determine if any members of these species are present.

*This commitment was implemented within the year prior to awarding to the contract of the final design projects. Surveys will continue to be conducted within the year prior to construction of the remaining preliminary design sections.*

**Roadway Design**

A capacity analysis for an updated design year using 2030 traffic volumes will be prepared and utilized in the design of the Final Plans.

*This commitment will be implemented prior to the completion of Final Plans.*

## COMMITMENTS FROM PERMITTING

### **PDEA & Division 6 Construction**

The permittee shall abide by the conservation measures identified in the Biological Assessment prepared for the Red-cockaded Woodpecker, *Piocooides borealis*, dated 9 September 2004 and the conservation measures identified by the US Fish and Wildlife Service in the Biological Opinion dated 28 April 2005.

*The commitment was implemented during design and will continue to be followed during construction.*

### **PDEA**

The 404 permit does not authorize you to take an endangered species, in particular the Red Cockaded Woodpecker. In order to legally take a listed species, you must have separate authorization under the ESA. (e.g., an ESA Section 10 permit, or a BO under the ESA Section 7, with “incidental take” provisions with which you must comply). The USFWS Biological Opinion, dated 28 April 2005, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with “incidental take” that is also specified in the BO. Your authorization under this Corps permit is conditional upon your compliance with all the mandatory terms and conditions associated with incidental take of the BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute non-compliance with your Corps permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and the ESA.

*The commitment was implemented during design and will continue to be followed during construction.*

### **PDEA**

#### **TERMS AND CONDITIONS FROM BO**

In order to be exempt from prohibitions of section 9 of the Act, the NCDOT must comply with the following terms and conditions, which implement the reasonable and prudent measures, described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

(1) [RPM (1)] Upon acquisition of the conservation property, NCDOT will identify the entity or entities responsible for owning and managing the property and secure an agreement from the entity (or entities) that the property will be managed in accordance with a RCW conservation plan approved by the Service and the NCSCP. (NCDOT’s obligations will not extend beyond the acquisition of the property, NCDOT’s receipt of assurances from the responsible third party that the property will be managed in accordance with standards set by the NCSCP for RCW conservation, and subsequent transferal to the third party; it is not anticipated that the cost of NCDOT’s obligation would exceed \$ 1.0 million).

*The NCDOT purchased the 113 acre Marshbanks Property to help establish the Northern Connector to encourage movement of existing RCW populations.*

(2) [RPM (1)] If the property is not acquired and transferred to a responsible third party at least six months prior to initiation of construction, then NCDOT, NCSCP and the Service will meet to determine an appropriate alternative that reasonably supports the objective of establishing the Northern Corridor as a demographic linkage between RCW subpopulations in the Sandhills East primary core population (Overhills HMU) and NEA. In any case, conservation actions to fulfill this reasonable and prudent measure must occur prior to construction.

*The NCDOT purchased the 113 acre Marshbanks Property to help establish the Northern Connector to encourage movement of existing RCW populations.*

(3) [RPM (2)] Where NCDOT is able to program the timing of tree clearing and highway construction within the project area, NCDOT will, in the early stages of the planning process, schedule meetings with Fort Bragg's Directorate of Public Works and the Service to determine:

A. The best time to conduct tree clearing and/or construction activities in a manner that minimizes impacts to cluster 65 and its associated RCW group.

B. Determine the time and location where artificial cavities will be created to minimize the loss of RCWs associated with project activities.

C. Establish protective measures for trees selected and/or used to provision cavities for conserving RCWs associated with the Fayetteville Outer Loop project.

*NCDOT Coordinated with Fort Bragg on tree clearing plans prior to construction*

Upon locating a dead, injured, or sick individual of an endangered or threatened species, initial notification must be made to the Clemson Field Office. Additional notification must be made to the Raleigh, North Carolina Fish and Wildlife Ecological Services Field Office. Care should be taken in handling sick or injured individuals and in the preservation of specimens in the best possible state for later analysis of cause of death or injury. All procedural and reporting requirements as outlined in the Service's region-wide biological opinion on monitoring and management (Service 2003b) will be followed.

These reasonable and prudent measures, together with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. The Service believes that no more than one RCW group will be incidentally taken. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking, and review with the Service the need for possible modification of the reasonable and prudent measures.

#### **PDEA**

The permittee shall continue coordination of design for U-2519 Sections AA, AB, BA, BB, CA and CB through the NEPA/Section 404 Merger 01 Process – Concurrence points 2A, 4B and 4C. The final design shall incorporate appropriate avoidance, minimization and mitigation of aquatic resource impacts to the fullest extent practicable. The applicant shall not commence any work within waters of the United States within U-2519 Sections AA, AB, BA, BB, CA and CB until after the submittal of a modified

*All section of the project (U-2519 AA, AB, BA, BB, CA, CB, DA, X-0002 B and X-0002 C) have been through the NEPA/Section 404 Merger 01 Process as follows:*

- *Concurrence Point 1*                      *Signed – July 13, 2000*
- *Concurrence Point 2*                      *Signed – July 31, 2000*
- *Concurrence Point 3*                      *Signed – October 5, 2000*
- *Concurrence Point 2A and 4A*              *Signed – March 16, 2004*



*The following sections have been through the NEPA/Section 404 Merger 01 Process for Concurrence points 4B and 4C as follows:*

X-0002C	Concurrence Point 4B and 4C	February 22, 2006 & June 13, 2007
X-0002B	Concurrence Point 4B and 4C	December 14, 2005 & June 13, 2007
U-2519E	Concurrence Point 4B and 4C	N/A* & June 13, 2007
U-2519DA	Concurrence Point 4B and 4C	December 14, 2005 & June 13, 2007
U-2519CB	Concurrence Point 4B and 4C	March 16, 2005 & January 23, 2013
U-2519CA	Concurrence Point 4B	April 12, 2006

*\* received Concurrence Point 4B as U-2519DA*

## **PDEA**

Compensatory mitigation for the unavoidable impacts to 34.84 acres of riparian wetlands and 13.59 acres of non-riparian wetlands associated with the proposed project shall be provided by debiting 104.52 acres of riparian wetlands and 40.77 acres of non-riparian wetlands from the Privateer Farms Mitigation Site. Compensatory mitigation for the unavoidable impacts to 12,346 linear feet of important stream reach associated with the proposed project shall be provided by debiting 18,519 linear feet of stream reach from the Privateer Farms Mitigation Site. The permittee shall maintain the Privateer Farms Mitigation Site in its natural condition, as altered by the mitigation plan, in perpetuity. Except as authorized or required by the mitigation plan, prohibited activities on the mitigation property include, but are not limited to, filling; grading; excavating; earth moving of any kind; construction of roads, walkways, buildings signs, or any other structure; any activity that may alter the drainage patterns on the property; destruction, mowing, or other alteration of vegetation on the property; disposal or storage of any garbage trash, or other waste material. In addition, the permittee shall take no action, whether on or off the mitigation property, which will adversely impact the wetlands on the mitigation property. This condition above runs with the land. The permittee shall not sell, lease, or otherwise convey any interest in the mitigation property without subjecting the property to legally enforceable restrictions on the use of the property, to ensure its preservation, approved in writing by the Wilmington District Corps of Engineers.

*Approved modifications have brought the total project wetland impacts to 51.26 acres (33.74 riparian, 17.52 non-riparian) and total stream impacts to 13,173 feet.*

## **Division 6 Construction**

At locations where ponds will be drained, proper measures will be taken to drain the pond with limited impact to upstream and downstream channel stability as well as to native aquatic species. Proper measures will be taken to avoid sediment release and/or sediment accumulation downstream as a result of pond draining. If typical pond draining techniques will create significant disturbance to native aquatic species, additional measures such as collection and relocation may be necessary to prevent a significant fish kill. NCDOT shall consult with NC Wildlife Resources staff to determine if there are any sensitive species, and the most appropriate measures to limit impacts to these species. The permittee shall observe any natural channel re-establishment, or utilize natural channel construction techniques, to ensure that the jurisdictional stream channel above and below the drained pond remain stable, and that no additional impacts occur within the natural stream channel as a result of draining the pond.



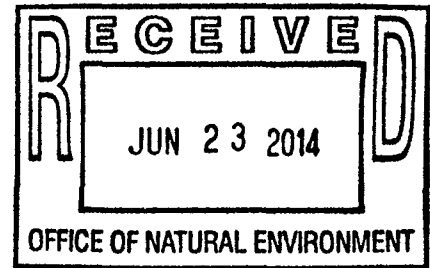
REPLY TO  
ATTENTION OF:

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

June 18, 2014

Regulatory Division

Action ID. SAW-2008-01413  
NC DOT TIP: X-0002 B & C; U-2519



Richard W. Hancock, P.E.  
Environmental Management Director, PDEA  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Dear Mr. Hancock:

Reference the Department of the Army permit issued on November 4, 2008, for the discharge of fill material into waters and wetlands adjacent to various creeks, and their tributaries in order to construct X-0002 B& C and U-2519, in Cumberland, Hoke, and Robeson Counties, North Carolina. Reference is also made to subsequent permit modifications dated December 21, 2010, and April 13, 2011. The referenced section 404 permit authorizes impacts to 48.43 acres of jurisdictional wetlands, 12,346 linear feet of stream channel and 3.67 acres of open waters. The permit modification is proposed to include additional impact that were not authorized by the November 4, 2008 Department of the Army permit or the aforementioned permit modifications. The proposed modifications are based on final design plans for sections U-2519 CB and changes associated with U-2519 DA permit sites 18 (TT4DA), 19, and 20. Overall permanent impacts to wetlands have increased by 0.36 acre and decreased by 449 linear feet to stream channels.

I have determined that the proposed project modifications described above are not contrary to the public interest and consistent with the 404 (B)(1) and therefore, the Department of the Army permit is hereby modified and, as requested, the new expiration date is December 31, 2019. The following conditions specific to Section CB and DA have been added:

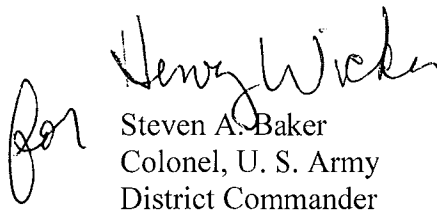
**All original conditions in the November 4, <sup>2008</sup>~~2014~~ permit remain valid and are enforceable with Section U-2519 CB and DA authorization. The Special Conditions for the permit modification are the following:**

1. This permit modification only authorizes work on TIP U-2519 CB and section DA (permit sites 18, 19, & 20). Construction on Sections AA, AB, BA, BB & CA of TIP U-2519 shall not commence until final design has been completed for those sections, 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 (COE).

2. In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit modification authorization.

This modification approval will be utilized for future compliance of the project. If you have questions, please contact Liz Hair of the Wilmington Regulatory Field Office, at telephone (910) 251-4049.

Sincerely,

  
Steven A. Baker  
Colonel, U. S. Army  
District Commander

Enclosures:

1. 401 Water Quality Certification Modification dated May 22, 2014
2. Privateer Farms Updated Debit Ledger
3. Roadway Permit Drawings U-2519 CB and revisions dated 5/13/14
4. Mitigation Responsibility Transfer Form

Copies Furnished (w/o attachments):

Mr. Mason Herndon, NCDWR (electronic copy)  
Ms. Cynthia Van Der Wiele, USEPA (electronic copy)  
Mr. Gary Jordan, USFWS (electronic copy)  
Mr. Travis Wilson, NCWRC (electronic copy)  
Mr. Jim Rerko, NCDOT, DEO Division 6 (electronic copy)

Copies Furnished (w/enclosures):

Mr. Tyler Stanton, NCDOT (electronic copy)  
Ms. Beth Harmon, NCEEP (electronic copy)  
Mr. Todd Tugwell, USACE (electronic copy)





REPLY TO  
ATTENTION OF:

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

April 13, 2011

Regulatory Division

Subject: Action ID No. 2008-01413, TIP Nos. U-2519 and X-0002, Fayetteville, Cumberland, Robeson and Hoke Counties, North Carolina.

Dr. Gregory J. Thorpe, Ph.D.  
Environmental Management Director  
Project Development & Environmental Analysis  
1598 Mail Service Center  
Raleigh, N.C. 27699-1598

Dear Dr. Thorpe:

I am responding to your request dated March 28, 2011 for an extension of time modification to the existing Department of the Army (DA) permit issued for the above referenced project on November 4, 2008 and modified on December 21, 2010.

I have determined that the proposed project modification described above is not contrary to the public interest and therefore, the DA permit expiration date is hereby modified. The permit modification is as follows:

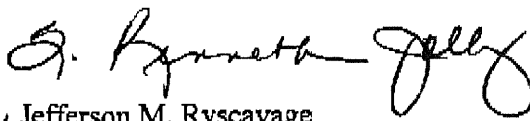
**GENERAL CONDITION #1**

**The time limit for completing the work authorized ends on December 31, 2014. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.**

Please note that all unmodified terms and conditions of your original Department of the Army permit and modifications of December 21, 2010 shall remain in effect.

Should you have any questions, please contact Mr. Ronnie Smith, Wilmington Field Office, Regulatory Division, at telephone (910) 251-4829.

Sincerely,

  
Jefferson M. Ryscavage  
Colonel, U.S. Army  
District Commander

Copies Furnished:

Mr. Greg Burns, PE  
Division Engineer, Division 6  
North Carolina Department of Transportation  
Post Office Box 1150  
Fayetteville, North Carolina 28302

Mr. Jim Rerko ✓  
Division Environmental Officer, Division 6  
North Carolina Department of Transportation  
Post Office Box 1150  
Fayetteville, North Carolina 28302

Mr. Brain Wrenn  
NCDENR-DWQ  
Wetlands Section  
1650 Mail Service Center  
Raleigh, North Carolina 27699-1650

Mr. Mason Herndon  
NCDENR-DWQ  
225 Green Street, Suite 214  
Fayetteville, North Carolina 28301-5094

Mr. Travis W. Wilson  
NC Wildlife Resource Commission  
1142 I-85 Service Rd.  
Creedmoor, North Carolina 27522

Mr. David Cox  
North Carolina Wildlife Resources Commission  
512 N. Salisbury Street  
Raleigh, North Carolina 27604-1188

-2-

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

Mr. Chris Militcher  
 United States Environmental Protection Agency  
 c/o Federal Highway Administration  
 310 New Bern Avenue, Room 206  
 Raleigh, North Carolina 27601

Ms. Renee Gledhill-Early  
 North Carolina Department of Cultural Resources  
 4617 Mail Service Center  
 Raleigh, North Carolina 27699



REPLY TO  
ATTENTION OF:

**DEPARTMENT OF THE ARMY**  
**WILMINGTON DISTRICT, CORPS OF ENGINEERS**  
**P.O. BOX 1890**  
**WILMINGTON, NORTH CAROLINA 28402-1890**  
November 4, 2008

Regulatory Division

Action ID SAW-200801413

Dr. Gregory J. Thorpe, PhD, Manager  
Project Development and Environmental Analysis Branch  
N.C. Department of Transportation  
Division of Highways  
1589 Mail Service Center  
Raleigh, North Carolina 27699-1598

Dear Dr. Thorpe:

Enclosed is a Department of the Army permit to directly discharge dredged and/or fill material into jurisdictional wetlands to facilitate the construction of Fayetteville Outer Loop, Transportation Improvements Project X-0002B & C and U-2159, State Project Number 8.2441301 and 8.T441302, Cumberland, Hoke and Robeson Counties, North Carolina. The proposed 27.8 mile controlled-access freeway is located beginning at an interchange with I-95 just south of SR 1718 (Green Spring Road) in Robeson County, continues north through Cumberland County, turns eastward along the southern boundary of the Fort Bragg Military Reservation, and ends just west of US 401 (Ramsey Street).

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

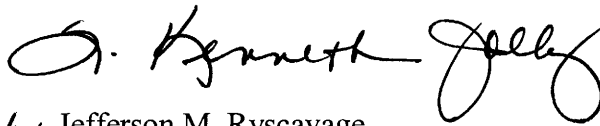
Carefully read your permit. The general and special conditions are important. Your failure to comply with these conditions could result in a violation of Federal law. Certain significant conditions require that:

- a. You must complete construction before December 31, 2011.
- b. You must allow representatives from this office to make periodic visits to your worksite as deemed necessary to assure compliance with permit plans and conditions.

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

You should address all questions regarding this authorization to Richard K. Spencer, Wilmington Regulatory Field Office at (910) 251-4172.

Sincerely,

  
Jefferson M. Ryscavage  
Colonel, U.S. Army  
District Commander

Enclosures

Copy Furnished (with enclosures):

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

Copies Furnished (with special conditions and plans):

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

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

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

Mr. Doug Huggett  
Division of Coastal Management  
N.C. Department of Environment  
and Natural Resources  
400 Commerce Avenue  
Morehead City, North Carolina 28557  
  
Mr. David Rackley  
National Marine Fisheries Service  
219 Fort Johnson Road  
Charleston, South Carolina 29412-9110

## DEPARTMENT OF THE ARMY PERMIT

Permittee **NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**

Permit No. **2008-01413**

Issuing Office **USAED, Wilmington**

**RECEIVED**

NOV 03 2008

REGULATORY  
WILM.FLD.OFC.

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

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

Project Description: **Directly discharge dredged or fill material into waters of the United States associated with construction of the Fayetteville Outer Loop from I-95 South of Fayetteville to NC 24/87 in Cumberland and Robeson Counties, North Carolina.**

Project Location: **In the Lumber River, Hydrologic Cataloging Unit 03040203 and the Cape Fear River, Hydrologic Cataloging Unit 03030004. The project is more specifically located starting at Latitude 34.89727 N, Longitude 78.95899 W and ending at Latitude 35.11051, Longitude 78.97456.**

a. Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2011.** If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

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

Special Conditions:

## **SEE ATTACHED SPECIAL CONDITIONS**

Further Information:

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

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

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

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

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

E. P. Luck for Dr. Gregory J. Thayer, PhD 10-29-08  
(PERMITTEE) **NORTH CAROLINA DEPARTMENT OF TRANSPORTATION** (DATE)

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

G. Kenneth Kelly 11-4-08  
(DISTRICT ENGINEER) **JEFFERSON M. RYSCAVAGE, COLONEL** (DATE)

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

\_\_\_\_\_  
(TRANSFeree) (DATE)



SPECIAL CONDITIONS  
2008-01413

SPECIAL CONDITIONS (Action ID. 2008-01413, Fayetteville Outer Loop, Transportation Improvements Project . X-0002B & C and U-2519, State Project Number 8.2441301 and 8.T441302

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.
3. The permittee shall schedule a preconstruction meeting between its representatives, the contractor's representatives, and the Corps of Engineers, Mr. Richard Spencer, Wilmington Regulatory Field Office, prior to any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all of the terms and conditions contained within this Department of the Army Permit. The permittee shall notify the Corps of Engineers Project Manager a minimum of thirty (30) days in advance of the scheduled meetings in order to provide that individual 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 Corps of Engineers, Mr. Richard Spencer, Wilmington Regulatory Field Office prior to the pre-construction meeting.
4. The permittee shall ensure that the construction design plans for this project do not deviate from the permit plans attached to this authorization. Written verification shall be provided that the final construction drawings comply with the attached permit drawings prior to any active construction in waters of the United States, including wetlands. Any deviation in the construction design plans will be brought to the attention of the Corps of Engineers, Mr. Richard Spencer, Wilmington Regulatory Field Office prior to any active construction in waters or wetlands.
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 USACE 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 District Engineer within 24 hours of the violation.
6. Compensatory mitigation for the unavoidable impacts to 34.84 acres of riparian wetlands and 13.59 acres of non-riparian wetlands associated with the proposed project shall be provided by

debiting 104.52 acres of riparian wetlands and 40.77 acres of non-riparian wetlands from the Privateer Farms Mitigation Site. Compensatory mitigation for the unavoidable impacts to 12,346 linear feet of important stream reach associated with the proposed project shall be provided by debiting 18,519 linear feet of stream reach from the Privateer Farms Mitigation Site. The permittee shall maintain the Privateer Farms Mitigation Site in its natural condition, as altered by the mitigation plan, in perpetuity. Except as authorized or required by the mitigation plan, prohibited activities on the mitigation property include, but are not limited to, filling; grading; excavating; earth moving of any kind; construction of roads, walkways, buildings signs, or any other structure; any activity that may alter the drainage patterns on the property; destruction, mowing, or other alteration of vegetation on the property; disposal or storage of any garbage trash, or other waste material. In addition, the permittee shall take no action, whether on or off the mitigation property, which will adversely impact the wetlands on the mitigation property. This condition above, runs with the land. The permittee shall not sell, lease, or otherwise convey any interest in the mitigation property without subjecting the property to legally enforceable restrictions on the use of the property, to ensure its preservation, approved in writing by the Wilmington District Corps of Engineers.

7. Except as authorized by this permit or any USACE 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. There shall be no excavation from, waste disposal into, or degradation of, jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit, including appropriate compensatory mitigation. This prohibition applies to all borrow and fill activities connected with this project. 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 or to reduce the reach of waters or wetlands.

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. 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 (#7) 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 (#7). All information will be available to the Corps of Engineers upon request. NCDOT shall require its contractors to complete and execute reclamation plans for each waste and borrow site and provide written documentation that the reclamation plans have been implemented and all work is completed. This documentation will be provided to the Corps of Engineers within 30 days of the completion of the reclamation work.

10. The permittee shall comply with the conditions specified in the water quality certification, No. 3758, issued by the North Carolina Division of Water Quality on 6 October 2008.

11. The permittee shall abide by the conservation measures identified in the Biological Assessment prepared for the Red-cockaded Woodpecker, *Piocoides borealis*, dated 9 September 2004 and the conservation measures identified by the US Fish and Wildlife Service in the Biological Opinion dated 28 April 2005.

12. This Corps permit does not authorize you to take an endangered species, in particular the Red Cockaded Woodpecker. In order to legally take a listed species, you must have separate authorization under the ESA. (e.g., an ESA Section 10 permit, or a BO under the ESA Section 7, with “incidental take” provisions with which you must comply). The enclosed USFWS Biological Opinion, dated 28 April 2005, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with “incidental take” that is also specified in the BO. Your authorization under this Corps permit is conditional upon your compliance with all the mandatory terms and conditions associated with incidental take of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute non-compliance with your Corps permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and the ESA.

13. The permittee shall continue coordination of design for U-2519 Sections AA, AB, BA, BB, CA and CB through the NEPA/Section 404 Merger 01 Process – Concurrence points 2A, 4B and 4C. The final design shall incorporate appropriate avoidance, minimization and mitigation of aquatic resource impacts to the fullest extent practicable. The applicant shall not commence any work within waters of the United States within U-2519 Sections AA, AB, BA, BB, CA and CB until after the submittal of a modified application with final design plans reflecting the appropriate avoidance, minimization and mitigation within these sections and has received final approval from Wilmington District Corps of Engineers

14. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or streambeds or banks, adjacent to, upstream or downstream of the structures. Riprap armoring of streams at culvert outlets shall be minimized above the ordinary high water elevation in favor of bioengineering techniques such as bank sloping, erosion control matting and revegetation with deep-rooted, woody plants.

15. 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.

16. The permittee shall take appropriate measure to control any bottom sediment that may be sluiced by the draining of impacted ponds on the project site. Sediment sluicing from ponds is not authorized by this permit.

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

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

19. The permittee shall install barrier fencing or other acceptable forms of barrier around all wetlands that are not to be disturbed to make them readily visible and prevent construction equipment from inadvertently entering and disturbing the wetland areas that are to remain undisturbed.

20. 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 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.

21. The permittee shall abide by all project commitments identified in the FHWA/NCDOT EIS and ROD.

22. The permittee shall abide by all stipulations identified in the Memorandum of Agreement between the North Carolina Department of Transportation and the North Carolina State Historic Preservation Officer, executed 12 April 2005, and the stipulations identified in the Concurrence Form for Assessment of Effects, executed 11 January 2005.

23. If the permittee discovers any previously unknown historic or archeological sites while accomplishing the authorized work, he shall immediately stop work and notify the Wilmington District Engineer who will initiate the required State/Federal coordination.

24. The permittee shall maintain the authorized work in good condition and in conformance with the terms and conditions of this permit. The permittee is not relieved of this requirement if he abandons the permitted activity without transferring it to a third party.

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

26. This Department of the Army permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

27. In issuing this permit, the Federal Government does not assume any liability for:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future Federal activities initiated on behalf of the general public.

c. Damages to other permitted or un-permitted activities or structures caused by the authorized activity.

d. Design and construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.



North Carolina Department of Environment and Natural Resources



Pat McCrory  
Governor

May 22, 2014

Mr. Richard W. Hancock, P.E., Manager  
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 with ADDITIONAL CONDITIONS for Proposed improvements to the Fayetteville Outer Loop from I-95 South of Fayetteville to NC 24-87 in Cumberland, Hoke and Robeson Counties, Federal Aid Project No. NHF-DPR-0100(001), State Project No. 8.2441301, TIP Nos X-002 B & C, and U-2519AA, AB, BA, BB, CA, CB, DA & E..  
NCDWR Project No. 20080737 v. 4

Dear Mr. Hancock:

Attached hereto is a modification of Certification No. 3758 issued to The North Carolina Department of Transportation (NCDOT) dated October 6, 2008 and modifications dated June 3, 2010 and December 16, 2010.

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

Sincerely,

Thomas A. Reeder, Director  
Division of Water Resources

Attachments

cc: Liz Hair, US Army Corps of Engineers, Wilmington Field Office (electronic copy only)  
Greg Burns, PE, Division 6 Engineer  
Jim Rerko, Division 6 Environmental Officer  
Cynthia Van Der Wiele, Environmental Protection Agency (electronic copy only)  
Travis Wilson, NC Wildlife Resources Commission (electronic copy only)  
LeiLani Paugh, NCDOT, Natural Environment Section (electronic copy only)  
Sonia Carrillo, NCDWR Central Office  
File Copy

Transportation and Permitting Unit  
1617 Mail Service Center, Raleigh, North Carolina 27699-1617  
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604  
Phone: 919-807-6300 \ FAX: 919-733-1290  
Internet: [www.ncwaterquality.org](http://www.ncwaterquality.org)

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

**THIS CERTIFICATION** is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact an additional 14.16 acres of jurisdictional wetlands and 1,027 linear feet of jurisdictional streams in Cumberland County for the construction of **U-2519 CB and portions of U-2519 DA only**. The project shall be constructed pursuant to the modification dated received April 30, 2014 and revisions received on May, 15, 2014. **No impacts to Sections AA, AB, BA, BB or CA are being authorized with this certification.** The authorized impacts are as described below:

**Stream Impacts in the Cape Fear River Basin**

Site	Station	Permanent Fill in Intermittent Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Bank Stabilization (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
1	-L-821+59 to 830+78	0	0	0	5	0	5	0
2	-TT1- 46+10 to 46+73	0	0	69	19	10	98	0
13	-Y2REV-LT-34+55 to 36+20	0	0	80	0	10	90	0
14	-Y2REV-LT-29+32 to 29+33	0	0	25	10	10	45	0
15	-TT4- 54+56 to 58+27	0	0	440	40	0	480	440
18*	-L- 49+55 to 53+31	0	0	135	0	20	155	155
18*	-TT4DA-43+45 to 56+12	0	0	133	11	10	154	143
<b>TOTAL</b>		<b>0</b>	<b>0</b>	<b>882</b>	<b>85</b>	<b>60</b>	<b>1027</b>	<b>738</b>

**Total Stream Impact for Modification: 1,027 linear feet.**

\*same stream feature.

**Wetland Impacts in the Cape Fear River Basin**

Site	Station	Wetland Type	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Impacts Requiring Mitigation (ac)
1	-L- 821+59 to 830+78	R	0	0	0	0	2.60	2.60	0
3	-L- 836+61 to 838+07	R	0.33	0	0	0.02	0	0.35	0.35
4	-L- 838+80 to 841+17	R	0.10	0	0.07	0.02	0	0.19	0.19
5	-L- 847+36 to 849+22	R	0.62	0	0	0.07	0	0.69	0.69
6	-L- 852+83 to 853+64	R	0.11	0	0	0.02	0	0.13	0.13
7	-L- 855+25 to 855+70	R	0.07	0	0	0.01	0	0.08	0.08
8	-L- 859+50 to 861+81	R	0.62	0	0	0.04	0	0.66	0.66
9	-L- 864+39 to 865+64	R	0.27	0	0	0.04	0	0.31	0.31
10	-L- 889+04 to 902+62	R	1.47	0	0.30	0.17	2.18	4.12	1.94
12	-L- 908+82 to 909+03	NR	0	0	0	0.01	0	0.01	0.01
13	-Y2REV-LT-34+55 to 36+20	NR	0.27	0	0	0	0	0.27	0.27
15	-TT4- 54+56 to 58+27	NR	0.42	0	0	0.08	0	0.50	0.50
16	-Y1- 39+18 to 40+61	NR	0.15	0	0	0.05	0	0.20	0.20
18	-L- 49+55 to 53+31	NR	0.25	0	0	0.07	0	0.32	0.32
18	-TT4DA-43+45 to 56+12	NR	0.16	0	0	0.05	0	0.21	0.21
19	-L- 89+00 to 93+35	R	0	0	0	0	2.62	2.62	0
20	-RP1C-42+50 to 48+50	R	0	0	0	0	0.89	0.89	0
<b>UTILITIES</b>									
U1	-Y4- 16+36 to 16+66	R	0	<0.01	<0.01*	0	0.01	0.01	0
U2	-PR2A- 17+68 to 17+94	NR	0	<0.01	<0.01*	0	<0.01	<0.01	0
<b>TOTAL</b>			<b>4.84</b>	<b>&lt;0.01</b>	<b>0.37</b>	<b>0.65</b>	<b>8.30</b>	<b>14.16</b>	<b>5.86</b>

**Total Wetland Impact for Modification: 14.16 acres**

\*temporary excavation for open cut utility installation



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 April 30, 2014 and revisions received on May, 15, 2014. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated October 6, 2008 and modifications dated June 3, 2010 and December 16, 2010 still apply except where superceded 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). 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 of the authorized activities and conditions of certification associated with the original Water Quality Certification dated October 6, 2008 and subsequent modifications dated June 3, 2010 and December 16, 2010 still apply except where superceded by this certification.
2. Material temporarily excavated for utility installation shall be stockpiled in an upland area and placed back into the excavated area in a manner that restores the original grade and soil profile with the organic/root layer on top.
3. Compensatory mitigation for 738 linear feet of impacts to streams is required. We understand that you have chosen to debit mitigation from the Privateer Farm Mitigation Bank. Privateer Farm Mitigation Bank is located in HUC 03030005 which is adjacent to the project HUC 03030004, therefore a 1.5:1 mitigation ratio is required. This certification gives you approval to debit 1,107 linear feet of stream mitigation from the Privateer Farm Mitigation Bank to satisfy the mitigation requirements of this certification.
4. Compensatory mitigation for 5.86 acres of wetlands is required. We understand that you have chosen to debit mitigation from the Privateer Farm Mitigation Bank. Privateer Farm Mitigation Bank is located in HUC 03030005 which is adjacent to the project HUC 03030004, therefore a 3:1 mitigation ratio is required. This certification gives you approval to debit 17.58 acres of wetland mitigation from the Privateer Farm Mitigation Bank to satisfy the mitigation requirements of this certification.

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

If 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 DENR as follows:

Mr. Lacy Presnell, General Counsel  
Department of Environment and Natural Resources  
1601 Mail Service Center

This the 22nd day of May 2014

DIVISION OF WATER RESOURCES



Thomas A. Reeder, Director  
Division of Water Resources

WQC No. 3758



North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

John E. Skvarla, III  
Secretary

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, 1650 Mail Service Center, Raleigh, NC, 27699-1650. 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 \_\_\_\_\_

Transportation and Permitting Unit  
1617 Mail Service Center, Raleigh, North Carolina 27699-1617  
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604  
Phone: 919-807-6300 \ FAX: 919-733-1290  
Internet: [www.ncwaterquality.org](http://www.ncwaterquality.org)

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October 6, 2008

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

Subject: 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water with ADDITIONAL CONDITIONS for Proposed Fayetteville Outer Loop in Cumberland, Hoke and Robeson Counties, Federal Aid Project No. NHF-DPR-0100(001), State Project No. 8 2441301, TIP Nos. X-002 B&C and U-2519  
DWQ Project No. 20080737

Dear Dr. Thorpe:

Attached hereto is a copy of Certification No. 3758 issued to The North Carolina Department of Transportation dated October 6, 2008.

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

Sincerely,

Coleen Sullins,  
Director

Attachments

cc: Richard Spencer, US Army Corps of Engineers, Wilmington Field Office  
Tyler Stanton, NCDOT NEU  
Jim Rerko, DOT Division 6 Environmental Officer  
Kathy Matthews, Environmental Protection Agency  
Travis Wilson, NC Wildlife Resources Commission  
Beth Harmon, Ecosystem Enhancement Program  
Ken Averitte, DWQ Fayetteville Regional Office  
File Copy



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

**THIS CERTIFICATION** is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (DWQ) Regulations in 15 NCAC 2H 0500. This certification authorizes the NCDOT to impact 57.08 acres of jurisdictional wetlands and 13,232 linear feet of jurisdictional streams in Cumberland, Hoke and Robeson Counties. The project shall be constructed pursuant to the application dated received April 25, 2008. The authorized impacts are as described below.

### Section X-0002 B Stream Impacts in the Cape Fear River Basin

Site	Permanent Fill in Intermittent Stream (linear ft)	Temporary Impacts to Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Impacts to Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
2	0	0	213	0	213	213
<b>Total</b>	<b>0</b>	<b>0</b>	<b>213</b>	<b>0</b>	<b>213</b>	<b>213</b>

**Total Stream Impact for Section X-0002 B: 213 linear feet**

### Section X-0002 C Stream Impacts in the Cape Fear River Basin

Site	Permanent Fill in Intermittent Stream (linear ft)	Temporary Impacts to Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Impacts to Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
1	0	0	279	0	279	279
3	0	0	775	0	775	775
5	0	0	361	0	361	361
6	0	0	479	0	479	479
7	0	0	213	0	213	213
8	0	0	509	0	509	509
9	0	0	98	0	98	98
<b>Total</b>	<b>0</b>	<b>0</b>	<b>2714</b>	<b>0</b>	<b>2714</b>	<b>2714</b>

**Total Stream Impact for Section X-0002 C: 2,714 linear feet**

### Section U-2519 E Stream Impacts in the Cape Fear River Basin

Site	Permanent Fill in Intermittent Stream (linear ft)	Temporary Impacts to Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Impacts to Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
2	886	0	0	0	886	0
<b>Total</b>	<b>886</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>886</b>	<b>0</b>

**Total Stream Impact for Section U-2519 E: 886 linear feet**



This approval is only valid for the purpose and design that you submitted in your application dated received April 25, 2008. Should your project change, you are required to notify the DWQ and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If any additional wetland 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). For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

### Conditions of Certification

- 1 This Water Quality Certification authorizes impacts to wetlands, streams and open waters to sections X-0002 B and C, and U-2519 DA and E only. When final design plans are completed for U-2519 Sections AA, AB, BA, BB, CA, and CB, modifications to the 401 Water Quality Certification shall be submitted with four 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, or surface waters, located in U-2519 Sections AA, AB, BA, BB, CA or CB 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.
- 2 Compensatory mitigation for 12,346 linear feet of impact to streams is required. We understand that you have chosen to debit mitigation from the Privateer Farm Mitigation Bank. This certification gives approval to the debiting of 12,346 linear feet of stream mitigation from the Privateer Farms Mitigation Site in order to satisfy the mitigation requirements of this project.
- 3 Compensatory mitigation for 48.4 acres of wetlands is required at a 2:5:1 ratio. We understand that you have chosen to debit mitigation from the Privateer Farm Mitigation Bank. This certification gives approval to the debiting of 121.0 acres of wetland mitigation from the Privateer Farms Mitigation Site in order to satisfy the mitigation requirements of this project.
- 4 At locations where ponds will be drained, proper measures will be taken to drain the pond with limited impact to upstream and downstream channel stability as well as to native aquatic species. Proper measures will be taken to avoid sediment release and/or sediment accumulation downstream as a result of pond draining. If typical pond draining techniques will create significant disturbance to native aquatic species, additional measures such as collection and relocation may be necessary to prevent a significant fish kill. NCDOT shall consult with NC Wildlife Resources staff to determine if there are any sensitive species, and the most appropriate measures to limit impacts to these species. The permittee shall observe any natural channel re-establishment, or utilize natural channel construction techniques, to ensure that the jurisdictional stream channel above and below the drained pond remain stable, and that no additional impacts occur within the natural stream channel as a result of draining the pond.
- 5 The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species.
- 6 Strict adherence to the most recent version of NCDOT's Best Management Practices For Bridge Demolition and Removal approved by the US Army Corps of Engineers is a condition of the 401 Water Quality Certification.
- 7 Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices*.

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- 8 For any streams being impacted due to site dewatering activities, the site shall be graded to its preconstruction contours and revegetated with appropriate native species
- 9 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.
- 10 If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
- 11 Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.
- 12 One copy of the final construction drawings shall be furnished to NCDWQ Central Office, and one copy to the NCDWQ Fayetteville Regional Office, prior to the pre-construction meeting. The permittee shall provide written verification that the final construction drawings comply with the permit drawings contained in the application dated received April 25, 2008. Any deviations from the approved drawings are not authorized unless approved by the NC Division of Water Quality.
- 13 If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
- 14 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.
- 15 The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions.
- 16 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.
- 17 The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.
- 18 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.
- 19 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.
- 20 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.



- 21 No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification
- 22 Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited
- 23 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
- 24 All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification
- 25 A copy of this Water Quality Certification shall be maintained on site at the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager
- 26 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
- 27 The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc
- 28 The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery
- 29 Upon completion of the project (including any impacts at associated borrow or waste site), 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
- 30 Native woody riparian vegetation (i.e., 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
- 31 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, or access roads to 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
- 32 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.

33 Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.

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

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

This the 6th day of October 2008

DIVISION OF WATER QUALITY

Coleen Sullins  
Director

WQC No 3758



## **WASTE AND BORROW SOURCE REQUIREMENTS:**

This project is located in a known habitat area for *Picoides borealis*, the Red Cockaded Woodpecker (RCW). The RCW is protected under the Endangered Species Act. Any federal action that is likely to affect the species requires consultation with the US Fish and Wildlife Service (USFWS). The Federal Highway Administration (FHWA) consulted with the USFWS, resulting in the USFWS issuing a Biological Opinion (28 April 2005). The U. S. Army Corps of Engineers permit, included elsewhere in this contract, also references the Biological Opinion.

In the Biological Opinion (BO), a corridor is referenced as being critical to the future survival of the RCW species. NCDOT's Biological Assessment identified the Northern Corridor which is critical to the future survival of the RCW species. Contractors should become familiar with the Biological Opinion. Copies of the BO and the figures showing the Northern Corridor locations can be obtained at the Project Letting Website.

Also posted on the Project Letting Website is a document entitled "Instructions for Selecting Borrow and Waste Sites with Potential to Impact the Red-Cockaded Woodpecker (RCW)". This document should be used as a guide to determining the possible acceptability of a potential borrow or waste site for use on this project.

The Department recognizes this "Northern Corridor" contains property which bidders may plan to utilize as borrow or waste sources. Potential indirect effects to the RCW associated with borrow or waste pits are related to timber removal or changes to the soil conditions that reduce potential timber growth. Loss of existing or future timber may reduce potential foraging and nesting habitat between RCW clusters. Sub-articles 230-4(B)(3)(d) and 802-2(F) of the *Standard Specifications* require that an environmental assessment be performed on all proposed waste and borrow sites to determine if there are conflicts with a federally protected species. If federally listed threatened or endangered species or habitat that may support such species exists on the site it may not be approved for use. In addition to the above requirements, for this project, borrow or waste sources located within the Northern Corridor will be subject to review and approval as outlined in the document referenced above entitled "Instructions for Selecting Borrow and Waste Sites with Potential to Impact the Red-Cockaded Woodpecker (RCW)".

No direct payment will be made for the work covered by the above requirements.

# Instructions for Selecting Borrow & Waste Sites with Potential To Impact the Red-Cockaded Woodpecker (RCW) (Final 11.24.10)

## Background

The North Carolina Department of Transportation (NCDOT), United States Fish & Wildlife Service (USFWS) and the Federal Highway Administration (FHWA) recognize that borrow and waste sites associated with construction of this transportation project could have an effect on the red-cockaded woodpecker (a species protected by the Endangered Species Act (ESA)). As borrow and waste locations are typically not known at the time of the Section 7 (of the ESA) consultation (which occurs much earlier in the project development process), FHWA and NCDOT must consider the effects of borrow and waste sites prior to NCDOT approving such sites for contractors to use.

In order to efficiently and predictably determine how borrow and waste sites may affect the RCW, these three agencies have agreed upon a coordination framework. The outcome of this coordination is a clear understanding of how a potential borrow or waste site might affect the RCW. This information can be used by a contractor in determining whether to pursue utilization of a site. This information can be used by NCDOT & FHWA to help determine whether to approve the use of the site. This information also can be used by USFWS to better understand what action is being taken by NCDOT & FHWA and how it might affect the RCW.

Representatives from these three agencies met on 11.15.10 to develop the coordination framework. The framework is outlined below in text, as well as graphically at the end of this document.

## Coordination Framework

### Step 1:

Determine if desired borrow/waste site is located within either of the following areas of the Northern Corridor:

- Any of the three "priority areas" (see map provided by NCDOT); and/or
- Within one half (1/2) mile from a known red-cockaded woodpecker cluster (see map provided by NCDOT).

If "yes", go to Step 4.

If "no", go to Step 2.

### Step 2:

Determine if the site has a pine stand (any species) approximately 30 years or more in age.

If "yes", go to Step 3.

If "no", go to Step 6.

### Step 3:

Determine if any RCW cavity trees are present w/in ½ mile of the desired site. Contractor must hire an environmental consultant with experience in performing RCW surveys to make this determination. Results should be coordinated with NCDOT Division Environmental Officer (DEO) as a double-check (especially if the answer is "yes").

If "yes", go to Step 5.

If "no", go to Step 6.

**Step 4:**

Determine if there are any pine stands (any species, any age) on the desired borrow/waste site.

If “yes”, go to Step 5.

If “no”, go to Step 6.

**Step 5:**

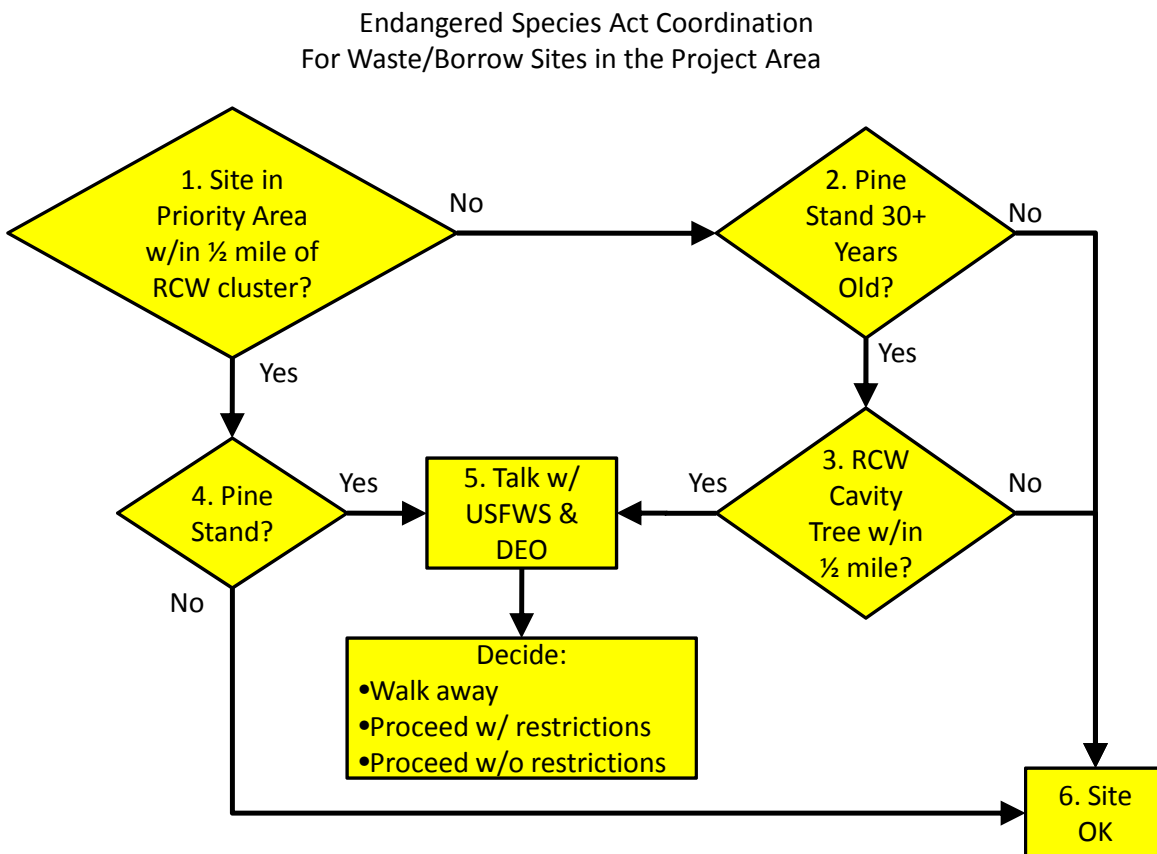
Contractor discusses results with DEO. Contractor may be required to conduct an RCW survey<sup>1</sup> of the property and within ½ mile if wanting to continue pursuit of the site. DEO discusses survey results with USFWS (and possibly NCDOT’S Natural Environment Unit NEU).

From this discussion, contractor should have sufficient information to decide to either abandon the site or proceed with requesting approval from NCDOT. NCDOT should have sufficient information to know whether consultation with USFWS is required

**Step 6:**

Site is OK related to RCW. No consultation with USFWS is necessary. No restrictions are needed related to the RCW. RCW-related issues should not affect NCDOT’s decision to approve/not approve the site.

<sup>1</sup>Contact NCDOT Natural Environment Unit for RCW survey protocol



**Privateer**  
**WM 026-005**

The Privateer Farms Restoration Site (Site) is located in Bladen and Cumberland Counties, North Carolina, approximately fourteen miles southeast of Fayetteville. Prior to restoration, land use on the Site over the past 20 years had been primarily row crop agriculture. Stream and riparian functions on the Site had been severely impacted as a result of agricultural conversion. Harrison Creek had historically meandered through the Site, but was channelized in the early 1980s to reduce flooding and provide a drainage outlet for the extensive network of ditches excavated across the Site. Subsequent to channelization, Harrison Creek existed as a large canal running straight through the Site.

Restoration activities for the Site involved moving the stream channel back to its historic location and elevation, and filling drainage ditches to raise the local water table and restore wetland and stream hydrology. The plan also included scarification of the fields and breaking of the local plow pan to increase surface water storage and provide a range of hydrologic conditions suitable for a variety of native wetland plant species. The restoration plan for the Site predicted the restoration of 405 acres of riverine wetlands, 25 acres of riverine wetland enhancement, and 33,985 linear feet (LF) of stream restoration. Following construction, the as-built data indicated that the total area of restored riverine wetlands was 402.5 acres (excluding 2.5 acres for road accesses), with 25 acres of enhanced riverine wetlands, and 34,005 LF of restored stream channel.

As of fall 2009, the Site has met all prescribed hydrologic and vegetative monitoring criteria and been recommended for closeout.

According to the April 2014 permit mod, there were an additional 0.36 acres of wetland impacts associated with T.I.P. U-2519CB and an excess of 612 linear feet of debits to the Privateer Mitigation Site. To offset the additional 0.36 acres of unavoidable wetland impacts, the Privateer Farms Mitigation Site will be debited at a 3:1 ratio, totaling 1.14 acres wetland debits. Privateer will be credited 775 linear feet of stream credit from the over debit of 516.6 linear feet at 1.5:1 ratio from preliminary design. These debits and credits are reflected in the following ledger.

HUC	Mitigation Type	Starting Amount	Additional Notes
3030004	Stream Restoration	25676	**Out of service area ratios: 1.5:1 ratio for stream impacts 3:1 for wetland impacts
3030004	Riparian Wetland Restoration	185.58	**Out of service area ratios: 1.5:1 ratio for stream impacts 3:1 for wetland impacts

**Privateer**  
**WM 026-005**

Mitigation Type	Debit Amount (Ln.Ft.)	Status	Site TIP	Action ID#	Notes
Stream Restoration	19759.5	Close Out	U-2519	2008-01413	Debit amount includes all modification request including U-2519CB(5/15/14)
Stream Restoration	615	Close Out	U-2519 Mod	2008-01413	

Mitigation Type	Debit Amount (Ac.)	Status	Site TIP	Action ID#	Notes
Riparian Wetland Restoration	153.78	Close Out	U-2519	2008-01413	Debit amount includes all modification request including U-2519CB(5/15/14)
Riparian Wetland Restoration	1.29	Close Out	U-2519 Mod	2008-01413	
Riparian Wetland Restoration	7.38	Close Out	R-2303A	1992-03237	



**U.S. ARMY CORPS OF ENGINEERS**  
**Wilmington District**  
**Compensatory Mitigation Responsibility Transfer Form**

Permittee: North Carolina DOT, Mr. Richard Hancock, P.E.  
Project Name: X-0002 B&C/U-2519 Fayetteville Outer Loop

Action ID: SAW-2008-01413  
County: Cumberland

**Instructions to Permittee:** The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Ecosystem Enhancement Program (NCEEP), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that to the U.S. Army Corps of Engineers (USACE) Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate mitigation Sponsors.

**Instructions to Sponsor:** The Sponsor must verify that the mitigation requirements (credits) shown below are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether or not they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated bank ledger to the Permittee, the USACE Project Manager, and the Wilmington District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

**Permitted Impacts and Compensatory Mitigation Requirements:**

Permitted Impacts Requiring Mitigation*			8-digit HUC and Basin: 03030004, Cape Fear River Basin			
Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
882			4.35	1.51		

\*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

Compensatory Mitigation Requirements:			8-digit HUC and Basin: 03030005, Cape Fear River Basin			
Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
1323			13.05	4.53		

**Mitigation Site Debited:** Privateer Farms

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCEEP, list NCEEP. If the NCEEP acceptance letter identifies a specific site, also list the specific site to be debited).

***Section to be completed by the Mitigation Sponsor***

**Statement of Mitigation Liability Acceptance:** I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCEEP), as approved by the USACE, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

Mitigation Sponsor Name: North Carolina Dept. of Transportation

Name of Sponsor's Authorized Representative: Richard Hancock P.E.

Richard Hancock P.E.  
Signature of Sponsor's Authorized Representative

6/20/2014  
Date of Signature



**USACE Wilmington District  
Compensatory Mitigation Responsibility Transfer Form, Page 2**

**Conditions for Transfer of Compensatory Mitigation Credit:**

- Once this document has been signed by the Mitigation Sponsor and the USACE is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the USACE is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. For authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by the Sponsor must be provided to the USACE within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the USACE has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the USACE Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the USACE, the Sponsor must obtain case-by-case approval from the USACE Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the USACE administrative records for both the permit and the Bank/ILF Instrument.

**Comments/Additional Conditions:**

This Compensatory Mitigation Transfer Form is associated with a permit modification for NC DOT TIP U-2519 sections CB and a portion of DA. Mitigation ratios for impacts to wetlands are 3:1 and for impacts to streams are 1.5:1 due to the impact sites being located in a HUC adjacent to the Privateer Farms site. An updated debit ledger associated with the Fayetteville Outer Loop project is provided as attachment to this form.

This form is not valid unless signed below by the USACE Project Manager and by the Mitigation Sponsor on Page 1. *Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the USACE Project Manager at the address below, and 3) the Wilmington District Mitigation Office, Attn: Todd Tugwell, 11405 Falls of Neuse Road, Wake Forest, NC 27587 (email: [todd.tugwell@usace.army.mil](mailto:todd.tugwell@usace.army.mil)).* Questions regarding this form or any of the permit conditions may be directed to the USACE Project Manager below.

USACE Project Manager: Liz Hair  
USACE Field Office: Wilmington Regulatory Field Office  
US Army Corps of Engineers  
69 Darlington Avenue  
Wilmington, NC 28403

Email:

**HAIR.SARAH.E  
A.1054693512**

USACE Project Manager Signature

Digitally signed by  
HAIR.SARAH.EA.1054693512  
DN: c=US, o=U.S. Government,  
ou=DoD, ou=PKI, ou=USA,  
cn=HAIR.SARAH.EA.1054693512  
Date: 2014.06.13 12:04:58 -0400

June 13, 2014

Date of Signature

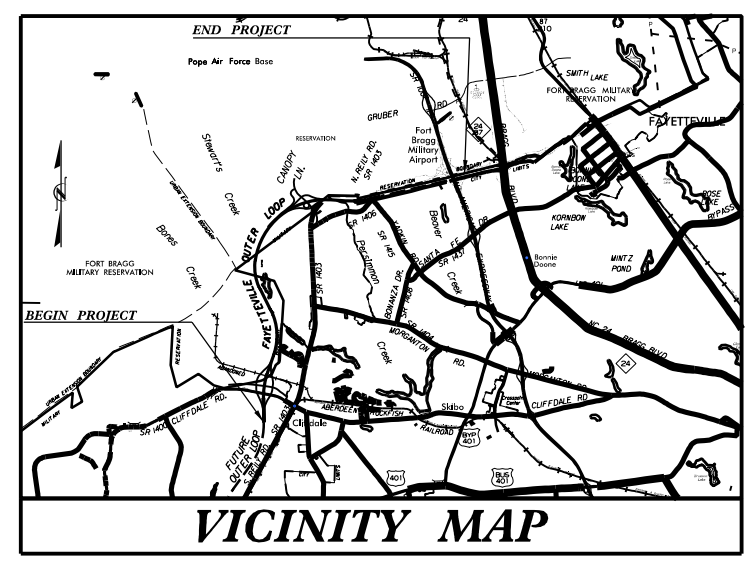
Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>.

12/24/13

TIP PROJECT: U-2519CB

CONTRACT: C203398

See Sheet 1-A For Index of Sheets  
See Sheet 1-B For Conventional Symbols



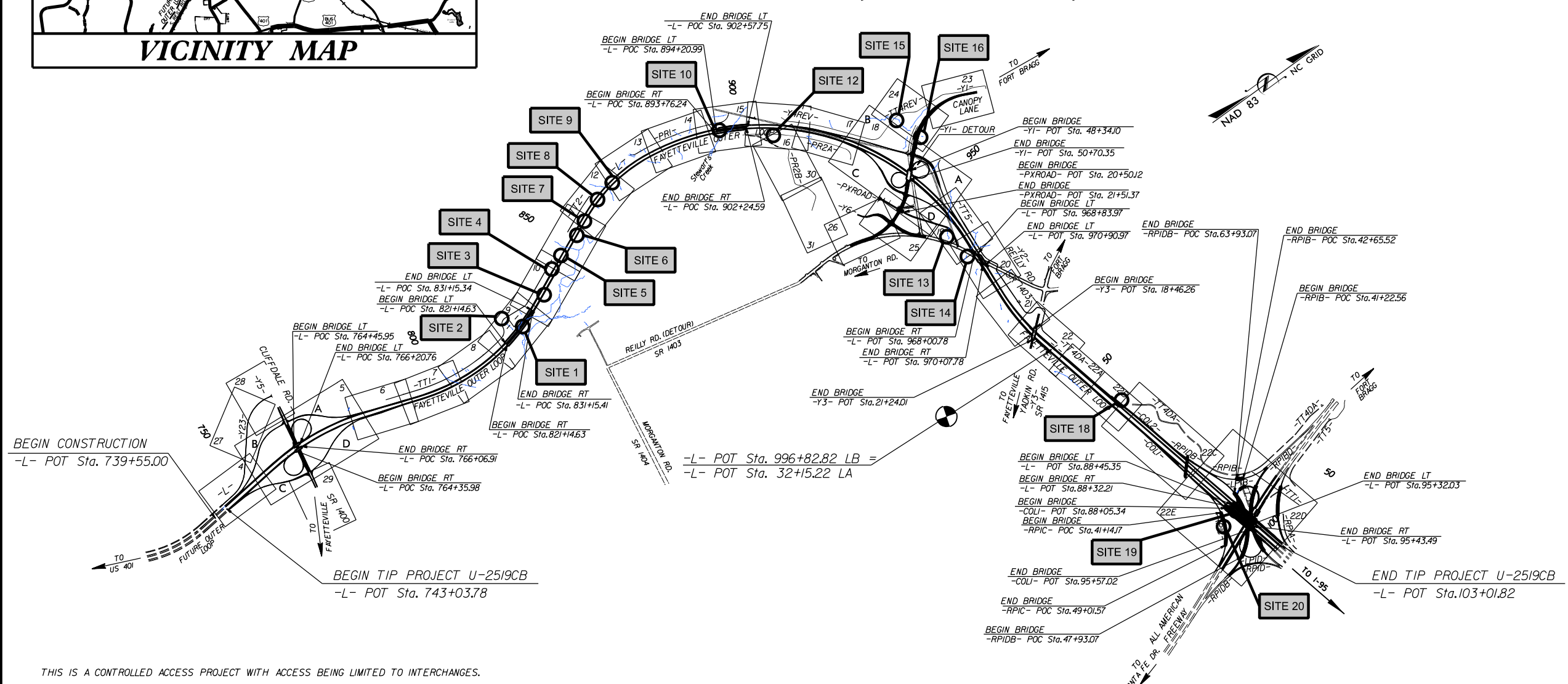
# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS CUMBERLAND COUNTY

LOCATION: FAYETTEVILLE OUTER LOOP  
FROM SOUTH OF SR 1400 (CLIFFDALE ROAD)  
TO EAST OF ALL AMERICAN FREEWAY

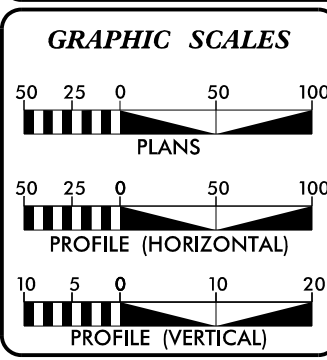
TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURES,  
CULVERT, RETAINING WALLS, SIGNALS & SIGNING

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2519CB	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34817.1.2	NHF-DPR-0100(001)	P.E.	
34817.2.8	NHF-DPR-0100(001)	RW, UTL.	
34817.3.S8	NHF-DPR-0100(001)	CONST.	

PERMIT DRAWINGS  
SHEET 1 OF 55



THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.



DESIGN DATA	
ADT 2014 =	49,900
ADT 2034 =	70,300
DHV =	8 %
D =	55 %
T =	12 % *
V =	70 MPH
* (TTST=4 + DUAL=8)	
FUNC CLASS : INTERSTATE	
STATEWIDE TIER	

PROJECT LENGTH	
LENGTH ROADWAY TIP PROJECT U-2519CB	= 5.592 MILES
LENGTH STRUCTURES TIP PROJECT U-2519CB	= 0.557 MILES
TOTAL LENGTH OF TIP PROJECT U-2519CB	= 6.149 MILES

Prepared In the Office of:  
**RS&H**  
**ARCHITECTS-ENGINEERS-PLANNERS, INC.**  
8601 SIX FORKS RD, SUITE 260  
RALEIGH, NC 27615  
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
2012 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
JULY 31, 2006

**LETTING DATE:**  
AUGUST 19, 2014

**KENNETH HERRING, PE**  
PROJECT ENGINEER

**JASON TALLEY, PE**  
PROJECT DESIGN ENGINEER

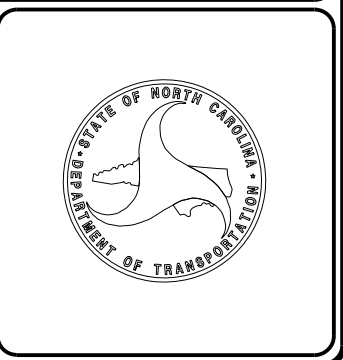
**BRENDA L. MOORE, PE**  
NCDOT CONTACT

**HYDRAULICS ENGINEER**

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_

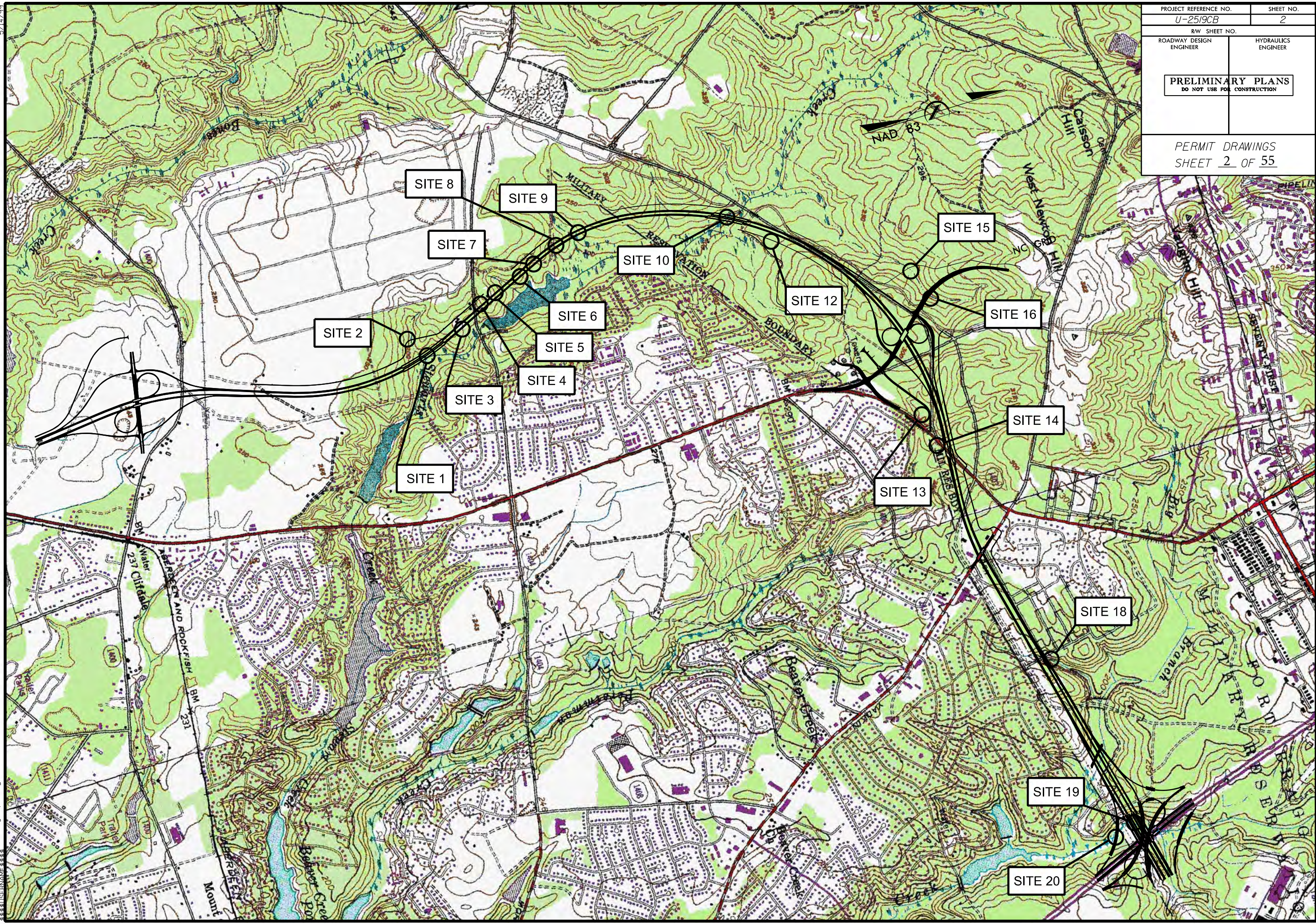
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5/14/99  
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PROJECT REFERENCE NO. U-2519CB		SHEET NO. 2
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
PERMIT DRAWINGS SHEET 2 OF 55		



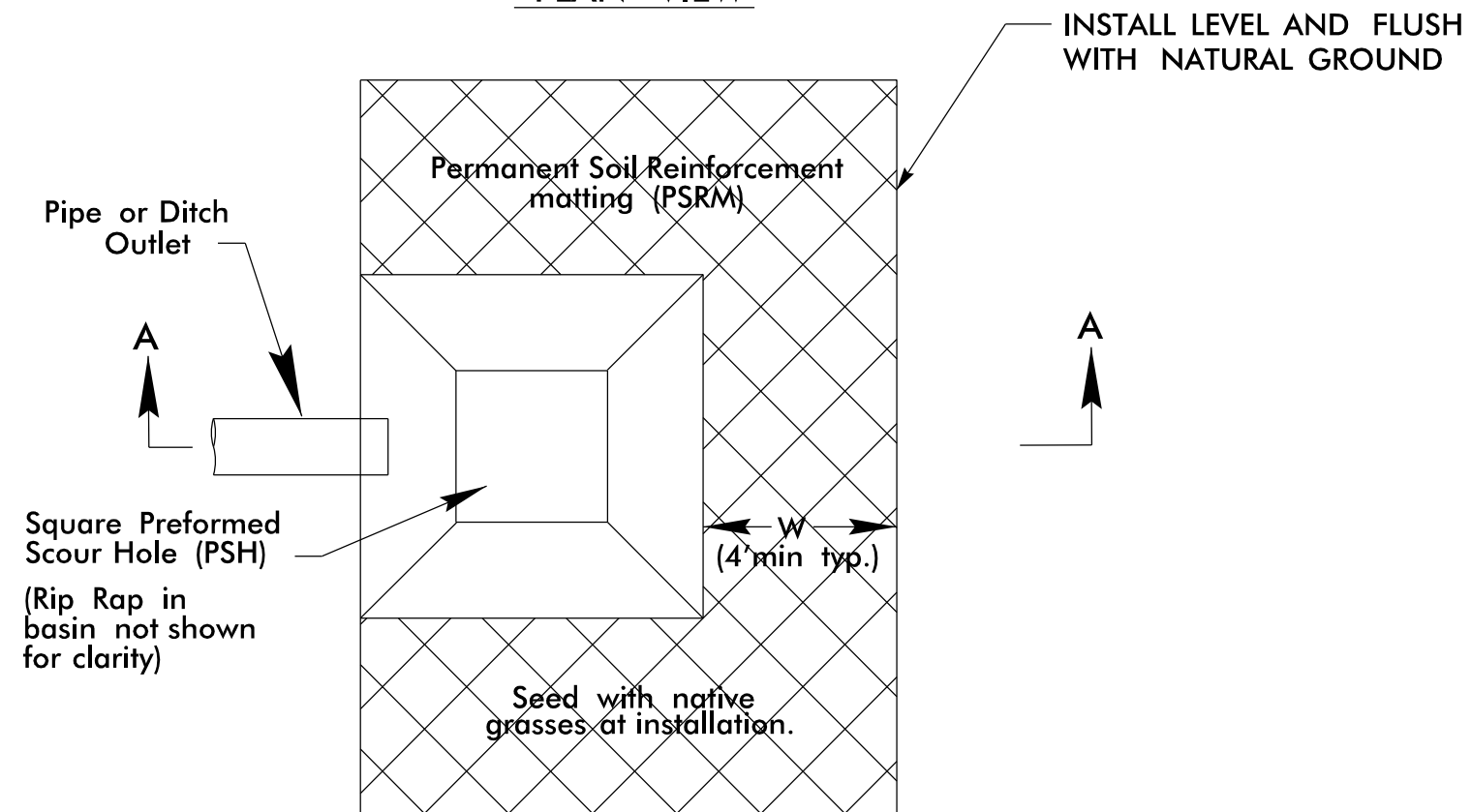


PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
PERMIT DRAWINGS SHEET <u>3</u> OF <u>55</u>	

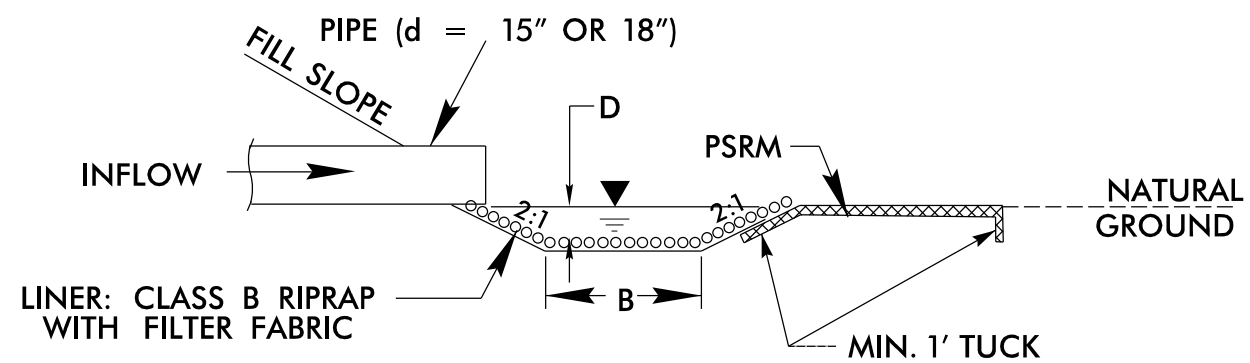
# **PREFORMED SCOUR HOLE**

**\*NOT TO SCALE**

## **PLAN VIEW**



## **SECTION A-A**



35 (-YIREV\_LT-)

40 (YIREV\_RT)

40 (-YIREV-LT-)








SEE DETAIL SHTS. 2-BI THRU 2-BK FOR ISLANDS AND PAVEMENT DIMENSIONS AND CONSTRUCTION DETAILS.

FOR -Y1REV\_LT- PROFILE SEE SHT. 2-BE

FOR -Y1REV\_RT- PROFILE SEE SHT. 2-BF

**PLANS PREPARED BY :**

**RK&K**  
RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
EIGH, NORTH CAROLINA 27609-3960  
LICENSE NO. F-0112 • (919) 878-9560

LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES EXCAVATION IN WETLAND
	DENOTES WORK BRIDGE

NAD / 83

PAVEMENT REMOVAL

**DETAIL I**  
**STANDARD BASE DITCH**  
(Not to Scale)

Natural Ground

3:1

D

3:1

Natural Ground

Min. D= 1.5 Ft.  
B= 2.0 Ft.

Type of Liner= CL, 'B' Rip-Rap

FROM -YIREV\_LT- STA. 33+50 TO STA. 35+50 (RT)

**DETAIL OF SPECIAL CUT BASE DITCH**  
(Not to Scale)

Diagram illustrating the detail of a Special Cut Base Ditch. The ditch is shown in cross-section, with the following dimensions and labels:

- Natural Ground**: The top surface of the ditch.
- 3:1**: The slope of the ditch.
- D**: The depth of the ditch.
- 4:1 or Flatter**: The slope of the ditch.
- Front Ditch Slope**: The slope of the ditch.
- B**: The width of the ditch.

Min. D = 1.0 Ft.  
B = 2.0 Ft.

FROM -YIREV\_LT- STA. 30+00 TO STA. 33+00 (LT)

**DETAIL RR**  
**TOE PROTECTION**  
 (Not to Scale)

Natural Ground

3d

Fill Slope

Geo-Textile

d = 1.0 Ft.

Type of Liner = CL, 'B' Rip-Rap

-TT4REV- 52+50 TO 56+05 (RT)  
-TT4REV- 55+56 TO 58+50 (LT)  
-Y1REV\_LT- 35+00 TO 39+70 (LT)  
-Y1REV\_LT- 39+90 TO 41+25 (LT)

**DETAIL U**  
**LATERAL BASE DITCH**  
 (Not to Scale)

Natural Ground 3:1 3% 3:1 8% Fill Slope

Min. D = 1.0 Ft.  
 b = 5.0 Ft.  
 R = 2.0 Ft.

Type of Lining: Clay Pipe

FROM -Y1REV\_LT- STA. 35+50 TO STA. 36+50 (RT)

**DETAIL AG**  
**STANDARD BASE DITCH**  
(Not to Scale)

Natural Ground

3/4:1

D

3/4:1

Natural Ground

Min. D = - Ft.  
B = \* Ft.

Type of Liner= CL. 'B' Rip-Rap

FROM -YIREV LT- STA. 36+50 TO STA. 37+00 (RT)  
\*B VARIES FROM 2 TO 10 FT

**DETAIL AH**  
**SPECIAL LATERAL BASE DITCH**  
 (Not to Scale)

Natural Ground

3:1

D

4:1 or flatter

Fill Slope

B

Min. D = 1.0 Ft.  
 B = 2.0 Ft.

FROM -YIREV\_LT- STA. 32+00 TO STA. 33+50 (RT)

# SITE 15

55

TOE PROTECTION  
SEE DETAIL RR  
EST. 100 TONS  
EST. 300 S.Y.G.F

— TOE PROTECTION  
SEE DETAIL RR  
EST. 105 TONS  
EST. 320 S.Y.G.F

PREFORMED  
SCOUR HOLE  
B= 5' W= 5'  
D= 2' d= 0.5'



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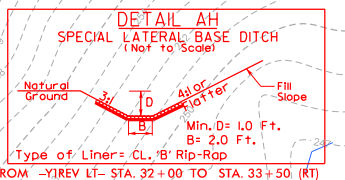
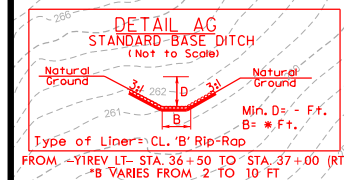
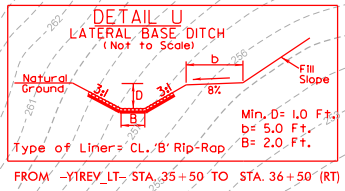
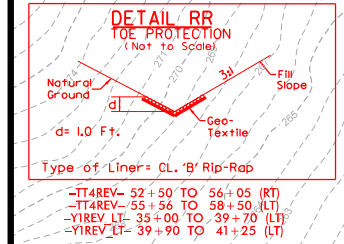
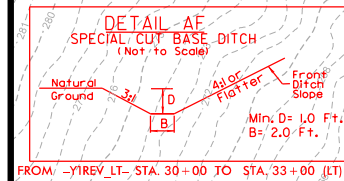
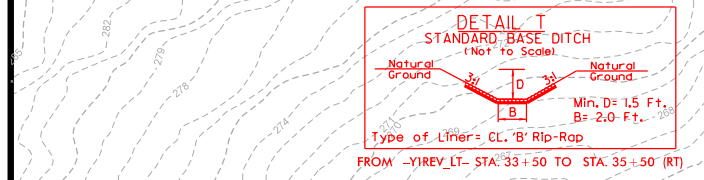
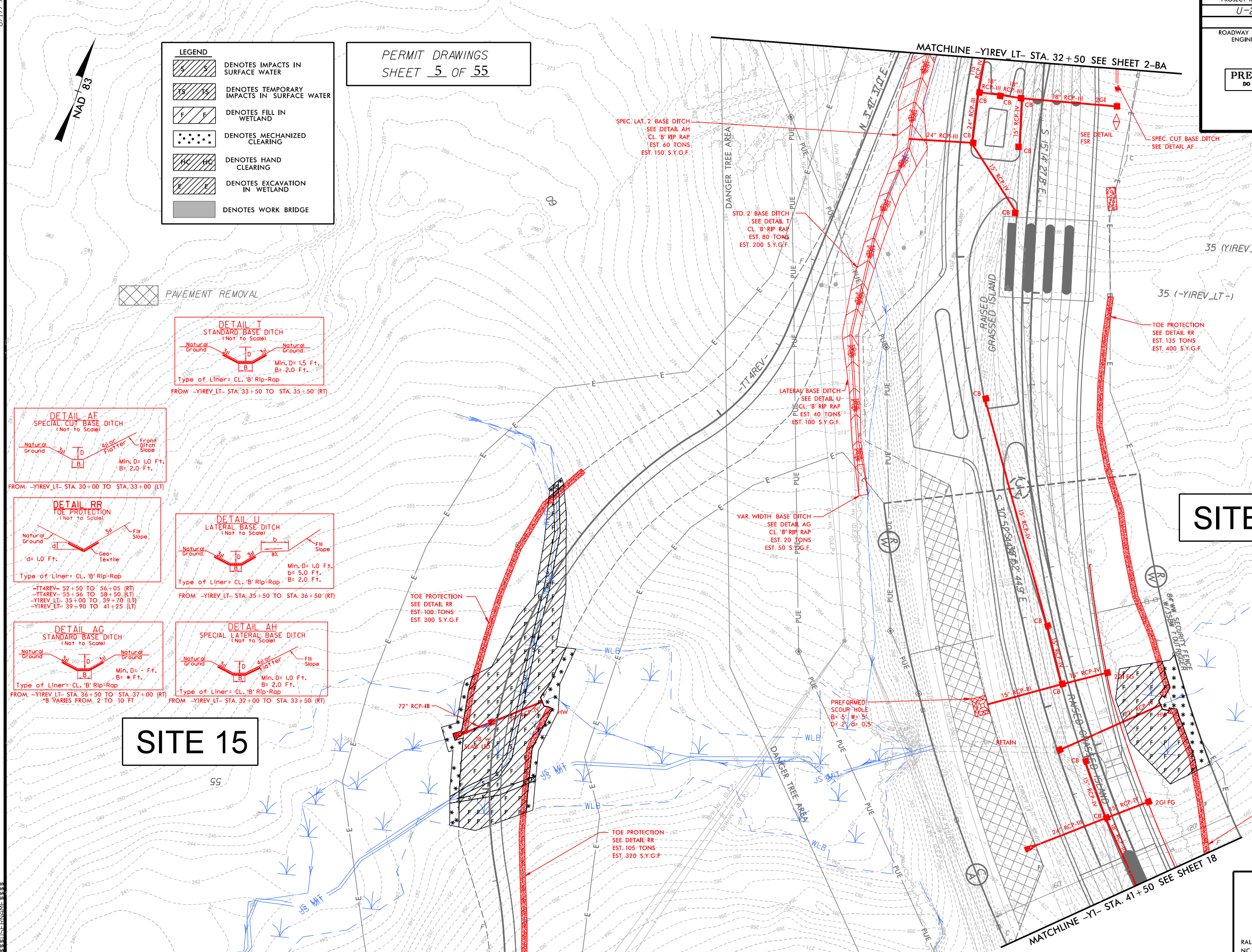
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U-2519CB	2-BB
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

ROADWAY DESIGN ENGINEER

LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES EXCAVATION IN WETLAND
	DENOTES WORK BRIDGE

PERMIT DRAWINGS  
SHEET 5 OF 55



SITE 15

SITE 16

TOE PROTECTION  
SEE DETAIL RR  
EST. 100 TONS  
EST. 300 S.Y.G.F.

SEE DETAIL SHTS. 2-B1 THRU 2-BK FOR ISLANDS AND PAVEMENT DIMENSIONS AND CONSTRUCTION DETAILS.

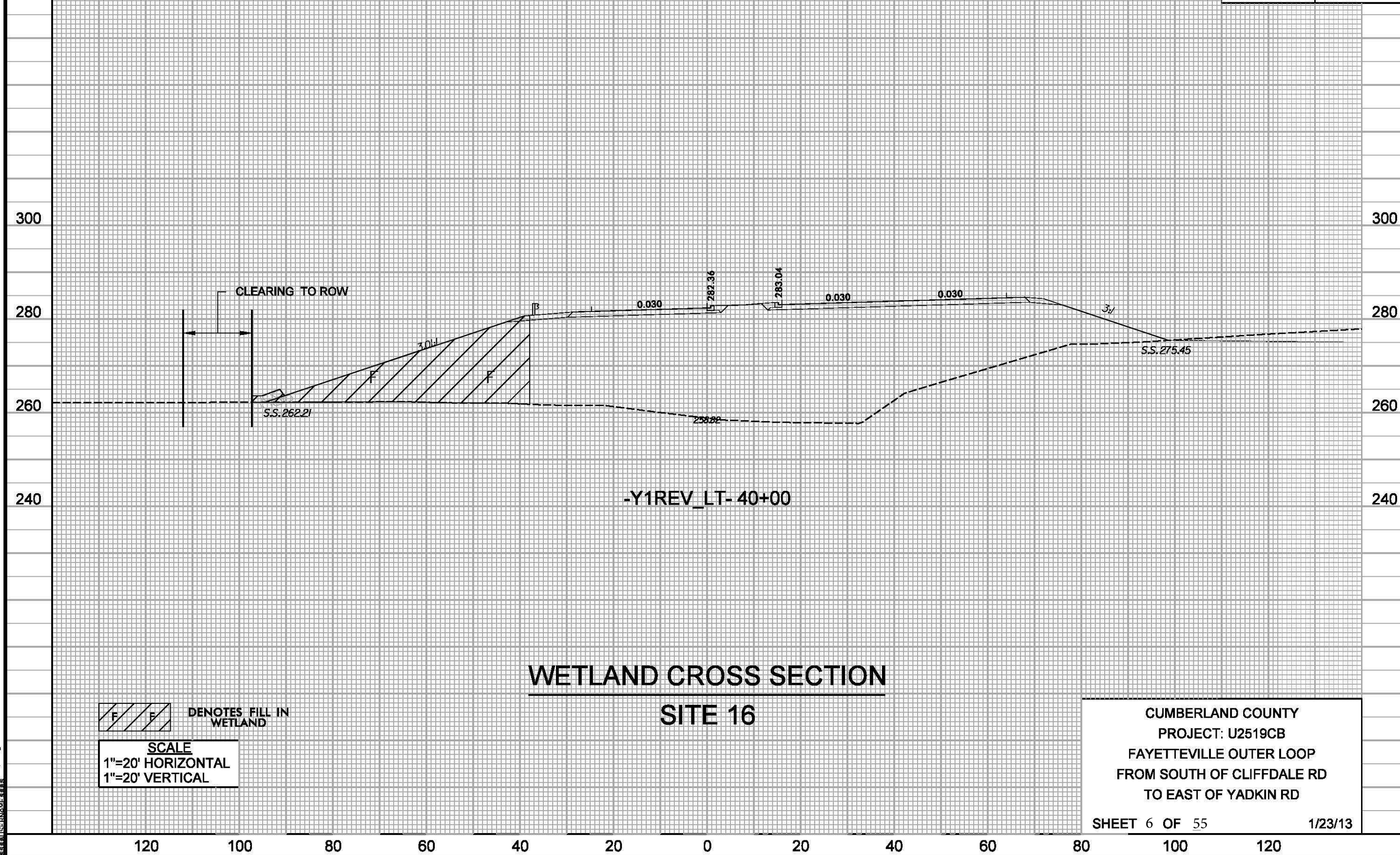
FOR -YIREV\_LT- PROFILE SEE SHT. 2-BE

FOR -YIREV\_RT- PROFILE SEE SHT. 2-BF

PLANS PREPARED BY :  
**RK&K**  
RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560

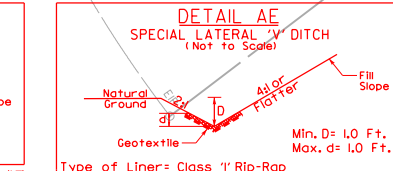
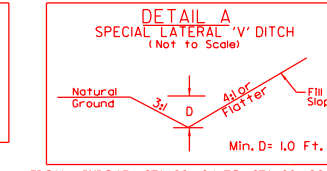
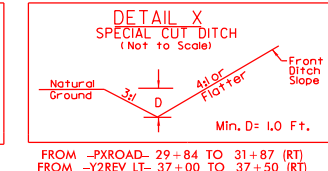
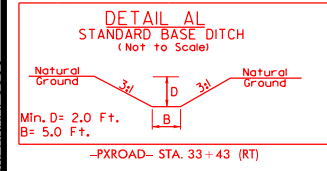
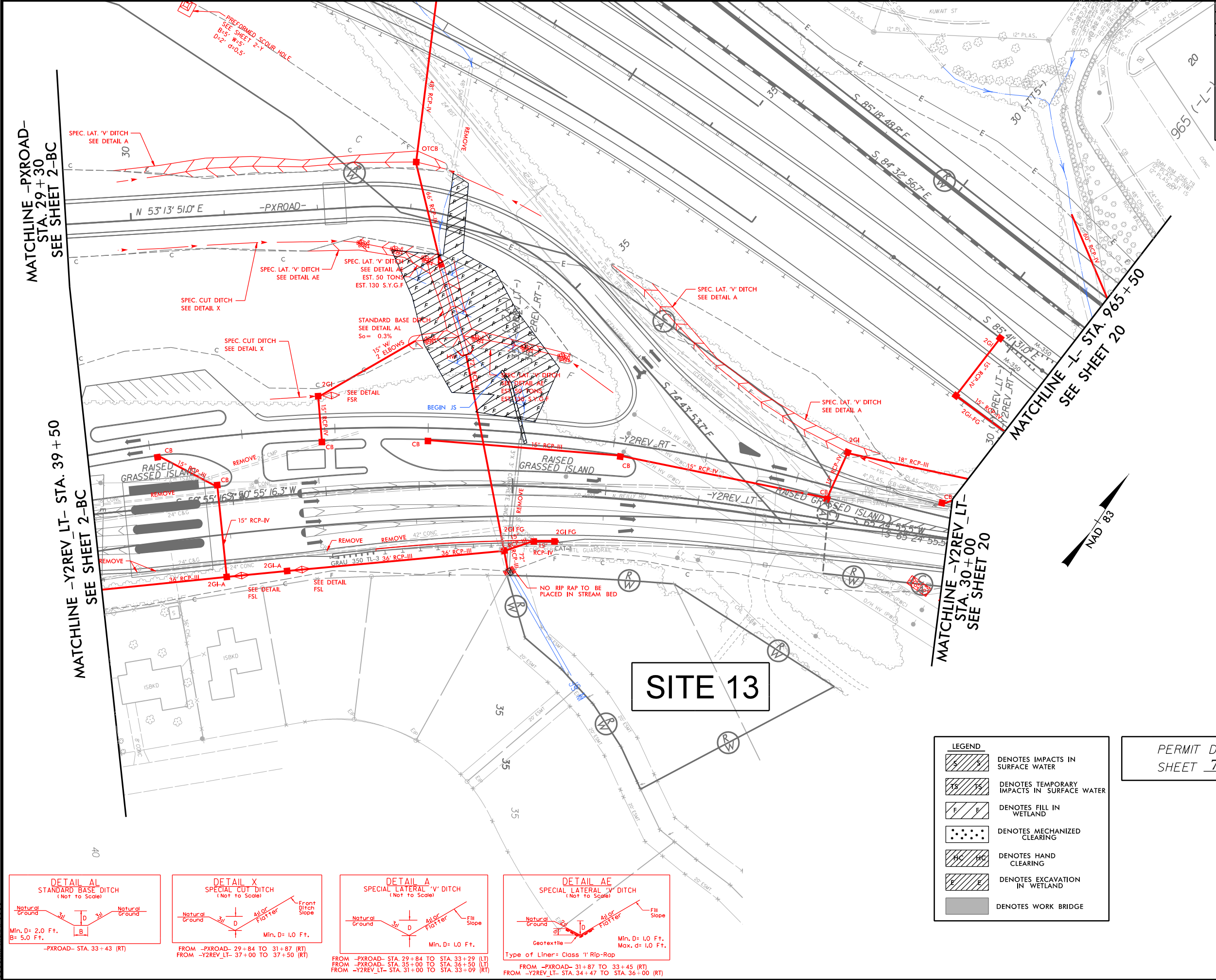
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PROJECT REFERENCE NO.		SHEET NO.	
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ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div>PRELIMINARY PLANS</div> <div>DO NOT USE FOR CONSTRUCTION</div>			





PROJECT REFERENCE NO.		SHEET NO.
U-2519CB		2-BD
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
<div>PRELIMINARY PLANS</div> <div>DO NOT USE FOR CONSTRUCTION</div>		



LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES EXCAVATION IN WETLAND
	DENOTES WORK BRIDGE

PERMIT DRAWINGS  
SHEET 7 OF 55

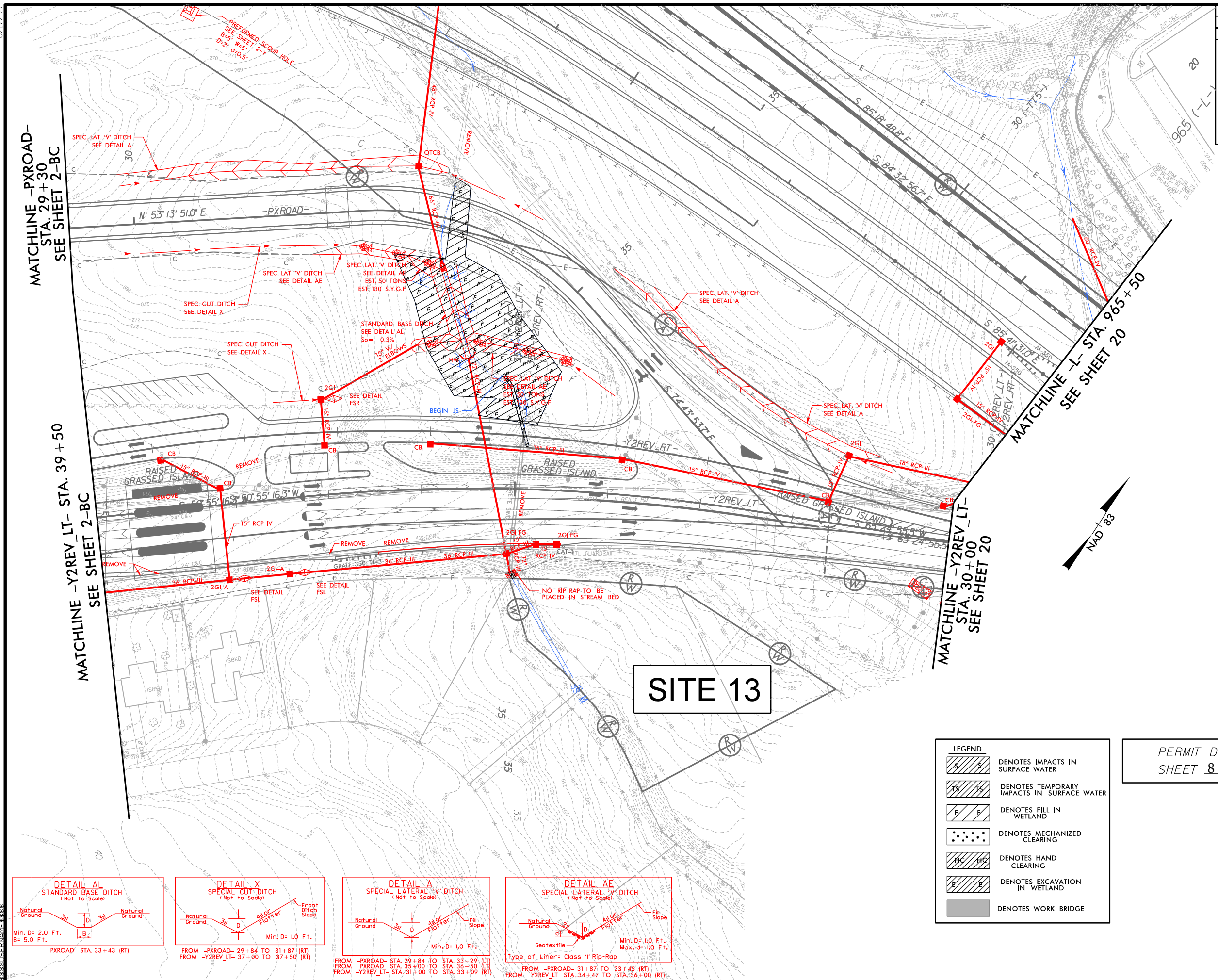
SEE DETAIL SHTS. 2-BL & 2-BM FOR ISLANDS AND PAVEMENT DIMENSIONS AND CONSTRUCTION DETAILS.

FOR -Y2REV\_LT- PROFILE SEE SHT. 2-BG

FOR -Y2REV\_RT- PROFILE SEE SHT. 2-BH

PLANS PREPARED BY :  
**RK&K**  
RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560





PERMIT DRAWINGS  
SHEET 8 OF 55

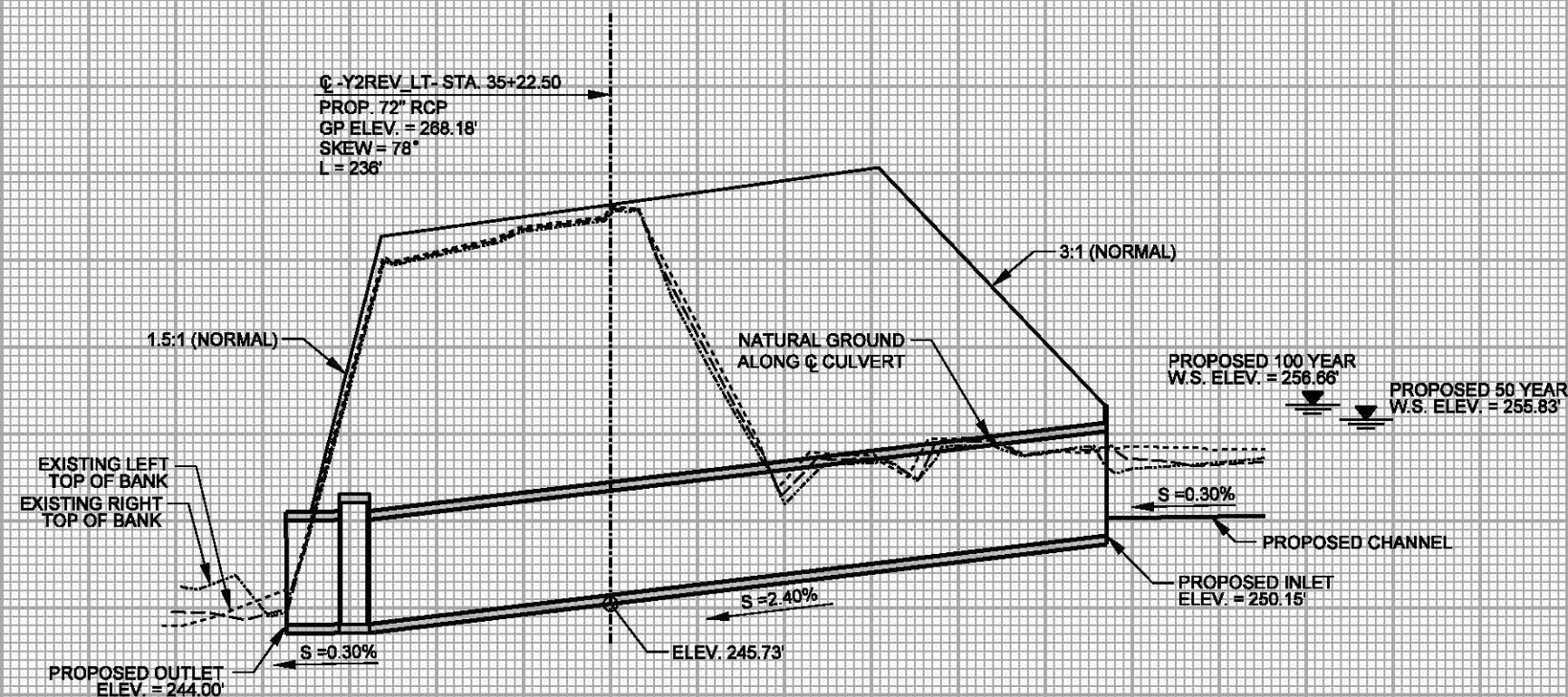
SEE DETAIL SHTS. 2-BL & 2-BM FOR  
ISLANDS AND PAVEMENT DIMENSIONS  
AND CONSTRUCTION DETAILS.

FOR -Y2REV\_LT- PROFILE SEE SHT. 2-BG

FOR -Y2REV\_RT- PROFILE SEE SHT. 2-BH

**PLANS PREPARED BY :**

**RK&K**  
RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560



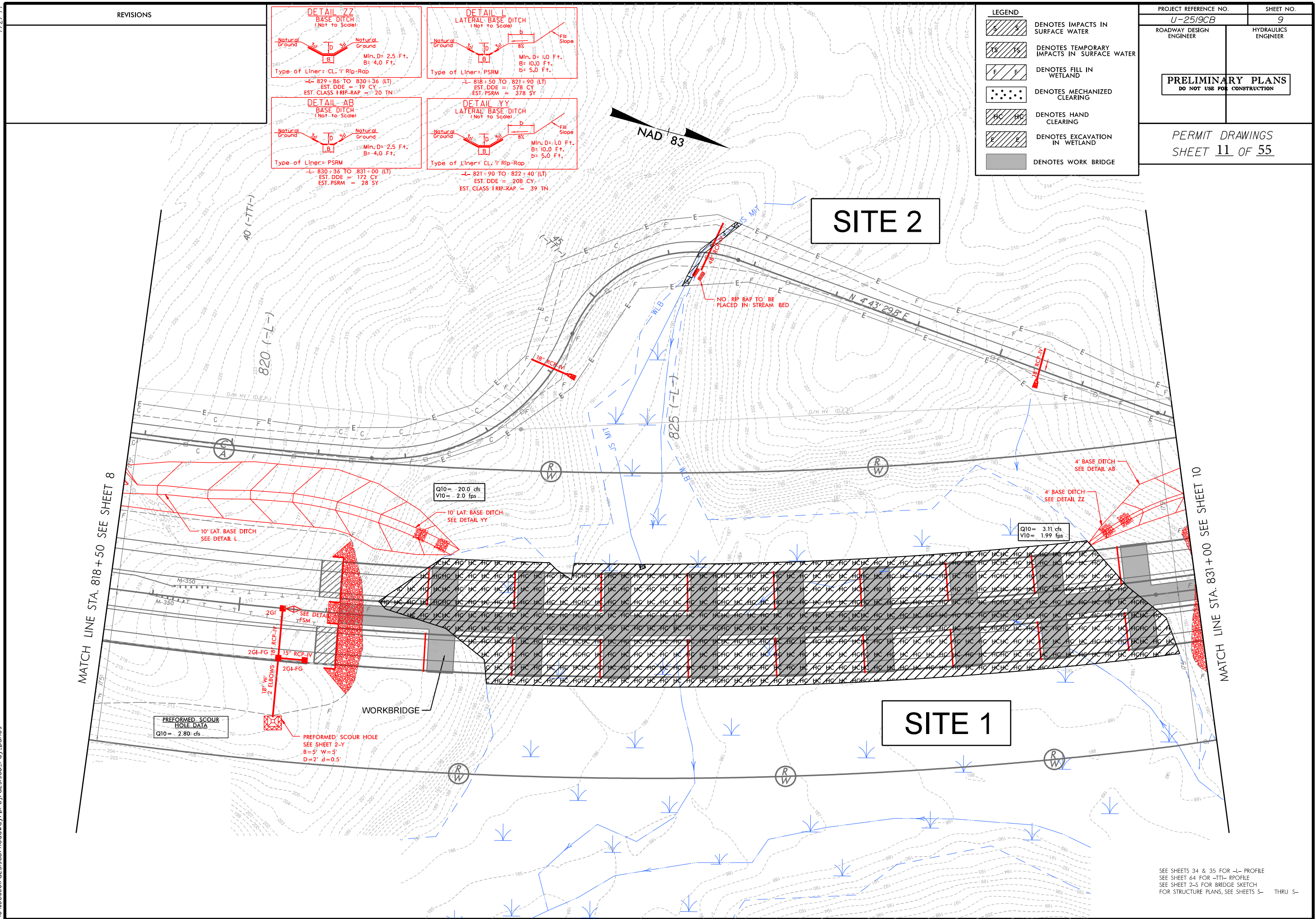
## PROFILE ALONG STRUCTURE SITE 13

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

CUMBERLAND COUNTY  
 PROJECT: U2519CB  
 FAYETTEVILLE OUTER LOOP  
 FROM SOUTH OF CLIFFDALE RD  
 TO EAST OF YADKIN RD







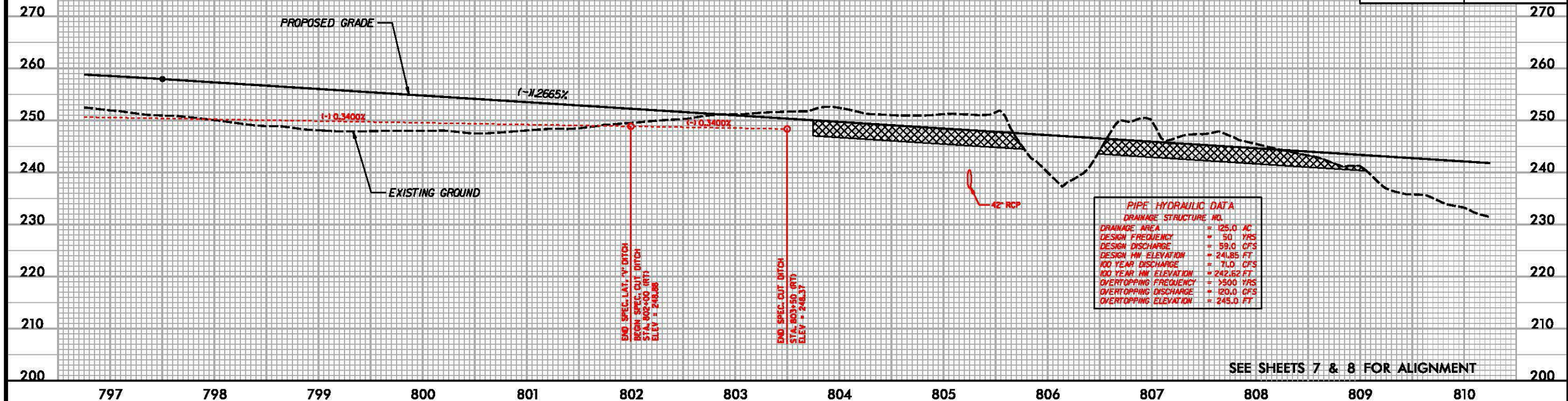


-L- FAYETTEVILLE OUTER LOOP

PERMIT DRAWINGS  
SHEET 12 OF 55

PROJECT REFERENCE NO. U-2519CB	SHEET NO. 34
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

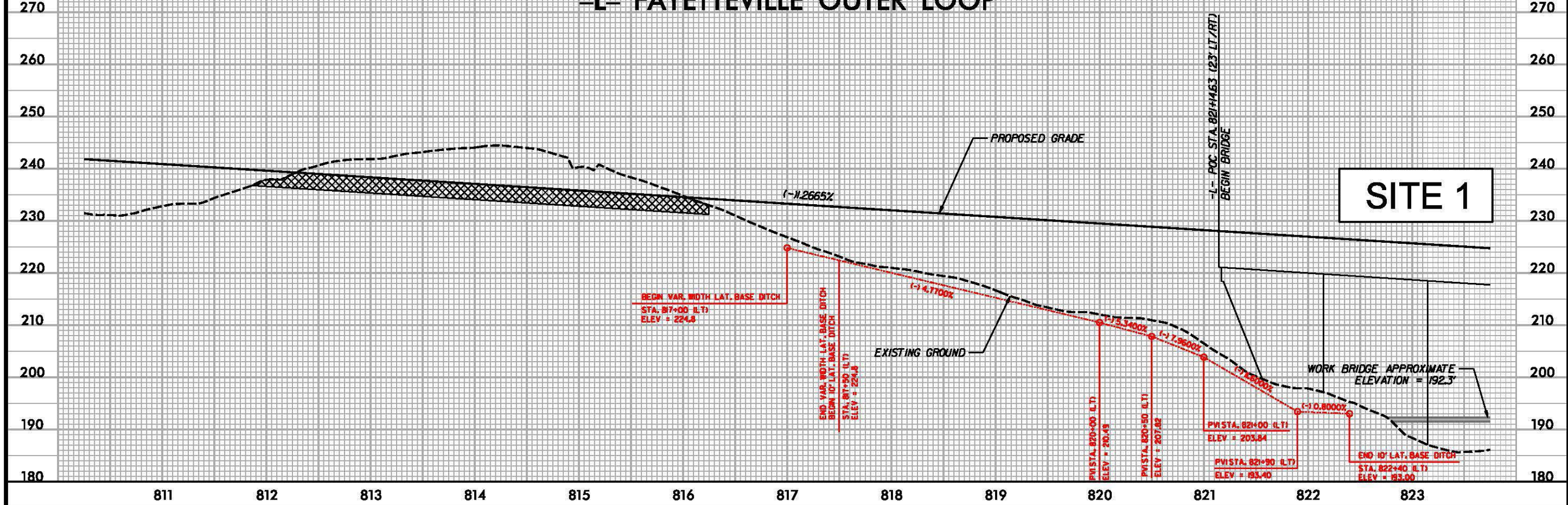
BM#3 Elev. = 250.10' - BL - 69+41.374'(RT)  
RR SPIKE IN 9" PINE TREE  
N: 482143.4 E: 1994154.2



-L- FAYETTEVILLE OUTER LOOP

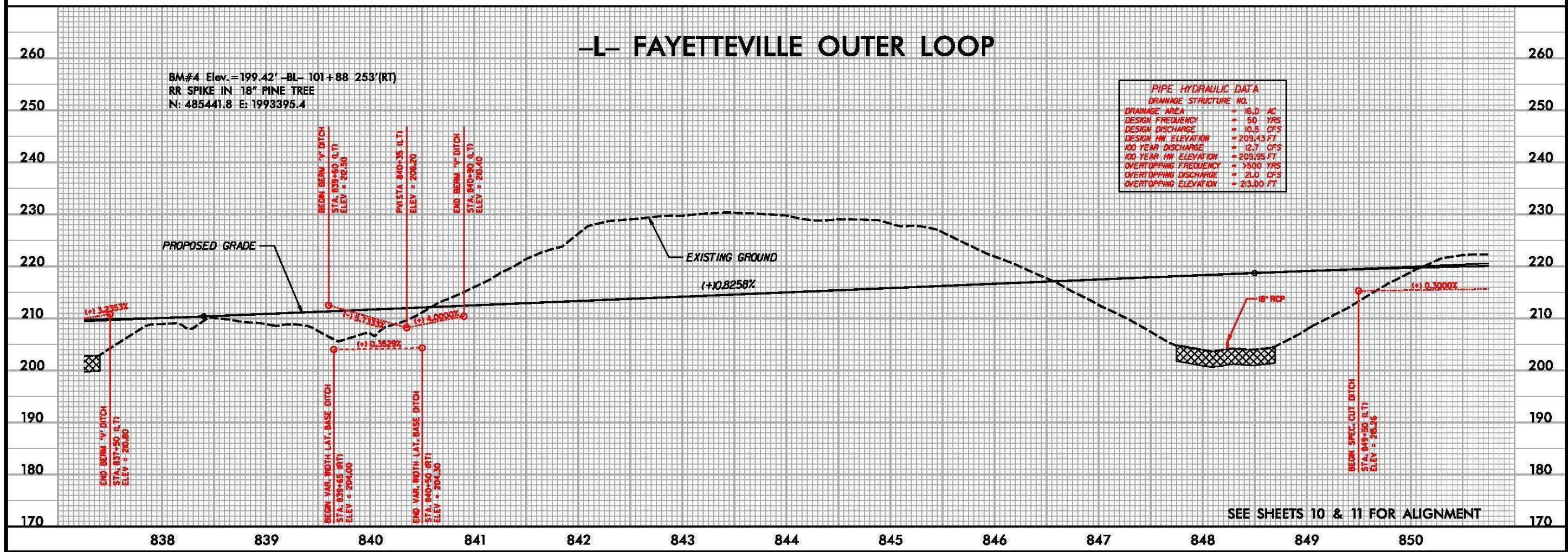
SEE SHEETS 8 & 9 FOR ALIGNMENT

SITE 1



104.001.001/u2519cb/Roadway/proj/u2519cb\_rdy.prn34





7/2/99

104.001.001\U2519cb\Roadway\proj\U2519cb.rdy.pst10

REVISIONS

LEGEND

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

PROJECT REFERENCE NO.

U-2519CB

SHEET NO.

10

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

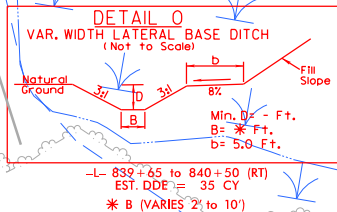
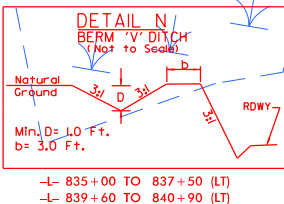
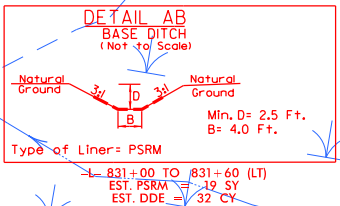
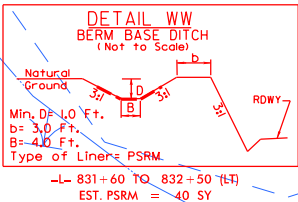
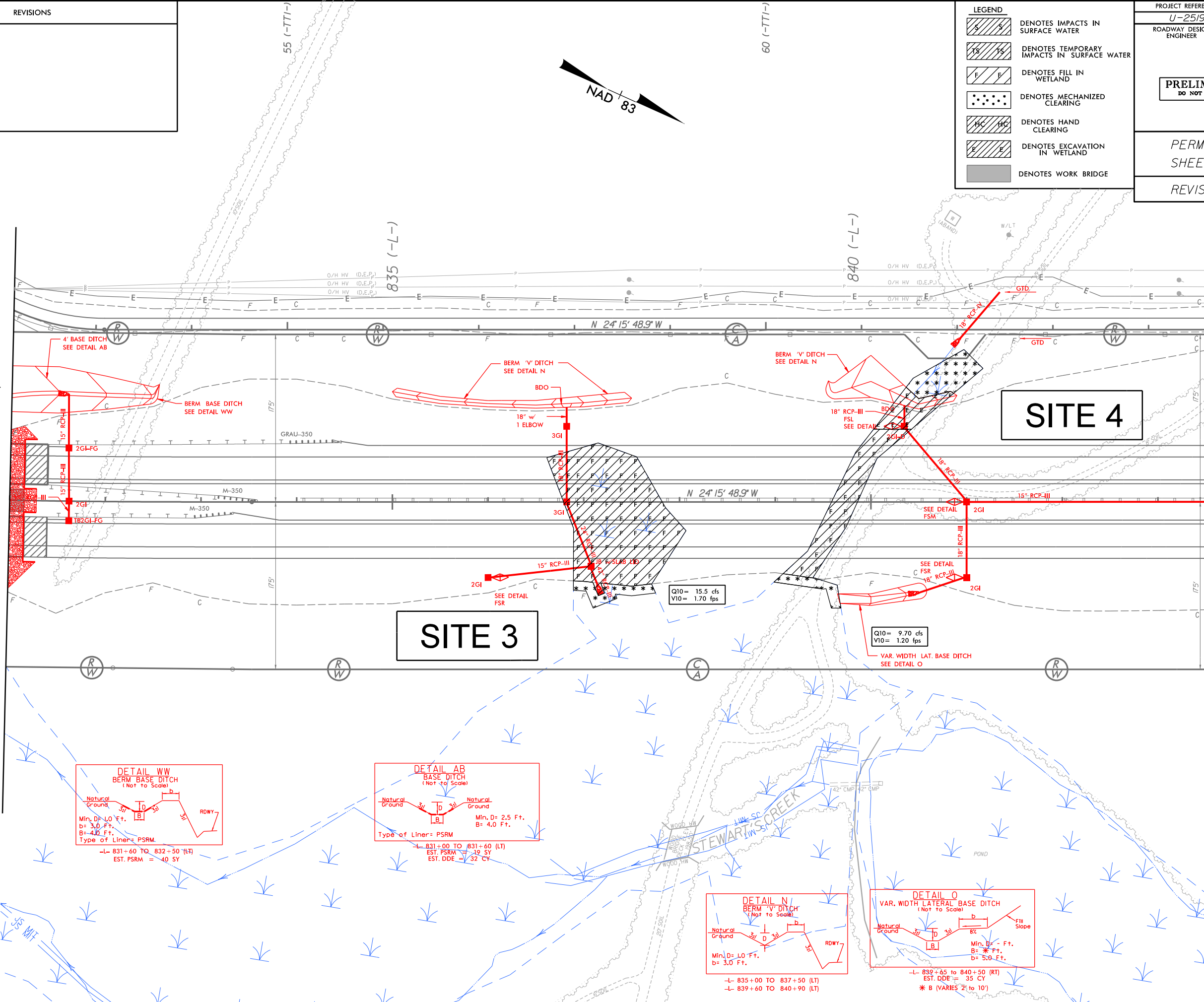
PERMIT DRAWINGS  
SHEET 14 OF 55

REVISED 5/13/14

NAD 83

MATCH LINE STA. 831+00 SEE SHEET 9

MATCH LINE STA. 843+50 SEE SHEET 11



SEE SHEET 35 FOR -L- PROFILE  
SEE SHEET 64 -TT1- FOR PROFILE



7/2/99

104.001.001\U2519cb\Roadway\proj\U2519cb.rdy.pstho

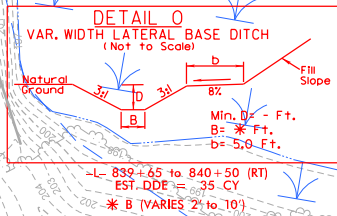
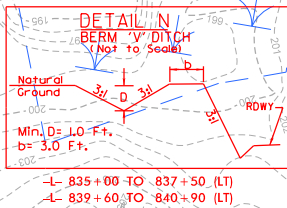
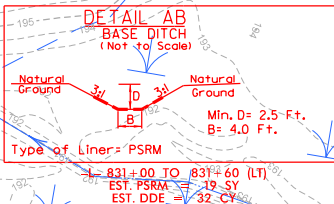
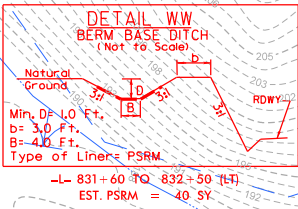
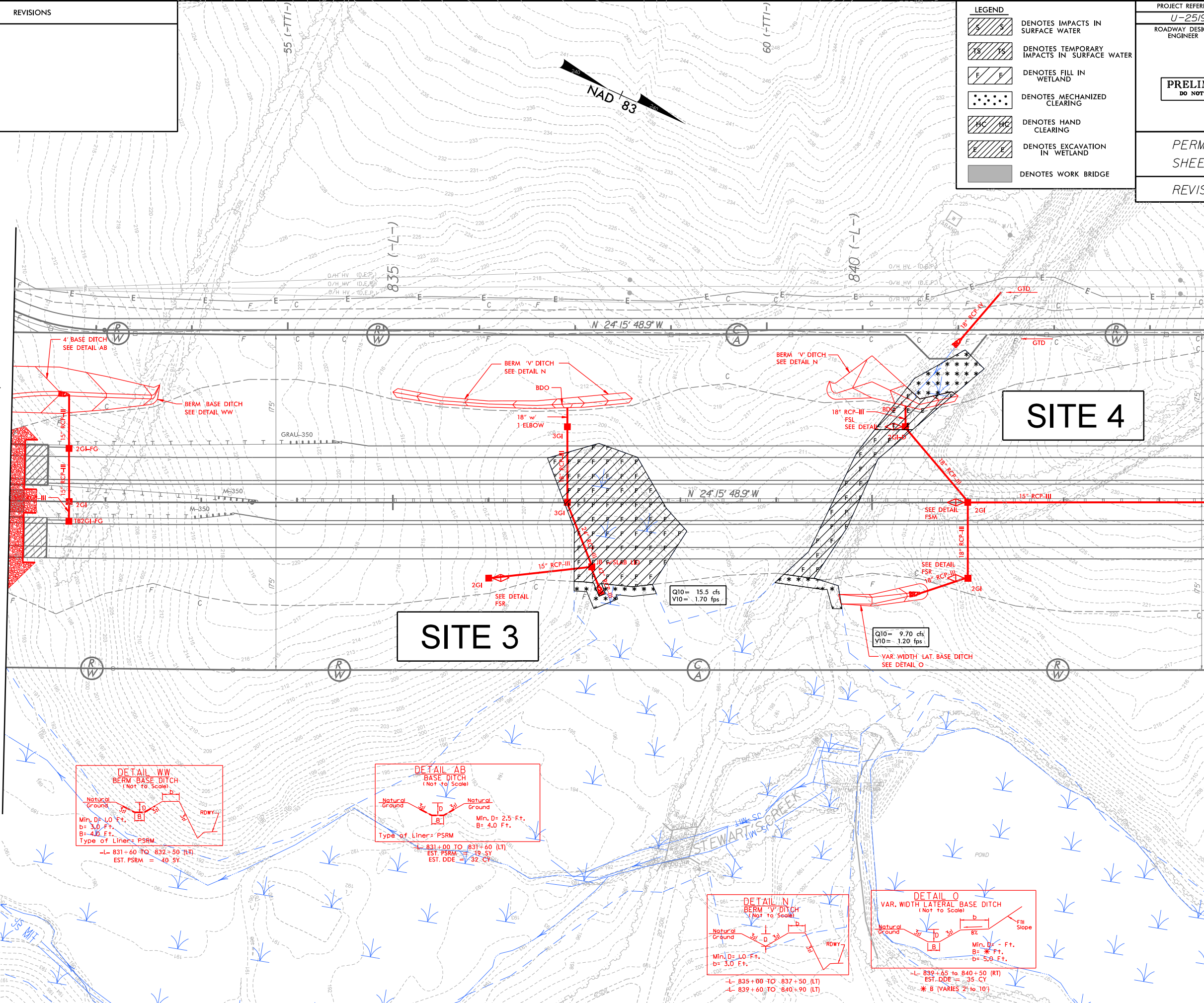
REVISIONS

LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES EXCAVATION IN WETLAND
	DENOTES WORK BRIDGE

PROJECT REFERENCE NO.		SHEET NO.	
U-2519CB		10	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
PERMIT DRAWINGS SHEET 15 OF 55			
REVISED 5/13/14			

MATCH LINE STA. 831+00 SEE SHEET 9

MATCH LINE STA. 843+50 SEE SHEET 11



SEE SHEET 35 FOR -L- PROFILE  
SEE SHEET 64 -TTI- FOR PROFILE














7/2/99

104.001.001/u2519cb/Roadway/proj/u2519cb.rdy.pstn

REVISIONS

LEGEND

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

PROJECT REFERENCE NO.

U-2519CB

SHEET NO.

11

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWINGS  
SHEET 18 OF 55

REVISED 5/13/14

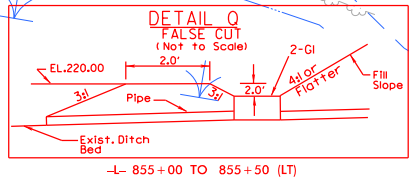
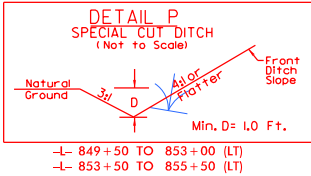
MATCH LINE STA. 843+50 SEE SHEET 10

MATCH LINE STA. 855+50 SEE SHEET 12

SITE 5

SITE 6

SITE 7

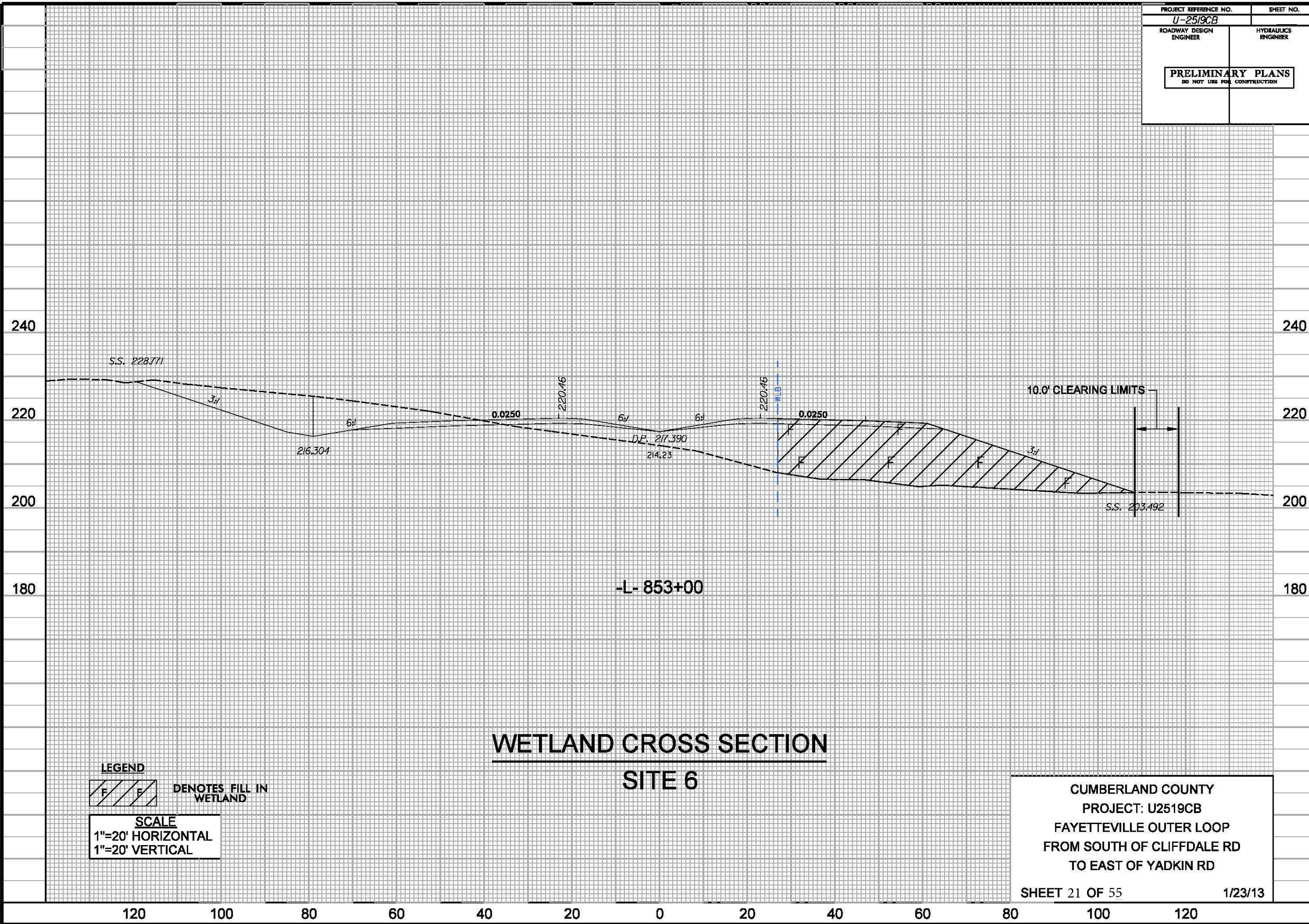


SEE SHEETS 35 & 36 FOR -L- PROFILE  
SEE SHEET 64 FOR -TT- PROFILE  
SEE SHEET 65 FOR -TT2- PROFILE





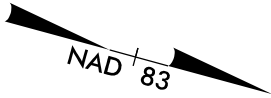




7/2/99

104,001,001/u259cb/Roadway/proj/u259cb.rdy.psh12

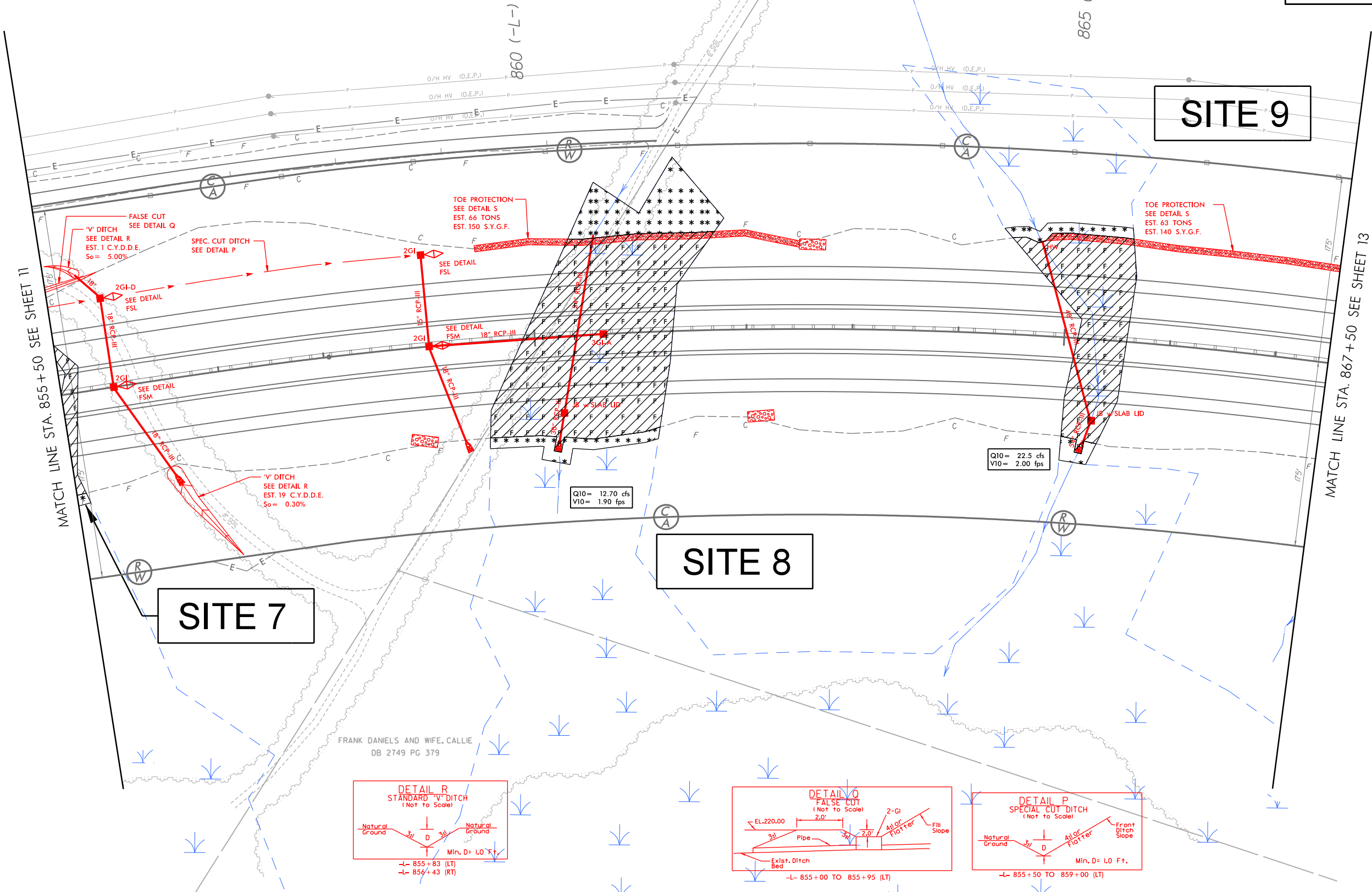
REVISIONS



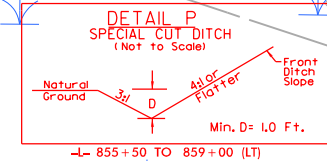
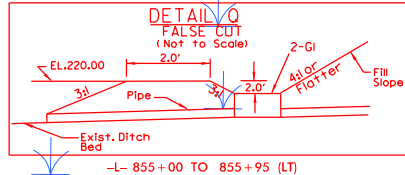
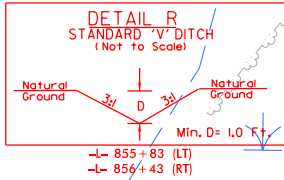
20 (-TT2-)

LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES EXCAVATION IN WETLAND
	DENOTES WORK BRIDGE

PROJECT REFERENCE NO.		SHEET NO.	
<i>U-25/9CB</i>		<i>12</i>	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div>PRELIMINARY PLANS</div> <div>DO NOT USE FOR CONSTRUCTION</div>			
<i>PERMIT DRAWINGS</i>			
<i>SHEET 22 OF 55</i>			
<i>REVISED 5/13/14</i>			



FRANK DANIELS AND WIFE, CALLIE  
DB 2749 PG 379

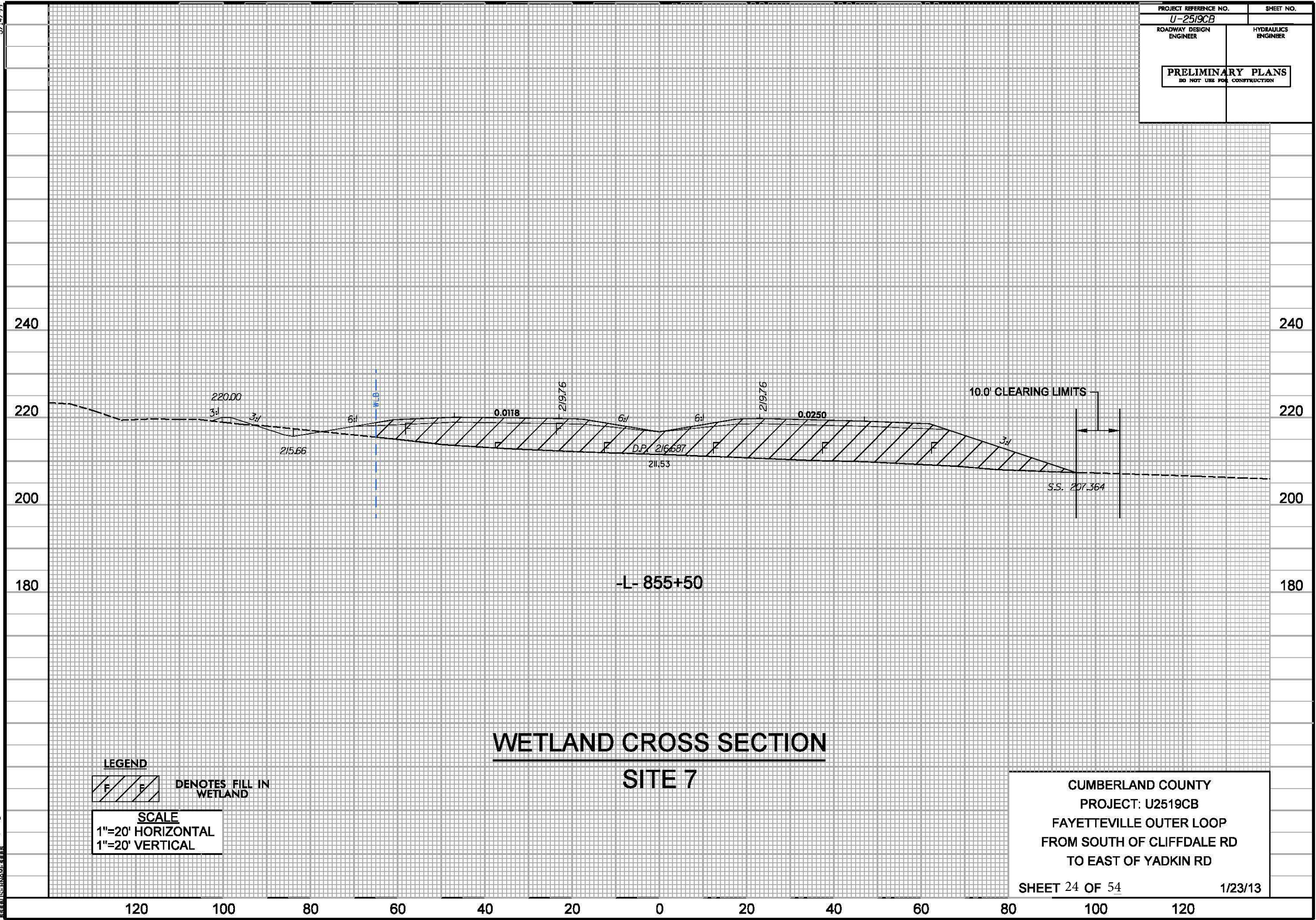


SEE SHEET 36 FOR -L- PROFILE  
SEE SHEET 65 FOR -TT2- PROFILE









## WETLAND CROSS SECTION SITE 7

### LEGEND



DENOTES FILL IN  
WETLAND

### SCALE

1"=20' HORIZONTAL  
1"=20' VERTICAL

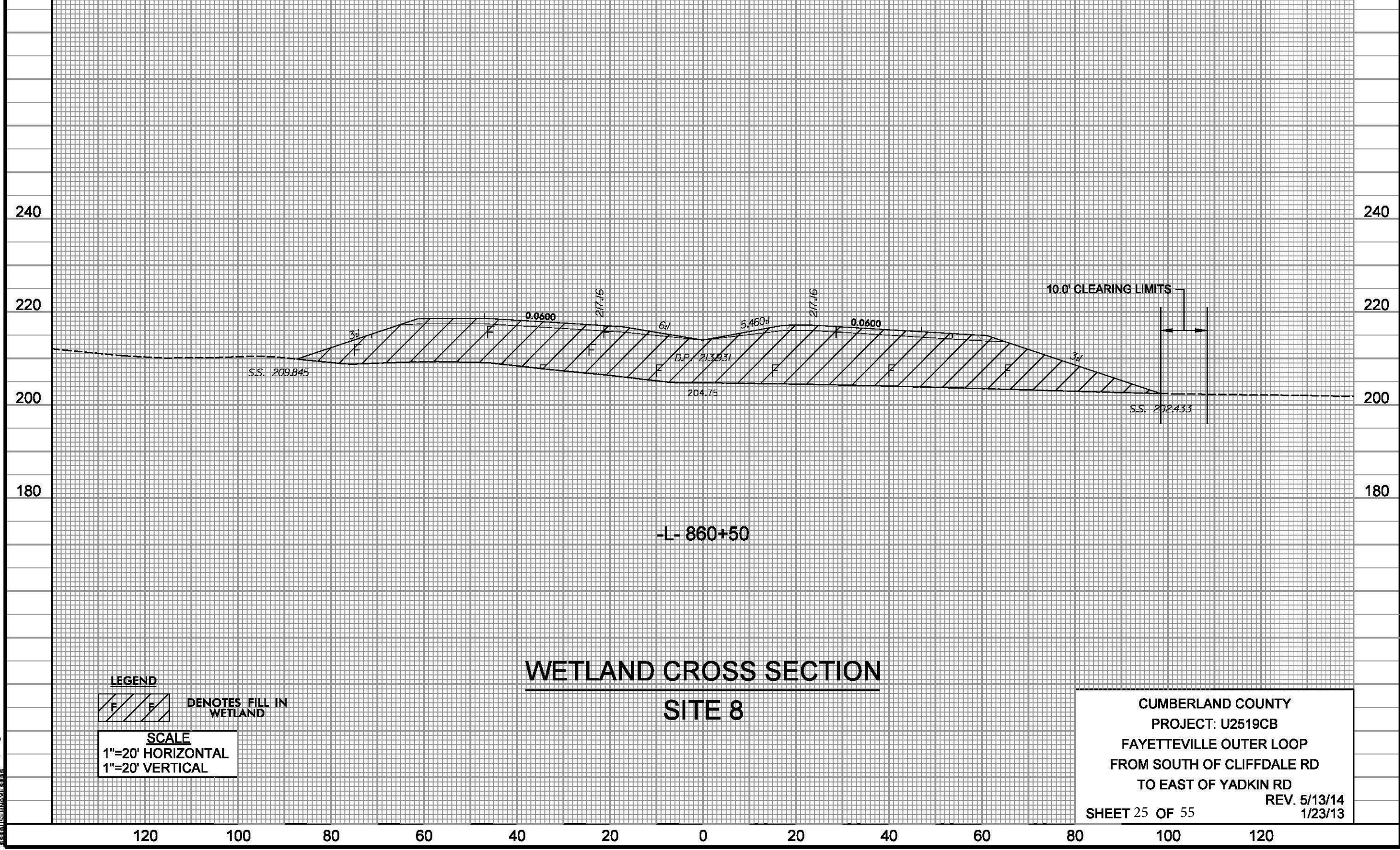
CUMBERLAND COUNTY  
PROJECT: U2519CB  
FAYETTEVILLE OUTER LOOP  
FROM SOUTH OF CLIFFDALE RD  
TO EAST OF YADKIN RD

SHEET 24 OF 54


1/23/13

5/14/99  
4:16:51 PM  
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2519CB\2519CB.dwg

PROJECT REFERENCE NO.		SHEET NO.	
U-2519CB			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div><b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION</div>			



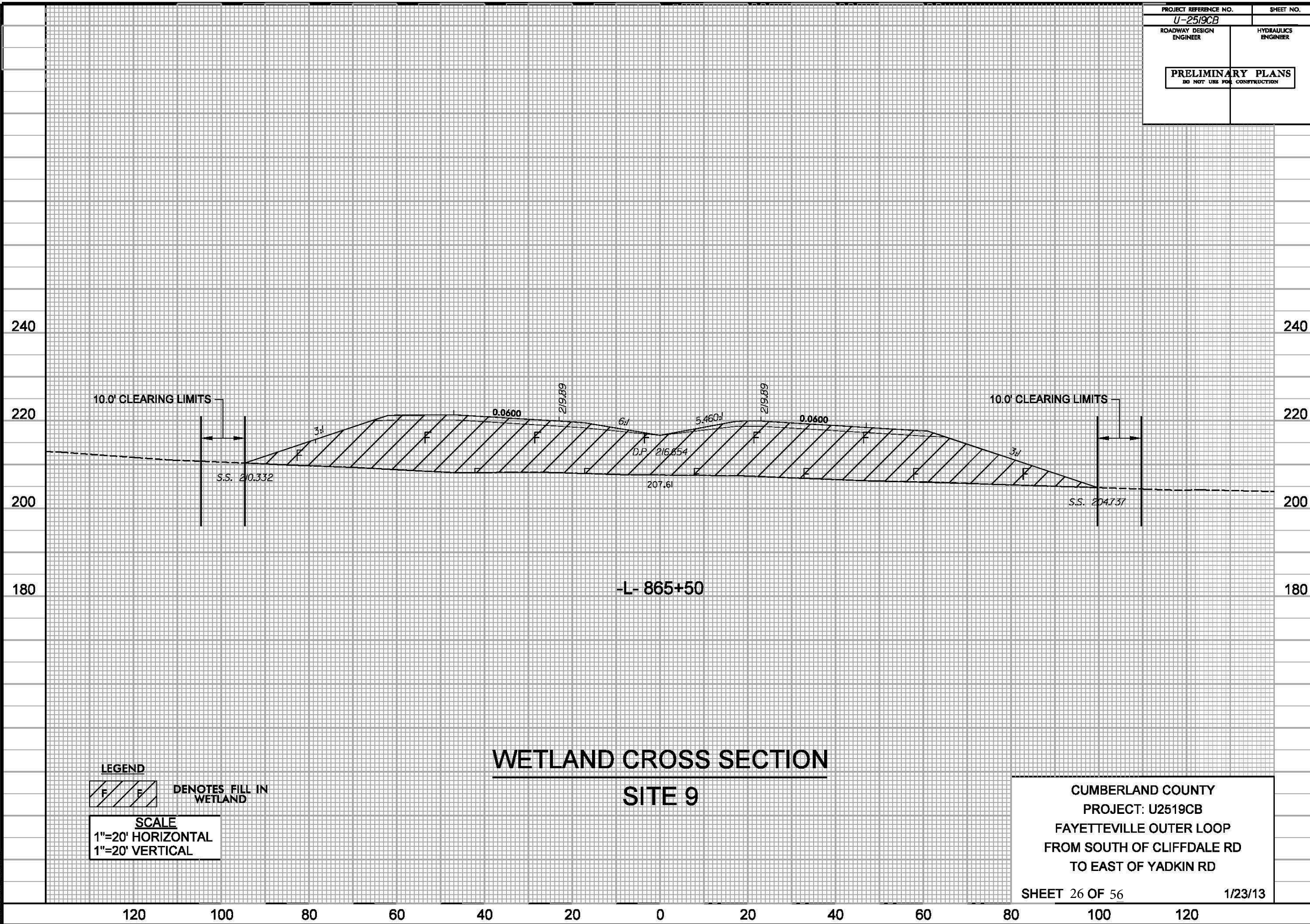
**LEGEND**

 DENOTES FILL IN WETLAND

**SCALE**  
1"=20' HORIZONTAL  
1"=20' VERTICAL

# WETLAND CROSS SECTION SITE 8

CUMBERLAND COUNTY  
PROJECT: U2519CB  
FAYETTEVILLE OUTER LOOP  
FROM SOUTH OF CLIFFDALE RD  
TO EAST OF YADKIN RD  
REV. 5/13/14  
1/23/13  
SHEET 25 OF 55










7/22/99

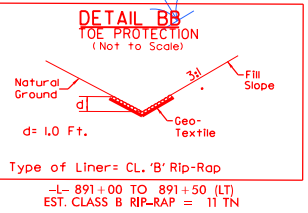
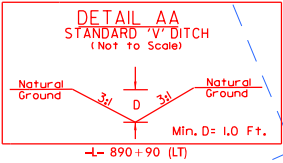
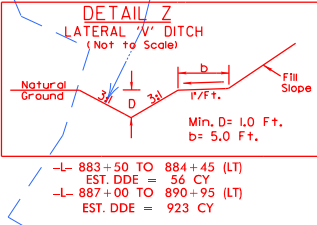
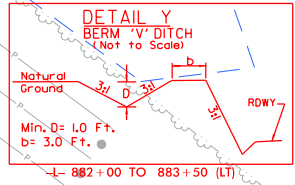
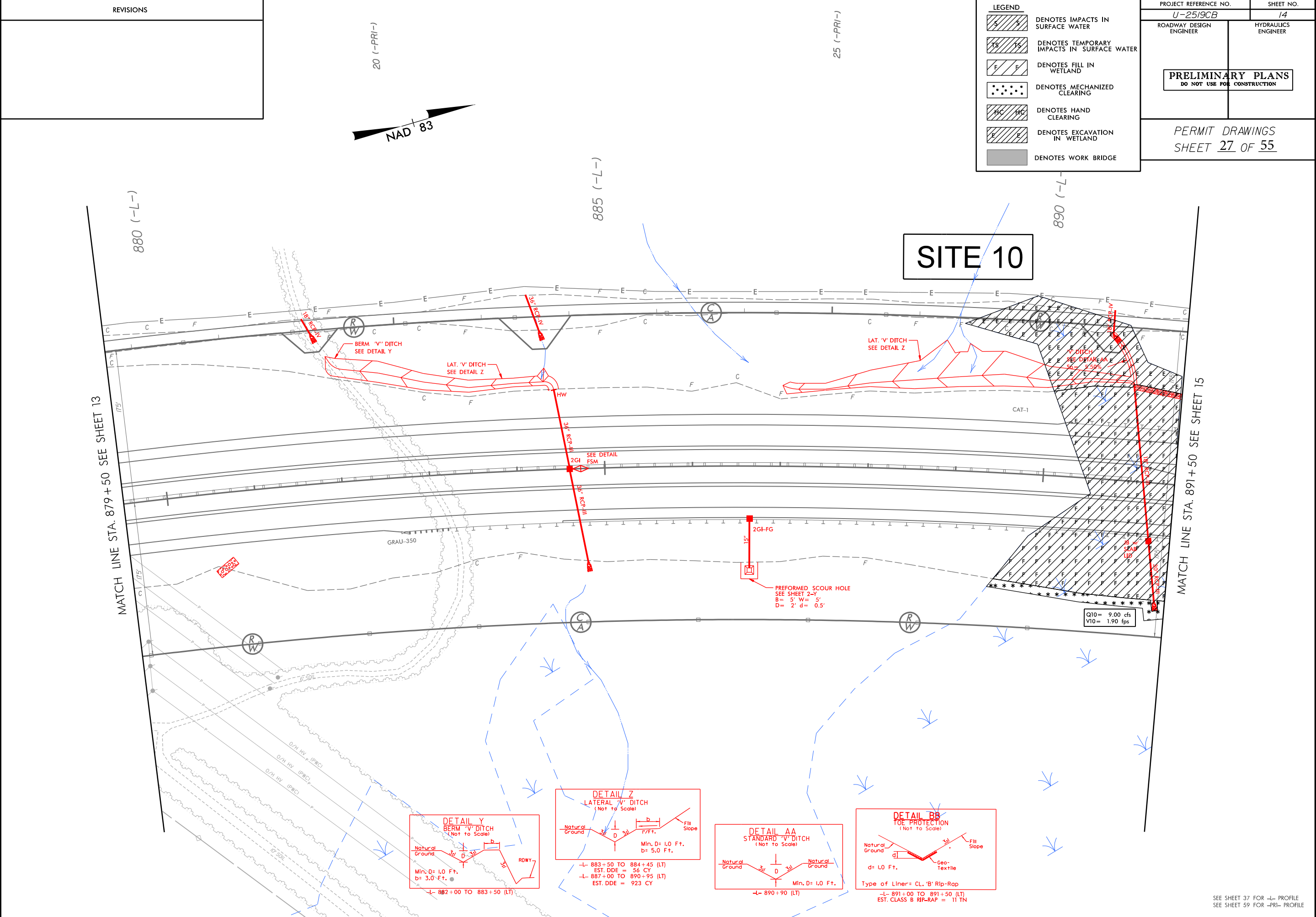
104.001.001\2519cb\Roadway\proj\2519cb\_rdy\_psh4

REVISIONS



LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES EXCAVATION IN WETLAND
	DENOTES WORK BRIDGE

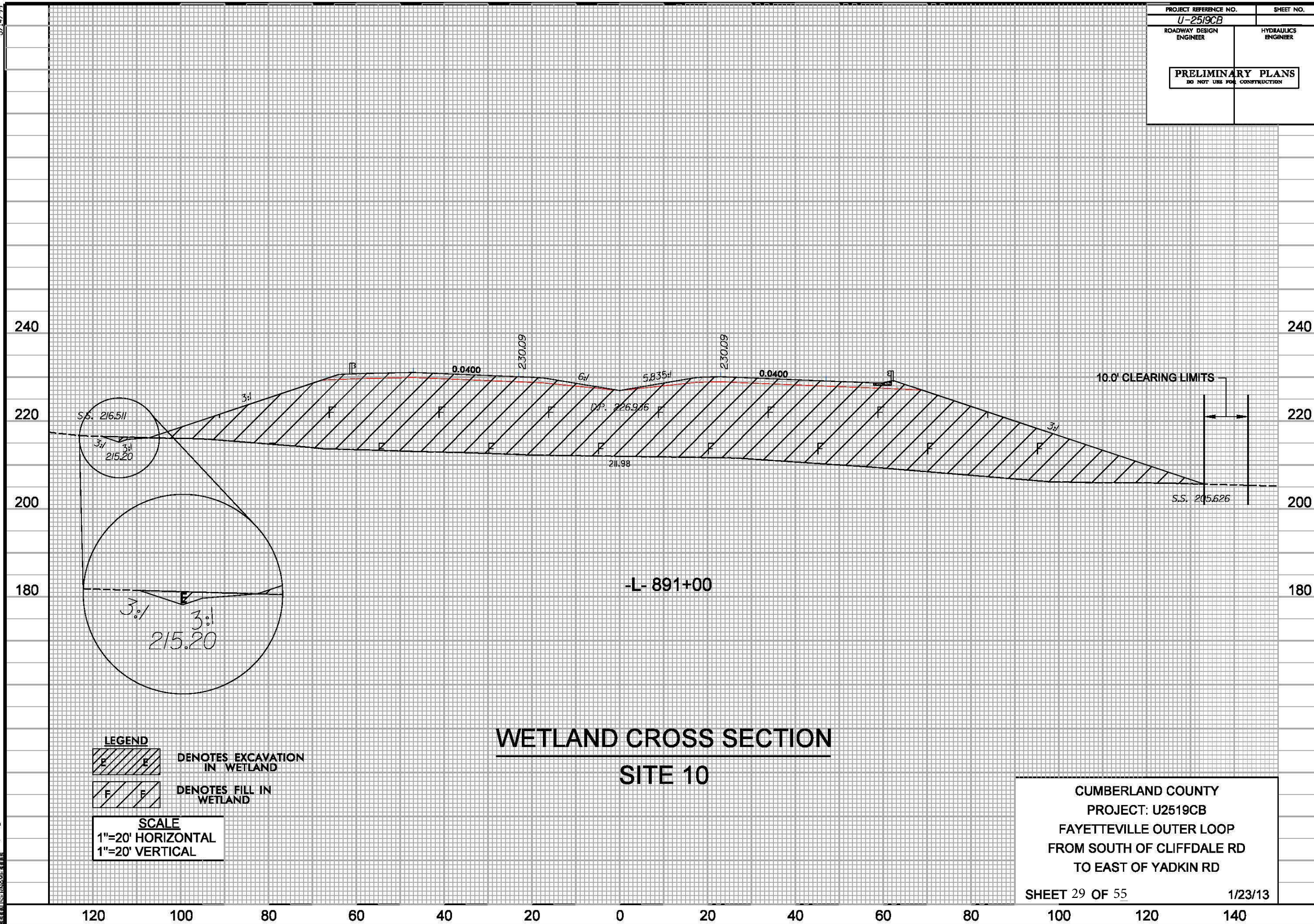
PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	14
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
PERMIT DRAWINGS SHEET 27 OF 55	



SEE SHEET 37 FOR —L— PROFILE  
SEE SHEET 59 FOR —PRI— PROFILE









SEE SHEET 37 FOR -L- PROFILE  
SEE SHEET 59 FOR -PR1- PROFILE  
SEE SHEET 60 FOR -PR2A- PROFILE  
SEE SHEET 2-S FOR BRIDGE SKETCH  
FOR STRUCTURE PLANS. SEE SHEET S- THRU S-

SEE SHEET 37 FOR -L- PROFILE  
SEE SHEET 59 FOR -PR1- PROFILE  
SEE SHEET 60 FOR -PR2A- PROFILE  
SEE SHEET 2-S FOR BRIDGE SKETCH  
FOR STRUCTURE PLANS SEE SHEET S- THRU S-



[illegible]

**-L- FAYETTEVILLE OUTER LOOP**

**SITE 10**

POC STA. 893+76.24 (23' RT) BEGIN BRIDGE

PROPOSED GRADE

10.4444%

WORK BRIDGE APPROXIMATE ELEVATION = 210.00'

EXISTING GROUND

POC STA. 902+24.59 (23' RT) END BRIDGE

**BRIDGE HYDRAULIC DATA**

- DESIGN DISCHARGE = 6700 CFS
- DESIGN FREQUENCY = 50 YRS
- DESIGN HW ELEVATION = 206.7 FT.
- BASE DISCHARGE = 900 CFS
- BASE FREQUENCY = 100 YRS
- BASE HW ELEVATION = 2700 FT
- OVERTOPPING DISCHARGE = - CFS
- OVERTOPPING FREQUENCY = 100 YR.
- OVERTOPPING ELEVATION = 225.0 FT
- DATE OF SURVEY = 2-27-01
- WS ELEVATION AT DATE OF SURVEY = 203.4 FT

BM#6 Elev. = 212.82' -BY4- 5+45 34'(RT)  
CHISELED SQUARE IN HEADWALL  
N: 491353.9 E: 1992679.2

BEGIN VAR. WIDTH LAT. BASE DITCH  
STA. 902+75 (L.T)  
ELEV = 200.00

STA. 904+50 (L.T)  
ELEV = 210.65

SEE SHEETS 14, 15 & 16 FOR ALIGNMENT



SEE SHEET 37 & 38 FOR -L- PROFILE  
SEE SHEET 60 FOR -PR2A- PROFILE  
SEE SHEET 65 FOR -TT4REV- PROFILE

SEE SHEET 37 & 38 FOR -L- PROFILE  
SEE SHEET 60 FOR -PR2A- PROFILE  
SEE SHEET 65 FOR -TT4REV- PROFILE

SEE SHEET 40 FOR -L- PROFILE  
SEE SHEET 68 FOR -TT5- PROFILE  
SEE SHEET 2-T FOR BRIDGE SKETCH  
FOR STRUCTURE PLANS, SEE SHEET S- THRU S-



SEE SHEET 40 FOR -L- PROFILE  
SEE SHEET 68 FOR -TT5- PROFILE  
SEE SHEET 2-T FOR BRIDGE SKETCH  
FOR STRUCTURE PLANS, SEE SHEET S- THRU S-

5/14/99

PROJECT REFERENCE NO.		SHEET NO.
U-2519CB		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

270

260

250

240

230

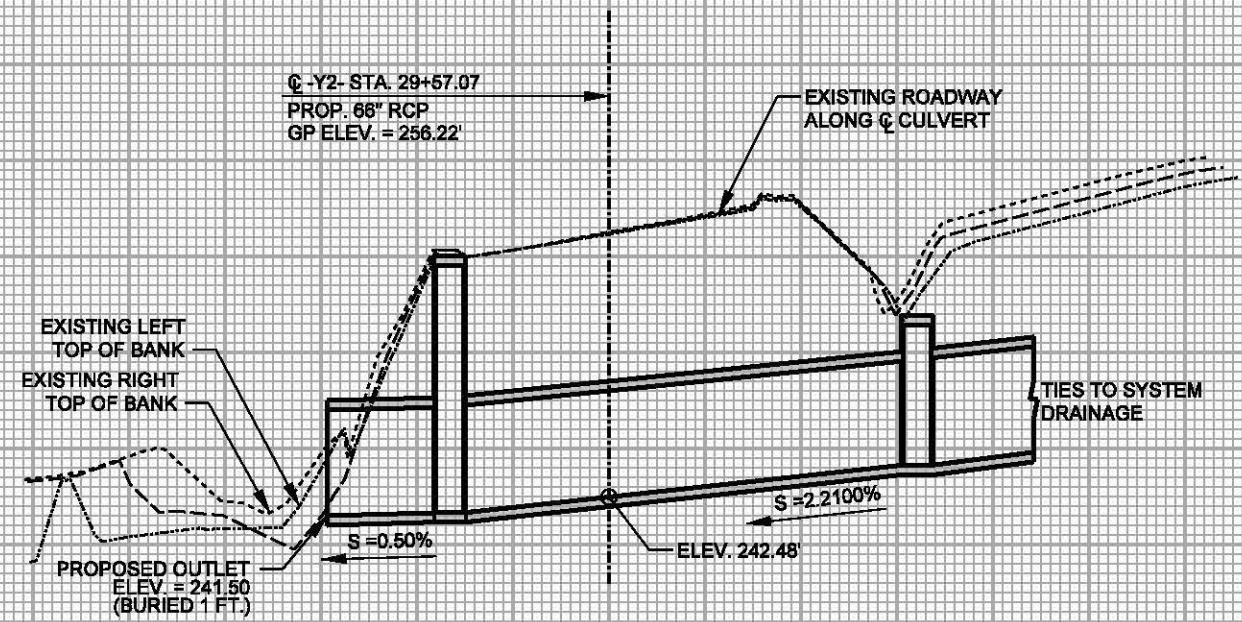
270

260

250

240

230



PROFILE ALONG STRUCTURE  
SITE 14

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

CUMBERLAND COUNTY  
PROJECT: U2519CB  
FAYETTEVILLE OUTER LOOP  
FROM SOUTH OF CLIFFDALE RD  
TO EAST OF YADKIN RD  
SHEET 37 OF 55 1/23/13

200

150

100

50

0

50

100

150

200

7/22/99

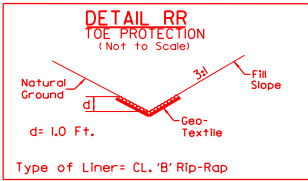
104.001.001/u2519cb/Roadway/proj/u2519cb.rdy\_pst24

REVISIONS

SEE SHEET 2-BB FOR  
CANOPY LANE ACP



PAVEMENT REMOVAL



-TT4REV- 52+50 TO 56+05 (RT)  
-TT4REV- 55+56 TO 58+50 (LT)  
-Y1REV LT- 35+00 TO 39+70 (LT)  
-Y1REV LT- 39+90 TO 41+25 (LT)

SITE 15

TOE PROTECTION  
SEE DETAIL RR  
EST. 100 TONS  
EST. 300 S.Y.G.F

72" RCP-III  
CL 'I' RIP RAP  
EST. 38 TON  
EST. 78 S.Y.G.F

TOE PROTECTION  
SEE DETAIL RR  
EST. 105 TONS  
EST. 320 S.Y.G.F

MATCH LINE STA. 32+50 SEE SHEET 23

SITE 16

MATCH LINE STA. 41+50 SEE SHEET 18

PROJECT REFERENCE NO. <b>U-2519CB</b>		SHEET NO. <b>24</b>	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			
PERMIT DRAWINGS SHEET <b>38</b> OF <b>55</b>			

**LEGEND**

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES EXCAVATION IN WETLAND
	DENOTES WORK BRIDGE

SEE SHEET 2-Q FOR -Y1 DET-  
SEE SHEET 53 FOR -Y1- PROFILE  
SEE SHEET 66 & 67 FOR -TT4REV- PROFILE



7/2/99

REVISIONS

SEE SHEET 2-BB FOR  
CANOPY LANE ACP

MATCH LINE STA. 32+50 SEE SHEET 23

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	24
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

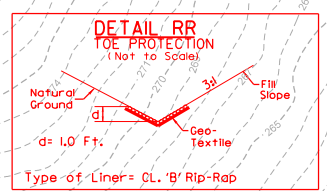
PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWINGS  
SHEET 39 OF 55

LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES EXCAVATION IN WETLAND
	DENOTES WORK BRIDGE

SITE 16

SITE 15



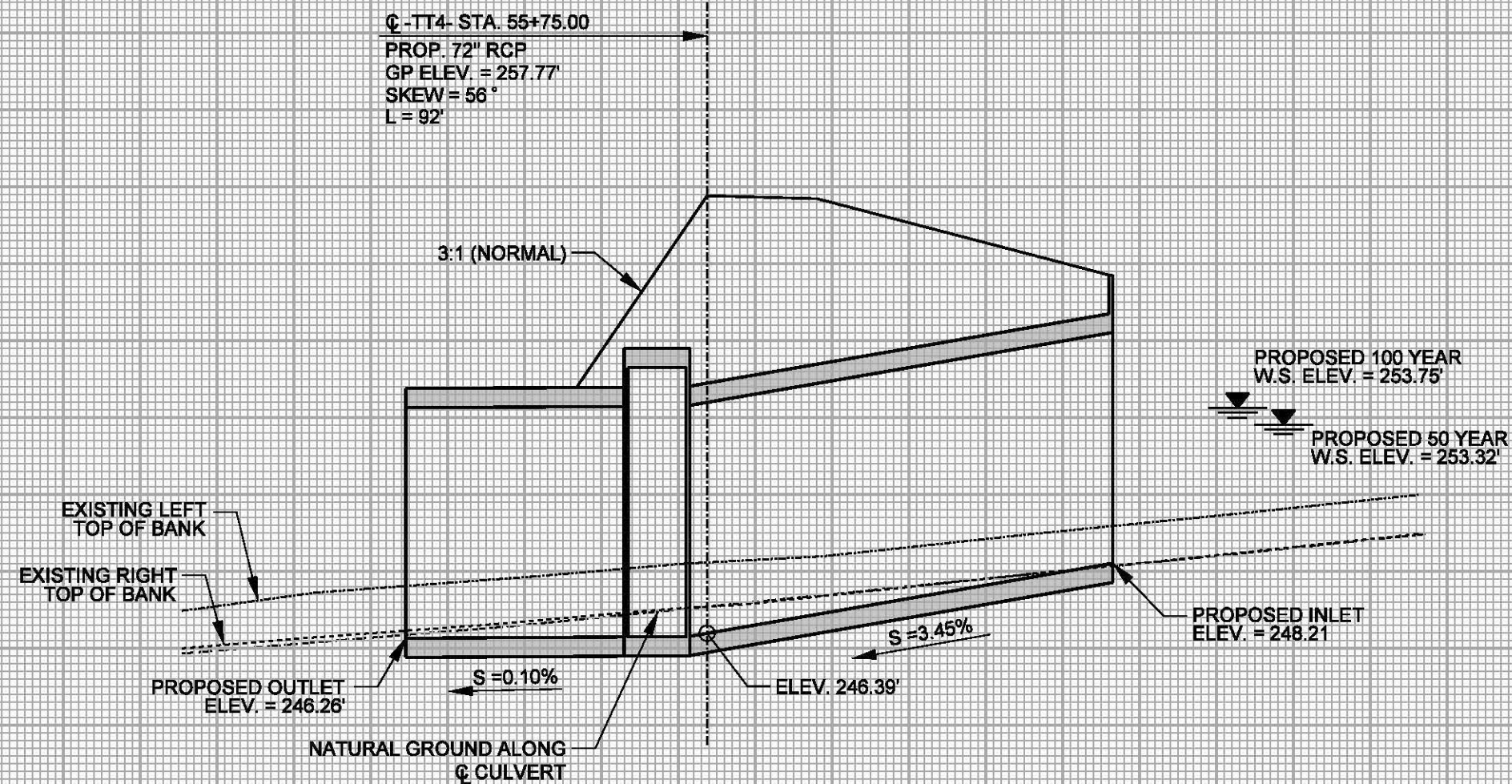
-TT4REV- 52+50 TO 56+05 (RT)  
-TT4REV- 55+56 TO 58+50 (LT)  
-YIREV LT- 35+00 TO 39+70 (LT)  
-YIREV LT- 39+90 TO 41+25 (LT)

TOE PROTECTION  
SEE DETAIL RR  
EST. 100 TONS  
EST. 300 S.Y.G.F

72" RCP-III  
CL 'I' RIP RAP  
EST. 38 TON  
EST. 78 S.Y.G.F

TOE PROTECTION  
SEE DETAIL RR  
EST. 105 TONS  
EST. 320 S.Y.G.F

SEE SHEET 2-Q FOR -Y1 DET-  
SEE SHEET 53 FOR -Y1- PROFILE  
SEE SHEET 66 & 67 FOR -TT4REV- PROFILE



# PROFILE ALONG STRUCTURE SITE 15

**SCALE**  
 1"=20' HORIZONTAL  
 1"=5' VERTICAL

CUMBERLAND COUNTY  
 PROJECT: U2519CB  
 FAYETTEVILLE OUTER LOOP  
 FROM SOUTH OF CLIFFDALE RD  
 TO EAST OF YADKIN RD

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

290

270

250

230

290

270

250

230

10.0' CLEARING LIMITS

10.0' CLEARING LIMITS

S.S. 246.42

247.14

S.S. 248.07

0.020

3:1

3:1

-TT4- 55+50

LEGEND



DENOTES IMPACTS IN  
SURFACE WATER



DENOTES FILL IN  
WETLAND

SCALE

1"=20' HORIZONTAL  
1"=20' VERTICAL

WETLAND CROSS SECTION  
SITE 15

CUMBERLAND COUNTY  
PROJECT: U2519CB  
FAYETTEVILLE OUTER LOOP  
FROM SOUTH OF CLIFFDALE RD  
TO EAST OF YADKIN RD

SHEET 41 OF 55

1/23/13

100

80

60

40

20

0

20

40

60

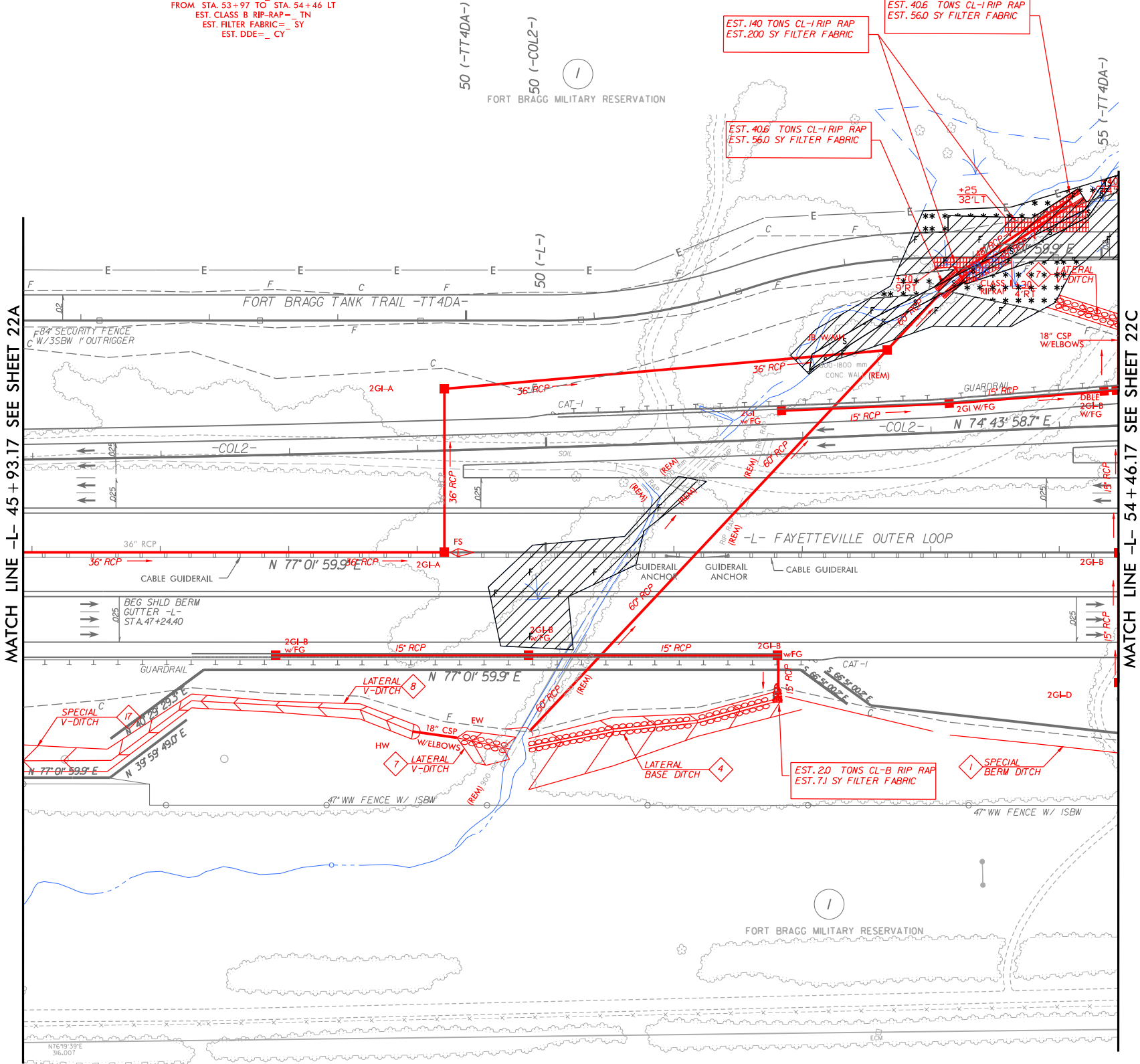
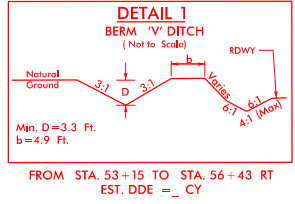
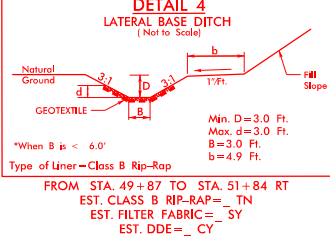
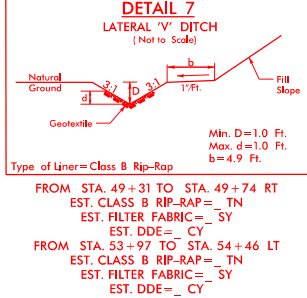
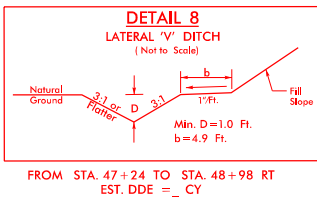
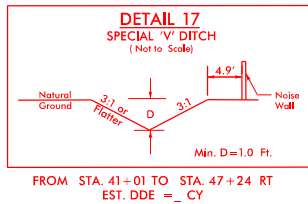
80

100

U2519CB.dwg  
1/23/13  
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8/17/99



PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	22B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
NOT A CERTIFIED DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS.	NOT A CERTIFIED DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS.
THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY :	THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY :
DENNIS JAMES MORY	W. HENRY WELLS JR.
20031 ON 8-29-08	9334 ON 8-29-08
THIS DOCUMENT IS ONLY CERTIFIED AS TO THE REVISIONS.	THIS DOCUMENT IS ONLY CERTIFIED AS TO THE REVISIONS.

Right of Way for this Plan Sheet has been acquired under metric TIP Project U-2519DA. Right of Way authorization was May 19, 2006. Right of Way shown is for information purposes only.

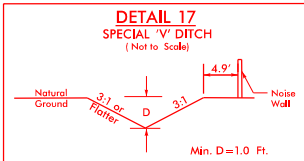
LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES EXCAVATION IN WETLAND
	DENOTES WORK BRIDGE

PERMIT DRAWINGS  
SHEET 42 OF 55  
REVISED 5/14/14

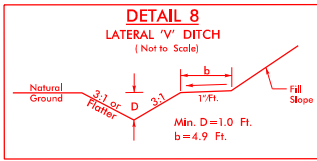
SITE 18

SEE SHEET 41A FOR -L- PROFILE  
SEE SHEET 74 FOR -COL2- PROFILE  
SEE SHEET 70 FOR -TT4DA- PROFILE

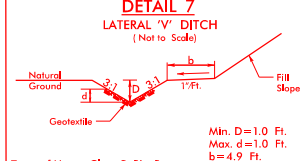
8/17/99



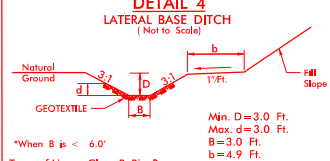
FROM STA. 41+01 TO STA. 47+24 RT  
EST. DDE = \_ CY



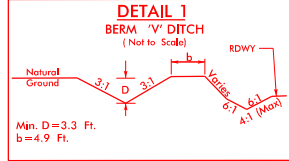
FROM STA. 47+24 TO STA. 48+98 RT  
EST. DDE = \_ CY



FROM STA. 49+31 TO STA. 49+74 RT  
EST. CLASS B RIP-RAP = \_ TN  
EST. FILTER FABRIC = \_ SY  
EST. DDE = \_ CY  
FROM STA. 53+97 TO STA. 54+46 LT  
EST. CLASS B RIP-RAP = \_ TN  
EST. FILTER FABRIC = \_ SY  
EST. DDE = \_ CY

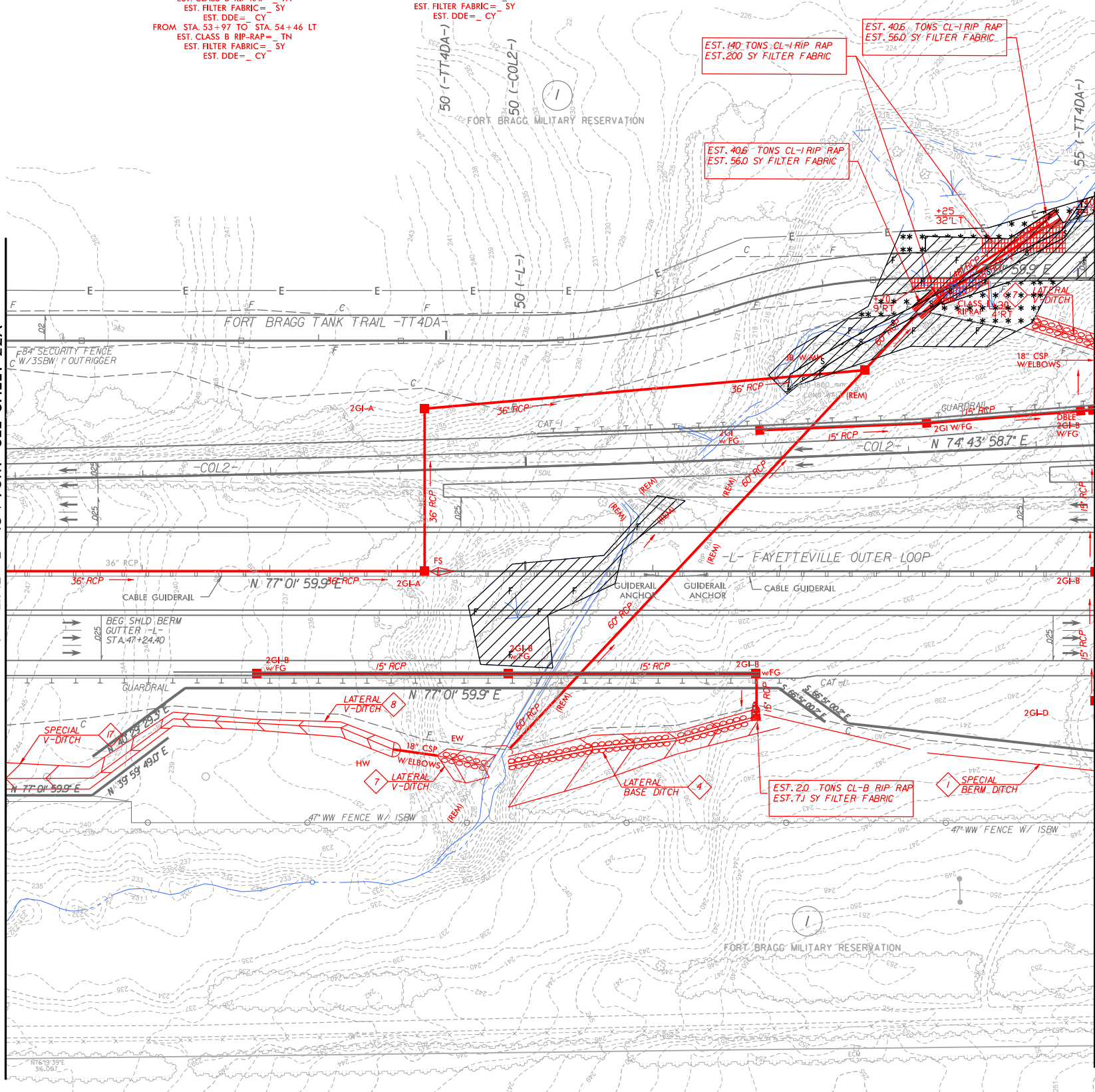


FROM STA. 49+87 TO STA. 51+84 RT  
EST. CLASS B RIP-RAP = \_ TN  
EST. FILTER FABRIC = \_ SY  
EST. DDE = \_ CY



FROM STA. 53+15 TO STA. 56+43 RT  
EST. DDE = \_ CY

MATCH LINE -L- 45 + 93.17 SEE SHEET 22A



MATCH LINE -L- 54 + 46.17 SEE SHEET 22C

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	22B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
NOT A CERTIFIED DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS.	NOT A CERTIFIED DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS.
THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY :	THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY :
DENNIS JAMES MORY	W. HENRY WELLS JR.
20031 ON 8-29-08	9334 ON 8-29-08
THIS DOCUMENT IS ONLY CERTIFIED AS TO THE REVISIONS.	THIS DOCUMENT IS ONLY CERTIFIED AS TO THE REVISIONS.

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LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES EXCAVATION IN WETLAND
	DENOTES WORK BRIDGE

PERMIT DRAWINGS  
SHEET 43 OF 55

REVISED 5/14/14

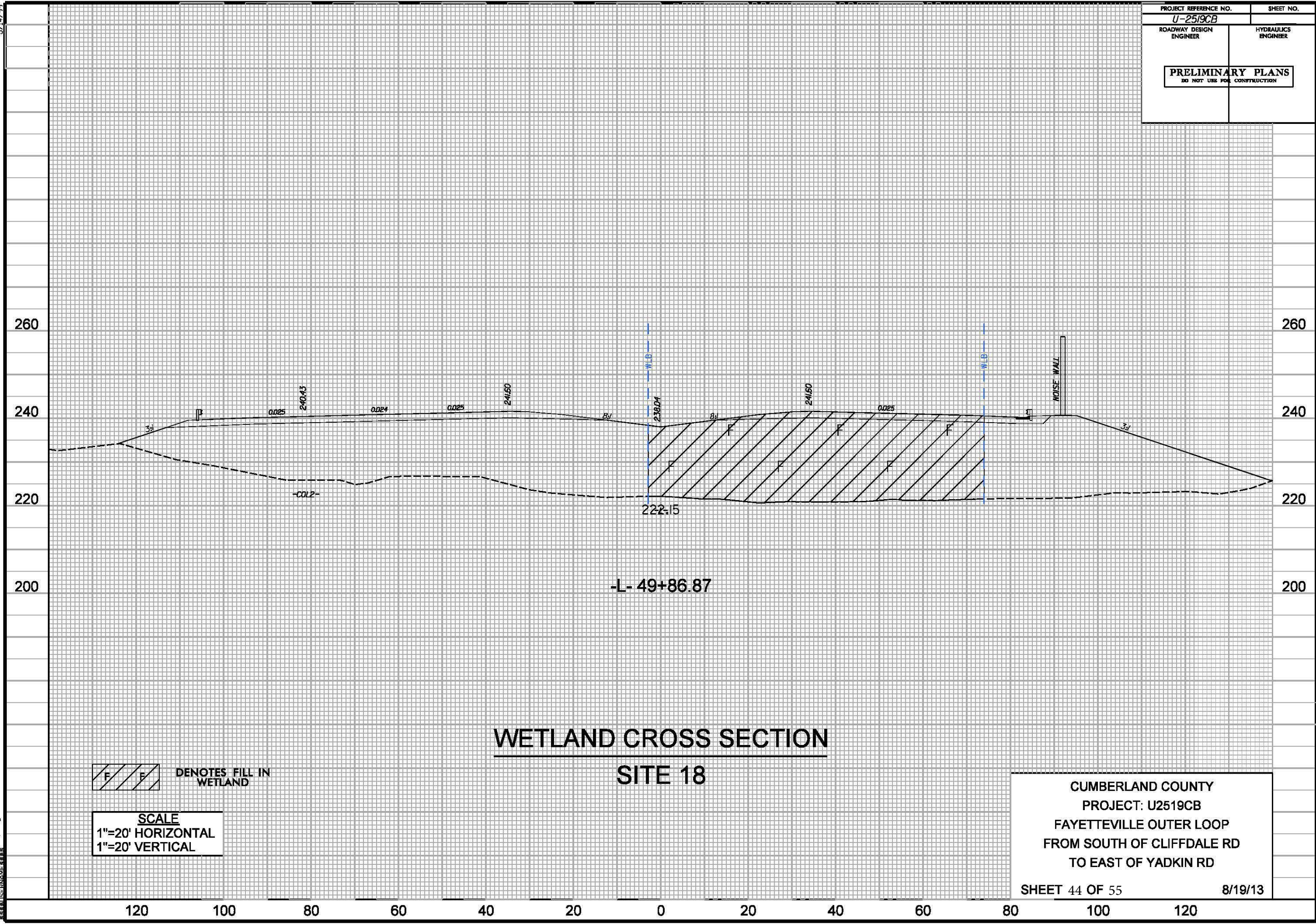
**SITE 18**

SEE SHEET 41A FOR -L- PROFILE  
SEE SHEET 74 FOR -COL2- PROFILE  
SEE SHEET 70 FOR -TT4DA- PROFILE

REVISIONS

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U-2519CB-01A Rdu.esh.22B.dgn  
3:33:31 PM  
SERNAME





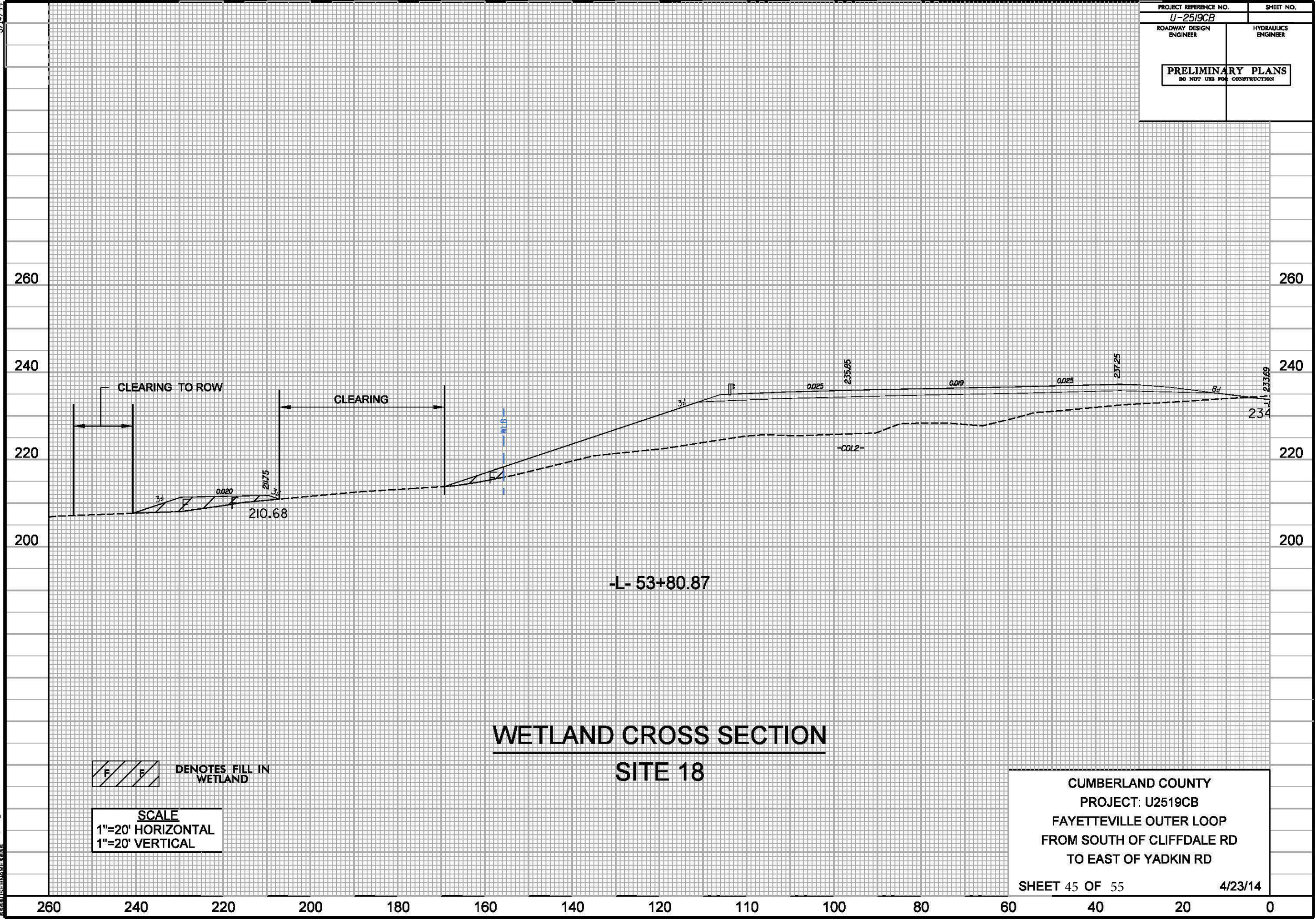
**F** DENOTES FILL IN WETLAND

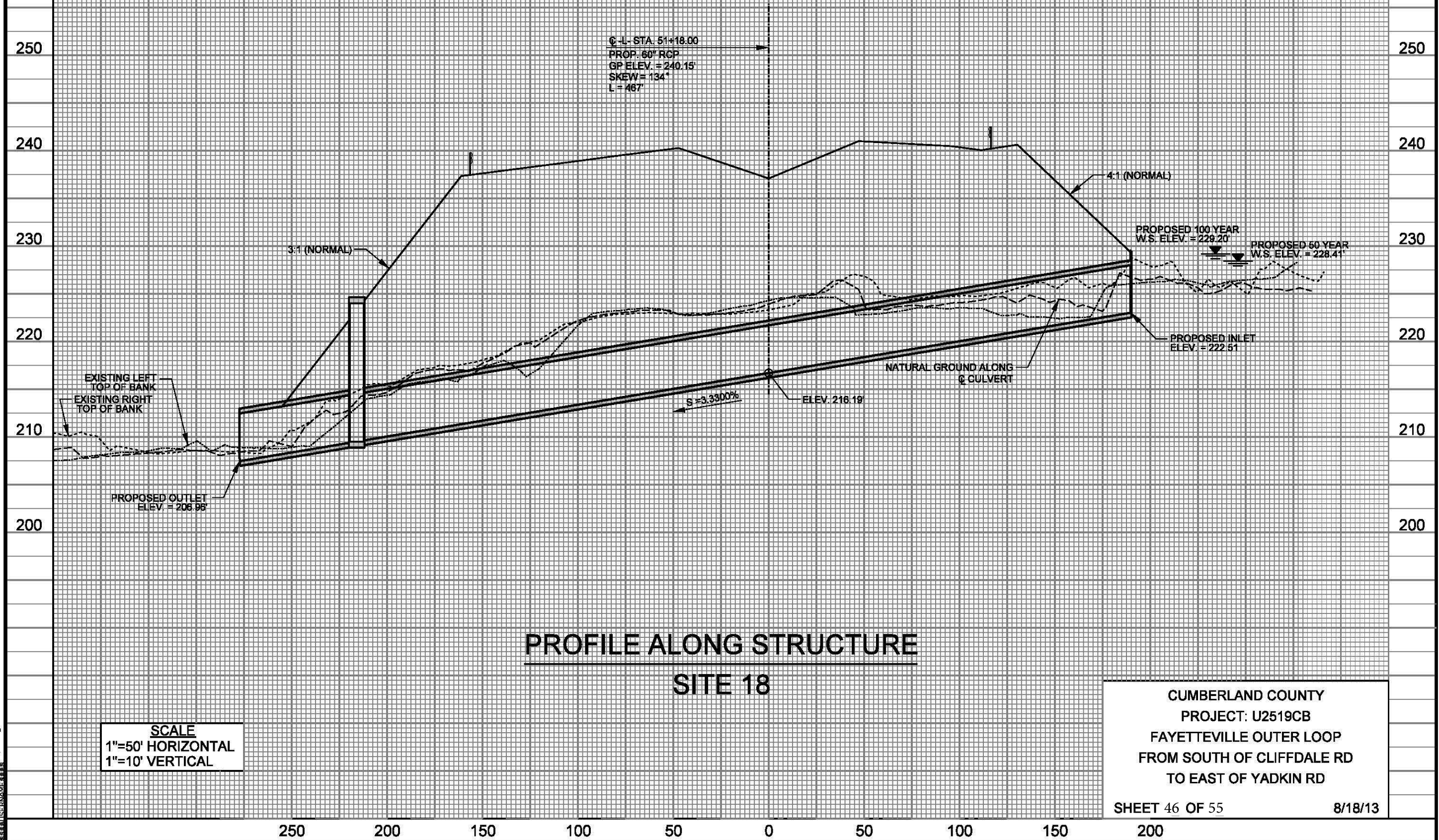
**SCALE**  
 1"=20' HORIZONTAL  
 1"=20' VERTICAL

## WETLAND CROSS SECTION SITE 18

CUMBERLAND COUNTY  
 PROJECT: U2519CB  
 FAYETTEVILLE OUTER LOOP  
 FROM SOUTH OF CLIFFDALE RD  
 TO EAST OF YADKIN RD





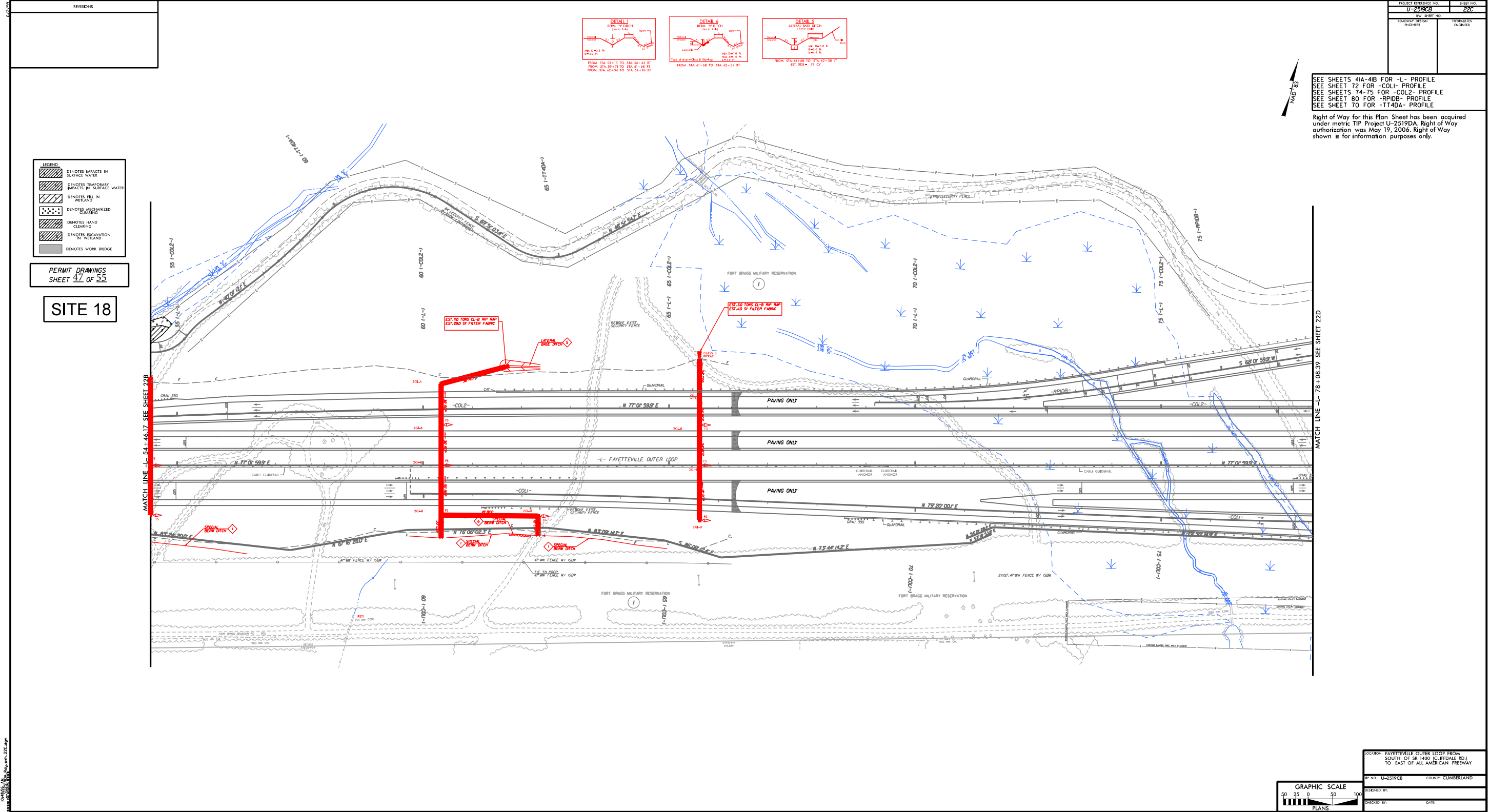


**SCALE**  
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 1"=10' VERTICAL

CUMBERLAND COUNTY  
 PROJECT: U2519CB  
 FAYETTEVILLE OUTER LOOP  
 FROM SOUTH OF CLIFFDALE RD  
 TO EAST OF YADKIN RD  
 SHEET 46 OF 55  
 8/18/13

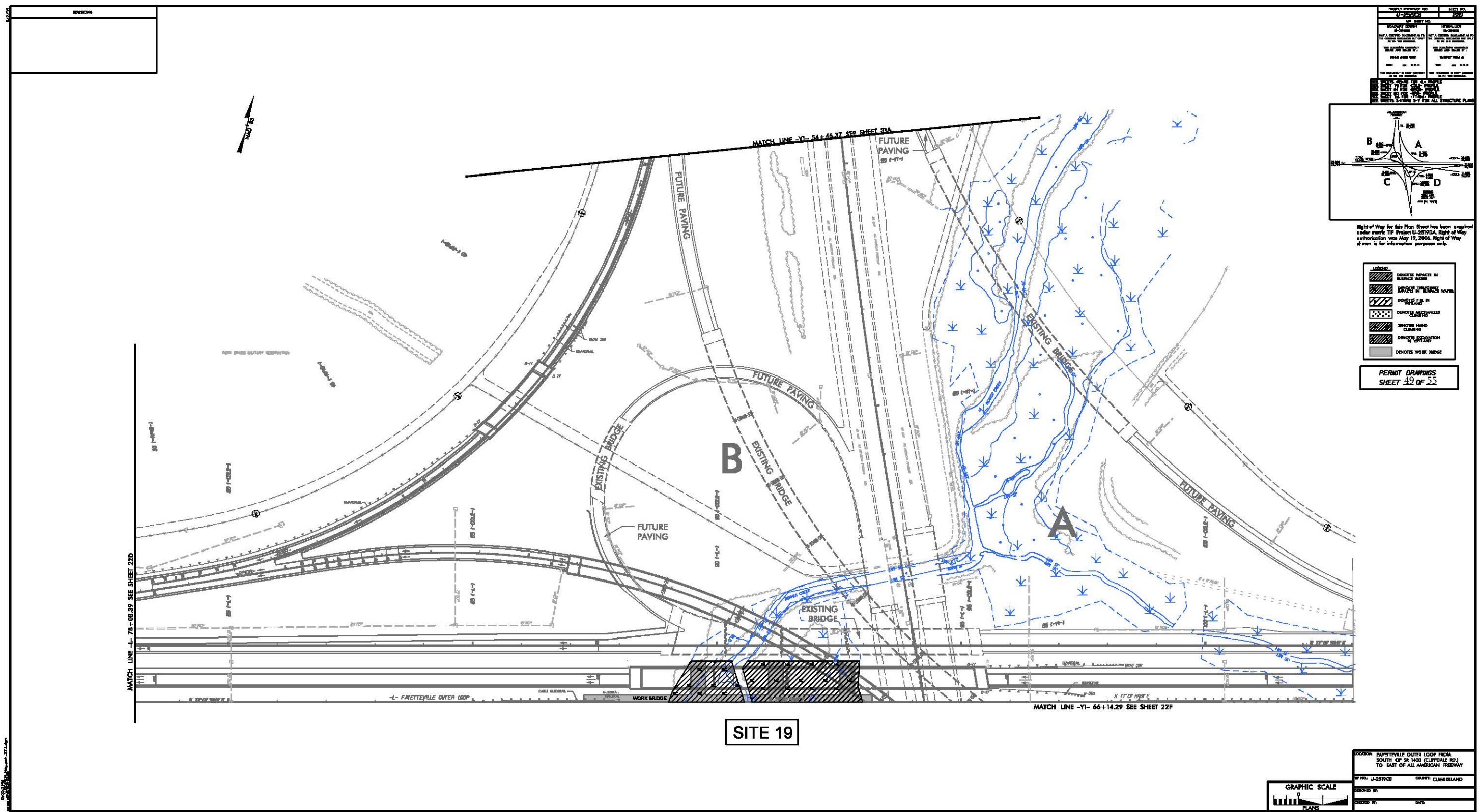
5/14/99

2162519CB hyd pipe-pf1.dgn





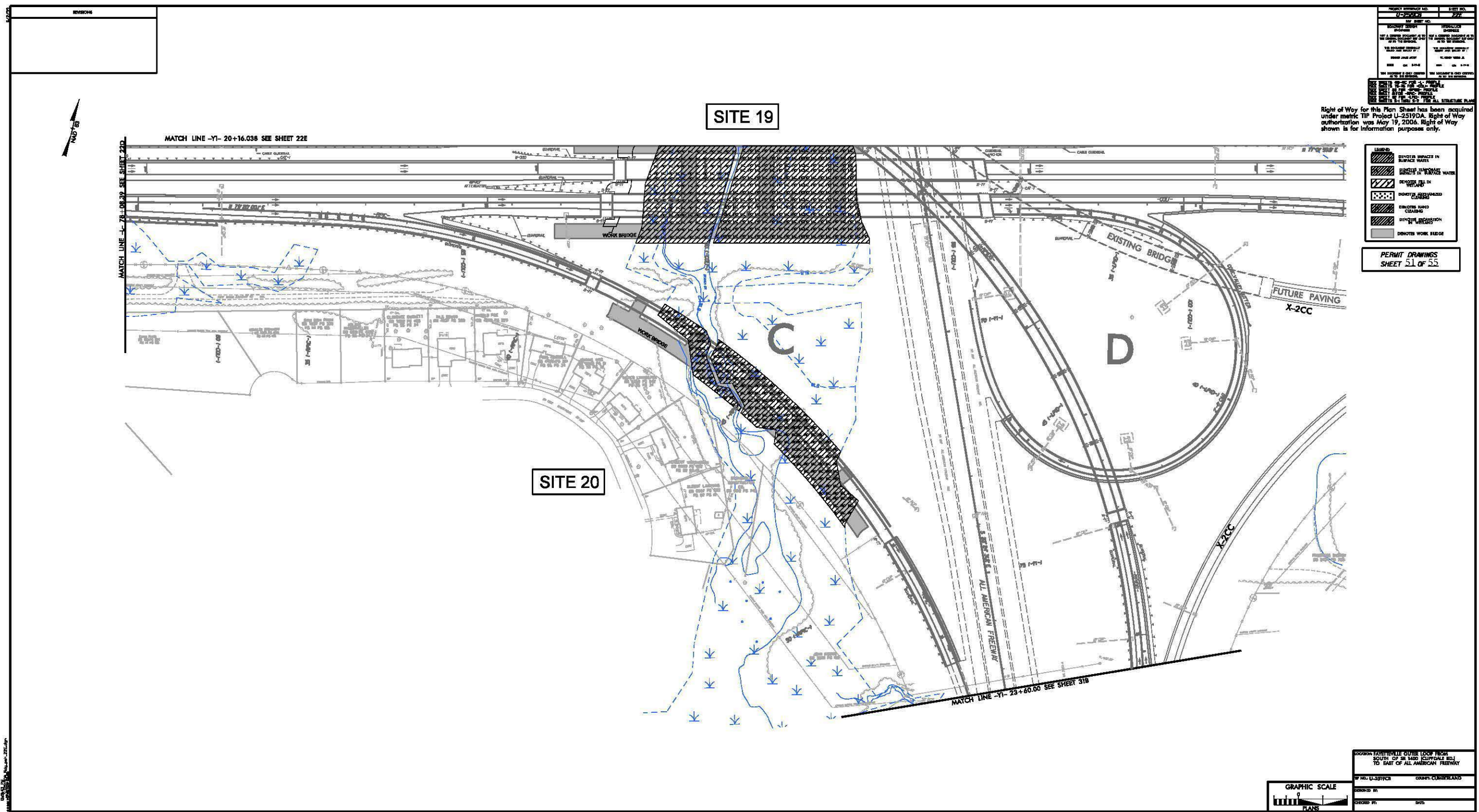












REVISIONS

PROJECT NUMBER: U-2519DA	SHEET NO.: 51
DATE: 05/19/2006	BY: J. J. JONES
CHECKED BY: J. J. JONES	DATE: 05/19/2006
DESIGNED BY: J. J. JONES	DATE: 05/19/2006
APPROVED BY: J. J. JONES	DATE: 05/19/2006

Right of Way for this Plan Sheet has been acquired under metric TIP Project U-2519DA. Right of Way authorization was May 19, 2006. Right of Way shown is for information purposes only.

LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER
DENOTES MECHANIZED CLEARING
DENOTES HAND CLEARING
DENOTES EXISTING IN WETLANDS
DENOTES WORK BRIDGE

PERMIT DRAWINGS  
SHEET 51 OF 55










SECTION: FAYETTEVILLE OUTER LOOP FROM SOUTH OF SR 1400 (CLIPPALE RD) TO EAST OF ALL AMERICAN FREEWAY	
BY: J. J. JONES	COUNTY: CUMBERLAND
CHECKED BY: J. J. JONES	DATE: 05/19/2006



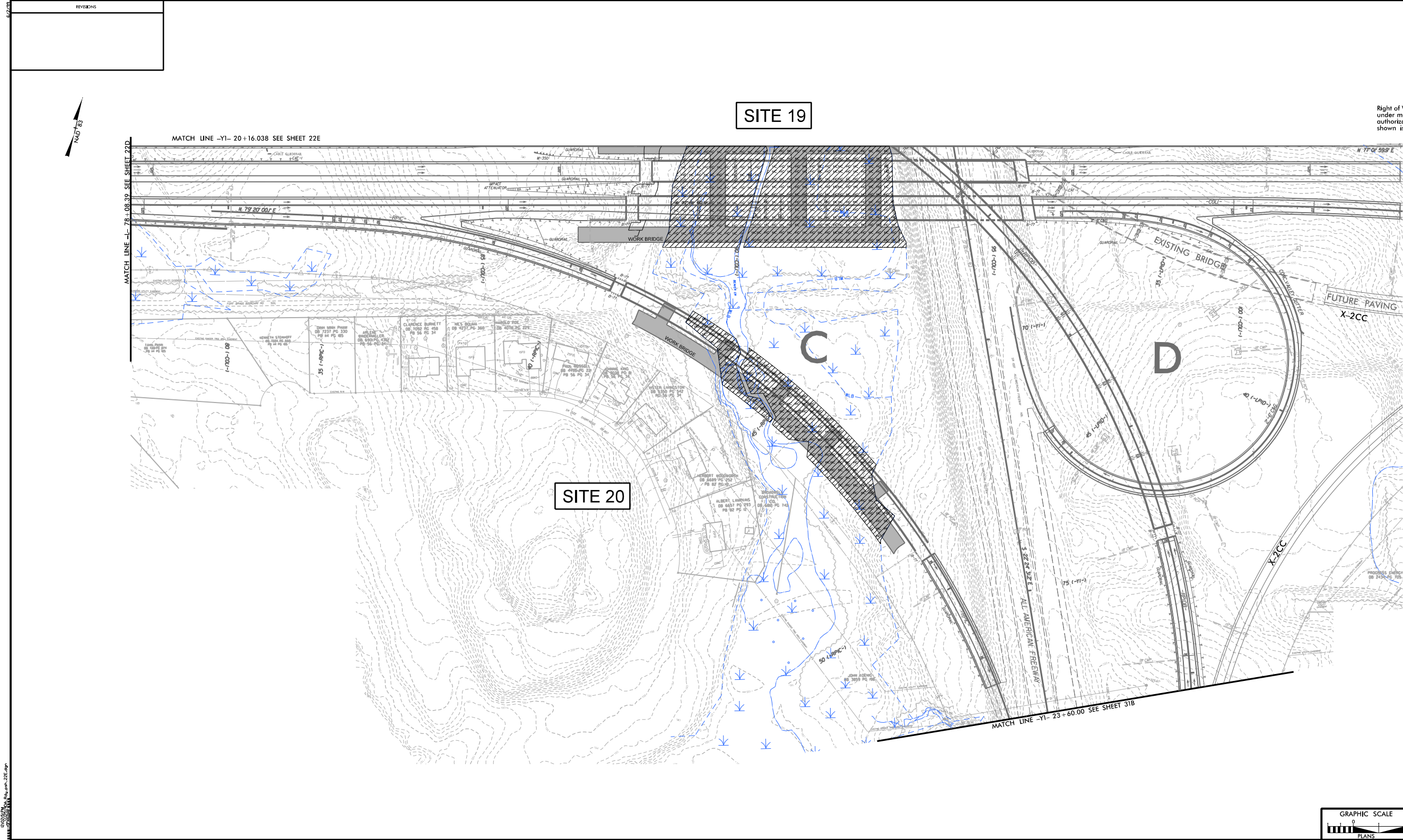
PROJECT REFERENCE NO.		SHEET NO.	
U-2519-9		22E	
BSW SHEET NO.			
ROADWAY DESIGN		HYDRAULICS	
ENGINEER		ENGINEER	
NOT A CREDIT DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS HEREIN		NOT A CREDIT DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS HEREIN	
THIS DOCUMENT ORIGINALLY DATED AND SIGNED BY:		THIS DOCUMENT ORIGINALLY DATED AND SIGNED BY:	
EDMUND JONES MKE		W. HENRIE WEINER MKE	
70011 00 00 00 00 00		70011 00 00 00 00 00	
THIS DOCUMENT IS ONLY CREDITED AS TO THE REVISIONS.		THIS DOCUMENT IS ONLY CREDITED AS TO THE REVISIONS.	
SHEETS 83-AC FOR 1-1 PROFILE		SHEETS 83-AC FOR 1-1 PROFILE	
SHEETS 83-AC FOR 1-1 PROFILE		SHEETS 83-AC FOR 1-1 PROFILE	
SHEET 83-AC FOR 1-1 PROFILE		SHEET 83-AC FOR 1-1 PROFILE	
SHEET 83-AC FOR 1-1 PROFILE		SHEET 83-AC FOR 1-1 PROFILE	
SHEETS 1-1 THRU 5-7 FOR ALL STRUCTURE PLAN		SHEETS 1-1 THRU 5-7 FOR ALL STRUCTURE PLAN	

Right of Way for this Plan Sheet has been acquired under metric TIP Project U-2519DA. Right of Way authorization was May 19, 2006. Right of Way shown is for information purposes only.

**LEGEND**

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES EXCAVATION IN WETLAND
	DENOTES WORK BRIDGE

PERMIT DRAWINGS  
SHEET 52 OF 55



-RPIDB- 57+06.94 EL 272.57  
-L- 93+38.60 EL 241.50

PERMIT DRAWINGS  
SHEET 53 OF 55

PROJECT REFERENCE NO.

U-2519CB

ROADWAY DESIGN  
ENGINEER

SHEET NO.

1C

HYDRAULICS  
ENGINEER

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

# SITE 19

$$\begin{aligned}PI &= 93+83.18 \\EL &= 247.74' \\K &= 320 \\VC &= 1,247'\end{aligned}$$

END BRIDGE  
-L- 95+43.49  
(34.45' RT.)

~~(+)2.2300%  $\triangle$  (-)11.6700%~~

— PROPOSED GRADE

— WORK BRIDGE  
APPROXIMATE  
ELEVATION = 200.00'

EXISTING GROUND -

FOR -L- ALIGNMENT, SEE SHEET NO. 22D-22E

BEGIN BRIDGE  
-L- 88+32.21  
(34.45' RT.)

1.5:1

1.5:1

280

270

260

250

240

230

220

210

200

190

280

270

260

250

240

230

220

210

200

90

**-L- FAYETTEVILLE OUTER LOOP**

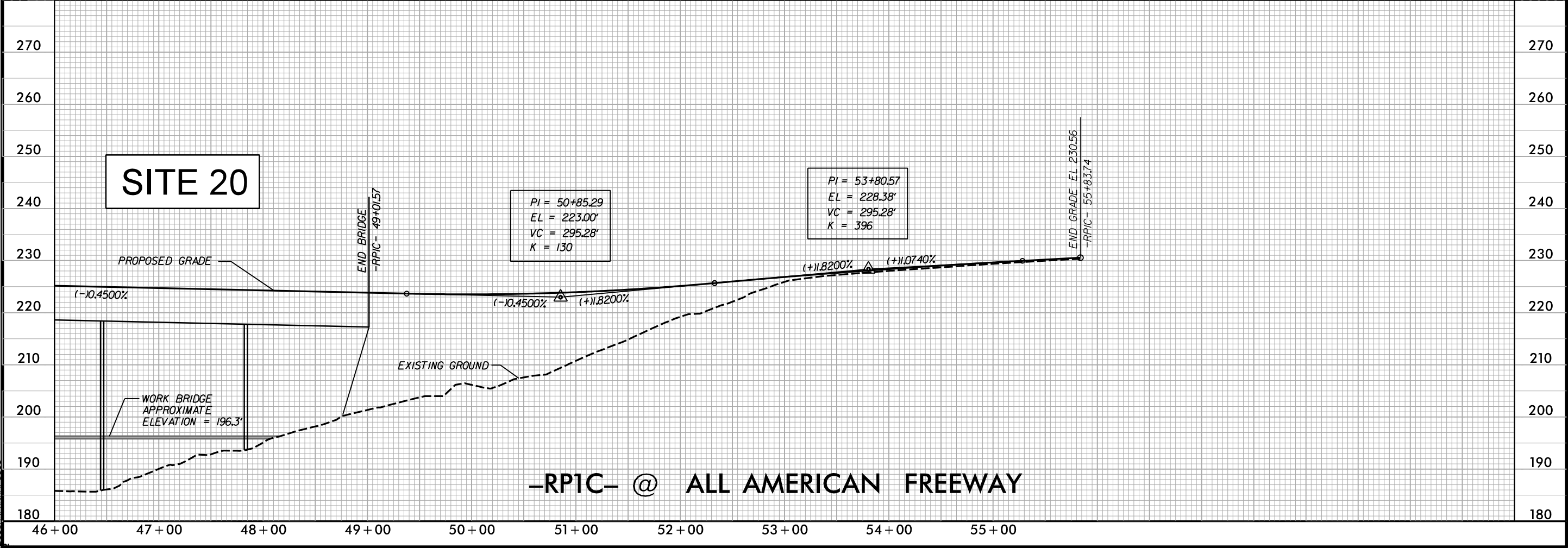
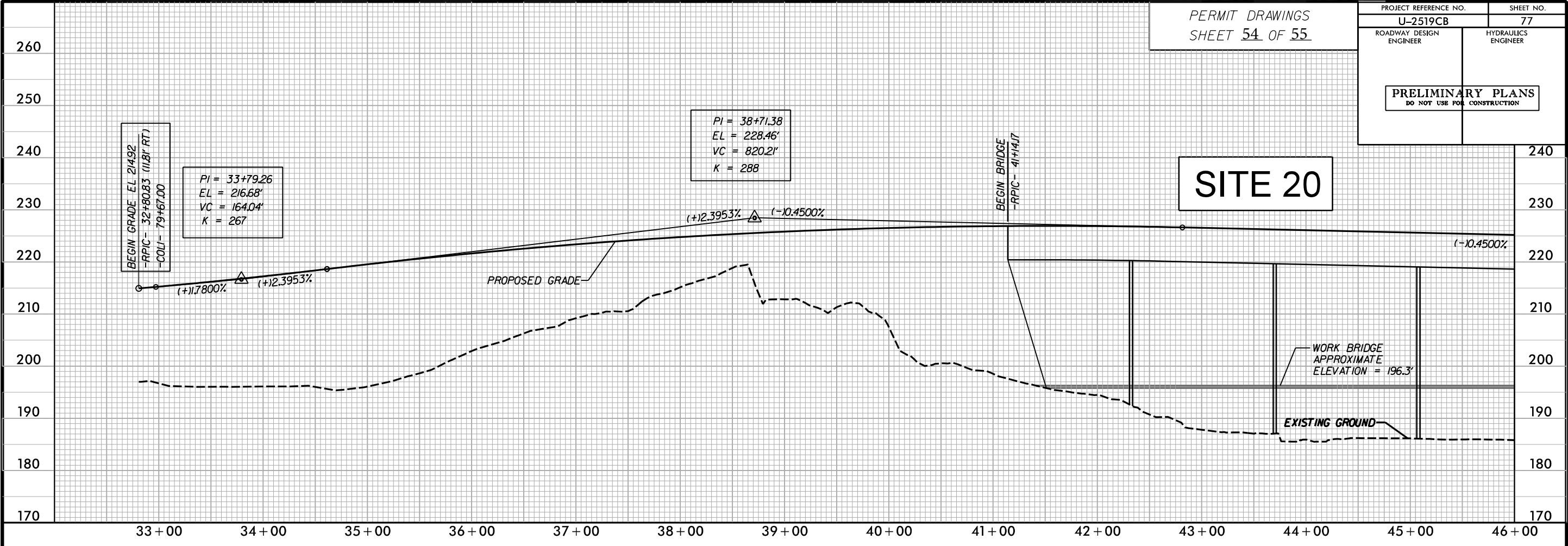
FOR -L- ALIGNMENT, SEE SHEET NO. 22D-22E



5/28/99

PERMIT DRAWINGS  
SHEET 54 OF 55

PROJECT REFERENCE NO.		SHEET NO.
U-2519CB		77
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
<div>PRELIMINARY PLANS</div> <div>DO NOT USE FOR CONSTRUCTION</div>		



-RP1C- @ ALL AMERICAN FREEWAY

12:05:53 PM 5/28/99 U-2519CB-RDY-pro77.dgn

WETLAND PERMIT IMPACT SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-L- 821+59 TO 830+76	Bridge	-	-	-	-	2.60	-	0.01	-	5	-
2	-TT1- 46+10 TO 46+73	48" CSP	-	-	-	-	-	0.01	0.01	69	19	-
	-TT1- 46+29	Bank Stabilization	-	-	-	-	-	-	-	10	-	-
3	-L- 836+61 TO 838+07	Roadway & 42" RCP	0.33	-	-	0.02	-	-	-	-	-	-
4	-L- 838+80 TO 841+17	Roadway	0.10	-	0.07	0.02	-	-	-	-	-	-
5	-L- 847+36 TO 849+22	Roadway & 36" RCP	0.62	-	-	0.07	-	-	-	-	-	-
6	-L- 852+83 TO 853+64	Roadway	0.11	-	-	0.02	-	-	-	-	-	-
7	-L- 855+25 TO 855+70	Roadway	0.07	-	-	0.01	-	-	-	-	-	-
8	-L- 859+50 TO 861+81	Roadway & 30" RCP	0.62	-	-	0.04	-	-	-	-	-	-
9	-L- 864+39 TO 865+64	Roadway & 54" RCP	0.27	-	-	0.04	-	-	-	-	-	-
10	-L- 889+04 TO 902+62	Roadway & Bridge	1.47	-	0.30	0.17	2.18	-	-	-	-	-
11	SITE ELIMINATED	N/A	-	-	-	-	-	-	-	-	-	-
12	-L- 908+82 TO 909+03	Roadway	-	-	-	0.01	-	-	-	-	-	-
13	-Y2REV_LT- 34+55 TO 36+20	Roadway	0.27	-	-	-	-	0.01	-	80	-	-
	-Y2REV_LT- 35+03	Bank Stabilization	-	-	-	-	-	-	-	10	-	-
14	-Y2REV_LT- 29+32 TO 29+33	66" RCP	-	-	-	-	-	0.01	0.01	25	10	-
	-Y2REV_LT- 29+33	Bank Stabilization	-	-	-	-	-	-	-	10	-	-
15	-TT4- 54+56 TO 58+27	Roadway & 72" RCP	0.42	-	-	0.08	-	0.06	0.01	440	40	-
16	-Y1- 39+18 TO 40+61	Roadway & 72" RCP	0.15	-	-	0.05	-	-	-	-	-	-
17	SITE ELIMINATED	N/A	-	-	-	-	-	-	-	-	-	-
18	-L- 49+55 TO 53+31	Roadway & 60" RCP	0.25	-	-	0.07	-	0.02	-	135	-	-
	-L- 53+08	Bank Stabilization	-	-	-	-	-	-	-	20	-	-
	-TT4DA- 43+45 TO 56+12	Roadway & 48" RCP	0.16	-	-	0.05	-	0.02	0.01	133	11	-
	-TT4DA- 54+75	Bank Stabilization	-	-	-	-	-	-	-	10	-	-
19	-L- 89+00 TO 93+35	Bridge	-	-	-	-	2.62	-	-	-	-	-
20	-RP1C- 42+50 TO 48+50	Bridge	-	-	-	-	0.89	-	-	-	-	-
TOTALS:			4.84	0.00	0.37	0.65	8.29	0.13	0.05	942	85	0

Notes:

- 1.Total for "Existing Channel Impacts - Permanent" includes 40' of Bank Stabilization at culvert outlets.
2. Site 4 includes 0.05 acres of "Total Take"
3. Site 8 includes 0.13 acres of "Total Take"
4. Site 13 includes 0.18 acres of "Total Take"
5. Permanent Wetland Impacts from bridge pier installation = 0.03
6. Temporary Wetland Impacts from work bridge pier installation = 0.02
7. All impacts at Sites 19 & 20 other than those associated with the Bridge Construction shown, were permitted under Project U-2519DA.

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

U-2519CB

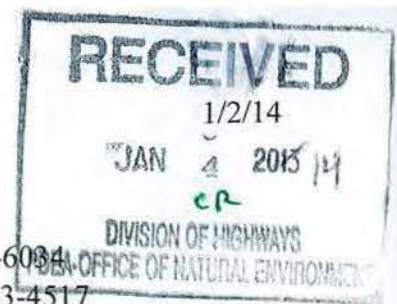
Rev. 5/14/2014

SHEET 55

OF 55

10/8/2013

## U-2519CB NEU Narrative



### **Utility Owners:**

- **Power:** Duke Progress Energy - Contact: Mr. Jamie Loy (919) 546-6004
- **Power:** PWC (Distribution) - Contact: Mr. Rick Anderson (919) 223-4517
- **Power:** PWC (Transmission)- Contact: Mr. Rick Anderson (919) 223-4517
- **Power:** Sandhills Utility Services - Contact: Mr. Bill Cannon (910) 497-7399
- **Telephone:** Century Link - Contact: Mr. Kevin Godwin (910) 366-2142
- **Water:** PWC - Contact: Mr. Chris Rainey (910) 223-4370
- **Water:** Old North Utility Services- Contact: Mr. Pat Jennings (910) 495-1311
- **Sewer:** Old North Utility Services- Contact: Mr. Pat Jennings (910) 495-1311
- **CATV:** Time Warner - Contact: Mr. Jack Crabb (910) 401-5034
- **Gas:** Fort Bragg DPW- Contact: Mrs. Peggy (910) 396-0325
- **Telephone:** USA-SENC -Contact: Mrs. Peggy (910) 396-0325

### **General Utility Relocation:**

All utility lines inside the project limits will be adjusted as necessary or relocated away from construction.

### **Existing Utilities:**

- **Power (Duke Energy Progress Distribution):**
  - Joint use poles containing power, Telephone (PWC) and TV (TWC) runs along the north side of Y-5.
- **Power (PWC Transmission):**
  - Existing transmission line to be relocated begins at Y-5 sta. 240+00 and continues until it crosses the L line at sta. 779+62.42 and continues until it reaches the substation
- **Power (PWC Distribution):**
  - Existing overhead power runs parallel to Y-5 on the south side, power will be relocated due to conflicts with the proposed ramp, loop, and bridge.
- **Power (Sandhills Utility Services):**
  - Overhead power on the south side of Y-4 begins at sta. 12+82.31 and ends at sta. 51+87.46
  - Overhead power begins on the north side of L sta. 928+12.51 and crosses the L line and runs 411ft to a transformer
  - Overhead power begins on the south side of Y-4 at sta. 50+23.49 continues for 857ft and crosses RPC2 at sta. 15+60 and continues for another 50ft
  - An existing line begins south of RPC2 sta. 14+35.45 and connects to a transformer located at RPC2 sta. 17+25.85



- Power leaves the transformer located south of RPC2 sta. 14+35.45 on the south eastern side and continues 698ft where it crosses Y-1 at sta. 59+05.60 and continues for another 46ft before making a 60 degree turn in the north eastern direction where the line then continues for 2874ft running alongside Y-2
- Power line begins on the north side of Y-2 at sta. 34+39.20 and crosses Y-2 at sta. 33+72.28 and continues for 2185ft and turns northeast 49 degrees and continues for 485ft
- Existing power located 111.4ft to the east of Y-3 sta. 25+94.21 and continues 145.5 degrees southeast for 350ft the line then makes a 75 degree turn northeast and continues in that direction for 507ft
- **Telephone (Century Link):**
  - Existing fiber optic line runs along the south side of Y-5 beginning at sta. 229+32.28 and ending at sta. 268+08.06.
  - Existing telephone cable located on the south side of Y-2 portion of line to relocated begins at Y-2 sta. 36+19.26 and ends at sta. 18+29.23
  - Two existing line one fiber optic and one telephone line along Y-3 between sta. 12+97.06 and sta. 24+69.31 will be abandoned due to conflicts. These two lines run parallel to each other on the north side of Y-3
  - Existing telephone lines along the south and north side of Y-1 and also along the south side of existing Reilly Rd.
- **Telephone ( USA SENC):**
  - Two Existing telephone lines run parallel to each other and begin at Y-4 sta. 22+13.31 and continues in a southeastern direction, the line continues in this direction until it reaches RPB2 where it then begins to run parallel with the ramp. The telephone line eventually crosses RPB2 at sta. 16+92.28 and sta. 17+58.17 and continues to run parallel with RPB2 on the north side until it reaches the intersection of RPB2 and Y-1. One of the telephone lines stop while the other one turns north and continues to run parallel with Y-1
- **Water (PWC):**
  - Existing 16" water line begins at sta. 230+03.29 for 45.32ft south of Y-5 and continues to run parallel until sta. 263+27.69, where it makes a 90 degree turn and crosses Y-5 and continues to run parallel to Y-5 for 335.6 ft
  - Existing 8" water line begins at sta. 263+27.69 runs parallel to Y-5 45.3 ft from the centerline until it ends at sta. 266+53.52
- **Water (Old North Utility Services):**
  - Existing water line to be relocated begins at Y-4 sta. 19+51.49 and runs parallel to Chicken Foot Rd on the south side and branches off at Ramp A2 at sta. 14+19.98 to the north and to the south

- **Sewer (Old North Utility Services):**
  - Existing sewer line to be relocated runs parallel to Chicken Foot Rd on the north side, the sewer line relocation ends at L sta. 964+64.97
- **Time Warner Cable:**
  - Existing TV (TWC) runs along the north side of Y-5 on joint use poles with power and telephone.
- **Gas (FB-DPW):**
  - Existing gas line begins at Y-4 sta. 22+94.67 and continues in a southeastern direction, the line continues in this direction until it reaches RPB2 where it then begins to run parallel with the ramp/ the gas line eventually crosses RPB2 at sta. 16+14.02 and continues to run parallel with RPB2 on the north side until it reaches the intersection of RPB2 and Y-1. Here the gas line crosses the intersection and continues alongside RPA2 and continues down Chicken Foot Rd. until it reaches Reilly Rd and begins to run parallel with Y-2. The portion of the line stated above will be abandoned and relocated

#### **Proposed Utility Relocation:**

- **Power (Duke Energy Progress Distribution):**
  - Proposed overhead power will be located on the north side of Y-5; part of the line will remain overhead while the portion under the proposed bridge will be placed underground
- **Power (PWC Transmission):**
  - A portion of the existing transmission line will be relocated inside the proposed utility easement that has been acquired; the transmission line will leave the substation crossing the L line and then continue southwest inside the easement until the existing line is reached.
- **Power (PWC Distribution):**
  - The proposed overhead power will be relocated out and around by means of a PUE that is located outside the right of way line along Y-23 and RPC1. The existing line will be abandoned along Y-5 in between Y-23 and RPC1
- **Power (Sandhills Utility Service):**
  - Proposed underground power will begin at Y-4 sta. 12+82.31 and run along the north side of Y-4 until sta. 23+81.10; at this station the power crosses Y-4 and runs parallel to PR2A beginning at sta. 23+81.08 on the south side and ending at sta. 34+86.52
  - 2 proposed underground power lines branch off of a proposed underground power line at PR2A sta. 36+13.24 and PR2A sta. 36+16 and run parallel to each other for 187ft and connect to an existing transformer
  - Proposed underground power beginning on the north side of the L line and crosses at sta. 928+67016 and continues for 453ft



- Proposed underground power beginning 60ft north of RPA2 and crossing at RPA2 sta. 21+42.96 and continuing 943ft running parallel to Y-1
- Proposed underground power begins at PR2A sta. 22+05.50 and runs parallel to the CA fence for 674ft where it continues to run parallel outside the RW/CA fence for 432ft. the line then make a 45 degree turn to the south east for 812ft and makes a 95degree turn to the northeast and continues in that direction for another 455ft
- Underground power begins 56ft to the west of Y-6 and runs northeast 67.5 degrees for 604ft until it crosses Y-2 at sta. 48+35.40 and continues along the north side of Y-2 for 2636ft
- Begin power at the coordinates 1995684.74, 493023.18 in the direction of 58.2 degrees northeast for 311ft, the line then makes a 82 degree turn northeast and continues 215ft, the direction changes once more to 54 degrees northeast for 447ft, before ending at another proposed power line
- Proposed power begins 60ft to the east of Y-3 sta. 28+12.29 and runs 42.5 degrees to the northeast for 168ft from here the line tees off; to the west the line continues 334ft and to the east it continues for 25ft before taking a 76 degree turn to the northeast and continues for 160ft and then makes another turn 43 degrees to the north east for 183ft , the line then makes a 108.5 degree turn to the south east and continues in that direction for 177.5ft the line then turns northeast 35 degrees and continues in that direction for 44ft and connect to a transformer

- **Telephone (Century Link):**

- The existing telephone line running parallel to -Y5-on the south side will be relocated on the same side to avoid conflicts. The proposed fiber optic line will begin at sta. 229+32.28 and will be relocated 1ft inside and parallel to the right of way until sta. 242+80.51 is reached. At this location the fiber optic line makes a 90 degree turn and continues to run along this direction until sta. 257+82.99 is reached. This is where the line will resume the location of 1ft inside and parallel to the right of way line until it reconnects to the existing line at sat. 268+08.06. The existing line between stations 229+32.28 through 268+08.06 will be abandoned.
- The existing telephone line located on Y-2 will be relocated to on the same side of the existing line beginning at sta. 36+19.26 and ending at sta. 18+29.23; the relocation will be located further away from Y-2 on the south side to avoid conflicts. The existing line between the beginning and ending stations will be abandoned
- The two existing lines will be abandoned and replaced with one single fiber optic line. The proposed line will begin at Y-3 sta. 12+97.06 and continue through 24+69.31 where it will cross Y-3 and end at a hand hole.
- Proposed telephone will be relocated on the south side of Y-1 and along the existing Reilly Rd to avoid conflicts. The telephone lines will also be relocated



out and around the intersection of Y-1 and Y-6. Parts of the existing lines will be abandoned while other sections will remain.

- **Telephone (USA-SENC):**

- Two proposed telephone lines run parallel to each other and begin at Y-4 sta. 22+13.31, both of these lines run parallel with the right of way line until the intersection of RPB2 and Y-1, at this location one of the telephone lines ends and the other continues parallel to the right of way line to the north of Y-1 until the right of way line ends and the proposed line ties back in to the existing at Y-1 sta. 36+60.47; the existing telephone line will be abandoned.
- Two proposed telephone lines run parallel to each other and connect to the existing line at RPA2 sta. 14+40.24 and sta. 14+36.69 and continue to run parallel to the right of way line. Once the lines reach L sta. 964+07.42 they make a 90 degree turn and cross the L line until they reach Y-2 and continue parallel until they reach Y-2 sta. 40+92.11 where they reconnect with an existing pedestal

- **Water (PWC):**

- The existing 16" water line will be relocated to the south side of Y-5 starting at Sta. 231+00 and ending at Sta. 231+20. The existing line between those stationing will be removed and a down and under will be installed to avoid conflict with drainage
- Proposed 16" water line will connect to existing 16" at sta. 238+84.76 and will be located 5ft inside the right of way and will reconnect to the existing water line at sta. 244+12.45. The existing line between those stationing will be abandoned
- Connect to existing 16" water line at sta. 247+85.92 proposed line will cross Y-5 and run line parallel to Y-5 for 1125.3ft where it sta. 259+93.42 a 45 degree bend will be used to cross back over Y-5 and connect back to the existing 16" water line at sta. 260+83.68. Existing line to be abandoned between the stations.

- **Water (Old North Utility Services):**

- Proposed 12" water line begins at Y-4 sta. 19+51.49 and runs parallel with the right of way line until the intersection of RPB2 and Y-1 where the water line crosses the intersection and continues to run parallel to the right of way line until it reconnects with the existing water line to the north of RPA2 sta. 14+26.31; existing water line will be abandoned between the two stations.

- **Sewer (Old North Utility Services):**

- Proposed 8" and 4" sewer lines begin at Y-4 sta. 23+60.94 and run parallel with the right of way line until the intersection of RPB2 and Y-1 where the sewer lines cross this intersection and continue to run parallel to the right of way line until it reaches L sta. 964+68.90 and makes a 90 degree turn and continues in that direction until the lines reach the lift station

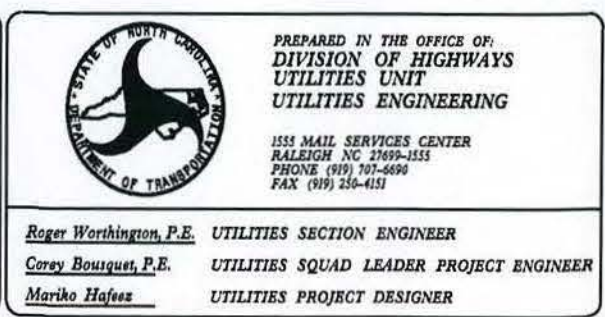
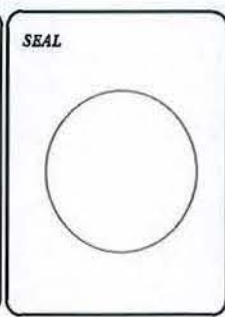
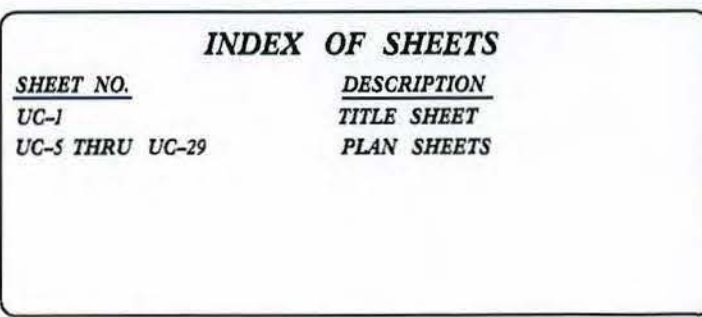
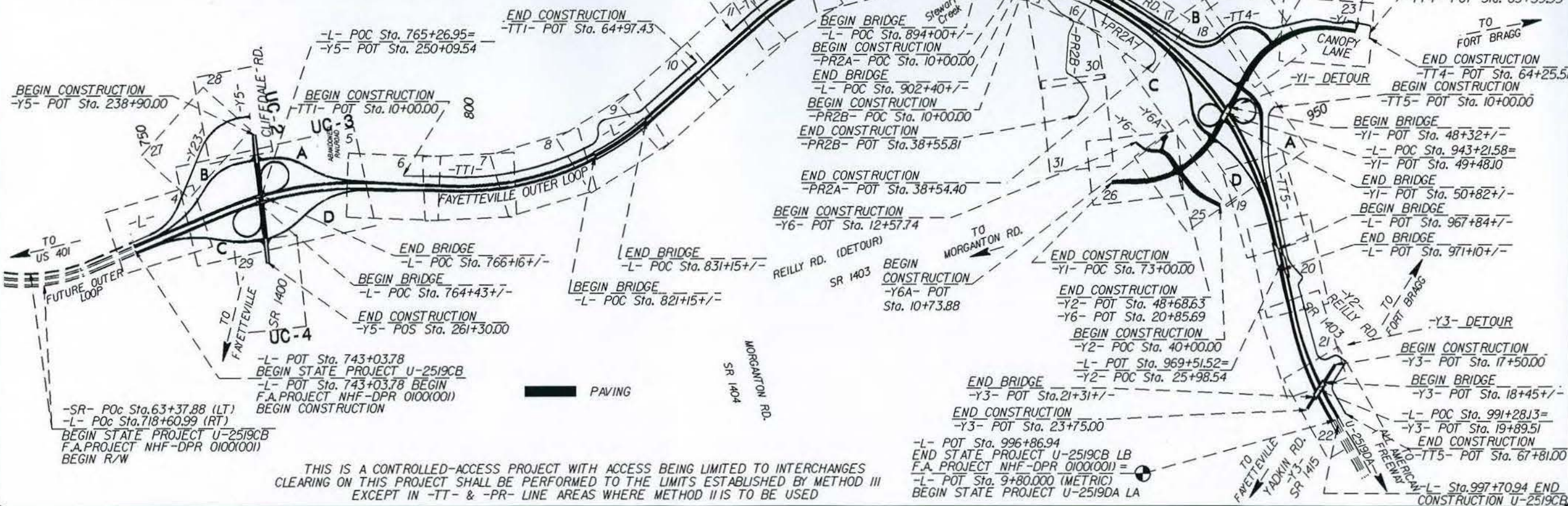
- **Time Warner Cable:**

- Proposed cable TV lines will be relocated to avoid conflicts with the proposed construction

- **Gas (FB-DPW):**

- Proposed 4" gas line begins at Y-4 sta. 22+94.67 and runs parallel with the right of way line until the intersection of RPB2 and Y-1 where the gas line crosses the intersection and continues to run parallel to the right of way line until it reconnects with the existing gas line to the north of Y-2 sta. 24+63.68. Existing gas line will be abandoned between the two stations.



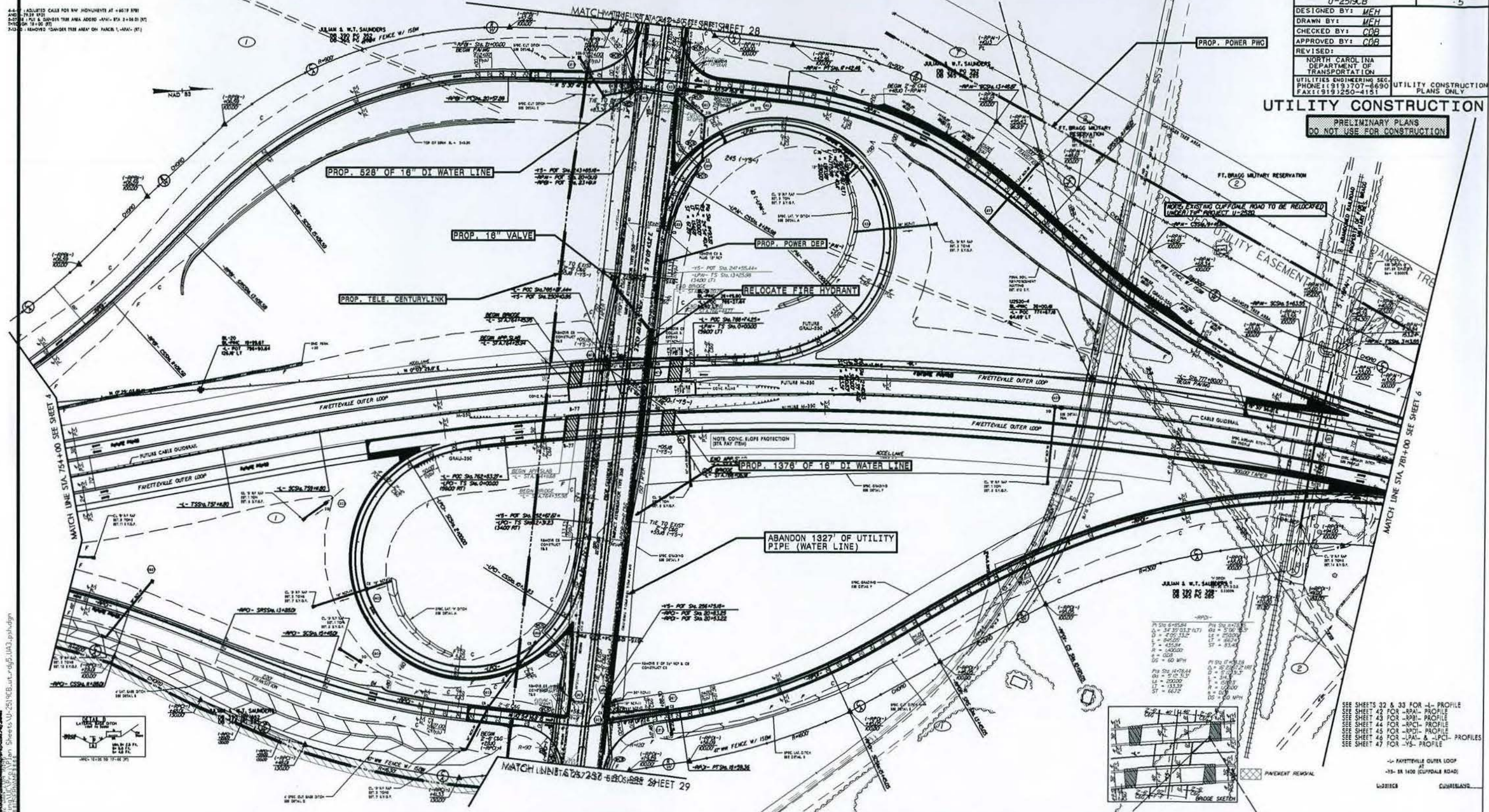




PROJECT REFERENCE NO.	SHEET NO.
U-25/9CB	5
DESIGNED BY: MEF	
DRAWN BY: MEF	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-8690	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION





5-07-08 : PUE & DANGER TREE AREA ADDED, -RPAI- STA 0+47.24 (RT) TO 3+05.01 (RT) AND -L- STA 784+20.38 (RT) TO 786+08.51 (RT)



-L- MEDIAN  
-LTEOPI-  
PI Sta 2+62.23 PI Sta 7+86.66  
 $\Delta = 118' 39.9" (RT)$   $\Delta = 118' 39.9" (LT)$   
 $D = 0' 15' 00.0"$   $D = 0' 15' 00.0"$   
 $L = 524.43'$   $L = 524.43'$   
 $T = 262.23'$   $T = 262.23'$   
 $R = 22,918.00'$   $R = 22,918.00'$   
 $e = NC$   $e = NC$   
 $DS = 70 MPH$   $DS = 70 MPH$

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	6
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

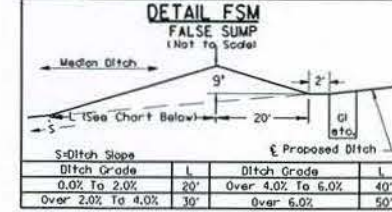
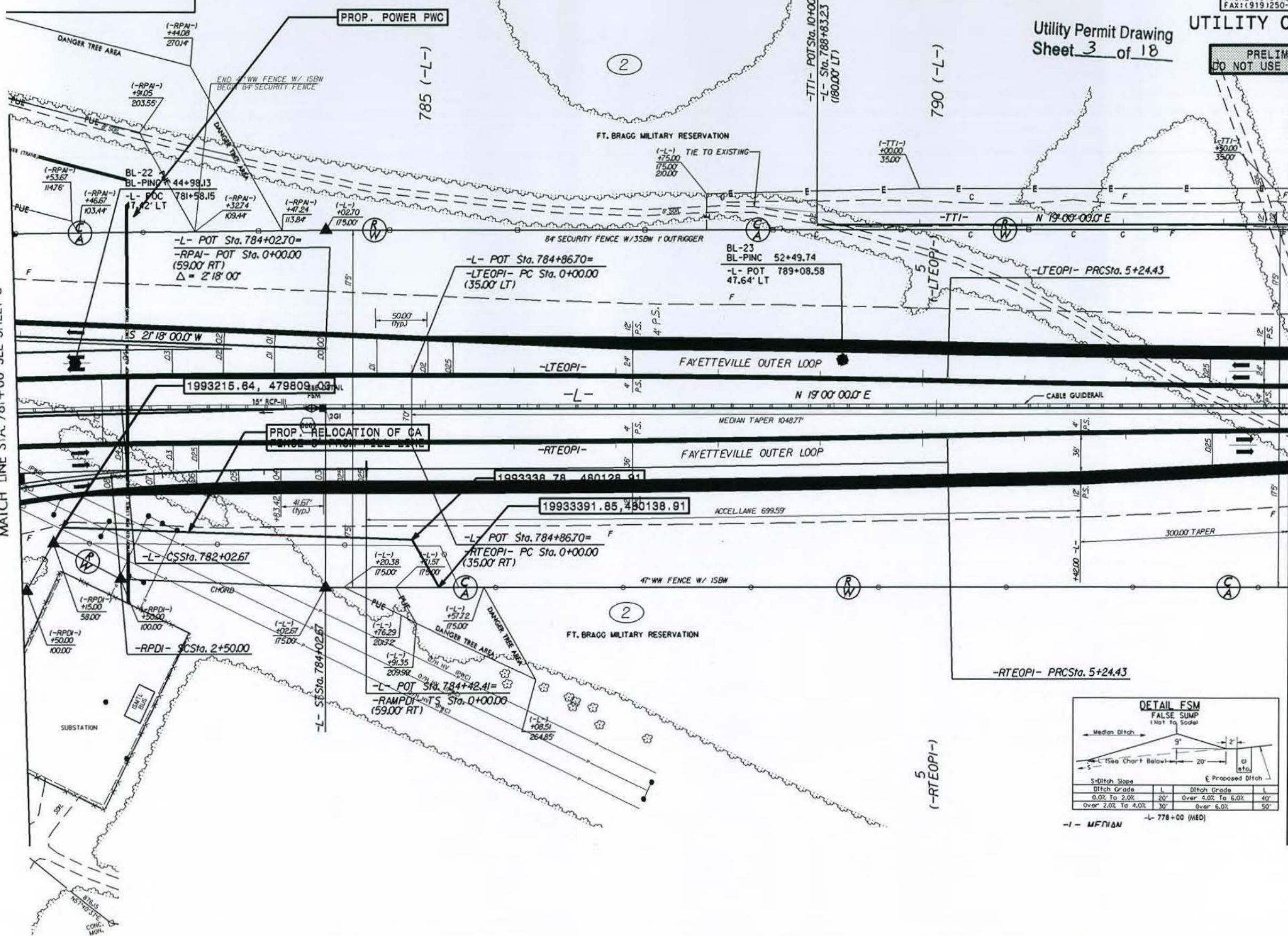
Utility Permit Drawing  
Sheet 3 of 18

UTILITY CONSTRUCTION

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

MATCH LINE STA. 781+00 SEE SHEET 5

MATCH LINE STA. 793+50 SEE SHEET 7

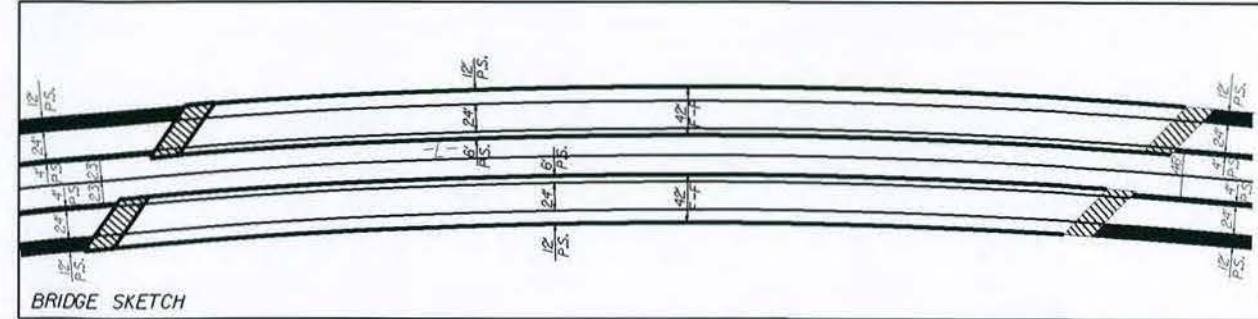
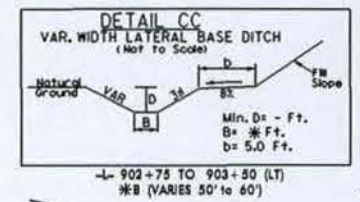


-L- MEDIAN -L- 778+00 (MED)

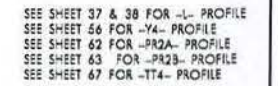
SEE SHEET 33 FOR -L- PROFILE  
SEE SHEET 42 FOR -RPAI- PROFILE  
SEE SHEET 45 FOR -RPDI- PROFILE  
SEE SHEET 65 FOR -TTI- PROFILE



Utility Permit Drawing  
Sheet 4 of 18

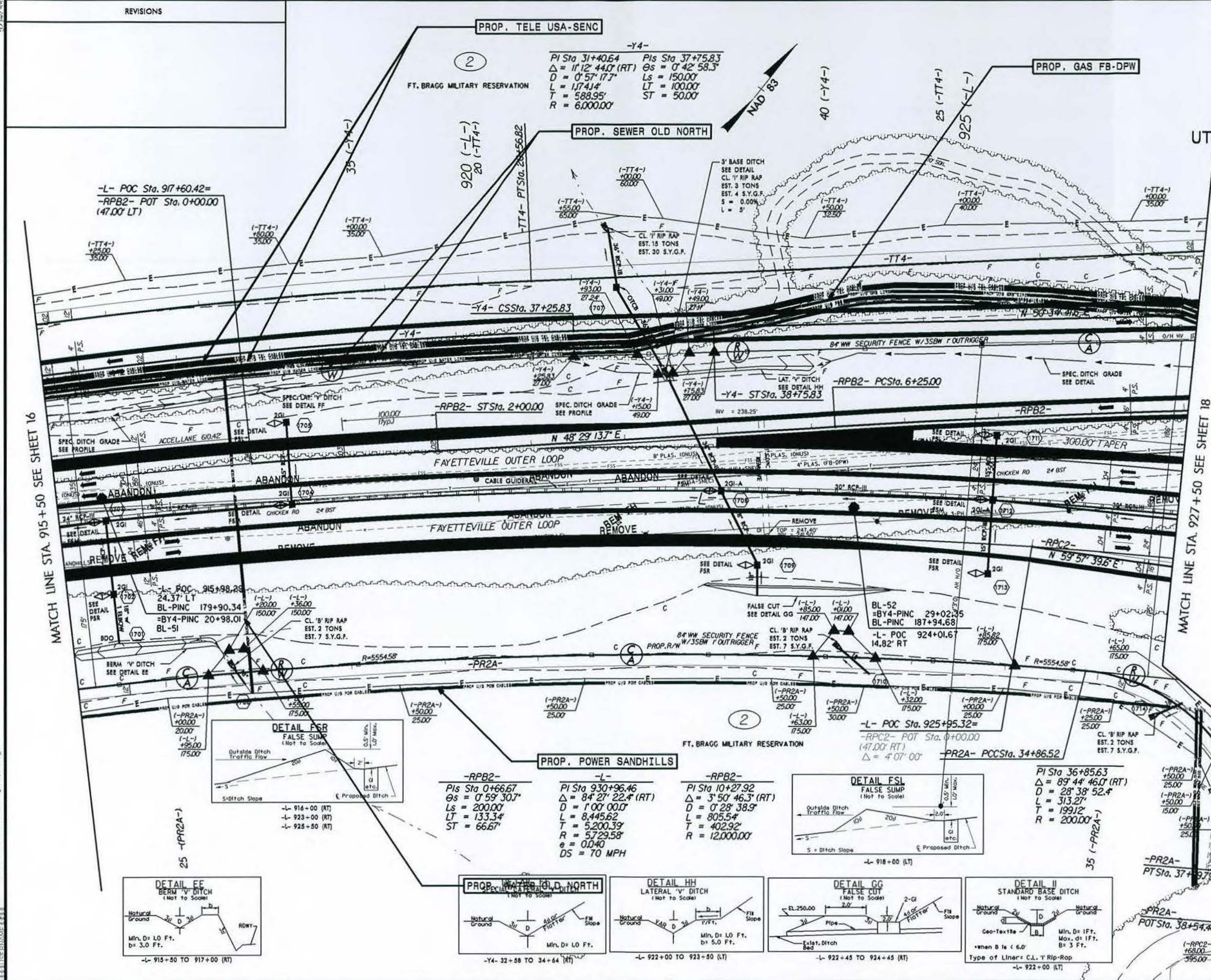








02-JAN-2014 15:15:15 Plan Sheets U-2519CB.Utr.dgn 17 psh.dgn

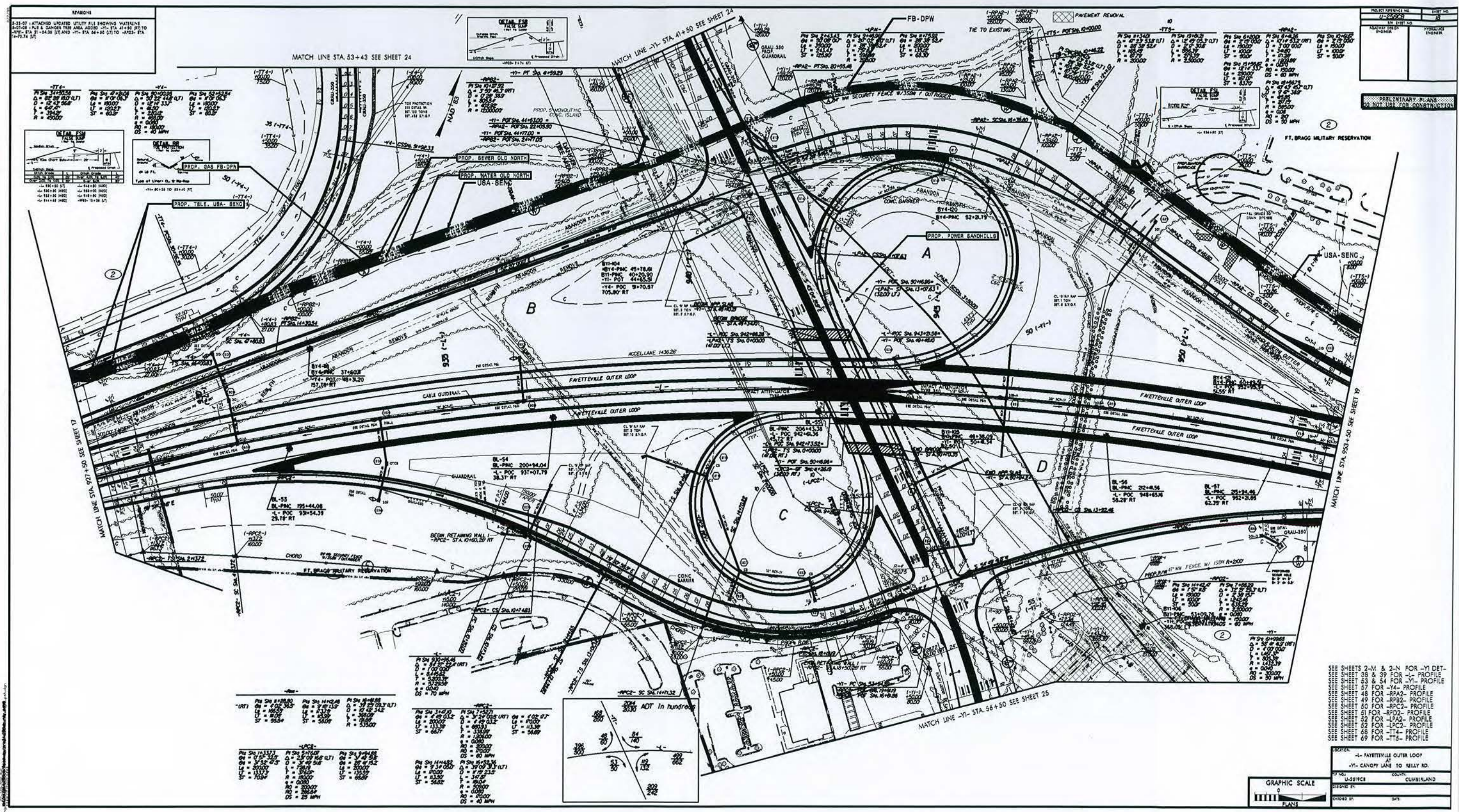


PROJECT REFERENCE NO.	U-2519CB	SHEET NO.	17
DESIGNED BY:	MEH		
DRAWN BY:	MEH		
CHECKED BY:	CDB		
APPROVED BY:	CDB		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION			
UTILITIES ENGINEERING SEC.			
PHONE: (919) 707-6690			
FAX: (919) 250-4131			
UTILITY CONSTRUCTION PLANS ONLY			

UTILITY CONSTRUCTION  
PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

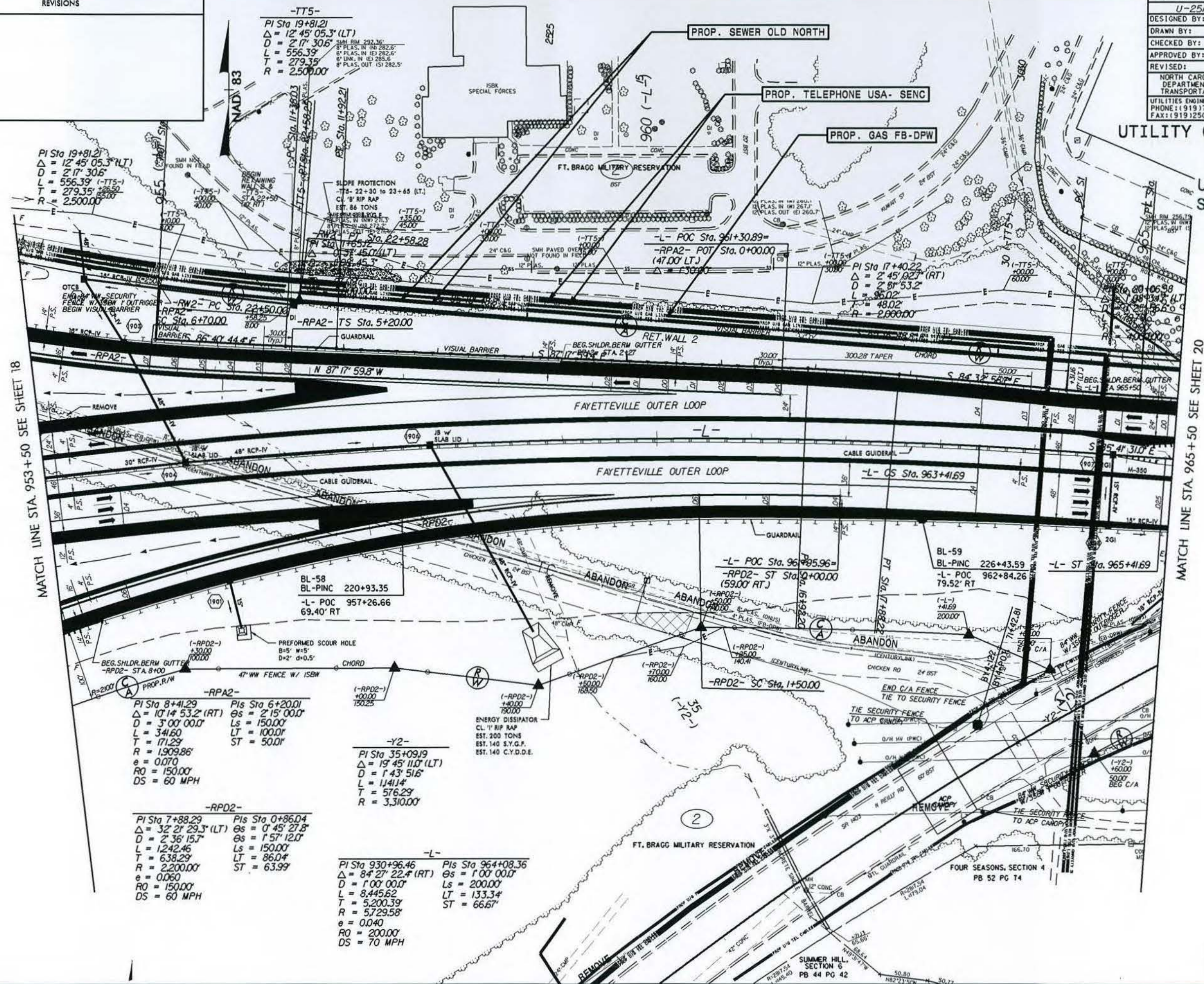
Utility Permit Drawing  
Sheet 6 of 18







Utility Permit Drawing  
Sheet 8 of 18



SEE SHEETS 39 & 40 FOR -L- PROFILE  
SEE SHEET 48 FOR -RPA2- PROFILE  
SEE SHEET 51 FOR -RPD2- PROFILE  
SEE SHEET 69 & 70 FOR -TT5- PROFILE

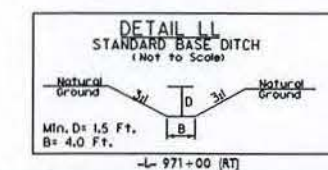
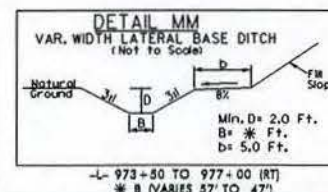
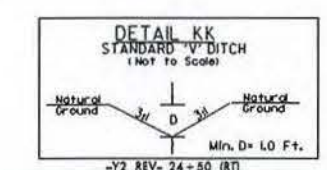
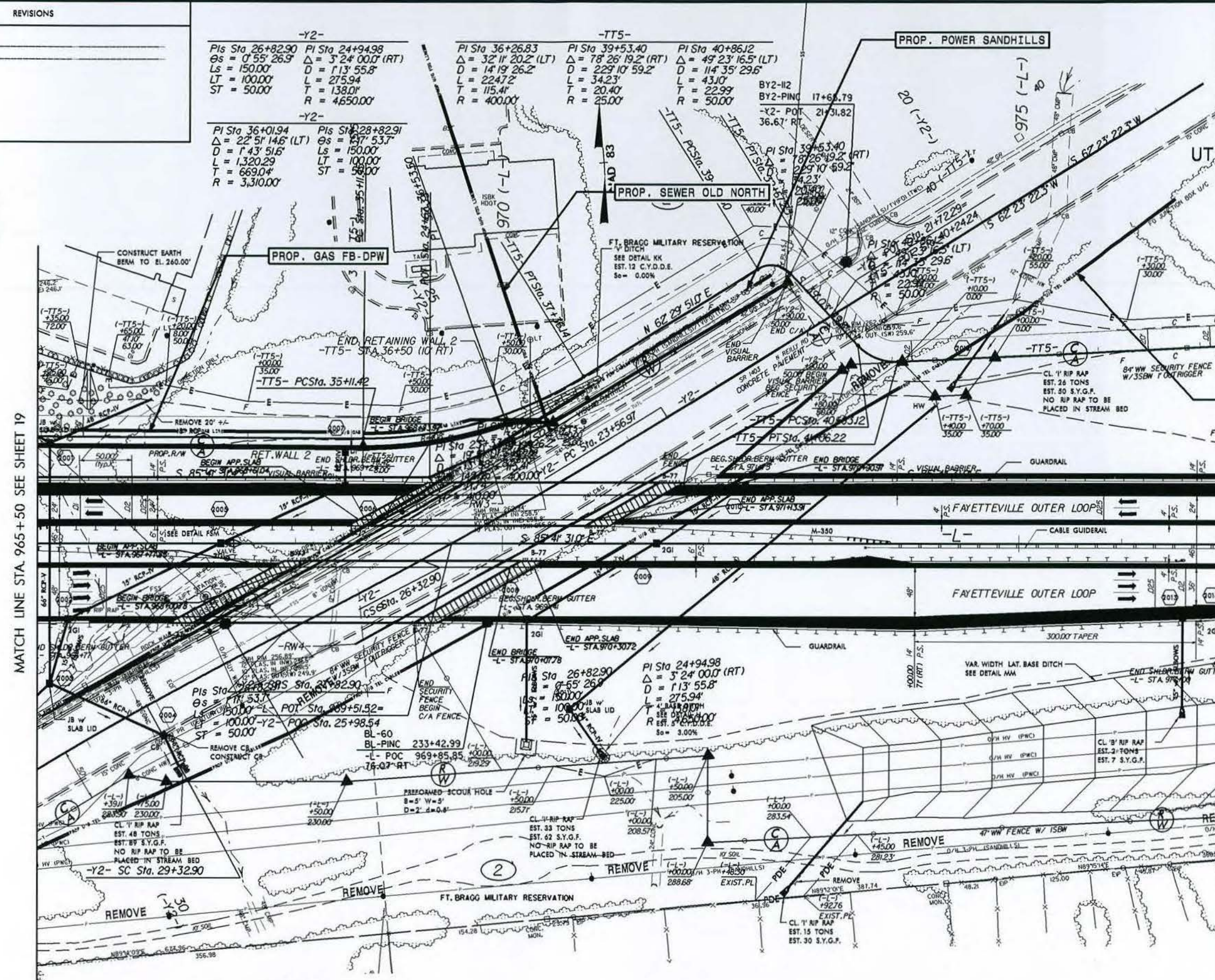


02-JAN-2014 14:14  
Engineering: U:\2519CB\U-2519CB.dgn  
Drawing: U-2519CB.dgn

REVISIONS

10.19+66.69  
1.20+46.48

MATCH LINE STA. 965+50 SEE SHEET 19



PROJECT REFERENCE NO. **U-2519CB** SHEET NO. **20**  
DESIGNED BY: **MEH**  
DRAWN BY: **MEH**  
CHECKED BY: **CDB**  
APPROVED BY: **CDB**  
REVISED:  
NORTH CAROLINA  
DEPARTMENT OF  
TRANSPORTATION  
UTILITIES ENGINEERING SEC.  
PHONE: (919) 707-6690  
FAX: (919) 250-4151  
UTILITY CONSTRUCTION  
PLANS ONLY

**UTILITY CONSTRUCTION**  
**PRELIMINARY PLANS**  
**DO NOT USE FOR CONSTRUCTION**

Utility Permit Drawing  
Sheet **9** of **18**

**PROP. U/G TELE. CENTURYLINK**

MATCH LINE STA. 977+00 SEE SHEET 21

SEE SHEET 40 FOR -L- PROFILE  
SEE SHEET 35 FOR -Y2- PROFILE  
SEE SHEET 70 FOR -TT5- PROFILE



SEE SHEETS 2-O & 2-P FOR -Y3 DET-  
SEE SHEETS 40 & 41 FOR -L- PROFILE  
SEE SHEET 70 & 71 FOR -TT5- PROFILE



30-DEC-2013 14:10  
\\p010000\259868\259868.dwg  
30-DEC-2013 14:10  
\\p010000\259868\259868.dwg

DATE: 12/14/99  
RW REVISION: MODIFIED THE TEMPORARY CONSTRUCTION EASEMENT ON PARCEL 2 TO AVOID THE APARTMENT BUILDING.

MATCH LINE  
-Y3- STA. 14+60  
SEE SHEET 21

MATCH LINE STA. 988+00 SEE SHEET 21

PROP. U/G TELE. CENTURYLINK

FOR CONTINUATION  
SEE SHEET 2-P

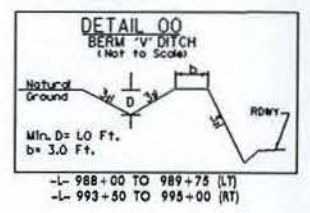
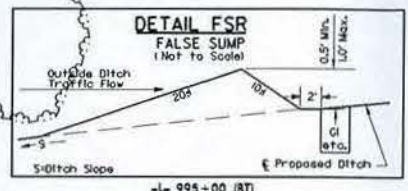
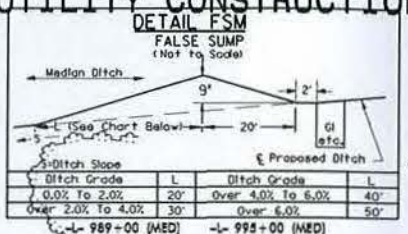
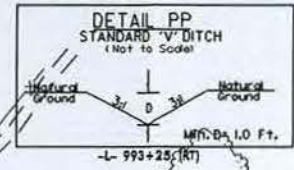
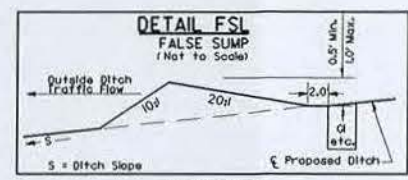
-TT5REV-  
PI Sta 62+66.87  
 $\Delta = 62^\circ 51' 59.7''$  (LT)  
 $D = 28^\circ 38' 52.4''$   
 $L = 219.45'$   
 $T = 122.24'$   
 $R = 200.00'$

PRO U/G POWER SANDHILLS  
PROP. U/G TELE. CENTURYLINK

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	22
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

### UTILITY CONSTRUCTION



POT Sta. 996+82.82 END  
PROJECT U-2519CB LB =  
Sta. 32+15.22  
PROJECT U-2519DA LA

Utility Permit Drawing  
Sheet 11 of 18

-L- POT Sta. 996+82.82 (LB)  
-L- POT Sta. 32+15.22 (LA)

MATCH LINE STA. 32+15.22 SEE SHEET 22A



SEE SHEETS 2-O & 2-P FOR -Y3 DET-  
SEE SHEET 41 FOR -L- PROFILE  
SEE SHEET 55 FOR -Y3- PROFILE  
SEE SHEET 71 FOR -TT5- PROFILE



REVISIONS	
5-07-08	PUE & DANGER TREE AREA ADDED -Y1- STA 32+50 (RT) TO 41+50 (RT)

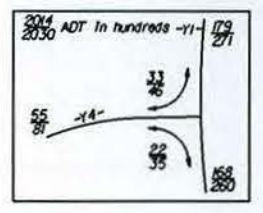
PROJECT REFERENCE NO.	U-2519CB	SHEET NO.	24
DESIGNED BY:	MEH		
DRAWN BY:	MEH		
CHECKED BY:	CDB		
APPROVED BY:	CDB		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION			
UTILITIES ENGINEERING SEC.		UTILITY CONSTRUCTION	
PHONE: (919) 707-6690		PLANS ONLY	
FAX: (919) 250-4151			

# UTILITY CONSTRUCTION

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

Utility Permit Drawing  
Sheet 12 of 18

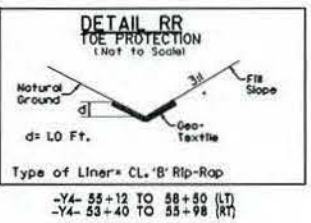
-Y1-
PI Sta 34+22.94
$\Delta = 68^\circ 22' 18.4"$ (LT)
D = 4'00'00.0"
L = 1709.29'
T = 972.94'
e = 0.040
RO = 300.00'
DS = 50 MPH



PAVEMENT REMOVAL



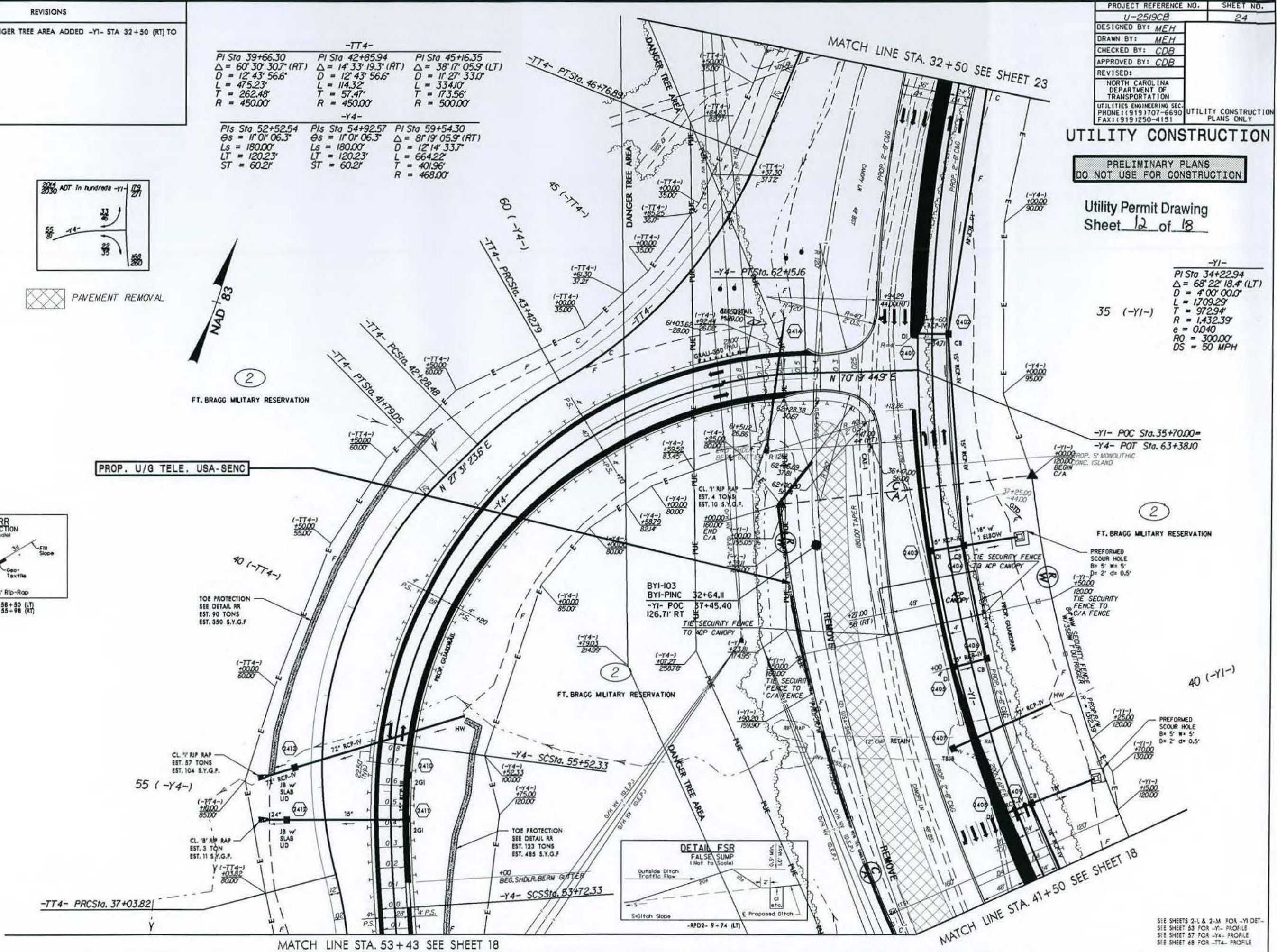
PROP. U/G TELE. USA-SENC



-Y4- 55+12 TO 58+80 (LT)  
-Y4- 55+40 TO 55+98 (RT)



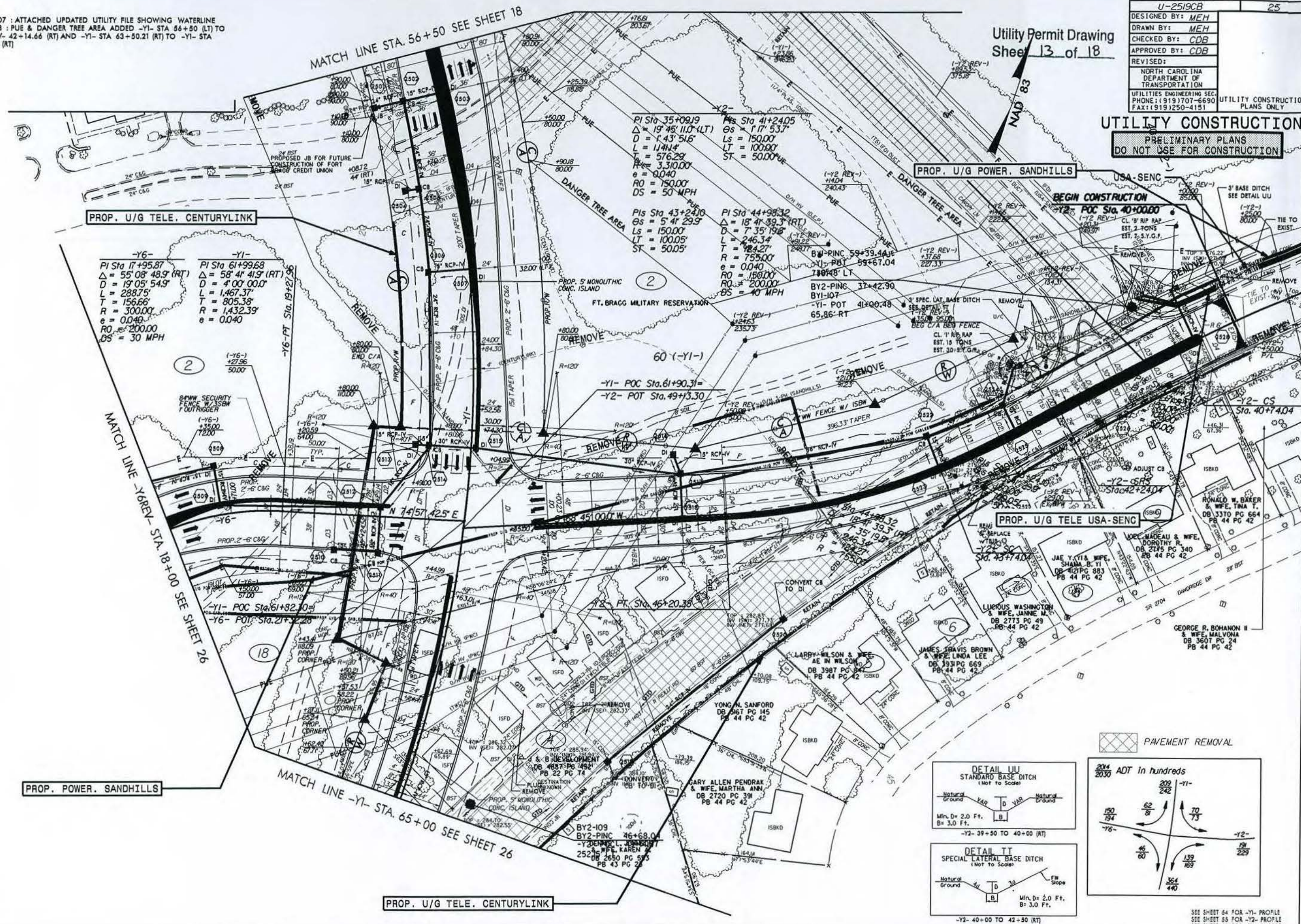
30-DEC-2002 13:44  
T:\04\001001\2519CB\Roadway\p01\2519CB.rdy:pan24 psh.dgn



SEE SHEETS 2-1 & 2-M FOR -Y1- DET-  
SEE SHEET 63 FOR -Y1- PROFILE  
SEE SHEET 57 FOR -Y4- PROFILE  
SEE SHEET 68 FOR -TT4- PROFILE



Utility Permit Drawing  
Sheet 13 of 18



SEE SHEET 54 FOR -Y1- PROFILE  
SEE SHEET 55 FOR -Y2- PROFILE  
SEE SHEET 58 FOR -Y6- PROFILE



5/14/99

PROJECT REFERENCE NO.		SHEET NO.	
U-25/9CB		26	
DESIGNED BY: MEH			
DRAWN BY: MEH			
CHECKED BY: CDB			
APPROVED BY: CDB			
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION			
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY	

NOTE:  
SECURITY FENCE REQUIRED FOR  
PRELIMINARY ACP LOCATION SHOWN  
CUTS OFF -Y6A-. FORT BRAGG  
TO DETERMINE NEED FOR  
-Y6A- DURING FINAL ACP DESIGN.  
IF DETERMINATION  
IS MADE -Y6A- IS NOT  
NEEDED IT WILL BE REMOVED

PROP. UG POWER SANDHILLS

**BEGIN CONSTRUCTION**  
% -Y6- POT Sta. 12+57.7

Utility Permit Drawing  
Sheet 14 of 18

 PAVEMENT REMOVAL

SEE SHEET 54 FOR -Y1- PROFILE  
SEE SHEET 58 FOR -Y6- PROFILE  
SEE SHEET 59 FOR -Y6A- PROFILE

30-DEC-2013 13:18  
 ering\U-6\RollPlan Sheets\U-2519C8-U-rdy2E.psh.dgn



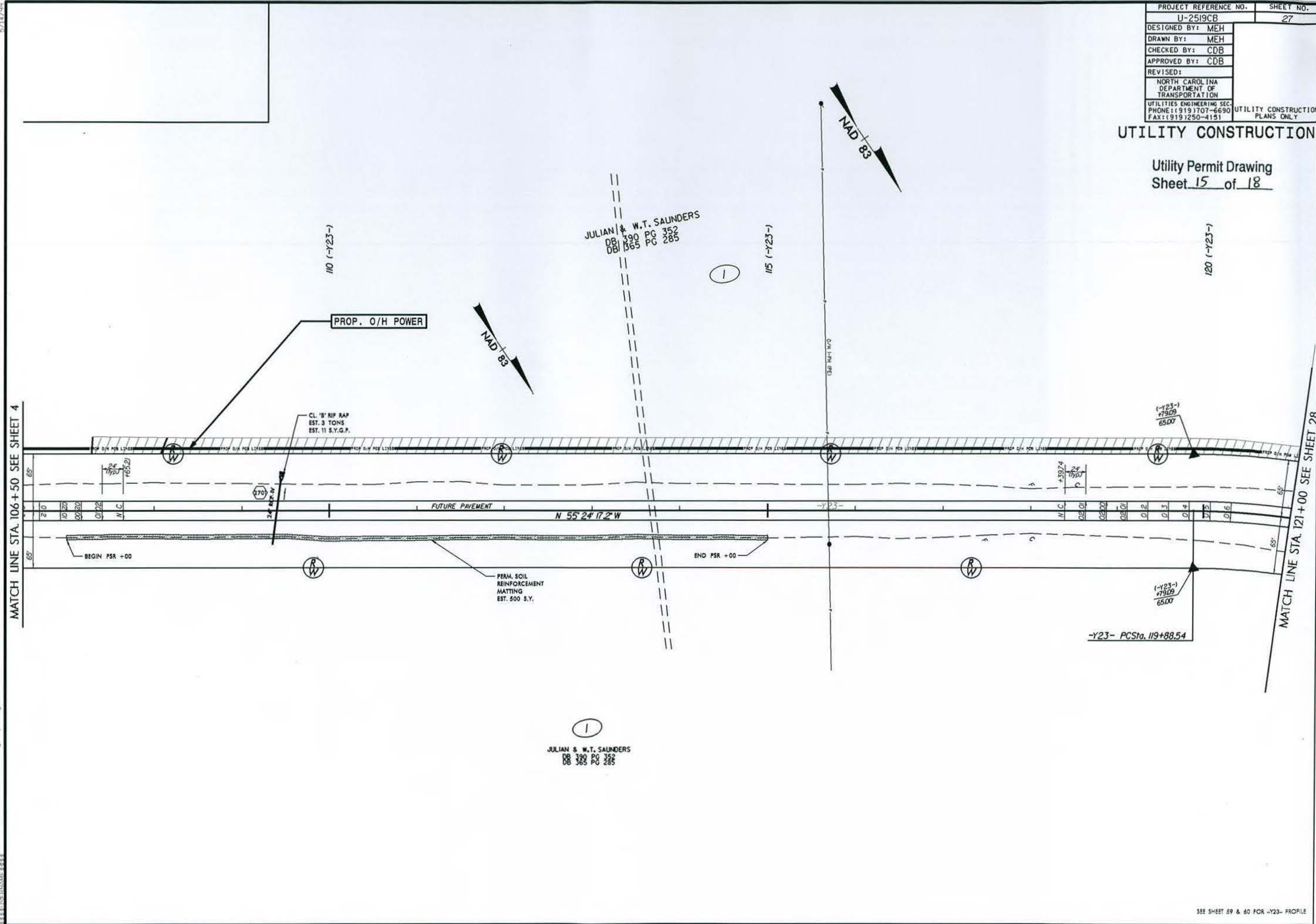
5/14/99

\\04001001\025959cb\Roadway\pc\01\025959cb\_rdy.dgn  
5/14/99 10:58:12 PM

PROJECT REFERENCE NO.	SHEET NO.
U-2519CB	27
DESIGNED BY: MEH	
DRAWN BY: MEH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

Utility Permit Drawing  
Sheet 15 of 18



SEE SHEET 59 & 60 FOR -Y23- PROFILE



PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690	UTILITY CONSTRUCTION
FAX: (919) 250-4151	PLANS ONLY

UTILITY CONSTRUCTION

MATCH LINE STA. 242+50 SEE SHEET 5

Utility Permit Drawing  
Sheet 16 of 18

PROP. POWER DEP

**BEGIN CONSTRUCTION**  
-Y5- Sta. 238+90.00 (RT J)

-Y5- PTSta. 238+19.21

PROP. 20' OF  
16" DI WATER LINE

RELOCATE FIRE HYDRANT

PROP. 528' OF 16" DI WATER LINE

ABANDON 534' OF UTILITY  
PIPE (WATER LINE)

PROP. O/H	POWER	PWC
-----------	-------	-----

-Y5-

<i>PI Sta 202+92.12</i> $\Delta = 5^{\circ} 49' 37.3" (LT)$ $D = 2^{\circ} 10' 58.7"$ $L = 266.93'$ $T = 133.58'$ $R = 2,624.67'$ $e = EXIST.$ $RO = EXIST.$ $DS = 50 MPH$	<i>PI Sta 233+91.56</i> $\Delta = 9^{\circ} 58' 59.5" (RT)$ $D = 1^{\circ} 09' 51.3"$ $L = 857.48'$ $T = 429.83'$ $R = 4,921.25'$ $e = EXIST.$ $RO = EXIST.$ $DS = 50 MPH$
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

-Y23-

PI Sta 124+57.45  
 $\Delta = 58^\circ 38' 04.6''$  (RT)  
 $D = 6^\circ 51' 42.4''$   
 $L = 854.51$   
 $T = 468.91'$   
 $R = 835.00'$   
 $e = 0.06'$   
 $RO = 143.93'$   
 $DS = 50$  MPH

SEE SHEET 60 FOR -Y23- PROFILE  
SEE SHEET 47 FOR -Y5- PROFILE





