



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE  
GOVERNOR

EUGENE A. CONTI, JR.  
SECRETARY

November 20, 2012

MEMORANDUM TO: Mr. Richard Hancock, PE  
Division 8 Engineer

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

SUBJECT: Richmond County, US 220 Bypass from SR 1304 to US 220  
business/Bypass interchange south of Ellerbe; Federal Aid Project  
NHF-220(4); WBS 34542.1.1; **TIP R-3421 A, B, C**

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

A copy of this permit package will be posted on the NCDOT website at:  
<http://www.ncdot.gov/doh/preconstruct/pe/neu/permit.html>

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

Mr. Art King, Division Environmental Officer  
Mr. Majed Alghandour, P. E., Programming and TIP  
Mr. Jay Bennett, P.E., Roadway Design Unit  
Mr. Dewayne Sykes, P.E. Utilities Unit  
Mr. Art McMillan, P.E., Hydraulics Unit  
Mr. Tom Koch, P.E., Structure Design Unit  
Mr. Mark Staley, Roadside Environmental Unit  
Mr. Ron Hancock, P.E., State Roadway Construction Engineer  
Mr. Eric Midkiff, P.E., PDEA Central Region  
Mr. Clarence Coleman, P.E., FHWA

# PROJECT COMMITMENTS

T.I.P Project No. R-3421C  
US 220 Bypass from 0.2 miles southwest of SR 1304 (Harrington Road)  
to US 220 Business/Bypass interchange south of Ellerbe (R-2231)  
Richmond County  
Federal Aid Project No. NHF-220 (4)  
WBS Element 34542.1.1

## COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

### Roadway Design/Roadside Environmental Unit/Hydraulics/Division 8 Construction

- “High Quality Waters (HQW) Erosion Control Guidelines” will be adhered to throughout construction.

*This is a standard project commitment. These guidelines are currently referred to as “Design Standards in Sensitive Watersheds”. A “No Effect” conclusion for the shortnose sturgeon was issued by the National Marine Fisheries Service based on NCDOT adhering to this set of guidelines.*

- NCDOT’s “Stream Crossing Guidelines for Anadromous Fish Passage” will be adhered to for this project.

*This is a standard project commitment. A “No Effect” conclusion for the shortnose sturgeon was issued by the National Marine Fisheries Service based on NCDOT adhering to this set of guidelines.*

### Structure Design Unit

- NCDOT’s Guidelines for Best Management Practices for Bridge Demolition and Removal” will be adhered to throughout construction.

*This is a standard project commitment. A “No Effect” conclusion for the shortnose sturgeon was issued by the National Marine Fisheries Service based on NCDOT adhering to this set of guidelines.*

### Division 8 Construction

- No in-stream construction in Hitchcock Creek and Cartledge Creek will be carried out during the months of January, February, March or April. This schedule will provide spawning shortnose sturgeon (*Acipenser brevirostrum*) adequate time to migrate upstream and return.

*A “No Effect” conclusion for the shortnose sturgeon was issued by the National Marine Fisheries Service based on NCDOT adhering to this moratorium.*

*Hitchcock Creek and Cartledge Creek will not be impacted by this project. No moratorium is needed.*

## **Project Development and Environmental Analysis Branch**

- According to the archaeological investigations, two prehistoric sites eligible for listing in the National Register of Historic Places (site numbers 31RH418 and 31RH 420) may be affected by the proposed project. Prior to right-of-way acquisition, NCDOT commits to resolve any adverse affects to these prehistoric properties in consultation with the North Carolina State Historic Preservation Office (HPO) and any other consulting party(s) that may be identified. The Advisory Council for Historic Preservation will be provided an opportunity to comment on the undertaking.

*Site 31RH420/420\*\* is outside of the proposed right of way area of project R-3421C and will not be disturbed. Site 31RH418 is within the proposed right of way area of R-3421C; however, the property owner, a timber company, clear-cut all of their property in 2005. Clear-cutting the forest around the site and bulldozing the approximate site location to create a level loading area for the logging trucks appears to have destroyed the site. Gary Glover, Ph.D., North Carolina Department of Transportation Archaeological Section, furnished this information to the Office of State Archaeology in 2005.*

- On February 27, 2001, the Carolina heelsplitter (*Lasmigona decorata*) was added as a Federally listed endangered mussel species in Richmond County. NCDOT performed intensive surveys for this species September through December 2001. While no species were located during this survey, its presence cannot be totally ruled out due to previous occurrences. Thus a finding of "not likely to adversely affect" was given. The USFWS concurred with this finding in a letter dated January 22, 2002. Should additional information become available relative to the referenced species, NCDOT commits to provide additional surveys for the protected Carolina heelsplitter.

*The PDEA Natural Environment Unit is currently coordinating with Gary Jordan, US Fish and Wildlife Service, to request concurrence on changing the "Not Likely to Adversely Affect" Biological Conclusion to a "No Effect" Biological Conclusion for the Carolina heelsplitter.*

*The Carolina heelsplitter has been removed from the USFWS list of threatened and endangered species for Richmond County.*

## **COMMITMENTS FROM PERMITTING**

### **Roadway Design Unit, Hydraulics Unit, Natural Environment Section**

404 Special Condition #7: The permit plans for R-3421 A and B are currently in the preliminary plan state and accordingly, R-3421A and B are not authorized for construction at this time. Construction may commence on Sections A and B only after all appropriate and practicable avoidance and minimization measures have been employed, final design has been completed and plans have been approved by the District Commander. A modification request must be submitted to the District Commander prior to construction.

401 Project Specific Condition #9: When final design plans are completed for R-3421 Sections A and B, a modification to the 401 Water Quality Certification shall be submitted with five 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. No construction activities that impact any wetlands, streams, or surface waters located in R-3421 Sections A or B 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.

### **Hydraulics Unit**

404 Special Condition #8: In order to ensure that all impacts associated with R-3421 Section A and B are avoided and minimized, a Concurrence Point 4C meeting shall be held prior to construction in these sections.

### **Natural Environment Section**

404 Special Condition #10: The applicant shall submit a compensatory mitigation plan for impacts associated with Sections A and B of the R-3421 along with the final plans for R-3421A and B and the permit modification request(s).

### **Division 8 Construction, Roadside Environmental Unit**

404 Special Condition #22: In order to ensure that the project is not likely to adversely affect the endangered Short-nose Sturgeon, the permittee shall adhere to the following conditions:

- a. "High Quality Waters Erosion Control Guidelines" shall be adhered to throughout the entire project.
- b. NCDOT's "Stream Crossing Guidelines for Anadromous Fish Passage" shall be adhered to for all streams identified in the project area.
- c. The "Guidelines for Best Management Practices for Bridge Demolition and Removal" shall be adhered to for all streams identified in the project area.

401 Modification Condition #2: Geotextile fabric shall be placed within and along the banks of the 27 linear feet of stream channel to be temporarily impacted at Site 13A to ease removal of fill material from the temporary detour.

401 Modification Condition #3: Grubbing within the 50 foot riparian area of the stream should be avoided to the maximum extent practicable at Site 13A.

401 Modification Condition #4: The impacted stream, banks, and riparian area at Site 13A shall be restored as closely as possible to its pre-impacted condition during removal of the temporary detour. If any trees are removed within the riparian area, appropriate, native tree species shall be planted to replace any removed to construct the detour.



REPLY TO  
ATTENTION OF:

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



October 17, 2012

Regulatory Division

Action ID No. SAW-1996-03023, TIP No. R3421, I-73-74, Richmond County, North Carolina.

Dr. Gregory J. Thorpe, Ph.D.  
Environmental Management Director  
Project Development & Environmental Analysis  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1598

Dear Dr. Thorpe:

I am responding to your request dated September 13, 2012 for modification to the existing Department of the Army (DA) permit issued for the above referenced project on August 7, 2012.

The permit modification is proposed to include additional impacts that were not authorized by the May 28, 2002 Department of the Army permit. The temporary impacts proposed in the modification request include an additional 27 linear feet of stream impacts for the construction of a detour road at site number 13A of the project.

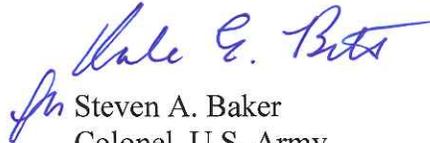
I have determined that the proposed project modifications described above are minor and are not contrary to the public interest and therefore, the DA permit is hereby modified. It is understood that all conditions of the original permit and subsequent modifications remain applicable and that the expiration date is unchanged.

The permit modifications are as follows:

- 1. All conditions of the September 28, 2012 Modification to the North Carolina Division of Water Quality 401 Water Quality Certification are incorporated as part of the Department of the Army permit.**

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

Sincerely,



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

Enclosures

Copies Furnished (with enclosures):

Mr. Jason Dilday  
NC Department of Transportation  
Project Development and Analysis Branch  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1598

Mr. Richard Hancock, PE  
Division Engineer, Division 8  
NC Department of Transportation  
902 North Sandhills Boulevard  
Aberdeen, North Carolina 28315

Mr. Art King  
Division Engineer, Division 8  
NC Department of Transportation  
902 North Sandhills Boulevard  
Aberdeen, North Carolina 28315

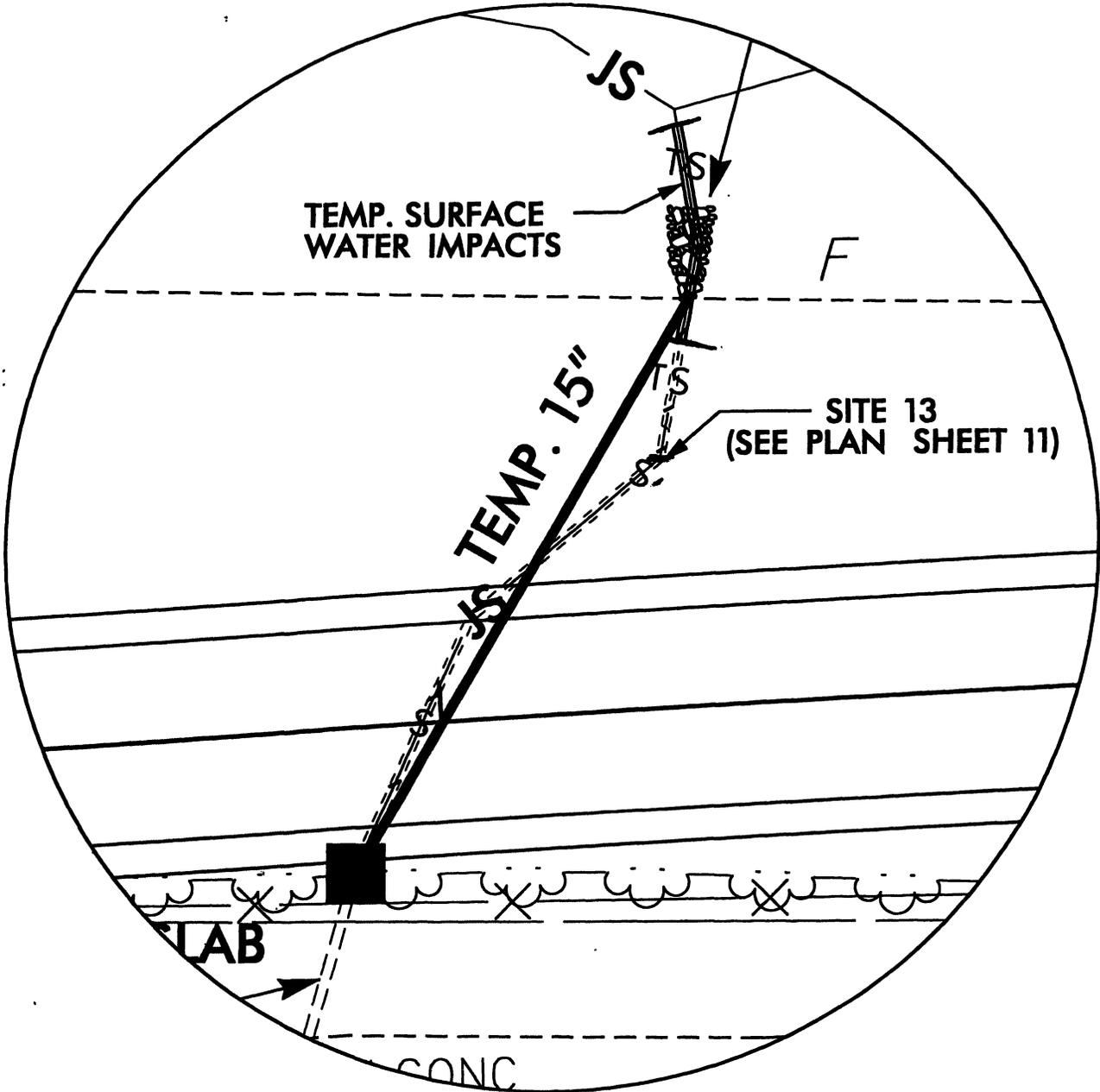
Mr. Mason Herndon  
NCDENR-DWQ  
225 Green Street, Suite 214  
Fayetteville, North Carolina 28301-5094

Mr. Travis W. Wilson  
NC Wildlife Resource Commission  
1718 Highway 56 West  
Creedmoor, North Carolina 27522

Mr. Gary Jordan  
U.S. Fish and Wildlife Service  
Raleigh Field Office  
Post Office Box 33726  
Raleigh, North Carolina 27636-3726

Mr. Chris Militscher  
NEPA Section/Region 4  
US Environmental Protection Agency  
61 Forsyth Street  
Atlanta, Georgia 30303

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

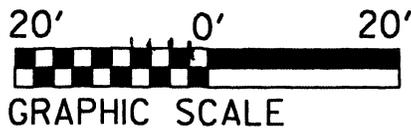


**SITE 13A ENLARGMENT**

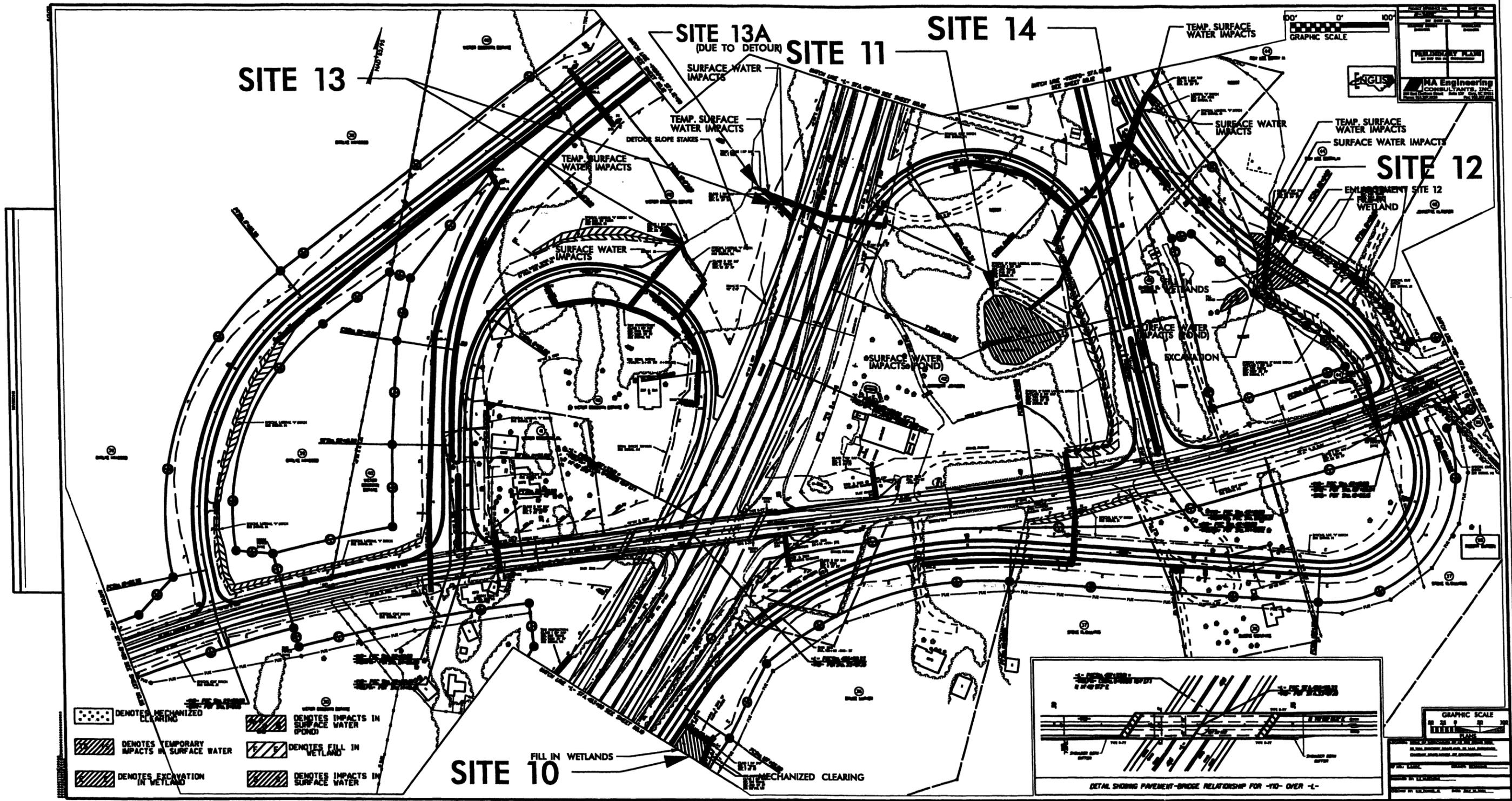
Permit Drawing  
 Sheet 45A of 49  
 Revised 8/28/2012



DENOTES TEMPORARY  
 IMPACTS IN SURFACE WATER



**NCDOT**  
 DIVISION OF HIGHWAYS  
 RICHMOND COUNTY  
 PROJECT: 34542.1.2 (R-3421C)  
 US 220 BYPASS FROM 0.2 MILES SW OF  
 SR 1304 TO US 220 BUS/US 220 BYPASS  
 INTERCHANGE SOUTH OF ELLERBE  
 SHEET OF 08/09/12

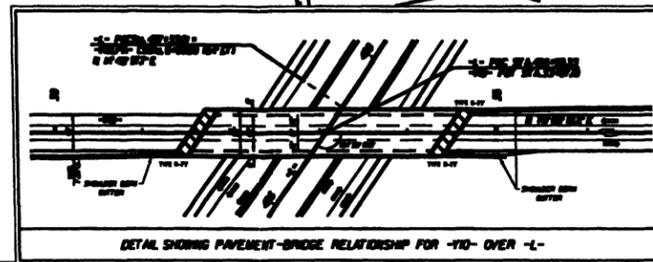


0' 100' GRAPHIC SCALE

MA Engineering CONSULTANTS, INC.

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

**SITE 10** FILL IN WETLANDS MECHANIZED CLEARING



GRAPHIC SCALE

MA Engineering CONSULTANTS, INC.



North Carolina Department of Environment and Natural Resources

Division of Water Quality  
Charles Wakild, P.E  
Director

Beverly Eaves Perdue  
Governor



September 28, 2012

Dr. Greg Thorpe, PhD., 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 the proposed widening and new lane construction from US 74 (Rockingham/Hamlet Bypass) to US 220 (Ellerbe Bypass) in Richmond County, Federal Aid Project No. NHF-0220(4), State Project No. 8.1580802, TIP R-3421A, B, & C.  
  
NCDWQ Project No. 20120142v.2

Dear Dr. Thorpe:

Attached hereto is a modification of Certification No. 3916 issued to The North Carolina Department of Transportation (NCDOT) dated May 10, 2012.

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

Sincerely,

Charles Wakild  
Director

- cc: Ronnie Smith, US Army Corps of Engineers, Wilmington Field Office (electronic copy only)
- Richard Hancock, PE, Division 8 Engineer
- Art King, Division 8 Environmental Officer
- Chris Militscher, Environmental Protection Agency (electronic copy only)
- Travis Wilson, NC Wildlife Resources Commission (electronic copy only)
- File Copy

Transportation and Permitting Unit  
1650 Mail Service Center, Raleigh, North Carolina 27699-1617  
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604  
Phone: 919-807-6300 \ FAX: 919-807-6488  
Internet: [www.ncwaterquality.org](http://www.ncwaterquality.org)



**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 Quality (NCDWQ) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact an additional 27 linear feet of jurisdictional streams in Richmond County. The project shall be constructed pursuant to the modification dated received September 18, 2012. The authorized impacts are as described below:

**Stream Impacts in the Yadkin-Pee Dee River Basin**

<b>Site</b>	<b>Permanent Fill in Intermittent Stream (linear ft)</b>	<b>Temporary Fill in Intermittent Stream (linear ft)</b>	<b>Permanent Fill in Perennial Stream (linear ft)</b>	<b>Temporary Fill in Perennial Stream (linear ft)</b>	<b>Total Stream Impact (linear ft)</b>	<b>Stream Impacts Requiring Mitigation (linear ft)</b>
Original approved impacts at Site 13A 462+70 -L- (LT) Detour	0	0	0	0	0	0
New impacts with this approval at Site 13A 462+70 -L- (LT) Detour	0	27	0	0	27	0
<b>Total</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>0</b>

**Total Stream Impact for Site 13A: 27 linear feet**

The application provides adequate assurance that the discharge of fill material into the waters of the Yadkin-Pee Dee 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 September 18, 2012. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated May 10, 2012 still apply except where superceded by this certification. Should your project change, you are required to notify NCDWQ 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 at Site 13A. All of the authorized activities and conditions of certification associated with the original Water Quality Certification dated May 10, 2012 still apply except where superceded by this certification
2. Geotextile fabric shall be placed within and along the banks of the 27 linear feet of stream channel to be temporarily impacted at Site 13A to ease removal of fill material from the temporary detour..
3. Grubbing within the 50 foot riparian area of the stream should be avoided to the maximum extent practicable at Site 13A.

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND  
REQUEST FOR APPEAL**

Applicant: <b><u>NCDOT</u></b>		File Number: <b><u>SAW-1996-03023</u></b>	Date: <b><u>July 17, 2012</u></b>
Attached is:		See Section below	
<input checked="" type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A	
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B	
<input type="checkbox"/>	PERMIT DENIAL	C	
<input type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D	
<input type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E	

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT**

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:  
District Engineer, Wilmington Regulatory Division  
Attn: Mr. Ronnie Smith  
U.S. Army Corps of Engineers, Regulatory Division  
69 Darlington Avenue  
Wilmington, North Carolina 28403

If you only have questions regarding the appeal process you may also contact:  
Mr. Jason Steele, Administrative Appeal Review Officer  
CESAD-PDO  
U.S. Army Corps of Engineers, South Atlantic Division  
60 Forsyth Street, Room 10M15  
Atlanta, Georgia 30303-8801  
Phone: (404) 562-5137

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

<hr/> Signature of appellant or agent.	Date:	Telephone number:
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**For appeals on Initial Proffered Permits send this form to:**

**District Commander, Wilmington Regulatory Division, Attn: Ronnie Smith, 69 Darlington Avenue,  
Wilmington, North Carolina 28403**

**For Permit denials, Proffered Permits and approved Jurisdictional Determinations send this form to:**

**Division Commander, U.S. Army Engineer Division, South Atlantic, Attn: Mr. Jason Steele,  
Administrative Appeal Officer, CESAD-PDO, 60 Forsyth Street, Room 10M15, Atlanta, Georgia 30303-  
8801  
Phone: (404) 562-5137**



North Carolina Department of Environment and Natural Resources

Division of Water Quality  
Charles Wakild, P.E.  
Director

May 10, 2012

Beverly Eaves Perdue  
Governor



Dr. Greg Thorpe, PhD., Manager  
Project Development and Environmental Analysis  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina, 27699-1598

Subject: 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS for the proposed widening and new lane construction from US 74 (Rockingham/Hamlet Bypass) to US 220 (Ellerbe Bypass) in Richmond County, Federal Aid Project No. NHF-0220(4), State Project No. 8.1580802, TIP R-3421A, B, & C.

NCDWQ Project No. 20120142

Dear Dr. Thorpe:

Attached hereto is a copy of Certification No. 3916 issued to The North Carolina Department of Transportation (NCDOT) dated May 10, 2012.

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

Sincerely,

  
Charles Wakild  
Director

Attachments

- cc: Ronnie Smith, US Army Corps of Engineers, Wilmington Field Office (electronic copy only)
- Richard Hancock, PE, Division 8 Engineer
- Art King, Division 8 Environmental Officer
- Chris Militscher, Environmental Protection Agency (electronic copy only)
- Travis Wilson, NC Wildlife Resources Commission (electronic copy only)
- Mason Herndon, NCDWQ Fayetteville Regional Office
- File Copy

Transportation and Permitting Unit  
1650 Mail Service Center, Raleigh, North Carolina 27699-1650  
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604  
Phone: 919-807-6300 \ FAX: 919-807-6488  
Internet: [www.ncwaterquality.org](http://www.ncwaterquality.org)

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One  
North Carolina  
*Naturally*

**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 (NCDWQ) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact 14.45 acres of jurisdictional wetlands and 13,569 linear feet of jurisdictional streams in Richmond County. The project shall be constructed pursuant to the application dated received February 10, 2012. **This certification only authorizes construction of Section C of the project.** The authorized impacts are as described below:

**Stream Impacts in the Yadkin-Pee Dee River Basin**

Site	Location	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)	Total Stream Impact (linear feet)	Stream Impacts Requiring Mitigation* (linear ft)
<b>R-3421A (Preliminary)</b>							
1	24+55/26+90 FLY	---	---	364	---	364	364
2	94+45/98+20 I-73	---	---	1,097	---	1,097	1,097
3	12+60/14+55 LPC	---	---	676	---	676	676
4	108+12/109+60 I-73	---	---	511	---	511	511
5	10+04/12+05 RPD	---	---	435	---	435	435
7	33+10/44+51 L2REV	---	---	1,247	100	1,347	1,247
8	132+75/135+72 US 74	---	---	187	---	187	187
<b>TOTAL:</b>		<b>0</b>	<b>0</b>	<b>4,517</b>	<b>100</b>	<b>4,617</b>	<b>4,517</b>
<b>R-3421B (Preliminary)</b>							
1	148+07 & 150+96 -L-	---	---	24	15	39	0
2	12+90-Y4- & 42+86 -SR1-	---	---	28	40	68	0
3	166+62 & 168+00 -L-	---	---	759	37	796	759
4	178+71 -L-	---	---	352	26	378	352
5	216+69 -L-	---	---	645	20	665	645
7	229+82 -L-	---	---	610	20	630	610
8	236+34 -L-	---	---	832	90	922	832
11	15+33 -Y5-	---	---	47	10	57	0
<b>TOTAL:</b>		<b>0</b>	<b>0</b>	<b>3,297</b>	<b>258</b>	<b>3,555</b>	<b>3,198</b>
<b>R-3421C</b>							
5	380+50 -L-	---	---	278	20	298	278
8	435+00 -L- (LT)	---	---	629	10	639	629
9	435+00 -L- (RT)	---	---	463	20	483	463
12	23+00 -SR5-	40	10	---	---	50	0
13	462+70 -L- (LT)	205	20	---	---	225	0
14	14+00 -Y10RPD-	---	---	538	10	548	538
16	8+00 -Y10RPD-	---	---	61	---	61	0
17a/b	473+00 -L- (LT)	381	10	606	10	1,007	606
18	485+50 -L-	208	17	---	---	225	0
18	484+90 -L- (RT)	10	---	---	---	10	0
19	489+40 -L-	199	22	---	---	221	0
20	502+60 -L-	191	24	---	---	215	0
21	509+50 -L-	---	---	279	167	446	279
23	518+60 -L- (RT)	---	---	449	21	470	449
24	534+50 -L- (RT)	212	8	---	---	220	0
26	14+07 -Y8-	---	---	41	20	61	0
27	25+00 -Y8REV-	---	---	196	22	218	196
<b>TOTAL:</b>		<b>1,446</b>	<b>111</b>	<b>3,540</b>	<b>300</b>	<b>5,397</b>	<b>3,438</b>
<b>PROJECT TOTAL:</b>		<b>1,446</b>	<b>111</b>	<b>11,354</b>	<b>658</b>	<b>13,569</b>	<b>11,153</b>

\* Mitigation for intermittent streams is not required for this project as the FONSI was signed prior to October 16, 2009.

**Total Stream Impact for Project: 13,569 linear feet**

**Wetland Impacts in the Yadkin-Pee Dee River Basin**

Site	Location	Wetland Type	Fill (ac)	Fill (temp) (ac)	Excavation	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Impacts Requiring Mitigation (ac)
<b>R-3421A (Preliminary)</b>									
2	94+45/98+20 I-73	Riparian	0.76	---	---	---	---	0.76	0.76
6	125+90/127+50 I-73	Riparian	0.19	---	---	0.06	---	0.25	0.25
7	33+10/44+51 L2REV	Riparian	0.01	---	0.05	0.09	---	0.15	0.15
8	132+75/135+72 US 74	Riparian	0.03	---	---	0.06	---	0.09	0.09
<b>TOTAL:</b>			<b>0.99</b>	<b>0.00</b>	<b>0.05</b>	<b>0.21</b>	<b>0.00</b>	<b>1.25</b>	<b>1.25</b>
<b>R-3421B (Preliminary)</b>									
1	148+07 & 150+96 -L-	Riparian	0.22	---	---	0.03	---	0.25	0.25
3	166+62 & 168+00 -L-	Riparian	0.03	---	---	---	---	0.03	0.03
4	178+71 -L-	Riparian	0.08	---	---	0.01	---	0.09	0.09
6	226+70 -L-	Riparian	0.58	---	---	<0.01	---	0.58	0.58
8	236+34 -L-	Riparian	0.20	---	---	<0.01	---	0.20	0.20
9	302+79 -L-	Riparian	0.37	---	---	0.05	---	0.42	0.42
10	304+32 -L- & 13+93 -Y5RPC-	Riparian	1.06	---	---	0.05	---	1.11	1.11
11	15+33 -Y5-	Riparian	<0.01	---	---	<0.01	---	0.02	0.02
12	353+20 -L-	Riparian	1.79	---	---	0.13	---	1.92	1.92
<b>TOTAL:</b>			<b>4.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.28</b>	<b>0.00</b>	<b>4.62</b>	<b>4.62</b>
<b>R-3421C</b>									
1	354+45 -L-	Riparian	0.03	---	---	0.05	---	0.08	0.08
2	355+25 -L- (LT)	Riparian	0.16	---	---	0.04	---	0.20	0.20
3	373+40 -L- (LT)	Riparian	0.17	---	---	0.02	---	0.19	0.19
4	376+50 -L-	Riparian	0.69	---	---	0.10	---	0.79	0.79
5	380+50 -L-	Riparian	1.30	---	0.01	0.14	---	1.45	1.45
6	385+50 -L- (LT)	Non-Rip.	---	---	<0.01	0.01	---	0.01	0.01
7	398+50 -L-	Riparian	2.58	---	<0.01	0.08	---	2.66	2.66
8	435+00 -L- (LT)	Riparian	0.19	---	0.07	0.05	---	0.31	0.31
9	435+00 -L- (RT)	Riparian	0.59	---	0.01	0.07	---	0.67	0.67
10	451+00 -L- (RT)	Riparian	0.83	---	---	0.09	---	0.92	0.92
12	23+00 -SR5-	Riparian	0.16	---	<0.01	---	---	0.16	0.16
16	8+00 -Y10RPD-	Riparian	---	---	0.02	0.01	---	0.03	0.03
24	534+50 -L- (RT)	Riparian	0.07	---	0.01	0.01	---	0.09	0.09
25	109+30-SR4- (LT)	Riparian	<0.01	---	---	0.01	---	0.01	0.01
26	14+07 -Y8-	Riparian	<0.01	---	<0.01	0.02	---	0.02	0.02
28	68+54 -Y9SBL- (RT)	Non-Rip.	---	---	---	<0.01	---	0.00	0.00
29	14+50 -SR2- (RT)	Non-Rip.	0.06	---	---	0.01	---	0.07	0.07
30	18+20 -SR2-	Riparian	0.27	---	---	0.06	---	0.33	0.33
31	22+00 -SR2-	Riparian	0.16	---	---	0.02	---	0.18	0.18
33	11+50 -Y14-	Riparian	0.11	---	---	0.12	---	0.23	0.23
34	118+00 -SR4-	Riparian	0.14	---	<0.01	0.04	---	0.18	0.18
<b>TOTAL:</b>			<b>7.51</b>	<b>0.00</b>	<b>0.12</b>	<b>0.95</b>	<b>0.00</b>	<b>8.58</b>	<b>8.58</b>
<b>PROJECT TOTAL:</b>			<b>12.84</b>	<b>0.00</b>	<b>0.17</b>	<b>1.44</b>	<b>0.00</b>	<b>14.45</b>	<b>14.45</b>

**Total Wetland Impact for Project: 14.45 acres (14.37 acres riparian/0.08 acres non-riparian)**

### Open Water Impacts in the Yadkin-Pee Dee River Basin

Site	Location	Permanent Fill in Open Waters (ac)	Temporary Fill in Open Waters (ac)	Total Fill in Open Waters (ac)
11	11+00 -Y10LPD- (RT)	0.35	---	0.35
12	23+00 -SR5-	0.03	---	0.03
15	28+00 -SR4-	1.24	---	1.24
16	8+00 -Y10RPD-	0.99	---	0.99
22	511+50 -L- (LT)	0.12	---	0.12
32	59+00 -Y8REV- (LT)	0.04	---	0.04
<b>TOTAL:</b>		<b>2.77</b>	<b>0.00</b>	<b>2.77</b>

**Total Open Water Impact for Project: 2.77 acres.**

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

This approval is only valid for the purpose and design that you submitted in your application dated received February 10, 2012. Should your project change, you are required to notify the NCDWQ 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:

#### Project Specific Conditions

1. The NCDOT Division Environmental Officer or Environmental Assistant will conduct a pre-construction meeting with all appropriate staff to ensure that the project supervisor and essential staff understand the potential issues with stream and pipe alignment at the permitted site. NCDWQ staff shall be invited to the pre-construction meeting.
2. Mitigation:
  - a. Compensatory mitigation for 3,438 linear feet of impact to streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated January 17, 2012 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the EEP Mitigation Banking Instrument signed July 28, 2010.
  - b. Compensatory mitigation for impacts to 8.58 acres wetlands (8.50 acres riparian; 0.08 acres non-riparian) is required. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated January 17, 2012 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the EEP Mitigation Banking Instrument signed July 28, 2010.
3. 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.

4. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams, 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 NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
5. 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.
6. 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.
7. The stream channel shall be excavated no deeper than the natural bed material of the stream, to the maximum extent practicable. Efforts must be made to minimize impacts to the stream banks, as well as to vegetation responsible for maintaining the stream bank stability. Any applicable riparian buffer impact for access to stream channel shall be temporary and be revegetated with native riparian species.
8. Pipes and culverts used exclusively to maintain equilibrium in wetlands, where aquatic life passage is not a concern, shall not be buried. These pipes shall be installed at natural ground elevation.
9. When final design plans are completed for R-3421 Sections A and B, a modification to the 401 Water Quality Certification shall be submitted with five 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. No construction activities that impact any wetlands, streams, or surface waters located in R-3421 Sections A or B 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.

#### **General Conditions**

10. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
11. 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.
12. 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.
13. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.
14. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams 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 NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.

15. 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.
16. 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.
17. 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.
18. 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.
19. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.
20. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
21. 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 NCDWQ 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, NCDWQ may reevaluate and modify this certification.
22. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification.
23. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.
24. 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.
25. 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.
26. Native riparian vegetation must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction.
27. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.
28. 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.
29. 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.
30. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.
31. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify NCDWQ when all work included in the 401 Certification has been completed.
32. 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:

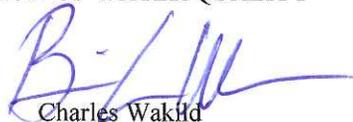
Office of Administrative Hearings  
6714 Mail Service Center  
Raleigh, NC 27699-6714  
Telephone: (919)-733-2698, Facsimile: (919)-733-3478

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

Ms. Mary Penny Thompson, General Counsel  
Department of Environment and Natural Resources  
1601 Mail Service Center  
Raleigh, NC 27699-1601

This the 10th day of May 2012

DIVISION OF WATER QUALITY

  
Charles Wakild  
for Director



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Charles Wakild, P.E
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

NCDWQ 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 Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650. This form may be returned to NCDWQ 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
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-807-6300 \ FAX: 919-807-6488
Internet: www.ncwaterquality.org

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4. The impacted stream, banks, and riparian area at Site 13A shall be restored as closely as possible to its pre-impacted condition during removal of the temporary detour. If any trees are removed within the riparian area, appropriate, native tree species shall be planted to replace any removed to construct the detour.

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. William Carey, General Counsel  
Department of Environment and Natural Resources  
1601 Mail Service Center

This the 28th day of September 2012

DIVISION OF WATER QUALITY



Charles Wakild  
Director

WQC No. 3916

**DEPARTMENT OF THE ARMY PERMIT**

**Permittee:** NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
ATTN: MR. GREGORY THORPE, PhD

**Permit No.:** SAW-1996-03023 R-3421 A, B, C

**Issuing Office:** USAED, WILMINGTON

**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:** Discharge dredged and or fill material into 13,569 linear feet of stream channel, 2.58 acres of open water ponds and 14.54 acres of wetlands to facilitate the widening of US 220 and new lane construction.

**Project Location:** From US 74 Rockingham/Hamlet Bypass to US 220 Ellerbe Bypass in Richmond County, North Carolina.

**General Conditions:**

1. The time limit for completing the work authorized ends on December 31, 2017 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

**RECEIVED**

**AUG 06 2012**

**REG. WILM. FLD. OFC**

**Further Information:**

1. **Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:**
  - Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
  - Section 404 of the Clean Water Act (33 U.S.C. 1344).
  - Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. **Limits of this authorization.**
  - a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
  - b. This permit does not grant any property rights or exclusive privileges.
  - c. This permit does not authorize any injury to the property or rights of others.
  - d. This permit does not authorize interference with any existing or proposed Federal project.
3. **Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:**
  - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
  - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
  - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
  - d. Design or construction deficiencies associated with the permitted work.
  - e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. **Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.**
5. **Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:**
  - a. You fail to comply with the terms and conditions of this permit.
  - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
  - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

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

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

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

E. L. Lusk for Gregory J. Thorpe, PhD  
(PERMITEE) NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
ATTN: MR. GREGORY THORPE, PhD

Aug 2, 2012  
(DATE)

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

Steven A. Baker  
for (DISTRICT ENGINEER) STEVEN A. BAKER, COLONEL

7 Aug 2012  
(DATE)

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

\_\_\_\_\_  
(TRANSFEEE)

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

## SAW-1996-03023, SPECIAL CONDITIONS

Action ID. 1996-03023, Widening and new lane construction from US 74 Rockingham/Hamlet Bypass to US 220 Ellerbe Bypass in Richmond County. Federal Aid Project No. NHF-0220(4), State Project No. 8.1580802, TIP Nos. R-3421A, B and C)

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. In accordance with 33 U.S.C. 1341(d), all conditions of the North Carolina Division of Water Quality 401 Water Quality Certification are incorporated as part of the Department of the Army permit.
3. All work authorized by this permit must be performed in strict compliance with the attached plans, which are a part of this permit. Any modification to these plans must be approved by the US Army Corps of Engineers (USACE) prior to implementation.
4. The permittee shall schedule a preconstruction meeting between its representatives, the contractor's representatives, and the Corps of Engineers, Mr. Ronnie Smith, 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. Ronnie Smith, Wilmington Regulatory Field Office prior to the pre-construction meeting.
5. 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. Ronnie Smith, Wilmington Regulatory Field Office, prior to any active construction in waters or wetlands.
6. 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.

**RECEIVED**

**AUG 06 2012**

REG. WILM. FLD. OFC.

7. The permit plans for R-3421 A and B are currently in the preliminary plan state and accordingly, R-3421 A and B are not authorized for construction at this time. Construction may commence on Sections A and B only after all appropriate and practicable avoidance and minimization measures have been employed, final design has been completed and plans have been approved by the District Commander. A modification request must be submitted to the District Commander prior to construction.

8. In order to ensure that all impacts associated with R-3421 Section A and B are avoided and minimized, a Concurrence Point 4C meeting shall be held prior to construction in these sections.

9. Compensatory mitigation for the unavoidable impacts to 8.49 acres of riparian wetlands, 0.08 acre of non-riparian wetland and 4,508 linear feet of warm water stream associated with the proposed project shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated January 17, 2012, from Michael Ellison, EEP Deputy Director. Pursuant to the In-Lieu-Fee Instrument signed July 28, 2010, between the State of North Carolina, Ecosystem Enhancement Program and the US Army Corps of Engineers the EEP will provide 16.98 acres of restoration equivalent non-riverine, riparian wetlands, 0.16 acre of non-riparian wetlands and 7,013 linear feet of restoration equivalent warm water stream channel in the Lumber River Basin (Hydrologic Cataloging Unit 03040201) in accordance with Section F of the instrument.

10. The applicant shall submit a compensatory mitigation plan for impacts associated with Sections A and B of the R-3421 along with the final plans for R-3421 A and B and the permit modification request(s).

11. 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.

12. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area.

13. All temporary impacts associated with dewatering, etc shall be conducted in accordance with the NCDOT "Best Management Practices for Construction and Maintenance Activities" manual dated 2003.

14. 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 provide the USACE with appropriate maps indicating the locations of proposed borrow or waste sites as soon as the permittee has that information. The permittee will coordinate with the USACE before approving any borrow or waste sites that are within 400 feet of any streams or wetlands to ensure that all such areas comply with special condition (10) of this permit. 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.

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

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

18. 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.

19. 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 (800) 858-0368 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

20. All necessary precautions and measures will be implemented so that any activity will not kill, injure, capture, harass, or otherwise harm any protected federally listed species. While accomplishing the authorized work, if the permittee discovers or observes a damaged or hurt listed endangered or threatened species, the District Engineer will be immediately notified.

21. If the permittee discovers any previously unknown historic or archaeological sites while accomplishing the authorized work, he shall immediately stop work and notify the Wilmington District Engineer.

22. In order to ensure that the project is not likely to adversely affect the endangered Short-nose Sturgeon, the permittee shall adhere to the following conditions:

- a. "High Quality Waters Erosion Control Guidelines" shall be adhered to throughout the entire project.
- b. NCDOT's "Stream Crossing Guidelines for Anadromous Fish Passage" shall be adhered to for all streams identified in the project area.
- c. The "Guidelines for Best Management Practices for Bridge Demolition and Removal" shall be adhered to for all streams identified in the project area.

23. The permittee shall adhere to the most recent "Best Management Practices for Protection of Surface Waters" for all streams identified in the project area.

24. The permittee shall maintain the authorized work in good condition and in conformance with the terms and conditions of this permit.

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. All authorized culverts will be installed to promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed opening should be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gage data, if available. In the absence of such data, bankfull flow can be used as a comparable level. Placement of culverts and other structures in open waters and streams shall be placed below the natural bed elevation of the stream bed by one foot for all culverts greater than 48" and 20% of the culvert diameter for culverts having a diameter less than 48 inches. Culverts that must be buried more than one foot should be coordinated with the Corps project manager to consider the possibility of head cutting upstream of the installation.

27. A representative of the Corps of Engineers will periodically and randomly inspect the work for compliance with these conditions. Deviations from these procedures may result in cessation of work until the problem is resolved to the satisfaction of the Corps.

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

29. 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.

See Sheet 1-A For Index of Sheets  
See Sheet 1-B For Symbology

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3421C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34542.1.2	NHF-0220(4)	PE	
34542.2.5	HPPNHF-0220(56)	R/W & UTILITIES	

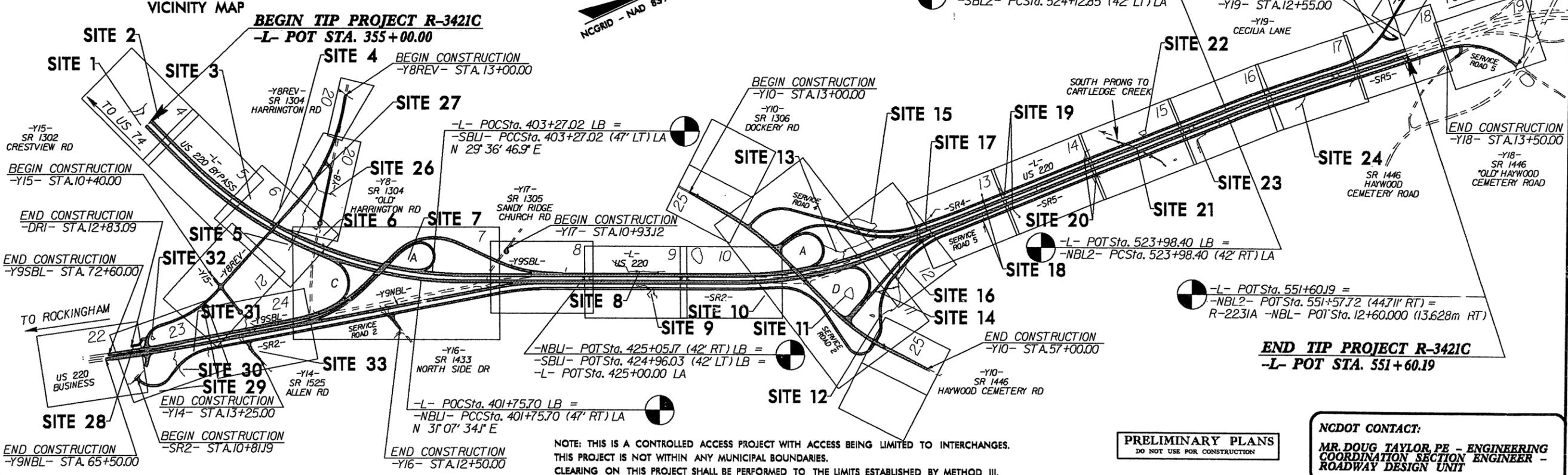
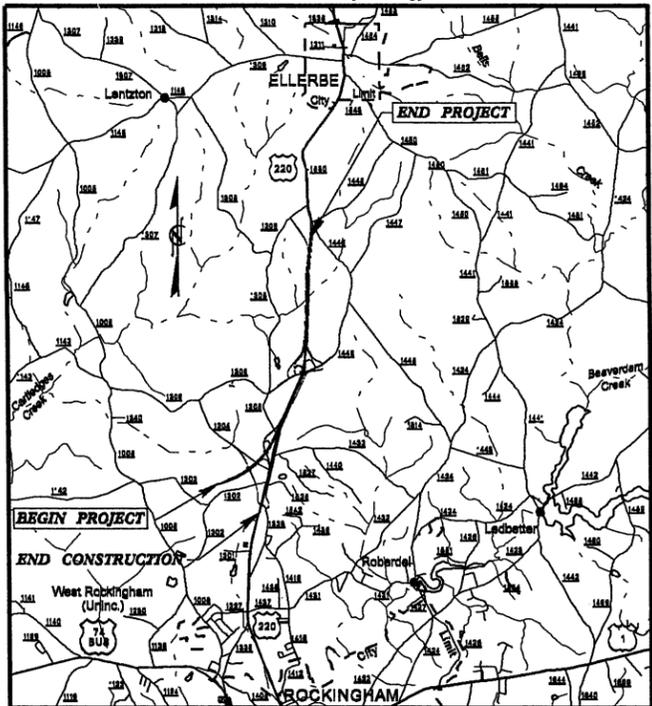
**RICHMOND COUNTY**

**LOCATION: US 220 BYPASS FROM 0.2 MILES SOUTHWEST OF  
SR 1304 (HARRINGTON RD) TO US 220 BUSINESS/BYPASS  
INTERCHANGE SOUTH OF ELLERBE**  
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNING,  
STRUCTURES, AND CULVERT**

Permit Drawing  
Sheet 1 of 49

**WETLAND/SURFACE WATER PERMIT DRAWINGS**

**TIP PROJECT: R-3421C**

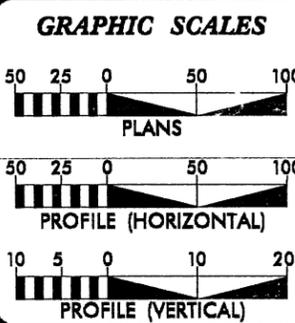


NOTE: THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.  
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

**NCDOT CONTACT:**  
**MR. DOUG TAYLOR, PE - ENGINEERING  
COORDINATION SECTION ENGINEER -  
ROADWAY DESIGN UNIT**

**CONTRACT:**



**DESIGN DATA**

ADT 2012	= 25,500
ADT 2030	= 35,300
DHV	= 10 %
D	= 60 %
T	= 28 % *
V	= 70 MPH
* TTST 18 % DUAL 10 %	
FUNC. CLASS = INTERSTATE	
STATEWIDE TIER	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT R-3421C	= 3.724 mi
TOTAL LENGTH TIP PROJECT R-3421C	= 3.724 mi

**-L- LINE USED FOR PROJECT LENGTH**

Prepared for:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., NC, 27610  
Prepared by:  
**MA ENGINEERING CONSULTANTS, INC.**  
508 E. CHATHAM STREET, SUITE 137  
CARY, NORTH CAROLINA 27511  
(919) 297-0220

2006 STANDARD SPECIFICATIONS  
**RIGHT OF WAY DATE:**  
NOVEMBER 19, 2010  
**LETTING DATE:**  
NOVEMBER 20, 2012

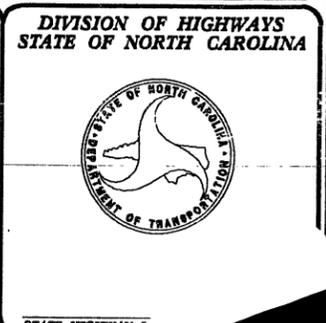
**R.W. PORTER, JR., PE**  
PROJECT ENGINEER  
**K.S. HUTCHENS**  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.



PROJECT REFERENCE NO. R-3421C	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>MA Engineering CONSULTANTS, INC.</b> 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221	

ALL DRIVEWAY RADII ARE 10 UNLESS OTHERWISE NOTED.  
SEE SHEET NO. 27 FOR -L- PROFILE

50' 0' 50'  
GRAPHIC SCALE

**ENGLISH**

Permit Drawing  
Sheet 2 of 49



**SITE 2**

END STATE PROJECT R-3421B  
BEGIN STATE PROJECT R-3421C  
-L- POT STA. 355+00.00

①  
MCRAE FAMILY, LLC

①  
MCRAE FAMILY, LLC

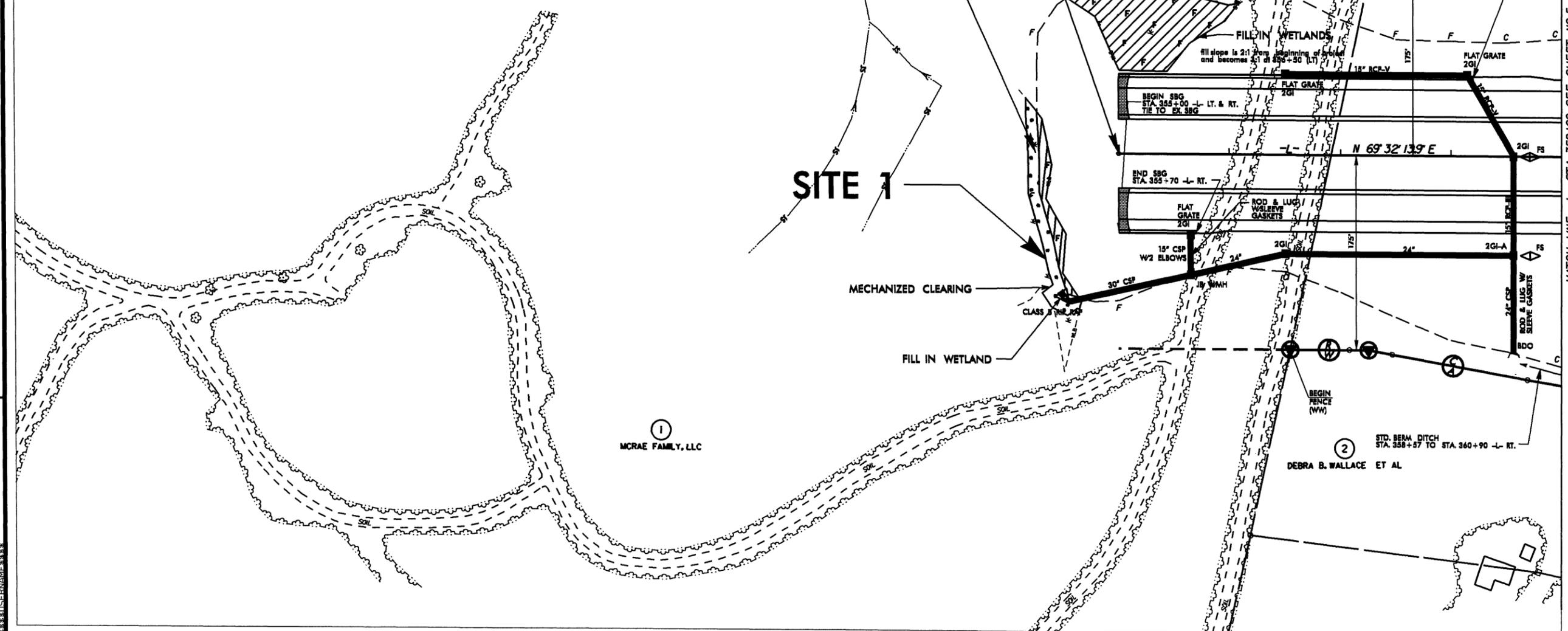
②  
DEBRA B. WALLACE ET AL

**REVISIONS**

**F** DENOTES FILL IN WETLAND

**\*** DENOTES MECHANIZED CLEARING

BEGIN CONSTRUCTION  
-L- POT STA. 354+25.00 (RT.)



**SITE 1**

①  
MCRAE FAMILY, LLC

②  
DEBRA B. WALLACE ET AL

8/22/95  
 SYSTEMS DESIGN  
 USER NAME

PROJECT REFERENCE NO. <b>R-3421C</b>	SHEET NO. <b>4</b>
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>MA Engineering CONSULTANTS, INC.</b> 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221	

ALL DRIVEWAY RADII ARE 10 UNLESS OTHERWISE NOTED.  
SEE SHEET NO. 27 FOR -L- PROFILE

50' 0' 50'  
GRAPHIC SCALE

**ENGLISH**

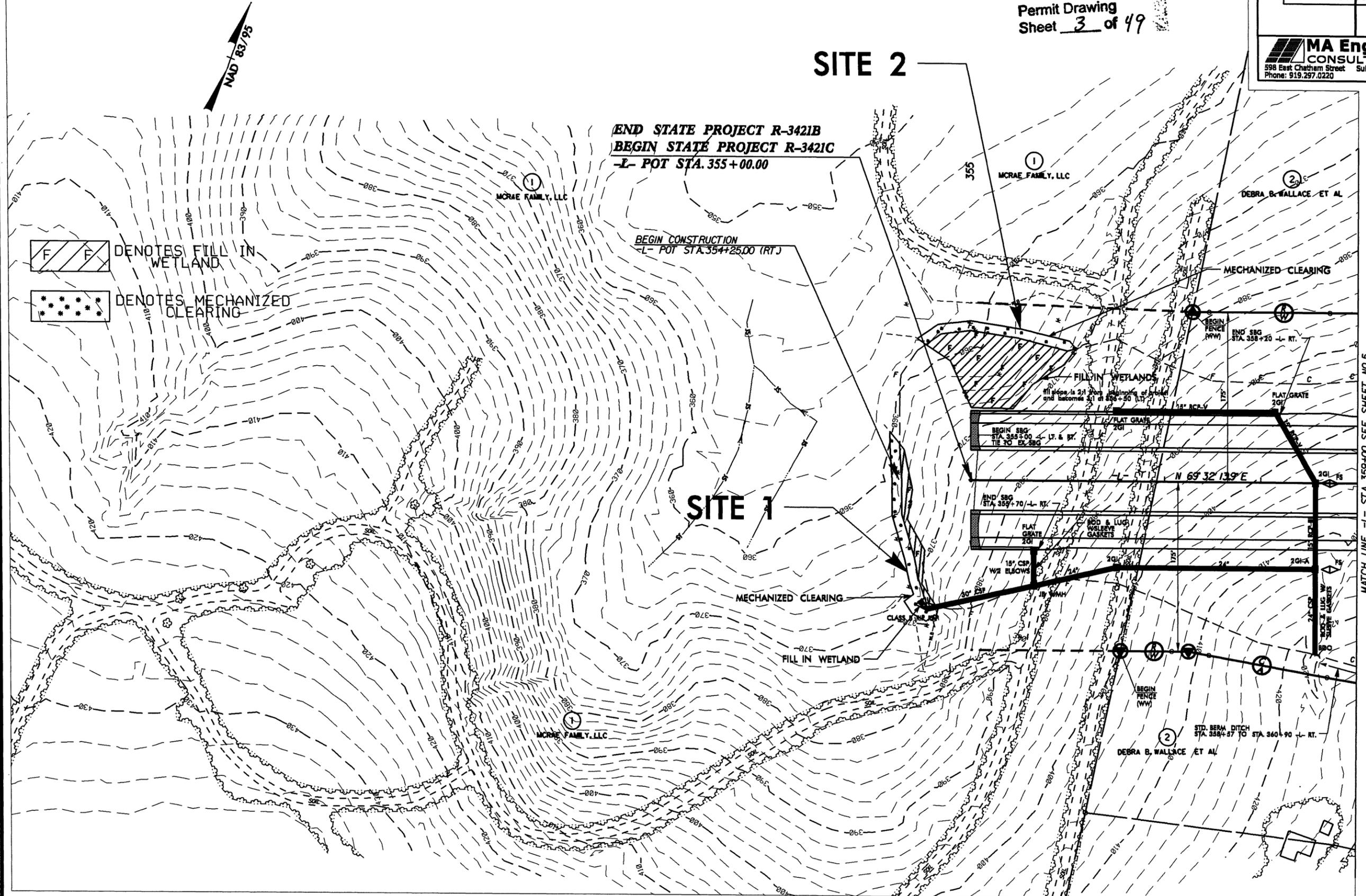
Permit Drawing  
Sheet 3 of 49

# SITE 2

**END STATE PROJECT R-3421B  
BEGIN STATE PROJECT R-3421C  
-L- POT STA. 355+00.00**

**BEGIN CONSTRUCTION  
-L- POT STA. 354+25.00 (RT.)**

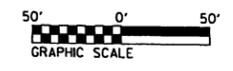
**F F** DENOTES FILL IN WETLAND  
**\*** DENOTES MECHANIZED CLEARING



REVISIONS

\*\*\*\*\*  
SYTIME DGN  
\*\*\*\*\*

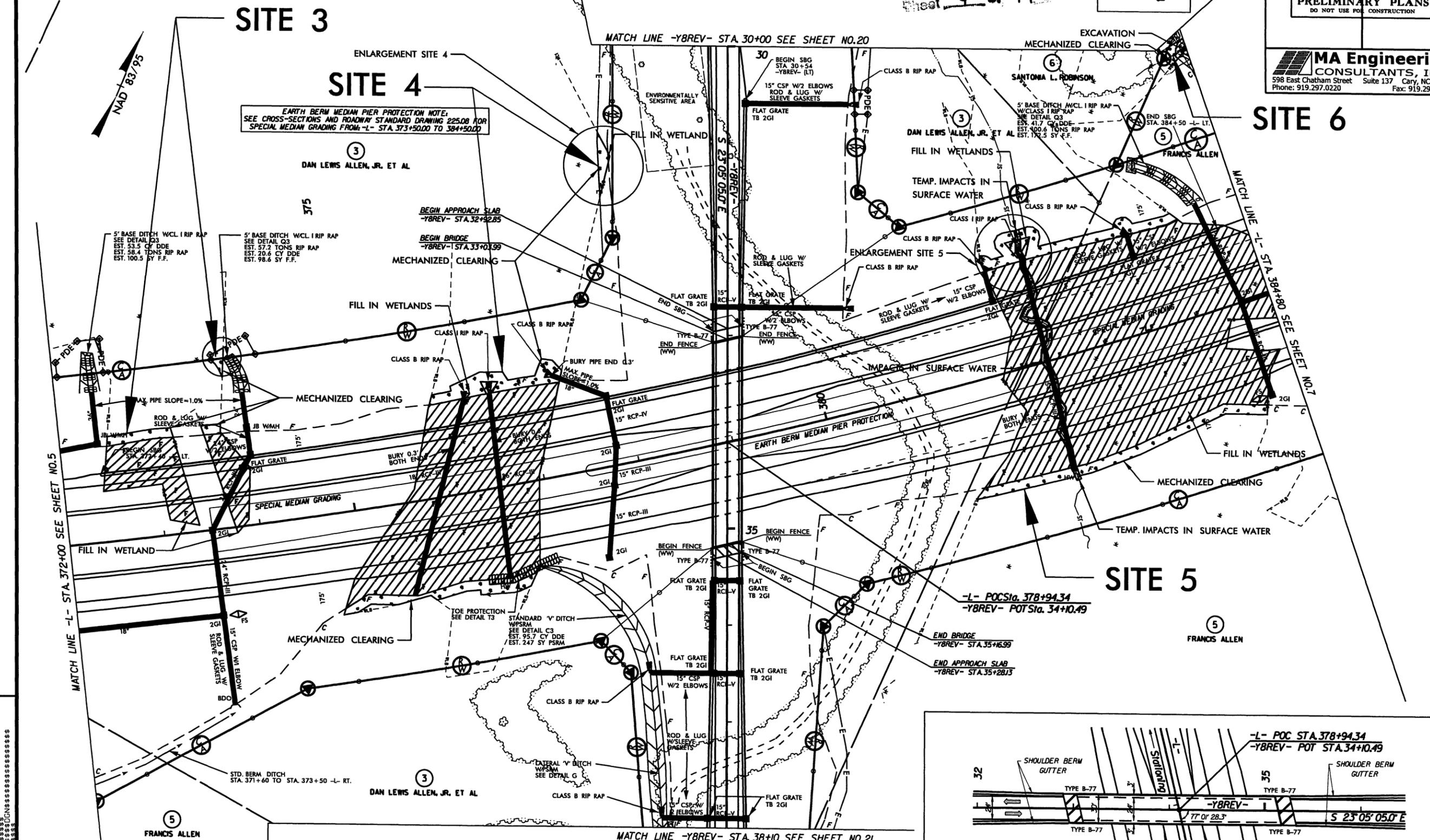
SR 1304 (HARRINGTON ROAD)	
2005 ADT 1,000	TTST = 18%
2025 ADT 2,000	DUALS = 10%
	DHV = 10%
	DIR = 60%



ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.  
SEE SHEET NOS. 27 AND 28 FOR -L- PROFILE  
SEE SHEET NO. 40 FOR -YBREV- PROFILE

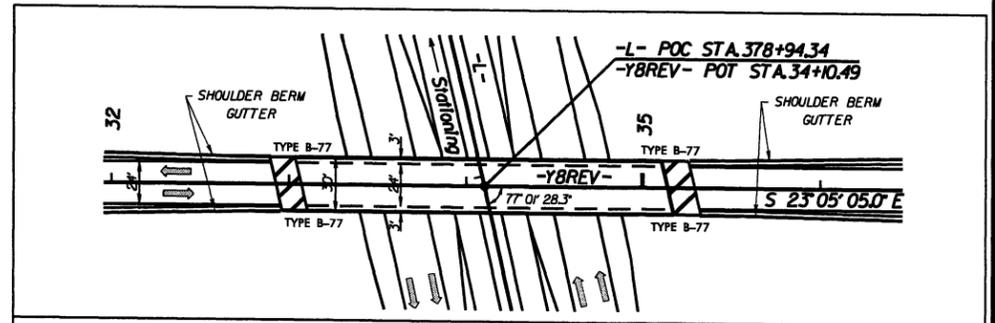
PROJECT REFERENCE NO. <b>R-3421C</b>	SHEET NO. <b>6</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>MA Engineering CONSULTANTS, INC.</b> 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221	

Permit Drawing  
Sheet 4 of 49



**EARTH BERM MEDIAN PIER PROTECTION NOTE:**  
SEE CROSS-SECTIONS AND ROADWAY STANDARD DRAWING 225.08 FOR SPECIAL MEDIAN GRADING FROM -L- STA. 373+50.00 TO 384+50.00

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

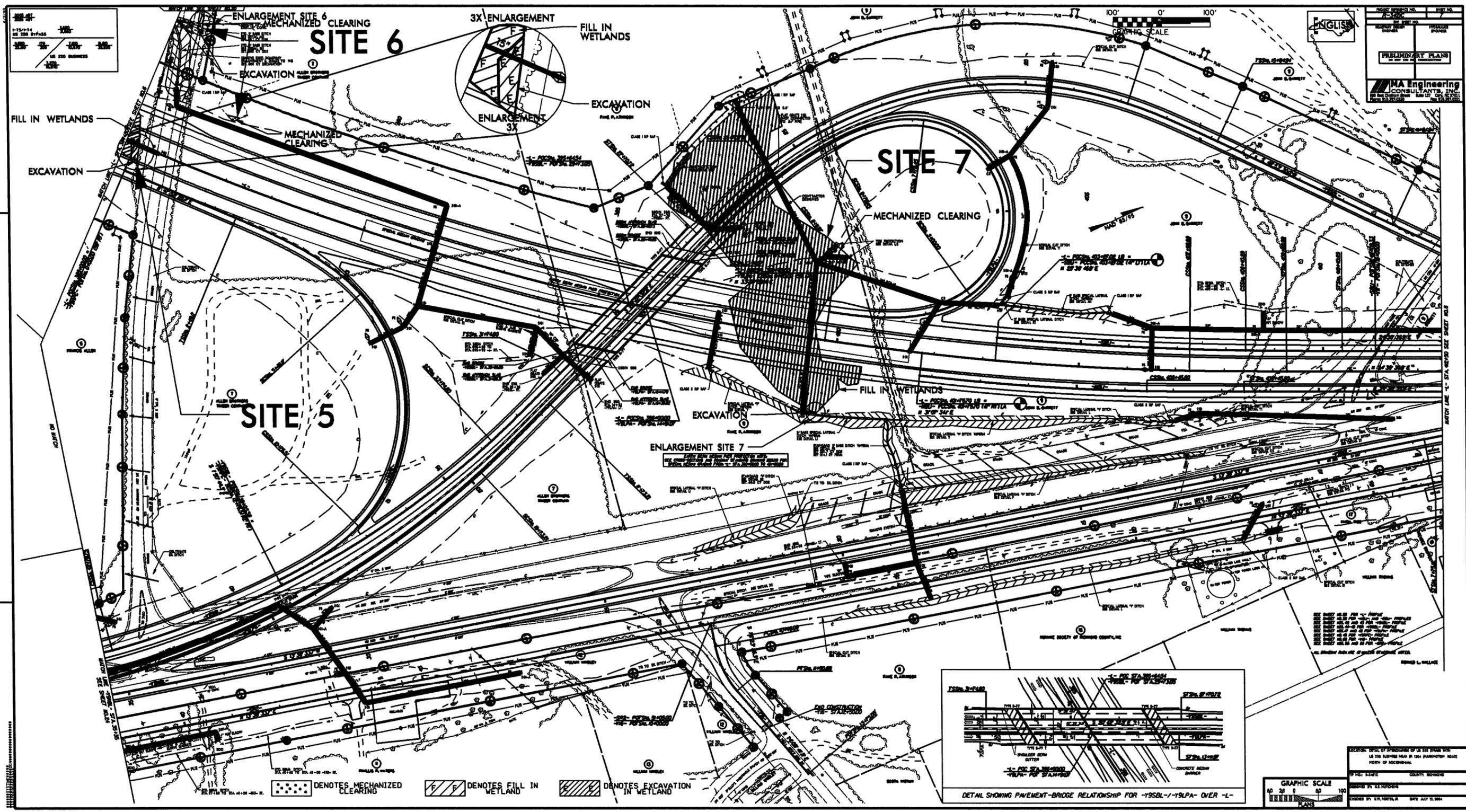


DETAIL SHOWING PAVEMENT-BRIDGE RELATIONSHIP FOR -YBREV- OVER -L-

REVISIONS

SYSTEM TIME: 08/22/2011 10:00:00 AM

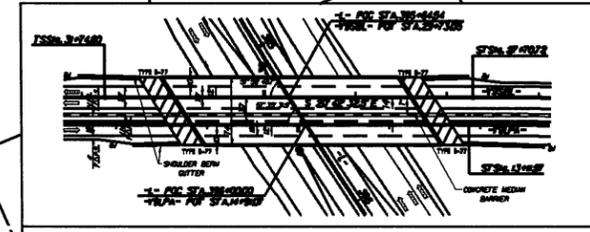




1-15-14  
US 250 BYPASS  
US 250 BUSINESS  
1510'

PRELIMINARY PLANS  
MA Engineering  
CONSULTANTS, INC.  
1000 W. 10th St., Suite 100  
Tulsa, Oklahoma 74106  
Tel: 918.438.1111  
Fax: 918.438.1112

DENOTES MECHANIZED CLEARING  
 DENOTES FILL IN WETLAND  
 DENOTES EXCAVATION IN WETLAND



GRAPHIC SCALE  
0 25 50 100  
1"=25'

APPROVED BY: [Signature]  
DATE: JULY 13, 2014

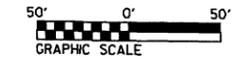




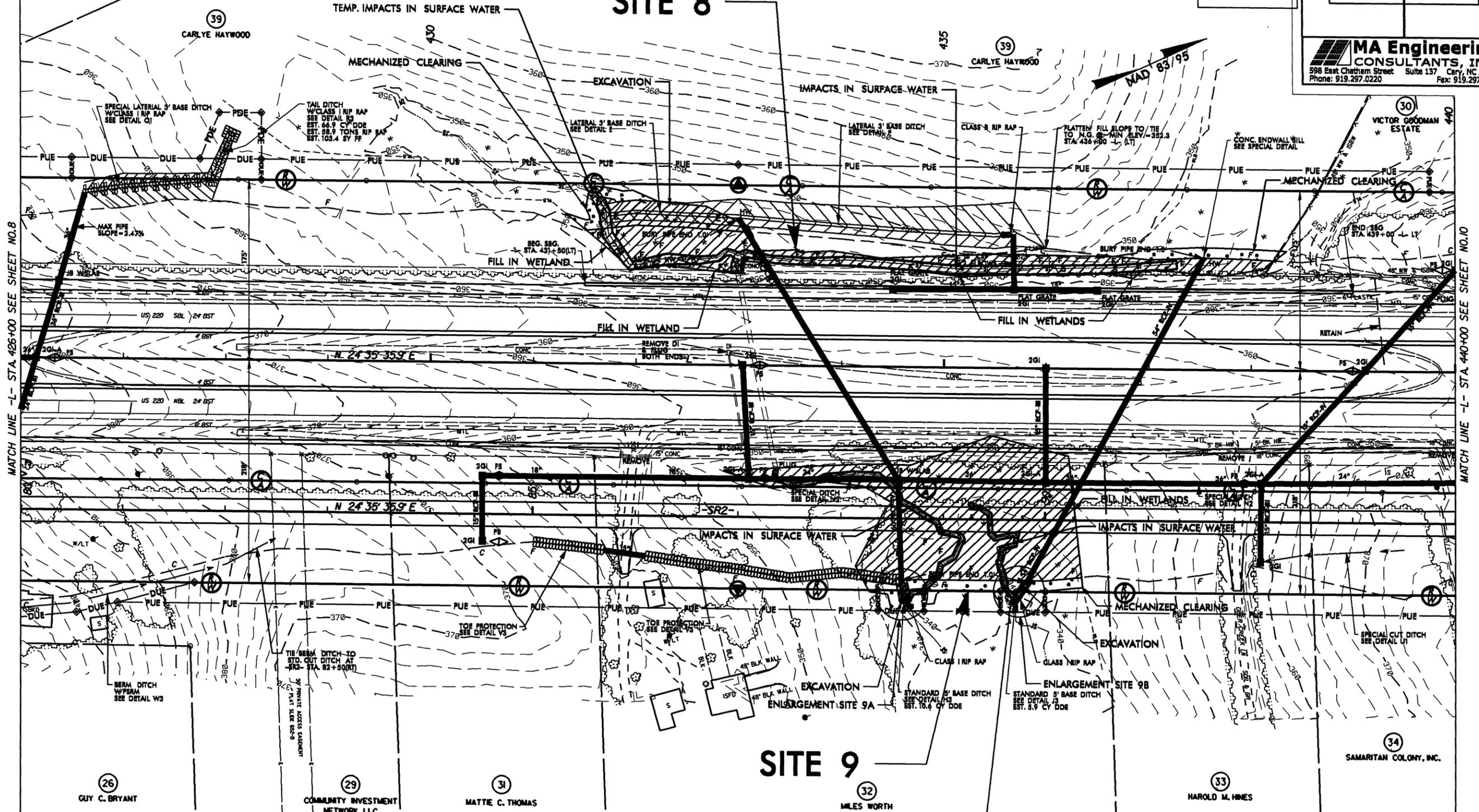
PROJECT REFERENCE NO. R-3421C	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
 <b>MA Engineering</b> CONSULTANTS, INC. 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221	

ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.  
 SEE SHEET NOS. 30 AND 31 FOR -NBL- AND -SBL- PROFILES  
 SEE SHEET NO. 57 FOR -SR2- PROFILE

Permit Drawing  
 Sheet 9 of 49



# SITE 8



MATCH LINE -L- STA. 426+00 SEE SHEET NO. 8

MATCH LINE -L- STA. 440+00 SEE SHEET NO. 10

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

# SITE 9

26 GUY C. BRYANT

29 COMMUNITY INVESTMENT NETWORK, LLC

31 MATTE C. THOMAS

32 MILES WORTH

33 HAROLD M. HINES

34 SAMARITAN COLONY, INC.

REVISIONS

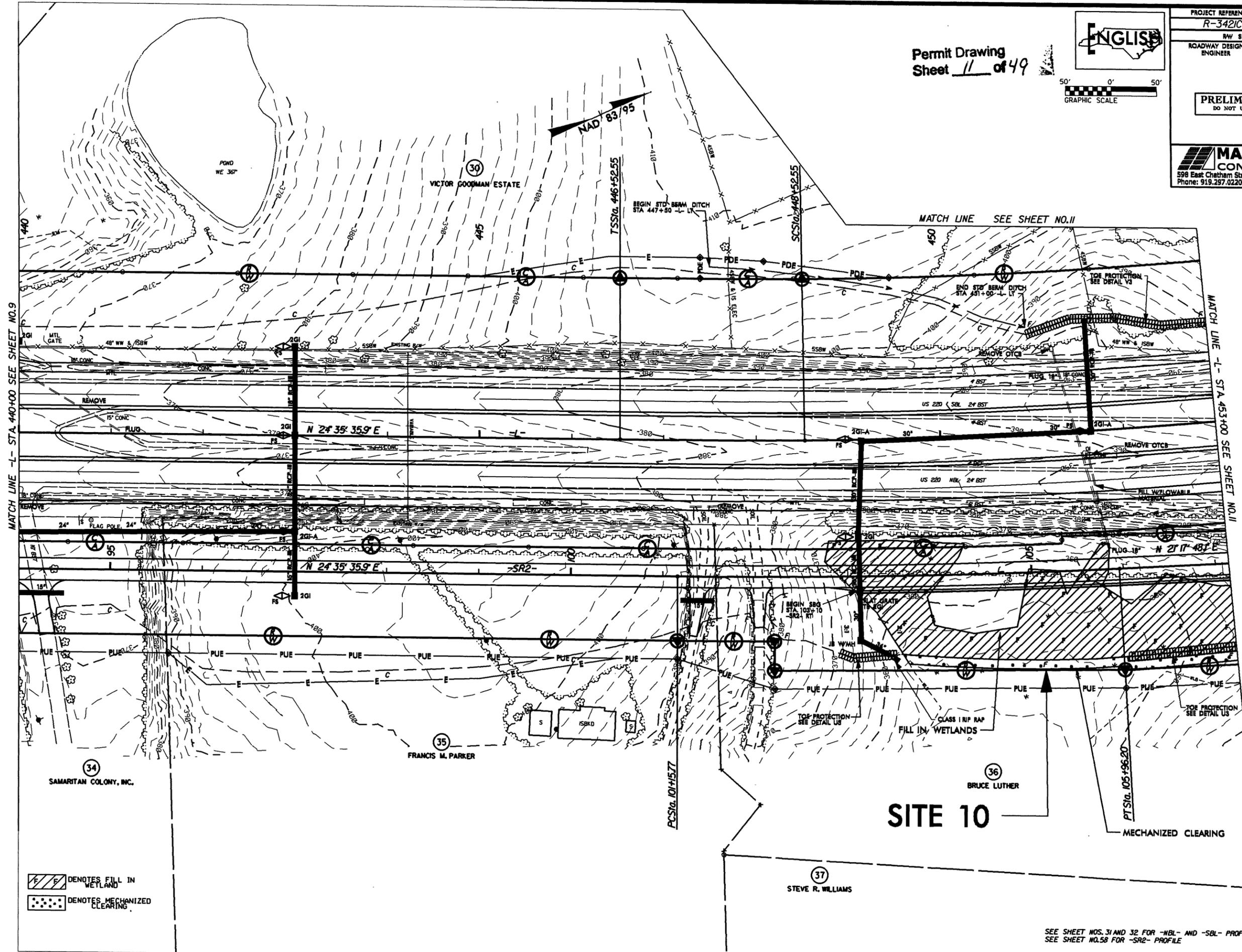
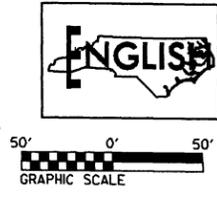
8/12/1994

\*\*\*\*\*  
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 87. 12/15/01  
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PROJECT REFERENCE NO. R-3421C		SHEET NO. 10	
RWY SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			
<b>MA Engineering</b> CONSULTANTS, INC. 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221			

Permit Drawing  
Sheet 11 of 49



REVISIONS

MATCH LINE - L - STA. 440+00 SEE SHEET NO.9

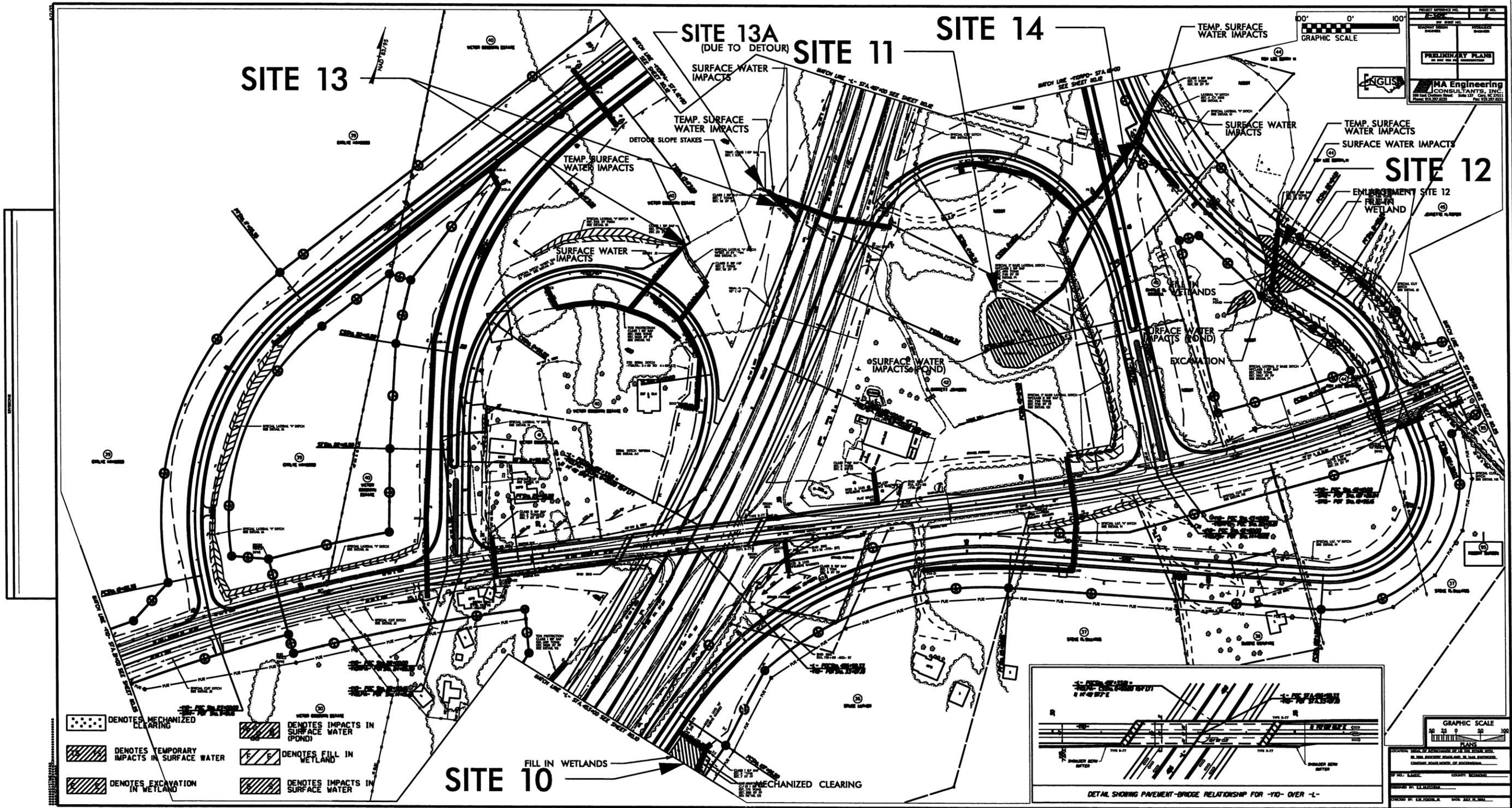
MATCH LINE - L - STA. 453+00 SEE SHEET NO.11

- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING

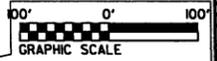
**SITE 10**

SEE SHEET NOS. 31 AND 32 FOR -HBL- AND -SBL- PROFILES  
SEE SHEET NO. 38 FOR -SR2- PROFILE  
ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.

\*\*\*\*\*  
DATE: 11/12/99  
TIME: 10:00 AM  
DRAWN BY: J. B. BROWN  
CHECKED BY: J. B. BROWN  
\*\*\*\*\*



PRELIMINARY PLANS  
 MA Engineering CONSULTANTS, INC.  
 1100 W. 14th Street, Suite 137, Fort Worth, TX 76102  
 Phone: 817.337.2020



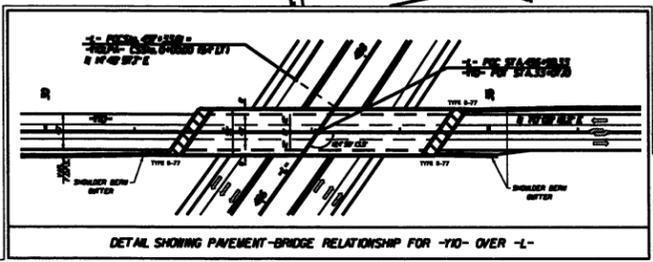
**SITE 12**

ENLARGEMENT SITE 12  
 FILL IN WETLAND

**SITE 10**

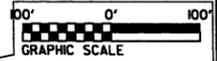
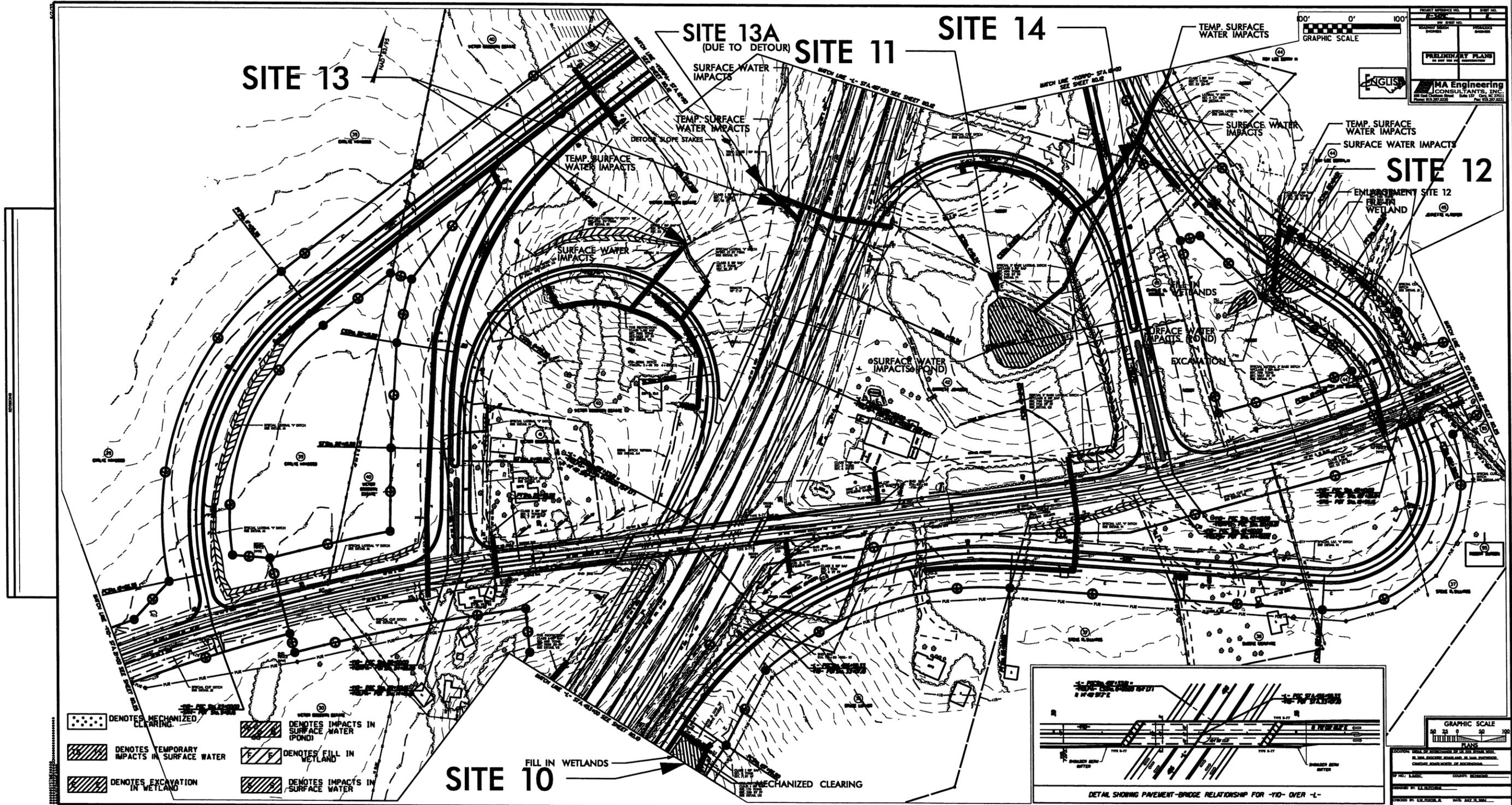
FILL IN WETLANDS

MECHANIZED CLEARING



DETAIL SHORING PAVEMENT-BRIDGE RELATIONSHIP FOR -10- OVER -1-

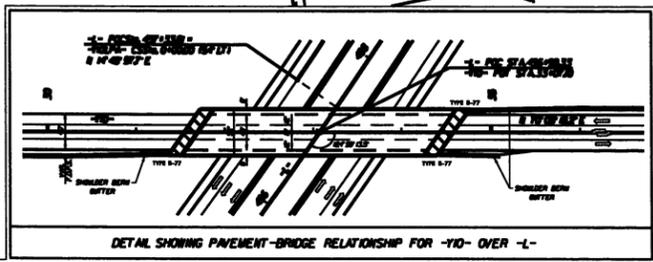
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 PLANS  
 COUNTY: TARRANT  
 SHEET NO. 12 OF 49  
 DATE: 9/29/12



PRELIMINARY PLANS

MA Engineering  
 CONSULTANTS, INC.  
 1100 N. GARDNER ROAD, SUITE 117, GARDNER, MA 01450  
 TEL: 413-253-0200 FAX: 413-253-0201

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



GRAPHIC SCALE  
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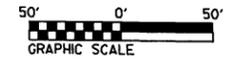
PLANS

MA Engineering  
 CONSULTANTS, INC.  
 1100 N. GARDNER ROAD, SUITE 117, GARDNER, MA 01450  
 TEL: 413-253-0200 FAX: 413-253-0201



PROJECT REFERENCE NO. R-3421C		SHEET NO. 12	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			
598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221			

-YORPD-		-SR5-	
PIs Sta 1+33.37	PI Sta 4+47.76	PI Sta 26+20.23	PI Sta 35+53.09
Os = 4'00"00"	Δ = 19'37"35.5" (LT)	Δ = 44'31"49.1" (RT)	Δ = 27'31"35.5" (RT)
Ls = 200.00'	D = 4'00"00"	D = 6'59"14.2"	D = 4'00"24.1"
LT = 133.37'	L = 490.66'	L = 637.30'	L = 689.51'
ST = 66.70'	T = 247.76'	T = 335.72'	T = 351.59'
	R = 1,432.39'	R = 820.00'	R = 1,430.00'
	SE = 0.08 ft/ft	SE = 0.08 ft/ft	SE = 0.065 ft/ft
	V = 60 MPH	RO = 192 ft	RO = 156 ft
		V = 50 MPH	V = 50 MPH

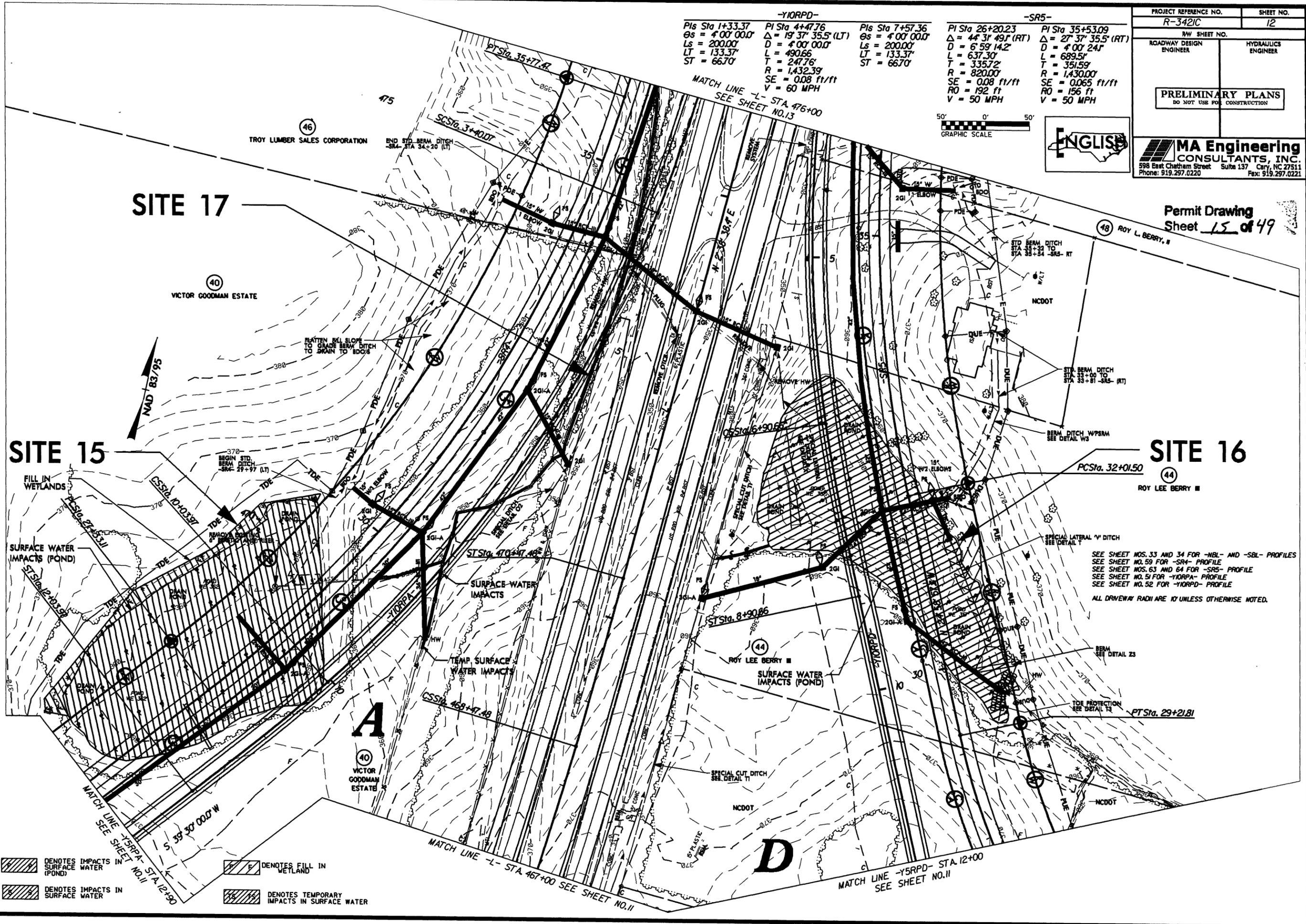


**SITE 17**

**SITE 15**

**SITE 16**

Permit Drawing Sheet 15 of 49



SEE SHEET NOS. 33 AND 34 FOR -HBL- AND -SBL- PROFILES  
 SEE SHEET NO. 59 FOR -SR4- PROFILE  
 SEE SHEET NOS. 63 AND 64 FOR -SR5- PROFILE  
 SEE SHEET NO. 51 FOR -YORPD- PROFILE  
 SEE SHEET NO. 52 FOR -YORPD- PROFILE  
 ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.

- DENOTES IMPACTS IN SURFACE WATER (POND)
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

REVISIONS

8/12/99

8/12/99

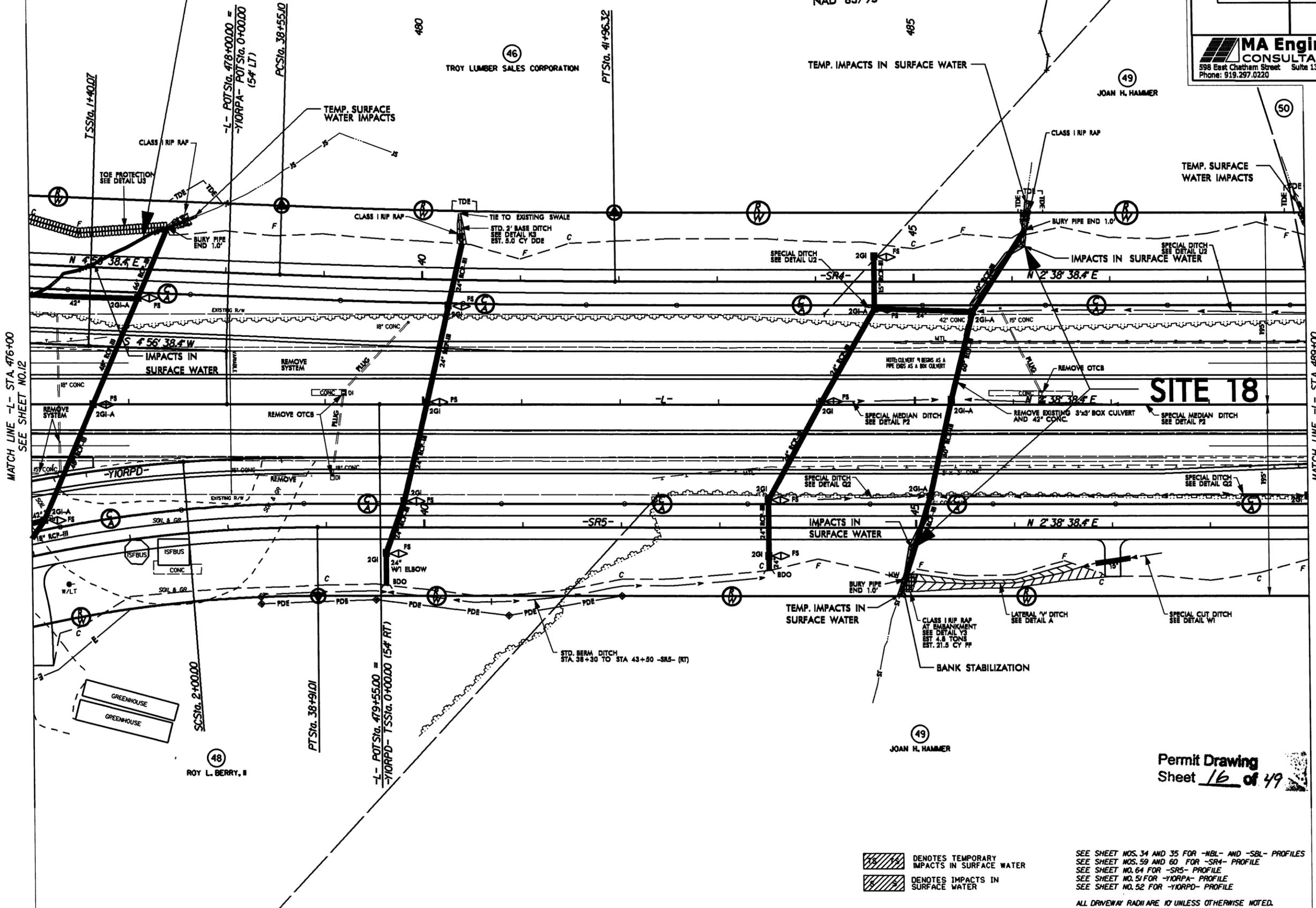
REVISIONS

# SITE 17



ENGLISH

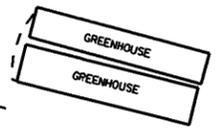
PROJECT REFERENCE NO. <b>R-3421C</b>		SHEET NO. <b>13</b>	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
<b>MA Engineering CONSULTANTS, INC.</b> 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221			



MATCH LINE -L- STA. 476+00  
SEE SHEET NO.12

MATCH LINE -L- STA. 489+00  
SEE SHEET NO.14

# SITE 18



ROY L. BERRY, II

JOAN H. HAMMER

Permit Drawing  
Sheet **16** of **49**

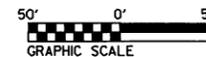
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES IMPACTS IN SURFACE WATER

SEE SHEET NOS. 34 AND 35 FOR -NBL- AND -SBL- PROFILES  
 SEE SHEET NOS. 59 AND 60 FOR -SR4- PROFILE  
 SEE SHEET NO. 64 FOR -SR5- PROFILE  
 SEE SHEET NO. 51 FOR -YIORPA- PROFILE  
 SEE SHEET NO. 52 FOR -YIORPD- PROFILE  
 ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.

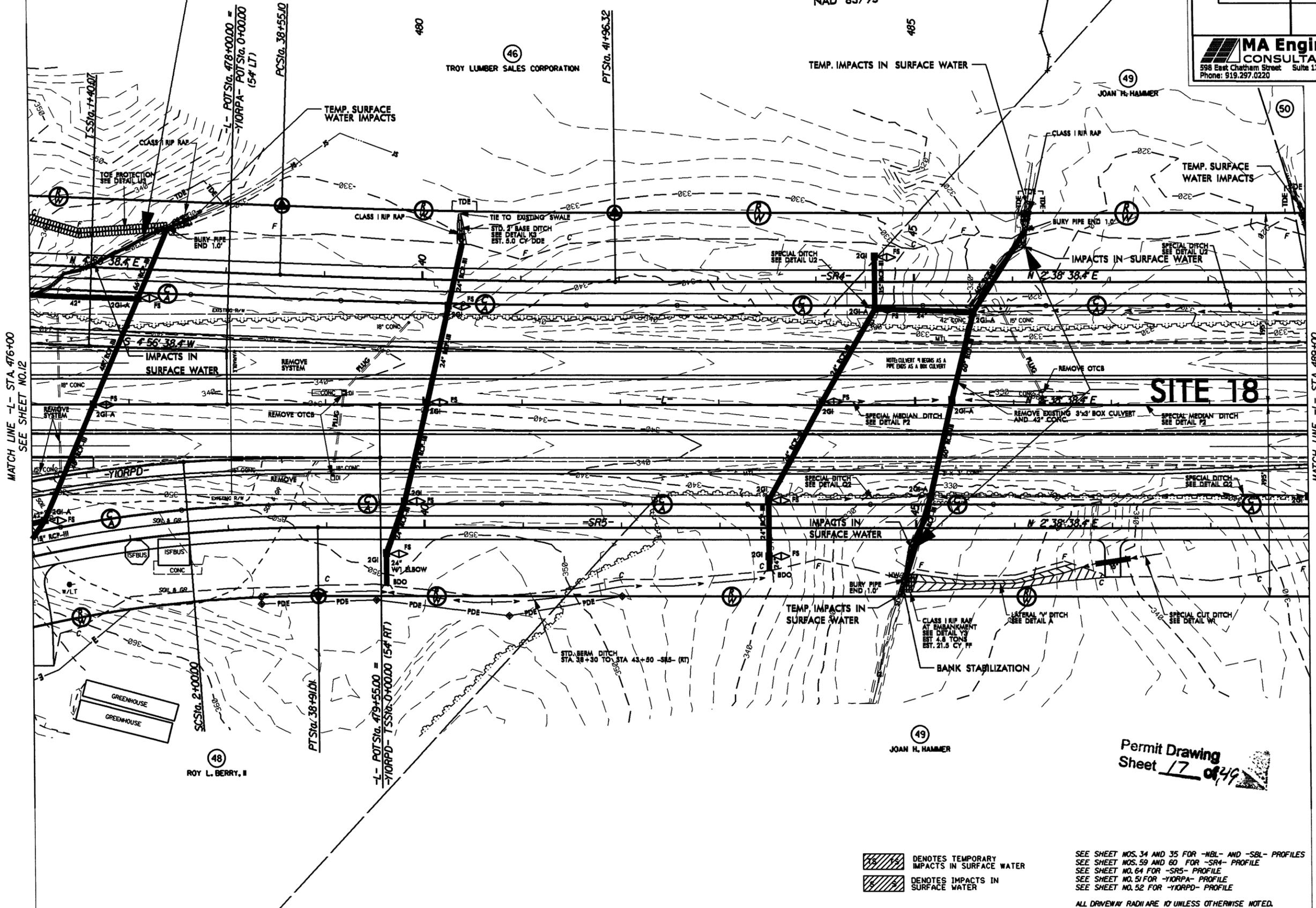
8/12/99

REVISIONS

# SITE 17



PROJECT REFERENCE NO. <b>R-3421C</b>		SHEET NO. <b>13</b>	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			
<b>MA Engineering CONSULTANTS, INC.</b> 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221			



MATCH LINE -L- STA. 476+00  
SEE SHEET NO.12

MATCH LINE -L- STA. 489+00  
SEE SHEET NO.14

# SITE 18

- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES IMPACTS IN SURFACE WATER

SEE SHEET NOS. 34 AND 35 FOR -NBL- AND -SBL- PROFILES  
 SEE SHEET NOS. 59 AND 60 FOR -SR4- PROFILE  
 SEE SHEET NO. 64 FOR -SR5- PROFILE  
 SEE SHEET NO. 51 FOR -Y1ORPA- PROFILE  
 SEE SHEET NO. 52 FOR -Y1ORPD- PROFILE

ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.

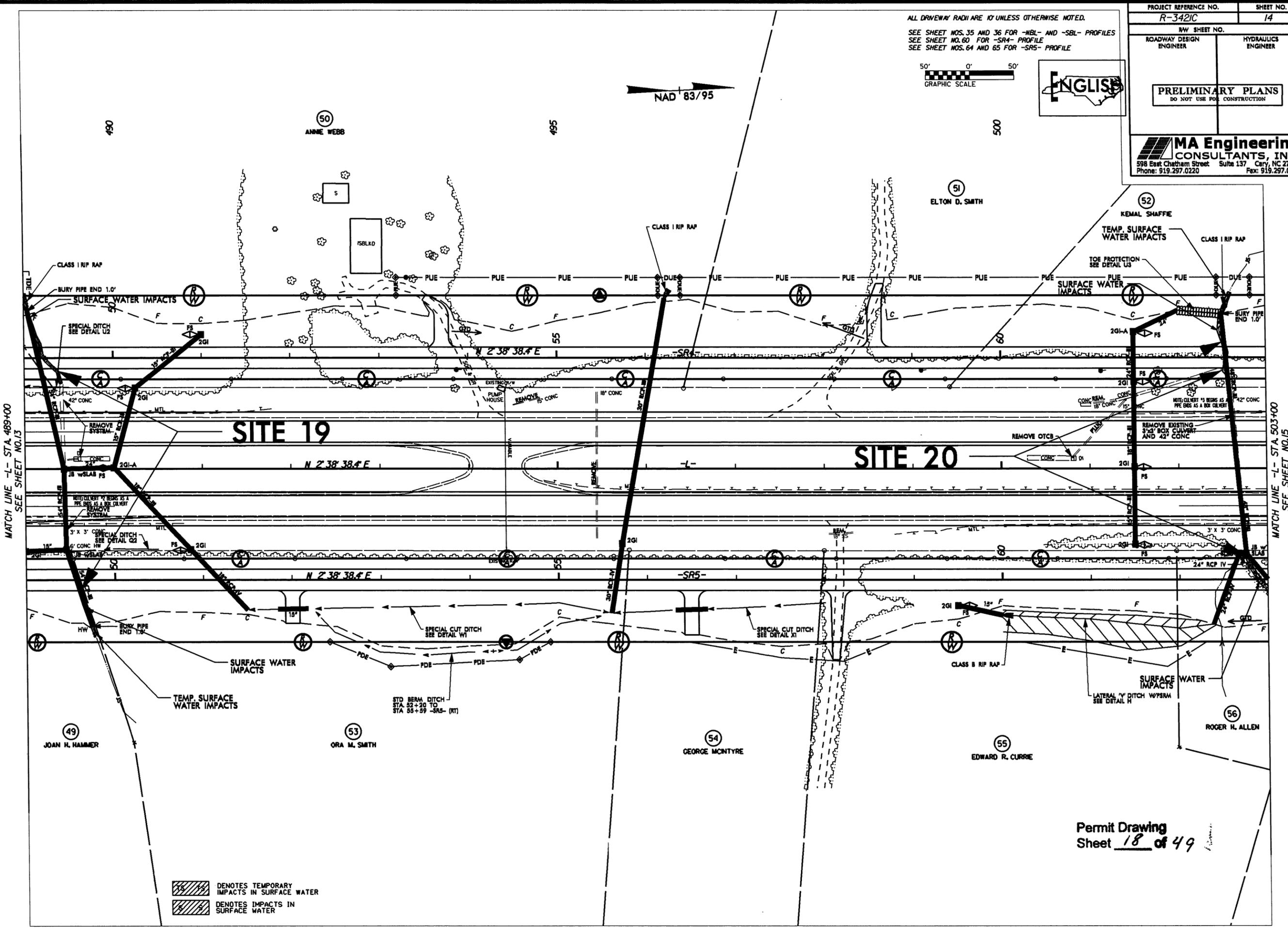
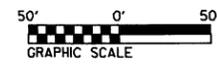
Permit Drawing  
 Sheet **17** of **49**

8/27/99

PROJECT REFERENCE NO. <b>R-3421C</b>		SHEET NO. <b>14</b>	
RAW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			
<b>MA Engineering</b> CONSULTANTS, INC. 598 East Chatham Street, Suite 137, Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221			

ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.

SEE SHEET NOS. 35 AND 36 FOR -NBL- AND -SBL- PROFILES  
SEE SHEET NO. 60 FOR -SR4- PROFILE  
SEE SHEET NOS. 64 AND 65 FOR -SR5- PROFILE



REVISIONS

\*\*\*\*\*SYTIME\*\*\*\*\*  
\*\*\*\*\*DGN\*\*\*\*\*  
\*\*\*\*\*PRINT\*\*\*\*\*

DENOTES TEMPORARY IMPACTS IN SURFACE WATER  
 DENOTES IMPACTS IN SURFACE WATER

Permit Drawing  
Sheet 18 of 49







8/12/1999

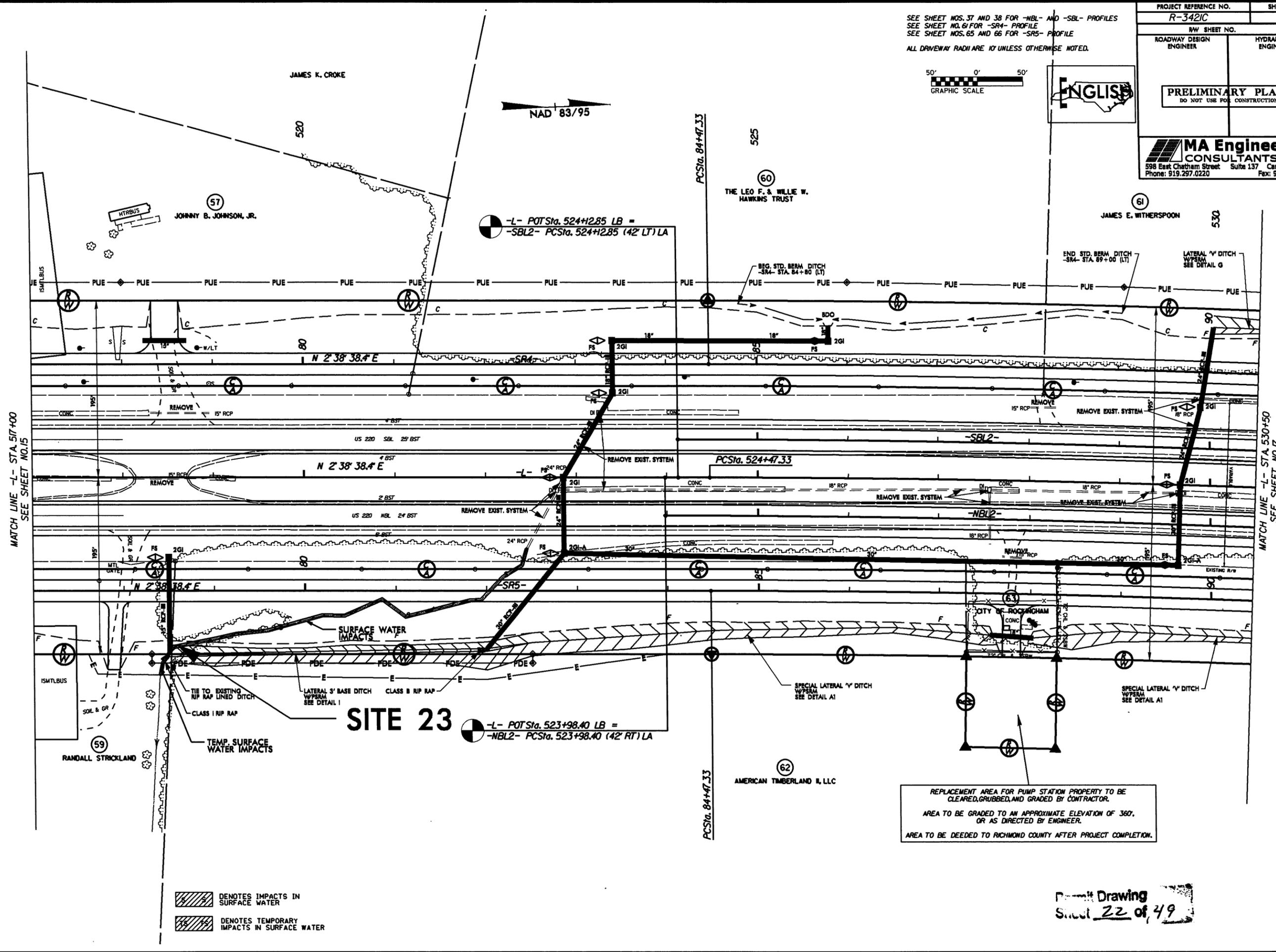
REVISIONS

\*\*\*\*\*  
SYTIME  
\*\*\*\*\*

SEE SHEET NOS. 37 AND 38 FOR -NBL- AND -SBL- PROFILES  
SEE SHEET NO. 61 FOR -SR4- PROFILE  
SEE SHEET NOS. 65 AND 66 FOR -SR5- PROFILE  
ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.



PROJECT REFERENCE NO. <b>R-3421C</b>		SHEET NO. <b>16</b>	
RAW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			
<b>MA Engineering CONSULTANTS, INC.</b> 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221			



MATCH LINE -L- STA 517+00  
SEE SHEET NO.15

MATCH LINE -L- STA 530+50  
SEE SHEET NO.17

### SITE 23

-L- POTSta. 523+98.40 LB =  
-NBL2- PCSta. 523+98.40 (42' RT) LA

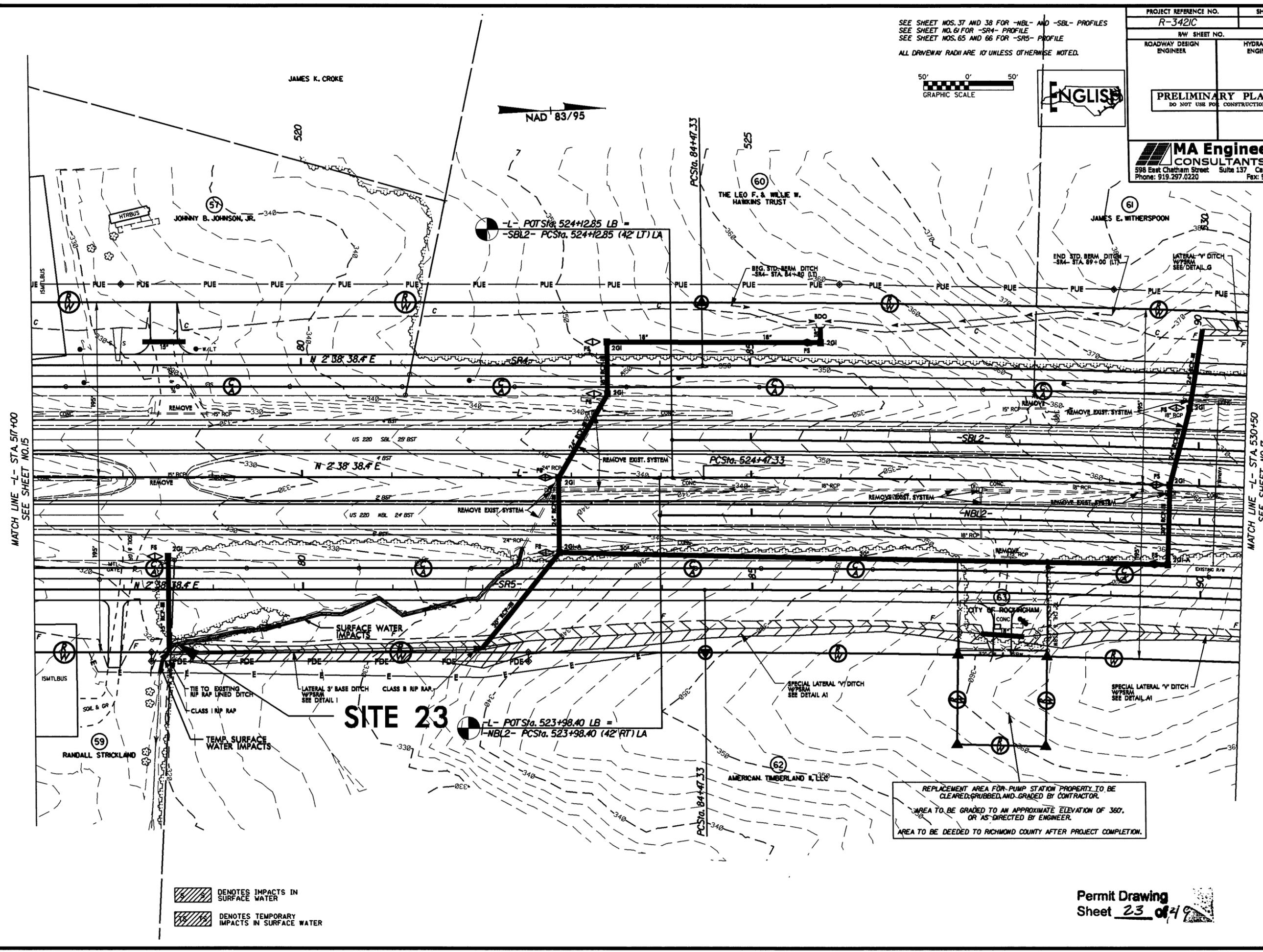
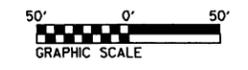
REPLACEMENT AREA FOR PUMP STATION PROPERTY TO BE  
CLEARED, GRUBBED, AND GRADED BY CONTRACTOR.  
AREA TO BE GRADED TO AN APPROXIMATE ELEVATION OF 360,  
OR AS DIRECTED BY ENGINEER.  
AREA TO BE DEEDED TO RICHMOND COUNTY AFTER PROJECT COMPLETION.

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

Permit Drawing  
Sheet 22 of 49

PROJECT REFERENCE NO. R-3421C		SHEET NO. 16	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			
<b>MA Engineering CONSULTANTS, INC.</b> 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221			

SEE SHEET NOS. 37 AND 38 FOR -NBL- AND -SBL- PROFILES  
SEE SHEET NO. 61 FOR -SR4- PROFILE  
SEE SHEET NOS. 65 AND 66 FOR -SR5- PROFILE  
ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.



MATCH LINE -L- STA. 517+00  
SEE SHEET NO. 15

MATCH LINE -L- STA. 530+50  
SEE SHEET NO. 17

REPLACEMENT AREA FOR PUMP STATION PROPERTY TO BE  
CLEARED, GRUBBED, AND GRADED BY CONTRACTOR.  
AREA TO BE GRADED TO AN APPROXIMATE ELEVATION OF 360',  
OR AS DIRECTED BY ENGINEER.  
AREA TO BE DEEDED TO RICHMOND COUNTY AFTER PROJECT COMPLETION.

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

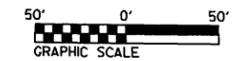
Permit Drawing  
Sheet 23 of 29





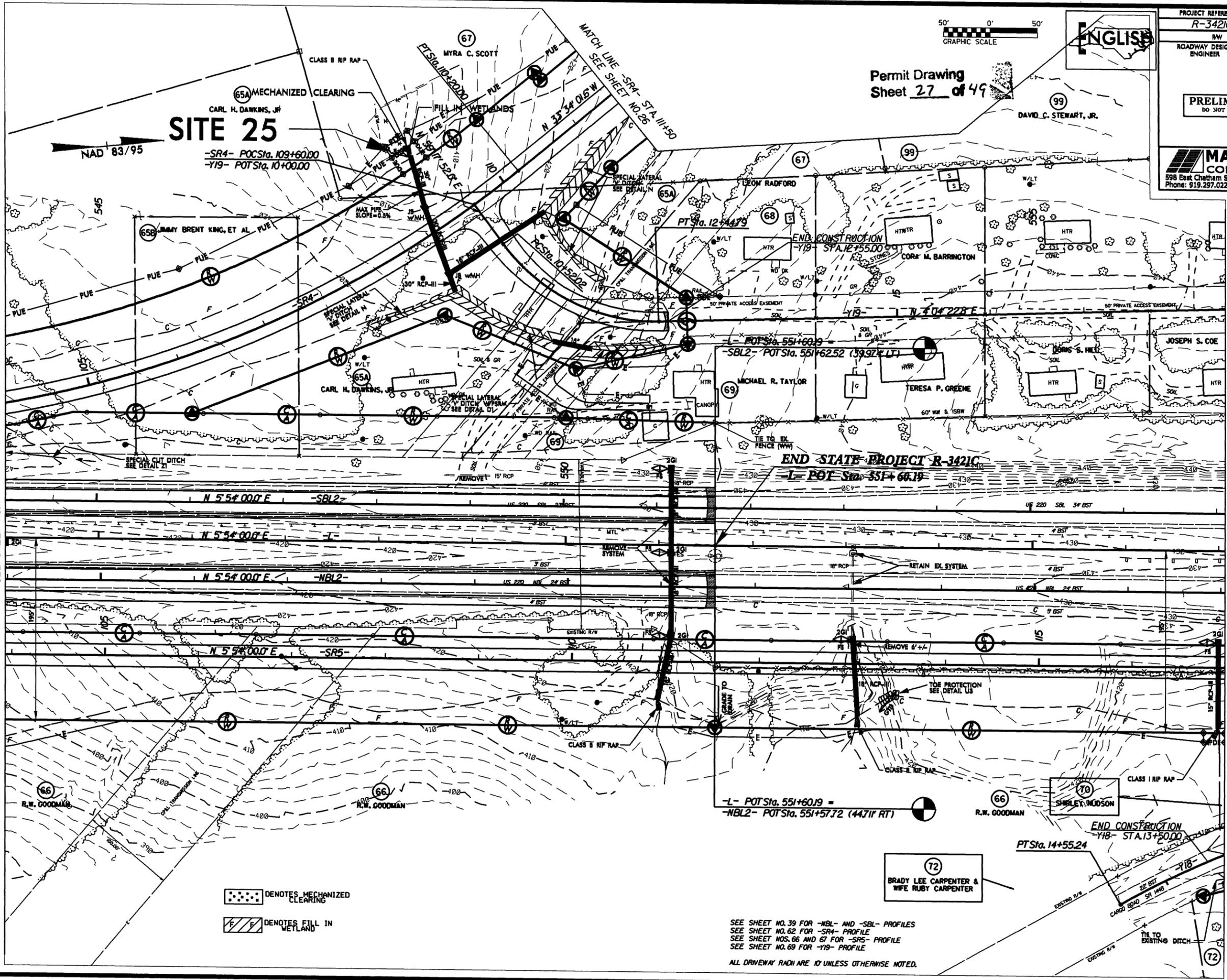


PROJECT REFERENCE NO. R-3421C		SHEET NO. 18	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		DAVID C. STEWART, JR.	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
 <b>MA Engineering</b> CONSULTANTS, INC. 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221			



**ENGLISH**

Permit Drawing  
Sheet 27 of 49



NAD 83/95

**SITE 25**  
CARL H. DANKINS, JR.  
-SR4- POC Sta. 109+60.00  
-Y19- POT Sta. 10+00.00

**END STATE PROJECT R-3421C**  
-L- POT Sta. 551+60.19

-L- POT Sta. 551+60.19 =  
-NBL2- POT Sta. 551+57.72 (44.71' RT)

END CONSTRUCTION  
-Y18- STA. 13+50.00

-  DENOTES MECHANIZED CLEARING
-  DENOTES FILL IN WETLAND

SEE SHEET NO. 39 FOR -NBL- AND -SBL- PROFILES  
SEE SHEET NO. 62 FOR -SR4- PROFILE  
SEE SHEET NOS. 66 AND 67 FOR -SRS- PROFILE  
SEE SHEET NO. 69 FOR -Y19- PROFILE

ALL DRIVEWAY RADII ARE 10 UNLESS OTHERWISE NOTED.

REVISIONS

MATCH LINE -L- STA. 544+00  
SEE SHEET NO. 17

MATCH LINE -SR5- STA. 117+00  
SEE SHEET NO. 19

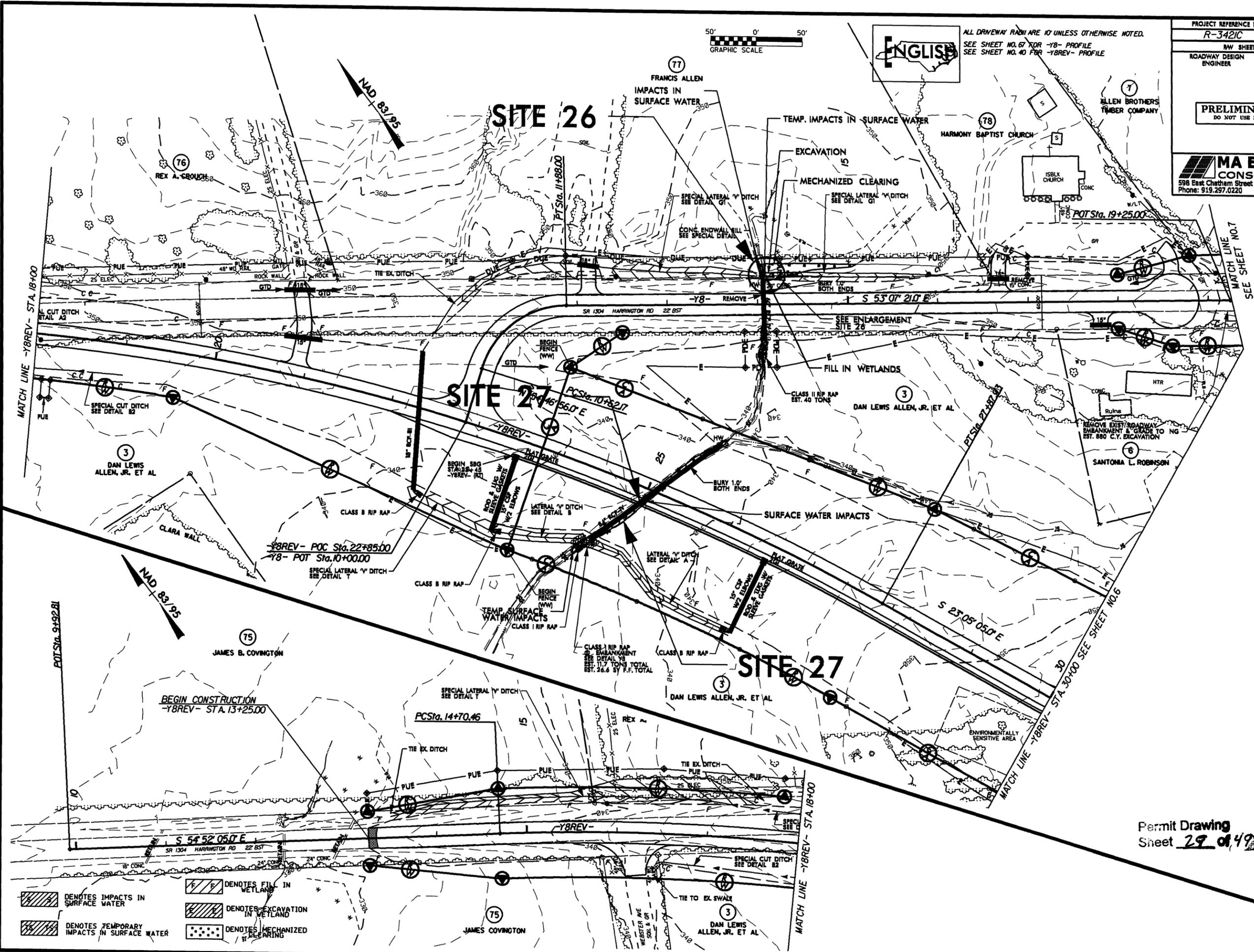
\*\*\*\*\*  
SYSTEMS  
\*\*\*\*\*





ALL DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED.  
 SEE SHEET NO. 67 FOR -Y8- PROFILE  
 SEE SHEET NO. 40 FOR -Y8REV- PROFILE

PROJECT REFERENCE NO. <b>R-3421C</b>	SHEET NO. <b>20</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>MA Engineering</b> CONSULTANTS, INC. 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221	



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

Permit Drawing  
 Sheet **29 of 49**

REVISIONS

SYSTEMS: CONDUIT, CABLE, AND TELEPHONE LINES ARE SHOWN AS DASHED LINES WITH CIRCLES AT CROSSINGS. SEE SHEET NO. 19 FOR DETAILS.



-DRI-  
 PI Sta 12+67.53  
 $\Delta = 3^{\circ} 33' 58.9" (RT)$   
 $D = 11^{\circ} 27' 33.0"$   
 $L = 311.2'$   
 $T = 15.57'$   
 $R = 500.00'$

PI Sta 11+65.10  
 $\Delta = 46^{\circ} 32' 19.6" (RT)$   
 $D = 11^{\circ} 35' 29.6"$   
 $L = 40.6'$   
 $T = 21.50'$   
 $R = 50.00'$

PI Sta 10+67.69  
 $\Delta = 70^{\circ} 52' 21.4" (LT)$   
 $D = 190^{\circ} 59' 09.4"$   
 $L = 37.1'$   
 $T = 21.35'$   
 $R = 30.00'$

# SITE 28

# SITE 29

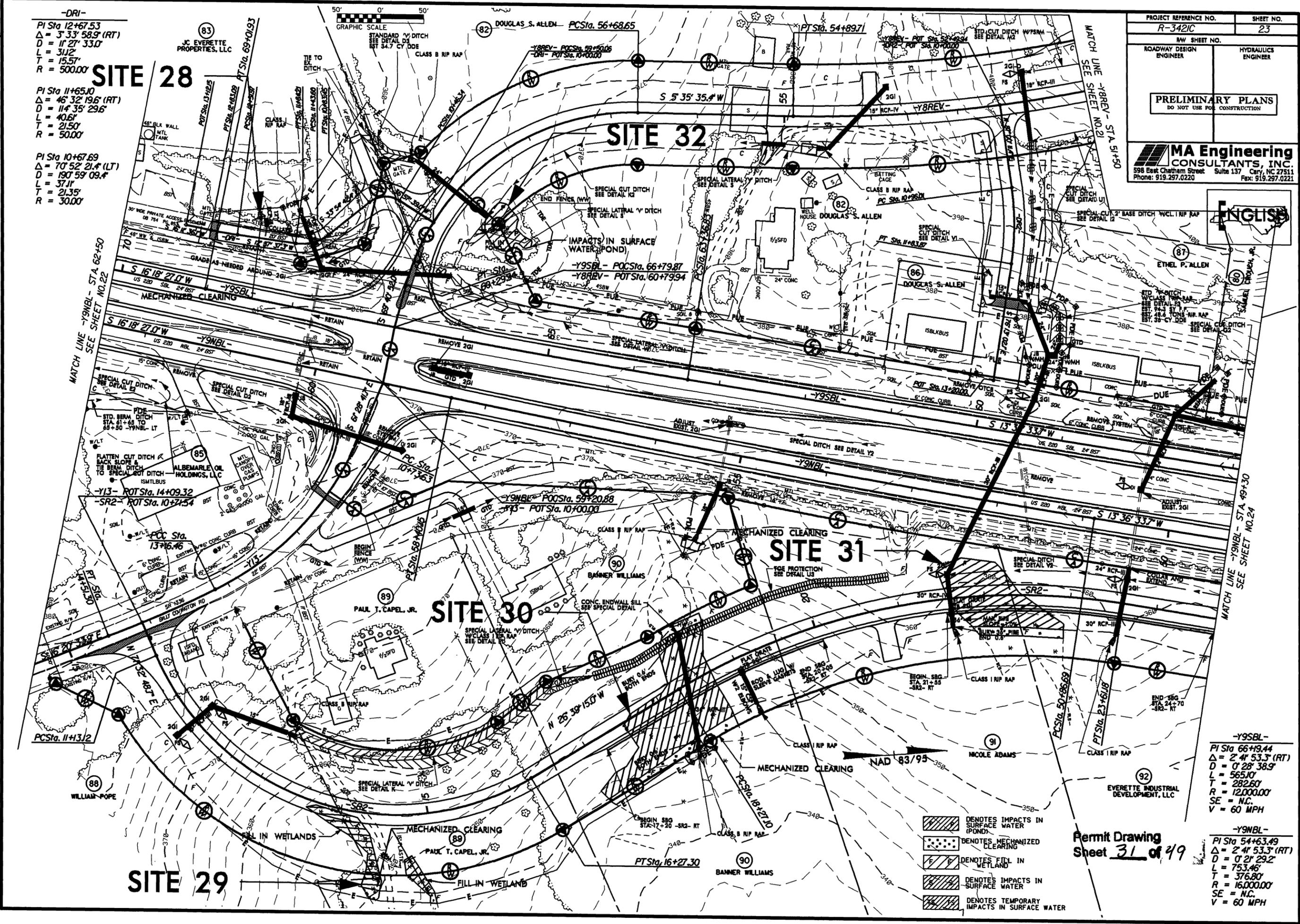
# SITE 30

# SITE 32

# SITE 31

PROJECT REFERENCE NO. <b>R-3421C</b>	SHEET NO. <b>23</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>MA Engineering</b> CONSULTANTS, INC. 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221	

ENGLISH



- DENOTES IMPACTS IN SURFACE WATER (POND)
- DENOTES MECHANIZED CLEARING
- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

-Y9SBL-  
 PI Sta 66+19.44  
 $\Delta = 2^{\circ} 4' 53.3" (RT)$   
 $D = 0^{\circ} 28' 38.9"$   
 $L = 565.10'$   
 $T = 282.60'$   
 $R = 12,000.00'$   
 SE = N.C.  
 $V = 60 \text{ MPH}$

-Y9NBL-  
 PI Sta 54+63.49  
 $\Delta = 2^{\circ} 4' 53.3" (RT)$   
 $D = 0^{\circ} 2' 29.2"$   
 $L = 753.46'$   
 $T = 376.80'$   
 $R = 16,000.00'$   
 SE = N.C.  
 $V = 60 \text{ MPH}$

Permit Drawing  
 Sheet 31 of 49

REVISIONS

\*\*\*\*\* SYSTEM TIME \*\*\*\*\*  
 \*\*\*\*\* DATE \*\*\*\*\*  
 \*\*\*\*\* USER \*\*\*\*\*

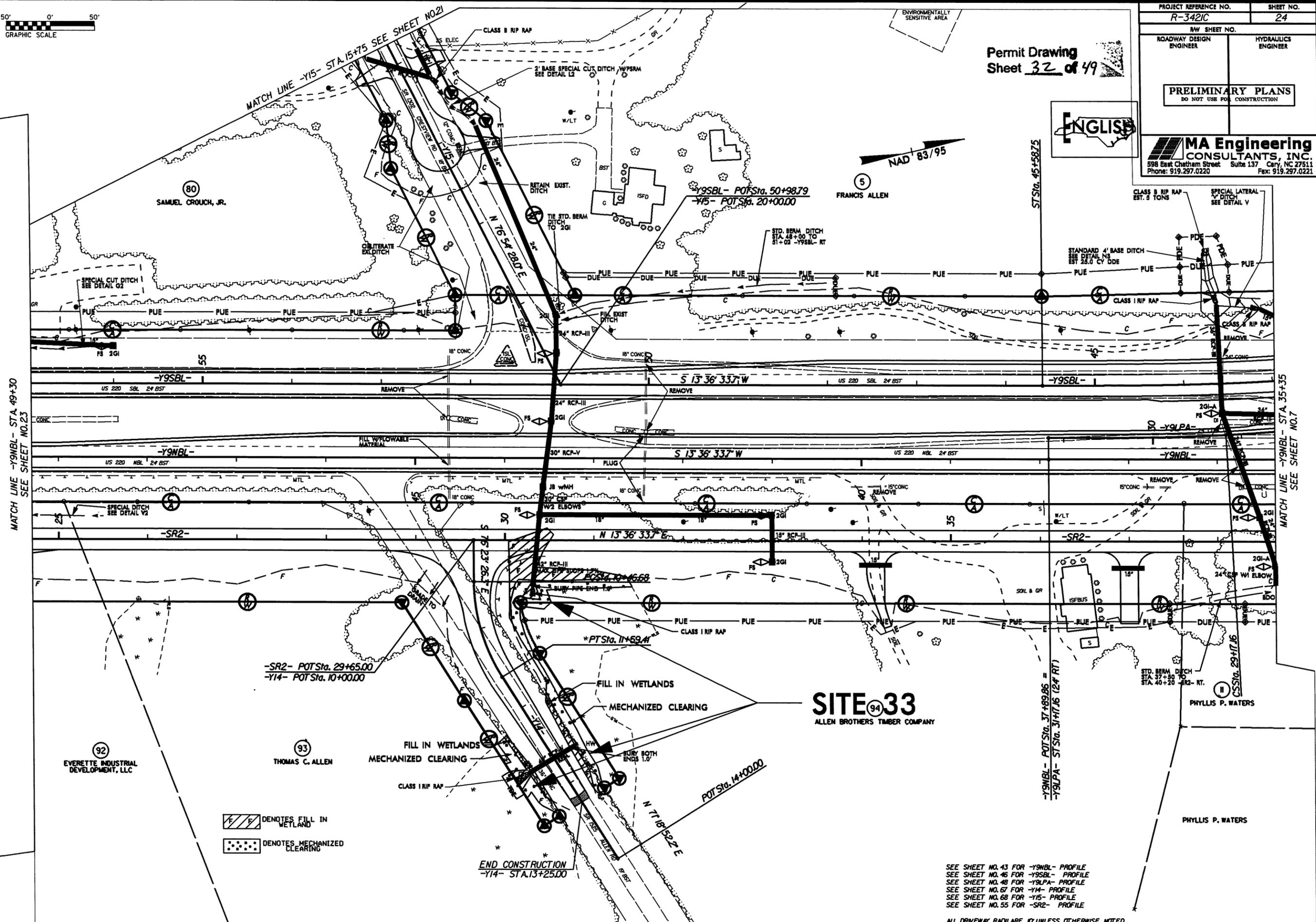


Permit Drawing  
Sheet 32 of 49

PROJECT REFERENCE NO. R-3421C	SHEET NO. 24
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	CONSTRUCTION

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

**MA Engineering CONSULTANTS, INC.**  
598 East Chatham Street Suite 137 Cary, NC 27511  
Phone: 919.297.0220 Fax: 919.297.0221



REVISIONS

MATCH LINE -Y9NBL- STA. 49+30  
SEE SHEET NO. 23

MATCH LINE -Y9NBL- STA. 35+35  
SEE SHEET NO. 7

DENOTES FILL IN WETLAND  
 DENOTES MECHANIZED CLEARING

END CONSTRUCTION  
-Y14- STA. 13+25.00

**SITE 94 33**  
ALLEN BROTHERS TIMBER COMPANY

SEE SHEET NO. 43 FOR -Y9NBL- PROFILE  
SEE SHEET NO. 46 FOR -Y9SBL- PROFILE  
SEE SHEET NO. 48 FOR -Y9LPA- PROFILE  
SEE SHEET NO. 67 FOR -Y14- PROFILE  
SEE SHEET NO. 68 FOR -Y15- PROFILE  
SEE SHEET NO. 55 FOR -SR2- PROFILE

ALL DRIVEWAY RADII ARE 10 UNLESS OTHERWISE NOTED.

\*\*\*\*\*  
SYSTEMTIME: 2008/08/20 10:00:00  
USER: JAMES.M.  
\*\*\*\*\*



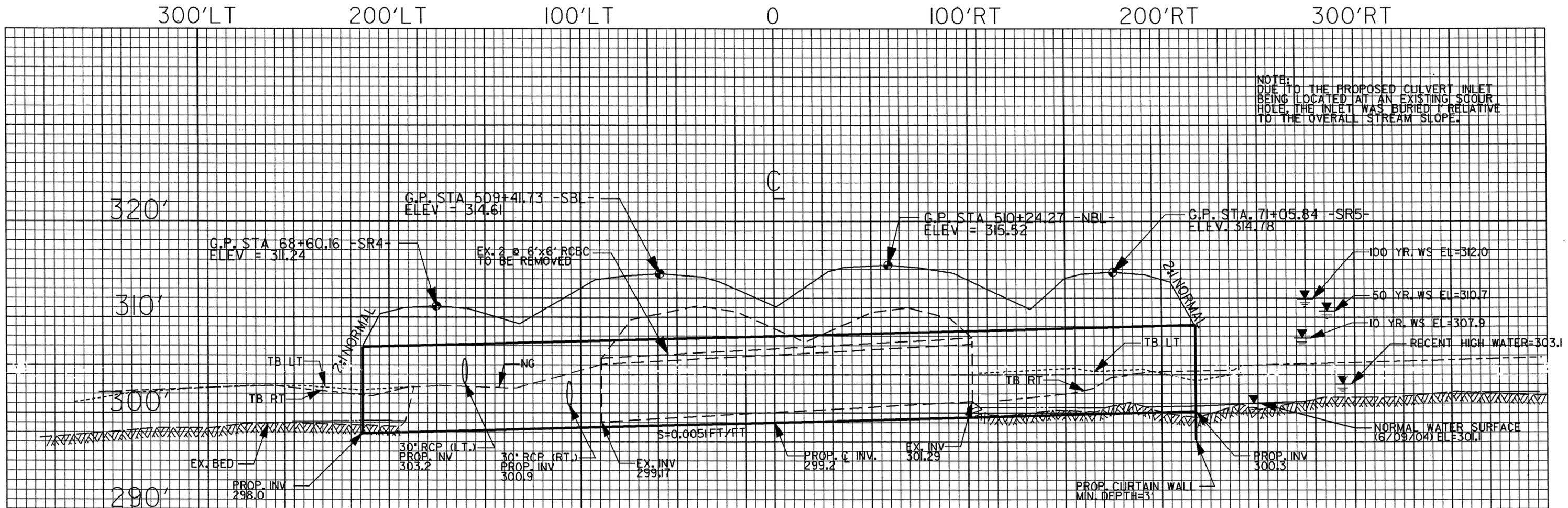




# PROFILE ALONG CULVERT

-L- STA. 509+83  
 PROP. 2 @ 9'X9' RCBC  
 SKEW: 45.5°

Permit Drawing  
 Sheet 36 of 49



NOTE:  
 DUE TO THE PROPOSED CULVERT INLET  
 BEING LOCATED AT AN EXISTING SCOUR  
 HOLE, THE INLET WAS BURIED 1' RELATIVE  
 TO THE OVERALL STREAM SLOPE.

SCALES: 1"=50' HORZ  
 1"=10' VERT

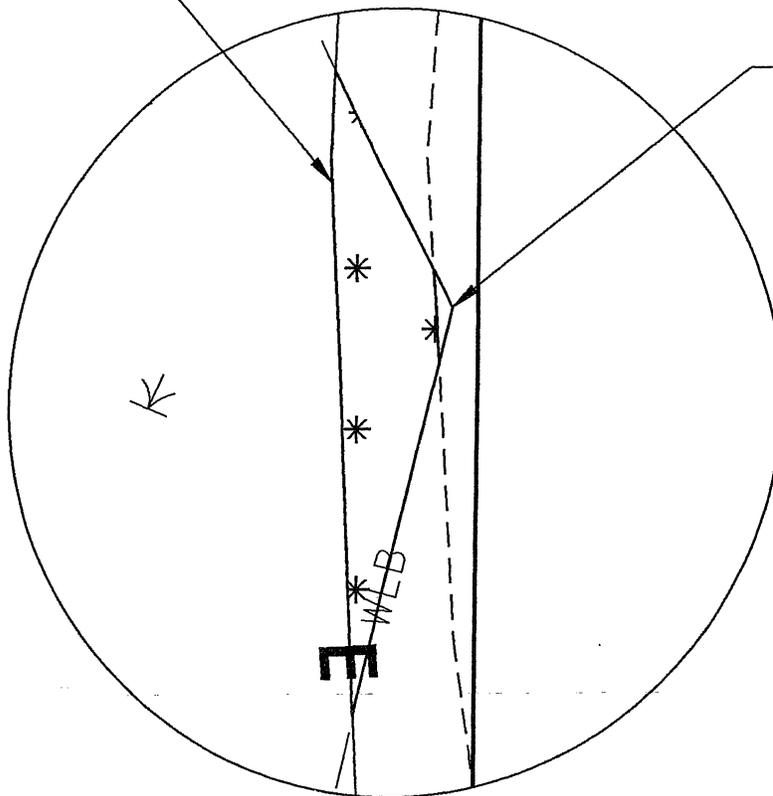




# ENLARGEMENT SITE 4

MECHANIZED  
CLEARING

FILL IN WETLANDS



Permit Drawing  
Sheet 39 of 49

20' 0' 20'



GRAPHIC SCALE

**NCDOT**

**DIVISION OF HIGHWAYS  
RICHMOND COUNTY**

**PROJECT: 34542.1.2 (R-3421C)**

**US220 BYPASS FROM 0.2 MILES SW OF  
SR1304 TO US220BUS / US220 BYPASS  
INTERCHANGE SOUTH OF ELLERBE**

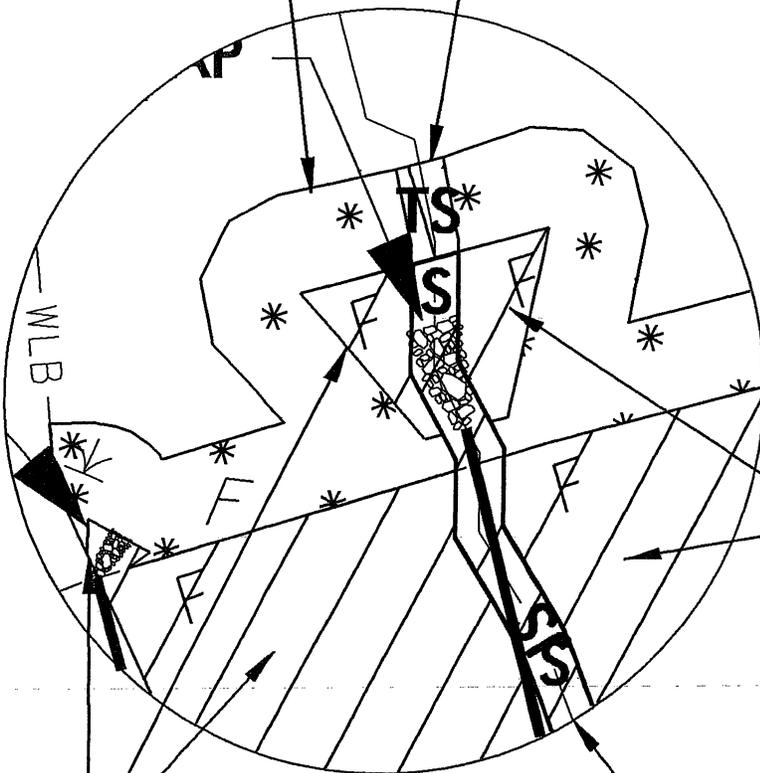
**SHEET OF**

**04/21/11**

# ENLARGEMENT SITE 5

MECHANIZED CLEARING

TEMP. SURFACE  
WATER IMPACTS



FILL IN  
WETLANDS

FILL IN  
WETLANDS

SURFACE WATER  
IMPACTS

Permit Drawing  
Sheet 40 of 49

20' 0' 20'



GRAPHIC SCALE

**NCDOT**

**DIVISION OF HIGHWAYS  
RICHMOND COUNTY**

**PROJECT: 34542.1.2 (R-3421C)**

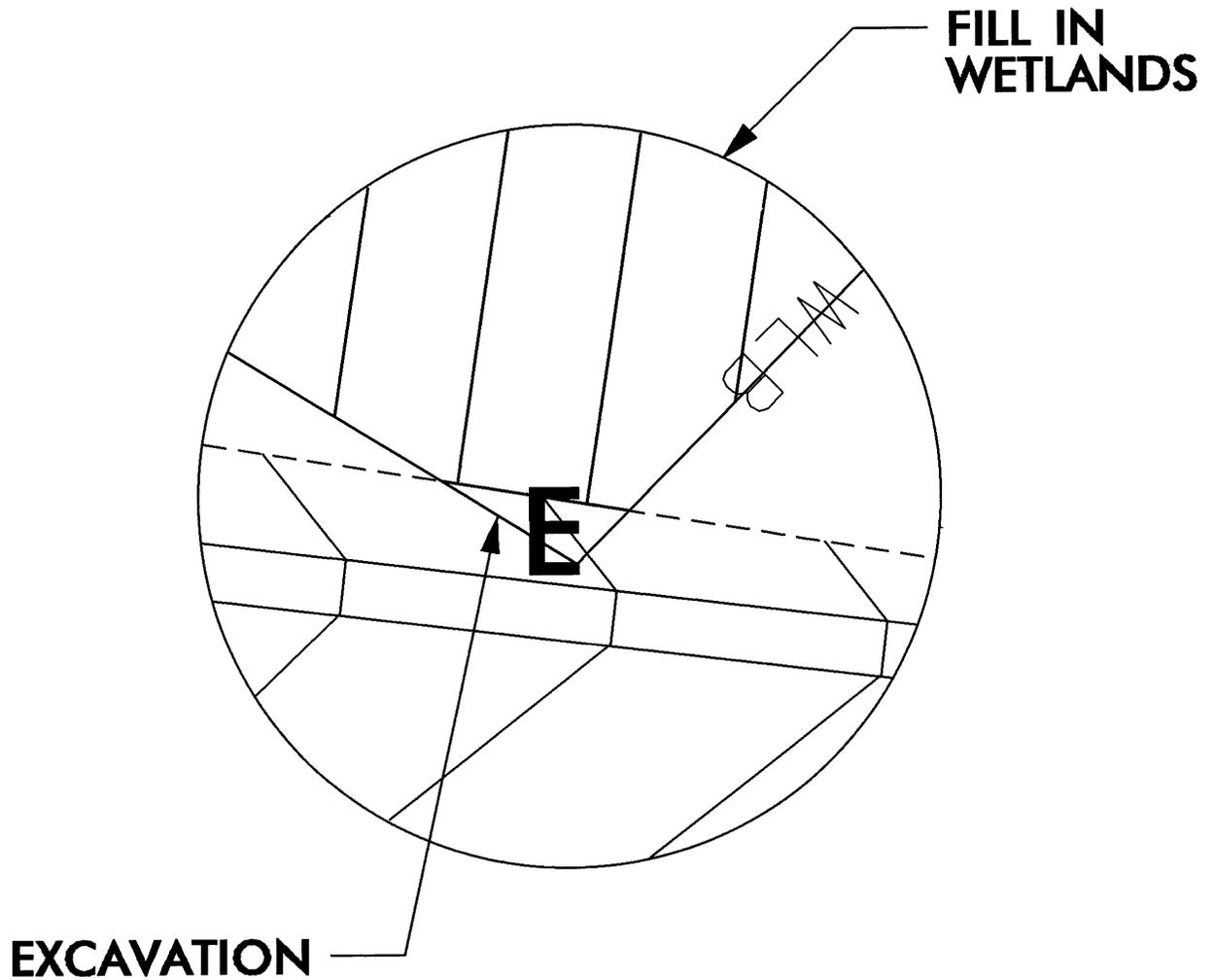
**US220 BYPASS FROM 0.2 MILES SW OF  
SR1304 TO US220BUS/US220 BYPASS  
INTERCHANGE SOUTH OF ELLERBE**

**SHEET OF**

**04/21/11**



# ENLARGEMENT SITE 7



Permit Drawing  
Sheet 42 of 49



GRAPHIC SCALE

**NCDOT**

**DIVISION OF HIGHWAYS**

**RICHMOND COUNTY**

**PROJECT: 34542.1.2 (R-3421C)**

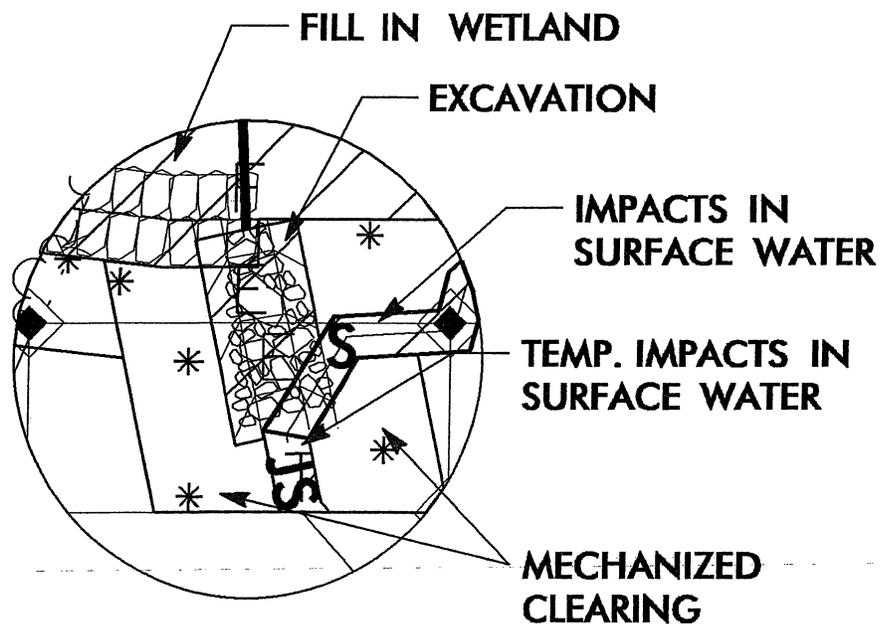
**US220 BYPASS FROM 0.2 MILES SW OF  
SR1304 TO US220BUS/US220 BYPASS  
INTERCHANGE SOUTH OF ELLERBE**

**SHEET**

**OF**

**4/21/11**

# ENLARGEMENT SITE 9A



Permit Drawing  
Sheet 43 of 49

PLAN VIEW

20' 0' 20'



GRAPHIC SCALE

**NCDOT**

DIVISION OF HIGHWAYS  
RICHMOND COUNTY

PROJECT: 34542.1.2 (R-3421C)

US220 BYPASS FROM 0.2 MILES SW OF  
SR1304 TO US220BUS/US220 BYPASS  
INTERCHANGE SOUTH OF ELLERBE

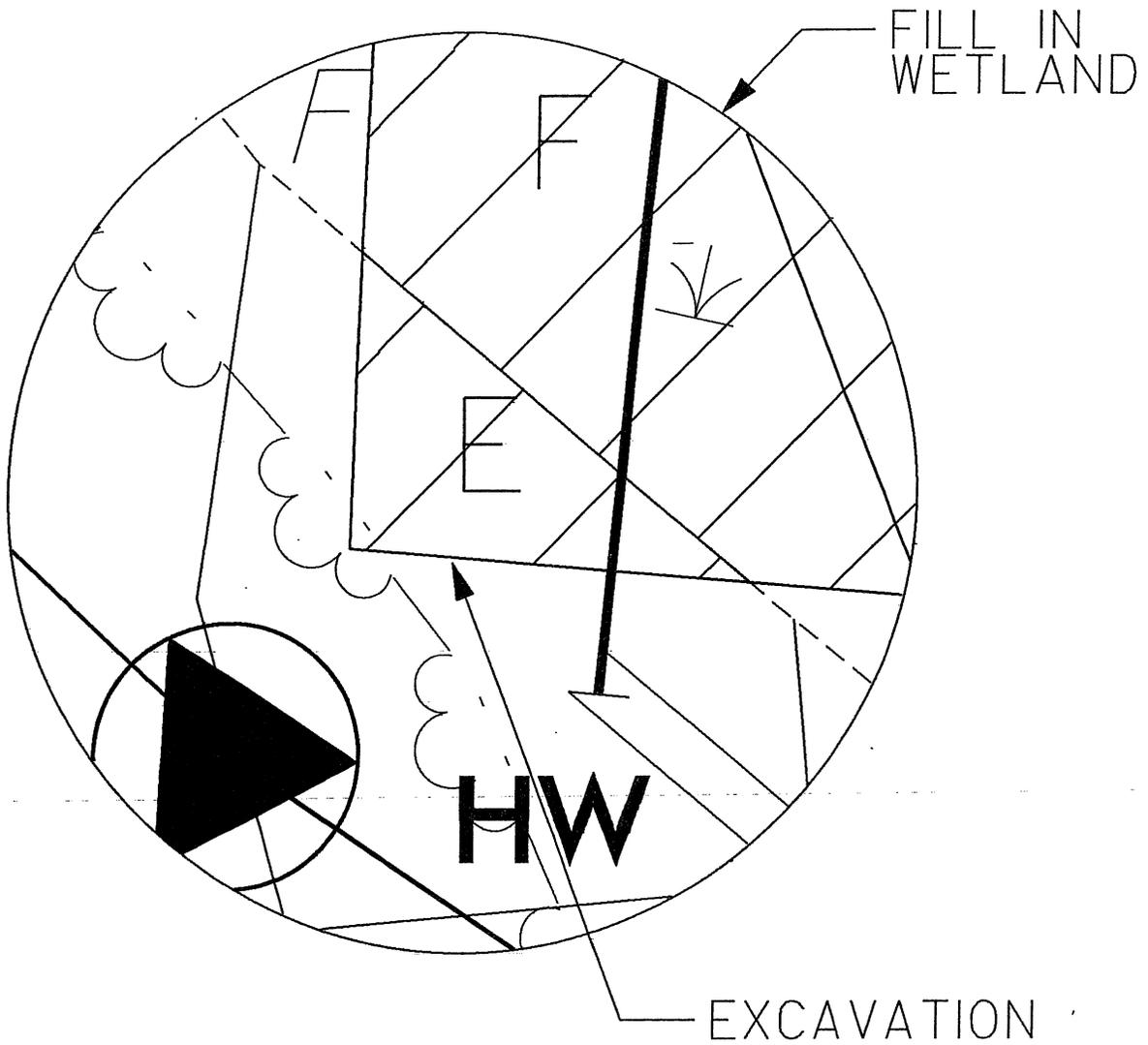
SHEET

OF

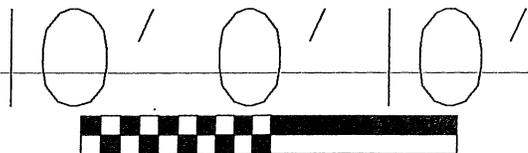
04 / 21 / 11



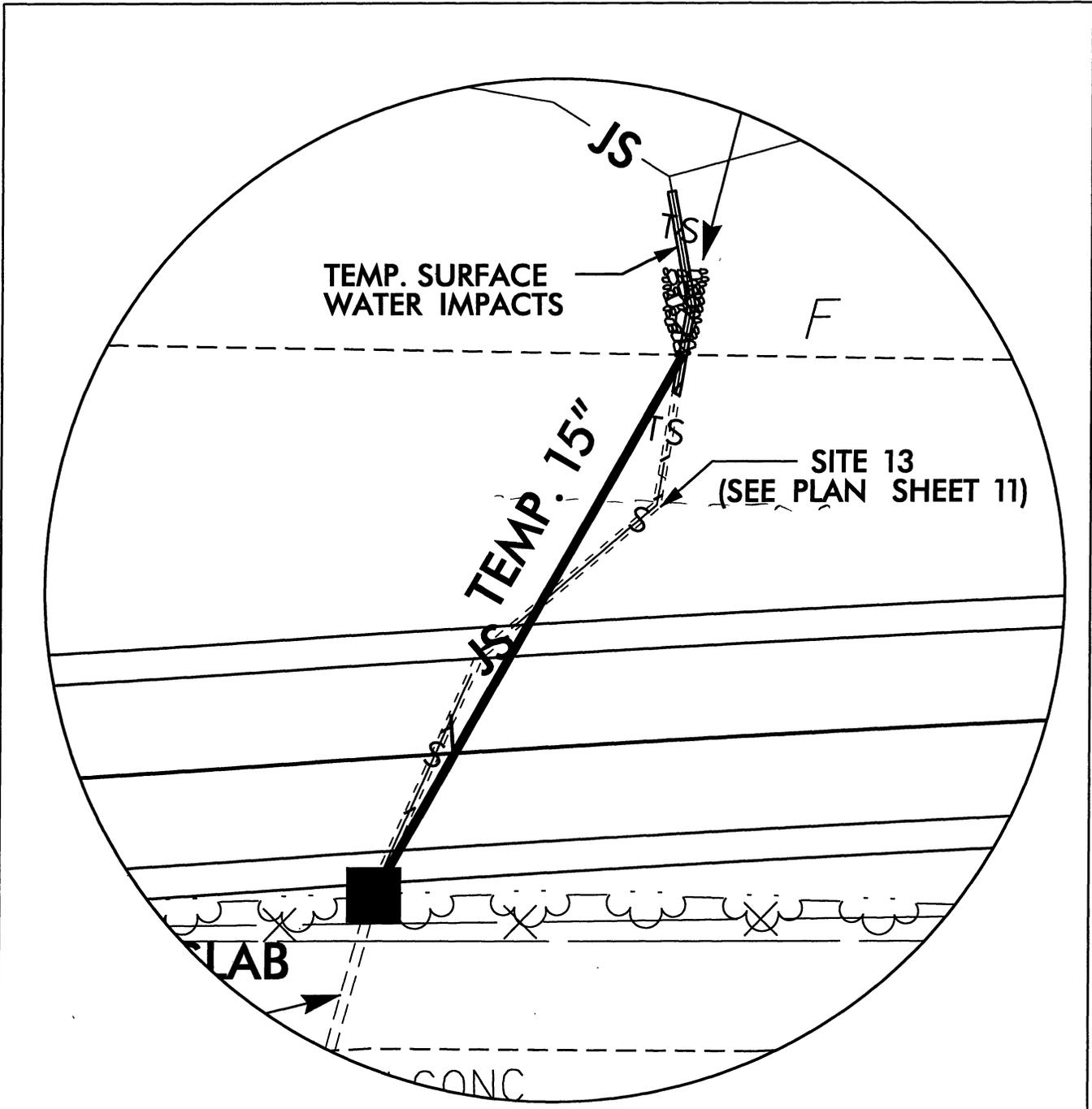
# ENLARGEMENT SITE 12



Permit Drawing  
Sheet 45 of 49

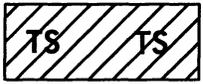


**NCDOT**  
DIVISION OF HIGHWAYS  
RICHMOND COUNTY  
PROJECT: 34542.1.1 (R-3421C)  
US220 BYPASS FROM 0.2 MILES SW OF  
SR1304 TO US220BUS/US220 BYPASS  
INTERCHANGE SOUTH OF ELLERBE  
SHEET OF 04/21/11

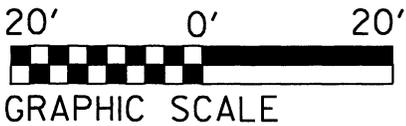


**SITE 13A ENLARGMENT**

Permit Drawing  
 Sheet 45A of 49  
 Revised 8/28/2012

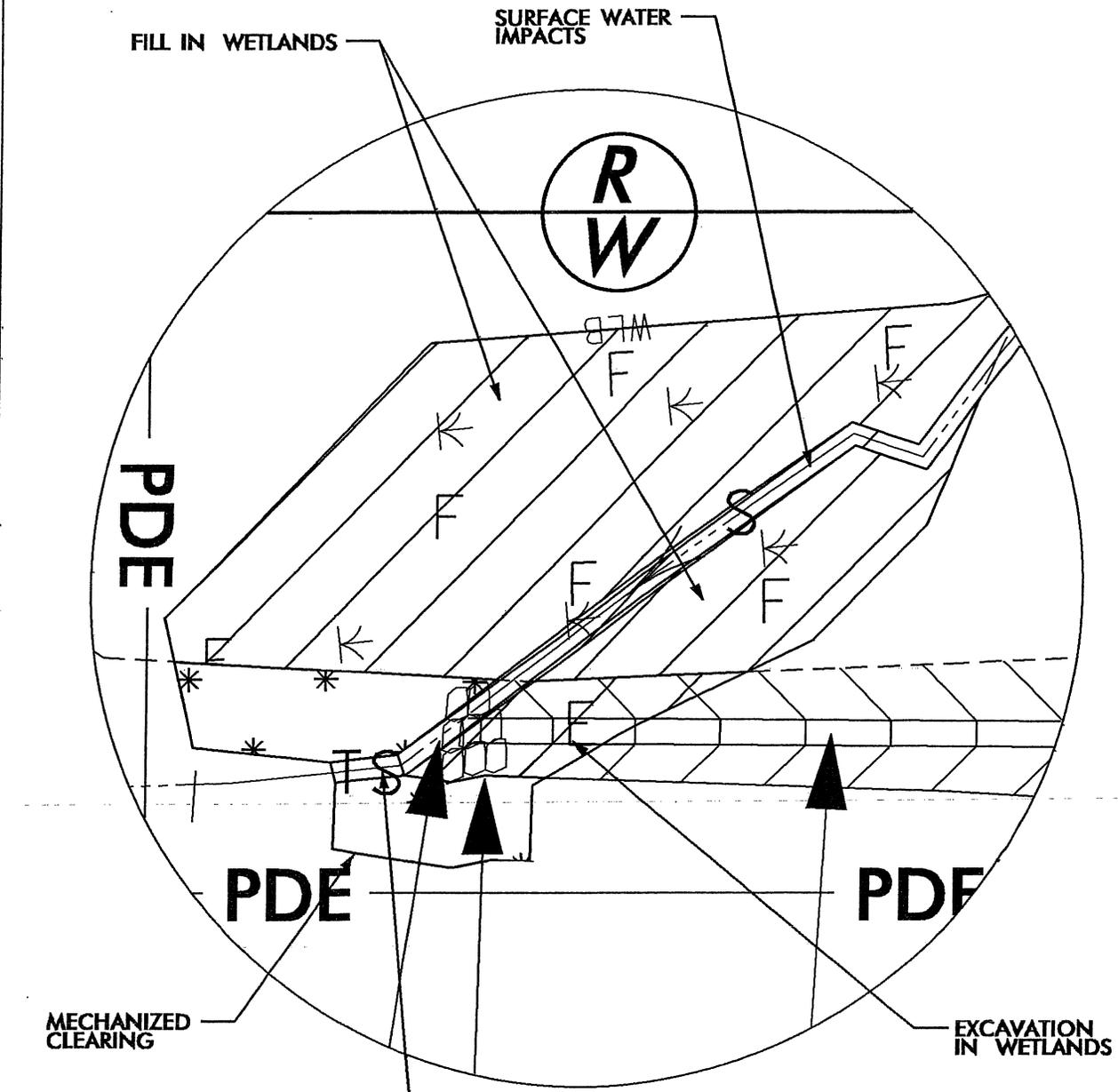


DENOTES TEMPORARY  
 IMPACTS IN SURFACE WATER

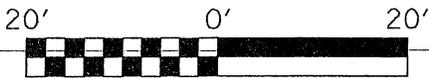


**NCDOT**  
 DIVISION OF HIGHWAYS  
 RICHMOND COUNTY  
 PROJECT: 34542.1.2 (R-3421C)  
 US 220 BYPASS FROM 0.2 MILES SW OF  
 SR 1304 TO US 220 BUS/US 220 BYPASS  
 INTERCHANGE SOUTH OF ELLERBE  
 SHEET OF 08/09/12

# ENLARGEMENT SITE 24

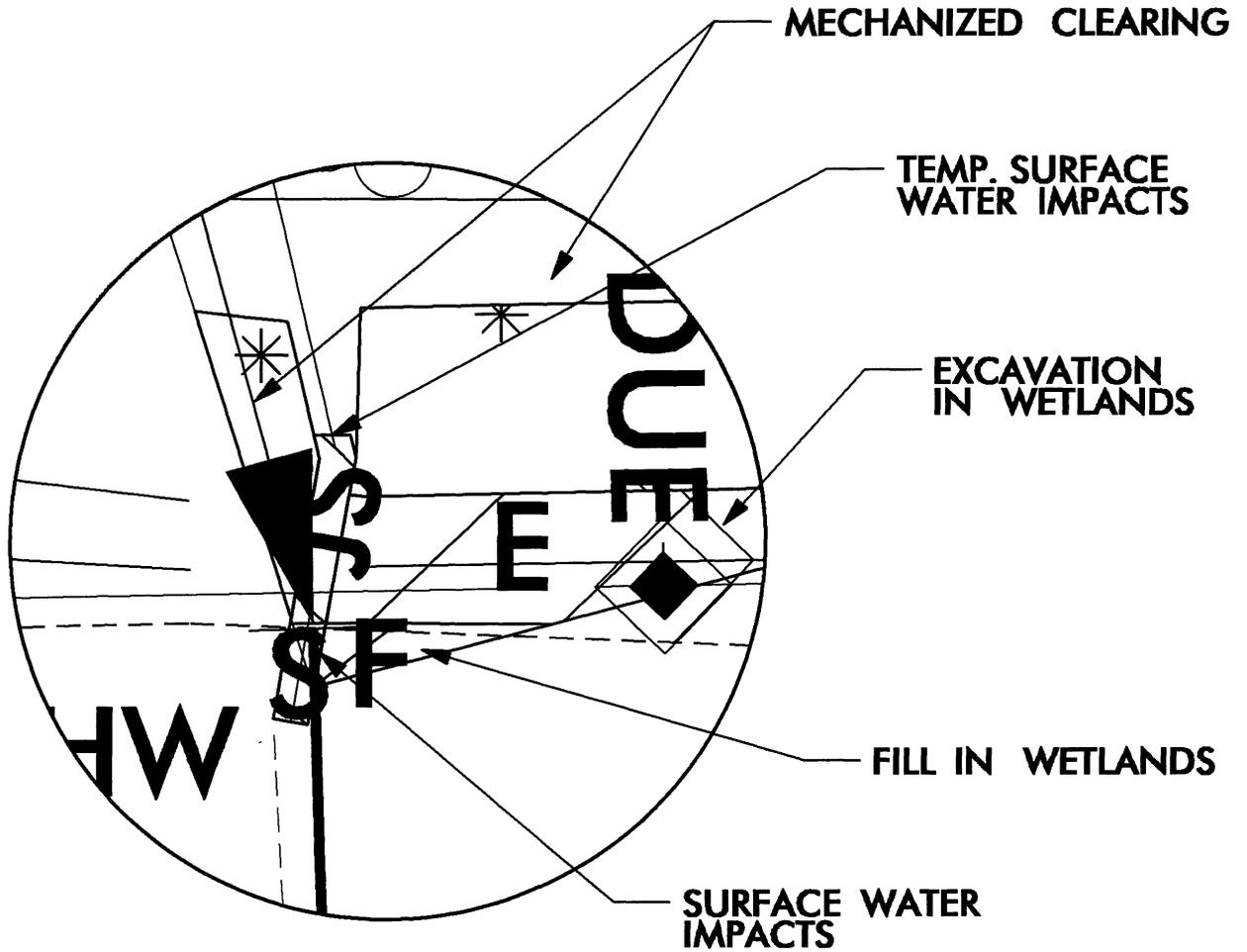


Permit Drawing  
Sheet 46 of 49

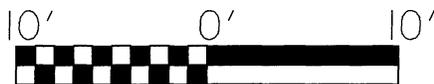


**NCDOT**  
 DIVISION OF HIGHWAYS  
 RICHMOND COUNTY  
 PROJECT: 34542.1.1 (R-3421C)  
 US220 BYPASS FROM 0.2 MILES SW OF  
 SR1304 TO US220BUS / US220 BYPASS  
 INTERCHANGE SOUTH OF ELLERBE  
 SHEET OF 4 / 21 / 11

# ENLARGEMENT SITE 26



Permit Drawing  
Sheet 47 of 49



**NCDOT**

DIVISION OF HIGHWAYS

RICHMOND COUNTY

PROJECT: 34542.1.1 (R-3421C)

US220 BYPASS FROM 0.2 MILES SW OF  
SR 1304 TO US220BUS/US220 BYPASS  
INTERCHANGE SOUTH OF ELLERBE

SHEET

OF

04/21/11

**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- 354+45		0.03			0.05										
2	-L- 355+25 (LT)		0.16			0.04										
3	-L- 373+40 (LT)		0.17			0.02										
4	-L- 376+50		0.69			0.10										
5	-L- 383+50		1.30		0.01	0.14					0.03	<0.01		278	20	
6	-L- 385+50 (LT)				<0.01	0.01										
7	-L- 398+50		2.58		<0.01	0.08										
8	-L- 435+00 (LT)		0.19		0.07	0.05					0.12	<0.01		629	10	
9	-L- 435+00 (RT)		0.59		0.01	0.07					0.05	<0.01		463	20	
10	-L- 451+00 (RT)		0.83			0.09										
11	-Y10LPD- 11+00 (RT)	POND									0.35					
12	-SR5- 23+00		0.16		<0.01						<0.01	<0.01		40	10	
12	-SR5- 23+00	POND									0.03					
13	-L- 462+70 (LT)			0.00							<0.01	<0.01		205	20	
13A	-L- 462+70 (LT)	TEMP. DETOUR										<0.01			27	
14	-Y10RPD- 14+00										0.07	<0.01		538	10	
15	-SR4- 28+00	POND	0.10								1.24					
16	-Y10RPD- 8+00	POND									0.99					
16	-Y10RPD- 8+00				0.02	0.01					<0.01			61		
17a	-L- 473+00 LT	Intermittant									0.02	<0.01		381	10	
17b	-L- 473+00 LT	Perennial									0.03	<0.01		606	10	
18	-L- 485+50										0.02	<0.01		208	17	
18	-L- 484+90 RT	Bank Stabilization									<0.01	<0.01		10		
19	-L- 489+40										0.01	<0.01		199	22	
<b>SUBTOTAL SHEET 1:</b>			<b>6.80</b>		<b>0.11</b>	<b>0.65</b>					<b>2.96</b>	<b>0.01</b>		<b>3618</b>	<b>176</b>	

Site 11, 15, & 16 are non-mitigable pond impacts. Site 15 includes 0.10ac of non-mitigable fringe wetlands bordering pond.

Site 12 includes 0.0309ac of non-mitigable surface water impacts for pond impacts, and 0.0048ac of other mitigable surface water impacts for stream impacts.

Site 17b includes 428ft. non-mitigable impacts to an existing concrete lined ditch.

**Permit Drawing**  
**Sheet 48 of 49**  
**Revised 8/28/2012**

**N.C.D.O.T.**

DIVISION OF HIGHWAYS  
 RICHMOND COUNTY

PROJECT: 34542.1.2 (R-3421C)  
 US 220 BYPASS FROM 0.2 MILES SW OF  
 SR1304 TO US220BUS/US220 BYPASS  
 INTERCHANGE SOUTH OF ELLERBE

SHEET OF 8/16/2012

