



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

October 8, 2014

U. S. Army Corps of Engineers  
Regulatory Field Office  
3331 Heritage Trade Drive, Suite 105  
Wake Forest, NC 27587

ATTN: Mr. Dave Bailey  
NCDOT Coordinator

SUBJECT: **Request for Modification to the Section 404 Individual Permit and Section 401 Water Quality Certification** for the proposed Greensboro Eastern Loop from US 70 Relocation to SR 2303 (Lawndale Drive), Guilford County, Division 7. WBS Element No. 34821.1.1, TIP Nos. U-2525B and U-2525C.

REFERENCE: USACE Individual Permit Action ID SAW-2005-21386, dated April 15, 2014.  
NCDWR Project No. 20130918, Certification No. 3978, dated February 6, 2014.  
NCDWR Project No. 20130918\_v2, Modification to Certification No. 3978, dated June 24, 2014.

Dear Sir:

The purpose of this letter is to request a modification to the United States Army Corps of Engineers (USACE) Individual Permit and North Carolina Division of Water Resources Certification for the above referenced project. The requested modification is to account for additional permanent stream and wetland impacts associated with Whiterock Road and Sanctuary Drive intersection. Also please find attached the revised and new permit drawing sheets, revised plan sheet 39, and revised NCEEP acceptance letter.

The area of new impacts (Permit Site 36) was overlooked during the water resources reverification prior to the original permit application submittal. The stream impacts for Permit Site 36 include 101 linear feet of permanent fill, 10 linear feet of bank stabilization, and 21 linear feet of temporary fill (Table 2). The wetland impacts for Permit Site 36 include 0.004 acres of permanent fill (shown as <0.01 acres in Table 3 below). Please replace the current permit drawings with the new revised drawings (Revised Permit Drawing Sheets 1 and 93 of 93) and current plan sheet 39 with the revised version and insert the new Permit Drawing Sheets 86A and 86B of 93, all attached with this letter.

MAILING ADDRESS:  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1548

TELEPHONE: 919-707-6000  
FAX: 919-212-5785  
WEBSITE: NCDOT.GOV

LOCATION:  
CENTURY CENTER, BUILDING B  
1020 BIRCH RIDGE DRIVE  
RALEIGH NC 27610

**Table 1. Revised U-2525B Stream Impacts (Final)**

Permit Site No.	Stream Name/JD Packet ID	I/P Flow Status	Impact Type	Permanent Impacts (ft)	Impacts requiring USACE mitigation (ft)	USACE Mitigation Ratio <sup>1</sup>	Impacts requiring NCDWR mitigation (ft)	Temp Impacts (ft)
1	UT to South Buffalo Creek/SAF	P	Fill	1352	1352	2:1	1352	0
		I	Fill	332	332	1:1	0 <sup>3</sup>	0
4	UT to South Buffalo Creek/SAE	P	Fill	394	394	2:1	394	153
			BS	98	0 <sup>2</sup>	n/a	98	0
5	UT to South Buffalo Creek/SAD	P	Fill	1598	1598	2:1	1598	20
6	UT to South Buffalo Creek/SAG	I	Fill	138	138	1:1	0 <sup>3</sup>	10
9	UT to North Buffalo Creek/SAA	P	Fill	462	462	1:1	462	10
9A	UT to North Buffalo Creek/SAJ	I	Fill	84	84	1:1	0 <sup>3</sup>	0
10	UT to North Buffalo Creek/SZ	P	Fill	212	212	2:1	212	29
			BS	97	0 <sup>2</sup>	n/a	97	0
11	UT to North Buffalo Creek/SY	P	BS	18	0 <sup>2</sup>	n/a	0 <sup>4</sup>	0
12	UT to North Buffalo Creek/SX	P	Fill	286	286	2:1	286	22
			BS	30	0 <sup>2</sup>	n/a	30	0
13	UT to North Buffalo Creek/SW	P	Fill	137	137	2:1	0 <sup>4</sup>	7
			BS	10	0 <sup>2</sup>	n/a	0 <sup>4</sup>	0
		I	Fill	32	0 <sup>5</sup>	n/a	0 <sup>3</sup>	0
14	UT to North Buffalo Creek/SV	I	Fill	347	347	1:1	0 <sup>3</sup>	35
			BS	10	0 <sup>2</sup>	n/a	10	0
15	UT to North Buffalo Creek/SU	P	Fill	292	292	2:1	292	26
			BS	20	0 <sup>2</sup>	n/a	20	0
16	UT to North Buffalo Creek/SS	P	Fill	382	382	1:1	382	43
			BS	12	0 <sup>2</sup>	n/a	12	0
17	UT to North Buffalo Creek/SR	I	Fill	51	51	1:1	0 <sup>3</sup>	20
18	UT to North Buffalo Creek/SQ	P	Fill	241	241	2:1	241	20
			BS	30	0 <sup>2</sup>	n/a	30	0

**Table 1. Revised U-2525B Stream Impacts (Final) continued**

Permit Site No.	Stream Name/JD Packet ID	I/P Flow Status	Impact Type	Permanent Impacts (ft)	Impacts requiring USACE mitigation (ft)	USACE Mitigation Ratio <sup>1</sup>	Impacts requiring NCDWR mitigation (ft)	Temp Impacts (ft)
20	UT to North Buffalo Creek/SL	P	Fill	815	815	2:1	815	49
20A	UT to North Buffalo Creek/SL	P	Fill	236	236	1:1	236	29
20B	UT to North Buffalo Creek/SM	P	Fill	29	29	2:1	0 <sup>4</sup>	0
21	UT to North Buffalo Creek/SI	P	Fill	374	374	2:1	374	10
22A	UT to North Buffalo Creek/SK	I	Fill	142	142	1:1	0 <sup>3</sup>	10
			BS	10	0 <sup>2</sup>	n/a	0 <sup>3</sup>	0
25	UT to North Buffalo Creek/SO	I	Fill	12	12	1:1	0 <sup>3</sup>	10
			BS	12	0 <sup>2</sup>	n/a	0 <sup>3</sup>	0
26	UT to North Buffalo Creek/SI	P	Fill	319	319	2:1	319	11
			BS	12	0 <sup>2</sup>	n/a	12	0
27	UT to North Buffalo Creek/SH	I	Fill	215	215	1:1	0 <sup>3</sup>	10
28	UT to North Buffalo Creek/SH	I	Fill	461	461	1:1	0 <sup>3</sup>	0
29	UT to UT at Camp Herman/SF	P	Fill	290	290	2:1	290	4
			BS	10	0 <sup>2</sup>	n/a	10	0
31	UT to UT at Camp Herman /SD	P	Fill	191	191	2:1	191	27
			BS	21	0 <sup>2</sup>	n/a	21	0
32A	UT to UT at Camp Herman/SB	P	Fill	151	151	2:1	151	25
			BS	28	0 <sup>2</sup>	n/a	28	0
33	UT to UT at Camp Herman/SC	I	Fill	115	115	1:1	0 <sup>3</sup>	10
			BS	17	0 <sup>2</sup>	n/a	0 <sup>3</sup>	0
35	UT to UT at Camp Herman/SF	P	Fill	120	120	2:1	120	17
			BS	10	0 <sup>2</sup>	n/a	10	0
36	UT to North Buffalo Creek/SM	P	Fill	101	101	2:1	0 <sup>4</sup>	21
			BS	10	0 <sup>2</sup>	n/a	0 <sup>4</sup>	0
<b>TOTALS (ft)</b>				<b>10,366</b>	<b>9,879</b>		<b>8,083</b>	<b>628</b>

Notes: P = Perennial; I = Intermittent; BS = Bank Stabilization; n/a = not applicable. <sup>1</sup>Determined from USACE during verification site visits on October 10, 2012, December 6, 2012, and January 29, 2013. <sup>2</sup>Mitigation for bank stabilization not required by USACE. <sup>3</sup>Intermittent streams grandfathered from NCDWR mitigation. <sup>4</sup>Mitigation not required by NCDWR (less than 150 linear feet of stream). <sup>5</sup>Stream deemed unimportant by the USACE requiring no mitigation.

**Table 2. Revised U-2525B Wetland Impacts (Final)**

Permit Site No.	JD Package ID	Permanent Fill (ac)	Excavation (ac)	Mechanized Clearing (ac)	Total Impacts (ac)
1	WAP	0.57	0.04		0.61
1A	WAO	0.03			0.03
1B	WAN	0.01			0.01
2	WAQ	0.05		<0.01	0.06
3	WAM	0.12			0.12
3A	WAX	0.03			0.03
3B	WAL	0.02			0.02
3C	WAK	0.25	0.02	0.02	0.29
4	WAI	0.02			0.02
5A	WAH	0.08			0.08
5B	WAG	0.02			0.02
6	WAE	0.03			0.03
6A	WAD	0.05		<0.01	0.05
7	WAC	1.29	0.05	0.03	1.37
8	WZ	0.83		0.09	0.92
8A	WAA		<0.01		<0.01
9	WX/WY	2.01		0.15	2.16
10	WV		<0.01		<0.01
10A	WU	0.02		0.02	0.04
10B	WT	0.03	<0.01	<0.01	0.04
10C	WS	0.25	0.04		0.29
11	WR	0.33			0.33
13	WO	0.02		0.01	0.03
16	WAY	<0.01			<0.01
18	WK	0.03		0.01	0.04
19	WJ		0.14		0.14
20B	WI	0.02			0.02
21	WE	0.34		0.04	0.38
22	WH	0.03			0.03
22A	WF	0.02			0.02
22B	WG	0.01			0.01
23	WAB	0.02			0.02
24	WAB	0.19			0.19
27	WAR	0.10			0.10
30	WA	0.03	<0.01		0.04
34	WAT	<0.01			<0.01
36	n/a	<0.01			<0.01
<b>TOTALS (ac)</b>		<b>6.85</b>	<b>0.31</b>	<b>0.38</b>	<b>7.54</b>

Notes: Totals are rounded based upon sum of actual impacts. Most permanent impacts require 2:1 USACE mitigation except for Permit Sites 20B and 34 which USACE determined as 1:1 mitigation. Permit Site 8A is an isolated wetland and therefore not under USACE jurisdiction.

Revised compensatory mitigation requirements for U-2525B are summarized below in Table 3. The new permanent stream impacts (101 linear feet) at Permit Site 36 will be mitigated at a 2:1 ratio. The new wetland impacts (0.004 acres) at Permit Site 36 did not change the overall wetland impacts and therefore does not change the overall wetland mitigation requirements as well. Compensatory mitigation requirements for U-2525C remains unchanged (see original permit application dated August 26, 2013).

**Table 3. Revised U-2525B Required Compensatory Mitigation Summary (Final)**

	<b>Stream Impacts in Length (ft)</b>	<b>Riparian Wetland Impacts (ac)</b>
Impacts Requiring Mitigation	9,879	7.54
Onsite Mitigation Credits	2,055	
Total Mitigable Impacts Less Onsite Mitigation	7,824	7.54
Required EEP Mitigation	4,847 @ 2:1	7.52 @ 2:1
	2,977 @ 1:1	0.02 @ 1:1
Total EEP Mitigation	12,671	15.06

A copy of this permit modification application and its distribution list will be posted on the NCDOT website at <https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>. Thank you for your time and assistance with this project. Please contact Greg Price at either [gwprice@ncdot.gov](mailto:gwprice@ncdot.gov) or (919) 707-6148 if you have any questions or need additional information.

Sincerely,



Richard W. Hancock, P.E., Manager  
Project Development and Environmental Analysis Unit

**Cc:** NCDOT Permit Application Standard Distribution List



North Carolina Department of Environment and Natural Resources

Pat McCrory  
Governor

Michael Ellison, Director  
Ecosystem Enhancement Program

John E. Skvarla, III  
Secretary

October 7, 2014

Mr. Richard W. Hancock, P.E., Manager  
Project Development and Environmental Analysis Unit  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Mr. Hancock:

Subject: EEP Mitigation Acceptance Letter:

**U-2525B / C**, Greensboro Eastern Loop from US 70 Relocation to SR 2303 (Lawndale Drive), Guilford County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory stream and riparian wetland mitigation for the subject project. Based on the information supplied by you on October 2, 2014, the impacts are located in CU 03030002 of the Cape Fear River basin in the Central Piedmont (CP) Eco-Region, and are as follows:

Cape Fear 03030002 CP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	20,470.0	9.94	0	0	0	0

\*Some of the stream and wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

**This mitigation acceptance letter replaces the mitigation acceptance letter issued on September 3 and October 22, 2013.** This impact and associated mitigation need were under projected by the NCDOT in the 2014 impact data. EEP will commit to implement sufficient compensatory stream and riparian wetland mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of the N.C. Department of Environment and Natural Resources' Ecosystem Enhancement Program In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

Sincerely,

James B. Stanfill  
EEP Asset Management Supervisor

cc: Mr. Andy Williams, USACE – Raleigh Regulatory Field Office  
Mr. Dave Wanucha, Division of Water Resources  
File: U-2525B/C Revised 2

09/08/14

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

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS GUILFORD COUNTY

LOCATION: GREENSBORO EASTERN LOOP FROM NORTH OF US 70  
RELOCATION TO US 29 NORTH OF GREENSBORO

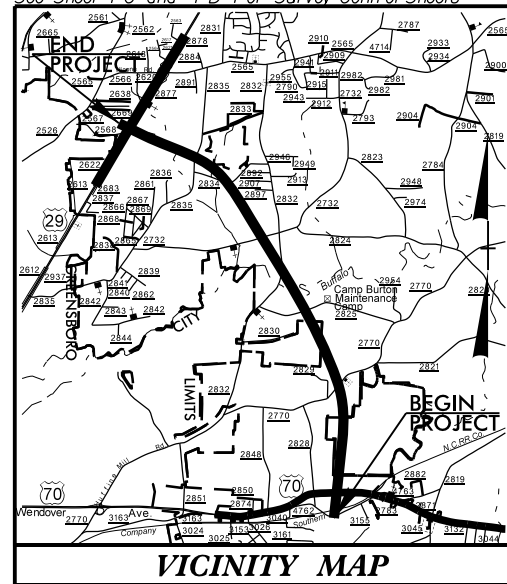
TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS, CULVERTS,  
RETAINING WALLS, AND STRUCTURES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2525B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34821.1.3		PE	
34821.2.3		RW & UTILITIES	

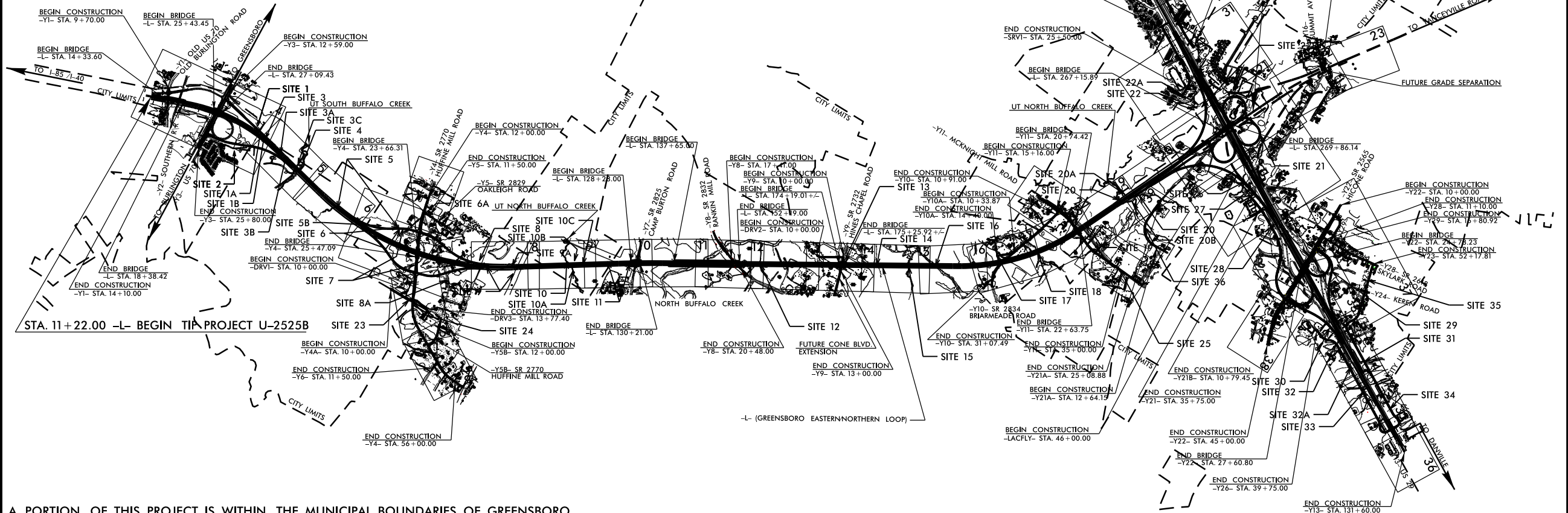
PERMIT DRAWING  
SHEET 1 OF 93  
Revised 10/01/2014



TIP PROJECT: U-2525B



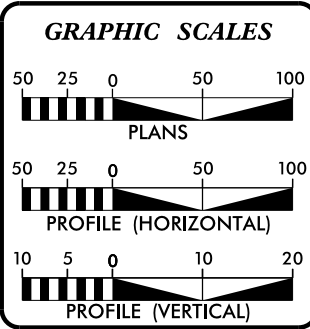
## WETLAND AND SURFACE WATER IMPACTS PERMIT



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

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

CONTRACT:



**DESIGN DATA**

ADT 2014 =	N/A
ADT 2030 =	20000
DHV =	10 %
D =	60 %
T =	16 % *
V =	70 MPH
* TTST 5% DUAL 11%	
FUNC CLASS=INTERSTATE "STATEWIDE TIER"	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT U-2525B =	4.504 Miles
LENGTH STRUCTURE TIP PROJECT U-2525B =	0.492 Miles
TOTAL LENGTH OF TIP PROJECT U-2525B =	4.996 Miles

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

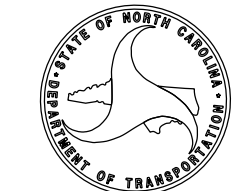
<b>RIGHT OF WAY DATE:</b> MAY 22, 2012	<b>JAMES A. SPEER, PE</b> PROJECT ENGINEER
<b>LETTING DATE:</b> MAY 20, 2014	<b>DANIEL W. GARDNER JR., PE</b> PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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

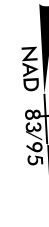


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\$\$\$USERNAM1\$\$\$

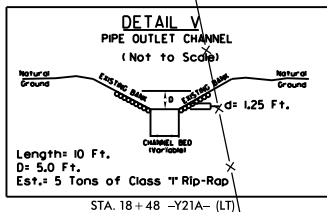
# SITE 36

PERMIT DRAWING  
SHEET 86A OF 93

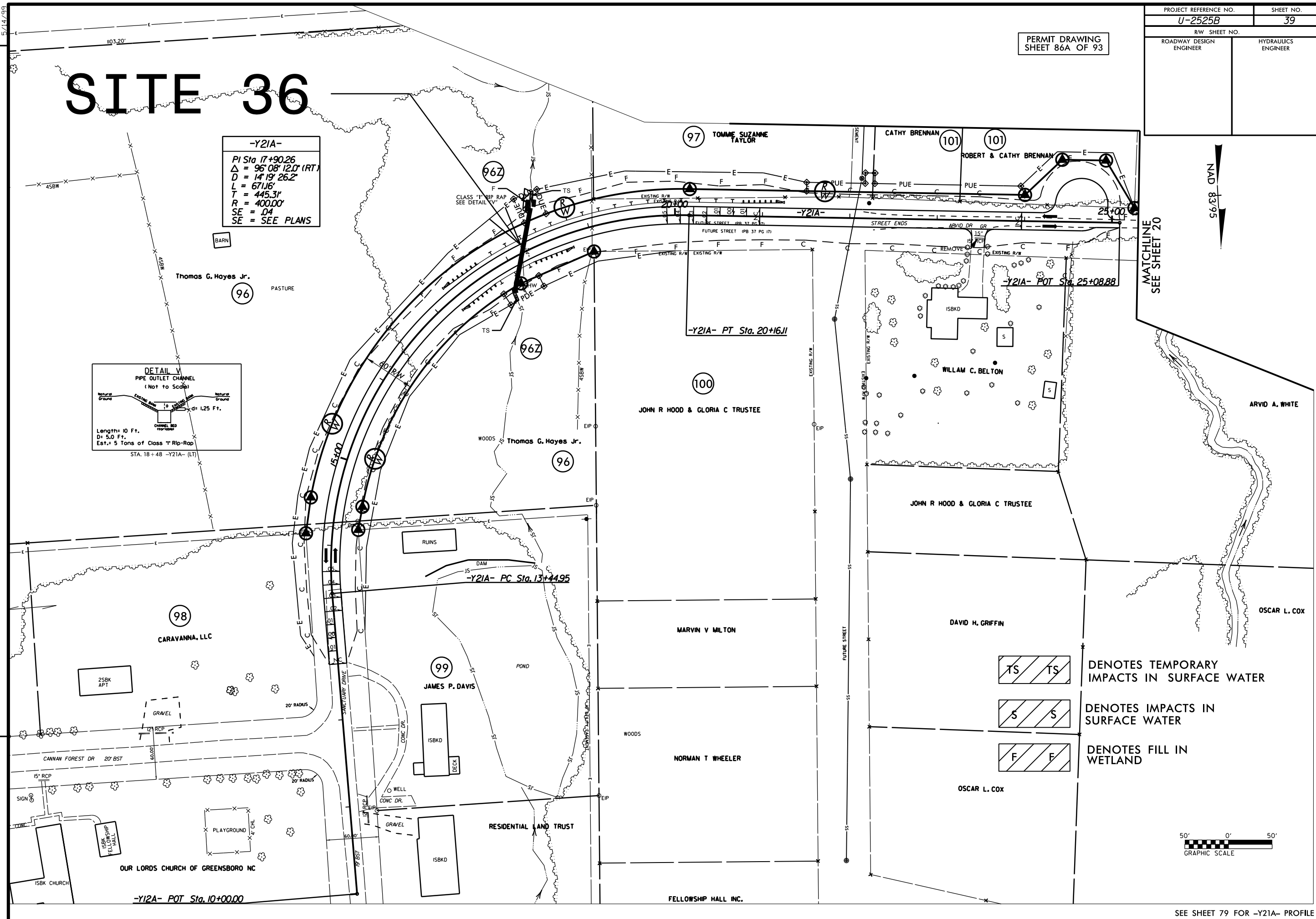
PROJECT REFERENCE NO. <b>U-2525B</b>	SHEET NO. <b>39</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



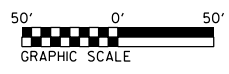
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 PI Sta 17+90.26  
 $\Delta = 96^{\circ} 08' 12.0''$  (RT)  
 $D = 14^{\circ} 19' 26.2''$   
 $L = 671.16'$   
 $T = 445.31'$   
 $R = 400.00'$   
 $SE = .04$   
 SE = SEE PLANS



REVISIONS  
 10-2-14 R/W REVISION ON A LET PROJECT (DMG) - ADDED A SECOND CLAIM (96Z) OF DUE, PUE, AND TCE ON PARCEL 96 (THOMAS G. HAYES JR.) AT -Y2IA- STA. 18+3500 LT. AND STA. 17+1500 RT.



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



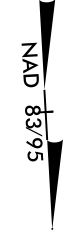
SEE SHEET 79 FOR -Y2IA- PROFILE



# SITE 36

PERMIT DRAWING  
SHEET 86B OF 93

PROJECT REFERENCE NO. <b>U-2525B</b>	SHEET NO. <b>39</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

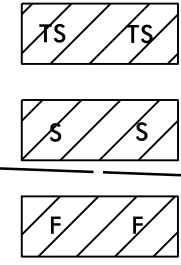
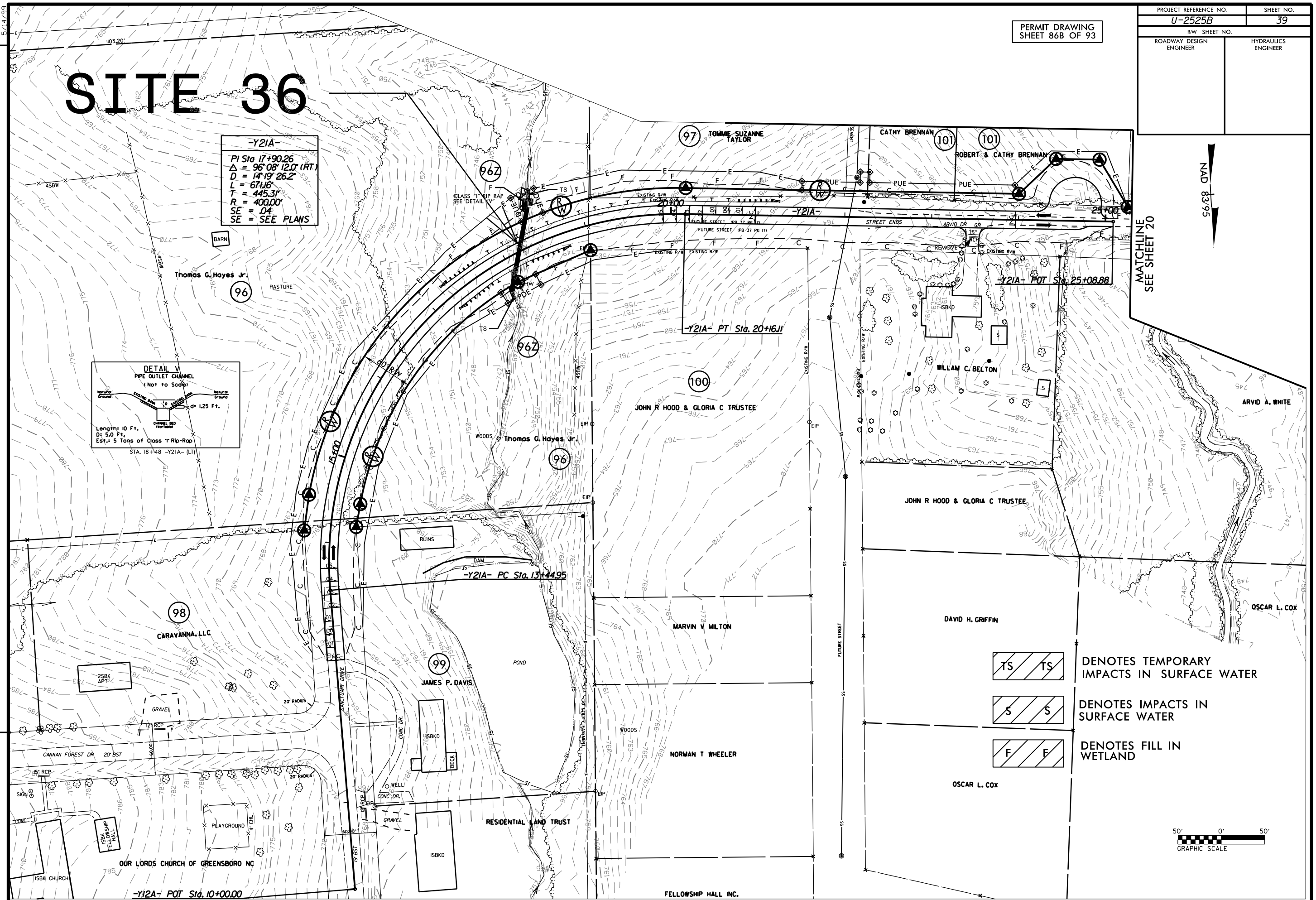


MATCHLINE  
SEE SHEET 20

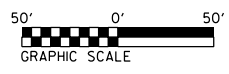
**-Y2IA-**  
 PI Sta 17+90.26  
 $\Delta = 96'08''12.0''$  (RT)  
 $D = 14'19''26.2''$   
 $L = 671.16'$   
 $T = 445.31'$   
 $R = 400.00'$   
 $SE = .04$   
 SE = SEE PLANS

**DETAIL V**  
 PIPE OUTLET CHANNEL  
 (Not to Scale)  
 Length: 10 Ft.  
 D: 5.0 Ft.  
 Est. = 5 Tons of Class "1" Rip-Rap  
 STA. 18+48 -Y2IA- (LT)

REVISIONS  
 10-2-14 P.W. REVISION ON A LET PROJECT (DMG) - ADDED A SECOND CLAIM (6627) OF DUE, PUE, AND TCE ON PARCEL 96 (THOMAS G. HAYES JR.) AT -Y2IA- STA. 18+3500 LT. AND STA. 17+1500 RT.



**TS TS** DENOTES TEMPORARY IMPACTS IN SURFACE WATER  
**S S** DENOTES IMPACTS IN SURFACE WATER  
**F F** DENOTES FILL IN WETLAND



SEE SHEET 79 FOR -Y2IA- PROFILE



