



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

January 17, 2019

US Army Corps of Engineers
Raleigh Regulatory Field Office
3331 Heritage Trade Dr., Suite 105
Wake Forest, NC 27587

Attention: David Bailey
NCDOT Coordinator, Division 7

Subject: **Application for the Modification to the Section 404 Individual Permit, Section 401 Water Quality Certification and Randleman Lake Buffer Authorization** for proposed widening from SR 1003 (North Main Street) and SR 1820 (Skeet Club Road) to NC 68 in High Point, Guilford County, Division 7, Federal Aid Project No. STP-1820(2), WBS No. 34962.3.FD1, TIP No. U-3615B.

Reference: Section 404 Individual Permit, issued September 20, 2013 and December 15, 2014; USACE Action ID SAW-1999-21179

Section 401 Individual Water Quality Certification and Randleman Buffer Authorization, issued June 28, 2013, August 29, 2013, December 8, 2014, and March 16, 2016; NCDWR Project No. 2013-0477

Dear Sir:

The North Carolina Department of Transportation (NCDOT) proposes to widen and improve Skeet Club Road to a multi-lane facility from SR 1003 (North Main Street) and SR 1820 (Skeet Club Road) between US 311 to NC 68 and reconfigure the intersection at North Main Street and Skeet Club Road in High Point. This permit modification request is for revisions to Site 1. Attached are the revised Permit Plan Sheets 5-8 and 26-27 of 27, Buffer Permit Plan Sheets 2-3 and 12-13 of 13, and corresponding roadway plans.

Site 1

The roadway and hydraulic design at the beginning of Section B located at station 170+67 has been revised to improve a turn lane and lengthen the two proposed 66-foot reinforced

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
NATURAL ENVIRONMENT SECTION
1598 MAIL SERVICE CENTER
RALEIGH, NC 27699-1598

Telephone: (919) 707-6000
Fax: (919) 212-5785
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
1020 BIRCH RIDGE DRIVE
RALEIGH, NC 27699

concrete pipes. This existing turn lane was not picked up in the original survey thus it was not accounted for during the design. The existing turn lane will be updated to meet NCDOT roadway criteria and the previously proposed reinforced concrete pipes will be lengthened. This is a design revision, so the two 66-foot pipes have yet to be installed. Guardrail will also be installed due to an approximately 7 foot drop off at the end of the pipes.

There are impact changes to the jurisdictional features at Site 1. The permanent stream impacts at Site 1 increased from 119 to 137 linear feet (+18 linear feet) and added 20 of bank stabilization. Temporary impacts at Site 1 increased from 16 to 30 linear feet. The total permanent stream impacts for U-3615B increased from 1,978 to 1,996 linear feet, bank stabilization impacts increased from 111 to 131 linear feet, and temporary stream impacts increased from 117 to 131 linear feet.

The Zone 1 allowable buffers at Site 1 increased from 5,869 to 6,983 square feet (+1,064 square feet) and the Zone 2 allowable buffer increased from 1,671 to 3,793 square feet (+2,122 square feet). See Revised Buffer Permit Plan Sheets 12 and 13 for Site 1 impact amounts and see Table 4A below for overall buffer impact changes.

Table 4A. U-3615B Randleman Lake Watershed Buffer Impacts (ft²) Final

Impact Type	Zone 1 Impacts	Updated Zone 1 Impacts	Difference Zone 1	Zone 2 Impacts	Updated Zone 2 Impacts	Difference Zone 2
Allowable Road Crossing Impacts	39,744 ²	40,808	+1,064	22,001	24,123	+2,122
Mitigable Road Crossing Impacts	10,287 ²	10,287	0	6,151	6,151	0
Mitigable Parallel Impacts	90,736	86,004	-4,732	64,268	50,474	-13,794
Other Allowable Impacts ¹	2,437	2,437	0	1,947	1,947	0
Total Allowable Impacts	42,181	43,245	1,064	23,948	26,070	2,122
Total Mitigable Impacts	101,023	96,291	-4,732	70,419	56,625	-13,794
TOTAL IMPACTS	143,204	139,536	-3,668	94,367	82,695	-11,672

¹No mitigation required if treatment is provided prior to buffers under new Randleman rules. ²Amount in original application differs by 3,478 sq. ft (Zone 1) and 1,674 sq. ft. (Zone2) due to Site 6 impacts moving from mitigable to allowable per DWR permit because stream is less than 150 feet.

Mitigation

No additional mitigation is proposed for the buffer impacts. The increase in buffer impacts are allowable.

Stream impacts have increased 18 linear feet since the previous permit was issued. Mitigation is proposed for the additional 18 linear feet. See attached NC Division of Mitigation Services letter.

Regulatory Approvals

Application is hereby made for a modification to the Department of the Army Section 404 Individual Permit as required for the above-described activities.

We are also hereby requesting a Modification to the Individual Section 401 Water Quality Certification from the Division of Water Quality. In compliance with Section 143 215.3D(e) of the NCAC, we will provide \$570.00 to act as payment for processing the Section 401 permit application .

A copy of this permit 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 assistance with this project. If you have any questions or need additional information, please contact Deanna Riffey at driffey@ncdot.gov or (919) 707-6151.

Sincerely,

Carla Dagnino

for

Philip S. Harris III, P.E., C.P.M., Manager
Environmental Analysis Unit

cc: NCDOT Permit Application Standard Distribution List



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

TIM BAUMGARTNER
Director

January 10, 2019

Mr. Philip S. Harris, III, P.E.
Environmental Analysis Unit
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

Subject: Mitigation Acceptance Letter:

TIP Number U-3615B, SR 1820 (Skeet Club Road) from East of SR 1818 (Johnston Street) to West of NC 68 (Eastchester Drive), Guilford County

References: USACE 404 Individual Permit issued September 16, 2013 (USACE Action ID 1999-21179) and modification issued on December 15, 2014

NCDWR 401 Water Quality Certification 2013-0477 issued on August 29, 2013 and modifications issued on December 8, 2014 and March 11, 2016.

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the additional stream mitigation for the subject project. Based on the information supplied by you on December 13, 2018 and January 7 and 9, 2019, the additional stream impacts are located in CU 03030003 of the Cape Fear River Basin in the Central Piedmont (CP) Eco-Region, and are as follows:

Table 1 – Additional Impacts (feet / acres)

Cape Fear 03030003 CP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1 (3:1)	Zone 2 (1.5:1)
Impacts (feet/acres)	0	0	18.0	0	0	0	0	0

These impacts and associated mitigation needs were not projected by the NCDOT in the 2018 impact data. DMS is currently providing stream, riparian wetland and buffer mitigation for the impacts associated with this project located in cataloging unit 03030003 of the Cape Fear River basin as required by the permits that were issued in August and September 2013 and permit modifications issued in December 2014 and March 2016, as shown in the below table (in mitigation credits):



Table 2 – Current Permitted Impacts and Associated Mitigation Requirements provided by DMS (based on 2013, 2014 and 2016 permits) and Revised Anticipated Impacts (based on mitigation request)

Impact Type	Total Permitted Impacts (feet / acre / sq ft)	Mitigation Provided by DMS per Issued Permits (Credits)	Additional Impact (for approval)	Revised Total Impacts*
Stream	1,228.0	1,680.0	18.0	1,246.0
Riparian Wetland	0.81	1.62	0	0.81
Riparian Buffer – Zone 1	85,024.0	255,072.0	0	85,024.0
Riparian Buffer – Zone 2	36,739.0	55,109.0	0	36,739.0

This impact and associated mitigation need were under projected by the NCDOT in the 2018 impact data. DMS will commit to implement sufficient compensatory stream mitigation credits to offset the additional impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of the In-Lieu Fee Instrument dated July 28, 2010. **This mitigation acceptance letter replaces the mitigation acceptance letter that was issued on August 20, 2013, February 26, 2016 and December 14, 2018.**

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

Sincerely,



James B. Stanfill
DMS Asset Management Supervisor

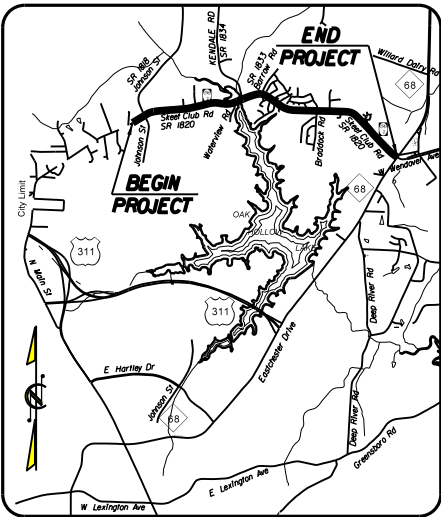
Cc: Mr. Monte Matthews, USACE – Raleigh Regulatory Field Office
Ms. Amy Chapman, NCDWR – Raleigh
Ms. Linda Fitzpatrick, NCDOT – PDEA
File: U-3615B Additional 2



TIP PROJECT: U-3615B

CONTRACT:

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



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
GUILFORD COUNTY

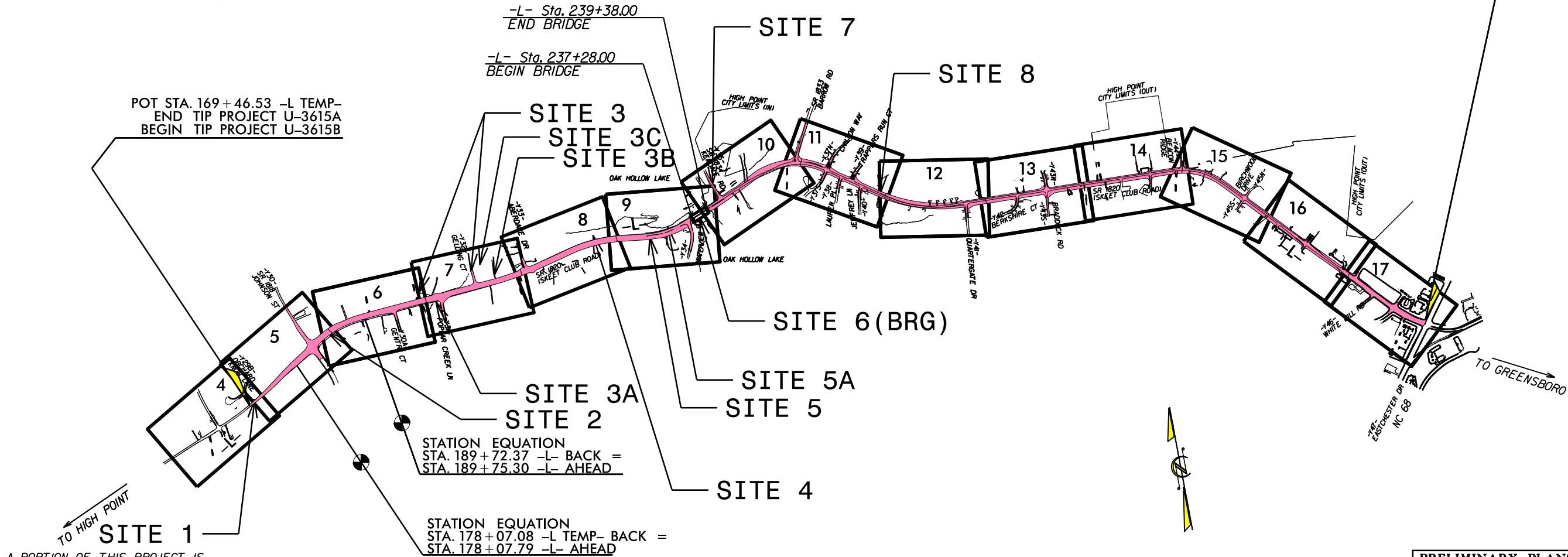
LOCATION: SR 1820 (SKEET CLUB ROAD) FROM WEST OF SR 1818 (JOHNSON STREET) TO NC 68 (EASTCHESTER DRIVE).

TYPE OF WORK: PAVING, GRADING, DRAINAGE, CURB & GUTTER, STRUCTURE, CULVERT, SIGNING AND SIGNALS

WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3615B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34962.1.1	STP-1820(2)	P.E.	
34962.2.3	STP-1820(2)	RW, UTL.	

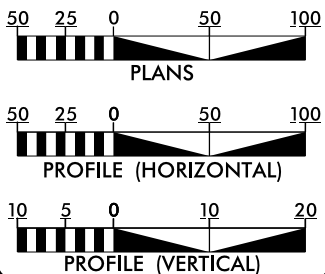
STA. 348+41.04 -L- END TIP PROJECT U-3615B



A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF CITY OF HIGH POINT

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



DESIGN DATA

ADT 2013 = 10860-23524
ADT 2035 = 17900-34700
DHV = 10 %
D = 60 %
T = 5 % *
V = 50 MPH
* TTST = 2% DUAL 3%
FUNC CLASS =
URBAN MINOR ARTERIAL
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-3615B = 3.349 MI
LENGTH STRUCTURE TIP PROJECT U-3615B = 0.040 MI
TOTAL LENGTH OF TIP PROJECT U-3615B = 3.389 MI



Prepared for the North Carolina Department of Transportation in the Office of:
SSP JONES FRANKLIN ROAD
SUITE 164
Raleigh, N.C. 27606
License No. F-40377
Bus: 919 851 8077
Fax: 919 851 8107

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
APRIL 27, 2009

LETTING DATE:
OCTOBER 15, 2013

NCDOT CONTACT:

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

GREG S. PURVIS, PE
PROJECT DESIGN ENGINEER

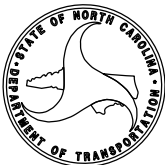
BRENDA L. MOORE, PE
ROADWAY DESIGN ENGINEERING
COORDINATION SECTION PROJECT ENGINEER

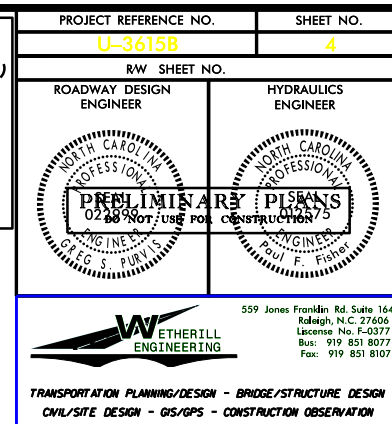
HYDRAULICS ENGINEER

SIGNATURE: P.E.

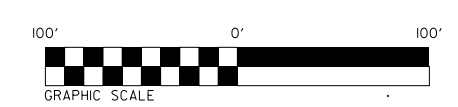
ROADWAY DESIGN
ENGINEER

SIGNATURE: P.E.





-L- STA. 169+46.53 POC
END TIP PROJECT U-3615A
BEGIN TIP PROJECT U-3615B



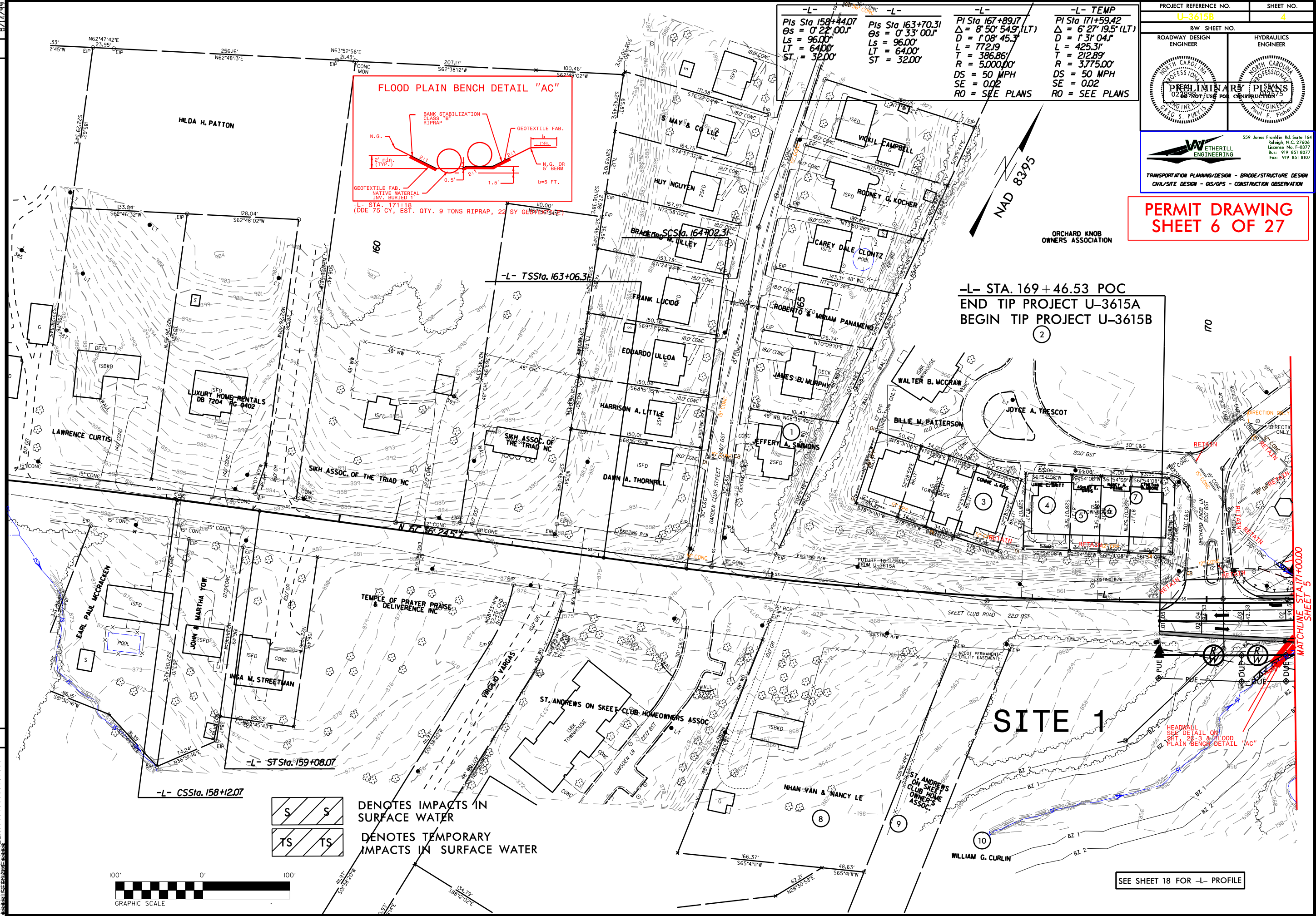
SEE SHEET 18 FOR -L- PROFILE

11/7/18 CONST. REVISION: ADDED A RIGHT TURN LANE AND REVISED DRAINAGE FROM -L- STA. 170+25.00 TO -L- STA. 171+00.00 LT.

REVISIONS

8/13/99

SYSTEMS TIME



PROJECT REFERENCE NO. **U-3615B** SHEET NO. **4**

RW SHEET NO. ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

PRELIMINARY PLANS
02/28/2018 NOT FOR CONSTRUCTION

WETHERILL ENGINEERING
559 Jones Franklin Rd. Suite 104
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

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

PERMIT DRAWING SHEET 6 OF 27

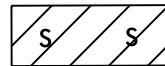
MATCHLINE STA. 171+00.00 SHEET 5

11/18 CONST. REVISION: ADDED A RIGHT TURN LANE AND REVISED DRAINAGE FROM -L- STA. 171+00.00 TO -L- STA. 173+40.00 LT.

REVISIONS

REVISIONS

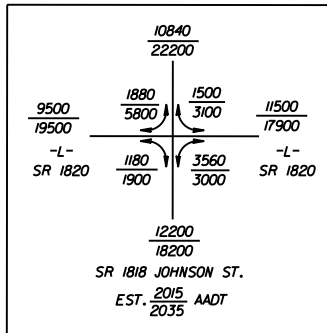
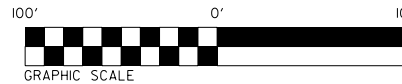
8/17/99



DENOTES IMPACTS IN SURFACE WATER

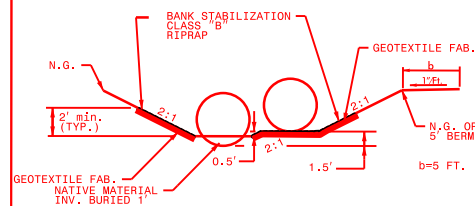


DENOTES TEMPORARY IMPACTS IN SURFACE WATER

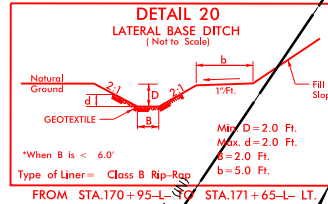


-Y30-	-Y30-	-Y30-	-Y30-	-L-
PI Sta 13+04.81	PI Sta 16+79.88	PI Sta 19+82.79	PI Sta 24+40.55	PIs Sta 183+84.03
$\Delta = 3' 22' 29.0''$ (LT)	$\Delta = 5' 27' 52.5''$ (LT)	$\Delta = 1' 45' 44.6''$ (RT)	$\Delta = 13' 12' 11.3''$ (RT)	$\Theta s = 4' 31' 24.1''$
$D = 1' 16' 56.3''$	$D = 2' 00' 00.0''$	$D = 4' 42' 58.3''$	$D = 4' 50' 06.3''$	$Ls = 150.00'$
$L = 263.17'$	$L = 273.23'$	$L = 246.08'$	$L = 273.07'$	$LT = 100.03'$
$T = 131.62'$	$T = 136.72'$	$T = 123.05'$	$T = 137.14'$	$ST = 50.03'$
$R = 4,468.14'$	$R = 2,864.79'$	$R = 8,000.00'$	$R = 1,185.00'$	

FLOOD PLAIN BENCH DETAIL "AC"



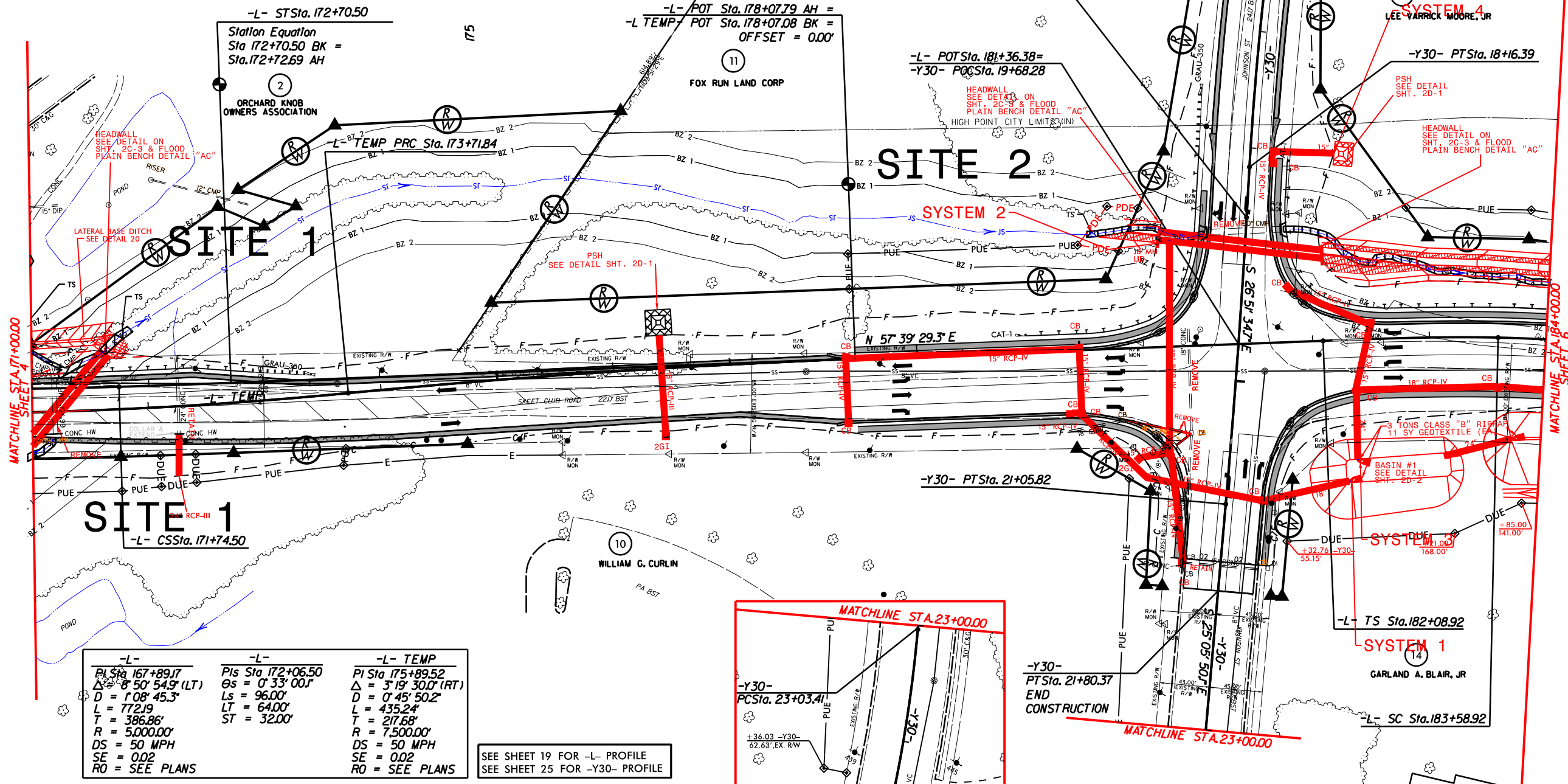
L- STA. 171+18 (DDE 75 CY, EST. QTY. 9 TONS RIPRAP, 22 SY GEOTEXTILE)
-Y30- STA. 18+93 (DDE 85 CY, EST. QTY. 16 TONS RIPRAP, 39 SY GEOTEXTILE)



When B is < 6.0'
Type of Liner = Class B Rip-Rap
FROM STA. 170+95-L- TO STA. 171+65-L- LT.

PERMIT DRAWING
SHEET 7 OF 27

PROJECT REFERENCE NO. U-36158		SHEET NO. 5	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		ENGINEER	
NORTH CAROLINA PROFESSIONAL ENGINEER 02280 Not Used for Construction		NORTH CAROLINA PROFESSIONAL ENGINEER 02280 Not Used for Construction	
GREG S. PUNIS		PAUL F. FISHER	
559 Jones Franklin Rd. Suite 104 Raleigh, N.C. 27606 Bus: 919 851 8077 Fax: 919 851 8107			
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GEOPR - CONSTRUCTION OBSERVATION			



-L-	-L-	-L- TEMP
PI Sta 167+89.17	PIs Sta 172+06.50	PI Sta 175+89.52
$\Delta = 8' 50' 54.9''$ (LT)	$\Theta s = 0' 33' 00.1''$	$\Delta = 3' 19' 30.0''$ (RT)
$D = 1' 08' 45.3''$	$Ls = 96.00'$	$D = 0' 45' 50.2''$
$L = 772.19'$	$LT = 64.00'$	$L = 435.24'$
$T = 386.86'$	$ST = 32.00'$	$T = 217.68'$
$R = 5,000.00'$		$R = 7,500.00'$
$DS = 50$ MPH		$DS = 50$ MPH
$SE = 0.02$		$SE = 0.02$
$RO =$ SEE PLANS		$RO =$ SEE PLANS

SEE SHEET 19 FOR -L- PROFILE
SEE SHEET 25 FOR -Y30- PROFILE

11/18 CONST. REVISION: ADDED A RIGHT TURN LANE AND REVISED DRAINAGE FROM -L- STA. 171+00.00 TO -L- STA. 173+40.00 LT.

REVISIONS

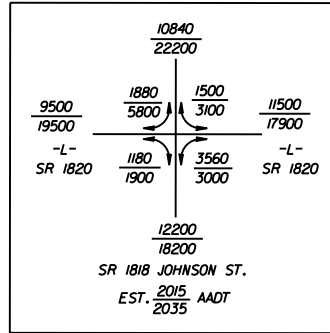
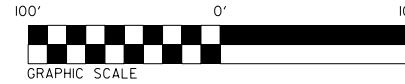
8/17/99



DENOTES IMPACTS IN SURFACE WATER

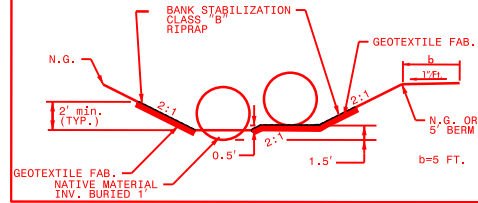


DENOTES TEMPORARY IMPACTS IN SURFACE WATER

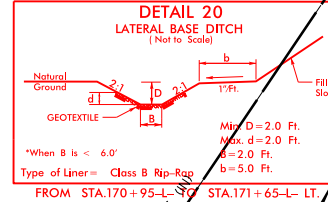


-Y30-	-Y30-	-Y30-	-Y30-	-L-
PI Sta 13+04.81 $\Delta = 3' 22' 29.0''$ (LT) $D = 1' 16' 56.3''$ $L = 263.17'$ $T = 131.62'$ $R = 4,468.14'$	PI Sta 16+79.88 $\Delta = 5' 27' 52.5''$ (LT) $D = 2' 00' 00.0''$ $L = 273.23'$ $T = 136.72'$ $R = 2,864.79'$	PI Sta 19+82.79 $\Delta = 1' 45' 44.6''$ (RT) $D = 0' 42' 58.3''$ $L = 246.08'$ $T = 123.05'$ $R = 8,000.00'$	PI Sta 24+40.55 $\Delta = 13' 12' 11.3''$ (RT) $D = 4' 50' 06.3''$ $L = 273.07'$ $T = 137.14'$ $R = 1,185.00'$	PIs Sta 183+84.03 $\Delta s = 4' 31' 24.1''$ $Ls = 150.00'$ $LT = 100.03'$ $ST = 50.03'$

FLOOD PLAIN BENCH DETAIL "AC"

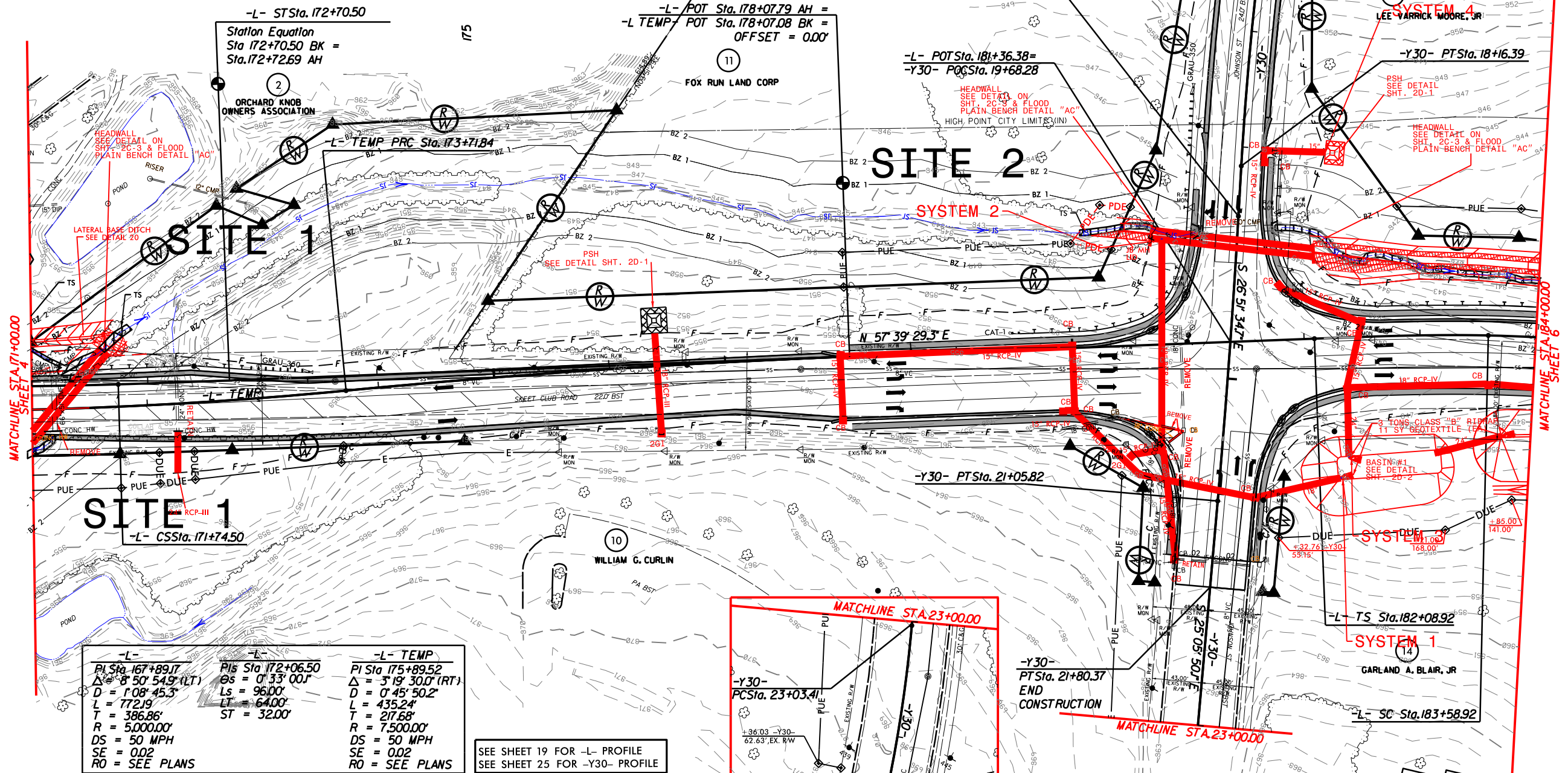


L- STA. 171+19
(DDE 75 CY, EST. QTY. 9 TONS RIPRAP, 22 SY GEOTEXTILE)
-Y30- STA. 18+93
(DDE 85 CY, EST. QTY. 16 TONS RIPRAP, 39 SY GEOTEXTILE)



When B is < 6.0'
Type of Liner = Class B Rip-Rap
FROM STA. 170+95-L- TO STA. 171+65-L- LT.

PERMIT DRAWING SHEET 8 OF 27



-L-	-L-	-L- TEMP
PI Sta 167+89.17 $\Delta = 8' 50' 54.9''$ (LT) $D = 1' 08' 45.3''$ $L = 772.19'$ $T = 386.86'$ $R = 5,000.00'$ $DS = 50$ MPH $SE = 0.02$ $RO =$ SEE PLANS	PIs Sta 172+06.50 $\Delta s = 0' 33' 00.1''$ $Ls = 96.00'$ $LT = 64.00'$ $ST = 32.00'$	PI Sta 175+89.52 $\Delta = 3' 19' 30.0''$ (RT) $D = 0' 45' 50.2''$ $L = 435.24'$ $T = 217.68'$ $R = 7,500.00'$ $DS = 50$ MPH $SE = 0.02$ $RO =$ SEE PLANS

SEE SHEET 19 FOR -L- PROFILE
SEE SHEET 25 FOR -Y30- PROFILE

PROJECT REFERENCE NO. U-36158		SHEET NO. 5	
RW SHEET NO.		HYDRAULICS	
ROADWAY DESIGN ENGINEER		ENGINEER	
NORTH CAROLINA PROFESSIONAL ENGINEER 02280 Not Used For Construction		NORTH CAROLINA PROFESSIONAL ENGINEER 02280 Not Used For Construction	
559 Jones Franklin Rd. Suite 104 Raleigh, N.C. 27606 Licence No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107			
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL SITE DESIGN - GEOTECHNICAL CONSTRUCTION OBSERVATION			

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	170+67 -L-	2@66" RCP						0.01	<0.01	137	30	
		BANK STABILIZATION								20		
2	180+59/188+46 -L-	RELOCATE CHANNEL						2.20		594	10	
3	197+50/204+26-L-	NAT. STREAM DESIGN								699	10	760
3A	199+27/199+95 -L-	2@54" RCP						<0.01	<0.01	38	10	
3B	208+63 -L-	48" RCP						<0.01	<0.01	109	4	
		BANK STABILIZATION								10		
3C	201+27/204+76 -L-	NAT. STREAM DESIGN			0.67			<0.01		63		
4	218+72/219+72 -L-	2@30" RCP	0.13		<0.01							
5	231+60/232+27-L-	30" RCP	<0.01			0.01		<0.01		131	16	
5A	232+87/236+40 -L-	ROCK FILL IN LAKE						0.01				
6	237+28/239+38 -L-	BRIDGE						0.19	0.29			
SUBTOTALS:			0.13		0.67	0.01		2.45	0.30	1801	80	760

Note: Revision on 10/2/2018 is on Site 1 only and due to added turn lane.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GUILDFORD COUNTY
WBS - 34962.1.1 (U-3615B)

4/9/2013

Revised 10/28/2014

SHEET 26 of 27 **Revised: 10/2/2018**

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)
7	12+20 -Y35-	42" RCP						<0.01	<0.01	49	19	
8	266+36 -L-	8'X8' RCBC						0.03	<0.01	186	32	
		BANK STABILIZATION								101		
SHEET 1 SUBTOTALS:			0.13		0.67	0.01		2.45	0.30	1801	80	760
SHEET 2 SUBTOTALS:								0.03	<0.01	336	51	
TOTALS:			0.13		0.67	0.01		2.48	0.31	2137	131	760

BRIDGE SURFACE WATER TEMPORARY IMPACTS = 0.29 a.c. (Work Pads)

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

 GUILDFORD COUNTY
 WBS - 34962.1.1 (U-3615B)
 4/9/2013
 Revised 10/28/2014
 SHEET 27 of 27 Revised 10/2/2018

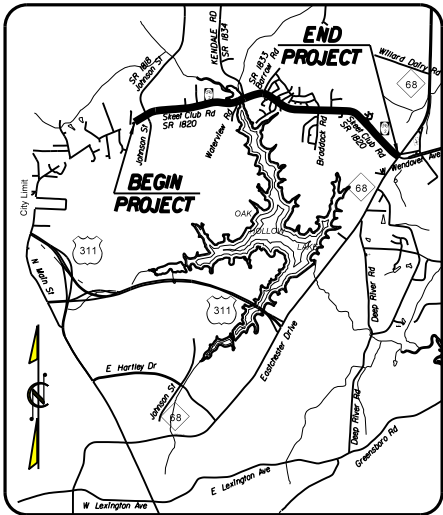
05/08/99

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
GUILFORD COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3615B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34962.1.1	STP-1820(2)	P.E.	
34962.2.3	STP-1820(2)	R/W, UTL.	

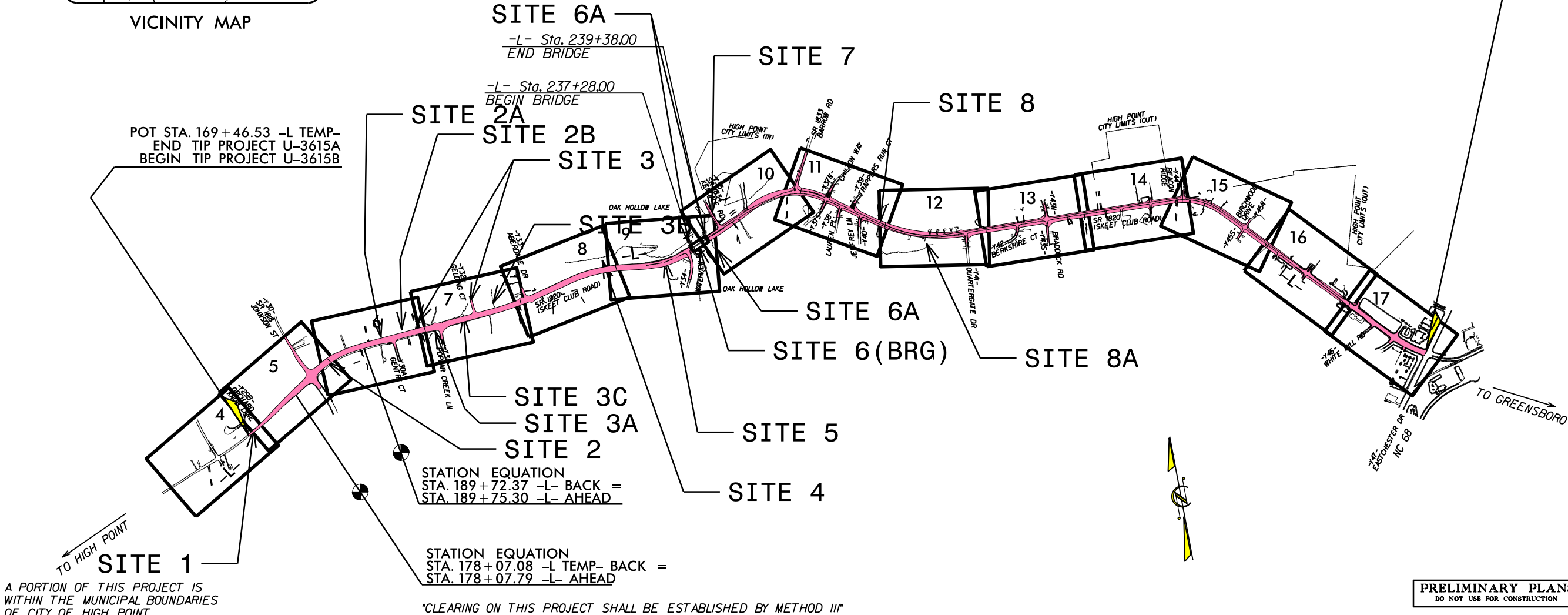
LOCATION: SR 1820 (SKEET CLUB ROAD) FROM WEST OF SR 1818 (JOHNSON STREET) TO NC 68 (EASTCHESTER DRIVE).
TYPE OF WORK: PAVING, GRADING, DRAINAGE, CURB & GUTTER, STRUCTURE, CULVERT, SIGNING AND SIGNALS



VICINITY MAP

BUFFER IMPACTS PERMIT

STA. 348+41.04 -L- END TIP PROJECT U-3615B

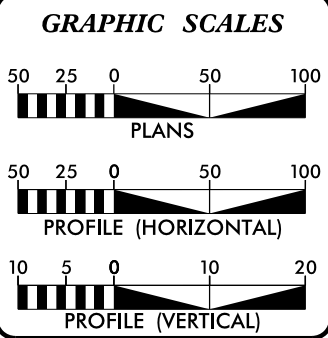


A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF CITY OF HIGH POINT

CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD III


PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:

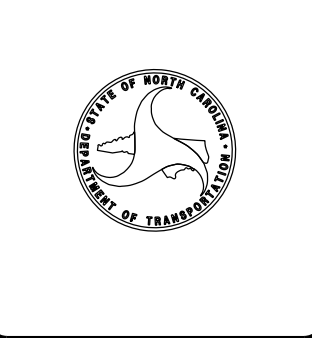


DESIGN DATA	
ADT 2013	= 10860-23524
ADT 2035	= 17900-34700
DHV	= 10 %
D	= 60 %
T	= 5 % *
V	= 50 MPH
* TTST	= 2% DUAL 3%
FUNC CLASS	=
URBAN MINOR ARTERIAL	
SUBREGIONAL TIER	

PROJECT LENGTH	
LENGTH ROADWAY TIP PROJECT U-3615B	= 3.349 MI
LENGTH STRUCTURE TIP PROJECT U-3615B	= 0.040 MI
TOTAL LENGTH OF TIP PROJECT U-3615B	= 3.389 MI

 Prepared for the North Carolina Department of Transportation in the Office of: 559 JONES FRANKLIN ROAD SUITE 164 RALEIGH, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107	
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: APRIL 27, 2009	EDWARD G. WETHERILL, PE PROJECT ENGINEER
LETTING DATE: OCTOBER 15, 2013	GREG S. PURVIS, PE PROJECT DESIGN ENGINEER
NCDOT CONTACT:	BRENDA L. MOORE, PE ROADWAY DESIGN: ENGINEERING COORDINATION SECTION PROJECT ENGINEER

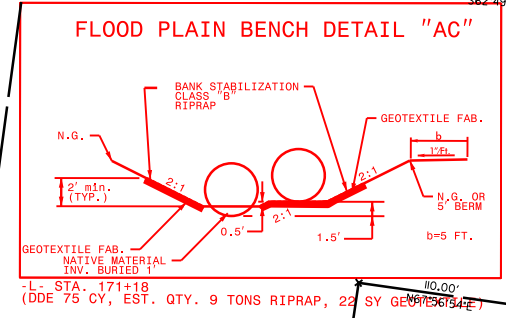
HYDRAULICS ENGINEER	
SIGNATURE: _____	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE: _____	P.E.



PROJECT REFERENCE NO.	SHEET NO.
U-3615B	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

BUFFER DRAWING
SHEET 2 OF 13

-L-	-L-	-L-	-L- TEMP
PI Sta 158+44.07 Δs = 0' 22' 00" Ls = 96.00' LT = 64.00' ST = 32.00'	PI Sta 163+70.31 Δs = 0' 33' 00" Ls = 96.00' LT = 64.00' ST = 32.00'	PI Sta 167+89.17 Δs = 8' 50' 54.9" (LT) D = 1' 08' 45.3" L = 772.19' T = 386.86' R = 5000.00' DS = 50 MPH SE = 0.02 RO = SEE PLANS	PI Sta 171+59.42 Δs = 6' 27' 19.5" D = 1' 31' 04.1" L = 425.31' T = 212.89' R = 3775.00' DS = 50 MPH SE = 0.02 RO = SEE PLAN

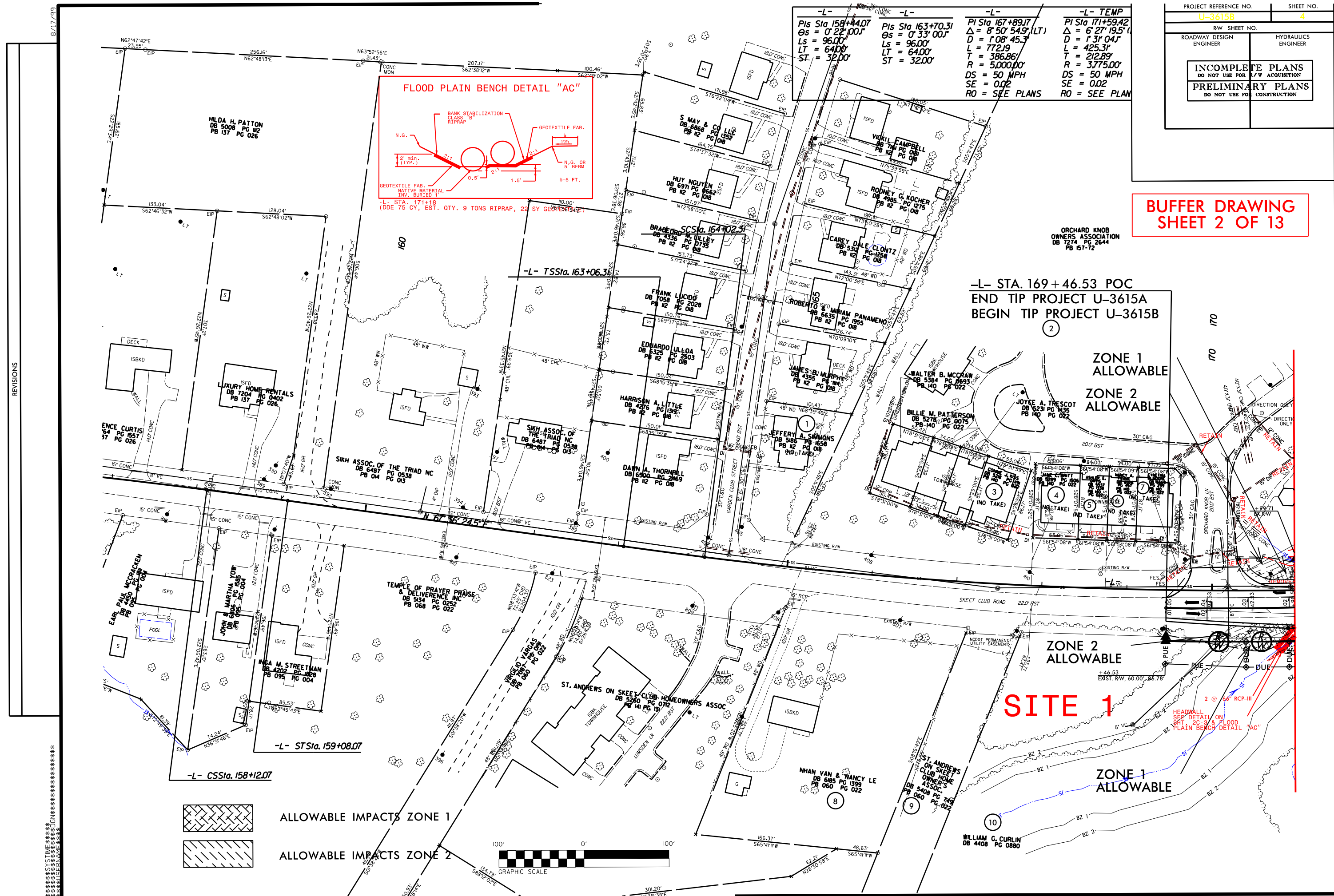
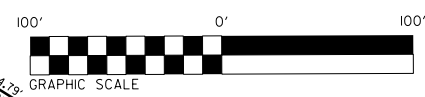


-L- STA. 169+46.53 POC
END TIP PROJECT U-3615A
BEGIN TIP PROJECT U-3615B

ZONE 1
ALLOWABLE
ZONE 2
ALLOWABLE

SITE 1

ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2



BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
SITE NO.	STATION (FROM/TO)	STRUCTURE SIZE / TYPE	TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft ²)	ZONE 2 (ft ²)
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)		
1	170+02/172+39 -L-	2 @66" RCP & 24"RCP	X			6933	3793						
2	180+10/187+26 -L-(LT)	RELOCATE CHANNEL	X		X	3975	2546		31061	13632			
2A	187+45/196+55-L-(LT)	ROADWAY FILL & GRASS SWALE			X				2456	5717			
2B	192+48 -L-(LT)	RIP RAP PAD			X		51						
3	197+50/205+22-L-(LT)	NAT. STREAM DESIGN			X				52487	31125		45810	29829
3A	198+75/200+23 -L-(RT)	2@54" RCP	X			2216	623						
3B	208+02/209+14 -L-(LT)	48" RCP	X			6967	4638						
3C	202+96-L-(LT)	LEVEL SPREADER			X		64						
4	221+87 /223+01-L-(LT)	2' BASE DITCH(BYPASS)			X	1166	998						
5	231+05/232+65-L-(LT&RT)	30" RCP	X			8562	4228						
SUBTOTALS=:						29819	16941		86004	50474		45810	29829

Note: Revision on 9/27/2018 was to Site #1 only. This reflects the changes due to the addition of a Lateral Base Ditch. Totals were also revised.

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

GUILFORD COUNTY
PROJECT: 34962.1.1 (U-3615B)

6/6/2013
Revised 11/17/2014
Revised: 9/27/2018

12 of 13

BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)	STRUCTURE SIZE / TYPE	IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft ²)	ZONE 2 (ft ²)
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)		
6	237+28 /239+38-L-	BRIDGE APPROACH	X			3478	1674						
6A	240+18/240+81 -L-(RT)	"V" DITCH (BYPASS)			X	1271	834						
7	11+52/12+86-L-(LT&RT)	42" RCP	X			3933	2411						
8	265+24/266+91-L-(LT&RT)	8'X8' RCBC	X						8902	4658			
8A	271+16/273+92 -L-(RT)	30" & 24" RCP	X			1226	2536		1385	1493			
SUBTOTALS=:	THIS SHEET					9908	7455		10287	6151			
SUBTOTALS=:	SHEET 1					29819	16941		86004	50474		45810	29829
TOTALS=:						39727	24396		96291	56625		45810	29829

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

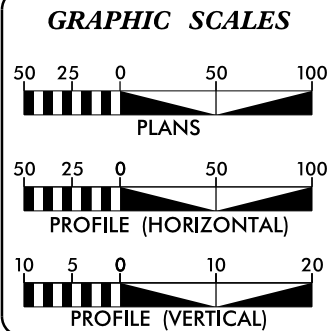
GUILFORD COUNTY
PROJECT: 34962.1.1 (U-3615B)

6/6/2013
Revised 11/17/2014
Revised: 9/27/2018

TIP: U-3615B

CONTRACT:

A PORTION OF THIS PROJECT IS
WITHIN THE MUNICIPAL BOUNDARIES
OF CITY OF HIGH POINT



DESIGN DATA

ADT 2008 = 9600-23400
ADT 2030 = 18100-40400
DHV = 10 %
D = 60 %
T = 5 %
V = 50 MPH
TTST 2% DUAL 3%

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

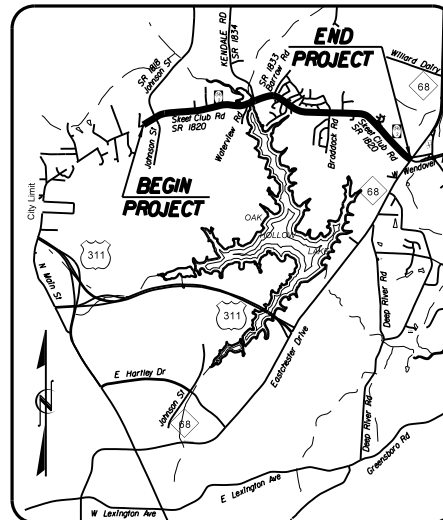
GUILFORD COUNTY

LOCATION: SR 1820 (SKEET CLUB ROAD) FROM WEST OF SR 1818 (JOHNSON STREET) TO NC 68 (EASTCHESTER DRIVE).

**TYPE OF WORK: PAVING, GRADING, DRAINAGE, CURB & GUTTER,
STRUCTURE, CULVERT, SIGNING AND SIGNALS**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3615B	1	
STATE PROJ.NO.	F.A.PROJ.NO.	DESCRIPTION	
34962.1.1	STP-1820(2)	P.E.	
34962.2.3	STP-1820(5)	R/W, UTIL.	

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

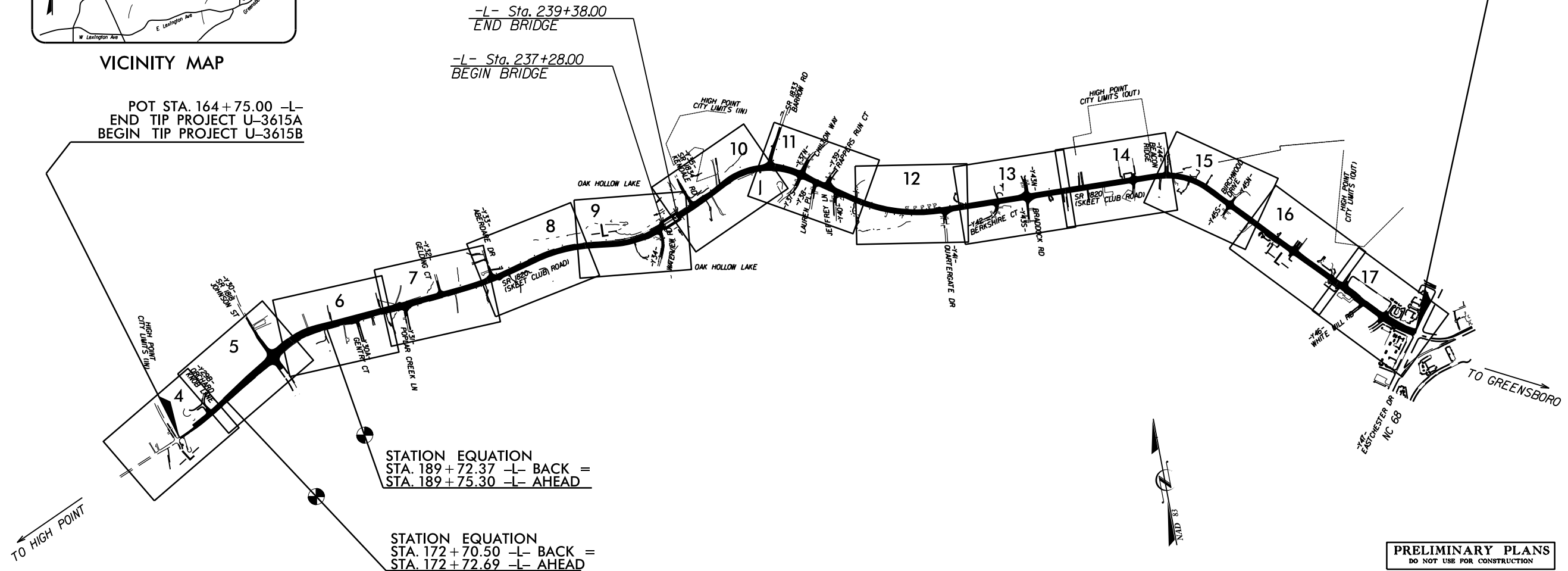


VICINITY MAP

POT STA. 164+75.00 -L-
END TIP PROJECT U-3615A
BEGIN TIP PROJECT U-3615B

-L- Sta. 239+38.00
END BRIDGE

-L- Sta. 237+28.00
BEGIN BRIDGE



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NCDOT CONTACT: B. Doug Taylor, P.E., PROJECT ENGINEER - ROADWAY DESIGN UNIT

"CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD III"

Prepared In the Office of:
WANG ENGINEERING COMPANY, INC.
CARY, N.C.

FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY DATE:
APRIL 27, 2009

LETTING DATE:
OCTOBER 15, 2013

CLIFTON T. REGISTER, PE
PROJECT ENGINEER

SCOTT L. KENNEDY
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.

SIGNATURE:

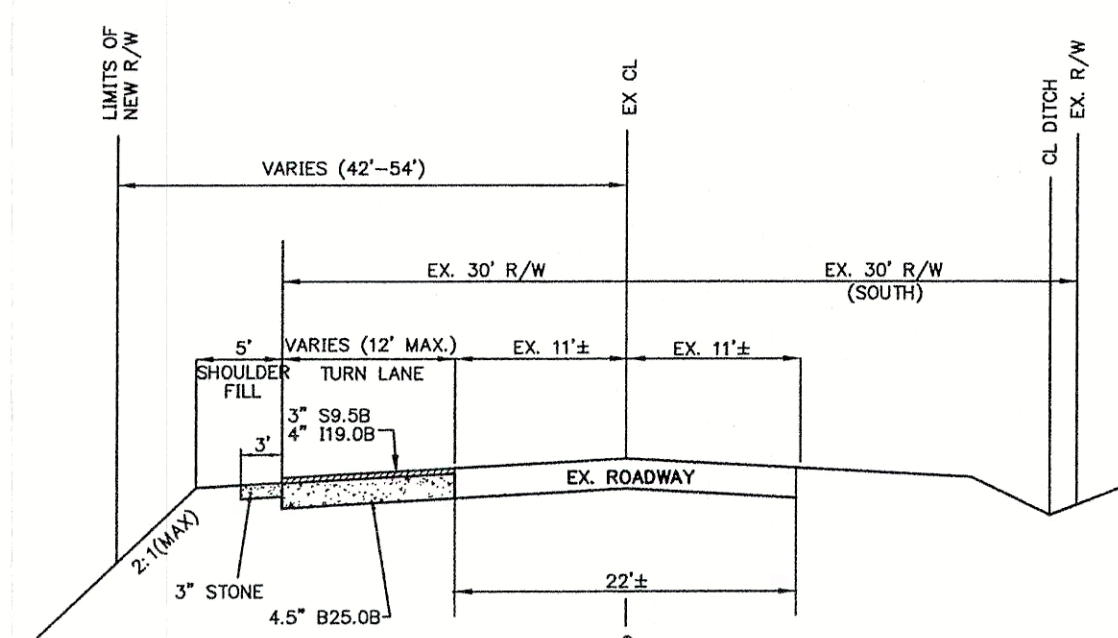
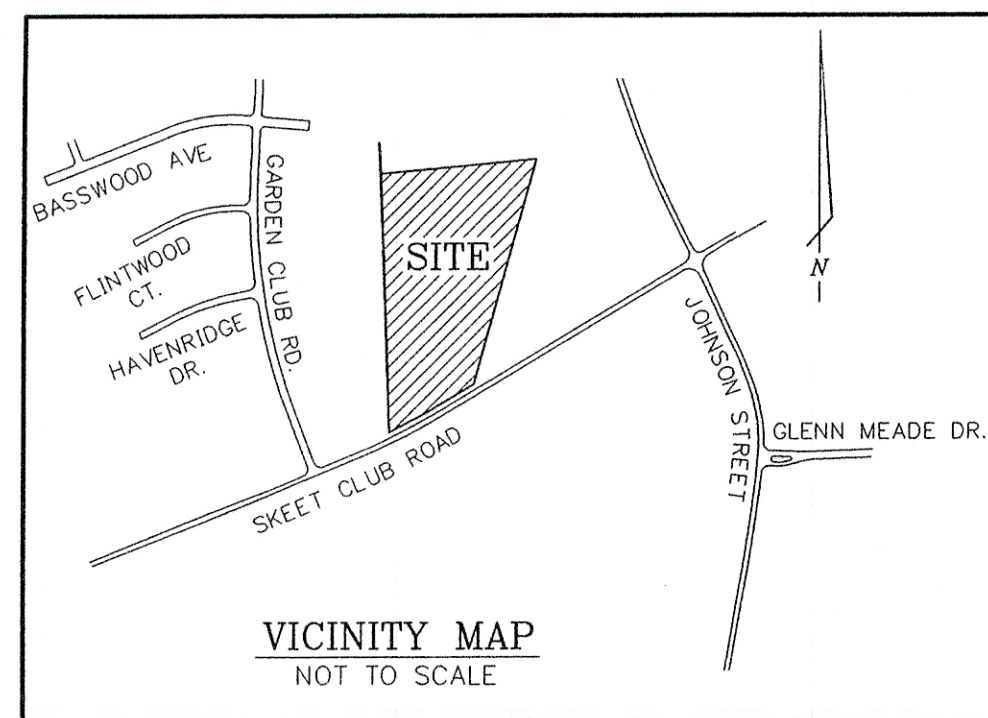
**ROADWAY DESIGN
ENGINEER**

SIGNATURE: _____ *P.E.*

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE DESIGN ENGINEER
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

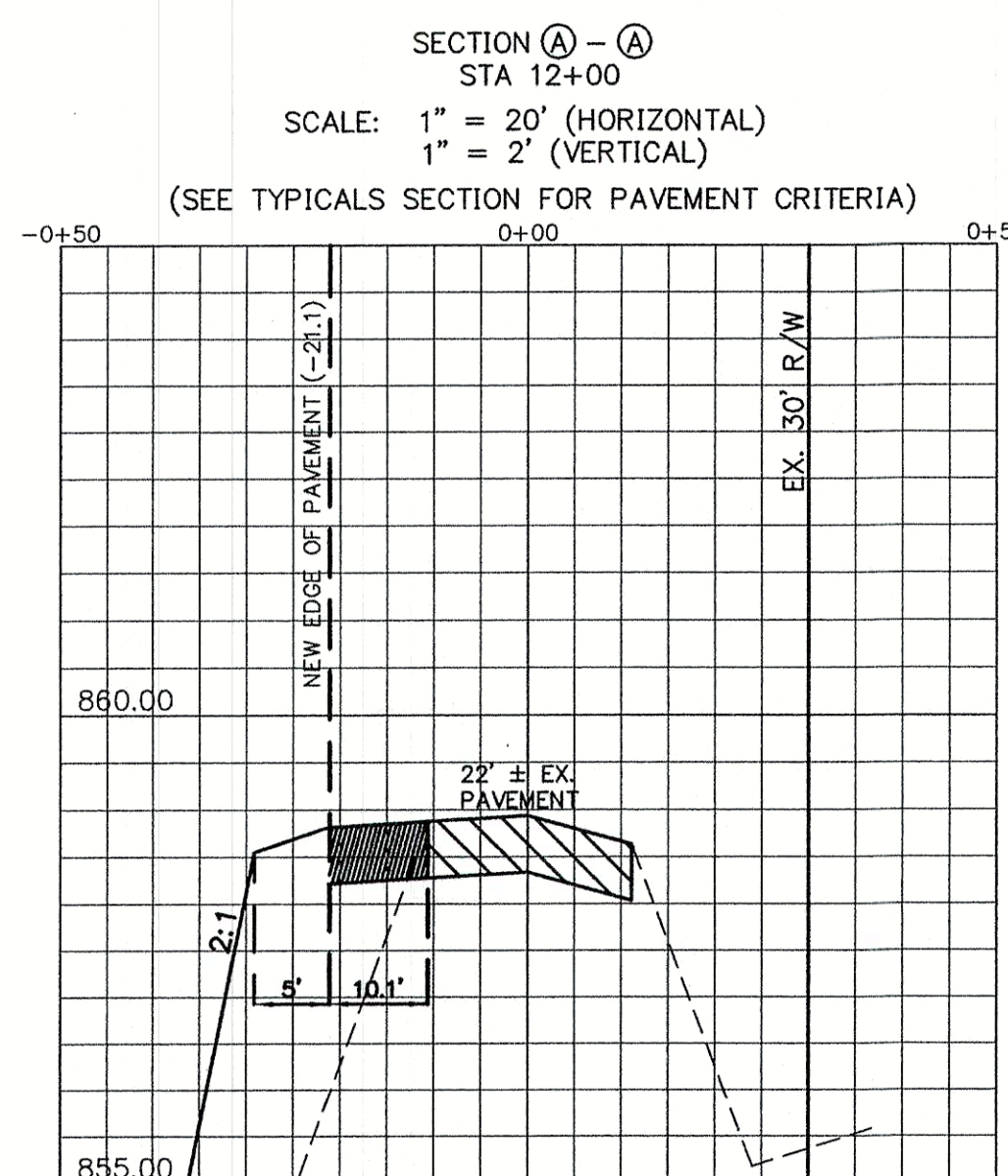
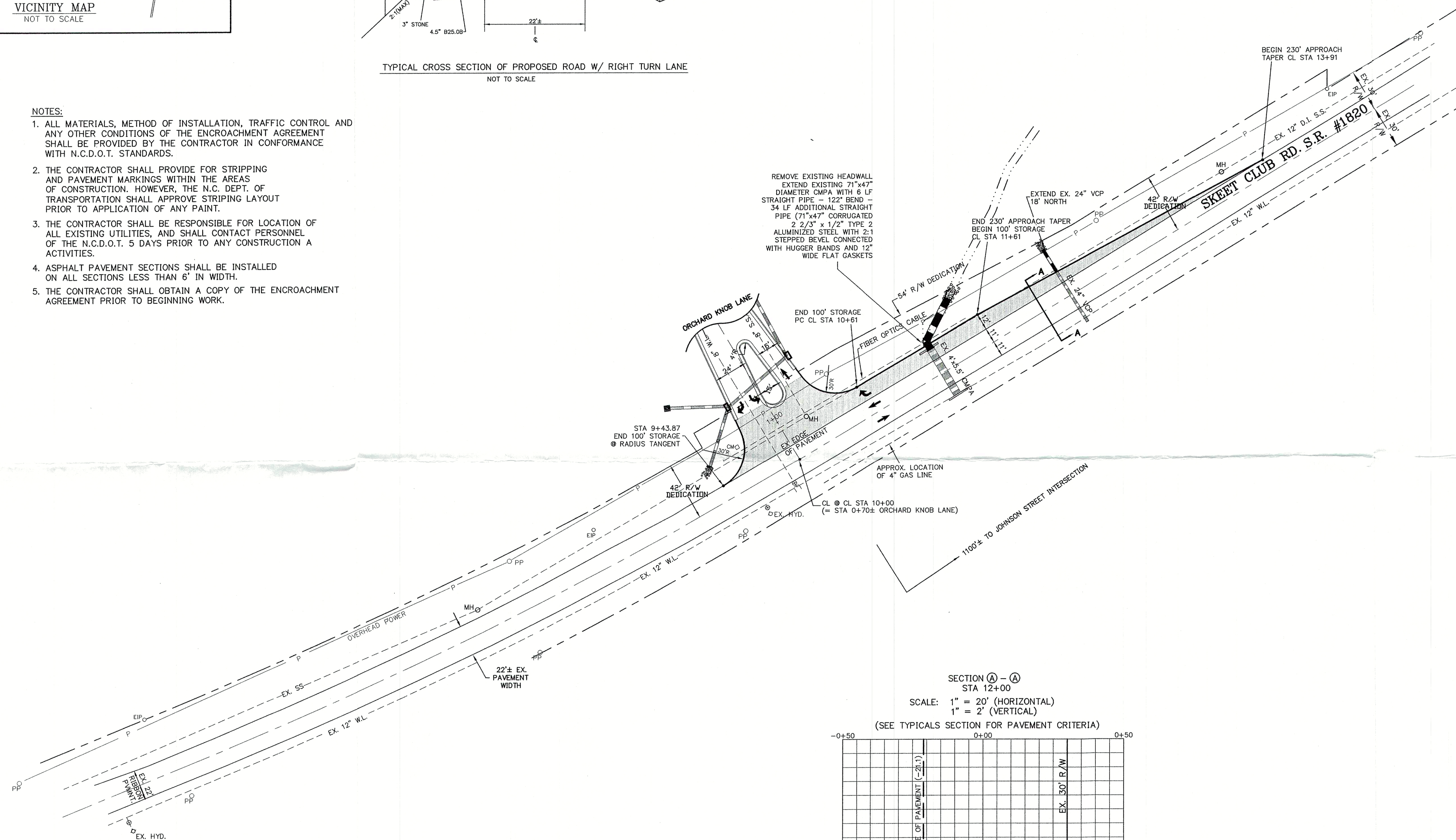
APPROVED
DIVISION ADMINISTRATOR DATE



3" 59.5B (AVG. RATE OF 238 LBS/SY)	4" 119.0B (AVG. RATE OF 458 LBS/SY)	4.5" B25.0B (AVG. RATE OF 513 LBS/SY)
PAVEMENT SECTION DETAILS		



- NOTES:
1. ALL MATERIALS, METHOD OF INSTALLATION, TRAFFIC CONTROL AND ANY OTHER CONDITIONS OF THE ENCROACHMENT AGREEMENT SHALL BE PROVIDED BY THE CONTRACTOR IN CONFORMANCE WITH N.C.D.O.T. STANDARDS.
 2. THE CONTRACTOR SHALL PROVIDE FOR STRIPPING AND PAVEMENT MARKINGS WITHIN THE AREAS OF CONSTRUCTION. HOWEVER, THE N.C. DEPT. OF TRANSPORTATION SHALL APPROVE STRIPING LAYOUT PRIOR TO APPLICATION OF ANY PAINT.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION OF ALL EXISTING UTILITIES, AND SHALL CONTACT PERSONNEL OF THE N.C.D.O.T. 5 DAYS PRIOR TO ANY CONSTRUCTION A ACTIVITIES.
 4. ASPHALT PAVEMENT SECTIONS SHALL BE INSTALLED ON ALL SECTIONS LESS THAN 6' IN WIDTH.
 5. THE CONTRACTOR SHALL OBTAIN A COPY OF THE ENCROACHMENT AGREEMENT PRIOR TO BEGINNING WORK.



ROAD WIDENING & ENTRANCE DETAIL SKEET CLUB ROAD S.R. No. 1820 FOR ORCHARD KNOB TOWNHOMES

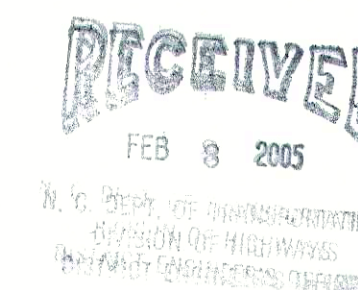
CITY OF HIGH POINT - HIGH POINT TOWNSHIP
GUILFORD COUNTY - NORTH CAROLINA

MAY, 2000
REV. OCTOBER, 2002
REV. OCTOBER, 2004
REV. FEBRUARY, 2005
JOB No. 99059

OWNER/DEVELOPER

TRIAD PROPERTY GROUP, L.L.C.
c/o BRITT DEVELOPMENT CO.
PO BOX 4587
HIGH POINT, N.C. 27263
(336) 883-6122

SCALE: 1"=40'



JAMESTOWN ENGINEERING GROUP, INC.
CONSULTING ENGINEERS

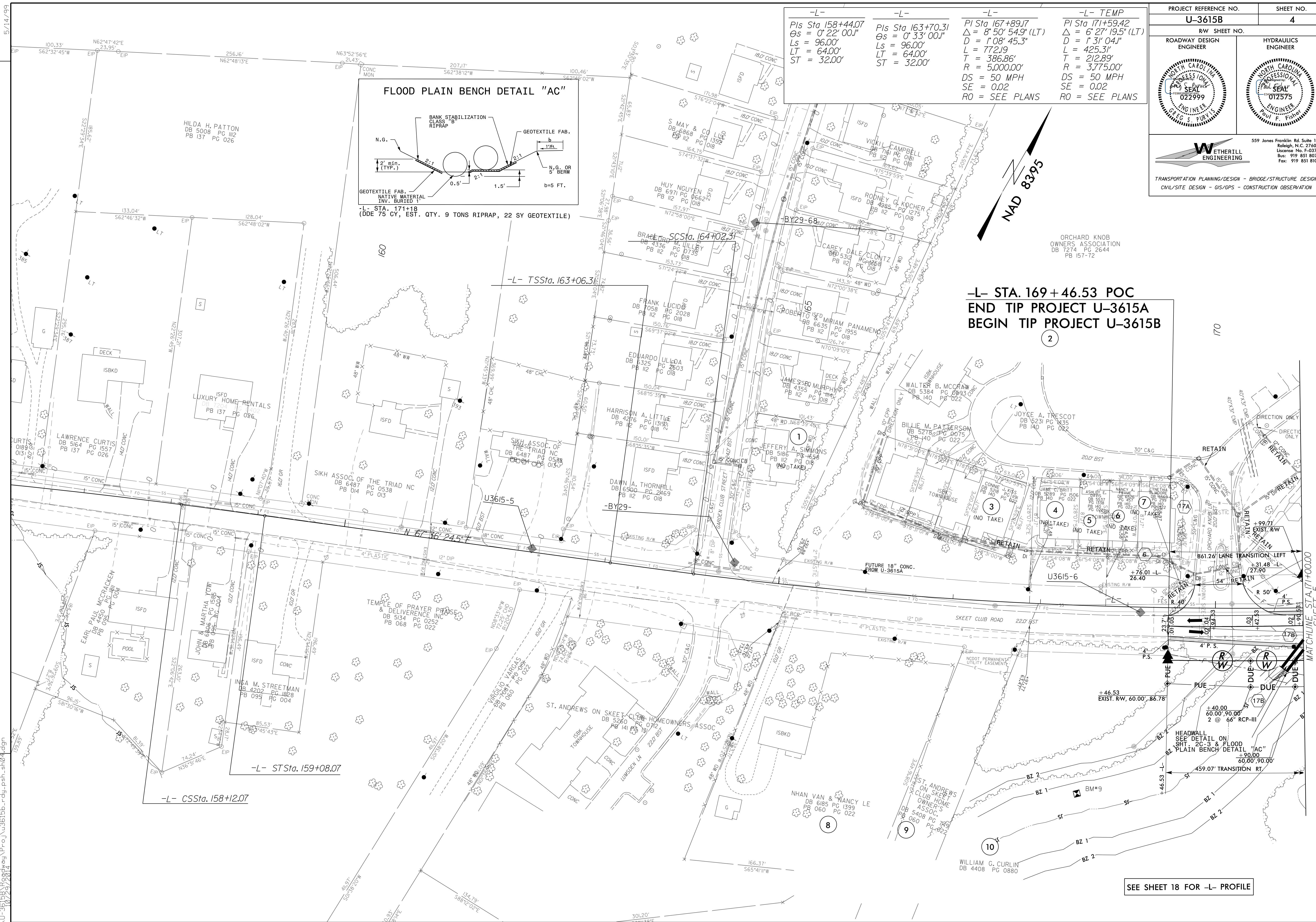


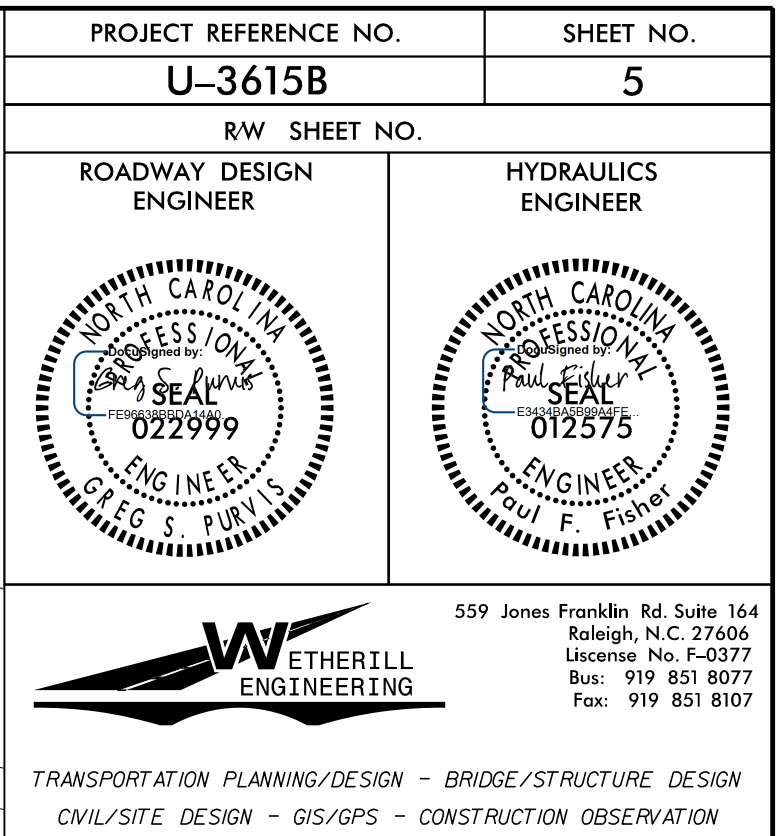
117 EAST MAIN STREET
P.O. BOX 365
JAMESTOWN, N.C. 27282
Telephone (336) 886-5523

SHEET NO.

6

OF 9





8/23/99

5:35:13 PM
P:\2001\U-3615B\Roadway\Xsc\U3615b-rdy.xpl.L.dgn
10/2/2014

