



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

March 18, 2019

MEMORANDUM TO: Mr. Mike Mills, P.E.
Division 7 Engineer

FROM: Philip S. Harris, III, P.E., Manager *Carla Dagnino*
for Environmental Analysis Unit

SUBJECT: Guilford County; SR 1003 (North Main Street) – SR 1820 (Skeet Club Road), US 311 to NC 68 (Eastchester Drive) Federal Aid Project No. STP-1802(2);
WBS No 34962.1.1, TIP U-3615

Attached are the U.S. Army Corps of Engineers and N.C. Division of Water Resources Permits and the , and the Randleman Buffer Authorization. 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:

<https://xfer.services.ncdot.gov/pdea/PermlIssued/>

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

Mr. Ron Davenport, P.E. Contracts Management
Ms. Jerry Parker, Division 7 Environmental Officer
Dr. Majed Al-Ghandour, P.E., Programming and TIP
Mr. Carl Barclay, P.E., Utilities Unit
Mr. Matt Lauffer, P.E., Hydraulics Unit
Mr. Brian Hanks, P.E., Structures Management Unit
Mr. Mark Staley, Roadside Environmental Unit
Mr. Lamar Sylvester, P.E., State Roadway Construction Engineer
Ms. Kevin Fischer, P.E. Structures Management Unit
Ms. Beth Harmon, Division of Mitigation Services
Ms. Cheterra Sheff, Single Audit Compliance

PROJECT COMMITMENTS

T.I.P. Project No. U-3615
SR 1003 (North Main Street) – SR 1820 (Skeet Club Road)
US 311 to NC 68 (Eastchester Drive), Guilford County
Federal Project No. STP-1802(2)
State Project No.8.2494701
WBS Element No.34962.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Structure Design Unit / Roadside Environmental Unit / Division Construction Engineer

For the removal of bridge No.65 over Oak Hollow Lake, Best Management Practices will be employed to minimize sediment distribution downstream in the lake. Care will be taken in the removal of the bridge and the removal of erosion control or sediment control devices so that sediment is not released downstream in the lake.

This is a standard operating procedure.

Roadway Design Unit

The Elihu Mendenhall property, a 4(f) resource, will be impacted with temporary easements. These easements will be needed only during the construction of the project. The easements will not cause permanent or adverse physical impacts or interfere with the activities or purposes of the Farmstead. A note will be added to the roadway design plans and/or project special provisions instructing the contractor to fully restore each easement area to a condition equal to or better than what existed prior to the project. As specified in 23 CFR 771.135, the temporary easements will not constitute a use of property from the Farmstead within the meaning of Section 4(f), and a Section 4(f) Evaluation is not required. However, if modifications during final design result in any of the above conditions not being met, then a 4(f) evaluation will be required.

A note instructing the contractor to fully restore each easement in the area of Elihu Mendenhall property to a condition equal to or greater than what existed prior to the project was not included on the Right of Way Plans or in the Project Special Provisions. Roadway agreed the note will be added to the plans.

The note has been added to roadway plans.

Hydraulics Unit and Project Development and Environmental Analysis Unit

Any impacts to wetlands, streams, and buffers must comply with the Randleman Buffer Rules, 404/401 regulations, water supply regulations (15A NCAC 2B .0216), and any other required federal, state, and local regulations.

This is a standard operating procedure.

Geotechnical Unit

It is anticipated that the proposed widening of Skeet Club Road will encroach on one property identified as an underground storage tank (UST) site. This impacted site will be further evaluated prior to right of way acquisition.

There are three (3) UST sites identified by NCDOT Geotechnical Unit that may be impacted by the proposed widening. 1) Bizzy Bee Grocery II at 3802 North Main Street 2) Dixon Produce at 3300 North Main Street 3) Former Tan Safeway at 3301 North Main Street. All three sites will be evaluated prior to acquisition.

Hydraulics Unit

Hazardous spill basins will be required on any part of the project that falls within a 0.5 mile of the Critical Area of the Water Supply Watershed.

Hazardous spill basins have been included in the Right of Way Plans as needed.

Hydraulics Unit and Structure Design Unit

In association with the replacement of Bridge #65, no deck drains will be allowed to discharge directly into Oak Hollow Lake.

Bridge design of Bridge No. 65 is complete and does not have deck drains.

Project Development and Environmental Analysis Unit

The noise analysis in this report assumed a worst-case scenario of a 4-lane median divided typical section. It is anticipated that the final recommendation on the typical section may reduce the number of impacted noise receptors. Once the typical section recommendation has been determined, the number of impacted noise receptors will be re-calculated and reported in the final environmental document.

A revised noise report has been completed and is summarized in Section V of the FONSI.

In the area of the Historic Spring House, in order to accommodate for the widening of the road and avoid impacts to the Spring House ruins, two avoidance alternatives have been developed. Until final designs are complete, it cannot be determined at this time which alternate will be used. The State Historic Preservation Officer

issued a determination of "No effect" for Alternative 1 (1:1 slope), and a determination of "adverse effect" for Alternative 2 (retaining wall) (see pages B-1 and B-2 in Appendix B for concurrence forms). Once more detailed survey and soils information is obtained, an alternative will be selected, and the project's impact on this 4(f) resource will be re-evaluated. If the "adverse effect" alternative is selected, a Memorandum of Agreement (MOA) will have to be issued. Impacts associated with the selected alternative will be included in the final environmental document.

After investigating the soils in the area of the Spring House Ruins, it was determined that a 2:1 slope could be utilized. After presenting this information to the SHPO, it was determined that the slope alternative would result in "no adverse effect" on the historic property, and the retaining wall alternative (which includes a handrail and guardrail) would result in an "adverse effect". Although the slope would impact the site, it would act as a protective covering for the Spring House. This decision was made with the condition that archaeological monitoring be provided during fill and construction of the project (see Appendix Bin the FONSL pages B-1 and B-2 for concurrence form). The retaining wall alternative was seen as a least desirable alternative due to the fact that the guardrail, handrail, and size and appearance of the retaining wall would not be consistent with the historic and rural nature of the National Register Property.

Right of Way Unit

Properties owned by the City of High Point at Oak Hollow Lake were purchased with grants from the US Department of Interior. That property is protected by Section 6(f)(3) of the Land and Water Conservation Fund (LWCF) Act of 1965. Rights of way needs of this property for this project are a LWCF Conversion. NC Department of Environment and Natural Resources, Division of Parks and Recreation, and the US Department of Interior have approved of the mitigation by replacement with property of equal value.

See the City of High Point Conversion attachment to the Consultation for U-3615 of February 2009.

The above referenced properties of Oak Hollow Lake are protected by Section 4(f). They are qualified as Deminimus.

See the City of High Point Letter of March 15, 2007 and the published Public Notice of January 2, 2009 attached to the Consultation of February 2009.

COMMITMENTS DEVELOPED FROM PERMITTING

As a result of the 401 permit issued August 29, 2013 and the 404 permit issued September 20, 2013, the following special conditions for U-3615B were added.

Roadside Environmental and Division 7 Construction

401 condition 7

For the 150 linear feet of streams being impacted due to site dewatering activities, the site shall be graded to its preconstruction contours and revegetated with appropriate native species.

Division 7 Construction

401 condition 12

A turbidity curtain will be installed in Oak Hollow Lake if driving or drilling activities occur within the lake, on the bank, or within 5 feet of the top of bank. This condition can be waived with prior approval from DWR.

Project Development and Environmental Analysis Unit – Natural Environment Section

404 condition f

Compensatory mitigation requirements for U-3615B are summarized in Table 1(see Permit). Due to the status of Section U-3615A being unfunded and letting more than 5 years out, NCDOT is not proposing mitigation for Section U-3615A at this time. The U-3615B section will permanently impact a total of 2,099 feet of warm water streams. Of these 2,099 feet, there are 111 feet of stream impacts requiring mitigation.

The Corps is requiring 2:1 mitigation for 452 feet of perennial stream impacts and 1:1 mitigation for 1,536 feet of intermittent stream impacts. NCDOT is providing onsite mitigation of 760 feet of warm water stream by relocating a section of UT at site 3-3. The remaining mitigation requirement of 1,680 feet of permanent warm water stream impacts will be provided by the North Carolina Ecosystem Enhancement Program (NCEEP), as outlined in the letter dated April 23, 2013, from James B. Stanfill, NCEEP Asst. Management Supervisor. In order to compensate for this wetland impact associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit authorization. NCEEP will also provide mitigation for 0.82 acres (2:1 ratio) of permanent riparian wetland impacts resulting from roadway fill, excavation, and mechanized clearing. The on-site mitigation will be constructed and in compliance with the attached U-3615B Stream Mitigation Plan dated January 12, 2013 (see Permit - Identified as Exhibit C).

Per USACE 404 Permit Modification issued on February 19, 2019, compensatory stream mitigation has changed. Compensatory impacts are required for 470 linear feet at replacement ratio of 2:1 and 1,536 linear feet of stream at a replacement ratio of 1:1 for U-3615B. NCDOT is providing onsite mitigation of 760 feet of warm water stream by relocating a section of UT at site 3-3. The remaining mitigation requirement of 1,716 linear feet of permanent warm water stream will be provided by NC Division of Mitigation Services. Mitigation has been provided by NC Division of Mitigation Services by receipt of letter dated January 10, 2019.

401 condition 20

Compensatory mitigation for impacts to 1,580 linear feet of streams at a replacement ratio of 1:1 is required for U-3615B. Compensatory mitigation for impacts to jurisdictional streams shall be provided by onsite stream relocations of 760 linear feet of UT 3-3 West Fork of Deep River. The onsite stream relocation shall be constructed in accordance with the design submitted by your May 2, 2013 application. All on-site mitigation sites shall be protected in perpetuity by a conservation easement or through NCDOT fee simple acquisition and recorded in the NCDOT Natural Environment Unit mitigation geodatabase. Please be reminded that as-builts for the completed streams shall be submitted to the North Carolina Division of Water Resources 401 Wetland Unit with the as-builts for the rest of the project. If the parameters of this condition are not met, then the permittee shall supply additional stream mitigation for the 760 linear feet of impacts. All channel relocation will be constructed in a dry work area, will be completed and stabilized and must be approved on site by NCDWR staff, prior to diverting water into the new channel. Whenever possible, channel relocations shall be allowed to stabilize for an entire growing season. All stream relocations shall have a 50-foot wide native wooded buffer planted on both sides of the stream unless otherwise authorized by this Certification. A transitional phase incorporating rolled erosion control product (RECP) and appropriate temporary cover is allowable.

401 condition 23

Compensatory mitigation for impacts to 101,023 square feet of protected riparian buffers in Zone 1 (303,069 square feet of mitigation) and 70,419 square feet of protected riparian buffers in Zone 2 (105,629 square feet of mitigation) shall be required for U3615B. In accordance with 15A NCAC 02B.0252, riparian vegetation reestablishment shall include a minimum of at least 2 native hardwood tree species planted at a density sufficient to provide 320 trees per acre at maturity. All on-site mitigation sites shall be protected in perpetuity by a conservation easement or through NCDOT fee simple acquisition and recorded in the NCDOT Natural Environment Unit mitigation geodatabase.

Per DWR 401 Permit Modification issued on January 29, 2019, compensatory buffer mitigation has changed. Compensatory impacts are required for 100,294 ft² of riparian buffers in Zone 1 (300,882 ft² of mitigation) and 56,625 ft² of riparian buffer in Zone 2 (84,938 ft² of mitigation) for U-3615B. Mitigation has been provided by NC Division of Mitigation Services by receipt of letter dated January 10, 2019.

401 condition 24

The permittee shall monitor the buffer mitigation site. Monitoring shall consist of stem counts. An annual report shall be submitted to NCDWR for a period of 5 years showing monitoring results, survival rate/ success of tree and vegetation establishment, and that diffuse flow through the riparian buffer has been maintained. The first annual report shall be submitted within one year of final planting. Failure to achieve a buffer density of 320 trees per acre after 5 years will require the annual report to provide appropriate remedial actions to be implemented and a schedule for implementation. Approval of the final annual report, and a formal “close out” of the mitigation site by NCDWR is required.

401 condition 25

Compensatory mitigation for 303,069 square feet of riparian buffers in Zone 1 and 105,629 square feet in riparian buffer Zone 2 shall be required for U3615B. We understand that 45,810 square feet of protected riparian buffer in Zone 1 and 29,829 square feet of protected riparian buffer in Zone 2 are being performed on-site. We understand that you have chosen to perform compensatory mitigation for the remaining 257,259 square feet of riparian buffer in Zone 1 and 75,800 square feet of riparian buffer in Zone 2 to protected buffers through use of the North Carolina Ecosystem Enhancement Program (NCEEP). Mitigation for unavoidable impacts to Randleman Riparian Buffers shall be provided in the Cape Fear River Basin and done in accordance with 15A NCAC2B.0252. NCEEP has indicated in a letter dated August 20, 2013 that they will assume responsibility for satisfying the compensatory mitigation requirements for the above-referenced project, in accordance with NCEEP’s Mitigation Banking Instrument signed July 28, 2010.

Per DWR 401 Permit Modification issued on January 29, 2019, compensatory buffer mitigation has changed. Compensatory mitigation for 300,882 ft² of Zone 1 riparian buffers and 84,938 ft² of Zone 2 riparian buffers shall be required for U-3615B. After deduction for onsite mitigation, NCDOT will be required to perform compensatory mitigation for the remaining 255,072 ft² of riparian buffers in Zone 1 and 55,109 ft² of riparian buffer in Zone 2 for U-3615B. Mitigation has been provided by NC Division of Mitigation Services by receipt of letter dated January 10, 2019.

Permit Modification

No new special conditions were added for the 401 permit modification issued on January 29, 2019 and the 404 permit modification issued on February 19, 2019.

However, as a result of the 2019 permits, previous comments issued need to be modified to reflect additional impacts. All modifications to the previous comments are italicized.



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

February 19, 2019

Regulatory Division/1200A

Action ID: SAW-1999-21179

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

Dear Mr. Harris:

Reference the Department of the Army (DA) permit issued on September 16, 2013, to Mr. Phillip S. Harris, III, P.E., of the North Carolina Department of Transportation (NCDOT) for impacts associated with the new location project identified as U-3615. The 6.3 mile project widens and improves 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 reconfigures the intersection at North Main Street and Skeet Club Road in High Point, Guilford County, North Carolina. For construction purposes this project has been divided into two sections: U-3615A includes SR 1003 (North Main Street) and SR 1820 (Skeet Club Road) between US 311 and east of SR 1818 (Johnston Street). U-3615B includes SR 1820 (Skeet Club Road) from west of SR 1818 (Johnson Street) to NC 68 (East Chester Drive). The project area contains tributaries to West Fork Deep River as well as adjacent wetland areas and impoundments in the Cape Fear River Basin (8-Digit Cataloging Unit 03030003).

Total impacts authorized by the permit include: 1) the permanent placement of fill material into 2,538 linear feet of jurisdictional stream channel, 0.04 acre of open waters, and 0.82 acre of adjacent riparian wetlands and 2) the temporary placement of fill material into 150 linear feet of jurisdictional stream channel. The above impacts were authorized based on final design for U-3615B and preliminary design for U-3615A; construction is not authorized on U-3615A until permit modifications are submitted and approved based on final design for that section. Compensatory mitigation was implemented for the unavoidable impacts for U-3615B by a combination of payment into the North Carolina Ecosystem Enhancement Program, now known as the North Carolina Division of Mitigation Services, as well as on-site permittee responsible mitigation. NCDOT will provide a compensatory mitigation plan for U-3615A when permit modifications based on final design are requested for this section.

Also reference your permit modification request letter dated January 17, 2019, proposing the following:


- 1) Extending culvert pipes into an additional 18 linear feet of stream channel, and adding 20 linear feet of additional bank stabilization at U-3615B Permit Site 1. This work would also require an additional 14 linear feet of temporary stream impacts. The purpose of the additional stream impacts would be for NCDOT to improve a turn lane and lengthen the two previously-authorized 66-foot reinforced concrete pipes at the Site. This existing turn lane was not included in the original survey, and as such was not accounted for during the original project design. The existing turn lane would be updated to meet NCDOT roadway criteria and the previously authorized reinforced concrete pipes would be lengthened. This is a design revision, so the two originally permitted 66-foot pipes have yet to be installed. Guardrail would also be installed due to an approximately 7 foot vertical drop at the end of the pipes.

The Corps has completed the evaluation of your request and determined that it is appropriate and reasonable, and no public notice is required for this modification. Therefore, the permit is modified as listed and shown in the modified drawings in the January 17, 2019 modification request, for a net increase of permanent impacts to streams of 38 linear feet (permanent loss of 18 linear feet) and a net increase of temporary impacts to streams of 14 linear feet. Project U-3615 now totals 1) permanent placement of fill material into 2,576 linear feet of jurisdictional stream channel, 0.04 acre of open waters, and 0.82 acre of adjacent riparian wetlands and 2) the temporary placement of fill material into 164 linear feet of jurisdictional stream channel. In addition, the following special conditions regarding compensatory mitigation has been incorporated:

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

All other conditions of the permit, including the permit expiration date of December 31, 2023, remain in effect as written. Should you have questions, contact Mr. David E. Bailey, Raleigh Regulatory Field Office at David.E.Bailey2@usace.army.mil or telephone (919) 554-4884, Extension 30.

FOR THE COMMANDER


Sgt Robert J. Clark
Colonel, U.S. Army
District Commander

Copies Furnished with Attachment:

Ms. April Norton
Transportation Permitting Unit
Division of Water Resources
North Carolina Department of
Environment and Natural Resources
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

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

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

Copies Furnished without Attachment:

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

Ms. Amanetta Somerville
U.S. Environmental Protection Agency
Region 4 NEPA Program Office
61 Forsyth Street, SW
Atlanta, Georgia 30303

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

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

Permittee: North Carolina Department of Transportation
Project Name: SR 1003 & SR 1820 from US 311 to NC 68 - TIP U-3615B

Action ID: SAW-1999-21179
County: Guilford

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

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

Permitted Impacts and Compensatory Mitigation Requirements

Permitted Impacts Requiring Mitigation*: **8-digit HUC and Basin:** 03030003, Cape Fear River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
1246				0.82		

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

Compensatory Mitigation Requirements: **8-digit HUC and Basin:** 03030003, Cape Fear River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
1716				1.64		

Mitigation Site Debited: NCDMS

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

Section to be completed by the Mitigation Sponsor

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

Mitigation Sponsor Name: _____

Name of Sponsor's Authorized Representative: _____

Signature of Sponsor's Authorized Representative

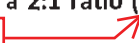
Date of Signature

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

Conditions for Transfer of Compensatory Mitigation Credit:

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

Comments/Additional Conditions:

- This Form supersedes the Compensatory Mitigation Responsibility Transfer Form, dated September 5, 2013, included as part of the DA Permit dated September 16, 2013. Note that the compensatory mitigation required by this referenced form was satisfied by NCEEP (now NCDMS) via signature on September 25, 2013.
- This DA permit modification results in a net INCREASE in the number of stream credits required relative to the original DA Permit consisting of additional permanent loss of 18 linear feet of stream channel at a 2:1 ratio (32 additional stream credits required). Typo. Should be 36 
- Additional on-site mitigation for U-3615B was required by special permit condition f) included in the original DA Permit; this requirement has not changed as a result of this modification.

This form is not valid unless signed below by the USACE Project Manager and by the Mitigation Sponsor on Page 1. *Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the USACE Project Manager at the address below, and 3) the Wilmington District Mitigation Office, Attn: Todd Tugwell, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587 (email: todd.tugwell@usace.army.mil).* Questions regarding this form or any of the permit conditions may be directed to the USACE Project Manager below.

USACE Project Manager: David Bailey
USACE Field Office: Raleigh Regulatory Field Office
US Army Corps of Engineers
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587
Email: David.E.Bailey2@usace.army.mil



USACE Project Manager Signature

February 14, 2019

Date of Signature

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



NORTH CAROLINA
Environmental Quality

ROY COOPER

Governor

MICHAEL S. REGAN

Secretary

LINDA CULPEPPER

Interim Director

January 29, 2019

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

Subject: **Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act and Randleman Buffer Rules with ADDITIONAL CONDITIONS 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. NCDWR Project No. 20130477 v.5**

Dear Mr. Harris:

Attached hereto is a copy of Certification No. WQ003966 issued to the North Carolina Department of Transportation (NCDOT) originally dated June 28, 2013 and subsequently modified and dated August 29, 2013 and December 8, 2014.

If additional assistance is requested, please contact April Norton at april.norton@ncdenr.gov.

Sincerely,

Linda Culpepper, Director
Division of Water Resources

Electronic copy only distribution:

Carla Dagnino, NCDOT, Environmental Analysis Unit
April Norton, Division of Water Resource, Central Office
David Bailey, US Army Corps of Engineers, Raleigh Field Office
Jerry Parker, Division 7 Environmental Supervisor
Gary Jordan, US Fish and Wildlife Service
Travis Wilson, NC Wildlife Resource Commission
Beth Harmon, Ecosystem Enhancement Program



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

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500. This certification authorizes the North Carolina Department of Transportation to impact 167 linear feet of jurisdictional streams and 10,726 square feet Randleman buffer impacts in Guilford County. The project shall be constructed pursuant to the application originally dated June 28, 2013 and subsequently modified and dated August 29, 2013 and December 8, 2014. The authorized impacts are as described below:

Surface Water Impacts in the Cape Fear River Basin

Site	Permanent Fill in Surface Water (linear ft)	Temporary Impacts in Surface Water (linear ft)	Total Surface Water Impacts (linear ft)	Surface Water Impacts Requiring Mitigation (linear ft)
1	137	30	137	--
Total	137	30	137	--

Total Surface Water Impacts for Site 1 Modification: 167 linear feet.

Randleman Riparian Buffer Impacts

Site	Zone 1 Impacts (sqft)	minus Wetlands in Zone 1 (sqft)	= Zone 1 Buffer Impacts (sqft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sqft)	minus Wetlands in Zone 2 (sqft)	= Zone 2 Buffer Impacts (sq ft)	Zone 2 Buffer Mitigation Required (sq ft) (using 1.5:1 ratio)
1	6,933	--	6,933	-	3,793	--	3,793	--
Total	6,933	--	6,933	-	3,793	--	3,793	--

Total Buffer Impact for Site 1 Modification: 10,726 square feet.

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

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one acre, or if total impacts to streams (now or in the future) exceed 300 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to



remain valid, you must adhere to the conditions listed in the certification and any additional conditions listed below.

Additionally, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Conditions of Certification:

1. As a condition of this 401 Water Quality Certification, if bridge demolition occurs now or in the future, the bridge demolition must be accomplished in strict compliance with the most recent version of NCDOT's Best Management Practices for Construction and Maintenance Activities. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]
2. 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. [15A NCAC 02H.0506(b)(2)]
3. 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. [15A NCAC 02H.0506(b)(2)]
4. 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. [15A NCAC 02B.0200]
5. 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. [15A NCAC 02H.0506(b)(2)]
6. 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. [15A NCAC 02H.0506(b)(2)]
7. The use of riprap above the Normal High-Water Mark shall be minimized. Any riprap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]
8. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507 (c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
9. 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. [15A NCAC 02H.0506(b)(3) and (c)(3)]

10. Heavy equipment shall be operated from the banks rather than in the stream channel to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]
11. 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. [15A NCAC 02H.0506(b)(3)]
12. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
13. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
14. 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 the NCDWR 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, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]
15. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
16. A copy of this Water Quality Certification shall be maintained on the construction site always. 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. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
17. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization, including all non-commercial borrow and waste sites associated with the project, 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. [15A NCAC 02H.0501 and .0502]
18. The issuance of this certification does not exempt the Permittee from complying with 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.
19. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]



20. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer (or whomever is the authorized agent if a non-NCDOT project) shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]
21. Native riparian vegetation (i.e., trees and shrubs native to your geographic region) 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. [15A NCAC 02B.0506(b)(2)]
22. 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 in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities. [15A NCAC 02H.0506(b)(3) and (c)(3)]
23. 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 to protect surface waters standards [15A NCAC 02H.0506(b)(3) and (c)(3)]:
 - 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.
24. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]
25. All sediment and erosion control devices shall be removed, and the natural grade restored within two (2) months of the date that the Division of Energy, Mining and Land Resources (DEMLR) or locally delegated program has released the specific area within the project. [15A NCAC 02H.0506(b)(3) and (c)(3)]

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

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

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

Mr. Bill F. Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center

The 29th day of January 2019

DIVISION OF WATER RESOURCES


Linda Culpepper

WQC No. WQ003966





NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

LINDA CULPEPPER
Interim Director

NCDWR Project No.: _____ County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Engineer's Certification

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

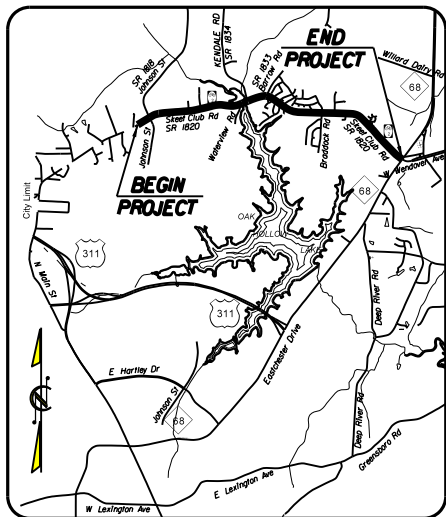
Signature _____ Registration No. _____

Date _____



TIP PROJECT: U-3615B

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

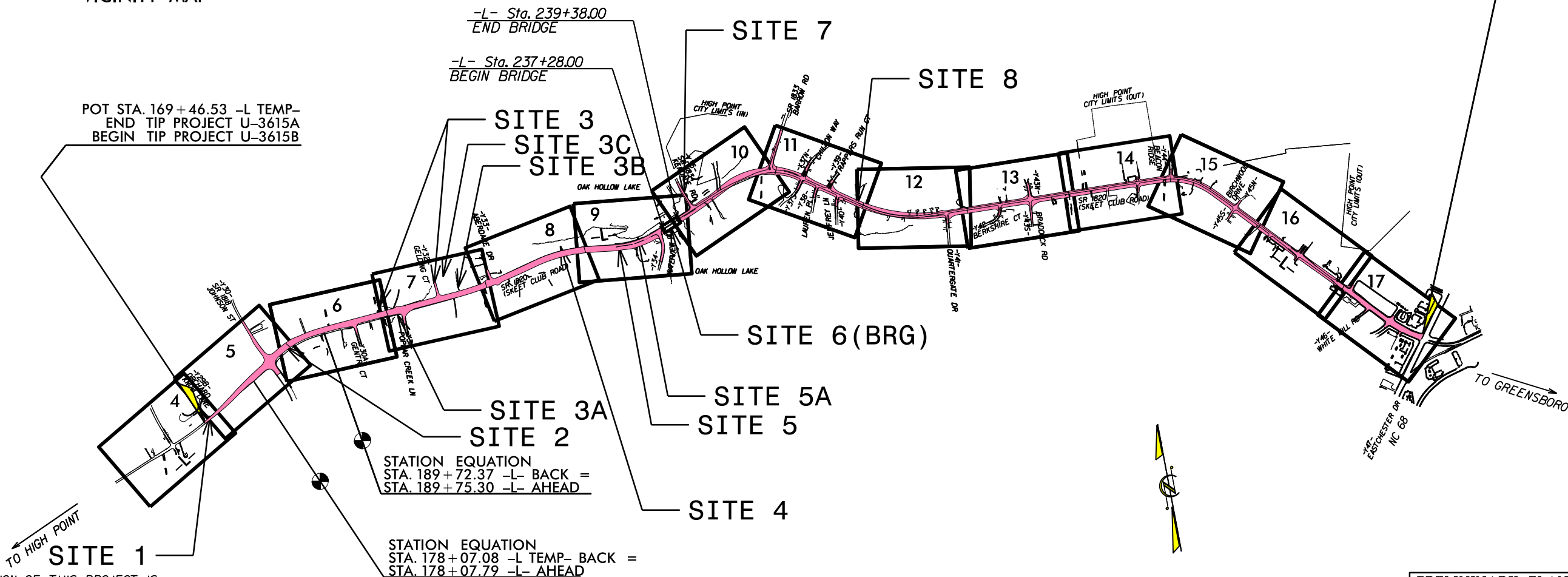
LOCATION: SR 1820 (SKEET CLUB ROAD) FROM WEST OF SR 1818 (JOHNSON STREET) TO NC 68 (EASTCHESTER DRIVE).

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



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

-L- Sta. 239+38.00
END BRIDGE

-L- Sta. 237+28.00
BEGIN BRIDGE

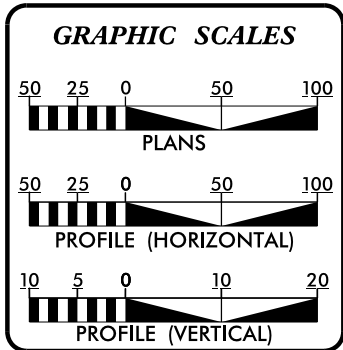
STATION EQUATION
STA. 189+72.37 -L- BACK =
STA. 189+75.30 -L- AHEAD

STATION EQUATION
STA. 178+07.08 -L- TEMP- BACK =
STA. 178+07.79 -L- AHEAD

"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:
SSP JONES FRANKLIN ROAD
SUITE 164
RALEIGH, N.C. 27605
License No. F-43377
Bus: 919 851 8077
Fax: 919 851 8107

WETHERILL ENGINEERING

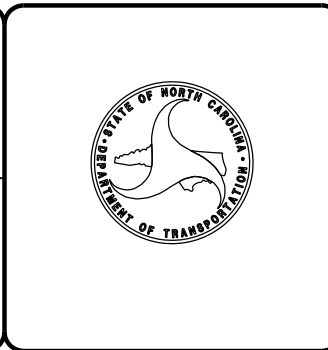
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: APRIL 27, 2009	EDWARD G. WETHERILL, PE PROJECT ENGINEER
LETTING DATE: OCTOBER 15, 2013	GREG S. PURVIS, PE PROJECT DESIGN ENGINEER
NCDOT CONTACT:	BRENDA L. MOORE, PE ROADWAY DESIGN ENGINEERING COORDINATION SECTION PROJECT ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

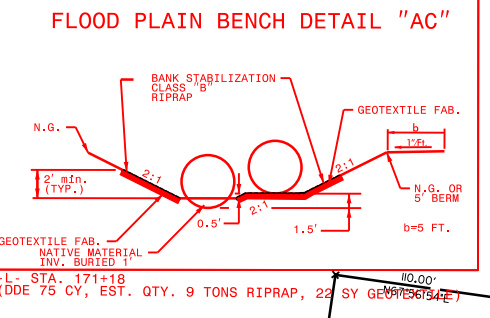
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



PERMIT DRAWING SHEET 5 OF 27

-L-	-L-	-L-	-L- TEMP
PI Sta 158+44.07	PI Sta 163+70.31	PI Sta 167+89.17	PI Sta 171+59.42
Δs = 0' 22" 00.1	Δs = 0' 33" 00.1	Δ = 8' 50" 54.9 (LT)	Δ = 6' 27" 19.5 (LT)
Ls = 96.00'	Ls = 96.00'	D = 1' 08" 45.3	D = 1' 31" 04.1
LT = 64.00'	LT = 64.00'	T = 772.19	T = 425.31'
ST = 32.00'	ST = 32.00'	R = 386.86'	R = 212.89'
		DS = 50 MPH	DS = 50 MPH
		SE = 0.02	SE = 0.02
		RO = SEE PLANS	RO = SEE PLANS



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

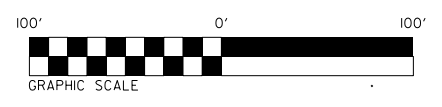
-L- STA. 169+46.53 POC
END TIP PROJECT U-3615A
BEGIN TIP PROJECT U-3615B

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

DENOTES IMPACTS IN SURFACE WATER

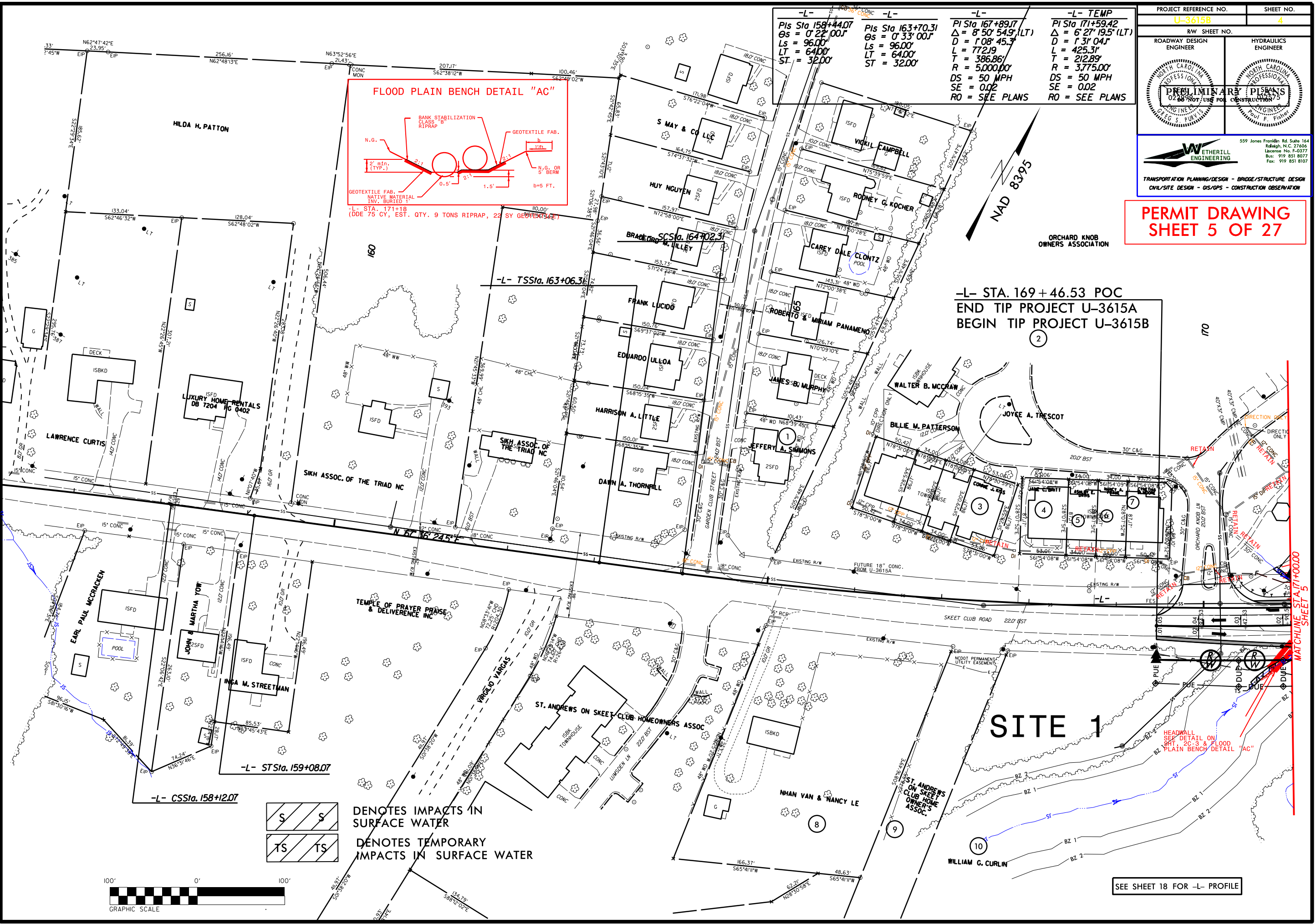
DENOTES TEMPORARY IMPACTS IN SURFACE WATER



SEE SHEET 18 FOR -L- PROFILE

MATCHLINE STA. 171+00.00 SHEET 5

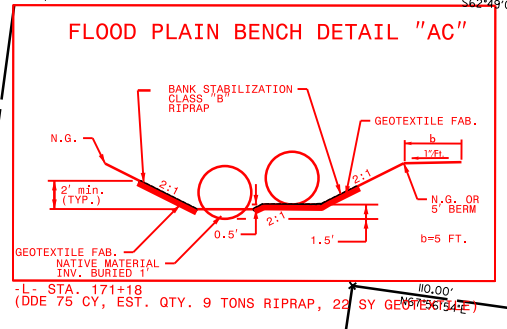
SITE 1



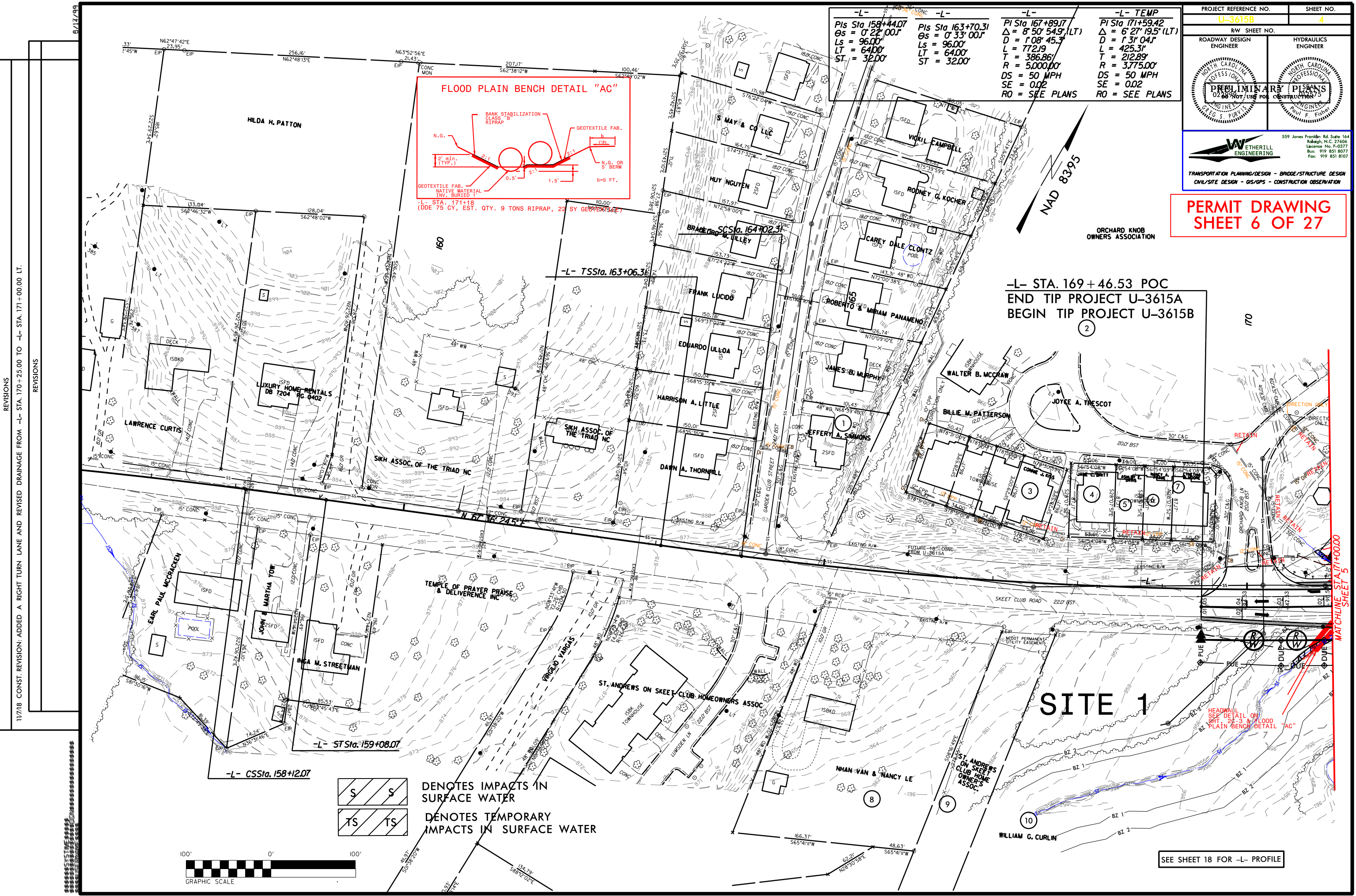
PROJECT REFERENCE NO. U-3615B	SHEET NO. 4
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	
<small>559 Jones Franklin Rd. Suite 164 Raleigh, N.C. 27606 License No. P-0377 Bus: 919 851 8077 Fax: 919 851 8107</small>	
<small>TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</small>	

PERMIT DRAWING
SHEET 6 OF 27

-L-	-L-	-L-	-L- TEMP
PI Sta 158+44.07	PI Sta 163+70.31	PI Sta 167+89.17	PI Sta 171+59.42
Os = 0' 22" 00.7	Os = 0' 33" 00.7	Δ = 8' 50" 54.9 (LT)	Δ = 6' 27" 19.5 (LT)
Ls = 96.00'	Ls = 96.00'	D = 1' 08" 45.3	D = 1' 31" 04.7
LT = 64.00'	LT = 64.00'	T = 772.19	T = 425.31'
ST = 32.00'	ST = 32.00'	R = 386.86'	R = 212.89'
		DS = 50 MPH	DS = 50 MPH
		SE = 0.02	SE = 0.02
		RO = SEE PLANS	RO = SEE PLANS

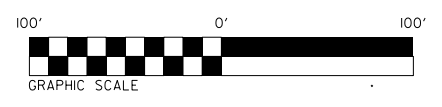


-L- STA. 169 + 46.53 POC
END TIP PROJECT U-3615A
BEGIN TIP PROJECT U-3615B



DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER



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.

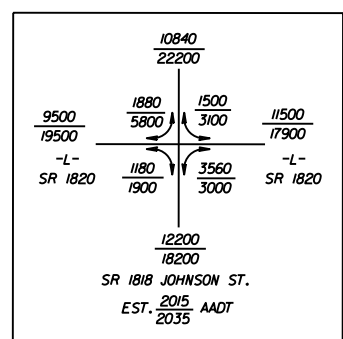
REVISIONS

MATCHLINE STA. 171+00.00 SHEET 5

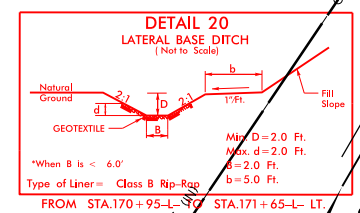
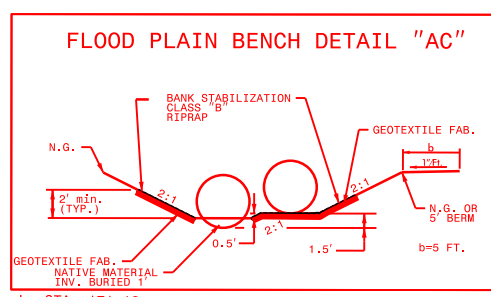
PROJECT REFERENCE NO. U-3615B		SHEET NO. 5	
RAW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		ENGINEER	

559 Jones Franklin Rd Suite 104
 Raleigh, N.C. 27606
 Licenses No. P-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SEE DESIGN - GEOPRE - CONSTRUCTION - OBSERVATION



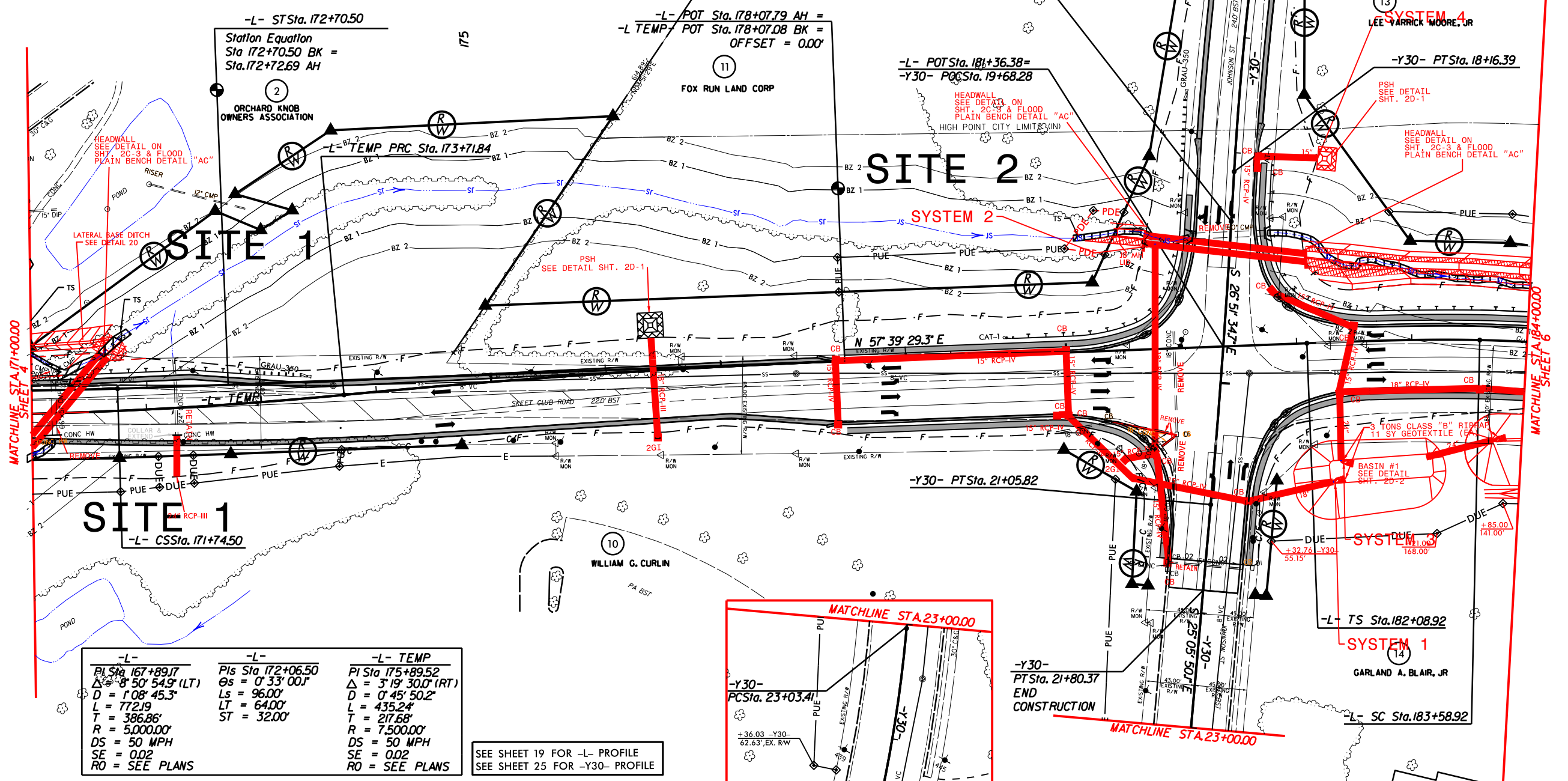
-Y30-	-Y30-	-Y30-	-Y30-	-L-
PI Sta 13+04.81	PI Sta 16+79.88	PI Sta 19+82.79	PI Sta 24+40.55	PIs Sta 183+84.03
$\Delta = 3' 22'' 29.0''$ (LT)	$\Delta = 5' 27'' 52.5''$ (LT)	$\Delta = 1' 45'' 44.6''$ (RT)	$\Delta = 13' 12'' 11.3''$ (RT)	$\Theta_s = 4' 31'' 24.1''$
$D = 1' 16'' 56.3''$	$D = 2' 00'' 00.0''$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



PERMIT DRAWING SHEET 7 OF 27

DENOTES IMPACTS IN SURFACE WATER
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

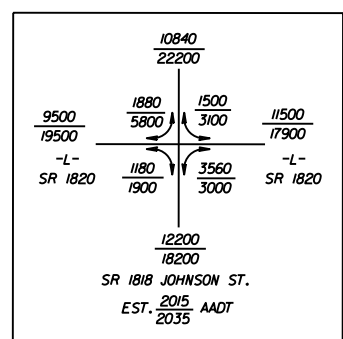
100' 0' 100'
 GRAPHIC SCALE



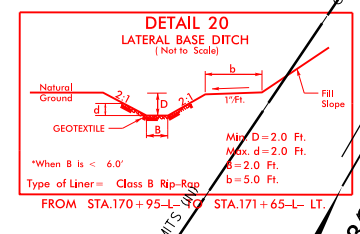
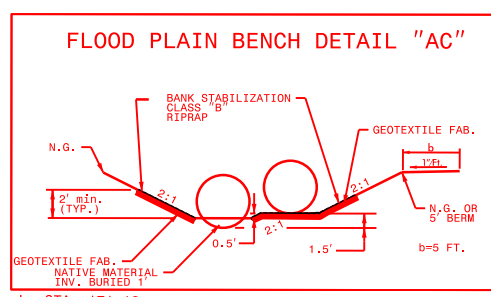
-L-	-L-	-L- TEMP
PI Sta 167+89.17	PIs Sta 172+06.50	PI Sta 175+89.52
$\Delta = 8' 50'' 54.9''$ (LT)	$\Theta_s = 0' 33'' 00.1''$	$\Delta = 3' 19'' 30.0''$ (RT)
$D = 1' 08'' 45.3''$	$L_s = 96.00'$	$D = 0' 45'' 50.2''$
$L = 772.19'$	$LT = 64.00'$	$L = 435.24'$
$T = 386.86'$	$ST = 32.00'$	$T = 217.68'$
$R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

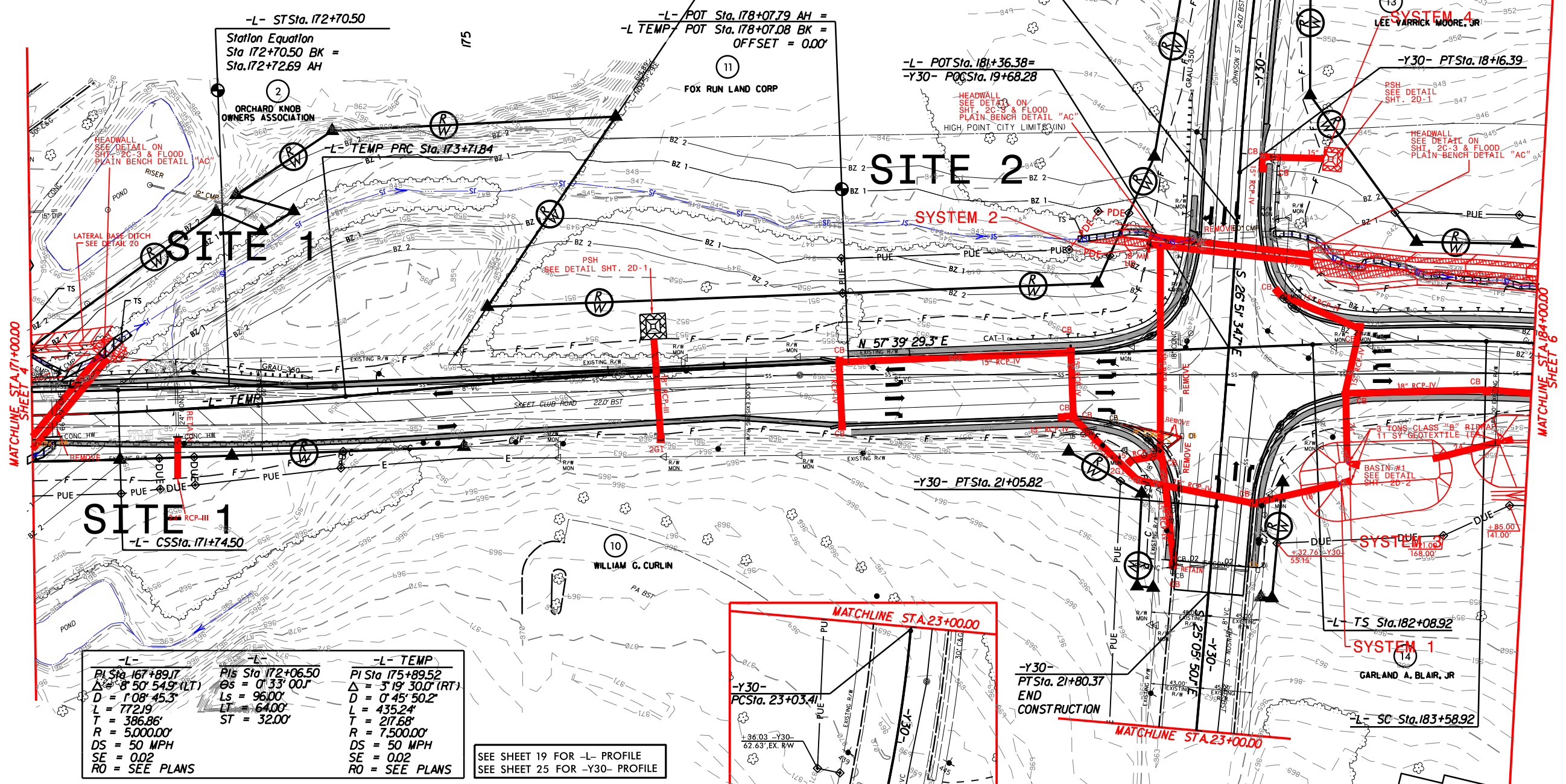
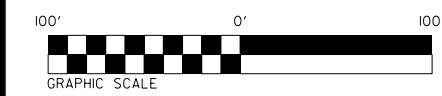
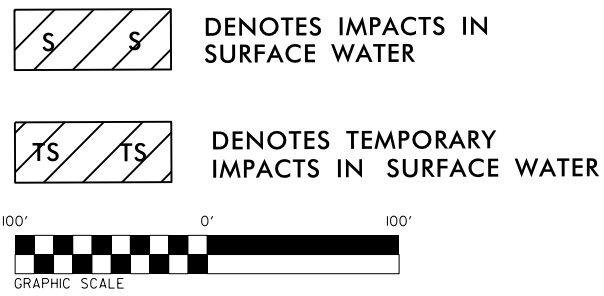
11/17/18 CONST. REVISION: ADDED A RIGHT TURN LANE AND REVISED DRAINAGE FROM -L- STA. 171+00.00 TO -L- STA. 173+40.00 LT.
 REVISIONS



-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
$\Delta = 3^{\circ} 22' 29.0''$ (LT)	$\Delta = 5^{\circ} 27' 52.5''$ (LT)	$\Delta = 1^{\circ} 45' 44.6''$ (RT)	$\Delta = 13^{\circ} 12' 11.3''$ (RT)	$\Theta_s = 4^{\circ} 31' 24''$
$D = 116^{\circ} 56.3'$	$D = 2^{\circ} 00' 00.0'$	$D = 42^{\circ} 58.3'$	$D = 45^{\circ} 06.3'$	$L_s = 150.00'$
$L = 263.17'$	$L = 273.23'$	$L = 246.08'$	$L = 273.07'$	$LT = 100.03'$
$T = 131.62'$	$T = 136.72'$	$T = 123.05'$	$T = 137.14'$	$ST = 50.03'$
$R = 4468.14'$	$R = 2864.79'$	$R = 8000.00'$	$R = 1185.00'$	



PERMIT DRAWING SHEET 8 OF 27



-L-	-L-	-L- TEMP
PI Sta 167+89.17	PIs Sta 172+06.50	PI Sta 175+89.52
$\Delta = 8^{\circ} 50' 54.9''$ (LT)	$\Theta_s = 0^{\circ} 33' 00.0''$	$\Delta = 3^{\circ} 19' 30.0''$ (RT)
$D = 1^{\circ} 08' 45.3''$	$L_s = 96.00'$	$D = 0^{\circ} 45' 50.2''$
$L = 772.19'$	$L = 435.24'$	$L = 435.24'$
$T = 386.86'$	$ST = 32.00'$	$T = 217.68'$
$R = 5000.00'$		$R = 7500.00'$
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$SE = 0.02$		$SE = 0.02$
$RO = \text{SEE PLANS}$		$RO = \text{SEE PLANS}$

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

11/7/18 CONST. REVISION: ADDED A RIGHT TURN LANE AND REVISED DRAINAGE FROM -L- STA. 171+00.00 TO -L- STA. 173+40.00 LT.
 REVISIONS

8.17.19.9

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

ATN Revised 3/31/05

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

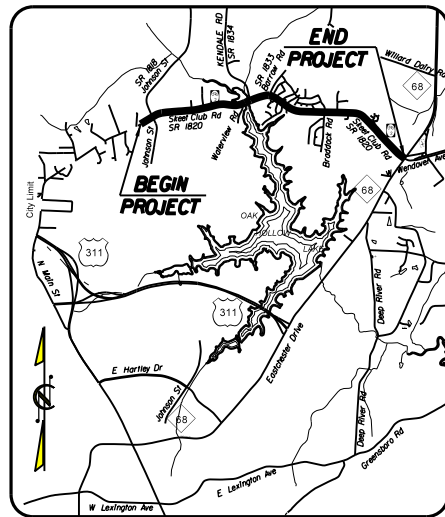
GUILFORD COUNTY

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(2)	RW, UTL.	

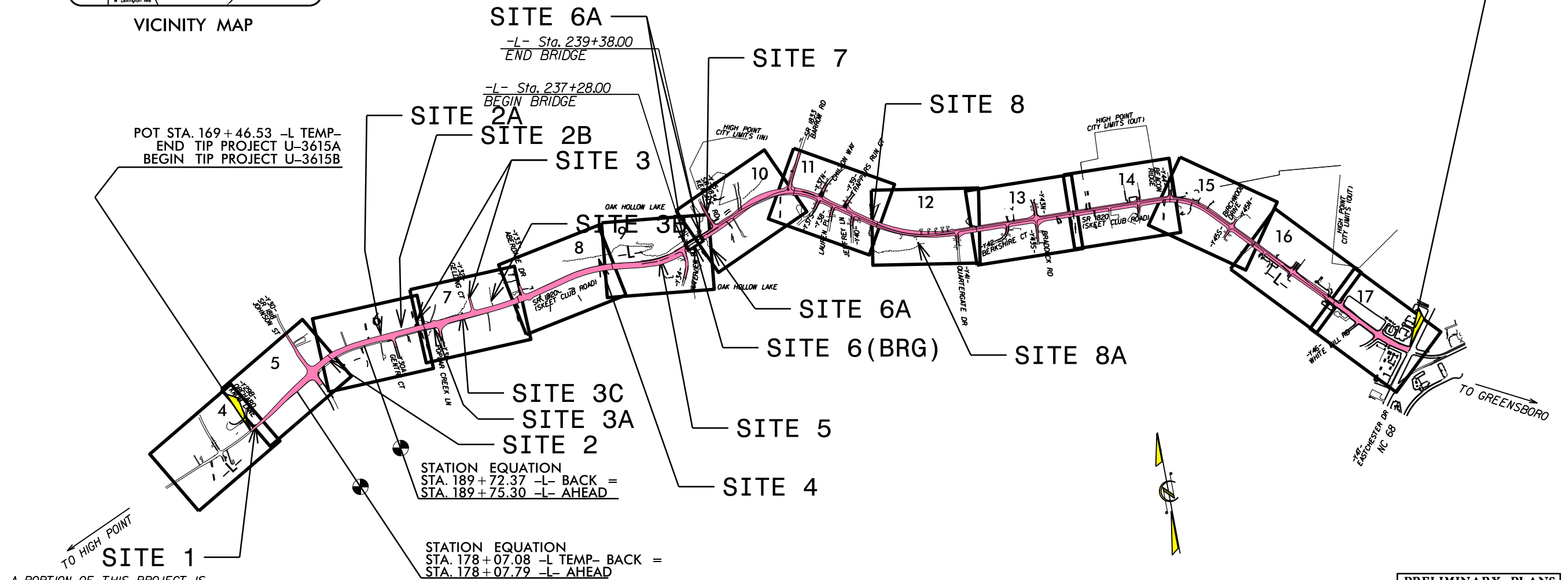
TIP PROJECT: U-3615B



VICINITY MAP

BUFFER IMPACTS PERMIT

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

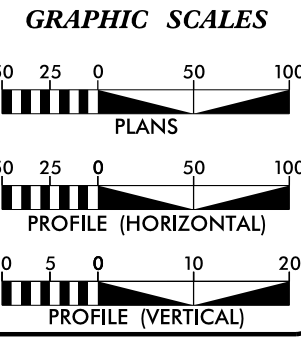


A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF CITY OF HIGH POINT

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

WETHERILL ENGINEERING
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

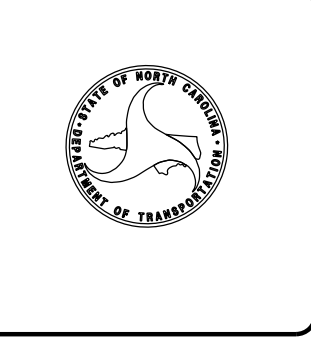
2012 STANDARD SPECIFICATIONS	EDWARD G. WETHERILL, PE PROJECT ENGINEER
RIGHT OF WAY DATE: APRIL 27, 2009	GREG S. PURVIS, PE PROJECT DESIGN ENGINEER
LETTING DATE: OCTOBER 15, 2013	BRENDA L. MOORE, PE ROADWAY DESIGN: ENGINEERING COORDINATION SECTION PROJECT ENGINEER
NCDOT CONTACT:	

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

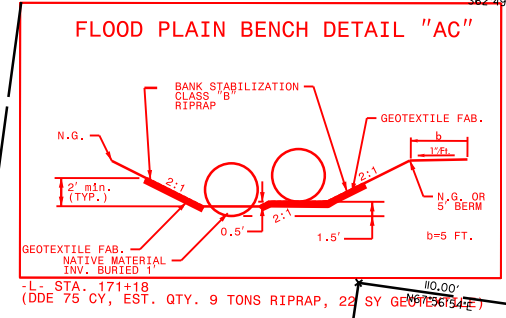
PROJECT REFERENCE NO. U-3615B	SHEET NO. 4
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING
SHEET 2 OF 13

-L- Pis Sta 159+44.07 Os = 0' 22' 00" Ls = 96.00' LT = 64.00' ST = 32.00'	-L- Pis Sta 163+70.31 Os = 0' 33' 00" Ls = 96.00' LT = 64.00' ST = 32.00'	-L- Pis Sta 167+89.77 Os = 8' 50' 54.9" (LT) Ls = 1' 08' 45.3" LT = 772.19 R = 386.86' DS = 50 MPH SE = 0.02 RO = SEE PLANS	-L- TEMP Pis Sta 171+59.42 Os = 6' 27' 19.5" Ls = 1' 31' 04.4" LT = 425.31 R = 212.89' DS = 50 MPH SE = 0.02 RO = SEE PLAN
--	--	---	--



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

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

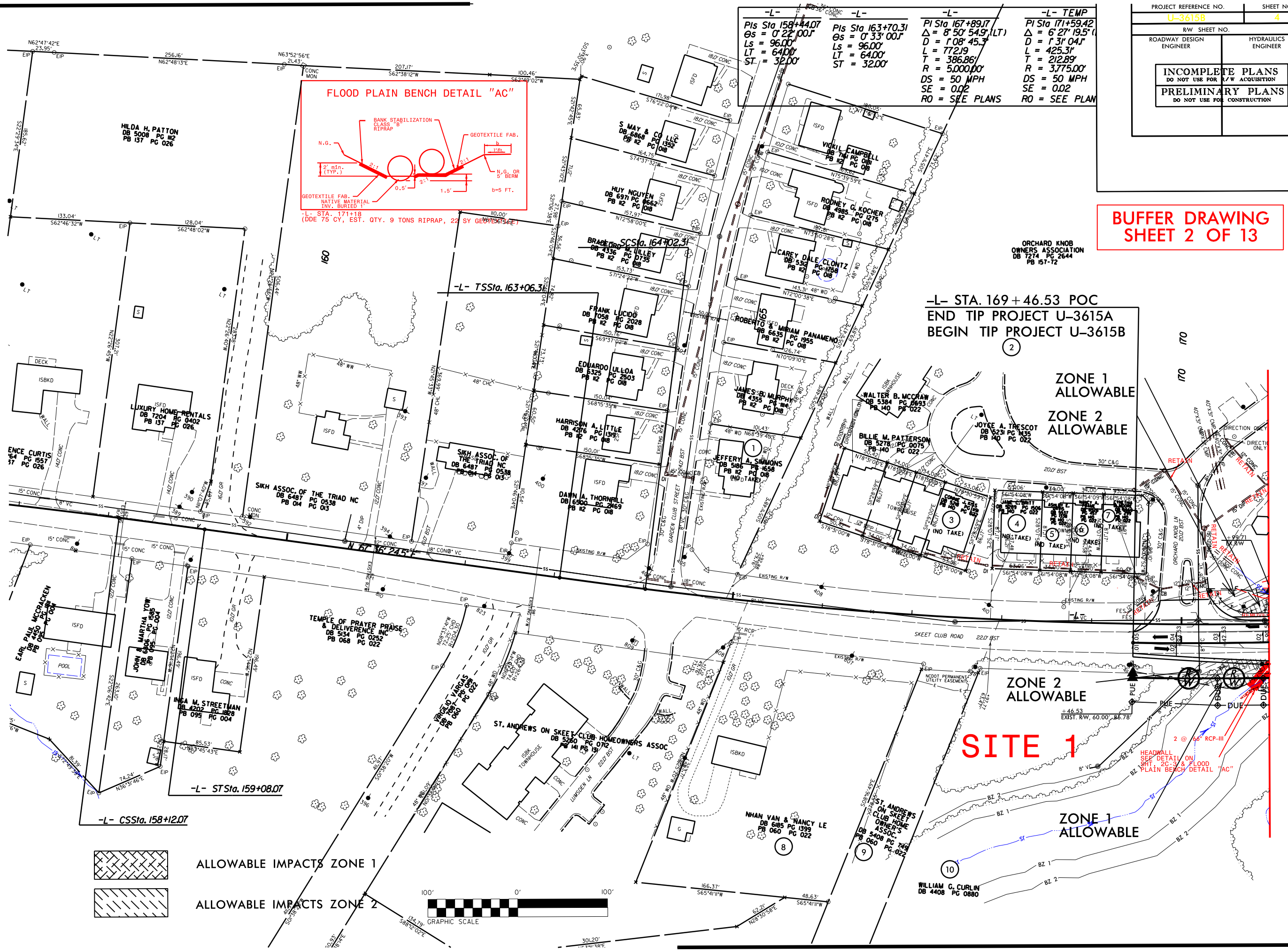
ZONE 1 ALLOWABLE

ZONE 2 ALLOWABLE

SITE 1

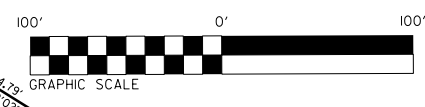
ZONE 2 ALLOWABLE

ZONE 1 ALLOWABLE



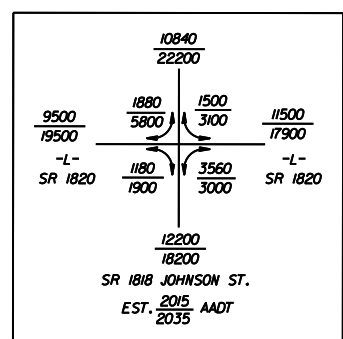
ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

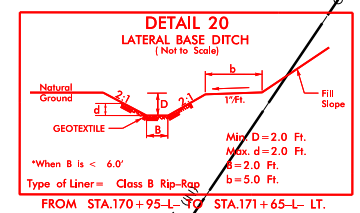
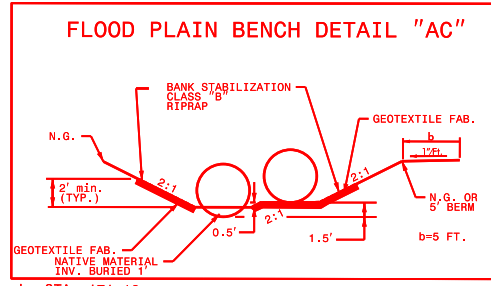


REVISIONS

DATE: 11/15/2011
TIME: 10:00 AM
BY: J. SHERMAN



-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
$\Delta = 3^{\circ} 22' 29.0''$ (LT)	$\Delta = 5^{\circ} 27' 52.5''$ (LT)	$\Delta = 1^{\circ} 45' 44.6''$ (RT)	$\Delta = 13^{\circ} 12' 11.3''$ (RT)	$\Theta_s = 4^{\circ} 31' 24''$
$D = 116^{\circ} 56.3'$	$D = 2^{\circ} 00' 00.0'$	$D = 4^{\circ} 42' 58.3'$	$D = 4^{\circ} 50' 06.3'$	$L_s = 150.00'$
$L = 263.17'$	$L = 273.23'$	$L = 246.08'$	$L = 273.07'$	$LT = 100.03'$
$T = 131.62'$	$T = 136.72'$	$T = 123.05'$	$T = 137.14'$	$ST = 50.03'$
$R = 4468.14'$	$R = 2864.79'$	$R = 8000.00'$	$R = 1185.00'$	

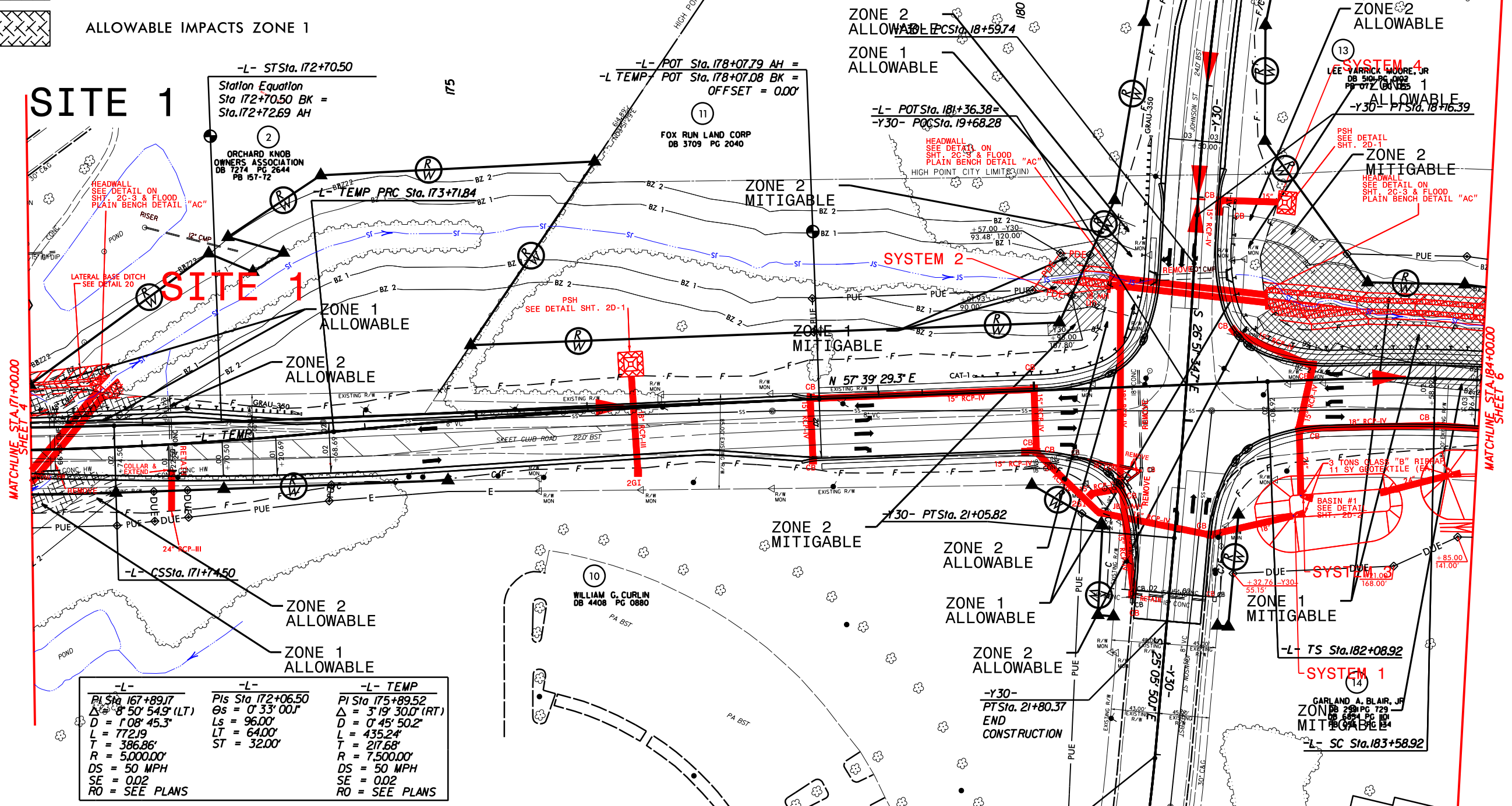


BUFFER DRAWING SHEET 3 OF 13

- ALLOWABLE IMPACTS ZONE 2
- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2
- ALLOWABLE IMPACTS ZONE 1

SITE 1

SITE 2



-L-	-L-	-L- TEMP
PI Sta 167+89.17	PIs Sta 172+06.50	PI Sta 175+89.52
$\Delta = 8^{\circ} 50' 54.9''$ (LT)	$\Theta_s = 0^{\circ} 33' 00.0''$	$\Delta = 3^{\circ} 19' 30.0''$ (RT)
$D = 1^{\circ} 08' 45.3''$	$L_s = 96.00'$	$D = 0^{\circ} 45' 50.2''$
$L = 772.19'$	$LT = 64.00'$	$L = 435.24'$
$T = 386.86'$	$ST = 32.00'$	$T = 217.68'$
$R = 5,000.00'$		$R = 7,500.00'$
$DS = 50$ MPH		$DS = 50$ MPH
$SE = 0.02$		$SE = 0.02$
$RO = \text{SEE PLANS}$		$RO = \text{SEE PLANS}$

REVISIONS

MATCHLINE STA 171+00.00 SHEET 4

MATCHLINE STA 184+00.00 SHEET 6

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)		
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

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