

Turchy, Michael A

From: Turchy, Michael A
Sent: Tuesday, January 28, 2020 11:25 AM
To: Mills, James M
Cc: Davenport, Ronald E; Parker, Jerry A; Al-Ghandour, Majed N; Martin, Tucker R; Morgan, Stephen R; Eason, Patty P; Hanks, Brian; Sylvester, Lamar; Dagnino, Carla S; Griffin, Randy W; Staley, Mark K; Gracey, John S.; Schoonmaker, Carla M; Kennedy, Durwood R; Al-Dhalimy, Nadia A; Foster, Alexander J; Key, Bryan C; Sutton, Laura E
Subject: U-2581 BA Permit Distribution

All environmental permits have been received for the construction of U-2581 BA (the widening of US 70 from Mount Hope Church Road to Birch Creek Road in Guilford County).

The permit package has been posted on the NCDOT website at:

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

or direct link:

<https://xfer.services.ncdot.gov/pdea/PermlIssued/U-2581%20BA%20Guilford%20January%2028%202020.pdf>

Thank you,
Michael

Michael Turchy
Environmental Coordination and Permitting
North Carolina Department of Transportation

[919 789-1102](tel:9197891102) mobile
[919 707-6157](tel:9197076157) office

1598 Mail Service Center
Raleigh, NC 27699-1598

1000 Birch Ridge Drive
Raleigh, NC 27610

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

January 28, 2020

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

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

SUBJECT: 404 Individual Permit, 401 Water Quality Certification, and Buffer
Certification for the Widening of US 70 from Mount Hope Church Road
to Birch Creek Road in Guilford County, Division 7; WBS No 38440.1.4,
TIP: U-2581 BA.

Enclosed are the US Army Corps of Engineers Permit, NC Division of Water Resources Water Quality Certification, Buffer Certification, and Project Commitments ("greensheet") for the above-referenced project. All environmental permits have been received for the construction of this project.

The permit package has been posted on the NCDOT website at:
<https://xfer.services.ncdot.gov/pdea/PermIssued/>

ec:

Mr. Ron Davenport, P.E. Contracts Management
Mr. Jerry Parker, Division Environmental Officer
Dr. Majed Al-Ghandour, P.E., Programming and TIP
Mr. Stephen Morgan, P.E., Hydraulics
Mr. Brian Hanks, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. Lamar Sylvester, P.E., State Roadway Construction Engineer

PROJECT COMMITMENTS

T.I.P Project No. U-2581 BA
US 70 Widening from Mount Hope Church Road to Birch Creek Road
Guilford County
Federal Aid Project No. BRZ-1890(1)
WBS Element 34840.1.4

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Hydraulic Unit – FEMA Coordination

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

Division 7 Construction-FEMA

This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

Division 7 Project Development

This project involves a joint USACE Individual permit in coordination with the Publix development. Division 7 staff will coordinate closely with the developer throughout the Publix construction process to ensure that the shared responsibilities of the permit conditions are upheld.

COMMITMENTS FROM PERMITTING

No additional commitments were developed during project permitting.

DEPARTMENT OF THE ARMY PERMIT

Permittee: PUBLIX SUPER MARKETS, INC.
ATTN: MR. RANDY BARBER

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
ATTN: MR. PHILIP S. HARRIS III, P.E., C.P.M.

Permit No: SAW-2018-00240

Issuing Office: CESAW-RG-R

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

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

Project Description: **The project involves construction of the Publix Greensboro Distribution Center and associated infrastructure, including the NCDOT US Highway 70 Improvements (TIP No. U-2581BA). The project involves the permanent discharge of dredged or fill material into 4,780 linear feet of intermittent and perennial stream channel, 1.01 acres of riparian non-riverine wetlands, and 1.65 acres of open water impoundments, the temporary discharge of fill material into 90 linear feet of stream channel, and indirect impacts to 0.20 acre of wetlands and 252 linear feet of stream channel.**

Project Location: **The grocery distribution center project area is located on the south side of US Highway 70, centered at its intersection with Birch Creek Road, in McLeansville, Guilford County, North Carolina. Roadway improvements associated with this project are proposed along approximately 1.5 miles of US Highway 70, from Mt. Hope Church Road to Sun Lake Road, in McLeansville, Guilford County, North Carolina (36.0805° N, -79.6556° W**

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2030**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized

activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit,

Special Conditions:

SEE ATTACHED SPECIAL CONDITIONS

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

() Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

() Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

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

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

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

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

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

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

(PERMITTEE) **PUBLIX SUPER MARKETS, INC.** (DATE)
MR. RANDY BARBER

Carla Druce 4/17/2020

(PERMITTEE) **NORTH CAROLINA DEPARTMENT OF TRANSPORTATION** (DATE)
for **MR. PHILIP S. HARRIS III, P.E., C.P.M.**

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

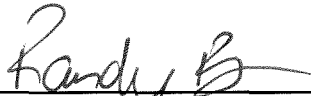
(DISTRICT COMMANDER) **ROBERT J. CLARK, COLONEL** (DATE)

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

(TRANSFEREE) (DATE)

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

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



(PERMITTEE) **PUBLIX SUPER MARKETS, INC.** 1/28/20 (DATE)
MR. RANDY BARBER, as Vice President of Publix Super Markets, Inc.

(PERMITTEE) **NORTH CAROLINA DEPARTMENT OF TRANSPORTATION** (DATE)
MR. PHILIP S. HARRIS III, P.E., C.P.M.

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


for (DISTRICT COMMANDER) **ROBERT J. CLARK, COLONEL** 11 Feb 20 (DATE)

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

(TRANSFEREE) (DATE)

SPECIAL CONDITIONS
ACTION ID: SAW-2018-00240
PUBLIX SUPER MARKETS, INC.
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PUBLIX GREENSBORO DISTRIBUTION CENTER AND NCDOT TIP NO. U-2581BA
GUILFORD COUNTY

WORK LIMITS / NOTIFICATION

1. **Work Limits:** All work authorized by this permit shall be performed in strict compliance with the attached permit plans entitled "Preliminary Jurisdictional Waters of the U.S. Impacts Map" Sheets 1 through 12, "Publix Greensboro Distribution Center" Sheets SW-100 through SW-107, and NCDOT "Wetland and Surface Water Impacts Permit" Permit Drawing Sheets 1 through 14. The Permittees shall ensure that the construction design plans for this project do not deviate from the permit plans attached to this authorization. Any modification to the attached permit plans must be approved by the U.S. Army Corps of Engineers (Corps) prior to any active construction in waters or wetlands.
2. **Unauthorized Dredge and/or Fill:** Except as authorized by this permit or any Corps-approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.
3. **Permit Distribution:** The Permittees shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A copy of this permit, including all conditions and drawings shall be available at the project site during construction and maintenance of this project.
4. **Preconstruction Meeting:** The Permittees shall conduct an onsite preconstruction meeting between their representatives, contractor's representatives and the appropriate U.S. Army Corps of Engineers Project Manager prior to undertaking any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all terms and conditions contained within the Department of the Army permit. The Permittees shall schedule the preconstruction meeting for a time frame when the Corps and NCDWR Project Managers can attend. The Permittees shall invite the Corps and NCDWR Project Managers a minimum of thirty (30) days in advance of the scheduled meeting in order to provide those individuals with ample opportunity to schedule and participate in the required meeting. The thirty (30) day requirement can be waived with the concurrence of the Corps.

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5. **Notification of Construction Commencement and Completion:** The Permittees shall notify the U.S. Army Corps of Engineers in writing prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.
6. **Reporting Address:** All reports, documentation, and correspondence required by the conditions of this permit shall be submitted to the following: U.S. Army Corps of Engineers, Wilmington District Raleigh Field Office, Attn: David E. Bailey at 919-554-4884 Ext. 30 / David.E.Bailey2@usace.army.mil. The Permittees shall reference the following permit number, SAW-2018-00240, on all submittals.
7. **Permit Revocation:** The Permittees, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition.
8. **Reporting Violations:** Violation of these permit conditions or violation of Section 404 of the Clean Water Act shall be reported to the Corps in writing and by telephone at: 919-554-4884 Ext. 30 / David.E.Bailey2@usace.army.mil within 24 hours of the Permittee's discovery of the violation.
9. **Endangered Species Act:** The Permittees shall implement all necessary measures to ensure the authorized activity does not kill, injure, capture, harass, or otherwise harm any federally-listed threatened or endangered species. While accomplishing the authorized work, if the Permittees discover or observe an injured or dead threatened or endangered species, the U.S. Army Corps of Engineers, Wilmington District Raleigh Field Office, Attn: David E. Bailey at 919-554-4884 Ext. 30 / David.E.Bailey2@usace.army.mil will be immediately notified to initiate the required Federal coordination.
10. **Endangered Species Act:** The U.S. Fish and Wildlife Service's (USFWS's) Programmatic Biological Opinion (BO) titled "Bridge and Culvert Replacements/Repairs/Rehabilitations in Eastern North Carolina, NCDOT Divisions 1-8)," dated June 13, 2018, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that are specified in the BO. Your authorization under this Corps permit is conditional upon your compliance with all the mandatory terms and conditions associated with incidental take of the BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also

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GUILFORD COUNTY

constitute non-compliance with your Corps permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA.

11. **National Historic Preservation Act:** While accomplishing the authorized work, if the Permittees discover any previously unknown cultural resources, the District Engineer will be immediately notified so that required coordination can be initiated with the North Carolina Division of Natural and Cultural Resources.

RELATED LAWS

12. **Maintain Flows and Circulation Patterns of Waters:** Except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters and/or wetlands.

13. **Sediment and Erosion Control:**

- a. During the clearing phase of the project, heavy equipment shall not be operated in surface waters or stream channels. Temporary stream crossings will be used to access the opposite sides of stream channels. All temporary diversion channels and stream crossings will be constructed of non-erodible materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.
- b. No fill or excavation impacts for the purposes of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless the impacts are included on the plan drawings and specifically authorized by this permit. This includes, but is not limited to, sediment control fences and other barriers intended to catch sediment losses.
- c. The Permittees shall remove all sediment and erosion control measures placed in waters and/or wetlands, and shall restore natural grades on those areas, prior to project completion.
- d. The Permittees shall use appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" to ensure compliance with the appropriate turbidity water quality standard. Erosion and sediment control practices shall be in full

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GUILFORD COUNTY

compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to ensure compliance with the appropriate turbidity water quality standards. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project shall remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4). Adequate sedimentation and erosion control measures shall be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. These measures shall be inspected and maintained regularly, especially following rainfall events. All fill material shall be adequately stabilized at the earliest practicable date to prevent sediment from entering into adjacent waters or wetlands.

14. **Clean Fill:** The Permittees shall use only clean fill material for this project. The fill material shall be free of items such as trash, construction debris, metal and plastic products, and concrete block with exposed metal reinforcement bars. Soils used for fill shall not be contaminated with any toxic substance in concentrations governed by Section 307 of the Clean Water Act. Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source.

15. **Water Contamination:** All mechanized equipment shall be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. In the event of a spill of petroleum products or any other hazardous waste, the Permittees shall immediately report it to the N.C. Division of Water Resources at (919) 733-3300 or (800) 858-0368 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act shall be followed.

Rationale: This condition addresses potential indirect impacts to WOUS from mechanized equipment fluids.

**SPECIAL CONDITIONS
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PUBLIX GREENSBORO DISTRIBUTION CENTER AND NCDOT TIP NO. U-2581BA
GUILFORD COUNTY**

AQUATIC LIFE

16. **Aquatic Life Movement:** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area. All discharges of dredged or fill material within waters of the United States shall be designed and constructed to maintain low flows to sustain the movement of aquatic species.
17. **Prohibitions on Concrete:** The Permittees shall take measures necessary to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with any water in or entering into waters of the United States. Water inside coffer dams or casings that has been in contact with concrete shall only be returned to waters of the United States when it no longer poses a threat to aquatic organisms (concrete is set and cured).

COMPENSATORY MITIGATION

18. 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 Forms. The requirements of these forms, including any special conditions listed on these forms, are hereby incorporated as special conditions of this permit.

UTILITY LINES

19. No discharges of dredged or fill material are authorized by this permit for the purposes of installation of utility lines. Stream impacts for the sewer line crossings of Streams A and J will be avoided through the use of trenchless techniques such as jack and bore or horizontal directional drill, as shown on the permitted plans.

MONITORING

20. Publix Super Markets shall implement the "Stream Hydrology Monitoring Plan, Publix Distribution Center" prepared by Timmons Group, dated November 27, 2019, with the following modification: Publix Super Markets shall collect data continuously for a minimum period of three (3) years which will begin when the erosion control permit is formally closed by the appropriate local or state agency indicating that the site is considered stable and in a "post-construction" stormwater condition. Publix Super Markets will notify the Corps within 30 days of the start of continuous monitoring. All required reports shall be provided to the Corps per Special Condition 6 above.

**U.S. ARMY CORPS OF ENGINEERS
Wilmington District**

Compensatory Mitigation Responsibility Transfer Form

Permittee: NCDOT (Attn: Mr. Philip S. Harris III)
Project Name: Publix Distribution Center

Action ID: SAW-2018-00240
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: 03030002, Cape Fear River Basin**

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
300				0.11		

*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: 03030002, Cape Fear River Basin**

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
600				0.22		

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:

- The stream credits required correspond to 300 linear feet of impacts at 2:1.
- The wetland credits required correspond to 0.11 acre of impacts at 2:1.

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:



Date: 2020.01.07
09:43:35 -05'00'

USACE Project Manager Signature

January 7, 2020
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

S. DANIEL SMITH
Director

February 6, 2020

DWR # 20190289 correction
Guilford County

Publix Super Markets Inc
Attn: Randy Barber
501 North Galloway Rd
Lakeland, FL 33815

NCDOT, Environmental Analysis Unit
Attn: Phillip Harris III, P.E., C.P.M.
1598 Mail Service Center
Raleigh NC 27699-1598

Subject: Approval of Individual 401 Water Quality Certification with Additional Conditions
Publix Distribution Center
USACE Action ID. No. SAW-2018-00240

Dear Sirs:

Attached hereto is a copy of Certification No. WQC004211 issued to Randy Barber and Publix Super Markets Inc., and Phillip Harris III and NCDOT, dated February 6, 2020. **This Certification is being issued to modify the mitigation condition and replaces in full the Certification issued on January 22, 2020.** Please note that you should get any other federal, state or local permits before proceeding with the subject project, including those required by (but not limited to) Sediment and Erosion Control, Non-Discharge, and Water Supply Watershed regulations.

This approval and its conditions are final and binding unless contested. This Certification can be contested as provided in Articles 3 and 4 of General Statute 150B by filing a written petition for an administrative hearing to the Office of Administrative Hearings (hereby known as OAH) **within sixty (60) calendar days.**

A petition form may be obtained from the OAH at <http://www.ncoah.com/> or by calling the OAH Clerk's Office at (919) 431-3000 for information. A petition is considered filed when the original and one (1) copy along with any applicable OAH filing fee is received in the OAH during normal office hours (Monday through Friday between 8:00am and 5:00pm, excluding official state holidays).



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

The petition may be faxed to the OAH at (919) 431-3100, provided the original and one copy of the petition along with any applicable OAH filing fee is received by the OAH within five (5) business days following the faxed transmission.

Mailing address for the OAH:

If sending via US Postal Service:
Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714

If sending via delivery service (UPS, FedEx, etc):
Office of Administrative Hearings
1711 New Hope Church Road
Raleigh, NC 27609-6285

One (1) copy of the petition must also be served to DEQ:

William F. Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center
Raleigh, NC 27699-1601

Unless such a petition is filed, this Certification shall be final and binding.

This certification completes the review of the Division under section 401 of the Clean Water Act and 15A NCAC 02H .0500. Contact Sue Homewood at 336-776-9693 or sue.homewood@ncdenr.gov if you have any questions or concerns.

Sincerely,



Mac Haupt, Acting Supervisor
401 & Buffer Permitting Branch

Enclosures: Final Decision Granting Variance with Conditions (DWR Project #20190289 v2)

cc: Brian Breissing, Timmons Group (via email)
Michael Turchy, NCDOT (via email)
David Bailey, USACE Raleigh Regulatory Field Office (via email)
Olivia Munzer, NCWRC (via email)
Todd Bowers, EPA, (via email)
DWR WSRO 401 file
DWR 401 & Buffer Permitting Branch file

Filename: 20190289Publix(Guilford)_401_IC_reissuance.docx

NORTH CAROLINA 401 WATER QUALITY CERTIFICATION

CERTIFICATION #WQC004211 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to North Carolina’s Regulations in 15 NCAC 02H .0500, to Randy Barber and Publix Super Markets Inc., and Phillip Harris III and NCDOT, who have authorization for the impacts listed below, as described within your modified mitigation information received by the N.C. Division of Water Resources (Division) on January 24, 2020, and the original application received on March 5, 2019 and subsequent information on May 5, 2019, August 16, 2019, October 7, 2019, December 9, 2019 and December 12, 2019, and by Public Notice issued by the U. S. Army Corps of Engineers and received by the Division on February 28, 2019.

The State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of the Public Laws 92-500 and PL 95-217 if conducted in accordance with the application, the supporting documentation, and conditions hereinafter set forth.

This approval requires you to follow the conditions listed in the certification below.
Conditions of Certification:

- The following impacts are hereby approved. No other impacts are approved, including incidental impacts. [15A NCAC 02H .0506(b) and/or (c)]

Development Impacts

Type of Impact	Amount Approved (units) Permanent	Amount Approved (units) Temporary
Stream		
S1-A*	290 (linear feet)	0 (linear feet)
S1-B	687 (linear feet)	0 (linear feet)
S1-C	28 (linear feet)	0 (linear feet)
S2	318 (linear feet)	0 (linear feet)
S3*	204 (linear feet)	0 (linear feet)
S3.2*	163 (linear feet)	0 (linear feet)
S4	283 (linear feet)	0 (linear feet)
S5	56 (linear feet)	0 (linear feet)
S6	373 (linear feet)	0 (linear feet)
S7-A*	1479 (linear feet)	0 (linear feet)
S7-B	708 (linear feet)	0 (linear feet)
S7-C	54 (linear feet)	0 (linear feet)
S10.2	89 (linear feet)	0 (linear feet)
404/401 Wetlands		
W1	142 (square feet)	0 (square feet)
W2	743 (square feet)	0 (square feet)
W2.2	21 (square feet)	0 (square feet)
W3-A	87 (square feet)	0 (square feet)
W3-B	5035 (square feet)	0 (square feet)

W3-C	1297 (square feet)	0 (square feet)
W4	1468 (square feet)	0 (square feet)
W5-B	4169 (square feet)	0 (square feet)
W6-A	911 (square feet)	0 (square feet)
W6-B	1370 (square feet)	0 (square feet)
W8	255 (square feet)	0 (square feet)
W9	976 (square feet)	0 (square feet)
W10	285 (square feet)	0 (square feet)
W10.2	85 (square feet)	0 (square feet)
W11	519 (square feet)	0 (square feet)
W12-A	608 (square feet)	0 (square feet)
W12-B	340 (square feet)	0 (square feet)
W13	5895 (square feet)	0 (square feet)
W14	7167 (square feet)	0 (square feet)
W15	132 (square feet)	0 (square feet)
W16	67 (square feet)	0 (square feet)
W17	87 (square feet)	0 (square feet)
W18-A	280 (square feet)	0 (square feet)
W18-B	203 (square feet)	0 (square feet)
W18-C	164 (square feet)	0 (square feet)
W18-D	822 (square feet)	0 (square feet)
W18-E	1308 (square feet)	0 (square feet)
W19	4935 (square feet)	0 (square feet)
W19.2	3461 (square feet)	0 (square feet)
W19.3	5113 (square feet)	0 (square feet)
Open Waters		
W5-A	62719 (square feet)	0 (square feet)
W7	142 (square feet)	0 (square feet)

* indicates perennial stream requiring mitigation

Roadway Improvement Impacts

Type of Impact	Amount Approved (units) Permanent	Amount Approved (units) Temporary
Stream		
S1	10 (linear feet)	19 (linear feet)
S2	6 (linear feet)	10 (linear feet)
S3	13 (linear feet)	13 (linear feet)
S5	251 (linear feet)	33 (linear feet)
S6	20 (linear feet)	15 (linear feet)
404/401 Wetlands		
W2	0.02 (acres)	0.01 (acres)
W4	0.05 (acres)	0.03 (acres)
W5	0..01 (acres)	0 (acres)

Buffers – Zone 1		
B1	1201 (square feet)	0 (square feet)
B2*	11763 (square feet)	0 (square feet)
B3	1635 (square feet)	0 (square feet)
Buffers – Zone 2		
B2*	4355 (square feet)	0 (square feet)
B3	896 (square feet)	0 (square feet)

* indicates impacts requiring mitigation

2. This approval is for the purpose and design described in your application and as described in the Public Notice. The plans and specifications for this project are incorporated by reference and are an enforceable part of the Certification. Any modifications to the project require notification to DWR and may require an application submittal to DWR with the appropriate fee. [15A NCAC 02H .0501 and .0502]

3. Mitigation must be provided for the proposed development impacts as specified in the table below. The Division has received acceptance letters from the NC Division of Mitigation Services (DMS) to meet the stream and buffer mitigation requirements and from the Restoration Systems LLC Mitigation Bank - Benton Branch Site to meet the wetland mitigation requirement. Until the DMS and Restoration Systems receives and clears your payment, and proof of payment has been provided to this Office, no impacts specified in this Authorization Certificate shall occur. For accounting purposes, this Authorization Certificate authorizes payment to the DMS to meet the following compensatory mitigation requirement [15A NCAC 02H .0506 (b)(6)]:

	Compensatory Mitigation Required	River and Sub-basin Number
Stream	2,136 (feet)	Cape Fear (03030002)
Wetland	1.10 (acres)	Cape Fear (03030002)
Buffers	Zone 1: 35,289 (square feet) Zone 2: 6,532.5 (square feet)	Cape Fear (03030002) Haw River

4. Publix Super Markets Inc shall secure an approved Stormwater Management Plan (SMP) from Guilford County before *any* development impacts authorized in this certification occur. If the approved SMP, or any future modification of the SMP, causes the outlet structures of Stormwater Pond A and Stormwater Pond D to be different from what was submitted to the Division on December 9, 2019 then the modified SMP shall also be submitted to the Division prior to the commencement of the modifications [15A NCAC 02B. .0506(b)(5)]

5. Publix Super Markets Inc shall implement the Stream Hydrology Monitoring Plan prepared by Timmons Group and dated November 27, 2019 with the following modification: Publix Super Markets Inc shall collect data continuously for a minimum period of three (3) years which will begin when the erosion control permit is formally closed by the appropriate local or state agency which will indicate that the site is considered stable and in a “post-construction” stormwater condition. Publix Super Markets Inc will notify the Division within 30 days of start of continuous monitoring.

6. Full Compliance with Final Decision Granting Variance with Conditions (DWR Project #20190289 v2), issued by the Environmental Management Commission on August 9, 2019 is required. [15A NCAC 02H .0506(b)(3)]
7. All wetlands, streams, surface waters, and riparian buffers located within 50 feet of the construction area on the project site shall be clearly marked (example- orange fabric fencing) prior to any land disturbing activities and must be maintained on the property until the project phase is completed. [15A NCAC 02H .0506 (b)(2) and (c)(2) and 15A NCAC 02H .0507 (c)]
8. Any final construction plans for this project must include or reference the application and plans approved by the Division under this authorization letter and certification. The applicant will also be required to evaluate all acquired permits to assure that they are consistent, and all relative impacts are accounted for and shown on the construction plans. [15A NCAC 02H .0502 (b) and 15A NCAC 02H .0506 (4)]
9. The proposed project development project must comply with the Guilford County local water supply ordinance approved by the N.C. Environmental Management Commission (EMC) as required under the Jordan Lake Water Supply Watershed: Protection and Maintenance of Riparian Areas (Jordan Buffer Rule) [15A NCAC 02B .0267]
10. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the impacts (including temporary impacts) as authorized under this Certification. [15A NCAC 02H .0501 and .0502]

No removal of vegetation or other impacts of any kind shall occur to state regulated riparian buffers beyond the footprint of impacts approved in a Buffer Authorization or Variance or as listed as an exempt activity in the applicable riparian buffer rules. [15A NCAC 02B .0200]

11. All construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973).
12. Sediment and erosion control measures shall not be placed in wetlands or waters except within the footprint of temporary or permanent impacts authorized under this Certification. [15A NCAC 02H .0501 and .0502]
13. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands. [15A NCAC 02B .0201]
14. An NPDES Construction Stormwater Permit (NCG010000) is required for construction projects that disturb one (1) or more acres of land. The NCG010000 Permit allows stormwater to be discharged during land disturbing construction activities as stipulated in the conditions of the permit. If the project is covered by this permit, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required. [15A NCAC 02H .0506(b)(5) and (c)(5)]

The North Carolina Department of Transportation (NCDOT) shall be required to be in full compliance with the conditions related to the construction activities within the most recent version of their individual NPDES (NCS000250) stormwater permit. [15A NCAC 02H .0506(b)(5) and (c)(5)]

15. All work in or adjacent to streams shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the *NC Sediment and Erosion Control Manual*, or the *NC DOT Construction and Maintenance Activities Manual*, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water. [15A NCAC 02H .0506(b)(3) and (c)(3)]
16. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters. [15A NCAC 02B .0200 and 15A NCAC 02B .0231]
17. If concrete is used during construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state. [15A NCAC 02B .0200]
18. No temporary impacts are allowed beyond those included in this Certification. All temporary fill and culverts shall be removed and the impacted area shall be returned to natural conditions within 60 calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross sectional dimensions, planform pattern, and longitudinal bed profile. All temporarily impacted sites shall be restored and stabilized with native vegetation. [15A NCAC 02H .0506(b)(2) and (c)(2)]
19. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams shall be installed as outlined in the most recent edition of the *North Carolina Sediment and Erosion Control Planning and Design Manual* or the *North Carolina Surface Mining Manual* or the *North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities* so as not to restrict stream flow or cause dis-equilibrium during use of this Certification. [15A NCAC 02H .0506(b)(2) and (c)(2)]
20. Any riprap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All riprap shall be buried and/or "keyed in" such that the original stream elevation and streambank contours are restored and maintained. Placement of riprap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area. [15A NCAC 02H .0506(b)(2)]
21. Any rip-rap used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures. [15A NCAC 02H .0506(b)(2)]
22. This Certification does not relieve the applicant of the responsibility to obtain all other required Federal, State, or Local approvals before proceeding with the project, including those required by, but not limited to Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, and Trout Buffer regulations.

23. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication and general equipment maintenance shall not take place within 50 feet of a waterbody or wetlands to prevent contamination by fuels and oils. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0211 (12)]
24. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance. [15A NCAC 02H .0506(b)(3) and (c)(3)]
25. In accordance with 143-215.85(b), the permittee shall report to the Winston Salem Regional Office at (336) 776-9800 (after hours and on weekends call 800-858-0368) any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours.
26. Randy Barber and Publix Super Markets Inc., and Phillip Harris III and NCDOT shall conduct construction activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with section 303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. [15A NCAC 02B .0200] If the Division 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 Division may reevaluate and modify this Certification. Before modifying the Certification, the Division shall notify Randy Barber and Publix Super Markets Inc., and Phillip Harris III and NCDOT and the U.S. Army Corps of Engineers, provide public notice in accordance with 15A NCAC 02H .0503 and provide opportunity for public hearing in accordance with 15A NCAC 02H .0504. Any new or revised conditions shall be provided to Randy Barber and Publix Super Markets Inc., and Phillip Harris III and NCDOT in writing, shall be provided to the U.S. Army Corps of Engineers for reference in any Permit issued pursuant to Section 404 of the Clean Water Act, and shall also become conditions of the 404 Permit for the project.
27. Upon completion of all permitted impacts included within the approval and any subsequent modifications, the applicant shall be required to return a certificate of completion (available on the DWR website <https://edocs.deq.nc.gov/Forms/Certificate-of-Completion>). [15A NCAC 02H .0502(f)]
28. If the property or project is sold or transferred, the new Permittee shall be given a copy of this Certification (and written authorization if applicable) and is responsible for complying with all conditions. [15A NCAC 02H .0501 and .0502]
29. This Certification neither grants nor affirms any property right, license, or privilege in any waters, or any right of use in any waters. This Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and this Certification does not create any prescriptive right or any right of priority regarding any usage of water. This Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this Certification to possess any prescriptive or other right of priority with respect to any other consumptive user

regardless of the quantity of the withdrawal or the date on which the withdrawal was initiated or expanded.

30. This certification grants permission to the director, an authorized representative of the Director, or DENR staff, upon the presentation of proper credentials, to enter the property during normal business hours. [15A NCAC 02H .0502(e)]
31. Non-compliance with or violation of the conditions herein set forth by a specific project may result in revocation of this General Certification for the project and may also result in criminal and/or civil penalties.
32. The permittee shall report to the Winston Salem Regional Office at (336) 776-9800 any noncompliance with this certification, any violation of stream or wetland standards [15A NCAC 02B .0200] including but not limited to sediment impacts, and any violation of state regulated riparian buffer rules [15A NCAC 02B .0200]. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the applicant became aware of the circumstances. A written submission shall also be provided within 5 business days of the time the applicant becomes aware of the circumstances. The written submission shall contain a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, if the noncompliance has not been corrected, the anticipated time compliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Division may waive the written submission requirement on a case-by-case basis.

This approval to proceed with your proposed impacts or to conduct impacts to waters as depicted in your application shall expire upon expiration of the 404 Permit. The conditions in effect on the date of issuance shall remain in effect for the life of the project, regardless of the expiration date of this Certification. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506]

This the 6th day of February 2020



Mac Haupt, Acting Supervisor
401 & Buffer Permitting Branch

SLH

WQC004211



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 2.08; Released April 2018)

WBS Element: 34840.1.1 TIP No.: U-2581BA County(ies): Guilford Guilford Page 1 of 1

General Project Information

WBS Element:	34840.1.1	TIP Number:	U-2581BA	Project Type:	Roadway Widening	Date:	12/21/2018
NCDOT Contact:	Craig Lee, PE		Contractor / Designer:	Brandon Barham, PE			
Address:	1590 Mail Service Center Raleigh, NC 27699-1590		Address:	940 Main Campus Drive Suite 500 Raleigh, NC 27606			
	Phone:	919-707-6708		Phone:	919-741-5779		
	Email:	cilee@ncdot.gov		Email:	bbarham@vhb.com		
City/Town:	Mcleansville		County(ies):	Guilford			
River Basin(s):	Cape Fear		CAMA County?	No			
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	1.5 Miles	Surrounding Land Use:	Residential, Agriculture, Forest					
	Proposed Project			Existing Site				
Project Built-Upon Area (ac.)	14.0	ac.	8.6	ac.				
Typical Cross Section Description:	4@ 12' lanes, 2 @ 6' turn lanes, 2'-6" C&G, 10' sidewalk behind curb			3@10' lanes with variable paved shoulder				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	25,890	Year:	2039	Existing:	15,430	Year:	2019
General Project Narrative: (Description of Minimization of Water Quality Impacts)	<p>This project proposes the widening of US 70 (Burlington Rd) from west of SR 3045/SR 2819 (Mt. Hope Church Rd) to just east of SR 3175 Birch Creek Rd. The existing roadway will be widened with proposed C&G with sidewalk behind the curb. There is an existing 1 @ 10' X 6' RCBC with headwall that will be replaced with a 1@ 10' x 8' RCBC with beveled headwall. The proposed culvert will be buried 1' and sills will be included. The culvert conveys UT to Little Alamance Ck underneath US 70 from north to south. UT to Little Alamance Ck is not a FEMA studied stream. The proposed project calls for Rip Rap both upstream and downstream of the new culvert in order to stabilize the existing bed and banks of UT to Little Alamance Ck. Whenever possible proposed drainage systems were stubbed into the side of the proposed box culvert in order to dissipate energy and avoid erosion along the fill slope. All other proposed outfalls within the project will utilize Rip Rap outlet pads to provide energy dissipation and lessen erosive velocities.</p>							

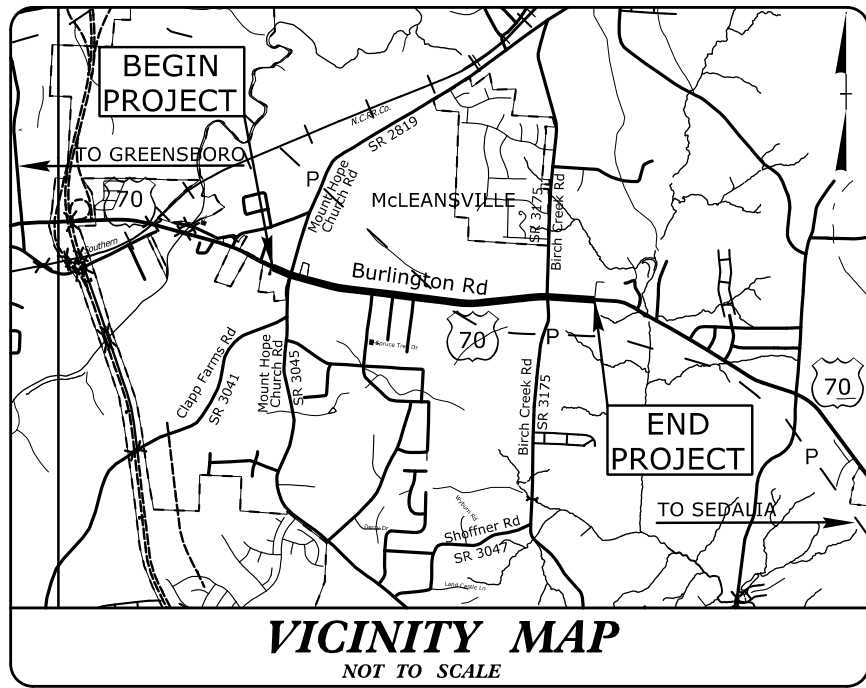
Waterbody Information

Surface Water Body (1):	UT to Little Alamance Creek		NCDWR Stream Index No.:	16-19-3-(0.5)			
NCDWR Surface Water Classification for Water Body	Primary Classification:		Water Supply IV (WS-IV)				
	Supplemental Classification:		Nutrient Sensitive Waters (NSW)				
Other Stream Classification:	None						
Impairments:	None						
Aquatic T&E Species?	Yes	Comments:					
NRTR Stream ID:				Buffer Rules in Effect:	Jordan Lake		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A		
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)			
(If yes, provide justification in the General Project Narrative)							

09/28/19

TIP PROJECT: U-2581BA

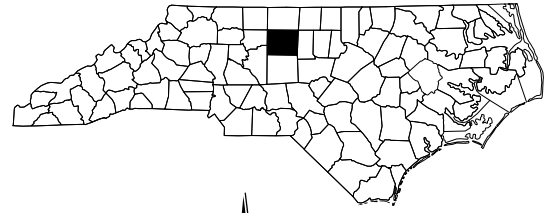
See Sheet 1B For Conventional Symbols



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
GUILFORD COUNTY

**PERMIT DRAWING
SHEET 1 OF 14**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2581BA	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34840.1.1		PE	
		R/W, UTIL.	
		CONST.	



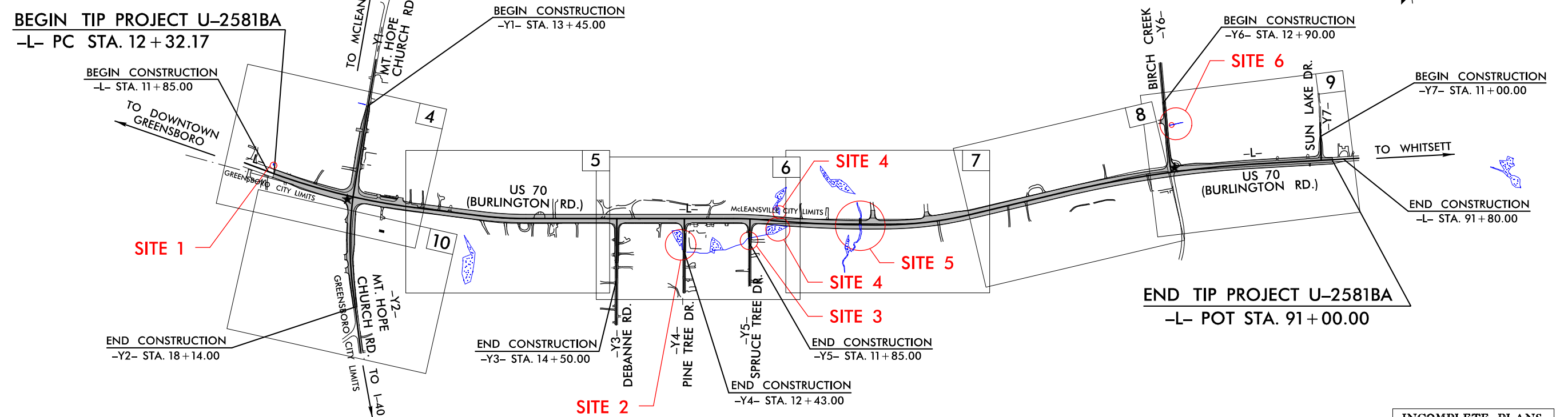
LOCATION: US 70 (BURLINGTON ROAD) FROM WEST OF SR 3045/SR 2819 (MT. HOPE CHURCH ROAD) TO JUST EAST OF SR 3175 (BIRCH CREEK ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS AND CULVERT

WETLAND AND SURFACE WATER IMPACTS PERMIT

★ EXISTING SIGNAL TO BE MODIFIED

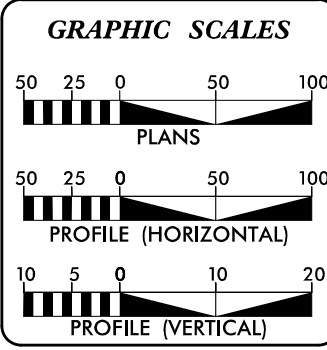
CFI PLANS



A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF GREENSBORO AND McLEANSVILLE. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ??.

**INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

CONTRACT:



DESIGN DATA

ADT 2019 =	15,430
ADT 2039 =	25,890
K =	12 %
D =	60 %
T =	6 % *
V =	50 MPH
* (TTST 1 + DUAL 5)	
FUNC CLASS =	PRINCIPAL ARTERIAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-2581BA =	1.490 MI.
TOTAL LENGTH OF TIP PROJECT U-2581BA =	1.490 MI.

Prepared for the North Carolina Department of Transportation
In the Office of:

VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606

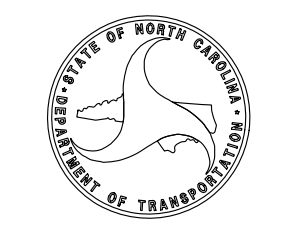
2018 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	JIMMY GOODNIGHT, PE PROJECT ENGINEER
OCTOBER 30, 2018	
LETTING DATE:	JERRY JAVELLANA, PE PROJECT DESIGN ENGINEER
OCTOBER 15, 2019	
NCDOT CONTACT	LAURA SUTTON, PE

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

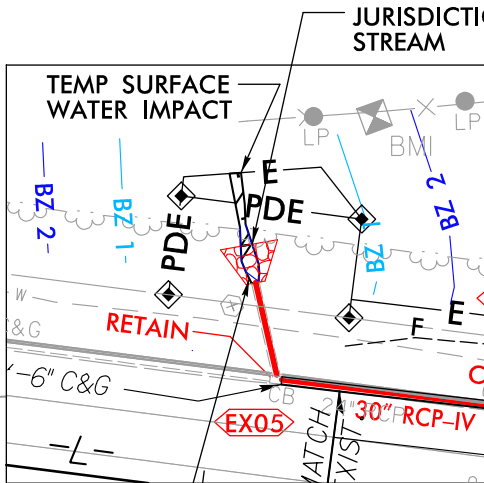
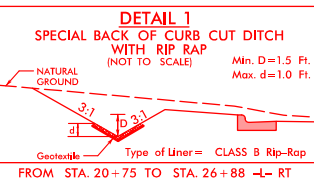
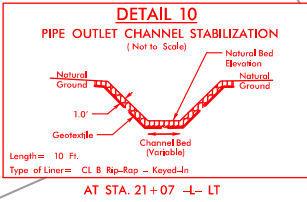
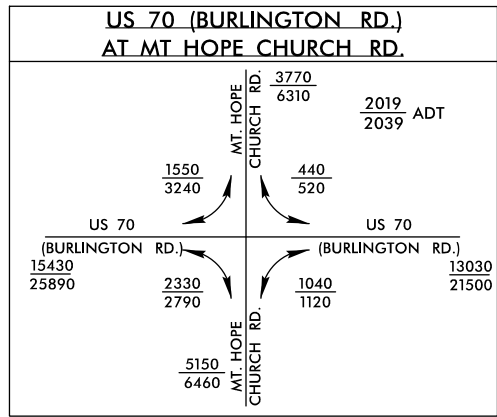


7:35:38 AM R:\Hydraulics\PERMITS\Environmental\Drawings\PSH\U2581BA_Hyd_prm_wet_tsh.dgn bbarham

8/17/99

-L- CURVE DATA
 PI Sta 17+66.41
 $\Delta = 12^\circ 58' 11"$ (LT)
 $D = 1' 13" 08.6"$
 $L = 1063.91'$
 $T = 534.24'$
 $R = 4700.00'$
 $SE = 0.025$
 $RO = 105'$
 $INC = 42'$

-Y2- CURVE DATA
 PI Sta 13+49.93
 $\Delta = 14^\circ 39' 42.3"$ (LT)
 $D = 2' 06' 23.3"$
 $L = 696.04'$
 $T = 349.93'$
 $R = 2720.00'$
 $SE = 0.04$
 $RO = 144'$

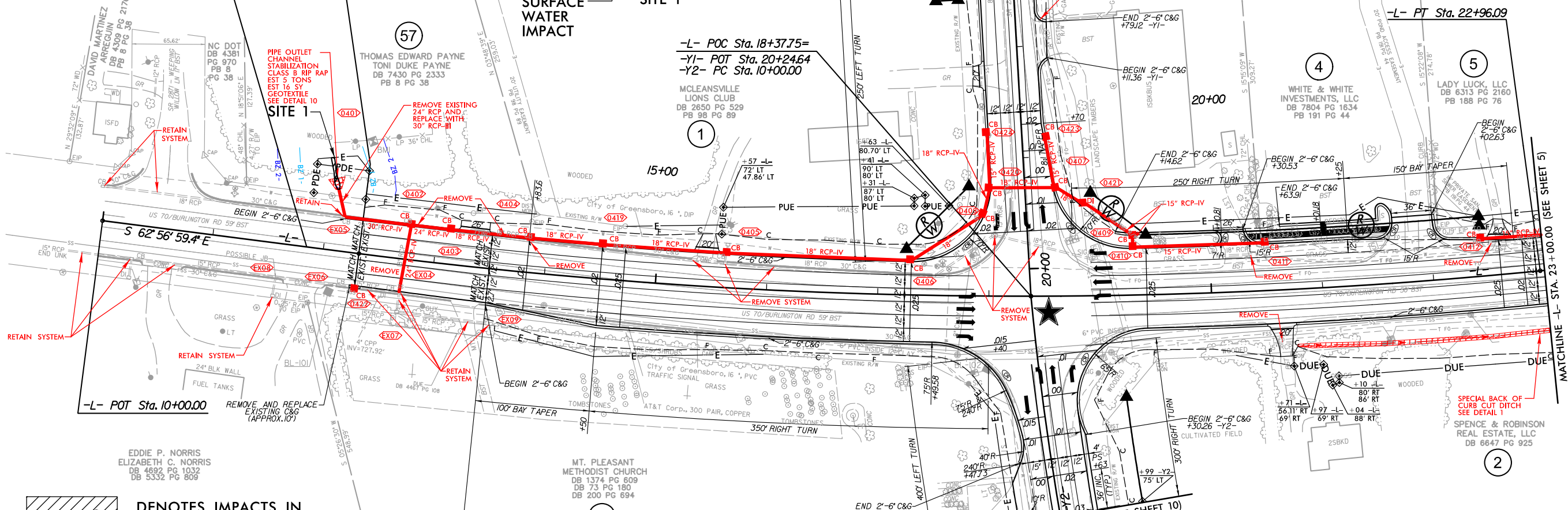


BEGIN CONSTRUCTION
 -Y1- POT Sta. 13+45.00

BEGIN TIP PROJECT U-2581BA

-L- PC STA. 12+32.17
 BEGIN MILL/RESURFACE
 BEGIN WIDENING (LT SIDE ONLY)

BEGIN CONSTRUCTION
 -L- POT Sta. 11+85.00



DENOTES IMPACTS IN SURFACE WATER

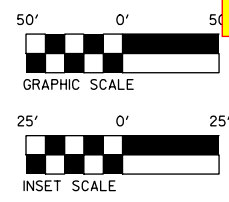


DENOTES TEMPORARY IMPACTS IN SURFACE WATER

BEGIN GRADE
 END MILL/RESURFACE
 -L- POT STA. 13+50.00

PROJECT REFERENCE NO. U-2581BA	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Prepared by vhb VHB Engineering, Inc., P.C. (C-2705) 9800 Mayfield Drive, Suite 500 Raleigh, NC 27616	

PERMIT DRAWING
SHEET 2 OF 14
Revised 5/30/2019




PROP. 4" CONCRETE SIDEWALK

FOR -L- PROFILE SEE SHEET 11
 FOR -Y1- & -Y2- PROFILES SEE SHEET 14

★ EXISTING SIGNAL TO BE MODIFIED

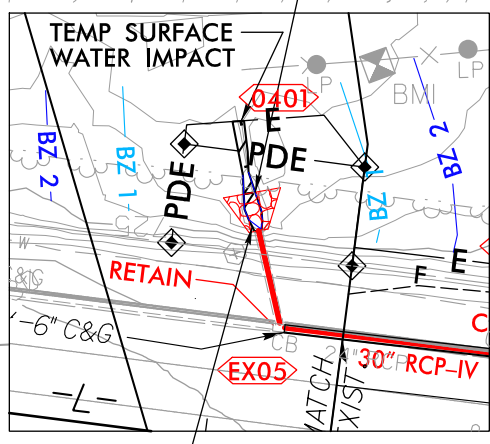
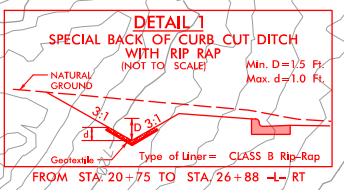
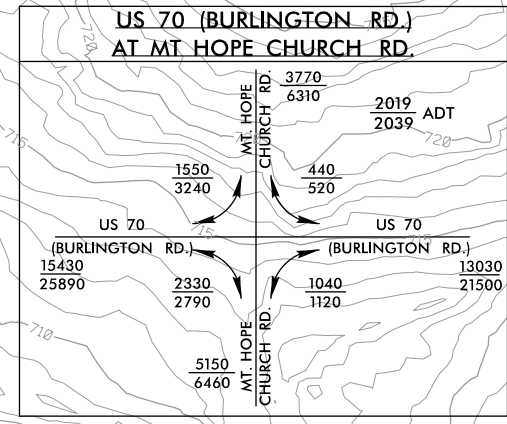
REVISIONS

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 8/17/99

PROJECT REFERENCE NO. U-2581BA	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 VHB Engineering, Inc. P.C. (C-2705) 9800 Maywood Drive, Suite 500 Raleigh, NC 27616	

PERMIT DRAWING
SHEET 3 OF 14

-L- CURVE DATA	-Y2- CURVE DATA
PI Sta 17+66.41	PI Sta 13+49.93
$\Delta = 12^\circ 58' 11.1"$ (LT)	$\Delta = 14^\circ 39' 42.3"$ (LT)
$D = 1^\circ 13' 08.6"$	$D = 2^\circ 06' 23.3"$
$L = 1063.91'$	$L = 696.04'$
$T = 534.24'$	$T = 349.93'$
$R = 4700.00'$	$R = 2720.00'$
$SE = 0.025$	$SE = 0.04$
$RO = 105^\circ$	$RO = 144^\circ$
$INC = 42'$	

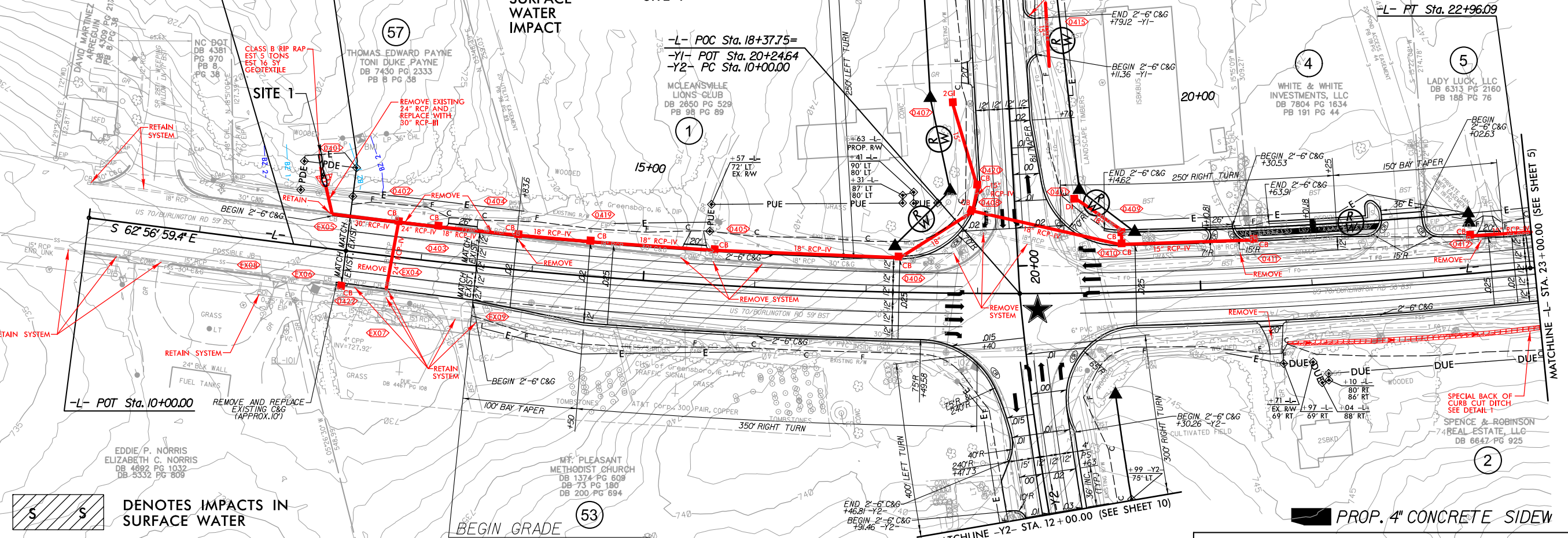


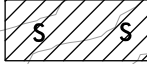

BEGIN TIP PROJECT U-2581BA
-L- PC STA. 12+32.17
 BEGIN MILL/RESURFACE
 BEGIN WIDENING (LT SIDE ONLY)

BEGIN CONSTRUCTION
-L- POT Sta. 11+85.00

-L- POC Sta. 18+37.75=
-Y1- POT Sta. 20+24.64
-Y2- PC Sta. 10+00.00

-L- PT Sta. 22+96.09

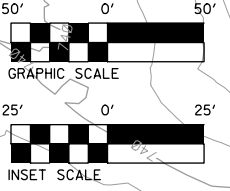


 DENOTES IMPACTS IN SURFACE WATER
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

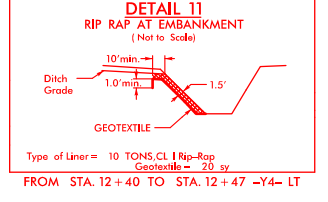
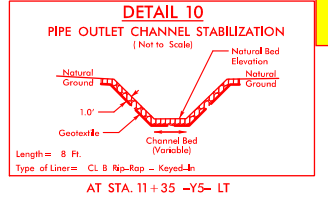
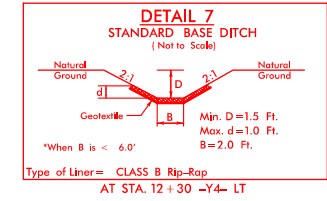
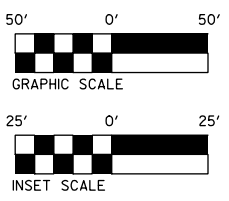
BEGIN GRADE
 END MILL/RESURFACE
-L- POC STA. 13+50.00

 EXISTING SIGNAL TO BE MODIFIED

 PROP. 4" CONCRETE SIDEWALK
 FOR -L- PROFILE SEE SHEET 11
 FOR -Y1- & -Y2- PROFILES SEE SHEET 14

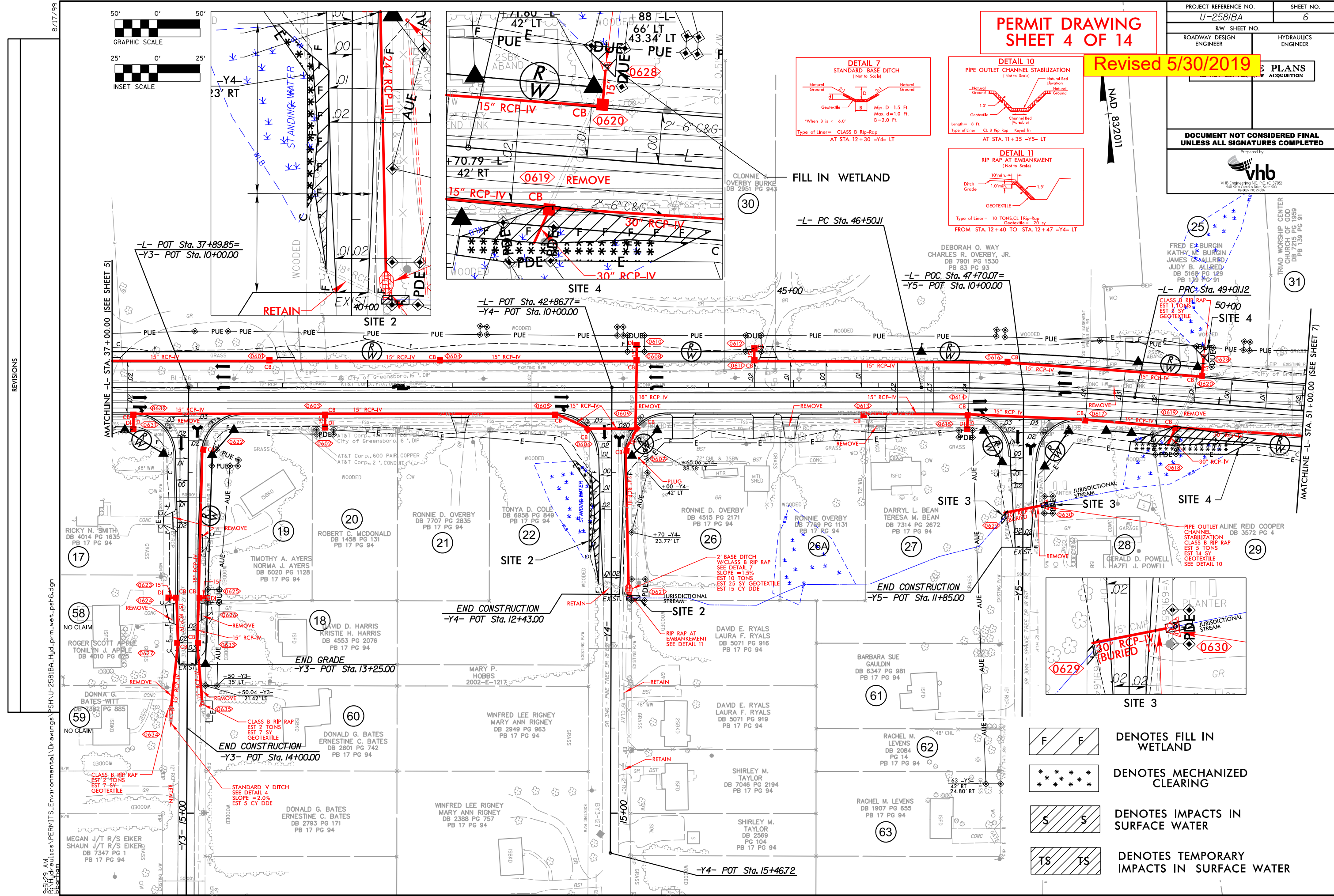


8/17/99
 REVISIONS
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Revised 5/30/2019

NAD 83/2011



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


REVISIONS

8/17/99
9:51:29 AM
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MATCHLINE -L- STA. 37+00.00 (SEE SHEET 5)

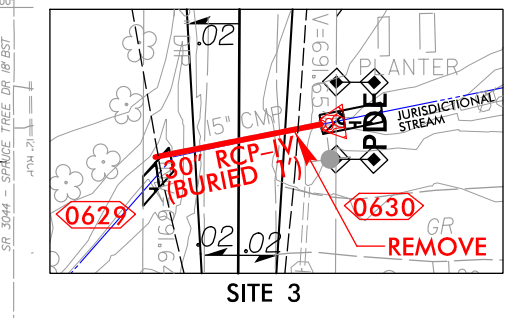
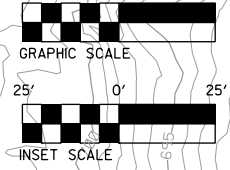
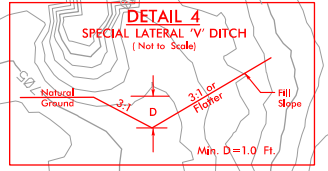
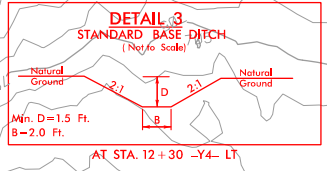
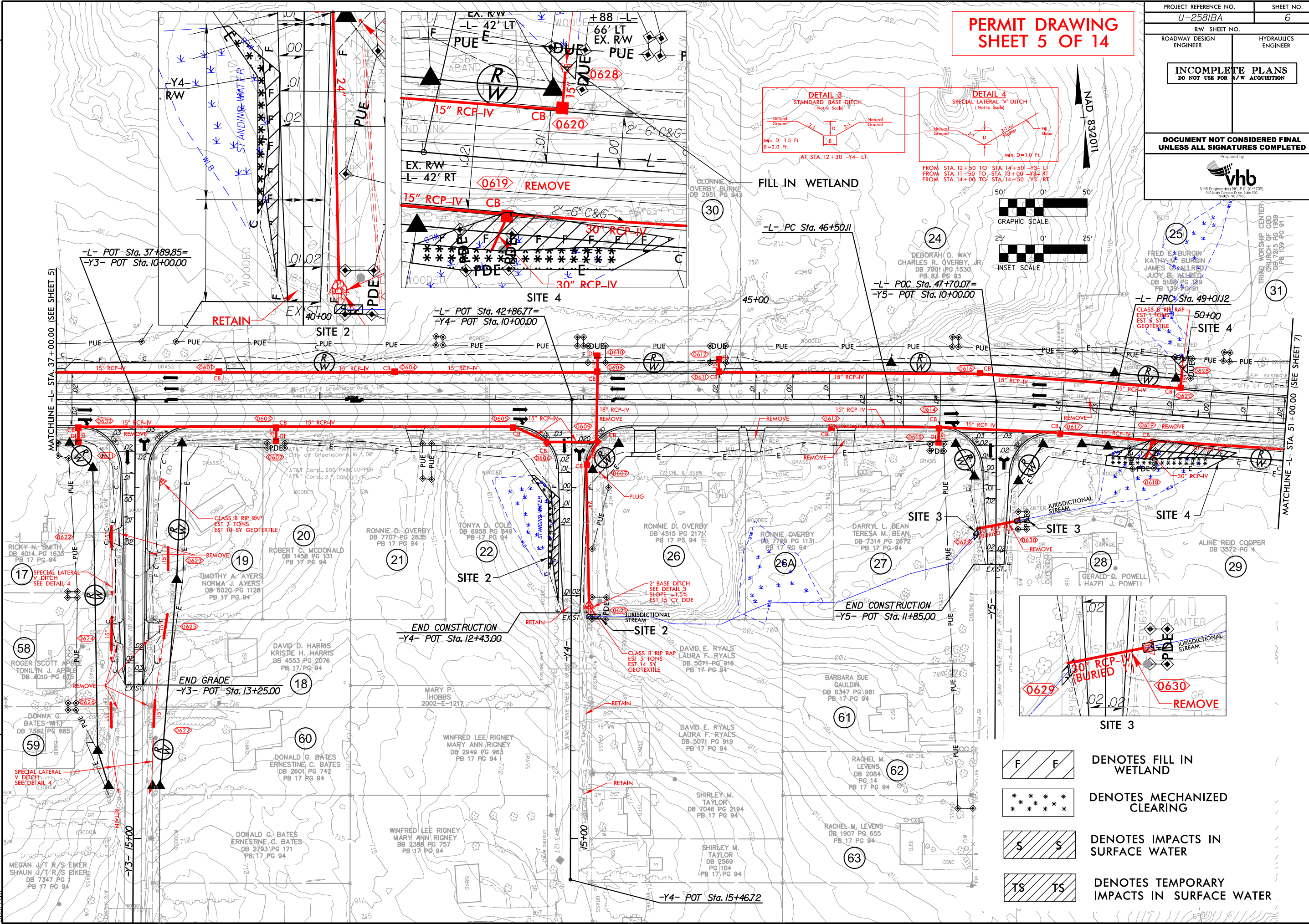
MATCHLINE -L- STA. 51+00.00 (SEE SHEET 7)

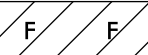


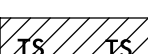
8/17/99

PROJECT REFERENCE NO. U-2581BA	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 VHB Engineering, Inc. P.C. (C-2705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606	

PERMIT DRAWING
SHEET 5 OF 14

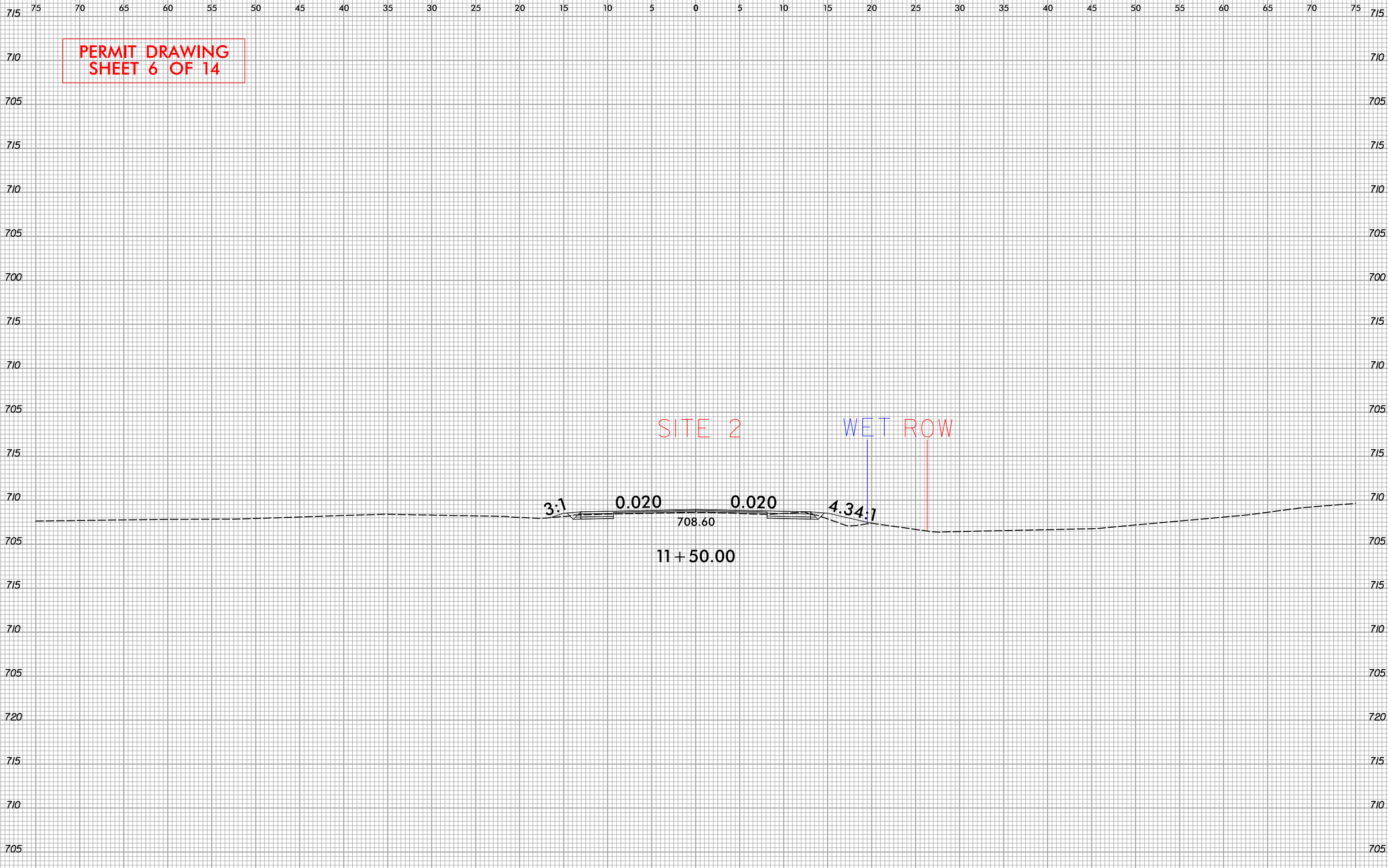
REVISIONS



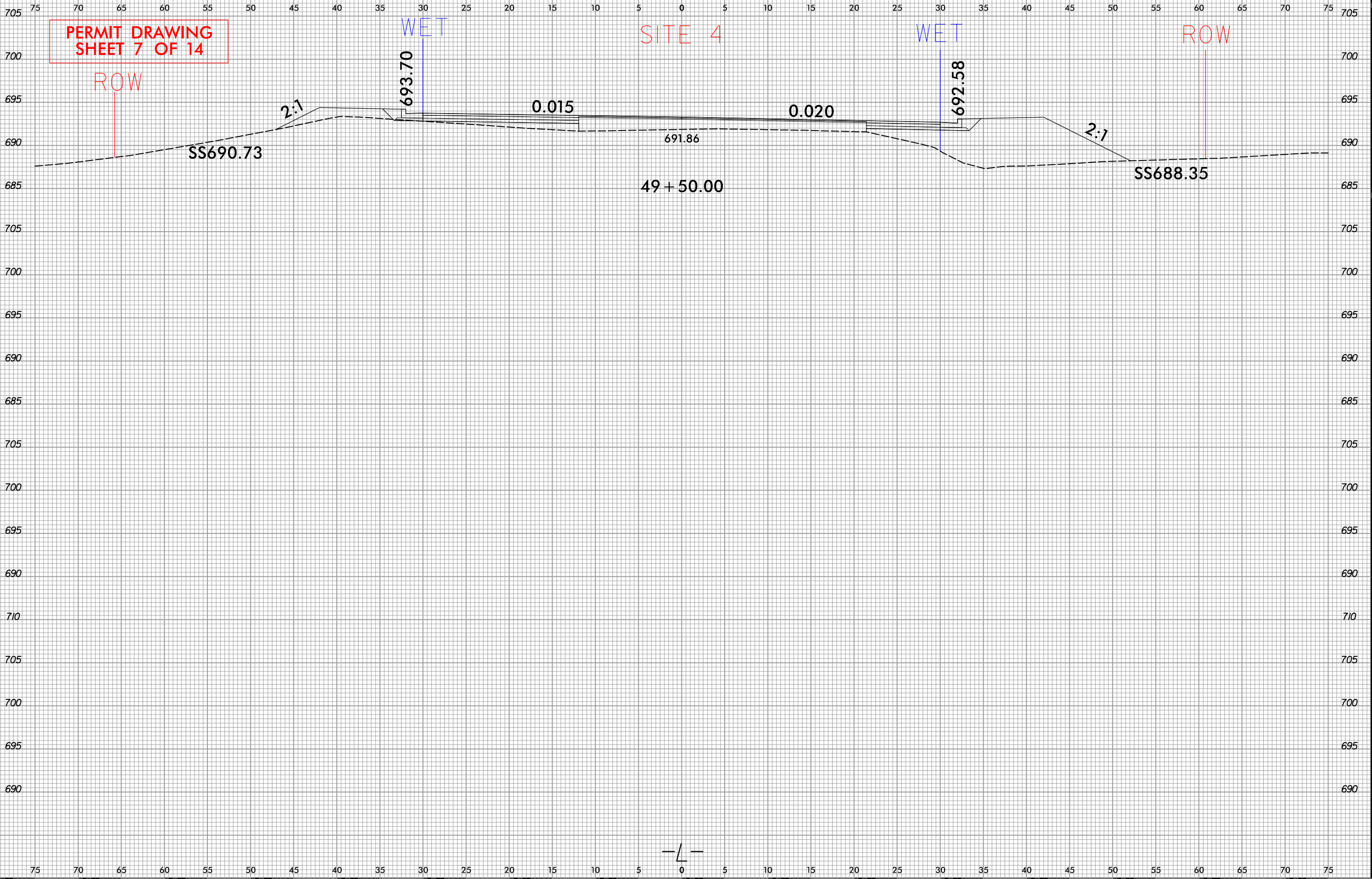
-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER

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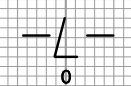
PERMIT DRAWING
SHEET 6 OF 14




6/23/16



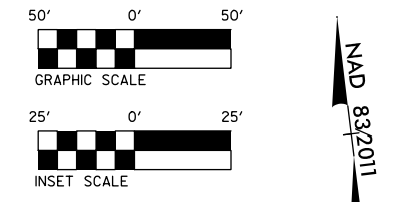
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8/17/99

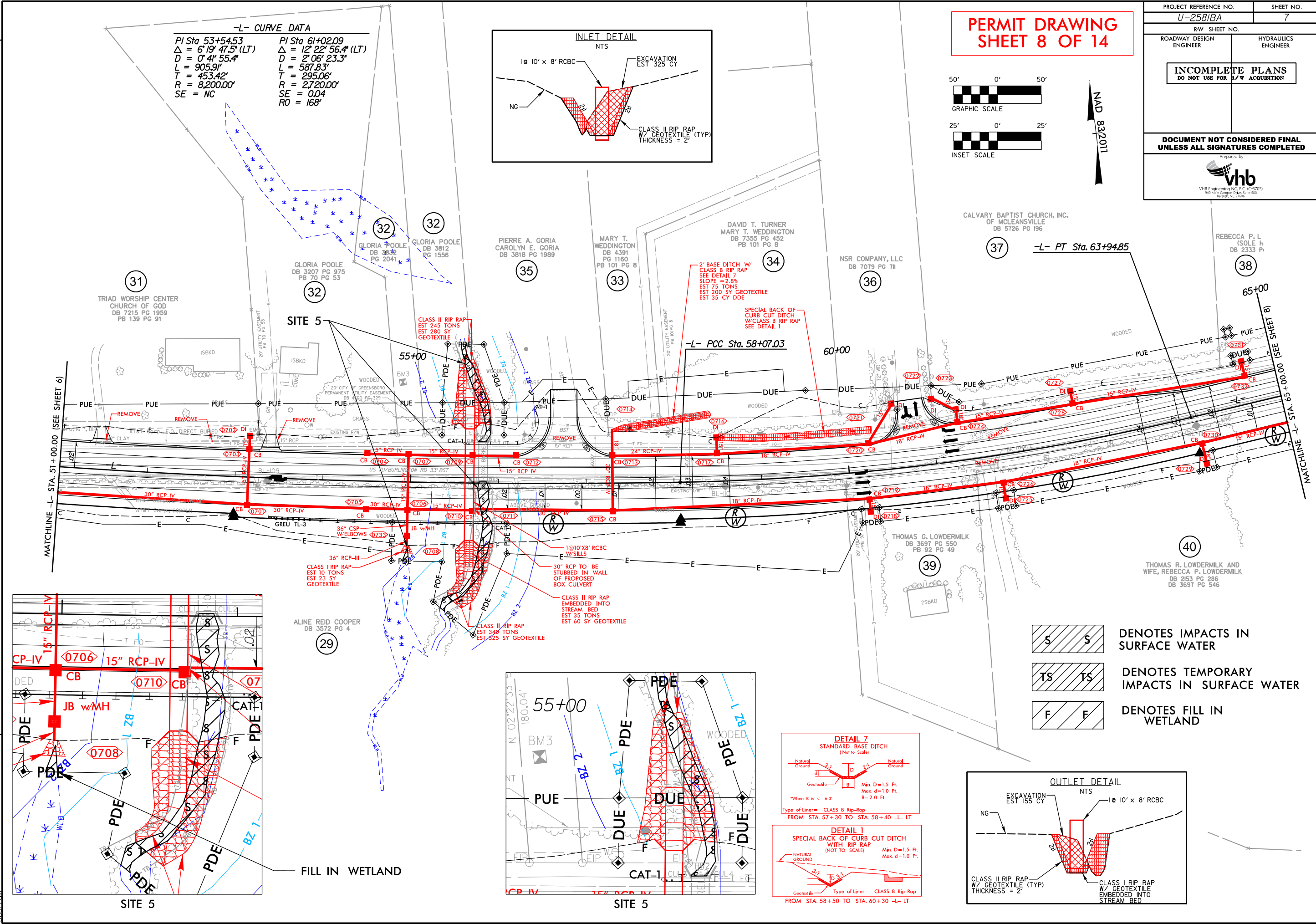
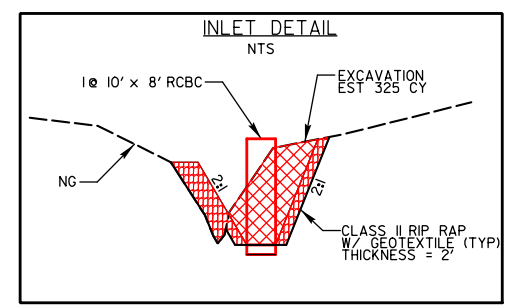
PROJECT REFERENCE NO. U-2581BA	SHEET NO. 7
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 VHB Engineering, P.C. (C-27705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606	

PERMIT DRAWING
SHEET 8 OF 14

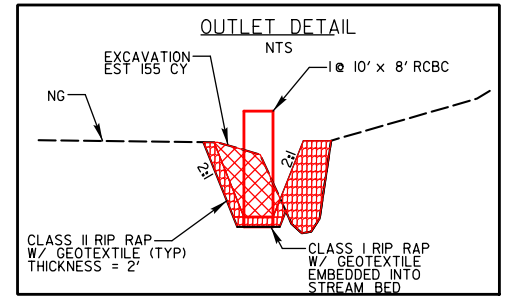
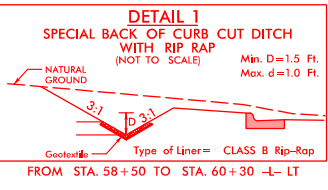
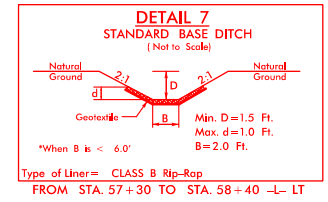
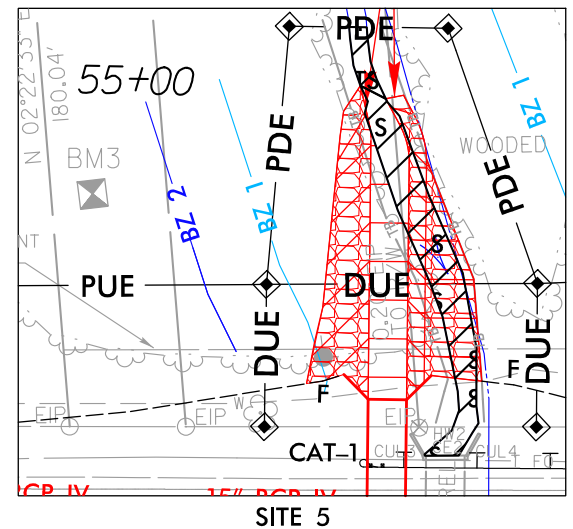
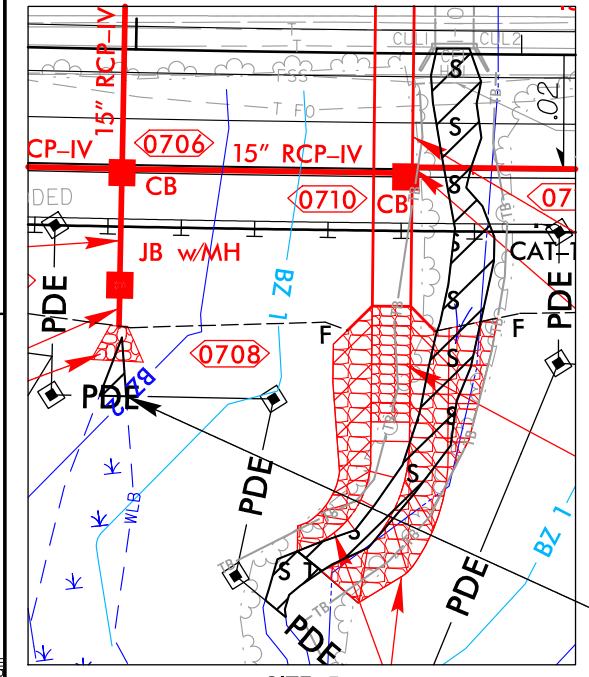



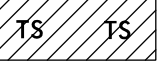
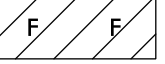
-L- CURVE DATA

PI Sta 53+54.53	PI Sta 61+02.09
$\Delta = 6' 19'' 47.5''$ (LT)	$\Delta = 12' 22'' 56.4''$ (LT)
$D = 0' 41'' 55.4''$	$D = 2' 06'' 23.3''$
$L = 905.9'$	$L = 587.83'$
$T = 453.42'$	$T = 295.06'$
$R = 8,200.00'$	$R = 2,720.00'$
SE = NC	SE = 0.04
	RO = 168'



REVISIONS



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

7:36:20 AM
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 abarham

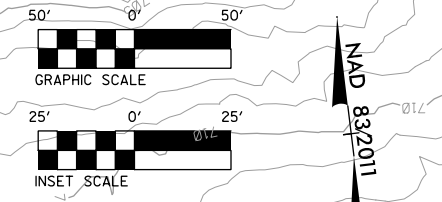
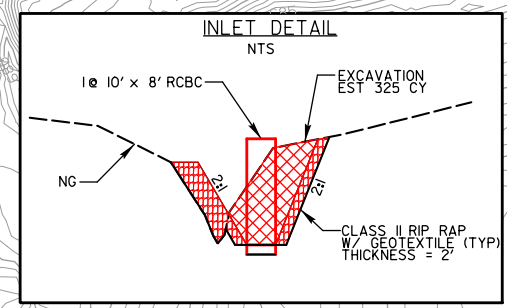
8/17/99

PERMIT DRAWING SHEET 9 OF 14

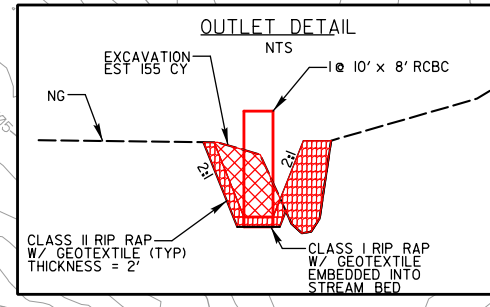
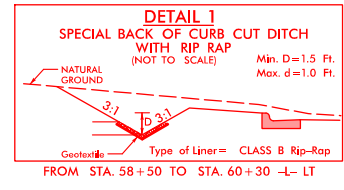
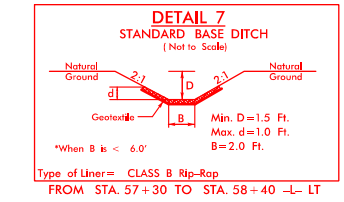
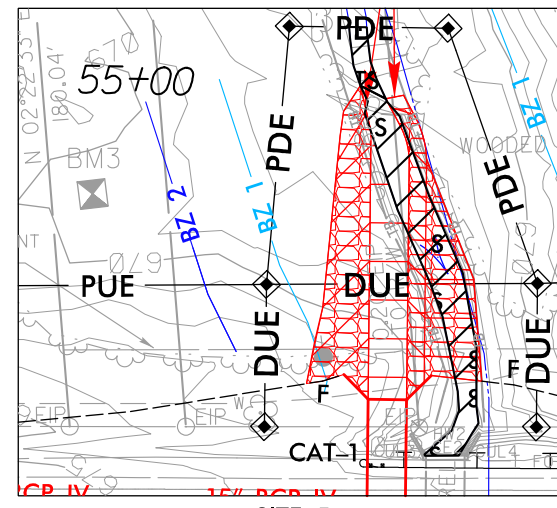
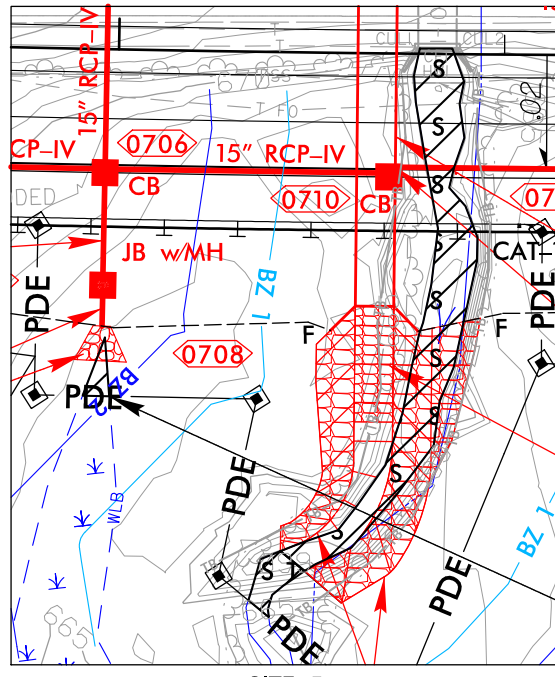
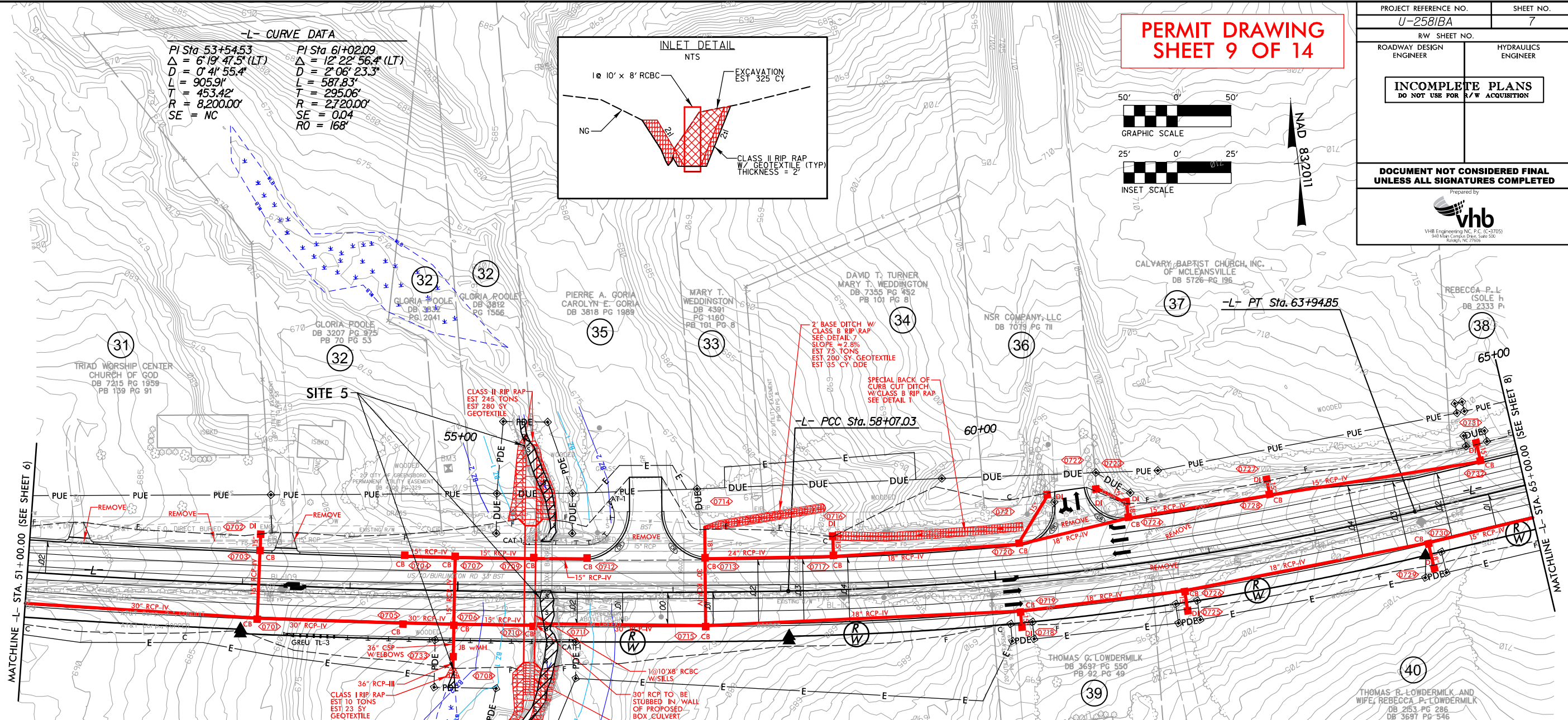
PROJECT REFERENCE NO. U-2581BA	SHEET NO. 7
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Prepared by vhb VHB Engineering, P.C. (C-2705) 900 W. Cannon Drive, Suite 500 Raleigh, NC 27608	

L-CURVE DATA

PI Sta 53+54.53	PI Sta 61+02.09
$\Delta = 6' 19" 47.5" (LT)$	$\Delta = 12' 22" 56.4" (LT)$
$D = 0' 41" 55.4"$	$D = 2' 06" 23.3"$
$L = 905.9'$	$L = 587.83'$
$T = 453.42'$	$T = 295.06'$
$R = 8,200.00'$	$R = 27,200.00'$
SE = NC	SE = 0.04
	RO = 168'



REVISIONS



S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

7:36:26 AM R:\Hydro\ulacs\PERMITS\Environmental\Drawings\SHU-U-2581BA-Hyd-prm-wet-psh7_con.dgn

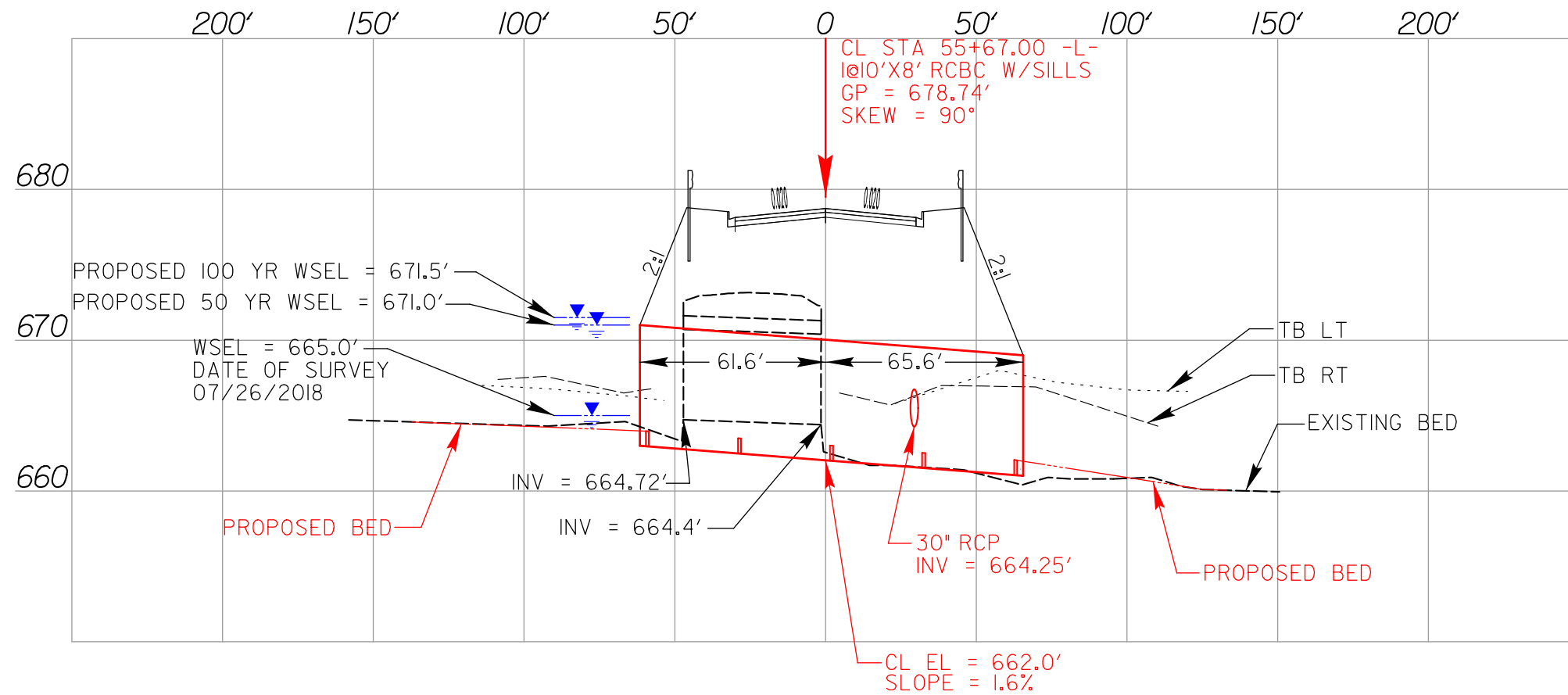
REVISIONS

8/17/99

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abraham

**PERMIT DRAWING
SHEET 10 OF 14**

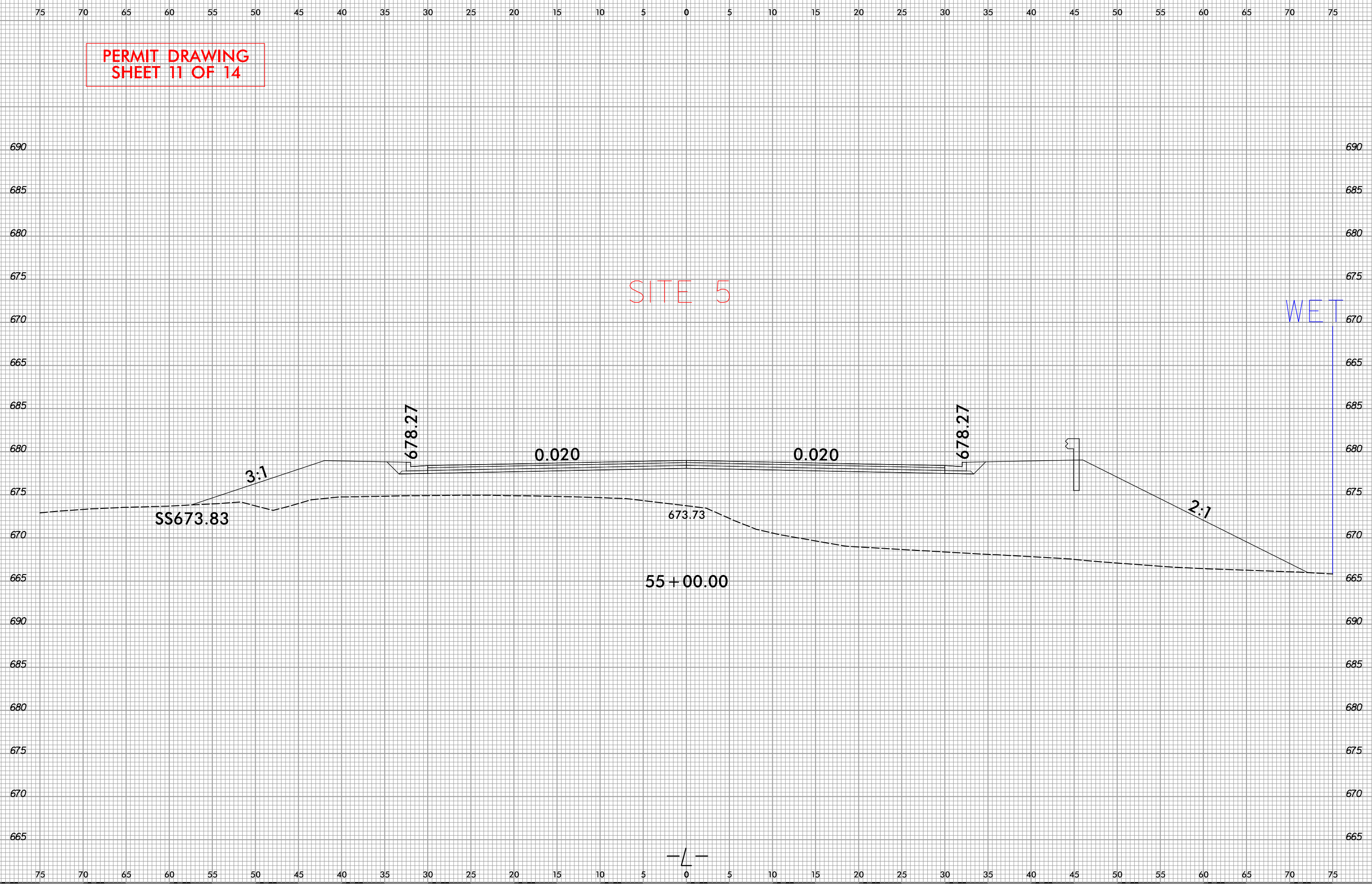
PROJECT REFERENCE NO. <i>U-2581BA</i>	SHEET NO.
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



PERMIT DRAWING
SHEET 11 OF 14

SITE 5

WET



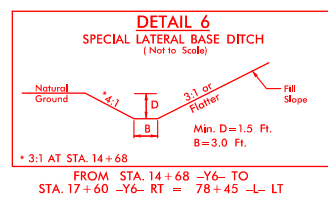
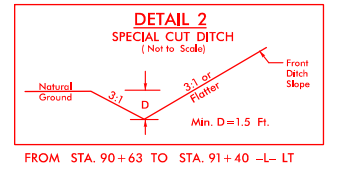
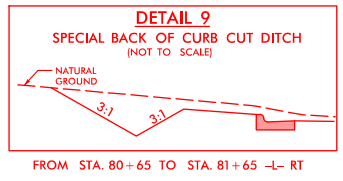
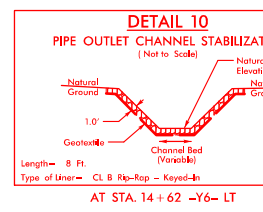
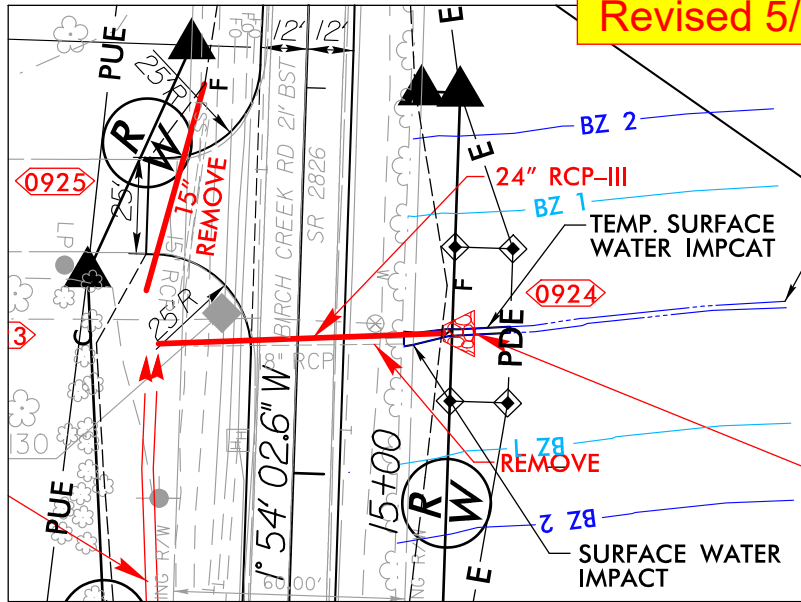
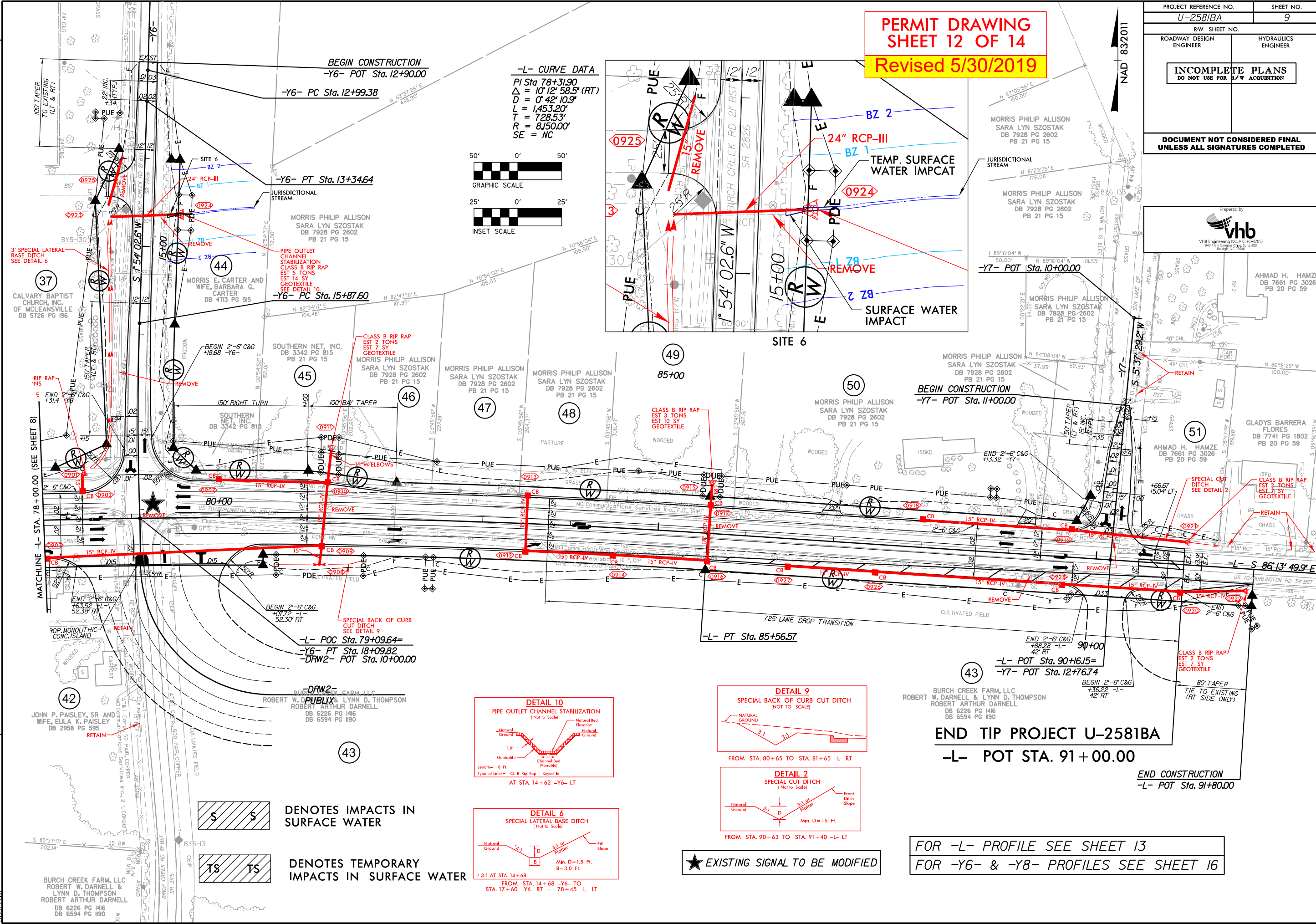
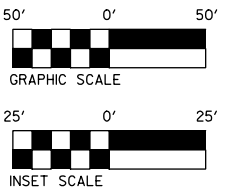
8/17/99

**PERMIT DRAWING
SHEET 12 OF 14
Revised 5/30/2019**

PROJECT REFERENCE NO. U-2581BA	SHEET NO. 9
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



-L- CURVE DATA
 PI Sta 78+31.90
 $\Delta = 10^{\circ}12'58.5''$ (RT)
 $D = 0^{\circ}42'10.9''$
 $L = 1,453.20'$
 $T = 728.53'$
 $R = 8,150.00'$
 $SE = NC$



★ EXISTING SIGNAL TO BE MODIFIED

S DENOTES IMPACTS IN SURFACE WATER

TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

FOR -L- PROFILE SEE SHEET 13
FOR -Y6- & -Y8- PROFILES SEE SHEET 16

REVISIONS

9:51:40 AM R:\Hydro\ulics\PERMITS-Environmental\Drawings\SHU-U-2581BA-Hyd-prm-wet_psh9.dgn

BURCH CREEK FARM, LLC
 ROBERT W. DARNELL & LYNN D. THOMPSON
 ROBERT ARTHUR DARNELL
 DB 6226 PG 1416
 DB 6594 PG 1190

JOHN P. PAISLEY, SR AND WIFE, EULA K. PAISLEY
 DB 2958 PG 595

BURCH CREEK FARM, LLC
 ROBERT W. DARNELL & LYNN D. THOMPSON
 ROBERT ARTHUR DARNELL
 DB 6226 PG 1416
 DB 6594 PG 1190

-L- POC Sta. 79+09.64=
 -Y6- PT Sta. 18+09.82
 -DRW2- POT Sta. 10+00.00

BEGIN CONSTRUCTION
 -Y7- POT Sta. 11+00.00

-L- POT Sta. 90+16.15=
 -Y7- POT Sta. 12+76.74


END TIP PROJECT U-2581BA
 -L- POT STA. 91+00.00

END CONSTRUCTION
 -L- POT Sta. 91+80.00

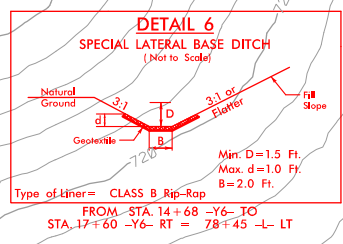
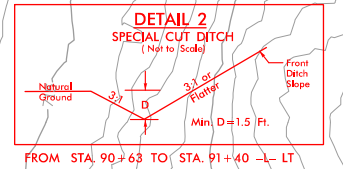
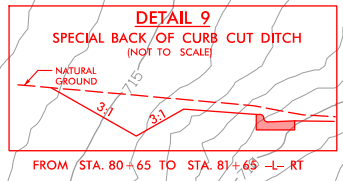
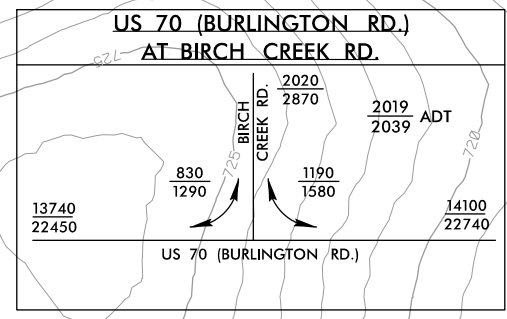
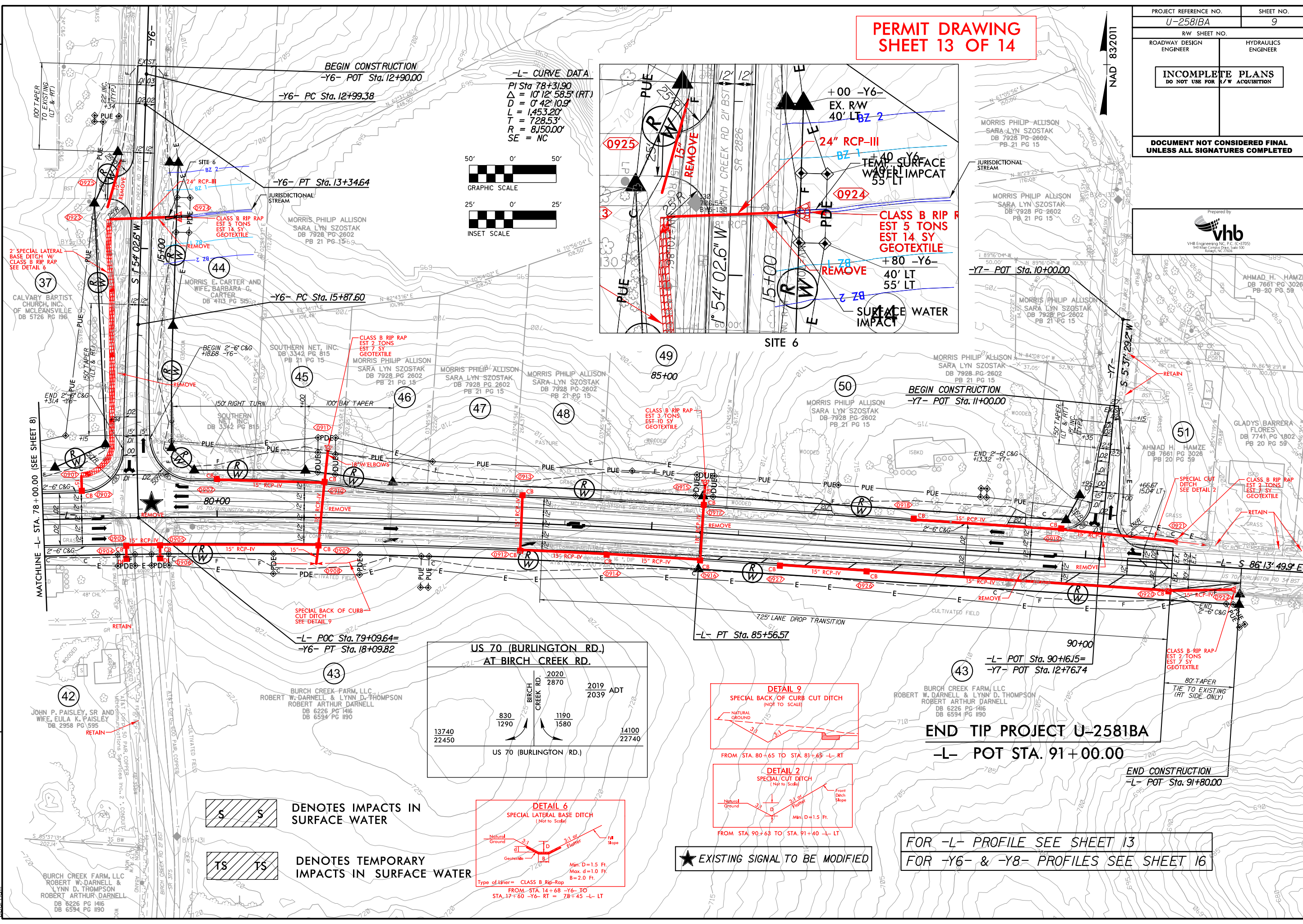
**PERMIT DRAWING
SHEET 13 OF 14**

PROJECT REFERENCE NO. U-2581BA	SHEET NO. 9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

Prepared by



VHB Engineering Inc. (C-0100)
940 Kilar, Campus Drive, Suite 500
Kearney, NE 68845



S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

★ EXISTING SIGNAL TO BE MODIFIED

REVISIONS

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8/17/99

WETLAND AND SURFACE WATER IMPACTS 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	12+02/12+07 -L- LT	30" RCP						< 0.01	< 0.01	10	19	
2	10+86/12+50 -Y4- RT	Roadway Fill/24" Pipe	0.02			0.01		< 0.01	< 0.01	6	10	
3	11+30/11+50 -Y5-	30" RCP								13	13	
4	49+00/50+47 -L-	Roadway Fill	0.05			0.03						
5	54+92/55+93 -L-	1@10'x8' RCBC/Roadway Fill	< 0.01					0.05	< 0.01	251	33	
6	14+60/14+66 -Y6- LT	24" RCP						< 0.01	< 0.01	20	15	
TOTALS*:			0.07			0.04		0.05	< 0.01	300	90	0

*Rounded totals are sum of actual impacts

NOTES:

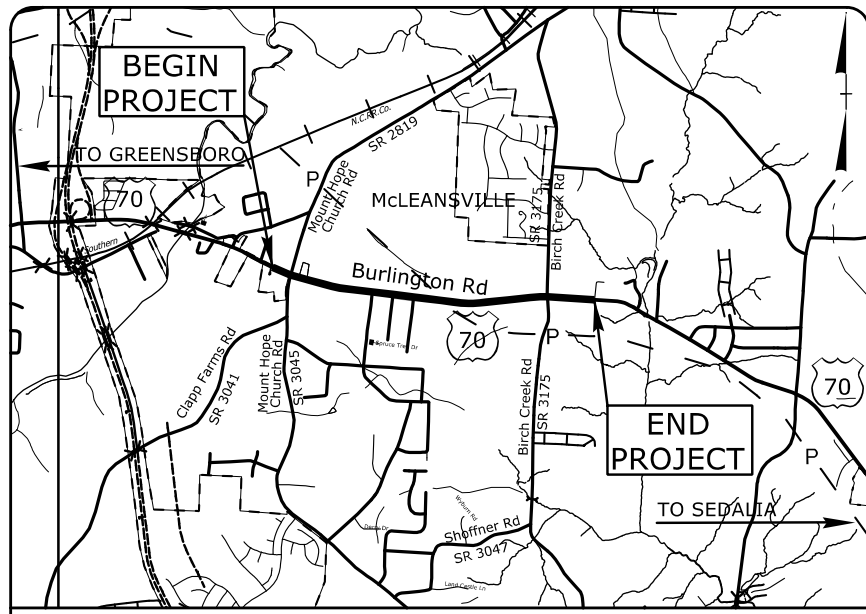
Revised 5/30/2019

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 05/30/2019
 GUILFORD COUNTY
 U-2581BA

09/28/19

TIP PROJECT: U-2581BA

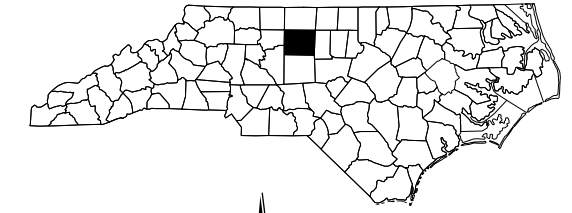
See Sheet 1B For Conventional Symbols



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
GUILFORD COUNTY

BUFFER DRAWING SHEET 1 OF 7

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2581BA	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34840.1.1		PE	
		R/W, UTIL.	
		CONST.	



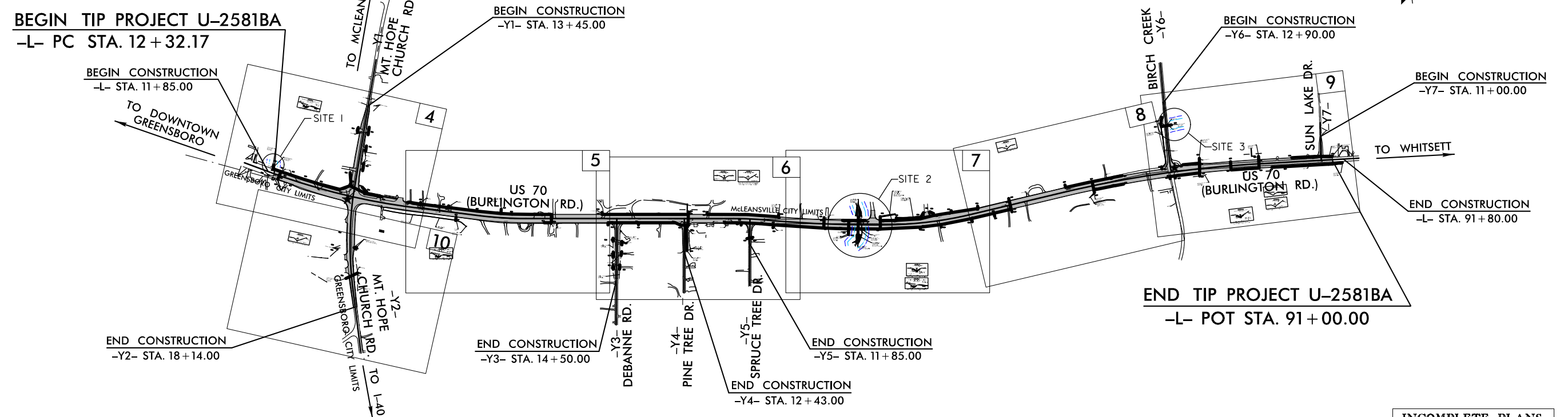
LOCATION: US 70 (BURLINGTON ROAD) FROM WEST OF SR 3045/SR 2819 (MT. HOPE CHURCH ROAD) TO JUST EAST OF SR 3175 (BIRCH CREEK ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS AND CULVERT

BUFFER IMPACT PERMIT

★ EXISTING SIGNAL TO BE MODIFIED

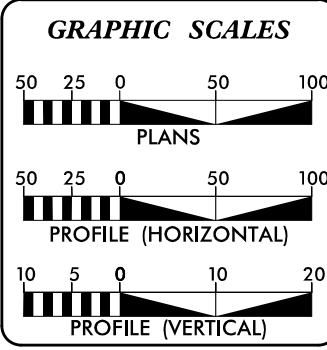
CFI PLANS



A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF GREENSBORO AND McLEANSVILLE. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ??.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

ADT 2019 =	15,430
ADT 2039 =	25,890
K =	12 %
D =	60 %
T =	6 % *
V =	50 MPH
* (TTST 1 + DUAL 5)	
FUNC CLASS =	PRINCIPAL ARTERIAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-2581BA =	1.490 MI.
TOTAL LENGTH OF TIP PROJECT U-2581BA =	1.490 MI.

Prepared for the North Carolina Department of Transportation
In the Office of:

VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606

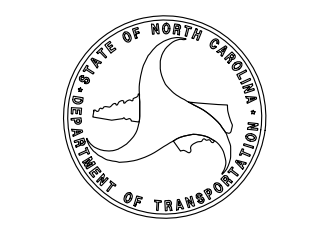
2018 STANDARD SPECIFICATIONS	JIMMY GOODNIGHT, PE PROJECT ENGINEER
RIGHT OF WAY DATE: OCTOBER 30, 2018	
LETTING DATE: OCTOBER 15, 2019	JERRY JAVELLANA, PE PROJECT DESIGN ENGINEER
NCDOT CONTACT	LAURA SUTTON, PE

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

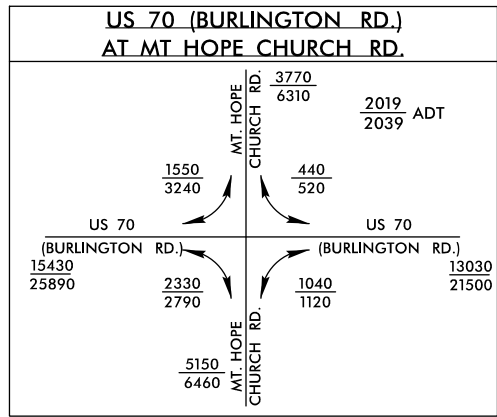


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bbarham

8/17/99

-L- CURVE DATA
 PI Sta 17+66.41
 $\Delta = 12^\circ 58' 11"$ (LT)
 $D = 1'13" 08.6"$
 $L = 1063.91'$
 $T = 534.24'$
 $R = 4700.00'$
 $SE = 0.025$
 $RO = 105'$
 $INC = 42'$

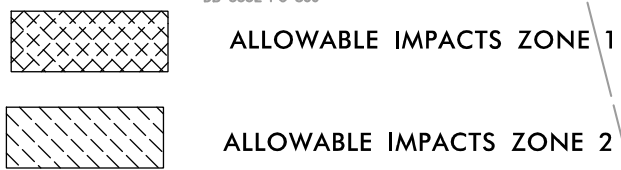
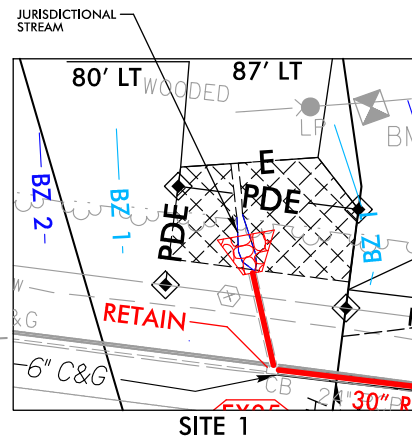
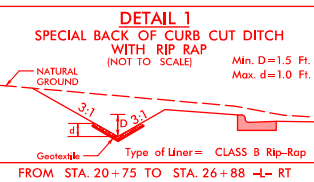
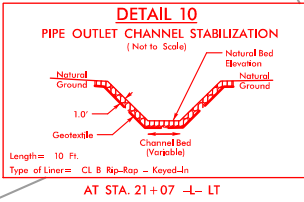
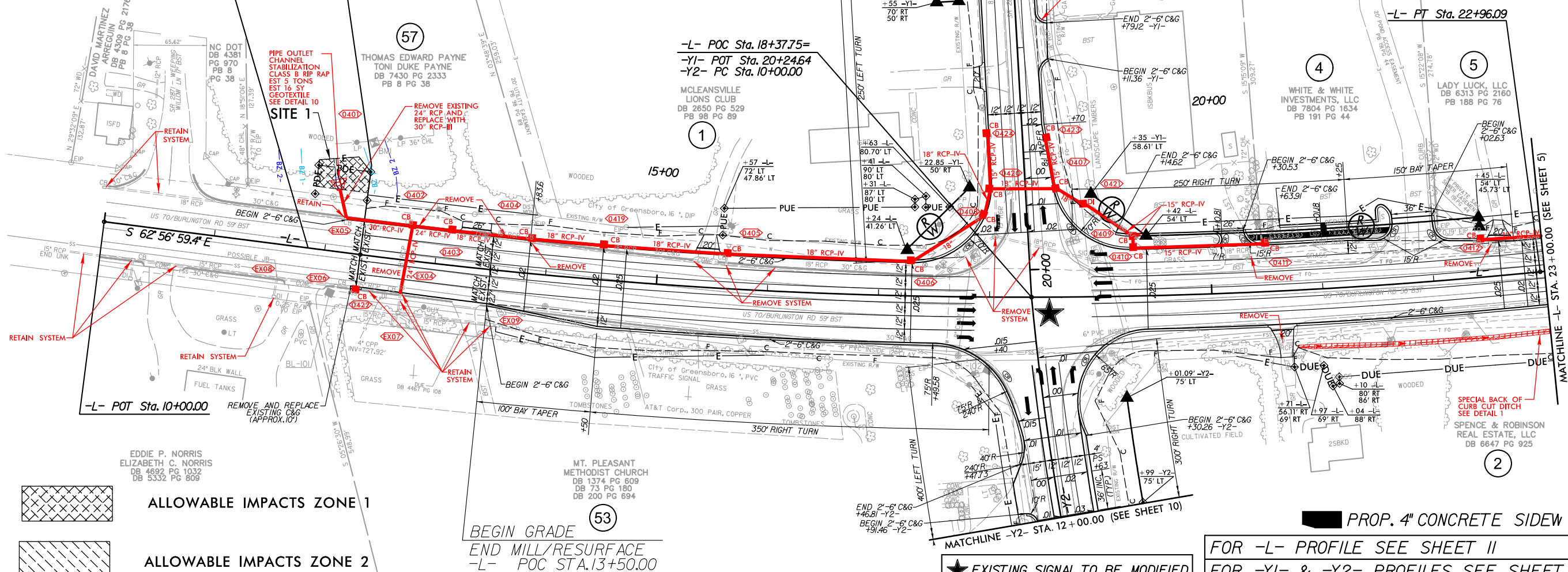
-Y2- CURVE DATA
 PI Sta 13+49.93
 $\Delta = 14^\circ 39' 42.3"$ (LT)
 $D = 2'06" 23.3"$
 $L = 696.04'$
 $T = 349.93'$
 $R = 2720.00'$
 $SE = 0.04$
 $RO = 144'$



BEGIN TIP PROJECT U-2581BA

-L- PC STA. 12+32.17
 BEGIN MILL/RESURFACE
 BEGIN WIDENING (LT SIDE ONLY)

BEGIN CONSTRUCTION
-L- POT Sta. 11+85.00



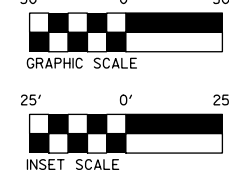
BEGIN GRADE
END MILL/RESURFACE
-L- POT STA. 13+50.00

★ EXISTING SIGNAL TO BE MODIFIED

FOR -L- PROFILE SEE SHEET 11
 FOR -Y1- & -Y2- PROFILES SEE SHEET 14

BUFFER DRAWING
SHEET 2 OF 7
 Revised 5/30/2019

PROJECT REFERENCE NO. U-2581BA
 SHEET NO. 4
 RW SHEET NO.
 ROADWAY DESIGN ENGINEER
 HYDRAULICS ENGINEER
INCOMPLETE PLANS
 DO NOT USE FOR R/W ACQUISITION
 DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED
 Prepared by
vhb
 VHB Engineering Inc., P.C. (C-2705)
 9800 Mayfield Drive, Suite 500
 Raleigh, NC 27615




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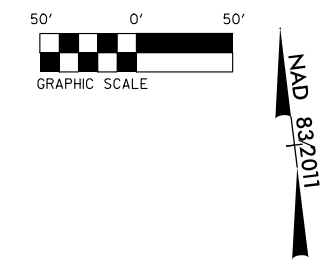
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8/17/99

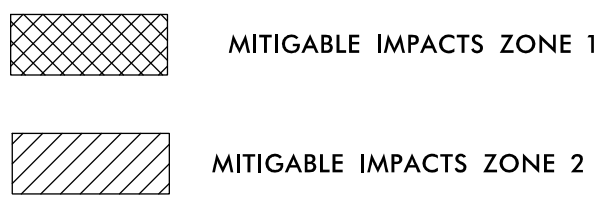
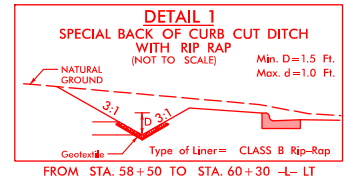
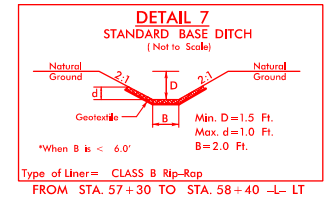
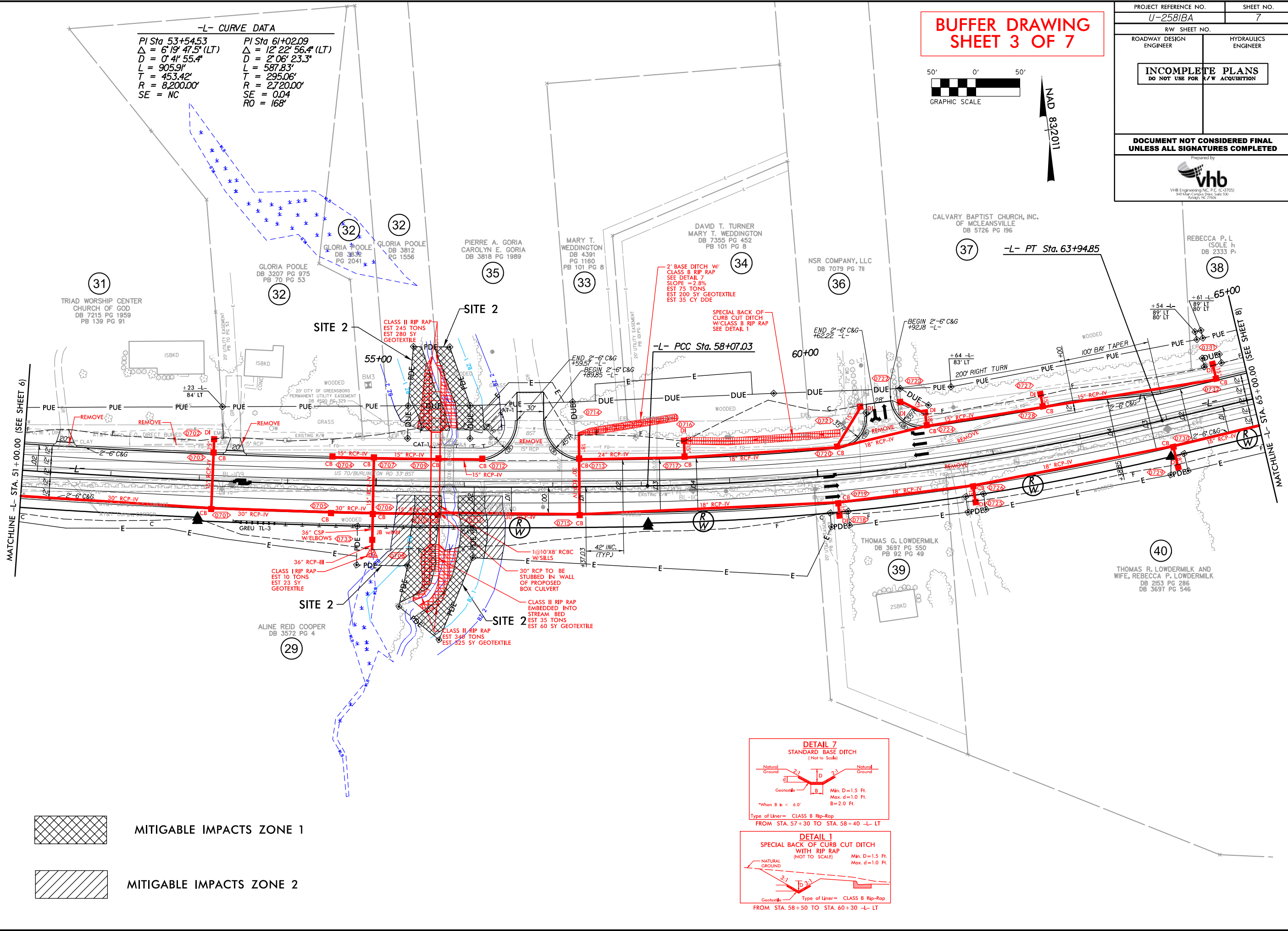
PROJECT REFERENCE NO. U-2581BA		SHEET NO. 7	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
Prepared by  vhb VHB Engineering, Inc., P.C. (C-27705) 940 Alcoa Center, Drive, Suite 500 Roanoke, NC 27860			

BUFFER DRAWING
SHEET 3 OF 7



-L- CURVE DATA


PI Sta 53+54.53	PI Sta 61+02.09
$\Delta = 6' 19'' 47.5''$ (LT)	$\Delta = 12' 22'' 56.4''$ (LT)
$D = 0' 41'' 55.4''$	$D = 2' 06'' 23.3''$
$L = 905.9'$	$L = 587.83'$
$T = 453.42'$	$T = 295.06'$
$R = 8,200.00'$	$R = 2,720.00'$
SE = NC	SE = 0.04
	RO = 168'

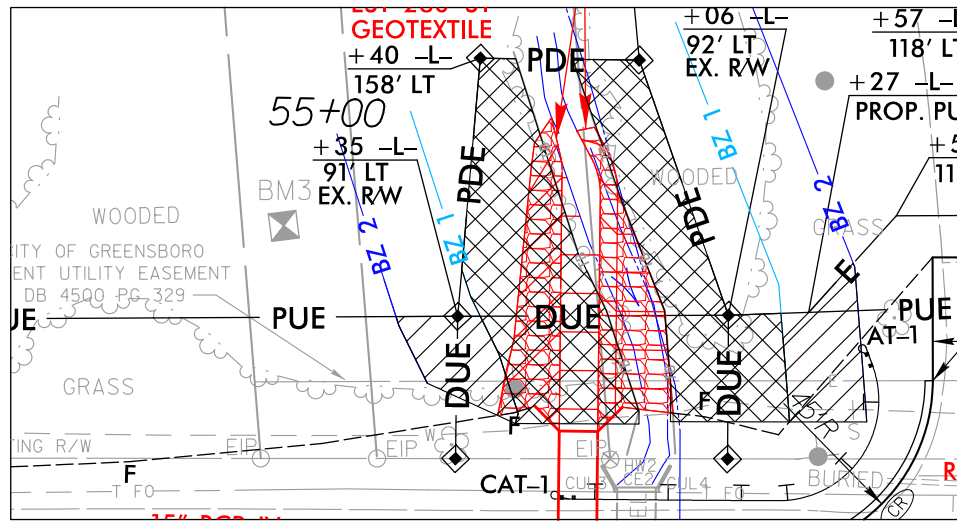
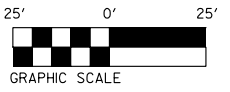


REVISIONS

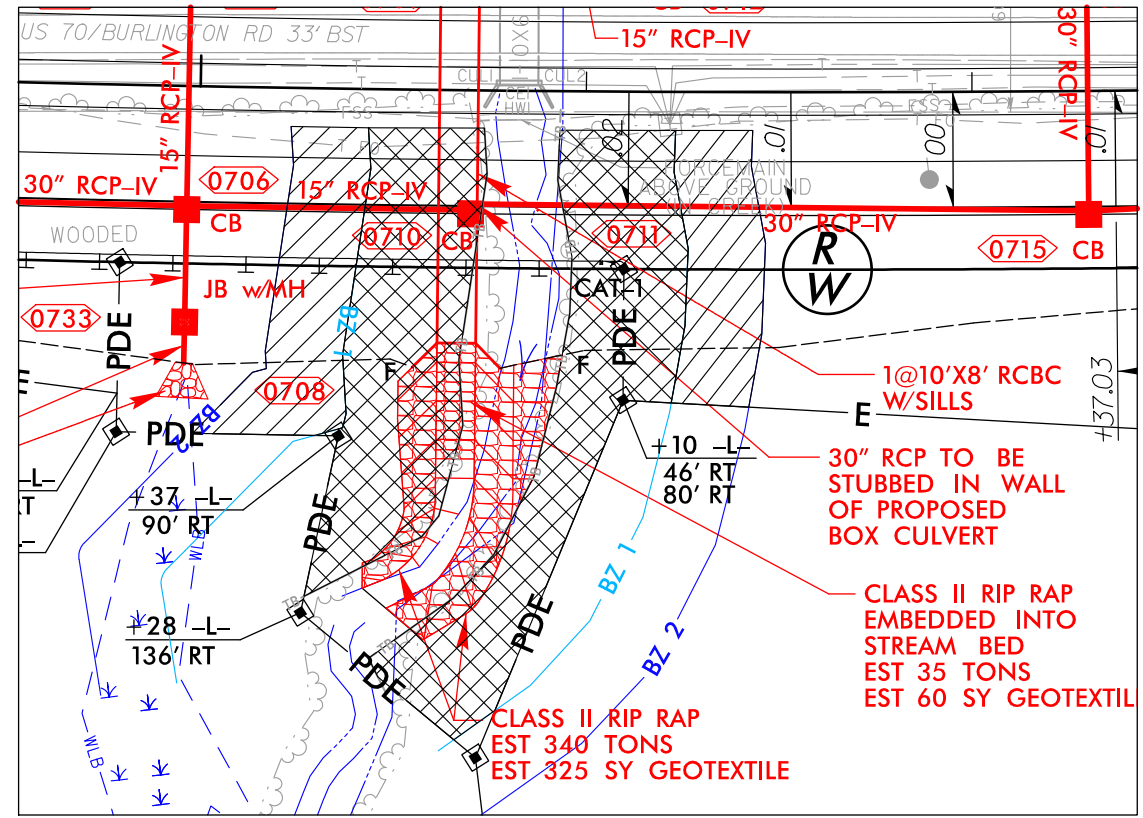
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BUFFER DRAWING SHEET 4 OF 7

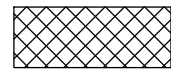
PROJECT REFERENCE NO. U-2581BA	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Prepared by  VHB Engineering, Inc., P.C. (C-2705) 940 Alston Campus Drive, Suite 500 Raleigh, NC 27608	



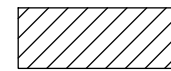
SITE 2



SITE 2



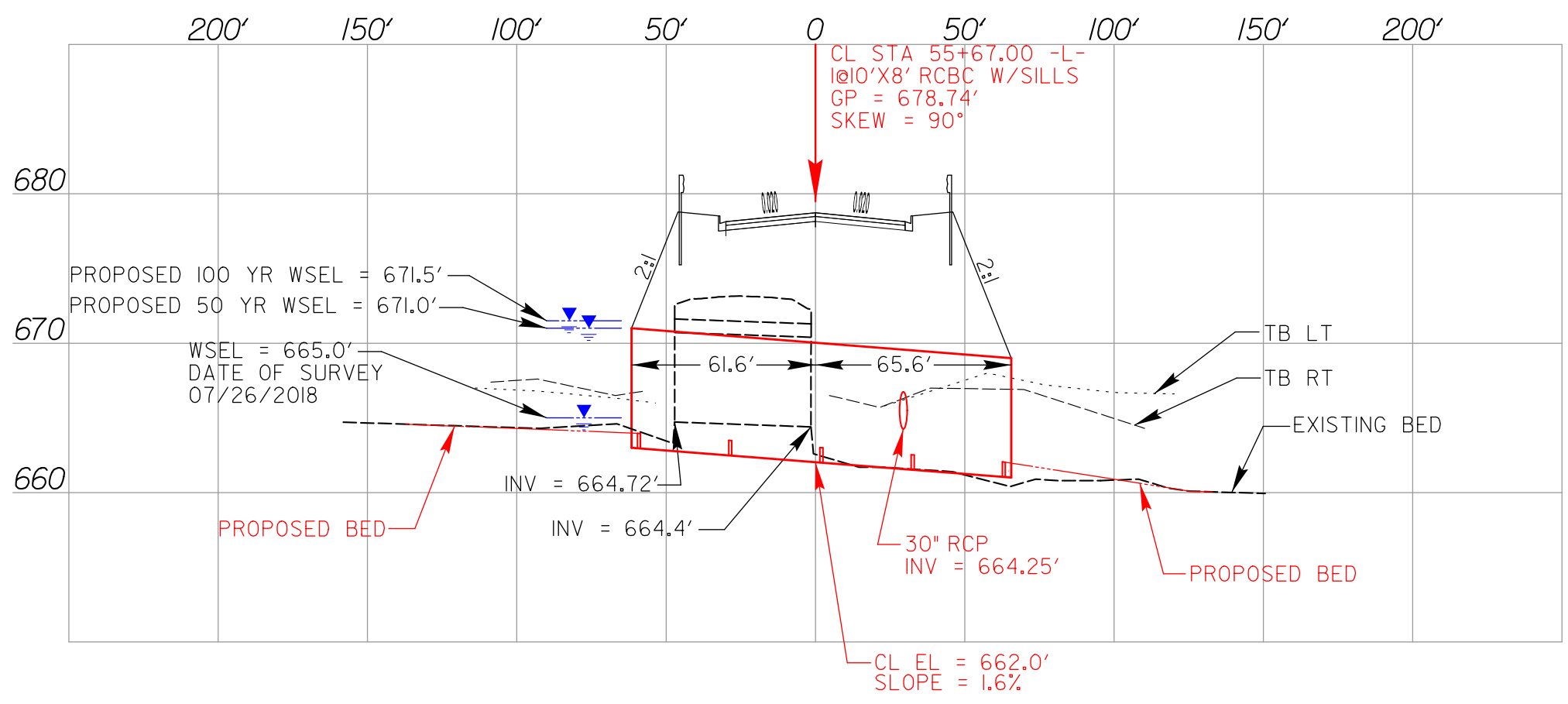
MITIGABLE IMPACTS ZONE 1



MITIGABLE IMPACTS ZONE 2

**BUFFER DRAWING
SHEET 5 OF 7**

PROJECT REFERENCE NO. <i>U-2581BA</i>	SHEET NO.
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



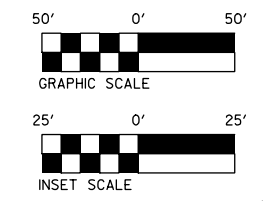
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abraham

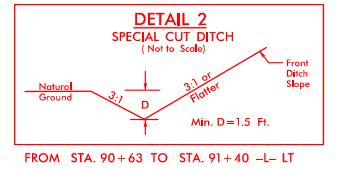
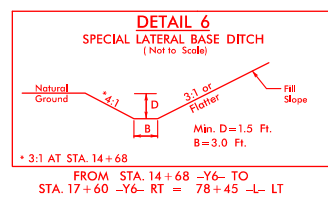
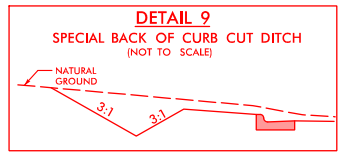
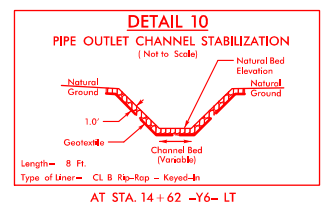
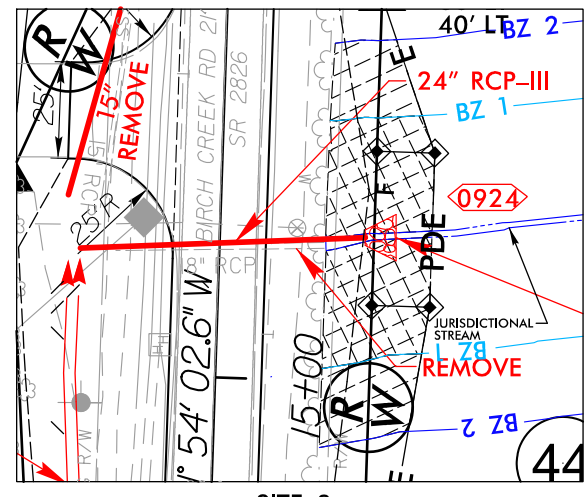
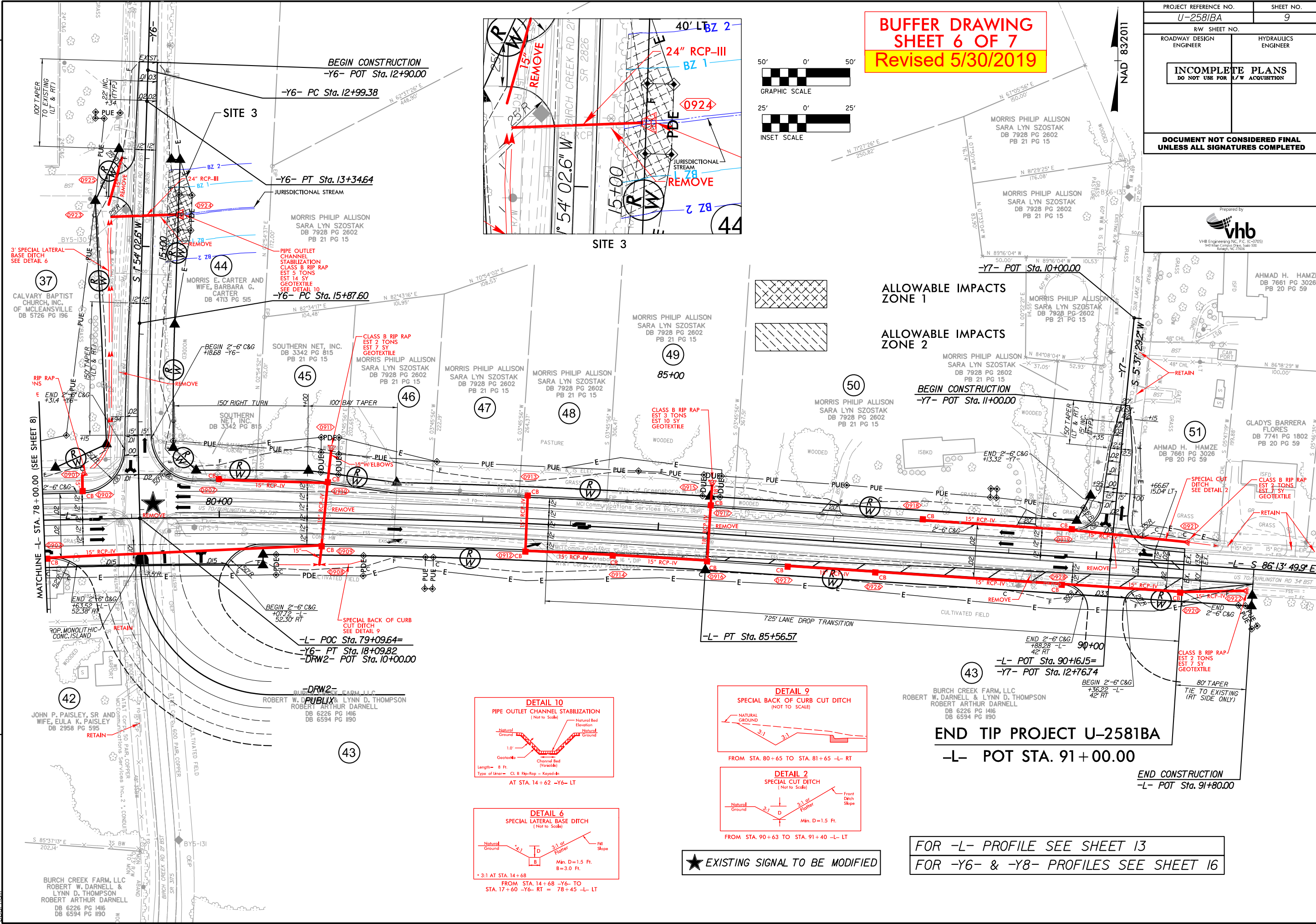
8/17/99

BUFFER DRAWING SHEET 6 OF 7 Revised 5/30/2019

PROJECT REFERENCE NO. U-2581BA	SHEET NO. 9
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



NAD 832011



★ EXISTING SIGNAL TO BE MODIFIED

FOR -L- PROFILE SEE SHEET 13
FOR -Y6- & -Y8- PROFILES SEE SHEET 16

REVISIONS

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BURCH CREEK FARM, LLC
ROBERT W. DARNELL & LYNN D. THOMPSON
ROBERT ARTHUR DARNELL
DB 6226 PG 1416
DB 6594 PG 1190

JOHN P. PAISLEY, SR AND WIFE, EULA K. PAISLEY
DB 2958 PG 595

BURCH CREEK FARM, LLC
ROBERT W. DARNELL & LYNN D. THOMPSON
ROBERT ARTHUR DARNELL
DB 6226 PG 1416
DB 6594 PG 1190

BURCH CREEK FARM, LLC
ROBERT W. DARNELL & LYNN D. THOMPSON
ROBERT ARTHUR DARNELL
DB 6226 PG 1416
DB 6594 PG 1190

CALVARY BAPTIST CHURCH, INC. OF MCLEANSVILLE
DB 5726 PG 196

MORRIS E. CARTER AND WIFE, BARBARA G. CARTER
DB 4713 PG 515

SOUTHERN NET, INC.
DB 3342 PG 815

MORRIS PHILIP ALLISON SARA LYN SZOSTAK
DB 7928 PG 2602
PB 21 PG 15

MORRIS PHILIP ALLISON SARA LYN SZOSTAK
DB 7928 PG 2602
PB 21 PG 15

MORRIS PHILIP ALLISON SARA LYN SZOSTAK
DB 7928 PG 2602
PB 21 PG 15

MORRIS PHILIP ALLISON SARA LYN SZOSTAK
DB 7928 PG 2602
PB 21 PG 15

MORRIS PHILIP ALLISON SARA LYN SZOSTAK
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PB 21 PG 15

MORRIS PHILIP ALLISON SARA LYN SZOSTAK
DB 7928 PG 2602
PB 21 PG 15

MORRIS PHILIP ALLISON SARA LYN SZOSTAK
DB 7928 PG 2602
PB 21 PG 15

MORRIS PHILIP ALLISON SARA LYN SZOSTAK
DB 7928 PG 2602
PB 21 PG 15

AHMAD H. HAMZE DB 7661 PG 3026
PB 20 PG 59

AHMAD H. HAMZE DB 7661 PG 3026
PB 20 PG 59

GLADYS BARRERA FLORES DB 7741 PG 1802
PB 20 PG 59

RIPARIAN BUFFER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	IMPACTS									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	11+85/12+35 -L- LT		X			1201		1201					
2	55+18/56+42 -L- LT	1@ 10'x8' RCBC	X						4370	1127	5497		
2	55+00/56+43 -L- RT	1@ 10'x8' RCBC	X						7393	3228	10621		
3	14+10/15+17 -Y6- LT		X			1635	896	2531					
TOTALS*:						2836	896	3732	11763	4355	16118	0	0

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 01/07/2019
 GUILFORD COUNTY
 U-2581BA

Revised 2018 Feb