



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

July 27, 2023

Regulatory Division

Action ID. SAW-2020-00746

Mr. Art King
NCDOT Division 8
121 DOT Drive
Carthage, North Carolina 28327

Mr. Timothy Smith
Chatham Park Investors, LLC.
100 Weston Estates Way
Cary, North Carolina 27513

Dear Mr. Art King and Mr. Timothy Smith,

Reference the Department of the Army (DA) permit issued on March 2, 2022, which authorized the permanent discharge of dredged or fill material into a total of 3,014 linear feet (LF) of stream channel (2,320 LF of which are considered a permanent loss) and 0.411 acre of wetland, and the temporary discharge of dredged or fill material into 1,366 LF of stream channel and 0.008 acre of wetland. The Project is comprised of two components: 1) Chatham Park North Village and 2) Chatham Park Way North (R-5930). Chatham Park North Village consists of approximately 2,224 acres of land and is located on the northeast side of the Town of Pittsboro, in Chatham County, North Carolina. Chatham Park Way North (R-5930) includes approximately 2.7 miles of roadway (334 acres) from approximately 1,400 feet north of US Highway 64 Bypass (beginning at Suttles Road [SR 1809]) to US Highway 15-501 (near Russell Chapel Church Road [SR 1520]) and would cross through the western section of Chatham Park North Village, intersecting with other proposed roads within the North Village.

This modification requests changes associated solely with the Chatham Park Way North (R-5930) Project component. The proposed roadway design has been revised to include roadway improvements along US Highway 15-501 at its proposed intersection with Chatham Park Way at the northern terminus of the proposed project; however, these improvements would not result in a discharge of dredged or fill material into any aquatic resources. The impacts previously authorized for Chatham Park Way



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North (R-5930) were based on functional level of design (15%) and included a 20-foot offset from the anticipated slope stakes. This modification proposes to update the previously permitted quantities to reflect the proposed final design. This request also addresses a stream impact calculation error included in the initial DA permit, in which the permanent loss of stream channel was calculated based on the linear footage of the proposed culvert rather than the stream channel length impacted by the culvert. The originally authorized permanent stream channel loss and the corrected permanent stream channel loss are documented in this modification. The proposed changes in impacts due to final design calculation error corrections are shown on the submitted revised drawings and itemized by impact site in Table 1 and summarized for the Project in Table 2 below:

Table 1. Discharge Summary of Permit Modification

Site	Impact Type	Duration	Permitted (stream = LF, wetland = acre)	Proposed (stream = LF, wetland = acre)	Difference (stream = LF, wetland = acre)
Site 1	Wetland	Temporary	0	0.018	+0.018 (Increase)
Site 2	Stream	Permanent Loss	244*	245	+1 (Increase)
			251**		-6 (Decrease)
		Permanent No Loss	77	34	-43 (Decrease)
		Temporary	20	25	+5 (Increase)
Site 3	Stream	Permanent Loss	167*	201	+34 (Increase)
			170**		+31 (Increase)
		Permanent No Loss	76	44	-32 (Decrease)
		Temporary	20	63	+43 (Increase)
Site 4	Stream	Permanent Loss	175*	203	+28 (Increase)
			242**		-39 (Decrease)
		Permanent No Loss	103	71	-32 (Decrease)
		Temporary	20	89	+79 (Increase)
Site 5	Stream	Permanent Loss	123*	125	+2 (Increase)
			128**		-3 (Decrease)
		Permanent No Loss	66	38	-28 (Decrease)
		Temporary	20	20	No Change

*Permitted linear footage error using culvert length in place of stream loss

**Linear footage of stream loss based on permitted plans



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Table 2. Discharge Summary of Project

Project Component	Impact Type	Duration	Permitted (stream = LF, wetland = acre)	Proposed (stream = LF, wetland = acre)	Difference (stream = LF, wetland = acre)
Chatham Park North Village	Wetland	Permanent	0.411	N/A	No Change
		Temporary	0.008	N/A	No Change
	Stream	Permanent Loss	1,611	N/A	No Change
		Permanent No Loss	392	N/A	No Change
		Temporary	1,286	N/A	No Change
Chatham Park Way North (R-5930)	Wetland	Temporary	0	0.018	+0.018 (Increase)
		Stream	Permanent Loss	709*	799
	791**			+8 (Increase)	
	Permanent No Loss		322	187 197	-135 (Decrease)
	Temporary	80	+117 (Increase)		

*Permitted linear footage error using culvert length in place of stream loss

**Linear footage of stream loss based on permitted plans

The proposed project revisions result in a net increase of 8 LF of stream channel loss, a net increase of 177 LF of temporary discharge of fill material within stream channel, a net increase of temporary discharge of fill material within 0.018 ac of wetland, a net decrease of 135 LF of permanent discharge of fill material resulting in no loss of stream channel.

I have determined that the proposed project modifications described above are not contrary to the public interest and are consistent with the 404(b)(1) Guidelines and therefore, the DA permit is hereby modified. The authorized work shall be completed in accordance with the attached revised drawings and the following additional Special Condition:

Special Condition 27. In order to compensate for impacts associated with this permit modification, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special



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conditions listed on this form, are hereby incorporated as special conditions of this permit modification.

All other conditions of the original permit, including the Compensatory Mitigation Responsibility Transfer Forms attached to the DA permit issued February 2, 2022, remain applicable and the expiration date remains unchanged.

This approved modification should be attached to the original permit and will be utilized for future compliance reviews of the Project. If you have questions, please contact George Lyle Phillips III of the Raleigh Regulatory Field Office, at telephone (919) 588-9200, or email George.L.Phillips@usace.army.mil.

FOR THE DISTRICT ENGINEER

A handwritten signature in cursive script that reads "Jean B. Gibby".

Brad A. Morgan
COL, U.S. Army
District Commander

Enclosures:

Copies Furnished (electronic):

Mr. Ryan Conchilla, PWS
Division of Water Resources
North Carolina Department of Environmental Quality
ryan.conchilla@deq.nc.gov

Mr. Todd Bowers
Oceans, Wetlands and Streams Protection Branch
Wetlands and Streams Regulatory Section
U.S. Environmental Protection Agency – Region 4
bowers.todd@epa.gov

Compensatory Mitigation Responsibility Transfer Form

Permittee: North Carolina Department of Transportation, Art King
Chatham Park Investors, Tim Smith

Action ID: SAW-2020-00746
County: Wake

Project Name: Chatham Park North Village and Chatham Park Way North (R-5930)

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 Wilmington District 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 verifies that the mitigation requirements (credits) shown below have been released and are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether 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 ledger to the Permittee, the Project Manager who issued the permit, the Bank Project Manager, and the 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
799						

*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
1,598						

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 Wilmington District, 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

Conditions for Transfer of Compensatory Mitigation Credit:

- Once this document has been signed by the Mitigation Sponsor and the District 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 District 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. When NCDMS provides mitigation 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 NCDMS must be provided to the District within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the District 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 District 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 District, the Sponsor must obtain case-by-case approval from the District 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 District administrative records for both the permit and the Bank/ILF Instrument.

Comments/Additional Conditions: A letter from NCDMS, confirming they are willing and able to accept the applicant's compensatory mitigation responsibility, dated 3/28/2023 was included with the preconstruction notification.

This form is not valid unless signed below by the District 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 District Project Manager at the address below, 3) the Bank Manager listed in RIBITS, and 4) the Wilmington District Mitigation Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587 (or by email to SAWMIT@usace.army.mil).** Questions regarding this form or any of the permit conditions may be directed to the District Mitigation Office.

USACE Project Manager: George Lyle Phillips III
USACE Field Office: Raleigh Regulatory Office
US Army Corps of Engineers
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587
Email: George.L.Phillips@usace.army.mil

George Lyle Phillips III

USACE Project Manager Signature

7/27/2023

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

ELIZABETH S. BISER
Secretary

RICHARD E. ROGERS, JR.
Director

July 11, 2023

DWR # 20200533v3_Rev 1
Chatham County

NCDOT Division 8
Attn: Mr. Art King
121 DOT Drive
Carthage, NC 28327
Delivered via email to: acking@ncdot.gov

Chatham Park Investors LLC
Attn: Mr. Timothy Smith
100 Weston Estates Way
Cary, NC 27513
Delivered via email to: tim@prestonddev.com

Subject: Approval of Individual 401 Water Quality Certification -Modification
NCDOT Chatham Park Way North (R-5930)
USACE Action ID. No. SAW-2020-00746

Dear Sirs:

Attached hereto is a copy of Certification No. WQC004228 issued to Art King and NCDOT Division 8 and Timothy Smith and Chatham Park Investors LLC ("CPI") dated July 11, 2023. This approval is for the purpose and design described in your application for a modification. The plans and specifications for this project are incorporated by reference as part of this Water Quality Certification. If you change your project, you must notify the Division and you may be required to submit a new application package with the appropriate fee. If the property is sold, the new owner must be given a copy of this Certification and is responsible for complying with all conditions. [15A NCAC 02H .0507(d)(2)].

This Water Quality Certification does not relieve the permittee 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.

This Water Quality Certification neither grants nor affirms any property right, license, or privilege in any lands or waters, or any right of use in any waters. This Water Quality Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and does not create any prescriptive right or any right of priority regarding any usage of water. This Water Quality 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 Water Quality Certification to possess any prescriptive or other right of priority with respect to any other consumptive user.

Upon the presentation of proper credentials, the Division may inspect the property.

This Water Quality Certification shall expire on the same day as the expiration date of the corresponding Section 404 Permit. The conditions shall remain in effect for the life of the project, regardless of the expiration date of this Water Quality Certification.

Non-compliance with or violation of the conditions herein set forth may result in revocation of this Water Quality Certification for the project and may also result in criminal and/or civil penalties.

If you are unable to comply with any of the conditions of this Water Quality Certification you must notify the Raleigh Regional Office within 24 hours (or the next business day if a weekend or holiday) from the time the permittee becomes aware of the circumstances.

The permittee shall report to the Raleigh Regional Office any noncompliance with, and/or any violation of, stream or wetland standards [15A NCAC 02B .0200] including but not limited to sediment impacts to streams or wetlands. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the permittee became aware of the non-compliance circumstances.

This approval and its conditions are final and binding unless contested [G.S. 143-215.5].

This Certification can be contested as provided in Chapter 150B of the North Carolina General Statutes by filing a Petition for a Contested Case Hearing (Petition) with the North Carolina Office of Administrative Hearings (OAH) **within sixty (60) calendar days**. Requirements for filing a Petition are set forth in Chapter 150B of the North Carolina General Statutes and Title 26 of the North Carolina Administrative Code. Additional information regarding requirements for filing a Petition and Petition forms may be accessed at <http://www.ncoah.com/> or by calling the OAH Clerk's Office at (919) 431-3000.

One (1) copy of the Petition must also be served to the North Carolina Department of Environmental Quality:

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

This letter completes the Division's review under section 401 of the Clean Water Act and 15A NCAC 02H .0500. Please contact Ryan Conchilla at 919-707-9111 or ryan.conchilla@deq.nc.gov if you have any questions or concerns.

Sincerely,

DocuSigned by:

9C9886312DCD474...

Richard E. Rogers, Director
Division of Water Resources

cc: Willie Sullivan, Kimley-Horn (via email)
Lyle Phillips, USACE Raleigh Regulatory Field Office (via email)
Beth Harmon, Division of Mitigation Services (via email)
DWR 401 & Buffer Permitting Branch Electronic file

Filename: 20200533v3_Rev 1_Chatham Park Way North_401_IC-MOD.doc

NORTH CAROLINA 401 WATER QUALITY CERTIFICATION

CERTIFICATION # WQC004228 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 and 15A NCAC 02B .0200, to Art King and NCDOT Division 8 and Timothy Smith and Chatham Park Investors LLC ("CPI"), who have authorization for the impacts listed below, as described within your IP modification request received by the N.C. Division of Water Resources (Division) on June 27, 2023.

The State of North Carolina certifies that this activity will comply with water quality requirements and 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.

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

SITE	Amount Approved (units) Permanent	Amount Approved (units) Temporary
Chatham Park Way North (NCDOT R-5930) – Stream Impacts		
Impact 1- Construction Easement	0 (linear feet)	15 (linear feet)
Impact 2- Outlet Protection	17 (linear feet)	0 (linear feet)
Impact 3 – 1 @ 7'x 7' RCBC	270 (linear feet)	0 (linear feet)
Impact 4- Inlet Protection	17 (linear feet)	0 (linear feet)
Impact 5- Construction Easement	0 (linear feet)	10 (linear feet)
Impact 6- Construction Easement	0 (linear feet)	33 (linear feet)
Impact 7- Outlet Protection	26 (linear feet)	0 (linear feet)
Impact 8 - 1 @ 11'x 7' RCBC	201 (linear feet)	0 (linear feet)
Impact 9- Inlet Protection	18 (linear feet)	0 (linear feet)
Impact 10- Construction Easement	0 (linear feet)	30 (linear feet)
Impact 11- Construction Easement	0 (linear feet)	31 (linear feet)
Impact 12- Outlet Protection	33 (linear feet)	0 (linear feet)
Impact 13 - 3 @ 11'x 12' RCBC	174 (linear feet)	0 (linear feet)
Impact 14- Inlet Protection	38 (linear feet)	0 (linear feet)
Impact 15- Construction Easement	0 (linear feet)	38 (linear feet)
Impact 15- Channel Change	29 (linear feet)	20 (linear feet)
Impact 16- Construction Easement	0 (linear feet)	10 (linear feet)
Impact 17- Outlet Protection	29 (linear feet)	0 (linear feet)
Impact 18- 1 @ 54' RCP	125 (linear feet)	0 (linear feet)
Impact 19- Inlet Protection	9 (linear feet)	0 (linear feet)
Impact 20- Construction Easement	0 (linear feet)	10 (linear feet)
TOTAL	986 (linear feet)	197 (linear feet)
Chatham Park Way North (NCDOT R-5930) - 404/401 Wetland Impacts		
Impact 1- Skimmer Basin Hand Clearing	0 (acres)	0.018 (acres)

This approval requires you to follow the conditions listed in the certification below.

CONDITIONS OF CERTIFICATION [15A NCAC 02H .0507(c)]:

1. The Division has received an updated acceptance letter from the NC Division of Mitigation Services (DMS) dated March 28, 2023 for impacts to 799 linear feet of jurisdictional streams located in the Cape Fear River Basin in Chatham County. Until the DMS receives and clears your payment, and proof of payment has been provided to this Office, no impacts specified in this Authorization Certificate for each phase outlined in the mitigation plan submitted with the application and updated (*Mitigation Plan, Revised August 2020*) shall occur. For accounting purposes, this Authorization Certificate authorizes payment to the DMS to meet the following compensatory mitigation requirement:

Phase 1 Mitigation:

	Compensatory Mitigation Required	River & Sub-basin Number
Streams	799 linear feet	Cape Fear (03030002)

Citation: 15A NCAC 02H .0506(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state’s antidegradation policy), the project must provide for replacement of existing uses through compensatory mitigation.

2. Mitigation for NCDOT Chatham Park Way (R-5930) for must be provided for the proposed impacts as specified in the table above. The Division has received an acceptance letter from the NC Division of Mitigation Services (DMS) to meet this mitigation requirement. Until the DMS 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:

Citation: 15A NCAC 02H .0506(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state’s antidegradation policy), the project must provide for replacement of existing uses through compensatory mitigation.

3. Any final construction plans for development within the Chatham Park Way portion of this project must include or reference the application and plans approved by the Division under this authorization letter and certification. CPI shall evaluate all final construction plans for all phases of the project, including any areas that are sold, leased, or otherwise constructed by others, to assure that they are consistent, and all relative impacts are accounted for and shown on the application documents.

Citation: 15A NCAC 02H .0502 (a) and 15A NCAC 02H .0506 (b)(1)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

4. NCDOT shall submit final construction plans for the Chatham Park Way (R-5930) portion of this project for review and approval by DWR. The final design of Chatham Park Way shall follow the NCDOT Post-Construction Stormwater Plan and Stormwater Best Management Practices Toolbox and that all stormwater measures shall be properly inspected and maintained in accordance with NCDOT's National Pollutant Discharge Elimination System (NPDES) stormwater permit NCS000250.

Citation: 15A NCAC 02H .0502 (a) and 15A NCAC 02H .0506 (b)(1)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

5. CPI shall ensure that all final construction plans for the development within Chatham Park North portion of this project comply with the approved Master Stormwater Manual Additional Element as approved by the Town. CPI shall evaluate all proposed SCM locations in detail to ensure that downstream hydrology is provided to all jurisdictional features within the project limits. CPI shall notify DWR if any future modifications occur to approved Master Stormwater Manual Additional Element which would result in less stringent stormwater requirements for the overall project.

Citation: 15A NCAC 02H .0502 (a) and 15A NCAC 02H .0506 (b)(1)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

6. CPI shall notify all future buyers, tenants, and/or leases of the conditions of this certification, particularly with attention to the requirements that may be above and beyond typical erosion control and/or stormwater measures. CPI shall retain documentation of these communications and provide them to DWR upon request.

Citation: 15A NCAC 02H .0502 (a) and 15A NCAC 02H .0506 (b)(1)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

7. NCDOT shall schedule and conduct a pre-construction meeting with the construction contractors, NCDOT staff, and Division staff to review the conditions and requirements of the respective certifications and permits for clarity and understanding before *any* impacts authorized in this Certification occur.

Citation: 15A NCAC 02H .0507 (c) and 15A NCAC 02H .0502 (e) and 15A NCAC 02H .0506 (b)(3)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

8. All sewer lines shall be designed, constructed and maintained in accordance with Title 15A NCAC Chapter 02T, applicable Minimum Design Criteria (MDC), and/or Alternative Design Criteria.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: The referenced Minimum Design criteria and 02T rules were adopted to ensure that conditions of waters be suitable for all best uses provided for in state rule (including, at minimum: aquatic life propagation, survival, and maintenance of biological integrity; wildlife: secondary contact recreation: agriculture); and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis.

9. Any utility construction corridor that is parallel to a stream or open water shall not be closer than 10 feet to the top of bank or ordinary high-water mark.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

10. Construction corridors in wetlands and/or across stream channels shall be minimized to the maximum extent practicable and shall not exceed 40 feet wide for utility lines.

For construction corridors in wetlands and across stream channels, stumps shall be grubbed only as needed to install the utility and remaining stumps shall be cut off at grade level. The general stripping of topsoil within wetlands along the construction corridor is prohibited.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

11. Permanent maintained access corridors in wetlands and across stream channels shall be restricted to the minimum width practicable and shall not exceed 30 feet wide except at manhole locations.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

12. For all utility lines constructed within wetlands, an anti-seep collar shall be placed at the downstream (utility line gradient) wetland boundary and every 150 feet up the gradient until the utility exits the wetland. Anti-seep collars may be constructed with class B concrete, compacted clay, PVC pipe, or metal collars. Wetland crossings that are directionally drilled, and perpendicular wetland crossings that are open cut and less than 150 feet long do not require anti-seep collars. The compacted clay shall have a specific infiltration of 1×10^{-5} cm/sec or less. A section and plan view diagram is attached for the anti-seep collars.

The following specifications shall apply to class B concrete:

- i. Minimum cement content, sacks per cubic yard with rounded coarse aggregate 5.0
- ii. Minimum cement content, sacks per cubic yard with angular coarse aggregate 5.5
- iii. Maximum water-cement ratio gallons per sack 6.8
- iv. Slump range 2" to 4"
- v. Minimum strength – 28-day psi 2,500

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

13. The permittee shall have a specific plan for restoring wetland contours to pre-construction conditions. Any excess material will be removed to a high ground disposal area.

The mixing of topsoil and subsoils within the wetlands along utility corridors shall be minimized to the greatest extent practical. During excavation, the soils shall be placed on fabric to minimize impacts whenever possible. Topsoil excavated from utility trenches will be piled separately from subsoils and will be backfilled into the trench only after the subsoils have been placed and compacted.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. In determining that the proposed activity will comply with state water quality standards (including designated uses, numeric criteria, narrative criteria and the state's antidegradation policy), the Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards or would result in secondary or cumulative impacts.

14. The permittee shall report to the DWR Raleigh Regional Office any noncompliance with, and/or any violation of, stream or wetland standards [15A NCAC 02B .0200], including but not limited to sediment impacts to streams or wetlands. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the permittee became aware of the non-compliance circumstances.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Timely reporting of non-compliance is important in identifying and minimizing detrimental impacts to water quality and avoiding impacts due to water pollution that precludes any best use on a short-term or long-term basis.

15. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the approved impacts (including temporary impacts).

Citation: 15A NCAC 02H .0506; 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule (including, at minimum: aquatic life propagation, survival, and maintenance of biological integrity; wildlife; secondary contact recreation; agriculture); and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis.

16. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2B of Title 15A in the North Carolina Administrative Code.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: The referenced Riparian Buffer rules were adopted to address water quality impairments and further protect existing uses.

17. 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), the Chatham County Soil Erosion and Sedimentation Control Ordinance, as well as 15A NCAC 04B .0124: Design Standards for Sensitive Watersheds items (b), (c) and (e).

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC02B .0200; 15A NCAC 02B .0231

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses; and (21) turbidity in the receiving water shall not exceed 50 Nephelometric Turbidity Units (NTU) in streams not designated as trout waters and 10 NTU in streams, lakes, or reservoirs designated as trout waters; for lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTU; if turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased. As cited in Wetland Standards: (c)(1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

18. Sediment and erosion control measures shall not be installed in wetland or waters except within the footprint of temporary or permanent impacts otherwise authorized by this Certification. If placed within authorized impact areas, then placement of such measures shall not be conducted in a manner that results in dis-equilibrium of any wetlands, streambeds, or streambanks. Any silt fence installed within wetlands shall be removed from wetlands and the natural grade restored within two (2) months of the date that DEMLR or locally delegated program has released the specific area within the project to ensure wetland standards are maintained upon completion of the project.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses; and (21) turbidity in the receiving water shall not exceed 50 Nephelometric Turbidity Units (NTU) in streams not designated as trout waters and 10 NTU in streams, lakes, or reservoirs designated as trout waters; for lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTU; if turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased. As cited in Wetland Standards: (c)(1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

19. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses (including aquatic life propagation and biological integrity), and the water quality to protect such uses, are protected. Protections are necessary to ensure any remaining surface waters or wetlands, and any surface waters or wetlands downstream, continue to support existing uses during and after project completion. The Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards, or would result in secondary or cumulative impacts.

20. If the project is covered by NPDES Construction Stormwater Permit Number NCG010000 or NPDES Construction Stormwater Permit Number NCG250000, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses; and (21) turbidity

in the receiving water shall not exceed 50 Nephelometric Turbidity Units (NTU) in streams not designated as trout waters and 10 NTU in streams, lakes, or reservoirs designated as trout waters; for lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTU; if turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased. As cited in Wetland Standards: (c)(1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

21. 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 Department of Transportation Construction and Maintenance Activities Manual*, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses; and (21) turbidity in the receiving water shall not exceed 50 Nephelometric Turbidity Units (NTU) in streams not designated as trout waters and 10 NTU in streams, lakes, or reservoirs designated as trout waters; for lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTU; if turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased.

22. In-stream structures installed to mimic natural channel geomorphology such as cross-vanes, sills, step-pool structures, etc. shall be designed and installed in such a manner that allow for continued aquatic life movement.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. Ensuring that in-stream structures are installed properly will ensure that surface water quality standards are met and conditions of waters are suitable for all best uses.

23. Culverts shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. If the width of the culvert is wider than the stream channel, the culvert shall include multiple boxes/pipes, baffles, benches and/or sills to maintain the natural width of the stream channel. If multiple culverts/pipes/barrels are used, low flows shall be accommodated in one culvert/pipe and additional culverts/pipes shall be installed such that they receive only flows above bank full.

Placement of culverts and other structures in streams shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20% of the culvert diameter for culverts having a diameter less than or equal to 48 inches, to allow low flow passage of water and aquatic life. If the culvert outlet is submerged within a pool or scour hole and designed to provide for aquatic passage, then culvert burial into the streambed is not required.

For structures less than 72" in diameter/width, and topographic constraints indicate culvert slopes of greater than 2.5% culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g. rock ladders, cross-vanes, sills, baffles etc.). Notification, including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations, shall be provided to DWR 30 calendar days prior to the installation of the culvert.

When bedrock is present in culvert locations, culvert burial is not required, provided that there is sufficient documentation of the presence of bedrock. Notification, including supporting documentation such as a location map of the culvert, geotechnical reports, photographs, etc. shall be provided to DWR a minimum of 30 calendar days prior to the installation of the culvert. If bedrock is discovered during construction, then DWR shall be notified by phone or email within 24 hours of discovery.

Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native woody vegetation and other soft stream bank stabilization techniques shall be used where practicable instead of rip-rap or other bank hardening methods.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. Ensuring that structures are installed properly in waters will ensure that surface water quality standards are met and conditions of waters are suitable for all best uses.

24. Bridge deck drains shall not discharge directly into streams or wetlands. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means to the maximum extent practicable (e.g. grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering streams or wetlands.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. Ensuring that in-stream structures are installed properly will ensure that surface water quality standards are met and conditions of waters are suitable for all best uses.

25. 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.

Citation: 15A 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses. As cited in Wetland Standards: (c)(1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

26. 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.

Citation: 15A 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses. As cited in Wetland Standards: (c)(1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

27. All proposed and approved 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.

Citation: 15A NCAC 02H.0506(b); 15A NCAC 02H .0507(c)

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Protections are necessary to ensure any remaining surface waters or wetlands, and any surface waters or wetlands downstream, continue to support existing uses after project completion.

28. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams or wetlands 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.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. Ensuring that structures are installed properly in waters will ensure that surface water quality standards are met and conditions of waters are suitable for all best uses.

29. Any rip-rap 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 rip-rap shall be placed such that the original streambed elevation and streambank contours are restored and maintained and shall consist of clean rock or masonry material free of debris or toxic pollutants. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or be installed in a manner that precludes aquatic life passage.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. The Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards, or would result in secondary or cumulative impacts.

30. Any rip-rap used for stream 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.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0201

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. The Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards, or would result in secondary or cumulative impacts.

31. 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 be performed in a manner to prevent, to the maximum extent practicable, contamination of surface waters by fuels and oils.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

Justification: A project that affects waters shall not be permitted unless the existing uses, and the water quality to protect such uses, are protected. Activities must not cause water pollution that precludes any best use on a short-term or long-term basis. As cited in Stream Standards: (12) Oils, deleterious substances, or colored or other wastes: only such amounts as shall not render the waters injurious to public health, secondary recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses. As cited in Wetland

Standards: (c)(1) Liquids, fill or other solids, or dissolved gases shall not be present in amounts that may cause adverse impacts on existing wetland uses; and (3) Materials producing color or odor shall not be present in amounts that may cause adverse impacts on existing wetland uses.

32. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance and compaction.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0231

Justification: Wetland standards require maintenance or enhancement of existing uses of wetlands such that hydrologic conditions necessary to support natural biological and physical characteristics are protected; populations of wetland flora and fauna are maintained to protect biological integrity of the wetland; and materials or substances are not present in amounts that may cause adverse impact on existing wetland uses.

33. In accordance with 143-215.85(b), the permittee shall report 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.

Citation: 15A NCAC 02H .0507(c); N.C.G.S 143-215.85(b)

Justification: Person(s) owning or having control over oil or other substances upon notice of discharge must immediately notify the Department, or any of its agents or employees, of the nature, location, and time of the discharge and of the measures which are being taken or are proposed to be taken to contain and remove the discharge. This action is required in order to contain or divert the substances to prevent entry into the surface waters. Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule (including, at minimum: aquatic life propagation, survival, and maintenance of biological integrity; wildlife; secondary contact recreation; agriculture); and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis.

34. The permittee and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Surface water quality standards require that conditions of waters be suitable for all best uses provided for in state rule, and that activities must not cause water pollution that precludes any best use on a short-term or long-term basis. The Division must evaluate if the activity has avoided and minimized impacts to waters, would cause or contribute to a violation of standards, or would result in secondary or cumulative impacts.

35. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this General Certification. A copy of this General Certification shall be available at the project site during the construction and maintenance of this project.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

Justification: Those actually performing the work should be aware of the requirements of this 401 Water Quality General Certification to minimize water quality impacts.

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 or CAMA 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(c)]

This, the 11th day of July 2023

DocuSigned by:

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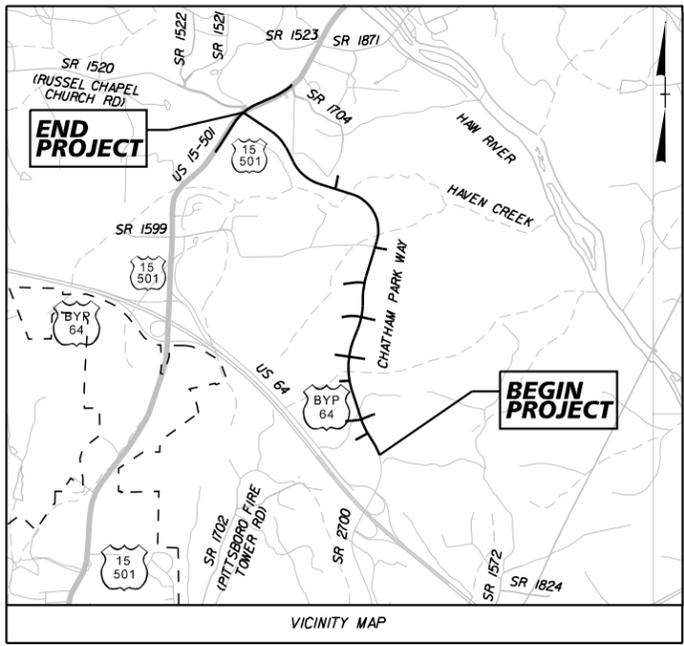
Richard E. Rogers, Director
Division of Water Resources

WQC004228-Modification

09/28/2022

TIP PROJECT: R-5930

SEE SHEET 1A FOR INDEX OF SHEETS
SEE SHEET 1B FOR CONVENTIONAL PLAN SHEET SYMBOLS



----- PITTSBORO CITY LIMITS

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS CHATHAM COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5930	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
48548.1.1		PE	
48548.2.1		RW & UTIL	
48548.3.1		CONST.	

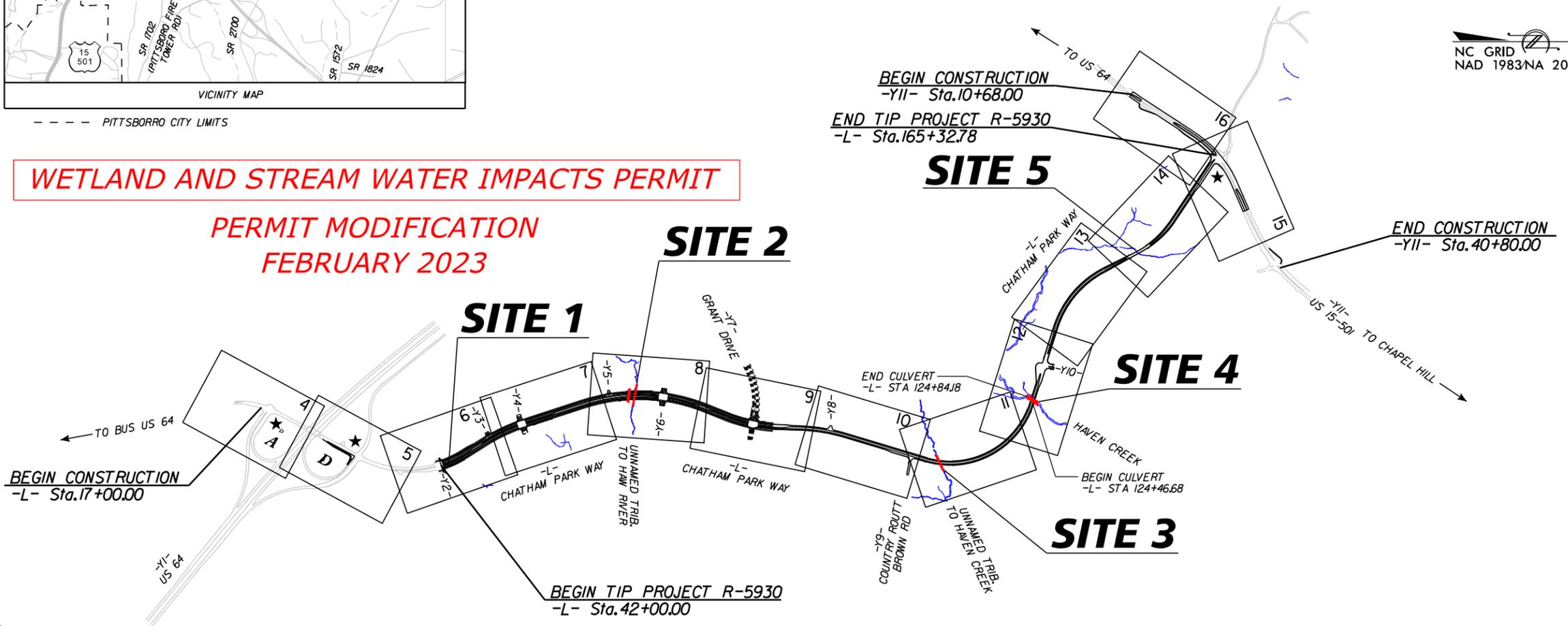
PERMIT DRAWING
SHEET 1 OF 19

LOCATION: CHATHAM PARK WAY FROM US 64 TO NORTH OF FUTURE GRANT DRIVE

TYPE OF WORK: GRADING, DRAINAGE, CULVERTS, AND PAVING

WETLAND AND STREAM WATER IMPACTS PERMIT

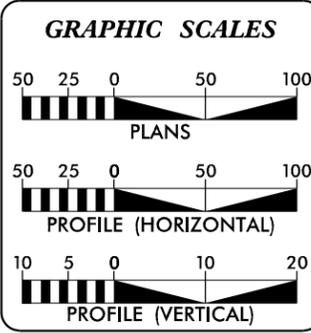
PERMIT MODIFICATION
FEBRUARY 2023



★ TRAFFIC SIGNAL
THIS IS A LIMITED CONTROLLED ACCESS PROJECT WITH ACCESS LIMITED TO POINTS AS SHOWN ON THE PLANS
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



R-5930 DESIGN DATA

ADT 2025 =	0
ADT 2045 =	30000
K =	8%
D =	65
T =	5%*
V =	50 MPH

* (TTST 2% + DUAL 3%)
FUNCTIONAL CLASSIFICATION:
URBAN ARTERIAL
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5930	=	0.852 MILES
TOTAL LENGTH TIP PROJECT R-5930	=	0.852 MILES

PLANS PREPARED FOR THE NCDOT BY:

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 30, 2022

LETTING DATE:
JUNE 18, 2024

Kimley Horn

VANCE W. BLANTON, P.E.
PROJECT ENGINEER

TYLER G. SPRING, P.E.
PROJECT DESIGN ENGINEER

JEFFREY L. TEAGUE, P.E.
PROJECT MANAGER
NCDOT HIGHWAY DIVISION 8

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

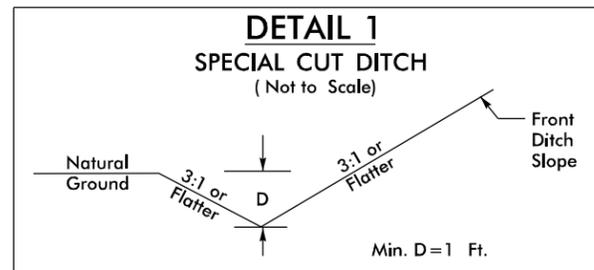
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

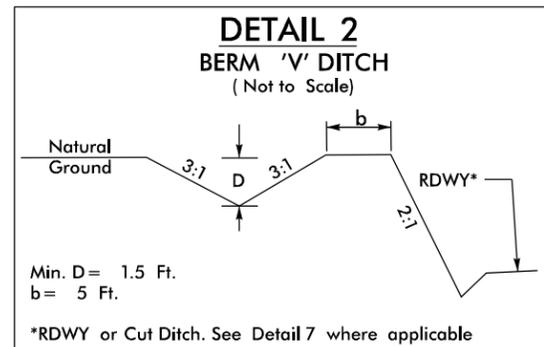


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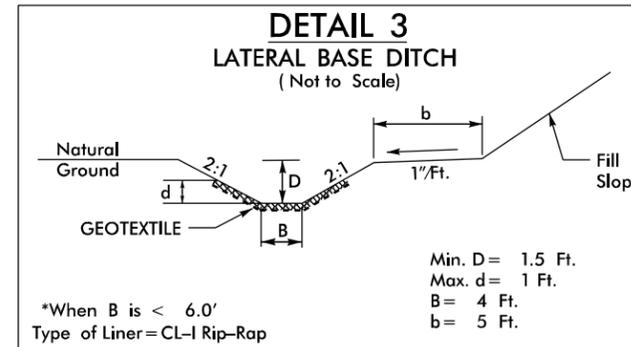
PROJECT REFERENCE NO. R-5930	SHEET NO. 2D-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



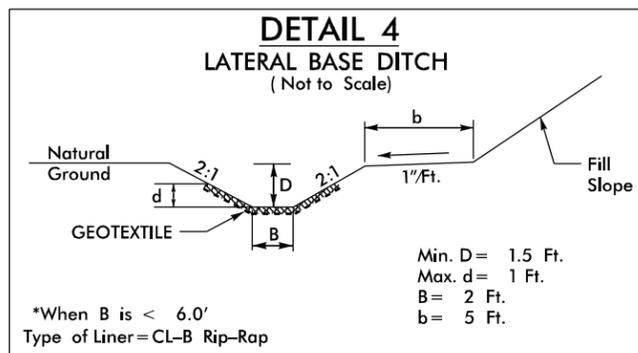
Min. D=1 Ft.
FROM STA. 19+00 TO STA. 22+00 -Y11- (RT)
FROM STA. 90+50 TO STA. 91+00 -L- (RT)
FROM STA. 91+00 TO STA. 92+50 -L- (RT)
FROM STA. 133+50 TO STA. 135+90 -L- (RT)
FROM STA. 135+90 TO STA. 137+00 -L- (RT)



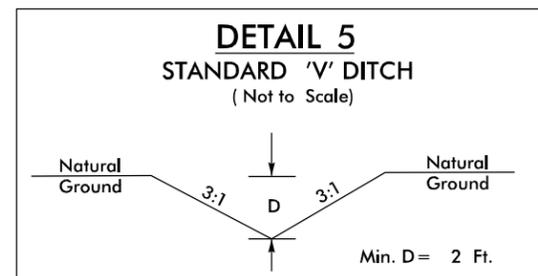
Min. D= 1.5 Ft.
b= 5 Ft.
*RDWY or Cut Ditch. See Detail 7 where applicable
FROM STA. 42+70 TO STA. 49+40 -L- (LT)
FROM STA. 49+40 TO STA. 53+30 -L- (LT)
FROM STA. 85+00 TO STA. 87+00 -L- (RT)
FROM STA. 87+00 TO STA. 89+50 -L- (RT)
FROM STA. 92+50 TO STA. 94+00 -L- (RT)
FROM STA. 94+00 TO STA. 96+50 -L- (RT)
FROM STA. 159+50 TO STA. 163+00 -L- (RT)



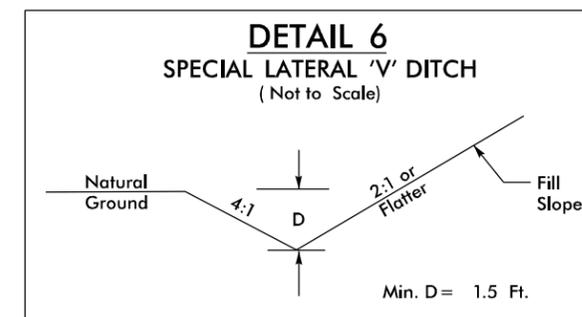
Min. D= 1.5 Ft.
Max. d= 1 Ft.
B= 4 Ft.
b= 5 Ft.
*When B is < 6.0'
Type of Liner= CL-I Rip-Rap
FROM STA. 68+50 TO STA. 70+00 -L- (RT)
FROM STA. 82+50 TO STA. 83+50 -L- (RT)



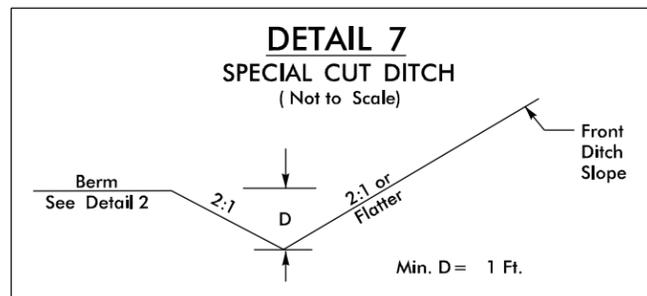
Min. D= 1.5 Ft.
Max. d= 1 Ft.
B= 2 Ft.
b= 5 Ft.
*When B is < 6.0'
Type of Liner= CL-B Rip-Rap
FROM STA. 70+00 TO STA. 71+00 -L- (RT)



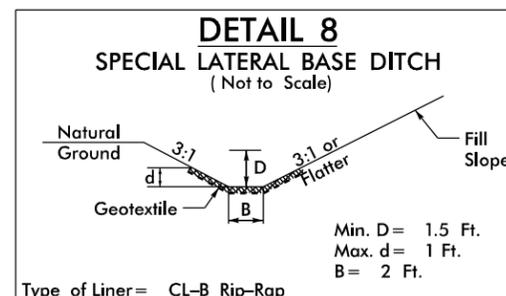
Min. D= 2 Ft.
STA. 47+70 -L- (RT)



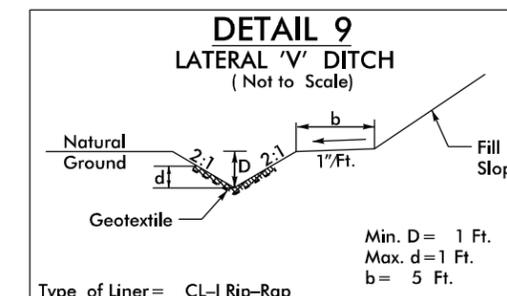
Min. D= 1.5 Ft.
FROM STA. 126+50 TO STA. 127+50 -L- (RT)
FROM STA. 13+00 TO STA. 14+62 -Y9- (RT)



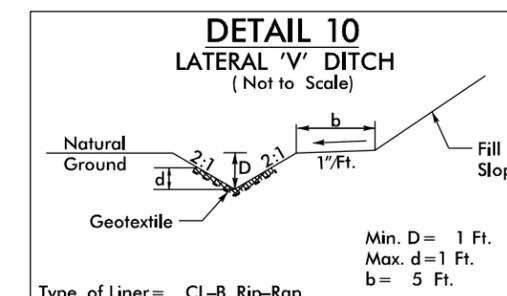
Min. D= 1 Ft.
FROM STA. 42+70 TO STA. 48+90 -L- (LT)
FROM STA. 49+50 TO STA. 49+75 -L- (LT)
FROM STA. 49+75 TO STA. 51+75 -L- (LT)
FROM STA. 51+75 TO STA. 53+15 -L- (LT)



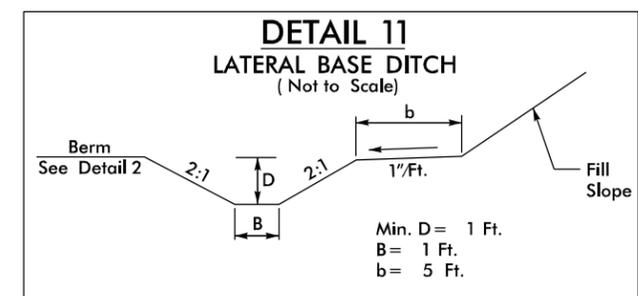
Min. D= 1.5 Ft.
Max. d= 1 Ft.
B= 2 Ft.
Type of Liner= CL-B Rip-Rap
FROM STA. 55+00 TO STA. 57+25 -L- (LT)



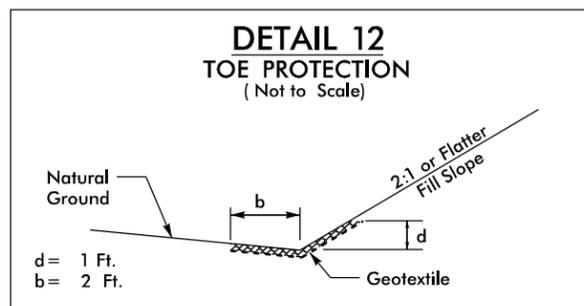
Min. D= 1 Ft.
Max. d= 1 Ft.
b= 5 Ft.
Type of Liner= CL-I Rip-Rap
FROM STA. 69+05 TO STA. 70+00 -L- (LT)
FROM STA. 97+00 TO STA. 97+50 -L- (LT)



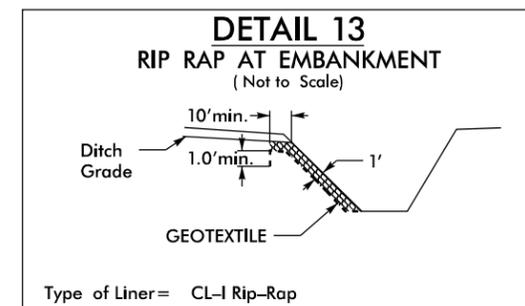
Min. D= 1 Ft.
Max. d= 1 Ft.
b= 5 Ft.
Type of Liner= CL-B Rip-Rap
FROM STA. 96+50 TO STA. 97+00 -L- (LT)



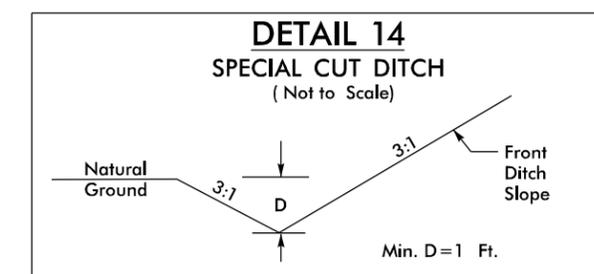
Min. D= 1 Ft.
B= 1 Ft.
b= 5 Ft.
FROM STA. 108+50 TO STA. 112+00 -L- (LT)



d= 1 Ft.
b= 2 Ft.
Type of Liner= CL-B Rip-Rap
FROM STA. 112+00 TO STA. 113+00 -L- (LT)
FROM STA. 122+85 TO STA. 124+15 -L- (RT)



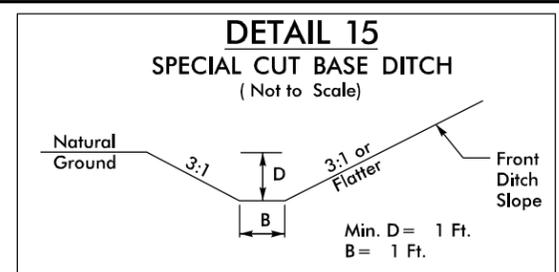
Type of Liner= CL-I Rip-Rap
STA. 109+60 -L- (RT)
STA. 149+63 -L- (RT)



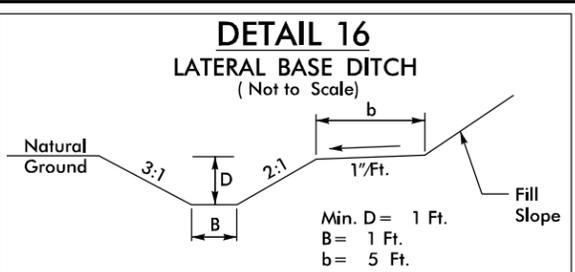
Min. D= 1 Ft.
FROM STA. 154+50 TO STA. 156+50 -L- (LT)
FROM STA. 153+50 TO STA. 154+50 -L- (RT)
FROM STA. 154+50 TO STA. 156+00 -L- (RT)

REVISIONS

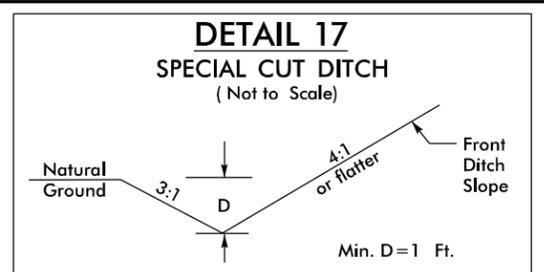
PROJECT REFERENCE NO. R-5930	SHEET NO. 2D-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



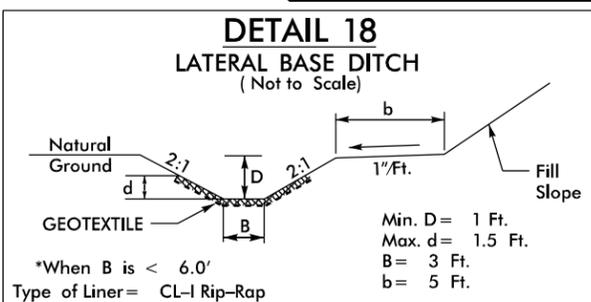
FROM STA. 147+50 TO STA. 148+50 -L- (RT)



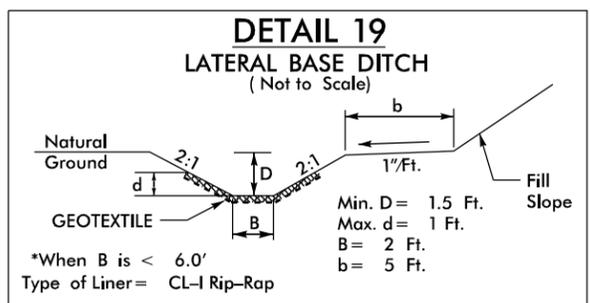
FROM STA. 148+50 TO STA. 149+60 -L- (RT)



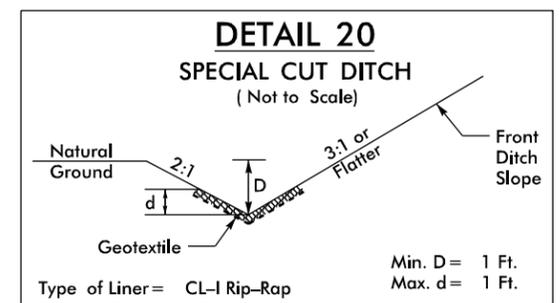
FROM STA. 139+00 TO STA. 141+50 -L- (RT)
FROM STA. 141+50 TO STA. 143+50 -L- (RT)



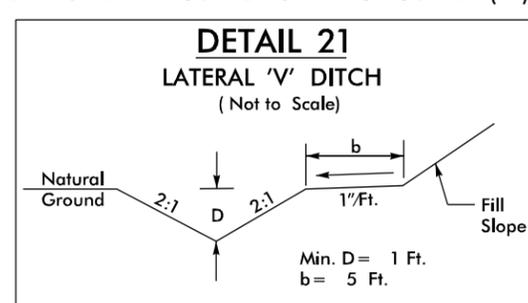
FROM STA. 109+65 TO STA. 112+00 -L- (RT)
FROM STA. 124+55 TO STA. 125+00 -L- (RT)



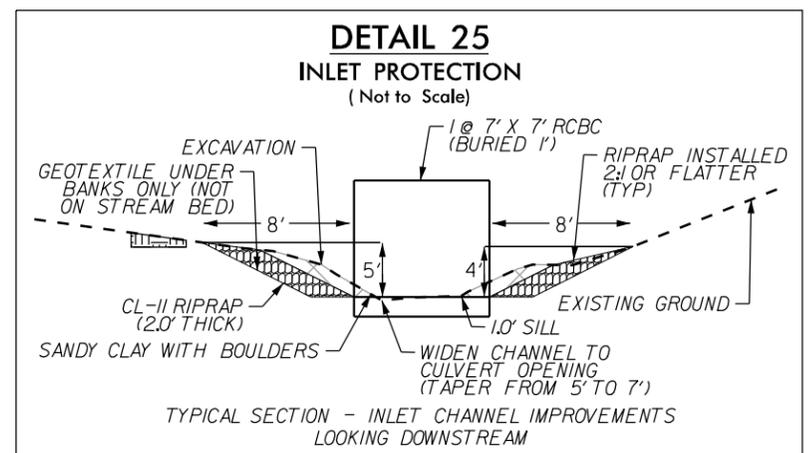
FROM STA. 81+00 TO STA. 82+50 -L- (RT)
FROM STA. 107+00 TO STA. 109+50 -L- (RT)



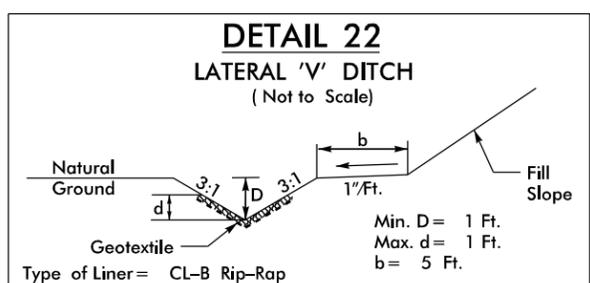
FROM STA. 105+75 TO STA. 107+00 -L- (RT)



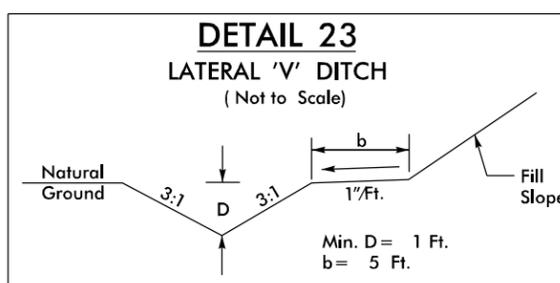
FROM STA. 98+50 TO STA. 100+00 -L- (RT)



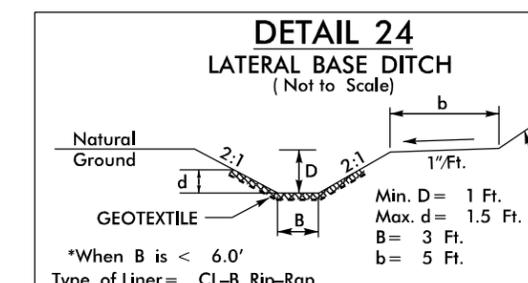
STA. 68+70 -L-



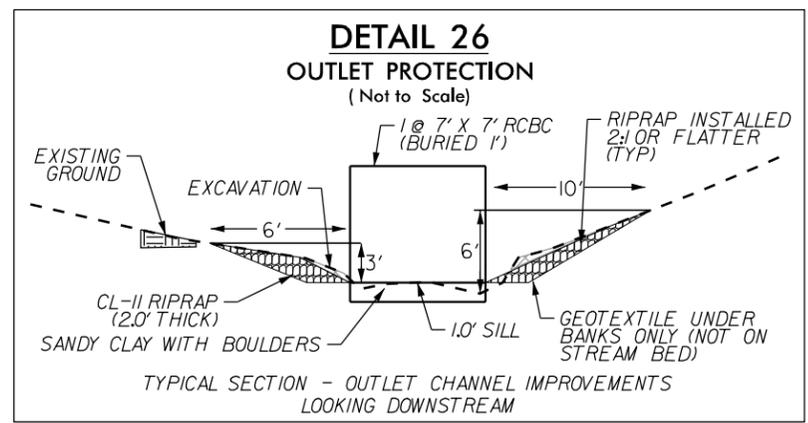
FROM STA. 97+50 TO STA. 98+50 -L- (RT)



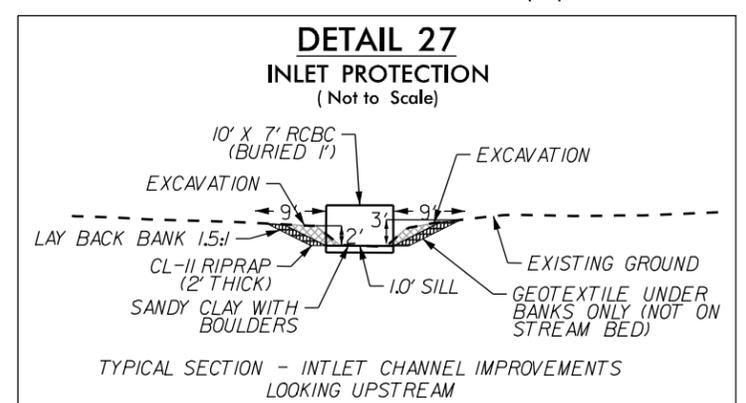
FROM STA. 96+50 TO STA. 97+50 -L- (RT)



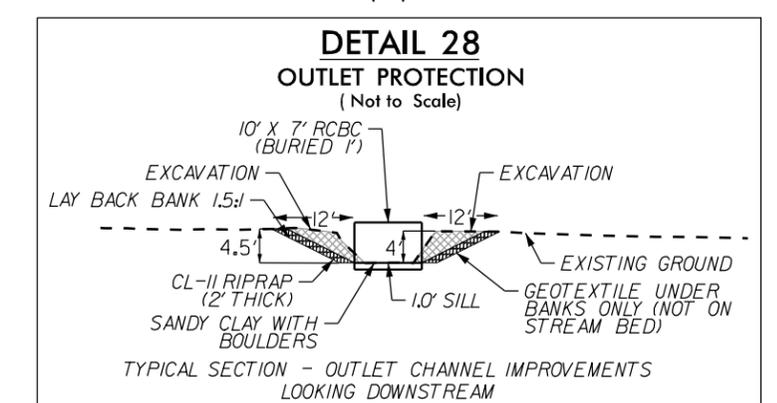
FROM STA. 125+00 TO STA. 126+00 -L- (RT)



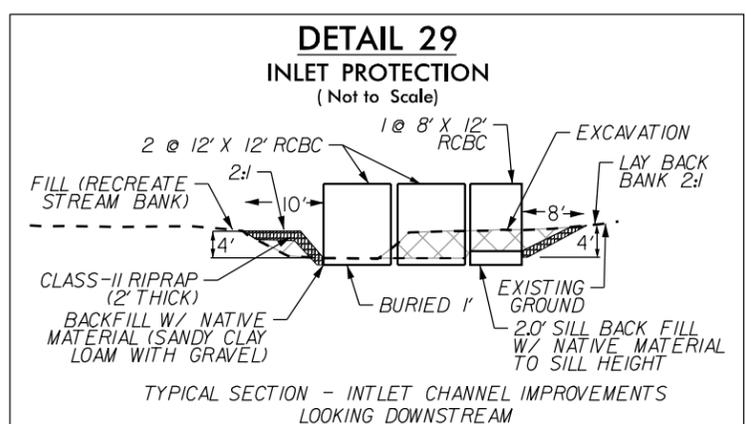
STA. 68+70 -L-



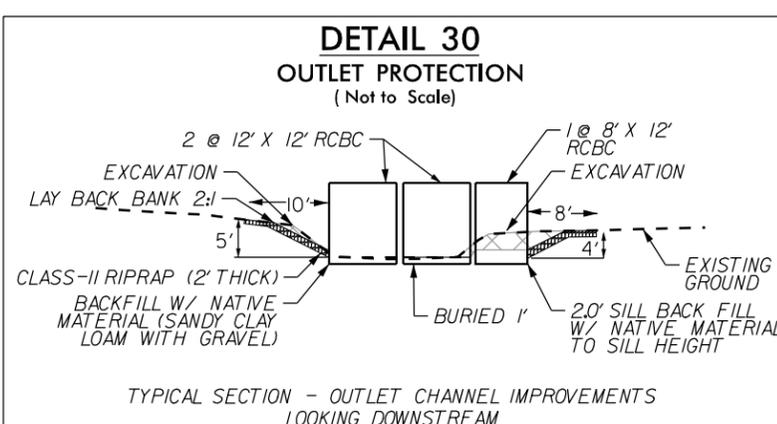
STA. 108+98 -L-



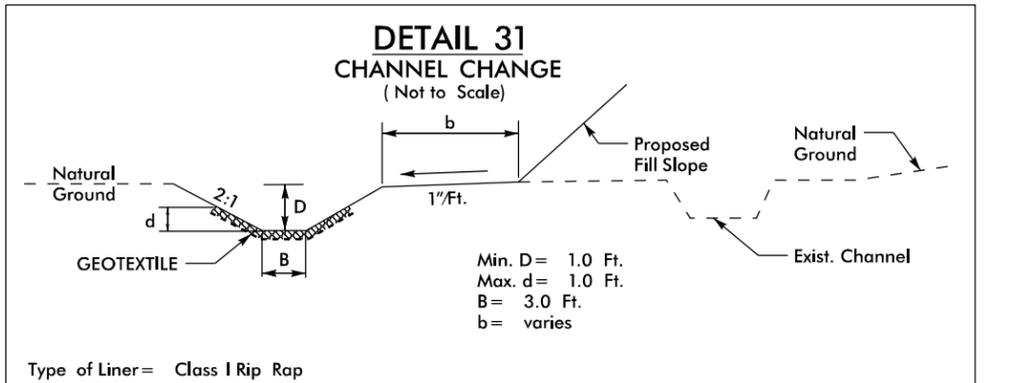
STA. 108+98 -L-



STA. 124+70 -L-



STA. 124+70 -L-



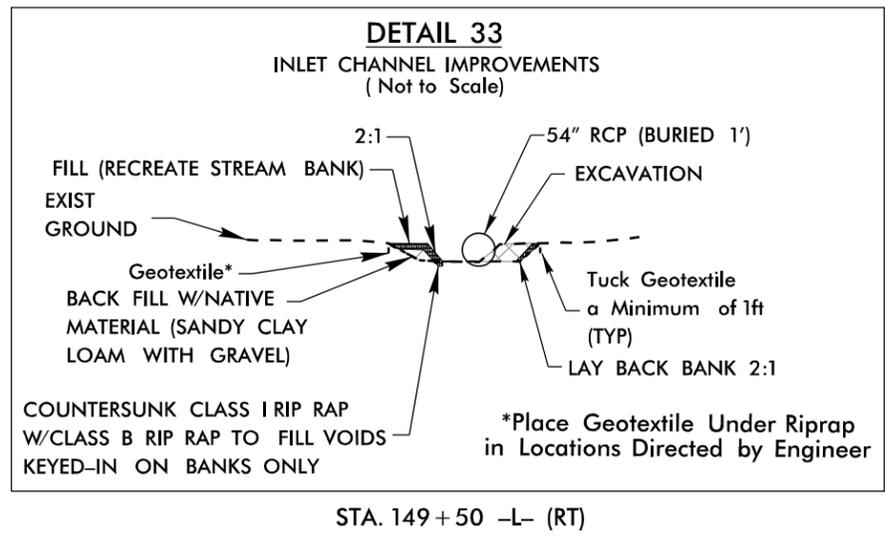
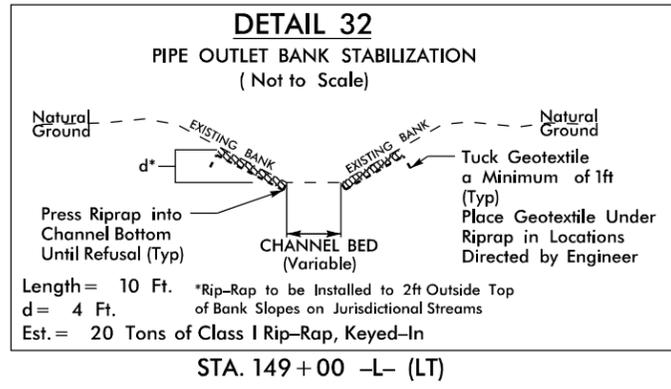
FROM STA. 125+00 TO STA. 125+35 -L- (LT)

REVISIONS

\$DATE\$

PROJECT REFERENCE NO. R-5930	SHEET NO. 2D-3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING
 SHEET 4 OF 22



REVISIONS

\$DATE\$

LEGEND



HAND CLEARING (NON-GRUBBING)

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO. SHEET NO.

R-5930 6

RW SHEET NO.

ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 5 OF 19

NAD 83 / NA 2011

5/14/19

REVISIONS

MATCHLINE -L- STA 37+00 (SEE SHEET 5)

MATCHLINE -L- STA 50+50 (SEE SHEET 7)

-Y1- UNNAMED INTERSECTION 3

CHATHAM PARK INVESTORS LLC
DB 1382 PG 377
PB 4 PG 74

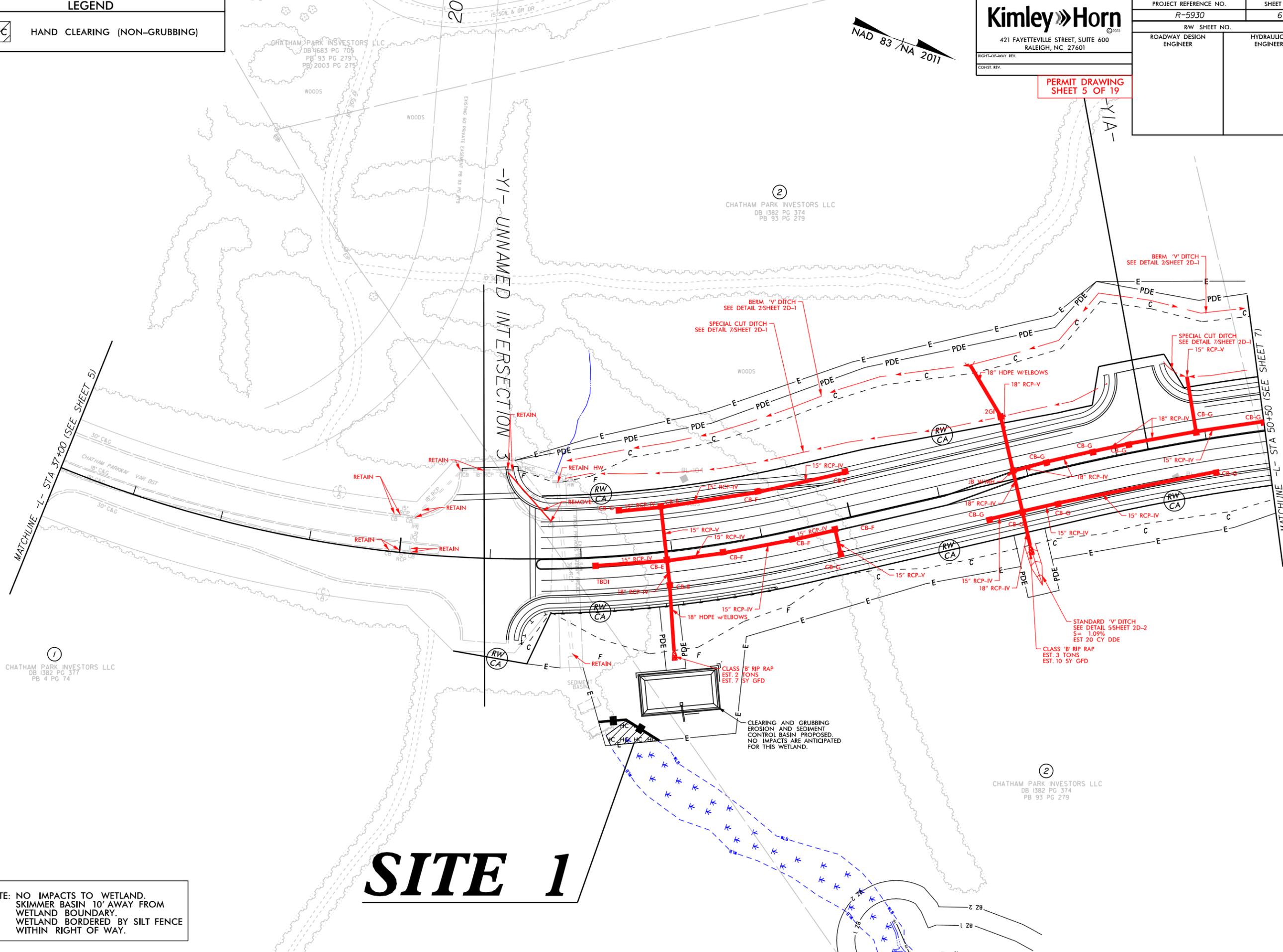
CHATHAM PARK INVESTORS LLC
DB 1382 PG 374
PB 93 PG 279

CHATHAM PARK INVESTORS LLC
DB 1382 PG 374
PB 93 PG 279

SITE 1

NOTE: NO IMPACTS TO WETLAND.
SKIMMER BASIN 10' AWAY FROM
WETLAND BOUNDARY.
WETLAND BORDERED BY SILT FENCE
WITHIN RIGHT OF WAY.

CLEARING AND GRUBBING
EROSION AND SEDIMENT
CONTROL BASIN PROPOSED.
NO IMPACTS ARE ANTICIPATED
FOR THIS WETLAND.



5/14/19

LEGEND



HAND CLEARING (NON-GRUBBING)

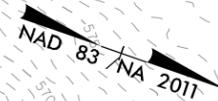
Kimley Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

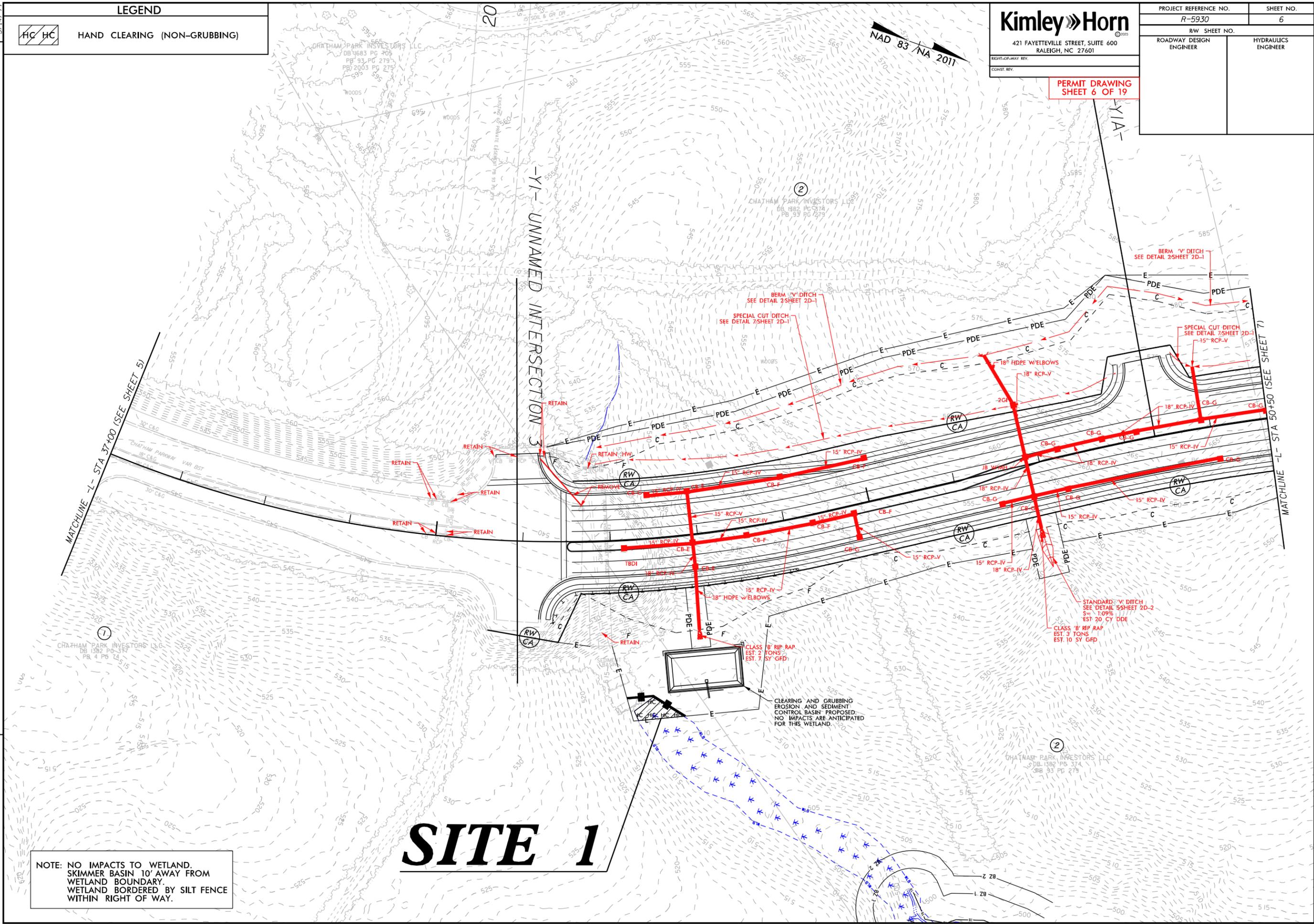
RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO. R-5930	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 6 OF 19

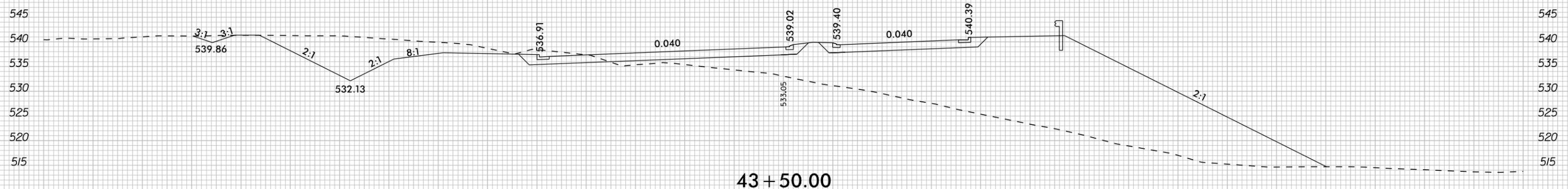


REVISIONS

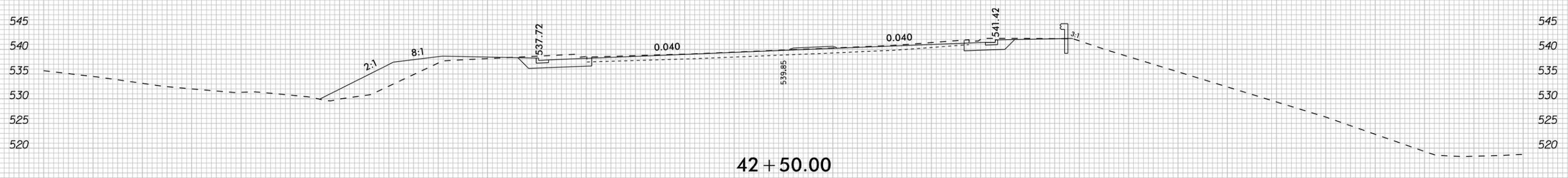
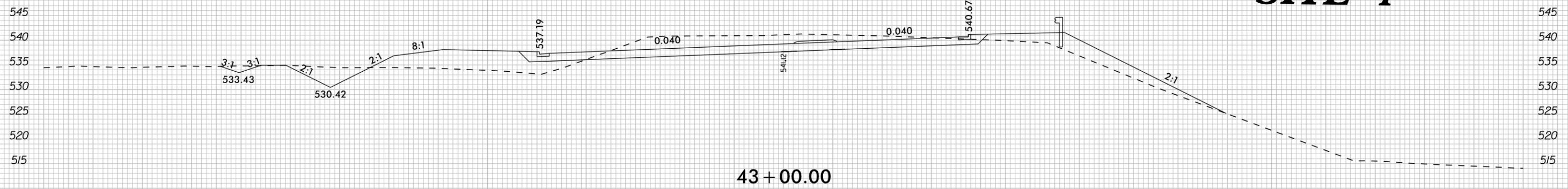


NOTE: NO IMPACTS TO WETLAND.
SKIMMER BASIN 10' AWAY FROM
WETLAND BOUNDARY.
WETLAND BORDERED BY SILT FENCE
WITHIN RIGHT OF WAY.

SITE 1



SITE 1



-L- CHATHAM PARK WAY

LEGEND

- TS TS TEMPORARY SURFACE WATER IMPACTS
- S S PERMANENT SURFACE WATER IMPACTS

PERMIT DRAWING
MODIFICATION FOR
IMPACT #1-5

Kimley Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.
CONST. REV.

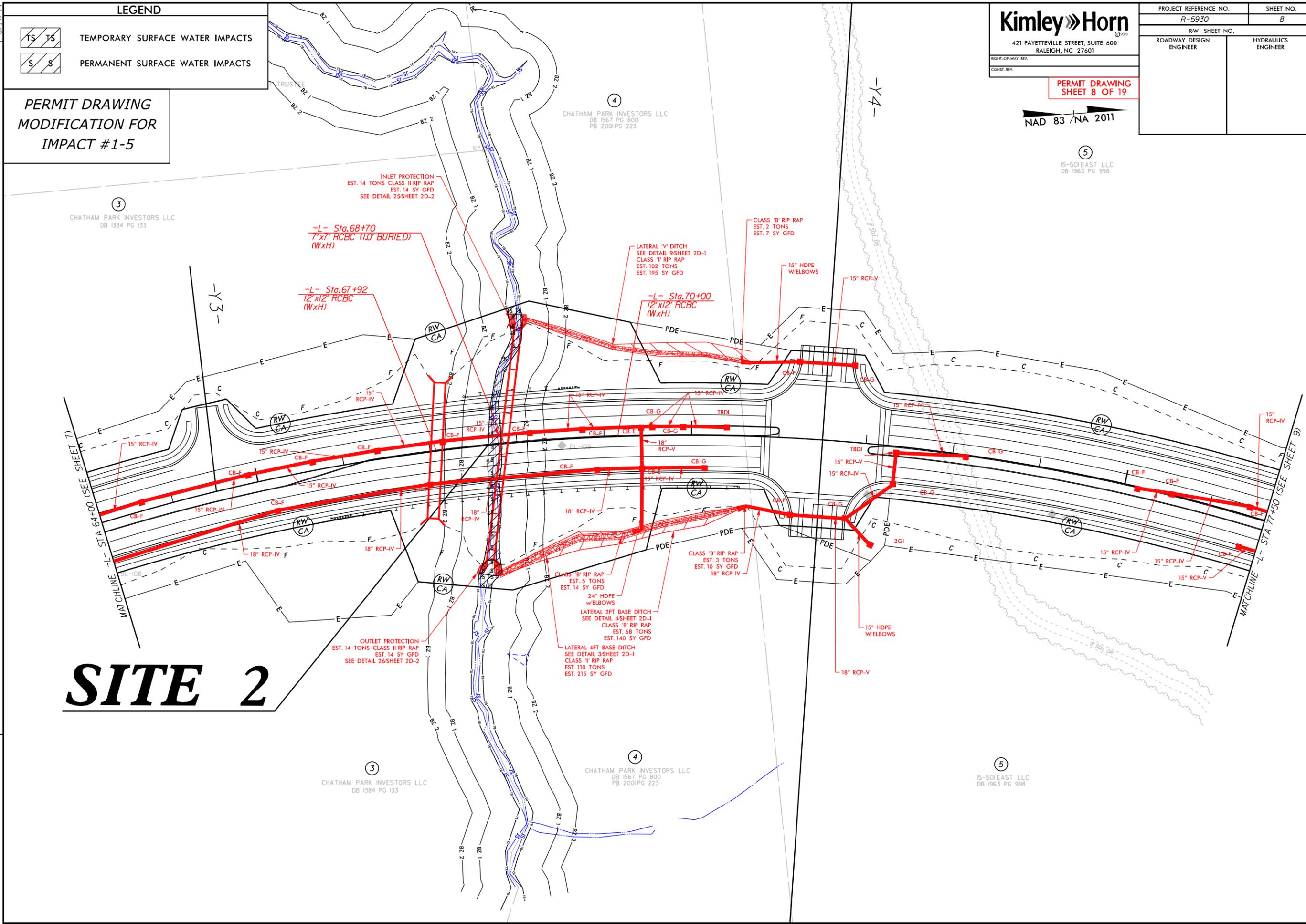
PERMIT DRAWING
SHEET 8 OF 19

NAD 83 / NA 2011

PROJECT REFERENCE NO. R-5930	SHEET NO. 8
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

REVISIONS

SITE 2



5/14/19

LEGEND

-  TS TS TEMPORARY SURFACE WATER IMPACTS
-  S S PERMANENT SURFACE WATER IMPACTS

PERMIT DRAWING
MODIFICATION FOR
IMPACT #1-5

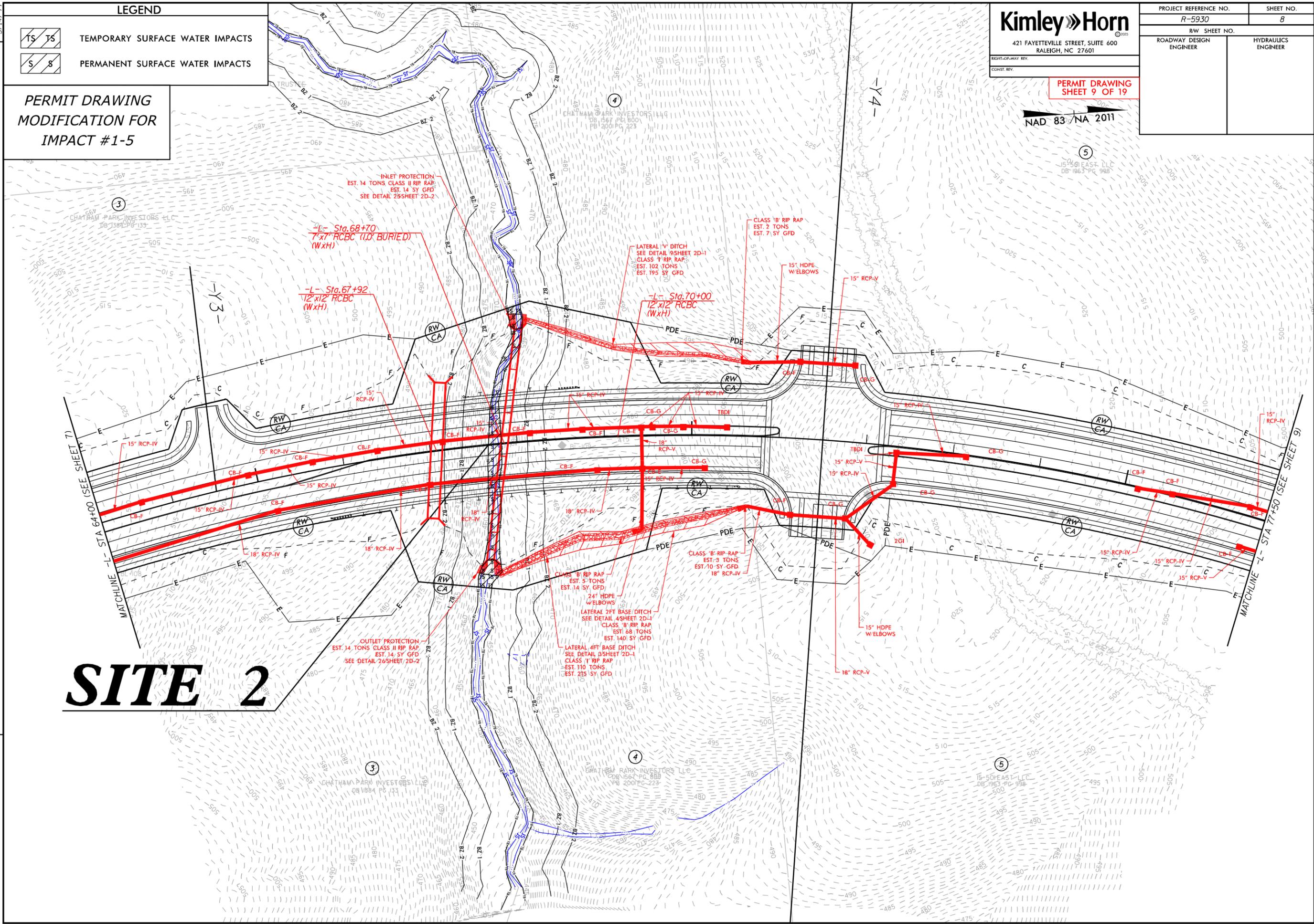
Kimley Horn
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

PROJECT REFERENCE NO. R-5930	SHEET NO. 8
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

PERMIT DRAWING
SHEET 9 OF 19

NAD 83 / NA 2011

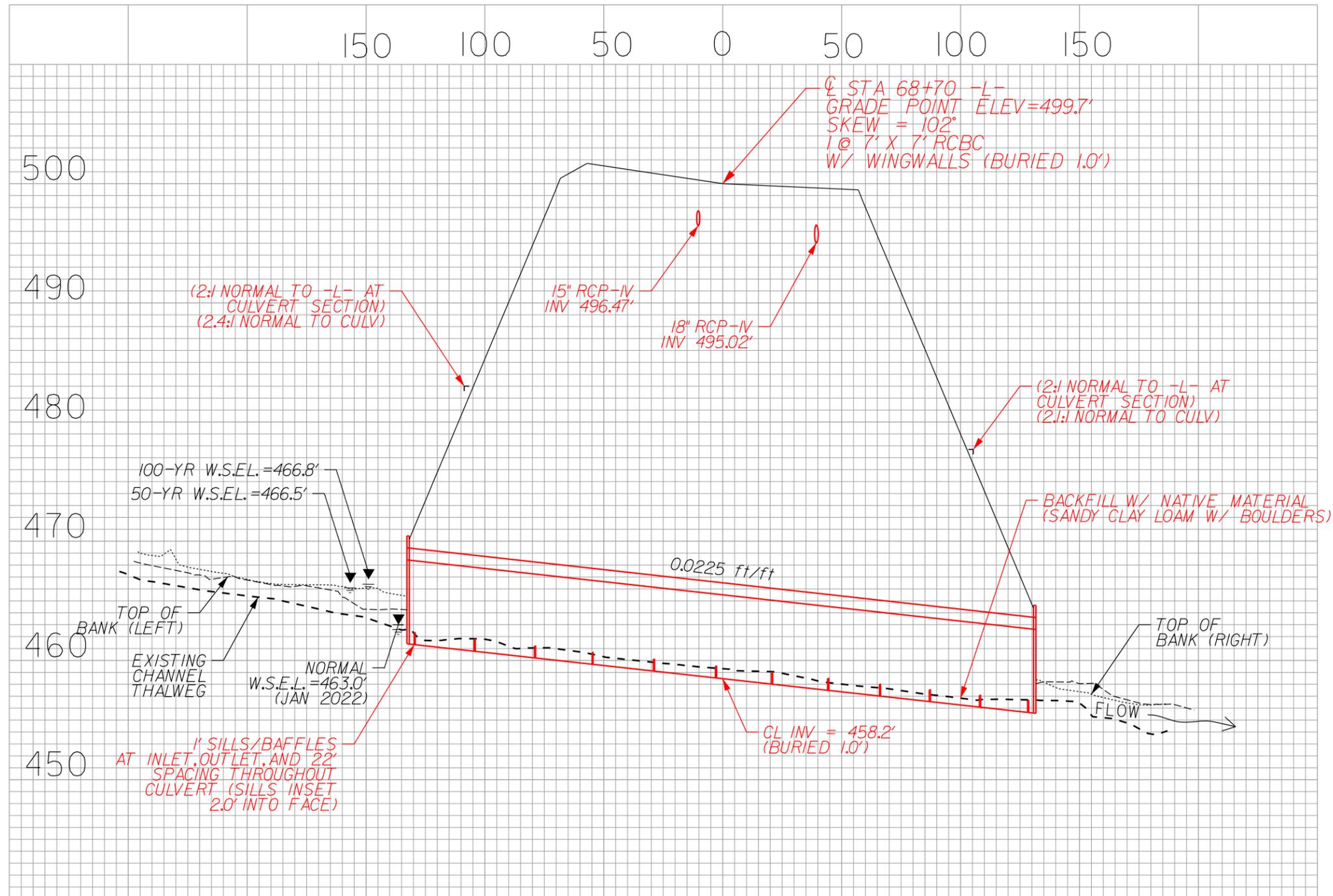
REVISIONS



SITE 2

PROJECT REFERENCE NO. R-5930		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PERMIT DRAWING SHEET 10 OF 19			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SITE 2 - STA 68+70



LEGEND

- TEMPORARY SURFACE WATER IMPACTS
- PERMANENT SURFACE WATER IMPACTS

PERMIT DRAWING
MODIFICATION FOR
IMPACT #6-10

Kimley Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.
CONST. REV.

PERMIT DRAWING
SHEET 11 OF 19

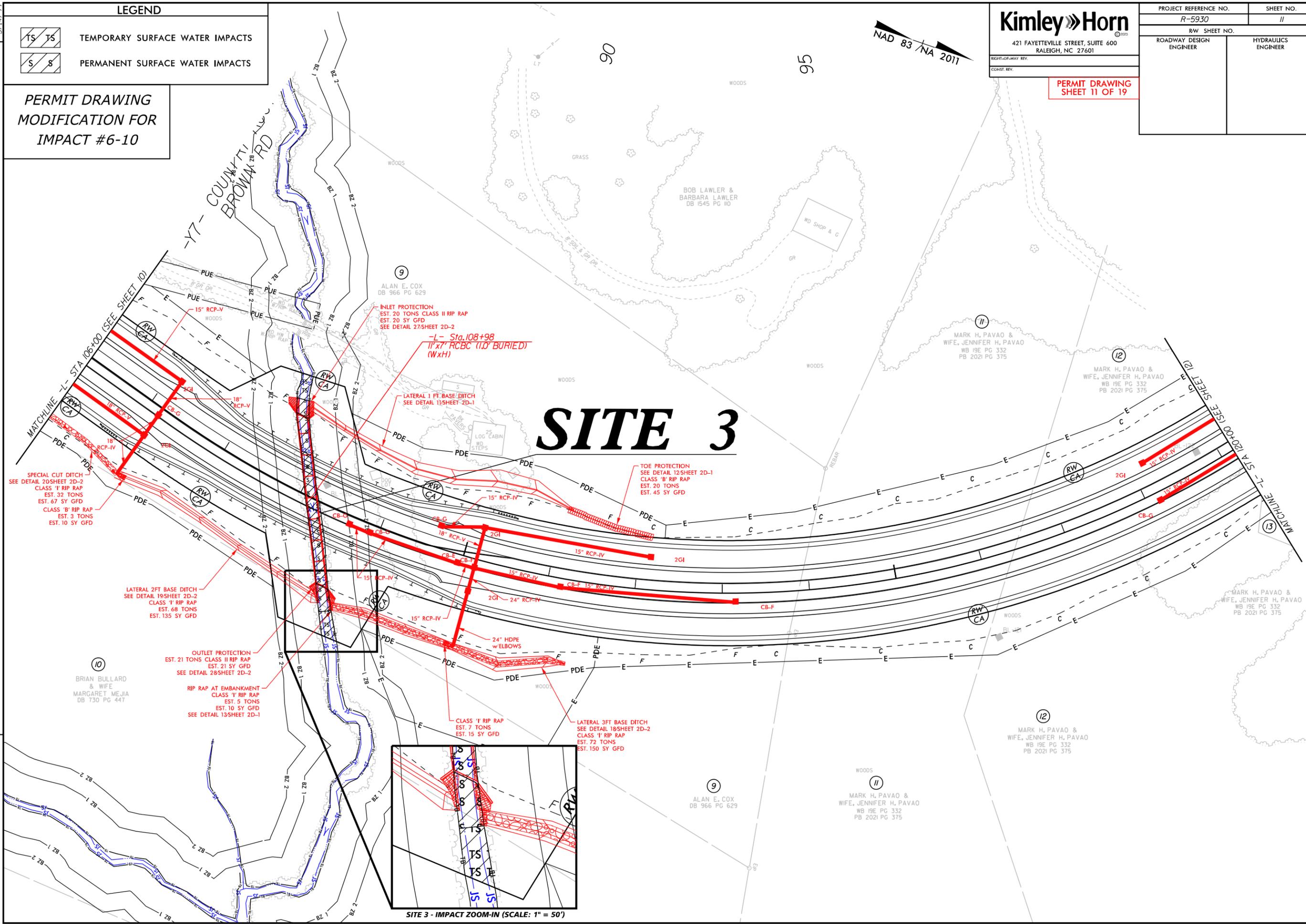
PROJECT REFERENCE NO. SHEET NO.

R-5930 //

RW SHEET NO. ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER



SITE 3



SPECIAL CUT DITCH
SEE DETAIL 20/SHEET 2D-2
CLASS '1' RIP RAP
EST. 32 TONS
EST. 67 SY GFD
CLASS 'B' RIP RAP
EST. 3 TONS
EST. 10 SY GFD

LATERAL 2FT BASE DITCH
SEE DETAIL 19/SHEET 2D-2
CLASS '1' RIP RAP
EST. 68 TONS
EST. 135 SY GFD

OUTLET PROTECTION
EST. 21 TONS CLASS II RIP RAP
EST. 21 SY GFD
SEE DETAIL 28/SHEET 2D-2

RIP RAP AT EMBANKMENT
CLASS '1' RIP RAP
EST. 5 TONS
EST. 10 SY GFD
SEE DETAIL 13/SHEET 2D-1

INLET PROTECTION
EST. 20 TONS CLASS II RIP RAP
EST. 20 SY GFD
SEE DETAIL 27/SHEET 2D-2

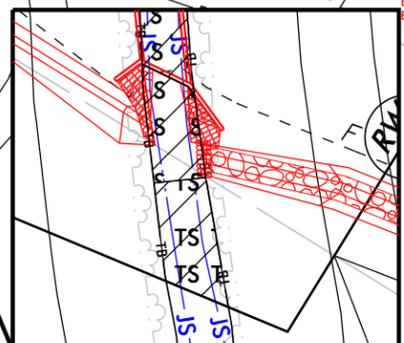
-L- Sta. 108+98
11'x7' RCBC (1.0' BURIED)
(WxH)

LATERAL 1 FT BASE DITCH
SEE DETAIL 11/SHEET 2D-1

TOE PROTECTION
SEE DETAIL 12/SHEET 2D-1
CLASS 'B' RIP RAP
EST. 20 TONS
EST. 45 SY GFD

CLASS '1' RIP RAP
EST. 7 TONS
EST. 15 SY GFD

LATERAL 3FT BASE DITCH
SEE DETAIL 18/SHEET 2D-2
CLASS '1' RIP RAP
EST. 72 TONS
EST. 150 SY GFD



SITE 3 - IMPACT ZOOM-IN (SCALE: 1" = 50')

REVISIONS

5/14/19

LEGEND

- TEMPORARY SURFACE WATER IMPACTS
- PERMANENT SURFACE WATER IMPACTS

PERMIT DRAWING
MODIFICATION FOR
IMPACT #6-10

Kimley Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

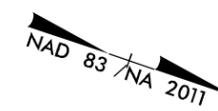
RIGHT-OF-WAY REV.
CONST. REV.

PERMIT DRAWING
SHEET 12 OF 19

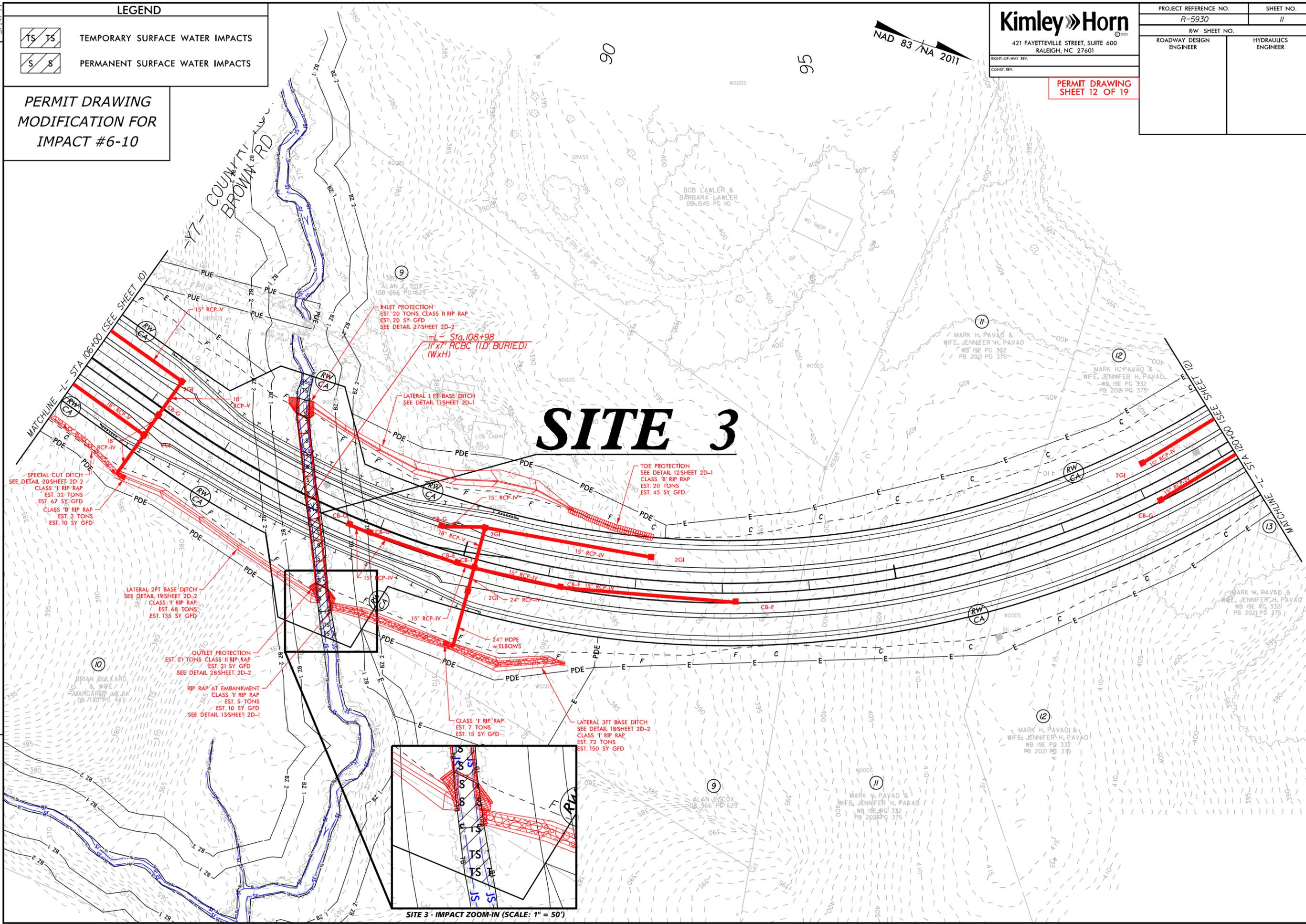
PROJECT REFERENCE NO. SHEET NO.

R-5930 //

RW SHEET NO. ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER



SITE 3

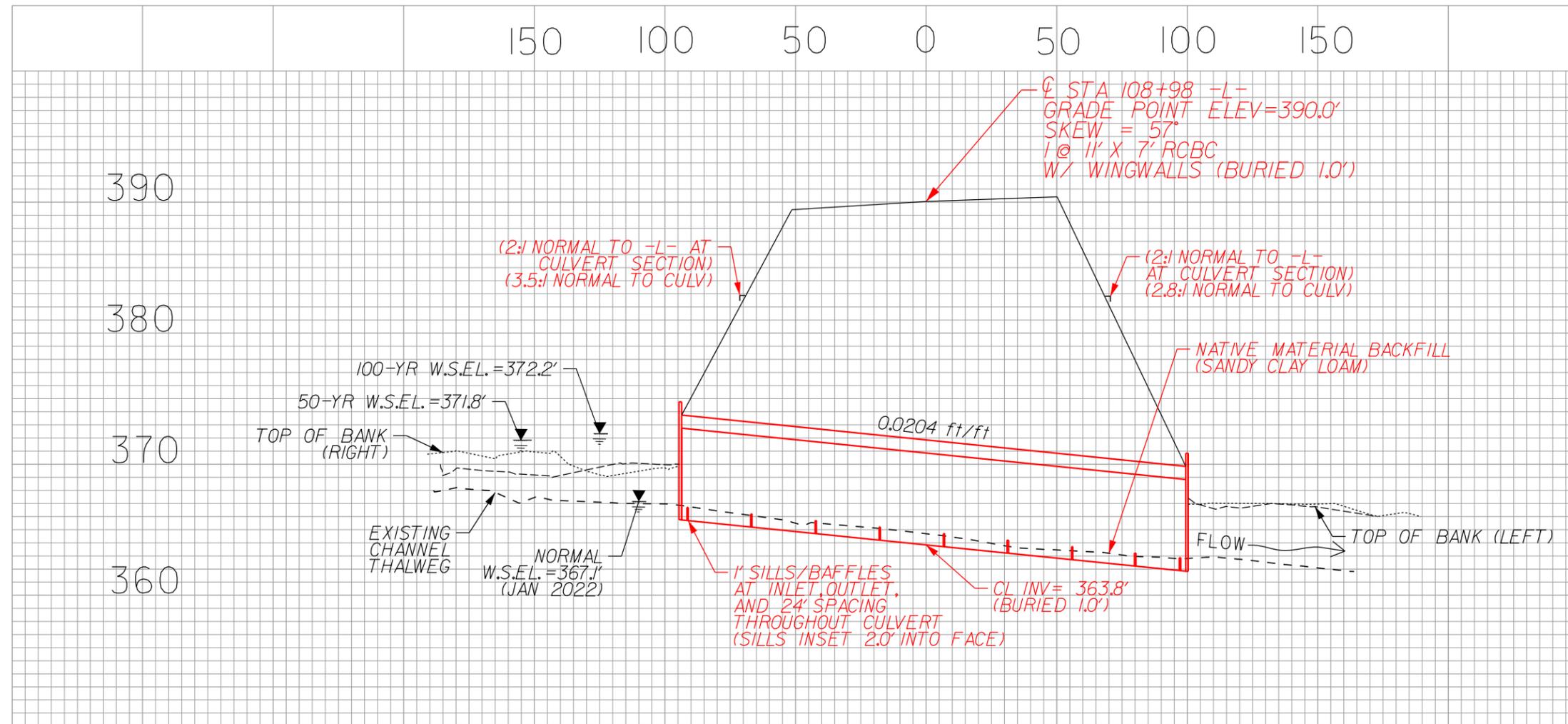


REVISIONS

SITE 3 - IMPACT ZOOM-IN (SCALE: 1" = 50')

PROJECT REFERENCE NO. R-5930		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PERMIT DRAWING SHEET 13 OF 19			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SITE 3 - STA 108+98



LEGEND

-  TEMPORARY SURFACE WATER IMPACTS
-  PERMANENT SURFACE WATER IMPACTS

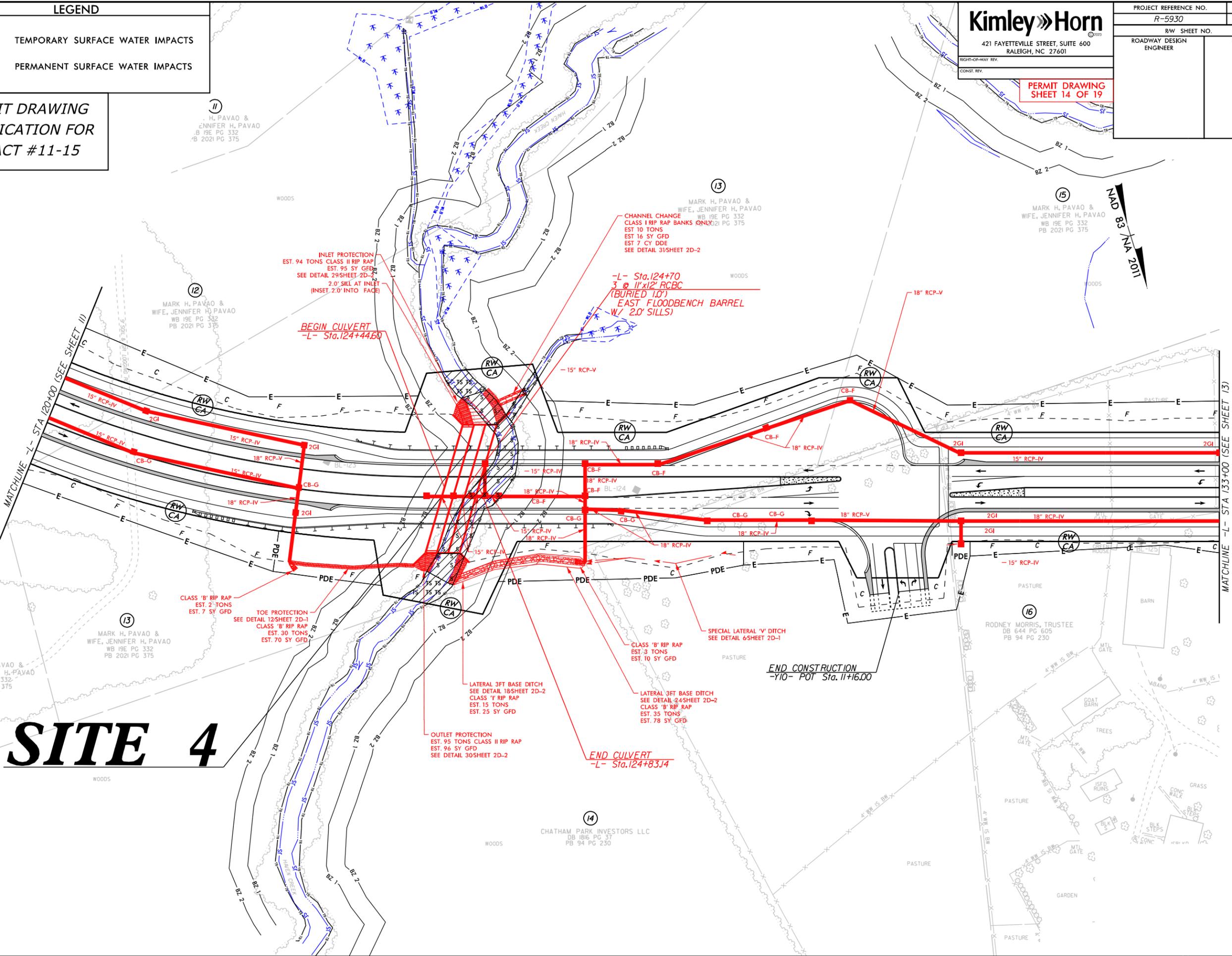
PERMIT DRAWING
MODIFICATION FOR
IMPACT #11-15

Kimley Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

PERMIT DRAWING
SHEET 14 OF 19

PROJECT REFERENCE NO. R-5930	SHEET NO. 12
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



SITE 4

REVISIONS

5/14/99

NAD 83
N/A 2011

MATCHLINE -L- STA 120+00 (SEE SHEET 11)

MATCHLINE -L- STA 133+00 (SEE SHEET 13)

END CONSTRUCTION
-Y10- POT Sta. 11+16.00

BEGIN CULVERT
-L- Sta. 124+44.60

END CULVERT
-L- Sta. 124+83.14

-L- Sta. 124+70
3 @ 11'x12' RCBC
(BURIED 10')
EAST FLOODBENCH BARREL
W/ 2.0' SILLS

11
H. PAVAO &
JENNIFER H. PAVAO
WB 19E PG 332
PB 2021 PG 375

13
MARK H. PAVAO &
WIFE, JENNIFER H. PAVAO
WB 19E PG 332
PB 2021 PG 375

15
MARK H. PAVAO &
WIFE, JENNIFER H. PAVAO
WB 19E PG 332
PB 2021 PG 375

12
MARK H. PAVAO &
WIFE, JENNIFER H. PAVAO
WB 19E PG 332
PB 2021 PG 375

13
MARK H. PAVAO &
WIFE, JENNIFER H. PAVAO
WB 19E PG 332
PB 2021 PG 375

12
MARK H. PAVAO &
WIFE, JENNIFER H. PAVAO
WB 19E PG 332
PB 2021 PG 375

14
CHATHAM PARK INVESTORS LLC
DB 1816 PG 37
PB 94 PG 230

16
RODNEY MORRIS, TRUSTEE
DB 644 PG 605
PB 94 PG 230

5/14/9/

LEGEND



TEMPORARY SURFACE WATER IMPACTS



PERMANENT SURFACE WATER IMPACTS

PERMIT DRAWING
MODIFICATION FOR
IMPACT #11-15

Kimley Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

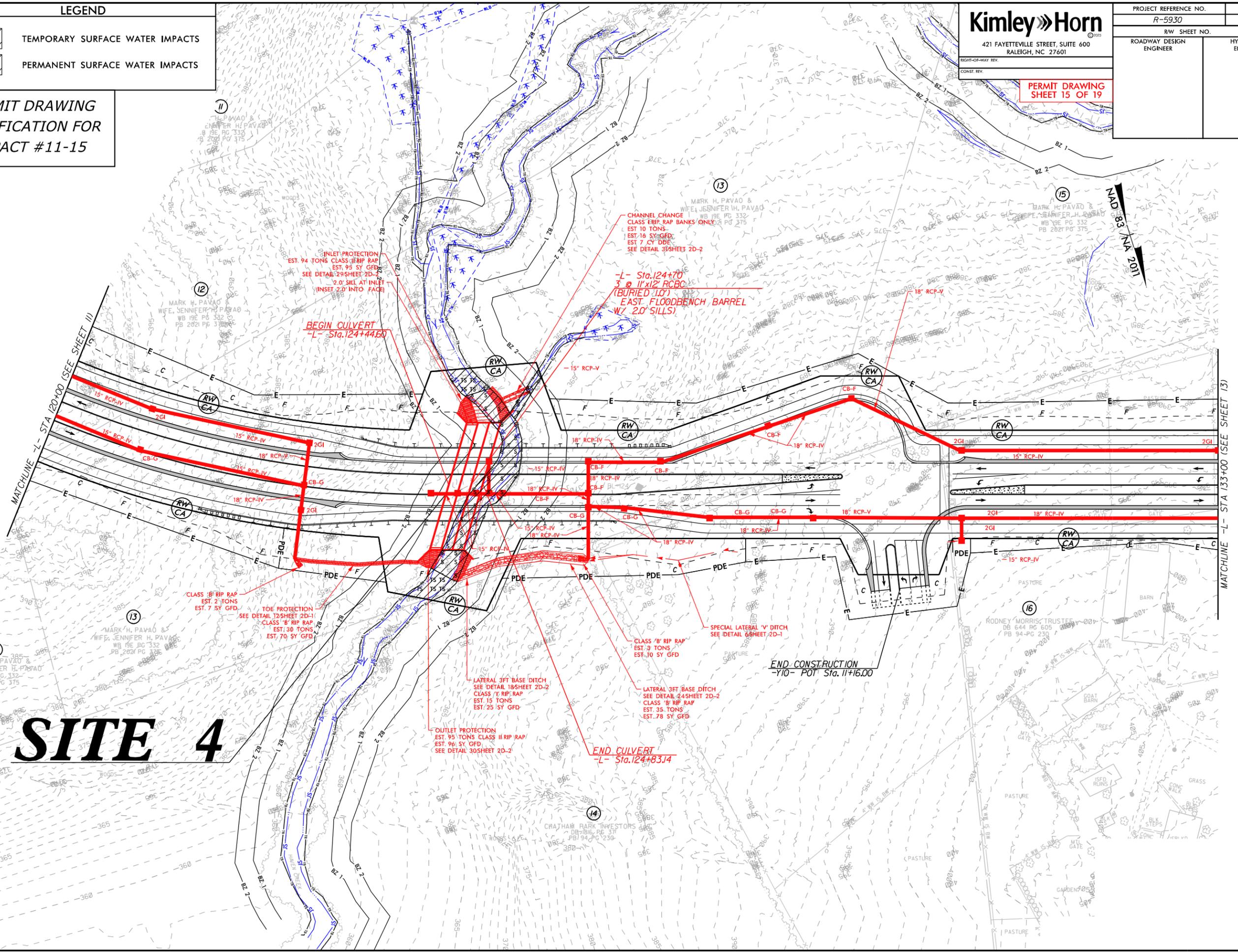
RIGHT-OF-WAY REV.
CONST. REV.

PERMIT DRAWING
SHEET 15 OF 19

PROJECT REFERENCE NO. R-5930 SHEET NO. 12

RW SHEET NO. ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

REVISIONS



SITE 4

MATCHLINE -L- STA 120+00 (SEE SHEET 11)

MATCHLINE -L- STA 133+00 (SEE SHEET 13)

MA 301

END CONSTRUCTION
-Y10- POT Sta. 11+16.00

END CULVERT
-L- Sta. 124+31.4

BEGIN CULVERT
-L- Sta. 124+44.60

CHANNEL CHANGE
CLASS II RIP RAP BANKS ONLY
EST. 10 TONS
EST. 16 SY GFD
EST. 7 CY DBE
SEE DETAIL 30/SHEET 2D-2

-L- Sta. 124+70
3 @ 11'x12' RCBC
(BURIED 'LO')
EAST FLOODBENCH BARREL
W/ 2.0' SILLS

INLET PROTECTION
EST. 94 TONS CLASS II RIP RAP
EST. 95 SY GFD
SEE DETAIL 29/SHEET 2D-2
2.0' SILL AT INLET
(INSET 2.0' INTO FACE)

CLASS 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GFD
TOE PROTECTION
SEE DETAIL 12/SHEET 2D-1
CLASS 'B' RIP RAP
EST. 30 TONS
EST. 70 SY GFD

LATERAL 3FT BASE DITCH
SEE DETAIL 18/SHEET 2D-2
CLASS 'I' RIP RAP
EST. 15 TONS
EST. 25 SY GFD

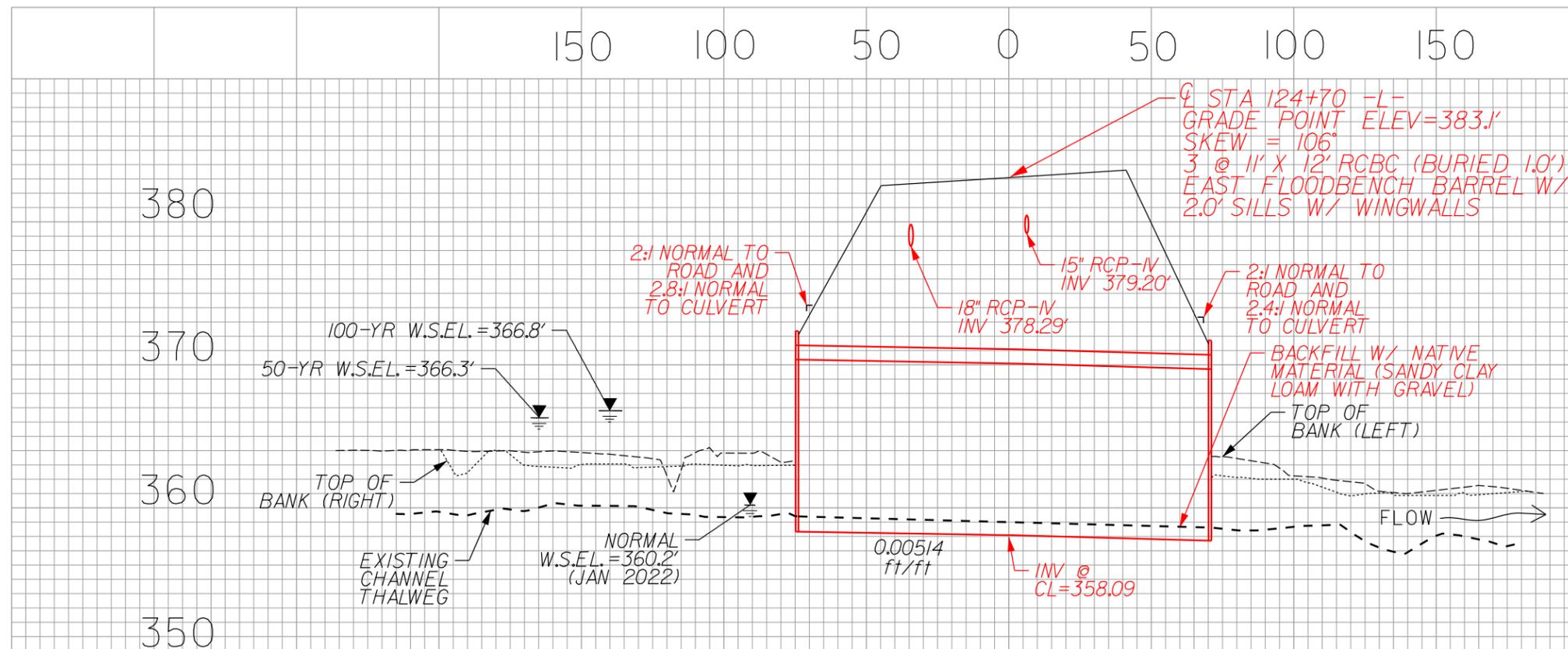
CLASS 'B' RIP RAP
EST. 9 TONS
EST. 10 SY GFD
SPECIAL LATERAL 'V' DITCH
SEE DETAIL 6/SHEET 2D-1

OUTLET PROTECTION
EST. 95 TONS CLASS II RIP RAP
EST. 94 SY GFD
SEE DETAIL 30/SHEET 2D-2

LATERAL 3FT BASE DITCH
SEE DETAIL 24/SHEET 2D-2
CLASS 'B' RIP RAP
EST. 35 TONS
EST. 78 SY GFD

PROJECT REFERENCE NO. R-5930		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PERMIT DRAWING SHEET 16 OF 19			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SITE 4 - STA 124+70



LEGEND



TEMPORARY SURFACE WATER IMPACTS



PERMANENT SURFACE WATER IMPACTS

PERMIT DRAWING
MODIFICATION FOR
IMPACT #16-20

Kimley Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.
CONST. REV.

PERMIT DRAWING
SHEET 17 OF 19

PROJECT REFERENCE NO. SHEET NO.

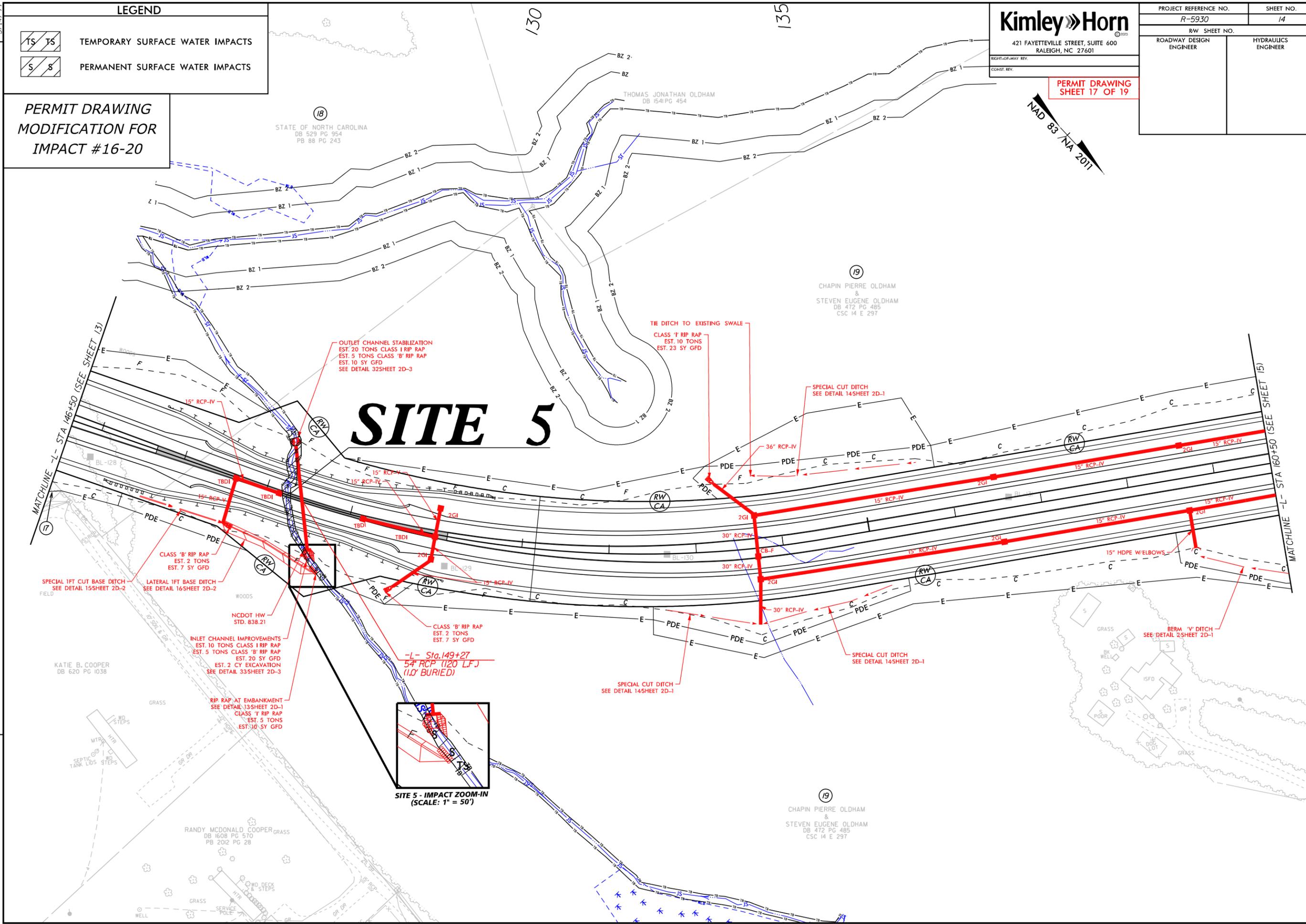
R-5930 14

RW SHEET NO. HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

5/14/99

REVISIONS



SITE 5

SITE 5 - IMPACT ZOOM-IN
(SCALE: 1" = 50')

- OUTLET CHANNEL STABILIZATION
EST. 20 TONS CLASS 1 RIP RAP
EST. 5 TONS CLASS 'B' RIP RAP
EST. 10 SY GFD
SEE DETAIL 32SHEET 2D-3
- TIE DITCH TO EXISTING SWALE
CLASS '1' RIP RAP
EST. 10 TONS
EST. 23 SY GFD
- SPECIAL CUT DITCH
SEE DETAIL 14SHEET 2D-1
- 36" RCP-IV
- 15" HDPE W/ELBOWS
- BERM 'V' DITCH
SEE DETAIL 2SHEET 2D-1
- SPECIAL CUT DITCH
SEE DETAIL 14SHEET 2D-1
- 30" RCP-IV
- 30" RCP-IV
- 30" RCP-IV
- 30" RCP-IV
- SPECIAL CUT DITCH
SEE DETAIL 14SHEET 2D-1
- CLASS 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GFD
- LATERAL 1FT BASE DITCH
SEE DETAIL 16SHEET 2D-2
- NCDOT HW
STD. 838.21
- INLET CHANNEL IMPROVEMENTS
EST. 10 TONS CLASS 1 RIP RAP
EST. 5 TONS CLASS 'B' RIP RAP
EST. 20 SY GFD
EST. 2 CY EXCAVATION
SEE DETAIL 33SHEET 2D-3
- RIP RAP AT EMBANKMENT
SEE DETAIL 13SHEET 2D-1
CLASS '1' RIP RAP
EST. 5 TONS
EST. 10 SY GFD
- L- Sta. 149+27
54" RCP (120 LF.)
(1.0' BURIED)

STATE OF NORTH CAROLINA
DB 529 PG 954
PB 88 PG 243

CHAPIN PIERRE OLDHAM &
STEVEN EUGENE OLDHAM
DB 472 PG 485
CSC 14 E 297

CHAPIN PIERRE OLDHAM &
STEVEN EUGENE OLDHAM
DB 472 PG 485
CSC 14 E 297

KATIE B. COOPER
DB 620 PG 1038

RANDY McDONALD COOPER
DB 1608 PG 570
PB 2012 PG 28



LEGEND



TEMPORARY SURFACE WATER IMPACTS

PERMANENT SURFACE WATER IMPACTS

PERMIT DRAWING
MODIFICATION FOR
IMPACT #16-20

Kimley Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

PROJECT REFERENCE NO. SHEET NO.

R-5930 14

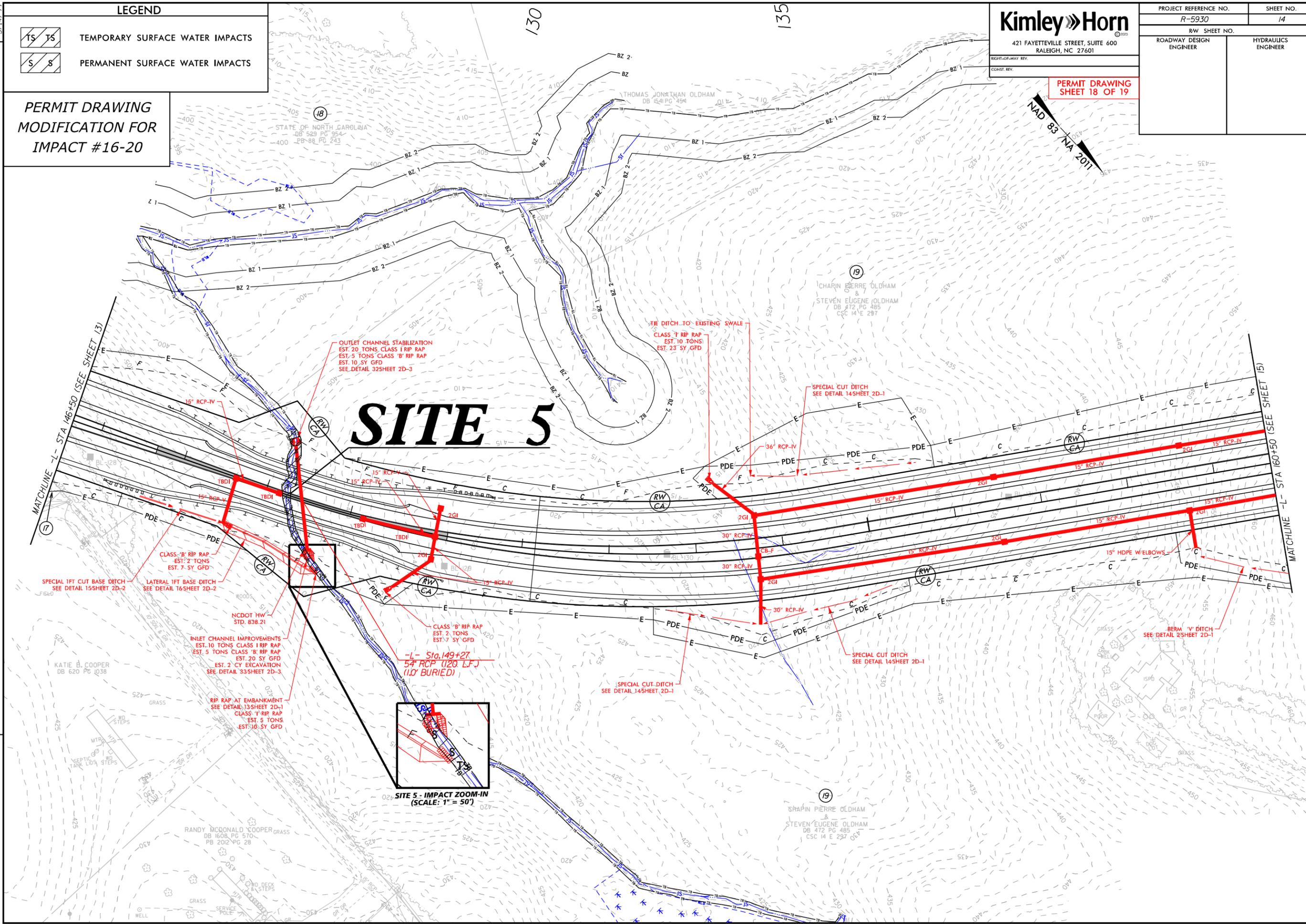
RW SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 18 OF 19

REVISIONS



SITE 5

SITE 5 - IMPACT ZOOM-IN
(SCALE: 1" = 50')

MATCHLINE L- STA 146+50 (SEE SHEET 13)

MATCHLINE L- STA 160+50 (SEE SHEET 15)

SPECIAL 1FT CUT BASE DITCH
SEE DETAIL 15/SHEET 2D-2

LATERAL 1FT BASE DITCH
SEE DETAIL 16/SHEET 2D-2

INLET CHANNEL IMPROVEMENTS
EST. 10 TONS CLASS 'B' RIP RAP
EST. 5 TONS CLASS 'B' RIP RAP
EST. 20 SY GFD
EST. 2 CY EXCAVATION
SEE DETAIL 33/SHEET 2D-3

RIP RAP AT EMBANKMENT
SEE DETAIL 13/SHEET 2D-1
CLASS 'B' RIP RAP
EST. 5 TONS
EST. 10 SY GFD

OUTLET CHANNEL STABILIZATION
EST. 20 TONS CLASS 'B' RIP RAP
EST. 5 TONS CLASS 'B' RIP RAP
EST. 10 SY GFD
SEE DETAIL 32/SHEET 2D-3

-L- Sta. 149+27
54" RCP (120 L.F.)
(110' BURIED)

CLASS 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GFD

TIE DITCH TO EXISTING SWALE
CLASS 'B' RIP RAP
EST. 10 TONS
EST. 23 SY GFD

SPECIAL CUT DITCH
SEE DETAIL 14/SHEET 2D-1

SPECIAL CUT DITCH
SEE DETAIL 14/SHEET 2D-1

BERM V DITCH
SEE DETAIL 2/SHEET 2D-1

KATIE B. COOPER
DB 620 PG 1038

RANDY McDONALD COOPER GRASS
DB 1608 PG 570
PB 2012 PG 28

STATE OF NORTH CAROLINA
DB 529 PG 954
PB 88 PG 243

THOMAS JONATHAN OLDHAM
DB 1541 PG 354

CHARIN PIERRE OLDHAM &
STEVEN EUGENE OLDHAM
DB #72 PG 485
CSC 14 E 287

SHAPIN PIERRE OLDHAM &
STEVEN EUGENE OLDHAM
DB 472 PG 485
CSC 14 E 287



WETLAND AND SURFACE WATER IMPACTS SUMMARY

Permit Modification Site No.	Original Permit Impact #	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS					
				Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)	
1	-	-L-43+01 / -L- 43+50 (RT)	Skimmer Basin					0.02						
		-L-68+23 / -L- 69+00	TOTAL						0.09	0.04	304	25		
2	1		Construction Easement							< 0.01		15		
	2		Outlet Protection (Bank Stabilization)						< 0.01		17			
	3		1@ 7' x 7' RCBC, Buried 1'						0.08		270			
	4		Inlet Protection (Bank Stabilization)						< 0.01		17			
	5		Construction Easement							0.03		10		
		-L-108+17 / -L- 109+84	TOTAL						0.08	0.02	245	63		
3	6		Construction Easement							0.01		33		
	7		Outlet Protection (Bank Stabilization)						< 0.01		26			
	8		1@11' x 7' RCBC, Buried 1'						0.06		201			
	9		Inlet Protection (Bank Stabilization)						< 0.01		18			
	10		Construction Easement							< 0.01		30		
		-L-124+00 / -L- 125+26	TOTAL						0.15	0.05	274	89		
4	11		Construction Easement							0.02		31		
	12		Outlet Protection (Bank Stabilization)						0.02		33			
	13		3@11' x 12' RCBC, Buried 1' East Floodbench Barrel, 2' Sills						0.10		174			
	14		Inlet Protection (Bank Stabilization)						0.02		38			
	15		Construction Easement							0.02		38		
	-		Channel Change						< 0.01	< 0.01	29	20		
		-L-148+85 / -L- 149+73	TOTAL						0.03	< 0.01	163	20		
5	16		Construction Easement							< 0.01		10		
	17		Outlet Protection (Bank Stabilization)						< 0.01		29			
	18		1 @ 54" RCP, Buried 1'						0.03		125			
	19		Inlet Protection (Bank Stabilization)						< 0.01		9			
	20		Construction Easement							< 0.01		10		
TOTALS*:									0.02	0.35	0.11	986	197	

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 02/13/2023
 CHATHAM COUNTY
 R-5930