



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

August 03, 2023

**Addendum No. 1**

RE: Contract # C204872

WBS # 48548.3.2

STATE FUNDED

**Chatham County (R-5930A)**

CHATHAM PARKWAY FROM NORTH OF US-64 TO NORTH OF PROPOSED  
GRANT DRIVE

**August 15, 2023 Letting**

To Whom It May Concern:

Reference is made to the proposal form furnished to you on this project.

The following revisions have been made to the proposal.

<b>Page No.</b>	<b>Revision</b>
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 08-03-2023"
P-1	Revised to reflect the Department's receipt of the permits
New Pages P-2 thru P-148	Permit added to the proposal

Please void the above listed existing Pages in your proposal and staple the revised Pages thereto.

Staple New Pages P-2 thru P-148 after revised Page P-1 in your proposal.

The contract will be prepared accordingly.

Sincerely,

DocuSigned by:  
*Ronald E. Davenport, Jr.*  
#01B603BA47AA42...

Ronald E. Davenport, Jr., PE  
State Contract Officer

RED/jjr  
Attachments

cc: Mr. Boyd Tharrington, PE  
Mr. Patrick Norman, PE  
Mr. Jon Weathersbee, PE  
Mr. Ken Kennedy, PE

Mr. Forrest Dungan, PE  
Ms. Jaci Kincaid  
Mr. Mike Gwyn  
Project File (2)

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH, N.C.

PROPOSAL

**INCLUDES ADDENDUM No.1 DATED 08-03-2023**

DATE AND TIME OF BID OPENING: **Aug 15, 2023 AT 02:00 PM**

CONTRACT ID C204872  
WBS 48548.3.2

FEDERAL-AID NO. STATE FUNDED  
COUNTY CHATHAM  
T.I.P NO. R-5930A  
MILES 0.852

ROUTE NO.

LOCATION CHATHAM PARKWAY FROM NORTH OF US-64 TO NORTH OF PROPOSED  
GRANT DRIVE.

TYPE OF WORK GRADING, DRAINAGE, AND PAVING.

**NOTICE:**

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

**BIDS WILL BE RECEIVED AS SHOWN BELOW:**

**THIS IS A ROADWAY & CULVERT PROPOSAL**

**5% BID BOND OR BID DEPOSIT REQUIRED**

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**PROJECT SPECIAL PROVISION**

(10-18-95) (Rev. 8-15-23)

Z-1a

**PERMITS**

The Contractor's attention is directed to the following permits, which have been issued to the Department of Transportation by the authority granting the permit.

<b><u>PERMIT</u></b>	<b><u>AUTHORITY GRANTING THE PERMIT</u></b>
Dredge and Fill and/or Work in Navigable Waters (404)	U. S. Army Corps of Engineers
Water Quality (401)	Division of Environmental Management, DEQ State of North Carolina
Buffer Certification	Division of Environmental Management, DEQ State of North Carolina

The Contractor shall comply with all applicable permit conditions during construction of this project.

Agents of the permitting authority will periodically inspect the project for adherence to the permits.

The Contractor's attention is also directed to Articles 107-10 and 107-13 of the *2018 Standard Specifications* and the following:

Should the Contractor propose to utilize construction methods (such as temporary structures or fill in waters and/or wetlands for haul roads, work platforms, cofferdams, etc.) not specifically identified in the permit (individual, general, or nationwide) authorizing the project it shall be the Contractor's responsibility to coordinate with the Engineer to determine what, if any, additional permit action is required. The Contractor shall also be responsible for initiating the request for the authorization of such construction method by the permitting agency. The request shall be submitted through the Engineer. The Contractor shall not utilize the construction method until it is approved by the permitting agency. The request normally takes approximately 60 days to process; however, no extensions of time or additional compensation will be granted for delays resulting from the Contractor's request for approval of construction methods not specifically identified in the permit.

**Where construction moratoriums are contained in a permit condition which restricts the Contractor's activities to certain times of the year, those moratoriums will apply only to the portions of the work taking place in the restricted waters, wetlands or buffer zones, provided that activities outside those areas is done in such a manner as to not affect the restricted waters, wetlands or buffer zones.**



**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



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

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
Wetland	Temporary	0	0.018	+0.018 (Increase)	
Chatham Park Way North (R-5930)	Stream	Permanent Loss	709*	799	+90 (Increase)
			791**		+8 (Increase)
	Stream	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



DEPARTMENT OF THE ARMY  
WILMINGTON DISTRICT, CORPS OF ENGINEERS  
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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](mailto:George.L.Phillips@usace.army.mil).

FOR THE DISTRICT ENGINEER

*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](mailto: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](mailto:bowers.todd@epa.gov)





REPLY TO  
ATTENTION OF

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

March 02, 2022

Regulatory Division/1200A

Action ID: SAW-2020-00746

Mr. Tim Smith  
Chatham Park Investors, LLC (CPI)  
100 Weston Estates Way  
Cary, North Carolina 27513

Mr. Art King  
North Carolina Department of Transportation (NCDOT)  
121 DOT Drive  
Carthage, North Carolina 28327

Dear Messrs. Smith and King:

In accordance with your written request of April 13, 2020, and additional information received September 3, 2020, and February 21, 2022, and the ensuing administrative record, enclosed are two copies of a permit to construct the Chatham Park North Village and associated infrastructure, including the NCDOT Chatham Parkway (TIP No. R-5930). These activities involve the permanent discharge of dredged or fill material into a total of 3,014 linear feet (LF) of stream channel (2,320 LF permanent stream channel loss from culvert installation, 714 LF of stream channel impacts from rip rap installation), 1,366 LF of temporary stream channel impacts from construction access, 0.411 acre of permanent wetland loss from fill, and 0.008 acre of temporary wetland impacts from construction access.

You should acknowledge that you accept the terms and conditions of the enclosed permit by signing and dating each copy in the spaces provided ("Permittee" on page 3). Your signature, as Permittee, indicates that, as consideration for the issuance of this permit, you voluntarily accept and agree to comply with all of the terms and conditions of this permit. All pages of both copies of the signed permit with drawings should then be returned to this office for final authorization. A self-addressed envelope is enclosed for your convenience.

Title 33, Part 325.1(f), of the Code of Federal Regulations reads, in part, that, "A \$10 fee will be charged for permit applications when the work is noncommercial in nature and provides personal benefits that have no connection with a commercial enterprise...", and "A fee of \$100 will be charged for permit applications when the planned or ultimate purpose of the project is commercial or industrial in nature and is in support of operations that charge for the production, distribution, or sale of goods or services." As your application fits the latter category, you are requested to remit your check for \$100, made payable to the Finance and Accounting Officer, USAED, Wilmington. The check should accompany the signed and dated copies of your permit.

This correspondence contains a proffered permit for the above described site. If you object to this decision, you may request an administrative appeal under Corps regulations at 33 CFR part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and request for appeal (RFA) form. If you request to appeal this decision you must submit a completed RFA form to the following address:

District Engineer, Wilmington Regulatory Division  
Attn: James C. Lastinger  
69 Darlington Avenue  
Wilmington, North Carolina 28403

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by April 30, 2022.

It is not necessary to submit an RFA form to the Division Office if you do not object to the decision in contained in this correspondence.

After the permit is authorized in this office, the original copy will be returned to you; the duplicate copy will be permanently retained in this office. If you have questions, please contact James C. Lastinger at the Raleigh Regulatory Field Office, telephone 919-554-4884, extension 32.

Thank you in advance for completing our Customer Survey Form. This can be accomplished by visiting our web site at [http://corpsmapu.usace.army.mil/cm\\_apex/f?p=136:4:0](http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0) and completing the survey on-line. We value your comments and appreciate your taking the time to complete a survey each time you interact with our office.

Sincerely,



For Tyler Crumbley  
Acting Chief, Regulatory Division  
Wilmington District

Enclosures

Copy Furnished:

Mr. Bob Zarzecki  
Soil and Environmental Consultants  
8412 Falls of Neuse Road, suite 104  
Raleigh, NC 27615

Mr. Jason Hartshorn  
Kimley-Horn  
421 Fayetteville Street, suite 600  
Raleigh, NC 27601

DEPARTMENT OF THE ARMY PERMIT

Permittee **CHATHAM PARK INVESTORS**  
**ATTN: MR. TIM SMITH**

**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**  
**ATTN: MR. ART KING**

Permit No. **SAW-2020-00746**

Issuing Office **CESAW-RG-R**

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

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

**Project Description: The project involves construction of Chatham Park North Village and associated infrastructure, including the NCDOT Chatham Parkway (TIP No. R-5930). The project involves the permanent discharge of dredged or fill material into 3,014 linear feet of intermittent and perennial stream channel, 0.411 acre of riparian non-riverine wetlands, the temporary discharge of fill material into 1,366 linear feet of stream channel and 0.008 acre of wetlands.**

**Project Location: Chatham Park North Village comprises approximately 2,224 acres of land and is located on the northeast side of the Town of Pittsboro, in Chatham County, North Carolina. The property is bound by the Haw River to the north and east, US 15-501 to the west, and US 64 Business to the south. In addition, there are approximately 2.7 miles of roadway proposed on new location comprising 334 acres from approximately 1,400 feet north of US 64 Bypass (beginning at Suttles Road [SR 1809]) to US 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.**

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2052**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you

abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

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

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

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

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

Special Conditions:

**SEE ATTACHED SPECIAL CONDITIONS**

Further Information:

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

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

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

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

2. Limits of this authorization.

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

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

- c. This permit does not authorize any injury to the property or rights of others.
  - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
  - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
  - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
  - d. Design or construction deficiencies associated with the permitted work.
  - e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. You fail to comply with the terms and conditions of this permit.
  - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
  - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

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

such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

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

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

Tim R. Smith VP/AGENT 3/2/22  
(PERMITTEE) CHATHAM PARK INVESTORS (DATE)  
MR. TIM SMITH

[Signature] 3/2/2022  
(PERMITTEE) NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (DATE)  
for MR. ART KING

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

Jean B. Hibler 2 Mar 2022  
for (DISTRICT COMMANDER) BENJAMIN A. BENNETT, COLONEL (DATE)

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

\_\_\_\_\_  
(TRANSFEEE) (DATE)

**SPECIAL CONDITIONS  
ACTION ID: SAW-2020-00746  
CHATHAM PARK INVESTORS  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
CHATHAM PARK NORTH VILLAGE AND NCDOT TIP NO. R-5930  
CHATHAM COUNTY**

**SPECIAL CONDITIONS**

Failure to institute and carry out the details of the following special conditions below (listed as 1-26) will result in a directive to cease all ongoing and permitted work within waters of the United States, including wetlands, associated with the permitted project, or such other remedies and/or fines as the U.S. Army Corps of Engineers District Commander or his authorized representatives may seek.

**WORK LIMITS / NOTIFICATION**

1. **Work Limits:** All work authorized by this permit shall be performed in strict compliance with the attached permit plans entitled "Chatham Park" dated March 30, 2020. The Permittees shall ensure that the construction design plans for this project do not deviate from the permit plans attached to this authorization. Any modification to the attached permit plans must be approved by the U.S. Army Corps of Engineers (Corps) prior to any active construction in waters or wetlands.
2. **Unauthorized Dredge and/or Fill:** Except as authorized by this permit or any Corps-approved modification to this permit, no excavation, fill, or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.
3. **Permit Distribution:** The Permittees shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A copy of this permit, including all conditions and drawings shall be available at the project site during construction and maintenance of this project.
4. **Preconstruction Meeting:** The Permittees shall conduct an onsite preconstruction meeting between their representatives, contractor's representatives, and the appropriate U.S. Army Corps of Engineers Project Manager prior to undertaking any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all terms and conditions contained within the Department of the Army permit. The



**SPECIAL CONDITIONS  
ACTION ID: SAW-2020-00746  
CHATHAM PARK INVESTORS  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
CHATHAM PARK NORTH VILLAGE AND NCDOT TIP NO. R-5930  
CHATHAM COUNTY**

Permittees shall schedule the preconstruction meeting for a time frame when the Corps and NCDWR Project Managers can attend. The Permittees shall invite the Corps and NCDWR Project Managers a minimum of thirty (30) days in advance of the scheduled meeting in order to provide those individuals with ample opportunity to schedule and participate in the required meeting. The thirty (30) day requirement can be waived with the concurrence of the Corps.

5. Notification of Construction Commencement and Completion: The Permittees shall notify the U.S. Army Corps of Engineers in writing prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.
6. Reporting Address: All reports, documentation, and correspondence required by the conditions of this permit shall be submitted to the following: U.S. Army Corps of Engineers, Wilmington District Raleigh Field Office, Attn: James Lastinger at 919-554-4884 Ext. 32 / [James.c.Lastinger@usace.army.mil](mailto:James.c.Lastinger@usace.army.mil). The Permittees shall reference the following permit number, SAW-2020-00746, on all submittals.
7. Permit Revocation: The Permittees, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition.
8. Reporting Violations: Violation of these permit conditions or violation of Section 404 of the Clean Water Act shall be reported to the Corps in writing and by telephone at: 919-554-4884 Ext. 32 / [James.C.Lastinger@usace.army.mil](mailto:James.C.Lastinger@usace.army.mil) within 24 hours of the Permittee's discovery of the violation.
9. Endangered Species Act: The Permittees shall implement all necessary measures to ensure the authorized activity does not kill, injure, capture, harass, or otherwise harm any federally listed threatened or endangered species. While accomplishing the authorized work, if the Permittees discover or observe an injured or dead threatened or endangered species, the U.S. Army Corps of Engineers, Wilmington District Raleigh Field Office, Attn: James Lastinger at 919-554-4884 Ext. 32 /

**SPECIAL CONDITIONS  
ACTION ID: SAW-2020-00746  
CHATHAM PARK INVESTORS  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
CHATHAM PARK NORTH VILLAGE AND NCDOT TIP NO. R-5930  
CHATHAM COUNTY**

James.C.Lastinger@usace.army.mil will be immediately notified to initiate the required Federal coordination.

10. The U.S. Fish and Wildlife Service's (USFWS's) Programmatic Biological Opinion (PBO) titled, "NCDOT Program Effects on the Northern Long-eared Bat in Divisions 1-8", dated November 6, 2020, contains agreed upon conservation measures for the NLEB. As noted in the PBO, applicability of these conservation measures varies depending on the location of the project. Your authorization under this Department of the Army permit is conditional upon your compliance with all applicable conservation measures in the PBO, which are incorporated by reference in this permit. Failure to comply with the applicable conservation measures would constitute non-compliance with your Department of the Army permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its PBO, and with the ESA.
11. National Historic Preservation Act: While accomplishing the authorized work, if the Permittees discover any previously unknown cultural resources, the District Engineer will be immediately notified so that required coordination can be initiated with the North Carolina Division of Natural and Cultural Resources.

**RELATED LAWS**

12. The North Carolina Division of Water Resources (DWR) permit/certification number 4228 was issued for this project on March 31, 2021. Special conditions were issued associated with this water quality permit/certification and a copy of these conditions is attached as Exhibit A. These referenced conditions are hereby incorporated as special conditions of this permit.
13. Maintain Flows and Circulation Patterns of Waters: Except as specified in the plans attached to this permit, no excavation, fill, or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters and/or wetlands.
14. Sediment and Erosion Control:

**SPECIAL CONDITIONS  
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CHATHAM PARK INVESTORS  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
CHATHAM PARK NORTH VILLAGE AND NCDOT TIP NO. R-5930  
CHATHAM COUNTY**

- a. During the clearing phase of the project, heavy equipment shall not be operated in surface waters or stream channels. Temporary stream crossings will be used to access the opposite sides of stream channels. All temporary diversion channels and stream crossings will be constructed of non-erodible materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.
- b. No fill or excavation impacts for the purposes of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless the impacts are included on the plan drawings and specifically authorized by this permit. This includes, but is not limited to, sediment control fences and other barriers intended to catch sediment losses.
- c. The Permittees shall remove all sediment and erosion control measures placed in waters and/or wetlands, and shall restore natural grades on those areas, prior to project completion.
- d. The Permittees shall use appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" to ensure compliance with the appropriate turbidity water quality standard. Erosion and sediment control practices shall be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to ensure compliance with the appropriate turbidity water quality standards. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project shall remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4). Adequate sedimentation and erosion control measures shall be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. These measures shall be inspected and maintained regularly, especially following rainfall events. All fill material shall be adequately stabilized at the earliest practicable date to prevent sediment from entering into adjacent waters or wetlands.

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15. Clean Fill: The Permittees shall use only clean fill material for this project. The fill material shall be free of items such as trash, construction debris, metal and plastic products, and concrete block with exposed metal reinforcement bars. Soils used for fill shall not be contaminated with any toxic substance in concentrations governed by Section 307 of the Clean Water Act. Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source.
16. Water Contamination: All mechanized equipment shall be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. In the event of a spill of petroleum products or any other hazardous waste, the Permittees shall immediately report it to the N.C. Division of Water Resources at (919) 733-3300 or (800) 858-0368 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act shall be followed.

**AQUATIC LIFE**

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

**CULVERTS**

19. Unless otherwise requested in the application and depicted on the approved permit plans, culverts greater than 48 inches in diameter shall be buried at

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least one foot below the bed of the stream. Culverts 48 inches in diameter and less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain existing channel slope. The bottom of the culvert shall be placed at a depth below the natural stream bottom to provide for passage during drought or low flow conditions. Culverts shall be designed and constructed in a manner that minimizes destabilization and head cutting.

20. Measures shall be included in the culvert construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a culvert or pipe 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 opening shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gauge data, if available. In the absence of such data, bankfull flow can be used as a comparable level.
21. The Permittee shall implement all reasonable and practicable measures to ensure that equipment, structures, fill pads, work, and operations associated with this project do not adversely affect upstream and/or downstream reaches. Adverse effects include, but are not limited to, channel instability, flooding, and/or stream bank erosion. The Permittee shall routinely monitor for these effects, cease all work when detected, take initial corrective measures to correct actively eroding areas, and notify this office immediately. Permanent corrective measures may require additional authorization by the U.S. Army Corps of Engineers.

**UTILITY LINES**

22. Temporary Impacts Restoration Measures: Within thirty (30) days of the date of completing the authorized work, the Permittee shall remove all temporary fills in waters of the United States and restore the affected areas to pre-construction contours and elevations. The affected areas shall be re-vegetated with native, non-invasive vegetation as necessary to minimize erosion and ensure site stability. In wetland areas where pipeline installation via trenching is authorized, wetland topsoil shall be segregated from the

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underlying subsoil, and the top 6 to 12 inches of the trench shall be backfilled with topsoil from the trench.

23. The Permittee shall submit to the Corps as-built surveys of each of the authorized jurisdictional crossings associated with the utility line installation. The Permittee shall submit the surveys within sixty (60) days of construction completion of the subject utilities.
24. Cleared wetland areas shall be re-vegetated with a wetland seed mix or a mix of native woody species. Fescue grass or any invasive species such as Lespedeza spp., shall not be used within the wetland areas.
25. Prior to construction within any jurisdictional areas, the Permittee shall correctly install silt fencing (with or without safety fencing) parallel with the utility line corridor, on both sides of the jurisdictional crossing. This barrier is to serve both as an erosion control measure and a visual identifier of the limits of construction within any jurisdictional area. The Permittee shall maintain the fencing, at minimum, until the wetlands have re-vegetated and stabilized.

**COMPENSATORY MITIGATION**

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

Construction within jurisdictional areas on the property shall begin only after the permittee has made payments per the below mitigation table to either the DMS or an approved mitigation bank within the service area and provided a written confirmation to the Corps that it agrees to accept responsibility for the mitigation work required.

The cost of credits will be the current price at the time of payment, not the current price at the time of permit issuance. No work on any phase of the project shall begin until the payment for that phase has been issued.

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**CHATHAM COUNTY**

Payment/Phase	Impact numbers	Mitigation Required	Mitigation Payment deadline
1	2, 26, 27, 28, 28A, 40	892 SMU's 0.102 acre of wetlands	Prior to construction or 12/31/2022 which ever occurs first
2	31, 48, 50, 74, 81, 92, 118	1,310 SMU's 0.72 acre of wetlands	Prior to construction or 9/1/2026 which ever occurs first
3	13, 53, 61, 100, 104, 108, 115	1,327 SMU's	Prior to construction or 9/1/2031 which ever occurs first

ROY COOPER

Governor

ELIZABETH S. BISER

Secretary

RICHARD E. ROGERS, JR.

Director



NORTH CAROLINA  
Environmental Quality

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](mailto:acking@ncdot.gov)**

Chatham Park Investors LLC  
Attn: Mr. Timothy Smith  
100 Weston Estates Way  
Cary, NC 27513  
**Delivered via email to: [tim@prestondev.com](mailto:tim@prestondev.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@deg.nc.gov](mailto:ryan.conchilla@deg.nc.gov) if you have any questions or concerns.

Sincerely,

DocuSigned by:  
*Amy Chapman*  
9C98863120CD474...

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
<b>Chatham Park Way North (NCDOT R-5930) – Stream Impacts</b>		
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)
<b>TOTAL</b>	<b>986 (linear feet)</b>	<b>197 (linear feet)</b>
<b>Chatham Park Way North (NCDOT R-5930) - 404/401 Wetland Impacts</b>		
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  $1 \times 10^{-5}$  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)*

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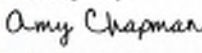
DocuSign Envelope ID: 24D27E93-DCED-4830-AC06-BA0E032F6E77

NCDOT / Chatham Park Investors LLC  
DWR# 20200533v3\_Rev 1  
Individual Certification # WQC004228-Modification  
Page 16 of 16

*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 11<sup>th</sup> day of July 2023

DocuSigned by:  
  
9C9886312DCCD474...

Richard E. Rogers, Director  
Division of Water Resources

WQC004228-Modification

ROY COOPER  
*Governor*  
DIONNE DELLI-GATTI  
*Secretary*  
S. DANIEL SMITH  
*Director*



March 31, 2021

DWR # 20200533v2  
Chatham County

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

Chatham Park Investors LLC  
Attn: Mr. Timothy Smith  
100 Weston Estates Way  
Cary, NC 27513  
**Delivered via email to: [tim@prestondev.com](mailto:tim@prestondev.com)**

**Subject: Approval of Individual 401 Water Quality Certification**  
Chatham Park North Village & 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 March 31, 2021. This approval is for the purpose and design described in your application. 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 Sue Homewood at 336-776-9693 or [Sue.Homewood@ncdenr.gov](mailto:Sue.Homewood@ncdenr.gov) if you have any questions or concerns.

Sincerely,



S. Daniel Smith, Director  
Division of Water Resources

cc: Jason Hartshorn, Kimley-Horn (via email)  
Bob Zarzecki, Soil & Environmental Consultants, PA (via email)  
James Lastinger, USACE Raleigh Regulatory Field Office (via email)  
Todd Bowers, EPA, (via email)  
Gabriela Garrison, NCWRC (via email)  
Emily Wells, USFWS (via email)  
DWR 401 & Buffer Permitting Branch Electronic file

Filename: 20200533v2ChathamPark(Chatham)\_401\_IC.docx

## 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 application received by the N.C. Division of Water Resources (Division) on September 8, 2020 and subsequent information on November 13, 2020, and by Public Notice issued by the Division on December 4, 2020 and Public Hearing held on January 7, 2021.

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)]

Type of Impact	Amount Approved (units) Permanent	Amount Approved (units) Temporary
<b>Chatham Park Way North (NCDOT R-5930) – Stream Impacts</b>		
Site 3 - Perennial	251 (linear feet)	0 (linear feet)
Site 8 - Perennial	170 (linear feet)	0 (linear feet)
Site 13 - Perennial	242 (linear feet)	0 (linear feet)
Site 18 - Intermittent	138 (linear feet)	0 (linear feet)
<b>Chatham Park North Village – Stream Impacts</b>		
Impact 1	0 (linear feet)	15 (linear feet)
Impact 2 & 3 Culvert Dissipator	80 (linear feet) 20 (linear feet)	0 (linear feet)
Impact 4	0 (linear feet)	5 (linear feet)
Impact 5	0 (linear feet)	30 (linear feet)
Impact 10	0 (linear feet)	35 (linear feet)
Impact 11	0 (linear feet)	10 (linear feet)
Impact 12 & 13 Culvert Dissipator	100 (linear feet) 20 (linear feet)	0 (linear feet)
Impact 14	0 (linear feet)	10 (linear feet)
Impact 15	0 (linear feet)	35 (linear feet)
Impact 16	0 (linear feet)	35 (linear feet)
Impact 26	66 (linear feet)	0 (linear feet)
Impact 27	155 (linear feet)	0 (linear feet)
Impact 29	0 (linear feet)	5 (linear feet)
Impact 30 & 31 Culvert	125 (linear feet)	0 (linear feet)

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NCDOT / Chatham Park Investors LLC

DWR# 20200533v2

Individual Certification # WQC004228

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Dissipator	20 (linear feet)	
Impact 32	0 (linear feet)	10 (linear feet)
Impact 33	0 (linear feet)	35 (linear feet)
Impact 34	0 (linear feet)	5 (linear feet)
Impact 35 & 36 Culvert Dissipator	165 (linear feet) 50 (linear feet)	0 (linear feet)
Impact 37	0 (linear feet)	10 (linear feet)
Impact 38	0 (linear feet)	10 (linear feet)
Impact 39 & 40 Culvert Dissipator	145 (linear feet) 25 (linear feet)	0 (linear feet)
Impact 42	0 (linear feet)	30 (linear feet)
Impact 43	0 (linear feet)	30 (linear feet)
Impact 44	0 (linear feet)	30 (linear feet)
Impact 45	0 (linear feet)	30 (linear feet)
Impact 46	0 (linear feet)	5 (linear feet)
Impact 47 & 48 Culvert Dissipator	170 (linear feet) 50 (linear feet)	0 (linear feet)
Impact 49	0 (linear feet)	5 (linear feet)
Impact 51	0 (linear feet)	35 (linear feet)
Impact 52	0 (linear feet)	10 (linear feet)
Impact 53 & 54 Culvert Dissipator	75 (linear feet) 20 (linear feet)	0 (linear feet)
Impact 55	0 (linear feet)	5 (linear feet)
Impact 57	0 (linear feet)	40 (linear feet)
Impact 58	0 (linear feet)	35 (linear feet)
Impact 59	0 (linear feet)	35 (linear feet)
Impact 60	0 (linear feet)	5 (linear feet)
Impact 61 & 62 Culvert Dissipator	135 (linear feet) 40 (linear feet)	0 (linear feet)
Impact 63	0 (linear feet)	10 (linear feet)
Impact 65	0 (linear feet)	35 (linear feet)
Impact 68	0 (linear feet)	35 (linear feet)
Impact 69	0 (linear feet)	35 (linear feet)
Impact 70	0 (linear feet)	35 (linear feet)
Impact 71	0 (linear feet)	35 (linear feet)
Impact 72	0 (linear feet)	35 (linear feet)
Impact 73	0 (linear feet)	35 (linear feet)
Impact 80	0 (linear feet)	5 (linear feet)
Impact 81 & 82 Culvert Dissipator	120 (linear feet) 40 (linear feet)	0 (linear feet)

Impact 83	0 (linear feet)	5 (linear feet)
Impact 84	0 (linear feet)	30 (linear feet)
Impact 85	0 (linear feet)	35 (linear feet)
Impact 86	0 (linear feet)	30 (linear feet)
Impact 87	0 (linear feet)	30 (linear feet)
Impact 88	0 (linear feet)	35 (linear feet)
Impact 89	0 (linear feet)	30 (linear feet)
Impact 90	0 (linear feet)	30 (linear feet)
Impact 91	0 (linear feet)	10 (linear feet)
Impact 92 & 93		0 (linear feet)
Culvert	155 (linear feet)	
Dissipator	60 (linear feet)	
Impact 94	0 (linear feet)	30 (linear feet)
Impact 95	0 (linear feet)	5 (linear feet)
Impact 96	0 (linear feet)	35 (linear feet)
Impact 97	0 (linear feet)	35 (linear feet)
Impact 98	0 (linear feet)	5 (linear feet)
Impact 99 & 100		0 (linear feet)
Culvert	45 (linear feet)	
Dissipator	30 (linear feet)	
Impact 101	0 (linear feet)	5 (linear feet)
Impact 102	0 (linear feet)	5 (linear feet)
Impact 103 & 104		0 (linear feet)
Culvert	40 (linear feet)	
Dissipator	7 (linear feet)	
Impact 105	0 (linear feet)	5 (linear feet)
Impact 106	0 (linear feet)	5 (linear feet)
Impact 107 & 108		0 (linear feet)
Culvert	70 (linear feet)	
Dissipator	30 (linear feet)	
Impact 109	0 (linear feet)	6 (linear feet)
Impact 115 & 116		0 (linear feet)
Culvert	110 (linear feet)	
Dissipator	30 (linear feet)	
Impact 117	0 (linear feet)	30 (linear feet)
Impact 119	0 (linear feet)	35 (linear feet)
Impact 120	0 (linear feet)	25 (linear feet)
Impact 121	0 (linear feet)	35 (linear feet)
<b>Chatham Park North Village – 404/401 Wetland Impacts</b>		
Impact Location 28	0.041 (acres)	0 (acres)
Impact Location 28A	0.01 (acres)	0 (acres)
Impact Location 50	0.111 (acres)	0 (acres)
Impact Location 67	0 (acres)	0.008 (acres)
Impact Location 74	0.217 (acres)	0 (acres)
Impact Location 118	0.032 (acres)	0 (acres)

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

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

- Mitigation for Chatham Park North Village must be provided for the proposed impacts as specified in the mitigation plan included in your permit application titled "*Mitigation Plan, Revised August 2020*" and as revised below to reflect the Division's mitigation requirements and project phasing. The Division acknowledges that the phasing of the impacts and associated mitigation, as well as the mitigation provider(s) (i.e., DMS, mitigation bank, etc.), as described in the mitigation plan may change. The Division shall be notified in writing of any changes to the mitigation plan and required mitigation as outlined below. Changes will require written approval by the Division and may require modification of this condition.

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 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	611 linear feet	Cape Fear (03030002)
Wetlands	0.051 (acres)	Cape Fear (03030002)

\*Phase 1 Impacts include 2, 3, 26, 27, 28, 28A, 35, 36, 39, 40.

Phase 2 Mitigation\*\*:

	Compensatory Mitigation Required	River & Sub-basin Number
Streams	570 linear feet	Cape Fear (03030002)
Wetlands	0.36 (acres)	Cape Fear (03030002)

\*\*Phase 2 Impacts include 30, 31, 47, 48, 50, 74, 76, 77, 79, 81, 82, 92, 93, 114, 118.

Phase 3 Mitigation\*\*\*:

	Compensatory Mitigation Required	River & Sub-basin Number
Streams	575 linear feet	Cape Fear (03030002)

\*\*\*Phase 3 Impacts currently include 12, 13, 53, 54, 61, 62, 99, 100, 103, 104, 107, 108, 115, 116.

*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.*

- Mitigation for NCDOT Chatham Park Way (R-5930) for must be provided for the proposed impacts as specified in the tables below. 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:

	Compensatory Mitigation Required	River & Sub-basin Number
Perennial Streams	663 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.*

- Any final construction plans for development within the Chatham Park North Village 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 Village 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  $1 \times 10^{-5}$  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 bankfull.

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 destabilization 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 31<sup>st</sup> day of March 2021



S. Daniel Smith, Director  
Division of Water Resources

PAW/SLH

WQC004228

ROY COOPER  
*Governor*

DIONNE DELLI-GATTI  
*Secretary*

S. DANIEL SMITH  
*Director*



March 31, 2021

DWR # 20200533v2  
Chatham County

Chatham Park Investors LLC  
Attn: Mr. Timothy Smith  
100 Weston Estates Way  
Cary, NC 27513  
**Delivered via email to: [tim@prestondev.com](mailto:tim@prestondev.com)**

**Subject: Approval of Individual Isolated and Other Non-404 Jurisdictional Wetlands and Waters Permit with Additional Conditions**  
Chatham Park North Village  
USACE Action ID. No. SAW-2020-00746

Dear Mr. Smith:

Attached hereto is a copy of Isolated Wetlands Permit# IWP000007 issued to Timothy Smith and Chatham Park Investors LLC ("CPI") dated March 31, 2021. This approval is for the purpose and design described in your application. The plans and specifications for this project are incorporated by reference as part of this Isolated Wetlands Permit. 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 Permit and is responsible for complying with all conditions. [15A NCAC 02H .1304(d)(2)].

This Isolated Wetlands Permit 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 Isolated Wetlands Permit neither grants nor affirms any property right, license, or privilege in any lands or waters, or any right of use in any waters. This Isolated Wetlands Permit 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 Isolated Wetlands Permit 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 Isolated Wetlands Permit 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 Isolated Wetlands Permit shall expire on the same day as the expiration date of the corresponding Section 401 Water Quality Certification. The conditions shall remain in effect for the life of the project, regardless of the expiration date of this Isolated Wetlands Permit.

Non-compliance with or violation of the conditions herein set forth may result in revocation of this Isolated Wetlands Permit 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 Isolated Wetlands Permit 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 authorization 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 the Isolated Wetlands Rules 15A NCAC 02H .1300. Please contact Sue Homewood at 336-776-9693 or [Sue.Homewood@ncdenr.gov](mailto:Sue.Homewood@ncdenr.gov) if you have any questions or concerns.

Sincerely,



S. Daniel Smith, Director  
Division of Water Resources

cc: Jason Hartshorn, Kimley-Horn (via email)  
Bob Zarzecki, Soil & Environmental Consultants, PA (via email)  
James Lastinger, USACE Raleigh Regulatory Field Office (via email)  
Todd Bowers, EPA, (via email)  
Gabriela Garrison, NCWRC (via email)  
Emily Wells, USFWS (via email)  
DWR 401 & Buffer Permitting Branch Electronic file

Filename: 20200533v2ChathamPark(Chatham)\_Isolated.docx

**NORTH CAROLINA ISOLATED WETLANDS PERMIT**

**ISOLATED WETLANDS PERMIT # IWP000007** is issued in conformity with the requirements of North Carolina's Regulations in 15 NCAC 02H .1300 and 15A NCAC 02B .0200, to Timothy Smith and Chatham Park Investors LLC ("CPI"), who have authorization for the impacts listed below, as described within your application received by the N.C. Division of Water Resources (Division) on September 8, 2020 and subsequent information on November 13, 2020, and by Public Notice issued by the Division on December 4, 2020 and Public Hearing held on January 7, 2021.

The following impacts are hereby approved. No other impacts are approved, including incidental impacts. [15A NCAC 02H .1305(b)]

Type of Impact	Amount Approved (units) Permanent	Amount Approved (units) Temporary
Impact Location 76	0.735 (acres)	0 (acres)
Impact Location 77	0.180 (acres)	0 (acres)
Impact Location 79	0.031 (acres)	0 (acres)
Impact Location 114	0.160 (acres)	0 (acres)

**This approval requires you to follow the conditions listed below.**

**CONDITIONS OF PERMIT [15A NCAC 02H .1304(c)]:**

- Mitigation for Chatham Park North Village must be provided for the proposed impacts as specified in the table below. 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 for each phase outlined in the mitigation plan submitted with the application shall occur. For accounting purposes, this Authorization Certificate authorizes payment to the DMS to meet the following compensatory mitigation requirement:

	Compensatory Mitigation Required	River & Sub-basin Number
Isolated Wetlands	1.106 (acres)	Cape Fear (03030002)

*Citation: 15A NCAC 02H .1305(c)*

- Any final construction plans for development within the Chatham Park North Village portion of this project must include or reference the application and plans approved by the Division under this authorization letter and permit. 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 .1302 (a) and 15A NCAC 02H .1305 (b)(1)*

3. CPI shall ensure that all final construction plans for the development within Chatham Park North Village 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 .1302 (a) and 15A NCAC 02H .1305 (b)(1)*

4. CPI shall notify all future buyers, tenants, and/or leases of the conditions of this permit, 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 .01302 (a), 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231*

5. 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 .1305(b); 15A NCAC 02H .1304(c), 15A NCAC 02T et. seq.;*

6. 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.

*Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c);*

7. 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 .1305(b); 15A NCAC 02H .1304(c);*

8. 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 .1305(b); 15A NCAC 02H .1304(c);*

9. 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  $1 \times 10^{-5}$  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 .1305(b); 15A NCAC 02H .1304(c);*

10. 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 .1305(b); 15A NCAC 02H .1304(c);*

11. 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 .1305(b); 15A NCAC 02H .1304(c)*

12. 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 .1305; 15A NCAC 02H .1304(c)*

13. 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 .1305(b); 15A NCAC 02H .1304(c)*

14. 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 .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231*

15. 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 Permit. 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 .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231*

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

*Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)*

17. 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 .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231*

18. 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 .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231*

19. 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 .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231*

20. 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 .1305(b); 15A NCAC 02H .1304(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231*

21. 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 .1305(b); 15A NCAC 02H .1305(c); 15A NCAC 02B .0231*

22. 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 .1304(c); N.C.G.S 143-215.85(b)*

23. 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 .1305(b); 15A NCAC 02H .1304(c)*

24. 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 Permit. A copy of this Permit shall be available at the project site during the construction and maintenance of this project.

*Citation: 15A NCAC 02H .1305(b); 15A NCAC 02H .1304(c)*

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 corresponding 401 Water Quality Certification. 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 Permit. [15A NCAC 02H .1304(c)]

This, the 31<sup>st</sup> day of March 2021



S. Daniel Smith, Director  
Division of Water Resources

PAW/SLH

IWP000007

ROY COOPER  
*Governor*  
DIONNE DELLI-GATTI  
*Secretary*  
S. DANIEL SMITH  
*Director*



March 31, 2021

DWR # 20200533v2  
Chatham County

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

**Subject: APPROVAL of JORDAN LAKE RIPARIAN BUFFER IMPACTS WITH ADDITIONAL CONDITIONS**  
NCDOT Chatham Park Way North (R-5930)

Dear Mr. King:

You have our approval for the impacts listed below for the purpose described in your application received by the Division of Water Resources (Division) September 8, 2020 with subsequent information on November 13, 2020 and by Public Notice issued by the Division on December 4, 2020 and Public Hearing held on January 7, 2021. These impacts are covered by the Jordan Lake Riparian Buffer Rules and the conditions listed below. Please note that you should get any other federal, state or local permits before proceeding with your project, including those required by (but not limited to) Clean Water Act Section 404 and/or 401 Authorizations, Sediment and Erosion Control, Non-Discharge, and Water Supply Watershed regulations.

The following impacts are hereby approved, provided that all of the Conditions listed below and all of the conditions of the Jordan Lake Riparian Buffer Rules are met. No other impacts are approved, including incidental impacts. [15A NCAC 02B .0267(11)]

Type of Impact	Amount Approved (units) Permanent	Amount Approved (units) Temporary
Buffers – Zone 1		
Impact Site 1	15291 (square feet)	0 (square feet)
Impact Site 2	10672 (square feet)	0 (square feet)
Impact Site 3	14493 (square feet)	0 (square feet)
Buffers – Zone 2		
Impact Site 1	13893 (square feet)	0 (square feet)
Impact Site 2	10850 (square feet)	0 (square feet)
Impact Site 3	14440 (square feet)	0 (square feet)

This approval is for the purpose and design described in your application. The plans and specifications for this project are incorporated by reference as part of this Authorization Certificate. If you change your project, you must notify the Division and you may be required to submit a new application package. If the property is sold, the new owner must be given a copy of this Authorization Certificate and is responsible for complying with all conditions. [15A NCAC 02B .0267(11)]

If you are unable to comply with any of the conditions below, 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 the conditions of this Authorization Certificate and/or any violation of state regulated riparian buffer rules [15A NCAC 02B .0267]. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the applicant became aware of the circumstances.

Additional Conditions:

1. Mitigation for NCDOT Chatham Park Way (R-5930) for must be provided for the proposed impacts as specified in the tables below. 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:

	Compensatory Mitigation Required	River & Sub-basin Number
Buffers	79,639 square feet	Cape Fear (03030002)

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

2. 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)*

3. 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)*

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

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

**This Authorization shall expire when the corresponding 401 Water Quality Certification Approval DWR#20200533v2 expires.**

This letter completes the Division's review under the Raleigh Riparian Buffer Rules as described in 15A NCAC 02B.0267. Please contact Sue Homewood at 336-776-9693 or [Sue.Homewood@ncdenr.gov](mailto:Sue.Homewood@ncdenr.gov) if you have any questions or concerns.

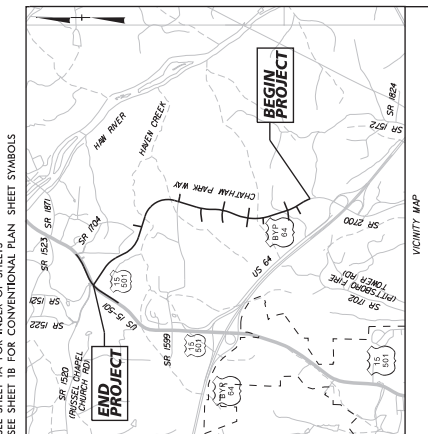
Sincerely,



S. Daniel Smith, Director  
Division of Water Resources

cc: Jason Hartshorn, Kimley-Horn (via email)  
Bob Zarzecki, Soil & Environmental Consultants, PA (via email)  
James Lastinger, USACE Raleigh Regulatory Field Office (via email)  
Todd Bowers, EPA, (via email)  
Gabriela Garrison, NCWRC (via email)  
Emily Wells, USFWS (via email)  
DWR 401 & Buffer Permitting Branch Electronic file

**TIP PROJECT: R-5930**



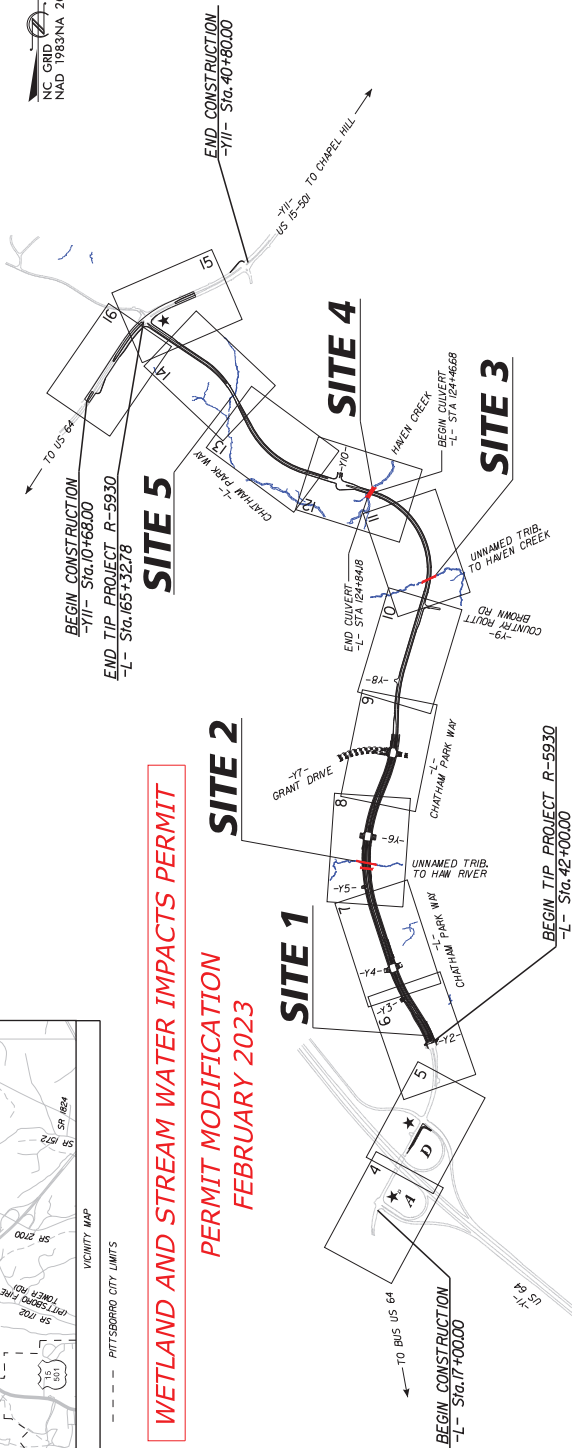
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**CHATHAM COUNTY**

STATE	N.C.	PROJECT NUMBER	R-5930	SHEET NO.	1	TOTAL SHEETS	1
PLANT NUMBER	48548.1.1	PLANT DESCRIPTION	PE	DATE			
PLANT NUMBER	48548.2.1	PLANT DESCRIPTION	RW & UTIL	DATE			
PLANT NUMBER	48548.3.1	PLANT DESCRIPTION	CONST.	DATE			

PERMIT DRAWING  
SHEET 1 OF 19

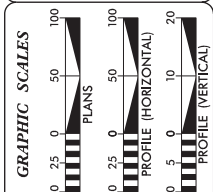
LOCATION: CHATHAM PARK WAY FROM US 64 TO NORTH OF FUTURE GRANT DRIVE

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



**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:  
200 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
NOVEMBER 30, 2022

LETTING DATE:  
JUNE 18, 2024

**Kimley Horn**

FRANCE W. BLANTON, P.E.  
PROJECT ENGINEER

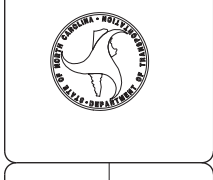
TYLER G. SPRING, P.E.  
PROJECT DESIGN ENGINEER

JEFFREY L. TEAGUE, P.E.  
PROJECT MANAGER

NCDOT HIGHWAY DIVISION 8

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

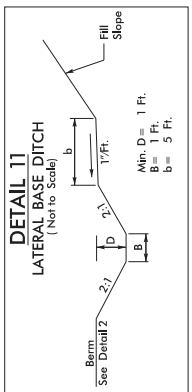
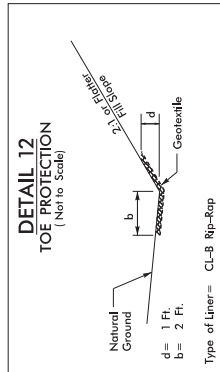
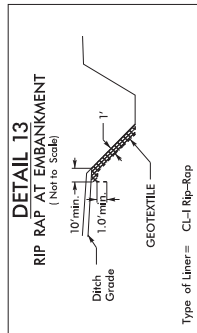
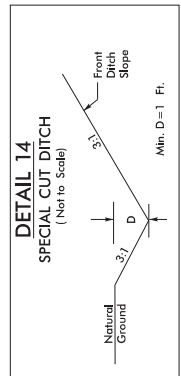
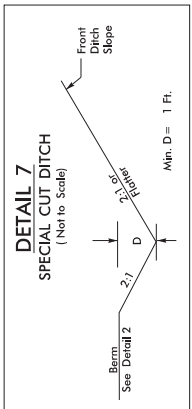
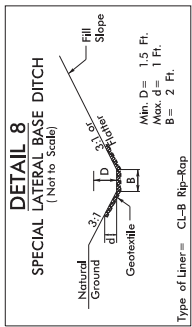
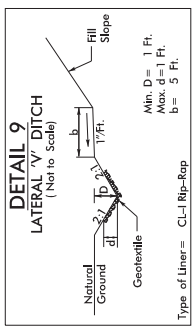
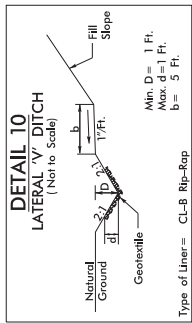
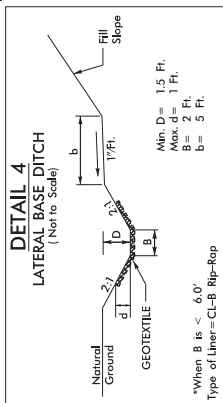
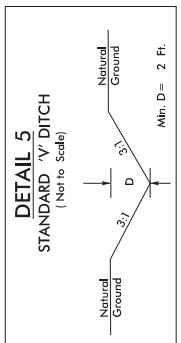
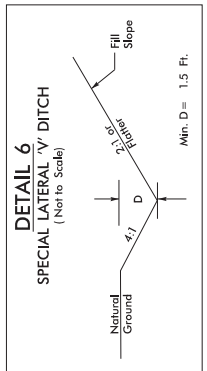
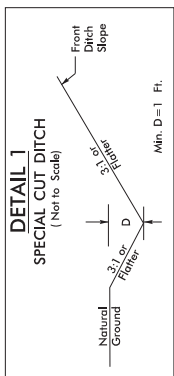
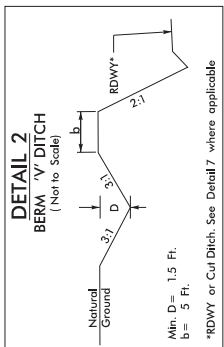
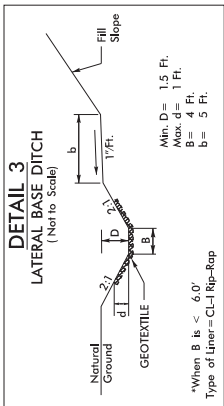


DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT:**

**Kimley-Horn**  
 421 FAVERHAM DRIVE, SUITE 600  
 FAYETTEVILLE, NC 27707  
 PERMIT DRAWING  
 SHEET 2 OF 22

PROJECT REFERENCE NO. **R-5530**  
 R/W SHEET NO. **2D-7**  
 ROADWAY DESIGN ENGINEER  
 HYDRAULICS ENGINEER



PROJECT REFERENCE NO. P-5530	SHEET NO. 20-2
DESIGNER KIMLEY-HORN ENGINEERS	DATE NOVEMBER 2011

**Kimley-Horn**  
421 FAVENHILL STREET, SUITE 600  
DENVER, COLORADO 80202

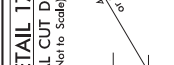
**PERMIT DRAWING  
SHEET 3 OF 22**



**DETAIL 15**  
SPECIAL CUT BASE DITCH  
(Not to Scale)

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

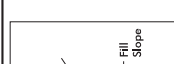
Min. D = 1 Ft.  
Max. d = 5 Ft.  
B = 1 Ft.



**DETAIL 16**  
LATERAL BASE DITCH  
(Not to Scale)

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

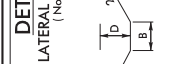
Min. D = 1 Ft.  
Max. d = 5 Ft.  
B = 1 Ft.



**DETAIL 17**  
SPECIAL CUT DITCH  
(Not to Scale)

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

Min. D = 1 Ft.  
Max. d = 5 Ft.  
B = 1 Ft.



**DETAIL 18**  
LATERAL BASE DITCH  
(Not to Scale)

FROM STA. 109+65 TO STA. 112+00 -L- (RT)  
FROM STA. 124+55 TO STA. 123+00 -L- (RT)

Min. D = 1 Ft.  
Max. d = 1.5 Ft.  
B = 3 Ft.  
b = 5 Ft.

\*When B is < 6.0'

Type of Liner = CL-1 Rip-Rap



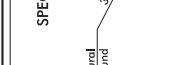
**DETAIL 19**  
LATERAL BASE DITCH  
(Not to Scale)

FROM STA. 81+00 TO STA. 82+50 -L- (RT)  
FROM STA. 107+00 TO STA. 109+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-1 Rip-Rap



**DETAIL 20**  
SPECIAL CUT DITCH  
(Not to Scale)

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

Min. D = 1 Ft.  
Max. d = 1 Ft.



**DETAIL 21**  
LATERAL 'V' DITCH  
(Not to Scale)

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

Min. D = 1 Ft.  
Max. d = 1.5 Ft.  
B = 3 Ft.  
b = 5 Ft.

\*When B is < 6.0'

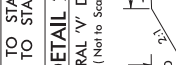
Type of Liner = CL-B Rip-Rap



**DETAIL 22**  
LATERAL 'V' DITCH  
(Not to Scale)

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

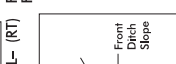
Min. D = 1 Ft.  
Max. d = 1 Ft.  
b = 5 Ft.



**DETAIL 23**  
LATERAL 'V' DITCH  
(Not to Scale)

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

Min. D = 1 Ft.  
Max. d = 1 Ft.  
b = 5 Ft.



**DETAIL 24**  
LATERAL BASE DITCH  
(Not to Scale)

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

Min. D = 1 Ft.  
Max. d = 1.5 Ft.  
B = 3 Ft.  
b = 5 Ft.

\*When B is < 6.0'

Type of Liner = CL-B Rip-Rap



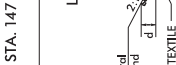
**DETAIL 25**  
INLET PROTECTION  
(Not to Scale)

FROM STA. 68+70 -L-



**DETAIL 26**  
OUTLET PROTECTION  
(Not to Scale)

FROM STA. 68+70 -L-



**DETAIL 27**  
INLET PROTECTION  
(Not to Scale)

FROM STA. 108+98 -L-



**DETAIL 28**  
OUTLET PROTECTION  
(Not to Scale)

FROM STA. 108+98 -L-



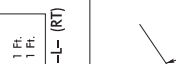
**DETAIL 29**  
INLET PROTECTION  
(Not to Scale)

FROM STA. 108+98 -L-



**DETAIL 30**  
OUTLET PROTECTION  
(Not to Scale)

FROM STA. 124+70 -L-



**DETAIL 31**  
CHANNEL CHANGE  
(Not to Scale)

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

Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 3.0 Ft.  
b = varies

Type of Liner = Class I Rip Rap



**DETAIL 32**  
CHANNEL CHANGE  
(Not to Scale)

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

Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 3.0 Ft.  
b = varies

Type of Liner = Class I Rip Rap

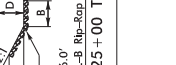


**DETAIL 33**  
CHANNEL CHANGE  
(Not to Scale)

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

Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 3.0 Ft.  
b = varies

Type of Liner = Class I Rip Rap

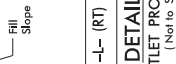


**DETAIL 34**  
CHANNEL CHANGE  
(Not to Scale)

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

Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 3.0 Ft.  
b = varies

Type of Liner = Class I Rip Rap

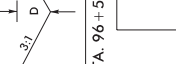


**DETAIL 35**  
CHANNEL CHANGE  
(Not to Scale)

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

Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 3.0 Ft.  
b = varies

Type of Liner = Class I Rip Rap

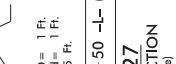


**DETAIL 36**  
CHANNEL CHANGE  
(Not to Scale)

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

Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 3.0 Ft.  
b = varies

Type of Liner = Class I Rip Rap

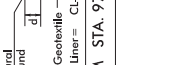


**DETAIL 37**  
CHANNEL CHANGE  
(Not to Scale)

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

Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 3.0 Ft.  
b = varies

Type of Liner = Class I Rip Rap



**DETAIL 38**  
CHANNEL CHANGE  
(Not to Scale)

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

Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 3.0 Ft.  
b = varies

Type of Liner = Class I Rip Rap



**DETAIL 39**  
CHANNEL CHANGE  
(Not to Scale)

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

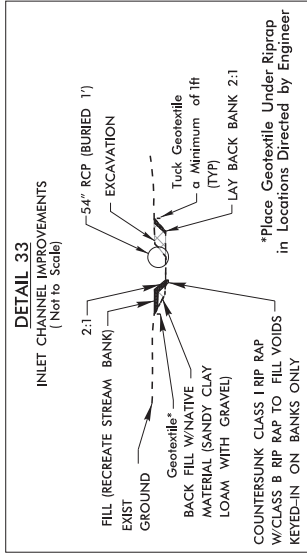
Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 3.0 Ft.  
b = varies

Type of Liner = Class I Rip Rap

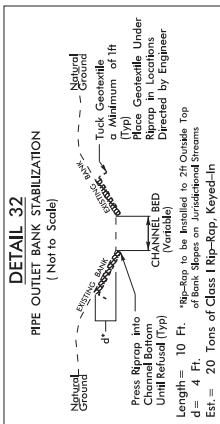


**Kimley-Horn**  
 427 FAYETTEVILLE, SUITE 600  
 FAYETTEVILLE, NC 27803  
 PERMIT DRAWING  
 SHEET 4 OF 22

PROJECT REFERENCE NO. #-5530	SHEET NO. 20-3
DESIGNER RODOLPH W. HORN ENGINEER	CHECKER MICHAEL S. HORN ENGINEER



STA. 149 + 50 -L- (RT)



STA. 149 + 00 -L- (LT)

REGIONS

NOTES

PROJECT REFERENCE NO. P-5520	SHEET NO. 6
RAW SHEET NO. ROADWAY DESIGN	PROFESSIONAL ENGINEER
437 FAVORVILLE STREET, SUITE 600 CHARLOTTE, NC 28202 PHONE: 704.366.7200 FAX: 704.366.7201 WWW.KIMLEY-HORN.COM	

PERMIT DRAWING  
SHEET 5 OF 19

MAD 83 NA 2011

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

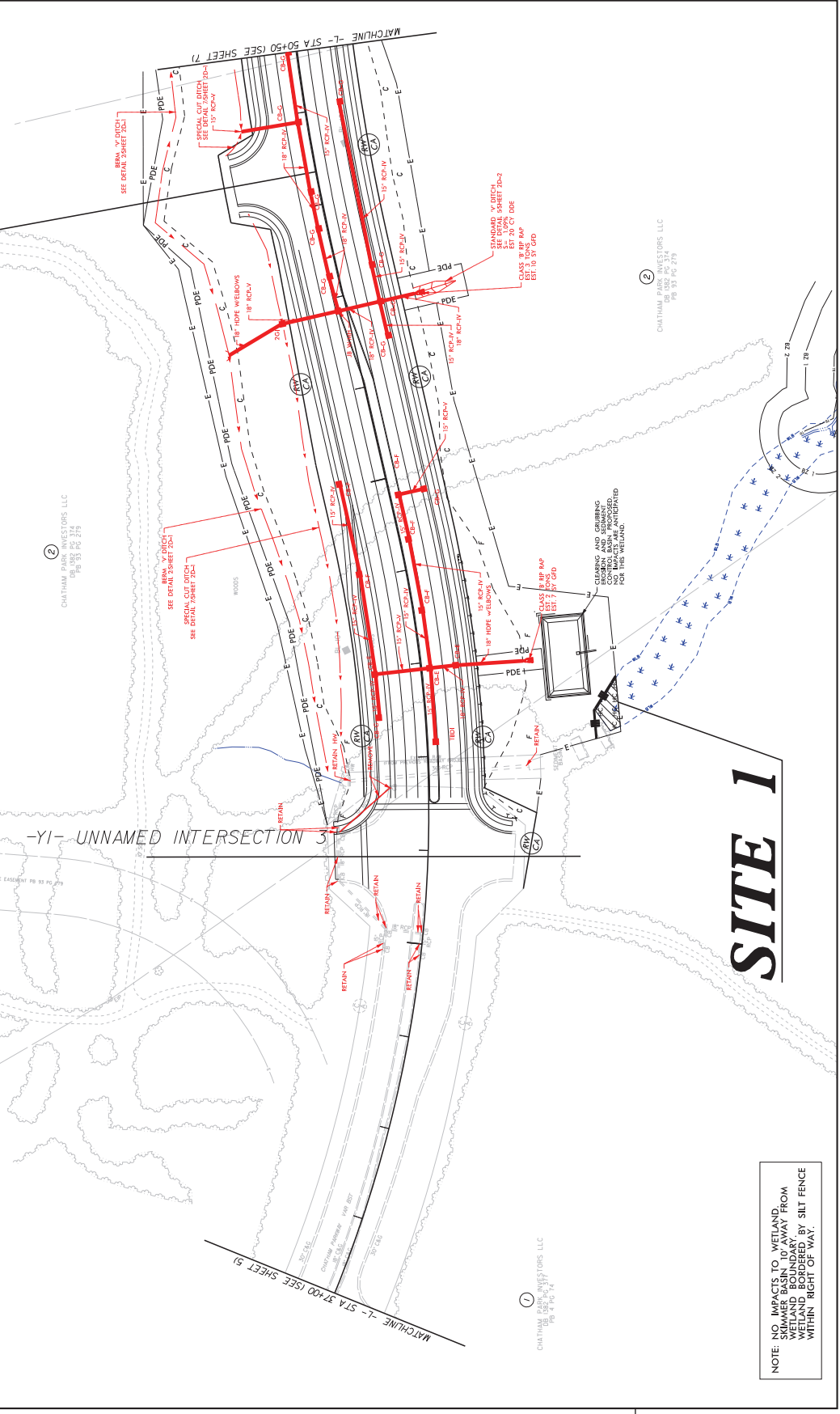
CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279



LEGEND  
 HAND CLEARING (NON-GRUBBING)

REVISIONS

**SITE 1**

NOTE: NO IMPACTS TO WETLAND BOUNDARY FROM WETLAND BOUNDARY BORDERED BY SILT FENCE WITHIN RIGHT OF WAY.

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

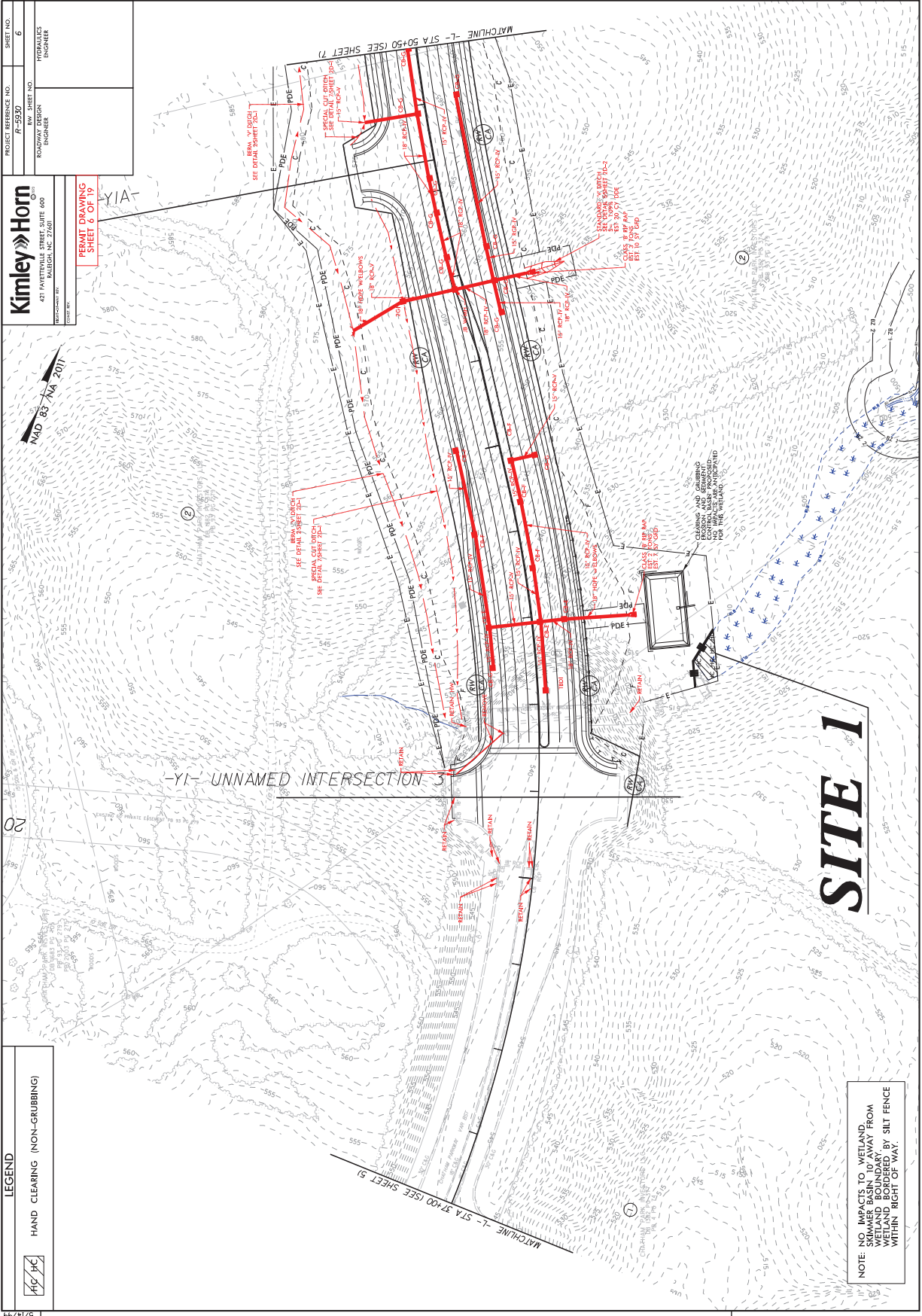
CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279

CHATHAM PARK INVESTORS, LLC  
 10/13/2009 PG 279  
 10/20/09 PG 279



PROJECT REFERENCE NO.	R-5520
SHEET NO.	6
PROJ. ENGINEER	HYDRAULICS ENGINEER
PROJ. NO.	431 FAYETTEVILLE STREET, SUITE 600
PROJ. NAME	UNNAMED INTERSECTION

**Kimley Horn**  
 431 FAYETTEVILLE STREET, SUITE 600  
 FAYETTEVILLE, NC 27404  
 PHONE: 704.785.1100  
 FAX: 704.785.1101  
 WWW.KIMLEYHORN.COM

PERMIT DRAWING  
 SHEET 6 OF 19

LEGEND  
 HAND CLEARING (NON-GRUBBING)

5/14/99

REVISIONS

UNNAMED INTERSECTION

MATCHLINE - STA 37+00 (SEE SHEET 51)

MATCHLINE - STA 50+50 (SEE SHEET 71)

NOTE: NO IMPACTS TO WETLAND BOUNDARY FROM WETLAND BOUNDARY BORDERS BY SILT FENCE WITHIN RIGHT OF WAY.

SITE 1

PROJ. REFERENCE NO.  
A-5930

SHEET NO.  
X-4

PERMIT DRAWING  
SHEET 7 OF 19



8/23/98

8/23/98

8/23/98

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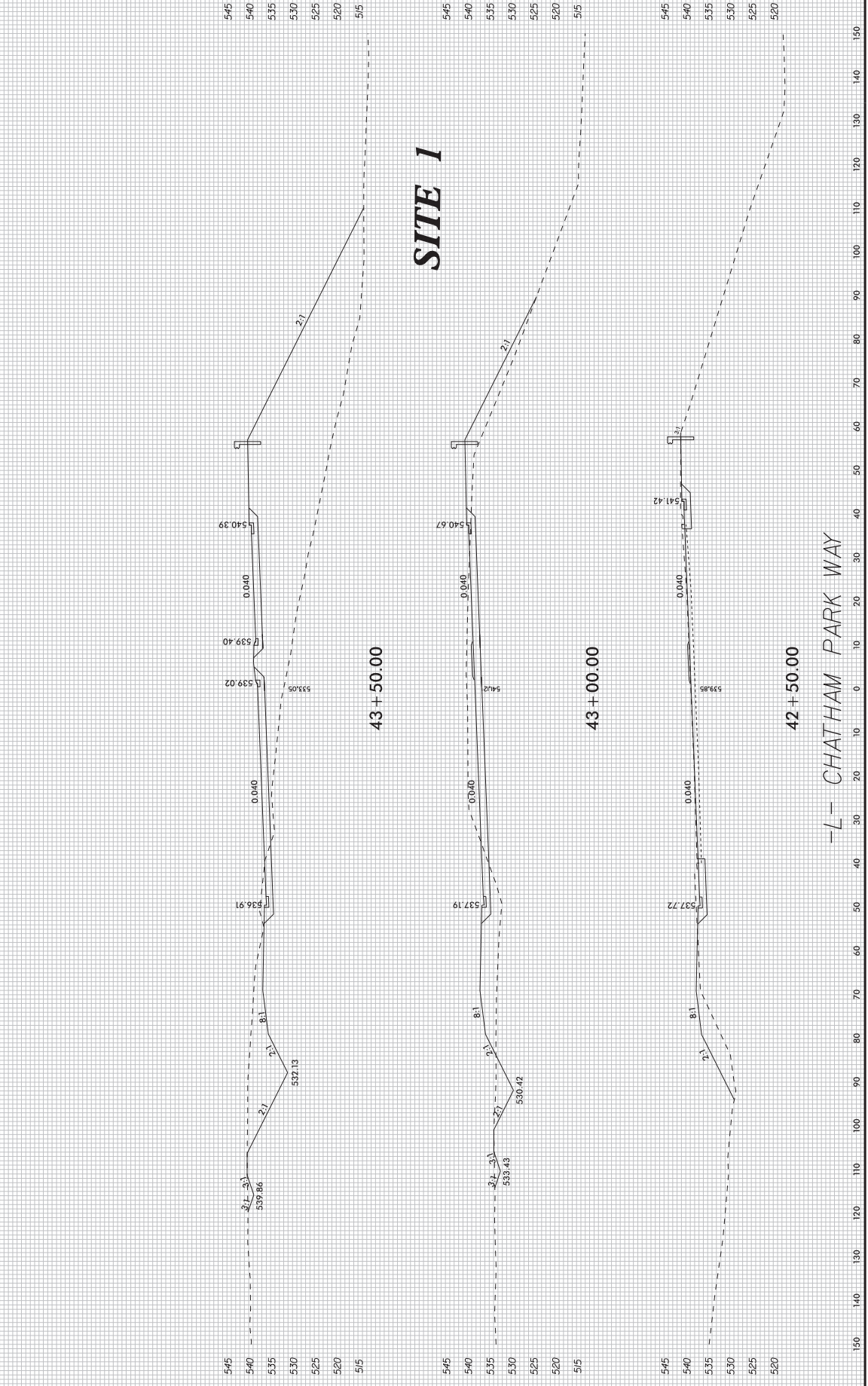
8/23/98

8/23/98

8/23/98

8/23/98

8/23/98



-L- CHATHAM PARK WAY

8/23/98

8/23/98

8/23/98

8/23/98

PROJECT REFERENCE NO.	P-5930
ROW SHEET NO.	ROADWAY DESIGN ENGINEER
ROW SHEET NO.	HYDRAULICS ENGINEER

**Kimley-Horn**  
 431 FAVERVILLE STREET, SUITE 600  
 FAYETTEVILLE, NC 27033  
 PHONE: 704.329.4200  
 FAX: 704.329.4201  
 WWW.KHENGINEERS.COM

**PERMIT DRAWING**  
**SHEET 8 OF 19**

**NAD 83 / NA 2011**

5/14/99

REGIONS

**LEGEND**

	TEMPORARY SURFACE WATER IMPACTS
	PERMANENT SURFACE WATER IMPACTS

**PERMIT DRAWING**  
**MODIFICATION FOR**  
**IMPACT #1-5**

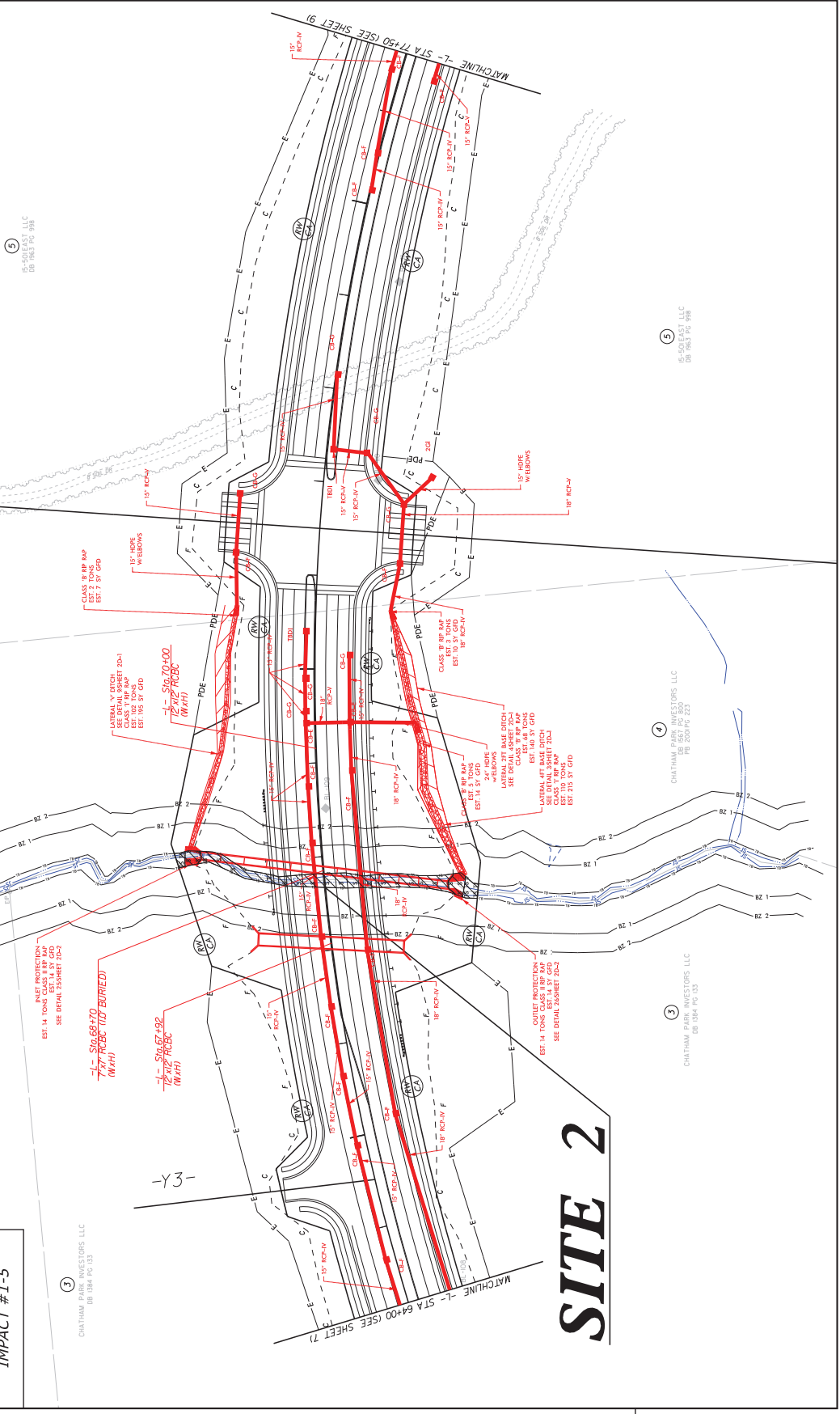
CHATHAM PARK INVESTORS, LLC  
 DB 1084 PG 03

CHATHAM PARK INVESTORS, LLC  
 DB 2004 PG 223

CHATHAM PARK INVESTORS, LLC  
 DB 1084 PG 03

CHATHAM PARK INVESTORS, LLC  
 DB 2004 PG 223

CHATHAM PARK INVESTORS, LLC  
 DB 1084 PG 03



**SITE 2**

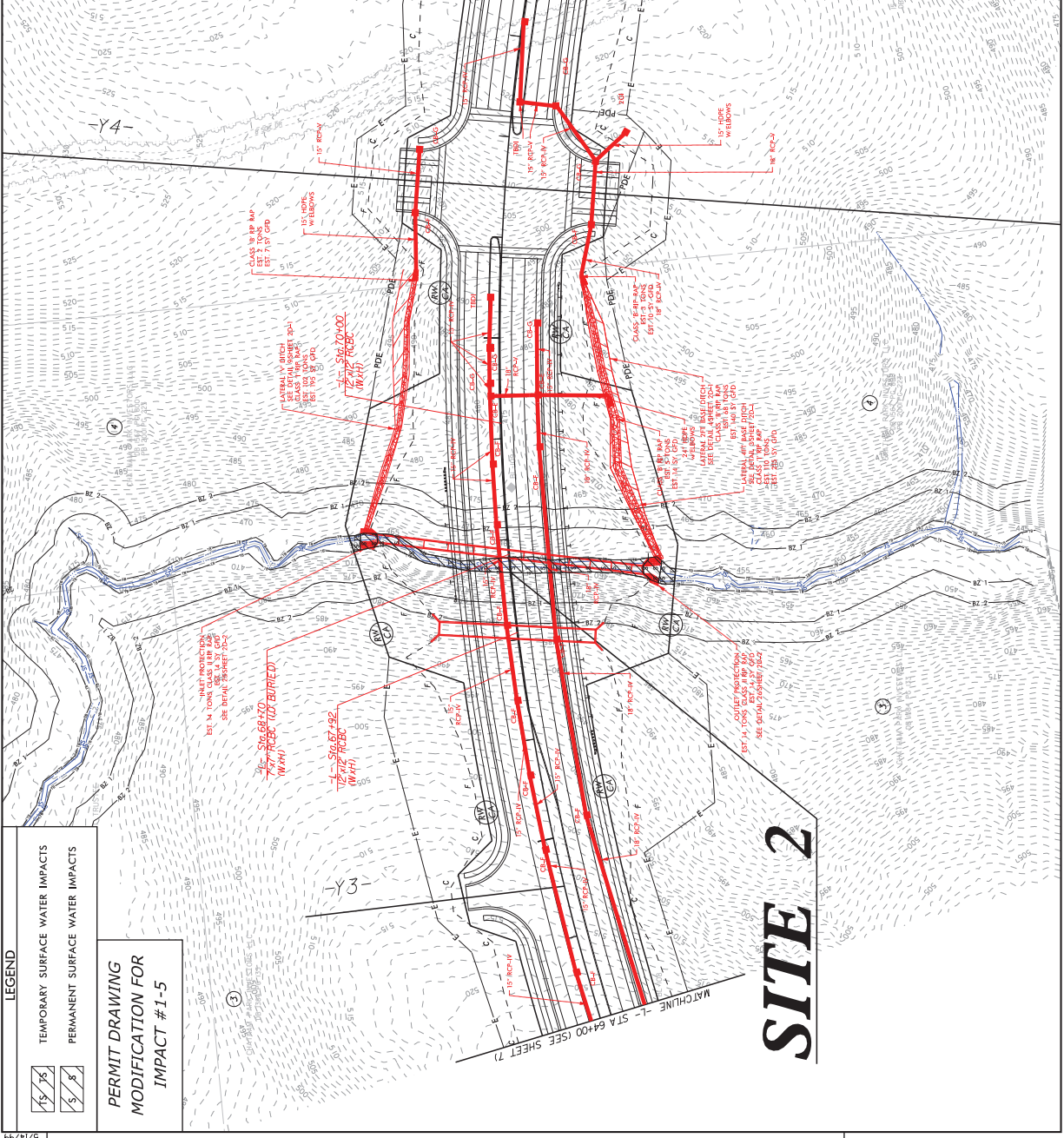
PROJECT REFERENCE NO.	R-5530
R/W SHEET NO.	8
PROFESSOR	HYDRAULICS ENGINEER
DESIGNER	

**Kimley Horn**

431 FAYETTEVILLE STREET, SUITE 600  
MEMPHIS, TN 38103

PERMIT DRAWING  
SHEET 9 OF 19

NAD 83 / NA 2011



**LEGEND**

	TEMPORARY SURFACE WATER IMPACTS
	PERMANENT SURFACE WATER IMPACTS

**PERMIT DRAWING  
MODIFICATION FOR  
IMPACT #1-5**

**SITE 2**

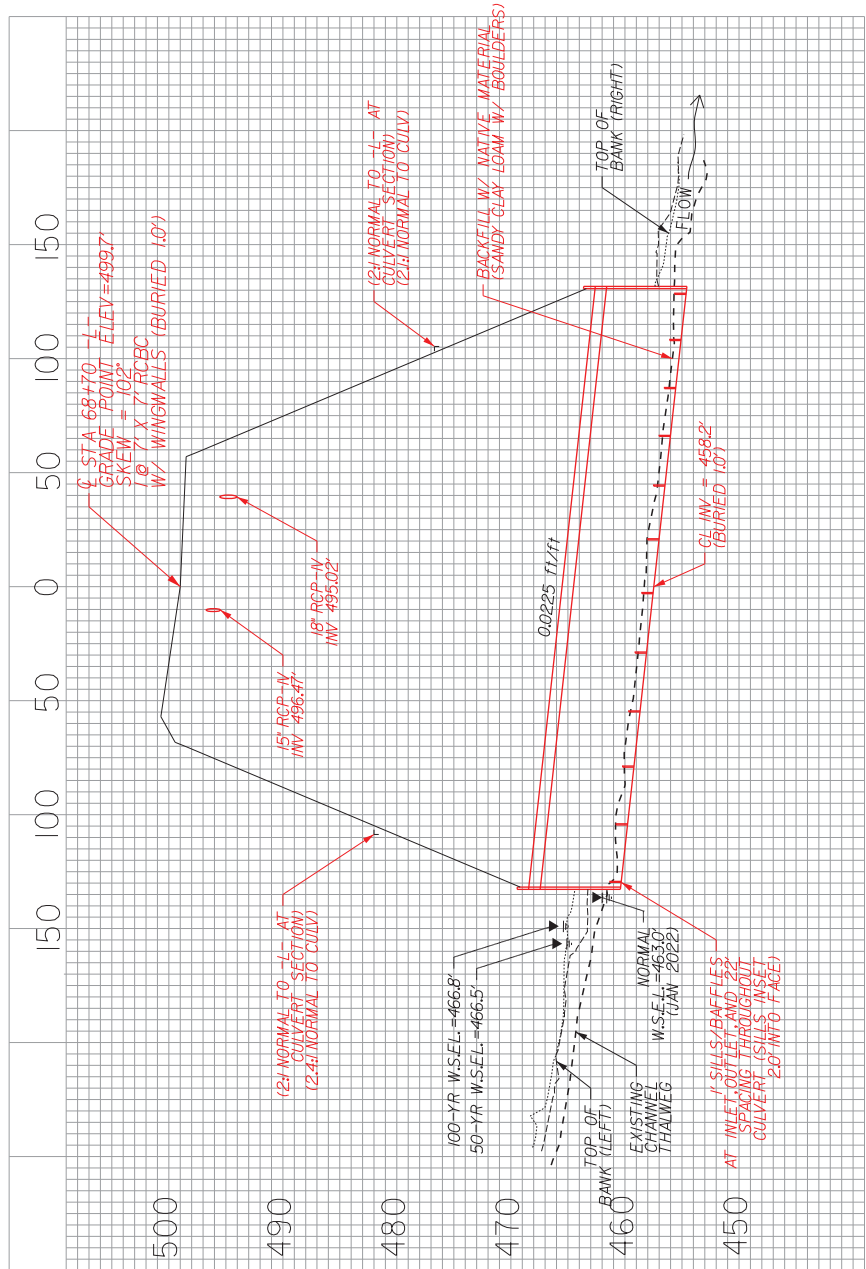
5/14/99

REVISIONS

PROJECT REFERENCE NO. P-5930	SHEET NO.
ROW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**Kimley»Horn**  
 P.O. BOX 33068 RALEIGH, N.C. 27613-0608  
 PERMIT DRAWING  
 SHEET 10 OF 19

SITE 2 - STA 68+70



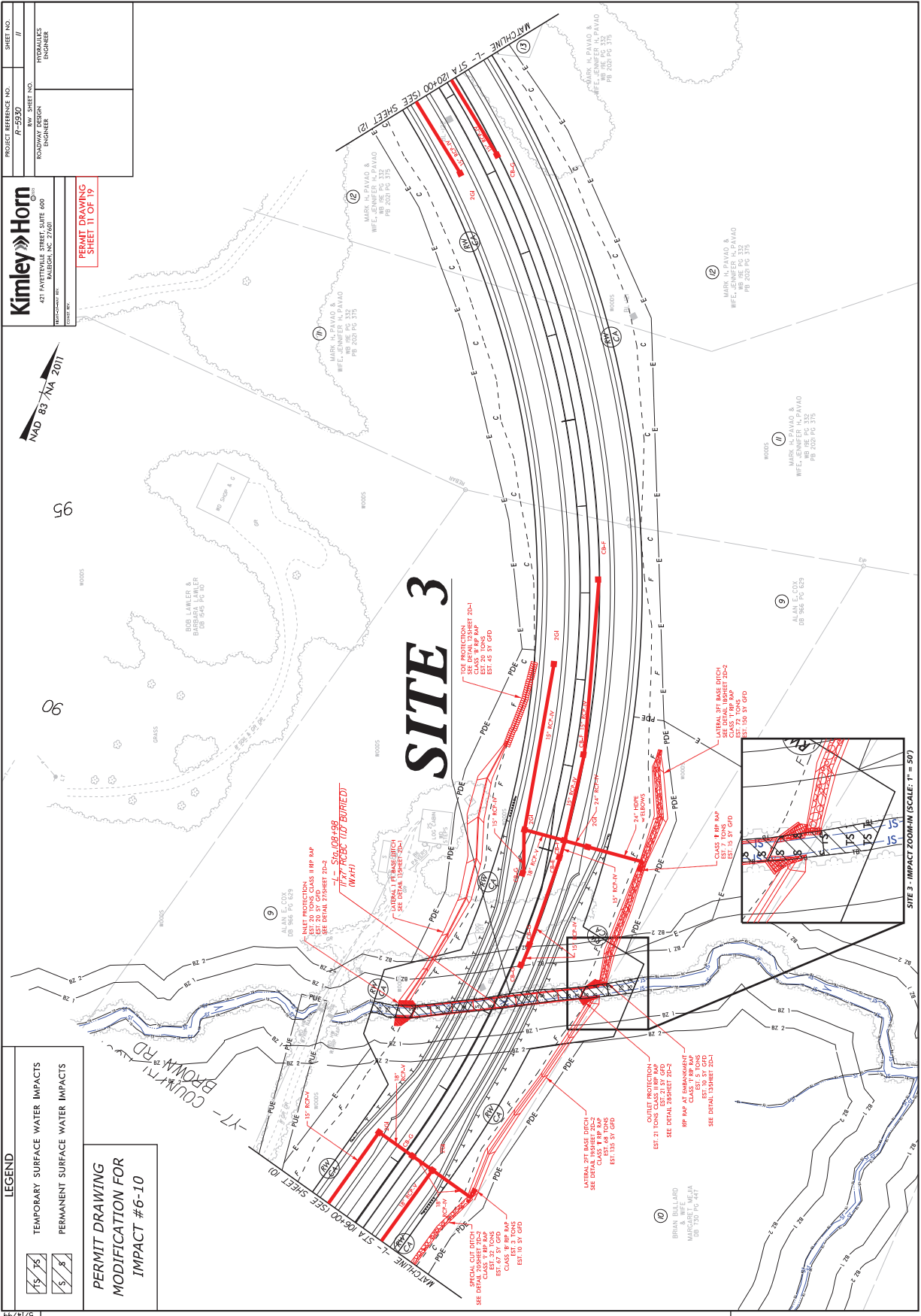
5/14/99

R:\930\mtd\psd\Culvert\PL.L68+70.dgn 1/27/2023

PROJECT REFERENCE NO.	R-5520
RHW SHEET NO.	77
DESIGNER	RODOLFO GONZALEZ ENGINEER
CHECKER	MARK H. PAVAO & WIFE, GENIEER, N. PAVAO PR. 2020 PG. 375

**Kimley-Horn**  
431 FAYETTEVILLE STREET, SUITE 600  
FAYETTEVILLE, NC 27404  
TELEPHONE: 704.781.2200  
FAX: 704.781.2201  
WWW.KIMLEY-HORN.COM

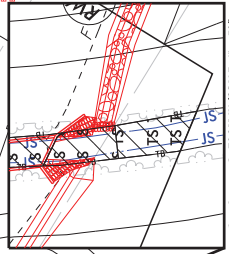
PERMIT DRAWING  
SHEET 11 OF 19



LEGEND

	TEMPORARY SURFACE WATER IMPACTS
	PERMANENT SURFACE WATER IMPACTS

PERMIT DRAWING  
MODIFICATION FOR  
IMPACT #6-10



REVISIONS	

5/14/19



PROJECT REFERENCE NO.	R-5530
ROW SHEET NO.	7
DESIGNER	HYDRAULICS ENGINEER
DATE	NOV 2011

**Kimley-Horn**  
 437 FAVENTILLE STREET, SUITE 600  
 CHARLOTTE, NC 28202  
 PHONE: 704.366.9200  
 FAX: 704.366.9201  
 WWW.KIMLEY-HORN.COM

PERMIT DRAWING  
 SHEET 12 OF 19

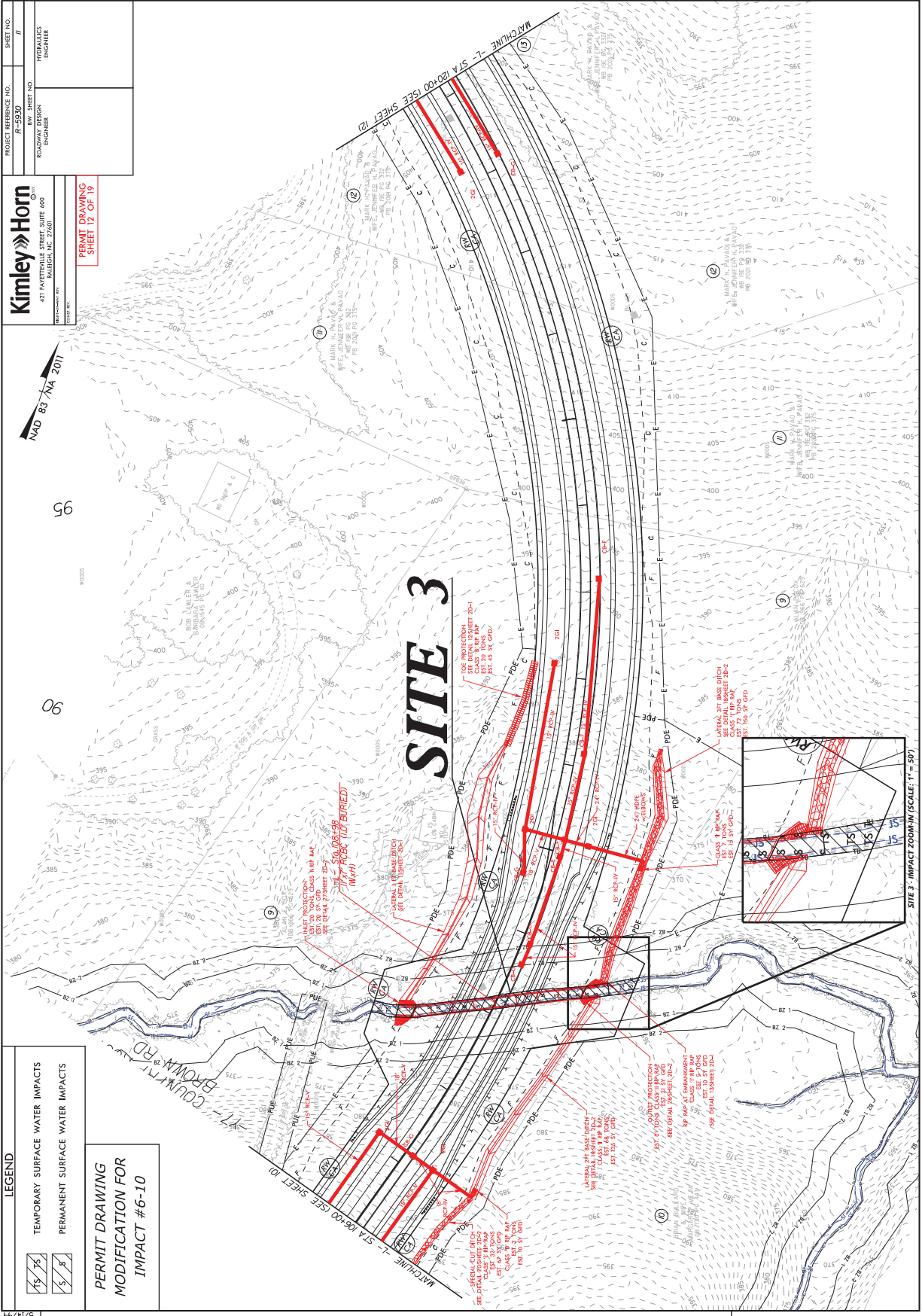
MAD 83 / MA 2011

95  
 90

**LEGEND**

	TEMPORARY SURFACE WATER IMPACTS
	PERMANENT SURFACE WATER IMPACTS

PERMIT DRAWING  
 MODIFICATION FOR  
 IMPACT #6-10



**SITE 3**

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

5/14/99

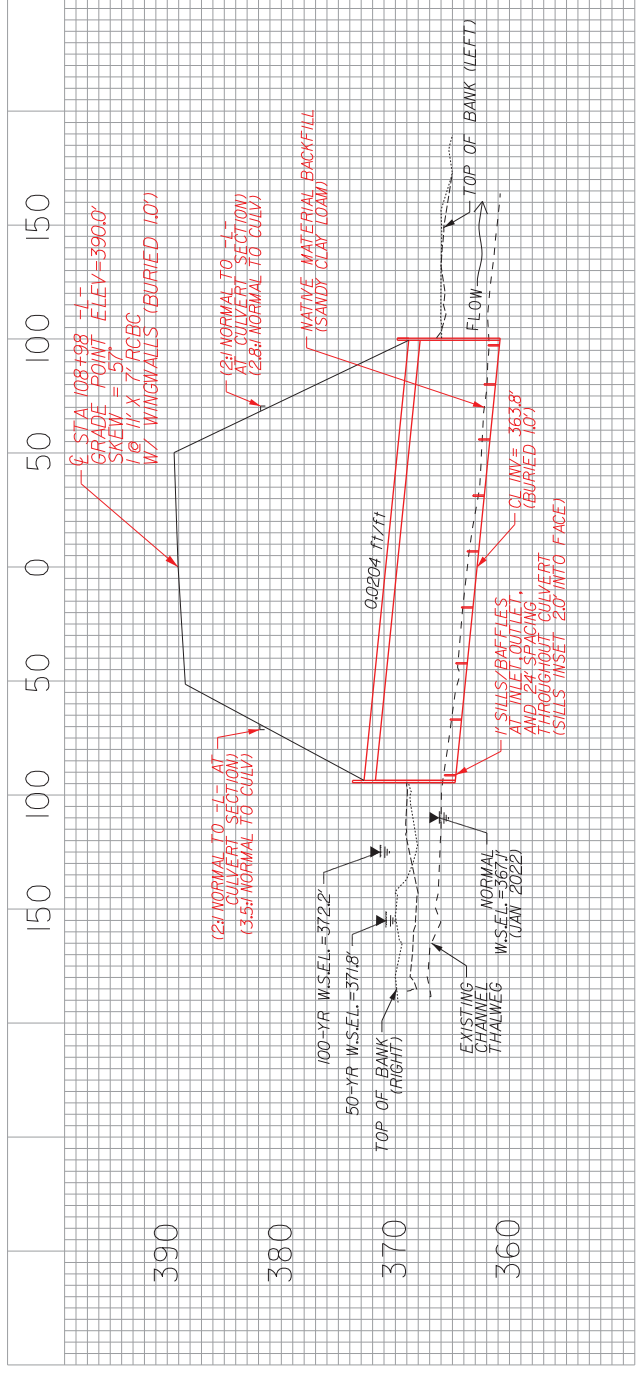
REVISIONS

**Kimley»Horn**  
 P.O. BOX 30068 RALEIGH, N.C. 27616-0068  
 PERMIT DRAWING SHEET 13 OF 19

PROJECT REFERENCE NO. P-5930	SHEET NO.
ROW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

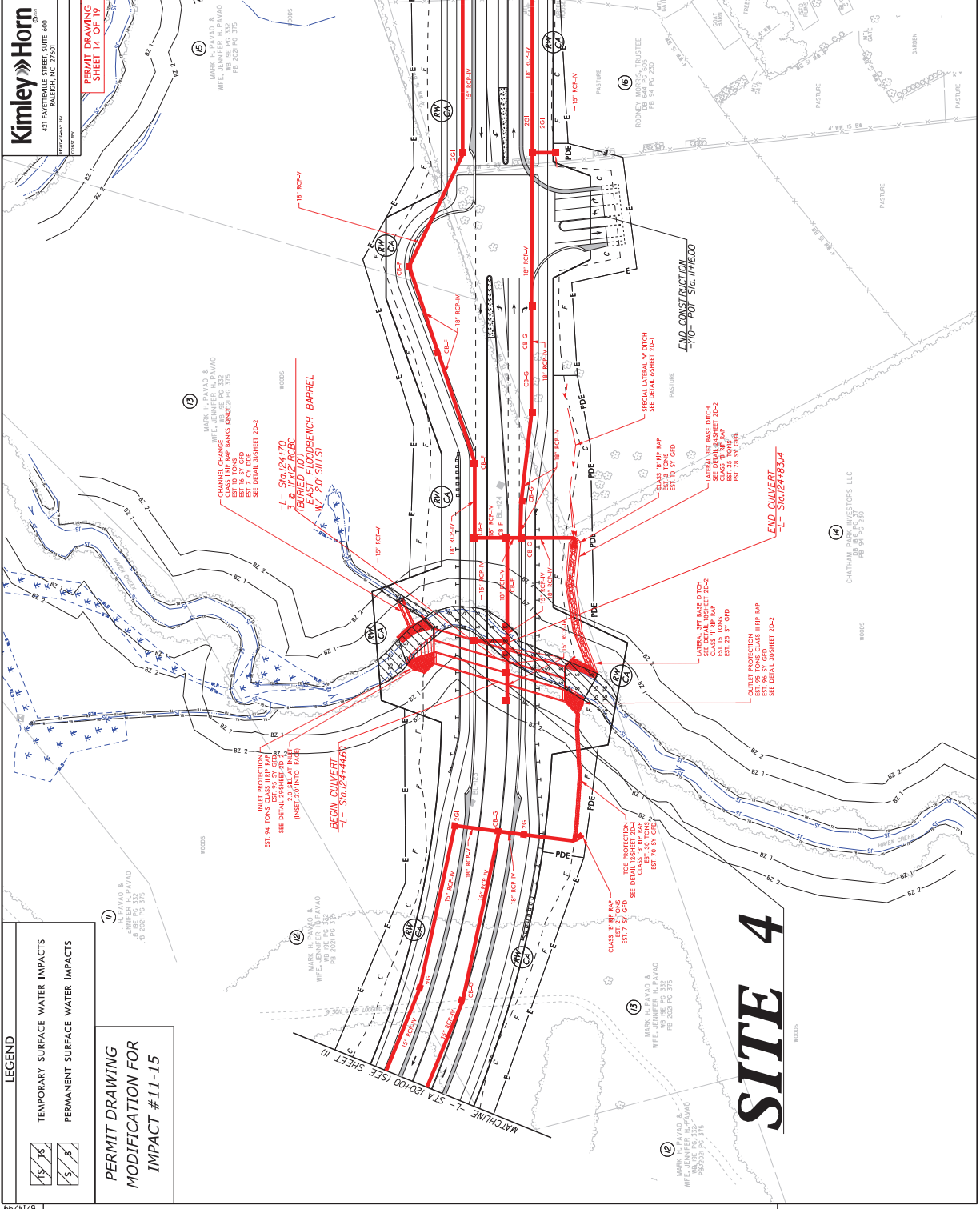
SITE 3 - STA 108+98



**Kimley-Horn**  
 431 FAYETTEVILLE STREET, SUITE 600  
 FAYETTEVILLE, NC 27404  
 PHONE: 704.785.1100  
 WWW.KIMLEY-HORN.COM

PROJECT REFERENCE NO. P-5930  
 R/W SHEET NO. 1/2  
 PERMITS/DESIGN ENGINEER  
 HYDRAULICS ENGINEER

DATE: 05/14/2011  
 PERMIT DRAWING SHEET 14 OF 19



**LEGEND**

TEMPORARY SURFACE WATER IMPACTS

PERMANENT SURFACE WATER IMPACTS

**PERMIT DRAWING  
 MODIFICATION FOR  
 IMPACT #11-15**

**SITE 4**

PROJECT REFERENCE NO. P-2930  
 DATE: 11/11/11  
 DRAWN BY: KIMLEY-HORN  
 CHECKED BY: KIMLEY-HORN  
 ENGINEER: KIMLEY-HORN

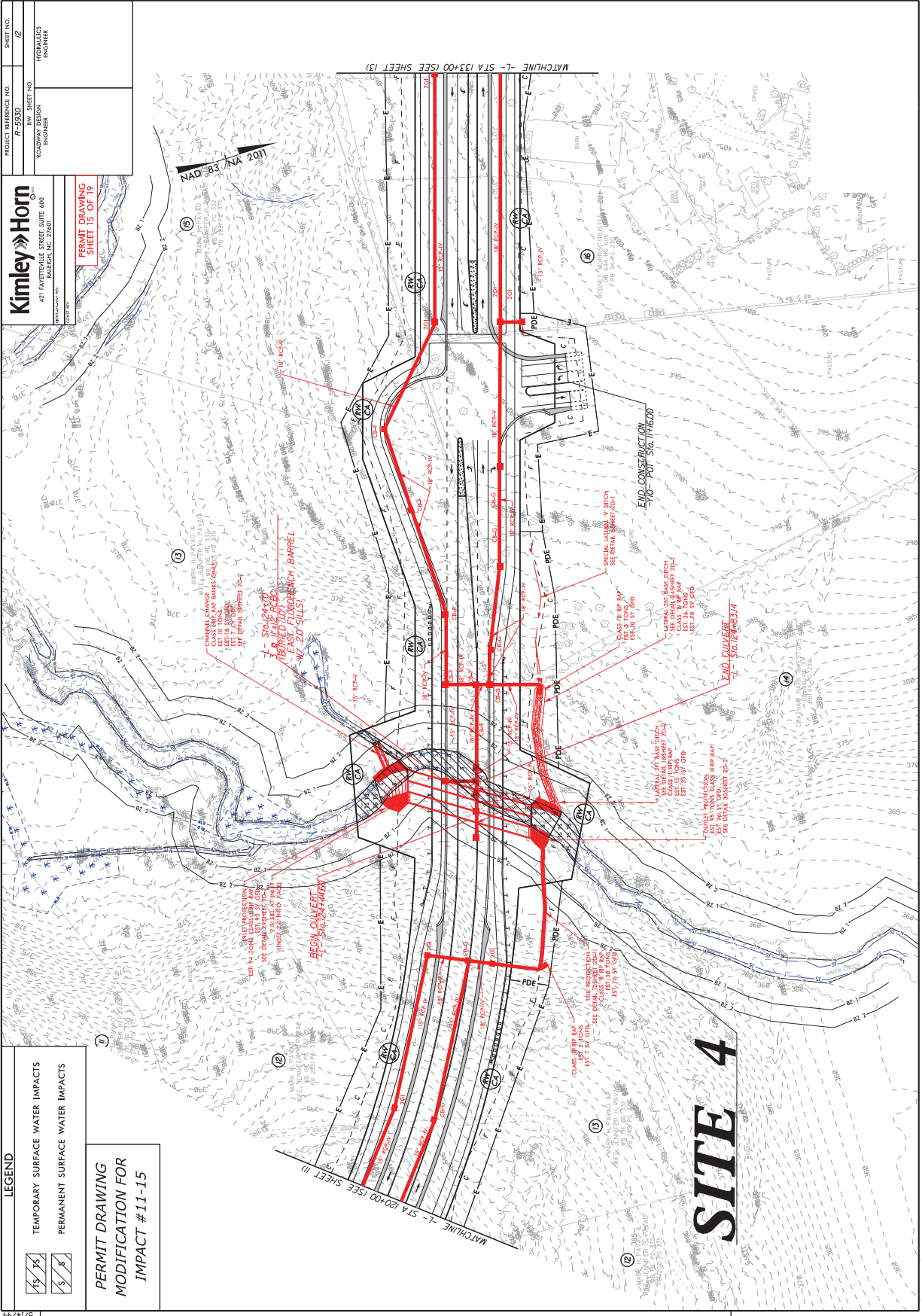
**Kimley-Horn**  
 421 AVENUE 600  
 SUITE 600  
 FAYETTEVILLE, NC 27707  
 PHONE: 704.329.1100  
 FAX: 704.329.1101  
 WWW.KIMLEY-HORN.COM

PERMIT DRAWING  
 SHEET 15 OF 19

**LEGEND**

	TEMPORARY SURFACE WATER IMPACTS
	PERMANENT SURFACE WATER IMPACTS

**PERMIT DRAWING  
 MODIFICATION FOR  
 IMPACT #11-15**



REVISIONS

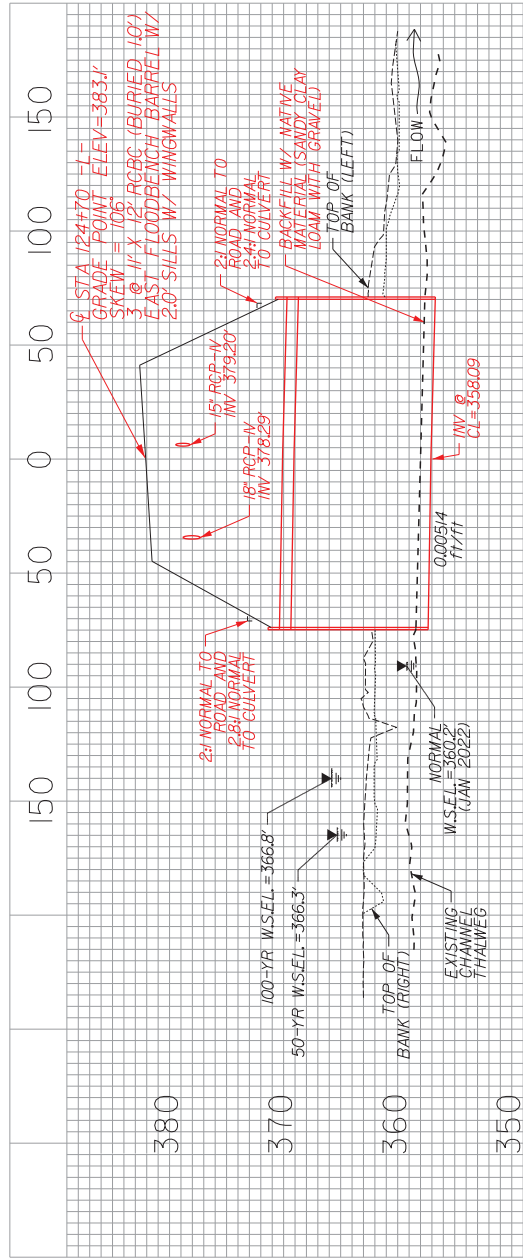
5/14/99

PROJECT REFERENCE NO. P-5930	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**Kimley»Horn**  
 P.O. BOX 33068 RALEIGH, N.C. 27613-0608  
 PERMIT DRAWING  
 SHEET 16 OF 19

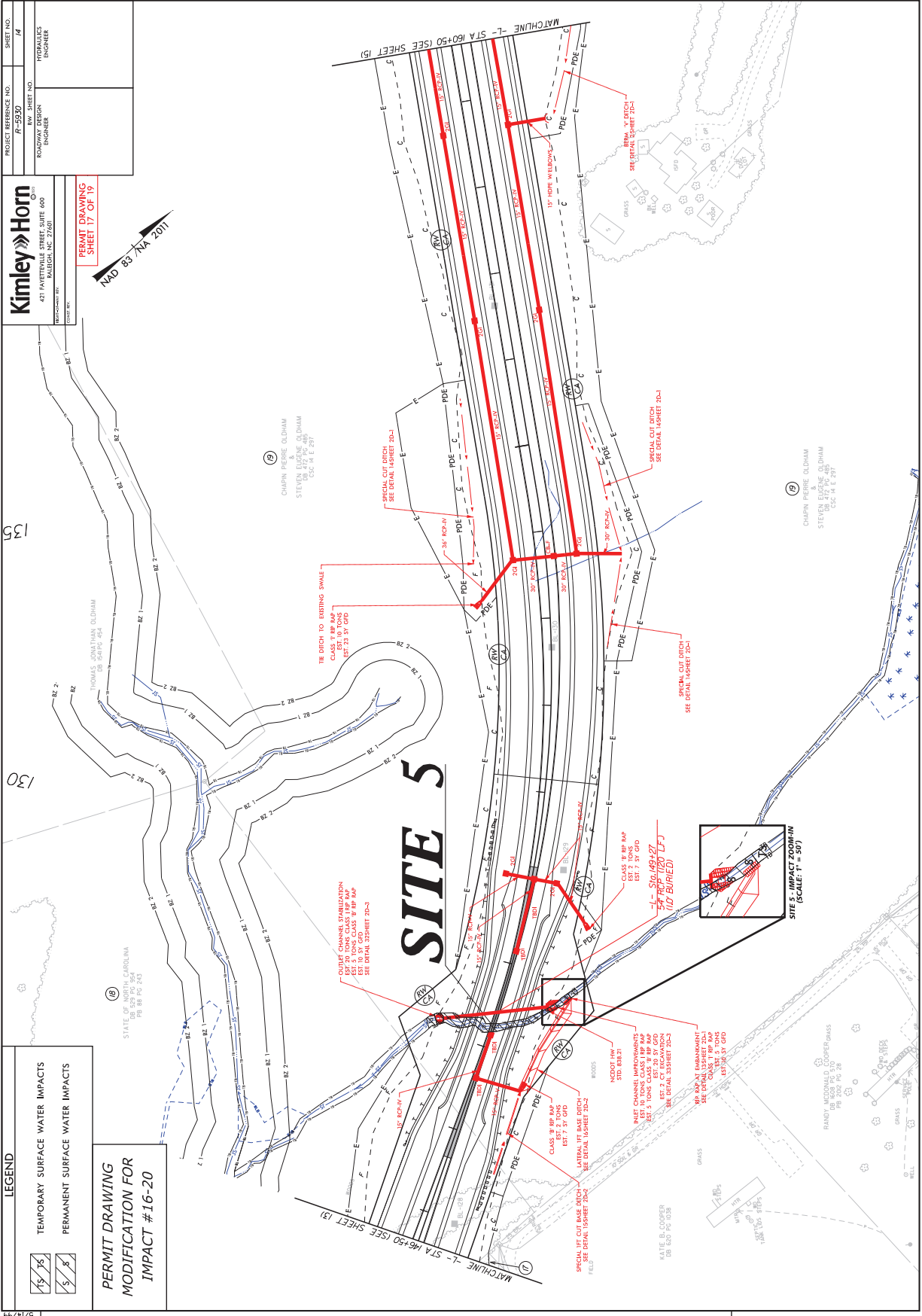
DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

SITE 4 - STA 124+70



5/14/2023

R:\930\img\d\psh\Culvert\PL124+70.dgn



**Kimley-Horn**  
 431 FAVENHILL STREET, SUITE 600  
 FAYETTEVILLE, NC 27030  
 PHONE: 704.782.1200  
 FAX: 704.782.1201  
 WWW.KIMLEY-HORN.COM

PROJECT REFERENCE NO. **P-5530**  
 R/W SHEET NO. **14**  
 PERMITS SECTION  
 ENGINEER

**PERMIT DRAWING SHEET 17 OF 19**

**NAD 83 / N/A 2011**

**LEGEND**

TEMPORARY SURFACE WATER IMPACTS

PERMANENT SURFACE WATER IMPACTS

**PERMIT DRAWING MODIFICATION FOR IMPACT #16-20**

REGIONS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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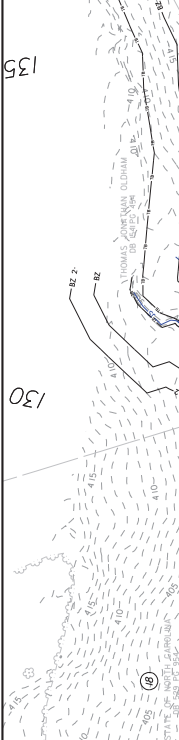
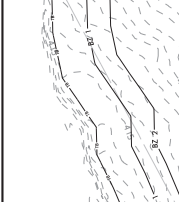
5/14/99

PROJECT REFERENCE NO.	R-5530
PROJ. SHEET NO.	14
DESIGNER	HYDRAULICS ENGINEER
DATE	NOVEMBER 2011

**Kimley-Horn**

431 FAYETTEVILLE STREET, SUITE 600  
 WASHINGTON, DC 20001

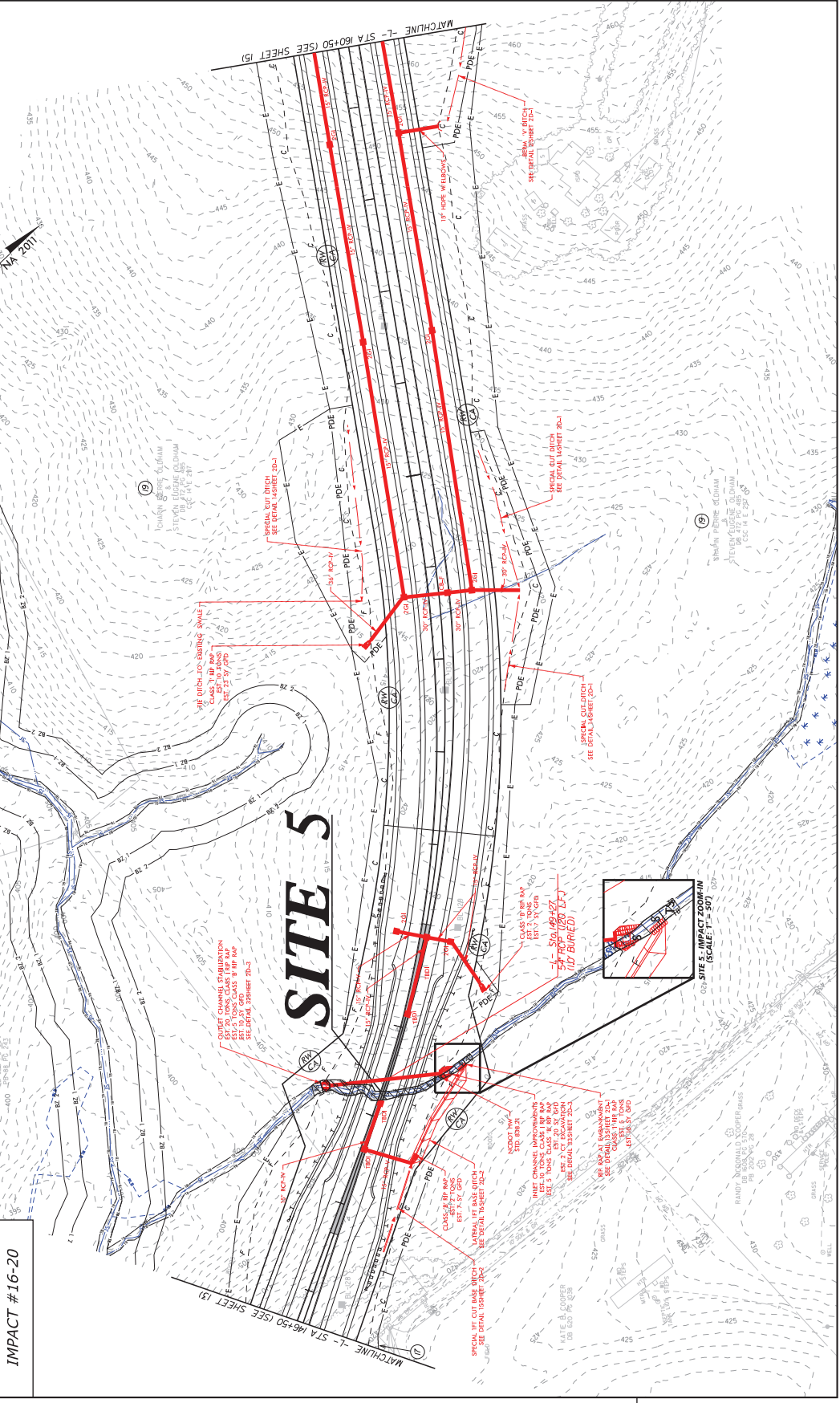
PERMIT DRAWING  
 SHEET 18 OF 19



**LEGEND**

	TEMPORARY SURFACE WATER IMPACTS
	PERMANENT SURFACE WATER IMPACTS

**PERMIT DRAWING  
 MODIFICATION FOR  
 IMPACT #16-20**



5/14/99

REVISIONS

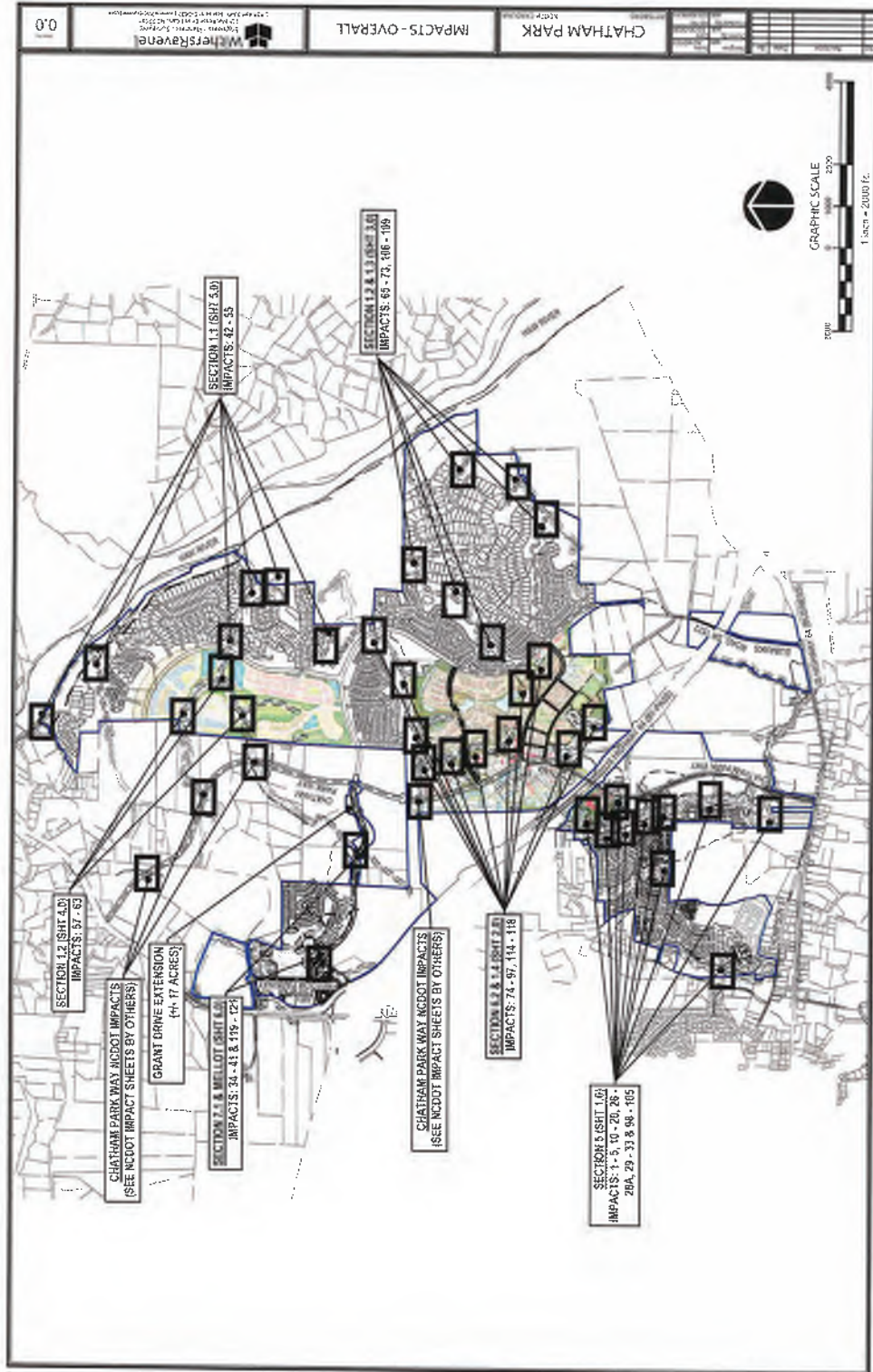
WETLAND AND SURFACE WATER IMPACTS SUMMARY													
Permit Modification Site No.	Original Permit Impact #	Station (From/To)	Structure Size / Type	WETLAND IMPACTS				SURFACE WATER IMPACTS					
				Permanent Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in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

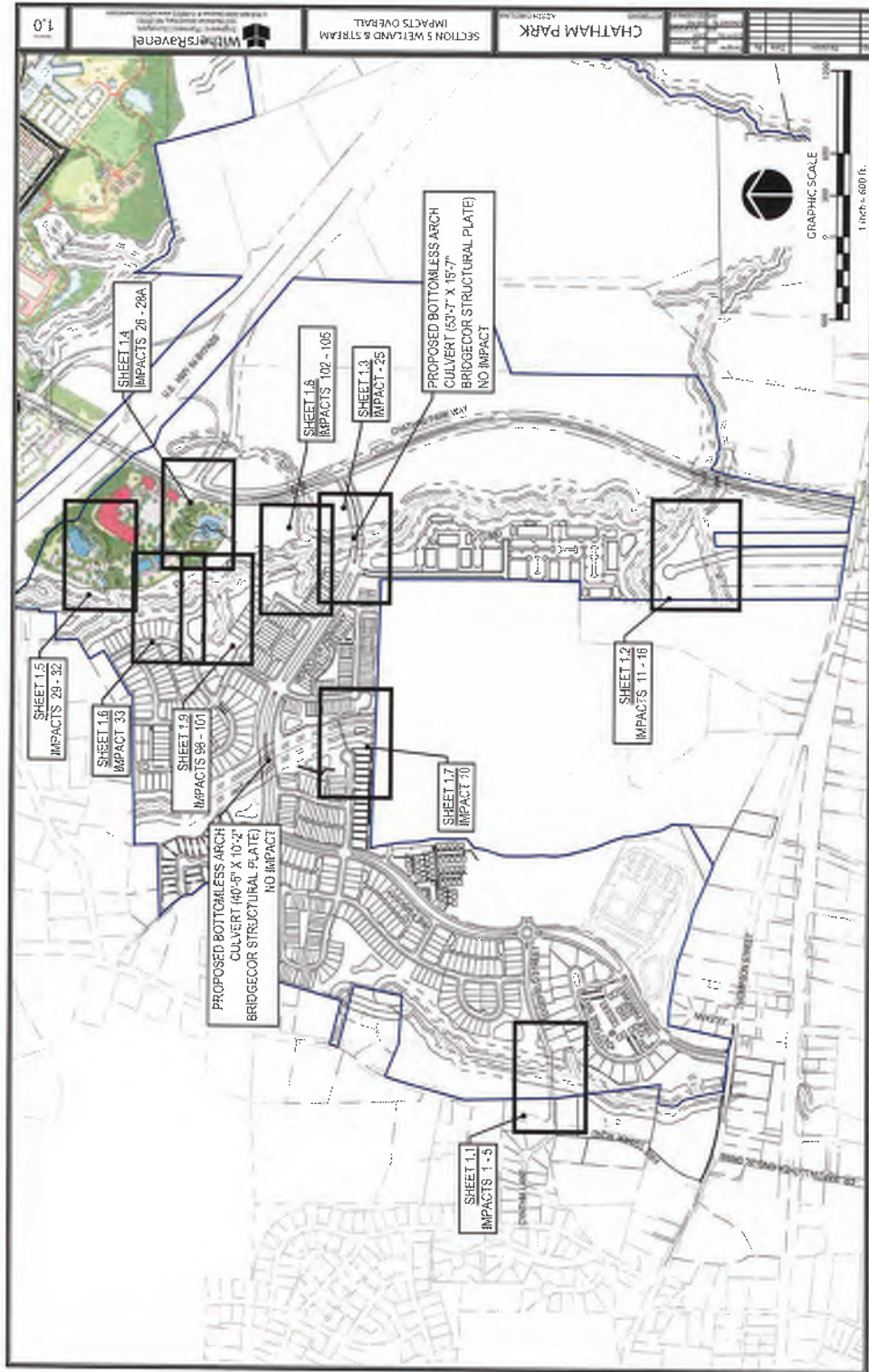
\*Rounded totals are sum of actual impacts

NOTES:

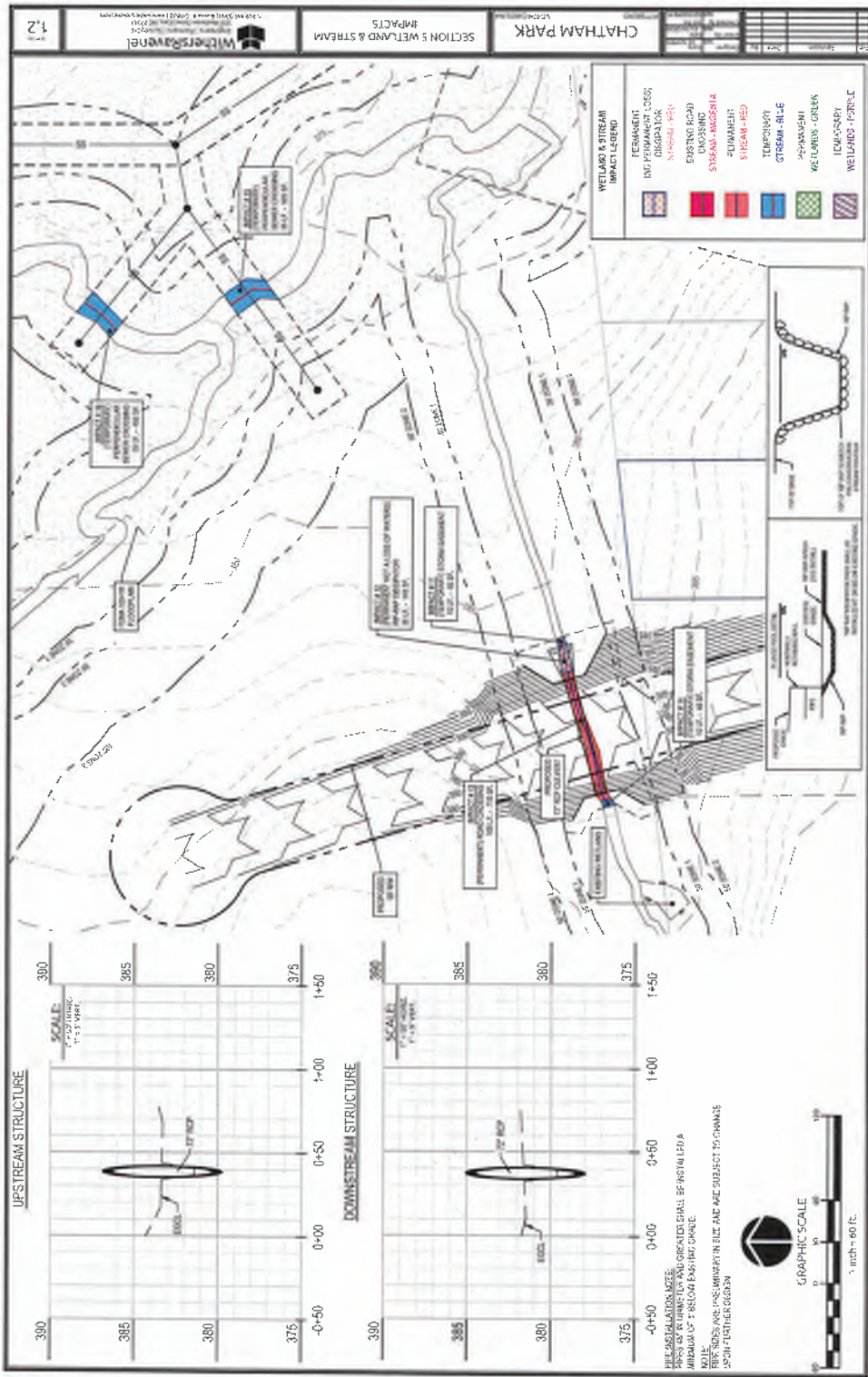
NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 02/13/2023  
 CHATHAM COUNTY  
 R-5930

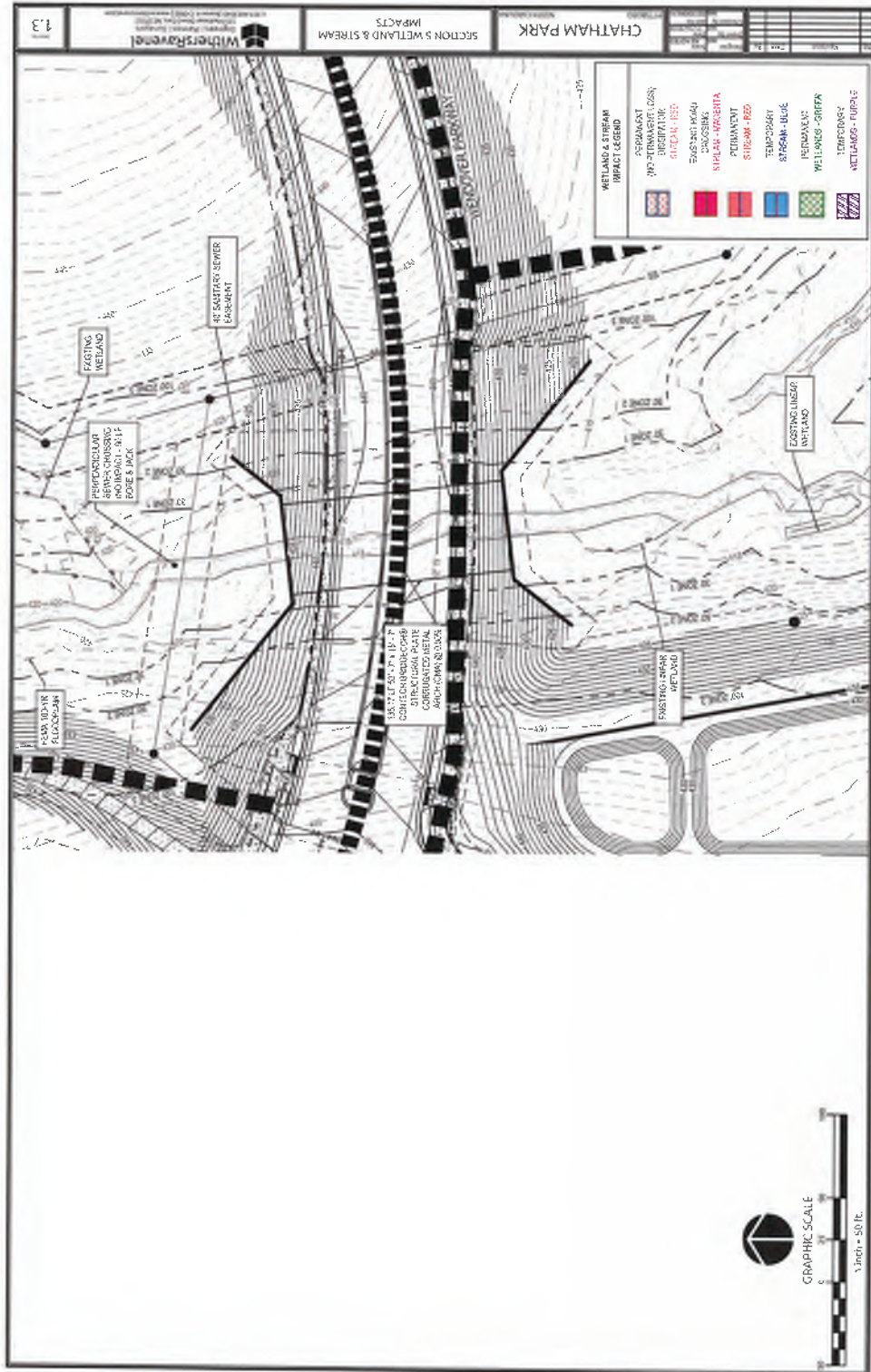






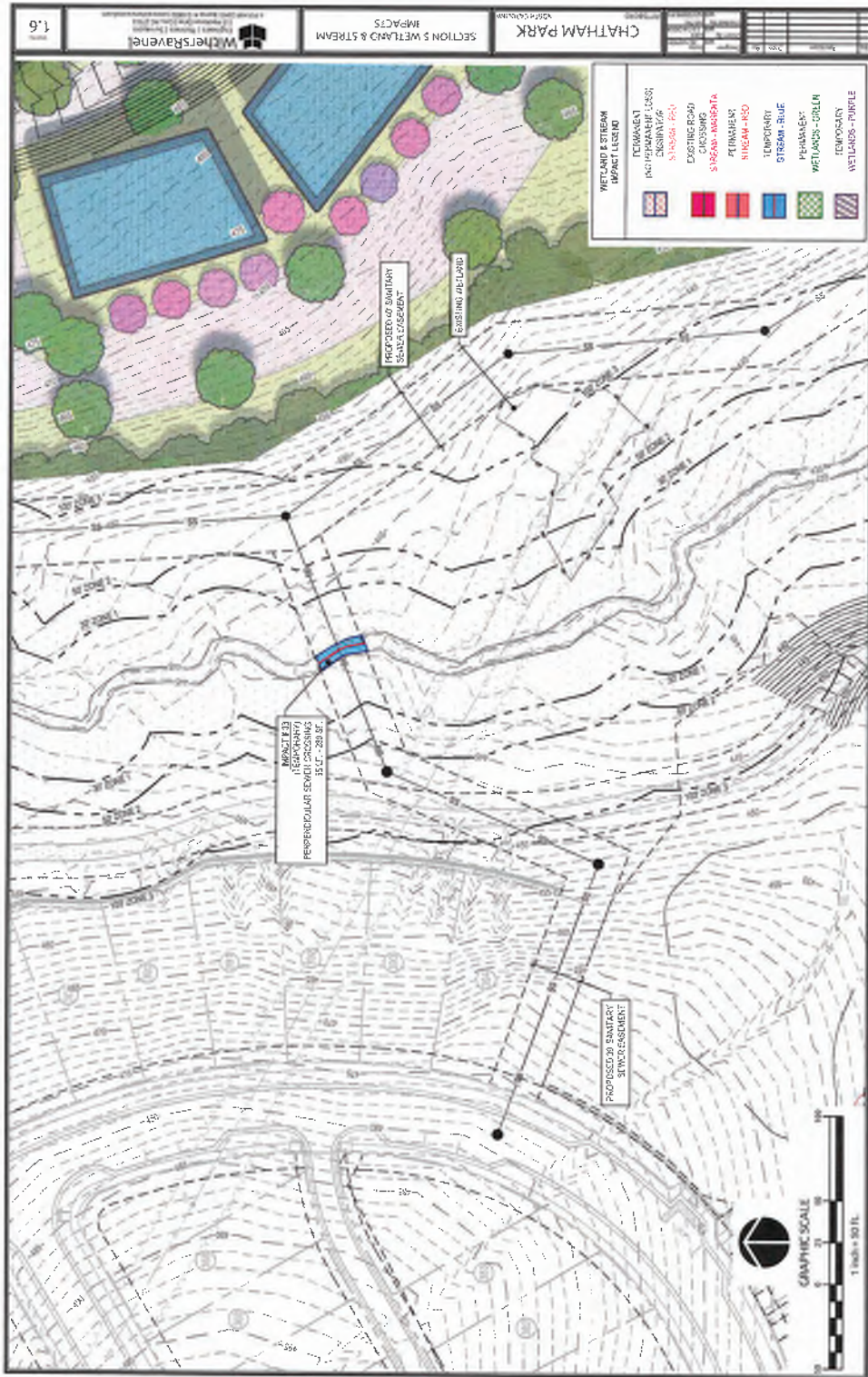






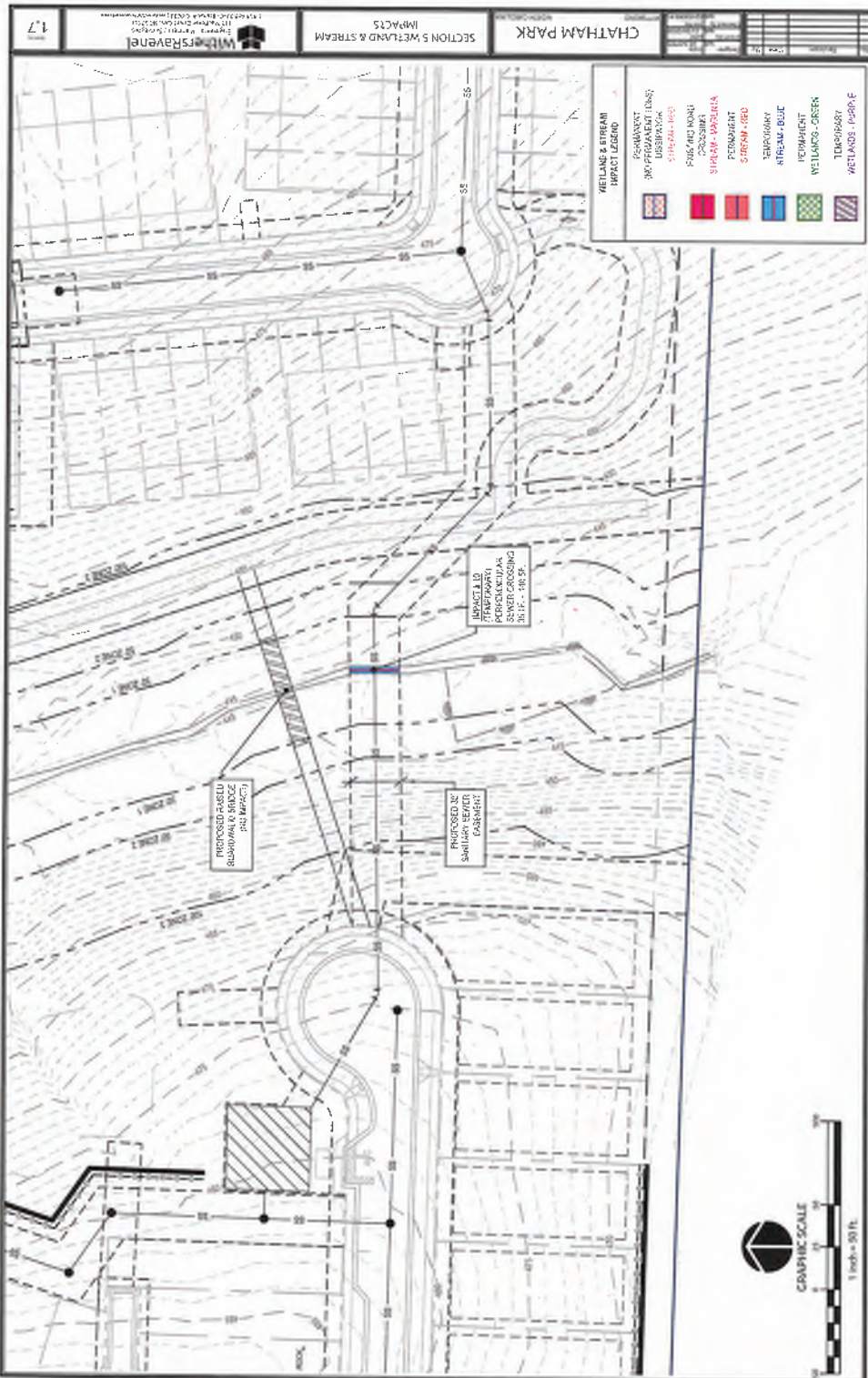


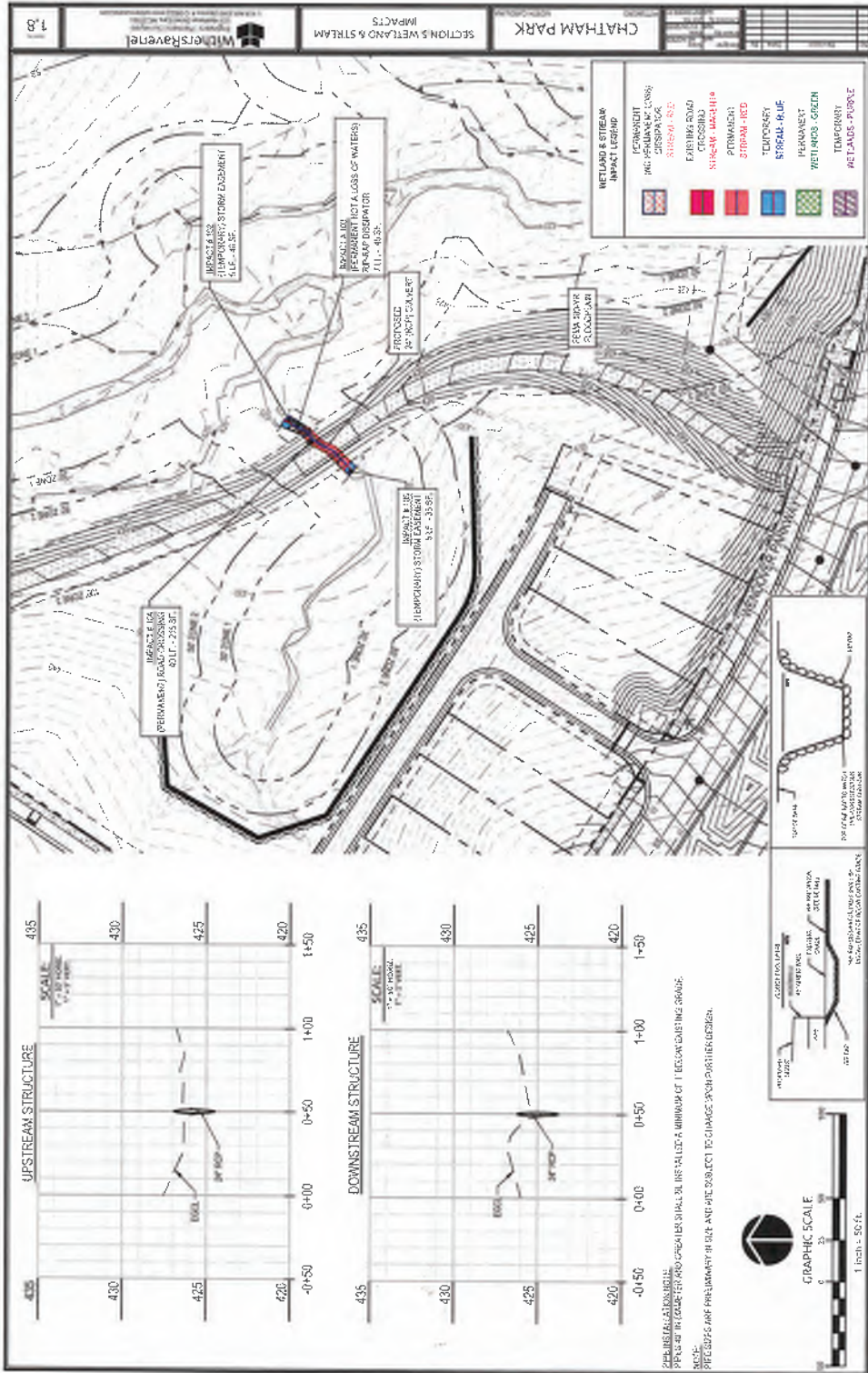


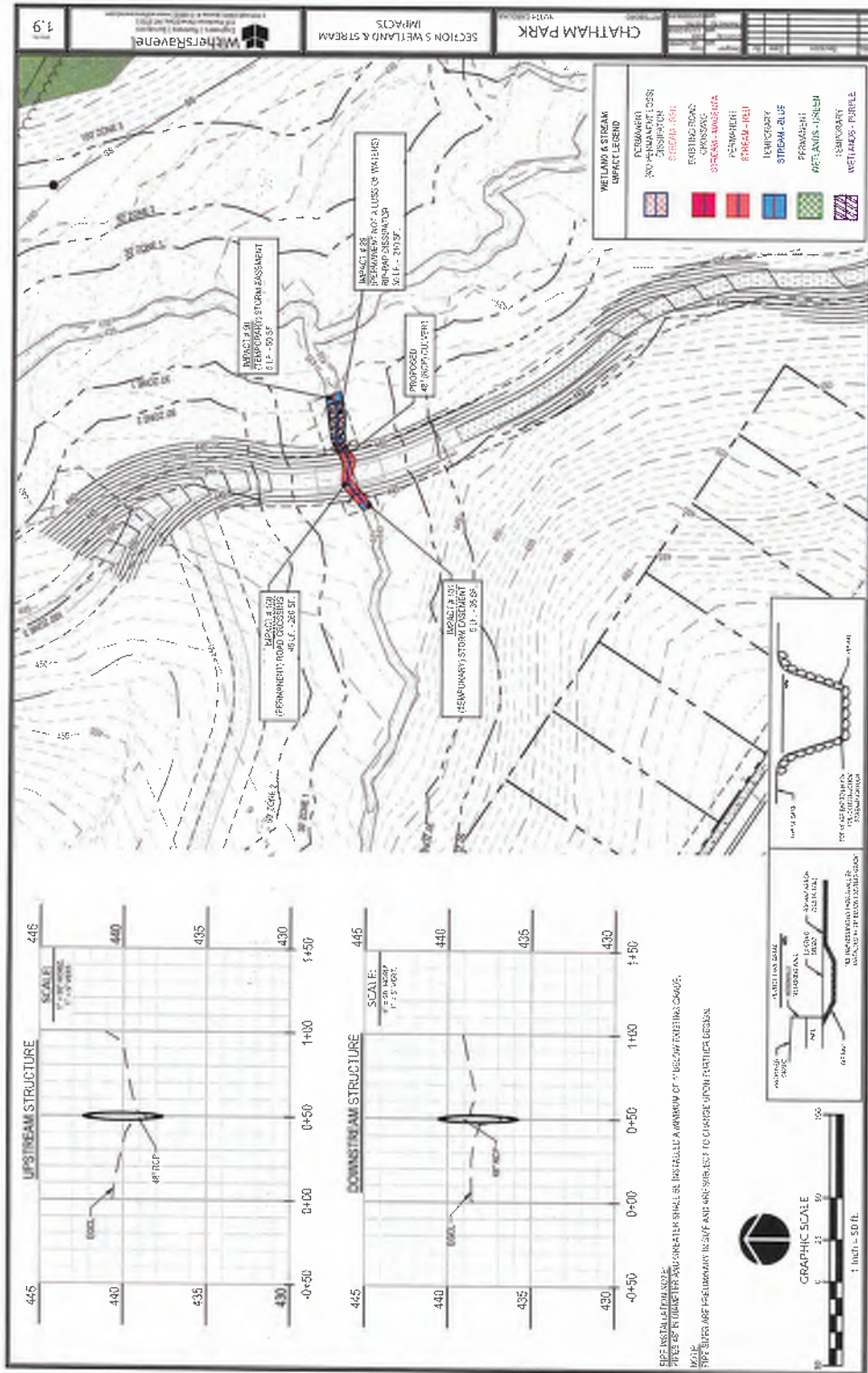


DATE: 10/20/2010 BY: [unreadable] FOR: [unreadable] PROJECT: [unreadable]





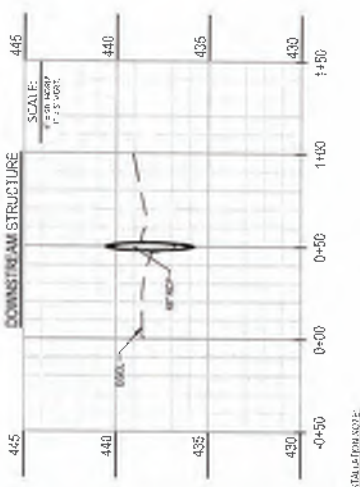
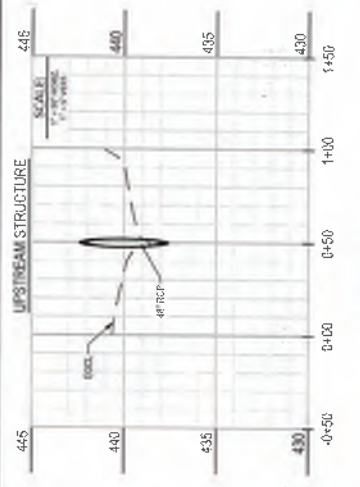




CHATHAM PARK  
SECTION 5 WETLAND & STREAM IMPACTS

**WETLAND & STREAM IMPACT LEGEND**

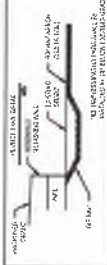
- PERMANENT LOSS OF WETLAND
- TEMPORARY LOSS OF WETLAND
- PERMANENT LOSS OF STREAM
- TEMPORARY LOSS OF STREAM
- PERMANENT LOSS OF FOREST
- TEMPORARY LOSS OF FOREST
- PERMANENT LOSS OF OPEN SPACE
- TEMPORARY LOSS OF OPEN SPACE
- PERMANENT LOSS OF CULTIVATED LAND
- TEMPORARY LOSS OF CULTIVATED LAND



PROPOSED STRUCTURE: 48" RCP DUCTILE IRON PIPE WITH 12" DIA. MANHOLE AT EACH END AND 4" DIA. CLEANOUTS AT 50' INTERVALS.

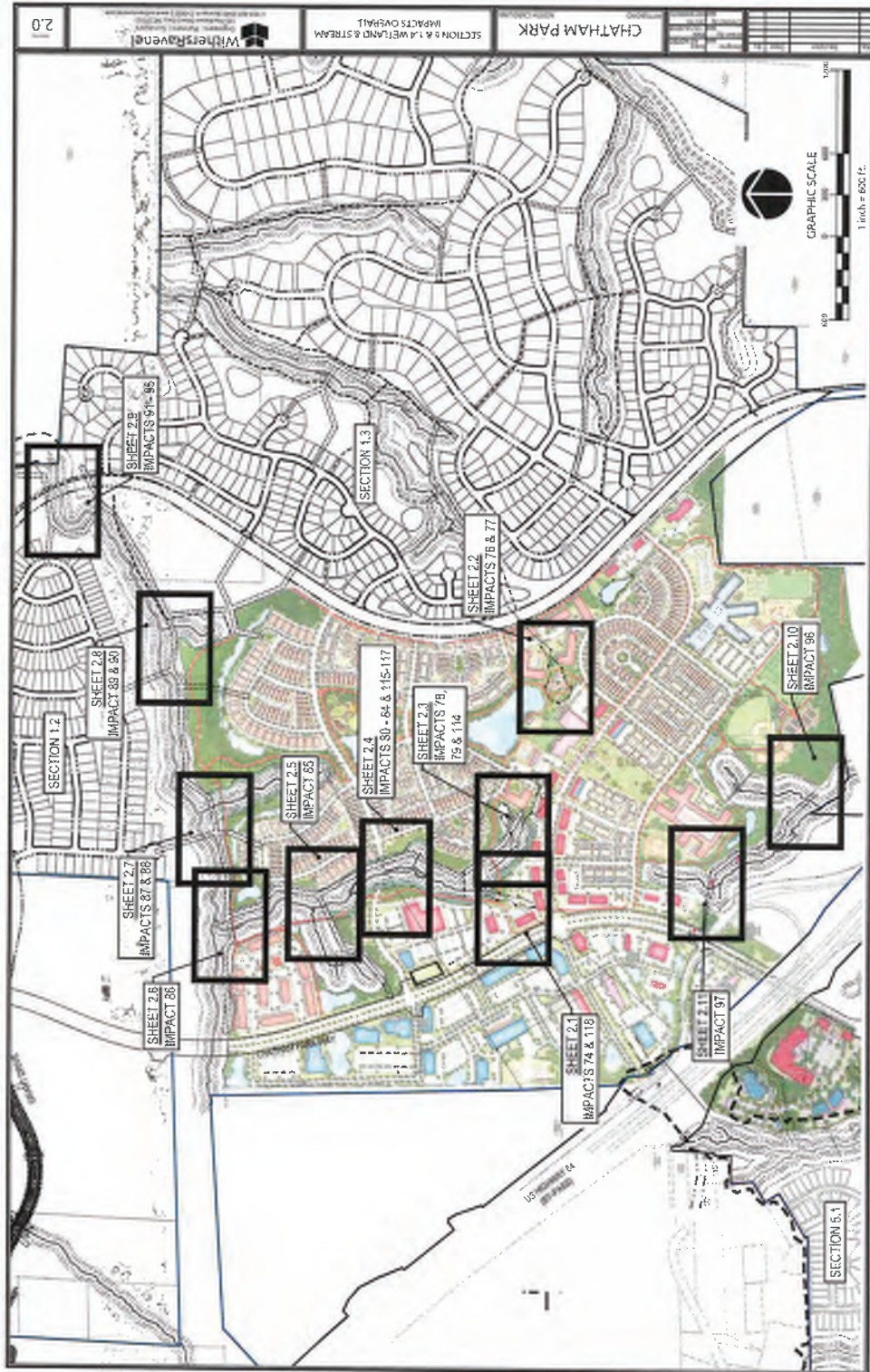
APPROXIMATE STORM DISCHARGE: 100 CFS.

PROPOSED 48" RCP DUCTILE IRON PIPE WITH 12" DIA. MANHOLE AT EACH END AND 4" DIA. CLEANOUTS AT 50' INTERVALS.



SECTION	SHEET NUMBER	IMPACT NUMBER	IMPACT SPECIFICATION	TEMPORARY				PERMANENT				PERMANENT (NOT A LOSS OF WATERS)				WETLAND & STREAM	PERMANENT IMPACT MINIMIZATION SUMMARY **
				STREAM		WETLANDS		STREAM		WETLANDS		STREAM		WETLANDS			
				(LF)	(SF)	(AC)	(SF)	(SF)	(AC)	(LF)	(SF)	(AC)	(LF)	(SF)	(AC)		
1.1		1	STORM EASEMENT	45	109	-	-	-	-	-	-	-	-	-	-	-	2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS PLUNGE POOL
		2	ROAD CROSSING	-	-	-	-	80	735	87	-	-	-	-	-	-	
		3	RIP-RAP DISSIPATOR	-	-	-	-	-	-	-	-	-	-	-	-	-	
		4	STORM EASEMENT	5	40	-	-	-	-	-	-	-	-	-	-	-	
		5	PERPENDICULAR SEWER CROSSING	30	245	-	-	-	-	-	-	-	-	-	-	-	
1.2		11	STORM EASEMENT	10	40	-	-	-	-	-	-	-	-	-	-	2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS PLUNGE POOL	
		12	RIP-RAP DISSIPATOR	-	-	-	-	-	-	-	-	-	-	-	-		
		13	ROAD CROSSING	-	-	-	-	100	710	86	-	-	-	-	-		
		14	STORM EASEMENT	12	40	-	-	-	-	-	-	-	-	-	-		
1.5		15	PERPENDICULAR SEWER CROSSING	35	505	-	-	-	-	-	-	-	-	-	-	2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS PLUNGE POOL	
		16	PERPENDICULAR SEWER CROSSING	35	450	-	-	-	-	-	-	-	-	-	-		
		26	ROAD CROSSING	-	-	-	-	68	400	-	-	-	-	-	-		
		27	SCM GRADING	-	-	-	-	555	910	-	-	-	-	-	-		
1.4		28	SCM GRADING	-	-	-	-	-	-	-	-	-	-	-	-	2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS PLUNGE POOL	
		28	SCM GRADING	-	-	-	-	-	-	-	-	-	-	-	-		
		28A	SCM GRADING	-	-	-	-	-	-	-	1,790	0.041	-	-	-		
		28B	SCM GRADING	-	-	-	-	-	-	-	425	0.010	-	-	-		
1.5		29	STORM EASEMENT	5	40	-	-	-	-	-	-	-	-	-	-	2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS PLUNGE POOL	
		30	RIP-RAP DISSIPATOR	-	-	-	-	-	-	-	-	-	-	-	-		
		31	ROAD CROSSING	-	-	-	-	125	925	105	-	-	-	-	-		
1.6		32	STORM EASEMENT	10	35	-	-	-	-	-	-	-	-	-	-	2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS PLUNGE POOL	
		33	PERPENDICULAR SEWER CROSSING	35	280	-	-	-	-	-	-	-	-	-	-		
1.7		10	PERPENDICULAR SEWER CROSSING	35	140	-	-	-	-	-	-	-	-	-	-	2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS PLUNGE POOL	
		98	STORM EASEMENT	5	50	-	-	-	-	-	-	-	-	-	-		
1.8		99	RIP-RAP DISSIPATOR	-	-	-	-	-	-	-	-	-	-	-	-	2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS PLUNGE POOL	
		100	GREENWAY CROSSINGS	-	-	-	-	45	260	30	-	-	-	-	-		
		101	STORM EASEMENT	5	35	-	-	-	-	-	-	-	-	-	-		
1.9		102	STORM EASEMENT	5	40	-	-	-	-	-	-	-	-	-	-	2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS PLUNGE POOL	
		103	RIP-RAP DISSIPATOR	-	-	-	-	-	-	-	-	-	-	-	-		
		104	GREENWAY CROSSINGS	-	-	-	-	40	215	25	-	-	-	-	-		
		105	STORM EASEMENT	5	35	-	-	-	-	-	-	-	-	-	-		
<b>TOTAL</b>				<b>245</b>	<b>72081</b>	<b>0</b>	<b>0</b>	<b>811</b>	<b>4365</b>	<b>333</b>	<b>2,243</b>	<b>0.051</b>	<b>97</b>	<b>833</b>	<b>0</b>		

\*\* SLOPE MINIMIZATION SHOWN BASED ON RECOMMENDATIONS FROM GEOTECHNICAL REPORT PROVIDED BY GEOTECHNOLOGIES INC.



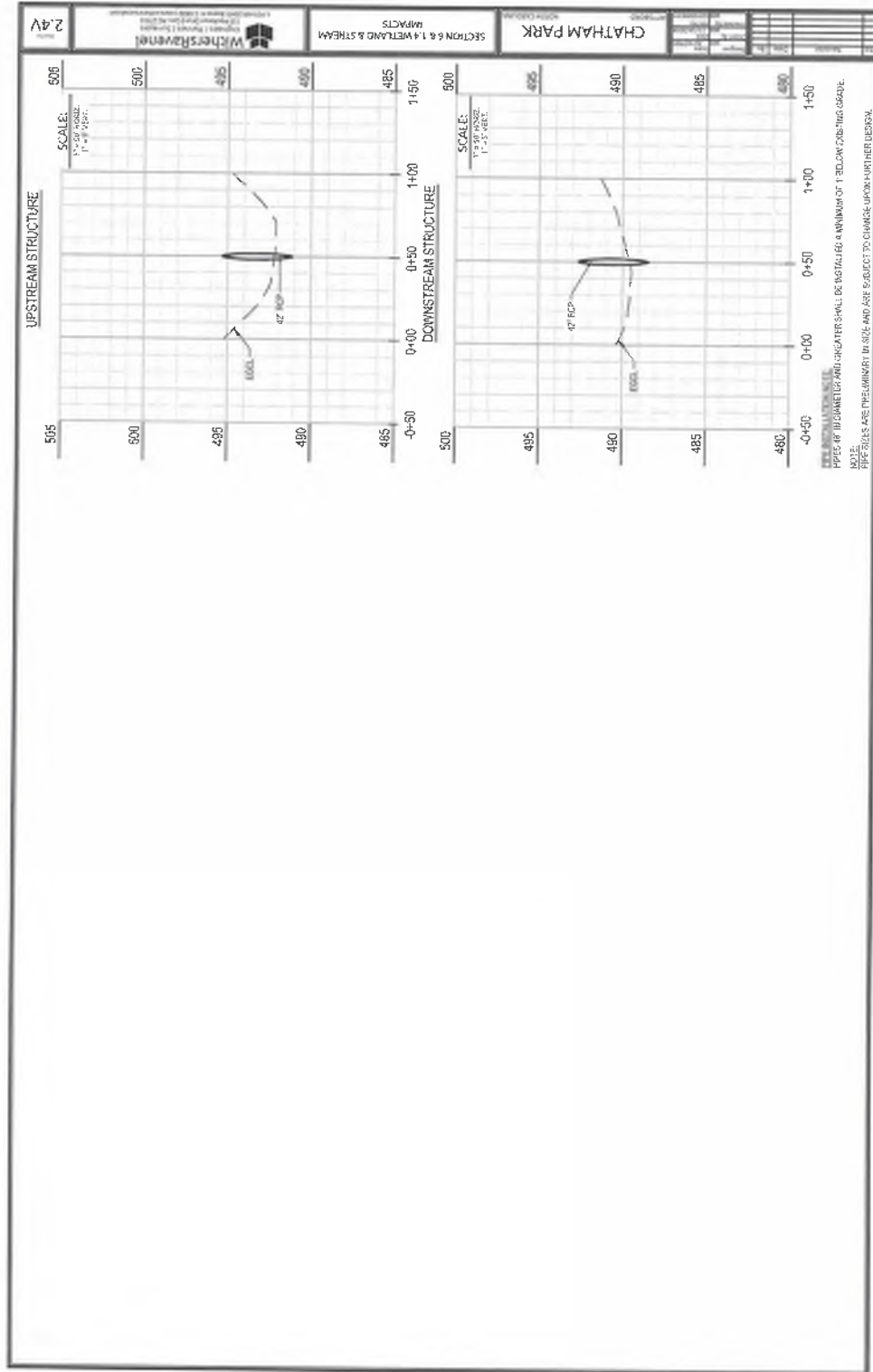












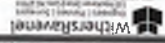








2.8

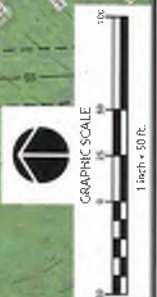


SECTION 6 & 7 WETLAND & STREAM IMPACTS

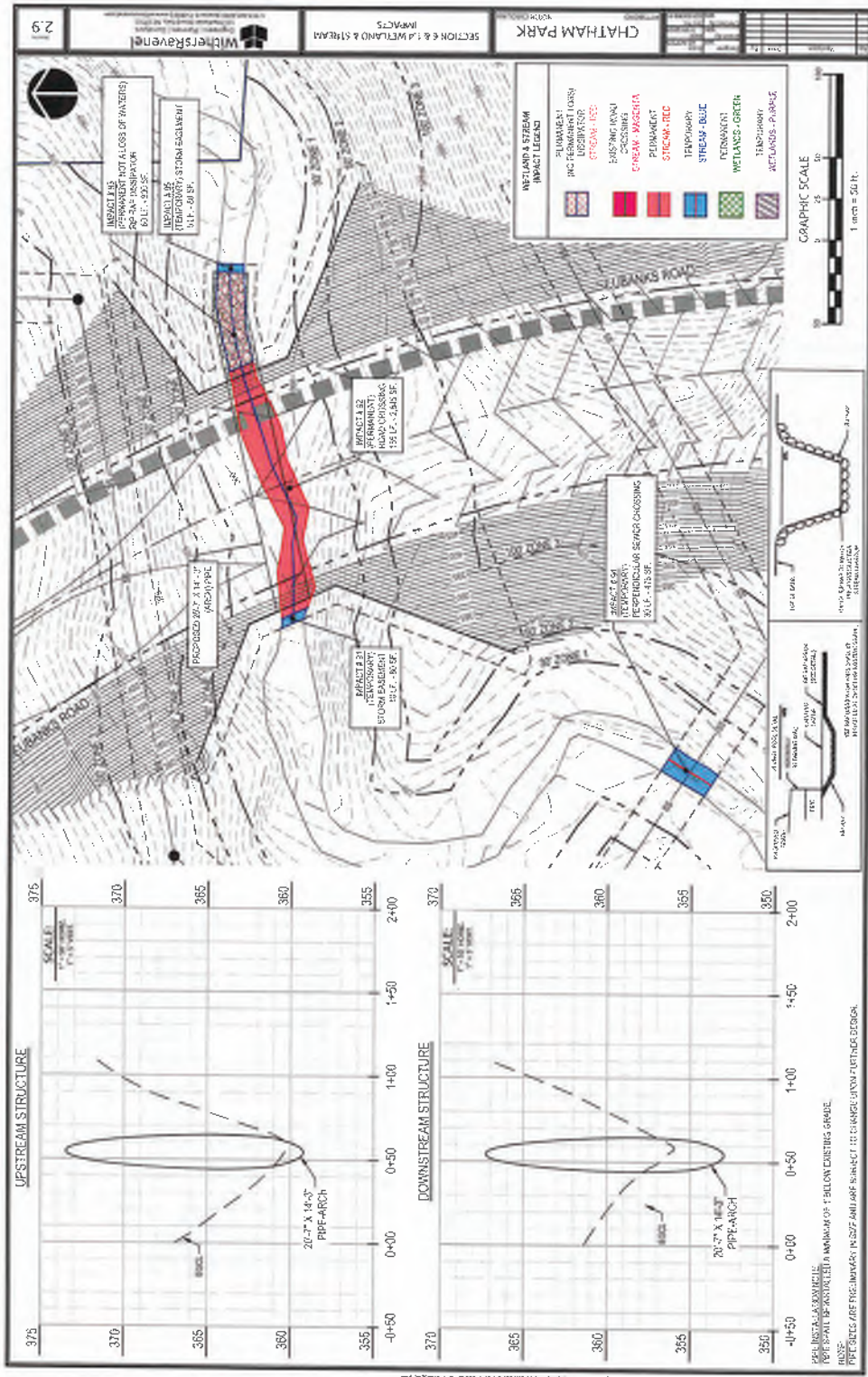
CHATHAM PARK

WETLAND & STREAM IMPACT LEGEND

[Green Swatch]	PERMANENT WETLANDS
[Pink Swatch]	TEMPORARY WETLANDS (PRAIRIE)
[Red Swatch]	STREAM CHANNELS
[Red Swatch]	PERMANENT STREAM
[Red Swatch]	TEMPORARY STREAM
[Blue Swatch]	PERMANENT STREAM
[Blue Swatch]	TEMPORARY STREAM
[Green Swatch]	WETLANDS - GREEN
[Pink Swatch]	WETLANDS - PRAIRIE

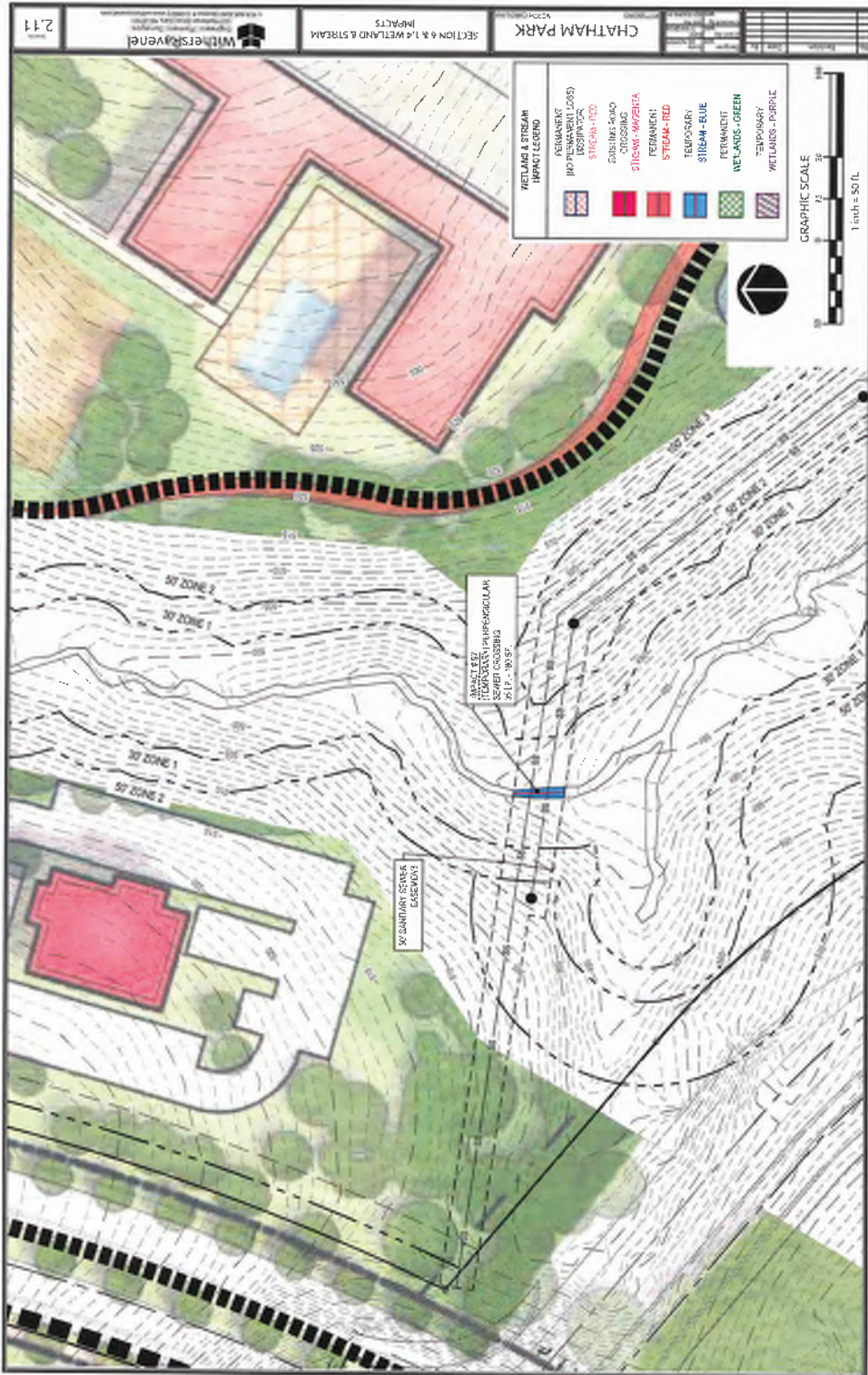


DATE: 08/14/18 BY: J. WILSON



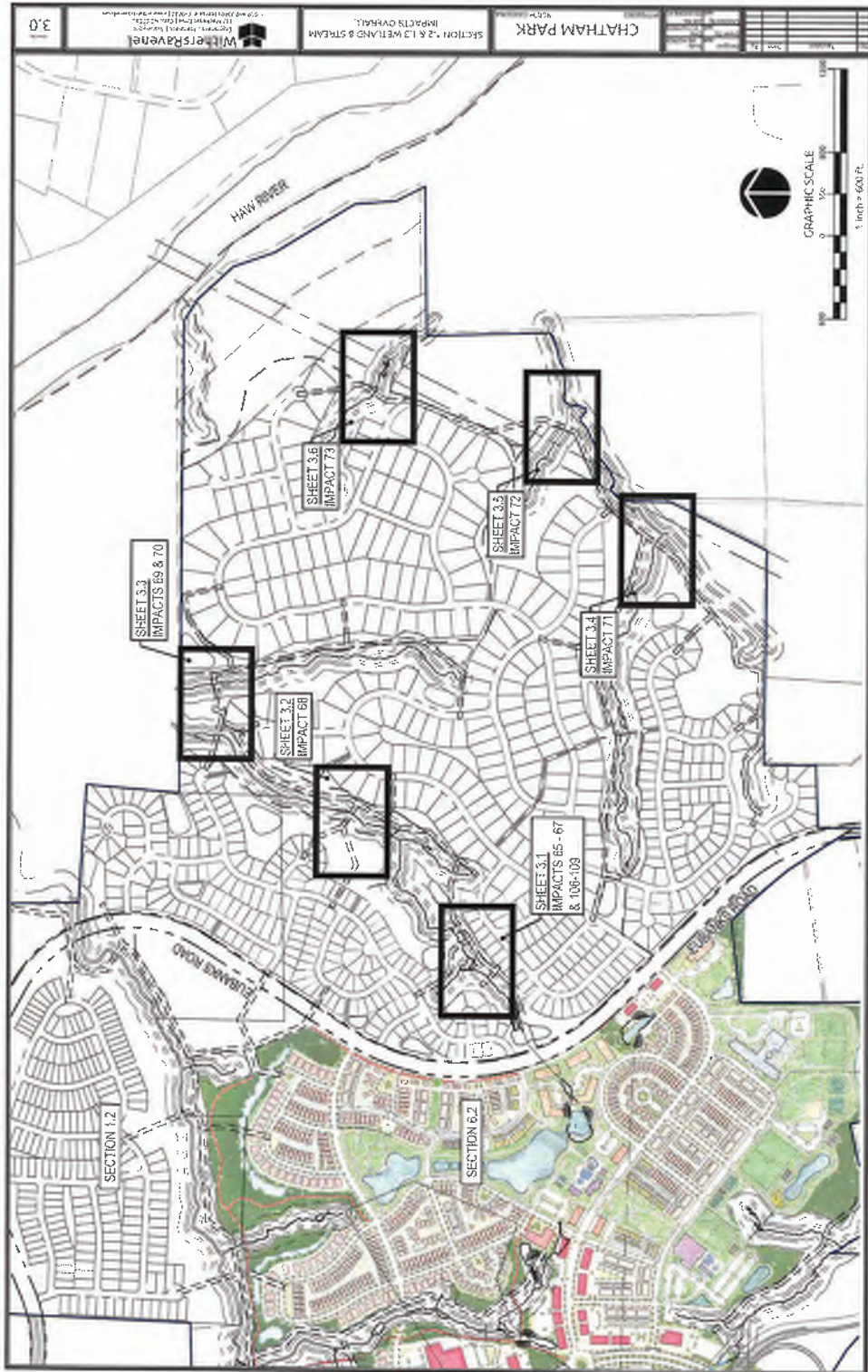


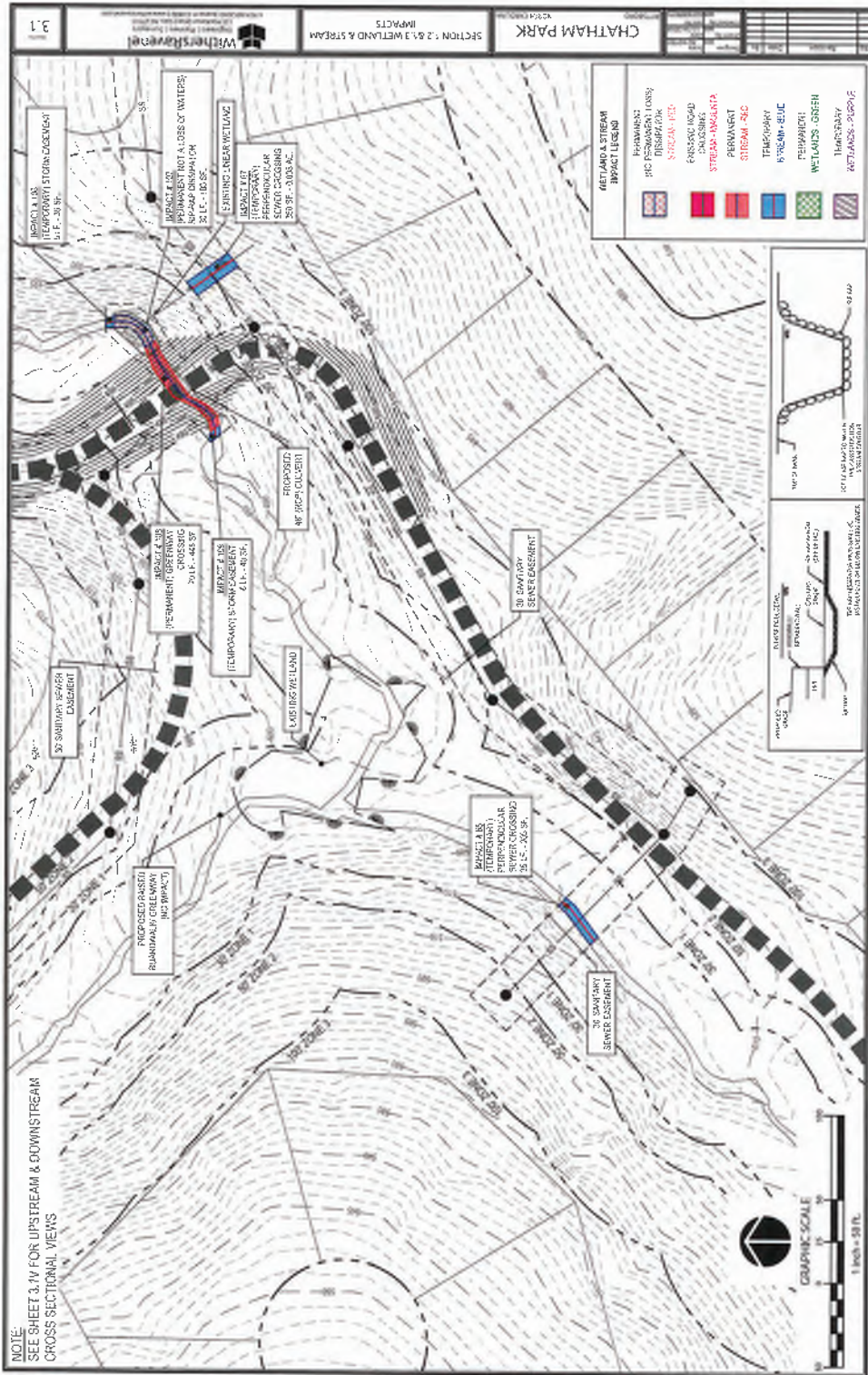




SHEET NUMBER	IMPACT SPECIFICATION	TEMPORARY						PERMANENT						WETLAND & STREAM (NO PERMANENT LOSS)						PERMANENT IMPACT MINIMIZATION SUMMARY **	
		STREAM		WETLANDS		WETLANDS		STREAM		WETLANDS		WETLANDS		STREAM		WETLANDS					
		(LF)	(SF)	(AC)	(SF)	(LF)	(AC)	(SF)	(LF)	(AC)	(SF)	(LF)	(AC)	(SF)	(LF)	(AC)	(SF)	(LF)	(AC)		
2.1	74	PARKING LOT GRADING																			SEGMENTAL BLOCK WALLS
2.2	76	PARKING IMPROVEMENTS & GRADING																			2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS
2.3	75	PARKING LOT & SITE GRADING																			SITE DEVELOPMENT
2.4	80	ROAD CROSSING						5	58												2.5:1 (H:V) SIDE SLOPES
6.2	81	STORM EASEMENT																			2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS
	82	ROAD CROSSING						170	1,226	305											PLUNGE POOL
	83	RIP-RAP DISSIPATOR						5	55												TEMPORARY CONSTRUCTION EASEMENT
	84	STORM EASEMENT						30	375												TEMPORARY UTILITY CROSSING
	115	GREENWAY CROSSING																			TEMPORARY CONSTRUCTION EASEMENT
	116	RIP-RAP DISSIPATOR																			2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS
	117	STORM EASEMENT						30	375												PLUNGE POOL
2.5	85	PERPENDICULAR SEWER CROSSING						35	285												TEMPORARY CONSTRUCTION EASEMENT
2.6	86	PERPENDICULAR SEWER CROSSING						30	400												TEMPORARY UTILITY CROSSING
2.7	88	PERPENDICULAR SEWER CROSSING						30	476												TEMPORARY UTILITY CROSSING
2.8	89	PERPENDICULAR SEWER CROSSING						35	230												TEMPORARY UTILITY CROSSING
2.11	90	PERPENDICULAR SEWER CROSSING						30	240												TEMPORARY UTILITY CROSSING
2.9	91	STORM EASEMENT						10	90												TEMPORARY CONSTRUCTION EASEMENT
2.10	92	ROAD CROSSING																			2.5:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS
2.11	93	RIP-RAP DISSIPATOR																			2 URSE POOL
2.10	94	PERPENDICULAR SEWER CROSSING						30	476												TEMPORARY UTILITY CROSSING
2.11	95	STORM EASEMENT						5	60												TEMPORARY CONSTRUCTION EASEMENT
2.11	96	PERPENDICULAR SEWER CROSSING						35	180												TEMPORARY UTILITY CROSSING
2.11	97	PERPENDICULAR SEWER CROSSING						35	180												TEMPORARY UTILITY CROSSING
		<b>TOTAL</b>					<b>375</b>	<b>3,480</b>		<b>385</b>	<b>4,324</b>	<b>299</b>	<b>10,660</b>	<b>0,249</b>	<b>481,140</b>	<b>1,196</b>	<b>1,575</b>	<b>640</b>	<b>0,815</b>		

\*\* SLOPE MINIMIZATION SHOWN BASED ON RECOMMENDATIONS FROM GEOLOGICAL REPORT PROVIDED BY GEOTECHNOLOGIES INC.





NOTE:  
SEE SHEET 3.1V FOR UPSTREAM & DOWNSTREAM  
CROSS SECTIONAL VIEWS

3.1

WithersParker  
Environmental & Planning Services, Inc.  
10000 Northpark Drive, Suite 100  
Atlanta, Georgia 30328  
Tel: 770.433.8800  
Fax: 770.433.8801  
www.withersparker.com

CHATHAM PARK  
SECTION 1, 2 & 3 WETLAND & STREAM  
IMPACTS

CHATHAM PARK  
SECTION 1, 2 & 3 WETLAND & STREAM  
IMPACTS

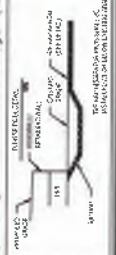
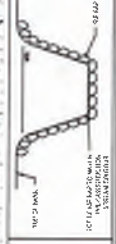
**WETLAND & STREAM IMPACT LEGEND**

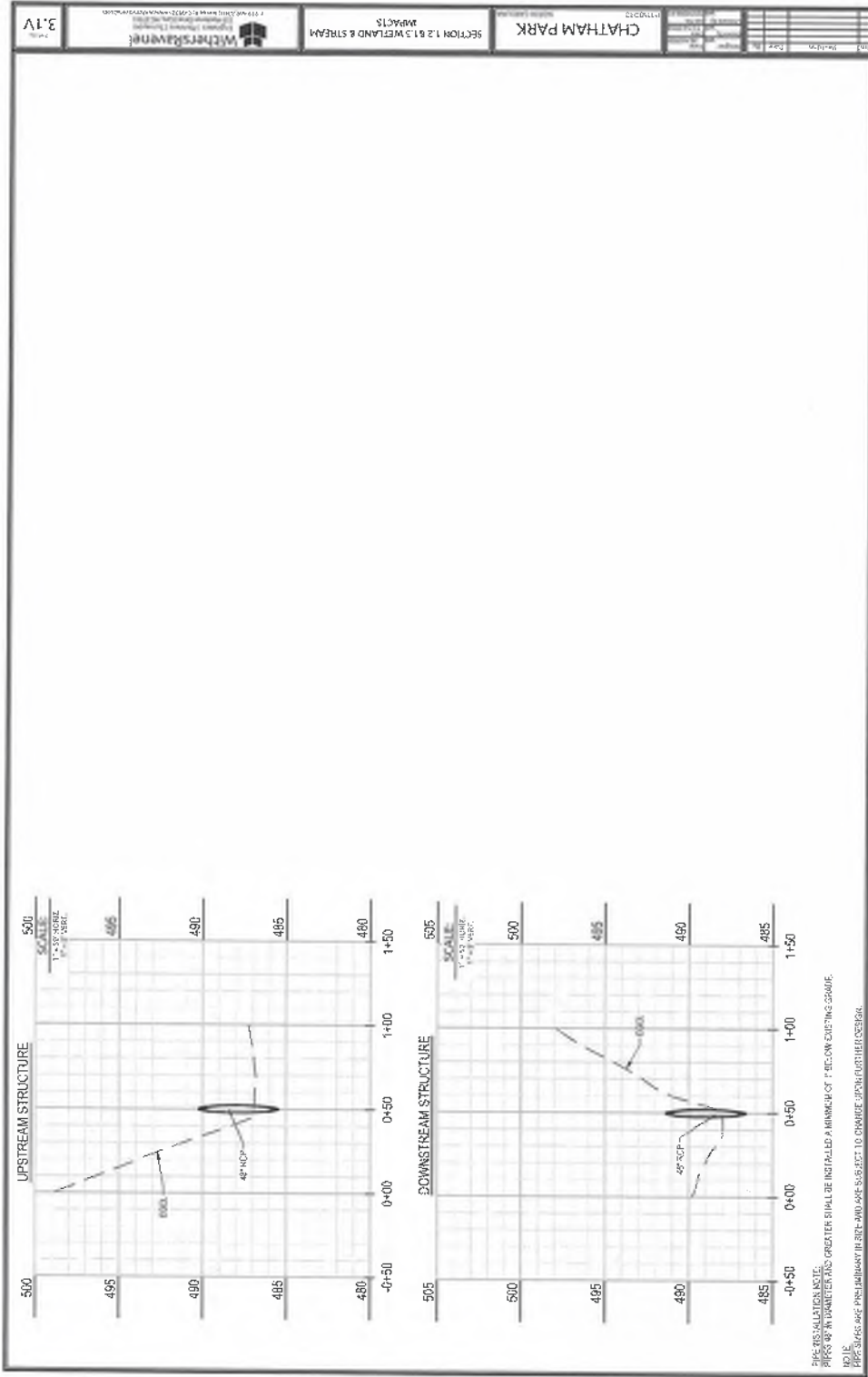
**EXISTING LINES WETLANDS**

- Forested Wetland
- Shrubland
- Forested Wetland - High Quality
- Forested Wetland - Medium Quality
- Forested Wetland - Low Quality
- Stream - Intake
- Stream - RC
- Stream - Non-RC
- Stream - EUC
- Wetland - Green
- Wetland - Yellow
- Wetland - Purple

**PROPOSED NEW WETLANDS**

- Forested Wetland
- Shrubland
- Forested Wetland - High Quality
- Forested Wetland - Medium Quality
- Forested Wetland - Low Quality
- Stream - Intake
- Stream - RC
- Stream - Non-RC
- Stream - EUC
- Wetland - Green
- Wetland - Yellow
- Wetland - Purple





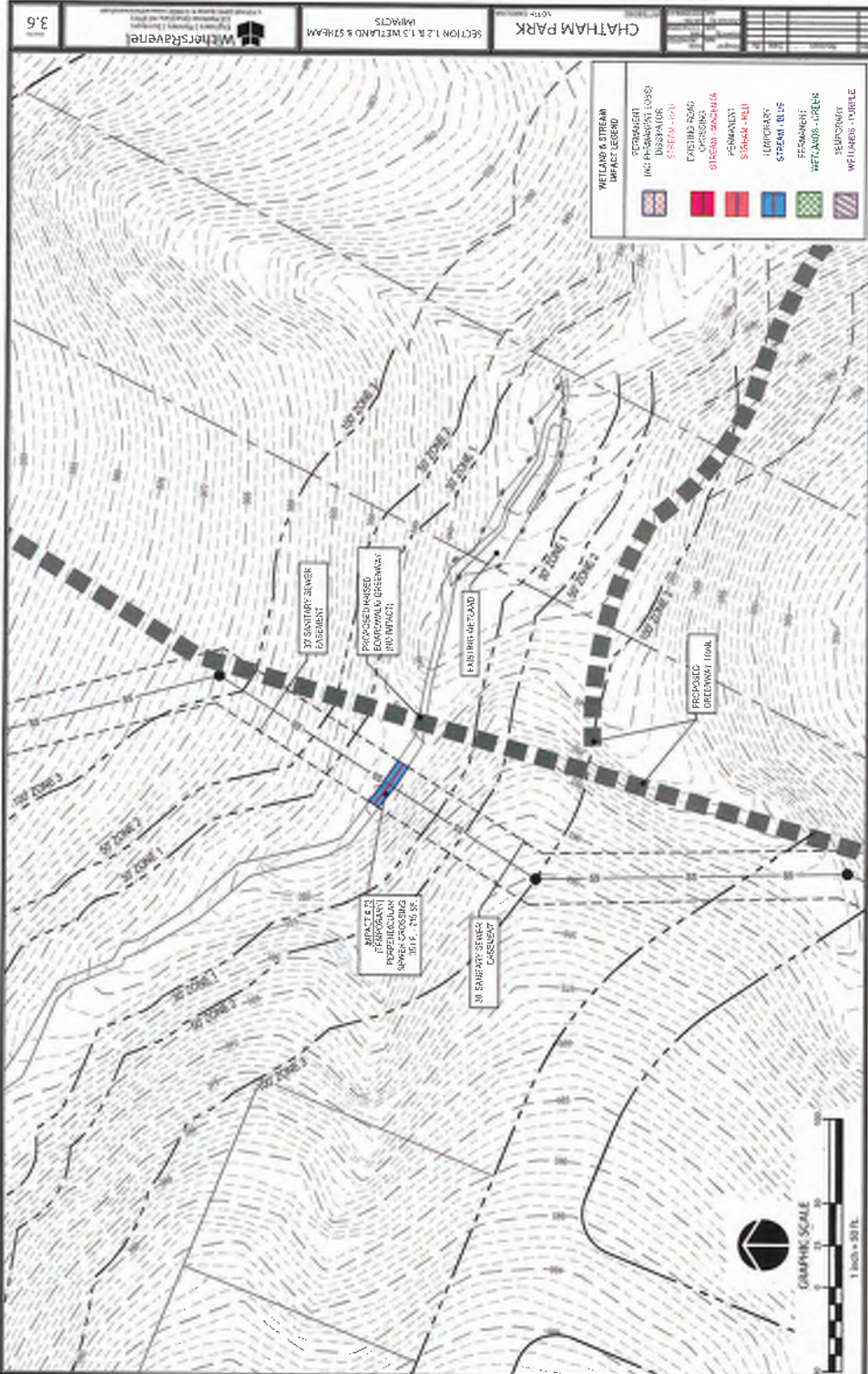






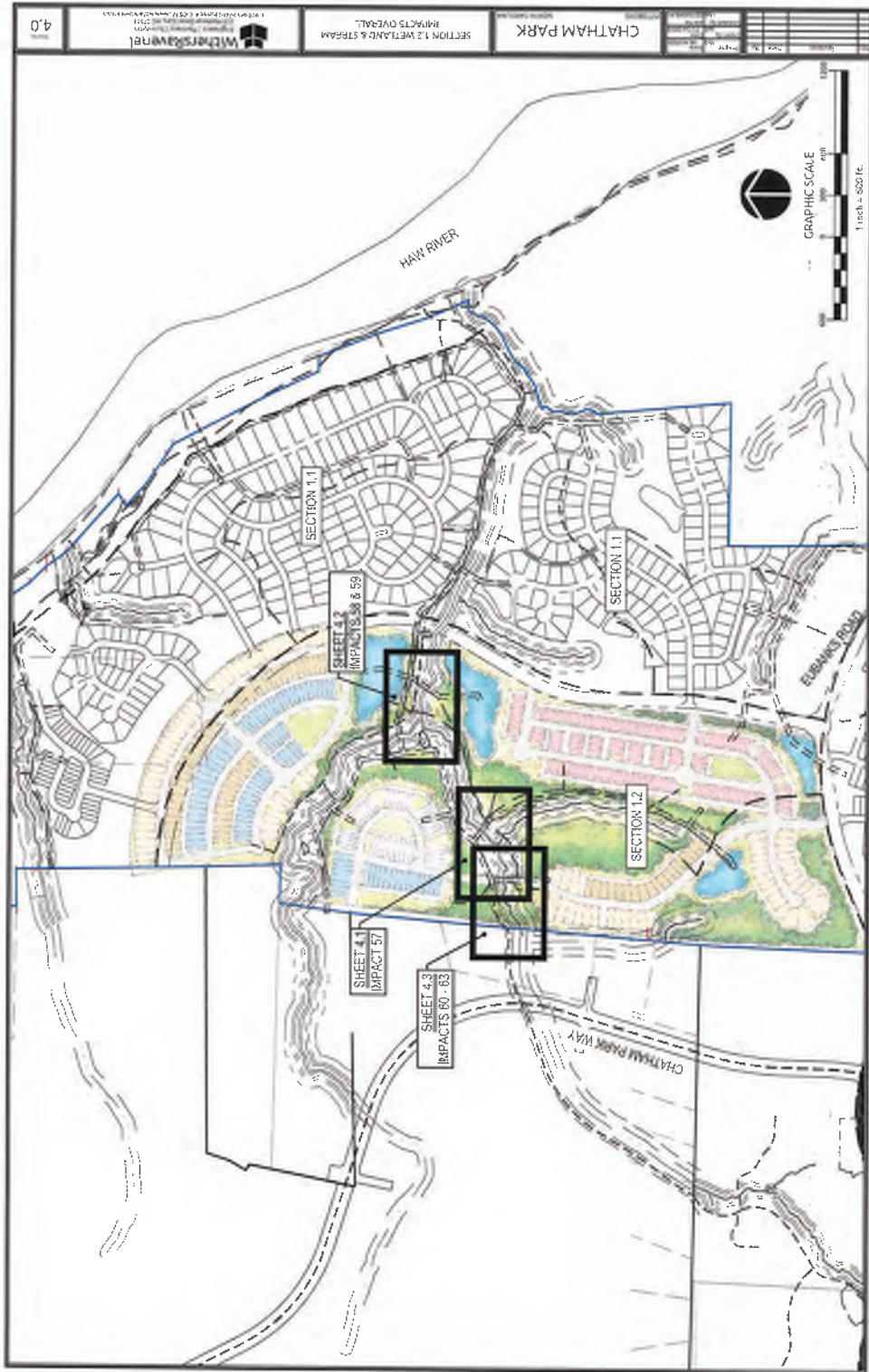


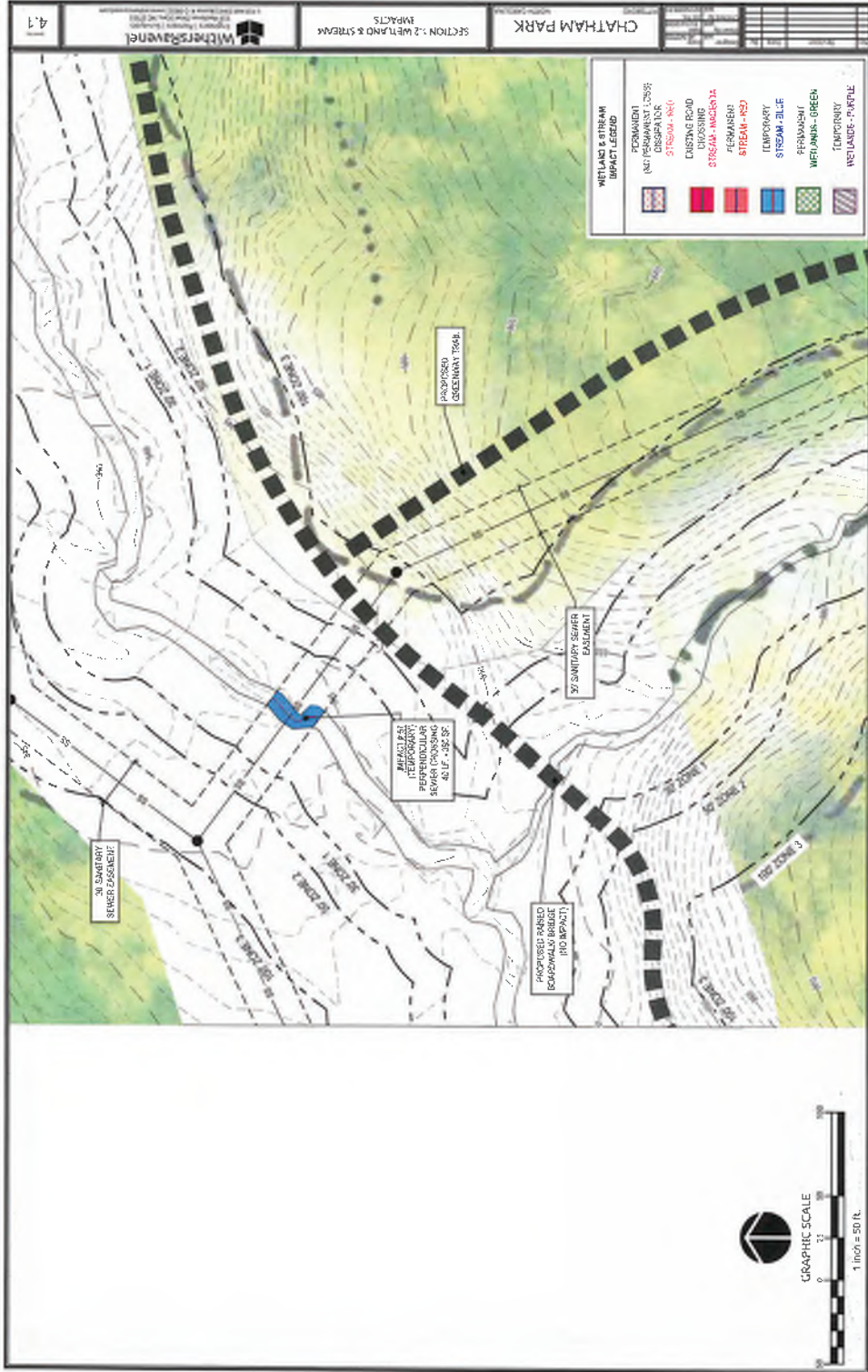




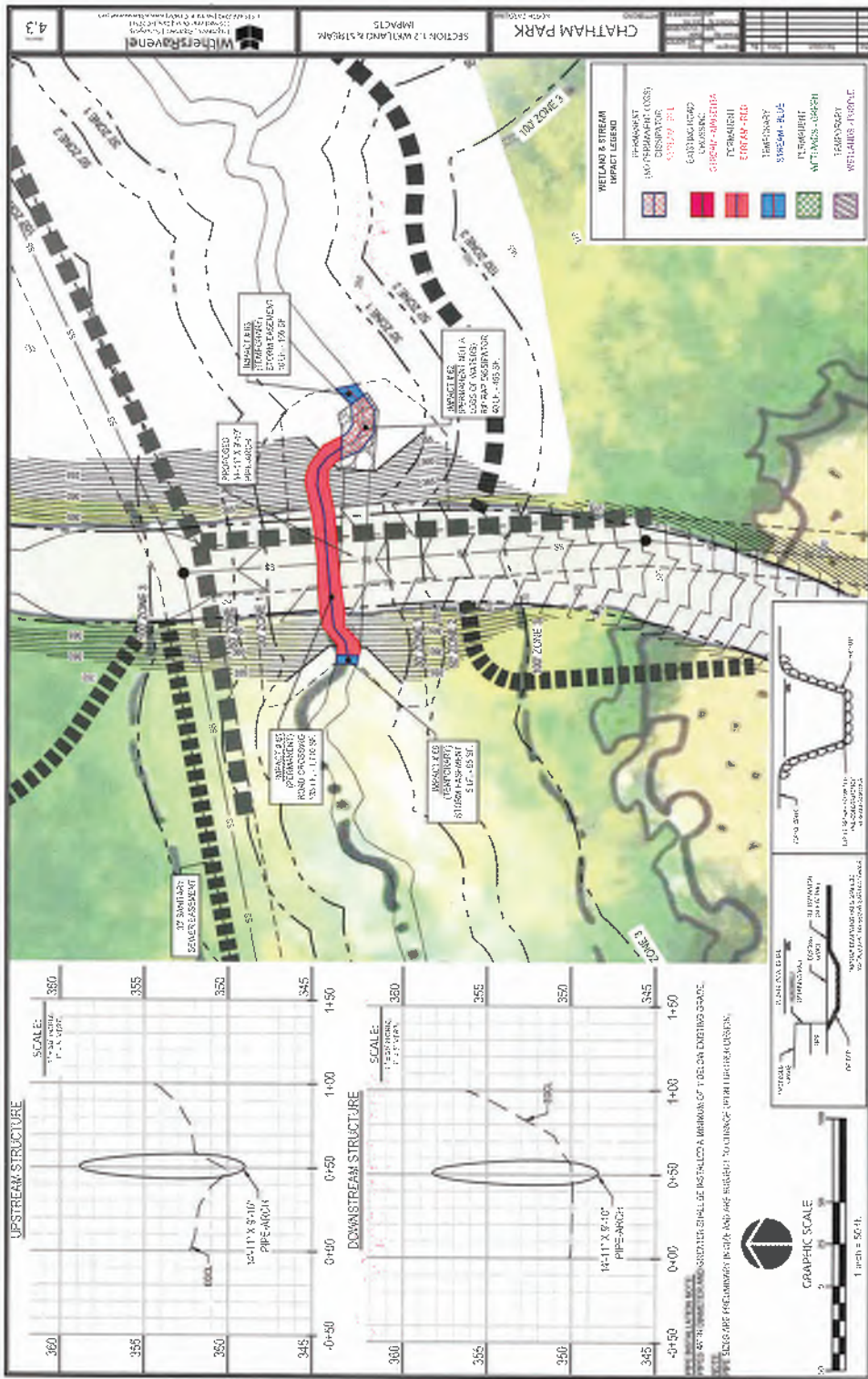
DATE: 10/12/2016 - 10:12:15 AM - Project: CHATHAM PARK - 10/12/2016 - 10:12:15 AM - 10/12/2016 - 10:12:15 AM - 10/12/2016 - 10:12:15 AM

SECTION	SHEET NUMBER	IMPACT NUMBER	IMPACT SPECIFICATION	TEMPORARY				PERMANENT				WETLAND & STREAM (NO PERMANENT LOSS)				PERMANENT IMPACT MINIMIZATION SUMMARY	
				WETLANDS		STREAM		WETLANDS		STREAM		WETLANDS		STREAM			
				(LF)	(SF)	(AC)	(LF)	(SF)	(AC)	(SF)	(AC)	(LF)	(SF)	(AC)	(LF)		(SF)
3.1	66		PERPENDICULAR SEWER CROSSING	35	225	-	-	-	-	-	-	-	-	-	-	-	TEMPORARY UTILITY CROSSING
	67		PERPENDICULAR SEWER CROSSING	-	-	350	0.008	-	-	-	-	-	-	-	-	-	TEMPORARY UTILITY CROSSING
	185		STORM CASEMENT	5	35	-	-	-	-	-	-	-	-	-	-	-	TEMPORARY CONSTRUCTION EASEMENT
	187		PIP RAMP DISSIPATOR	-	-	-	-	-	-	-	-	-	-	-	-	-	PLUNGE POOL
	308		GREENWAY CROSSING	-	-	-	-	70	465	95	-	-	-	-	-	-	2.5:1 (H/V) SOLE BLOCK AND SEGMENTAL BLOCK OR WALKWAY HEADWALLS
	386		STORM CASEMENT	8	40	-	-	-	-	-	-	-	-	-	-	-	TEMPORARY CONSTRUCTION EASEMENT
3.2	69		PERPENDICULAR SEWER CROSSING	35	325	-	-	-	-	-	-	-	-	-	-	-	TEMPORARY UTILITY CROSSING
	69		PERPENDICULAR SEWER CROSSING	35	375	-	-	-	-	-	-	-	-	-	-	-	TEMPORARY UTILITY CROSSING
3.3	70		PERPENDICULAR SEWER CROSSING	35	325	-	-	-	-	-	-	-	-	-	-	-	TEMPORARY UTILITY CROSSING
	71		PERPENDICULAR SEWER CROSSING	35	305	-	-	-	-	-	-	-	-	-	-	-	TEMPORARY UTILITY CROSSING
3.4	71		PERPENDICULAR SEWER CROSSING	35	325	-	-	-	-	-	-	-	-	-	-	-	TEMPORARY UTILITY CROSSING
	72		PERPENDICULAR SEWER CROSSING	35	325	-	-	-	-	-	-	-	-	-	-	-	TEMPORARY UTILITY CROSSING
3.6	73		PERPENDICULAR SEWER CROSSING	35	215	-	-	-	-	-	-	-	-	-	-	-	TEMPORARY UTILITY CROSSING
	73		PERPENDICULAR SEWER CROSSING	35	215	-	-	-	-	-	-	-	-	-	-	-	TEMPORARY UTILITY CROSSING
<b>TOTAL</b>				<b>205</b>	<b>2,120</b>	<b>350</b>	<b>0.008</b>	<b>70</b>	<b>465</b>	<b>95</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>









NOT TO SCALE - SEE PLAN FOR DIMENSIONS. ALL DIMENSIONS SHALL BE IN FEET AND INCHES. TYPICAL DETAILS SHALL BE USED UNLESS OTHERWISE SHOWN.

SECTION	SHEET NUMBER	IMPACT NUMBER	IMPACT SPECIFICATION	WETLAND & STREAM													
				TEMPORARY		PERMANENT				PERMANENT (NO PERMANENT LOSSES)				PERMANENT IMPACT MINIMIZATION SUMMARY**			
				STREAM (LF)	WETLANDS (SF)	WETLANDS (AC)	STREAM (LF)	PROPOSED PIPE (LF)	WETLANDS (SF)	WETLANDS (AC)	STREAM (LF)	WETLANDS (SF)	WETLANDS (AC)				
4.1	5		PERPENDICULAR SEWER CROSSING	40	380	-	-	-	-	-	-	-	-	-	-	PERMANENT IMPACT MINIMIZATION SUMMARY**	
4.2	58		PERPENDICULAR SEWER CROSSING	35	600	-	-	-	-	-	-	-	-	-	-	TEMPORARY UTILITY CROSSING	
			PERPENDICULAR SEWER CROSSING	35	435	-	-	-	-	-	-	-	-	-	-	-	TEMPORARY UTILITY CROSSING
4.3	61		ROAD CROSSING	5	85	-	-	-	-	-	-	-	-	-	-	TEMPORARY CONSTRUCTION EASEMENT	
			RIP - RAP DISSIPATOR	-	-	135	1,710	110	-	-	40	582	-	-	-	-	2.5:1 H:V, SIDE SLOPES AND RECTANGULAR BOX CULVERT PRECAST HEADWALLS
62			STORM EASEMENT	19	105	-	-	-	-	-	-	-	-	-	-	RUNOFF POOL	
63			STORM EASEMENT	125	1,585	-	158	1,710	110	-	-	-	-	-	-	-	TEMPORARY CONSTRUCTION EASEMENT
TOTAL																	

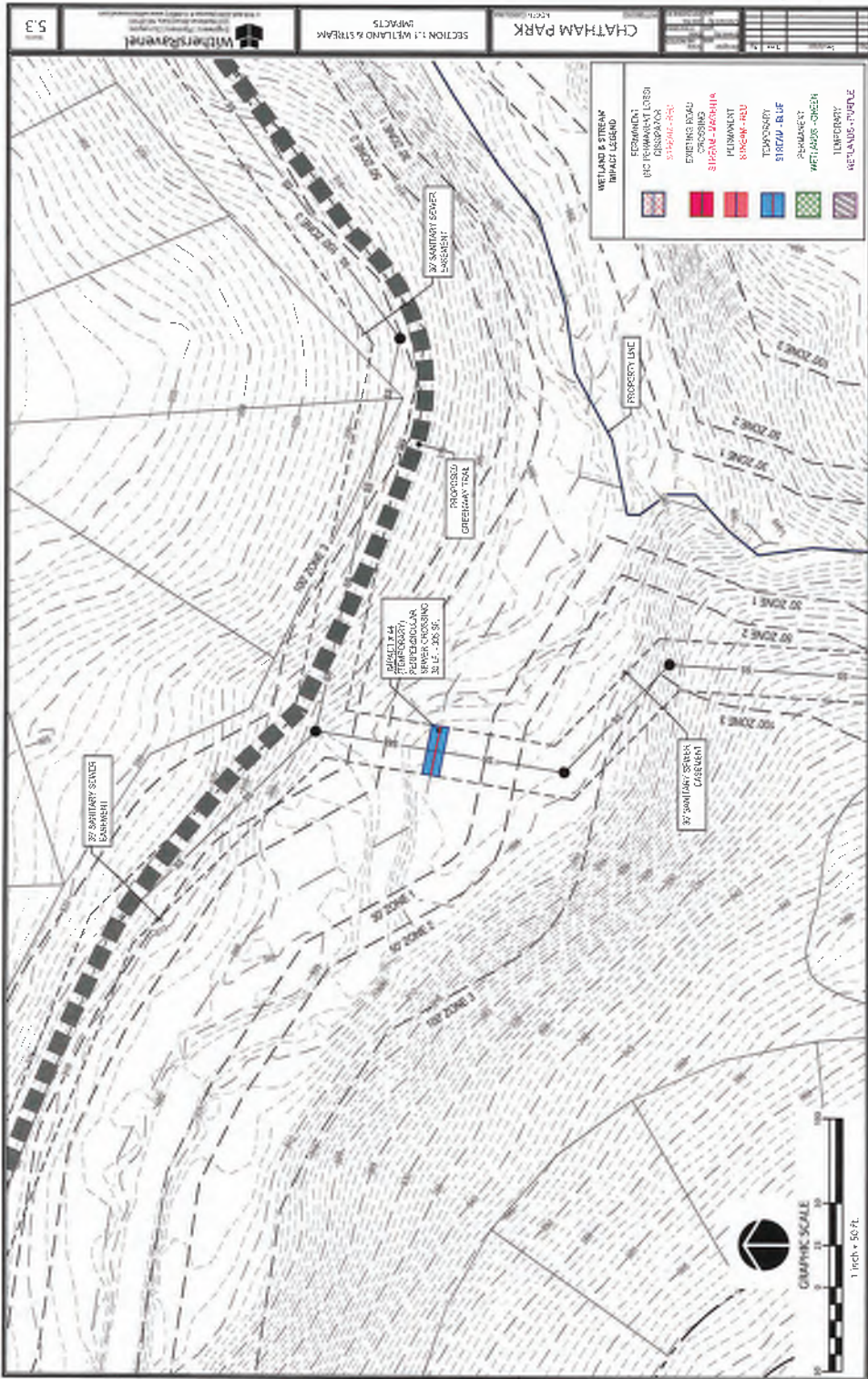
\*\* SLOPE MINIMIZATION SHOWN BASED ON RECOMMENDATIONS FROM GEOTECHNICAL REPORT PROVIDED BY GEOTECHNOLOGIES INC.



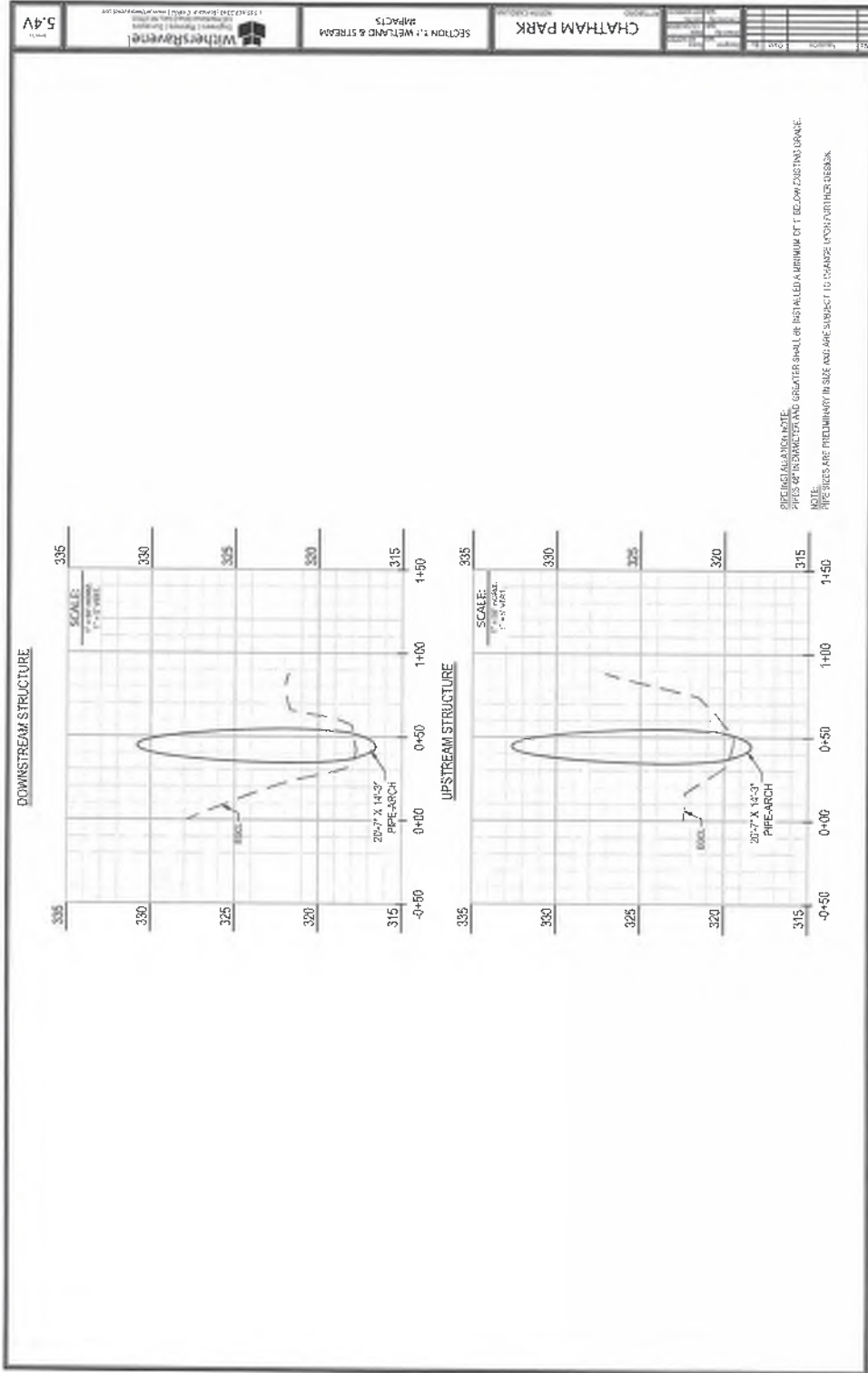


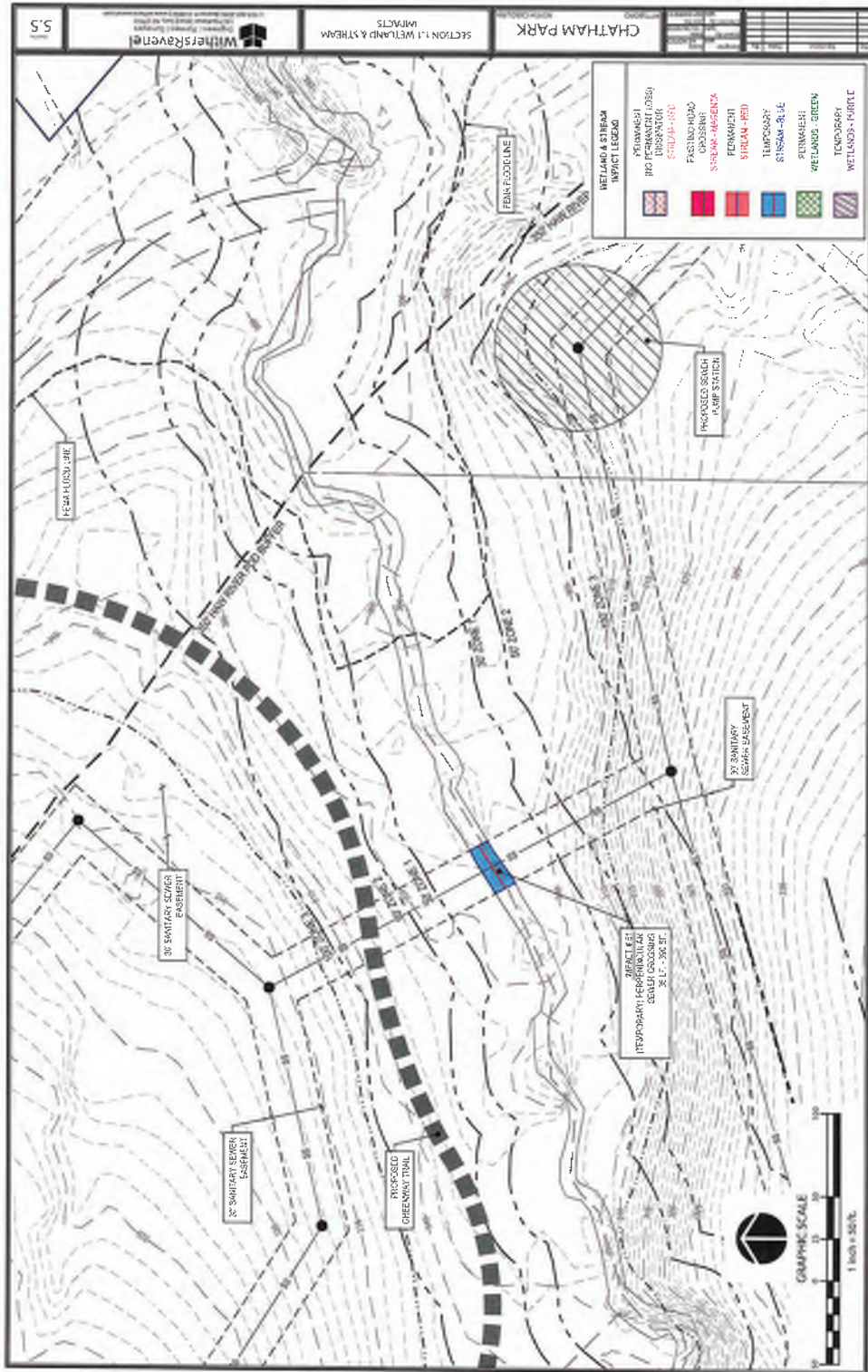














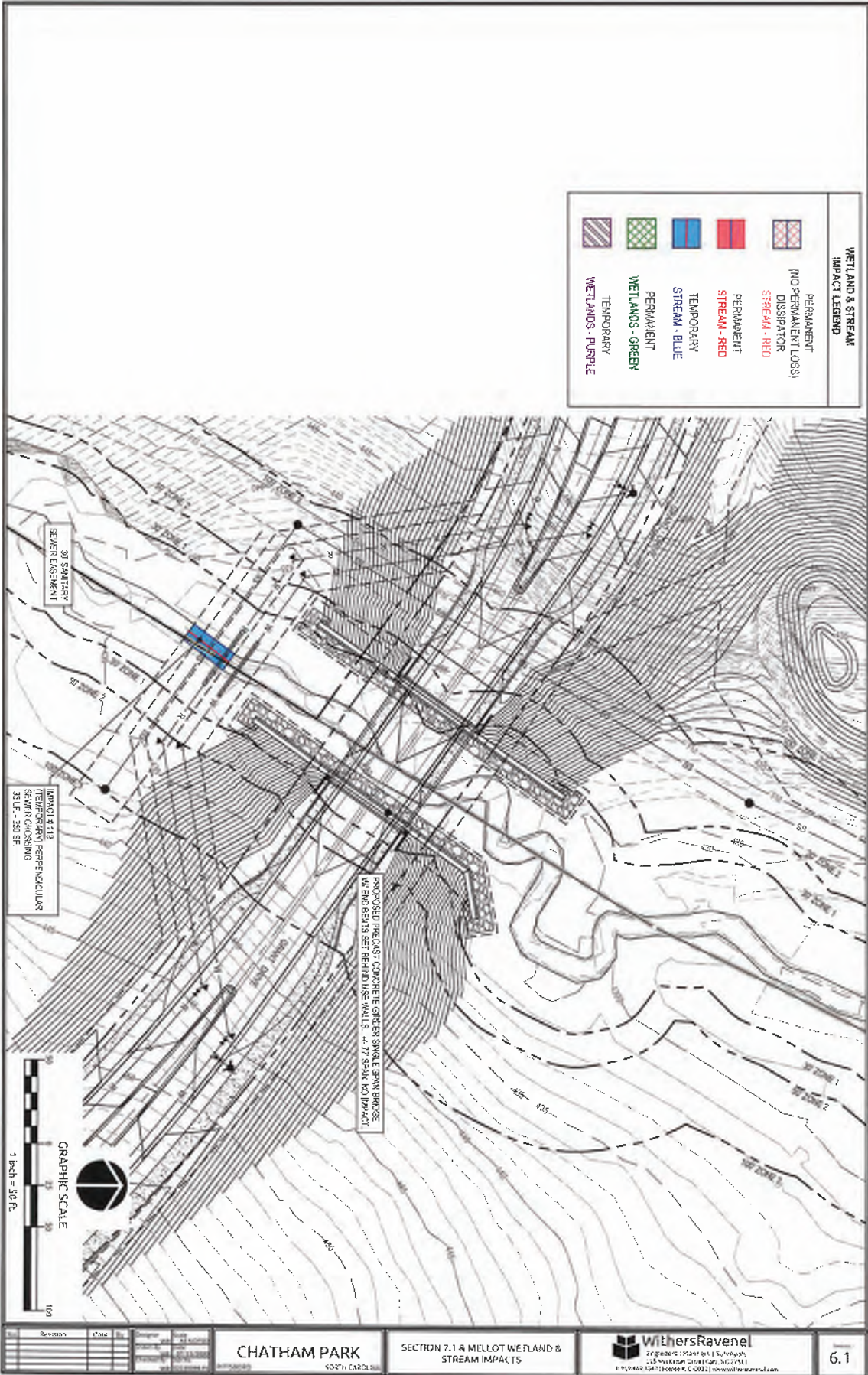


SECTION	SHEET NUMBER	IMPACT SPECIFICATION	TEMPORARY						PERMANENT						WETLAND & STREAM (NO PERMANENT LOSS)						PERMANENT IMPACT MINIMIZATION SUMMARY **
			STREAM		WETLANDS		WETLANDS		STREAM		WETLANDS		WETLANDS		STREAM		WETLANDS				
			(LF)	(SF)	(AC)	(SF)	(AC)	(LF)	(SF)	(AC)	(SF)	(AC)	(LF)	(SF)	(AC)	(LF)	(SF)	(AC)			
1.1	5.1	42	30	210																TEMPORARY UTILITY CROSSING	
			PERPENDICULAR SEWER CROSSING																		
	5.2	43	30	300																TEMPORARY UTILITY CROSSING	
			PERPENDICULAR SEWER CROSSING																		
	5.3	44	30	306																TEMPORARY UTILITY CROSSING	
		PERPENDICULAR SEWER CROSSING																			
	45		30	306																TEMPORARY UTILITY CROSSING	
	46		5	130																TEMPORARY UTILITY CROSSING	
	47		5	170	4,420	150														TEMPORARY UTILITY CROSSING	
	48		5	180																TEMPORARY UTILITY CROSSING	
	49		35	300																TEMPORARY UTILITY CROSSING	
	50		10	30																TEMPORARY UTILITY CROSSING	
	51		5	30																TEMPORARY UTILITY CROSSING	
	52		5	30																TEMPORARY UTILITY CROSSING	
	53		5	30																TEMPORARY UTILITY CROSSING	
	54		5	30																TEMPORARY UTILITY CROSSING	
	55		5	30																TEMPORARY UTILITY CROSSING	
		TOTAL	180	1,880	245	4,810	240	4,850	0.111	70	1,445										

\*\* SLOPE MINIMIZATION SHOWN BASED ON RECOMMENDATIONS FROM GEOTECHNICAL REPORT PROVIDED BY GEOTECHNOLOGIES INC.



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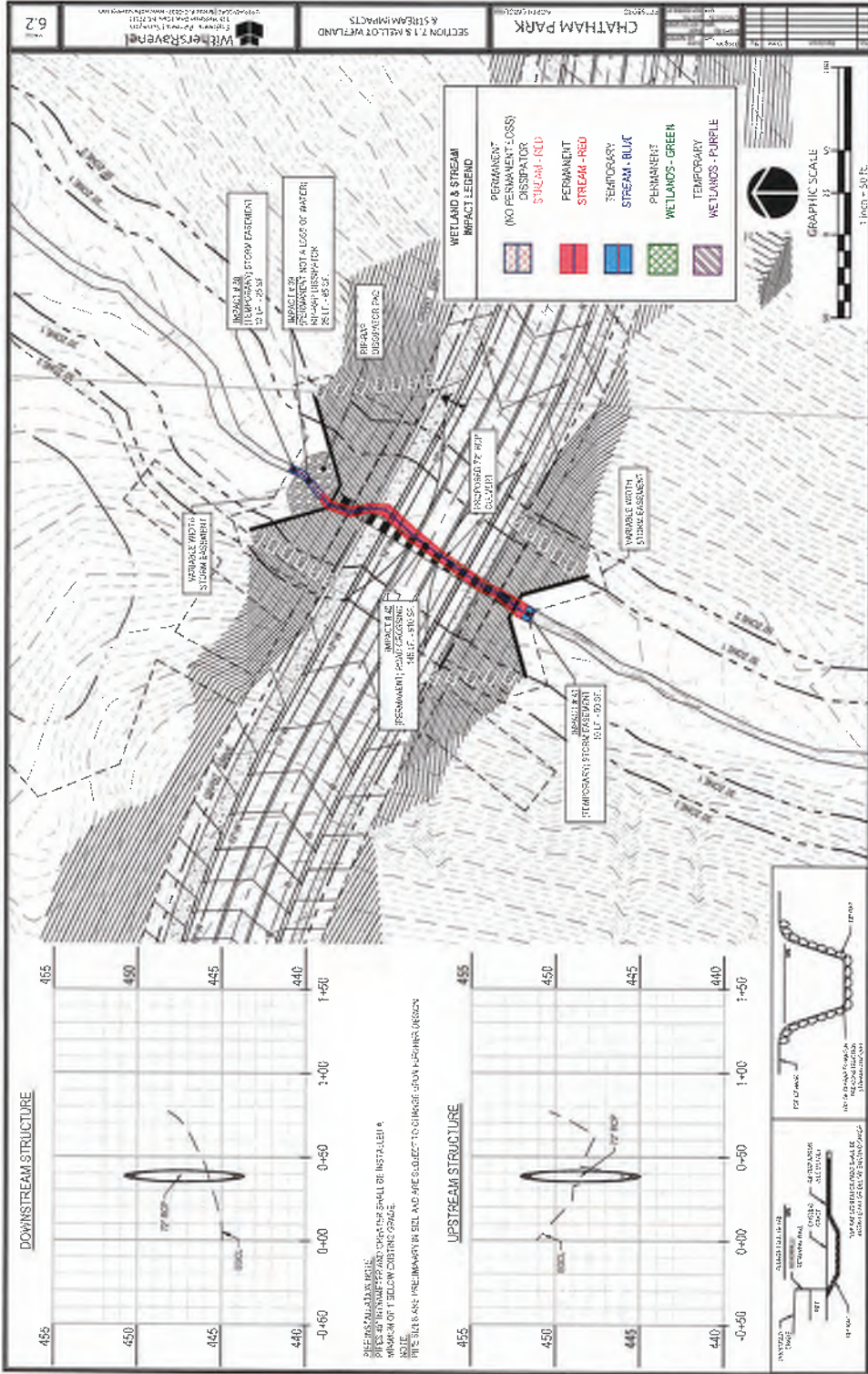


No.	Description	Date	By	Checked	App'd

**CHATHAM PARK**  
 NORTH CAROLINA

**SECTION 7.1 & MELLOTT WETLAND & STREAM IMPACTS**

**withersRavenel**  
 Engineers • Planners • Surveyors  
 115 W. Franklin Street, Cary, NC 27513  
 P: 919.443.3042 | F: 919.443.3021 | www.withersravenel.com

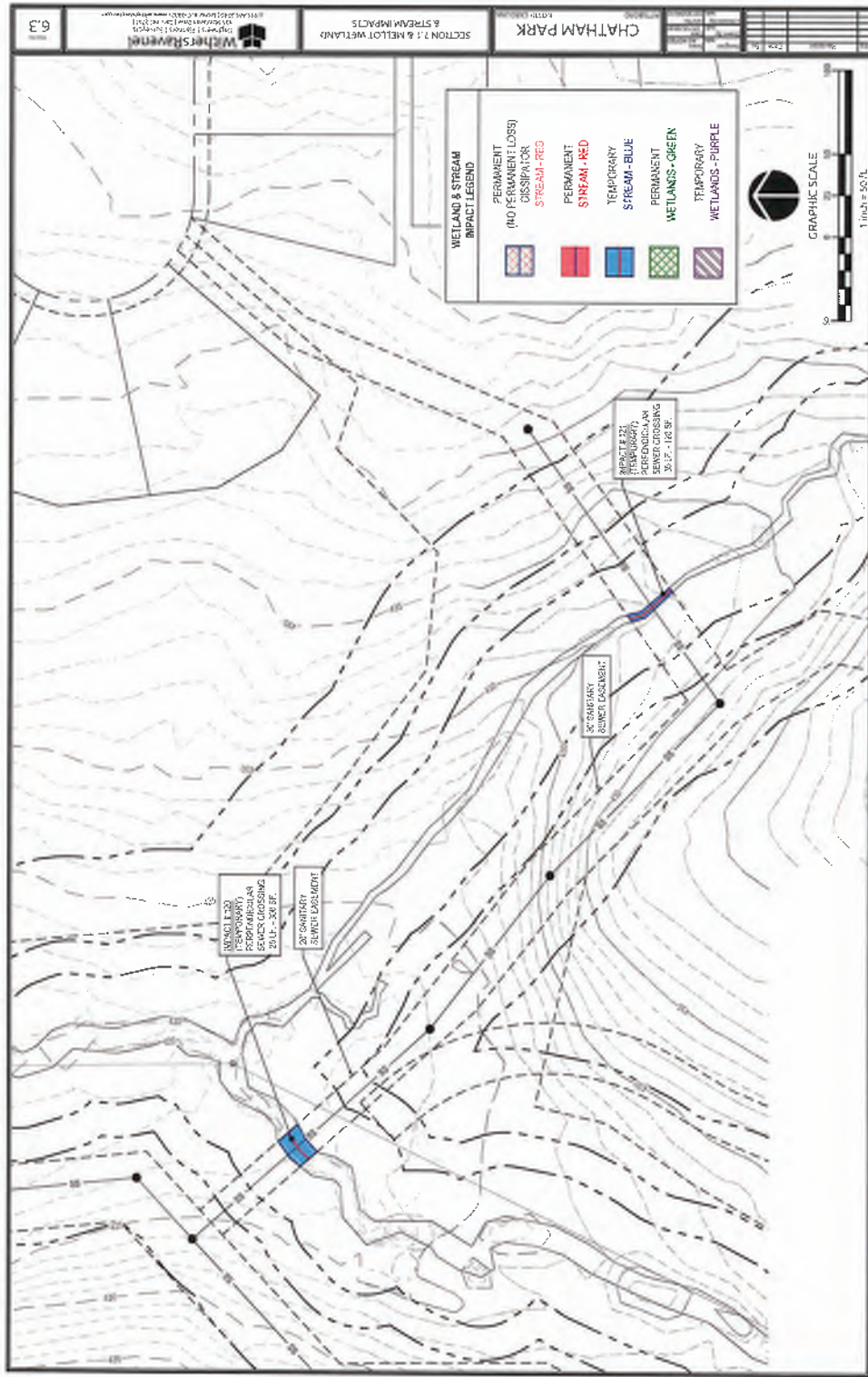


WithersRavenel

6.2

PLEASE ADVISE THE CITY OF CHATHAM COUNTY OF ANY CHANGES TO THE IMPACTS OF THIS PLAN. THE CITY OF CHATHAM COUNTY RESERVES THE RIGHT TO REJECT OR MODIFY ANY PART OF THIS PLAN.

PLEASE ADVISE THE CITY OF CHATHAM COUNTY OF ANY CHANGES TO THE IMPACTS OF THIS PLAN. THE CITY OF CHATHAM COUNTY RESERVES THE RIGHT TO REJECT OR MODIFY ANY PART OF THIS PLAN.

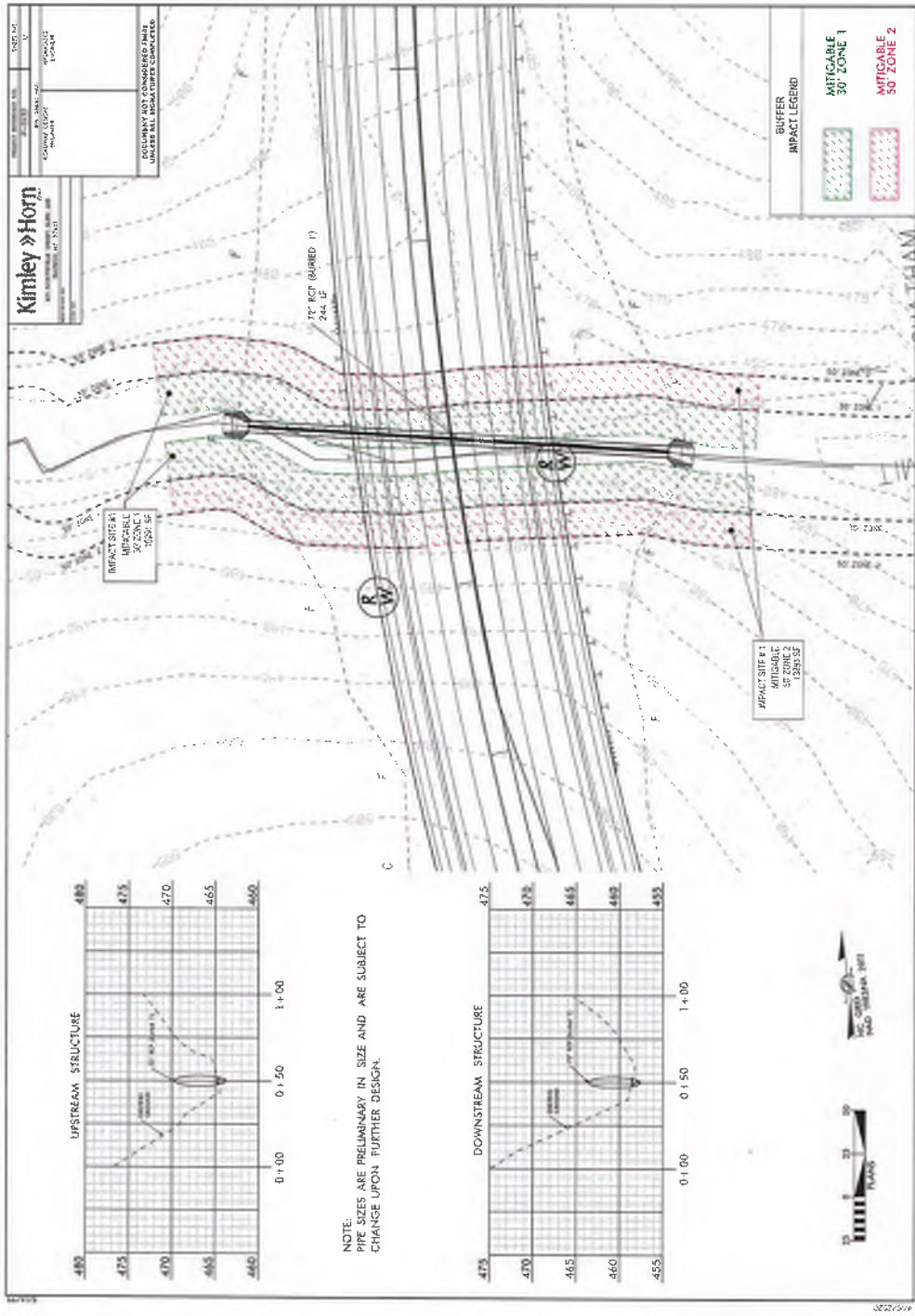


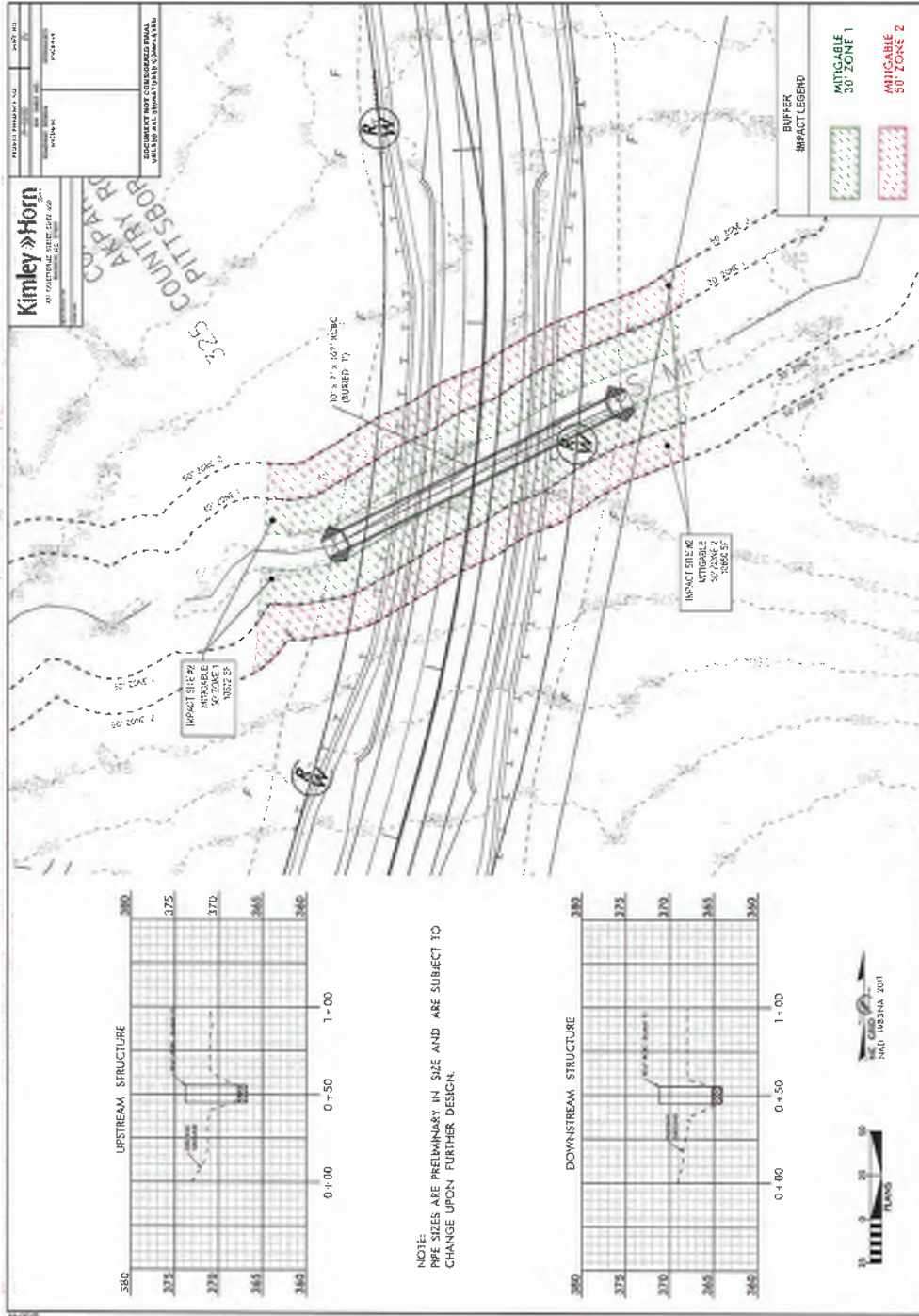
SECTION	SHEET NUMBER	IMPACT NUMBER	IMPACT SPECIFICATION	WETLAND & STREAM														
				TEMPORARY					PERMANENT					PERMANENT (NO PERMANENT LOSS)				
				STREAM		WETLANDS		WETLANDS		STREAM		WETLANDS		WETLANDS		STREAM		WETLANDS
(LF)	(SF)	(SF)	(AC)	(LF)	(SF)	(SF)	(AC)	(LF)	(SF)	(SF)	(AC)	(LF)	(SF)	(SF)	(AC)			
6.1	119		PERPENDICULAR SEWER CROSSING	35	360	-	-	-	-	-	-	-	-	-	-	-	-	
		38	STORM EASEMENT	10	25	-	-	-	-	-	-	-	-	-	-	-	-	
6.2	39		RIP-RAP DISSIPATOR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		40	ROAD CROSSING	-	-	-	-	145	910	125	-	-	-	-	-	-	-	
6.3	120		PERPENDICULAR SEWER CROSSING	25	300	-	-	-	-	-	-	-	-	-	-	-	-	
	121		PERPENDICULAR SEWER CROSSING	35	120	-	-	-	-	-	-	-	-	-	-	-	-	
			<b>TOTAL</b>	<b>105</b>	<b>795</b>	<b>-</b>	<b>-</b>	<b>145</b>	<b>910</b>	<b>125</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>25</b>	<b>85</b>	<b>-</b>	<b>-</b>	

\*\* SLOPE MINIMIZATION SHOWN BASED ON RECOMMENDATIONS FROM GEOTECHNICAL REPORT PROVIDED BY GEOTECHNOLOGIES INC.

PERMANENT IMPACT MINIMIZATION SUMMARY \*\*

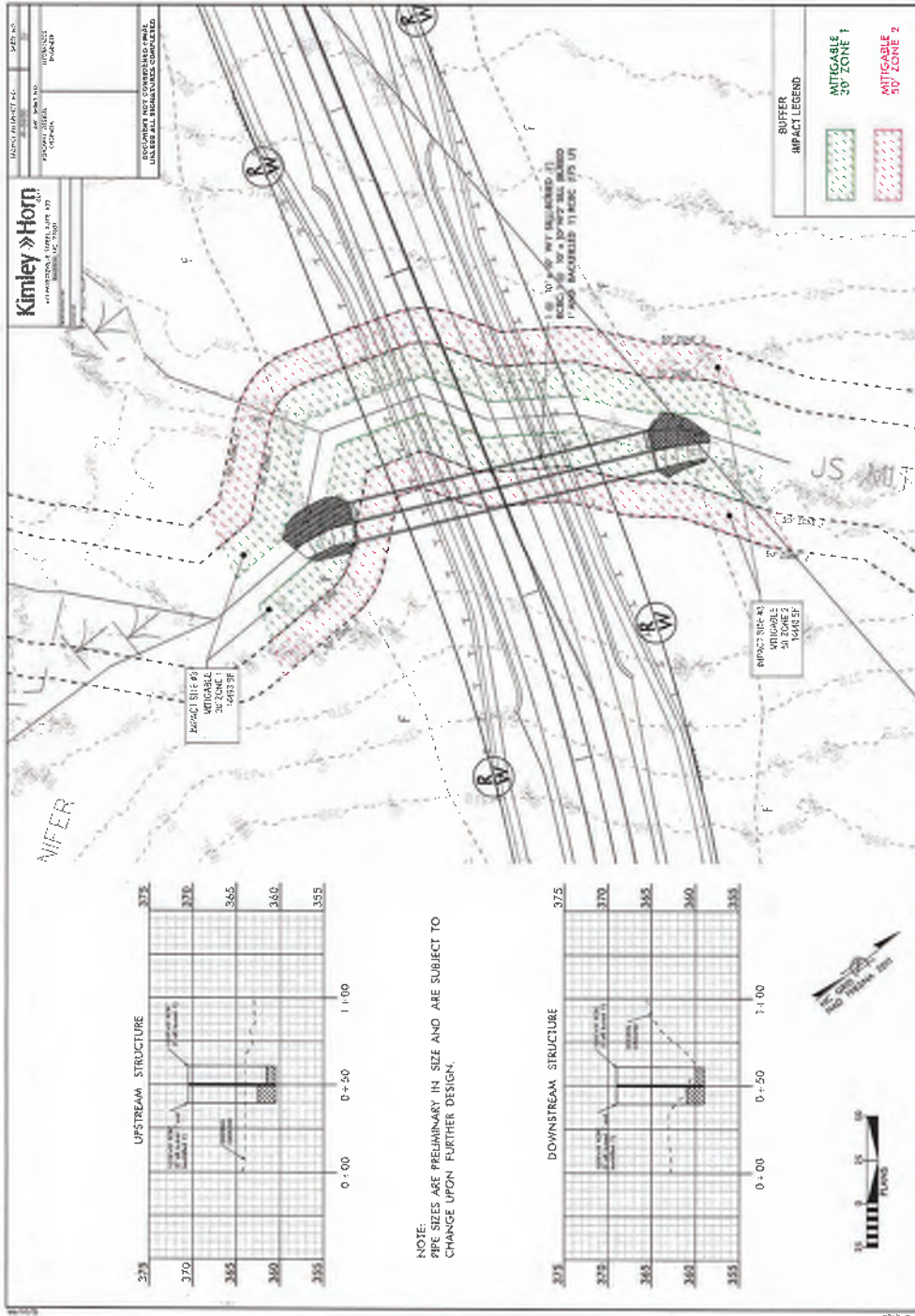
- TEMPORARY UTILITY CROSSING
- TEMPORARY CONSTRUCTION EASEMENT
- PLUNGE POOL
- 2:1 (H:V) SIDE SLOPES AND SEGMENTAL BLOCK OR PRECAST HEADWALLS
- TEMPORARY UTILITY CROSSING
- TEMPORARY UTILITY CROSSING



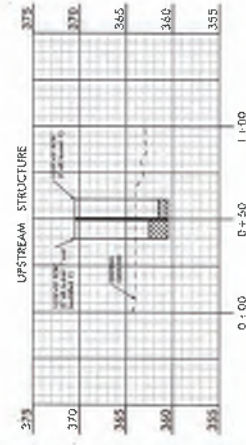


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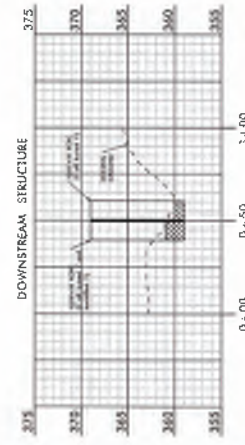




**Kimley»Horn**  
INCORPORATED  
10000 N. 10TH AVENUE, SUITE 100  
DENVER, COLORADO 80231  
TEL: 303.751.4000  
WWW.KIMLEYHORN.COM



NOTE:  
PIPE SIZES ARE PRELIMINARY IN SIZE AND ARE SUBJECT TO  
CHANGE UPON FURTHER DESIGN.



**IMPACT LEGEND**

- MITIGABLE 30' ZONE 1
- MITIGABLE 50' ZONE 2



020-219

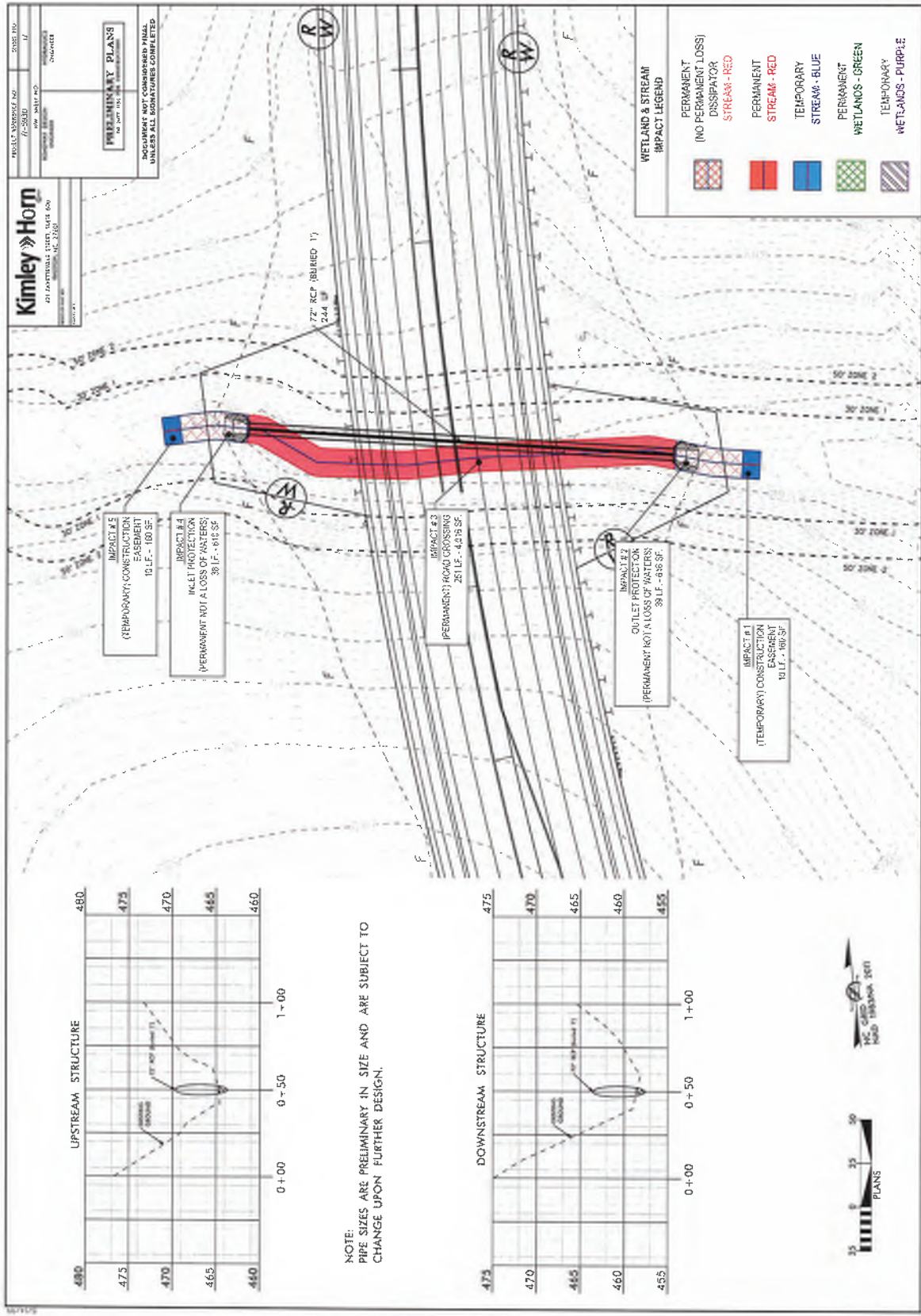
SECTION	SHEET NUMBER	IMPACT NUMBER	IMPACT SPECIFICATION	MITIGABLE IMPACTS			PERMANENT IMPACT MINIMIZATION SUMMARY
				30' ZONE 1 (SF)	50' ZONE 2 (SF)		
1.1	1	1	ROAD CROSSING	15291	13893	72" RCP-IV (BURIED 1')	
2.1	2	2	ROAD CROSSING	10672	10850	10' x 7' RCBC (BURIED 1')	
3.1	3	3	ROAD CROSSING	14493	14440	1@10' x 10' RCBC (BURIED 1') & 1@10' x 10' RCBC (BURIED 2')	
<b>TOTAL</b>				<b>40456</b>	<b>39183</b>		

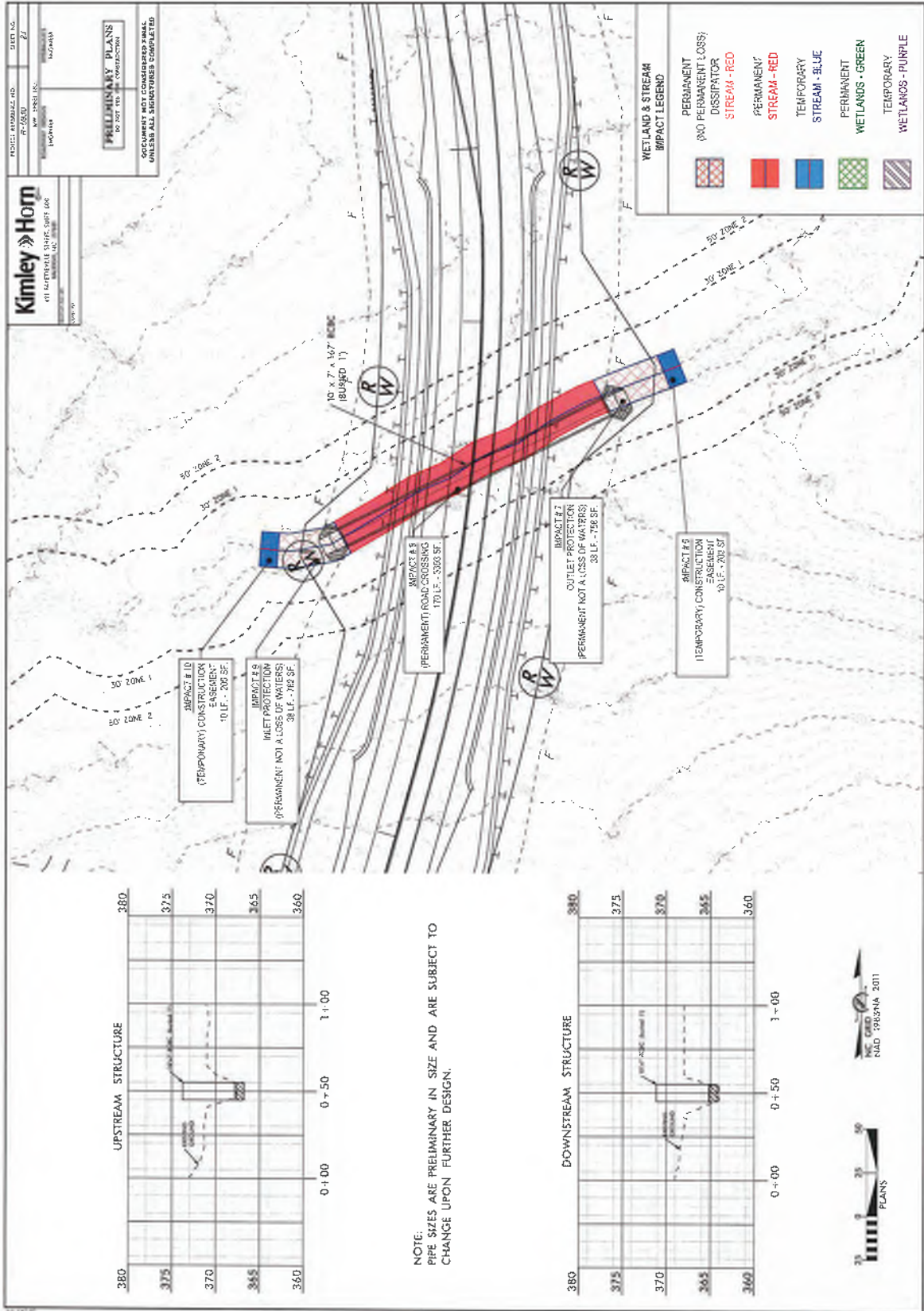
**Kimley-Horn**  
 400 WEST 10TH AVENUE, SUITE 200  
 DENVER, CO 80202  
 PHONE: 303.733.8900  
 WWW.KIMLEY-HORN.COM

PROJECT NUMBER: 15-001  
 SHEET NUMBER: P-143  
 DATE: 11/15/15

DESIGNED BY: JLD  
 CHECKED BY: JLD  
 IN CHARGE: JLD

ACCURACY NOT GUARANTEED FOR UNUSUAL SUBSTRATA CONDITIONS.





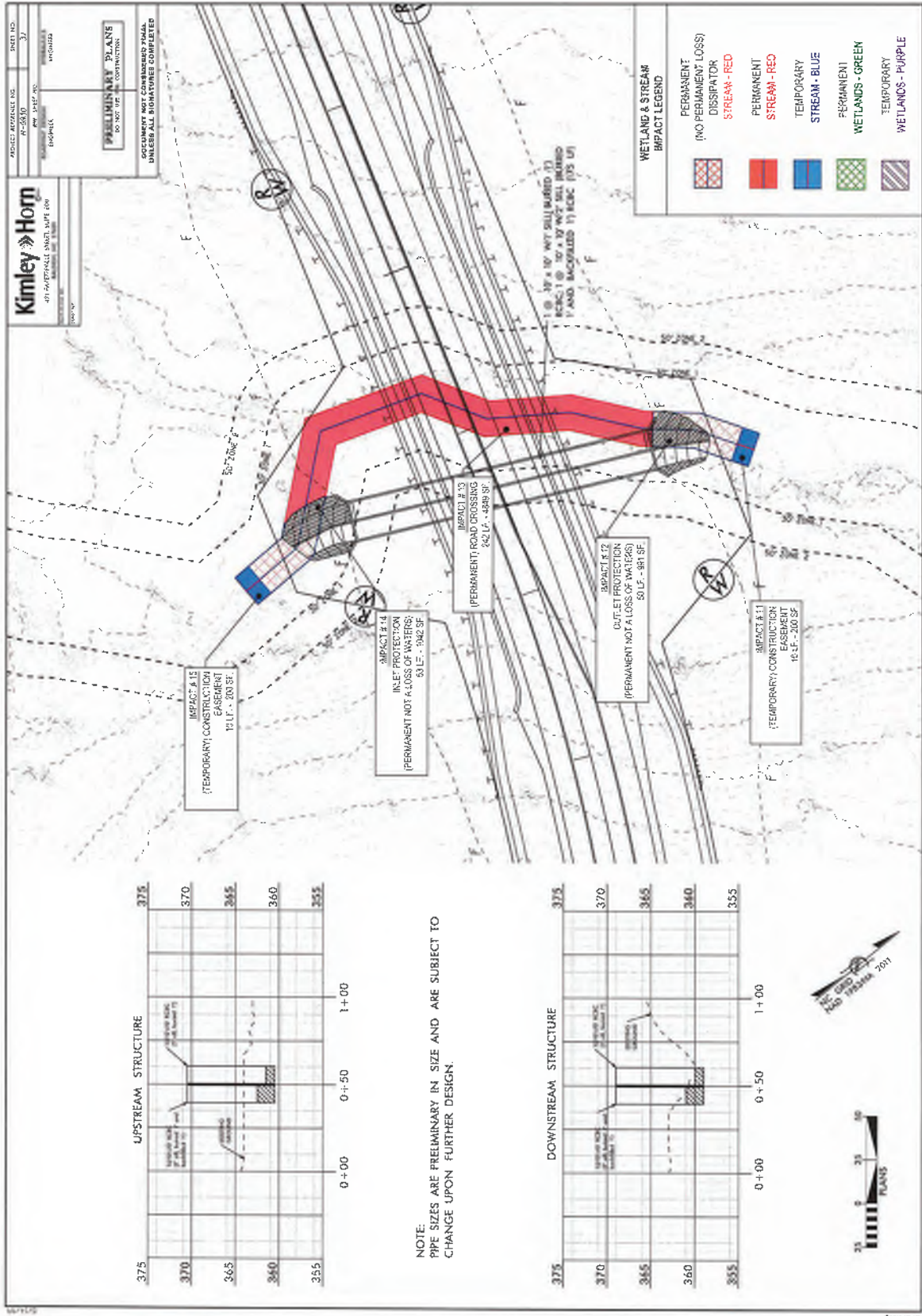
**Kimley-Horn**  
 401 W. STATE ST. SUITE 200  
 CHARLOTTE, NC 28202  
 (704) 383-1100

PROJECT NUMBER AND SHEET NO.  
 R-2400 22

DATE  
 12/2011

PRELIMINARY PLANS  
 DO NOT USE FOR CONSTRUCTION

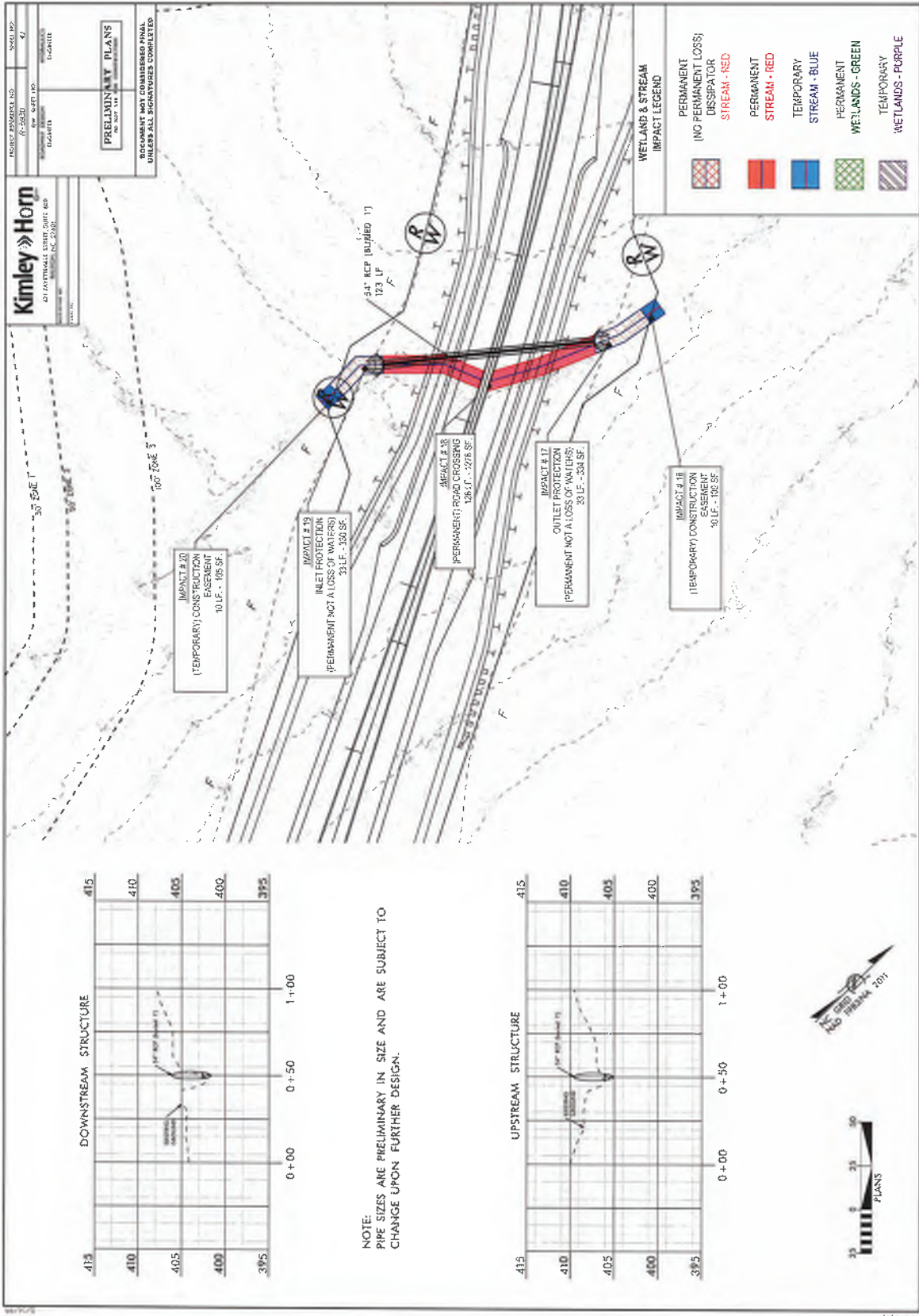
DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED



**Kimley-Horn**  
401 W. PINE STREET, SUITE 100  
DALLAS, TEXAS 75201  
PH: 972.343.7000  
WWW.KIMLEY-HORN.COM

PROJECT NUMBER: 105  
DATE: 11/17/10  
DRAWING NO.: P-146  
SCALE: AS SHOWN  
DESIGNED BY: [Redacted]  
CHECKED BY: [Redacted]

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION  
ORDINANCE NOT COMPLETED  
UNLESS ALL NOTATIONS COMPLETED



**Kimley-Horn**  
 401 HARTWELL CENTER DRIVE, SUITE 400  
 FARMINGDALE, MS 39240  
 PHONE: 662.833.2322  
 WWW.KH.COM

**PRELIMINARY PLANS**  
 NO. 207.144  
 11/18/2021

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

PROJECT NUMBER: MS 30021072  
 PROJECT NAME: (1) NEW WATER LIFT  
 CLIENT: FARMINGDALE  
 LOCATION: FARMINGDALE, MS



PROJECT NUMBER: 2020-002  
 SHEET NO.: 34

**INCOMPLETE PLANS  
 PRELIMINARY PLANS**  
 DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

SECTION	SHEET NUMBER	IMPACT SPECIFICATION	WETLAND & STREAM										PERMANENT IMPACT MINIMIZATION SUMMARY				
			TEMPORARY					PERMANENT						PERMANENT (NO PERMANENT LOSS)			
			STREAM		WETLANDS			STREAM		WETLANDS				STREAM	WETLANDS		
(LF)	(SF)	(SF)	(AC)	(LF)	(SF)	(AC)	(LF)	(SF)	(AC)	(LF)	(SF)	(AC)					
1.1	1	CONSTRUCTION EASEMENT	10	100												TEMPORARY CONSTRUCTION ACCESS	
	2	BANK STABILIZATION										39	616			OUTLET PROTECTION	
	3	ROAD CROSSING										38	610			72" RCP-IV (BURIED 1')	
	4	BANK STABILIZATION	10	100												INLET PROTECTION	
2.1	5	CONSTRUCTION EASEMENT	10	200												TEMPORARY CONSTRUCTION ACCESS	
	6	CONSTRUCTION EASEMENT	10	200												TEMPORARY CONSTRUCTION ACCESS	
	7	BANK STABILIZATION										38	758			OUTLET PROTECTION	
	8	ROAD CROSSING										38	762			10' x 7' RCB (BURIED 1')	
3.1	9	BANK STABILIZATION	10	200												INLET PROTECTION	
	10	CONSTRUCTION EASEMENT	10	200												TEMPORARY CONSTRUCTION ACCESS	
	11	CONSTRUCTION EASEMENT	10	200												TEMPORARY CONSTRUCTION ACCESS	
	12	BANK STABILIZATION										50	991			OUTLET PROTECTION	
4.1	13	ROAD CROSSING										53	1042			1@10' x 10' RCB (BURIED 2') & 1@10' x 10' RCB (BURIED 2')	
	14	BANK STABILIZATION	10	100												INLET PROTECTION	
4.1	15	CONSTRUCTION EASEMENT	10	200												TEMPORARY CONSTRUCTION ACCESS	
	16	CONSTRUCTION EASEMENT	10	100												TEMPORARY CONSTRUCTION ACCESS	
	17	BANK STABILIZATION										35	334			INLET PROTECTION	
	18	ROAD CROSSING										33	330			54" RCP-IV (BURIED 1')	
		19	BANK STABILIZATION	10	105											OUTLET PROTECTION	
		20	CONSTRUCTION EASEMENT	80	1205	0	0	791	13536	709	0	0	322	5443	0	0	TEMPORARY CONSTRUCTION ACCESS
<b>TOTAL</b>																	