



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

March 17, 2023

MEMORANDUM TO: Division Environmental and Construction Units

FROM: *mat* Michael A. Turchy, ECAP Group Leader
Environmental Analysis Unit

SUBJECT: Environmental Permits for the Interstate Access Addition to I-485 at
Weddington Road (SR 3468) in Mecklenburg County, Division 10, **TIP:
R-0211EC.**

Please find enclosed the following permits for this project:

Agency	Permit Type	Date	Permit Expiration
US Army Corps of Engineers Section 404 Clean Water Act Permit	Regional General Permit (RGP) 50	March 13, 2023	May 25, 2025
	Nationwide 14	October 1, 2019	Expired, but retained as referenced in 3/13/2023 permit
NC Division of Water Resources Section 401 Water Quality Certification	General Certification 4135 (RGP 50)	February 9, 2023	May 25, 2025
	General Certification 4135 (NW 14)	November 7, 2019	Expired, but retained as reference

Work is authorized by the above referenced permit provided it is accomplished in strict accordance with the permitted plans.

The Environmental Coordination and Permitting Group or the Division Environmental Office must be consulted if any deviation from the permit(s) is required.

The General Conditions and Certifications for Nationwide and Regional Permits can be referenced at:
https://xfer.services.ncdot.gov/pdea/PermIssued/_General_Conditions_and_Certifications/

PROJECT COMMITMENTS

T.I.P Project No. R-0211EC
Interstate Access Addition to I-485
at Weddington Road (SR 3468)
Mecklenburg County
WBS Element 34331.1.12

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Roadway Design Unit / Division 10

NCDOT will provide five-foot (5-ft) bicycle lanes along the north and southbound outside travel lanes to accommodate bicycle traffic along the Weddington Road (SR 3468) portion of the project.

Roadway Design Unit / Division 10

At the request of the City of Charlotte and the Town of Matthews, NCDOT will enter into a municipal agreement with each municipality to fund the construction of sidewalk/multi-use paths along each side of Weddington Road. The cost share for the proposed paths will apply to the construction cost for the five-foot (5-ft) width of a sidewalk. The cost share percentage to be paid by each municipality will be determined by the size in population of the municipality. Each municipality will be responsible for 100% of the cost for the additional multi-use path width beyond the typical five-foot (5-ft) section of sidewalk. Final terms and costs of constructing the multi-use paths will be disclosed in separate municipal agreements between NCDOT and each municipality (the City of Charlotte and the Town of Matthews).

Structure Design Unit / Division 10

Placement of new culverts and other structures in waters, streams, and wetlands shall be placed below the elevation of the streambed by one foot for all culverts/pipes with a diameter greater than 48 inches, and 20 percent of the culvert/pipe diameter for pipes having a diameter less than 48 inches, to allow low flow passage of water and aquatic life.

Existing culverts on this project are not buried, therefore the culvert extensions will not be buried. The bottom elevation of the extended culverts will match the elevation of the existing stream bed.

COMMITMENTS FROM PERMITTING

No special conditions developed during permitting.

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action Id. SAW 2019-01768 NCDOT R-0211EC I-485 & SR 3468 (Weddington Road) Interchange.
County: Mecklenburg U.S.G.S. Quad: NC-Matthews

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Permittee: North Carolina Department of Transportation
Ms. Erin Cheely
Address: 1598 Mail Service Road
Raleigh, NC 27699-1598
Telephone Number: (919) 707-6008
E-mail: ekcheely@ncdot.gov

Size (acres)	<u>N/A</u>	Nearest Town	<u>Mathews</u>
Nearest Waterway	<u>Fourmile Creek</u>	River Basin	<u>Lower Catawba</u>
USGS HUC	<u>03050103</u>	Coordinates	Latitude: <u>35.089500</u> Longitude: <u>-80.730048</u>

Location description: The project is located at the I-485 and SR 3468 (Weddington Road) Interchange near the town of Matthews in Mecklenburg County, North Carolina.

Description of projects area and activity: This verification supersedes former NWP 14 SAW-2019-01768 acknowledged on October 1, 2019, to authorize NCDOT project R-0211EC, which will include the I-485 and SR 3468 (Weddington Road) interchange construction/improvement project. This project is a half-clover leaf interchange that will include the permanent placement of 59 linear feet of stream bank stabilization, permanent placement of 66 linear feet of culvert extensions and rock armor and 0.01-acre temporary impacts for dewatering activities in areas where culvert extensions/rock armor/stabilization will be placed in two separate tributaries to Fourmile Creek.

Applicable Law(s): ☒ Section 404 (Clean Water Act, 33 USC 1344)
☐ Section 10 (Rivers and Harbors Act, 33 USC 403)

Authorization: **Regional General Permit (RGP) 50**

SEE ATTACHED NWP GENERAL, REGIONAL, AND/OR SPECIAL CONDITIONS

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached Conditions, your application signed and dated 1/19/2023, and the enclosed plans Permit Drawings 1-11 of 11 dated 9/12/2019. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order, a Class I administrative penalty, and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide and/or regional general permit authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide and/or regional general permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide permit. If the nationwide and/or regional general permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide and/or regional general permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide and/or regional general permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Resources (telephone 919-807-6300) to determine Section 401 requirements.

For activities occurring within the twenty coastal counties subject to regulation under the Coastal Area Management Act (CAMA), prior to beginning work you must contact the N.C. Division of Coastal Management **Morehead City, NC, at (252) 808-2808.**

SAW 2019-01768 NCDOT R-0211EC I-485 & SR 3468 (Weddington Road) Interchange, Mecklenburg Co.

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits. If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact Stephen A. Brumagin at (704) 798-6471 or stephen.a.brumagin@usace.army.mil.

Monte
Matthew

2023.03.13

07:04:47 -04'00'

Corps Regulatory Official: _____ Date: 3/13/2023
Expiration Date of Verification: 5/25/2025

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

Copy furnished:

Mr. Michael Turchy
North Carolina Department of Transportation
1598 Mail Service Road
Raleigh, NC 27699-1598
maturchy@ncdot.gov

SPECIAL CONDITIONS

1. All work must be performed in strict compliance with (a) the description of work in the PCN and (b) the Wetlands and Surface Water Impact Permit Drawing(s) (Permit Plans) in the application dated January 29, 2021. Any modification to the description of work and/or the permit plans must be approved by the USACE prior to implementation.
2. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this authorization letter 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 authorization letter, all conditions, and any authorized modifications. A copy of this authorization letter, all conditions, and any authorized modifications, shall be available at the project site during construction and maintenance of this project.

SAW 2019-01768 NCDOT R-0211EC I-485 & SR 3468 (Weddington Road) Interchange, Mecklenburg Co.

Action ID Number: SAW 2019-01768 NCDOT R-0211EC I-485 & SR 3468 (Weddington Road) Interchange. County: Mecklenburg

Permittee: North Carolina Department of Transportation, Ms. Erin Cheely

Project Name: NCDOT R-0211EC I-485 and SR 3468 (Weddington Road.) Interchange

Date Verification Issued: 3/13/2023

Project Manager: Stephen A. Brumagin

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
Attn: Stephen A. Brumagin
Charlotte Regulatory Office
U.S Army Corps of Engineers
8430 University Executive Park Drive, Suite 615
Charlotte, North Carolina 28262
or
stephen.a.brumagin@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action Id. SAW No. 2019-01768 County: Mecklenburg U.S.G.S. Quad: NC-Matthews

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Permittee: North Carolina Department of Transportation

Erin Cheely

Address: 1598 Mail Service Center

Raleigh, North Carolina 27699-1598

Telephone Number: 919-707-6108

E-mail: ekcheely@ncdot.gov

Size (acres) 80 acres

Nearest Waterway Fourmile Creek

USGS HUC 03050103

Nearest Town Matthews

River Basin Santee

Coordinates Latitude: 35.089500

Longitude: -80.730048

Location description: I 485 and SR 3468 (Weddington Rd.) in Mecklenburg County, North Carolina.

Description of projects area and activity: This verification authorizes the construction of a half-clover interchange at I 485 and SR 3468 (Weddington Rd.), resulting in 59 linear feet of stream bank stabilization, 66 linear feet of permanent stream channel impacts, and less than 0.01 acre of temporary stream impacts for dewatering activities.

Applicable Law(s): ☒ Section 404 (Clean Water Act, 33 USC 1344)
☐ Section 10 (Rivers and Harbors Act, 33 USC 403)

Authorization: **NWP 14. Linear Transportation Projects**

SEE ATTACHED NWP GENERAL, REGIONAL, AND/OR SPECIAL CONDITIONS

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the enclosed Conditions, your application signed and dated 9/16/2019, and the enclosed plans Sheets 1-11 dated 9/12/2019. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order, a Class I administrative penalty, and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide permit. If the nationwide permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Resources (telephone 919-807-6300) to determine Section 401 requirements.

For activities occurring within the twenty coastal counties subject to regulation under the Coastal Area Management Act (CAMA), prior to beginning work you must contact the N.C. Division of Coastal Management **Morehead City, NC, at (252) 808-2808.**

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits.

If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact Nicholle Braspenickx at 704-510-0162 or Nicholle.M.Braspenickx.usace.army.mil.

Corps Regulatory Official: _____

Moak Matthews

Date: 2019.10.01 15:09:05 -04'00'

Date: 10/01/2019

Expiration Date of Verification: 03/18/2022

SPECIAL CONDITIONS

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

Action ID Number: SAW No. 2019-01768 County: Mecklenburg

Permittee: North Carolina Department of Transportation, Erin Cheely

Project Name: NC DOT/R 0211EC, I 485 and SR 3468 (Weddington Rd.)

Date Verification Issued: 10/01/2019

Project Manager: Nicholle Braspennickx

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
Attn: Nicholle Braspennickx
Charlotte Regulatory Office
U.S Army Corps of Engineers
8430 University Executive Park Drive, Suite 615
Charlotte, North Carolina 28262
or
Nicholle.M.Braspennickx.usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

Compensatory Mitigation Responsibility Transfer Form

Permittee: North Carolina Department of Transportation, Erin Cheely
Project Name: NC DOT/R 0211EC, I 485 and SR 3468 (Weddington Rd.)

Action ID: SAW No. 2019-01768
County: Mecklenburg

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

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

Permitted Impacts and Compensatory Mitigation Requirements:

Permitted Impacts Requiring Mitigation*

8-digit HUC and Basin: 03050103, Catawba River Basin

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

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

Compensatory Mitigation Requirements:

8-digit HUC and Basin: 03050103, Catawba River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
132 linear feet						

Mitigation Site Debited:

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

Section to be completed by the Mitigation Sponsor

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

Mitigation Sponsor Name: NCDMS

Name of Sponsor's Authorized Representative: Beth Harmon

Beth Harmon
Signature of Sponsor's Authorized Representative

03/11/2020
Date of Signature

Conditions for Transfer of Compensatory Mitigation Credit:

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

Comments/Additional Conditions: A letter from the North Carolina Division of Mitigation Services, confirming they are willing and able to accept the applicant's compensatory mitigation responsibility, dated 9/13/2019 was included with the preconstruction notification.

This form is not valid unless signed below by the USACE Project Manager and by the Mitigation Sponsor on Page 1. ***Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the USACE Project Manager at the address below, and 3) the Wilmington District Mitigation Office, Attn: Todd Tugwell, 11405 Falls of Neuse Road, Wake Forest, NC 27587 (email: todd.tugwell@usace.army.mil).*** Questions regarding this form or any of the permit conditions may be directed to the USACE Project Manager below.

USACE Project Manager: Nicholle Braspenickx
USACE Field Office: Charlotte Regulatory Office
US Army Corps of Engineers
8430 University Executive Park Drive, Suite 615
Charlotte, North Carolina 28262
Email: Nicholle.M.Braspenickx.usace.army.mil

Nicholle Braspenickx

USACE Project Manager Signature

10/01/2019

Date of Signature

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

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

RICHARD E. ROGERS, JR.
Director



NORTH CAROLINA
Environmental Quality

February 9, 2023

DWR # 2019-1232v2
Mecklenburg County

Ms. Erin Cheely
Environmental Coordinator
NCDOT
MSC 1598
Raleigh, NC 27699-1598

Delivered via email to:

Subject: APPROVAL OF 401 WATER QUALITY CERTIFICATION -REISSUANCE Proposed R-0211EC Interstate Access Addition to I-485 at Weddington Road, Mecklenburg County; Fourmile Creek (Catawba River Basin; 11-137-9-4; C) and Sixmile Creek, (Catawba River Basin, 11-138-3 C)

Dear Ms. Cheely:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of the proposed R-0211EC Interstate Access Addition to I-485 at Weddington Road in Mecklenburg County:

Stream Impacts in the Catawba River Basin

Site	Amount Approved (LF)
S1 (culvert ext)	42
S1 (riprap fill)	53
S2 (culvert ext)	96
Total	191

The project shall be constructed in accordance with your application dated received January 19, 2023. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 4135. This certification corresponds to the Regional General Permit 50 issued by the Corps of Engineers. In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit.

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



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

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

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

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

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

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

This letter completes the review of the Division of Water Resources under Section 401 of the Clean Water Act. If you have any questions, please contact Amy Chapman at (919) 707-3871 or amy.chapman@ncdenr.gov.

Sincerely,

DocuSigned by:

Amy Chapman

9C9886312DCD474...

Richard E. Rogers, Jr., Director
Division of Water Resources

Electronic copy only distribution:

Steve Brumagin, US Army Corps of Engineers, Charlotte Field Office, Stephen.A.Brumagin@usace.army.mil
Michael Turchy; via email
Kristi Lynn Carpenter, DWR



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

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

RICHARD E. ROGERS, JR.
Director



NCDWR Project No.: _____ County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

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

Applicant's Certification

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

Signature: _____ Date: _____

Agent's Certification

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

Signature: _____ Date: _____

Engineer's Certification

_____ Partial _____ Final

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

Signature _____ Registration No. _____
Date _____



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



ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
LINDA CULPEPPER
Director

November 7, 2019
Mecklenburg County
NCDWR Project No. 20191232v.1
I-485 Access Ramp at SR 3468
State Project No. R-0211EC

APPROVAL of 401 WATER QUALITY CERTIFICATION, with ADDITIONAL CONDITIONS

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

Dear Mr. Harris:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of Interstate Access Addition to I-485 at Weddington Road (SR 3468) R-0211EC in Mecklenburg County:

Stream Impacts in the Catawba River Basin

Site	Bank Stabilization Permanent (linear ft)	Bank Stabilization Temporary (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
1 (culvert ext)	6	20	16		42	16
1 (riprap fill)			34	19	53	34
2 (culvert ext)	53	27	16		96	16
					0	0
TOTAL	59	47	66	19	191	66

Total Stream Impact for Project: 191 linear feet.

The project shall be constructed in accordance with your application dated received September 16, 2019. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 4135. This certification corresponds to the Nationwide Permit 14 issued by the Corps of Engineers. In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the NCDWR and submit a new application. If the property is sold, the



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

new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to perennial streams (now or in the future) exceed 300 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed in the attached certification(s) and any additional conditions listed below.

Condition(s) of Certification:

Project Specific Conditions

1. Compensatory mitigation for 66 linear feet of impact to streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Division of Mitigation Service (DMS) (formerly NCEEP), and that the DMS has agreed to implement the mitigation for the project. The DMS has indicated in a letter dated September 13, 2019 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the DMS Mitigation Banking Instrument signed July 28, 2010.
2. The NCDOT Division Environmental Officer or Environmental Assistant will conduct a pre-construction meeting with all appropriate staff to ensure that the project supervisor and essential staff understand the potential issues with stream and pipe alignment at the permitted site. NCDWR staff shall be invited to the pre-construction meeting. [15A NCAC 02H.0506(b)(2) and (b)(3)]
3. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams, shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by the NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]
4. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage. [15A NCAC 02H.0506(b)(2)]
5. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed. [15A NCAC 02H.0506(b)(2)]
6. For the 68 linear feet of streams being impacted due to site dewatering activities, the site shall be graded to its preconstruction contours and revegetated with appropriate native species. [15A NCAC 02H.0506(b)(2)]
7. The stream channel shall be excavated no deeper than the natural bed material of the stream, to the maximum extent practicable. Efforts must be made to minimize impacts to the stream banks, as well as to vegetation responsible for maintaining the stream bank stability. Any applicable riparian buffer impact for access to stream channel shall be temporary and be revegetated with native riparian species. [15A NCAC 02H.0506(b)(2)]
8. The waiver for culvert burial is granted as requested. Stream bed is required to be level with the end of the culvert extension, as presented in the application. [15A NCAC 02H.0506(b)(2)]



General Conditions

1. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and downstream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]
2. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. [15A NCAC 02B.0200]
3. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]
4. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]
5. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]
6. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
7. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]
8. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]
9. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]
10. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
11. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
12. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water



Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]

13. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
14. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
15. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0501 and .0502]
16. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
17. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]
18. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]
19. Native riparian and wetland vegetation (**ex. Salix nigra, Juncus (spp), Carex (spp), et al.**) must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction. [15A NCAC 02B.0231(b)(6)]
20. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.[15A NCAC 02H.0506(b)(3) and (c)(3)]
21. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards [15A NCAC 02H.0506(b)(3) and (c)(3)]:
 - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
 - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
 - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.



- d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
22. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]
23. With the issuance of this 401 certification, the DWR approves the stormwater drainage and treatment designs as shown in the roadway plans and permit drawings submitted as part of the 401 application, which are incorporated by reference and are enforceable by the DWR. Significant modifications to the way stormwater is managed and conveyed, any outfalls, or stormwater control measures represented in the roadway plans or permit drawings after issuance of this 401 certification are prohibited without prior approval from the DWR.
24. In the event that discharges of sediment or other pollutants from the drainage system outfalls are found by DWR to cause or contribute to a violation of surface water quality standards, DWR may take enforcement action, or NCDOT and DWR shall conduct an assessment and implement the appropriate best management practices necessary to adequately address NCDOT's contribution to the water quality standards violation. Implementation of such best management practices shall be made within a reasonable timeframe as agreed upon by NCDOT and DWR; and may require NCDOT to obtain a 404 Permit from the Corps and a 401 Certification from the DWR

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

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

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

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

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

This letter completes the review of the Division of Water Resources under Section 401 of the Clean Water Act. If you have any questions, please contact Donna Hood at (704)235-2193 or donna.hood@ncdenr.gov.

Sincerely,

DocuSigned by:
Amy Chapman
9C9886312DCD474...
Linda Culpepper, Director
Division of Water Resources



Electronic copy only distribution:

Nicholle Braspennickx, US Army Corps of Engineers, Charlotte Field Office
Joel Howard, Acting Division 10 Environmental Officer
Michael Turchy, NC Department of Transportation
Claire Ellwanger, US Fish and Wildlife Service
Marla Chambers, NC Wildlife Resources Commission
Beth Harmon, Division of Mitigation Services
Donna Hood, NC Division of Water Resources Mooresville Regional Office
File Copy



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



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
LINDA CULPEPPER
Director

NCDWR Project No.: _____ County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

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

Applicant's Certification

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

Signature: _____ Date: _____

Agent's Certification

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

Signature: _____ Date: _____

Engineer's Certification

_____ Partial _____ Final

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

Signature _____ Registration No. _____
Date _____



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

9/12/2019
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PROD\WCS01\$

TIP PROJECT: R-0211EC

CONTRACT: C203970

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

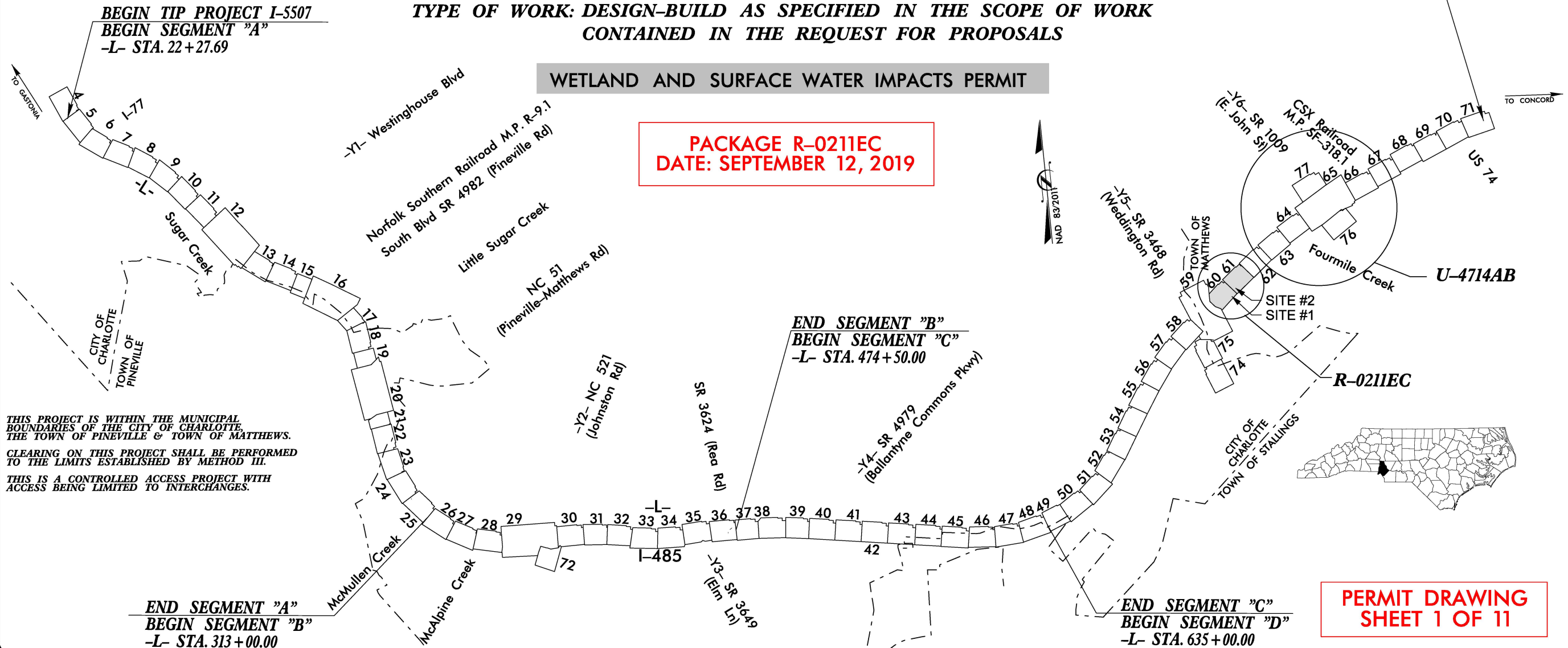
MECKLENBURG COUNTY



LOCATION: I-485 FROM I-77 TO US 74 (INDEPENDENCE BOULEVARD) (I-5507);
I-485 / WEDDINGTON ROAD INTERCHANGE (R-0211EC); AND I-485 /
EAST JOHN STREET - OLD MONROE ROAD INTERCHANGE (U-4714AB)

TYPE OF WORK: DESIGN-BUILD AS SPECIFIED IN THE SCOPE OF WORK
CONTAINED IN THE REQUEST FOR PROPOSALS

WETLAND AND SURFACE WATER IMPACTS PERMIT

PACKAGE R-0211EC
DATE: SEPTEMBER 12, 2019



STATE	STATE PROJECT REFERENCE NO.		SHEET NO.	TOTAL SHEETS
N.C.	R-0211EC		1	
STATE PROJ.NO.		F.A.PROJ.NO.	DESCRIPTION	
43609.3.2		N/A	Design-Build	
 BLYTHE				

8/17/99



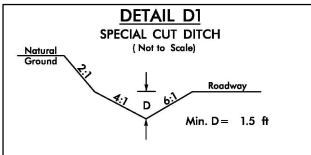
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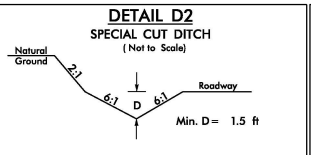
R/W SHEET NO. ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

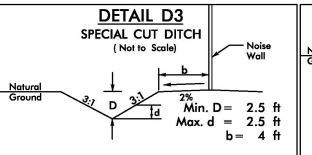
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



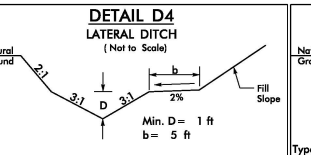
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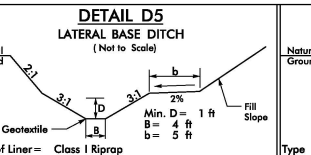
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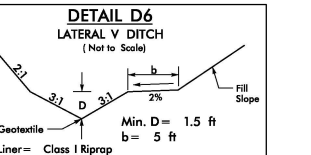
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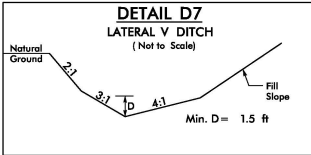
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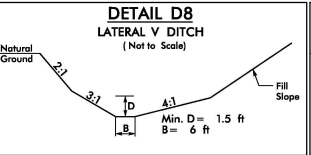
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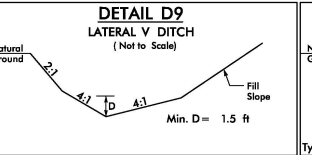
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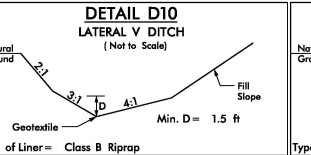
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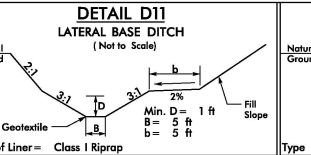
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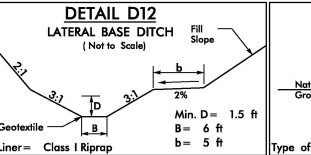
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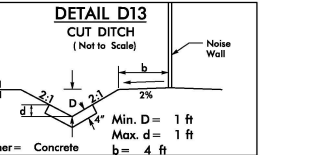
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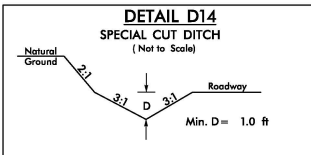
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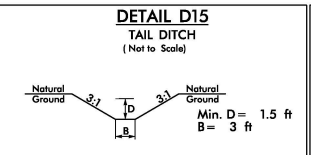
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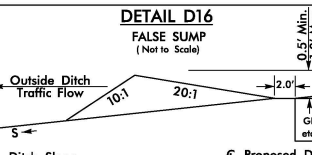
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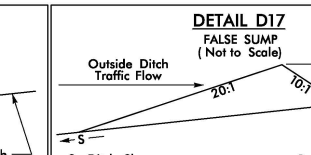
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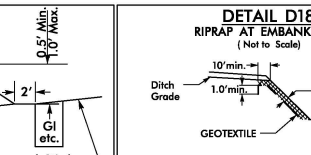
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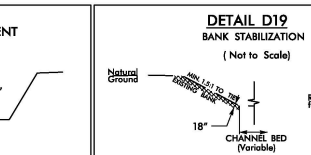
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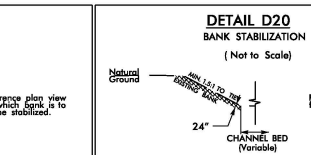
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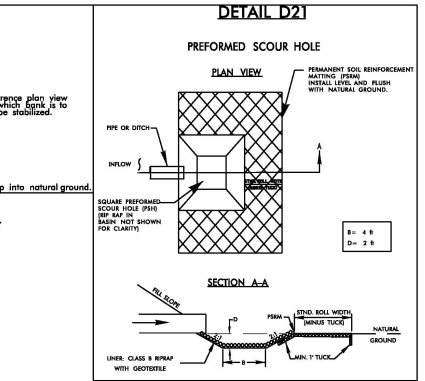
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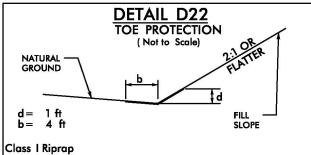
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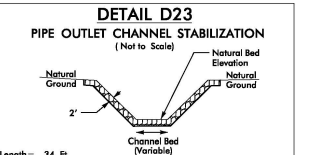
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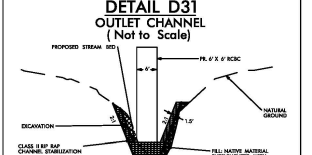
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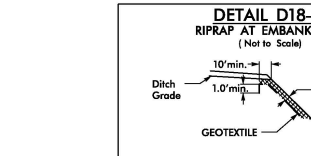
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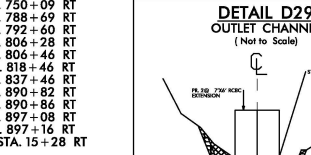
-L- STA. 789+30



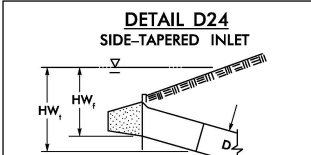
-L- STA. 841+00



-Y6- STA. 129+88 LT

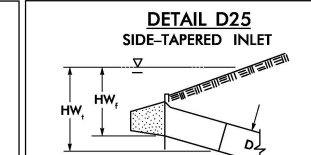


-L- STA. 837+70 LT



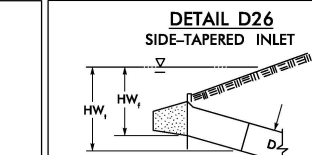
B=3 ft
D=3 ft
B=5 ft
L=4 ft

-L- STA. 641+48 LT



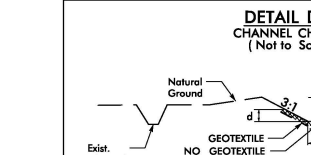
B=4.5 ft
D=4.5 ft
B=6.5 ft
L=4 ft

-L- STA. 749+91 RT
-Y24RPA- STA. 18+83 RT



B=3.5 ft
D=3.5 ft
B=5.5 ft
L=4 ft

-L- STA. 644+52 LT



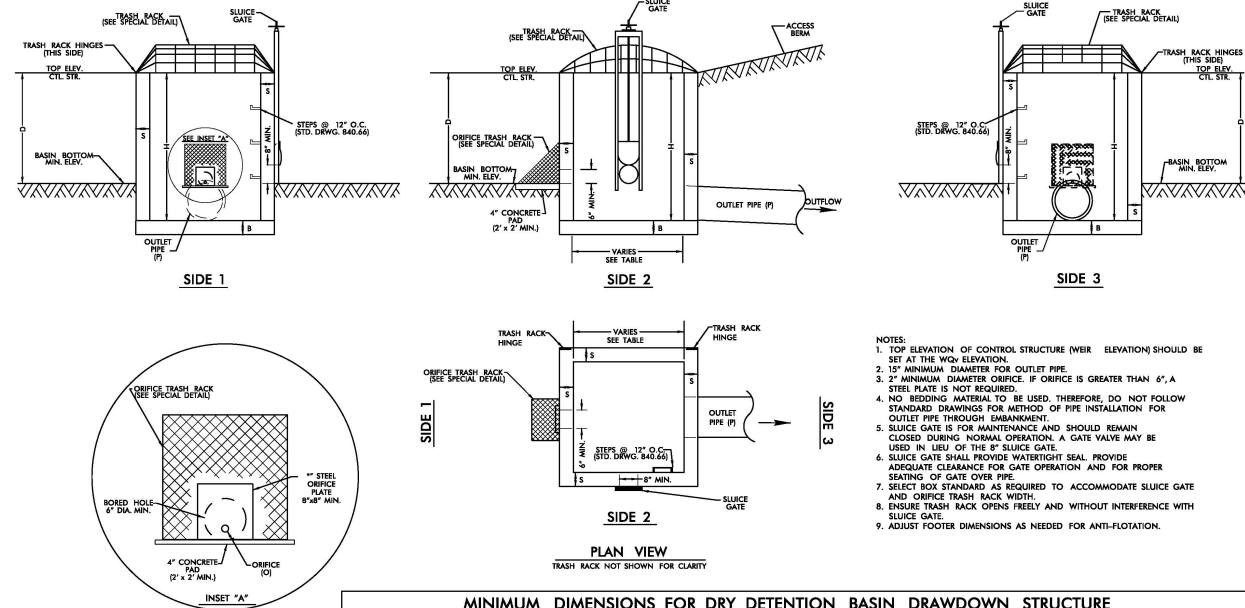
-L- STA. 897+13 RT

PERMIT DRAWING SHEET 2 OF 11



PROJECT REFERENCE NO.	SHEET NO.
R-0211EC	2D-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div style="border: 1px solid black; padding: 10px; text-align: center;"> INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION </div>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

DETAIL D27
DRY DETENTION BASIN DRAWDOWN STRUCTURE
 NOT TO SCALE

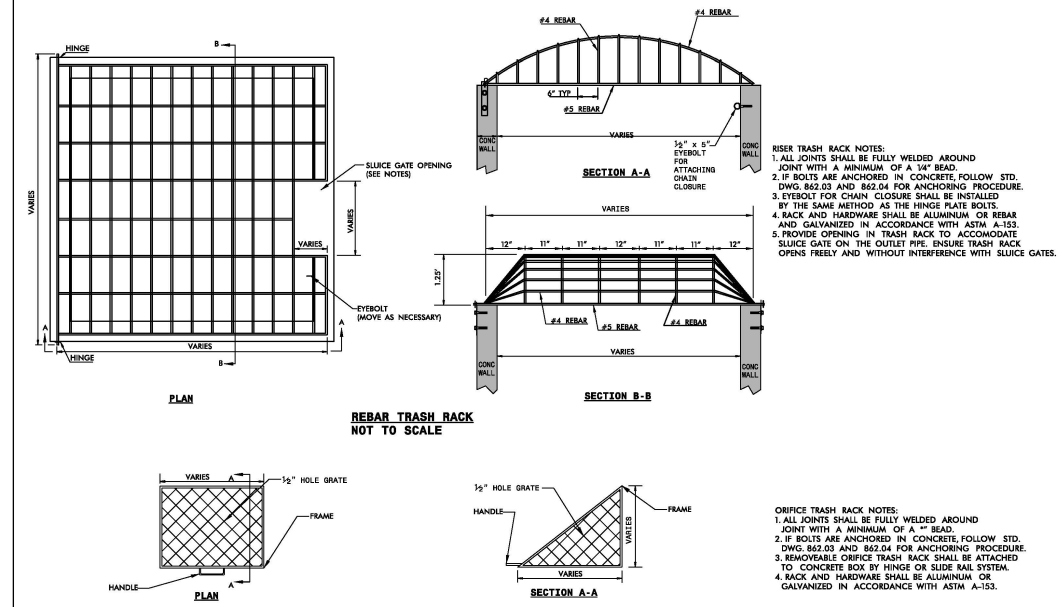


Water Quality Volume:
Treated Rainfall Depth = 1.6 inches
NBUA = 6.4 acres
 $WQv = 1.6 \times 6.4 \times 3450 = 35,328 \text{ CF}$
WQ Elev = 725.13

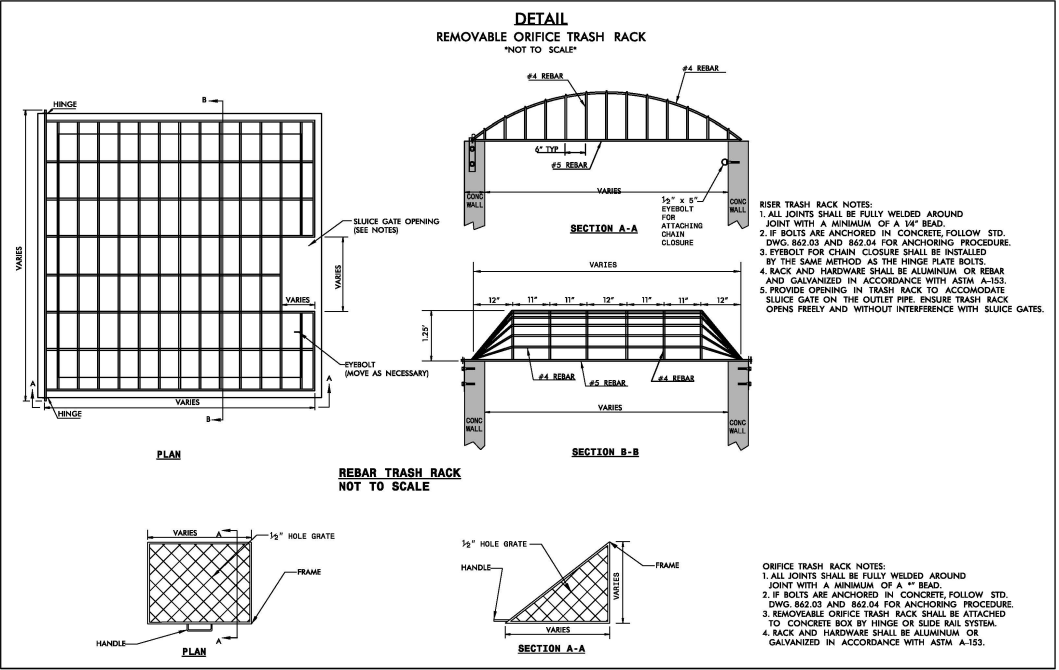
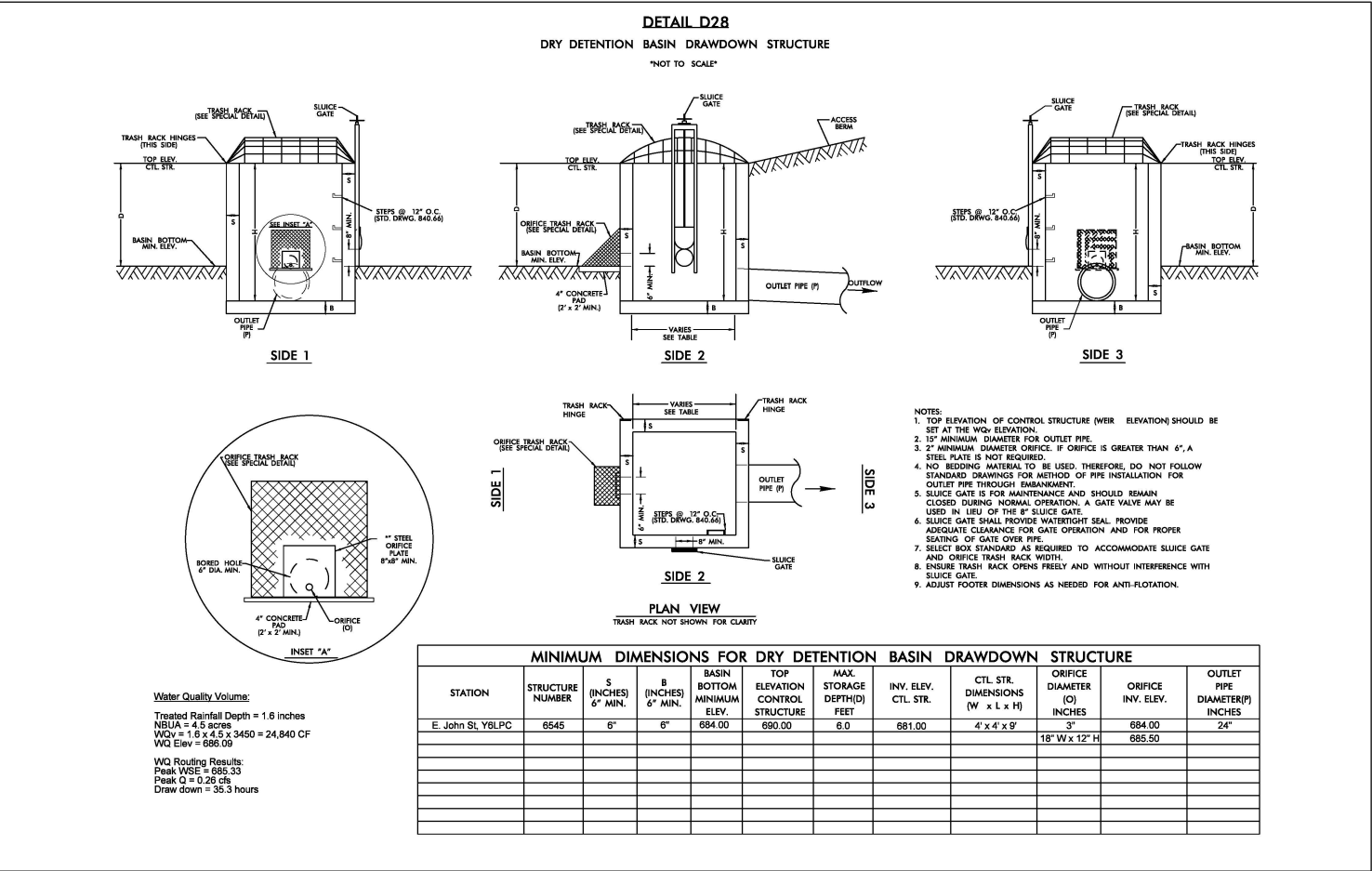
WQ Routing Results:
Peak WSE = 724.73
Peak Q = 0.26 cfs
Draw down = 52.5 hours

[illegible]

DETAIL
REMOVABLE ORIFICE TRASH RACK
 NOT TO SCALE



**PERMIT DRAWING
SHEET 3 OF 11**

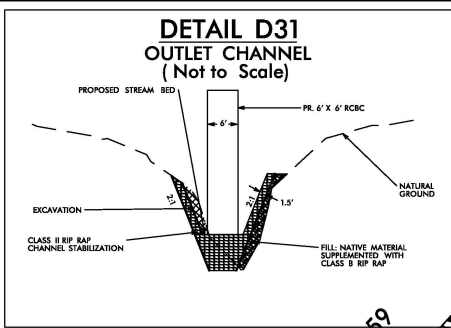


**PERMIT DRAWING
SHEET 4 OF 11**

8/17/99

REVISIONS
1. 9/5/99 - ADDED BOXES 6050 AND 6060.

9/12/2019
\\bpc\projects\01\pics_workingdir\3091\336401_4040\NR-0211EC_Hyd_prm_wet.pst60.dgn
P:\DWG\CS01\$

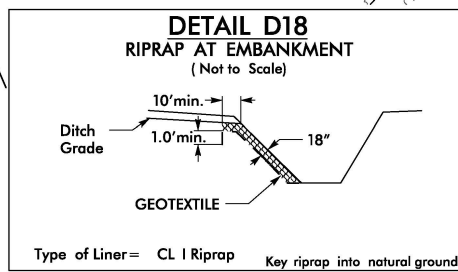


-L- STA. 789+30

MATCH LINE SEE SHEET 59
STA. 20+00.00

MATCH LINE SEE SHEET 59
-L- STA. 778+50.00

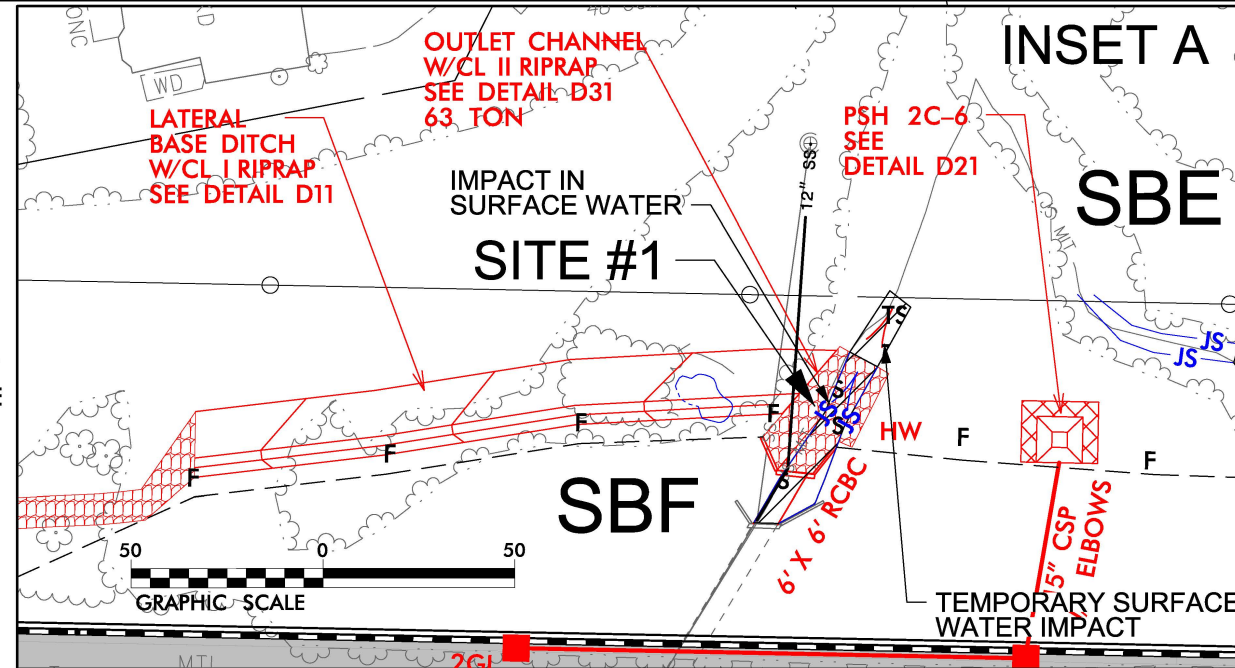
MATCH LINE SEE SHEET 59
STA. 16+25.00





Type of Liner = CL I Riprap Key riprap into natural ground.


DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER



SITE #1 NOTE:
THE EXISTING CULVERT IS NOT BURIED, THEREFORE
THE CULVERT EXTENSION WILL NOT BE BURIED. THE
BOTTOM ELEVATION OF THE EXTENDED CULVERT WILL
MATCH THE ELEVATION OF THE EXISTING STREAM BED.

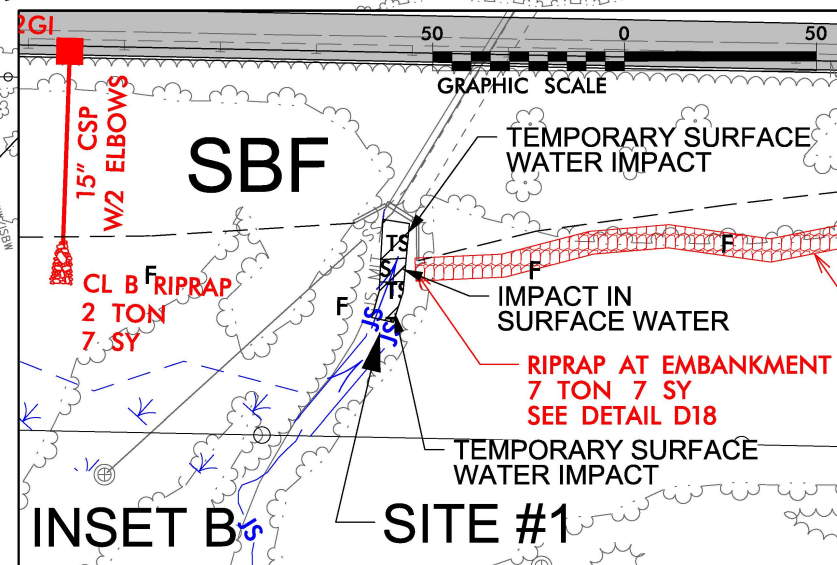
 <i>1001 Morehead Square Dr. Suite 610 Charlotte NC, 28203 NC LIC NO. F-0165</i>	PROJECT REFERENCE NO.		SHEET NO.
	R-0211EC		60
	RW SHEET NO.		
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
	DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
			



NAD 8/3/2011

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN SURFACE WATER

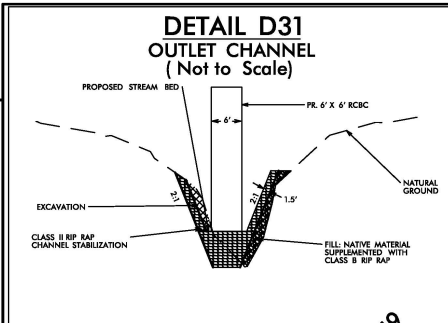
DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100 0 100
GRAPHIC SCALE

PERMIT DRAWING
SHEET 5 OF 11

MATCH LINE SEE SHEET 61
-L- STA. 791+00.00

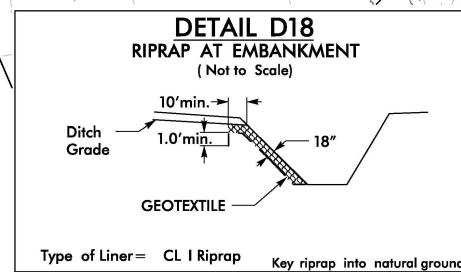
9/12/2019
 \\prodwics01\ics_workingdir\3091\336401_4041\R-0211EC_Hyd-pr-m_wet_psh60_cont.dgn
 PRDPWICS01\$



- L- STA. 789 + 30

MATCH LINE SEE SHEET 59
-L- STA. 778+50.00

MATCH LINE SEE SHEET 59
 STA. 16+25.00



Type of Liner= CL I Riprap Key riprap into natural ground

**DENOTES IMPACTS IN
SURFACE WATER**

**DENOTES TEMPORARY
IMPACTS IN SURFACE
WATER**

**LATERAL
BASE DITCH
W/CL I RIPRAP
SEE DETAIL D11**

OUTLET CHANNEL
W/CL II RIPRAP
SEE DETAIL D31
63 TON

IMPACT IN SURFACE WATER

SITE #1

SBF

SITE #1 NOTE:
THE EXISTING CULVERT IS NOT BURIED, THEREFORE
THE CULVERT EXTENSION WILL NOT BE BURIED. THE
BOTTOM ELEVATION OF THE EXTENDED CULVERT WILL
MATCH THE ELEVATION OF THE EXISTING STREAM BED.

INSET A

SBE

PSH 2C-6
SEE
DETAIL D21

TEMPORARY SURFACE WATER IMPACT

1001 Morehead Square Dr.
Suite 610
Charlotte NC, 28203
NC LIC NO. F-0165

PROJECT REFERENCE NO.

R-0211EC

RW SHEET NO.

ROADWAY DESIGN ENGINEER	
----------------------------	--

SHEET NO.


60

**HYDRAULICS
ENGINEER**

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



DENOTES IMPACTS IN
SURFACE WATER



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

SITE #1 –
SEE
INSET A

CHANNEL
RIPRAP
TAIL D31


SBF



1 1 1 1 1

**PERMIT DRAWING
SHEET 6 OF 11**

MATCH LINE SEE SHEET 61
-L- STA. 791+00.00

 DENOTES IMPACTS IN SURFACE WATER

**DENOTES TEMPORARY
IMPACTS IN SURFACE**

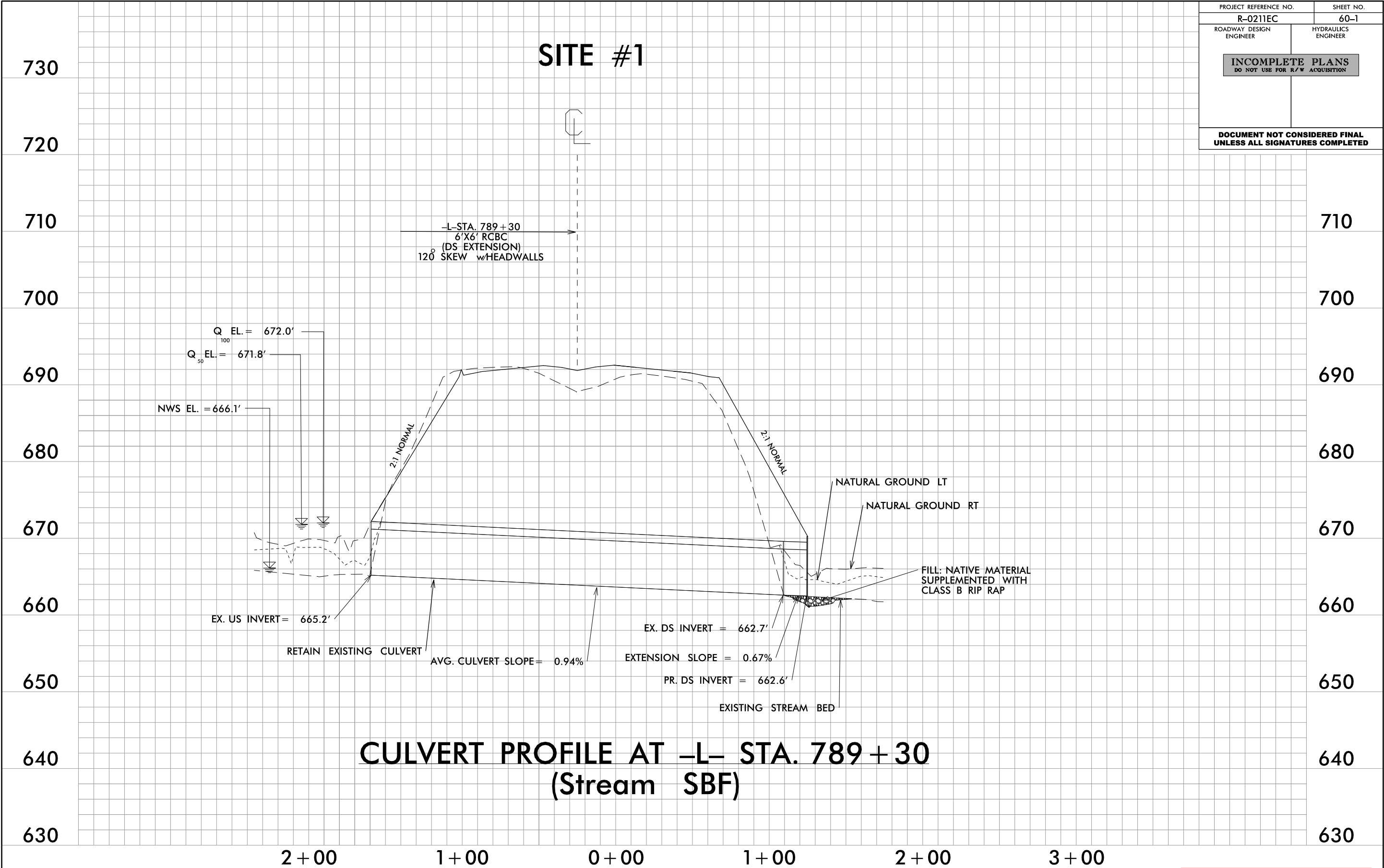
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GRAPHIC SCALE

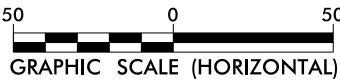
5/28/99

9/12/2019
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PRDWCS01

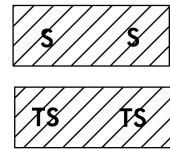
PROJECT REFERENCE NO.		SHEET NO.
R-0211EC		60-1
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



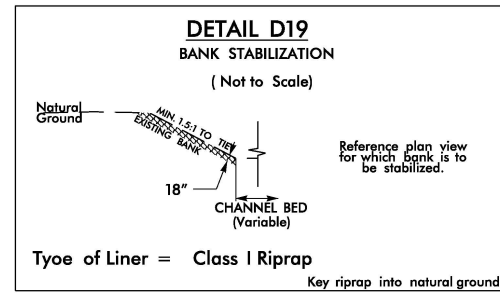
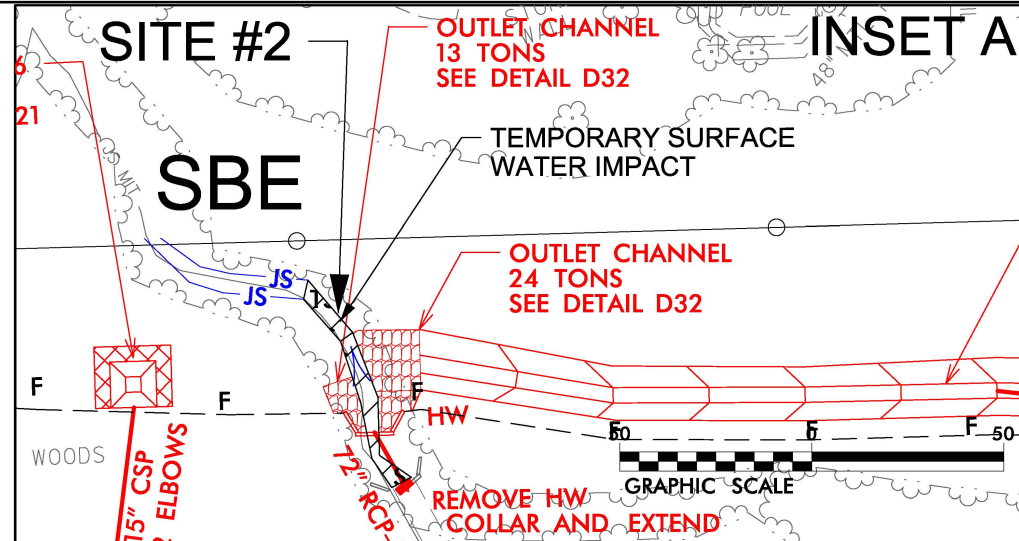
**PERMIT DRAWING
SHEET 7 OF 11**



8/17/99



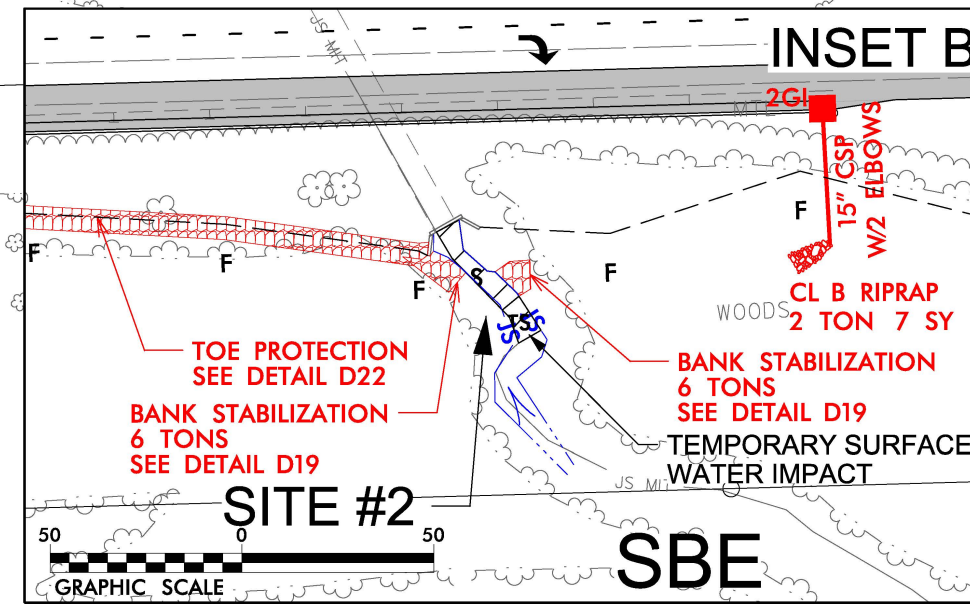
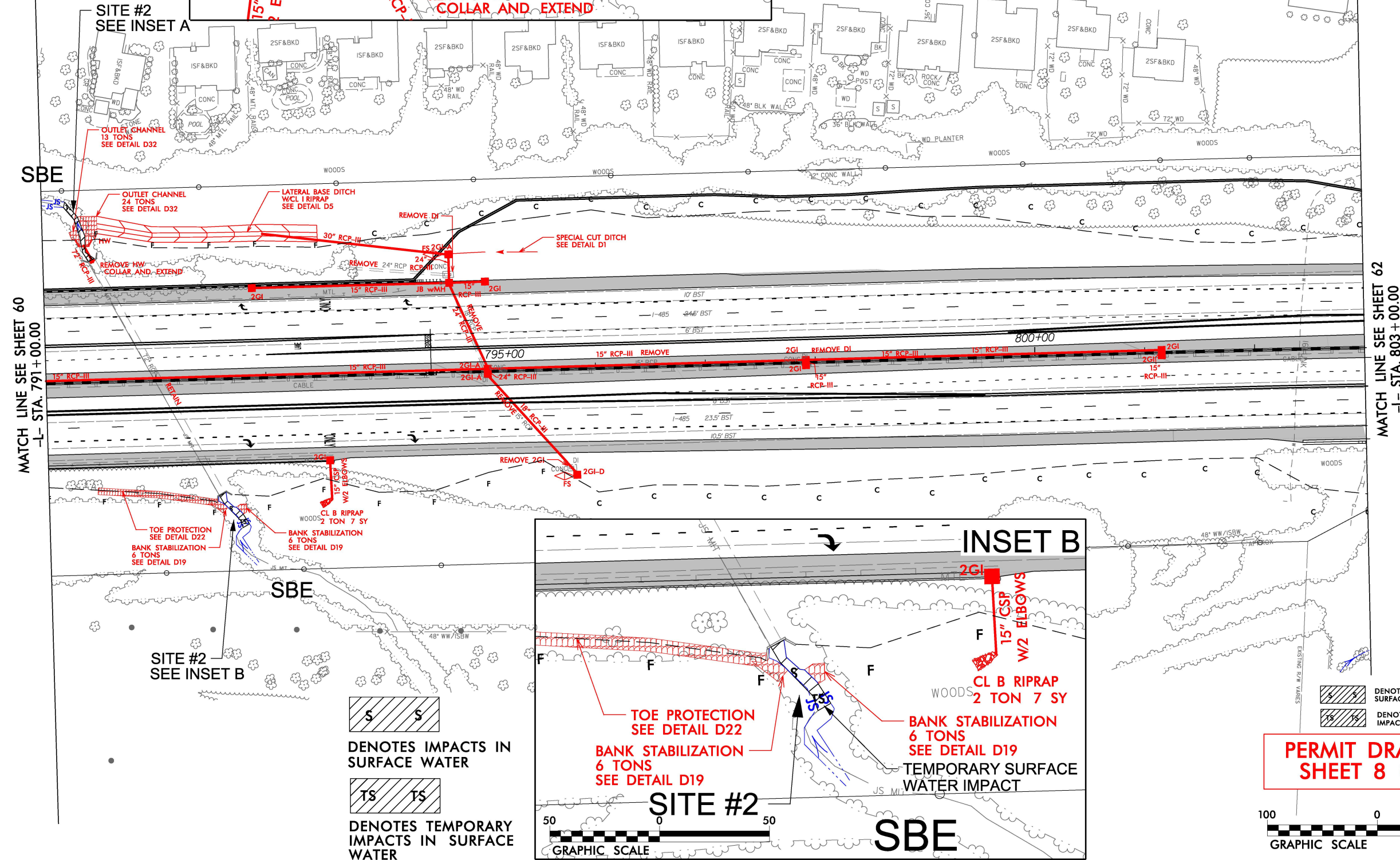
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER



wsp 1001 Morehead Square Dr.
Suite 610
Charlotte NC, 28203
NC LIC NO. F-0165

PROJECT REFERENCE NO.	SHEET NO.
R-0211EC	61
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

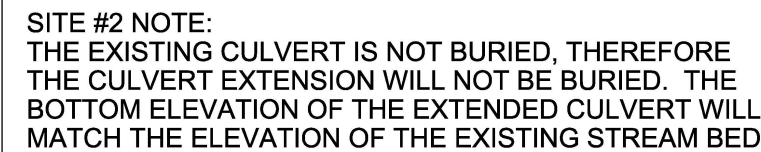
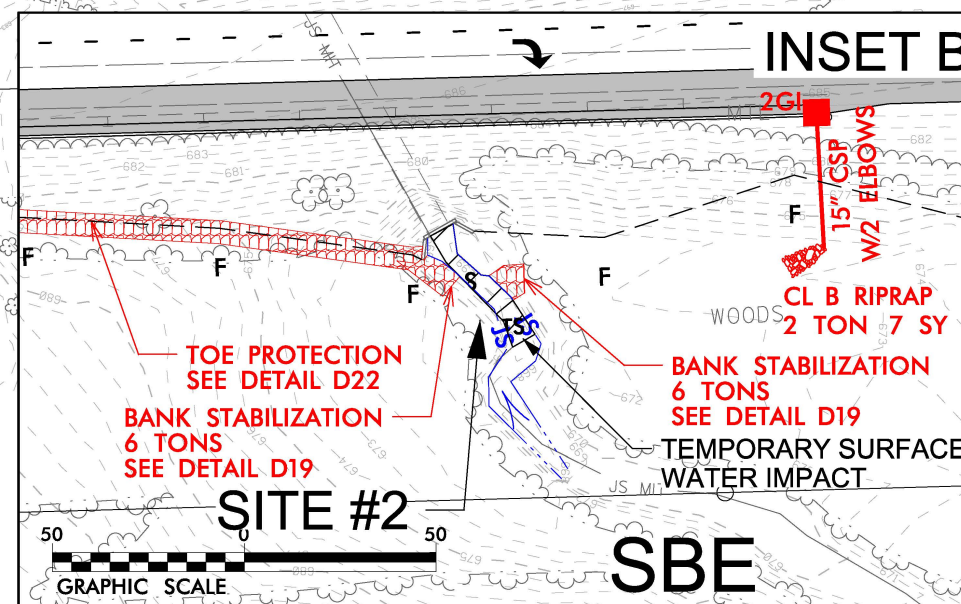
SITE #2 NOTE:
THE EXISTING CULVERT IS NOT BURIED, THEREFORE THE CULVERT EXTENSION WILL NOT BE BURIED. THE BOTTOM ELEVATION OF THE EXTENDED CULVERT WILL MATCH THE ELEVATION OF THE EXISTING STREAM BED.





**PERMIT DRAWING
SHEET 8 OF 11**



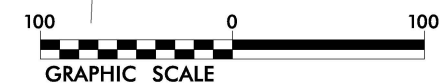
9/12/2019
\\bpc\p\proj\01\cs_workingdir\3091\336401_4038\AR-0211EC_Hyd_prm_wet.pst61.dgn
PDEWCS01\$



 DENOTES IMPACTS IN SURFACE WATER

 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 9 OF 11

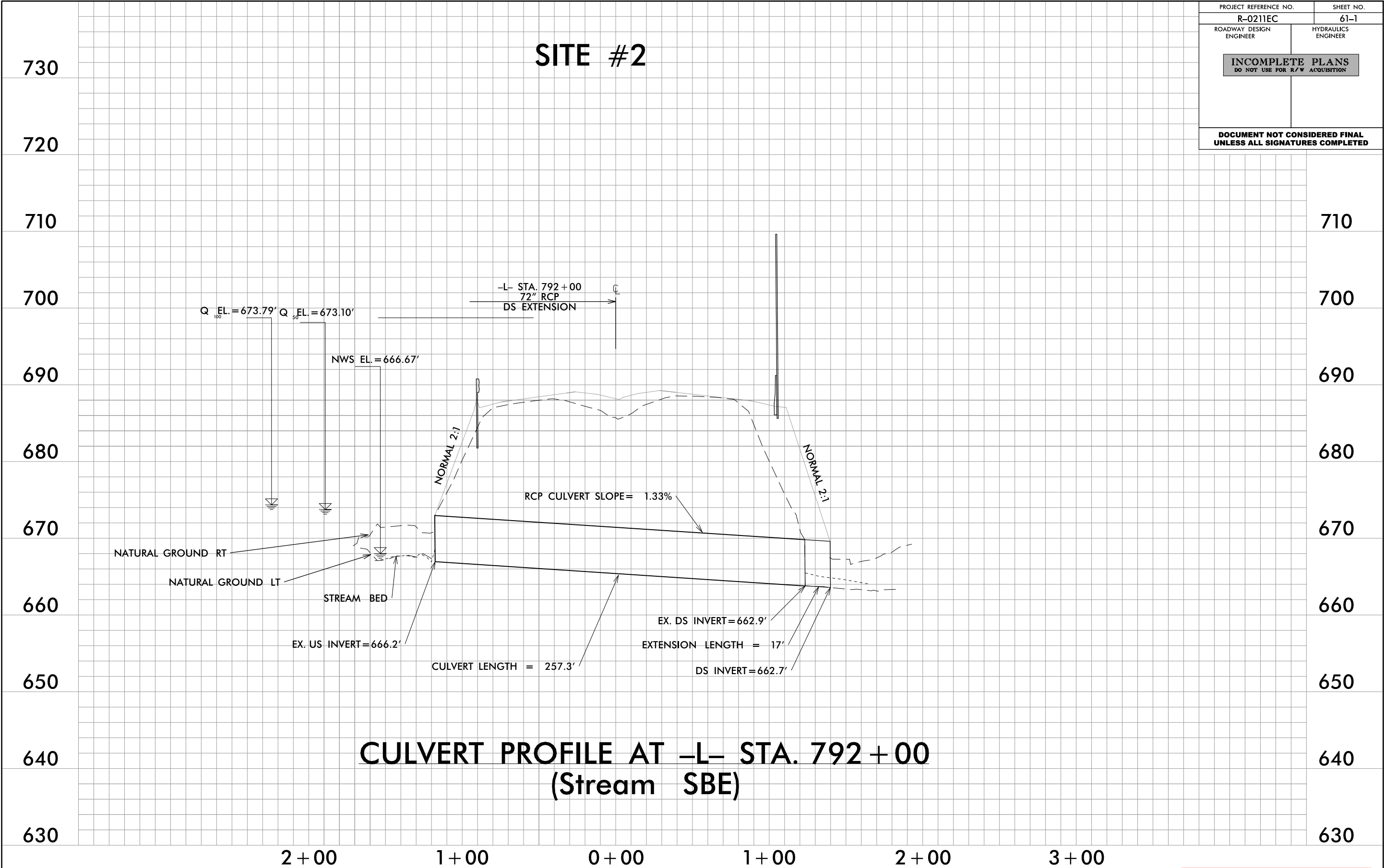


MATCH LINE SEE SHEET 62
-L- STA. 803+00.00

5/28/99

9/12/2019
\\spsdpc\cs01\ics_workingdir\3091\336401_4044\R-0211EC_Hyd_prm_wet_psh61.pf1.culvert.dgn
PDEWICS01

PROJECT REFERENCE NO.	SHEET NO.
R-0211EC	61-1
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**PERMIT DRAWING
SHEET 10 OF 11**



WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	790+00 -L- (LT)	Extend 6' x 6' RCBC						< 0.01		16		
1	790+00 -L (LT)	Riprap Fill						< 0.01	< 0.01	34	19	
1	788+50 -L- (RT)	Bank Stabilization						< 0.01	< 0.01	6	20	
2	791+30 -L-	Extend 72" RCP						< 0.01		16		
2	791+30/792+70 -L-	Bank Stabilization						< 0.01	< 0.01	53	27	
TOTALS*:								0.02	< 0.01	125	66	0

NOTES:

At Site 2, <0.01 ac (26 lf) of temporary impacts due to construction activities are included within the bank stabilization impacts.

SHEET 11 OF 11