



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

December 9, 2020

Regulatory Division

Action ID No. SAW-2017-02112

Ms. Amy Euliss
NCDOT Division 9 Environmental Officer
North Carolina Department of Transportation Division 9
375 Silas Creek Parkway
Winston-Salem, North Carolina 27127

Dear Ms. Amy Euliss:

Reference the Department of the Army (DA) permit issued on January 22, 2018, to the North Carolina Department of Transportation (NCDOT), for impacts associated with the new location project identified as U-2579 C, Phase 2 and U-2579 D, E, & F. The project is 6.95 miles, six-lane, divided facility, extending east from US 52 to US 311, near Winston Salem, Forsyth County, North Carolina. Coordinates (in decimal degrees) for the site are 36.1788° N, -80.2166° W. The project area contains unnamed tributaries to Mill Creek, Mill Creek, Trick-Um Creek, unnamed tributaries to Trick-Um Creek, an unnamed tributary to Ogburn Branch, Buffalo Creek, Rough Fork, unnamed tributaries to Rough Fork, unnamed tributaries to Frazier Creek, and sixteen (16) wetland areas in the Yadkin & Roanoke River Basins (8-Digit Cataloging Units 03040101 and 03010103, respectively). Also reference the North Carolina Department of Environmental Quality Water Quality Certification# 004131, dated December 21, 2017.

On November 5, 2020, the U.S. Army Corps of Engineers (Corps) received a request from NCDOT to modify the standard permit for the U-2579 DEF project to include an additional 31 linear feet of permanent stream channel impact, and an additional 20 linear feet of temporary stream impacts. The modification request stated the additional impacts are at Site 18A, in the Yadkin River Basin. There are no changes to wetland impacts. The total waters of the U.S., including wetland impacts, for the U-2579 DEF project are: 12,111 linear feet of permanent stream impacts, of which 405 linear feet are bank stabilization, 615 linear feet of temporary stream impacts, 1.66 acres of permanent wetland impacts, no temporary wetland impacts, and no hand clearing in wetland.

The Corps has completed the evaluation of your request and has determined that it is appropriate and reasonable, and no public notice is required for this modification. Therefore, the permit is modified as requested and as shown on the **enclosed revised Permit Drawings, Sheets 60, 61, 72, 73, 74, 75, 96, & 97 of 97, prepared by HDR Engineering Inc. and STV Engineers, Inc., received on November 5, 2020.

For your information, the following special conditions from the original authorization have been updated to include the new compensatory mitigation requirements and the new modified plan set:

1. All work authorized by this permit shall be performed in strict compliance with the attached sets of plans, "U-2579DEF: PERMIT MODIFICATION PACKAGE" Sheets 1-97, dated December 18, 2018, with revisions to Sheets 60, 61, 72, 73, 74, 75, 96, & 97, received on November 5, 2020; and Sheets 1-34, dated September 16, 2019, which are part of this permit. The Permittee shall ensure 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.

25. 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.

The North Carolina Department of Environmental Quality issued a modified Section 401 Water Quality Certification (WQC) for this modification on November 30, 2020 (WQC004131). Conditions of the 401 WQC are also conditions of this Corps standard permit.

All other conditions of the permit, including the permit expiration date of December 31, 2028, remain in effect as written. Should you have any questions, contact Mr. Eric Alsmeyer, via email at Eric.C.Alsmeier@usace.army.mil or by telephone at (919) 554-4884, extension 23.

FOR THE COMMANDER

Monte Matthews Date:
2020.12.09
13:16:12 -05'00'

Monte Matthews
Lead Project Manager
Wilmington District

Enclosures

Electronic Copies Furnished with Enclosures:

Mr. Dave Wanucha
North Carolina Department of Environmental
Quality Division of Water Resources
450 West Hanes Mill Road, Suite
300 Winston-Salem, North Carolina
27105

Ms. Holland Youngman
U.S. Fish and Wildlife Services
Asheville Ecological Service Field
Office 160 Zillicoa Street
Asheville, North Carolina 28801

Ms. Amanetta Somerville
U.S. Environmental Protection Agency Region 4
National Environmental Policy Act Section
Strategic Programs Office
61 Forsyth Street SW. Atlanta, Ga 30303

Marla J. Chambers
Western NCDOT Permit Coordinator
North Carolina Wildlife Resources Commission
12275 Swift Road
Oakboro, NC 28129

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

Permittee: North Carolina Department of Transportation, Div 9
Project Name: NCDOT/U-2579 DEF, Winston-Salem Northern Beltway

Action ID: SAW-2017-02112
County: Forsyth

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:** 03040101, Yadkin River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
4,345				0.04		

*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:** 03040101, Yadkin River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
7,367				0.08		

Mitigation Site Debited: NCDMS

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

Section to be completed by the Mitigation Sponsor

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

Mitigation Sponsor Name: _____

Name of Sponsor's Authorized Representative: _____

Signature of Sponsor's Authorized Representative

Date of Signature

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

Conditions for Transfer of Compensatory Mitigation Credit:

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

Comments/Additional Conditions:

This Transfer Form includes the total NCDMS mitigation requirement within HUC 03040101, Yadkin River Basin, for TIP U-2579, Sections D, E, and F, and replaces all previous Transfer Forms for this HUC and these project sections.

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

USACE Project Manager: Eric Alsmeyer
USACE Field Office: Raleigh Regulatory Field Office
US Army Corps of Engineers
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587
Email: eric.c.alsmeyer@usace.army.mil

 Eric C. Alsmeyer 2020.12.08 08:58:14 -05'00'

USACE Project Manager Signature

December 8, 2020

Date of Signature

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



ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
S. DANIEL SMITH
Director

November 30, 2020

Ms. Amy Euliss, Environmental Officer
NCDOT Division 9
375 Silas Creek Parkway
Winston Salem, NC 27127

Subject: **Modification to 401 Water Quality Certification (WQC004131)** pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS for the Winston Salem Northern Beltway from US 52 to US 311 (New Walkertown Road) in Forsyth County. Federal Aid Project No. NHP-0074(213), TIP Nos. U-2579 D, E & F. This will be NCDWR Project No. 19980260 (version 6). U-2579 D, E and F is a Section of the overall Winston Salem Northern Beltway that includes the following projects: Northern Beltway from I-40 to US 52 (TIP Nos. R-2247B Phase 2, CA, CB, CD, D, EA, EB, and EC), from US 52 to US 311 north (U-2579C Phase 2, D, E, and F) and from I-40 Business to US 311 south (U-2579AA and AB).

Dear Ms. Euliss:

Attached hereto is a copy of modified Certification No. WQC004131 for TIP U-2579 D, E & F (v6) issued to The North Carolina Department of Transportation (NCDOT) dated November 30, 2020.

For reference, WQC004131 was initially issued on November 14, 2017, revised on November 27, 2017, December 21, 2017 and again on February 7, 2019. Revised version 4 (modification for TIP R-2247EB) was issued on August 13, 2019. Modification 5 (for U-2579 D, E & F) was dated November 14, 2019.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,
DocuSigned by:

Amy Chapman

S. Daniel Smith, Director
Division of Water Resources

Electronic copy only distribution:

Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office
Bill Barrett, NC Department of Transportation
Amanetta Somerville, US Environmental Protection Agency
Janet Mizzi, US Fish and Wildlife Service
Marla Chambers, NC Wildlife Resources Commission
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

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

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact an additional 31 linear feet of permanent impacts and 20 linear feet of temporary impacts to jurisdictional streams in Forsyth County. The project shall be constructed pursuant to the modification application dated November 4, 2020. The authorized impacts are as described below:

Table 1. Modifications to Stream Impacts in the Yadkin Pee Dee River Basin, R-2579 D, E, and F.

New Site	Stream Designation	Permanent Impacts (linear ft)		Temporary Impacts (linear ft)	Additional Stream Impacts Requiring Mitigation (linear ft)
		Fill	Bank Stabilization	Dewater	
18A	Intermittent	24	7	20	-

Total Impacts for this Modification: 51 linear feet

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

This approval is only valid for the purpose and design that you submitted in your application for a modification dated November 4, 2020. All the authorized activities and conditions associated with the phased permit Water Quality Certification issued on November 14, 2017 (revised on November 27, 2017, on December 21, 2017, on February 7, 2019, on August 13, 2019 and again on November 14, 2019) still apply except where superseded by this Certification.

Should your project change, you are required to notify 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 any additional wetland impacts, or perennial stream impacts, for this project (now or in the future) exceed one acre or 300 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Condition(s) of Certification

1. This approval is only valid for the purpose and design that you submitted in your application for a modification dated November 4, 2020. All the authorized activities and conditions associated with the phased permit Water Quality Certification issued on November 14, 2017 (revised on November 27, 2017, December 21, 2017, February 7, 2019, on August 13, 2019 and November 14, 2019) still apply except where superseded by this certification.

2. Revised drawings for Site 26 were also included as part of this modification application and approved herewith. No new impacts resulted from the revisions.

Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit.

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 that 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 the 30th day of November 2020

DIVISION OF WATER RESOURCES

DocuSigned by:

9C9886312DCD474...

S. Daniel Smith, Director

WQC No. 004131



ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

S. DANIEL SMITH
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 _____

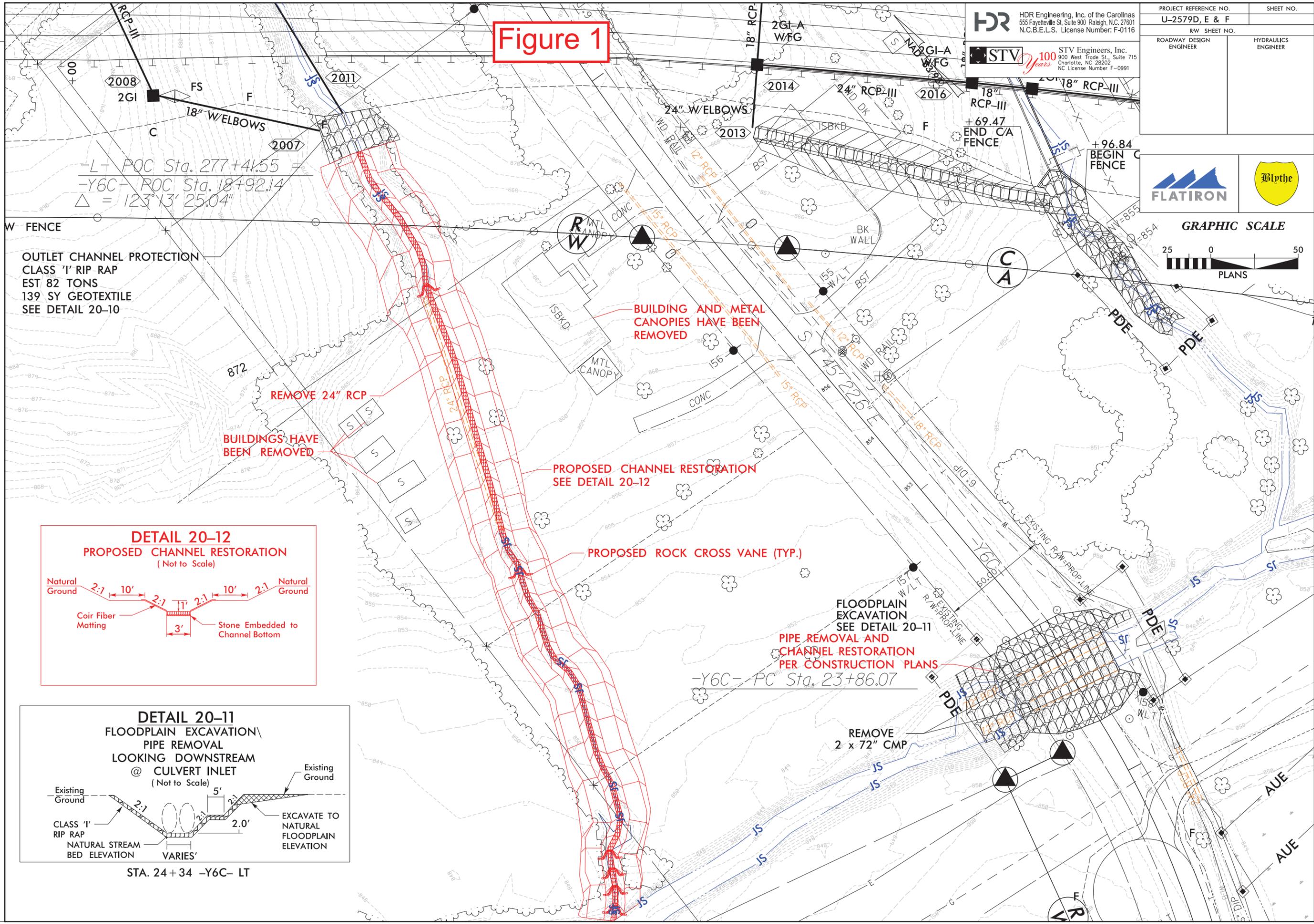
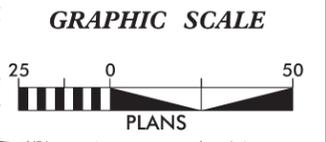


Figure 1

PROJECT REFERENCE NO. U-2579D, E & F		SHEET NO.	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

HDR HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

STV 100 Years STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

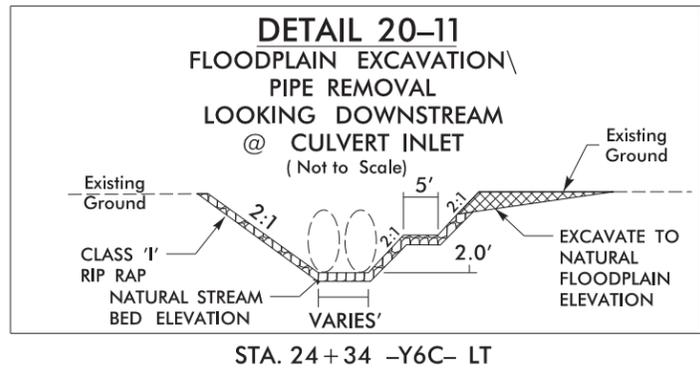
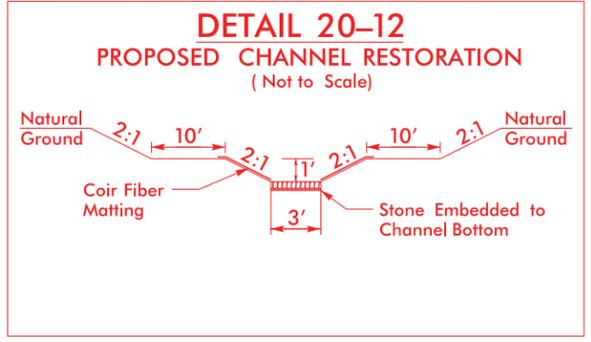


$$-L- POC Sta. 277+41.55 =$$

$$-Y6C- POC Sta. 18+92.14$$

$$\Delta = 123^{\circ} 13' 25.04''$$

OUTLET CHANNEL PROTECTION
CLASS '1' RIP RAP
EST 82 TONS
139 SY GEOTEXTILE
SEE DETAIL 20-10

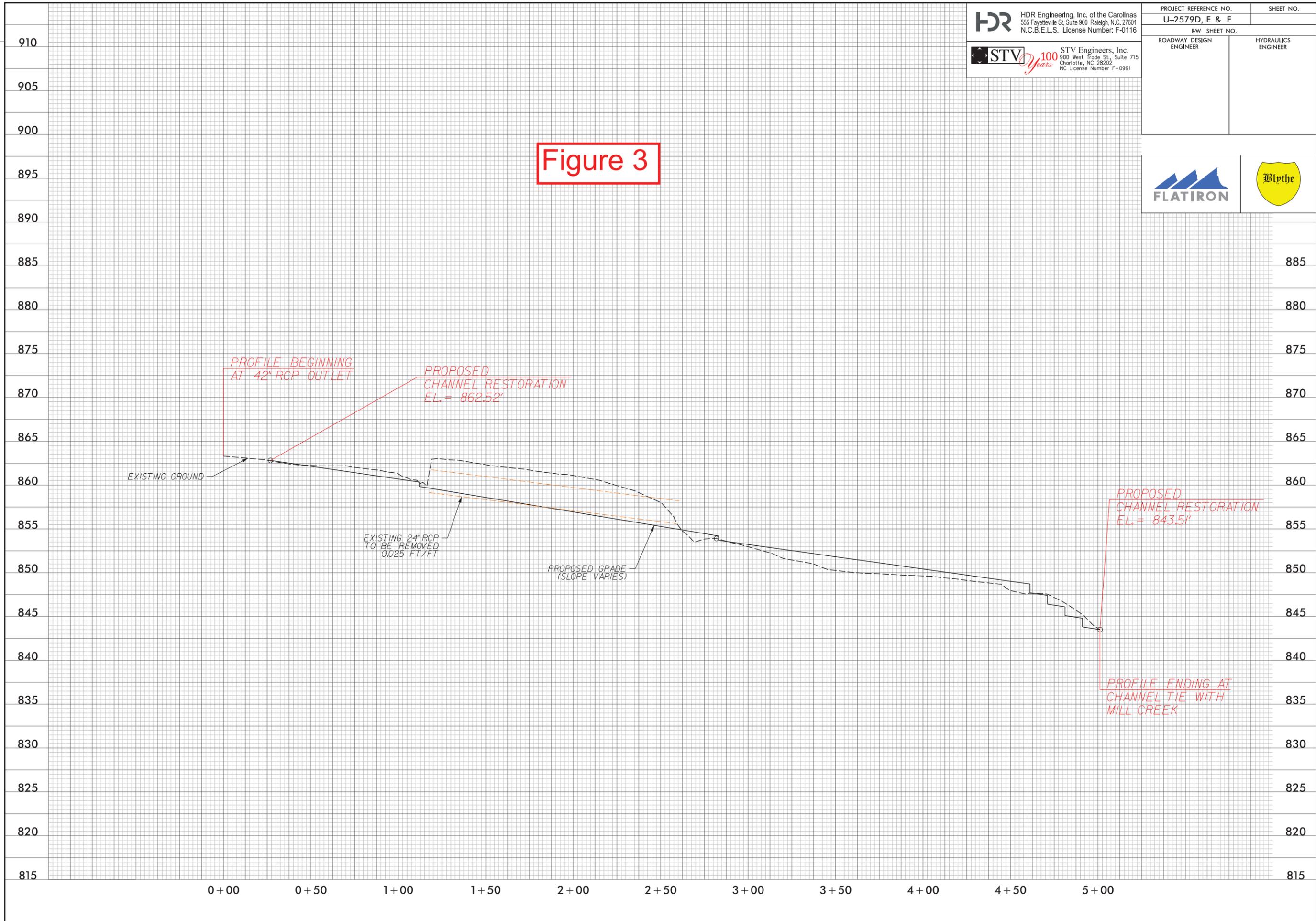


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 Received 11/5/2020

PROJECT REFERENCE NO. U-2579D, E & F		SHEET NO.
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	



Figure 3



REVISIONS

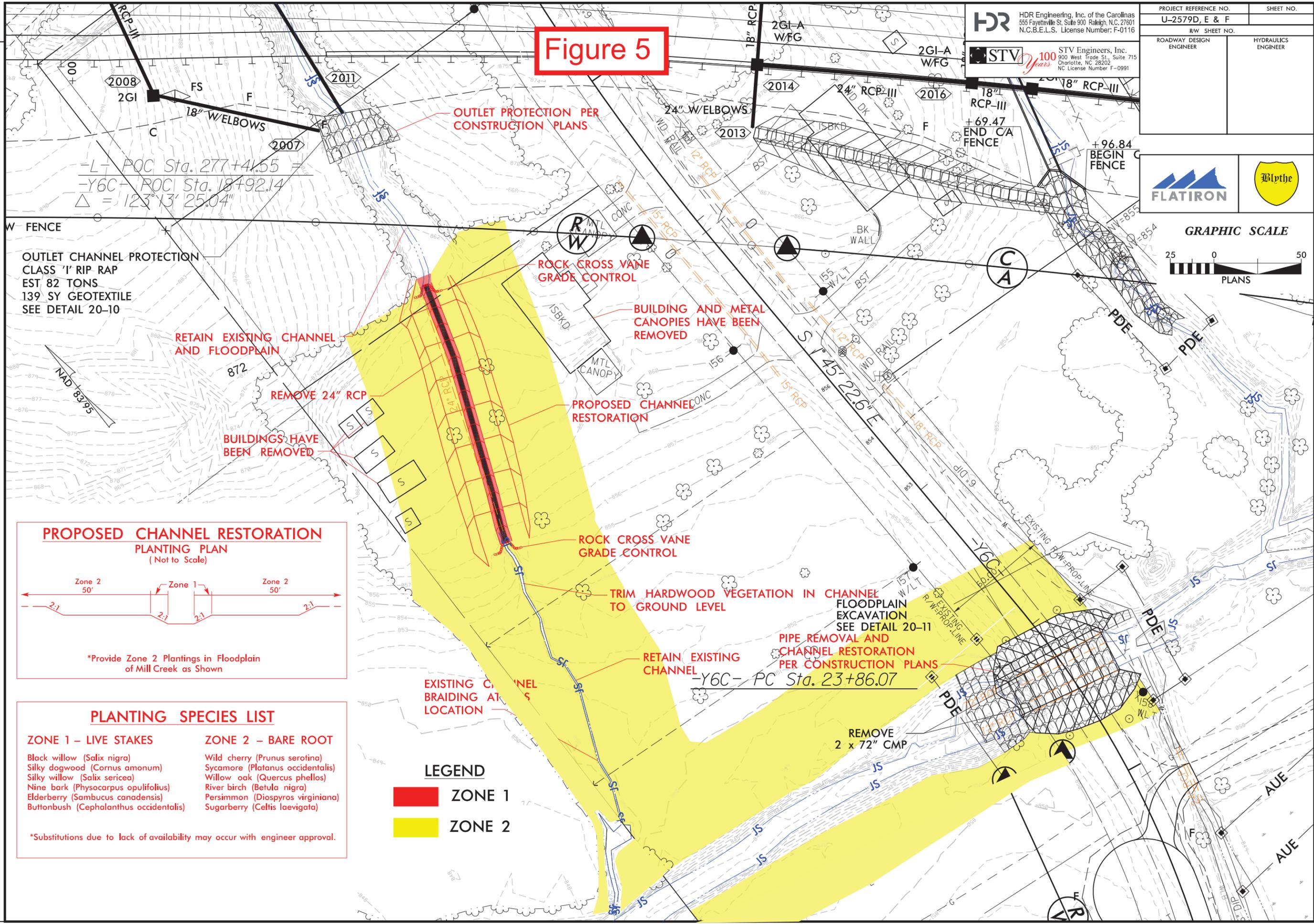
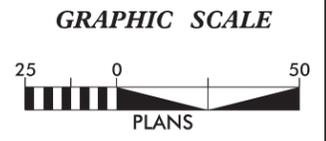
Figure 5

PROJECT REFERENCE NO. U-2579D, E & F		SHEET NO.	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

HDR HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

STV 100 Years STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

FLATIRON **Blythe**



PLANTING SPECIES LIST

ZONE 1 – LIVE STAKES	ZONE 2 – BARE ROOT
Black willow (<i>Salix nigra</i>)	Wild cherry (<i>Prunus serotina</i>)
Silky dogwood (<i>Cornus amomum</i>)	Sycamore (<i>Platanus occidentalis</i>)
Silky willow (<i>Salix sericea</i>)	Willow oak (<i>Quercus phellos</i>)
Nine bark (<i>Physocarpus opulifolius</i>)	River birch (<i>Betula nigra</i>)
Elderberry (<i>Sambucus canadensis</i>)	Persimmon (<i>Diospyros virginiana</i>)
Buttonbush (<i>Cephalanthus occidentalis</i>)	Sugarberry (<i>Celtis laevigata</i>)

*Substitutions due to lack of availability may occur with engineer approval.

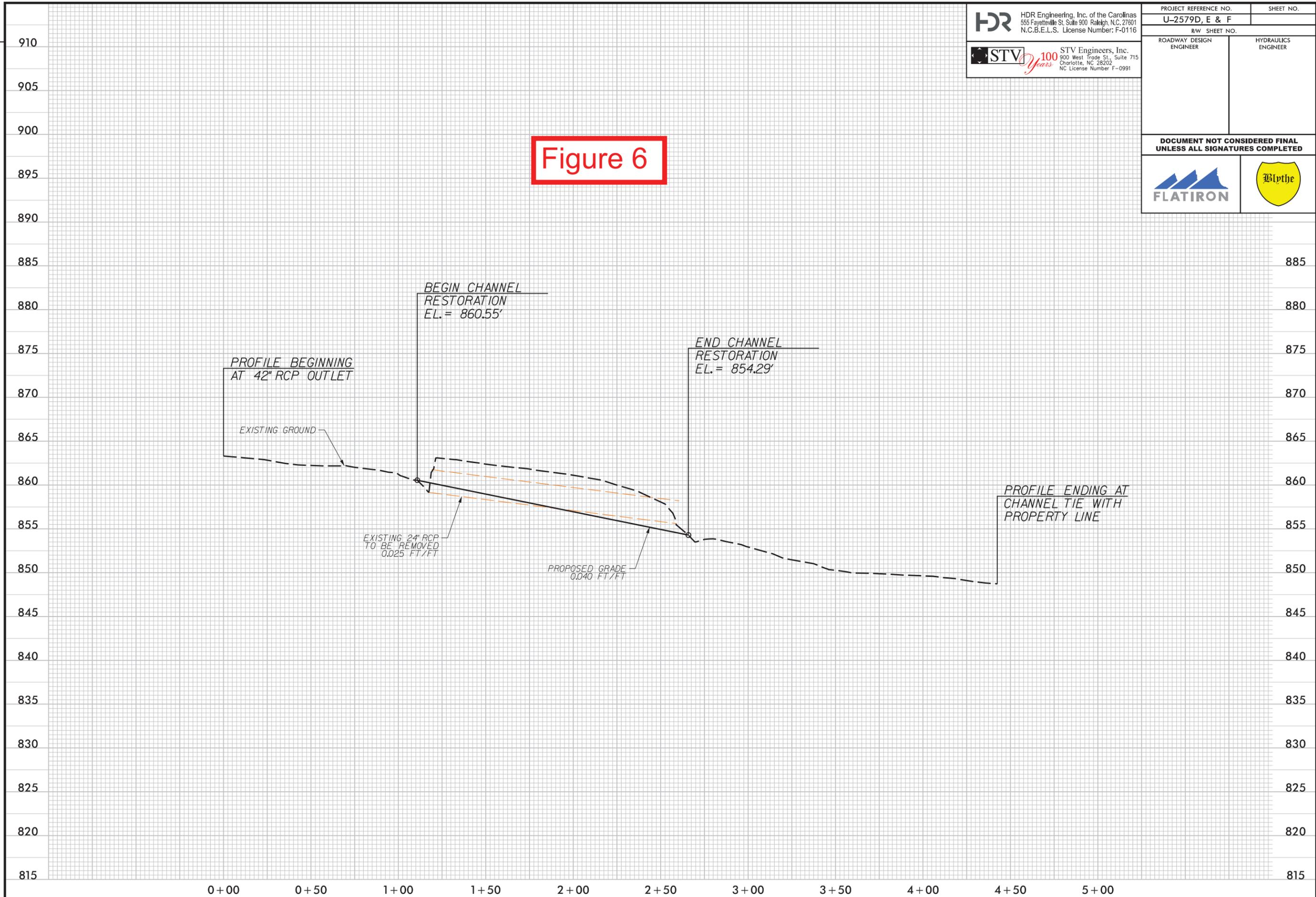


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Received 11/5/2020
 Eric C. Blomgren

PROJECT REFERENCE NO. U-2579D, E & F		SHEET NO.
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
		

Figure 6



PLOT DRIVER: NCDOT_pdf_color_eng_100.plt
 USER: -USERNAME- DATE: 2/20/2020 TIME: 10:07:51 AM
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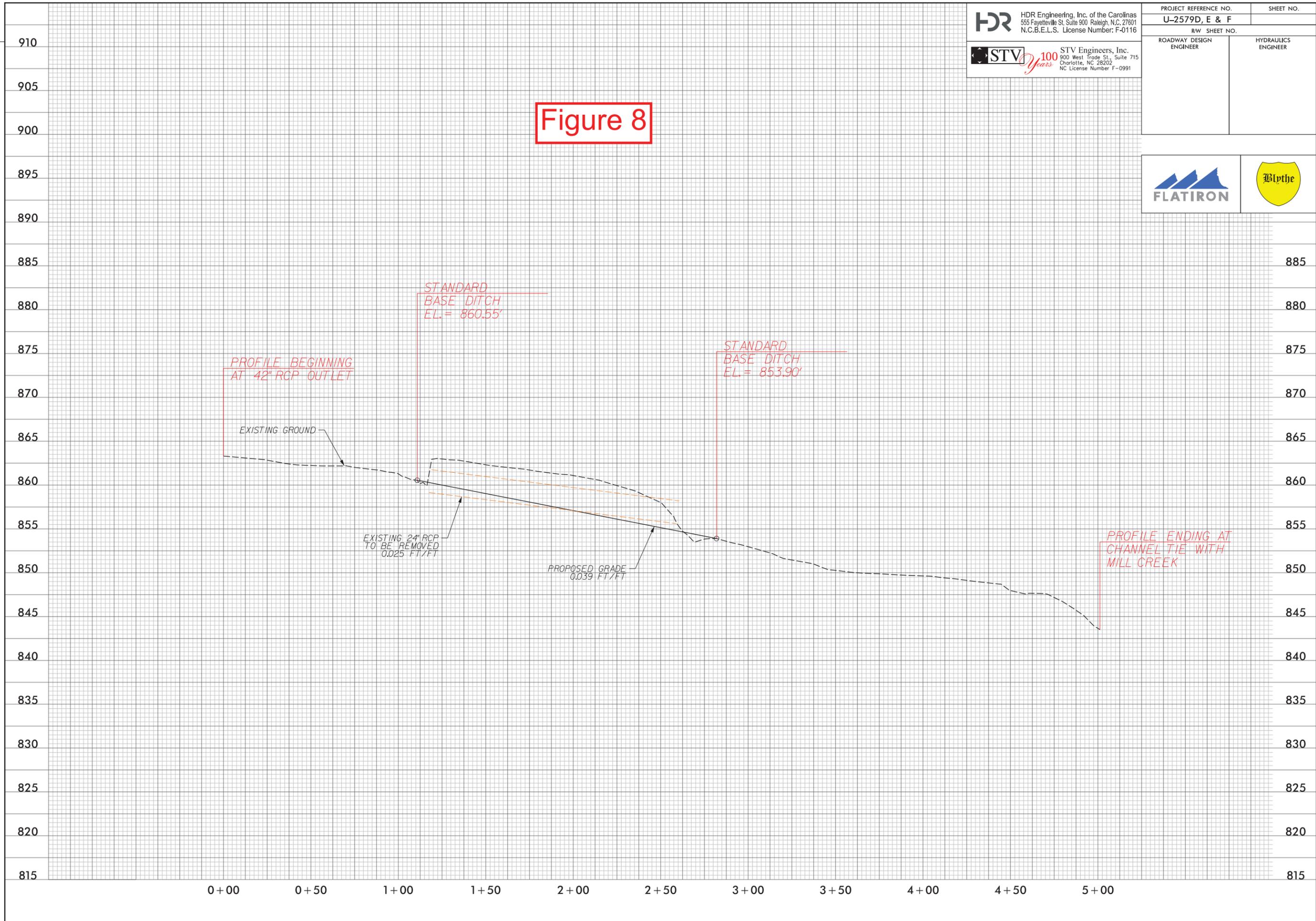
REVISIONS

Received 11/5/2020
Eric C. Alamyra

PROJECT REFERENCE NO. U-2579D, E & F	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



Figure 8



PLOT DRIVER: NCDOT...
 USER: DWAGNER
 DATE: 3/23/2020
 TIME: 10:18:46 AM
 FILE: Flatiron Construction Corp.\Flatiron\11-2579 D, E & F\WSP\6.0 CAD RTM\6.2 WTP\U-2579DEF\Hydraulics\CADD\Stream Restoration\U2579DEF_STREAM_PFL.dgn
Received 11/5/2020
Eric C. Albany

REVISIONS

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 TIME: 11/25/2020 11:25:38 AM

DATE: 10/19/2020
 DATE: 10/19/2020
 DATE: 10/19/2020

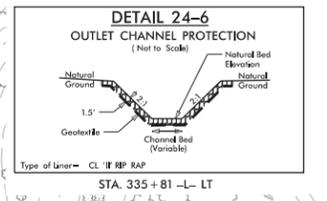
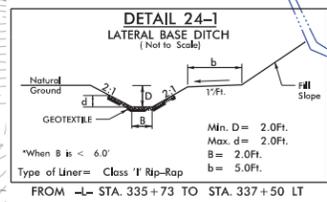
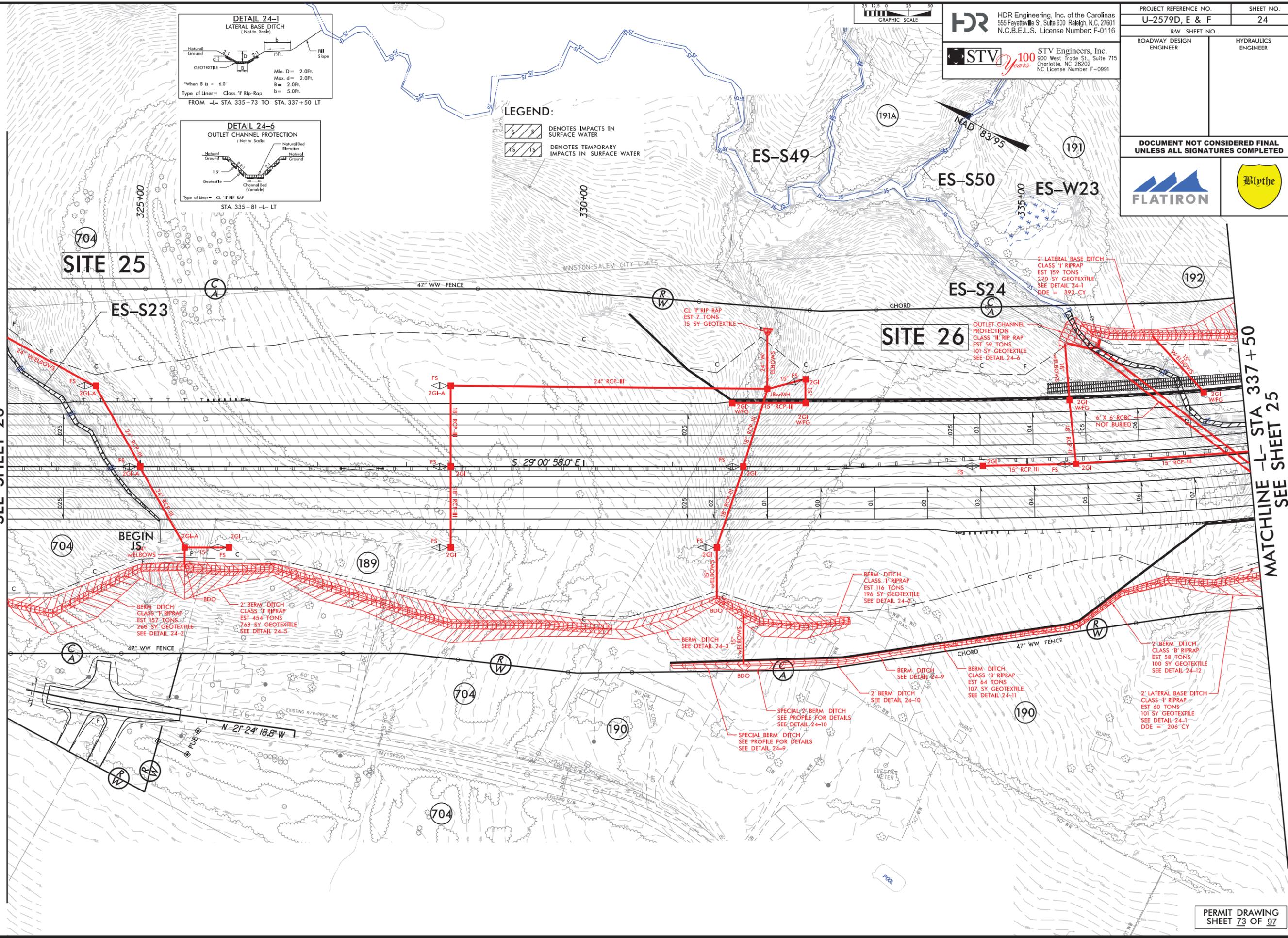
REVISIONS

Received 11/5/2020

Eric C. Blomgren

MATCHLINE -L- STA 323 + 50
 SEE SHEET 23

MATCHLINE -L- STA 337 + 50
 SEE SHEET 25



LEGEND:

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER



HDR HDR Engineering, Inc. of the Carolinas
 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
 N.C.B.E.L.S. License Number: F-0116

STV 100 Years
 STV Engineers, Inc.
 800 West Trade St., Suite 715
 Charlotte, NC 28202
 NC License Number F-0991

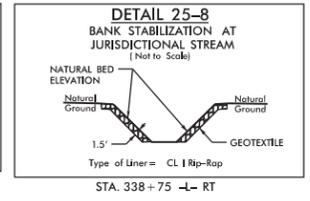
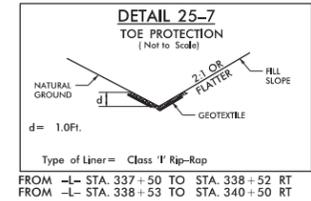
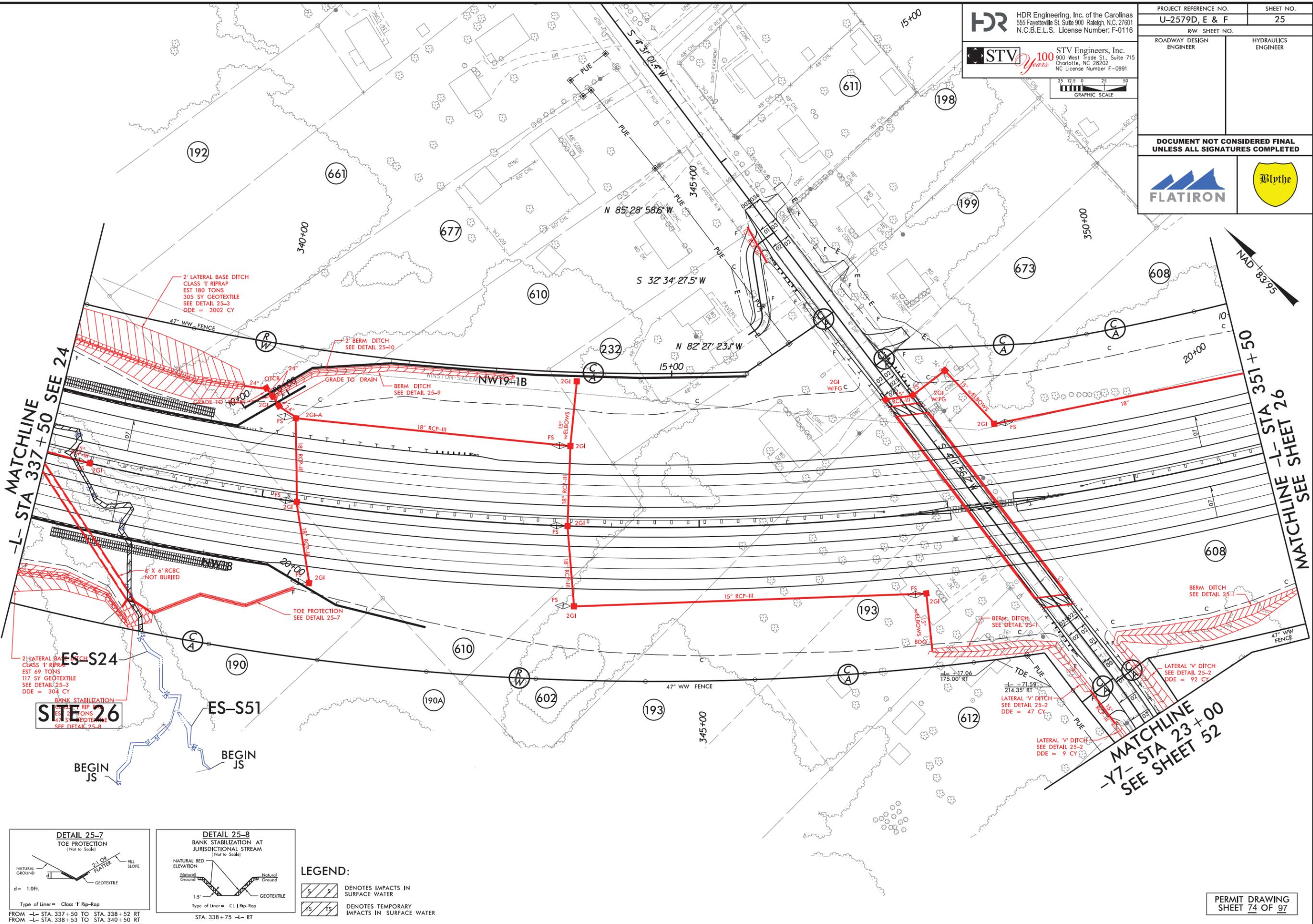
PROJECT REFERENCE NO. U-2579D, E & F	SHEET NO. 24
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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 USER: CMYERS
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PENTABLE: NCDOT_permits.NCON.tbl
 TIME: 11/27/20
 DATE: 10/19/2020

Received 11/5/2020

Eric C. Blomgren



LEGEND:

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PROJECT REFERENCE NO. U-2579D, E & F		SHEET NO. 25	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

HDR HDR Engineering, Inc. of the Carolinas
 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
 N.C.B.E.L.S. License Number: F-0116

STV 100 Years
 STV Engineers, Inc.
 900 West Trade St., Suite 715
 Charlotte, NC 28202
 NC License Number F-0991

GRAPHIC SCALE: 25 12.5 0 25 50

FLATIRON

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

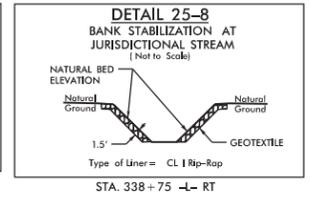
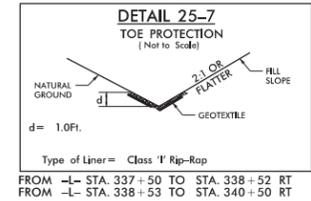
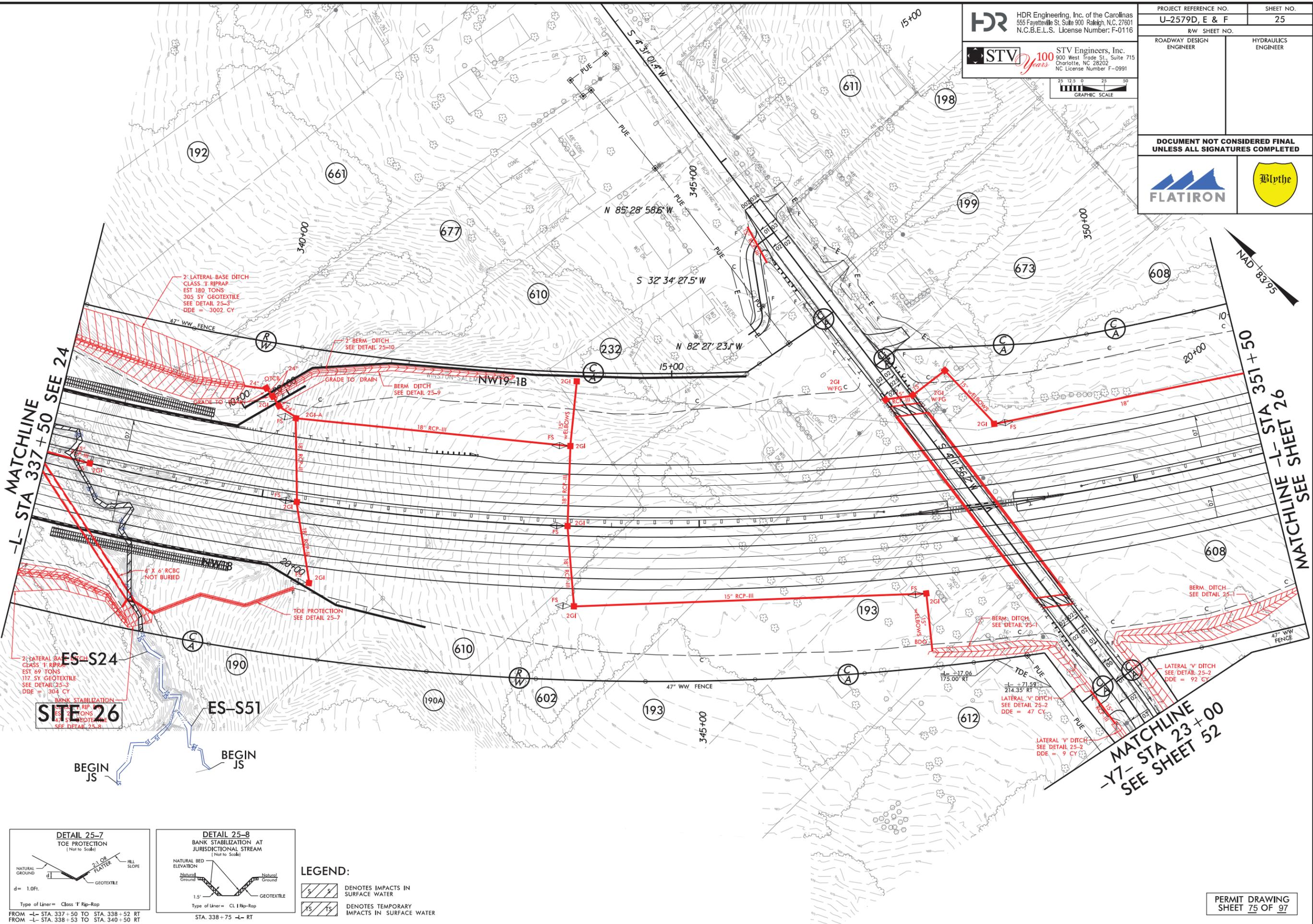
PERMIT DRAWING
 SHEET 25 OF 97

PLOT DRIVER: NCDOT_color_eng_100.plt
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PENTABLE: NCDOT_permits.CON.tbl
 TIME: 11/26/20
 DATE: 10/19/2020

REVISIONS

Received 11/5/2020
Eric C. Blomgren



LEGEND:

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PROJECT REFERENCE NO. U-2579D, E & F		SHEET NO. 25	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

HDR HDR Engineering, Inc. of the Carolinas
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STV 100 Years STV Engineers, Inc.
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 NC License Number F-0991

GRAPHIC SCALE: 1" = 25'

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Blythe

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PERMIT DRAWING
 SHEET 25 OF 97

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WETLAND PERMIT IMPACT SUMMARY													
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS					
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)	
11	173+80 -L-	48" RCP							0.04		615		
11A**	174+23 -L- RT	48" RCP	0.08										
12	203+75 - 207+10 -L- RT	ROADWAY FILL							0.02	< 0.01	410	10	
12A	205+69 -L- RT	FILL IN WETLAND	0.08										
13	207+24 -L-	5x6 CULVERT							0.03	< 0.01	337	22	
13A	209+14 -L- LT	4' BASE DITCH				< 0.01							
14	222+50 - 223+56 -L- RT	48" RCP							0.01	< 0.01	220	11	
14A	222+65 -L- LT	POND							3.06				
15	242+86/244+20 -L-	5'x6' RCBC							0.05	< 0.01	520	15	
15A	243+60/244+00 -L-	5'x6' RCBC	0.04										
16	253+92/255+58 -L-	42" RCP AND DITCH							0.05	< 0.01	513	20	
17	261+02/262+96 -L-	6'x6' RCBC							0.08	< 0.01	928	23	
18	275+75/276+78 -L-	42" RCP							0.03	< 0.01	161	11	
18A	277+00 RT -L-	PIPE REMOVAL AND DITCH							< 0.01	< 0.01	24	20	
18A	277+00 RT -L-	BANK STABILIZATION							< 0.01		7		
19	279+30/280+86 -L-	5'x7' RCBC							0.04	< 0.01	250	11	
19	280+86/281+71 -L-	5' STANDARD BASE DITCH							< 0.01	< 0.01	91	15	
20	280+61/281+66 -L-	REMOVE 2 - 72" CMP							0.02	< 0.01	35	31	
20A	285+56/285+81 -L-	BANK STABILIZATION							< 0.01	< 0.01	16	21	
20B	285+56/285+81 -L-	BANK STABILIZATION							< 0.01	< 0.01	20	21	
20C	284+44/285+33 -L-	TEMPORARY WORK PAD								0.06		165	
21	285+19/285+65 -L-	CHANNEL CHANGE							< 0.01		133		
21	285+19 -L-	BANK STABILIZATION							< 0.01	< 0.01	10	10	
22	303+57/304+09 -L-	30" RCP/ 36" RCP							< 0.01	< 0.01	97	7	
TOTALS SHEET 2*:			0.20			< 0.01			3.47	0.09	4387	413	0

*Rounded totals are sum of actual impacts

NOTES:

- **Wetland ES-W33 is total take
- Site 24 is a Channel Relocation

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WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
23	316+25/317+41 -L-	6'x6' RCBC						0.04		363		
23	317+40/317+49 -L-	BANK STABILIZATION						< 0.01	< 0.01	28	10	
24	316+84/317+01 -L-	CHANNEL CHANGE						< 0.01	< 0.01	120	10	
25	323+23/325+22 -L-	24" RCP						0.02	< 0.01	294	10	
26	335+66/338+74 -L-	6'x6' RCBC						0.05	< 0.01	523	10	
26	338+82 -L-	BANK STABILIZATION						< 0.01	< 0.01	29	8	
27	356+07/357+64 -L-	7'x7' RCBC						0.05		328		
27	356+07 -L- LT	BANK STABILIZATION						< 0.01	< 0.01	35	8	
27	357+63 -L- RT	BANK STABILIZATION						< 0.01	< 0.01	37	12	
28**	397+37/400+85 -L-	ROADWAY FILL	0.26									
29**	398+61/405+73 -L-	ROADWAY FILL / 5' BASE DITCH						0.06		906		
29**	398+61/405+73 -L-	BANK STABILIZATION						< 0.01	< 0.01	40	10	
29A**	401+96 -L-	ROADWAY FILL	< 0.01									
29B**	402+33/405+59 -L-	ROADWAY FILL / 5' BASE DITCH	0.26		0.03	0.01						
30***	409+52/411+61 -L-	54" RCP						0.05	< 0.01	563	14	
30***	409+53 -L-	BANK STABILIZATION						< 0.01	< 0.01	15	10	
31	49+59 - 50+28 -Y3- LT	2' BASE DITCH						< 0.01		57		
32	35+68/37+32 -Y6-	BANK STABILIZATION						0.03	< 0.01	172	19	
33	173+50 -L- LT	CHANNEL IMPROVEMENT TIE-IN						< 0.01	< 0.01	20	21	
34	357+38/357+49 -L-	BANK STABILIZATION						< 0.01	< 0.01	24	11	
		TOTAL SHEET 1	0.87		< 0.01	0.01		0.49	< 0.01	5694	49	
		TOTAL SHEET 2	0.20			< 0.01		3.47	0.09	4387	413	
		TOTAL SHEET 3	0.53		0.03	0.01		0.34	0.02	3554	153	
TOTALS ALL SHEETS*:			1.60	0.00	0.03	0.03	0.00	4.31	0.11	13635	615	

*Rounded totals are sum of actual impacts

** SITE 28, 29, 29A, AND 29B - SITE 1 IN U-2579C PHASE 2 PERMIT

*** SITE 30 - SITE 2 IN U-2579C PHASE 2 PERMIT

NOTES

- ISOLATED WETLANDS SITE
- SITE 24 IS A CHANNEL RELOCATION

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