



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

March 24, 2023

U.S. Army Corps of Engineers Charlotte Regulatory Field Office  
8430 University Executive Park Drive, Suite 615  
Charlotte, NC 28262

ATTN: Mr. Steve Brumagin, NCDOT Regulatory Coordinator

**Subject: Request for Modification to Individual Section 404 Permit and Section 401 Water Quality Certification** for recently modified U-2579 AA (USACE, dated February 10, 2021; WQC Rev. 7, dated February 9, 2021), the Winston-Salem Northern Beltway (Eastern Section of Future I-74), from US 311 to I-40; U-2579AA; Federal Aid Project No. NHF-0918(14), Division 9. Debit \$570 from WBS No. 34839.1.7

**References: Section 404 and 401 Individual Permit Application** requested October 2, 2017, for Winston Salem Northern Beltway from I-40 to US 52 (R-2247B Phase 2, CA, CB, CD, D, EA, EB, and EC), from US 52 to US 311 North (U-2579C Phase 2, D, D, and F), and from I-40 Business to US 311 South (U-2579AA and AB).

- Modification Application for U-2579D, E, F / U-2579C Phase 2, dated January 7, 2019.
- Modification Application for R-2247EB, dated June 26, 2019.
- Modification Application for U-2579D, E, and F, dated October 17, 2019.
- Modification Application for U-2579D, E, and F, dated November 4, 2020.
- Modification Application for U-2579AB, dated December 2, 2020.
- Modification Application for U-2579AB noise wall addition and U-2579AA, dated November 23, 2021
- Modification Application for U-2579AB temporary access dated February 28, 2023

**Section 404 Individual Permit** issued for the Winston Salem Northern Beltway from I-40 to US 52 (R-2247B Phase 2, CA, CB, CD, D, EA, EB, and EC), from US 52 to US 311 North (U2579C Phase 2, D, D, and F), and from I-40 Business to US 311 South (U-2579AA and AB), dated January 22, 2018 (**SAW-2017-02112**).

- Permit Modification for U-2579D, E, F / U-2579C Phase 2, dated March 4, 2019.
- Permit Modification for R-2247EB, dated August 13, 2019.
- Permit Modification for U-2579D, E and F, dated January 29, 2020.
- Permit Modification for U-2579D, E, and F, dated December 9, 2020.
- Permit Modification for U-2579AB, dated February 10, 2021.

*Mailing Address:*  
NC DEPARTMENT OF TRANSPORTATION  
DIVISION 9  
375 SILAS CREEK PARKWAY  
WINSTON SALEM, NC 27127

*Telephone:* (336) 747-7800  
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*Customer Service:* 1-877-368-4968

*Location:*  
375 SILAS CREEK PARKWAY  
WINSTON-SALEM, NC 27127

*Website:* [ncdot.gov](http://ncdot.gov)

- Permit Modification for U-2579AB noise wall addition and U-2579AA, dated July 29, 2022

Permit Modification for U-2579AB temporary access dated March 9, 2023.

**Section 401 Water Quality Certification** issued November 14, 2017 (**WQC004131**), for the Winston Salem Northern Beltway from I-40 to US 52 (R-2247B Phase 2, CA, CB, CD, D, EA, EB, and EC), from US 52 to US 311 North (U-2579C Phase 2, D, D, and F), and from I-40 Business to US 311 South (U-2579AA and AB); Revision 2 dated December 21, 2017; Revision 3 dated February 7, 2019; and Revision 4 dated August 13, 2019; Revision 5 dated November 14, 2019; Revision 6, dated November 30, 2020; Revision 7, dated February 9, 2021; Revision 8, dated January 10, 2022; Revision 9, dated March 9, 2023.

Dear Sir:

The purpose of this modification is to revise two permit sites and add one new permit site. I have included copies of the contractor submittals and marked up permit sheets for the applicable sites. The additional impacts are as follows:

Permit site 3b: The existing impacts at permit site 3b were for the construction of a temporary detour of High Point Road. The contractor has modified the construction plan and no longer needs to construct the High Point Road detour. A bridge was proposed at this location and the impacts were proposed as bank stabilization along the stream under the bridge. The contractor has proposed to utilize the area as a temporary crossing for access. The proposed crossing will consist of (8) 24" steel culvert pipes that have a length of 40'. The (8) pipes will be stacked 2 rows high with (4) pipes in each row. This crossing has been sized for the 2 year storm event which is consistent with NCDOT guidelines for temporary crossings. We previously permitted 35 feet of permanent bank stabilization and 18 feet of temporary impacts at site 3B. We need to permit an additional 17' of temporary impacts at the site. Total impacts will be 70' at site 3b. The existing stream at this location has been field surveyed, so it can be restored in its existing location. Any impacted stream banks will be sloped at 2:1 or flatter, matted with coir fiber matting, and revegetated with native riparian seed mix.

Permit site 6: We have currently proposed 57' of permanent impacts from a welded steel pipe, 68' of permanent impacts from bank stabilization and 20' of temporary impacts. We need to propose an additional 100' of temporary impacts at this site. The stream, in its existing location, conflicts with the construction of the bridge piers. Installing the stream crossing will allow for the construction of the bridge piers and will provide better access to the site. It will also minimize the potential for unauthorized impacts to the stream from sedimentation due to the close proximity of the pier. The temporary crossing will be a 36" pipe that is 80' long. Due to the meander in the stream, the pipe is shorter than the impacts. The existing stream at this location has been field surveyed, so it can be restored in its existing location. Any impacted stream banks will be sloped at 2:1 or flatter, matted with coir fiber matting, and revegetated with native riparian seed mix

New permit site 19: The borrow site is on NCDOT property and within the study area for the project. The stream can be seen on plan sheet 4 on the U-2579AA project, downstream of permit site 13 on the U-2579AB project. There will be 100' of temporary stream impacts to an unnamed tributary (ESE-S19 in the January 2016 PJD Report). The stream will need to be crossed to access the borrow site. A 42"X40' steel culvert will be installed in the stream and an additional 70 of

stream will be impacted for bank stabilization and/or dewatering. Once the borrow site is stabilized, the pipe and any bank stabilization will be removed and the stream will be returned to its existing alignment. The banks will be sloped at 2:1, matted with coir fiber matting and revegetated with a native riparian seed mix.

The modification application has revised total temporary impacts from 422 to 639.

There will be no impacts to threatened or endangered species or their habitat because of the additional work. There will also be no impacts to Section 106 resources.

### **Regulatory Approvals**

Section 404: We are hereby requesting modification to the USACE Individual 404 Permit (SAW-2017-02112), for the above-described activities for Section U-2579AA.

Section 401: We are hereby requesting a modification to the 401 Water Quality Certification (WQC004131) from the NCDWR for Section U-2579AA. We believe this work is permissible under an Infield modification with no fee requirement.

Thank you for your assistance with this project. If you have any questions or need additional information, please contact me at (336) 747-7802 or [aeuliss@ncdot.gov](mailto:aeuliss@ncdot.gov).

Sincerely,



Amy Euliss  
NCDOT Division 9 PDEA Engineer

Attachments: Flatiron (contractor) submittals  
Current plan sheets for the locations with revisions

**Contract ID: C204746**

**Location: Future I-74 Winston Salem**

**Northern Beltway US-311 to I-40**

**T.I.P. No: U-2579AA**

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Jurisdictional Stream Crossing at Borrow Site –L- 13+50 LT

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March 23, 2023

**PREPARED FOR:**

North Carolina Department of Transportation  
1151 N Martin Luther King, Jr. Drive  
Winston-Salem, NC 27101

**PREPARED BY:**

Flatiron Constructors, Inc.  
1883 Union Cross Road  
Winston-Salem, NC 27107

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## Introduction

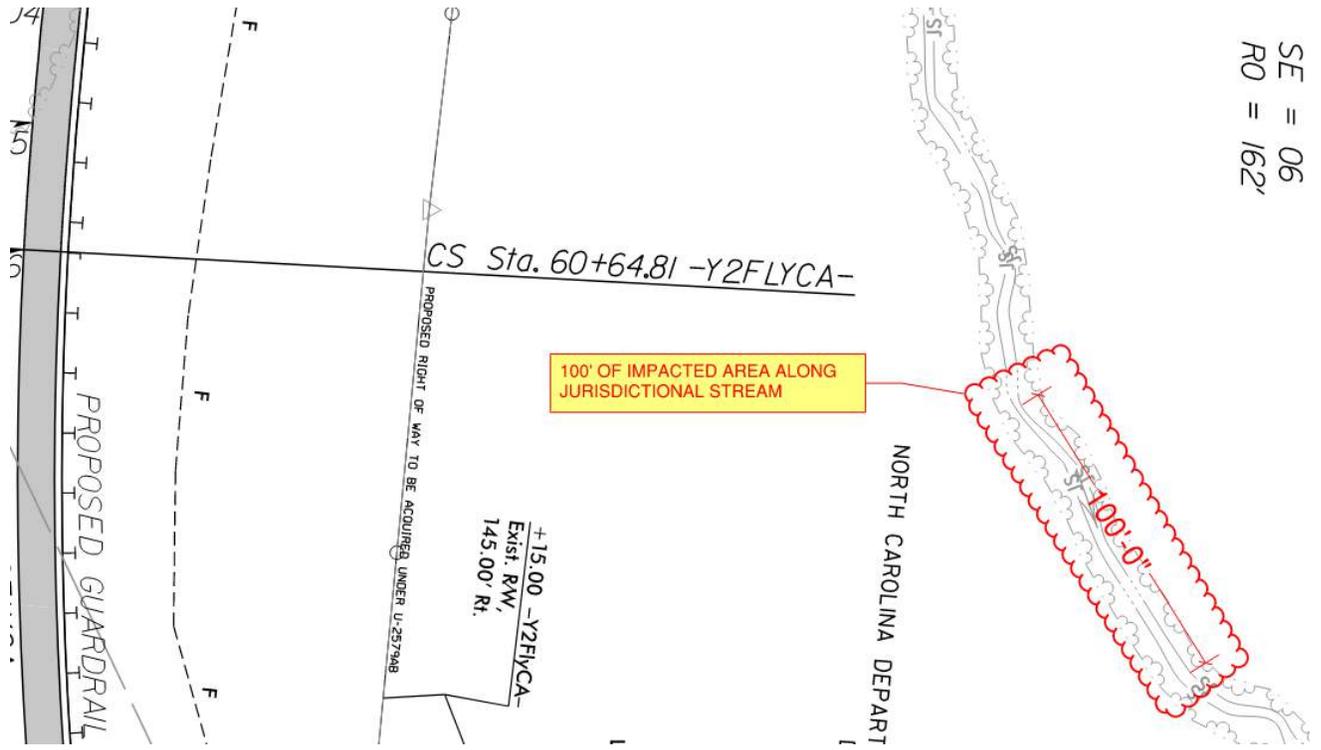
The proposed locations and supporting information contained in this submittal serves to cover the requirements needed for a proposed stream crossing across a jurisdictional stream to access the borrow site at the northeast area of the project. This crossing will be used as a temporary access point and help to limit the disturbance of the existing creeks to this location during construction for the duration of the project. The existing stream at this location will be field surveyed, so it can be restored in its existing location. Any impacted stream banks will be sloped at 2:1 or flatter, matted with coir fiber matting, and revegetated with native riparian seed mix.

### **Jurisdictional Stream Crossing at Borrow Site**

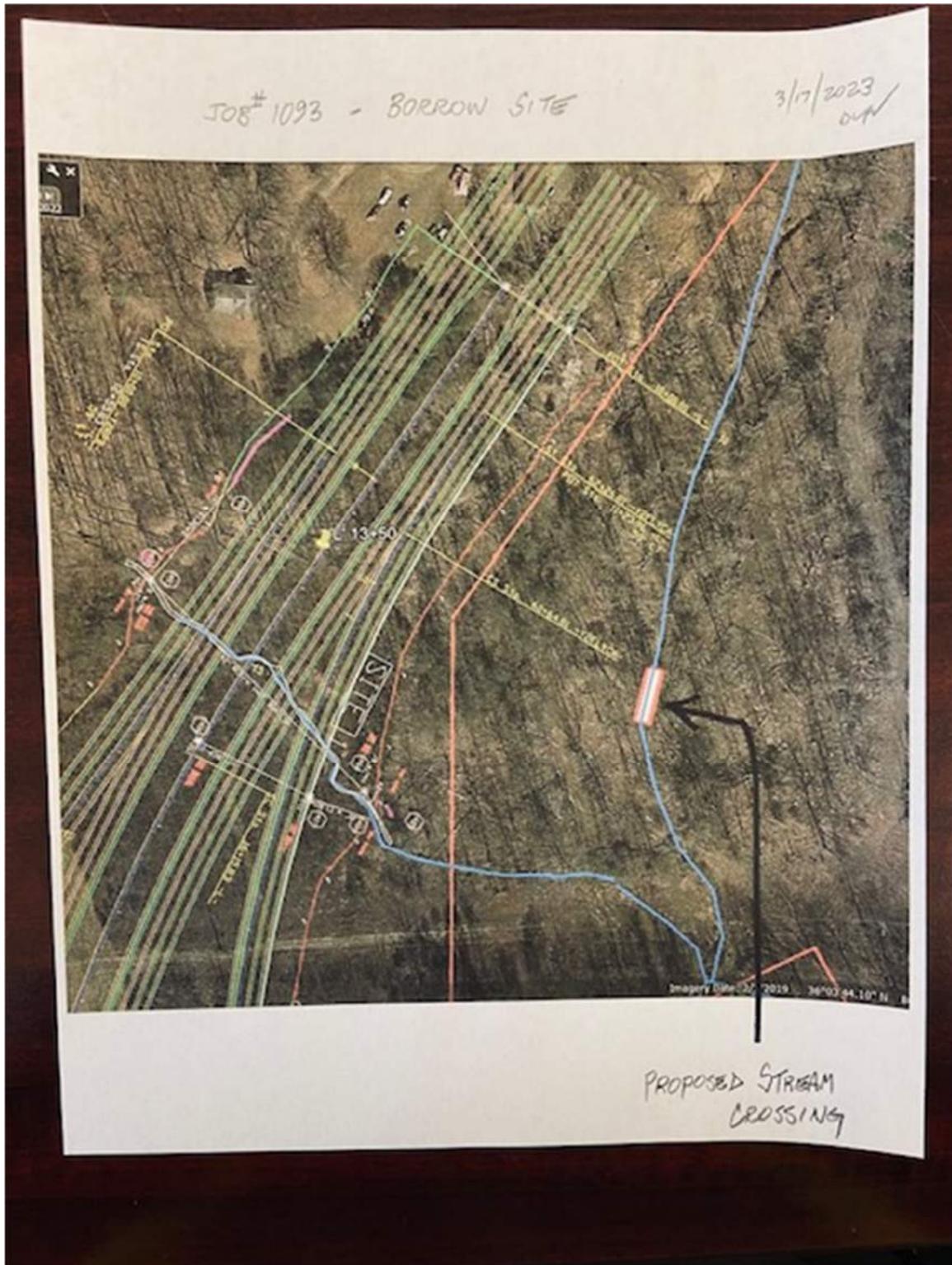
The proposed jurisdictional stream (JS) crossing is located just east of the proposed L alignment at 13+50 LT. The proposed crossing will consist of (1) 42" steel culvert pipes that have a length of 40'. The culvert pipe is a larger size of the proposed 36" culvert pipe (Adjacent Project) upstream of this location. The total impacted length along the JS will be 100' (approximately 30' beyond the inlet and outlet of the 40' culvert pipe).

A .dwg file will be provided under a separate cover after the area has been cleared and prior to disturbing the JS.

## Appendix A – Location Aerial Views

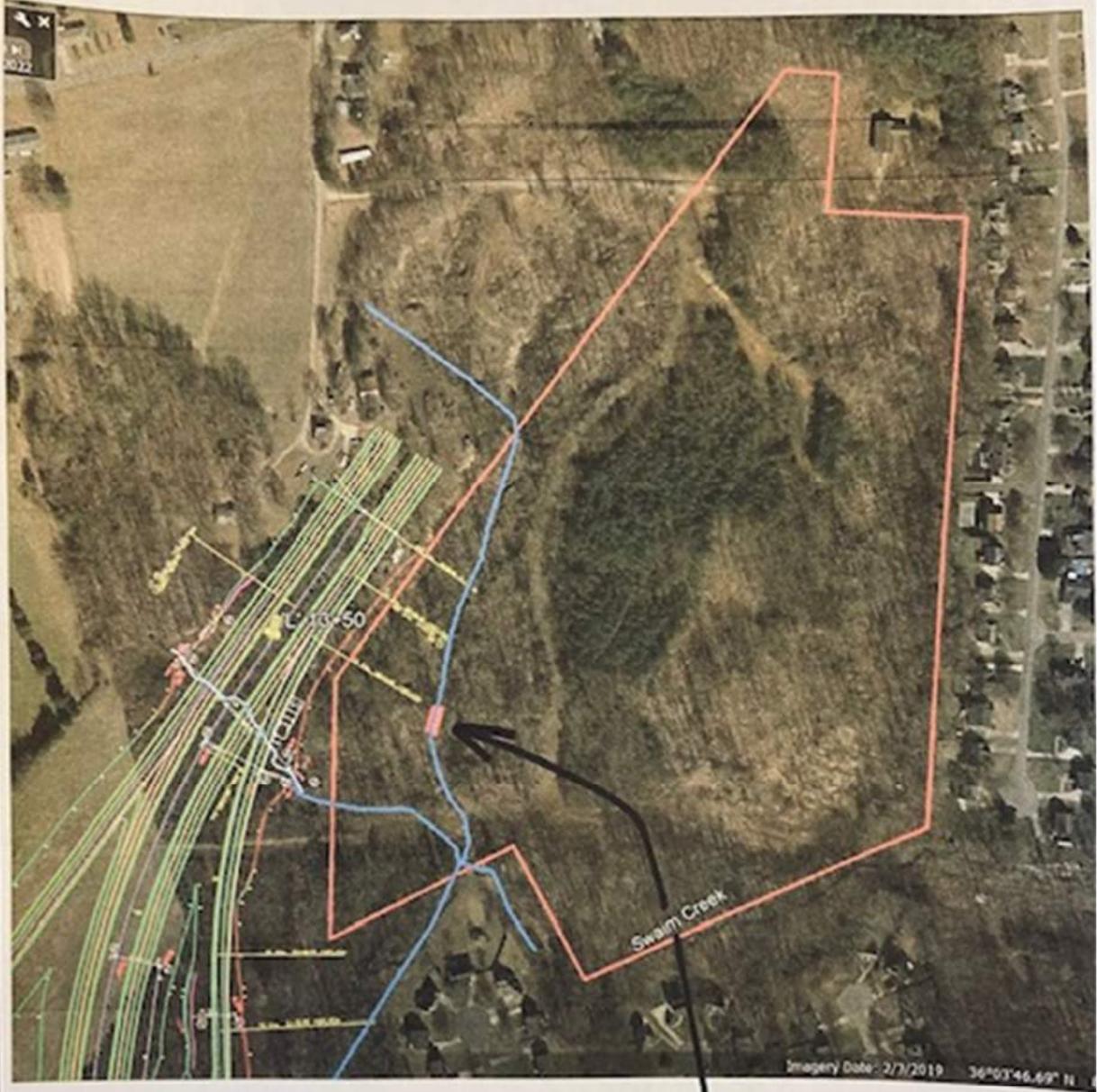






JOB # 1093 - BORROW SITE OVERVIEW

3/17/2023  
OUT



PROPOSED STREAM CROSSING

**Contract ID: C204746**

**Location: Future I-74 Winston Salem  
Northern Beltway US-311 to I-40**

**T.I.P. No: U-2579AA**

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Swaim Creek Proposed Stream Crossing

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March 23, 2023

**PREPARED FOR:**

North Carolina Department of Transportation  
1151 N Martin Luther King, Jr. Drive  
Winston-Salem, NC 27101

**PREPARED BY:**

Flatiron Constructors, Inc.  
1883 Union Cross Road  
Winston-Salem, NC 27107

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## Introduction

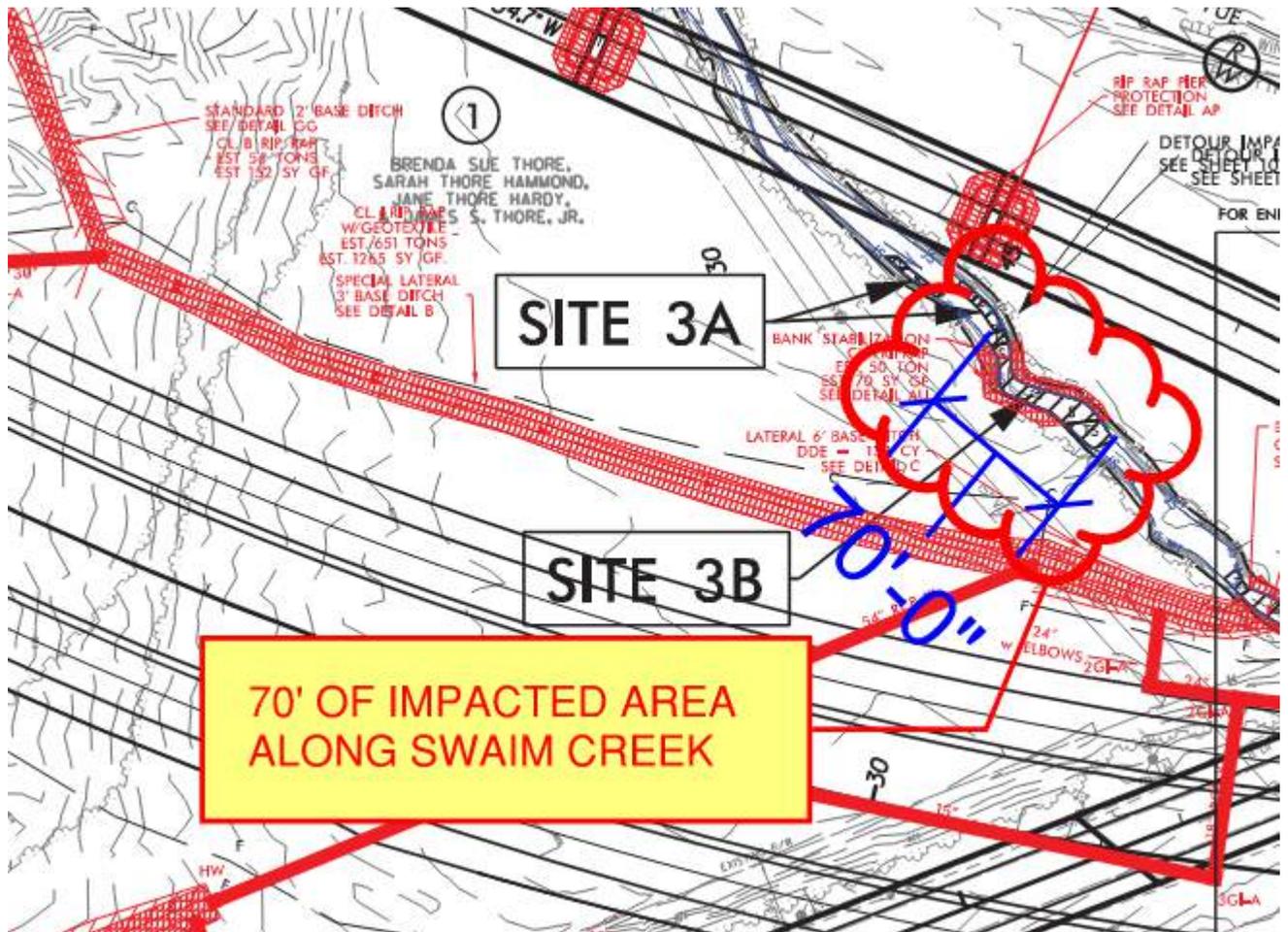
The proposed locations and supporting information contained in this submittal serves to cover the requirements needed for stream crossing at Swaim Creek within the project limits at Permit site 3B. This crossing will be used as a temporary access point and help to limit the disturbance of the existing creeks to this location during construction for the duration of the project. The existing stream at this location has been field surveyed, so it can be restored in its existing location. Any impacted stream banks will be sloped at 2:1 or flatter, matted with coir fiber matting, and revegetated with native riparian seed mix.

### Swaim Creek Crossing at Permit Site 3B

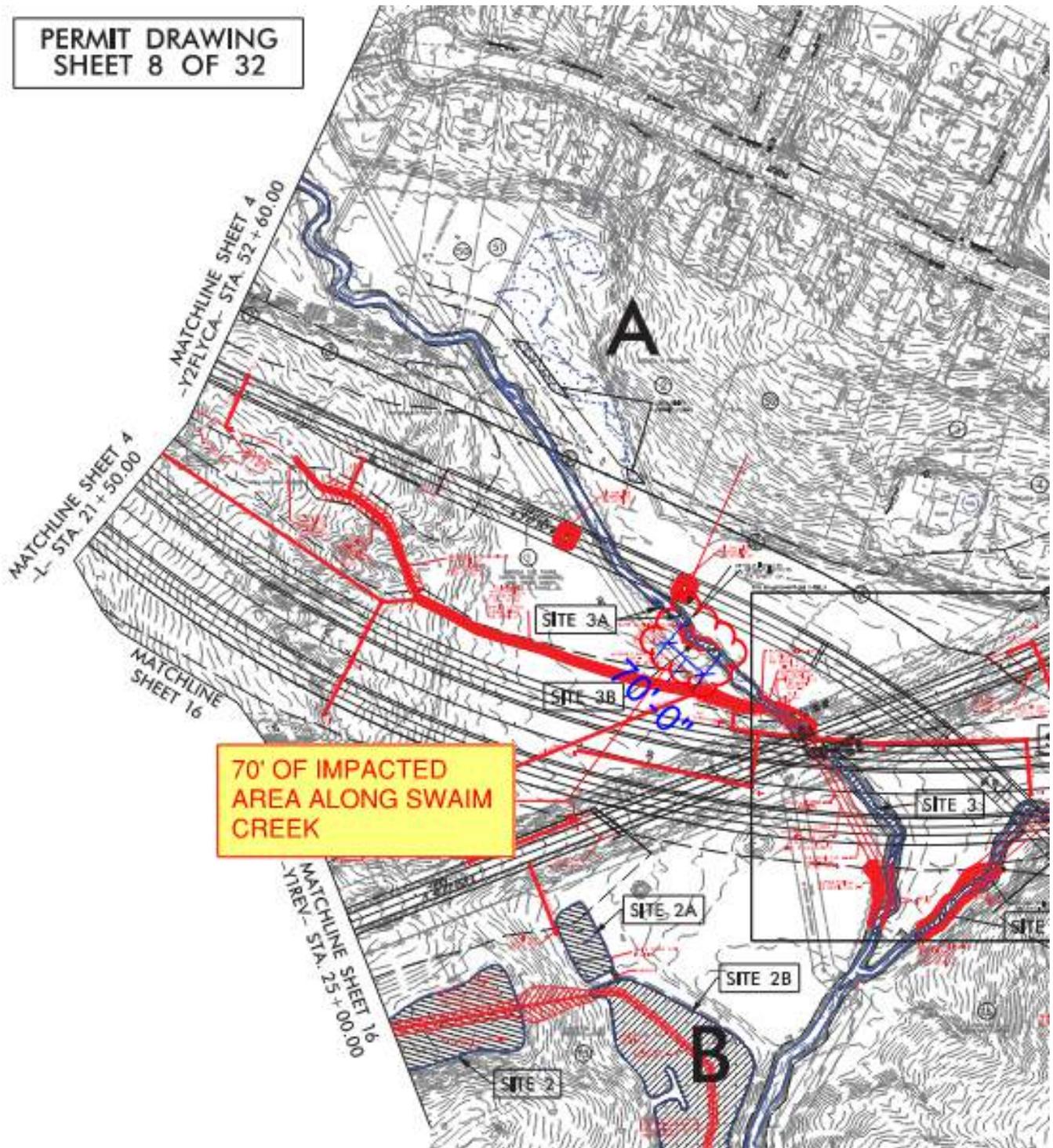
The proposed crossing at Swaim Creek is located just north of High Point Road upstream of the proposed culvert 1 (Station 32+77.5) at permit Site 3B. The proposed crossing will consist of (8) 24" steel culvert pipes that have a length of 40'. The (8) pipes will be stacked 2 rows high with (4) pipes in each row. The same proposed configuration that is being installed for the culvert diversion channel that was already hydraulically approved for access while constructing culvert 1. The total impacted length along Swaim Creek will be 70' (approximately 15' beyond the inlet and outlet of the 40' culvert pipe).

A .dwg file is included as well as a separate attachment as part of this submittal.

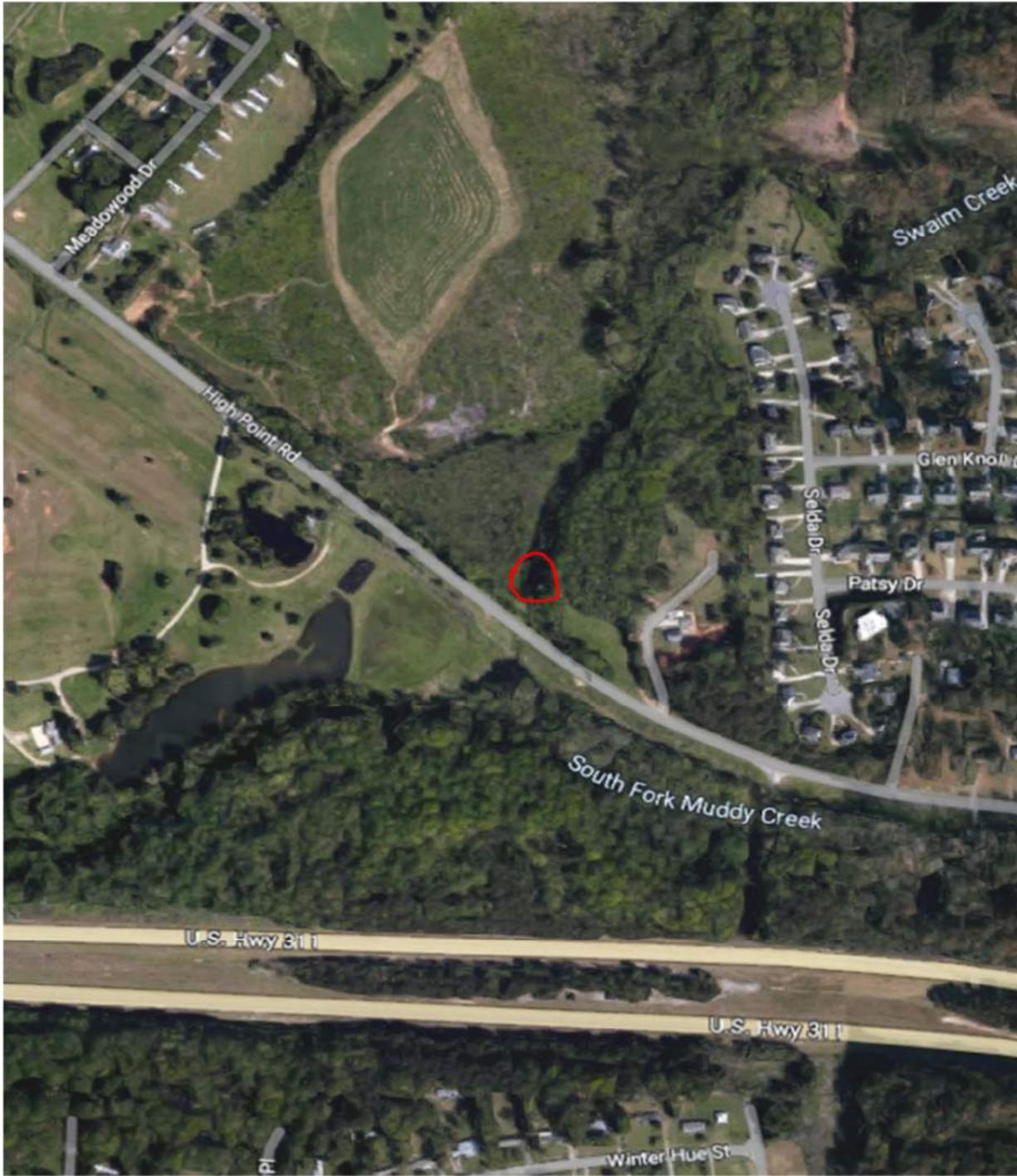
## Appendix A – Location Aerial Views



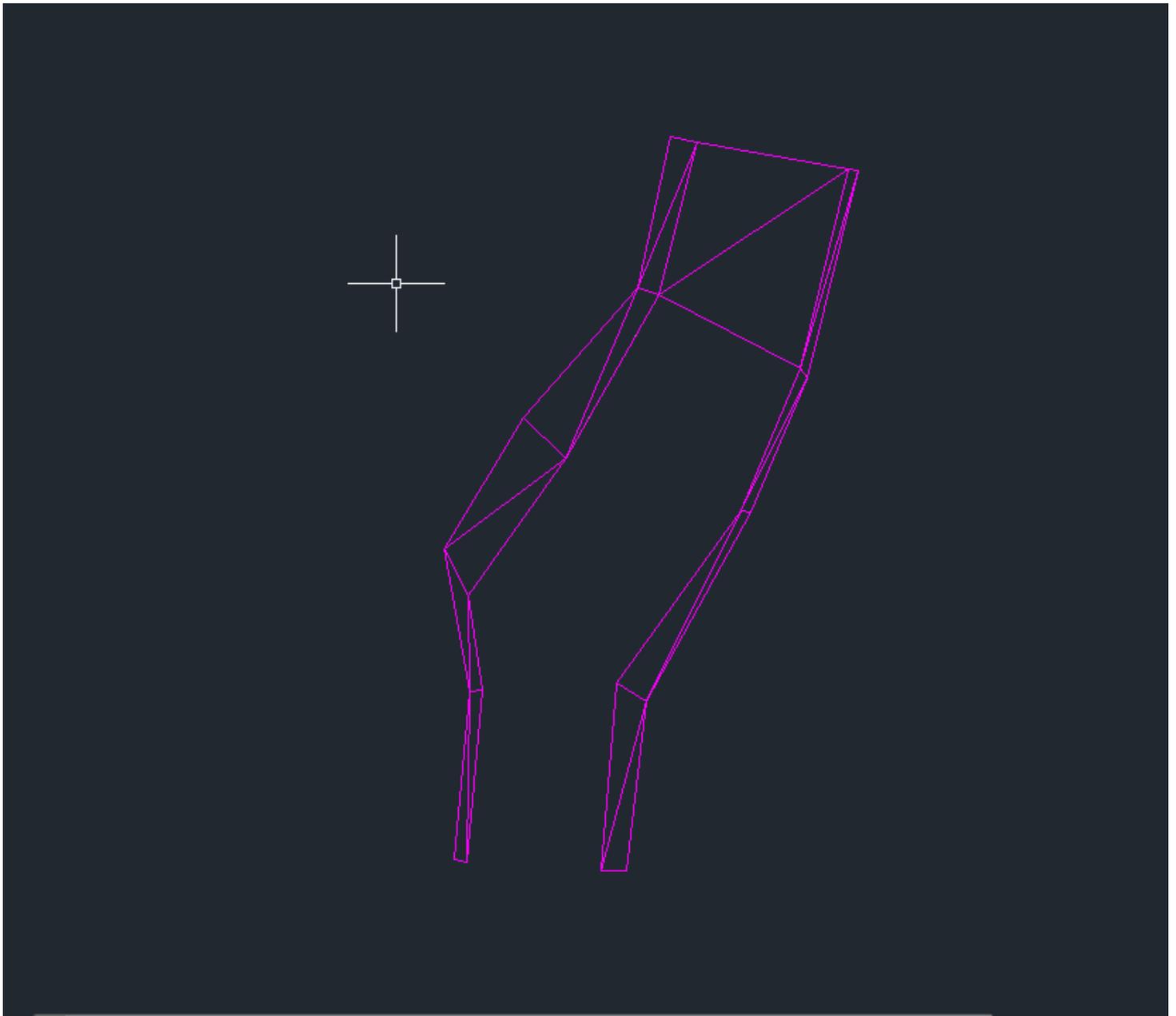
PERMIT DRAWING  
SHEET 8 OF 32







## Appendix B – CAD Existing Topo View



A .dwg file is included as well as a separate attachment as part of this submittal.

**Contract ID: C204746**

**Location: Future I-74 Winston Salem  
Northern Beltway US-311 to I-40**

**T.I.P. No: U-2579AA**

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Jurisdictional Stream Crossing –Y1- 42+80.00 RT

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March 23, 2023

**PREPARED FOR:**

North Carolina Department of Transportation  
1151 N Martin Luther King, Jr. Drive  
Winston-Salem, NC 27101

**PREPARED BY:**

Flatiron Constructors, Inc.  
1883 Union Cross Road  
Winston-Salem, NC 27107

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## Introduction

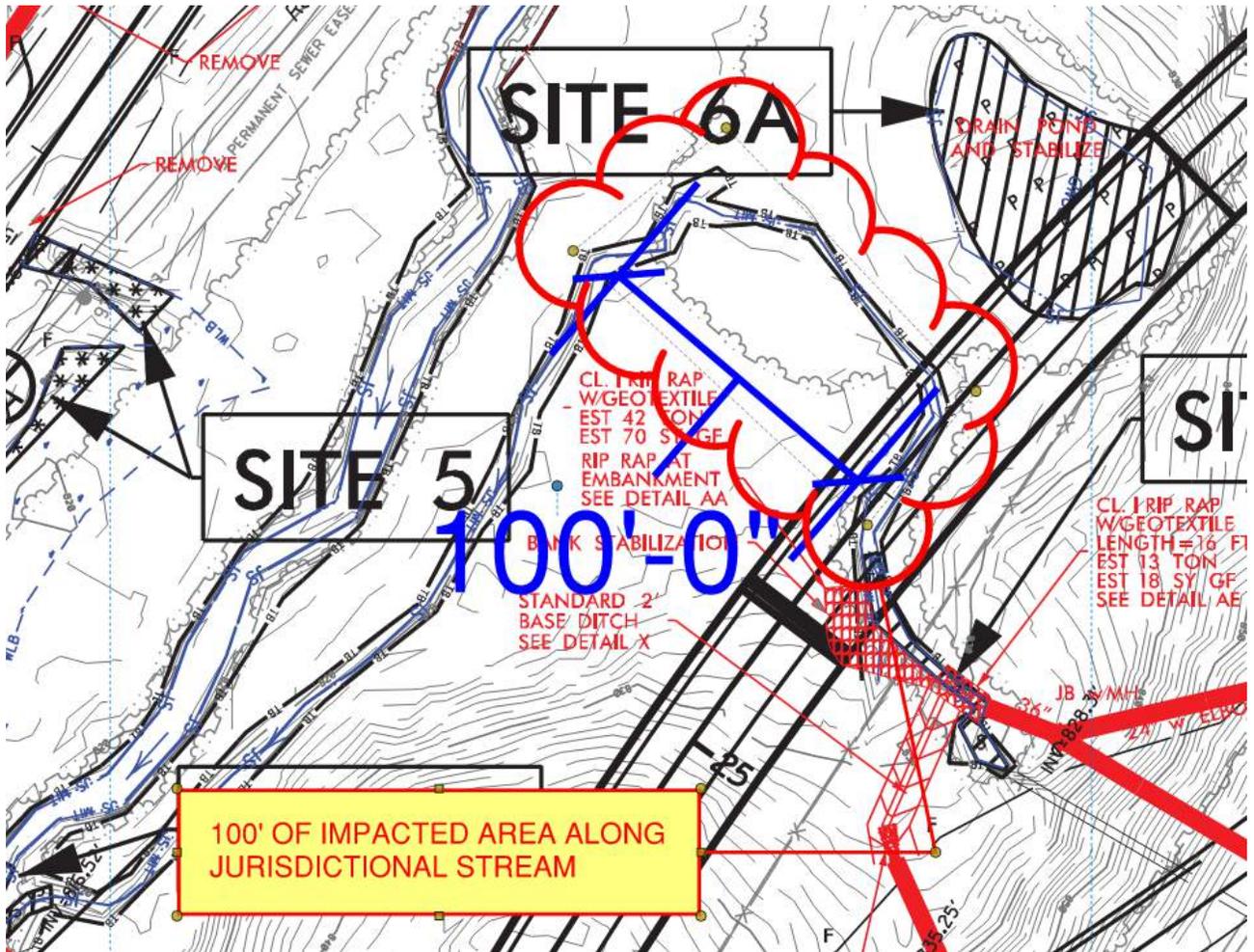
The proposed locations and supporting information contained in this submittal serves to cover the requirements needed for a proposed stream crossing across South Fork Muddy Creek within the project limits. The stream, in its existing location, conflicts with the construction of the bridge piers. Installing the stream crossing will allow for the construction of the bridge piers and will provide better access to the site. It will also minimize the potential for unauthorized impacts to the stream from sedimentation due to the close proximity of the pier. The existing stream at this location has been field surveyed, so it can be restored in its existing location. Any impacted stream banks will be sloped at 2:1 or flatter, matted with coir fiber matting, and revegetated with native riparian seed mix.

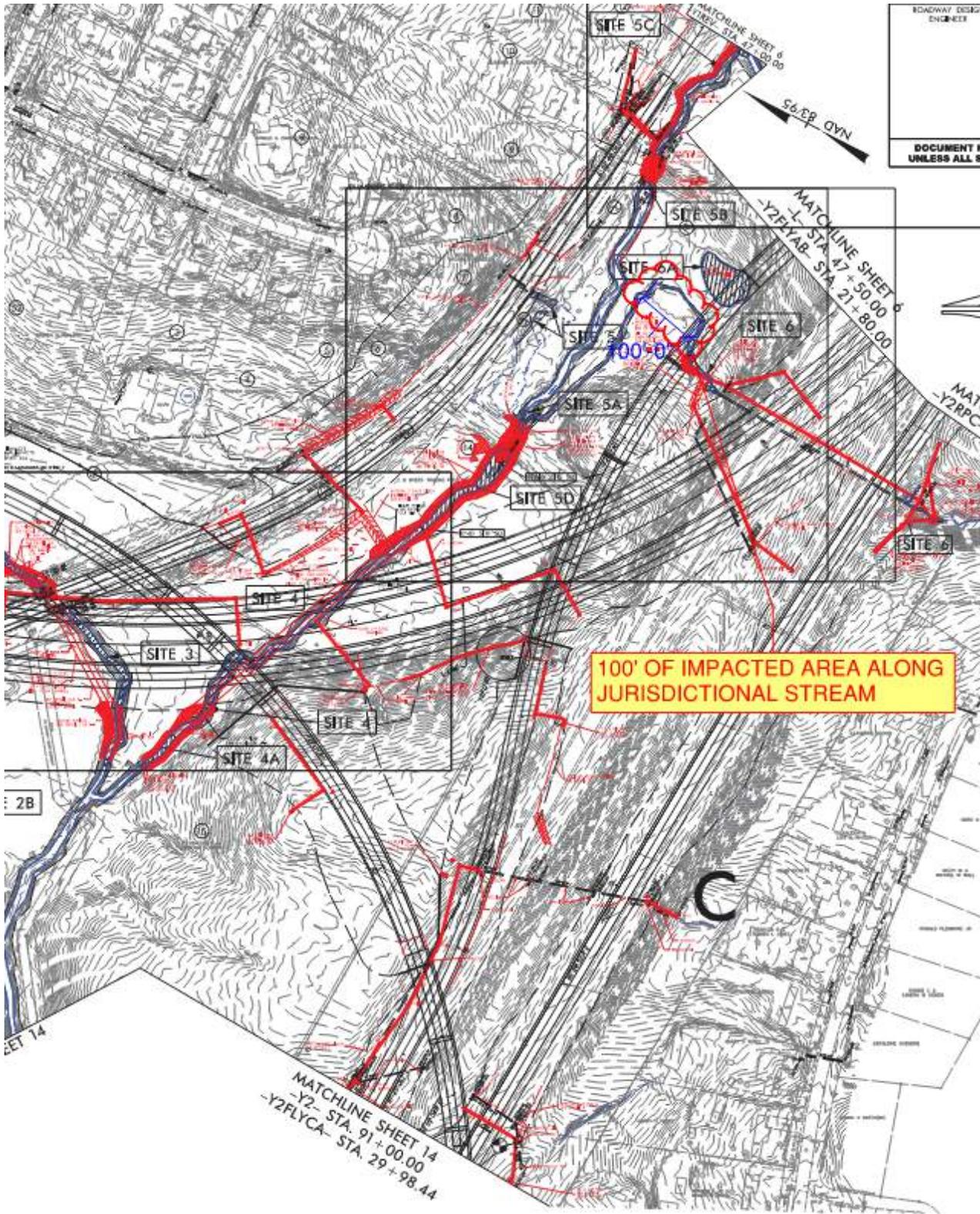
## Jurisdictional Stream Crossing –Y1- 42+80.00 RT

The proposed jurisdictional stream (JS) crossing is located just south of High Point Road (-Y1-) Station 42+80.00. The proposed crossing will consist of (1) 36" steel culvert pipes that have a length of 80'. The culvert pipe is the same size as the existing culvert pipe upstream of this location. The total impacted length along the JS will be 100' (approximately 10' beyond the inlet and outlet of the 80' long culvert pipe). The JS ties into the South Fork of Muddy Creek just downstream of the proposed crossing.

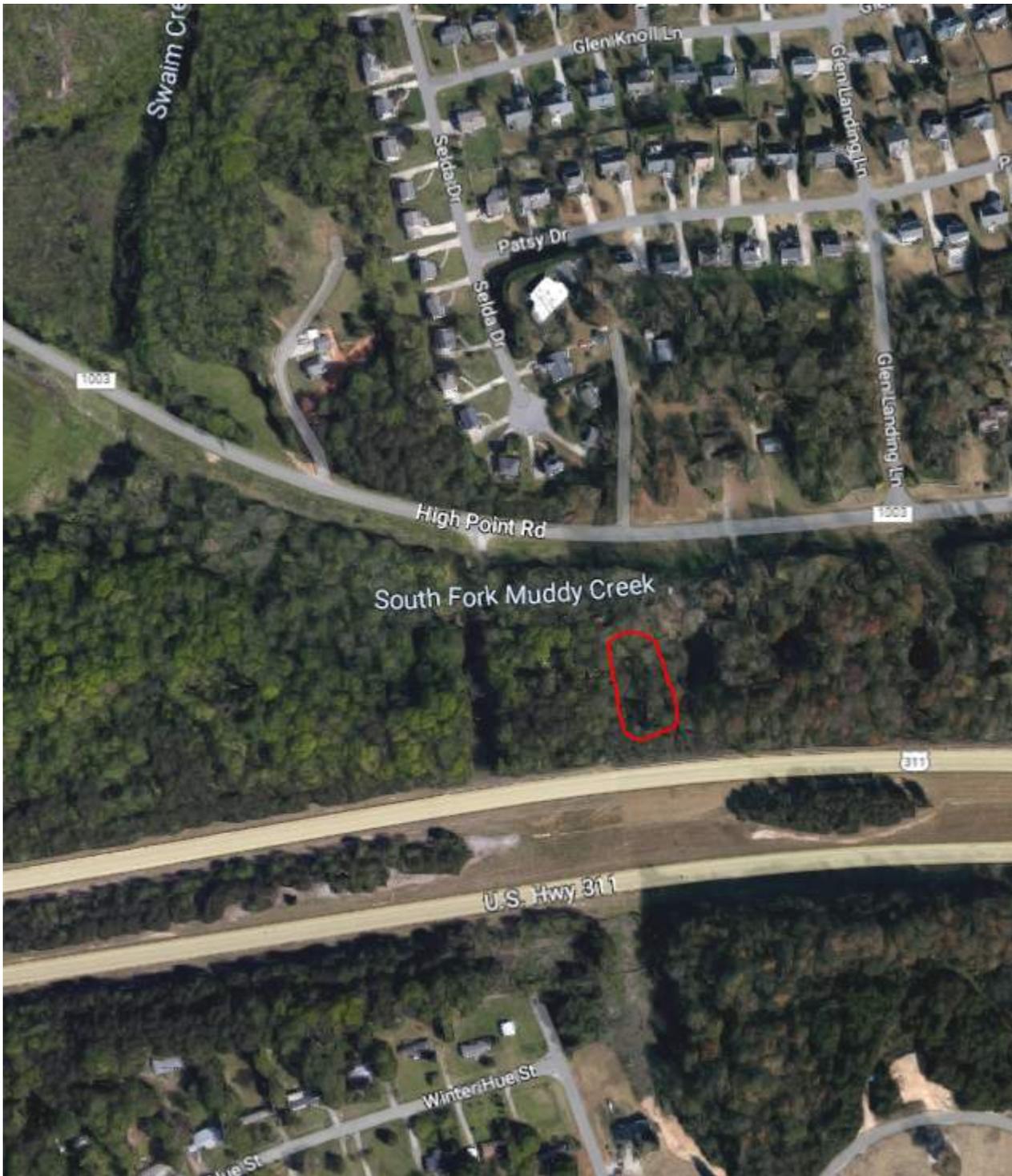
A .dwg file is included as well as a separate attachment as part of this submittal.

## Appendix A – Location Aerial Views









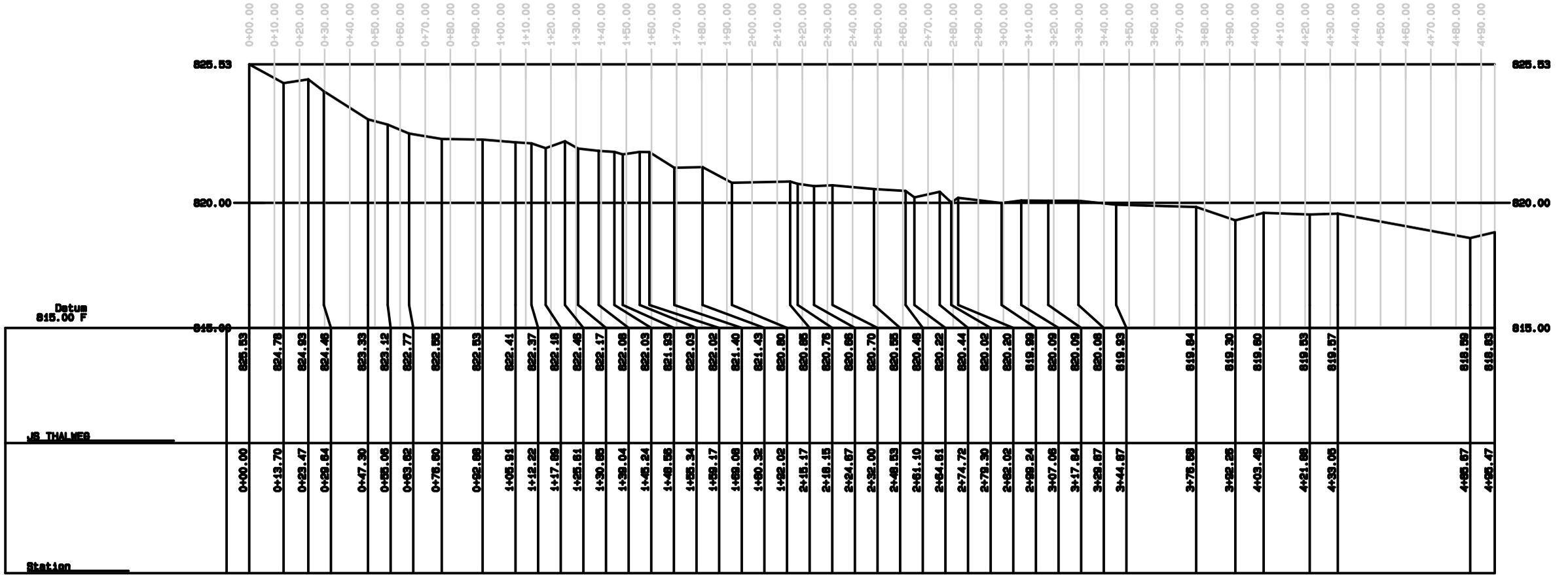
## Appendix B – CAD Existing Topo View



A .dwg file is included as well as a separate attachment as part of this submittal.

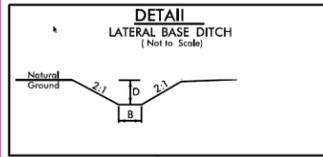
# Appendix C – Longitudinal Profile View

-Y1- 42+80.00 RT



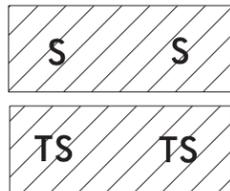
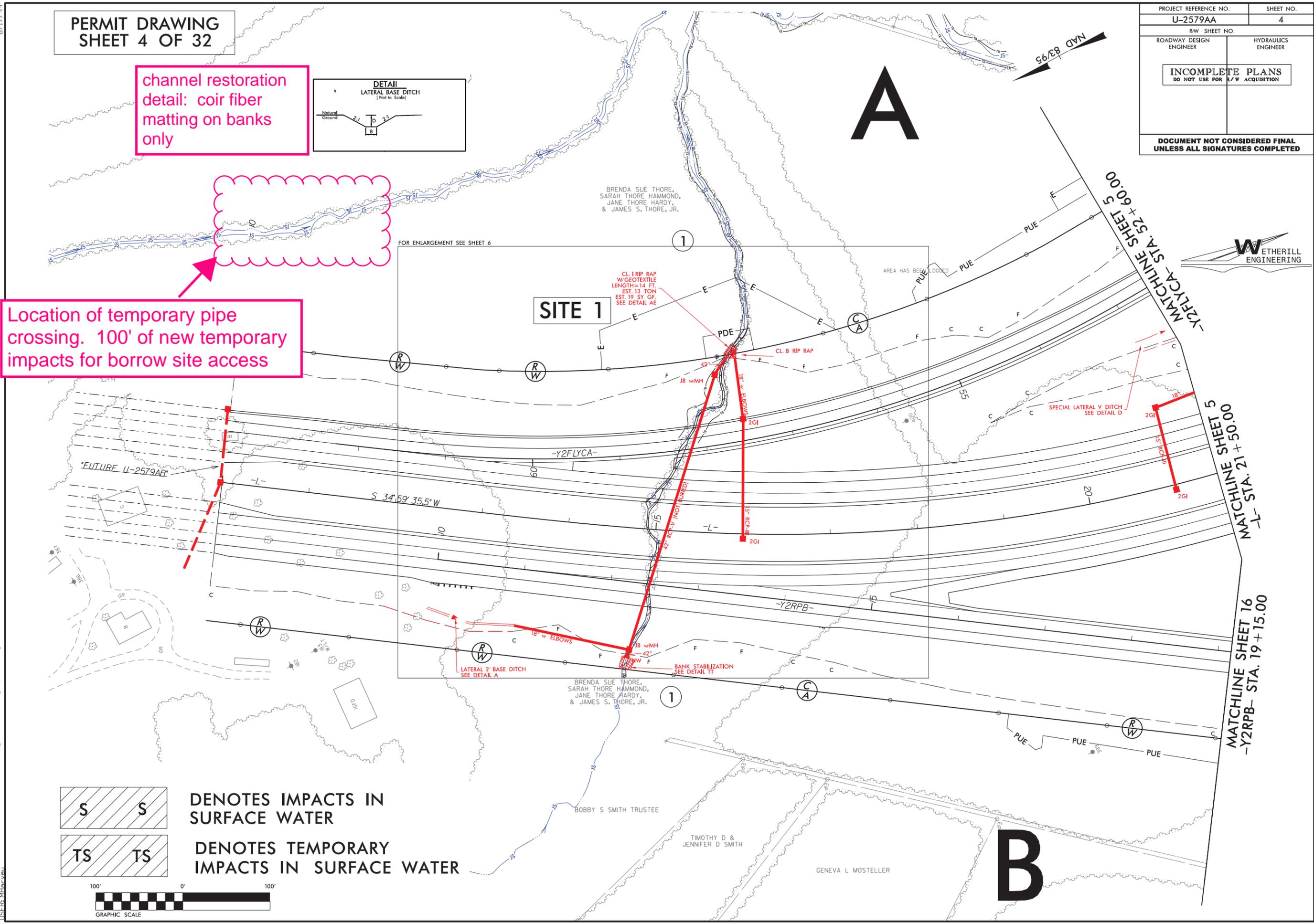
PERMIT DRAWING  
SHEET 4 OF 32

channel restoration  
detail: coir fiber  
matting on banks  
only

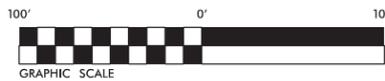


Location of temporary pipe  
crossing. 100' of new temporary  
impacts for borrow site access

PROJECT REFERENCE NO. U-2579AA		SHEET NO. 4	
RW SHEET NO. ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



**S** DENOTES IMPACTS IN SURFACE WATER  
**TS** DENOTES TEMPORARY IMPACTS IN SURFACE WATER



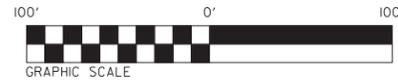
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USER: jhewitt



DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



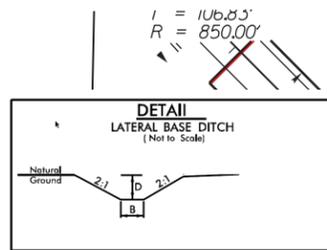
PERMIT DRAWING SHEET 10A OF 32

# DETAIL FOR HIGH POINT RD ON-SITE DETOUR (-YIDET-)



PROJECT REFERENCE NO. U-2579AA	SHEET NO. 2B-2
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

channel restoration detail: coir fiber matting on banks only



Location of temporary pipe crossing. Revising total impacts from 53' (35' permanent stabilization and 18' temporary) to 70' (35' permanent stabilization and 35' temporary)

MATCHLINE -YIDET- STA 31+00.00

MATCHLINE STA 35+00.00 -YIDET-

SEE PERMIT SHEET 31 FOR PROFILE OF -YIDET- BRIDGE

NOTES:  
SEE SHEETS 41 & 42 FOR -YIDET- PROFILE  
SEE SHEETS 5, 15 & 16 FOR -YI- PLANS AND CURVE DATA

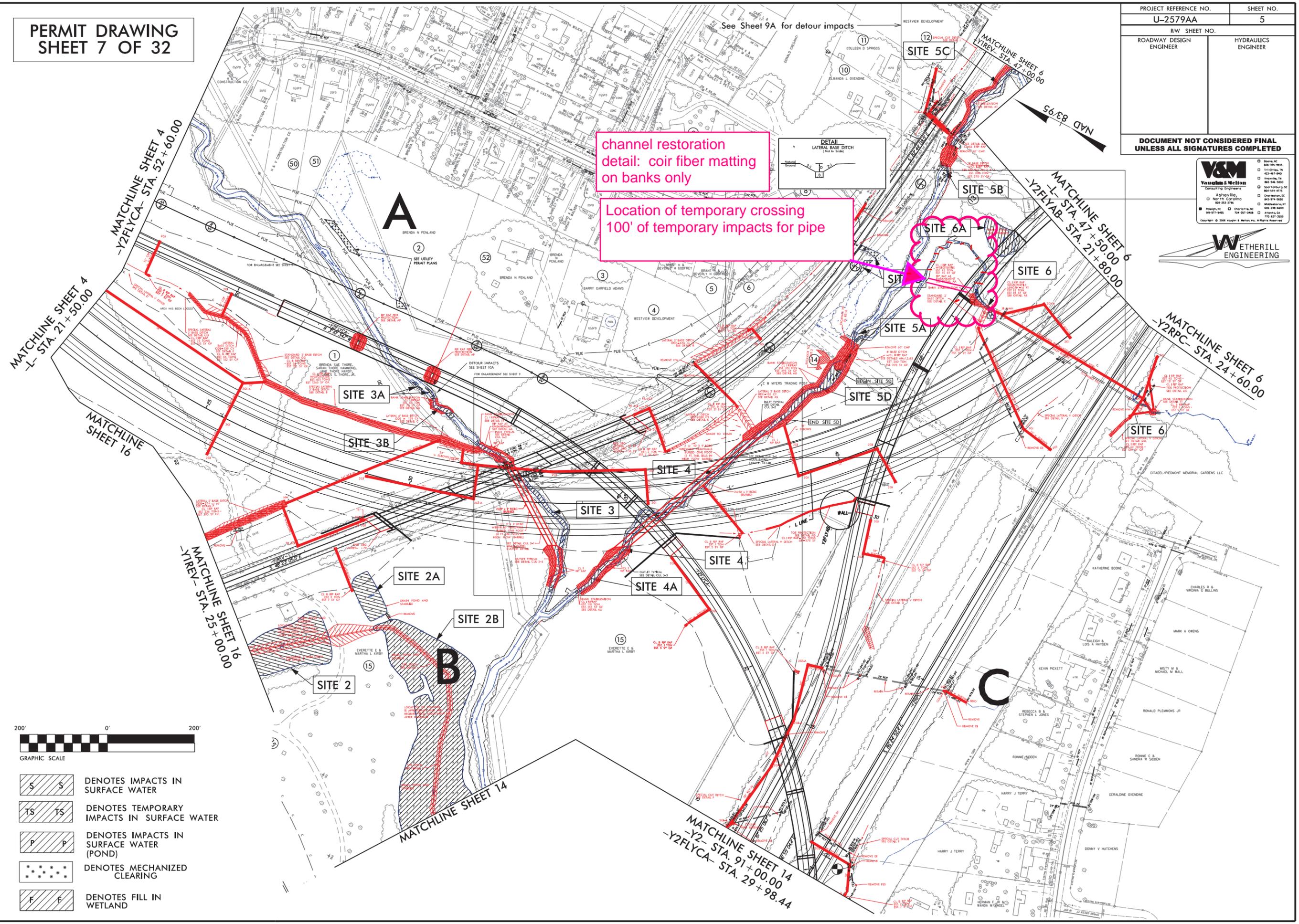
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PERMIT DRAWING  
SHEET 7 OF 32

PROJECT REFERENCE NO. U-2579AA	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

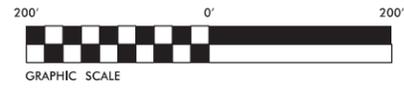
**V&M**  
Vaughan & Melton  
Consulting Engineers  
1000 North Carolina  
Raleigh, NC 27601  
919-977-9455

**W**  
ETHERILL  
ENGINEERING



channel restoration  
detail: coir fiber matting  
on banks only

Location of temporary crossing  
100' of temporary impacts for pipe



- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES IMPACTS IN SURFACE WATER (POND)
- DENOTES MECHANIZED CLEARING
- DENOTES FILL IN WETLAND

8/17/99  
6/24/2021  
R:\Hydro\Utilities\PERMITS\Environmental\Drawings\U2579AA\_Hyd\_psh\_05.dgn  
USER: kballard

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)
1	-L- 15+12	42" RCP-V (Not Buried)						0.03		392		
1		Channel Armoring						< 0.01	< 0.01	14	24	
1		Bank Stabilization						< 0.01	< 0.01	15	9	
2	-Y1REV- 25+60 RT	Drain and Stabilize Pond						0.50				
2A	-Y1REV- 28+00 RT	Drain and Stabilize Pond						0.12				
2B	-Y1REV- 28+60 RT	Drain and Stabilize Pond						2.31				
2C	-Y1REV- 28+60 RT	Bank Stabilization						< 0.01	< 0.01	16	20	
3	-Y1REV-32+78	2 @ 9'x9' RCBC						0.05		240		
3		Channel Change						0.02		124		
3		Bank Stabilization						< 0.01	< 0.01	26	20	
3A	-Y2FLYCA- 46+56 LT to 46+92	Detour Ditch Outlets						< 0.01	< 0.01	20	40	
3B	-Y2FLYCA- 46+56 LT to 46+92	Detour Bridge/Bank Stabilization						0.01	< 0.01	35	<del>16</del> 35	
4	-L- 36+28	2 @ 10'x9' RCBC						0.10		418		
4	-L- 34+68 RT	Channel Change						0.02		85		
4	-L- 38+65 LT	Bank Stabilization						0.01		80		
4A	-L- 33+95 to 34+33 RT	Bank Stabilization and Temporary Diversion Channel for Culvert Phasing						0.01	< 0.01	67	10	
5	-Y1REV- 41+70 RT	15" Pipe Removal	< 0.01			0.02						
5A	-Y1REV- 39+50 RT	60" Pipe Removal/Scour Hole Stabilization						< 0.01	< 0.01	42	40	
5B	-Y1REV- 44+50 RT	60" Pipe Removal/Scour Hole Stabilization						< 0.01	< 0.01	8	10	
5C	1REV- 44+83 to 47+09 R	Bank Stabilization						0.05	< 0.01	236	17	
5D	-L- 39+22 to 39+93 RT	Bank Stabilization and Temporary Diversion Channel for Culvert Phasing						0.06		173		
6	-L- 45+60	36" Welded Steel						< 0.01		57		
6		Bank Stabilization						< 0.01	< 0.01	68	<del>120</del> 120	
6A	-Y2 FLYAB- 23+00	Drain and Stabilize Pond						0.11				
7	-L- 54+04	72" Alt/Welded Steel						< 0.01		26		
7		Bank Stabilization						< 0.01	< 0.01	23	15	
7A	-L- 54+04	72" Alt/Welded Steel						< 0.01		11		
7A		Bank Stabilization						< 0.01	< 0.01	35	10	
8	-Y2- 15+70 to 17+65 RT	4' Base Ditch	0.04		0.04	0.02						
9	-Y2- 15+92 to 17+31 RT	Erosion Control Practices				0.06						
10	-Y2- 18+36	Bank Stabilization						0.04	< 0.01	60	20	
10A	-Y2- 19+50 LT	Bank Stabilization						< 0.01	< 0.01	9	22	
10B	-Y2- 22+10 LT	Bank Stabilization						< 0.01	< 0.01	8	10	
10C	-Y2- 23+50 LT	Bank Stabilization						< 0.01	< 0.01	8	10	
10D	-Y2- 25+50 LT	Bank Stabilization						< 0.01	< 0.01	10	10	
11	-Y2- 19+40 to 20+01 RT	Erosion Control Practices				0.03						
12A	-Y2- 52+60	Channel Armoring for Energy Dissipator Basin						< 0.01		33		
12B	-Y2- 54+75	Channel Change						< 0.01	< 0.01	80	10	
13	-Y2- 72+48 RT	60" Alt/Welded Steel						< 0.01		32		
13		Channel Armoring						< 0.01	< 0.01	31	25	
14	-Y2- 78+70	3 @ 8'x8' RCBC Extension						0.06		150		
14		Bank Stabilization						0.03	< 0.01	97	20	
14A	-Y2FLYCA- 14+75 to 15+30	3' Base Ditch						< 0.01	< 0.01	50	10	
14B	-Y2FLYCA- 15+88 to 17+46	Y2 FLYCA	0.38			0.05						
15	-Y2RPB- 41+50	36" RCP-III						0.03		249		
15		Bank Stabilization						< 0.01	< 0.01	16	32	
15A	-Y2RPB- 39+50 to 42+00	Y2RPB	0.64		0.07	0.20						
TOTALS:			1.07		0.11	0.38		3.63	0.06	3044	<del>422</del> 639	

adding temporary impacts to site 6 for access and stability

19. Borrow site access

\*Rounded totals are sum of actual impacts

100

NOTES:  
15A - There will be total take of the remnant, shown in the quantities.

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
6/24/2021  
Forsythe Co.  
U-2579AA

Revised 2013 10 24

SHEET 32 OF 32