

Project Submittal Interim Form

Updated December 4, 2023



*Please note: fields marked with a red asterisk * below are required. You will not be able to submit the form until all mandatory questions are answered.*

Project Type: *

- ☐ For the Record Only (Courtesy Copy)
- ☐ New Project
- ☐ Modification/New Project with Existing ID
- ☒ More Information Response
- ☐ Other Agency Comments
- ☐ Pre-Application Submittal
- ☐ Re-Issuance/Renewal Request
- ☐ Stream or Buffer Appeal

Is this supplemental information that needs to be sent to the Corps? *

- ☐ Yes
- ☒ No

Project Contact Information

Name: William A. Barrett
Who is submitting the information?

Email Address: * wabarrett@ncdot.gov

Project Information

Existing ID #: *

20250885
20170001 (no dashes)

Existing Version: *

1
1

Project Name: * BR-0060

Is this a public transportation project? *

- ☒ Yes
- ☐ No

Is this a DOT project? *

- ☒ Yes
- ☐ No

Is the project located within a NC DCM Area of Environmental Concern (AEC)? *

- ☐ Yes
- ☒ No
- ☐ Unknown

Does this project involve maintenance dredging funded by the Shallow Draft Navigation Channel Dredging and Aquatic Weed Fund, electric generation projects located at an existing or former electric generating facility, or involve the distribution or transmission of energy or fuel, including natural gas, diesel, petroleum, or electricity? *

- ☐ Yes
- ☒ No

Is this project connected with ARPA funding? *

☐ Yes ☒ No

TIP#:

BR-0060

WBS#:

67060.1.1

(Applies to DOT projects only)

County (ies) *

Alamance

Please upload all files that need to be submitted.

Click the upload button or drag and drop files here to attach document

BR-0060_Response to DWR Comments

12.41MB

Package.pdf

Only pdf or kmz files are accepted.

Describe the attachments or add comments:

Attached to this submittal is the BR-0060_Response to DWR Comments Package.

* ☒ By checking the box and signing box below, I certify that:

- I, the project proponent, hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief.
- I, the project proponent, hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.
- I agree that submission of this online form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the online form.

Signature: *

William A. Barrett

Submittal Date:



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

August 20, 2025

North Carolina DEQ
1617 Mail Service Center
Raleigh, NC 27699-1617

ATTN: Ms. Faith Hardin, Supervisor

Subject: **Additional Information Response for the 401 Certification and Buffer Authorization** for the replacement of Bridge No. 14 located on NC 87 over Cane Creek, Alamance County
DWR# 20250885

Reference: On hold letter dated August 1, 2025 (DWR# 20250885)

Pursuant to your request for additional information dated August 1, 2025, please find enclosed responses:

NCDWR Comment 1:

Confirm Sheet 5 of the Permit drawings. At the end of the Project and east of NC 87, there is an off-site pond which appears to drain into the Project area. Please provide supporting information and data forms collected in this area.

NCDOT Response:

During the site visit by our consultants, there was no drainage from the off-site pond to the study area identified. Therefore, no forms were completed. Also, Location & Survey did not pick up a drainage feature from the off-site pond to the study area. It appears that any drainage from the off-site pond flows to the roadside ditch (see attached photo of the drainage area. The [link below](#) directs to this particular area, between the off-site pond and drainage roadside ditch on Google Maps).

It appears that the feature identified in the CE Document Figure as Stream SC (labeled on the attached Figure as Ditch DA) may be a relic drainage feature from the off-site pond to Cane Creek. However, it is no longer an active conveyance from the off-site pond (see Stream ID Form for Ditch DA; score = 10.5). See Response to DWR Comment 4 for additional information.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL ANALYSIS UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

Website: www.ncdot.gov

Location:
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610

https://www.google.com/maps/place/35%C2%B053'04.4%22N+79%C2%B017'45.1%22W/@35.8824689,-79.2942581,3a,75y,65.07h,86.38t/data=!3m7!1e1!3m5!1sjPW7dPbFtmlq4iwU-jo8ow!2e0!6shttps:%2F%2Fstreetviewpixels-pa.googleapis.com%2Fv1%2Fthumbnail%3Fcb_client%3Dmaps_sv.tactile%26w%3D900%26h%3D600%26pitch%3D3.618210615127964%26panoid%3DjPW7dPbFtmlq4iwU-jo8ow%26yaw%3D65.07030307855283!7i16384!8i8192!4m4!3m3!8m2!3d35.8845441!4d-79.2958526?entry=tту&_ep=EgoyMDI1MDcxNi4wKXMDSoASAFQAw%3D%3D

NCDWR Comment 2:

Based on the Jurisdictional Map, stream SB and SC are located on-site.

NCDOT Response:

The Jurisdictional Map referenced in the NCDWR comment is from the CE Document for BR-0060, dated March 2023. In the Water Resources section of the referenced CE, the *Status of Streams in the Study Area* Table lists Streams SB and SC as Ephemeral; therefore, not jurisdictional streams.

Stream SB was determined to be ephemeral (Stream ID score of 15.5) and therefore was not labeled as a stream on the permit and buffer drawings. However, it was identified as a drainage feature by Locations & Survey, so it is depicted with a non-JS blue line on the permit and buffer drawings. The Stream ID Form for SB is included in the attachment in this submittal.

Please note that in the attachment included with this Response is a Figure (*Potential Jurisdictional Features Map*) that identifies and re-labels Stream SC as **Ditch DA** (Stream SC => Ditch DA), along with a Stream ID Form for Ditch DA (score of 10.5).

There is also a Stream ID Form for “Stream SD” in the attachment, which is not depicted or labeled on the CE Document Figure. However, as noted on the Stream ID Form for Stream SD, the feature is located between Pond PA and Cane Creek, and was determined to be ephemeral (score of 9.5). A label has been applied to the *Potential Jurisdictional Features Map* for this feature, included in the attachment.

For clarity, it would have been prudent for NCDOT to have included this Figure in the CE Document.

NCDWR Comment 3:

Provide a topographic map and soil survey of the revised project area.

NCDOT Response:

A topographic Map and a Soil Survey Map are included in the attachment in this Response submittal.

NCDWR Comment 4:

Please label stream SB and Stream SC throughout the permit and buffer drawings.

NCDOT Response:

The non-JS blue line feature (SB) has been labeled on the permit and buffer drawings.

As described in the Response to DWR Comment 2, Stream SC has been updated to/labelled as Ditch DA (in attachment) and a label has been included on permit and buffer drawings.

Feature SB has been labeled on the permit and buffer drawings for reference. Please note that SB was determined to be ephemeral (Stream ID score of 15.5) and therefore was not labeled as a stream on the permit and buffer drawings but was identified as a drainage feature by Locations & Survey. The Stream ID Form for SB is included in the attachment in this submittal.

Feature SC referred to in this DWR Comment, and labeled as such on the Jurisdictional Determination Map in the CE Document, was determined to be ephemeral (Stream ID score of 10.5). It is depicted on the Figure (*Potential Jurisdictional Features Map*) included in the attachment as **Ditch DA** (SC = Ditch DA). As NCDOT's Location & Survey group did not pick this up as a drainage feature, it was not depicted on the permit and buffer drawings. A label has been placed on the permit and buffer drawings, included as an attachment, in the vicinity of the ditch (DA).

Also, please note that there is a Stream ID Form for "Ditch DA" in the attachment to this Response.

NCDWR Comment 5:

Please provide the Stream ID forms collected for Stream SB and SC.

NCDOT Response:

As noted in responses to prior DWR Comments, Stream ID Forms for SB and SC (=> Ditch DA) are included in the Response attachment.

Also as noted in prior comment responses, there also is a Stream ID Form for Stream SD, which is an ephemeral feature that is located between Pond PA and Cane Creek (see Response to DWR Comment 2). The attachment to DWR Comments includes photographic documentation of ephemeral feature SD.

NCDWR Comment 6:

Stream SC does not appear to be depicted on the permit drawings.

NCDOT Response:

Stream SC was determined to be ephemeral (score = 10.5), and therefore not included in the permit and buffer drawings. As noted in prior responses, Stream SC is re-labeled as Ditch DA (SC => Ditch DA) on the Figure *Potential Jurisdictional Features Map* in the attachment.

By way of this message, NCDOT hereby request the removal of the “on hold” status and the continued processing of the 401 Certification and Buffer Authorization.

If you have any questions or need additional information, please feel free to contact us.
Thank you for your assistance with this project.

Sincerely,

A handwritten signature in black ink, appearing to read 'William A. Barrett', followed by a stylized flourish.

William A. Barrett, Environmental Coordinator
Environmental Coordination and Permitting [ECAP]
North Carolina Department of Transportation

Enclosures:

Additional Information Response Package for BR-0060 (DWR #20250885)

Cc: Ryan Conchilla – NCDWR ryan.conchilla@deq.nc.gov

Additional Information Response Package for BR-0060 (DWR #20250885)

The following supporting documents are attached:

Permit Drawing Set w/ additional Labels

Buffer Drawing Set w/ additional Labels

Project Mapping, including:

- Vicinity Map
- Topographic Map
- Soils Map
- Potential Jurisdictional Determination Features

Stream ID Forms: SA, SB, SC (= Ditch DA), SD

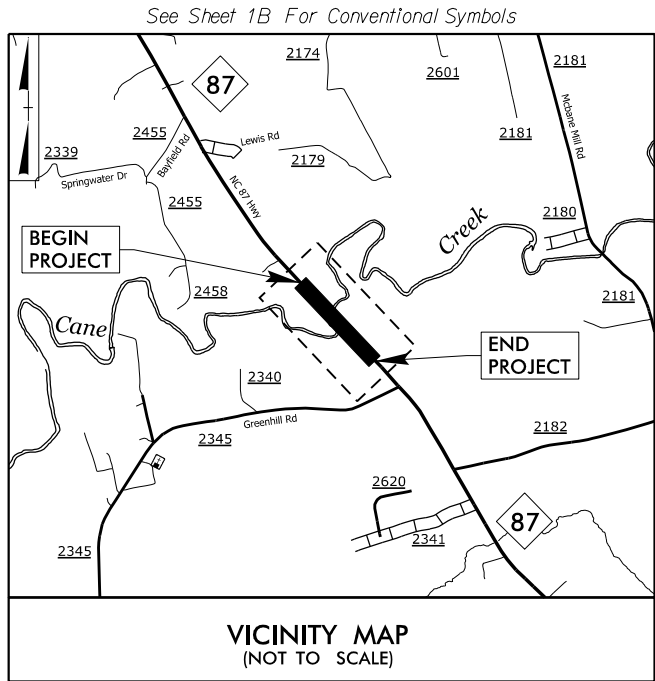
Photographic Documentation for Ephemeral Channel (SD) connecting Pond PA to Cane Creek

Photographic Documentation of Drainage Area of Off-site Pond

09/08/99
1/13/2025
Q:\RA1000\108\BR-0060\Hydraulics\PERMITS_Environmental\WET_PSH\BR-0060_hyd_prm_wet_01.tsh.dgn
tdavenport

TIP PROJECT: BR-0060

CONTRACT:



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ALAMANCE COUNTY

LOCATION: REPLACE BRIDGE 000014 ON NC 87 OVER CANE CREEK

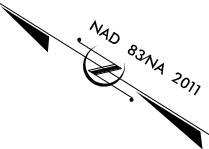
TYPE OF WORK: PAVING, GRADING, GUARDRAIL, DRAINAGE,
AND STRUCTURES

WETLAND AND SURFACE WATER IMPACTS PERMIT

Re-submitted August 2025

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0060	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
67060.1.1	N/A	PE	
67060.2.1	N/A	ROW/UTIL	

PERMIT DRAWING
SHEET 1 OF 12



BEGIN STATE TIP PROJECT BR-0060
-L- STA 12+16.55

BEGIN CONSTRUCTION
-L- STA 11+49.63

TO LEWIS RD

BEGIN BRIDGE
-L- STA 20+04.00

END BRIDGE
-L- STA 22+34.00

NC 87

-L- DETOUR-

SITE 1

SITE 2

END CONSTRUCTION
-L- STA 35+16.10

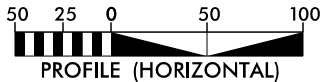
END STATE TIP PROJECT BR-0060
-L- STA 34+64.00

TO GREENHILL RD

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2023 = 3,000
ADT 2043 = 3,300
K = 10 %
D = 60 %
T = 7 % *
V = 60 MPH
* TTST = 3% DUAL 4%
FUNC CLASS =
MINOR ARTERIAL-
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BR-0060 = 0.382
LENGTH STRUCTURE TIP PROJECT BR-0060 = 0.044
TOTAL LENGTH TIP PROJECT BR-0060 = 0.426

Prepared for NCDOT in the Office of:

moffatt & nichol
4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4625 VOICE (919) 781-4845 FAX
NC License NO.: F-0105

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 27, 2023

LETTING DATE:
SEPTEMBER 16, 2025

TRENT HUFFMAN, P.E.
PROJECT ENGINEER

GRAY MODLIN, P.E.
PROJECT DESIGN ENGINEER

DAVID STUTTS, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

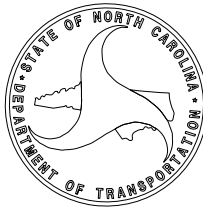
moffatt & nichol

SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

moffatt & nichol

SIGNATURE: P.E.



8/17/99

-LDET-

CLARENCE ALVIS & SHARON LAMBE PICKARD

PERMIT DRAWING
SHEET 2 OF 12

PROJECT REFERENCE NO.
BR-0060

SHEET NO.
2B-1

RW SHEET NO.

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

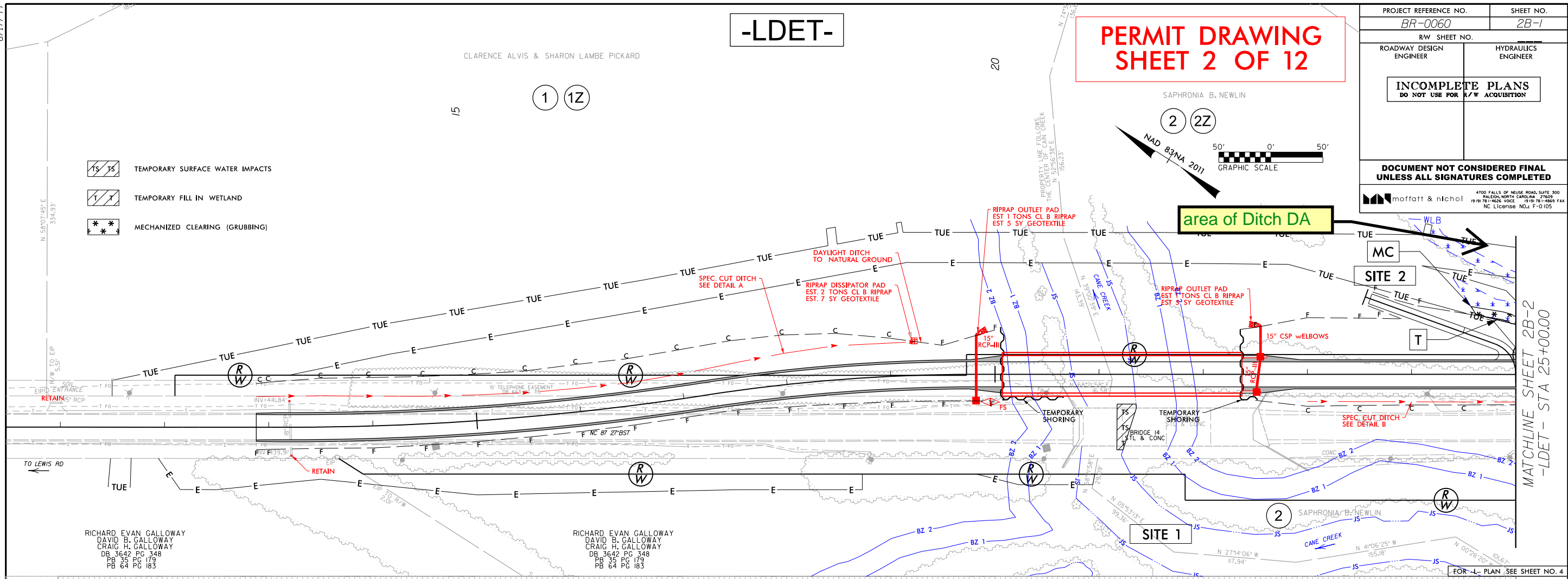
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

moffatt & nichol

4700 FALLS OF NEUSE ROAD, SUITE 300
WALTON, NORTH CAROLINA 27897
(919) 781-4626 VOICE (919) 781-4869 FAX
NC License NO.: F-0105

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

area of Ditch DA

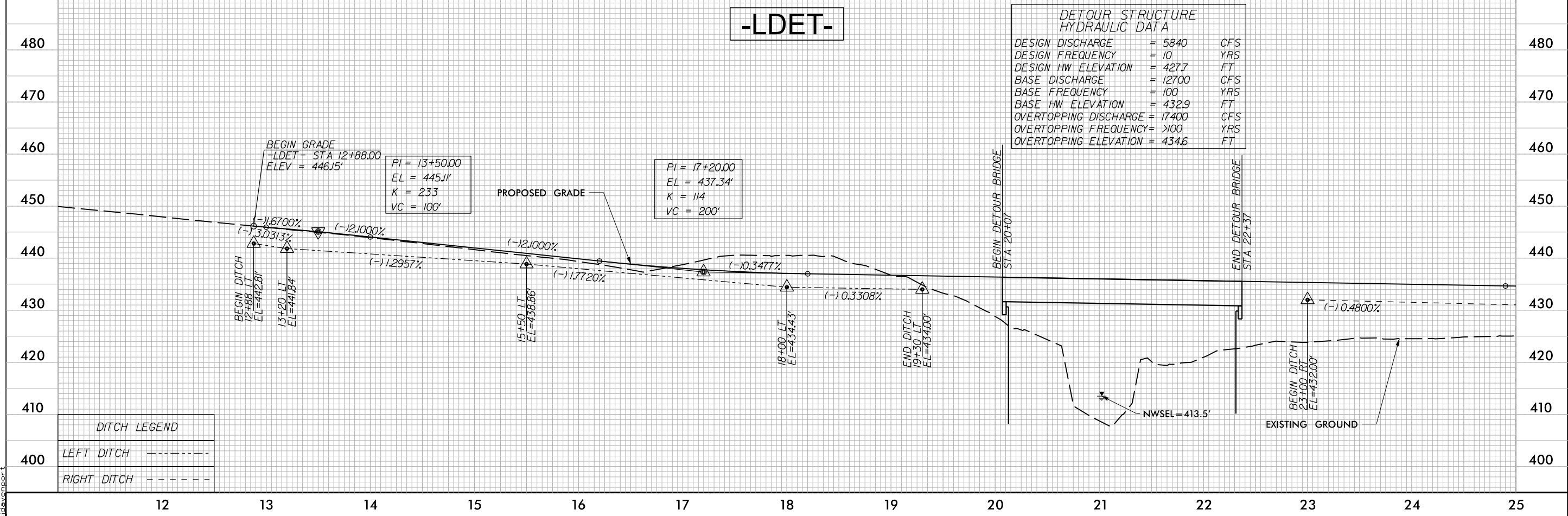


RICHARD EVAN GALLOWAY
DAVID B. GALLOWAY
CRAIG H. GALLOWAY
DB 3642 PG 348
PB 35 PG 179
PB 64 PG 183

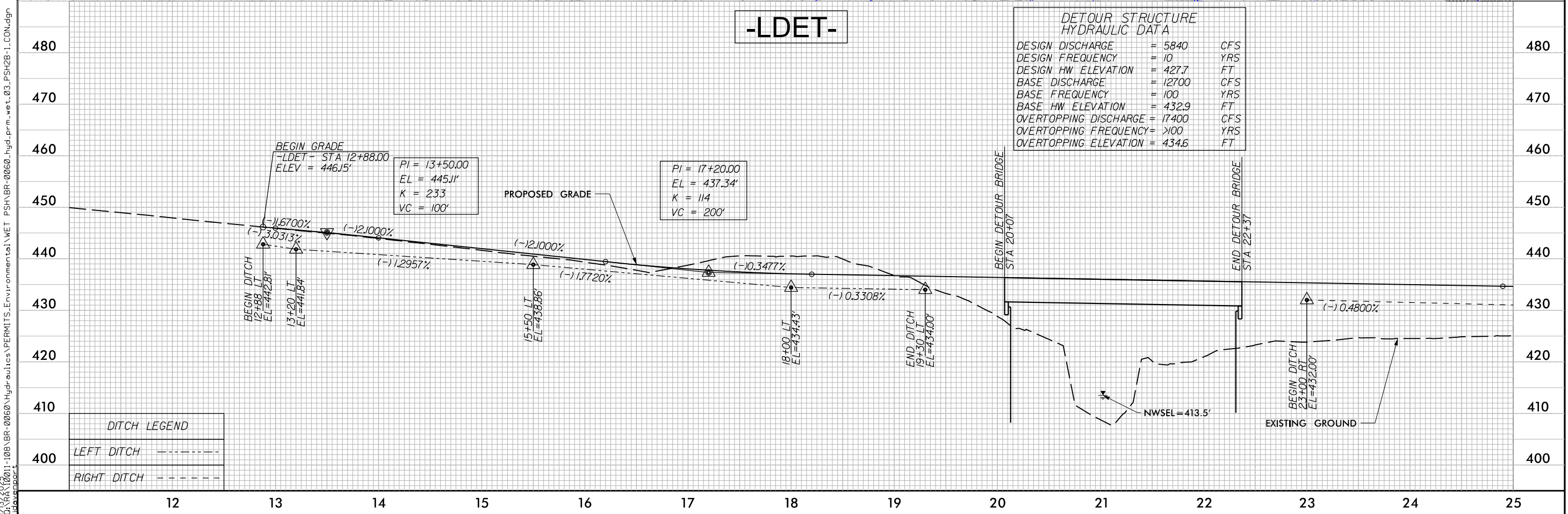
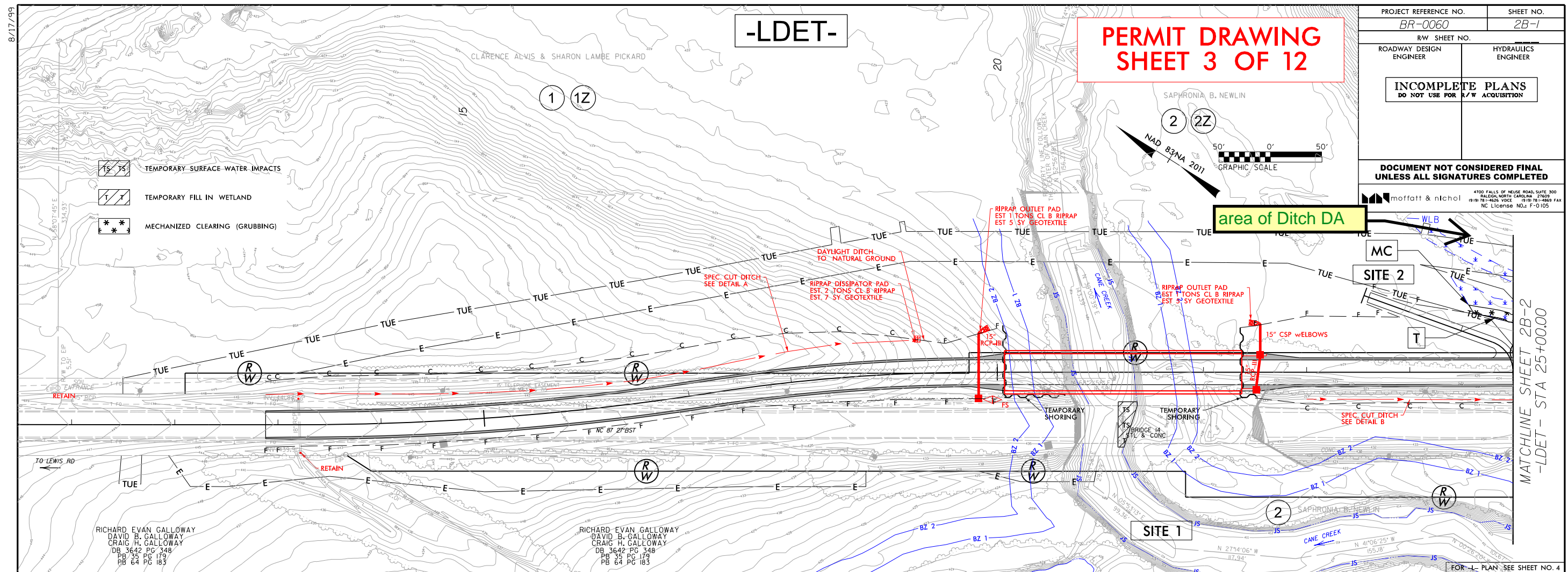
RICHARD EVAN GALLOWAY
DAVID B. GALLOWAY
CRAIG H. GALLOWAY
DB 3642 PG 348
PB 35 PG 179
PB 64 PG 183

-LDET-

DETOUR STRUCTURE HYDRAULIC DATA		
DESIGN DISCHARGE	= 5840	CFS
DESIGN FREQUENCY	= 10	YRS
DESIGN HW ELEVATION	= 427.7	FT
BASE DISCHARGE	= 12700	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 432.9	FT
OVERTOPPING DISCHARGE	= 17400	CFS
OVERTOPPING FREQUENCY	= 100	YRS
OVERTOPPING ELEVATION	= 434.6	FT



DITCH LEGEND	
LEFT DITCH	----
RIGHT DITCH	----



8/17/99

25

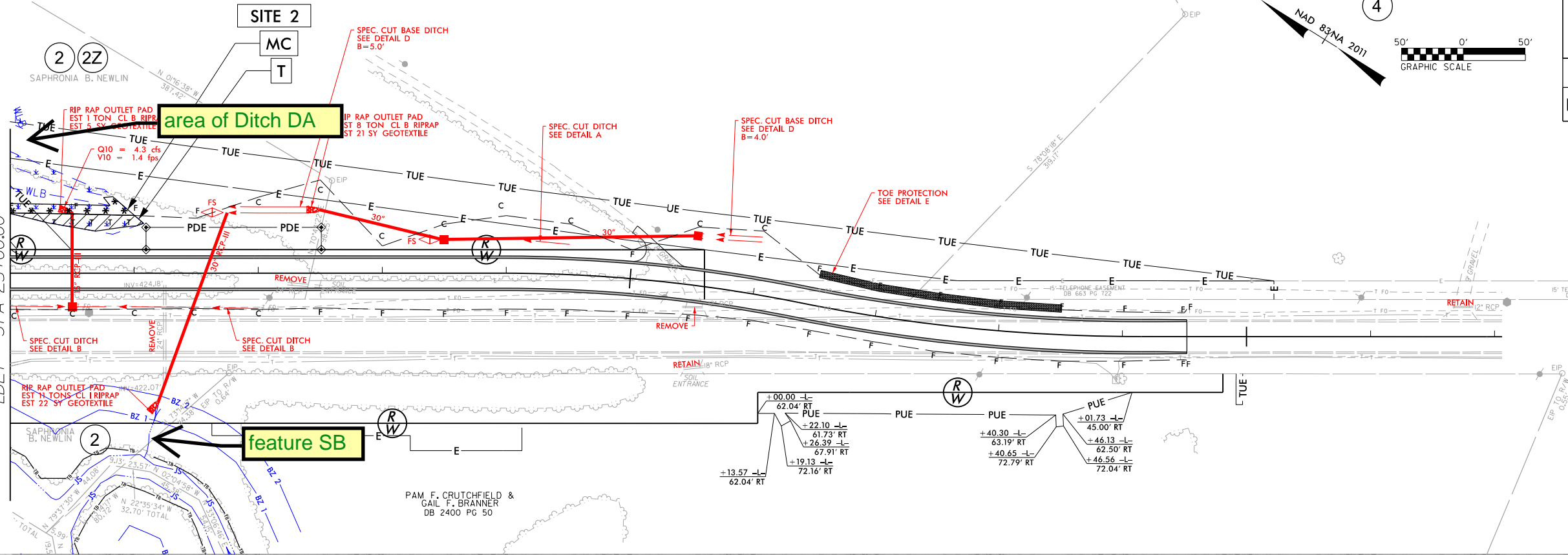
30

-LDET-

PERMIT DRAWING
SHEET 4 OF 12

PROJECT REFERENCE NO. BR-0060		SHEET NO. 2B-2	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
moftatt & nichol		4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4669 FAX NC License NO.: F-0105	

MATCHLINE SHEET 2B-1
-LDET- STA 25+00.00



485

475

465

455

445

435

425

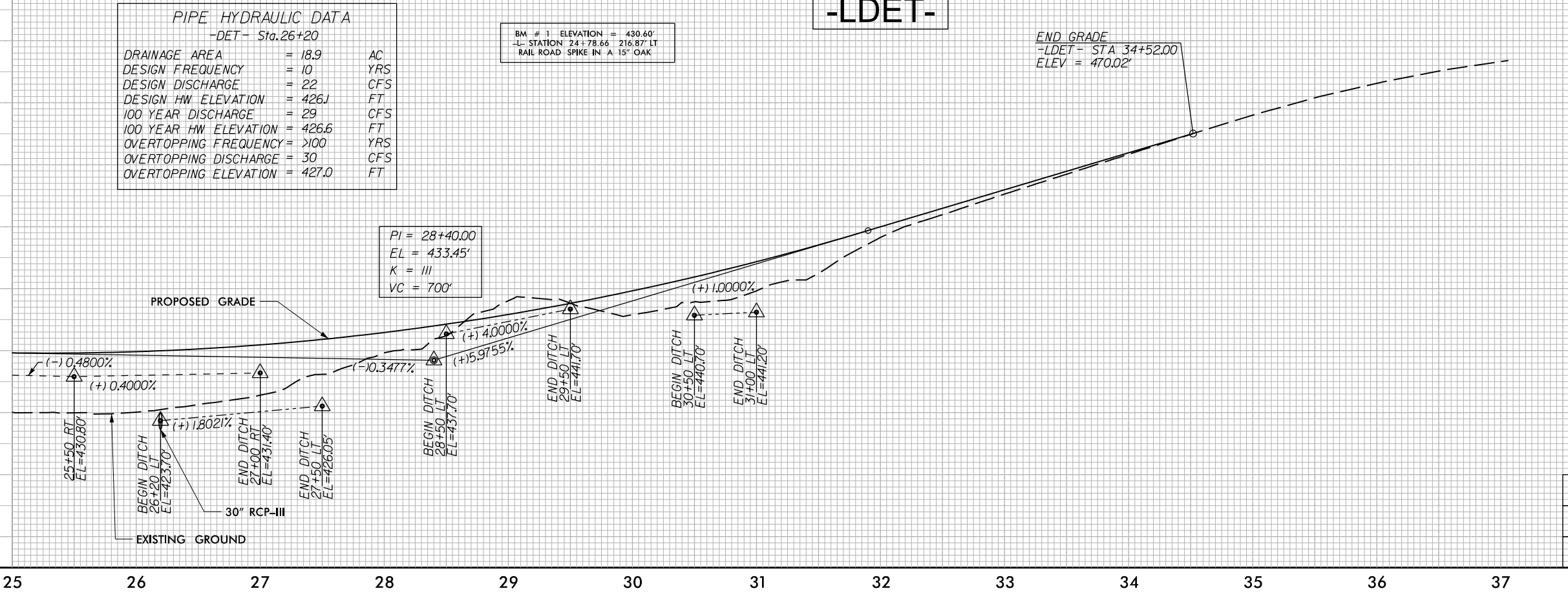
415

405

PIPE HYDRAULIC DATA		
-DET- Sta. 26+20		
DRAINAGE AREA	= 18.9	AC
DESIGN FREQUENCY	= 10	YRS
DESIGN DISCHARGE	= 22	CFS
DESIGN HW ELEVATION	= 426.1	FT
100 YEAR DISCHARGE	= 29	CFS
100 YEAR HW ELEVATION	= 426.6	FT
OVERTOPPING FREQUENCY	= 100	YRS
OVERTOPPING DISCHARGE	= 30	CFS
OVERTOPPING ELEVATION	= 427.0	FT

BM # 11 ELEVATION = 430.60'
-L- STATION 24+78.66 216.87' LT
RAIL ROAD SPIKE IN A 15" OAK

PI = 28+40.00
EL = 433.45'
K = III
VC = 700'



FOR -L- PLAN SEE SHEET NO. 5

485

475

465

455

445

435

425

415

405

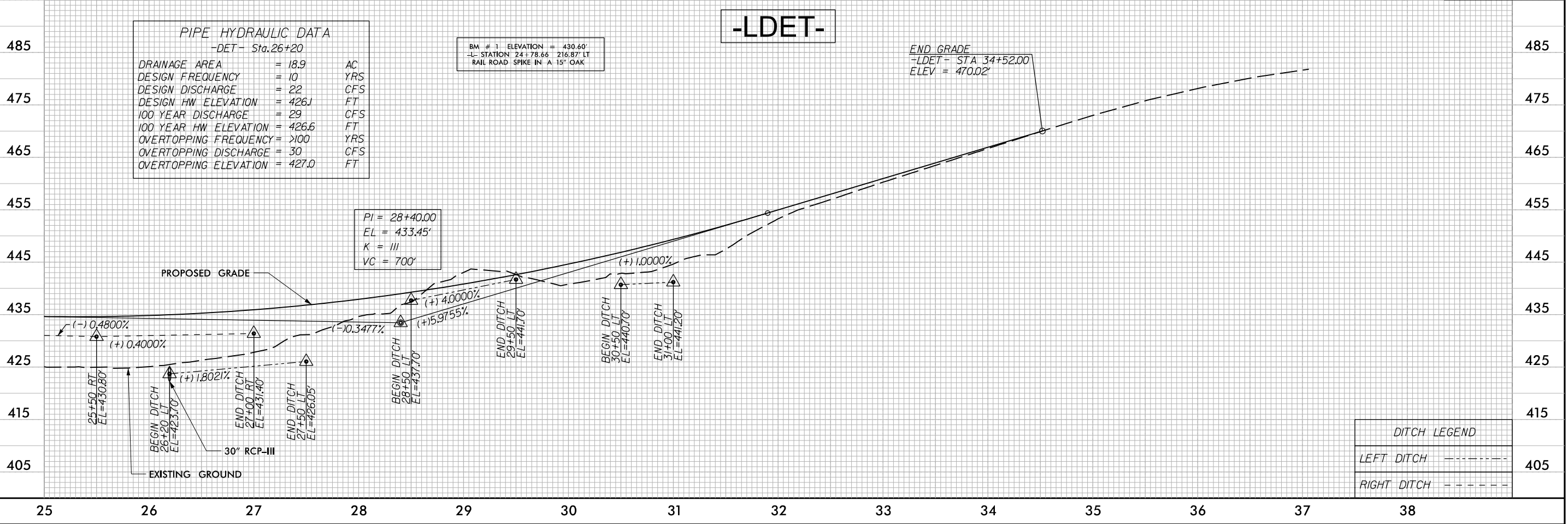
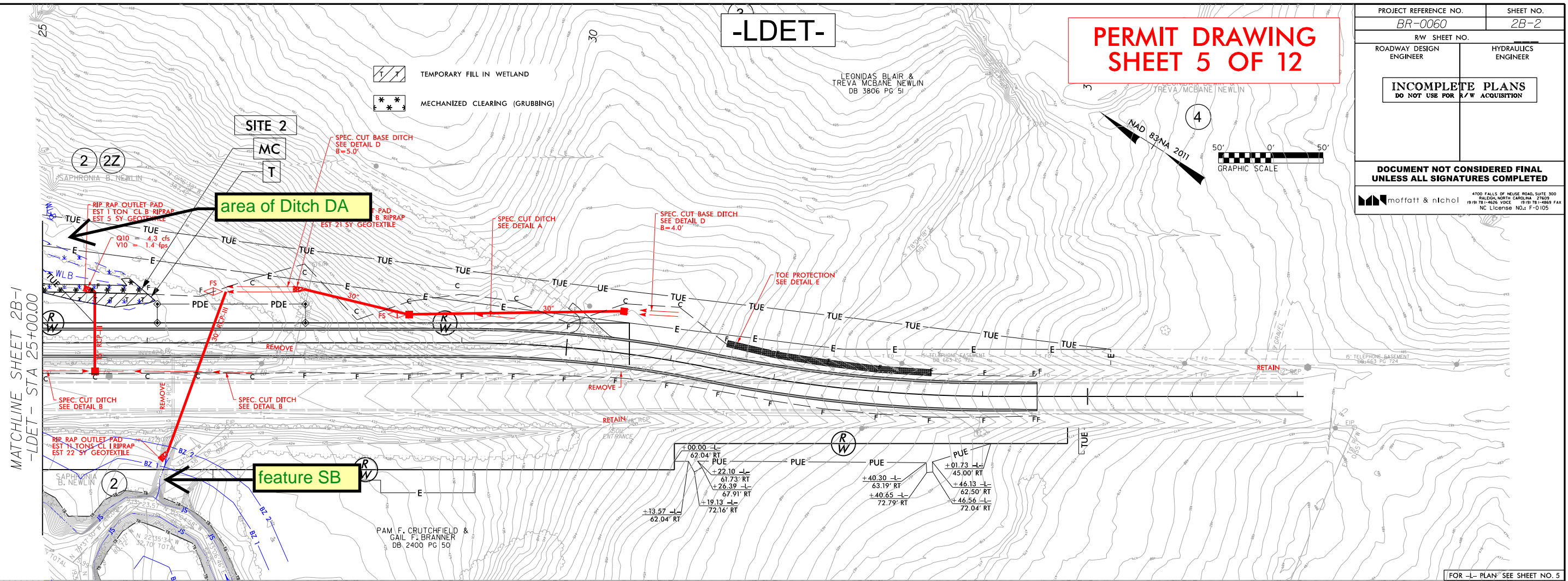
DITCH LEGEND

LEFT DITCH

RIGHT DITCH

405

I:\3\2025\01\108\BR-0060\Hydraulics\PERMITS\Environmental\WET_PSH\BR-0060_hyd.prm_wet.04_PSH2B-2.dgn



BR-0060	5
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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INCOMPLETE PLANS

4700 FALLS OF NEUSE ROAD, SUITE 100
REAL ESTATE AND TITLE COMPANY, INC.

PERMIT DRAWING
SHEET 8 OF 12

NAD 83/NA 2011

50' 0' 50'



GRAPHIC SCALE

FILL IN WETLAND

PI Sta 12+39.48
 $\Delta = 90^{\circ} 00' 00.0''$ (RT)
 $D = 114^{\circ} 35' 29.6''$
 $L = 78.54'$
 $T = 50.00'$
 $R = 50.00'$

LEONIDAS BLAIR &
TREVA MCBANE NEWLIN

LEONIDAS BLAIR &
TREVA MCBANE NEWLIN

area of Ditch DA

SITE 2

Feature SB

DETAIL H
AND TOE PROTECTION
(Not to Scale)

Type of Liner = C1B Rip-Rap

OM -L- STA. 25+57 LT TO -L- STA. 26+06 LT

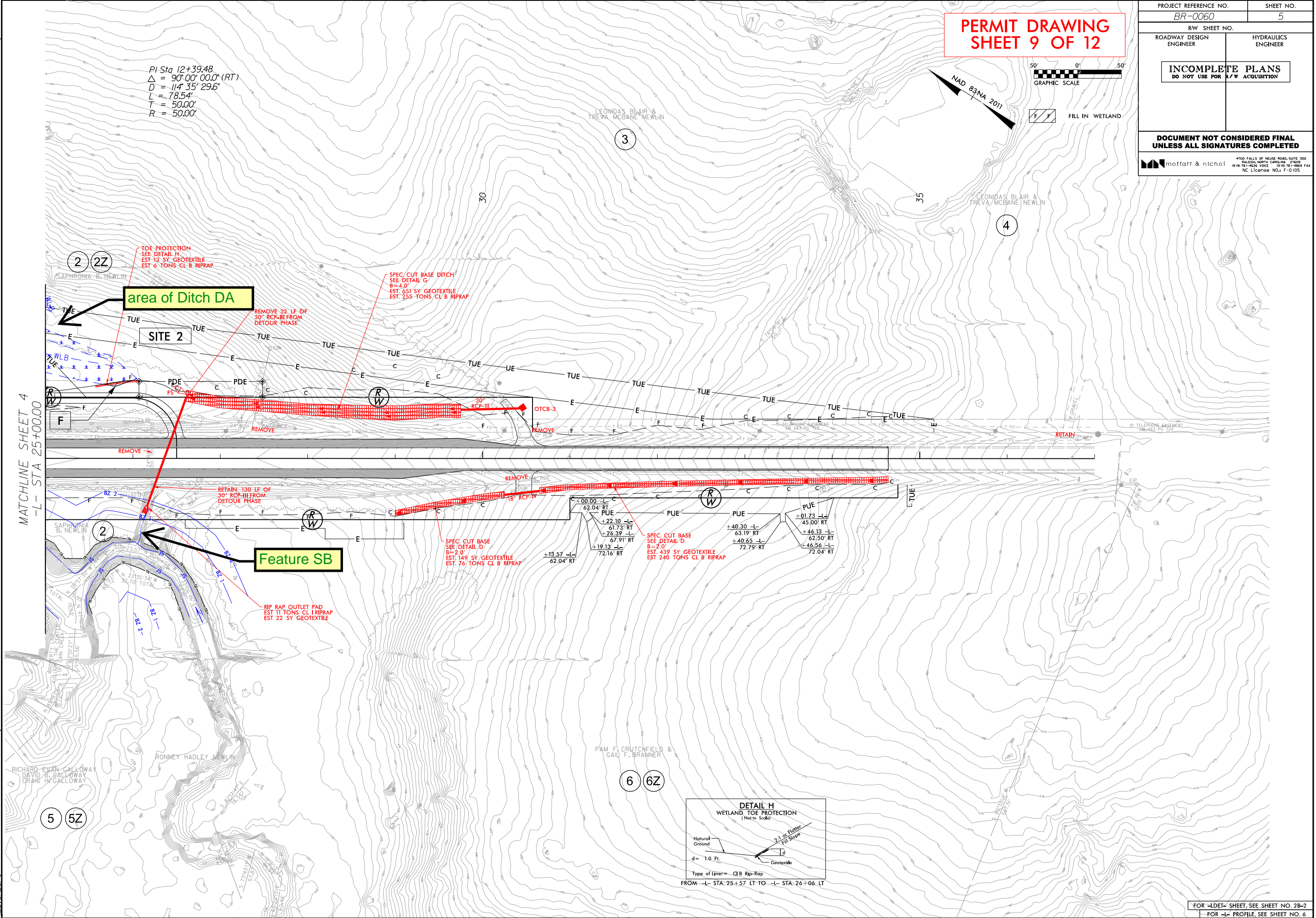
FOR -LDET- SHEET, SEE SHEET NO. 2B-2
FOR -L- PROFILE, SEE SHEET NO. 6

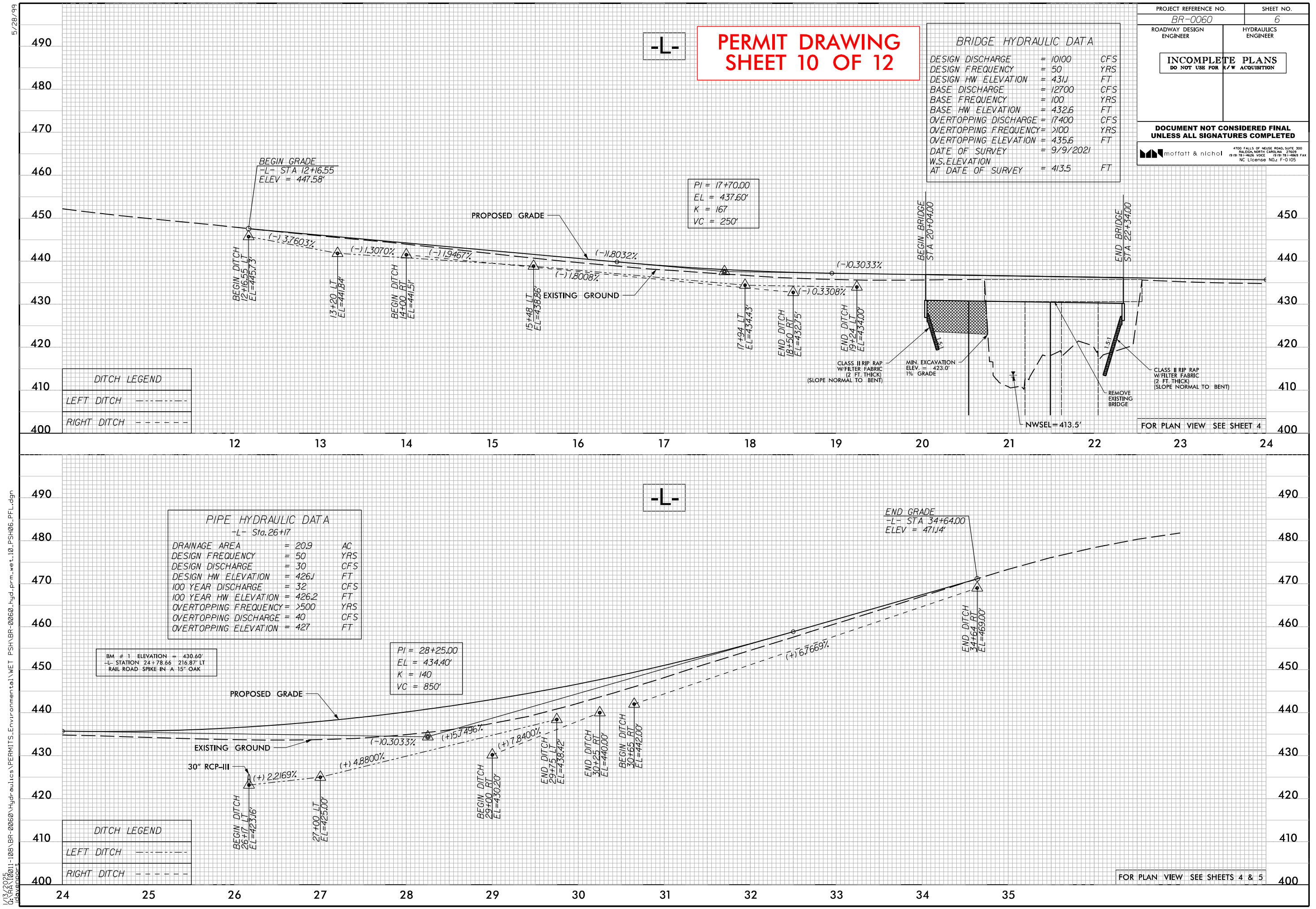
8/17/99

REVISIONS

8/14/2023 - (GM) RW REVISION - REVISE TCE STA 32+61/2 LT TO 35+16.0 LT TO TIE BACK TO EXISTING RW AT STA 35+16.0 AND 30.00 LT.

1/3/2025
D:\FA\1001-108\BR-0060\Hydraulics\PERMITS\Environmental\WET_PSH\BR-0060_hyd.prm_wet_09_PSH05.CON.dgn
develop





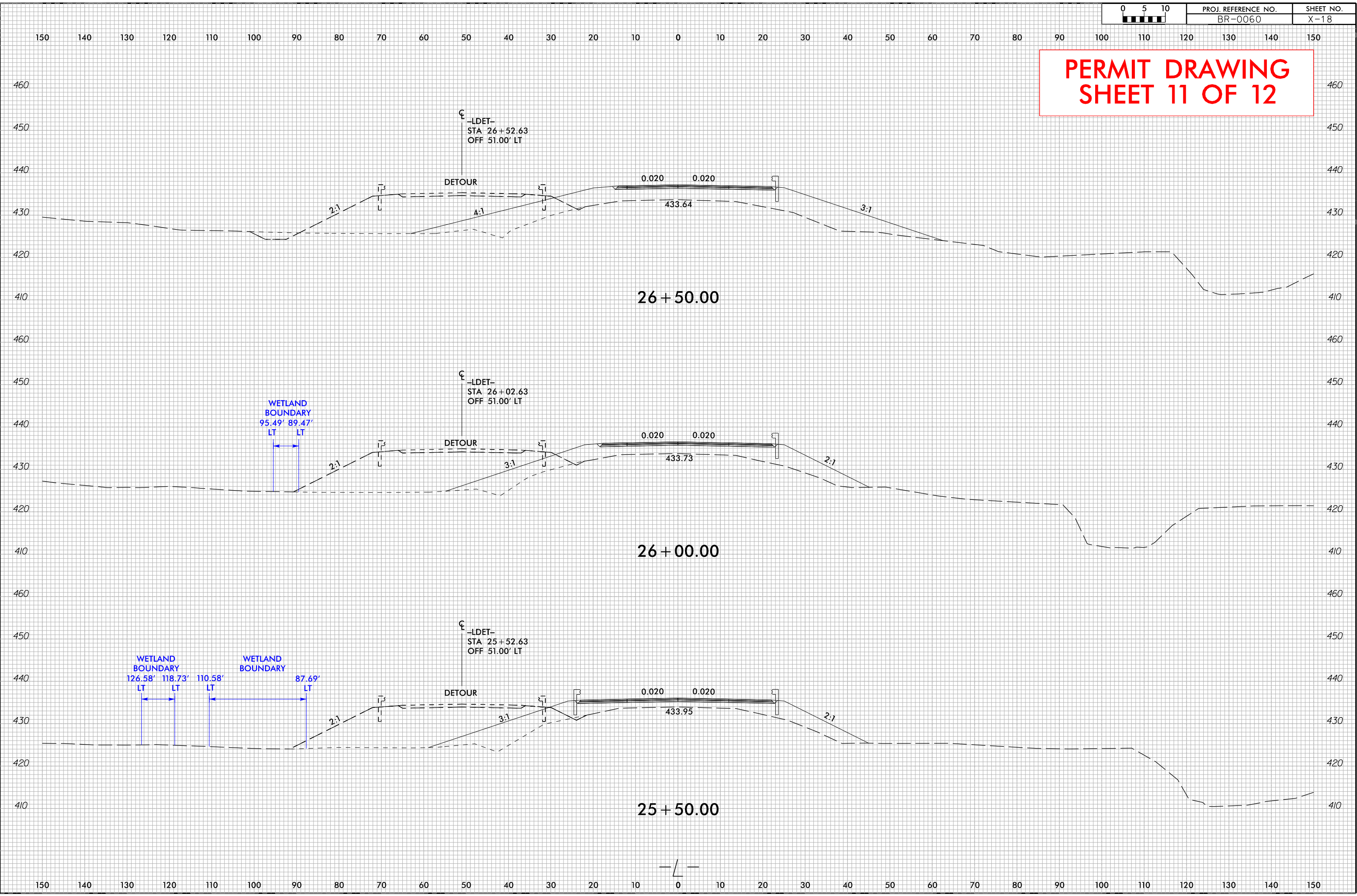
PROJECT REFERENCE NO. BR-0060		SHEET NO. 6	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
moffatt & nichol		4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 881-4626 VOICEMAIL FAX NC LICENSE NO.: F-0105	

6/23/16
I:\3\2025
0:\RA\10011-108\BR-0060\Hydraulics\PERMITS\Environmental\WET_PSH\BR-0060_hyd.prm_wet.il\XPL.Ldgn
development



PROJ. REFERENCE NO.	SHEET NO.
BR-0060	X-18

PERMIT DRAWING
SHEET 11 OF 12



WETLAND AND SURFACE 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	-L- 21+14 LT TO 21+34 LT	BRIDGE-EXISTING PIER REMOVAL							0.01		44	
2	-L- 24+57 LT TO 26+07 LT	FILL SLOPE-DETOUR & PROPOSED	< 0.01	0.02		0.03						
TOTALS*:			< 0.01	0.02		0.03			0.01	0	44	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
1/13/2025
ALAMANCE
BR-0060
67060.1.1
SHEET 12 OF 12

1/13/2025

ALAMANCA

BR-0060

67060.1.1

SHEET

12

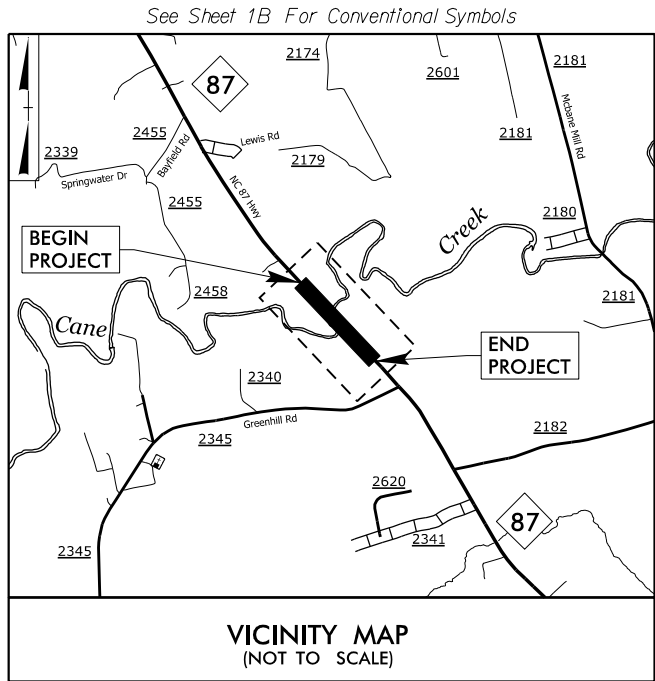
OF

12

09/08/99
I:\3\2025
Q:\RA\10011-108\BR-0060\Hydraulics\PERMITS_Environmental\PSH_BUFF\BR-0060_hyd_prm_buf_01.tsh.dgn
tdavenport

TIP PROJECT: BR-0060

CONTRACT:



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ALAMANCE COUNTY

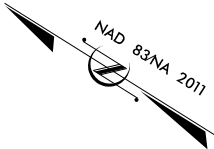
LOCATION: REPLACE BRIDGE 000014 ON NC 87 OVER CANE CREEK
TYPE OF WORK: PAVING, GRADING, GUARDRAIL, DRAINAGE,
AND STRUCTURES

BUFFER IMPACTS PERMIT

Re-submitted August 2025

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0060	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
67060.1.1	N/A	PE	
67060.2.1	N/A	ROW/UTIL	

**BUFFER DRAWING
SHEET 1 OF 5**



BEGIN STATE TIP PROJECT BR-0060
-L- STA 12+16.55

BEGIN CONSTRUCTION
-L- STA 11+49.63

TO LEWIS RD

BEGIN BRIDGE
-L- STA 20+04.00

END BRIDGE
-L- STA 22+34.00

SITE 1

-L- DETOUR-

SITE 2

END CONSTRUCTION
-L- STA 35+16.10

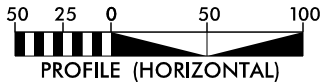
TO GREENHILL RD

END STATE TIP PROJECT BR-0060
-L- STA 34+64.00

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2023 = 3,000
ADT 2043 = 3,300
K = 10 %
D = 60 %
T = 7 % *
V = 60 MPH
* TTST = 3% DUAL 4%
FUNC CLASS =
MINOR ARTERIAL-
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BR-0060 = 0.382
LENGTH STRUCTURE TIP PROJECT BR-0060 = 0.044
TOTAL LENGTH TIP PROJECT BR-0060 = 0.426

Prepared for NCDOT in the Office of:

moffatt & nichol
4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4625 VOICE (919) 781-4845 FAX
NC License NO.: F-0105

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 27, 2023

LETTING DATE:
SEPTEMBER 16, 2025

TRENT HUFFMAN, P.E.
PROJECT ENGINEER

GRAY MODLIN, P.E.
PROJECT DESIGN ENGINEER

DAVID STUTTS, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

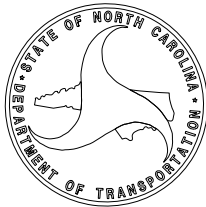
moffatt & nichol

SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

moffatt & nichol

SIGNATURE: P.E.



4

ROADWAY DESIGN
ENGINEER

**HYDRAULICS
ENGINEER**

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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

 **moffatt & nichol**
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RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4869 FAX
NC License NO.: F-0105

**BUFFER DRAWING
SHEET 2 OF 5**

NAD 83/NA 2011

SAPHRONIA B. NEWLIN

area of Ditch DA
(= Stream SC from CE)

CLARENCE ALVIS & SHARON LAMBE PICKARD

① ⑫

20

2 2Z

SITE 1

SITE 1

SITE 1

SITE 2

MATCHLINE SHEET 5
-1- STA 25+00.00

RICHARD EVAN GALLOWAY
DAVID B. GALLOWAY
CRAIG H. GALLOWAY

RICHARD EVAN GALLOWAY
DAVID B. GALLOWAY
CRAIG H. GALLOWAY

RICHARD E
DAVID I
CRAIG I

RONNEY HADLEY NEWLIN

FOR -LDET- SHEET, SEE SHEET NO. 2B-1

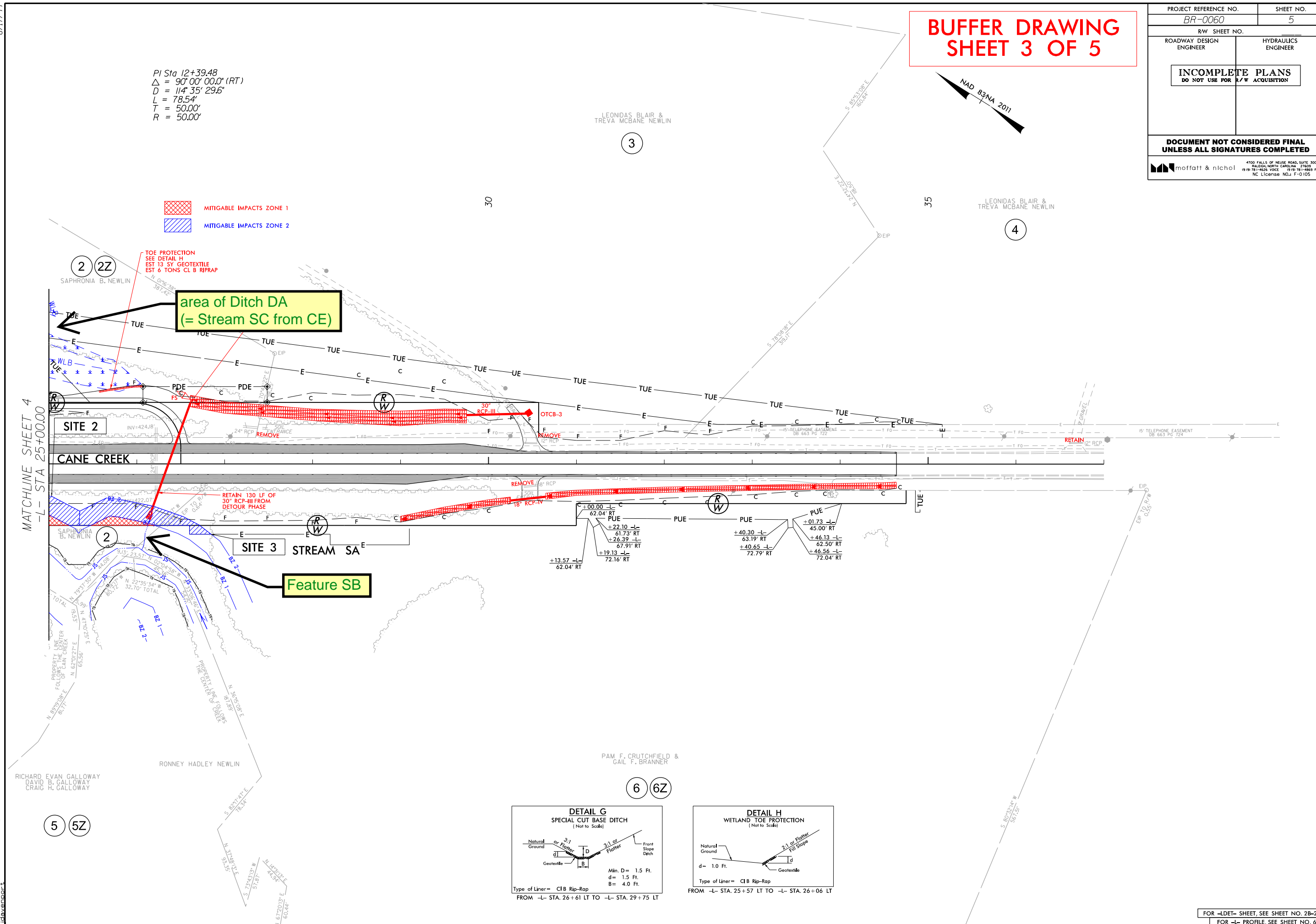
FOR STRUCTURE PLANS, SEE SHEETS XX THRU XX

8/17/99

1/3/2025
G:\RA\1001-108\BR-0060_Hydraulics\PERMITS.Environmental\PSH BUFF\BR-0060_hyd.prm.buf_04_PSH04.dgn
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8/17/99

L:\3\2025\0-16\1001-108\BR-0060\Hydro\Permits\Environmental\PSH_BUFF\BR-0060_hyd.prm.buf.05.PSH05.dgn



PI Sta 12+39.48
 $\Delta = 90^{\circ} 00' 00.0''$ (RT)
 $D = 114^{\circ} 35' 29.6''$
 $L = 78.54'$
 $T = 50.00'$
 $R = 50.00'$

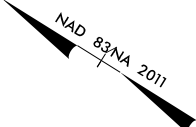
MITIGABLE IMPACTS ZONE 1
MITIGABLE IMPACTS ZONE 2


TOE PROTECTION
SEE DETAIL H
EST 13 SY GEOTEXTILE
EST 6 TONS CL B RIPRAP

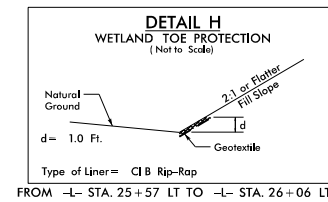
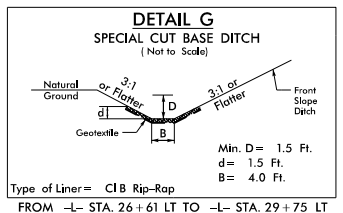
area of Ditch DA
(= Stream SC from CE)

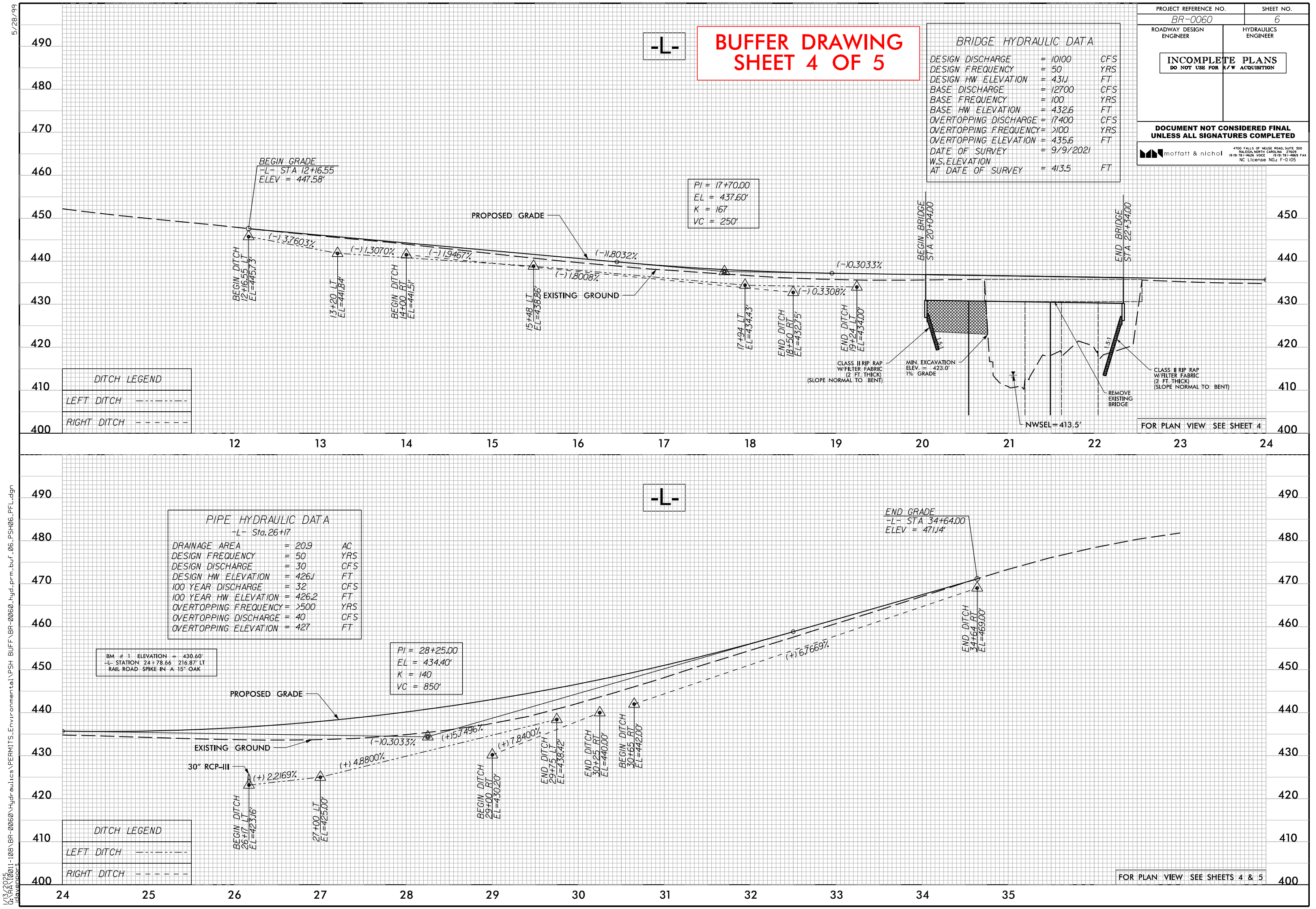
SITE 3
STREAM SA
Feature SB

BUFFER DRAWING SHEET 3 OF 5



PROJECT REFERENCE NO. <i>BR-0060</i>		SHEET NO. <i>5</i>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
 moffatt & nichol		4700 FALLS OF NEUSE ROAD, SUITE 300 DALLAS, NORTH CAROLINA 75039 (972) 781-4626 VOICE (972) 781-4669 FAX NC License No.: F-0105	





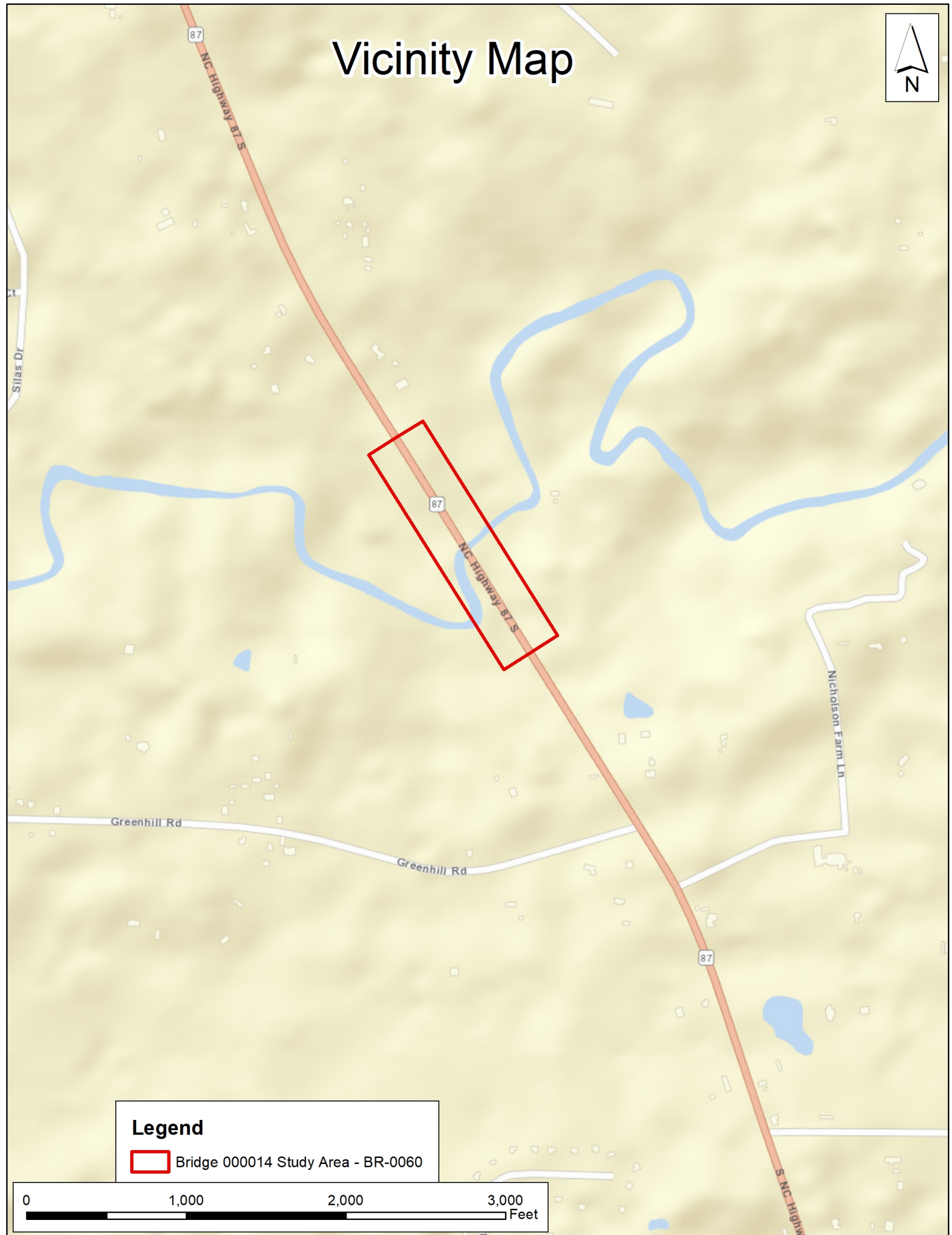
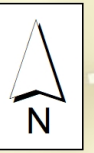
RIPARIAN BUFFER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	TYPE			ALLOWABLE			MITIGABLE			BUFFER REPLACEMENT	
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)
1	-L- 19+78 LT TO 22+34 RT	BRIDGE		X		10858	7644	18502					
2	-L- 22+34 RT TO 25+34 RT	PARALLEL IMPACT			X				5202	3640	8842		
3	-L- 25+34 RT TO 26+85 RT	PARALLEL IMPACT			X				435	2555	2990		
TOTALS*:						10858	7644	18502	5637	6195	11832	0	0


NOTES:
SITE 1 & 2 - CANE CREEK
SITE 3 - STREAM SA

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
01-13-2025
ALAMANCE
BR-0060
67060.1.1

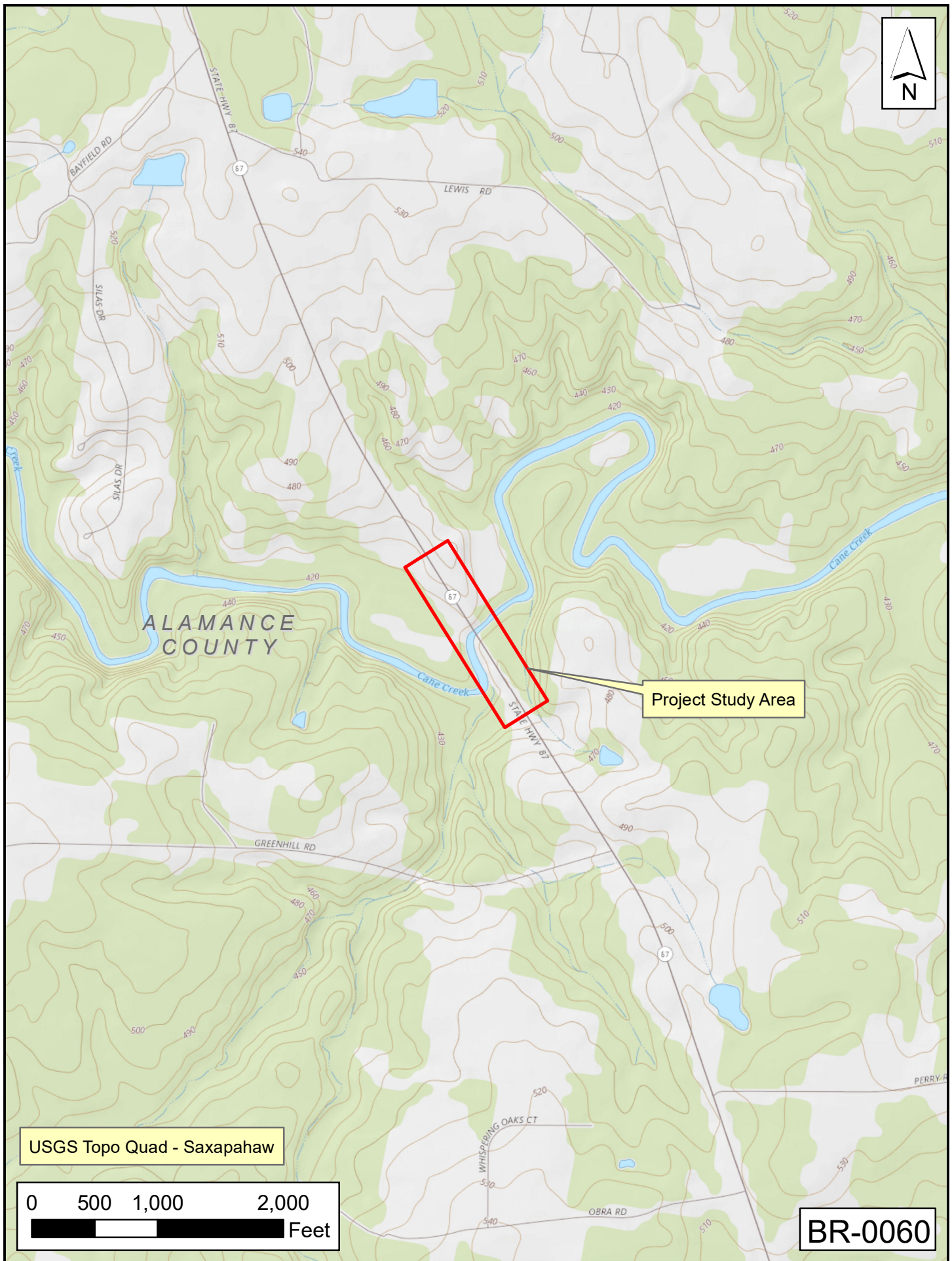
Vicinity Map



Legend

 Bridge 000014 Study Area - BR-0060

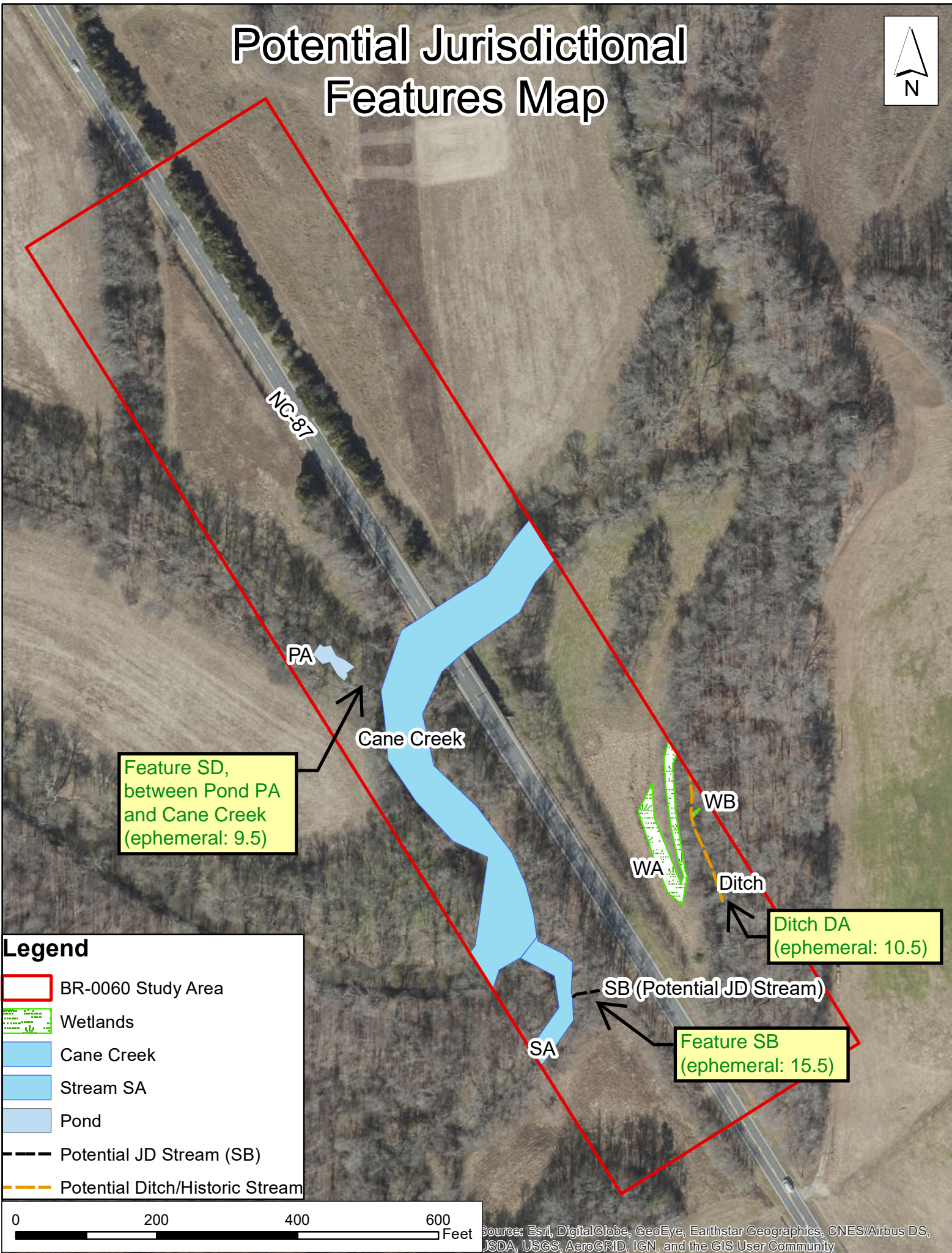
0 1,000 2,000 3,000 Feet



BR-0060 Soils Map



Potential Jurisdictional Features Map



NC DWQ Stream Identification Form Version 4.11

Cane Creek

Date: 4-8-21	Project/Site: 30-0060	Latitude: 35.88452°
Evaluator: Dorney, Dairrell	County: Alamance	Longitude: -79.294297°
Total Points: Stream is at least intermittent if ≥ 19 or perennial if ≥ 30* 46	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal = 24)

	Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	(2) →	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	(3)
4. Particle size of stream substrate	0	1	2	(3)
5. Active/relict floodplain	0	1	2	(3)
6. Depositional bars or benches	0	1	(2) →	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	0.5	1	(1.5)
10. Natural valley	0	0.5	1	(1.5)
11. Second or greater order channel	No = 0		Yes = 3	

^a artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 10)

12. Presence of Baseflow	0	1	2	(3)
13. Iron oxidizing bacteria	0	(1)	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0	0.5	(1)	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 12)

18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macroinvertebrates (note diversity and abundance)	0	1	(2) →	3
21. Aquatic Mollusks	0	(1)	2	3
22. Fish	0	0.5	(1)	1.5
23. Crayfish	0	0.5	(1)	1.5
24. Amphibians	0	0.5	(1)	1.5
25. Algae	0	0.5	(1)	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch: mapped blue line stream, perennial Cane Creek

NC DWQ Stream Identification Form Version 4.11

SA 4-8-2021

Date: 4/8/21	Project/Site: N. 87 (one creek)	Latitude:
Evaluator: Dorey Darnell	County: Chatham	Longitude:
Total Points: 43.5 <i>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*</i>	Stream Determination (circle one): Ephemeral Intermittent <u>Perennial</u>	Other e.g. Quad Name:

A. Geomorphology (Subtotal = 22)

	Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	No = 0		Yes = 3	

*artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 9.5)

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 12)

18. Fibrous roots in streambed	0	2	1	0
19. Rooted upland plants in streambed	0	2	1	0
20. Macroinvertebrates (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

Channel SA - 3rd order blue line

Beetles,

3 kinds snails

Baby Salamanders
small may fish
few fish

34
9.5

NC DWQ Stream Identification Form Version 4.11

SB 4/8/2011

Date: 4/8/21	Project/Site: NC87 cont. 2	Latitude:
Evaluator: Dray Darnell	County: Chatham	Longitude:
Total Points: Stream is at least intermittent if ≥ 19 or perennial if $\geq 30^*$ 15.5	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal = 9)

	Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	No = 0		Yes = 3	

*artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 3.5)

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 3)

18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macroinvertebrates (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

SB-1 at headcut
SB-2 at confluence
very little flow - mostly subsurface
floodplain only for larger channel
valley only for larger channel
lots fibrous roots, soil not reduced
multiple headcut of various sizes
OHWM - yes from headcut

SD

NC DWQ Stream Identification Form Version 4.11

Date: 1/10/2021	Project/Site: BR-0060	Latitude:
Evaluator: R. Sim.; A. Welch	County: Alamance	Longitude:
Total Points: Stream is at least intermittent if ≥ 19 or perennial if $\geq 30^*$ 9.5	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal = 4.5)	Absent	Weak	Moderate	Strong
1 ^a . Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	No = 0		Yes = 3	

^a artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 1)	Absent	Weak	Moderate	Strong
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 4)	Absent	Weak	Moderate	Strong
18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macroinvertebrates (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: At tail end of pond & other ephemeral channels system. Appears to be man-made; evidence of disturbance.

Sketch: This is a drainage ditch that leads from the pond to Cane Creek. No water or water marks in channel.

Cane Creek is incised so it doesn't reach the channel.

NC DWQ Stream Identification Form Version 4.11

Date: May 6, 2021	Project/Site: Bridge 0060	Latitude:
Evaluator: Dorney Darnell - mfw	County: Chatham	Longitude:
Total Points: Stream is at least intermittent if ≥ 19 or perennial if $\geq 30^*$ 10.5	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal = 3.5)	Absent	Weak	Moderate	Strong
1 ^a . Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	No = 0		Yes = 3	

^a artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 4.5)

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 3.5)

18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macroinvertebrates (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

Feature is clearly a ditch rather than a stream.
Stream ID form completed for NRTB/PJD package - Feature
since feature is a ditch, it is not subject to Jordan Lake

buffer rules (kick-out class)

Wetland nearby so soil hydric.

Amphipods and a few tadpoles present at first site visit
(4/8/21)

Photographic Documentation for Ephemeral Channel
(Feature SD) connecting Pond PA to Cane Creek

Figure 1: View of outlet of Pond PA

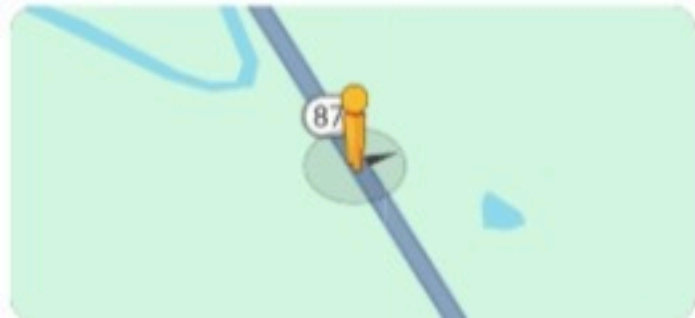


Figure 2: Area assessed between Pond PA and Cane Creek



Photographic Documentation of Drainage Area of Off-site Pond

Snow Camp, North Carolina
Google Street View
Jul 2024 [See more dates](#)



Cheely, Erin K

From: Barrett, William A
Sent: Wednesday, August 20, 2025 2:14 PM
To: Conchilla, Ryan
Cc: Alsmeyer, Eric C CIV USARMY CESAW (USA); Cheely, Erin K
Subject: RE: BR-0060 Add Info Pkg (DWR# 20250885)
Attachments: BR-0060_ut_tsh_UO01_UBI_psh Combined 06-26-2025.pdf

Hey Ryan,

The temporary buffer impacts that you inquired about are associated with the proposed clearing for aerial utility line relocation, to be conducted by others. These Utility impacts are outside the footprint of the project impacts, so they were provided separately, in two (2) sets of Utility Impact Drawings. These were included with the original ePCN submittal. Note: a total of four (4) sets of drawings were submitted with the original ePCN, in order:

1. (regular) Permit Drawings
2. (regular) Buffer Impact Drawings
3. Utility Impact Drawings
4. Utility Buffer Impact Drawings

Your inquiry did not include any questions directly regarding the Utility Impacts, so I did not include Utility Drawing sets in my recent submittal of supplemental information (I may have interpreted that incorrectly). I have attached the Utility Buffer Impact Drawings, with the buffer impacts depicted on Sheet 2 of 4. They unfortunately do not include the nice color depictions that the regular Buffer Impact Drawings do, so not as visible.

Please note that there are no changes to any of the project / buffer impact values with this submittal of supplemental information.

I hope that I have adequately addressed your questions. Let me know if it would be helpful to discuss.

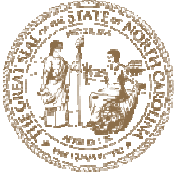
Thanks!
Bill

William A. Barrett
ECAP Environmental Coordinator
Environmental Analysis Unit
North Carolina Department of Transportation

919 707 6103 office
919 302 1908 mobile
wabarrett@ncdot.gov

1598 Mail Service Center (Mail)
Raleigh, NC 27699-1598

1000 Birch Ridge Drive (Delivery)
Raleigh, NC 27610



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From: Conchilla, Ryan <ryan.conchilla@deq.nc.gov>
Sent: Wednesday, August 20, 2025 12:41 PM
To: Barrett, William A <wabarrett@ncdot.gov>
Cc: Alsmeyer, Eric C CIV USARMY CESAW (USA) <eric.c.alsmeyer@usace.army.mil>; Cheely, Erin K <ekcheely@ncdot.gov>
Subject: BR-0060 Add Info Pkg (DWR# 20250885)

Bill,
Thank you for this update package, this is really helpful.
The additional descriptions, photos and data forms document the non-jurisdictional status of these drainage features located on-site.

One question:
On page 5 of the PCN, temporary buffer impacts are listed (attached), but I did not notice them in the updated buffer impact table.
These temporary impacts may not be necessary now, but I just wanted to confirm before I move forward with the 401/Buffer Approval.

Talk to you soon-

Ryan Conchilla
Environmental Specialist II
401 and Buffer Transportation Permitting Branch
North Carolina Department of Environmental Quality
919-707-9111
Ryan.Conchilla@deq.nc.gov

From: Barrett, William A <wabarrett@ncdot.gov>
Sent: Wednesday, August 20, 2025 11:13 AM
To: Conchilla, Ryan <ryan.conchilla@deq.nc.gov>
Subject: BR-0060 Add Info Pkg (DWR# 20250885)

Ryan,

I have submitted response to DWR's request for Additional Information (DWR# 20250885, dated August 1, 2025) via the website. I thought I would also provide a copy directly to you. Please see attached.

Let me know if it would be helpful to discuss.

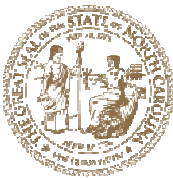
Thanks!
Bill

William A. Barrett
ECAP Environmental Coordinator
Environmental Analysis Unit
North Carolina Department of Transportation

919 707 6103 office
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Raleigh, NC 27610



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