

Attachment C: I-5987 State Stormwater Management Plan



(Version 2.08; Released April 2018)

North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS

WBS Element: 47533.1.2 TIP No.: I-5987A County(ies): Robeson Page 1 of 3

General Project Information

WBS Element:	47533.1.2	TIP Number:	I-5987A	Project Type:	Roadway Widening	Date:	8/23/2021
NCDOT Contact:	Paul Atkinson, PE		Contractor / Designer:	NV5 / David Bocker, PE			
Address:	1590 Mail Service Center Raleigh, NC 27699-1590			7500 East Independence Blvd., Suite 100 Charlotte, NC 28227			
	Phone:	919-704-6707		Phone:	704-566-4342		
Email:	patkinson@ncdot.gov		Email:	david.bocker@nv5.com			
City/Town:			County(ies):	Robeson			
River Basin(s):	Lumber		CAMA County?	No			
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	8.11	Surrounding Land Use:	Commercial/Business towards south & rural/wooded/agriculture to the north				
			Proposed Project		Existing Site		
Project Built-Upon Area (ac.)	166.8	ac.	100.0 ac.				
Typical Cross Section Description:	Northbound Lanes - 4 @ 12' Lanes w/ Paved Shoulders & Median Barrier Wall Southbound Lanes - 4 @ 12' Lanes w/ Paved Shoulders & Median Barrier Wall			Northbound Lanes - 2 @ 12' Lanes w/ Paved Shoulders Southbound Lanes - 2 @ 12' Lanes w/ Paved Shoulders			
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: 101750	Year: 2042	Existing:	69300	Year:	2022	
General Project Narrative: (Description of Minimization of Water Quality Impacts)	The project consists of the widening of I-95 from south of US 301 (Exit 22) to north of SR 1758 (McDuffie Crossing Road) from 2 lanes in each direction to 4 lanes in each direction. Several grade separated bridges will be replaced along the project corridor as well as reconfiguration of the interchange at US 301 (Exit 25). The proposed stormwater runoff from the roadway widening has been conveyed to roadside ditches and storm drainage systems that drain to existing outfalls.						

Waterbody Information

Surface Water Body (1):	Tributary to Saddletree Swamp		NCDWR Stream Index No.:	14-12		
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C			
		Supplemental Classification:	Swamp Waters (Sw)			
Other Stream Classification:						
Impairments:	None					
Aquatic T&E Species?	No	Comments:				
NRTR Stream ID:	SM, SO		Buffer Rules in Effect:	N/A		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A	
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)		
(If yes, provide justification in the General Project Narrative)						



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WBS Element:	47533.1.2	TIP No.:	I-5987A	County(ies):	Robeson		
Additional Waterbody Information							
Surface Water Body (2):	Tributary to Fivemile Branch			NCDWR Stream Index No.:	14-12-6		
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C				
		Supplemental Classification:	Swamp Waters (Sw)				
Other Stream Classification:							
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	TX, TV, TU, TT			Buffer Rules in Effect:	N/A		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A		
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)			(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)		
Surface Water Body (3):	Tenmile Swamp			NCDWR Stream Index No.:	14-22-3		
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C				
		Supplemental Classification:	Swamp Waters (Sw)				
Other Stream Classification:							
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	TS, TBB, TR			Buffer Rules in Effect:	N/A		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A		
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)			(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)		
Surface Water Body (4):	Cowpen Branch			NCDWR Stream Index No.:	14-22-3-1		
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C				
		Supplemental Classification:	Swamp Waters (Sw)				
Other Stream Classification:							
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	SP, TP			Buffer Rules in Effect:	N/A		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A		
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)			(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)		
Surface Water Body (5):				NCDWR Stream Index No.:			
NCDWR Surface Water Classification for Water Body		Primary Classification:					
		Supplemental Classification:					
Other Stream Classification:							
Impairments:							
Aquatic T&E Species?	Comments:						
NRTR Stream ID:				Buffer Rules in Effect:			
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?		Dissipator Pads Provided in Buffer?			
Deck Drains Discharge Over Water Body?		(If yes, provide justification in the General Project Narrative)			(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)		



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WBS Element: 47533.1.3 TIP No.: I-5987B County(ies): Robeson Page 1 of 2

General Project Information

WBS Element:	47533.1.3	TIP Number:	I-5987B	Project Type:	Roadway Widening	Date:	5/12/2021
NCDOT Contact:	Paul Atkinson, PE		Contractor / Designer:	Wetherill Engineering/ Kevin B. Alford, PE			
Address:	1590 Mail Service Center Raleigh, NC 27699-1590			1223 Jones Franklin Road Raleigh, NC 27606			
	Phone:	919-704-6707		Phone:	919-851-8077		
Email:	patkinson@ncdot.gov			Email: kalford@wetherilleng.com			
City/Town:	Town of St. Pauls		County(ies):	Robeson			
River Basin(s):	Lumber		CAMA County?	No			
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	7.96	Surrounding Land Use:	Rural/wooded/agriculture			
	Proposed Project			Existing Site		
Project Built-Upon Area (ac.)	165.0	ac.	93.0	ac.		
Typical Cross Section Description:	Northbound Lanes - 4 @ 12' Lanes w/ Paved Shoulders & Median Barrier Wall Southbound Lanes - 4 @ 12' Lanes w/ Paved Shoulders & Median Barrier Wall			Northbound Lanes - 2 @ 12' Lanes w/ Paved Shoulders Southbound Lanes - 2 @ 12' Lanes w/ Paved Shoulders		
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: 92600	Year: 2042	Existing:	63300	Year:	2022
General Project Narrative: (Description of Minimization of Water Quality Impacts)	The project consists of the widening of I-95 from north of SR 1758 (McDuffie Crossing Road) to north of SR 1723 (Parkton Tobemory Road) from 2 lanes in each direction to 4 lanes in each direction. Several grade separated bridges will be replaced along the project corridor as well as reconfiguration of the interchanges at NC 20 (Exit 31) and US 301 (Exit 33). The proposed stormwater runoff from the roadway widening has been conveyed to roadside ditches and storm drainage systems that drain to existing outfalls.					

Waterbody Information

Surface Water Body (1):	Big Marsh Swamp		NCDWR Stream Index No.:	14-22-2		
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C			
		Supplemental Classification:	Swamp Waters (Sw)			
Other Stream Classification:						
Impairments:	None					
Aquatic T&E Species?	No	Comments:				
NRTR Stream ID:	Big Marsh Swamp, TH, TM, TJ, SN, SR			Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A	
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)		
(If yes, provide justification in the General Project Narrative)						



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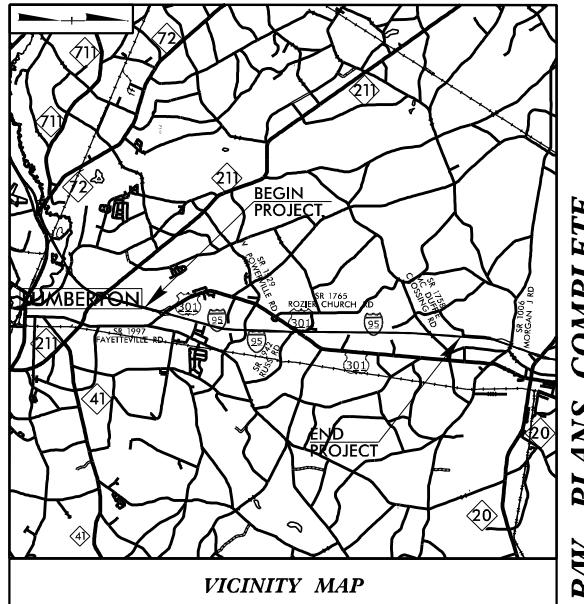
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WBS Element:	47533.1.3	TIP No.:	I-5987B	County(ies):	Robeson		
Additional Waterbody Information							
Surface Water Body (2):	Mercer Branch		NCDWR Stream Index No.:	14-22-1-3-3			
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C				
		Supplemental Classification:	Swamp Waters (Sw)				
Other Stream Classification:							
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	Mercer Branch, SQ			Buffer Rules in Effect:	N/A		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A		
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)			
Surface Water Body (3):	Brisson Branch		NCDWR Stream Index No.:	14-22-1-3-3-1			
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C				
		Supplemental Classification:	Swamp Waters (Sw)				
Other Stream Classification:							
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	Brisson Branch, SJ, TF			Buffer Rules in Effect:	N/A		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A		
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)			
Surface Water Body (4):	Little Marsh Swamp		NCDWR Stream Index No.:	14-22-1-3			
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C				
		Supplemental Classification:	Swamp Waters (Sw)				
Other Stream Classification:							
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	Little Marsh Swamp, SP, TP			Buffer Rules in Effect:	N/A		
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A		
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)			
Surface Water Body (5):	Buckhorn Swamp		NCDWR Stream Index No.:	14-22-1-2			
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C				
		Supplemental Classification:	Swamp Waters (Sw)				
Other Stream Classification:							
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:				Buffer Rules in Effect:			
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A		
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)			

Attachment D: I-5987 Wetland and Surface Water Impacts Permit Drawings and Utility Drawings

TIP PROJECT: I-5987A

CONTRACT:



IMAGES COMME

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROBESON COUNTY

LOCATION: I-95 IMPROVEMENTS

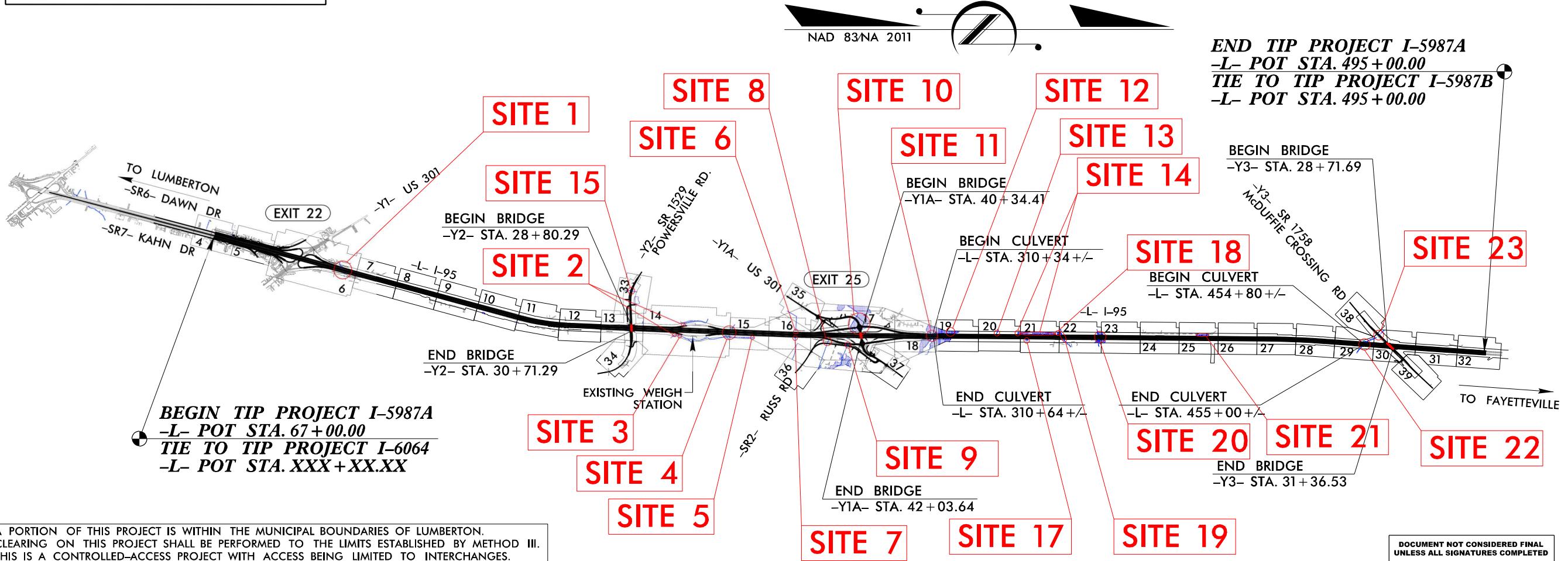
FROM SOUTH OF US 301 (EXIT 22)

TO NORTH OF SR 1758 (McDUFFIE CROSSING RD.)

**TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURES,
CULVERTS, AND RETAINING WALLS**

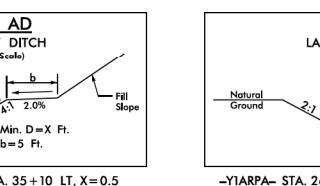
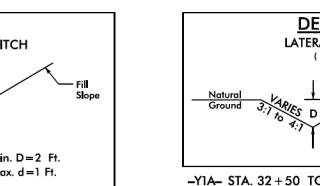
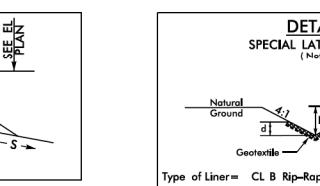
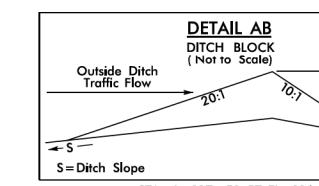
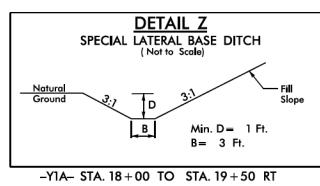
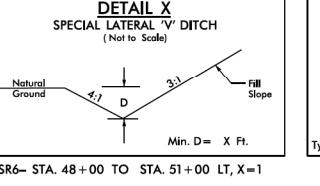
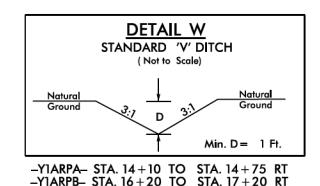
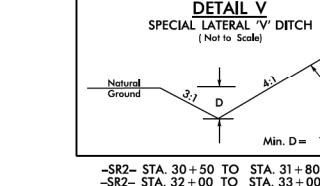
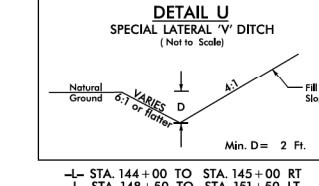
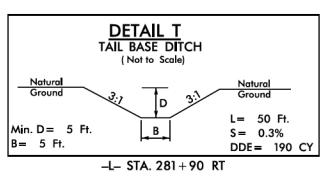
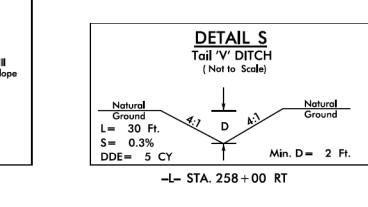
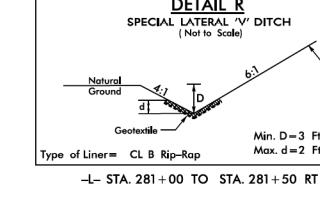
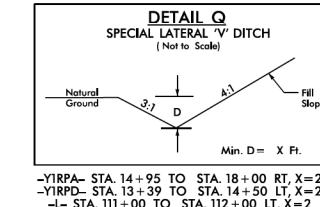
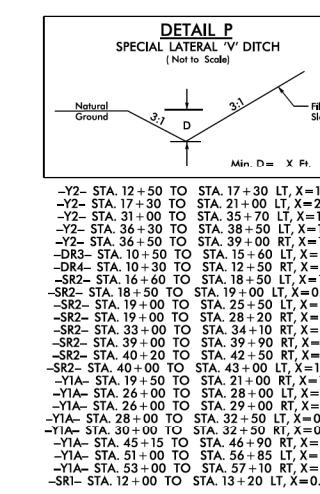
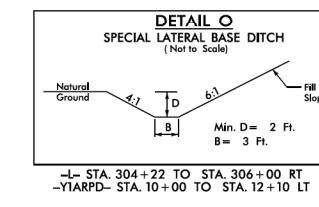
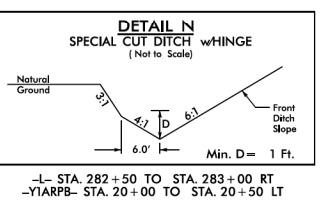
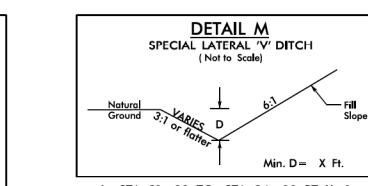
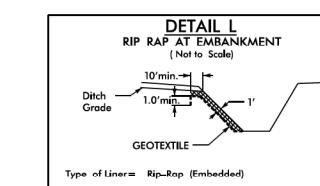
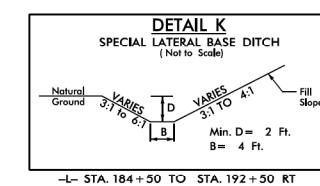
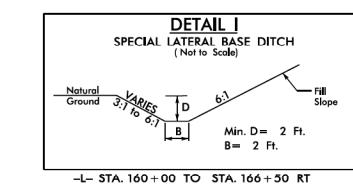
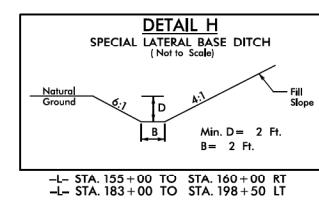
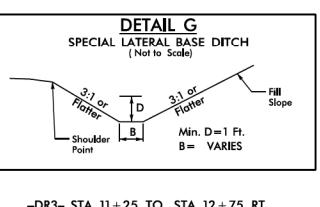
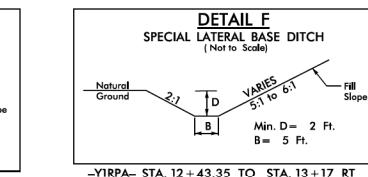
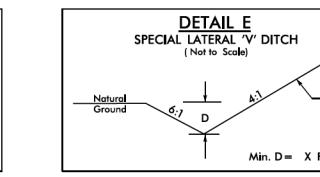
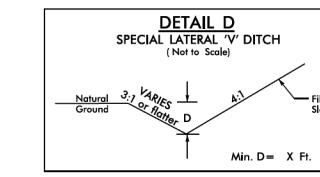
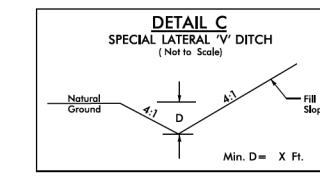
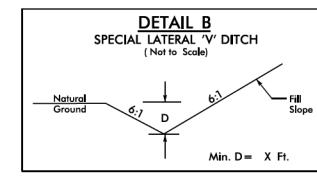
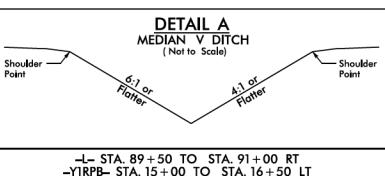
WETLAND AND SURFACE WATER IMPACTS PERMIT

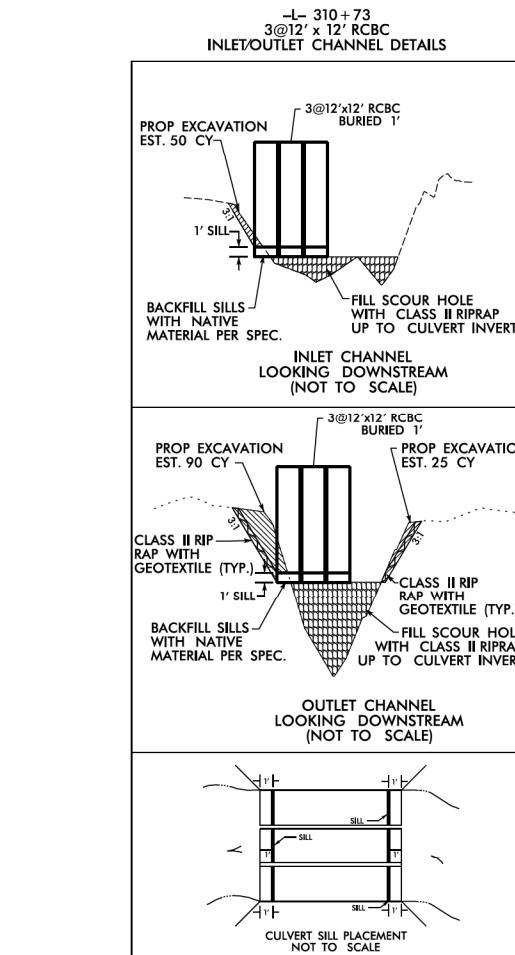
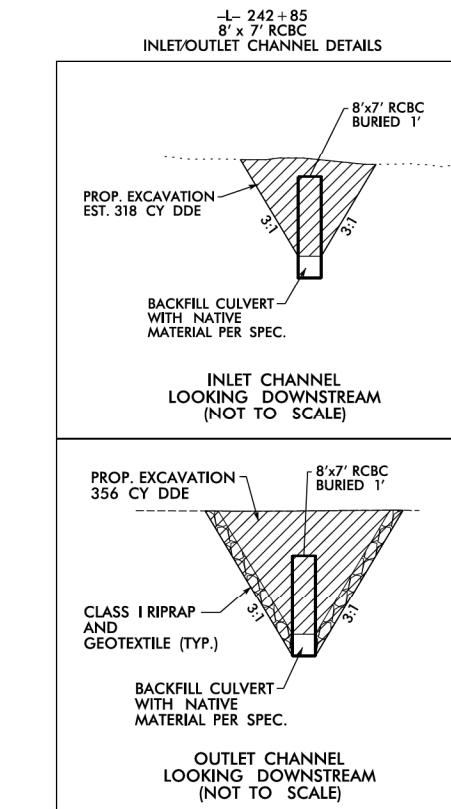
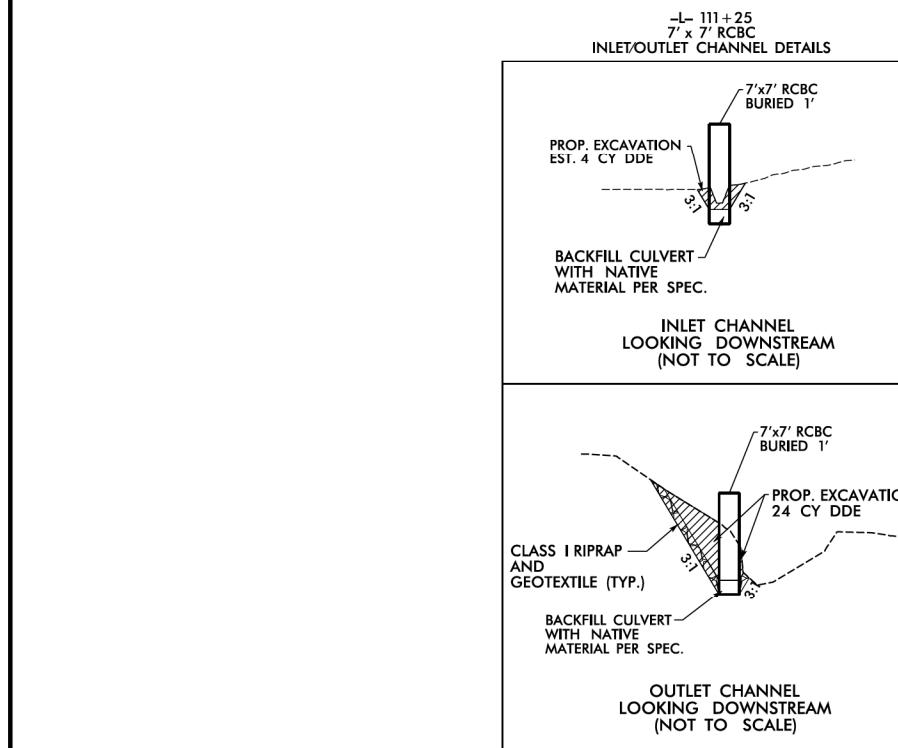
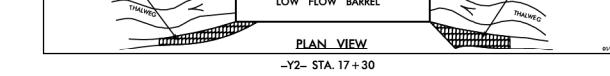
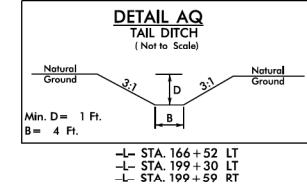
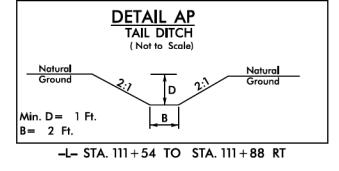
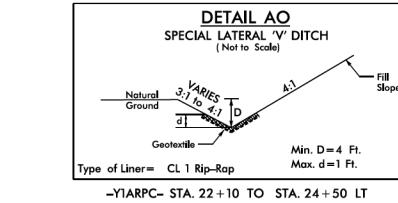
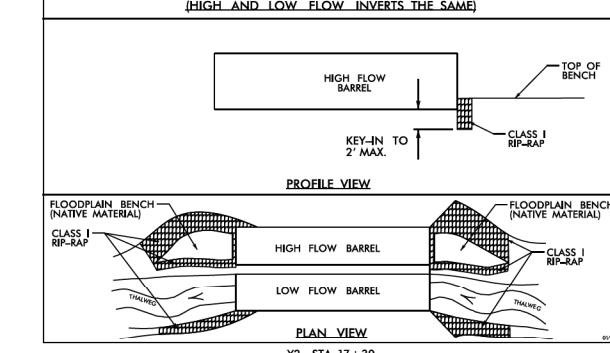
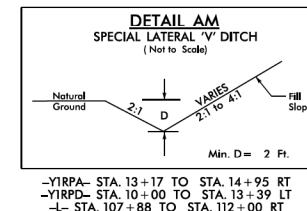
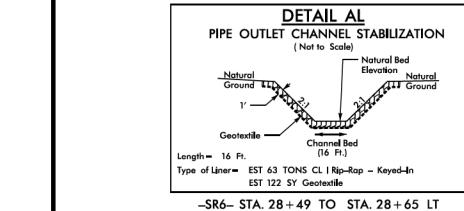
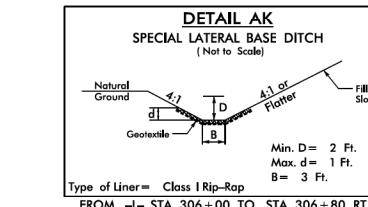
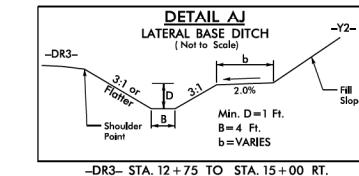
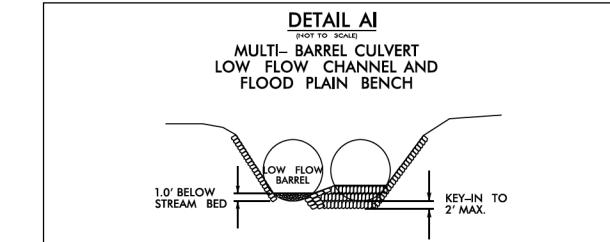
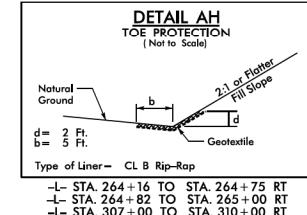
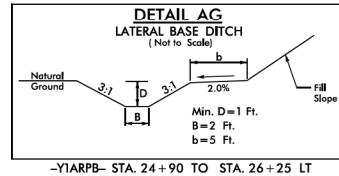
**PERMIT DRAWING
SHEET 1 OF 55**

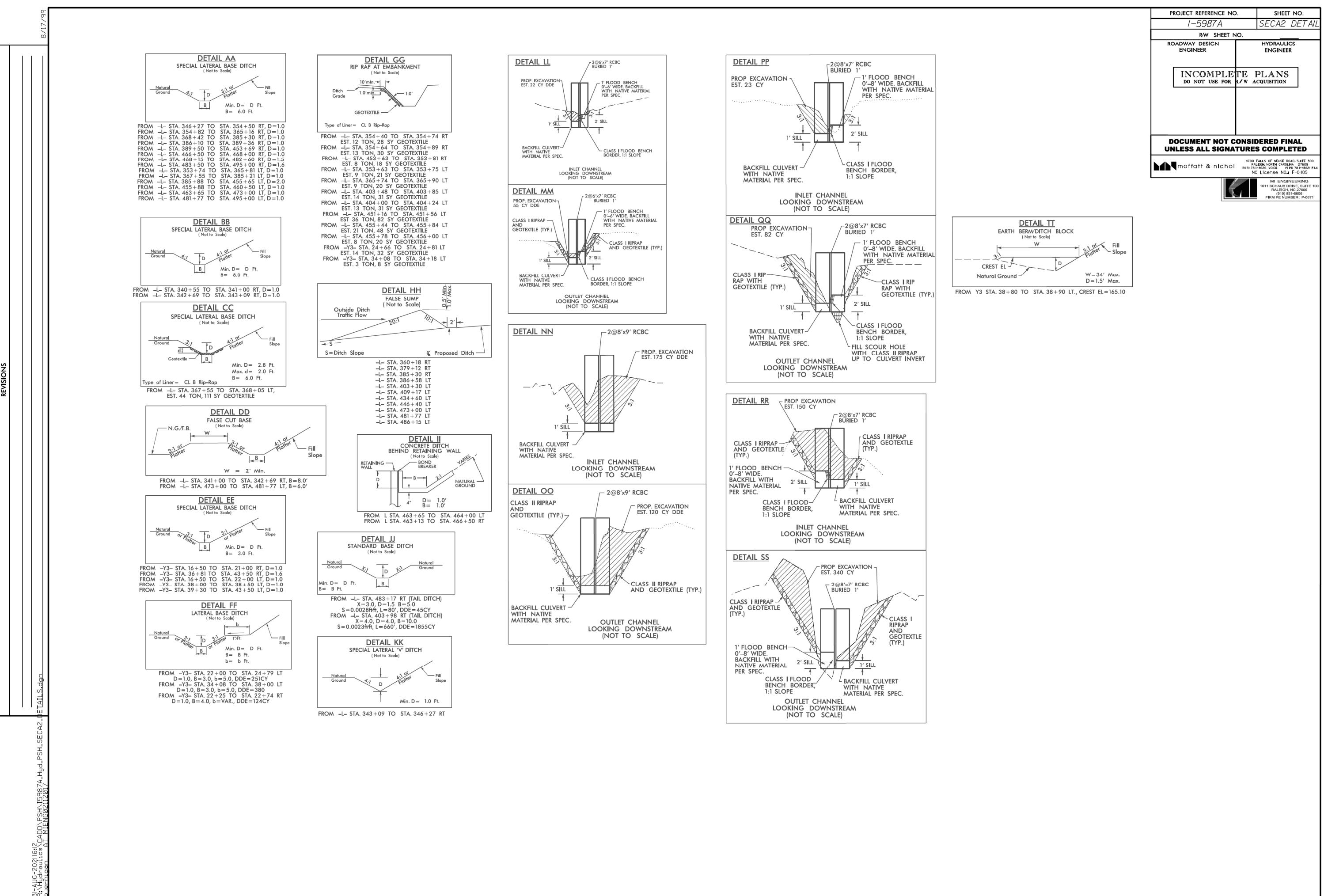


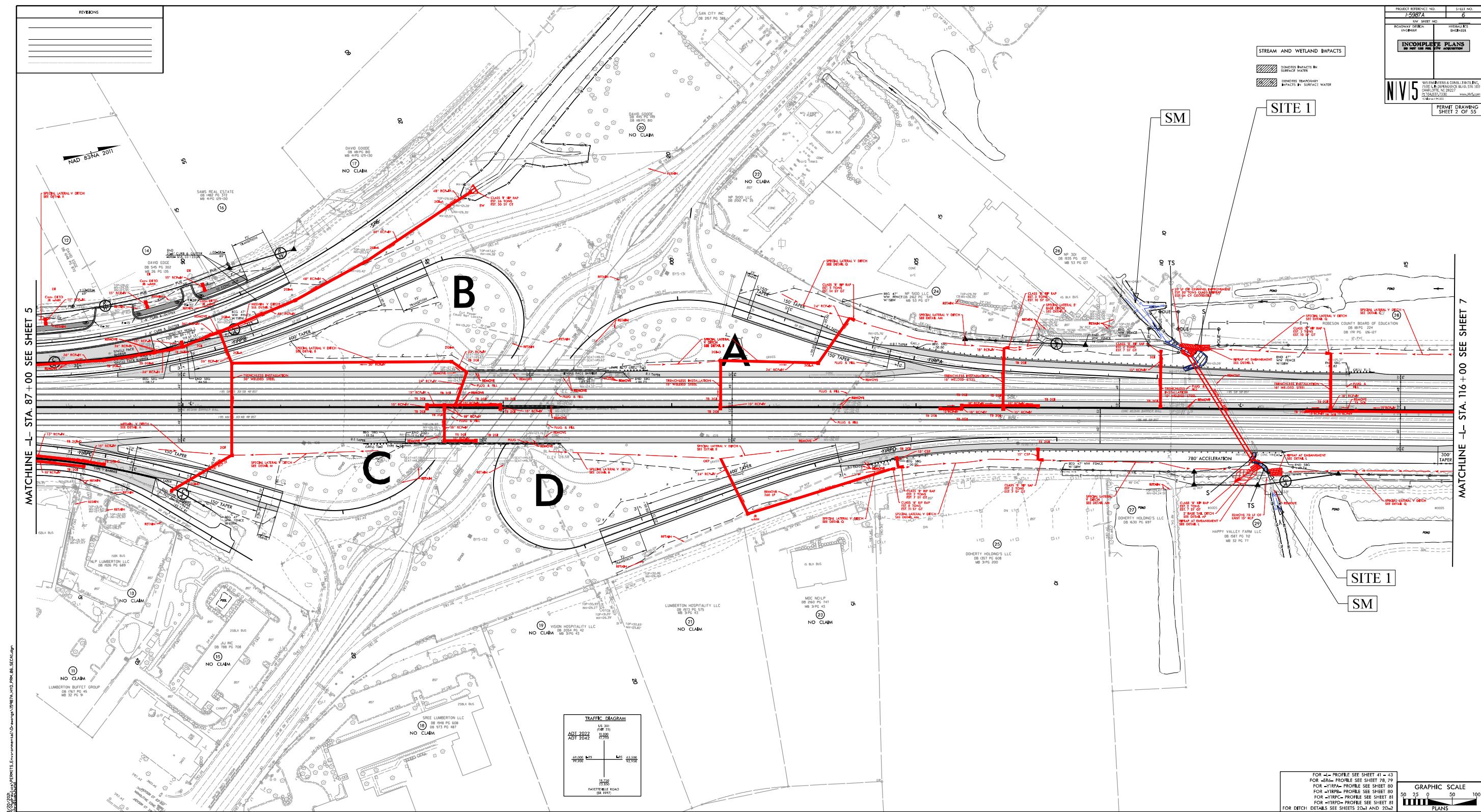
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF LUMBERTON.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

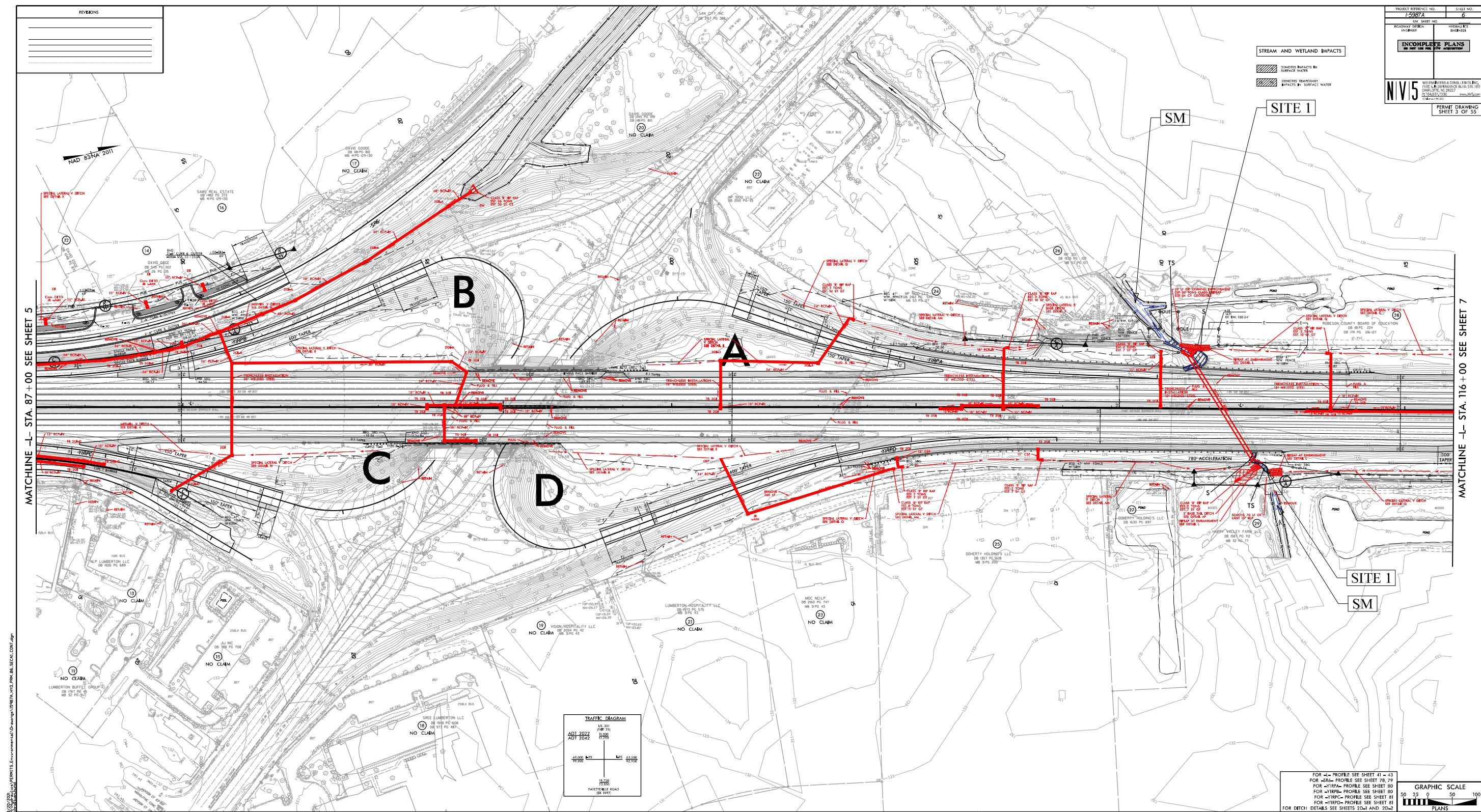
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UNLESS ALL SIGNATURES COMPLETED**









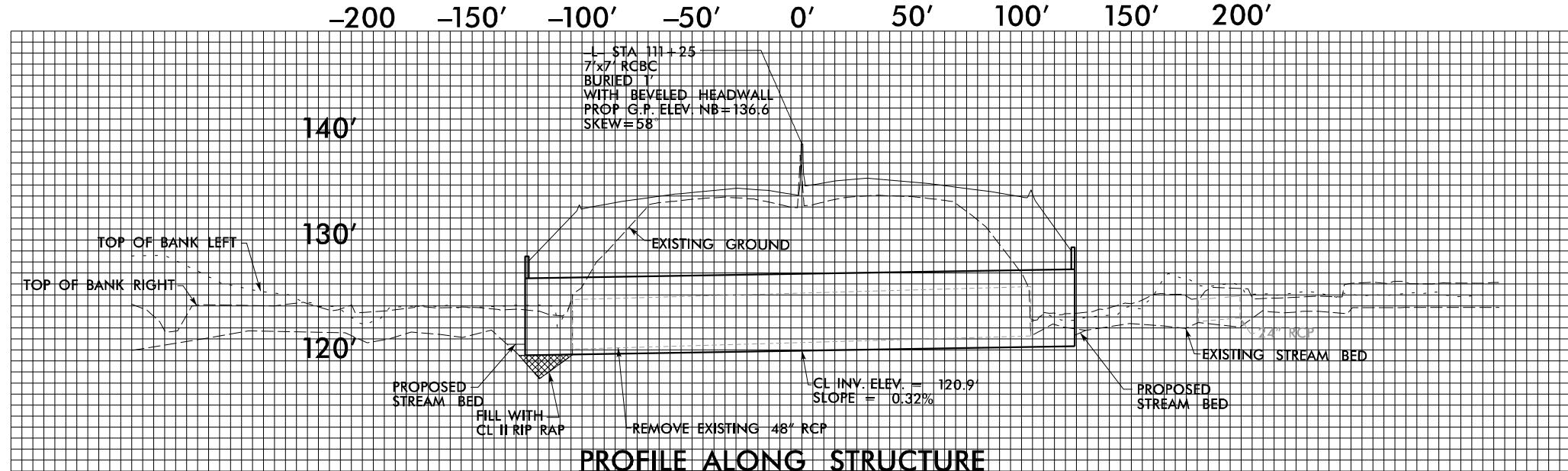


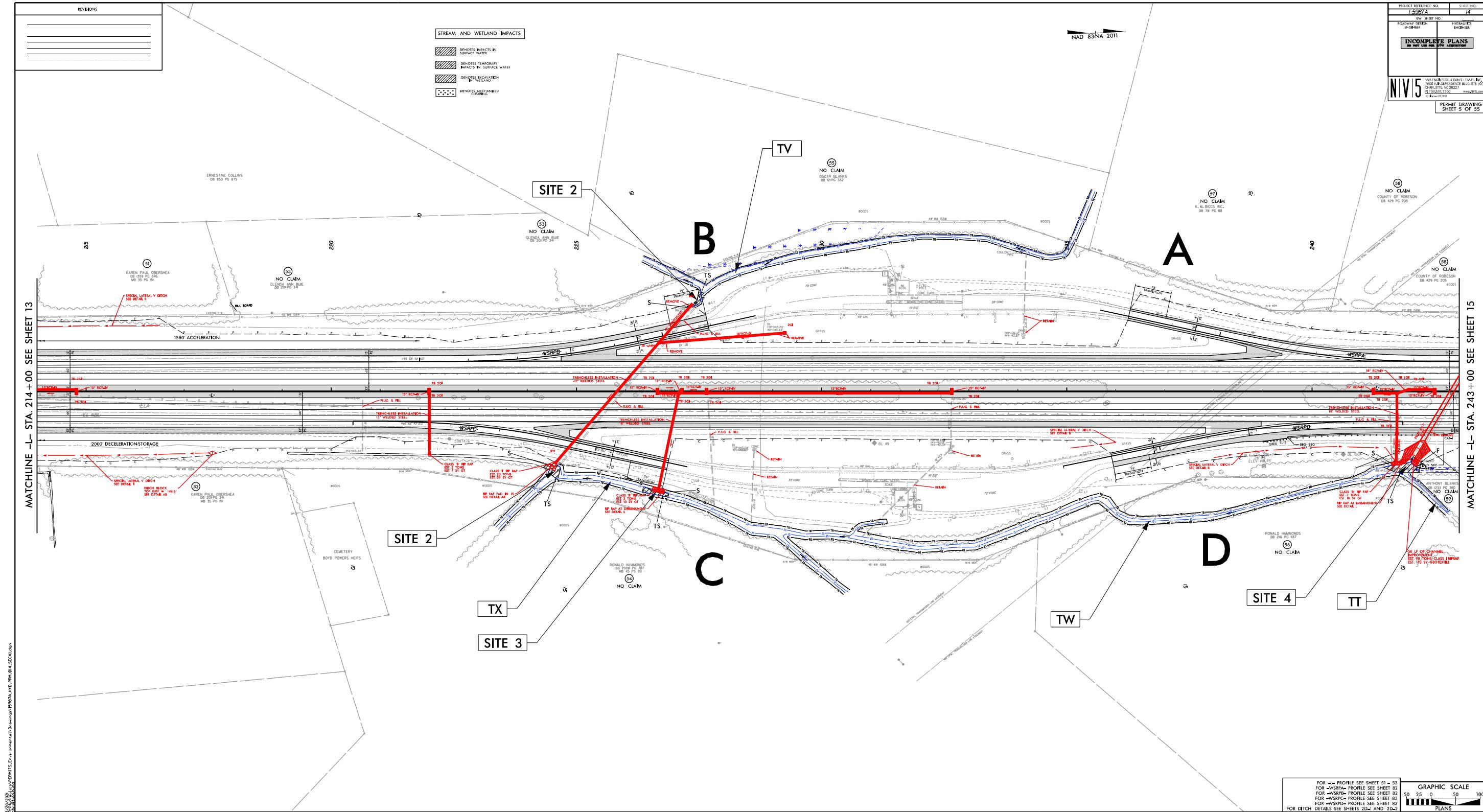
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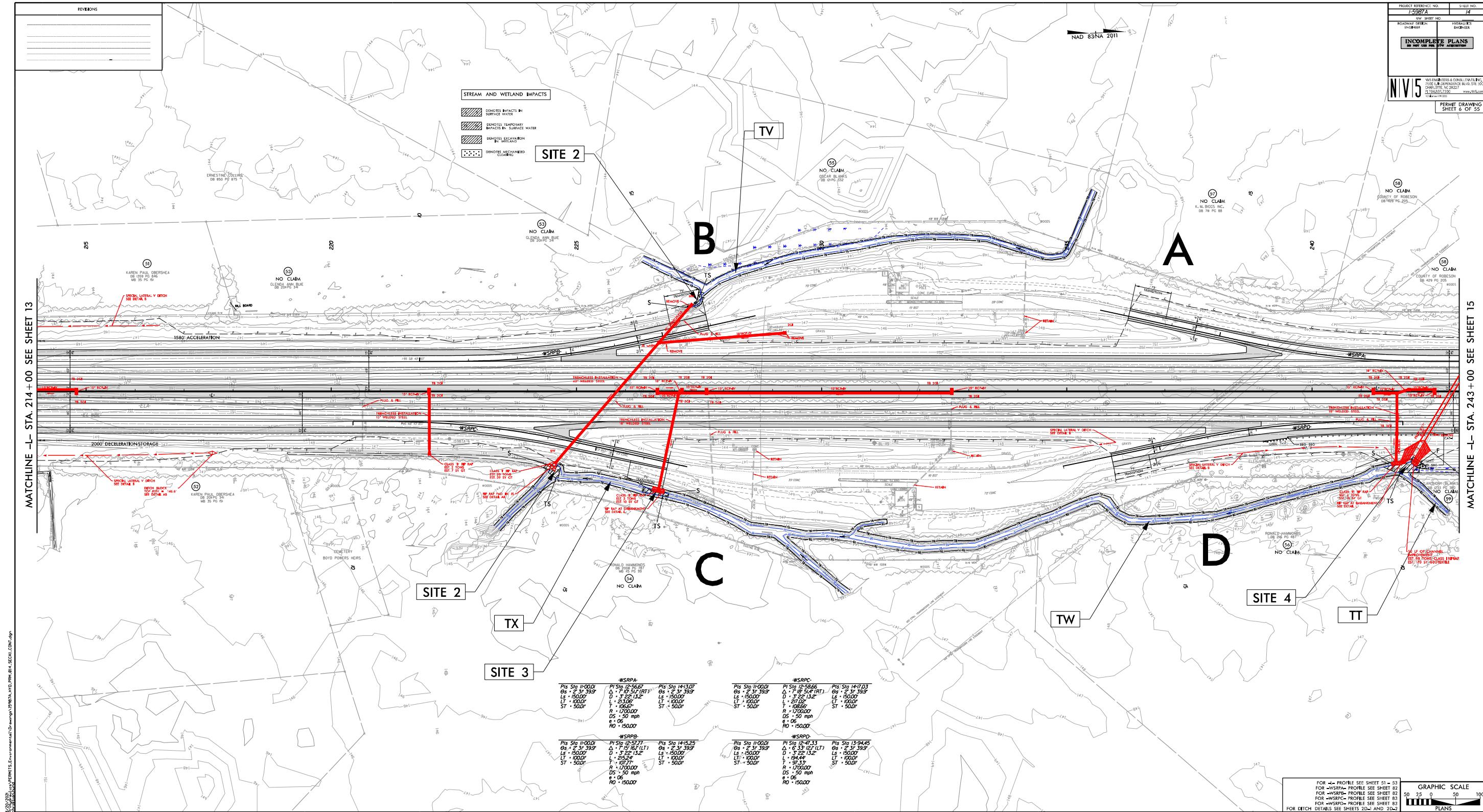
PROJECT REFERENCE NO.	SHEET NO.
I-5987A	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ROW ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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PERMIT DRAWING
SHEET 4 OF 55

-L- STATION 111 + 25 7'X7' RCBC

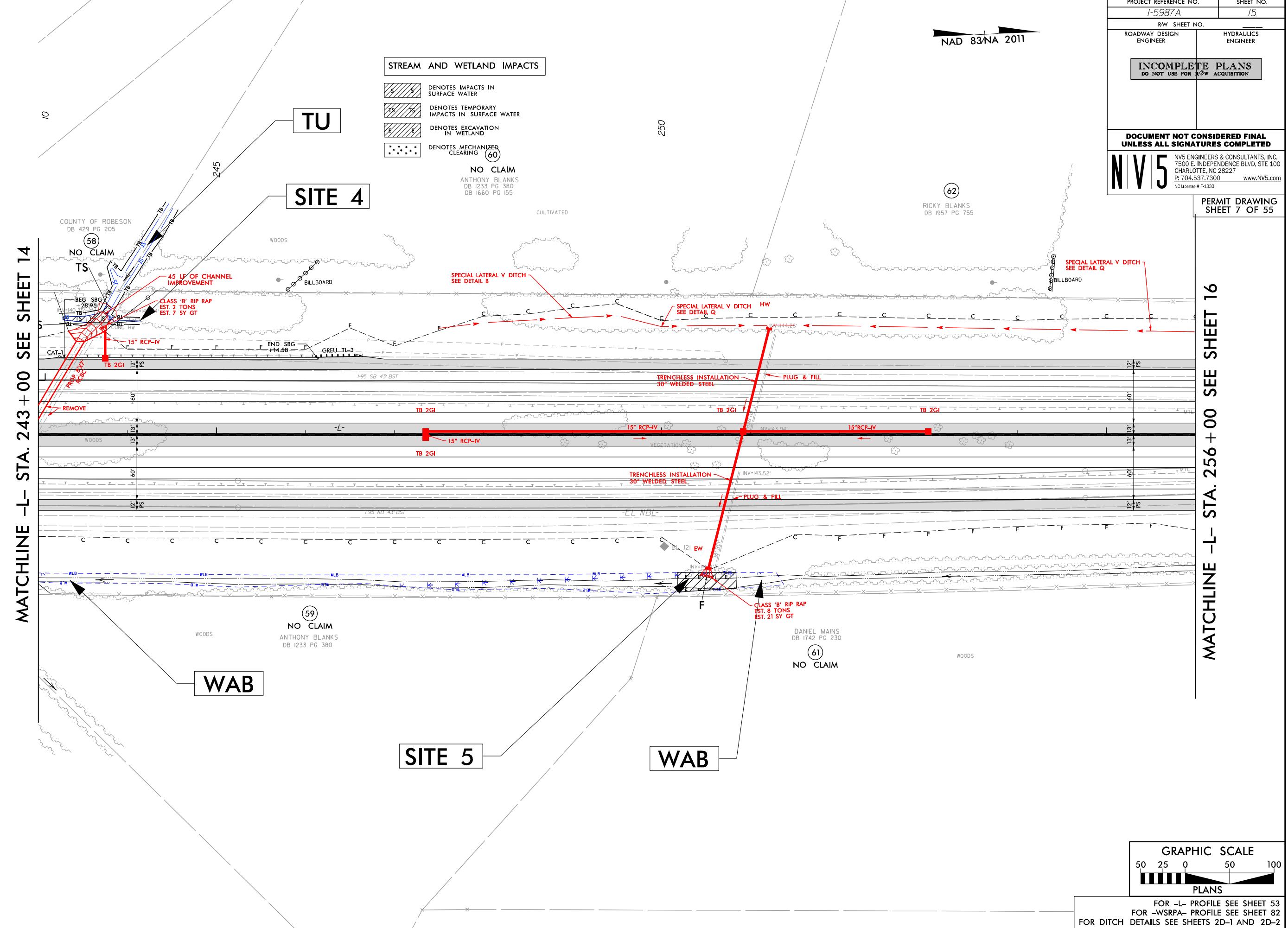




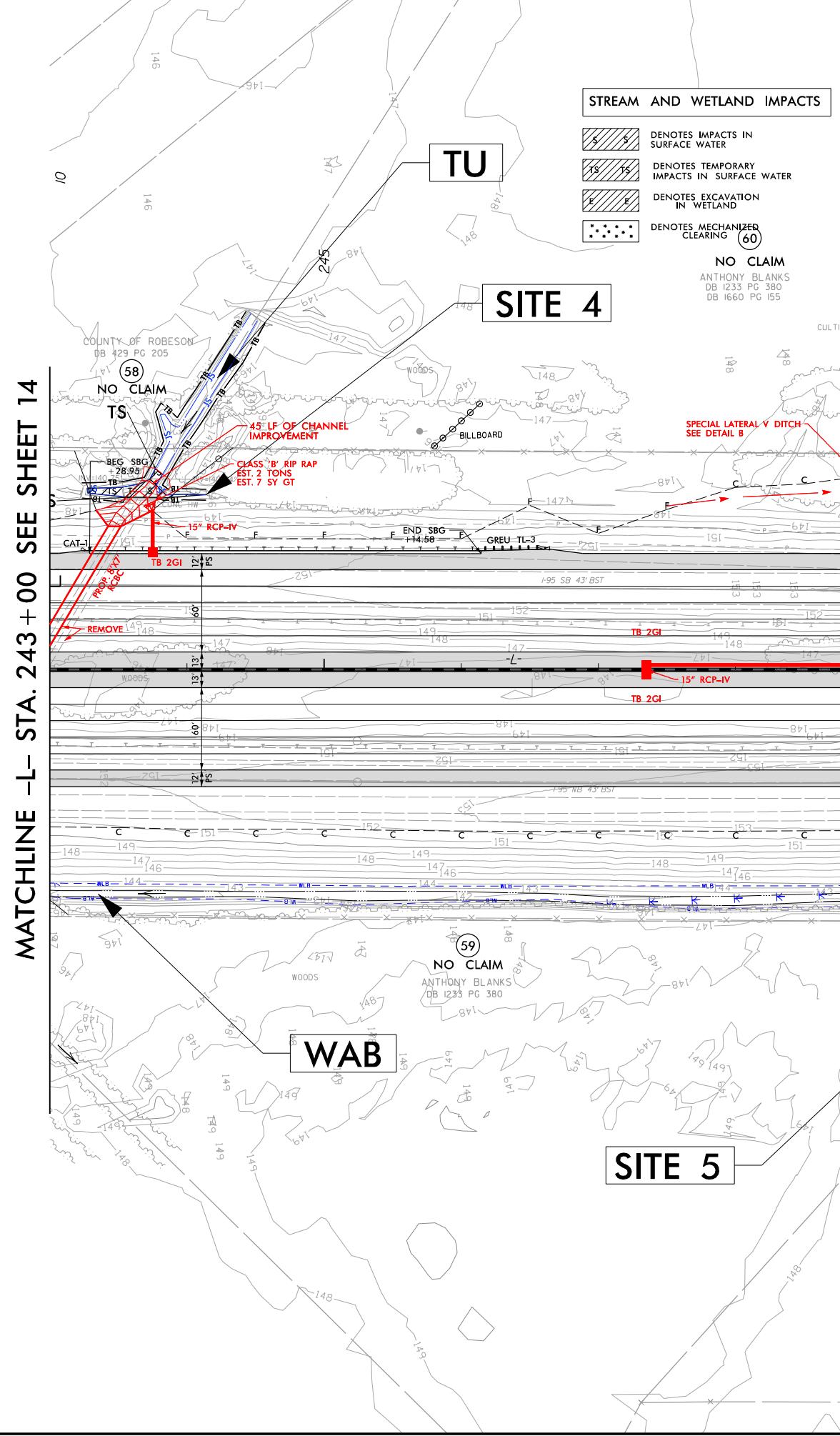


NAD 83 NA 2011

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ROW ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 243+00 SEE SHEET 14

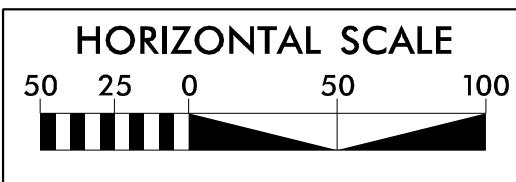
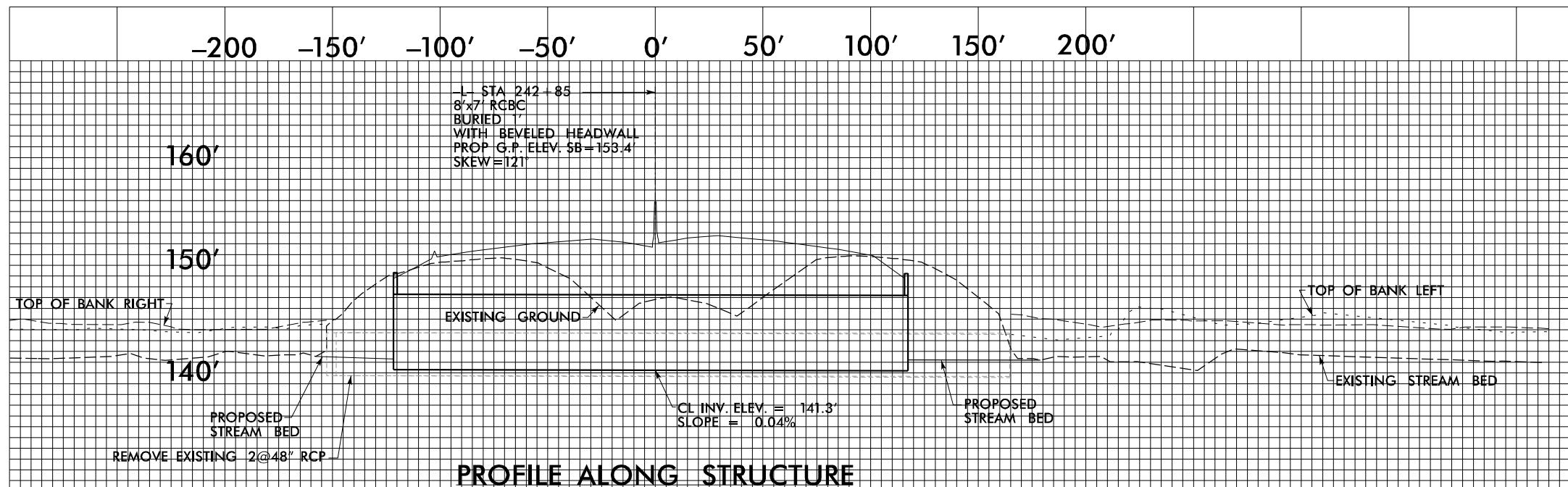
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SITE 4

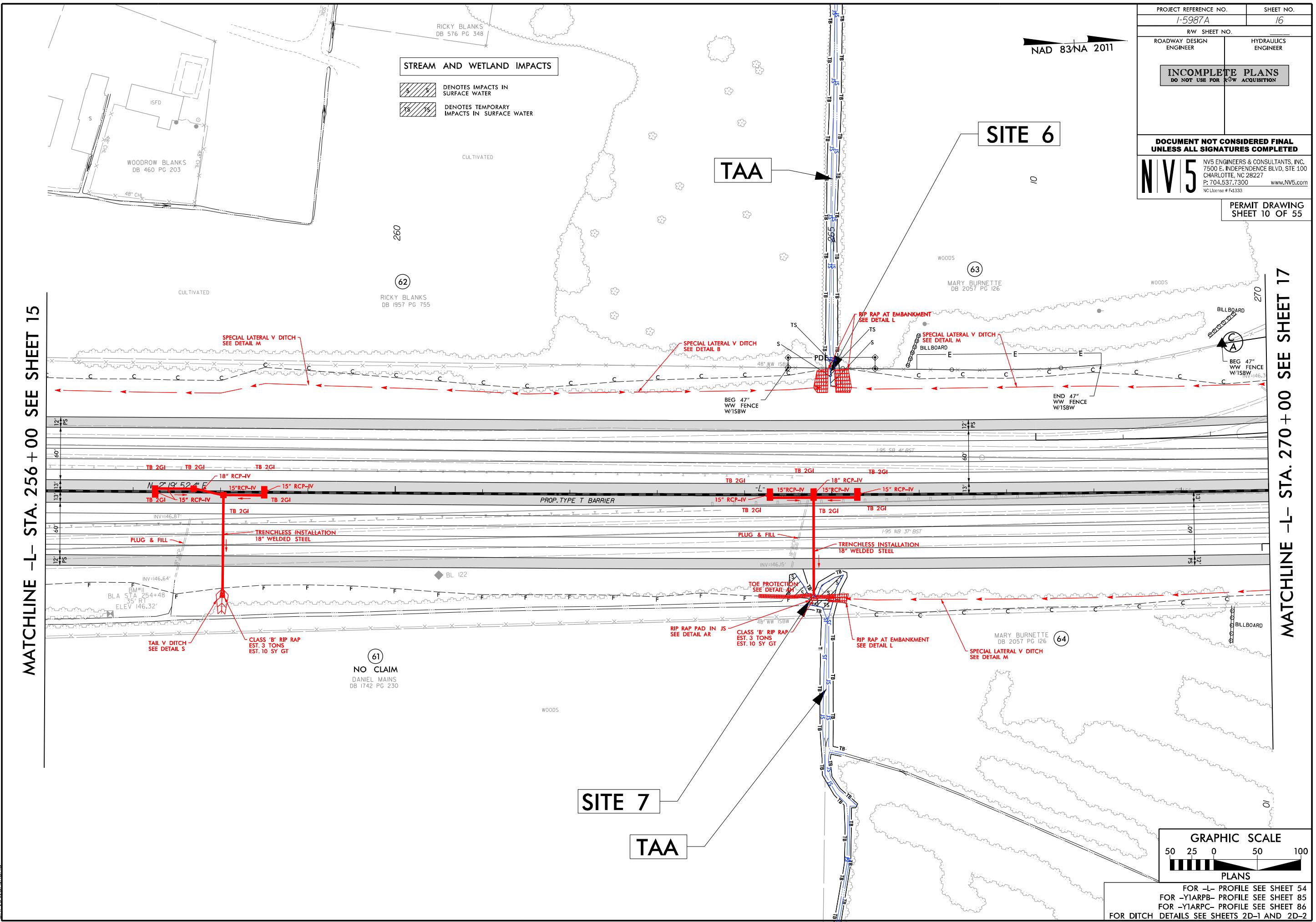
-L- STATION 242 + 85 8'X7' RCBC

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ROW ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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PERMIT DRAWING
SHEET 9 OF 55

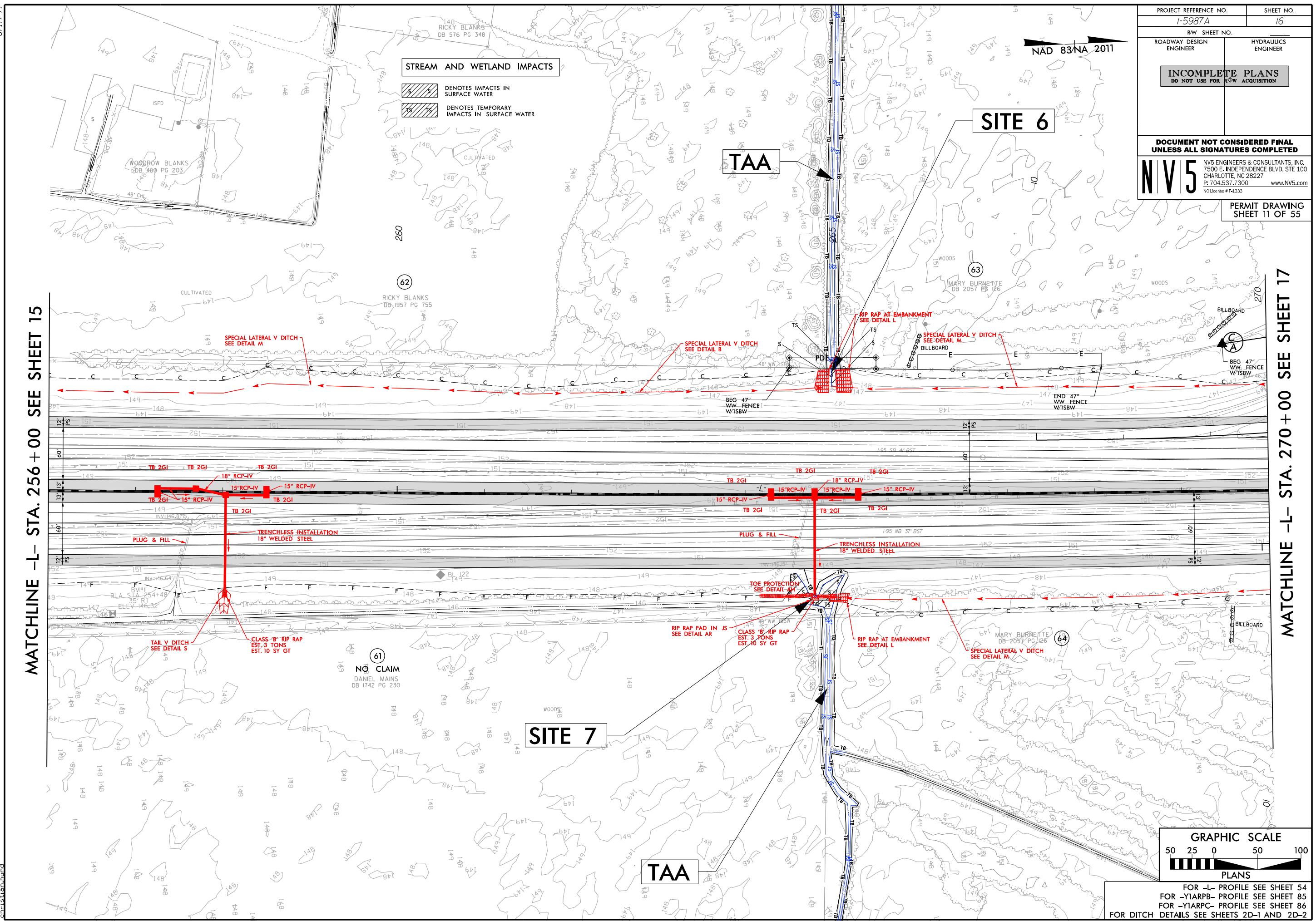
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Christian.hund

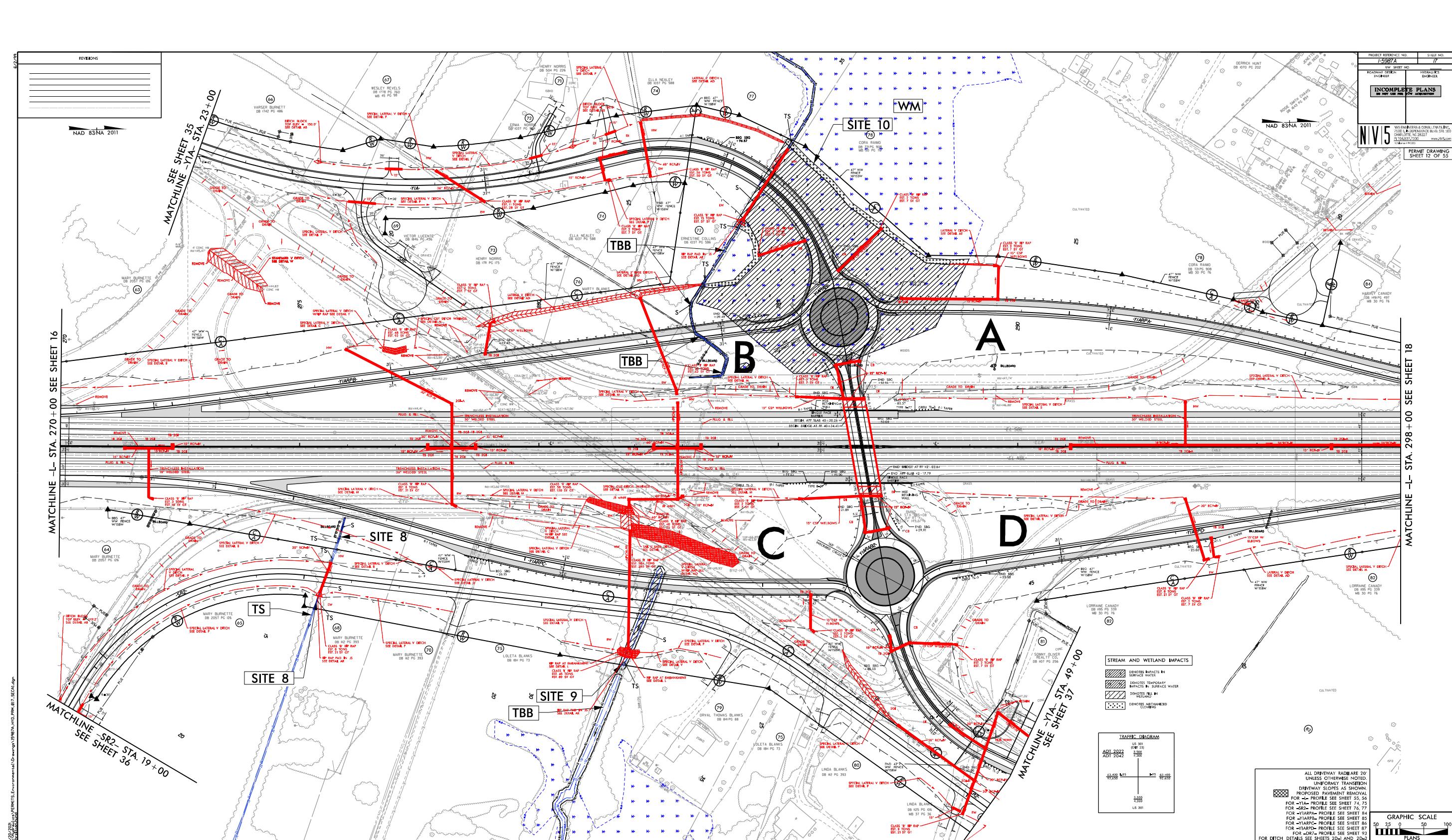
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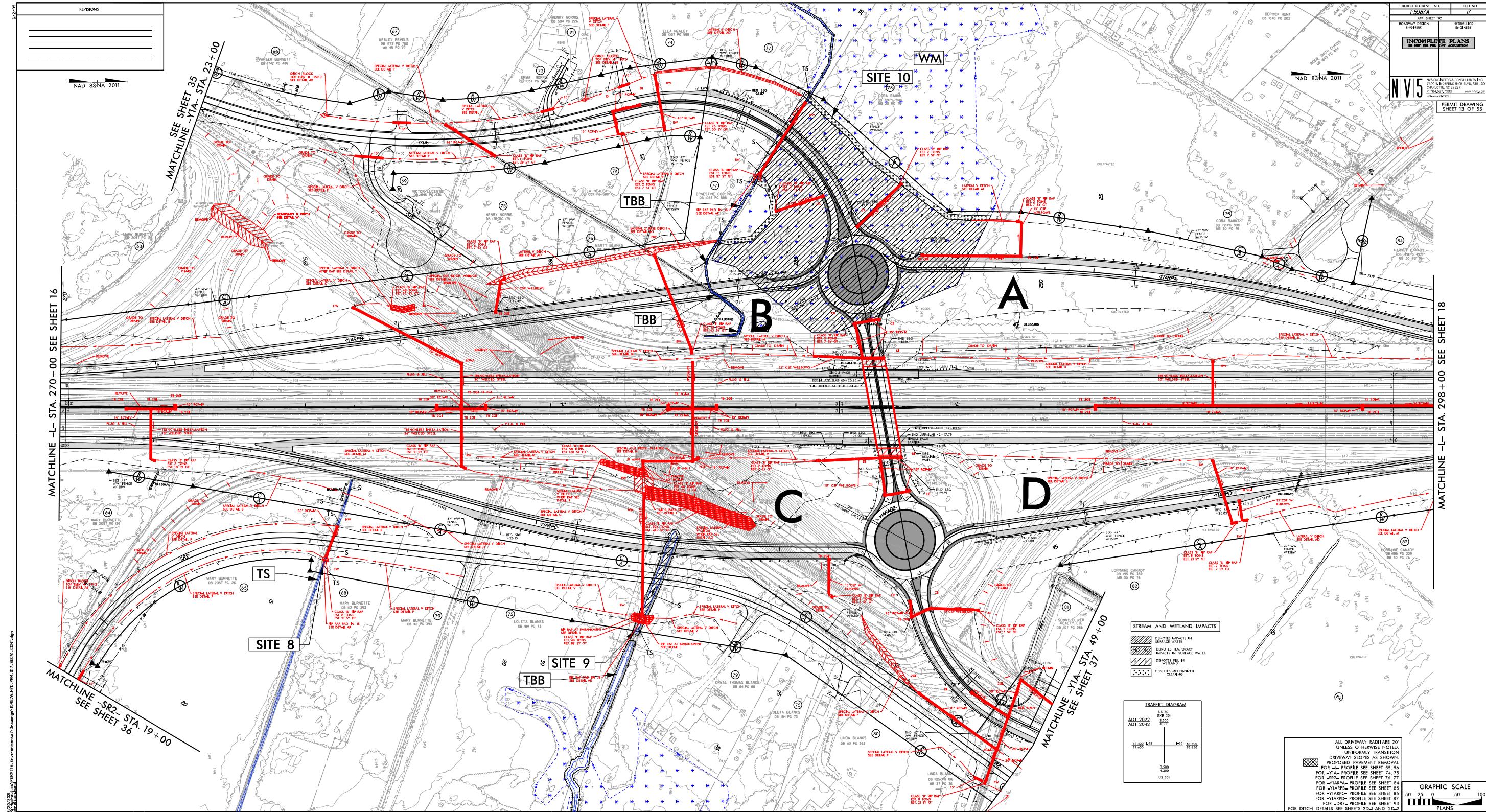


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MATCHLINE -L- STA. 256 + 00 SEE SHEET 15







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PERMIT DRAWING
SHEET 15 OF 55

150 150

150 150

180 180

170 170

160 160

150 150

39 + 50.00

WETLAND

SITE 10

180 180

WETLAND

SITE 10

180 180

170 170

37 + 00.00

4:1

WETLAND

SITE 10

150 150

146.61

180 180

170 170

36 + 50.00

4:1

WETLAND

SITE 10

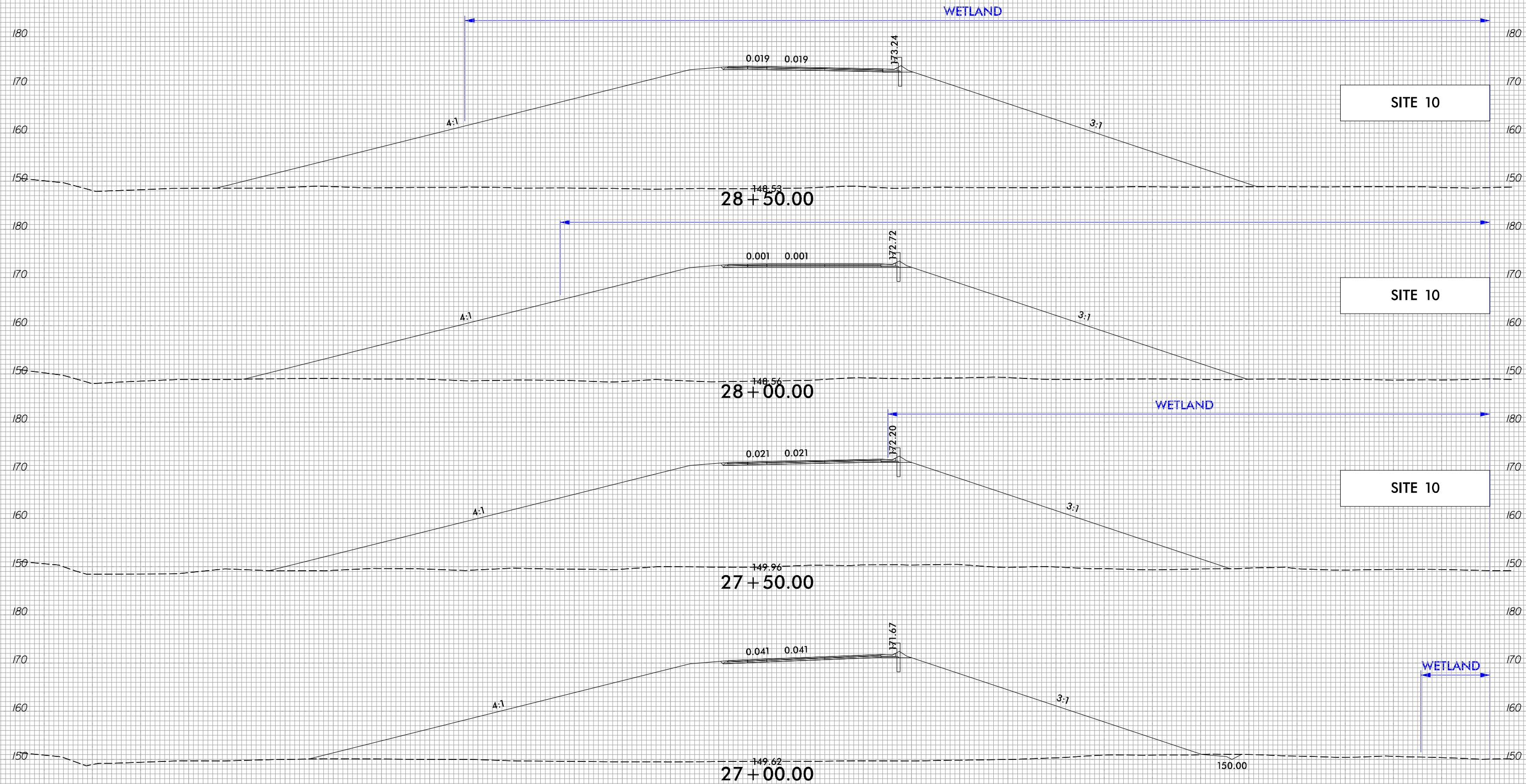
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180 180

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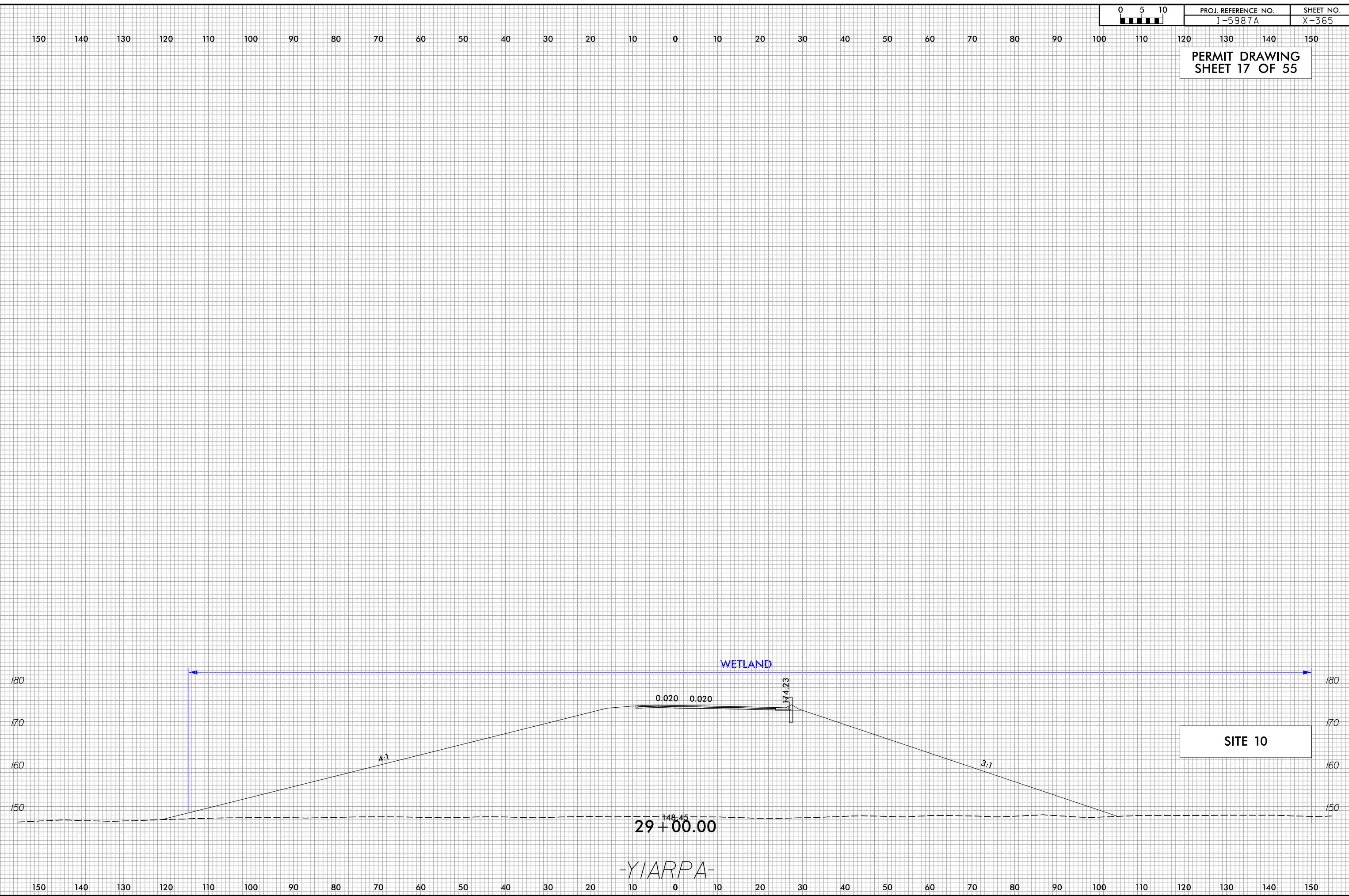
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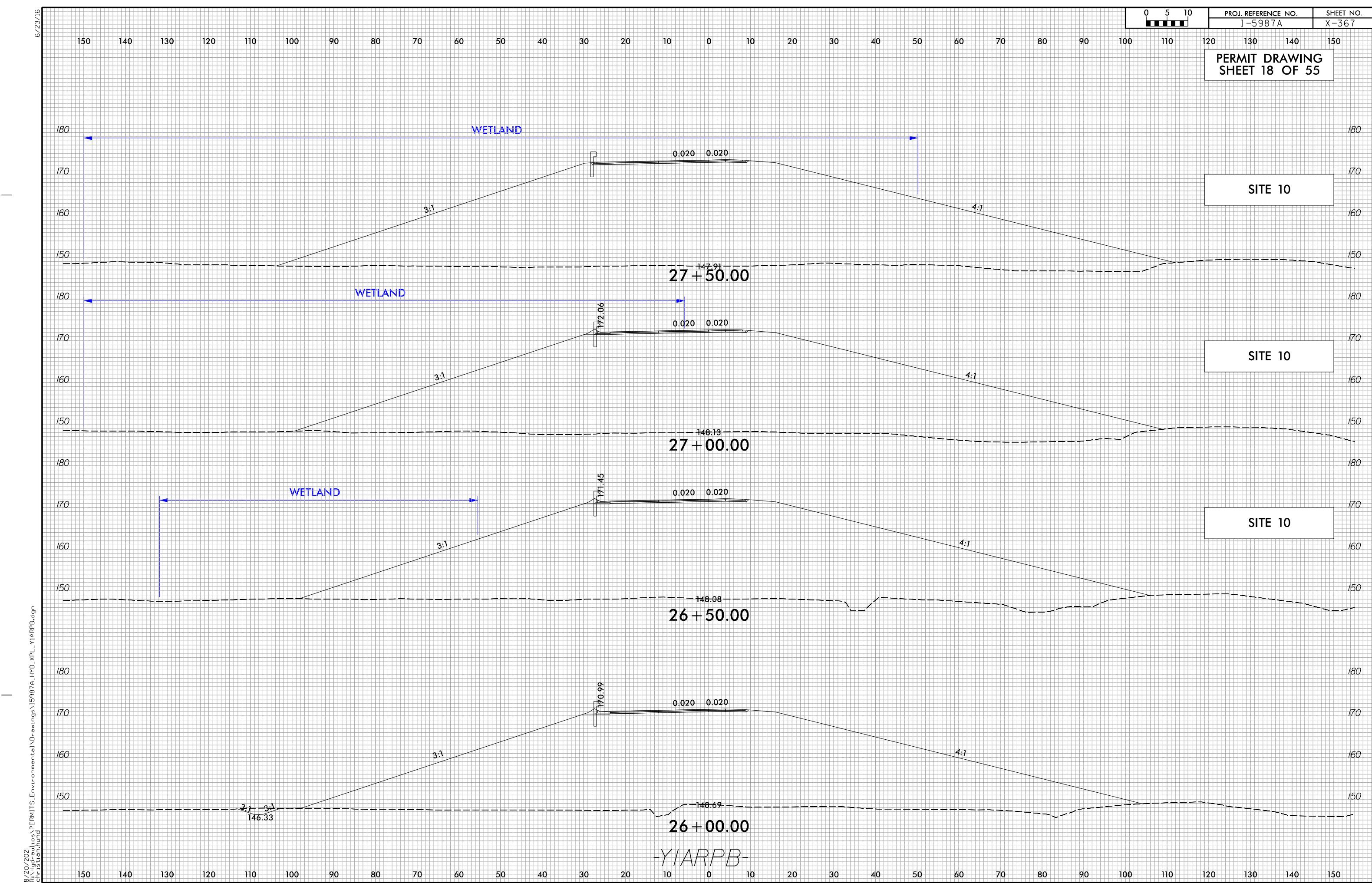
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PERMIT DRAWING
SHEET 16 OF 55

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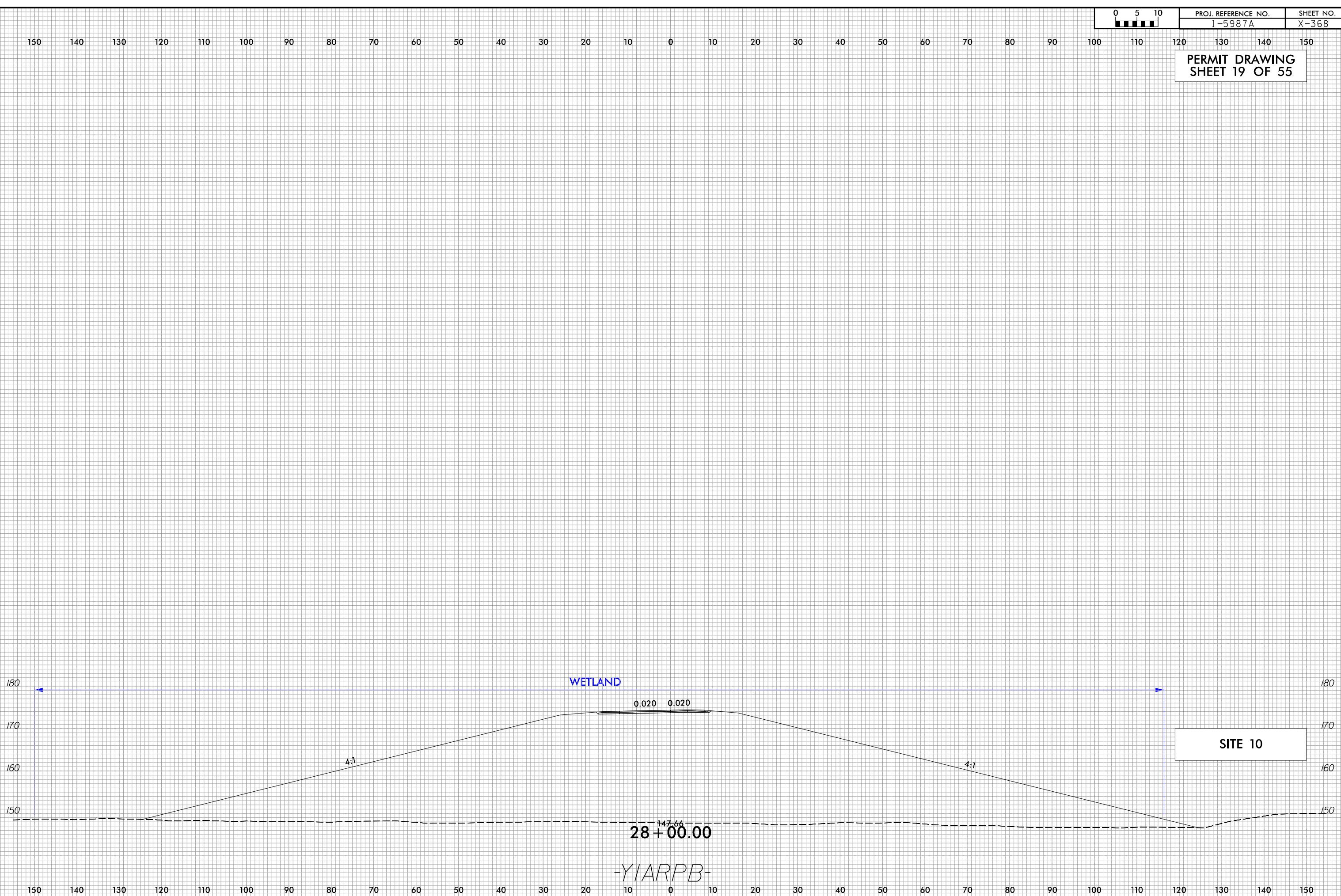
PERMIT DRAWING
SHEET 17 OF 55

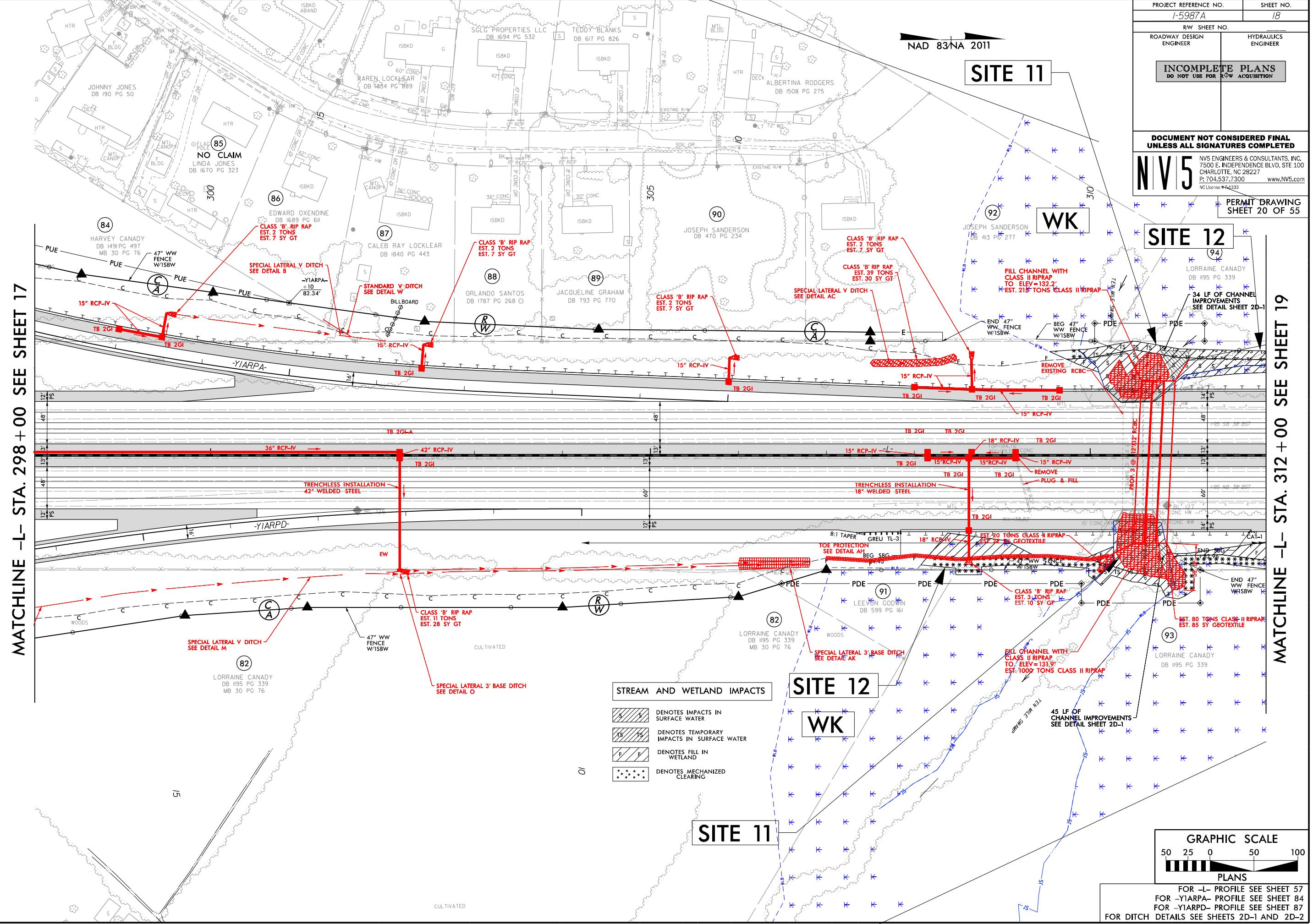


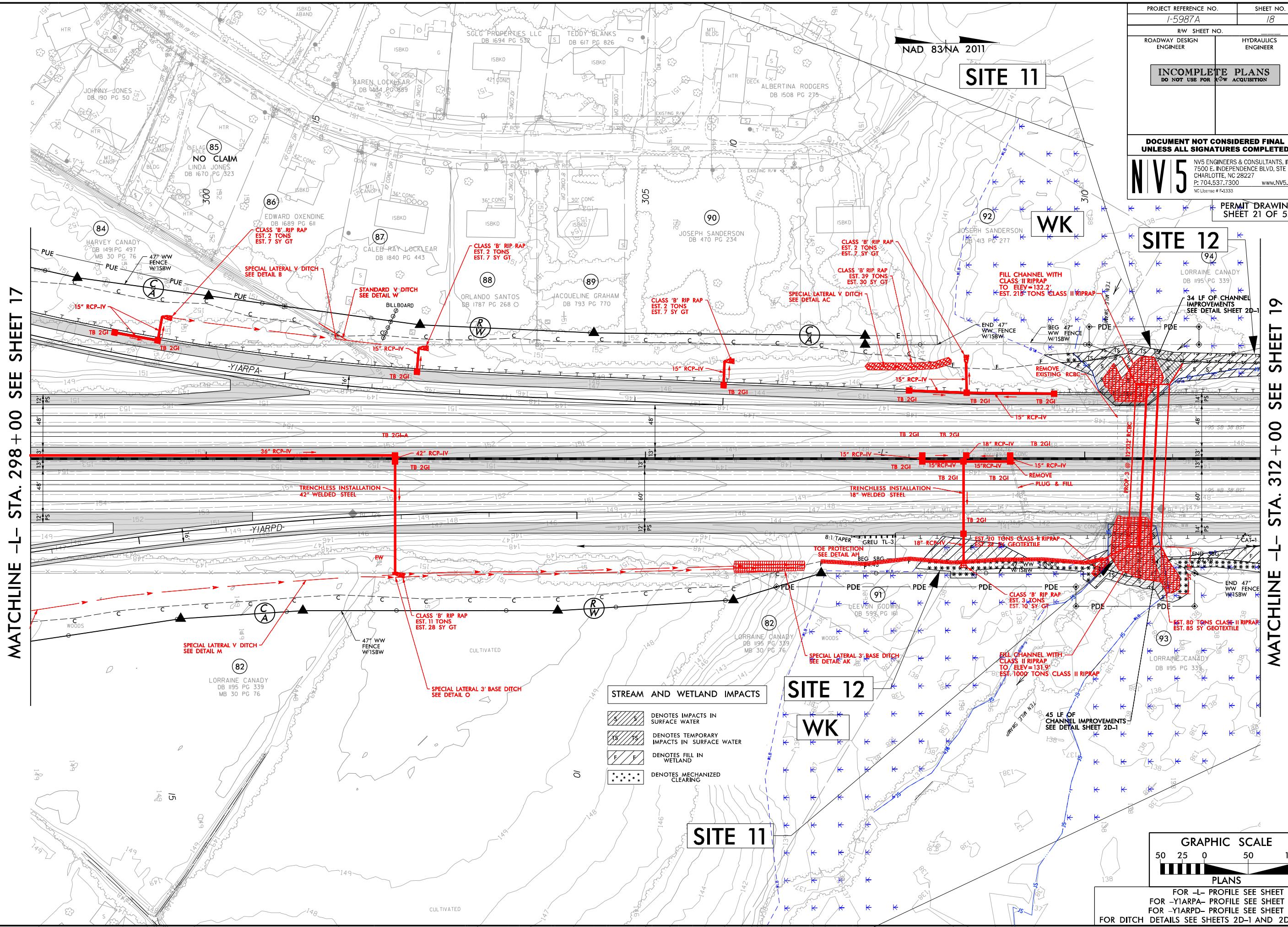
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PROJ. REFERENCE NO.	SHEET NO
I-5987A	X-368

**PERMIT DRAWING
SHEET 19 OF 55**



MATCHLINE -L- STA. 298 +00 SEE SHEET 17

MATCHLINE -L- STA. 298 +00 SEE SHEET 17**MATCHLINE -L- STA. 312 +00 SEE SHEET 19**

PROJECT REFERENCE NO. I-5987A SHEET NO. 18
RW SHEET NO.
ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR ROW ACQUISITION

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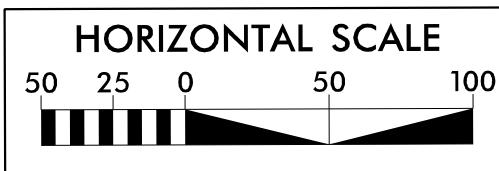
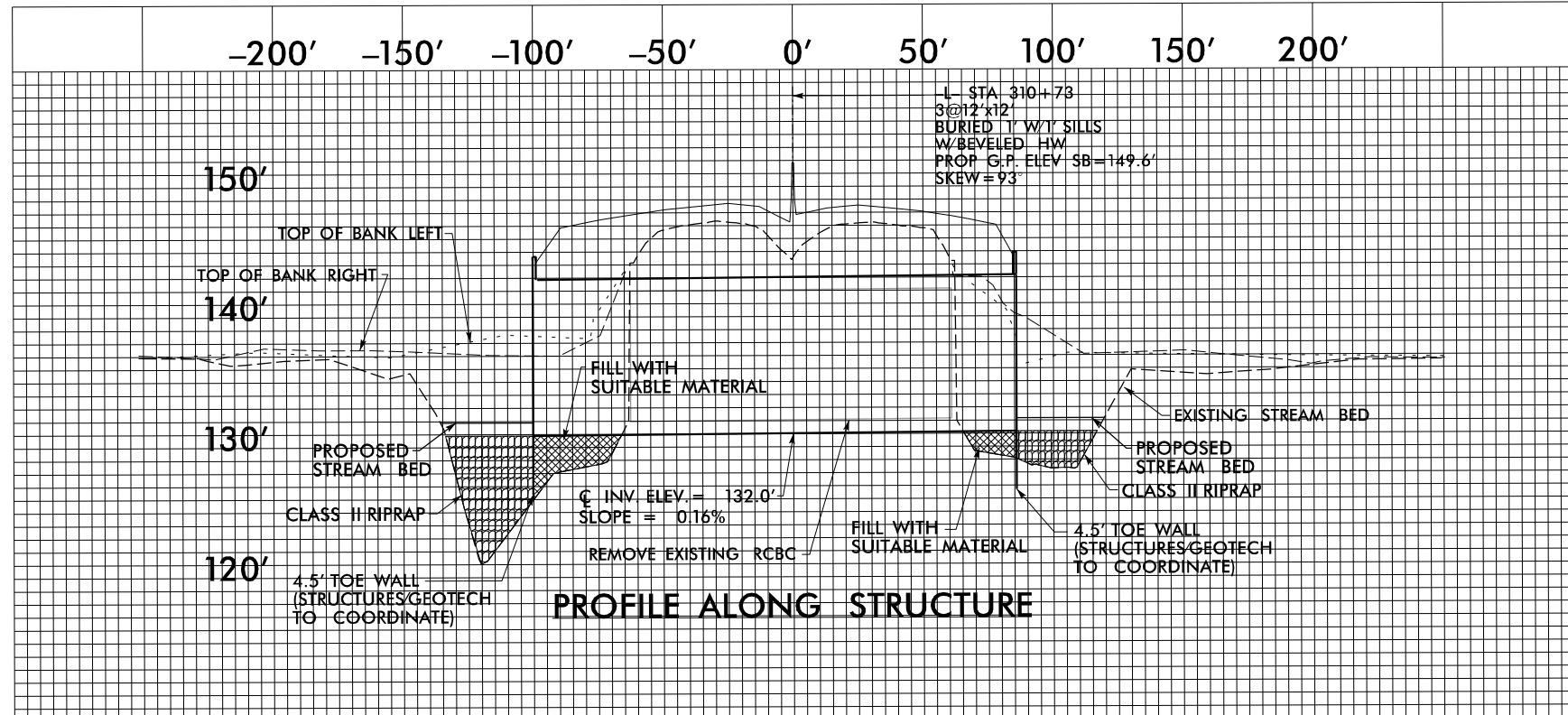
PERMIT DRAWING
SHEET 21 OF 55

SITE 11

-L- STATION 310 + 73 3@12'x12'

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ROW ACQUISITION	
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PERMIT DRAWING
SHEET 22 OF 55



FOR -L- PROFILE SEE SHEET 58
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

MATCHLINE -L- STA. 312 + 00 SEE SHEET 18

SITE 1

3/5

325

CLASS 'B' RIP RAP
EST. 2 TONS
EST. 7 SY GT

CANADY
G 339

不

NO CLAIM
BRUNSWICK TIMBER L
BB 1360 BC 680

SITE 12

STREAM AND WETLAND IMPAC

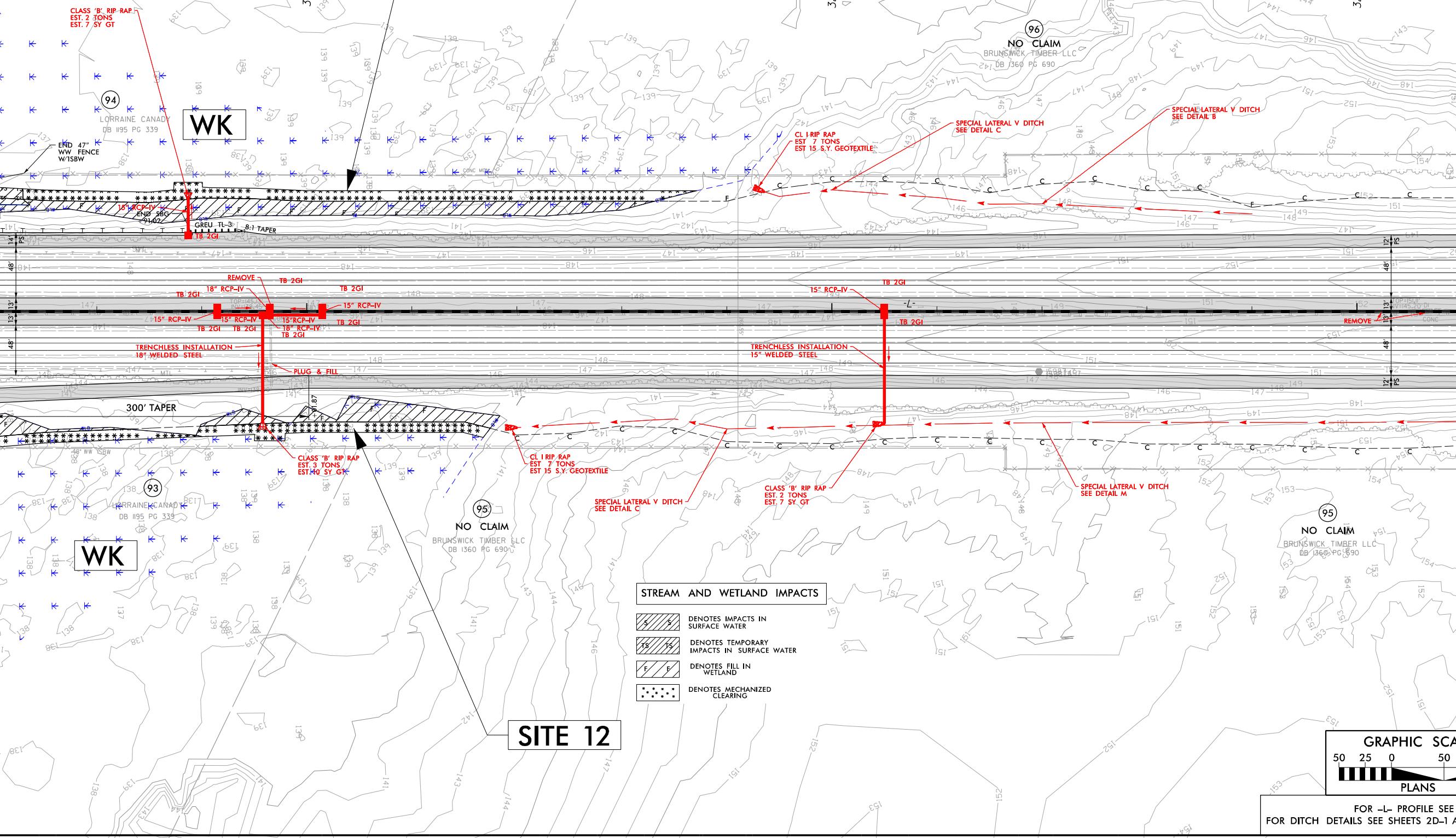
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATERS
-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED DREDGING

A graphic scale diagram consisting of a horizontal axis with numerical markings at 50, 25, 0, 50, and 100. The segment from 0 to 50 is filled with vertical hatching. The segment from 50 to 100 is filled with a triangular pattern. Below the axis, the word "PLANS" is written in capital letters.

FOR -L- PROFILE SEE SHEET 58
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

MATCHLINE -L- STA. 312 + 00 SEE SHEET 18

NAD 83 NA 2011

SITE 12**MATCHLINE -L- STA. 326 + 00 SEE SHEET 20**

PROJECT REFERENCE NO.

I-5987A

SHEET NO.

19

RW SHEET NO.

ROADWAY DESIGN

ENGINEER

HYDRAULICS

ENGINEER

INCOMPLETE PLANS

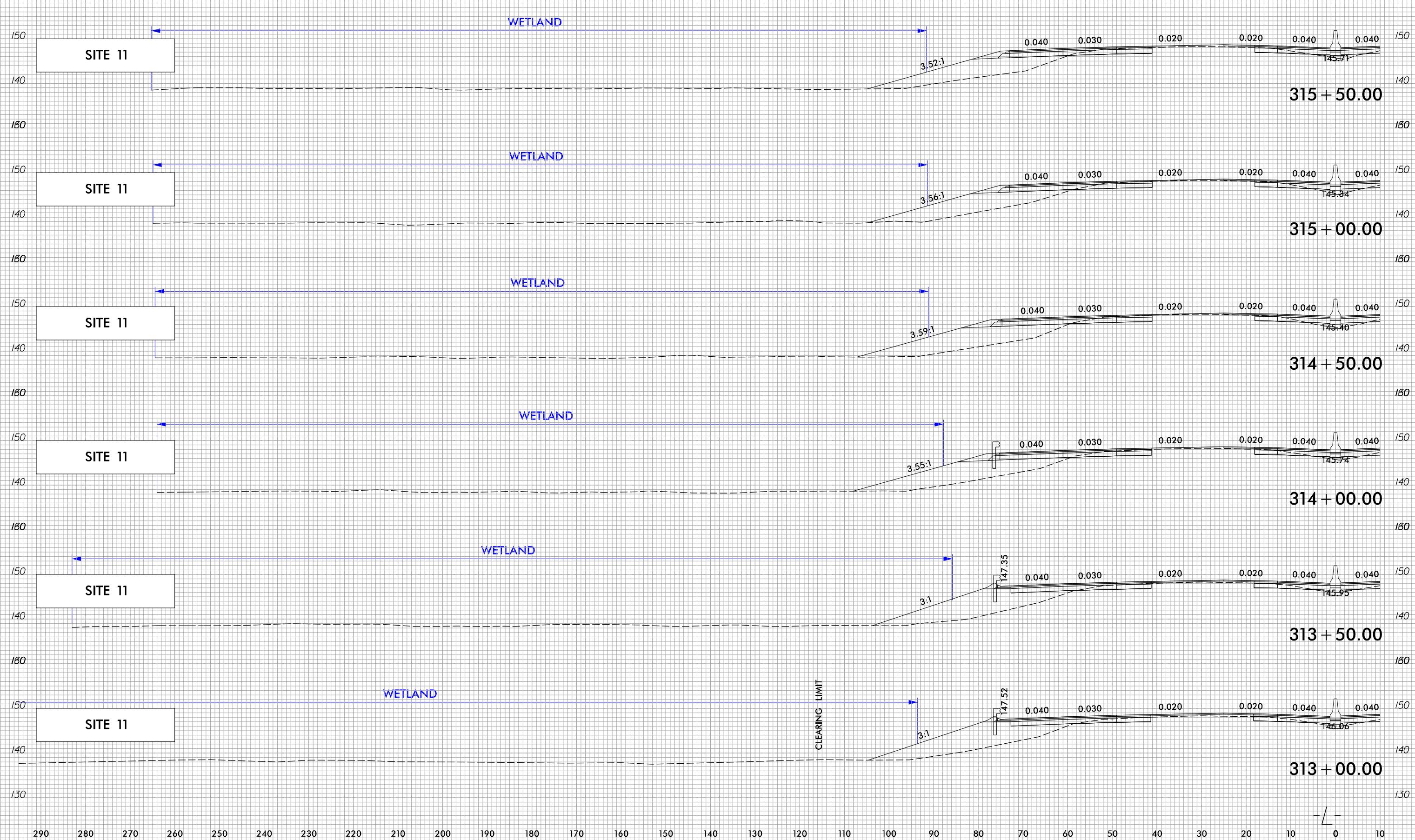
DO NOT USE FOR ROW ACQUISITION

DOCUMENT NOT CONSIDERED FINAL

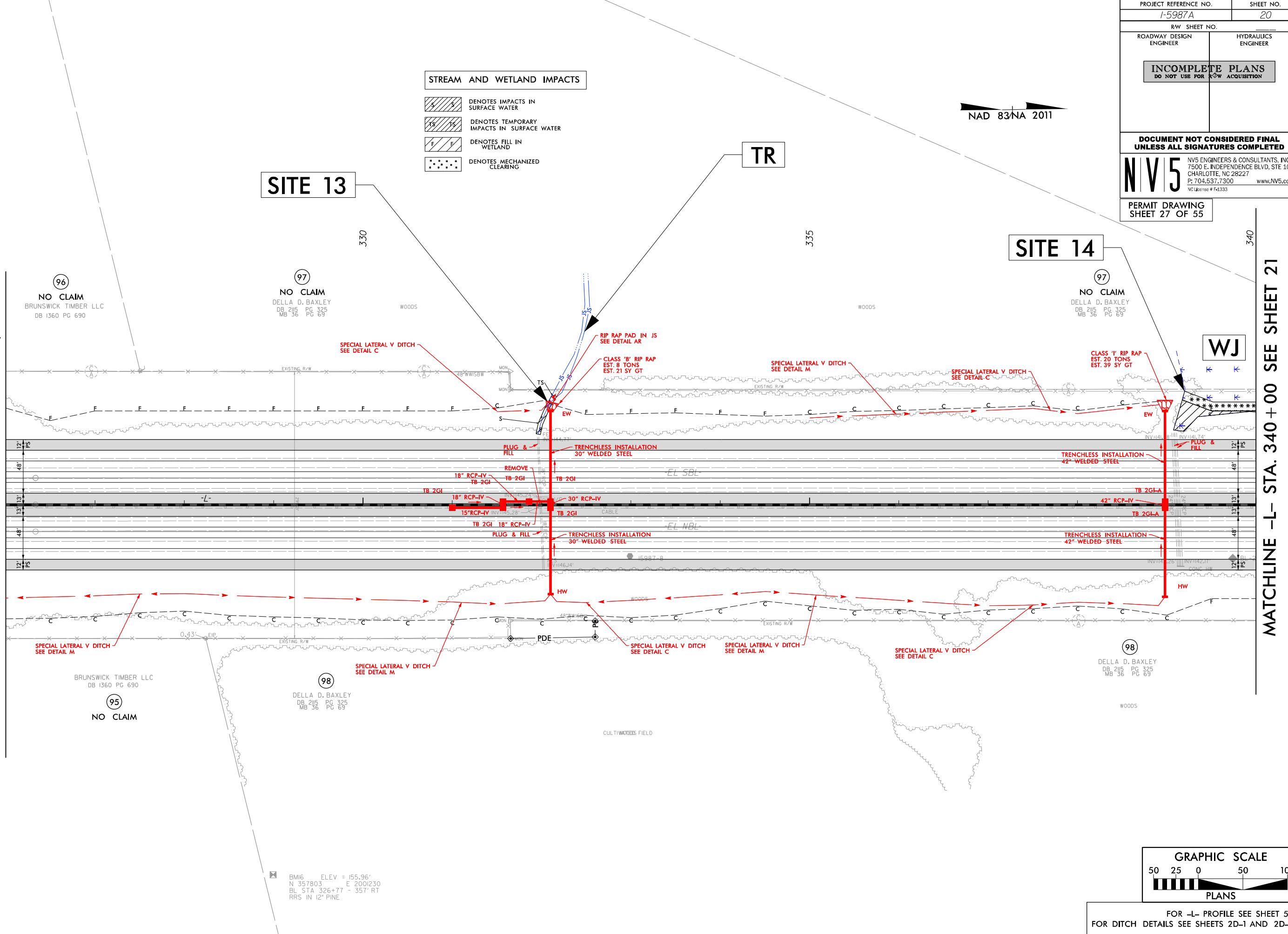
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SHEET 24 OF 55

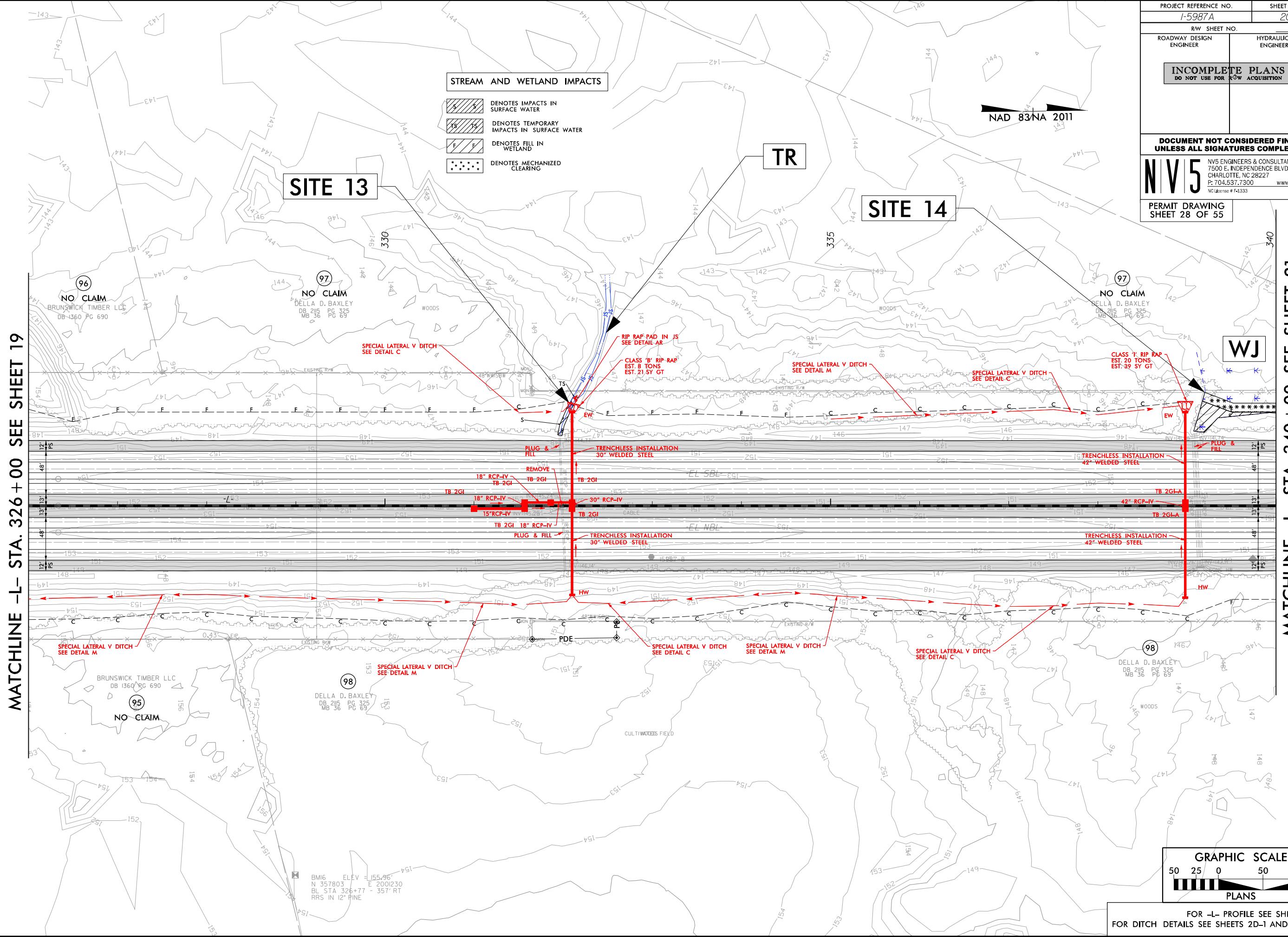
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PERMIT DRAWING
SHEET 25 OF 55

MATCHLINE -L- STA. 326 + 00 SEE SHEET 19



MATCHLINE -L- STA. 326 + 00 SEE SHEET 19



99
NO CLAIM

— SITE 16

PERMIT DRAWING
SHEET 29 OF 55

PERMIT DRAWING
SHEET 29 OF 55

PROJECT REFERENCE NO.		SHEET NO.
I-5987A		21
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		

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moffatt & nichol

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RALEIGH, NORTH CAROLINA 27609
1919 781-4626 VOICE (919) 781-4669 FAX
NC License No. F-0105

ME ENGINEERING

MI ENGINEERING
1011 SCHABU DRIVE, SUITE 1
RALEIGH, NC 27606
(919) 851-6606
FIRM PE NUMBER : P-0671

 DENOTES EXCAVATION
 IN WETLAND
 DENOTES FILL IN
 WETLAND
 DENOTES MECHANIZED
 CLEARING

NAD 83/NA 2011

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

moffatt & nichol

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RALEIGH, NORTH CAROLINA 27609
1919 781-4626 VOICE (919) 781-4669 FAX
NC License No. F-0105

ME ENGINEERING

MI ENGINEERING
1011 SCHABU DRIVE, SUITE 1
RALEIGH, NC 27606
(919) 851-6606
FIRM PE NUMBER : P-0671

REVISED

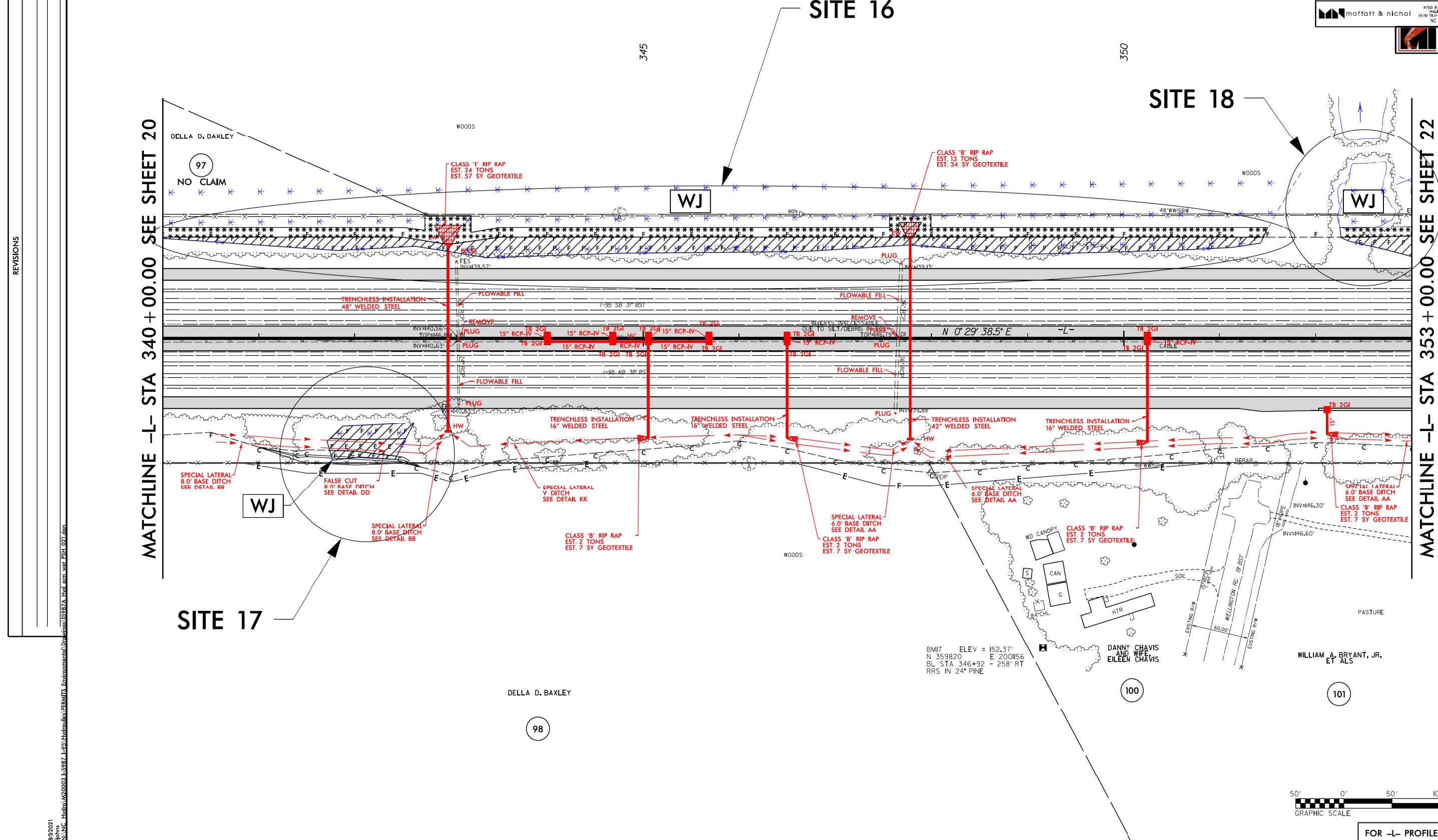
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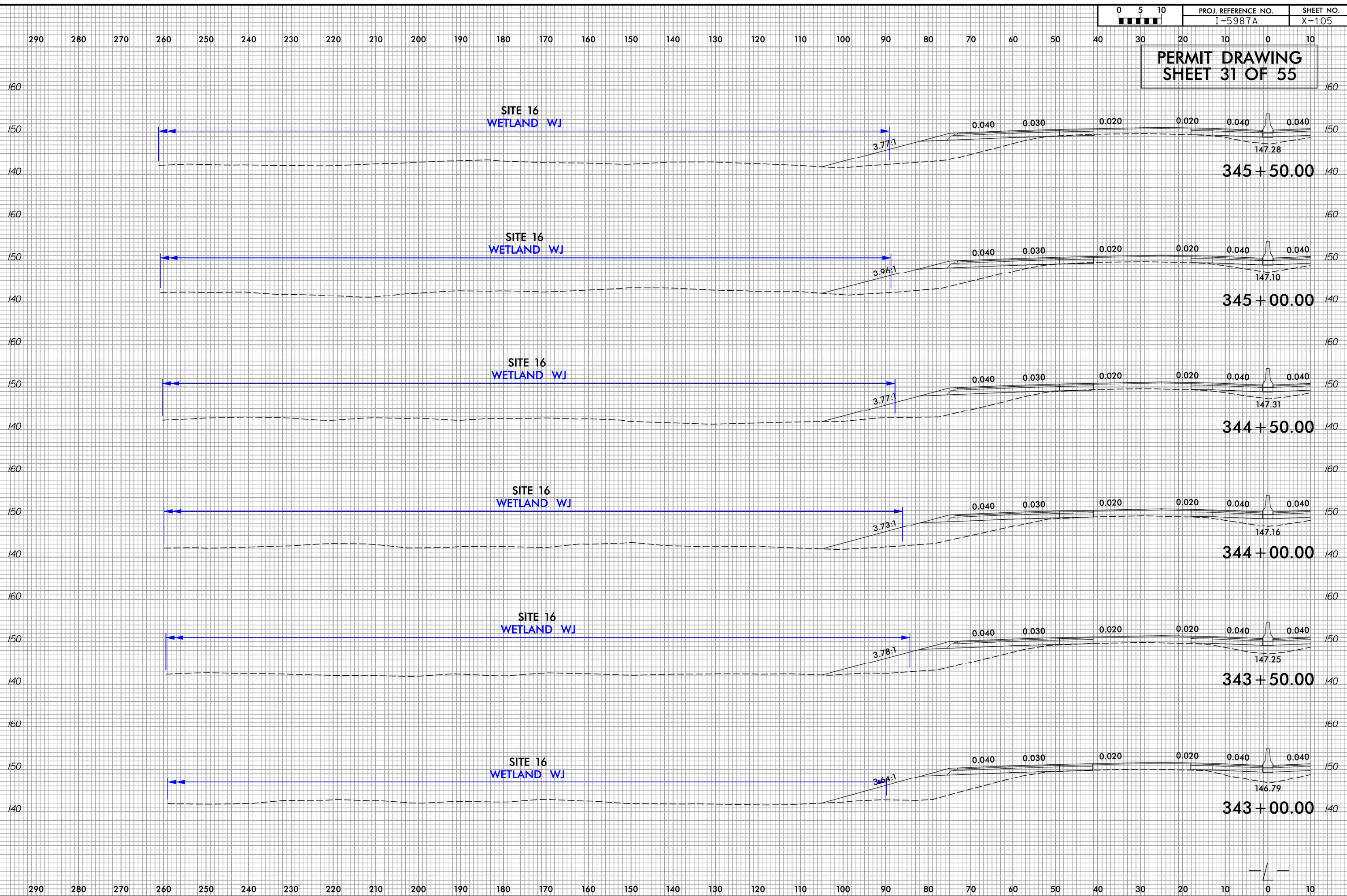
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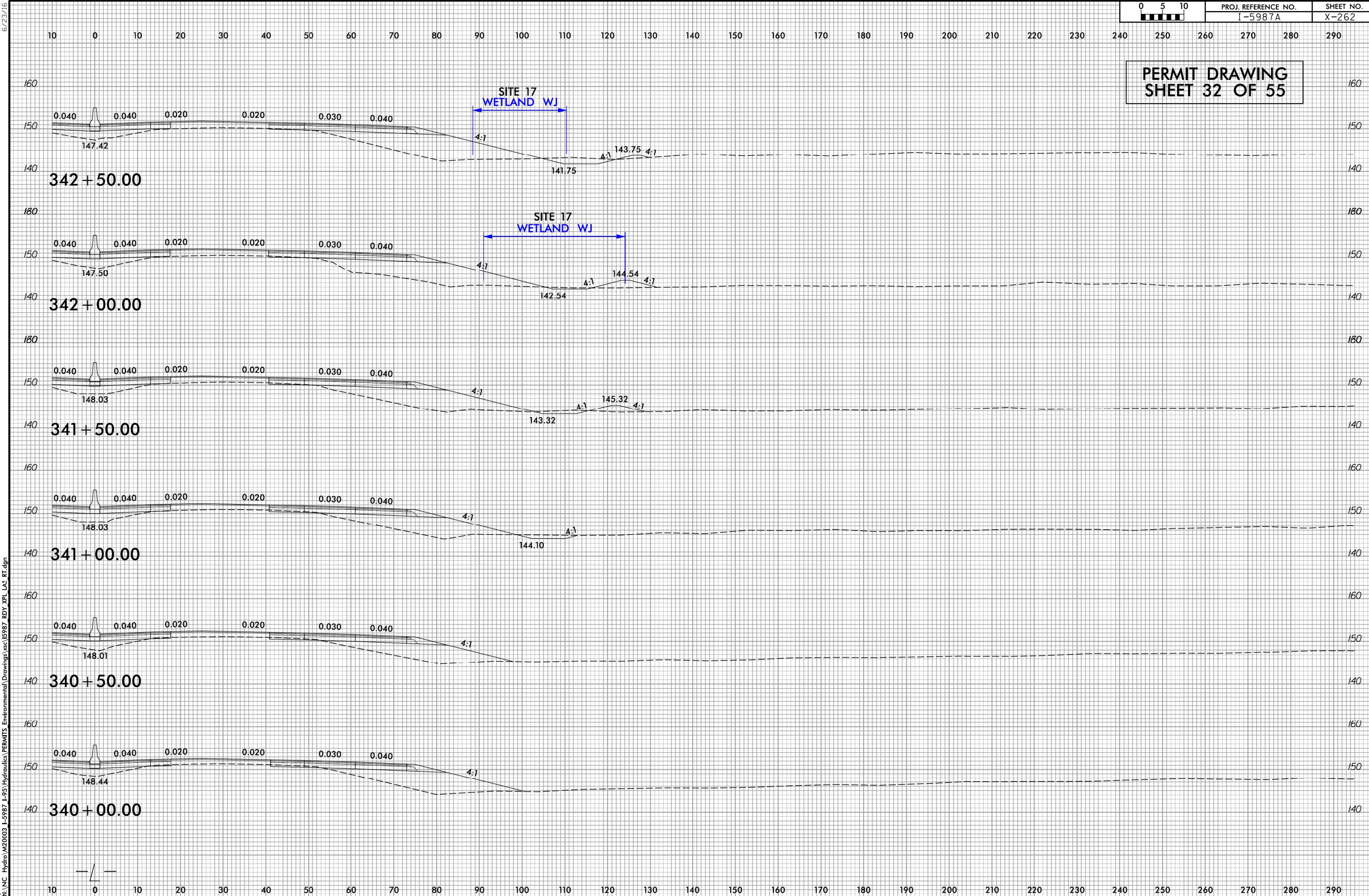
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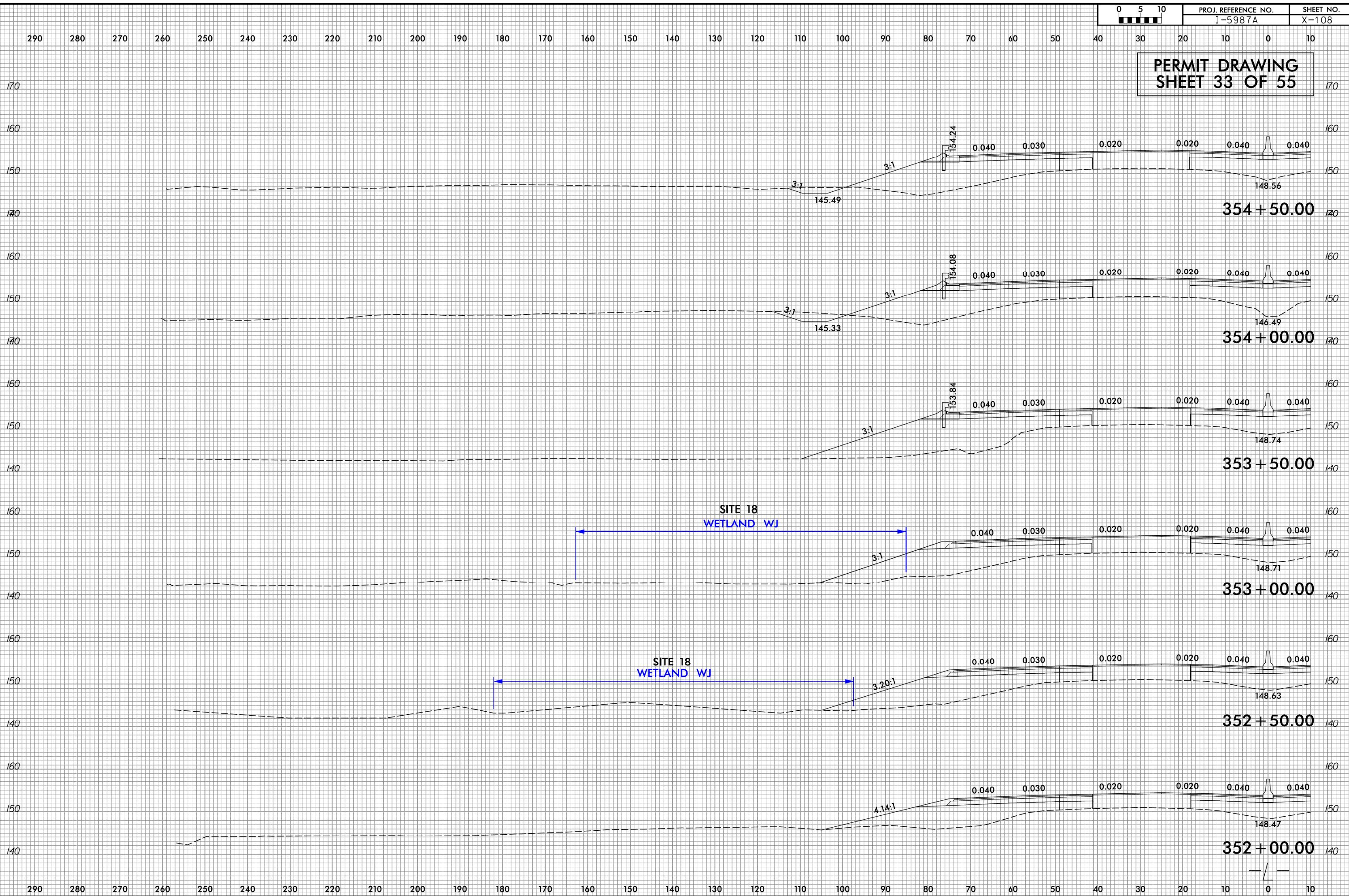
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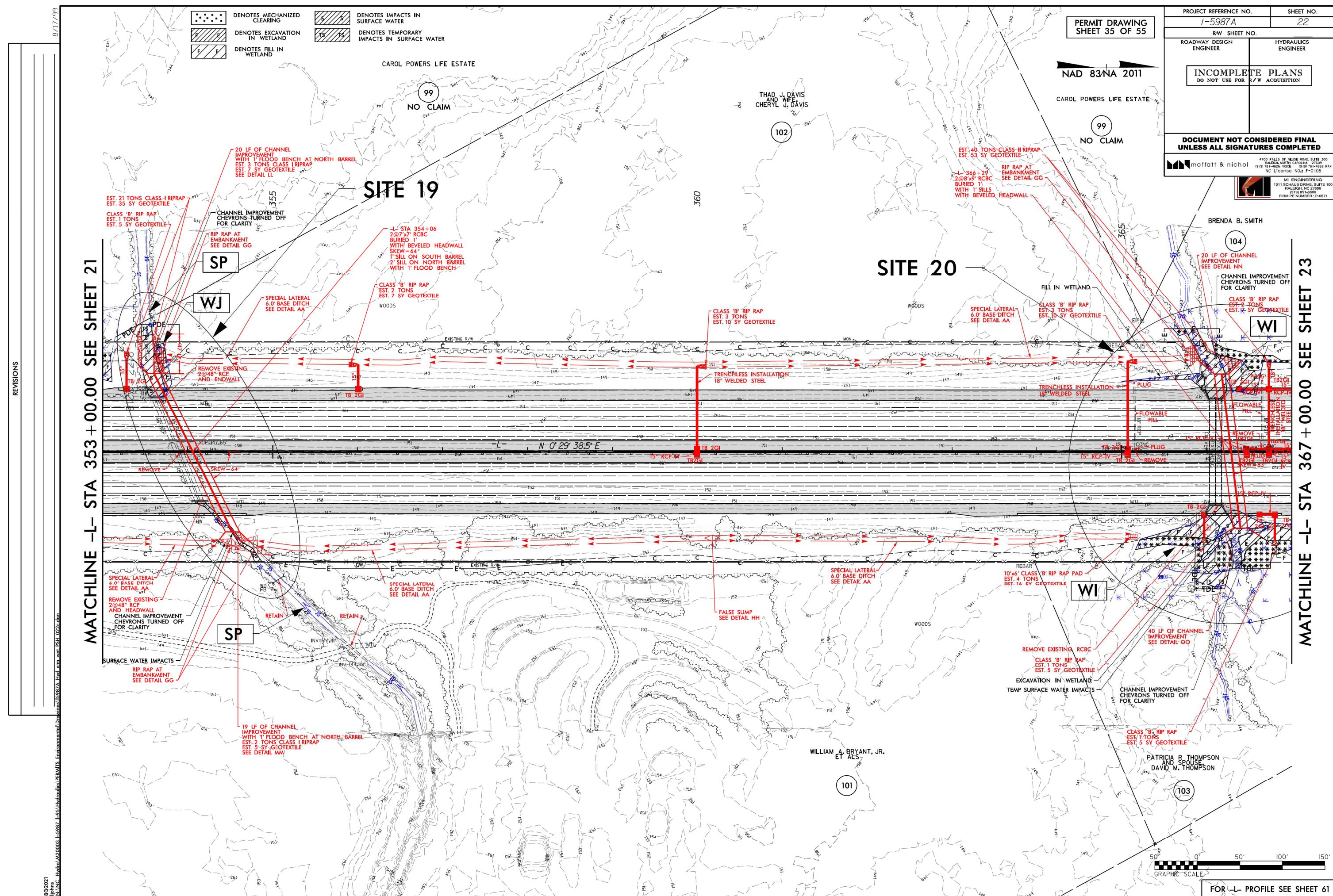
8/3/2021
johns





PERMIT DRAWING
SHEET 32 OF 55





PROJECT REFERENCE NO.	SHEET NO.
I-5987A	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

NAD 83NA 2011

PERMIT DRAWING
SHEET 36 OF 55DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

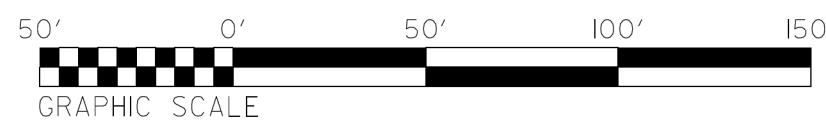
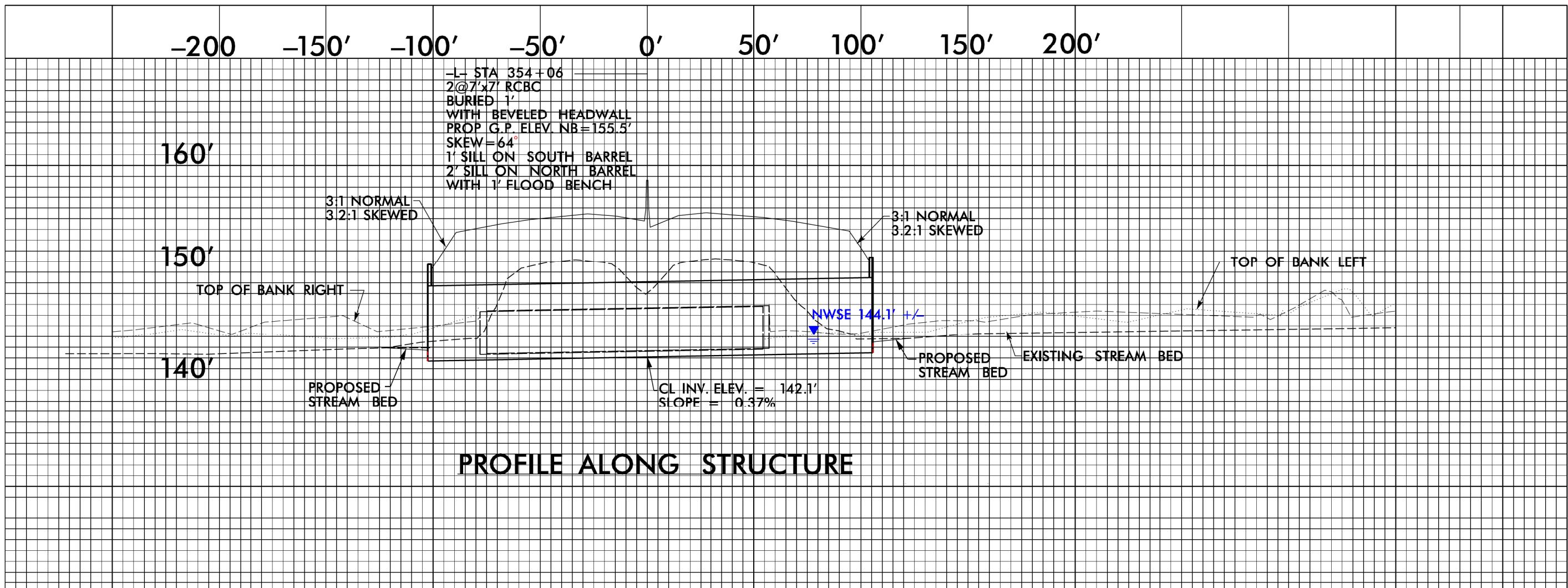
moffatt & nichol

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NC License No. F-0-105
www.aecom.com
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SITE 19

REVISIONS



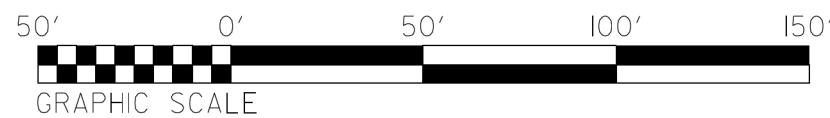
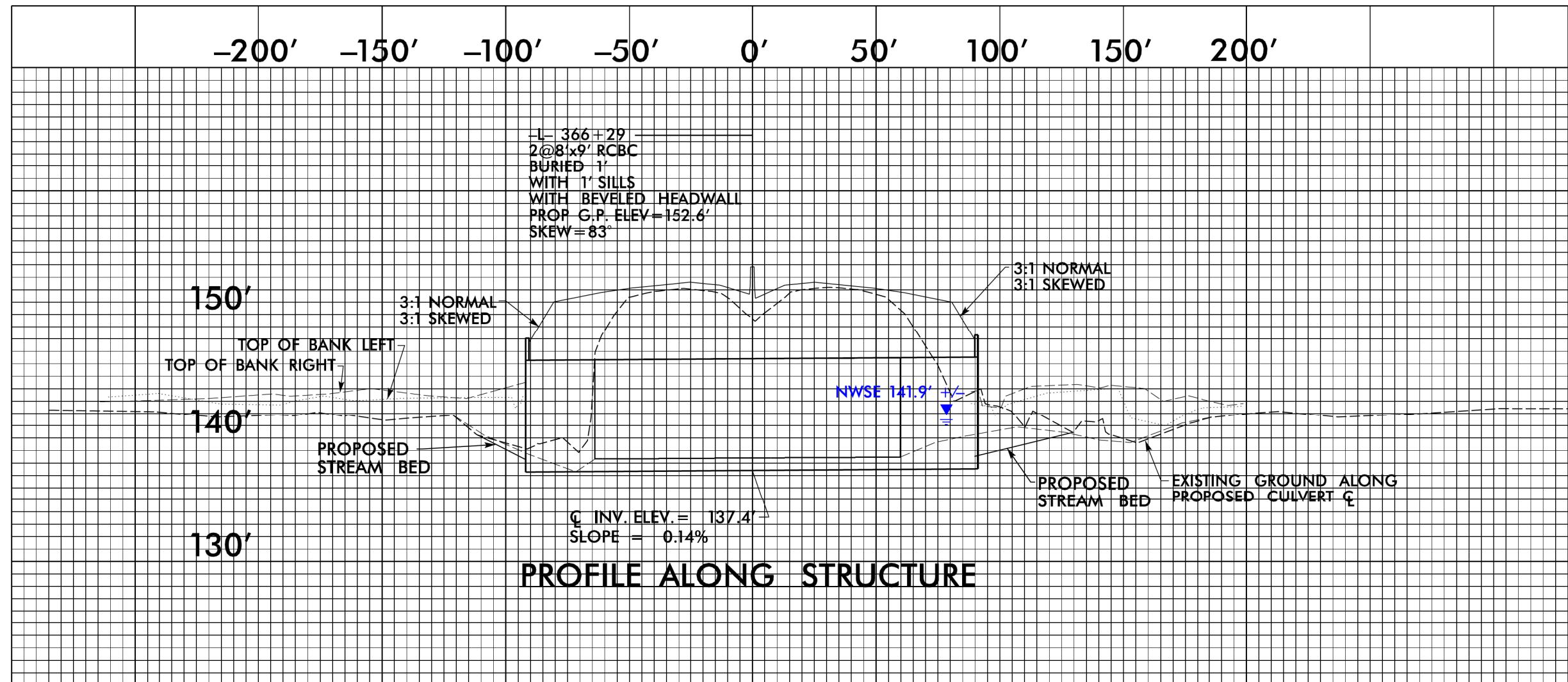
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I-5987A	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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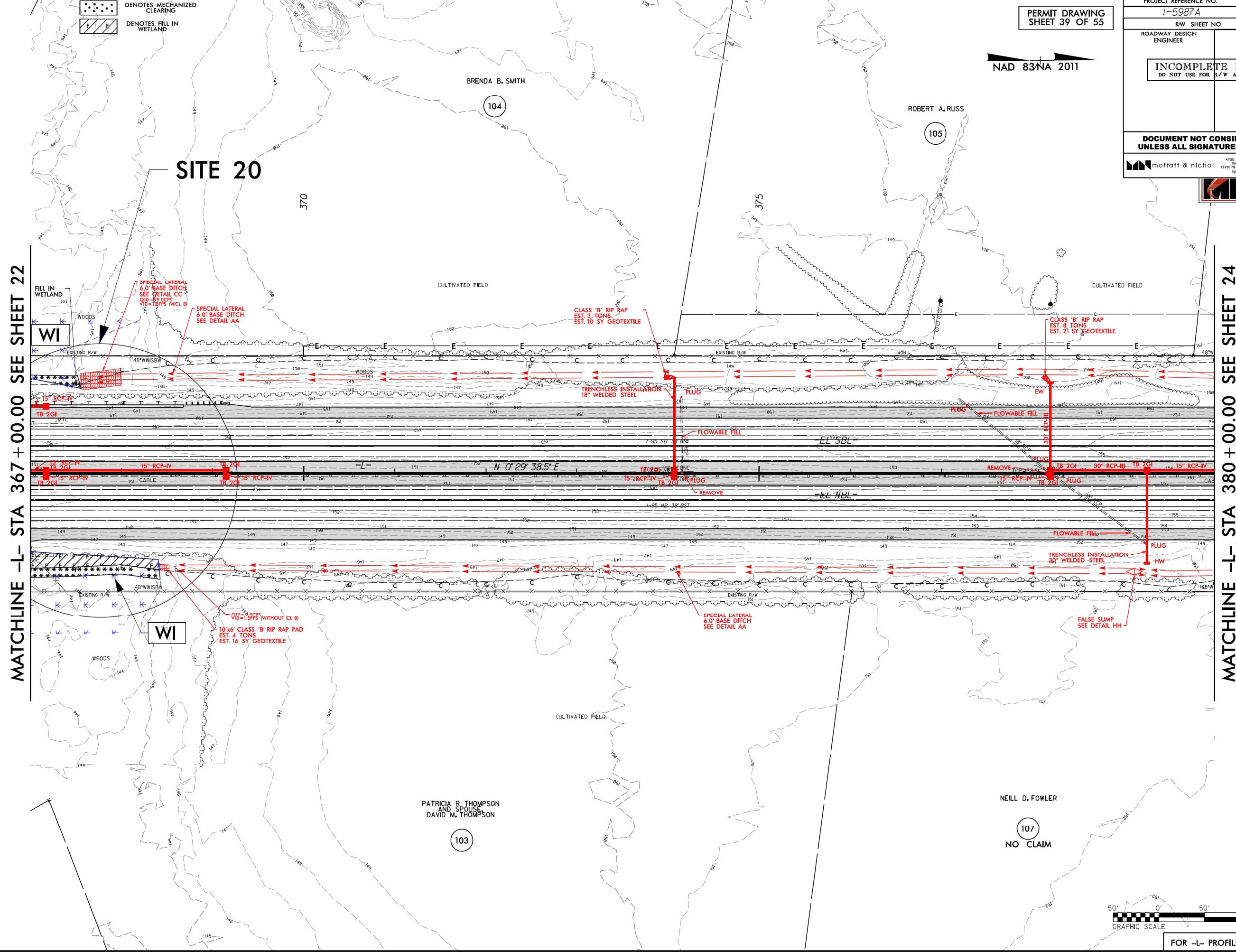
PERMIT DRAWING
SHEET 37 OF 55

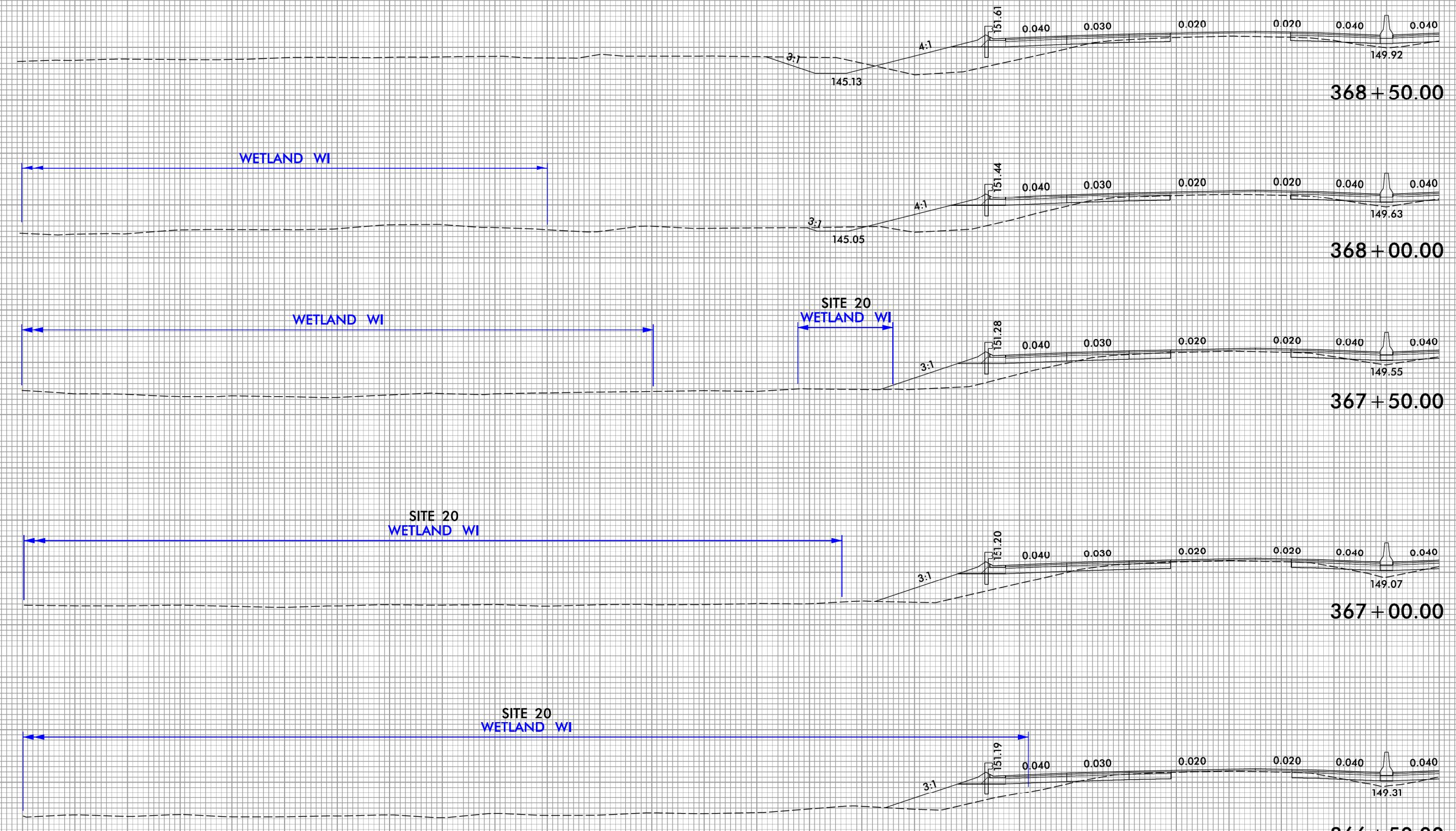
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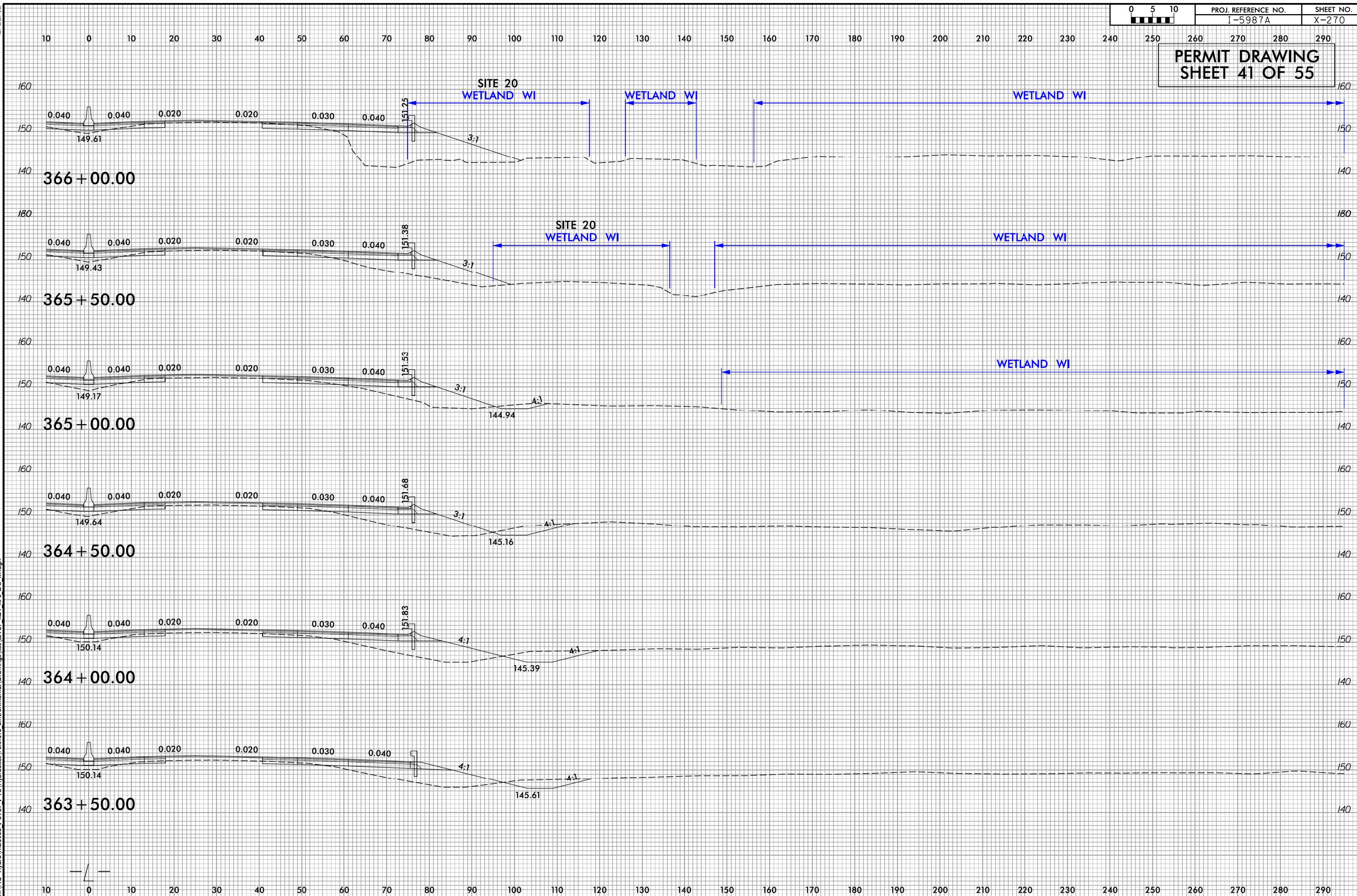
REVISIONS



MATCHLINE -L- STA 367 + 00.00 SEE SHEET 22



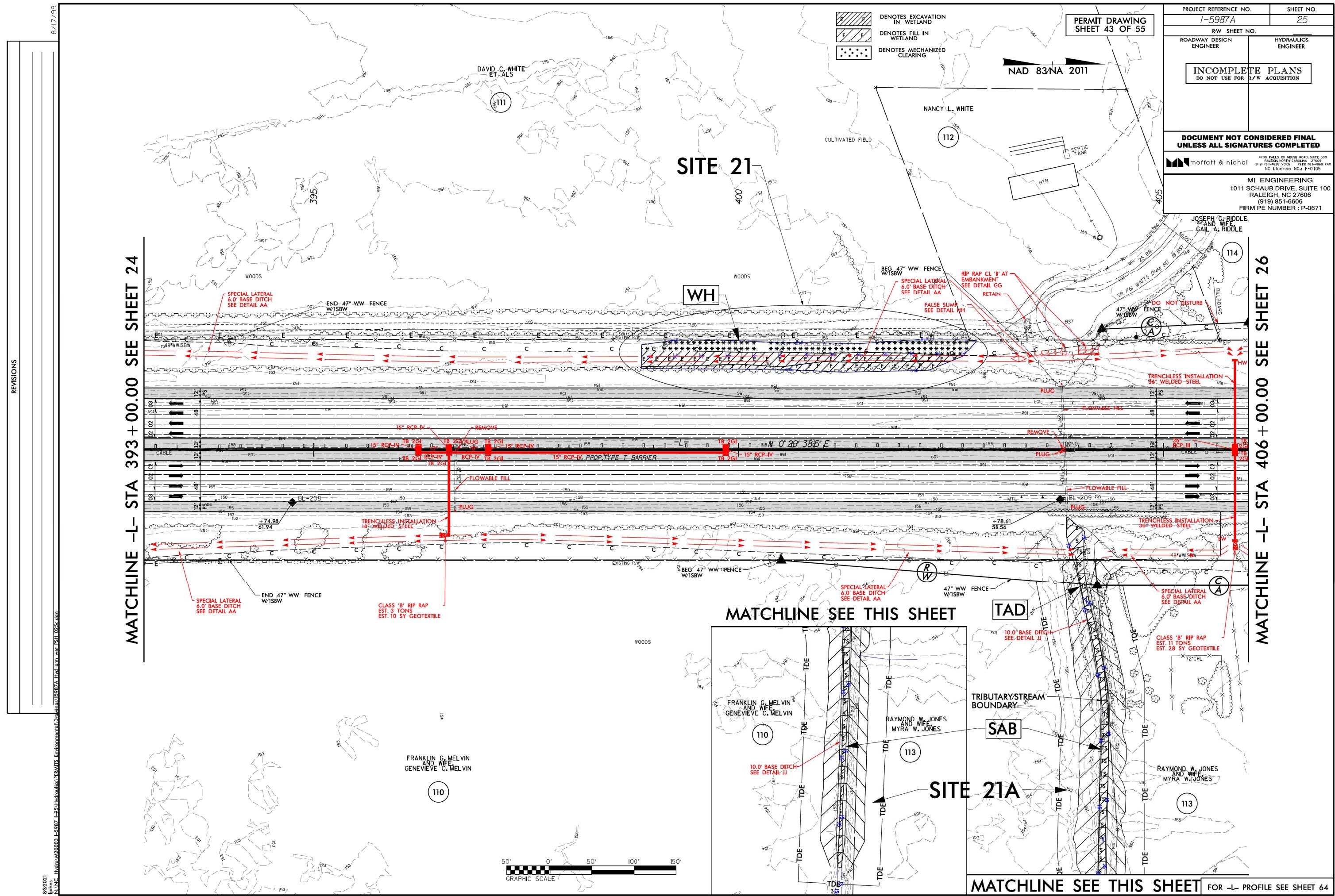


**PERMIT DRAWING
SHEET 41 OF 55**


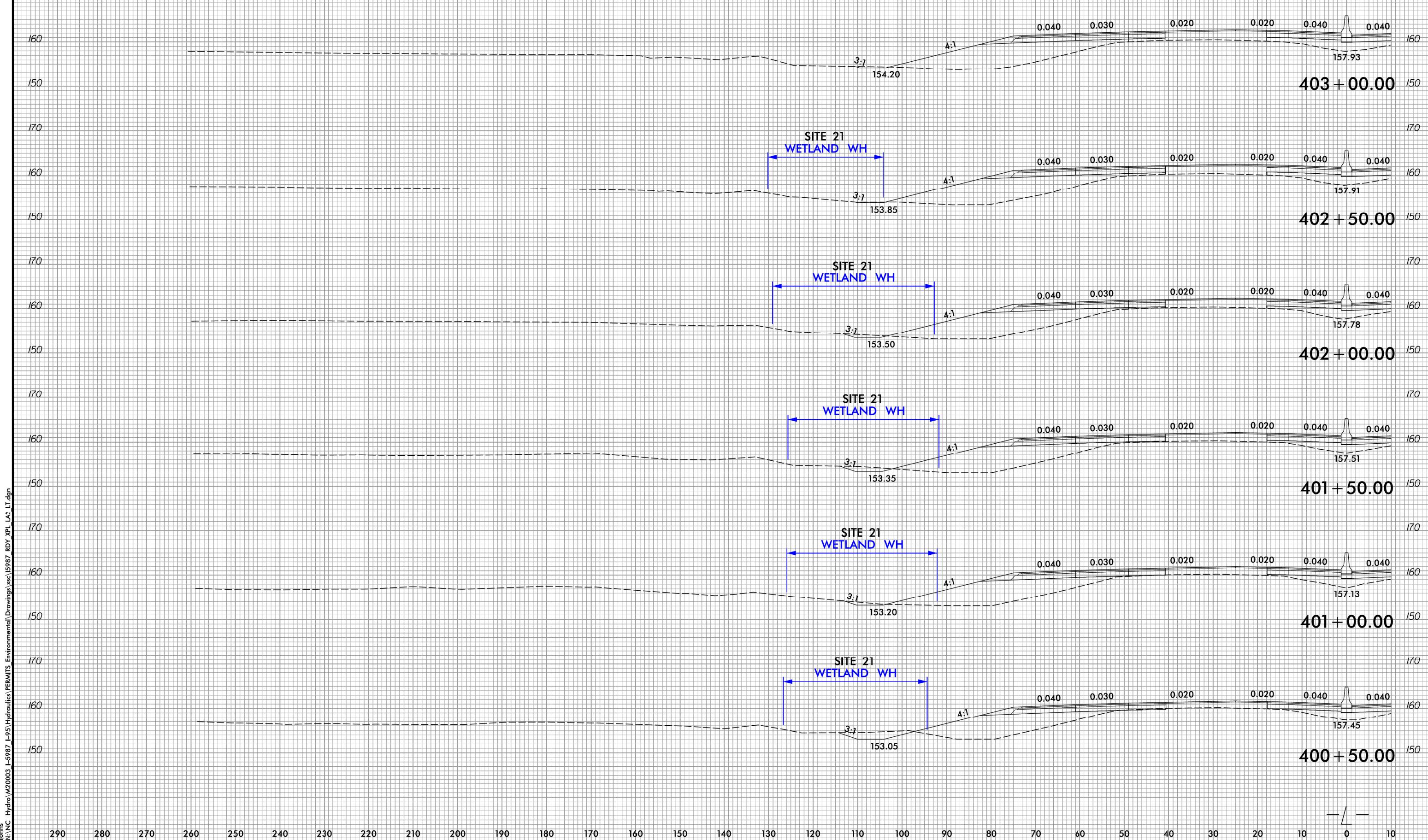
8/17/99

MATCHLINE = STA 393 + 00.00 SEE SHEET 24

REVISES



**PERMIT DRAWING
SHEET 44 OF 55**



833/021
johns

REVISIONS

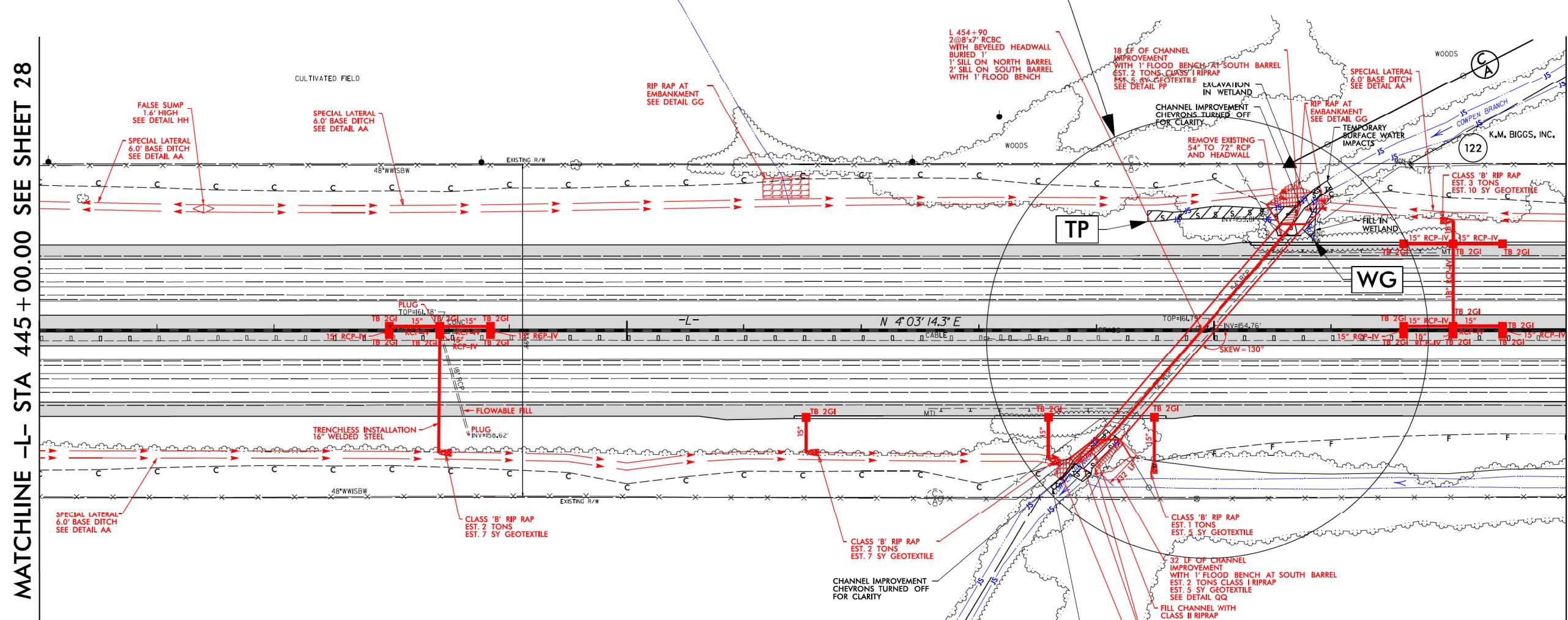
MATCHLINE -L- STA 445+00.00 SEE SHEET 28

JOSEPH G. RIDD
AND WIFE,
GAIL A. RIDDLE

120

SITE 22

MATCHLINE -L- STA 458 + 00.00 SEE SHEET 30



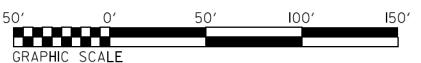
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N 369710 E 20013
BL STA 446+03 - 246'
RRS IN 10' HICKORY

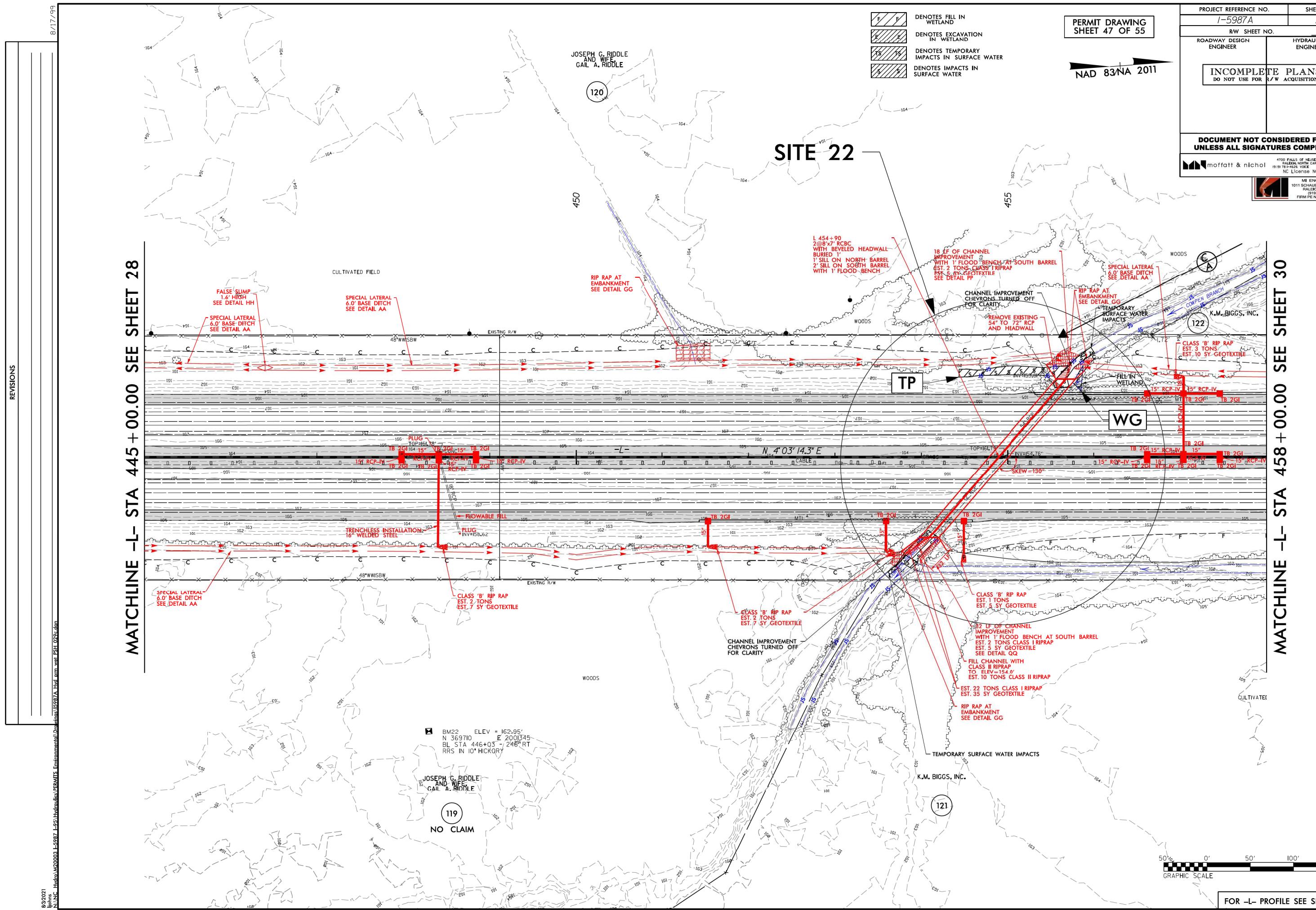
JOSEPH G. RID
AND WIFE
GAIL A. RIDDI

119

K.M. BIGGS, INC.

121

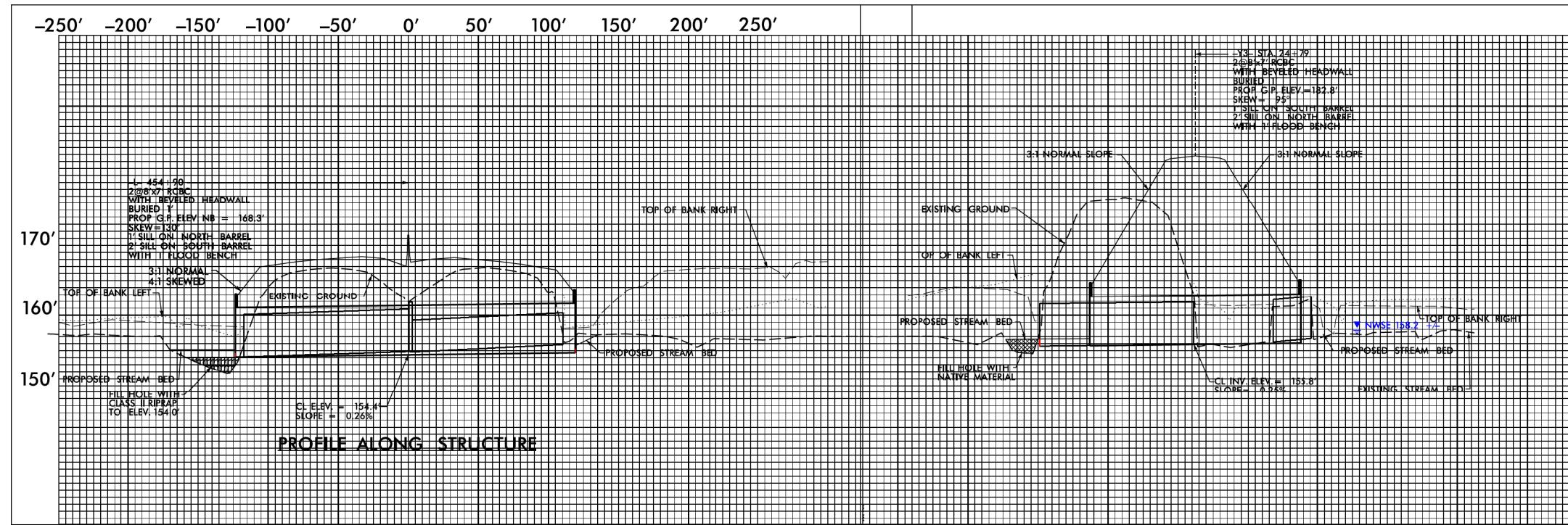




SITE 22

SITE 23

REVISED



A graphic scale bar consisting of a black horizontal line with a series of alternating black and white squares at the left end. The line is marked with numerical labels: '50'' above the first square, '0'' above the second square, '50'' above the third square, '100'' above the fourth square, and '15' above the fifth square.

STREAM AND WETLAND IMPACT

 DENOTES IMPACT SURFACE WATER

 DENOTES TEMPORARY IMPACTS IN SURFACE W

SO

SITE 1

Woods
v pano SP - E

This diagram illustrates a bridge deck's cross-section with several labeled components:

- Top Surface:** Labeled "E" at the top right.
- Deck Slab:** Labeled "C" at the top center.
- Reinforcement:** A red dashed line with arrows indicating the direction of reinforcement.
- Concrete Piers:** Labeled "F" at the bottom left.
- Supports:** Labeled "C" at the bottom center.
- Base:** Labeled "E" at the bottom right.
- Wedge:** A circular symbol containing a wedge shape, labeled "R" and "W".

This architectural drawing illustrates a roof transition. A horizontal line labeled 'TRANSITION' indicates a distance of 75'. The roof surface slopes down from left to right. At the transition point, the roof angle changes. A vertical red line at the top right is labeled 'C'. A red line representing the new roof plane makes a 20° angle with the original roof surface. Another red line shows a 18° angle. Horizontal dashed lines labeled 'E' and 'F' indicate the projection of the transition onto the horizontal plane. A vertical dimension of 17' is shown between two points on the roof surface.

DB 756 PG 399
129

SITE 15

SITE 15

**RIP RAP AT EMBANKMENT
SEE DETAIL L**

**30 LF OF CHANNEL
IMPROVEMENTS**

**CLASS 'I' RIP RAP
EST. 64 SY GT
EST. 36 BANKS C
RIP RAP BANKS C**

The diagram illustrates the removal of two vertical support rods from a bridge pier. The pier is labeled 'P' at the top and features a red rectangular base. Two vertical rods, each labeled 'C', are being removed. A red arrow labeled 'REMOVE' points to the top rod, and another red arrow labeled 'REMOVE' points to the bottom rod. The background shows a bridge deck with labels like 'INV# 77-08', 'IMD 05202', '124 CONCRETE', and '124 CONCRETE'.

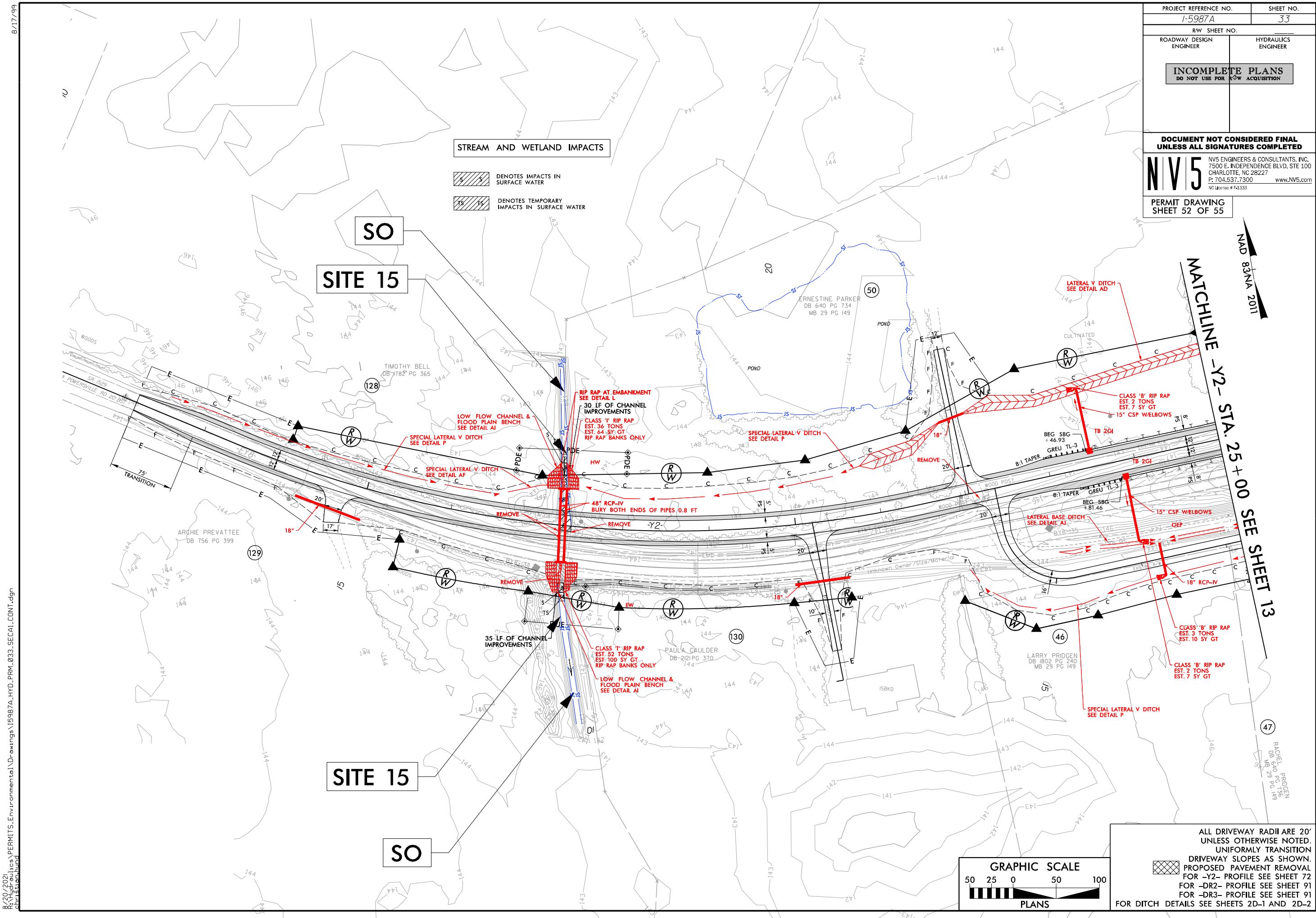
NAD
83NA 2011

25 ± 00 SEE SHEET 13

47
RACHID DB NB PG 149

ALL DRIVEWAY RADII ARE 20'
UNLESS OTHERWISE NOTED.
UNIFORMLY TRANSITION
DRIVEWAY SLOPES AS SHOWN.
PROPOSED PAVEMENT REMOVAL
FOR -Y2- PROFILE SEE SHEET 72
FOR -DR2- PROFILE SEE SHEET 91
FOR -DR3- PROFILE SEE SHEET 91
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

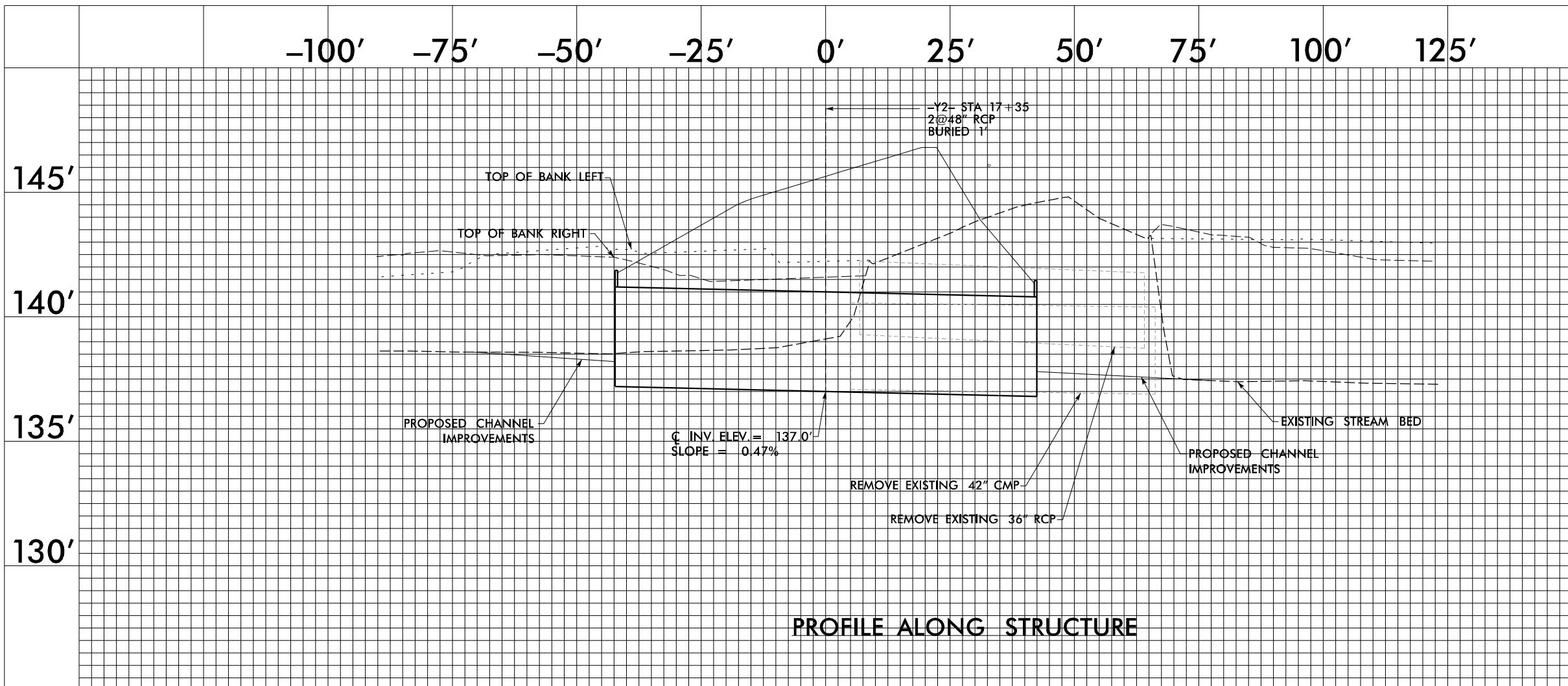
8/17/99



SITE 15

-Y2- STATION 17 + 35 2@48"RCP

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ROW ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
N V 5	NV5 ENGINEERS & CONSULTANTS, INC. 7500 E. INDEPENDENCE BLVD, STE 100 CHARLOTTE, NC 28227 P: 704.537.7300 www.NV5.com NC License # F-3333

PERMIT DRAWING
SHEET 53 OF 55

HORIZONTAL SCALE

FOR -L- PROFILE SEE SHEET 58
FOR DITCH DETAILS SEE SHEETS 2D-1 AND 2D-2

WETLAND AND SURACE WATER IMPACTS 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- 110+70/112+15	7'x7' RCBC						0.025	0.008	155	36	
2	-L- 224+65	System Outlet						0.003	0.015			
3	-L- 226+70	Bank Stabilization						0.002	0.009			
4	-L- 242+00/243+70	Bank Stabilization for 8'x7' RCBC	0.005			0.003		0.005	0.030			
5	-L- 250+55	System Outlet	0.001		0.029							
6	-L- 265+00 LT	Bank Stabilization						0.003	0.001			
7	-L- 265+00 RT	System Outlet						0.022	0.001			
7	-L- 265+00 RT	Bank Stabilization						0.001	0.003			
8	-L- 275+80	30" RCP						0.004	0.001			
8	-L- 275+80	Roadway Fill						0.024	0.001			
9	-L- 281+90 RT	66" RCP						0.046				
9	-L- 281+90 RT	Bank Stabilization						0.003	0.002			
10	-L- 285+50 LT	Roadway Fill	3.029			0.166		0.018	0.003			
11	-L- 310+50	3 @ 12'x12' RCBC						0.220	0.077	120	40	
12	-L- 308+00 to 318+50	Roadway Fill	0.401			0.354						
13	-L- 332+05	System Outlet						0.004	0.001			
14	-L- 339+15	Roadway Fill	0.020			0.023						
15	-Y2- 17+25	2 @ 48" RCP						0.012		50		
15	-Y2- 17+25	Bank Stabilization						0.006	0.003	58	20	
TOTALS* :			3.456	0.000	0.029	0.546	0.000	0.397	0.156	383	96	0

*Rounded totals are sum of actual impacts

NOTES:

Sites 2, 3, 4, 6, 7, 8, 9, and 13 are Tributaries and therefore Surface water impacts are considered for area only.

WETLAND AND SURACE WATER IMPACTS 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)
1-15		Totals from Sheet 53 =>	3.456		0.029	0.546		0.397	0.156	383	96	
16	LA2 340+00-351+50 Lt.	Rdy fill,1@48" RCP,1@42"RCP	0.354			0.285						
17	LA2 342+15 Rt.	Roadway fill/False cut ditch	0.035		0.024							
18	LA2 352+25-353+10 Lt.	Roadway fill	0.024			0.019						
19	LA2 354+06 Rt. & Lt.	2@7'X7' RCBC	0.012			0.001		0.018	0.006	82	26	
19	LA2 354+06 Rt. & Lt.	Bank Stabilization						0.020		82		
20	LA2 366+29 Rt. & Lt.	Rdy Fill/2@8'X9' RCBC	0.139		0.022	0.119		0.035	0.025	96	104	
20	LA2 366+29 Rt. & Lt.	Bank Stabilization						0.026		96		
21A	LA2 404+01 Rt	Roadway fill						0.013		38		
21A	LA2 404+01 Rt	Taillditch-Cleanout **							0.107		488	
21	LA2 398+86-402+73 Lt.	Roadway fill	0.057		0.112	0.122						
22	LA2 454+44-455+52 Lt.	Roadway fill **						0.022				
22	LA2 454+44-455+52 Lt.	Bank Stabilization						0.004		14		
22	LA2 454+90 Rt. & Lt.	2@8'x7' RCBC	0.003		0.001			0.006	0.007	22	45	
22	LA2 454+90 Rt. & Lt.	Bank Stabilization						0.018		83		
23	Y3 24+79 Rt. & Lt.	2@8'x7' RCBC						0.020	0.003	57	10	
23	Y3 24+79 Rt. & Lt.	Bank Stabilization †						0.010	0.013	33	30	
TOTALS*:			4.080	0.000	0.188	1.092	0.000	0.588	0.317	986	799	0

*Rounded totals are sum of actual impacts

NOTES:

** Site 21A & 22: Includes Tributaries TAD and TP respectively. Therefore, Permanent or Temporary Surface Water impacts are considered for area for area only. Site 21A totals include SAB Temporary Surface water impacts: 0.107 ac., 488 LF.

† Site 23: Bank Stabilization includes removal of existing roadway embankment and pipe, and installation of Rip Rap Class I to the proposed streambed elevation per profile.

NC DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

September 29, 2021

Robeson County

I-5987A

47533.1.2

SHEET

55

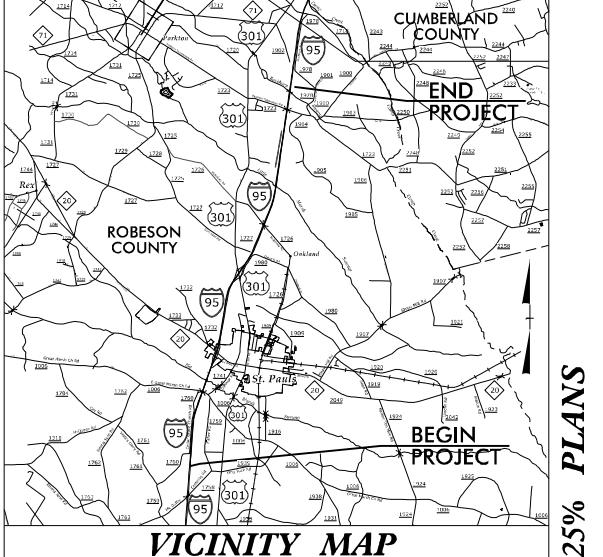
OF

55

CONTRACT:

TIP PROJECT: I-5987B

See Sheet 1A For Index of Sheets



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

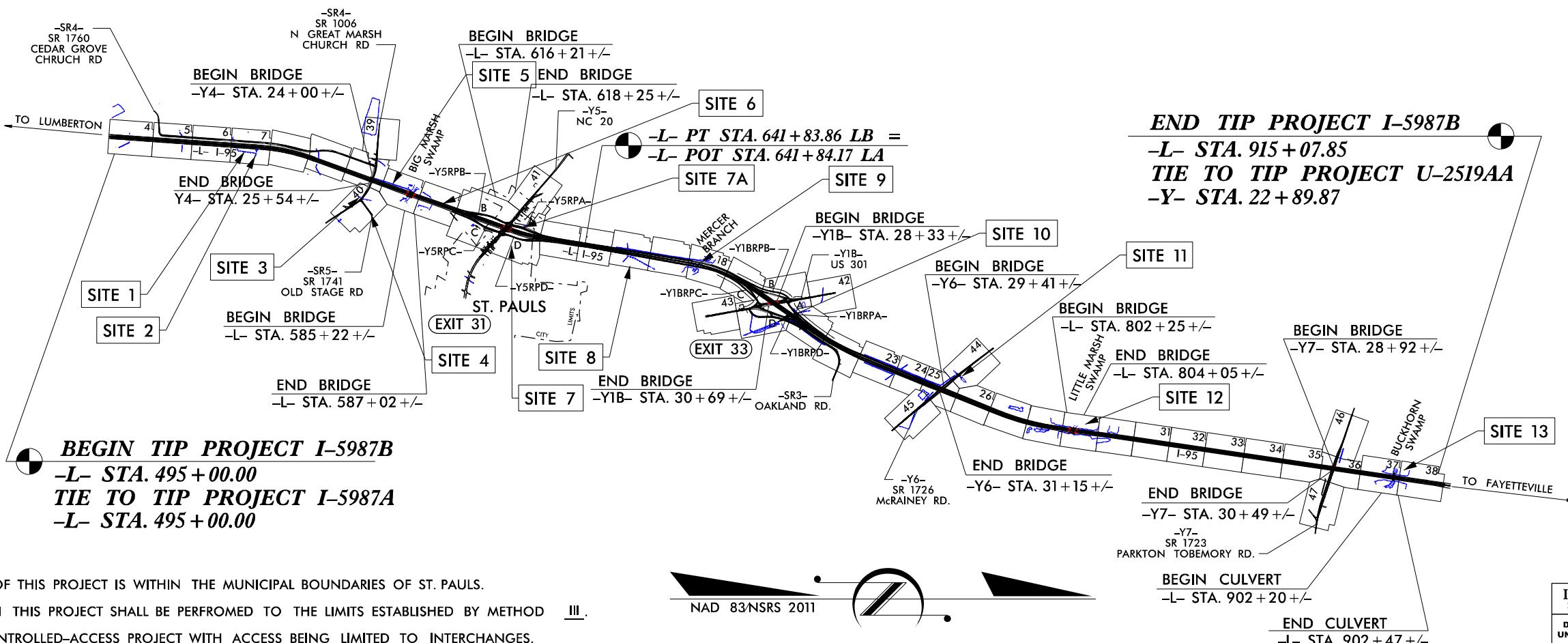
ROBESON COUNTY

**PERMIT DRAWING
SHEET 1 OF 80**

**LOCATION: I-95 IMPROVEMENTS FROM
NORTH OF SR 1758 (McDUFFIE CROSSING RD.)
TO NORTH OF SR 1723 (PARKTON TOBEMORY RD.)**

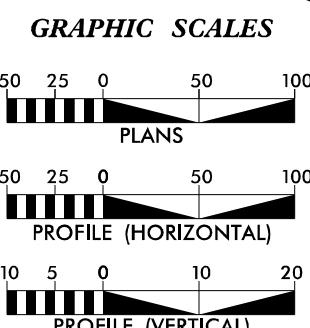
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURES,
SIGNING, CULVERTS, AND RETAINING WALLS**

WETLAND AND SURFACE WATER IMPACTS PERMIT



**INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION**

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



DESIGN DATA

ADT 2022 =	63,300
ADT 2042 =	92,600
K =	8 %
D =	55 %
T =	14 % *
V =	75 MPH

* TTST = 11 DUAL :
 FUNC CLASS =
 INTERSTATE
 STATEWIDE TIER

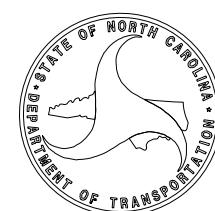
PROJECT LENGTH

Prepared
7621 Purfoy Rd., Suite 115
Fuquay-Varina, NC 27526
(919) 552-2253
(919) 552-2254 [Fax]
License No. F-0669
www.mottpc.com/merceris

2018 STANDARD SPECIFICATIONS
<p>RIGHT OF WAY DATE: <u>MAY 28, 2021</u></p> <p>LETTING DATE: <u>AUGUST 17, 2022</u></p>

HYDRAULICS ENGINEER

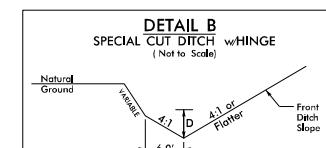
**ROADWAY DESIGN
ENGINEER**



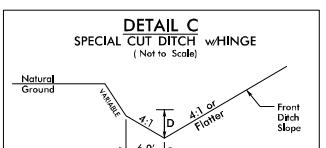
5/14/99



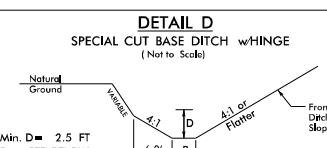
FROM STA. 522+00 TO STA. 527+00 L= RT
FROM STA. 522+00 TO STA. 528+50 L= RT
FROM STA. 875+00 TO STA. 878+50 L= RT
FROM STA. 20+50 TO STA. 27+00 -Y1BPPB- RT
FROM STA. 15+00 TO STA. 18+00 -Y1BPPC- RT
FROM STA. 19+50 TO STA. 21+25 Y7- RT



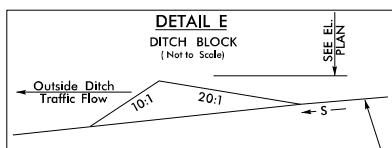
FROM STA. 497+80 TO STA. 506+00 L= RT
FROM STA. 527+50 TO STA. 518+50 L= LT
FROM STA. 772+50 TO STA. 809+50 L= LT
FROM STA. 839+00 TO STA. 851+00 L= LT
FROM STA. 851+00 TO STA. 864+83 L= LT
FROM STA. 892+00 TO STA. 895+00 L= LT



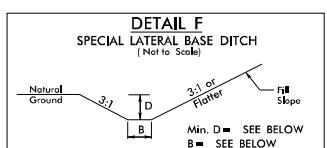
FROM STA. 543+50 TO STA. 549+00 L= RT
FROM STA. 851+00 TO STA. 863+00 L= LT
FROM STA. 868+00 TO STA. 878+50 L= LT



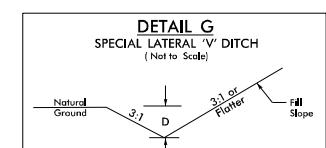
FROM STA. 816+50 TO STA. 851+00 L= RT, B = 4'
Min. D = 2.5 FT
B = SEE BELOW



FROM STA. 536+70 L= LT
STA. 543+62 L= LT
STA. 563+12 L= RT
STA. 568+12 L= LT
STA. 592+62 L= LT
STA. 595+13 L= LT
STA. 599+88 L= LT
STA. 610+12 L= LT
STA. 612+37 L= RT
STA. 613+12 L= LT
STA. 615+12 L= RT
STA. 619+80 L= RT
STA. 622+37 L= LT
STA. 71+62 L= LT
STA. 839+00 L= LT
STA. 35+09 -SR10- LT



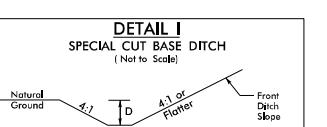
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FROM STA. 495+00 TO STA. 497+80 L= LT, D = 1.0', B = 6'
FROM STA. 497+80 TO STA. 502+00 L= LT, D = 1.0', B = 6'
FROM STA. 502+00 TO STA. 518+33 L= LT, D = 1.0', B = 6'
FROM STA. 518+33 TO STA. 520+00 L= LT, D = 1.0', B = 6'
FROM STA. 520+00 TO STA. 543+50 L= LT, D = 1.0', B = 6'
FROM STA. 536+85 TO STA. 556+00 L= LT, D = 1.5', B = 6'
FROM STA. 556+00 TO STA. 558+00 L= LT, D = 1.0', B = 6'
FROM STA. 558+00 TO STA. 564+00 L= LT, D = 1.0', B = 6'
FROM STA. 564+00 TO STA. 566+10 L= LT, D = 1.0', B = 6'
FROM STA. 566+10 TO STA. 562+00 L= LT, D = 1.0', B = 6'
FROM STA. 562+00 TO STA. 599+00 L= LT, D = 1.0', B = 6'
FROM STA. 599+00 TO STA. 600+00 L= LT, D = 1.0', B = 6'
FROM STA. 600+00 TO STA. 617+16 L= LT, D = 1.0', B = 6'
FROM STA. 617+16 TO STA. 617+56 L= LT, D = 1.0', B = 6'
FROM STA. 617+56 TO STA. 638+00 L= LT, D = 1.0', B = 6'
FROM STA. 638+00 TO STA. 642+25 L= LT, D = 2.0', B = 8'
FROM STA. 642+25 TO STA. 659+50 L= LT, D = 1.5', B = 4'
FROM STA. 659+50 TO STA. 662+50 L= LT, D = 1.0', B = 6'
FROM STA. 662+50 TO STA. 674+00 L= LT, D = 1.0', B = 6'
FROM STA. 674+00 TO STA. 703+50 L= LT, D = 1.0', B = 6'
FROM STA. 703+50 TO STA. 726+50 -SR4- LT, D = 1.0', B = 6'
FROM STA. 726+50 TO STA. 74+00 L= LT, D = 1.0', B = 6'
FROM STA. 74+00 TO STA. 76+50 -SR4- LT, D = 1.0', B = 6'
FROM STA. 76+50 TO STA. 10+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 10+50 TO STA. 11+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 11+50 TO STA. 12+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 12+50 TO STA. 13+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 13+50 TO STA. 14+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 14+50 TO STA. 15+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 15+50 TO STA. 16+50 -SR3- LT, D = 1.0', B = 6'
FROM STA. 16+50 TO STA. 17+00 -Y4- LT, D = 1.0', B = 6'
FROM STA. 17+00 TO STA. 18+00 -Y4- LT, D = 1.0', B = 6'
FROM STA. 18+00 TO STA. 19+00 -Y4- LT, D = 1.0', B = 6'
FROM STA. 19+00 TO STA. 20+00 -Y4- LT, D = 1.0', B = 6'
FROM STA. 20+00 TO STA. 21+25 -SR10- LT, D = 1.0', B = 6'
FROM STA. 21+25 TO STA. 22+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 22+50 TO STA. 23+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 23+50 TO STA. 24+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 24+50 TO STA. 25+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 25+50 TO STA. 26+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 26+50 TO STA. 27+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 27+50 TO STA. 28+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 28+50 TO STA. 29+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 29+50 TO STA. 30+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 30+50 TO STA. 31+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 31+50 TO STA. 32+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 32+50 TO STA. 33+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 33+50 TO STA. 34+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 34+50 TO STA. 35+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 35+50 TO STA. 36+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 36+50 TO STA. 37+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 37+50 TO STA. 38+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 38+50 TO STA. 39+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 39+50 TO STA. 40+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 40+50 TO STA. 41+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 41+50 TO STA. 42+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 42+50 TO STA. 43+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 43+50 TO STA. 44+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 44+50 TO STA. 45+50 -SR10- LT, D = 1.0', B = 6'
FROM STA. 45+50 TO STA. 46+50 -SR10- LT, D = 1.0', B = 6'



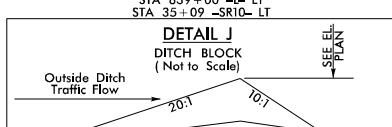
FROM STA. 502+00 TO STA. 503+00 L= LT
FROM STA. 527+50 TO STA. 536+80 L= LT
FROM STA. 536+80 TO STA. 551+50 L= LT
FROM STA. 551+50 TO STA. 553+50 L= LT
FROM STA. 553+50 TO STA. 564+00 L= LT
FROM STA. 564+00 TO STA. 566+10 L= LT
FROM STA. 566+10 TO STA. 562+00 L= LT
FROM STA. 562+00 TO STA. 599+00 L= LT
FROM STA. 599+00 TO STA. 600+00 L= LT
FROM STA. 600+00 TO STA. 617+16 L= LT
FROM STA. 617+16 TO STA. 617+56 L= LT
FROM STA. 617+56 TO STA. 638+00 L= LT
FROM STA. 638+00 TO STA. 642+25 L= LT
FROM STA. 642+25 TO STA. 659+50 L= LT
FROM STA. 659+50 TO STA. 662+50 L= LT
FROM STA. 662+50 TO STA. 674+00 L= LT
FROM STA. 674+00 TO STA. 703+50 L= LT
FROM STA. 703+50 TO STA. 726+50 -SR4- LT
FROM STA. 726+50 TO STA. 74+00 L= LT
FROM STA. 74+00 TO STA. 76+50 -SR4- LT
FROM STA. 76+50 TO STA. 10+50 -SR10- LT
FROM STA. 10+50 TO STA. 11+50 -SR10- LT
FROM STA. 11+50 TO STA. 12+50 -SR10- LT
FROM STA. 12+50 TO STA. 13+50 -SR10- LT
FROM STA. 13+50 TO STA. 14+50 -SR10- LT
FROM STA. 14+50 TO STA. 15+50 -SR10- LT
FROM STA. 15+50 TO STA. 16+50 -SR3- LT
FROM STA. 16+50 TO STA. 17+00 -Y4- LT
FROM STA. 17+00 TO STA. 18+00 -Y4- LT
FROM STA. 18+00 TO STA. 19+00 -Y4- LT
FROM STA. 19+00 TO STA. 20+00 -Y4- LT
FROM STA. 20+00 TO STA. 21+25 -SR10- LT
FROM STA. 21+25 TO STA. 22+50 -SR10- LT
FROM STA. 22+50 TO STA. 23+50 -SR10- LT
FROM STA. 23+50 TO STA. 24+50 -SR10- LT
FROM STA. 24+50 TO STA. 25+50 -SR10- LT
FROM STA. 25+50 TO STA. 26+50 -SR10- LT
FROM STA. 26+50 TO STA. 27+50 -SR10- LT
FROM STA. 27+50 TO STA. 28+50 -SR10- LT
FROM STA. 28+50 TO STA. 29+50 -SR10- LT
FROM STA. 29+50 TO STA. 30+50 -SR10- LT
FROM STA. 30+50 TO STA. 31+50 -SR10- LT
FROM STA. 31+50 TO STA. 32+50 -SR10- LT
FROM STA. 32+50 TO STA. 33+50 -SR10- LT
FROM STA. 33+50 TO STA. 34+50 -SR10- LT
FROM STA. 34+50 TO STA. 35+50 -SR10- LT
FROM STA. 35+50 TO STA. 36+50 -SR10- LT
FROM STA. 36+50 TO STA. 37+50 -SR10- LT
FROM STA. 37+50 TO STA. 38+50 -SR10- LT
FROM STA. 38+50 TO STA. 39+50 -SR10- LT
FROM STA. 39+50 TO STA. 40+50 -SR10- LT
FROM STA. 40+50 TO STA. 41+50 -SR10- LT
FROM STA. 41+50 TO STA. 42+50 -SR10- LT
FROM STA. 42+50 TO STA. 43+50 -SR10- LT
FROM STA. 43+50 TO STA. 44+50 -SR10- LT
FROM STA. 44+50 TO STA. 45+50 -SR10- LT
FROM STA. 45+50 TO STA. 46+50 -SR10- LT



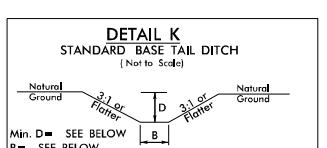
FROM STA. 36+00 -SR10- RT TO STA. 603+65 L= LT
FROM STA. 879+00 TO STA. 883+00 L= LT
FROM STA. 879+00 TO STA. 907+50 L= LT
FROM STA. 36+50 TO STA. 38+50 -Y4- LT
FROM STA. 38+50 TO STA. 39+50 -Y4- LT
FROM STA. 22+09 TO STA. 28+60 -Y1SRPB- LT
FROM STA. 10+20 -Y21- LT TO STA. 10+25 -Y21- RT



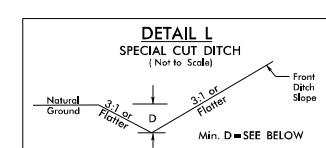
FROM STA. 907+50 TO STA. 913+00 L= LT
FROM STA. 10+50 TO STA. 15+50 -Y5- LT



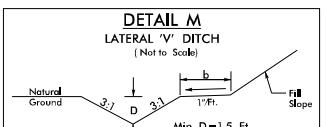
FROM STA. 895+00 L= LT
S = Ditch Slope
SEE EL. PLAN
S = Ditch Slope
SEE EL. PLAN



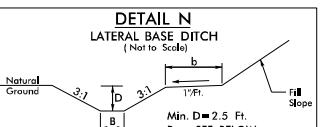
FROM STA. 621+00 L= RT, D = 6', B = 6', L = 590', S = 0.02%, BEG. EL. = 153.25', END. EL. = 153.00'
FROM STA. 895+14 TO STA. 895+72 L= RT, D = 2.5', B = 3'
FROM STA. 15+50 TO STA. 18+00 -Y5- RT, D = 1.6', B = 4'
FROM STA. 48+50 -Y5- RT, D = 6', B = 6', L = 150', S = 0.02%, BEG. EL. = 154.30', END. EL. = 154.27'



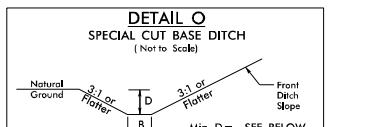
FROM STA. 911+18 TO STA. 915+07 L= RT, D = 6', B = 6', L = 2'
FROM STA. 913+00 TO STA. 915+07 L= RT, D = 2.5', B = 3'
FROM STA. 12+50 TO STA. 14+00 -Y4- RT, D = 1.25', B = 2'
FROM STA. 30+50 TO STA. 33+50 -Y5- RT, D = 1.5', B = 3'



FROM STA. 503+00 TO STA. 507+00 L= LT
FROM STA. 552+00 TO STA. 555+90 L= LT
FROM STA. 721+00 TO STA. 724+50 L= LT
FROM STA. 10+90 TO STA. 16+50 -SR3- LT
FROM STA. 76+50 TO STA. 81+00 -SR4- RT
FROM STA. 14+00 TO STA. 17+00 -Y4- LT
FROM STA. 32+50 TO STA. 39+50 -Y4- LT
FROM STA. 21+25 TO STA. 29+00 -Y7- RT



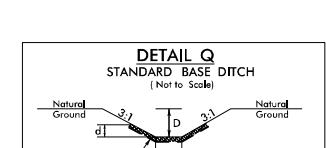
FROM STA. 553+50 TO STA. 556+00 L= RT, B = 4'
FROM STA. 574+90 TO STA. 577+00 L= LT, B = 6'
FROM STA. 621+00 TO STA. 628+00 L= RT, B = 6'
FROM STA. 628+00 TO STA. 632+00 L= LT, B = 6'
FROM STA. 79+00 TO STA. 80+88 -SR4- LT, B = 4'
FROM STA. 13+25 TO STA. 19+80 -Y1BRPA- RT, B = 4'



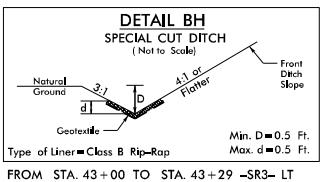
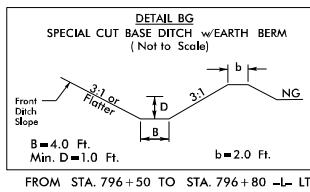
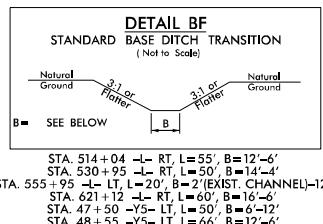
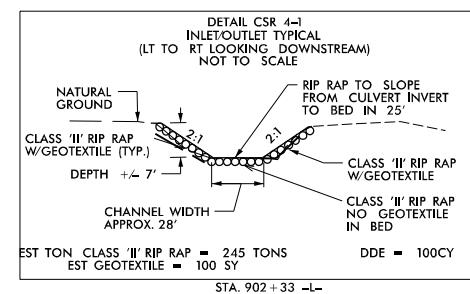
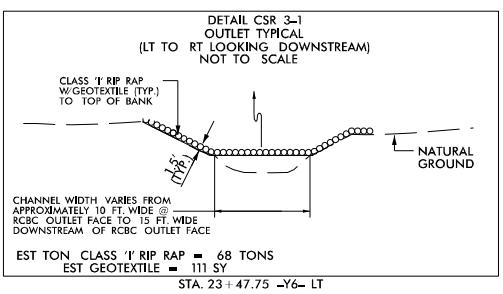
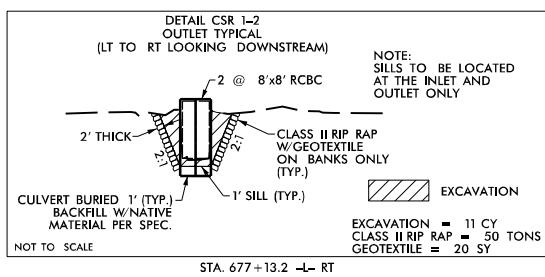
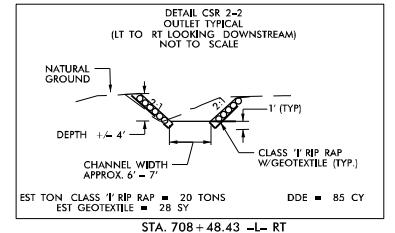
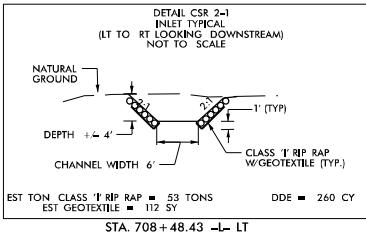
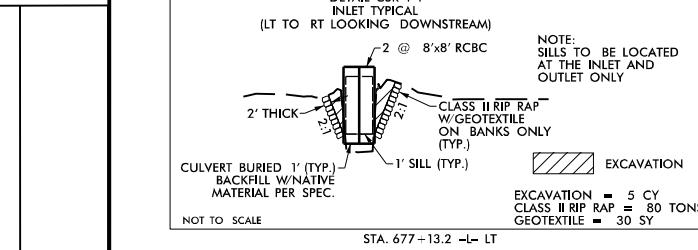
FROM STA. 520+00 TO STA. 522+00 L= RT, D = 1.0', B = 4'
FROM STA. 10+58.30 TO STA. 15+21 -DR1- LT, D = 1.5', B = 3'
FROM STA. 12+50 TO STA. 14+00 -Y4- RT, D = 2.0', B = 4'



FROM STA. 11+30 TO STA. 12+41.11 -DR1- RT



5/14/99



PROJECT REFERENCE NO.	
1-5897B	
SHEET NO.	
2D-3	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
MOTT MACDONALD I & E, LLC LICENSE NO. F-0669	

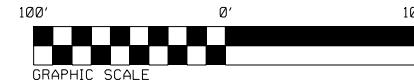
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Prepared in the
Office of: M M
MOTT MACDONALD NC License No. F-0669
7621 Purfoy Road, Suite 115
Fuquay-Varina, NC 27526
(919) 552-2253
www.mottmac.com
1233 Jones Franklin Rd.
Charlotte, NC 28210
Phone No. 704-377-
Bus: 919 651 8977
Fax: 919 651 8107

**PERMIT DRAWING
SHEET 4 OF 80**

REVISIONS

**PERMIT DRAWING
SHEET 5 OF 80**



S S

DENOTES IMPACTS IN
SURFACE WATER

TS TS

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

* * * * *

DENOTES MECHANIZED
CLEARING

E E

DENOTES EXCAVATION
IN WETLAND

NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

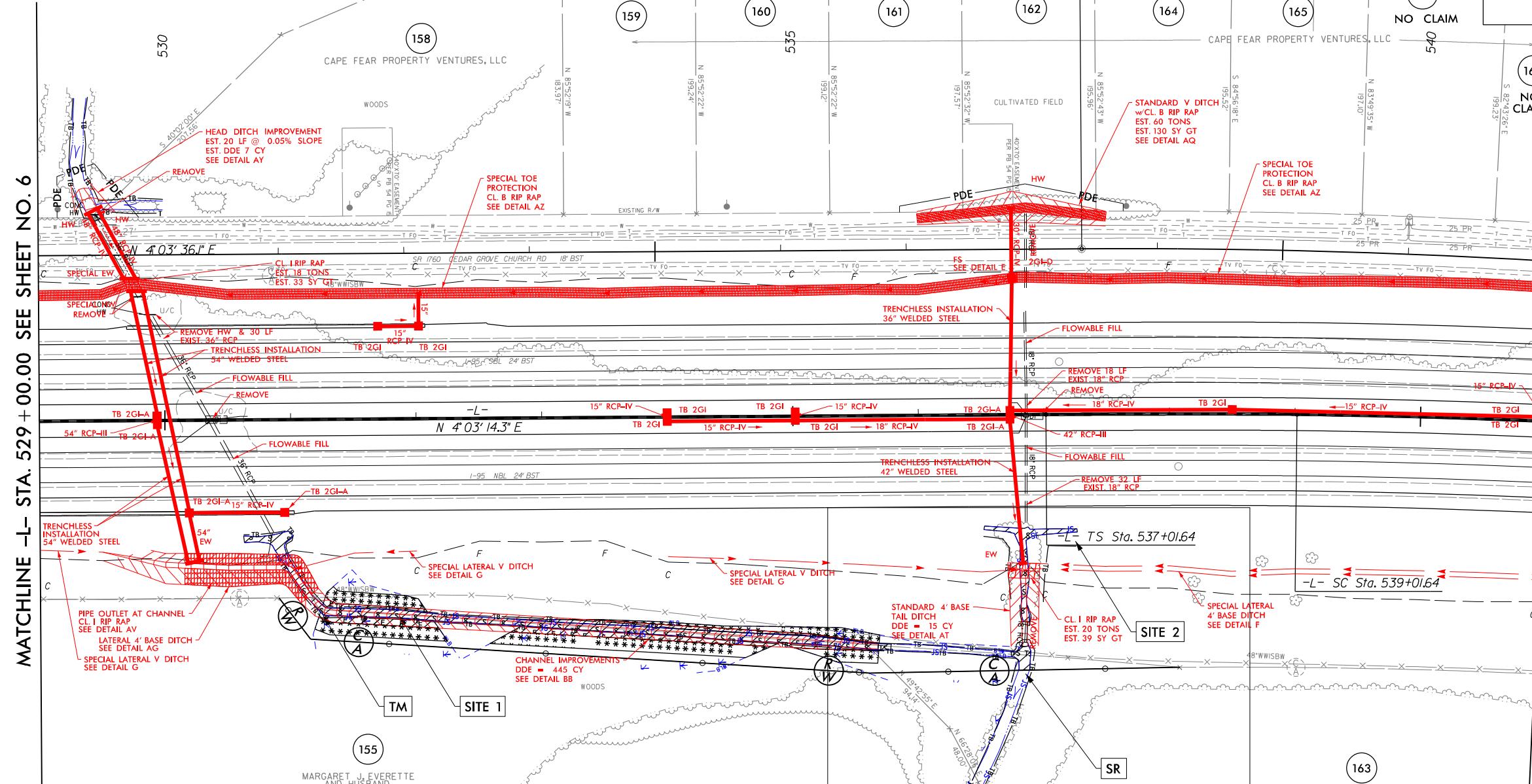
MOTT MACDONALD I & E, LLC
LICENSE NO. F-0669

MOTT MACDONALD I & E, LLC
LICENSE NO. F-0669

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UNLESS ALL SIGNATURES COMPLETED**

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MOTT MACDONALD 7621 Purley Rd, Suite 115
Fuquay-Varina, NC 27526
www.mottmac.com/americas

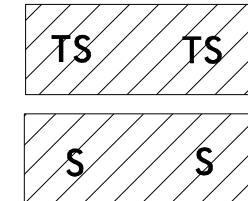
MATCHLINE -L- STA. 529 + 00.00 SEE SHEET NO. 6



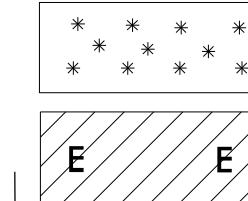
PERMIT DRAWING
SHEET 6 OF 80

20' 0' 20'

GRAPHIC SCALE



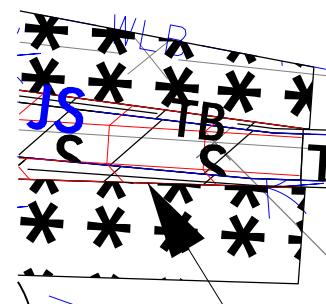
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN
SURFACE WATER



DENOTES MECHANIZED
CLEARING
DENOTES EXCAVATION
IN WETLAND

PROJECT REFERENCE NO.	SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

STANDARD 4' BASE
TAIL DITCH
DDE = 15 CY
SEE DETAIL AT



49°42'55"E
94°14'33"S

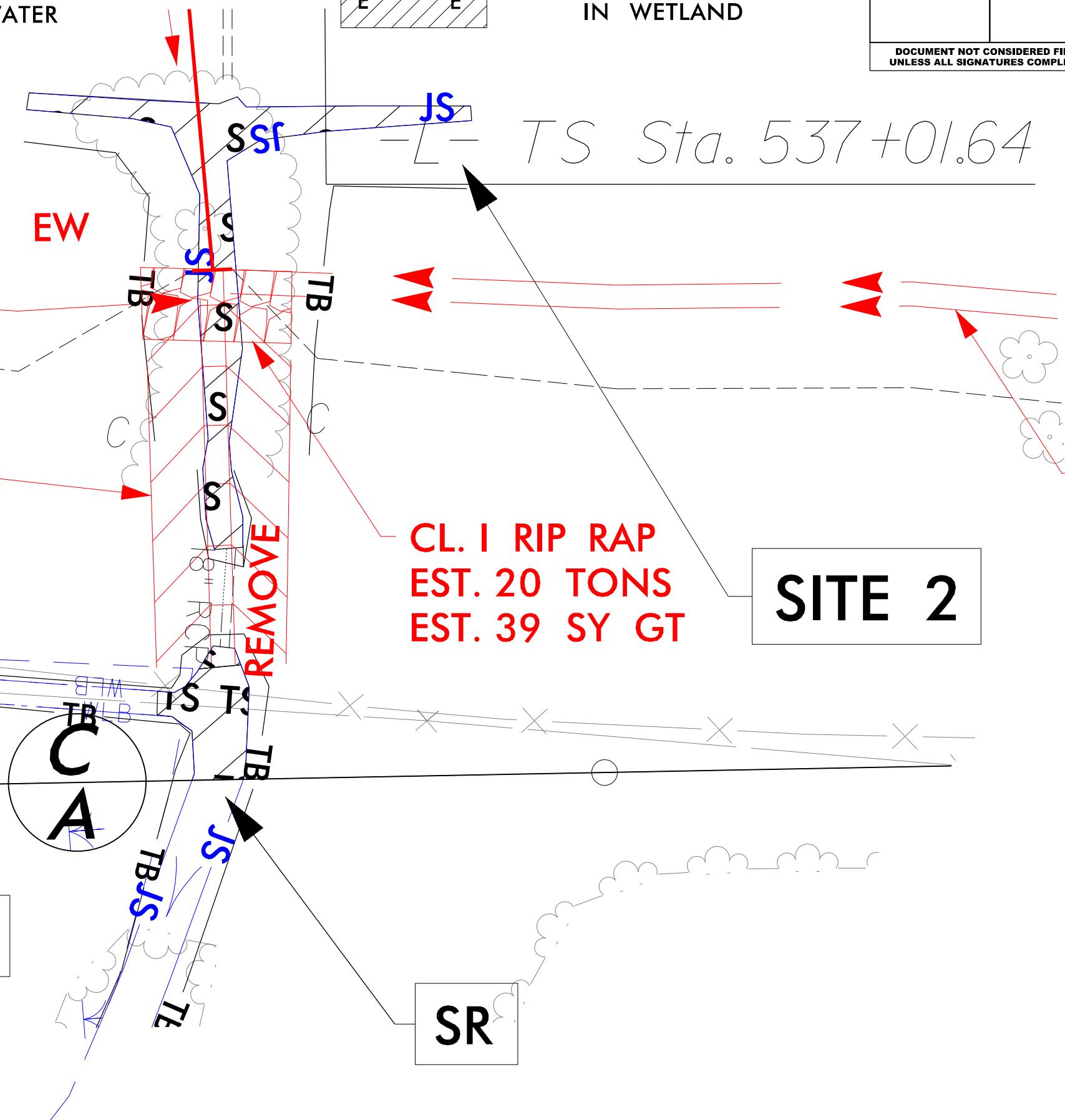
TM

SITE 1

SR

CL. I RIP RAP
EST. 20 TONS
EST. 39 SY GT

SITE 2



**PERMIT DRAWING
SHEET 7 OF 80**

A graphic scale bar consisting of a black horizontal line with a white checkered pattern on its left side. The text "GRAPHIC SCALE" is printed below the bar.

S S

DENOTES IMPACTS IN
SURFACE WATER

TS TS

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

* * * *

DENOTES MECHANIZED
CLEARING

DENOTES EXCAVATION
IN WETLAND

NAD 83/2011

PROJECT REFERENCE NO.		SHEET NO.
<u>1-5987B</u>		<u>7</u>
R/W SHEET NO.		
Roadway Design Engineer	Hydraulics Engineer	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		

MOTT MACDONALD I & E, LLC
LICENSE NO. F-0669

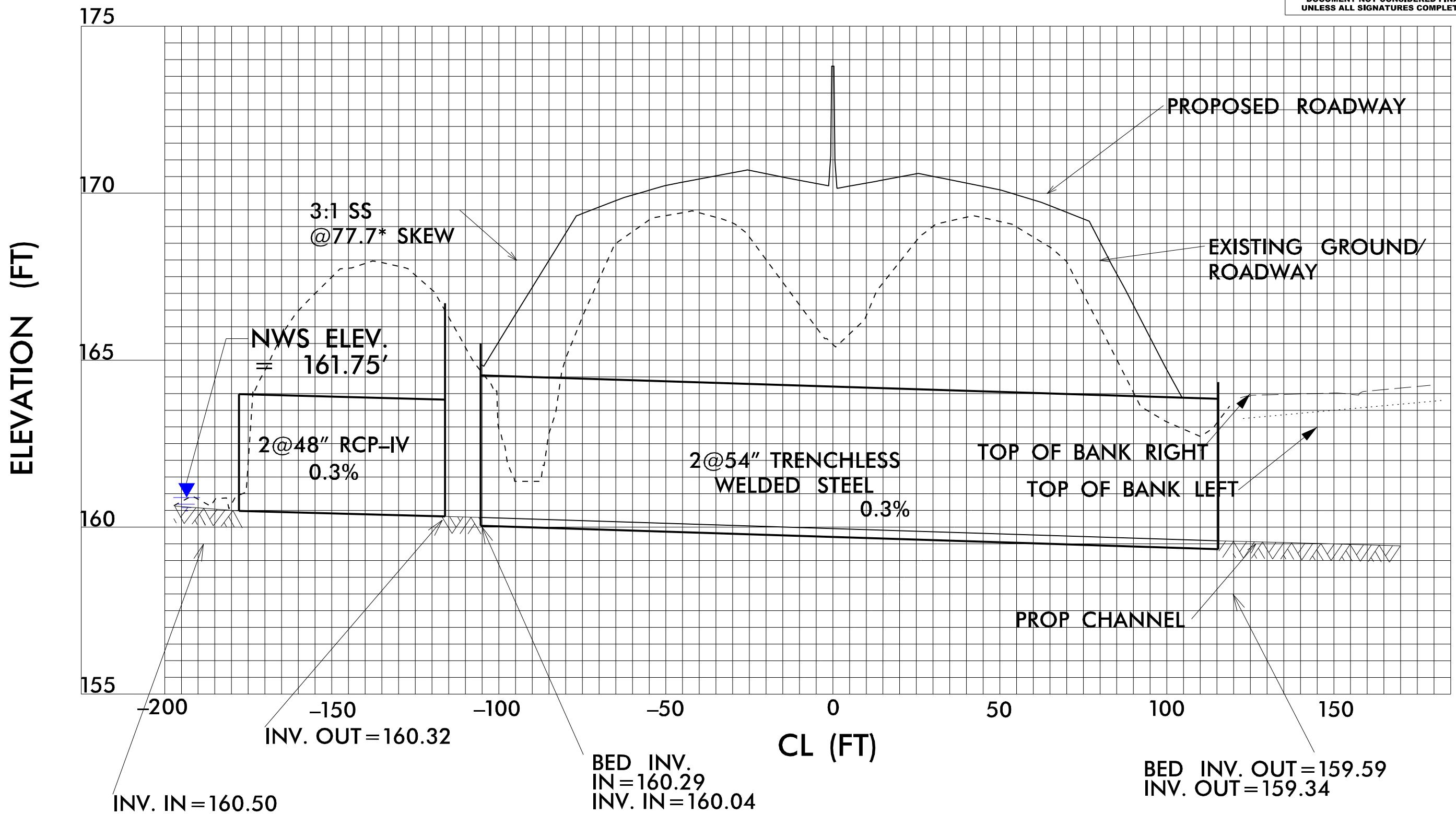
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

MATCHLINE -L- STA. 529 + 00.00 SEE SHEET NO. 6

RMTS-Environmental\Drawings\5987b-rdu-psb-07-con.dan
8/19/2021

PERMIT DRAWING SHEET 8 OF 80

PROJECT REFERENCE NO.		SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



**PERMIT DRAWING
SHEET 9 OF 80**

F **F**

**DENOTES MECHANIZED
CLEARING**

S S DENOTES IMPACTS IN SURFACE WATER

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

51

194

CALVIN T. WILKERSON

WZ

WZ

N 37°43'15" W
300,72'

SITE 4

OLD STAGE RD

20 BST

SEE SHEET 11 OF 80 FOR ENLARGEMENT

15

AD 83/2011

JECT REFERENCE NO.		SHEET NO.
<u>1-5987B</u>		<u>40</u>
RW SHEET NO.		
OWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DONALD I & E, LLC DES A VOL P&M		MOTT MACDONALD, I&E, LLC WFMNS NO. 5 1446

CUMENT NOT CONSIDERED FINAL

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in the **M**

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MACDONALD Fuquay-Varina, NC 27526
www.mottmac.com/amicards

**PERMIT DRAWING
SHEET 11 OF 80**

20' 0' 20'



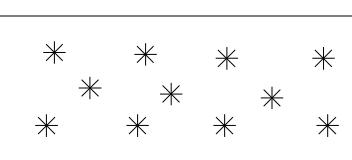
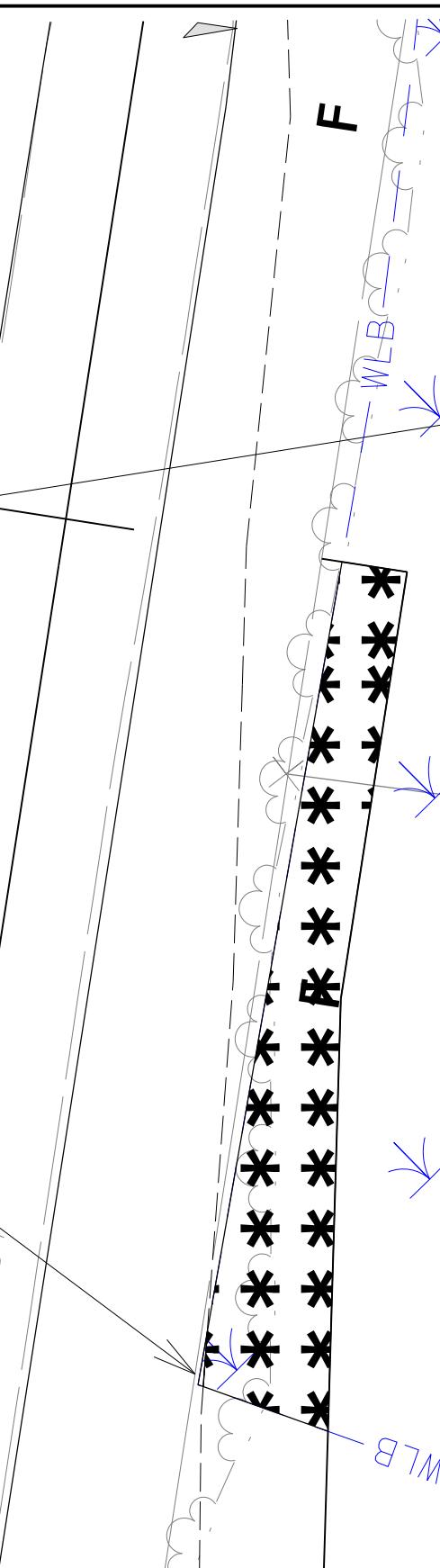
GRAPHIC SCALE

FILL IN WETLAND



**DENOTES FILL IN
WETLAND**

-SR 5 -
RD 20' BST



**DENOTES MECHANIZED
CLEARING**

WZ

**MECHANIZED
IN WETLAND**

N 37°43'15" W
300.72'

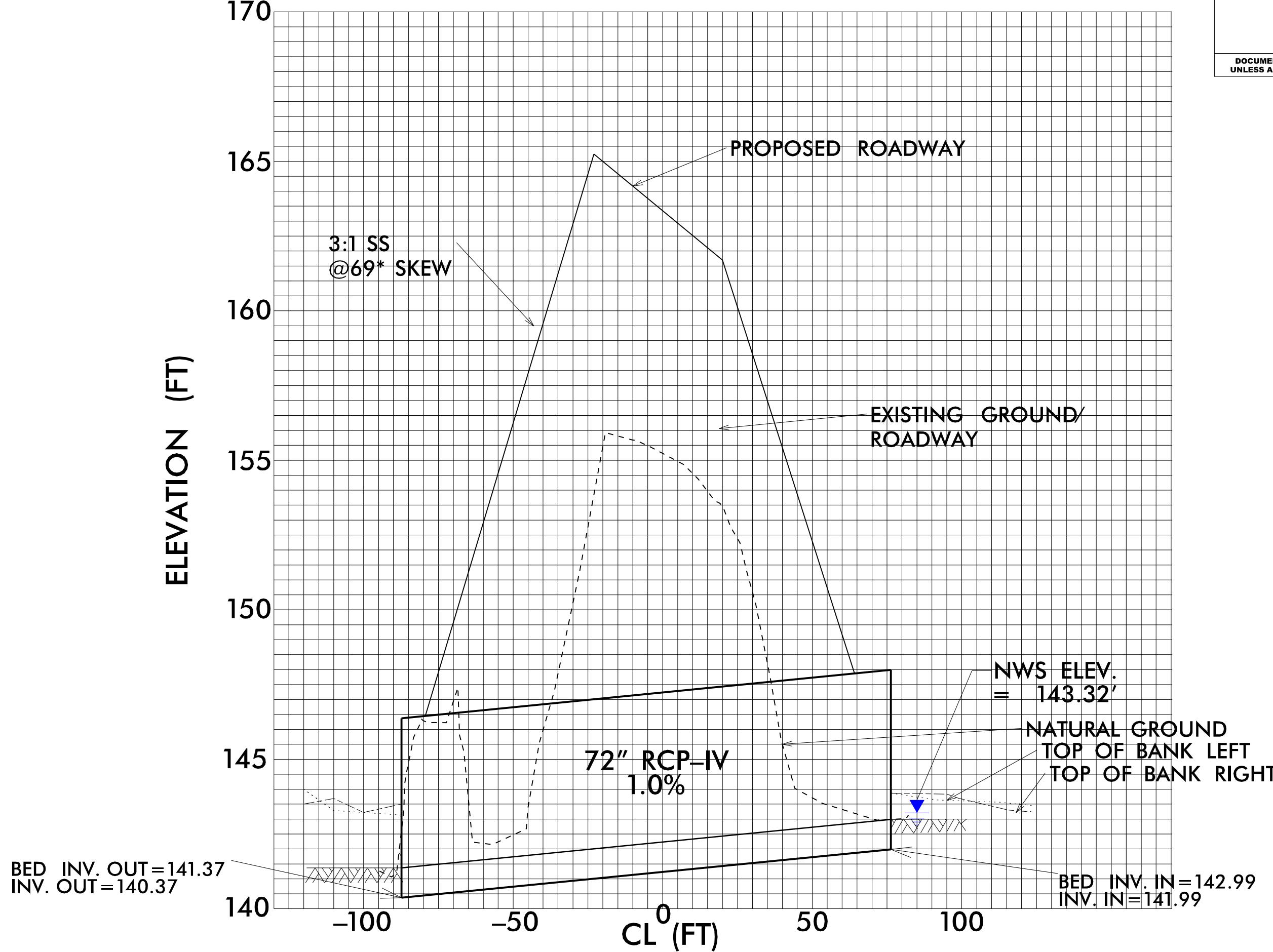
SITE 4

PROJECT REFERENCE NO.		SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR S/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

SITE 3
-Y4- 31 + 05

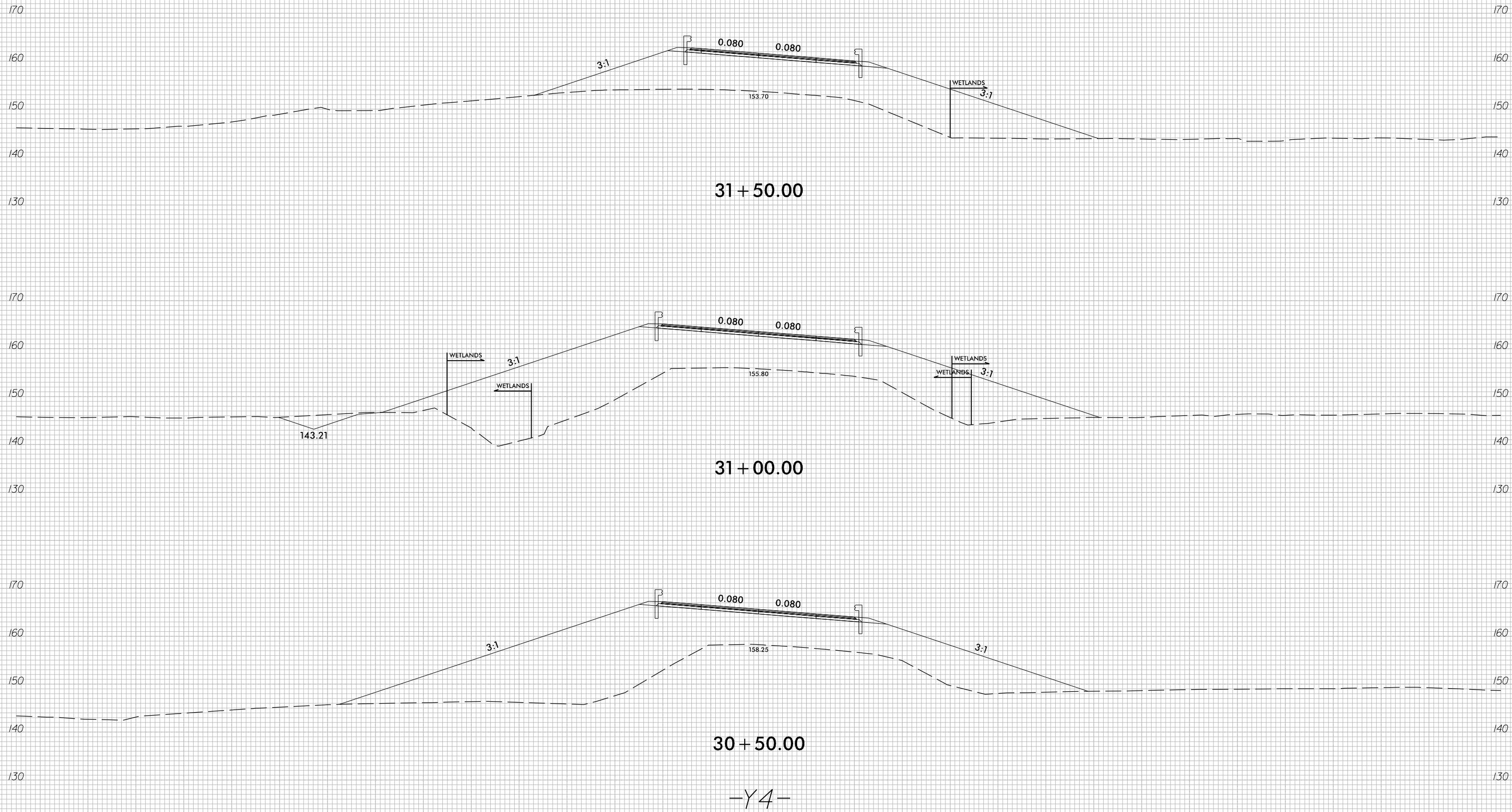
PERMIT DRAWING
SHEET 13 OF 80

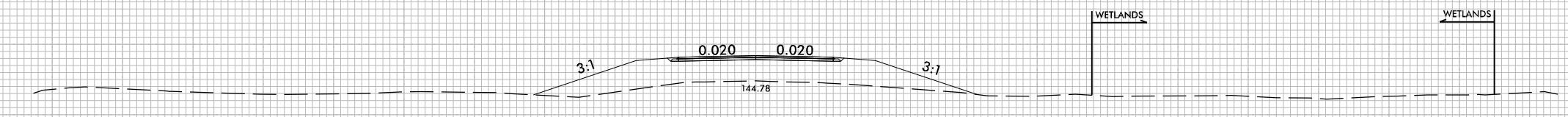
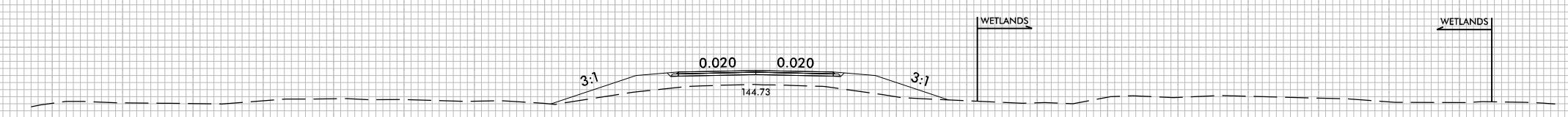
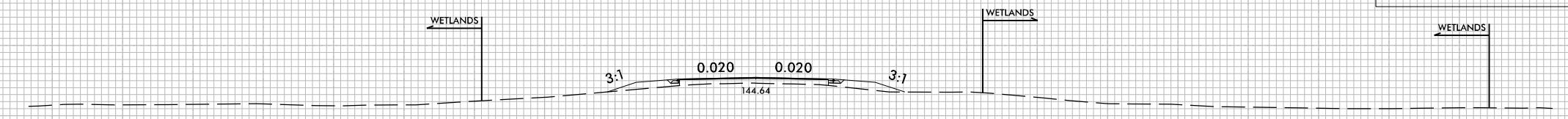
PROJECT REFERENCE NO.		SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

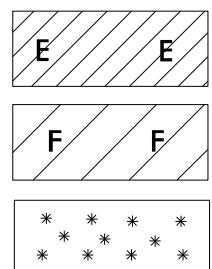
SITE 3

**PERMIT DRAWING
SHEET 14 OF 79**

SITE 4**PERMIT DRAWING
SHEET 15 OF 80**

-SR5-

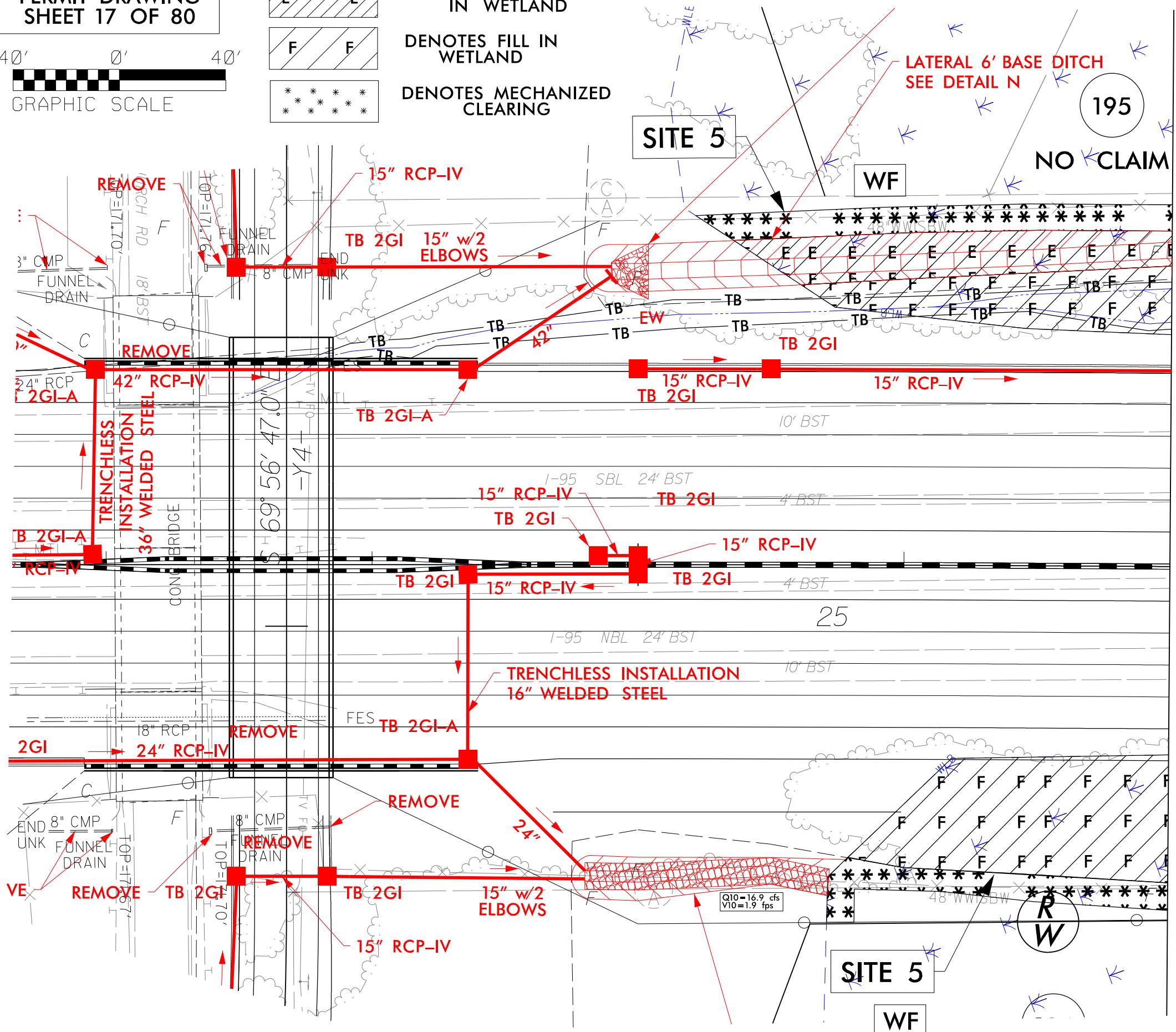
**PERMIT DRAWING
SHEET 17 OF 80**



DENOTES EXCAVATION
IN WETLAND

**DENOTES FILL IN
WETLAND**

DENOTES MECHANIZED CLEARING

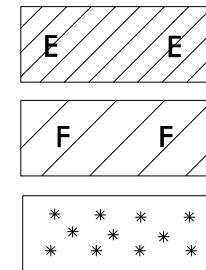


RCHLINE -L- STA. 577 +00.00 SEE SHEET NO. 11

PROJECT REFERENCE NO.		SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER	
<div style="text-align: center; padding: 10px;"> INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION </div>		
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>		

**PERMIT DRAWING
SHEET 20 OF 80**

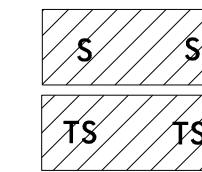
A graphic scale marking consisting of a black horizontal bar with white squares. The text "40'" is positioned above the first two squares from the left, and the text "0'" is positioned above the last two squares. Below the bar, the words "GRAPHIC SCALE" are printed.



DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN
WETLAND

DENOTES MECHANIZED CLEARING



**DENOTES IMPACTS IN
SURFACE WATER**

DENOTES TEMPORARY
IMPACTS IN SURFACE W

EXCAVATION LIMIT

SITE 5

PROJECT REFERENCE NO.		SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER	
<div style="text-align: center;"> INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION </div>		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

()

TEMP IMPACTS IN SURFACE WATER DUE TO WORKPAD

BIG MARSH SWAMP

EXISTING R/W

48" WWSBW

EST. 1 TONS
EST. 5 SY GT

CL. B RIP RAP
EST. 1 TONS
EST. 5 SY GT

SITE 5

C

A

ICHLINE -+- STA. 589 + 00.00 SEE SHEET NC

PERMIT DRAWING SHEET 21 OF 80

193

DWIGHT A. ATKINSON, JR.
AND WIFE, 100'
AMANDA B BARNHORST

136° E

136° E

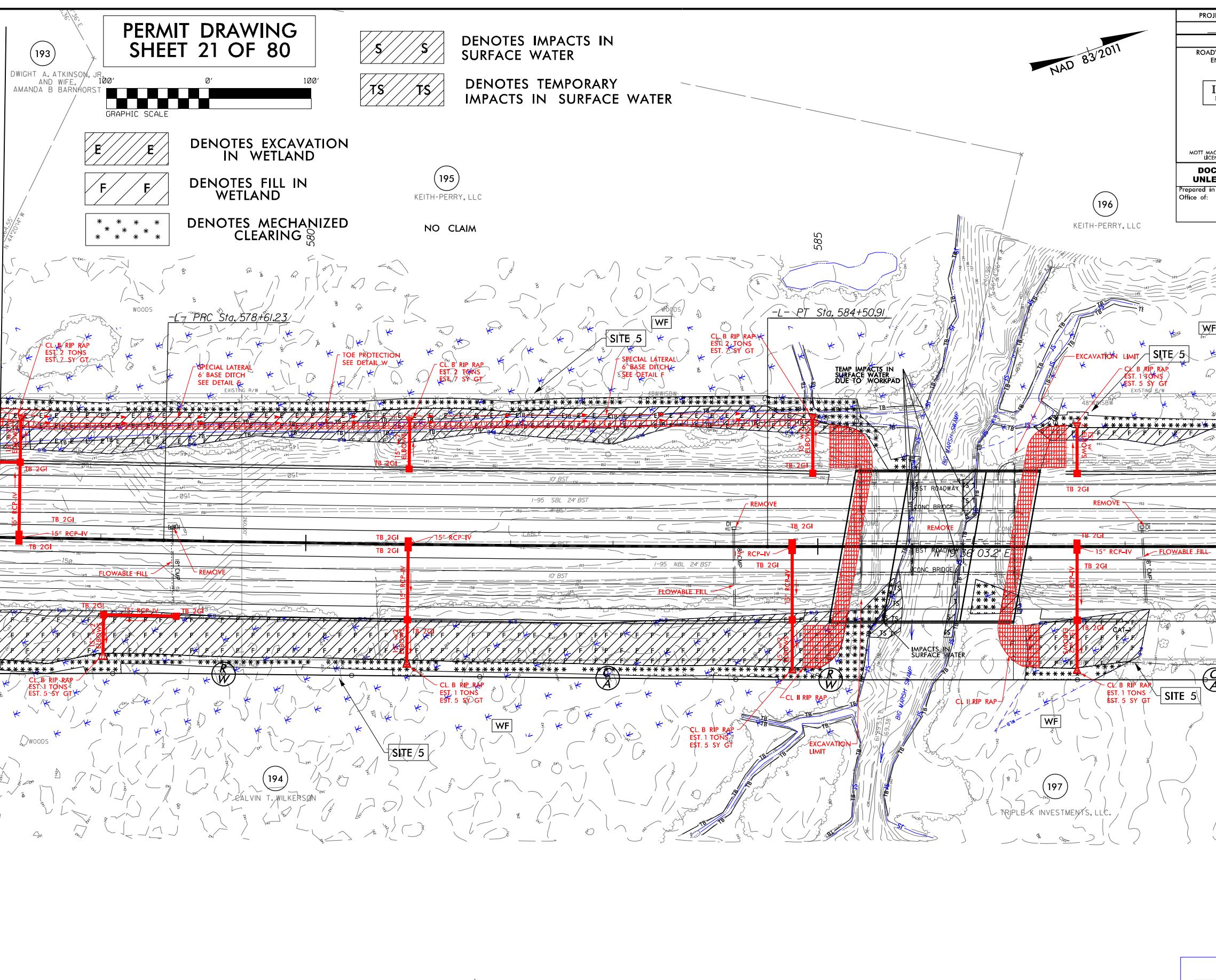
0'

100'

GRAPHIC SCALE

DENOTES IMPACTS IN
SURFACE WATERDENOTES TEMPORARY
IMPACTS IN SURFACE WATERDENOTES EXCAVATION
IN WETLANDDENOTES FILL IN
WETLANDDENOTES MECHANIZED
CLEARING

MATCHLINE -L- STA. 577 + 00.00 SEE SHEET NO. 10

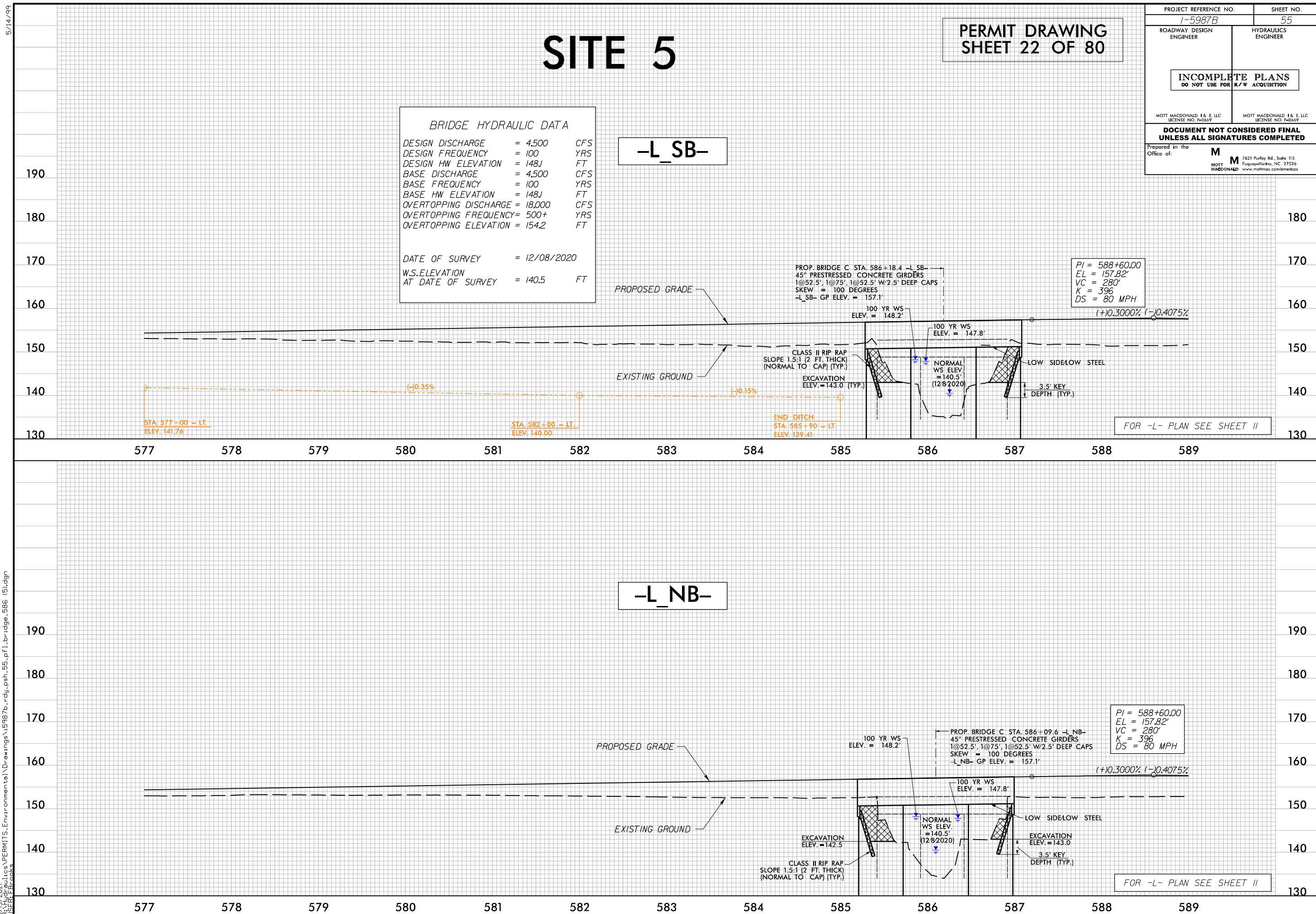


LEGEND

- PROPOSED PAVEMENT REMOVAL
- PROPOSED PAVED SHOULDER
- PROPOSED APPROACH SLAB

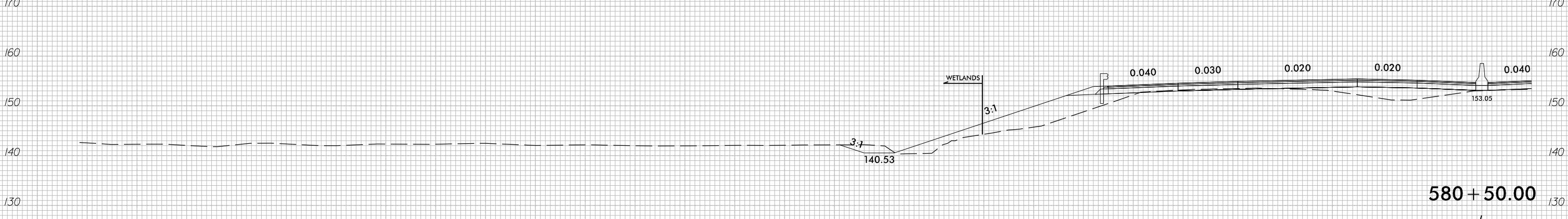
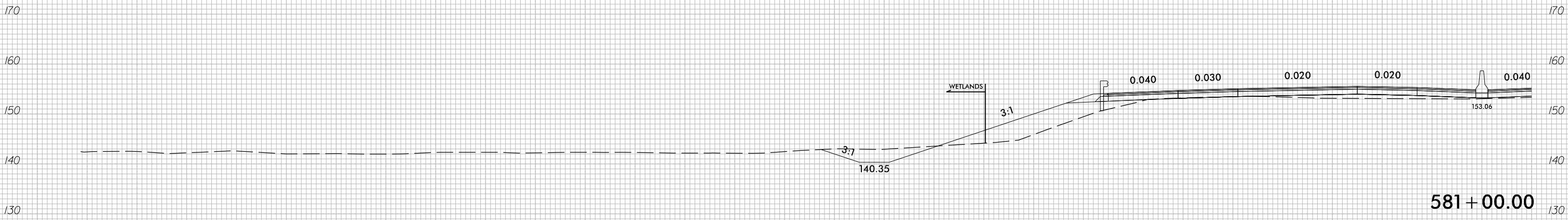
FOR -L- PROFILE SEE SHEET 55

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
MOTT MACDONALD I & E, LLC LICENSE NO. F-0669	MOTT MACDONALD I & E, LLC LICENSE NO. F-0669
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Prepared in the Office of:	
M	M 7621 Purley Rd, Suite 115 Fayetteville, NC 27226 MOTT MACDONALD www.mottmac.com/americas



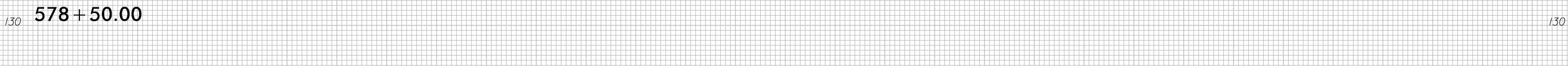
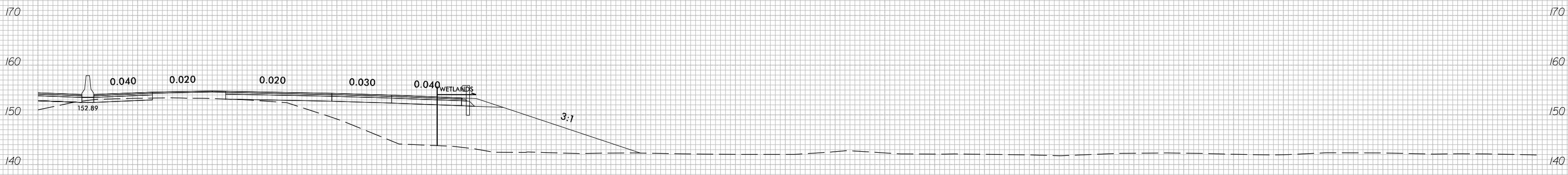
290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10

SITE 5

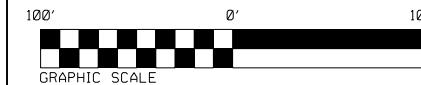
**PERMIT DRAWING
SHEET 23 OF 80**


10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290

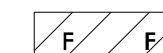
SITE 5

**PERMIT DRAWING
SHEET 24 OF 80**

**PERMIT DRAWING
SHEET 25 OF 80**



DENOTES MECHANIZED
CLEARING



DENOTES FILL IN
WETLAND



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN
SURFACE WATER

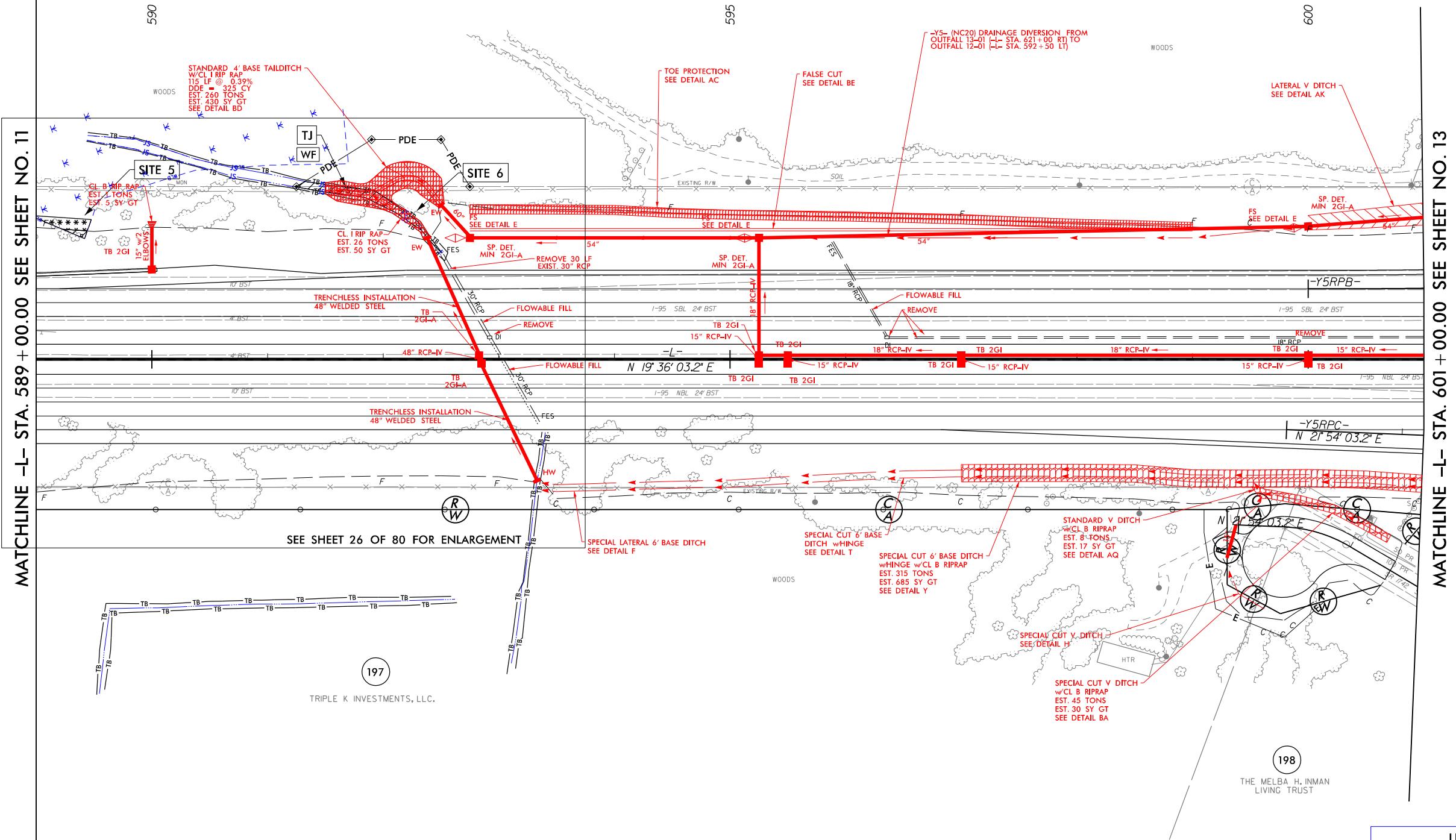


NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
MOTT MACDONALD I & E, LLC LICENSE NO. P-0669	MOTT MACDONALD I & E, LLC LICENSE NO. P-0669

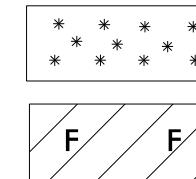
DOCUMENT NOT CONSIDERED FINAL
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Prepared in the
Office of:
M M 7621 Purify Rd, Suite 155
MOTT
MACDONALD Fuquay-Varina, NC 27526
www.mottmac.com/americas

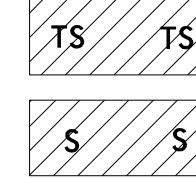


**PERMIT DRAWING
SHEET 26 OF 80**

A graphic scale bar consisting of a black horizontal line with a series of white and black squares at its left end, labeled '40\' above it.



DENOTES MECHANIZED CLEARING



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



**DENOTES IMPACTS IN
SURFACE WATER**

PROJECT REFERENCE NO. _____		SHEET NO. _____
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER	
<div style="text-align: center;"> INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION </div>		
<hr/> <p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p> <hr/>		

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

SITE 5

WF

PDE

SITE 6

CL. B RIP RAP EST. 1 TONS EST. 5 SY GT

CL. I RIP RAP EST. 26 TONS EST. 50 SY GT

15" W² ELBOWS

TB 2GI

10' BST

4' BST

4' BST

10' BST

TRENCHLESS INSTALLATION 48" WELDED STEEL

TB 2GI-A

48" RCP-IV

TB 2GI-A

TRENCHLESS INSTALLATION 48" WELDED STEEL

F

F

F

F

HW

R/W

PDE

EW

60° FS SEE DETAIL E

FES

SP. DET. MIN 2GI-A

54"

REMOVE 30 LF EXIST. 30" RCP

150" RCP

150" RCP

150" RCP

FLOWABLE FILL

REMOVE

FLOWABLE FILL

FES

MON

CL. B RIP RAP EST. 1 TONS EST. 5 SY GT

CL. I RIP RAP EST. 26 TONS EST. 50 SY GT

15" W² ELBOWS

TB 2GI

10' BST

4' BST

4' BST

10' BST

TRENCHLESS INSTALLATION 48" WELDED STEEL

TB 2GI-A

48" RCP-IV

TB 2GI-A

TRENCHLESS INSTALLATION 48" WELDED STEEL

F

F

F

F

HW

R/W

PDE

EW

60° FS SEE DETAIL E

FES

SP. DET. MIN 2GI-A

54"

REMOVE 30 LF EXIST. 30" RCP

150" RCP

150" RCP

150" RCP

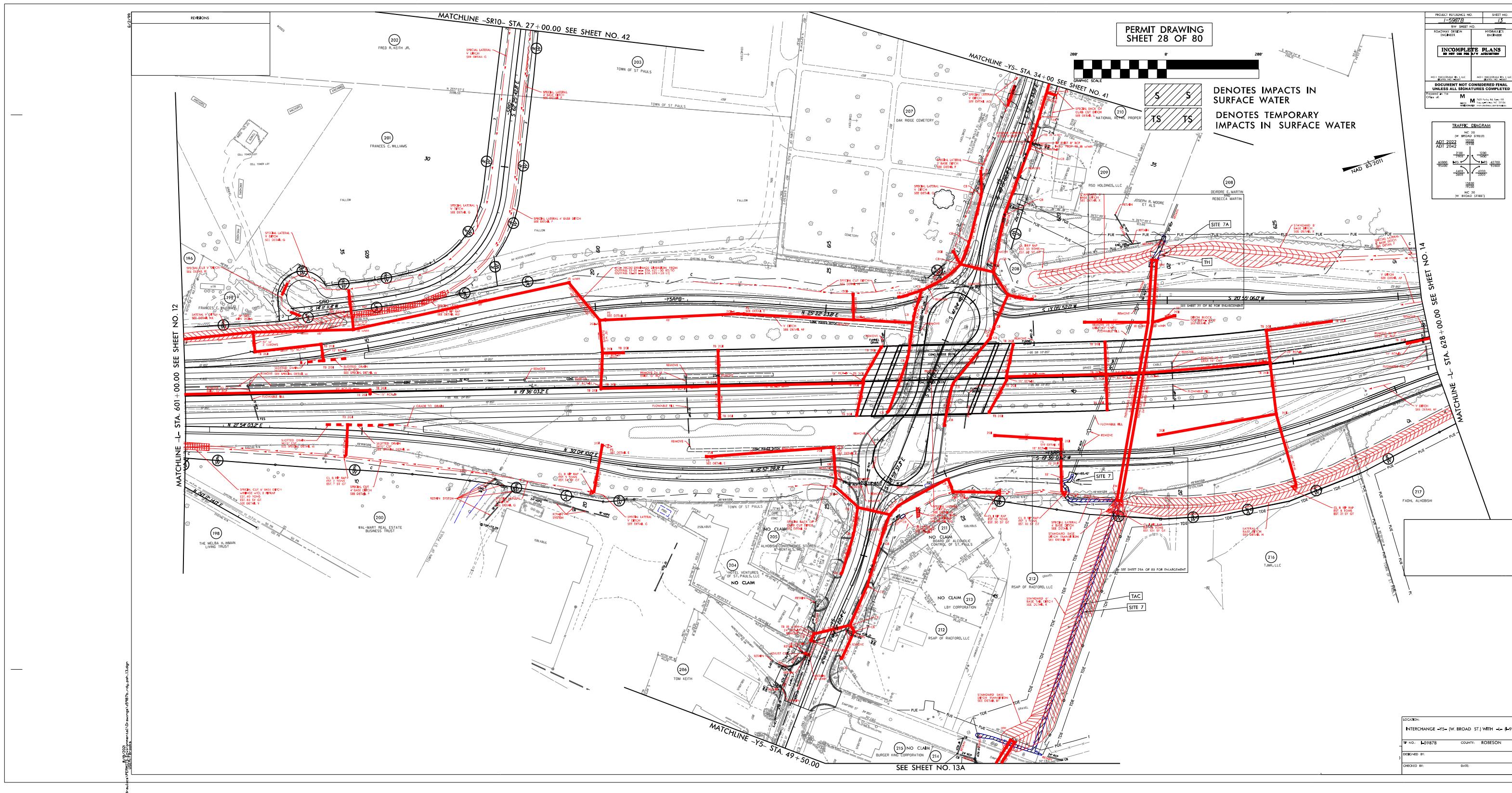
FLOWABLE FILL

REMOVE

FLOWABLE FILL

FES

MON

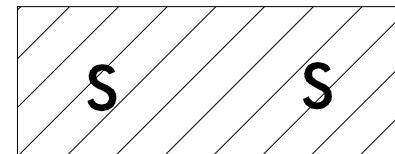


PERMIT DRAWING
SHEET 29 OF 80

20' 0' 20'



GRAPHIC SCALE

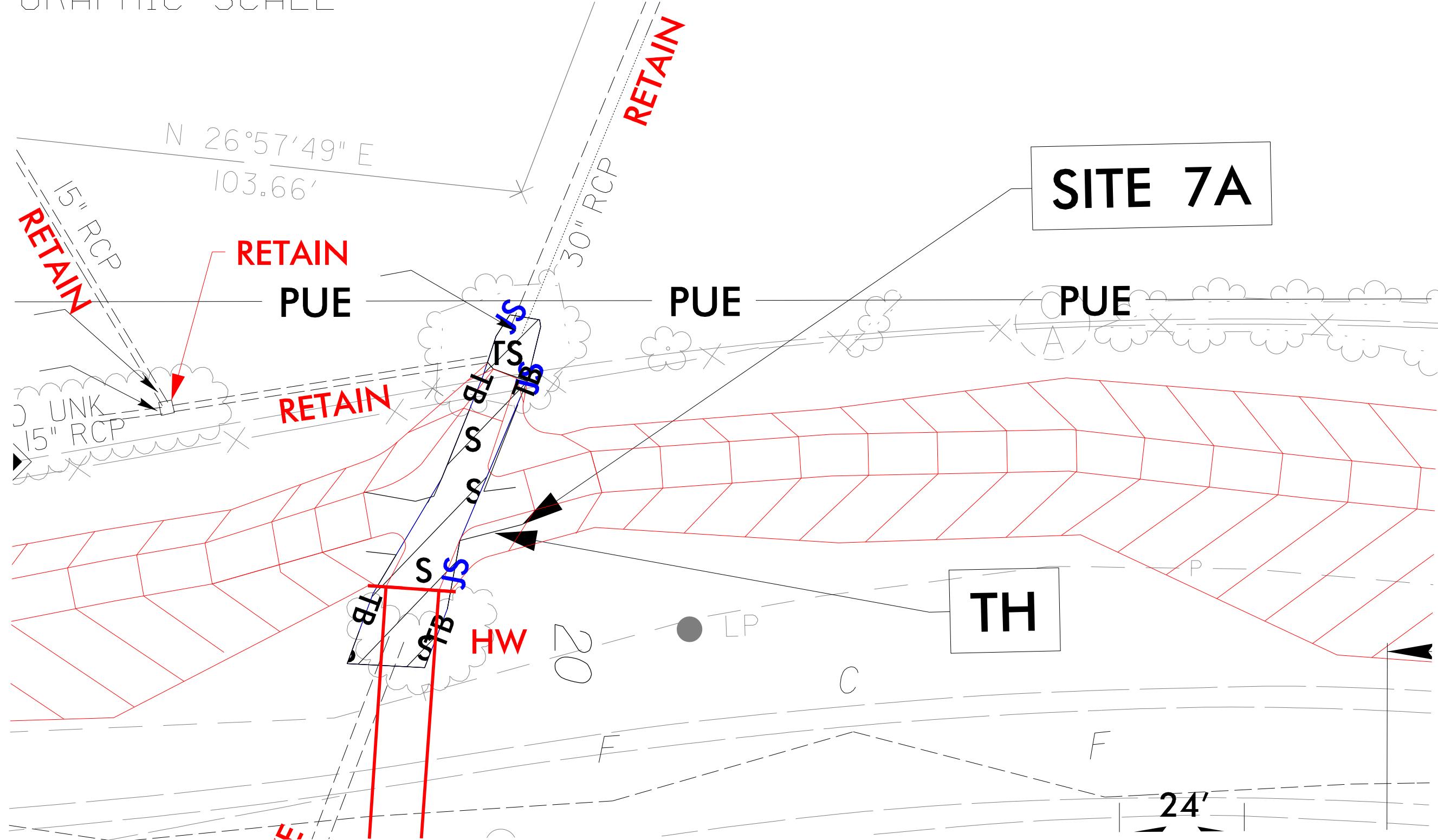


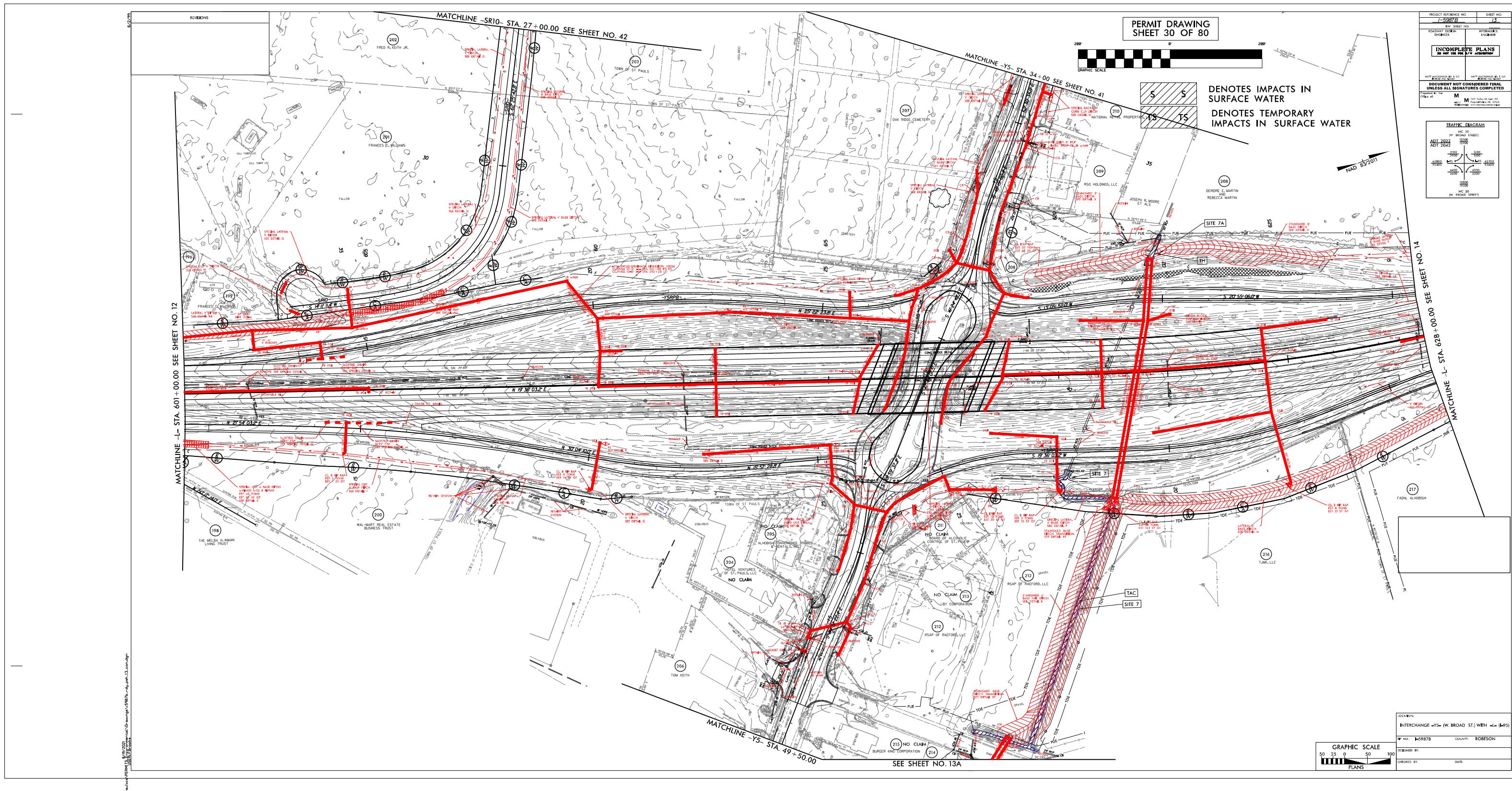
DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

REBECCA

PROJECT REFERENCE NO.		SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		





SITE 7
-L1- 621+66PERMIT DRAWING
SHEET 33 OF 80

PROJECT REFERENCE NO.	SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ELEVATION (FT)

190

185

180

175

170

165

160

155

150

145

BED EL. = 156.02
INV. IN = 155.77NWS ELEV.
= 157.60'
TOP OF BANK LEFT
TOP OF BANK RIGHT

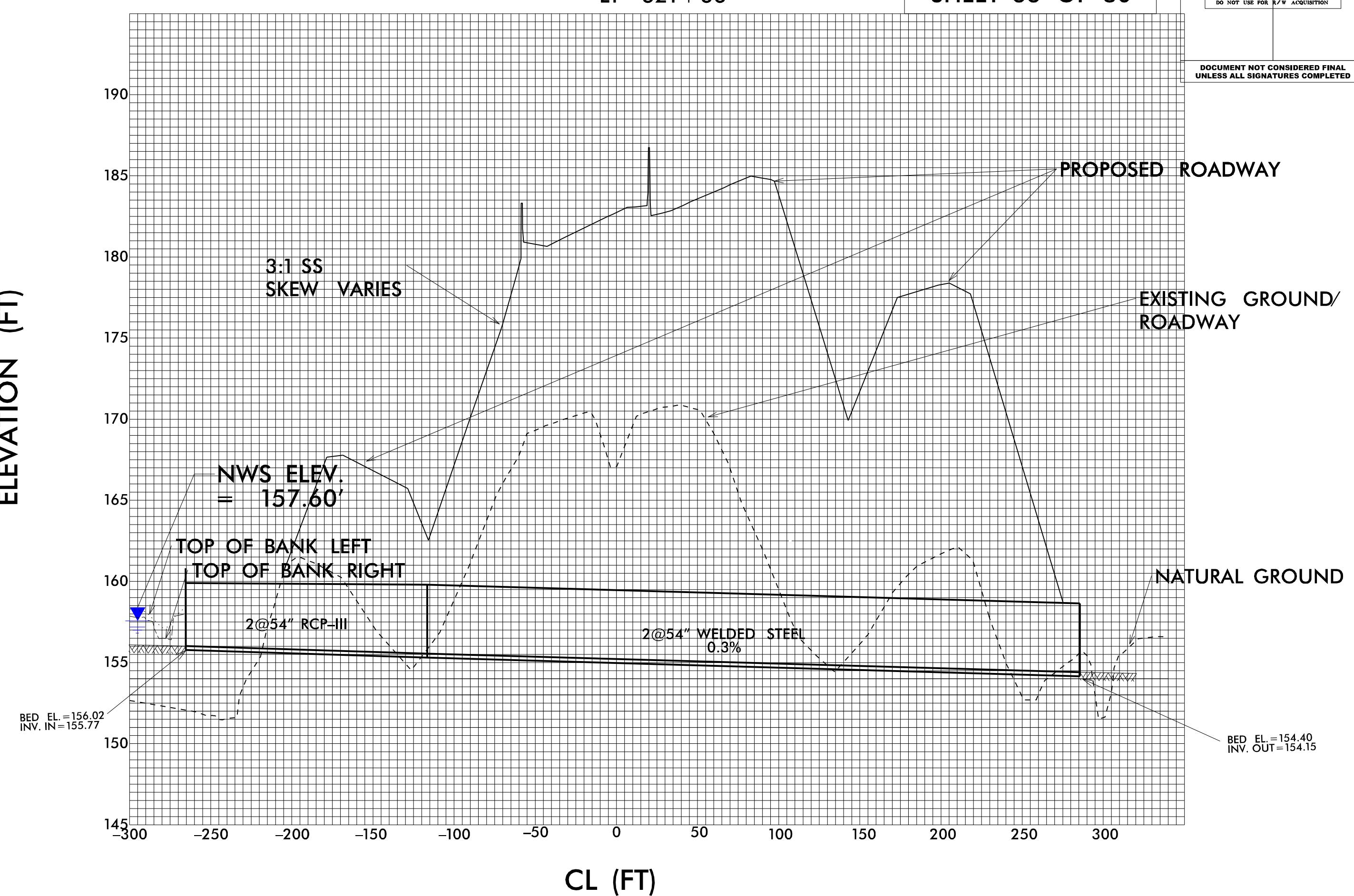
2@54" RCP-III

2@54" WELDED STEEL
0.3%

NATURAL GROUND

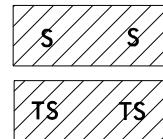
BED EL. = 154.40
INV. OUT = 154.15

CL (FT)



**PERMIT DRAWING
SHEET 34 OF 80**

A graphic scale bar consisting of a black and white checkered pattern followed by a solid black segment and a white segment. The text "GRAPHIC SCALE" is printed below it.



DENOTES IMPACTS
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

NAD 83/2011

PROJECT REFERENCE NO.		SHEET NO.
<i>I-5987B</i>		<i>16</i>
RW SHEET NO.		
RROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
 WETHERILL ENGINEERING		
1223 Jones Franklin Rd. Raleigh, NC 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107		
TRANSPORTATION PLANNING/DESIGN • BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN • GIS/GPS • CONSTRUCTION OBSERVATION		

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

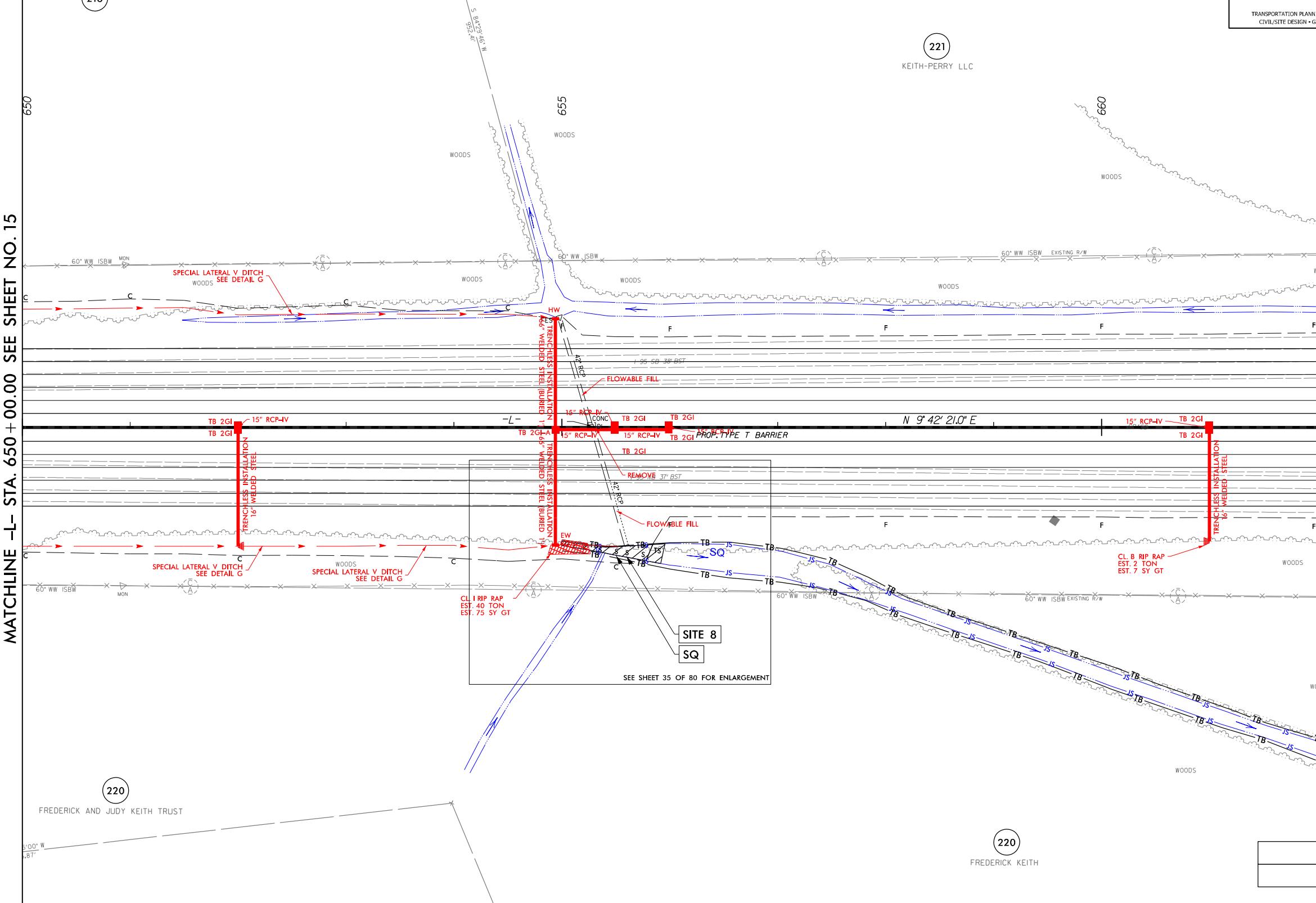
KEITH-PERRY

218

221
KEITH-PERRY LLC

WATCHLINE | STA 650 + 00 00 SEE SHEET NO 15

MATCHLINE -L- STA. 662 + 00.00 SEE SHEET NO. 17

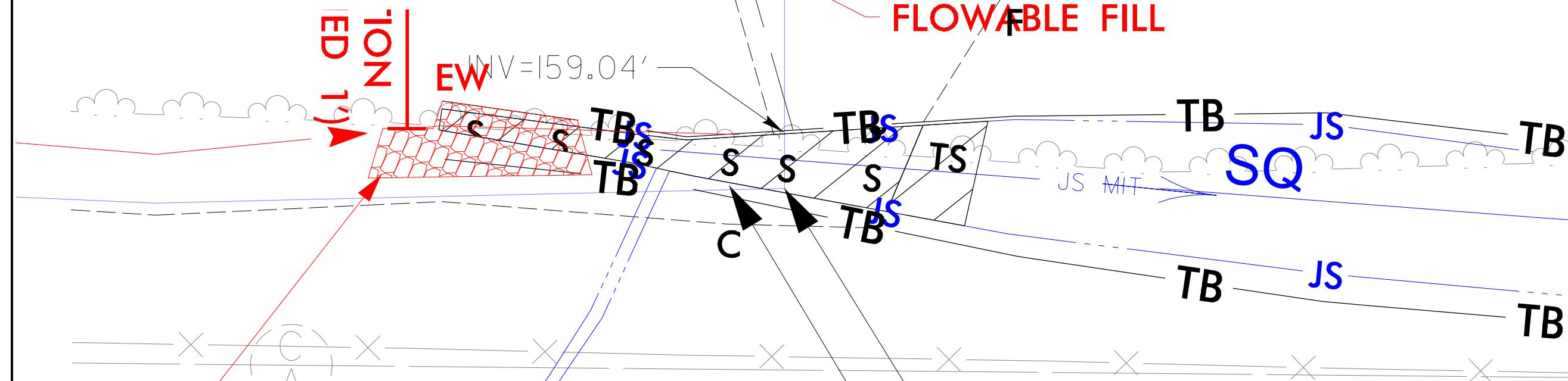


**PERMIT DRAWING
SHEET 35 OF 80**

20' 0' 20'



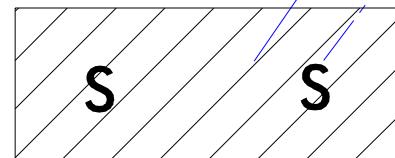
GRAPHIC SCALE



IP RAP
TON
SY GT

SITE 8

SQ



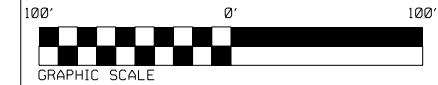
DENOTES IMPACTS IN
SURFACE WATER



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

PROJECT REFERENCE NO.	
SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

**PERMIT DRAWING
SHEET 36 OF 80**



S S

TS TS

DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
1-5987B	16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

WEATHERILL
ENGINEERING

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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

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CIVIL/SITE DESIGN • GIS/GPS • CONSTRUCTION OBSERVATION

KEITH-PERRY

218

KEITH-PERRY LLC

221

MATCHLINE -L- STA. 650 + 00.00 SEE SHEET NO. 15

650

655

660

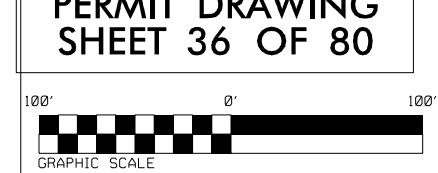
220

FREDERICK AND JUDY KEITH TRUST

220
FREDERICK KEITH

MATCHLINE -L- STA. 662 + 00.00 SEE SHEET NO. 17

662



KEITH-PERRY

218

KEITH-PERRY LLC

221

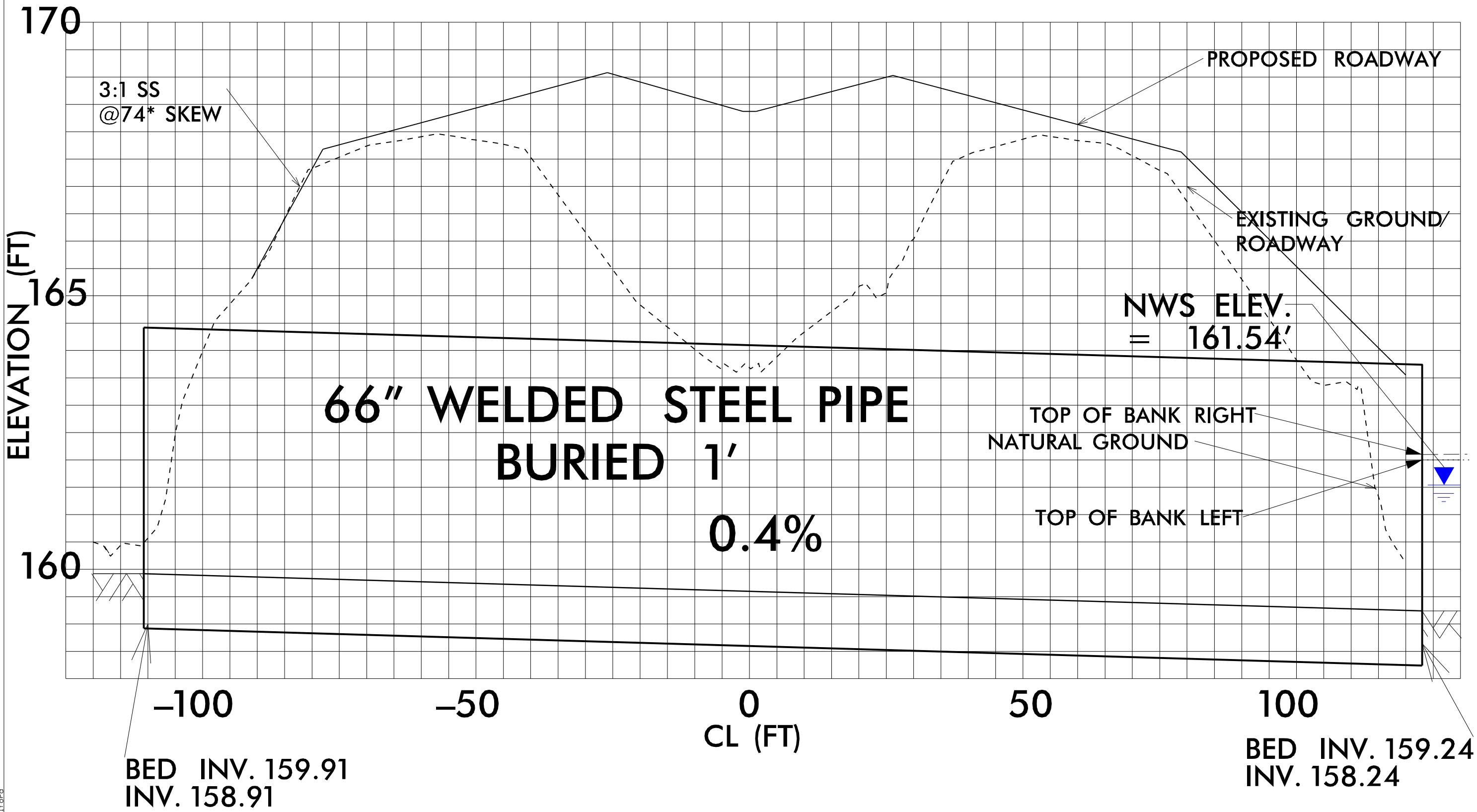
220

FREDERICK AND JUDY KEITH TRUST

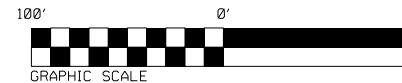
220
FREDERICK KEITH

**PERMIT DRAWING
SHEET 37 OF 80**

PROJECT REFERENCE NO.		SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

**SITE 8
-L2- 655 + 00**


**PERMIT DRAWING
SHEET 38 OF 80**



DENOTES MECHANIZED
CLEARING



DENOTES EXCAVATION
IN WETLAND

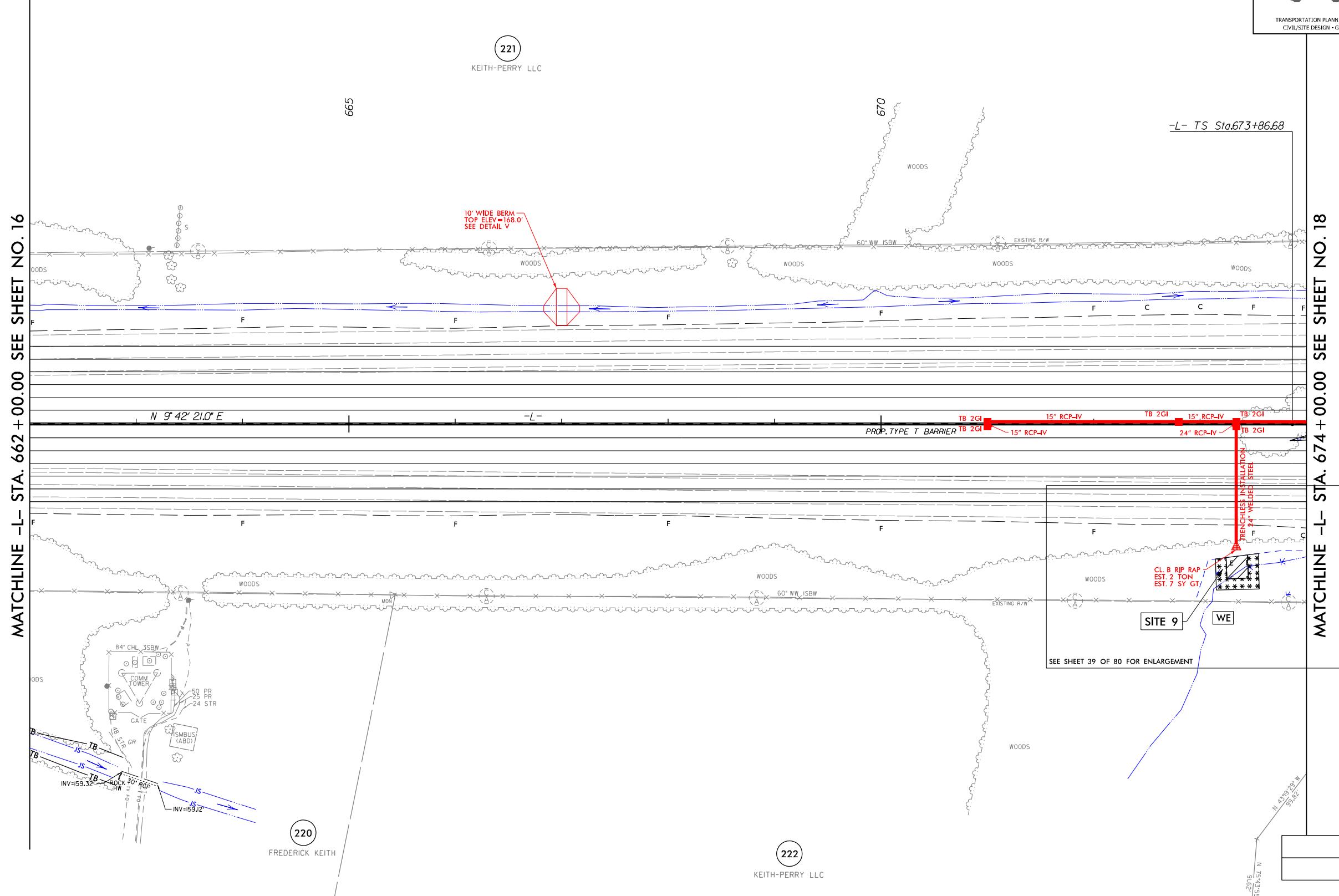
NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

**WEATHERILL
ENGINEERING**

TRANSPORTATION PLANNING/DESIGN • BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN • GIS/GPS • CONSTRUCTION OBSERVATION

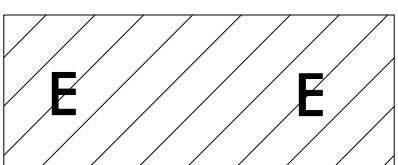
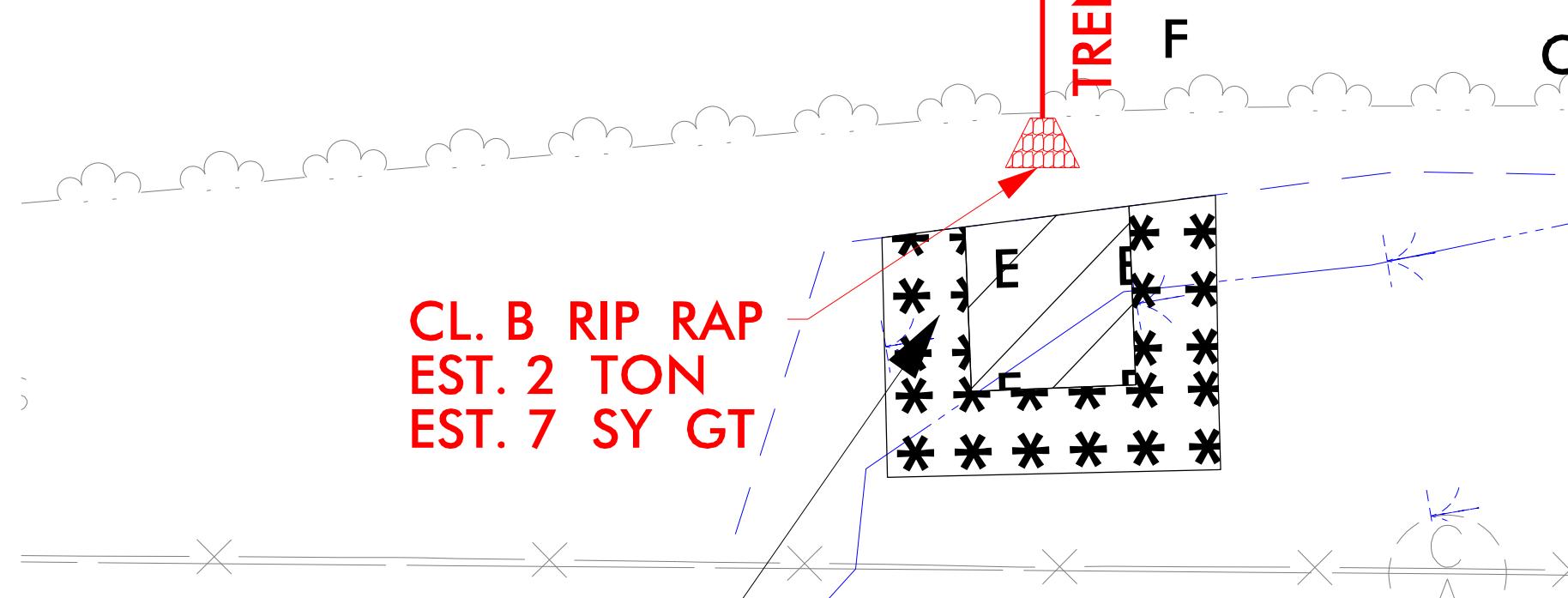


**PERMIT DRAWING
SHEET 39 OF 80**

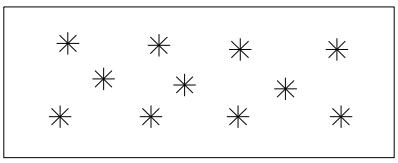
20' 0' 20'



GRAPHIC SCALE



DENOTES EXCAVATION
IN WETLAND



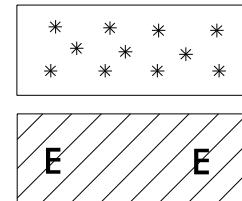
DENOTES MECHANIZED
CLEARING

PROJECT REFERENCE NO.		SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

MATCHLINE - L - STA. 6

**PERMIT DRAWING
SHEET 40 OF 80**

A graphic scale bar consisting of a black horizontal line with white squares and rectangles. The text "100'" is at the left end, "0'" is at the center, and "100" is at the right end. Below the scale is the text "GRAPHIC SCALE".



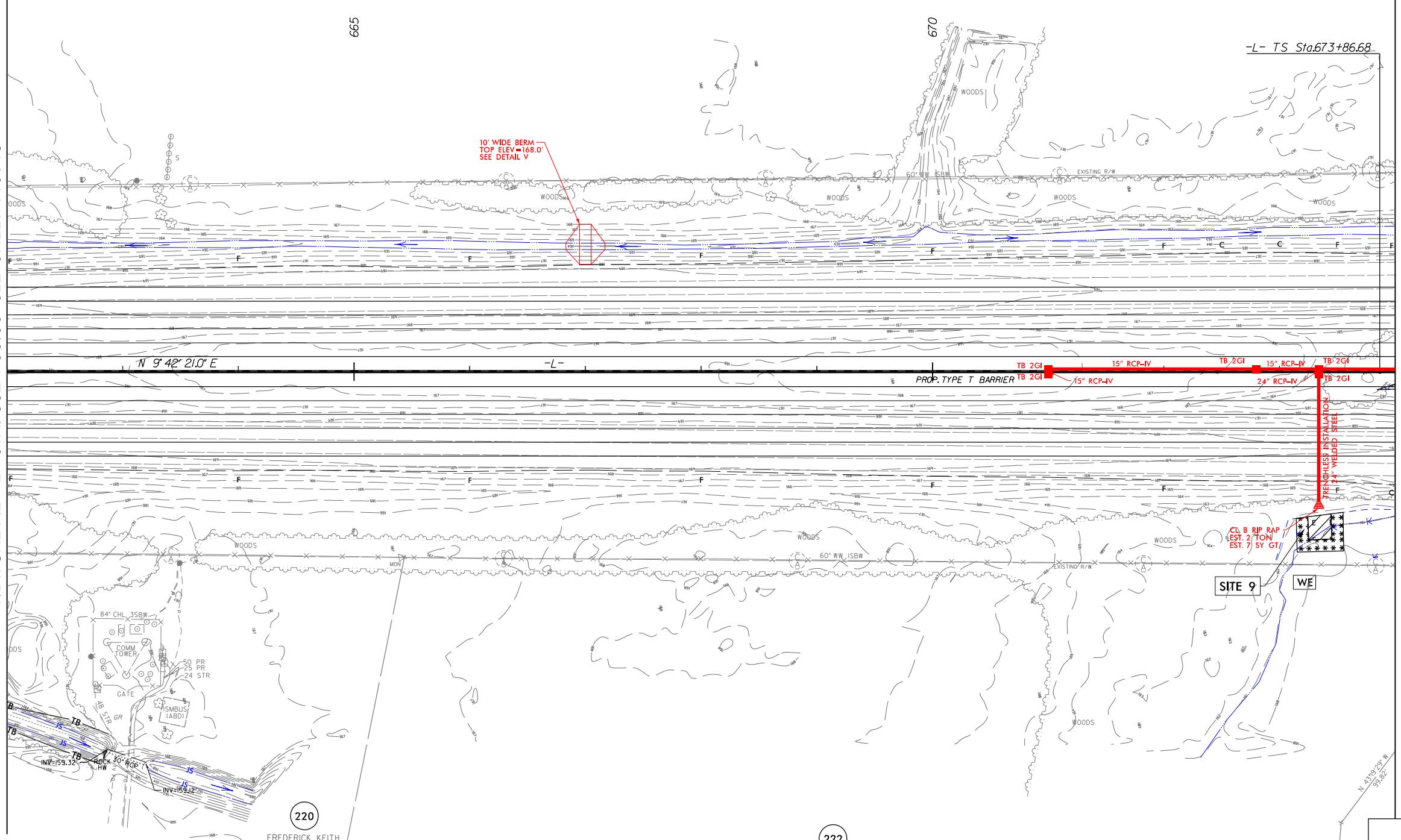
DENOTES MECHANIZED CLEARING

NAD 83/2011

DENOTES EXCAVATION IN WETLAND

PROJECT REFERENCE NO.		SHEET NO.
<i>I-5987B</i>		<i>17</i>
RW SHEET NO.		
RWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
 WETHERILL ENGINEERING		
1223 Jones Franklin Rd. Raleigh, NC 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107		
TRANSPORTATION PLANNING/DESIGN • BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN • GIS/GPS • CONSTRUCTION OBSERVATION		

MATCHLINE -L- STA. 662 + 00.00 SEE SHEET NO. 16



MATCHLINE -L- STA. 674+00.00 SEE SHEET NO. 18

5/14/99

**PERMIT DRAWING
SHEET 41 OF 80**

100' 0' 100'



GRAPHIC SCALE

KEITH-PERRY LLC

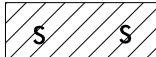
DENOTES MECHANIZED
CLEARING



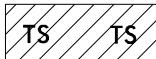
DENOTES FILL IN
WETLAND



DENOTES IMPACTS IN
SURFACE WATER



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



JOHN C. MCLEOD & SHORE B. MCLEOD

NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	18
RW SHEET NO. _____	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

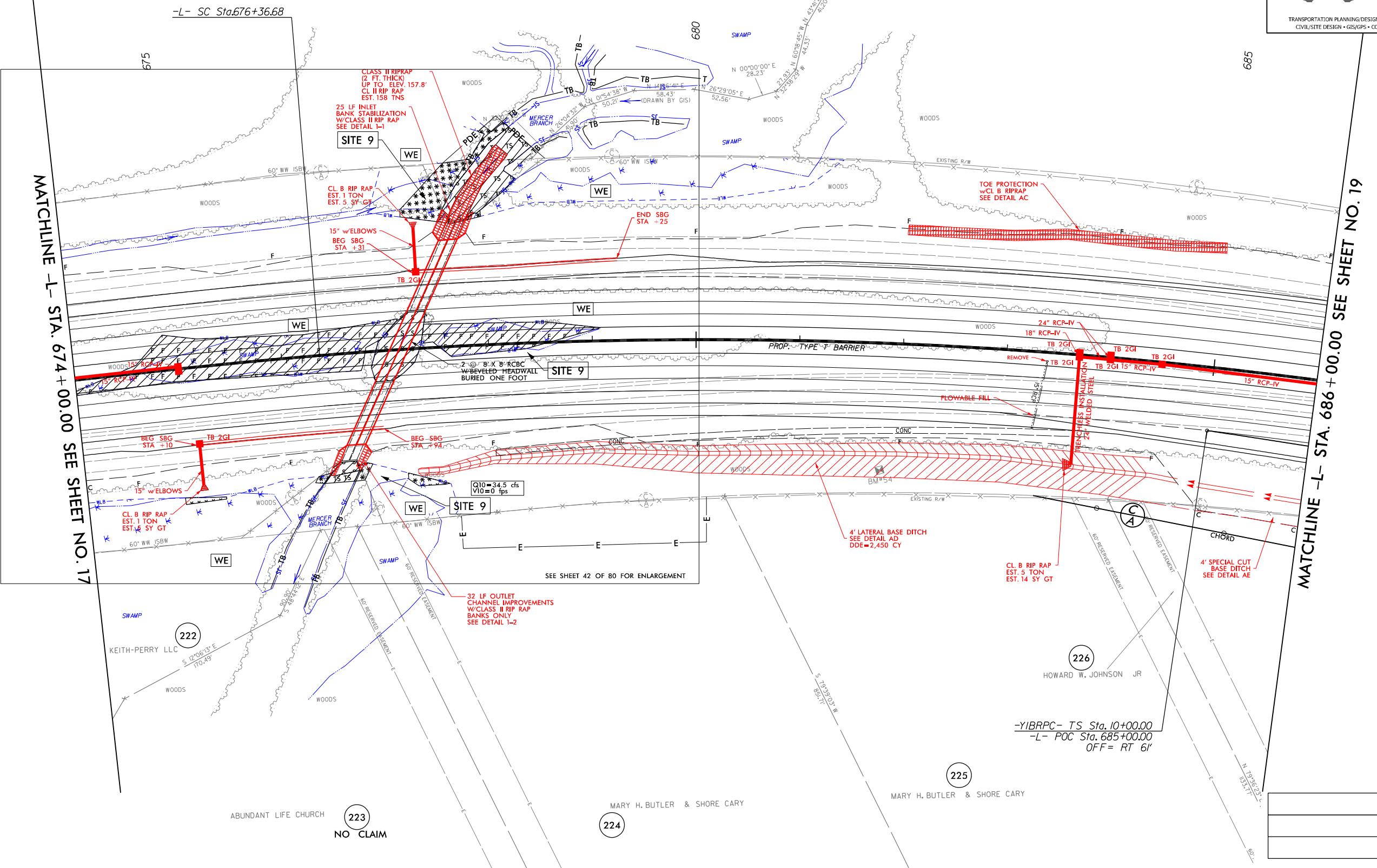
23 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

REVISED

ROW REVISION - ??/??/2021 - UPDATED PDE FLAGGING ON PARCEL 221.BAM

Permit 8/19/2021

MATCHLINE -E- 311



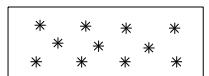
**PERMIT DRAWING
SHEET 42 OF 80**

40' 0' 40'

GRAPHIC SCALE



DENOTES FILL IN WETLAND



DENOTES MECHANIZED CLEARING



DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER

MATCHLINE - STA. 674+00.00 SEE SHEET

25 LF INLEI
BANK STABILIZATION
W/CLASS II RIP RAP
SEE DETAIL 1-1

SITE 9**WE**

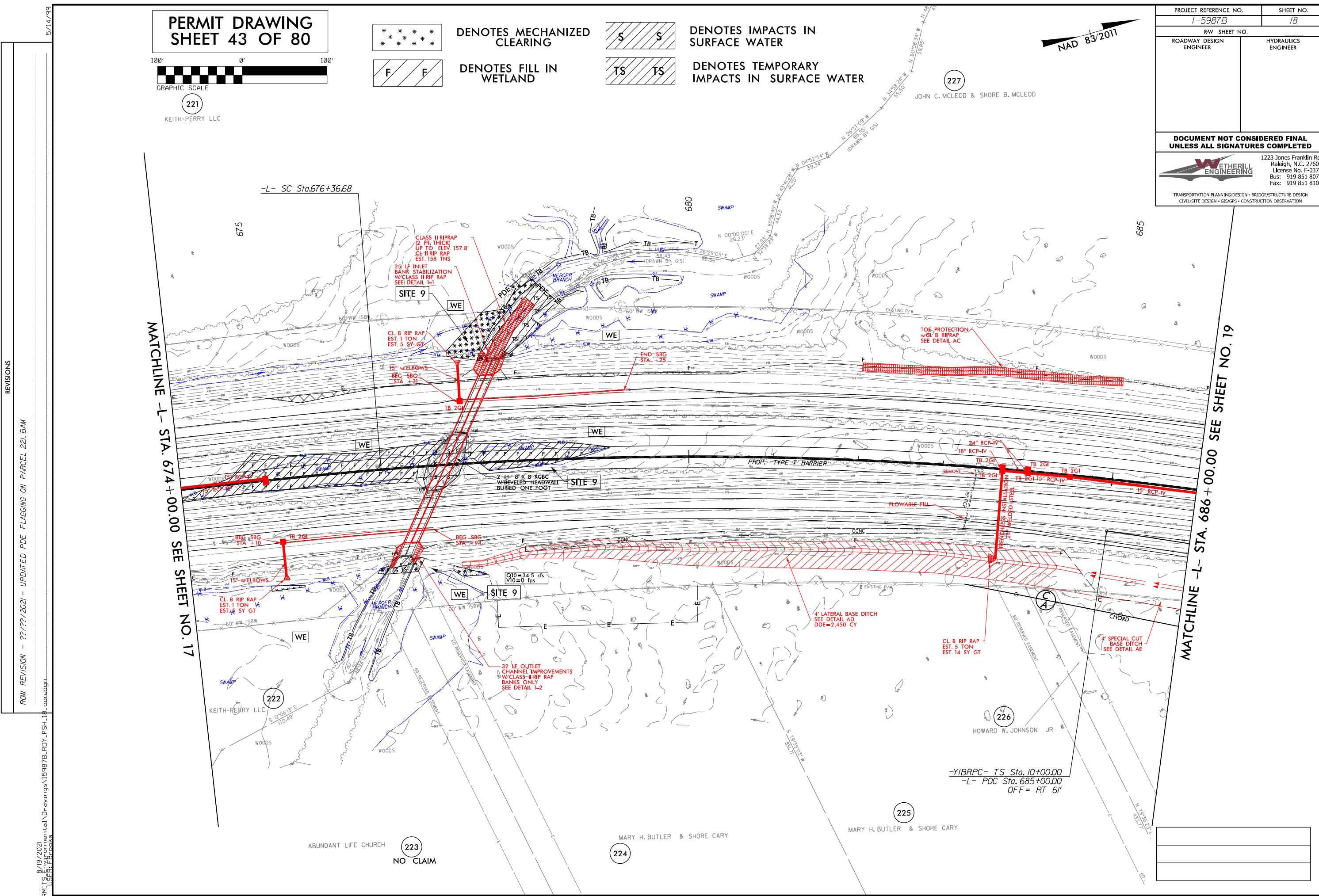
60" WW ISBW

CL. B RIP RAP
EST. 1 TON
EST. 5 SY GT

15" w/ELBOWS
BEG SBG
STA +31

TB 2GI

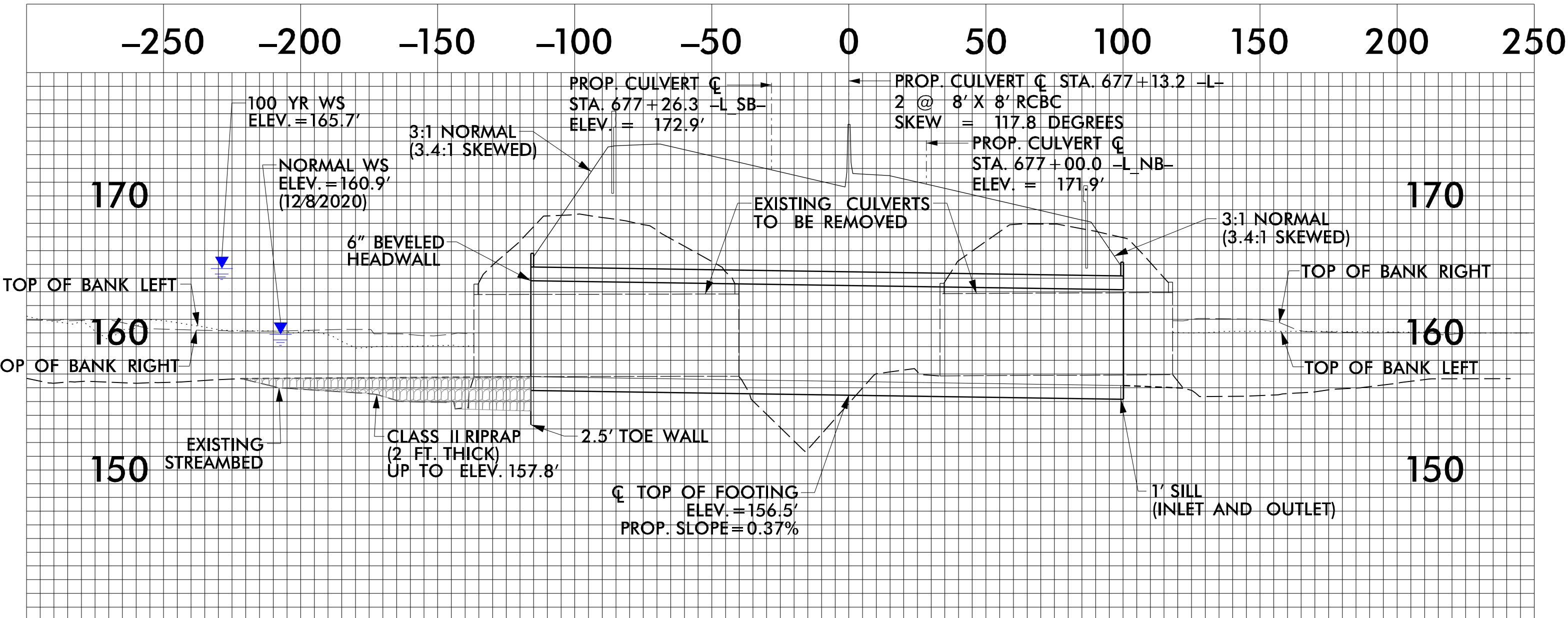
WE**WE****F**



**PERMIT DRAWING
SHEET 44 OF 80**

PROJECT REFERENCE NO.	SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

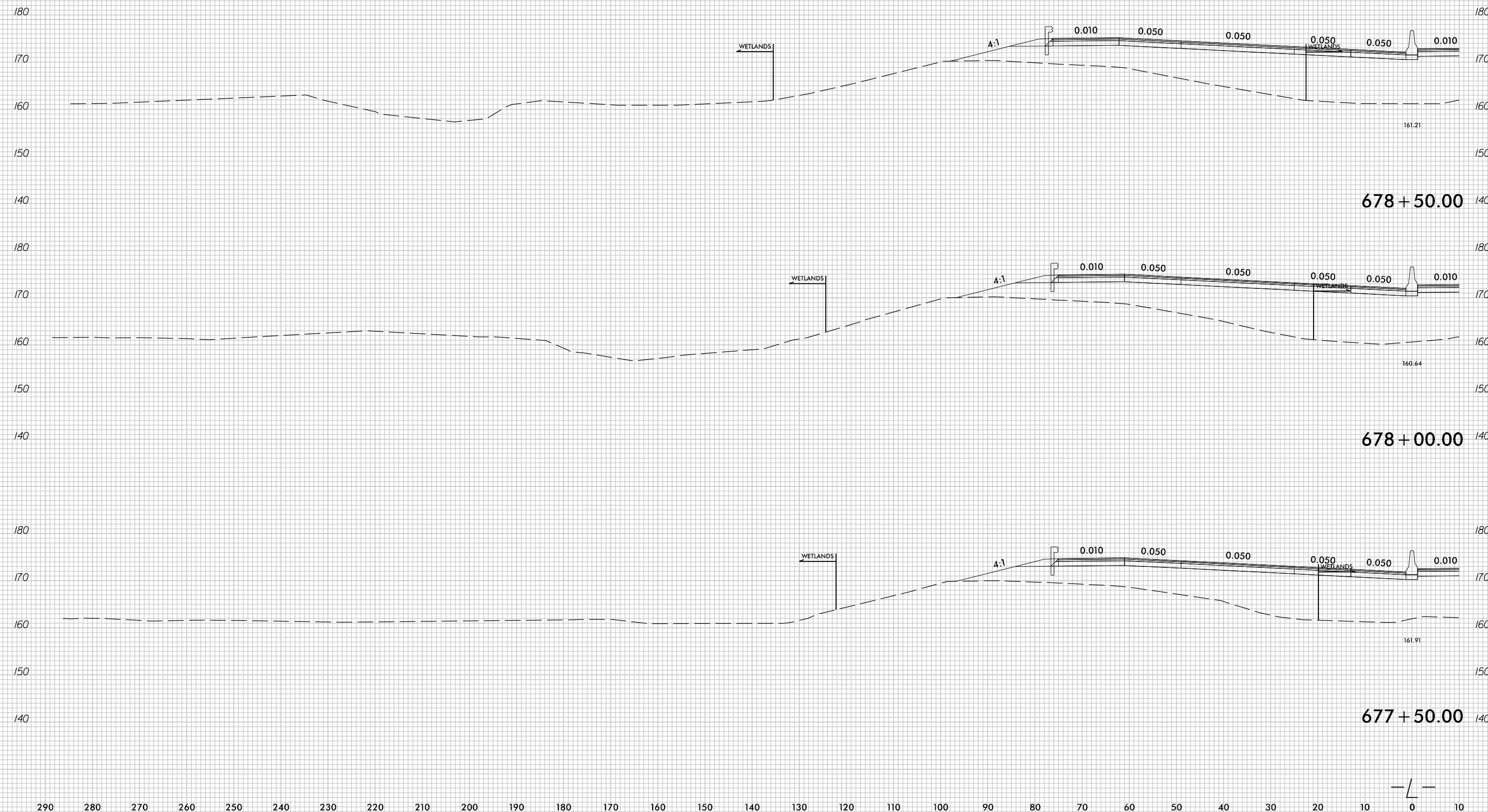
SITE 9



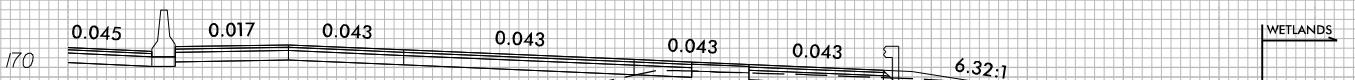
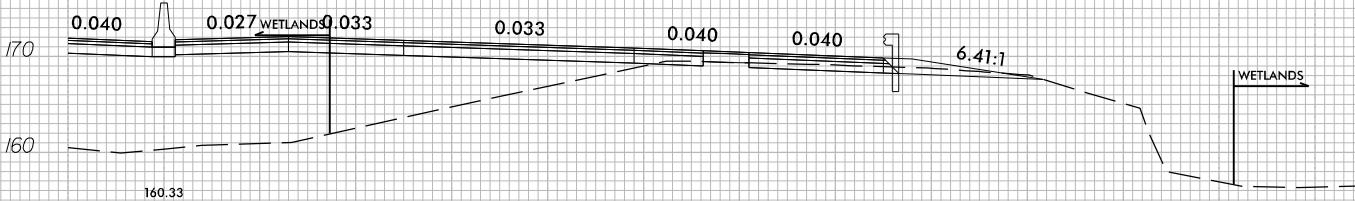
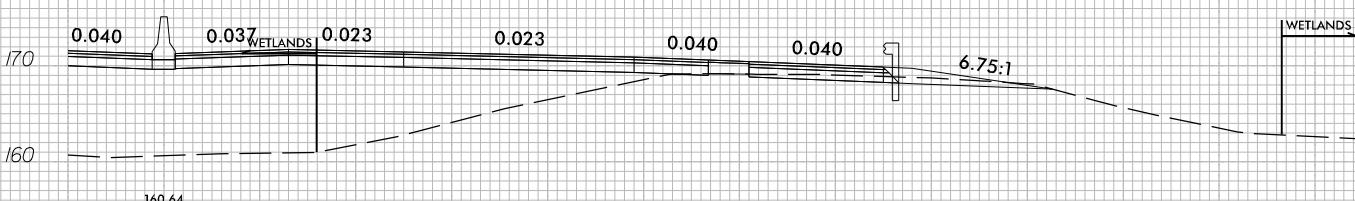
290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10

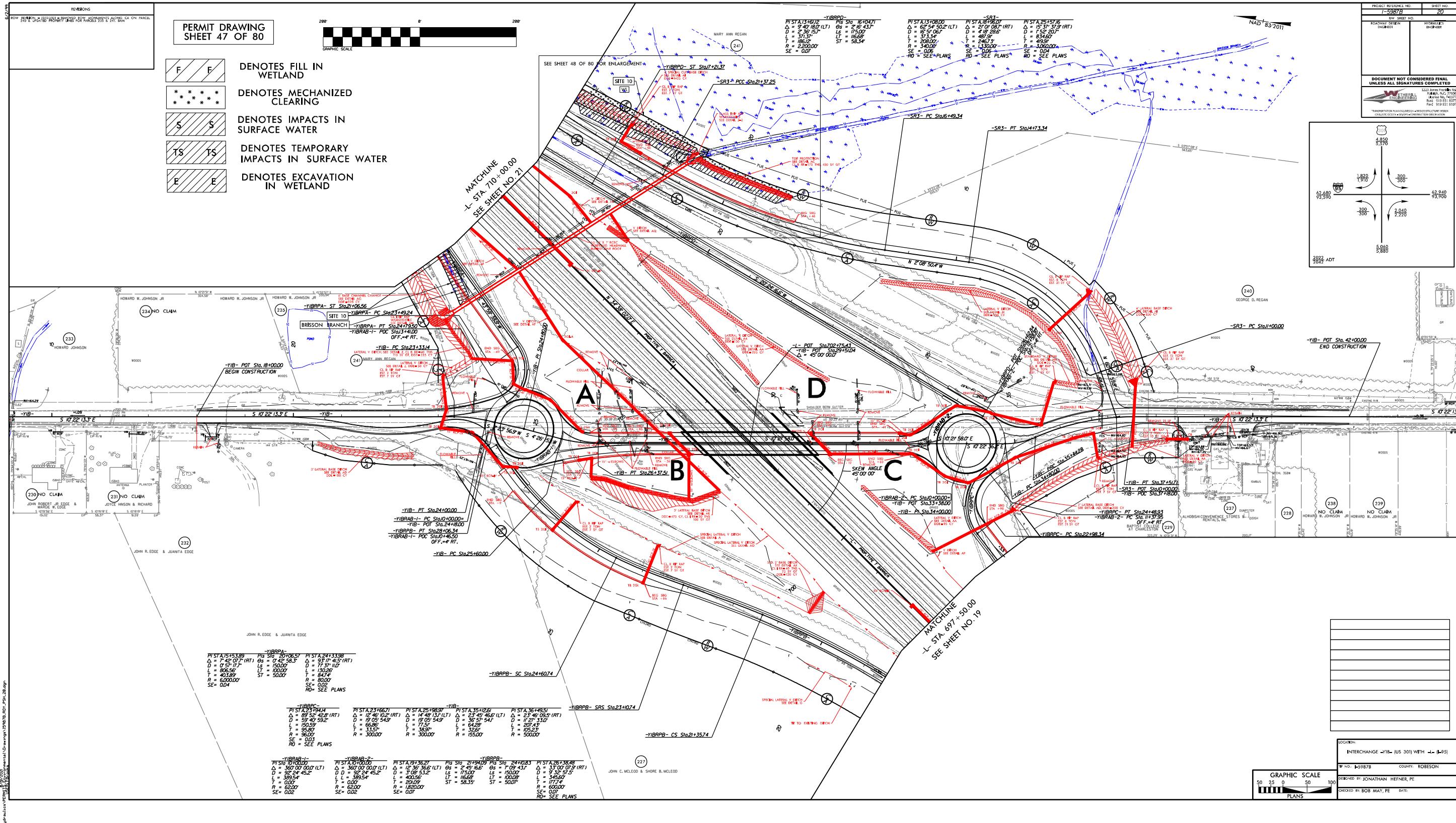
SITE 9

**PERMIT DRAWING
SHEET 45 OF 80**



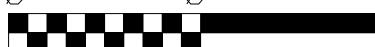
10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290

SITE 9**PERMIT DRAWING
SHEET 46 OF 80****677 + 00.00****676 + 50.00****676 + 00.00**



PERMIT DRAWING
SHEET 48 OF 80

40' 0' 4



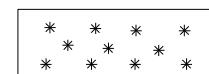
GRAPHIC SCALE



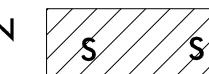
**DENOTES EXCAVATION
IN WETLAND**



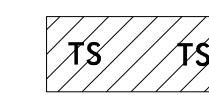
**DENOTES FILL IN
WETLAND**



**DENOTES MECHANIZED
CLEARING**



DENOTES IMPACTS IN
SURFACE WATER

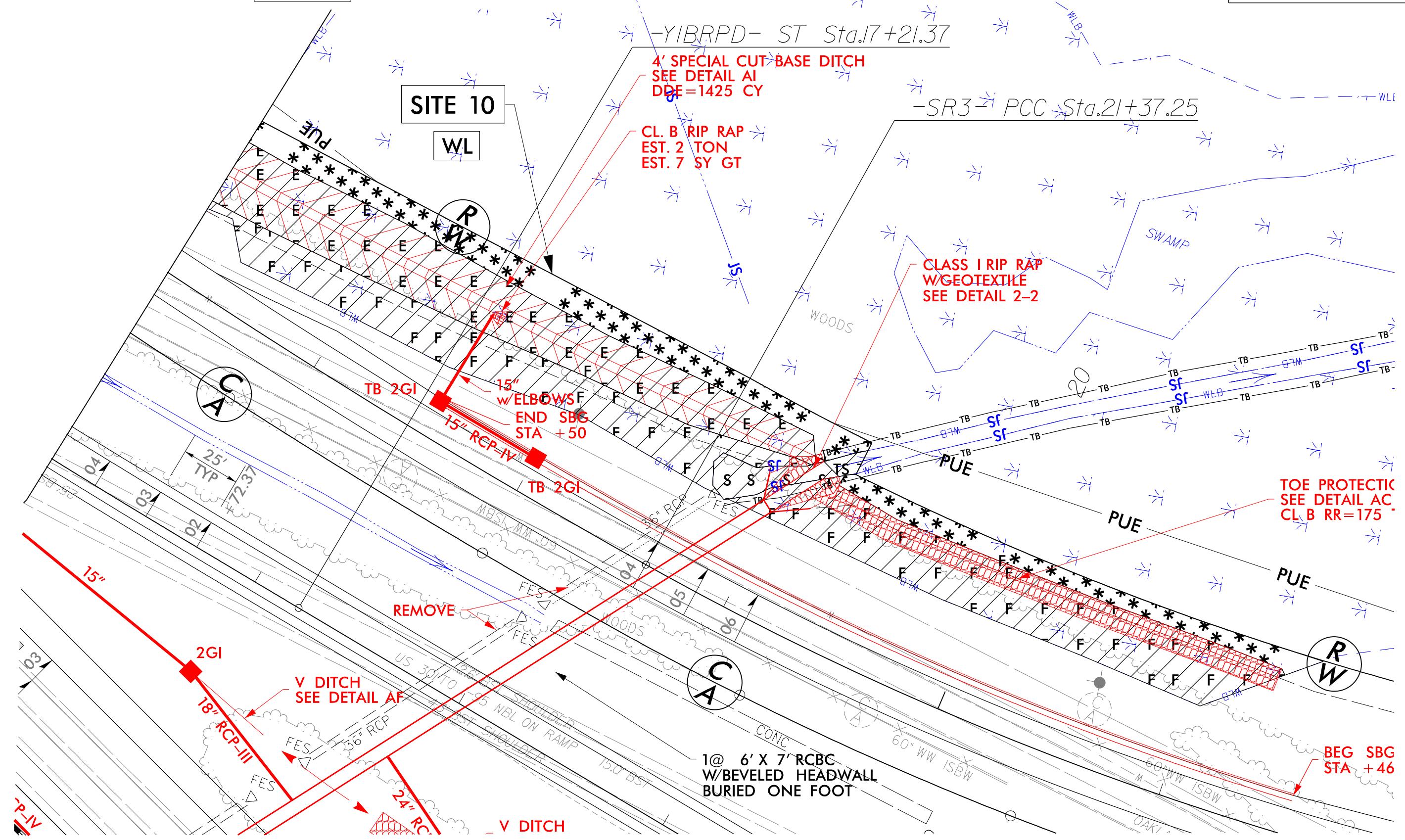


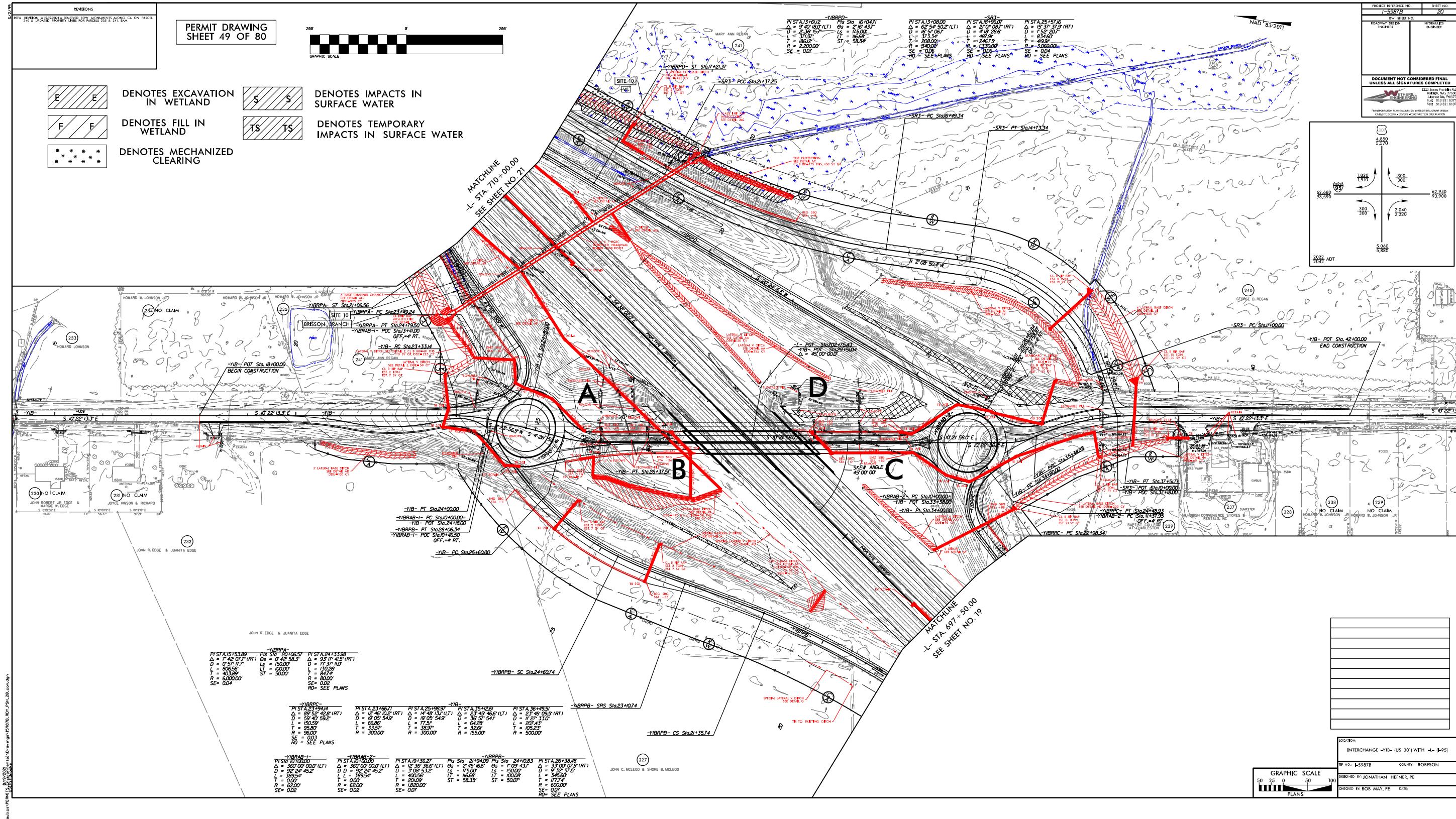
DENOTES TEMPORARY
IMPACTS IN SURFACE WATERS

MARY ANN REGAN

(241)

PROJECT REFERENCE NO. _____		SHEET NO. _____
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



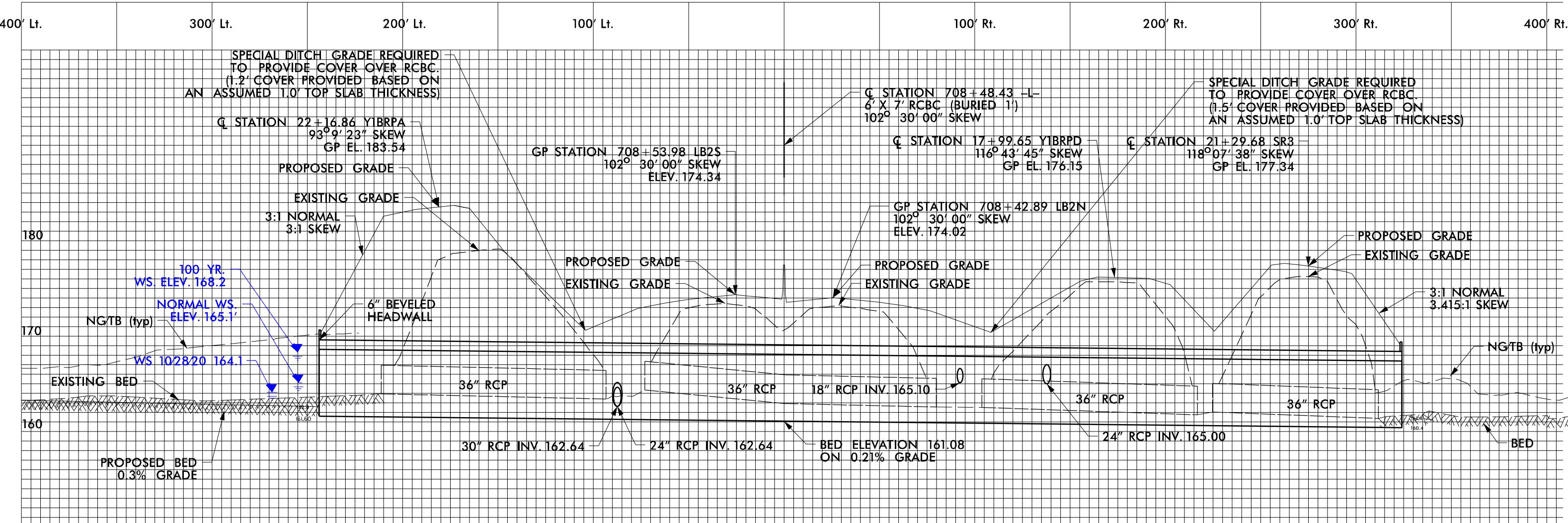


PROJECT REFERENCE NO.	SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

**PERMIT DRAWING
SHEET 50 OF 80**

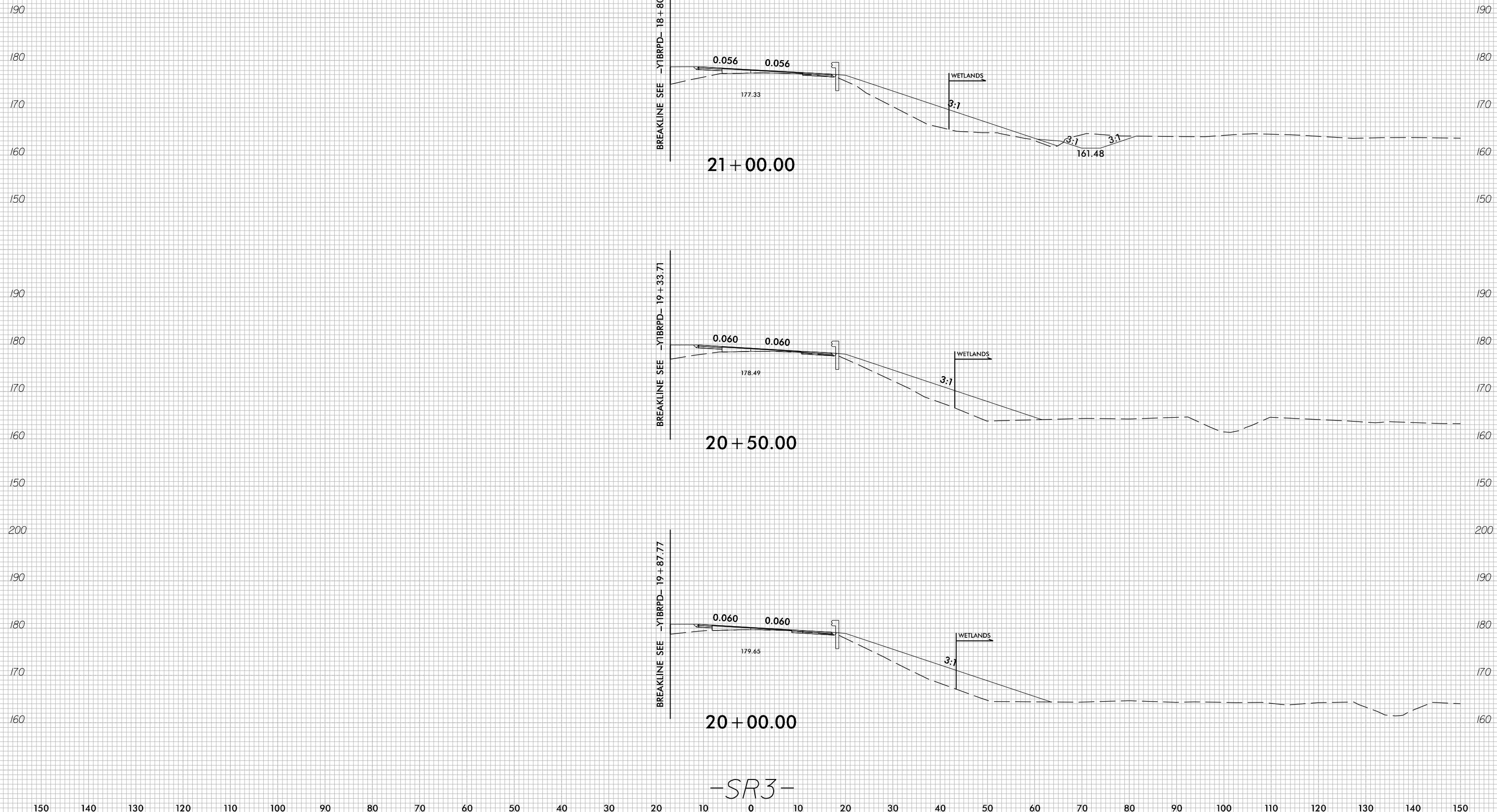
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

SITE 10

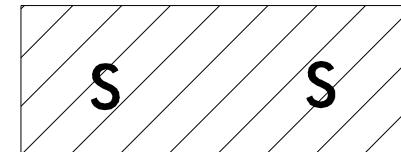


150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SITE 10

**PERMIT DRAWING
SHEET 51 OF 80**


**PERMIT DRAWING
SHEET 53 OF 80**

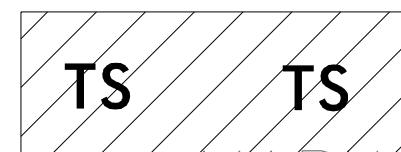


DENOTES IMPACTS IN SURFACE WATER

20' 0' 20'



GRAPHIC SCALE



MARY ANN REGAN

**DENOTES TEMPORARY
IMPACTS IN SURFACE WATER**

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

CHORD

WORD

100

E 94

10 of 10

**CL. I RIP RAP
EMBANKMENT PROTECTIC
EST. 41 TON
EST. 59 SY GT**

SITE 10

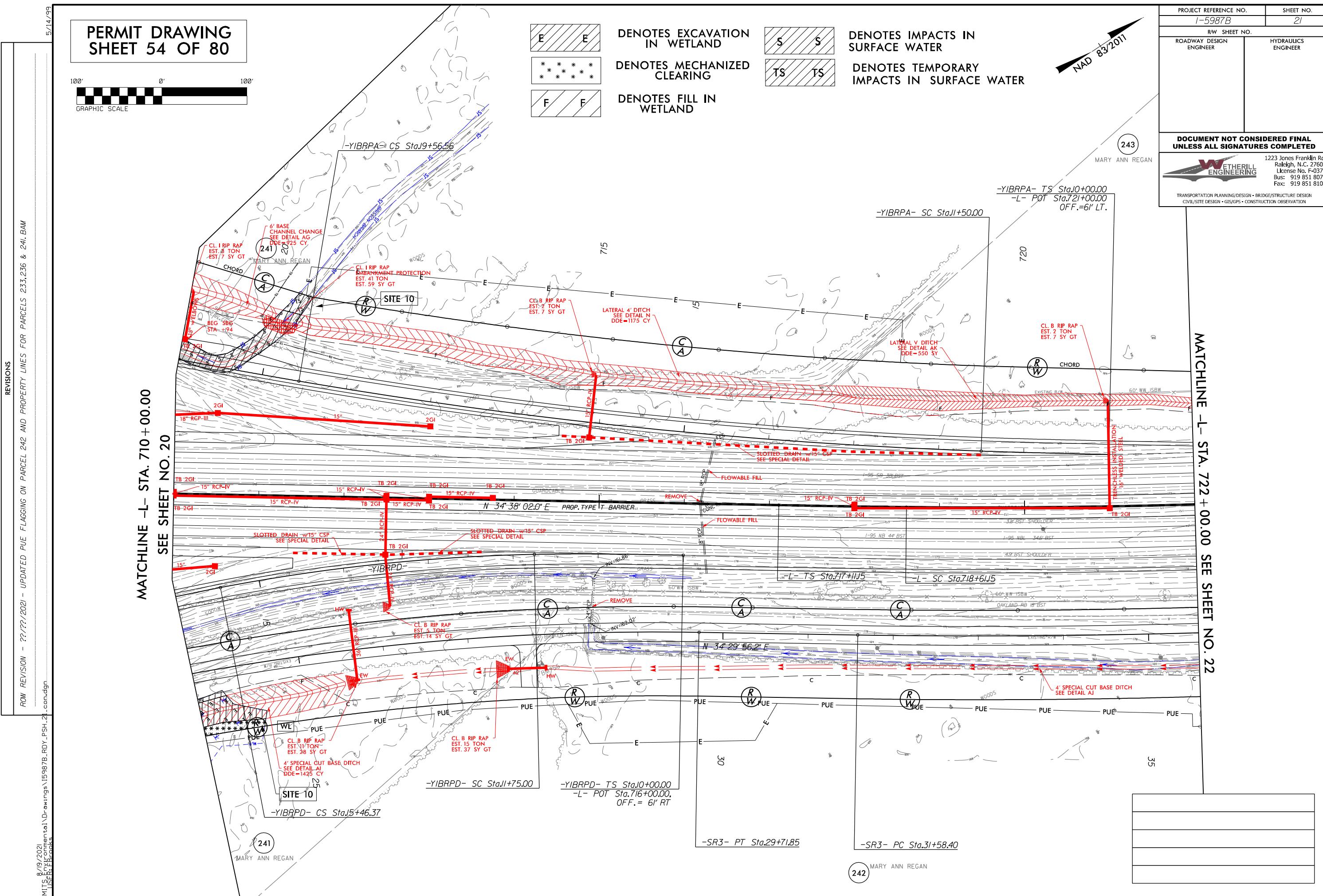
BRISSON BRANCH

BRISSON BRANCH

BEG SBG STA + 94

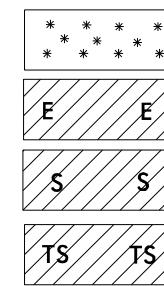
TB 2GI

15'' W/EL



**PERMIT DRAWING
SHEET 55 OF 80**

100' 0' 100'
GRAPHIC SCALE



DENOTES MECHANIZED
CLEARING

DENOTES EXCAVATION
IN WETLAND

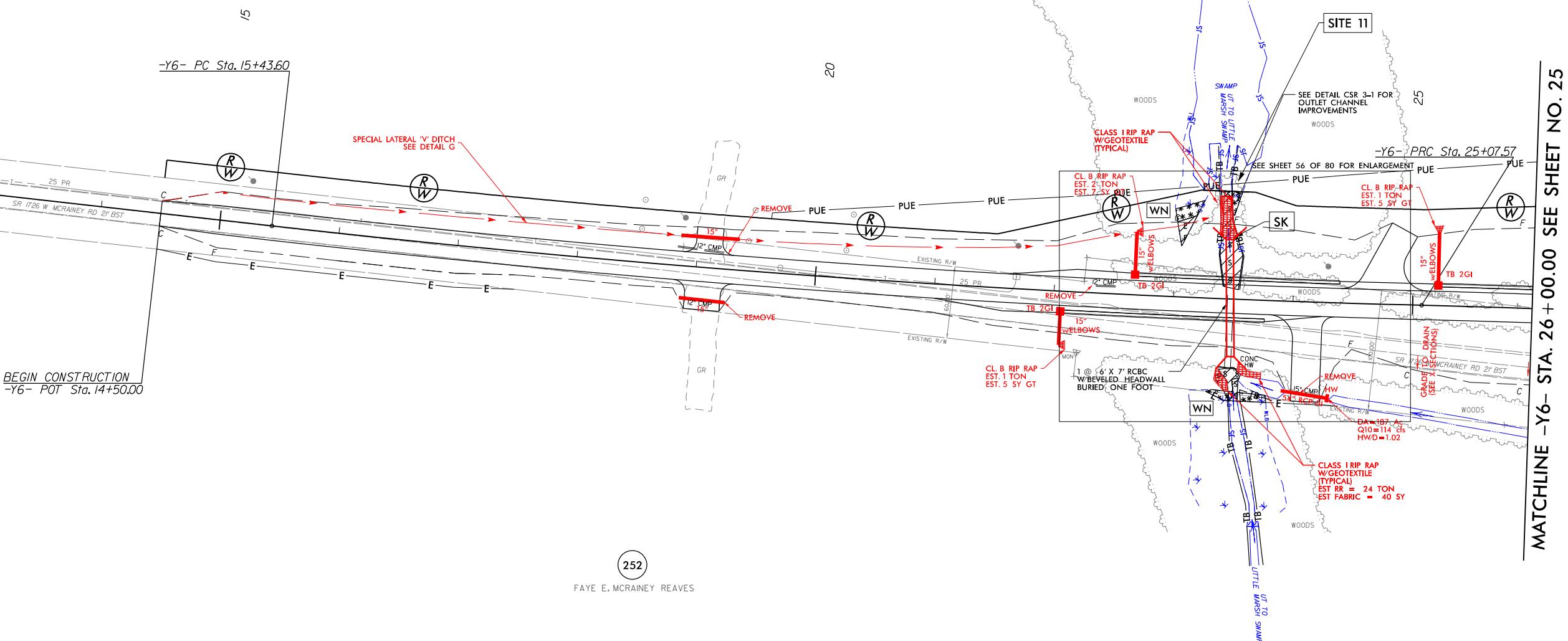
DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

NAD
8/3/2011

PROJECT REFERENCE NO.	SHEET NO.
1-5987B	44
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
MOTT MACDONALD I & E, LLC LICENSE NO. F-0669	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Prepared in the Office of:	
M MOTT MACDONALD	PO Box 700 Fuquay-Varina, NC 27526 www.mottmac.com/mccas
W ETHERILL ENGINEERING	1223 Jones Franklin Rd. Raleigh, NC 27606 Phone: 919 851 8077 Fax: 919 851 8107

256
FAYE E. MCRAINEY REAVES



-Y6-
PI Sta 20+25.89 PI Sta 26+92.85
 $\Delta = 4^{\circ} 58' 32.9'' (LT)$ $\Delta = 1^{\circ} 54' 45.5'' (RT)$
 $D = 0^{\circ} 30' 58.2''$ $D = 0^{\circ} 30' 58.2''$
 $L = 963.97'$ $L = 370.54'$
 $T = 482.29'$ $T = 185.29'$
 $R = 11,000.00'$ $R = 11,000.00'$
 $SE = NC$ $SE = NC$

LEGEND		
	PROPOSED PAVEMENT REMOVAL	
	PROPOSED PAVED SHOULDER	
	PROPOSED APPROACH SLAB	

FOR -Y6- PROFILE SEE SHEET 95

**PERMIT DRAWING
SHEET 56 OF 80**

20' 0' 20'



GRAPHIC SCALE

WN

PU

۲

SITE 11

A hand-drawn technical sketch of a bridge deck. The sketch includes several horizontal lines representing the deck surface and various structural supports. A red arrow points to a section labeled "12\" data-bbox="350 620 450 680"> CMP". Another red arrow points to a vertical dimension line labeled "6' PS" data-bbox="750 150 850 250" and "15'" data-bbox="850 150 950 250". To the right, the text "WIFI BOWS" is written vertically. At the bottom left, the word "OVE" is partially visible.

15"
WELBOWS

1 @ 6' X 7' RCBC
W/BEVELED HEADWALL
BURIED ONE FOOT

WN

CONC
HW

TBS S S

TBS

F x * S

S * TBS

MIL

15" CMP

54" RCP-III

REMOVE

HW

E 24' DR-III

EXISTING R/W

100.00'

DA 187 A-

DENOTES EXCAVATION IN WETLAND

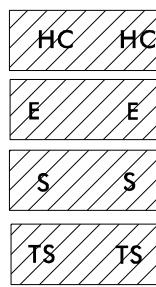
DENOTES MECHANIZED CLEARING

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

**PERMIT DRAWING
SHEET 57 OF 80**

100' 0' 100'
GRAPHIC SCALE

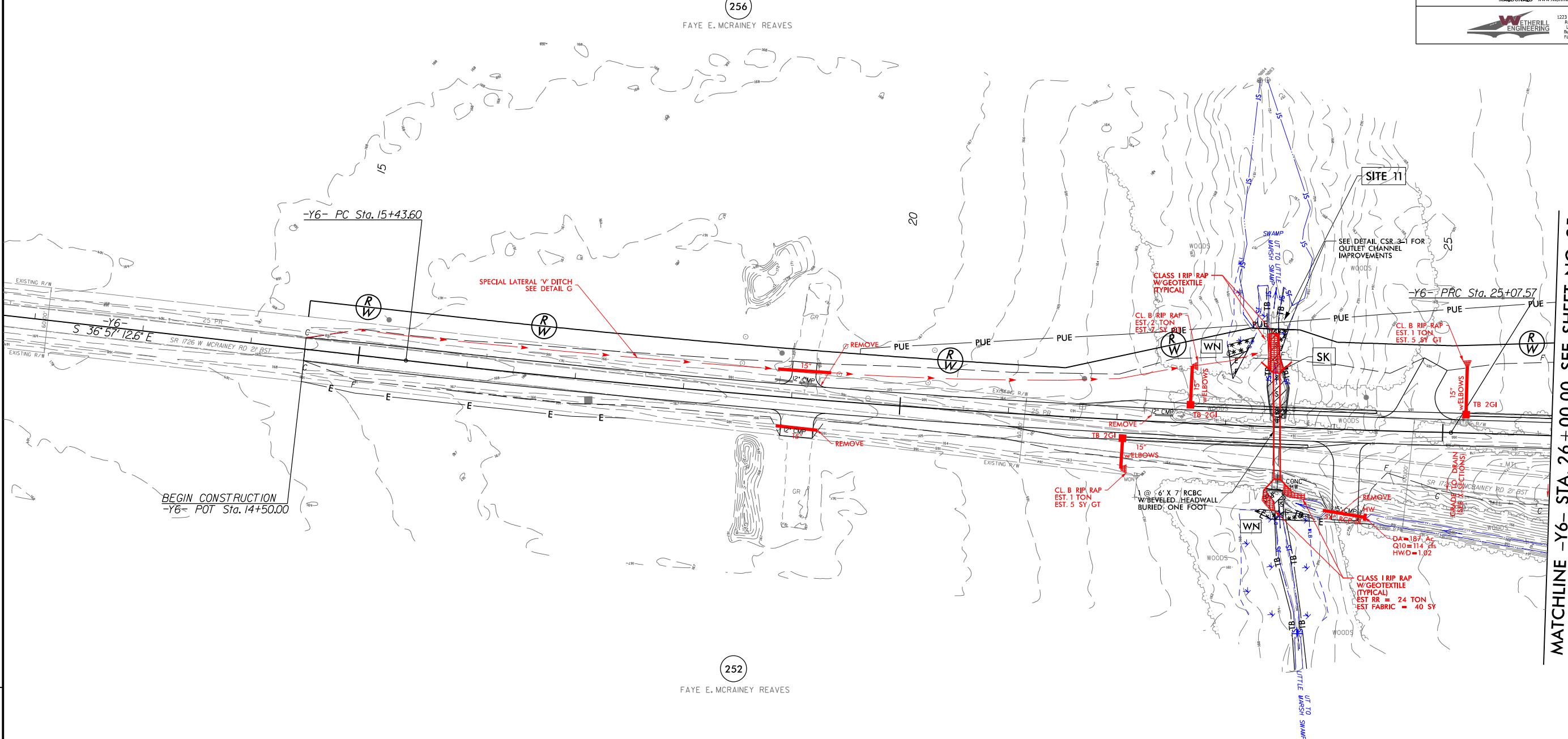


DENOTES HAND
CLEARING
DENOTES EXCAVATION
IN WETLAND
DENOTES IMPACTS IN
SURFACE WATER
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

NAD
8/3/2011

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	44
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
MOTT MACDONALD I & E, LLC LICENSE NO. F-0669	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Prepared in the Office of:	
M MOTT MACDONALD	PO Box 700 Fuquay-Varina, NC 27576 Phone: 919-851-8077 Fax: 919-851-8107
ETHERILL ENGINEERING	1223 Jones Franklin Rd, Raleigh, NC 27606 Phone: 919-851-8077 Fax: 919-851-8107

REVISIONS



MATCHLINE -Y6- STA. 26+00.00 SEE SHEET NO. 25

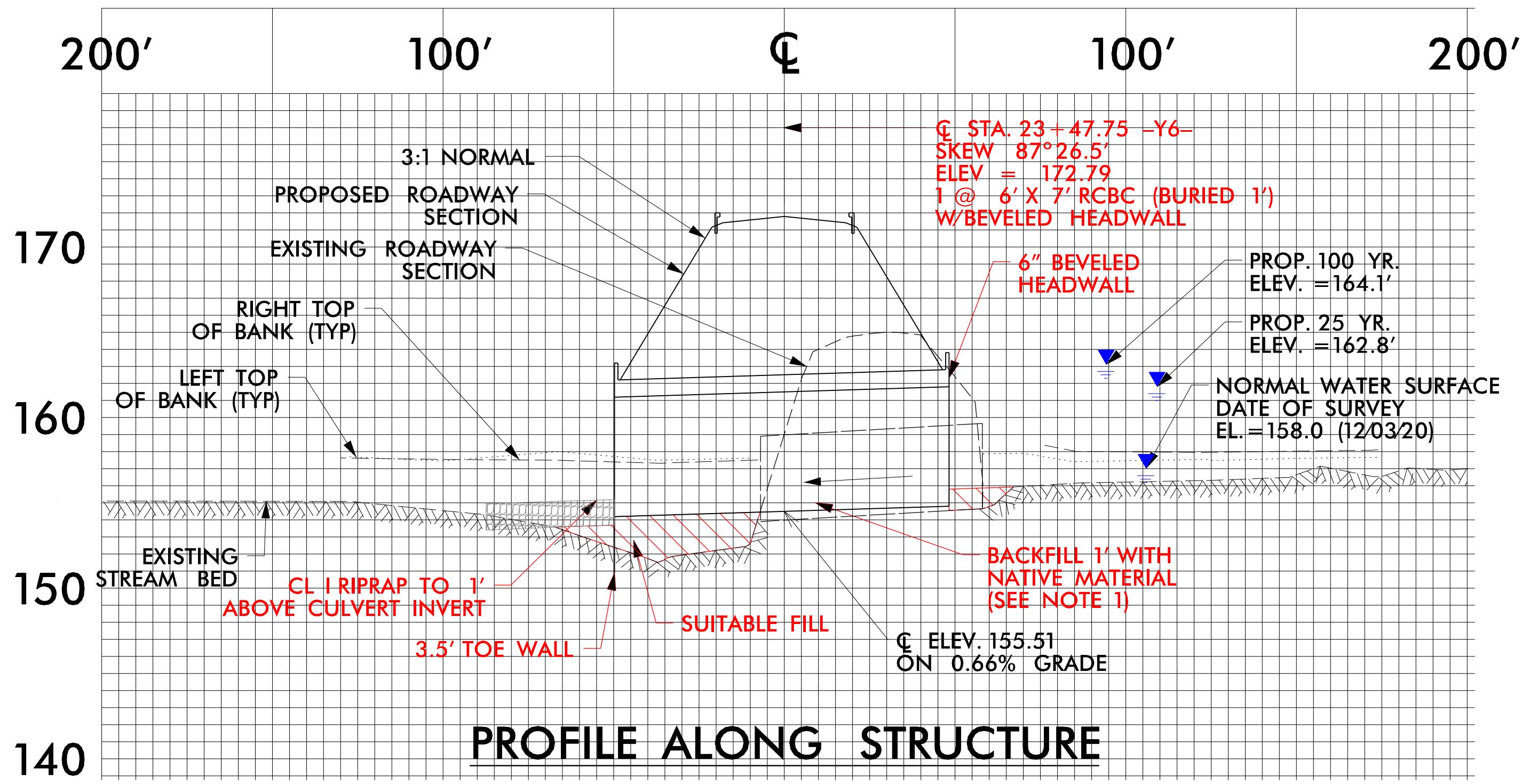
-Y6-
PI Sta 20+25.89 PI Sta 26+92.85
Δ = 4° 58' 32.9" (LT) Δ = 1° 54' 45.5" (RT)
D = 0° 30' 58.2" D = 0° 30' 58.2"
L = 963.97' L = 370.54'
T = 482.29' T = 185.29'
R = 11,000.00' R = 11,000.00'
SE = NC SE = NC

|||||

PROJECT REFERENCE NO.		SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

SITE 11

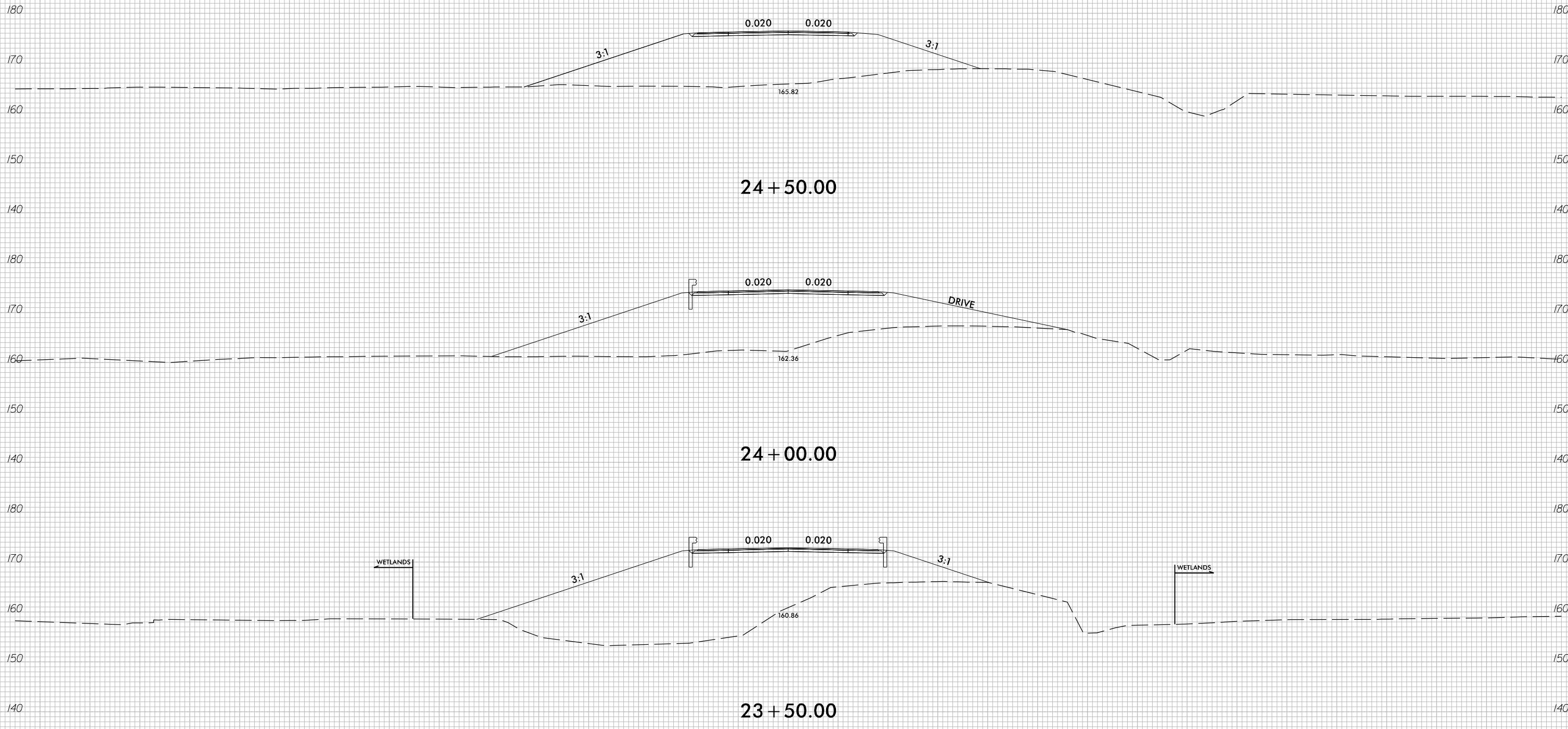
PERMIT DRAWING
SHEET 58 OF 80



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

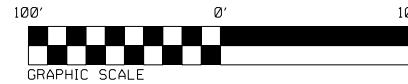
SITE 11

**PERMIT DRAWING
SHEET 59 OF 80**

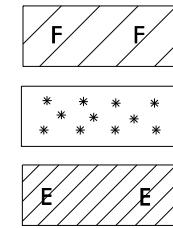


150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

**PERMIT DRAWING
SHEET 60 OF 80**



GRAPHIC SCALE



DENOTES FILL IN
WETLAND

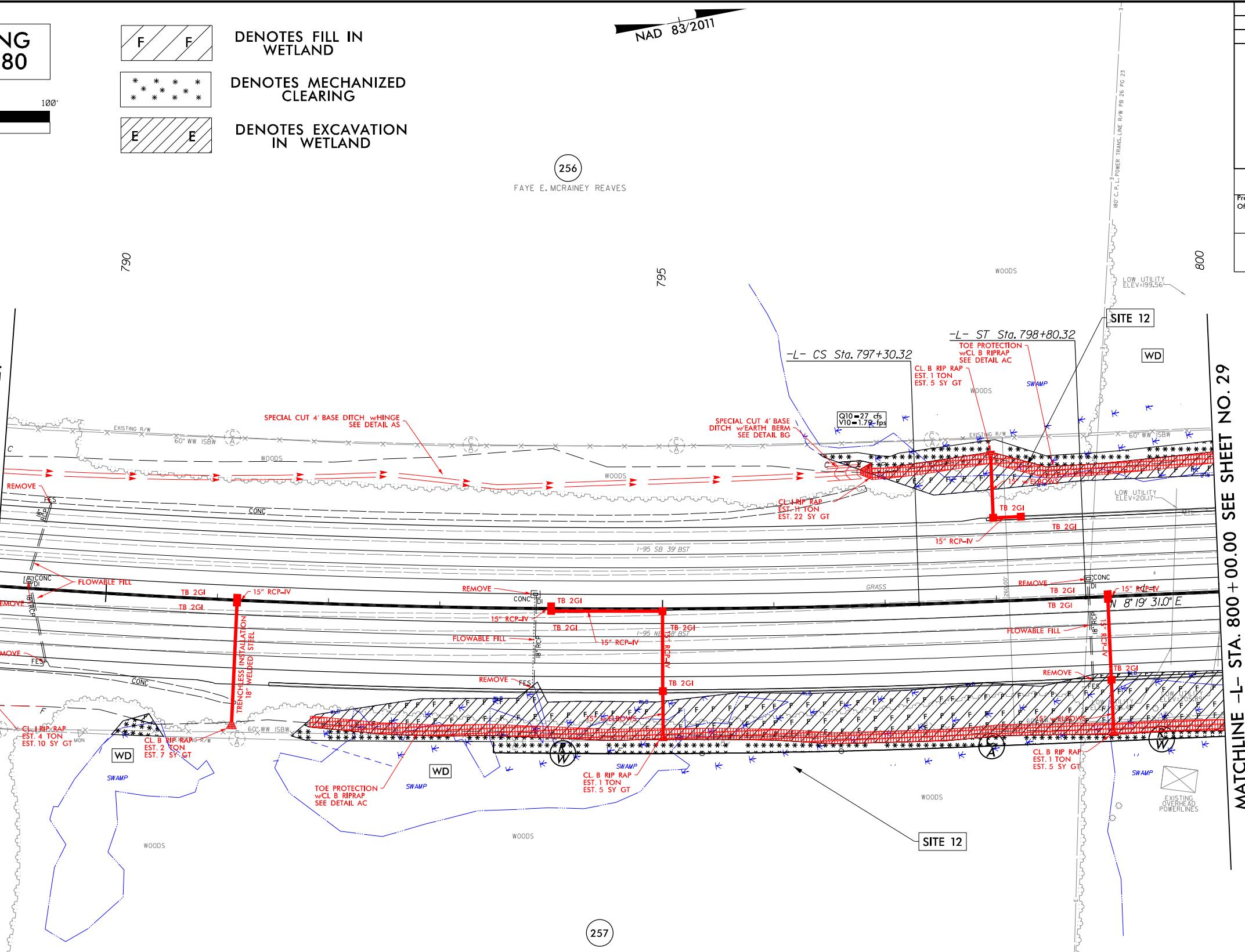
DENOTES MECHANIZED
CLEARING

DENOTES EXCAVATION
IN WETLAND

NAD 83/2011

FAYE E. MCRAINEY REAVES

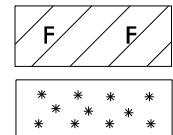
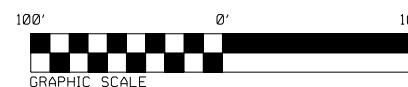
MATCHLINE -L- STA. 789 + 00.00 SEE SHEET NO. 27



PROJECT REFERENCE NO.		SHEET NO.
I-5897B		28
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
MOTT MACDONALD I & E, LLC LICENSE NO. F-0669		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
Prepared in the Office of:		
M MOTT MACDONALD PO Box 700 Fuquay-Varina, NC 27526 1223 Jones Franklin Rd. Fuquay-Varina, NC 27526 Tel: 919 851 8077 Fax: 919 851 8107		
 WETHERILL ENGINEERING		

PI Sta 788+81.45 P/I Sta 797+80.32
 $\Delta = 12^{\circ} 33' / 2.3' (LT)$ $\Theta_S = 0^{\circ} 33' 08.4''$
 $D = 0^{\circ} 44' 11.2''$ $L_S = 150.00'$
 $L = 1,704.58'$ $L_T = 100.00'$
 $T = 855.72'$ $S_T = 50.00'$
 $R = 7,780.00'$
 $SE = .03$
 $RO = 150.00'$

**PERMIT DRAWING
SHEET 61 OF 80**



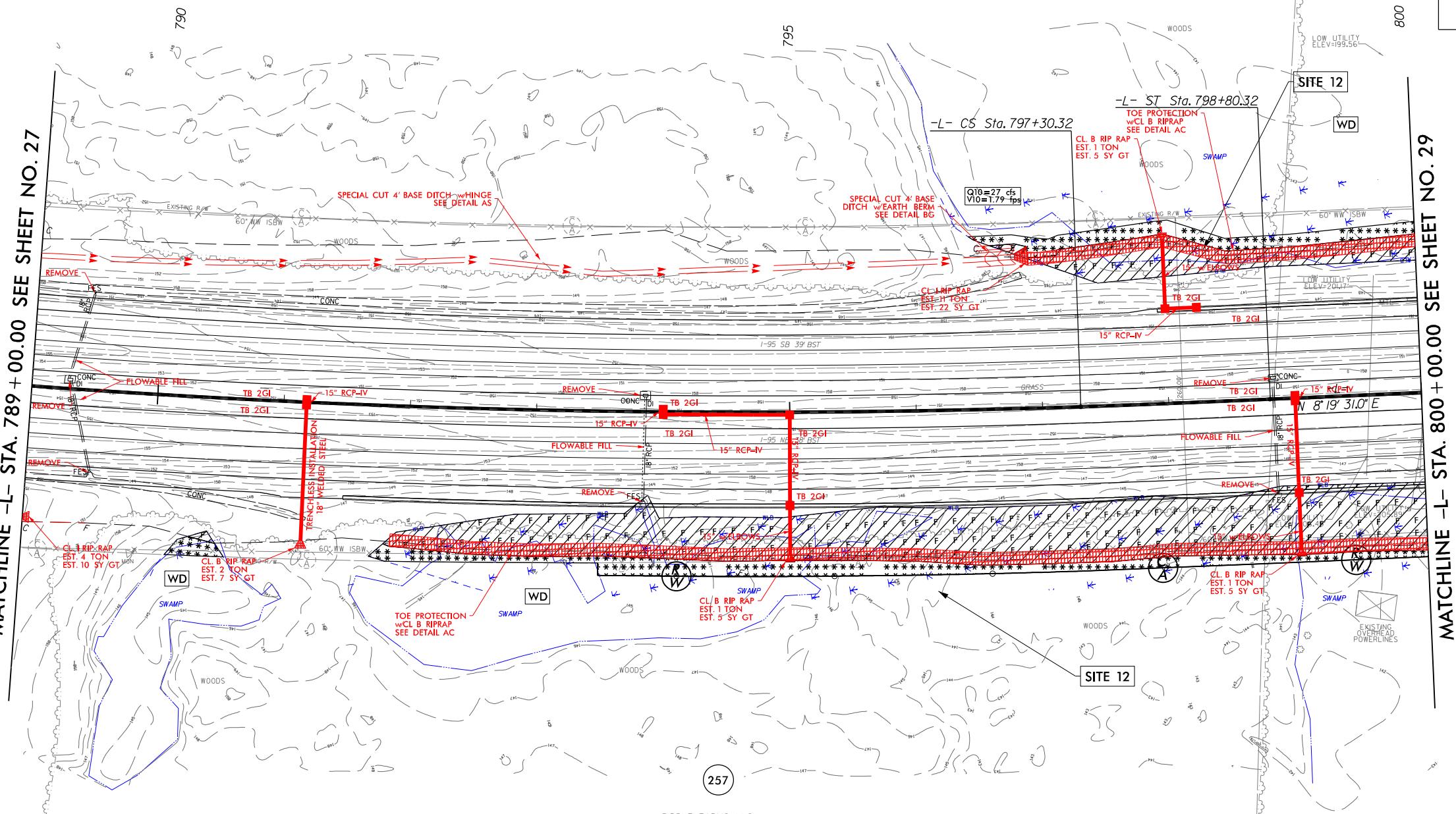
DENOTES FILL IN
WETLAND

DENOTES MECHANIZED
CLEARING

NAD 83/2011

256
FAYE E. MCRAINEY REAVES

MATCHLINE -L- STA. 789 + 00.00 SEE SHEET NO. 27



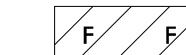
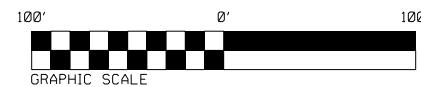
RIDDLE FARMS, LLC.

-L-
PI Sta 788+81.45 Pls Sta 797+80.32
 $\Delta = 12^\circ 33' 12.3'' (LT)$ $\Theta_S = 0^\circ 33' 08.4''$
 $D = 0^\circ 44' 11.2''$ $L_S = 150.00'$
 $L = 1,704.58'$ $L_T = 100.00'$
 $T = 855.72'$ $S_T = 50.00'$
 $R = 7,780.00'$
 $SE = 03$
 $RO = 150.00'$

PROJECT REFERENCE NO.		SHEET NO.
I-5897B		28
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
MOTT MACDONALD I & E, LLC LICENSE NO. I-0669		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
Prepared in the Office of: M M PO Box 700 MOTT MACDONALD Fuquay-Varina, NC 27526 www.mottmac.com/maccorps		
1223 Jones Ferry Rd. Raleigh, NC 27606 Phone: 919 851 807/ Fax: 919 851 8107		
WEATHERILL ENGINEERING		

MATCHLINE -L- STA. 800 + 00.00 SEE SHEET NO. 29

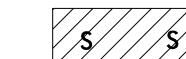
**PERMIT DRAWING
SHEET 62 OF 80**



DENOTES FILL IN WETLAND



DENOTES MECHANIZED
CLEARING



DENOTES IMPACTS IN
SURFACE WATER



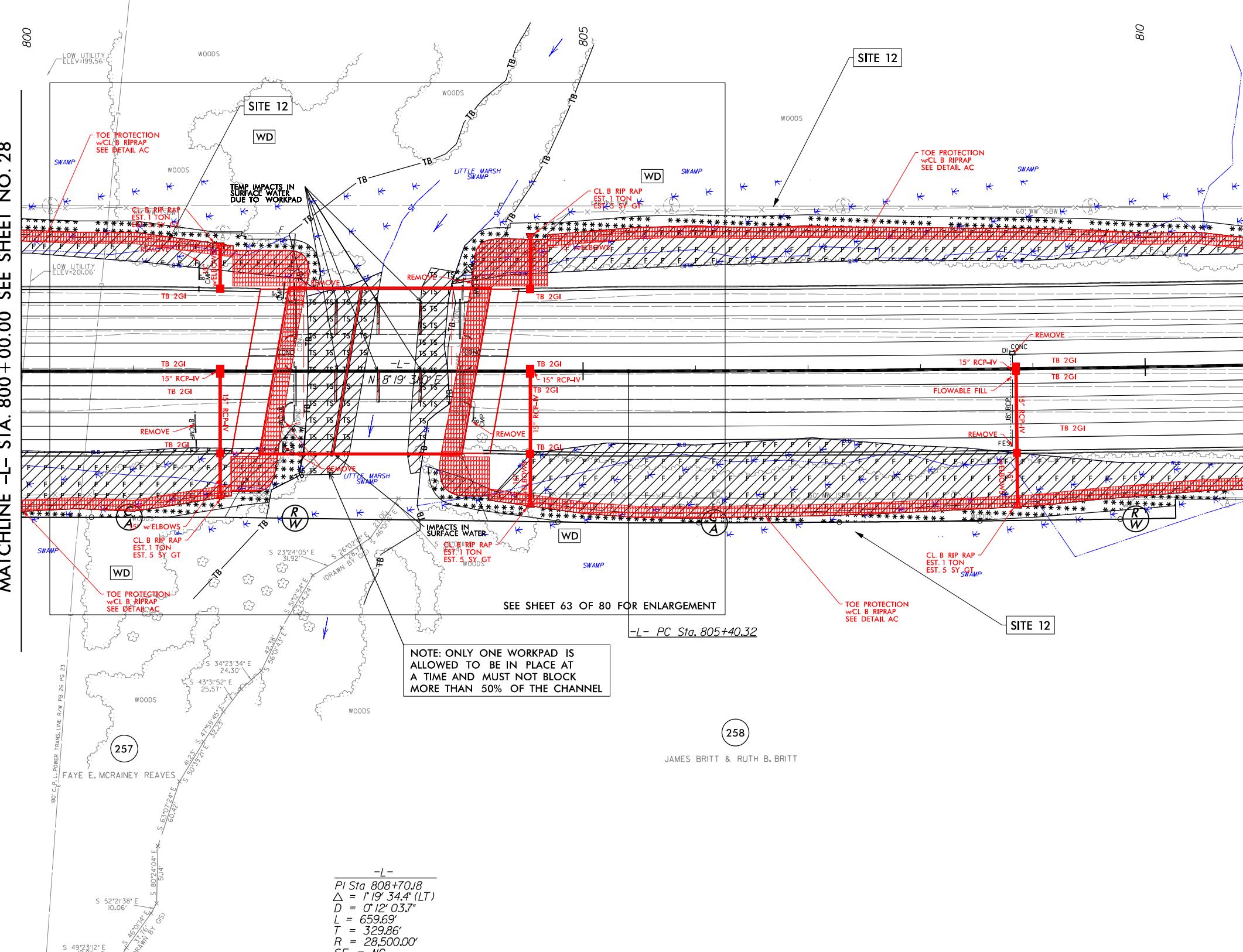
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

NAD 83/2011

256
FAYE E. MCRAINEY REAVES

MATCHLINE -L- STA. 800+00.00 SEE SHEET NO. 28

MATCHLINE -L- STA. 811+00.00 SEE SHEET NO. 30



PROJECT REFERENCE NO. <u>I-5897B</u>	SHEET NO. <u>29</u>
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
MOTT MACDONALD I & E, LLC LICENSE NO. 146669	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Prepared in the Office of: M MOTT MACDONALD PO Box 700 Fuquay-Varina, NC 27526 www.mtmac.com/mertekas	
WETHERILL ENGINEERING 1223 Jones Franklin Rd. Raleigh, NC 27606 Tel: 919 851 8077 Fax: 919 851 8107	

6/2/99

**PERMIT DRAWING
SHEET 63 OF 80**

40' 0' 40'



GRAPHIC SCALE

SITE 1

DENOTES MECHANIZED CLEARING

DENOTES FILL IN
WETLAND

DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATERS

LITTLE MARSH
SWAMP

SWAMP

PROJECT REFERENCE NO. _____		SHEET NO. _____
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL		

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

SWAMP

**PERMIT DRAWING
SHEET 64 OF 80**

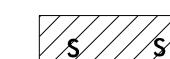
A graphic scale bar consisting of a black horizontal line with a white checkered pattern on its left side. The pattern has 10 squares, each 10' wide, totaling 100'. The word "GRAPHIC" is printed below the pattern, and "SCALE" is printed to its right.



DENOTES MECHANIZED
CLEARING



DENOTES FILL IN
WETLAND



DENOTES IMPACTS IN
SURFACE WATER



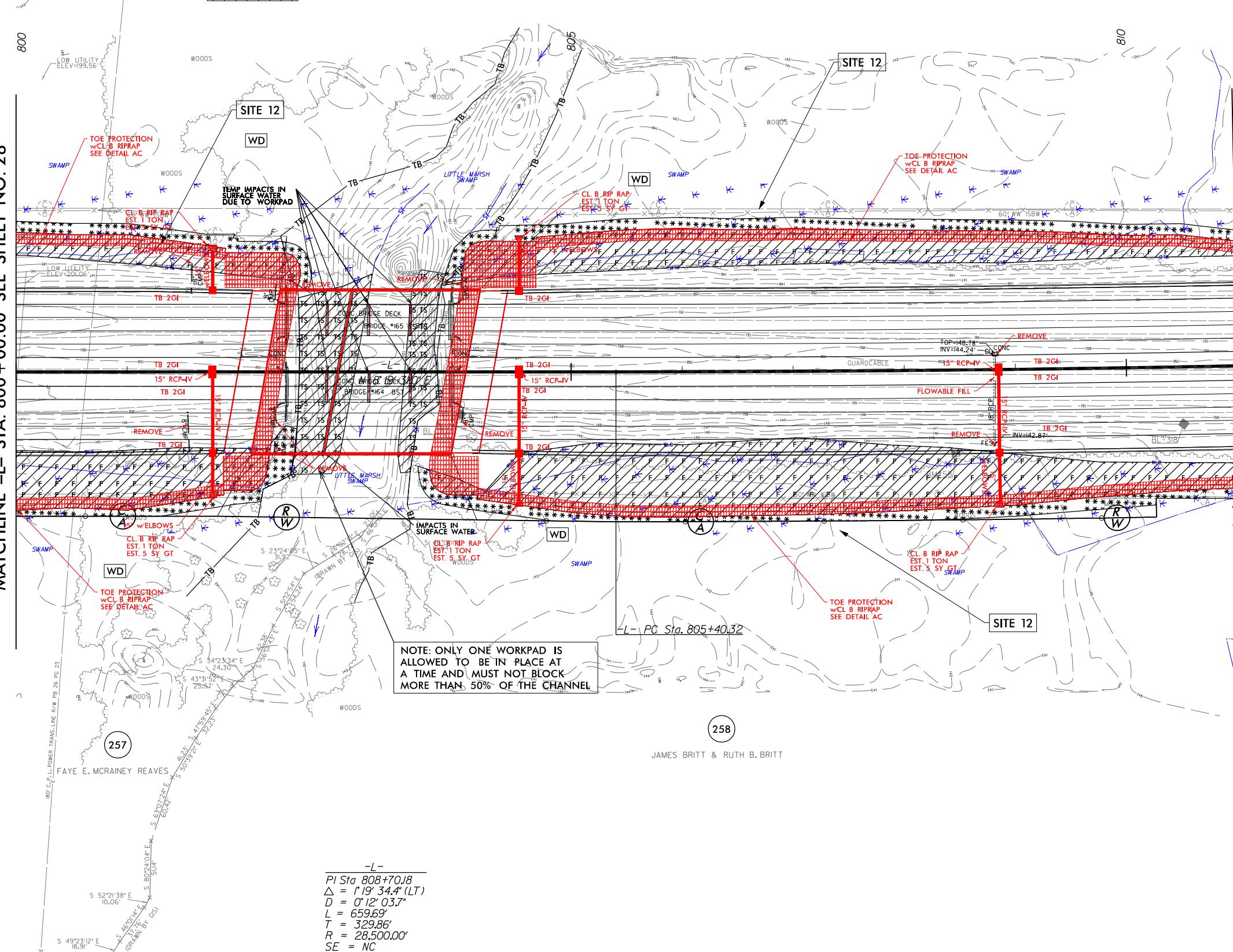
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

NAD 83/20

FAYE E. MCRAINEY REAVE

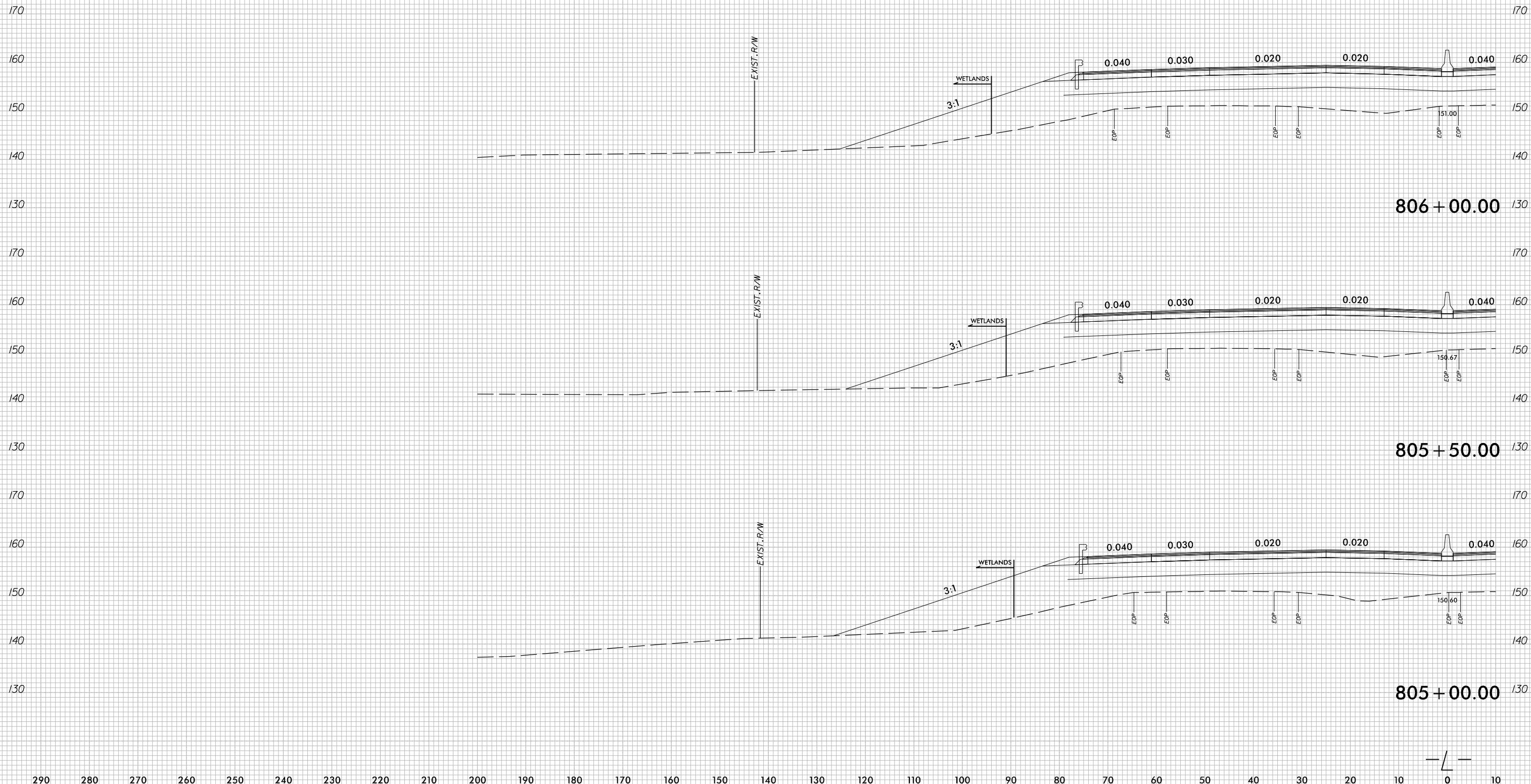
MACHINE | STA 800+00 00 SEE SHEET NO 28

MATCHLINE - STA. 811 + 00.00 SEE SHEET NO. 30

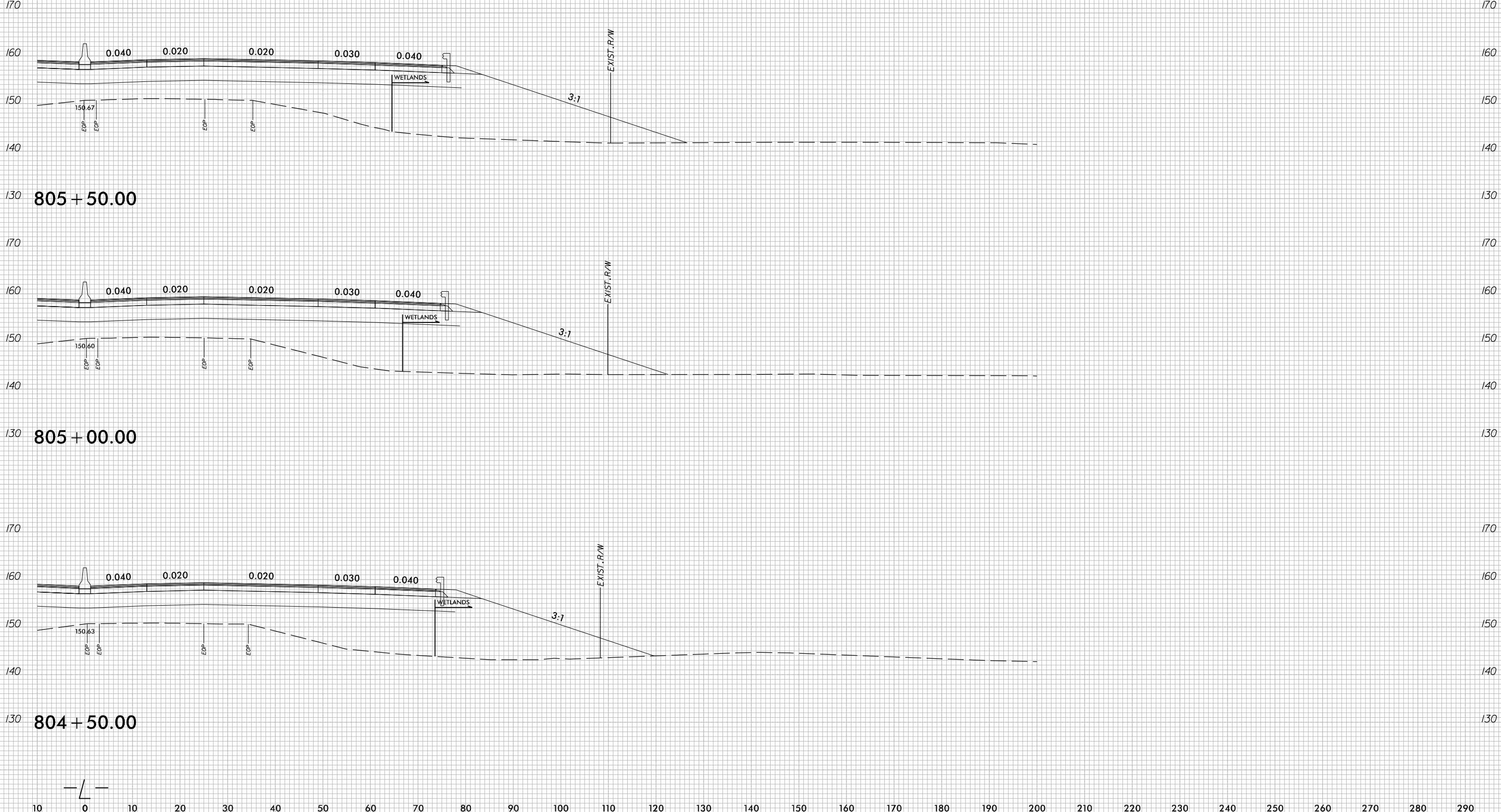


290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10

SITE 12

**PERMIT DRAWING
SHEET 66 OF 80**


10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290

SITE 12**PERMIT DRAWING
SHEET 67 OF 80**

**PERMIT DRAWING
SHEET 68 OF 80**

A graphic scale bar consisting of a black horizontal line with a white checkered pattern on its left side. The pattern includes numerical markings: '100\' at the far left, '0\' in the center, and '1' at the far right.



DENOTES FILL IN
WETLAND

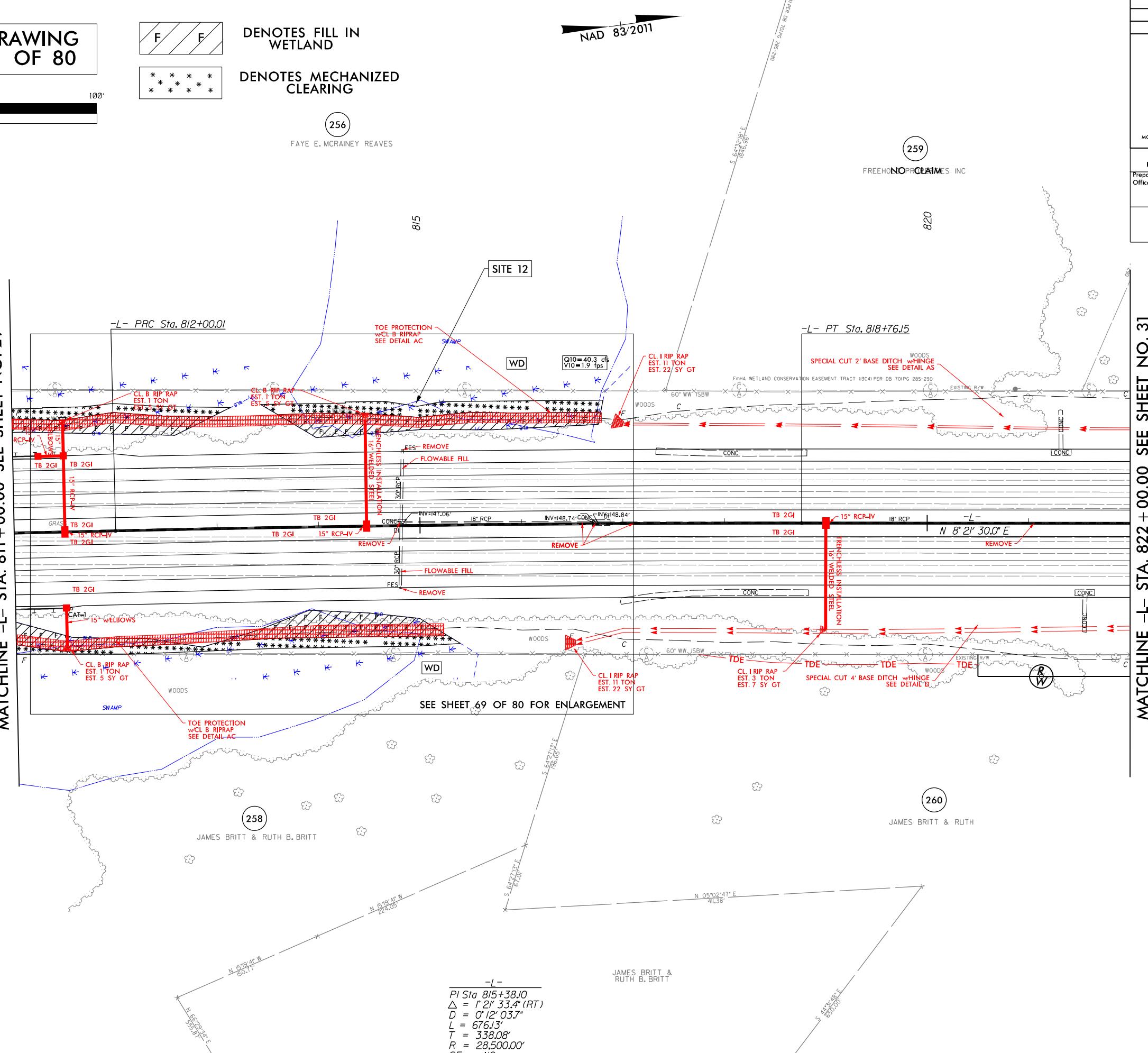


DENOTES MECHANIZED
CLEARING

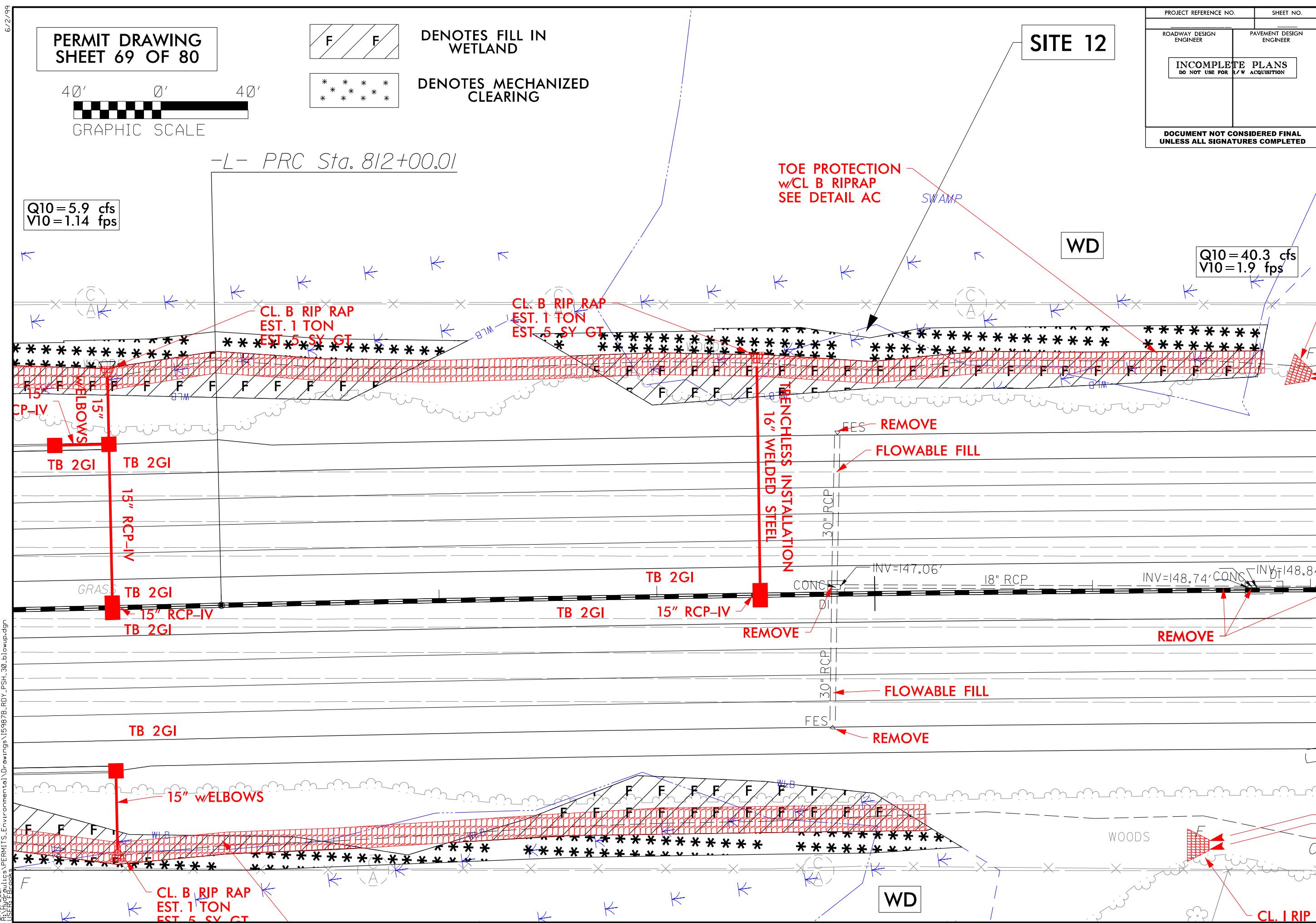
NAD 83/201

FAYE E. MCRAINEY REAVE

WATSON | STA 811 + 00 00 SEE SHEET NO. 29



PROJECT REFERENCE NO. <u>1-5897B</u>		SHEET NO. <u>30</u>
R/W SHEET NO.		
Roadway Design Engineer	Hydraulics Engineer	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
<p>MOTT MACDONALD I & E, LLC LICENSE NO. 1-0669</p> <p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p> <p>ured in the e of:</p> <p style="text-align: center;">M</p> <p>MOTT MACDONALD PO Box 700 Fuquay-Varina, NC 27526 www.mtmac.com/ameicas</p> <p>W.F.ETHERILL ENGINEERING</p> <p>1223 West Franklin Rd., Raleigh, NC 27606 Mobile No. 1-50377 Bus: 919 851 8077 Fax: 919 851 8107</p>		



**PERMIT DRAWING
SHEET 70 OF 80**

100' 0' 100'
GRAPHIC SCALE



DENOTES FILL IN
WETLAND

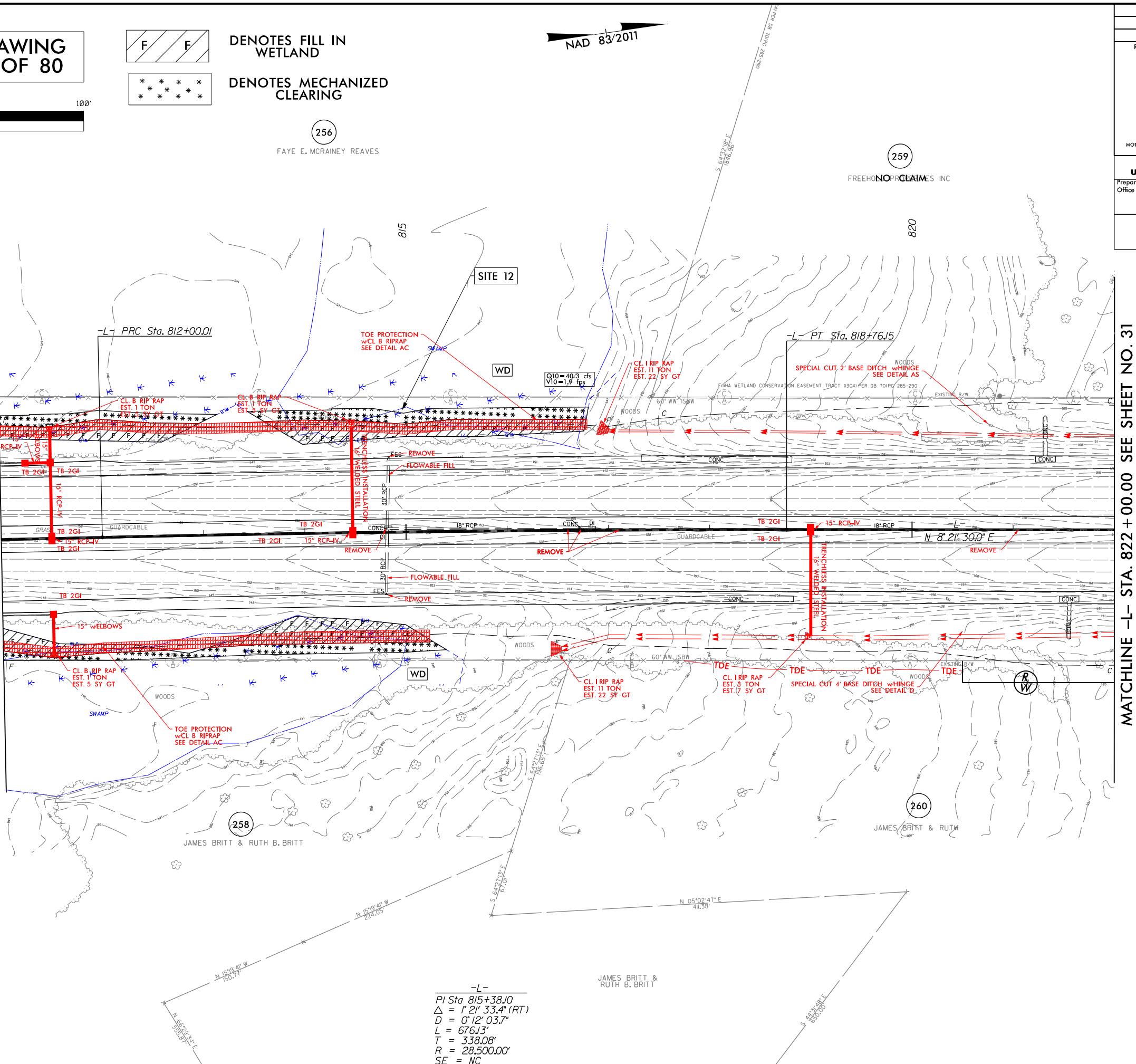


DENOTES MECHANIZED
CLEARING

NAD 83/2011

FAYE E. MCRAINEY REAVES

MATCHLINE -L- STA. 811+00.00 SEE SHEET NO. 29



-L-
PI Sta 815+38.0
 $\Delta = 1' 21'' 33.4'' (RT)$
 $D = 0' 12'' 03.7''$
 $L = 676.13'$
 $T = 338.08'$
 $R = 28.500.00'$
 $SE = NC$

JAMES BRITT &
RUTH B. BRITT

MATCHLINE -L- STA. 822 + 00.00 SEE SHEET NO. 31

PROJECT REFERENCE NO.		SHEET NO.
I-5897B		30
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
MOTT MACDONALD I & E, LLC DOCUMENT NOT CONSIDERED FINAL LESS ALL SIGNATURES COMPLETED		
Prepared in the Office of: M MOTT MACDONALD PO Box 700 Fayetteville, NC 27556 LIC. NO. I-0569 www.mottmac.com/mercos		
1223 Jones Franklin Rd. Raleigh, NC 27605 Ph: 919 851 8670 Fax: 919 851 8107		
WEATHERILL ENGINEERING		

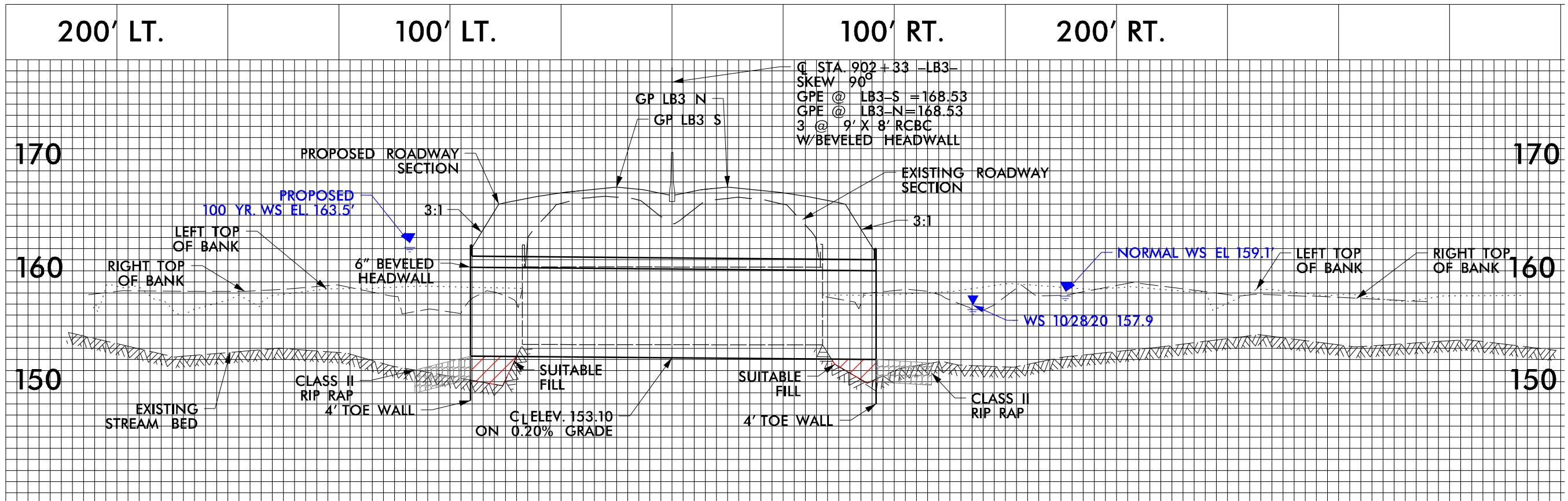
ATCHLINE -L- STA. 904 + 00 SEE SHEET NO. 38

**PERMIT DRAWING
SHEET 74 OF 80**

PROJECT REFERENCE NO.	SHEET NO.
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

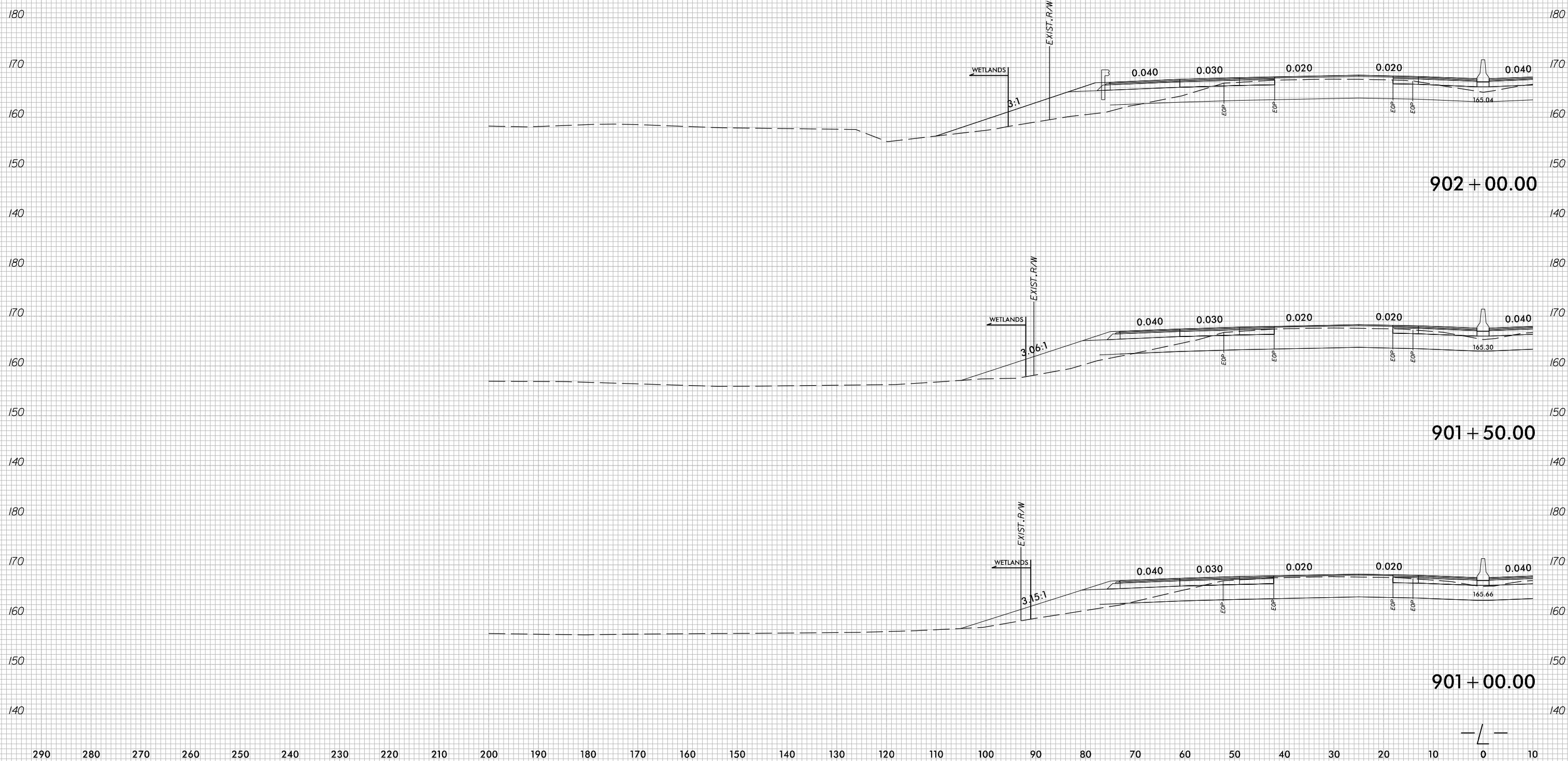
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

SITE 13



290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10

SITE 13

**PERMIT DRAWING
SHEET 75 OF 80**


10

0

10

20

30

40

50

60

70

80

90

100

110

120

130

140

150

160

170

180

190

200

210

220

230

240

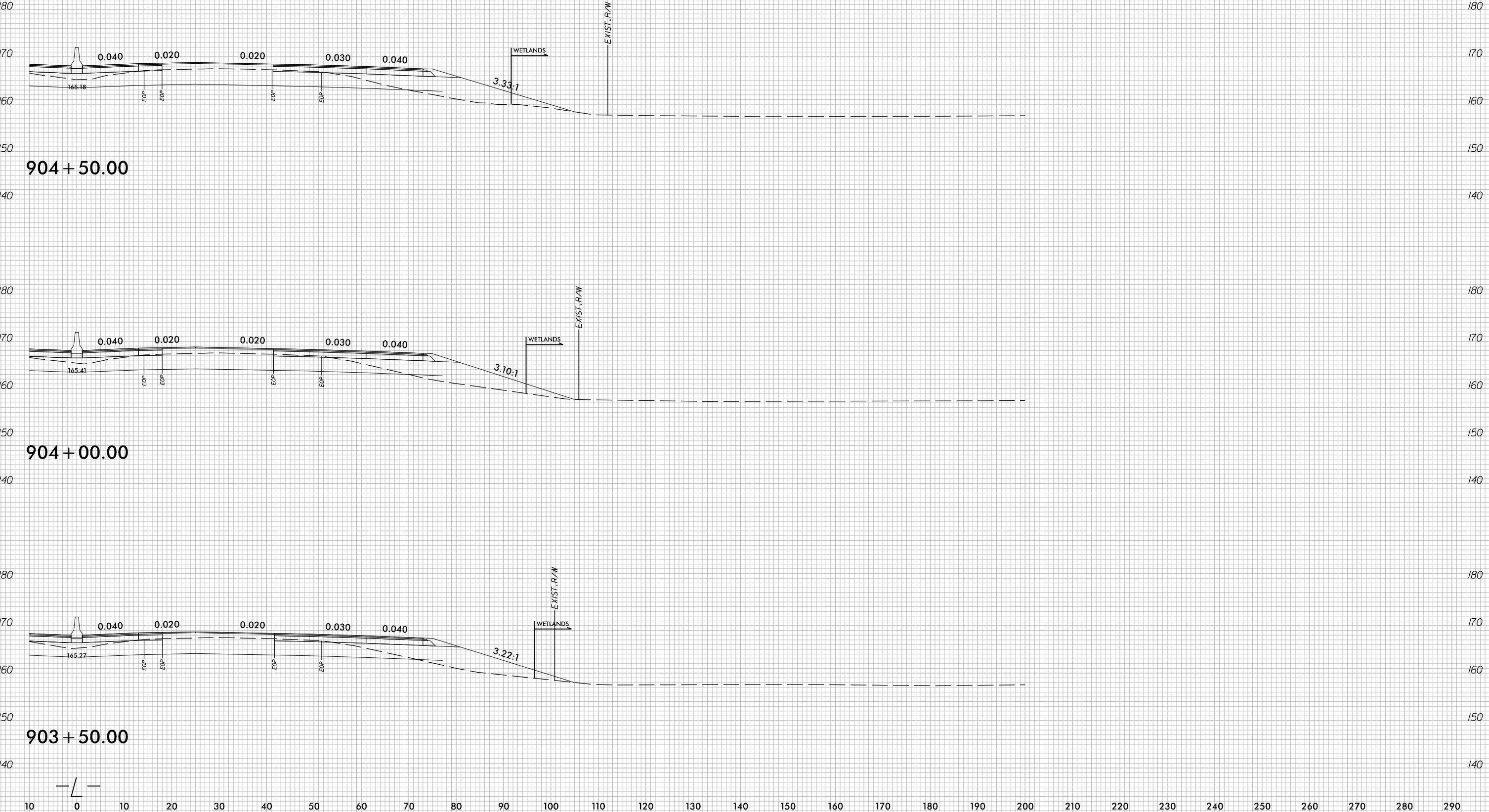
250

260

270

280

290

SITE 13**PERMIT DRAWING
SHEET 76 OF 80**

**PERMIT DRAWING
SHEET 78 OF 80**

40' 0' 40'



SEE SHEET NO. 37

**NO CLAIM
DENOTES FILL IN
WETLAND
(276)**

WOODS

SITE 13

**TOE PROTECTION
w/CL B RIPRAP
SWAMP SEE DETAIL AC**

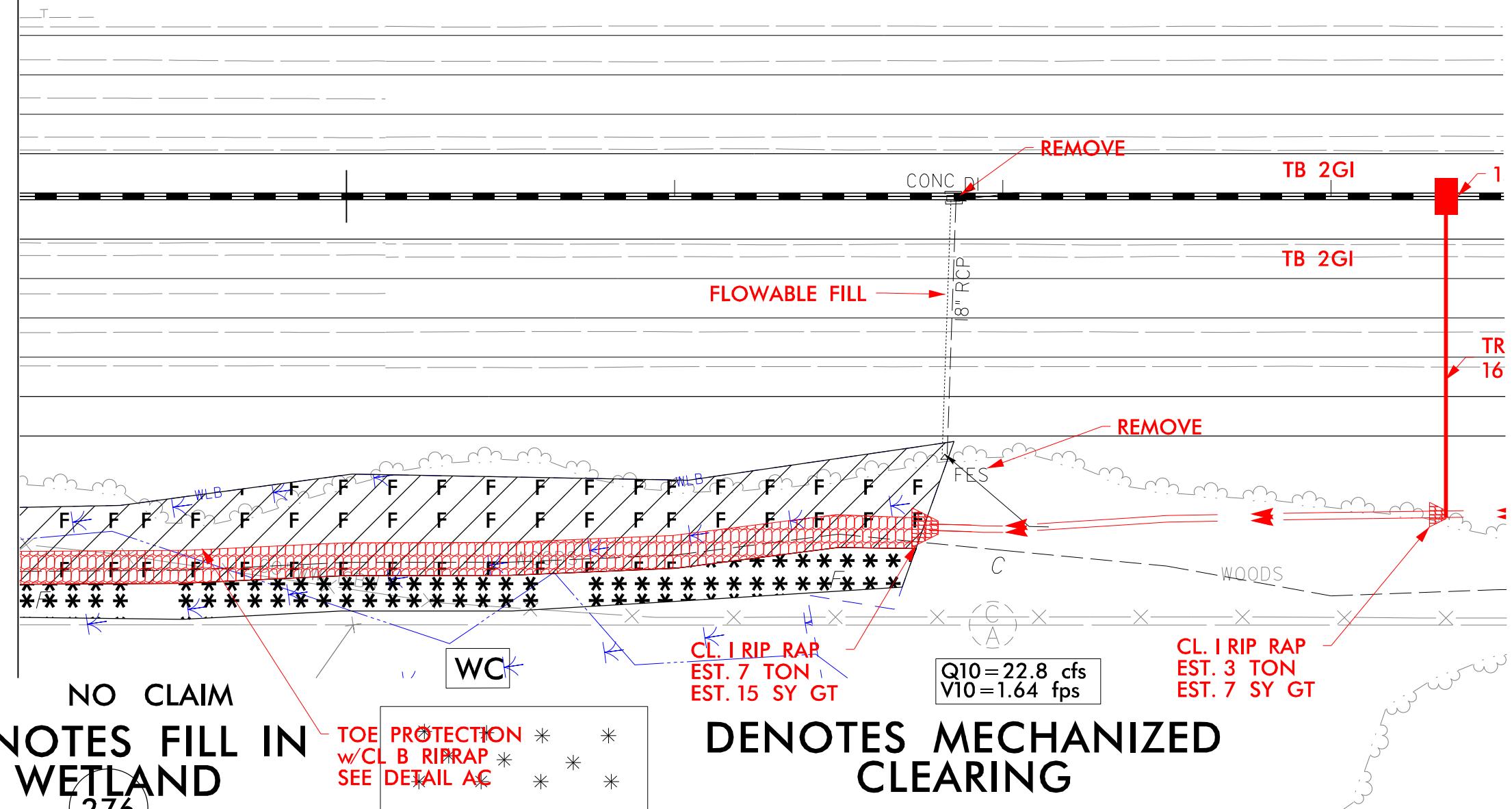
WC

**CL. I RIP RAP
EST. 7 TON
EST. 15 SY GT**

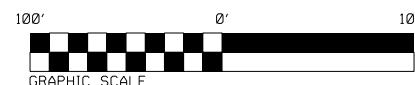
**Q10 = 21.0 cfs
V10 = 1.64 fps**

*S 46°40' /
75.07'*

WOODS



**PERMIT DRAWING
SHEET 79 OF 80**



F F

* * * * *

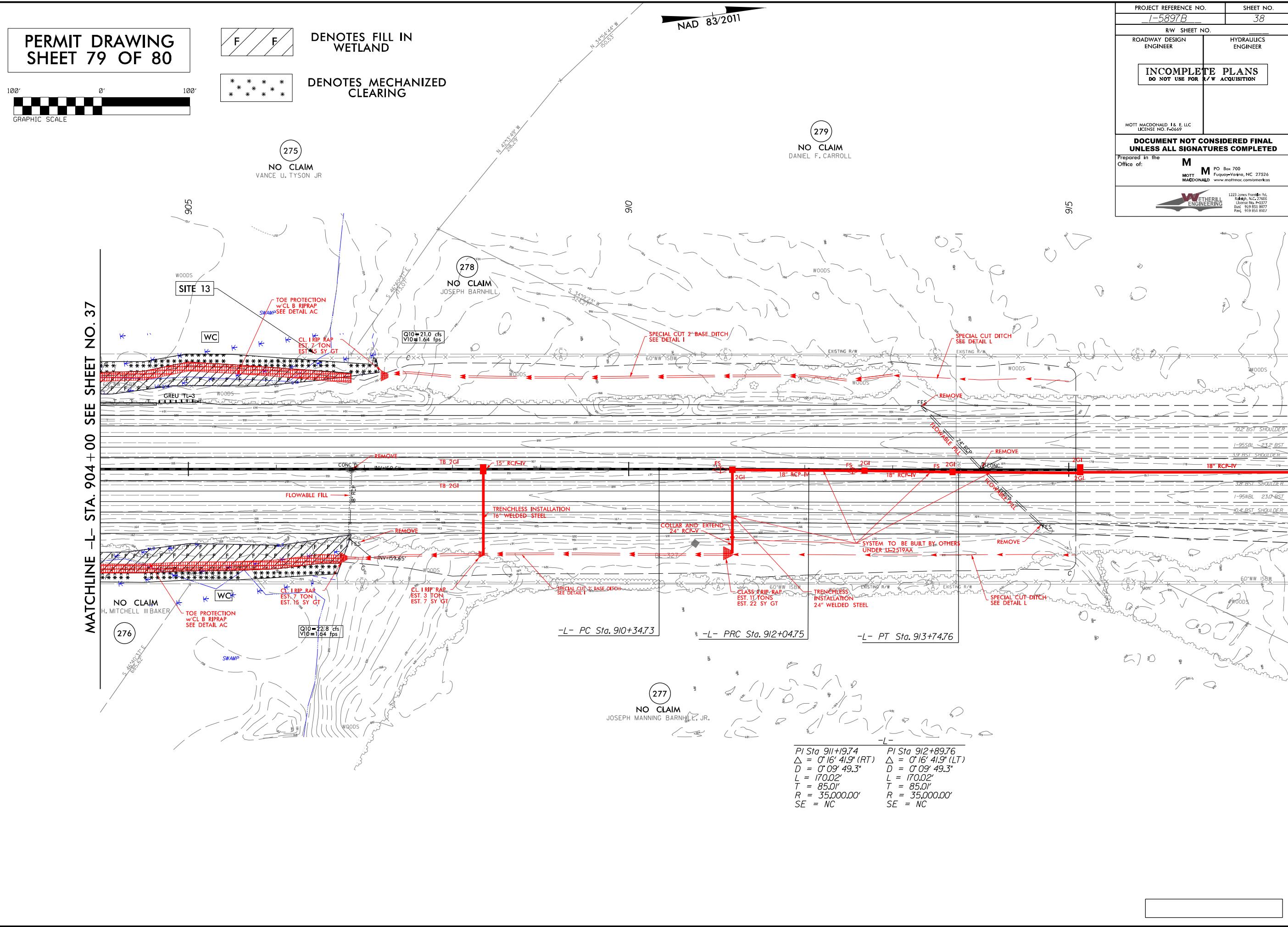
DENOTES FILL IN
WETLAND

DENOTES MECHANIZED
CLEARING

NAD 83/2011

N 34°54'44" W
75°52'53"

MATCHLINE -L- STA. 904+00 SEE SHEET NO. 37



WETLAND AND SURACE WATER IMPACTS 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	-L1- 530+90 to 535+85 RT	Bank Stabilization						0.010				
		Channel Improvements			0.056	0.118		0.062	0.001			
2	-L1- 536+85 RT	42" Welded Steel Pipe						0.011		30		
		Base Ditch						0.006	0.004	50	20	
3	-Y4- 31+00	72" RCP	0.074			0.026		0.012	0.001	65	20	
		Riprap Pad outlet						0.003	0.001	25	10	
4	-SR5- 14+00 to 15+00 RT	Fill slope	0.000			0.023						
5	-L1- 575+20 to 589+50 RT	Fill/cut slopes	1.181		0.565	0.646						
		Bents and Causeway						0.001	0.047	10	150	
6	-L1- 592+40 LT	48" Welded Steel Pipe						0.001				
		Riprap Channel						0.014	0.003			
7	-L1- 621+00 RT	2@54" Welded Steel Pipe						0.022				
		Riprap Pad outlet						0.005				
		Rechannelization						0.142				
7A	-L1- 622+50 LT	2@54" RCP						0.008				
		Rechannelization						0.009	0.005			
8	-L2- 655+00 RT	Rechannelization						0.008		58		
		Riprap Pad outlet						0.006	0.005	25	10	
9	-L2- 677+25	2@8'x8' RCBC	0.315			0.068		0.051		73		
		Bank Stabilization						0.006	0.005	20	10	
		Riprap in Channel						0.029	0.047	86	100	
	-L2- 673+35 RT	Temporary Bore Pit			0.010	0.020						
10	-L2- 708+50	1@6'x7' RCBC	0.226		0.181	0.126		0.142	0.013	320	40	
11	-Y6- 23+50	1@6'x7' RCBC			0.004	0.014		0.026	0.003	101	23	
12	-L3- 790+00 to 816+80	Fill/cut slopes	2.883		0.003	0.929						
		Bents and Causeway						0.008	0.289	150	30	
13	-L3- 898+00 to 907+00	3@9'x8' RCBC	0.753		0.014	0.409		0.052	0.029	50	20	
		Riprap in channel						0.048		50		
TOTALS*:			5.432	0.00	0.833	2.379	0.00	0.682	0.453	1113	433	0

*Rounded totals are sum of actual impacts

NOTES:

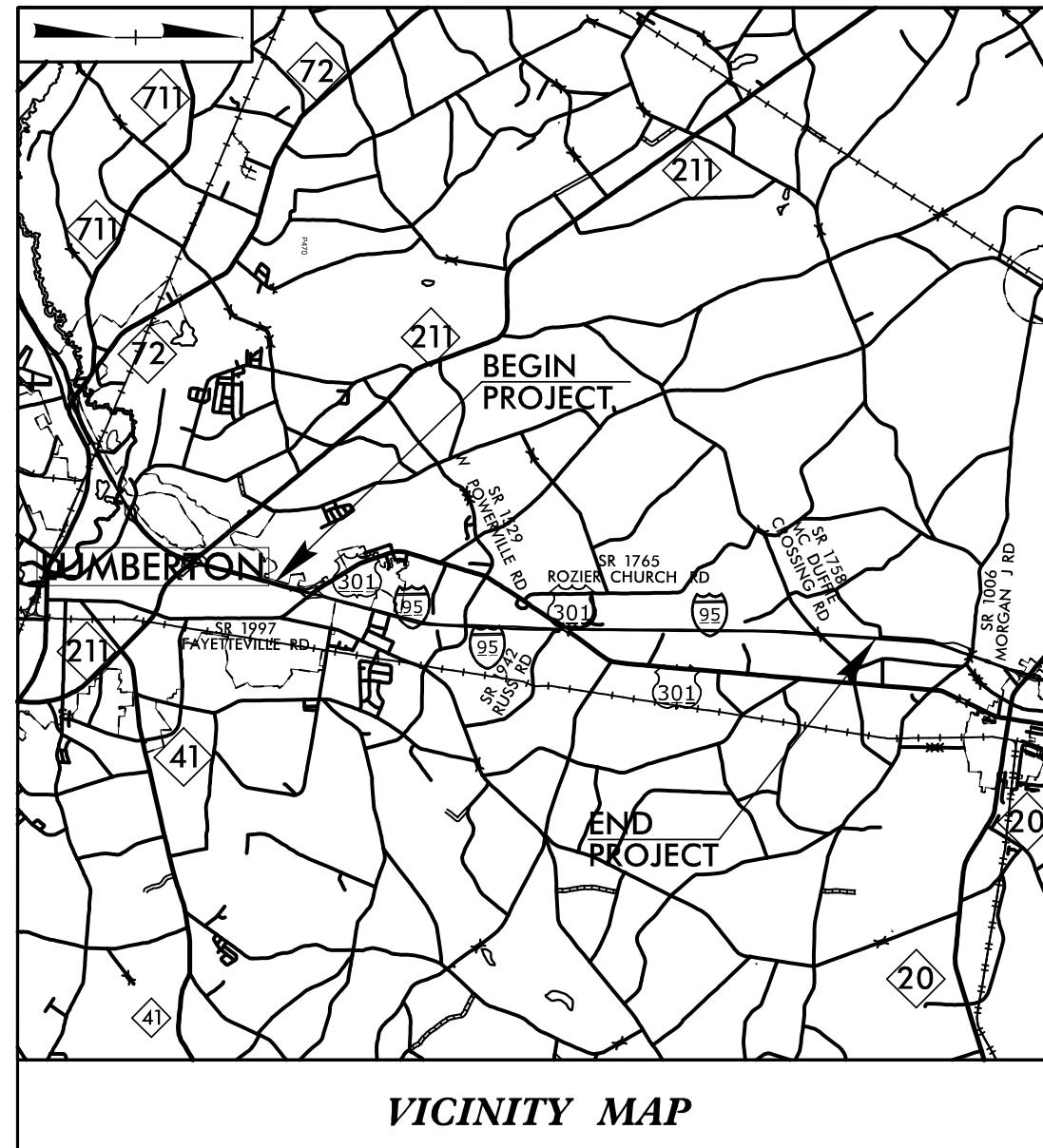
Sites 1, 6, 7 and 7A are Tributaries and therefore Surface water impacts are considered for area only.

Site 9 Excavation in Wetland may be considered temporary impacts due to backfilling of the bore pits after installation of trenchless pipes.

Impacts should only last 1 month +/- and will not require mitigation.

Site 13 Riprap in channel impacts will not need mitigation.

Sites 5 and 12: Permanent bent impacts calculated using 3' width by the length of the bent within the JS feature. 23 sqft and 365 sqft respectively.



TIP PROJECT: I-5987A

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS ROBESON COUNTY

T.I.P. NO.

SHEET NO.

I-5987A

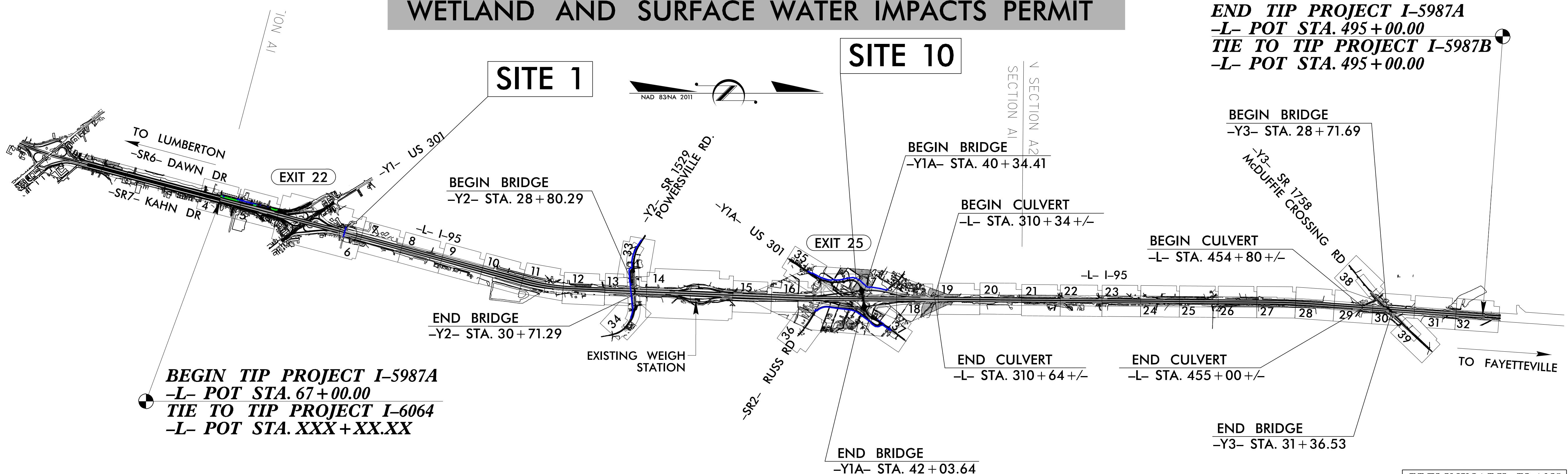
UC-1

PERMIT DRAWING
SHEET 1 OF 4

**LOCATION: I-95 IMPROVEMENTS
FROM SOUTH OF US 301 (EXIT 22)
TO NORTH OF SR 1758 (McDUFFIE CROSSING RD.)**

**TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURES,
CULVERTS, AND RETAINING WALLS**

WETLAND AND SURFACE WATER IMPACTS PERMIT



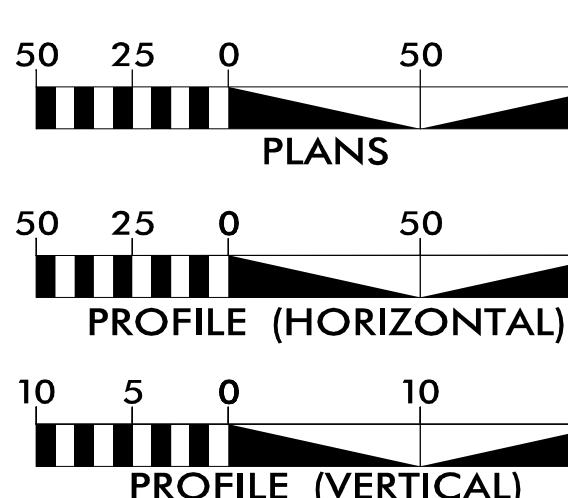
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF LUMBERTON.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

THIS PRELIMINARY UC PLAN SET INCLUDES ALL ROADWAY SHEETS. ONCE ALL PARTIES AGREE ON
PROPOSED WATER AND SEWER RELOCATIONS, SHEETS CONTAINING NO RELOCATION WORK
WILL BE REMOVED FOR FUTURE SUBMISSIONS.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED

GRAPHIC SCALES



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLS
UC-3	NOTES
UC-3A	DETAILS
UC-4 THRU UC-39	UTILITY CONSTRUCTION SHEETS
UC-X THRU UC-X	PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

- (A) WATER - CITY OF LUMBERTON AND COUNTY OF ROBESON
- (B) FORCE MAIN SEWER - CITY OF LUMBERTON

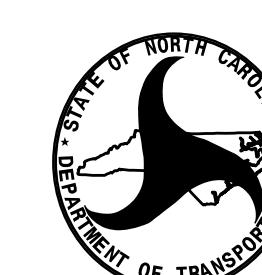
PREPARED IN THE OFFICE OF



STV Engineers, Inc.
1600 Perimeter Park Dr.
Suite 225
Morrisville, NC 27560
NC License Number F-0991
(919) 238-6672 FAX: (919) 468-8007

ANDREW PARKER, PE CONSULTANT CONTACT #1
ABBEY NARAYAN, EI CONSULTANT CONTACT #2
- CONSULTANT CONTACT #3

SEAL



DIVISION OF HIGHWAYS
UTILITIES UNIT
155 MAIL SERVICES CENTER
RALEIGH NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

BO HEMPHILL	EASTERN UTILITIES MANAGER
NABIL HAMDAN	UTILITIES REGIONAL ENGINEER
RICK HANDLIN	UTILITIES ENGINEER
RANDY D. ROGERS	UTILITIES COORDINATOR

NOTES:
1. XXX

PROJECT REFERENCE NO. I-5987A
SHEET NO. UC-06
DESIGNED BY: ABN
DRAWN BY: ABN
CHECKED BY: ATP
APPROVED BY:
REVISED:
NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION
UTILITIES ENGINEERING SEC.
PHONE: (919)707-6690
FAX: (919)250-4151
UTILITY CONSTRUCTION
PLANS ONLY

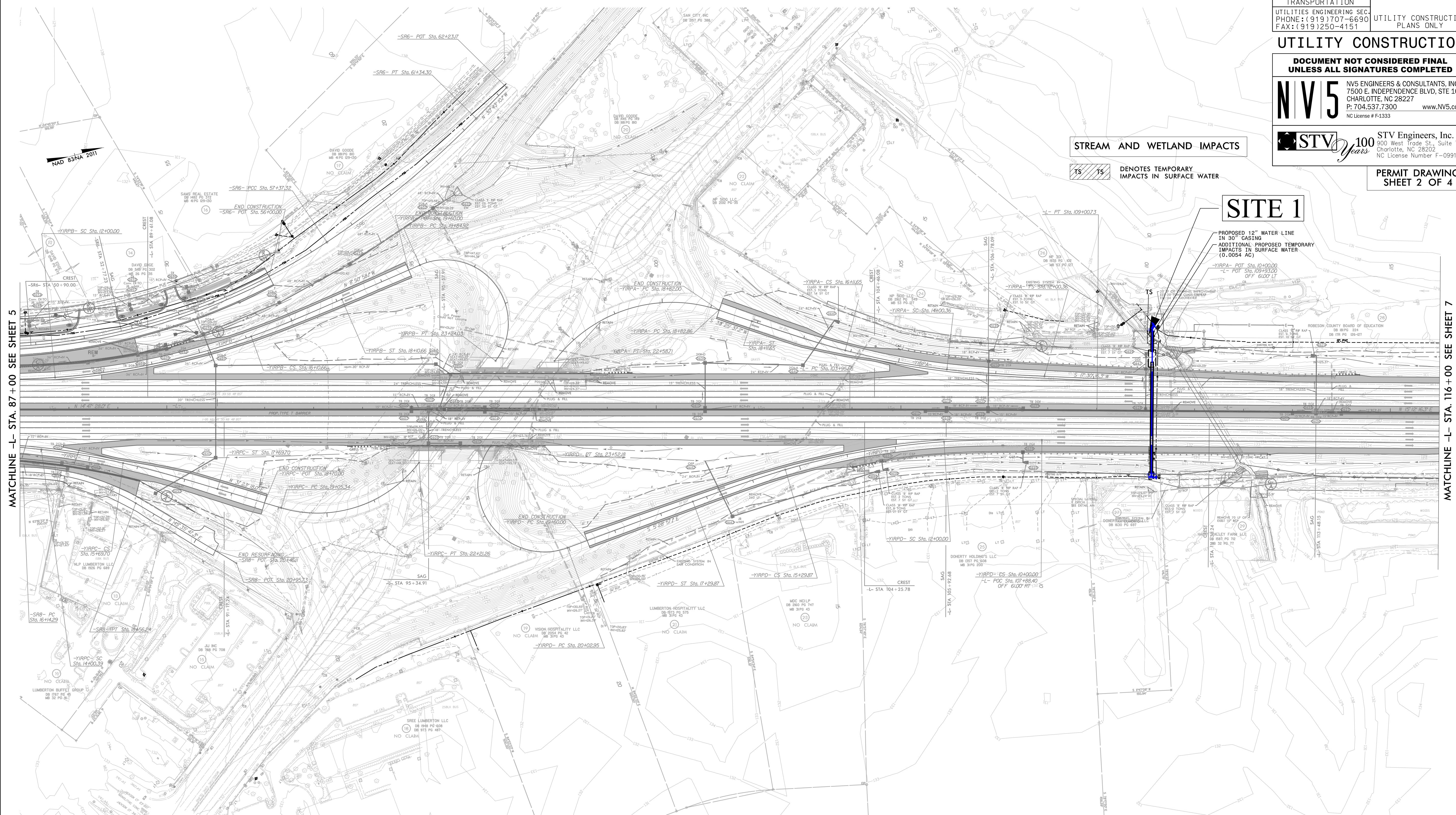
UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NV5 NV5 ENGINEERS & CONSULTANTS, INC.
7500 E. INDEPENDENCE BLVD, STE 100
CHARLOTTE, NC 28227
P: 704.537.7300
www.NV5.com
NC License # F-1333

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

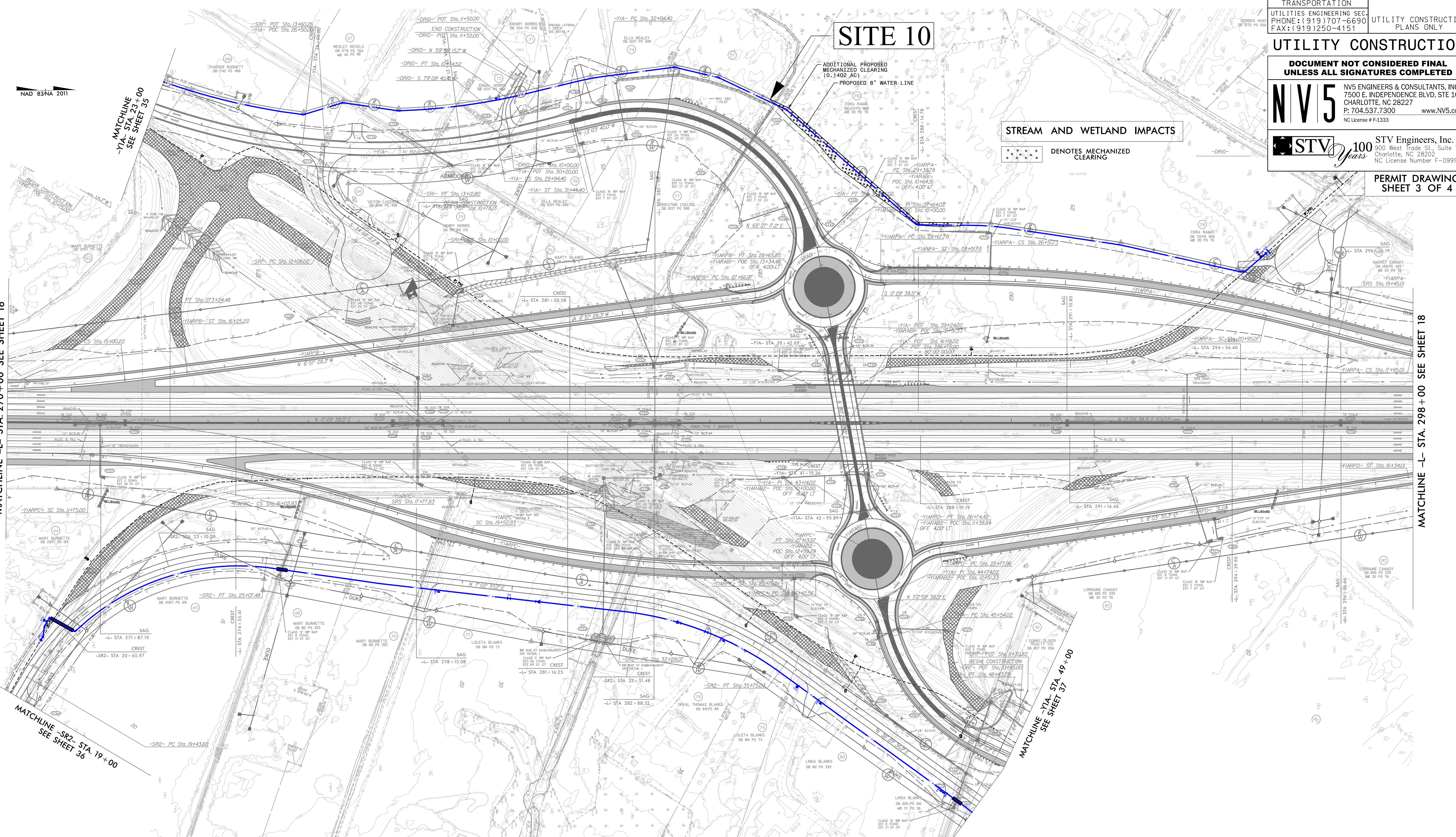
PERMIT DRAWING
SHEET 2 OF 4



5/14/99

NOTES:
1. XXX

PROJECT REFERENCE NO. I-5987A
SHEET NO. UC-17
DESIGNED BY: ABN
DRAWN BY: ABN
CHECKED BY: ATP
APPROVED BY:
REVISED:
NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION
UTILITIES ENGINEERING SEC.
PHONE: (919) 707-6690
FAX: (919) 250-4151
UTILITY CONSTRUCTION
PLANS ONLY



*Rounded totals are sum of actual impacts

NOTES:

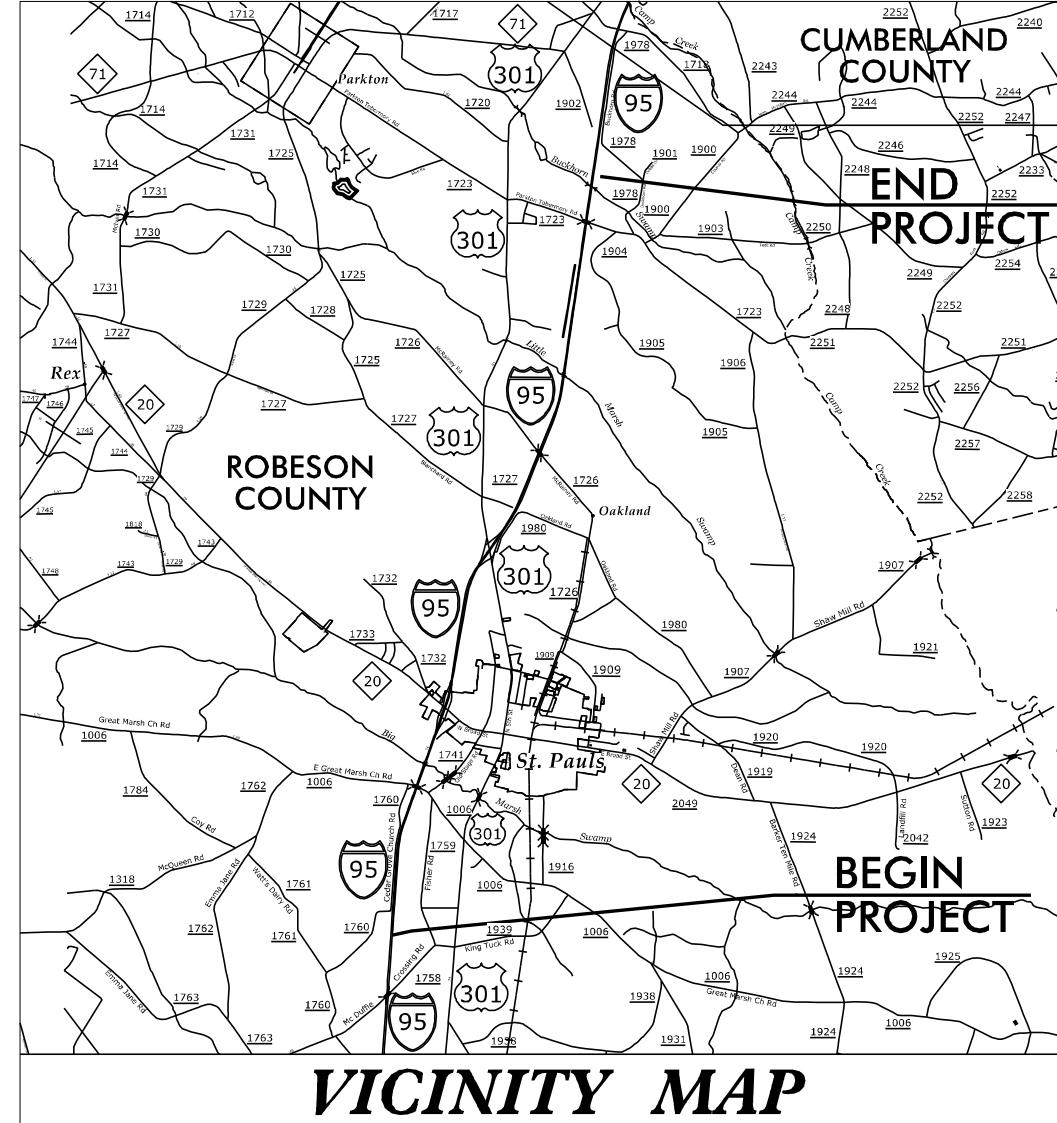
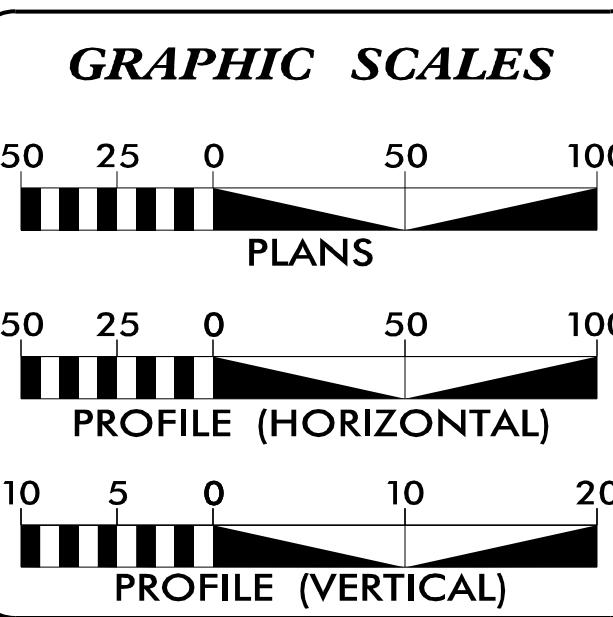
NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

07-26-2021

ROBESON COUNTY

I-5987A

47533.1.2

CONTRACT:**TIP PROJECT: I-5987B**

BEGIN TIP PROJECT I-5987B
-L- STA. 495+00.00
TIE TO TIP PROJECT I-5987A
-L- STA. 495+00.00

INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
1	TITLE SHEET
2	SITE 5
3	SITE 10
4	SITE 10
5	TABLE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROBESON COUNTY

T.I.P. NO.

I-5987B

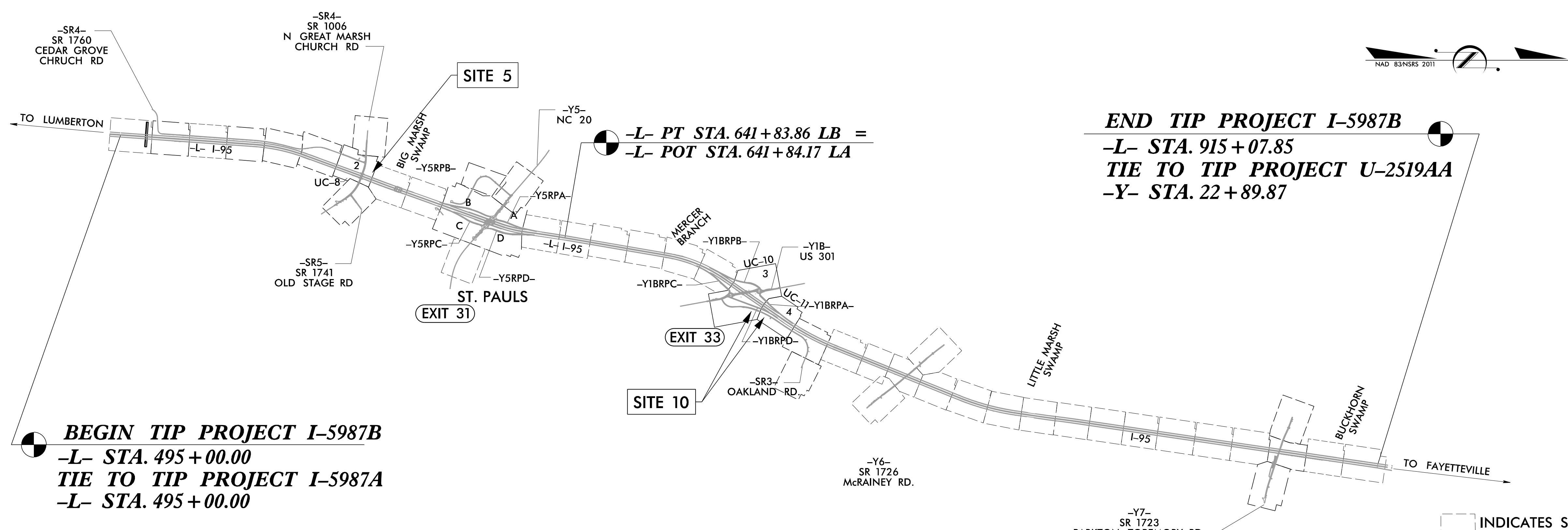
SHEET NO.

1

PERMIT DRAWING
SHEET 1 OF 5

LOCATION: I-95 IMPROVEMENTS FROM NORTH OF SR 1758 (MCDUFFIE CROSSING RD.) TO NORTH OF SR 1723 (PARKTON TOBEMORY RD.)

WETLAND & SURFACE WATER IMPACTS FOR UTILITIES



INDICATES SHEETS WITH
NO UTILITY IMPACTS

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED

PREPARED IN THE OFFICE OF

M M PO Box 700
 MOTT MACDONALD Fuquay-Varina, NC 27526
www.mottmac.com/americas

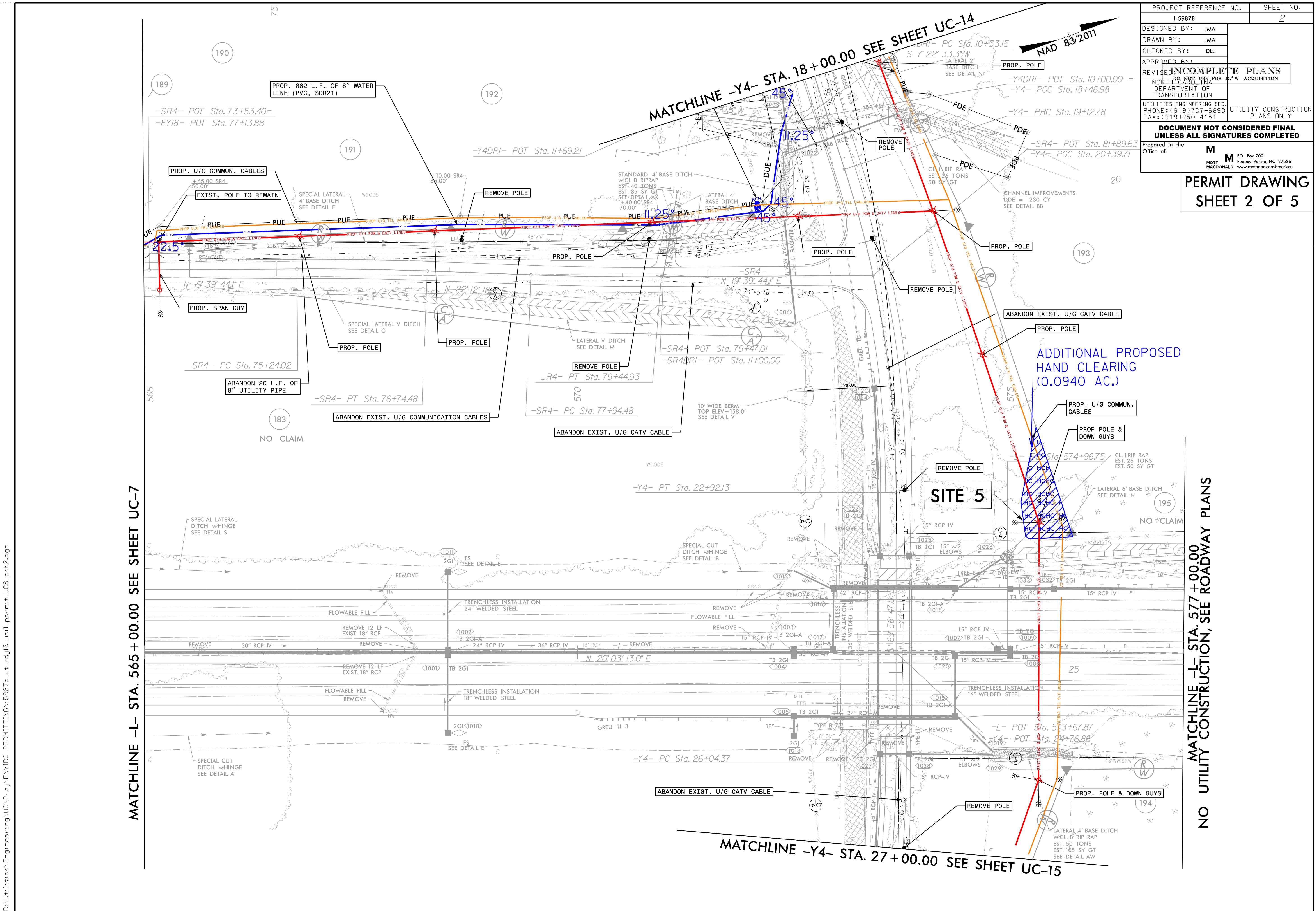
DONNA JACKSON	CONSULTANT CONTACT #1
JESSALYN ABRIL	CONSULTANT CONTACT #2
DAVID WALLER	CONSULTANT CONTACT #3

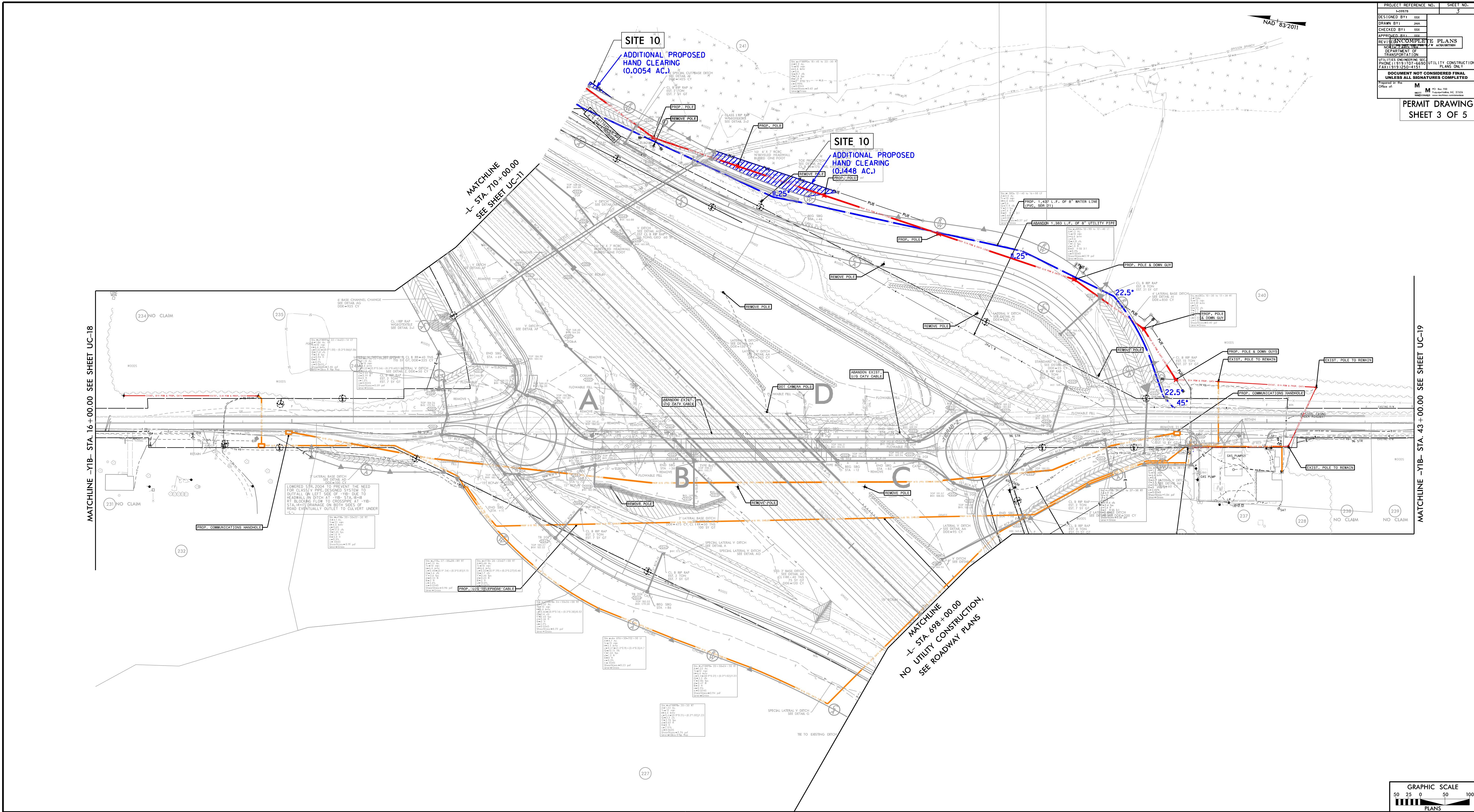
SEAL



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 1555 MAIL SERVICES CENTER
 RALEIGH NC 27699-1555
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RICK HANDLIN	UTILITIES DIVISION ENGINEER
DONNA JACKSON	UTILITIES ENGINEER
RICK BOUNDS	UTILITIES DIVISION COORDINATOR
ED REAMS	UTILITIES COORDINATOR





*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
07-26-2021
ROBESON COUNTY
I-5987B
47533 1 3