



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

August 16, 2019

Wilmington Regulatory Field Office
US Army Corps of Engineers
2407 West 5th Street
Washington, North Carolina 27889

N.C. Dept. of Environmental Quality
Division of Coastal Management
400 Commerce Avenue
Morehead City, NC 28557

ATTN: Mr. Tom Steffens
NCDOT Coordinator

ATTN: Mr. Stephen Lane
NCDOT Coordinator

Subject: **Modification Request for Nationwide Permit 14, Section 401 Water Quality Certification and Revised Application for a CAMA Major Development Permit** for the Proposed Replacement of Bridge No. 38 over Trent Creek on NC 55 in Pamlico County, North Carolina; TIP No. B-4593; Debit \$570 from WBS No. 42328.1.2

Dear Sirs,

As you are aware, the North Carolina Department of Transportation (NCDOT) proposes to replace the existing 145-foot Bridge No. 38 on NC 55 over Trent Creek in Pamlico County. The purpose of the project is to replace a deficient bridge. The U.S. Army Corps of Engineers (USACE) verified Nationwide Permit (NWP) 14 authorization on July 3, 2019 (SAW-2019-01204), and the N.C. Division of Water Resources (DWR) approved the project on June 24, 2019 (DWR Project No. 20190585).

Several revisions have been made to both roadway and utility plans for the proposed project.

Roadway:

NCDOT was asked to reduce slopes to 2:1 in order to minimize impacts to CAMA wetlands. The NCDOT Geotechnical Unit has recommended that these slopes be reinforced with rock plating to stabilize them. This addition can be seen in the revised permit drawings 2 through 4. The 2:1 slopes with rock plating can also be seen in the revised cross-section permit drawings 12 through 16.

The summary sheet shows that 13 feet of temporary stream impacts have been added to account for the dewatering necessary to install rip rap. Temporary surface water impacts increased from 0 sq. ft. to 199 sq. ft., as listed in the notes. The notes also show the > 0.01 acre of permanent SW impacts more specifically as 143 sq. ft.

Utilities:

Based on the revised utility relocation plans, the utility narrative, the utility streams and wetlands permit drawings, utility buffer permit drawings, and impact summary sheets have been revised and are attached. A brief summary of the changes is given below:

Utility Narrative

The Bay River Metropolitan Sewer section has been revised to state that there are no wetland impacts associated with this relocation. The Pamlico County Water section has been revised to reflect the linear footage of pipe and the area of impact.

Utility Permit Drawings

Revised relocation plan and profile dgn files were incorporated into plan and profile sheets respectively.

- Excavation/Hand Clearing limits revised for northwest waterline bore pit
- Excavation/Hand Clearing limits revised for northeast waterline bore pit
- Excavation/Hand Clearing limits revised for sanitary sewer open cut
- Excavation added for the southeast waterline receive pit which is within the wetland boundary
- Excavation Summary on UE-3 revised

Utility Buffer Drawings

Revised relocation plan and profile dgn files were incorporated into plan and profile sheets respectively, but impact numbers did not change.

Utility Impact Summary Sheet

- Sanitary Sewer Force Main impact removed
- Water Main impact for southeast receiving pit added
- Water main excavation impact totals revised
- Excavation impact totals revised

Project Impacts

Despite several revisions to the proposed work, changes to impact totals are minimal. The sanitary sewer and force main impact (<0.01 acre) have been removed. Additional notes are listed on the Utility impact summary sheet describing the excavation impacts in detail, which total 0.016 acre, rounded to 0.02 in the spreadsheet.

Regulatory Approvals

Section 404 Permit: Revision is hereby requested to the NWP 14 authorization previously verified.

Section 401 Permit: The Water Quality Certifications issued by the North Carolina Department of Environmental Quality, Division of Water Resources were for NWP 3 and NWP 12. We anticipate 401 General Certification number 4135 will apply to this project to coincide with the above mentioned NWP 14 issued by the USACE. Authorization to debit the \$570 Permit Modification Fee from WBS Element 42328.1.2 is hereby given.

CAMA Major Development Permit: NCDOT requests that the revised work be authorized under a Coastal Area Management Act Major Permit.

A copy of this modification request will be posted on the NCDOT Website at <https://xfer.services.ncdot.gov/pdea/PermApps/>.

Should you have any questions regarding this information, please contact Gordon Cashin at (919) 707-6107 or gcashin@ncdot.gov.

Sincerely,



for

Philip S. Harris III, P.E., C.P.M., Unit Head
Environmental Analysis Unit

cc: NCDOT Permit Application Standard Distribution List

BRIDGES and CULVERTS

Attach this form to Joint Application for CAMA Major Permit, Form DCM MP-1. Be sure to complete all other sections of the Joint Application that relate to this proposed project. Please include all supplemental information.

1. BRIDGES☐ This section not applicable

- a. Is the proposed bridge:
☐ Commercial ☒ Public/Government ☐ Private/Community
- b. Water body to be crossed by bridge:
 Trent Creek
- c. Type of bridge (construction material):
 36" Girder Bridge with Concrete Deck and 4 foot Caps
- d. Water depth at the proposed crossing at NLW or NWL:
 10 feet
- e. (i) Will proposed bridge replace an existing bridge? ☒ Yes ☐ No
 If yes,
 (ii) Length of existing bridge: 145.0
 (iii) Width of existing bridge: 31.5
 (iv) Navigation clearance underneath existing bridge: 7.5
 (v) Will all, or a part of, the existing bridge be removed?
 (Explain) All of the existing bridge will be removed.
- f. (i) Will proposed bridge replace an existing culvert? ☐ Yes ☒ No
 If yes,
 (ii) Length of existing culvert: _____
 (iii) Width of existing culvert: _____
 (iv) Height of the top of the existing culvert above the NHW or NWL: _____
 (v) Will all, or a part of, the existing culvert be removed?
 (Explain)
- g. Length of proposed bridge: 160
- h. Width of proposed bridge: 34.6
- i. Will the proposed bridge affect existing water flow? ☒ Yes ☐ No
 If yes, explain: larger waterway opening allows larger conveyance
- j. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening? ☒ Yes ☐ No
 If yes, explain: The low chord of the bridge is slightly higher than the existing low chord
- k. Navigation clearance underneath proposed bridge: 7.5'
- l. Have you contacted the U.S. Coast Guard concerning their approval? ☒ Yes ☐ No
 If yes, explain: Advance Approval received
- m. Will the proposed bridge cross wetlands containing no navigable waters? ☐ Yes ☒ No
 If yes, explain:
- n. Height of proposed bridge above wetlands: 8

2. CULVERTS☒ This section not applicable

- a. Number of culverts proposed: _____
- b. Water body in which the culvert is to be placed:

< Form continues on back>

c. Type of culvert (construction material):

d. (i) Will proposed culvert replace an existing bridge?

☐ Yes ☐ No

If yes,

(ii) Length of existing bridge: _____

(iii) Width of existing bridge: _____

(iv) Navigation clearance underneath existing bridge: _____

(v) Will all, or a part of, the existing bridge be removed?
(Explain)

e. (i) Will proposed culvert replace an existing culvert?

☐ Yes ☐ No

If yes,

(ii) Length of existing culvert(s): _____

(iii) Width of existing culvert(s): _____

(iv) Height of the top of the existing culvert above the NHW or
NWL: _____(v) Will all, or a part of, the existing culvert be removed?
(Explain)

f. Length of proposed culvert: _____

g. Width of proposed culvert: _____

h. Height of the top of the proposed culvert above the NHW or NWL.
_____i. Depth of culvert to be buried below existing bottom contour.
_____j. Will the proposed culvert affect navigation by reducing or
increasing the existing navigable opening? ☐ Yes ☐ NoIf yes, explain:

k. Will the proposed culvert affect existing water flow?

☐ Yes ☐ NoIf yes, explain:

_____**3. EXCAVATION and FILL**☐ This section not applicablea. (i) Will the placement of the proposed bridge or culvert require any
excavation below the NHW or NWL? ☐ Yes ☒ No

If yes,

(ii) Avg. length of area to be excavated: _____

(iii) Avg. width of area to be excavated: _____

(iv) Avg. depth of area to be excavated: _____

(v) Amount of material to be excavated in cubic yards: _____

b. (i) Will the placement of the proposed bridge or culvert require any
excavation within coastal wetlands/marsh (CW), submerged
aquatic vegetation (SAV), shell bottom (SB), or other wetlands
(WL)? If any boxes are checked, provide the number of square
feet affected.☐ CW _____ ☐ SAV _____ ☐ SB _____☐ WL _____ ☒ None(ii) Describe the purpose of the excavation in these areas:

_____c. (i) Will the placement of the proposed bridge or culvert require any
high-ground excavation? ☒ Yes ☐ No

If yes,

(ii) Avg. length of area to be excavated: 17ft(iii) Avg. width of area to be excavated: 71.5ft(iv) Avg. depth of area to be excavated: 2.12ft(v) Amount of material to be excavated in cubic yards: 192 CY

Form DCM MP-5 (Bridges and Culverts, Page 3 of 4)

d. If the placement of the bridge or culvert involves any excavation, please complete the following:

(i) Location of the spoil disposal area: Currently unknown, to be determined by contractor

(ii) Dimensions of the spoil disposal area: _____

(iii) Do you claim title to the disposal area? ☐ Yes ☒ No (If no, attach a letter granting permission from the owner.)

(iv) Will the disposal area be available for future maintenance? ☐ Yes ☐ No

(v) Does the disposal area include any coastal wetlands/marsh (CW), submerged aquatic vegetation (SAVs), other wetlands (WL), or shell bottom (SB)?

☐ CW ☐ SAV ☐ WL ☐ SB ☒ None

If any boxes are checked, give dimensions if different from (ii) above.

(vi) Does the disposal area include any area below the NHW or NWL? ? ☐ Yes ☒ No

If yes, give dimensions if different from (ii) above.

e. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d above) to be placed below NHW or NWL? ☐ Yes ☒ No

If yes,

(ii) Avg. length of area to be filled: _____

(iii) Avg. width of area to be filled: _____

(iv) Purpose of fill:

f. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d above) to be placed within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

☒ CW 10,392 sf ☐ SAV _____ ☐ SB _____

☐ WL _____ ☐ None

(ii) Describe the purpose of the excavation in these areas:

The fill is for the construction of both the proposed and detour bridges. Of the total 10,392 sf of fill, approximately 6,328 sf is temporary fill and will be removed once the proposed bridge is completed.

g. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d above) to be placed on high-ground? ☒ Yes ☐ No

If yes,

(ii) Avg. length of area to be filled: 950 ft

(iii) Avg. width of area to be filled: 40 ft

(iv) Purpose of fill: Slightly raising the grade and widening the road

4. GENERAL

a. Will the proposed project require the relocation of any existing utility lines? ☒ Yes ☐ No

If yes, explain: Relocation of multiple power poles and associated overhead power lines and guy wire anchor units. The existing water line and sanitary sewer will also be relocated. There are 0.02 acre of excavation and 0.65 acre of handclearing associated with the utility relocations.

If this portion of the proposed project has already received

b. Will the proposed project require the construction of any temporary detour structures? ☒ Yes ☐ No

If yes, explain: 140' Detour bridge around the existing while proposed structure is built

If this portion of the proposed project has already received approval from local authorities, please attach a copy of the approval or certification.

< Form continues on back >

- c. Will the proposed project require any work channels?

☐ Yes ☒ No

If yes, complete Form DCM-MP-2.

- d. How will excavated or fill material be kept on site and erosion controlled?

Erosion control devices during and after construction

- e. What type of construction equipment will be used (for example, dragline, backhoe, or hydraulic dredge)?

Project is to be let. Construction equipment may include but is not limited to cranes, excavators, and backhoes.

- f. Will wetlands be crossed in transporting equipment to project site?

☐ Yes ☒ No

If yes, explain steps that will be taken to avoid or minimize environmental impacts.

- g. Will the placement of the proposed bridge or culvert require any shoreline stabilization?

☐ Yes ☒ No

If yes, complete form MP-2, Section 3 for Shoreline Stabilization only.

08/16/2019

Date

B-4593 Bridge Replacement

Project Name

for Philip S. Harris, III P.E., C.P.M.

Applicant Name

Thad C. Rill III

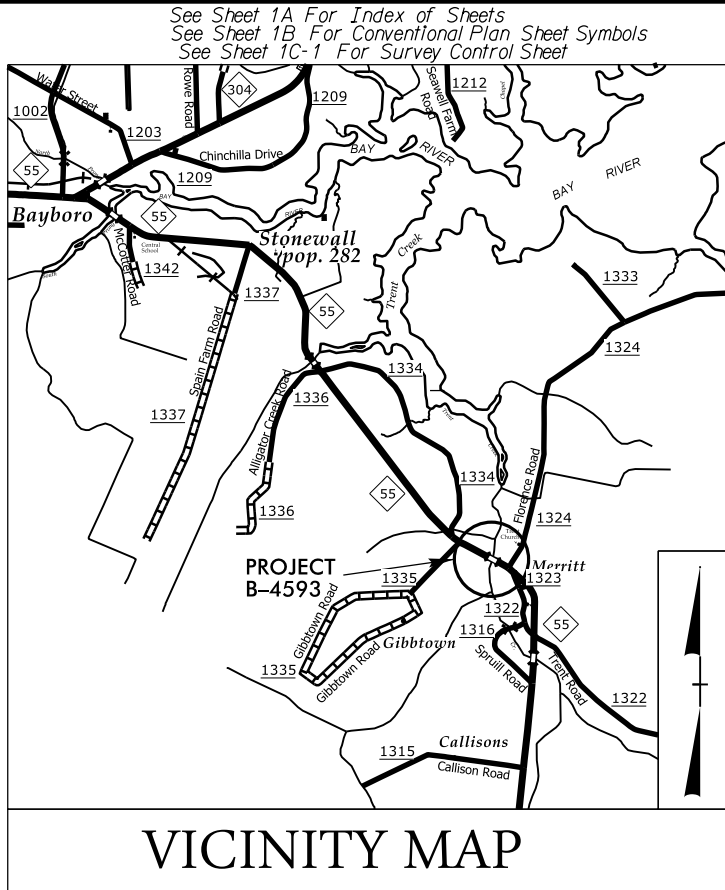
Applicant Signature

		North Carolina Department of Transportation Highway Stormwater Program STORMWATER MANAGEMENT PLAN FOR NCDOT PROJECTS					
(Version 2.01; Released December 2014)							
WBS Element: 38422.1.2		TIP No.: B-4593		County(ies): Pamlico		Page 1 of 1	
General Project Information							
WBS Element:		38422.1.2		TIP Number:		B-4593	
NCDOT Contact:		Paul Atkinson, P.E.		Contractor / Designer:		Jason Patskoski, PhD, P.E.	
Address:		NCDOT Hydraulics Unit 1020 Birch Ridge Drive		Address:		Summit Design and Engineering Services 100 East Six Forks Road, Suite 300 Raleigh, NC 27609	
Phone:		(919) 707-6707		Phone:		(919) 322-0115	
Email:		patkinson@ncdot.gov		Email:		jason.patskoski@summitde.net	
City/Town:		Merrit		County(ies):		Pamlico	
River Basin(s):		Neuse		CAMA County?		Yes	
Wetlands within Project Limits?		Yes					
Project Description							
Project Length (lin. miles or feet):		0.284 miles		Surrounding Land Use: Rural Area with Agricultural or Residential Land Uses, Coastal			
		Proposed Project		Existing Site			
Project Built-Up Area (ac.)		3.06 ac.		1.04 ac.			
Typical Cross Section Description:		2 lane road with 12' travel lanes and 4' paved shoulder with total bridge length of 160 ft and width of 34.58 ft		2 lane road with 12' travel lanes and no paved shoulder with total bridge length of 145.4 ft and width of 28 ft			
Annual Avg Daily Traffic (veh/hr/day):		Design/Future: 8600 Year: 2040		Existing: 5576		Year: 2019	
General Project Narrative: (Description of Minimization of Water Quality Impacts)		State Project 38422.1.2 involves the replacement of NCDOT Bridge 680038 on NC 55 over Trent Creek. The proposed bridge will maintain the existing level of service. The proposed roadway fill slopes are 2:1 (which per geotechnical recommendations are the steepest allowable) and are grassy. There are no deck drains over Trent Creek. There are two proposed outlets on the beginning and end of the bridge left side to allow proper drainage for the bridge and minimize disturbance in the surrounding wetlands. Rip Rap outlet pads will be utilized to dissipate the flow and minimize erosion. All piping is outletted beyond buffer zones. Rip rap toe protection has been added to stabilize fill slopes as needed. The detour bridge will utilize 2:1 fill slopes as well as a pile retaining wall in order to minimize wetland impacts. The bridge will be constructed without work bridges or causeways which minimizes temporary surface water impacts.					
Waterbody Information							
Surface Water Body (1):		Trent Creek		NCDWR Stream Index No.:		27-150-(6)	
NCDWR Surface Water Classification for Water Body		Primary Classification:		Class SC			
		Supplemental Classification:		Nutrient Sensitive Waters (NSW)			
Other Stream Classification:		None					
Impairments:		None					
Threatened/Endangered Species?		No		Comments:			
NRTR Stream ID:		Trent Creek		Buffer Rules in Effect:		Neuse	
Project Includes Bridge Spanning Water Body?		Yes		Deck Drains Discharge Over Buffer?		No	
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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B-4593-Hyd-prm-fsh.dgn
jason.potiskoski

TIP PROJECT: B-4593

CONTRACT: C204217

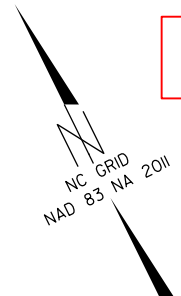


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PAMLICO COUNTY

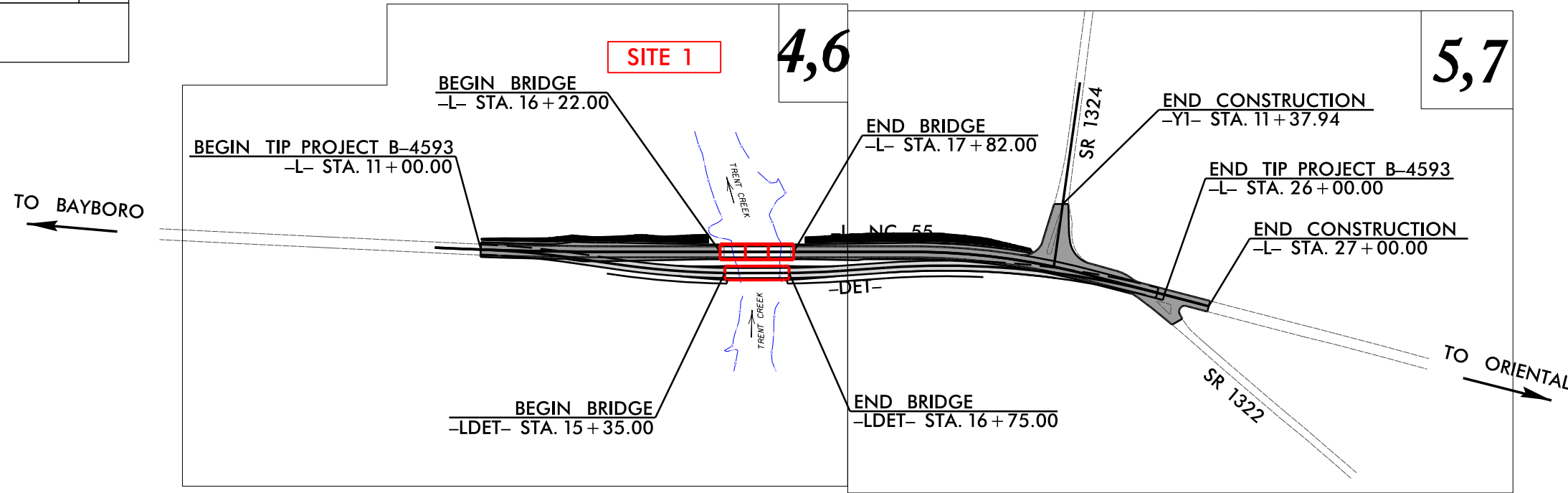
LOCATION: BRIDGE NO. 38 ON NC 55 OVER TRENT CREEK
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE.

PERMIT DRAWINGS
STREAM AND WETLAND IMPACTS

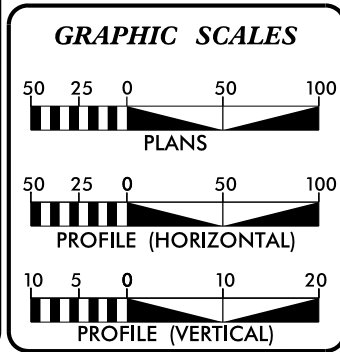
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4593	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
38422.1.2	-	PE	
38422.2.1	-	R/W, Utilities	
38422.3.1	-	CONST.	



PERMIT DRAWING
SHEET 1 OF 17



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

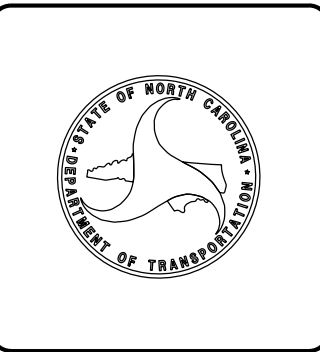


DESIGN DATA	
ADT 2019 =	5576
ADT 2040 =	8600
K =	8 %
D =	55 %
T =	9 % *
V =	60 MPH
V _{DET} =	50 MPH
* TTST =	2% DUAL = 7%
FUNC CLASS =	MAJOR COLLECTOR
REGIONAL TIER	

PROJECT LENGTH	
LENGTH ROADWAY TIP PROJECT B-4593 =	0.254 MILES
LENGTH STRUCTURE TIP PROJECT B-4593 =	0.030 MILES
TOTAL LENGTH OF TIP PROJECT B-4593 =	0.284 MILES
NCDOT CONTACT: DAVID STUTTS, PE	

Prepared in the Office of: SUMMIT DESIGN AND ENGINEERING SERVICES FIRM NO. P-0339	
RIGHT OF WAY DATE: NOVEMBER 1, 2018	BRANDON W. JOHNSON, PE PROJECT ENGINEER
LETTING DATE: JULY 16, 2019	FAITH E. JAHNKE, PE PROJECT DESIGN ENGINEER

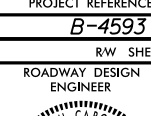
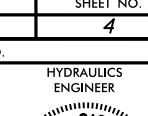
HYDRAULICS ENGINEER	
SIGNATURE:	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE:	P.E.



09-JUL-2019 12:08
jasoo.patskoki

R/W REV:REMOVED ROW,ADDED TCE,ADDED PDE ON PARCELS 1,2,3,AND 4.- FEJ 190131

PROJECT REFERENCE NO.	SHEET NO.
B-4593	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATCHLINE -L- STA 19+00.00 (SEE SHEET 5)



SEE SHEETS S-1 THRU S-42 FOR STRUCTURES PLANS

NC GRID
NAD 83 NA 2011

Revised July 19, 2019

8/17/99

REVISIONS

R/W REV. REMOVED ROW. ADDED TCE. ADDED PDE ON PARCELS 1, 2, 3, AND 4. - FEJ 190/31

MATCHLINE -L- STA 19+00.00 (SEE SHEET 4)

SITE 1

PAMCAR FARMS, LLC
DB 306 PG 447

JOHN L. McCOTTER, III
DB 353 PG 860

PAMCAR FARMS, LLC
DB 306 PG 447

3

END ROCK PLATING

L-22+75

R=40'

PAMCAR FARMS, LLC
DB 306 PG 447

LARRY MASSENGILL, et al
DB 587 PG 274
MB 6 PG 53

15

4

LARRY MASSENGILL, et al
DB 587 PG 274
MB 6 PG 53

5

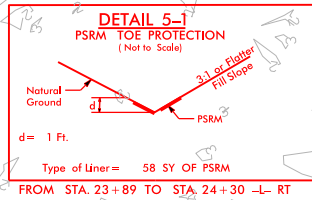
ANDREW M. BUEHL, JR., et al
DB 518 PG 710

ISBKD

LARRY MASSENGILL, et al
DB 587 PG 274
MB 6 PG 53

PAMCAR FARMS, LLC
DB 306 PG 447

STEVEN LAYALLEE
DB 337 PG 755
DB 470 PG 147



NOTE: DETOUR IMPACTS
APPEAR GRAY ON THIS SHEET

PROJECT REFERENCE NO. B-4593	SHEET NO. 5
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 046981 PAUL E. JAHNKE	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 046226 LARRY M. PATSKOS
FOR PROFILE, SEE SHEET 8	
FOR ONSITE DETOUR, SEE SHEET 7	

PERMIT DRAWING
SHEET 5 OF 17



DENOTES HAND
CLEARING



DENOTES FILL IN
WETLAND

NC GRID
NAD 83 NA 2011

Revised July 19, 2019

8/17/99

R/W REV: REMOVED ROW ADDED TCE ADDED PDE ON PARCELS 1,2,3, AND 4 - FEJ 190131

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jason.patakoski

REVISIONS

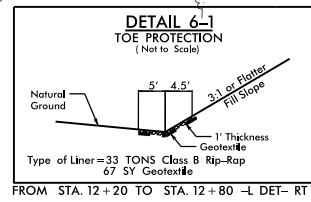
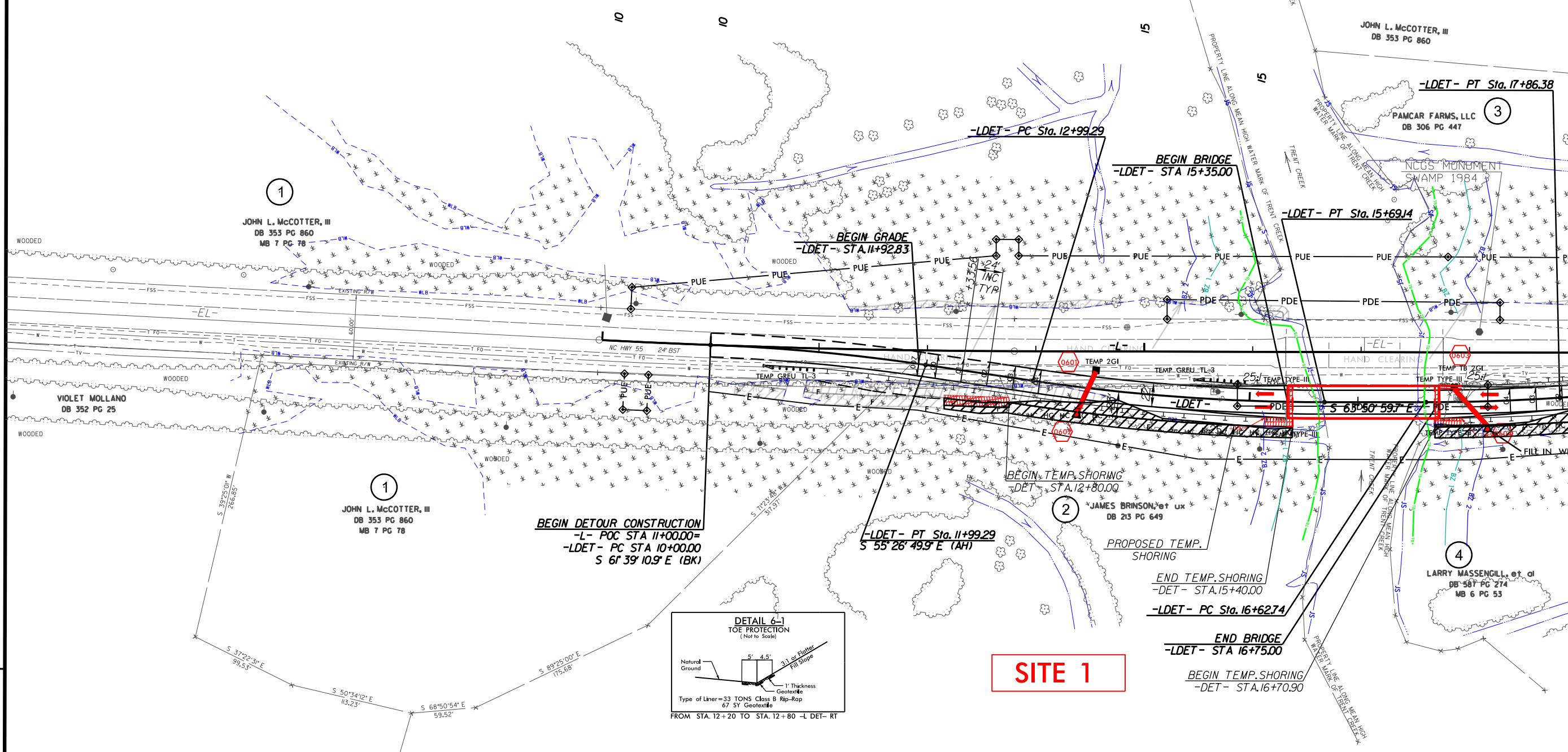
DETOUR BRIDGE

NOTE: ALL DETOUR
IMPACTS ARE TEMPORARY

NOTE: MAIN BRIDGE IMPACTS
APPEAR GRAY ON THIS SHEET

PERMIT DRAWING
SHEET 6 OF 17

PROJECT REFERENCE NO. B-4593		SHEET NO. 6
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	SEAL 046981 FAITH E. JAHNE	
FOR PROFILE, SEE SHEET 9		FOR -L- LINE, SEE SHEET 4



DENOTES TEMPORARY
FILL IN WETLAND

DENOTES HAND
CLEARING

SITE 1

-LDET-		
PI Sta 10+99.74 Δ = 6' 12' 21.0" (RT) D = 3' 06' 50.0" L = 199.29' T = 99.74' R = 1,840.00' SE = 04 RO = 96'	PI Sta 14+34.46 Δ = 8' 24' 09.8" (LT) D = 3' 06' 50.0" L = 269.85' T = 135.16' R = 1,840.00' SE = 04 RO = 96'	PI Sta 17+24.58 Δ = 3' 51' 00.3" (LT) D = 3' 06' 50.0" L = 123.64' T = 61.84' R = 1,840.00' SE = 04 RO = 96'

MATCHLINE -L- STA 19+00.00 (SEE SHEET 7)

Revised July 19, 2019

8/17/99

R/W REV: REMOVED ROW ADDED TCE ADDED PDE ON PARCELS 1,2,3, AND 4 - FEJ 190131

09-JUL-2019 12:09
jason.patacski

REVISIONS

DETOUR BRIDGE

NOTE: ALL DETOUR
IMPACTS ARE TEMPORARY

NOTE: MAIN BRIDGE IMPACTS
APPEAR GRAY ON THIS SHEET

PERMIT DRAWING
SHEET 7 OF 17

PROJECT REFERENCE NO.
B-4593

SHEET NO.
6

R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

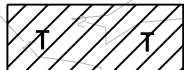
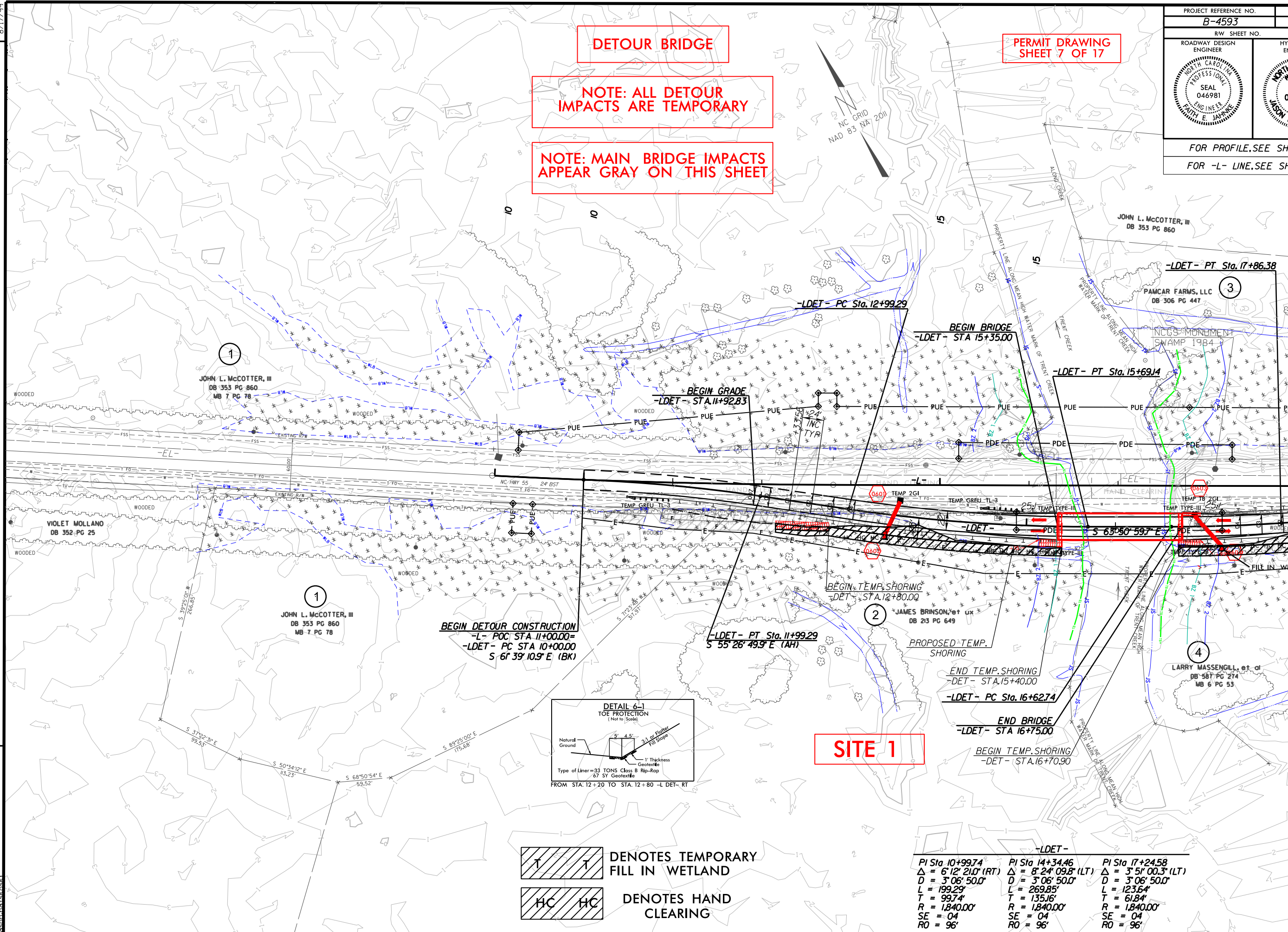
HYDRAULICS
ENGINEER



FOR PROFILE, SEE SHEET 9

FOR -L- LINE, SEE SHEET 4

MATCHLINE -L- STA 19+00.00 (SEE SHEET 7)



DENOTES TEMPORARY
FILL IN WETLAND



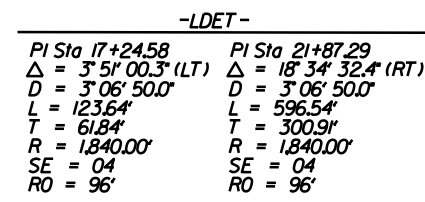
DENOTES HAND
CLEARING

SITE 1

PI Sta 10+99.74	PI Sta 14+34.46	PI Sta 17+24.58
Δ = 6'12' 21.0" (RT)	Δ = 8'24' 09.8" (LT)	Δ = 3'51' 00.3" (LT)
D = 3'06' 50.0"	D = 3'06' 50.0"	D = 3'06' 50.0"
L = 199.29'	L = 269.85'	L = 123.64'
T = 99.74'	T = 135.16'	T = 61.84'
R = 1,840.00'	R = 1,840.00'	R = 1,840.00'
SE = 04	SE = 04	SE = 04
RO = 96'	RO = 96'	RO = 96'

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B4593_Hyd-prm-psh_7_det.dgn
jason.natskoski

REVISIONS



Revised July 19, 2019

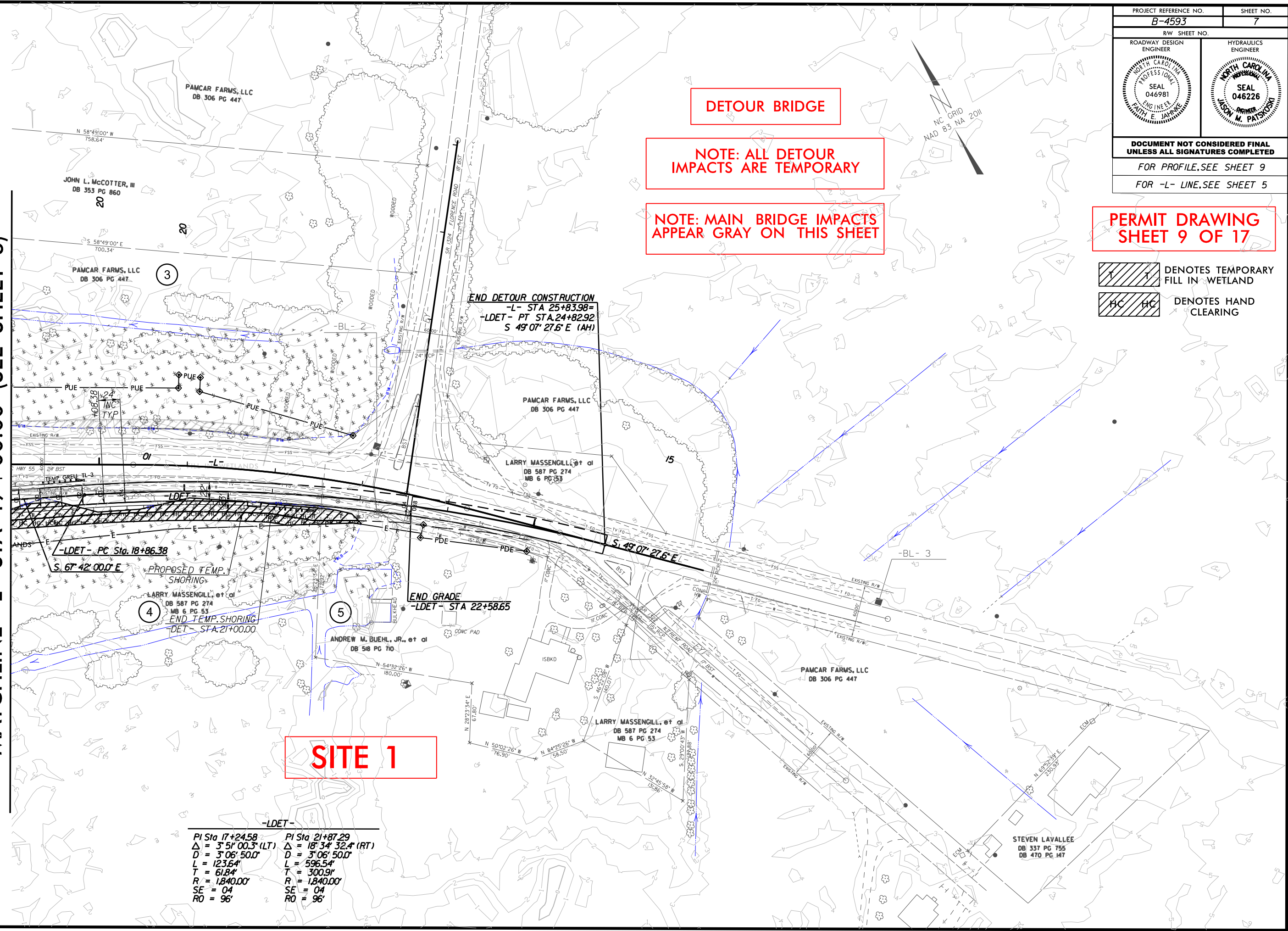
8/17/99

REVISIONS

R/W REV: REMOVED ROW ADDED TCE ADDED POE ON PARCELS 1,2,3, AND 4. - FEJ 190131

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jason.pattakoski

MATCHLINE -L- STA 19+00.00 (SEE SHEET 6)



PROJECT REFERENCE NO. B-4593		SHEET NO. 7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 		HYDRAULICS ENGINEER 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
FOR PROFILE,SEE SHEET 9			
FOR -L- LINE,SEE SHEET 5			

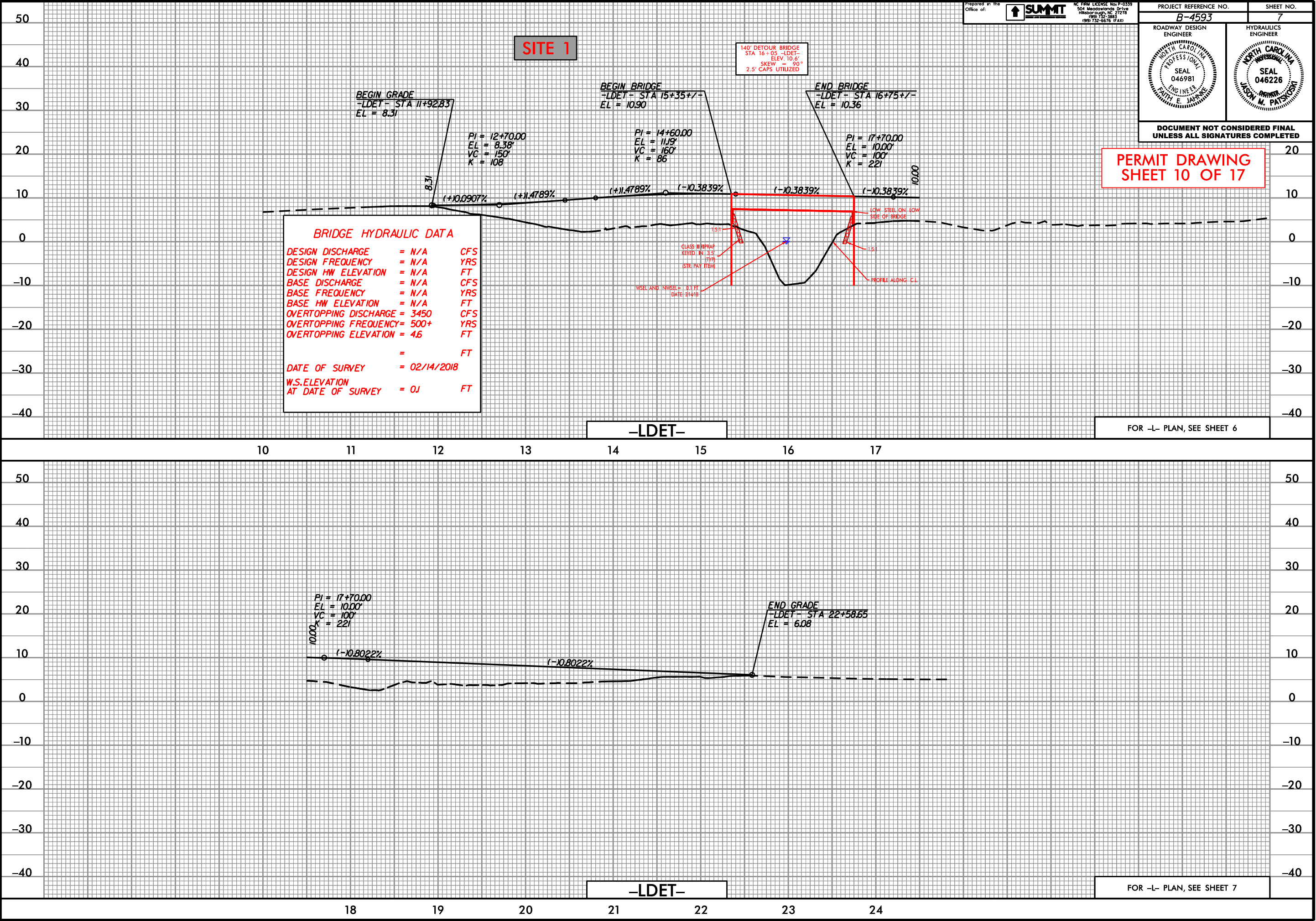
**PERMIT DRAWING
SHEET 9 OF 17**

- DENOTES TEMPORARY FILL IN WETLAND
- DENOTES HAND CLEARING

-LDET-	
PI Sta 17+24.58	PI Sta 21+87.29
$\Delta = 3^{\circ} 51' 00.3" (LT)$	$\Delta = 18^{\circ} 34' 32.4" (RT)$
$D = 3^{\circ} 06' 50.0"$	$D = 3^{\circ} 06' 50.0"$
$L = 123.64'$	$L = 596.54'$
$T = 61.84'$	$T = 300.91'$
$R = 1,840.00'$	$R = 1,840.00'$
$SE = 04$	$SE = 04$
$RO = 96'$	$RO = 96'$

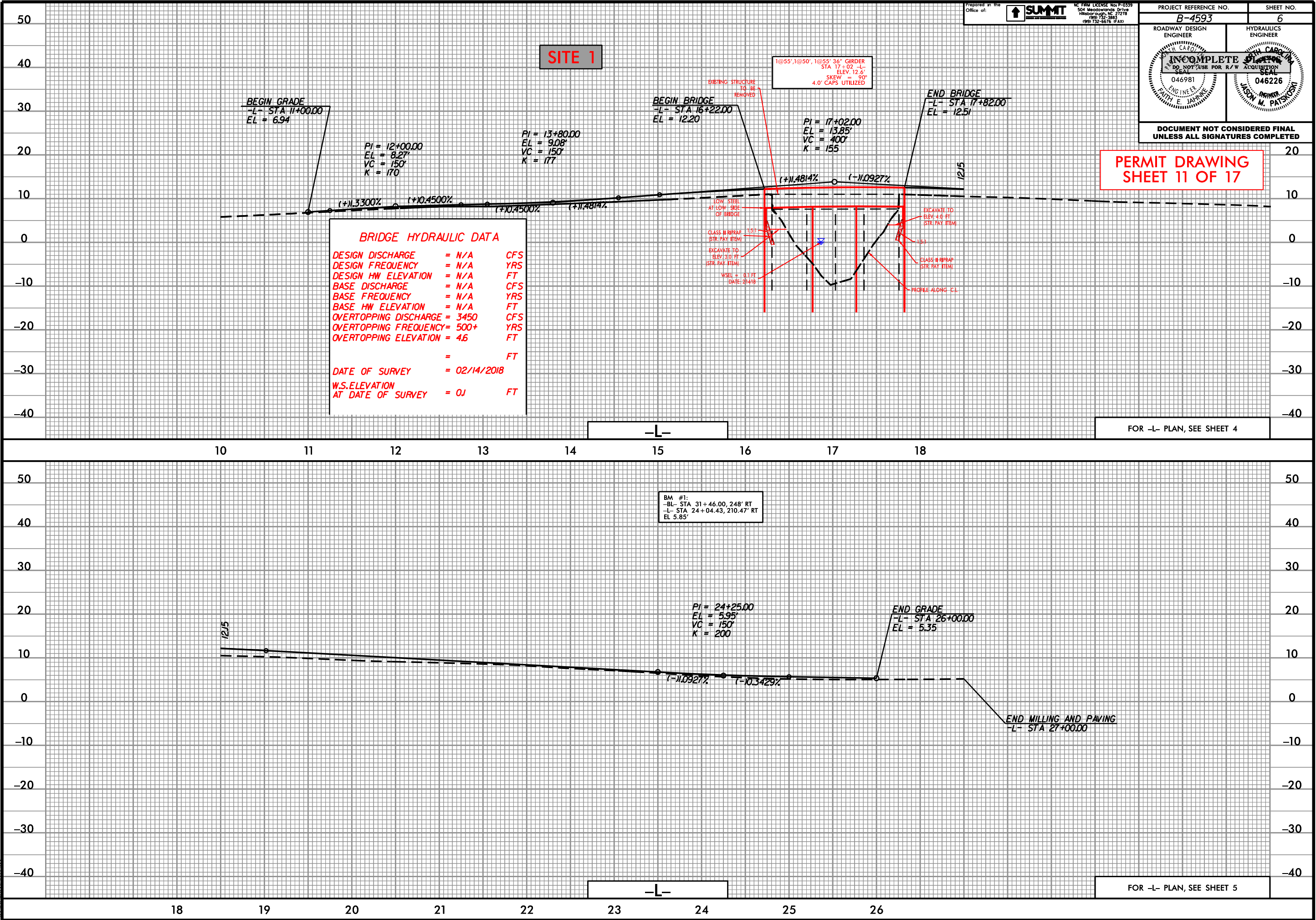
Revised July 19, 2019

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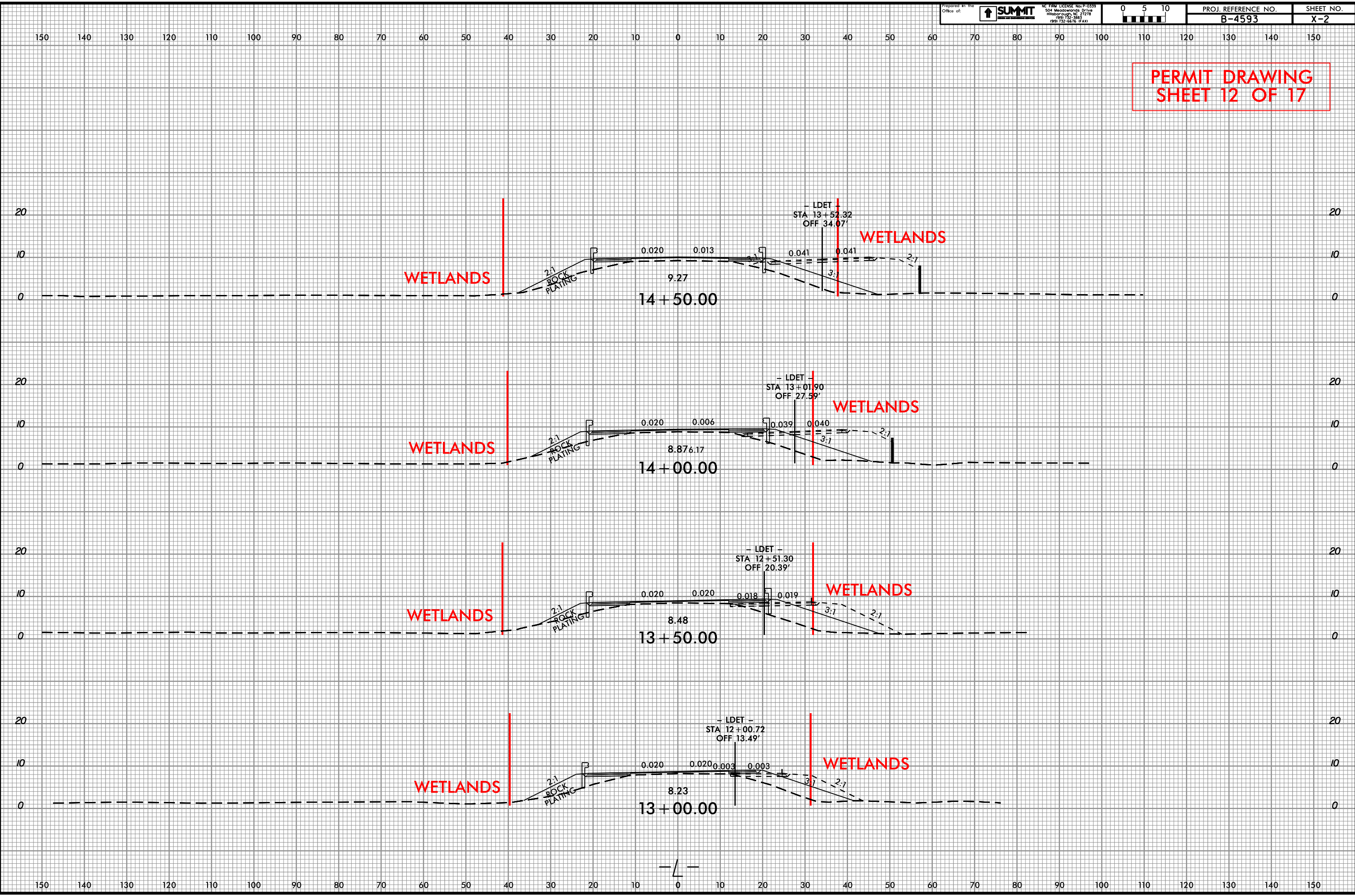
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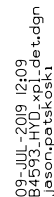


Revised July 19, 2019

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jason@atkinski.com

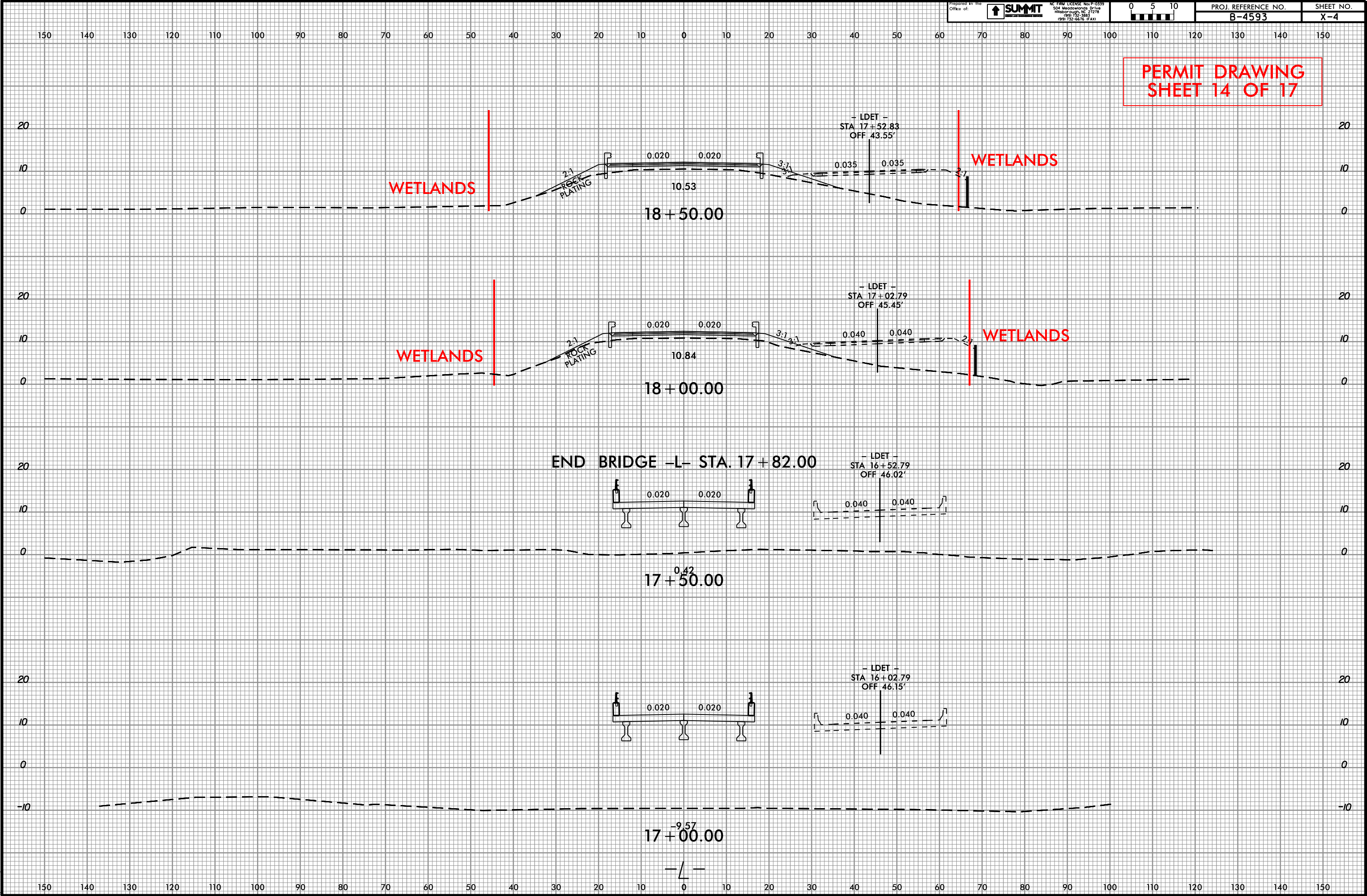


Revised July 19, 2019



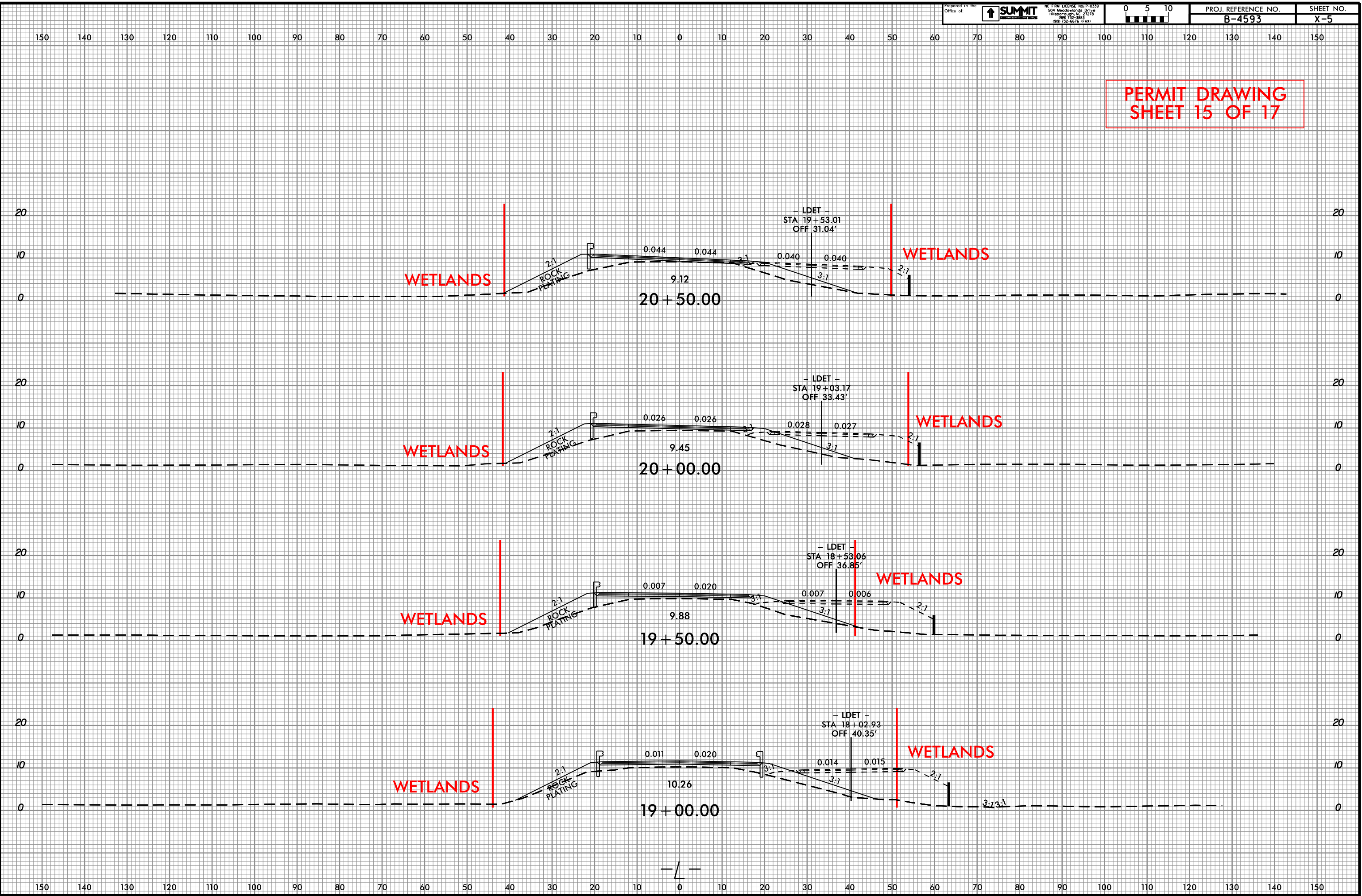
Revised July 19, 2019

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jason.patskoski



Revised July 19, 2019

09-JUL-2019 12:09
B4593.HVD_xpl.dgn
jason@atkinski.com



Revised July 19, 2019

09-JUL-2019 12:09
B4593.HVD_xpl.dgn
jason.patkoski

Prepared in the
Office of:



NC FIRM LICENSE No. P-0339
504 Woodlands Drive
Hillsborough, NC 27278
(919) 732-3883
(919) 732-6676 (FAX)

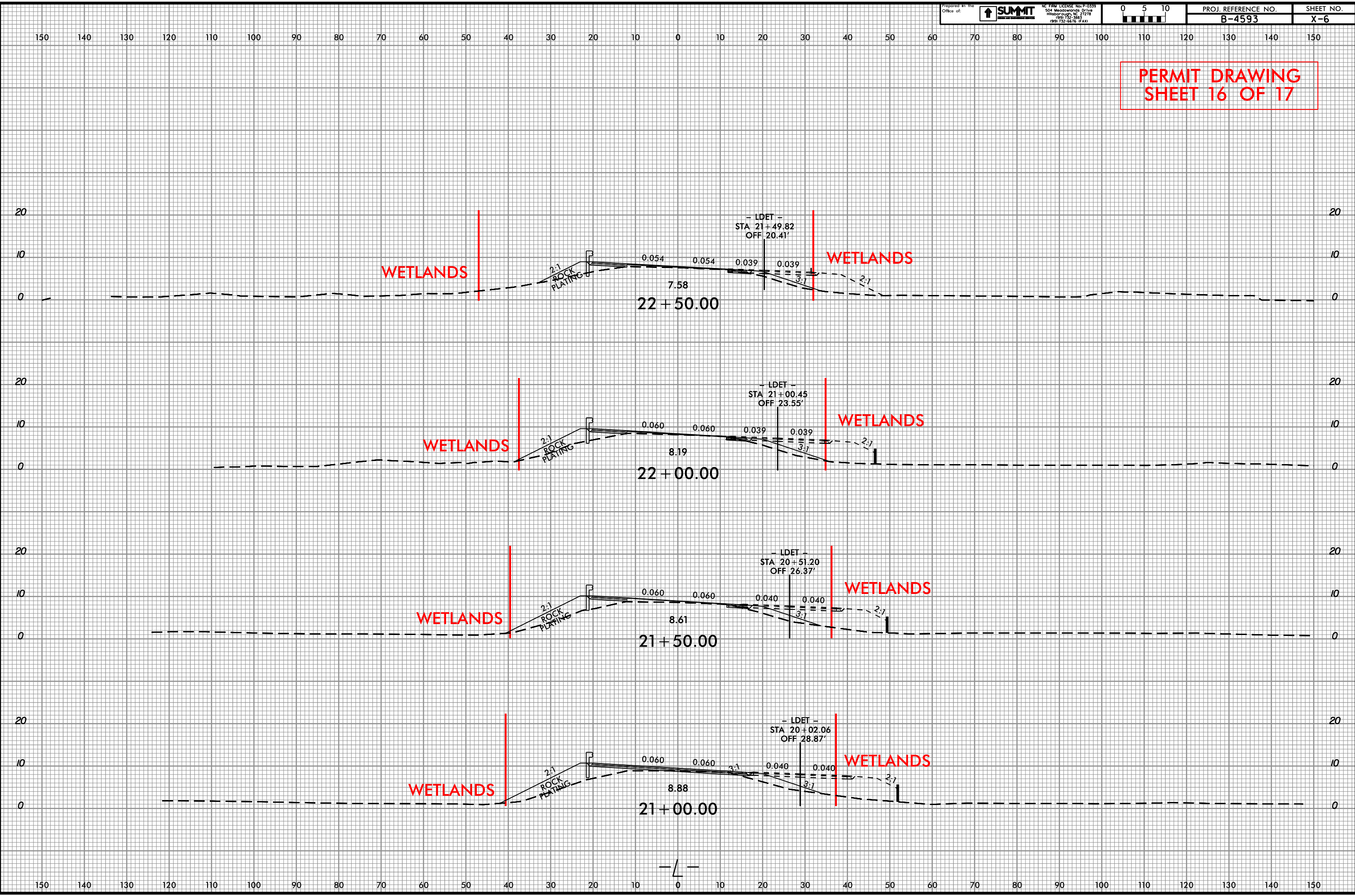


PROJ. REFERENCE NO.

B-4593

SHEET NO.

X-6



WETLAND AND SURFACE WATER IMPACTS SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Temp Fill In Wetlands (ac)	Permanent 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	12+25 to 22+37 -L- LT	Roadway Fill Slope		< 0.01			0.10					
1	11+24 to 22+76 -L- RT	Roadway Fill Slope		0.09			0.04					
1	15+97 to 16+28 -L- LT	Rip Rap						< 0.01	<0.01	8.00	13.00	
1	11+12 to 22+04 -L- DET_ RT	Detour Fill Slope	0.15				0.18					
TOTALS*:			0.15	0.09	0.00	0.00	0.32	< 0.01*	<0.01**	8.00	13.00	0.00

Rounded totals are sum of actual impacts

NOTES:

0.09 acre of Temporary Fill in Wetlands in the Hand Clearing areas for erosion control measures.

*Permanent SW impacts = 143 sf

**Temporary SW impacts = 199 sf

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
06/27/2019
PAMLICO COUNTY
B-4593
BRIDGE REPLACEMENT ON NC 55 OVER TRENT CREEK
SHEET 17 OF 17

**B-4593 Utility Narrative
Pamlico County, North Carolina
Updated July 9, 2019**

Duke Energy

Contact Information: Alex Craig (919) 399-3081 ext. 7304
alex.craig@duke-energy.com

Duke Energy will be changing out (2) poles for taller poles, placing (5) new poles in the new PUE acquired north of NC Hwy 55, removing (5) existing poles north of NC Hwy 55, placing (1) new pole south of NC Hwy 55, and installing (11) and replacing (1) guys and anchors.

Wetland areas will be impacted by the installation of five new poles and 11 guys and anchors in the wetland areas and the clearing required. The clearing for the proposed power lines will be 30 feet wide (15 feet on each side of the lines), and the hand clearing impacts total 0.65 acres. There are also 15 square feet of utility pole impacts attributed to Duke Energy. Additionally, Duke energy guy wires/anchors account for 33 square feet of impacts.

CenturyLink

Contact Information: Rod Medlin (252) 413-7711
rod.m.medlin@centurylink.com

CenturyLink will be removing (2) poles, installing (4) guys and anchors, and abandoning buried cables south of NC Hwy 55. The replacement copper and fiber cables will be placed on the north side on NC Hwy 55 both buried in the R/W, and aerially west of the project, then both aerially attached to the new Duke poles inside the project, then riser down the existing pole at Florence Road, and buried under NC Hwy 55 to an existing handhole south of NC Hwy 55.

Wetland areas will be impacted by the installation of (2) guys and anchors in the wetland which account for 6 square feet of impacts.

Spectrum

Contact Information: Stan Ramsay (252) 725-1141
stan.ramsay@pintechcorp.com

Spectrum will be abandoning buried cable south of NC Hwy 55, and removed from the aerial crossing attached to CenturyLink's poles (to be removed). Spectrum will be attaching to Duke's new poles north of NC Hwy 55, and to Duke's existing poles until they are east of Florence Rd. Then, they will go buried under NC Hwy 55 to tie back into their existing facilities west of N Trent Rd. Spectrum will be installing (4) guys and anchors.

Wetland areas will be impacted by the installation of (3) guys and anchors in the wetland areas which account for 9 square feet of impacts.

Bay River Metropolitan Sewer

Contact Information: Eric Harper - (252) 670-4055 - (252) 745-4812 (office)
ericbayriver@gmail.com
Chris Venters (252) 670-8236
venters.brmsd@gmail.com

Bay River Metropolitan Sewer will be abandoning approximately 1184 LF of 6-inch PVC sanitary sewer forcemain north on the northside of NC Hwy 55. The abandoned segment will be replaced by approximately 207 LF of 8-inch PVC forcemain, 1050 LF of 8-inch FPVC forcemain, two 8-inch insertion valves, 2 8-inch 11.25-degree bends, one 8-inch 22.5 degree bends, two combination air valve and vaults, and two 10"x8" HDPE Reducers with 8" MJ Adaptors. The new segment will connect to the existing sanitary sewer forcemain east and west of the bridge. The proposed forcemain will cross underneath Trent Creek (maintaining a 20' minimum separation below the bottom of the channel) with 1050 LF of directionally drilled 8-inch FPVC. All open cut sections are outside the wetland boundary, so, there are no wetland impacts associated with this relocation.

Pamlico County Water

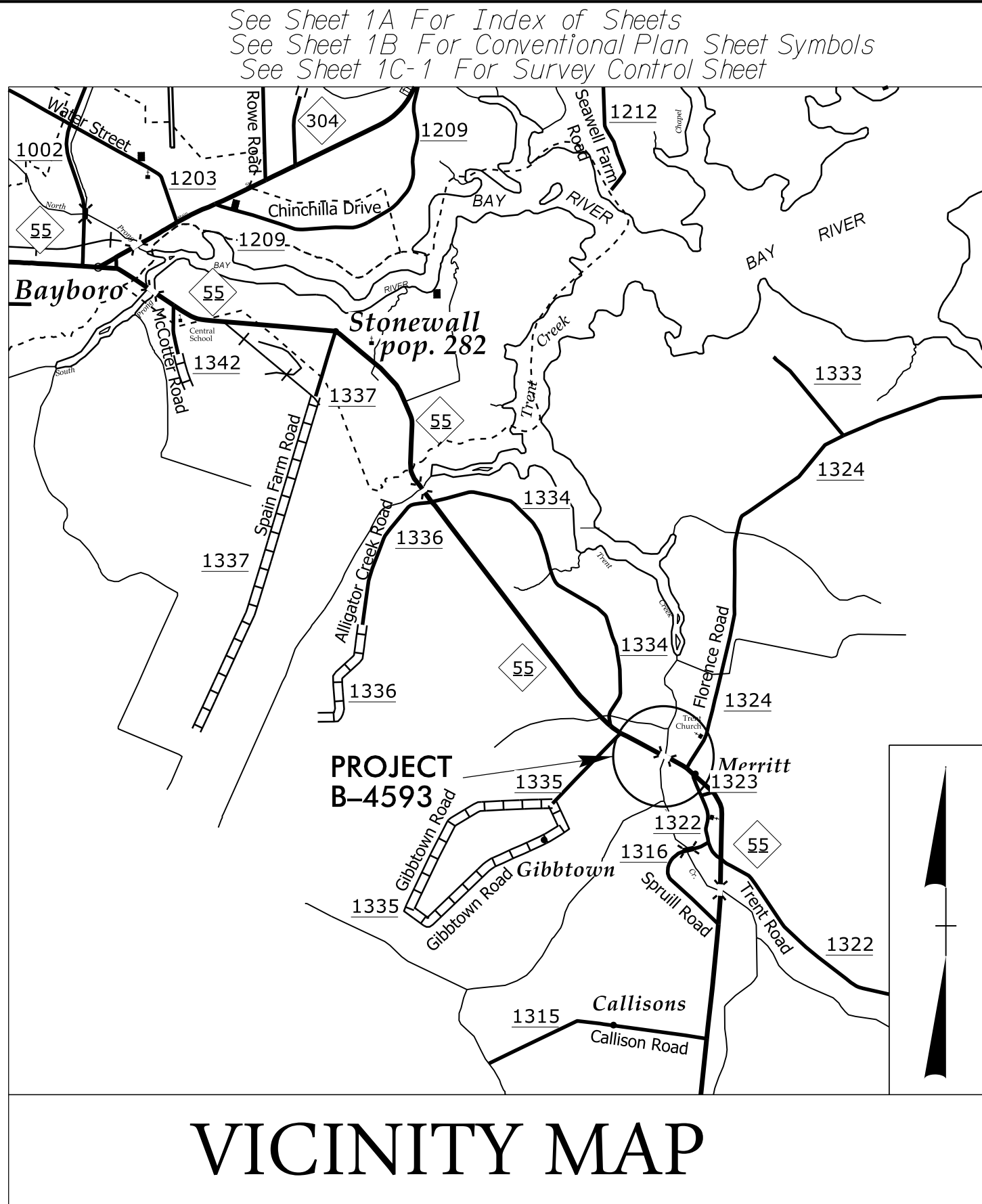
Contact Information: Jeff Sanders (252) 670-7519, (252) 745-5453 (office)
jeff.sanders@pamlicocounty.org
Paul Campbell (252) 670-2037, (252) 745-5453 (office)
paul.campbell@pamlicocounty.org

Pamlico County Water will be removing/abandoning approximately 1111 feet of 8-inch PVC waterline on the south side of NC Hwy 55. The existing waterline is suspended from the existing bridge. This segment will be removed. The removed/abandoned segment of waterline will be replaced with approximately 265 LF of 8-inch PVC, 980 LF of 10" HDPE, two 8-inch insertion valves, three 8-inch 90-degree bends, an 8-inch 22.5-degree bend, an 8-inch 45-degree bend, and two 10"x8" HDPE Reducers with 8" MJ Adaptors. The new segment will cross NC Hwy 55 West and East of the bridge, requiring 40 and 60 LF of 16-inch steel casing respectively. The steel casing will be bore and jacked which will require a 30'x15' bore pit at the east and west crossings. Both bore pits will be north of NC Hwy 55. The new segment will connect to the existing waterline at the crossings of NC Hwy 55 which will require 15'x15' receiving pits at both locations. The proposed waterline will cross underneath Trent Creek (maintaining a 20' minimum separation below the bottom of the channel) with 960 LF of directionally drilled 10-inch HDPE. Wetland areas will be impacted by the bore pits at both crossings of NC Hwy 55 (north of NC Hwy 55), the receiving pit south of NC Hwy 55 and east of the bridge, and some open cut installation east of the bridge. These impacts total 0.014 acres (164 square feet in Site 2 and 453 square feet in Site 3). Note it was assumed excavation limits for the open cut section would extend 7.0' from the center of the waterline.

Revised July 19, 2019

09-JUL-2019 11:19 B-4593-Hyd-UTL-+sh.dgn Jason.potfskoski

PROJECT: B-4593



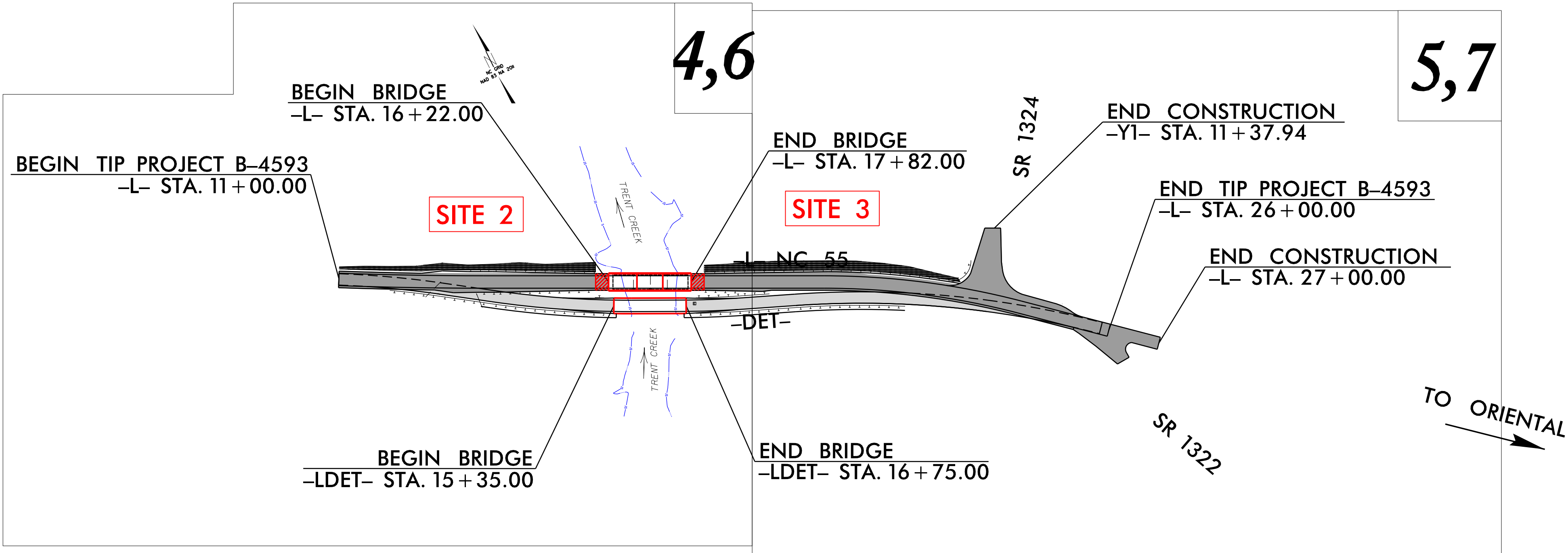
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NEU PERMIT PLANS
PAMLICO COUNTY

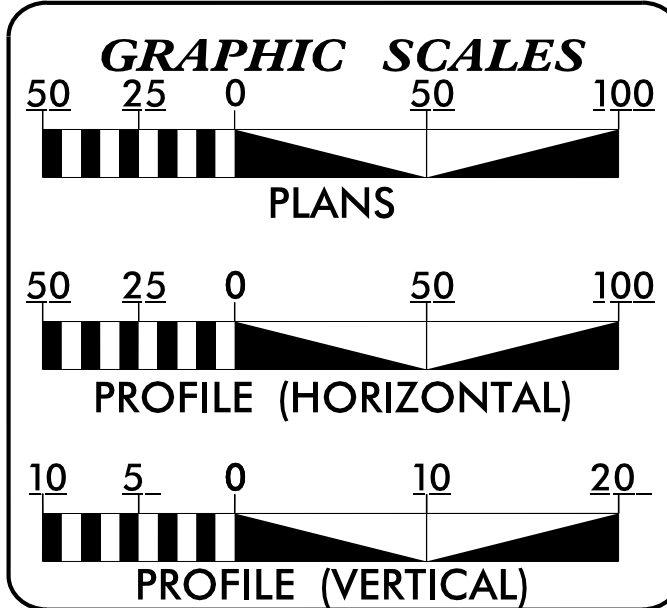
LOCATION: BRIDGE NO. 38 ON NC 55 OVER TRENT CREEK
TYPE OF WORK: RELOCATION OF POWER, TELEPHONE, CABLE,
WATER, AND SANITARY SEWER

T.I.P. NO.	SHEET NO.
B-4593	UE-1

SITE 1: ROADWAY IMPACTS
(SHOWN IN SEPERATE
PERMIT PACKAGE)
SITE 2&3: UTILITY IMPACTS



DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



SHEET NO.:	DESCRIPTION:
UE-1	TITLE SHEET
UE-2 THRU UE-3	UTILITY CONSTRUCTION PLAN

UTILITY OWNERS ON PROJECT

- (A) TELEPHONE - CENTURYLINK
- (B) POWER - DUKE ENERGY
- (C) CABLE - SPECTRUM
- (D) WATER - PAMLICO COUNTY WATER
- (E) SANITARY SEWER - BAY RIVER METROPOLITAN

PREPARED IN THE OFFICE OF

SUMMIT

DESIGN AND ENGINEERING SERVICES
FIRM NO. P-0339

504 Meadowland Drive
Hillsborough, NC 27278-8551
Voice: (919) 732-3883
Fax: (919) 732-6776
www.summitde.net

BRANDON W. JOHNSON, PE PROJECT ENGINEER
FAITH E. JAHNKE, PE PROJECT DESIGNER

DIVISION OF HIGHWAYS
UTILITIES UNIT

1555 MAIL SERVICES CENTER
RALEIGH, NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

KYLE PLEASANT REGIONAL UTILITY COORDINATOR
LARRY M. JAMES, JR. SENIOR UTILITY COORDINATOR
NABIL HAMDAN REGIONAL UTILITIES ENGINEER
KELVIN S. MARTIN, EI SENIOR UTILITIES ENGINEER

PERMIT DRAWING SHEET 2 OF 5

SITE 2

SITE 3

MATCHLINE -L- STA 19+00.00 (SEE SHEET 5)

TOTAL HAND CLEARING (THIS SHEET)
0.31 ACRES SITE 2
0.12 ACRES SITE 3

TOTAL EXCAVATION (THIS SHEET):
<0.01 ACRES SITE 2
<0.01 ACRES SITE 3

NOTE: SITE 2 IS ALL WETLAND AREAS WEST OF TRENT CREEK AND SITE 3 IS ALL WETLAND AREAS EAST OF TRENT CREEK

SKETCH SHOWING BRIDGE TO PAVEMENT RELATIONSHIP

BEGIN APP. SLAB -L- STA.15+97.83

END APP. SLAB -L- STA.18+06.17

BEGIN BRIDGE -L- STA.16+22.00

END BRIDGE -L- STA.17+82.00

TYPE-III

TYPE-III

TYPE-III

TYPE-III

NEW BURIED CENTURYLINK CABLE

DUKE ENERGY OVERHEAD GUY

REPLACE DUKE POLE

DIRECTIONAL DRILL

HORIZ. DIRECTIONAL DRILL (Approx. 1050 LF of 8" FPVC Forcemain)

HORIZ. DIRECTIONAL DRILL (Approx. 980 LF of 10" HDPE Water)

PROP. COMBO. AIR VALVE & VAULT (Sewer Only)

PROP. 10"x8" HDPE REDUCER W/ 8" MJ ADAPTER

PROP. 8" PVC WATER

PROP. 8" PVC FORCEMAIN

PROP. 30'x15' BORE PIT OPEN CUT

OPEN CUT

NEW DUKE POLE

REM DUKE POLE

REM CENTURYLINK POLE

EX. 8" WATER (Abandon)

8" FORCEMAIN (Abandon)

PROP. 40 LF OF 16" STEEL CASING (Bore & Jack)

PROP. 15'x15' RECEIVING PIT OPEN CUT

SPECTRUM OVERHEAD GUY

BURIED SPECTRUM CATV ABANDONED IN PLACE

BURIED CENTURYLINK CABLES ABANDONED IN PLACE

JOHN L. McCOTTER, III DB 353 PG 860 MB 7 PG 78

VIOLET MOLLANO DB 352 PG 25

JAMES BRINSON, et ux DB 213 PG 649

LARRY MASSENGILL, et al DB 587 PG 274 MB 6 PG 53

PAMCAR FARMS, LLC DB 306 PG 447

CAMA Wetland

TRENT CREEK

NC GRID NAD 83 NA 2011

FOR PROFILE, SEE SHEET 8

FOR ONSITE DETOUR, SEE SHEET 6

SEE SHEETS S-1 THRU S-42 FOR STRUCTURES PLANS

HC HC DENOTES HAND CLEARING

REVISED JULY 2018

PROJECT REFERENCE NO. B-4593

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PROFESSIONAL SEAL 046981

PROFESSIONAL SEAL 046226

ENGINEER JASON E. JAHNKE

ENGINEER JASON M. PATSKOSKI

MATCHLINE -L- STA 19+00.00 (SEE SHEET 4)

SITE 3

NOTE: SITE 2 IS ALL WETLAND AREAS WEST OF TRENT CREEK AND
SITE 3 IS ALL WETLAND AREAS EAST OF TRENT CREEK



PROJECT REFERENCE NO. B-4593		SHEET NO. RDY-5, UE-3	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		SEAL 046226 JASON M. PATSKOBY	
SEAL 046981 FAITH E. JAHANSKI		FOR PROFILE, SEE SHEET 8	
		FOR ONSITE DETOUR, SEE SHEET 7	

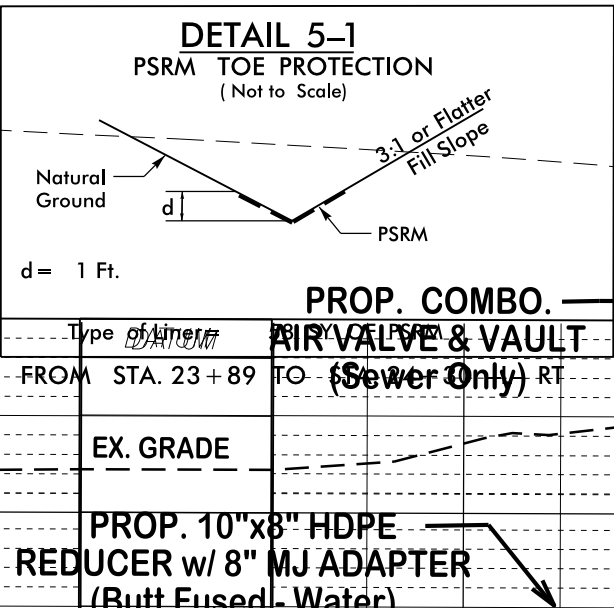
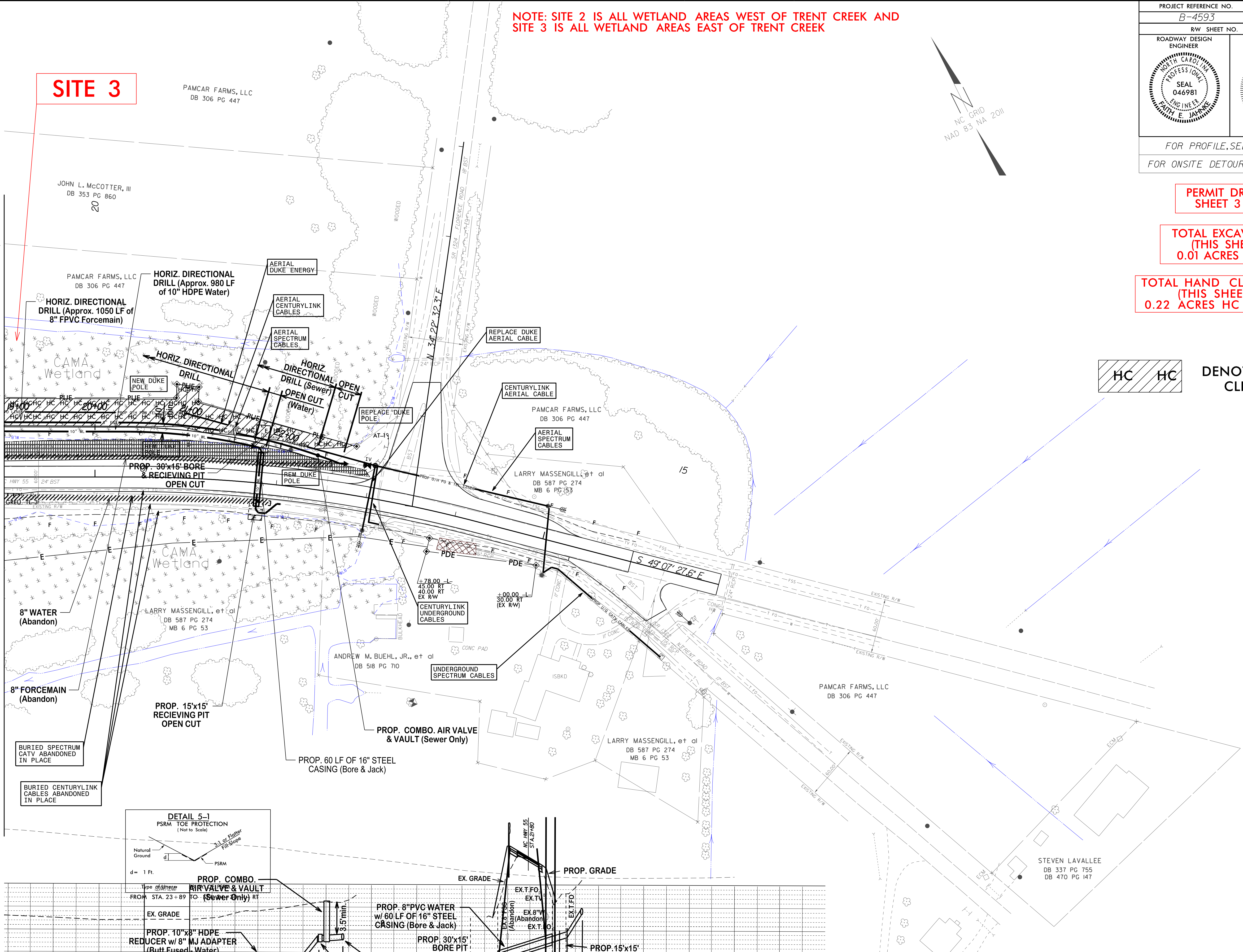
PERMIT DRAWING
SHEET 3 OF 5

TOTAL EXCAVATION
(THIS SHEET):
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TOTAL HAND CLEARING
(THIS SHEET):
0.22 ACRES HC SITE 3

HC HC

DENOTES HAND
CLEARING

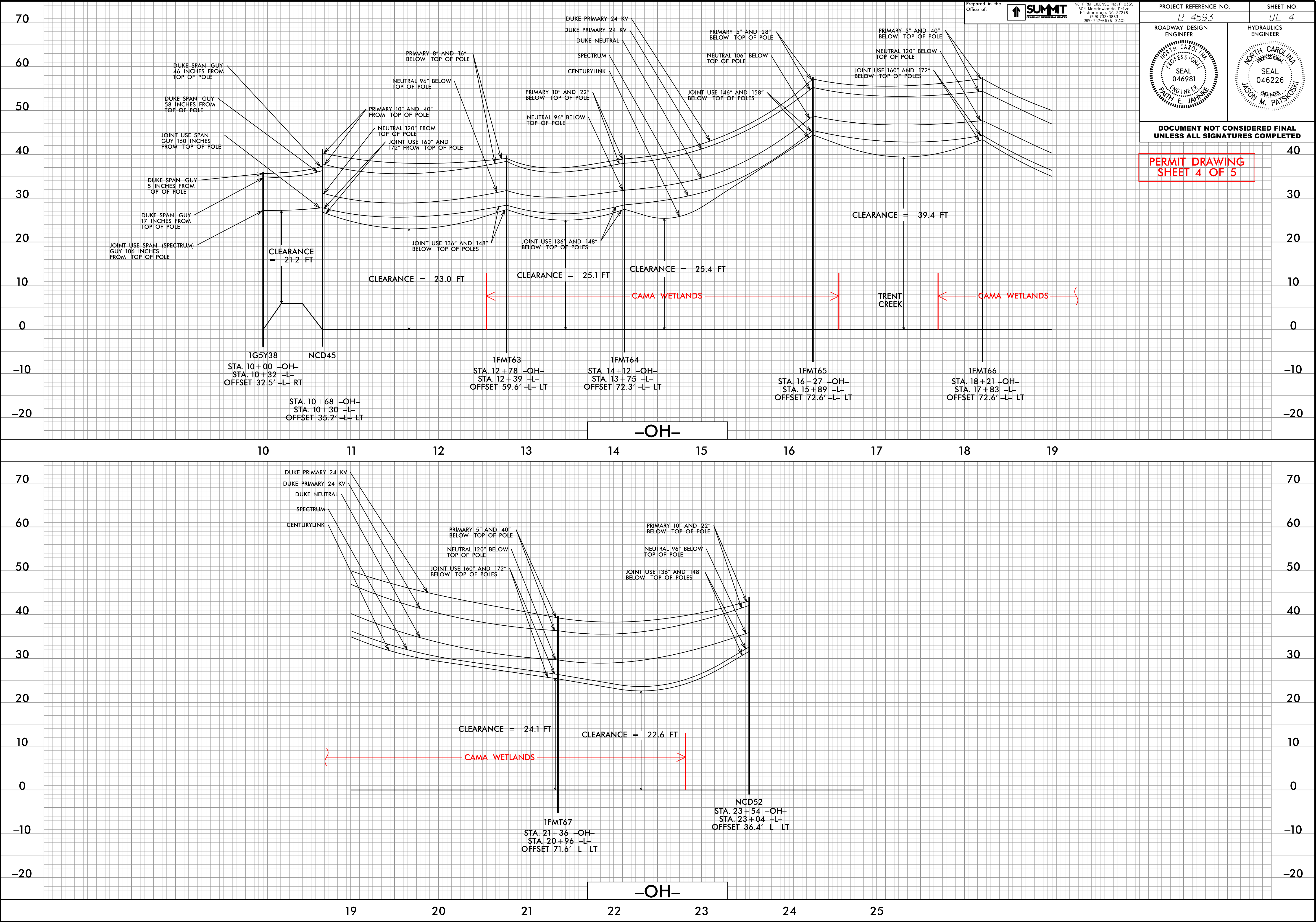


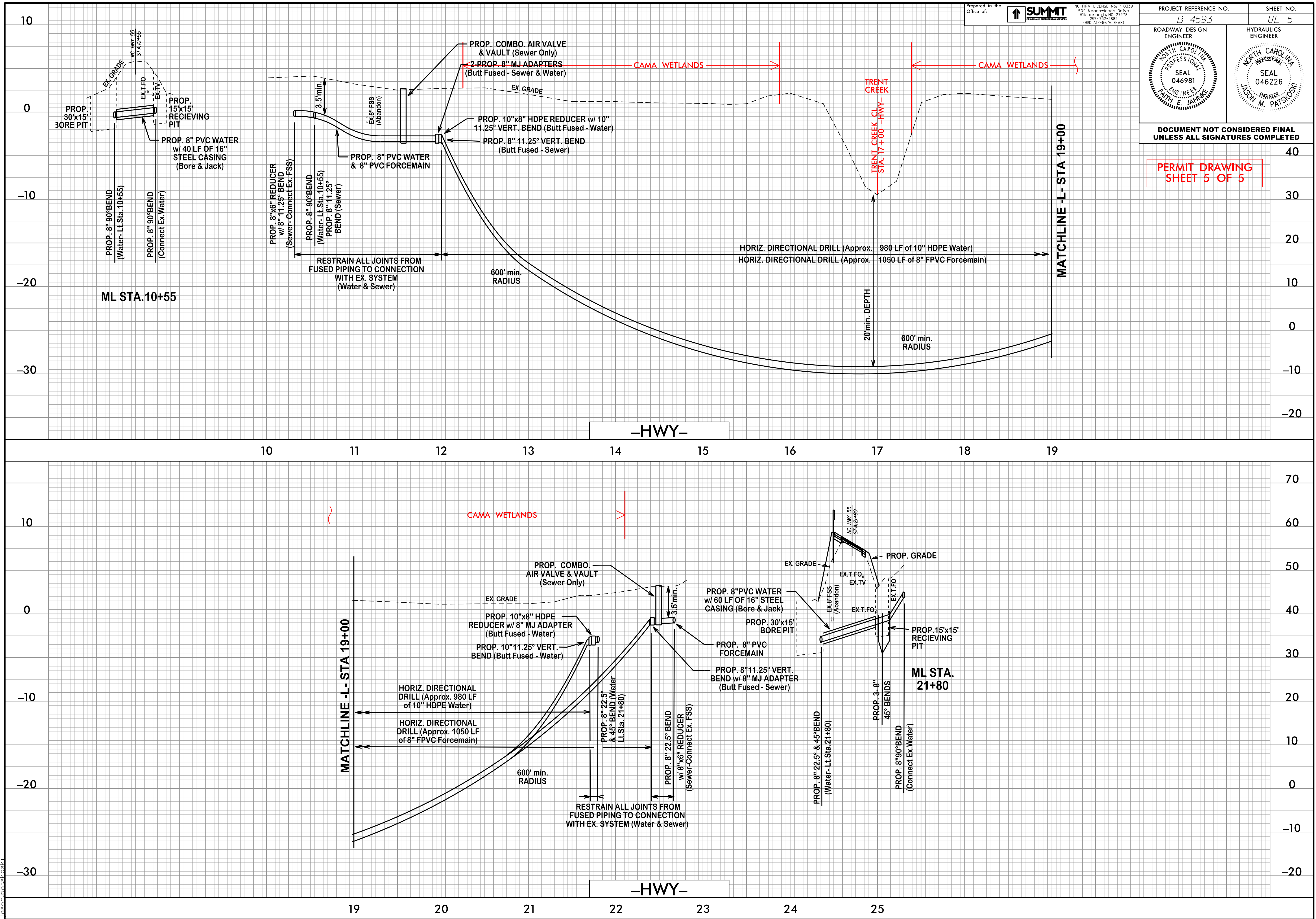
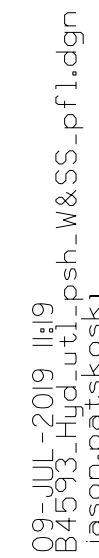
PROP. 8\"/>

PROP. 30'x15' BORE PIT

PROP. 15'x15'

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jason@starkoski.com





Revised July 19, 2019

WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Temp Fill In Wetlands (ac)	Permanent 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)
2	10+00 to 16+30 -L- LT & RT	Utility Easement					0.31					
2	10+00 to 16+30-L- LT & RT	Utility Poles and Guys			< 0.01 **							
2	10+45 to16+65 -L- LT	Water Main			<0.01***							
3	17+25 to 22+80 -L- LT	Utility Easement					0.34					
3	17+75 to 21+00 -L- LT	Utility Poles and Guy Wires			< 0.01 **							
3	21+62 to 21+91 -L- LT	Water Main			0.01							
3	21+62 to 21+91 -L- RT	Water Main			<0.01***							
TOTALS*:			0.00	0.00	0.02	0.00	0.65	0.00	0.00	0.00	0.00	0.00

Rounded totals are sum of actual impacts

NOTES:

**Utility Pole and Guy Wire Anchor Impacts = 36 SF in Site 2, 27 SF in Site 3 (2 Utility Poles fall within Buffer zones, 1 in Buffer Zone 1, 1 in Buffer Zone 2)

*** Water Main Impacts in Site 2 = 164 SF, in Site 3 = 376 SF north of NC 55 and 77 SF south of NC 55

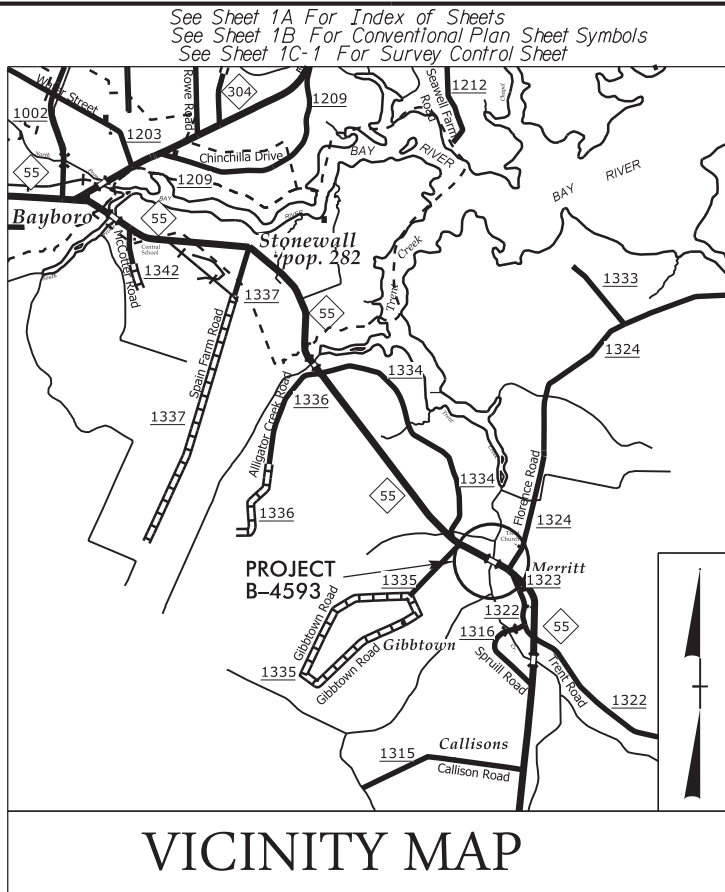
*****Total excavation impacts = 164 SF + 376 SF + 77 SF + 36 SF + 27 SF = 680 SF = 0.016 acres

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
7/10/2019
PAMLICO COUNTY
B-4593
BRIDGE REPLACEMENT ON NC 55 OVER TRENT
CREEK

09/08/99

26-JUN-2019 13:41
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jason.potiskoski

PROJECT: B-4593



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

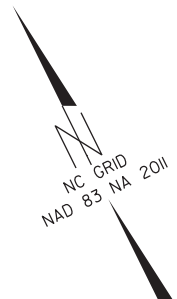
NEU PERMIT PLANS
PAMLICO COUNTY

LOCATION: BRIDGE NO. 38 ON NC 55 OVER TRENT CREEK
TYPE OF WORK: RELOCATION OF POWER, TELEPHONE, CABLE,
WATER, AND SANITARY SEWER

BUFFER IMPACTS PERMIT
FOR UTILITIES

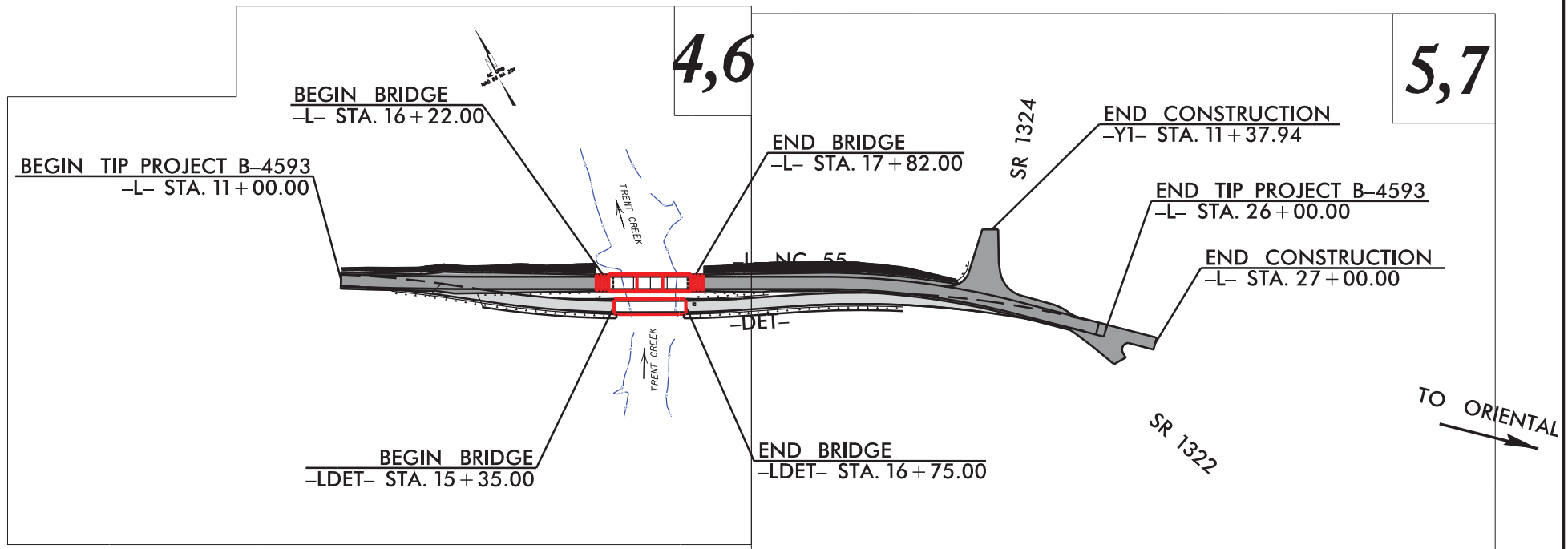
T.I.P. NO.	SHEET NO.
B-4593	UE-1

BUFFER DRAWING
SHEET 1 OF 4

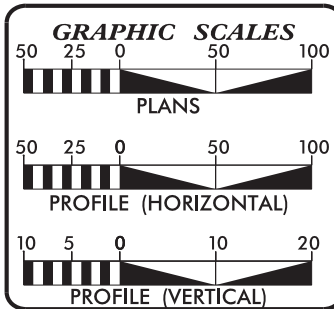


TO BAYBORO

TO ORIENTAL



DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



SHEET NO.:	DESCRIPTION:
UE-1	TITLE SHEET
UE-2 THRU UE-3	UTILITY CONSTRUCTION PLAN

UTILITY OWNERS ON PROJECT

(A) TELEPHONE - CENTURYLINK
(B) POWER - DUKE ENERGY
(C) CABLE - SPECTRUM
(D) WATER - PAMLICO COUNTY WATER
(E) SANITARY SEWER - BAY RIVER METROPOLITAN

PREPARED IN THE OFFICE OF

SUMMIT
DESIGN AND ENGINEERING SERVICES
FIRM NO. P-0339

504 Meadowland Drive
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www.summitde.net

BRANDON W. JOHNSON, PE PROJECT ENGINEER
FAITH E. JAHNKE, PE PROJECT DESIGNER

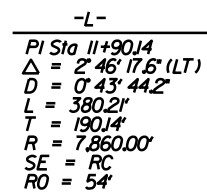
 DIVISION OF HIGHWAYS
UTILITIES UNIT
1555 MAIL SERVICES CENTER
RALEIGH, NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

KYLE PLEASANT REGIONAL UTILITY COORDINATOR
LARRY M. JAMES, JR. SENIOR UTILITY COORDINATOR
NABIL HAMDAN REGIONAL UTILITIES ENGINEER
KELVIN S. MARTIN, EI SENIOR UTILITIES ENGINEER

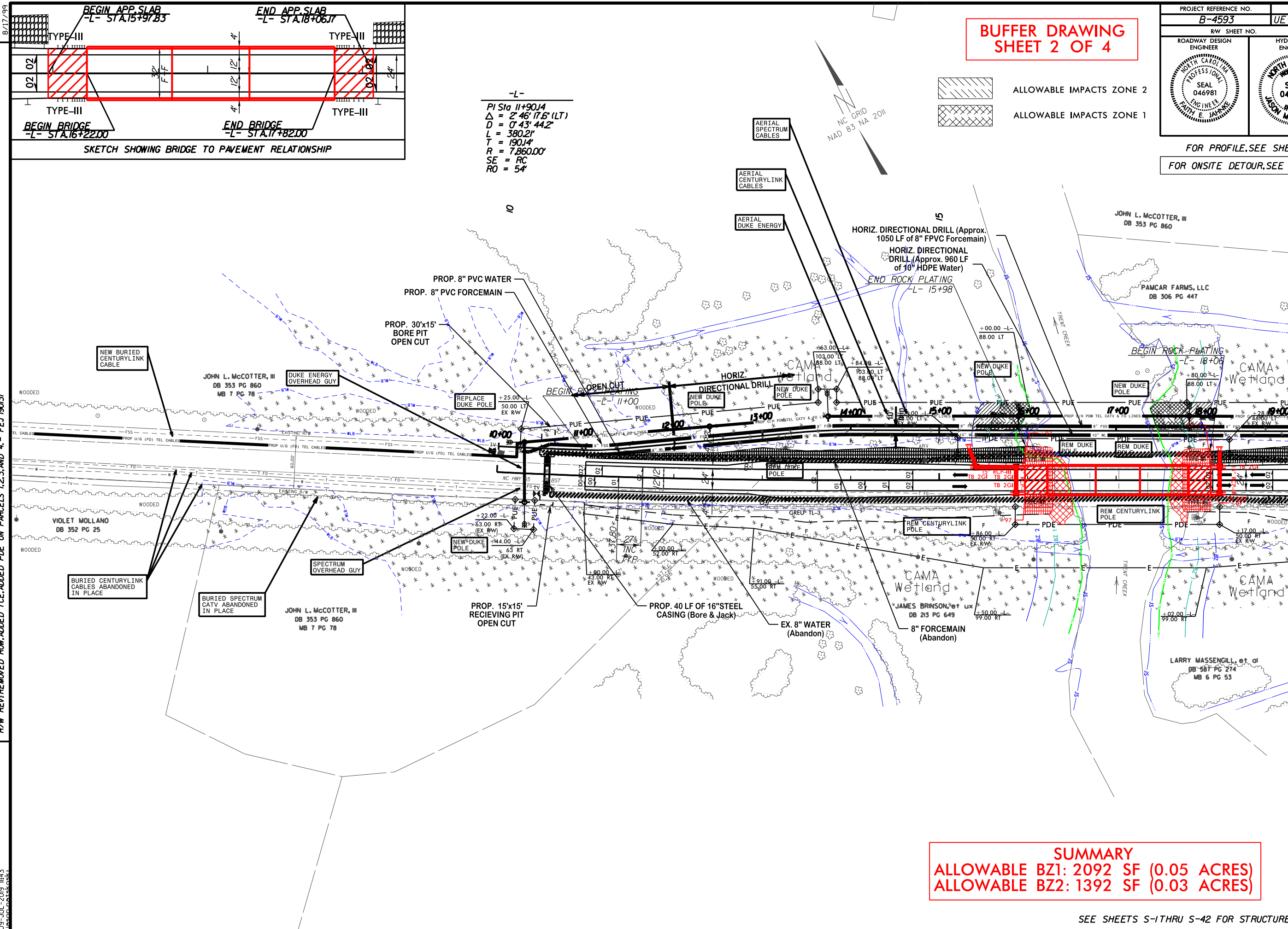
09-JUL-2019 11:43
jasop.patskoki

ROW REV: REMOVED ROW, ADDED TCE, ADDED PDE ON PARCELS 1, 2, 3, AND 4. - FEJ 190131

8/17/99



PROJECT REFERENCE NO.	SHEET NO.
B-4593	UE-2/RDY-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
<i>FOR PROFILE, SEE SHEET 8</i>	
<i>FOR ONSITE DETOUR, SEE SHEET 6</i>	



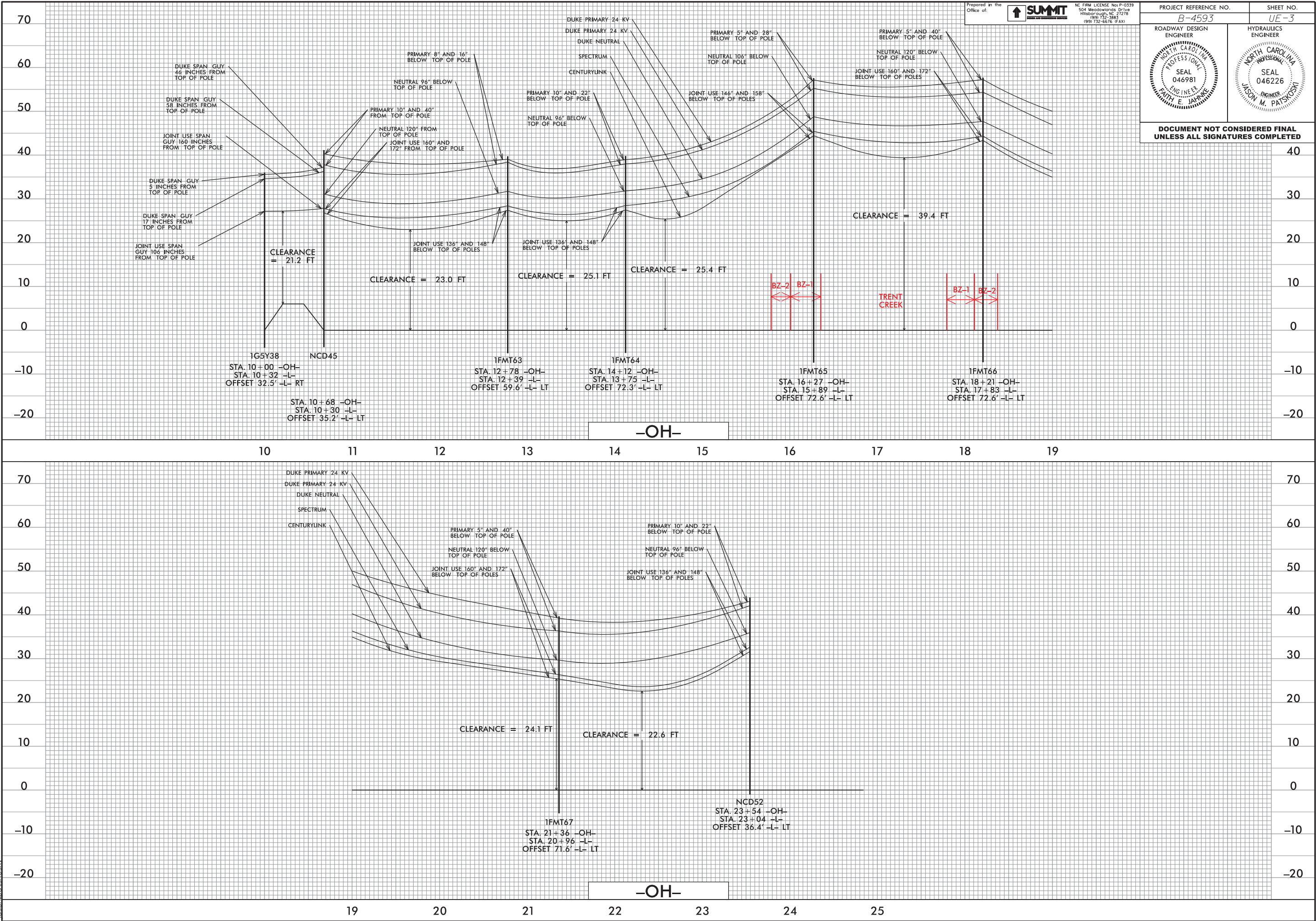
SUMMARY			
ALLOWABLE	BZ1: 2092 SF	(0.05	ACRES)
ALLOWABLE	BZ2: 1392 SF	(0.03	ACRES)

SEE SHEETS S-1 THRU S-42 FOR STRUCTURES PLANS

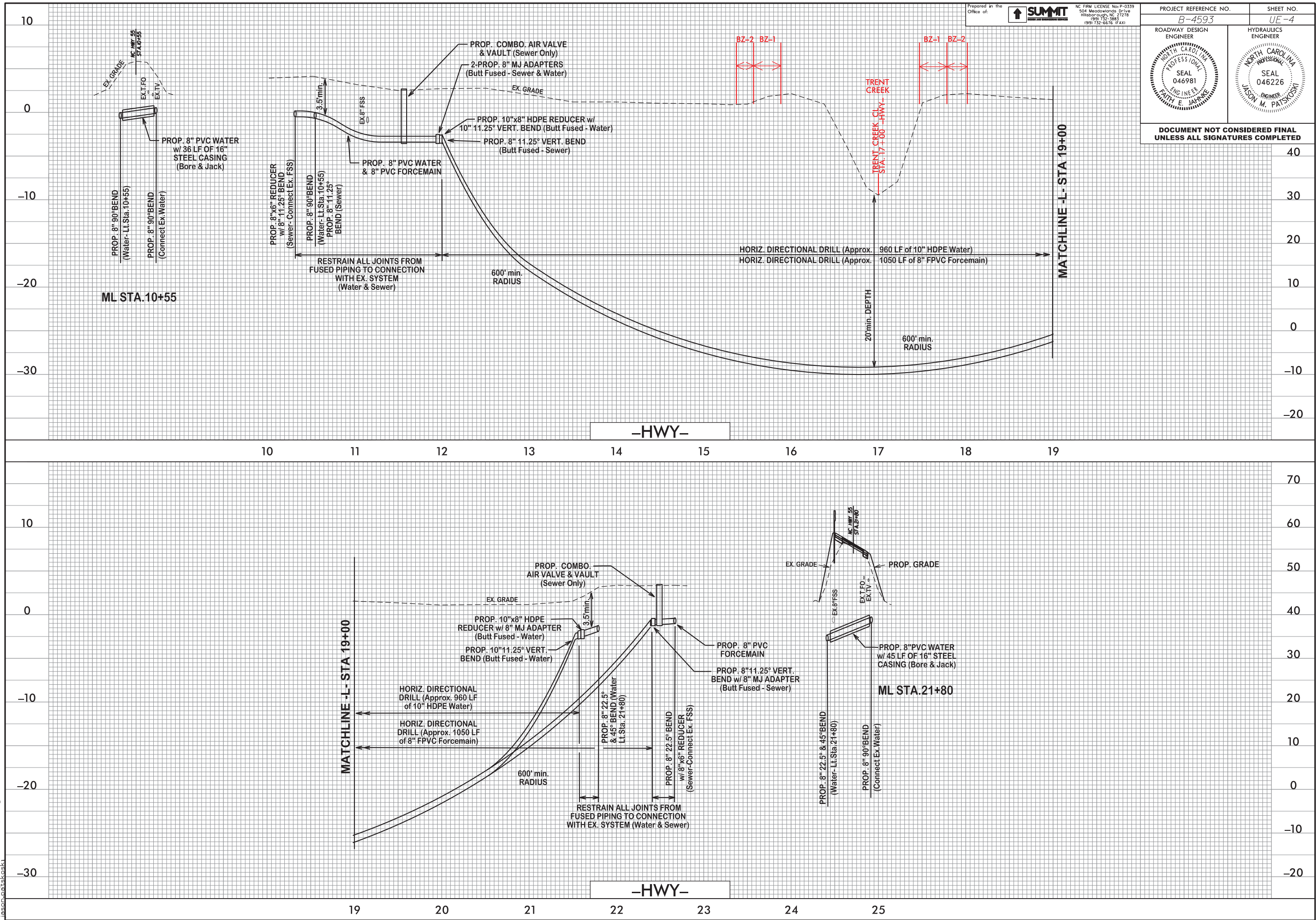
MATCHLINE -L- STA 19+00.00 (SEE SHEET 5)

Revised July 19, 2019

26-JUL-2019 13:43
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jason.patskoki



25-JUL-2019 13:43
B55933_HighwayBoreJack.dgn
jason.patakoski



RIPARIAN BUFFER IMPACTS SUMMARY													
Site No.	Station (From/To)	Structure Size / Type	IMPACTS									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)
1	15+37 -L- LT to 18+09 -L- LT	Utility Relocation	X			2092	1392	3484					
TOTALS*:						2092	1392	3484	0	0	0	0	0

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
7/10/2019
PAMLICO COUNTY
B-4593
BRIDGE REPLACEMENT ON NC HWY 55 BYPASS
OVER TRENT CREEK
SHEET 2 OF 3

Revised July 19, 2019

WETLANDS IN BUFFER IMPACTS SUMMARY

			WETLANDS IN BUFFERS	
SITE NO.	STATION (FROM/TO)		ZONE 1 (ft²)	ZONE 2 (ft²)
1	15+37 to 18+09 -L- LT		2092	1392
TOTAL:			2092	1392

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
7/10/2019
PAMLICO COUNTY
B-4593
BRIDGE REPLACEMENT ON NC HWY 55 BYPASS
OVER TRENT CREEK
SHEET 3 OF 3