



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J.R. "JOEY" HOPKINS  
SECRETARY

November 16, 2023

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

NC Division of Water Resources  
Transportation Permitting Branch  
610 East Center Avenue, Suite 401  
Mooresville NC 28115

ATTN: Mr. Steve Brumagin,  
NCDOT Coordinator

Ms. Beth Plummer  
NCDOT Coordinator

Subject: **Application for Section 404 General Permit 201902350 and Section 401 Water Quality Certification** for the Proposed widening of East John Street-Old Monroe Road (SR-1009) to a multi-lane facility from Trade Street (SR-3448/SR-3474) to east of SR 1377 (Wesley Chapel-Stouts Road) in Mecklenburg and Union Counties, North Carolina; TIP No. U-4714; WBS 39078.1.2 & 39078.1.6.

Dear Sir and Madam:

The North Carolina Department of Transportation (NCDOT) proposes the widening of East John Street-Old Monroe Road (SR-1009) to a multi-lane facility from Trade Street (SR-3448/SR-3474) to east of SR 1377 (Wesley Chapel-Stouts Road).

This is a phased permit application consisting of three sections. Sections AC and B are final, and letting in February 2025, and Section AA is preliminary at this time, with a tentative letting date of October 2029.

As a result of the widening and improvements in Sections AC and B, there will be a total of 1,759 linear feet (lf) of stream impacts (1,389 lf permanent fill, 36 lf permanent bank stabilization, and 334 lf temporary), 0.48 acre (ac) of wetland impacts (0.38 ac permanent, 0.1 ac temporary) and 1.08 ac of open water impacts.

- U-4714AC:
  - Stream: 917 lf permanent (881 lf of fill + 36 lf bank stabilization) and 93 lf (1.08 ac) temporary impacts
  - Wetland: 0.34 ac permanent and 0.03 ac temporary impacts
  - Open Water: 0.01 ac permanent and 1.07 ac temporary impacts
- U-4714B:
  - Stream: 508 lf permanent and 241 lf (0.03 ac) temporary impacts
  - Wetland: 0.04 ac permanent and 0.07 ac temporary impacts (0.06 from construction + 0.01 from utility relocation)

Please see enclosed copies of the Pre-Construction Notification (PCN), Stormwater Management Plan (SMP), Final Permit Drawings for Sections AC and B, Preliminary Permit Drawings for Section AA, Division of Mitigation Services (DMS) mitigation acceptance letters, Protected Species Info, and Cultural

Resource Documents. An Environmental Assessment (EA) was completed in July 2016 and a Finding of No Significant Impact (FONSI) was completed in June 2018 and distributed shortly thereafter. Additional copies of the EA and FONSI are available upon request.

This project calls for a letting date of February 18, 2025.

A copy of this permit application and its distribution list will be posted on the NCDOT Website at: <http://connect.ncdot.gov/resources/Environmental>. If you have any questions or need additional information, please call Erin Cheely at (919) 707-6108.

Sincerely,



for Michael A. Turchy  
Environmental Coordination and Permitting Group Leader

cc: NCDOT Permit Application Standard Distribution List



# Pre-Construction Notification



## Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits  
(along with corresponding Water Quality Certifications)

October 2, 2023 Ver 4.3

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

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

<https://edocs.deq.nc.gov/WaterResources/DocView.aspx?dbid=0&id=2196924>

### A. Processing Information

Pre-Filing Meeting Date Request was submitted on: \*

4/29/2022

If this is a courtesy copy, please fill in this with the submission date.

Does this project involve maintenance dredging funded by the Shallow Draft Navigation Channel Dredging and Aquatic Weed Fund or involve the distribution or transmission of energy or fuel, including natural gas, diesel, petroleum, or electricity? \*

☐ Yes ☒ No

Is this project connected with ARPA funding? \*

☐ Yes ☒ No

County (or Counties) where the project is located: \*

Mecklenburg

Union

Is this a NCDMS Project? \*

☐ Yes ☒ No

Click Yes, only if NCDMS is the applicant or co-applicant.

DO NOT CHECK YES, UNLESS YOU ARE DMS OR CO-APPLICANT.

Is this project a public transportation project? \*

☒ Yes ☐ No

This is any publicly funded by municipal, state or federal funds road, rail, airport transportation project.

Is this a NCDOT Project? \*

☒ Yes ☐ No

(NCDOT only) T.I.P. or state project number:

U-4714

WBS # \*

39078.1.1

(for NCDOT use only)

1a. Type(s) of approval sought from the Corps: \*

- ☒ Section 404 Permit (wetlands, streams and waters, Clean Water Act)  
☐ Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

Has this PCN previously been submitted? \*

☐ Yes  
☒ No

1b. What type(s) of permit(s) do you wish to seek authorization? \*

- ☐ Nationwide Permit (NWP)  
☒ Regional General Permit (RGP)  
☐ Standard (IP)

1c. Has the NWP or GP number been verified by the Corps? \*

☒ Yes ☐ No

Regional General Permit (RGP) Number:

201902350 - Work associated with bridge construction, widening, replacement, and interchanges

**RGP Numbers (for multiple RGPS):**

List all RGP numbers you are applying for not on the drop down list.

**1d. Type(s) of approval sought from the DWR: \***

check all that apply

- ☒ 401 Water Quality Certification - Regular  
☐ Non-404 Jurisdictional General Permit  
☐ Individual 401 Water Quality Certification

- ☐ 401 Water Quality Certification - Express  
☐ Riparian Buffer Authorization

**1e. Is this notification solely for the record because written approval is not required?**

\*

For the record only for DWR 401 Certification:

☐ Yes ☒ No

For the record only for Corps Permit:

☐ Yes ☒ No

**1f. Is this an after-the-fact permit application? \***

☐ Yes ☒ No

**1g. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts?**

If so, attach the acceptance letter from mitigation bank or in-lieu fee program.

☒ Yes ☐ No

**Acceptance Letter Attachment**

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

FILE TYPE MUST BE PDF

**1h. Is the project located in any of NC's twenty coastal counties? \***

☐ Yes ☒ No

**1j. Is the project located in a designated trout watershed? \***

☐ Yes ☒ No

Link to trout information: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx>

## B. Applicant Information



**1a. Who is the Primary Contact? \***

Erin Cheely

**1b. Primary Contact Email: \***

ekcheely@ncdot.gov

**1c. Primary Contact Phone: \***

(xxx)xxx-xxxx

(919)707-6108

**1d. Who is applying for the permit? \***

☐ Owner

(Check all that apply)

☒ Applicant (other than owner)

**1e. Is there an Agent/Consultant for this project? \***

☐ Yes ☒ No

## 2. Owner Information

**2a. Name(s) on recorded deed: \***

NCDOT

**2b. Deed book and page no.:**

**2c. Contact Person:**

(for Corporations)

**2d. Address \***

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

Postal / Zip Code

27699-1598

State / Province / Region

NC

Country

US

**2e. Telephone Number: \***

(xxx)xxx-xxxx

(919)707-6157

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address: \*

maturchy@ncdot.gov

3. Applicant Information (if different from owner)

3a. Name: \*

Erin Cheely

3b. Business Name:

(if applicable)

3c. Address \*

Street Address

1598 Mail Service Center

Address Line 2

City

Raleigh

Postal / Zip Code

27699-1598

State / Province / Region

NC

Country

US

3d. Telephone Number: \*

(919)707-6108

(xxx)xxx-xxxx

3e. Fax Number:

(xxx)xxx-xxxx

3f. Email Address: \*

ekcheely@ncdot.gov

C. Project Information and Prior Project History

1. Project Information

1a. Name of project: \*

U-4714: SR 1009 (John St.-Old Monroe Rd.), Widen/Improve from SR 3448-SR-3474 (Trade St.) to E. of SR 1377 (Wesley Chapel-Stouts Rd)

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town: \*

Matthews, Stallings, and Indian Trail

2. Project Identification

2a. Property Identification Number:

(tax PIN or parcel ID)

2b. Property size:

(in acres)

2c. Project Address

Street Address

Address Line 2

City

Postal / Zip Code

State / Province / Region

Country

2d. Site coordinates in decimal degrees

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

Latitude: \*

35.059718

ex: 34.208504

Longitude: \*

-80.662431

-77.796371

3. Surface Waters

3a. Name of the nearest body of water to proposed project: \*

Fourmile Creek

3b. Water Resources Classification of nearest receiving water: \*

C

[Surface Water Lookup](#)

**3c. What river basin(s) is your project located in? \***

Catawba

Yadkin-PeeDee

**3d. Please provide the 12-digit HUC in which the project is located. \***

03050103, 03040105

[River Basin Lookup](#)

## 4. Project Description and History

**4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: \***

The project is located within a highly urbanized area, with paved roadways with maintained shoulders among heavy residential and commercial/industrial use along large portions of the PSA. Forested areas persist along streams and near the I-485 interchange. The southern end of the PSA has segments that are more rural, comprised of wooded forests and ag. fields where home sites are spread out, transitioning to commercial/industrial at Wesley Chapel Stouts Road.

**4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? \***

☐ Yes ☒ No ☐ Unknown

**4f. List the total estimated acreage of all existing wetlands on the property:**

4.2

**4g. List the total estimated linear feet of all existing streams on the property:**

(intermittent and perennial)

20,702

**4h. Explain the purpose of the proposed project: \***

The purpose of the project is to improve existing and projected traffic flow and operational efficiency on this section of East John Street-Old Monroe Road (SR-1009). Heavy traffic occurs daily along East John Street-Old Monroe Road through the project study area, and capacity deficiencies result in frequent congestion and delays. In addition, the existing roadway does not adequately serve bicyclists and pedestrians. The proposed project would address the need to increase capacity for vehicles and enhance mobility for pedestrians and bicyclists along the corridor. The project would improve existing and projected traffic flow and operational efficiency on this section of East John Street-Old Monroe Road. Another desirable outcome for this project is to enhance the overall travel safety in the project study area.

**4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: \***

The NCDOT proposes to widen the existing two-lane East John Street-Old Monroe Road (SR 1009) to a multi-lane facility from Trade Street (SR 3448-SR 3474) in the Town of Matthews in Mecklenburg County to Wesley Chapel-Stouts Road (SR 1377) in the Town of Indian Trail in Union County. The project is approximately 6.5 miles long.

The project is included in the North Carolina Department of Transportation's (NCDOT) current federally-approved 2016-2025 State Transportation Improvement Program (STIP) (January 2016) as STIP No. U-4714.

The project is divided into three sections:

\* U-4714AC – SR-1009 (John St. - Old Monroe Rd.) from East of I-485 to West of Morningside Meadow Lane.

\* U-4714B – SR-1009 (John St. - Old Monroe Rd.) from West to Morningside Meadow Lane to East of SR-1377 (Wesley Chapel - Stouts Rd.)

\* U-4714AA – (Future): SR-1009 (John St. - Old Monroe Rd.) from SR-3448/SR-3474 (Trade St.) to I-485.

Construction activities include earth removal, hauling, grading, and paving. Standard road building equipment, such as trucks, bulldozers, and cranes will be used.

## 5. Jurisdictional Determinations

**5a. Have the wetlands or streams been delineated on the property or proposed impact areas? \***

☒ Yes ☐ No ☐ Unknown

**Comments:**

**5b. If the Corps made a jurisdictional determination, what type of determination was made? \***

☐ Preliminary ☐ Approved ☒ Not Verified ☐ Unknown ☐ N/A

**Corps AID Number:**

Example: SAW-2017-99999

**5c. If 5a is yes, who delineated the jurisdictional areas?**

Name (if known): Matthew Thomas/Ben Cogdell; Jeff Harbour/Lauren Roper; Sara Easterly, R. Dugger

Agency/Consultant Company: Atkins; Env. Services Inc.; HDR

Other:

## 6. Future Project Plans

**6a. Is this a phased project? \***

☒ Yes ☐ No

6b. If yes, explain.

NCDOT intends to phase this project to construct segments AC & B. Segment AA is not yet funded and would not be constructed within the near future (>5 years). When funding becomes available for segment AA, NCDOT will request a permit modification that includes the details of this segment (based on final design) and any required mitigation that may be required to accommodate this modification.

Preliminary permit drawings for Section AA are included with this application. At this time Section AA is estimated to have 223 linear feet of permanent stream impacts and 61 linear feet (<0.01ac) of temporary stream impacts.

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

U-4714AB - Interchange with I-485 has already permitted and under construction. (Regional General Permit: 198200031 - NCDOT Bridges, Widening Projects 2015) (SAW-2019-01774)

This U-4714AB interchange section was determined to have independent utility by the USACE and was permitted separately and not phased with the remaining sections of U-4714.

## D. Proposed Impacts Inventory



### 1. Impacts Summary

1a. Where are the impacts associated with your project? (check all that apply):

- ☒ Wetlands ☒ Streams-tributaries ☐ Buffers  
☒ Open Waters ☐ Pond Construction

### 2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

"W." will be used in the table below to represent the word "wetland".

2a. Site # <sup>*</sup> (?)	2a1 Reason <sup>*</sup> (?)	2b. Impact type <sup>*</sup> (?)	2c. Type of W. <sup>*</sup>	2d. W. name <sup>*</sup>	2e. Forested <sup>*</sup>	2f. Type of Jurisdiction <sup>*</sup> (?)	2g. Impact area <sup>*</sup>
AC: Site 5	Roadway Fill	P	Non-Tidal Freshwater Marsh	WK	No	Corps	0.031 (acres)
AC: Site 7	Roadway Fill	P	Headwater Forest	WL	Yes	Corps	0.277 (acres)
AC: Site 7	Roadway Fill (Mech. Clearing)	P	Headwater Forest	WL	Yes	Corps	0.009 (acres)
AC: Site 8	Roadway Fill (Mechanized Clearing)	P	Headwater Forest	WM	Yes	Corps	0.001 (acres)
AC: Site 8	Roadway Fill (Hand Clearing)	T	Headwater Forest	WM	Yes	Corps	0.026 (acres)
AC: Site 9	Outlet Channel (Mechanized Clearing)	P	Headwater Forest	WN	Yes	Corps	0.003 (acres)
AC: Site 9	Outlet Channel (Hand Clearing)	P	Headwater Forest	WN	Yes	Corps	0.021 (acres)
B: Site 3c	2-6' x 6' RCBC	P	Headwater Forest	WO	Yes	Corps	0.001 (acres)
B: Site 3c Hand Clearing	2-6' x 6' RCBC (Hand Clearing)	T	Headwater Forest	WO	Yes	Corps	0.063 (acres)
B: Site 4	36" RCP	P	Headwater Forest	WP	Yes	Corps	0.010 (acres)
B: Site 4	36" RCP	P	Headwater Forest	WP	Yes	Corps	0.026 (acres)
B: Utility: Site 1	Waterline Relocation	T	Headwater Forest	WO	Yes	Corps	0.002 (acres)
B: Utility: Site 2	Waterline Relocation	T	Headwater Forest	WO	Yes	Corps	0.001 (acres)
B: Utility: Site 3	Waterline Relocation	T	Headwater Forest	WO	Yes	Corps	0.002 (acres)
B: Utility: Site 4	Waterline Relocation	T	Headwater Forest	WO	Yes	Corps	0.001 (acres)

2g. Total Temporary Wetland Impact

0.095

2g. Total Permanent Wetland Impact

0.379

2g. Total Wetland Impact

0.474

## 2i. Comments:

U-4714 AC = Wetlands: 0.33 Permanent Fill, 0.01 Mechanized Clearing, 0.03 Hand Clearing  
= 0.34 Permanent/0.03 Temporary

U-4714 B = Wetlands: 0.01 Permanent Fill, 0.03 Excavation, 0.06 Hand Clearing  
= 0.04 Permanent/0.07 (0.06 Temporary + 0.008 Utilities)

No Utility impacts associated with U-4714 AC.

Utility impacts associated with U-4714 B are incorporated into totals above, actual numbers per site are below. Impacts are temporary excavation, as excavation will be set to the side and then placed back into the hole.

Site 1: 0.0021 ac

Site 2: 0.0019 ac

Site 3: 0.0023 ac

Site 4: 0.0017 ac === Totaling: 0.008 ac

## 3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

"S." will be used in the table below to represent the word "stream".

	3a. Reason for impact <sup>*</sup> (?)	3b. Impact type <sup>*</sup>	3c. Type of impact <sup>*</sup>	3d. S. name <sup>*</sup>	3e. Stream Type <sup>*</sup> (?)	3f. Type of Jurisdiction <sup>*</sup>	3g. S. width <sup>*</sup>	3h. Impact length <sup>*</sup>
S1	AC: Site 1a - Extend 2 @ 5'x6' RCBC	Permanent	Culvert	SH	Perennial	Both	12.000 <i>Average (feet)</i>	96.000 <i>(linear feet)</i>
S2	AC: Site 1a - Extend 2 @ 5'x6' RCBC	Temporary	Culvert	SH	Perennial	Both	12.000 <i>Average (feet)</i>	37.000 <i>(linear feet)</i>
S3	AC: Site 1b - Inlet Channel	Permanent	Fill	SH	Perennial	Both	12.000 <i>Average (feet)</i>	43.000 <i>(linear feet)</i>
S4	AC: Site 1c - Outlet Channel	Permanent	Fill	SH	Perennial	Both	12.000 <i>Average (feet)</i>	38.000 <i>(linear feet)</i>
S5	AC: Site 2a - Roadway Fill	Permanent	Fill	SN	Perennial	Both	10.000 <i>Average (feet)</i>	395.000 <i>(linear feet)</i>
S6	AC: Site 2a - Roadway Fill	Temporary	Fill	SN	Perennial	Both	10.000 <i>Average (feet)</i>	8.000 <i>(linear feet)</i>
S7	AC: Site 3a - 66" Pipe	Permanent	Culvert	SO	Intermittent	Both	9.000 <i>Average (feet)</i>	138.000 <i>(linear feet)</i>
S8	AC: Site 3b - Inlet Channel	Temporary	Culvert	SO	Intermittent	Both	9.000 <i>Average (feet)</i>	12.000 <i>(linear feet)</i>
S9	AC: Site 3b - Inlet Channel	Permanent	Excavation	SO	Intermittent	Both	9.000 <i>Average (feet)</i>	43.000 <i>(linear feet)</i>
S10	AC: Site 3c - Outlet Channel	Temporary	Bank Stabilization	SO	Intermittent	Both	9.000 <i>Average (feet)</i>	13.000 <i>(linear feet)</i>
S11	AC: Site 4a - 42" Pipe	Permanent	Culvert	SP	Intermittent	Both	6.000 <i>Average (feet)</i>	27.000 <i>(linear feet)</i>
S12	AC: Site 4a - 42" Pipe	Temporary	Culvert	SP	Intermittent	Both	6.000 <i>Average (feet)</i>	14.000 <i>(linear feet)</i>
S13	AC: Site 4b - Outlet Channel	Permanent	Fill	SP	Intermittent	Both	6.000 <i>Average (feet)</i>	31.000 <i>(linear feet)</i>
S14	AC: Site 6a - Roadway Fill	Permanent	Fill	SQ	Intermittent	Both	7.000 <i>Average (feet)</i>	28.000 <i>(linear feet)</i>
S15	AC: Site 6b - Outlet Channel	Temporary	Excavation	SQ	Intermittent	Both	7.000 <i>Average (feet)</i>	9.000 <i>(linear feet)</i>
S16	B: Site 1 - 72" RCP	Permanent	Fill	SR	Intermittent	Both	7.000 <i>Average (feet)</i>	235.000 <i>(linear feet)</i>
S17	B: Site 1 - 72" RCP	Temporary	Dewatering	SR	Intermittent	Both	7.000 <i>Average (feet)</i>	88.000 <i>(linear feet)</i>
S18	B: Site 2 - 24" RCP	Permanent	Culvert	ST	Intermittent	Both	5.000 <i>Average (feet)</i>	73.000 <i>(linear feet)</i>
S19	B: Site 2 - 24" RCP	Temporary	Dewatering	ST	Intermittent	Both	5.000 <i>Average (feet)</i>	23.000 <i>(linear feet)</i>
S20	B: Site 3a - 2'-6" x 6' RCBC	Permanent	Culvert	SV	Intermittent	Both	4.000 <i>Average (feet)</i>	10.000 <i>(linear feet)</i>

S21	B: Site 3a - 2'-6' x 6' RCBC	Temporary	Dewatering	SV	Intermittent	Both	4.000 Average (feet)	112.000 (linear feet)
S22	B: Site 3b - 2'-6' x 6' RCBC	Permanent	Culvert	SW	Intermittent	Both	8.000 Average (feet)	162.000 (linear feet)
S23	B: Site 3b - 2'-6' x 6' RCBC	Temporary	Dewatering	SW	Intermittent	Both	8.000 Average (feet)	18.000 (linear feet)
S24	AC: Site 3c - Outlet Bank Stabilization	Permanent	Bank Stabilization	SO	Intermittent	Both	9.000 Average (feet)	36.000 (linear feet)
S25	AC: Site 6b - Outlet Channel	Permanent	Fill	SQ	Intermittent	Both	7.000 Average (feet)	42.000 (linear feet)
S26	B: Site 5 - Armoring	Permanent	Stabilization	SY	Perennial	Both	5.000 Average (feet)	28.000 (linear feet)

\*\* All Perennial or Intermittent streams must be verified by DWR or delegated local government.

3i. Total jurisdictional ditch impact in square feet:

0

3i. Total permanent stream impacts:

1,425

3i. Total temporary stream impacts:

334

3i. Total stream and ditch impacts:

1759

3j. Comments:

U-4714 AC = Streams: 917 If Permanent (of which 36' is from bank stabilization), 93 If (1.08 ac) Temporary Impacts

U-4714 B = Streams: 508 If Permanent, 241 If (0.03 ac) Temporary Impacts

4. Open Water Impacts

If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.

4a. Site # <sup>*</sup> (?)	4a1. Impact Reason	4b. Impact type <sup>*</sup> (?)	4c. Name of waterbody (?)	4d. Activity type <sup>*</sup>	4e. Waterbody type <sup>*</sup>	4f. Impact area <sup>*</sup>
AC: Site 2b - Pond	RCP - IV Outlet	P	OW2	Fill	Pond	0.01 (acres)
AC: Site 2b - Pond	Construction Access	T	OW2	Dewatering	Pond	1.07 (acres)

4g. Total temporary open water Impacts:

1.07

4g. Total permanent open water impacts:

0.01

4g. Total open water impacts:

1.08

4h. Comments:

Pond actual numbers = 0.005 ac Permanent impacts; 1.07 ac Temporary impact.

E. Impact Justification and Mitigation



1. Avoidance and Minimization



**1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project: \***

BMPs that will be used include the promotion of sheet flow and infiltration with grassed shoulders except where shoulder berm gutter is required, drainage systems outlet to riprap pads or riprap lined ditches, and riprap on embankments to prevent erosion where ditches enter streams.

For section AC, there is one proposed major structure involved with the improvements to East John Street, which is to be constructed at existing stream crossing locations. The major structure, along UT to Fourmile Creek, is a 2@5'x6' Reinforced Concrete Box Culvert extension with a beveled headwall. The culvert is to be extended both upstream and downstream. The upstream culvert extension will require a channel realignment to smoothly tie the existing channel with the culvert extension. This structure has been designed to have as little environmental and surface water impacts as possible. Velocities at jurisdictional features and wetlands are non-erosive. Other measures used throughout the project to avoid or minimize water quality impacts include the use of 2:1 slopes, burial of invert in jurisdictional areas, and bank stabilization added to outlet channels.

AC Utilities: The proposed 16" water line relocation produces the least amount of environmental impacts for crossing wetland.

Section B: Existing drainage systems within the project limits connected to systems outside of the ROW will be modified to account for the road widening and tie to the existing pipes of each system. Appropriately sized rip rap aprons and/or outfall channel improvements including rip rap lined channels will be constructed at all outfalls to mitigate any potential erosion due to increased flows. There are several existing dry detention basins along -L-(Old Monroe Road) and -Y22- (Wesley Chapel Stouts Road), the proposed roadway improvements will not discharge to these basins. Some of the existing basins currently discharge through the roadside drainage systems in NCDOT ROW, the proposed systems will continue to convey water from these basins to the same outfall points.

The first permitted site is at approximately -L- Sta. 15+55 and will replace a 36" RCP cross pipe that carries a small tributary to Davis Mine Creek with a 72" RCP pipe that is buried 1'. The replacement pipe will be skewed to better align with the channel. Inlet and outfall improvements with riprap placed on the side slopes of the channel will mitigate erosion issues for this site. The second site will be at approximately -L- Sta. 118+10 and will consist of the removal of a 24" cross pipe conveying a small tributary to Price Mill Creek. A new drainage system with an outfall approximately 60' downstream from the current outfall will replace the existing cross pipe. A rip rap pad will be placed at the outfall to control outfall velocities and minimize potential erosion to the receiving channel. The third site will be located at -L- Sta. 149+20 and is located at a 54" RCP cross pipe at the confluence of two additional unnamed tributaries to Price Mill Creek. The single 54" pipe will be replaced with a dual 6'x6' RCBC that is buried 1'. Inlet and outfall improvements with riprap placed on the side slopes of the channel will mitigate potential erosion issues for this site. The fourth site is conveying a small tributary to South Fork

Crooked Creek at approximately -L- Sta. 198+50 and will replace a 24" RCP cross pipe with a 36" RCP pipe including a rip rap outlet pad. The outfall channel is in a wetland and will be widened and regraded to lower velocities and minimize potential erosion. And the last site is at -Y22- Sta. 0+51 where an existing roadside ditch will be reconstructed with a rip rap lining which outfalls to the downstream end of a dual 30" pipe culvert. This last site is also a small tributary to South Fork Crooked Creek.

Section B Utilities: The proposed 16" water line relocation produces the least amount of environmental impacts for crossing wetland.

**1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques: \***

NCDOT's Best Management Practices (BMP) for Construction and Maintenance Activities and Protection of Surface Waters will be adhered to. Erosion control devices such as silt fence, rock inlet sediment traps, slope drains, clean water diversions, and silt bags will be utilized as applicable. Hand clearing in wetland utilized where possible to reduce permanent impacts. Conservation measures to avoid adverse effects to bats during construction will also be implemented (see USFWS Concurrence letter).

## 2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

**2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?**

☒ Yes ☐ No

**2c. If yes, mitigation is required by (check all that apply):**

☒ DWR ☒ Corps

**2d. If yes, which mitigation option(s) will be used for this project?**

☐ Mitigation bank ☒ Payment to in-lieu fee program ☐ Permittee Responsible Mitigation

## 4. Complete if Making a Payment to In-lieu Fee Program

**4a. Approval letter from in-lieu fee program is attached.**

☒ Yes ☐ No

**4b. Stream mitigation requested:**

(linear feet)  
1389

**4c. If using stream mitigation, what is the stream temperature:**

warm

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's [RIBITS](#) website.

**4d. Buffer mitigation requested (DWR only):**

(square feet)  
0

**4e. Riparian wetland mitigation requested:**

(acres)  
0.38

**4f. Non-riparian wetland mitigation requested:**

(acres)  
0

**4g. Coastal (tidal) wetland mitigation requested:**

(acres)  
0

**4h. Comments**

No mitigation is required for the stream bank stabilization or temporary stream impacts as these impacts do not constitute a loss of waters of the U.S.

## 6. Buffer mitigation (State Regulated Riparian Buffer Rules) - required by DWR

**6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation? If yes, you must fill out this entire form - please contact DWR for more information.**

☐ Yes ☒ No

## F. Stormwater Management and Diffuse Flow Plan (required by DWR)



\*\*\* Recent changes to the stormwater rules have required updates to this section .\*\*\*

### 1. Diffuse Flow Plan

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

☐ Yes ☒ No

For a list of options to meet the diffuse flow requirements, click [here](#).

If no, explain why:

The water resources within the project area are located in the Catawba basin but not along the main stem of the Catawba River.

### 2. Stormwater Management Plan

2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250? \*

☒ Yes ☐ No

Comments:

## G. Supplementary Information



### 1. Environmental Documentation

1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? \*

☒ Yes ☐ No

1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? \*

☒ Yes ☐ No

1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) \*

☒ Yes ☐ No

### 2. Violations (DWR Requirement)

2a. Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)? \*

☐ Yes ☒ No

### 3. Cumulative Impacts (DWR Requirement)

3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? \*

☐ Yes ☒ No

3b. If you answered "no," provide a short narrative description.

The project would not likely influence the intensity of development activities. Land use will continue to be guided by adopted zoning and land use plans. The project is generally consistent with local land use plans. Any additional development in the area would adhere to local stormwater rules.

### 4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? \*

☐ Yes ☐ No ☒ N/A

### 5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? \*

☒ Yes ☐ No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? \*

☒ Yes ☐ No

5c. If yes, indicate the USFWS Field Office you have contacted.

Asheville

5d. Is another Federal agency involved? \*

☒ Yes ☐ No ☐ Unknown

What Federal Agency is involved?

FHWA

5e. Is this a DOT project located within Division's 1-8? \*

☐ Yes ☒ No

5f. Will you cut any trees in order to conduct the work in waters of the U.S.? \*

☒ Yes ☐ No

5g. Does this project involve bridge maintenance or removal? \*

☐ Yes ☒ No

Link to the NLEB SLOPES document: [http://saw-reg.usace.army.mil/NLEB/1-30-17-signed\\_NLEB-SLOPES&apps.pdf](http://saw-reg.usace.army.mil/NLEB/1-30-17-signed_NLEB-SLOPES&apps.pdf)

5h. Does this project involve the construction/installation of a wind turbine(s)? \*

☐ Yes ☒ No

5i. Does this project involve (1) blasting, and/or (2) other percussive activities that will be conducted by machines, such as jackhammers, mechanized pile drivers, etc.? \*

☒ Yes ☐ No

5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? \*

The FHWA is the lead federal agency for this project.

IPaC, North Carolina Natural Heritage Program data explorer, and the June 2018 Findings Of No Significant Impact (FONSI) were used. A biological conclusion of No Effect was rendered for Michaux's sumac, Schweinitz's Sunflower, Smooth Coneflower, and Carolina heelsplitter. Section 7 informal concurrence/conference for the Proposed Endangered tricolored bat was requested September 19, 2023. The USFWS concurred with a May Affect, Not Likely to Adversely Affect (MANLAA) biological conclusion for the tricolored bat on November 15, 2023. See attached USFWS concurrence letter for a list of conservation measures to be implemented during construction for this project, including limiting tree clearing to only occur between October 16 – March 31 of any given year.

## 6. Essential Fish Habitat (Corps Requirement)

6a. Will this project occur in or near an area designated as an Essential Fish Habitat? \*

☐ Yes ☒ No

6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? \*

National Oceanic and Atmospheric Administration Essential Fish Habitat Mapper

## 7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: <http://gis.ncdcr.gov/hpweb/>)

7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? \*

☐ Yes ☒ No

7b. What data sources did you use to determine whether your site would impact historic or archeological resources? \*

The State Historic Preservation Office (SHPO) Historic Properties Map, June 2018 FONSI, and correspondence letters with SHPO (see attached) were used to make a determination. No historic properties or significant archaeological resources will be impacted by this project.

## 8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: <https://msc.fema.gov/portal/search>

8a. Will this project occur in a FEMA-designated 100-year floodplain? \*

☒ Yes ☐ No

8b. If yes, explain how project meets FEMA requirements:

8c. What source(s) did you use to make the floodplain determination? \*

FEMA Mapping

There are only two locations along the project corridor where East John Street-Old Monroe Road crosses a stream located within a FEMA regulated special flood hazard area (SFHA). The two streams with associated regulated floodplains and floodways that cross the corridor include Fourmile Creek north of I-485 and an unnamed tributary to Price Mill Creek near the southern end of the project.

NCDOT Hydraulics Unit will coordinate with FEMA and local authorities to ensure compliance with applicable floodplain management ordinances. Since this project involves construction on or adjacent to FEMA regulated streams, the NCDOT Division 10 shall submit sealed as-built construction plans to the NCDOT Hydraulics Unit upon completion of project construction, certifying that the drainage structures and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

## Miscellaneous

Comments



Please use the space below to attach all required documentation or any additional information you feel is helpful for application review. Documents should be combined into one file when possible, with a Cover Letter, Table of Contents, and a Cover Sheet for each Section preferred.

[Click the upload button or drag and drop files here to attach document](#)

U-4714 Mecklenburg Union November 16 2023.pdf

37.45MB

U-4714 EA and FONSI.pdf

51.38MB

File must be PDF or KMZ

## Signature



\*

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

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

Full Name: \*

Erin K. Cheely

Signature \*

Erin K. Cheely

Date

11/16/2023

# Permit Drawings

U-4714AC



## North Carolina Department of Transportation

Highway Stormwater Program  
STORMWATER MANAGEMENT PLAN  
FOR NCDOT PROJECTS

(Version 2.08; Released April 2018)

WBS Element:	39078.1.8	TIP No.:	U-4714AC	County(ies):	Mecklenburg	Page	1	of	1
General Project Information									
WBS Element:	39078.1.8	TIP Number:	U-4714AC	Project Type:	Roadway Widening	Date:	10/6/2023		
NCDOT Contact:	David Webb, PE			Contractor / Designer:	Joshua G. Dalton, PE				
	Address:	NCDOT Hydraulics Unit 1590 Mail Service Raleigh, NC 27699-1590				Address:	Sungate Design Group, P.A. 905 Jones Franklin Road Raleigh, NC 27606		
	Phone:	(919) 707-6731				Phone:	(919) 859-2243		
	Email:	dswebb1@ncdot.gov				Email:	jdalton@sungatedesign.com		
City/Town:	Matthews			County(ies):	Mecklenburg				
River Basin(s):	Catawba			CAMA County?	No				
Wetlands within Project Limits?	Yes								
Project Description									
Project Length (lin. miles or feet):	3.37	Surrounding Land Use:	Commercial, Industrial, Medium Density Residential, Forest						
	Proposed Project			Existing Site					
Project Built-Up Area (ac.)	35.9	ac.	21.9			ac.			
Typical Cross Section Description:	E. John Street (SR 1009): 4 paved lanes (total 44') with 2'-6" curb and gutter. Paved median with monolithic island and turn lane (total 0'-42') Varying 10'-15' shoulder (14'-19' with guardrail) shoulder with varying 5' -10' width pedestrian sidewalk.			E. John Street (SR 1009): Open shoulder section, 2 paved lanes (total 24'), 1' paved shoulder on each side. Varying fill and cut slopes. Curb and gutter section with 3 paved lanes (total 36') with 10' concrete sidewalk. Varying fill and cut slopes.					
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	54,500	Year:	Existing:	45,000	Year:	2017		
General Project Narrative: (Description of Minimization of Water Quality Impacts)	The North Carolina Department of Transportation (NCDOT) has proposed to widen and improve East John Street (SR 1009) in Matthews, NC. There is one proposed major structure involved with the improvements to East John Street, which is to be constructed at existing stream crossing locations. The major structure, along UT to Fourmile Creek, is a 2@5'x6' Reinforced Concrete Box Culvert extension with a beveled headwall. The culvert is to be extended both upstream and downstream. The upstream culvert extension will require a channel realignment to smoothly tie the existing channel with the culvert extension. This structure has been designed to have as little environmental and surface water impacts as possible. Velocities at jurisdictional features and wetlands are non-erosive. Other measures used throughout the project to avoid or minimize water quality impacts include the use of 2:1 slopes, burial of inverts in jurisdictional areas, and bank stabilization added to outlet channels.								
Waterbody Information									
Surface Water Body (1):	UT to Fourmile Creek			NCDWR Stream Index No.:	11-137-9-4				
NCDWR Surface Water Classification for Water Body	Primary Classification:			Class C					
	Supplemental Classification:								
Other Stream Classification:	None								
Impairments:	None								
Aquatic T&E Species?	No			Comments:					
NRTR Stream ID:				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)									

**CONTRACT:**

A vicinity map of the project area. The map shows a network of roads including S Trade St, Pleasant Plains Rd, E John St, Ridge Rd, Stallings Rd, Potter Rd, Chestnut Ln, and N Indian Trail Rd. Key landmarks include the Matthews area (POP. 25,442) and the Stallings area (Pop. 12,546). The map also shows the CSX Railroad and the CSX Rail Road. Project boundaries are indicated by a dashed line, and the project area is labeled "BEGIN PROJECT" and "END PROJECT". Road numbers 485, 74, 1009, 1364, 1365, 1366, 1367, 1368, 137, 1387, 1388, 1397, 1400, 1401, 1402, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414, 1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422, 1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430, 1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446, 1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484, 1485, 1486, 1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508, 1509, 1510, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524, 1525, 1526, 1527, 1528, 1529, 1530, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1538, 1539, 1540, 1541, 1542, 1543, 1544, 1545, 1546, 1547, 1548, 1549, 1550, 1551, 1552, 1553, 1554, 1555, 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566, 1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577, 1578, 1579, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588, 1589, 1590, 1591, 1592, 1593, 1594, 1595, 1596, 1597, 1598, 1599, 1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686, 1687, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1708, 1709, 1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764, 1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786, 1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1799, 1800, 1801, 1802, 1803, 1804, 1805, 1806, 1807, 1808, 1809, 1810, 1811, 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046,

***MECKLENBURG & UNION COUNTY***

**TYPE OF WORK: GRADING, PAVING, DRAINAGE AND SIGNALS**

## WETLAND AND SURFACE WATER IMPACTS PERMIT

## RIGHT OF WAY PLANS

DATE: 10/24/2023

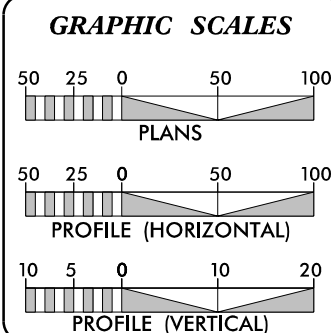


- ★ PROPOSED SIGNAL
  - ★ EXISTING SIGNAL

1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD 2.

2. THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF MATTHEWS, STALLINGS AND INDIAN TRAIL.

3. THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS SHOWN ON THE PLANS.



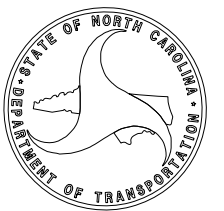
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ADT 2037 = 54,500  
K = 6 %  
D = 55 %  
T = 4 % \*  
V = 40 MPH  
\* TTST =1% DUAL 3%  
FUNC CLASS =  
MINOR ARTERIAL

**TOTAL LENGTH OF TIP PROJECT U-4714AC = 1.886 MILES**

**NCDOT CONTACT:**

**BRYAN KEY, PE**  
PROJECT ENGINEER – NCDOT

*P.E.*  
\_\_\_\_\_  
**SIGNATURE:**





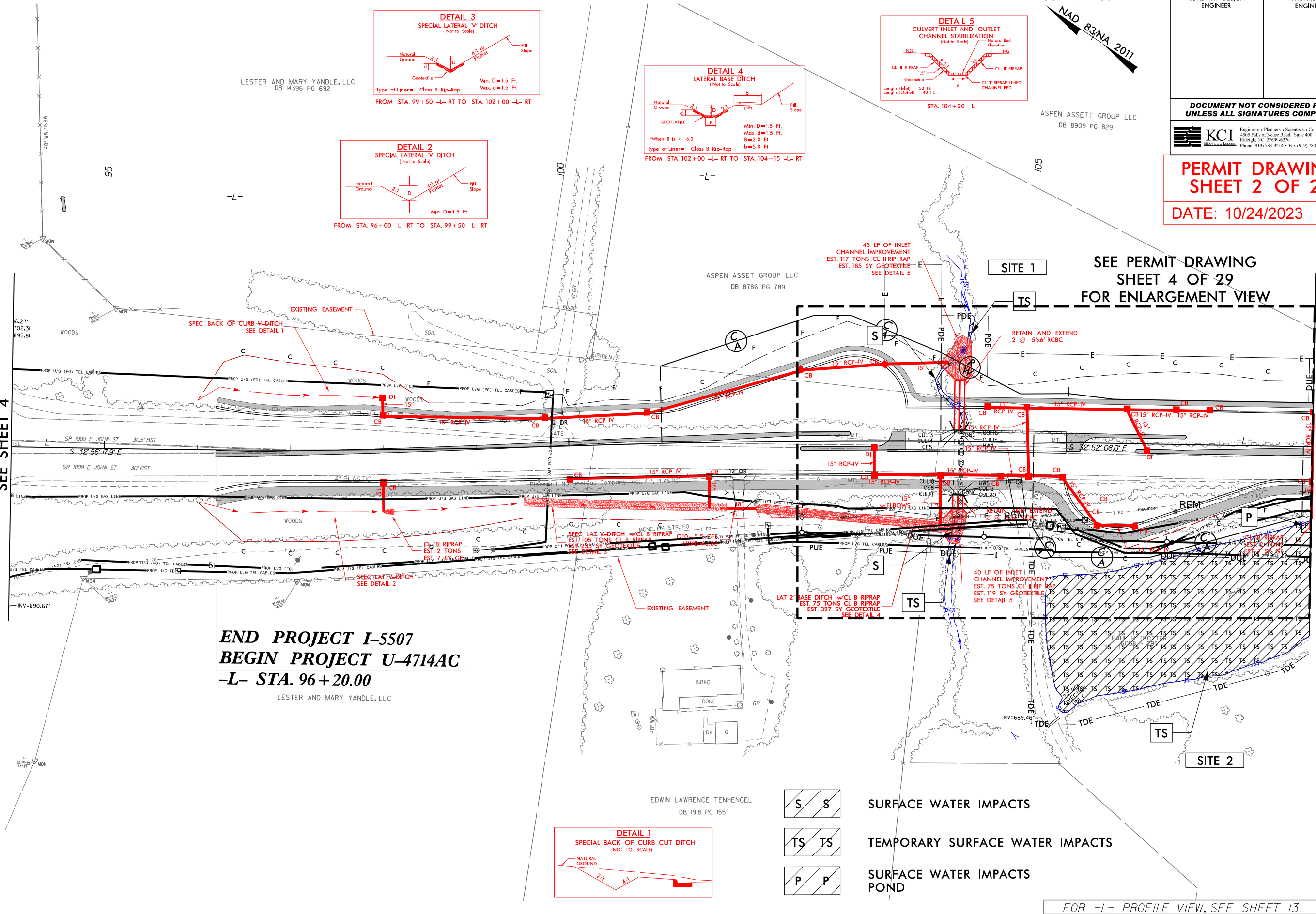
8/17/99

REVISIONS

05-10-2022: RW REVISION: ADDED PUE AND CHANGED PDE TO DUE ON PARCEL 170; CHANGED PDE TO DUE AND ADDED ADDITIONAL DUE ON PARCEL 84. [BH]

10/24/2023  
U-4714AC-Hyd-prm-wet-psh\_05.dgn  
JHAY

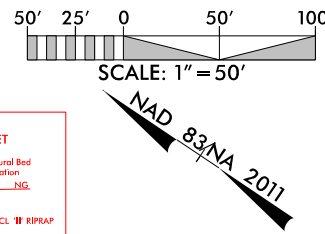
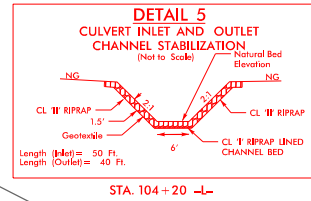
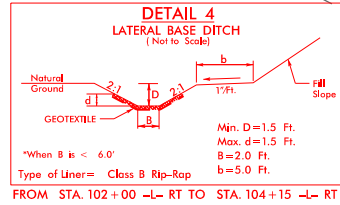
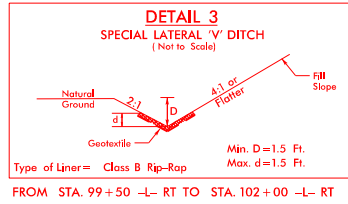
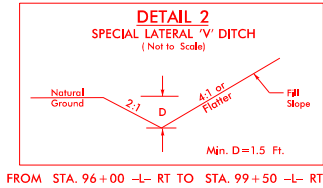
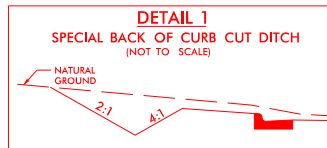
MATCHLINE -L- 94+00.00  
SEE SHEET 4




**END PROJECT I-5507  
BEGIN PROJECT U-4714AC**  
-L- STA. 96+20.00

LESTER AND MARY YANDLE, LLC

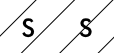

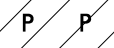
EDWIN LAWRENCE TENHENGEL  
DB 1918 PG 155



PROJECT REFERENCE NO. <i>U-4714AC</i>		SHEET NO. <b>5</b>
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
<b><i>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</i></b>		
 <b>KCI</b> <a href="http://www.kci.com">http://www.kci.com</a> Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214 • Fax (919) 783-9266		

**PERMIT DRAWING  
SHEET 2 OF 29**  
DATE: 10/24/2023

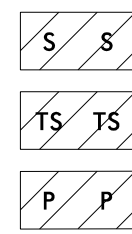
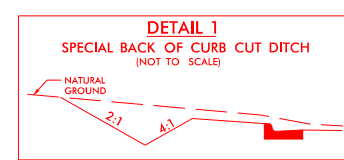
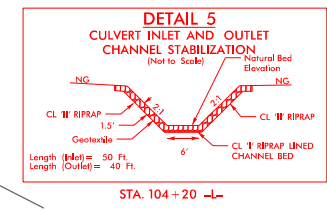
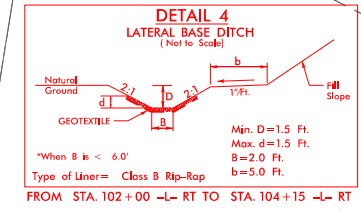
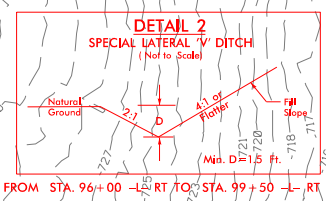
SEE PERMIT DRAWING  
SHEET 4 OF 29  
FOR ENLARGEMENT VIEW

-  SURFACE WATER IMPACTS
-  TEMPORARY SURFACE WATER IMPACTS
-  SURFACE WATER IMPACTS POND

FOR -L- PROFILE VIEW, SEE SHEET 13

MATCHLINE -L- 108+00.00  
SEE SHEET 6





SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS  
POND

FOR -L- PROFILE VIEW, SEE SHEET 13

**MATCHLINE -L- 94 + 00.00  
SEE SHEET 4**

**MATCHLINE -L- 108 + 00.00  
SEE SHEET 6**

**END PROJECT I-5507**  
**BEGIN PROJECT U-4714AC**  
**-L- STA. 96 + 20.00**

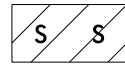
REVISIONS	
05-10-2022: RW	REVISION: ADDED PUE AND CHANGED PDE TO DUE ON PARCEL 170; CHANGED PDE TO DUE AND ADDED ADDITIONAL DUE ON PARCEL 84. (BH)

10/24/2023  
U4714AC-Hyd-prm\_wet\_psh\_05a.dgn  
iharvey

8/17/99



8/17/99



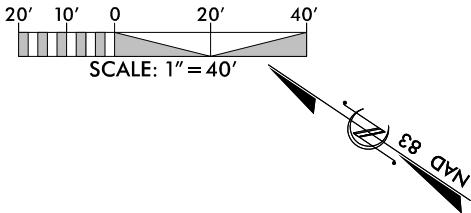
SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS



SURFACE WATER IMPACTS POND

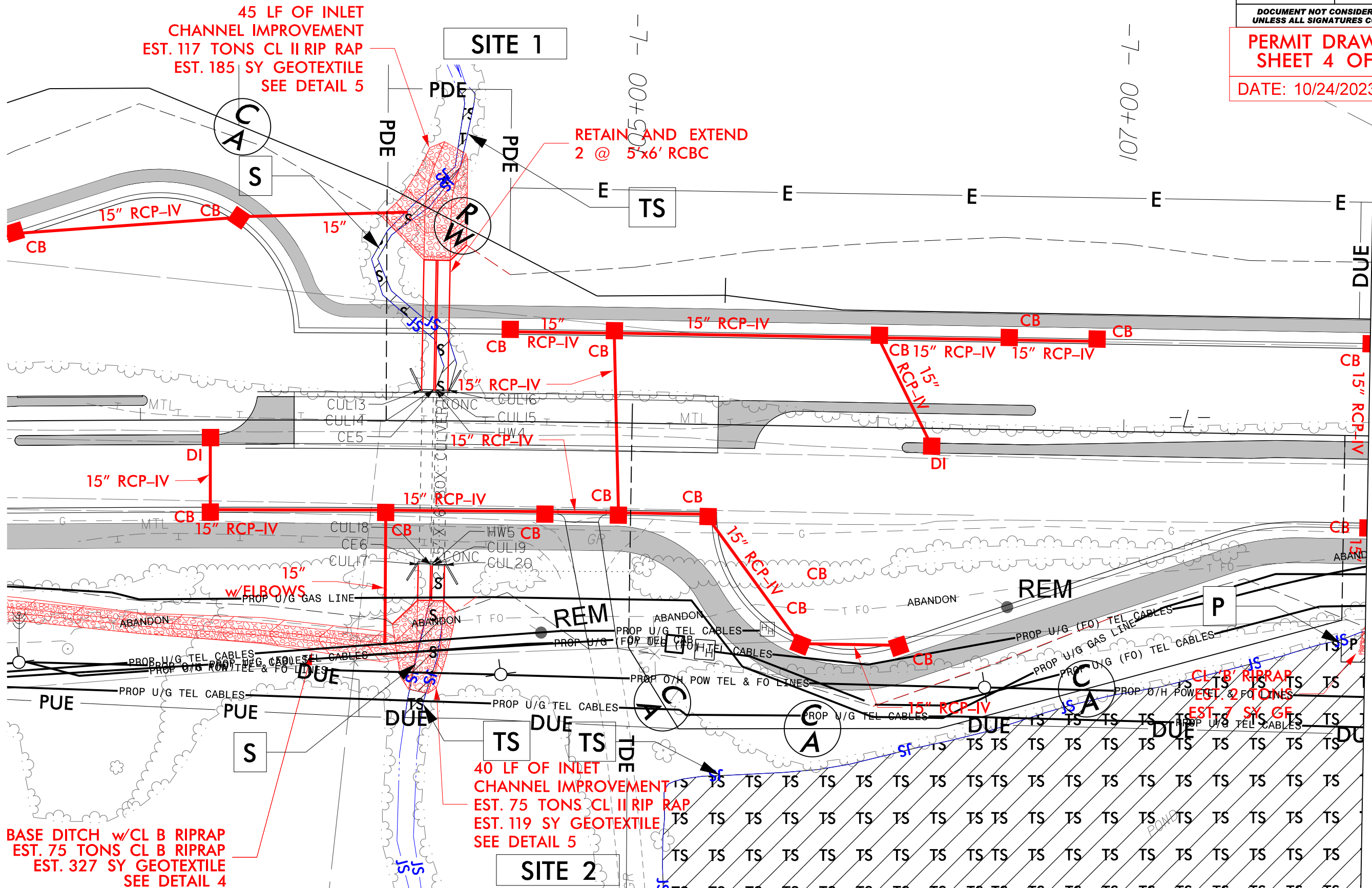


PROJECT REFERENCE NO. U-4714AC		SHEET NO.
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 4 OF 29

DATE: 10/24/2023



MATCHLINE -L- 108+00.00  
SEE SHEET 6

10/24/2023  
U-4714AC-Hyd-prm-wet-psh-05b-View1.dgn  
10/24/2023

5/28/99

PERMIT DRAWING  
SHEET 5 OF 29

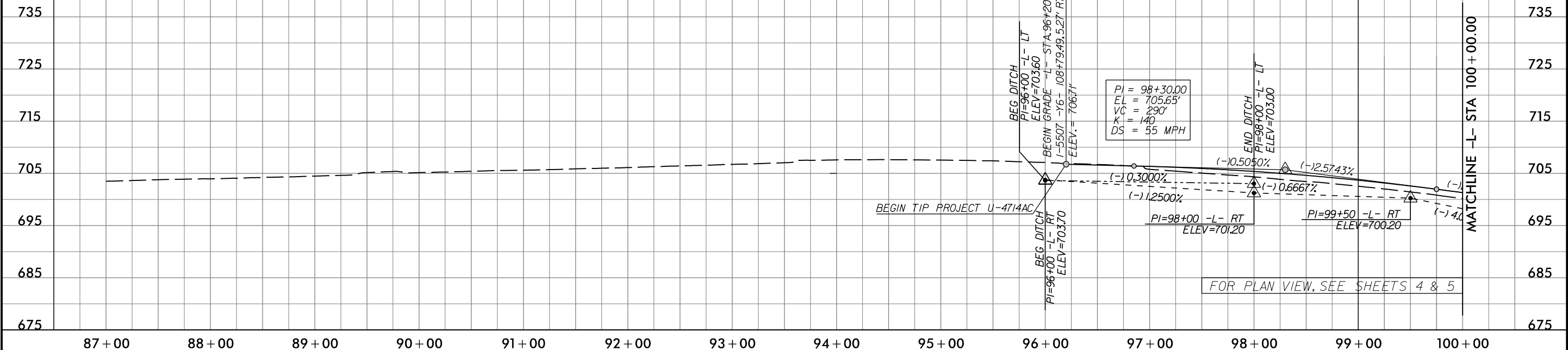
DATE: 10/24/2023



Engineers • Planners • Scientists • Construction Managers  
4505 Falls of Neuse Road, Suite 400  
Raleigh, NC 27609-6270  
Phone (919) 783-9214 • Fax (919) 783-9266

PROJECT REFERENCE NO.		SHEET NO.
U-4714AC		13
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>		

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

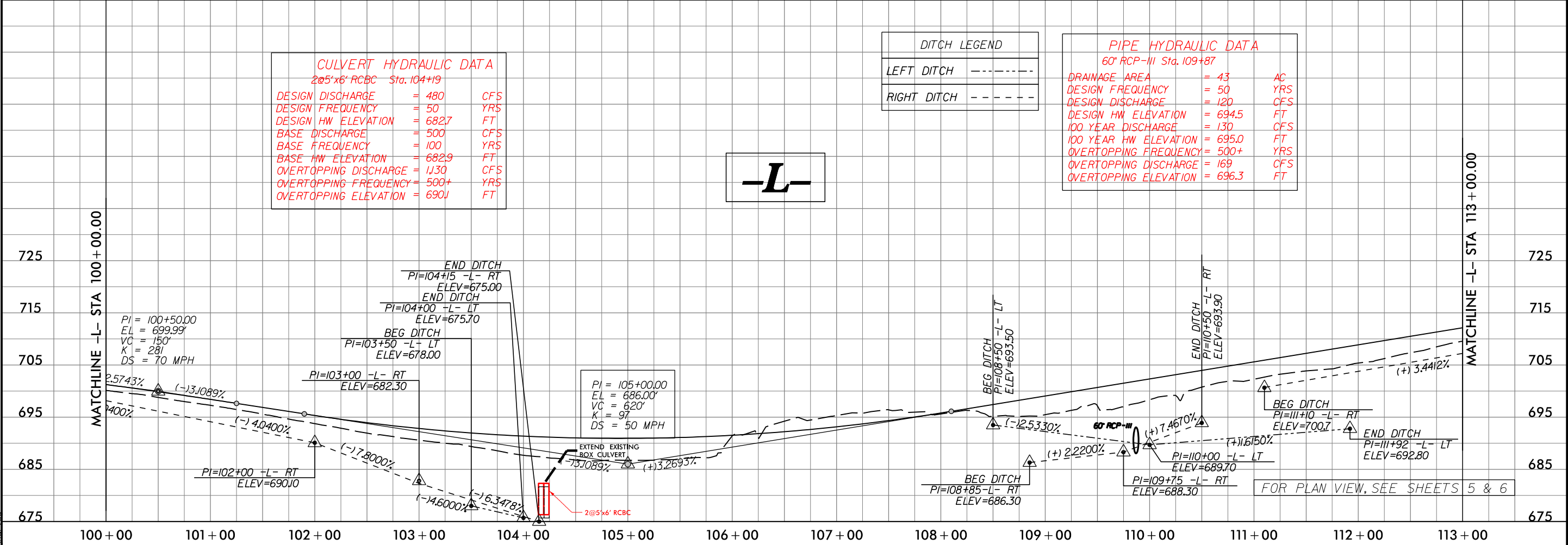


FOR PLAN VIEW, SEE SHEETS 4 & 5

CULVERT HYDRAULIC DATA		
2@5'x6' RCBC Sta. 104+19		
DESIGN DISCHARGE	= 480	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 682.7	FT
BASE DISCHARGE	= 500	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 682.9	FT
OVERTOPPING DISCHARGE	= 1,130	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 690.1	FT

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

PIPE HYDRAULIC DATA		
60" RCP-III Sta. 109+87		
DRAINAGE AREA	= 43	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 120	CFS
DESIGN HW ELEVATION	= 694.5	FT
100 YEAR DISCHARGE	= 130	CFS
100 YEAR HW ELEVATION	= 695.0	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 169	CFS
OVERTOPPING ELEVATION	= 696.3	FT



FOR PLAN VIEW, SEE SHEETS 5 & 6

10/24/2023  
U-4714AC-Hyd-prm-wet\_psh\_05c-pl.dgn  
haryan

5/14/99

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

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 6 OF 29

DATE: 10/24/2023

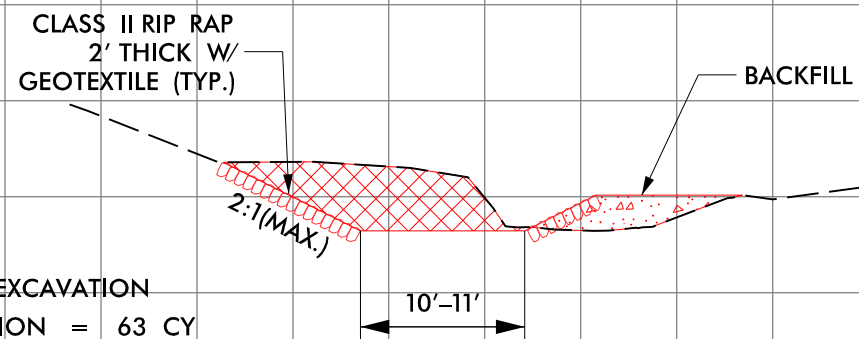
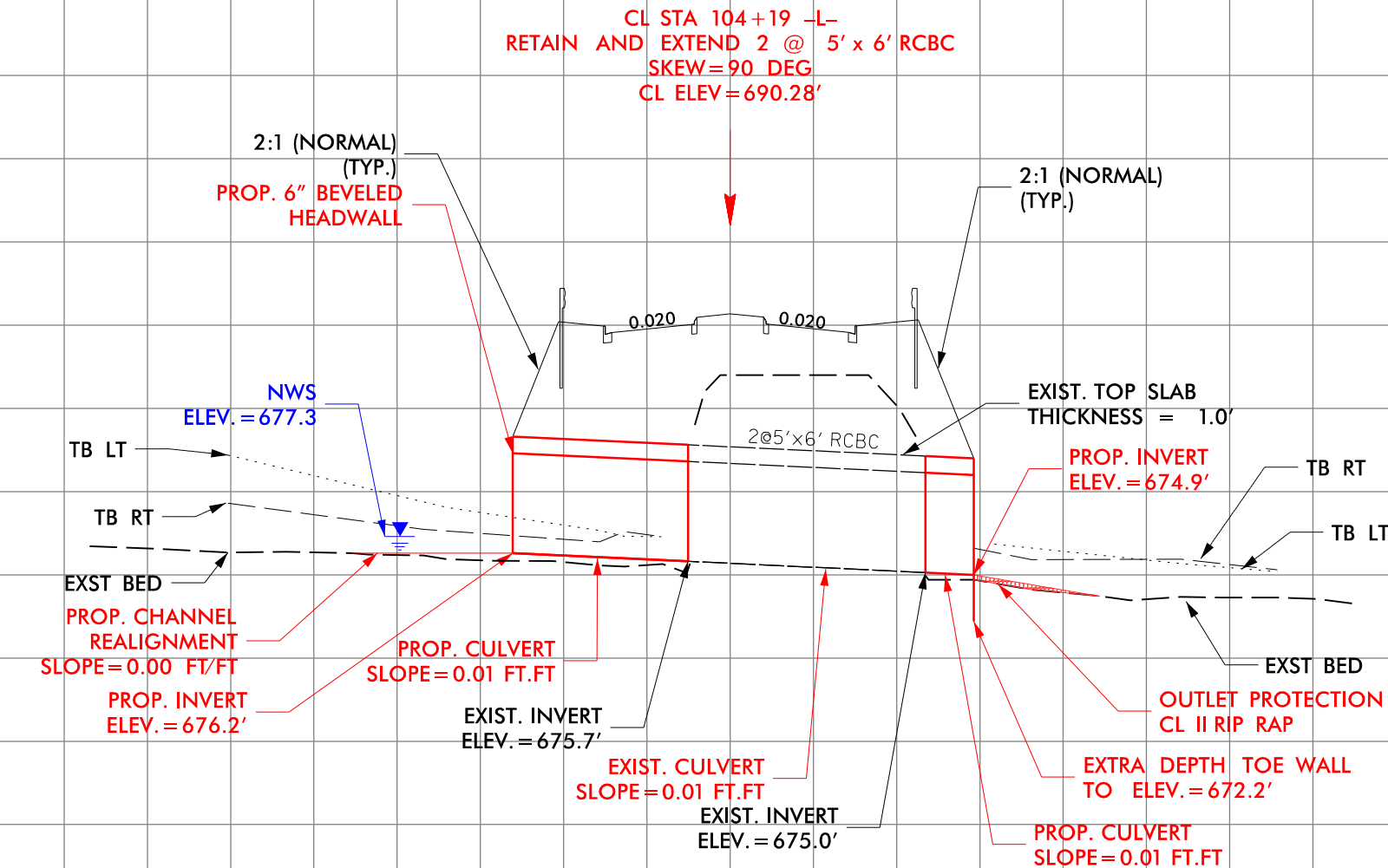
-200                      -100                      0                      100                      200

700

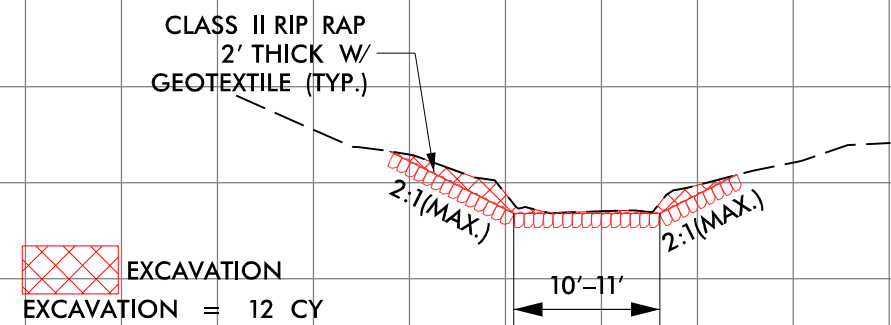
690

680

670



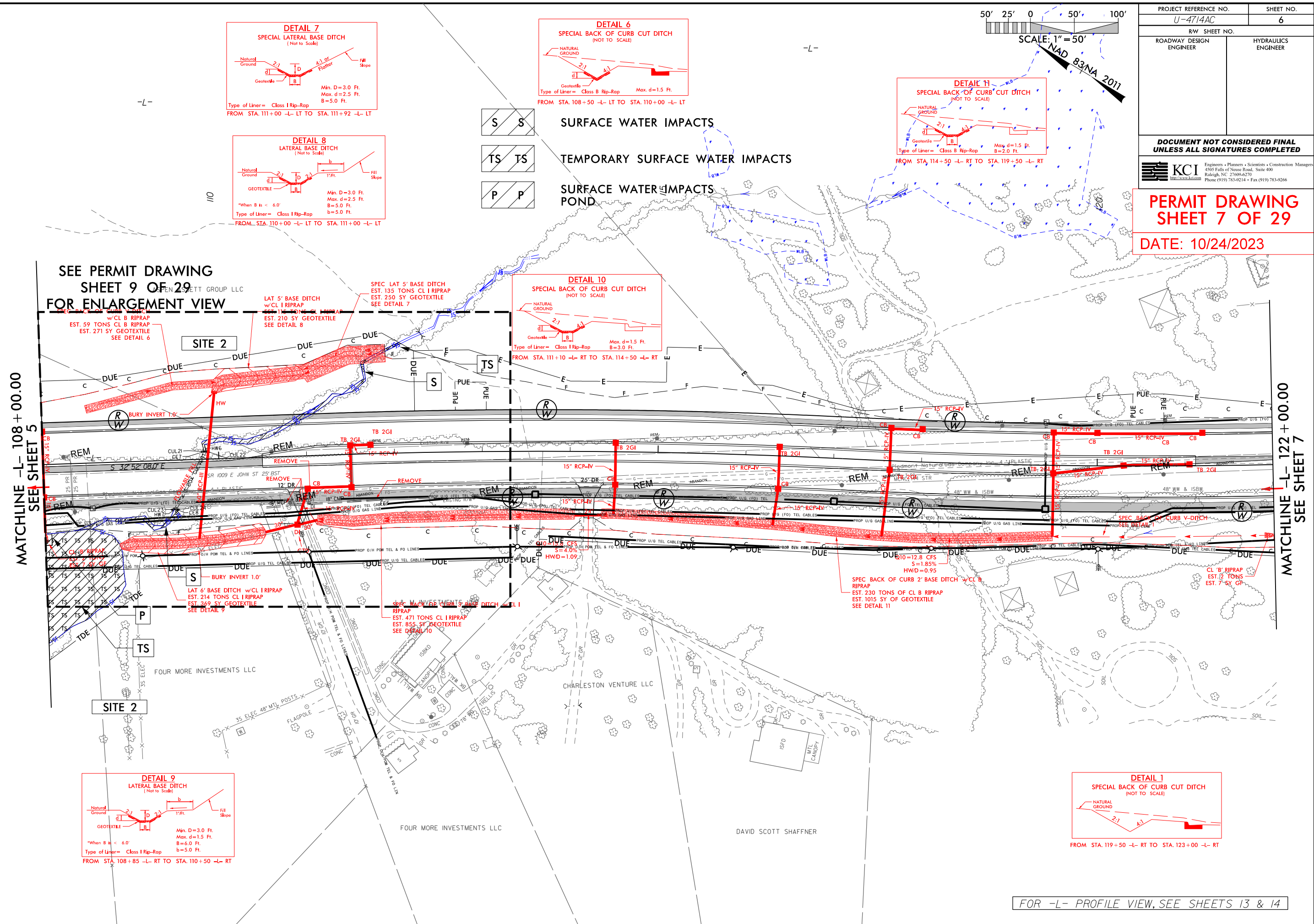
INLET CHANNEL  
(LOOKING DOWNSTREAM)  
(NOT TO SCALE)



OUTLET CHANNEL  
(LOOKING DOWNSTREAM)  
(NOT TO SCALE)

10/24/2023  
04714AC-Hyd-prm-wet-psh-05d-sect.dgn  
Jharvey





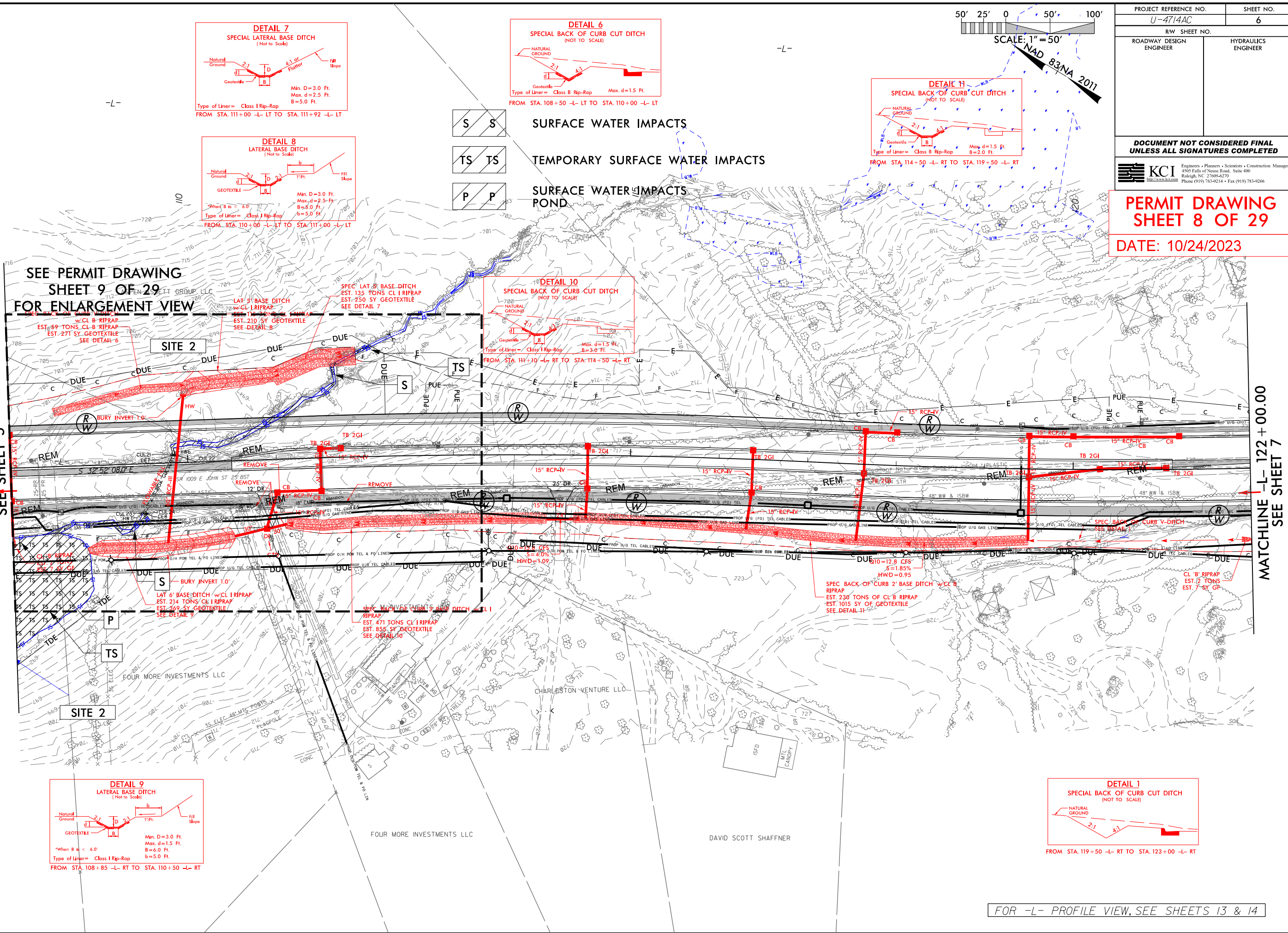


8/17/99

10/24/2023  
U:\4714AC\_Hyd.prm\_wet\_psh\_06a.dgn  
David

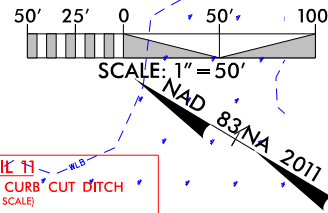
MATCHLINE -L- 108+00.00  
SEE SHEET 5


SEE PERMIT DRAWING  
SHEET 9 OF 29  
FOR ENLARGEMENT VIEW



-L-

-L-

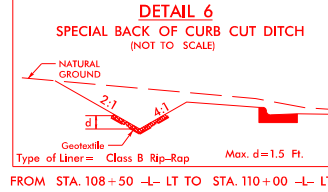
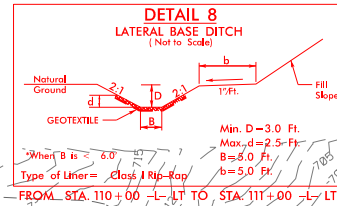
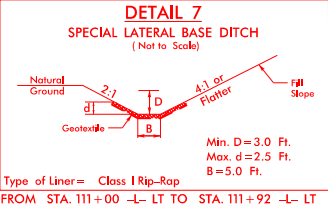
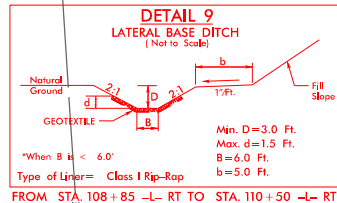


PROJECT REFERENCE NO. U-4714AC		SHEET NO. 6
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
 KCI Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214 • Fax (919) 783-9266		

PERMIT DRAWING  
SHEET 8 OF 29

DATE: 10/24/2023

MATCHLINE -L- 122+00.00  
SEE SHEET 7



S S

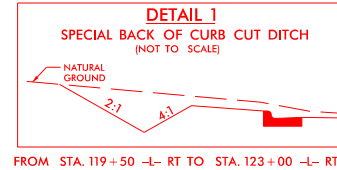
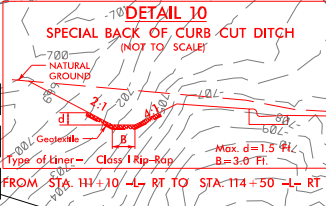
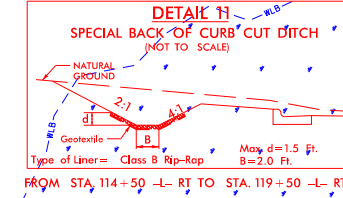
SURFACE WATER IMPACTS

TS TS

TEMPORARY SURFACE WATER IMPACTS

P P

SURFACE WATER IMPACTS  
POND

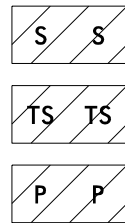


FOUR MORE INVESTMENTS LLC

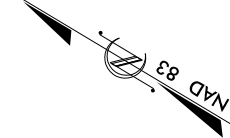
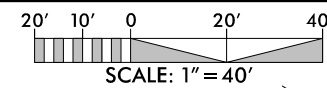
DAVID SCOTT SHAFFNER

FOR -L- PROFILE VIEW, SEE SHEETS 13 & 14

8/17/99



SURFACE WATER IMPACTS  
TEMPORARY SURFACE WATER IMPACTS  
SURFACE WATER IMPACTS  
POND



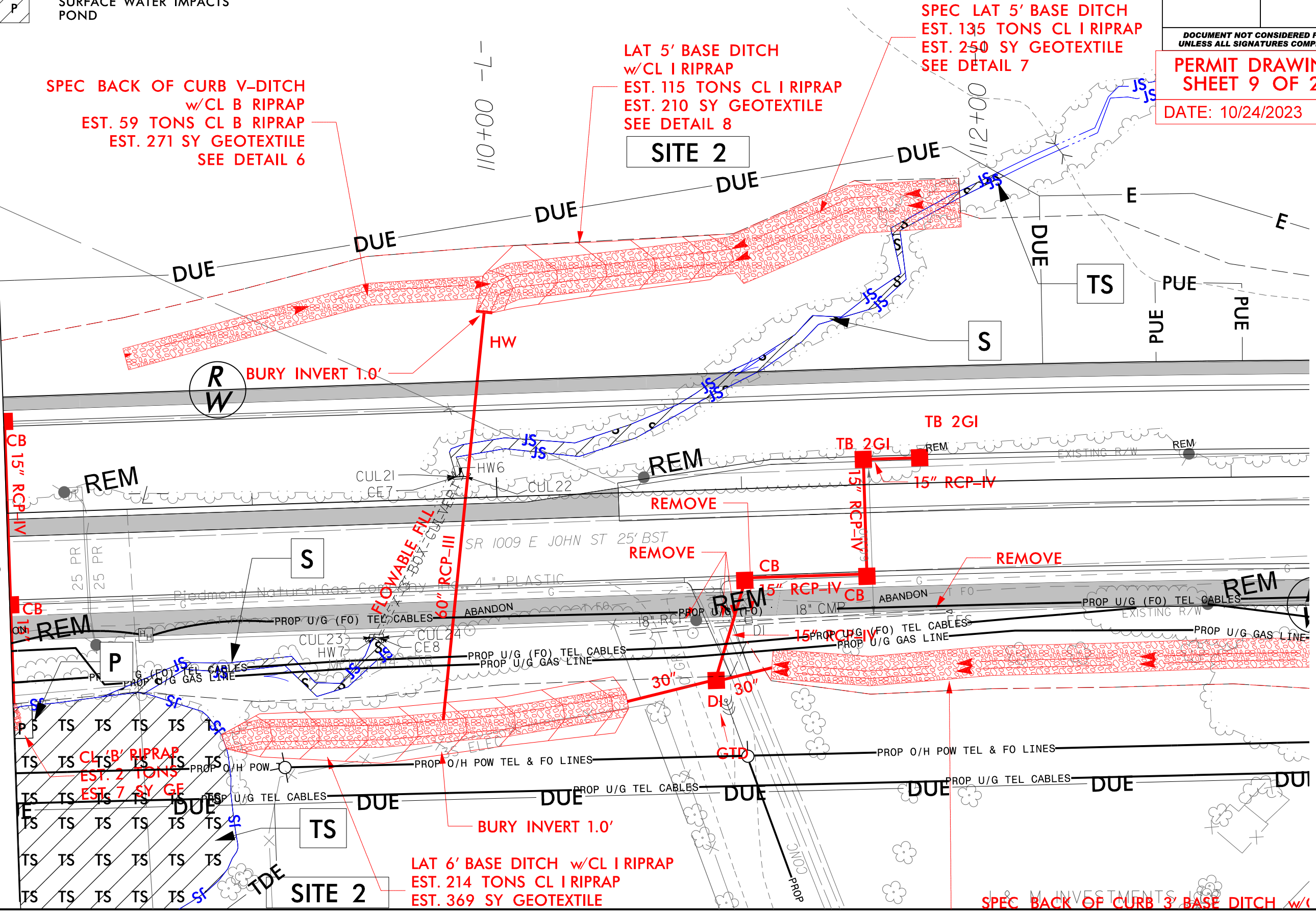
PROJECT REFERENCE NO.	SHEET NO.
U-4714AC	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 9 OF 29

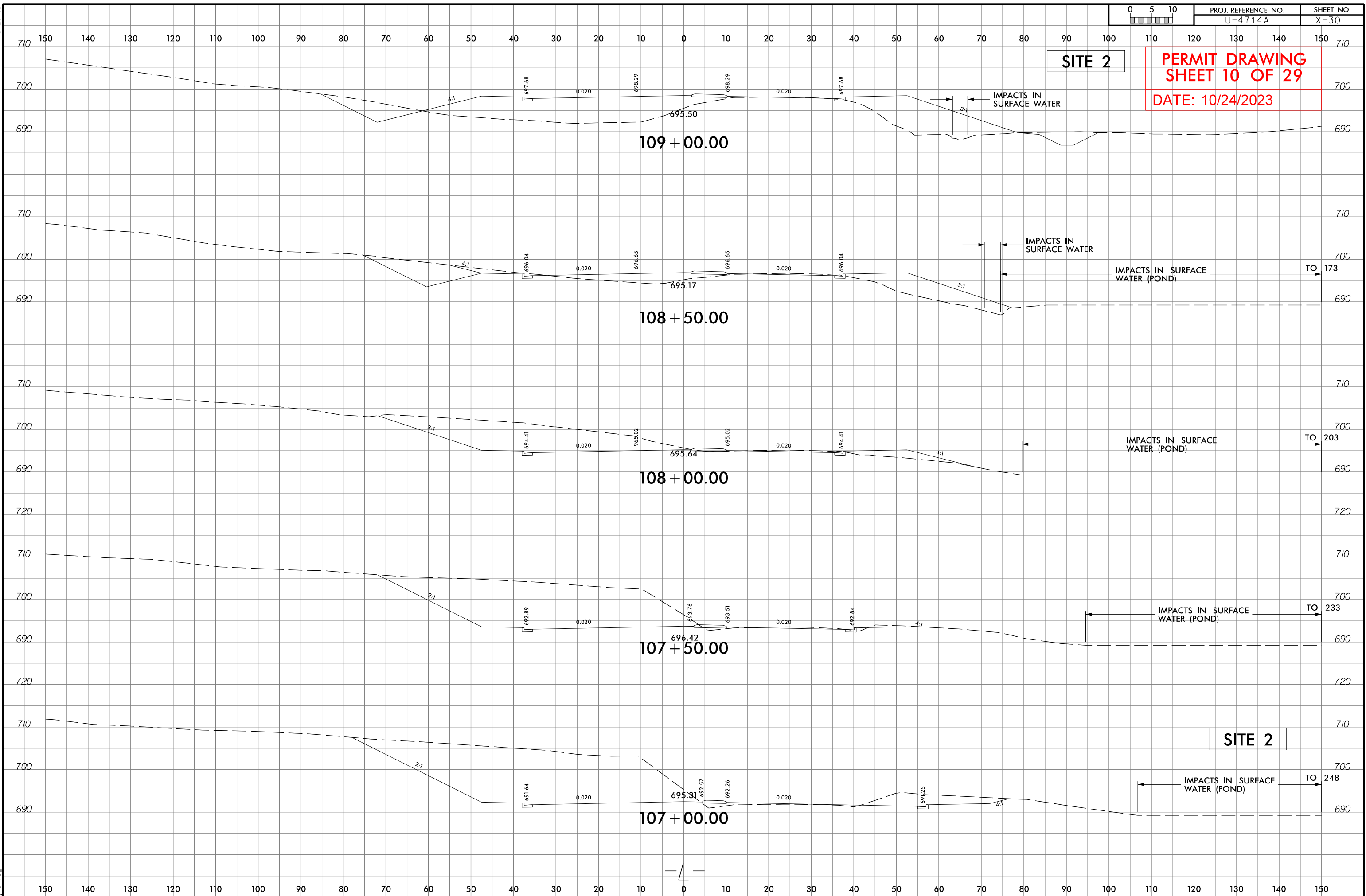
DATE: 10/24/2023

MATCHLINE -L- 108+00.00  
SEE SHEET 5



10/24/2023  
U:\4714AC\_Hyd-prm\_wet\_psh\_06b\_View\indgn  
indgn







5/14/99

10/24/2023  
04714AC-Hyd-prn-wet.psh\_06d\_sect.dgn  
Jharvey

100

0

100

CL STA 109+87 -L-

710

700

690

680

SITE 2

PROJECT REFERENCE NO.		SHEET NO.	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 11 OF 29			
DATE: 10/24/2023			

LAT 5' BASE DITCH  
W/CL B RIPRAP

INV = 689.7

1@66" RCP

SLOPE = 0.88%

LAT 6' BASE DITCH  
W/CL I RIPRAP

INV = 688.3

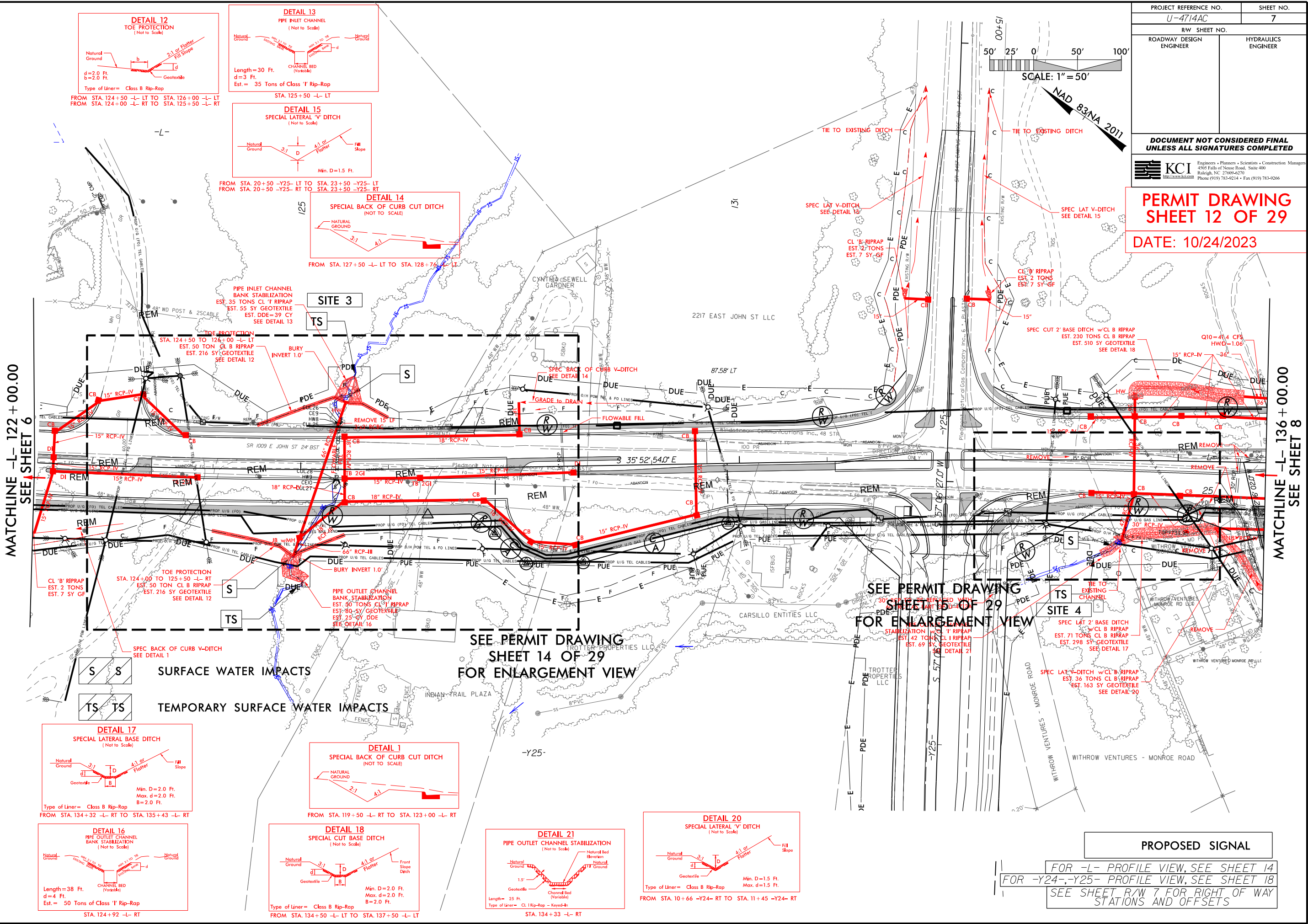
REVISIONS

05-10-2022: RW REVISION: REVISED DUE ON PARCELS 87, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

03-22-2023: RW AND DESIGN REVISION: ADDED TCE TO PARCELS 91 AND 92. CHANGED DUE TO PUE ON 91 AND 92. REVISED PUE ON 93 AND 98. (BH)

03-22-2023: DESIGN REVISION: SHIFTED U-TURN BULB ABOUT 50' TO THE EAST. (BH)

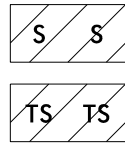
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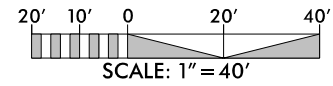




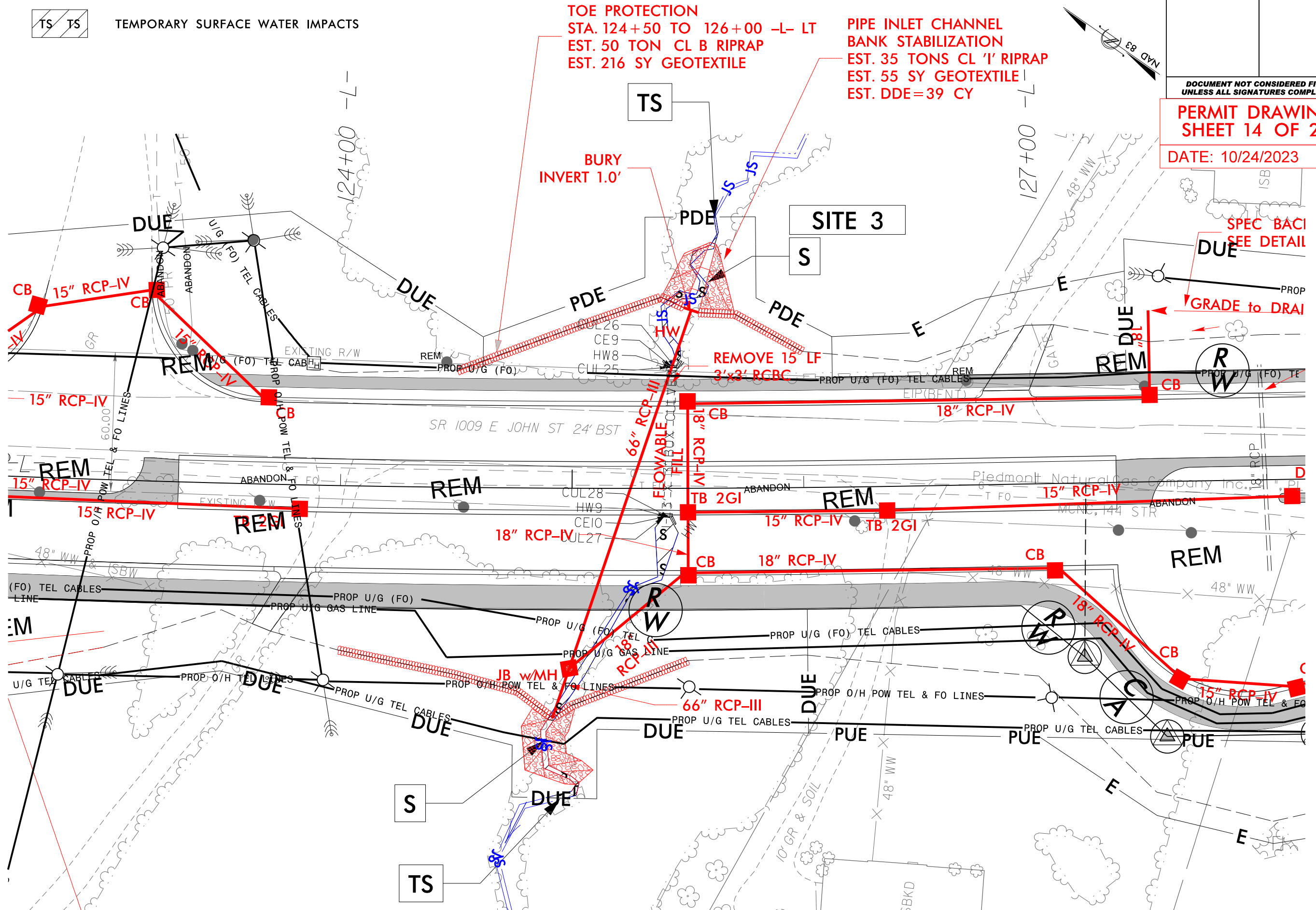




SURFACE WATER IMPACTS  
TEMPORARY SURFACE WATER IMPACTS



PROJECT REFERENCE NO.		SHEET NO.	
U-4714AC			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 14 OF 29			
DATE: 10/24/2023			

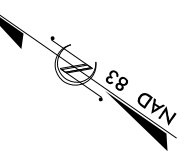
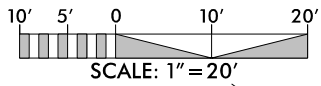




SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS

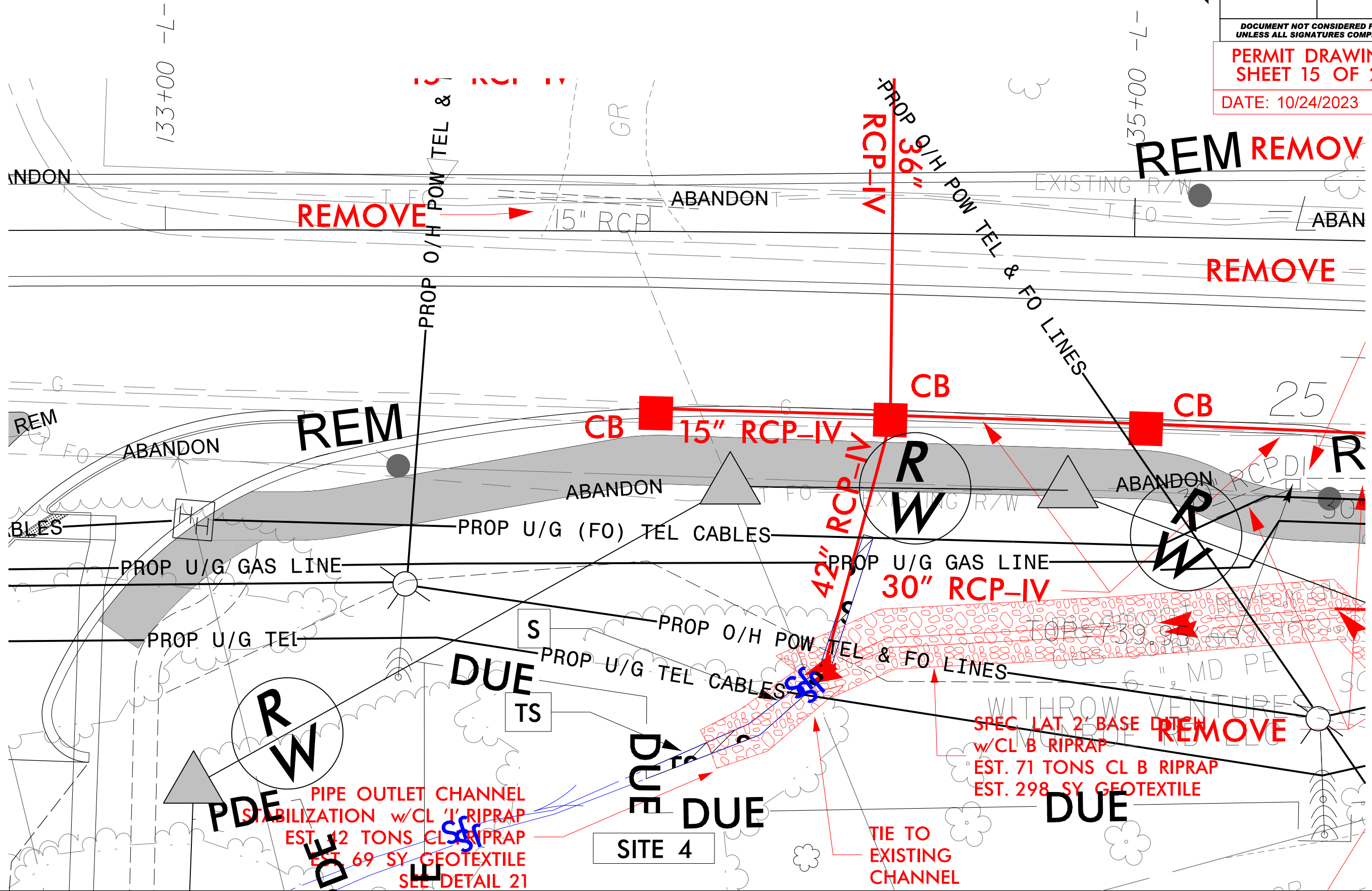


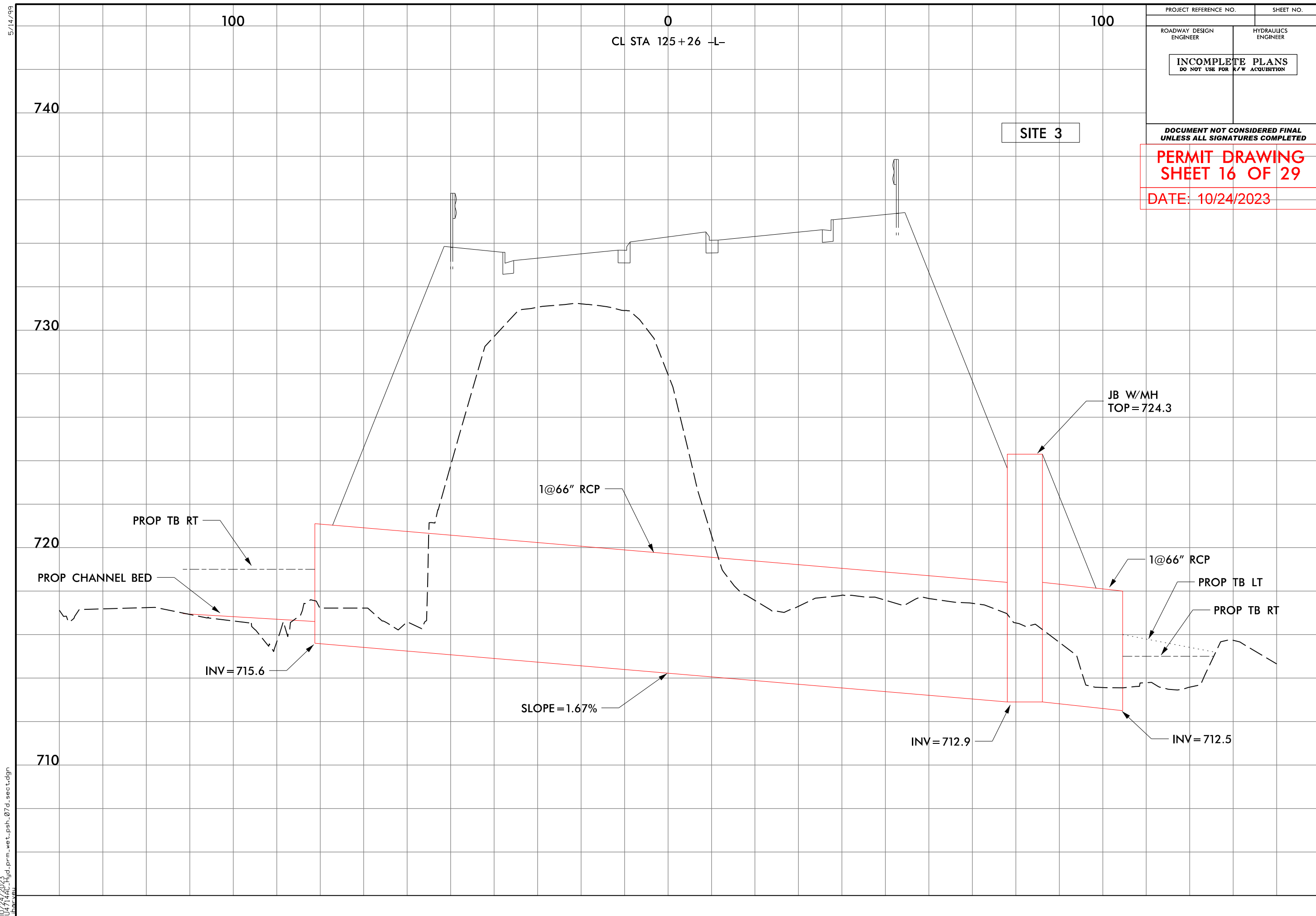
PROJECT REFERENCE NO. U-4714AC		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 15 OF 29

DATE: 10/24/2023







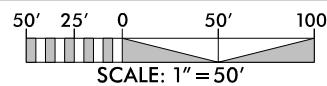
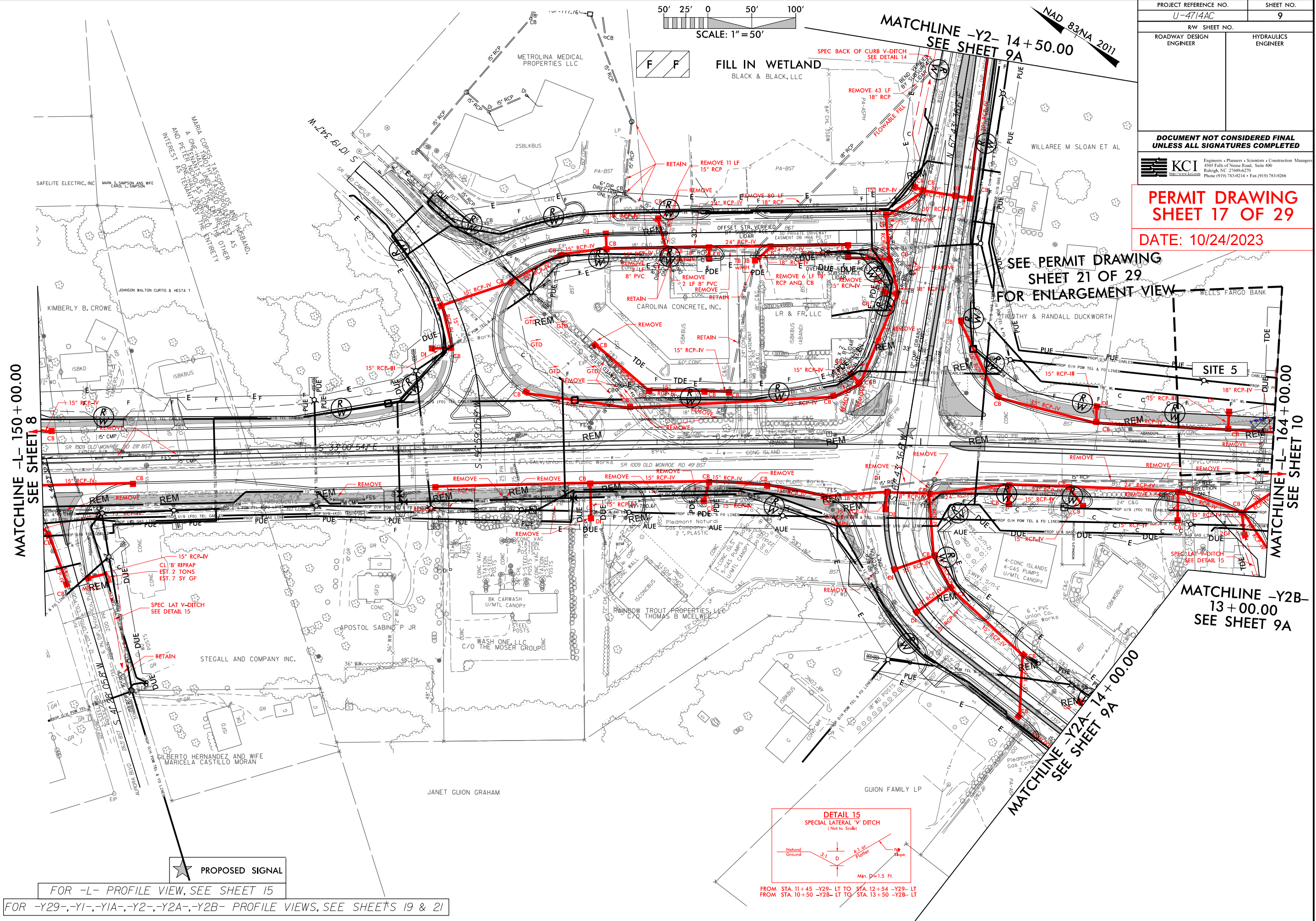
REVISIONS

05-10-2022: RW REVISION: REVISED STALLINGS POTTER ROAD INTERSECTION WITH NO THRU MOVEMENTS ON POTTER STALLINGS ROAD AND THRU ONLY MOVEMENTS ON OLD MONROE ROAD TO A QUADRANT INTERSECTION WITH FULL MOVEMENTS ON POTTER STALLINGS ROAD AND THRU ONLY MOVEMENTS ON OLD MONROE ROAD FROM 30' TO 10.5' REMOVED U-TURN BULB FROM PARCELS 122 AND 123. ADDED RETAINING WALL TO PARCEL 128.


12-22-2022: RW REVISION: CHANGED DUE TO AUE ON PARCEL 125 FROM -L- STA. 156+37.00 TO 158+96.81. ALSO ADDED PDE TO PARCEL 125 FOR THE CATCH BASIN AT -L- 157+50.00. (BH)

05-10-2022: RW REVISION: CHANGED DUE TO AUE ON PARCEL 125 FROM -L- STA. 156+37.00 TO 158+96.81. ALSO ADDED PDE TO PARCEL 125 FOR THE CATCH BASIN AT -L- 157+50.00. (BH)

05-10-2022: RW REVISION: CHANGED DUE TO AUE ON PARCEL 125 FROM -L- STA. 156+37.00 TO 158+96.81. ALSO ADDED PDE TO PARCEL 125 FOR THE CATCH BASIN AT -L- 157+50.00. (BH)

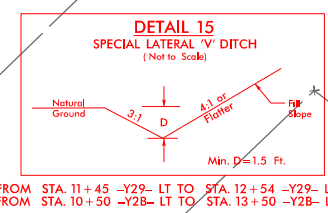


MATCHLINE -Y2- 14+50.00  
SEE SHEET 9A

PROJECT REFERENCE NO. U-4714AC		SHEET NO. 9	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			
 KCI <a href="http://www.kci.com">www.kci.com</a>		Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214 • Fax (919) 783-9266	

PERMIT DRAWING  
SHEET 17 OF 29  
DATE: 10/24/2023

SEE PERMIT DRAWING  
SHEET 21 OF 29  
FOR ENLARGEMENT VIEW



FOR -L- PROFILE VIEW, SEE SHEET 15  
FOR -Y29-, -Y1-, -Y1A-, -Y2-, -Y2A-, -Y2B- PROFILE VIEWS, SEE SHEETS 19 & 21



REVISIONS

05-10-2022: RW REVISION: REVISED STALLINGS POTTER ROAD INTERSECTION WITH NO THRU MOVEMENTS ON POTTER STALLINGS ROAD AND THRU ONLY MOVEMENTS ON OLD MONROE ROAD. TO A QUADRANT INTERSECTION WITH FULL MOVEMENTS ON POTTER STALLINGS ROAD AND THRU ONLY MOVEMENTS ON OLD MONROE ROAD. REDUCED THE MEDIAN WIDTH ON OLD MONROE ROAD FROM 30' TO 10.5'. REMOVED U-TURN BULB FROM PARCELS 122 AND 123. ADDED RETAINING WALL TO PARCEL 128.

12-22-2022: RW REVISION: CHANGED DUE TO AUE ON PARCEL 125 FROM -L- STA. 156+37.00 TO 158+96.81. ALSO ADDED PDE TO PARCEL 125 FOR THE CATCH BASIN AT -L- 157+50.00. (BH)

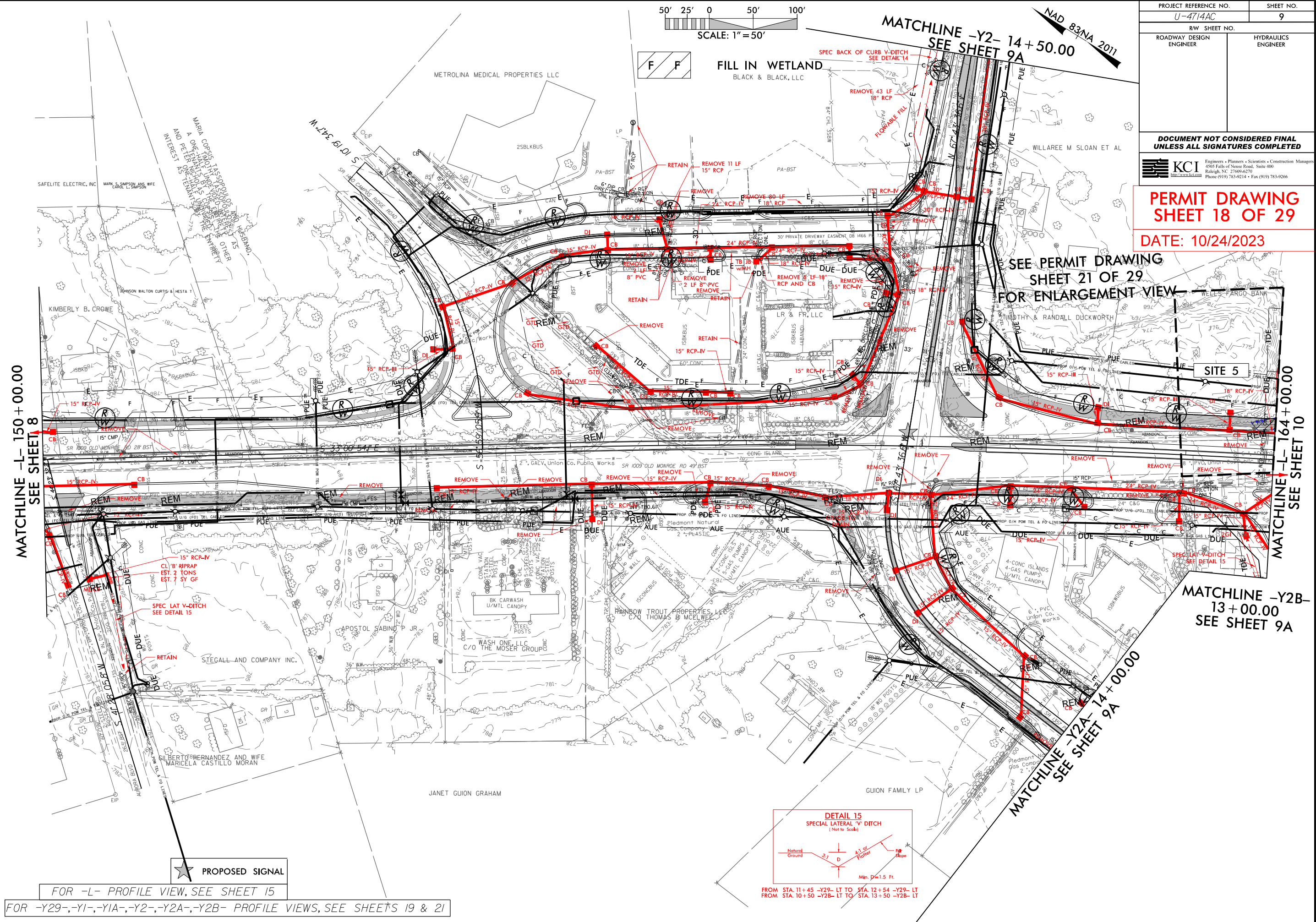
05-10-2022: RW REVISION: REVISED STALLINGS POTTER ROAD INTERSECTION WITH NO THRU MOVEMENTS ON POTTER STALLINGS ROAD AND THRU ONLY MOVEMENTS ON OLD MONROE ROAD. TO A QUADRANT INTERSECTION WITH FULL MOVEMENTS ON POTTER STALLINGS ROAD AND THRU ONLY MOVEMENTS ON OLD MONROE ROAD. REDUCED THE MEDIAN WIDTH ON OLD MONROE ROAD FROM 30' TO 10.5'. REMOVED U-TURN BULB FROM PARCELS 122 AND 123. ADDED RETAINING WALL TO PARCEL 128.

12-22-2022: RW REVISION: CHANGED DUE TO AUE ON PARCEL 125 FROM -L- STA. 156+37.00 TO 158+96.81. ALSO ADDED PDE TO PARCEL 125 FOR THE CATCH BASIN AT -L- 157+50.00. (BH)

8/17/99

05-10-2022: RW REVISION: REVISED STALLINGS POTTER ROAD INTERSECTION WITH NO THRU MOVEMENTS ON POTTER STALLINGS ROAD AND THRU ONLY MOVEMENTS ON OLD MONROE ROAD. TO A QUADRANT INTERSECTION WITH FULL MOVEMENTS ON POTTER STALLINGS ROAD AND THRU ONLY MOVEMENTS ON OLD MONROE ROAD. REDUCED THE MEDIAN WIDTH ON OLD MONROE ROAD FROM 30' TO 10.5'. REMOVED U-TURN BULB FROM PARCELS 122 AND 123. ADDED RETAINING WALL TO PARCEL 128.

12-22-2022: RW REVISION: CHANGED DUE TO AUE ON PARCEL 125 FROM -L- STA. 156+37.00 TO 158+96.81. ALSO ADDED PDE TO PARCEL 125 FOR THE CATCH BASIN AT -L- 157+50.00. (BH)



PROJECT REFERENCE NO.		SHEET NO.
U-4714AC		9
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

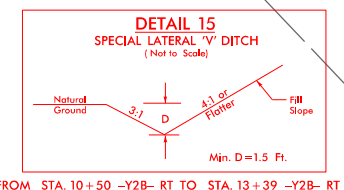
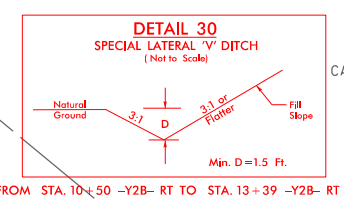
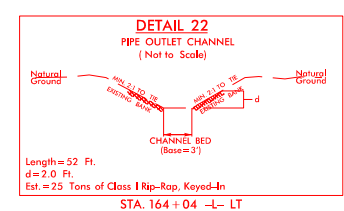
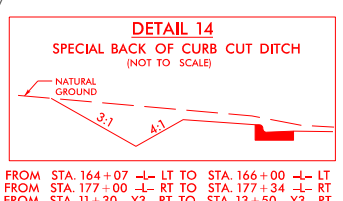
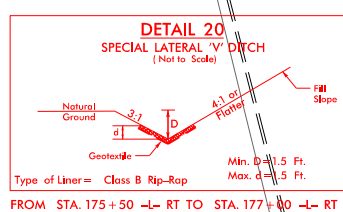
PERMIT DRAWING  
SHEET 18 OF 29  
DATE: 10/24/2023

SEE PERMIT DRAWING  
SHEET 21 OF 29  
FOR ENLARGEMENT VIEW

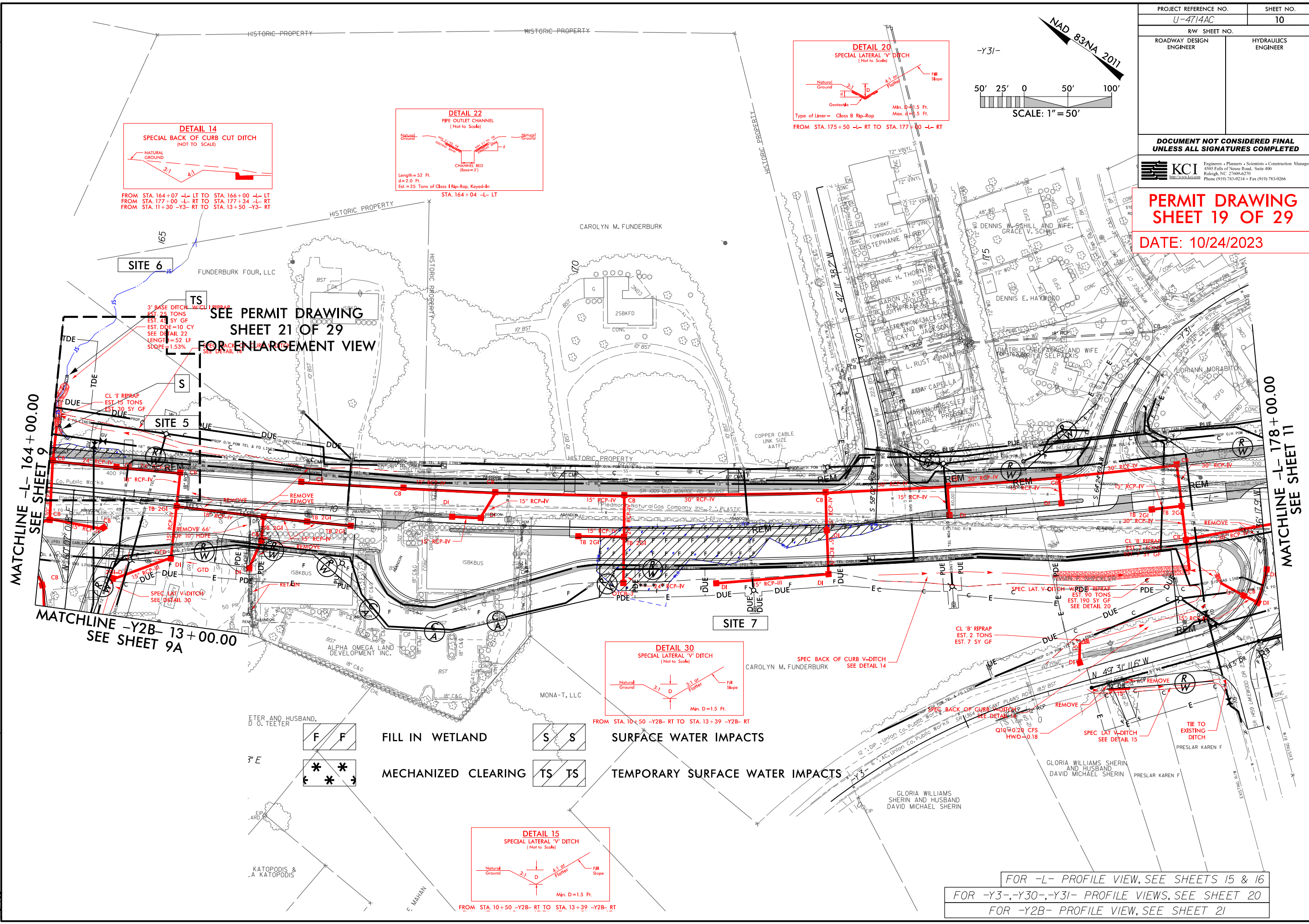
MATCHLINE -Y2B-  
13+00.00  
SEE SHEET 9A

FOR -L- PROFILE VIEW, SEE SHEET 15  
FOR -Y29-, -Y1-, -Y1A-, -Y2-, -Y2A-, -Y2B- PROFILE VIEWS, SEE SHEETS 19 & 21





10/24/2023  
U4714AC\_Hyd\_prm\_wet\_psh\_10.dgn  
iharveu





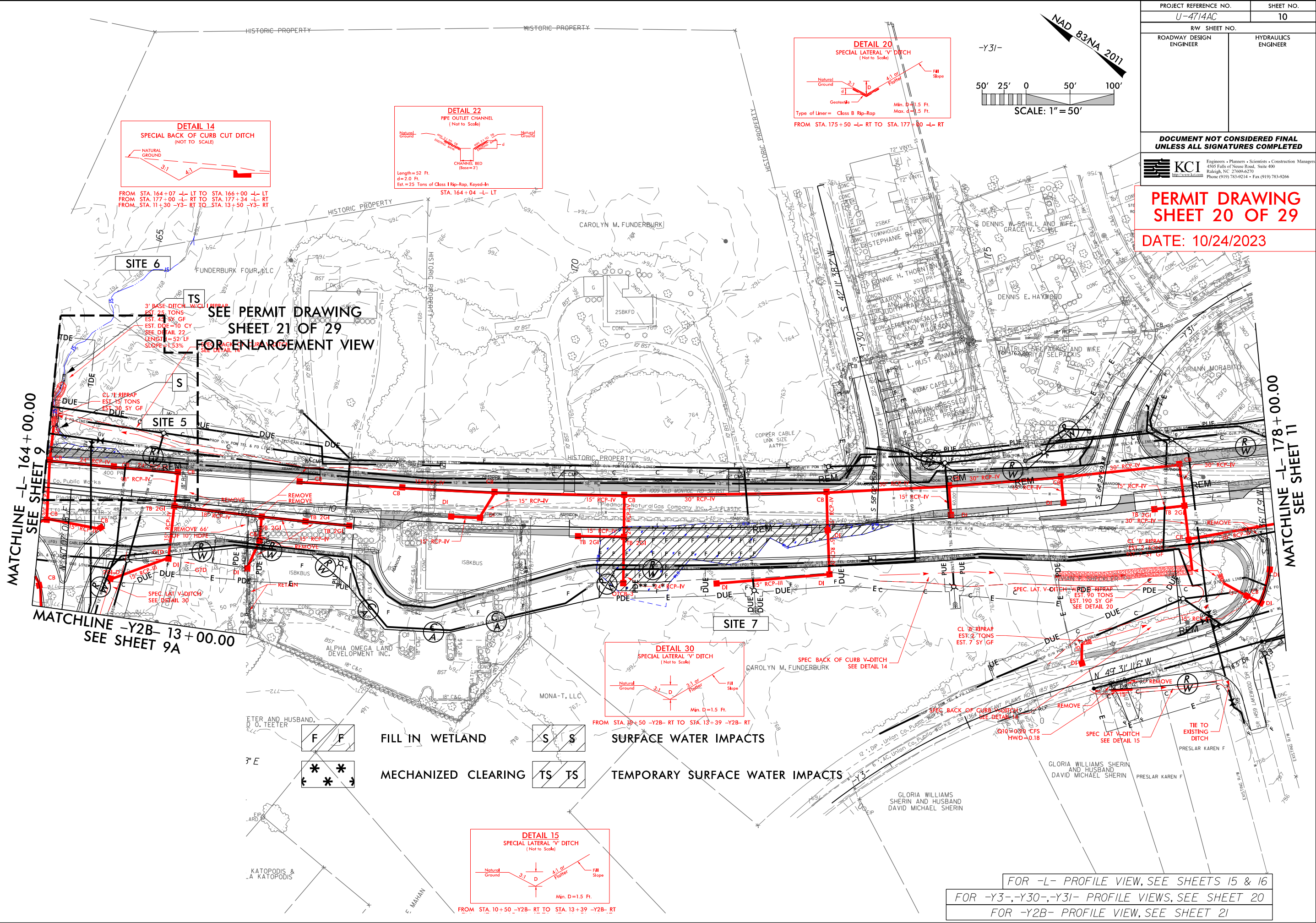
8/17/99


REVISIONS

05-10-2022, RW, REVISION: ADDED NEW ROADWAY CONNECTION SOUTH WEST OF STALLINGS / POTTER / OLD MONROE INTERSECTION AND ADDED RELATED RW AND EASEMENTS. PARCELS WITHIN 30' TO 105' REMOVED TURN BULB ON PARCELS 125 AND 142. ADDED A DRIVEWAY FOR PARCEL 143.

07-29-2022, RW, REVISION: ADDED PARCEL NUMBER 145A AND ADDED PROPERTY OWNER NAME NAME "PARKSIDE AT STALLINGS TOWNHOME ASSOCIATION, INC." (BH)

10/24/2023  
U-4714AC-Hyd-prm\_wet\_psh\_10a.dgn



PROJECT REFERENCE NO. U-4714AC		SHEET NO. 10
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>		
 KCI Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214 • Fax (919) 783-9266		
<b>PERMIT DRAWING SHEET 20 OF 29</b>		
DATE: 10/24/2023		

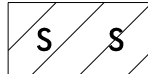
FOR -L- PROFILE VIEW, SEE SHEETS 15 & 16  
FOR -Y3-, -Y30-, -Y31- PROFILE VIEWS, SEE SHEET 20  
FOR -Y2B- PROFILE VIEW, SEE SHEET 21

8/17/99

WELLS FARGO BANK



FILL IN WETLAND



SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS

SITE 6

TDE

MATCHLINE -L- 164+00.00  
SEE SHEET 9

MATCHLINE -L- 164+00.00  
SEE SHEET 10

TDE

JS

TDE

3' BASE DITCH W/CL I RIPRAP  
EST. 25 TONS  
EST. 45 SY GF  
EST. DDE=10 CY  
LENGTH=52 LF  
SLOPE=1.53%

CL 'I' RIPRAP  
EST. 15 TONS  
EST. 30 SY GF

SPEC BACK OF CURB V-DITCH



165+00 -L-

PROJECT REFERENCE NO.		SHEET NO.	
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			
PERMIT DRAWING SHEET 21 OF 29			
DATE: 10/24/2023			

163+00 -L-  
UE

PROP U/G TEL CABLES

PUE

PROP O/H POW TEL & FO LINES  
18" RCP-IV

PROP U/G TEL CABLES

DI

16" WL

SITE 5

16" WL

50" CONC

CB

REM

ABANDON

CB

24" RCP-IV

CB

24" RCP-IV

REM

ABANDON

CB

8", PVC, Union Co. Public Works

Piedmont Natural Gas Company Inc., 2", PLASTIC

10/24/2023  
047146C-Hyd.prm-wet.psh-10b\_ViewIndgn  
10/24/2023



6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
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PERMIT DRAWING  
SHEET 22 OF 29  
DATE: 10/24/2023

SITE 5

FILL IN WETLAND

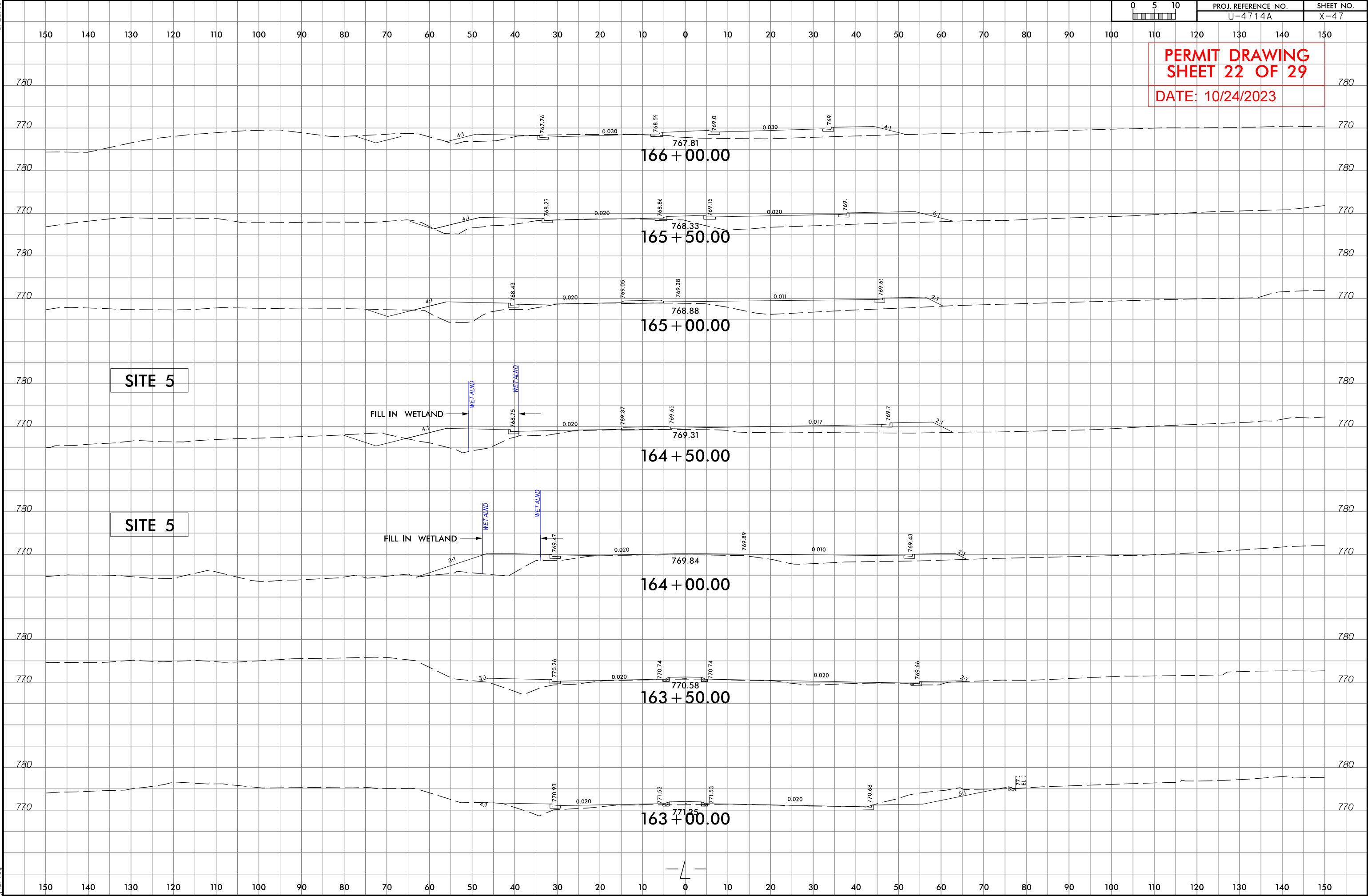
WETLAND

SITE 5

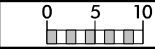
FILL IN WETLAND

WETLAND

10/24/2023  
U4714A\_U-4714A\_Hyd\_prm\_wet.psh\_10c\_xpl.dgn  
jharvey



6/23/16



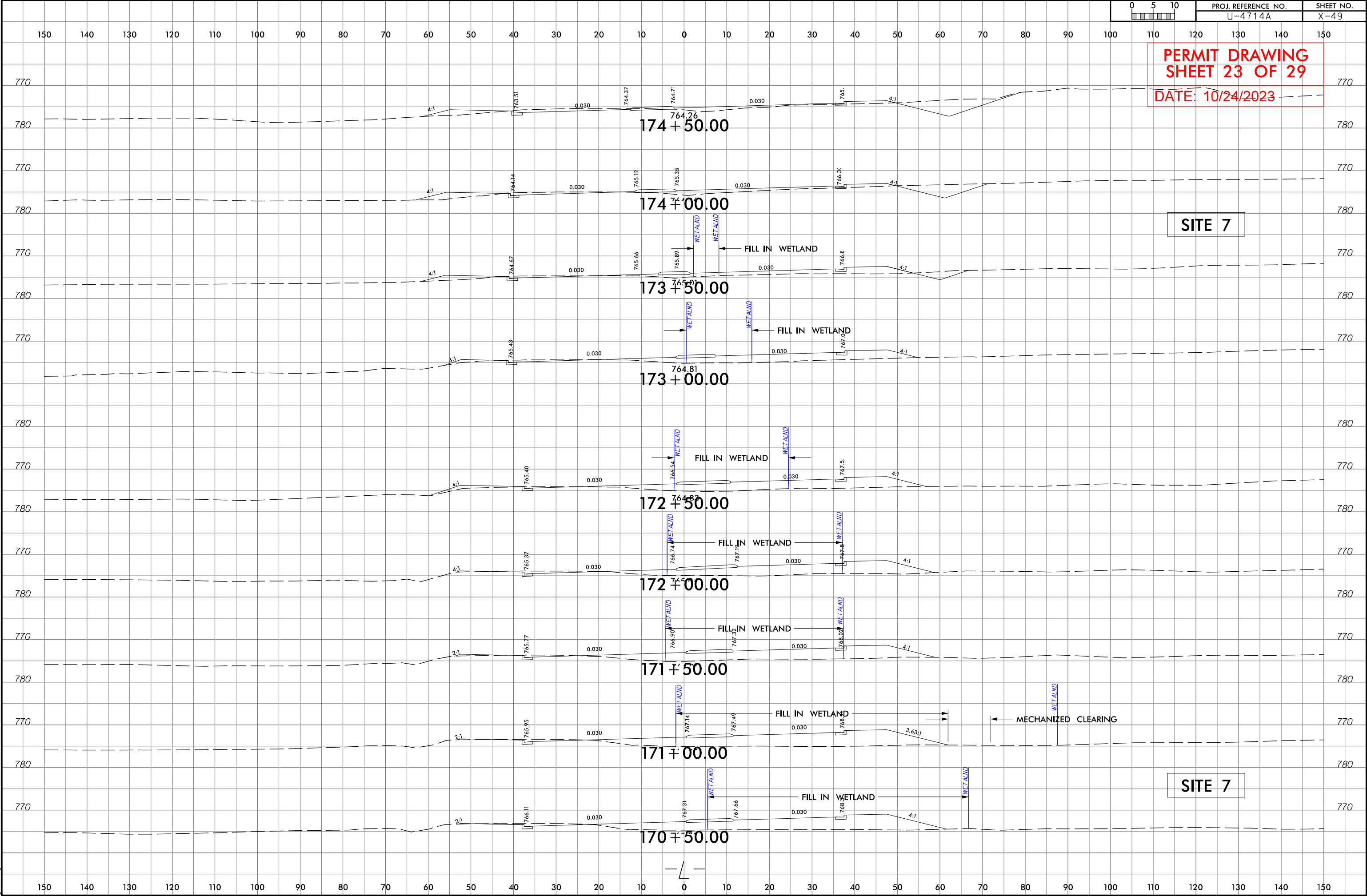
PROJ. REFERENCE NO.	SHEET NO.
U-4714A	X-49

PERMIT DRAWING  
SHEET 23 OF 29  
DATE: 10/24/2023

SITE 7

SITE 7

10/24/2023  
U:\4714A\Hyd\_prm\_wet.psh.10.d.xpl.dgn  
jharvey

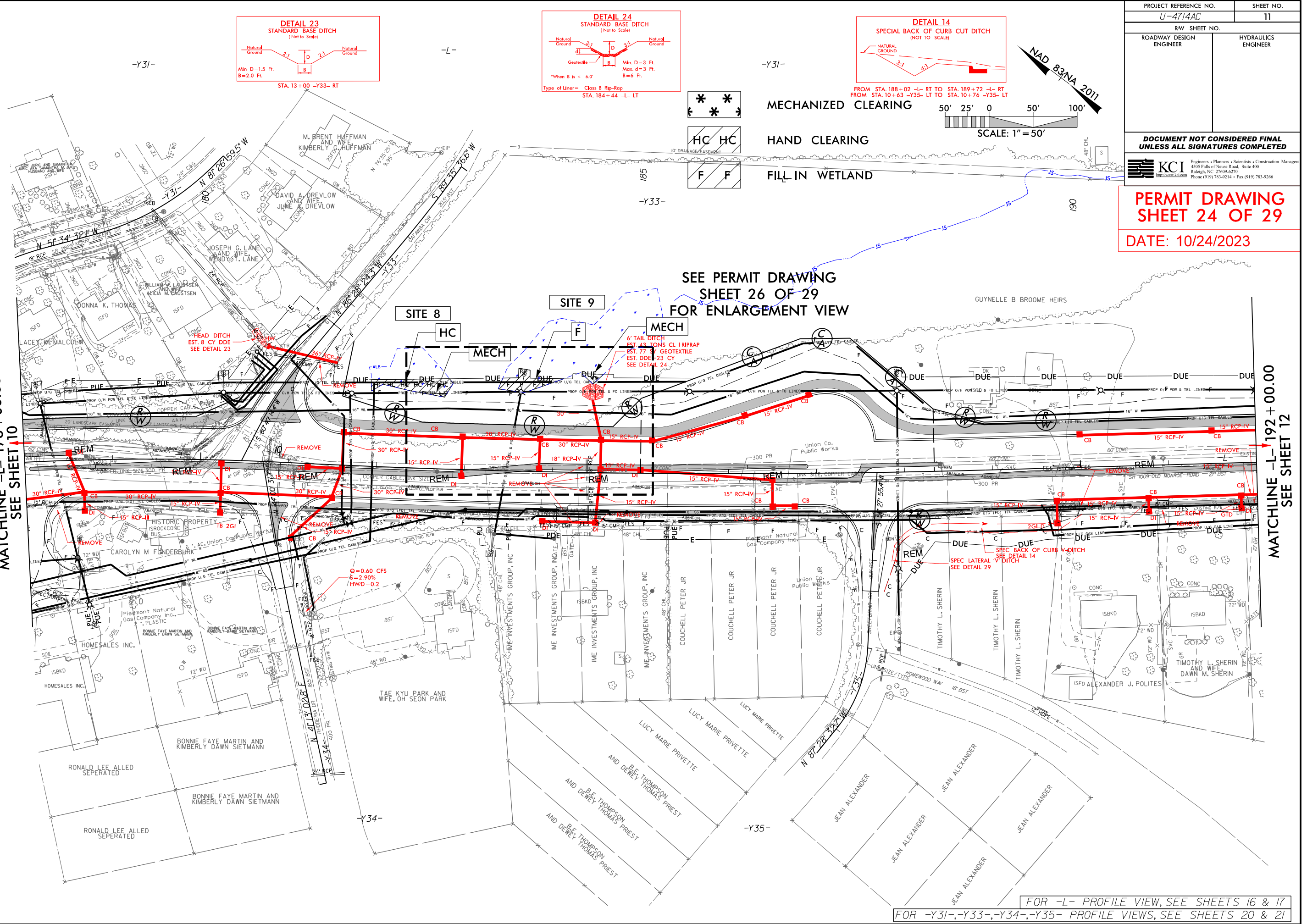


REVISIONS  
05-10-2022: RW REVISION: ADDED NEW PARCELS 161A AND 167A WITH PUE; ADDED PUE TO PARCELS 150 AND 151; REVISED TCE ON PARCELS 161 AND 163; REVISED PUE ON PARCELS 161, 162, 163, AND 167.  
06-2-2022: RW REVISION: ADDED PARCEL NUMBERS 163Z AND 167Z. (BH)  
11-17-2022: RW REVISION: CHANGED THE TCE ON PARCELS 155, 156 AND 157 TO DUE AND CHANGED THE PUE ON PARCEL 155 TO DUE. (BH)

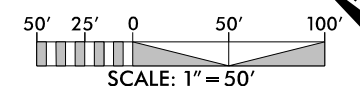
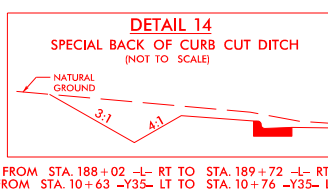
10/24/2023  
U4714AC\_Hyd\_prm\_wet\_psh.11.dgn

8/17/99

MATCHLINE -L- 178+00.00  
SEE SHEET 10

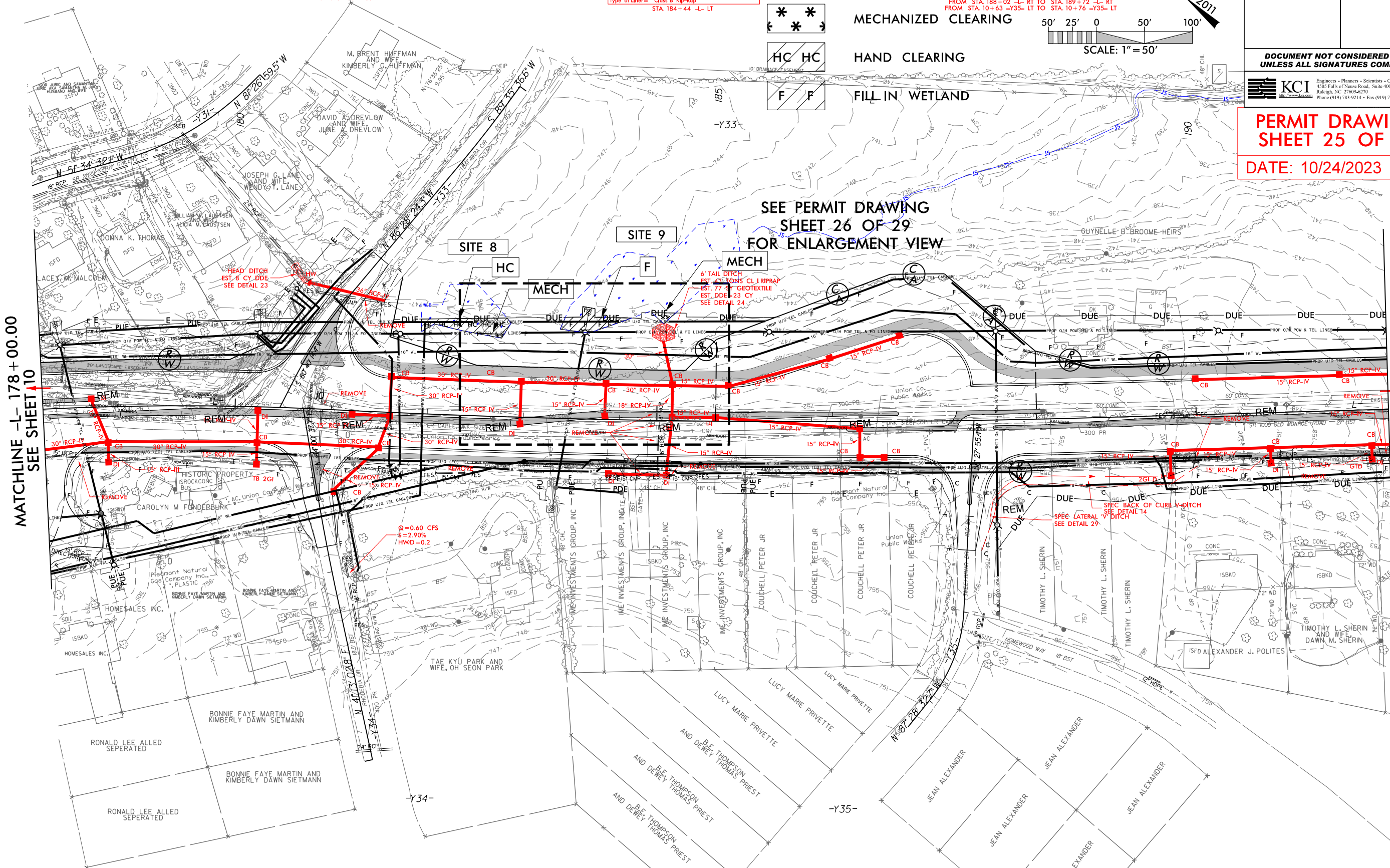






**FILL IN WETLAND**


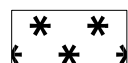
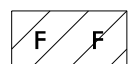
SEE PERMIT DRAWING  
SHEET 26 OF 29  
FOR ENLARGEMENT VIEW

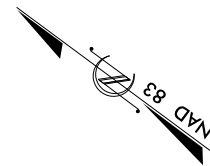
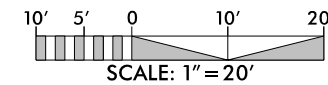


MATCHLINE -L- 192 + 00.00  
SEE SHEET 12

FOR -L- PROFILE VIEW, SEE SHEETS 16 & 17  
FOR -Y31-, -Y33-, -Y34-, -Y35- PROFILE VIEWS, SEE SHEETS 20 & 21

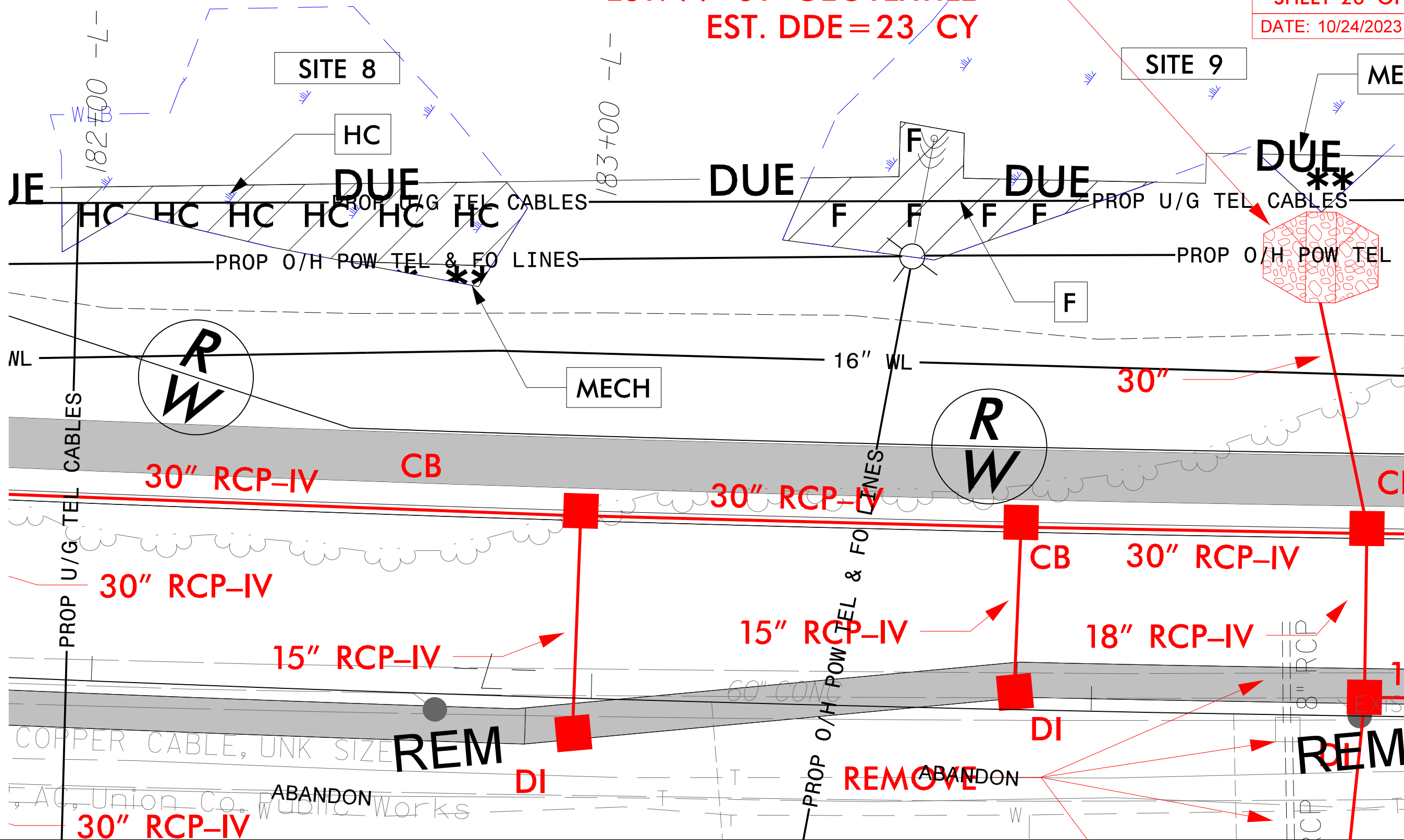
0/24/2023  
J4714AC-Hyd-prm-wet\_psh\_11a.dgn  
ibave

-  HAND CLEARING
-  MECHANIZED CLEARING
-  FILL IN WETLAND



PROJECT REFERENCE NO. U-4714AC		SHEET NO.	
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			
PERMIT DRAWING SHEET 26 OF 29			
DATE: 10/24/2023			

6' TAIL DITCH  
EST. 43 TONS CL I RIPRAP  
EST. 77 SY GEOTEXTILE  
EST. DDE = 23 CY



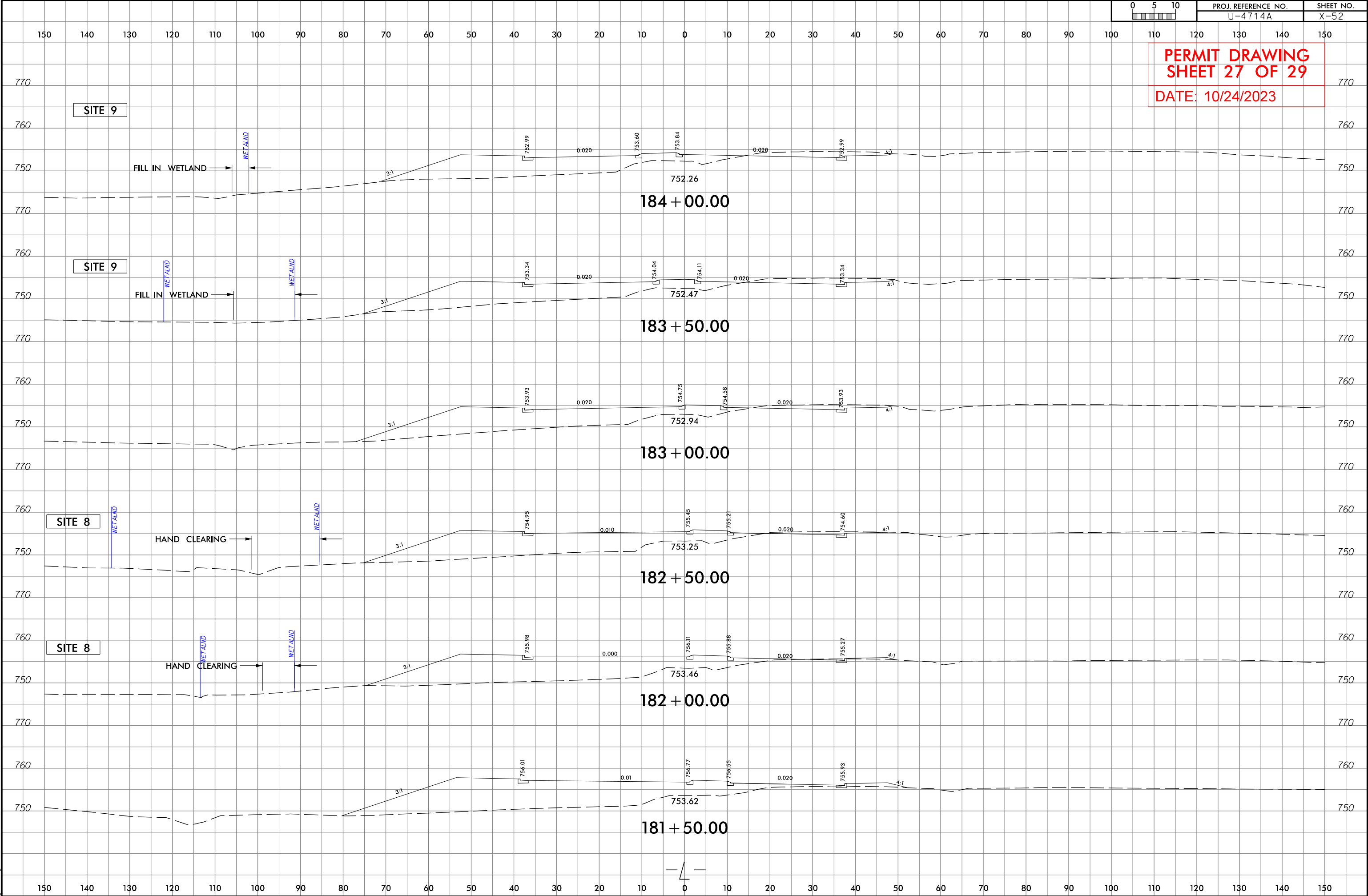


6/23/16

0	5	10	PROJ. REFERENCE NO.	SHEET NO.
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>			U-4714A	X-52

PERMIT DRAWING  
SHEET 27 OF 29

DATE: 10/24/2023



WETLAND AND SURFACE 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	103+94 to 104+35-L-	2 at 5'x6' RCBC EXTENSIONS						< 0.01	< 0.01	96	37	
	104+02 to 104+30-L-LT	INLET CHANNEL						< 0.01		43		
	104+08 to 104+24-L-LT	OUTLET CHANNEL						< 0.01		38		
2	107+90 to 112+10-L-	ROADWAY FILL						0.04	< 0.01	395	8	
		POND						< 0.01	1.07			
3	124+87 to 125+64-L-	66" PIPE						0.01		138		
	125+42 to 125+62-L-LT	INLET CHANNEL						< 0.01	< 0.01	43	12	
	124+90 to 124+93-L-RT	OUTLET CHANNEL							< 0.01		13	
		OUTLET BANK STABILIZATION								36		
4	134+00 to 134+47-L-RT	42" PIPE						< 0.01	< 0.01	27	14	
	134+13 to 134+39-L-RT	OUTLET CHANNEL						< 0.01		31		
5	163+72 to 164+87-L-LT	ROADWAY FILL	0.03									
6	164+00 to 164+34-L-LT	ROADWAY FILL						< 0.01		28		
	164+00 to 164+20-L-LT	OUTLET CHANNEL						< 0.01	< 0.01	42	9	
7	170+31 to 173+69-L-	ROADWAY FILL	0.28			< 0.01						
TOTALS*:			0.31			< 0.01		0.08	1.08	917	93	0

\*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
10-24-2023  
MECKLENBURG/UNION COUNTY  
U-4714AC  
39078.3.9  
SHEET 28 OF 29



# Permit Drawings

U-4714B



## North Carolina Department of Transportation

Highway Stormwater Program  
STORMWATER MANAGEMENT PLAN



FOR NCDOT PROJECTS



(Version 3.00; Released August 2021)

<b>WBS Element:</b>		<b>TIP/Proj No:</b> U-4714B		<b>County(ies):</b> Union		<b>Page</b> 1 <b>of</b> 2	
<b>General Project Information</b>							
<b>WBS Element:</b>		<b>TIP Number:</b> U-4714B		<b>Project Type:</b> Roadway Widening		<b>Date:</b> 9.5.2023	
<b>NCDOT Contact:</b>		<b>Contractor / Designer:</b>					
<b>Address:</b>		<b>Address:</b>					
1000 Birch Ridge Drive Raleigh, NC 27610		STV Engineers, Inc. 900 West Trade Street Suite 715 Charlotte, NC 28202-1144					
<b>Phone:</b> (919) 707-6731		<b>Phone:</b> (704) 816-2555					
<b>Email:</b> crsharpless@ncdot.gov		<b>Email:</b> Edward.Vance@stvinc.com					
<b>City/Town:</b>		Stallings & Indian Trail		<b>County(ies):</b>		Union	
<b>River Basin(s):</b>		Catawba		<b>CAMA County?</b>		No	
<b>Wetlands within Project Limits?</b>		Yes					
<b>Project Description</b>							
<b>Project Length (lin. miles or feet):</b>		3.80		<b>Surrounding Land Use:</b> Commercial & Residential			
<b>Proposed Project</b>				<b>Existing Site</b>			
<b>Project Built-Upon Area (ac.)</b>		ac.		ac.			
<b>Typical Cross Section Description:</b>		Proposed four 12' travel lanes with a raised median and center turn lanes. Proposed curb & gutter and sidewalk along improvement section of roadway.		Existing two travel lanes with occasional center turn lane and right turn lanes. Sidewalk and curb & gutter within more heavily developed parts of the project area.			
<b>Annual Avg Daily Traffic (veh/hr/day):</b>		<b>Design/Future:</b> 43,160		<b>Year:</b> 2041		<b>Existing:</b> 36,140	
<b>General Project Narrative:</b>							
<b>(Description of Minimization of Water Quality Impacts)</b>		The project includes a proposed four travel lane section, with center turn lanes, raised medians, right turn lanes, roundabouts, sidewalk, and curb and gutter. There are nineteen storm water outfalls that carry roadway drainage from the project area and from offsite. Existing drainage systems within the project limits connected to systems outside of the ROW will be modified to account for the road widening and tie to the existing pipes of each system. Storm Water Treatment is not provided considering the potential impacts to existing utilities, adjacent properties, and existing natural features. Appropriately sized rip rap aprons and/or outfall channel improvements including rip rap lined channels will be constructed at all outfalls to mitigate any potential erosion due to increased flows. There are several existing dry detention basins along -L-(Old Monroe Road) and -Y22- (Wesley Chapel Stouts Road), the proposed roadway improvements will not discharge to these basins. Some of the existing basins currently discharge through the roadside drainage systems in NCDOT ROW, the proposed systems will continue to convey water from these basins to the same outfall points. There are a total of five surface water/wetland impact sites on this section of the project U-4714B. The first permitted site is at approximately -L- Sta. 15+55 and will replace a 36" RCP cross pipe that carries a small tributary to Davis Mine Creek with a 72" RCP pipe that is buried 1'. The replacement pipe will be skewed to better align with the channel. Inlet and outfall improvements with riprap placed on the side slopes of the channel will mitigate erosion issues for this site. The second site will be at approximately -L- Sta. 118+10 and will consist of the removal of a 24" cross pipe conveying a small tributary to Price Mill Creek. A new drainage system with an outfall approximately 60' downstream from the current outfall will replace the existing cross pipe. A rip rap pad will be placed at the outfall to control outfall velocities and minimize potential erosion to the receiving channel. The third site will be located at -L- Sta. 149+20 and is located at a 54" RCP cross pipe at the confluence of two additional unnamed tributaries to Price Mill Creek. The single 54" pipe will be replaced with a dual 6'x6' RCBC that is buried 1'. Inlet and outfall improvements with riprap placed on the side slopes of the channel will mitigate potential erosion issues for this site. The fourth site is conveying a small tributary to South Fork Crooked Creek at approximately -L- Sta. 198+50 and will replace a 24" RCP cross pipe with a 36" RCP pipe including a rip rap outlet pad. The outfall channel is in a wetland and will be widened and regraded to lower velocities and minimize potential erosion. And the last site is at -Y22- Sta. 0+51 where an existing roadside ditch will be reconstructed with a rip rap lining which outfalls to the downstream end of a dual 30" pipe culvert. This last site is also a small tributary to South Fork Crooked Creek.					

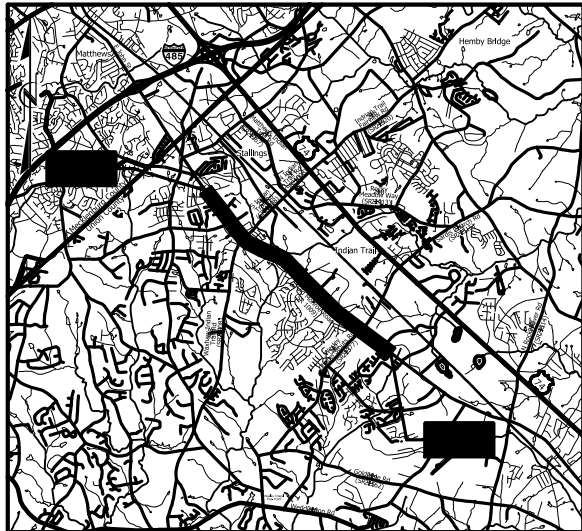
Please fill out all yellow cells as completely as possible. Use pick lists where provided. For more information on the NCDOT Stormwater Management Plan form, please refer to the document, NCDOT Stormwater Best Management Practices Toolbox (2014).  
If the project drains to multiple water bodies, please drag the print area down such that Water Bodies 4 through 7 print on the second page, water bodies 8 through 11 on third, etc.

 <div style="text-align: center;"> <b>North Carolina Department of Transportation</b>  <b>Highway Stormwater Program</b>  <b>STORMWATER MANAGEMENT PLAN</b>  <b>FOR NCDOT PROJECTS</b> </div> 									
(Version 3.00; Released August 2021)									
WBS Element:		TIP/Proj No.: U-4714B		County(ies): Union		Page 2 of 2			
<b>General Project Information</b>									
<b>Waterbody Information</b>									
Surface Water Body (1):		Davis Mine Creek			NCDWR Stream Index No.:		11-138-2-2-1		
NCDWR Surface Water Classification for Water Body				Primary Classification:		Class C			
				Supplemental Classification:					
Other Stream Classification:									
Impairments:		None							
Aquatic T&E Species?		No		Comments:					
NRTR Stream ID:		SR				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?	
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)							
Surface Water Body (2):		South Fork Crooked Creek			NCDWR Stream Index No.:		13-17-20-2		
NCDWR Surface Water Classification for Water Body				Primary Classification:		Class C			
				Supplemental Classification:					
Other Stream Classification:									
Impairments:		biological impairment							
Aquatic T&E Species?		No		Comments:					
NRTR Stream ID:		SX, SY, SZ				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?	
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)							
Surface Water Body (3):		Price Mill Creek			NCDWR Stream Index No.:		11-138-2-2		
NCDWR Surface Water Classification for Water Body				Primary Classification:		Class C			
				Supplemental Classification:					
Other Stream Classification:									
Impairments:		None							
Aquatic T&E Species?		No		Comments:					
NRTR Stream ID:		ST, SU, SV, SW				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?	
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)							

09/08/99

TIP PROJECT: U-4714B

See Sheet 1A For Index of Sheets  
See Sheet 1B For Standard Symbology Sheet



VICINITY MAP N.T.S.

ROW PLANS

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

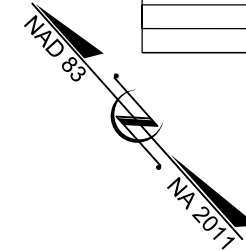
UNION COUNTY

LOCATION: SR 1009 (OLD MONROE ROAD) FROM WEST OF  
MORNINGSIDE MEADOW LANE TO EAST OF SR 1377  
(WESLEY CHAPEL-STOUTS RD)

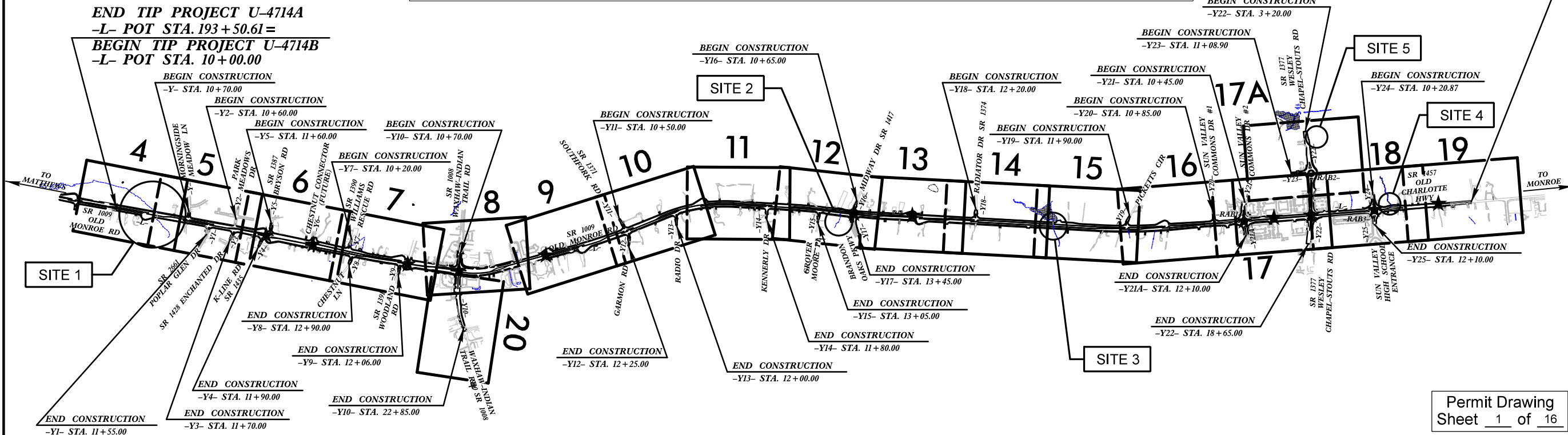
TYPE OF WORK: GRADING, DRAINAGE, PAVING, RETAINING WALLS,  
SIGNALS, AND SIGNING

WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4714B	1	20
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
39078.1.6	STPDA-1009(18)	PE	
39078.2.6		R /W & UTIL	



END TIP PROJECT U-4714B  
-L- POT STA. 210+30.00

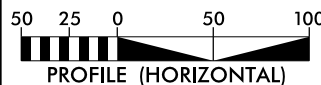


THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF  
STALLINGS AND INDIAN TRAIL.

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE  
LIMITS ESTABLISHED BY METHOD II

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT EXCEPT  
U-TURN BULBS HAVE FULL CONTROL OF ACCESS.

GRAPHIC SCALES



DESIGN DATA

ADT 2021 = 36,140  
ADT 2041 = 43,160  
K = 9%  
D = 55%  
T = 6%\*  
V = 50 MPH  
\* (TTST = 2% + DUAL 4%)  
FUNC CLASS =  
MINOR ARTERIAL  
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-4714B = 3.795 MILES  
TOTAL LENGTH OF TIP PROJECT U-4714B = 3.795 MILES

NCDOT CONTACT: ALEX FOSTER, PE  
PROJECT MANAGER

PLANS PREPARED FOR THE NCDOT BY:



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

RIGHT OF WAY DATE:  
MAY 28, 2021

LETTING DATE:  
JUNE 18, 2024

SEAN C. STEPHENS, PE  
PROJECT ENGINEER

ASHLEY KRONSTEDT, EI  
PROJECT DESIGNER

HYDRAULICS ENGINEERS

SIGNATURE: \_\_\_\_\_  
ROADWAY DESIGN ENGINEER

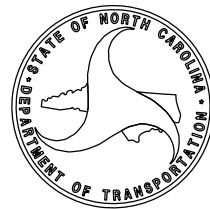
SIGNATURE: \_\_\_\_\_  
P.E.

Permit Drawing  
Sheet 1 of 16

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

★ PROPOSED TRAFFIC SIGNAL

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



ROW PLANS  
9/12/2023

CONTRACT:

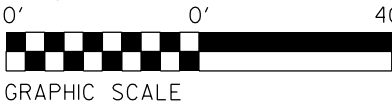
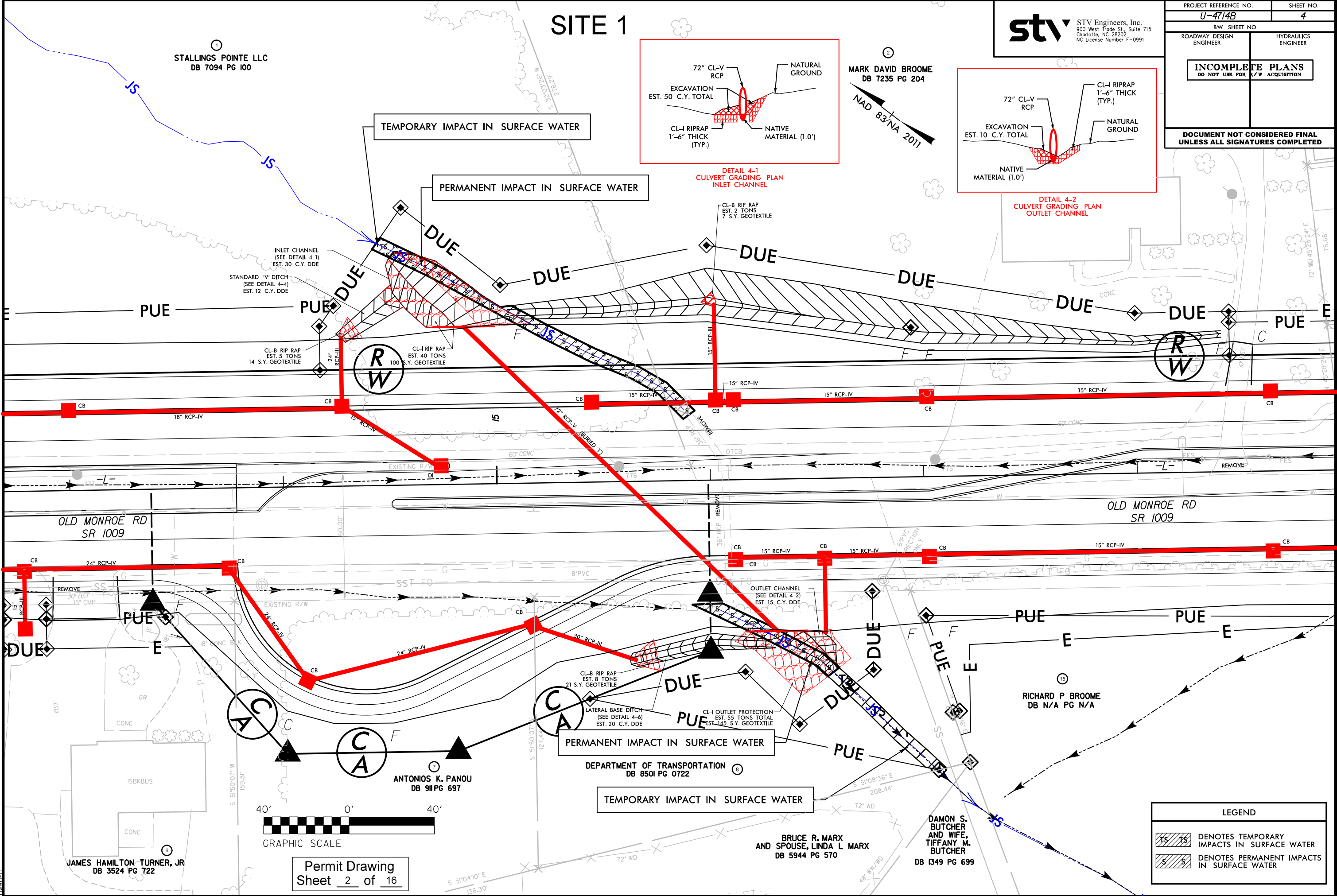
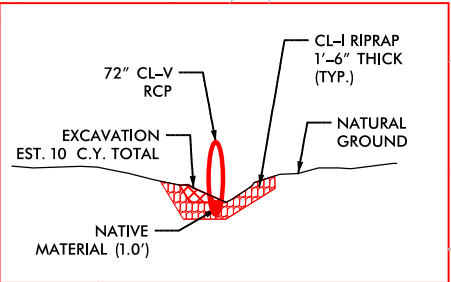
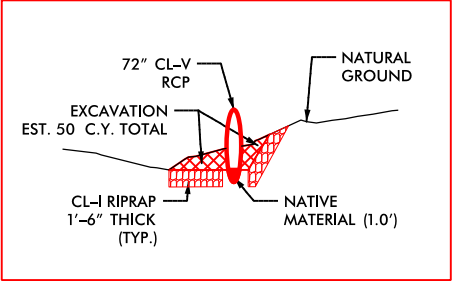


SITE 1

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

PROJECT REFERENCE NO.		SHEET NO.	
U-4714B		4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MARK DAVID BROOME  
DB 7235 PG 204  
NAD 83/NA 2011



Permit Drawing  
Sheet 2 of 16

LEGEND	
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES PERMANENT IMPACTS IN SURFACE WATER

9/12/2023  
R:\Hydro\Permits\Environmental\Drawings\U-4714B\_hyd-prm-psh04.dgn

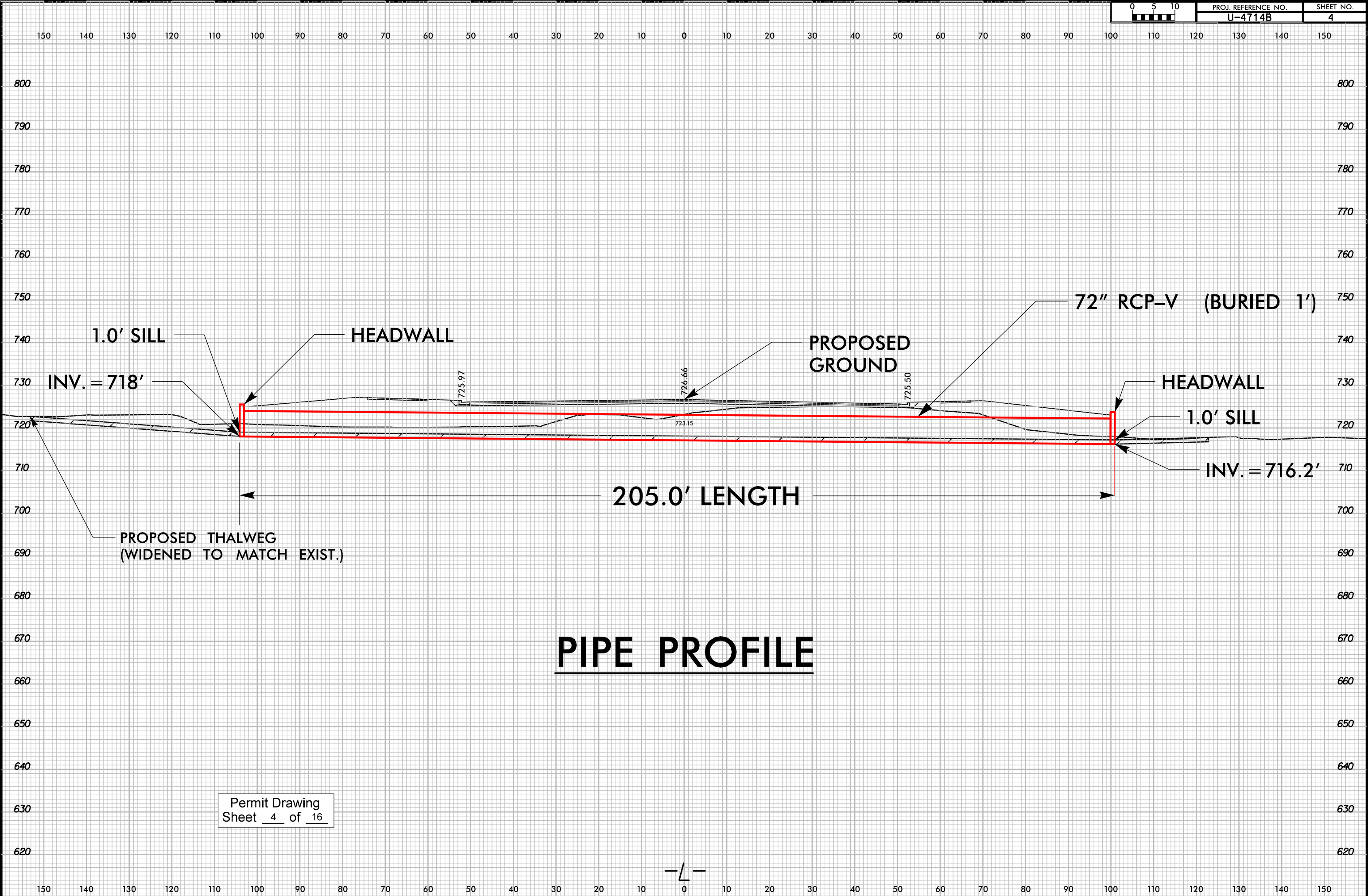




6/23/16

9/12/2023  
R:\HydroQualica\PERMITS\Environmental\Drawings\SHU\U-4714B\_hyd\_perm\_psh04\_Pipe.dgn  
OWENS

0510	PROJ. REFERENCE NO.	SHEET NO.
	U-4714B	4





NO INFO FOUND FOR MARIE DEESE HEIRS  
OR FOR ARTHUR F DEESE  
PARCEL# 07087016

SPECIAL LATERAL 'V' DITCH  
(SEE DETAIL 12-2)

**PUE** 117  
JAMES ARTHUR  
BRADLEY & MARY  
MB 5 PG 120

PERMANENT IMPACT IN SURFACE WATER

OLD MONROE RD  
SR 1009

122  
LOT 44  
WILLIAM F HERRON  
DB 3570 PG 800  
PB 6 PG 30

123  
BRANDON OAKS  
COMMUNITY ASSOCIATION

## TEMPORARY IMPACT IN SURFACE WATER

202  
LOT 43  
NATHAN J GREENE  
NO DEED ASSOCIATED  
W\PARCEL 07114189  
PB 6 PG 30

LOT 29  
JONATHAN R WELCH  
KELLY A TRAHEY  
DB 5958 PG 816  
PB D PG 634

LOT 30  
ADAM JOSEY  
REBECCA JOSEY  
DB 5744 PG 710  
PB D PG 634

JENNA MCDANIEL  
DB 5679 PG 797  
PB D PG 634

BRANDON OAKS  
COMMUNITY ASSOCIATION  
PB D PG 550

### LEGEND

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

S S DENOTES PERMANENT IMPACTS IN SURFACE WATER

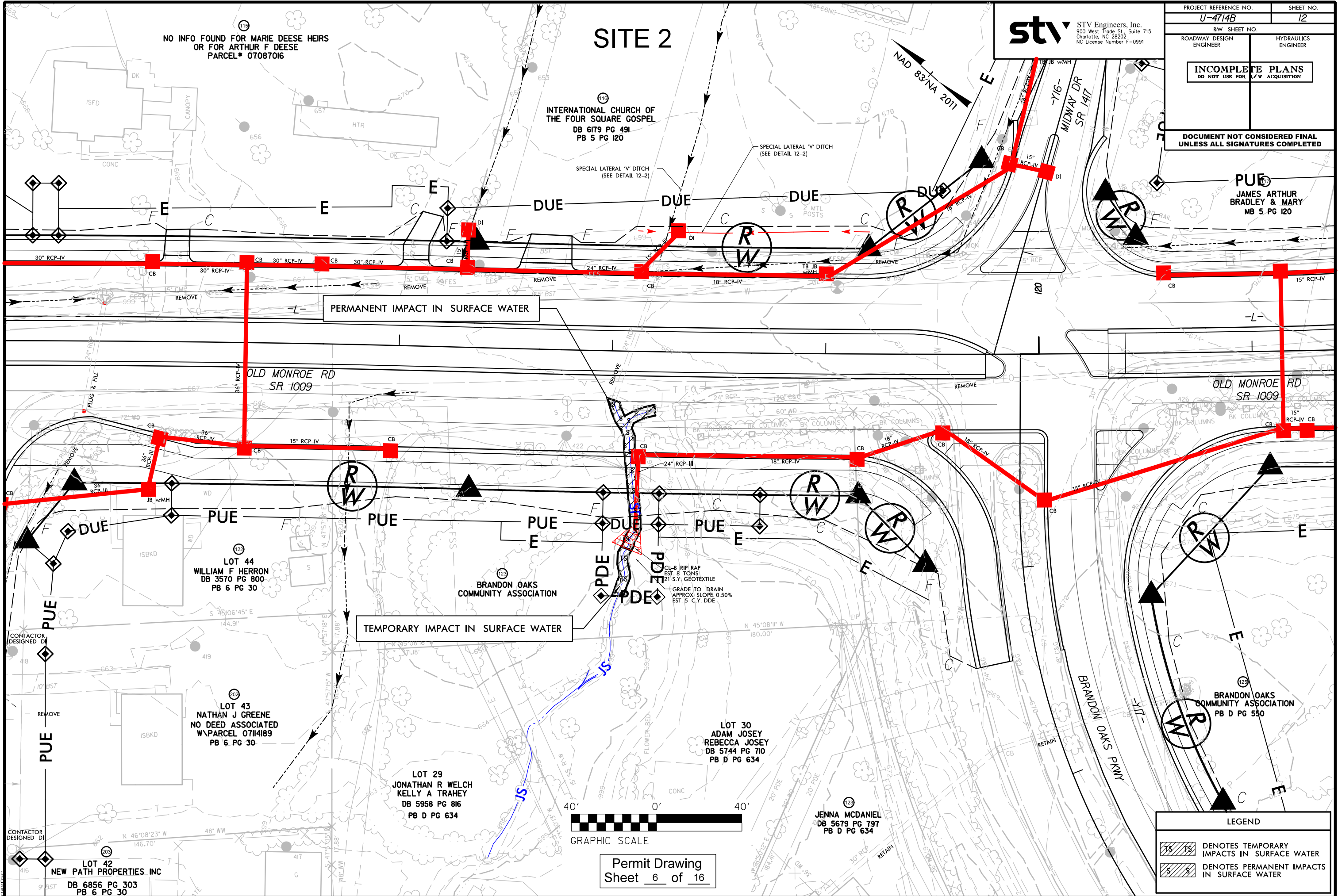
Permit Drawing  
Sheet 5 of 16

LOT 42  
W PATH PROPERTIES INC  
DB 6856 PG 303  
PB 6 PG 30

9/12/2023  
R:\Hydraulics\PERMITS\_Environmental\Drawings\SHT\U-4714B\_hyd-prm\_psh012.dgn  
qwen



9/12/2023 R:\Hydraulics\PERMITS\Environmental\Drawings\SHU-U-4714B\_hyd-prm-pah012\_CONTOURS.dgn



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

PROJECT REFERENCE NO. <b>U-4714B</b>		SHEET NO. <b>12</b>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION			
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			

**PUE**  
**JAMES ARTHUR  
BRADLEY & MARY  
MB 5 PG 120**

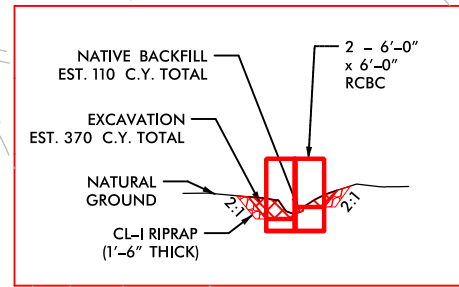
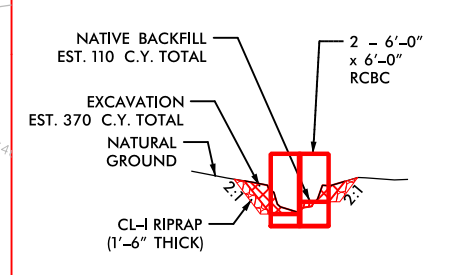




SITE 3

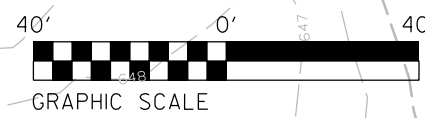
**stv** STV Engineers, Inc.  
900 West Trade St., Suite 715  
Charlotte, NC 28202  
NC License Number F-0991

PROJECT REFERENCE NO.		SHEET NO.	
U-4714B		15	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS</div> <div>DO NOT USE FOR R/W ACQUISITION</div>			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

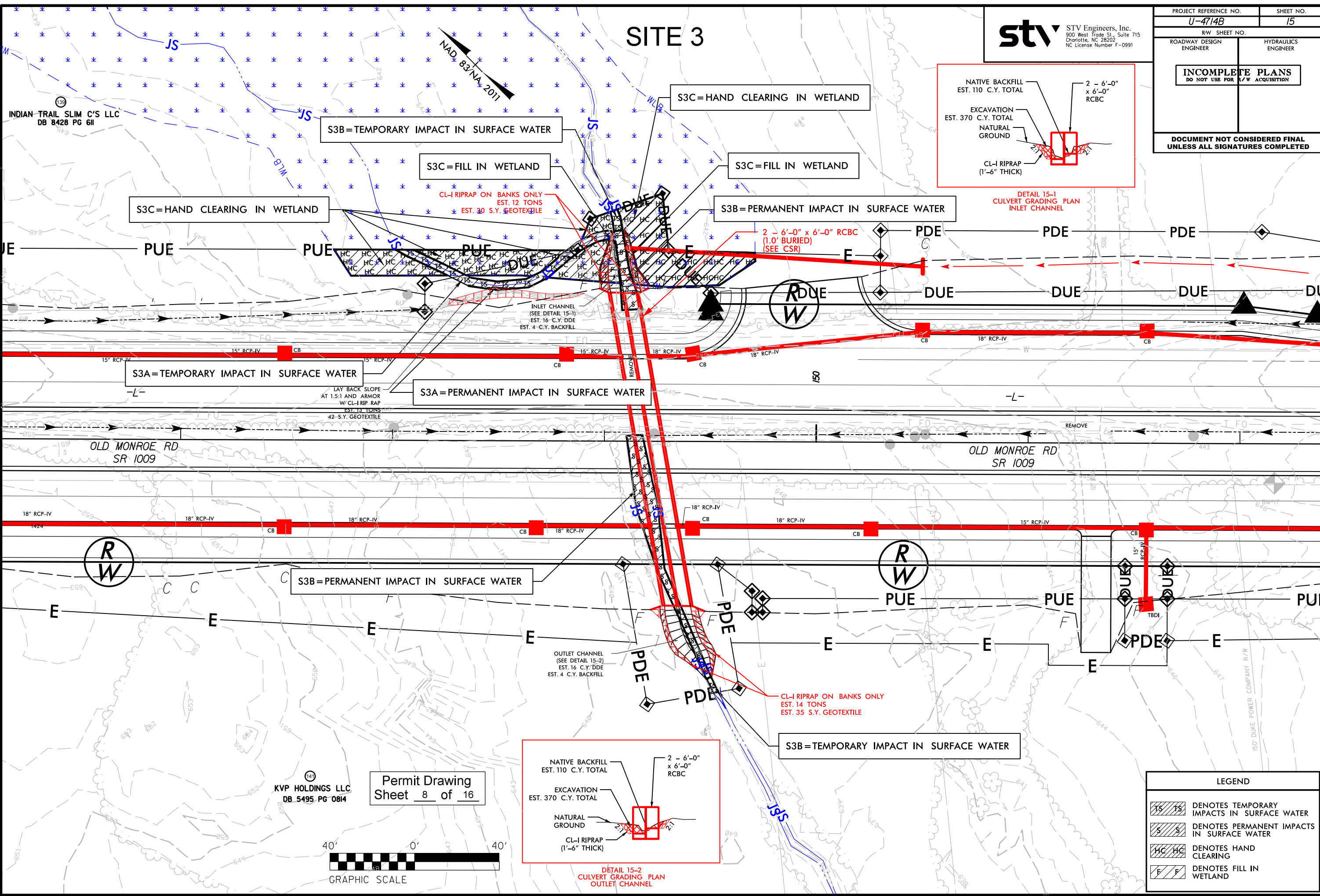


LEGEND	
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES PERMANENT IMPACTS IN SURFACE WATER
	DENOTES HAND CLEARING
	DENOTES FILL IN WETLAND

Permit Drawing  
Sheet 8 of 16



9/12/2023 R:\Hydro\Permits\Environmental\Drawings\Site\U-4714B\_hyd\prj-psa\015\_CONTOURS.dgn



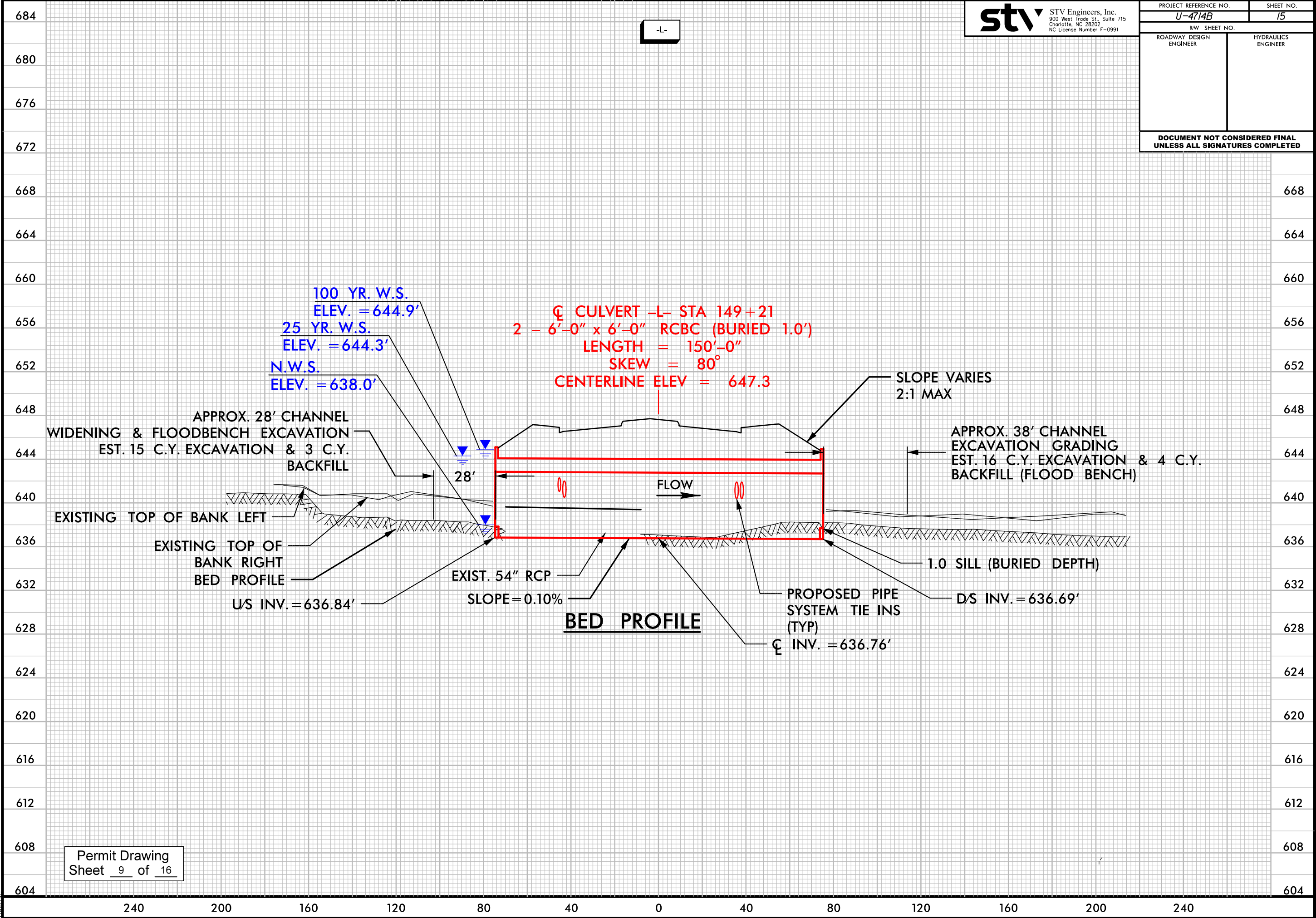
8/17/99

9/12/2023  
R:\Hydraulics\PERMITS\Environmental\Drawings\SHU-U-4714B-hyd-prm-psh015\_CULVERT.dgn  
dwg

stv

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

PROJECT REFERENCE NO.	SHEET NO.
U-4714B	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



6/23/16

9/12/2023 R:\Hydro\Gulica\PERMITS\Environmental\Drawings\XPL\U-4714B-rdy-hyd-xpl-L WETLAND.XSC SHEET 15.dgn

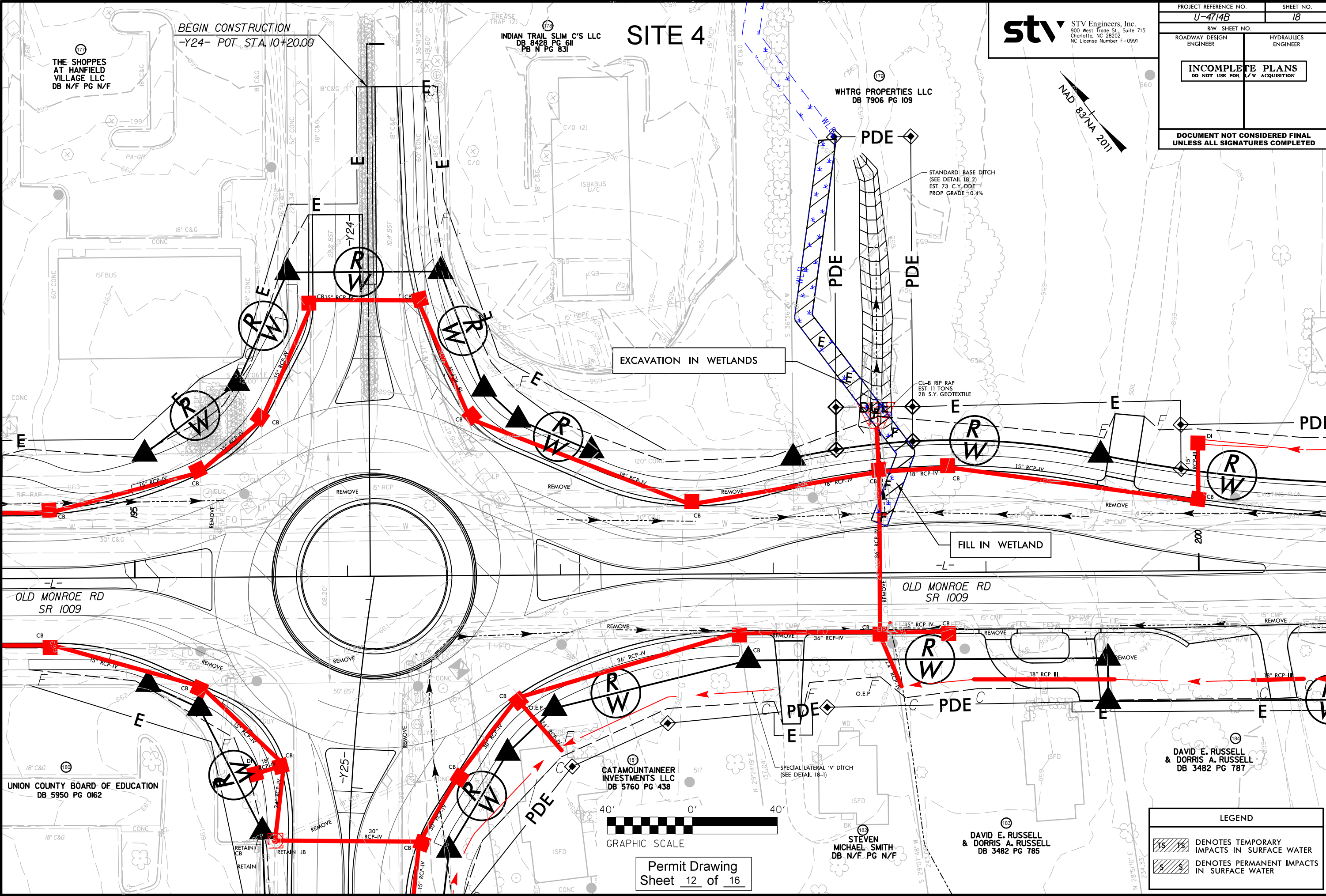









9/12/2023  
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STV Engineers, Inc.  
900 West Trade St., Suite 715  
Charlotte, NC 28202  
NC License Number F-0991

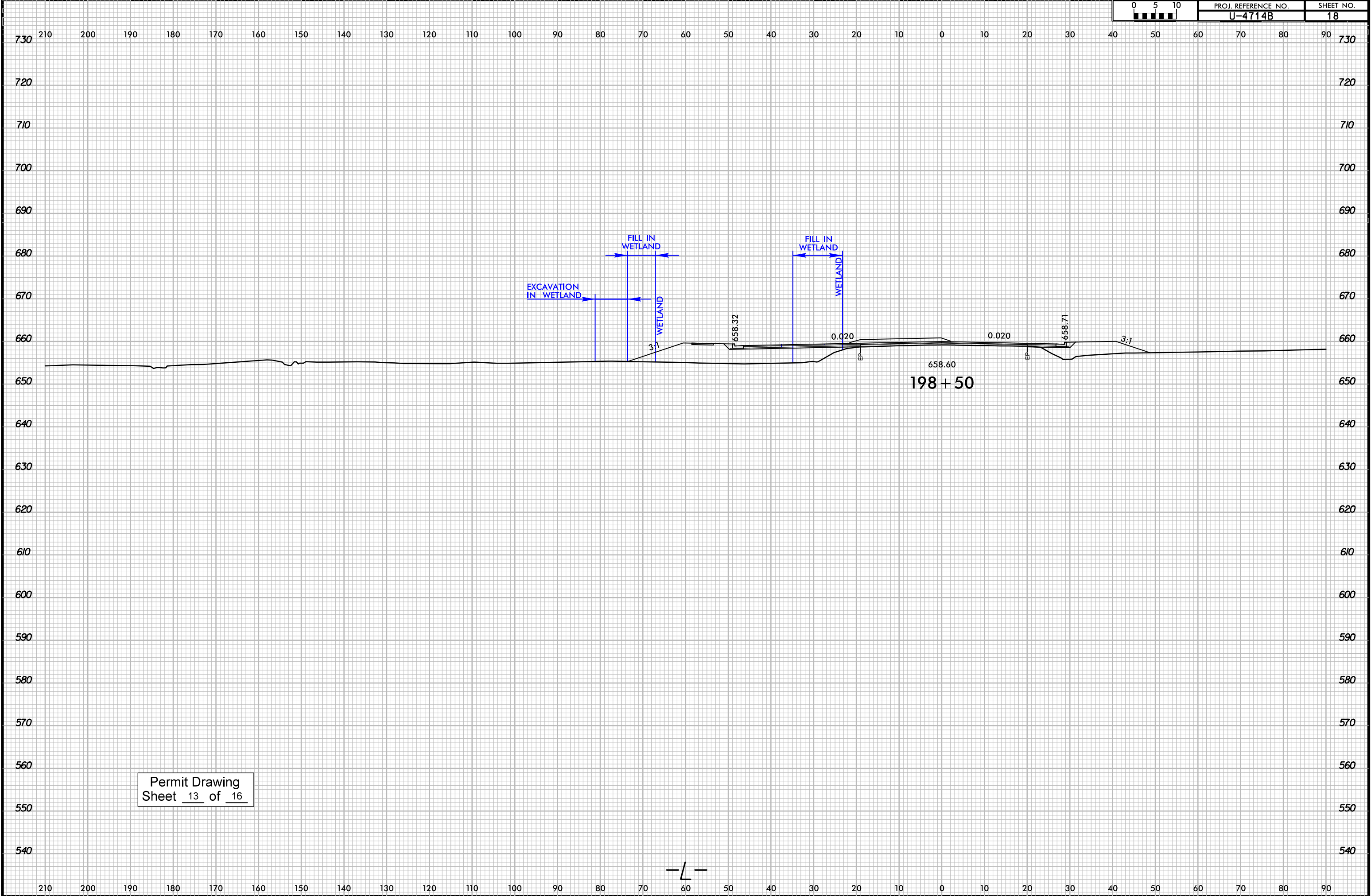
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RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION			
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED			



6/23/16

9/12/2023  
R:\Hatch\aulica\PERMITS\Environmental\Drawings\XPL\U-4714B\_rdy.xpl.L.WETLAND\_XSC.SHEET 18.dgn  
OWENS

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	U-4714B	18



Permit Drawing  
Sheet 13 of 16

PROJECT REFERENCE NO.

U-4714B

SHEET NO.

17A

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

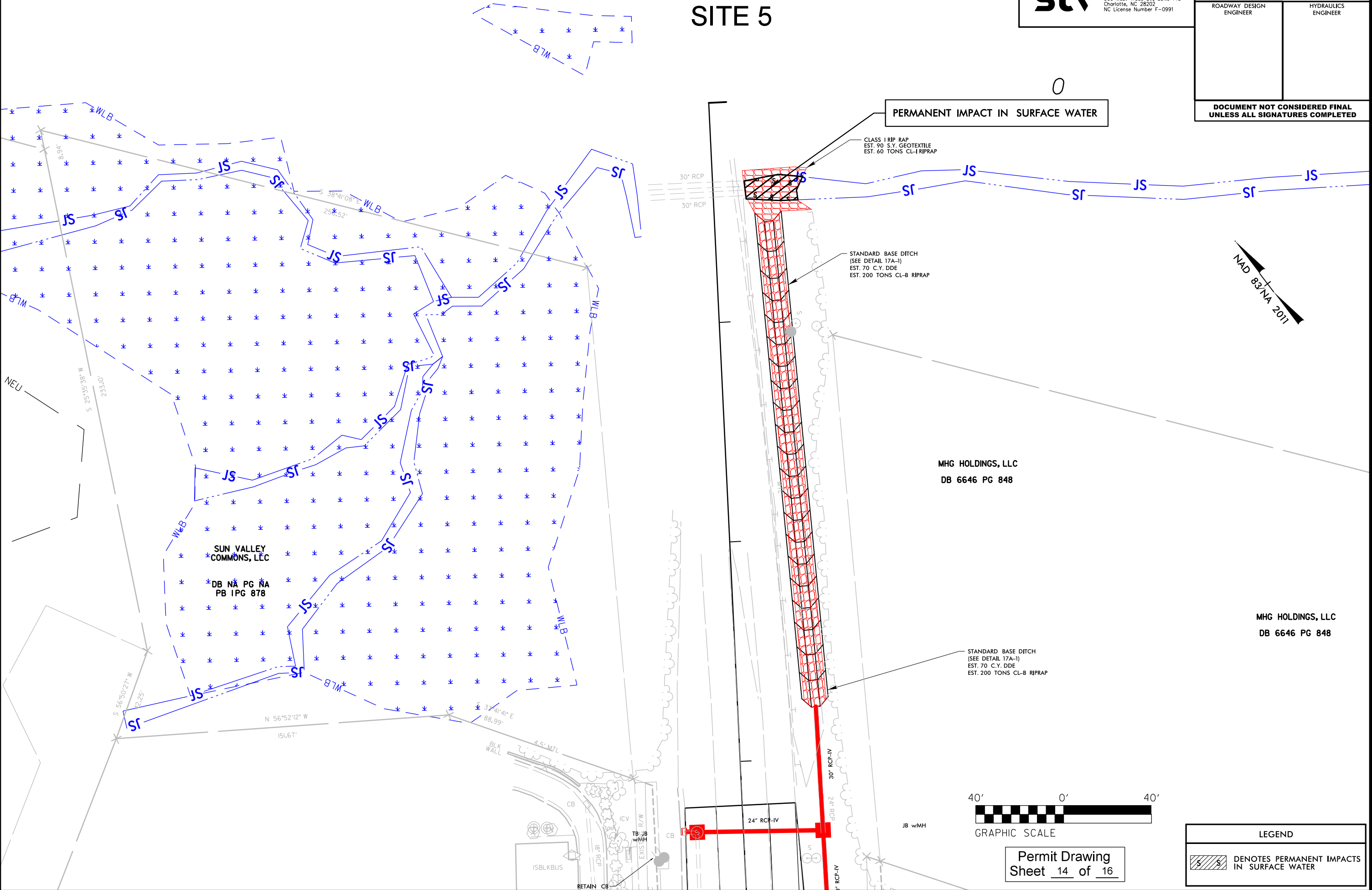
HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

STV

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

SITE 5



Permit Drawing  
Sheet 14 of 16

LEGEND

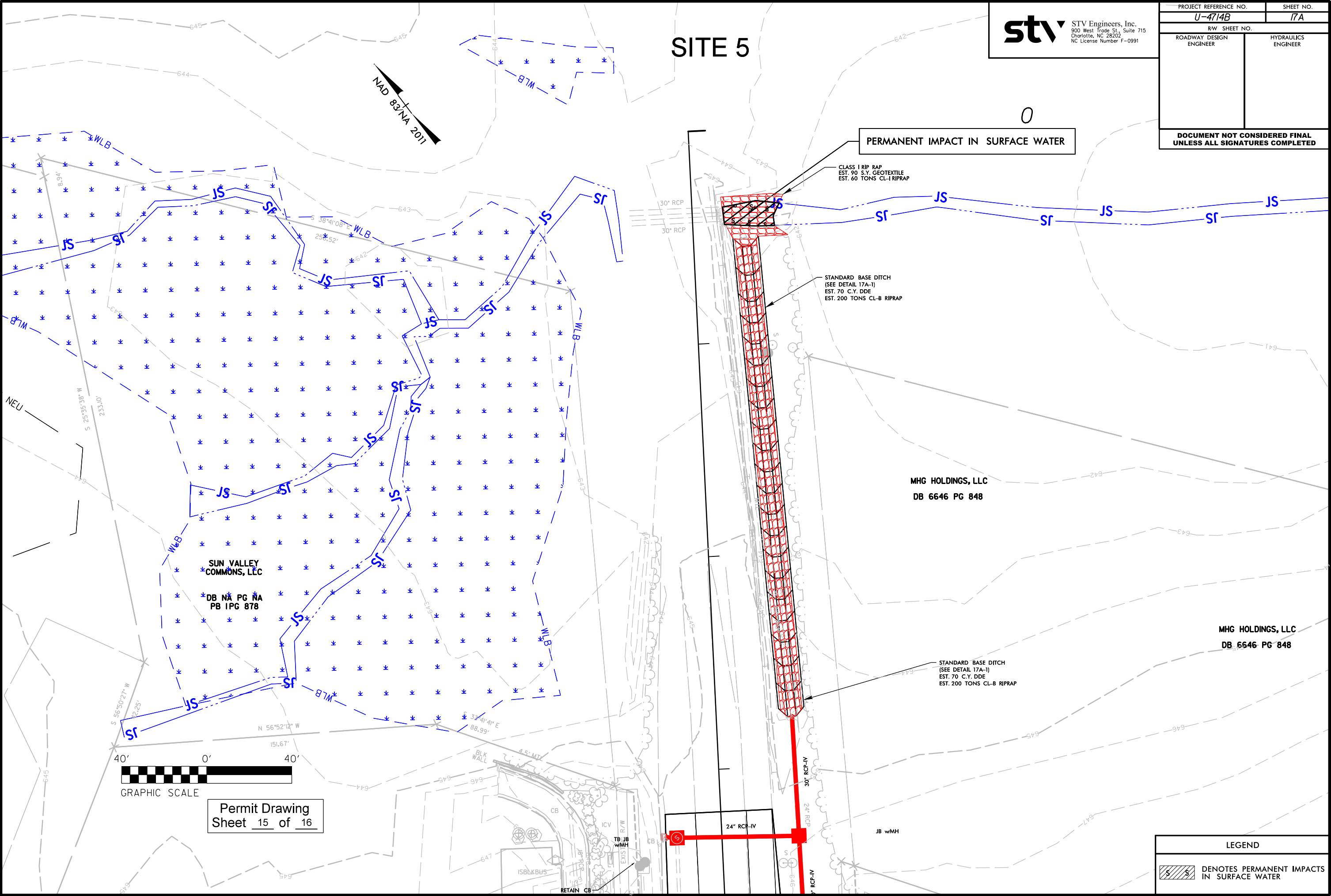
DENOTES PERMANENT IMPACTS  
IN SURFACE WATER



**stv**

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

PROJECT REFERENCE NO.		SHEET NO.	
U-4714B		17A	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



SITE 5

0

PERMANENT IMPACT IN SURFACE WATER

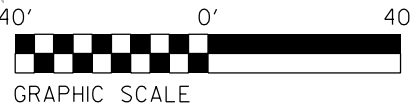
CLASS I RIP RAP  
EST. 90 S.Y. GEOTEXTILE  
EST. 60 TONS CL-I RIPRAP

STANDARD BASE DITCH  
(SEE DETAIL 17A-1)  
EST. 70 C.Y. DDE  
EST. 200 TONS CL-B RIPRAP

MHG HOLDINGS, LLC  
DB 6646 PG 848

MHG HOLDINGS, LLC  
DB 6646 PG 848

STANDARD BASE DITCH  
(SEE DETAIL 17A-1)  
EST. 70 C.Y. DDE  
EST. 200 TONS CL-B RIPRAP



GRAPHIC SCALE

Permit Drawing  
Sheet 15 of 16

LEGEND	
	DENOTES PERMANENT IMPACTS IN SURFACE WATER



# WETLAND AND SURFACE 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	14+43.30 TO 17+08.40	72" RCP						0.03	0.01	235	88	
2	117+97.98 TO 118+20.64	24" RCP						< 0.01	< 0.01	73	23	
3A	148+01.09 TO 149+03.50	2-6' x 6' RCBC						< 0.01	< 0.01	10	112	
3B	149+02.19 TO 149+54.30	2-6' x 6' RCBC						0.02	< 0.01	162	18	
3C	147+71.98 TO 149+63.11	2-6' x 6' RCBC	< 0.01				0.06					
4	198+10.92 TO 198+66.87	36" RCP	0.01		0.03							
5	-Y22- +33.92 TO 0+45.97	Armoring						< 0.01		28		
TOTALS*:			0.01		0.03		0.06	0.07	0.03	508	241	0

\*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 WEST OF MORNINGSIDE MEADOW LN.  
 TO EAST OF WESLEY CHAPEL-STOUTS RD  
 UNION COUNTY  
 U-4714B

# Permit Drawings

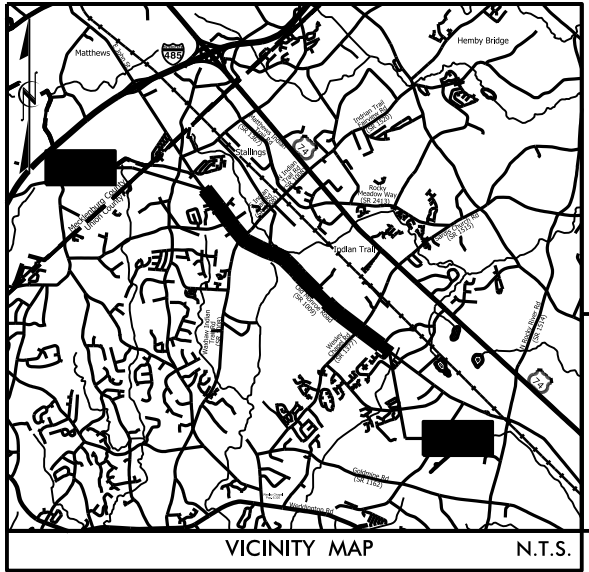
U-4714B Utilities

09/08/19

TIP PROJECT: U-4714B

CONTRACT:

See Sheet 1A For Index of Sheets  
See Sheet 1B For Standard Symbology Sheet



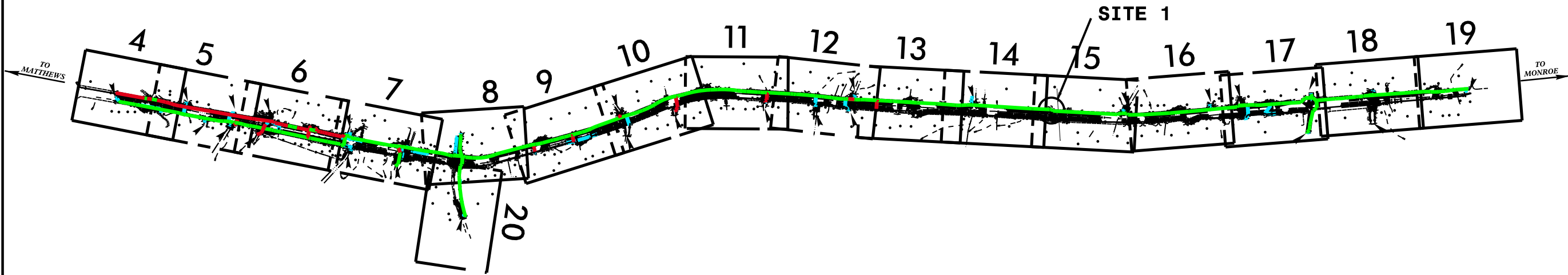
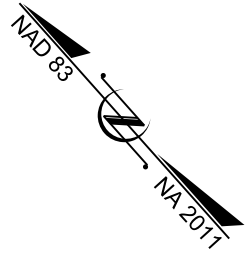
65% PLANS

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**UNION COUNTY**

LOCATION: SR 1009 (OLD MONROE ROAD) FROM WEST OF  
MORNINGSIDE MEADOW LANE TO EAST OF SR 1377  
(WESLEY CHAPEL-STOUTS RD)

ENVIRONMENTAL PERMIT DRAWING  
FOR WATER LINE RELOCATION

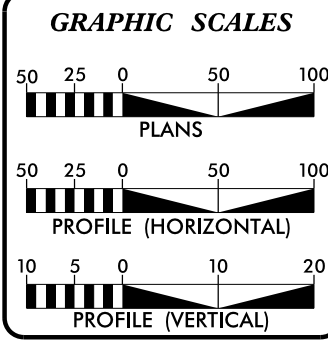
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4714B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
39078.1.6		PE	



INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION

★ PROPOSED TRAFFIC SIGN

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

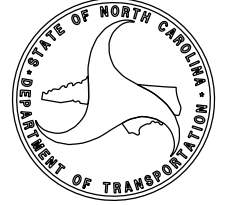


**DESIGN DATA**  
ADT 2021 = 36,140  
ADT 2041 = 43,160  
K = 9%  
D = 55%  
T = 6%\*  
V = 50 MPH  
\* (TTST = 2% + DUAL 4%)  
FUNC CLASS =  
MINOR ARTERIAL  
REGIONAL TIER

**PROJECT LENGTH**  
  
LENGTH ROADWAY TIP PROJECT U-4714B = 3.795 MILES  
LENGTH STRUCTURE TIP PROJECT U-4714B = 0.000 MILES  
TOTAL LENGTH OF TIP PROJECT U-4714B = 3.795 MILES

PLANS PREPARED FOR THE NCDOT BY:  
**STV** 100 Years  
STV Engineers, Inc.  
900 West Trade St., Suite 715  
Charlotte, NC 28202  
NC License Number F-0991  
  
2018 STANDARD SPECIFICATIONS  
  
RIGHT OF WAY DATE:  
FEBRUARY 15, 2019  
  
LETTING DATE:  
FEBRUARY 16, 2021  
  
SEAN C. STEPHENS, PE  
PROJECT ENGINEER  
  
STEPHANIE PHILLIPS, EIT  
PROJECT DESIGNER  
  
BRYAN KEY, PE  
PROJECT ENGINEER  
NCDOT ROADWAY DESIGN

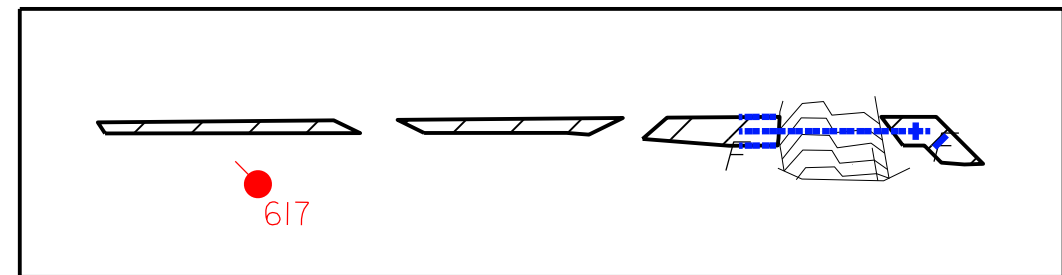
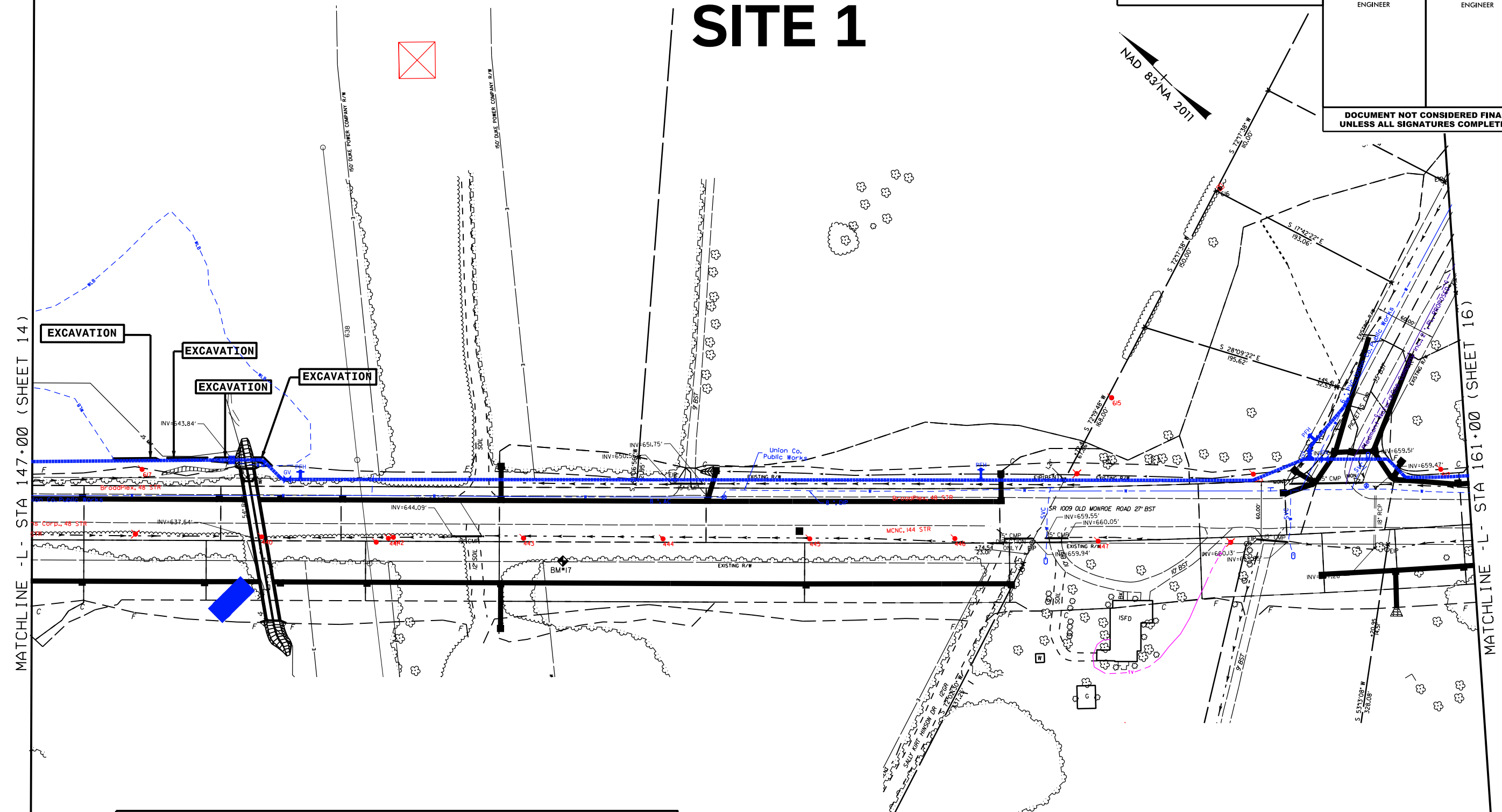
**HYDRAULICS ENGINEERS**  
  
SIGNATURE: \_\_\_\_\_ P.E.  
ROADWAY DESIGN ENGINEER  
  
SIGNATURE: \_\_\_\_\_ P.E.



25% PLANS  
08-JUN-2023 16:04

PROJECT REFERENCE NO.		SHEET NO.
U-4714B		15
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

# SITE 1



ENLARGED SITE 1

WETLAND EXCAVATION





# Permit Drawings

U-4714AA

PRELIMINARY



## North Carolina Department of Transportation

Highway Stormwater Program  
STORMWATER MANAGEMENT PLAN  
FOR NCDOT PROJECTS

(Version 2.08; Released April 2018)

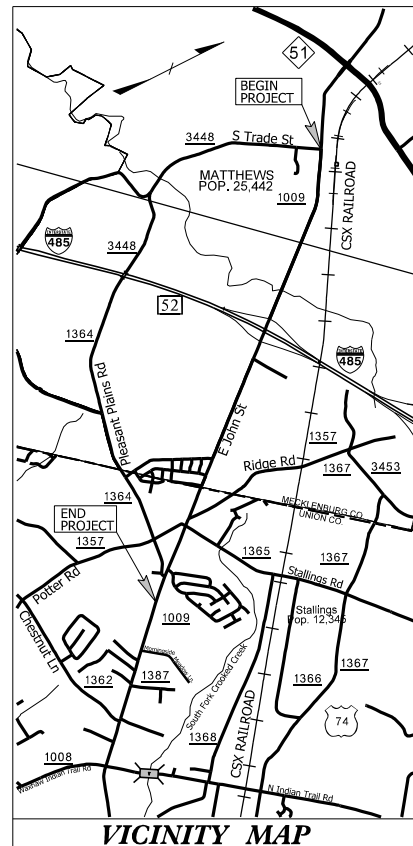
WBS Element:	39078.1.2	TIP No.:	U-4714A	County(ies):	Mecklenburg	Page	1	of	1
General Project Information									
WBS Element:	39078.1.2	TIP Number:	U-4714A	Project Type:	Roadway Widening	Date:	6/14/2021		
NCDOT Contact:	David Webb, PE			Contractor / Designer:	Joshua G. Dalton, PE				
	Address:	NCDOT Hydraulics Unit 1590 Mail Service Raleigh, NC 27699-1590				Address:	Sungate Design Group, P.A. 905 Jones Franklin Road Raleigh, NC 27606		
	Phone:	(919) 707-6731				Phone:	(919) 859-2243		
	Email:	dswebb1@ncdot.gov				Email:	jdalton@sungatedesign.com		
City/Town:	Matthews			County(ies):	Mecklenburg				
River Basin(s):	Catawba			CAMA County?	No				
Wetlands within Project Limits?	Yes								
Project Description									
Project Length (lin. miles or feet):	3.37	Surrounding Land Use:	Commercial, Industrial, Medium Density Residential, Forest						
	Proposed Project			Existing Site					
Project Built-Up Area (ac.)	35.9	ac.	21.9			ac.			
Typical Cross Section Description:	E. John Street (SR 1009): 4 paved lanes (total 44') with 2'-6" curb and gutter. Paved median with monolithic island and turn lane (total 0'-42') Varying 10'-15' shoulder (14'-19' with guardrail) shoulder with varying 5' -10' width pedestrian sidewalk.			E. John Street (SR 1009): Open shoulder section, 2 paved lanes (total 24'), 1' paved shoulder on each side. Varying fill and cut slopes. Curb and gutter section with 3 paved lanes (total 36') with 10' concrete sidewalk. Varying fill and cut slopes.					
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	54,500	Year:	Existing:	45,000	Year:	2017		
General Project Narrative: (Description of Minimization of Water Quality Impacts)	The North Carolina Department of Transportation (NCDOT) has proposed to widen and improve East John Street (SR 1009) in Matthews, NC. There is one proposed major structures involved with the improvements to East John Street, which is to be constructed at existing stream crossing locations. The major structure, along UT to Fourmile Creek, is a 2@5'x6' Reinforced Concrete Box Culvert extension with a beveled headwall. The culvert is to be extended both upstream and downstream. The upstream culvert extension will require a channel realignment to smoothly tie the existing channel with the culvert extension. This structure has been designed to have as little environmental and surface water impacts as possible. Velocities at jurisdictional features and wetlands are non-erosive.								
Waterbody Information									
Surface Water Body (1):	UT to Fourmile Creek			NCDWR Stream Index No.:	11-137-9-4				
NCDWR Surface Water Classification for Water Body	Primary Classification:			Class C					
	Supplemental Classification:								
Other Stream Classification:	None								
Impairments:	None								
Aquatic T&E Species?	No			Comments:					
NRTR Stream ID:				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)									



***TIP PROJECT: U-4714A***

**CONTRACT:**

SEE SHEET 1B FOR CONVENTIONAL SYMBOLS



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

***MECKLENBURG & UNION COUNTIES***

**LOCATION: SR 1009 (JOHN STREET\OLD MONROE ROAD)  
FROM SR 3448\SR 3474 (TRADE STREET) TO  
WEST OF MORNINGSIDE MEADOW LANE  
(EXCLUDING I-485 INTERCHANGE)**

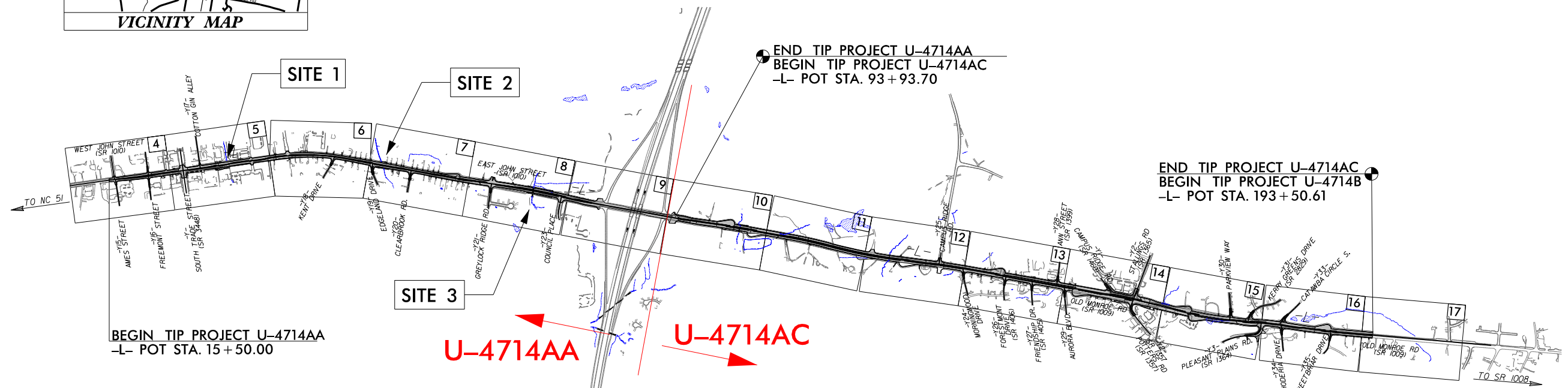
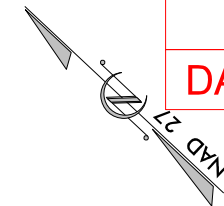
***TYPE OF WORK: GRADING, PAVING, AND DRAINAGE***

## WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4714AA	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
39078.1.2		P.E.	
25% REVIEW PLANS			

PERMIT DRAWING  
SHEET 1 OF 15

DATE: 8/3/2023



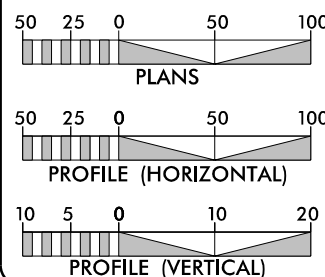
**NOTE:**

1. THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF MATTHEWS.  
2. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD

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

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

## GRAPHIC SCALES



### DESIGN DATA

ADT 2017 = 45,000  
ADT 2037 = 54,500  
K = 6 %  
D = 55 %  
T = 4 % \*  
V = 40 MPH  
\* TTST =1% DUAL 3%  
FUNC CLASS =  
MINOR ARTERIAL

### PROJECT LENGTH

**TOTAL LENGTH OF TIP PROJECT U-4714A = 3.371 MILES**

Prepared in the Office of:



2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

**LETTING DATE:**

***NCDOT CONTACT:***

Plans Prepared For:

## DIVISION OF HIGHWAYS

**DEWAYNE L. SYKES, PE**  
PROJECT ENGINEER

**BRYAN E. HOUGH, PE**  
PROJECT DESIGN ENGINEER

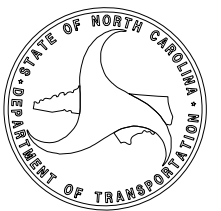
**BRYAN KEY, PE**  
PROJECT ENGINEER - NCDOT

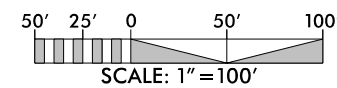
**HYDRAULICS ENGINEER**

**SIGNATURE:** \_\_\_\_\_ **P.E.**

**ROADWAY DESIGN  
ENGINEER**


*P.E.*  
\_\_\_\_\_  
**SIGNATURE:**





SCALE: 1" = 100'

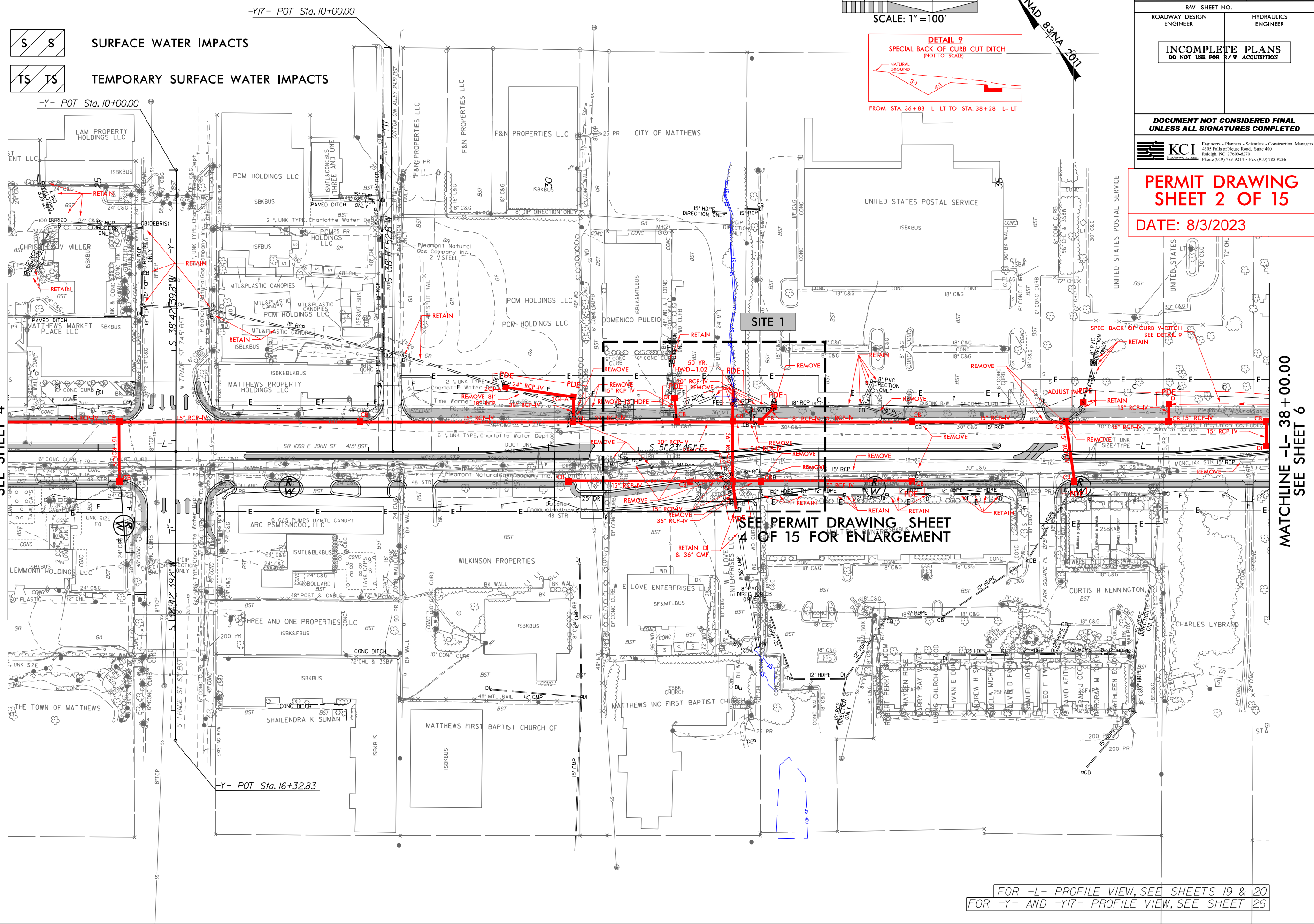
NAD 83/NA 2011

PROJECT REFERENCE NO.	SHEET NO.
U-4714AA	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div style="border: 1px solid black; padding: 10px; text-align: center;"><b>INCOMPLETE PLANS</b> <b>DO NOT USE FOR R/W ACQUISITION</b></div>	
<b><i>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</i></b>	
 <div><b>KCI</b> Engineers • Planners • Scientists • Construction Managers <a href="http://www.kci.com">http://www.kci.com</a> 4905 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214 • Fax (919) 783-9266</div>	

PERMIT DRAWING  
SHEET 2 OF 15

DATE: 8/3/2023

**MATCHLINE -L- 24+00.00  
SEE SHEET 4**



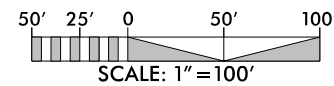
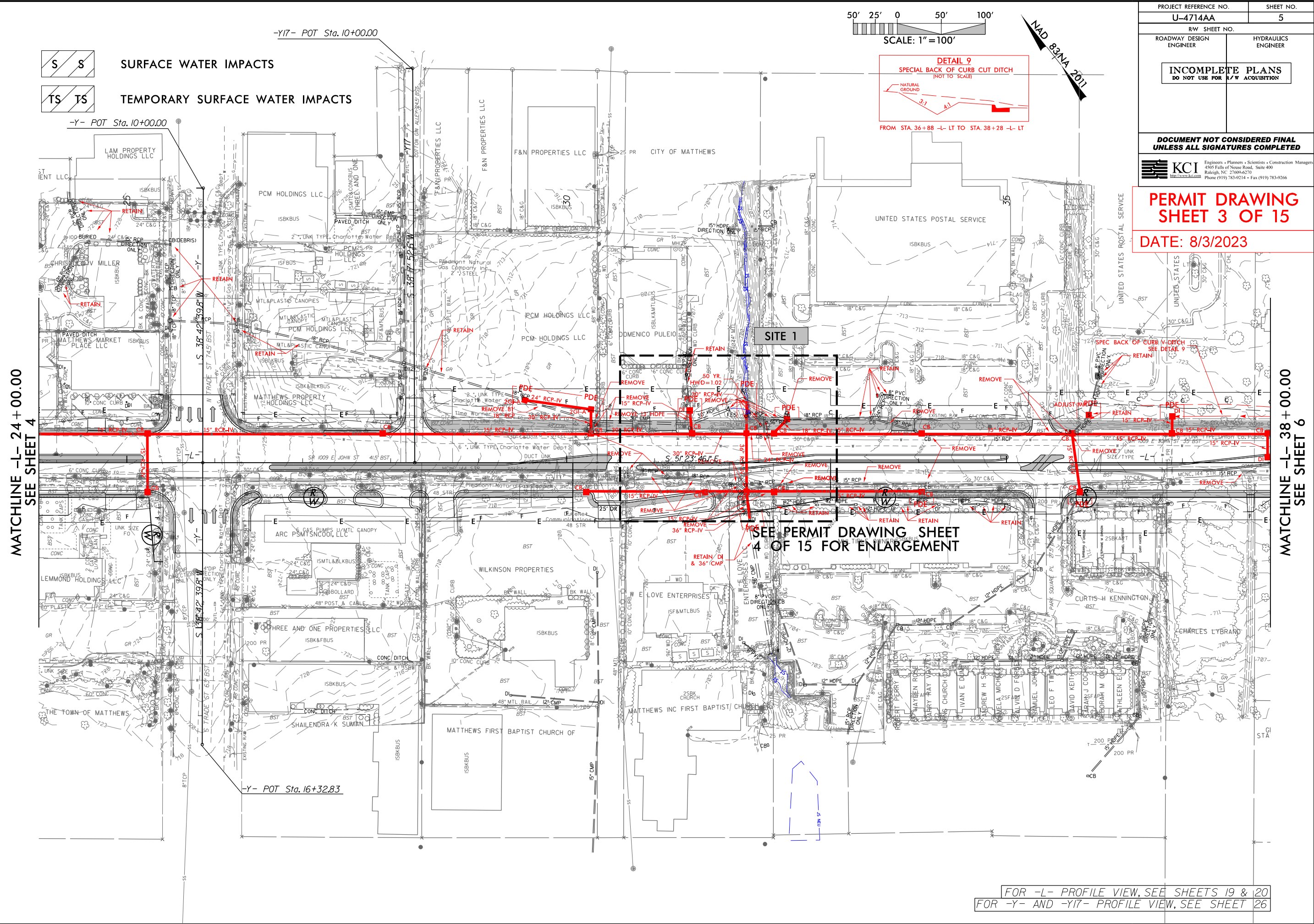
MATCHLINE -L- 38 + 00.00  
SEE SHEET 6

FOR -L- PROFILE VIEW, SEE SHEETS 19 &	20
FOR -Y- AND -YI7- PROFILE VIEW, SEE SHEET	26



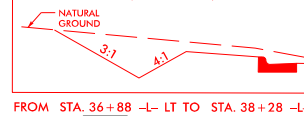
8/17/99

8/3/2023  
U-4714AA\_Hyd\_prm\_wet.pst-05-1.dgn  
INX



SCALE: 1" = 100'

**DETAIL 9**  
SPECIAL BACK OF CURB CUT DITCH  
(NOT TO SCALE)



NAD 83/NA 2011

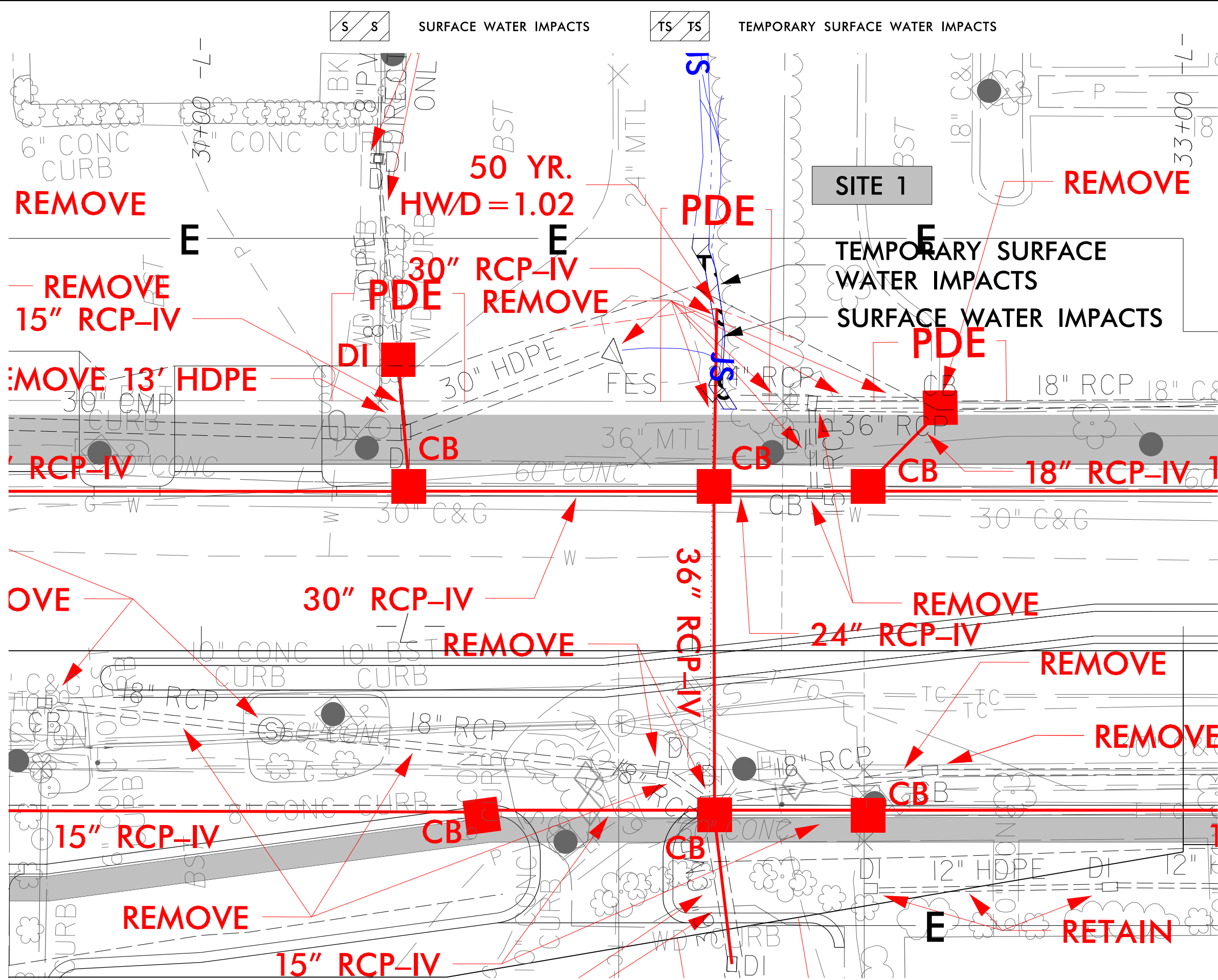
PROJECT REFERENCE NO. <b>U-4714AA</b>		SHEET NO. <b>5</b>
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION		
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED		
<b>KCI</b> Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214 • Fax (919) 783-9266		
<b>PERMIT DRAWING</b> <b>SHEET 3 OF 15</b>		
<b>DATE: 8/3/2023</b>		

MATCHLINE -L- 24+00.00  
SEE SHEET 4

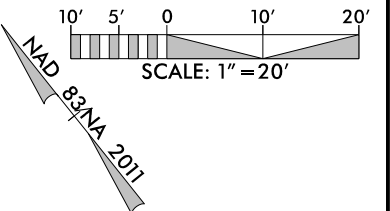
MATCHLINE -L- 38+00.00  
SEE SHEET 6

SEE PERMIT DRAWING SHEET  
4 OF 15 FOR ENLARGEMENT

FOR -L- PROFILE VIEW, SEE SHEETS 19 & 20  
FOR -Y- AND -Y17- PROFILE VIEW, SEE SHEET 26

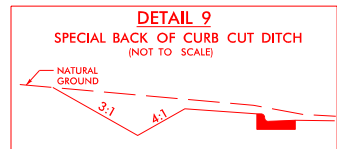
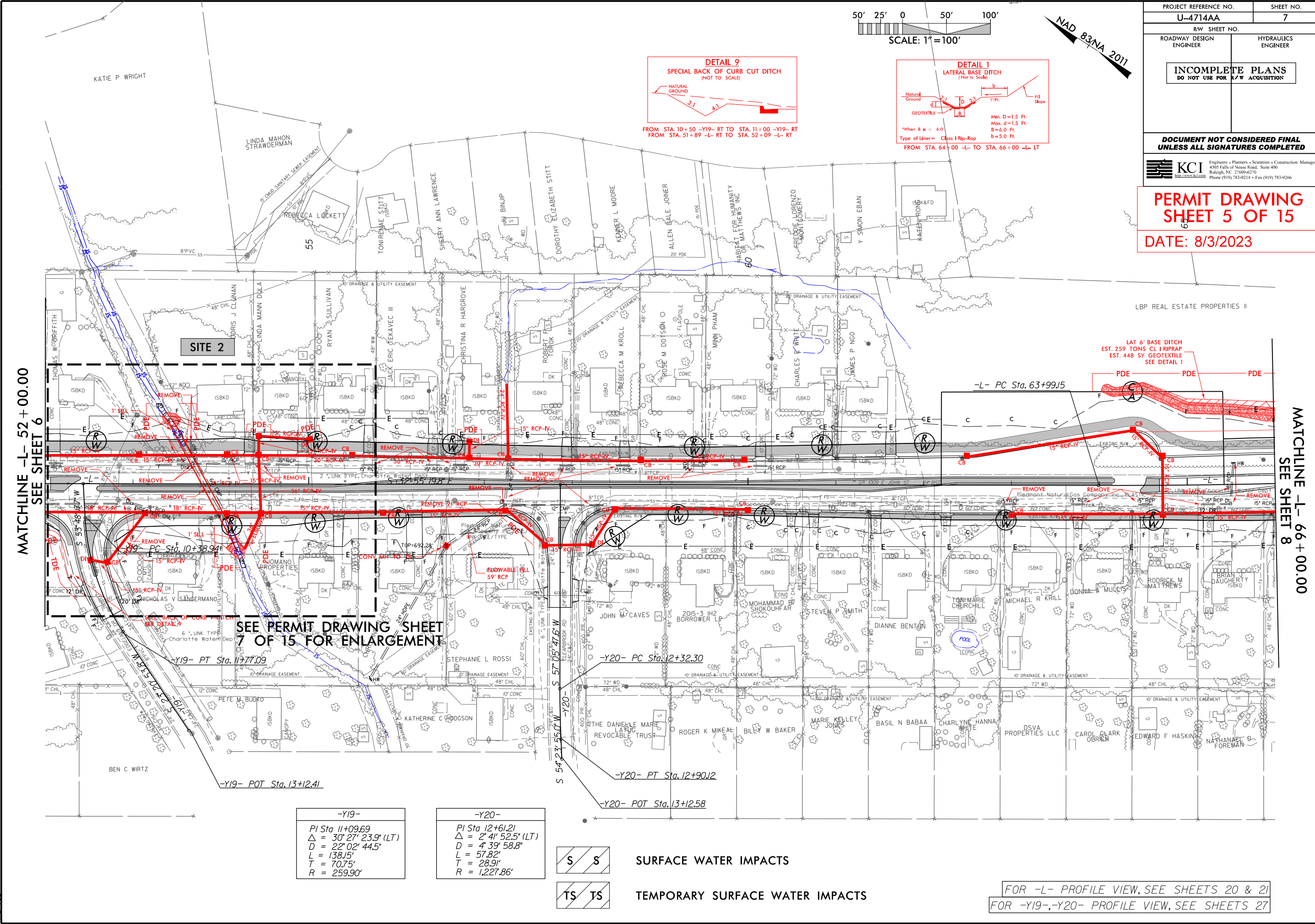


PROJECT REFERENCE NO.		SHEET NO.	
U-4714AA			
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 4 OF 15			
DATE: 8/3/2023			

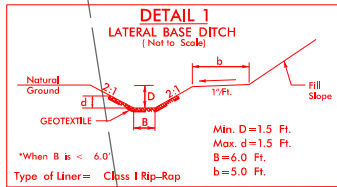




8/17/99  
8/3/2023  
U-4714AA\_Hyd\_prm\_wet.pst-07.dgn  
KATIE P WRIGHT



FROM STA. 10+50 -Y19- RT TO STA. 11+00 -Y19- RT  
FROM STA. 51+89 -L- RT TO STA. 52+09 -L- RT



\*When B is < 6.0'  
Type of Liner = Class I Rip-Rap  
FROM STA. 64+00 -L- TO STA. 66+00 -L- LT

PROJECT REFERENCE NO. <b>U-4714AA</b>		SHEET NO. <b>7</b>	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION			
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED			
 KCI Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214 • Fax (919) 783-9266			
<b>PERMIT DRAWING</b> <b>SHEET 5 OF 15</b>			
DATE: 8/3/2023			

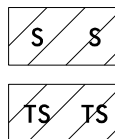
MATCHLINE -L- 52+00.00  
SEE SHEET 6

MATCHLINE -L- 66+00.00  
SEE SHEET 8

SEE PERMIT DRAWING SHEET 7 OF 15 FOR ENLARGEMENT

-Y19-
PI Sta 11+09.69
$\Delta = 30^{\circ} 27' 23.9"$ (LT)
D = 22' 02" 44.5"
L = 138.15'
T = 70.75'
R = 259.90'

-Y20-
PI Sta 12+61.21
$\Delta = 2^{\circ} 41' 52.5"$ (LT)
D = 4' 39" 58.8"
L = 57.82'
T = 28.91'
R = 1,227.86'



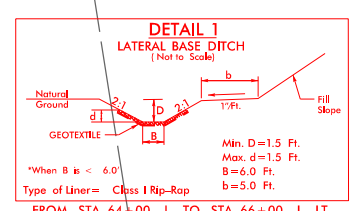
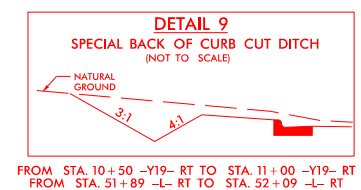
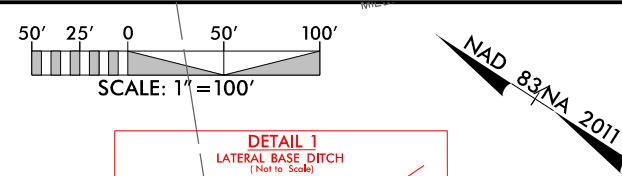
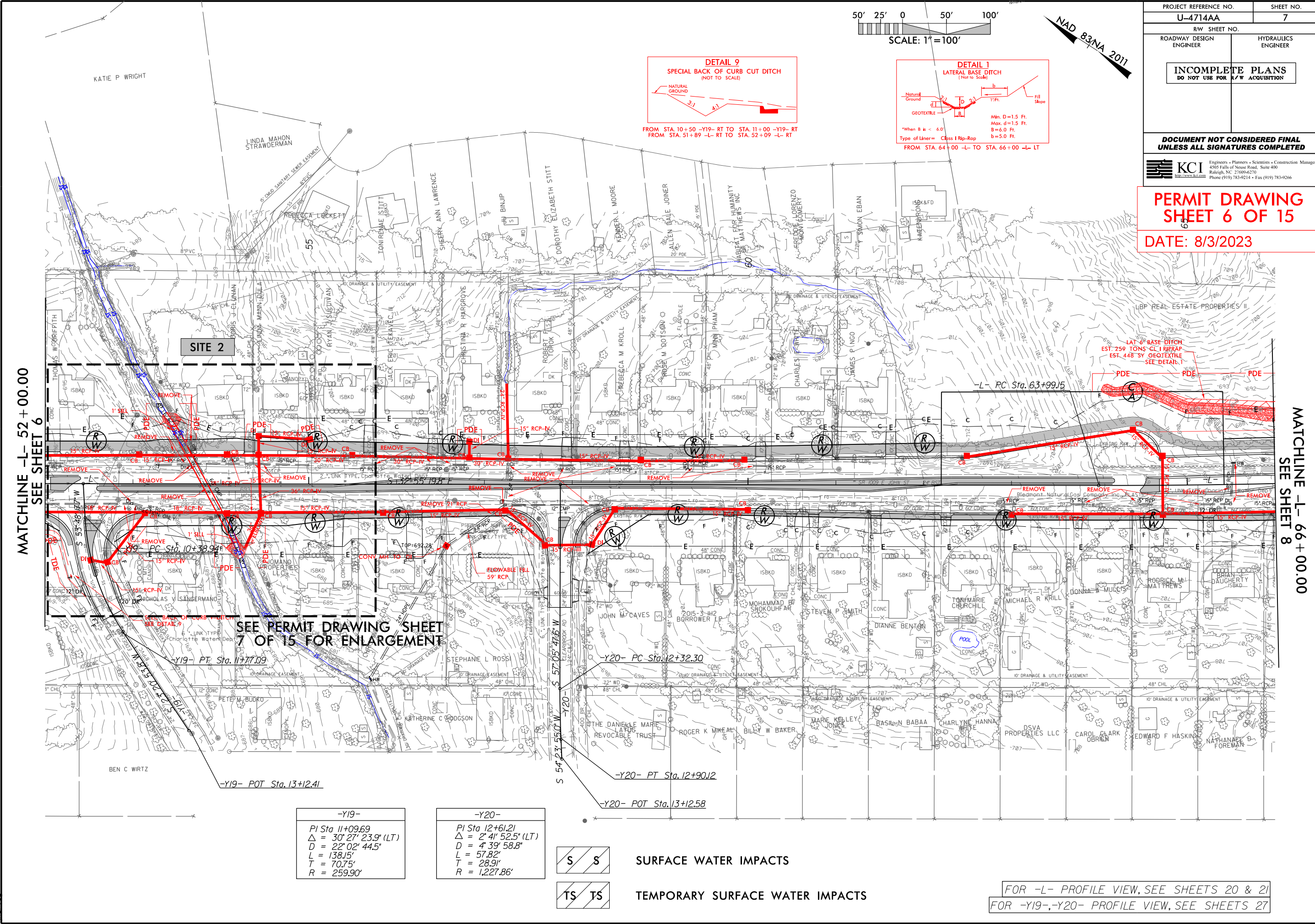
SURFACE WATER IMPACTS


TEMPORARY SURFACE WATER IMPACTS

FOR -L- PROFILE VIEW, SEE SHEETS 20 & 21  
FOR -Y19-, -Y20- PROFILE VIEW, SEE SHEETS 27



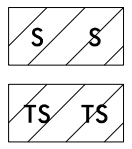
8/17/99  
8/3/2023  
U-4714AA\_Hyd\_prm\_wet\_wet.pst-07-1.dgn  
KATIE P WRIGHT



PROJECT REFERENCE NO. <b>U-4714AA</b>		SHEET NO. <b>7</b>
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION		
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED		
 <b>KCI</b> Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214 • Fax (919) 783-9266		
<b>PERMIT DRAWING</b> <b>SHEET 6 OF 15</b>		
<b>DATE: 8/3/2023</b>		

-Y19-
PI Sta 11+09.69
Δ = 30° 27' 23.9" (LT)
D = 22' 02" 44.5"
L = 138.15'
T = 70.75'
R = 259.90'

-Y20-
PI Sta 12+61.21
Δ = 2° 41' 52.5" (LT)
D = 4' 39" 58.8"
L = 57.82'
T = 28.91'
R = 1,227.86'



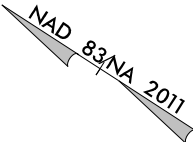
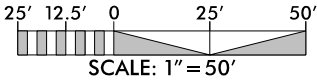
FOR -L- PROFILE VIEW, SEE SHEETS 20 & 21  
FOR -Y19-, -Y20- PROFILE VIEW, SEE SHEETS 27



SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS

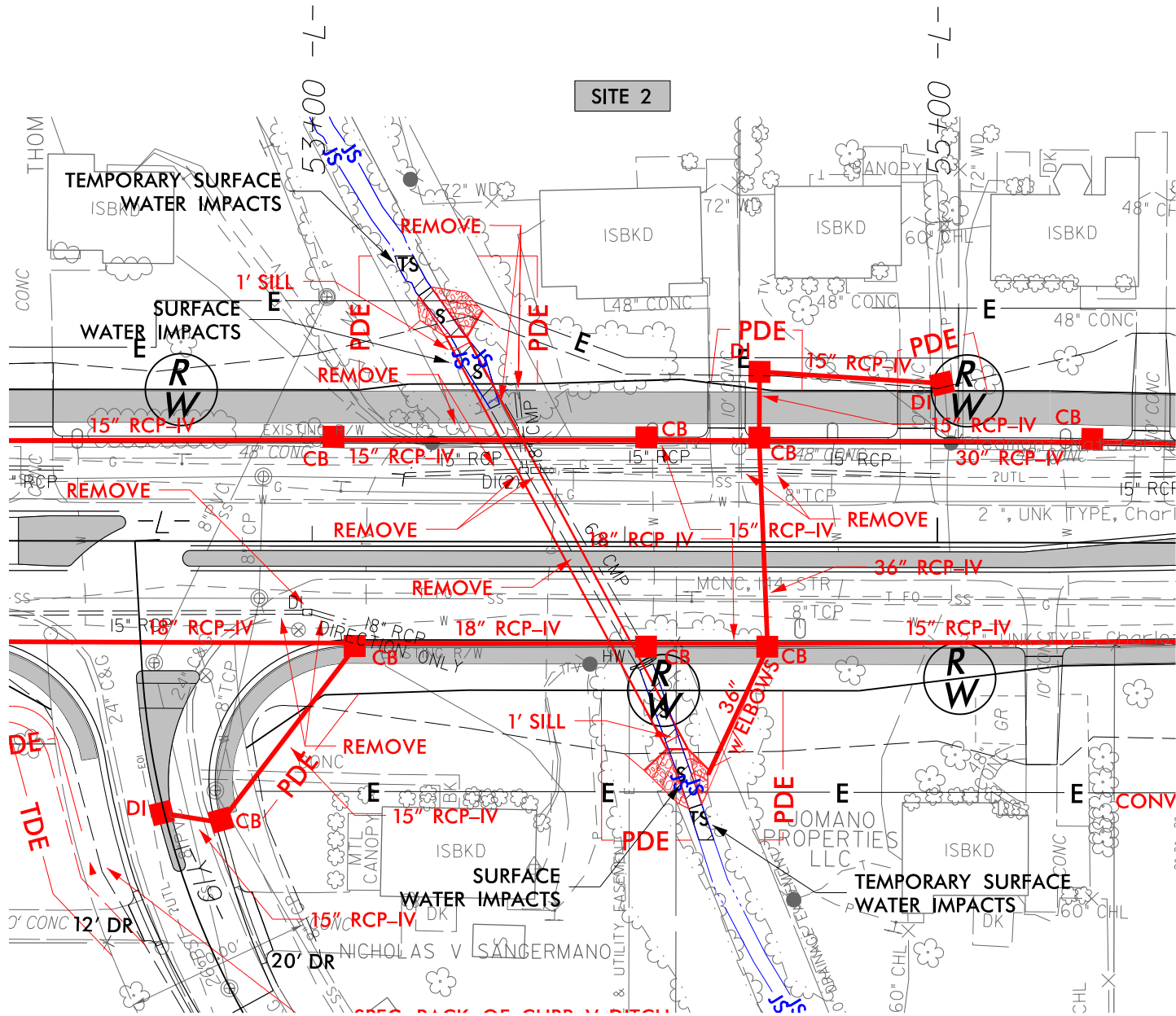


PROJECT REFERENCE NO.		SHEET NO.	
U-4714AA			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

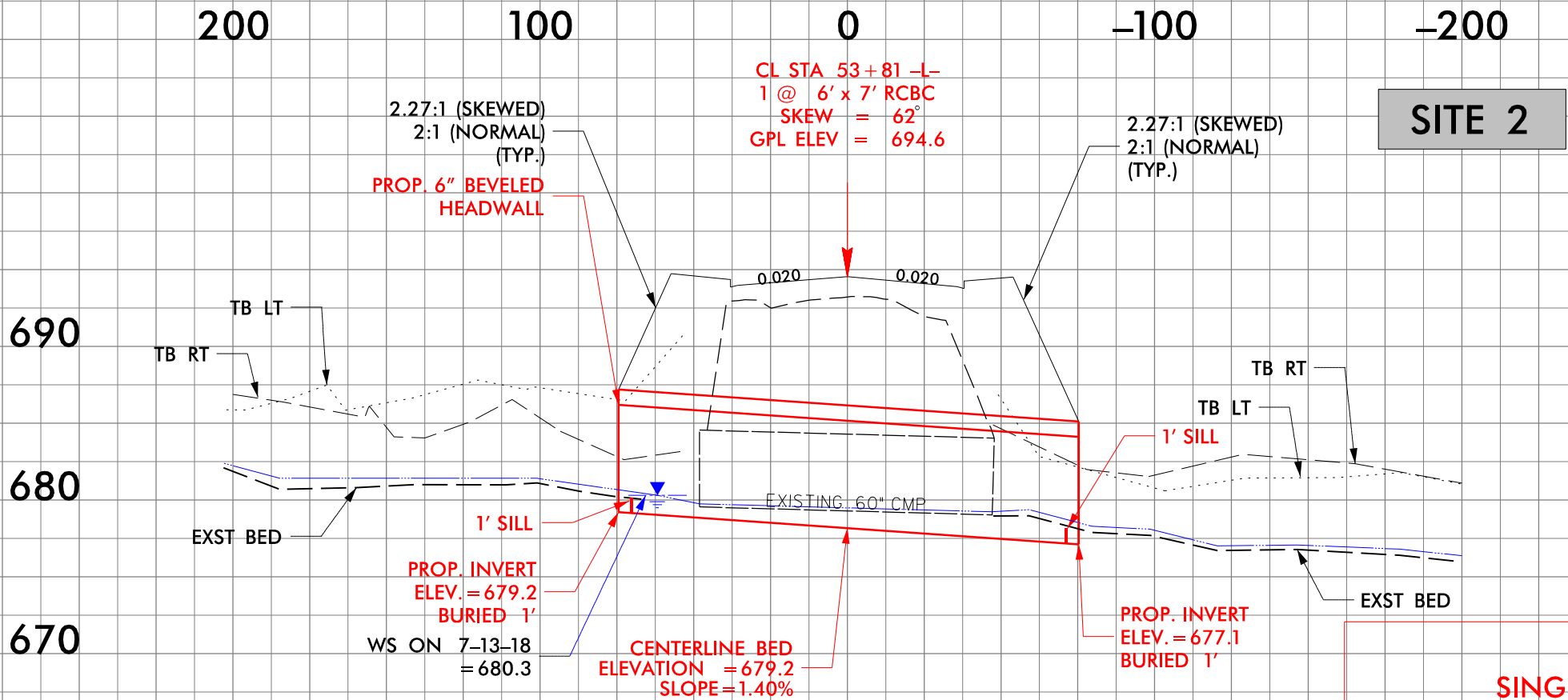
PERMIT DRAWING  
SHEET 7 OF 15

DATE: 8/3/2023

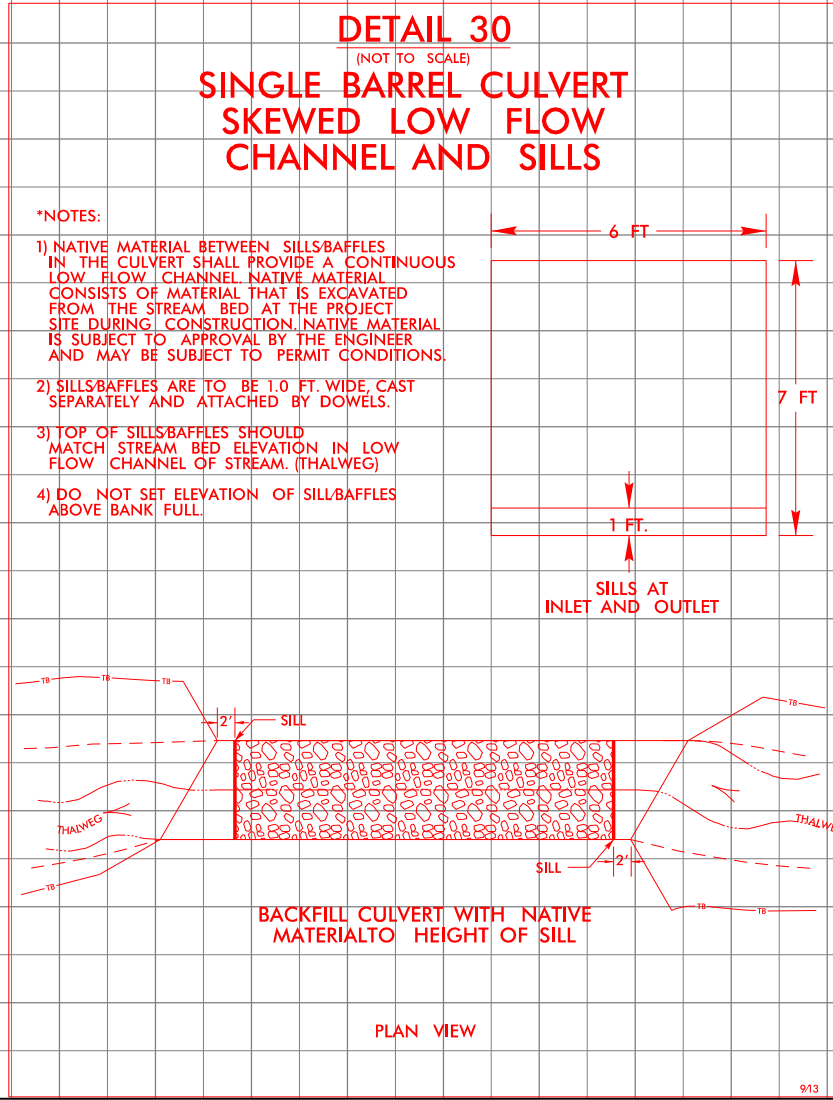
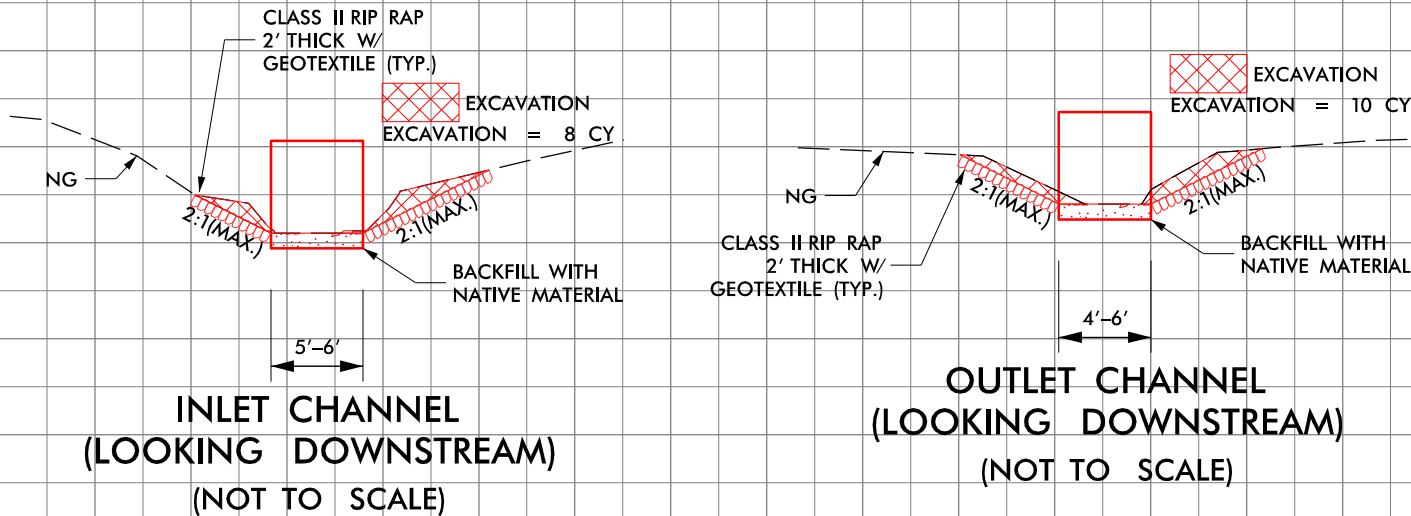




5/14/99  
8/3/2023  
U-4714AA\_Hyd\_prm\_wet-psht-07-3\_PipeSect.dgn  
D:\Users\jharvey



PROJECT REFERENCE NO. U-4714AA		SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 8 OF 15		
DATE: 8/3/2023		



- \*NOTES:
- 1) NATIVE MATERIAL BETWEEN SILLS/BAFFLES IN THE CULVERT SHALL PROVIDE A CONTINUOUS LOW FLOW CHANNEL. NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAM BED AT THE PROJECT SITE DURING CONSTRUCTION. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.
  - 2) SILLS/BAFFLES ARE TO BE 1.0 FT. WIDE, CAST SEPARATELY AND ATTACHED BY DOWELS.
  - 3) TOP OF SILLS/BAFFLES SHOULD MATCH STREAM BED ELEVATION IN LOW FLOW CHANNEL OF STREAM (THALWEG).
  - 4) DO NOT SET ELEVATION OF SILLS/BAFFLES ABOVE BANK FULL.

5/28/99

KCI  
Engineers • Planners • Scientists • Construction Managers  
4505 Falls of Neuse Road, Suite 400  
Raleigh, NC 27609-6270  
Phone (919) 783-9214 • Fax (919) 783-9266

PERMIT DRAWING  
SHEET 9 OF 15

DATE: 8/3/2023

PROJECT REFERENCE NO.

U-4714AA

SHEET NO.

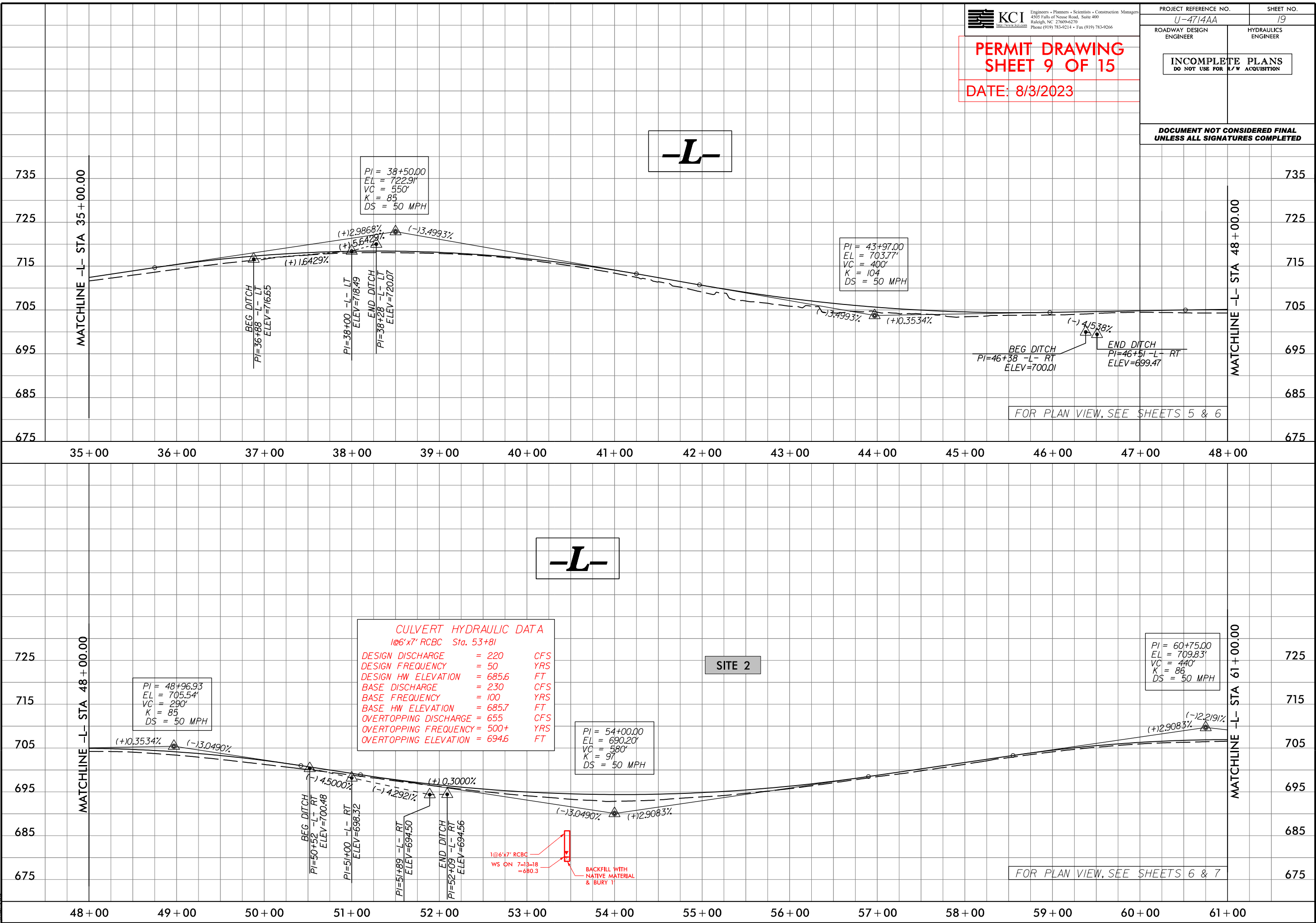
19

ROADWAY DESIGN  
ENGINEER

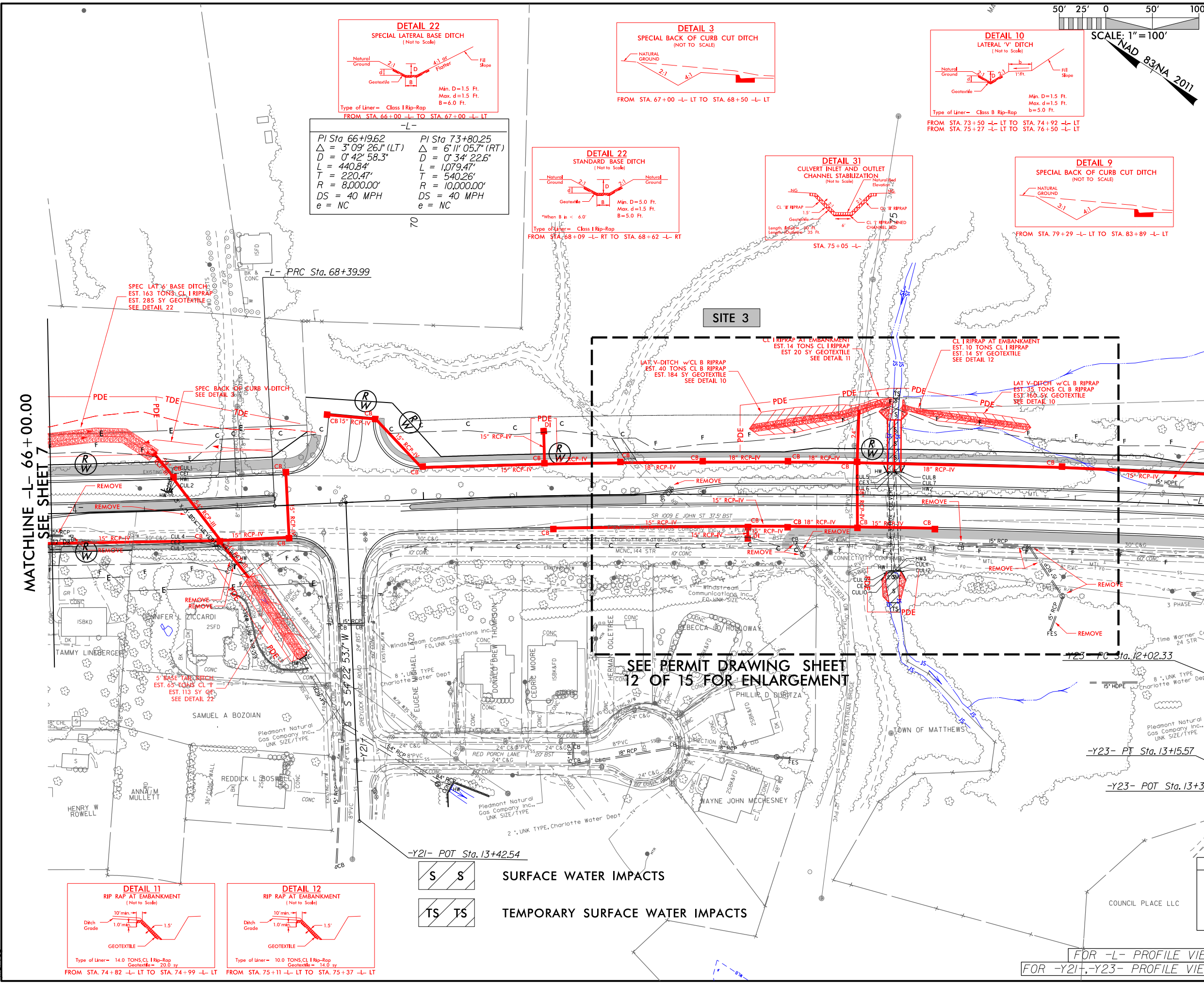
HYDRAULICS  
ENGINEER

INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



8/3/2023  
U-4714AA\_Hyd\_prm\_wet-psh-07-4-.pfl.dgn



SHEET NO. 8  
 CIVILS  
 ENGINEER  
 TS  
 ON  
 FINAL  
 PLETED  
 Construction Manager  
 43-9266  
 NG  
 15  
 MATCHLINE -L- 80 + 00.00  
 SEE SHEET 9

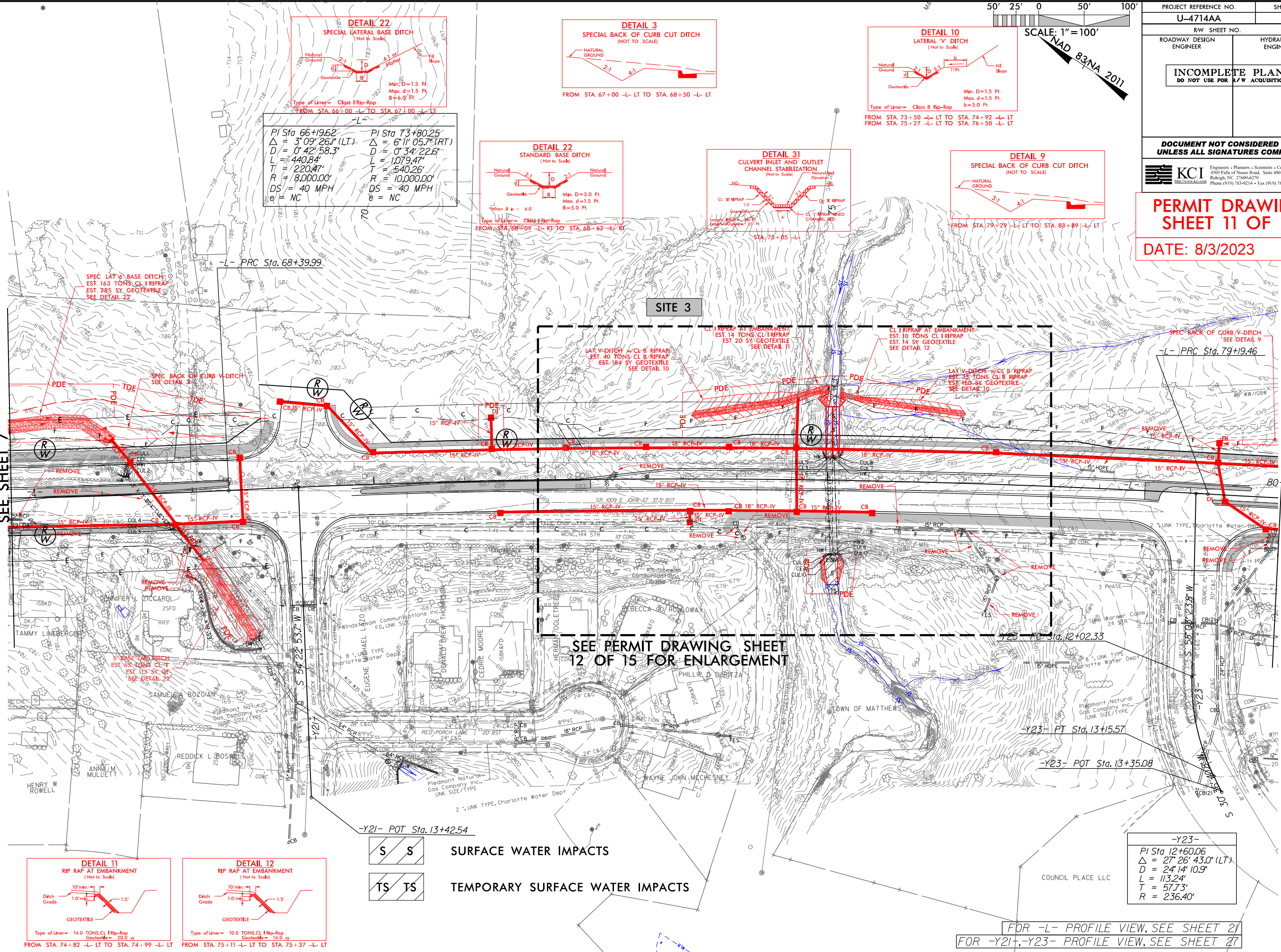


8/17/99

8/3/2023 U-4714AA\_Hyd\_prm\_wet.pst-08-1.dgn

MATCHLINE -L- 66+00.00  
SEE SHEET 7

MATCHLINE -L- 80+00.00  
SEE SHEET 9




SEE PERMIT DRAWING SHEET  
12 OF 15 FOR ENLARGEMENT

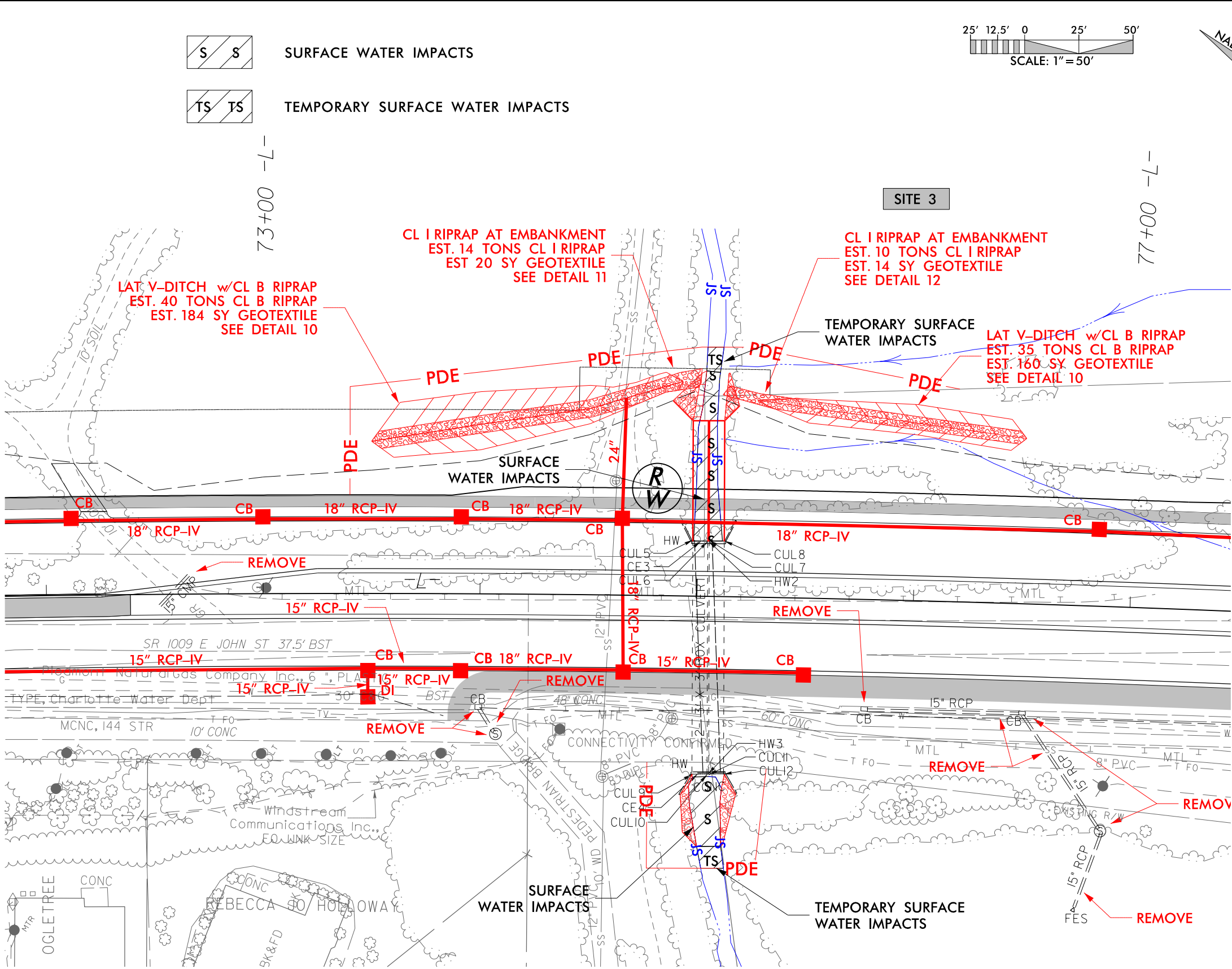
**S S** SURFACE WATER IMPACTS  
**TS TS** TEMPORARY SURFACE WATER IMPACTS

-Y23-  
PI Sta 12+60.06  
 $\Delta = 27^{\circ} 26' 43.0''$  (LT)  
D = 24' 14" 10.9"  
L = 113.24'  
T = 57.73'  
R = 236.40'

FOR -L- PROFILE VIEW, SEE SHEET 21  
FOR -Y21-, -Y23- PROFILE VIEW, SEE SHEET 27

PROJECT REFERENCE NO. <b>U-4714AA</b>		SHEET NO. <b>8</b>	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION			
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED			
 <b>KCI</b> Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214 • Fax (919) 783-9266			
<b>PERMIT DRAWING</b> <b>SHEET 11 OF 15</b>			
DATE: 8/3/2023			





PROJECT REFERENCE NO. U-4714AA		SHEET NO.	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 12 OF 15			
DATE: 8/3/2023			

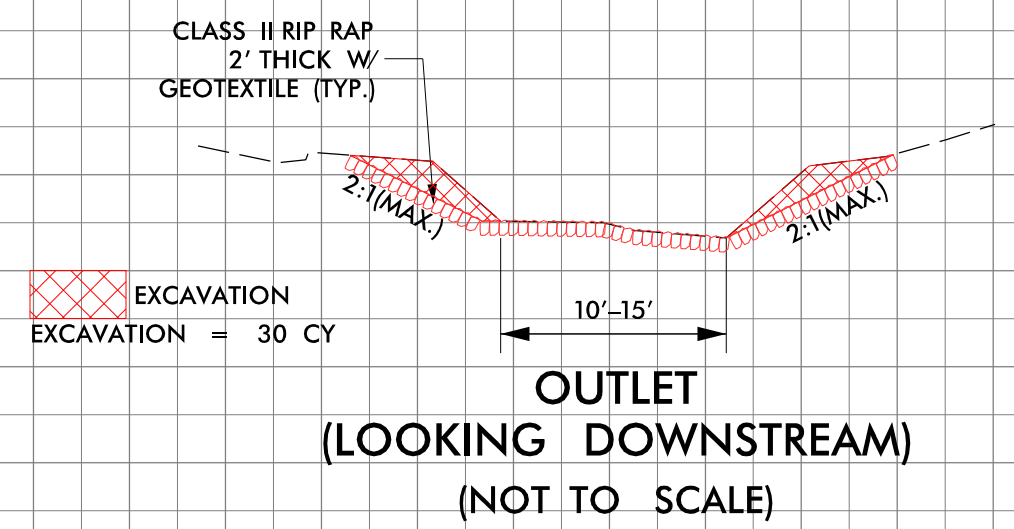
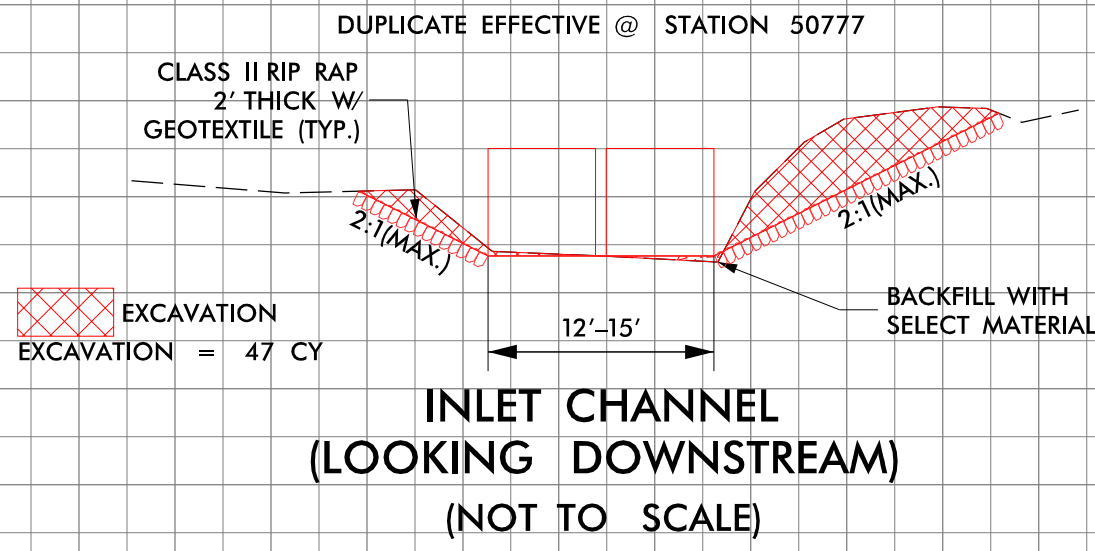
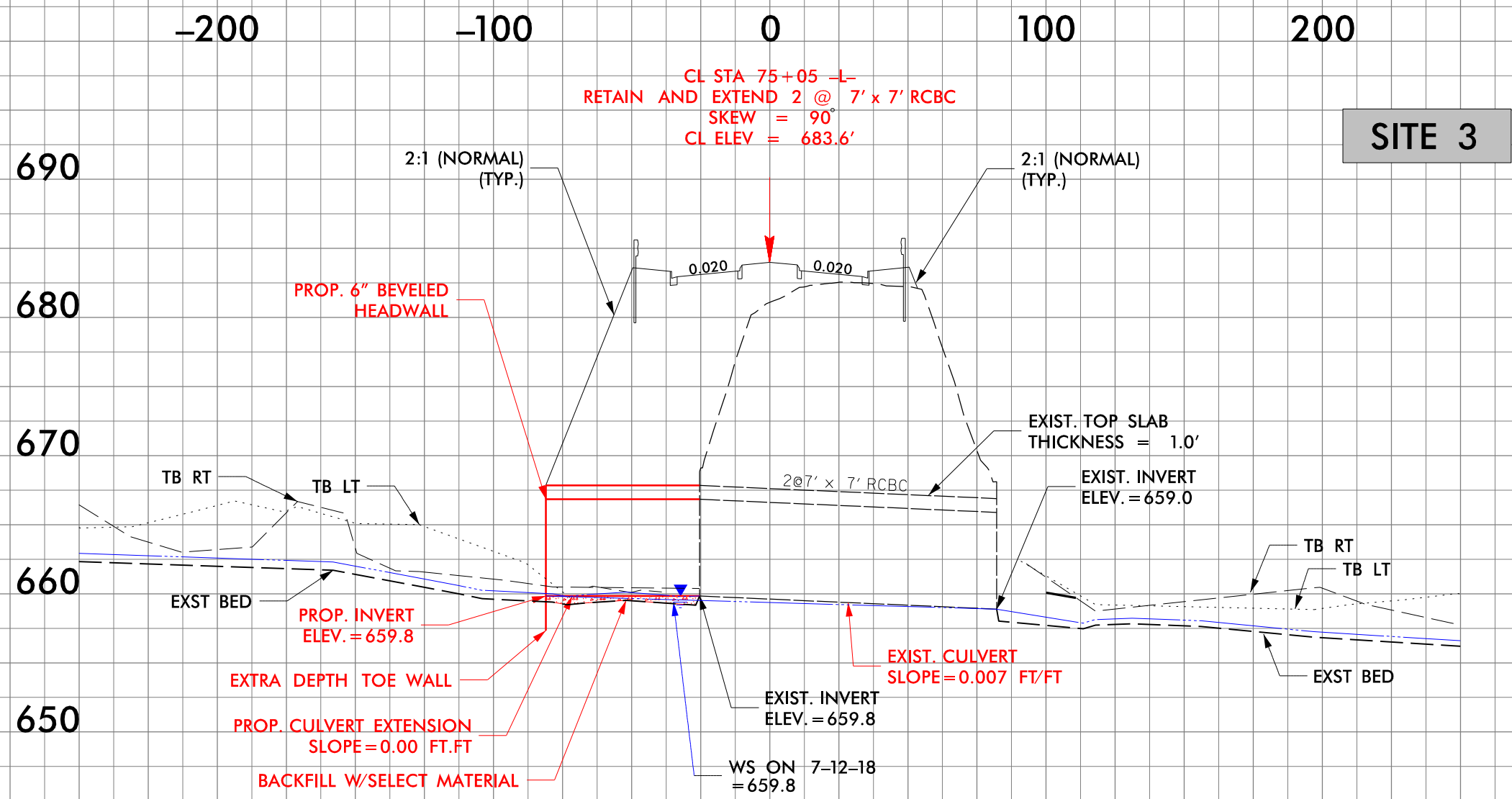
5/14/99

PROJECT REFERENCE NO.	SHEET NO.
U-4714AA	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 13 OF 15

DATE: 8/3/2023



8/3/2023  
U-4714AA\_Hyd\_perm\_wet-psl-08-3\_PipeSect.dgn  
JAV

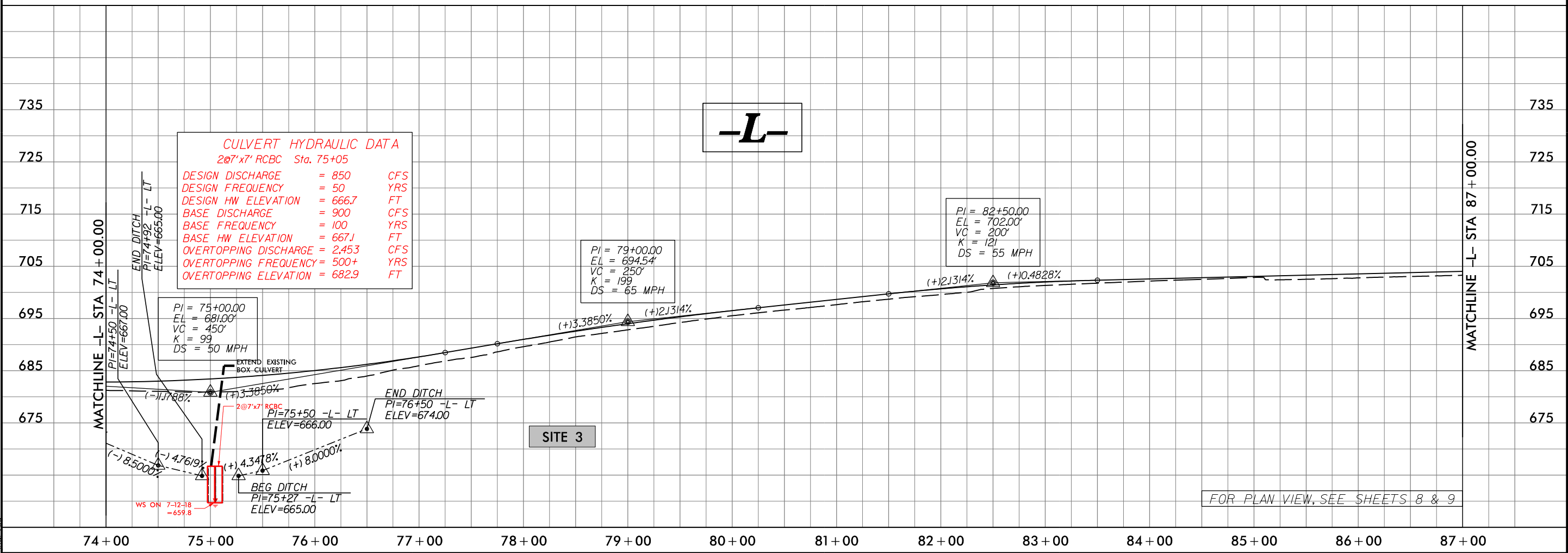
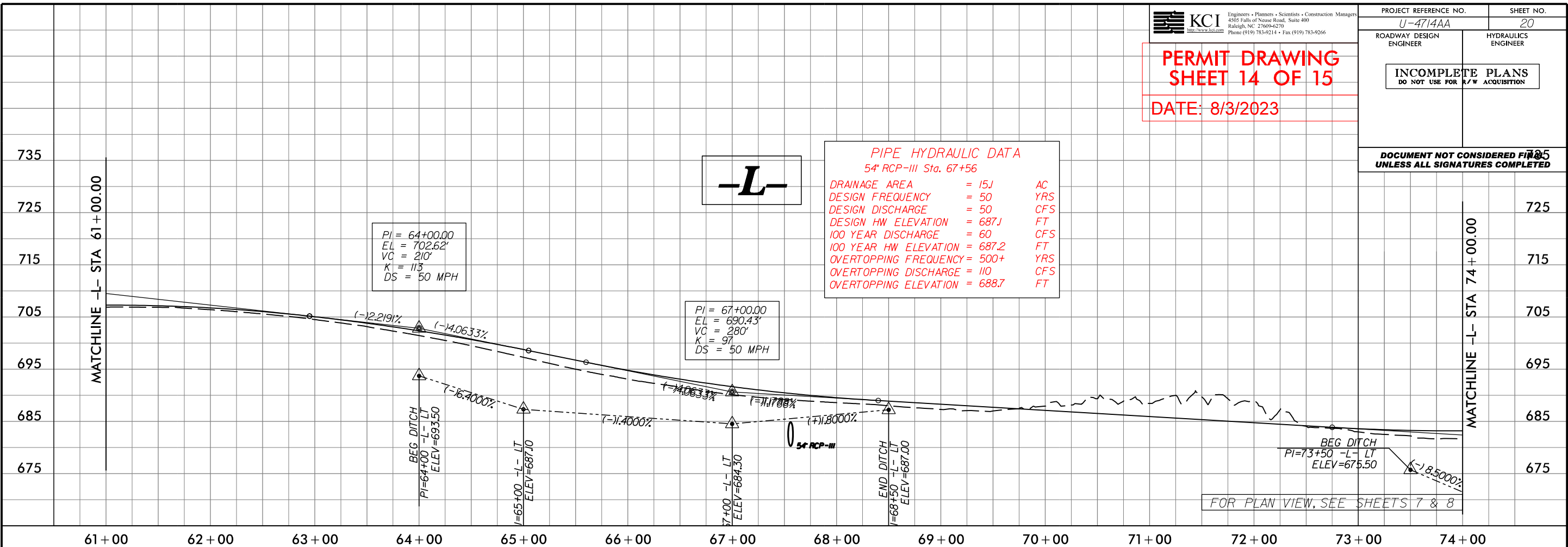


5/28/99

PROJECT REFERENCE NO.		SHEET NO.	
U-4714AA		20	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

PERMIT DRAWING  
SHEET 14 OF 15

DATE: 8/3/2023



8/3/2023  
U-4714AA\_Hyd\_prm\_wet\_psh\_08-4\_pfl.dgn



# Mitigation



ROY COOPER  
Governor  
ELIZABETH S. BISER  
Secretary  
MARC RECKTENWALD  
Director



November 9, 2023

Mr. Jamie Lancaster, P.E.  
Environmental Analysis Unit  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Dear Mr. Lancaster:

Subject: Mitigation Acceptance Letter:

**U-4714AC**, SR 1009 (John Street – Old Monroe Road) Improvements from East of I-485 to West of Morningside Meadow Lane, Mecklenburg and Union Counties

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the compensatory mitigation for the subject project. Based on the information supplied by you on November 9, 2023, the impacts are located in CU 03050103 of the Catawba River basin and 03040105 of the Yadkin River basin in the Southern Piedmont (SP) Eco-Region, and are as follows:

Stream and Wetlands	Impact Location (Service Area)	Eco-Region	Stream			Wetlands		
			Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	Catawba 03050103	SP	0	0	811.000	0.030	0	0
Impacts	Yadkin 03040105	SP	0	0	70.000	0.310	0	0

\*Some of the stream and/or wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

NCDEQ-DMS will commit to implement sufficient compensatory mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the In-Lieu Fee Instrument dated July 28, 2010, and consistent with the Guidance for Expanded Service Area for Mitigating Impacts within the Lower Catawba River basin approved by the IRT. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from NCDEQ-DMS.

If you have any questions or need additional information, please contact Beth Harmon at 919-707-8420.

Sincerely,

  
for James B. Stanfill  
DMS Deputy Director

cc: Mr. Monte Matthews, USACE – Raleigh Regulatory Field Office  
Ms. Amy Chapman, NCDWR  
File: U-4714AC



North Carolina Department of Environmental Quality | Division of Mitigation Services  
217 West Jones Street | 1652 Mail Service Center | Raleigh, North Carolina 27699-1652  
919.707.8976

ROY COOPER  
Governor  
ELIZABETH S. BISER  
Secretary  
MARC RECKTENWALD  
Director



November 9, 2023

Mr. Jamie Lancaster, P.E.  
Environmental Analysis Unit  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Dear Mr. Lancaster:

Subject: Mitigation Acceptance Letter:

**U-4714B**, SR 1009 Widening (John Street – Old Monroe Road) from West of Morningside Meadow Lane to East of SR 1377 (Wesley Chapel-Stouts Road), Union County

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the compensatory mitigation for the subject project. Based on the information supplied by you on November 9, 2023, the impacts are located in CU 03050103 of the Catawba River basin and 03040105 of the Yadkin River basin in the Southern Piedmont (SP) Eco-Region, and are as follows:

Stream and Wetlands	Impact Location (Service Area)	Eco-Region	Stream			Wetlands		
			Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	Catawba 03050103	SP	0	0	480.000	0	0	0
Impacts	Yadkin 03040105	SP	0	0	28.000	0.040	0	0

\*Some of the stream and/or wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

NCDEQ-DMS will commit to implement sufficient compensatory mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the In-Lieu Fee Instrument dated July 28, 2010, and consistent with the Guidance for Expanded Service Area for Mitigating Impacts within the Lower Catawba River basin approved by the IRT. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from NCDEQ-DMS.

If you have any questions or need additional information, please contact Beth Harmon at 919-707-8420.

Sincerely,

A handwritten signature in cursive script that reads "Elizabeth Harmon".

for James B. Stanfill  
DMS Deputy Director

cc: Mr. Monte Matthews, USACE – Raleigh Regulatory Field Office  
Ms. Amy Chapman, NCDWR  
File: U-4714B



North Carolina Department of Environmental Quality | Division of Mitigation Services  
217 West Jones Street | 1652 Mail Service Center | Raleigh, North Carolina 27699-1652  
919.707.8976

# Protected Species/ Section 7





STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

September 19, 2023

Ms. Janet A. Mizzi  
Field Office Supervisor  
US Fish and Wildlife Service  
160 Zillicoa Street  
Asheville, NC 28801

Subject: **Section 7 Concurrence/Conference Request** for the widening/improvements to East John Street – Old Monroe Road (SR 1009) from Trade Street (SR 3448-SR 3474) in Matthews to Wesley Chapel-Stouts Road (SR 1377) in Indian Trail in Mecklenburg and Union County, WBS No. 39078.1.1 in Division 10, **TIP No. U-4714**

Reference: U-4714 Map

Dear Ms. Mizzi:

The purpose of this letter is to request concurrence from the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 of the Endangered Species Act, as amended (16 U.S.C. 1531 et seq.) (ESA). The North Carolina Department of Transportation (NCDOT) proposes to widen/improve SR 1009 from Trade St. in the Town of Matthews to Wesley Chapel-Stouts Rd. in the Town of Indian Trail in Mecklenburg and Union Counties.

As of September 13, 2023, the US Fish and Wildlife Service's Information for Planning and Consultation (IPaC) lists the following federally protected species in the project area.

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Perimyotis subflavus</i>	tricolored bat	Proposed Endangered*	Yes	MA-NLAA
<i>Fusconaia masoni</i>	Atlantic pigtoe	Threatened	No	No Effect
<i>Lasmigona decorata</i>	Carolina heelsplitter	Endangered	No	No Effect
<i>Rhus michauxii</i>	Michaux's sumac	Endangered	Yes	No Effect
<i>Helianthus schweinitzii</i>	Schweinitz's sunflower	Endangered	Yes	No Effect
<i>Echinacea laevigata</i>	smooth coneflower	Threatened	Yes	No Effect

MA-NLAA – May Affect - Not Likely to Adversely Affect

\* Proposed for federal listing

### Species Summary – Bats

The North Carolina Department of Transportation (NCDOT, Division 10) proposes to widen/improve SR 1009 from Trade St. in the Town of Matthews to Wesley Chapel-Stouts Rd. in the Town of Indian Trail in Mecklenburg and Union Counties. See attached map for a breakdown of project sections. (Section AB was determined to have independent utility and was permitted separately from the rest of the project back in 2019.)

Foraging and commuting habitat for tricolored bat is present within the project area. The closest element of occurrence for a tricolored bat in relation to U-4714 is 18.5 miles (EO\_ID 37586) northeast of the project.

A Biological Conclusion of **May Affect, Not Likely To Adversely Affect** is proposed for tricolored bat based on the presence of suitable foraging and commuting habitat.

- It is anticipated that tree clearing can be performed during the winter months for this project (October 15<sup>th</sup> – April 1<sup>st</sup>).
- There are no existing bridges within the project that will need to be removed. There are two reinforced concrete box culverts (RCBCs) in sections AA and AC that will need to be extended and require work between April 1<sup>st</sup> – October 15<sup>th</sup>. There is also a 54” reinforced concrete pipe (RCP) in section B that will be removed and replaced with a double barrel 6’x6’ RCBC and require work between April 1<sup>st</sup> – October 15<sup>th</sup>. NCDOT can commit to surveying these structures within 2 years of construction.
- Blasting is anticipated within sections AA and AC. It is anticipated that blasting will occur from October 15<sup>th</sup> – April 1<sup>st</sup>. Other proposed percussive activities will include, but are not limited to guardrail installation, soil and fill material compaction, paving, pile driving, drilling, grading, and pavement breaking and removal.
- Temporary lighting for nighttime construction will be used during the April 1<sup>st</sup> – October 15<sup>th</sup> timeframe as lane closures are anticipated, and it is typically too cold during winter months to do nighttime work.

Pursuant to the ESA Handbook Section 3.5, NCDOT does not request concurrence from the Service for the remaining species, but identifies them below:

Scientific Name	Common Name	Federal Status	Survey Date(s)	Habitat Present	Biological Conclusion
<i>Fusconaia masoni</i>	Atlantic pigtoe	Threatened	3/10/2014	No*	No Effect
<i>Lasmigona decorata</i>	Carolina heelsplitter	Endangered	3/10/2014	No*	No Effect
<i>Rhus michauxii</i>	Michaux’s sumac	Endangered	10/20/2013 10/6/2017 10/24/2019 10/19/2022	Yes	No Effect
<i>Helianthus schweinitzii</i>	Schweinitz’s sunflower	Endangered	10/20/2013 10/6/2017 10/24/2019 10/19/2022	Yes	No Effect
<i>Echinacea laevigata</i>	smooth coneflower	Threatened	10/20/2013 10/6/2017 10/24/2019 10/19/2022	Yes	No Effect

\*Streams within the Mecklenburg County portion of the project are outside the IPaC range for either mussel species. The remainder of the streams are either intermittent or too small to provide suitable habitat.

NCDOT, under the delegation authority provided in 50 CFR § 402.08 by the Federal Highway Administration (FHWA), believes that the requirements of Section 7(a)(2) of the ESA have been satisfied and hereby request your concurrence.

If you have any questions, please contact Erin Cheely at [ekcheely@ncdot.gov](mailto:ekcheely@ncdot.gov) or 919-707-6108.

Sincerely,

A handwritten signature in black ink, appearing to read "Erin Cheely". The signature is fluid and cursive, with the first and last names being clearly legible.

Erin Cheely, ECAP Western Team Lead  
Environmental Analysis Unit

Enclosures:

Bat Survey Report, dated November 9, 2022

ec:

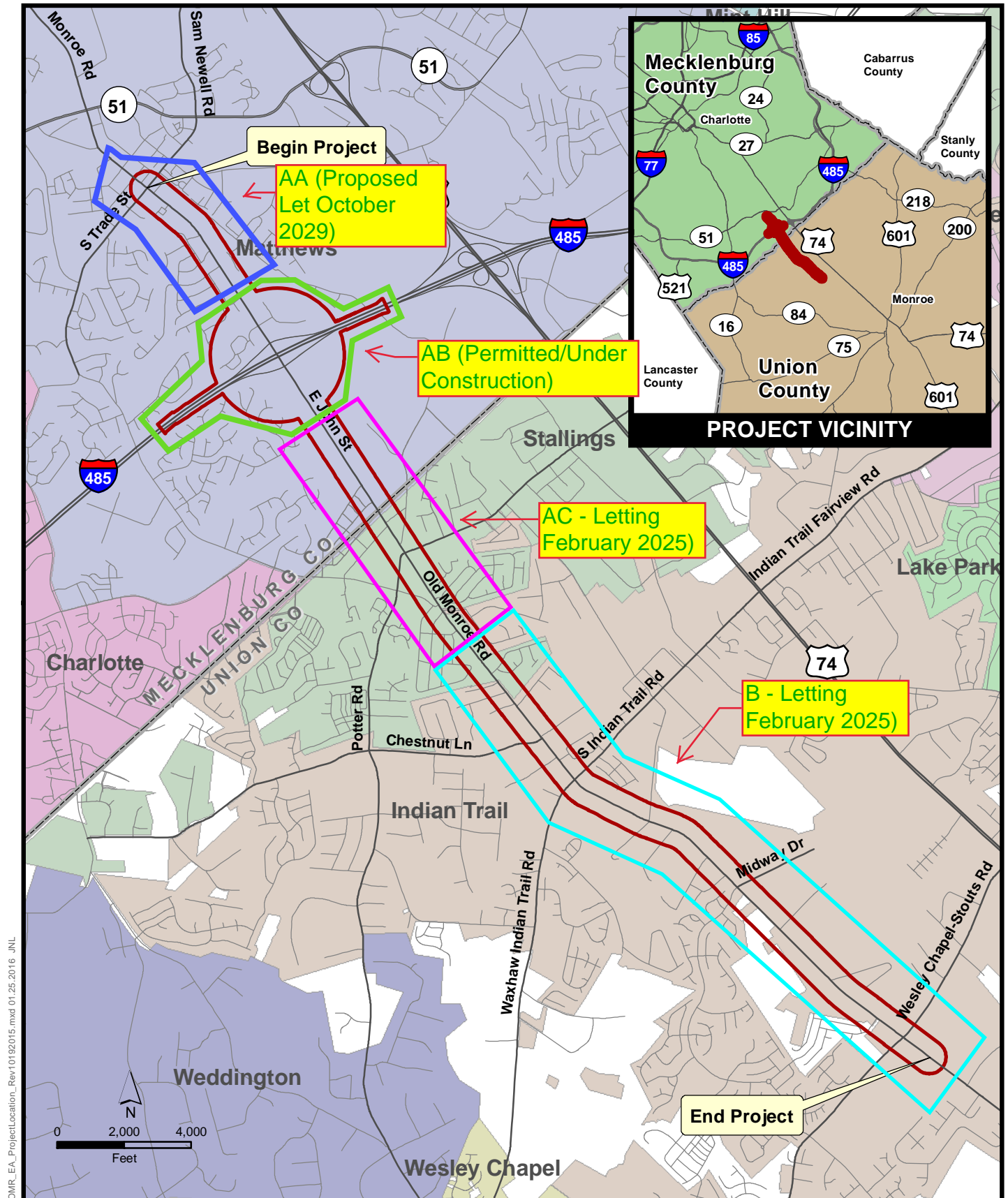
Ms. Holland Youngman, USFWS

Mr. Kevin Hining, DEO-Div. 11, NCDOT

Ms. Jacquelyn Bowles, NCDOT SMU

Mr. Tyler Stanton, NCDOT BSG-EAU





OMR\_EA\_ProjectLocation\_Rev10192015.mxd 01.25.2016 JNL



**E. JOHN STREET/  
OLD MONROE ROAD  
WIDENING PROJECT**  
STIP PROJECT NO. U-4714  
Mecklenburg and Union Counties,  
North Carolina

#### Legend

Project Study Area

Source: Union County, NCDOT, Mecklenburg County



#### PROJECT VICINITY AND LOCATION

**FIGURE S-1**



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Asheville Field Office  
160 Zillicoa Street Suite B  
Asheville, North Carolina 28801



November 15, 2023

Erin Cheely  
ECAP Western Team Lead, Environmental Analysis Unit  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina 27699

Subject: Informal Conference for Widening and Improvements to East John Street – Old Monroe Road (SR 1009) from Trade Street (SR 3448-SR 3474) in Matthews to Wesley Chapel-Stouts Road (SR 1377) in Indian Trail in Mecklenburg and Union Counties (TIP No. U-4717, Service Log #19-419)

Dear Erin Cheely:

On September 19, 2023, we received your request to initiate informal conference procedures for effects the subject project may have on federally proposed species. We have reviewed the information you submitted, and the following is provided in accordance with the provisions of the National Environmental Policy Act (42 U.S.C. § 4321 et seq.); the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661 - 667e); and section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 - 1543) (Act).

### **Project Description**

According to the information provided, the North Carolina Department of Transportation (NCDOT) proposes to widen/improve East John Street – Old Monroe Road (SR 1009) from Trade Street in the Town of Matthews to Wesley Chapel-Stouts Road (SR 1377) in the Town of Indian Trail in Mecklenburg and Union Counties. The linear project is divided into sections AA, AC, and B. Section AB was previously permitted. Approximately 21.7 acres of trees will be cleared. Percussive activities such as guardrail installation, pile driving, and drilling will occur, and blasting will take place during winter months in the AA and AC portions of the project. Nighttime construction will take place as well. Several culvert replacements will occur during project construction. The project is scheduled to Let in February of 2025 for Sections AC and B and in October of 2029 for Section AA. The Federal Highway Administration (FHWA) is the federal lead for this project for section 7 purposes, with authority delegated to NCDOT.

NCDOT has agreed to implement the following conservation measures for the project:

1. Tree clearing will take place from October 16 to March 31.
2. Culvert structures  $\geq$  3 feet in manufactured diameter within the action area will be surveyed for bats and signs of bat use within 2 weeks of project construction.
3. Blasting and other percussive activities will occur after tree clearing has occurred.
4. Temporary lighting associated with night work will be downcast, will be aimed at the active work area to maintain safe working conditions, and will be turned off when not needed for construction activities.
5. No additional permanent lighting will be added to the roadway.

### **Federally Listed Species**

The information provided states that “No Effect” (NE) determinations have been made for Atlantic pigtoe (*Fusconaia masoni*), Carolina heelsplitter (*Lasmigona decorata*), Michaux’s sumac (*Rhus michauxii*), Schweinitz’s sunflower (*Helianthus schweinitzii*), and smooth coneflower (*Echinacea laevigata*). In instances of suitable habitat being absent from the action area, we would agree that NE determinations are appropriate. For plants, in instances where suitable habitat is present and botanical surveys conducted during the optimal survey window and within the past 2 years have negative results, we would concur with a biological determination of “may affect, not likely to adversely affect” (NLAA). We acknowledge that the request for concurrence did not include these species. This information is provided for the sake of the administrative record.

The correspondence received from NCDOT requests a conference for the tricolored bat (*Perimyotis subflavus*).

Potentially suitable culvert roosts and suitable roosting, commuting, and foraging forested habitat for tricolored bat occurs within the action area. The proposed conservation measures minimize effects to bats potentially occurring within the action area. However, effects from construction noise to unknown tree roosts within the action area but outside the construction limits, while minimized, are not avoided. Bats that are present in proximity to transportation corridors are expected to be tolerant of baseline noise and vibration levels (or have already modified their behaviors to avoid them). How temporary increases in noise and vibration from construction activities effect bats within existing transportation corridors has not been well studied to our knowledge, though one study found that bats habituated rapidly to traffic noise (Luo et al. 2014). Given the information available and conservation measures above, we do not believe any response to project noise and vibration by bats that are already tree-roosting in the area is expected to rise to the level of harm (as defined at 50 CFR 17.3).

On September 14, 2022, the U.S. Fish and Wildlife Service (Service) published a proposal in the Federal Register to list the tricolored bat as endangered under the Act. As a result, NCDOT has requested a conference for the tricolored bat as the project may be on-going after the effective date of any final listing rule, if one is published. Based on the information provided, the analysis above, and the commitments to minimize project impacts, we have determined that the proposed project will not jeopardize the continued existence of the tricolored bat. Additionally, we would concur with the NCDOT’s determination that the project is NLAA the tricolored bat should it become listed.

### **Conservation Recommendations**

Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. General recommendations for the benefit of fish and wildlife resources are provided here:

- **Carolina Darter:** The Carolina darter (*Etheostoma collis*) has element occurrence data in several streams within the project study area. The species is not currently afforded legal protection under the Federal Endangered Species Act but it is listed as a North Carolina special concern species. We recommend the most protective sediment and erosion control measures that meet the Design Standards in Sensitive Watersheds be used in waters occupied by this species. We encourage you to coordinate the project and any relocation efforts with the North Carolina Wildlife Resources Commission.
- **Riparian Replanting:** Because the removal of forested riparian habitat can affect the quality and suitability of foraging and commuting habitat for bats and the water quality for aquatic organisms, we recommend replanting the riparian zone with native, fast-growing trees and shrubs that would serve to stabilize the stream bank, filter runoff and reduce erosion and sedimentation, block light pollution, and generally improve the quality of the habitat for bats and aquatic species.



Examples of potential native tree species to plant include: Sycamore, tulip poplar, black cherry and river birch. Planting with established (e.g. containerized) young trees can increase the survival rate of plantings and contribute to faster improvement of riparian habitat.

- **Noise Considerations for Bats:** If suitable roost trees are present near high-decibel activity (81 – 162 dBA) and would experience noise above background levels (41 – 70 dBA), avoid conducting those high-decibel activities during the bat maternity season (May 15 – August 15). Alternatively, activity could avoid the pup season (June 1 and July 31). To minimize noise levels, incorporate sound-dampening devices such as noise shrouds for pile driving.

### **Reinitiation Notice**

We believe the requirements under section 7 of the Act are fulfilled for the federally listed species discussed above. However, obligations under section 7 must be reconsidered if: (1) new information reveals impacts of this proposed action may affect listed species or critical habitat in a manner not previously considered, (2) this proposed action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed, or critical habitat is determined that may be affected by the proposed action.

We appreciate the opportunity to provide these comments. Please contact Ms. Holland Youngman of our staff at [holland\\_youngman@fws.gov](mailto:holland_youngman@fws.gov) if you have any questions. In any future correspondence concerning this project, please reference our Service Log #19-419.

Sincerely,

*-- original signed --*

Janet Mizzi  
Field Supervisor

Electronic CC:

Joel Howard, NCDOT, Division 10, Project Development & Environmental Analysis Engineer  
William Wescott, NCDOT, Division 10, Environmental Officer

# Archaeology



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

August 5, 2014

Ramona Bartos, Administrator  
State Historic Preservation Office  
Deputy State Historic Preservation Officer  
4617 Mail Service Center  
Raleigh, NC 27699-4617

RE: John Street/Old Monroe Road Widening, Mecklenburg and Union Counties, TIP# U-4714, ER 13-0879

Ms. Bartos,

Thank you for your correspondence of May 17, 2013 regarding the above-mentioned project. In response to comments provided by the Office of State Archaeology (OSA), consultation was held on Tuesday, August 5, 2014, between Paul J. Mohler (NCDOT Archaeologist) and John Mintz (OSA) to review and discuss preliminary design plans for the widening of SR 1009 (John Street/Old Monroe Road) from its intersection with Freemont Street in the Town of Matthews, Mecklenburg County, to its intersection with SR 1377 (Wesley Chapel/Stouts Road) in Union County.

Based on the mapping provided at this meeting as well as a thorough review of soil/landscape conditions, current commercial and residential development, previous archaeological survey results, and the nature and extent of the proposed project, it was determined that the project corridor, as depicted, is unlikely to contain intact and significant archaeological resources. Therefore, OSA does not recommend an archaeological survey be conducted for this project. However, if design plans change, then additional consultation regarding archaeology will be required.

Thank you for your assistance in this matter. If you have any questions concerning this project, please contact me at (919) 707-6089 or Mr. Paul J. Mohler, NCDOT Archaeologist, at (919) 707-6080.

Sincerely,

Matt Wilkerson  
Archaeology Supervisor  
Human Environment Section

MTW/pjm

cc: Elmo Vance, PDEA  
Paul J. Mohler, Archaeology



# Historic Architecture and Landscapes

Federal Aid #: STPDA-1009(16) TIP#: U-4714 County: Mecklenburg & Union

**CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS**

**Project Description: Improve SR 1009 (John St/Old Monroe Rd) from SR 3448/SR 3474 (Trade St) to SR 1377 (Wesley Chapel/Stout Rd) in Matthews, Stallings, and Indian Trail.**

On October 20, 2015, representatives of the

- ☒ North Carolina Department of Transportation (NCDOT)
- ☒ Federal Highway Administration (FHWA)
- ☒ North Carolina State Historic Preservation Office (HPO)
- ☐ Other United States Army Corps of Engineers (USACE)

Reviewed the subject project and agreed on the effects findings listed within the table on the reverse of this signature page.

Signed:

Shelby Reap  
Representative, NCDOT

Oct 20, 2015  
Date

John P. [Signature]

FHWA, for the Division Administrator, or other Federal Agency

10-20-15  
Date

Renee Hedrick-Easley  
Representative, HPO

10.20.15  
Date

\_\_\_\_\_  
State Historic Preservation Officer

\_\_\_\_\_  
Date

Federal Aid #: STPDA-1009(16)

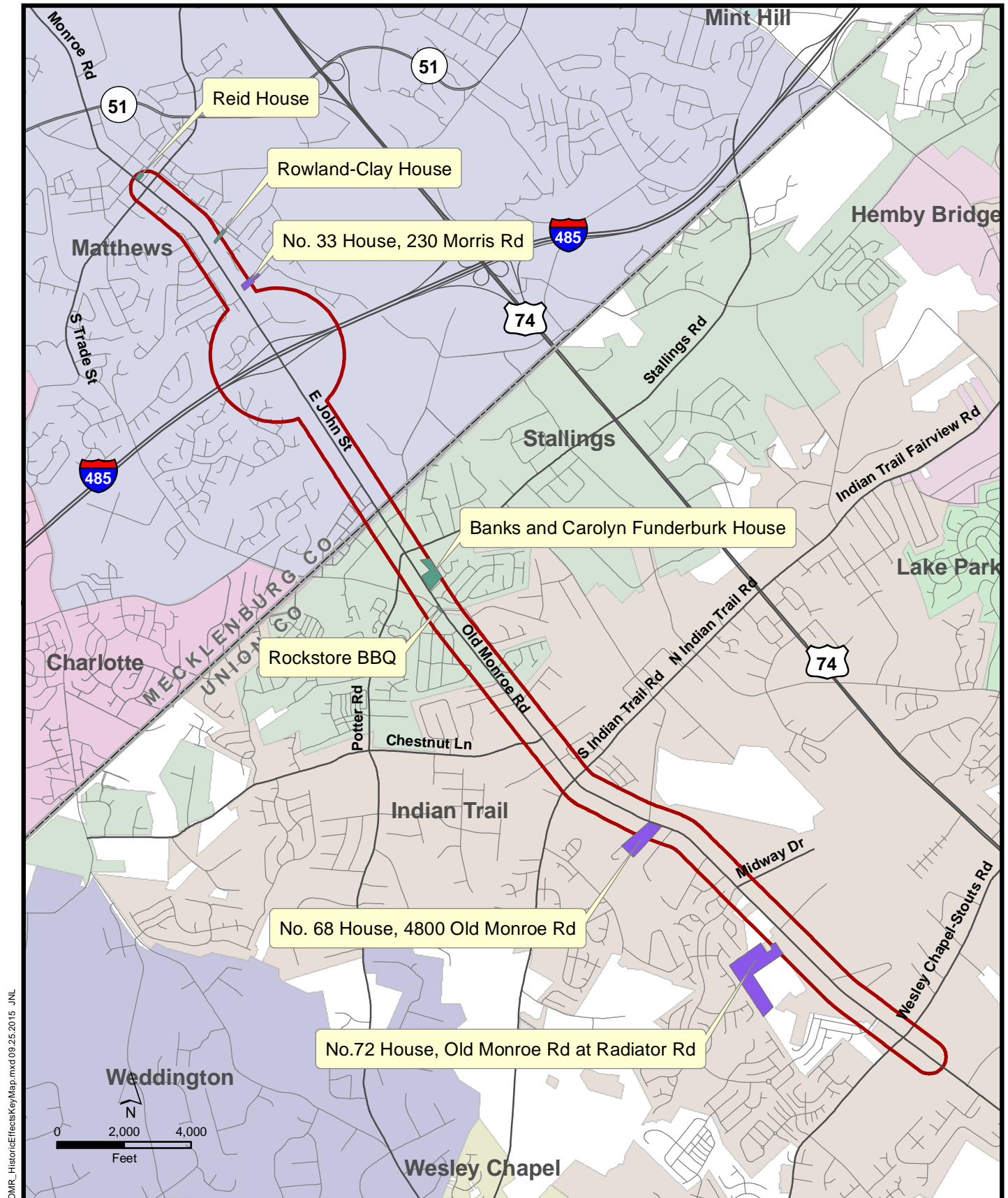
TIP#: U-4714

County: Mecklenburg &amp; Union

Property and Status	Alternative	Effect Finding	Reasons
Matthews National Register Commercial Historic District (MK1417) NR		no effect	no changes to Tradee St. boundary outside APE
Reid House (MK1191) DE		no adverse effect	no construction in ROW, no easements no PDEs; only replace curb & gutter; keep existing sidewalk. No tree removal.
Rowland-Clay House (MK2301) DE		no effect	out side construction area
Banks H. Funderburk Store (UN0125) DE, LL		no adverse effect with conditions	right in, right out; no construction in boundary may <del>remove</del> remove planting strip from plans, no permanent drainage easements
Banks and Carolyn Funderburk House (UN1200) DE		no adverse effect w/ conditions	no ROW; no easements, minimize tree removal No PDEs, No PDEs.

Initialed: NCDOT SUR FHWA USACE DB HPO \_\_\_\_\_

FHWA intends to use SHPO's concurrence as a basis of a "de minimis" finding for the following properties, pursuant to Section 4(f):



OMR\_HistoricEffectsKeyMap.mxd 09.25.2015 JNL

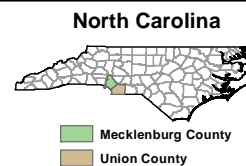


**E. JOHN STREET/  
OLD MONROE ROAD  
WIDENING PROJECT**  
STIP PROJECT NO. U-4714  
Mecklenburg and Union Counties,  
North Carolina

#### Legend

- Requires Additional Study
- Eligible for NRHP Listing
- Project Study Area

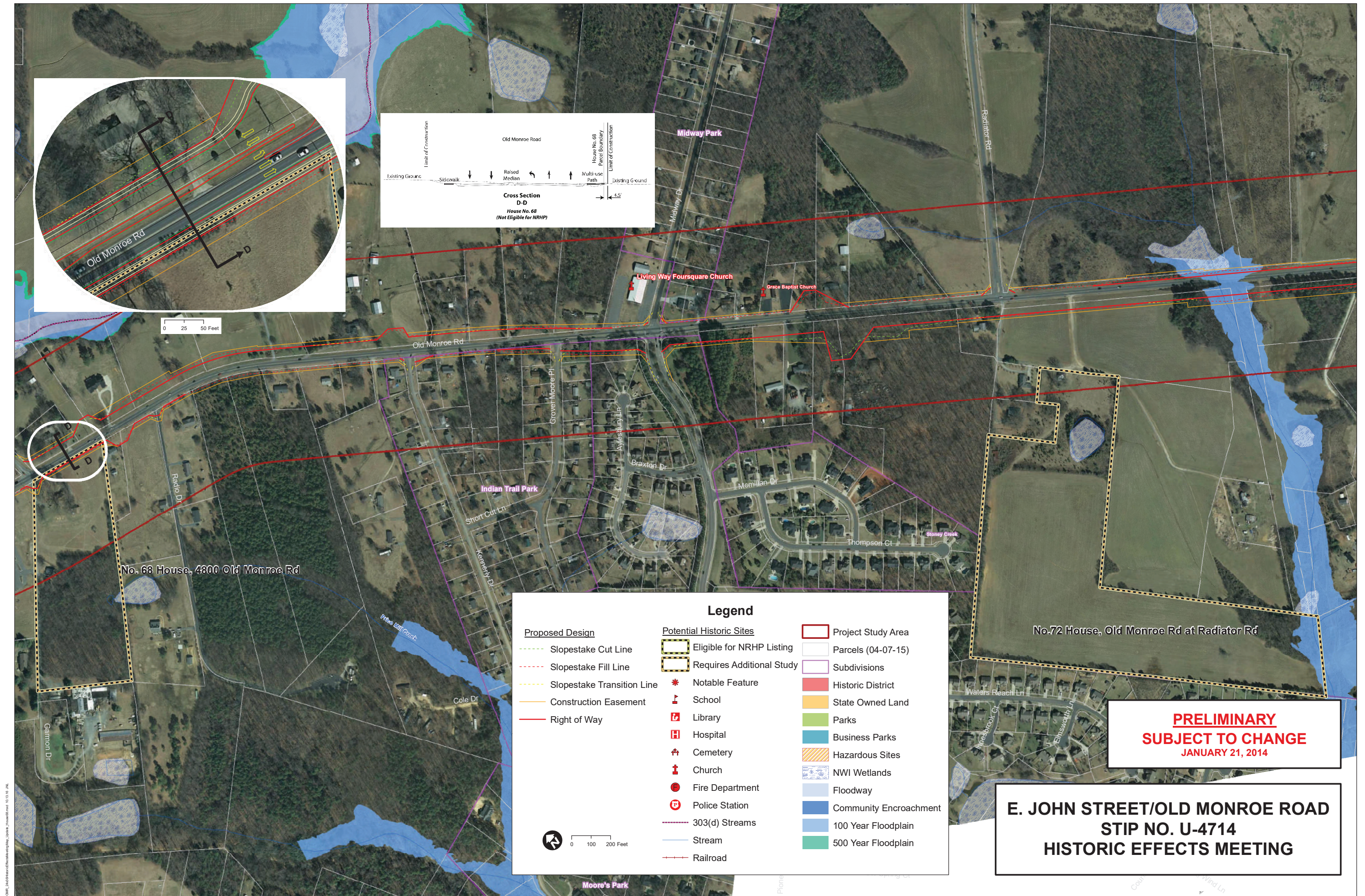
Source: Union County, NCDOT, Mecklenburg County



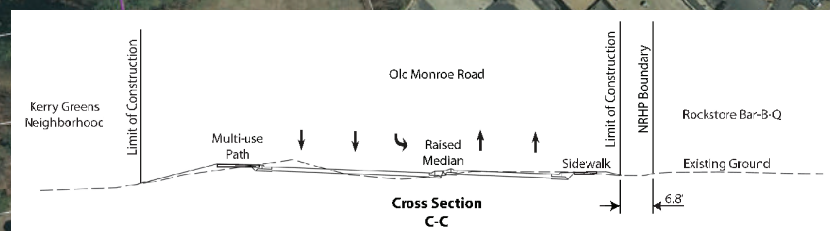
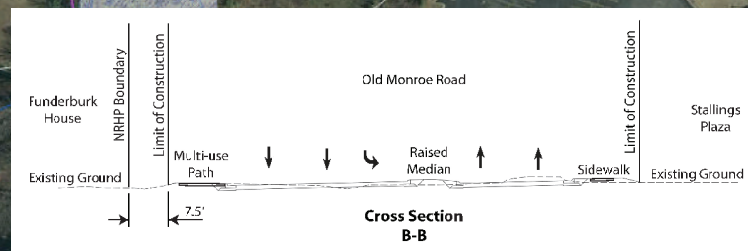
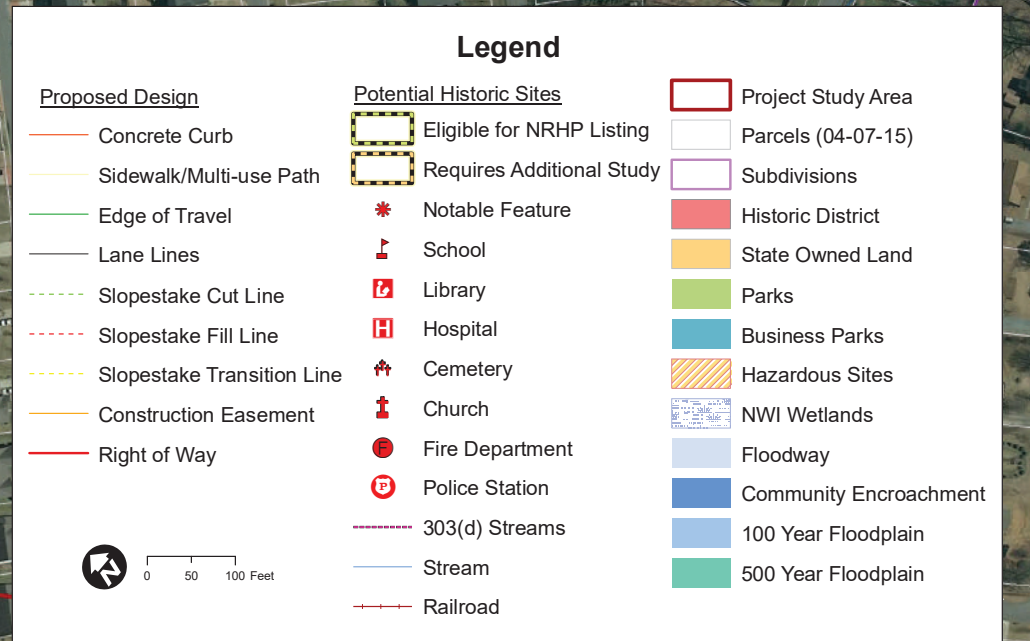
#### HISTORIC SITES

**FIGURE H-1**









**PRELIMINARY**  
**SUBJECT TO CHANGE**  
**JANUARY 21, 2014**

**E. JOHN STREET/OLD MONROE ROAD  
STIP NO. U-4714  
HISTORIC EFFECTS MEETING**









**North Carolina Department of Natural and Cultural Resources  
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper  
Secretary Susi H. Hamilton

Office of Archives and History  
Deputy Secretary Kevin Cherry

June 20, 2017

**MEMORANDUM**

**TO:** Shelby Reap  
Office of Human Environment  
NCDOT Division of Highways

**FROM:** Renee Gledhill-Earley *Renee Gledhill-Earley*  
Environmental Review Coordinator

**SUBJECT:** Historic Structures Survey Report for Widening of John Street/Old Monroe Road  
(SR1009) from Trade Street to Wesley Chapel-Stout Road, U-4717,  
Mecklenburg & Union Counties, ER 13-0879

Thank you for your May 16, 2017, letter transmitting the above-referenced report addendum. We have reviewed the addendum and offer the following comments.

We concur that the following properties are not eligible for listing in the National Register of Historic Places for the reasons outlined in the report addendum.

- Matthews Presbyterian Church (MK3696)
- Orr House, 230 W. John St. (MK3697)

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or [environmental.review@ncdcr.gov](mailto:environmental.review@ncdcr.gov). In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr, NCDOT, [mfurr@ncdot.gov](mailto:mfurr@ncdot.gov)



17-03-0023



## HISTORIC ARCHITECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

### PROJECT INFORMATION

<b>Project No:</b>	U-4714	<b>County:</b>	Mecklenburg
<b>WBS No.:</b>	39078.1.1	<b>Document Type:</b>	EA
<b>Fed. Aid No:</b>	STPDA-1009(16)	<b>Funding:</b>	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
<b>Federal Permit(s):</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Permit Type(s):</b>	Unknown at this time

#### Project Description:

Increased Area of Potential Effects (APE) from Freemont ST to Irwin Ln. U-4714 proposes to increase SR 1009 (John Street/Old Monroe Rd) to a multi-lane facility.

### SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

- ☒ There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- ☒ There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- ☐ There are no properties within the project's area of potential effects.
- ☒ There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.
- ☒ There are no historic properties present or affected by this project. (Attach any notes or documents as needed.)

Date of field visit: April 2017

#### Description of review activities, results, and conclusions:

Review of HPO quad maps, relevant background reports, historic designations roster, and indexes was undertaken on November 8, 2016. Based on this review there are no NR, DE, LL, SL, or SS in the project area. There two properties greater than 50 years old in the Area of Potential Effects (APE) of the project. An outside consultant conducted a site visit and wrote an eligibility evaluation for the properties (Matthews Presbyterian Church and the Orr House) and recommended that the neither property is eligible for National Register listing. In a letter dated June 20, 2017 the North Carolina Historic Preservation Office (NCHPO) concurred with our recommendation. No historic properties are present in the APE.

### SUPPORT DOCUMENTATION

☐ Map(s)    ☐ Previous Survey Info.    ☐ Photos    ☒ Correspondence    ☐ Design Plans

## FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes – NO HISTORIC PROPERTIES PRESENT OR AFFECTED

Shelly Reap

NCDOT Architectural Historian

June 21, 2017

Date

# Tribal Coordination





STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

August 14, 2023

Dr. Wenonah Haire  
Catawba Indian Nation  
Tribal Historic Preservation Office  
1536 Tom Steven Road  
Rock Hill, SC 29730

Dear Dr. Haire,

The North Carolina Department of Transportation proposes to widen 6.5 miles of the existing two-lane East John Street-Old Monroe Road (SR 1009) to a multi-lane facility from Trade Street (SR 3448-SR 3474) in the Town of Matthews in Mecklenburg County through the Town of Stallings, to Wesley Chapel-Stouts Road (SR 1377) in the Town of Indian Trail in Union County as project U-4714AC & B. The existing two-lane roadway provides a parallel route to US 74 and connects to the regional roadway network at the John Street interchange with I-485. The existing roadway is heavily traveled and experiences congestion and delays. The existing roadway west of South Trade Street is four (4) lanes, and this project would join the two sections with a consistent 4-lane cross-section. The Federal Highway Administration (FHWA) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE. A project vicinity map is attached. The coordinates of this project are approximately 35.056199, -80.658099.

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project. Your comments may be used in the preparation of a National Environmental Policy Act (NEPA) or State Environmental Policy Act (SEPA) Environmental Document.

In accordance with Section 106 of the NHPA, we also request that you inform us of any historic properties of traditional religious or cultural importance that you are aware of that may be affected by the proposed project. Be assured that, in accordance with confidentiality and disclosure stipulations in Section 304 of the NHPA, we will maintain strict confidentiality about certain types of information regarding historic properties.

*Mailing Address:*  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT MANAGEMENT UNIT  
1595 MAIL SERVICE CENTER  
RALEIGH, NC 27699

*Telephone:* (704) 982-3146  
*NDOT Customer Service:* 1-877-368-4968  
*Website:* [www.ncdot.gov](http://www.ncdot.gov)

*Location:*  
100 BIRCH RIDGE DRIVE  
RALEIGH, NC 27610

Please respond by September 14, 2023 so that your comments can be used in the scoping of this project. If you have any questions concerning this project, or would like any additional information, please contact me at [afoster@ncdot.gov](mailto:afoster@ncdot.gov) or (919) 707-6239

Thank you,

DocuSigned by:  
  
BDDCAC2122684EB...  
Alex Foster, PE  
Senior Project Manager

cc: Matt Wilkerson, NCDOT Archaeology Team Leader

*Mailing Address:*  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT MANAGEMENT UNIT  
1595 MAIL SERVICE CENTER  
RALEIGH, NC 27699

*Telephone:* (704) 982-3146  
*NDOT Customer Service:* 1-877-368-4968  
*Website:* [www.ncdot.gov](http://www.ncdot.gov)

*Location:*  
100 BIRCH RIDGE DRIVE  
RALEIGH, NC 27610



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

August 14, 2023

Elizabeth Toombs  
Cherokee Nation  
Tribal Historic Preservation Officer  
PO BOX 948  
Tahlequah, OK 74465

Dear Ms. Toombs,

The North Carolina Department of Transportation proposes to widen 6.5 miles of the existing two-lane East John Street-Old Monroe Road (SR 1009) to a multi-lane facility from Trade Street (SR 3448-SR 3474) in the Town of Matthews in Mecklenburg County through the Town of Stallings, to Wesley Chapel-Stouts Road (SR 1377) in the Town of Indian Trail in Union County as project U-4714AC & B. The existing two-lane roadway provides a parallel route to US 74 and connects to the regional roadway network at the John Street interchange with I-485. The existing roadway is heavily traveled and experiences congestion and delays. The existing roadway west of South Trade Street is four (4) lanes, and this project would join the two sections with a consistent 4-lane cross-section. The Federal Highway Administration (FHWA) is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) and a Permit is anticipated under the Section 404 Process with the USACE. A project vicinity map is attached. The coordinates of this project are approximately 35.056199, -80.658099.

We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project. Your comments may be used in the preparation of a National Environmental Policy Act (NEPA) or State Environmental Policy Act (SEPA) Environmental Document.

In accordance with Section 106 of the NHPA, we also request that you inform us of any historic properties of traditional religious or cultural importance that you are aware of that may be affected by the proposed project. Be assured that, in accordance with confidentiality and disclosure stipulations in Section 304 of the NHPA, we will maintain strict confidentiality about certain types of information regarding historic properties.

*Mailing Address:*  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT MANAGEMENT UNIT  
1595 MAIL SERVICE CENTER  
RALEIGH, NC 27699

*Telephone:* (704) 982-3146  
*NDOT Customer Service:* 1-877-368-4968  
*Website:* [www.ncdot.gov](http://www.ncdot.gov)

*Location:*  
1000 BIRCH RIDGE DRIVE  
RALEIGH, NC 27610



Please respond by September 14, 2023 so that your comments can be used in the scoping of this project. If you have any questions concerning this project, or would like any additional information, please contact me at [afoster@ncdot.gov](mailto:afoster@ncdot.gov) or (919) 707-6239

Thank you,

DocuSigned by:

Alexander J. Foster

BDDCAC2122684EB...  
Alex Foster, PE

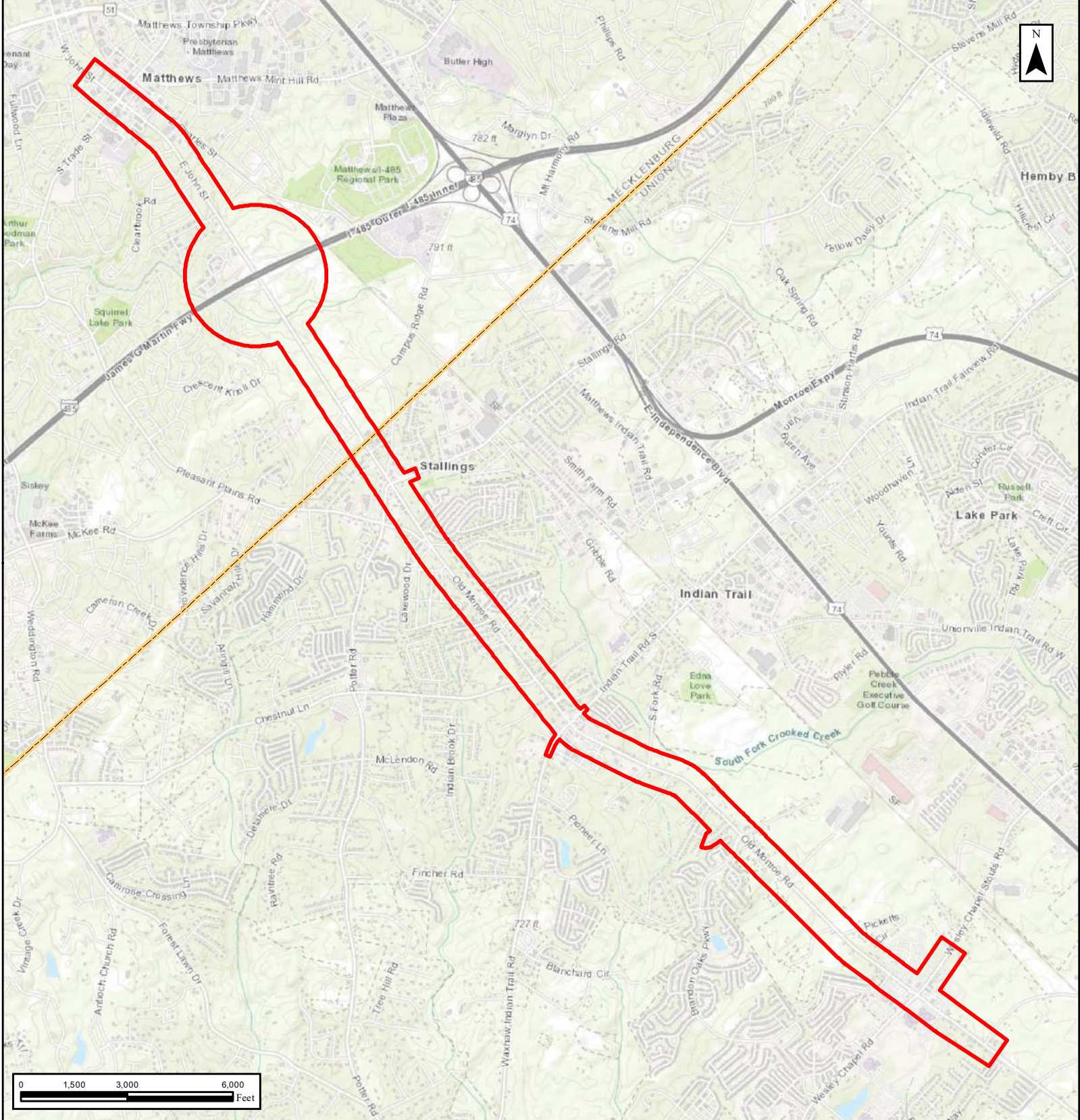
Senior Project Manager

cc: Matt Wilkerson, NCDOT Archaeology Team Leader

*Mailing Address:*  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT MANAGEMENT UNIT  
1595 MAIL SERVICE CENTER  
RALEIGH, NC 27699

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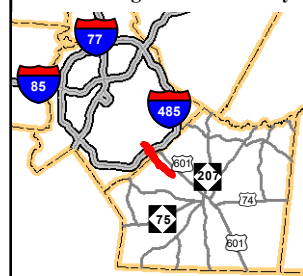
*Location:*  
1000 BIRCH RIDGE DRIVE  
RALEIGH, NC 27610



# Legend

- Study Area (1110 Acres)
- County Boundary

## Mecklenburg & Union County



Sources: Union County GIS, NC One Map, & Google Earth

**U-4714 AC and B  
Roadway Widening  
East John St &  
Old Monroe Road,  
Mecklenburg &  
Union County,  
North Carolina**

**August 2023**

**Vicinity Map**



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

August 5, 2014

Ramona Bartos, Administrator  
State Historic Preservation Office  
Deputy State Historic Preservation Officer  
4617 Mail Service Center  
Raleigh, NC 27699-4617

RE: John Street/Old Monroe Road Widening, Mecklenburg and Union Counties, TIP# U-4714, ER 13-0879

Ms. Bartos,

Thank you for your correspondence of May 17, 2013 regarding the above-mentioned project. In response to comments provided by the Office of State Archaeology (OSA), consultation was held on Tuesday, August 5, 2014, between Paul J. Mohler (NCDOT Archaeologist) and John Mintz (OSA) to review and discuss preliminary design plans for the widening of SR 1009 (John Street/Old Monroe Road) from its intersection with Freemont Street in the Town of Matthews, Mecklenburg County, to its intersection with SR 1377 (Wesley Chapel/Stouts Road) in Union County.

Based on the mapping provided at this meeting as well as a thorough review of soil/landscape conditions, current commercial and residential development, previous archaeological survey results, and the nature and extent of the proposed project, it was determined that the project corridor, as depicted, is unlikely to contain intact and significant archaeological resources. Therefore, OSA does not recommend an archaeological survey be conducted for this project. However, if design plans change, then additional consultation regarding archaeology will be required.

Thank you for your assistance in this matter. If you have any questions concerning this project, please contact me at (919) 707-6089 or Mr. Paul J. Mohler, NCDOT Archaeologist, at (919) 707-6080.

Sincerely,

Matt Wilkerson  
Archaeology Supervisor  
Human Environment Section

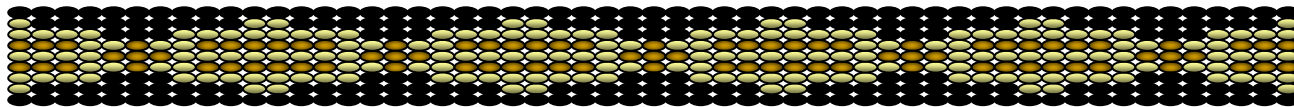
MTW/pjm

cc: Elmo Vance, PDEA  
Paul J. Mohler, Archaeology



Catawba Indian Nation  
Tribal Historic Preservation Office  
1536 Tom Steven Road  
Rock Hill, South Carolina 29730

Office 803-328-2427  
Fax 803-328-5791



September 15, 2023

Attention: Alex Foster  
NC Dept. of Transportation  
1595 Mail Service Center  
Raleigh, NC 27699

Re. THPO #	TCNS #	Project Description
2023-193-219		Proposes to widen 6.5 miles of the existing two-lane East John Street-Old Monroe Road to a multi lane facility from Trade Street in the Town of Matthews U-4714AC & B

Dear Mr. Foster,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-7369, or e-mail [Caitlin.Rogers@catawba.com](mailto:Caitlin.Rogers@catawba.com).

Sincerely,

Wenonah G. Haire  
Tribal Historic Preservation Officer

# NEPA/SEPA Document

EA/FONSI available upon request