



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

February 1, 2024

MEMORANDUM TO: Division Environmental and Construction Units

FROM: *mat* Michael A. Turchy, ECAP Group Leader
Environmental Analysis Unit

SUBJECT: Environmental Permits for the Widening of East John Street – Old Monroe Road in Mecklenburg and Union County, Division 10, **TIP: U-4714.**

Please find enclosed the following permits for this project:

Agency	Permit Type	Permit Expiration
US Army Corps of Engineers Section 404 Clean Water Act Permit	Regional General Permit 50	May 25, 2025
NC Division of Water Resources Section 401 Water Quality Certification	General Certification No. 4135 [RGP50]	May 25, 2025

Work is authorized by the above referenced permit provided it is accomplished in strict accordance with the permitted plans.

The Environmental Coordination and Permitting Group or the Division Environmental Office must be consulted if any deviation from the permit(s) or accompanying drawings is required.

The General Conditions and Certifications for Nationwide and Regional Permits can be referenced at:
https://xfer.services.ncdot.gov/pdea/PermIssued/_General_Conditions_and_Certifications/

PROJECT COMMITMENTS

T.I.P Project No. U-4714
East John Street – Old Monroe Road (SR 1009) Widening
from Trade Street (SR-3448/SR-3474) to east of SR 1377 (Wesley Chapel-Stouts Road)
Mecklenburg and Union County
WBS Element 39078.1.2 & 39078.1.6

U-4714 - COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Traffic and Transportation – Division 10, Roadway Design

NCDOT's Division 10 Traffic Engineer will coordinate with the communities during final project design to determine posted speed limits and will continue to look for ways to reduce impacts where feasible through final design.

Bicycle/Pedestrian – Division 10, PMU, Roadway Design, Bike and Ped

NCDOT Division 10/Project Management Unit (PMU)/Roadway Design Unit/Division of Bicycle and Pedestrian Transportation will ensure that landscaping and pedestrian and bicycle accommodations will be further coordinated with the communities during final design. The Towns of Matthews, Stallings, and Indian Trail will participate in the cost of new sidewalks and multi-use paths where they do not currently exist. Municipal Agreements will be prepared prior to project construction to formalize their financial obligations in regard to sidewalk and multi-use path construction. NCDOT Division 10/Project Management Unit/Roadway Design Unit/ Division of Bicycle and Pedestrian Transportation will coordinate with the Towns of Matthews, Stallings, and Indian Trail regarding the type and location of pedestrian/bicycle crossings at major intersections.

Community Resources – Division 10, PMU, Roadway Design

NCDOT Division 10/Project Management Unit/Roadway Design Unit will continue to minimize impacts to the extent feasible during final design. NCDOT's Project Management Unit and Division 10 will coordinate with schools and fire/EMS on any detours during construction. Specifically, appropriate detour routes will be identified for Sun Valley school buses, Stallings Volunteer Fire Station 20 (4616 Old Monroe Road), and Union County MED 51 Base (100 Williams Rescue Road) prior to construction.

Relocations and Property Acquisitions – Division 10, PMU, Roadway Design, ROW

NCDOT Division 10/Project Management Unit/Roadway Design Unit will continue to minimize impacts to the extent feasible during final design. NCDOT's Right of Way (ROW) Unit will use three programs to minimize the inconvenience of relocation: Relocation Assistance, Relocation Moving Payments, and Relocation Replacement Housing Payments or Rent Supplement. These programs are in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. Comparable replacement housing and business space is available in the Project area for displaced homeowners, tenants, and businesses.

Noise – Division 10

Division 10 and the contractor will be responsible for ensuring that low cost and easily implemented construction noise control measures will be incorporated during construction to the extent practicable.

Utilities

NCDOT's Utilities Unit will coordinate with all utility providers during final design and construction to prevent damage to utility systems and to minimize disruption and degradation of utility service to local customers.

Hazardous Materials – Geoenvironmental

NCDOT's Geoenvironmental Unit will complete further assessments on properties as necessary prior to right of way acquisition.

Floodplains and Floodways and Hydrology – Hydraulics

NCDOT's 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, NCDOT Division 10 shall submit sealed as-built construction plans to NCDOT's 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.

Cultural Resources – PMU, EAU

NCDOT's Project Management Unit and NCDOT's Environmental Analysis Unit (EAU) will review final plans to ensure the following applicable conditions are met to maintain the No Adverse Effect determinations:

Reid House

- No construction in right-of-way
- No drainage easements
- No permanent utility easements
- Only replace curb and gutter
- Keep existing sidewalk
- No tree removal

Banks H Funderburk Store (a.k.a. Rock Store Bar-B-Q)

- No right-of-way
- No permanent drainage easements

Banks and Carolyn Funderburk House

- No right-of-way
- No easements
- Minimize tree removal
- No permanent utility easements
- No permanent drainage easements

Section 4(f) – Division 10, PMU, Roadway Design

NCDOT Division 10/Project Management Unit/Roadway Design Unit will ensure that final design and construction within Section A shall avoid any impacts to the Four Mile Creek Greenway entrance on East John Street west of the I-485 interchange.

U-4714 - COMMITMENTS FROM PERMITTING

404 Special Condition #3: The permittee agrees to implement the follow conservation measures for the NCDOT U-4714, East John Street-Old Monroe Road (SR 1009) widening project in Mecklenburg and Union Counties:

- a. Tree clearing will take place from October 16 to March 31.
- b. Culvert structures > 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.
- c. Blasting and other percussive activities will occur after tree clearing has occurred.
- d. 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.
- e. No additional permanent lighting will be added to the roadway.

404 Special Condition #5: This permit only authorizes work on Sections AC and B of TIP U-4714. Construction on Sections AA of TIP U-4714 shall not commence until all the following occur: (a) final design has been completed for this section and submitted to the U.S. Army Corps of Engineers (Corps); (b) the Permittee has minimized impacts to waters and wetlands to the maximum extent practicable and the Corps concurs with this assessment; (c) any modification to the plans have been approved by the Corps in writing; and (d) a final compensatory mitigation plan has been submitted by the Permittee and approved by the Corps.

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action Id. SAW-2013-01090

County: Mecklenburg & Union

U.S.G.S. Quad: NC-Matthews

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Permittee: North Carolina Department of Transportation

attn: Ms. Erin Cheely

Address: 1598 Mail Service Road

Raleigh, North Carolina 27699-1598

Telephone Number: (919) 707-6008

E-mail: ekcheely@ncdot.gov

Size (acres) approximately 235 acres

Nearest Waterway Price Mill Creek

USGS HUC 03050103

Nearest Town Indian Trail

River Basin Santee

Coordinates Latitude: 35.059718

Longitude: -80.662431

Location description: The NCDOT U-4714 project is located along an approximately 6.5-mile-long segment of the existing East John Street-Old Monroe Road (SR 1009) corridor from its intersection with Trade Street (SR 3448/3474) in Matthews, Mecklenburg County to its intersection with Wesley Chapel-Stouts Road (SR 1337) in Indian Trail, Union County, North Carolina.

Description of projects area and activity: This verification authorizes the widening the existing two lane East John Street-Old Monroe Road (SR 1009) along U-4714 AC which includes widening of East John Street-Old Monroe Road (SR 1009) from East I-485 to a location west of Morningside Meadow Lane and U-4714 B which includes widening of East John Street-Old Monroe Road (SR 1009) from a location west of Morningside Meadow Lane to a location east of Wesley Chapel-Stouts Road (SR 1337).

Within the U-4714 project is Section U-4714AA which is a future (currently unfunded) section that includes widening East John Street-Old Monroe Road (SR 1009) from Trade Street (SR 3448/3474) to I-485. This authorization includes plans and preliminary impacts for U-4714 AA. However, impacts within Section U-4714 AA are not authorized by this RGP-50 and if NCDOT receives funding for this section and develops final designs for this section, NCDOT will apply for authorization for U-4714 AA section and will provide mitigation for permanent impacts that result in loss of waters within this section. This U-4714 project will include the following impacts (broken out by separate sections):

Section U-4714-AC

<u>Site ID #</u>	<u>Wetland Impact Temp.</u> <u>(ac)</u>	<u>Wetland Impact Perm.</u> <u>(ac)</u>	<u>Stream Impact Temp.</u> <u>(lf)</u>	<u>Stream Impact Perm.</u> <u>(lf)</u>
<u>Site #1, twin cell 5 x 6 RCBC extension</u>			<u>37</u>	<u>96</u>
<u>Site #1b & #1c Inlet & outlet channel protection (total)</u>				<u>81</u>
<u>Site #2a, Roadway fill</u>			<u>8</u>	<u>395</u>
<u>Site #2b RCP outlet and dewatering (Open Water)</u>	<u>1.07 ac Open Water dewatering</u>	<u>0.01 ac Open Water</u>		
<u>Site #3a, 60" diameter pipe</u>				<u>138</u>
<u>Site #3b & #3c Inlet & outlet protection (total)</u>			<u>25</u>	<u>79</u>
<u>Site #4a, 42" diameter pipe</u>			<u>14</u>	<u>27</u>
<u>Site #4b Outlet protection</u>				<u>31</u>

<u>Site ID #</u>	<u>Wetland Impact Temp. (ac)</u>	<u>Wetland Impact Perm. (ac)</u>	<u>Stream Impact Temp. (lf)</u>	<u>Stream Impact Perm. (lf)</u>
<u>Site #5, Roadway fill</u>		<u>0.03</u>		
<u>Site #6a, Roadway fill</u>				<u>28</u>
<u>Site #6b cut/fill</u>			<u>9</u>	<u>42</u>
<u>Site #7, Roadway fill</u>		<u>0.28 fill & <0.01 mechanical clearing</u>		
<u>Site #8</u>	<u>0.03 hand clearing</u>	<u><0.01 mechanical clearing</u>		
<u>Site #9</u>		<u>0.02 fill & <0.01 mechanical clearing</u>		
<u>TOTAL IMPACTS</u>	<u>1.07 Open water 0.03 wetlands</u>	<u>0.01 Open Water 0.34 wetlands</u>	<u>93</u>	<u>917 total</u>
<u>Total loss of waters of the U.S. (wetlands)</u>	<u>0.34</u>		<u>Total loss of waters of the U.S. (stream)</u>	<u>881</u>
<u>Required Wetland Mitigation (ac)</u>	<u>0.34</u>		<u>Required Stream Mitigation (lf)</u>	<u>881</u>

Section U-4714 B (including utilities)

<u>Site ID #</u>	<u>Wetland Impact Temp. (ac)</u>	<u>Wetland Impact Perm. (ac)</u>	<u>Stream Impact Temp. (lf)</u>	<u>Stream Impact Perm. (lf)</u>
<u>Utility site #1, water line relocation</u>	<u>0.002</u>			
<u>Utility site #2, water line relocation</u>	<u>0.001</u>			
<u>Utility site #3, water line relocation</u>	<u>0.002</u>			
<u>Utility site #4, water line relocation</u>	<u>0.001</u>			
<u>Site #1, 72" diameter pipe</u>			<u>88</u>	<u>235</u>
<u>Site #2, 24" diameter pipe</u>			<u>23</u>	<u>73</u>
<u>Site #3a & #3b, 6' x 6' RCBC</u>			<u>112</u>	<u>172</u>
<u>Site #3c, Outlet protection</u>	<u>0.063 hand clearing</u>	<u><0.01 fill</u>		
<u>Site #4, 36" diameter RCP</u>		<u>0.036 total</u>	<u>18</u>	
<u>Site #5 armoring</u>				<u>28</u>
<u>TOTAL IMPACTS</u>	<u>0.069</u>	<u>0.04</u>	<u>241</u>	<u>508</u>
<u>Total loss of waters of the U.S. (wetlands)</u>	<u>0.04</u>		<u>Total loss of waters of the U.S. (stream)</u>	<u>508</u>
<u>Required Wetland Mitigation (ac)</u>	<u>0.04</u>		<u>Required Stream Mitigation (lf)</u>	<u>508</u>

Section Future U-4714 AA (preliminary impacts)

<u>Site ID #</u>	<u>Wetland Impact Temp.</u> (ac)	<u>Wetland Impact Perm.</u> (ac)	<u>Stream Impact Temp.</u> (lf)	<u>Stream Impact Perm.</u> (lf)
U-4714 AA			61	223
TOTAL IMPACTS	0	0	61	223
<u>Total loss of waters of the U.S. (wetlands)</u>	0		<u>Total loss of waters of the U.S. (stream)</u>	223
<u>Required Wetland Mitigation (ac)</u>			<u>Required Stream Mitigation (lf)</u>	

This project U-4714 (all sections) will include a total of 2,043 linear feet (lf) both permanent and temporary impacts to streams. This includes permanent placement of fill/structures in 1,648 lf of streams and temporary impacts to 395 of streams from dewatering activities. In addition, this project will include the placement of fill/cut/mechanical clearing of 0.38 ac of wetland, temporary impacts from hand clearing/utility placement of 0.099 acres of wetland, dewatering of 1.07 acre of an impoundment and placement of fill in 0.03 acre of an impoundment.

This authorization specifically includes the construction of U-4714 AC and U-4714B only. These sections will include the authorization of the impacts for Sections U-4714 AC and U-4714 B, the permanent loss of waters (streams and wetlands), and the requirement of compensatory stream and wetland mitigation for these sections.

Applicable Law(s): ☒ Section 404 (Clean Water Act, 33 USC 1344)
☐ Section 10 (Rivers and Harbors Act, 33 USC 403)

Authorization: **Regional General Permit (RGP)-50**

SEE ATTACHED NWP GENERAL, REGIONAL, AND/OR SPECIAL CONDITIONS

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached Conditions, your application signed and dated 11/16/2023, and the enclosed Plan Sheets 1-29 of 29 entitled, "NCDOT TIP Project U714 AC" dated October 24, 2023, Plan Sheets 1-16 of 16 entitled, "NCDOT TIP Project U-4714B" dated September 12, 2023, Plan Sheets 1-3 of 3 entitled, "NCDOT TIP Project U-4714B, water line relocation" dated June 8, 2023, and Plan Sheets 1-15 of 15 entitled, "NCDOT TIP Project U-4714AA" dated August 3, 2023. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order, a Class I administrative penalty, and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide and/or regional general permit authorization is modified, suspended, or revoked. If, prior to the expiration date identified below, the nationwide and/or regional general permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide permit. If the nationwide and/or regional general permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide and/or regional general permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide and/or regional general permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Resources (telephone 919-807-6300) to determine Section 401 requirements.

For activities occurring within the twenty coastal counties subject to regulation under the Coastal Area Management Act (CAMA), prior to beginning work you must contact the N.C. Division of Coastal Management **Morehead City, NC, at (252) 808-2808.**

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State, or local approvals/permits. If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact **Stephen A. Brumagin** at **(704) 798 6471** or **stephen.a.brumagin@usace.army.mil**.

Corps Regulatory Official: Monte Matthews 2024.01.19 14:31:13 -05'00' Date: 1/19/2024
Expiration Date of Verification: 5/25/2025

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

Attachments

Plans

Exhibit A, Concurrence Form for Assessment of Affect

401 WQC GC# 4135

RGP-50

Copy furnished:

North Carolina Department of Transportation, Division 10

Mr. Joel Howard, PDEA

jmhoward@ncdot.gov

SPECIAL CONDITIONS

1. All work must be performed in strict compliance with (a) the description of work in the PCN and (b) the Wetlands and Surface Water Impact Permit Drawing(s) (Permit Plans) in the application dated November 16, 2023. Any modification to the description of work and/or the permit plans must be approved by the USACE prior to implementation.
2. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this authorization letter in the construction and maintenance of this project and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this authorization letter, all conditions, and any authorized modifications. A copy of this authorization letter, all conditions, and any authorized modifications, shall be available at the project site during construction and maintenance of this project.
3. The permittee agrees to implement the follow conservation measures for the NCDOT U-4714, East John Street-Old Monroe Road (SR 1009) widening projec in Mecklenburg and Union Counties:
 - a. Tree clearing will take place from October 16 to March 31.
 - b. Culvert structures > 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.
 - c. Blasting and other percussive activities will occur after tree clearing has occurred.
 - d. 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.
 - e. No additional permanent lighting will be added to the roadway.
4. In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Forms. The requirements of these forms, including any special conditions listed on these forms, are hereby incorporated as special conditions of this permit authorization.
5. This permit only authorizes work on Sections AC and B of TIP U-4714. Construction on Sections AA of TIP U-4714 shall not commence until all the following occur: (a) final design has been completed for this section and submitted to the U.S. Army Corps of Engineers (Corps); (b) the Permittee has minimized impacts to waters and wetlands to the maximum extent practicable and the Corps concurs with this assessment; (c) any modification to the plans have been approved by the Corps in writing; and (d) a final compensatory mitigation plan has been submitted by the Permittee and approved by the Corps.
6. NCDOT shall abide by all stipulations identified in the Concurrence Form for Assessment Affects between the NCDOT, FHWA and the North Carolina State Historic Preservation Officer, executed on October 20, 2015, copy attached and identified as Exhibit A.

Action ID Number: SAW-2013-01090

County: Mecklenburg & Union

Permittee: North Carolina Department of Transportation, attn: Ms. Erin Cheely

Project Name: NCDOT U-4714 AC & U-4714 B, East John Street-Old Monroe Road (SR 1009) widening project in Mecklenburg and Union Counties

Date Verification Issued: 1/19/2024

Project Manager: Stephen A. Brumagin

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification, and return it to the following address:

US ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
Attn: Stephen A. Brumagin
Charlotte Regulatory Office
U.S Army Corps of Engineers
8430 University Executive Park Drive, Suite 615
Charlotte, North Carolina 28262
or
stephen.a.brumagin@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying, or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

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 Oct 20, 2015
Representative, NCDOT Date

John P. [Signature] 10-20-15
FHWA, for the Division Administrator, or other Federal Agency Date

Renee Hedrick-Easley 10.20.15
Representative, HPO Date

State Historic Preservation Officer Date

County: Mecklenburg & Union

TIP#: U-4714

Federal Aid #: STPDA-1009(16)

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	outside construction area
Banks H. Funderburk Store (UN0125) DE, LL		no adverse effect with conditions	right in, right out; no construction in boundary may remove 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):

U.S. ARMY CORPS OF ENGINEERS
Wilmington District
Compensatory Mitigation Responsibility Transfer Form

Permittee: North Carolina Department of Transportation, Ms. Erin Cheely
Project Name: NCDOT U-4714AC

Action ID: SAW-2013-01090
County: Mecklenburg & Union

Instructions to Permittee: The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that Wilmington District Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one Mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate Mitigation Sponsors.

Instructions to Sponsor: The Sponsor verifies that the mitigation requirements (credits) shown below have been released and are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated ledger to the Permittee, the Project Manager who issued the permit, the Bank Project Manager, and the District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements:

Permitted Impacts Requiring Mitigation*			8-digit HUC and Basin: 03050103, Catawba River Basin			
Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
811			0.03			

*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

Compensatory Mitigation Requirements: 8-digit HUC and Basin: 03050103, Catawba River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
1,622			0.06			

Mitigation Site Debited: NCDMS

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

Section to be completed by the Mitigation Sponsor

Statement of Mitigation Liability Acceptance: I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCDMS), as approved by the Wilmington District, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

Mitigation Sponsor Name: NCDEQ - DMS

Name of Sponsor's Authorized Representative: Beth Harmon

Elizabeth Harmon

Signature of Sponsor's Authorized Representative

01/23/2024

Date of Signature

Conditions for Transfer of Compensatory Mitigation Credit:


- Once this document has been signed by the Mitigation Sponsor and the District is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the District is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. When NCDMS provides mitigation for authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by NCDMS must be provided to the District within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the District has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the District Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the District, the Sponsor must obtain case-by-case approval from the District Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the District administrative records for both the permit and the Bank/ILF Instrument.

Comments/Additional Conditions: NCDMS approved impacts for NCDOT U-4714AC in Catawba River Basin on November 9, 2023.

This form is not valid unless signed below by the District Project Manager and by the Mitigation Sponsor on Page 1. ***Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the District Project Manager at the address below, 3) the Bank Manager listed in RIBITS, and 4) the Wilmington District Mitigation Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587 (or by email to SAWMIT@usace.army.mil).***

Questions regarding this form or any of the permit conditions may be directed to the District Mitigation Office.

USACE Project Manager: Stephen A. Brumagin
USACE Field Office: Charlotte Regulatory Office
US Army Corps of Engineers
8430 University Executive Park Drive, Suite 615
Charlotte, North Carolina 28262
Email: stephen.a.brumagin@usace.army.mil



Digitally signed by
BRUMAGIN.STEPHEN.A.1283520
737
Date: 2024.02.05 11:34:52 -05'00'

USACE Project Manager Signature

2/5/2024

Date of Signature

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>.

U.S. ARMY CORPS OF ENGINEERS
Wilmington District
Compensatory Mitigation Responsibility Transfer Form

Permittee: North Carolina Department of Transportation, Ms. Erin Cheely
Project Name: NCDOT U-4714AC

Action ID: SAW-2013-01090
County: Mecklenburg & Union

Instructions to Permittee: The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that Wilmington District Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one Mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate Mitigation Sponsors.

Instructions to Sponsor: The Sponsor verifies that the mitigation requirements (credits) shown below have been released and are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated ledger to the Permittee, the Project Manager who issued the permit, the Bank Project Manager, and the District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements:

Permitted Impacts Requiring Mitigation*			8-digit HUC and Basin: 03040105, Yadkin River Basin			
Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
70			0.31			

*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

Compensatory Mitigation Requirements:			8-digit HUC and Basin: 03040105, Yadkin River Basin			
Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
140			0.62			

Mitigation Site Debited: NCDMS

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

Section to be completed by the Mitigation Sponsor

Statement of Mitigation Liability Acceptance: I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCDMS), as approved by the Wilmington District, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

Mitigation Sponsor Name: NCDEQ - DMS

Name of Sponsor's Authorized Representative: Beth Harmon


Signature of Sponsor's Authorized Representative

01/23/2024
Date of Signature

Conditions for Transfer of Compensatory Mitigation Credit:

- Once this document has been signed by the Mitigation Sponsor and the District is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the District is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. When NCDMS provides mitigation for authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by NCDMS must be provided to the District within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the District has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the District Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the District, the Sponsor must obtain case-by-case approval from the District Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the District administrative records for both the permit and the Bank/ILF Instrument.

Comments/Additional Conditions: NCDMS approved impacts for NCDOT U-4714AC in Yadkin River Basin on November 9, 2023.

This form is not valid unless signed below by the District Project Manager and by the Mitigation Sponsor on Page 1. ***Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the District Project Manager at the address below, 3) the Bank Manager listed in RIBITS, and 4) the Wilmington District Mitigation Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587 (or by email to SAWMIT@usace.army.mil).***

Questions regarding this form or any of the permit conditions may be directed to the District Mitigation Office.

USACE Project Manager: Stephen A. Brumagin
USACE Field Office: Charlotte Regulatory Office
US Army Corps of Engineers
8430 University Executive Park Drive, Suite 615
Charlotte, North Carolina 28262

Email: stephen.a.brumagin@usace.army.mil



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Date: 2024.02.05 11:32:02
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USACE Project Manager Signature

2/5/2024

Date of Signature

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>.

U.S. ARMY CORPS OF ENGINEERS
Wilmington District
Compensatory Mitigation Responsibility Transfer Form

Permittee: North Carolina Department of Transportation, Ms. Erin Cheely
Project Name: NCDOT U-4714B

Action ID: SAW-2013-01090
County: Mecklenburg & Union

Instructions to Permittee: The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that Wilmington District Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one Mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate Mitigation Sponsors.

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Permitted Impacts and Compensatory Mitigation Requirements:

Permitted Impacts Requiring Mitigation*			8-digit HUC and Basin: 03050103, Catawba River Basin			
Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
480						

*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

Compensatory Mitigation Requirements: 8-digit HUC and Basin: 03050103, Catawba River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
960						

Mitigation Site Debited: NCDMS

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

Section to be completed by the Mitigation Sponsor

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Mitigation Sponsor Name: NCDEQ - DMS

Name of Sponsor's Authorized Representative: Beth Harmon

Elizabeth Harmon

Signature of Sponsor's Authorized Representative

01/23/2024

Date of Signature

Conditions for Transfer of Compensatory Mitigation Credit:

- Once this document has been signed by the Mitigation Sponsor and the District is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
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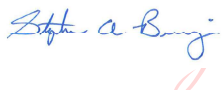
Comments/Additional Conditions: NCDMS approved impacts for NCDOT U-4714B in Catawba River Basin on November 9, 2023.

This form is not valid unless signed below by the District Project Manager and by the Mitigation Sponsor on Page 1. ***Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the District Project Manager at the address below, 3) the Bank Manager listed in RIBITS, and 4) the Wilmington District Mitigation Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587 (or by email to SAWMIT@usace.army.mil).***

Questions regarding this form or any of the permit conditions may be directed to the District Mitigation Office.

USACE Project Manager: Stephen A. Brumagin
USACE Field Office: Charlotte Regulatory Office
US Army Corps of Engineers
8430 University Executive Park Drive, Suite 615
Charlotte, North Carolina 28262

Email: stephen.a.brumagin@usace.army.mil


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Date: 2024.02.05 11:29:15
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USACE Project Manager Signature

2/5/2024

Date of Signature

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U.S. ARMY CORPS OF ENGINEERS
Wilmington District
Compensatory Mitigation Responsibility Transfer Form

Permittee: North Carolina Department of Transportation, Ms. Erin Cheely
Project Name: NCDOT U-4714B

Action ID: SAW-2013-01090
County: Mecklenburg & Union

Instructions to Permittee: The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that Wilmington District Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one Mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate Mitigation Sponsors.

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Permitted Impacts Requiring Mitigation*			8-digit HUC and Basin: 03040105, Yadkin River Basin			
Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
28			0.04			

*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

Compensatory Mitigation Requirements:			8-digit HUC and Basin: 03040105, Yadkin River Basin			
Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
56			0.08			

Mitigation Site Debited: NCDMS

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

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Name of Sponsor's Authorized Representative: Beth Harmon


Signature of Sponsor's Authorized Representative

01/23/2024
Date of Signature

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Comments/Additional Conditions: NCDMS approved impacts for NCDOT U-4714B in Yadkin River Basin on November 9, 2023.

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USACE Project Manager: Stephen A. Brumagin
USACE Field Office: Charlotte Regulatory Office
US Army Corps of Engineers
8430 University Executive Park Drive, Suite 615
Charlotte, North Carolina 28262
Email: stephen.a.brumagin@usace.army.mil



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Date: 2024.02.05 11:26:18
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USACE Project Manager Signature

2/5/2024

Date of Signature

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>.

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

RICHARD E. ROGERS, JR.
Director



NORTH CAROLINA
Environmental Quality

January 29, 2024
Mecklenburg & Union County
NCDWR Project No. 20231566
TIP- #U-4714
Widen/Improve SR 1168
WBS Element No. 39078.1.1

APPROVAL of 401 WATER QUALITY CERTIFICATION with ADDITIONAL CONDITIONS

Ms. Erin K. Cheely, Environmental Coordinator
NCDOT Western Region
1598 Mail Service Center
Raleigh, NC 27699-1598
EKCheely@NCDOT.gov

Dear Ms. Cheely:

You have our approval, in accordance with your application dated November 16, 2023, and with the conditions listed below, to impact Fourmile Creek, Davis Mine Creek, South Fork of Crooked Creek, and Price Mill Creek as part of a road widening/improvement project on Johns Street/Old Monroe Road (SR 1009). This approval replaces the approval issued to you on January 11, 2024.



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

Stream Impacts (linear feet of fill) in the Catawba River Basin.

Site		Perm. Fill in Perennial Stream (linear ft)		Perm. Fill in Intermittent Stream (linear ft)				Temp. Fill in Perennial Stream (linear ft)		Temp. Fill in Intermittent Stream (linear ft)			Stream Impacts Requiring Mitigation (linear ft)
		Cul vert	Fill	Cul vert	Excavate	Fill	Bank/ Stab.	Cul vert	Fill	Cul vert	Bank / Stab.	Dewater	
1	AC 1A	96	-	-	-	-	-	37	-	-	-	-	96
2	AC 1B	-	43	-	-	-	-	-	-	-	-	-	43
3	AC 1C	-	38	-	-	-	-	-	-	-	-	-	38
4	AC 2A	-	395	-	-	-	-	-	8	-	-	-	395
5	AC 3A	-	-	138	-	-	-	-	-	-	-	-	138
6	AC 3B	-	-	-	43	-	-	-	-	12	-	-	43
7	AC 3C	-	-	-	-	-	36	-	-	-	13	-	-
8	AC 4A	-	-	27	-	-	-	-	-	14	-	-	27
9	AC 4B	-	-	-	-	31	-	-	-	-	-	-	31
10	B1	-	-	-	-	235	-	-	-	-	-	88	235
11	B2	-	-	73	-	-	-	-	-	-	-	23	73
12	B 3A	-	-	10	-	-	-	-	-	-	-	112	10
13	B 3B	-	-	162	-	-	-	-	-	-	-	18	162
Total		96	476	410	43	266	36	37	8	26	13	241	1291
1,652		572		755				45		280			

Total Stream Impacts for Catawba River Basin: 1,652 linear feet.

Stream Impacts (linear feet of fill) in the Yadkin Pee Dee River Basin.

Site		Perm. Fill in Perennial Stream (linear ft)	Perm. Fill in Intermittent Stream (linear ft)	Temp. Fill in Intermittent Stream (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
		Bank/ Stab.	Fill	Excavate	
14	AC 6A	-	28	-	28
15	AC 6B	-	42	9	42
16	B5	28	-	-	28
Totals		28	70	9	98
107					

Total Stream Impacts for Yadkin Pee Dee River Basin: 107 linear feet.

Total Stream Impacts for Project: 1,759 linear feet.



Wetland Impacts in the Catawba River Basin

Site		Permanent Fill (ac)			Temporary Fill (ac)		Wetland Impacts Requiring Mitigation
		Culvert/Pipe	Mech. Clearing	Hand Clearing	Hand Clearing	Line Relocate	
1	B S3C	.001	-	-	.063	-	.001
2	B US 1	-	-	-	-	.002	-
3	B US 2	-	-	-	-	.001	-
4	B US 3	-	-	-	-	.002	-
5	B US 4	-	-	-	-	.001	-
6	AC S8	-	.001	-	.026	-	.001
7	AC S9	-	.003	.021	-	-	.024
Totals		.001	.004	.021	.089	.006	.026
.121		.026			.095		

Total Wetland Impacts for Catawba River Basin: .121**Wetland Impacts in the Yadkin Pee Dee River Basin**

Site		Permanent Fill (ac)			Wetland Impacts Requiring Mitigation
		Culvert/Pipe	Roadway Fill	Mech Clearing	
8	B S4	.036	-	-	.036
9	AC S5	-	.031	-	.031
10	AC S7	-	.277	.009	.286
Totals		.036	.308	.009	-
		.353			.353

Total Wetland Impacts for Yadkin Pee Dee River Basin: .353**Total Wetland Impact for Project: .474 acres.**

Open Water Impacts in the Catawba River Basin

Site		Permanent Fill in Open Waters (ac)	Temporary Fill in Open Waters (ac)	Total Fill in Open Waters (ac)
1	AC 2B	.01	-	.01
2	AC 2B	-	1.07	1.07
Total		.01	1.07	1.08

Total Open Water Impact for Project: 1.08 acres.

After reviewing your application, we have decided that the proposed impacts are covered by General Water Quality Certification (GC) Number 4135. This GC corresponds to US Army Corps of Engineers Regional General Permit 201902350. In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the corresponding 404 permit.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one tenth acre, or of total impacts to streams (now or in the future) exceed 300 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed in the attached certification(s) and any additional conditions listed below.

If you are unable to comply with any of the conditions of the Water Quality General Certification or with the additional conditions, you must notify the DWR Transportation Permitting Branch within 24 hours (or the next business day if a weekend or holiday) from the time the permittee becomes aware of the circumstances.

The permittee shall report to the NC Division of Water Resources any noncompliance with, and/or any violation of, stream or wetland standards [15A NCAC 02B .0200] including but not limited to sediment impacts to streams or wetlands. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the permittee became aware of the non-compliance circumstances.

Condition(s) of Certification:

Project Specific Conditions

1. All work in or adjacent to stream waters shall be conducted per approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual. [15A NCAC 02H.0506(b)(3) and (c)(3)]
2. The post-construction removal of any temporary bridge structures/causeways must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated (where practicable) with appropriate native species. [15A NCAC 02H .0506(b)(2)]
3. Stormwater shall be directed to vegetated buffer areas, grass-lined ditches or other means appropriate within the project area for the purpose of pre-treating storm water runoff prior to discharging directly into streams. (15A NCAC 02B.0224 and .0225)



4. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)].
5. No drill slurry or water that has been in contact with uncured concrete shall be allowed to enter surface waters. This water shall be captured, treated, and disposed of properly. [15A NCAC 02H .0506(b)(3)]

6. Off-Site Stream Mitigation

Compensatory mitigation for 1,389 linear feet of impact to streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Division of Mitigation Service (DMS) (formerly NCEEP), and that the DMS has agreed to implement the mitigation for the project. The DMS has indicated in a letter dated November 9, 2023, that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the DMS Mitigation Banking Instrument signed July 28, 2010.

7. Off-Site Wetland Mitigation

Compensatory mitigation for impacts to .379 riverine wetlands is required. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands through the North Carolina Division of Mitigation Services (DMS) (formerly NCEEP), and that the DMS has agreed to implement the mitigation for the project. DMS has indicated in a letter dated November 9, 2023 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with DMS's Mitigation Banking Instrument signed July 28, 2010.

General Conditions

1. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]
2. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. [15A NCAC 02B.0200]
3. For all streams being impacted due to site dewatering activities, the site shall be graded to its preconstruction contours and revegetated with appropriate native species. [15A NCAC 02H.0506(b)(2)]
4. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]
5. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]
6. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]



7. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
8. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]
9. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]
10. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]
11. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]
12. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
13. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
14. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]
15. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
16. A copy of this Water Quality Certification shall always be maintained on the construction site. In addition, the Water Quality Certification, and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
17. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0501 and .0502]
18. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
19. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer (or appointee) shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]
20. Native riparian vegetation must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction. [15A NCAC 02H.0506(b)(3) and (c)(3)]



21. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities. [15A NCAC 02H.0506(b)(3) and (c)(3)]
22. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices to protect surface waters standards [15A NCAC 02H.0506(b)(3) and (c)(3)]:
 - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
 - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
 - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
 - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
23. Where placement of sediment and erosion control devices in wetlands and/or waters is unavoidable, they shall be removed, and the natural grade restored upon completion of the project. [15A NCAC 02H.0506(b)(3) and (c)(3)]
24. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506 (b)(3) and (c)(3) and 15A NCAC 02B .0200]
25. Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the North Carolina Sediment and Erosion Control Manual, or for linear transportation projects, the NCDOT Sediment and Erosion Control Manual. All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times. For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the North Carolina Surface Mining Manual. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971. If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, Trout, WS-1, WS-11, High Quality Waters (HQW), Outstanding Resource Waters (ORW), or 303(d) Impaired Waters, then the sedimentation and erosion control designs shall comply with the requirements set forth in 15A NCAC 04B .0124, Design Standards in Sensitive Watershed. [15A NCAC 02H.0506(b)(3) and (c)(3); GC 4135]
26. DWR approves the stormwater drainage design as shown in the 401 application, under the assumption that it meets the requirements of the NCDOT NPDES permit #NCS000250. These plans are enforceable by DWR. Changes to the approved plans are prohibited without prior approval from DWR. If sediment or other pollutants are found to be discharged from the stormwater outfalls, DWR may take enforcement action. NCDOT and DWR shall assess the damage to water quality standards and implement an appropriate action plan to address the impacts. The action plan shall provide an appropriate timeline for implementation as agreed upon by both DWR and NCDOT. This may require NCDOT to obtain a modification to its current 401 and 404 permits.



This approval and its conditions are final and binding unless contested [G.S. 143-215.5]. Please be aware that impacting waters without first applying for and securing the issuance of a 401 Water Quality Certification violates Title 15A of the North Carolina Administrative Code (NCAC) 2H .0500. Title 15A NCAC 2H .0500 requires certifications pursuant to Section 401 of the Clean Water Act whenever construction or operation of facilities will result in a discharge into navigable waters, including wetlands, as described in 33 Code of Federal Regulations (CFR) Part 323. It also states any person desiring issuance of the State certification or coverage under a general certification required by Section 401 of the Federal Water Pollution Control Act shall file with the Director of the North Carolina Division of Water Quality. Pursuant to G.S. 143-215.6A, these violations and any future violations are subject to a civil penalty assessment of up to a maximum of \$25,000.00 per day for each violation.

This Certification can be contested as provided in Chapter 150B of the North Carolina General Statutes by filing a Petition for a Contested Case Hearing (Petition) with the North Carolina Office of Administrative Hearings (OAH) within sixty (60) calendar days. Requirements for filing a Petition are set forth in Chapter 150B of the North Carolina General Statutes and Title 26 of the North Carolina Administrative Code. Additional information regarding requirements for filing a Petition and Petition forms may be accessed at <http://www.ncoah.com> or by calling the OAH Clerk's Office at (919) 431-3000.

A party filing a Petition must serve a copy of the Petition on:

William F. Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center
Raleigh, NC 27699-1601

If the party filing the Petition is not the permittee, then the party must also serve the recipient of the Certification in accordance with N.C.G.S 150B-23(a).

This letter completes the review of the Division under section 401 of the Clean Water Act and 15A NCAC 02H .0500. Please contact Mary Plummer at 704-235-2193 or Mary.Plummer@deq.nc.gov if you have any questions or concerns.

Sincerely,
Signed by:

Amy Chapman

4F4DD2F21EA846E...

Richard E. Rogers Jr., Director
Division of Water Resources

Electronic copy only distribution:

Erin Cheely, NCDOT
Michael Turchy, NCDOT
Steve Brumagin, US Army Corps of Engineers, Charlotte Field Office
Rebekah Reid, US Fish and Wildlife Service
David McHenry, NC Wildlife Resources Commission
File Copy



ROY COOPER

Governor

ELIZABETH S. BISER

Secretary

RICHARD E. ROGERS, JR.

Director

NORTH CAROLINA
Environmental Quality

NCDWR Project No.: _____ County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR by the applicant, the applicant's authorized agent, **or** the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Engineer's Certification

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No. _____

Date _____

Completed hard copies can be emailed to kristilynn.carpenter@deq.nc.gov or mailed to:

NCDEQ Transportation Permitting

1617 Mail Service Center

Raleigh NC 27699-1617



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000



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.						

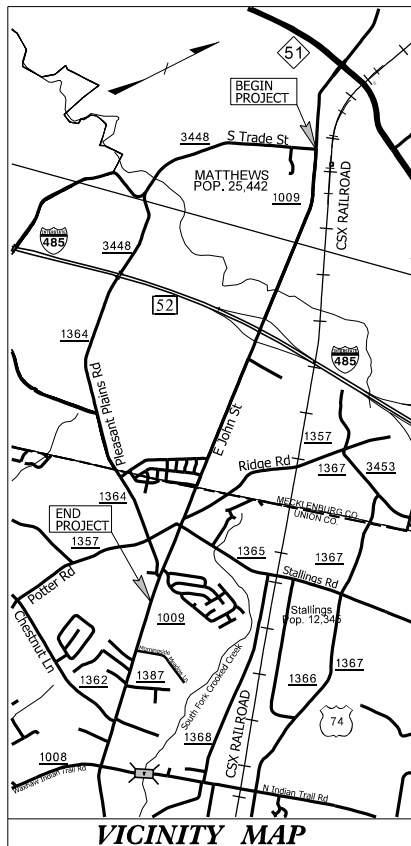
Waterbody Information

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



VICINITY MAP

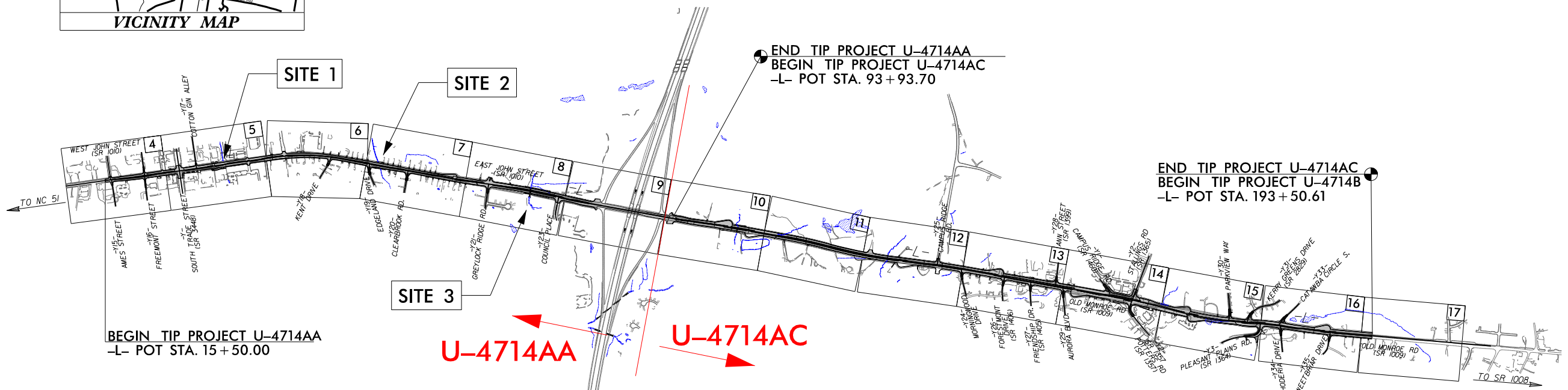
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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)

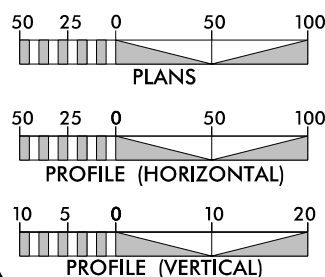
TYPE OF WORK: GRADING, PAVING, AND DRAINAGE

WETLAND AND SURFACE WATER IMPACTS PERMIT



- NOTE:
- THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF MATTHEWS.
 - CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ____.

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:
KCI Associates of N.C., P.A.
4505 Falls of Neuse Road, Suite 400
Raleigh, NC 27609
Phone (919) 783-9214
Fax (919) 783-9266

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

SIGNATURE: P.E.

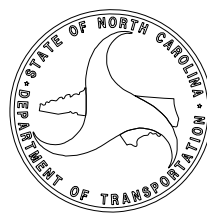
STATE	STATE PROJECT REFERENCE NO.		SHEET NO.	TOTAL SHEETS
N.C.	U-4714AA		1	
STATE PROJ. NO.		F.A. PROJ. NO.	DESCRIPTION	
39078.1.2			P.E.	
25% REVIEW PLANS				

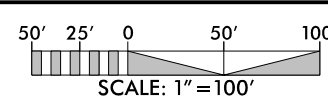
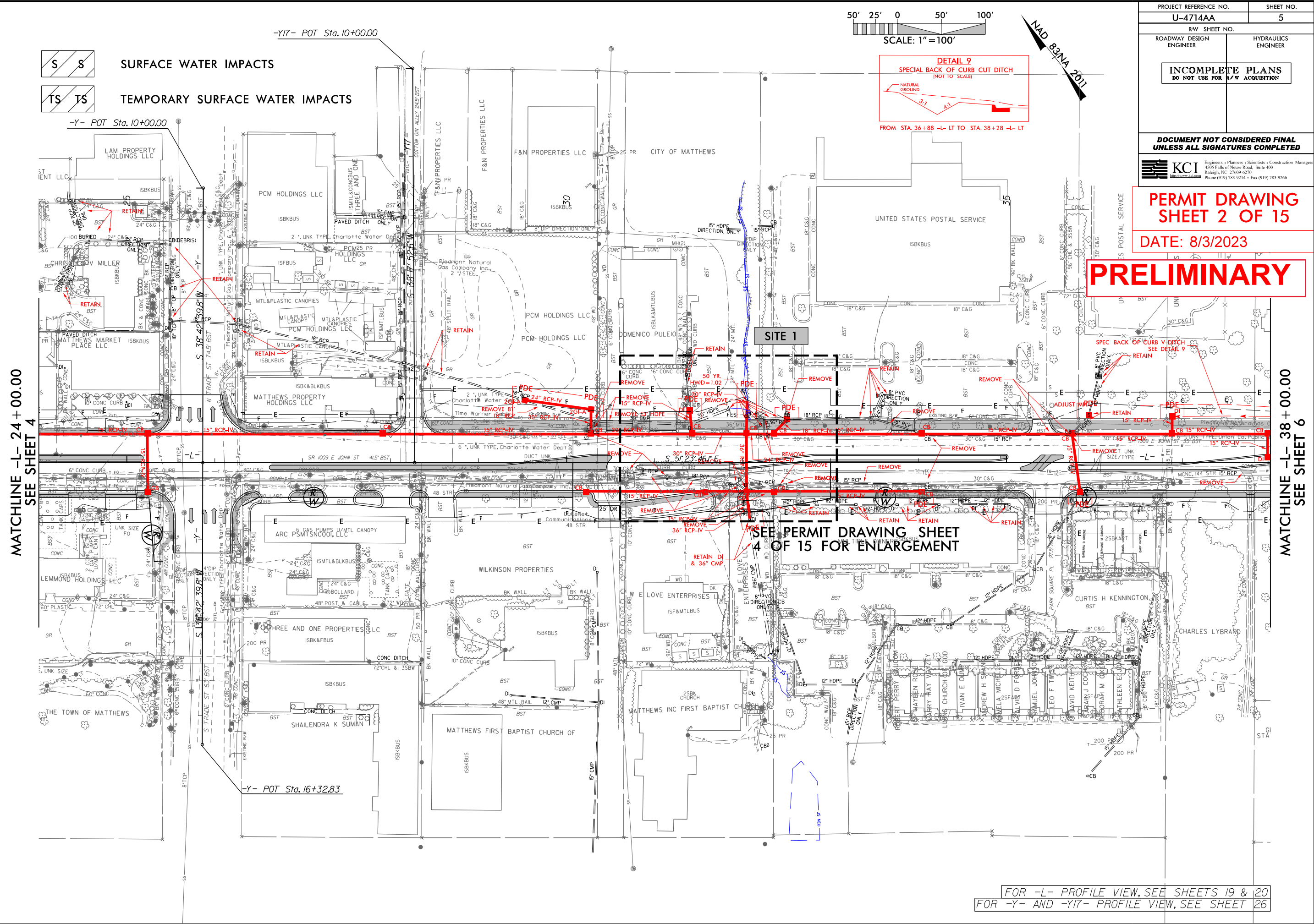
PERMIT DRAWING
SHEET 1 OF 15

DATE: 8/3/2023

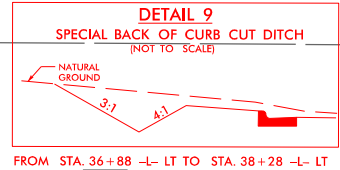
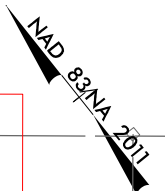
PRELIMINARY

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED






SCALE: 1"=100'



FROM STA. 36+88 -L- LT TO STA. 38+28 -L- LT

PROJECT REFERENCE NO. U-4714AA		SHEET NO. 5
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
 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 2 OF 15
DATE: 8/3/2023

PRELIMINARY

MATCHLINE -L- 24+00.00
SEE SHEET 4

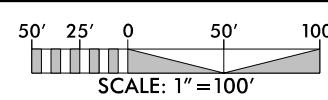
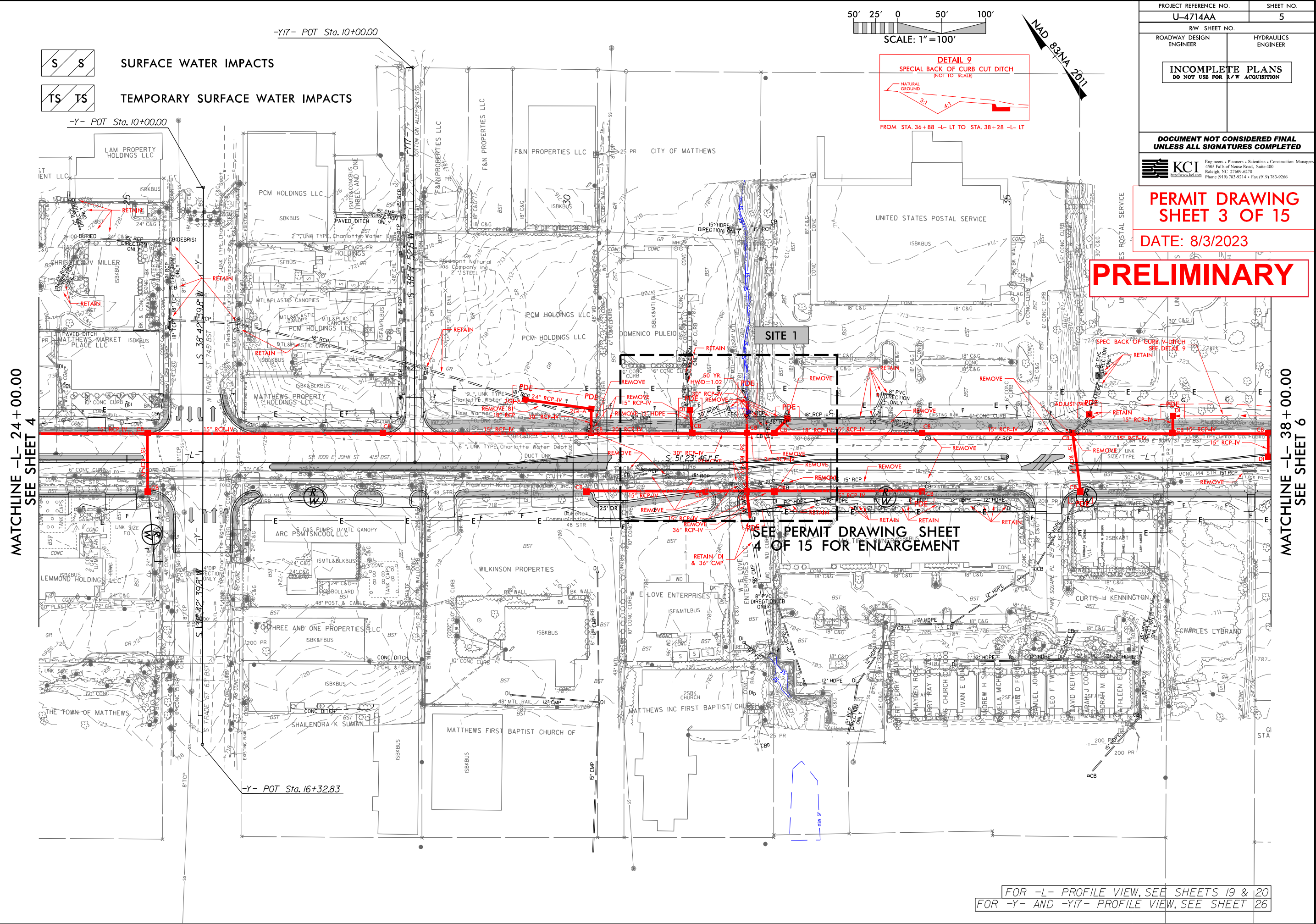
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SEE SHEET 6

SEE PERMIT DRAWING SHEET
4 OF 15 FOR ENLARGEMENT

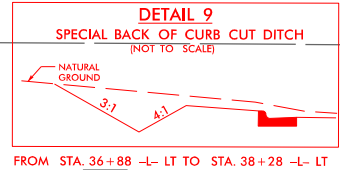
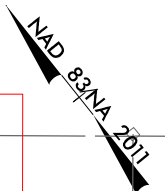
FOR -L- PROFILE VIEW, SEE SHEETS 19 & 20
FOR -Y- AND -Y17- PROFILE VIEW, SEE SHEET 26


8/17/99

8/3/2023
U-4714AA_Hyd.prm_wet.pst.05-1.dgn
in review



SCALE: 1" = 100'



PROJECT REFERENCE NO. U-4714AA		SHEET NO. 5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div style="border: 1px solid black; padding: 10px; text-align: center;">INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</div>			
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 http://www.kci.com	

PERMIT DRAWING
SHEET 3 OF 15
DATE: 8/3/2023

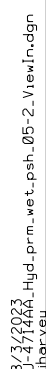
PRELIMINARY

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SEE SHEET 4

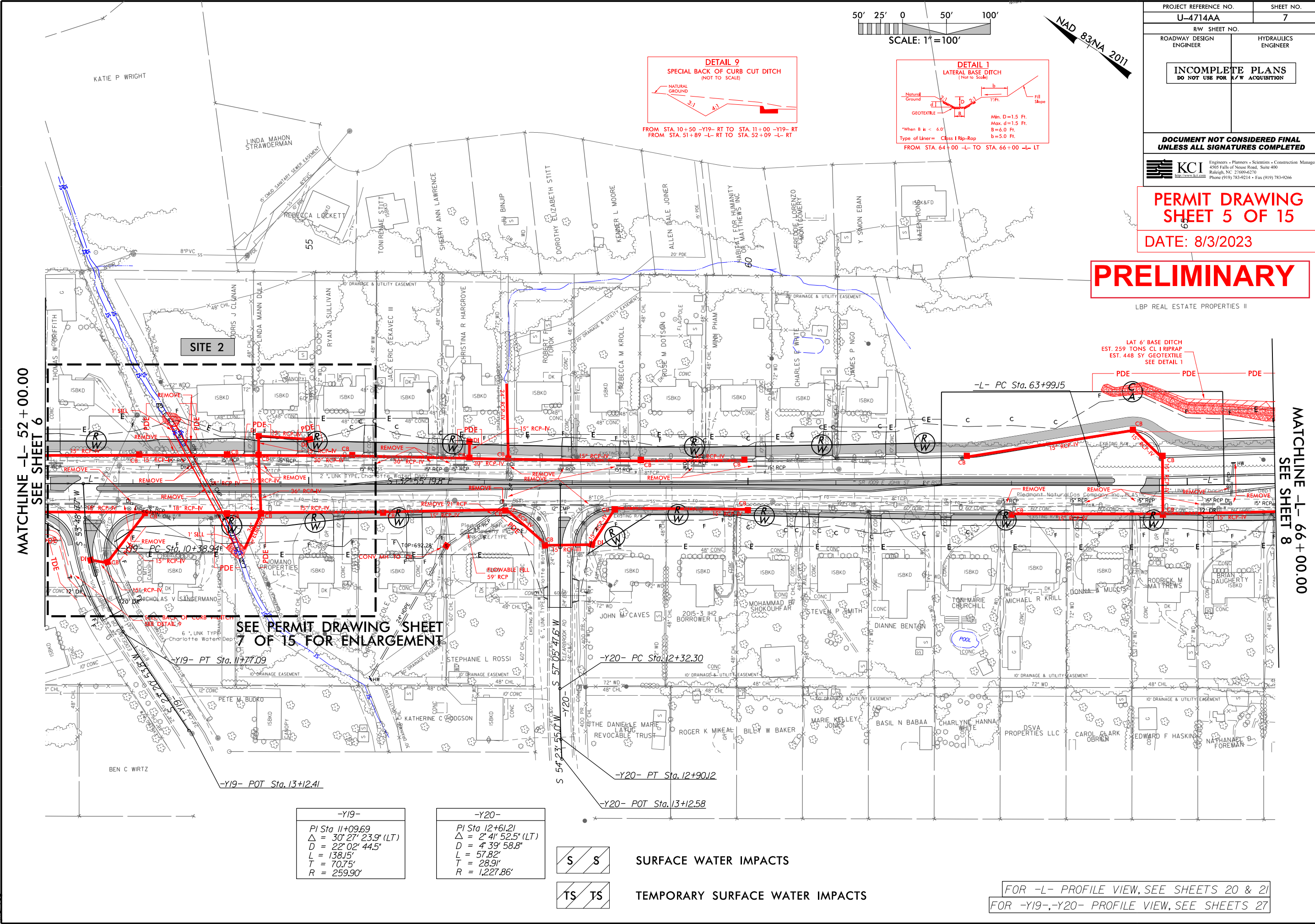
MATCHLINE -L- 38+00.00
SEE SHEET 6

SEE PERMIT DRAWING SHEET
4 OF 15 FOR ENLARGEMENT

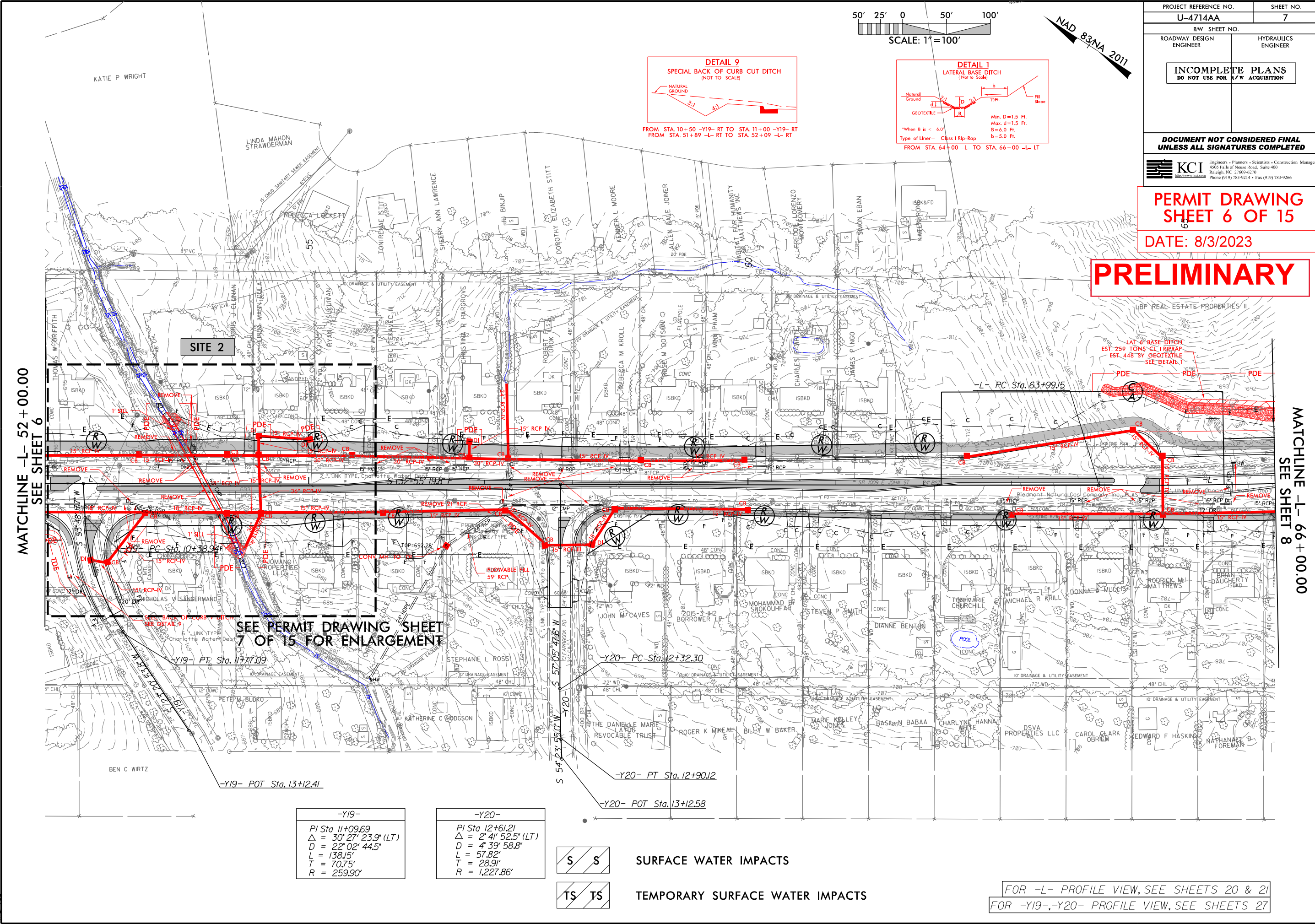
FOR -L- PROFILE VIEW, SEE SHEETS 19 & 20
FOR -Y- AND -Y17- PROFILE VIEW, SEE SHEET 26



8/17/99
8/3/2023
U-4714AA_Hyd_prm_wet.pst-07.dgn
KCI



8/17/99
8/3/2023
U-4714AA_Hyd_prm_wet_wet.pst-07-1.dgn
Katie P Wright



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

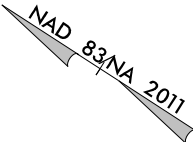
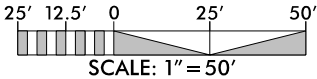
-Y20-
PI Sta 12+61.21
$\Delta = 2' 41' 52.5''$ (LT)
D = 4' 39' 58.8'
L = 57.82'
T = 28.91'
R = 1,227.86'



SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS



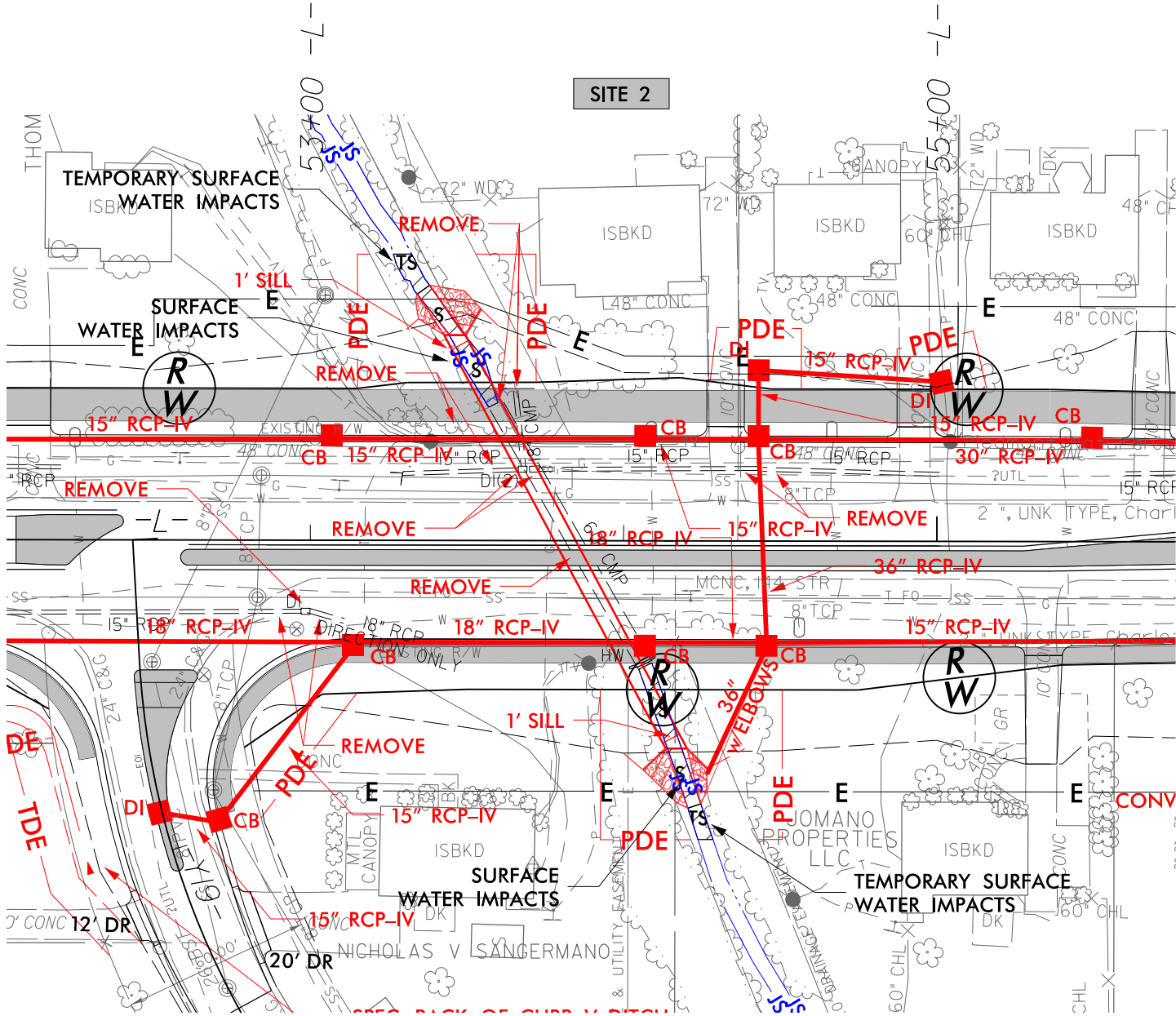
PROJECT REFERENCE NO.		SHEET NO.	
U-4714AA			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div>INCOMPLETE PLANS</div> <div>DO NOT USE FOR R/W ACQUISITION</div>			

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

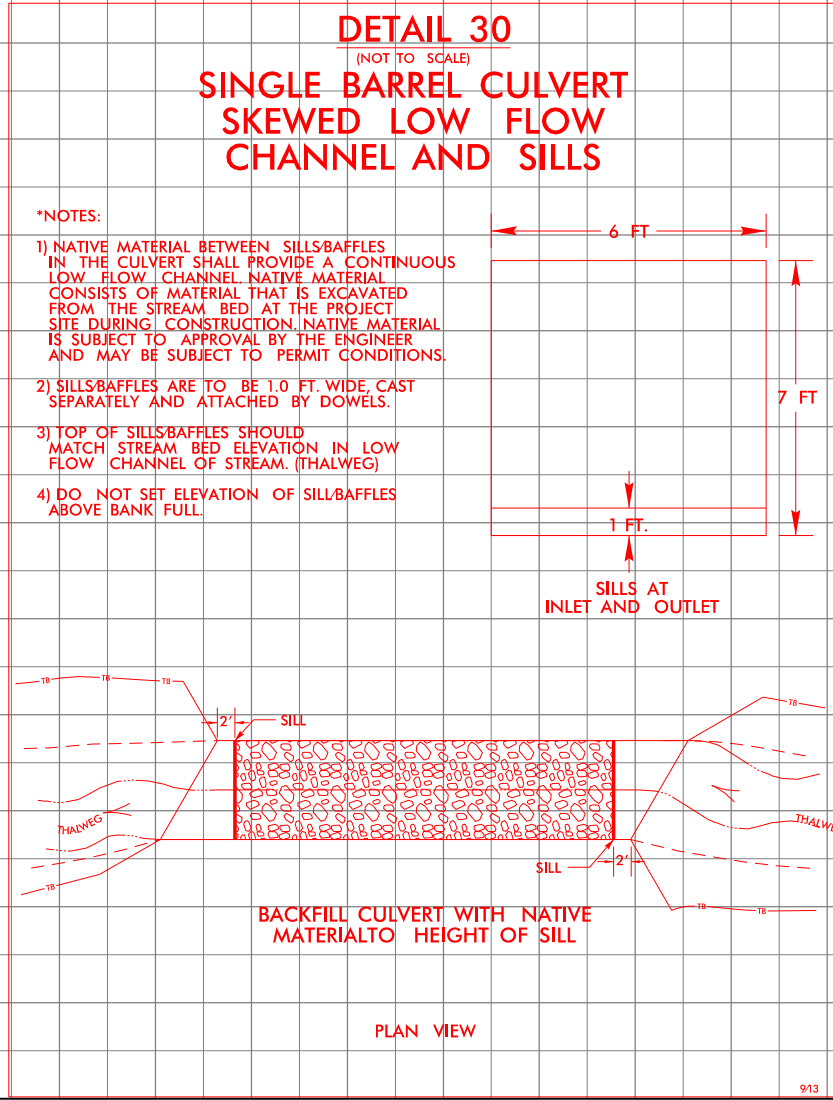
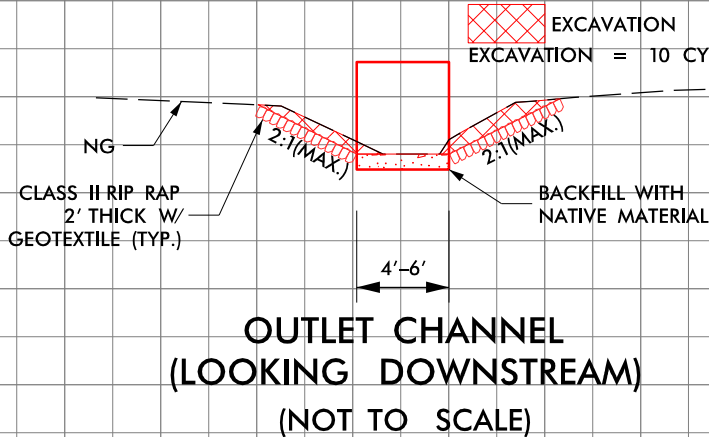
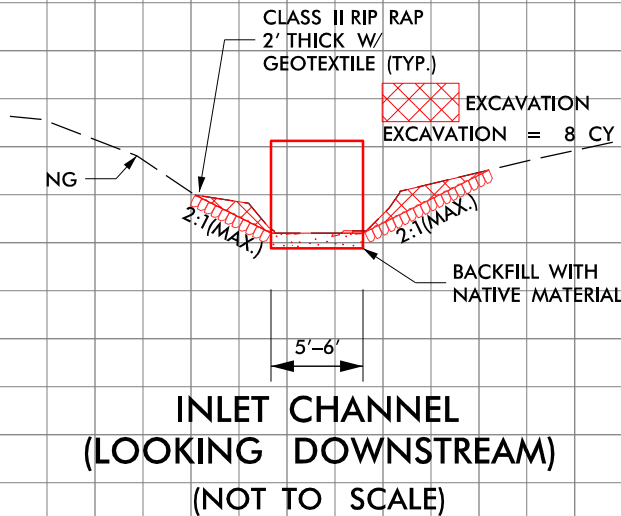
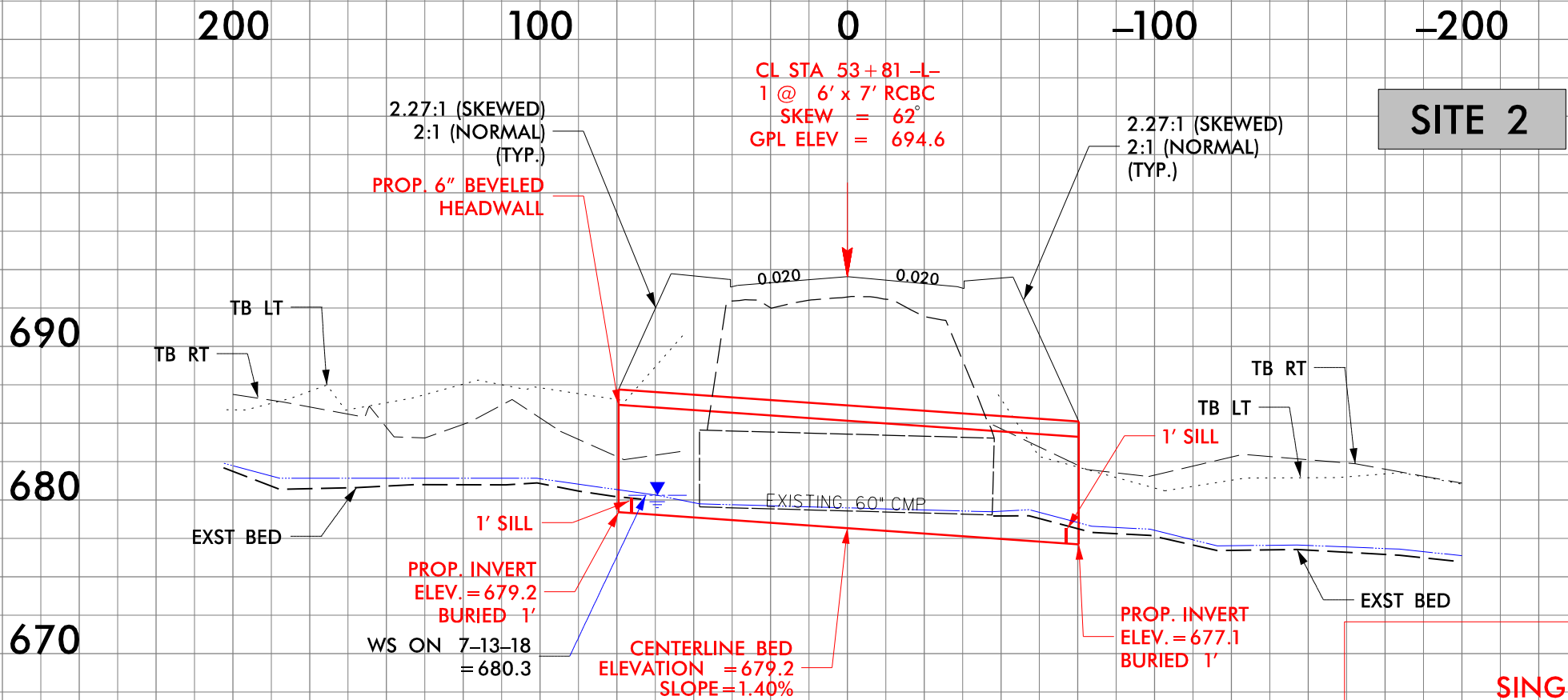
PERMIT DRAWING
SHEET 7 OF 15

DATE: 8/3/2023

PRELIMINARY



5/14/99
8/3/2023
U-4714AA_Hyd_prm_wet-psht-07-3_PipeSect.dgn
harsen



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		

PRELIMINARY

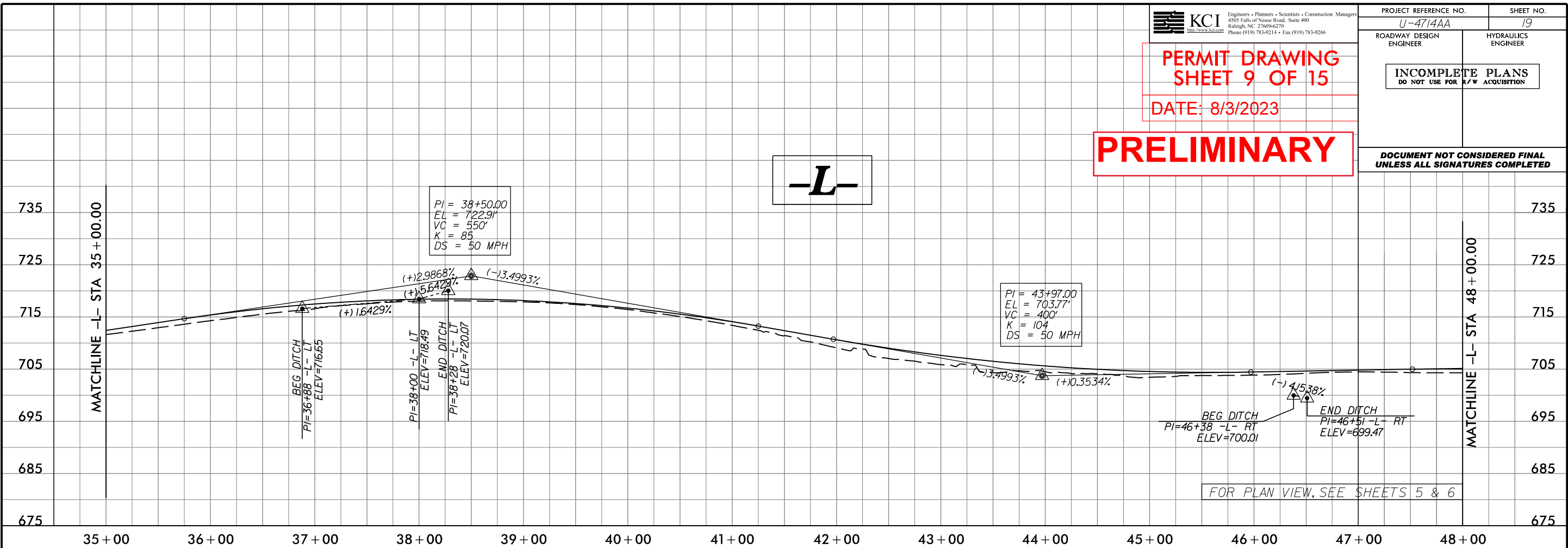
5/28/99

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U-4714AA		19	
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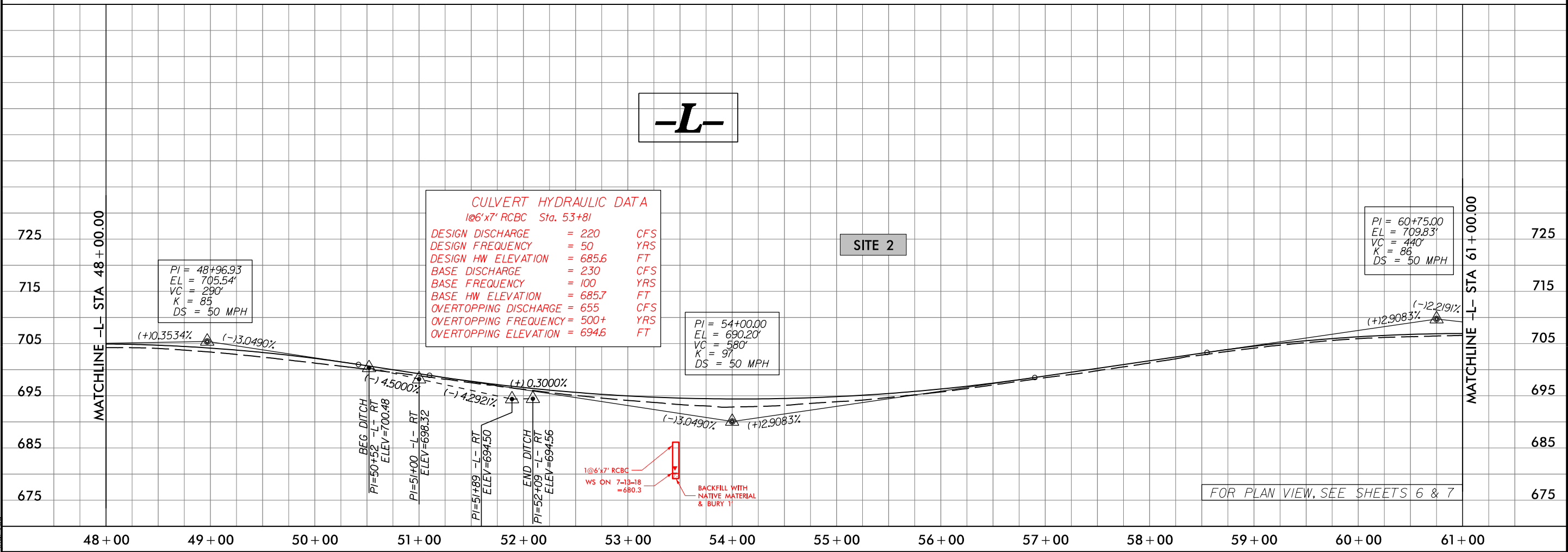
PERMIT DRAWING
SHEET 9 OF 15

DATE: 8/3/2023

PRELIMINARY

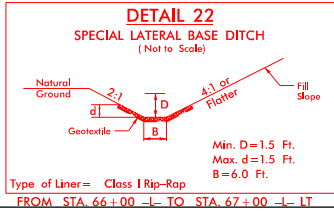
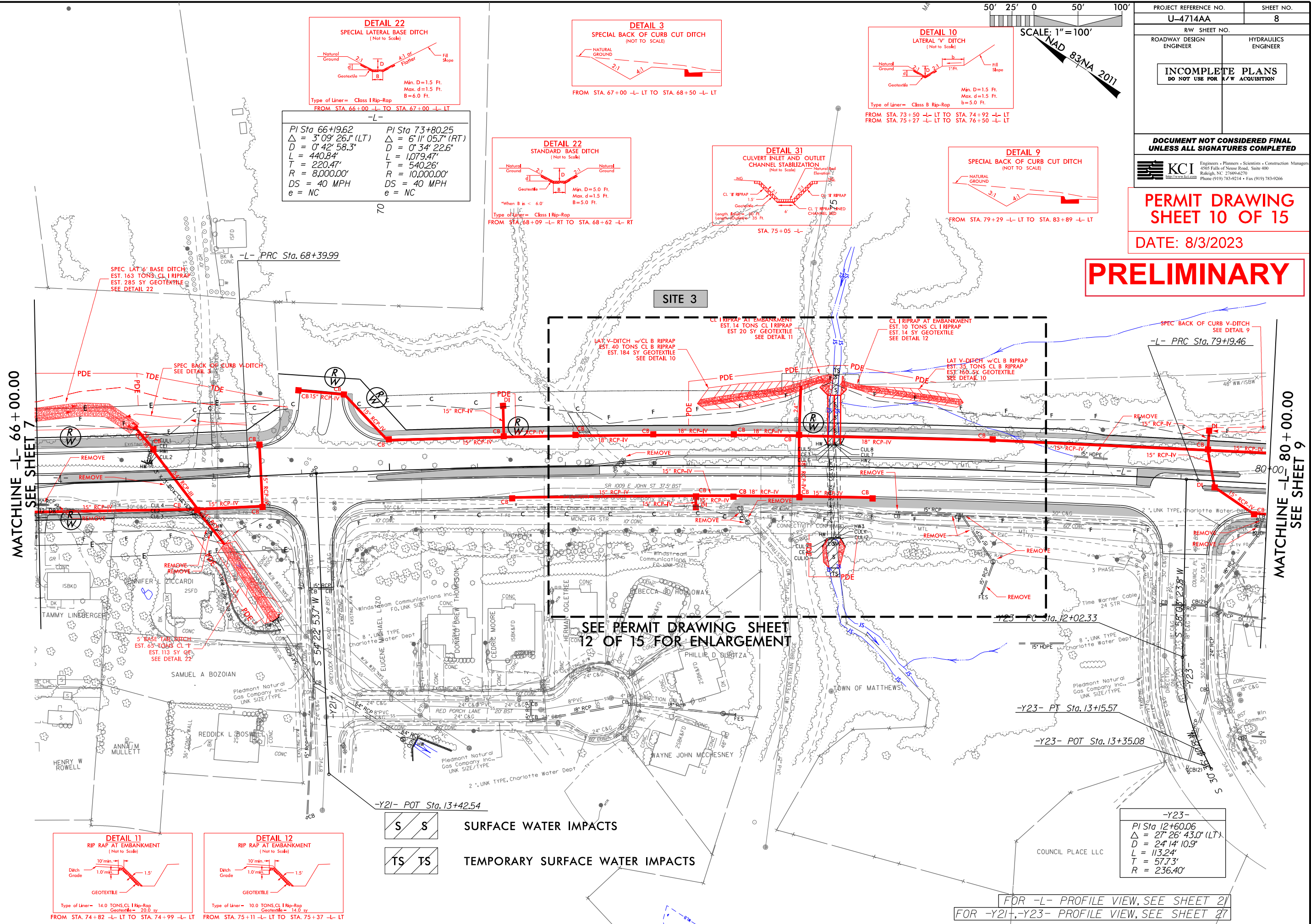


8/3/2023
U-4714AA_Hyd_prm_wet-psht-07-4-.pfl.dgn

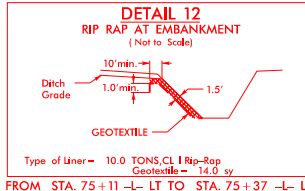
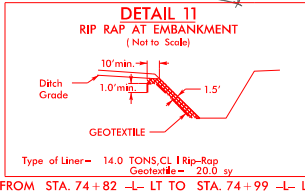
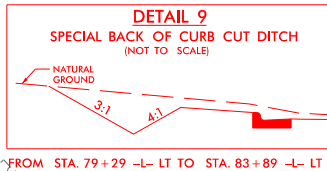
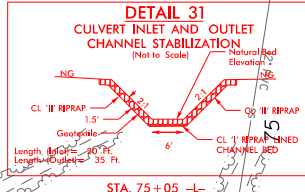
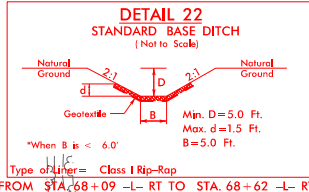
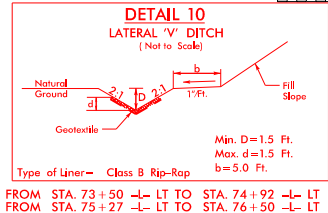
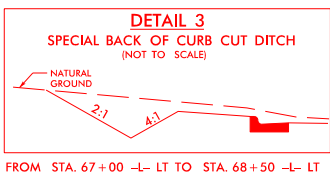


8/17/99

8/3/2023 U-4714AA_Hyd_prm_wet.pst.08.dgn



$PI\ Sta\ 66+19.62$	$PI\ Sta\ 73+80.25$
$\Delta = 3^{\circ}09'26.1\" (LT)$	$\Delta = 6^{\circ}11'05.7\" (RT)$
$D = 0^{\circ}42'58.3\"$	$D = 0^{\circ}34'22.6\"$
$L = 440.84'$	$L = 1,079.47'$
$T = 220.47'$	$T = 540.26'$
$R = 8,000.00'$	$R = 10,000.00'$
$DS = 40\ MPH$	$DS = 40\ MPH$
$e = NC$	$e = NC$



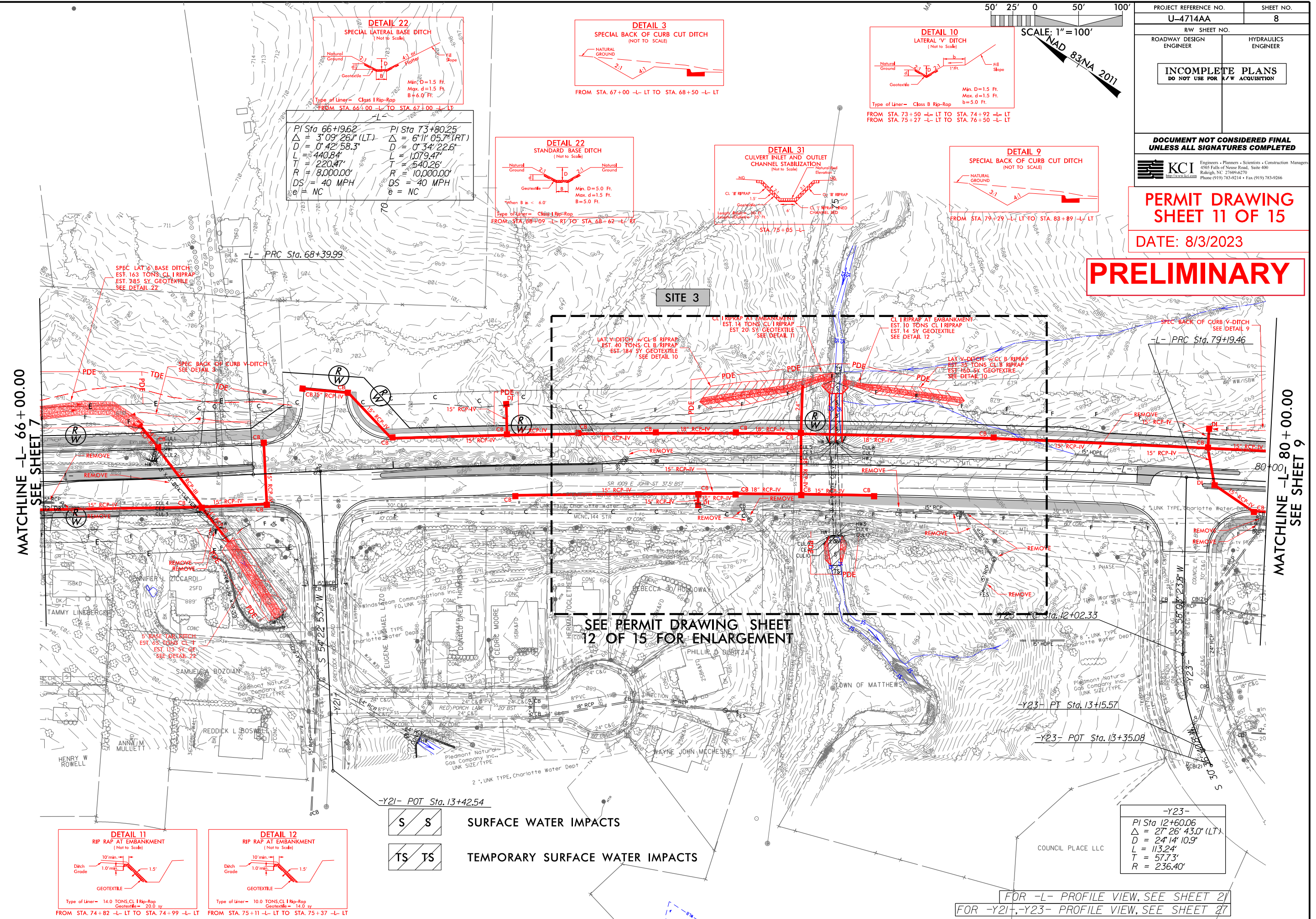
S S
TS TS

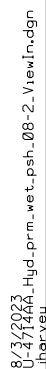
SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

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

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





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

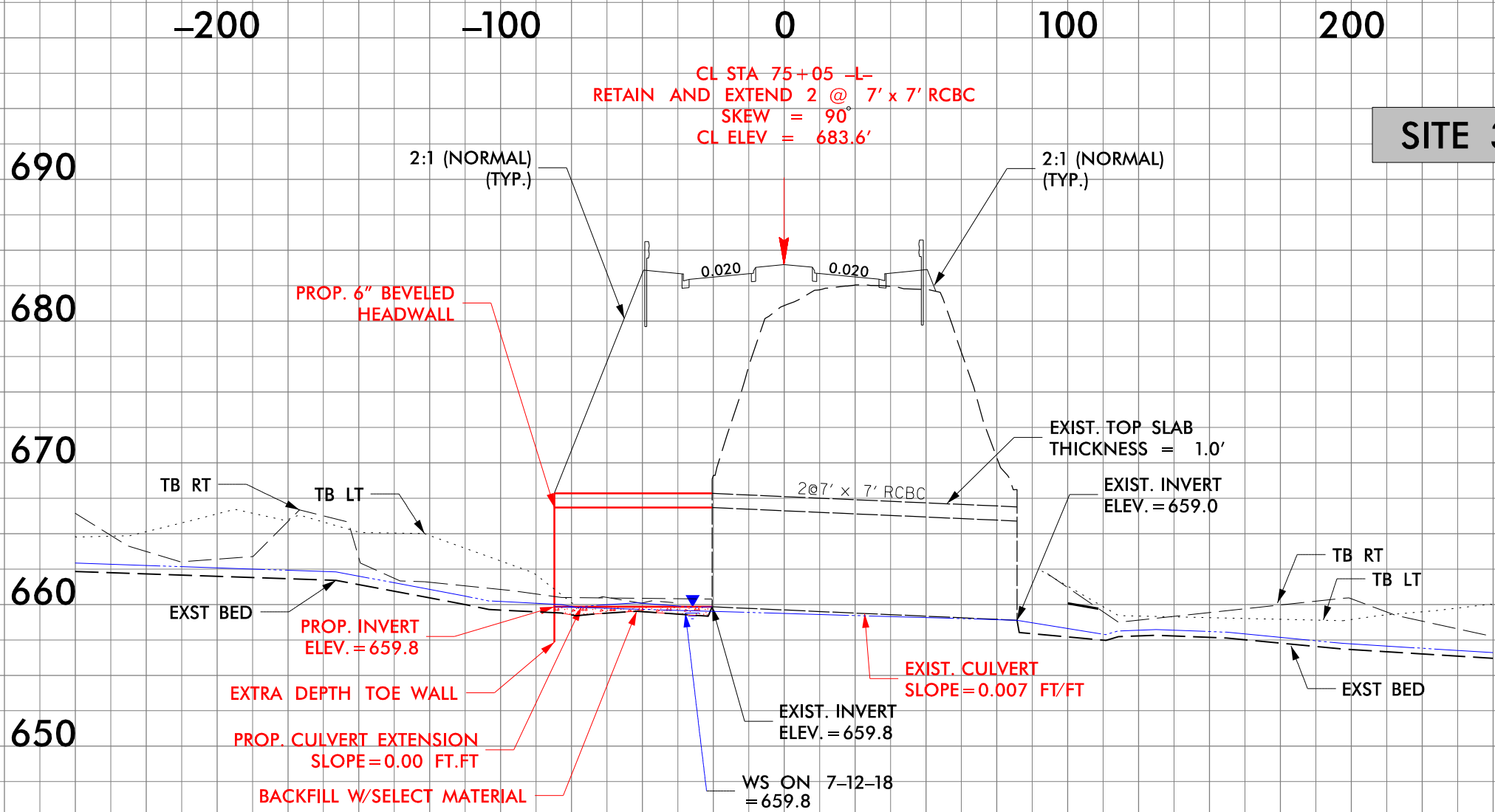
**PERMIT DRAWING
SHEET 12 OF 15**

DATE: 8/3/2023

PRELIMINARY

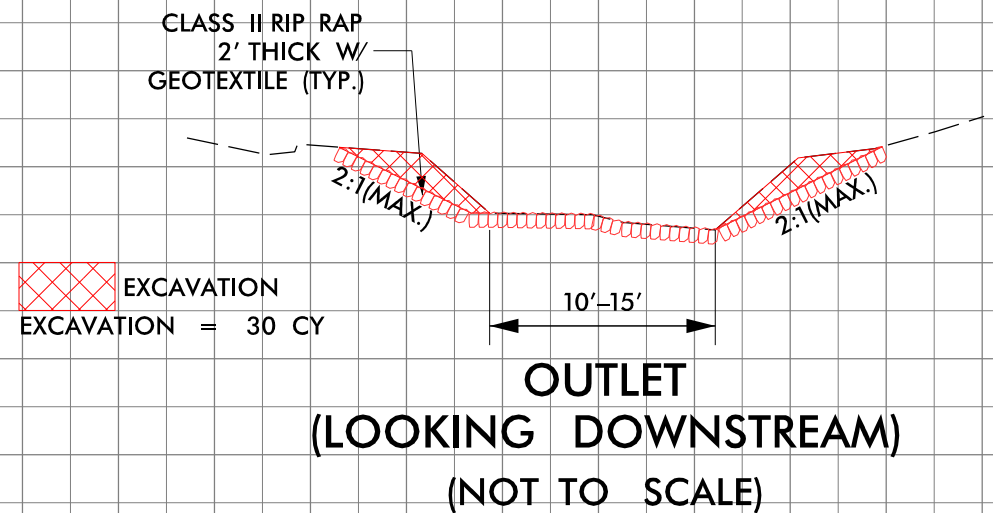
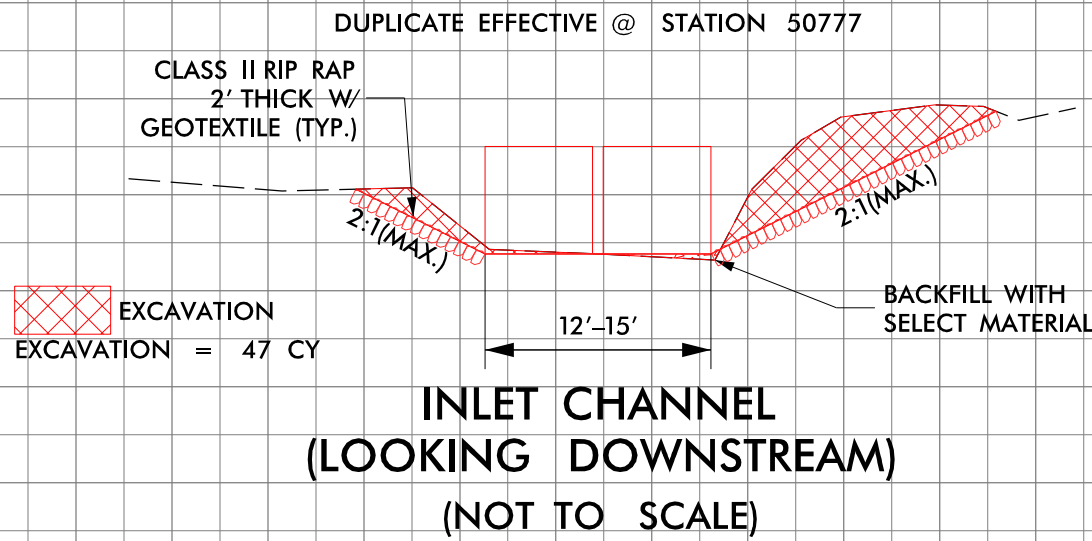
5/14/99
8/3/2023
U-4714AA_Hyd_prm_wet-psl-08-3_PipeSect.dgn

PROJECT REFERENCE NO. U-4714AA		SHEET NO.
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 13 OF 15		
DATE: 8/3/2023		



SITE 3

PRELIMINARY



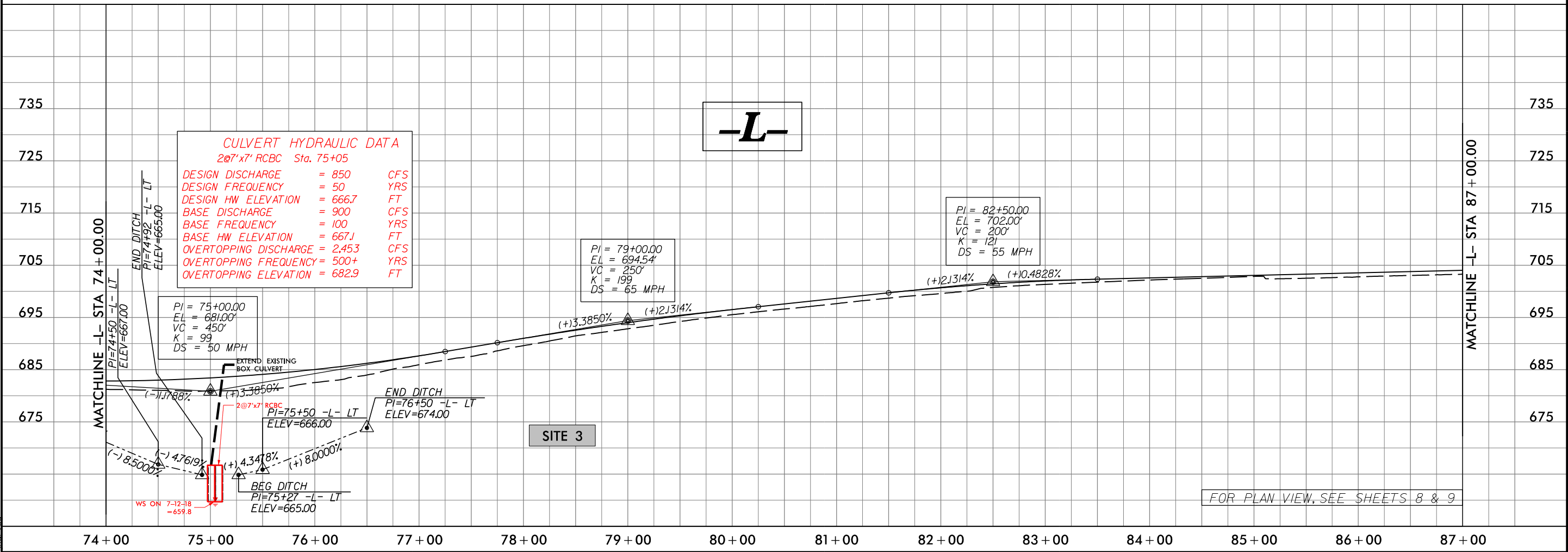
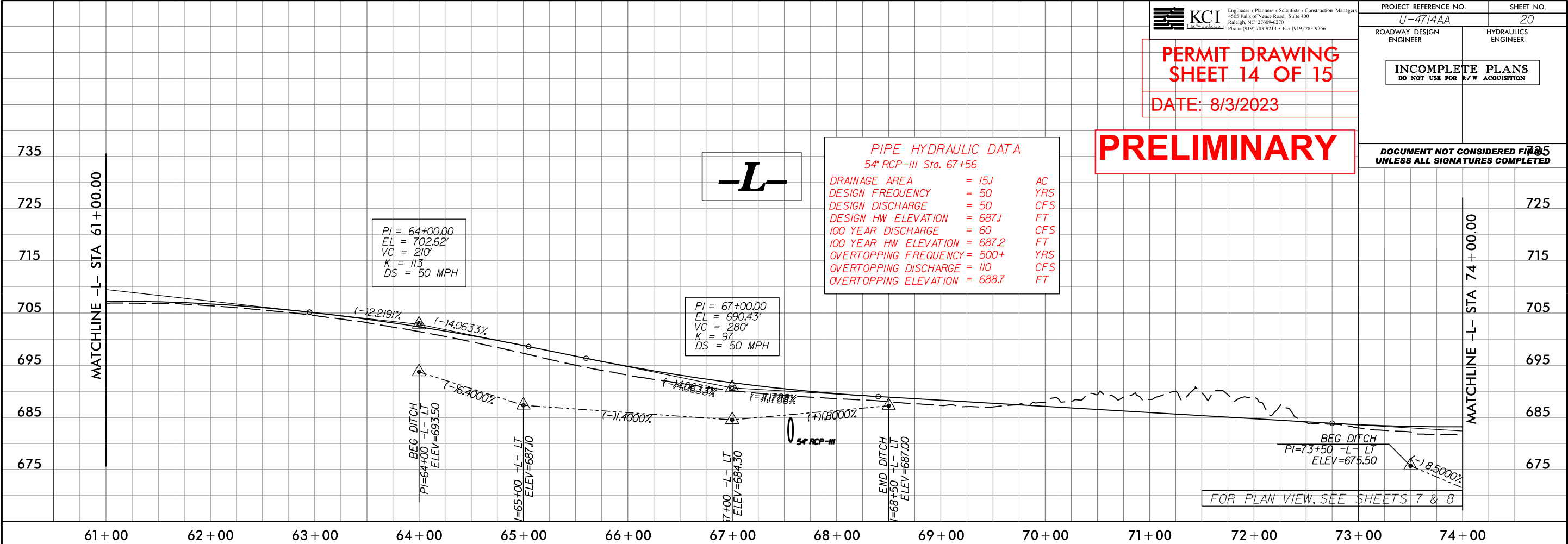
5/28/99

PROJECT REFERENCE NO.		SHEET NO.	
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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

PRELIMINARY





North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS

(Version 2.08; Released April 2018)

WBS Element: 39078.1.8 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 pedestiran 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?	
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:

VICINITY MAP

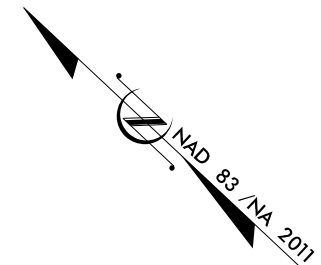
MECKLENBURG & UNION COUNTY

TYPE OF WORK: GRADING, PAVING, DRAINAGE AND SIGNALS

WETLAND AND SURFACE WATER IMPACTS PERMIT

RIGHT OF WAY PLANS

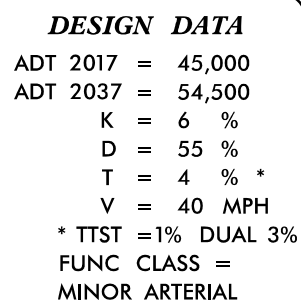
DATE: 10/24/2023



- ★ PROPOSED SIGNAL
- ★ EXISTING SIGNAL

END TIP PROJECT U-4714AC
BEGIN TIP PROJECT U-4714B
-L- POT STA. 193 + 50.61

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.

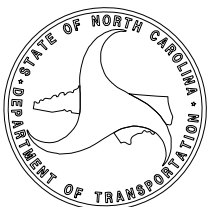


TOTAL LENGTH OF TIP PROJECT U-4714AC = 1.886 MILES

NCDOT CONTACT:

BRYAN KEY, PE
PROJECT ENGINEER – NCDOT

SIGNATURE: _____ *P.E.*



8/17/99

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

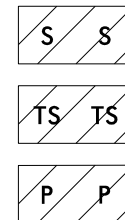
1/24/2024
U-4714AC_Hyd-prm-wet.psh.05.dgn
JStanovich

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

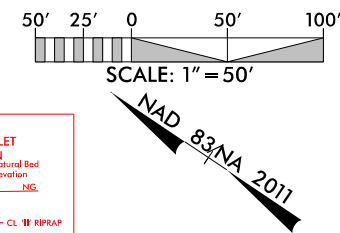
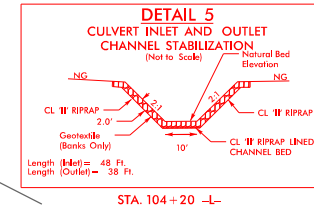
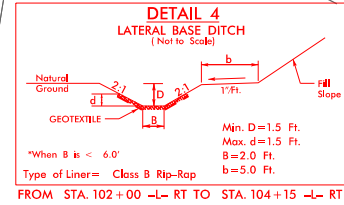
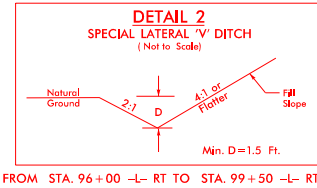
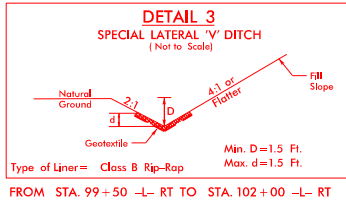
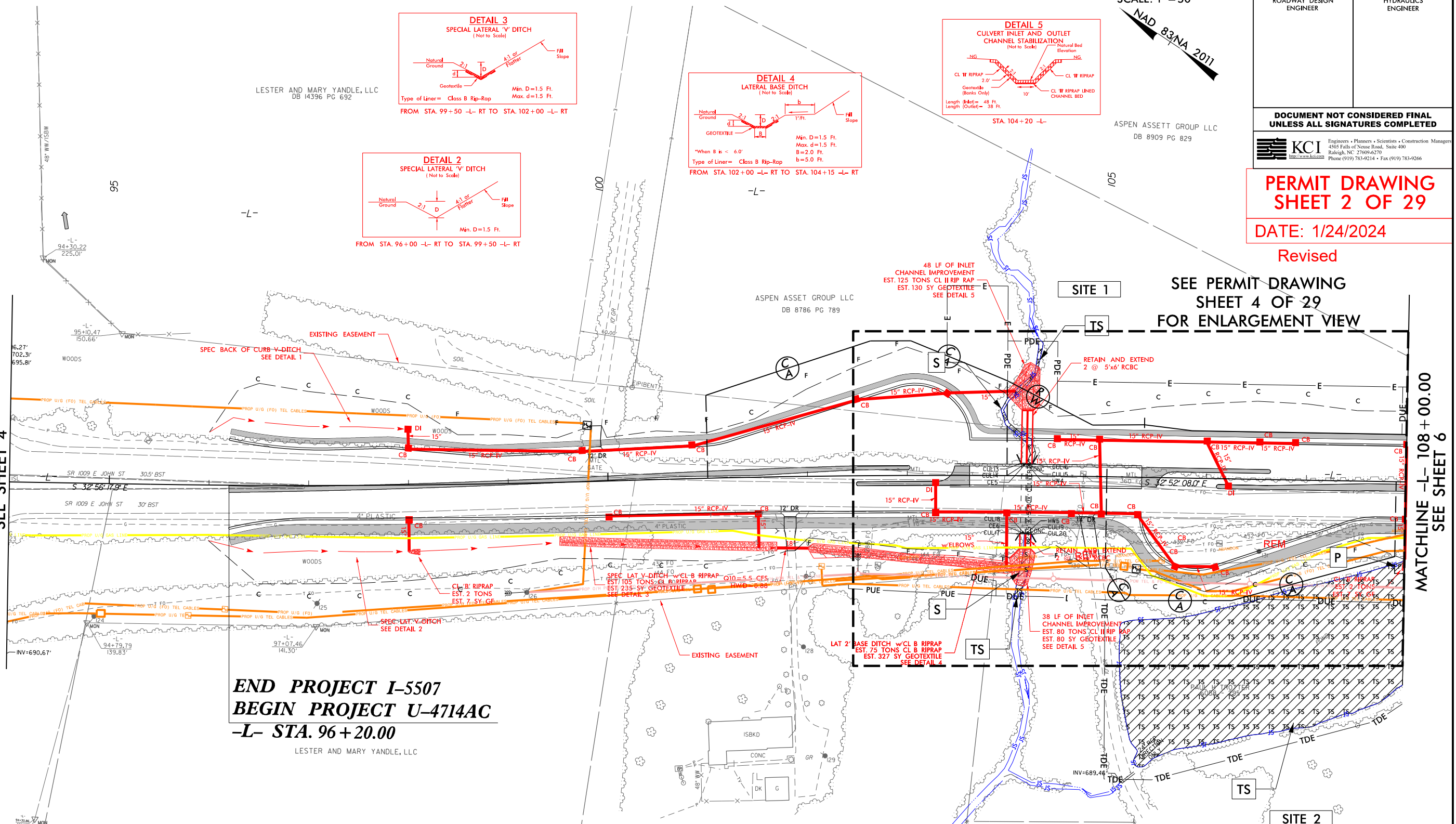



SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS
POND

FOR -L- PROFILE VIEW, SEE SHEET 13



PROJECT REFERENCE NO. <i>U-4714AC</i>		SHEET NO. 5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
 KCI www.kci.com		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: 1/24/2024

Revised

SEE PERMIT DRAWING
SHEET 4 OF 29
FOR ENLARGEMENT VIEW

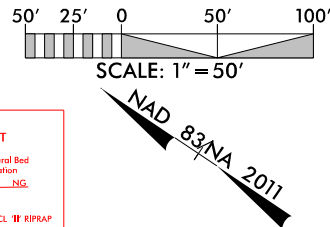
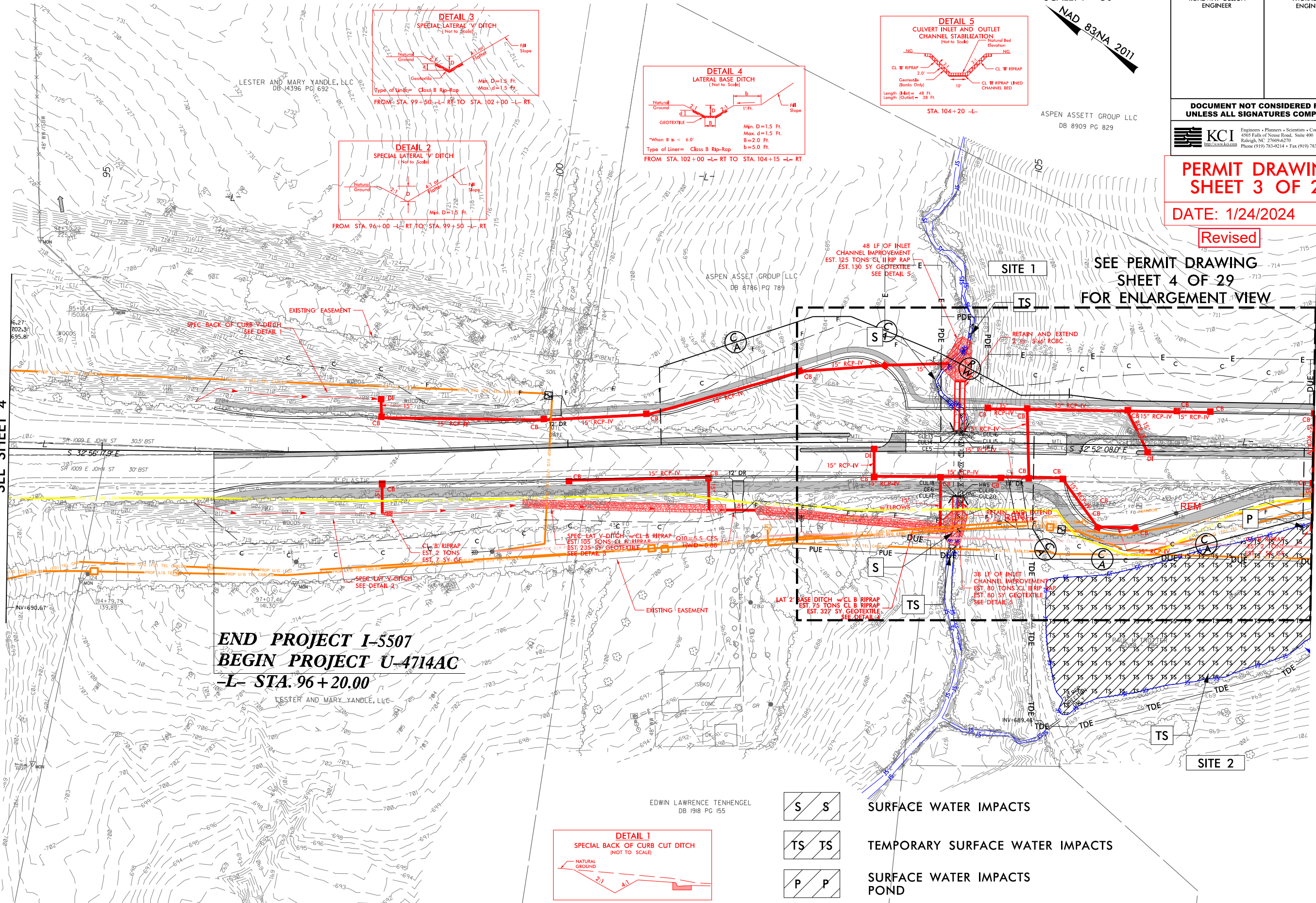
MATCHLINE -L- 108+00.00
SEE SHEET 6

8/17/99


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

1/24/2024
U-4714AC_Hyd-prm-wet.psh.05a.dgn
JStanovich

MATCHLINE -L- 94+00.00
SEE SHEET 4



PROJECT REFERENCE NO. U-4714AC		SHEET NO. 5	
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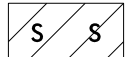
 KCI http://www.kci.com	Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214 • Fax (919) 783-9266
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PERMIT DRAWING
SHEET 3 OF 29

DATE: 1/24/2024

Revised

SEE PERMIT DRAWING
SHEET 4 OF 29
FOR ENLARGEMENT VIEW



SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS



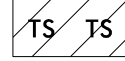
SURFACE WATER IMPACTS
POND

FOR -L- PROFILE VIEW, SEE SHEET 13

8/17/99



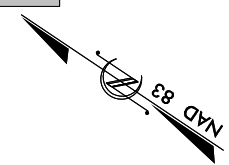
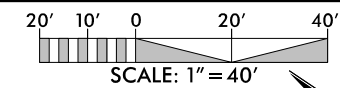
SURFACE WATER IMPACTS



TEMPORARY SURFACE WATER IMPACTS



SURFACE WATER IMPACTS
POND



PROJECT REFERENCE NO. SHEET NO.

U-4714AC

RW SHEET NO.

ROADWAY DESIGN
ENGINEER

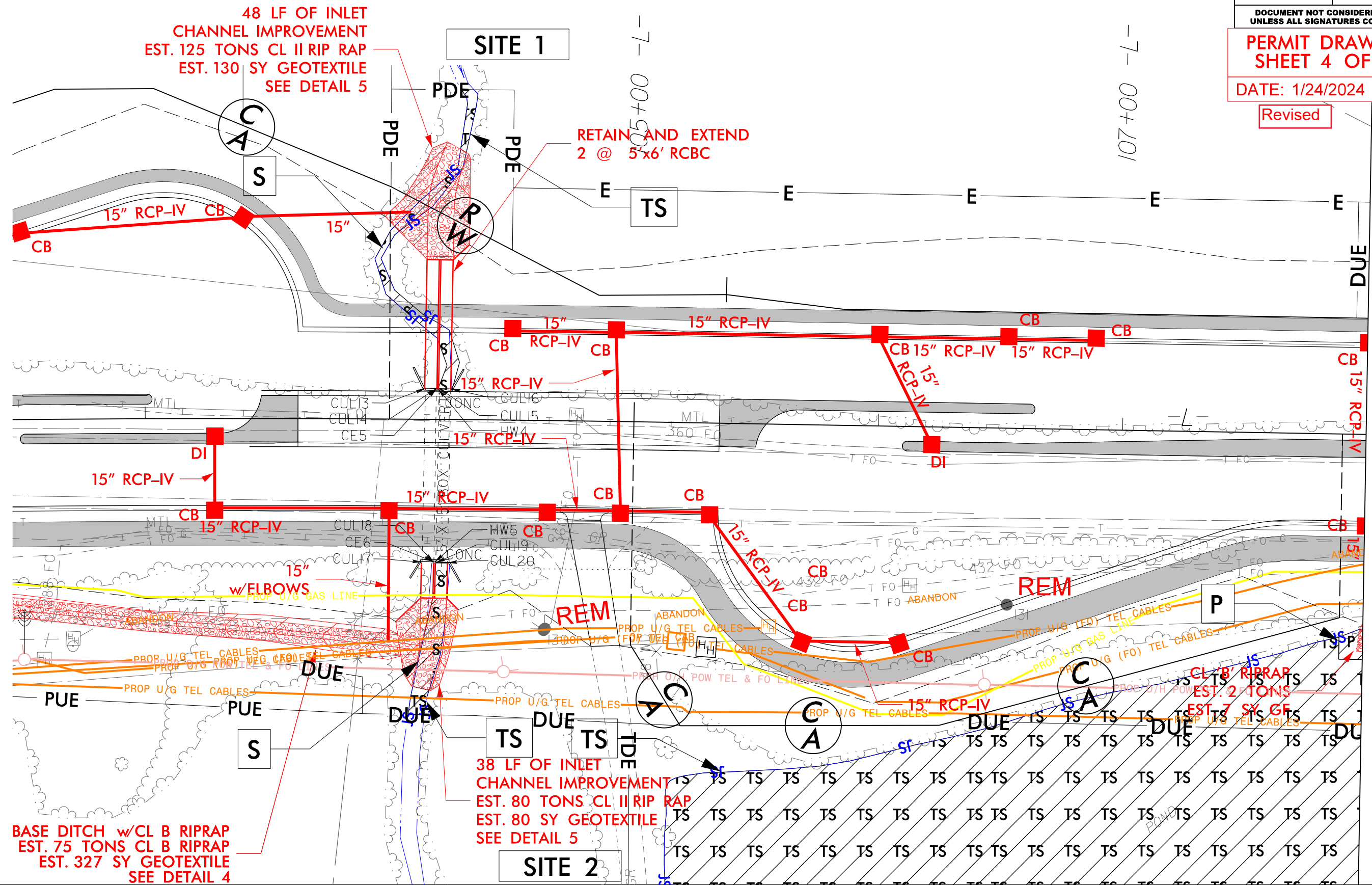
HYDRAULICS
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 4 OF 29

DATE: 1/24/2024

Revised



MATCHLINE -L- 108+00.00
SEE SHEET 6

1/24/2024 U-4714AC-Hyd-prm-wet.psh, 05b_View1.mxd

5/28/99

PERMIT DRAWING
SHEET 5 OF 29

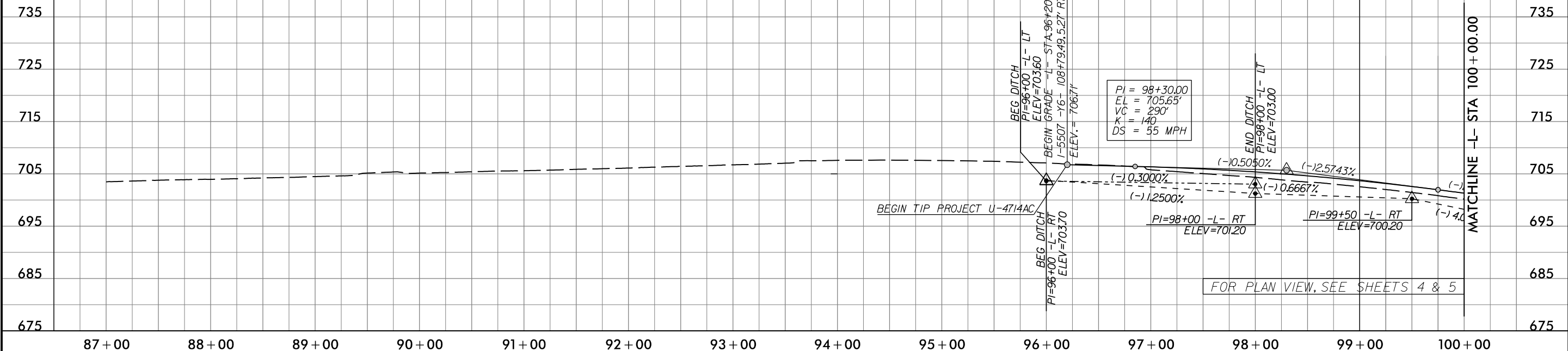
DATE: 10/24/2023



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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	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

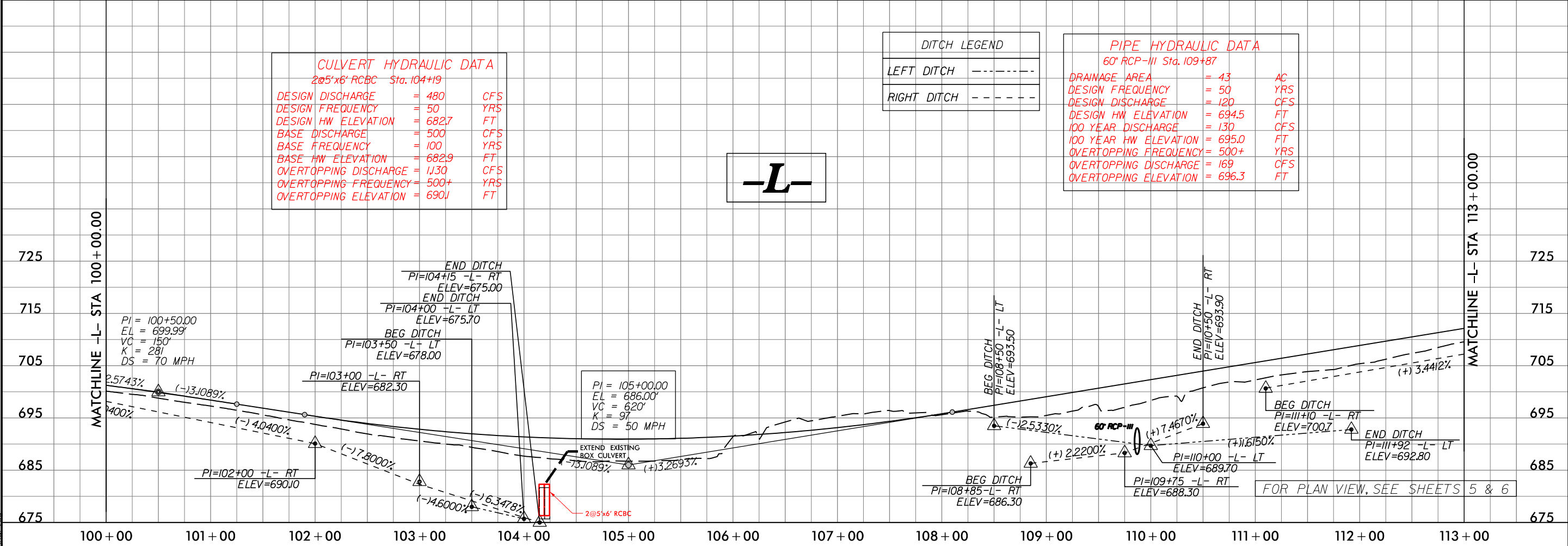
DITCH LEGEND	
LEFT DITCH	-----
RIGHT DITCH	-----



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	-----

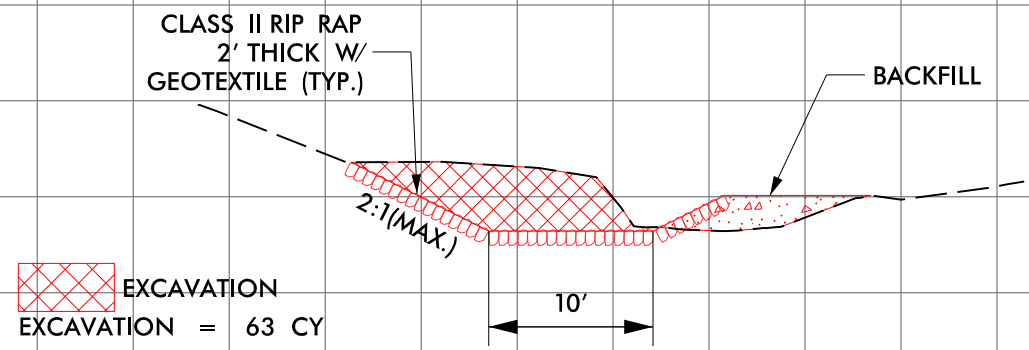
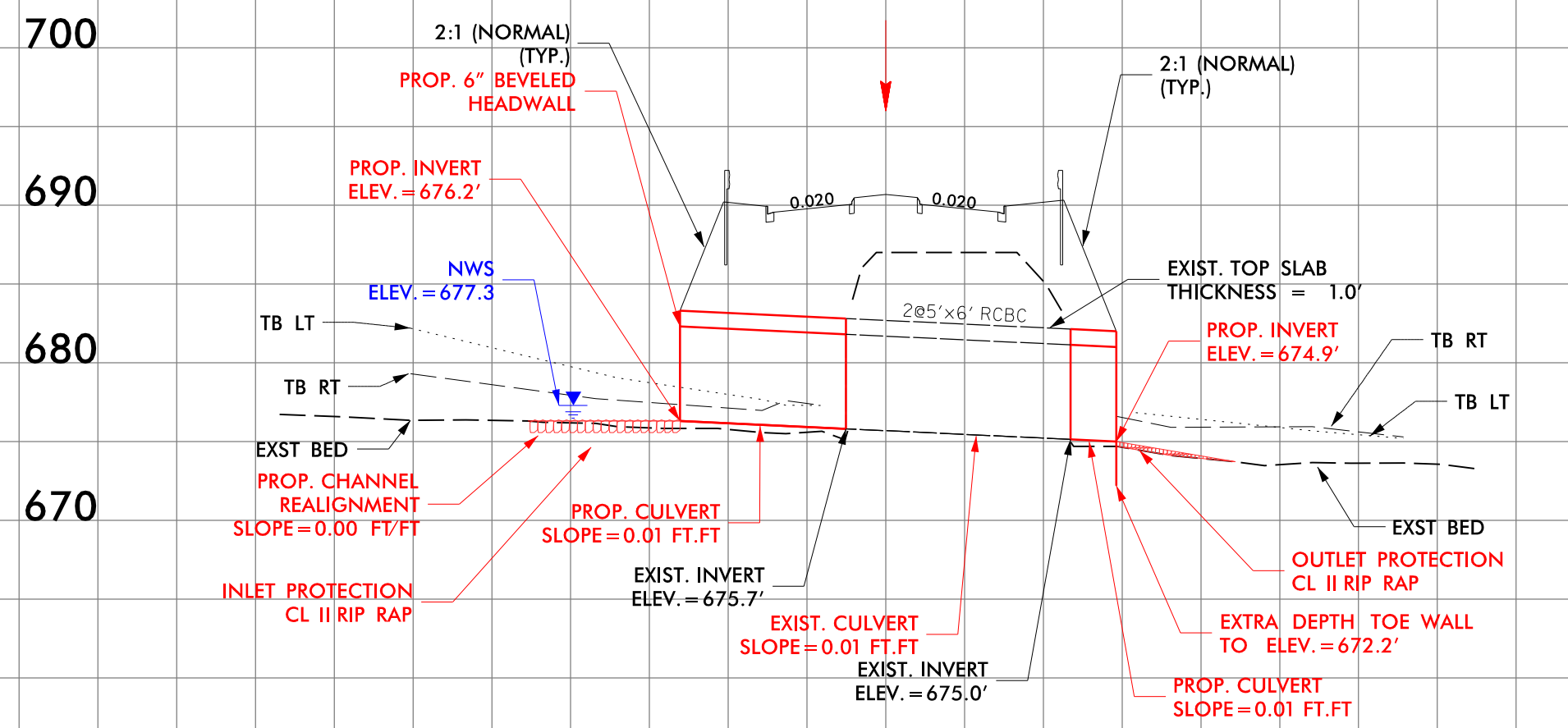
PIPE HYDRAULIC DATA		
60" RCP-III Std. 109+87		
DRAINAGE AREA	= 43	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 120	CFS
DESIGN HW ELEVATION	= 694.5	FT
100 YEAR DISCHARGE	= 130	CFS
100 YEAR HW ELEVATION	= 695.0	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 169	CFS
OVERTOPPING ELEVATION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



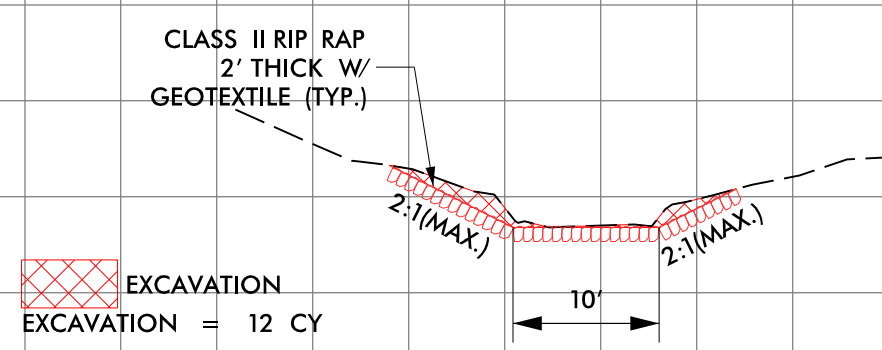
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1/24/2024
147140-Hyd-prm-wet.psh.05d-sec.tdgn
JStanovich

PROJECT REFERENCE NO.		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			
<div>PERMIT DRAWING</div> <div>SHEET 6 OF 29</div>			
DATE: 1/24/2024			
<div>Revised</div>			

-200 -100 0 100 200



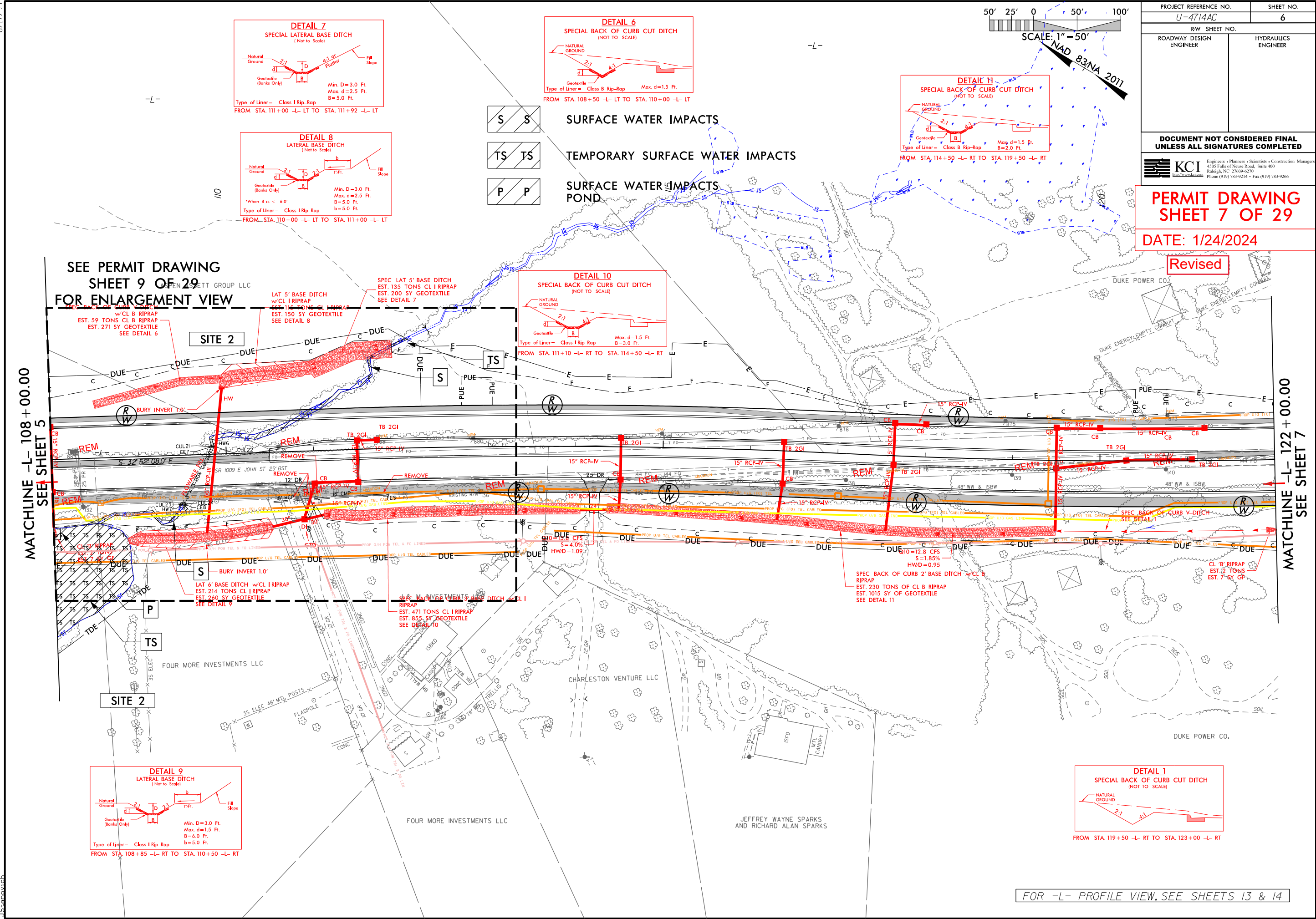
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(NOT TO SCALE)



OUTLET CHANNEL
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(NOT TO SCALE)

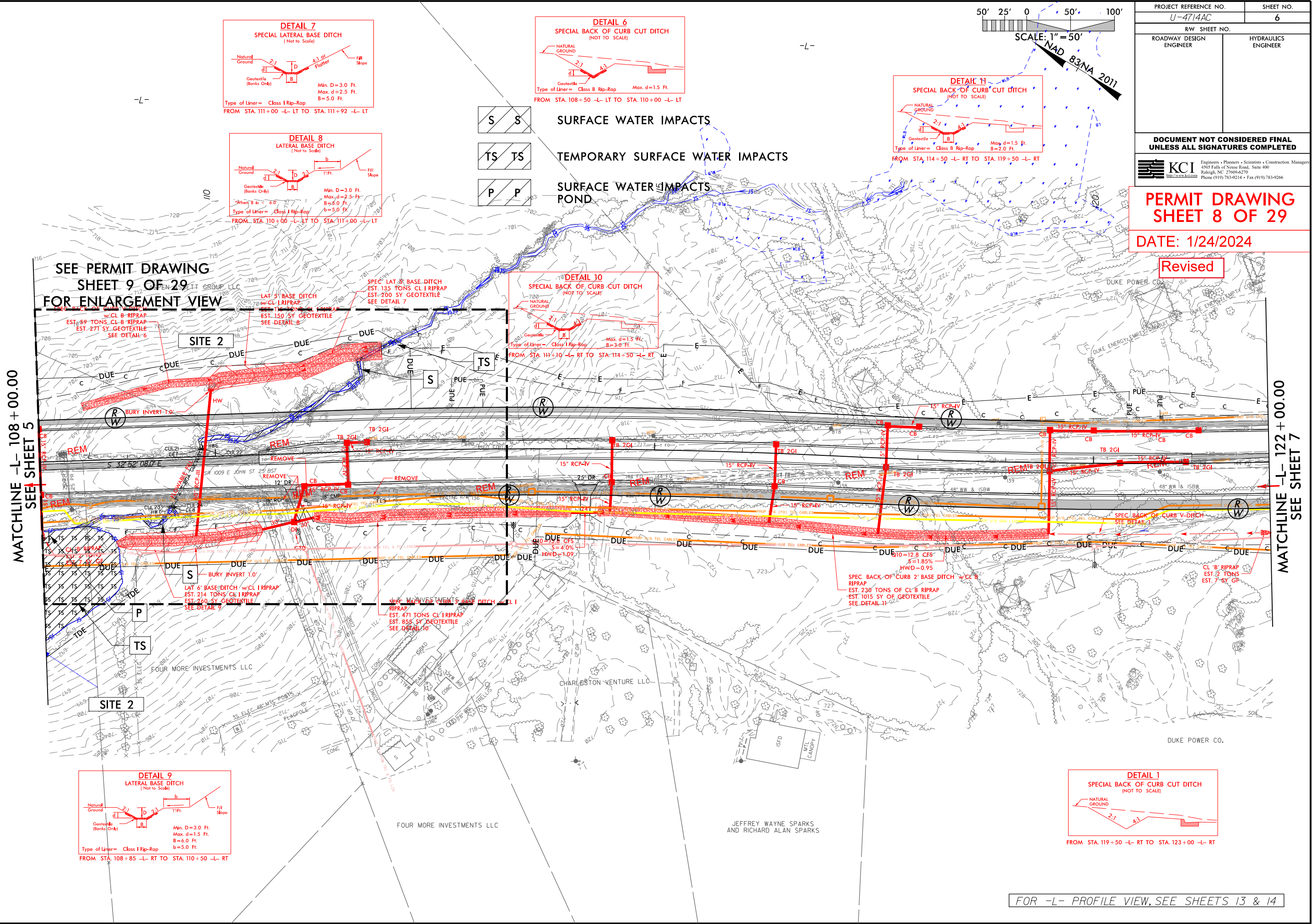
8/17/99

1/24/2024 U-4714AC-Hyd-prm-wet.psh.06.dgn



8/17/99

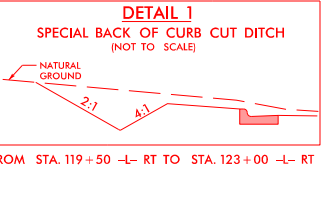
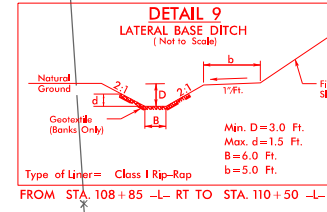
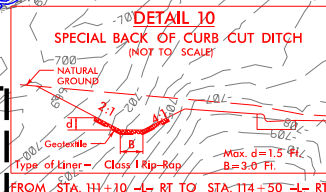
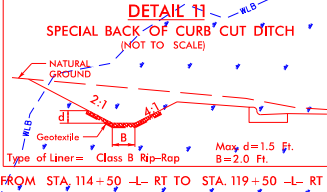
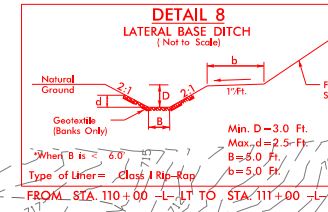
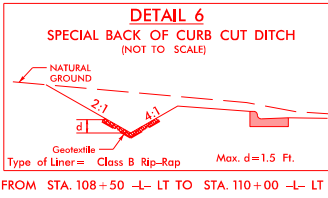
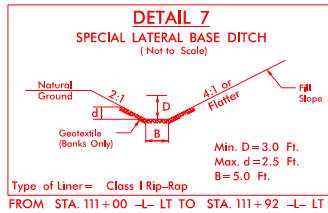
1/24/2024 U-4714AC Hyd-prm-wet.psh.06a.dgn JStanovich




SEE PERMIT DRAWING
SHEET 9 OF 29
FOR ENLARGEMENT VIEW

MATCHLINE -L- 108 + 00.00
SEE SHEET 5

MATCHLINE -L- 122 + 00.00
SEE SHEET 7



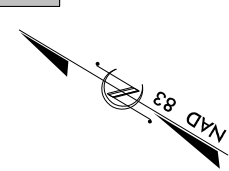
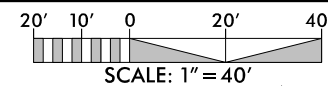
FOR -L- PROFILE VIEW, SEE SHEETS 13 & 14

PROJECT REFERENCE NO.	SHEET NO.
U-4714AC	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS 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: 1/24/2024

Revised

<div><div>S</div><div>S</div></div>	SURFACE WATER IMPACTS
<div><div>TS</div><div>TS</div></div>	TEMPORARY SURFACE WATER IMPACTS
<div><div>P</div><div>P</div></div>	SURFACE WATER IMPACTS POND



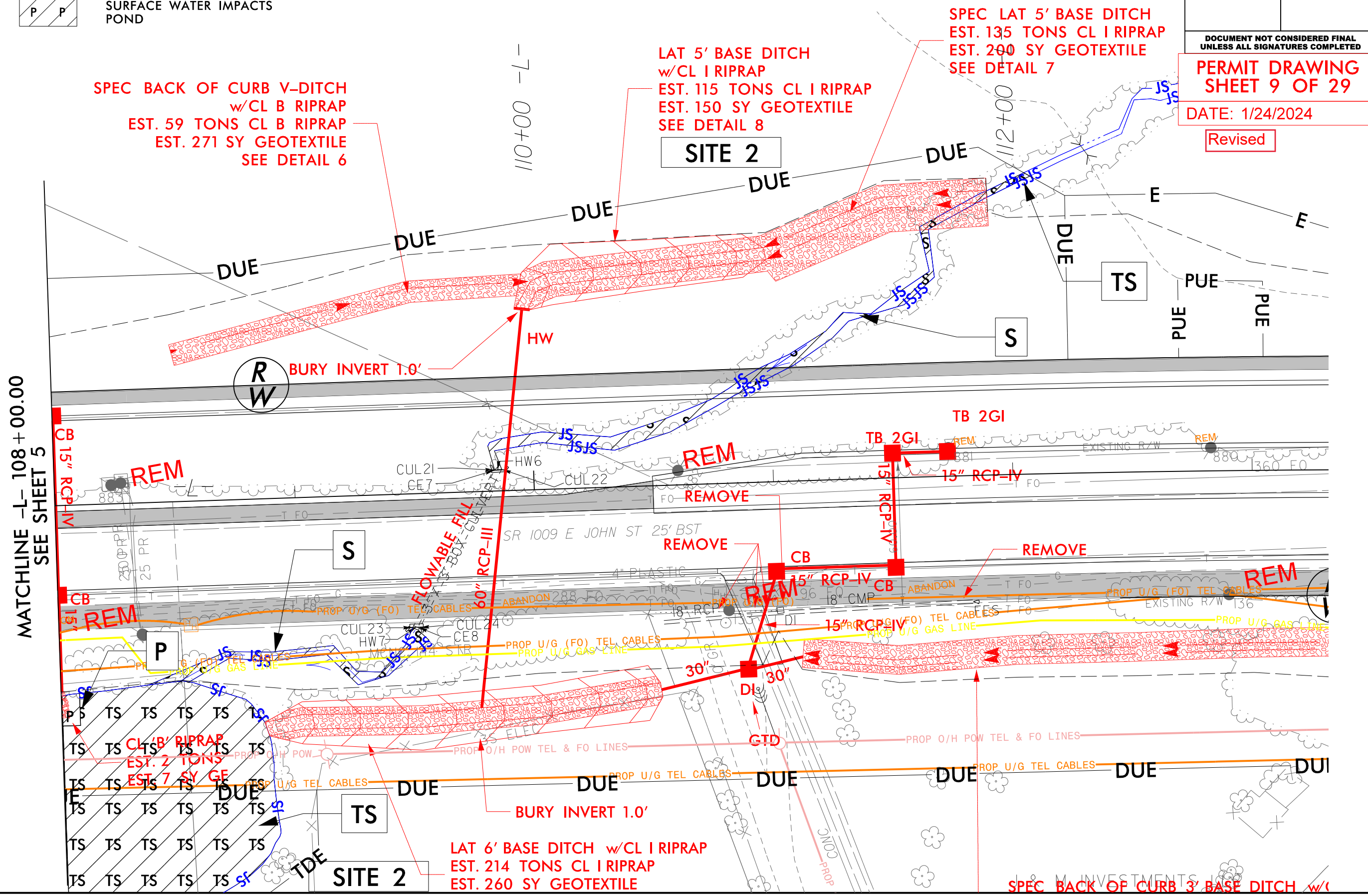
PROJECT REFERENCE NO. U-4714AC	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

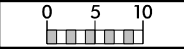
PERMIT DRAWING
SHEET 9 OF 29

DATE: 1/24/2024

Revised



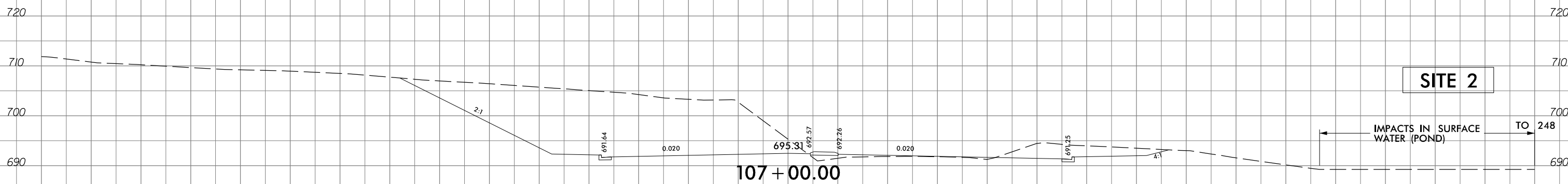
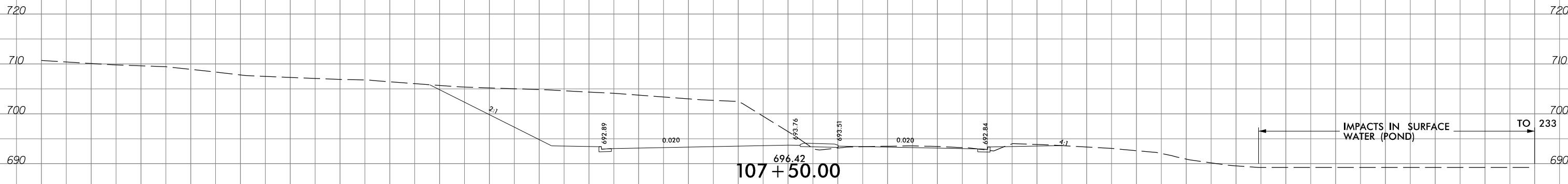
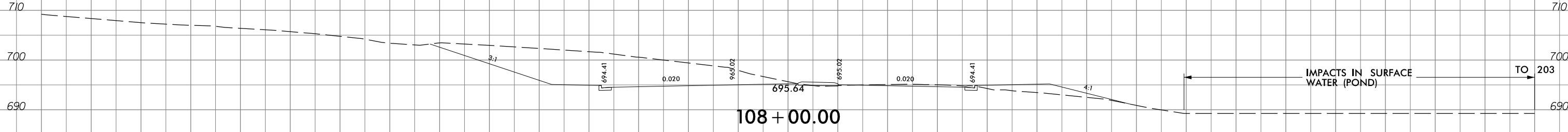
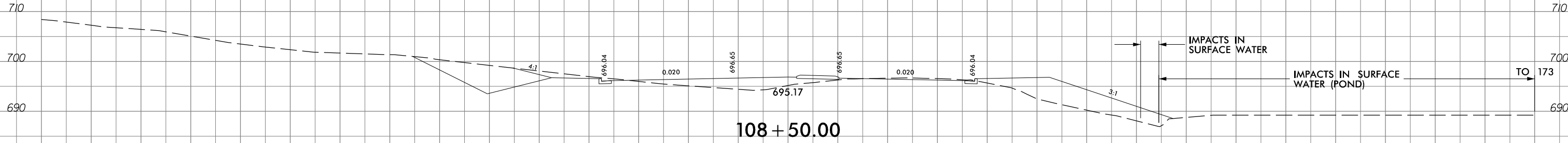
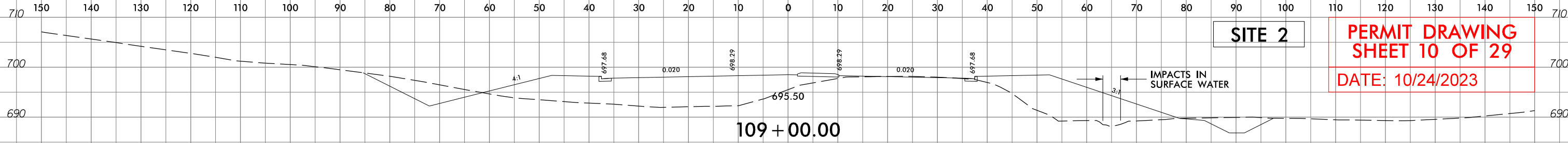
6/23/16



PROJ. REFERENCE NO.	SHEET NO.
U-4714A	X-30

SITE 2

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

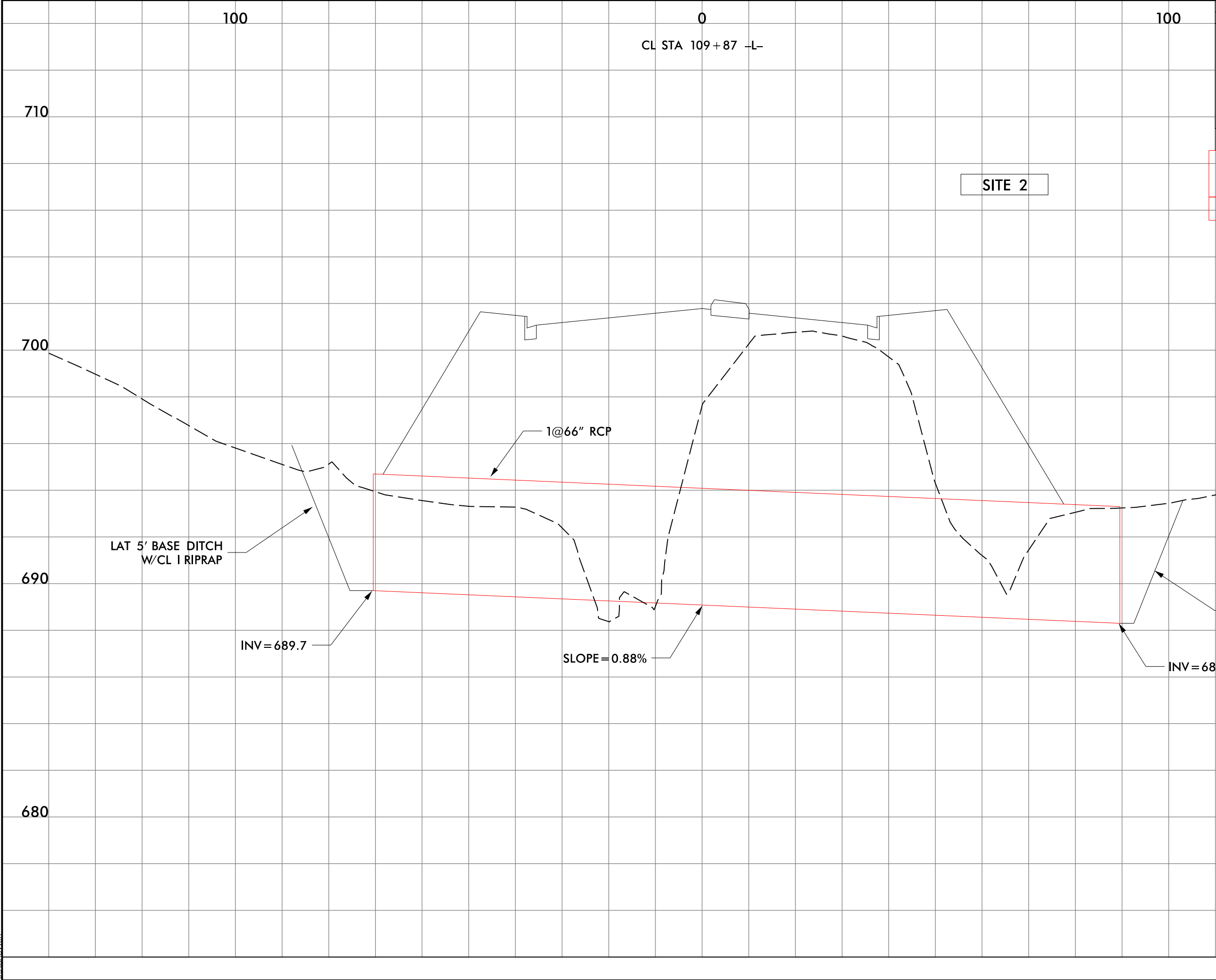


SITE 2

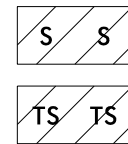
10/24/2023
U:\4714A\Hyd_prm_wet_psh_06c.xpl.dgn
jharvey

5/14/99

1/24/2024
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JStanovich

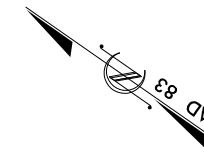
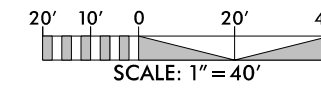


PROJECT REFERENCE NO.		SHEET NO.	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 11 OF 29			
DATE: 1/24/2024			
Revised			



SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

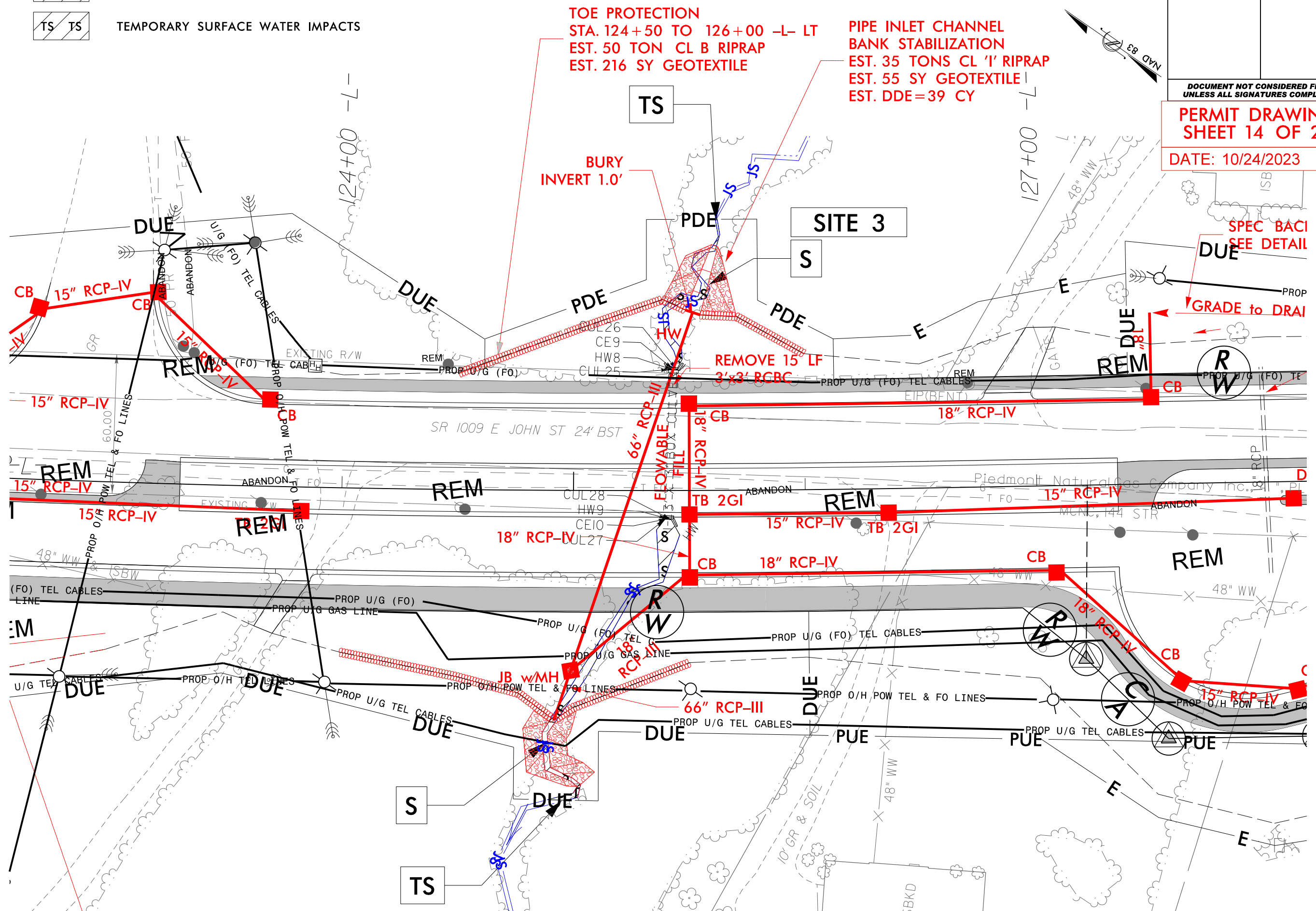


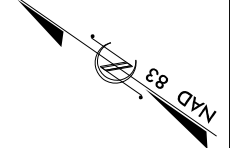
PROJECT REFERENCE NO.	SHEET NO.
U-4714AC	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

PERMIT DRAWING
SHEET 14 OF 29

DATE: 10/24/2023

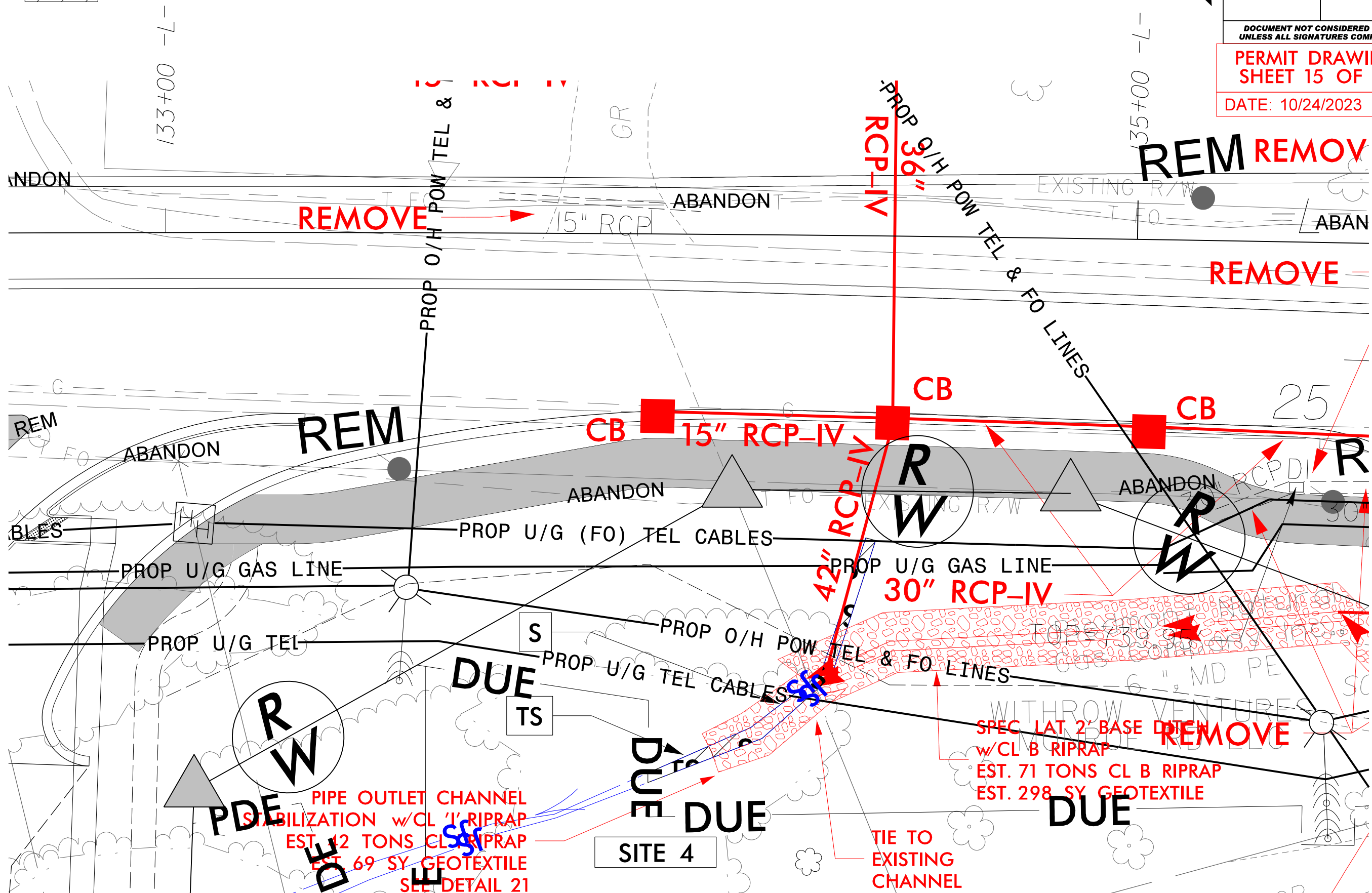




**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

PERMIT DRAWING
SHEET 15 OF 29

DATE: 10/24/2023



5/14/99

10/24/2023
04714AC-Hyd-prn-wet-psh-07d-sect.dgn
Jharvey

100

0

100

CL STA 125+26 -L-

740

730

720

710

SITE 3

PROJECT REFERENCE NO.

SHEET NO.

ROADWAY DESIGN
ENGINEER

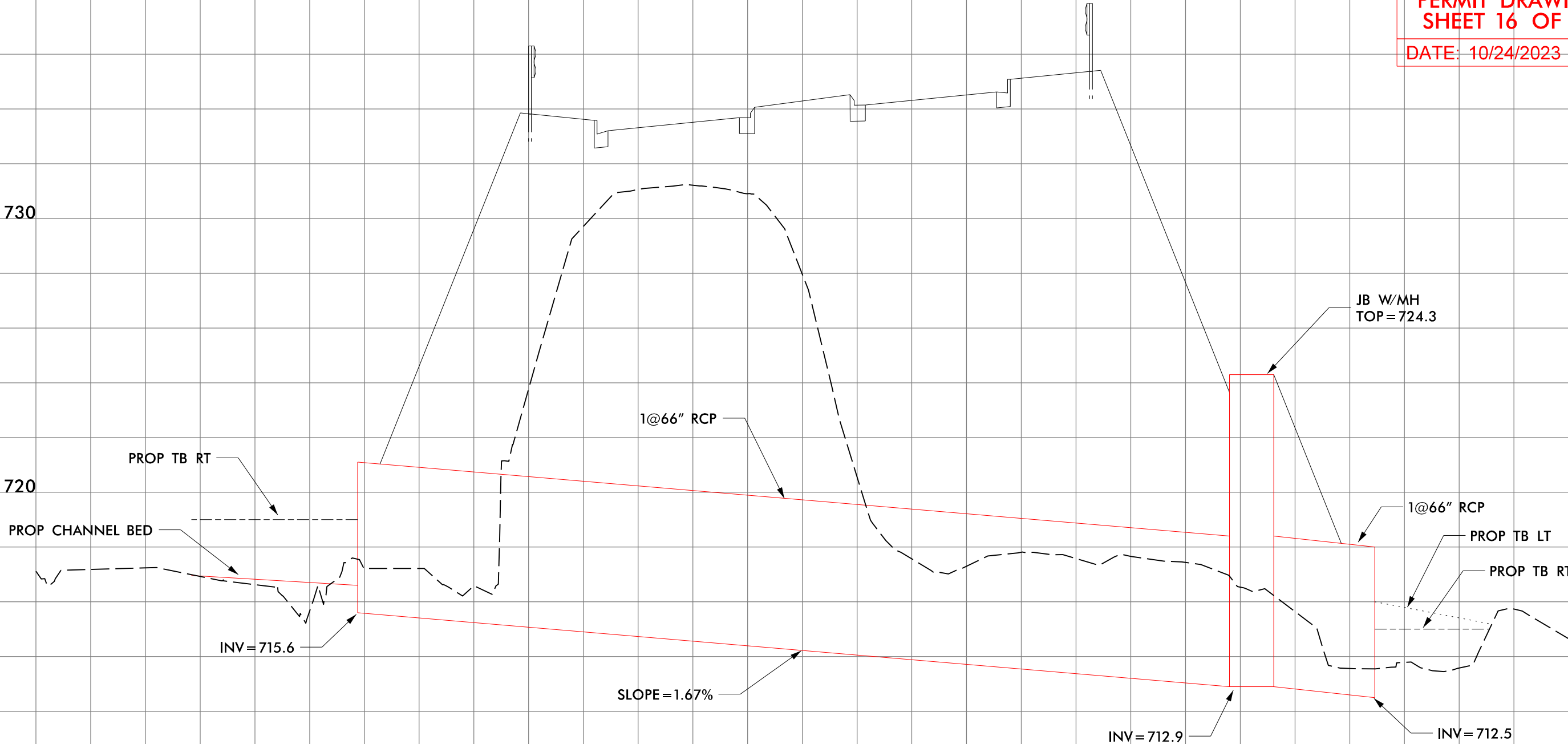
HYDRAULICS
ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 16 OF 29

DATE: 10/24/2023



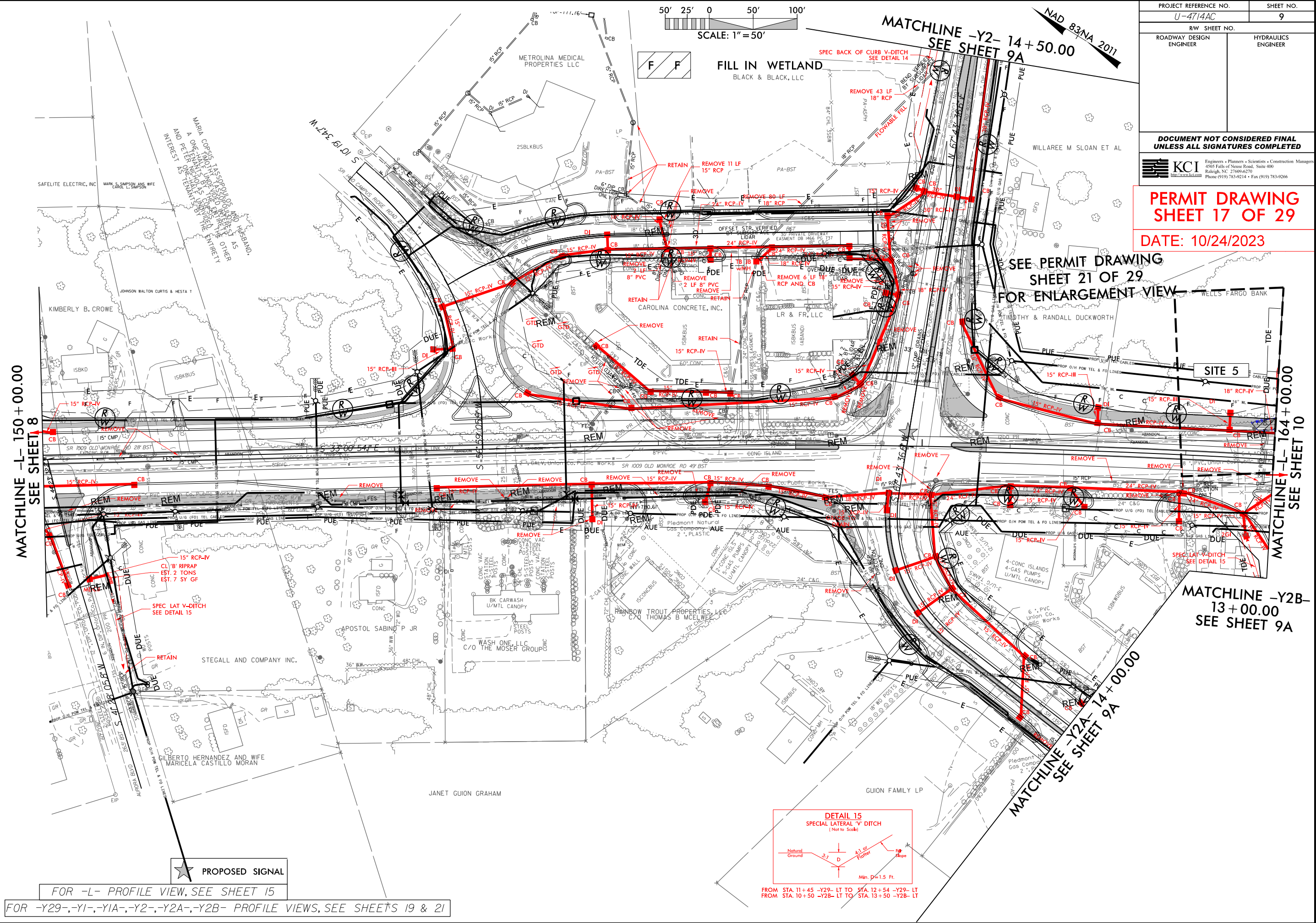
REVISIONS

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)

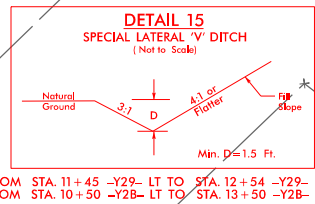
8/17/99


10/24/2023
U-4714AC-Hyd-prm-wet.psh.03.dgn



FOR -L- PROFILE VIEW, SEE SHEET 15

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



PROJECT REFERENCE NO. U-4714AC		SHEET NO. 9
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 17 OF 29

DATE: 10/24/2023

SEE PERMIT DRAWING
SHEET 21 OF 29
FOR ENLARGEMENT VIEW

MATCHLINE -Y2B-
13+00.00
SEE SHEET 9A

MATCHLINE -L- 164+00.00
SEE SHEET 10

MATCHLINE -Y2- 14+50.00
SEE SHEET 9A

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)

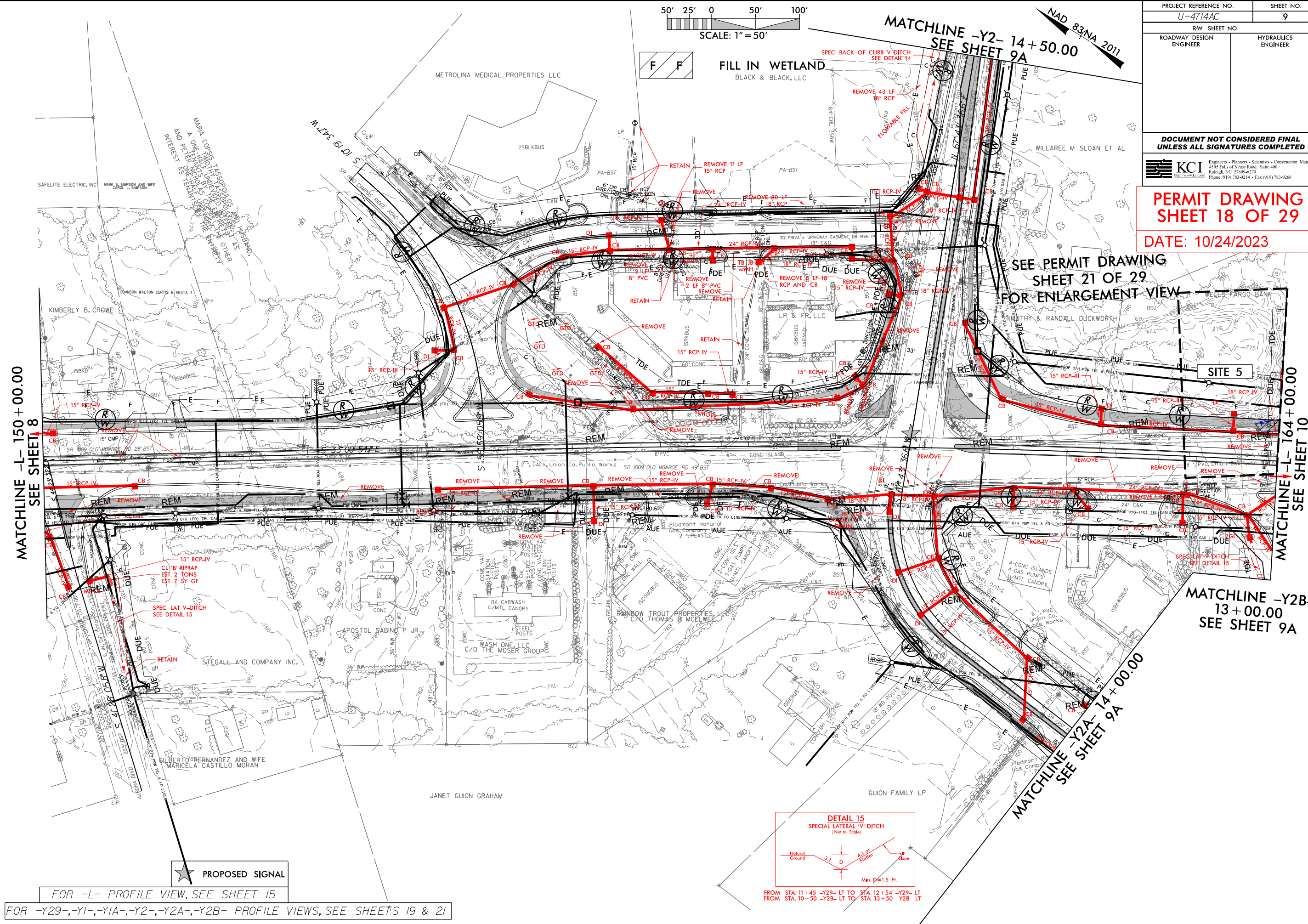
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12-22-2022: RW REVISION: CHANGED DUE TO AUE ON PARCEL 125 FROM -L- STA. 156+37.00 TO 158+96.81. ALSO ADDED PDE TO PARCEL 125 FOR THE CATCH BASIN AT -L- 157+50.00. (BH)

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)



FOR -L- PROFILE VIEW, SEE SHEET 15

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

PROJECT REFERENCE NO.		SHEET NO.
U-4714AC		9
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
<i>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</i>		

	KCI www.kci.com	Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214 • Fax (919) 783-9266
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PERMIT DRAWING
SHEET 18 OF 29

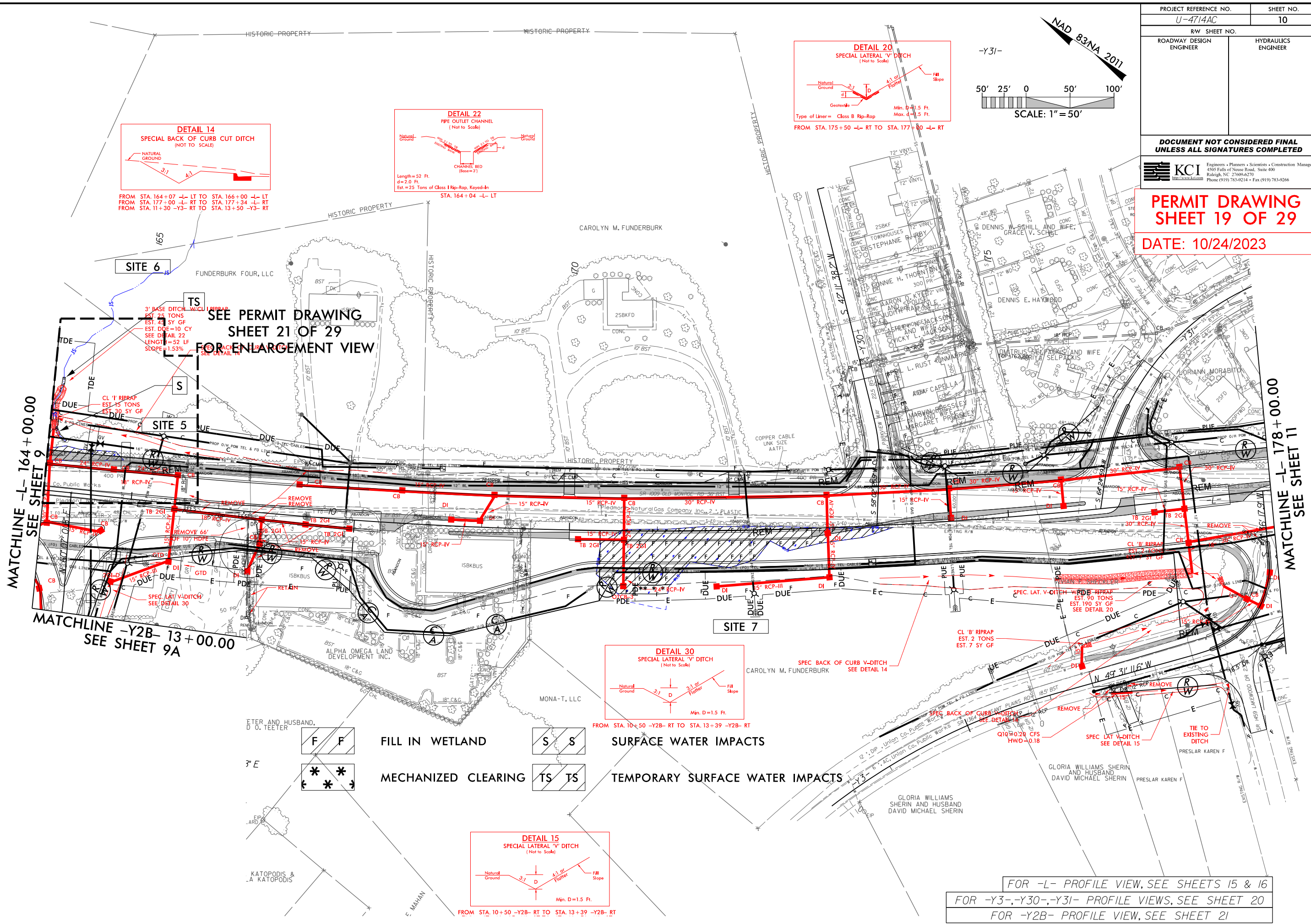
DATE: 10/24/2023

SEE PERMIT DRAWING
SHEET 21 OF 29
FOR ENLARGEMENT VIEW

MATCHLINE -Y2B-
13+00.00
SEE SHEET 9A

REVISIONS

0/24/2023
U4714AC_Hyd-prm_wet_psh_10.dgn



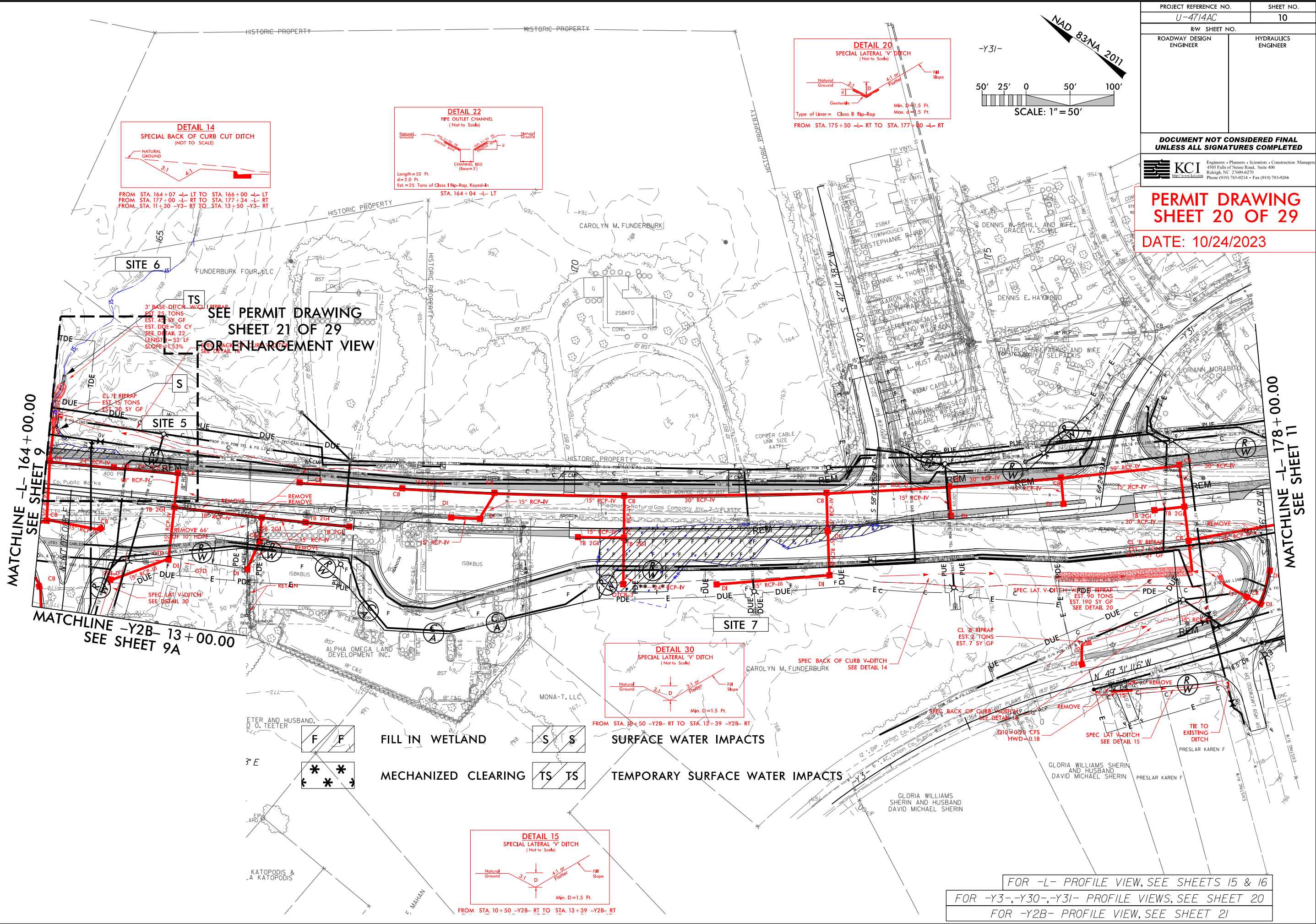
8/17/99

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 135 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



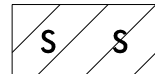
PROJECT REFERENCE NO. U-4714AC		SHEET NO. 10
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
KCI Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919)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

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

16" WL

DI

F

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

6/23/16

PERMIT DRAWING
SHEET 22 OF 29

DATE: 10/24/2023

SITE 5

FILL IN WETLAND

WETLAND

SITE 5

FILL IN WETLAND

WETLAND

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

SITE 7

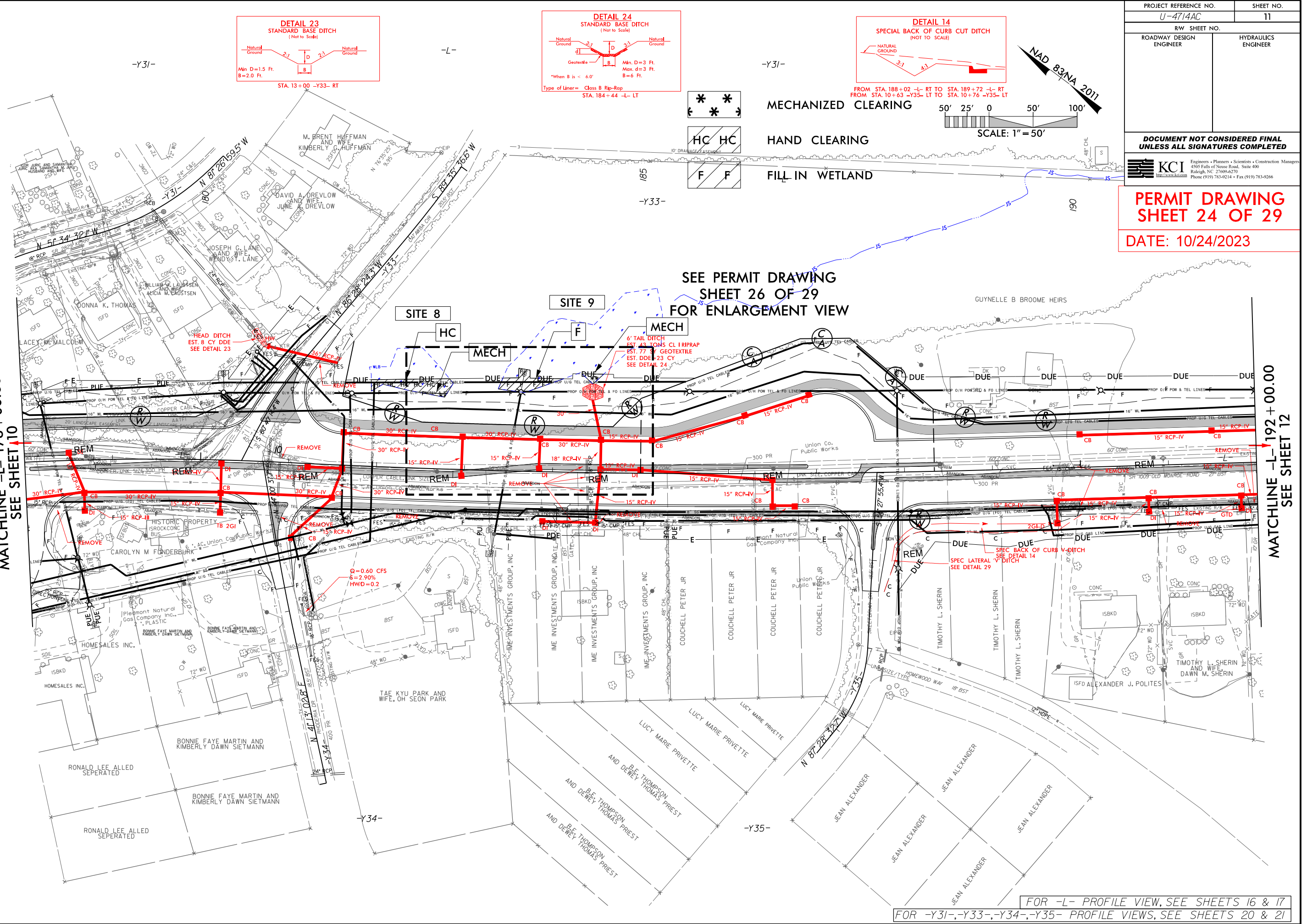
SITE 7

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



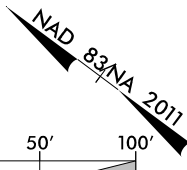
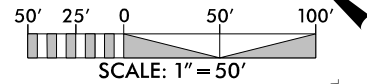
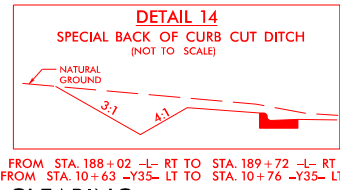
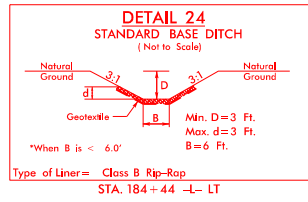
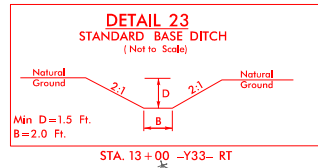
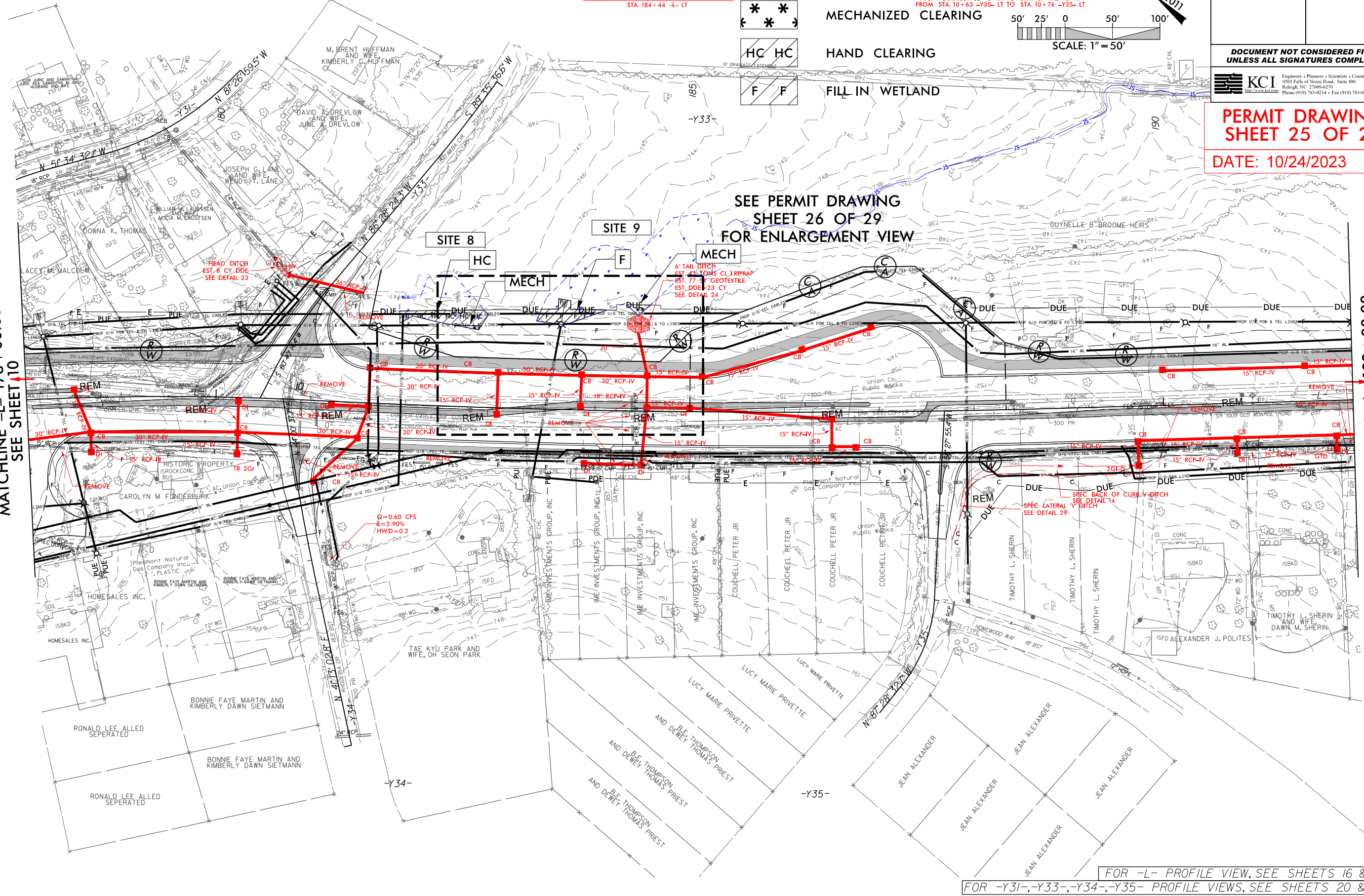
PROJECT REFERENCE NO.	SHEET NO.
U-4714AC	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
KCI Engineers • Planners • Scientists • Construction Managers 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9214 • Fax (919) 783-9266	
PERMIT DRAWING SHEET 24 OF 29 DATE: 10/24/2023	

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)


04/24/2023
U:\4714AC_Hyd_prm_wet_psh_11a.dgn

8/17/99

MATCHLINE -L- 178 + 00.00
SEE SHEET 10

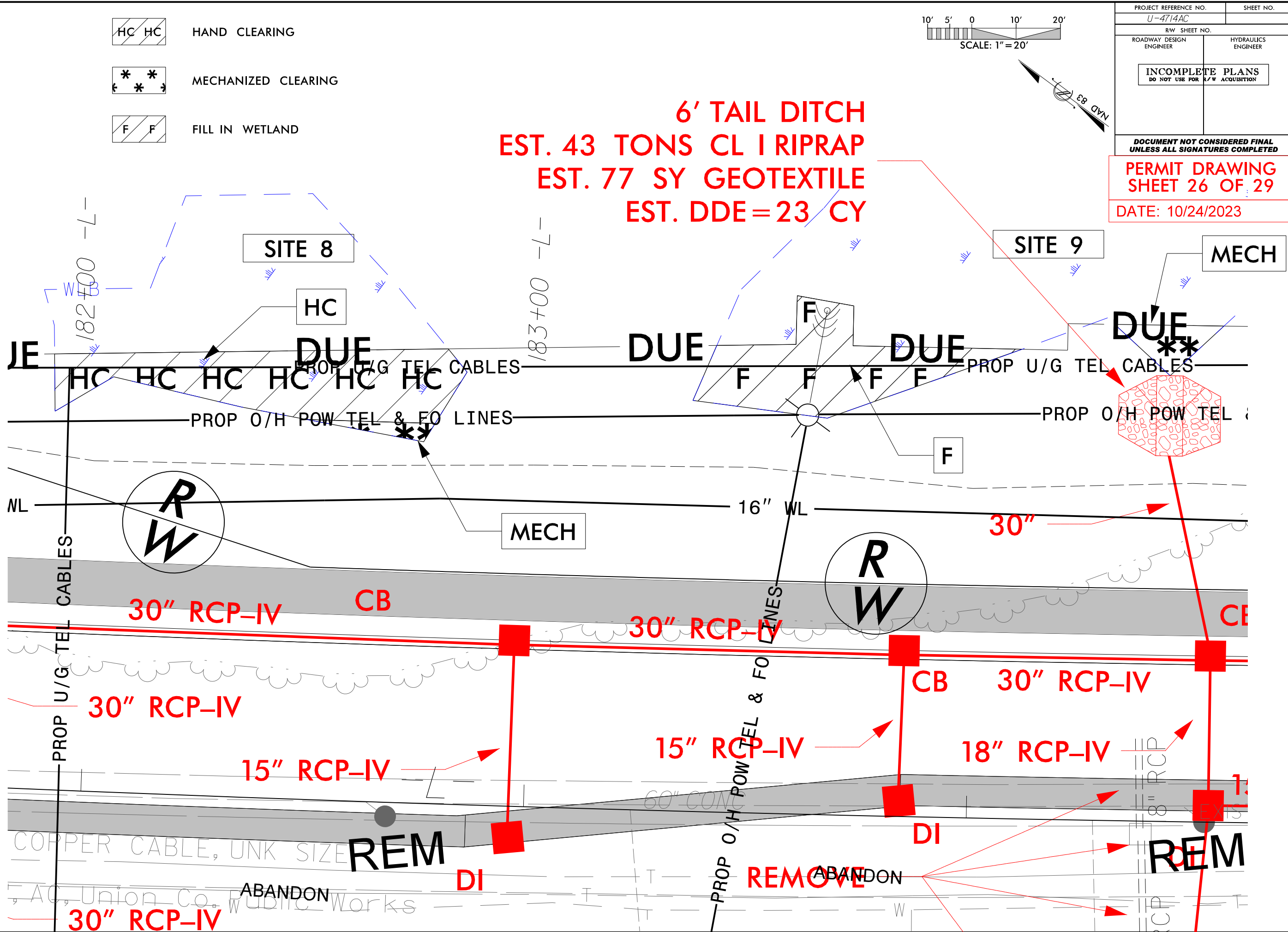


PERMIT DRAWING
SHEET 25 OF 29
DATE: 10/24/2023

PROJECT REFERENCE NO. U-4714AC		SHEET NO. 11
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		

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

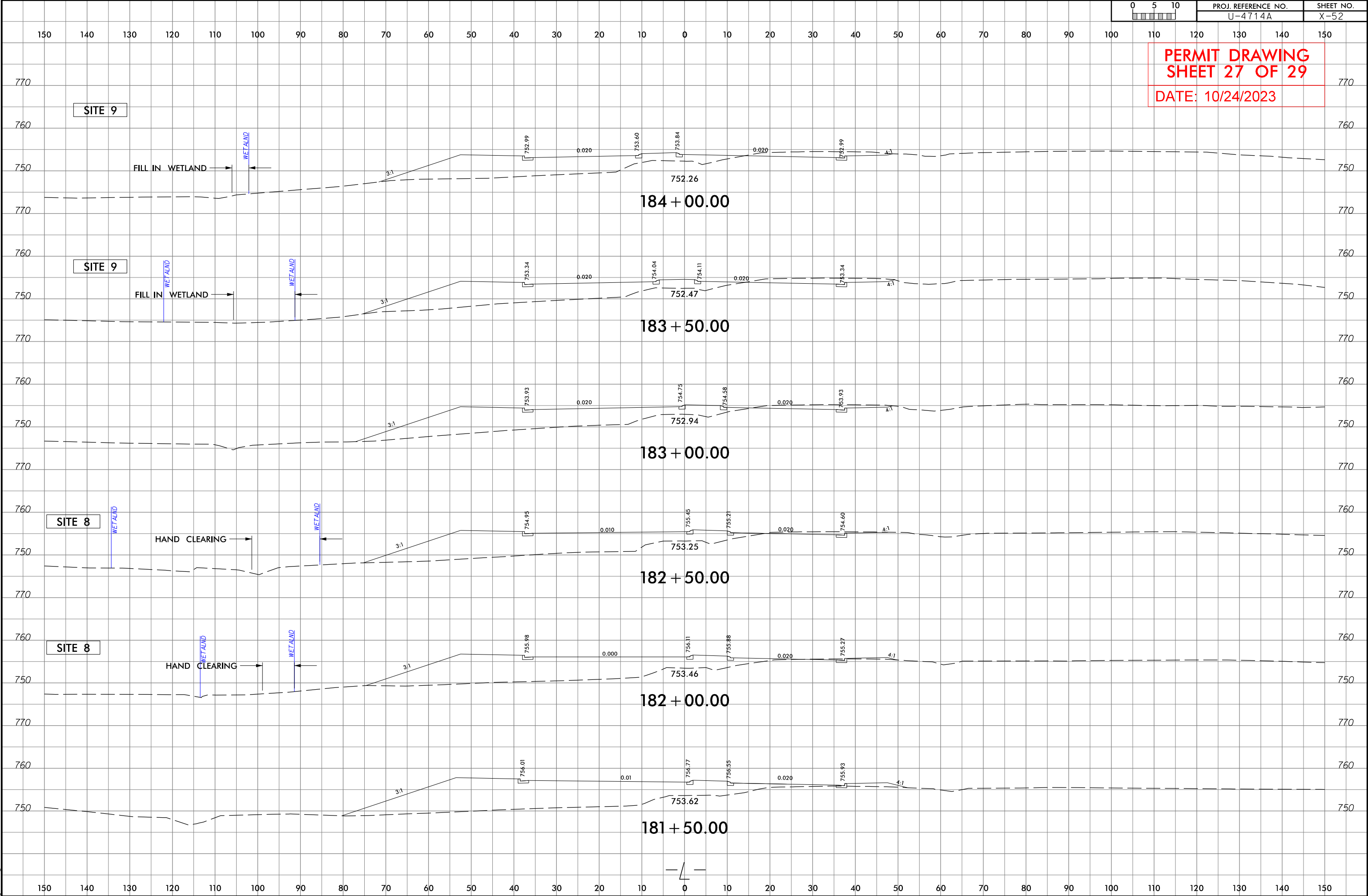


6/23/16

0510	PROJ. REFERENCE NO.	SHEET NO.
	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



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN



FOR NCDOT PROJECTS



(Version 3.00; Released August 2021)

WBS Element:		TIP/Proj No: U-4714B		County(ies): Union		Page 1 of 2	
General Project Information							
WBS Element:		TIP Number: U-4714B		Project Type: Roadway Widening		Date: 9.5.2023	
NCDOT Contact:		Contractor / Designer:					
Address:		Address:					
1000 Birch Ridge Drive Raleigh, NC 27610		STV Engineers, Inc. 900 West Trade Street Suite 715 Charlotte, NC 28202-1144					
Phone: (919) 707-6731		Phone: (704) 816-2555					
Email: crsharpless@ncdot.gov		Email: Edward.Vance@stvinc.com					
City/Town:		Stallings & Indian Trail		County(ies):		Union	
River Basin(s):		Catawba		CAMA County?		No	
Wetlands within Project Limits?		Yes					
Project Description							
Project Length (lin. miles or feet):		3.80		Surrounding Land Use:		Commercial & Residential	
Proposed Project				Existing Site			
Project Built-Upon Area (ac.)		ac.		ac.			
Typical Cross Section Description:		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.			
Annual Avg Daily Traffic (veh/hr/day):		Design/Future: 43,160		Year: 2041		Existing: 36,140	
General Project Narrative:							
(Description of Minimization of Water Quality Impacts)		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;"> North Carolina Department of Transportation Highway Stormwater Program STORMWATER MANAGEMENT PLAN FOR NCDOT PROJECTS </div> 									
(Version 3.00; Released August 2021)									
WBS Element:		TIP/Proj No.: U-4714B		County(ies): Union		Page 2 of 2			
General Project Information									
Waterbody Information									
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)							

SITE 1

PROJECT REFERENCE NO.
U-4714B

R/W SHEET NO.
4

ROADWAY DESIGN ENGINEER

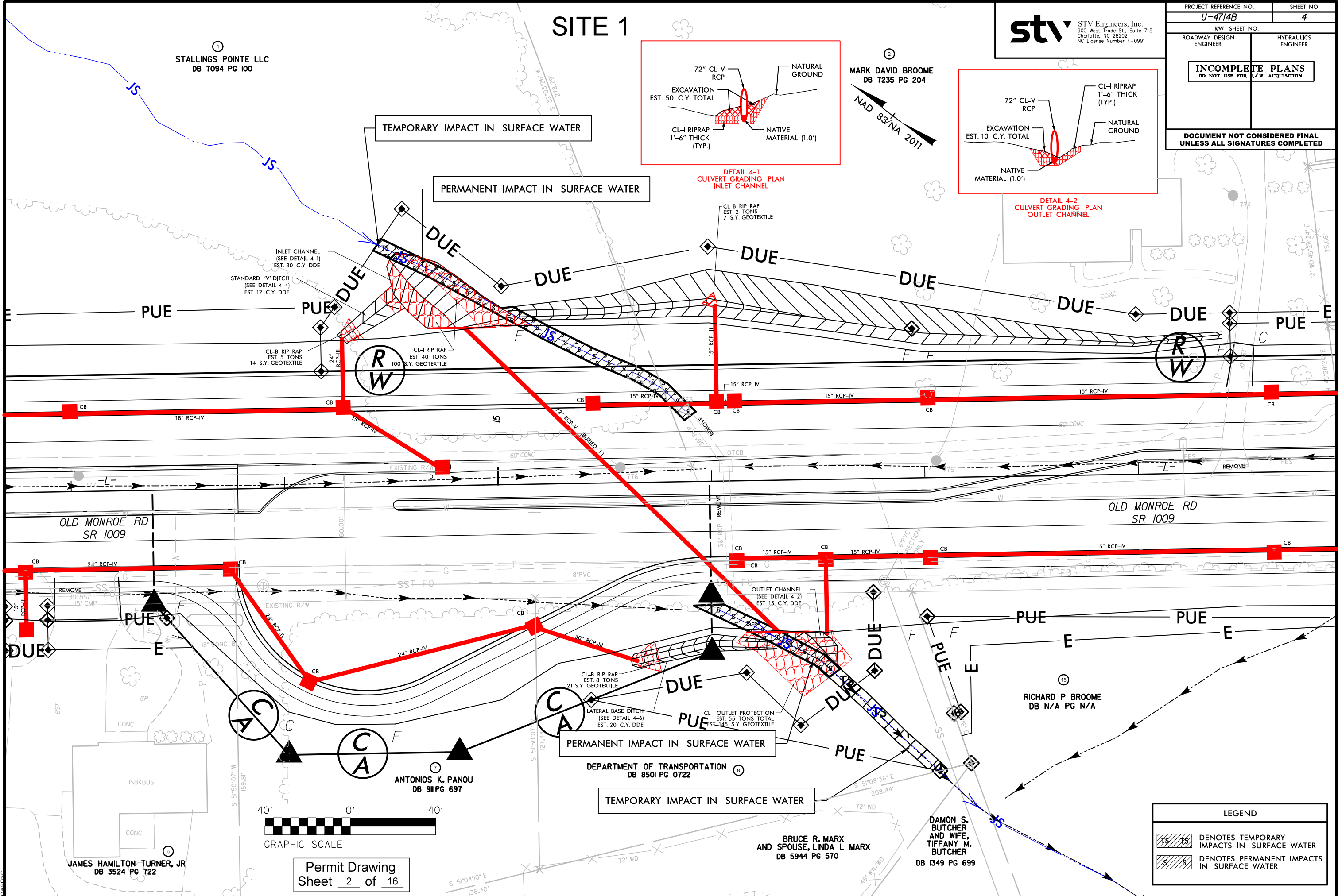
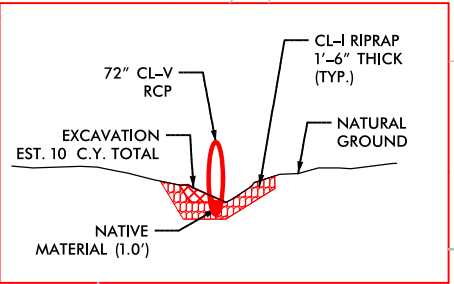
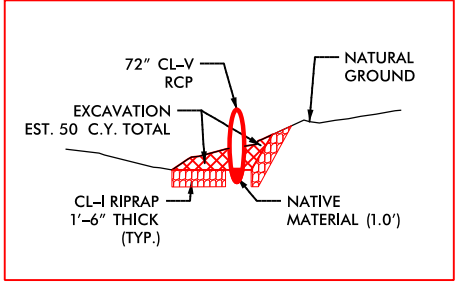
HYDRAULICS ENGINEER

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DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
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stv STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

MARK DAVID BROOME
DB 7235 PG 204



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

9/12/2023 R:\Hydro\Permits\Environmental\Drawings\U-4714B_hyd_perm_psh04.dgn

SITE 1

PROJECT REFERENCE NO.
U-4714B

R/W SHEET NO.
RW

ROADWAY DESIGN ENGINEER

SHEET NO.
4

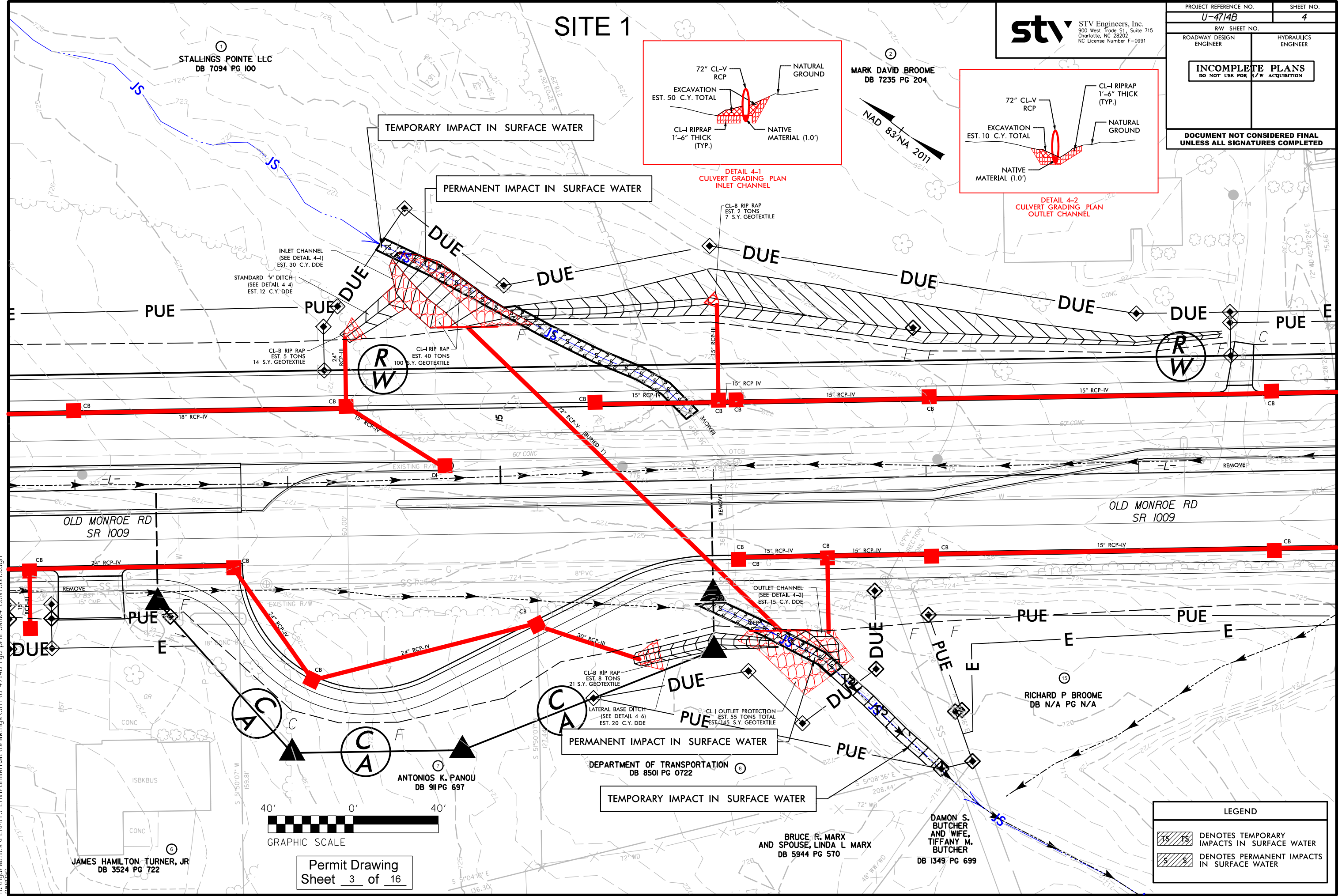
HYDRAULICS ENGINEER

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Charlotte, NC 28202
NC License Number F-0991

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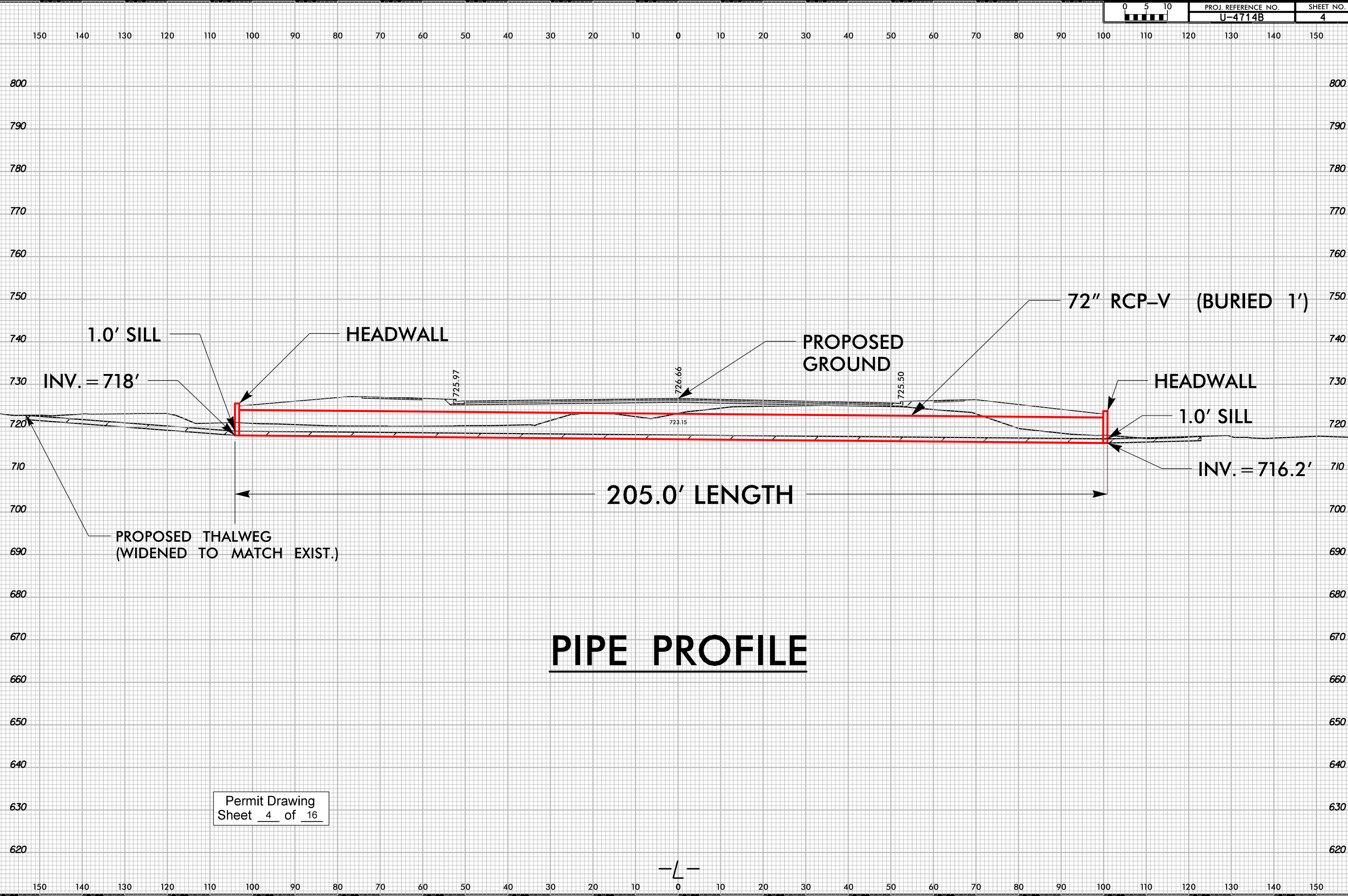


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6/23/16

9/12/2023
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OWENS

0 5 10	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

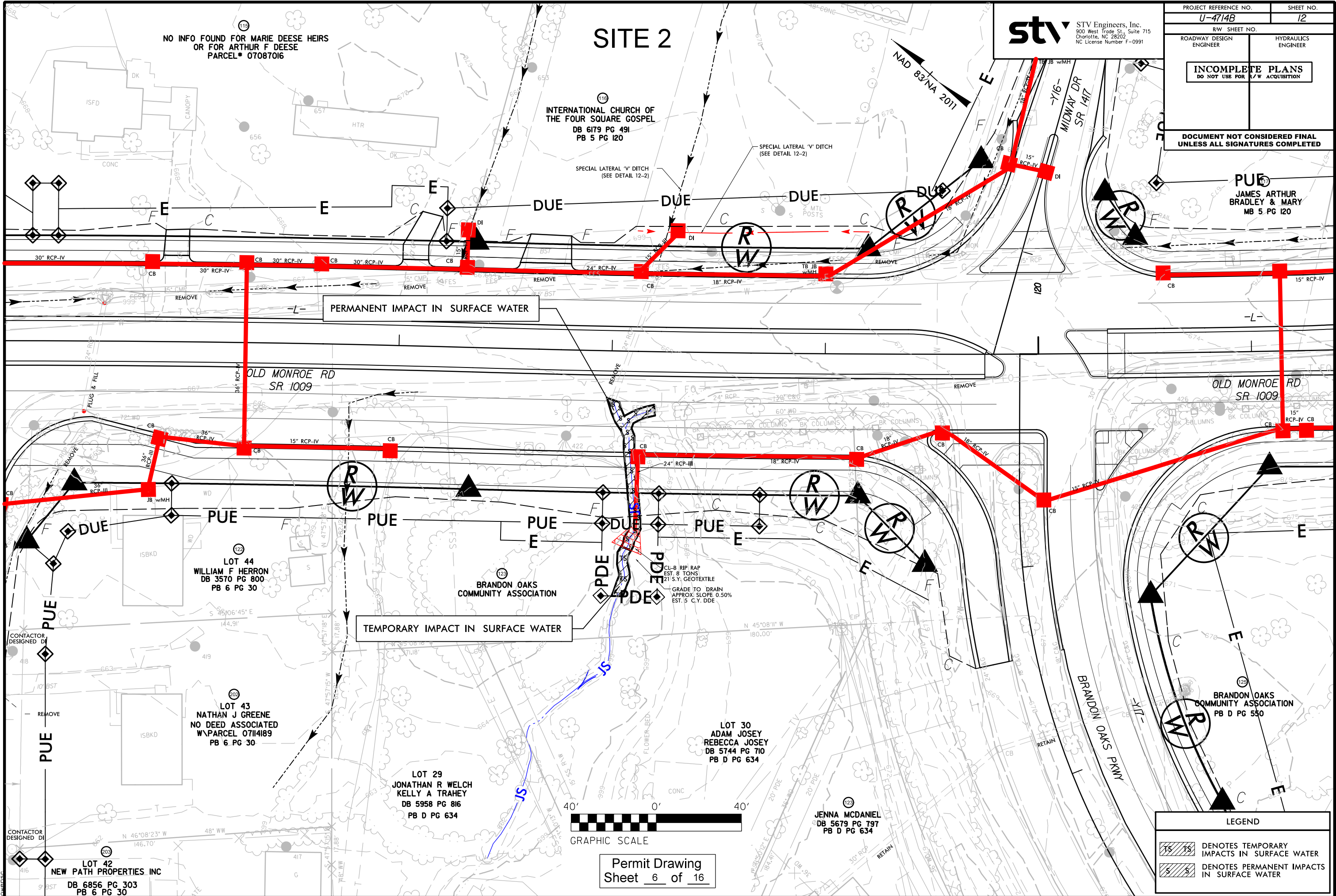
Permit Drawing
Sheet 5 of 16

40' 0' 40'



GRAPHIC SCALE

9/12/2023 R:\Hydraulics\PERMITS\Environmental\Drawings\SHU-U-4714B_hyd-prm-pah012_CONTOURS.dgn



PROJECT REFERENCE NO.
U-4714B

R/W SHEET NO.
12

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

STV

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Charlotte, NC 28202
NC License Number F-0991

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PUE
JAMES ARTHUR
BRADLEY & MARY
MB 5 PG 120

LEGEND

TS TS

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

S S

DENOTES PERMANENT IMPACTS
IN SURFACE WATER

SITE 3

PROJECT REFERENCE NO.
U-4714B

SHEET NO.
15

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

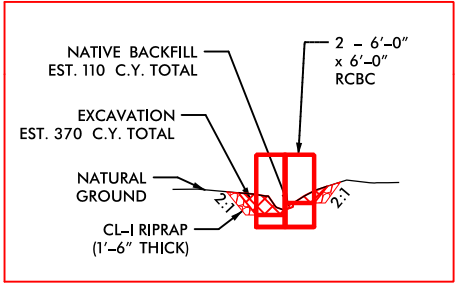
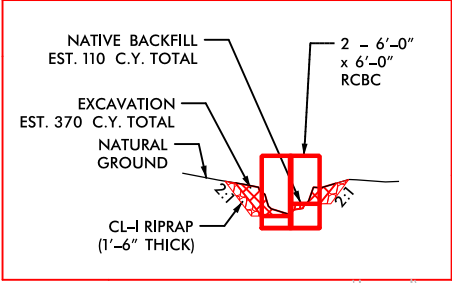
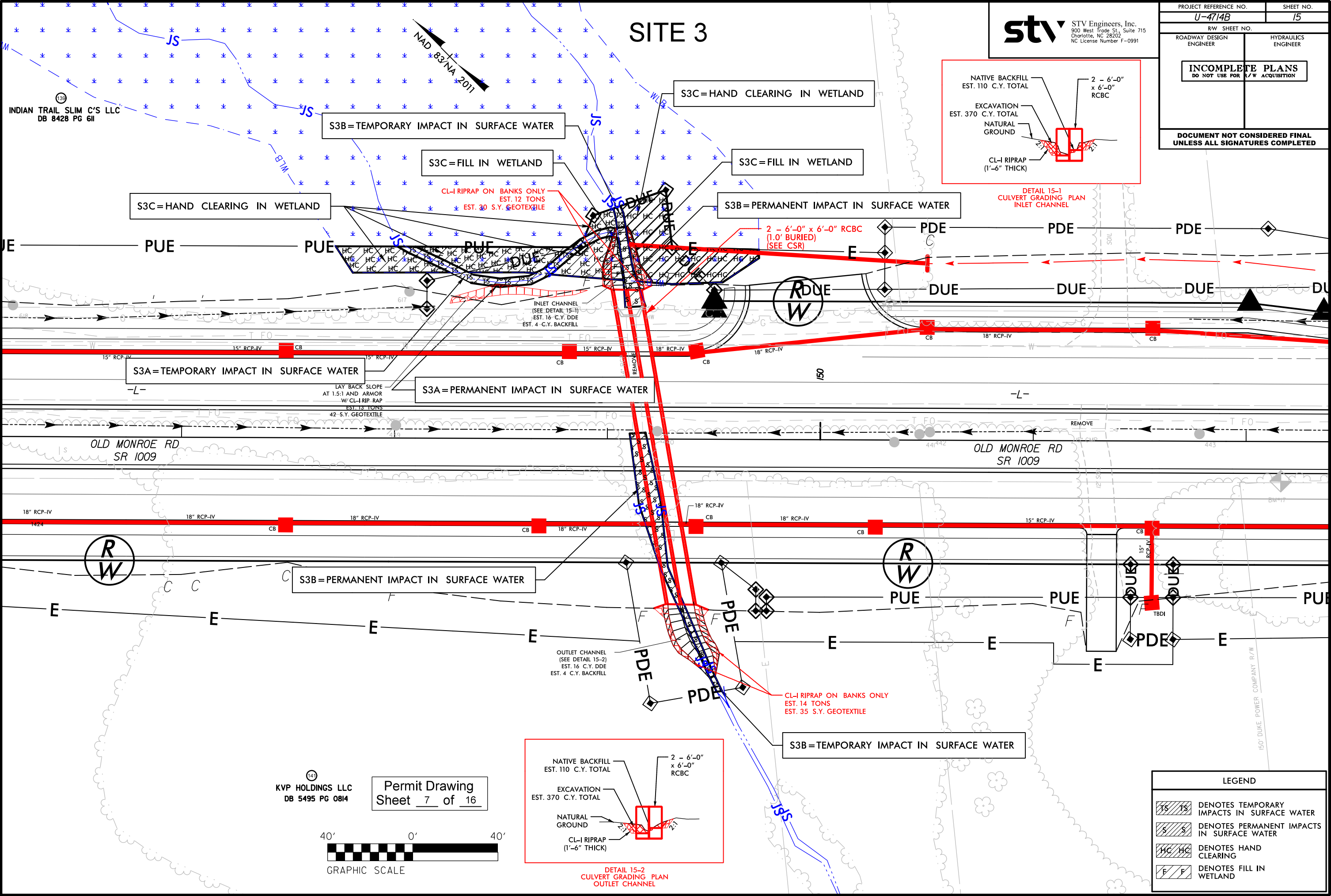
HYDRAULICS ENGINEER

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NC License Number F-0991



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

141

KVP HOLDINGS LLC
DB 5495 PG 0814

Permit Drawing
Sheet 7 of 16

40' 0' 40'

GRAPHIC SCALE

9/12/2023 R:\Hydro\Permits\Environmental\Drawings\SHT\U-4714B_hyd-prm-psa015.dgn

SITE 3

PROJECT REFERENCE NO.

U-4714B

SHEET NO.

15

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS

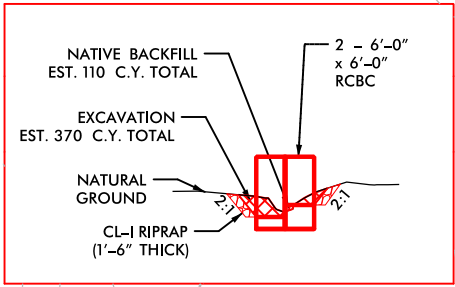
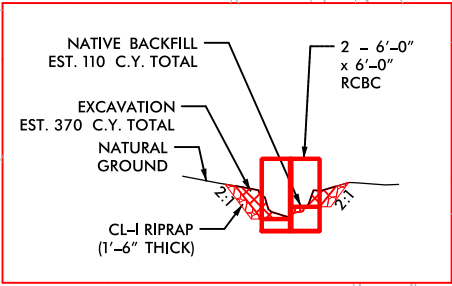
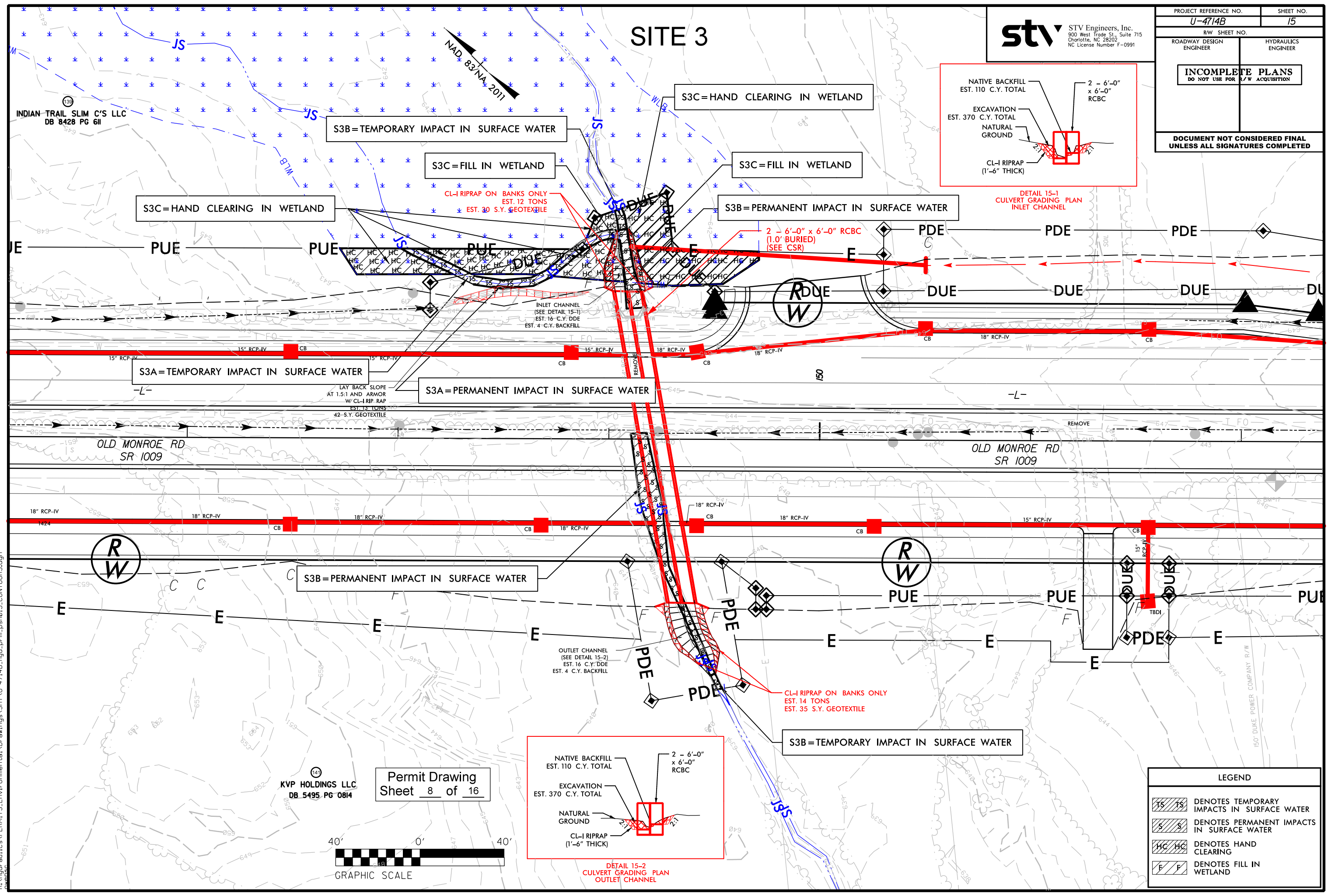
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NC License Number F-0991



Permit Drawing
Sheet 8 of 16

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

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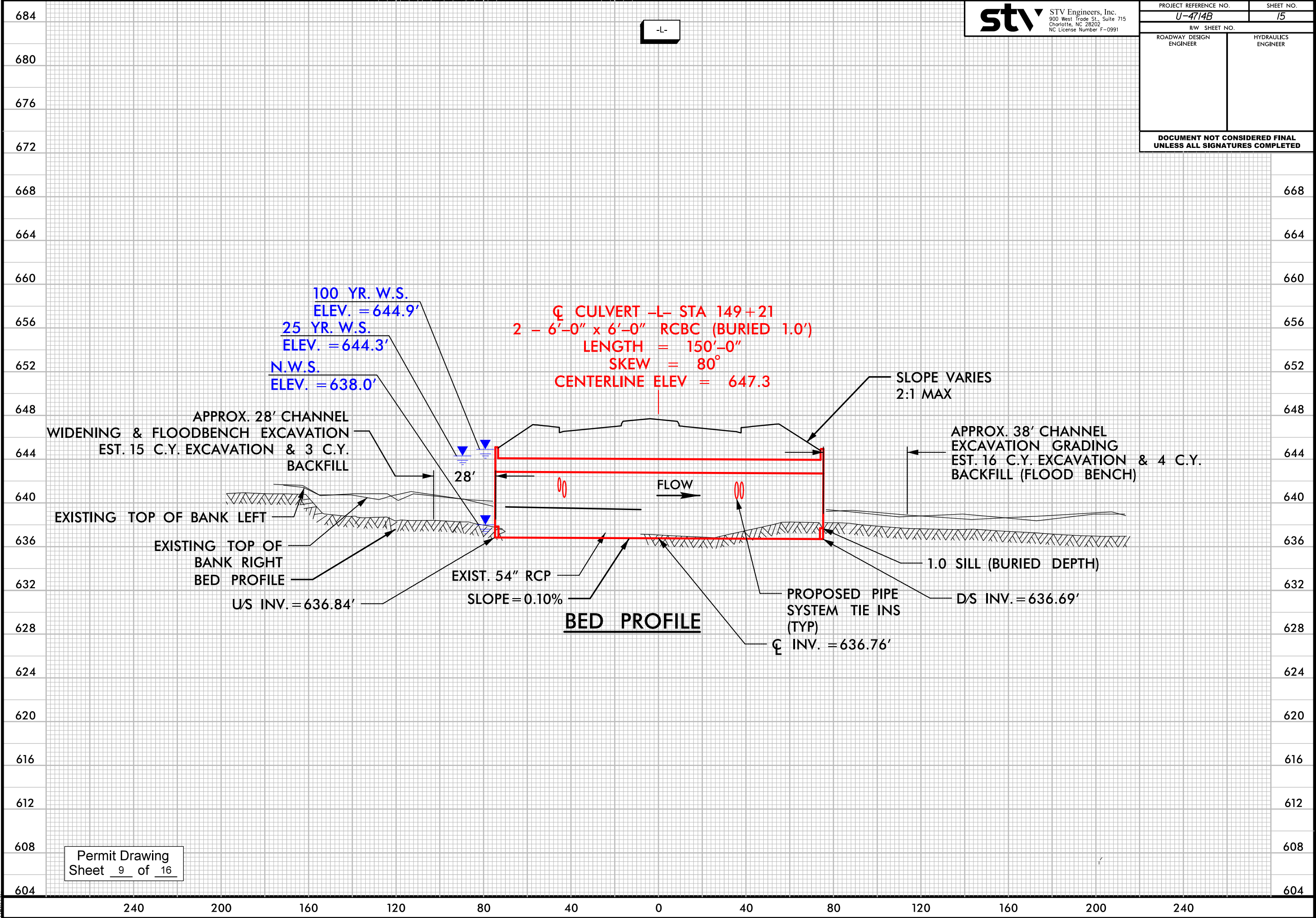
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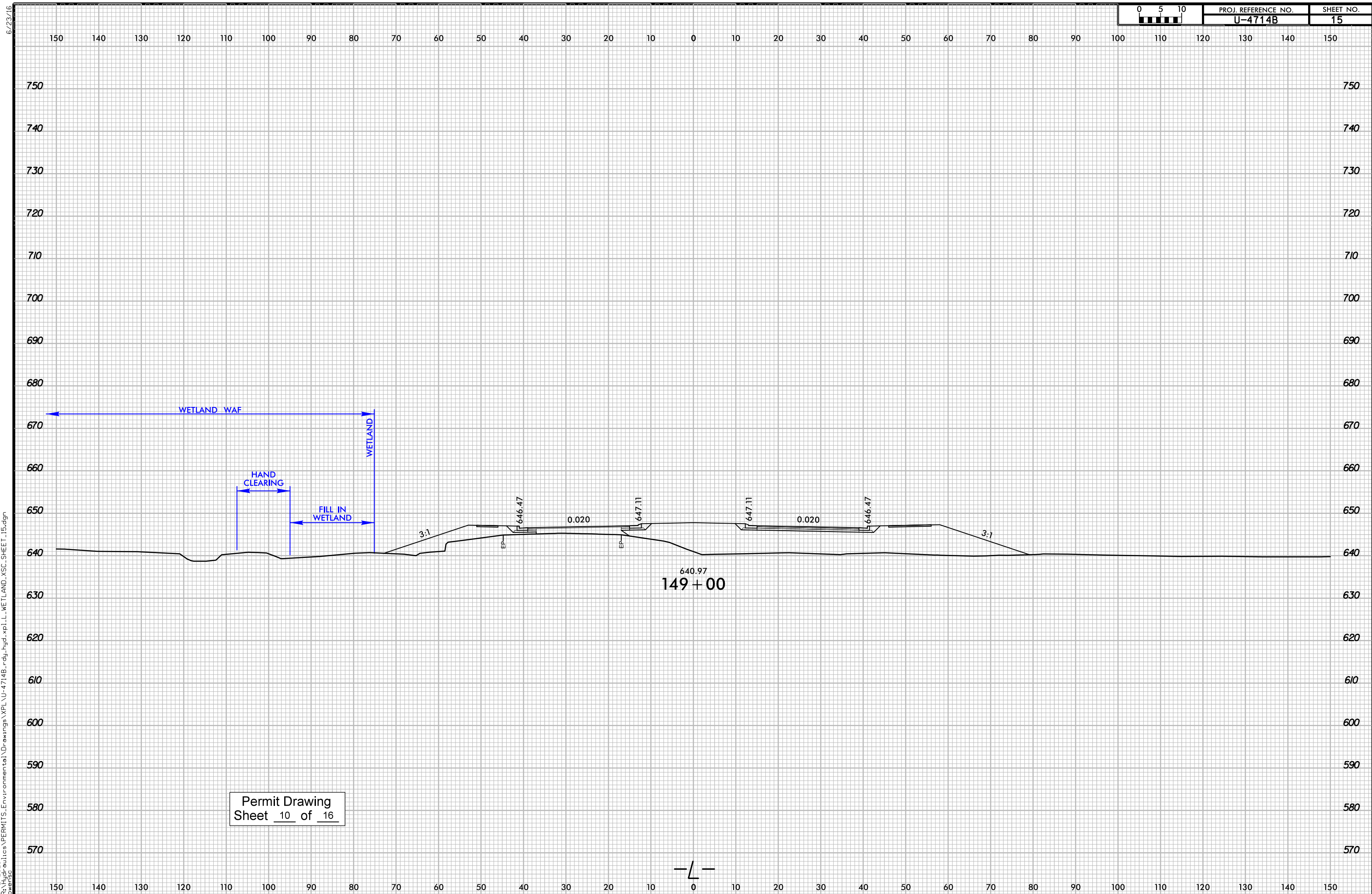
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dwg

stv

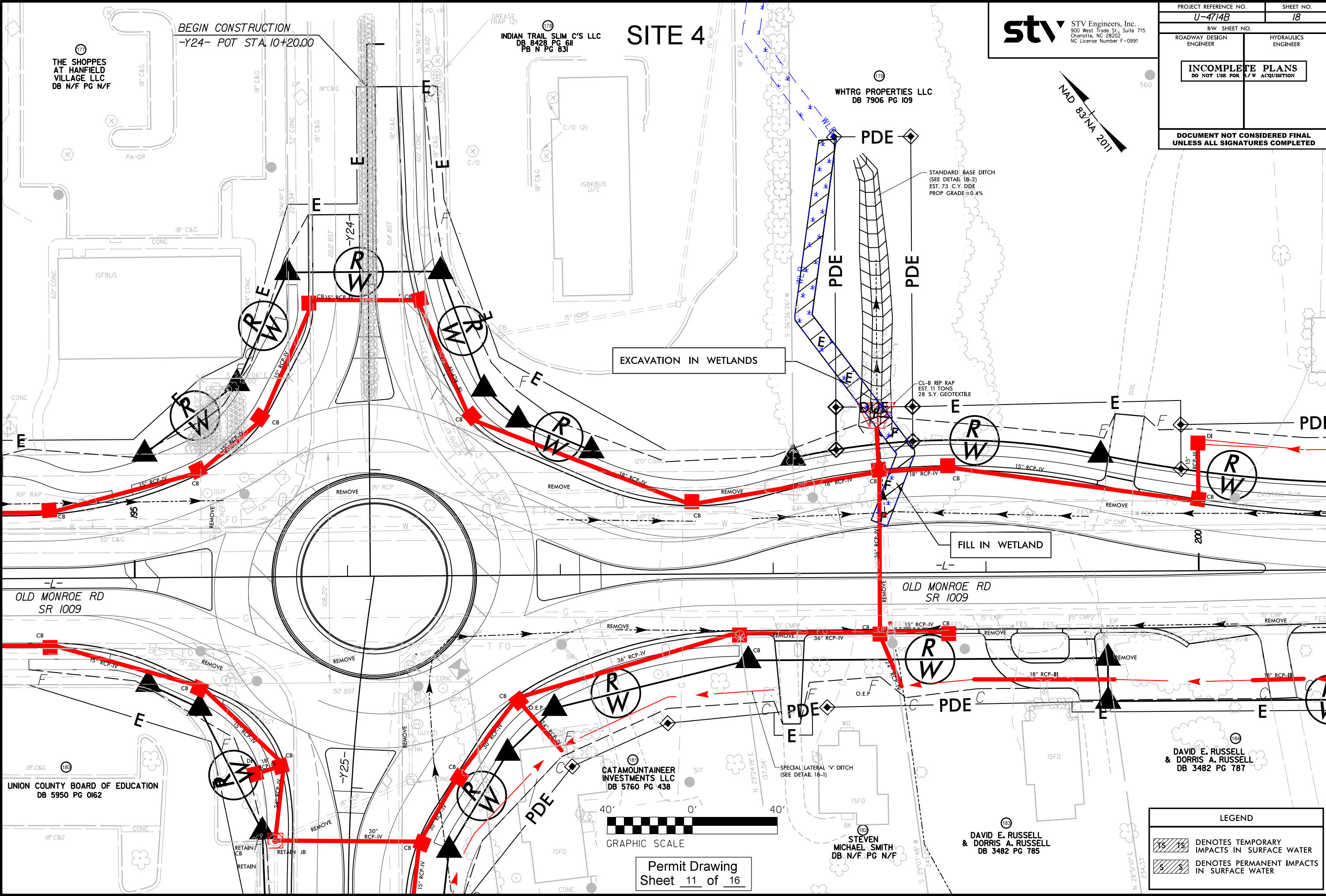
STV Engineers, Inc.
900 West Trade St. Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
U-4714B	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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dwg



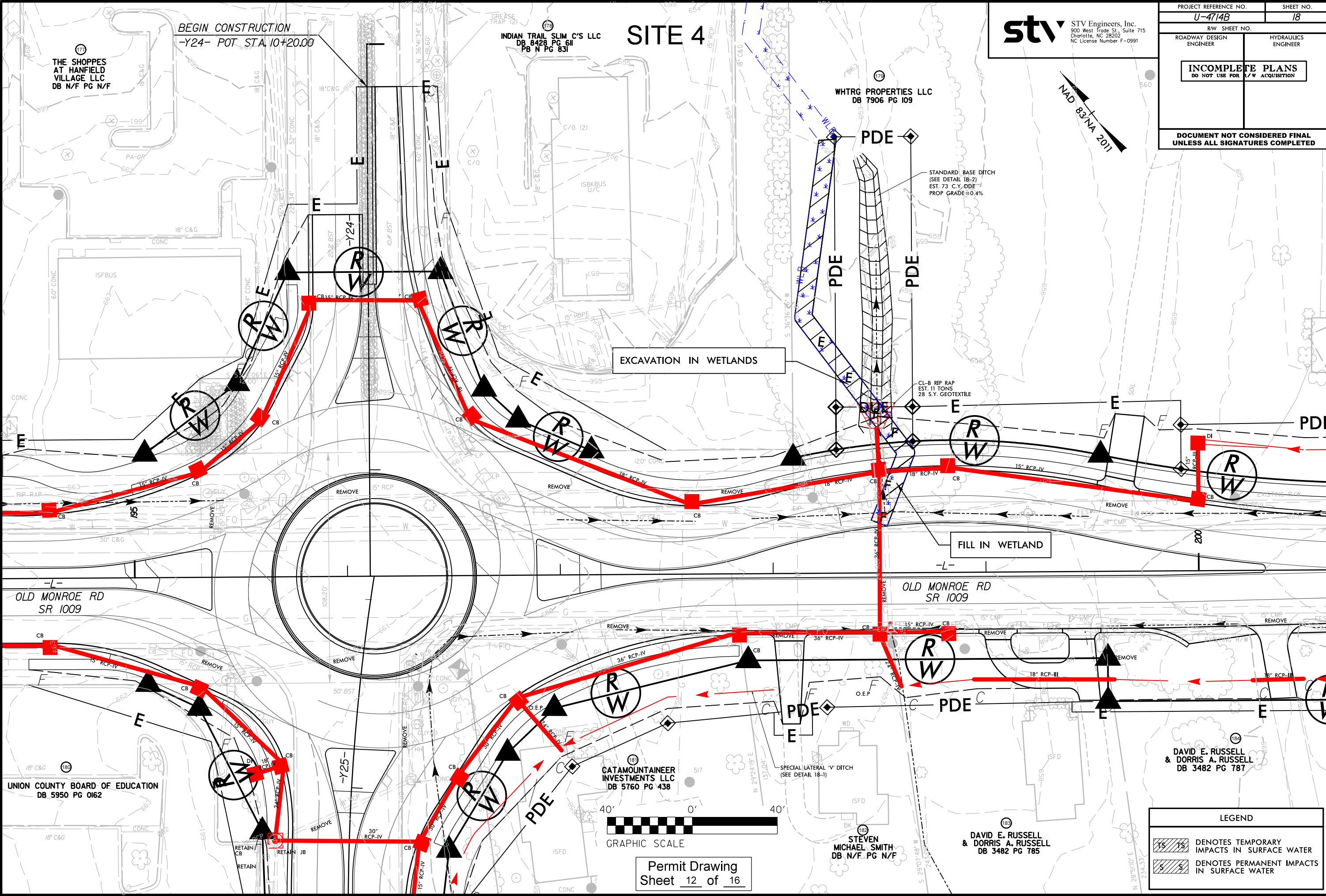
stv STV Engineers, Inc.
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Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO. U-4714B		SHEET NO. 18	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
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Permit Drawing
Sheet 11 of 16

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

9/12/2023
R:\Hydro\Permits\Environmental\Drawings\SHT-U-4714B_hyd_prm_psh018_CONTOURS.dgn



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Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO. U-4714B		SHEET NO. 18	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
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NAD 83/NA 2011

Permit Drawing
Sheet 12 of 16

LEGEND

	15	15	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	S	S	DENOTES PERMANENT IMPACTS IN SURFACE WATER

DAVID E. RUSSELL
& DORRIS A. RUSSELL
DB 3482 PG 787

DAVID E. RUSSELL
& DORRIS A. RUSSELL
DB 3482 PG 785

STEVEN
MICHAEL SMITH
DB N/F PG N/F

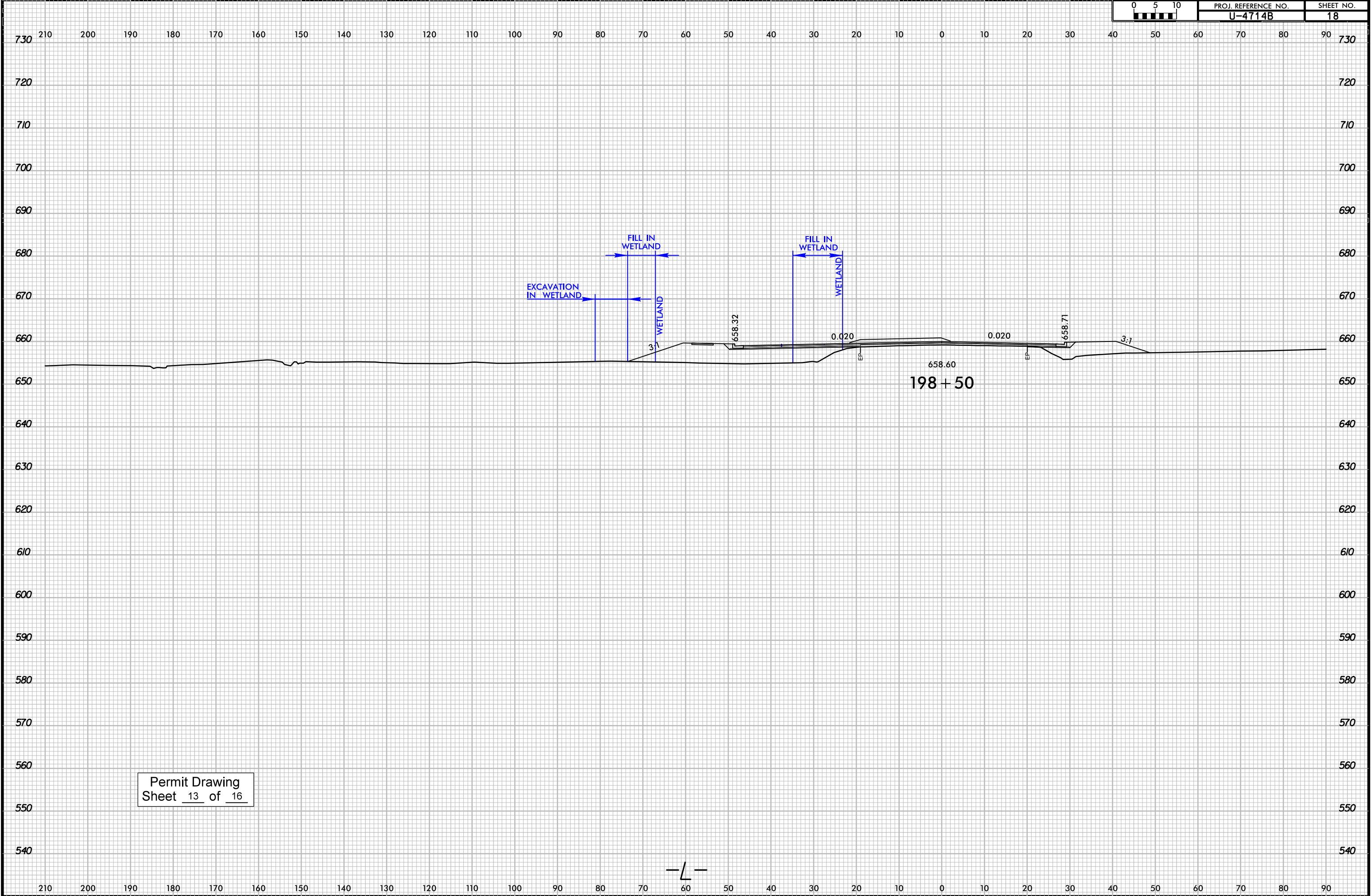
CATAMOUNTAINEER
INVESTMENTS LLC
DB 5760 PG 438

UNION COUNTY BOARD OF EDUCATION
DB 5950 PG 0162

OLD MONROE RD
SR 1009

OLD MONROE RD
SR 1009

6/23/16



Permit Drawing
Sheet 13 of 16

C

— 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

DB NA PG NA
PB IPG 878

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

40' 0' 40'

GRAPHIC SCALE

Permit Drawing
Sheet 14 of 16

 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.
<i>U-4714B</i>	<i>17A</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	

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SITE 5

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

LEGEND

 DENOTES PERMANENT IMPACTS
IN SURFACE WATER

Permit Drawing
Sheet 15 of 16

GRAPHIC SCALE

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

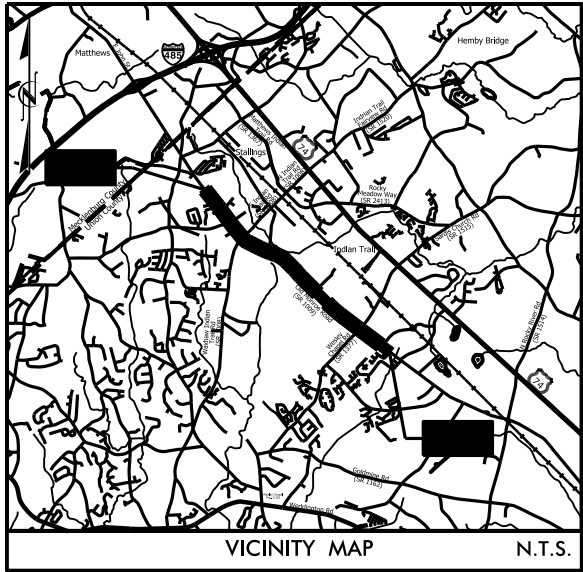
NOTES:

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

09/08/19

TIP PROJECT: U-4714B

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



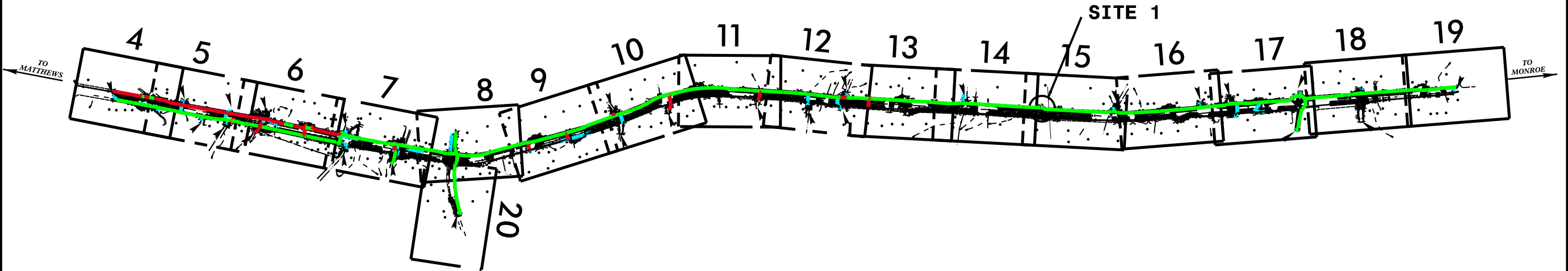
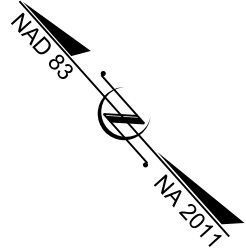
65% PLANS

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	

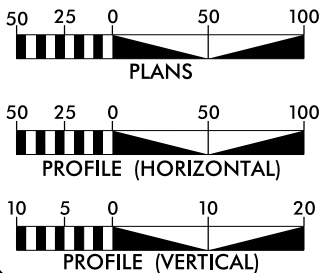


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

★ PROPOSED TRAFFIC SIGN

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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
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 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

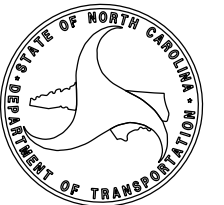
STEPHANIE PHILLIPS, EIT
PROJECT DESIGNER

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

SITE 1

