




STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

June 30, 2017

MEMORANDUM TO: Mr. Mike Mills, P.E.  
Division 7 Engineer

FROM: Philip S. Harris, III, P.E., Manager  
for Natural Environment Section 

SUBJECT: Alamance County; NC 119 Relocation from I-85/I-40 to South of SR  
1918 (Mrs. White Lane) in Mebane – Mebane Bypass;  
Federal Aid No. STP-119(1); WBS 34900.1.1; **TIP U-3109.**

Attached are the U.S. Army Corps of Engineers Individual Permit and N.C. Division of Water Resources Water Quality Certification. All environmental permits have been received for the construction of this project.

A copy of this permit package will be posted on the NCDOT website at:

<https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>

**Quick Links>Permit Documents> Issued Permits.**

cc: w/o attachment (see website for attachments)

Mr. Andy Gay, P.E. Contracts Management  
Ms. Jerry Parker, Division 7 Environmental Officer  
Dr. Majed Al-Ghandour, P.E., Programming and TIP  
Ms. Brenda Moore, P.E., Roadway Design  
Mr. Carl Barclay, P.E., Utilities Unit  
Mr. Matt Lauffer, P.E., Hydraulics  
Mr. Brian Hanks, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. Ron Hancock, P.E., State Roadway Construction Engineer  
Mr. Brian Yamamoto, P.E., Project Development

# PROJECT COMMITMENTS

T.I.P. Project No. U-3109  
NC 119 Relocation from I-85/I-40 to South of SR 1918 (Mrs. White Lane) in Mebane –  
Mebane Bypass  
Alamance County  
Federal Aid Project No. STP – 119(1)  
WBS Element No. 34900.1.1  
State Project No. 8.1470901

## COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

### **Project Development & Environmental Analysis Branch / Right of Way Branch**

The NCDOT will continue to coordinate with St. Luke's Christian Church throughout the project and work with the church to develop a detailed plan on the timing and means of the relocation prior to right-of-way acquisition.

*Advanced acquisition of the church has been completed. The church plans to relocate to and build on property on US 70 approximately 1/4 mile from its current location.*

### **Project Development & Environmental Analysis Branch / Highway Division 7 Office**

This project involves an environmentally sensitive area, identified on the preliminary design plans. No earthwork, staging, or storage of any kind should occur within this environmentally sensitive area.

*The environmentally sensitive area will be identified on the final design plans for Section B of the project, which will be designed at a later date.*

### **Project Development & Environmental Analysis Branch – Human Environment Unit**

The NCDOT, in consultation with the North Carolina State Historic Preservation Officer (HPO), the Eloise W. Cates Estate, and the Marsha A. Ritchie Trust, will develop and implement a landscape plan for the portion of the historic Cates Farm directly impacted by the project.

*No action at this time. The photo-documentation of the Cates Farm will be completed prior to construction. The landscape plan will be prepared in coordination with the property owners when the Section B design is prepared.*

### **Hydraulics Unit / Roadway Design Unit**

Investigate a spanning (three-sided) bottomless culvert at major stream crossing Site 2 (Unnamed Tributary to Mill Creek [UT14]).

*This stream is located in Section B of the project. The final design has not been prepared for Section B at this time. However, a bottomless culvert will be investigated once final design for Section B is underway.*

### **Hydraulics Unit**

Hazardous spill protection measures will be provided at stream crossings within ½ mile of the water supply watershed critical area of the Graham-Mebane Reservoir during final design of Alternative 9.

*Hazardous spill basin(s) will be included in the design of the project.*

Coordinate with the NC Floodplain Mapping Program (FMP), the delegated state agency for administering the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program, to determine status of project with regard to applicability of NCDOT'S Memorandum of Agreement with FMP (dated 6/5/08), or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

*NCDOT is coordinating with the NCFMP regarding a CLOMR due to floodplain impacts resulting from two crossings of MoAdams (McAdams) Creek.*

### **Highway Division 7 Office**

This project involves construction activities on or adjacent to FEMA-regulated streams. Therefore, the Division shall submit sealed as-built construction plans to the 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 on the construction plans, both horizontally and vertically.

*No action to date. This commitment will be fulfilled after construction is completed.*

### **Geotechnical Unit**

A re-evaluation of the two facilities containing potential hazardous materials/waste sites located along Alternative 9 will be completed once right-of-way plans are complete.

*Right of Way Plans are approaching completion. The Geotechnical Unit will follow through with the evaluation in the coming months.*

### **Geotechnical Unit/ Contract Standards and Development**

The GeoEnvironmental Section will provide a Project Special Provision with the let package notifying the contractor that contaminated soil may be encountered during construction. In the event that contaminated soil is encountered, the contaminated soil will be properly disposed at a facility licensed to accept it.

*This commitment was added as of 11/03/2014. Action will be taken prior to let.*

## **COMMITMENTS FROM PERMITTING**

### **Highway Division 7**

NCDOT shall design, construct, and operate and maintain four hazardous spill catch basins (HSCBs) adjacent to streams that drain to the water supply critical areas (WS CA) of Forest Lake and Graham-Mebane Reservoir. The HSCBs shall be located as shown in the Table below:

### **Locations of Hazardous Spill Catch Basins**

Station	Coordinates		Surface Water
161+92-L-RT	36.1028	-79.2946	Back Creek
179+68-L-RT	36.1058	-79.2901	Back Creek
20+90-Y16RPA-LT	36.1084	-79.2838	Back Creek
32+55-Y20-LT	36.1018	-79.2932	UT to Mill Creek





**DEPARTMENT OF THE ARMY**  
**WILMINGTON DISTRICT, CORPS OF ENGINEERS**  
**69 DARLINGTON AVENUE**  
**WILMINGTON, NORTH CAROLINA 28403-1343**

June 27, 2017

Regulatory Division/1200A

Action ID: SAW-2002-20667

Mr. Philip S. Harris III, P.E., C.P.M.  
Natural Environment Section Head  
North Carolina Department of Transportation  
Division of Highways  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

In accordance with your written request of February 27, 2017, and the ensuing administrative record, enclosed is a Department of the Army (DA) Permit to construct the 4.8 mile long Mebane Bypass in Alamance County, TIP U-3109, including widening NC 119 to six-lanes from the I-40/I-85 interchange north to the existing 3rd Street Extension, improvements to a portion of SR 1997 (Corrigidor Road), including realignment to the east of its existing location and connecting it to SR 1973 (Tate Avenue) near the Mebane Wastewater Treatment Plant (WWTP), and tying-in SR 1970 (Roosevelt Street) into the proposed Corrigidor Road realignment just north of the City of Mebane Maintenance Yard. The project also constructs NC 119 on new location as a four-lane, median-divided facility from the existing 3rd Street Extension north until tying into existing NC 119 just south of Mrs. White Lane. The project involves the permanent discharge of dredged or fill material into 6,232 linear feet of stream channel (6,065 linear feet of permanent loss and 167 linear feet of bank stabilization), 0.89 acre of riparian wetlands (0.78 acre of permanent fill, 0.02 acre of excavation, and 0.09 acre of mechanized clearing), and 0.32 acre of open water, as well as the temporary discharge of dredged or fill material into 461 linear feet of stream channel.

Any deviation in the authorized work will likely require modification of this permit. If a change in the authorized work is necessary, you should promptly submit revised plans to the Corps showing the proposed changes. You may not undertake the proposed changes until the Corps notified you that your permit has been modified.

Carefully read your permit. The general and special conditions are important. Your failure to comply with these conditions could result in a violation of Federal law. Certain significant general conditions require that:


- a. You must complete construction before December 31, 2022.
- b. You must notify this office in advance as to when you intend to commence and complete work.
- c. You must allow representatives from this office to make periodic visits to your worksite as deemed necessary to assure compliance with permit plans and conditions.

You should address all questions regarding this authorization to Mr. David Bailey, in the Raleigh Regulatory Field Office, telephone number (919) 554-4884, extension 30.

Thank you in advance for completing our Customer Survey Form. This can be accomplished by visiting our web-site at [http://corpsmapu.usace.army.mil/cm\\_apex/f?p=136:4:0](http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0) and completing the survey on-line. We value your comments and appreciate your taking the time to complete a survey each time you interact with our office.

Sincerely,



 Kevin P. Landers Sr.  
Colonel, U.S. Army  
District Commander

Enclosures

Copy Furnished (with enclosures):

Chief, Source Data Unit  
NOAA/National Ocean Service  
Attn: Sharon Tear N/CS261  
1315 East-West Hwy., Rm 7316  
Silver Spring, Maryland 20910-3282

Copies Furnished with special conditions and plans:

Mr. Pete Benjamin  
U.S. Fish and Wildlife Service  
Raleigh Ecological Service Field Office  
Post Office Box 33726  
Raleigh, North Carolina 27636-3726

Mr. Fritz Rohde  
Habitat Conservation Division – Atlantic Branch  
101 Pivers Island Road  
Beaufort, North Carolina 28516

Mr. Todd Bowers  
Oceans, Wetlands and Streams Protection Branch  
Wetlands and Streams Regulatory Section  
U.S. Environmental Protection Agency – Region 4  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, Georgia 30303-8931

Mr. Doug Huggett  
Division Coastal Management  
N.C. Department of Environment and Natural Resources  
400 Commerce Avenue  
Morehead City, North Carolina 28557

Dr. Pace Wilber  
Habitat Conservation Division – Atlantic Branch  
NOAA Fisheries Service  
219 Fort Johnston Road  
Charleston, South Carolina 29412



**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND  
REQUEST FOR APPEAL**

Applicant: NC Department of Transportation	File Number: SAW-2002-20667	Date: June 21, 2017
Attached is:		See Section Below

<input checked="" type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
<input type="checkbox"/>	PERMIT DENIAL	C
<input type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D
<input type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/ccwo/reg> or Corps regulations at 33 CFR Part 331.

**A: INITIAL PROFFERED PERMIT:** You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B: PROFFERED PERMIT:** You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.



E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT**

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:

**District Engineer, Wilmington Regulatory Division  
Attn: David E. Bailey  
Raleigh Regulatory Field Office  
3331 Heritage Trade Drive, Suite 105  
Wake Forest, North Carolina 27587**

If you only have questions regarding the appeal process you may also contact:

**Mr. Jason Steele, Administrative Appeal Review Officer  
CESAD-PDO  
U.S. Army Corps of Engineers, South Atlantic Division  
60 Forsyth Street, Room 10M15  
Atlanta, Georgia 30303-8801  
Phone: (404) 562-5137**

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.	Date:	Telephone number:
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**For appeals on Initial Proffered Permits send this form to:**

**District Engineer, Wilmington Regulatory Division, Attn: David Bailey, 69 Darlington Avenue, Wilmington, North Carolina 28403**

**For Permit denials, Proffered Permits and approved Jurisdictional Determinations send this form to:**

**Division Engineer, Commander, U.S. Army Engineer Division, South Atlantic, Attn: Mr. Jason Steele, Administrative Appeal Officer, CESAD-PDO, 60 Forsyth Street, Room 10M15, Atlanta, Georgia 30303-8801  
Phone: (404) 562-5137**



## DEPARTMENT OF THE ARMY PERMIT

Permittee **NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**  
**ATTN: MR. PHILIP S. HARRIS III, P.E., C.P.M.**

Permit No. **SAW-2002-20667**

Issuing Office **CESAW-RG-R**

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

**Project Description:** The project involves construction of the 4.8 mile long Mebane Bypass in Alamance County, TIP U-3109, including widening NC 119 to six-lanes from the I-40/I-85 interchange north to the existing 3rd Street Extension, improvements to a portion of SR 1997 (Corrigidor Road), including realignment to the east of its existing location and connecting it to SR 1973 (Tate Avenue) near the Mebane Wastewater Treatment Plant (WWTP), and tying-in SR 1970 (Roosevelt Street) into the proposed Corrigidor Road realignment just north of the City of Mebane Maintenance Yard. The project also constructs NC 119 on new location as a four-lane, median-divided facility from the existing 3rd Street Extension north until tying into existing NC 119 just south of SR 1918 (Mrs. White Lane). The project involves the permanent discharge of dredged or fill material into 6,232 linear feet of stream channel (6,065 linear feet of permanent loss and 167 linear feet of bank stabilization), 0.89 acre of riparian wetlands (0.78 acre of permanent fill, 0.02 acre of excavation, and 0.09 acre of mechanized clearing), and 0.32 acre of open water, as well as the temporary discharge of dredged or fill material into 461 linear feet of stream channel. **THIS IS A PHASED PERMIT AUTHORIZATION:** This permit only authorizes work on Section A of TIP U-3109. Construction on Section B of TIP U-3109 shall not commence until final design has been completed for this section, the permittee has minimized impacts to waters and wetlands to the maximum extent practicable, any modifications to the plans, and a compensatory mitigation plan, have been approved by the US Army Corps of Engineers (the Corps).

**Project Location:** The project area is located along NC 119 from the Interstate 40/85 (I-40/I-85) to the existing SR 1962 (3rd Street) Extension, in Mebane, Alamance County, North Carolina. The project then proceeds on new location, relocating NC 119 to the west and north of downtown Mebane before tying into existing NC 119 just south of SR 1918 (Mrs. White Lane). The project terminates just north of Mrs. White Lane. (36.108733°N, -79.286213°W [central point]).

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2022**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit,

Special Conditions:

**SEE ATTACHED SPECIAL CONDITIONS**

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
  - ( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
  - ( X ) Section 404 of the Clean Water Act (33 U.S.C. 1344).
  - ( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
  - a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
  - b. This permit does not grant any property rights or exclusive privileges.
  - c. This permit does not authorize any injury to the property or rights of others.
  - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
  - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
  - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
  - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
  - d. Design or construction deficiencies associated with the permitted work.
  - e. Damage claims associated with any future modification, suspension, or revocation of this permit.



4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit, Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

  
\_\_\_\_\_  
(PERMITTEE) NC DEPARTMENT OF TRANSPORTATION  
for ATTN: MR. PHILIP S. HARRIS III

06-26-2017  
\_\_\_\_\_  
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

for   
\_\_\_\_\_  
(DISTRICT COMMANDER) KEVIN P. LANDERS, SR., COLONEL

27 June 2017  
\_\_\_\_\_  
(DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(TRANSFEREE)

\_\_\_\_\_  
(DATE)



**SPECIAL CONDITIONS**  
**ACTION ID: SAW-2002-20677**  
**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**  
**U-3109, ALAMANCE COUNTY**

**Work Limits**

1. **CONSTRUCTION PLANS:** All work authorized by this permit must be performed in strict compliance with the attached plans for U-3109A, Wetland Surface Water Impacts Permit, dated February 29, 2016, Permit Drawing Sheets 1-43, dated February 1, 2016 (Sheets 4-9, 20-22, and 28-30), February 29, 2016 (Sheets 1, 10-12, 15-17, 23-27, 31-33, 36-38, 40, and 41), March 10, 2016 (Sheets 2, 3, 13, 14, 18, 19, and 39), October 5, 2016 (Sheets 34 and 35), and December 12, 2016 (Sheets 42 and 43), which are a part of this permit. Any modification to these plans must be approved by the US Army Corps of Engineers (USACE) prior to implementation.
2. **PHASED PERMIT:** This permit only authorizes work on Section A of TIP U-3109. Construction on Section B of TIP U-3109 shall not commence until final design has been completed for those sections, the permittee has minimized impacts to waters and wetlands to the maximum extent practicable, any modifications to the plans, and a compensatory mitigation plan, have been approved by the USACE.
3. **UNAUTHORIZED DREDGE OR FILL:** Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.
4. **MAINTAIN CIRCULATION AND FLOW OF WATERS:** Except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters or wetlands.
5. **DEVIATION FROM PERMITTED PLANS:** The permittee shall ensure that the construction design plans for this project do not deviate from the permit plans attached to this authorization. Written verification shall be provided that the final construction drawings comply with the attached permit drawings prior to any active construction in waters of the United States, including wetlands. Any deviation in the construction design plans will be brought to the attention of the Corps of Engineers, Mr. David E. Bailey of the Raleigh Regulatory Field Office prior to any active construction in waters or wetlands.
6. **PRECONSTRUCTION MEETING:** The Permittee shall schedule an onsite preconstruction meeting between its representatives, the contractor's representatives and the appropriate Corps of Engineers Project Manager prior to undertaking any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all terms and conditions contained within the Department of the Army permit. The Permittee shall notify the Corps of Engineers Project Manager a minimum of thirty (30) days in advance of the scheduled meeting in order to provide that individual with ample opportunity to schedule and participate in the required meeting.

**SPECIAL CONDITIONS**  
**ACTION ID: SAW-2002-20677**  
**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**  
**U-3109, ALAMANCE COUNTY**

7. **BORROW AND WASTE:** To ensure that all borrow and waste activities occur on high ground and do not result in the degradation of adjacent wetlands and streams, except as authorized by this permit, the permittee shall require its contractors and/or agents to identify all areas to be used to borrow material, or to dispose of dredged, fill, or waste material. The permittee shall provide the USACE with appropriate maps indicating the locations of proposed borrow or waste sites as soon as the permittee has that information. The permittee will coordinate with the USACE before approving any borrow or waste sites that are within 400 feet of any streams or wetlands.

**Related Laws**

8. **WATER CONTAMINATION:** All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. In the event of a spill of petroleum products or any other hazardous waste, the permittee shall immediately report it to the N.C. Division of Water Quality at (919) 733-3300 or (800) 858-0368 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

**Project Maintenance**

9. **NOTIFICATION OF CONSTRUCTION COMMENCEMENT AND COMPLETION:** The permittee shall advise the Corps in writing prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.
10. **PERMIT DISTRIBUTION:** The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit 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 permit. A copy of this permit, including all conditions, shall be available at the project site during construction and maintenance of this project.
11. **PERMIT REVOCATION:** The permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition.
12. **CLEAN FILL:** Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used. Soils used for fill shall not be contaminated with any toxic substance in concentrations governed by Section 307 of the Clean Water Act.



**SPECIAL CONDITIONS**  
**ACTION ID: SAW-2002-20677**  
**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**  
**U-3109, ALAMANCE COUNTY**

13. **SILT-FENCING:** The permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the permit area. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4). Fescue will not be planted within wetland areas.
14. **EROSION CONTROL MEASURES IN JURISDICTIONAL WATERS:**
- A. During the clearing phase of the project, heavy equipment must not be operated in surface waters or stream channels. Temporary stream crossings will be used to access the opposite sides of stream channels. All temporary diversion channels and stream crossings will be constructed of non-erodible materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.
  - B. No fill or excavation impacts for the purposes of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless the impacts are included on the plan drawings and specifically authorized by this permit.
  - C. The permittee shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades in those areas, prior to project completion.
15. **PROHIBITION ON CONCRETE:** The permittee shall take measures to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with any water in or entering into waters of the United States. Water inside coffer dams or casings that has been in contact with concrete shall only be returned to waters of the United States when it no longer poses a threat to aquatic organisms (i.e. concrete is set and cured).
16. **INSTALLATION OF CULVERTS:** Unless otherwise requested in the applicant's application and depicted on the approved work plans, culverts greater than 48 inches in diameter will be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter and less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain existing channel slope. The bottom of the culvert must be placed at a depth below the natural stream bottom to provide for passage during drought or low flow conditions. Destabilizing the channel and head cutting upstream should be considered in the placement of the culvert.



**SPECIAL CONDITIONS**  
**ACTION ID: SAW-2002-20677**  
**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**  
**U-3109, ALAMANCE COUNTY**

17. **AQUATIC PASSAGE:** Measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed opening should be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gauge data, if available. In the absence of such data, bankfull flow can be used as a comparable level.

**ESA**

18. **THREATENED AND ENDANGERED SPECIES:** All necessary precautions and measures will be implemented so that any activity will not kill, injure, capture, harass, or otherwise harm any protected federally listed species. While accomplishing the authorized work, if the permittee discovers or observes a damaged or hurt listed endangered or threatened species, the District Engineer will be immediately notified to initiate the required Federal coordination.

19. **NORTHERN LONG-EARED BAT:** This USACE permit does not authorize you to take a threatened or endangered species, in particular, the Northern Long-eared Bat (NLEB) (*Myotis septentrionalis*). In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g., a Biological Opinion (BO) under the ESA, Section 7, with “incidental take” provisions with which you must comply). The U.S. Fish and Wildlife Service’s (USFWS’s) Programmatic BO titled “Northern Long-eared Bat (NLEB) Programmatic Biological Opinion for North Carolina Department of Transportation (NCDOT) Activities in Eastern North Carolina (Divisions 1-8),” dated March 25, 2015, and adopted on May 4, 2015, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with “incidental take” that are specified in the BO. Your authorization under this USACE permit is conditioned upon your compliance with all the mandatory terms and conditions (incorporated by reference into this permit) associated with incidental take of the BO.

Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and would also constitute non-compliance with your USACE permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO and with the ESA.

**Section 103**

20. **CULTURAL RESOURCES:** The Permittee shall fully implement the Memorandum of Agreement between the Permittee, the North Carolina State Historic Preservation Officer, and the Federal Highway Administration, dated October 12, 2009, which is incorporated herein by reference. (See Exhibit A)

21. **UNKNOWN CULTURAL RESOURCES:** While accomplishing the authorized work, if the permittee discovers any previously unknown cultural resources, the District Engineer will be immediately notified so that required coordination can be initiated with the North Carolina Division of Cultural Resources.

**SPECIAL CONDITIONS**  
**ACTION ID: SAW-2002-20677**  
**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**  
**U-3109, ALAMANCE COUNTY**

**Enforcement**

22. **REPORTING ADDRESS:** All reports, documentation and correspondence required by the conditions of this permit shall be submitted to the following address: U.S. Army Corps of Engineers, Regulatory Division, Raleigh Regulatory Field Office, c/o Mr. David E. Bailey, 3331 Heritage Trade Drive, Suite 105, Wake Forest, North Carolina 27587, and by telephone at: 919-554-4884, extension 30. The Permittee shall reference the following permit number, SAW-2002-20667, on all submittals.
23. **REPORTING VIOLATIONS OF THE CLEAN WATER ACT AND RIVERS AND HARBORS ACT:** Violation of these conditions or violation of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act must be reported in writing to the Wilmington District U.S. Army Corps of Engineers within 24 hours of the permittee's discovery of the violation.
24. **COMPLIANCE INSPECTION:** A representative of the Corps of Engineers will periodically and randomly inspect the work for compliance with these conditions. Deviations from these procedures may result in an administrative financial penalty and/or directive to cease work until the problem is resolved to the satisfaction of the Corps.

**Compensatory Mitigation**

25. 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 Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit authorization. (See Exhibit B)
26. In order to compensate for wetland impacts associated with this permit, mitigation shall be provided from the NCDOT South Buffalo Creek Mitigation Site (I-2402, U-2525A, and I-2201F/E). The NCDOT will debit 0.71 acre of Riparian Wetland Restoration credits from the site. NCDOT will provide a copy of the ledger to the Corps of Engineers, Raleigh Regulatory Field Office, prior to initiation of permitted wetland impacts.



**MEMORANDUM OF AGREEMENT  
BETWEEN THE  
FEDERAL HIGHWAY ADMINISTRATION  
AND THE  
NORTH CAROLINA  
STATE HISTORIC PRESERVATION OFFICER  
FOR  
NC 119 RELOCATION  
I-85/40 TO SOUTH OF SR 1918 (MRS. WHITE LANE)  
MEBANE, ALAMANCE COUNTY, NORTH CAROLINA  
TIP PROJECT NO. U-3109  
FEDERAL AID PROJECT NO. STP-119(1)**

**WHEREAS**, the Federal Highway Administration (FHWA) has determined that the relocation of NC 119 from the I-85/40 interchange southwest of Mebane to existing NC 119 near SR 1918 (Mrs. White Lane) north of Mebane in Alamance County, including improvements to a portion of SR 1997 (Corridor Road) and SR 1970 (Roosevelt Street) (the Undertaking) will have an adverse effect upon the Charles F. and Howard Cates Farm, a property listed on the National Register of Historic Places (NRHP); and

**WHEREAS**, the Undertaking will alter the historic setting of the Charles F. and Howard Cates Farm by 1) requiring the acquisition of 12.6 acres of right-of-way; 2) isolating an additional 4.6 acres from the rest of the farm; and 3) creating a roadway visible from, at least, the western half of the property and the cluster of buildings comprising the farmstead, including the occupied main house; and

**WHEREAS**, the FHWA has consulted with the North Carolina State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

**WHEREAS**, the North Carolina Department of Transportation (NCDOT), the Eloise W. Cates Estate, and the Marsha A. Ritchie Trust (the latter two sharing the ownership of the parcels contained within the National Register boundary of the Charles F. and Howard Cates Farm) have participated in the consultation and been invited by FHWA and the North Carolina SHPO to concur in this Memorandum of Agreement (MOA); and



**WHEREAS**, the FHWA has notified the Advisory Council on Historic Preservation (Council) of the adverse effect and the Council has declined to comment or participate in the consultation;

**NOW, THEREFORE**, FHWA and the North Carolina SHPO agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effects of the Undertaking on the historic property.

## **STIPULATIONS**

The FHWA shall ensure that the following measures are carried out:

- I. **Photodocumentation of the Charles F. and Howard Cates Farm**  
Prior to the initiation of construction, NCDOT shall record the Charles F. and Howard Cates Farm and its surroundings in accordance with the attached "Historic Structures and Landscape Recordation Plan" (Appendix A). NCDOT shall deposit copies of the documentation with the SHPO, NCDOT Historic Architecture Group, the Eloise W. Cates Estate and the Marsha A. Ritchie Trust within three (3) years of the execution of this MOA.
- II. **Preservation and Restoration of Landscape Features**  
NCDOT, in consultation with the North Carolina SHPO, the Eloise W. Cates Estate, and the Marsha A. Ritchie Trust, shall develop and implement a landscape plan for that part of the Charles F. and Howard Cates Farm directly impacted by the undertaking (specifically, the top of the roadway slope). The plan will utilize materials from native plant communities and replace existing fencing as necessary to reestablish a natural appearance and composition, as well as help screen the farm from the proposed roadway. NCDOT Roadside Environmental Unit shall inventory the existing features and coordinate with the property owners. NCDOT Historic Architecture Group and the North Carolina SHPO shall review and comment on the resultant plan.
- III. **Refinement of Design**  
NCDOT Roadway Design Unit shall lower the proposed roadbed approximately two to three feet below the roadway design grade in the vicinity of Unnamed Tributary (UT) to Mill Creek to reduce the visibility of vehicles on the proposed roadway from the farm.



**IV. Treatment of Isolated Acreage**

Future use of the 4.6 acres isolated from the rest of the Charles F. and Howard Cates Farm by the undertaking is unknown at this time. NCDOT may purchase the acreage as an uneconomical remnant or provide it with a service road. If purchased, NCDOT shall insure that incompatible activities, such as billboard placement, do not occur on the land.

**V. Unanticipated Discovery**

In accordance with 36 CFR 800.11(a), if NCDOT identifies any additional cultural resource(s) during construction and determines it (them) to be eligible for the NRHP, all work will be halted within the limits of the NRHP-eligible resource(s) and the FHWA and SHPO contacted. If after consultation with the Signatory and Concurring Party(ies) additional mitigation is determined necessary, the NCDOT, in consultation with the Signatory and Concurring Party(ies), will develop and implement appropriate protection/mitigation measures for the resource(s). Inadvertent or accidental discovery of human remains will be handled in accordance with North Carolina General Statutes 65 and 70.

**VI. Dispute Resolution**

Should any of the Signatory or Concurring Party(ies) object within thirty (30) days to any plans or documentation provided for review pursuant to this MOA, the FHWA shall consult with the objecting party(ies) to resolve the objection. If the FHWA or objecting party(ies) determines that the objection cannot be resolved, the FHWA will forward all documentation relevant to the dispute to the Council. Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

- 1) Provide the FHWA with recommendations which the FHWA will take into account in reaching a final decision regarding the dispute, or
- 2) Notify the FHWA that it will comment pursuant to 36 CFR Section 800.7(c) and proceed to comment. Any Council comment provided in response to such a request will be taken into account by the FHWA, in accordance with 36 CFR Section 800.7(c)(4) with reference to the subject of the dispute.



Any recommendations or comment provided by the Council will be understood to pertain only to the subject of the dispute; FHWA's responsibility to carry out all of the actions under this agreement that are not the subject of the dispute will remain unchanged

**VII. Amendments**

If any Signatory to this MOA believes that its terms cannot be carried out or that an amendment to the terms must be made, that (those) party(ies) shall immediately consult with the other party(ies) to develop amendments in accordance with 36 CFR 800.6(c)(7). If an amendment cannot be agreed upon, the dispute resolution process set forth in Stipulation VI will be followed.

**VIII. Termination**

Any Signatory to this MOA may terminate the agreement by providing notice to the other parties, provided that the Signatories and Concurring party(ies) will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Termination of this MOA will require compliance with 36 CFR 800. This MOA may be terminated by the execution of a subsequent MOA that explicitly terminates or supersedes its terms.

**IX. Duration**

Unless terminated pursuant to Stipulation VIII above, this MOA will be in effect until FHWA, in consultation with the other Signatory and Concurring Party(ies), determines that all of its terms have satisfactorily been fulfilled or if NCDOT is unable or decides not to construct the Undertaking.

Execution of this Memorandum of Agreement by FHWA and the North Carolina SHPO, its subsequent filing with the Council, and implementation of its terms evidence that FHWA has afforded the Council an opportunity to comment on the Undertaking and that FHWA has taken into account the effects of the Undertaking on the historic property.

**AGREE:**

**Federal Highway Administration**

for John F. Sullivan III 10/28/09  
John F. Sullivan III, P.E. Date  
Division Administrator

**State Historic Preservation Officer**

Jeffrey J. Crow 10/20/09  
Jeffrey J. Crow Date  
North Carolina State Historic Preservation Officer

**FILED:**

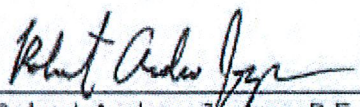
By: \_\_\_\_\_ Date  
Advisory Council on Historic Preservation

**MEMORANDUM OF AGREEMENT  
BETWEEN THE  
FEDERAL HIGHWAY ADMINISTRATION  
AND THE  
NORTH CAROLINA  
STATE HISTORIC PRESERVATION OFFICER  
FOR  
NC 119 RELOCATION  
I-85/40 TO SOUTH OF SR 1918 (MRS. WHITE LANE)  
MEBANE, ALAMANCE COUNTY, NORTH CAROLINA  
TIP PROJECT NO. U-3109  
FEDERAL AID PROJECT NO. STP-119(1)**

Execution of this Memorandum of Agreement by FHWA and the North Carolina SHPO, its subsequent filing with the Council, and implementation of its terms evidence that FHWA has afforded the Council an opportunity to comment on the Undertaking and that FHWA has taken into account the effects of the Undertaking on the historic property.

**CONCUR:**

**North Carolina Department of Transportation**

  
\_\_\_\_\_  
Robert Andrew Joyner, P.E.  
Human Environment Unit Head

10/12/09

Date

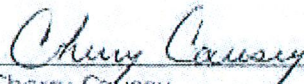



**MEMORANDUM OF AGREEMENT  
BETWEEN THE  
FEDERAL HIGHWAY ADMINISTRATION  
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**CONCUR:**

**Eloise W. Cates Estate**

  
Cherry Causey  
Executrix



Date

**MEMORANDUM OF AGREEMENT  
BETWEEN THE  
FEDERAL HIGHWAY ADMINISTRATION  
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Execution of this Memorandum of Agreement by FHWA and the North Carolina SHPO, its subsequent filing with the Council, and implementation of its terms evidence that FHWA has afforded the Council an opportunity to comment on the Undertaking and that FHWA has taken into account the effects of the Undertaking on the historic property.

**CONCUR:**

**Marsha A. Ritchie Trust**

---

Marsha Ritchie Altmeyer

Date



## APPENDIX A

**Historic Structures and Landscape Recordation Plan  
NC 119 Relocation  
I-85/40 to South of SR 1918 (Mrs. White Lane)  
Mebane, Alamance County, North Carolina  
TIP Project No. U-3109  
Federal Aid Project No. STP-119(1)**

### Photographic Requirements

- Overall views of the Charles F. and Howard Cates Farm and its immediate surroundings;
- Overall views of the farmstead and related fields and woodland;
- Elevations and oblique views of all component buildings, structures, and landscape elements and details of representative structural and ornamental features.

### Photographic Format

- All images will be captured, labeled, and stored according to the North Carolina State Historic Preservation Office's "Policy and Guidelines for Digital Photography for Historic Property Surveys, National Register Nominations and NRAC PowerPoint Presentations, Revised November 2008."

### Copies and Curation

- One (1) set of all photographic documentation will be deposited with the North Carolina Division of Archives and History/State Historic Preservation Office, to be made a permanent part of the statewide survey and iconographic collection;
- One (1) set of all photographic documentation will be deposited in the files of the Historic Architecture Group of NCDOT;
- One (1) set of all photographic documentation will be provided for representatives of the Eloise W. Cates Estate and the Marsha A. Ritchie Trust.

## SHPO CONSULTATION ON ARCHAEOLOGICAL ISSUES

JANUARY 27, 2003

PROJECT: **TIP # U-3109 NC 119 Relocation - Archaeological input on new Alternatives**

NCDOT ARCHAEOLOGIST(S): **Brian Overton, Paul Mohler**

CONSULTATION WITH: **Dolores Hall** DATE: **January 24, 2003**

CONSULTATION TYPE:  TELEPHONE  MEETING

Paul Mohler and I met with Dolores Hall of OSA on January 24, 2003 to discuss archaeological issues for new and/or selected alternatives for the NC 119 Relocation Project in Alamance County (TIP # U-3109). Three alternatives (8, 9 and 10) were selected for detailed study as a result of the NEPA merger team meeting on June 13, 2002. We reviewed the previous archaeological work completed by NCDOT archaeologists over the past several years (Glover 1996, 1997, 2000). In addition to aerial mapping of the proposed corridors, topographic mapping showing previously surveyed areas and identified sites were also studied and discussed.

We concluded that the previous archaeological surveys have covered the APE (Area of Potential Effects) for the three alternatives being considered. It is unlikely that the project will impact any undiscovered archaeological sites eligible for the National Register of Historic Places. Dolores Hall further commented that the eligible Cook's Mill (31Am369\*\*) should be avoided, if possible, as noted in previous documents. No further archaeological work is expected for this project.







**USACE Wilmington District  
Compensatory Mitigation Responsibility Transfer Form, Page 2**

**Conditions for Transfer of Compensatory Mitigation Credit:**

- Once this document has been signed by the Mitigation Sponsor and the USACE 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 USACE 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. 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 the Sponsor must be provided to the USACE within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the USACE 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 USACE 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 USACE, the Sponsor must obtain case-by-case approval from the USACE 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 USACE administrative records for both the permit and the Bank/ILF Instrument.

**Comments/Additional Conditions:**

- Note that only authorized stream impacts for U-3109A are included on the above form.
- At such time that NCDOT submits a permit modification request for U-3109B, including revised stream and wetland impacts and compensatory mitigation plan, the USACE will re-evaluate compensatory mitigation requirements per applicable law, policy, and guidance at the time of the request.

This form is not valid unless signed below by the USACE 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 USACE Project Manager at the address below, and 3) the Wilmington District Mitigation Office, Attn: Todd Tugwell, 11405 Falls of Neuse Road, Wake Forest, NC 27587 (email: [todd.tugwell@usace.army.mil](mailto:todd.tugwell@usace.army.mil)).** Questions regarding this form or any of the permit conditions may be directed to the USACE Project Manager below.

**USACE Project Manager:** David Bailey  
**USACE Field Office:** Raleigh Regulatory Field Office  
US Army Corps of Engineers  
3331 Heritage Trade Drive, Suite 105  
Wake Forest, North Carolina 27587  
**Email:** [David.E.Bailey2@usace.army.mil](mailto:David.E.Bailey2@usace.army.mil)



USACE Project Manager Signature

June 21, 2017

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*

MICHAEL S. REGAN  
*Secretary*

S. JAY ZIMMERMAN  
*Director*

March 24, 2017

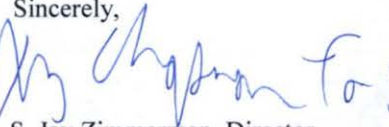
Mr. Philip S. Harris, III, P.E., CPM  
Natural Environment Section Head  
Project Development and Environmental Analysis  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina, 27699-1598

**Subject: 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS for the proposed relocation of NC 119 from Interstate 40/85 to north of SR 1918 (Mrs. White Lane) in Mebane (Mebane Bypass), Alamance County; Federal Aid Project No. STP-119(1); TIP U-3109. NCDWR Project No. 20170239**

Dear Mr. Harris:

Attached hereto is a copy of Certification No. WQ004111 issued to The North Carolina Department of Transportation (NCDOT) dated March 24, 2017.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,  
  
S. Jay Zimmerman, Director  
Division of Water Resources

#### Attachments

#### Electronic copy only distribution:

Dave Bailey, US Army Corps of Engineers, Raleigh Field Office  
Jerry Parker, Division 7 Environmental Officer  
Nicole Thomson, Division 7 Environmental Officer Assistant  
Rodger Rochelle, NC Department of Transportation  
Carla Dagnino, NC Department of Transportation  
Dr. Cynthia Van Der Wiele, US Environmental Protection Agency  
Gary Jordan, US Fish and Wildlife Service  
Travis Wilson, NC Wildlife Resources Commission  
Beth Harmon, Division of Mitigation Services  
Dave Wanucha, NC Division of Water Resources  
File Copy



**401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS**

**THIS CERTIFICATION** is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact 0.38 acres (in Section A) and 0.51 acres (in Section B) of jurisdictional wetlands; and, 5,387 linear feet (in Section A) and 1,306 linear feet (in Section B) of jurisdictional streams; and, 0.32 acres (in Section A) of open water impacts in Alamance County. The project shall be constructed pursuant to the application dated February 27, 2017. The authorized impacts are as described below:

**Stream Impacts in the Cape Fear River Basin for U-3109A**

Site	Temporary Fill in Perennial Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)		Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Intermittent Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
		Fill	Bank Stabilization				
1	16	117	-	-	235	368	-
2	-	-	-	17	348	365	-
3	10	320	-	-	-	330	320
5	-	-	-	16	-	16	-
6	-	-	-	35	257	292	-
7	52	501	63	-	-	616	564
7a	-	-	-	20	18	38	-
8a	19	463	-	-	-	482	463
8b	21	82	-	-	-	103	-
10	25	396	-	-	-	421	396
10a	-	74	-	-	-	74	-
11	25	270	-	-	-	295	270
12b	7	105	-	-	-	112	-
12c	13	-	-	-	-	13	-
13	21	183	-	-	-	204	183
14	19	-	-	-	-	19	-
15	44	447	-	-	-	491	447
16	32	494	-	-	-	526	494
17	-	-	35	-	-	35	35*
18	45	122	69	-	-	236	191
20	24	327	-	-	-	351	327
<b>Totals</b>	<b>373</b>	<b>3,901</b>	<b>167</b>	<b>88</b>	<b>858</b>	<b>5,387</b>	<b>3,690</b>

Note: \*Stream at Site 17 is the same stream in Section B (Site 1) of which impacts (all totaled) exceed mitigation thresholds.

**Total Stream Impact for Project: 5,387 linear feet.**

**Wetland Impacts in the Cape Fear River Basin (Riparian) U-3109A**

Site	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)
9	<0.01	-	-	0.01	-	<0.02
12	0.08	-	-	-	-	0.08
12a	0.03	-	-	-	-	0.03
13	0.07	-	-	0.01	-	0.08
19	0.04	-	-	0.01	-	0.05
20	0.05	-	0.02	0.06	-	0.13
<b>Totals</b>	<b>0.27</b>		<b>0.02</b>	<b>0.09</b>		<b>0.38</b>

**Total Wetland Impact for Project: 0.38 acres.**



**Open Water (Ponds) Impacts in the Cape Fear River Basin for U-3109A**

Site	Permanent Fill in Open Waters (ac)	Temporary Fill in Open Waters (ac)	Total Fill in Open Waters (ac)
4	0.10	-	0.01
12	0.13	-	0.13
13	0.09	-	0.09
<b>Total</b>	<b>0.32</b>	<b>-</b>	<b>0.32</b>

**Total Open Water Impact for Project: 0.32 acres.**

**Preliminary Stream Impacts in the Cape Fear River Basin for U-3109B**

Site	Temporary Fill in Perennial Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Intermittent Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
1	-	280	-	-	280	280
2	-	0*	-	-	0	0
3	-	-	-	400	400	-
4	-	-	-	146	146	-
10	-	-	-	299	299	-
11	-	-	-	181	181	-
<b>Totals</b>	<b>-</b>	<b>280</b>	<b>-</b>	<b>1,026</b>	<b>1,306</b>	<b>280</b>

Notes: \* Impacts are not determined at this time.

**Total Stream Impact for Project: 1,306 linear feet.**

**Preliminary Wetland Impacts in the Cape Fear River Basin (Riparian) U-3109B**

Site	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)
4	0.01	-	-	-	-	0.01
5	0.12	-	-	-	-	0.12
6	0.11	-	-	-	-	0.11
7	0.18	-	-	-	-	0.18
8	0.06	-	-	-	-	0.06
9	0.01	-	-	-	-	0.01
10	<0.01	-	-	-	-	<0.01
<b>Totals</b>	<b>0.51</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.51</b>

**Total Wetland Impact for Project: 0.51 acres.**

The application provides adequate assurance that the discharge of fill material into the waters of the Cape Fear River Basin in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your application dated received February 27, 2017. Should your project change, you are required to 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 any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional compensatory

mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

**Condition(s) of Certification:**

1. Any modifications to this 401 Water Quality Certification that propose additional stream impacts or increased impervious surface requiring additional stormwater management may be subject the Jordan Water Supply Nutrient Strategy (15A NCAC02B .0267). The NCDOT shall coordinate with the NCDWR prior to submitting a modification request to determine the applicability of the Jordan Water Supply Nutrient Strategy. This condition does not apply to major modifications for additional sections (i.e., Section B) of the project that were covered under the Finding of No Significant Impact or approved in the Avoidance and Minimization stage of the project.
2. NCDOT shall design, construct, and operate and maintain four hazardous spill catch basins (HSCBs) adjacent to streams that drain to the water supply critical areas (WS CA) of Forest Lake and Graham-Mebane Reservoir. The HSCBs shall be located as shown in the Table below.

**Locations of Hazardous Spill Catch Basins.**

Station	Coordinates		Surface Water
161+92-L-RT	36.1028	-79.2946	Back Creek
179+68-L-RT	36.1058	-79.2901	Back Creek
20+90-Y16RPA-LT	36.1084	-79.2838	Back Creek
32+55-Y20-LT	36.1018	-79.2932	UT to Mill Creek

3. 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 downstream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by the NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the 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)]
4. For sites where multiple pipes or barrels will be utilized, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage. [15A NCAC 02H.0506(b)(2)]
5. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed. [15A NCAC 02H.0506(b)(2)]
6. For segments of 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)]
7. The stream channel shall be excavated no deeper than the natural bed material of the stream, to the maximum extent practicable. Efforts must be made to minimize impacts to the stream banks, as well as to vegetation responsible for maintaining the stream bank stability. Any riparian impacts for access to the stream channel shall be temporary and be revegetated with native riparian species. [15A NCAC 02H.0506(b)(2)]
8. NCDOT shall be in compliance with NPDES Permit NCS000250 issued to the NCDOT, including the applicable requirements of General Permit for Construction Activities - NCG010000. Please note the extra protections for sensitive watersheds where applicable.

9. Erosion control measures that NCDOT employs in areas that drain to streams classified as High Quality Waters (HQW), Water Supply (WS-II) or are listed for turbidity on the 2014 Final 303(d) List of Impaired Waters for North Carolina, shall be based on Design Standards in Sensitive Watersheds (15A NCAC 4B.0124[a]-[e]).

#### *Off-Site Stream Mitigation*

10. Compensatory mitigation for 3,690 linear feet (Section A) and 280 linear feet (Section B) 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 letters dated February 16, 2017 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.

#### *Phased Projects [15A NCAC 02H. 0506(b)]*

11. When final design plans are completed for U-3109 Section B, a modification to the 401 Water Quality Certification and shall be submitted with five copies and fees to the NC Division of Water Resources. Final designs shall reflect all appropriate avoidance, minimization, and mitigation for impacts to wetlands, streams, and other surface waters. No construction activities that impact any wetlands, streams, surface waters located in U-3109 Section B shall begin until after the permittee applies for, and receives a written modification of the 401 Water Quality Certification from the NC Division of Water Resources.

#### **General Conditions**

1. 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)]
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. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or riparian areas. [15A NCAC 02H.0506(b)(2)]
4. 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)]
5. 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)]
6. 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)]
7. 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)]
8. 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)]
9. 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)]
10. 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)]

11. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
12. 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]
13. 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)]
14. A copy of this Water Quality Certification shall be maintained on the construction site at all times. 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)]
15. 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]
16. 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.
17. 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)]
18. 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.506(B)(3)]
19. 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)]
20. 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 in order 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.
21. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]

Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal

and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit.

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission. The mailing address for the Office of Administrative Hearings is:

Office of Administrative Hearings  
6714 Mail Service Center  
Raleigh, NC 27699-6714  
Telephone: (919) 431-3000, Facsimile: (919) 431-3100

A copy of the petition must also be served on DEQ as follows:

Mr. Sam M. Hayes, General Counsel  
Department of Environmental Quality  
1601 Mail Service Center

This the 24th day of March 2017

DIVISION OF WATER RESOURCES

  
S. Jay Zimmerman, Director

WQC No. WQC004111





PAT MCCRORY  
 Governor  
 DONALD R. VAN DER VAART  
 Secretary  
 JAY ZIMMERMAN  
 DWR Director

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 \_\_\_\_\_





North Carolina Department of Transportation

Highway Stormwater Program  
STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS



(Version 2.04; Released November 2015)

WBS Element: 34900.1.1      TIP No.: U-3109A      County(ies): Alamance      Page 1 of 4

General Project Information

WBS Element:	34900.1.1	TIP Number:	U-3109A	Project Type:	New Location	Date:	2/25/2016
NCDOT Contact:	William (Bill) S. Zerman, Jr. PE		Contractor / Designer:	W. Henry Wells, Jr. PE			
Address:	NCDOT Hydraulics Unit 1590 Mail Service Center Raleigh, NC 27699-1590		Address:	Sungate Design Group, PA 915 Jones Franklin Road Raleigh, NC 27609			
	Phone: 919-707-6755			Phone: 919-859-2243 ext. 202			
	Email: bzerman@ncdot.gov			Email: hwells@sungatedesign.com			
City/Town:	Mebane		County(ies):	Alamance			
River Basin(s):	Cape Fear		CAMA County?	No			
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	3.44 miles	Surrounding Land Use:	Urban, Residential					
	Proposed Project			Existing Site				
Project Built-Upon Area (ac.)	70.8	ac.	16.8	ac.				
Typical Cross Section Description:	The pavement consists of 2-12' lanes and a 4' paved shoulder in each direction with a raised 30' median. In cut sections, the roadway ditch will have a 6:1 front slope and a 4:1-6:1 back slope. For Site 1 and 2, the 4' paved shoulder is replaced with a 14' lane and C&G.			N/A				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	28,400	Year:	2036	Existing:	21,100	Year:	2016

**General Project Narrative:**  
(Description of Minimization of Water Quality Impacts)

A combination of grassed swales, roadway ditches and structural BMPs (Preformed Scour Holes, Energy Dissipators and Hazardous Spill Basins) were used to minimize the Water Quality Impacts. In most locations, the outlets for the storm drainage systems were placed at least 50 feet from the Jurisdictional Stream. However, due to topography none of the lateral grass swales located along the embankment fill slope met the recommended minimum length of swale.

Waterbody Information

Surface Water Body (1):	McAdams Creek		NCDWR Stream Index No.:	16-18-7			
NCDWR Surface Water Classification for Water Body	Primary Classification:		Water Supply V (WS-V)				
	Supplemental Classification:		Nutrient Sensitive Waters (NSW)				
Other Stream Classification:	None						
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	SI		Buffer Rules in Effect:				
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?		N/A	
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)			
(If yes, provide justification in the General Project Narrative)							



**North Carolina Department of Transportation**  
**Highway Stormwater Program**  
**STORMWATER MANAGEMENT PLAN**  
**FOR NCDOT PROJECTS**



(Version 2.04; Released November 2015)

**WBS Element:** 34900.1.1      **TIP No.:** U-3109A      **County(ies):** Alamance      **Page** 2 **of** 4

**Additional Waterbody Information**

<b>Surface Water Body (2):</b>	Back Creek (Graham-Mebane Reservoir)		<b>NCDWR Stream Index No.:</b>	16-18-(1.5)	
<b>NCDWR Surface Water Classification for Water Body</b>	<b>Primary Classification:</b>		Water Supply II (WS-II)		
	<b>Supplemental Classification:</b>		High Quality Waters (HQW)	(NSW)	
<b>Other Stream Classification:</b>					
<b>Impairments:</b>	None				
<b>Aquatic T&amp;E Species?</b>	No	<b>Comments:</b>			
<b>NRTR Stream ID:</b>					
<b>Project Includes Bridge Spanning Water Body?</b>	No	<b>Deck Drains Discharge Over Buffer?</b>	N/A	<b>Buffer Rules in Effect:</b>	
<b>Deck Drains Discharge Over Water Body?</b>	N/A	(If yes, provide justification in the General Project Narrative)		<b>Dissipator Pads Provided in Buffer?</b>	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)		
<b>Surface Water Body (3):</b>	UT to Mill Creek		<b>NCDWR Stream Index No.:</b>	16-18-3-2-(1)	
<b>NCDWR Surface Water Classification for Water Body</b>	<b>Primary Classification:</b>		Water Supply II (WS-II)		
	<b>Supplemental Classification:</b>		High Quality Waters (HQW)	(NSW)	
<b>Other Stream Classification:</b>					
<b>Impairments:</b>	None				
<b>Aquatic T&amp;E Species?</b>	No	<b>Comments:</b>			
<b>NRTR Stream ID:</b>	SU				
<b>Project Includes Bridge Spanning Water Body?</b>	No	<b>Deck Drains Discharge Over Buffer?</b>	N/A	<b>Buffer Rules in Effect:</b>	
<b>Deck Drains Discharge Over Water Body?</b>	N/A	(If yes, provide justification in the General Project Narrative)		<b>Dissipator Pads Provided in Buffer?</b>	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)		









5/14/99

12/16/2016 10:46:11 AM Hyd-prm\_wet.dgn

PROJECT REFERENCE NO. <i>U-3109A</i>	SHEET NO. <i>2K</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**DETAIL 47 HAZARDOUS SPILLBASIN**

DIM.	BASIN #				
	1	2	3	4	
A	4'	2480	6560	3740	2300
B	4'	2630	7526	4760	2590
C	ft	597.0	604.0	608.0	597.5
D	ft	1.0	1.0	1.0	1.0
E	ft	4.0	4.0	VARIES	4.0
F	ft	3.0	3.0	VARIES	3.0
G	ft	2.0	2.0	2.0	2.0
H	ft	23	VARIES	29	VARIES
I	ft	39	75	41	59
J	ft	23	54	40	21
K	ft	39	68	57	47

TOTAL CAPACITY REQUIRED: 'A' of TOTAL CAPACITY PROVIDED: 'B' of @ ELEV. 'C' w/ 'D' FT. FREEBOARD

MODEL 20-10C SLUICE GATE

BASIN #	LOCATION (AT OUTLET)
1	STA 161+85 -L- RT
2	STA 179+50 -L- RT
3	STA 20+50 -Y16RPA- LT
4	STA 32+50 -Y20- LT

**PREFORMED SCOUR HOLE DETAIL 55**  
\*NOT TO SCALE

PLAN VIEW

INSTALL LEVEL AND FLUSH WITH NATURAL GROUND

PIPE (d = 15" OR 18")

INFLOW

NATURAL GROUND

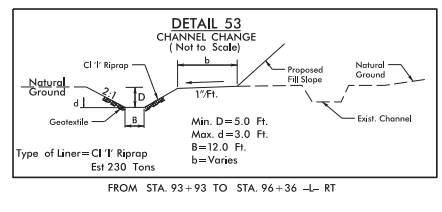
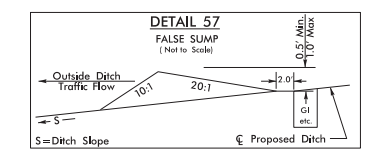
MIN. 1" TUCK

LINEAR CLASS B RIPRAP WITH GEOTEXTILE

PSRH

308

FROM STA. 130+39 TO STA. 130+60 -L- LT  
FROM STA. 140+39 TO STA. 140+60 -L- LT



**ENERGY DISSIPATOR DETAIL 56**  
RIP-RAPPED ENERGY DISSIPATOR BASIN

DIM. (ft)	RIP RAP BASIN #
A	2.5
B	2.0
C	2.0
D	0.9
E	11.8
F	10.1
G	10.1

ALL DIMENSIONS APPROXIMATE

PLAN

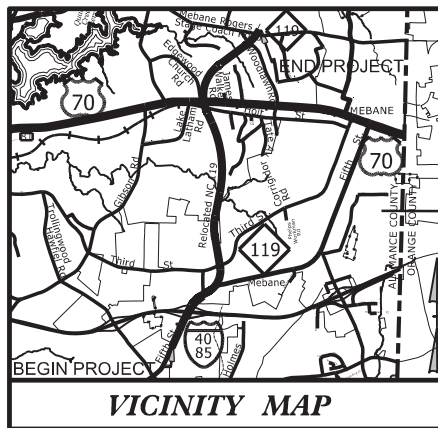
SECTION

BASIN #	LOCATION (AT OUTLET)
1	STA 100+70 -L- LT

708

09.06/2016

See Sheet 1-A For Index of Sheets  
See Sheet 1-B For Conventional Symbols



**TIP PROJECT: U-3109A**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**ALAMANCE COUNTY**

LOCATION: NC 119 RELOCATION FROM I-40 /85 TO NORTH OF SR 1921  
(MEBANE ROGERS ROAD /STAGE COACH ROAD)

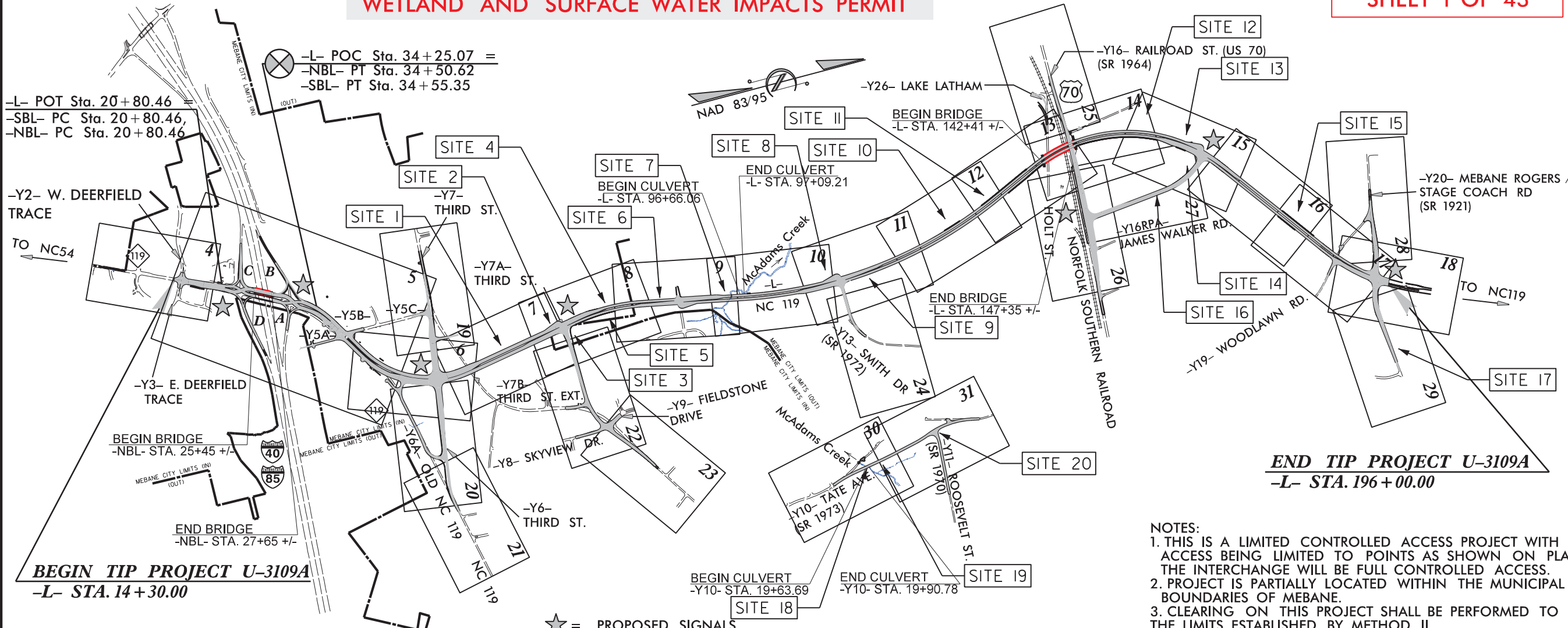
TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURES, AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3109A	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34900.1.1	STP-0119(10)	PE	
34900.2.FRU4	STP-0119(10)	UTILITY	
34900.2.FR4	STP-0119(10)	ROW	

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

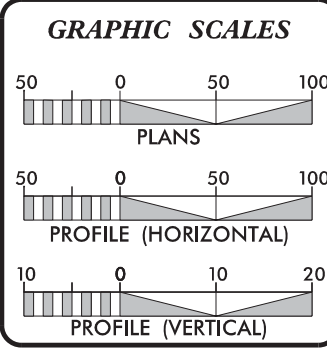
**WETLAND AND SURFACE WATER IMPACTS PERMIT**

**PERMIT DRAWING  
SHEET 1 OF 43**



- NOTES:
1. THIS IS A LIMITED CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON PLANS. THE INTERCHANGE WILL BE FULL CONTROLLED ACCESS.
  2. PROJECT IS PARTIALLY LOCATED WITHIN THE MUNICIPAL BOUNDARIES OF MEBANE.
  3. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

**CONTRACT:**



**DESIGN DATA**

ADT 2016 =	21,100
ADT 2036 =	28,400
DHV =	9 %
D =	55 %
T =	3 % *
V =	50 MPH
* TTST 1% DUAL 2%	
FUNC CLASS =	URBAN COLLECTOR REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT U-3109A	3.280 mi
LENGTH STRUCTURE TIP PROJECT U-3109A	0.161 mi
TOTAL LENGTH OF TIP PROJECT U-3109A	3.441 mi

**PLANS PREPARED BY:**

**Baker**

Michael Baker Engineering, Inc.  
8000 Regency Parkway, Suite 600  
Cary, NC 27518  
Professional Corporation License Number:  
F-1084

**DIVISION OF HIGHWAYS**

2012 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
DECEMBER 19, 2014

**LETTING DATE:**  
DECEMBER 20, 2016

**TODD H. BUCKNER, PE**  
PROJECT ENGINEER

**WARREN E. JOHNSON**  
PROJECT DESIGN ENGINEER

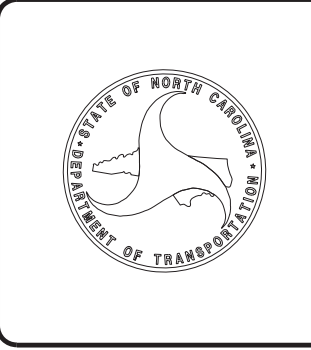
**RON E. MCCOLLUM, P.E.**  
PROJECT ENGINEER - ROADWAY DESIGN

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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

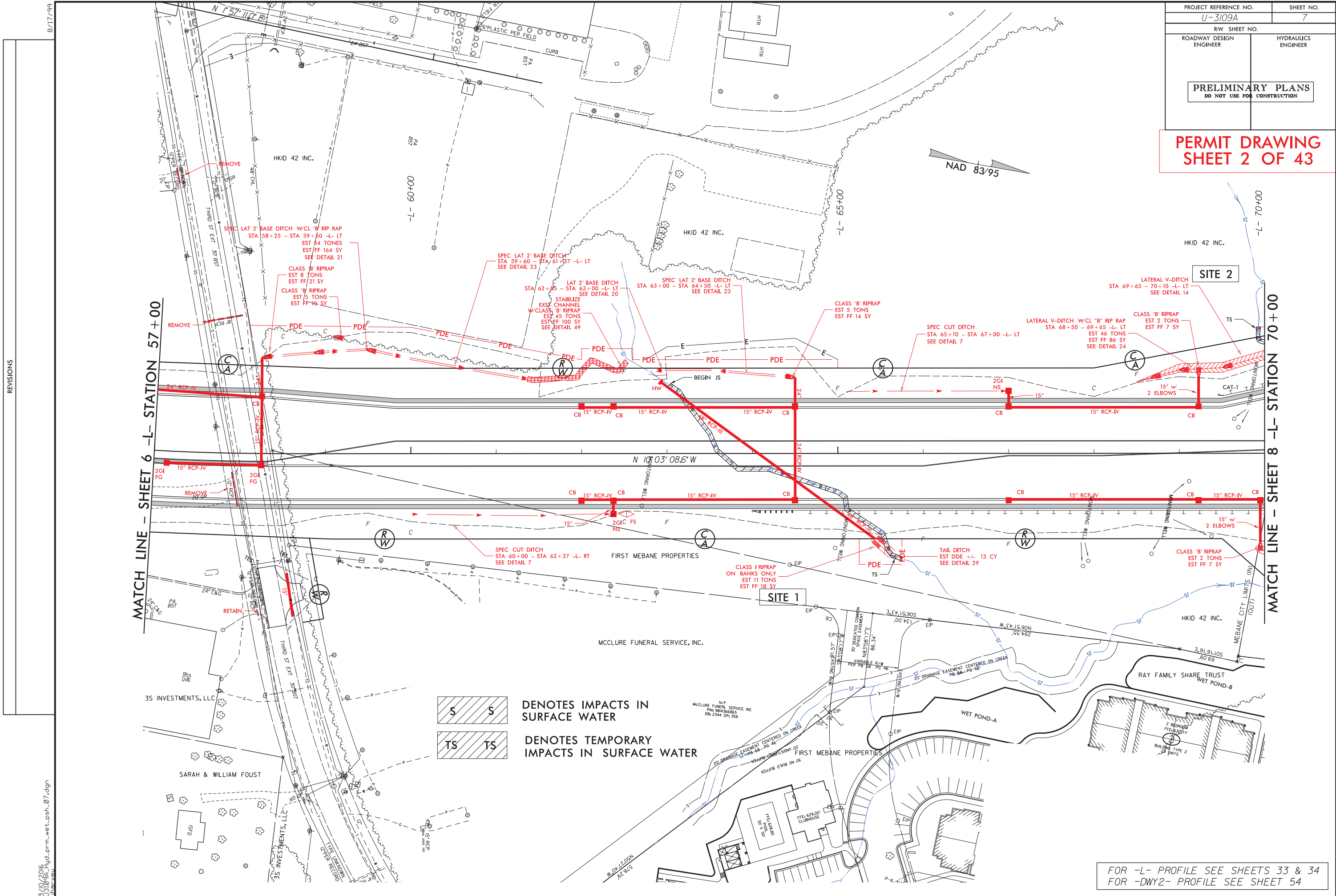


2/29/2016  
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jnarvey



PROJECT REFERENCE NO.	SHEET NO.
U-3109A	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
 SHEET 2 OF 43



MATCH LINE - SHEET 6 -L- STATION 57+00

MATCH LINE - SHEET 8 -L- STATION 70+00

S S DENOTES IMPACTS IN SURFACE WATER  
TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

FOR -L- PROFILE SEE SHEETS 33 & 34  
 FOR -DWY2- PROFILE SEE SHEET 54

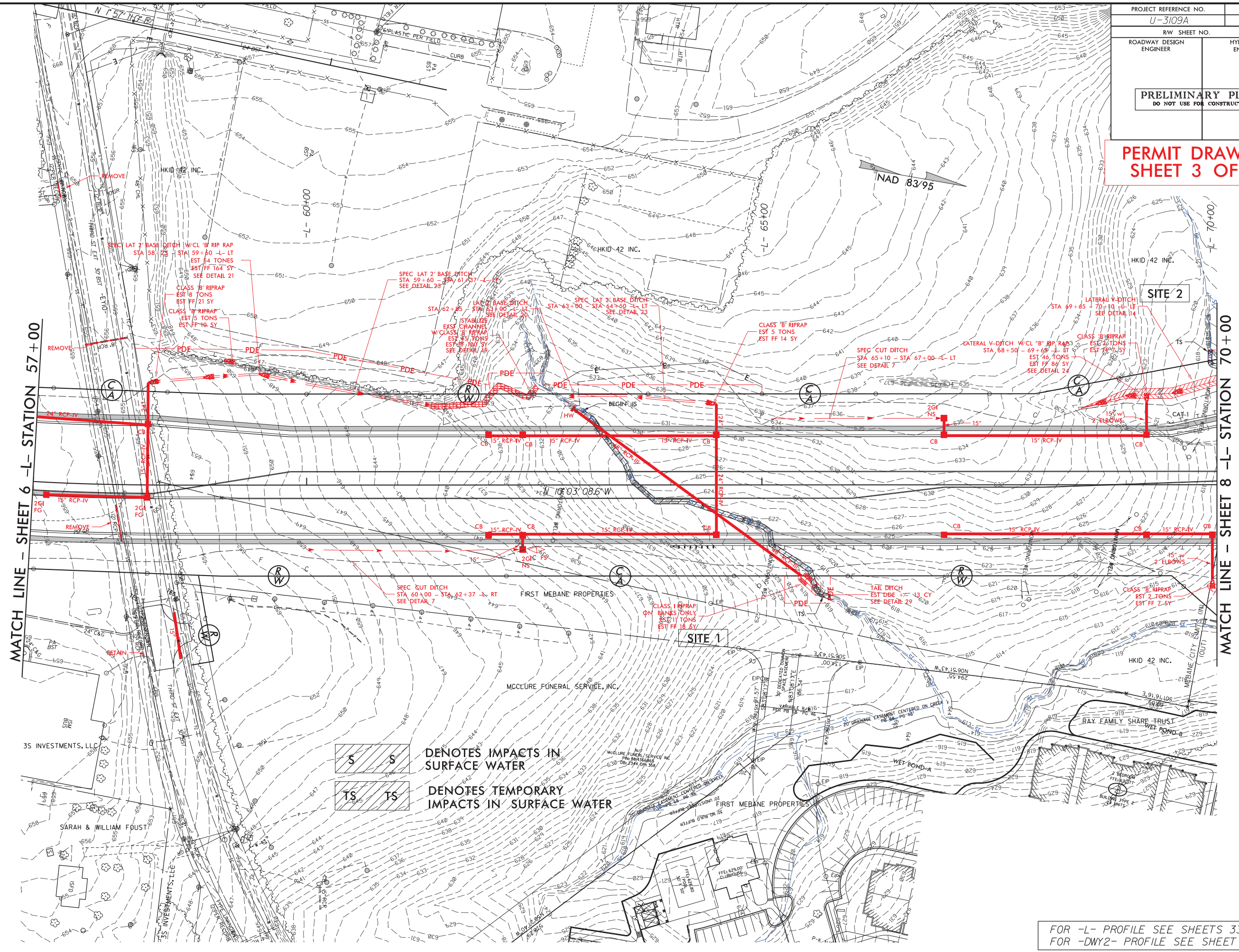
REVISIONS

8/17/99  
 7/10/2016  
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 10/24/2016



PROJECT REFERENCE NO.	SHEET NO.
U-3109A	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
SHEET 3 OF 43



REVISIONS

MATCH LINE - SHEET 6 -L- STATION 57+00

MATCH LINE - SHEET 8 -L- STATION 70+00

S S

§ § DENOTES IMPACTS IN SURFACE WATER

TS TS

§ § DENOTES TEMPORARY IMPACTS IN SURFACE WATER

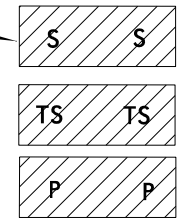
FOR -L- PROFILE SEE SHEETS 33 & 34  
FOR -DWY2- PROFILE SEE SHEET 54

3/10/2016  
 U:\3109A\hyd.prm\_wet\_psh\_07.con.dgn  
 8/17/99



PROJECT REFERENCE NO. U-3109A	SHEET NO. 8
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
SHEET 4 OF 43



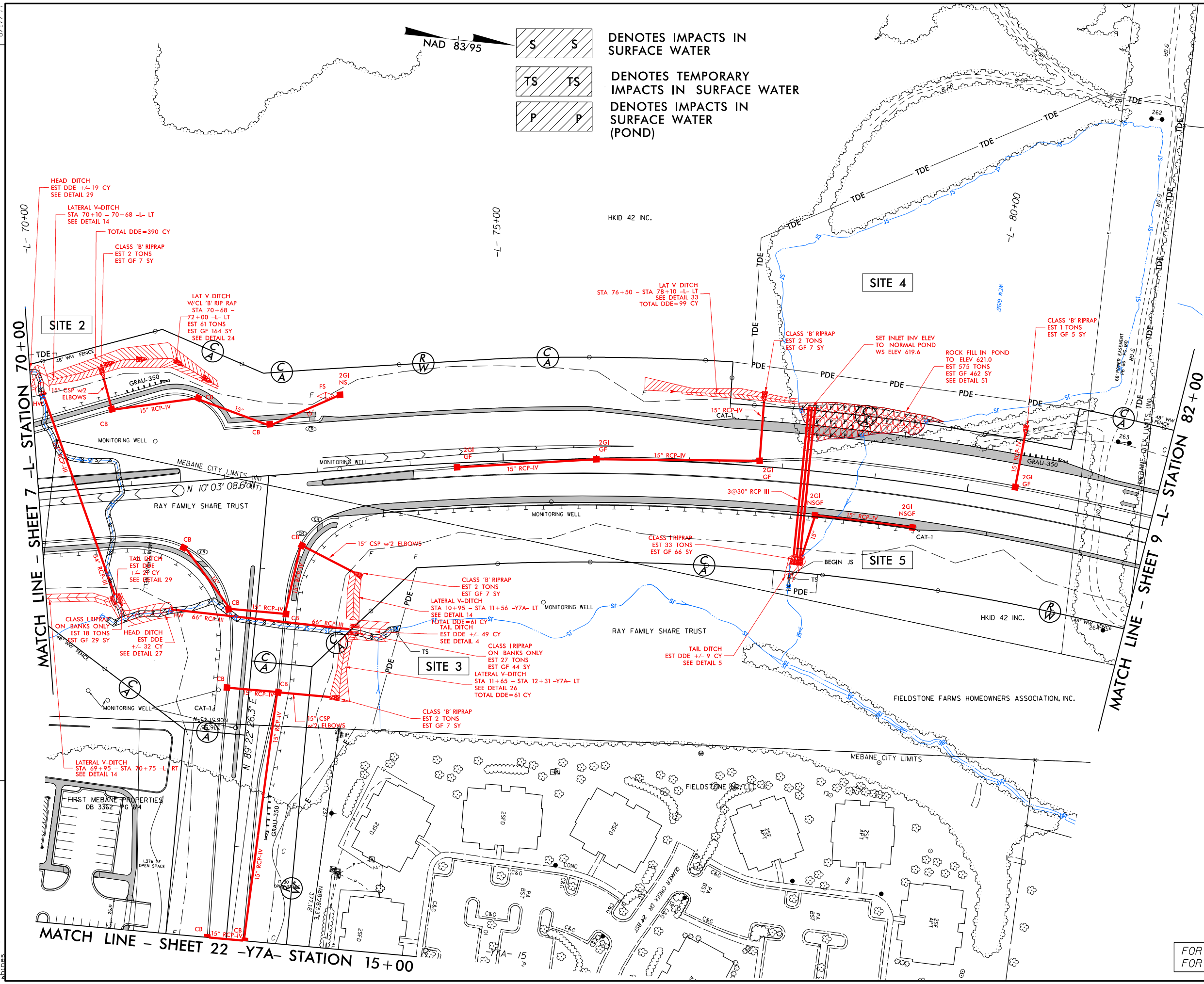
**S** DENOTES IMPACTS IN SURFACE WATER

**TS** DENOTES TEMPORARY IMPACTS IN SURFACE WATER

**P** DENOTES IMPACTS IN SURFACE WATER (POND)

8/17/99

REVISIONS



HEAD DITCH  
EST DDE +/- 19 CY  
SEE DETAIL 29

LATERAL V-DITCH  
STA 70+10 - 70+68 -L- LT  
SEE DETAIL 14

TOTAL DDE=390 CY

CLASS 'B' RIPRAP  
EST 2 TONS  
EST GF 7 SY

LAT V-DITCH  
W/CL 'B' RIP RAP  
STA 70+68 -  
72+00 -L- LT  
EST 61 TONS  
EST GF 164 SY  
SEE DETAIL 24

LAT V DITCH  
STA 76+50 - STA 78+10 -L- LT  
SEE DETAIL 33  
TOTAL DDE=99 CY

CLASS 'B' RIPRAP  
EST 1 TONS  
EST GF 5 SY

ROCK FILL IN POND  
TO ELEV 621.0  
EST 575 TONS  
EST GF 462 SY  
SEE DETAIL 51

TAIL DITCH  
EST DDE  
+/- 29 CY  
SEE DETAIL 29

CLASS RIPRAP  
ON BANKS ONLY  
EST 18 TONS  
EST GF 29 SY

HEAD DITCH  
EST DDE  
+/- 32 CY  
SEE DETAIL 27

CLASS 'B' RIPRAP  
EST 2 TONS  
EST GF 7 SY

LATERAL V-DITCH  
STA 10+95 - STA 11+56 -Y7A- LT  
SEE DETAIL 14

TOTAL DDE=61 CY

TAIL DITCH  
EST DDE +/- 49 CY  
SEE DETAIL 4

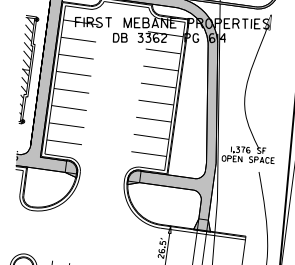
CLASS RIPRAP  
ON BANKS ONLY  
EST 27 TONS  
EST GF 44 SY

LATERAL V-DITCH  
STA 11+65 - STA 12+31 -Y7A- LT  
SEE DETAIL 26

TOTAL DDE=61 CY

CLASS 'B' RIPRAP  
EST 2 TONS  
EST GF 7 SY

LATERAL V-DITCH  
STA 69+95 - STA 70+75 -L- RT  
SEE DETAIL 14



MATCH LINE - SHEET 22 -Y7A- STATION 15+00

FOR -L- PROFILE SEE SHEET 34  
FOR -Y7A- PROFILE SEE SHEET 47

2/1/2017 U:\Hyd.pr.m\_wet\_psh\_08.dgn



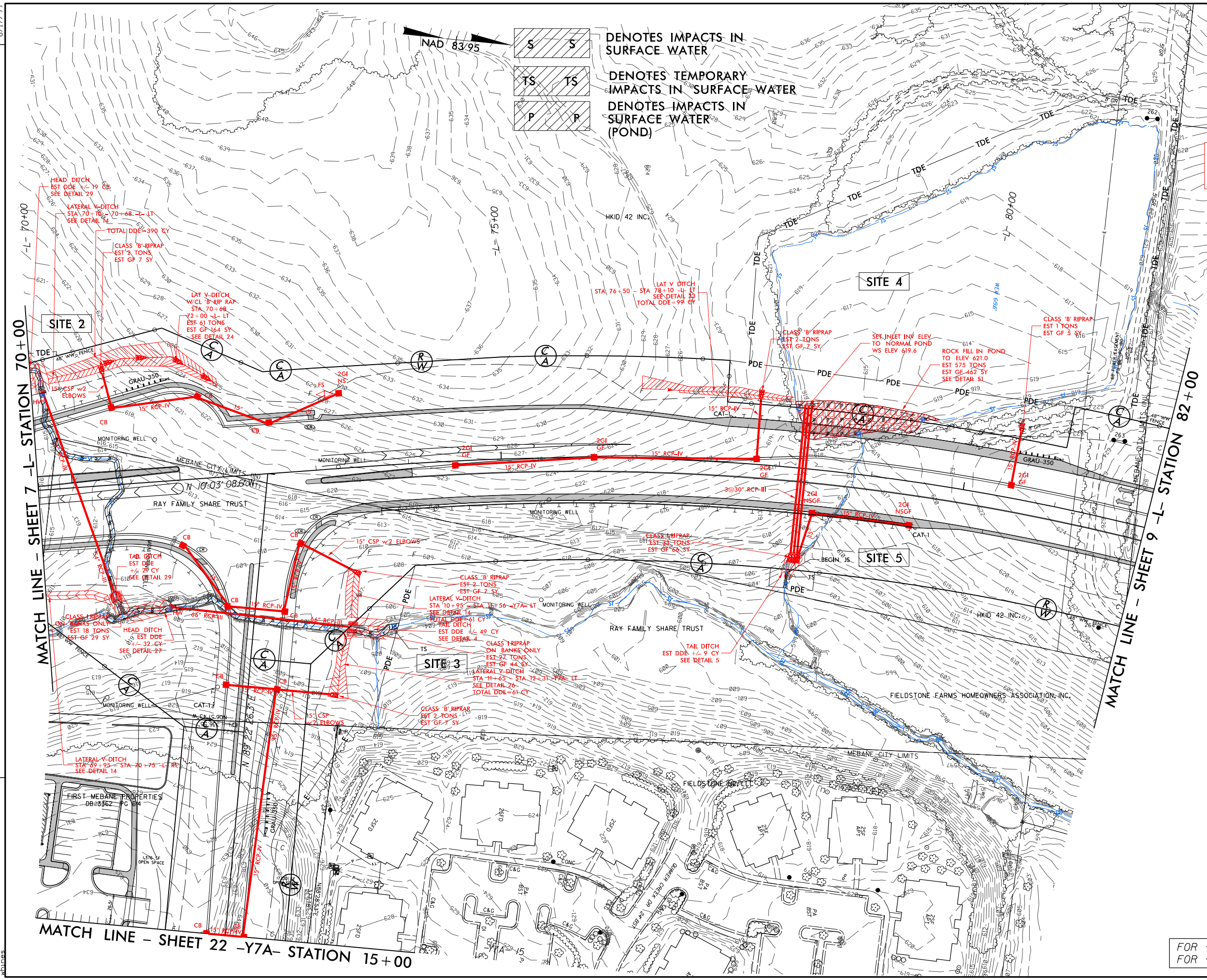
PROJECT REFERENCE NO. U-3109A	SHEET NO. 8
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	ENGINEER

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

**PERMIT DRAWING**  
**SHEET 5 OF 43**

NAD 83/95

S	S	DENOTES IMPACTS IN SURFACE WATER
TS	TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
P	P	DENOTES IMPACTS IN SURFACE WATER (POND)



8/17/99

REVISIONS

2/1/2017 U-3109A\_Hyd.prj\_wet\_psh\_08.con.dgn

MATCH LINE - SHEET 22 -Y7A- STATION 15+00

FOR -L- PROFILE SEE SHEET 34  
FOR -Y7A- PROFILE SEE SHEET 47



8/17/99

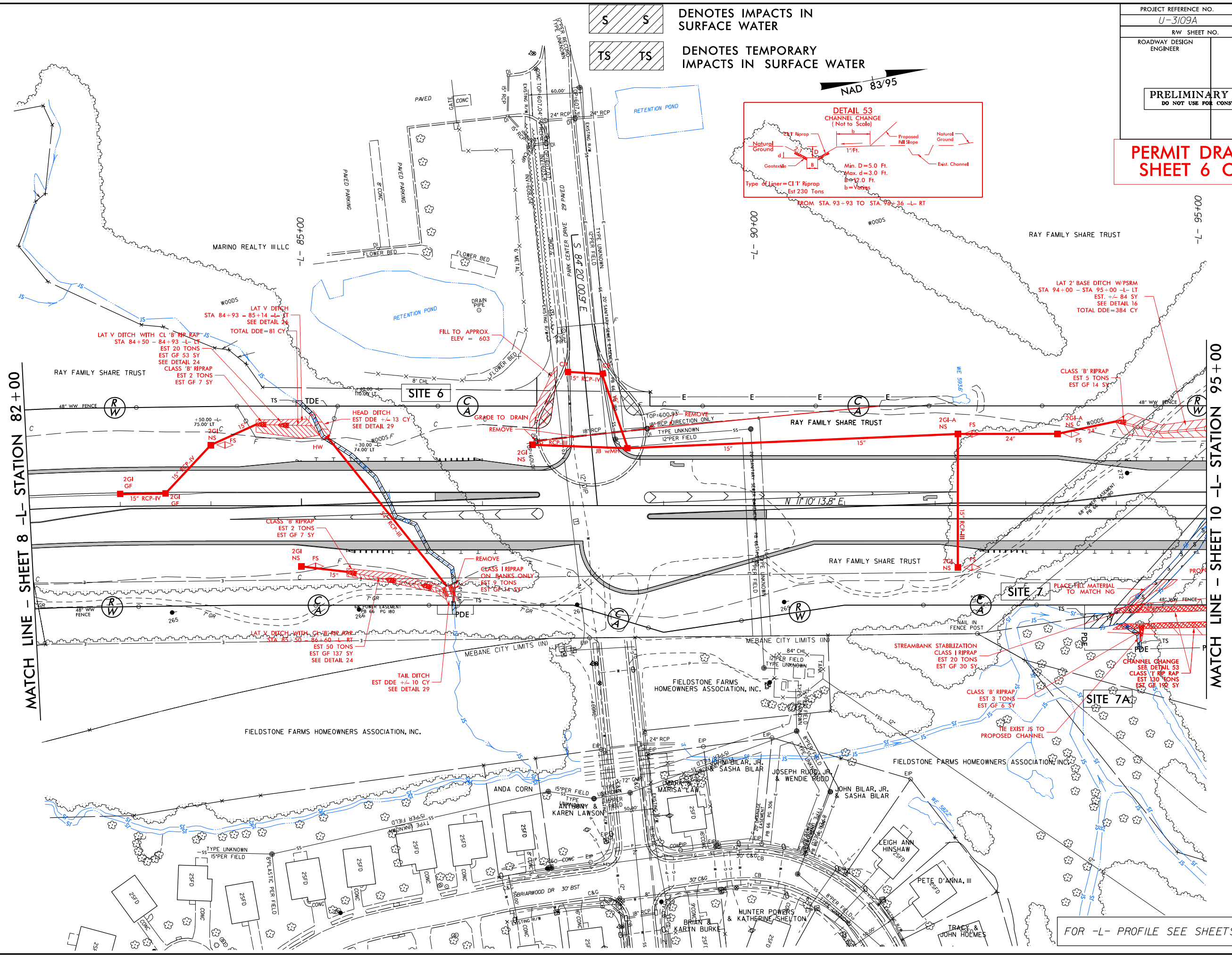
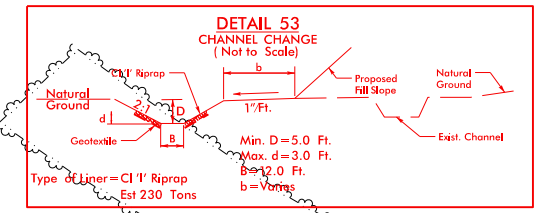
PROJECT REFERENCE NO. U-3109A	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

**PERMIT DRAWING**  
**SHEET 6 OF 43**

**S S** DENOTES IMPACTS IN SURFACE WATER

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

NAD 83/95



FOR -L- PROFILE SEE SHEETS 34 & 35

2/1/2017 10:09:21 Hyd.pr.m...wet...psh\_09.dgn



PROJECT REFERENCE NO. U-3109A	SHEET NO. 9
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

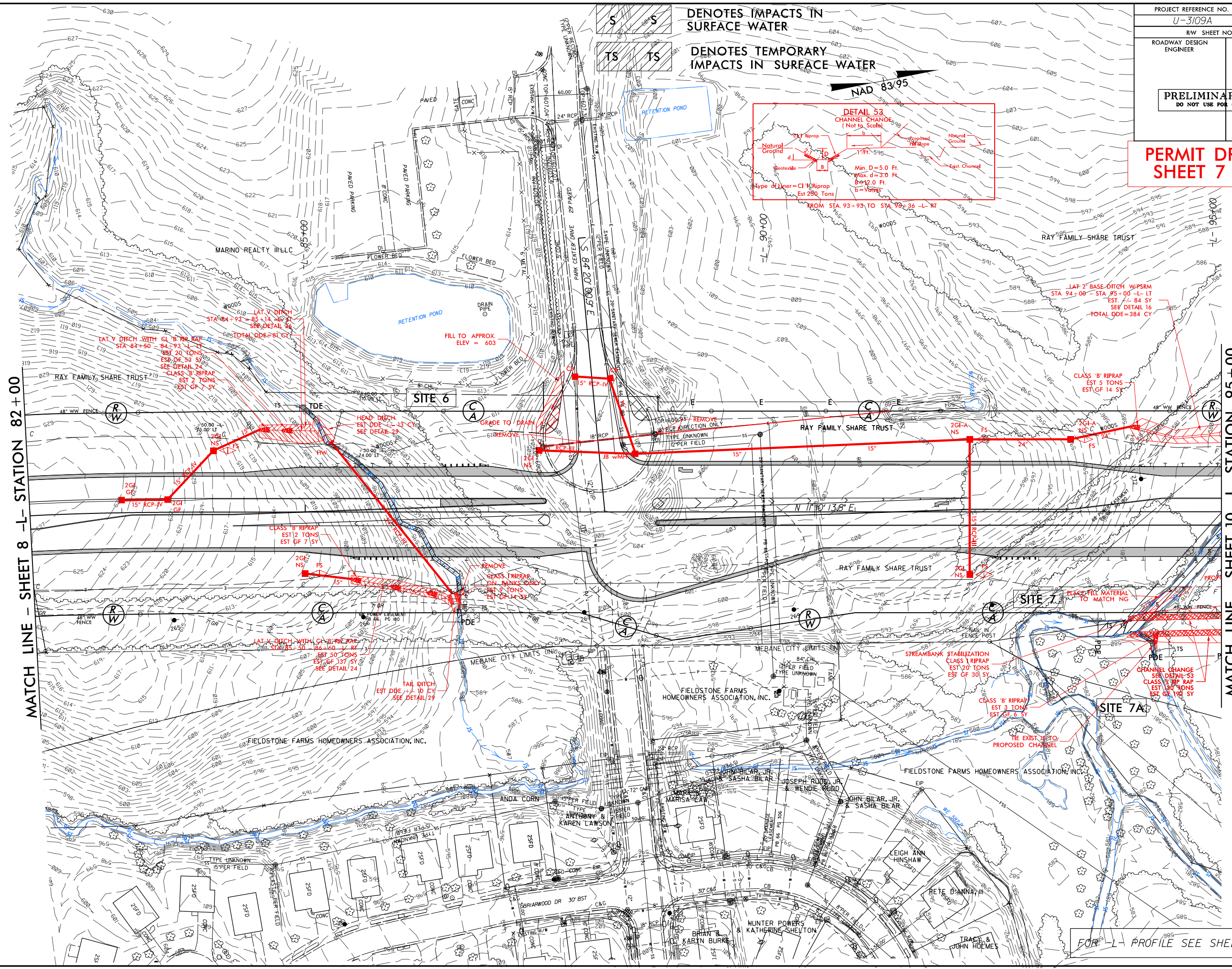
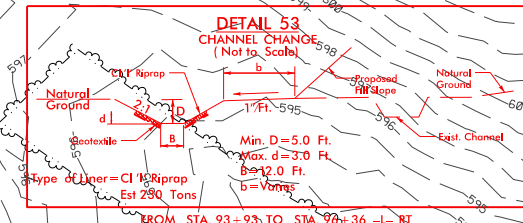
PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING  
SHEET 7 OF 43

SS DENOTES IMPACTS IN SURFACE WATER

TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NAD 83/95



MATCH LINE - SHEET 8 -L- STATION 82+00

MATCH LINE - SHEET 10 -L- STATION 95+00

FOR L- PROFILE SEE SHEETS 34 & 35

REVISIONS

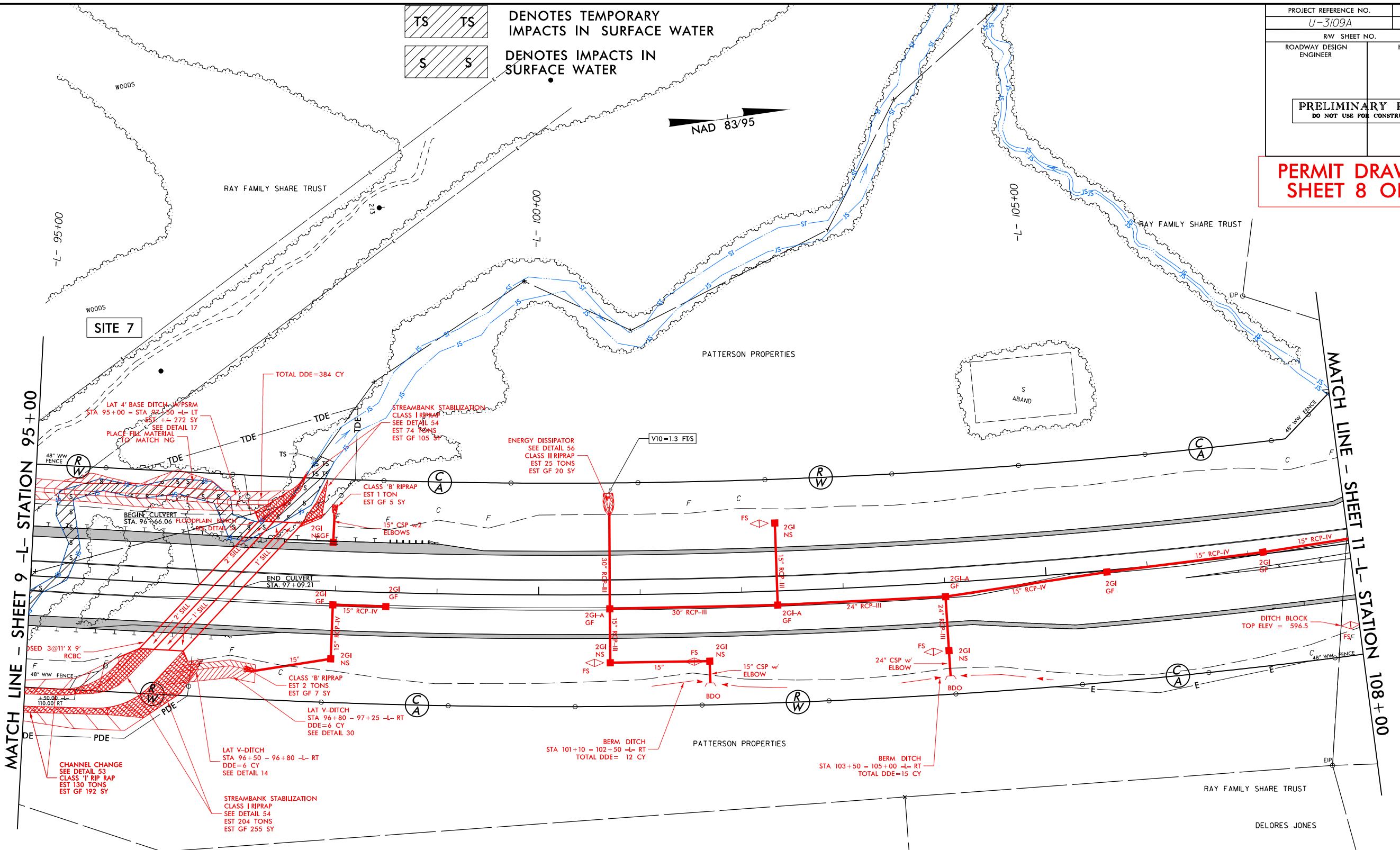
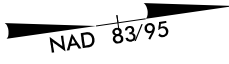
8/17/99  
2/1/2017  
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PROJECT REFERENCE NO.	SHEET NO.
U-3109A	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

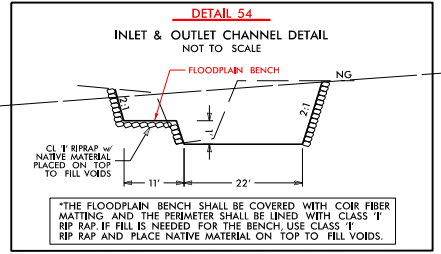
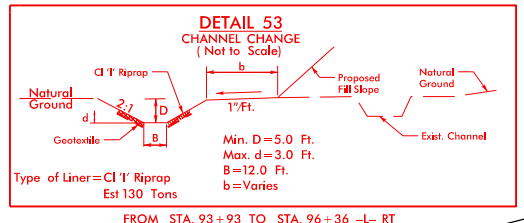
PERMIT DRAWING  
SHEET 8 OF 43

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



MATCH LINE - SHEET 9 - L- STATION 95+00

MATCH LINE - SHEET 11 - L- STATION 108+00



FOR -L- PROFILE SEE SHEET 35

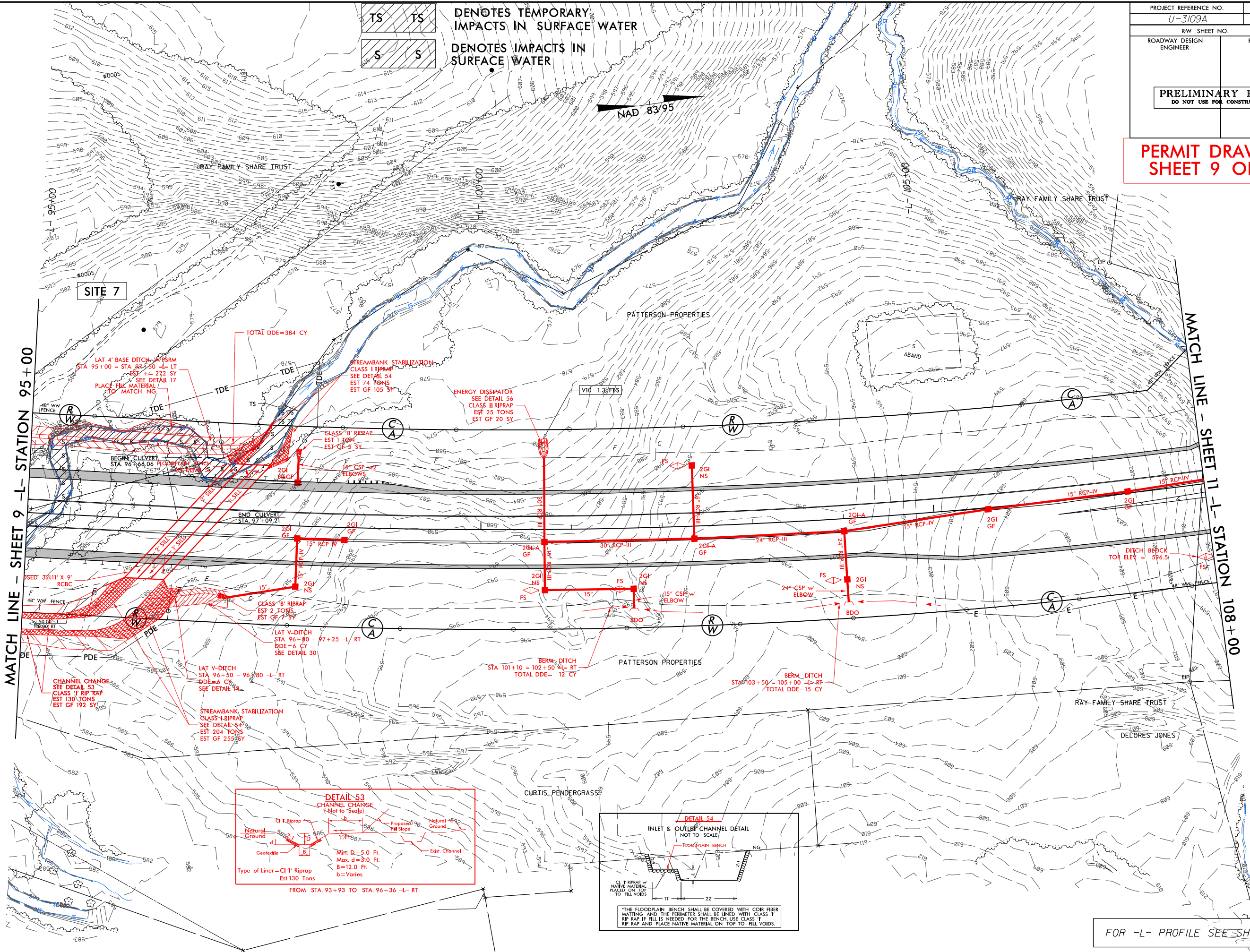
REVISIONS

8/17/99

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PROJECT REFERENCE NO. U-3109A	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
SHEET 9 OF 43



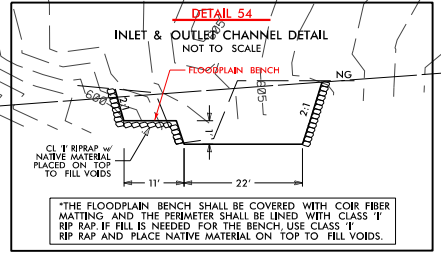
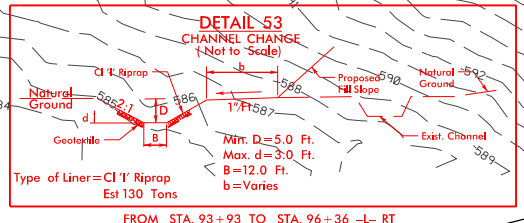
TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER  
S S DENOTES IMPACTS IN SURFACE WATER

NAD 83/95

MATCH LINE - SHEET 9 - L- STATION 95+00

MATCH LINE - SHEET 11 - L- STATION 108+00

REVISIONS



FOR -L- PROFILE SEE SHEET 35

2/13/2017 Hyd.pr.m\_wet\_psh\_10.con.dgn

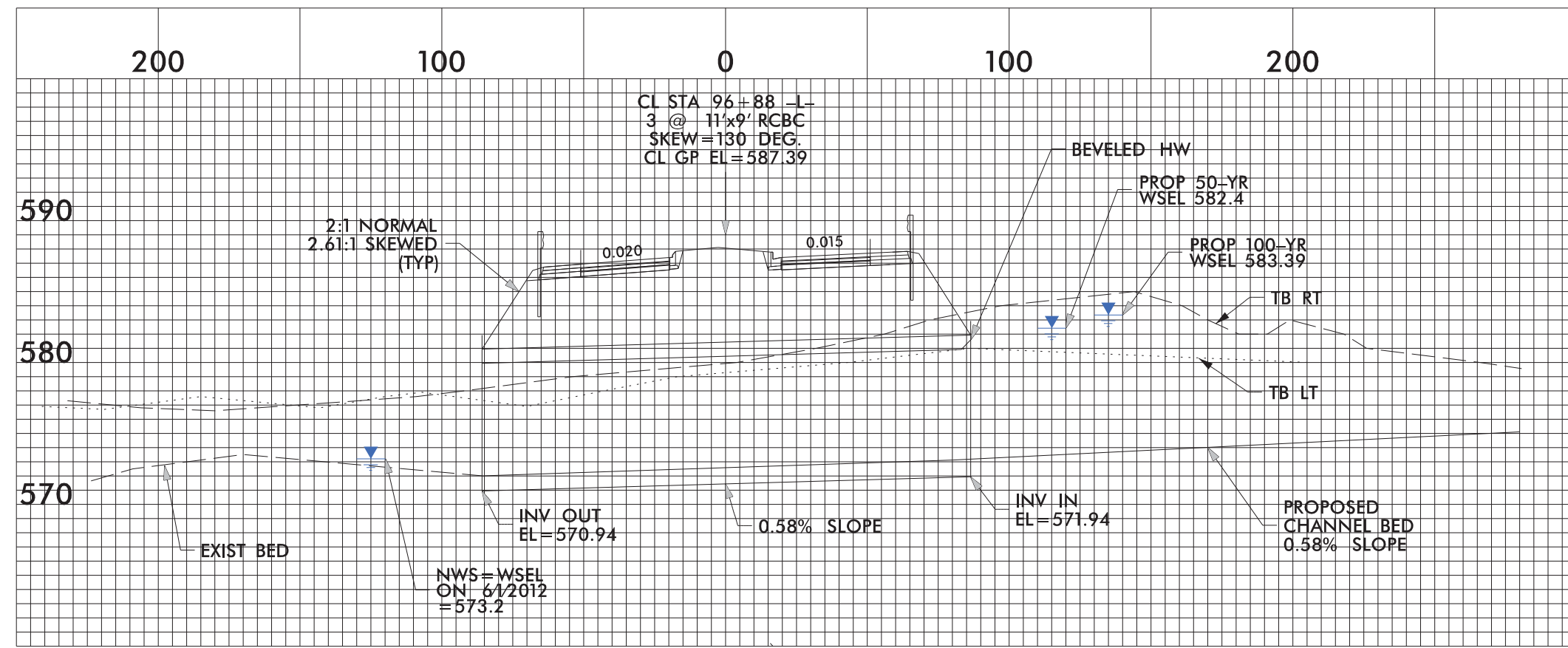


PROJECT REFERENCE NO.	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

**PERMIT DRAWING  
SHEET 10 OF 43**

**SITE 7**

REVISIONS

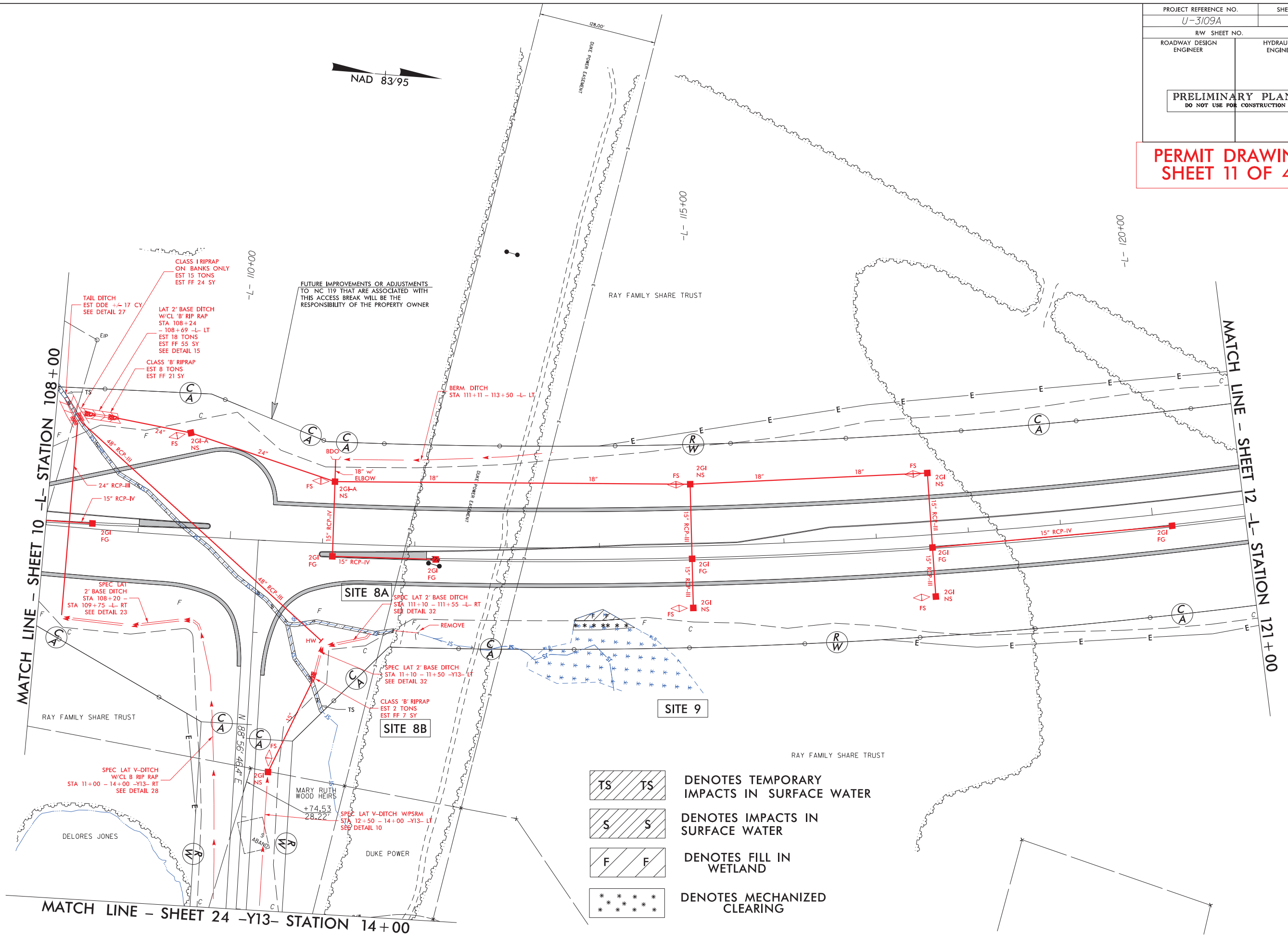


PROJECT REFERENCE NO. U-3109A	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

**PERMIT DRAWING  
SHEET 11 OF 43**

8/17/99



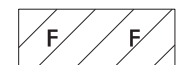
REVISIONS



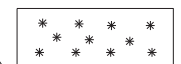
DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN SURFACE WATER



DENOTES FILL IN WETLAND



DENOTES MECHANIZED CLEARING

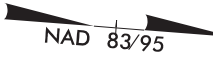
FOR -L- PROFILE SEE SHEETS 35 & 36  
FOR -Y13- PROFILE SEE SHEET 50

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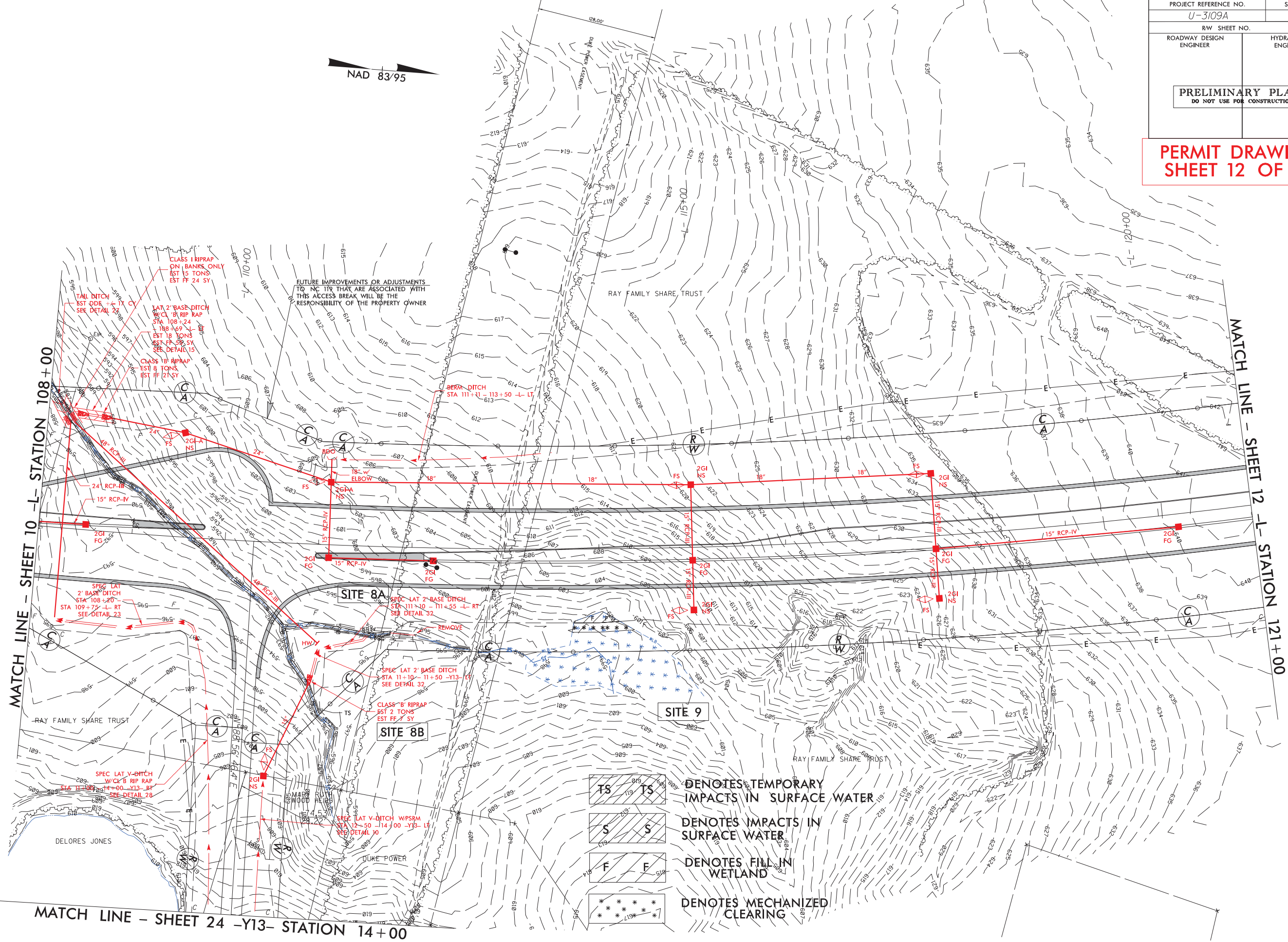


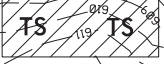



PROJECT REFERENCE NO. U-3109A	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

**PERMIT DRAWING  
SHEET 12 OF 43**



REVISIONS



-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING

MATCH LINE - SHEET 24 -Y13- STATION 14+00

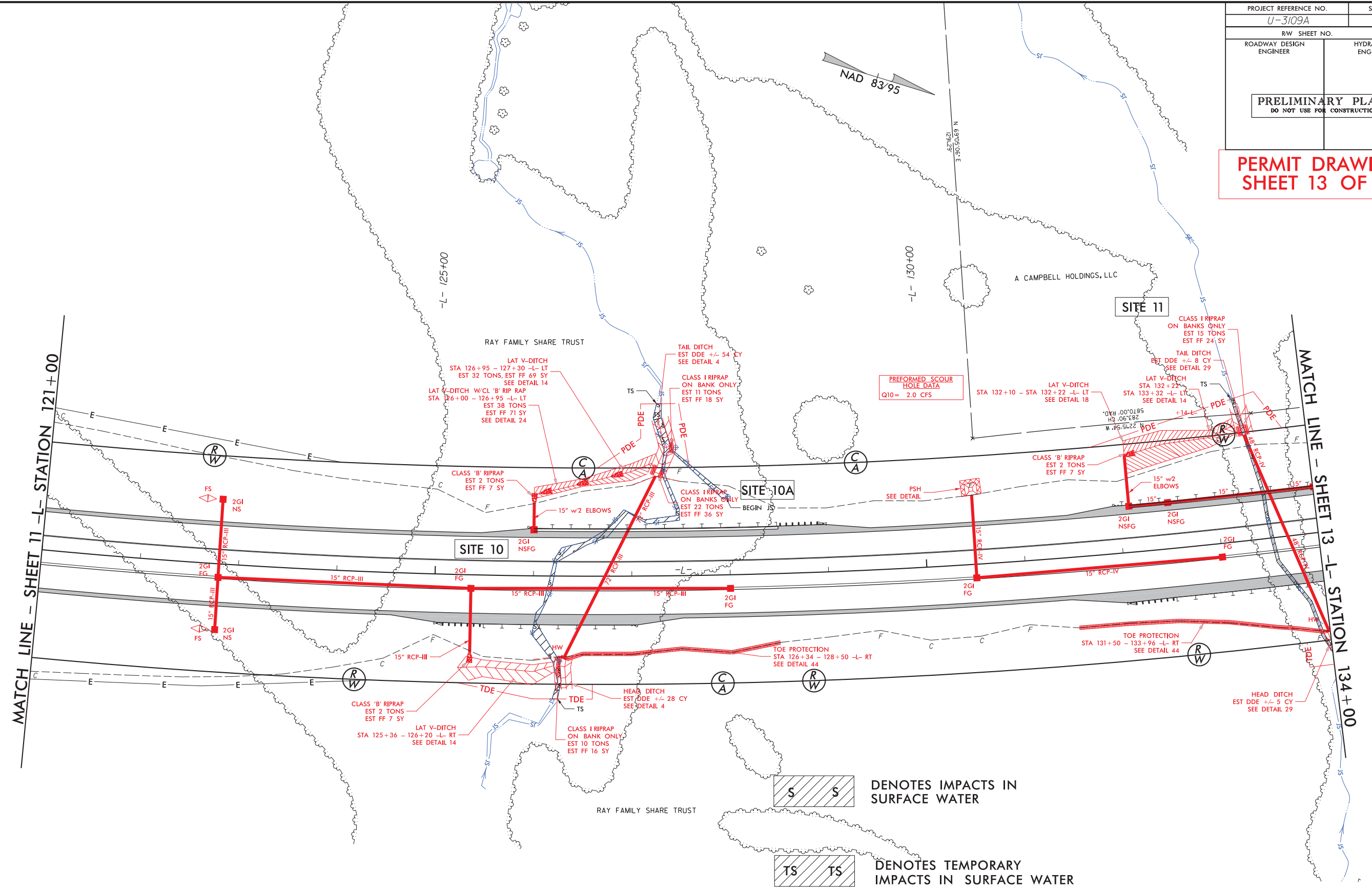
FOR -L- PROFILE SEE SHEETS 35 & 36  
FOR -Y13- PROFILE SEE SHEET 50

PROJECT REFERENCE NO. U-3109A	SHEET NO. 12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
SHEET 13 OF 43

8/17/99

REVISIONS



**S S** DENOTES IMPACTS IN SURFACE WATER

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

FOR -L- PROFILE SEE SHEET 36

3/10/2016 10:56:16 hyd.prm\_wet\_psh\_12.dgn

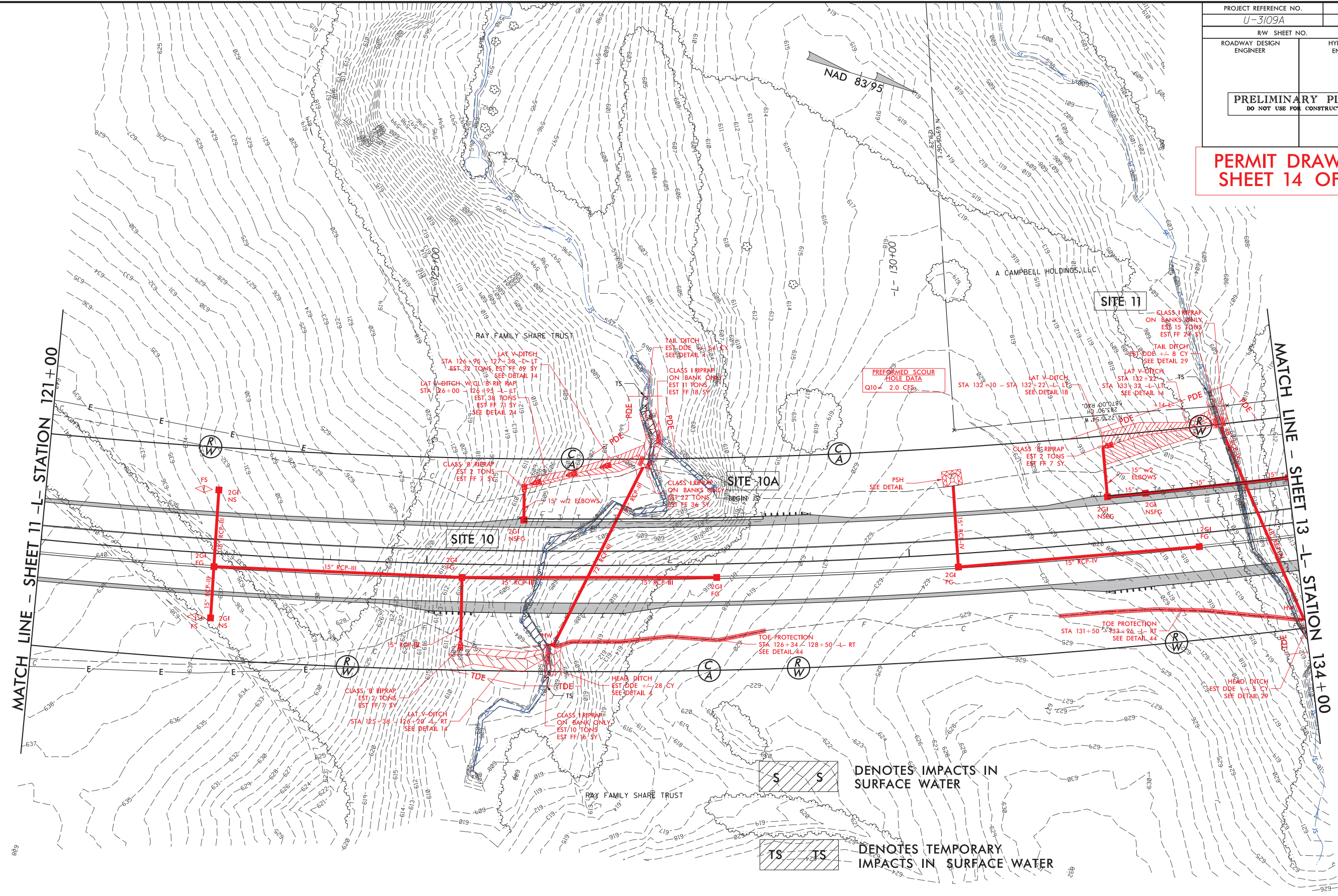


PROJECT REFERENCE NO. U-3109A	SHEET NO. 12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
SHEET 14 OF 43

8/17/99

REVISIONS



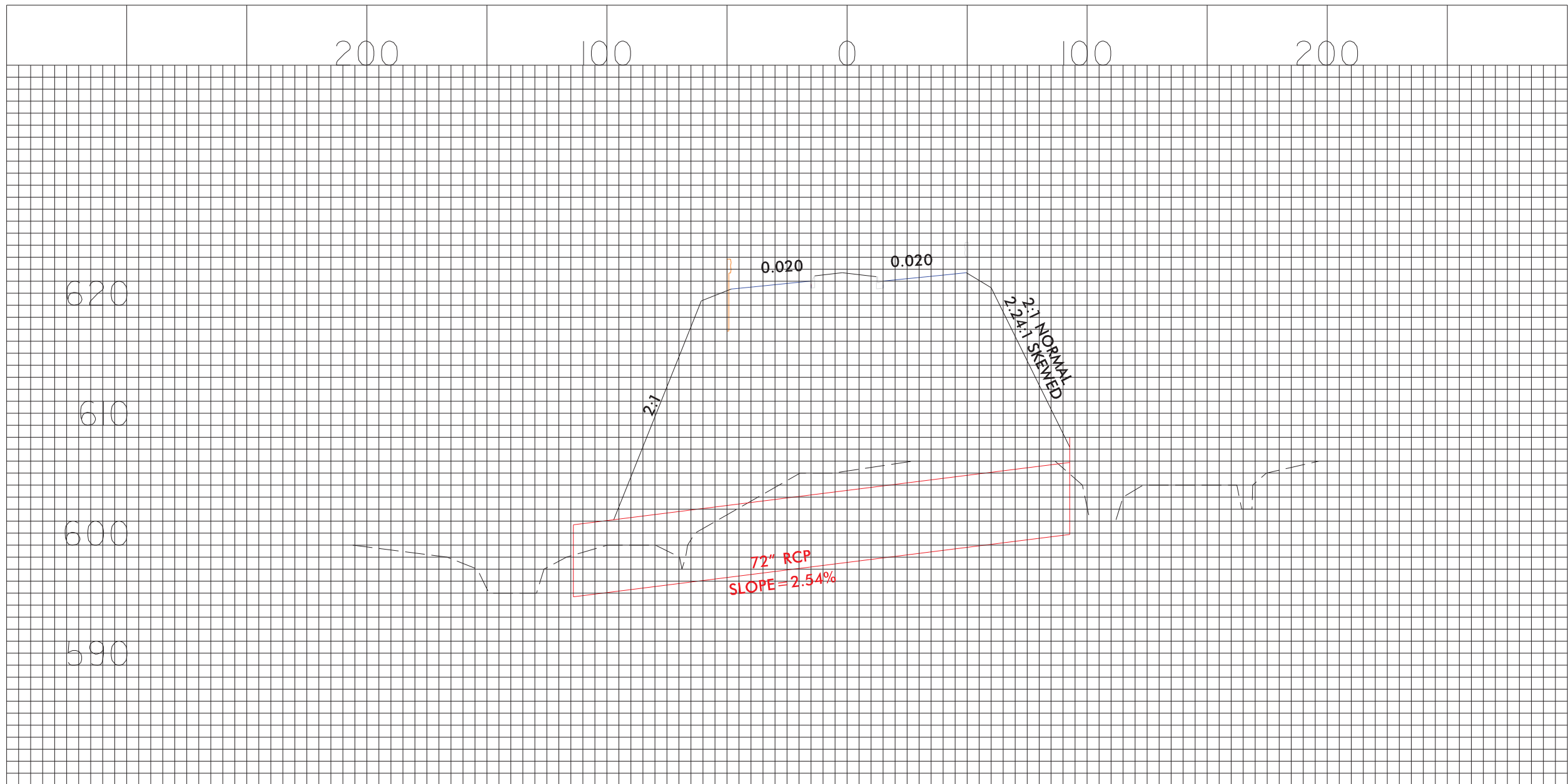
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10/10/2016

FOR -L- PROFILE SEE SHEET 36

PROJECT REFERENCE NO.	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

**PERMIT DRAWING  
SHEET 15 OF 43**

**SITE 10**





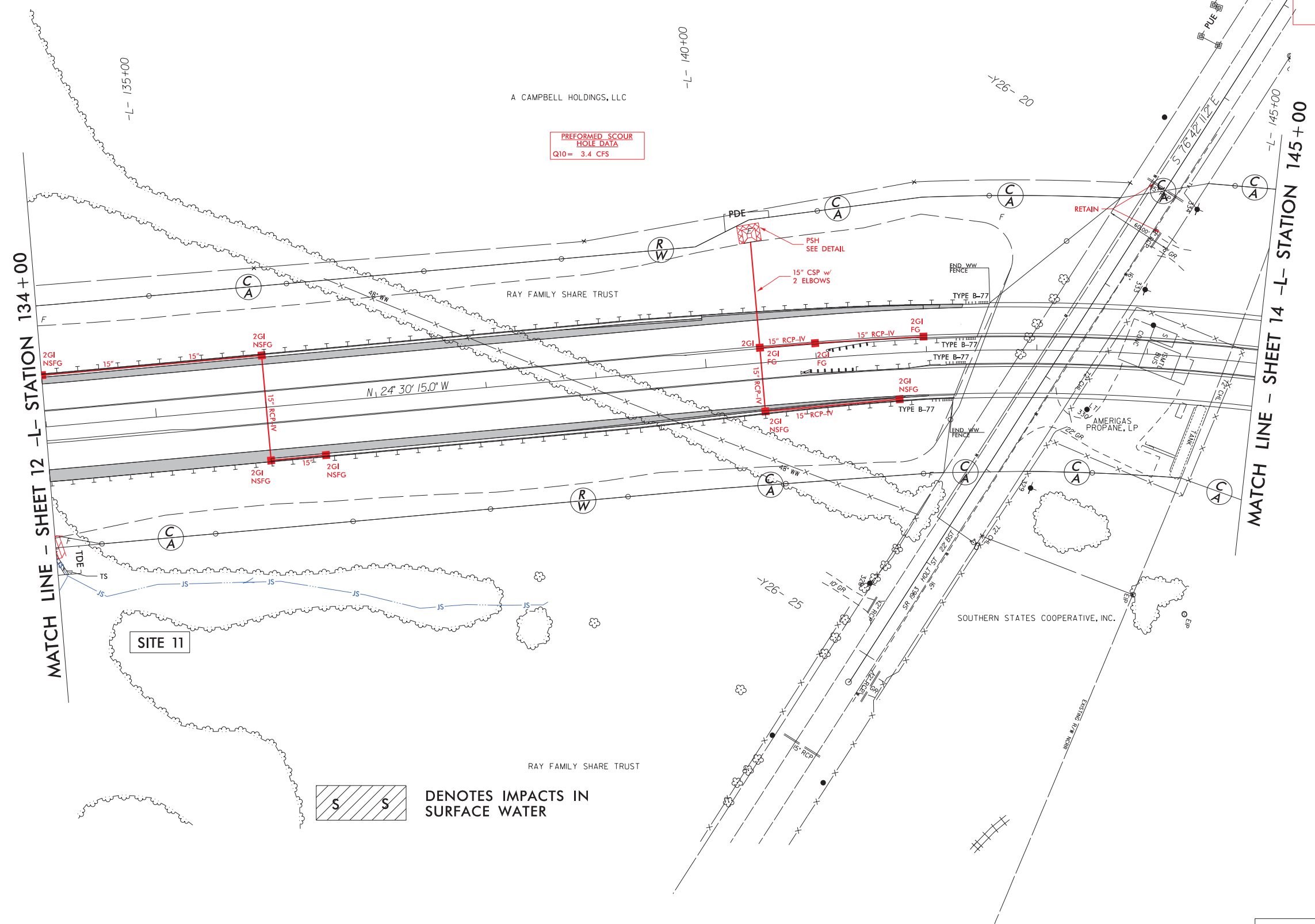
8/17/99

PROJECT REFERENCE NO. U-3109A	SHEET NO. 13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
 SHEET 16 OF 43



REVISIONS



PREFORMED SCOUR  
 HOLE DATA  
 Q10 = 3.4 CFS

**DENOTES IMPACTS IN SURFACE WATER**

MATCH LINE - SHEET 14 -L- STATION 145+00

MATCH LINE - SHEET 12 -L- STATION 134+00

FOR -L- PROFILE SEE SHEET 36  
 FOR BR. SKETCH SEE SHEET 14

2/28/2016  
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 harvey

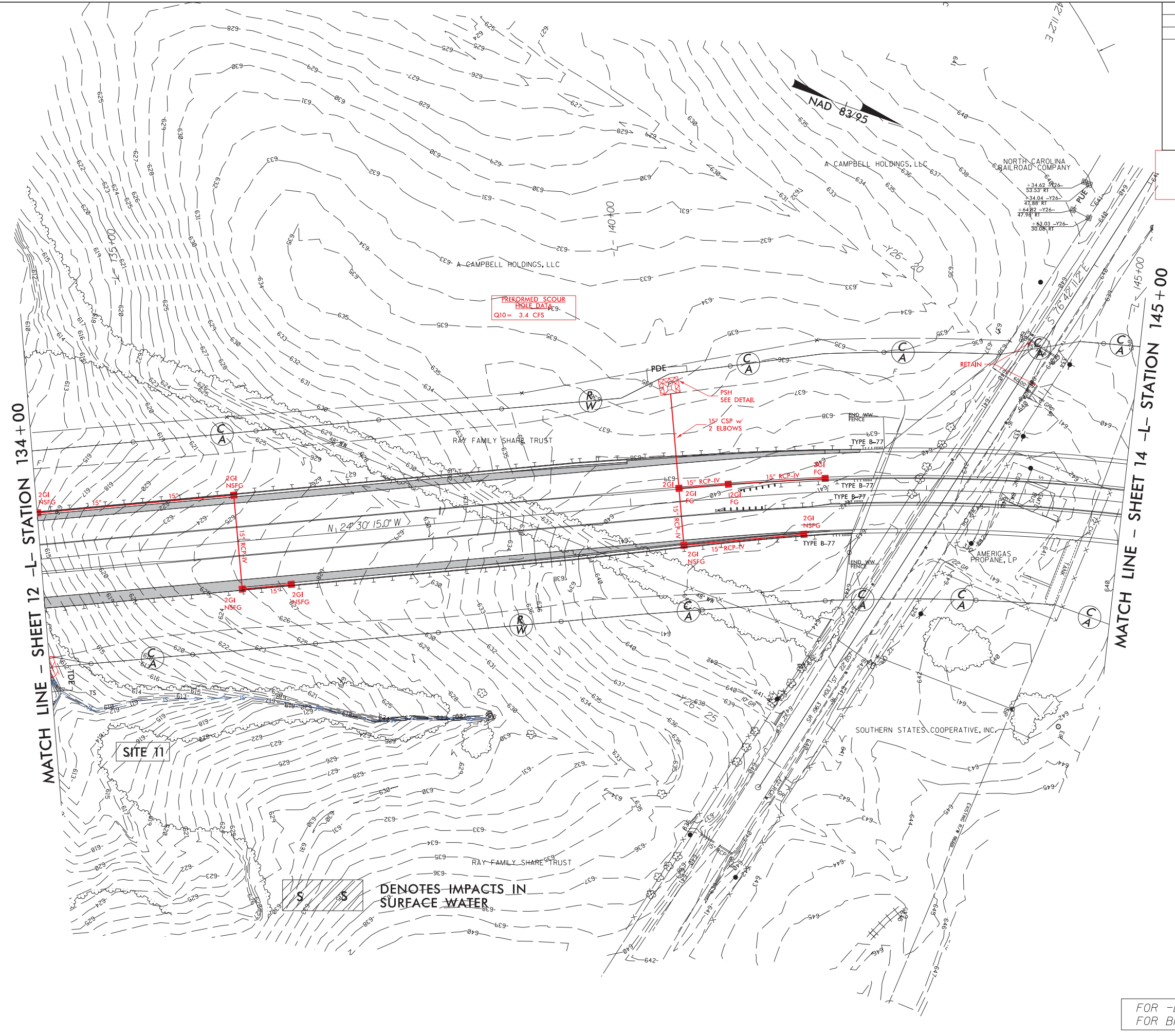
PROJECT REFERENCE NO. U-3109A	SHEET NO. 13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
SHEET 17 OF 43

8/17/99

REVISIONS

2/28/2016  
U-3109A.dwg.prm\_wet\_psh\_13.con.dgn  
har.vau



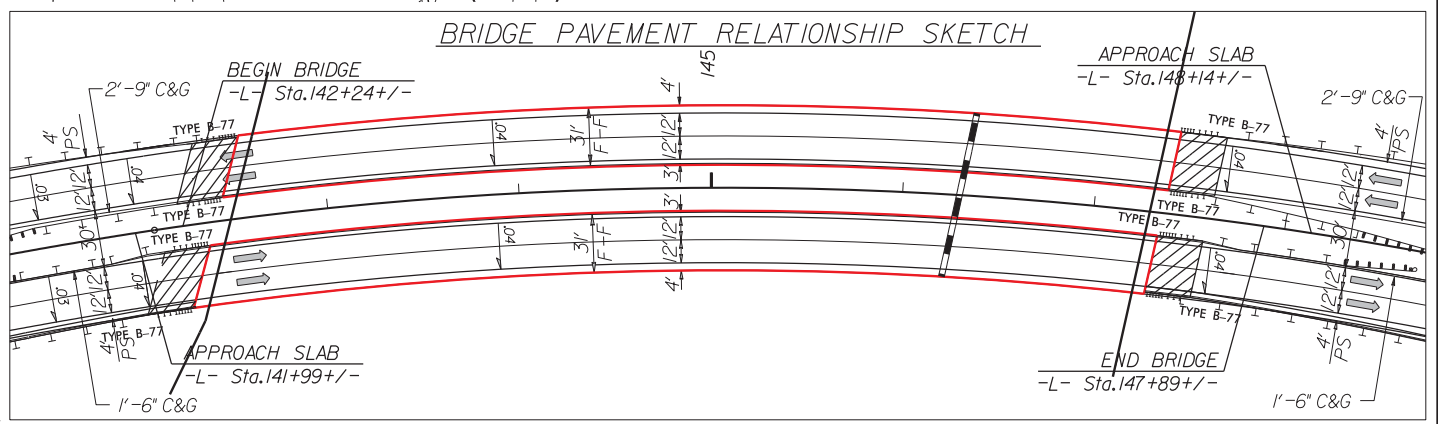
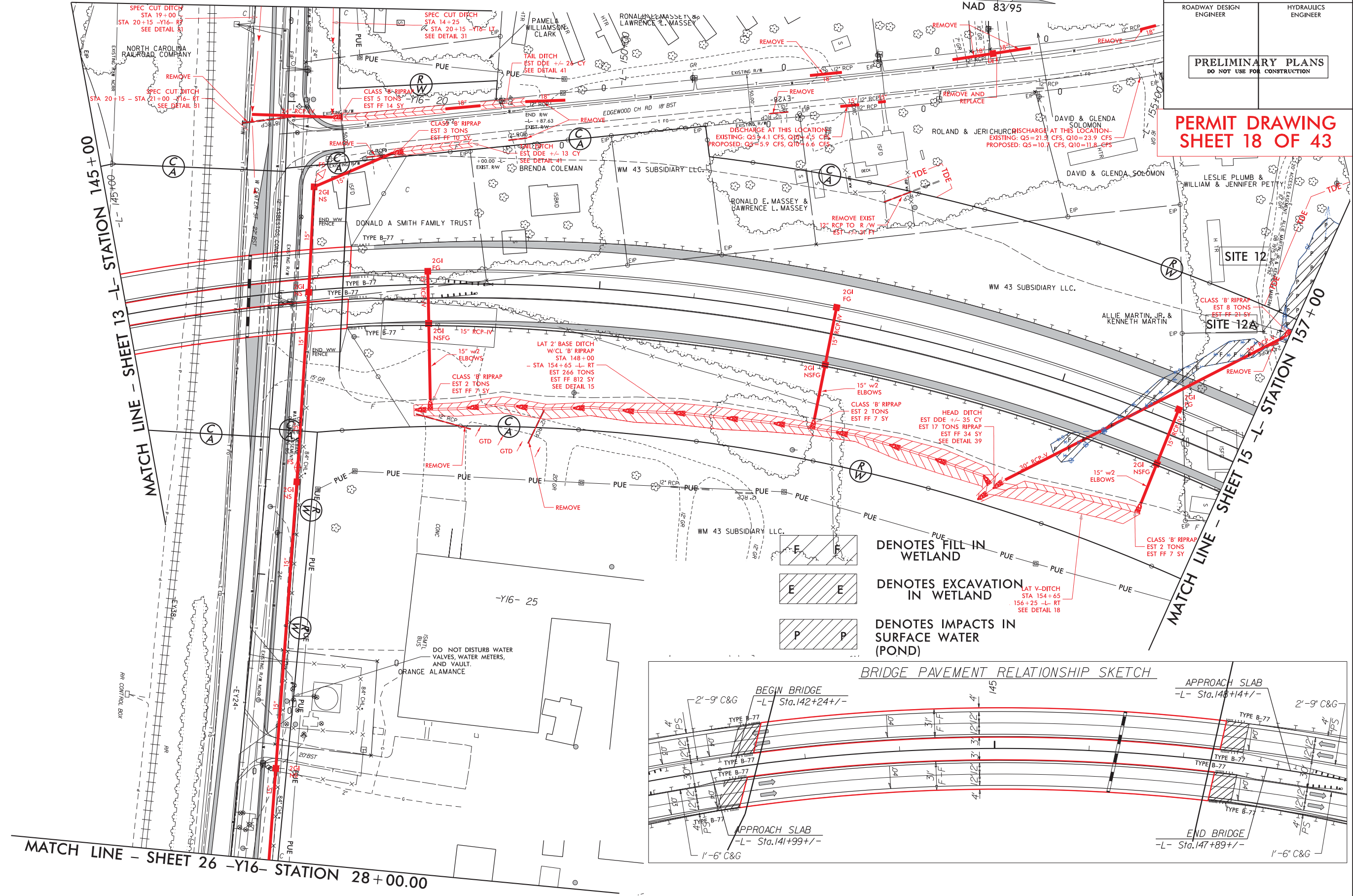
S S DENOTES IMPACTS IN SURFACE WATER

FOR -L- PROFILE SEE SHEET 36  
FOR BR. SKETCH SEE SHEET 14



PROJECT REFERENCE NO.		SHEET NO.	
U-3109A		14	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

PERMIT DRAWING  
SHEET 18 OF 43



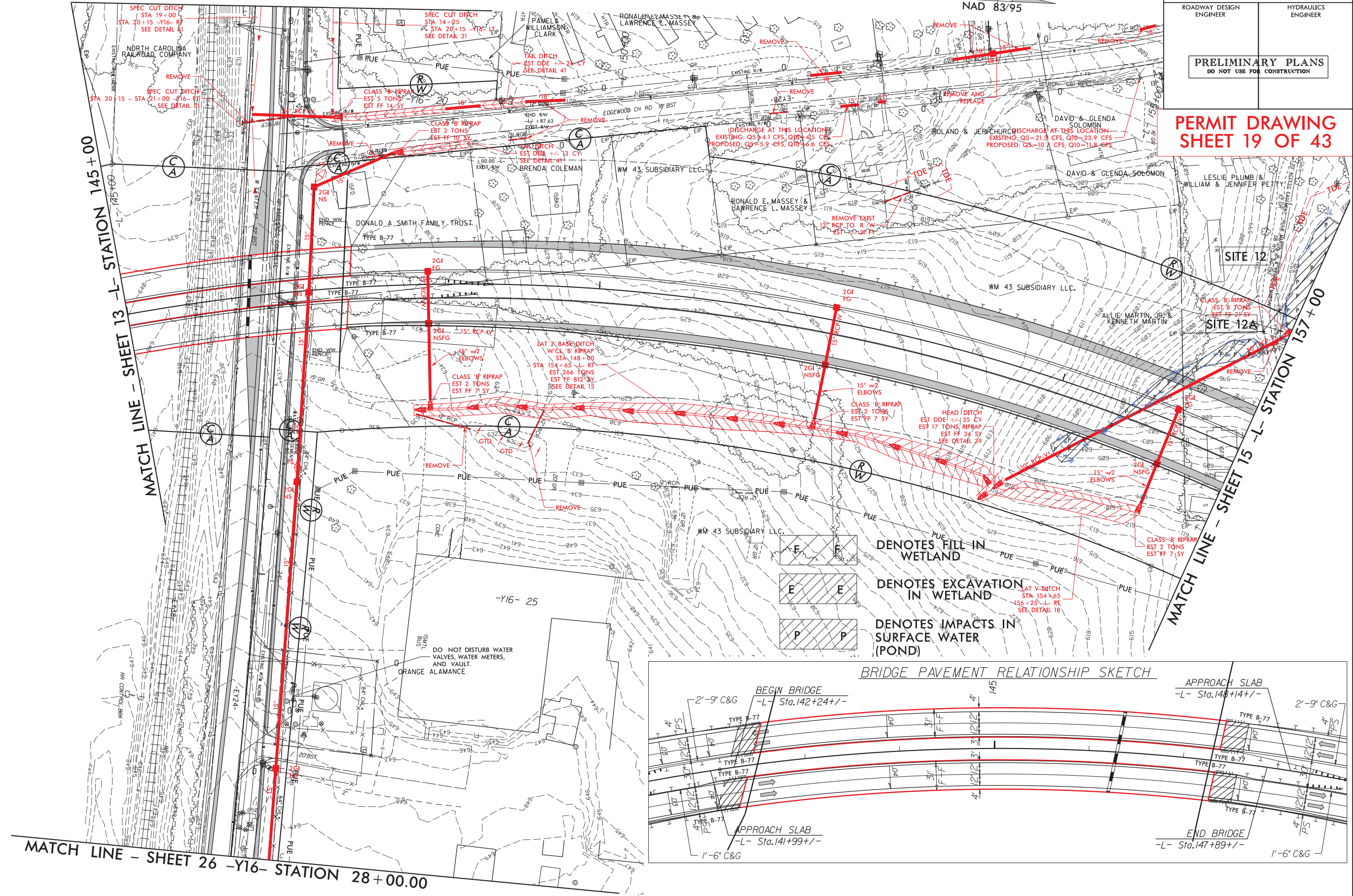
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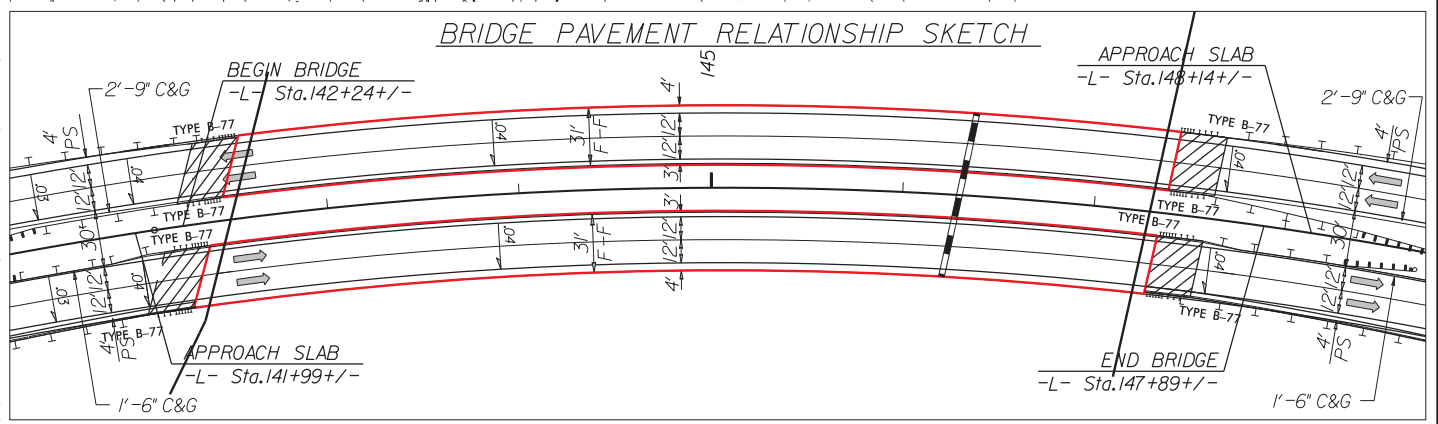
MATCH LINE - SHEET 25 -Y16- STATION 19+00

PROJECT REFERENCE NO. U-3109A	SHEET NO. 14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

**PERMIT DRAWING**  
**SHEET 19 OF 43**



DENOTES FILL IN WETLAND  
 DENOTES EXCAVATION IN WETLAND  
 DENOTES IMPACTS IN SURFACE WATER (POND)



FOR -L- PROFILE SEE SHEETS 36 & 37  
FOR -Y16- PROFILE SEE SHEETS 50 & 51

8/17/99  
 REVISIONS  
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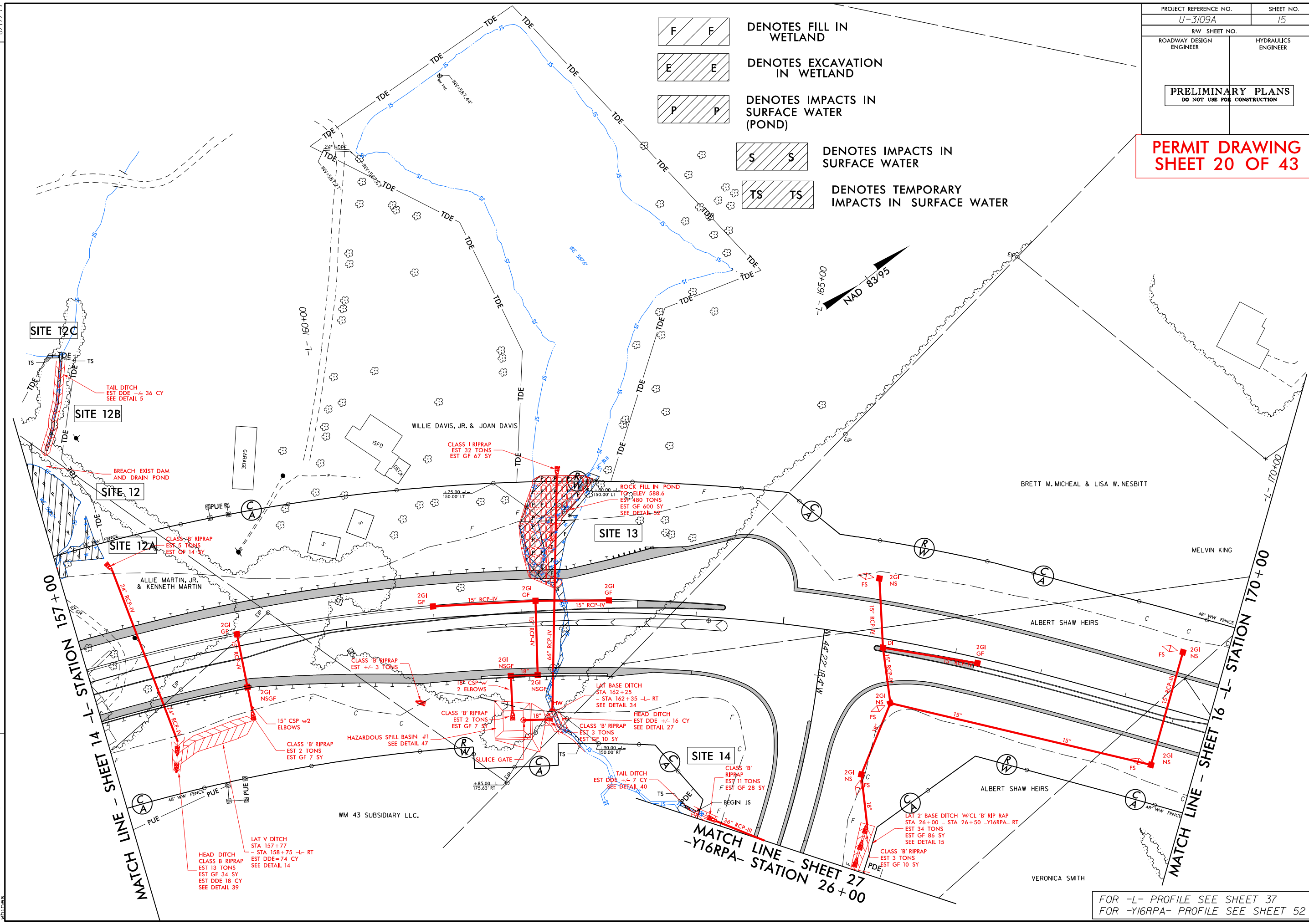


8/17/99  
 REVISIONS  
 2/1/2017 Hyd.pr.m..wet\_psh\_15.dgn  
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PROJECT REFERENCE NO. U-3109A	SHEET NO. 15
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

**PERMIT DRAWING  
SHEET 20 OF 43**

- DENOTES FILL IN WETLAND
- DENOTES EXCAVATION IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER (POND)
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



FOR -L- PROFILE SEE SHEET 37  
 FOR -Y16RPA- PROFILE SEE SHEET 52

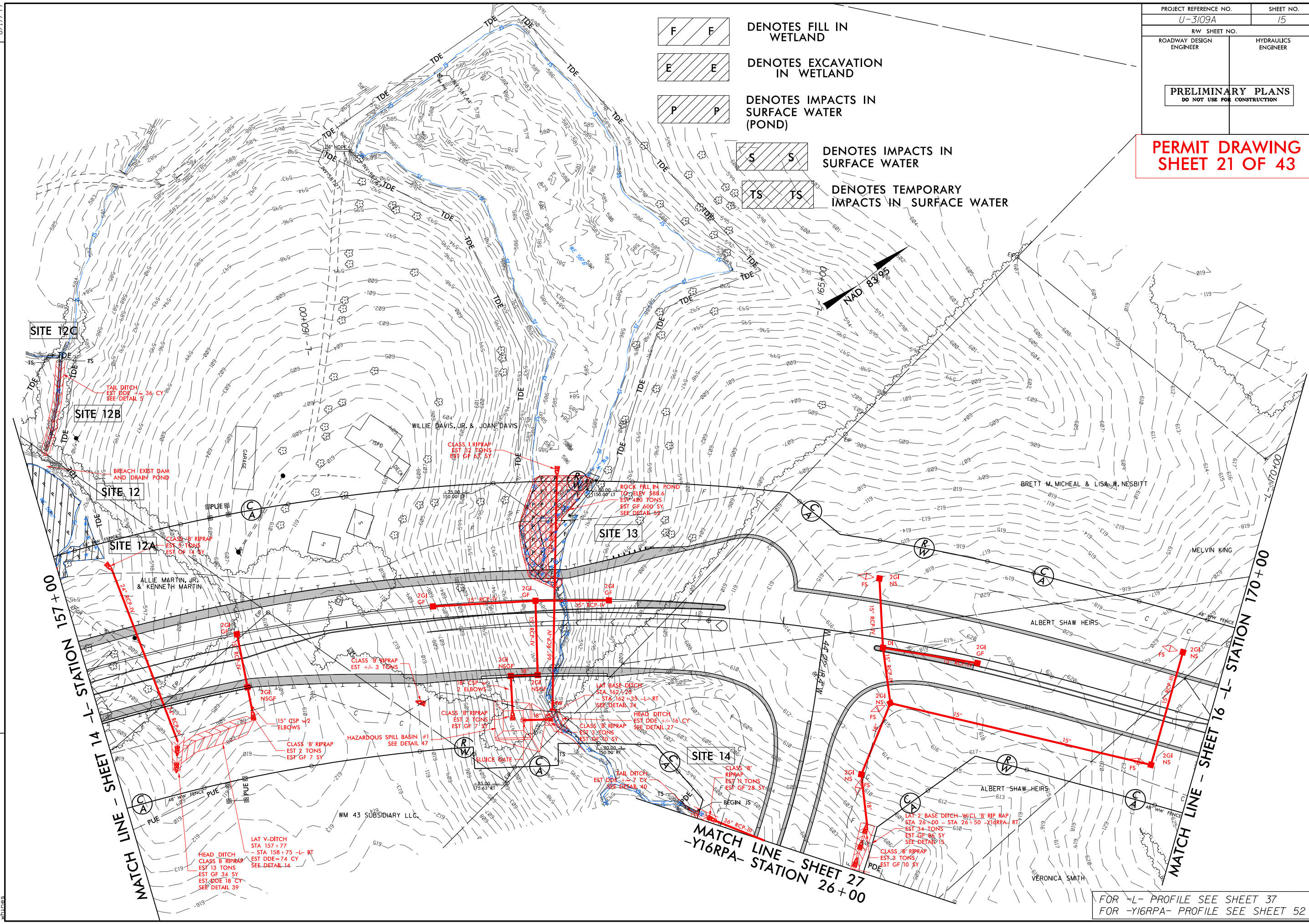
8/17/99

PROJECT REFERENCE NO. U-3109A	SHEET NO. 15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

**PERMIT DRAWING  
SHEET 21 OF 43**

- DENOTES FILL IN WETLAND
- DENOTES EXCAVATION IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER (POND)
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

REVISIONS



2/1/2017 Hyd.prm\_wet\_psh\_15.con.dgn

FOR -L- PROFILE SEE SHEET 37  
FOR -Y16RPA- PROFILE SEE SHEET 52

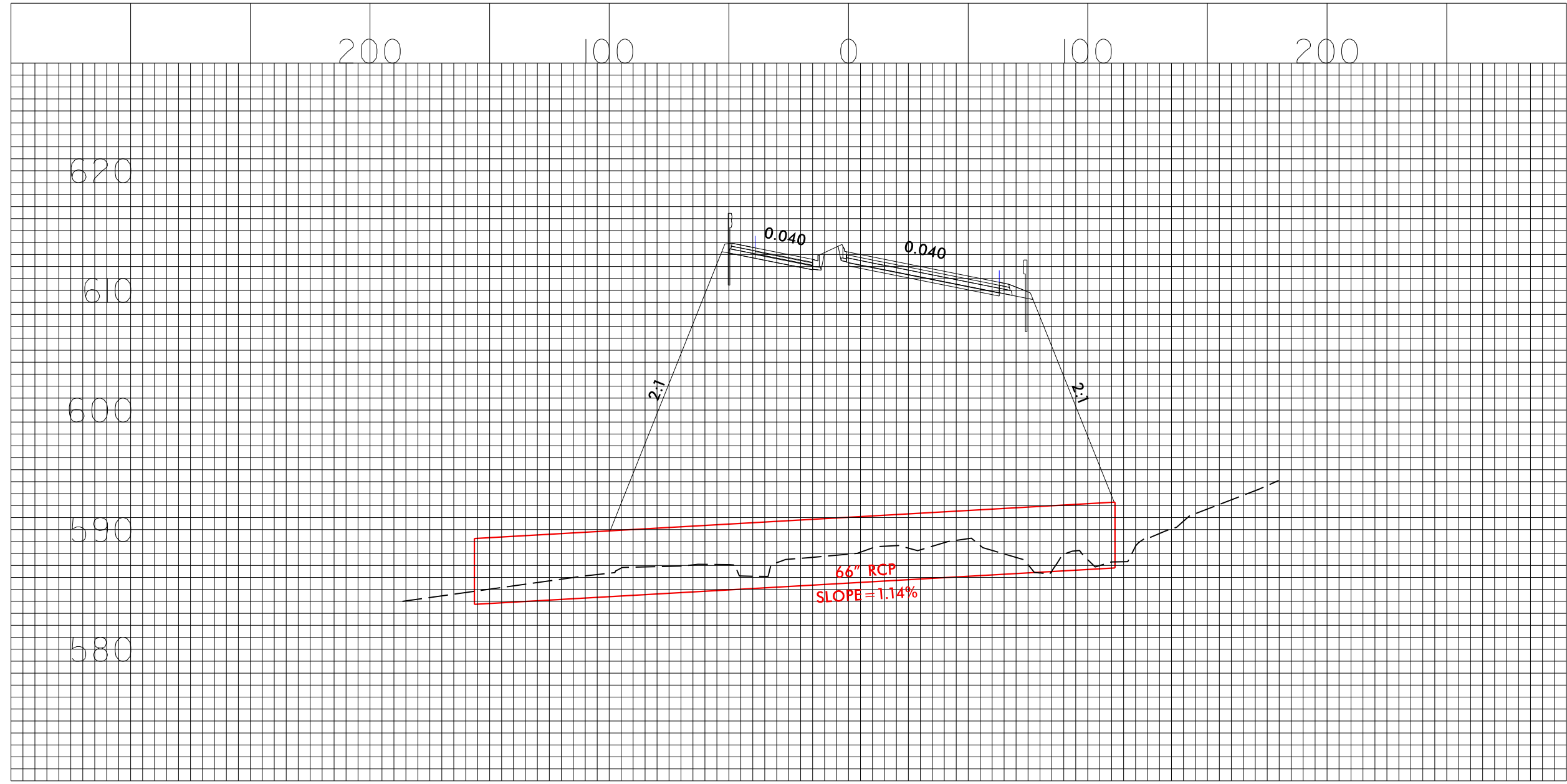


PROJECT REFERENCE NO.	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SITE 13

PERMIT DRAWING  
SHEET 22 OF 43

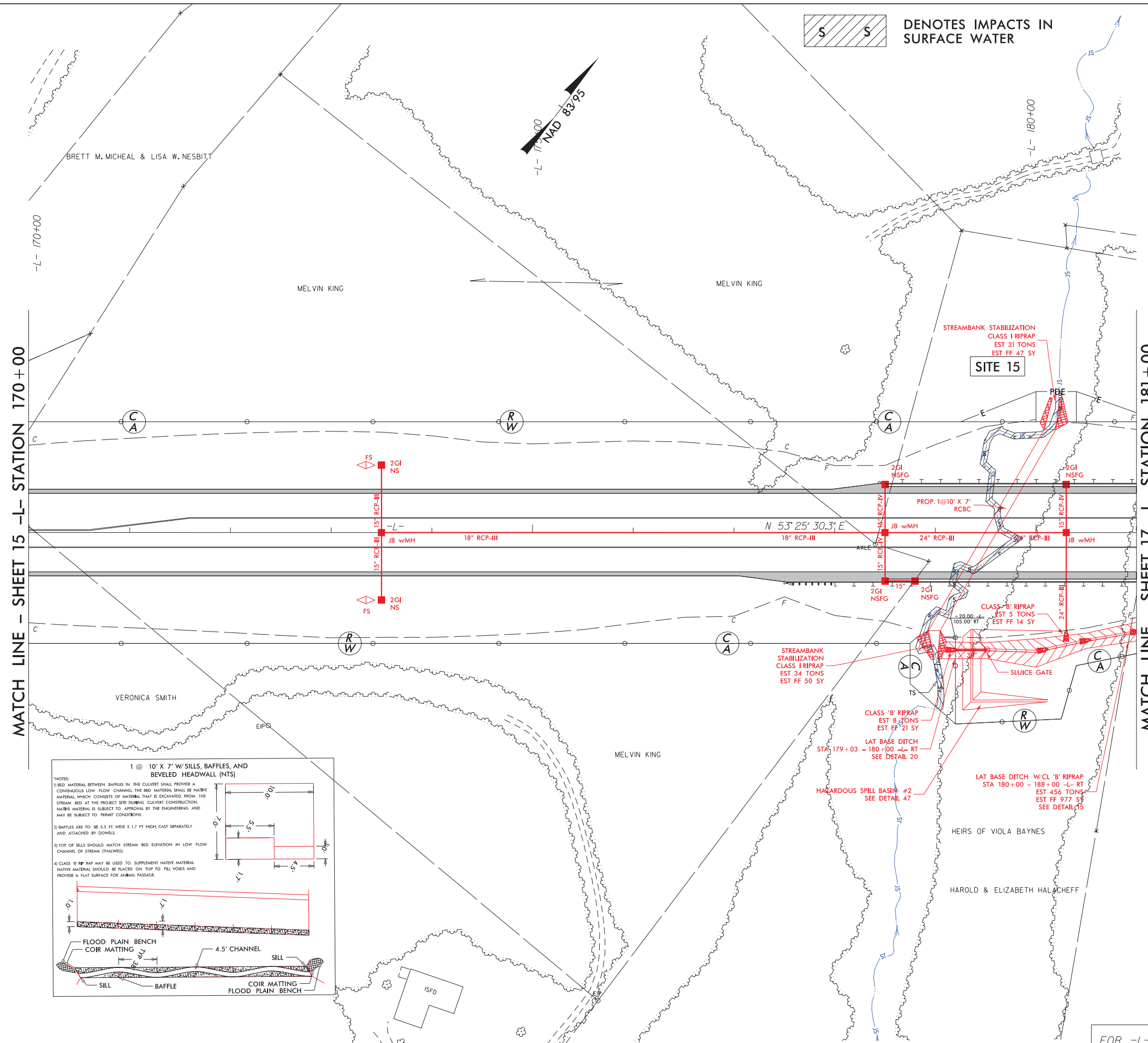
REVISIONS



8/17/99

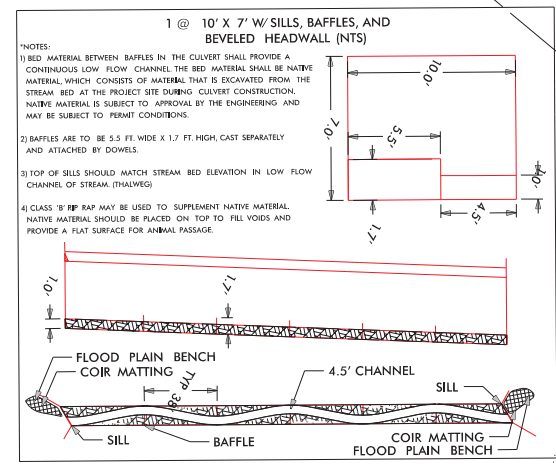
REVISIONS

2/28/2016  
U-3109A Hyd.pr.m..wet..psh..16.dgn  
har.vau



PROJECT REFERENCE NO. U-3109A		SHEET NO. 16	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			

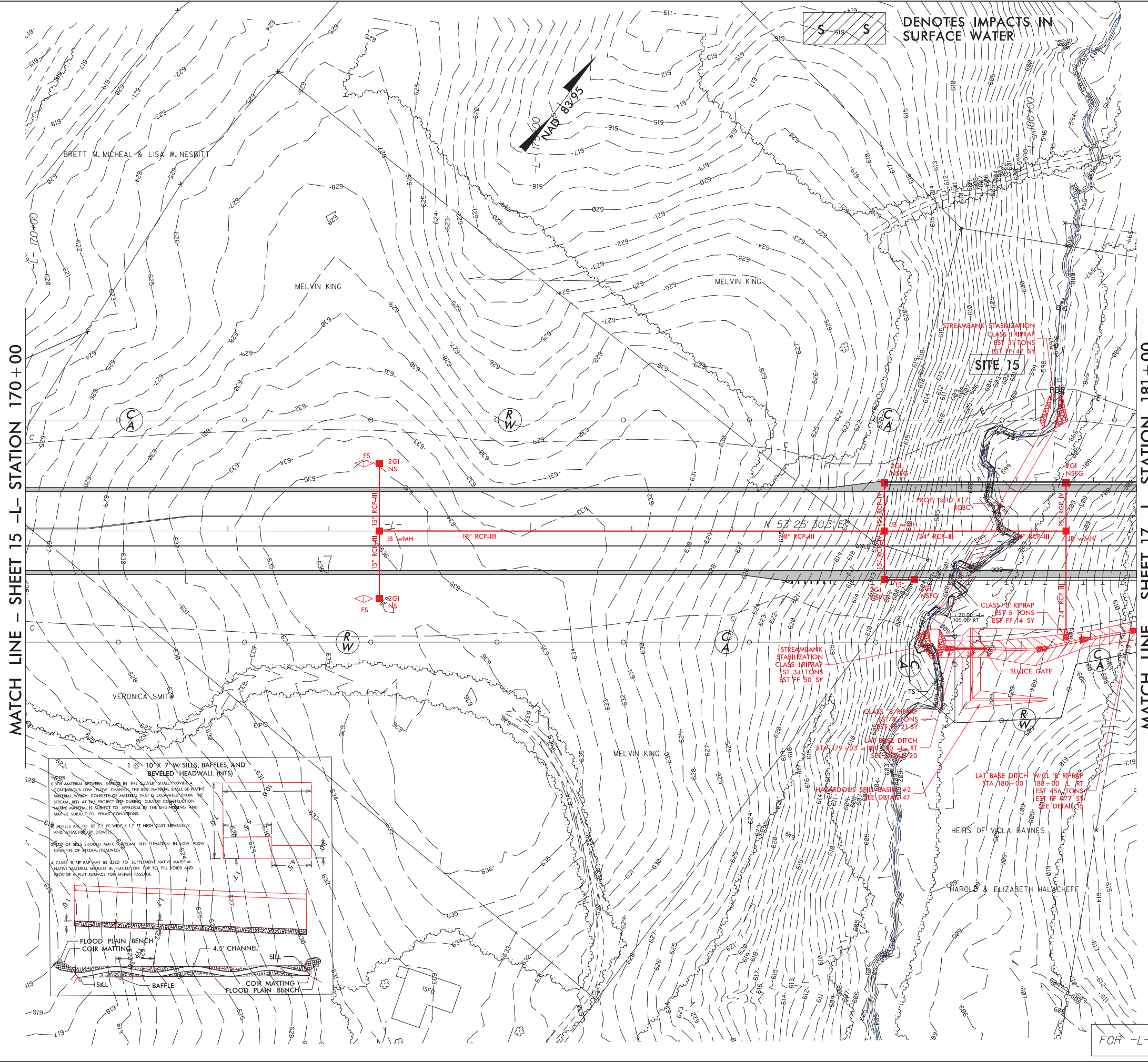
PERMIT DRAWING  
SHEET 23 OF 43



FOR -L- PROFILE SEE SHEETS 37 & 38



REVISIONS



PROJECT REFERENCE NO. U-3109A		SHEET NO. 16	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			

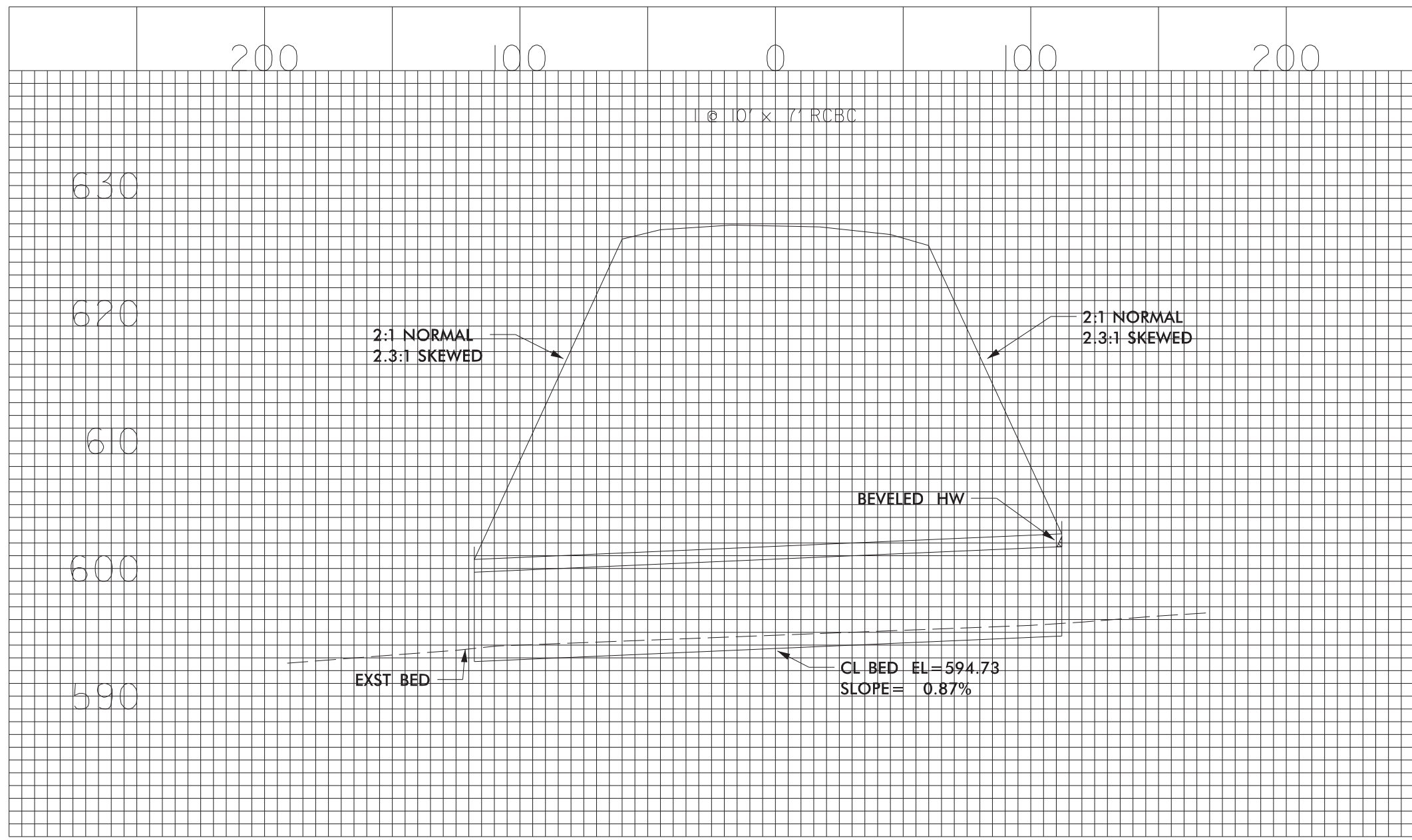
PERMIT DRAWING  
SHEET 24 OF 43

FOR -L- PROFILE SEE SHEETS 37 & 38

PROJECT REFERENCE NO.	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

# SITE 15

## PERMIT DRAWING SHEET 25 OF 43

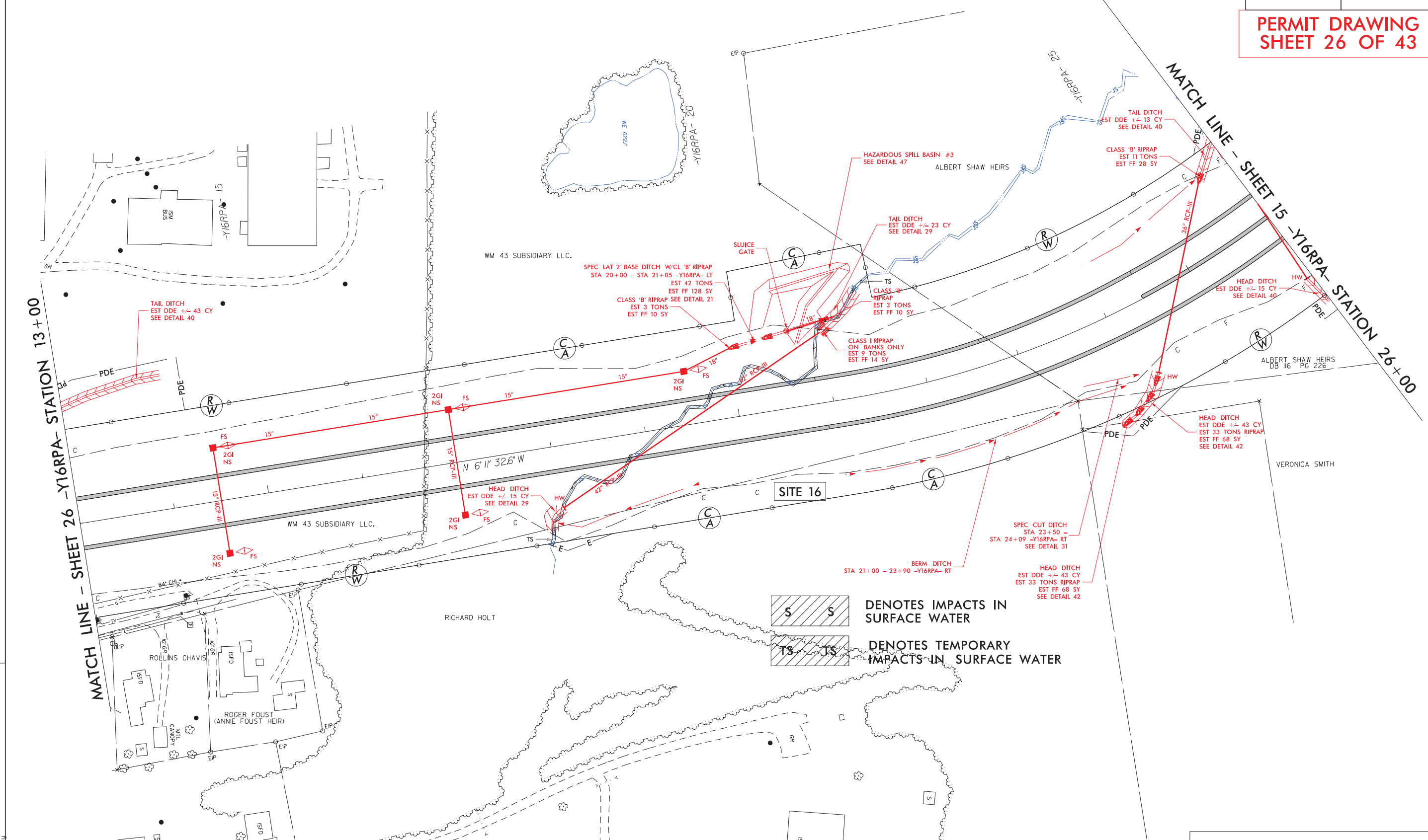
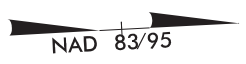




PROJECT REFERENCE NO. U-3109A		SHEET NO. 27	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

**PERMIT DRAWING**  
**SHEET 26 OF 43**

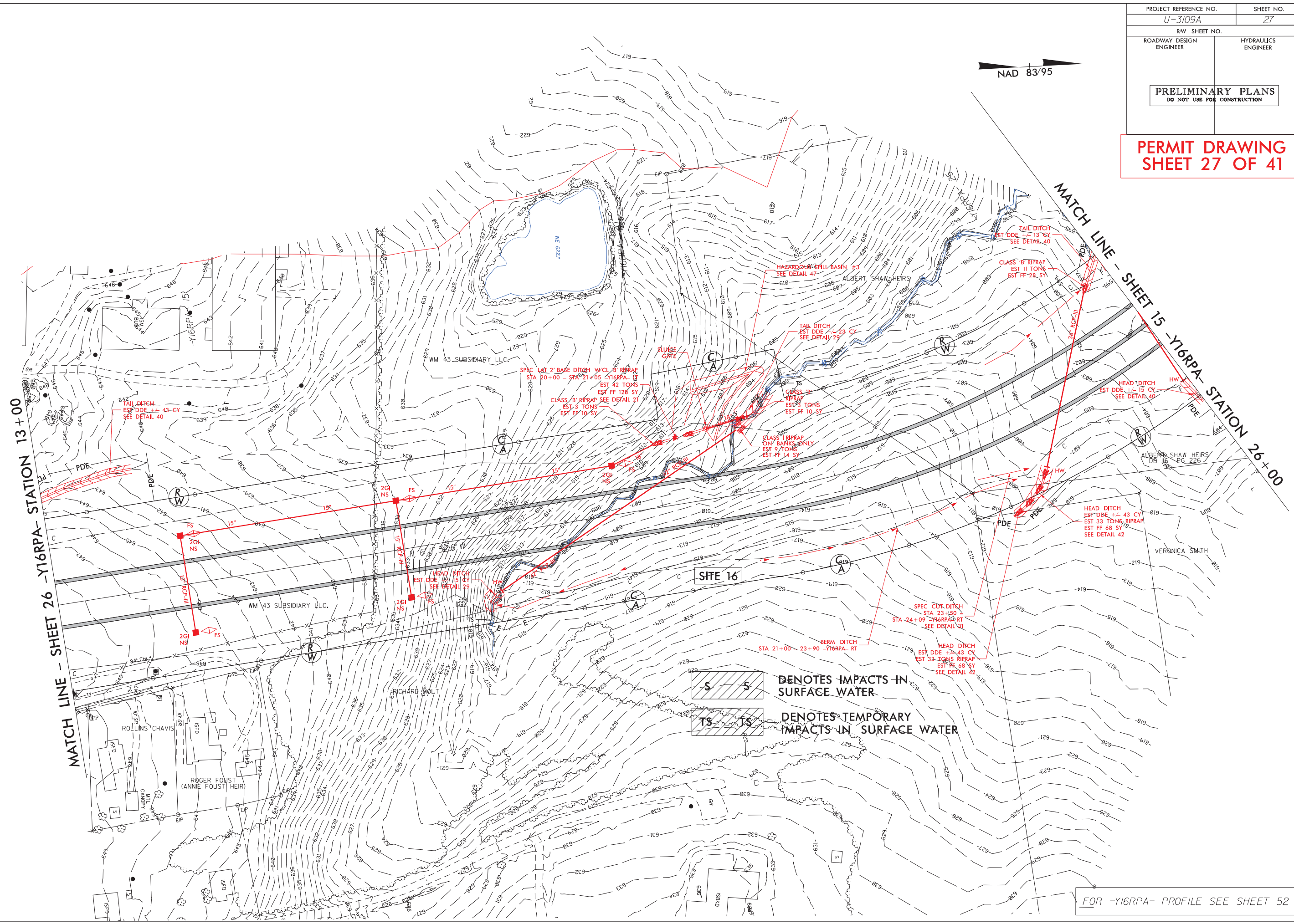
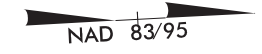


2/28/2016  
13109a.dwg  
13109a.dwg

FOR -Y16RPA- PROFILE SEE SHEET 52

PROJECT REFERENCE NO. U-3109A	SHEET NO. 27
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
SHEET 27 OF 41



REVISIONS

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

FOR -Y16RPA- PROFILE SEE SHEET 52

8/17/99

2/28/2016  
 13109A.dwg.prm.wet.psh.27.con.dgn  
 har.vau



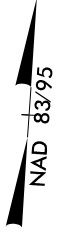
PROJECT REFERENCE NO. U-3109A	SHEET NO. 29
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
SHEET 28 OF 43

8/17/99



DENOTES IMPACTS IN SURFACE WATER



MATCH LINE - SHEET 18 -Y20- STATION 29+00

-Y20- 30

-Y20- 35

MARSHA ALTMeyer

MARSHA ALTMeyer

WINDSOR INVESTMENTS, LLC

CLASS 'B' RIPRAP  
EST 2 TONS  
EST GF 7 SY

STREAMBANK STABILIZATION  
CLASS I RIPRAP  
EST 8 TONS  
EST GF 17 SY  
SEE DETAIL 37

HAZARDOUS SPILL BASIN #4  
SEE DETAIL 47

CLASS 'B' RIPRAP  
EST 2 TONS  
EST GF 7 SY

SPEC CUT DITCH  
STA 26+50 -  
STA 30+00 -Y20- LT  
SEE DETAIL 31

NO UTILITY RECORDS  
MAPPED BY FIELD INSPECTION

SPEC CUT DITCH W/PSRM  
STA 32+00 - 33+10 -Y20- RT  
EST. +/- 39 SY  
SEE DETAIL 43

SPEC LAT V-DITCH  
STA 33+10 - 34+25 -Y20- RT  
SEE DETAIL 6

STREAMBANK STABILIZATION  
CLASS I RIPRAP  
EST 8 TONS  
EST GF 17 SY  
SEE DETAIL 37

JOHNSON CHAPEL A.M.E. CHURCH

SITE 17

ROBERT J. GERARDI

ROBERT GERARDI

REVISIONS

2/1/2017 U-3109A\_Hyd.pr.m..wet..psh..29.dgn

FOR -Y20- PROFILE SEE SHEET 53 & 54  
FOR -Y20DET- SEE SHEET 2-N

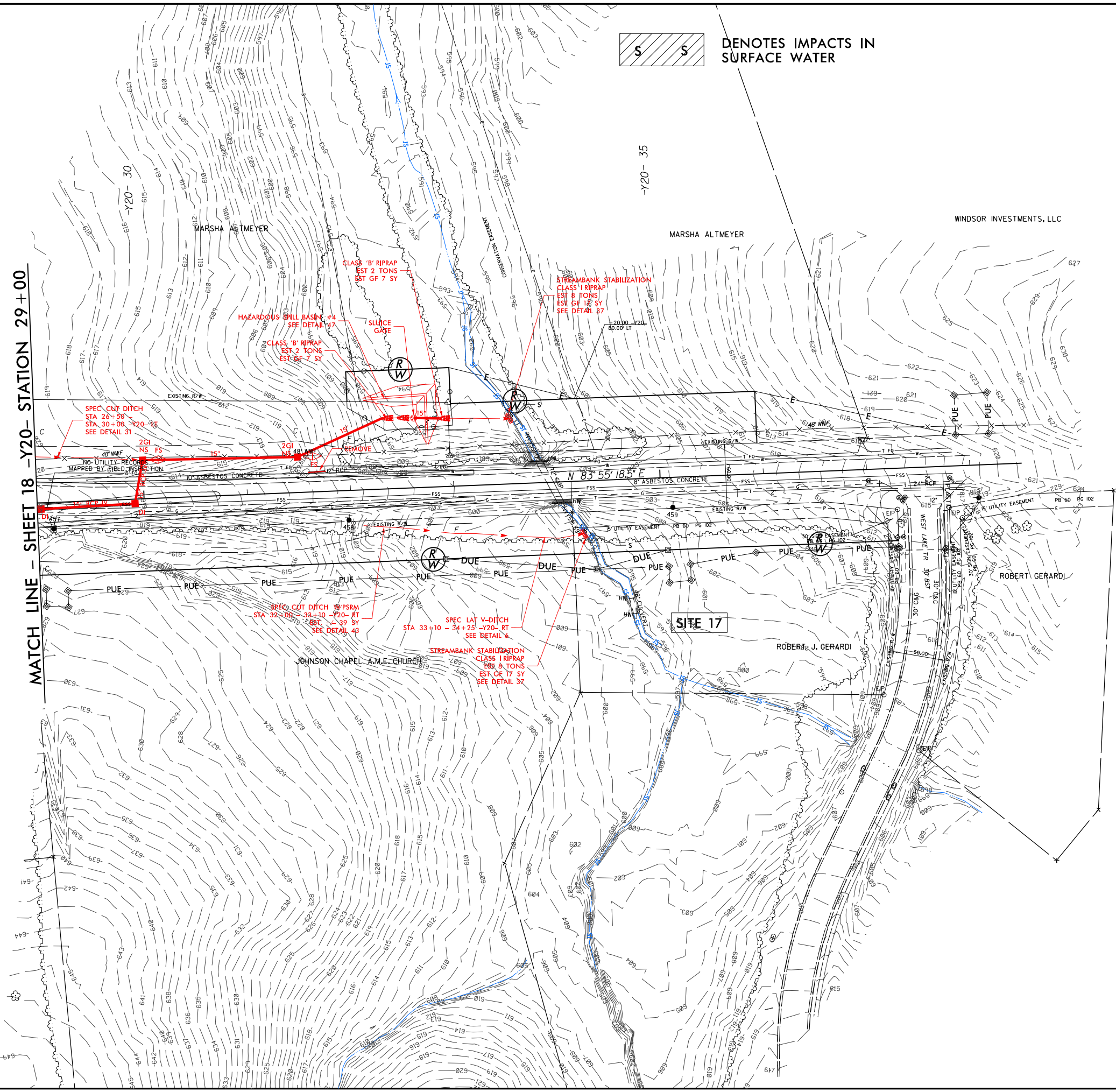
PROJECT REFERENCE NO. U-3109A	SHEET NO. 29
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
SHEET 29 OF 43

8/17/99

REVISIONS

2/1/2017  
U-3109A\_Hyd.prm\_wet\_psh\_29.con.dgn  
WLD/ES



S S DENOTES IMPACTS IN SURFACE WATER



FOR -Y20- PROFILE SEE SHEET 53 & 54  
FOR -Y20DET- SEE SHEET 2-N



8/17/99

REVISIONS

2/1/2017  
03/09/09 Hyd.prm\_wet\_psh\_29.csr.dgn  
jbar.vau

PROJECT REFERENCE NO.	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

**PERMIT DRAWING  
SHEET 30 OF 43**

**SITE 17**

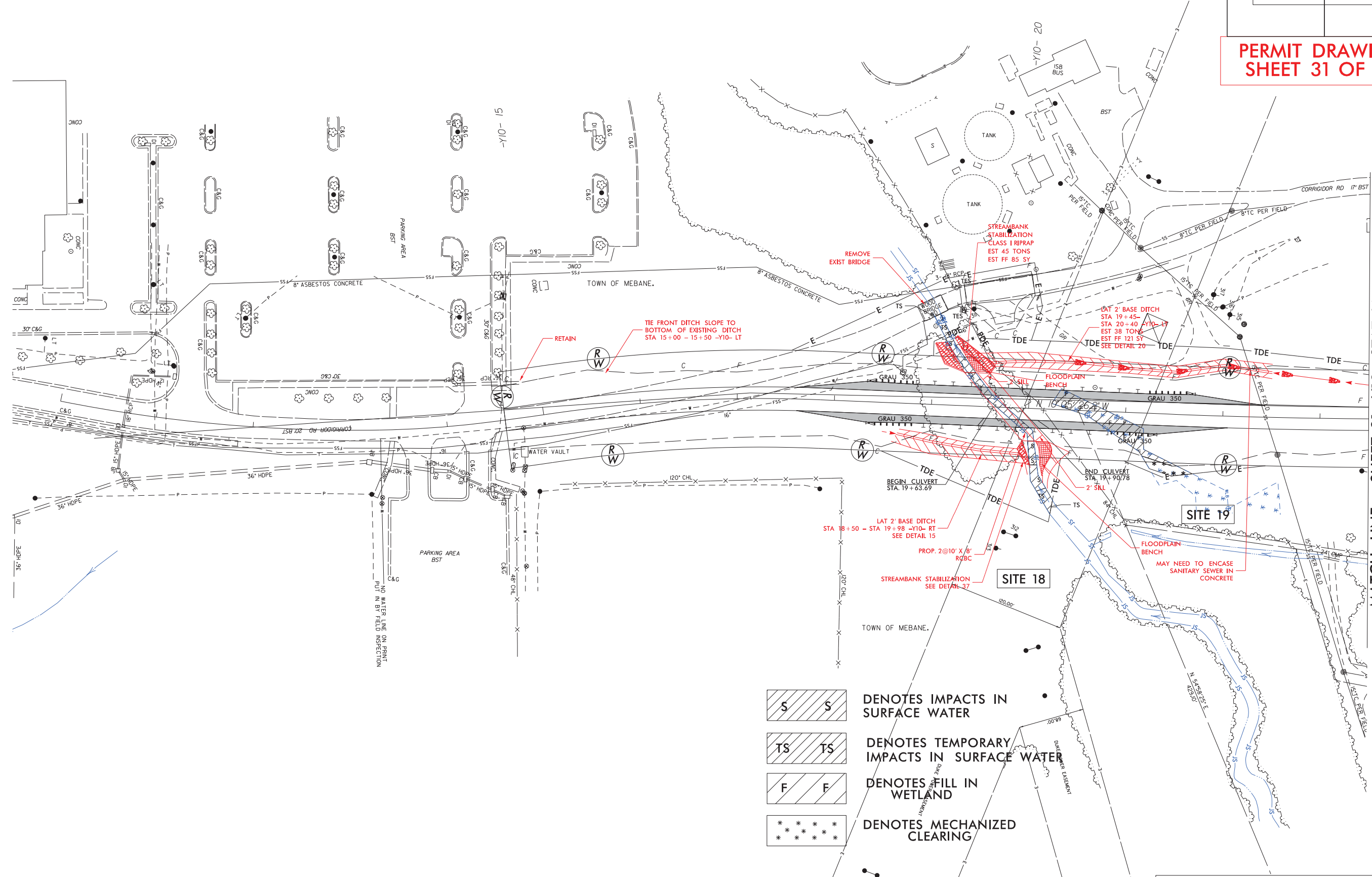
**CULVERT REMOVED  
FROM PROJECT  
SECTION NO LONGER NEEDED**

PROJECT REFERENCE NO. U-3109A		SHEET NO. 30	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

PERMIT DRAWING  
SHEET 31 OF 43



REVISIONS



- S S DENOTES IMPACTS IN SURFACE WATER
- TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- F F DENOTES FILL IN WETLAND
- \* \* \* \* DENOTES MECHANIZED CLEARING

FOR -Y10- PROFILE SEE SHEETS 48 & 49

MATCH LINE - SHEET 31 -Y10- STATION 23+50

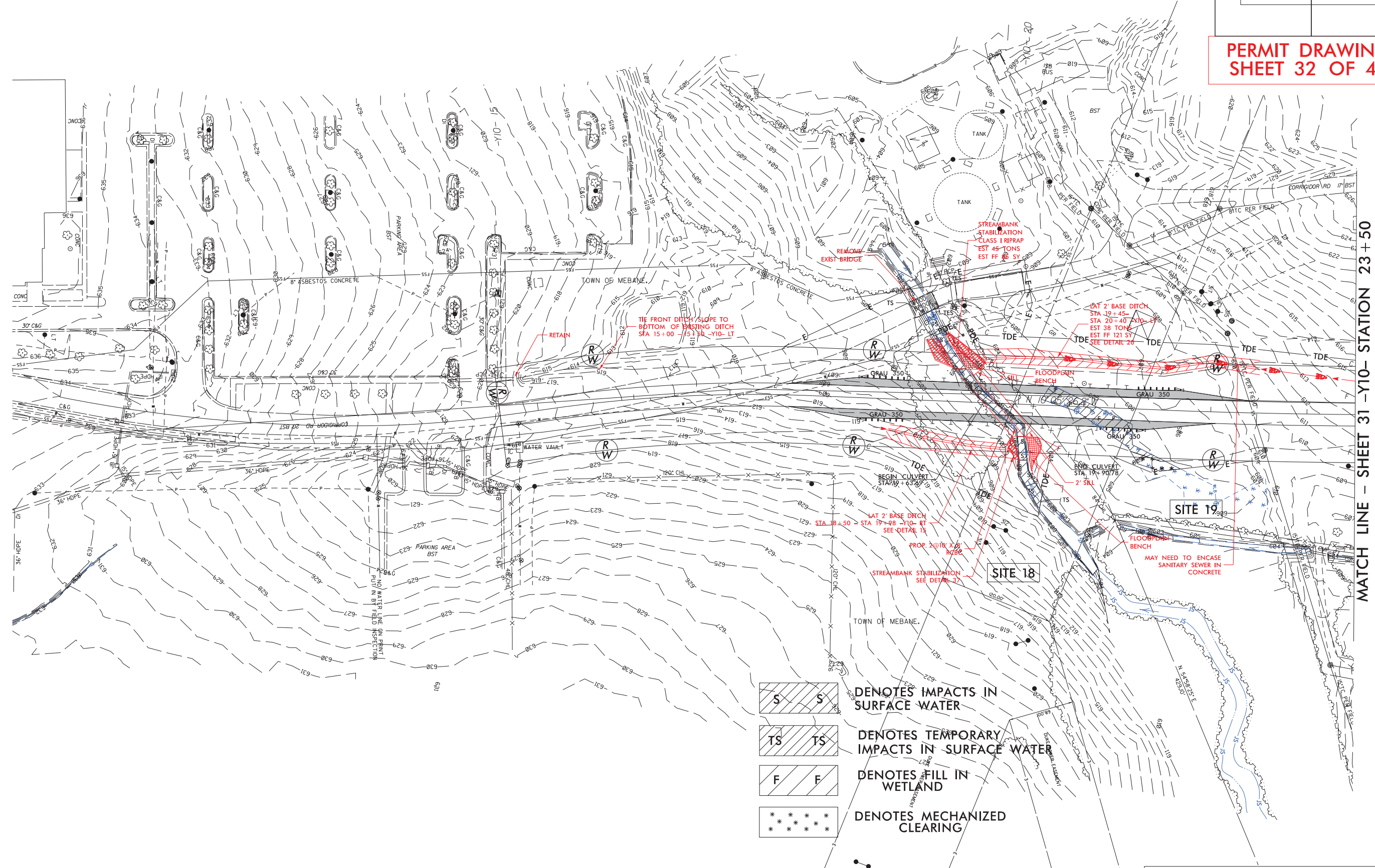


PROJECT REFERENCE NO. U-3109A	SHEET NO. 30
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING  
SHEET 32 OF 43

NAD 83/95



REVISIONS

MATCH LINE - SHEET 31 -Y10- STATION 23+50

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING

FOR -Y10- PROFILE SEE SHEETS 48 & 49

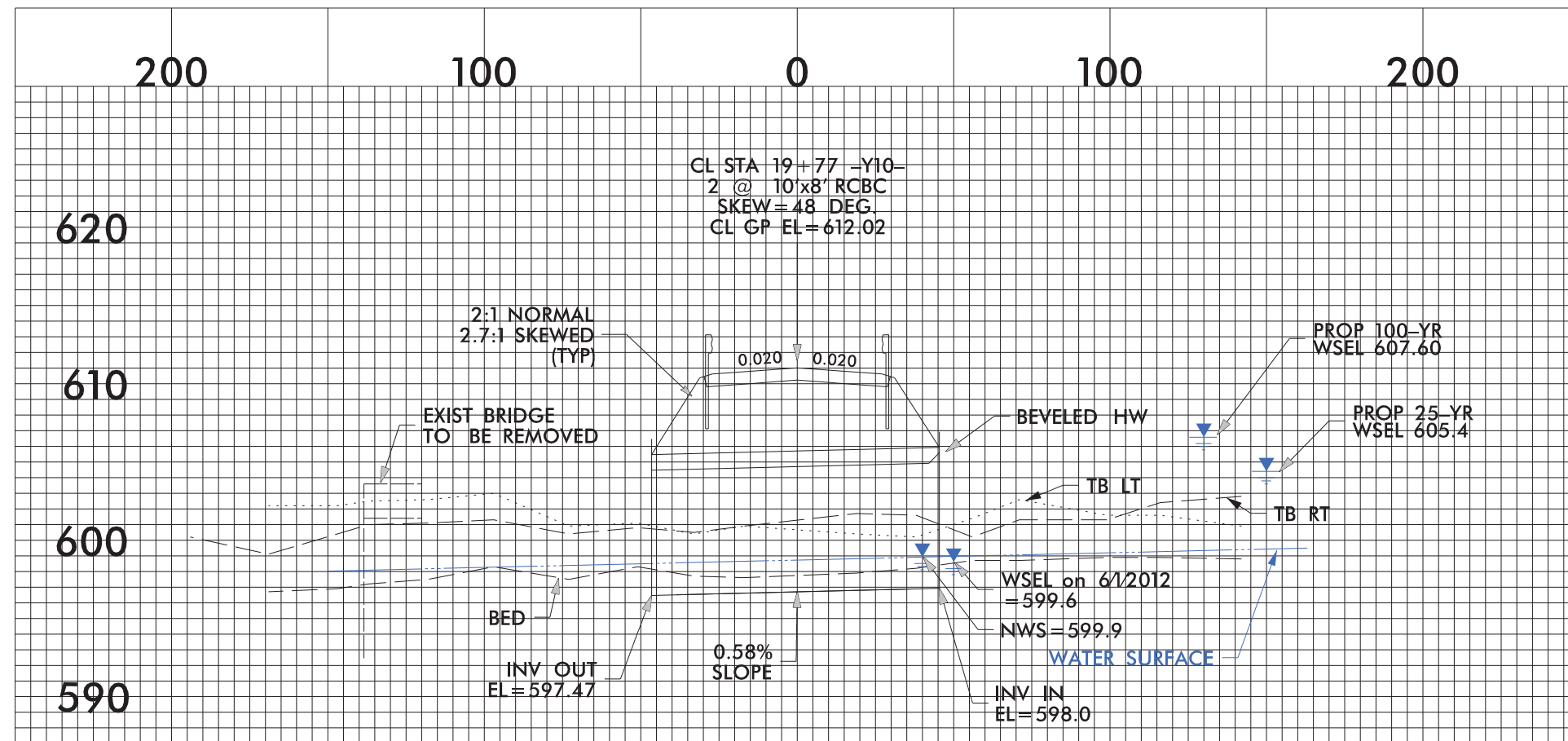
8/17/99

2/28/2016  
U:\3109A\fig.d.pr.m.wet.psh\_30.con.dgn  
harvey

PROJECT REFERENCE NO.	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

**PERMIT DRAWING**  
**SHEET 33 OF 43**

**SITE 18**





PROJECT REFERENCE NO. U-3109A	SHEET NO. 31
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

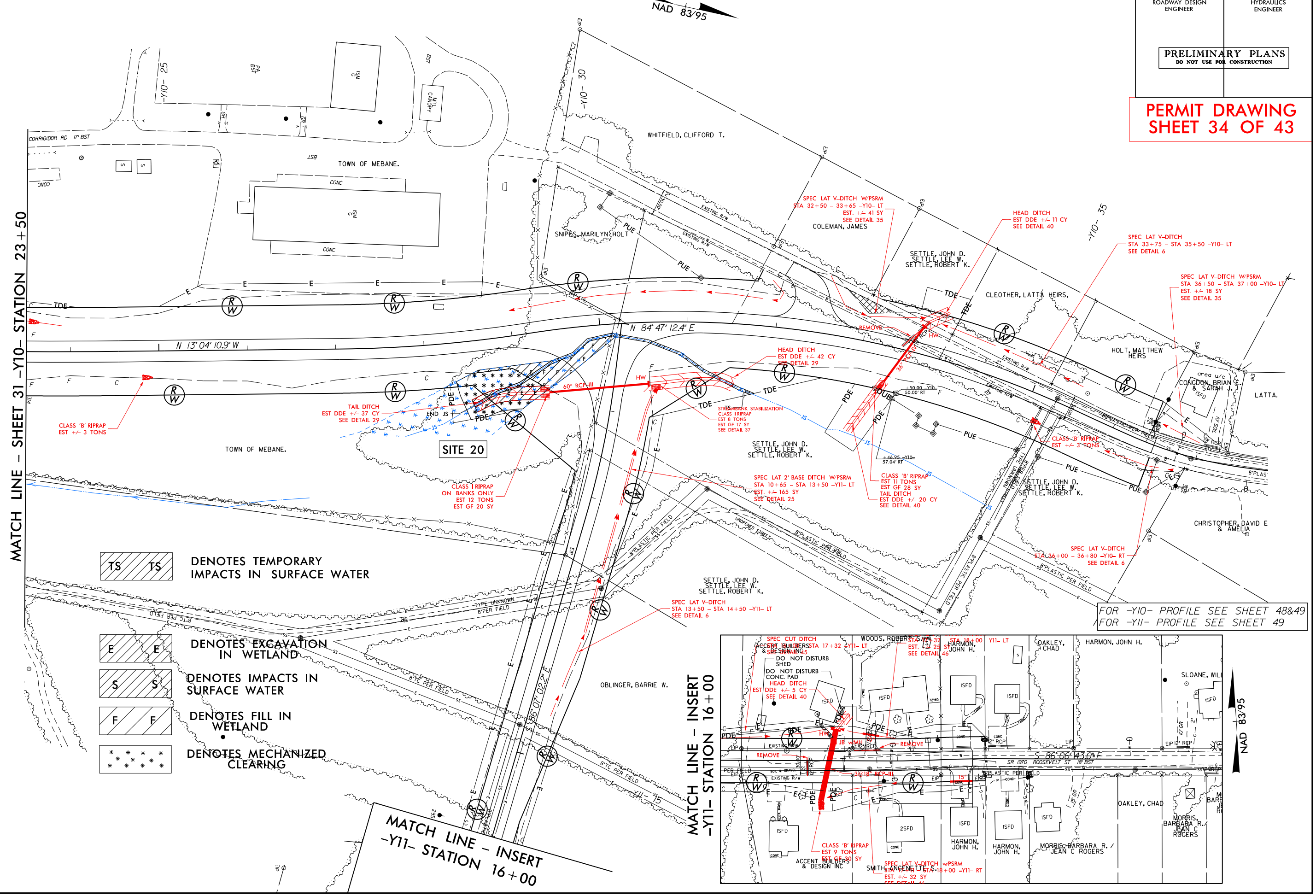
PERMIT DRAWING  
SHEET 34 OF 43

8/17/99

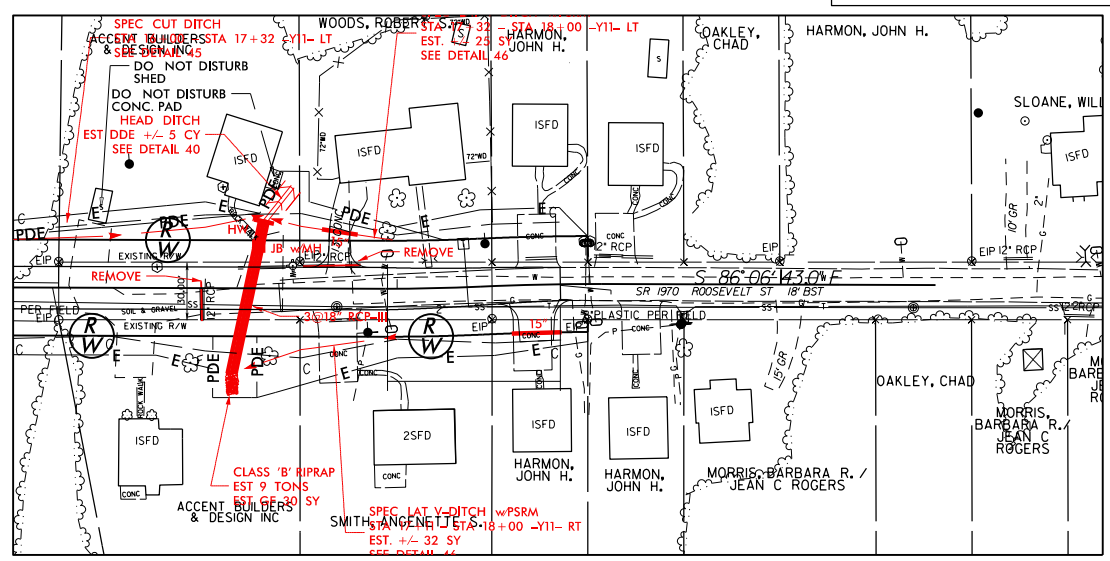
REVISIONS

MATCH LINE - SHEET 31 -Y10- STATION 23+50

MATCH LINE - INSERT  
-Y11- STATION 16+00



- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES EXCAVATION IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING



FOR -Y10- PROFILE SEE SHEET 48&49  
FOR -Y11- PROFILE SEE SHEET 49

10/5/2016  
U3109A\_Hyd\_prm\_wet\_psh\_31.dgn  
Moses

PROJECT REFERENCE NO.	SHEET NO.
U-3109A	31
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b>	
DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
SHEET 35 OF 43

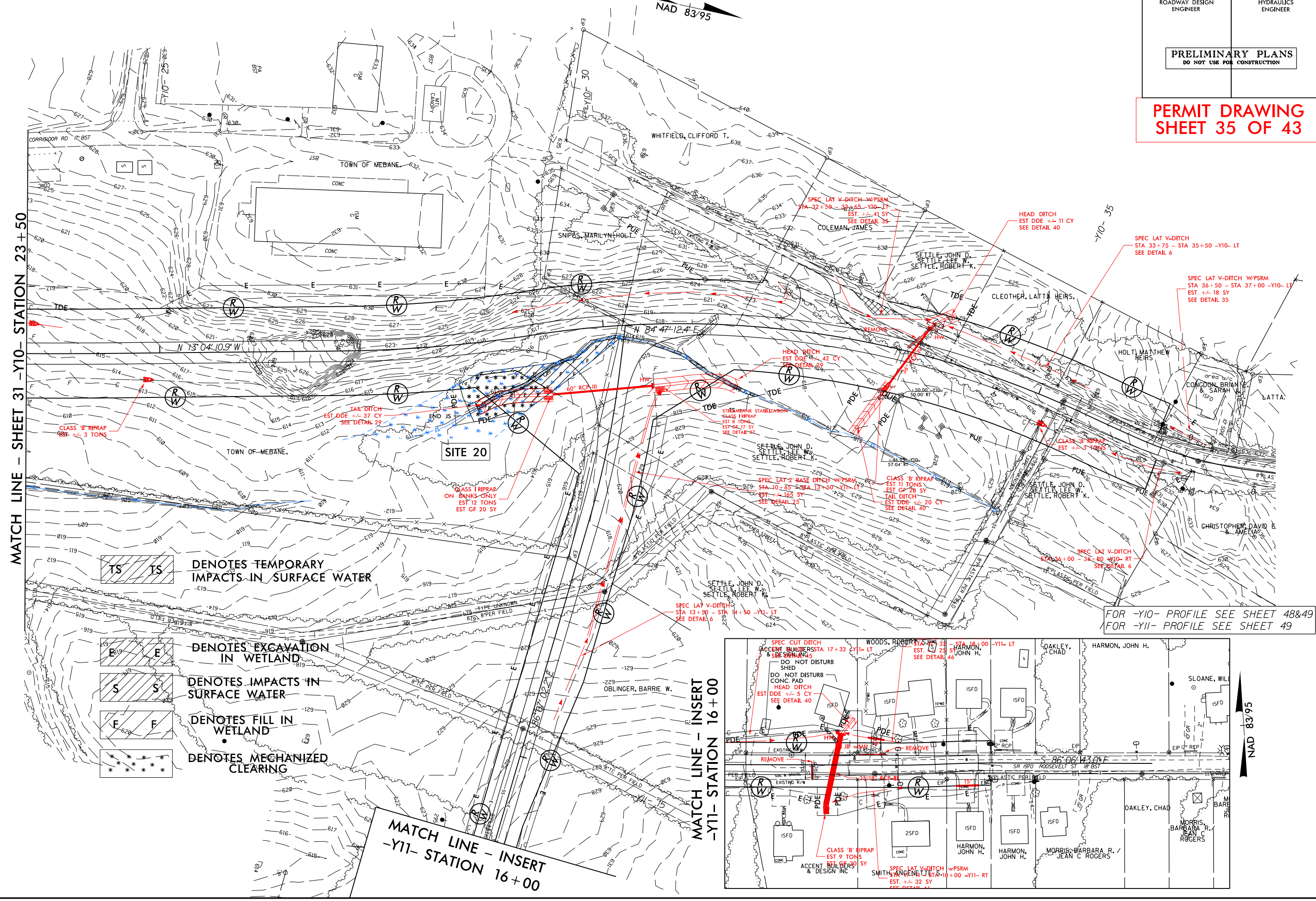
8/17/99

REVISIONS

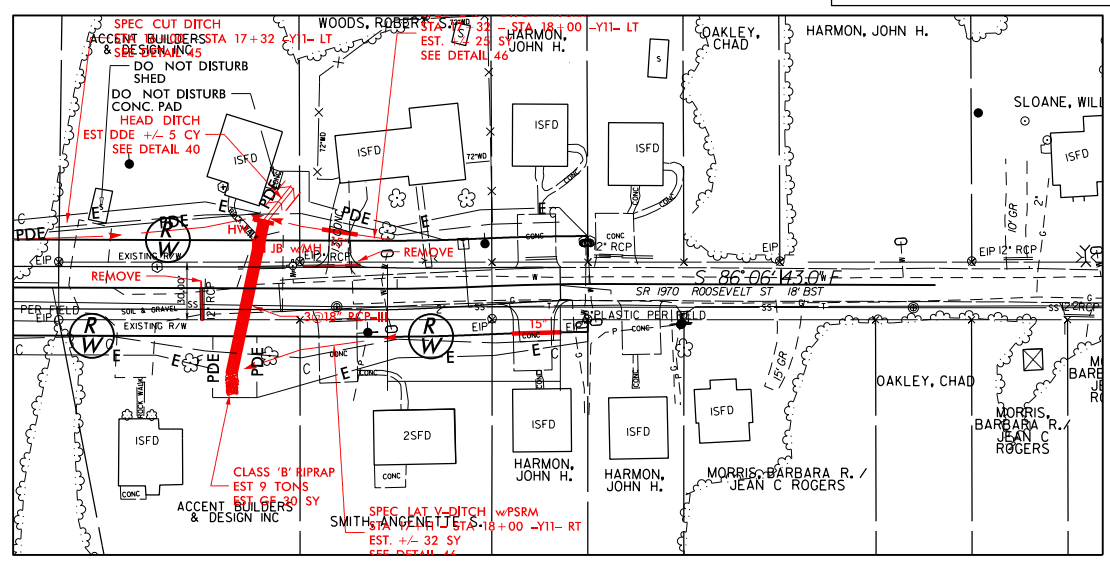
MATCH LINE - SHEET 31 -Y10- STATION 23+50

MATCH LINE - INSERT  
-Y11- STATION 16+00

MATCH LINE - INSERT  
-Y11- STATION 16+00



- TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- E E DENOTES EXCAVATION IN WETLAND
- S S DENOTES IMPACTS IN SURFACE WATER
- F F DENOTES FILL IN WETLAND
- \* \* \* \* DENOTES MECHANIZED CLEARING



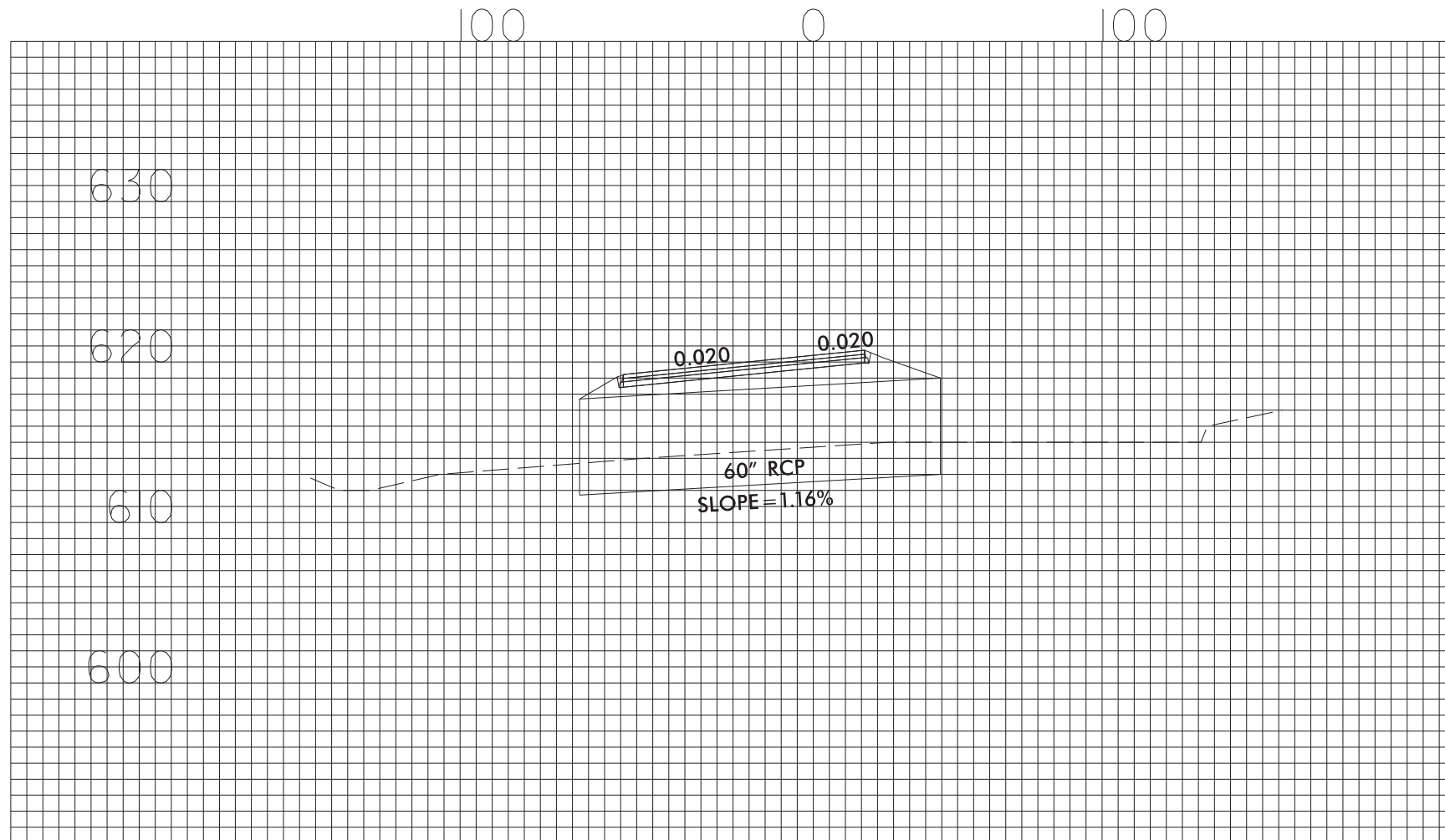
FOR -Y10- PROFILE SEE SHEET 48&49  
FOR -Y11- PROFILE SEE SHEET 49

10/5/2016  
U3109A\_Hyd\_prm\_wet\_psh\_31\_con.dgn



PROJECT REFERENCE NO.	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

**SITE 20**



**PERMIT DRAWING**  
**SHEET 36 OF 43**

8/23/99

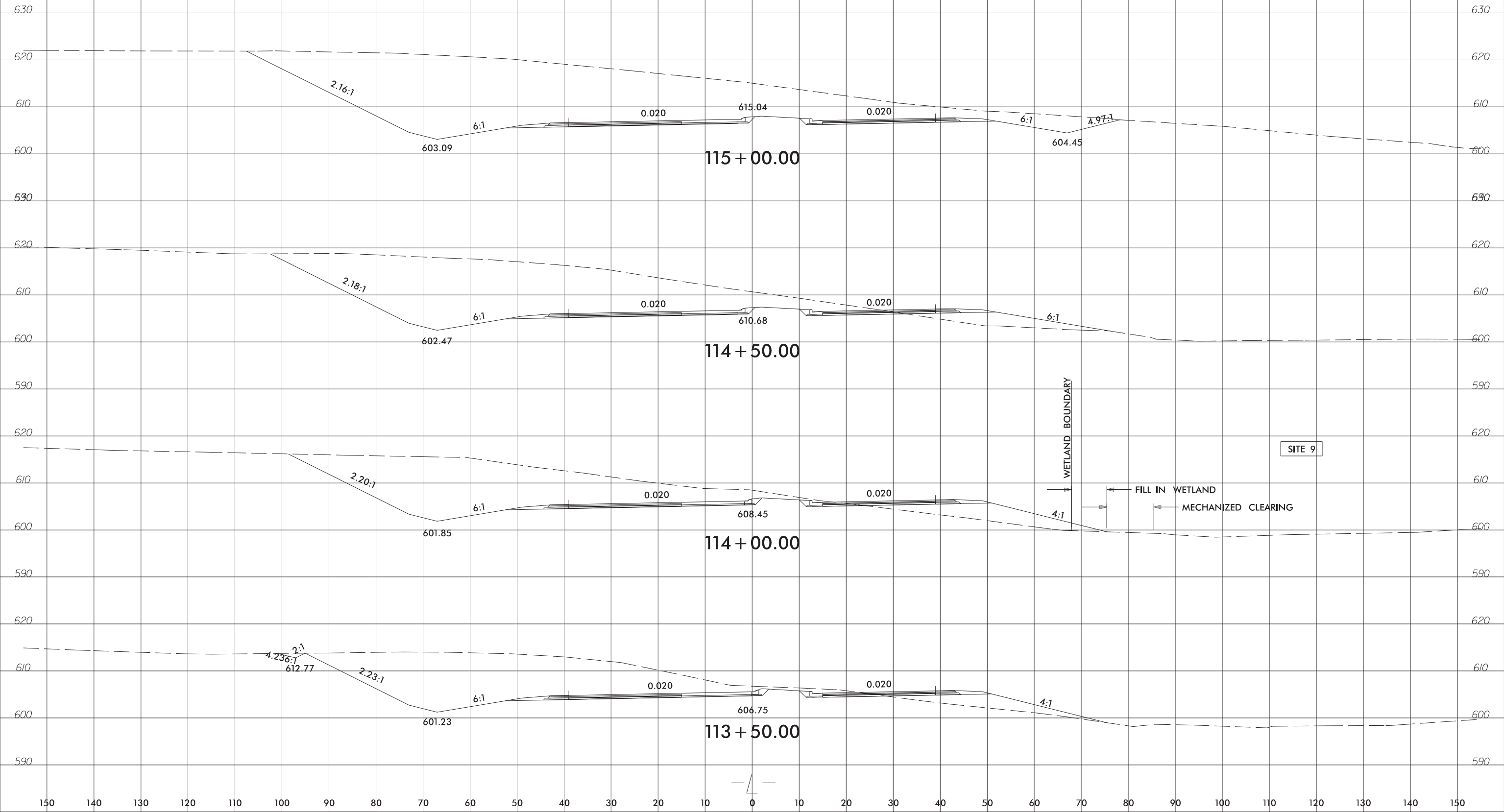


PROJ. REFERENCE NO.  
U-3109A

SHEET NO.  
X-53

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

**PERMIT DRAWING  
SHEET 37 OF 43**



SITE 9

WETLAND BOUNDARY

FILL IN WETLAND  
MECHANIZED CLEARING

115 + 00.00

114 + 50.00

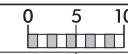
114 + 00.00

113 + 50.00

2/29/2016  
U3109A\_Hyd\_prm\_wet\_xpl\_L-53.dgn  
jharvey



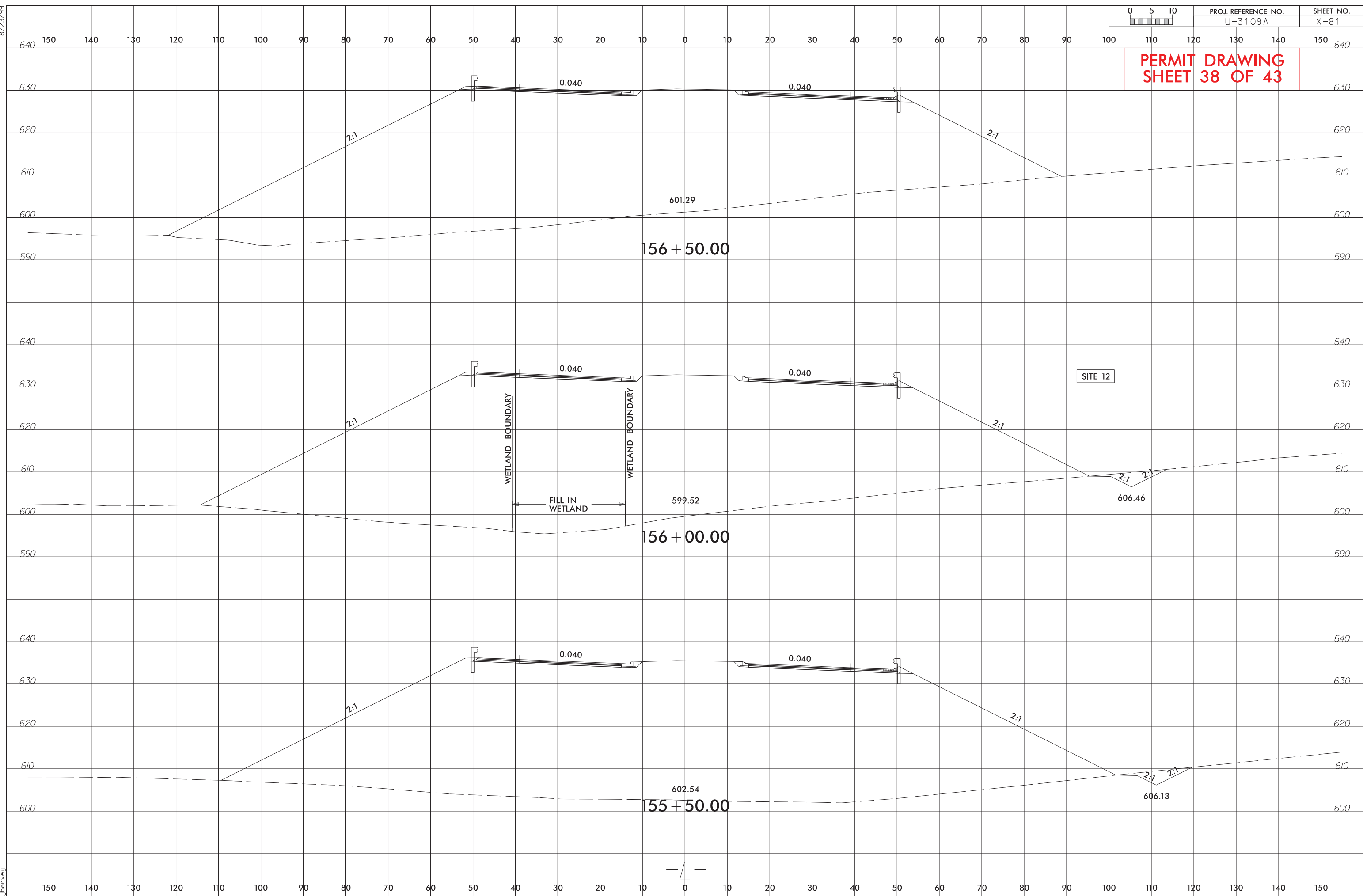
8/23/99



PROJ. REFERENCE NO.  
U-3109A

SHEET NO.  
X-81

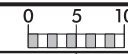
**PERMIT DRAWING  
SHEET 38 OF 43**



2/29/2016  
U3109A\_Hyd\_prm\_wet\_xpl\_L-81.dgn  
jharvey

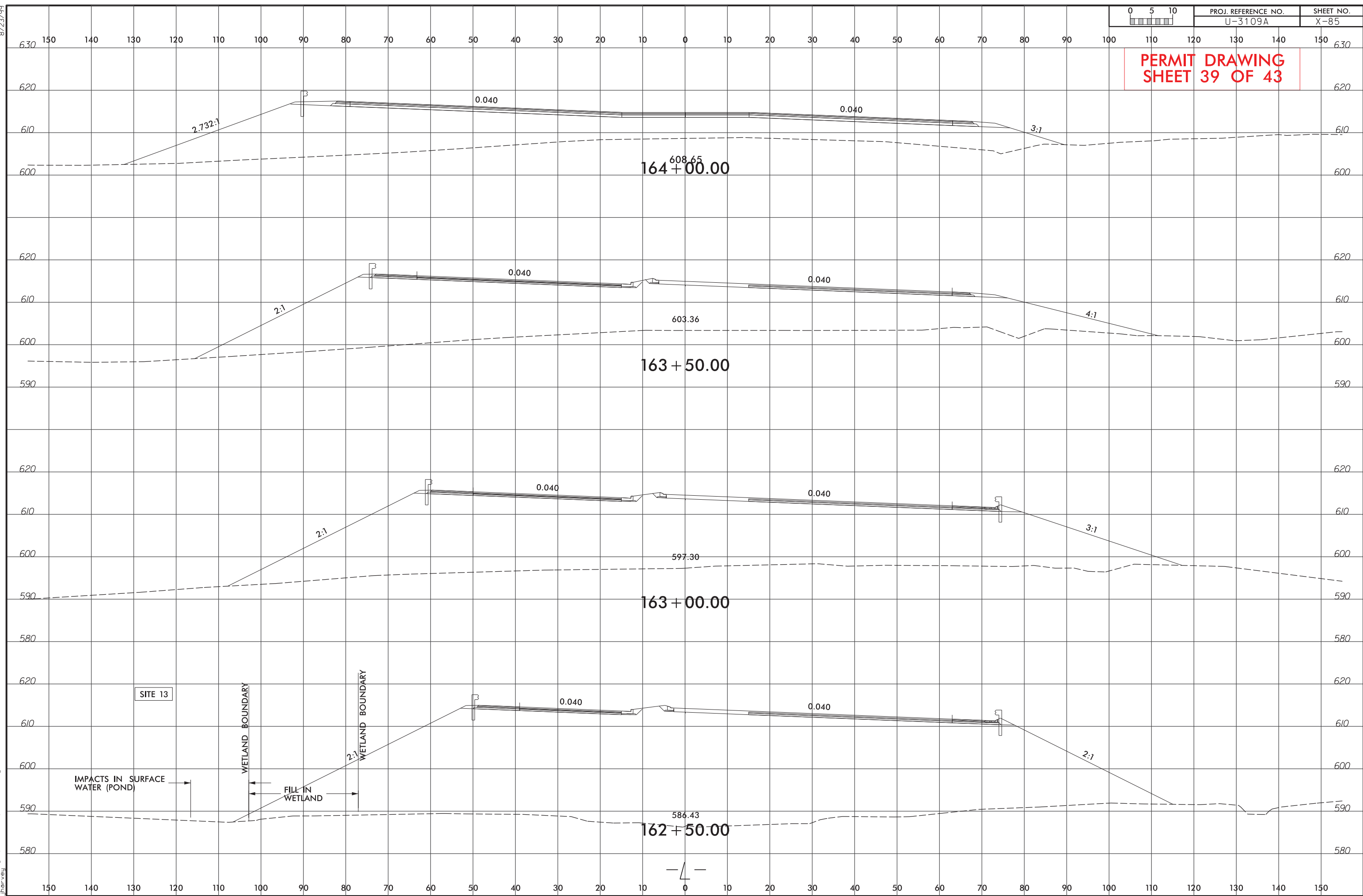


8/23/99



PROJ. REFERENCE NO.	SHEET NO.
U-3109A	X-85

PERMIT DRAWING  
SHEET 39 OF 43



SITE 13

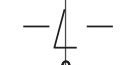
WETLAND BOUNDARY

WETLAND BOUNDARY

IMPACTS IN SURFACE WATER (POND)

FILL IN WETLAND

3/10/2016  
U:3109A\_Hyd\_prm\_wet\_xpl\_L-85.dgn  
[unverified]





8/23/99

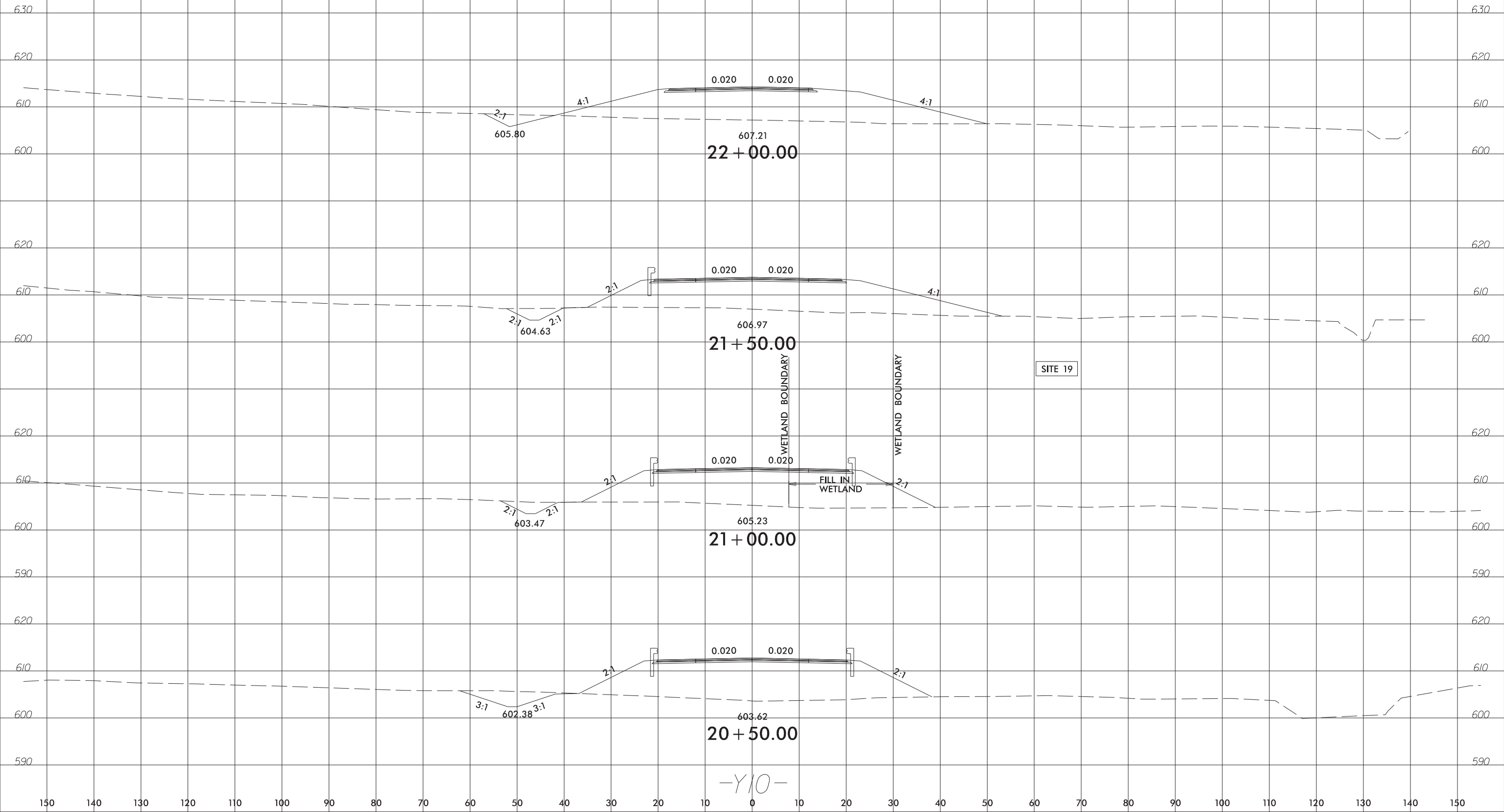


PROJ. REFERENCE NO.  
U-3109A

SHEET NO.  
X-175

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

**PERMIT DRAWING  
SHEET 40 OF 43**



-Y10-

2/29/2016  
U:\3109A\_Hyd\_prm\_wet\_xpl\_-Y10\_-175.dgn  
jharvey

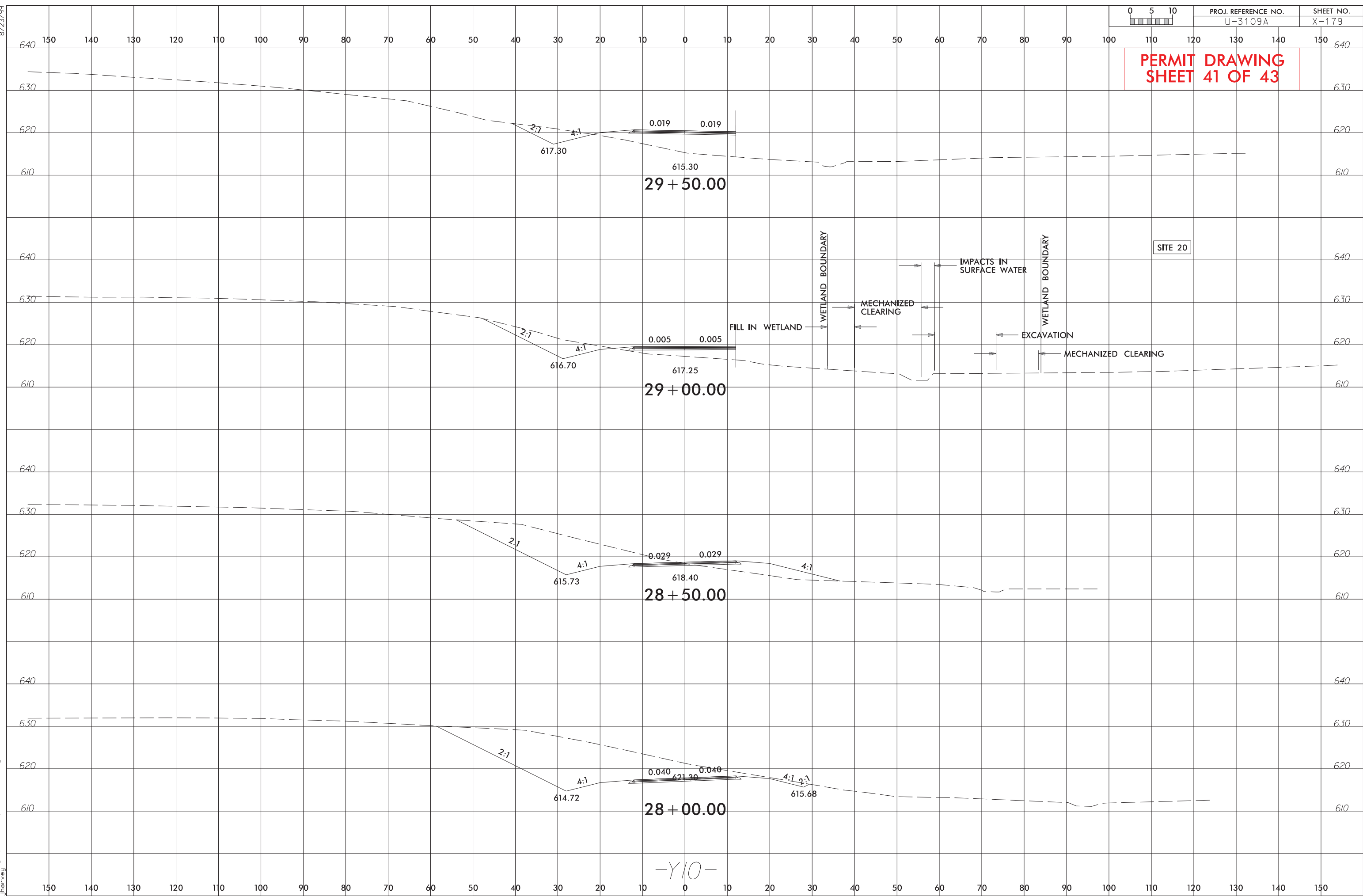
8/23/99



PROJ. REFERENCE NO.  
U-3109A

SHEET NO.  
X-179

**PERMIT DRAWING  
SHEET 41 OF 43**



-Y10-

2/29/2016  
U3109A\_Hyd\_prm\_wet\_xpl\_Y10\_179.dgn  
jharvey



**WETLAND PERMIT IMPACT 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	63+59-65+75 -L-	48" RCP						0.03		235		
		48" RCP						0.01	< 0.01	117	16	
2	69+92-70+95 -L-	54" RCP						0.04	< 0.01	348	17	
3	11+61 -Y7A-	66" RCP						0.04	< 0.01	320	10	
4	78+10-79+64 -L-LT	ROAD FILL						0.10				
5	78+25 -L- RT	3 AT 30" RCP							< 0.01		16	
6	85+02-86+67 -L-	54" RCP						0.02	< 0.01	257	35	
7	93+65-97+92 -L-	3 @ 11'x9' RCBC						0.15	0.02	501	52	
		STREAMBANK STABILIZATION						0.02		63		
7A	94+25 -L- RT	CHANNEL REALIGNMENT						< 0.01	< 0.01	18	20	
8A	108+00-111+82 -L-	48" RCP						0.04	< 0.01	463	19	
8B	110+64-111+10 -L- RT	48" RCP						< 0.01	< 0.01	82	21	
9	113+72-114+35 -L-RT	ROAD FILL	< 0.01			0.01						
10	125+99-127+49 -L-	72" RCP						0.04	< 0.01	396	25	
10A	127+41-127+99 -L- LT	ROAD FILL						< 0.01		74		
11	133+53 -L-	48" RCP						0.02	< 0.01	270	25	
12	155+09-157+67 -L-	30" RCP	0.08					0.13				
12A	156+91-157+54 -L-LT		0.03									
12B	157+25-157+73 -L-LT							< 0.01	< 0.01	105	7	
12C	157+55-L-LT								< 0.01		13	
13	162+01-162+68-L-	66" RCP	0.07			0.01		0.09	< 0.01	183	21	
14	26+00 -Y16RPA- LT	36" RCP							< 0.01		19	
15	178+79-180+22 -L-	1 @ 10'x7' RCBC						0.06	< 0.01	447	44	
<b>SUB TOTALS *:</b>			0.18			0.02		0.82	0.05	3879	360	

\*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 12/12/16  
 ALAMANCE COUNTY  
 U-3109A  
 34900.1.1

**WETLAND PERMIT IMPACT 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)
16	17+83-21+62 -Y6RPA-	42" RCP						0.03	< 0.01	494	32	
17	33+97 -Y20-	STREAMBANK STABILIZATION						< 0.01		35		
18	19+72 -Y10-	2 @ 10'x8' RCBC						0.02	< 0.01	122	45	
		DS STREAMBANK STABILIZATION						< 0.01		25		
		DS STREAMBANK STABILIZATION						< 0.01		44		
19	20+18-22+74 -Y10-RT	ROAD FILL	0.04			0.01						
20	10+14 -Y11-	60" RCP	0.05		0.02	0.06		0.02	< 0.01	327	24	
TOTALS FROM PREVIOUS SHEET			0.18			0.02		0.82	0.05	3879	360	
<b>TOTALS*:</b>			<b>0.27</b>		<b>0.02</b>	<b>0.09</b>		<b>0.91</b>	<b>0.06</b>	<b>4926</b>	<b>461</b>	

\*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 12/12/16  
 ALAMANCE COUNTY  
 U-3109A  
 34900.1.1  
 SHEET            43            OF            43