STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

March 27, 2013

MEMORANDUM TO: Ms. Karen E. Fussell, PE
Division 3 Engineer

FROM: Philip S. Harris, III, P.E., Section Head
Natural Environment Section
Project Development and Environmental Analysis Unit

SUBJECT: Cumberland, Sampson, Duplin Counties, NC 24 from 2.8 miles east of I-95 (Fayetteville) to I-40 (Warsaw); Federal Aid STPHNF-F-8-2(17); WBS Element 34416.1.1; **TIP R-2303 A-F.**

Attached are the U.S. Army Corps of Engineers Section 404 Individual Permit, Section 404 permit modifications (2), the N.C. Division of Water Quality Section 401 Water Quality Certification, and the Section 401 permit modifications (2). Environmental permits have been received for construction of Sections A and B this project.

A copy of this updated permit package will be posted on the NCDOT website at: http://www.ncdot.gov/doh/preconstruct/pe/neu/permit.html

cc: Mr. Greg Burns, P.E., Division 6 Engineer
Mr. Randy Garris, P.E., Contract Standards and Development Unit
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Jay Bennett, P.E., Roadway Design Unit
Mr. Dewayne Sykes, P.E. Utilities Unit
Mr. Art McMillan, P.E., Hydraulics Unit
Mr. Greg Perfetti, P.E., Structure Design Unit
Mr. Ron Hancock, P.E., State Roadway Construction Engineer
Mr. Mike Robinson, P.E., State Bridge Construction Engineer
Mr. Stoney Mathis, Division 3 Environmental Officer
Mr. Jim Rerko, Division 6 Environmental Officer
Mr. Rob Hanson, P.E., PDEA
Ms. Leilani Paugh, NES
Mr. Randy Griffin, P.E., NES
Ms. Beth Harmon, EEP
Mr. Phillip Ayscue, Office of Inspector General
Mr. Clarence Coleman, P.E., FHWA

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-707-6100
FAX: 919-212-5785

WEBSITE: WWW.NCDOT.ORG

LOCATION:
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610-4328

PROJECT COMMITMENTS

TIP Project No. R-2303
NC 24 from 2.8 Miles East of I-95 in Fayetteville
to I-40 at Warsaw. Cumberland, Sampson, and Duplin Counties
Federal Aid No. STPNHF-F-8-2(17)
WBS Project No. 34416

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

PDEA Unit, Roadway Design Unit, Divisions 3 and 6 Construction

Archaeological Resources (Sites 31SP331, 31DP226). Site 31SP331 is located in Segment D3B south of Bonnetsville (Selected), and Site 31DP226 is located in Segment F5 (Selected). Since the Selected Alternative will have an adverse effect upon these archaeological sites and preservation in place is not possible, NCDOT will develop a Data Recovery Plan (DRP) in consultation with the North Carolina State Historic Preservation Office (HPO). The DRP will be implemented in accordance with the Memorandum of Agreement signed by FHWA and the HPO on August 27, 2010.

This commitment is related to Sections D and F of the project. All of the parcels associated with Site 31SP331 in Section D have been acquired. The Data Recovery Plan for Site 31SP331 is being prepared and will be implemented after approval of the plan by the State Historic Preservation Office. The data recovery field work will be completed prior to the July 2013 Construction Let. It should also be noted that Section F is currently unfunded, and that the Data Recovery Plan for Site 31DP226 will not be prepared and implemented until right of way is acquired for the parcels associated with this resource.

PDEA Unit, Roadway Design Unit, Roadside Environmental Unit, Divisions 3 and 6 Construction

Maxwell House. Widening will be away from house (i.e., to south). NCDOT will develop a landscaping plan along the new road (to be reviewed by the North Carolina State Historic Preservation Office). This site is located near segment A2 (Selected).

This commitment is related to Section A of the project. The NCDOT Roadside Environmental Unit prepared and submitted a Landscaping Plan to the North Carolina State Historic Preservation Office for review and comment. In their August 7, 2012 letter, the Historic Preservation Office stated that either of the options for landscaping in front of the historic Maxwell House provides buffering and meets the commitment made by NCDOT, and, thereby, avoids an adverse effect upon this historic property.

PDEA Unit, Roadside Environmental Unit, Divisions 3 and 6 Construction

Proposed borrow sites designated by the contractor will be investigated and tested for invasive plant species of Japanese knotweed *(Reynoutria japonica)*. EPA should be consulted concerning known locations of the Japanese knotweed colonies in the project area.

GeoEnvironmental Section, Divisions 3 and 6 Construction

The GeoEnvironmental Section has removed all known underground fuel tanks from the project limits of R-2303B. Residual concentrations of petroleum-contaminated soil and groundwater may be encountered during construction. A project special provision will be included with the let package to instruct the Contractor in the event contamination is encountered. The areas of known soil contamination will be shown on the plans.

COMMITMENTS FROM PERMITTING

Division 3 Construction

No construction activities that impact any wetlands, streams, or surface waters located in R-2303 Section(s) C through F shall begin until after the permittee applies for, and receives written modifications from the US Army Corps of Engineers and the from the NC Division of Water Quality.

Pipes and culverts used exclusively to maintain equilibrium in wetlands, where aquatic life passage is not a concern, shall not be buried. These pipes shall be installed at natural ground elevation.

PDEA – Human Environment Section, Division 3 Construction

NCDOT shall abide by all stipulations identified in the Memorandum of Agreement between the Federal Highway Administration and the North Carolina State Historic Preservation Office, concurred by NCDOT and executed August 27, 2010 (copy attached).

Division 3 Construction, Roadside Environmental Unit

At locations where ponds will be drained, proper measures will be taken to drain the pond with limited impact to upstream and downstream channel stability as well as to native aquatic species. Proper measures will be taken to avoid sediment release and/or sediment accumulation downstream as a result of pond draining. If typical pond draining techniques will create significant disturbance to native aquatic species, additional measures such as collection and relocation may be necessary to prevent a significant fish kill. NCDOT shall consult with NC Wildlife Resources staff to determine if there are any sensitive species, and the most appropriate measures to limit impacts to these species. The permittee shall observe any natural channel reestablishment, or utilize natural channel construction techniques, to ensure that the jurisdictional stream channel above and below the drained pond remain stable, and that no additional impacts occur within the natural stream channel as a result of draining the pond.

All channel relocations will be constructed in a dry work area and stabilized before stream flows are diverted. Channel relocations will be completed and stabilized, and must be approved on site by NCDWQ staff, prior to diverting water into the new channel. Whenever possible, channel relocations shall be allowed to stabilize for an entire growing season. Vegetation used for bank stabilization shall be limited to native woody species, and should include establishment of a 30 foot wide wooded and an adjacent 20 foot wide vegetated buffer on both sides of the relocated channel to the maximum extent practical. All stream banks shall be matted with coir fiber matting. Also, rip-rap may be allowed if it is necessary to maintain the physical integrity of the stream, but the applicant must provide written justification and any calculations used to determine the extent of rip-rap coverage requested. Once the stream has been turned into the new channel, it may be necessary to relocate stranded fish to the new channel to prevent fish kills.

For streams being impacted due to site dewatering activities, the site shall be graded to its preconstruction contours and re-vegetated with appropriate native species.

The following commitments apply to R-2303 A

PDEA – Natural Environment Section

Wetland/stream mitigation for Section A:

- 2.46 acres of riparian impacts will be mitigated by debiting Privateer Farms mitigation site 7.38 acres.
- 5.22 acres of non-riparian impacts will be mitigated through EEP at 2:1, resulting in a 10.44 acre debit.
- 531 linear feet of stream impacts will be mitigated by 294 linear feet of stream relocation (Site #8) and the remaining 237 linear feet will be mitigated at 2:1 from EEP, resulting in a 474 linear feet debit.

PDEA – Human Environment Section, Division 6 Construction, Roadside Environmental Unit

NCDOT shall comply with its commitments regarding the following historic property: the Maxwell House (CD 0133). Specifically, NCDOT shall implement the landscaping plan approved by the North Carolina State Historic Preservation Officer, reference the July 27, 2012 NCDOT correspondence to the Deputy State Historic Preservation Officer (copy attached).

The following commitments apply to R-2303 B

Division 3 Construction

Native material shall be placed inside of the reinforced concrete box culverts at Permit Site 21 to provide a natural streambed in the low flow channel and floodplain benches between the sills in the overflow barrels. If possible, the material placed inside of the culvert should be the same native material that is excavated from the streambed and/or floodplain during the construction of these structures. Rip rap is not permissible in the low flow channel; however it may be used to supplement the natural material in the overflow barrels.

PDEA – Natural Environment Section, Roadside Environmental Unit

The Permittee shall fully implement the compensatory mitigation plan (Section B only), entitled Mitigation Plan, dated February 22, 2013 for the unavoidable impacts to 5.76 acres of wetlands. Activities prescribed by this plan shall be initiated prior to, or concurrently with, commencement of any construction activities within jurisdictional areas authorized by this permit. The permittee shall re-establish, enhance, and preserve 5.13 acres of wetlands in accordance with the plan, with the following conditions:

A) Any changes or modifications to your mitigation plan shall be approved by the Corps.

B) All mitigation areas shall be monitored for a minimum of 5 years or until deemed successful by the Corps in accordance with the monitoring requirements included in the mitigation plan.

For the forested wetland restoration mitigation sites B-1 and B-2, the permittee shall plant 680 stems/acre. Vegetation success shall be measured by survivability over a 5-year monitoring period. Survivability will be based on 320 stems/acre after three (3) years and 260 stems after five (5) years. A survey of vegetation during the growing season shall be conducted annually over the five-year monitoring period and submitted to the NCDWQ and USACE. If the surviving vegetation densities are below the required thresholds after the five-year monitoring period, the site may still be declared successful at the discretion of and with written approval from the NCDWQ and USACE.

For the wetland mitigation sites located from B-1 and B-2, hydrologic success of the sites will be attained by restoration of a hydrologic regime that results in inundation or saturation of the soils within 12 inches of the ground surface for at least 12.5 percent of the growing season. The hydrologic monitoring shall persist for a total of five (5) years. At the end of the monitoring period, NCDWQ and USACE will review the monitoring results for the mitigation site. Based on the results of the monitoring, NCDWQ and USACE will determine if the mitigation site is successful or if additional maintenance and monitoring is necessary to demonstrate site success.

PDEA – Natural Environment Section

Wetland/stream mitigation for Section B:

- 4.58 acres of riparian impacts will be mitigated through on-site mitigation of 5.31 acres of riparian mitigation comprised of restoration, enhancement, and preservation.
- 1.18 acres of non-riparian impacts will be mitigated through EEP at 2:1, resulting in a 2.36 acre debit.
- 296 linear feet of stream impacts will be mitigated at 2:1 from EEP, resulting in a 592 linear feet debit.

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

REPLY TO
ATTENTION OF:

December 12, 2012

Regulatory Division

Action ID No. SAW-1992-03237; TIP Project No. R-2303 Cumberland, Sampson, and Duplin Counties, North Carolina

Dr. Gregory J. Thorpe, Ph.D.
North Carolina Department of Transportation
Project Development and Environmental Analysis
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Dr. Thorpe:

In accordance with your complete written request of August 1, 2012 and the ensuing administrative record, enclosed is one copy of a Department of the Army permit to directly discharge fill material into waters and wetlands adjacent to various Creeks, and their tributaries in order to construct Section A of TIP# R-2303 (Hwy 24), Cumberland County, North Carolina. Section A improvements begins 2.8 miles east of I-95 (west of SR 1006) and ends at SR 1853 (John Nunnery Road) and totals 6.8 miles.

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 notifies 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, 2017.

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. Brad Shaver in the Wilmington Regulatory Field Office, telephone number (910) 251-4611.

Sincerely,

Steven A. Baker
Colonel, U. S. Army
District Commander

Enclosures

Copies Furnished (with enclosures):

Chief, Source Data Unit
NOAA/National Ocean Service
1315 East-West Highway, Room 3716
Silver Spring, Maryland 20910-3282

Copies Furnished (with Special Conditions and plans):

U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726

Mr. Ron Sechler
National Marine Fisheries Service
Pivers Island
Beaufort, North Carolina 28516

Ms. Jennifer Derby, Chief
Wetlands Protection Section – Region IV
Water Management Division
U.S. Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, Georgia 30303-8931

Mr. Jeffrey Garnett
Wetlands and Marine Regulatory Section
Water Protection Division – Region IV
U.S. Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, Georgia 30303-8931

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

Mr. Pace Wilber
National Marine Fisheries Service
2191 Fort Johnson Road
Charleston, South Carolina 29412-9110

DEPARTMENT OF THE ARMY PERMIT

Permittee: North Carolina Department of Transportation (NCDOT)

Permit No.: SAW-1992-03237 R-2303A-F

Issuing Office: CESAW-RG-L

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: Widening, new location segments, and other improvements to the existing NC 24 roadway from 2.8 miles east of I-95 to I-40 to create a four-lane divided facility.

Project Location: 2.8 miles eastward of Interstate 95 (I-95) in Cumberland County and progresses with both on location improvements and bypass improvements eastward through Sampson County until Interstate 40 (I-40) in Duplin County. The project can be generally located at Latitude 35.0024 N and Longitude -78.6549 W. The project area crosses South River, Big Swamp, Little Coharie Creek, Bearskin Swamp, Great Coharie Creek, Six Runs Creek, and their tributaries.

General Conditions:

1. The time limit for completing the work authorized ends on December 31, 2017 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.

E. L. Lusk for Gregory J. Thorpe, PhD — Oct 10, 2012

(PERMITTEE) North Carolina Department of Transportation (NCDOT) — *(DATE)*

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

20 DEC 2012

(DISTRICT ENGINEER) **STEVEN A. BAKER** — *(DATE)*
Colonel, U.S. Army
District Commander

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)***

*U.S. GOVERNMENT PRINTING OFFICE: 1986 - 717-425

SPECIAL CONDITIONS (Action ID SAW 1992-03237)

In accordance with 33 U.S.C. 1341(d), all conditions of the North Carolina Division of Water Quality 401 Water Quality Certification #3942 is incorporated as part of the Department of the Army permit.

1. Phased Permit

This permit only authorizes work on Section A of TIP R-2303. Construction on Sections B-F of TIP R-2303 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 US Army Corps of Engineers (the Corps).

2. Plans

A. The permittee will 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, Wilmington Regulatory Field Office prior to any active construction in waters or wetlands.

B. 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.

3. Pre Construction Meeting

The permittee shall schedule and attend a preconstruction meeting between its representatives, the contractors representatives, and the Corps of Engineers, Wilmington Field Office, NCDOT Regulatory Project Manager, prior to any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all the terms and conditions contained with this Department of Army Permit. The permittee shall provide the USACE, Wilmington Field Office, NCDOT Project Manager, with a copy of the final permit plans at least two weeks prior to the preconstruction meeting along with a description of any changes that have been made to the project's design, construction methodology or construction timeframe. The permittee shall schedule the preconstruction meeting for a time frame when the USACE, NCDCM, and NCDWQ Project Managers can attend. The permittee shall invite the Corps, NCDCM, and NCDWQ Project Managers a minimum of thirty (30) days in advance of the scheduled meeting in order to provide those individuals with ample opportunity to schedules and participate in the required meeting.

4. Culverts

A. 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. The excavation required, typically noted as temporary stream impact, should be restored to its original elevation at the completion of the culvert installation.

B. 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.

C. 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. Culverts placed across wetland fills purely for the purposes of equalizing surface water do not have to be buried.

5. Sediment Erosion Control

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. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area.

C. The permittee shall remove all sediment and erosion control measures placed in

wetlands or waters, and shall restore natural grades on those areas, prior to project completion.

D. The permittee shall use appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" to assure compliance with the appropriate turbidity water quality standard. 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 assure compliance with the appropriate turbidity water quality standards. 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). Adequate sedimentation and erosion control measures must be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. These measures must be inspected and maintained regularly, especially following rainfall events. All fill material must be adequately stabilized at the earliest practicable date to prevent sediment from entering into adjacent waters or wetlands.

E. The permittee shall install barrier fencing around all wetlands that are not to be disturbed to make them readily visible and prevent construction equipment from inadvertently entering or disturbing these areas.

6. Temporary Fills

Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

7. Borrow and Waste

A. 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. The evaluation of impacts to jurisdictional resources (waters and wetlands) associated with borrow/waste sites should include any haul roads or other access points.

8. Mitigation

A. The permittee, NCDOT, is the party responsible for the implementation and performance and long term management of the compensatory mitigation project.

B. The permittee shall maintain the entire mitigation site in its natural condition, as altered by the work in the mitigation plan, in perpetuity. Prohibited activities within the mitigation site specifically include, but are not limited to: Filling; grading; excavating; earth movement of any kind; construction of roads, walkways, buildings, signs, or any other structure; any activity that may alter the drainage patterns on the property; the destruction, cutting, removal, mowing, or other alteration of vegetation on the property; disposal or storage of any garbage, trash, debris or other waste material; graze or water animals, or use for any agricultural or horticultural purpose; or any other activity which will result in the property being adversely impacted or destroyed, except as specifically authorized by this permit.

C. The permittee shall not sell or otherwise convey any interest in the mitigation property used to satisfy the mitigation requirements for this permit to any third party, without written approval from the Wilmington District Corps of Engineers.

D. The permittee shall contact the Corps of Engineers, Wilmington Regulatory Field Office NCDOT Regulatory Project Manager for the project, to provide that individual with the opportunity to attend the annual mitigation monitoring efforts.

E. 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.

** Note, breakdown of impacts to required mitigation for Section A:

- 2.46 acres of riparian impacts will be mitigated by debiting Privateer Farms mitigation site at 3:1, resulting in a 7.38 acre debit
- 5.22 acres of non-riparian impacts will be mitigated through EEP at 2:1, resulting in a 10.44 acre debit
- 572 linear feet of stream impact minus 41 linear feet of stream bank stabilization which will not require compensatory mitigation leaves 531 linear feet subject to mitigation. 294 linear feet of stream relocation (Site #8) will serve as on-site mitigation with the remaining balance of 237 linear feet of impact mitigated at 2:1 from EEP, resulting in a 474 linear feet debit.

F. Prior to the introduction of stream flow, the restored channel will be allowed to stabilize for one growing season or until such time as the permittee can demonstrate to the Corps satisfaction that the channel has adequately stabilized.

G. The NCDOT should continue to pursue and investigate on-site mitigation opportunities as plans are finalized for Sections E and F of TIP R-2303.

9. Cultural Resources

A. NCDOT shall abide by all stipulations identified in the Memorandum of Agreement between the Federal Highway Administration and the North Carolina State Historic Preservation

Officer, concurred by NCDOT and executed August 27, 2010, **copy attached**.

B. NCDOT shall comply with its commitments regarding the following historic property: the Maxwell House (CD 0133). Specifically, NCDOT shall implement the landscaping plan approved by the North Carolina State Historic Preservation Officer, reference the July 27, 2012 NCDOT correspondence to the Deputy State Historic Preservation Officer, **copy attached**.

10. Enforcement

A. 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.

B. Violations of these conditions or violations of Section 404 of the Clean Water 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.

C. If the permittee discovers any previously unknown historic or archaeological sites while accomplishing the authorized work, he shall immediately stop work and notify the Wilmington District Commander who will initiate the required State/Federal coordination.

11. Jurisdiction Note

The project has been field reviewed but only Section A to date has been processed through as a final Jurisdictional Determination. Section A appeals information was forwarded to property owners whose land contained waters of the U.S. within the approved corridor. The Notification of Appeal letter was dated August 16, 2012 and the affected parties were given 60 days to appeal any jurisdictional determinations. No appeals were received within the 60 days timeframe. Sections B-F are currently viewed as a Preliminary Jurisdictional Determination.

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

REPLY TO
ATTENTION OF:

March 22, 2013

Regulatory Division

Action ID No. SAW-1992-03237

Dr. Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Dr. Thorpe:

Reference the Department of the Army (DA) permit issued on December 12, 2012, for the discharge of fill material into waters and wetlands adjacent to various Creeks, and their tributaries in order to construct Section A of TIP# R-2303 (NC 24), Cumberland County, North Carolina. Reference is also made to your Section A permit modification request dated March 13, 2013 with revision to work plan drawings dated March 18, 2013. This information was submitted to request authorization to complete utility installation which will result in hand clearing within jurisdictional areas. Specifically, the request is to impact an additional 0.19 acre of wetland that will be cut and maintained in a different vegetative state under overhead power lines.

I have determined that the proposed project modifications described above are not contrary to the public interest and consistent with the 404 (B)(1) and therefore, the DA permit is hereby modified.

This modification approval will be utilized for future compliance of the project. If you have questions, please contact Brad Shaver of the Wilmington Regulatory Field Office, at telephone (910) 251-4611.

Sincerely,

FOR Steven A. Baker
Colonel, U. S. Army
District Commander

Copies Furnished (electronic):

Mr. Mason Herndon, NCDWQ
Mr. Stoney Mathis, NCDOT
Mr. Chris Rivenbark, NCDOT
Mr. Chris Manley, NCDOT

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

Permittee: North Carolina Department of Transportation **Action ID:** SAW-1992-03237
Project Name: R-2303 Section A **County:** Cumberland

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

Instructions to Sponsor: The Sponsor should verify that the mitigation requirements shown below are available and ensure that they have received payment before signing this form. By signing below, the Sponsor is accepting responsibility for the identified mitigation. Once the form is signed, the Sponsor must update the appropriate ledger and provide a copy of the signed form to the Permittee and to the USACE Bank/ILF Manager. The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements:

Permitted Impacts Requiring Mitigation* **8-digit HUC and Basin:** 03030004, Cape Fear River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-riverine	Non-Riparian	Coastal
237					5.22	

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

Compensatory Mitigation Requirements: **8-digit HUC and Basin:** 03030004, Cape Fear River Basin

Stream (credits)			Wetland (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-riverine	Non-Riparian	Coastal
474					10.44	

Mitigation Site Debited: NCEEP
(For banks, list the name of the bank to be debited, and the specific site if an umbrella bank. For NCEEP, list "NCEEP" and "Advance Credits", "Unassigned", or the name of the site name if specified in the acceptance letter from NCEEP.)

Section to be completed by the Mitigation Bank or ILF Sponsor

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

Mitigation Bank/ILF Sponsor Name: _____

Name of Sponsor's Authorized Representative: _____

_____ _____
Signature of Sponsor's Authorized Representative **Date of Signature**

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 Bank/ILF Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to provide a signed copy of this form to the USACE Project Manager at the address below.
- 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:

This form is not valid unless signed by the mitigation Sponsor and USACE Project Manager. For questions regarding this form or any of the conditions of the permit authorization, contact the Project Manager at the address below.

USACE Project Manager: Brad Shaver
USACE Field Office: Wilmington Regulatory Field Office
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403

Email:

Brad E Shaver

USACE Project Manager Signature

November 26, 2012

Date of Signature

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

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

Permittee: North Carolina Department of Transportation **Action ID:** SAW-1992-03237
Project Name: R-2303 Section A **County:** Cumberland

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

Instructions to Sponsor: The Sponsor should verify that the mitigation requirements shown below are available and ensure that they have received payment before signing this form. By signing below, the Sponsor is accepting responsibility for the identified mitigation. Once the form is signed, the Sponsor must update the appropriate ledger and provide a copy of the signed form to the Permittee and to the USACE Bank/ILF Manager. The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements:

Permitted Impacts Requiring Mitigation* **8-digit HUC and Basin:** 03030004, Cape Fear River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-riverine	Non-Riparian	Coastal
			2.46			

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

Compensatory Mitigation Requirements: **8-digit HUC and Basin:** 03030005, Cape Fear River Basin

Stream (credits)			Wetland (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-riverine	Non-Riparian	Coastal
			7.38			

Mitigation Site Debited: NCDOT UMBI Site, Privateer Farm
(For banks, list the name of the bank to be debited, and the specific site if an umbrella bank. For NCEEP, list "NCEEP" and "Advance Credits", "Unassigned", or the name of the site name if specified in the acceptance letter from NCEEP.)

Section to be completed by the Mitigation Bank or ILF Sponsor

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

Mitigation Bank/ILF Sponsor Name: PRIVATEER FARM / NCDOT

Name of Sponsor's Authorized Representative: PHILIP S. HARRIS III

Signature of Sponsor's Authorized Representative — Date of Signature: 12/13/2012

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.
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- 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:

This form is not valid unless signed by the mitigation Sponsor and USACE Project Manager. For questions regarding this form or any of the conditions of the permit authorization, contact the Project Manager at the address below.

USACE Project Manager: Brad Shaver
USACE Field Office: Wilmington Regulatory Field Office
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403

Email:

Brad E Shaver

USACE Project Manager Signature

November 26, 2012

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.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

July 27, 2012

Ramona Bartos
Deputy State Historic Preservation Officer
North Carolina Department of Cultural Resources
4617 Mail Service Center
Raleigh, North Carolina 27699-4617

Dear Ms. Bartos:

RE: R-2303A, Cumberland and Sampson Counties, Widen NC 24/27 at the Maxwell House (CD 0133), WBS# 34416, Federal Aid# STPNHF-F-8-2(17)

The North Carolina Department of Transportation (NCDOT) is concluding planning studies for the above-referenced project. Please find attached one (1) set of the landscape design plans for the Maxwell House (National Register-listed property). These plans were developed to meet the conditions of the finding of no adverse effect as discussed during the effects assessment meeting in January 1999. Please review the plans and provide any comments to me by August 31, 2012.

Thank you for your consideration and cooperation. If you have any questions concerning the accompanying information please feel free to contact me at mfurr@ncdot.gov or 919-707-6068.

Sincerely,

Mary Pope Furr
Historic Architecture Section

Attachment

Cc: Mark Pierce, P.E., Project Engineer, PDEA

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
HUMAN ENVIRONMENT SECTION
1598 MAIL SERVICE CENTER
RALEIGH NC, 27699-1598

TELEPHONE: 919-707-6000
FAX: 919-212-5785

WEBSITE: WWW.NCDOT.ORG

LOCATION:
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH -
CENTURY CENTER BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC, 27610

deral Aid # STPNHF-F-8-2(17) TIP # R-2303 County Cumberland, Sampson, Duplin Cos.

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

f Project Description
NC 24 from 2.8 miles East of I-95 to I-40 - Upgrade Existing Alternative * w.m shallow Bypasses

1/21/1999, representatives of the

- ✓ North Carolina Department of Transportation (NCDOT)
- Federal Highway Administration (FHWA)
- ✓ North Carolina State Historic Preservation Office (SHPO)
- Other

viewed the subject project and agreed

- there are no effects on the National Register-listed property within the project area of potential effect and listed on the reverse.
- ✓ there are no effects on the National Register-eligible properties located within the project's area of potential effect and listed on the reverse.
- ✓ there is an effect on the National Register-listed property/properties within the project's area of potential effect. The property-properties and the effect(s) are listed on the reverse.
- ✓ there is an effect on the National Register-eligible property/properties within the project's area of potential effect. The property/properties and effect(s) are listed on the reverse.

gned:

Mary Pope Furr — 1/21/1999
epresentative, NCDOT, Historic Architectural Resources Section — Date

Wendy D. Troub — 2/9/99
HWA, for the Division Administrator, or other Federal Agency — Date

Deborah B. Barnes — 1/22/99
epresentative, SHPO — Date

David Brook for Jeffrey J. Crow — 2/19/99
te Historic Preservation Officer — Date

(over)

Federal Aid # STPNHF-F-B-2(17) TIP # R-2303 County Cumberland, Sampson, Duplin

Properties within area of potential effect for which there is no effect. Indicate if property is National Register-listed (NR) or determined eligible (DE).

Autryville School (DE)
George Washington Bullard House (DE)

Properties within area of potential effect for which there is an effect. Indicate property status (NR or DE) and describe effect.

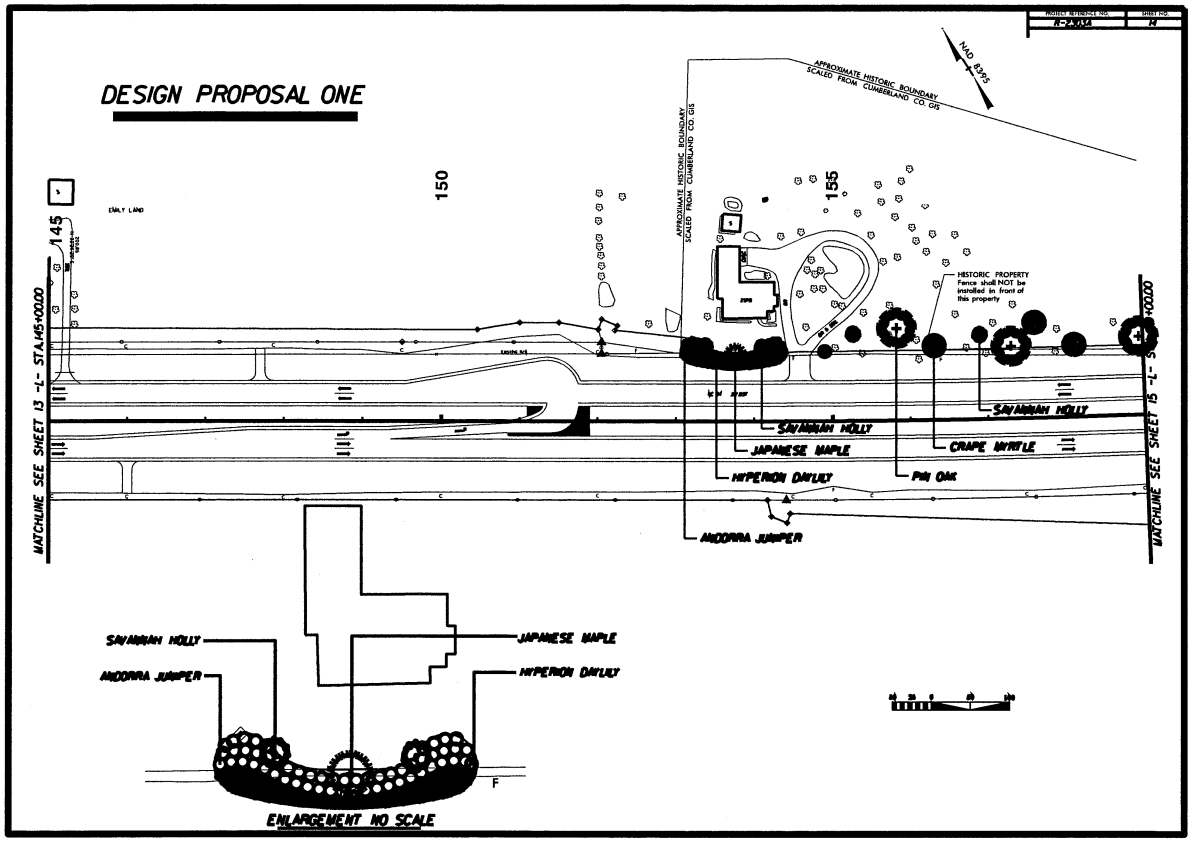
Maxwell House (NR) - conditional no adverse effect
JT Kennedy House (DE) - conditional no adverse effect

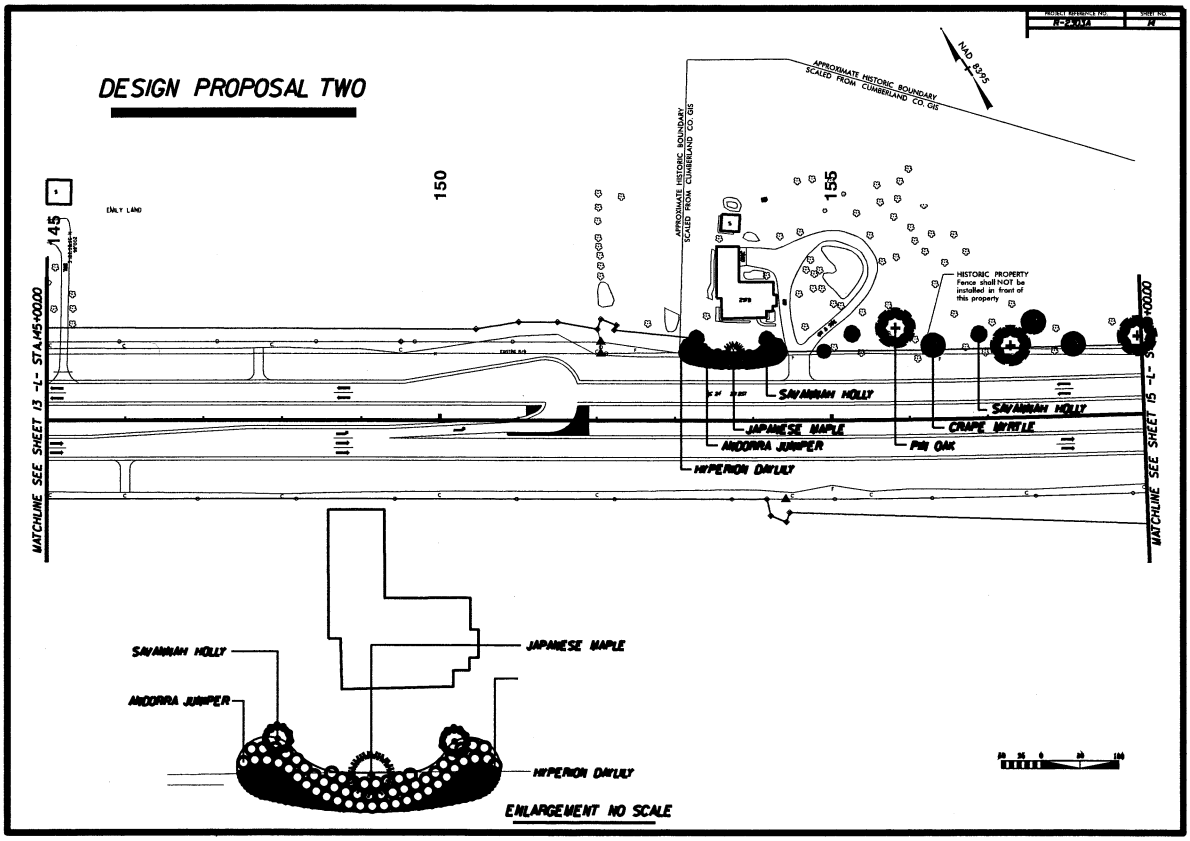
Reason(s) why effect is not adverse (if applicable).

Maxwell House - NCDOT plans to widen away from house along new road & will develop a landscaping plan to be reviewed by SHPO.

J.T. Kennedy House - NCDOT will develop a landscaping plan to be reviewed by SHPO along new road

Initialed: NCDOT MPS FHWA [illegible] SHPO DVS


DESIGN PROPOSAL ONE
NAD 83/95
APPROXIMATE HISTORIC BOUNDARY SCALED FROM CUMBERLAND CO. GIS
APPROXIMATE HISTORIC BOUNDARY SCALED FROM CUMBERLAND CO. GIS
150
155
145
DAILY LAND
HISTORIC PROPERTY Fence shall NOT be installed in front of this property
SAVANNAH HOLLY
JAPANESE MAPLE
HYPERION DAYLILY
ANDORRA JUNIPER
CRAPE MYRTLE
PIN OAK
SAVANNAH HOLLY
MATCHLINE SEE SHEET 13 -L- STA.145+00.00
MATCHLINE SEE SHEET 15 -L- STA.155+00.00
SAVANNAH HOLLY
JAPANESE MAPLE
ANDORRA JUNIPER
HYPERION DAYLILY
F
ENLARGEMENT NO SCALE


DESIGN PROPOSAL TWO
NAD 83/95
APPROXIMATE HISTORIC BOUNDARY SCALED FROM CUMBERLAND CO. GIS
APPROXIMATE HISTORIC BOUNDARY SCALED FROM CUMBERLAND CO. GIS
150
155
145
DAILY LAND
HISTORIC PROPERTY Fence shall NOT be installed in front of this property
SAVANNAH HOLLY
JAPANESE MAPLE
HYPERION DAYLILY
ANDORRA JUNIPER
CRAPE MYRTLE
PIN OAK
SAVANNAH HOLLY
MATCHLINE SEE SHEET 13 -L- STA.145+00.00
MATCHLINE SEE SHEET 15 -L- STA.155+00.00
SAVANNAH HOLLY
JAPANESE MAPLE
ANDORRA JUNIPER
HYPERION DAYLILY
ENLARGEMENT NO SCALE

Memorandum of Agreement
Between the Federal Highway Administration
and
State Historic Preservation Officer
for
NC 24 Widening from East of Fayetteville to Warsaw,
Cumberland, Sampson and Duplin counties, North Carolina
TIP Project R-2303
Federal Aid Project F-8-2(17)

Whereas, the Federal Highway Administration (FHwA) has determined that the widening of NC 24 from east of Fayetteville to Warsaw in Cumberland, Sampson and Duplin Counties (the Undertaking) will have an adverse effect upon archaeological sites 31SP331 and 31DP226/226**, properties determined eligible for listing on the National Register of Historic Places; and

Whereas, FHwA has consulted with the North Carolina State Historic Preservation Office (HPO) pursuant to 36CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

Whereas, in accordance with 36 CFR Part 800, FHwA acknowledges and accepts the advice and conditions outlined in the Advisory Council on Historic Preservation's (Council) "Recommended Approach for Consultation on the Recovery of Significant Information from Archaeological Sites," published in the Federal Register (DF Doc. 99-12055) on May 17, 1999; and

Whereas, the North Carolina Department of Transportation (NCDOT) has participated in the consultation and been invited to concur in the Memorandum of Agreement (MOA) as a consulting party in the development of this MOA; and

Whereas, the signatories and concurring parties agree that the recovery of significant information from the archaeological sites listed above may be done in accordance with the published guidance; and

Whereas, the signatories and concurring parties agree that it is in the public interest to expend funds for the recovery of significant information from these archaeological sites to mitigate the adverse effects of the project;

Now, therefore, the FHwA and HPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take in to account the effect of the undertaking on the historic properties.

Stipulations:

FHwA will ensure that the following measures are carried out:

I. The NCDOT will develop separate Data Recovery Plans (DRP) for sites 31SP331 and 31DP226/226**, the sites that will be affected by the subject Undertaking, in consultation with the HPO.

II. The NCDOT will ensure that the DRP will be implemented after Right of Way is acquired or once Right of Entry is secured from the property owners and prior to construction activities within the site locations as shown in the DRP.

III. Upon completion of each Data Recovery effort, the NCDOT will prepare and forward a Management Summary to HPO detailing the results of the Data Recovery field investigations. The Management Summaries will contain sufficient information to demonstrate that the field investigation portions of the DRP have been implemented.

IV. Upon receipt of each Management Summary HPO will respond within ten (10) days to the recommendations contained within the document.

V. Upon acceptance of the recommendations contained in each Management Summary HPO will issue the NCDOT documentation that the Data Recovery field investigations have been completed.

VI. The analyses and reports detailing sites 31SP331 and 31SP226/226** will be completed by the NCDOT or their consultants within twelve (12) months after completion of the fieldwork.

VII. If historic properties are discovered or unanticipated effects on historic properties are found after FHwA approves the Undertaking and construction has commenced, FHwA will consult with HPO and the property owner(s) in accordance with 36 CFR 800.13(b). Inadvertent or accidental discovery of human remains will be handled in accordance with North Carolina General Statutes 65 and 70.

VIII. Any Signatory may terminate this MOA by providing notice to the other party(ies) provided that the 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.

Other Terms and Conditions

This agreement shall be null and void if its terms are not carried out within five (5) years from the date of its execution, unless the signatories agree in writing to an extension for carrying out its terms.

Execution of this MOA by the FHwA and HPO, its subsequent acceptance by the Council, and implementation of its terms are evidence that the FHwA has afforded the Council an opportunity to comment on the Undertaking, and that the FHwA has taken into account the effects of the Undertaking on historic properties.

AGREE:

Federal Highway Administration — Date: 8-27-10

Deputy State Historic Preservation Officer — Date: 8-25-10

CONCUR:

North Carolina Department of Transportation — Date: 8/13/10

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

REPLY TO
ATTENTION OF:

March 5, 2013

Regulatory Division

Action ID No. SAW-1992-03237

R-2303B

Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Thorpe:

Reference the Department of the Army (DA) permit issued on December 12, 2012, for the discharge of fill material into waters and wetlands adjacent to various Creeks, and their tributaries in order to construct Section A of TIP# R -2303 (NC 24), Cumberland County, North Carolina. Reference is also made to your permit modification dated January 29, 2013 with revision dated February 25, 2013. Additional information was submitted on February 22 and 25, 2013. This information was submitted to request authorization to construct Section B of TIP#R-2303 starting east of Stedman in Cumberland County and ending west of Roseboro in Sampson County, a total of 6.891 miles. Specifically, the request is to impact an additional 5.76 acres of wetlands and 296 linear feet of stream channel necessary for the construction of Section B.

I have determined that the proposed project modifications described above are not contrary to the public interest and consistent with the 404 (B)(1) and therefore, the DA permit is hereby modified. The following conditions specific to Section B have been added:

All original conditions in the December 12, 2012 permit remain valid and are enforceable with Section B authorization. Special Conditions for the permit modification are the following:

1. This permit modification only authorizes work on Section B of TIP R-2303. Construction on Sections C-F of TIP R-2303 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 US Army Corps of Engineers (COE). Approved permit plans for section B are attached.

to 5.76 acres of wetlands. Activities prescribed by this plan shall be initiated prior to, or concurrently with, commencement of any construction activities within jurisdictional areas authorized by this permit. The permittee shall re-establish, enhance, and preserve 5.13 acres of wetlands in accordance with the plan, with the following conditions:

A) Any changes or modifications to your mitigation plan shall be approved by the Corps.

B) All mitigation areas shall be monitored for a minimum of 5 years or until deemed successful by the Corps in accordance with the monitoring requirements included in the mitigation plan.

3. REMEDIAL MITIGATION PLAN: If the compensatory mitigation fails to meet the performance standards 5 years after completion of the compensatory mitigation objectives, the compensatory mitigation will be deemed unsuccessful. Within 60 days of notification by the Corps that the compensatory mitigation is unsuccessful, the Permittee shall submit to the Corps an alternate compensatory mitigation proposal to fully offset the functional loss that occurred as a result of the project. The alternate compensatory mitigation proposal may be required to include additional mitigation to compensate for the temporal loss of wetland function associated with the unsuccessful compensatory mitigation activities. The Corps reserves the right to fully evaluate, amend, and approve or reject the alternate compensatory mitigation proposal. Within 120 days of Corps approval, the Permittee will complete the alternate compensatory mitigation proposal.

4. In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit modification authorization.

** Note, breakdown of impacts to required mitigation for Section B:
- 4.58 acres of riparian impacts will be mitigated through on-site mitigation of 5.31 acres of riparian mitigation comprised of restoration, enhancement, and preservation.
- 1.18 acres of non-riparian impacts will be mitigated through EEP at 2:1, resulting in a 2.36 acre debit.
- 296 linear feet of stream impact will be mitigated at 2:1 from EEP, resulting in a 592 linear feet debit.

This modification approval will be utilized for future compliance of the project. If you have questions, please contact Brad Shaver of the Wilmington Regulatory Field Office, at telephone (910) 251-4611.

Sincerely,

Henry Wicker

for Steven A. Baker
Colonel, U. S. Army
District Commander

Copies Furnished (electronic w/o attachments):

Mr. Mason Herndon, NCDWQ
Mr. Stoney Mathis, NCDOT
Mr. Chris Rivenbark, NCDOT
Mr. Chris Manly, NCDOT
Mr. Chris Militscher, USEPA
Mr. Gary Jordan, USFWS
Mr, Travis Wilson, NCWRC
Ms. Beth Harmon, NCEEP
Mr. Todd Tugwell, USACE

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

Permittee: North Carolina Department of Transportation **Action ID:** SAW-1992-03237
Project Name: R-2303 Section B **County:** Sampson

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

Instructions to Sponsor: The Sponsor should verify that the mitigation requirements shown below are available and ensure that they have received payment before signing this form. By signing below, the Sponsor is accepting responsibility for the identified mitigation. Once the form is signed, the Sponsor must update the appropriate ledger and provide a copy of the signed form to the Permittee and to the USACE Bank/ILF Manager. The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements:

Permitted Impacts Requiring Mitigation* **8-digit HUC and Basin:** 03030006, Cape Fear River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-riverine	Non-Riparian	Coastal
296					1.18	

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

Compensatory Mitigation Requirements: **8-digit HUC and Basin:** 03030004, Cape Fear River Basin

Stream (credits)			Wetland (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-riverine	Non-Riparian	Coastal
592					2.36	

Mitigation Site Debited: NCEEP
(For banks, list the name of the bank to be debited, and the specific site if an umbrella bank. For NCEEP, list "NCEEP" and "Advance Credits", "Unassigned", or the name of the site name if specified in the acceptance letter from NCEEP.)

Section to be completed by the Mitigation Bank or ILF Sponsor

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

Mitigation Bank/ILF Sponsor Name:_____

Name of Sponsor's Authorized Representative:_____

_____ _____
Signature of Sponsor's Authorized Representative **Date of Signature**

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 Bank/ILF Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to provide a signed copy of this form to the USACE Project Manager at the address below.
- 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:

This form is not valid unless signed by the mitigation Sponsor and USACE Project Manager. For questions regarding this form or any of the conditions of the permit authorization, contact the Project Manager at the address below.

USACE Project Manager: Brad Shaver
USACE Field Office: Wilmington Regulatory Field Office
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403

Email:

Brad Shaver
USACE Project Manager Signature

March 5, 2013
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.

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Water Quality
Charles Wakild, P.E
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

September 24, 2012

Dr. Greg Thorpe, PhD., Manager
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 with ADDITIONAL CONDITIONS for Proposed improvements to NC 24 from 2.8 miles east of I-95 to I-40 in Cumberland, Sampson and Counties, Federal Aid Project No. STPNHF-F-8-2(17), WBS No. 34416.1.1, TIP R-2303. NCDWQ Project No. 20120240

Dear Dr. Thorpe:

Attached hereto is a copy of Certification No. 3942 issued to The North Carolina Department of Transportation (NCDOT) dated September 24, 2012.

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

Sincerely,

Charles Wakild
Director

Attachments

cc: Brad Shaver, US Army Corps of Engineers, Wilmington Field Office (electronic copy only)
Greg Burns, PE, Division 8 Engineer
Jim Rerko, Division 8 Environmental Officer
Chris Militscher, Environmental Protection Agency (electronic copy only)
Gary Jordan, US Fish and Wildlife Service (electronic copy only)
Travis Wilson, NC Wildlife Resources Commission
Jason Elliott, NCDOT, Roadside Environmental Unit
Jim Stanfill, Ecosystem Enhancement Program
Sonia Carrillo, NCDWQ Central Office
File Copy

Transportation and Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1617
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-807-6300 \ FAX: 919-807-6492
Internet: www.ncwaterquality.org

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 Quality (NCDWQ) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact 7.68 acres of jurisdictional wetlands, 0.72 acres of waters and 599 linear feet of jurisdictional streams in Cumberland and Sampson Counties. The project shall be constructed pursuant to the application dated received August 2, 2012. **No impacts to Sections B, C, D or F are being authorized at this time.** The authorized impacts are as described below:

Stream Impacts in the Cape Fear River Basin

Site	Station	Permanent Fill in Intermittent Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
R-2303A							
8	300+06 to 305+40-L-	0	0	531	0	531**	237
8	304+40 to 304+51-L-LT	0	0	41*	27	68	41
Total		**0**	**0**	**572**	**27**	**599**	**278**
R-2303B* **							
Total		-	-	**296**	**113**	**409**	-
R-2303C* **							
Total		-	-	**2,990**	**301**	**3,291**	-
R-2303D* **							
Total		-	-	**1,792**	**77**	**1,869**	-
R-2303E* **							
Total		-	-	**1,336**	**155**	**1,491**	-
R-2303F* **							
Total		-	-	**3,859**	**294**	**4,153**	-
Project Total							
Project Total		-	-	**10,845**	**967**	**11,812**	-

*Bank stabilization; **294 lf of stream will be relocated.

***Sections B through F stream impacts are projected based on preliminary design and include perennial and intermittent systems.

Total Stream Impact for Project: 11,812 linear feet (599 linear feet for Section A)

Wetland Impacts in the Cape Fear River Basin

Site	Station	Wetland Type*	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)
R-2303A								
2	73+00 to 85+00-L-	NR	4.44	0	0	0.53	0	4.97
5	167+09 to 168+51-L-	NR	0.04	0	0	0.03	0	0.07
8	296+63 to 304+66-L-	R	2.03	0	0.02	0.20	0	2.25
9	321+92 to 322+64-L-RT	R	0.07	0	<0.01	0.02	0	0.09
9	321+58 to 322+98-L-LT	R	0.07	0	0.02	0.03	0	0.12
10	344+83 to 349+01-L-Rt	NR	0.08	0	0	0.10	0	0.18
Total			**6.73**	**0**	**0.04**	**0.91**	**0**	**7.68**
R-2303B**								
Total			**5.70**	**0.12**	-	-	-	**5.82**
R-2303C**								
Total			**12.13**	**0**	-	-	-	**12.13**
R-2303D**								
Total			**8.38**	**0**	-	-	-	**8.38**
R-2303E**								
Total			**1.58**	**0**	-	-	-	**1.58**
R-2303F**								
Total			**21.80**	**0**	-	-	-	**21.80**

Project Total						
Project Total	**56.32**	**0.12**	**0.04**	**0.91**	**0**	**57.39**

*Wetland Type: R = Riparian; NR=Non-Riparian

** Sections B through F wetland impacts are projected based on preliminary design.

Total Wetland Impact for Project: 57.39 (7.68 acres for Section A)

Open Water (Ponds/Tributary) Impacts in the Cape Fear River Basin

Site	Station	Permanent Fill in Open Waters (ac)	Temporary Fill in Open Waters (ac)	Total Fill in Open Waters (ac)
1	69+45 to 70+63 -L-RT	0.16	0	0.16
1	70+93 to 72+81-L-RT	0.11	0	0.11
4	131+57 to 133+50-L-RT	0.18	0	0.18
6	178+97 to 179+07-L-RT	0.02	0	0.02
7	200+65 to 202+44-L-	0.24	0	0.24
9	322+10-L-Rt	0.01	0	0.01
9	322+10-L-Rt (Bank Stabilization)	<0.01	0	<0.01
Total*		**0.72**	**0**	**0.72**

*Open Water Impacts for Sections B through F have not been projected based on preliminary design.

Total Open Water Impact for Section A: 0.72 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 August 2, 2012. Should your project change, you are required to notify the NCDWQ 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:

Project Specific Conditions

1. The NCDOT Division Environmental Officer or Environmental Assistant will conduct a pre-construction meeting with all appropriate staff to ensure that the project supervisor and essential staff understand the potential issues with stream and pipe alignment at the permitted site. NCDWQ staff shall be invited to the pre-construction meeting.

2. At locations where ponds will be drained, proper measures will be taken to drain the pond with limited impact to upstream and downstream channel stability as well as to native aquatic species. Proper measures will be taken to avoid sediment release and/or sediment accumulation downstream as a result of pond draining. If typical pond draining techniques will create significant disturbance to native aquatic species, additional measures such as collection and relocation may be necessary to prevent a significant fish kill. NCDOT shall consult with NC Wildlife Resources staff to determine if there are any sensitive species, and the most appropriate measures to limit impacts to these species. The permittee shall observe any natural channel re-establishment, or utilize natural channel construction techniques, to ensure that the jurisdictional stream channel above and below the drained pond remain stable, and that no additional impacts occur within the natural stream channel as a result of draining the pond.

3. All channel relocations will be constructed in a dry work area and stabilized before stream flows are diverted. Channel relocations will be completed and stabilized, and must be approved on site by NCDWQ staff, prior to diverting water into the new channel. Whenever possible, channel relocations shall be allowed to stabilize for an entire growing season. Vegetation used for bank stabilization shall be limited to native woody species, and should include establishment of a 30 foot wide wooded and an adjacent 20 foot wide vegetated buffer on both sides of the relocated channel to the maximum extent practical. All stream banks shall be matted with coir fiber matting. Also, rip-rap may be allowed if it is necessary to maintain the physical integrity of the stream, but the applicant must provide written justification and any calculations used to determine the extent of rip-rap coverage requested. Once the stream has been turned into the new channel, it may be necessary to relocate stranded fish to the new channel to prevent fish kills.

4. 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.

5. For streams being impacted due to site dewatering activities, the site shall be graded to its preconstruction contours and revegetated with appropriate native species.

6. 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 applicable riparian buffer impact for access to stream channel shall be temporary and be revegetated with native riparian species.

7. Pipes and culverts used exclusively to maintain equilibrium in wetlands, where aquatic life passage is not a concern, shall not be buried. These pipes shall be installed at natural ground elevation.

8. Compensatory mitigation for 278 linear feet of impact to streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated July 26, 2012 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the EEP Mitigation Banking Instrument signed July 28, 2010.

9. Compensatory mitigation for impacts to 5.22 acres of non-riparian wetlands is required. We understand that you have chosen to perform compensatory mitigation for impacts to non-riparian wetlands through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated July 26, 2012 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the EEP Mitigation Banking Instrument signed July 28, 2010.

10. Compensatory mitigation for the 2.46 acres of riparian wetland impacts is required. We understand that you have chosen to debit mitigation from Privateer Farm Mitigation Bank. Privateer Farm Mitigation Bank is located in Cumberland and Bladen County in HUC 03030005; adjacent to Section A of the project HUC (03030006). Since there are no available credits existing in HUC 03030006, it is DWQ's policy to debit adjacent HUCs at a 3:1 ratio. This certification gives you approval to debit 7.38 acres of riparian wetland mitigation from the Privateer Farm Mitigation Bank to satisfy the mitigation requirements of this permit.

11. When final design plans are completed for R-2303 Section(s) B through F, a modification to the 401 Water Quality Certification shall be submitted with five copies and fees to the NC Division of Water Quality. Final designs shall reflect all appropriate avoidance, minimization, and mitigation for impacts to wetlands, streams, and other surface waters, and buffers. No construction activities that impact any wetlands, streams, surface waters, or buffers located in R-2303 Section(s) B through F shall begin until after the permittee applies for, and receives a written modification of the 401 Water Quality Certification and the from the NC Division of Water Quality.

General Conditions

12. 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 NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.

13. 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.

14. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers.

15. 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.

16. 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.

17. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.

18. 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.

19. 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.

20. 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.

21. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.

22. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.

23. 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 NCDWQ 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, NCDWQ may reevaluate and modify this certification.

24. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification..

25. 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.

26. 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.

27. 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.

28. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.

29. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify NCDWQ when all work included in the 401 Certification has been completed.

30. 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.

31. 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.

32. 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:

    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.

33. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.

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 DENR as follows:

Mr. William Cary, General Counsel
Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

This the 24th day of September 2012

DIVISION OF WATER QUALITY

Charles Wakild
Director

WQC No. 3942

NCDWQ 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 Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650. This form may be returned to NCDWQ 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 Environment and Natural Resources
Division of Water Quality
Charles Wakild, P. E.
Director

Pat McCrory
Governor

John E. Skvarla, III
Secretary

March 18, 2013

Dr. Greg Thorpe, PhD., Manager
Project Development and Environmental Analysis
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water with ADDITIONAL CONDITIONS for Proposed improvements to NC 24 from 2.8 miles east of I-95 in Cumberland County to I-40 in Sampson County, Federal Aid Project No. STPNHF-F-8-2(17), WBS No. 34416.1.1, TIP R-2303A

NCDWQ Project No. 20120240 v.4

Dear Dr. Thorpe:

Attached hereto is a modification of Certification No. 3942 issued to The North Carolina Department of Transportation (NCDOT) dated September 24, 2012 and modification issued February 25, 2013.

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

Sincerely,

Charles Wakild
Director

Attachments

cc: Brad Shaver, US Army Corps of Engineers, Wilmington Field Office (electronic copy only)
Greg Burns, PE, Division 6 Engineer
Jim Rerko, Division 6 Environmental Officer
Chris Militscher, Environmental Protection Agency (electronic copy only)
Gary Jordan, US Fish and Wildlife Service (electronic copy only)
Travis Wilson, NC Wildlife Resources Commission
Jason Elliott, NCDOT, Roadside Environmental Unit
Jim Stanfill, Ecosystem Enhancement Program
Sonia Carrillo, NCDWQ Central Office
File Copy

Transportation and Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1617
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-807-6300 \ FAX: 919-807-6488
Internet: www.ncwaterquality.org

Modification to the 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 Quality (NCDWQ) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact an additional 0.19 acres of jurisdictional wetlands in Cumberland County. The project shall be constructed pursuant to the modification dated received March 13, 2013 and revisions received on March 18, 2013. The authorized impacts are as described below:

Wetland Impacts in the Cape Fear River Basin

Site	Station	Wetland Type*	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)
R-2303A Utilities								
U-21	168+00-L-RT	NR	0	0	0	0	0.11	0.11
U-34	322+00-L-LT	R	0	0	0	0	0.01	0.01
U-35	322+50-L-RT	R	0	0	0	0	0.05	0.05
U-36	348+75-L-RT	NR	0	0	0	0	0.02	0.02
Total			**0**	**0**	**0**	**0**	**0.19**	**0.19**

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 modified application dated received March 13, 2013 and revisions received on March 18, 2013. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated September 24, 2012 and modification issued February 25, 2013 still apply except where superceded by this certification. Should your project change, you are required to notify NCDWQ 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. This modification is applicable only to the additional proposed utility relocation activities. All of the authorized activities and conditions of certification associated with the original Water Quality Certification dated September, 24, 2012 and subsequent modification dated February 15, 2013 still apply except where superceded by this certification.

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 DENR as follows:

Mr. Lacy Presnell, General Counsel
Department of Environment and Natural Resources
1601 Mail Service Center

This the 18th day of March 2013

DIVISION OF WATER QUALITY

Charles Wakild
Director

WQC No. 3942

North Carolina Department of Environment and Natural Resources
Division of Water Quality
Charles Wakild, P. E.
Director

Pat McCrory
Governor

John E. Skvarla, III
Secretary

February 25, 2013

Dr. Greg Thorpe, PhD., Manager
Project Development and Environmental Analysis
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: Modification of 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water with ADDITIONAL CONDITIONS for Proposed improvements to NC 24 from SR 1853 (John Nunnery Rd.) in Cumberland County to US 421-701/SR 1296 (Sunset Avenue) in Sampson County, Federal Aid Project No. STPNHF-F-8-2(17), WBS No. 34416. **TIP R-2303B**.

NCDWQ Project No. 20120240v.2

Dear Dr. Thorpe:

Attached hereto is a modification of Certification No. 3942 issued to The North Carolina Department of Transportation (NCDOT) dated September 24, 2012.

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

Sincerely,

Charles Wakild
Director

Attachments

cc: Brad Shaver, US Army Corps of Engineers, Wilmington Field Office (electronic copy only)
Greg Burns, PE, Division 6 Engineer
Jim Rerko, Division 6 Environmental Officer
Chris Militscher, Environmental Protection Agency (electronic copy only)
Gary Jordan, US Fish and Wildlife Service (electronic copy only)
Travis Wilson, NC Wildlife Resources Commission
Jason Elliott, NCDOT, Roadside Environmental Unit
Jim Stanfill, Ecosystem Enhancement Program
Sonia Carrillo, NCDWQ Central Office
File Copy

Transportation and Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1617
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-807-6300 \ FAX: 919-807-6492
Internet: www.ncwaterquality.org

Modification to the 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 Quality (NCDWQ) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact an additional 10.35 acres of jurisdictional wetlands, 1.65 acres of waters and 439 linear feet of jurisdictional streams in Cumberland and Sampson Counties for the construction of **R-2303B** only. The project shall be constructed pursuant to the revised application dated received February 15, 2013and revisions received electronically on February 25, 2012. **No impacts to Sections C, D or F are being authorized with this certification**. The authorized impacts are as described below:

Stream Impacts in the Cape Fear River Basin

Site	Station	Permanent Fill in Intermittent Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
R-2303A[1]							
Total		**0**	**0**	**572**	**27**	**599**	**278**
R-2303B							
7A	431+78 to 434+23-L-	158	0	0	0	158	158
21	712+14 to 714+41-L-	0	0	193[2]	88	281	241
Total		**158**	**0**	**193[2]**	**88**	**439**	**351**
R-2303C[3]							
Total		**-**	**-**	**2,990**	**301**	**3,291**	**-**
R-2303D[3]							
Total		**-**	**-**	**1,792**	**77**	**1,869**	**-**
R-2303E[3]							
Total		**-**	**-**	**1,336**	**155**	**1,491**	**-**
R-2303F[3]							
Total		**-**	**-**	**3,859**	**294**	**4,153**	**-**
Project Total							
Project Total		**158**	**-**	**10,742**	**942**	**11,842**	**-**

[1]Impacts authorized in the original 401 certification dated September 24, 2012. [2]Includes 55 linear feet of bank stabilization.
[3]Sections C through F stream impacts are projected based on preliminary design and include perennial and intermittent systems.

Total Stream Impact for Project: 11,842 linear feet (439 linear feet for Section B)

Wetland Impacts in the Cape Fear River Basin

Site	Station	Wetland Type[1]	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Impacts Requiring Mitigation (ac)
R-2303A[2]									
Total			**6.73**	**0**	**0.04**	**0.91**	**0**	**7.68**	**7.68**
R-2303B									
1	388+00 to 391+28-L-	R	1.26	0	0	0.14	0	1.40	1.40
2	391+28 to 402+13-L-	R	0	0	0.09	<0.01	3.53	3.62	0.09
3	14+18 to 15+09-Y13-RT	NR	0.01	0	0	0.02	0	0.03	0.03
5	425+57 to 426+51-L-LT	R	0.02	0	0	0.02	0	0.04	0.04
7B	431+78 to 434+23-L-	R	0.23	0	0.01	0.03	0	0.27	0.27
8	437+97 to 439+15-L-RT	NR	0.07	0	0	0.02	0	0.09	0.09
10[3]	542+45 to 545+21-L-LT	NR	0.09	0	0	0.06	0	0.15	0.15
11	554+06 to 558+53-L-LT	NR	0.01	0	0	0.10	0	0.11	0.11
12	554+38 to 557+27-L-RT	NR	0.28	0	0	0.03	0	0.31	0.31
14	623+20 to 624+12-L-RT	NR	0.10	0	0.03	<0.01	0	0.13	0.13
15	654+75 to 663+38-L-	R	2.13	0	0	0.41	0.17	2.71	2.54

16	669+18 to 670+85-L-LT	NR	0.26	0	0	0.06	0	0.32	0.32
17	670+13 to 672+92-L-RT	NR	0.05	0	0	0.02	0	0.07	0.07
21	712+14 to 714+41-L-	R	0.13	0.12	0.01	0.06	0	0.32	0.20
R-2303B UTILITIES									
1	472+00-L-	NR	0	0	0	0	0.6	0.6	0
3	545+00-L-	NR	0	0	0.01	0	0	0.01	0.01
4	584+00-L-	NR	0	0	0.10	0	0	0.10	0.10
6	670+00-L-	NR	0	0	0.01	0	0.02	0.03	0.01
7	713+00-L-	R	0	0	0.04	0	0	0.04	0.04
Total			**4.64**	**0.12**	**0.30**	**0.97**	**4.32**	**10.35**	**5.91**
R-2303C[4]									
Total			**12.13**	**0**	**-**	**-**	**-**	**12.13**	**-**
R-2303D[4]									
Total			**8.38**	**0**	**-**	**-**	**-**	**8.38**	**-**
R-2303E[4]									
Total			**1.58**	**0**	**-**	**-**	**-**	**1.58**	**-**
R-2303F[4]									
Total			**21.80**	**0**	**-**	**-**	**-**	**21.80**	**-**
Project Total									
Project Total			**55.26**	**0.12**	**0.34**	**1.88**	**4.32**	**61.92**	**-**

[1] Wetland Type: R = Riparian; NR=Non-Riparian, [2] Impacts authorized in the original 401 certification dated September 24, 2012.
[3]Resource is regulated by DWQ only, [4] Sections C through F wetland impacts projected based on preliminary design.

Total Wetland Impact for Project: 61.92 (10.35 acres for Section B)

Open Water (Ponds/Tributary) Impacts in the Cape Fear River Basin

Site	Station	Permanent Fill in Open Waters (ac)	Temporary Fill in Open Waters (ac)	Total Fill in Open Waters (ac)
R-2303A[1]				
Total		**0.72**	**0**	**0.72**
R-2303B				
4	424+51 to 426+05-L-LT	0.25	0	0.25
6	430+34 to 432+25-L-RT	0.19	0	0.19
9	438+58 to 441+68-L-LT	0.73	0	0.73
13	576+76 to 576+89-L-RT	<0.01	<0.01	<0.01
18	674+45 to 674+81-L-RT	<0.01	<0.01	<0.01
19	680+56 to 684+21-L-LT	0.44	0	0.44
20	681+95 to 682+15-L-RT	<0.01	<0.01	<0.01
Total		**1.63**	**0.02**	**1.65**
Section A & B Total		**2.35**	**0.02**	**2.37**

*Open Water Impacts for Sections C through F have not been projected based on preliminary design.
[1] Impacts authorized in the original 401 certification dated September 24, 2012.

Total Open Water Impact for Sections A & B: 0.72 acres. (1.65 acres for Section B)

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 modified application dated received February 15, 2013 and revisions received electronically on February 25, 2012. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated September 24, 2012 still apply except where superceded by this certification. Should your project change, you are required to notify NCDWQ 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:

Project Specific Conditions

1. This modification is applicable only to the additional proposed activities. All of the authorized activities and conditions of certification associated with the original Water Quality Certification dated September 24, 2012 still apply except where superseded by this certification

2. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species.

3. Strict adherence to the most recent version of NCDOT's Best Management Practices For Bridge Demolition and Removal approved by the US Army Corps of Engineers is a condition of the 401 Water Quality Certification.

4. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. More specifically, jetting or other methods of pile driving are prohibited without prior written approval from NCDWQ first.

5. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices.*

6. The project must be constructed in accordance with the Stormwater Management Plan submitted in the application and dated September 27, 2011.

7. Native material shall be placed inside of the reinforced concrete box culverts at Permit Site 21 to provide a natural streambed in the low flow channel and floodplain benches between the sills in the overflow barrels. If possible, the material placed inside of the culvert should be the same native material that is excavated from the streambed and/or floodplain during the construction of these structures. Rip rap is not permissible in the low flow channel; however it may be used to supplement the natural material in the overflow barrels.

8. Compensatory mitigation for 351 linear feet of impact to streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated February 19, 2013 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the EEP Mitigation Banking Instrument signed July 28, 2010.

9. Compensatory mitigation for impacts to 1.33 acres of non-riparian wetlands is required. We understand that you have chosen to perform compensatory mitigation for impacts to non-riparian wetlands through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated February 19, 2013that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the EEP Mitigation Banking Instrument signed July 28, 2010.

10. Compensatory mitigation for impacts to 4.58 acres of riparian wetlands is required. The permittee shall comply with the revised on-site wetland mitigation plan Sites B-1 and B-2 submitted on February 22, 2013. All on-site mitigation sites shall be protected in perpetuity by a conservation easement or through NCDOT fee simple acquisition and recorded in the NCDOT Natural Environment Unit mitigation geodatabase.

11. For the forested wetland restoration mitigation sites B-1 and B-2, the permittee shall plant 680 stems/acre. Vegetation success shall be measured by survivability over a 5-year monitoring period. Survivability will be based on 320 stems/acre after three (3) years and 260 stems after five (5) years. A survey of vegetation during the growing season shall be conducted annually over the five-year monitoring period and submitted

to the NC Division of Water Quality. If the surviving vegetation densities are below the required thresholds after the five-year monitoring period, the site may still be declared successful at the discretion of and with written approval from the NC Division of Water Quality.

12. For the wetland mitigation sites located from B-1 and B-2, hydrologic success of the sites will be attained by restoration of a hydrologic regime that results in inundation or saturation of the soils within 12 inches of the ground surface for at least 12.5 percent of the growing season. The hydrologic monitoring shall persist for a total of five (5) years. At the end of the monitoring period, NCDWQ will review the monitoring results for the mitigation site. Based on the results of the monitoring, NCDWQ will determine if the mitigation site is successful or if additional maintenance and monitoring is necessary to demonstrate site success.

13. Success of the mitigation site shall be determined by NCDWQ during an on-site visit at or near the end of the monitoring period.

14. When final design plans are completed for R-2303 Section(s) E through F, a modification to the 401 Water Quality Certification shall be submitted with five copies and fees to the NC Division of Water Quality. Final designs shall reflect all appropriate avoidance, minimization, and mitigation for impacts to wetlands, streams, and other surface waters, and buffers. No construction activities that impact any wetlands, streams, surface waters, or buffers located in R-2303 Section(s) C through F shall begin until after the permittee applies for, and receives a written modification of the 401 Water Quality Certification and the from the NC Division of Water Quality.

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.

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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 DENR as follows:

Mr. Lacy Presnell, General Counsel
Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

This the 25th day of February 2013

DIVISION OF WATER QUALITY

Charles Wakild
Director

WQC No. 3942

NCDWQ 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 Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650. This form may be returned to NCDWQ 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 _____

Mitigation Plan

NC Highway 24 Improvements
Sampson County, North Carolina
T.I.P. Number R-2303
WBS No. 34416
February 22, 2013

Transportation Improvement Project (TIP) R-2303 involves improvements to existing NC Highway 24 from 2.8 miles eastward of Interstate 95 (I-95) in Cumberland County to Interstate 40 (I-40) in Duplin County. The project is located within USGS Hydrologic Cataloging Unit (HUC) 03030006, and NC Division of Water Quality (NCDWQ) sub-basins 03-06-18 and 03-06-19 within the Cape Fear River Basin. NCDOT proposes to mitigate for permanent impacts to jurisdictional areas requiring mitigation through the following sources: NCDOT Umbrella Mitigation Banking Instrument (UMBI), onsite mitigation, and the Ecosystem Enhancement Program (EEP).

NCDOT UMBI SITE – PRIVATEER FARM (ONE ID #026-005)

The Privateer Farm stream and wetlands restoration site is located in USGS HUC 03030005 and NCDWQ Cape Fear River sub-basins 15 and 16 along Little Alligator Swamp and Harrison Creek. It is located in the Southeastern Plains Level III Ecoregion (Southeastern Floodplains and Low terraces Level IV Ecoregion) and includes portions of Cumberland and Bladen counties, approximately 6 miles from the southern boundary of CU 03030004. The Site has been closed out for monitoring and was incorporated into NCDOT's UMBI.

The NCDOT debit ledger below (as of July 24, 2012) includes the debit of 7.38 acres of riparian wetland restoration to mitigate for 2.46 acres of riparian impact for R-2303A at a 3:1 ratio.

Site Name	River Basin	HUC	Mitigation Type	Transfer from EEP	Available	TIP Debit	TIP Debit	TIP Debit
Privateer Site	Cape Fear	3030005				U-2519**	U-2519 MOD**	R-2303A**
**Out of service area ratios: 1.5:1 ratio for stream impacts 3:1 for wetland impacts			Warm Stream Restoration	25,676	7,157	18,519		
			Riverine Wetland Restoration	185.58	32.22	145.29	0.69	7.38

ON-SITE MITIGATION

1.0 BASELINE INFORMATION

TIP R-2303 involves improvements to existing NC Highway 24 from 2.8 miles eastward of Interstate 95 (I-95) in Cumberland County to Interstate 40 (I-40) in Duplin County. The study corridor for this project ranges from 400 feet wide for widening sections to 1000 feet wide for bypass areas and is situated within the inner Coastal Plain physiographic province. Topography within the study area is described as nearly level to sloping with the majority of the topographic breaks found near the larger wetland systems. Land use within the project study area between towns is mostly rural in nature and includes a mixture of agricultural, residential, silvicultural, and industrial uses.

The project is located within USGS Hydrologic Cataloging Unit 03030006, and NC Division of Water Quality (NCDWQ) sub-basins 03-06-18 and 03-06-19 within the Cape Fear River Basin. Sub-basin 03-06-18 includes the South River and its tributaries as well as Big Swamp and its tributaries while sub-basin 03-06-19 includes Little Coharie Creek, Bearskin Swamp, Moccasin Branch, Great Coharie Creek, Six Runs Creek, and Buckhall Creek along with all their tributaries.

The R-2303 Natural Resources Technical Report (NRTR) dated January 2004 provides further details concerning existing roadway/project study area conditions and jurisdictional resources. The mitigation site selection and mitigation work plan sections of this plan will refer to the identification labels given the affected jurisdictional resources in that document as well as the Final Environmental Impact Statement (FEIS) dated 3-31-2010.

2.0 SITE SELECTION

R-2303B Mitigation Site 1 (ONE ID #082-007)

This site begins on plan sheet 8 south of Station 423+50 Rt. at the existing intersection of Gray Street and Old Stage Road and ends south of Station 439 Rt. on plan sheet 9. It is part of the South River watershed and involves a series of ponds (43 and 45) as well as three jurisdictional wetlands (42, 44 and 46), and one intermittent stream (SR4) that flows out of pond 43. Lynn Haven sand, a hydric soil in Sampson County, is the soil type found within this area.

R-2303B Mitigation Site 2 (ONE ID #082-008)

This site begins on plan sheet 26 at Sta. 680+20 Lt. at the ROW line and ends on plan sheet 27 at Sta. 685+50.38 Lt. at Boren Brick Road. The pond (88) will be drained as part of the construction of R-2303B. Currently, the pond connects a jurisdictional wetland area upstream to jurisdictional wetlands and a UT to Big Swamp downstream through a series of pipes under Boren Brick Road and existing NC Hwy 24. The existing wetland system above Boren Brick Road, wetland 88A, will

be used as the reference wetland system.

R-2303C Mitigation Site 1 (ONE ID #082-009)

This site is located on plan sheet 23 from approximately Sta. 1000 to 1005 Lt. The pond (133) will be drained as part of the construction of R-2303B. The pond is surrounded by Wagram loamy sand soils. It has a headwater wetland system located adjacent to its northeastern corner and outflows into a UT to Little Coharie (LC11) through a 36" pipe under existing NC Hwy 24.

R-2303D Mitigation Site 1 (ONE ID #082-010)

This site is located on plan sheet 18 northwest of approximate Sta. 1290 to 1295 Lt. Wetland 161 located adjacent to NC Hwy 24 is a riparian wetland that is bisected by the existing causeway of NC 24. A portion of Wetland 161 has been clear cut. This wetland also includes an excavated pond and side cast spoil. Soils within this mitigation area are either Johns fine sandy loam or Kalmia sandy loam. Both are non-hydric with hydric inclusions in Sampson County.

R-2303D Mitigation Site 2 (ONE ID #082-011)

This site is located on plan sheet 20 from approximately Sta. 1321+50 Lt. to Sta. 1325+50 Lt. on plan sheet 21. It is bordered on the north and west by wetland 165 and on the east by wetland 167. The soils in this area are mapped as Paxville fine loamy sand, a hydric soil in Sampson County. Wetland 165 is part of a 4600 acre NCEEP high quality wetland mitigation site known as the Great Coharie Tract (GCT). An old abandoned causeway extends into the wetland from NC Hwy 24.

3.0 SITE PROTECTION INSTRUMENT

The mitigation areas are presently located within or will be located within the NCDOT Right-of-Way for the project. They will be managed to prohibit all use inconsistent with its use as mitigation property, including any activity that would materially alter the biological integrity or functional and educational value of the site, consistent with the mitigation plan.

The site is designated on the plan sheets as a mitigation area and will placed on the Natural Environment Section's Mitigation GeoDatabase. This database is provided to all NCDOT personnel as a record of mitigation sites and their attributes, including prohibited activities. NCDOT is held by virtue of the permit associated with this mitigation site and the associated roadway impacts to protect the site in perpetuity.

4.0 OBJECTIVES

The goal of the proposed onsite mitigation is to mitigate for impacts due to R-2303 by restoring adjacent wetland and stream systems to their natural conditions through the removal of the degrading factors of ponding, fill, and disturbance. This will be achieved on seven individual sites

described below for a total of 15.89 acres of wetland and 900 feet of stream.

5.0 MITIGATION WORK PLAN

Each mitigation site will be constructed along with the construction of its associated section of the roadway project. Following the successful completion of site grading and stabilization, each site will be replanted with appropriate native tree species. Wetland restoration areas will be planted with a mix of bare-root tree species at a density of 680 stems per acre. The stream restoration areas will be stabilized by planting a mix of live stakes on three foot centers and matting with coir fiber on the banks as necessary. Reforestation plans for each can be found in Appendix B.

Native wetland seed and mulch will be applied on all disturbed areas within the mitigation sites for stabilization purposes according to guidance and standard procedures of NCDOT's Roadside Environmental Unit. An as-built report will be submitted within 60 days of completion of the project.

The Natural Environment Section shall be contacted to provide construction assistance to ensure that each mitigation area is constructed appropriately.

R-2303B Mitigation Site 1

NCDOT will drain P43 and P45 in conjunction with the construction of R-2303B. Based on topography and soils, the draining of these two features will result in restoration of a total of 1.84 acres of riparian wetlands. It will also result in the enhancement of 5.41 acres of wetlands (wetlands 42 and 44) and the preservation of 0.23 acres at wetland 46.

R-2303B Mitigation Site 2

NCDOT will restore 2.19 acres of riparian wetlands at Site 2. The pond associated with this mitigation area, identified as 88 in the NRTR, will be drained as part of the construction of R-2303B. The existing 30" pipe under NC Hwy 24 will be replaced and the invert of the new structure will be adjusted to assist in the wetland restoration within the drained pond 88.

Wetland 88a is a riparian wetland located on the east side of Boren Brick Road. It will be used as a reference for the reforestation plan of wetland restoration within pond 88. Soils within this wetland as well as adjacent to the pond are mapped as Aycock silt loam, a non-hydric soil in Sampson County, as well as Nahunta loam, a non-hydric soil with hydric inclusions.

R-2303C Mitigation Site 1

The pond associated with this mitigation area, identified as 133 in the NRTR, will be drained as part of the construction of R-2303C. The existing pipe under NC Hwy 24 will be replaced and the invert of the new structure will be adjusted to assist in the wetland and stream restoration within the drained pond 133. This new structure will outfall into LC11, a UT to Little Coharie. LC11 has a C Sw classification and is a Rosgen E type channel. Based on valley length and topography, NCDOT will restore 550 ft. of the stream system within this drained pond area as well as restore 2.5 acres of riparian wetlands.

R-2303D Mitigation Site 1

This site involves removing a portion of pavement and causeway along existing NC 24 and grading to match elevations within the adjacent Wetland 161. It also involves backfilling the existing pond with material side cast to match the existing, adjacent wetland elevation. The clear cut portion of Wetland 161 within the ROW will be revegetated. This work will result in the restoration of 1.55 acres and enhancement of 1.3 acres of riparian wetland.

R-2303D Mitigation Site 2

This site involves the removal of an old roadway causeway and grading to match elevations within the adjacent Wetlands 165 and 167. NCDOT will restore 0.87 acres of riparian wetland in this area.

6.0 PERFORMANCE STANDARDS

The hydrologic success criteria requires that the site demonstrate saturation or inundation within 12 inches of the soil surface for a consecutive 12.5% of the growing season during years of normal rainfall. Groundwater monitoring gauge will be installed in existing, adjacent reference wetlands where practical and feasible for comparison to groundwater gauges throughout the restoration and enhancement (B site 1) areas.

Success for vegetation monitoring within the riparian buffer and wetland areas are based on the survival of at least 260 stems of five year old trees at year five. Assessment of channel stability will be based on the survival of riparian vegetation and lack of significant bank erosion, channel widening or down-cutting.

7.0 MONITORING REQUIREMENTS

Groundwater gauges will be installed within the wetland enhancement (on B Site 1) and restoration areas as for hydrologic monitoring. Gauges will be placed within the enhancement areas pre-construction to collect baseline data for comparison, analysis, and determination of enhancement area boundaries. Number and placement of gauges will be site specific and determined based on contour intervals.

The following components of Level 1 stream restoration monitoring will be performed each year of the 5-year monitoring period: reference photos, visual inspection of channel stability, and plant survival. Specific problem areas and proposed/required remedial action will be identified.

Vegetation monitoring will consist of counts of planted stems within 50 x 50 foot plots established within the restoration and enhancement (D site 1) areas. Plot locations will be randomly selected.

These monitoring activities will be conducted for five years and documented in an annual report distributed to the regulatory agencies.

8.0 OTHER INFORMATION

N/A

9.0 DETERMINATION OF CREDITS

Based on field and meeting discussions with agency representatives and per the NCDOT plans and 401/404 permit application for R-2303; NCDOT proposes the following types of mitigation and ratios for each site.

Roadway Section Site Number	Wetland Restoration Acres (1:1)	Wetland Enhancement Acres (5:1)	Wetland Preservation Acres (10:1)	Stream Restoration Feet (1:1)	Stream Preservation Feet (10:1)
B Site1	1.84	5.41	0.23		
B Site 2	2.19	-	-	-	-
C Site 1	2.5	-	-	550	-
D Site 1	1.55	1.3	-	-	-
D Site 2	0.87	-	-	-	-

An as-built report will be submitted within 60 days of completion of the each mitigation site to verify actual mitigation areas constructed and planted. The success of the mitigation areas and determination of final credits will be based upon successful completion and closeout of the monitoring period.

9.1 CREDIT RELEASE SCHEDULE

NCDOT proposes immediate, full release of the proposed mitigation as on-site mitigation for unavoidable impacts associated with R-2303.

10.0 GEOGRAPHIC SERVICE AREA

The proposed Geographic Service Area (GSA) for the mitigation sites is composed of the 8-digit Hydrologic Cataloging Unit (HUC) 03030006.

11.0 MAINTENANCE PLAN

The mitigation site will be held by NCDOT and placed on the NES mitigation geodatabase. Once monitoring is completed and the site is closed out, it will be placed in the NCDOT Stewardship Program for long term maintenance and protection.

If an appropriate third party recipient is identified in the future, then the transfer of the property will include a conservation easement or other measure to protect the natural features and mitigation value of the site in perpetuity.

12.0 LONG TERM ADAPTIVE MANAGEMENT PLAN

The sites will be managed by the NCDOT according to the mitigation plan. Beaver management will be instituted during the monitoring period if necessary. Encroachments into the mitigation areas will be investigated and appropriate measures taken to minimize any negative effects. In the event that unforeseen issues arise that affect the management of the site, any remediation will be addressed by NCDOT in coordination with the Interagency Review Team.

13.0 FINANCIAL ASSURANCES

NCDOT is held by permit conditions associated with R-2303 to preserve the mitigation areas. NCDOT has established funds for each project and within each Division to monitor mitigation sites and to protect them in perpetuity.

ECOSYSTEM ENHANCEMENT PROGRAM

Mitigation Total for Sections A-F*

Cape Fear 03030006 SICP	Stream			Wetland			Buffer (sq. ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	9186**	31.68	15.11	0	0	0

*See Appendix A for individual EEP Mitigation Acceptance Letters

R-2303B Mitigation Site 1

Enhancement

42

Restoration

SR 4

43

44

Enhancement

45

Restoration

46

Preservation

0 130 260 520 Feet

R-2303B Mitigation Site 2

N
W E
S

Restoration

88

88a

Boren Brick Road

BEGIN CONSTRUCTION
-Y23- POT STA. 16+75.00

-L- POT STA. 687+00.06
-Y23- POT STA. 19+59.43

-L- S 61° 06' 17.1" E

S 28° 52' 11.4" W

END SBG
STA. 684+70 LT

180-40-180
8.5° OFF

150' TAPER

150' TAPER

300' TAPER

23' DR

17' DR

20' INC.

50' TAPER

+85.00

+00.06

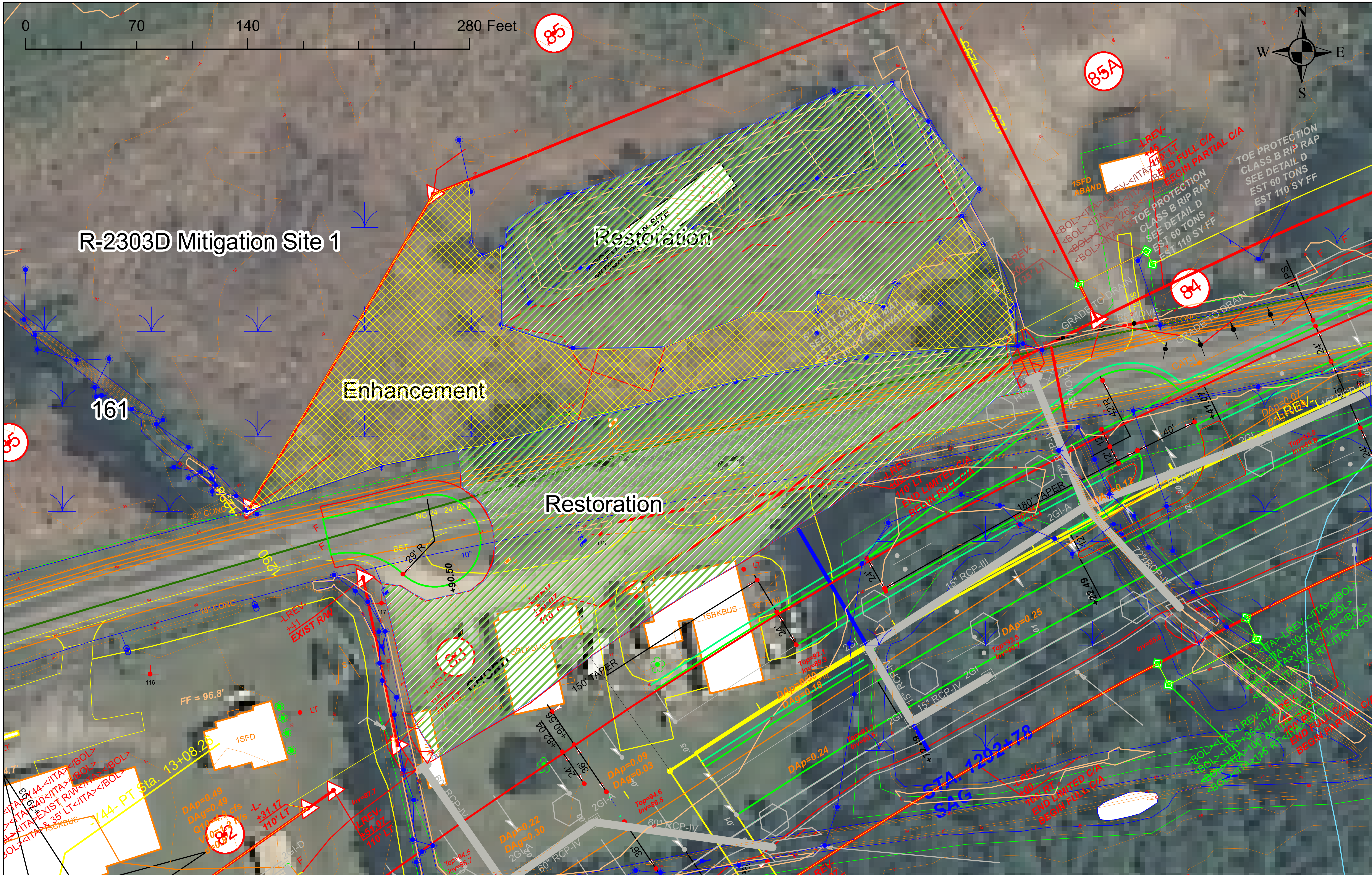
690

680

15

0 120 240 480 Feet


R-2303C Mitigation Site 1
0
70
140
280 Feet
N
W
E
S
133
Restoration
Stream Restoration
NO CHANNEL
OVERLAND FLOW
PI Sta 1003+58.50
D = 2° 27' 14.2" (RT)
D = 0° 34' 22.6"
L = 428.30'
T = 214.18'
R = 10,000.00'
CONC SLAB
WELL
SEPTIC TANK
1S BLK BLDG
PROPANE TANK
ON CONC SLAB
C16
136.34
WATER PUMP ?
BRICK FOUNTAIN
GAZEBO
C12
137.42
W/LT
C10
136.48
W/LT
C9
135.10
W/LT
HTR
1000
SOIL
12' DR.
20' DR.
CAT-1
48" CHL
72" CHL
WAREHOUSE
MTL
1SMB
GRAU 350
GR
12" RCP
36" CMP
15" RCP
CK100
129.65
CK101
127.45
NC 24 25' BST
10' PS
24'
46'



0
70
140
280 Feet
N
W
E
S
R-2303D Mitigation Site 1
Restoration
Enhancement
Restoration
161
85
85A
84
82
TOE PROTECTION
CLASS B RIP RAP
SEE DETAIL D
EST 60 TONS
EST 110 SY FF
1SFD
ABAND
GRADE TO DRAIN
REMOVE
18" CONC
30" CONC
CAT-1
-LREV-
NC 24 24' BST
BST
29' R
+90.50
1290
EXIST R/W
FF = 96.8'
1SFD
1SBKBUS
150' TAPER
180' TAPER
60" RCP-IV
72" RCP-IV
15" RCP-III
15" RCP-IV
2GI-A
-Y44- PT Sta. 13+08.26
DAp=0.49
DAg=0.49
-L-
+31.17
110' LT
+51.07
110' LT
DAp=0.09
DAg=0.03
DAp=0.22
DAg=0.30
DAp=0.24
DAp=0.25
Top=93.5
Inv=90.7
Top=94.6
Inv=86.5
Top=94.5
Inv=86.7
Top=92.8
Inv=89.8
Inv=85.0
+22.49
+41.07
STA. 1292+78
SAG
END LIMITED C/A
BEGIN FULL C/A
END FULL C/A
BEGIN PARTIAL C/A

R-2303D Mitigation Site 2

0 62.5 125 250 Feet

91A

N W E S

Great Coharrie Tract (GCT)

165

167

1320

1325

Restoration

PROPOSED ON-SITE
STREAM

BAG STA. 1021+00

1SF BUS

1SF WIRE FENCE BLDG

93

-LREV-
66.40
110' LT

BEGIN WW FENCE

<BOL><ITA>-LREV-</ITA></BOL>
<BOL><ITA>144.69</ITA></BOL>
<BOL><ITA>101.37' &</ITA></BOL>
<BOL><ITA>110' LT</ITA></BOL>

-LREV- 66.40 110' LT WW FENCE

-LTS 89° 58' 25.4" E

ATTENUATOR

-LREV- S 89° 58' 25.4" E

BEGIN APPROACH SLAB
-L- STA 1325+79.98 LT

BEGIN BRIDGE
-L- STA 1326+04.45 LT

END BRI
-L- STA

END BRIDGE

TOE PROTECTION
CLASS B RIP RAP
SEE DETAIL D
EST 400 TONS
EST 730 SY FF

TOE PROTECTIO
CLASS B RIP RA
SEE DETAIL D
EST 55 TONS
EST 100 SY FF

<BOL><ITA>PROP. 2'-6"</ITA></BOL>
<BOL><ITA>C&G</ITA></BOL>

EXPOSED WIRE

TYPE M350

TYPE B-77

15" RCP-III

15" RCP-IV

18" RCP-III

18" RCP-IV

DAp=0.22
DAg=0.25

DAp=0.06
DAg=0.04

DAp=0.17
DAg=0.10

DAp=0.04

DAp=0.19

DAp=0.27

DAp=0.08

DAp=0.20

Top=96.5
Inv=93.7

Top=96.3
Inv=93.3

Top=96.8
Inv=94.0

Top=96.9
Inv=94.1

Top=96.6

Inv=87.8

Inv=88.3

GRADE POINTS

GRADE POINT

650' TAPER LT & RT
GRADE POINT TRANSITION

650' TAPER LT & RT
GRADE POINT TRANSITION

CL B RIP RAP
EST 1 TONS

20'

PA22 PA21 pa20

GB18 GB11 GB9 GB8 GB7 GB6 GB5 GB4 GB3 GB2 GB1

GI10 GI11 GI12 GI13 GI14 GI15 GI16 GI17

pa0 bf1 bf2 bf3

09/08/99

TIP PROJECT: R-2303A

CONTRACT:

$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2303A	1	

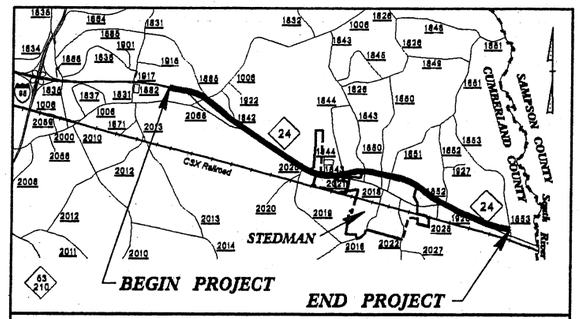
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34416.1.1	STPNHF-F-8-2(17)	P.E.
34416.2.2		R/W, UTIL.

CUMBERLAND COUNTY

LOCATION: NC 24 FROM WEST OF SR 1006 (MAXWELL RD./ CLINTON RD.) TO SR 1853 (JOHN NUNNERY RD.)

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

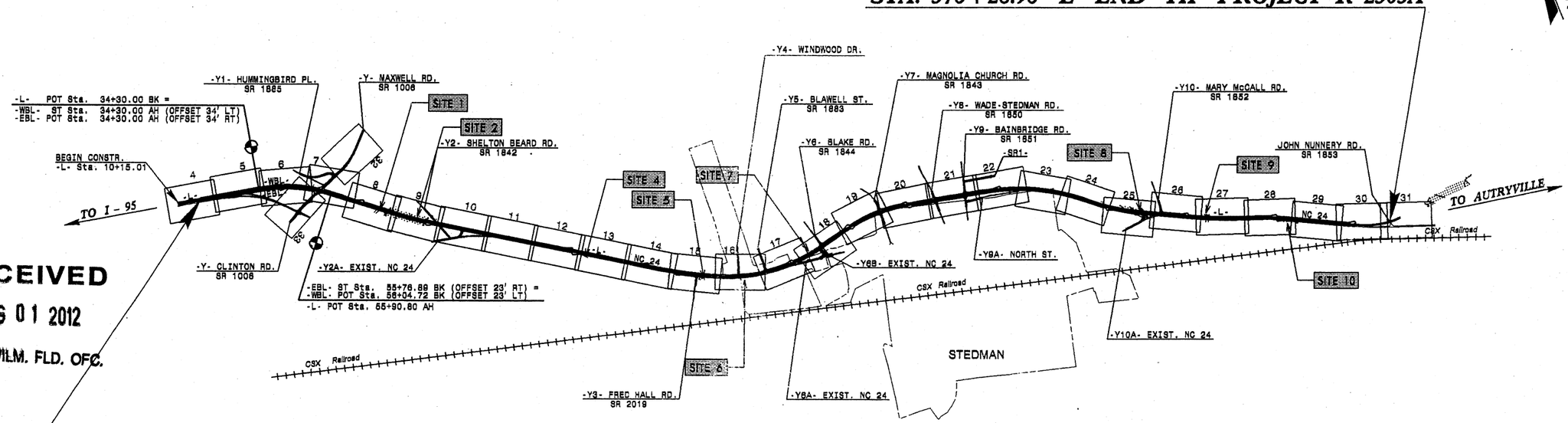
Permit Drawing
Sheet 1 of 40.
Revised 7/23/12



VICINITY MAP

NAD 83/95

STA. 376+28.96 –L– END TIP PROJECT R-2303A



STA. 16+90.00 –L– BEGIN TIP PROJECT R-2303A

A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF STEDMAN

THIS IS A LIMITED AND PARTIAL CONTROL OF ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

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

WETLAND PERMIT /STREAM IMPACT

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

PLANS: 50 25 0 50 100
PROFILE (HORIZONTAL): 50 25 0 50 100
PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2011 = 19,264
ADT 2031 = 30,144
DHV = 11 %
D = 65 %
T = 8 % *
V = 60 MPH
FUNC. CLASS = EXPY TYPE II
* TTST 5% DUAL 3%
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2303A	= 6.807 MILES
TOTAL LENGTH TIP PROJECT R-2303A	= 6.807 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: October 15, 2010

LETTING DATE: October 16, 2012

GARY LOVERING, PE
PROJECT ENGINEER

RICK DECOLA, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

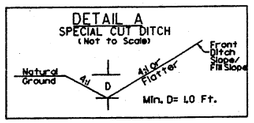
P.E.
STATE HIGHWAY DESIGN ENGINEER

PROJECT REFERENCE NO.	SHEET NO.
R-2303A	2-T
R/W SHEET NO.	
HYDRAULICS ENGINEER	

DITCH DETAILS

Permit Drawing
Sheet 2 of 40
Revised 7/23/12

DETAIL A
SPECIAL CUT DITCH
(Not to Scale)

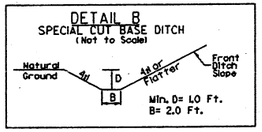


Min. D= 1.0 Ft.

FROM STA. 21+50 TO STA. 28+40 -L- LT.
FROM STA. 53+70 TO STA. 60+00 -L- LT.
FROM STA. 64+50 TO STA. 70+76 -L- LT.
FROM STA. 107+00 TO STA. 112+33 -L- LT.
FROM STA. 112+33 TO STA. 114+00 -L- LT.
FROM STA. 115+00 TO STA. 117+90 -L- LT.
FROM STA. 117+90 TO STA. 120+50 -L- LT.
FROM STA. 121+00 TO STA. 124+50 -L- LT.
FROM STA. 125+50 TO STA. 130+00 -L- LT.
FROM STA. 131+50 TO STA. 133+70 -L- LT.
FROM STA. 134+50 TO STA. 148+00 -L- LT.
FROM STA. 148+00 TO STA. 152+00 -L- LT.
FROM STA. 175+00 TO STA. 178+00 -L- LT.
FROM STA. 179+00 TO STA. 181+00 -L- LT.
FROM STA. 182+50 TO STA. 194+00 -L- LT.
FROM STA. 210+00 TO STA. 215+00 -L- LT.
FROM STA. 223+00 TO STA. 224+05 -L- LT.
FROM STA. 241+50 TO STA. 248+50 -L- LT.
FROM STA. 305+50 TO STA. 307+50 -L- LT.
FROM STA. 309+50 TO STA. 310+00 -L- LT.
FROM STA. 311+00 TO STA. 316+00 -L- LT.
FROM STA. 316+50 TO STA. 322+00 -L- LT.
FROM STA. 323+50 TO STA. 330+00 -L- LT.
FROM STA. 330+00 TO STA. 332+50 -L- LT.
FROM STA. 333+50 TO STA. 335+50 -L- LT.
FROM STA. 336+50 TO STA. 340+00 -L- LT.
FROM STA. 351+00 TO STA. 360+50 -L- LT.

FROM STA. 30+00 TO STA. 33+80 -L- RT
FROM STA. 49+00 TO STA. 50+50 -L- RT.
FROM STA. 52+30 TO STA. 55+00 -L- RT.
FROM STA. 90+00 TO STA. 96+80 -L- RT.
FROM STA. 96+92 TO STA. 99+50 -L- RT.
FROM STA. 107+00 TO STA. 112+80 -L- RT.
FROM STA. 112+80 TO STA. 115+00 -L- RT
FROM STA. 115+50 TO STA. 124+50 -L- RT.
FROM STA. 129+00 TO STA. 131+00 -L- RT.
FROM STA. 138+00 TO STA. 148+00 -L- RT.
FROM STA. 148+00 TO STA. 154+50 -L- RT.
FROM STA. 155+50 TO STA. 162+00 -L- RT.
FROM STA. 162+50 TO STA. 165+50 -L- RT.
FROM STA. 175+00 TO STA. 186+00 -L- RT.
FROM STA. 187+00 TO STA. 195+00 -L- RT.
FROM STA. 200+00 TO STA. 203+50 -L- RT.
FROM STA. 215+00 TO STA. 224+00 -L- RT.
FROM STA. 225+50 TO STA. 231+00 -L- RT.
FROM STA. 232+00 TO STA. 236+00 -L- RT.
FROM STA. 242+00 TO STA. 248+00 -L- RT.
FROM STA. 250+50 TO STA. 252+00 -L- RT.
FROM STA. 259+00 TO STA. 266+76 -L- RT.
FROM STA. 266+76 TO STA. 276+50 -L- RT.
FROM STA. 289+00 TO STA. 300+00 -L- RT.
FROM STA. 316+00 TO STA. 322+00 -L- RT.
FROM STA. 323+00 TO STA. 326+50 -L- RT.
FROM STA. 327+00 TO STA. 331+00 -L- RT.
FROM STA. 332+22 TO STA. 335+90 -L- RT.
FROM STA. 336+21 TO STA. 337+00 -L- RT.
FROM STA. 343+50 TO STA. 344+27 -L- RT.
FROM STA. 358+00 TO STA. 361+00 -L- RT.
FROM STA. 24+50 TO STA. 25+50 -Y- RT.
FROM STA. 24+22 TO STA. 30+41 -Y- LT.
FROM STA. 33+11 TO STA. 34+50 -Y- LT.
FROM STA. 14+85 TO STA. 18+00 -Y4- RT.
FROM STA. 12+00 TO STA. 13+00 -Y7- RT.
FROM STA. 12+70 TO STA. 13+25 -Y6B- LT.
FROM STA. 12+80 TO STA. 14+40 -Y6B- RT.
FROM STA. 14+86 TO STA. 16+00 -Y7- RT.
FROM STA. 10+00 TO STA. 12+00 -Y8- LT.
FROM STA. 11+00 TO STA. 11+80 -Y8- RT.
FROM STA. 14+00 TO STA. 14+50 -Y8- LT.
FROM STA. 14+00 TO STA. 14+50 -Y8- RT.
FROM STA. 12+00 TO STA. 13+00 -Y10- RT.

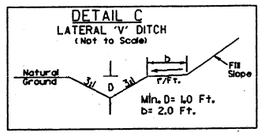
DETAIL B
SPECIAL CUT BASE DITCH
(Not to Scale)



Min. D= 1.0 Ft.
B= 2.0 Ft.

FROM STA. 195+50 TO STA. 209+00 -L- LT.
FROM STA. 203+50 TO STA. 214+50 -L- RT.

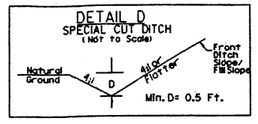
DETAIL C
LATERAL 'V' DITCH
(Not to Scale)



Min. D= 1.0 Ft.
D= 2.0 Ft.

FROM STA. 167+50 TO STA. 174+00 -L- LT.
FROM STA. 236+00 TO STA. 240+50 -L- RT.
FROM STA. 252+00 TO STA. 258+00 -L- RT.
FROM STA. 276+50 TO STA. 284+00 -L- RT.

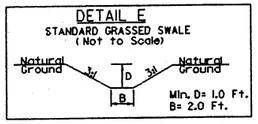
DETAIL D
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 0.5 Ft.

FROM STA. 365+50 TO STA. 367+00 -L- RT.

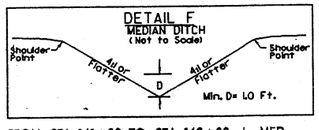
DETAIL E
STANDARD GRASSED SWALE
(Not to Scale)



Min. D= 1.0 Ft.
B= 2.0 Ft.

STA. 124+46 -L- LT.
STA. 147+98 -L- LT
STA. 190+39 -L- LT.
STA. 215+02 -L- LT.
STA. 96+70 -L- RT
STA. 304+93 -L- RT

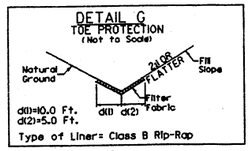
DETAIL F
MEDIAN DITCH
(Not to Scale)



Min. D= 1.0 Ft.

FROM STA. 161+00 TO STA. 162+00 -L- MED.
FROM STA. 196+00 TO STA. 199+00 -L- MED.
FROM STA. 211+00 TO STA. 214+00 -L- MED.

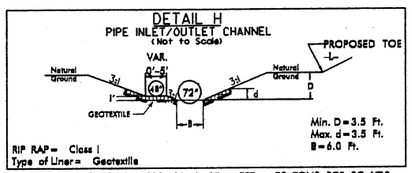
DETAIL G
TOE PROTECTION
(Not to Scale)



d(1)=10.0 Ft.
d(2)=5.0 Ft.
Type of Liner= Class B Rip-Rap

FROM STA. 300+38 TO STA. 305+00 -L- LT.
FROM STA. 322+68 TO STA. 323+10 -L- RT.

DETAIL H
PIPE INLET/OUTLET CHANNEL
(Not to Scale)

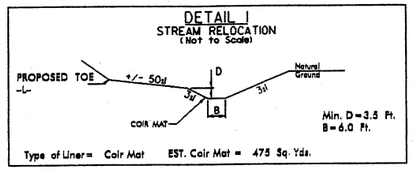


Min. D=3.5 Ft.
Max. d=3.5 Ft.
B=6.0 Ft.

RIP RAP= Class I
Type of Liner= Geotextile

STA. 299+70 TO STA. 300+05 -L- LT EST= 70 TONS /175 SQ. YDS.
STA. 301+24 TO STA. 301+52 -L- RT EST= 90 TONS /150 SQ. YDS.

DETAIL I
STREAM RELOCATION
(Not to Scale)

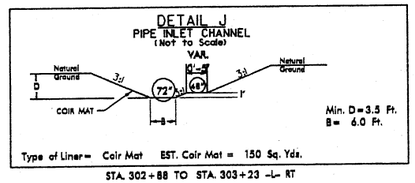


Min. D=3.5 Ft.
B=6.0 Ft.

Type of Liner= Coir Mat EST. Coir Mat = 475 Sq. Yds.

STA. 301+52 TO STA. 302+88 -L- RT

DETAIL J
PIPE INLET CHANNEL
(Not to Scale)

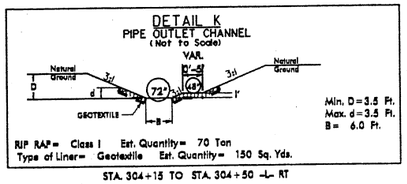


Min. D=3.5 Ft.
B= 6.0 Ft.

Type of Liner= Coir Mat EST. Coir Mat = 150 Sq. Yds.

STA. 302+88 TO STA. 303+23 -L- RT

DETAIL K
PIPE OUTLET CHANNEL
(Not to Scale)

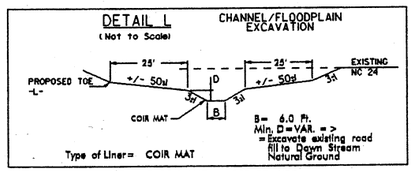


Min. D=3.5 Ft.
Max. d=3.5 Ft.
B= 6.0 Ft.

RIP RAP= Class I Est. Quantity= 70 Ton
Type of Liner= Geotextile Est. Quantity= 150 Sq. Yds.

STA. 304+15 TO STA. 304+50 -L- RT

DETAIL L
CHANNEL/FLOODPLAIN EXCAVATION
(Not to Scale)



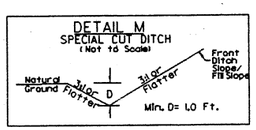
B= 6.0 Ft.
Min. D=VAR. =>
=Excavate existing road fill to Down Stream Natural Ground

Type of Liner= COIR MAT

EST. COIR MAT = 350 SQ YDS

FROM STA. 304+50 TO STA. 305+41 -L- RT

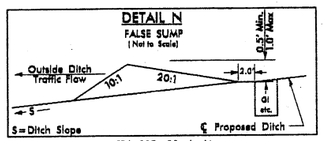
DETAIL M
SPECIAL CUT DITCH
(Not to Scale)



Min. D= 1.0 Ft.

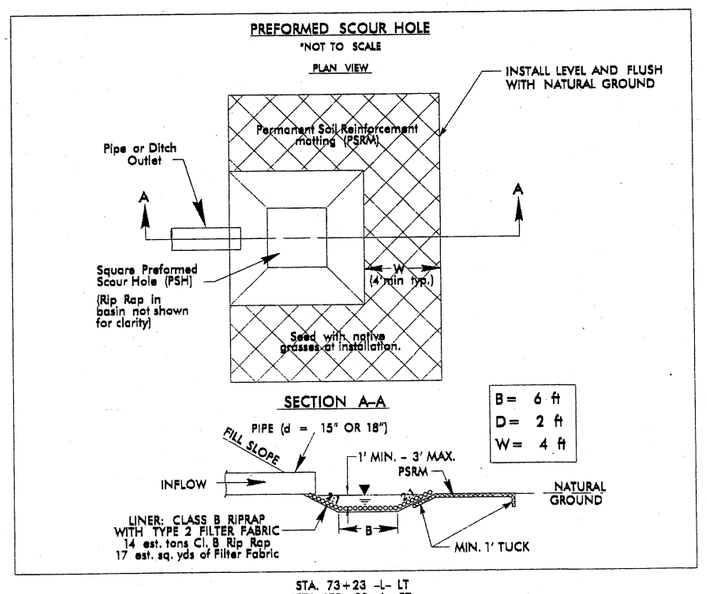
FROM STA. 300+00 TO STA. 301+33 -L- RT

DETAIL N
FALSE SUMP
(Not to Scale)



STA. 305+20 -L- Lt

PREFORMED SCOUR HOLE
*NOT TO SCALE



STA. 73+23 -L- LT
STA. 172+00 -L- RT

8/17/99

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$

R/W SHEET NO.

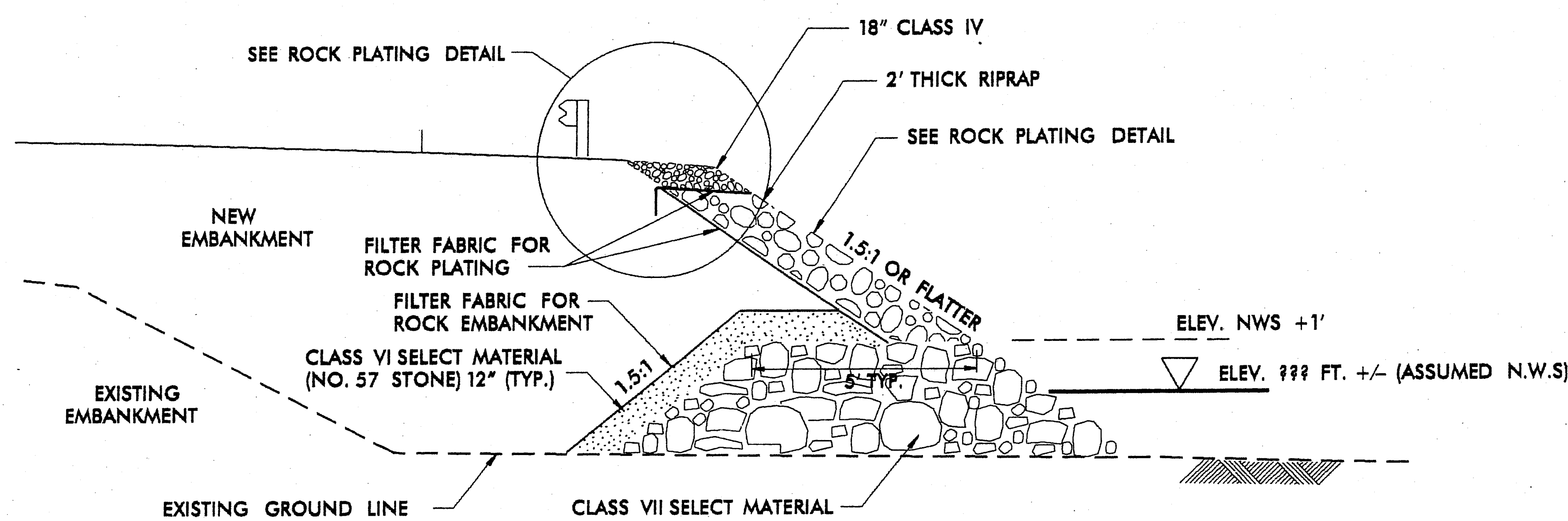
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 3 of 40

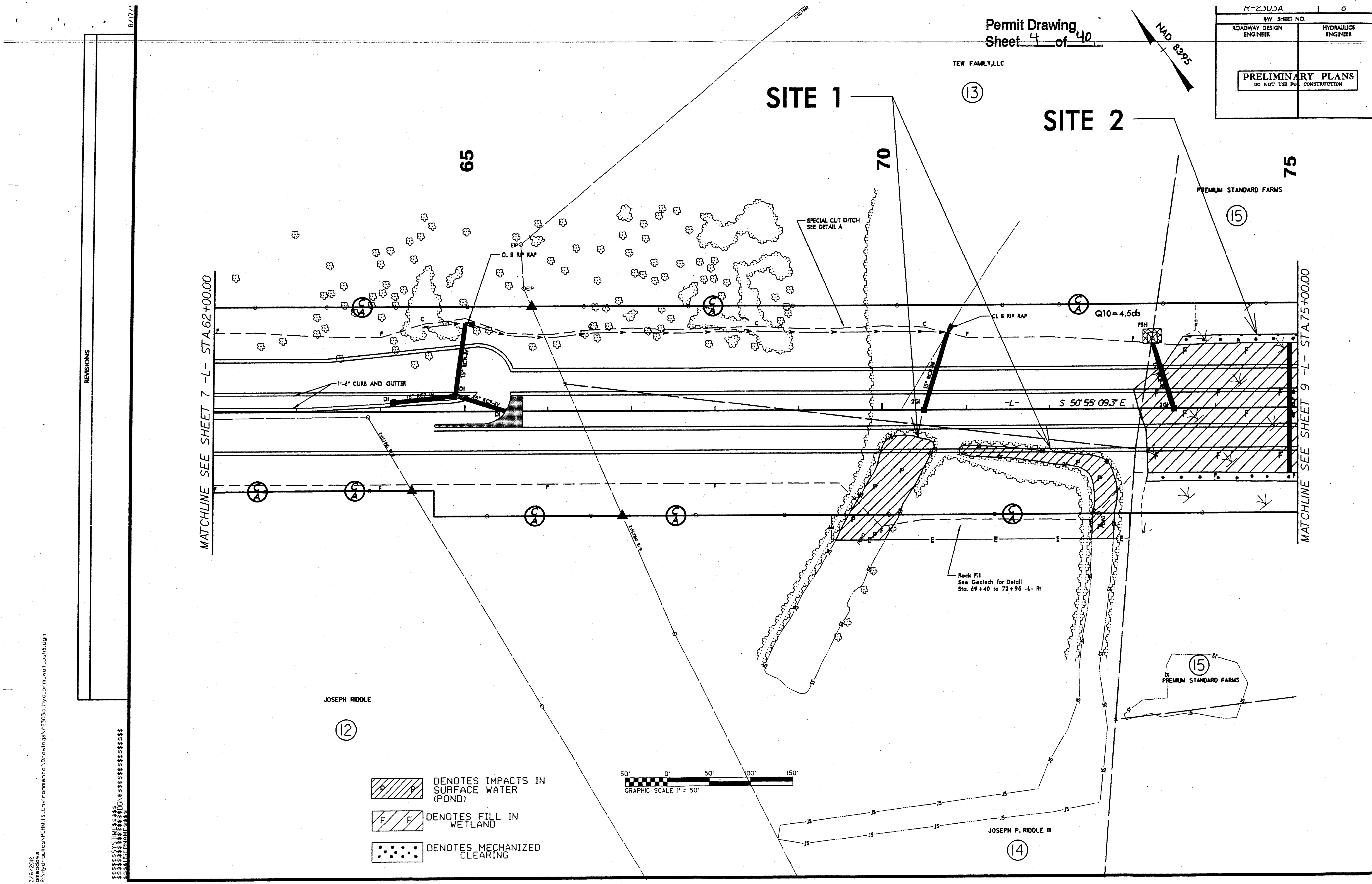
REVISIONS



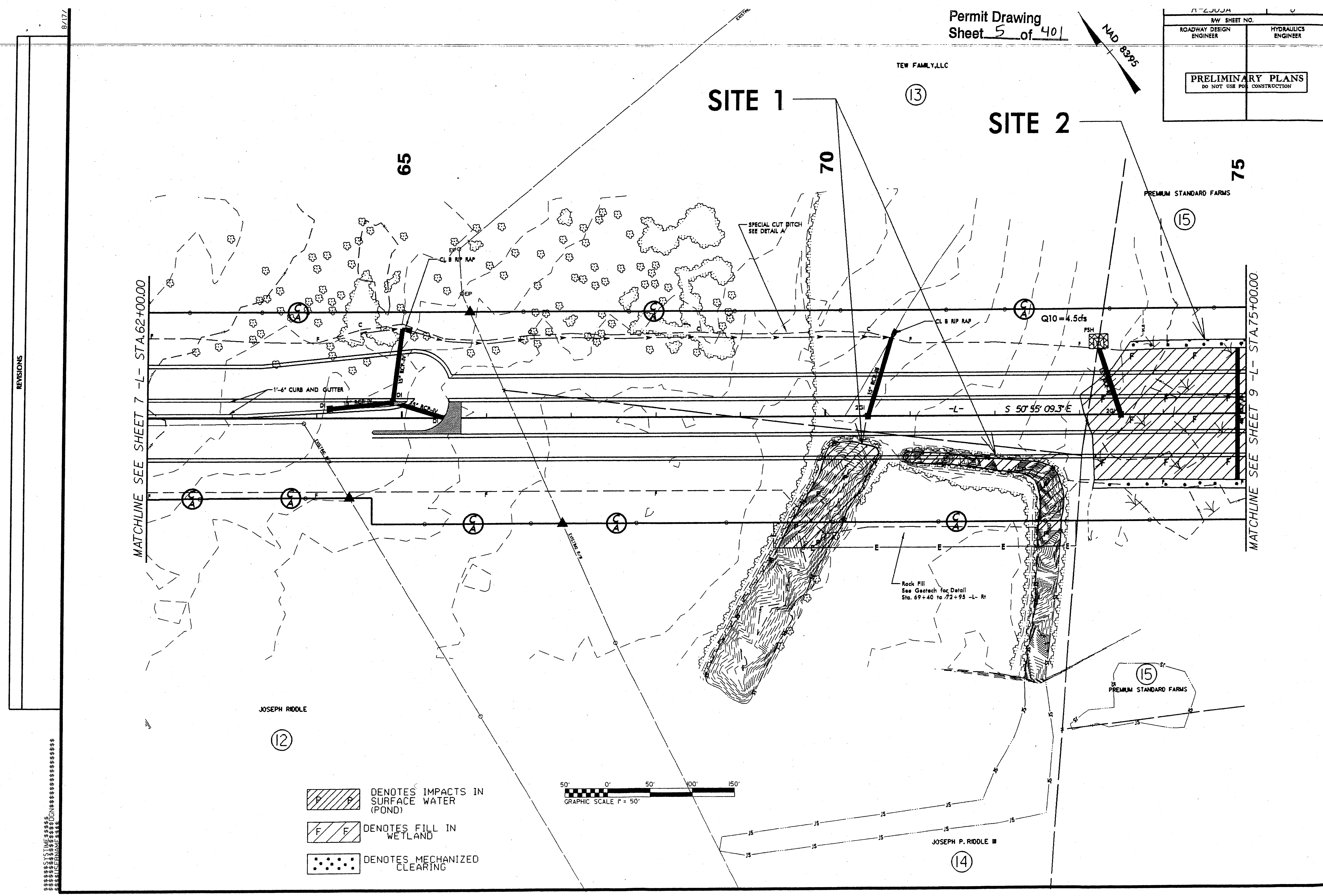
TYPICAL ROCK EMBANKMENT/ROCK PLATING DETAIL

N.T.S

$$$$SYSTIME$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$


Permit Drawing
Sheet 4 of 40
R-2303A
8
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
NAD 83/95
TEW FAMILY,LLC
13
SITE 1
SITE 2
65
70
75
PREMIUM STANDARD FARMS
15
SPECIAL CUT DITCH
SEE DETAIL A
CL B RIP RAP
EIP
Q10=4.5cfs
FSH
1'-6" CURB AND GUTTER
15" RCP-IV
15" RCP-III
DI
2GI
-L-
S 50°55' 09.3" E
EXISTING R/W
MATCHLINE SEE SHEET 7 -L- STA.62+00.00
MATCHLINE SEE SHEET 9 -L- STA.75+00.00
REVISIONS
Rock Fill
See Geotech for Detail
Sta. 69+40 to 72+95 -L- Rt
JOSEPH RIDDLE
12
JOSEPH P. RIDDLE III
14
PREMIUM STANDARD FARMS
15
DENOTES IMPACTS IN SURFACE WATER (POND)
DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'
2/6/2012
ameadows
R:\Hydraulics\PERMITS_Environmental\Drawings\r2303a_hyd_prm_wet_psh8.dgn
$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

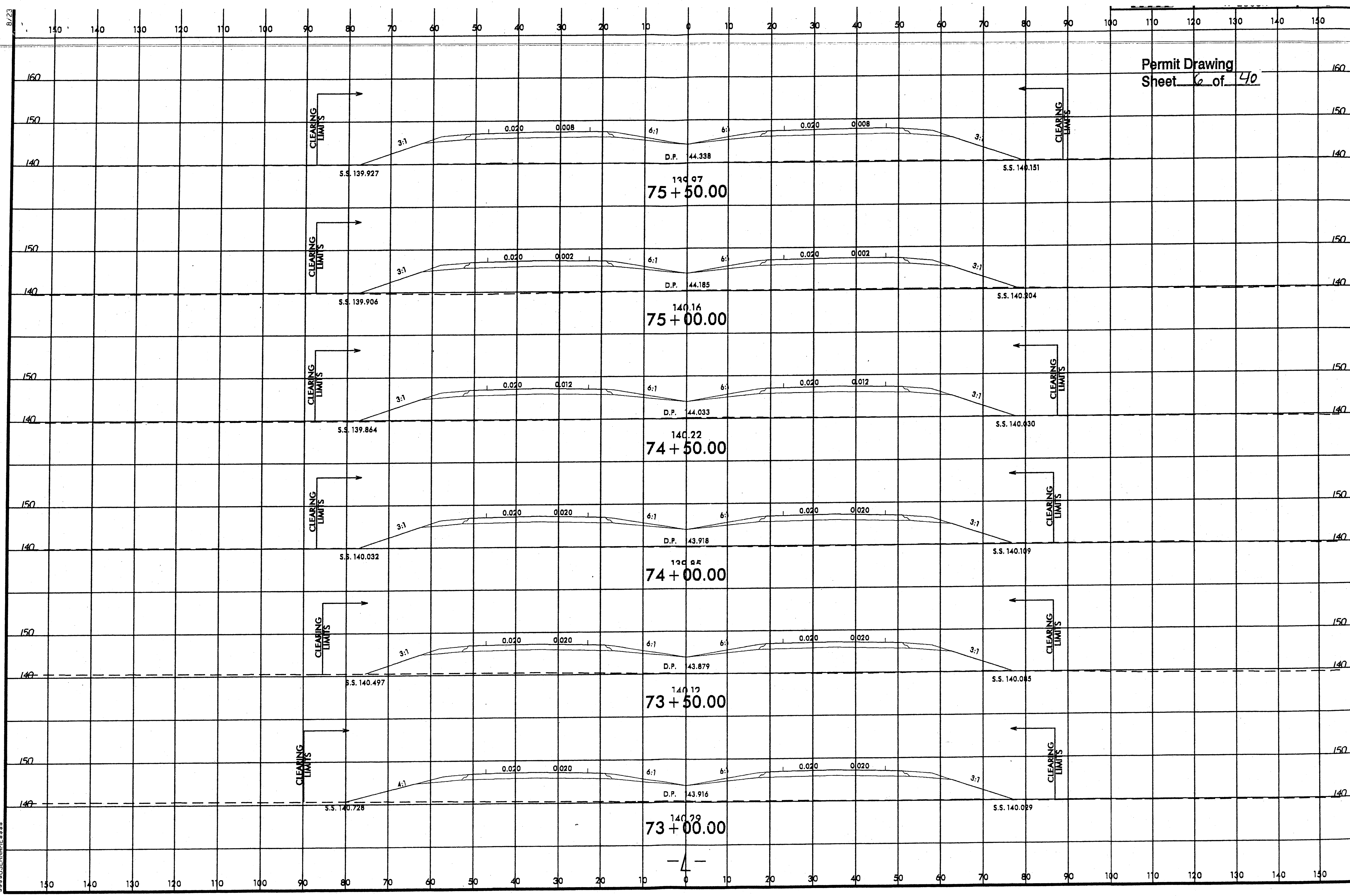
Permit Drawing
Sheet 5 of 401



2/6/2012
ameadows
R:\Hydraulics\PERMITS_Environmental\Drawings\r2303a_hyd_prm_wet_psh8.dgn

$$$$$SYSTIME$$$$
$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

Permit Drawing
Sheet 6 of 40



1/30/2012
ameadows
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$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO. R-2303A	SHEET NO. 9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 7 of 40

SITE 2

NOTE: Do Not Bury Equalizer Pipes, Place on Natural Ground. Equalizer Pipes are Pipes: 0809-0810, 0906-0904, 0901-0902, 0903-0907, and 0911-0909.

PREMIUM STANDARD FARMS (15)

SR 842 SHELTON BEARD RD 22' BST

18"CONC

POT Sta. 10+00.00

NAD 83'95

75

80

85

PC Sta. 76+07.81
BRG BK = S 50° 55' 09.3" E

-L- STA. 75+00.00

MATCHLINE SEE SHEET 8 -L-

PT Sta. 83+95.26

DONALD CULBRETH (16)

BEGIN CONSTR.
-Y2- STA. 12+80.00

-Y2-

S 19° 30' 22" E

CL B RIP RAP

END CONSTR.
-Y2- STA. 13+60.00

S 56° 33' 32" E

-L- STA. 89+00.00

MATCHLINE SEE SHEET 10 -L-

CELLULAR TELEPHONE TOWER

10' CHL & 35BW

-L- POT Sta. 88+53.85 =
-Y2- POT Sta. 15+84.67

F/F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

POT Sta. 13+83.69

-Y2A-

EXISTING R/W

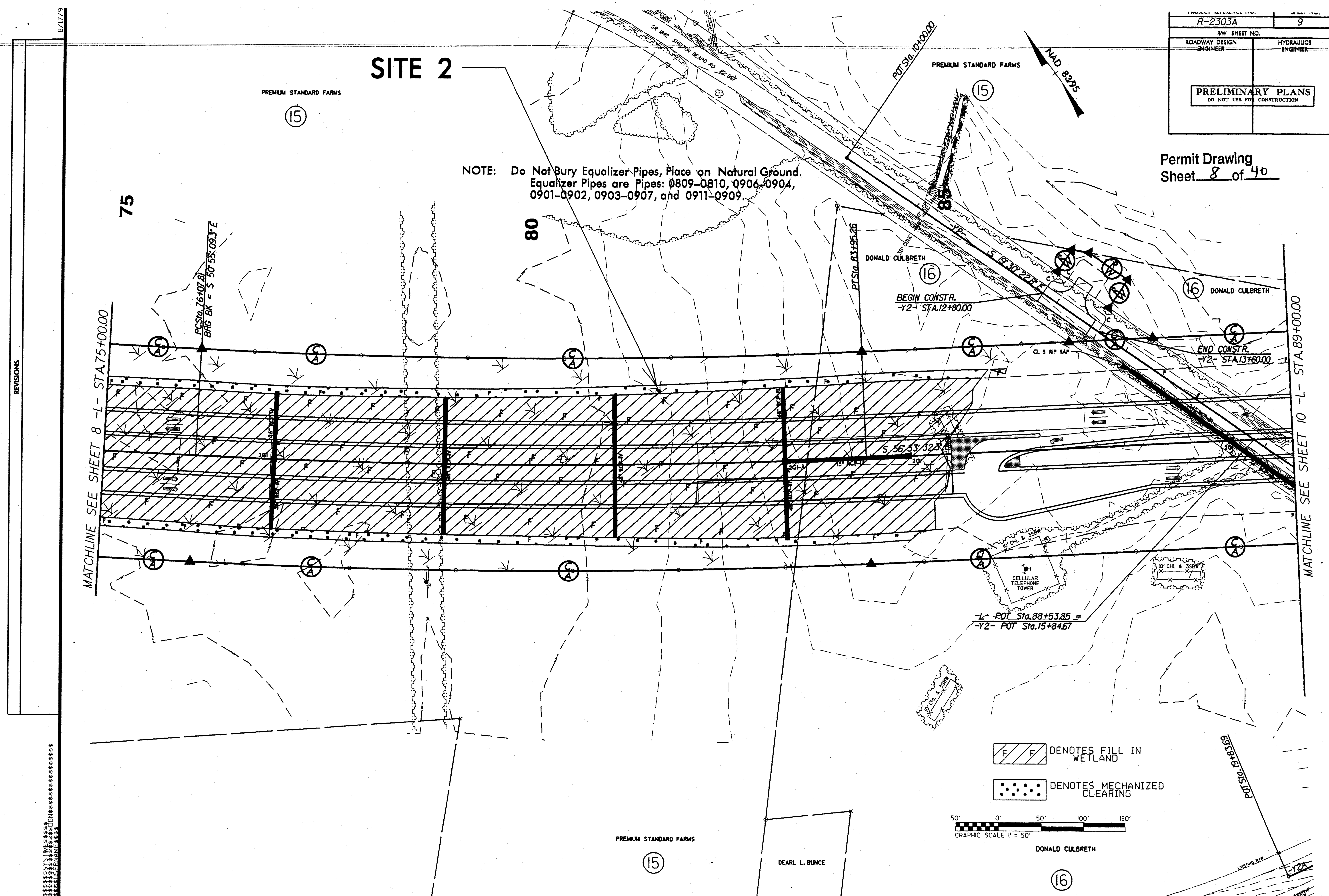
PREMIUM STANDARD FARMS (15)

DEARL L. BUNCE

DONALD CULBRETH (16)

REVISIONS 8/17/98

1/24/2012
gcall
R:\Hydraulics\PERMITS_Environmental\Drawings\r2303a_hyd_prm_wet_psh9.dgn



7/24/2012
belam
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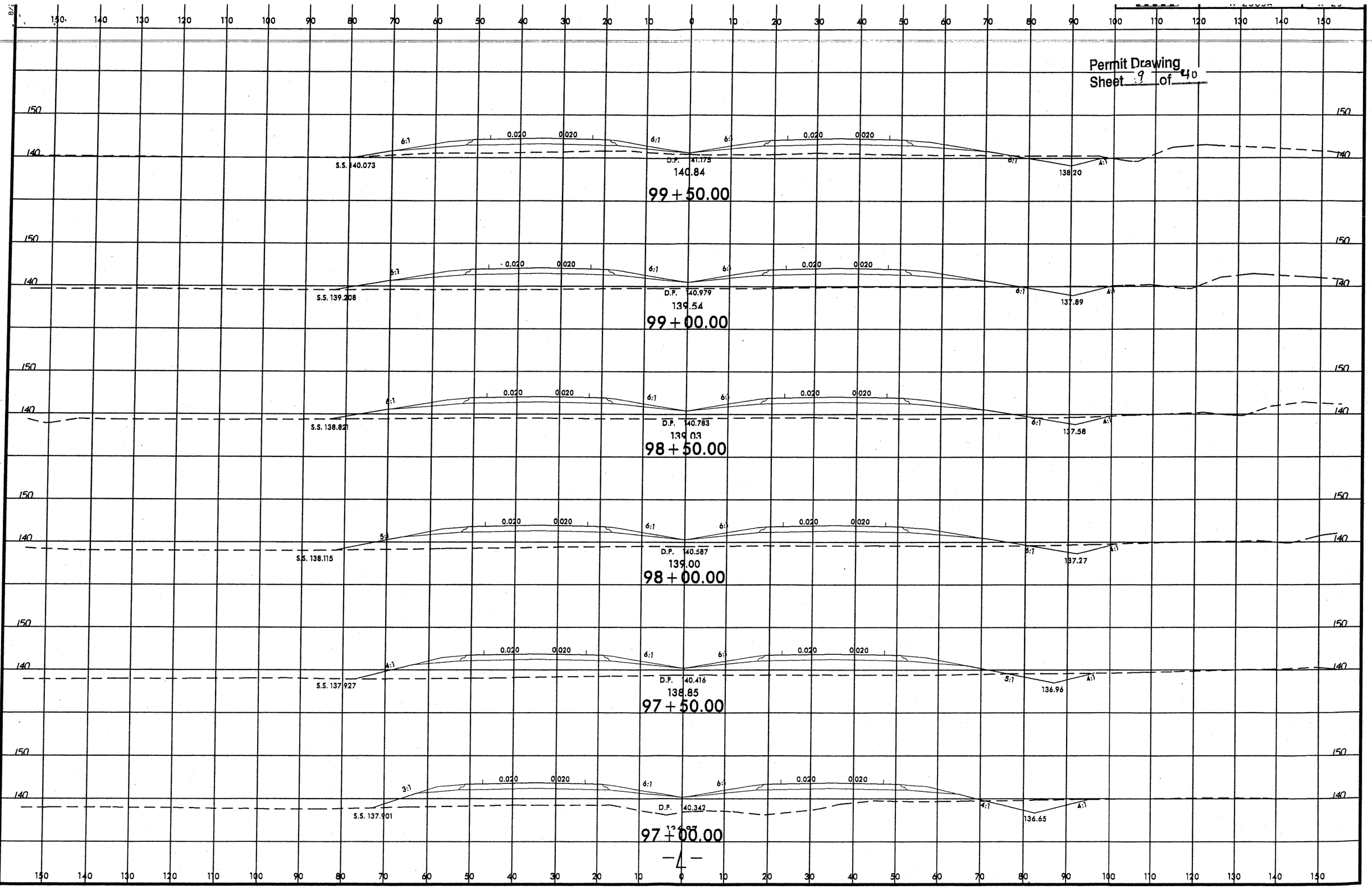
$$$$$$SYSTIME$$$$
$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$
$$$USERNAME$$$$

Permit Drawing
Sheet 9 of 40



Permit Drawing
Sheet 10 of 40

R-2303A	13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 8395

MAYFIELD CARTER (32)
JAMES ANDREW JACKSON (34)
B.A. ROBINSON (36)
DARRYL FISHER (29)
GEORGE BAKER (33)
MARILYN MCLAURIN (35)
EMILY LAND (37)

135
140
145

MATCHLINE SEE SHEET 12 -L- STA. 131+00.00
MATCHLINE SEE SHEET 14 -L- STA. 145+00.00

SPECIAL CUT DITCH SEE DETAIL A
CL B RIP RAP
ACCESS POINT
REMOVE
EXISTING R/W
POND
Rock Fill
See Geotech for Detail
Sta. 131+60 to 133+50 -L- Rt
SITE 4 (31)
S 56°33'32.3" E
48" VINYL RAIL
ISBKD
ISFD
1½SFD
1½SBKFD
25BKD
ISF BUS
GAZEBO
POOL
NURSERY
HTR
SOIL
ECM
12' DR
20' DR
15" CONC
18" CONC
24" CONC
36" CONC
48" IRON
60" CMP
60" CHL
60" BK
36" BK
2GI
2GI-D

DENOTES IMPACTS IN SURFACE WATER (POND)

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

RICHARD R. ALLEN JR.

REVISIONS

2/6/2012
ameadows
N:\Hydraulics\PERMITS_Env\Environmental\Drawings\r2303a_hyd_prm_wet_pshl3.dgn

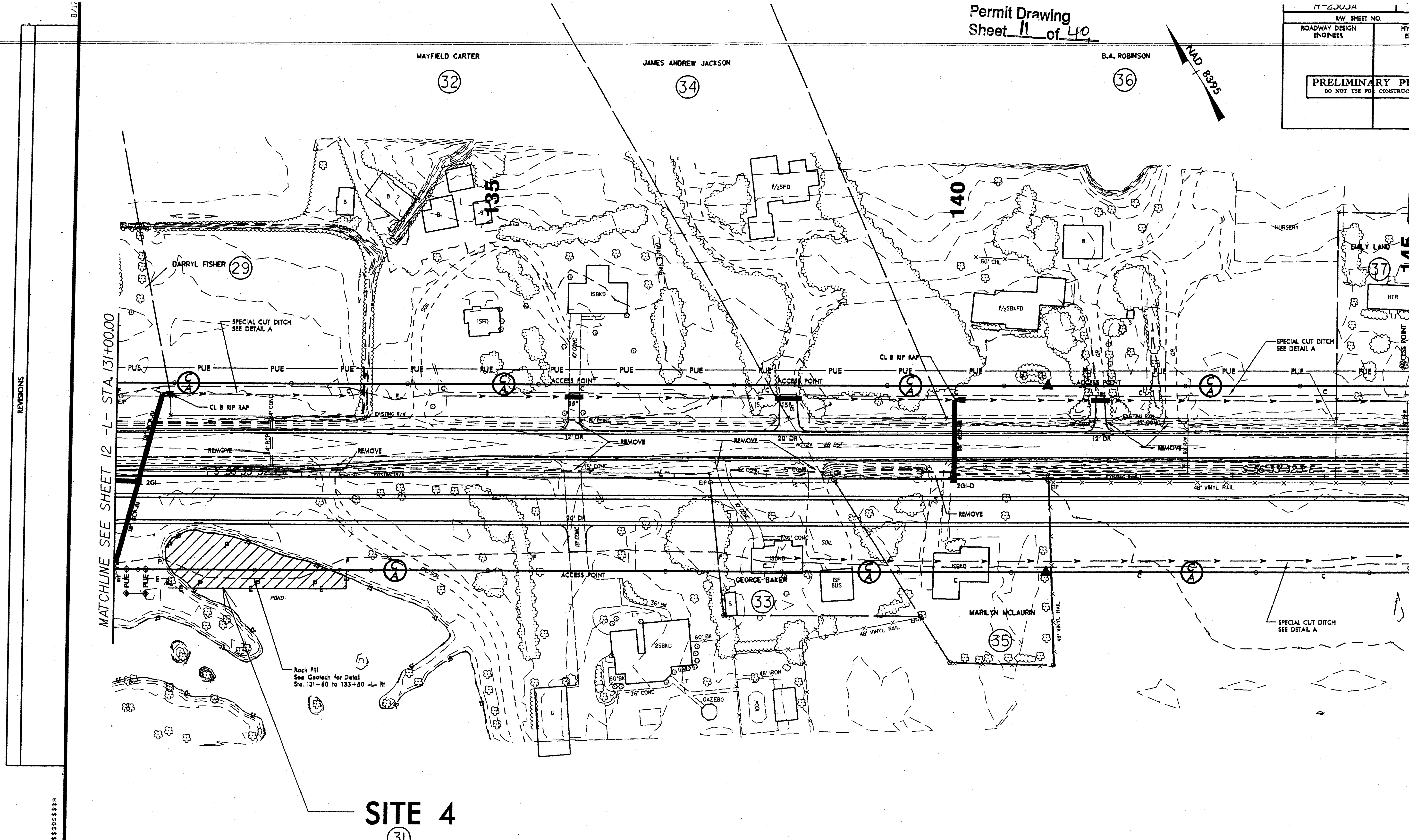
Permit Drawing
Sheet 11 of 40

R-2303A | 13

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

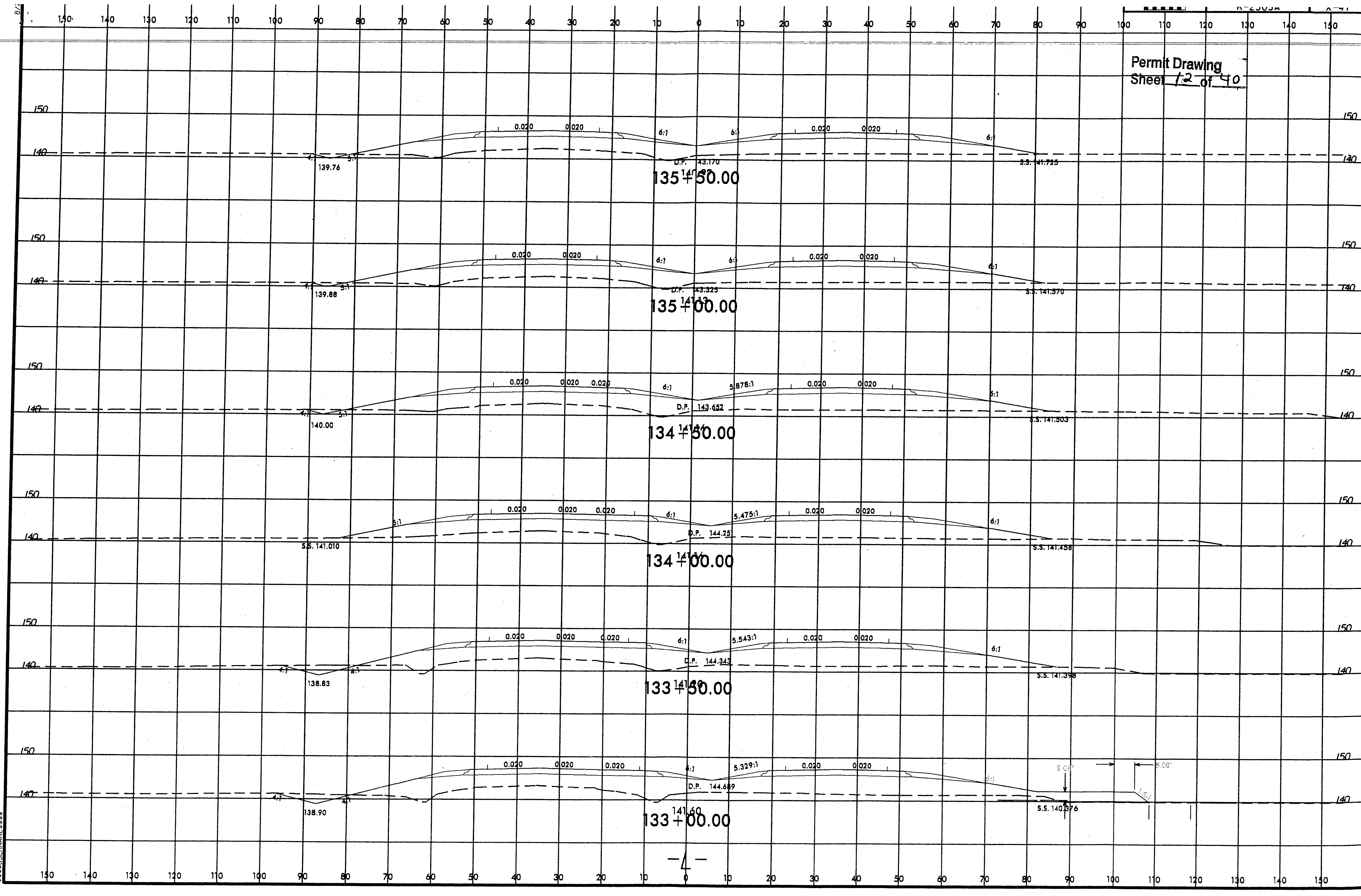


DENOTES IMPACTS IN SURFACE WATER (POND)

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

2/6/2012
ameadows
R:\Hydraulics\PERMITS_Environmental\Drawings\r2303a_hyd_prm_wet_psh13.dgn
$$$$$$SYSTIME$$$$$
$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$$

Permit Drawing
Sheet 12 of 40



9/30/2012
ameadows
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$$$$$SYSTIME$$$$
$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 13 of 40

NAD 83/95

REVISIONS

160

165

170

FIRST BANK
41

RAYMOND H. MAXWELL
39

WILLIAM M. BELL JR.
42

NCDOT
902

907
SYLVIA GUY MATTHEWS

MATCHLINE SEE SHEET 14 -L- STA.159+00.00

MATCHLINE SEE SHEET 16 -L- STA.172+00.00

-L- POC Sta.166+27.05 =
-Y3- POT Sta. 10+00.00

CL B RIP RAP

BSW FENCE

PUE

EXISTING R/W

ACCESS POINT

15" CONC

18" DR

REMOVE

16" DR

MC 24 28' BST

LATERAL V DITCH
SEE DETAIL C

ISBK BUS

GR

12" CONC

SPECIAL MEDIAN DITCH
SEE DETAIL F

2GI-D

SPECIAL CUT DITCH
SEE DETAIL A

SPECIAL CUT DITCH
SEE DETAIL A

END CONSTR.
-Y3- STA.12+14.88

POT Sta. 13+51.23

S 32°39'42.4"W -Y3-

60' R/W

SOIL

EIP

SR 2209 FRED HALL RD 22' BST

DWIGHT KIM JOHNSON
43

STACY R. CARR III
44

STACY R. CARR JR.
AND WIFE BETTY

DIANE H. MAXWELL

SITE 5

STACY R. CARR JR.
AND WIFE BETTY
44A

KENNETH E. HANCOCK
47

WILLIAM A. MAXWELL

RAYMOND H. MAXWELL
39

DORIS MAXWELL HALL
40

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$$$FILENAME$$$$$

2/6/2012
amaddows
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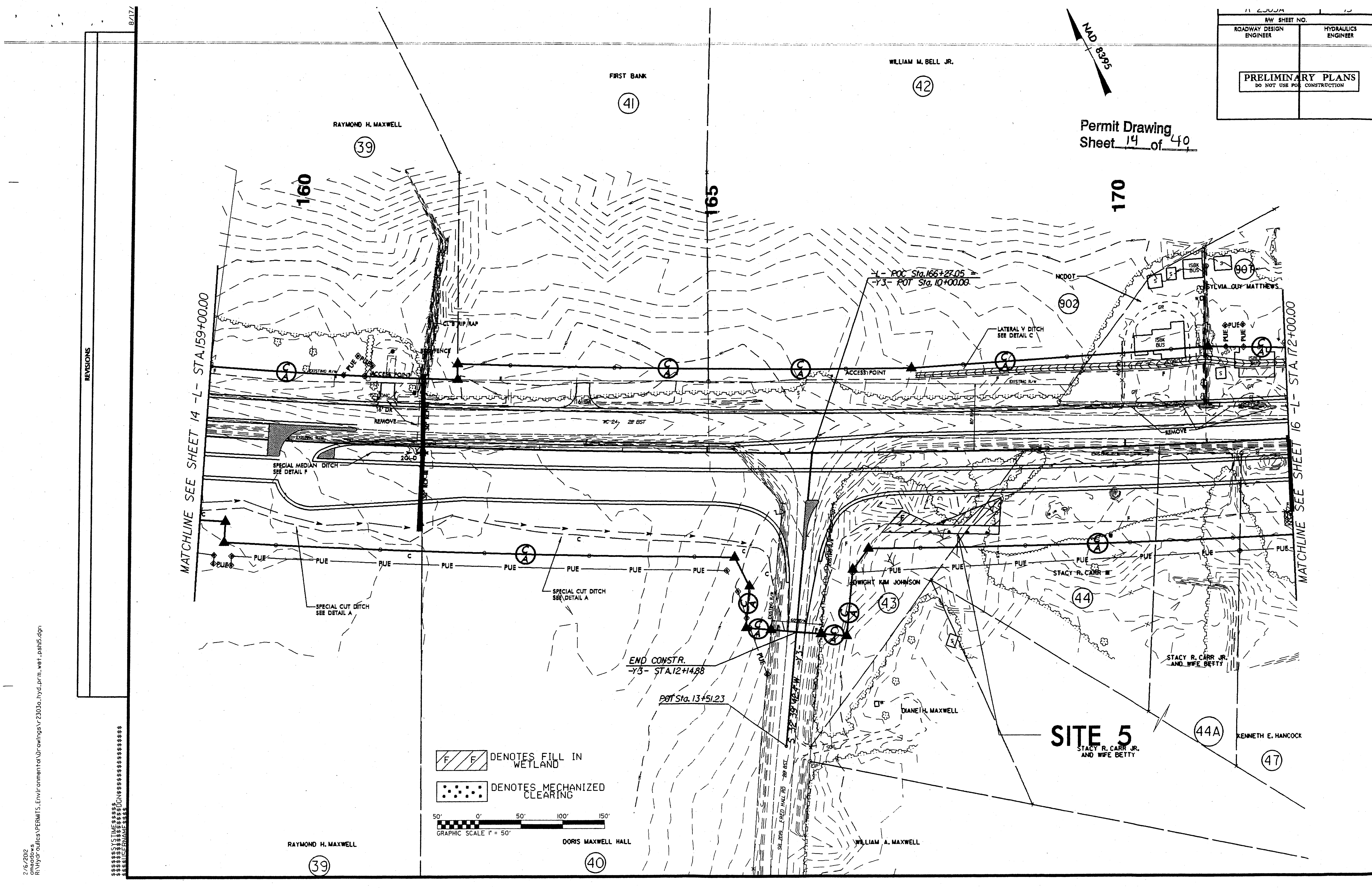
R-2303A
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
NAD 83/95
Permit Drawing
Sheet 14 of 40
REVISIONS
RAYMOND H. MAXWELL
39
FIRST BANK
41
WILLIAM M. BELL JR.
42
160
165
170
MATCHLINE SEE SHEET 14 -L- STA.159+00.00
MATCHLINE SEE SHEET 16 -L- STA.172+00.00
-L- POC Sta.166+27.05
-Y3- POT Sta.10+00.00
NCDOT
902
907
SYLVIA GUY MATTHEWS
ISBK BUS
LATERAL V DITCH
SEE DETAIL C
CL B RIP RAP
ACCESS POINT
EXISTING R/W
16' DR
REMOVE
SPECIAL MEDIAN DITCH
SEE DETAIL F
SPECIAL CUT DITCH
SEE DETAIL A
PUE
DWIGHT KIM JOHNSON
43
STACY R. CARR III
44
END CONSTR.
-Y3- STA.12+14.88
POT Sta.13+51.23
SR 2019 FRED HALL RD
DIANE H. MAXWELL
STACY R. CARR JR. AND WIFE BETTY
44A
KENNETH E. HANCOCK
47
SITE 5
DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'
RAYMOND H. MAXWELL
39
DORIS MAXWELL HALL
40
WILLIAM A. MAXWELL
2/6/2012
amaadows
R:\Hydraulics\PERMITS_Environmental\Drawings\r2303a_hyd_prm_wet_psh15.dgn
$$$$SYSTIME$$$$
$$$$DGN$$$$
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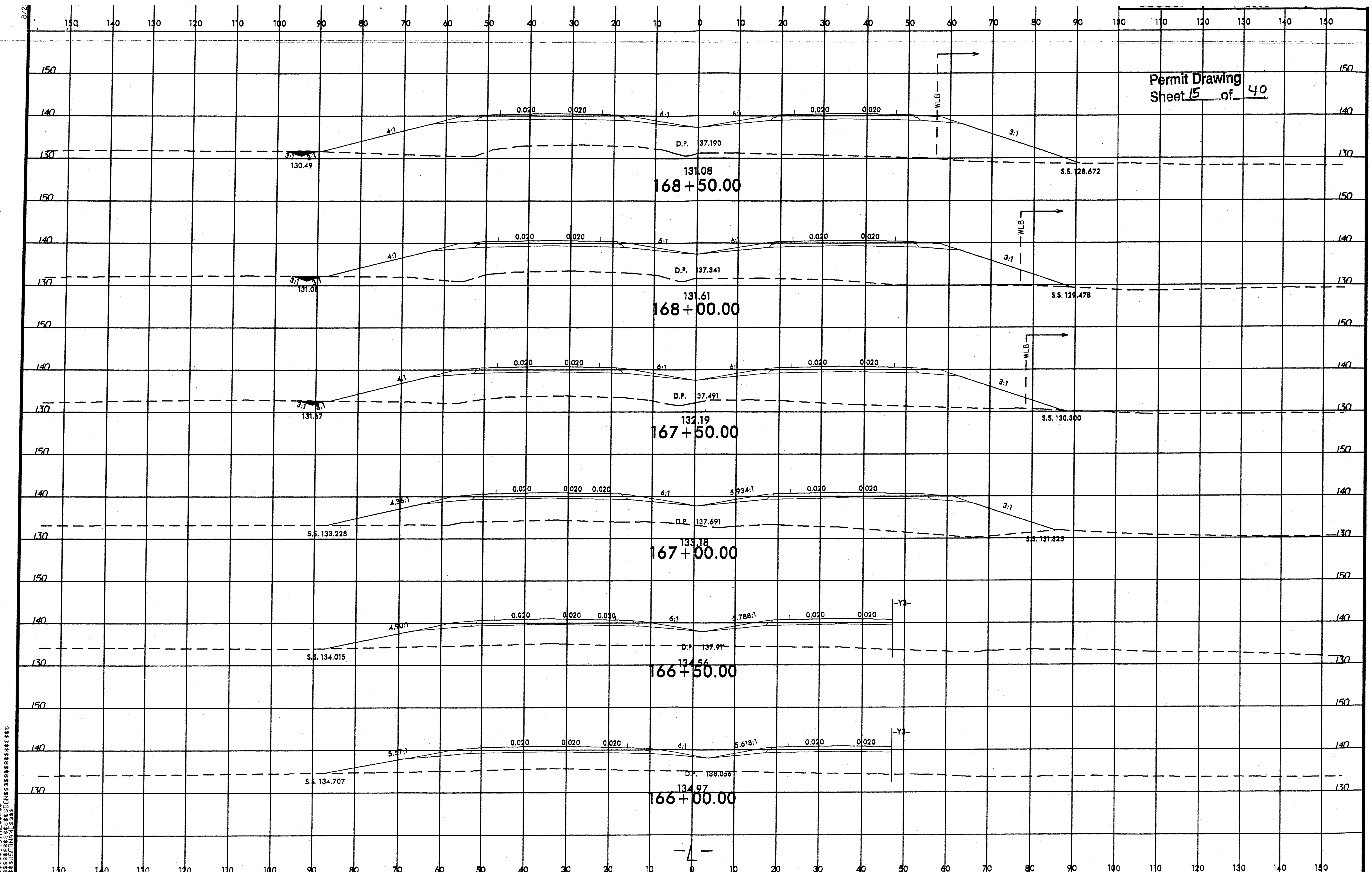

1/30/2012
ameadows
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$$$$$SYSTIME$$$$$
$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

REVISIONS

DECEMBER 29,2010 - R/W REVISIONS - REVISED PUE ON PARCEL 47.

R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 16 of 40

NAD 83'95

ANTHONY HUDSON
JOHN BUTTERBAUGH
LEON JR. BROCK
TED W. OWEN
CHARLES E. HORNE
JEWELL WILLIAMS CULBRETH
JESSIE G. REYNOLDS
BILLY D. HORNE
WILLIAM M. BELL JR.
HARRY T. PARKER
SYLVIA GUY MATTHEWS
KENNETH E. HANCOCK
STEDMAN-WADE HEALTH SERVICES
HAROLD R. DRAUGHON
WILLIAM A. PIERPOINT
ROBERT L. LANFORD
ROBERT E. OLIVER
BRUCE J. TEETS

BEGIN CONSTR.
-Y4- STA.14+00.00

-L- POC Sta.178+59.64 =
-Y4- POT Sta.18+82.95

MATCHLINE SEE SHEET 15 -L- STA.172+00.00

MATCHLINE SEE SHEET 17 -L- STA.186+00.00

SITE 6

Q10 = 4.0cfs

Q10 = 5.0cfs
V10 = 11.6fps

S S DENOTES IMPACTS IN SURFACE WATER

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

2/6/2012
ameadows
R:\Hydraulics\PERMITS_Environmental\Drawings\r-2303a_hyd_prm_wet_psh16.dgn

$$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$ON$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

REVISIONS

8/17

DECEMBER 29,2010 - R/W REVISIONS - REVISED PUE ON PARCEL 47.

RW SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 17 of 40

ANTHONY HUDSON

JOHN BUTTERBAUGH

LEON JR. BROCK

TED W. OWEN

NAD 8395

BEGIN CONSTR.
-Y4- STA.14+00.80

S 17° 53' 43.5" W

WILLIAM M. BELL JR. (42)

HARRY T. PARKER (48)

BILLY D. HORNE (49)

CHARLES E. HORNE (57)

TED OWEN

JESSIE G. REYNOLDS (59)

JEWELL WILLIAMS CULBRETH (55)

CHARLES E. HORNE (52)

SYLVIA GUY MATTHEWS (907)

-L- POC Sta.178+59.64 =
-Y4- POT Sta.18+82.95

SPECIAL CUT DITCH SEE DETAIL A

SPECIAL CUT DITCH SEE DETAIL C

SPECIAL CUT DITCH SEE DETAIL X

MATCHLINE SEE SHEET 15 -L- STA.172+00.00

MATCHLINE SEE SHEET 17 -L- STA.186+00.00

Q10 = 4.0cfs

Q10 = 5.0cfs
V10 = 11.6fps

SITE 6

DENOTES IMPACTS IN SURFACE WATER

GRAPHIC SCALE 1" = 50'

KENNETH E. HANCOCK (47)

STEDMAN-WADE HEALTH SERVICES (50)

HAROLD R. DRAUGHON (51)

WILLIAM A. PIERPOINT (53)

ROBERT L. LANFORD (54)

ROBERT E. OLIVER (56)

BRUCE J. TEETS (60)

BRUCE J. TEETS (906)

2/6/2012
ameadows
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$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

2/6/2012
ameadows
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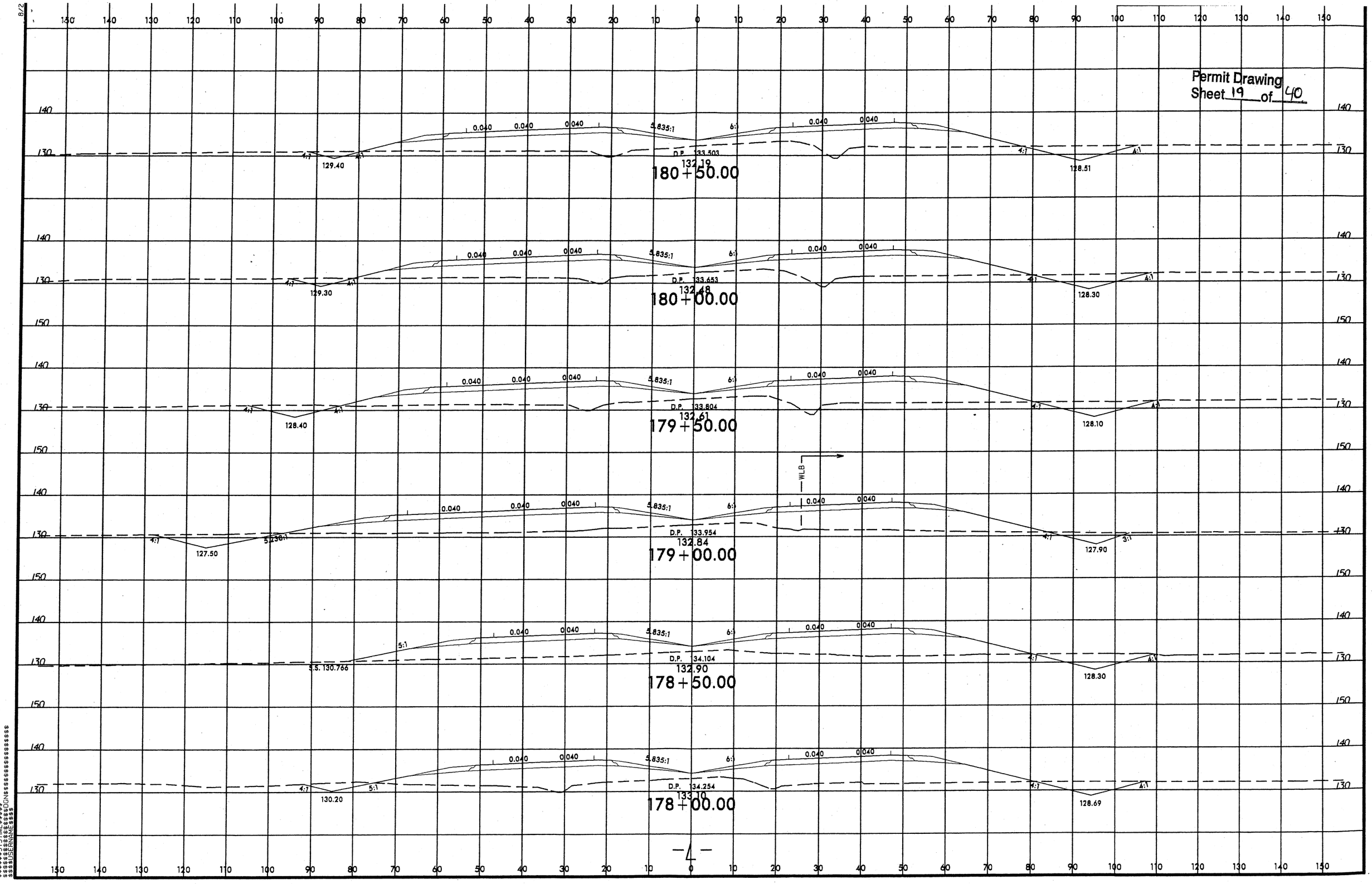
Permit Drawing
Sheet 19 of 40



SITE 7

REVISIONS

RIGHT OF WAY REVISION - JANUARY 18, 2011 - ADD PARCEL NOS. 76A AND 76B.

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 20 of 40

200 | 205 | 210 | NAD 83/95

(FORMERLY GERTRUDE P. BUNCE)
DAVID BRIAN BUNCE
77

(FORMERLY GERTRUDE P. BUNCE)
DONALD STEPHEN BUNCE, et al
77A

POT Sta. 10+00.00

BEGIN CONSTR.
-Y6- STA. 11+32.95

CSSta. 202+45.95
ST Sta. 202+45.95

-L- POT Sta. 204+83.63 =
-Y6- POT Sta. 13+48.04

-L- POS Sta. 204+00.00 =
-Y6B- POT Sta. 10+00.00

-Y6B- POC Sta. 12+40.00 =
-Y6A- POT Sta. 18+36.39

PC Sta. 11+67.87
BRG BK = S 12° 42' 33.9" E

BEG. CONSTR.
-Y6A- PC Sta. 16+59.29

END CONSTR.
-Y6B- POT Sta. 14+74.62
BRG BK =
S 83° 16' 54.7" E

PT Sta. 14+11.92

MATCHLINE SEE SHEET 17 -L- STA. 199+00.00

MATCHLINE SEE SHEET 19 -L- STA. 212+00.00

SPECIAL CUT BASE DITCH SEE DETAIL B

SPECIAL CUT DITCH SEE DETAIL A

SPECIAL MEDIAN DITCH SEE DETAIL F

CL B RIP RAP

REMOVE

GAZEBO

ISFD

ISBK APT

ISBK BUS

ISBK CHURCH

2SBKD

BARRY K. PRESS

GERTRUDE P. BUNCE

CHARLOTTE M. PERKINS

ROGER F. HARR

LARRY KIRK

ROBERT LEE LONG

FIRST BAPTIST CHURCH OF STEDMAN

CEMETARY

JOHN A. GRILLO

O.K. RENTALS, LLC

KENNETH E. HANCOCK, SR.

CYNTHIA JAMES

ROBERT SR. JOHNSON

JANICE B. JOHNSON

CEDAR CREEK MEDICAL SERVICES

DENOTES IMPACTS IN SURFACE WATER (POND)

GRAPHIC SCALE 1" = 50'

KENNETH E. HANCOCK

2/16/2012
ameadows
R:\Hydraulics\PERMITS_Environmental\Drawings\r-2303a_hyd_prm_ve1_pshl8.dgn

SITE 7

REVISIONS

RIGHT OF WAY REVISION - JANUARY 18, 2011 - ADD PARCEL NOS. 76A AND 76B.

8/17/

R-2303A | 10

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 21 of 40

NAD 83/95

200 | 205 | 210

MATCHLINE SEE SHEET 17 -L- STA. 199+00.00

MATCHLINE SEE SHEET 19 -L- STA. 212+00.00

POT Sta. 10+00.00

BEGIN CONSTR.
-Y6- STA. 11+32.95

CSSta. 202+45.95

STSta. 202+45.95

-L- POT Sta. 204+83.63 =
-Y6- POT Sta. 13+48.04

-L- POS Sta. 204+00.00 =
-Y6B- POT Sta. 10+68.00

-Y6B- POC Sta. 12+48.00 =
-Y6A- POT Sta. 18+56.39

BEG. CONSTR.
-Y6A- POC Sta. 16+59.23

PC Sta. 11+67.57
BRG BK = S 12° 42' 33.9" E

-Y6A- S 83°16'54.7" E

PT Sta. 14+13.92

END CONSTR.
-Y6B- POT Sta. 14+74.62
BRG BK =
S 83°16'54.7" E

N 77°13'27.6" E

S 13°55'23.7" E

(FORMERLY GERTRUDE P. BUNCE)
DAVID BRIAN BUNCE
77

(FORMERLY GERTRUDE P. BUNCE)
DONALD STEPHEN BUNCE, et al
77A

78 BARRY K. PRIER

79 CHARLOTTE M. PERKINS / ROGER F. HARR

77 GERTRUDE P. BUNCE

80 81 81A LARRY KIRK

81B ROBERT LEE LONG

76A JOHN A. GRILLO

76B O.K. RENTALS, LLC

KENNETH E. HANCOCK, SR.

81C CYNTHIA JAMES

81D FIRST BAPTIST CHURCH OF STEDMAN

82 FIRST BAPTIST CHURCH OF STEDMAN

77 GERTRUDE P. BUNCE

JANICE B. JOHNSON

ROBERT SR. JOHNSON

ROBERT SR. JOHNSON

CEDAR CREEK MEDICAL SERVICES

KENNETH E. HANCOCK

ISBK APT

ISBK APT

ISBK FIRST BAPTIST CHURCH

ISBK CHURCH

ISBKD

2SBKD

ISBK BLDG

CEMETARY

CREEN HOUSE

ISFD

2GI

CL B RIP RAP

SPECIAL CUT BASE DITCH SEE DETAIL B

SPECIAL CUT DITCH SEE DETAIL A

SPECIAL MEDIAN DITCH SEE DETAIL F

REMOVE

-Y6-

-Y6A-

-Y6B-

-L-

PUE

SOIL

BST

CONC

ISFD

GR

EXISTING R/W

PROP R/W ABSTRACT

24" RCP

18" RCP

15" RCP

60" CMP

48" CMP

72" RD

F F DENOTES IMPACTS IN SURFACE WATER (POND)

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

2/6/2012
ameadows
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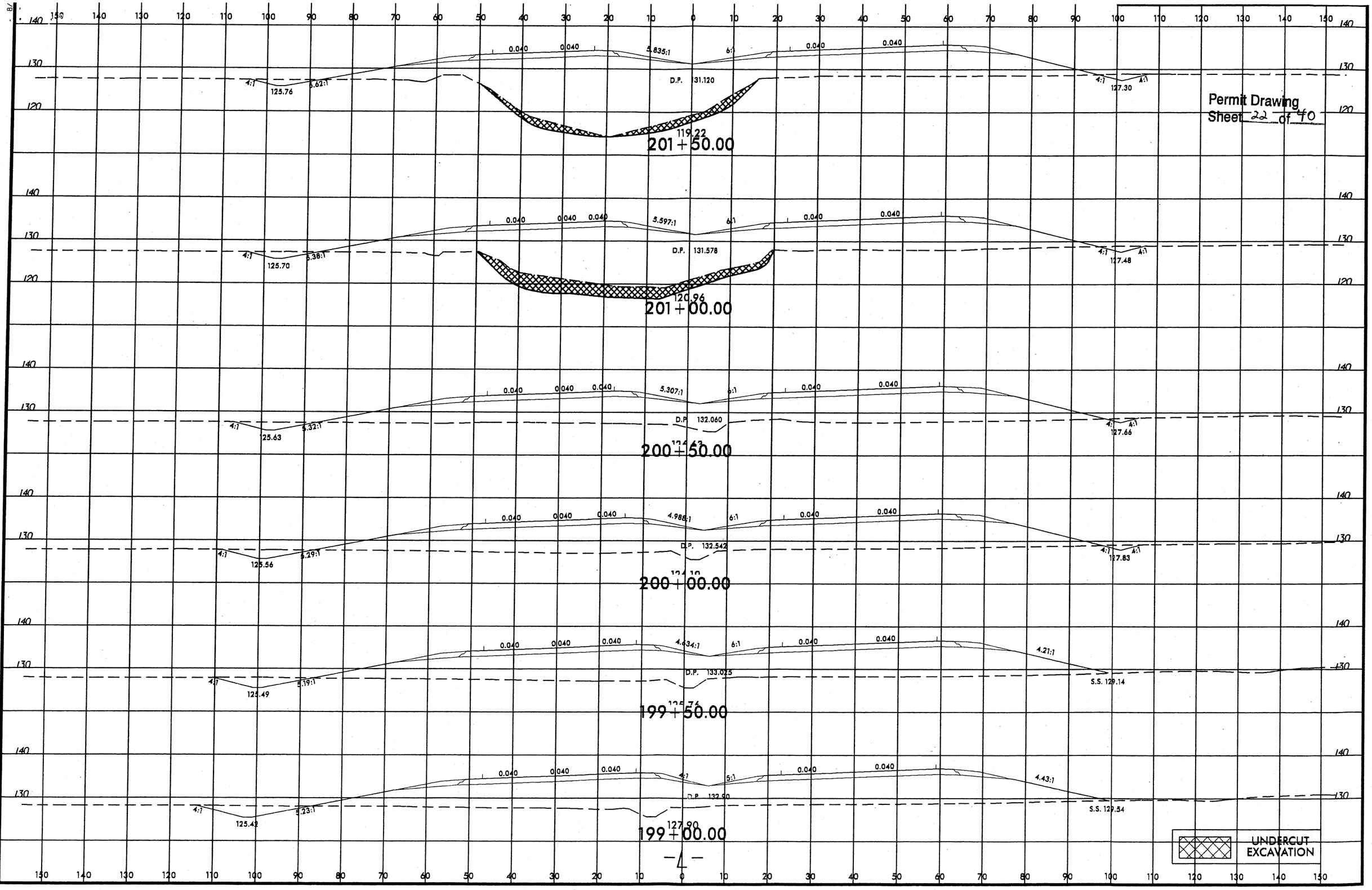

Permit Drawing
Sheet 22 of 40

1/30/202
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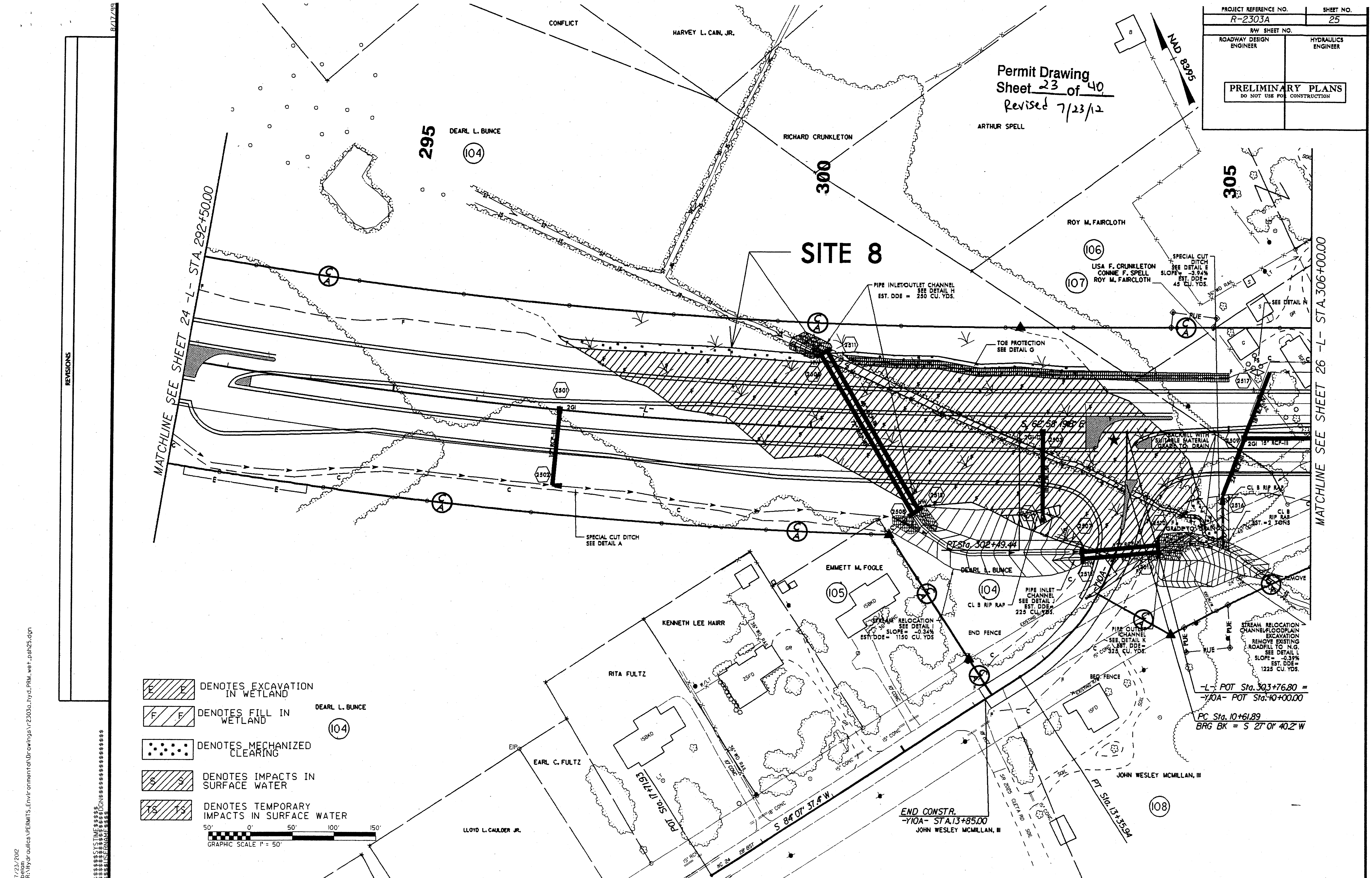
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R-2303A
SHEET NO.
25
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
Permit Drawing
Sheet 23 of 40
Revised 7/23/12
NAD 83/95
8/17/99
REVISIONS
SITE 8
CONFLICT
HARVEY L. CAIN, JR.
RICHARD CRUNKLETON
ARTHUR SPELL
ROY M. FAIRCLOTH
DEARL L. BUNCE
104
295
300
305
106
107
LISA F. CRUNKLETON
CONNIE F. SPELL
ROY M. FAIRCLOTH
SPECIAL CUT DITCH
SEE DETAIL E
SLOPE= -3.94%
EST. DDE= 45 CU. YDS.
36" WD RAIL
SEE DETAIL N
PUE
PIPE INLET/OUTLET CHANNEL
SEE DETAIL H
EST. DDE = 250 CU. YDS.
TOE PROTECTION
SEE DETAIL G
MATCHLINE SEE SHEET 24 -L- STA. 292+50.00
MATCHLINE SEE SHEET 26 -L- STA.306+00.00
2501
2502
2GI
15" RCP-III
-L-
S 62° 58' 19.8" E
2GI-D
2503
BACKFILL WITH SUITABLE MATERIAL GRADE TO DRAIN
2509
2GI 15" RCP-III
2517
CL B RIP RAP
2516
CL B RIP RAP
EST.=2 TONS
2508
2512
2507
2510
GRADE TO DRAIN
PT Sta. 302+49.44
2515
-Y10A-
REMOVE
SPECIAL CUT DITCH
SEE DETAIL A
EMMETT M. FOGLE
105
ISBKD
STREAM RELOCATION
SEE DETAIL I
SLOPE= -0.34%
EST. DDE= 1150 CU. YDS
CL B RIP RAP
PIPE INLET CHANNEL
SEE DETAIL J
EST. DDE= 225 CU. YDS.
END FENCE
PIPE OUTLET CHANNEL
SEE DETAIL K
EST. DDE= 325 CU. YDS.
STREAM RELOCATION CHANNEL/FLOODPLAIN EXCAVATION
REMOVE EXISTING ROADFILL TO N.G.
SEE DETAIL L
SLOPE= -0.39%
EST. DDE= 1225 CU. YDS.
-L- POT Sta. 303+76.80 =
-Y10A- POT Sta. 10+00.00
PC Sta. 10+61.89
BRG BK = S 27° 01' 40.2" W
KENNETH LEE HAIRR
2SFD
RITA FULTZ
EARL C. FULTZ
ISBKD
POT Sta. 17+71.93
EIP
LLOYD L. CAULDER JR.
BEG. FENCE
ISFD
JOHN WESLEY MCMILLAN, III
108
S 84° 07' 37.4" W
NC 24
28' BST
END CONSTR.
-Y10A- STA.13+85.00
JOHN WESLEY MCMILLAN, III
SR 2025
CLETA RD
PT Sta. 13+35.94
DENOTES EXCAVATION IN WETLAND
DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
GRAPHIC SCALE 1" = 50'
7/23/2012
belam
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PROJECT REFERENCE NO.	SHEET NO.
R-2303A	25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 24 of 40
Revised 7/23/12

NAD 83/95

REVISIONS 8/17/99

CONFLICT

HARVEY L. CAIN, JR.

DEARL L. BUNCE (104)

RICHARD CRUNKLETON

ARTHUR SPELL

295

300

305

ROY M. FAIRCLOTH

SITE 8

LISA F. CRUNKLETON
CONNIE F. SPELL
ROY M. FAIRCLOTH (106) (107)

SPECIAL CUT DITCH SEE DETAIL E SLOPE= -3.94% EST. DDE= 45 CU. YDS.

PIPE INLET/OUTLET CHANNEL SEE DETAIL H EST. DDE = 250 CU. YDS.

SEE DETAIL N

RUE

TOP PROTECTION SEE DETAIL G

MATCHLINE SEE SHEET 24 -L- STA. 292+50.00

MATCHLINE SEE SHEET 26 -L- STA. 306+00.00

SPECIAL CUT DITCH SEE DETAIL A

PT Sta. 302+49.44

EMMETT M. FOGLE (105)

DEARL L. BUNCE (104)

CL B RIP RAP

PIPE INLET CHANNEL SEE DETAIL J EST. DDE= 225 CU. YDS.

KENNETH LEE HAIRR

STREAM RELOCATION SEE DETAIL I SLOPE= -0.34% EST. DDE= 1150 CU. YDS

END FENCE

PIPE OUTLET CHANNEL SEE DETAIL K EST. DDE= 225 CU. YDS.

STREAM RELOCATION CHANNEL/FLOODPLAIN EXCAVATION REMOVE EXISTING ROADFILL TO N.G. SEE DETAIL L SLOPE= -0.39% EST. DDE= 1225 CU. YDS.

-L- POT. Sta. 303+76.80 =
-Y10A- POT. Sta. 10+00.00

PC Sta. 10+61.89
BRG BK = S 27° 01' 40.2" W

RITA FLUTZ

EARL C. FLUTZ

POT Sta. 11+71.93

S 84° 01' 37.4" W

END CONSTR.
-Y10A- STA. 13+85.00
JOHN WESLEY MCMILLAN, III

PT Sta. 13+35.94

JOHN WESLEY MCMILLAN, III (108)

LLOYD L. CAULDER JR.

E E DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

7/23/2012
belam
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SITE 8

PROJECT REFERENCE NO. R2303A | SHEET NO. 25B
RW SHEET NO.
ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER
INCOMPLETE PLANS — DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS — DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 25 of 40
Revised 7/23/12

300

PIPE INLET/OUTLET CHANNEL
SEE DETAIL H
EST. DDE = 250 CU. YDS.

LISA F. CRUNKLETON
CONNIE F. SPELL
ROY M. FAIRCLOTH
(107)

SPECIAL CUT DITCH
SEE DETAIL E
SLOPE = -3.04%
EST. DDE = 45 CU. YDS.

36" WD

RUE

TOE PROTECTION
SEE DETAIL G

305

FS

36" WD TRAIL

18" RCP-IV

48" RCP-III

72" RCP-III

2GI-D

15" RCP-III

BACKFILL WITH SUITABLE MATERIAL GRADE TO DRAIN

2GI 15" RCP-III

24" RCP-III

CL B RIP RAP

CL B RIP RAP
EST. = 2 TONS

GRADE TO DRAIN

72" RCP-III

48" RCP-III

HW

EMMETT M. FOGLE

DEARL L. BUNCE

105

104

ISBKD

STREAM RELOCATION
SEE DETAIL I
SLOPE = -0.34%
EST. DDE = 1150 CU. YDS

CL B RIP RAP

PIPE INLET CHANNEL
SEE DETAIL J
EST. DDE = 225 CU. YDS.

END FENCE

EXISTING R/W

PIPE OUTLET CHANNEL
SEE DETAIL K
EST. DDE = 325 CU. YDS.

15" CONC

100' R/W

PUE

STREAM RELOCATION CHANNEL/FLOODPLAIN EXCAVATION
REMOVE EXISTING ROADFILL TO N.G.
SEE DETAIL L
SLOPE = -0.39%
EST. DDE = 1225 CU. YDS.

BEG. FENCE

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

25' 0' 25' 50' 75'
SCALE= 1"=50'

REVISIONS 8/17/95

7/23/2012
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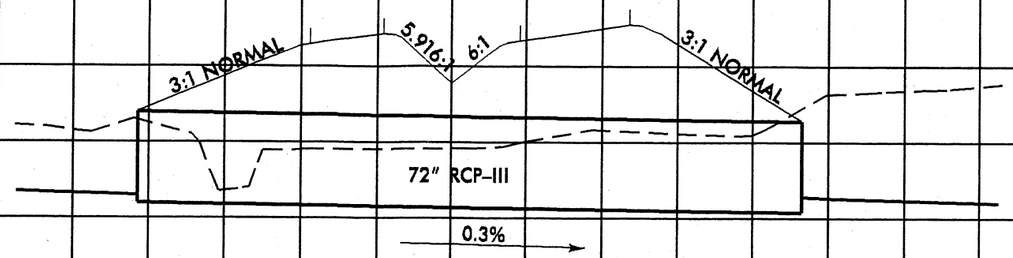
PROJ. REFERENCE NO. R2303A | SHEET NO. 25 PRL

300 200 100 0 100 200 300

Revised 6/20/12
Permit Drawing
Sheet 26 of 40

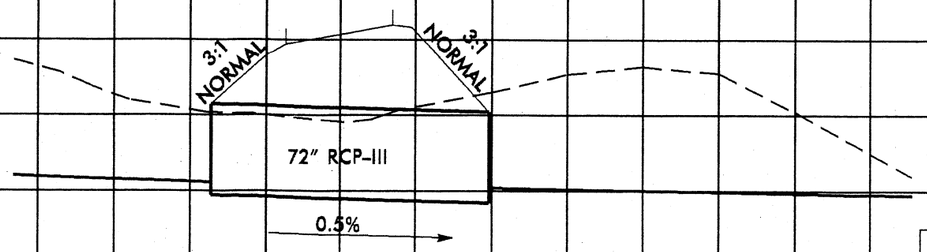
130
120
110

℄ STA. 300+64 –L–
ELEV. = 118.9′
SKEW = 60°
1 @ 72" RCP



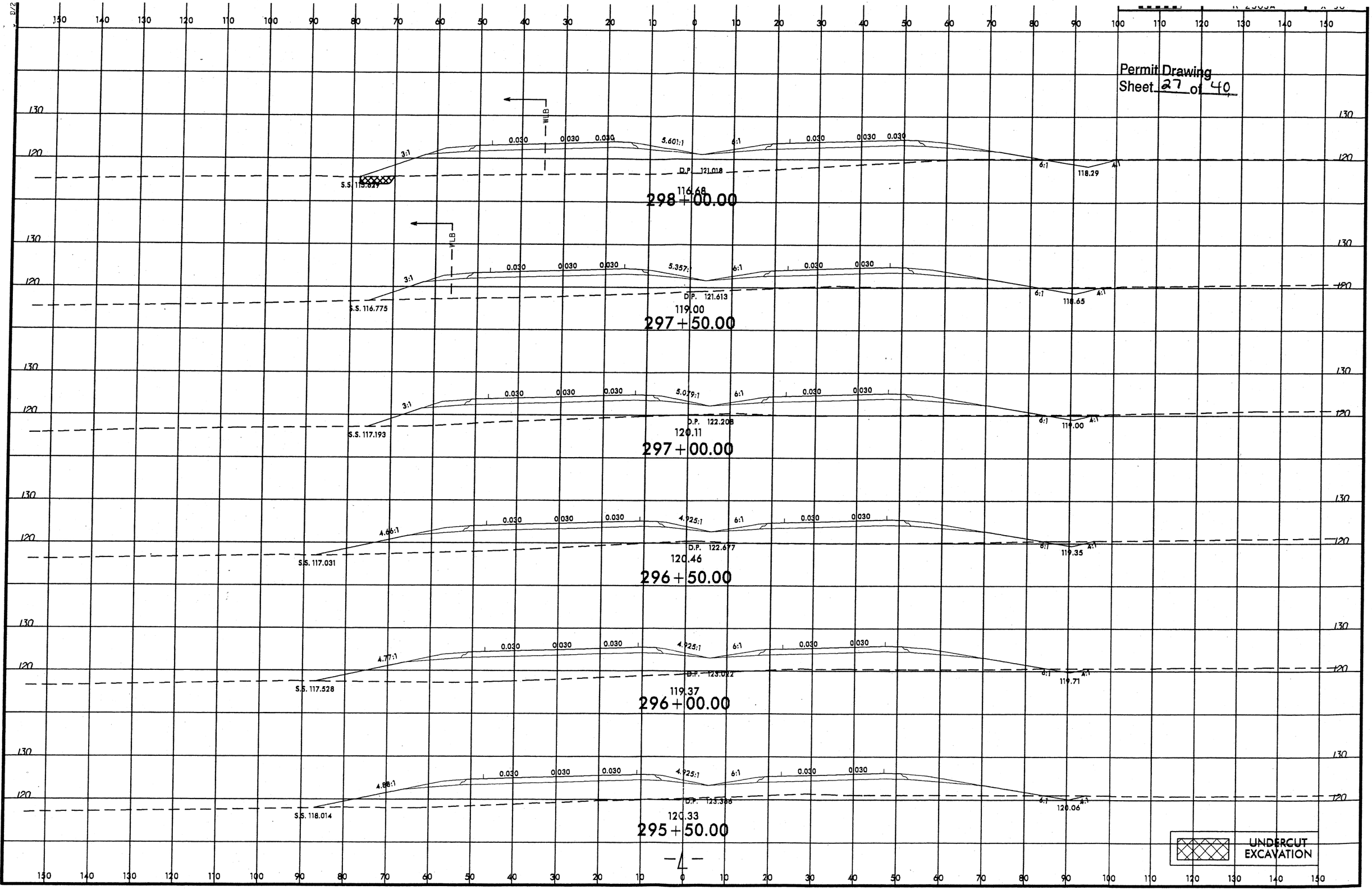
130
120
110

℄ STA. 11+40 –Y10A–
ELEV. = 120.3′
SKEW = 65°
1 @ 72" RCP



SITE 8

Permit Drawing
Sheet 27 of 40



R-2303A | X-98

Revised 6/20/12 Permit Drawing Sheet 28 of 40

304+00.00

114.50

-Y10A-

303+50.00

114.21

-Y10A-

303+00.00

D.P. 117.237

115.07

302+50.00

D.P. 117.582

302+00.00

D.P. 117.887

111.12

301+50.00

D.P. 118.231

UNDERCUT EXCAVATION

-4-

5/30/202
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R-2303A	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 29 of 40

-L-
PI Sta 325+20.68
Δ = 6° 42' 22.1" (LT)
D = 0° 28' 38.9"
L = 1,404.53'
T = 703.07'
R = 12,000.00'
SE = NC

NAD 83/95

SITE 9

WILEY DAVID HUNNICUTT, SR. (114)
PAUL W. BRANCH (120)
PAMELA S. TEMPE (116)
EMMA LUCILLE BULLARD (117)
FRANCIS LAWRENCE BLAIR, JR. (119)
JOSEPH H. LOCKAMY (121)
RUTH TRIPP (123)
HAYWOOD E. JOHNSON (124)
GERALD C. FISHER (125)
YULANDA SMITH (127)
STEPHEN E. BAKER (129)
ELLEN MCMILLAN HALL TRUSTEE (109)
MARY R. HARDISON (112)
HENRY E. JONES (113)
JERRY CHAVIS (115)
KENNETH P. CULBRETH (118)
HENRY JONES (111)
SHIRLEY J. NAYLOR
RICHARD D. NAYLOR (122)
SUSAN P. REINHARDT (126)
JOSEPH P. NAYLOR (128)
HARVEY E. HALL, JR. (134)
JOSEPH PRESTON NAYLOR (130)

320 325 330

PI Sta 332+22.14

MATCHLINE SEE SHEET 26 -L- STA. 320+00.00

MATCHLINE SEE SHEET 28 -L- STA. 333+50.00

S 69° 40' 41" E

SPECIAL CUT DITCH SEE DETAIL A
CL B RIP RAP
ACCESS POINT
TOE PROTECTION SEE DETAIL G
REMOVE
PUE
12' DR
15" CONC
18" RCP-III
24" RCP-III
36" CONC
96" BLK WALL
END FENCE
ISBKD
ISFD
ISF BLDG
ISFBUS
CARPORT
GREENHOUSE
HTR
GR
SOIL
EXISTING R/W
60' R/W
20' BST
MC 24 28' BST
ATWOOD TERRACE

F/F DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
S S DENOTES IMPACTS IN SURFACE WATER
TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

GRAPHIC SCALE 1" = 50'
50' 0' 50' 100' 150'

RIGHT OF WAY REVISION - JANUARY 18, 2011 - ADDED PARCEL NO. III.

REVISIONS

8/17

2/6/2012
ameadows
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R-2303A | 21

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 30 of 40

-L-
PI Sta 325+20.68
Δ = 6° 42' 22.5" (LT)
D = 0° 28' 38.9"
L = 1,404.53'
T = 703.07'
R = 12,000.00'
SE = NC

NAD 83/95

SITE 9

WILEY DAVID HUNNICUTT, SR. (114)
PAUL W. BRANCH (120)
PAMELA S. TRIPPE (116)
EMMA LUCILLE BULLARD (117)
FRANCIS LAWRENCE BLAIR, JR. (119)
JOSEPH H. LOCKAMY (121)
RUTH TRIPP (123)
HAYWOOD E. JOHNSON (124)
GERALD C. FISHER (125)
YULANDA SMITH (127)
STEPHEN E. BAKER (129)
ELLEN MCMILLAN HALL TRUSTEE (109)
MARY R. HARDISON (112)
HENRY E. JONES (113)
JERRY CHAVIS (115)
KENNETH P. CULBRETH (118)
HENRY JONES (111)
SHIRLEY J. NAYLOR
RICHARD D. NAYLOR (122)
SUSAN P. REINHARDT (126)
JOSEPH P. NAYLOR (128)
JOSEPH PRESTON NAYLOR (130)
HARVEY E. HALL, JR. (134)

320
325
330

-L- STA. 320+00.00
-L- STA. 333+50.00
PT Sta 332+22.14

MATCHLINE SEE SHEET 26 -L-
MATCHLINE SEE SHEET 28 -L-

S 69° 40' 41" E

SPECIAL CUT DITCH SEE DETAIL A
END FENCE
ACCESS POINT
CL B RIP RAP
REMOVE
12' DR
36" RCP-III
36" CONC
ISBKD
ISFD
HTR
CARPORT
ISFBUS
GREENHOUSE
PUE
SDWL
CL B RIP RAP BANKS ONLY HENRY E. JONES
SLOPE PROTECTION SEE DETAIL G
48" CML

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

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

REVISIONS
RIGHT OF WAY REVISION - JANUARY 18, 2011 - ADDED PARCEL NO. III.

8/17

2/6/2012
cmeadows
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SITE 9

109

PUE

PUE

PUE

END FENCE

ACCESS POINT

C A

HW

36" RCP-III

12' DR

EXISTING R/W

15" RCP-III

7' HW

REMOVE

2GI

SOIL

15" CONC

PUE

PUE

ACCESS POINT

CL B RIP RAP

18"

12' DR

REMOVE

SPEC

SEE

15" RCP-III

2GI

REMOVE

EXISTING R/W

4' BK HW

12' DR

15" CONC

SPECIAL CUT DITCH
SEE DETAIL A

24"

18"

15"

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PUE

2SFD

PUE

CL B RIP RAP
BANKS ONLY

PUE

ACCESS POINT

PUE

TOE PROTECTION
SEE DETAIL G

PUE

HENRY E. JONES

15' 0' 15' 30' 45'

SCALE= 1"=30'

NAD 83/95

RW SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 31 of 40

REVISIONS

B/17

2/6/2012
ameadows
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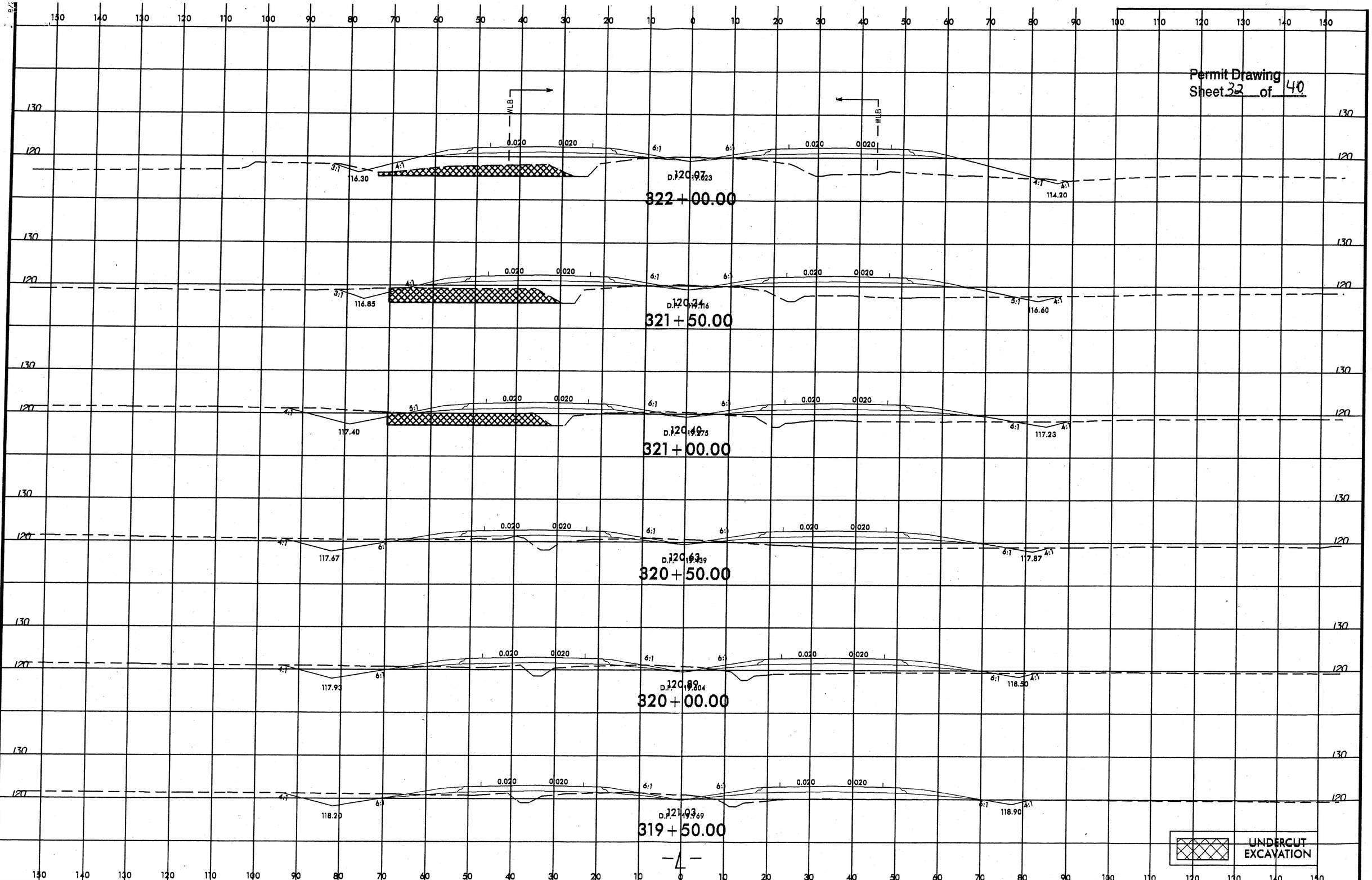
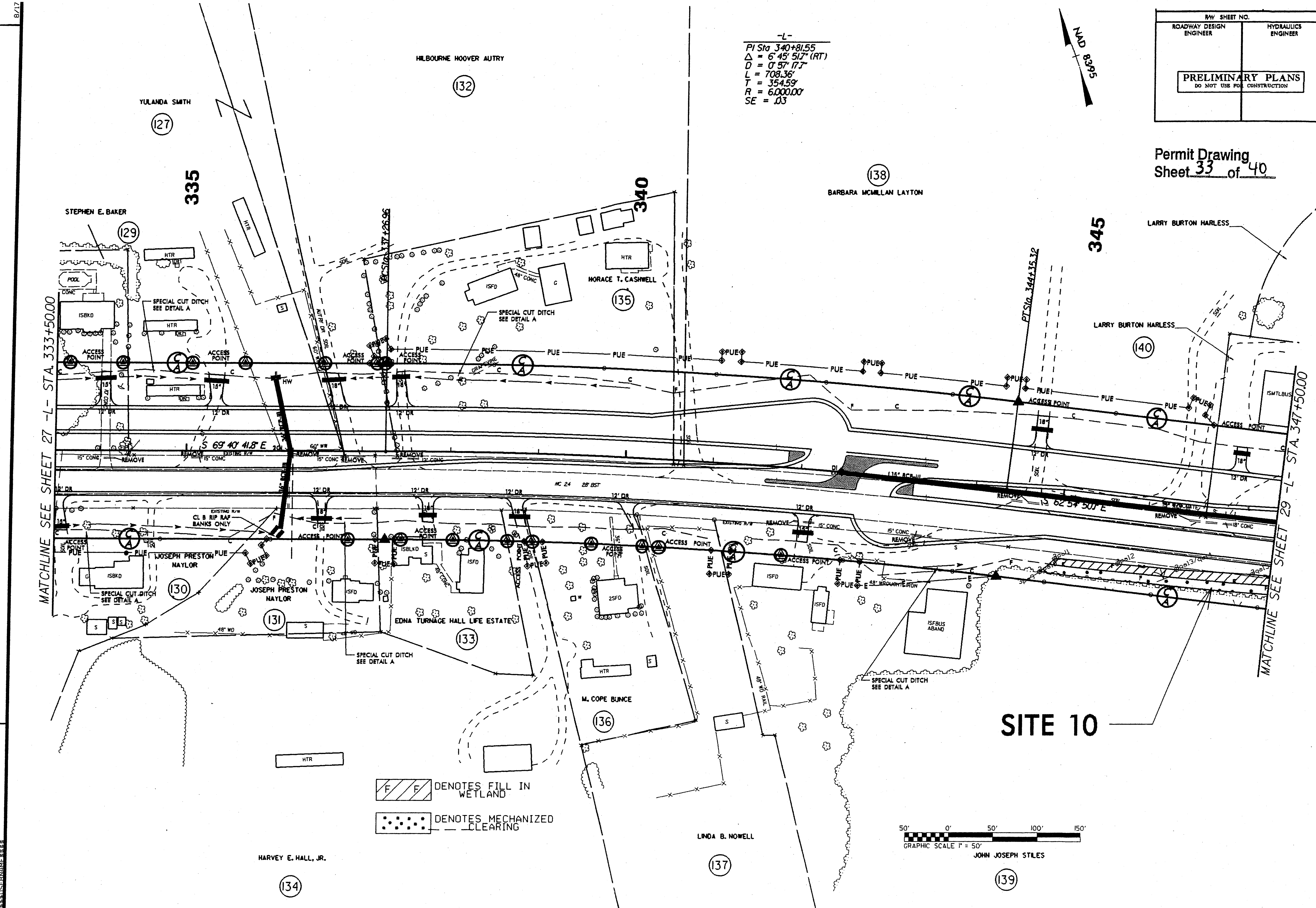
Permit Drawing
Sheet 32 of 40



REVISIONS

NOVEMBER 30,2010 - R/W REVISIONS - REVISED PUE ON PARCELS 131THROUGH 139. ADDED TCE TO PARCEL 139. ELIMINATED TCE FROM PARCEL 138.



2/13/2012
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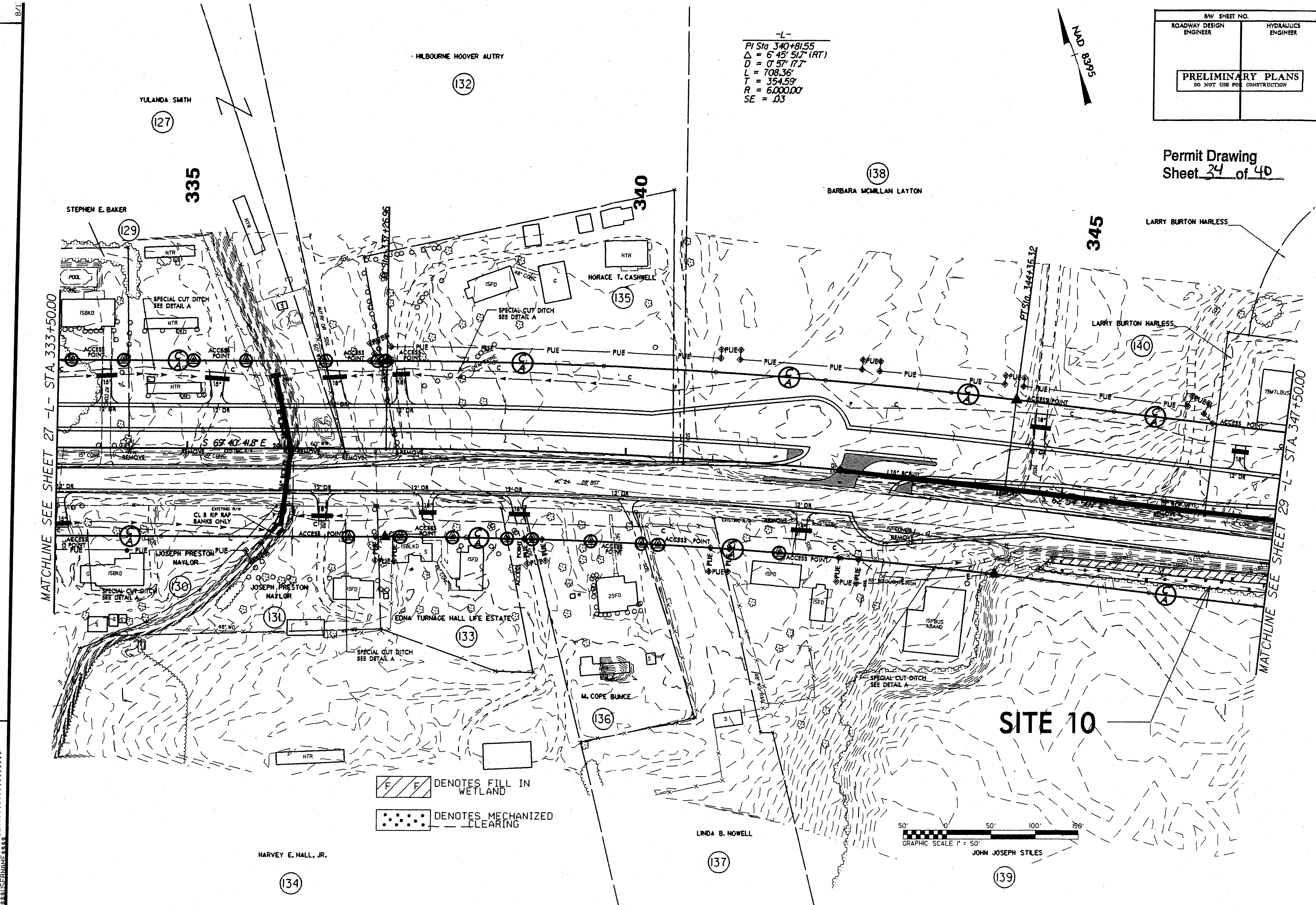
REVISIONS

NOVEMBER 30,2010 - R/W REVISIONS - REVISED PUE ON PARCELS 131THROUGH 139. ADDED TCE TO PARCEL 139. ELIMINATED TCE FROM PARCEL 138.



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2/13/2012
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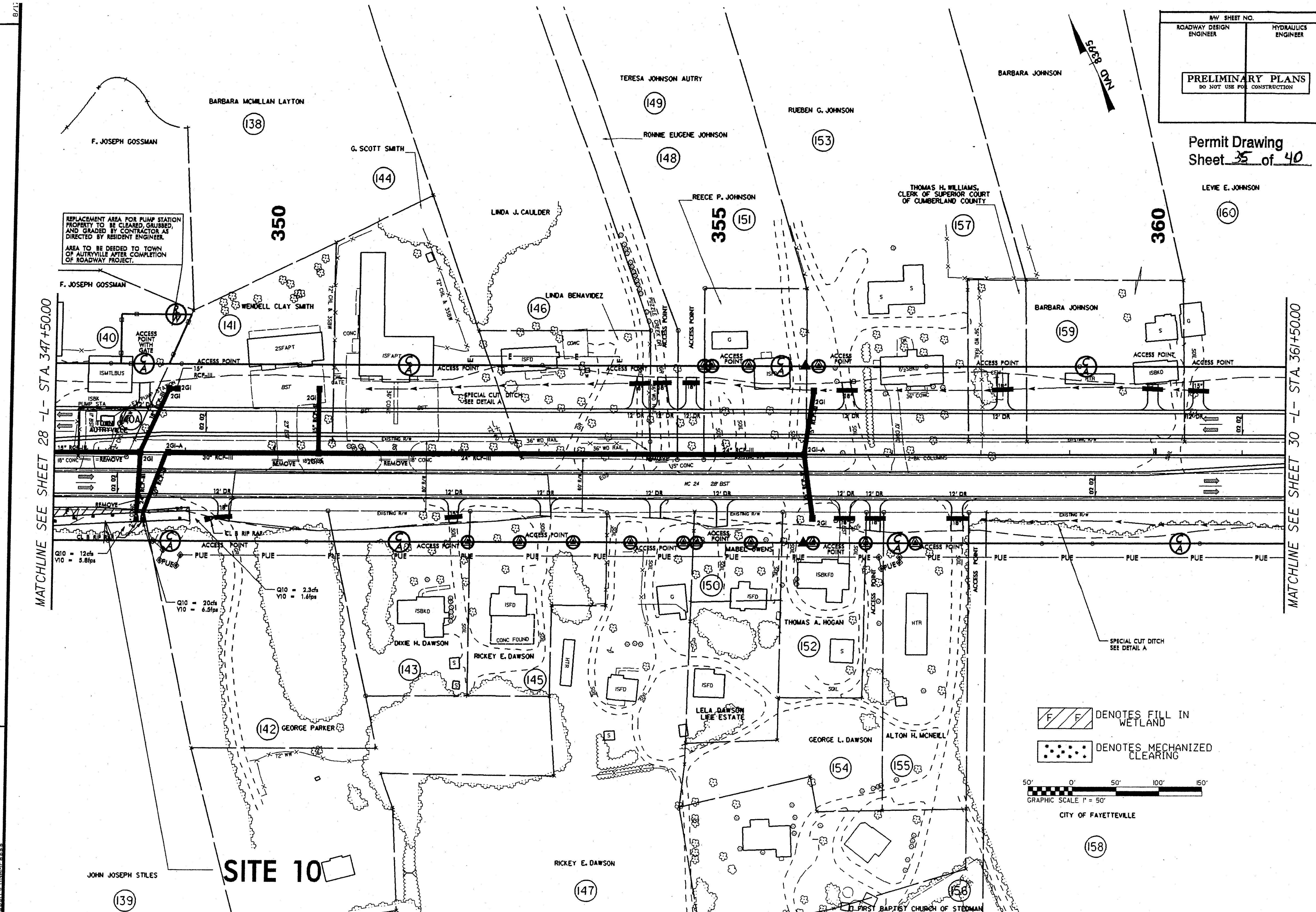

REVISIONS

NOVEMBER 30,2010 - R/W REVISIONS - REVISED PUE ON PARCEL 142, ELIMINATED PUE FROM PARCEL 139.

2/13/2012
gcall
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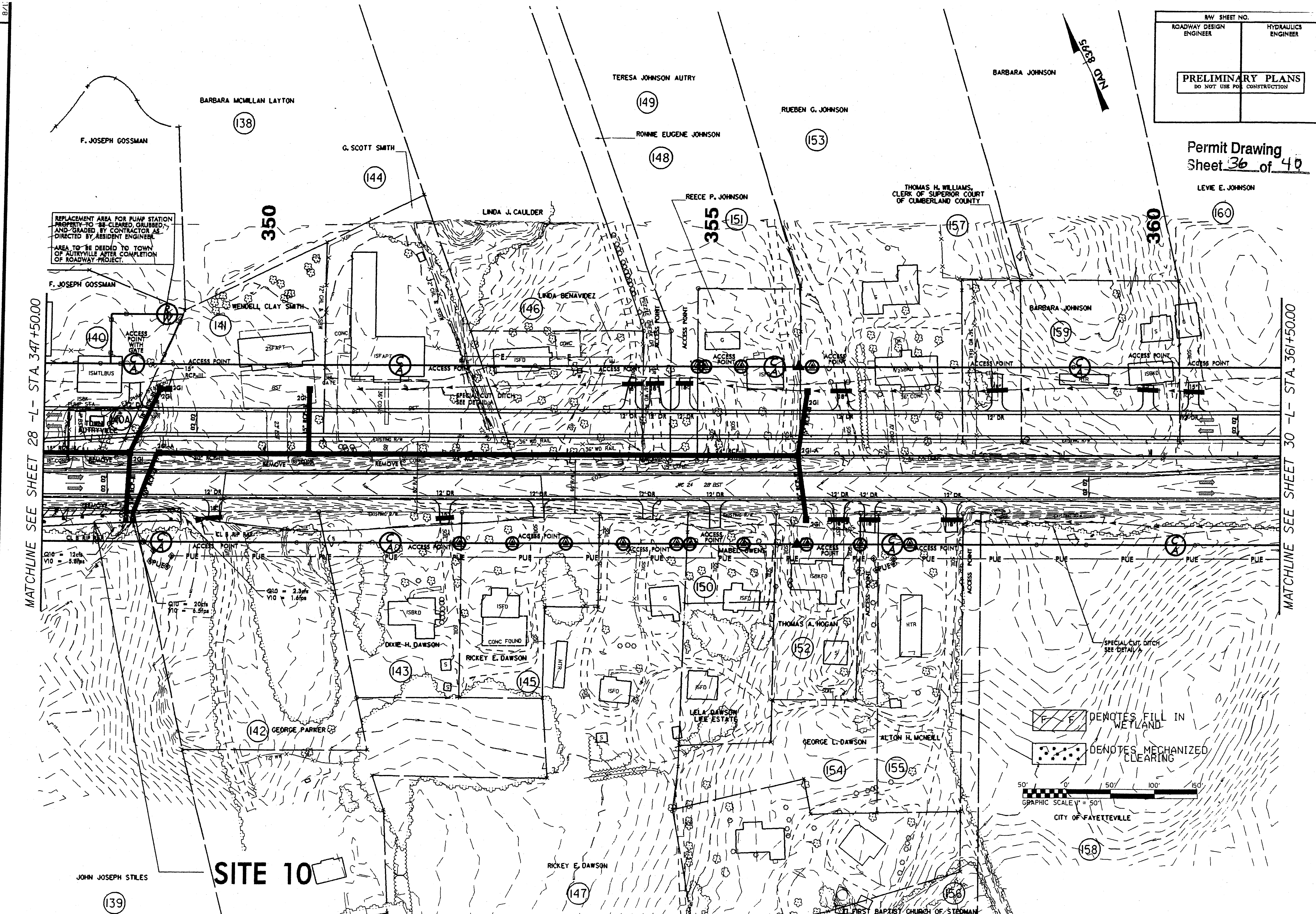
REVISIONS

NOVEMBER 30,2010 - R/W REVISIONS - REVISED PUE ON PARCEL 142. ELIMINATED PUE FROM PARCEL 139.



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2/13/2012
gcall
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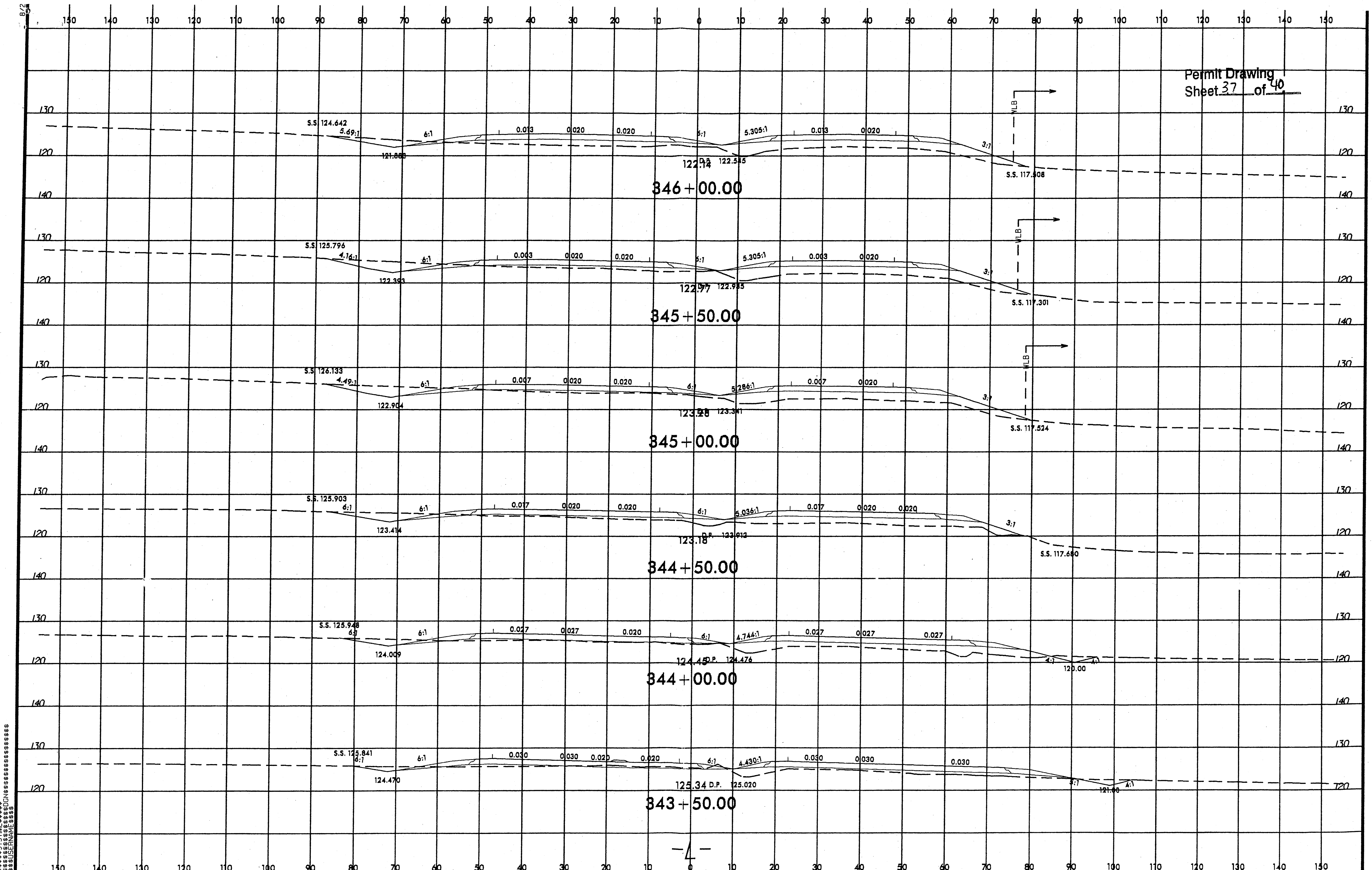


Permit Drawing
Sheet 37 of 40

1/30/2012
ameadows
R:\Hydraulics\PERMITS_Environmental\Drawings\r2303a_hyd_prm_wet_xpll.dgn
$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

8/17

REVISIONS

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$SHEETNO$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 38 of 40

PROPERTY OWNERS
NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
14	JOSEPH P. RIDDLE, III	P.O. BOX 53729 FAYETTEVILLE, NC 28305
15	PREMIUM STANDARD FARMS	623 SOUTHEAST Blvd. CLINTON, NC 28328
16	DONALD CULBRETH	427 HILLSBORO St. STEDMAN, NC 28391
	PROGESS ENERGY (EASEMENT) (CAROLINA POWER & LIGHT)	P.O. BOX 1551 CPB-4C4 RALEIGH, NC 27602
20	CANDACE JO CARTER	4160 PLEASANT VIEW DR. FAYETTEVILLE, NC 28301
31	RICHARD R. ALLEN, Jr.	6044 CLINTON RD. STEDMAN, NC 28391
43	DWIGHT KIM JOHNSON	3102 AUDUBON PLACE WILSON, NC 27896
44	STACY R. CARR, III	211 OLD STAGE RD. AUTRYVILLE, NC 28318
56	ROBERT E. OLIVER	6644 CLINTON RD. STEDMAN, NC 28391

NCDOT
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY
PROJECT: 34416.1.1 (R-2303A)
STEDMAN
NC 24 FROM SR 1006
TO SR 1853

SHEET OF 2/16/11

PROPERTY OWNERS
NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
86	DOUGLAS BRYANT	P.O. BOX 513 STEDMAN, NC 28391
104	DEARL L. BUNCE	414 GLENWOOD DR. LEXINGTON, NC 27292
113	HENRY E. JONES	8321 CLINTON RD. STEDMAN, NC 28391
114	WILEY DAVID HUNNICUTT, Sr.	8321 CLINTON RD. STEDMAN, NC 28391
139	JOHN JOSEPH STILES	102 COHARIE DR. CLINTON, NC 28328

NCDOT
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY
PROJECT: 34416.1.1 (R-2303A)
STEDMAN
NC 24 FROM SR 1006
TO SR 1853

SHEET OF 2/16/11

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation in Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing in Wetlands (ac)	WETLAND IMPACTS: Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	SURFACE WATER IMPACTS: Temp. SW impacts (ac)	SURFACE WATER IMPACTS: Existing Channel Impacts Permanent (ft)	SURFACE WATER IMPACTS: Existing Channel Impacts Temp. (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
1	69+45 to 70+63-L-RT.	Fill						0.16				
	70+93 to 72+81-L-RT	Fill						0.11				
2	73+00 to 85+00-L-	Fill	4.44			0.53						
3	ELIMINATED											
4	131+57 to 133+50-L- RT	Fill						0.18				
5	167+09 to 168+51-L- RT	Fill	0.04			0.03						
6	178+97 to 179+07-L- RT	Fill						0.02				
7	200+65 to 202+44-L-	Fill						0.24				
8	* 296+63 to 304+66-L-	Fill	2.03		0.02	0.20						
	300+06 to 305+40-L-	2*(1@72"&1@48")						0.08		531.00		
	304+40 to 304+51-L- LT	Bank Stablization						<0.01	<0.01	41.00	27.00	
TOTALS:			6.51		0.02	0.76		0.79	<0.01	572	27	

Site 1, 4 and 7 are Pond surface water impacts.

*Site 8 Wetland sta. 296+63 -L- impact shown as a total take due to ditch.
Additional impact outside of ditch is 0.02acres. Also, there will be 294 ft of stream relocation.

Permit Drawing
Sheet 39 of 40
Revised 7/23/12

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY
WBS - 34416.1.1 (R-2303A)

SHEET 7/23/2012

ATN Revised 3/31/05

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation in Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing in Wetlands (ac)	WETLAND IMPACTS: Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	SURFACE WATER IMPACTS: Temp. SW impacts (ac)	SURFACE WATER IMPACTS: Existing Channel Impacts Permanent (ft)	SURFACE WATER IMPACTS: Existing Channel Impacts Temp. (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
9	321+92 to 322+64-L- RT	Fill	0.07		<0.01	0.02						
	*321+58 to 322+98-L-LT	Fill	0.07		0.02	0.03						
	322+10 -L- RT	36" RCP						0.01				
	322+10-L- RT	Bank Stablization						<0.01				
10	344+83 to 349+06-L- RT	Fill	0.08			0.10						
Page Total:			0.22		0.02	0.15		0.01				
TOTALS:			6.73		0.04	0.91		0.80	<0.01	572	27	0

* Site 9 Wetland sta. 321+80 -L-LT. impact shown as total take due to ditch. Additional impact outside of ditch is 0.01acres.

Permit Drawing
Sheet 40 of 40
Revised 7/23/12

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY
WBS - 34416.1.1 (R-2303A)

SHEET 7/23/2012

ATN Revised 3/31/05

09/08/99

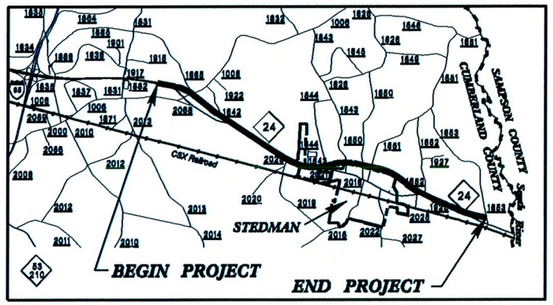
TIP PROJECT: R-2303A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
R-2303A	UEP-1

UTILITY ENVIRONMENTAL PERMIT PLAN
CUMBERLAND COUNTY

Utility Permit Drawing
Sheet 1 of 5



NEU SITE-36
SHEET UEP-29

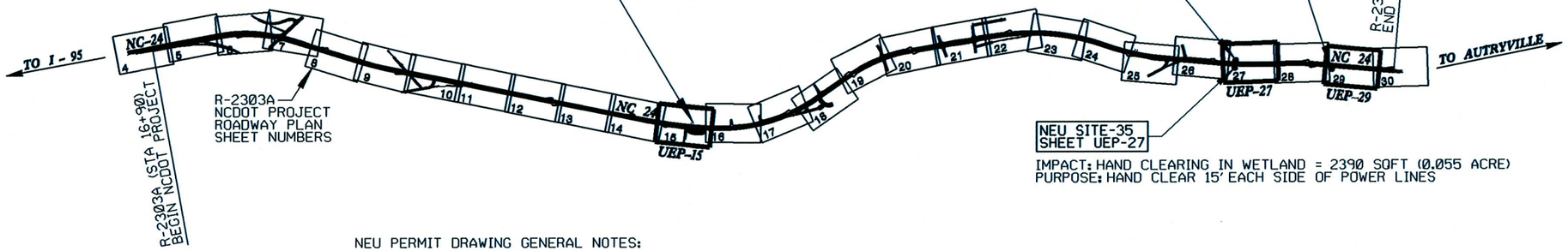
IMPACT: HAND CLEARING IN WETLAND = 820 SQFT (0.019 ACRE)
PURPOSE: HAND CLEAR 15' EACH SIDE OF POWER LINES

NEU SITE-21
SHEET UEP-15

IMPACT: HAND CLEARING IN WETLAND = 4790 SQFT (0.110 ACRE)
PURPOSE: HAND CLEAR 15' EACH SIDE OF POWER LINES

NEU SITE-34
SHEET UEP-27

IMPACT: HAND CLEARING IN WETLAND = 950 SQFT (0.022 ACRE)
PURPOSE: HAND CLEAR 15' EACH SIDE OF POWER LINES



NEU SITE-35
SHEET UEP-27

IMPACT: HAND CLEARING IN WETLAND = 2390 SQFT (0.055 ACRE)
PURPOSE: HAND CLEAR 15' EACH SIDE OF POWER LINES

NEU PERMIT DRAWING GENERAL NOTES:

(1) "HAND CLEARING IN WETLANDS" IMPACT IS DELINEATED FOR INSTALLATION OF AERIAL POWER LINES WITH BOUNDARY SET AT 15' EACH SIDE OF POWER LINE

(2) ALL UNDERGROUND WATER, SEWER, TELEPHONE, FIBER OPTICS, AND CATV LINES TO BE INSTALLED BY TRENCHLESS METHOD WITHIN WETLAND BOUNDARIES SO NO ENVIRONMENTAL IMPACTS TO WETLANDS WILL RESULT FROM INSTALLATION OF ANY UNDERGROUND UTILITIES

MARCH 12, 2013
UTILITY ENVIRONMENTAL PERMIT

INDEX OF SHEETS

PLAN SHEET NUMBERING NOTE:

UTILITY ENVIRONMENTAL PERMIT PLAN SHEET NUMBERS MATCH ROADWAY CONSTRUCTION PLAN SHEET NUMBERS

(I.E. UTILITY SHEET "UEP-10" = ROADWAY SHEET "10")

PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING

1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. — UTILITIES SECTION ENGINEER
Ron Wilkins, P.E. — UTILITIES SQUAD LEADER PROJECT ENGINEER
Eric Haugaard — UTILITIES PROJECT DESIGNER

8/17/99

NCDOT PROJECT R-2303A
UTILITY ENVIRONMENTAL PERMIT DRAWING
NEU SITE-21

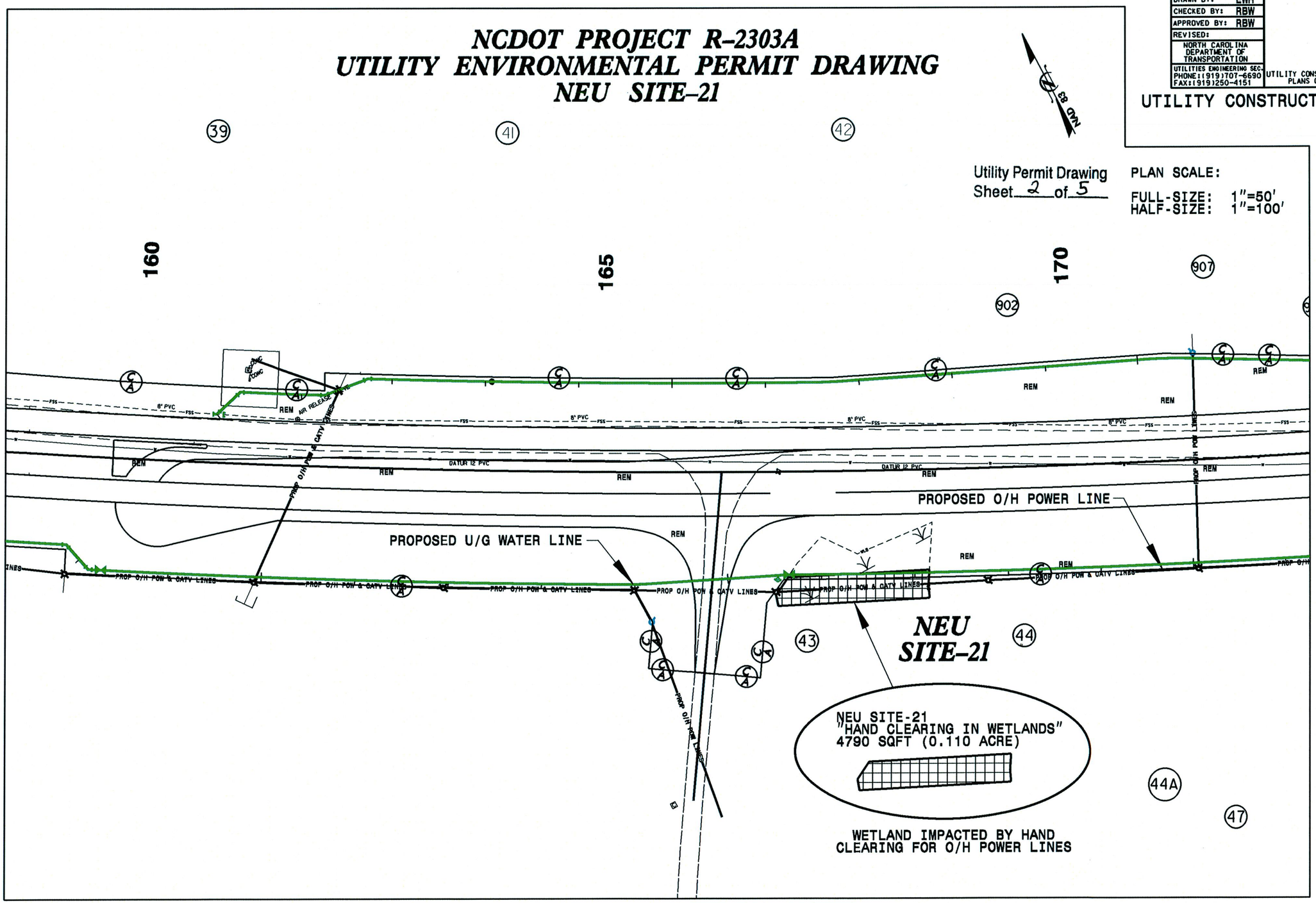
PROJECT REFERENCE NO.	SHEET NO.
R-2303A	UEP-15
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: RBW	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

NAD 83

Utility Permit Drawing
Sheet 2 of 5

PLAN SCALE:
FULL-SIZE: 1"=50'
HALF-SIZE: 1"=100'



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8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2303A	UEP-27
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: RBW	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

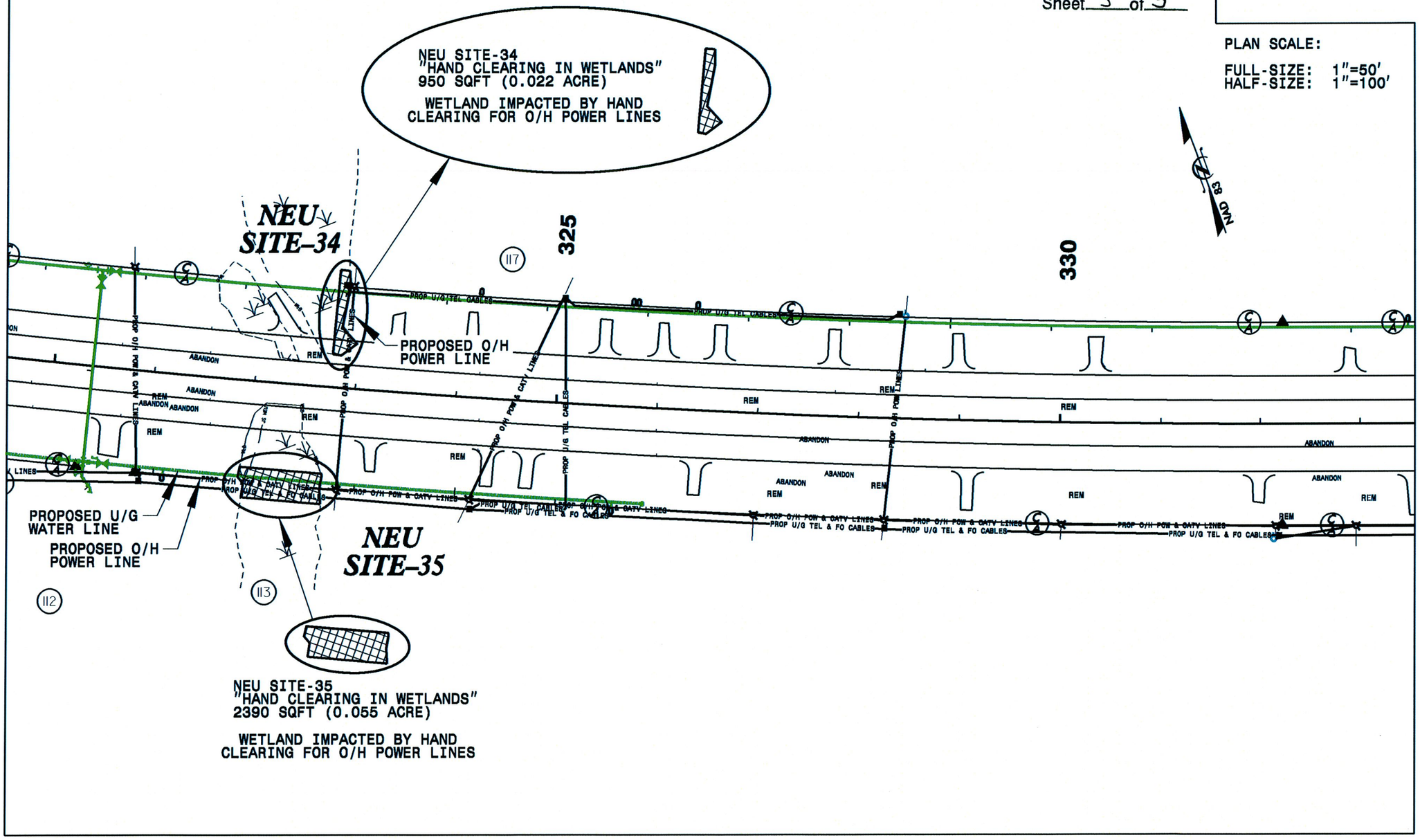
UTILITY CONSTRUCTION

NCDOT PROJECT R-2303A
UTILITY ENVIRONMENTAL PERMIT DRAWING
NEU SITE-34 AND NEU SITE-35

Utility Permit Drawing
Sheet 3 of 5

PLAN SCALE:

FULL-SIZE: 1"=50'
HALF-SIZE: 1"=100'



8/17/99

NCDOT PROJECT R-2303A
UTILITY ENVIRONMENTAL PERMIT DRAWING
NEU SITE-36

Utility Permit Drawing
Sheet 4 of 5

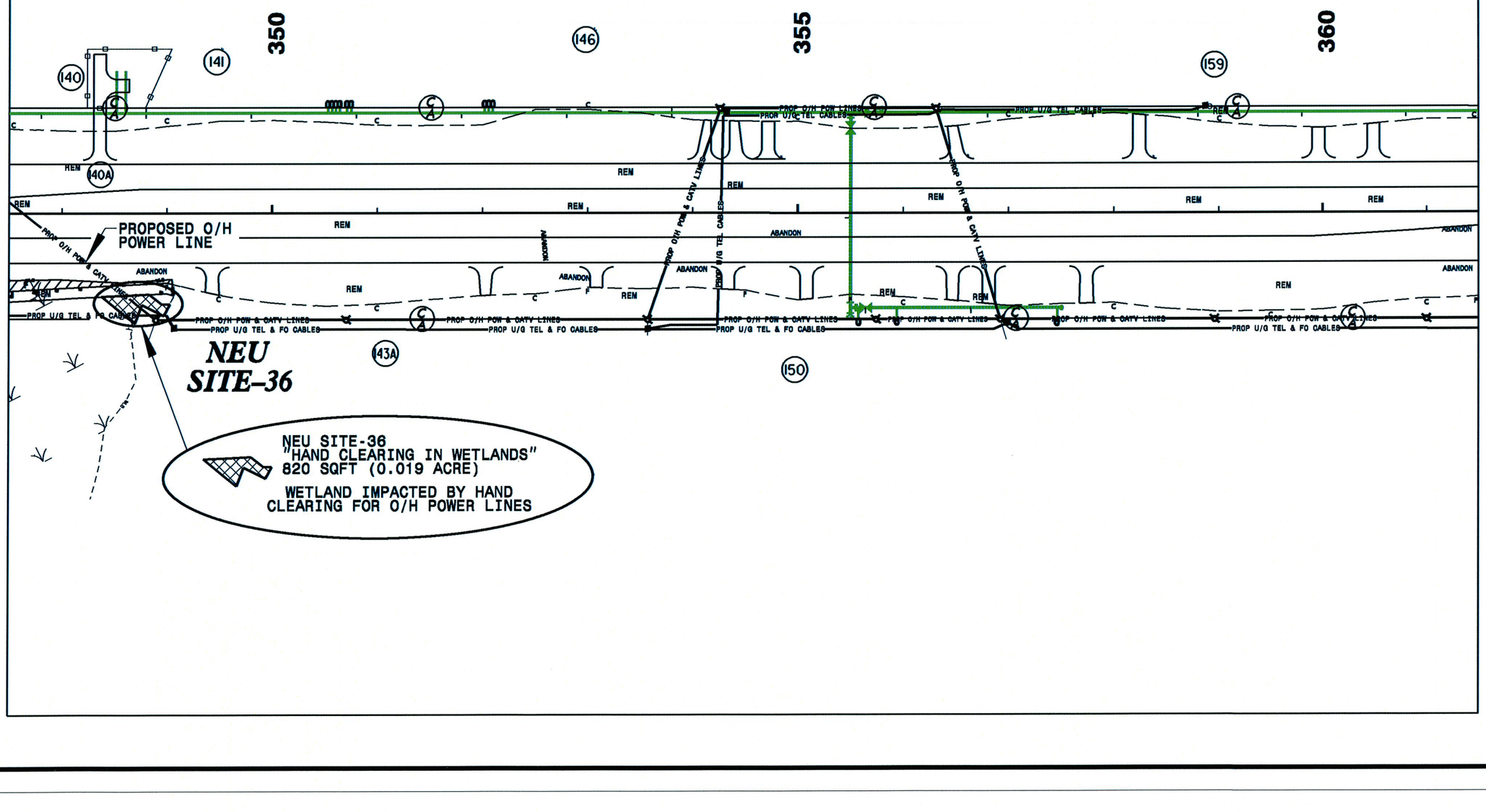
PROJECT REFERENCE NO.	SHEET NO.
R-2303A	UEP-29
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: RBW	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

NAD 83

PLAN SCALE:

FULL-SIZE: 1"=50'
HALF-SIZE: 1"=100'



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WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND 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)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
21	168+00 -R-	O/H POWER					0.11					
34	322+50 -L-	O/H POWER					0.02					
35	322+50 -R-	O/H POWER					0.06					
36	348+75 -R-	O/H POWER					0.02					
TOTALS:							0.21					

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

CUMBERLAND/SAMPSON COUNTY
WBS - 34416.1.1 (R-2303A)

SHEET 3/12/2013

ATN Revised 3/31/05

Utility Permit Drawing
Sheet 5 of 5

09/08/99

TIP PROJECT: R-2303B

CONTRACT:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND & SAMPSON COUNTIES

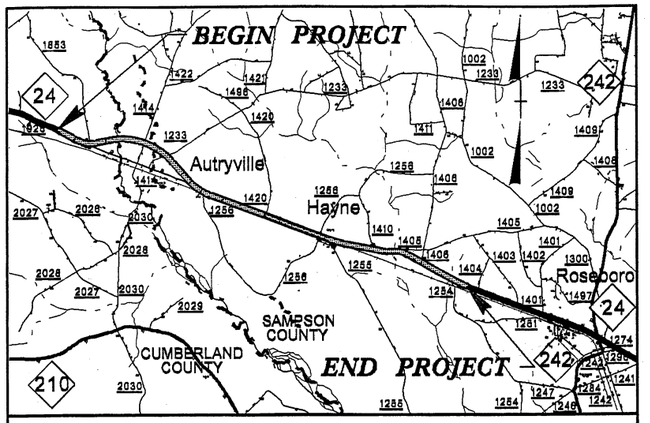
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2303B	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
34416.1.1	STPNHF-F-8-2(17)	P.E.	

RECEIVED
JAN 31 2013
REG. WILM. FLD. OFC.

Permit Drawing Sheet 1 of 56

LOCATION: NC 24 FROM WEST OF SR 1853 (JOHN NUNNERY ROAD) TO WEST OF SR 1404 (DOWDY ROAD)

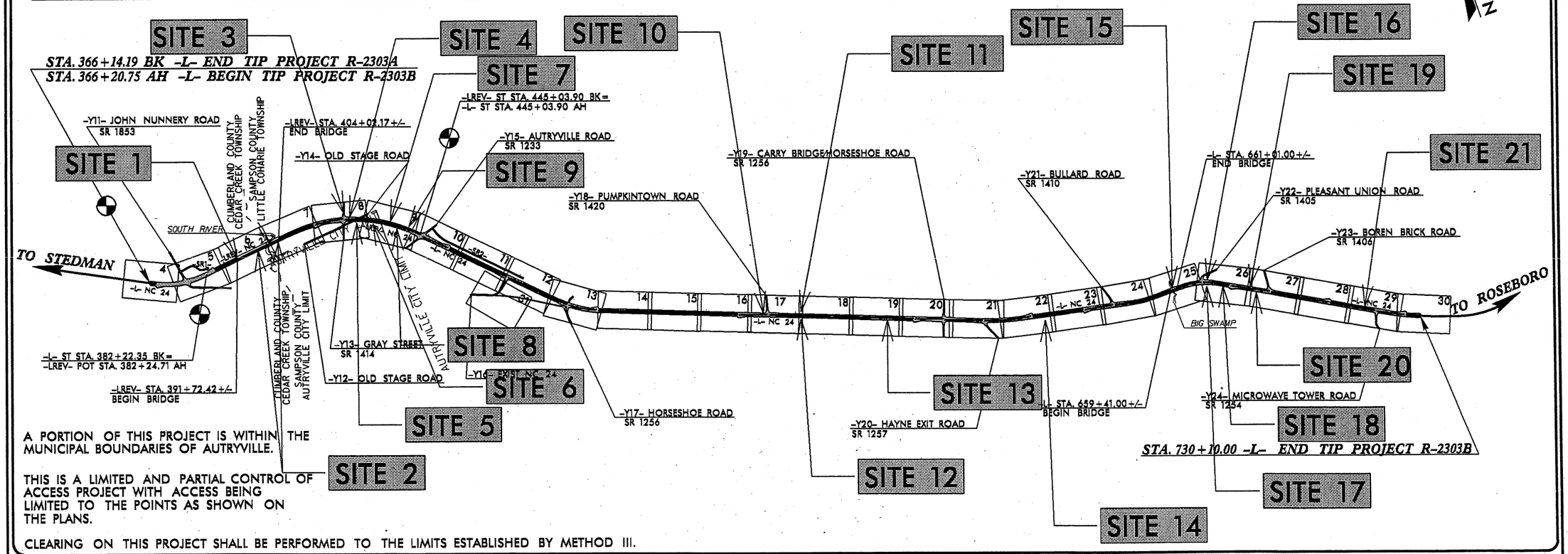
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURES



VICINITY MAP

NAD 83/95

WETLAND AND SURFACE WATER IMPACTS PERMIT



A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF AUTRYVILLE.

THIS IS A LIMITED AND PARTIAL CONTROL OF ACCESS PROJECT WITH ACCESS BEING LIMITED TO THE POINTS AS SHOWN ON THE PLANS.

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

GRAPHIC SCALES

PLANS: 50 25 0 50 100
PROFILE (HORIZONTAL): 50 25 0 50 100
PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2010 = 13520
ADT 2030 = 22000
DHV = 11 %
D = 65 %
T = 9 % *
V = 60 MPH
* TTST 6% DUAL 3%
FUNC. CLASS – ARTERIAL
TIER–STATEWIDE

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2303B = 6.628 MILES
LENGTH STRUCTURES TIP PROJECT R-2303B = 0.263 MILES
TOTAL LENGTH TIP PROJECT R-2303B = 6.891 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 29, 2011

LETTING DATE: JUNE 18, 2013

GARY LOVERING, PE
PROJECT ENGINEER

KEVIN E. MOORE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

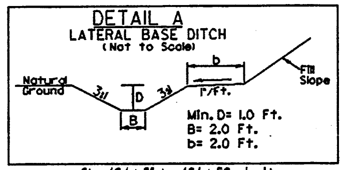
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

P.E.
STATE HIGHWAY DESIGN ENGINEER

5/14/99

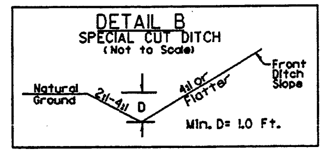
PROJECT REFERENCE NO.	SHEET NO.
R-2303B	2-G
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 2 of 56



Sta. 404+31 to 406+50 -L- Lt
Sta. 404+10 to 410+00 -L- Rt
Sta. 426+13 to 428+35 -L- Lt.
Sta. 431+50 to 436+00 -L- Lt
Sta. 438+00 to 438+00 -L- Lt
Sta. 462+50 to 480+50 -L- Lt
Sta. 487+00 to 503+00 -L- Lt
Sta. 494+27 to 503+00 -L- Rt
Sta. 492+77 to 494+27 -L- Rt
Sta. 503+30 to 513+00 -L- Rt
Sta. 514+40 to 523+00 -L- Rt
Sta. 503+15 to 520+00 -L- Lt
Sta. 523+50 to 526+00 -L- Rt
Sta. 552+50 to 555+00 -L- Rt
Sta. 553+00 to 554+00 -L- Lt
Sta. 556+50 to 558+00 -L- Rt
Sta. 558+50 to 561+50 -L- Lt
Sta. 561+75 to 573+00 -L- Lt
Sta. 562+00 to 567+75 -L- Rt
Sta. 587+29 to 594+22 -L- Rt
Sta. 607+50 to 615+00 -L- Rt
Sta. 617+50 to 627+70 -L- Lt
Sta. 640+00 to 646+00 -L- Rt
Sta. 670+25 to 672+00 -L- Lt
Sta. 682+15 to 685+50 -L- Rt
Sta. 688+13 to 691+50 -L- Lt
Tie to -Y23- Lt ditch
Sta. 696+50 to 701+20 -L- Lt
Sta. 714+24 to 715+97-L- Rt

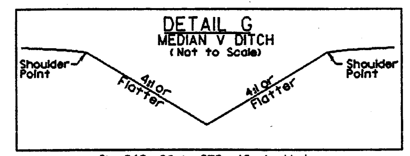
Sta. 11+31 to 14+00 -Y16- Rt
Sta. 11+10 to 13+00 -Y16- Lt
Sta. 16+25 to 18+64 -Y23- Lt
Ditch Should Be at Zero Depth



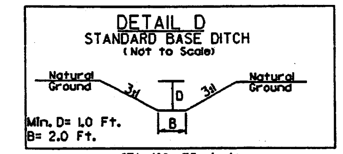
Sta. 367+80 to 371+00 -L- Rt
Sta. 374+10 to 376+10 -L- Rt
Sta. 374+10 to 375+28 -L- Lt
Sta. 377+27 to 382+10 -L- Lt
Sta. 384+50 to 385+50 -L- Lt
Sta. 415+32 to 422+08 -L- Rt
Sta. 448+31 to 462+50 -L- Lt
Sta. 573+00 to 574+15 -L- Lt
Sta. 574+50 to 576+75 -L- Lt
Sta. 576+77 to 594+00 -L- Lt
Sta. 595+97 to 600+00 -L- Rt
Sta. 596+00 to 611+00 -L- Lt
Sta. 600+50 to 605+92 -L- Rt
Sta. 611+50 to 616+00 -L- Lt
Sta. 616+00 to 630+00 -L- Rt
Sta. 627+70 to 635+07 -L- Lt
Sta. 635+07 to 639+50 -L- Rt
Sta. 636+82 to 638+00 -L- Lt
Sta. 638+32 to 641+50 -L- Lt
Sta. 643+35 to 646+00 -L- Lt
Sta. 646+44 to 648+00 -L- Rt
Sta. 651+00 to 654+75 -L- Lt
Sta. 673+50 to 678+00 -L- Lt
Sta. 674+75 to 678+50 -L- Rt**
Sta. 679+00 to 681+90 -L- Rt**
Sta. 685+50 to 687+00 -L- Rt
Sta. 701+50 to 703+50 -L- Lt
Sta. 701+00 to 707+13 -L- Rt
Sta. 704+00 to 710+00 -L- Lt
Sta. 717+75 to 720+52 -L- Rt
Sta. 721+00 to 723+65 -L- Rt
Sta. 724+00 to 727+50 -L- Rt
Sta. 13+11 to 13+90 -Y15- Lt.
Sta. 13+11 to 14+45 -Y15- Rt.
Sta. 17+00 to 18+50 -Y15- Rt
Sta. 17+00 to 18+50 -Y15- Lt.
Sta. 14+40 to 17+00 -Y16- Rt
Sta. 18+75 to 19+67 -Y19- Lt
Sta. 18+80 to 19+90 -Y19- Rt
Sta. 21+19 to 22+50 -Y19- Lt
Sta. 21+95 to 22+50 -Y19- Rt
Sta. 11+31 to 13+00 -Y20- Rt
Sta. 12+50 to 14+34 -Y22- Rt
Sta. 12+50 to 14+50 -Y22- Lt
Sta 10+75 to 11+90 -Y24- Lt

Sta 10+59 to 11+03 -Y24- Rt
Tie to -L- Ditch

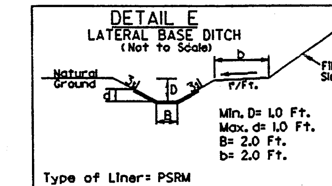
**Outlet on Natural Ground outside of wetlands



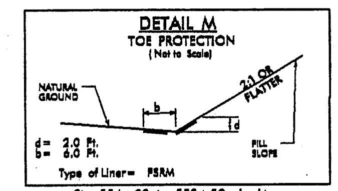
Sta. 368+85 to 372+60 -L- Med
Sta. 379+73 to 380+28 -L- Med
Sta. 446+89 to 453+50 -L- Med
Sta. 491+02 to 498+02 -L- Med
Sta. 538+89 to 546+00 -L- Med
Sta. 674+00 to 675+00 -L- Med
Sta. 698+75 to 702+50 -L- Med



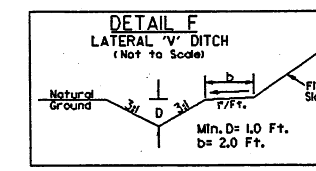
STA. 613+75 -L- Lt
STA. 666+87 -L- Lt
STA. 419+40 -L- Lt
STA. 11+50 -Y17- Rt
STA. 13+00 to 14+50 -Y20- Rt
STA. 15+31 -Y22- Rt



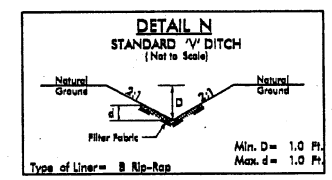
Sta. 710+00 to 712+00 -L- Lt



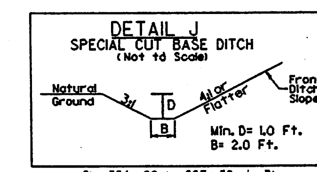
Sta. 554+00 to 558+50 -L- Lt
Sta. 12+50 to 14+34 -Y22- Rt



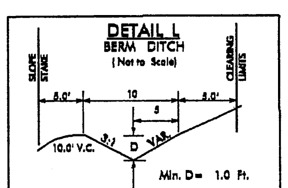
Sta. 377+43 to 382+22 -L- Rt



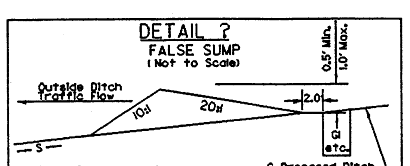
FROM STA. 391+95 TO STA. 393+75 -LREV- Rt
FROM STA. 391+95 TO STA. 393+60 -LREV- Lt
FROM STA. 401+85 TO STA. 402+85 -LREV- Rt
FROM STA. 401+75 TO STA. 403+87 -LREV- Lt



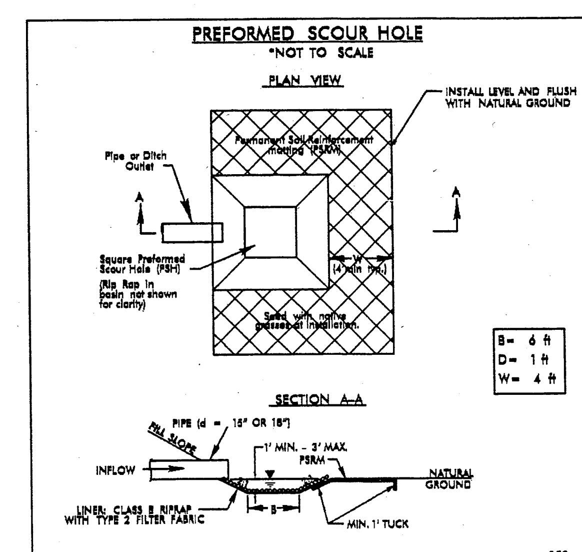
Sta. 526+00 to 537+50 -L- Rt
Sta. 528+50 to 542+13 -L- Lt
Sta. 547+37 to 553+00 -L- Lt
Sta. 547+37 to 552+50 -L- Rt



FROM STA. 625+00 TO STA. 630+00 -L- Rt
FROM STA. 672+50 TO STA. 676+00 -L- Lt



FROM STA. TO STA.



STA. 424+70 -L- Rt
STA. 476+60 -L- Lt
STA. 539+50 -L- Rt

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$$$$$$$$$$DGN$$$$$$$$$$$$$$
$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-2303B	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/95

Permit Drawing
Sheet 3 of 56

SITE 1

SITE 2

REVISIONS

8/17/99

MATCHLINE SHEET 5 -L- STA. 387+00

MATCHLINE SHEET 7 -L- STA. 401+00

390 395 400

6 19 ROLAND NUNNERY 19A 11 8 9

WW FENCE

SEE DETAIL N

TEMP. WORK BRIDGE

-L REV N 84° 22' 32.5" E

TYPE M350

TYPE B-77

2GI

30" RCP-III

GRAU-350

FS

TOE PROTECTION
Sta. 387+40 to 390+00 -L- Rt

CL I RIP RAP
W/FILTER FABRIC
EST. 17 TONS
EST. 38 SY FABRIC

CLASS II RIP RAP
To Elev. 101.7'

Sta.1
Q= 3cfs
V= 6.3 fps

POND

SOUTH RIVER CREEK

SOUTH RIVER CLUBERLAND

Y

E E DENOTES EXCAVATION IN WETLAND

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

HC HC DENOTES HAND CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

6/27/2012
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2/28/2011
jkeeter
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 4 of 56

SITE 1

SITE 2

NAD 83/95

MATCHLINE SHEET 5 -L- STA. 387+00

MATCHLINE SHEET 7 -L- STA. 401+00

ROLAND NUNNERY

WW FENCE

SEE DETAIL N

TEMP. WORK BRIDGE

CLASS II RIP RAP
To Elev. 101.7'

TOE PROTECTION
Sta. 387+40 to 390+00 -L- Rt

CL I RIP RAP
W/FILTER FABRIC
EST. 17 TONS
EST. 38 SY FABRIC

POND

DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES HAND CLEARING

GRAPHIC/SCALE 1" = 50'

REVISIONS

8/17/99

6/27/2012
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November 28, 2011
2303b_hyd_prm_wet_psh6.dgn
am_keeter

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-14

Permit Drawing
Sheet 5 of 56

391+63.99

-LREV-
STA 391+45.60
OFF 8.58

0.025 | 6:1 | 5.994:1 | 0.025

D.P. 109.71

3:1 — WLB — S.S. 95.90

3:1 — WLB — S.S. 97.40

9669

391+43.10

-LREV-
STA 391+40.97
OFF 8.47

0.025 | 6:1 | 5.994:1 | 0.025

D.P. 109.72

3:1 — WLB — S.S. 96.11

3:1 — WLB — S.S. 97.47

9666

391+38.46

-LREV-
STA 391+02.50
OFF 7.73

0.025 | 6:1 | 5.994:1 | 0.025

D.P. 109.84

3:1 — WLB — S.S. 97.88

3:1 — WLB — S.S. 100.03

9802

391+00.00

-LREV-
STA 390+52.49
OFF 6.76

0.025 | 6:1 | 5.994:1 | 0.025

D.P. 110.00

3:1 — WLB — S.S. 99.39

3:1 — WLB — S.S. 99.81

9972

390+50.00

6/20/2012
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November 28, 2011
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 6 of 56

SITE 2

NAD 83/95

-L- REV- N 84°22'32.5"E

MATCHLINE SHEET 6 -L- STA. 401+00

MATCHLINE SHEET 8 -L- STA. 415+00

19 ROLAND NUNNERY

21 JAMES H. SPELL

20 RICHARD S. SESSOMS, JR.

405

410

SEE DETAIL N

SOUTH RIVER
SAMPSON COUNTY
LITTLE COHARIE TOWNSHIP

CL B RIP RAP W/FILTER FABRIC EST. 10 TONS EST. 28 SY FABRIC

0706

15" w/ 2 Elbows 2GI

GRAU 350

TYPE B-77

0704

0705

TYPE M350

0708 2GI

0710 2GI

15" RCP-III

24" RCP-III

0701

CAT-1 15" w 2 Elbows

0707

2GI 0709

Excavate to El 98 Est. 1000 cu yds

0703

HW

CL B RIP RAP W/FILTER FABRIC EST. 2 TONS EST. 7 SY FABRIC

CLASS II RIP RAP (STRUCTURE PAY ITEM)

TDE

ALDE

WW FENCE

JAMES H. SPELL

CECIL HALL

JUANITA C. LONG

OLD STAGE ROAD

EIP

DALLAS BROCK

AUTRYVILLE CITY LIMIT

DENOTES MECHANIZED CLEARING

HC HC DENOTES HAND CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

REVISIONS

8/17/99

6/27/2012
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November 28, 2011
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 7 of 56

REVISIONS
8/17/99

SITE 2

MATCHLINE SHEET 6 -L- STA. 401+00

MATCHLINE SHEET 8 -L- STA. 415+00

NAD 83/05

19 ROLAND NUNNERY

21 JAMES H. SPELL

20 RICHARD S. SESSOMS, JR.

21 JAMES H. SPELL

CECIL HALL

21 JAMES H. SPELL

JUANITA C. LONG

21 JAMES H. SPELL

DALLAS BROCK

405

410

SEE DETAIL N

SEE DETAIL N

SWAMP RIVER
SAMPSON COUNTY
ACTIVE COHARIE TOWNSHIP

AUTRYVILLE CITY LIMIT

CL B RIP RAP W/FILTER FABRIC EST. 10 TONS EST. 28 SY FABRIC

CLASS II RIP RAP (STRUCTURE PAY ITEM)

CL B RIP RAP W/FILTER FABRIC EST. 2 TONS EST. 7 SY FABRIC

0706 0705 0704 0703 0702 0701 0710 0707 0708 0709

15" W
2 Elbows
2GI

GRAU 350

TYPE B-77

TYPE M350

REV-L-N 84°22'32"E
15 RCP-III

2GI

LAT-1
15" W
2 Elbows

Excavate to El 98
Est. 1000 cu yds

HW

WW FENCE

TDE

AUE

DENOTES MECHANIZED CLEARING

HC HC DENOTES HAND CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

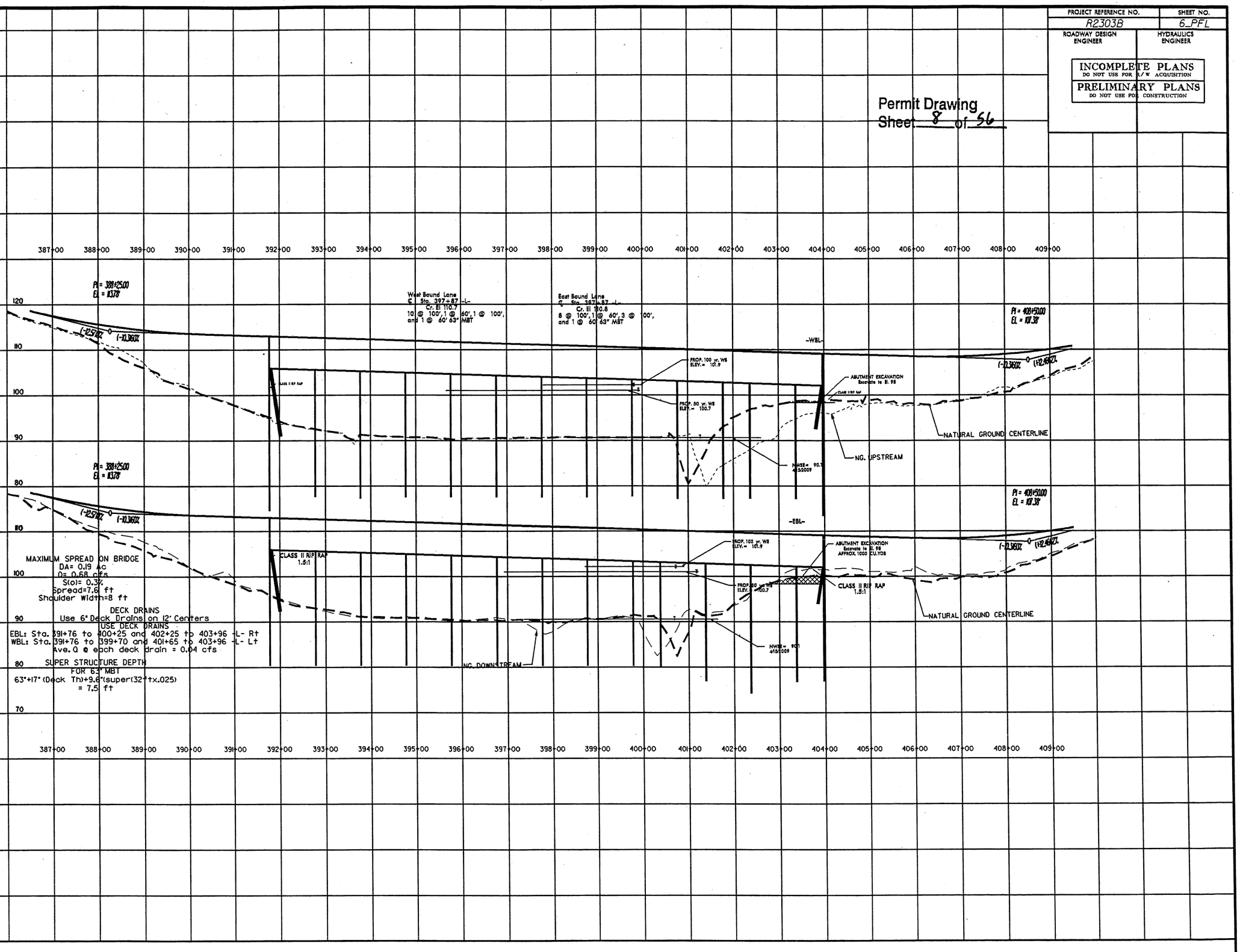
OLD STAGE ROAD

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R2303B	6_PFL
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 8 of 56



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mwebster
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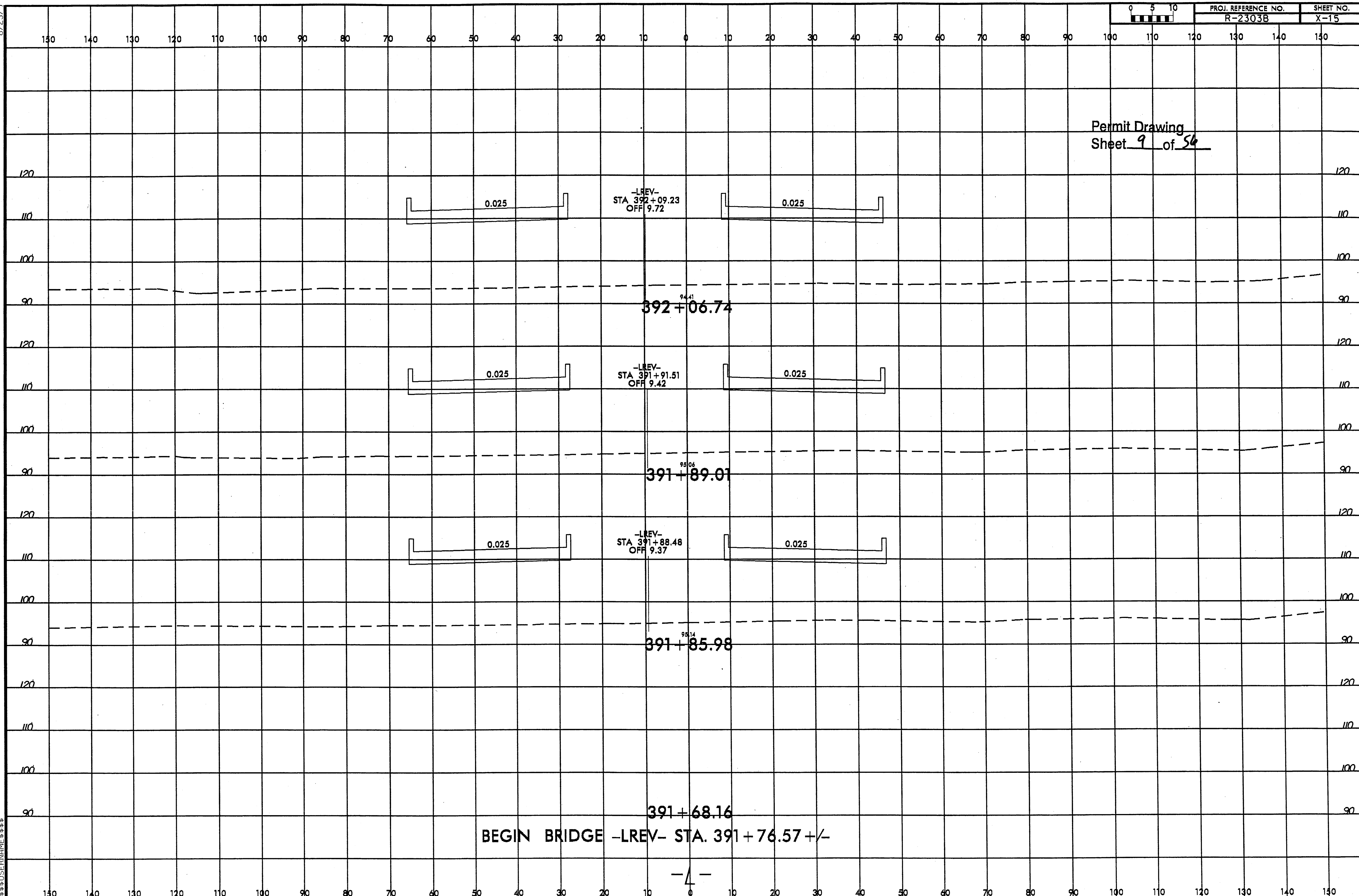

8/23/9

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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 10 of 56

REVISIONS

09/16/11 R/W REVISION (PJS) - THE R/W LINE WAS ADJUSTED TO THE EXISTING PROPERTY LINE ON PARCEL 26A (PAMELA C. MELVIN) AND PARCEL 26 (HEATHER ELIZABETH MELVIN).

08/26/11 R/W REVISION (PJS) - THE OFFSETS WERE CORRECTED ON PARCEL 25 (BERTIE A. WILLIAMS).

8/17/99

SITE 3

SITE 4

SITE 5

NAD 83/95

MATCHLINE SHEET 7 -L- STA. 415+00

MATCHLINE SHEET 9 -L- STA. 429+00

21 JAMES H. SPELL

22 VIRGINIA MAE PHILLIPS SIMMONS

KATHIE ELAINE HALL RAY

23 ROBERT F. CASHWELL

24

25 BERTIE A. WILLIAMS

26 HEATHER ELIZABETH MELVIN

26A PAMELA C. MELVIN (PER SAMPSON CO. GIS)

27 THORNTON HOMES CO.

28

MICKIE W. SPELL

TERRY A. SPELL

JAKE H. SPELL

HARVEY S. SUTTON

BOBBY L. HENDERSON

AUTRYVILLE CITY LIMIT

N 88°04'26"E

N 83°52'33"E

S 10°47'48"W

WW FENCE

SEE DETAIL "D"
2' Base Tailditch
Est. 40 cu yds excavation

CL B RIP RAP W/FILTER FABRIC
EST. 8 TONS
EST. 21 SY FABRIC

PDE

SPDE

Sta. 419+40 Station 2 CFS
Sta. 420+05 Station 25 CFS
10' Gal 5" Flat

See Detail "B"
Special Cut Ditch
Sta. 415+32 to 422+08 -L- Rt

ROCK FILL IN POND
SEE DETAIL PROVIDED BY GEOTECH

See Detail "M"
Rip Rap at Embankment

SEE DETAIL "A"
2' Base Lateral Ditch
Sta. 426+13 TO 428+35 -L- Lt.

Grade To Drain
Remove Old Roadbed
To Natural Ground

Sta. 2 CFS
Sta. 25 CFS
Flat

Sta. 423+75 -L- Rt
2' Base Lateral Ditch
Sta. 423+75 TO 425+35
Sta. 425+35 TO 426+13
Sta. 426+13 TO 428+35

GRAU 35" x 2GI Type D

PSH

EXISTING R/W

PROPOSED R/W

EIP

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES IMPACTS IN SURFACE WATER (POND)

GRAPHIC SCALE 1" = 50'

6/27/2012
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December 28, 2011
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amkeeter

PROJECT REFERENCE NO.	SHEET NO.
R-2303B	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

09/16/11 R/W REVISION (PJS) - THE R/W LINE WAS ADJUSTED TO THE EXISTING PROPERTY LINE ON PARCEL 26A (PAMELA C. MELVIN) AND PARCEL 26 (HEATHER ELIZABETH MELVIN).

08/26/11 R/W REVISION (PJS) - THE OFFSETS WERE CORRECTED ON PARCEL 25 (BERTIE A. WILLIAMS).

8/17/99

SITE 3

SITE 4

SITE 5

MATCHLINE SHEET 7 -L- STA. 415+00

MATCHLINE SHEET 9 -L- STA. 429+00

KATHIE ELAINE HALL RAY

VIRGINIA MAE PHILLIPS SIMMONS

JAMES H. SPELL

BERTIE A. WILLIAMS

HEATHER ELIZABETH MELVIN

THORNTON HOMES CO.

MICKIE W. SPELL

TERRY A. SPELL

JAKE H. SPELL

ROBERT F. CASHWELL

HARVEY S. SUTTON

PAMELA C. MELVIN (PER SAMPSON CO. GIS)

BOBBY L. HENDERSON

AUTRYVILLE CITY LIMIT

N 86°04'26"E

N 83°52'33"E

S 10°41'48"W

WW FENCE

ROCK FILL IN POND SEE DETAIL PROVIDED BY GEOTECH

See Detail "A" Rip Rap at Embankment

See Detail "B" Special Cut Ditch Sta. 415+32 to 422+08 -L- Rt

SEE DETAIL "D" 2 Base Fairditch Est. 40 cu yds excavation

CL B RIP RAP W/FILTER FABRIC EST. 8 TONS EST. 21 SY FABRIC

SEE DETAIL "A" 2 Base Lateral Ditch Sta. 426+43 to 428+35 -L- Lt

Grade To Drain Remove Old Roadbed To Natural Ground

Sta. 423+75 -L- Rt

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES IMPACTS IN SURFACE WATER (POND)

GRAPHIC SCALE 1" = 50'

Permit Drawing
Sheet 11 of 56

November 28, 2011
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amkeater

6/27/2012
amkeater
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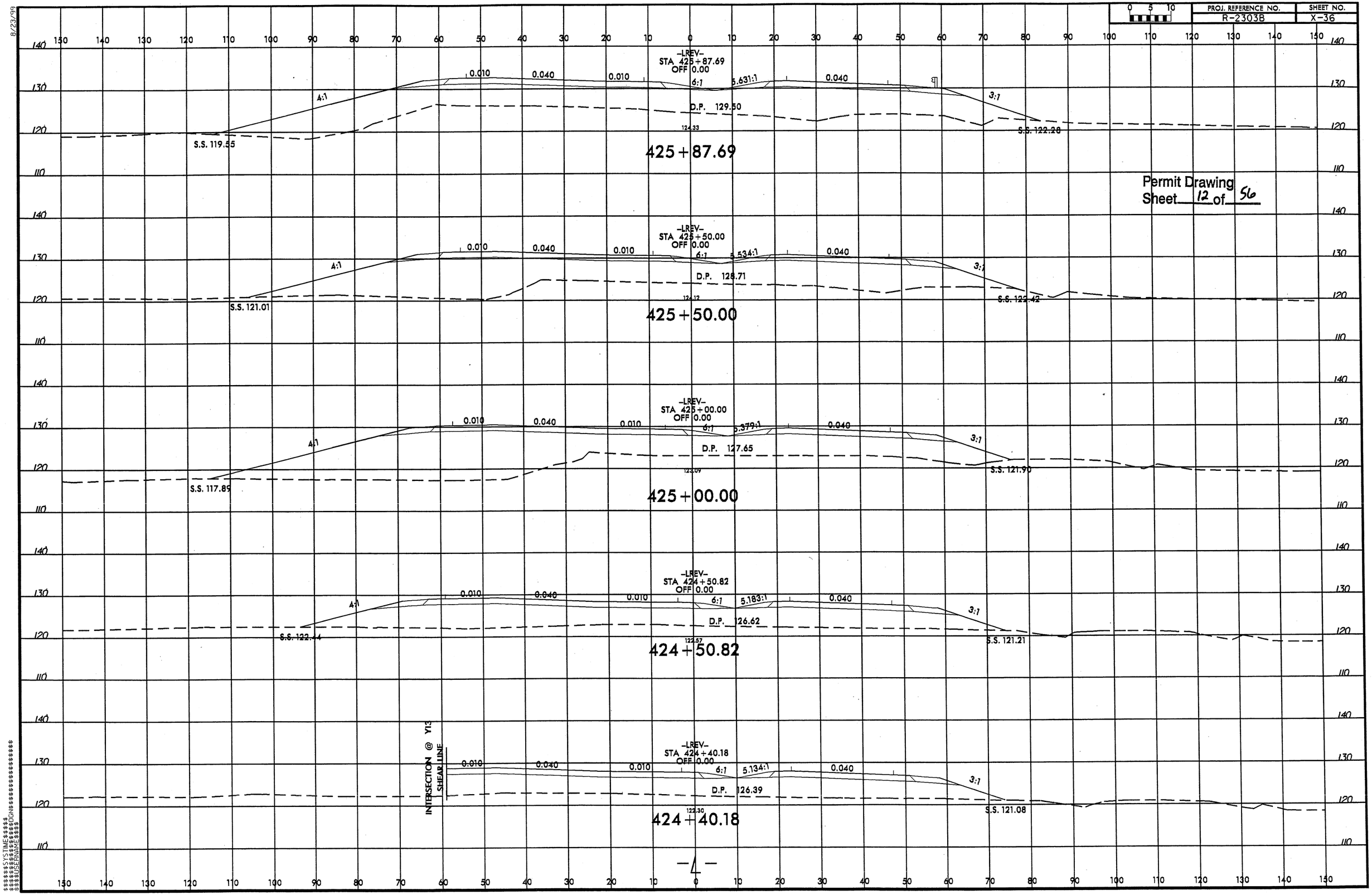
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-36

Permit Drawing
Sheet 12 of 56



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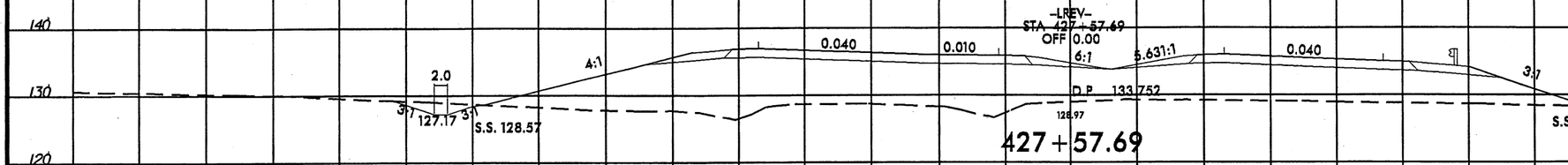
$$$$$$$$$$$$$$$$$$$$DGNs$$$$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

8/23/96

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-37

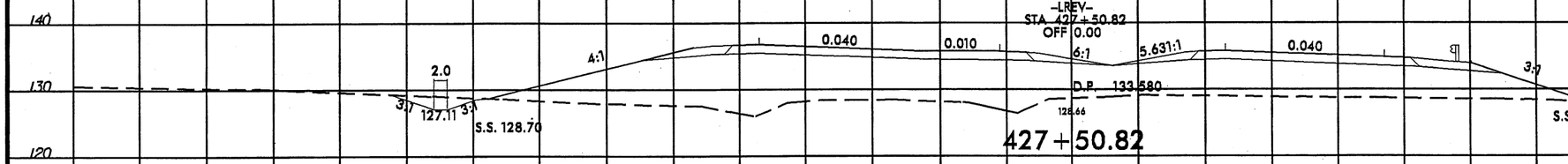
Permit Drawing
Sheet 13 of 56

-LREV-
STA 427+57.69
OFF 0.00



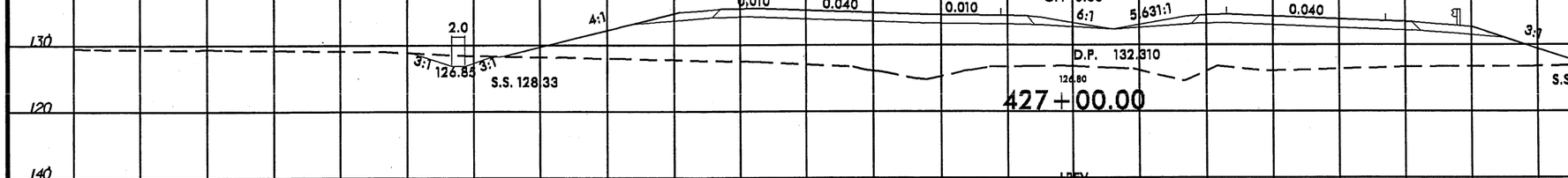
427+57.69

-LREV-
STA 427+50.82
OFF 0.00



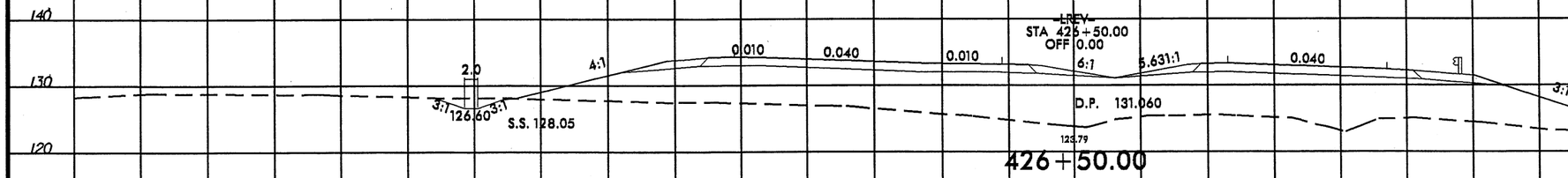
427+50.82

-LREV-
STA 427+00.00
OFF 0.00



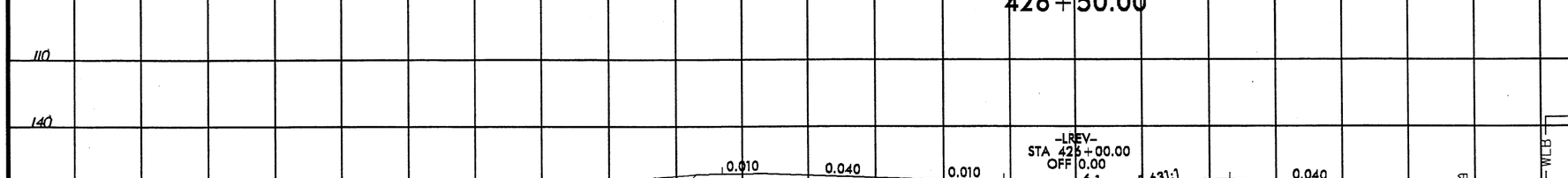
427+00.00

-LREV-
STA 426+50.00
OFF 0.00



426+50.00

-LREV-
STA 426+00.00
OFF 0.00

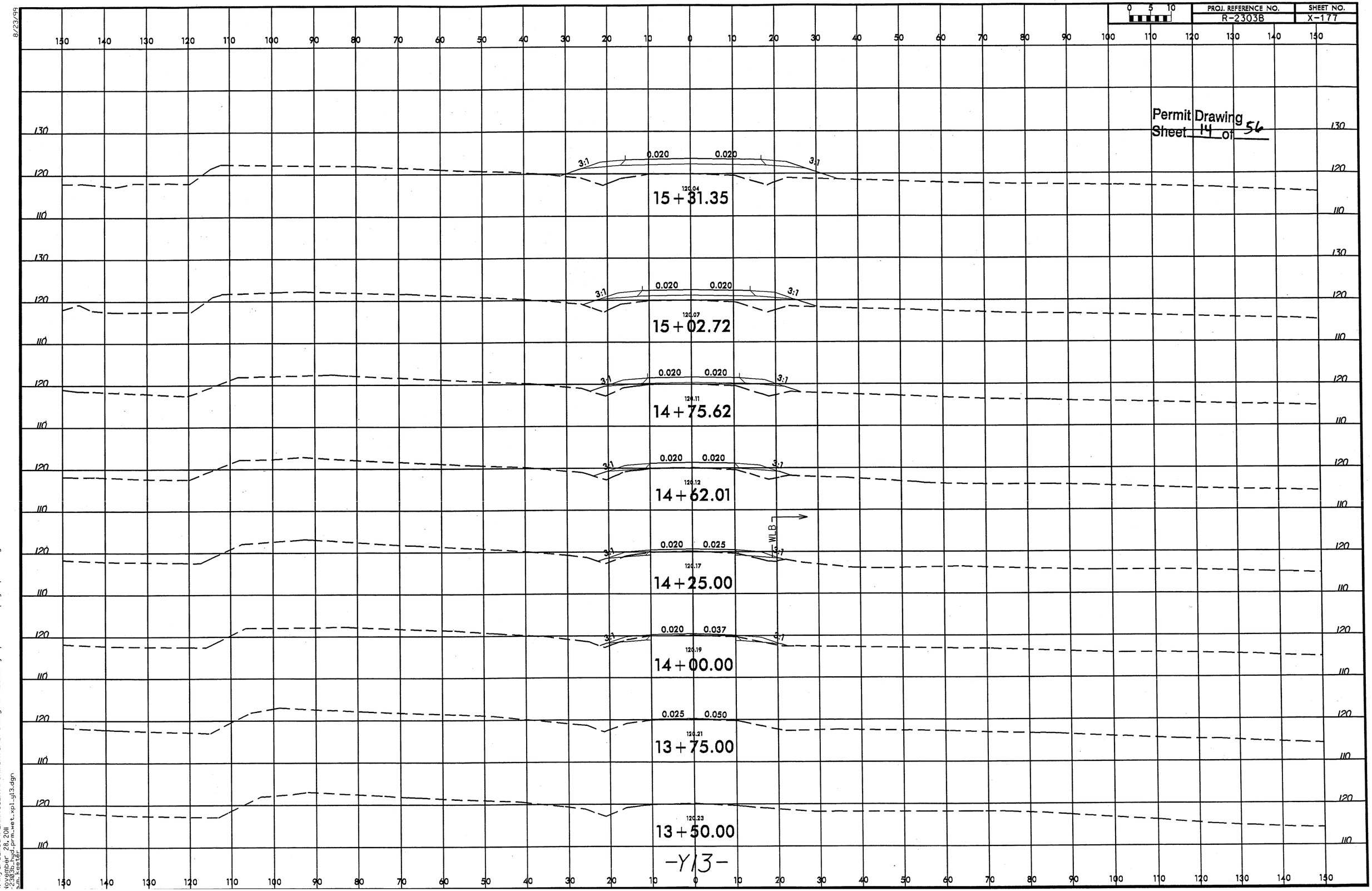


426+00.00

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-177

Permit Drawing
Sheet 14 of 56



PROJECT REFERENCE NO.	SHEET NO.
R-2303B	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 15 of 56

REVISIONS

09/16/11 R/W REVISION (PJS) – THE R/W LINE WAS ADJUSTED TO THE EXISTING PROPERTY LINE ON PARCEL 26 (HEATHER ELIZABETH MELVIN), PARCEL 30 (DONNA BROWN HOLDEN), PARCEL 32 (BRYON D. SESSOMS), AND PARCEL 34 (CLARA E. JOHNSON).

08/26/11 R/W REVISION (PJS) – THE OFFSETS WERE CORRECTED ON PARCEL 26 (HEATHER ELIZABETH MELVIN).

8/17/99

SITE 7B

SITE 7A

SITE 9

SITE 8

SITE 6

NAD 83/95

GEORGE R. SESSOMS
RUDOLPH L. SESSOMS

A. TART (24A)

AUTRYVILLE CITY LIMIT

FRANCES S. FAIRCLOTH (29)

DONNA BROWN HOLDEN (30)

HEATHER ELIZABETH MELVIN (26)

PAMELA B. MELVIN (28A)

HELEN S. SESSOMS (31)

DOUGLAS LEON NEW (31A)

DOUGLAS NEW (33)

FRANCES A. FAIRCLOTH (32)

DANNY RAY JOHNSON (34)

LOFTON E. BAREFOOT

WILLIE B. JOHNSON, JR.

BRENDA LN

MATCHLINE SHEET 8 –L– STA. 429+00

MATCHLINE SHEET 10 –L– STA. 443+00

See Detail "A"
2' Lateral Base Ditch
Sta. 431+50 to 436+00 –L– Lt

See Detail "A"
Lateral 2' Base Ditch
Sta. 438+00 to 439+98 –L– Lt

TOE PROTECTION
See Detail "K"
Sta. 436+00 to 437+00 –L– Lt

TOE PROTECTION
See Detail "K"
Sta. 440+20 to 441+70 –L– Lt

Rip Rap at Embankment
See Detail M

REMOVE GUARDRAIL BARRICADE

EXCAVATE DAM
APPROX. 3900 CU.YDS.

CL I RIP RAP
W/FILTER FABRIC
EST. 7 TONS
EST. 17 SY FABRIC

CL B RIP RAP
W/FILTER FABRIC
EST. 4 TONS
EST. 16 SY FABRIC

NOTE: PROPOSED MITIGATION SEE MITIGATION PLANS. INVERTS MAY NEED TO BE ADJUSTED ONCE POND IS DRAINED AND ELEVATIONS VERIFIED.

DENOTES EXCAVATION IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER (POND)
DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
DENOTES HAND CLEARING

GRAPHIC SCALE 1" = 50'

WW FENCE

POND

DRAIN POND

ABAND

ISFD

HTR

SOIL

DOL

GRAU 350

6/27/2012
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November 28, 2011
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am keeter

PROJECT REFERENCE NO.	SHEET NO.
R-2303B	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing Sheet 16 of 56

NAD 83/95

REVISIONS

09/16/11 R/W REVISION (PJS) – THE R/W LINE WAS ADJUSTED TO THE EXISTING PROPERTY LINE ON PARCEL 26 (HEATHER ELIZABETH MELVIN), PARCEL 30 (DONNA BROWN HOLDEN), PARCEL 32 (BYRON D. SESSOMS), AND PARCEL 34 (CLARA E. JOHNSON).

08/26/11 R/W REVISION (PJS) – THE OFFSETS WERE CORRECTED ON PARCEL 26 (HEATHER ELIZABETH MELVIN).

8/17/99

SITE 7B

SITE 7A

SITE 9

SITE 8

SITE 6

GEORGE R. SESSOMS
RUDOLPH L. SESSOMS

FRANCES S. FAIRCLOTH

DONNA BROWN HOLDEN

A. TART

AUTRYVILLE CITY LIMIT

HEATHER ELIZABETH MELVIN

PAMELA B. MELVIN

HELEN S. SESSOMS

DOUGLAS LEON NEW

DOUGLAS NEW

FRANCES A. FAIRCLOTH

DANNY RAY JOHNSON

LOFTON E. BAREFOOT

WILLIE B. JOHNSON, JR.

See Detail "A"
2' Lateral Base Ditch
Sta. 431+50 to 436+00 -L- Lt

TOE PROTECTION
See Detail "K"
Sta. 436+00 to 437+00 -L- Lt

See Detail "A"
Lateral 2' Base Ditch
Sta. 438+00 to 439+98 -L- Lt

TOE PROTECTION
See Detail "K"
Sta. 440+20 to 441+70 -L- Lt

Rip Rap at Embankment
See Detail M

REMOVE GUARDRAIL BARRIER

EXCAVATE DAM APPROX. 1800 CU.YDS.

CL I RIP RAP W/FILTER FABRIC
EST. 7 TONS
EST. 17 SY FABRIC

NOTE: PROPOSED MITIGATION SEE MITIGATION PLANS. INVERTS MAY NEED TO BE ADJUSTED ONCE POND IS DRAINED AND ELEVATIONS VERIFIED.

CL II RIP RAP W/FILTER FABRIC
EST. 4 TONS
EST. 15 SY FABRIC

DENOTES EXCAVATION IN WETLAND
DENOTES IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER (POND)
DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
DENOTES HAND CLEARING

GRAPHIC SCALE 1" = 50'

MATCHLINE SHEET 8 -L- STA. 429+00

MATCHLINE SHEET 10 -L- STA. 443+00

WW FENCE

POND

DRAIN POND

BRENDA LN

6/27/2012
amkeeter
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November 28, 2011
r2303b_hyd_prm_wet_psh9.dgn

PROJECT REFERENCE NO.	SHEET NO.
R2303B	9B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 17 of 56

See Detail "A"
2' Lateral Base Ditch
Sta. 431+50 to 436+00 -L- Lt

50.00

SITE 7A

SITE 7B CAT-1

SITE 6

26
HEATHER ELIZABETH MELVIN

28A
PAMELA C. MELVIN

31
HELEN S. SESSOMS

ISFD
SOIL
POOL
I-WD
48" CHL
HTR
PED
60" CHL
30" RCP-III
30" RCP-IV
2GI
TB 2GI
WLB
AUTRYVILLE
LIMIT
I"SS EASEMENT
R/W

E E DENOTES EXCAVATION IN WETLAND
F F DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
S S DENOTES IMPACTS IN SURFACE WATER
P P DENOTES IMPACTS IN SURFACE WATER (POND)

CL I RIP RAP
W/FILTER FABRIC
EST. 7 TONS
EST. 17 SY FABRIC

NOTE: PROPOSED MITIGATION- SEE MITIGATION PLANS. INVERTS MAY NEED TO BE ADJUSTED ONCE POND IS DRAINED AND ELEVATIONS VERIFIED.

20' 0' 20' 40' 60'
SCALE= 1"=40'

NAD 83/95

8/17/99
REVISIONS

6/27/2012
amkeeter
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November 28, 2011
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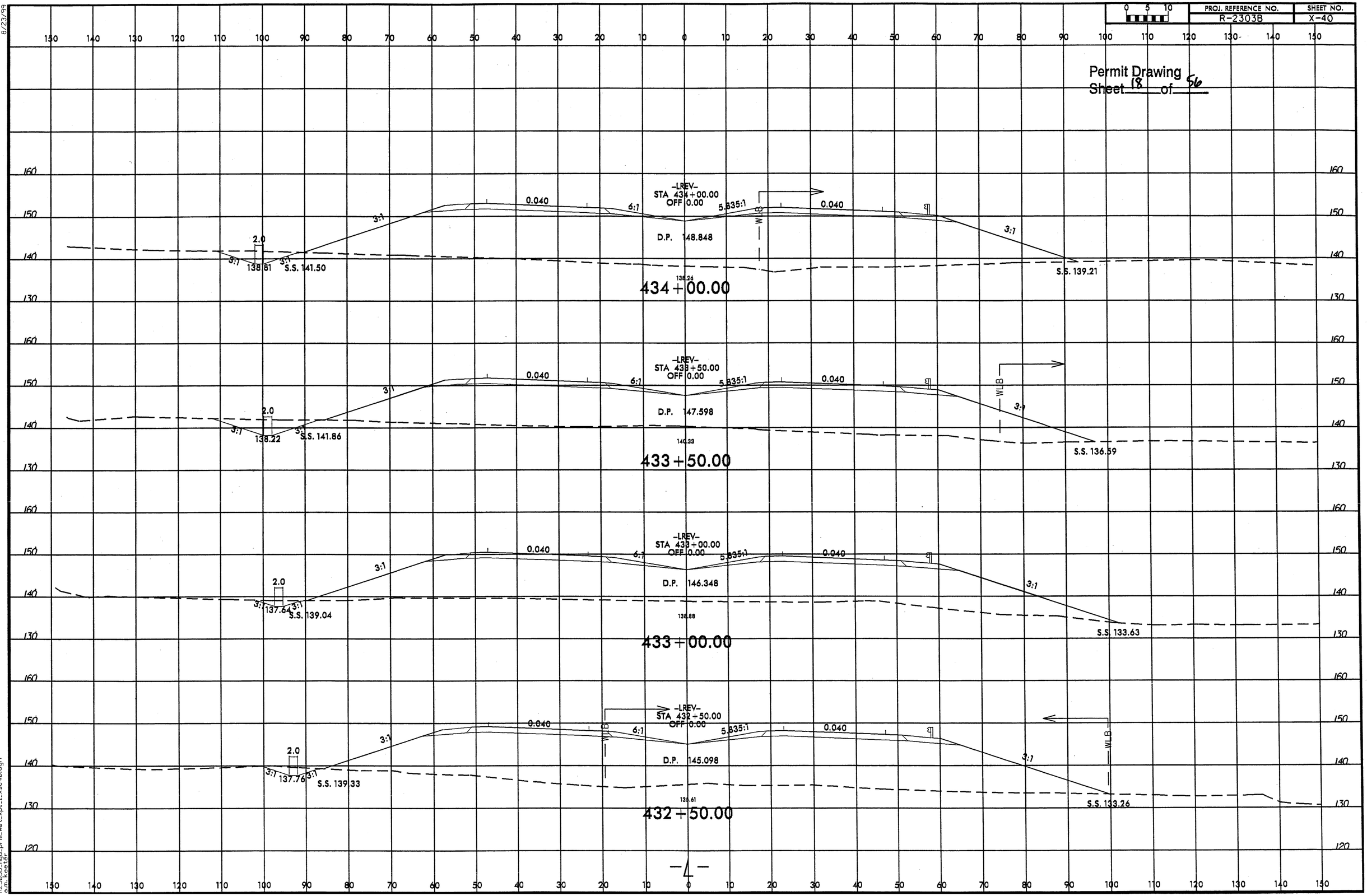
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-40

Permit Drawing
Sheet 18 of 56



8/23/99

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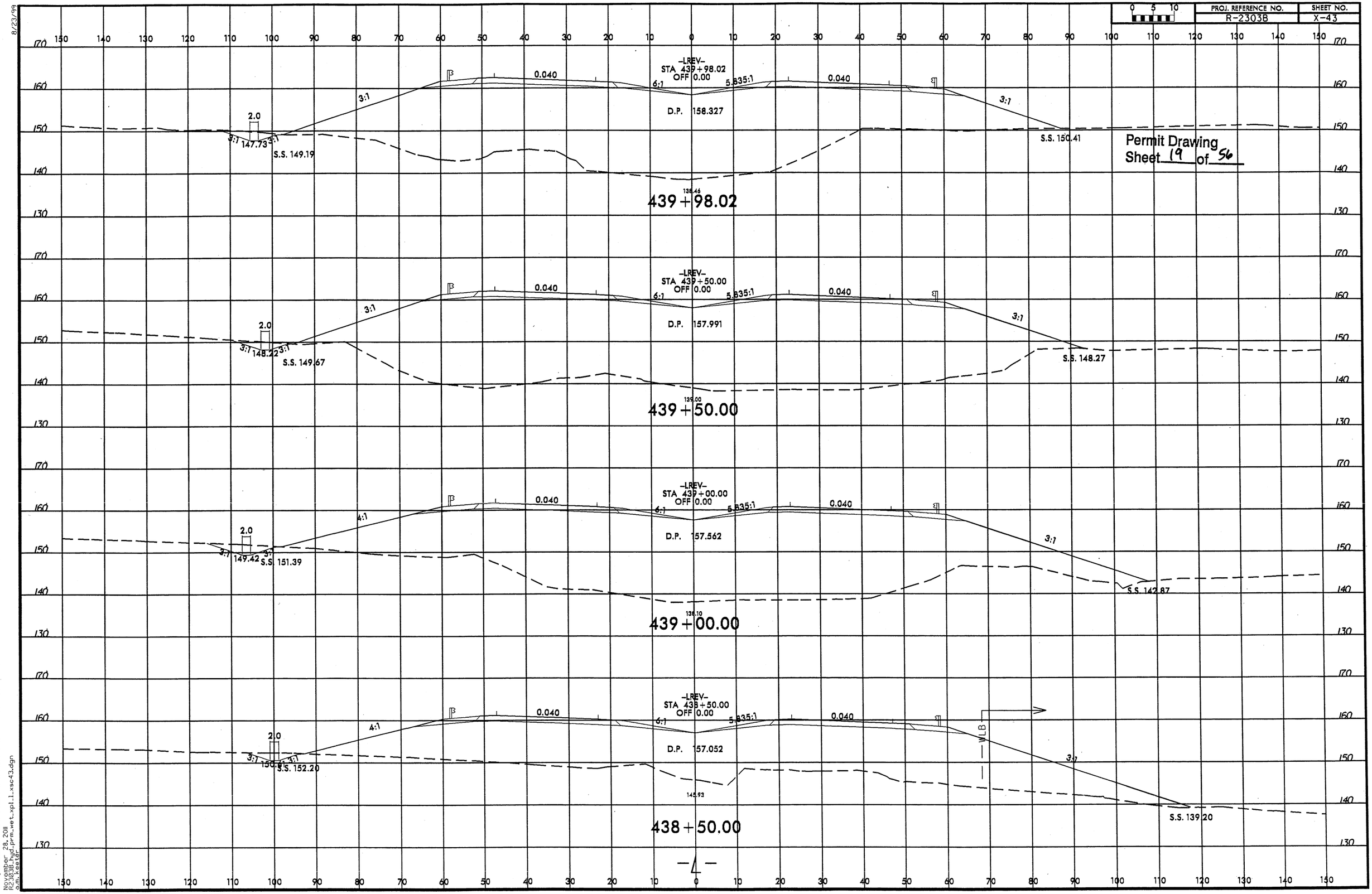
	R-2303B	X-43



Permit Drawing
Sheet 19 of 56

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November 28, 2011
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 20 of 56

NAD 83/95

REVISIONS

11/22/11 R/W REVISION: ADDED PARCEL • 048A SAMPSON CO.WATER & SEWER DISTRICT I.
ADDED 60' ACCESS POINT AT PROPERTY LINE PARCEL 048 AND CHANGED PUE TO ROW.
MOVED BEGIN FENCE TO THE END OF PUE THAT CHANGED TO ROW ON PARCELS 047/048.
ADDED 60' ACCESS POINT AT PROPERTY LINE PARCEL 050.
SHOWED _____ PARCEL 051 AND ADDED PROPERTY LINES PER MB 71/98 DB 1401 PG 925.

8/17/99

SITE 10

SITE 11

SITE 12

MATCHLINE SHEET 16 –L– STA. 541+00

MATCHLINE SHEET 18 –L– STA. 555+00

RICHARD F. HALL

JAMES R. STARLING

SAMPSON COUNTY WATER & SEWER DISTRICT I

RICHARD FRANKLIN HALL

JAMES V. BROWN

PERRY W. SESSOMS

GEORGE L. HALL

JOSE PEDRAZA

See Detail K
TOE PROTECTION
Sta. 542+60 to 545+25 –L– Lt.

See Detail "J"
Special Cut Ditch
Sta. 547+37 to 553+00 –L– Lt

See Detail "A"
Lateral 2' Base Ditch
Sta. 553+00 to 554+00 –L– Lt

Q(10) = 15 cfs
V(10) = 2.5 fps

See Detail "A"
Lateral 2' Base Ditch
Sta. 552+50 to 555+00 –L– Rt

See Detail "J"
Special Cut Ditch
Sta. 547+37 to 552+50 –L– Rt

WW FENCE
ACCESS POINT
EXISTING R/W
NC 24 AUTRY HIGHWAY
L S 69°32'36"E
RETAIN
REMOVE
SOIL
HTR
POOL
ISBKD
MTL CAR PORT
CONC
S

F/F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

6/27/2012
amkeeter
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November 28, 2011
r2303b_hyd_prm_wet_psh17.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2303B	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 21 of 56

NAD 83/95

REVISIONS

11/22/11 R/W REVISION; ADDED PARCEL • 048A SAMPSON CO.WATER & SEWER DISTRICT I, ADDED ACCESS POINT AT PROPERTY LINE THAT CHANGED PUE TO ROW, ADDED ACCESS POINT AT END OF PUE THAT CHANGED TO ROW ON PARCELS 047/048, ADDED 60' ACCESS POINT AT PROPERTY LINE PARCEL 050, SHOWED 60' ACCESS POINT AT PARCEL 051 AND ADDED PROPERTY LINES PER MB 71/98 DB 1401 PG 925.

8/17/99

SITE 10

SITE 11

SITE 12

MATCHLINE SHEET 16 -L- STA. 541+00

MATCHLINE SHEET 18 -L- STA. 555+00

JAMES R. STARLING (47)

RICHARD F. HALL (49)

SAMPSON COUNTY WATER & SEWER DISTRICT I

RICHARD FRANKLIN HALL (49)

JAMES V. BROWN (48)

GEORGE L. HALL (50)

JOSE PEDRAZA (51)

GEORGE L. HALL (53)

PERRY W. SESSOMS

RETAIN

See Detail K
TOE PROTECTION
Sta. 542+60 to 545+25 -L- Lt.

See Detail "J"
Special Cut Ditch
Sta. 547+37 to 553+00 -L- Lt

See Detail "A"
Lateral 2' Base Ditch
Sta. 553+00 to 554+00 -L- Lt

Q[10] = 14 cfs
V[10] = 2.3 fps

See Detail "A"
Lateral 2' Base Ditch
Sta. 552+50 to 555+00 -L- Rt

See Detail "J"
Special Cut Ditch
Sta. 547+37 to 552+50 -L- Rt

ACCESS POINT

WW FENCE

NC 24 AUTR HIGHWAY

EXISTING R/W

REMOVE

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

6/27/2012
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November 28, 2011
r2303b_hyd_prm_wet_pshl7.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-88

Permit Drawing
Sheet 22 of 56

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

160 150 140

WLB

3:1 0.025 0.020 6:1 6:1 0.020 0.025 3:1

S.S. 146.56

D.P. 151.845 (147.26)

S.S. 147.49

542+50.00

3:1 0.025 0.020 6:1 6:1 0.020 0.025 3:1

S.S. 146.78

D.P. 151.726 (146.66)

S.S. 147.32

542+13.33

S.S. 147.20 2.0 4:1 0.025 0.020 6:1 5.864:1 0.020 0.025 3:1

3:1 145.30 4:1

D.P. 151.593 (145.79)

S.S 147.09

542+00.00

S.S. 147.56 2.0 4:1 0.025 0.020 6:1 5.552:1 0.020 0.025 3:1

3:1 145.27 4:1

D.P. 151.098 (147.12)

S.S 146.90

541+50.00

S.S. 147.56 2.0 4:1 0.025 0.020 6:1 5.385:1 0.020 0.025 3:1

3:1 145.27 4:1

D.P. 150.602 (146.96)

S.S. 147.10

541+00.00

S.S. 147.43 2.0 4:1 0.025 0.020 6:1 5.305:1 0.025 3:1

3:1 145.26 4:1

D.P. 150.238 (147.75)

S.S. 147.37

540+63.33

6/22/2012
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November 28, 2011
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cm_keeter

PROJECT REFERENCE NO.	SHEET NO.
R-2303B	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 23 of 56

NAD 83/93

8/17/99

REVISIONS:
11/22/11 R/W REVISIONS; ADDED PROPERTY LINES PER DB 1200 PG 769 MB 27/90.
ADDED PARCELS 053A & 053B.

49 RICHARD FRANKLIN HALL

53A GEORGE L. HALL

56 JIMMY M. HALL

555 560 565

SITE 11

MATCHLINE SHEET 17 -L- STA. 555+00

MATCHLINE SHEET 19 -L- STA. 569+00

TOE PROTECTION
See Detail "M"
Sta. 554+00 to 558+50 -L- Lt

Q(10) = 7 cfs
V(10) = 1.3 fps

See Detail "A"
Lateral 2' Base Ditch
Sta. 558+50 to 561+50 -L- Lt
If Guardrail can be eliminated;
Use this Typical
See Detail "B"
Special Cut Ditch
Sta. 558+50 to 561+50 -L- Lt

WW FENCE

ACCESS POINT

See Profile 561+75 Lt

See Detail "A"
Lateral 2' Base Ditch
Sta. 561+75 to 573+00 -L- Lt

ACCESS POINT

24"

REMOVE

EXISTING R/W

60'

NC 24 AUTRY HIGHWAY

REMOVE

2GI 2GI 2GI

15" RCP

CL B RIP RAP
W/FILTER FABRIC
EST. 2 TONS
EST. 7 SY FABRIC

CL B RIP RAP
W/FILTER FABRIC
EST. 1 TON
EST. 5 SY FABRIC

Q(10) = 5 cfs
V(10) = 0.8 fps

See Detail "A"
Lateral 2' Base Ditch
Sta. 556+50 to 558+00 -L- Rt

WW FENCE

ACCESS POINT

AUE AUE AUE AUE AUE AUE AUE AUE

See Detail "A"
Lateral 2' Base Ditch
Sta. 562+00 to 576+75 -L- Rt

ACCESS POINT

24"

30' INGRESS EGRESS & REGRESS EASEMENT

53 GEORGE L. HALL, ETUL

SITE 12

53B GEORGE L. HALL

57 SOMBOON J. KACHAENCHAI

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

November 28, 2011
r2303b_hyd_prm_wet_psh18.dgn
amkeeter

6/27/2012
amkeeter
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 24 of 56

NAD 83/95

8/17/99

REVISIONS
11/22/11 R/W REVISIONS: ADDED PROPERTY LINES PER DB 1200 PG 769 MB 27/90.
ADDED PARCELS 053A & 053B.

MATCHLINE SHEET 17 -L- STA. 555+00

MATCHLINE SHEET 19 -L- STA. 569+00

RICHARD FRANKLIN HALL

49

555

560

565

53A
GEORGE L. HALL

56
JIMMY M. HALL

SITE 11

SITE 12

TOE PROTECTION
See Detail "M"
Sta. 554+00 to 558+50 -L- Lt

See Detail "A"
Lateral 2' Base Ditch
Sta. 558+50 to 561+50 -L- Lt
If Guardrail can be eliminated;
Use this Typical
See Detail "B"
Special Cut Ditch
Sta. 558+50 to 561+50 -L- Lt

Q(10) = 7 cfs
V(10) = 1.3 fps

WW FENCE

ACCESS POINT

See Profile 561+75 Lt

See Detail "A"
Lateral 2' Base Ditch
Sta. 561+75 to 573+00 -L- Lt

ACCESS POINT

24"

REMOVE

EXISTING R/W

NC 24 HUTRY HIGHWAY

60'

REMOVE

REMOVE

2GI

2GI

CL B RIP RAP
W/FILTER FABRIC
EST. 2 TONS
EST. 7 SY FABRIC

CL B RIP RAP
W/FILTER FABRIC
EST. 1 TON
EST. 3 SY FABRIC

Q(10) = 5 cfs
V(10) = 0.8 fps

See Detail "A"
Lateral 2' Base Ditch
Sta. 556+50 to 558+00 -L- Rt

WW FENCE

ACCESS POINT

AUE AUE AUE AUE AUE AUE AUE AUE

ACCESS POINT

See Detail "A"
Lateral 2' Base Ditch
Sta. 562+00 to 576+75 -L- Rt

30' INGRESS EGRESS & REGRESS EASEMENT

53
GEORGE L. HALL, ETUX

53B
GEORGE L. HALL

57
SOMBOON J. KACHAENCHAI

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

November 28, 2011
r2303b_hyd_prm_wet_psh18.dgn
Phil Harris

6/27/2012
amkeeter
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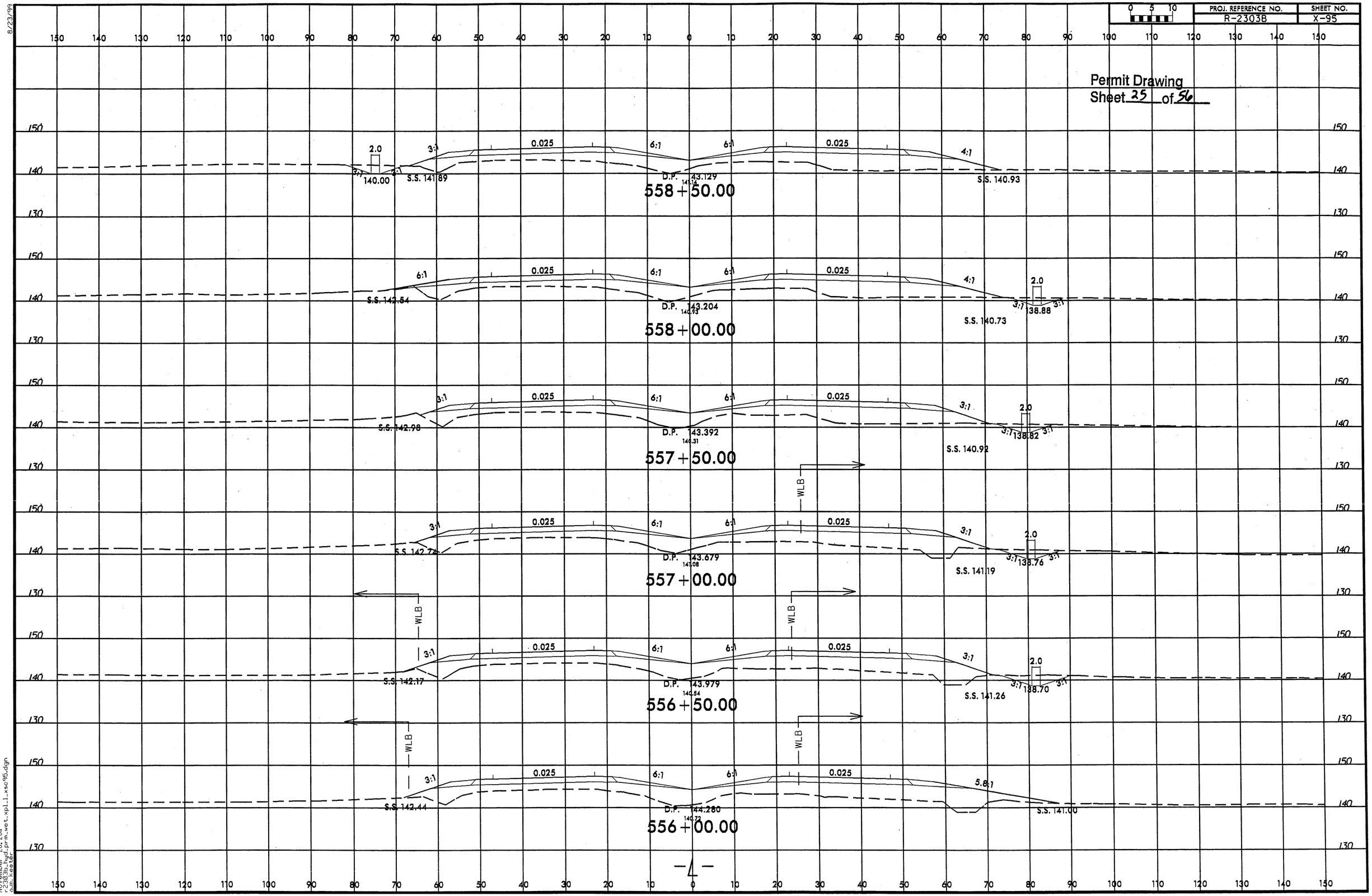
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-95

Permit Drawing
Sheet 25 of 56



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November 28, 2011
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Revised 2/3/13 Permit Drawing
Sheet 26 of 56

REVISIONS

08/26/11 R/W REVISION (PJS) - THE OFFSETS WERE CORRECTED AND ACCESS POINT WAS ADDED FROM -L- STA. 578+55.00 TO STA. 579+15.00 RT. ON PARCEL 57 (SAMBOON J. KACHAENCHAI). PARCEL 62 (DAVID NEIL FAIRCLOTH) WAS RENAMED TO (LINDA F. FAIRCLOTH). PARCEL 63 (WEYERHAEUSER COMPANY) WAS RENAMED TO (WEYERHAEUSER NR CO.).

8/17/94

NAD 83/95

MATCHLINE SHEET 18 -L- STA. 569+00

MATCHLINE SHEET 20 -L- STA. 583+00

56 JIMMY M. HALL

58 SCOTT McGOWAN

61 SABRA TYNDALL

62 LINDA F. FAIRCLOTH

63 WEYERHAEUSER NR CO.

57 SOMBOON J. KACHAENCHAI

HILDA HALL MATTHEWS

MTL B

HTR

CANOPY

POND

ISBLKD

ISFD

CONC LI

GARDEN SPOT TOP SOIL & GR

SOIL & GR

SOIL (ABAND)

W/LT

W/S

ACCESS POINT

SECOND TRACK

EXISTING R/W

60'

24" CONC

REMOVE

NC 24 AUTRY HWY 24" BST

-L- S 69° 32' 36.7" E

36" CONC

24" HDPE

27" GR

2GI

48" WW

AUE

WW FENCE

HW

See Detail "A" Lateral Base Ditch

See Detail "B" Special Cut Ditch

CL I RIP RAP W/GEOTEXTILE EST. 26 TONS EST. 50 SY GEOTEXTILE

CL B RIP RAP W/GEOTEXTILE EST. 2 TONS EST. 7 SY GEOTEXTILE

CL B RIP RAP W/GEOTEXTILE EST. 7 TONS EST. 21 SY GEOTEXTILE

CL I RIP RAP Est. 48 tons 89 Sq Yd GEOTEXTILE

ACCESS TO SEVERAL MOBILE HOMES

SITE 13

DENOTES IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

RECEIVED
FEB 20 2013
REG. WILM. FLD. OFC.

November 28, 2011
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Revised 2/4/13 Permit Drawing
Sheet 27 of 56

NAD 83/95

REVISIONS

08/26/11 R/W REVISION (PJS) - THE OFFSETS WERE CORRECTED AND ACCESS POINT WAS ADDED FROM -L- STA. 578+55.00 TO STA. 579+15.00 RT. ON PARCEL 57 (SAMBOON J. KACHAENCHAI). PARCEL 62 (DAVID HEIL FAIRCLOTH) WAS REMARKED TO LINDA F. FAIRCLOTH. PARCEL 63 (WEYERHAEUSER COMPANY) WAS RENAMED TO WEYERHAEUSER NR CO.L.

6/17/99

MATCHLINE SHEET 18 -L- STA. 569+00

MATCHLINE SHEET 20 -L- STA. 583+00

56 JIMMY M. HALL

58 SCOTT McGOWAN

57 SOMBOON J. KACHAENCHAI

61 SABRA TYNDALL

62 LINDA F. FAIRCLOTH

63 WEYERHAEUSER NR CO.

HILDA HALL MATTHEWS

570

575

580

MTL B

HTR

W/DK

(ABAND) W

SOIL

W/LT

SDS

ACCESS POINT

ISBLKD

24"

CONC

36" WD RAIL

24" CONC

REMOVE

NC 24 AUTRY HWY 24' BST

L- S 69°32'367" E

SECOND TRACT

See Detail "B" Special Cut Ditch

See Detail "A" Lateral Base Ditch

POND

CANOPY

S

SOIL & GR

WW FENCE

AUE

E

HW

CONC LI

See Detail "B" Special Cut Ditch

ACCESS POINT

ISFD

48" WW

CL B RIP RAP W/GEOTEXTILE EST. 7 TONS EST. 21 SY GEOTEXTILE

EXISTING R/W

60'

24" CONC

24" HDPE

27" GR

CL I RIP RAP W/GEOTEXTILE EST. 26 TONS EST. 50 SY GEOTEXTILE

CL B RIP RAP W/GEOTEXTILE EST. 7 TONS EST. 7 SY GEOTEXTILE

CL I RIP RAP Est. 48 Tons 89 Sq Yd GEOTEXTILE

ACCESS TO SEVERAL MOBILE HOMES

SITE 13

DENOTES IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

50' 0' 50' 100' 150'

GRAPHIC SCALE 1" = 50'

RECEIVED
FEB 20 2013
REG. WILM. FLD. OFC.

November 28, 2011
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7/7/2005
mmeeter

PROJECT REFERENCE NO.	SHEET NO.
R2303B	19B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Revised 2/8/13 Permit Drawing
Sheet 28 of 56

56
JIMMY M. HALL

57
SOMBOON J. KACHAENCHAI

SABRA TYNDAL

FIRST TRACT
SECOND TRACT
POND
S
HTR
W/LT
SOIL & GR
ISBLKD
94
95
96

See Detail "B"
Special Cut Ditch

See Detail "B"
Special Cut Ditch

ACCESS POINT
HW
HW
AUE
E
WW FENCE
REMOVE
24" CONC
30" CONC
REMOVE
NC 24 AUTRY HWY 24' BST
48" RCP-III
2GI
5" RCP-III
36" CONC
2GI
Type A
SEABOARD COASTLINE ABAND RR
66" RCP-III
69' RCP-III
55'
55'
55'
WW FENCE

CL I RIP RAP
W/GEOTEXTILE
EST. 26 TONS
EST. 50 SY GEOTEXTILE

CL B RIP RAP
W/GEOTEXTILE
EST. 2 TONS
EST. 7 SY GEOTEXTILE

CL I RIP RAP
Est. 48 tons
89 Sq Yd GEOTEXTILE

SITE 13

DENOTES IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

25' 0' 25' 50' 75'
SCALE: 1"=50'

RECEIVED
FEB 20 2013
REG. WILM. FLD. OPS

REVISIONS

8/17/98

Plotted: November 28, 2011
R2303B_Hyd_prm_wet_psh19B.dgn

Date: 11/28/2011
Time: 08:04:47
User Name: jmeeker
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PROJECT REFERENCE NO.	SHEET NO.
R2303B	19_PFL

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

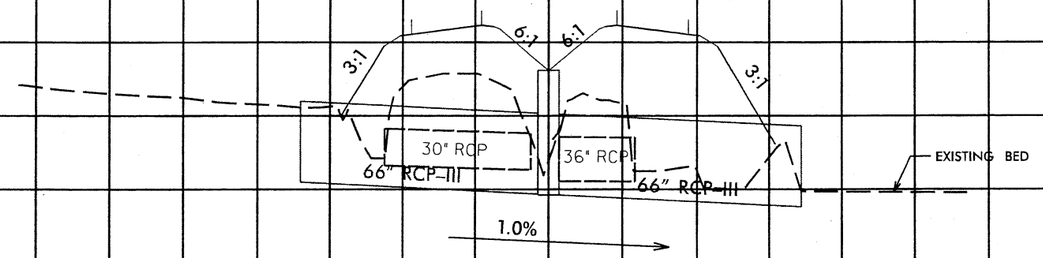
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Revised 2/8/13 Permit Drawing
Sheet 29 of 56

100′ 0′ 100′

℄ STA. 576+80–L–
GP. ELEV = 146.2′
SKEW = 90°



SITE 13

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-101

Permit Drawing
Sheet 30 of 36

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

576+50.00

S.S. 141.11 | 3:1 | 136.89 | 4:1 | 4:1 | 0.025 | 6:1 | 6:1 | 0.025 | 4:1 | 2.0 | 3:1 | 136.05 | 3:1 | S.S. 138.62 | D.P. 143.097 | 137.34

576+00.00

3:1 | 137.67 | 4:1 | 4:1 | S.S. 141.12 | 0.025 | 6:1 | 6:1 | 0.025 | 4:1 | 2.0 | 3:1 | 136.14 | 3:1 | S.S. 138.04 | D.P. 143.178 | 136.63

575+50.00

3:1 | 138.44 | 4:1 | 4:1 | S.S. 142.14 | 0.025 | 6:1 | 6:1 | 0.025 | 4:1 | 2.0 | 3:1 | 136.23 | 3:1 | S.S. 138.93 | D.P. 143.323 | 136.93

575+00.00

3:1 | 139.22 | 4:1 | 4:1 | S.S. 141.14 | 0.025 | 6:1 | 6:1 | 0.025 | 4:1 | 2.0 | 3:1 | 136.33 | 3:1 | S.S. 138.86 | D.P. 143.473 | 136.90

574+50.00

S.S. 141.58 | 3:1 | 140.00 | 4:1 | 4:1 | 0.025 | 6:1 | 6:1 | 0.025 | 4:1 | 2.0 | 3:1 | 136.42 | 3:1 | S.S. 139.59 | D.P. 143.624 | 139.42

574+00.00

S.S. 141.96 | 3:1 | 141.41 | 4:1 | 4:1 | 0.025 | 6:1 | 6:1 | 0.025 | 4:1 | 2.0 | 3:1 | 136.51 | 3:1 | S.S. 139.84 | D.P. 143.774 | 140.78

-4-

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amkeester
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November 28, 2011
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 31 of 56

NAD 83/95

REVISIONS

8/17/99 08/26/11 R/W REVISION (PJS) - PARCEL 79 (JAMES C. BARNES) WAS RENAMED TO (BETTY H. BARNES). PARCEL 80 (BRIAN K. BUTLER) WAS SPLIT INTO PARCEL 80 (BURIL D. BUTLER) AND PARCEL 80A (BRIAN K. BUTLER).

SITE 14

MATCHLINE SHEET 21 -L- STA. 611+00

MATCHLINE SHEET 23 -L- STA. 625+00

615 620 625

80 BURIL D. BUTLER

80A BRIAN K. BUTLER

82 LALA VAE M. BUTLER

79 BETTY H. BARNES

REBAR W/LT 72' WD S GP WD HTR 72' WD REBAR REBAR

SEE DETAIL "B" Special Cut Ditch Sta. 611+50 to Sta. 616+00 -L- Lt

SEE DETAIL "D" Est. 10 cu yds Excavation

PUE PUE PUE PUE PUE PUE PUE PUE PUE PUE

TIDE TIDE

ACCESS POINT

WW FENCE

CL B RIP RAP W/FILTER FABRIC EST. 8 TONS EST. 24 SY FABRIC

CL B RIP RAP W/FILTER FABRIC EST. 5 TONS EST. 14 SY FABRIC

SEE DETAIL "A" Lateral 2' Base Ditch Sta. 617+50 to 627+70 -L- Lt

AUE AUE AUE AUE AUE AUE AUE AUE AUE AUE

6' CONC HW REMOVE 18" CONC REMOVE 24" RCP REMOVE 8" CONC REMOVE

EXISTING R/W

NC 24 AUTRY HWY 24' BST NC 24 AUTRY HWY 24' BST NC 24 AUTRY HWY 24' BST

60'

24" RCP-III 2GI 2GI 18" RCP-IV DI 18" RCP-IV 2GI 2GI

SEE DETAIL "A" Lateral 2' Base Ditch Sta. 607+50 to 615+00 -L- Rt

AUE AUE

WW FENCE

SEABOARD COASTLINE ABAND RR

SEE DETAIL "B" Special Cut Ditch Sta. 616+00 to 630+00 -L- Rt

AUE AUE

BURIL D. BUTLER 80

82 LALA VAE M. BUTLER

DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

November 28, 2011
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amkeeter

6/27/2012
amkeeter
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 32 of 56

NAD 83/95

SITE 14

REVISIONS

08/26/11 R/W REVISION (PJS) - PARCEL 79 (JAMES C. BARNES) WAS RENAMED TO (BETTY H. BARNES). PARCEL 80 (BRIAN K. BUTLER) WAS SPLIT INTO PARCEL 80 (BURIL D. BUTLER) AND PARCEL 80A (BRIAN K. BUTLER).

8/17/99

MATCHLINE SHEET 21 -L- STA. 611+00

MATCHLINE SHEET 23 -L- STA. 625+00

80 BURIL D. BUTLER

80A BRIAN K. BUTLER

79 BETTY H. BARNES

82 LALA VAE M. BUTLER

SEE DETAIL "B" Special Cut Ditch Sta. 611+50 to Sta. 616+00 -L- Lt

SEE DETAIL "D" Est. 10 cu. yds Excavation

SEE DETAIL "A" Lateral 2' Base Ditch Sta. 607+50 to 615+00 -L- Rt

SEE DETAIL "A" Lateral 2' Base Ditch Sta. 617+50 to 627+70 -L- Lt

SEE DETAIL "B" Special Cut Ditch Sta. 616+00 to 630+00 -L- Rt

CL B RIP RAP W/FILTER FABRIC EST. 8 TONS EST. 24 SY FABRIC

CL B RIP RAP W/FILTER FABRIC EST. 5 TONS EST. 14 SY FABRIC

REBAR

72" WD

WD

HTP

ACCESS POINT

WW FENCE

PUE

AUE

BEV

TIDE

EXISTING R/W

NC 24 AUTRY HWY 24 BST

SEABOARD COASTLINE ABAND-RR

620

625

DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

November 28, 2011
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6/27/2012
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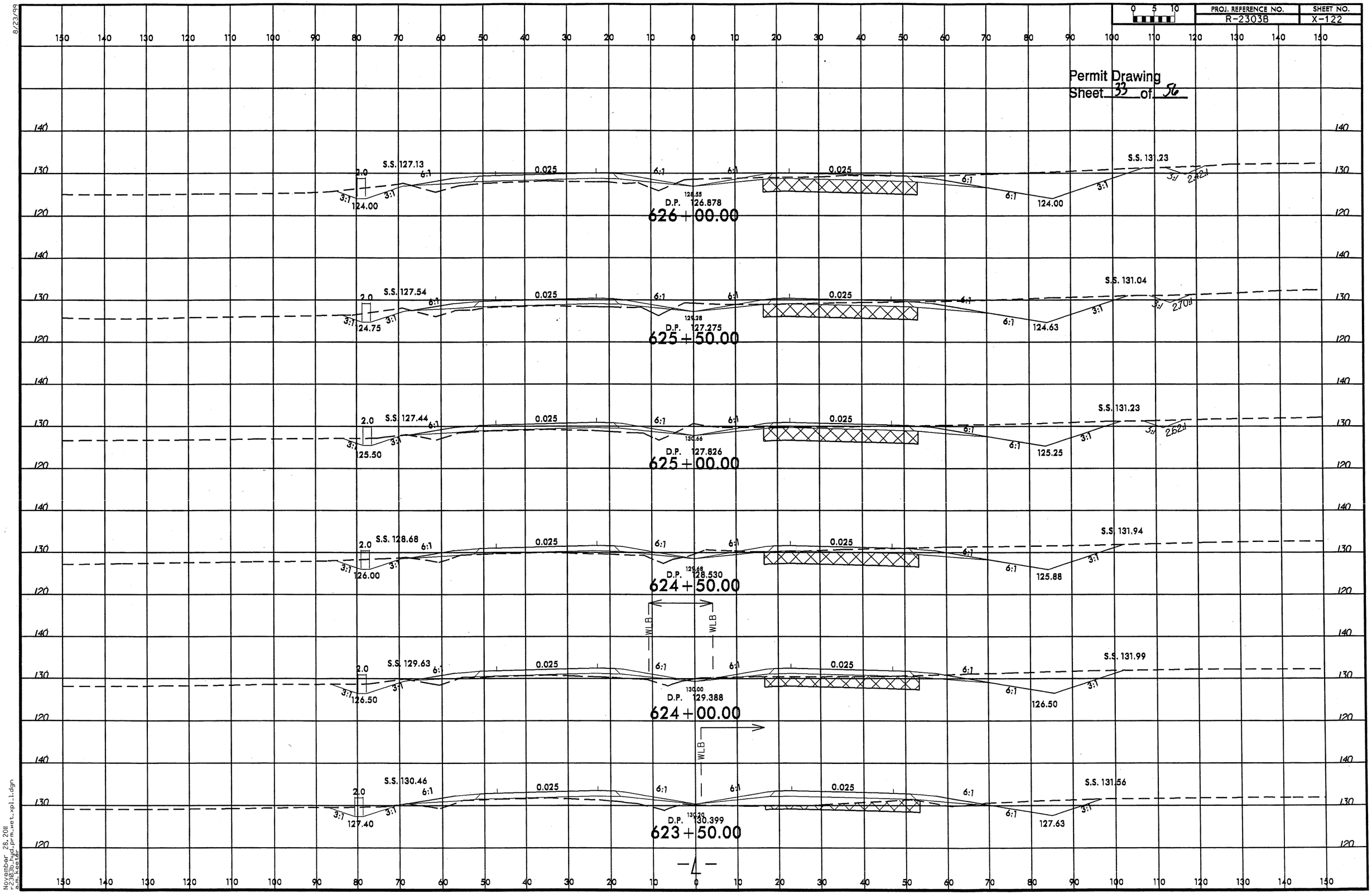
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-122

Permit Drawing
Sheet 33 of 96



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November 28, 2011
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SITE 15

Permit Drawing
Sheet 34 of 56

NAD 83/95

REVISIONS
08/26/11 R/W REVISION (PJS) - PARCEL 89 (WILLIAM M. MANOR) WAS RENAMED TO (THOMAS C. TANNAHILL).
8/17/99

MATCHLINE SHEET 24 -L- STA. 653+00

MATCHLINE SHEET 26 -L- STA. 667+00

81 BURIL D. BUTLER

83 DORIS O. DAVIS, et al

82 LALA VAE M. BUTLER

89 THOMAS C. TANNAHILL

POND

CONC

ISFD

48" BST

12" BST

15"

655

660

665

W/LT

CL B RIP RAP
Est. 5 tons

ACCESS POINT

WW FENCE

REMOVE

5' CONC

CAT-L

4' BST

NC 24

AUTRY HWY

23' BST

TYPE M350

L N 88° 52' 07" E

24" RCP-III

15" RCP-IV

2GI

TYPE B-77

SEE DETAIL "D"
2' Base Tail Ditch
Est. 20 cu yds excavation

18" CONC

DRAU 350

CAT-I

CL I RIP RAP
W/FILTER FABRIC
EST. 17 TONS
EST. 38 SY FABRIC

CLASS II RIP RAP
(STRUCTURE PAY ITEM)

BIG SWAMP

48" RW 358W

See Detail "K"
TOE PROTECTION
Sta. 663+15 to 664+90 -L- Rt

DO NOT DISTURB
HORSE FENCE

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

HC HC DENOTES HAND CLEARING

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

6/27/2012
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November 28, 2011
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a.m.keeter

SITE 15

PROJECT REFERENCE NO.	SHEET NO.
R-2303B	25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 35 of 56

NAD 83/95

REVISIONS

08/26/11 R/W REVISION (PJS) - PARCEL 89 (WILLIAM M. MANOR) WAS RENAMED TO (THOMAS C. TANNAHILL).

8/17/99

MATCHLINE SHEET 24 -L- STA. 653+00

MATCHLINE SHEET 26 -L- STA. 667+00

81 BURIL D. BUTLER

83 DORIS O. DAVIS, et al

82 LALA VAE M. BUTLER

89 THOMAS C. TANNAHILL

POND

CONC

CSNC

ISFD

48" BST

18" BST

W/LT

CL B RIP RAP
Est. 5 Tons

ACCESS POINT

WW FENCE

REMOVE

CONC

CMP

4' BST

23' BST

NC 24

AUTRY HWY

TYPE M350

N 86°58'07.6" E

15" RCP-IV

2GI

TYPE S-17

HC

CMP-I

660

665

SEE DETAIL "K"
2' Bote Toil Ditch
Est. 20 cu yds excavation

18" CONC

DRAIN 350

CL I RIP RAP
W/FILTER FABRIC
EST. 17 TONS
EST. 38 SY FABRIC

CLASS II RIP RAP
(STRUCTURE PAY ITEM)

DRY SWAMP

CL I RIP RAP
W/FILTER FABRIC
EST. 17 TONS
EST. 38 SY FABRIC

See Detail "K"
TOE PROTECTION
Sta. 663+15 to 664+90 -L- Rt

DO NOT DISTURB
HORSE FENCE

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

HC HC DENOTES HAND CLEARING

GRAPHIC SCALE 1" = 50'

November 28, 2011
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6/27/2012
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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R2303B	25_PFL

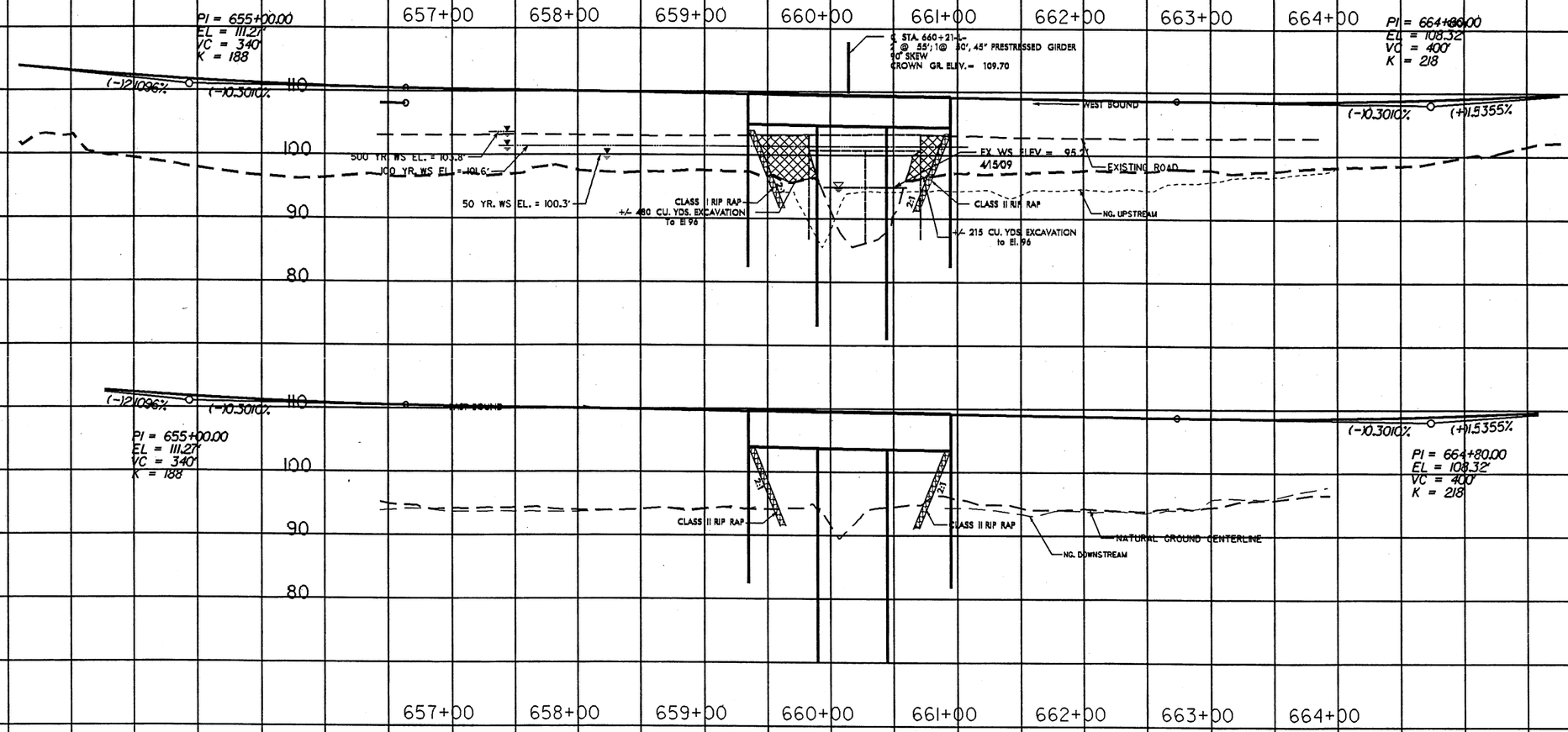
ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 36 of 56



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cmeadows
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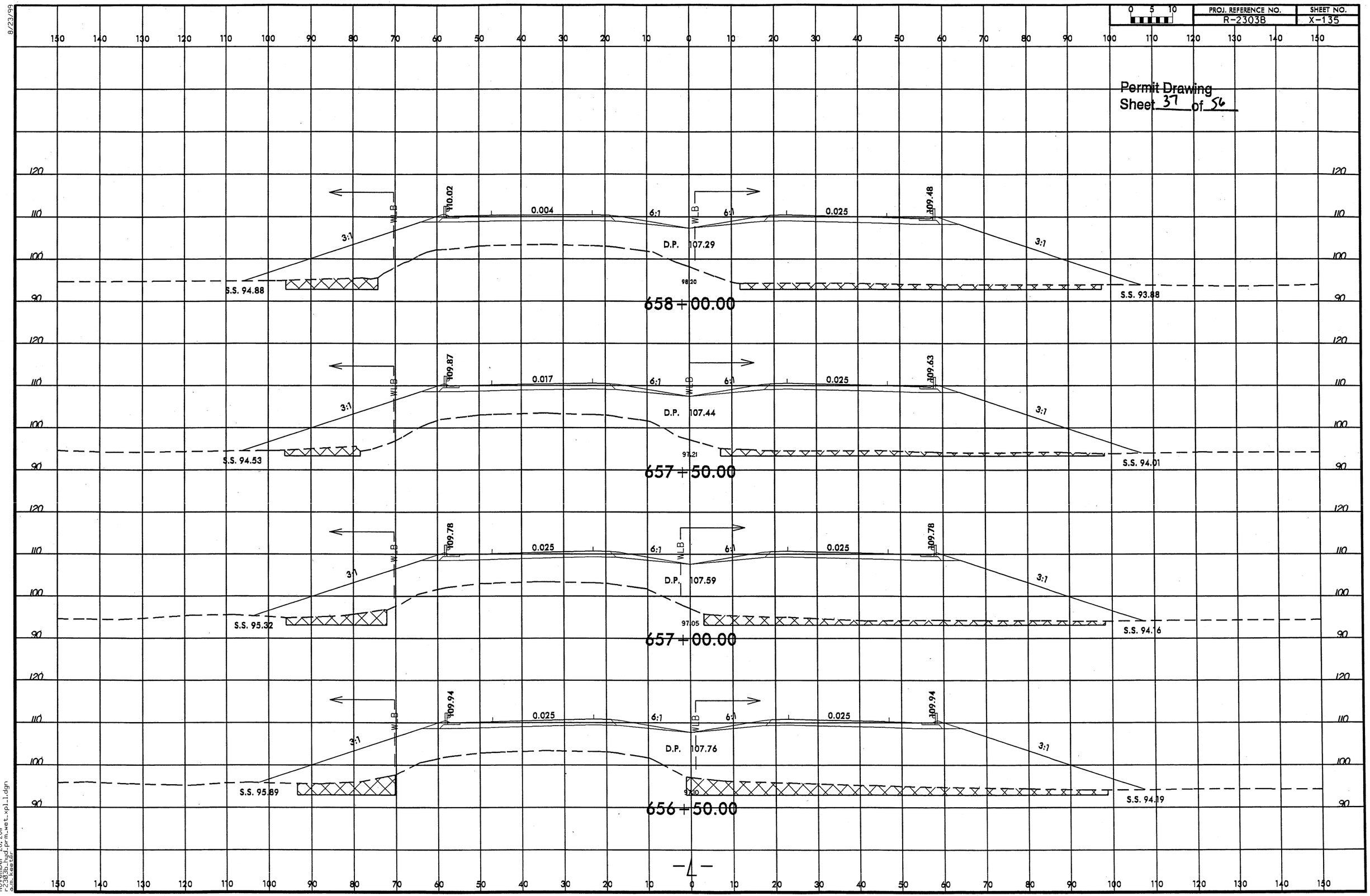
$$$$$$$$$$LOGIN$$$$$$$$$$
$$$$$$$$$$FILENAME$$$$$$$

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-135

Permit Drawing
Sheet 37 of 56



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November 28, 2011
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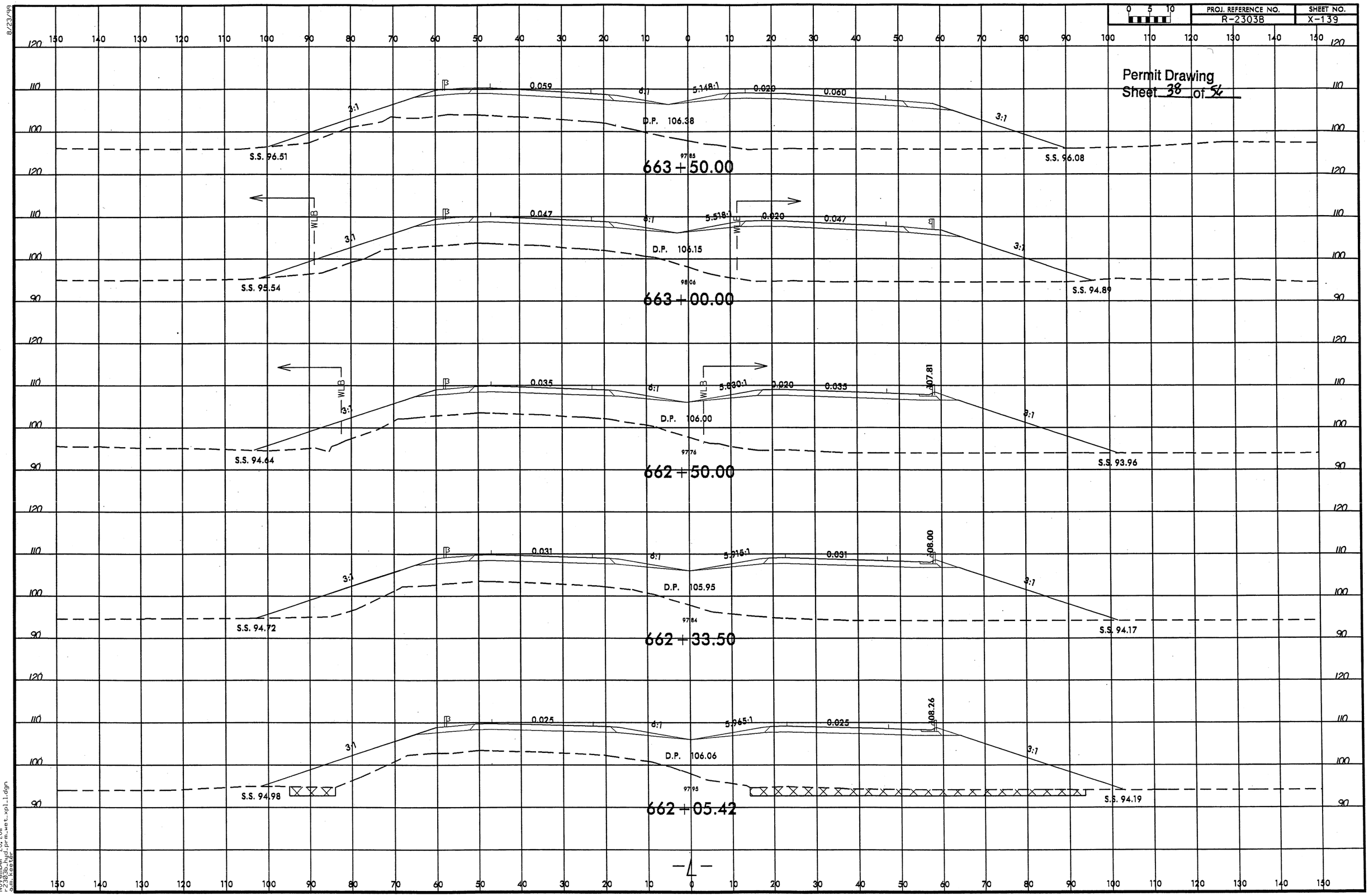
a.m. keeter

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-139

Permit Drawing
Sheet 38 of 54



November 28, 2011
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a.m. keeter

PROJECT REFERENCE NO.	SHEET NO.
R-2303B	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/95

8/17/99

09/16/11 R/W REVISION (PJS) - PARCEL 85 (EDNA S. WILLIAMS BEASLEY) WAS ADJUSTED TO EXISTING PROPERTY LINE AND RW WAS ADJUSTED TO THE PROPOSED R/W (REVISED). 89B (T & W DEVELOPMENT AT -L- STA 680+68.70 LT THE CLAIM ON PARCEL 90 (EUGENIO LUQUE) WAS ELIMINATED DUE TO THE ADJUSTMENT OF PROPOSED R/W TO THE EXISTING PROPERTY LINE.
PARCEL 89B (SECRETARY OF HOUSING & URBAN DEVELOPMENT) WAS RENUMBERED TO 89C.
08/26/11 R/W REVISION (PJS) - PARCEL 89 (WILLIAM M. MAINOR) WAS RENAMED TO (THOMAS C. TANNAHILL). WESTERN PARCEL 89A (T AND W DEVELOPMENT) WAS RENAMED TO (PEARL A. BRADSHAW) AND EASTERN PARCEL 89A (T AND W DEVELOPMENT) WAS RENUMBERED TO 89B.

SITE 16

SITE 17

SITE 18

SITE 19

MATCHLINE SHEET 25 -L- STA. 667+00

MATCHLINE SHEET 27 -L- STA. 681+00

PLEASANT UNION BAPTIST CHURCH

CEMETERY

ISBK CHURCH

2SBK CHURCH

KIM IVEY HALL

ISBKO

HTR

GARY E. WILLIAMS

T AND W DEVELOPMENT

BOBBY RAY

PERRY F. BUTLER

KELLY PAIGE

MARIA E. OLIVA

RONALD J. WOOD

PEARL A. BRADSHAW

PEARL A. BRADSHAW

EDNA S. WILLIAMS BEASLEY

THOMAS C. TANNAHILL

SR 1405 PLEASANT UNION RD

NC 24 NORTH HIGHWAY

SEE DETAIL "M" Toe Protection Sta. 12+50 to 14+34 -Y22- Rt

SEE DETAIL B LATERAL "V" DITCH Sta. 12+50 to 14+50 -Y22- Lt

See Detail "K" TOE PROTECTION Sta. 666+15 to 670+25 -L- Lt

See Detail "A" Lateral 2' Base Ditch Sta. 670+25 to 672+00 -L- Lt

SEE DETAIL "L" Berm Ditch STA. 672+50 to 676+00 -L- LT

Special Ditch SEE DETAIL "B" Sta. 673+50 to 678+00 -L- Lt

See Detail "G" Special Median Ditch Grade Sta. 674+00 to 675+00 -L- Med

SEE DETAIL "B" Special Cut Ditch Sta. 674+75 to 678+50 Rt

CL B RIP RAP Est. 5 tons 14 yds Filter Fabric

CL B RIP RAP W/FILTER FABRIC EST. 5 TONS EST. 16 SY FABRIC

DO NOT DISTURB HORSE FENCE

WW FENCE

-L- S 84°28'43"W

-L- S 76°06'17"E

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES IMPACTS IN SURFACE WATER (POND)

GRAPHIC SCALE 1" = 50'

Permit Drawing
Sheet 39 of 56

November 28, 2011
R2303b_hyd_prm_wet_psh26.dgn
Ann Beattie

6/27/2012
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

08/17/99 R/W REVISION (PJS) - PARCEL 85 (EDNA S. WILLIAMS BEASLEY) WAS DELETED AND PARCEL 86 (PLEASANT UNION BAPTIST CHURCH) WAS ADJUSTED TO EXISTING PROPERTY LINE AND R/E WAS ADJUSTED TO THE PROPOSED R/W REVISION. 89A (T. & W. DEVELOPMENT) AT -L- STA. 690+87.70 LT THE CLAIM ON PARCEL 90 (EUGENIO LUQUE) WAS ELIMINATED DUE TO THE ADJUSTMENT OF PROPOSED R/W TO THE EXISTING PROPERTY LINE.
PARCEL 89B (SECRETARY OF HOUSING & URBAN DEVELOPMENT) WAS RENUMBERED TO 89C.
08/26/11 R/W REVISION (PJS) - PARCEL 89 (WILLIAM M. MAINOR) WAS RENAMED TO (THOMAS C. TANNAHILL) WESTERN PARCEL 89A (T AND W DEVELOPMENT) WAS RENAMED TO (PEARL A. BRADSHAW) AND EASTERN PARCEL 89A (T AND W DEVELOPMENT) WAS RENUMBERED TO 89B.

SITE 16

SITE 17

SITE 18

SITE 19

PLEASANT UNION BAPTIST CHURCH
CEMETERY
GARY E. WILLIAMS
T AND W DEVELOPMENT
BOBBY RAY
KIM IVEY HALL
PERRY F. BUTLER
KELLY PAIGE
MARIA E. OLIVA
RONALD J. WOOD
PEARL A. BRADSHAW
PEARL A. BRADSHAW
EDNA S. WILLIAMS BEASLEY
THOMAS C. TANNAHILL
DO NOT DISTURB HORSE FENCE
DO NOT DISTURB HORSE -FENCE
WW FENCE
SEE DETAIL "M" Toe Protection Sta. 12+50 to 14+34 -Y22- Rt
SEE DETAIL S LATERAL "A" DITCH Sta. 13+50 to 14+50 -Y22- Lt
See Detail "K" TOE PROTECTION Sta. 669+15 to 670+25 -L- Lt
See Detail "A" Lateral 2' Base Ditch Sta. 670+25 to 672+00 -L- Lt
SEE DETAIL "L" Berm Ditch STA. 672+50 to 676+08 -L- Lt
Special Ditch SEE DETAIL "B" Sta. 673+50 to 678+00 -L- Lt
See Detail "G" Special Median Ditch Grade Sta. 674+00 to 675+00 -L- Med
SEE DETAIL "B" Special Cut Ditch Sta. 674+75 to 678+50 Rt
CL B RIP RAP Est. 5 tons 14 yds Filter Fabric
CL B RIP RAP W/FILTER FABRIC EST. 5 TONS EST. 16 SY FABRIC
MATCHLINE SHEET 25 -L- STA. 667+00
MATCHLINE SHEET 27 -L- STA. 681+00
S 86°28'45"W
NAD 83/95

F F DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
DENOTES IMPACTS IN SURFACE WATER (POND)

GRAPHIC SCALE 1" = 50'

Permit Drawing Sheet 40 of 56

6/27/2012
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November 28, 2011
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PROJECT REFERENCE NO.	SHEET NO.
R2303B	26B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 41 of 56

PERRY F. BUTLER

SITE 16

KELLY PA

NAD 83/95

88B

85

88

85

SEE DETAIL B
LATERL "V" DITCH
Sta. 12+50 to 14+50 -Y22- Lt

See Detail "K"
TOE PROTECTION
Sta. 669+15 to 670+25 -L- Lt.

See Detail "A"
Lateral 2' Base Ditch
Sta. 670+25 to 672+00 -L- Lt

AUE

PUE

670

675

60'

EXISTING R/W

ON GEAR

18" W
Elbow

3GI

18" RCP-III

24" RCP-III

2GI

24" RCP-IV

15" RCP IV

24"

30" RCP-III

EIP

REMOVE

COTTON GEAR

CAT-1

NC 24 AUTRY HIGHWAY

WLB

CL B RIP RAP
Est. 5 tons
14 yds Filter Fabric

CL B RIP RAP
W/FILTER FABRIC
EST. 5 TONS
EST. 16 SY FABRIC

See D
Specia
Sta. 67

SITE 17

SITE 18

25' 0' 25' 50' 75'
SCALE= 1"=50'

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

P P DENOTES IMPACTS IN SURFACE WATER (POND)

REVISIONS

6/27/2012
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November 28, 2011
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amkeeter

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-142

Permit Drawing
Sheet 42 of 56

WLB

4:1 | 0.020 | 0.070 | 6:1 | 5.290:1 | 0.070 | 3:1

S.S. 109.10 | D.P. 112.42 | 108.42 | N13.38 | S.S. 103.89

670+00.00

WLB

4:1 | 0.020 | 0.070 | 6:1 | 5.290:1 | 0.070 | 3:1

S.S. 108.10 | D.P. 112.01 | 107.44 | N12.98 | S.S. 103.94

669+50.00

4:1 | 0.020 | 0.070 | 6:1 | 5.290:1 | 0.070 | 3:1

S.S. 108.95 | D.P. 111.85 | 107.29 | N12.82 | S.S. 103.76

669+34.08

INTERSECTION @ Y22 SHEAR LINE

0.020 | 0.070 | 6:1 | 5.290:1 | 0.070 | 3:1

D.P. 111.45 | 106.78 | N12.41 | S.S. 103.56

669+00.00

INTERSECTION @ Y22 SHEAR LINE

0.020 | 0.070 | 0.070 | 0.010 | 0.027 | 0.010 | 0.070 | 3:1

106.09 | N11.82 | S.S. 103.69

668+58.50

6/22/2012
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November 28, 2011
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hyd_prm_wet_xpll.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2303B	X-143

Permit Drawing
Sheet 43 of 56

672+34.10

S.S. 114.54
6:1
0.045
6:1
5.744:1
0.045
113.93
3:1
113.66
D.P. 112.10 112.26
S.S. 107.91

672+00.00

2.0
4:1
0.020
0.053
6:1
5.583:1
0.053
113.91
W.L.B.
3:1
3:1
112.00
3:1
S.S. 113.49
D.P. 111.32 112.49
S.S. 106.86

671+50.00

2.0
4:1
0.020
0.066
6:1
5.362:1
0.066
113.76
W.L.B.
3:1
3:1
111.30
3:1
S.S. 113.13
D.P. 112.68
108.30
S.S. 105.92

671+32.71

2.0
4:1
0.020
0.070
6:1
5.290:1
0.070
113.67
3:1
3:1
111.09
3:1
S.S. 113.01
D.P. 112.71
107.25
S.S. 105.90

671+00.00

2.0
4:1
0.020
0.070
6:1
5.290:1
0.070
113.70
W.L.B.
3:1
3:1
110.33
3:1
S.S. 112.23
D.P. 112.74
104.17
S.S. 105.20

670+50.00

2.0
4:1
0.020
0.070
W.L.B.
6:1
5.290:1
0.070
113.62
3:1
3:1
110.20
3:1
S.S. 111.49
D.P. 112.66
107.39
S.S. 103.77

6/22/2012
amkeefer
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amkeefer

PROJECT REFERENCE NO.	SHEET NO.
R-2303B	27
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 44 of 56

NAD 83/95

8/17/93

REVISIONS

11/22/11 R/W REVISION: ADDED 2-60' ACCESS POINT AT PROPERTY LINE PARCELS 089 AND 092.

T AND W DEVELOPMENT

EUGENIO LUQUE

WW FENCE 48" WW

NOTE: PROPOSED MITIGATION SEE MITIGATION PLANS. INVERTS MAY NEED TO BE ADJUSTED ONCE POND IS DRAINED AND ELEVATIONS VERIFIED.

SITE 19

POND

(89B) HART-McNEILL INVESTMENTS

CL B RIP RAP W/FILTER FABRIC EST. 2 TONS EST. 7 SY FABRIC

HW

GRAU 350

685

690

695

(91) THE RICHARD AND GRACE ADAMS PROPERTY MANAGEMENT TRUST

Sta.= Y23
Q100= 7 cfs
Vt= 2.3 fps
Tc= 2.5 Feet
Rc= 1.5 '
n=0.045

AUE

SEE DETAIL "A"
2' Base Ditch
Sta. 16+25 to Sta. 18+64 -Y23- Lt
Ditch Should Be at Zero Depth at 16+25

SEE DETAIL "A"
2' Base Ditch
Sta. 688+13 to 691+50 -L- Lt
Tie Ditch to -Y23- Lt ditch

CL B RIP RAP W/FILTER FABRIC EST. 2 TONS EST. 7 SY FABRIC

CL B RIP RAP W/FILTER FABRIC EST. 2 TONS EST. 7 SY FABRIC

WW FENCE

MATCHLINE SHEET 26 -L- STA. 681+00

MATCHLINE SHEET 28 -L- STA. 695+00

2GI Type "D"

2GI Type D

REMOVE

10" CONC

18" CONC

CAT-1

48" WW

60' EXISTING R/W

NC 24 AUTRY HIGHWAY

COTTON GEAR

REMOVE 15" CONC

60' CHL

72" CHL & 3SBW

ACCESS POINT

AUE

CL I RIP RAP W/FILTER FABRIC EST. 42 TONS EST. 94 SY FABRIC

CL B RIP RAP W/FILTER FABRIC EST. 3 TONS EST. 10 SY FABRIC

WD POS

SEE DETAIL "A" Lateral 2' Base Sta. 682+15 to 685+50 -L- Rt

SEE DETAIL "B" Special Cut Ditch

SEE DETAIL "B" Special Cut Ditch Sta. 685+50 to 687+00 -L- Rt

18" CHL

72" CHL

MTL GATE

18" CONC

SOIL

MTL

60" WW & 2SBW

60" WW

ISFD

POND

72" MTL RAIL

(89) THOMAS C. TANNAHILL SITE 20

(92) BOREN CLAY PRODUCTS CO.

48" BK

24" CONC

BST

GR

BK BUS

ACCESS POINT CHL GATE

72" CHL & 3SBW

S = DENOTES IMPACTS IN SURFACE WATER

TS = DENOTES TEMPORARY IMPACTS IN SURFACE WATER

P = DENOTES IMPACTS IN SURFACE WATER (POND)

50' 0' 50' 100' 150'
GRAPHIC SCALE 1" = 50'

6/27/2012
amkeeter
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 45 of 96

NAD 83/95

T AND W DEVELOPMENT

EUGENIO LUQUE

WW FENCE

NOTE: PROPOSED MITIGATION SEE MITIGATION PLANS. INVERTS MAY NEED TO BE ADJUSTED ONCE POND IS DRAINED AND ELEVATIONS VERIFIED.

SITE 19

89B

HART-McNEILL INVESTMENTS

POND

CL B RIP RAP W/FILTER FABRIC EST. 2 TONS EST. 7 SY FABRIC

Sta.= Y23 Qdes= ? cfs Vr= 5.5 fps ds= 0.1 feet Bs= 1.5 % n=0.045

SEE DETAIL "A" 2' Base Ditch Sta. 16+25 to Sta. 18+64 -Y23- Lt Ditch Should Be at Zero Depth at 16+25

THE RICHARD AND GRACE ADAMS PROPERTY MANAGEMENT TRUST

91

690

695

SEE DETAIL "A" 2' Base Ditch Sta. 688+13 to 691+50 -L- Lt Tie Ditch to -Y23- Lt ditch

CL B RIP RAP W/FILTER FABRIC EST. 2 TONS EST. 7 SY FABRIC

CL B RIP RAP W/FILTER FABRIC EST. 2 TONS EST. 7 SY FABRIC

WW FENCE

MATCHLINE SHEET 26 -L- STA. 681+00

MATCHLINE SHEET 28 -L- STA. 695+00

2GI Type "D"

2GI Type "D"

REMOVE

NC 24 AUTRY HIGHWAY

COTTON GEAR

ACCESS POINT

SEE DETAIL "B" Special Cut Ditch

CL I RIP RAP W/FILTER FABRIC EST. 42 TONS EST. 94 SY FABRIC

CL B RIP RAP W/FILTER FABRIC EST. 3 TONS EST. 10 SY FABRIC

SEE DETAIL "A" Lateral 2' Base Sta. 682+15 to 685+50 -L- Rt

SEE DETAIL "B" Special Cut Ditch Sta. 685+50 to 687+00 -L- Rt

ISFD

72" CMP

72" CHL & 3SBW

ACCESS POINT

72" CHL GATE

48" BK

92

BOREN CLAY PRODUCTS CO.

BK BUS

89

THOMAS C. TANNAHILL

SITE 20

72" MTL

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN SURFACE WATER (POND)

GRAPHIC SCALE 1" = 50'

11/22/11 R/W REVISION: ADDED 2-60' ACCESS POINT AT PROPERTY LINE PARCELS 089 AND 092.

REVISIONS

8/17/99

6/27/2012
ankeeter
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ankeeter

PROJECT REFERENCE NO.	SHEET NO.
R2303B	27B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Revised 2/8/13 Permit Drawing
Sheet 46 of 56

REVISIONS

89B

HART-McNELL INVESTMENTS

SITE 19

POND

CL B RIP RAP
W/GEOTEXTILE
EST. 2 TONS
EST. 7 SY GEOTEXTILE

RCP-III

HW

-Y23- +80.00
30'

-L- +50.00
100'

20' DOUBLE GATE

+00

NAD 83/95

WW FENCE

48" WW EXISTING R/W

GRAU 350

EXISTING R/W

SD = 120' X 120'

SD = 125' X 125'

2GI

48" WW

REMOVE

30" CONC

18" RCP-III

10' CONC HW

18" CAT-1

REMOVE

48" WW

60' EXISTING R/W

60" WW

60" CHL

COTTON GEAR

REMOVE 15" CONC

18"

ACCESS POINT

RW

CL I RIP RAP
W/GEOTEXTILE
EST. 42 TONS
EST. 94 SY GEOTEXTILE

SEE DETAIL "B"
Special Cut Ditch

WD POST

CL B RIP RAP
W/GEOTEXTILE
EST. 3 TONS
EST. 10 SY GEOTEXTILE

TEMP SHORING LOC 5
SEE TMP-15

SEE DETAIL "A"
Lateral 2' Base

72" CHL

GR

MTL GATE

SOIL

MTL

60" WW & 2SBW

18" CONC

SITE 20

89

THOMAS C. TANNAHILL

60" WW

SEE DETAIL "B"
Special Cut Ditch

AUE

ACCESS POINT

ACCESS P

ABAND ISFD

60" WW

60" CHL

AUE

DENOTES IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

25' 0' 25' 50' 75'
SCALE: 1"=50'

RECEIVED
FEB 20 2013
FHWA, WILM, FLD, OFC.

8/17/99

Plotted: Sep 28, 2011
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PROJECT REFERENCE NO.	SHEET NO.
R2303B	27_PFL

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Revised 2/8/13

Permit Drawing
Sheet 47 of 56

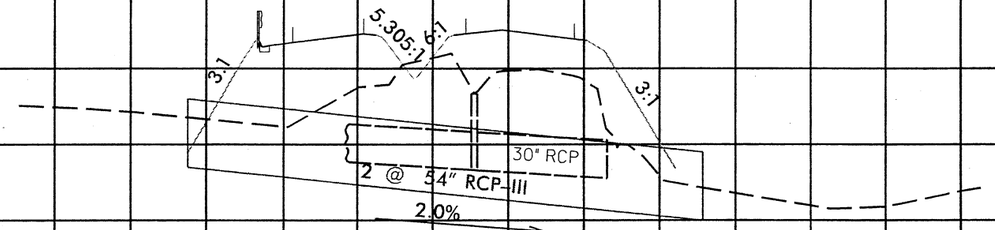
100′ 0 100′

℄ STA. 682+08–L–
GR. ELEV = 117.3′
SKEW = 90°

120

110

100

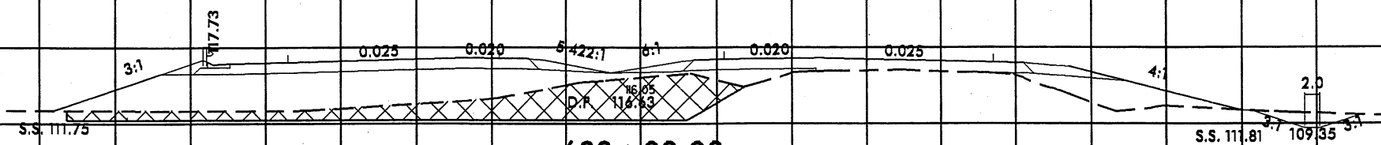


SITE 20

PROJ. REFERENCE NO.	SHEET NO.
R-2303B	X-148

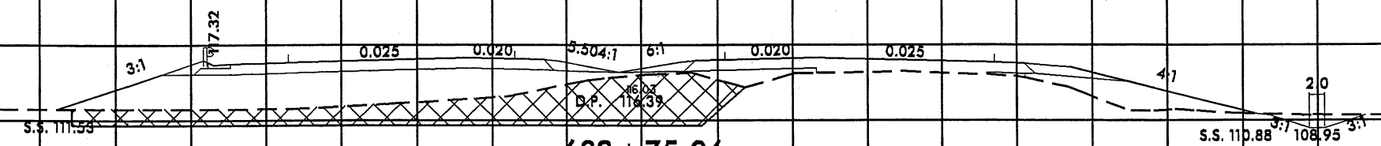
0 5 10

683+00.00

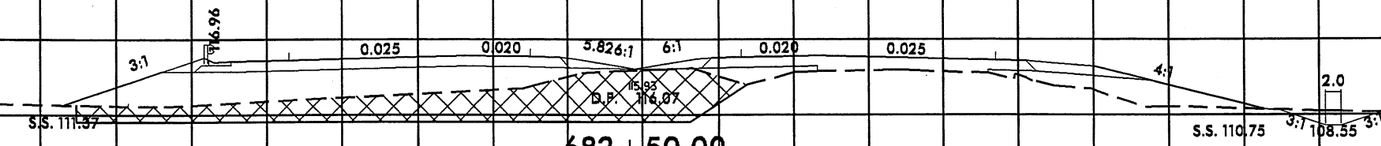


Permit Drawing
Sheet 48 of 56

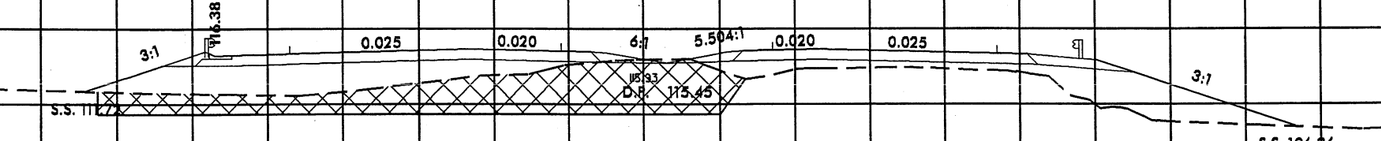
682+75.06



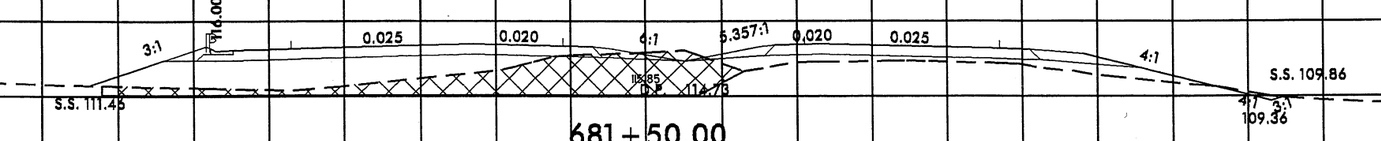
682+50.00



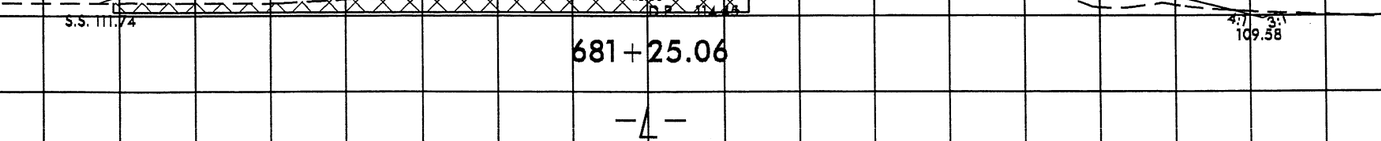
682+00.00



681+50.00



681+25.06



8/23/99

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November 28, 2011
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SITE 21

PROJECT REFERENCE NO.	SHEET NO.
R-2303B	29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 49 of 56
Revised 2-25-2013

RECEIVED
FEB 28 2013
REG. WTR. FLD. OPS.

NAD 83/95

REVISIONS
8/17/99
08/26/11 R/W REVISION (PJS) -- PARCEL 93 (ROBIE D. FAIRCLOTH) WAS SPLIT INTO PARCEL 93 (ROBIE D. FAIRCLOTH) AND PARCEL 93C (ELIZABETH FAIRCLOTH). PARCEL 95A (CHARLES S. LUCAS) WAS RENAMED (ANNIE HALL MCRORIE).

MATCHLINE SHEET 28 -L- STA. 709+00

MATCHLINE SHEET 30 -L- STA. 723+00

93C ELIZABETH FAIRCLOTH

95A ANNIE HALL McRORIE

93 ROBIE FAIRCLOTH

95 AUTRY MILLS PROPERTIES LLC
DB 1810 PG 104
MB 48 PG 23

93B ROY ROGER FAIRCLOTH

94 JERRY W. LUCAS

96 JESSE B. CARLISLE

97

SEE DETAIL "E"
2' Base Ditch w/PSRM
DDE = 158 CY

SEE DETAIL "K"
TOE PROTECTION
EST. 115 TONS
EST. 255 SY GEOTEXTILE

SEE DETAIL "K"
TOE PROTECTION
EST. 155 TONS
EST. 345 SY GEOTEXTILE

SEE DETAIL "A"
2' Lateral Base Ditch
DDE = 257 CY

SEE DETAIL "B"
Special Cut Ditch

TEMP SHORING LOC 6
SEE TMP-16

ACCESS POINT

WW FENCE

GRAU 350 TL-3

GRAU 350

SPECIAL DI

REMOVE

EXISTING R/W

NC 24 AUTRY HIGHWAY

60' SC.P.S. TOWER RD 250'

STA. 713+35 -LREV- Lt and Rt

INLET DETAIL
EST 120 SY GEOTEXTILE
EST 120 SY COIR MAT

OUTLET DETAIL
EST 60 TONS Class 1 Rip Rap on Side Slopes
EST 85 TONS Class 1 Rip Rap or Suitable Fill for Filling Scour Hole
EST 75 SY Geotextile

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

GRAPHIC SCALE 50' 0' 50' 100' 150'

2/25/2013
belam
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PROJECT REFERENCE NO.	SHEET NO.
R-2303B	29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 50 of 56
Revised 2-25-2013

RECEIVED
FEB 28 2013
REG. WILM. FLD. OPS.

SITE 21

NAD 83/95

MATCHLINE SHEET 28 -L- STA. 709+00

MATCHLINE SHEET 30 -L- STA. 723+00

93C ELIZABETH FAIRCLOTH

93 ROBIE FAIRCLOTH

95A ANNIE HALL McRORIE

95 AUTRY MILLS PROPERTIES LLC
DB 1810 PG 104
MB 48 PG 23

94 JERRY W. LUCAS

93B ROY ROGER FAIRCLOTH

96 JESSE B. CARLISLE

97

SEE DETAIL "C"
2' Lateral Ditch w/PSR
DDE = 158 CY

SEE DETAIL "K"
TOE PROTECTION
EST. 135 TONS
EST. 845 SY GEOTEXTILE

SEE DETAIL "A"
2 Lateral Rock Ditch
DDE = 257 CY

SEE DETAIL "B"
Special Cut Ditch

TEMP SHORING LOC 6
SEE TMP-16

STA. 713+35 -LREV- Lt and Rt

INLET DETAIL

OUTLET DETAIL

EST. 60 Tons Class I Rip Rap or Slag Stones
EST. 85 TONS Class I Rip Rap or Suitable Fill for Filling Scour Hole
EST. 75 SY Geotextile

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

GRAPHIC SCALE 50' 15 0' 50' 100' 150'

REVISIONS

08/26/11 R/W REVISION (PJS) - PARCEL 93 (ROBIE FAIRCLOTH) AND PARCEL 93C (ELIZABETH FAIRCLOTH). PARCEL 95A (CHARLES S. LUCAS) WAS RENAMED (ANNIE HALL MCRORIE).

8/17/99

November 28, 2011
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2/25/2013
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SITE 21

PROJECT REFERENCE NO.	SHEET NO.
R2303B	29B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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FEB 2 8 2013
FRO. WILM. FLD. OFC.

Permit Drawing
Sheet 51 of 56
Revised 2-25-2013

SEE DETAIL "E"
2' Base Ditch w/PSRM
DDE = 158 CY

SEE DETAIL "K"
TOE PROTECTION
EST. 115 TONS
EST. 255 SY GEOTEXTILE

93
ROBIE FAIRCLOTH

ANNIE HALL McRORIE

NAD 83/95

GRAVEL

ACCESS POINT

LOW FLOW SILL

WW FENCE

AUE — AUE — TDE — PUE — PUE — PUE — PUE — PUE — PUE

GRAU 350 TL-3

GRAU 350

2GI

24" RCP-III

36" RCP-III

36" RCP-IV

15" RCP-IV

18" RCP-III

2GI Type A

4'x4' CONC

SPECIAL DI

REMOVE

12" CMP

SR 1254 HUBQUAVE TOWER RD

EXISTING R/W

EXISTING DWY

CAT-1

168

169

350

SEE DETAIL "K"
TOE PROTECTION
EST. 155 TONS
EST. 345 SY GEOTEXTILE

TDE — PDE — TDE

94
JERRY W. LUCAS

ISB'D

W/LT

SEE DETAIL "A"
2' Lateral Base Ditch
DDE = 257 CY

Sta. = 714+24 -L- Rt
Q= 3.2 cfs
V= 2.0 fps
d= 0.45 ft
s= 0.017
n= 0.04

93B
ROGER FAIRCLOTH

F F DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
E E DENOTES EXCAVATION IN WETLAND
T T DENOTES TEMPORARY FILL IN WETLAND
TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER
S S DENOTES IMPACTS IN SURFACE WATER

TEMP SHORING LOC 6
SEE SHEET 16

25' 0' 25' 50' 75'
SCALE: 1"=50'

REVISIONS

8/17/99

November 28, 2011
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2/25/2013
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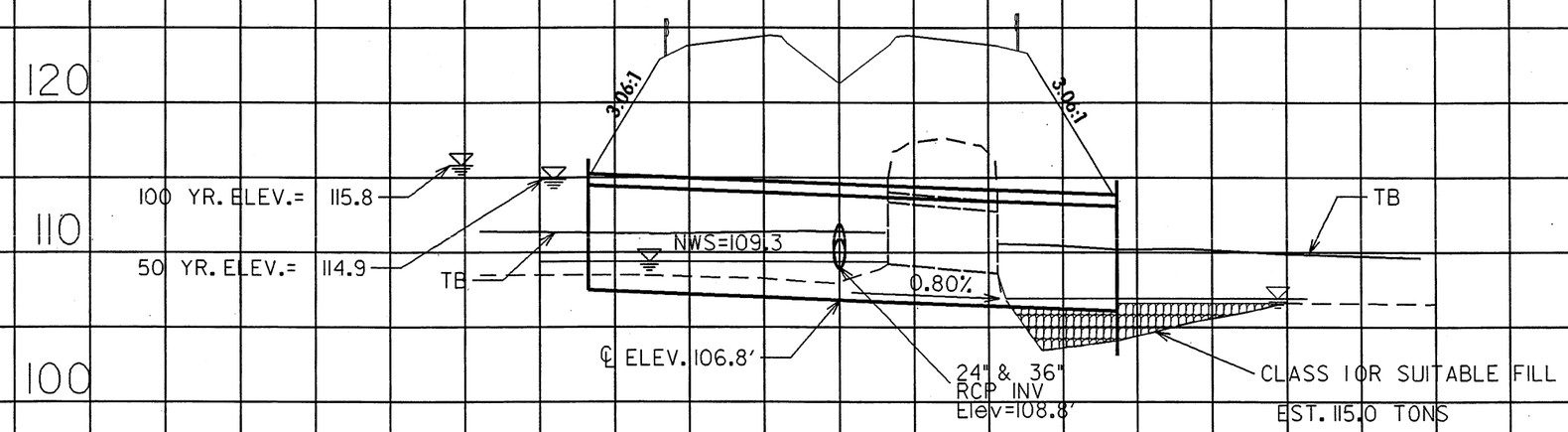
8/23/99

0	PROJ. REFERENCE NO.	SHEET NO.
	R2303B	29 PRL

Permit Drawing
Sheet 52 of 56

100' 0' 100'

℄ STA. 713+35 -L-
2 @7'x7' RCBC
GRADE PT. EL= 124.5
SKEW - 79°



SITE 21

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November 28, 2011
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8/23/99

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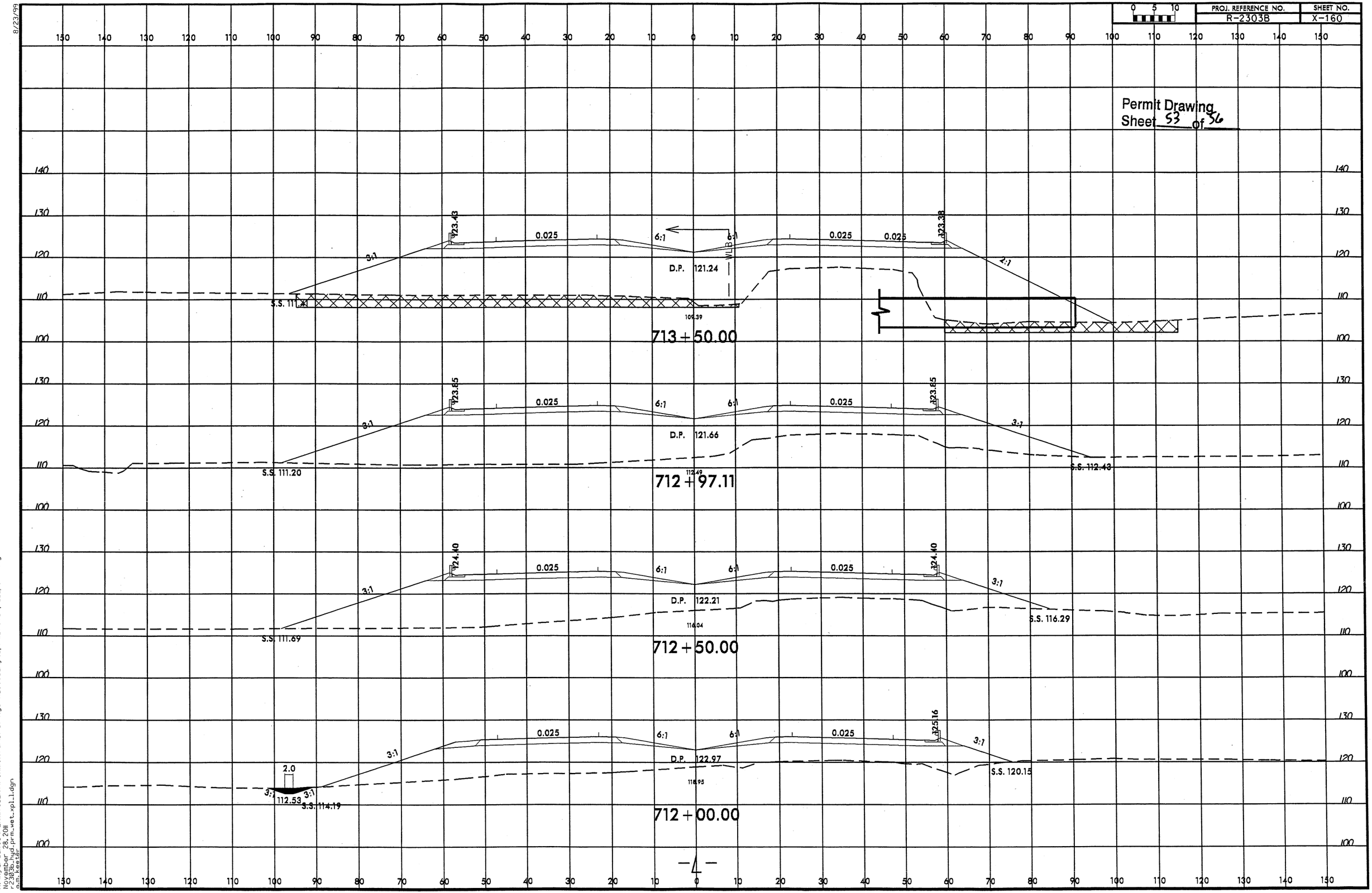
	R-2303B	X-160

Permit Drawing
Sheet 53 of 56



6/22/2012
amkeeter
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November 28, 2011
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a.m.keeter

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R2303B	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Revised 2/8/13 Permit Drawing
Sheet 54 of 56

PROPERTY OWNERS
NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
19	ROLAND NUNNERY	394 JOHN NUNNERY RD. STEDMAN, NC 28391
21	JAMES H. SPELL	P.O. BOX 98 ROSEBORO, NC 28382
26	HEATHER ELIZABETH MELVIN	124 EAST OLD STAGE RD. AUTRYVILLE, NC 28318
30	DONNA BROWN HOLDEN	182 OLD STAGE RD. AUTRYVILLE, NC 28318
31	HELEN S. SESSOMS	P.O. BOX 14 AUTRYVILLE, NC 28318
33	DOUGLAS NEW	P.O. BOX 53591 FAYETTEVILLE, NC 28305
46	EDDIE I. HALL	6510 AUTRY HWY. AUTRYVILLE, NC 28318
47	JAMES R. STARLING	P.O. BOX 31 AUTRYVILLE, NC 28318
49	RICHARD FRANKLIN HALL	5650 AUTRY HWY. AUTRYVILLE, NC 28318
50, 53	GEORGE L. HALL	5440 AUTRY HWY. AUTRYVILLE, NC 28318
56	JIMMY M. HALL	567 LIBBIE RD. AUTRYVILLE, NC 28318
81	BURIL D. BUTLER	3700 AUTRY HWY. AUTRYVILLE, NC 28318
82	LALA VAE M. BUTLER	3970 AUTRY HWY. AUTRYVILLE, NC 28318

NCDOT
DIVISION OF HIGHWAYS
CUMBERLAND & SAMPSON COUNTY
PROJECT: 34416.1.1 (R-2303B)
AUTRYVILLE
NC 24 FROM WEST OF SR 1853
TO WEST OF SR 1404

SHEET OF 10/16/11

PROPERTY OWNERS
NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
83	DORIS O. DAVIS	P.O. BOX 3331 BURLINGTON, NC 27217
85	EDNA S. WILLIAMS BEASLEY	2241 PLEASANT UNION RD. ROSEBORO, NC 28382
88	PERRY F. BUTLER	2227 PLEASANT UNION RD. ROSEBORO, NC 28382
89	WILLIAM M. MAINOR	P.O. BOX 1809 ROSEBORO, NC 28382
89B	SECRETARY OF HOUSING & URBAN DEVELOPMENT	40 MARIETTA ST. ATLANTA, GA 30303
93	ROBIE D. FAIRCLOTH	4412 DUNN RD. ROSEBORO, NC 28382
94	JERRY W. LUCAS	2106 SAPONA RD. FAYETTEVILLE, NC 28301
95A	CHARLES S. LUCAS	2106 SAPONA RD. FAYETTEVILLE, NC 28301

NCDOT
DIVISION OF HIGHWAYS
CUMBERLAND & SAMPSON COUNTY
PROJECT: 34416.1.1 (R-2303B)
AUTRYVILLE
NC 24 FROM WEST OF SR 1853
TO WEST OF SR 1404

SHEET OF 10/16/11

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND 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)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	388+00 to 391+28-L-	Fill	1.26			0.14						
*2	391+28 to 402+13-L-	Bridge			0.09	<0.01	3.53					
3	14+18 to 15+09-Y13-RT	Fill	0.01			0.02						
4	424+51 to 426+05-L-LT	Fill						0.25				
5	425+57 to 426+51-L-LT	Fill	0.02			0.02						
**6	430+34 to 432+25-L-RT	Fill/Pond						0.19				
7A	431+78 to 434+23-L-	Fill						0.02		158.00		
7B	431+78 to 434+23-L-	Fill	0.23		0.01	0.03						
8	437+97 to 439+15-L-RT	Fill	0.07			0.02						
9	438+58 to 441+68-L-LT	Fill						0.73				
***10	542+45 to 545+21-L-LT	Fill	0.09			0.06						
11	554+06 to 558+53-L-LT	Fill	0.01			0.10						
TOTALS:			1.69		0.10	0.39	3.53	1.19		158.00		

* Site 2: Impacts from piles are Str. # 1 148sf, Str. # 2 148sf.

** Site 6: Wetland Sta. 430+34-L-RT impact shown as total take due to Mitigation site. Additional impact outside of s.s. is 2.13 ac. .

***Site 10: This is a resource that is regulated by the NCDWQ but not by the USACE.

ATN Revised 3/31/05

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

CUMBERLAND/SAMPSON COUNTY
WBS - 34416.1.1 (R-2303B)

SHEET 2/25/2013

Permit Drawing
Sheet 55 of 56
Revised 2-25-2013

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND 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)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
12	554+38 to 557+27-L-RT	Fill	0.28			0.03						
13	576+76 to 576+89-L-RT	Fill						<0.01	<0.01			
14	623+20 to 624+12-L-RT	Fill	0.10		0.03	<0.01						
15	654+75 to 663+38-L-	Fill / Bridge	2.13			0.41	0.17					
16	669+18 to 670+85-L-LT	Fill	0.26			0.06						
17	670+13 to 672+92-L-RT	Fill	0.05			0.02						
18	674+45 to 674+81-L-RT	Fill						<0.01	<0.01			
19	680+56 to 684+21-L-LT	Fill / Pond						0.44				
20	681+95 to 682+15-L-RT	Fill						<0.01	<0.01			
21	712+14 to 714+41 -L-	Fill / RCBC	0.13	0.12	0.01	0.06		0.03	<0.01	138.00		
		Bank Stabilization						0.02	0.01	55.00	88.00	
TOTALS:			2.95	0.12	0.04	0.58	0.17	0.51	0.02	193.00	88.00	
		GRAND TOTAL:	4.64	0.12	0.14	0.97	3.70	1.70	0.02	351.00	88.00	

* Site 14 Wetland sta. 623+20-L-RT impact shown as total take.
Additional impact outside slope stake is 0.04 ac..

* Site 15: Impacts from piles are Str. # 3 25sf, Str. # 4 25sf.

* Site 16 Wetland sta. 669+18-L-LT impact shown as total take due to ditch.
Additional impact outside of ditch is 0.04 ac..

* Site 19 Wetland sta. 680+56-L-LT impact shown as total take due to Mitigation site.
Additional impact outside of s.s. is 1.99 ac..

ATN Revised 3/31/05

NC DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

CUMBERLAND/SAMPSON COUNTY

WBS - 34416.1.1 (R-2303B)

SHEET 2/27/2013

Permit Drawing
Sheet 56 of 56
Revised 2-27-2013

PROJECT REFERENCE NO.	SHEET
R-2303B	

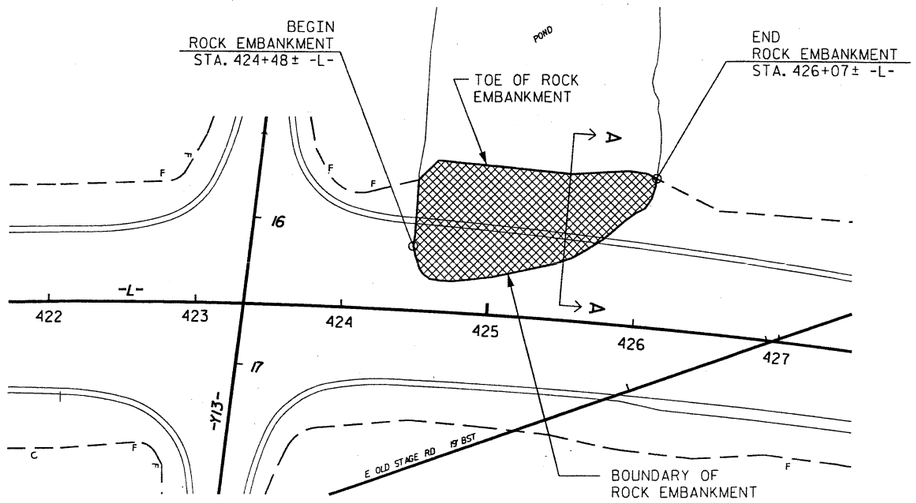
GEOTECHNICAL ENGINEER

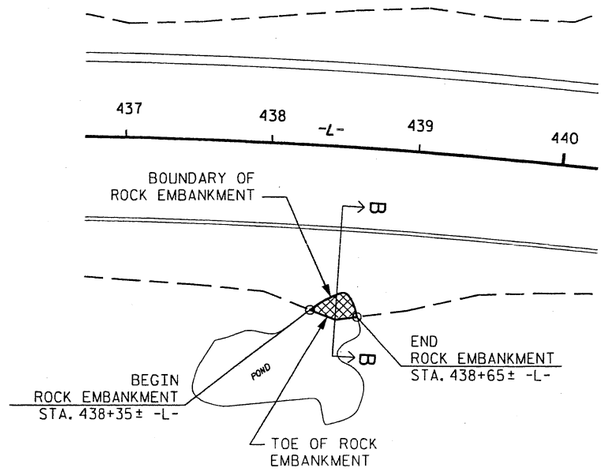
NORTH CAROLINA PROFESSIONAL SEAL 32171 ENGINEER JINTOUNG PARK

SIGNATURE DATE

ENGINEER

SIGNATURE DATE





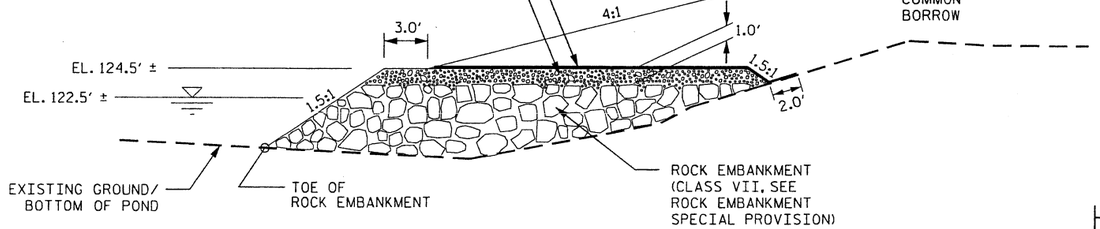
ROCK EMBANKMENT AREA

PLAN VIEW

NOT TO SCALE

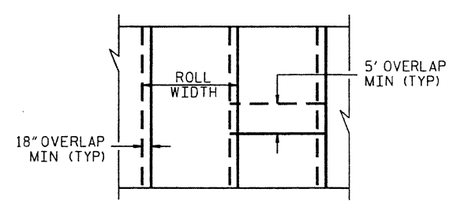
ROCK EMBANKMENT STATIONS		
BEGIN	END	LOCATION
424+48± -L-	426+07± -L-	LEFT
438+35± -L-	438+65± -L-	RIGHT

ESTIMATED QUANTITIES	
ROCK EMBANKMENTS	1,800 TONS
#57 STONE	950 TONS
GEOTEXTILE FOR ROCK EMBANKMENTS	1,050 SY



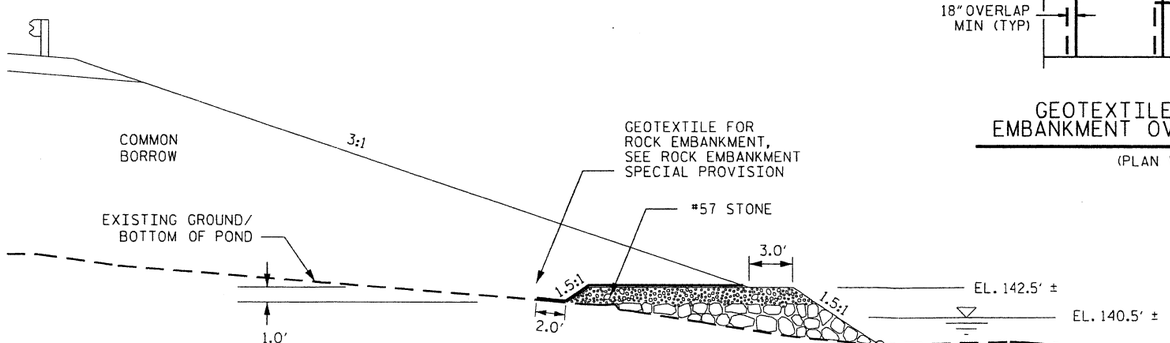
ROCK EMBANKMENT TYPICAL SECTION A-A

NOT TO SCALE



GEOTEXTILE FOR ROCK EMBANKMENT OVERLAP DETAIL

(PLAN VIEW)



ROCK EMBANKMENT TYPICAL SECTION B-B

NOT TO SCALE

FOR ROCK EMBANKMENT, SEE ROCK EMBANKMENTS SPECIAL PROVISION.

THE ESTIMATED QUANTITIES OF ROCK EMBANKMENTS INCLUDE ADDITIONAL TONNAGE FOR THE ANTICIPATED SETTLEMENT OF ROCK EMBANKMENTS.

THE ESTIMATED QUANTITIES OF #57 STONE INCLUDE ADDITIONAL TONNAGE FOR FOR FILLING OF GAPS BETWEEN CLASS VII AND EXCAVATION FOR FENCE POST, IF NECESSARY.

PREPARED BY: J. PARK	DATE: 08/2012
REVIEWED BY: J. BATTS	DATE: 08/2012

GEOTECHNICAL ENGINEERING UNIT

☐ EASTERN REGIONAL OFFICE
☐ WESTERN REGIONAL OFFICE
☐ CONTRACT OFFICE

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

ROCK EMBANKMENT DETAILS

REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

TIP PROJECT: R-2303B

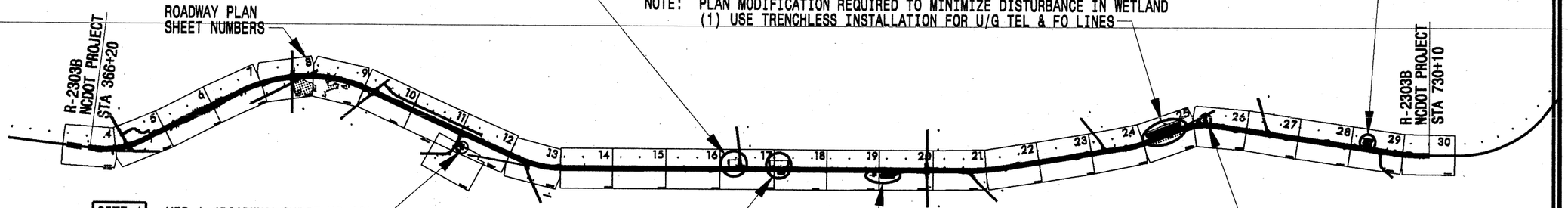
T.I.P. NO.	SHEET NO.
R-2303B	UEP-0

RECEIVED
JAN 3 1 2013
REG. WILM. FLD. OFC.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY WETLAND IMPACT PLAN
CUMBERLAND & SAMPSON COUNTIES

Utility Permit Drawing
Sheet 1 of 9



SITE-1 UEP-1 (ROADWAY SHEET UC-12)

IMPACTS: HAND CLEARING IN WETLAND = 0.058 ACRE (2520 SQFT)
PURPOSE: HAND CLEAR 15' EACH SIDE OF POWER LINES

NOTE: PLAN MODIFICATION REQUIRED TO MINIMIZE DISTURBANCE IN WETLAND
(1) RELOCATE (MOVE IN-LINE) PROPOSED POWER POLE OUT OF WETLAND
(2) USE TRENCHLESS INSTALLATION FOR U/G TEL & FO LINES

SITE-2 UEP-2 (ROADWAY SHEET UC-17)

IMPACTS: NONE

NOTE: PLAN MODIFICATION REQUIRED TO MINIMIZE DISTURBANCE IN WETLAND
(1) USE TRENCHLESS INSTALLATION FOR U/G TEL & FO LINES

SITE-3 UEP-3 (ROADWAY SHEETS UC-17 AND UC-18)

IMPACTS: EXCAVATION IN WETLAND = 0.014 ACRE (625 SQFT)
PURPOSE: EXCAVATE TRENCH FOR WATER LINE INSTALLATION

NOTE: PLAN MODIFICATION REQUIRED TO MINIMIZE DISTURBANCE IN WETLAND
(1) USE TRENCHLESS INSTALLATION FOR U/G TEL & FO LINES

SITE-4 UEP-4 (ROADWAY SHEETS UC-19 AND UC-20)

IMPACTS: EXCAVATION IN WETLAND = 0.095 ACRE (4150 SQFT)
PURPOSE: EXCAVATE TRENCH FOR WATER LINE INSTALLATION

SITE-5 UEP-5 (ROADWAY SHEET UC-25)

IMPACTS: NONE

NOTE: PLAN MODIFICATION REQUIRED TO MINIMIZE DISTURBANCE IN WETLAND
(1) USE TRENCHLESS INSTALLATION FOR U/G TEL & FO LINES

SITE-6 UEP-6 (ROADWAY SHEET UC-26)

IMPACTS: EXCAVATION IN WETLAND = 0.010 ACRE (405 SQFT)
IMPACTS: HAND CLEARING IN WETLAND = 0.022 ACRE (965 SQFT)

PURPOSE: EXCAVATE TRENCH FOR WATER LINE INSTALLATION
PURPOSE: HAND CLEAR 15' EACH SIDE OF POWER LINES

SITE-7 UEP-7 (ROADWAY SHEET UC-29)

IMPACTS: EXCAVATION IN WETLAND = 0.041 ACRE (1795 SQFT)
PURPOSE: EXCAVATE TRENCH FOR WATER LINE INSTALLATION

INDEX OF SHEETS

TOTAL PROJECT ENVIRONMENTAL IMPACTS DUE TO UTILITY RELOCATIONS:

(1) EXCAVATION IN WETLAND = 0.16 ACRE (6975 SQFT)
(2) HAND CLEARING IN WETLAND = 0.08 ACRE (3485 SQFT)

JANUARY 22, 2013

PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING

1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. — *UTILITIES SECTION ENGINEER*
Ron Wilkins, P.E. — *UTILITIES SQUAD LEADER PROJECT ENGINEER*
Eric Haugaard — *UTILITIES PROJECT DESIGNER*

R-2303B	UEP-1
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: RBW	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

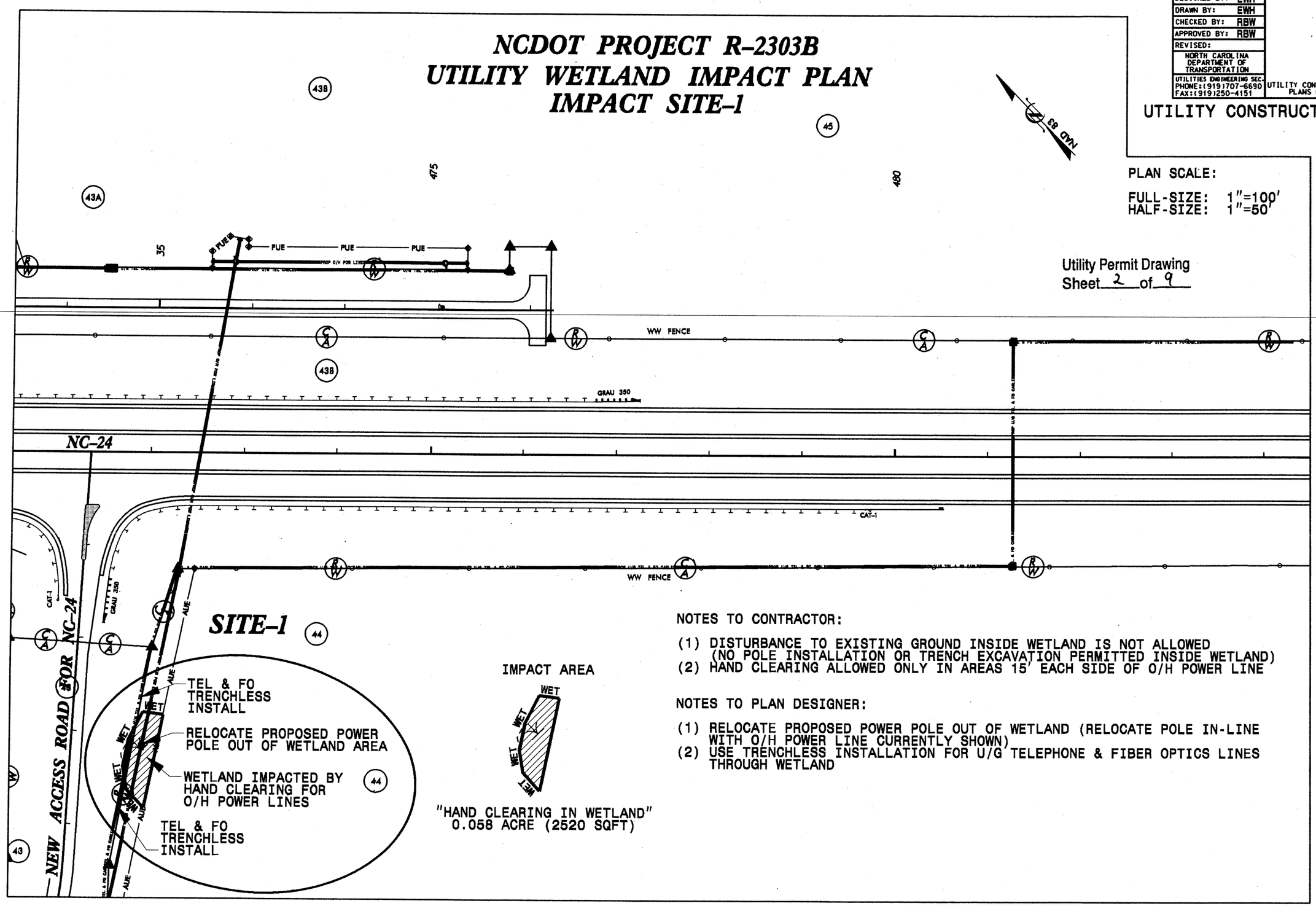
UTILITY CONSTRUCTION

NCDOT PROJECT R-2303B
UTILITY WETLAND IMPACT PLAN
IMPACT SITE-1

PLAN SCALE:

FULL-SIZE: 1"=100'
HALF-SIZE: 1"=50'

Utility Permit Drawing
Sheet 2 of 9



IMPACT AREA

"HAND CLEARING IN WETLAND"
0.058 ACRE (2520 SQFT)

NOTES TO CONTRACTOR:

(1) DISTURBANCE TO EXISTING GROUND INSIDE WETLAND IS NOT ALLOWED (NO POLE INSTALLATION OR TRENCH EXCAVATION PERMITTED INSIDE WETLAND)
(2) HAND CLEARING ALLOWED ONLY IN AREAS 15' EACH SIDE OF O/H POWER LINE

NOTES TO PLAN DESIGNER:

(1) RELOCATE PROPOSED POWER POLE OUT OF WETLAND (RELOCATE POLE IN-LINE WITH O/H POWER LINE CURRENTLY SHOWN)
(2) USE TRENCHLESS INSTALLATION FOR U/G TELEPHONE & FIBER OPTICS LINES THROUGH WETLAND

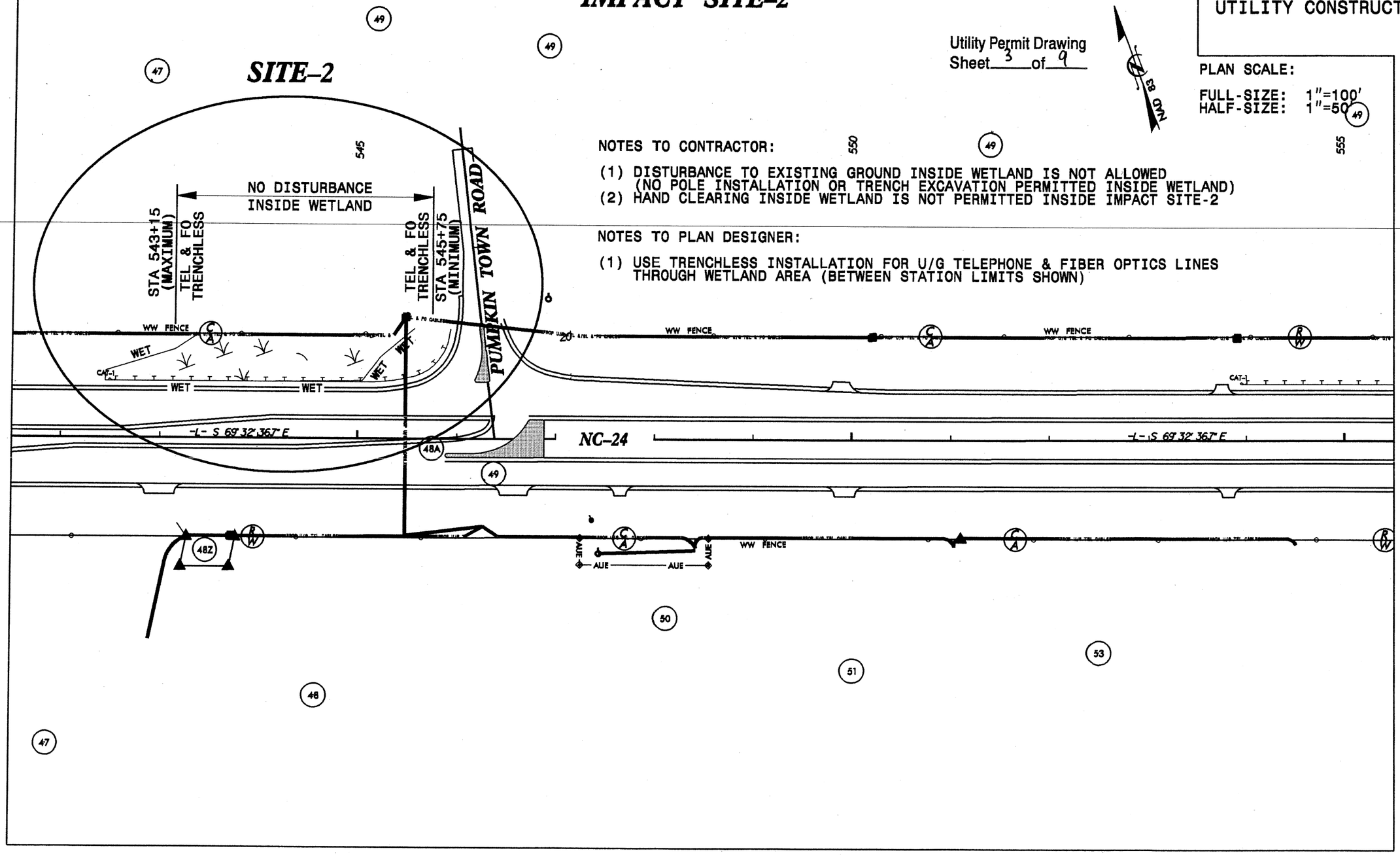
NCDOT PROJECT R-2303B
UTILITY ENVIRONMENTAL PERMIT DRAWING
IMPACT SITE-2

R-2303B	UEP-2
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: RBW	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

Utility Permit Drawing
Sheet 3 of 9

SITE-2



NOTES TO CONTRACTOR:

(1) DISTURBANCE TO EXISTING GROUND INSIDE WETLAND IS NOT ALLOWED (NO POLE INSTALLATION OR TRENCH EXCAVATION PERMITTED INSIDE WETLAND)
(2) HAND CLEARING INSIDE WETLAND IS NOT PERMITTED INSIDE IMPACT SITE-2

NOTES TO PLAN DESIGNER:

(1) USE TRENCHLESS INSTALLATION FOR U/G TELEPHONE & FIBER OPTICS LINES THROUGH WETLAND AREA (BETWEEN STATION LIMITS SHOWN)

PLAN SCALE:

FULL-SIZE: 1"=100'
HALF-SIZE: 1"=50'

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NCDOT PROJECT R-2303B
UTILITY ENVIRONMENTAL PERMIT DRAWING
IMPACT SITE-3

R-2303B	UEP-3
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: RBW	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

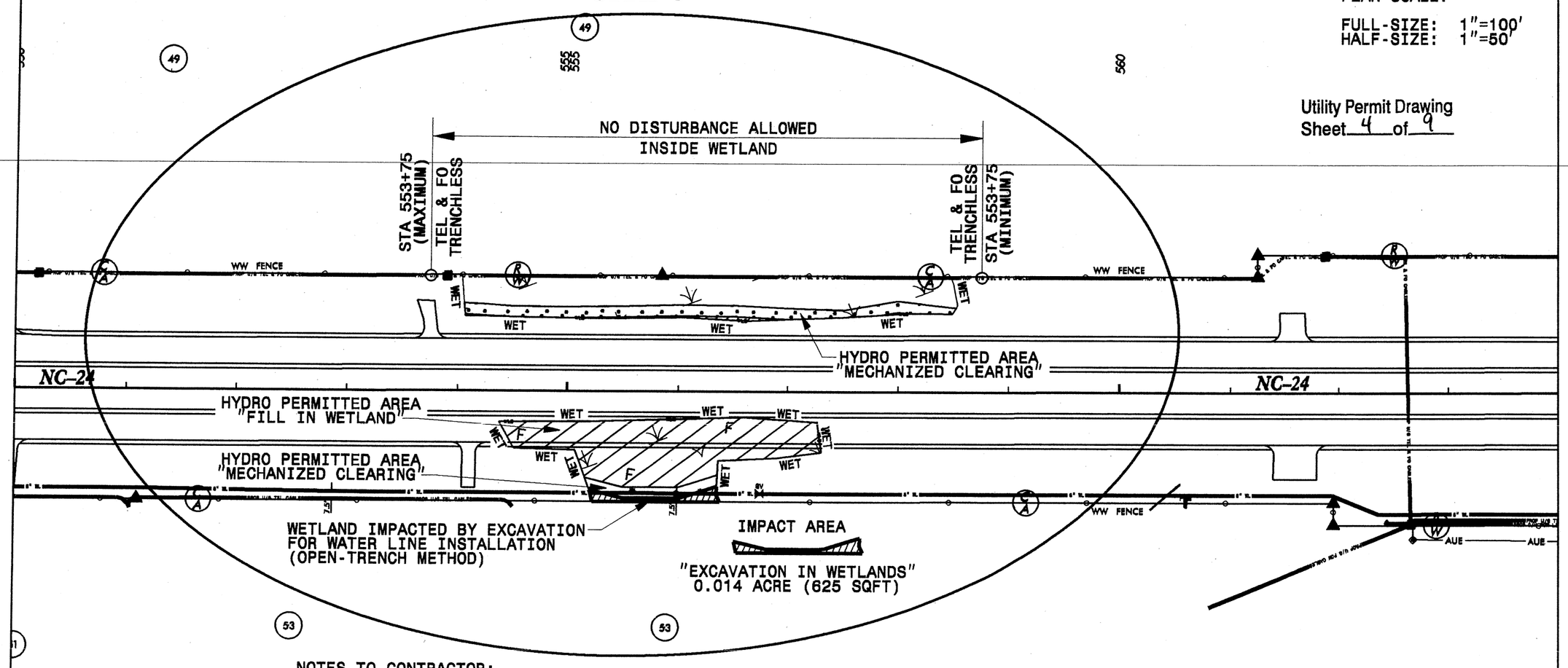
UTILITY CONSTRUCTION

PLAN SCALE:

FULL-SIZE: 1"=100'
HALF-SIZE: 1"=50'

Utility Permit Drawing
Sheet 4 of 9

SITE-3



NOTES TO CONTRACTOR:

(1) DISTURBANCE TO EXISTING GROUND INSIDE WETLAND IS NOT ALLOWED (NO POLE INSTALLATION OR TRENCH EXCAVATION PERMITTED INSIDE WETLAND)
(2) HAND CLEARING INSIDE WETLAND IS NOT PERMITTED INSIDE IMPACT SITE-3

NOTES TO PLAN DESIGNER:

(1) USE TRENCHLESS INSTALLATION FOR U/G TELEPHONE & FIBER OPTICS LINES THROUGH WETLAND AREA (BETWEEN STATION LIMITS SHOWN ABOVE)

R-2303B	UEP-4
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: RBW	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

NCDOT PROJECT R-2303B
UTILITY ENVIRONMENTAL PERMIT DRAWING
IMPACT SITE-4

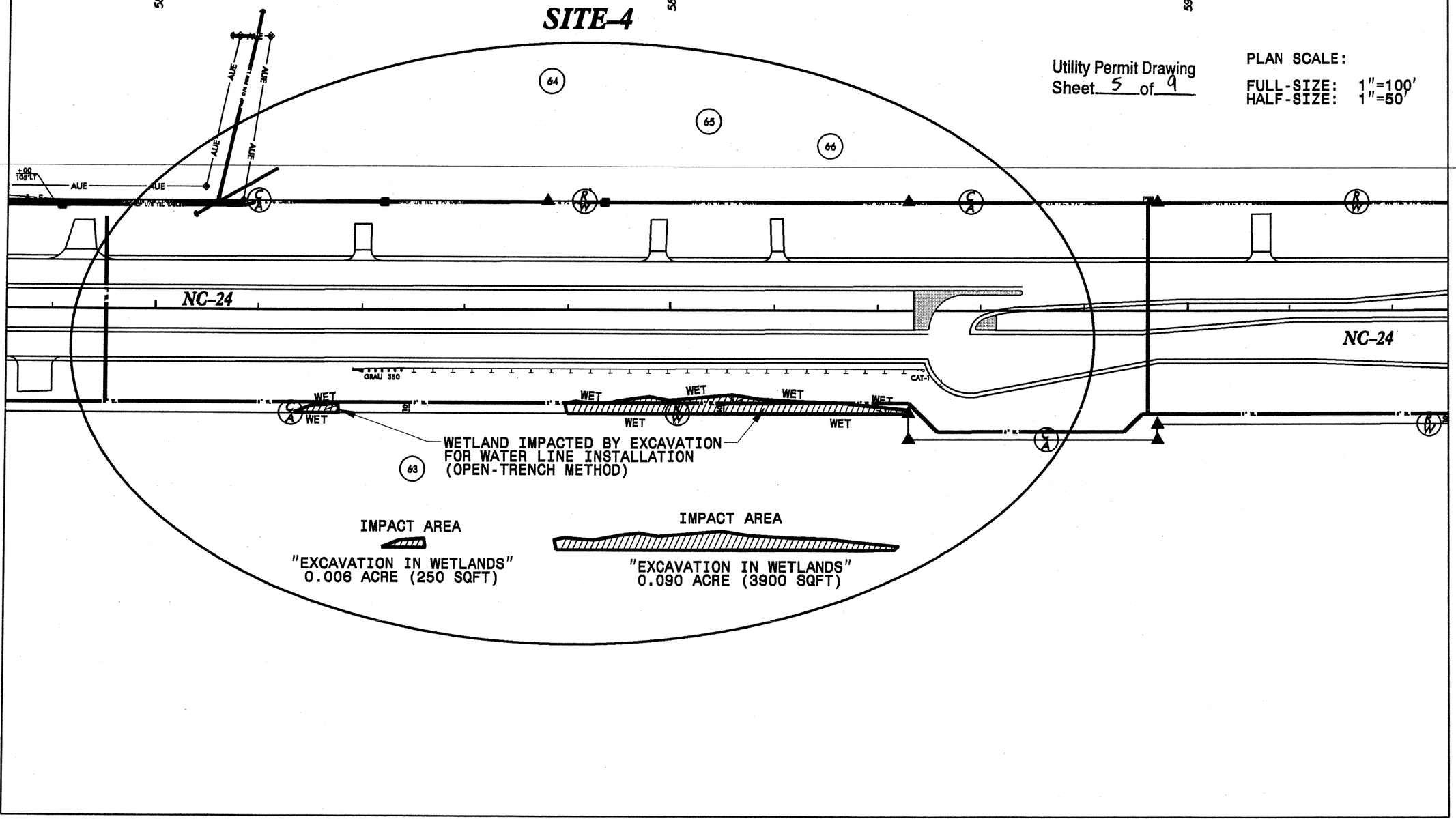
SITE-4

NAD 83

580 585 590

Utility Permit Drawing
Sheet 5 of 9

PLAN SCALE:
FULL-SIZE: 1"=100'
HALF-SIZE: 1"=50'



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NCDOT PROJECT R-2303B
UTILITY ENVIRONMENTAL PERMIT DRAWING
IMPACT SITE-5

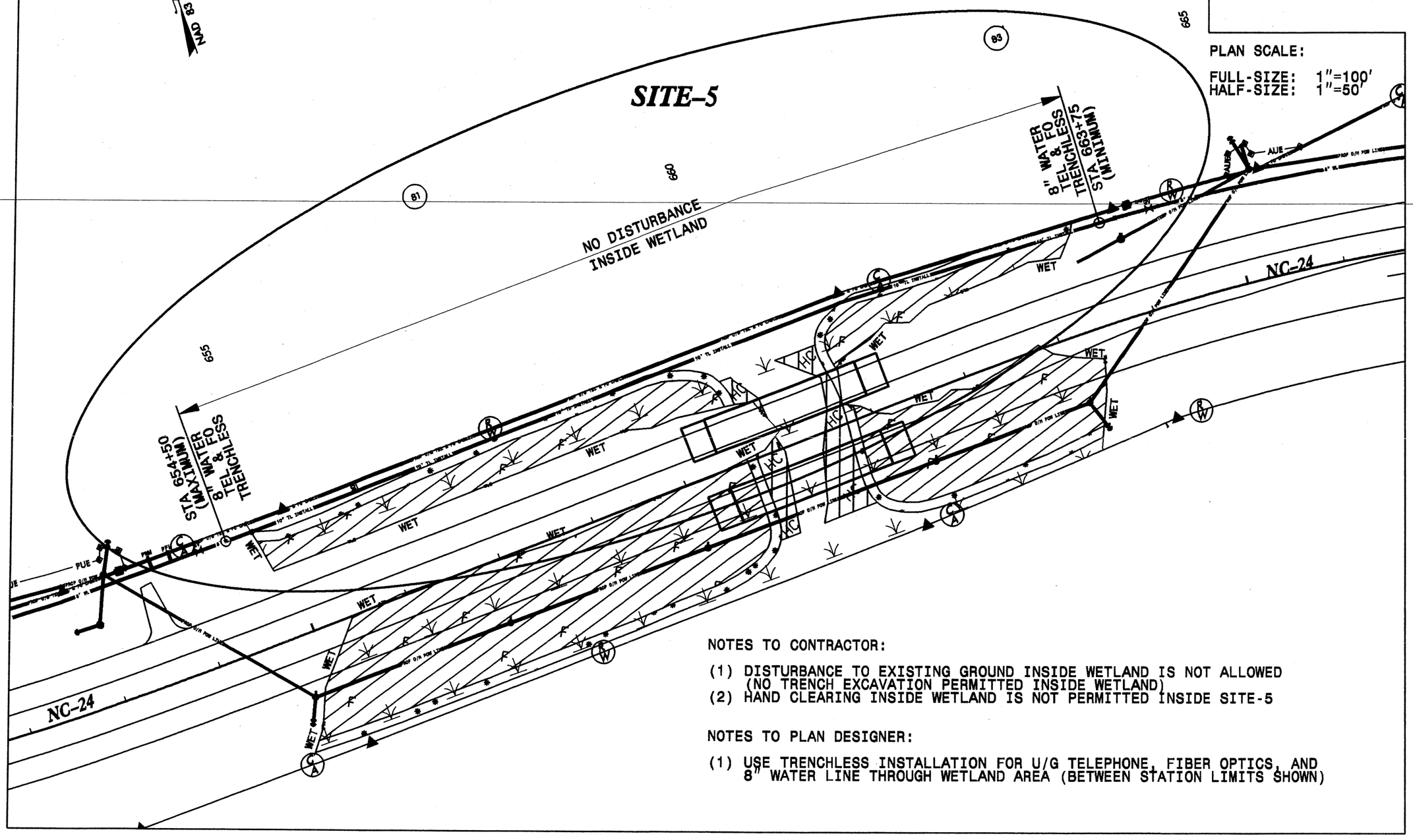
Utility Permit Drawing
Sheet 6 of 9

R-2303B	UEP-5
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: RBW	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

PLAN SCALE:

FULL-SIZE: 1"=100'
HALF-SIZE: 1"=50'



NOTES TO CONTRACTOR:

(1) DISTURBANCE TO EXISTING GROUND INSIDE WETLAND IS NOT ALLOWED (NO TRENCH EXCAVATION PERMITTED INSIDE WETLAND)
(2) HAND CLEARING INSIDE WETLAND IS NOT PERMITTED INSIDE SITE-5

NOTES TO PLAN DESIGNER:

(1) USE TRENCHLESS INSTALLATION FOR U/G TELEPHONE, FIBER OPTICS, AND 8" WATER LINE THROUGH WETLAND AREA (BETWEEN STATION LIMITS SHOWN)

R-2303B	UEP-6
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: RBW	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

NCDOT PROJECT R-2303B
UTILITY ENVIRONMENTAL PERMIT DRAWING
IMPACT SITE-6

NOTES TO CONTRACTOR:

(1) OPEN TRENCH INSTALLATION THROUGH WETLAND ALLOWED FOR 8" WATER, TELEPHONE, AND FIBER OPTICS LINES PROVIDED THAT EXCAVATION FOR THESE UTILITIES ARE INSIDE HYDRO'S PERMITTED (I.E. "FILL IN WETLAND" OR "MECHANIZED CLEARING") AREAS OR UTILTY'S PERMITTED (I.E. "EXCAVATION IN WETLANDS") AREA AS PER THIS PLAN SHEET

PLAN SCALE:

FULL-SIZE: 1"=100'
HALF-SIZE: 1"=50'

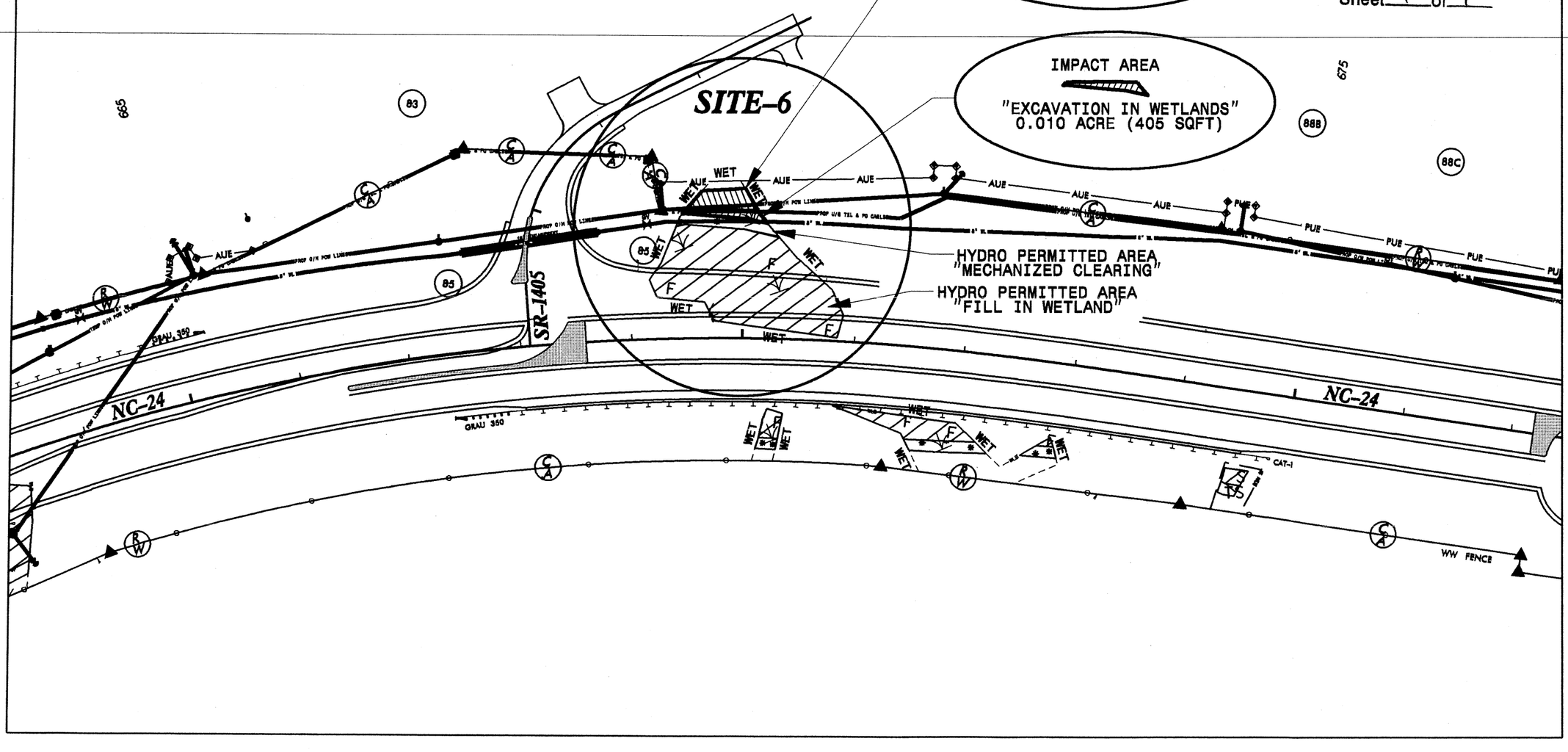
Utility Permit Drawing
Sheet 7 of 9

IMPACT AREA
"HAND CLEARING IN WETLANDS"
0.022 ACRE (965 SQFT)

IMPACT AREA
"EXCAVATION IN WETLANDS"
0.010 ACRE (405 SQFT)

HYDRO PERMITTED AREA
"MECHANIZED CLEARING"

HYDRO PERMITTED AREA
"FILL IN WETLAND"



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USER:ewhite

NCDOT PROJECT R-2303B
UTILITY ENVIRONMENTAL PERMIT DRAWING
IMPACT SITE-7

R-2303B	UEP-7
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: RBW	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

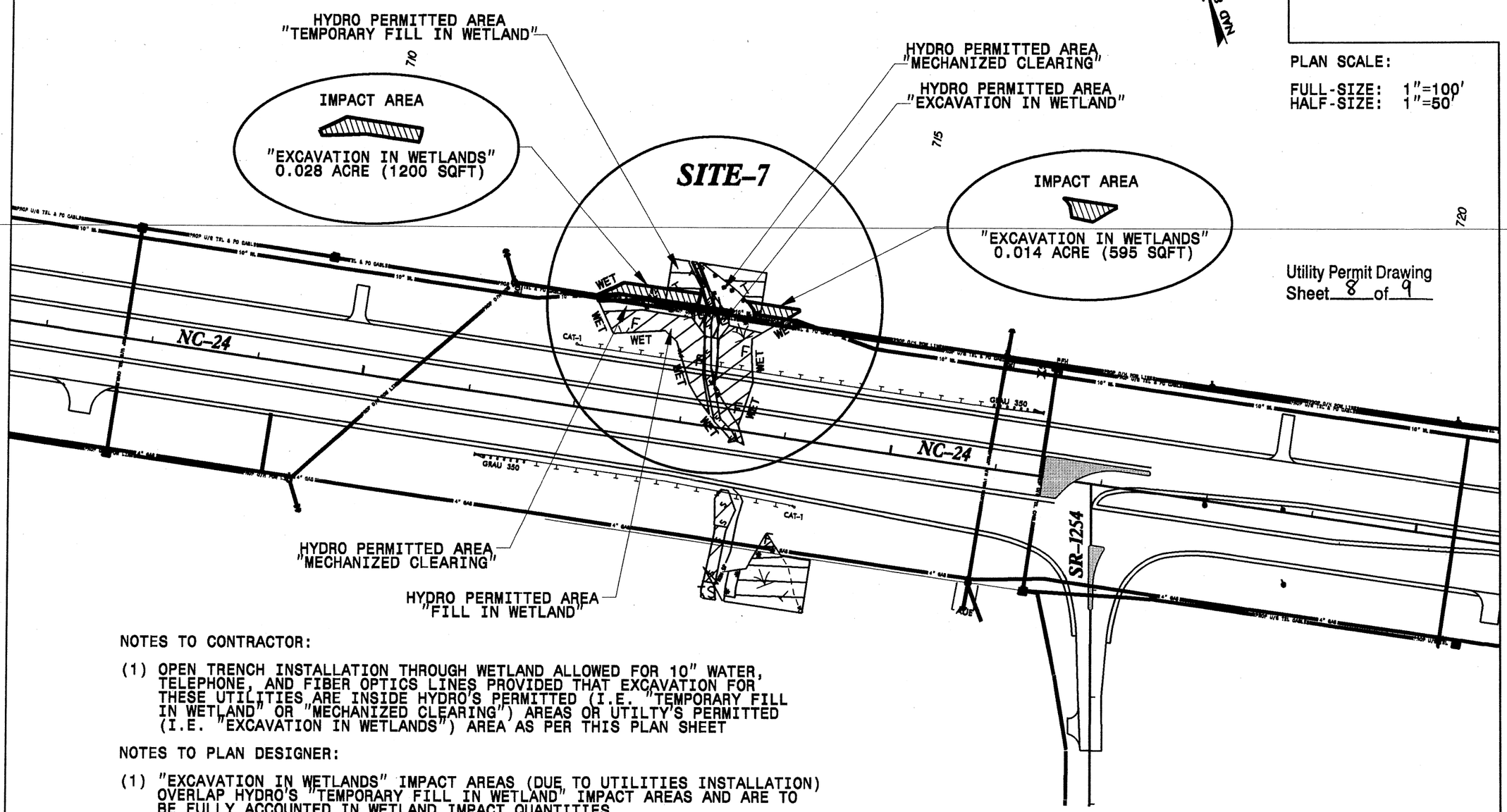
UTILITY CONSTRUCTION

NAD 83

PLAN SCALE:

FULL-SIZE: 1"=100'
HALF-SIZE: 1"=50'

Utility Permit Drawing
Sheet 8 of 9



NOTES TO CONTRACTOR:

(1) OPEN TRENCH INSTALLATION THROUGH WETLAND ALLOWED FOR 10" WATER, TELEPHONE, AND FIBER OPTICS LINES PROVIDED THAT EXCAVATION FOR THESE UTILITIES ARE INSIDE HYDRO'S PERMITTED (I.E. "TEMPORARY FILL IN WETLAND" OR "MECHANIZED CLEARING") AREAS OR UTILTY'S PERMITTED (I.E. "EXCAVATION IN WETLANDS") AREA AS PER THIS PLAN SHEET

NOTES TO PLAN DESIGNER:

(1) "EXCAVATION IN WETLANDS" IMPACT AREAS (DUE TO UTILITIES INSTALLATION) OVERLAP HYDRO'S "TEMPORARY FILL IN WETLAND" IMPACT AREAS AND ARE TO BE FULLY ACCOUNTED IN WETLAND IMPACT QUANTITIES

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	472+00 -L-	O/H POWER					0.06					
3	545+00 -L-	U/G WATER			0.01							
4	584+00 -L-	U/G WATER			0.10							
6	670+00 -L-	U/G WATER			0.01							
6	670+00 -L-	O/H POWER					0.02					
7	713+00 -L-	U/G WATER			0.04							
TOTALS:					0.16		0.08					

Utility Permit Drawing
Sheet 9 of 9

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

CUMBERLAND/SAMPSON COUNTY
WBS - 34416.1.1 (R-2303B)

SHEET 1/22/2013

ATN Revised 3/31/05