



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY PERDUE
GOVERNOR

EUGENE CONTI
SECRETARY

March 19, 2009

MEMORANDUM TO: Mr. Terry R Gibson, PE
Division Six Engineer

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

SUBJECT: Cumberland County, SR 1003 (Camden Road) from NC 59
(Hope Mills Road) to SR 1007 (Owen Drive); T.I.P.
Number U-2810; Federal Aid Project No. STP-1003(22);
WBS Element 34866.1.1



Attached are the U.S. Army Corps of Engineers Section 404 Individual Permit and the N.C. Division of Water Quality Section 401 Individual Water Quality Certification for the above referenced project. All environmental permits have been received for the construction of this project.

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

PSH/gyb

Attachment

Cc: W/attachment
Mr. Randy Garris, P.E. State Contract Officer
Ms. Beth Harmon, EEP
Mr. James J. Rerko, Division Environmental Officer

Cc: W/o attachment (see website for attachments)
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Jay Bennett, P.E., Roadway Design
Dr. David Chang, P.E., Hydraulics
Mr. Art McMillan, P.E., Highway Design
Mr. Tom Koch, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. John F. Sullivan, FHWA
Mr. Ron Hancock, P.E., State Roadway Construction Engineer
Mr. Mike Robinson, P.E., State Bridge Construction Engineer
Mr. Rob Hanson, P.E., PDEA Eastern Region Unit Head

PROJECT COMMITMENTS

SR 1003 (CAMDEN ROAD)

From NC 59 (Hope Mills Road) to SR 1007 (Owen Drive)

Fayetteville, Cumberland County

WBS Element 34866.1.1

Federal Project No. STP-1003(22)

TIP PROJECT U-2810

Current status, changes, or additions to the project commitments as shown in the environmental documents for the project are printed in *italics*.

Commitments Developed Through Project Development

Project Development/Roadway Design Unit/Structure Design Unit

NCDOT will provide sidewalk on each replacement bridge.

A sidewalk on each replacement bridge is currently included in design plans.

Geotechnical Unit

Any potential right of way involvement with the UST sites mentioned in the EA will be fully evaluated by NCDOT's Geotechnical Unit prior to right of way acquisition.

No UST site involvement.

Roadway Design

Bicycle accommodations will be provided for this project by 14-foot outside lanes. This provides 2-feet of additional pavement to each outside travel lane.

Bicycle accommodations are currently included in design plans.

Project Development & Environmental Analysis Branch

New surveys for the federally-protected species listed for Cumberland County will be completed prior to the construction consultation.

Updated surveys were completed between March and August 2006. Biological conclusions of No Effect were reached for all species.

PROJECT COMMITMENTS

Roadway Design Unit/ Enhancement Unit

New sidewalks will be included as part of the project within the town limits if the Town of Hope Mills participates in cost sharing.

NCDOT is currently coordinating with the Town of Hope Mills regarding this commitment.

Commitments Developed Through Permitting

Project Development & Environmental Analysis Branch

Compensatory mitigation for the unavoidable impacts to 0.9 acres of riparian wetlands and 273 linear feet of warm water streams associated with the proposed project shall be provided by the North Carolina Ecosystem Enhancement Program (NCEEP) within the Cape Fear River Basin (Cataloging Unit 03030004). The EEP will provide 1.8 acres of riparian wetland credits and 5496 warm water stream credits, pursuant to Section X of Amendment Number 2 to the Memorandum of Agreement (MOA) signed March 8, 2007.

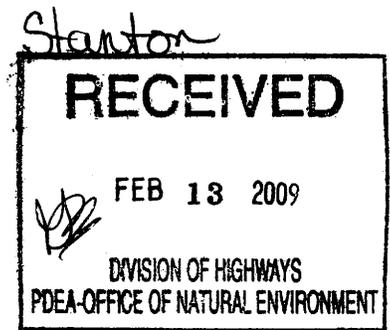
Mitigation for the unavoidable impacts to jurisdictional resources will be provided by the EEP. EEP indicated in a letter dated May 14, 2008 that they will assume responsibility for satisfying the compensatory mitigation requirements for the above-referenced project, in accordance with the Tri-Party MOA signed on July 22, 2003 and the Dual-Party MOA signed on April 12, 2004 and fully executed March 8, 2007.



REPLY TO
ATTENTION OF:

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

February 12, 2009



Regulatory Division

Action ID Number: 2008-02927, SR 1003 (Camden Road) Widening, Transportation Improvements Project U-2810, State Project Number 8.2442601, Cumberland County, North Carolina.

Dr. Gregory J. Thorpe, PhD, Manager
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
Division of Highways
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Dr. Thorpe:

In accordance with your written request of September 24, 2008 and the ensuing administrative record, enclosed are two copies of a Department of the Army permit to directly discharge dredged and/or fill material into jurisdictional wetlands to facilitate the construction of SR 1003 (Camden Road) Widening, Transportation Improvements Project U-2810, State Project Number 8.2442601, Cumberland County, North Carolina. The proposed 4.2 mile roadway widening project is located beginning at NC 59 (Hope Mills Road) and continues northeast to SR 1007 (Owens Drive) in Cumberland County, North Carolina.

You should acknowledge that you accept the terms and conditions of the enclosed permit by signing and dating each copy in the spaces provided ("Permittee" on page 3). Your signature, as permittee, indicates that, as consideration for the issuance of this permit, you voluntarily accept and agree to comply with all of the terms and conditions of this permit. All pages of both copies of the signed permit with drawings should then be returned to this office for final authorization. A self-addressed envelope is enclosed for your convenience.

This correspondence contains a proffered permit for the above described site. If you object to this decision, you may request an administrative appeal under Corps regulations at 33 CFR part 331.

Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and request for appeal (RFA) form. If you request to appeal this decision you must submit a completed RFA form to the District Commander, Wilmington District Corps of Engineers at the following address:

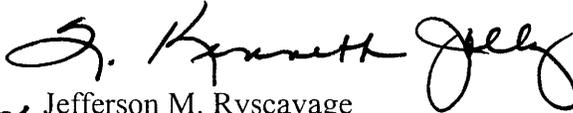
Colonel Jefferson M. Ryscavage, District Commander
U.S. Army Corps of Engineers, Wilmington District
69 Darlington Avenue
Wilmington, North Carolina 28403-1343

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete; that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by April 13, 2009.

It is not necessary to submit an RFA form to the Division Office if you do not object to the decision contained in this correspondence.

After the permit is authorized in this office, the original copy will be returned to you; the duplicate copy will be permanently retained in this office. Should you have questions, contact Mr. Richard K. Spencer of my Wilmington Field Office regulatory staff at telephone (910) 251-4172.

Sincerely,


Jefferson M. Ryscavage
Colonel, EN
Commanding

Enclosures

DEPARTMENT OF THE ARMY PERMIT

Permittee **North Carolina Department of Transportation; TIP NO. U-2810**

Permit No. **SAW-2008-02927**

Issuing Office **USAED, WILMINGTON**

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 : Directly discharge dredged and/or fill material into tributaries and associated wetlands to facilitate the widening of SR 1003 (Camden Road), Transportation Improvement Project (TIP) U-2810, State Project Numbers 8.2442601, in Cumberland County, North Carolina.

Project Location: In the Cape Fear River, Hydrologic Cataloging Unit 03030004. The project is more specifically located starting at Latitude 34.985837 N, Longitude -78.964789 W and ending at Latitude 35.018091 N, Longitude -78.906324 W. 3412 A/B, State Project No. 8.2692501).

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2014**. 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.

- c. 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. Luok for Gregory Traupe, Ph.D. March 17, 2009
 (PERMITEE) NC DEPARTMENT OF TRANSPORTATION (DATE)

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

 (DISTRICT ENGINEER) JEFFERSON M. RYSCAVAGE, COLONEL (DATE)

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

 (TRANSFEREE) (DATE)

**SPECIAL CONDITIONS (Action ID. 2008-02927, SR 1003 (Camden Road)
Widening, Transportation Improvements Project U-2810, State Project Number
8.2442601)**

1. Failure to institute and carry out the details of the following special conditions below will result in a directive to cease all ongoing and permitted work within waters of the United States, including wetlands, associated with the permitted project, or such other remedies and/or fines as the U.S. Army Corps of Engineers District Commander or his authorized representatives may seek.
2. All work authorized by this permit must be preformed in strict compliance with the attached plans, which are a part of this permit.
3. The permittee shall schedule a preconstruction meeting between its representatives, the contractor's representatives, and the Corps of Engineers, Mr. Richard Spencer, Wilmington Regulatory Field Office, prior to any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all of the terms and conditions contained within this Department of the Army Permit. The permittee shall notify the Corps of Engineers Project Manager a minimum of thirty (30) days in advance of the scheduled meetings in order to provide that individual with ample opportunity to schedule and participate in the required meetings. One copy of the final half-size construction drawings shall be furnished to the Corps of Engineers, Mr. Richard Spencer, Wilmington Regulatory Field Office prior to the pre-construction meeting.
4. The permittee shall ensure that the construction design plans for this project do not deviate from the permit plans attached to this authorization. Written verification shall be provided that the final construction drawings comply with the attached permit drawings prior to any active construction in waters of the United States, including wetlands. Any deviation in the construction design plans will be brought to the attention of the Corps of Engineers, Mr. Richard Spencer, Wilmington Regulatory Field Office prior to any active construction in waters or wetlands.
5. 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 and any authorized modifications. Copies of this permit and any modifications authorized by the USACE shall be available for review at the construction site at all times. All violations, including non-compliance of these conditions, of the authorized permit shall be reported to the District Engineer within 24 hours of the violation.
6. Compensatory mitigation for the unavoidable impacts to 0.9 acres of riparian wetlands and 273 linear feet of warm water streams associated with the proposed project shall be provided by the North Carolina Ecosystem Enhancement Program (NCEEP) within the Cape Fear River Basin (Cataloging Unit 03030004). The EEP will provide 1.8 acres of riparian wetland credits and 546 warm water stream credits, pursuant to Section X of Amendment Number 2 to the Memorandum of Agreement (MOA) signed 8 March 2007.

7. Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill, or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands, or shall any activities take place that cause the degradation of waters or wetlands. There shall be no excavation from, waste disposal into, or degradation of, jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit, including appropriate compensatory mitigation. This prohibition applies to all borrow and fill activities connected with this project. In addition, 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, into, or out of waters or wetlands or to reduce the reach of waters or wetlands.

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

9. To ensure that all borrow and waste activities occur on high ground and do not result in loss or 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 ensure that all such areas comply with the preceding condition (#7) of this permit, and shall require and maintain documentation of the location and characteristics of all borrow and disposal sites associated with this project. This information will include data regarding soils, vegetation and hydrology sufficient to clearly demonstrate compliance with the preceding condition (#7). All information will be available to the Corps of Engineers upon request. NCDOT shall require its contractors to complete and execute reclamation plans for each waste and borrow site and provide written documentation that the reclamation plans have been implemented and all work is completed. This documentation will be provided to the Corps of Engineers within 30 days of the completion of the reclamation work.

10. The permittee shall comply with the conditions specified in the water quality certification, No. 3775, issued by the North Carolina Division of Water Quality on 18 December 2008.

11. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or streambeds or banks, adjacent to, upstream or downstream of the structures. Culverts shall be placed so that the openings match the natural stream channel wherever possible. Riprap armoring of streams at culvert outlets shall be minimized, including riprap placed above the ordinary high water elevation, in favor of bioengineering techniques such as bank sloping, erosion control matting and revegetation with deep-rooted, woody plants.

12. 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.

13. The permittee shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades in those areas, prior to project completion.

14. Bridge demolition shall be conducted in accordance with Section 4.6 of the Best Management Practices for Construction and Maintenance Activities, dated August 2003. All piles shall be completely removed from the waterbody or cut one foot below the invert of the waterbody and removed.

15. The permittee shall take measures to prevent live or fresh concrete from coming into contact with any surface waters until the concrete has hardened.

16. The permittee shall install barrier fencing or other acceptable forms of barrier around all wetlands that are not to be disturbed to make them readily visible and prevent construction equipment from inadvertently entering and disturbing the wetland areas that are to remain undisturbed.

17. All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. No equipment staging or storage of construction material will occur in wetlands. Hydro-seeding equipment will not be discharged or washed out into any surface waters or wetlands. In the event of a spill of petroleum products or any other hazardous waste, the permittee shall immediately report it to the N.C. Division of Water Quality at (919) 733-5083 or (800) 662-7956 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

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

19. The permittee shall maintain the authorized work in good condition and in conformance with the terms and conditions of this permit. The permittee is not relieved of this requirement if he abandons the permitted activity without transferring it to a third party.

20. Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used.

21. This Department of the Army permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

22. In issuing this permit, the Federal Government does not assume any liability for:

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 Federal activities initiated on behalf of the general public.

c. Damages to other permitted or un-permitted activities or structures caused by the authorized activity.

d. Design and construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

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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 Federal activities initiated on behalf of the general public.

c. Damages to other permitted or un-permitted activities or structures caused by the authorized activity.

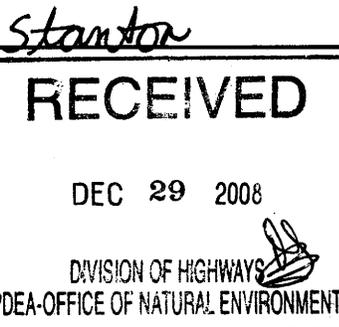
d. Design and construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.



Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen Sullins, Director
Division of Water Quality



December 18, 2008

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

Subject: 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS for Proposed widening to SR 1003 in Cumberland County, Federal Aid Project No. STP-1003(22), State Project No. 82442601, TIP No. U-2810 DWQ Project No. 20081731.

Dear Dr. Thorpe:

Attached hereto is a copy of Certification No. 3775 issued to The North Carolina Department of Transportation dated December 18, 2008.

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

Sincerely,

Coleen Sullins,
Director

Attachment

cc: Richard Spencer, US Army Corps of Engineers, Wilmington Field Office
Jim Rerko, Division 6 Environmental Officer
Kathy Matthews, Environmental Protection Agency
Travis Wilson, NC Wildlife Resources Commission
Beth Harmon, Ecosystem Enhancement Program
Ken Averitte, DWQ Fayetteville Regional Office
Tyler Stanton, NCDOT NEU
File Copy



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

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (DWQ) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact 0.99 acres of jurisdictional wetlands and 333 linear feet of jurisdictional streams in Cumberland County. The project shall be constructed pursuant to the application dated received November 21, 2008. The authorized impacts are as described below:

Stream Impacts in the Cape Fear River Basin

Site	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)
1	96	20	116	0
4	98	20	118	98
5	79	20	99	79
Total	273	60	333	177

Total Stream Impact for Project: 333 linear feet

Wetland Impacts in the Cape Fear River Basin

Site	Permanent Fill (ac)	Temporary Fill (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)
2	0.62	0	0.26	0.08	0.96
4	0.01	0.01	0.01	0	0.03
Total	0.63	0.01	0.27	0.08	0.99

Total Wetland Impact for Project: 0.99 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 November 21, 2008. Should your project change, you are required to notify the DWQ 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.

Conditions of Certification:

1. Compensatory mitigation for 177 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 May 14, 2008 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the Tri-Party MOA signed on July 22, 2003 and the Dual-Party MOA signed on April 12, 2004.



2. Placement of culverts and other structures in waters, streams, and wetlands shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by DWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NC DWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
3. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
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 the any 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 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.
7. 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.
8. 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*.
9. A copy of the final construction drawings shall be furnished to NCDWQ prior to the pre-construction meeting. The permittee shall provide written verification that the final construction drawings comply with the permit drawings contained in the application dated received November 21, 2008. Any deviations from the approved drawings are not authorized unless approved by the NC Division of Water Quality.
10. 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.
11. 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.
12. 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.
13. 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.
14. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.



15. 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.
16. 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.
17. 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.
18. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.
19. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
20. 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 DWQ 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, DWQ may reevaluate and modify this certification.
21. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification..
22. A copy of this Water Quality Certification shall be maintained on site at 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.
23. 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.
24. 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.
25. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.
26. Native woody riparian vegetation (i.e., trees and shrubs native to your geographic region) must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.
27. Upon completion of the project (including any impacts at associated borrow or waste site), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the 401 Certification has been completed.
28. 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.



29. 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.

30. 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 this Certification is unacceptable to you have the right to an adjudicatory hearing upon written request within sixty (60) days following receipt of this Certification. This request must be in the form of a written petition conforming to Chapter 150B of the North Carolina General Statutes and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699-6714. If modifications are made to an original Certification, you have the right to an adjudicatory hearing on the modifications upon written request within sixty (60) days following receipt of the Certification. Unless such demands are made, this Certification shall be final and binding.

This the 18th day of December 2008

DIVISION OF WATER QUALITY

Coleen Sullins
Director

WQC No. 3775



DWQ 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 DWQ 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 _____

09/08/99

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2810	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34866.1.1	STP-1003(22)	P.E.	
34866.2.2	STP-1003(22)	RW & UTIL	

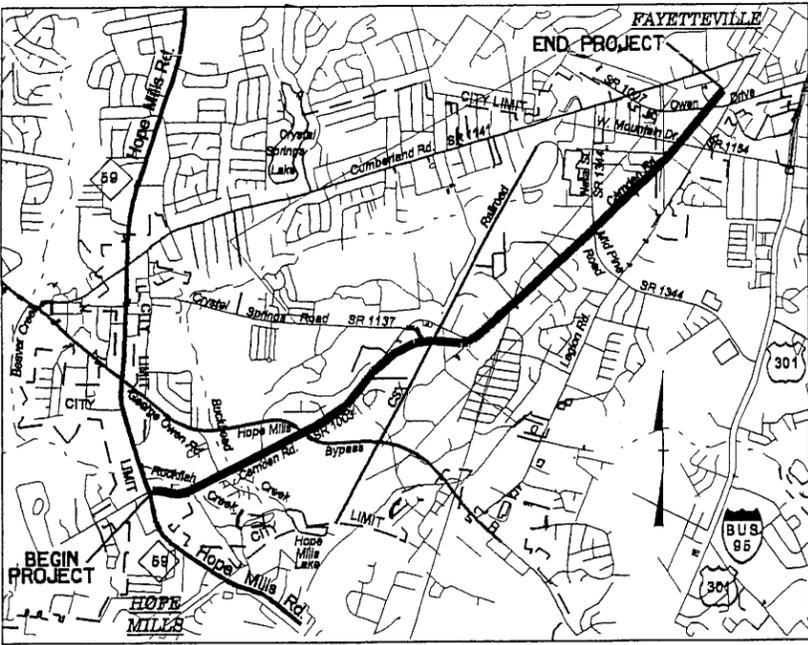
CUMBERLAND COUNTY

LOCATION: FAYETTEVILLE - SR 1003 (CAMDEN RD.) FROM
NC 59 (HOPE MILLS RD.) TO NORTH OF SR 1007 (OWEN DR.)

WETLAND /SURFACE WATER PERMIT

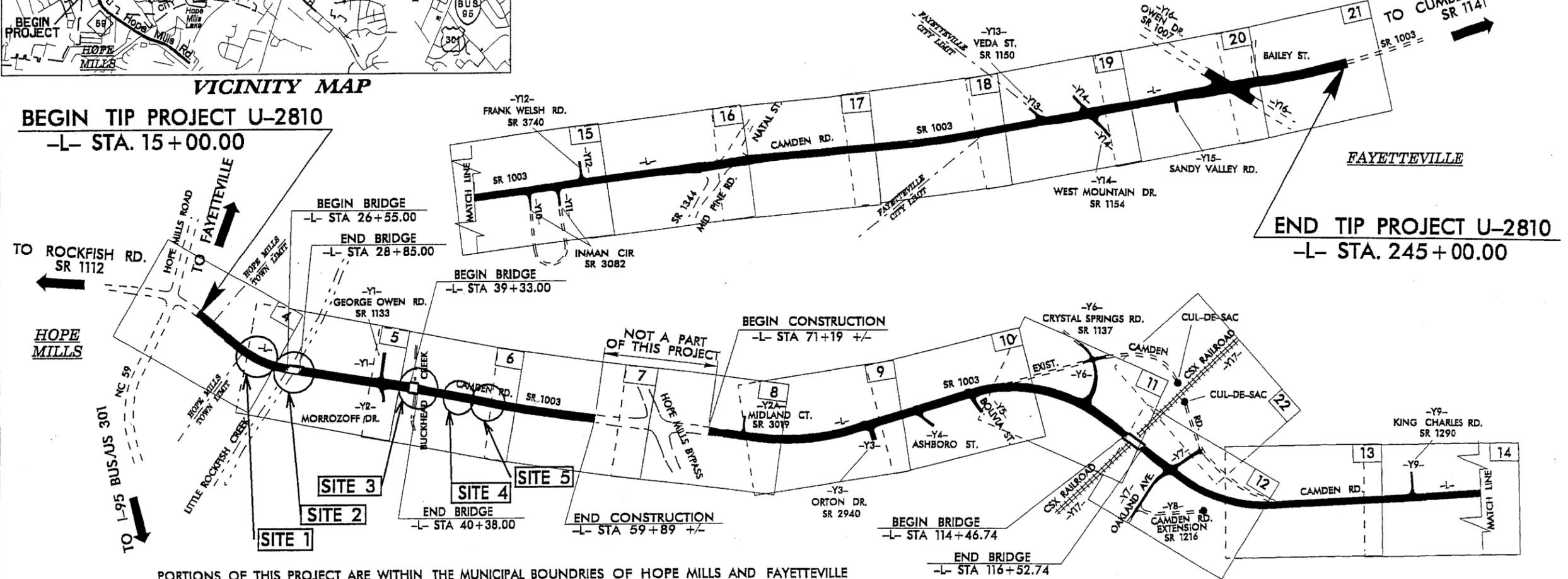
Permit Drawing
Sheet 1 of 20
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION.

TIP PROJECT: U-2810



VICINITY MAP

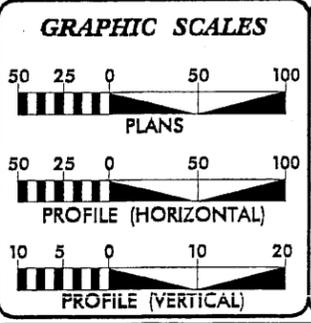
BEGIN TIP PROJECT U-2810
-L- STA. 15+00.00



END TIP PROJECT U-2810
-L- STA. 245+00.00

PORTIONS OF THIS PROJECT ARE WITHIN THE MUNICIPAL BOUNDARIES OF HOPE MILLS AND FAYETTEVILLE
NOTES: CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II

CONTRACT:



DESIGN DATA

ADT 2004 =	15,400
ADT 2030 =	26,800
DHV =	10 %
D =	60 %
T =	5 % *
V =	50 MPH
* TTST 1%	DUAL 4%

PROJECT LENGTH

LENGTH ROADWAY TIP PROJ. U-2810 =	4.022 MILES +/-
LENGTH STRUCTURES TIP PROJ. U-2810 =	0.101 MILES +/-
TOTAL LENGTH OF TIP PROJ. U-2810 =	4.123 MILES +/-

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: SEPTEMBER 29, 2006	ROGER D. THOMAS, P.E. PROJECT ENGINEER
LETTING DATE: N/A	SAMUEL L. ST. CLAIR PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

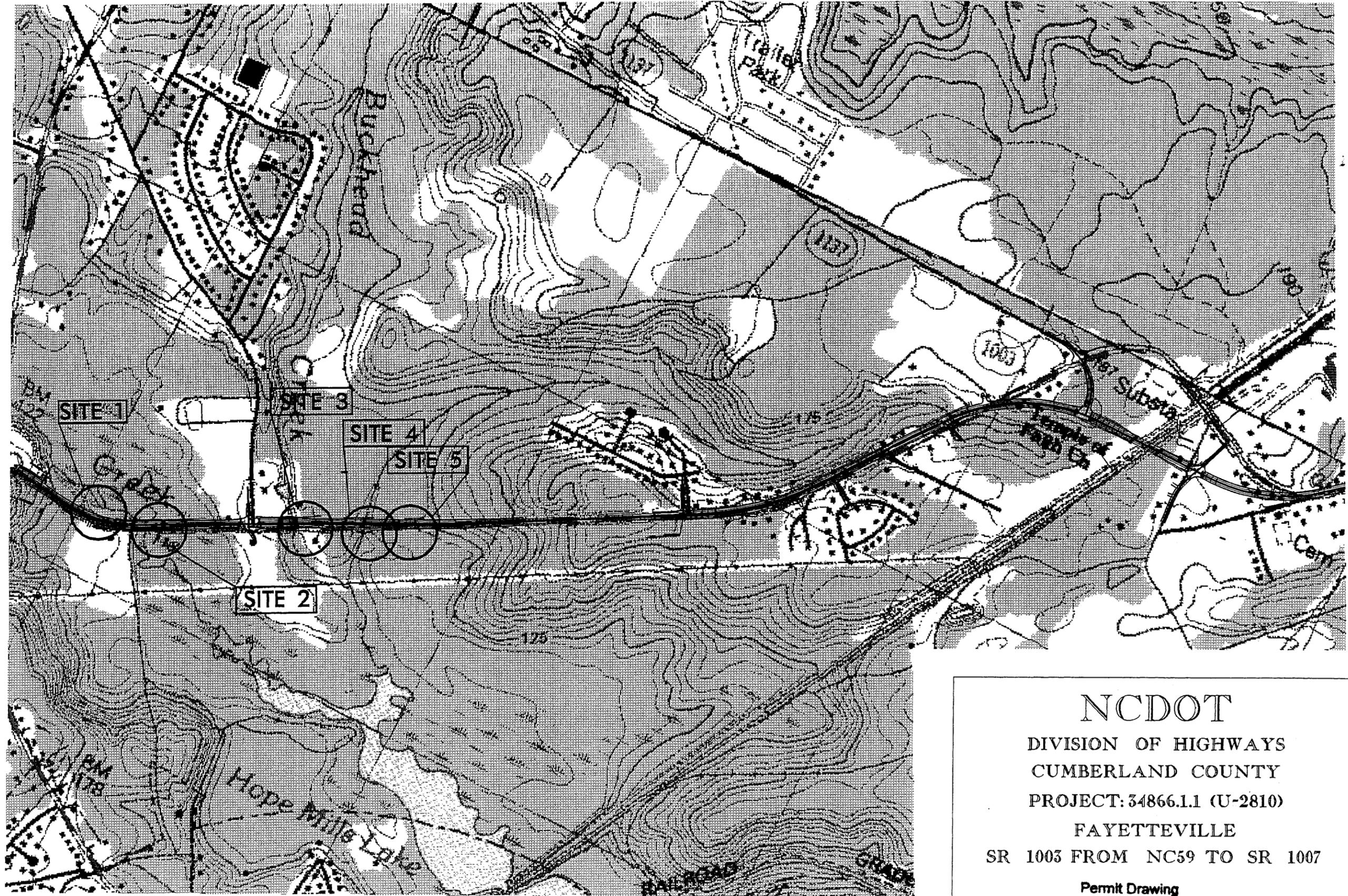
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER P.E.

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cabillings AT HY239442



NCDOT
 DIVISION OF HIGHWAYS
 CUMBERLAND COUNTY
 PROJECT: 34866.1.1 (U-2810)
 FAYETTEVILLE
 SR 1003 FROM NC59 TO SR 1007
 Permit Drawing
 Sheet 2 of 20
 SHEET OF 1/14/08

NOT TO SCALE PLAN VIEW

PROPERTY OWNERS
NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
4	NEIL SMITH	5301 CAMDEN ROAD, FAYETTEVILLE, NC 28306
5	NEIL SMITH	5301 CAMDEN ROAD, FAYETTEVILLE, NC 28306
6	NEIL SMITH	5301 CAMDEN ROAD, FAYETTEVILLE, NC 28306
7	BEVERLY MATTHEWS	PO BOX 39, HOPE MILLS, NC 28348
11	KATHERINE WARD	PO BOX 747, FAYETTEVILLE, NC 28302
12	MARY ALMA GILLIS	8621 CALATIA CHURCH RD. FAYETTEVILLE, NC 28306

Permit Drawing
Sheet 3 of 20

NCDOT
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY
PROJECT: 34866.11 (U-2810)
FAYETTEVILLE
SR 1003 FROM
NC 59 TO NORTH OF SR 1007

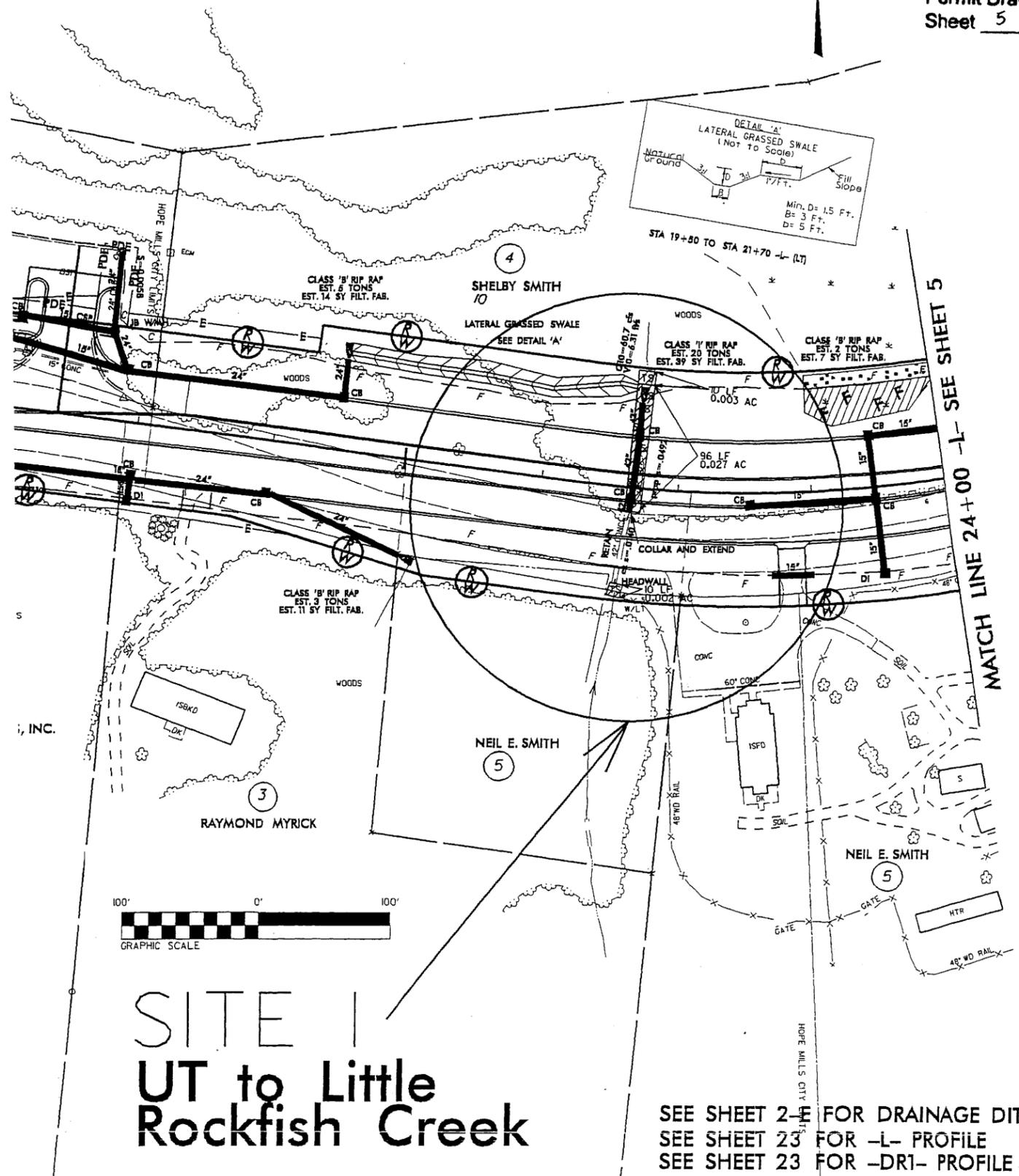
SHEET OF 1/14/08

'GIN TIP PROJECT U-2810 -L- STA 15+00.00

NC GRID
NAD 83

U-2810	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing
Sheet 5 of 20



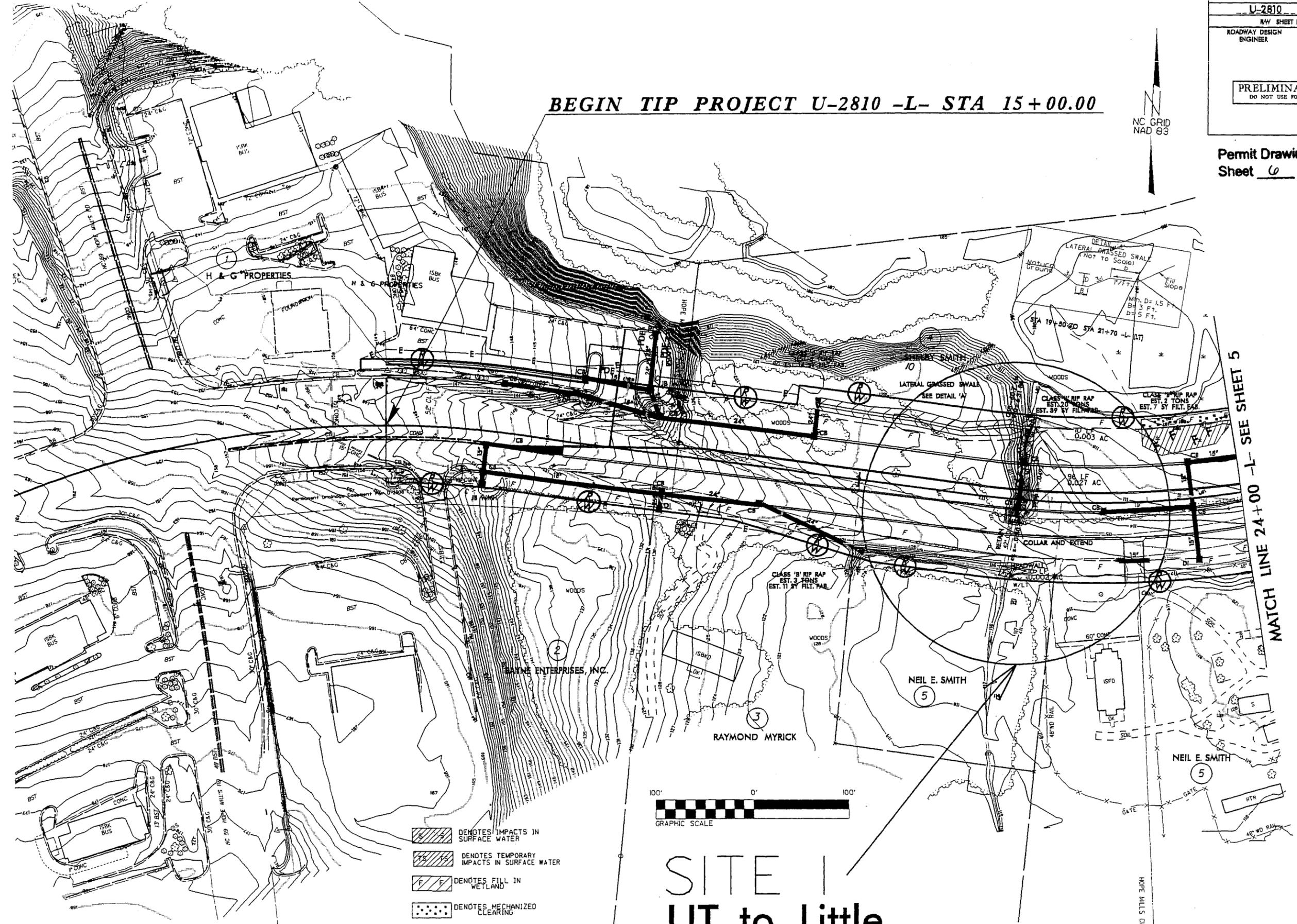
U-2810		4
NW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

Permit Drawing
Sheet 6 of 20

BEGIN TIP PROJECT U-2810 -L- STA 15+00.00

NC GRID
NAD 83

MATCH LINE 24+00 -L- SEE SHEET 5



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



**SITE 1
UT to Little
Rockfish Creek**

SEE SHEET 2-E FOR DRAINAGE DITCH DETAILS
SEE SHEET 23 FOR -L- PROFILE
SEE SHEET 23 FOR -DRI- PROFILE

REVISIONS
B.W. REV. 18/12/02 ILLUMINATED, PROPOSED ICE AND PDE ON PARCEL 2, REDUCED ICE ON PARCEL 3, -SIS

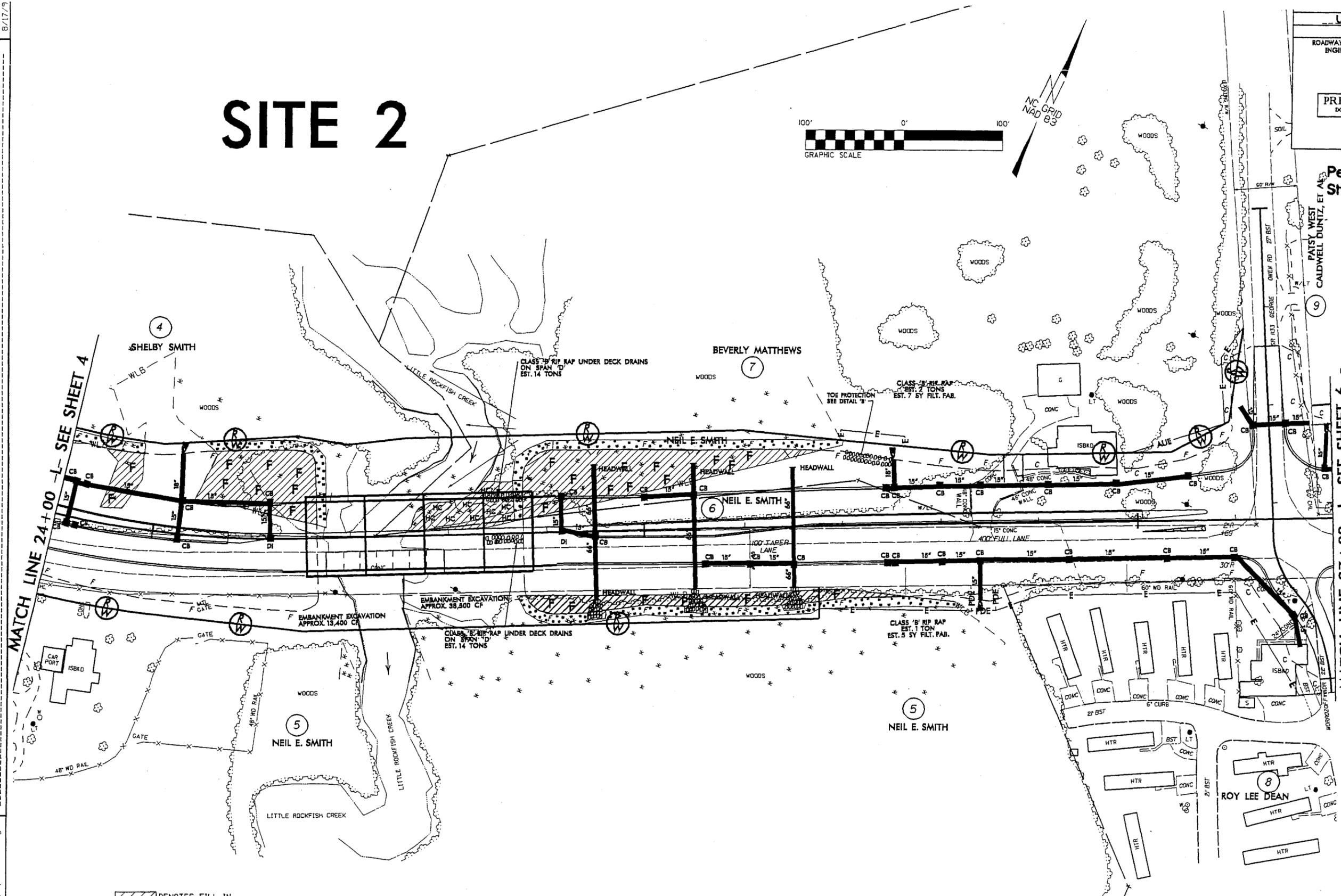
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msb11111

B/17/1

SITE 2

U-2810		5
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

Permit Drawing
Sheet 7 of 20



MATCH LINE 24+00 -L- SEE SHEET 4

MATCH LINE 37+00 -L- SEE SHEET 6

- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES RESTORED WETLANDS
- DENOTES MECHANIZED CLEARING

SEE SHEET 2-E FOR DRAINAGE DITCH DETAILS
 SEE SHT 2-F & 2-H FOR BRIDGE SKETCHES
 SEE SHT 23 FOR -L- PROFILE
 SEE SHT 32 FOR -Y1- AND -Y2- PROFILES
 SEE SHT 5- FOR STRUCTURE PLANS

REVISIONS

B/W REV. 15/22/2021 - CHANGED PROPERTY OWNER NAME ON PARCEL 9.sis

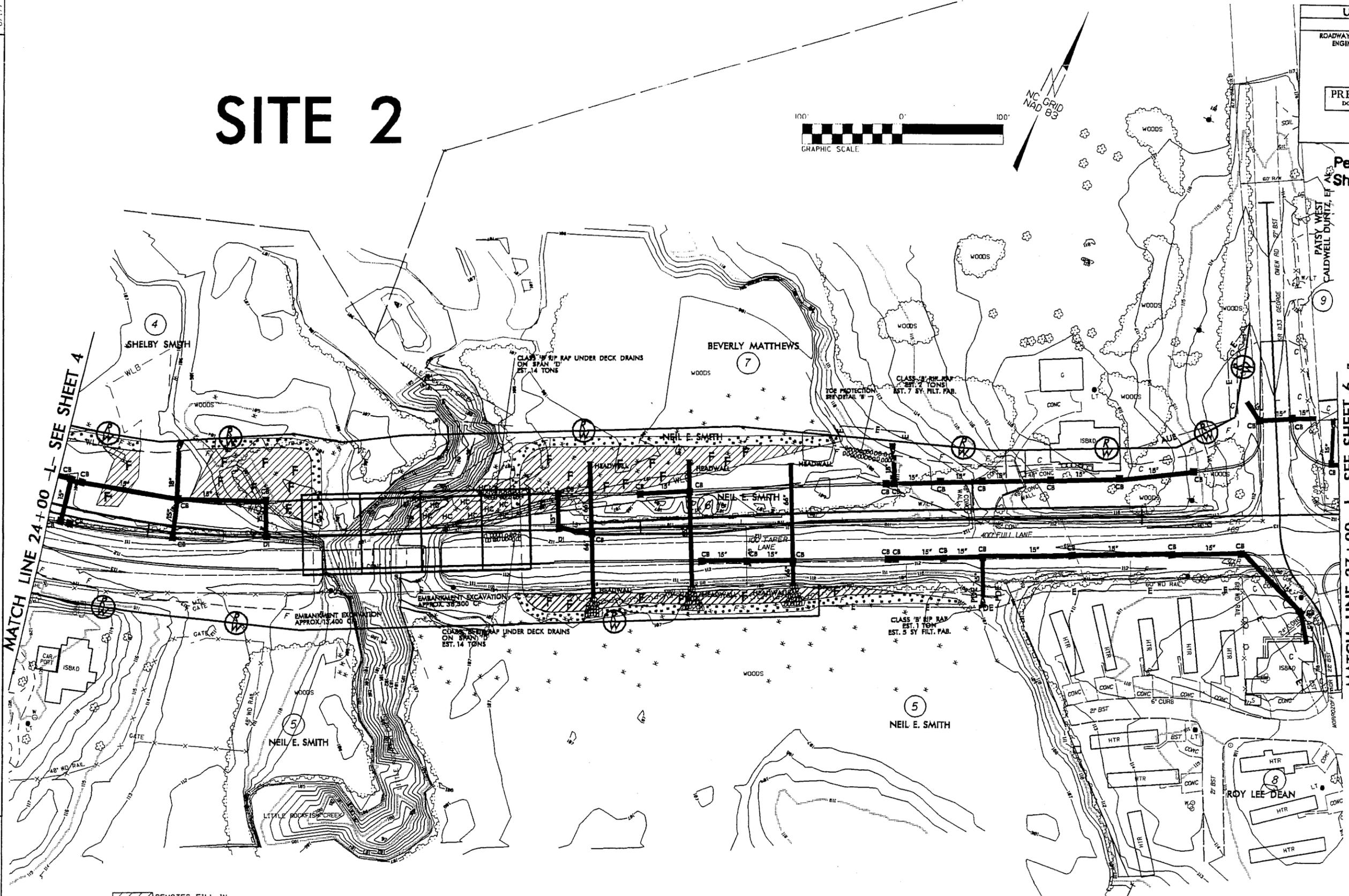
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 Job: 11/23/2017

8/17/19

SITE 2

U-2810		5
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

Permit Drawing
Sheet 8 of 20



MATCH LINE 24+00 -L- SEE SHEET 4

MATCH LINE 37+00 -L- SEE SHEET 6

- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES RESTORED WETLANDS
- DENOTES MECHANIZED CLEARING

SEE SHEET 2-E FOR DRAINAGE DITCH DETAILS
 SEE SHT 2-F & 2-H FOR BRIDGE SKETCHES
 SEE SHT 23 FOR -L- PROFILE
 SEE SHT 32 FOR -Y1- AND -Y2- PROFILES
 SEE SHT 5- FOR STRUCTURE PLANS

REVISIONS

R/W REV.15/22/07 - CHANGED PROPERTY OWNER NAME ON PARCEL 9.515

14-JAN-2008 09:32
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 cad\lucy AT 11/23/07

B/17.2

U-2810		5
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

SITE 2

TEMPORARY WORK BRIDGE LOCATION

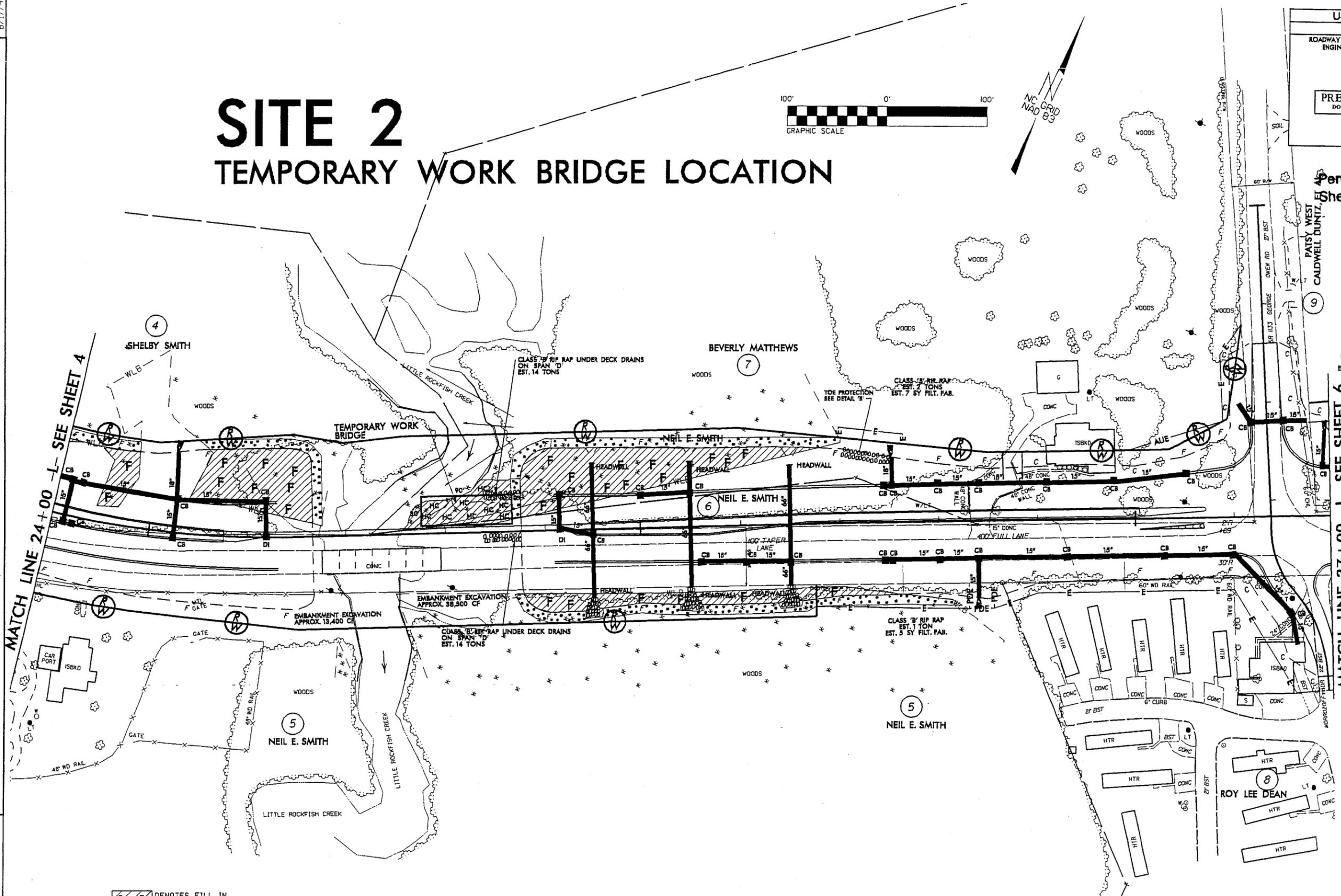


Permit Drawing
Sheet 9 of 10

REVISIONS

R/W REV. (5/22/07) - CHANGED PROPERTY OWNER NAME ON PARCEL 9.615

16-JAN-2008 08:06
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addbillings AT Hy233442



- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES MECHANIZED CLEARING

SEE SHEET 2-E FOR DRAINAGE DITCH DETAILS
 SEE SHT 2-F & 2-H FOR BRIDGE SKETCHES
 SEE SHT 23 FOR -L- PROFILE
 SEE SHT 32 FOR -Y1- AND -Y2- PROFILES
 SEE SHT S- FOR STRUCTURE PLANS

CLASS 'B' RIP RAP
EST. 2 TONS
EST. 7 SY FILT. FAB.

MATCH LINE 37+00 -L- SEE SHEET 6

MATCH LINE 24+00 -L- SEE SHEET 4

5/28/99

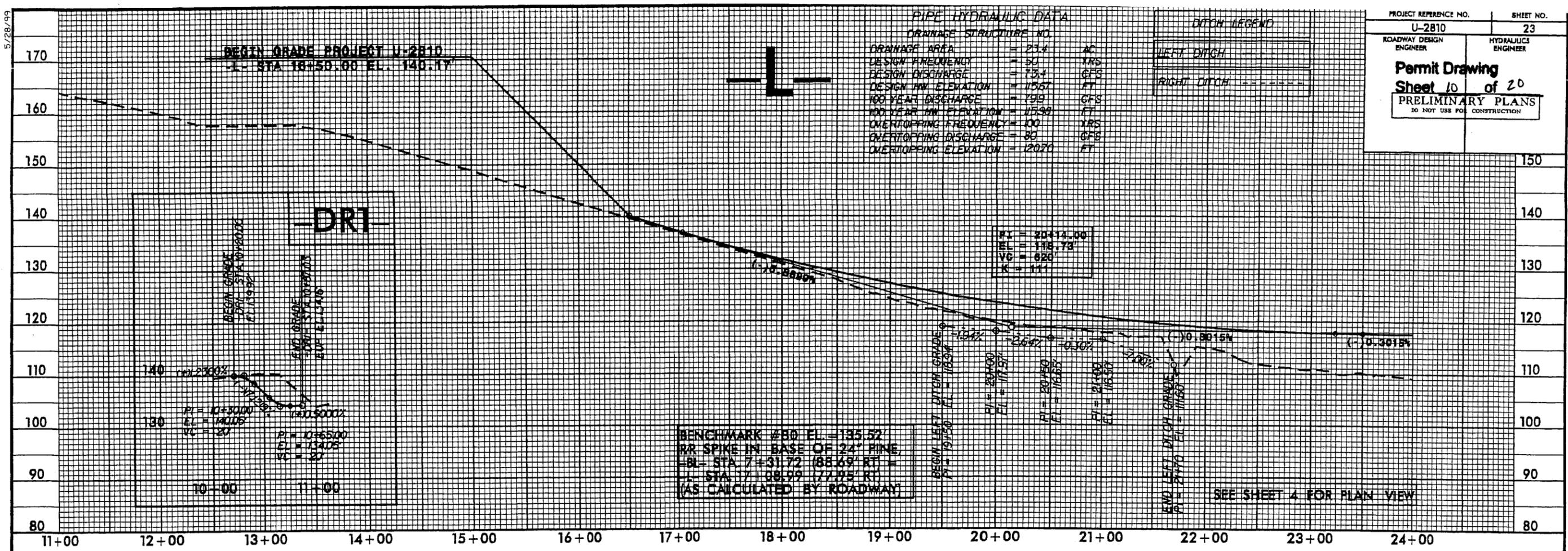
PROJECT REFERENCE NO. U-2810	SHEET NO. 23
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Permit Drawing	
Sheet 10 of 20	
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	

PIPE HYDRAULIC DATA

ORAINAGE STRUCTURE NO.	
ORAINAGE AREA	= 23.4 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 73.4 CFS
DESIGN HW ELEVATION	= 115.67 FT
100 YEAR DISCHARGE	= 79.9 CFS
100 YEAR HW ELEVATION	= 115.90 FT
OVERTOPPING FREQUENCY	= 100 YRS
OVERTOPPING DISCHARGE	= 80 CFS
OVERTOPPING ELEVATION	= 120.70 FT

DITCH LEGEND

LEFT DITCH	---
RIGHT DITCH	----



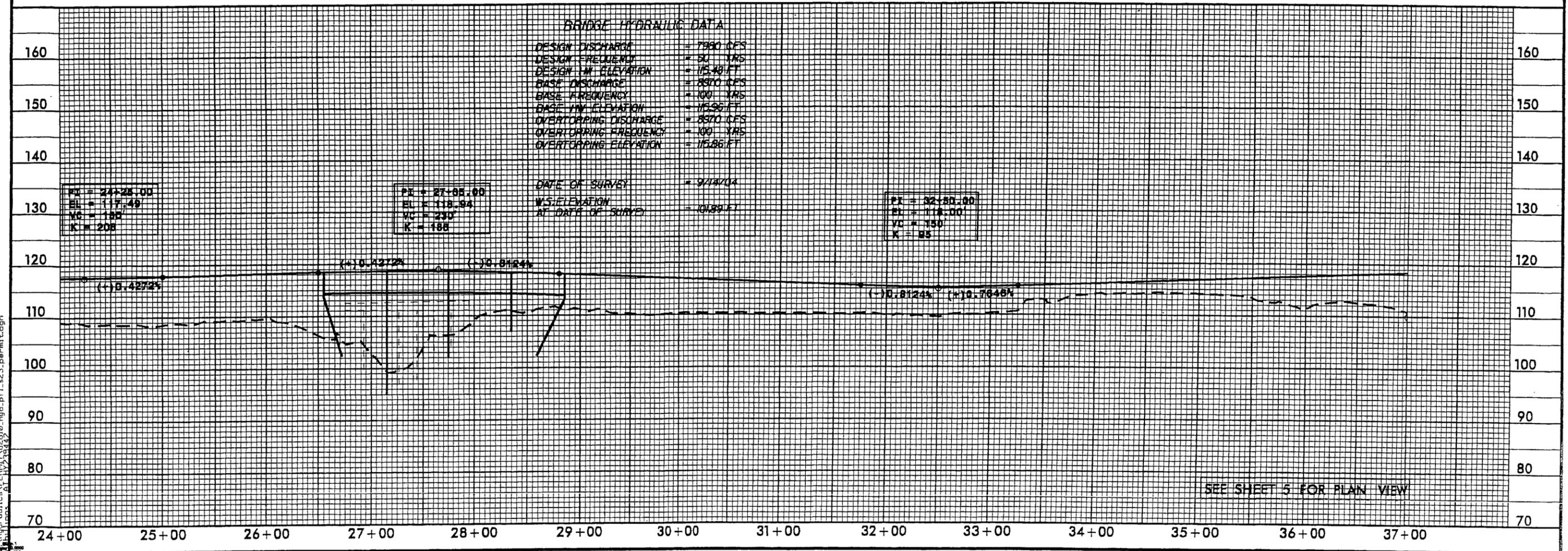
BENCHMARK #80 EL = 135.52
 RR SPIKE IN BASE OF 24" PIPE
 -BL- STA. 7+31.72 (88.69' RT) =
 -STA. 17+08.99 (77.95' RT) =
 (AS CALCULATED BY ROADWAY)

SEE SHEET 4 FOR PLAN VIEW

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 7990 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 115.48 FT
BASE DISCHARGE	= 8970 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 115.96 FT
OVERTOPPING DISCHARGE	= 8970 CFS
OVERTOPPING FREQUENCY	= 100 YRS
OVERTOPPING ELEVATION	= 115.86 FT

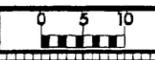
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 W.S. ELEVATION AT DATE OF SURVEY = 101.89 FT



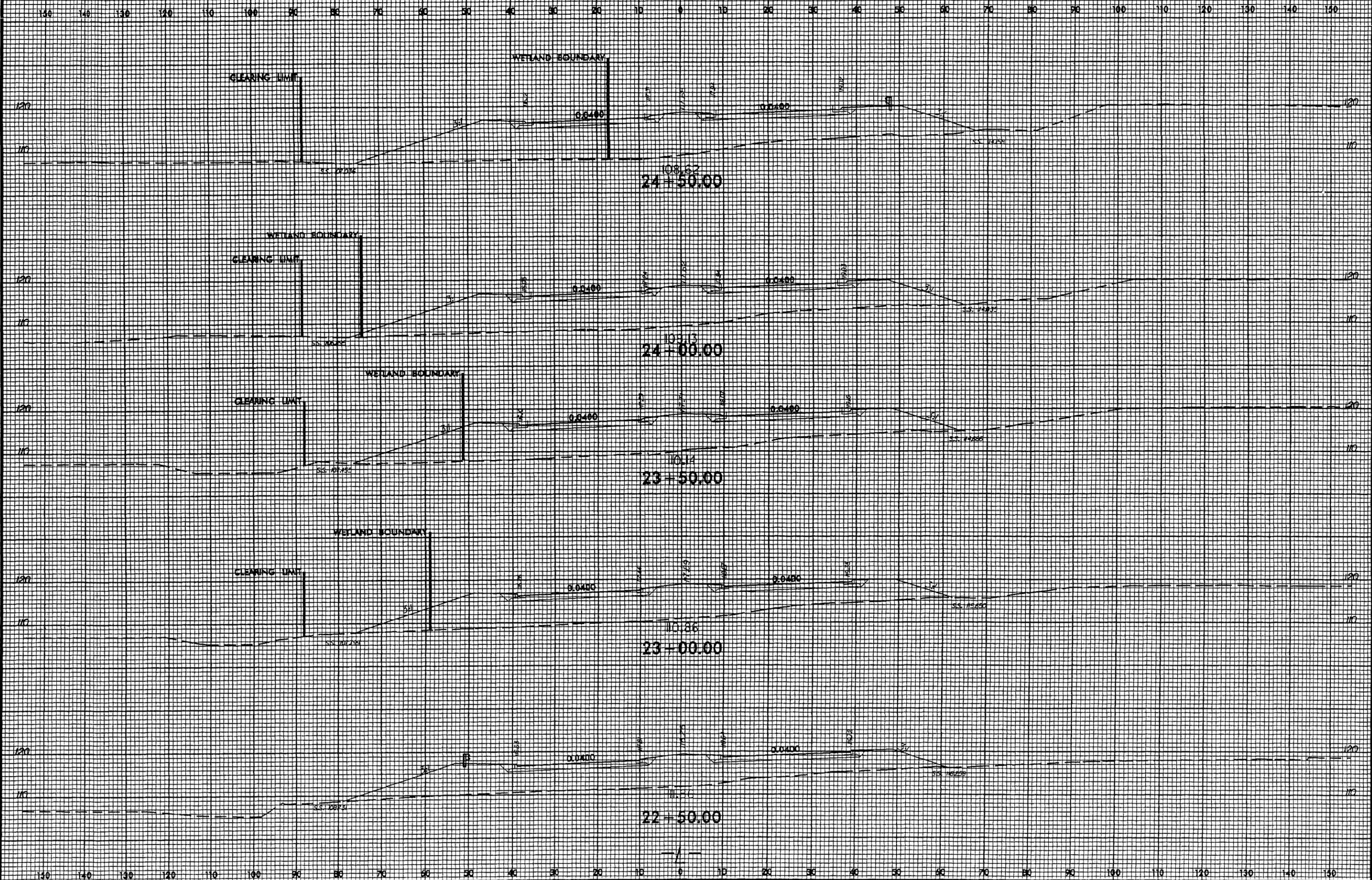
SEE SHEET 5 FOR PLAN VIEW

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8/23/99



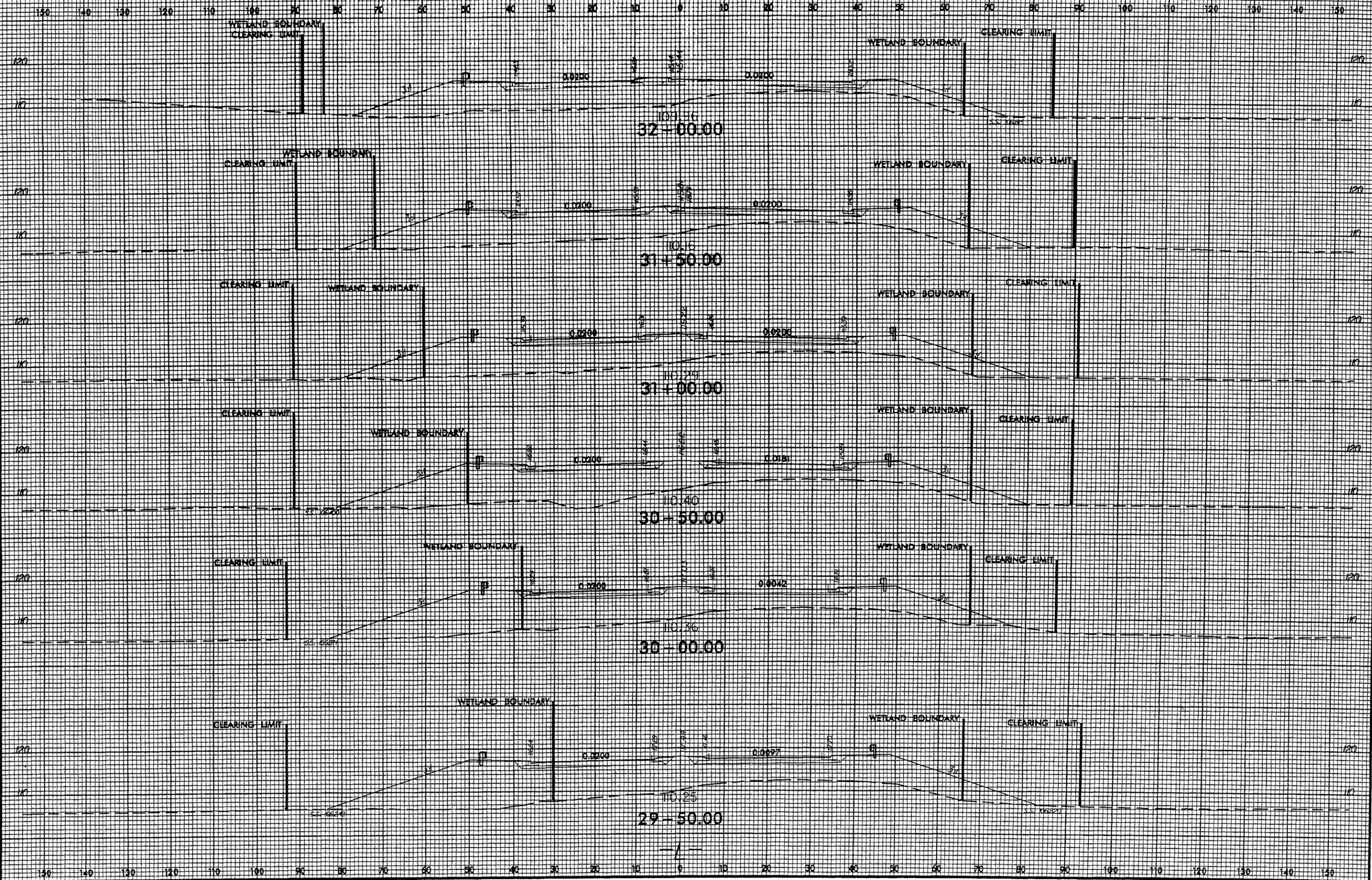
PROJ. REFERENCE NO.	SHEET NO.
U-2810	X-4



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Permit Drawing
Sheet 11 of 20

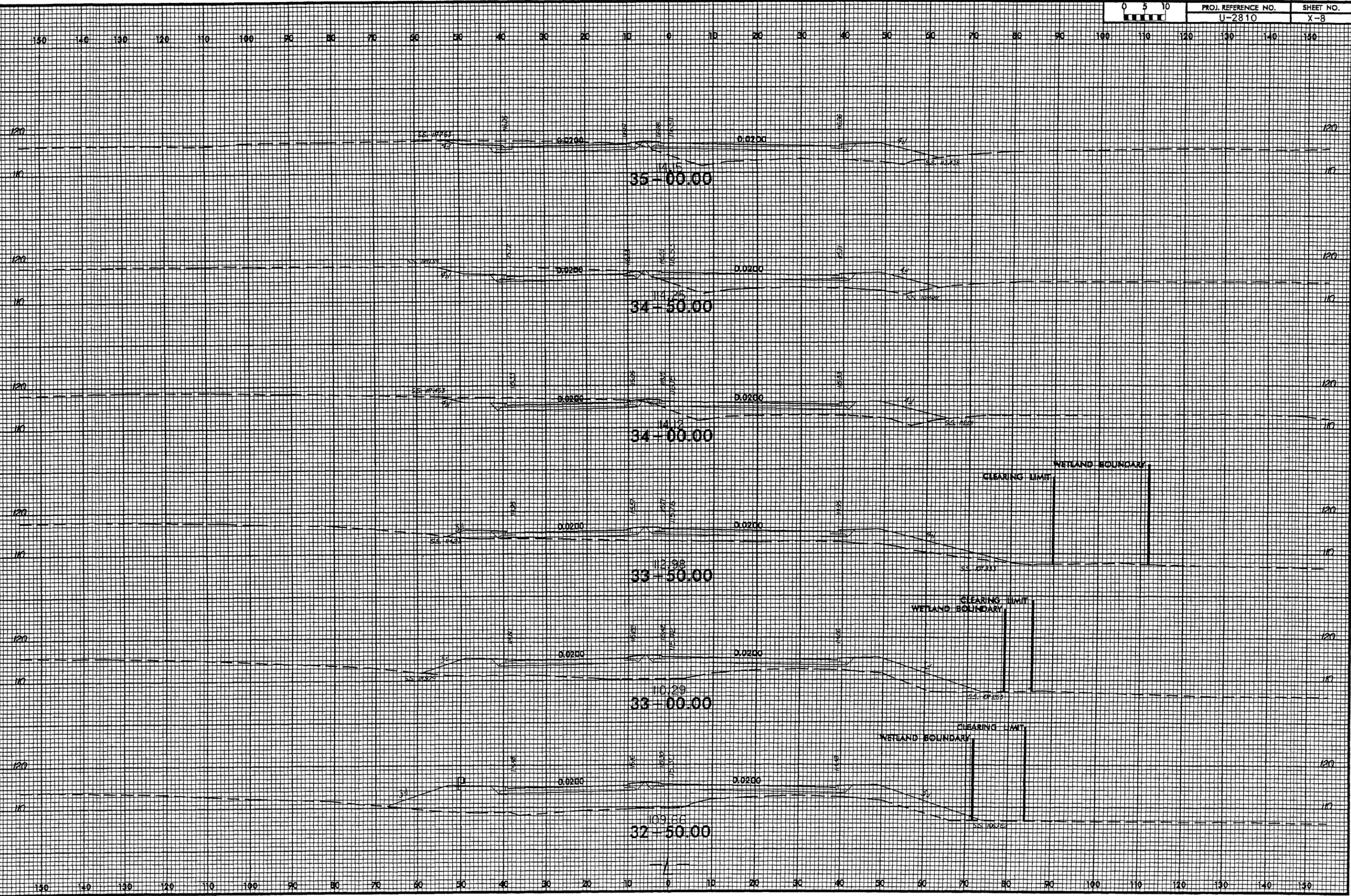
8/23/99



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Author: Al_H200334

8/23/99
06-AUG-2007 11:25
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	U-2810	X-8



Permit Drawing
Sheet 15 of 17

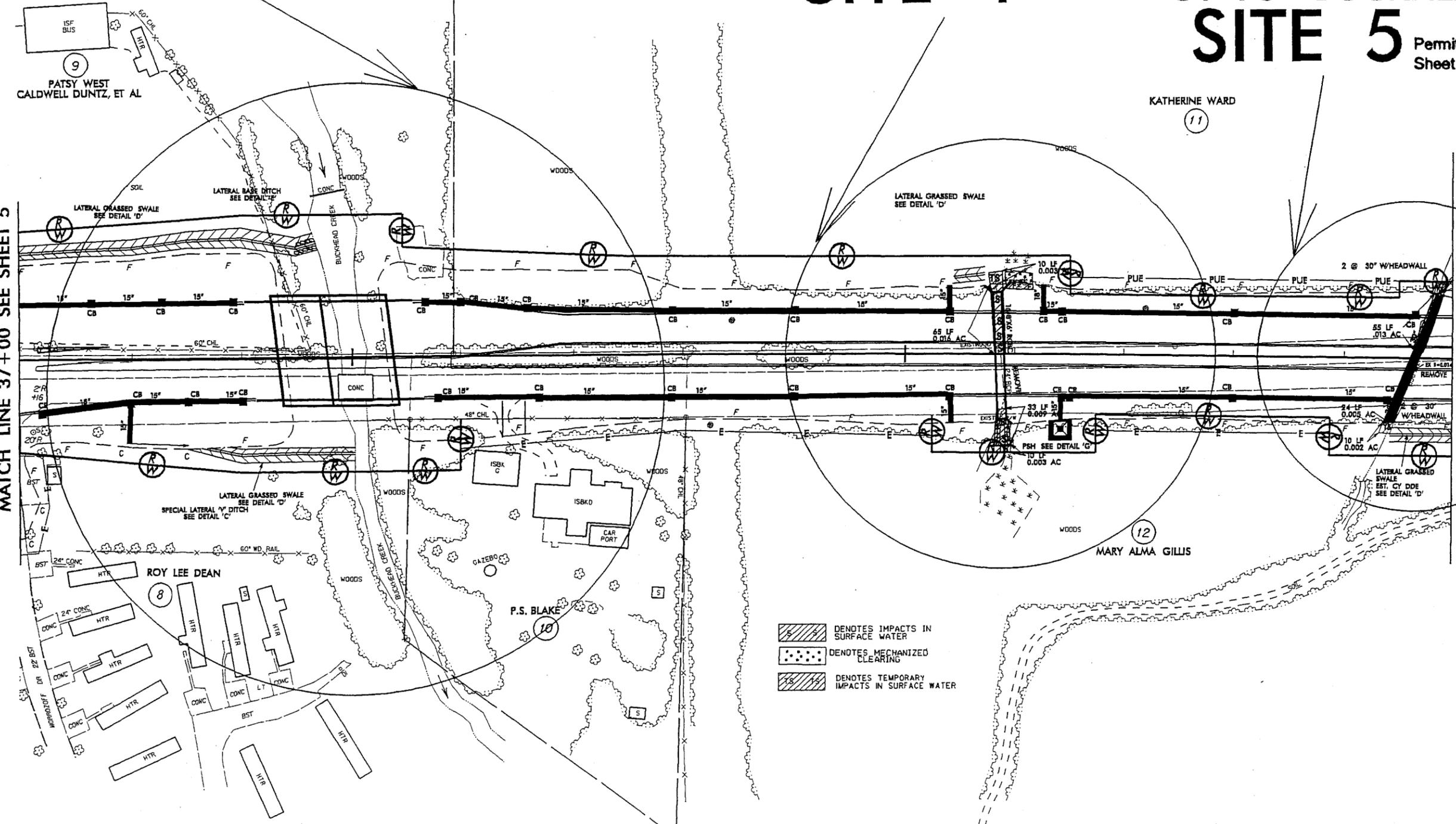


SITE 3

UT TO BUCKHEAD CK
SITE 4

UT TO BUCKHEAD CK
SITE 5

Permit Drawing
 Sheet 16 of 20



MATCH LINE 37+00 SEE SHEET 5

MATCH LINE 50+00 SEE SHEET 7

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

SEE SHEET 2-E FOR DRAINAGE DITCH DETAILS
 SEE SHEET 2-G & 2-I FOR BRIDGE SKETCHES
 SEE SHT 24 FOR -L- PROFILE
 SEE SHT S- FOR STRUCTURE PLANS
 SEE SHT C- FOR CULVERT PLANS

REVISIONS

B.W. REV. 5/22/07 - CHANGED PROPERTY OWNER NAME ON PARCEL 9.618

08-JAN-2008 16:27
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 abh\lump AL 1123442

U-2810		6
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

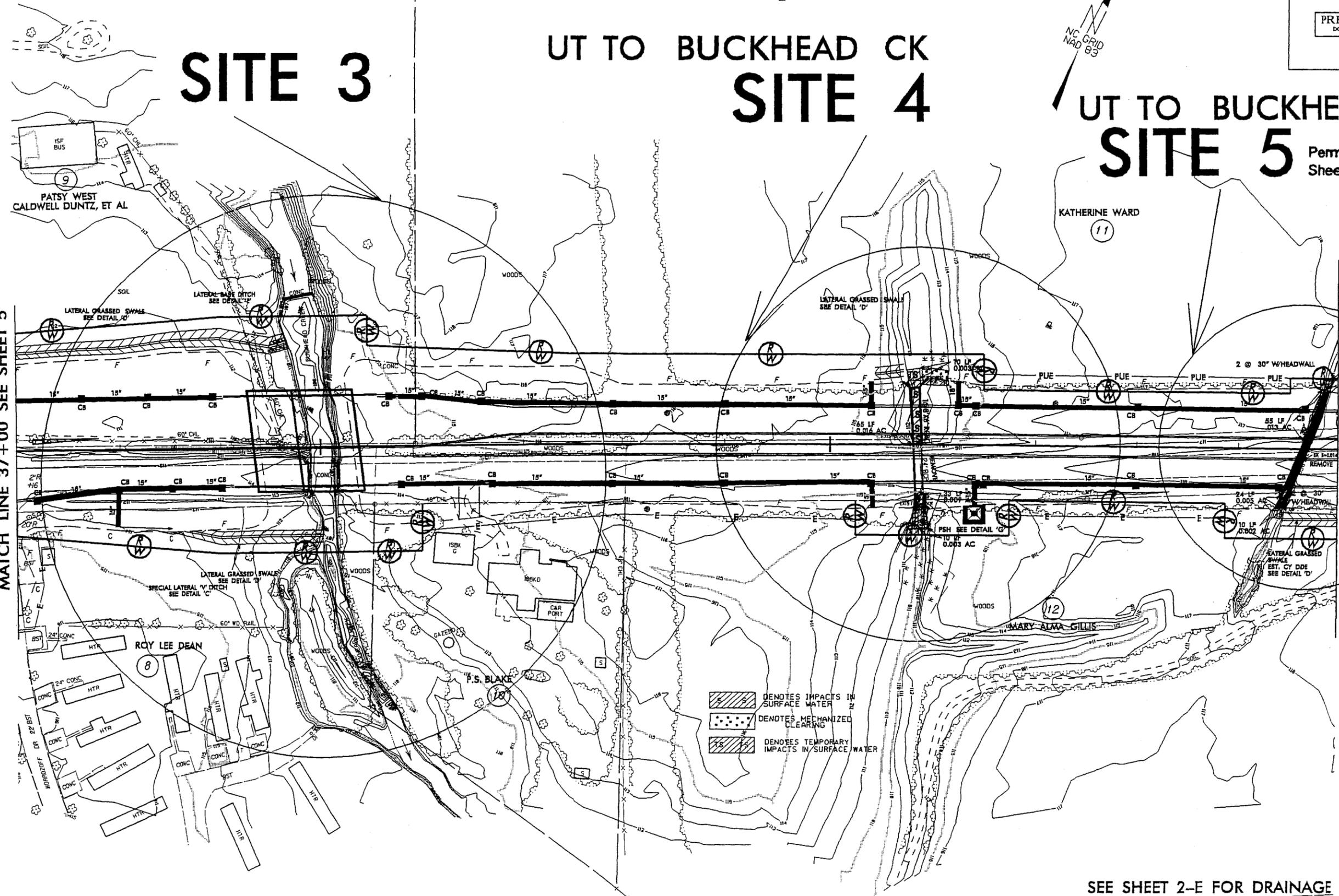


SITE 3

UT TO BUCKHEAD CK SITE 4

UT TO BUCKHEAD CK SITE 5

Permit Drawing
Sheet 11 of 20



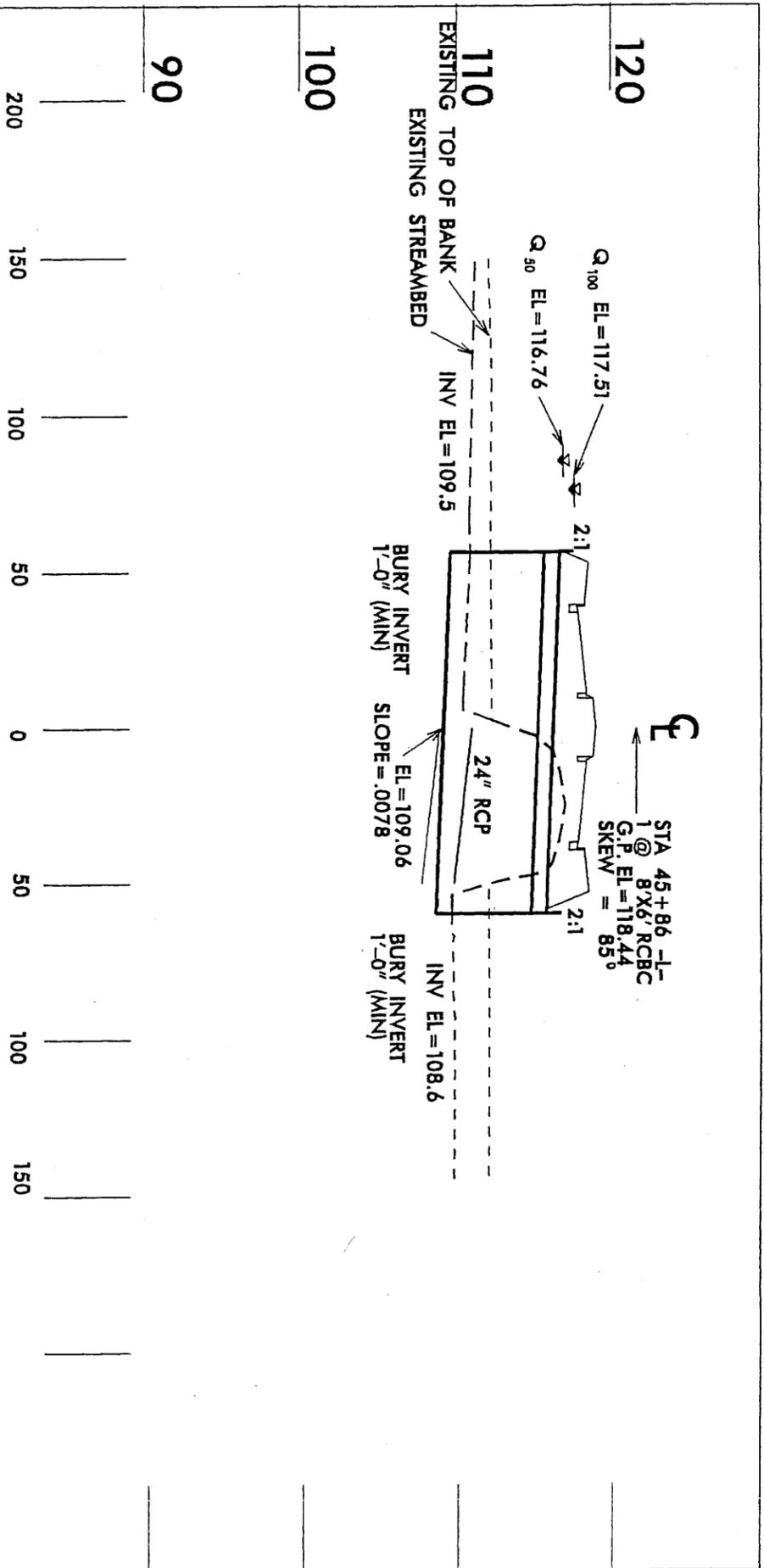
MATCH LINE 37+00 SEE SHEET 5

MATCH LINE 50+00 SEE SHEET 7

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

SEE SHEET 2-E FOR DRAINAGE DITCH DETAILS
 SEE SHEET 2-G & 2-I FOR BRIDGE SKETCHES
 SEE SHT 24 FOR -L- PROFILE
 SEE SHT S- FOR STRUCTURE PLANS
 SEE SHT C- FOR CULVERT PLANS

REVISIONS
 R/W REV. 15/22/07 - CHANGED PROPERTY OWNER NAME ON PARCEL 9.615
 08-JAN-2008 16:27
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 9/17



PROFILE
 SITE 4

NCDOT
 DIVISION OF HIGHWAYS
 CUMBERLAND COUNTY
 PROJECT: 34866.11 (U-2810)
 SR 1003 (CAMDEN RD.) FROM
 NC 59 (HOPE MILLS RD.)
 TO NORTH OF SR 1007 (OWEN DR)

BRIDGE HYDRAULIC DATA

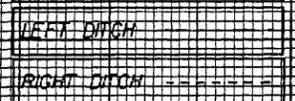
DESIGN DISCHARGE = 2230 CFS
 DESIGN FREQUENCY = 50 YRS
 DESIGN HW ELEVATION = 116.79 FT
 BASE DISCHARGE = 2500 CFS
 BASE FREQUENCY = 100 YRS
 BASE HW ELEVATION = 115.97 FT
 OVERTOPPING DISCHARGE = 3250 CFS
 OVERTOPPING FREQUENCY = 500 YRS
 OVERTOPPING ELEVATION = 117.15 FT

DATE OF SURVEY =
 WS ELEVATION AT DATE OF SURVEY = 106.80 FT

PIPE HYDRAULIC DATA

DRAINAGE STRUCTURE NO.
 DRAINAGE AREA = 28.7 AC
 DESIGN FREQUENCY = 50 YRS
 DESIGN DISCHARGE = 44.4 CFS
 DESIGN HW ELEVATION = 117.99 FT
 100 YEAR DISCHARGE = 51.5 CFS
 100 YEAR HW ELEVATION = 118.28 FT
 OVERTOPPING FREQUENCY = 100 YRS
 OVERTOPPING DISCHARGE = 51.5 CFS
 OVERTOPPING ELEVATION = 120.33 FT

DITCH LEGEND



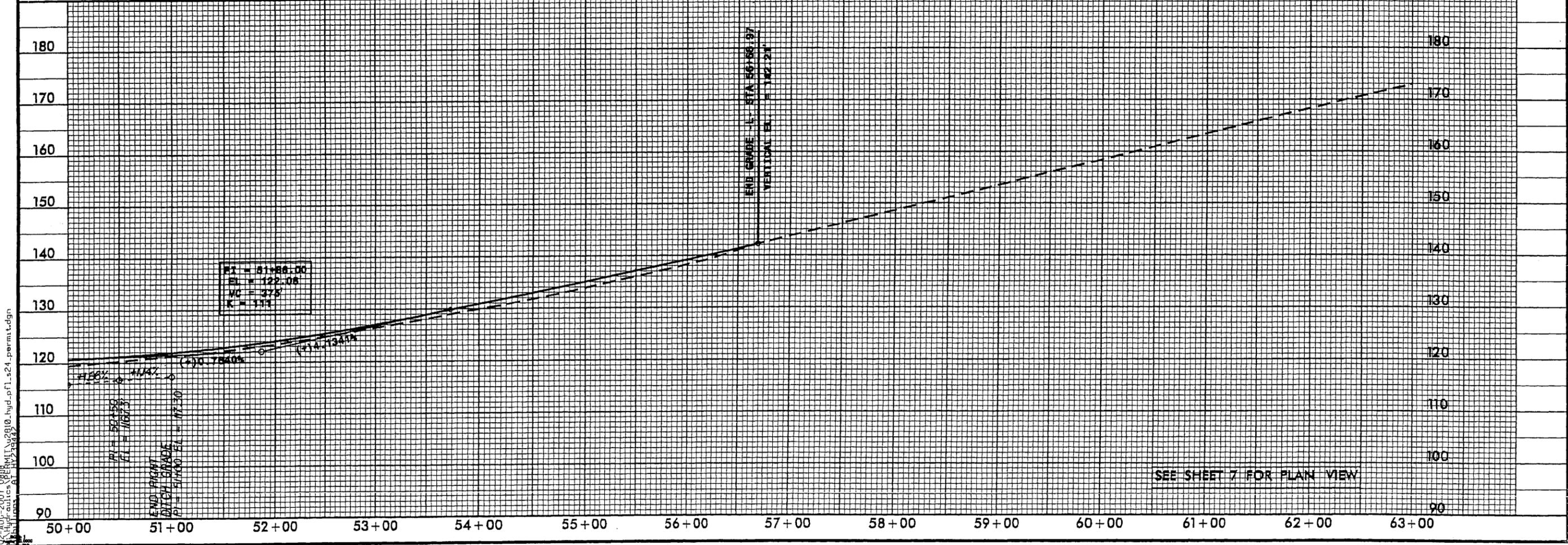
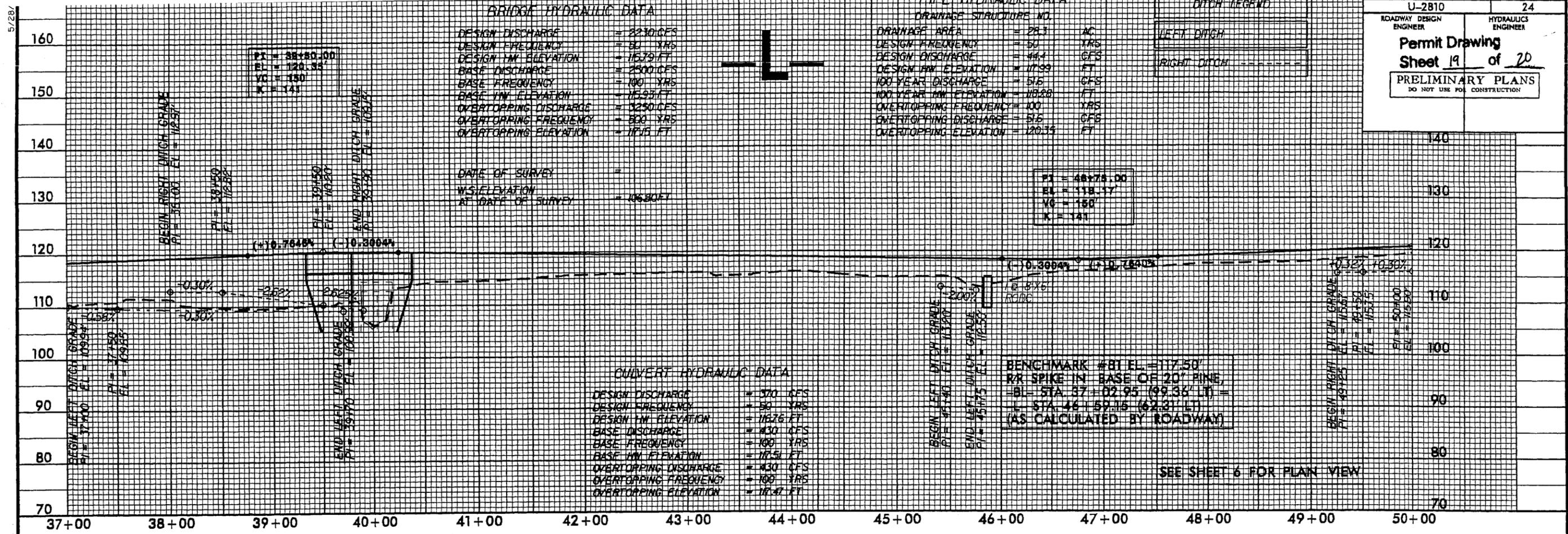
CONVERT HYDRAULIC DATA

DESIGN DISCHARGE = 370 CFS
 DESIGN FREQUENCY = 50 YRS
 DESIGN HW ELEVATION = 116.76 FT
 BASE DISCHARGE = 430 CFS
 BASE FREQUENCY = 100 YRS
 BASE HW ELEVATION = 117.51 FT
 OVERTOPPING DISCHARGE = 430 CFS
 OVERTOPPING FREQUENCY = 100 YRS
 OVERTOPPING ELEVATION = 117.47 FT

BENCHMARK #81 EL = 117.50'
 RR SPIKE IN BASE OF 20' PINE
 BL = STA. 37+02.95 (99.36' LT) =
 L STA. 46+59.15 (62.81' LT)
 (AS CALCULATED BY ROADWAY)

SEE SHEET 6 FOR PLAN VIEW

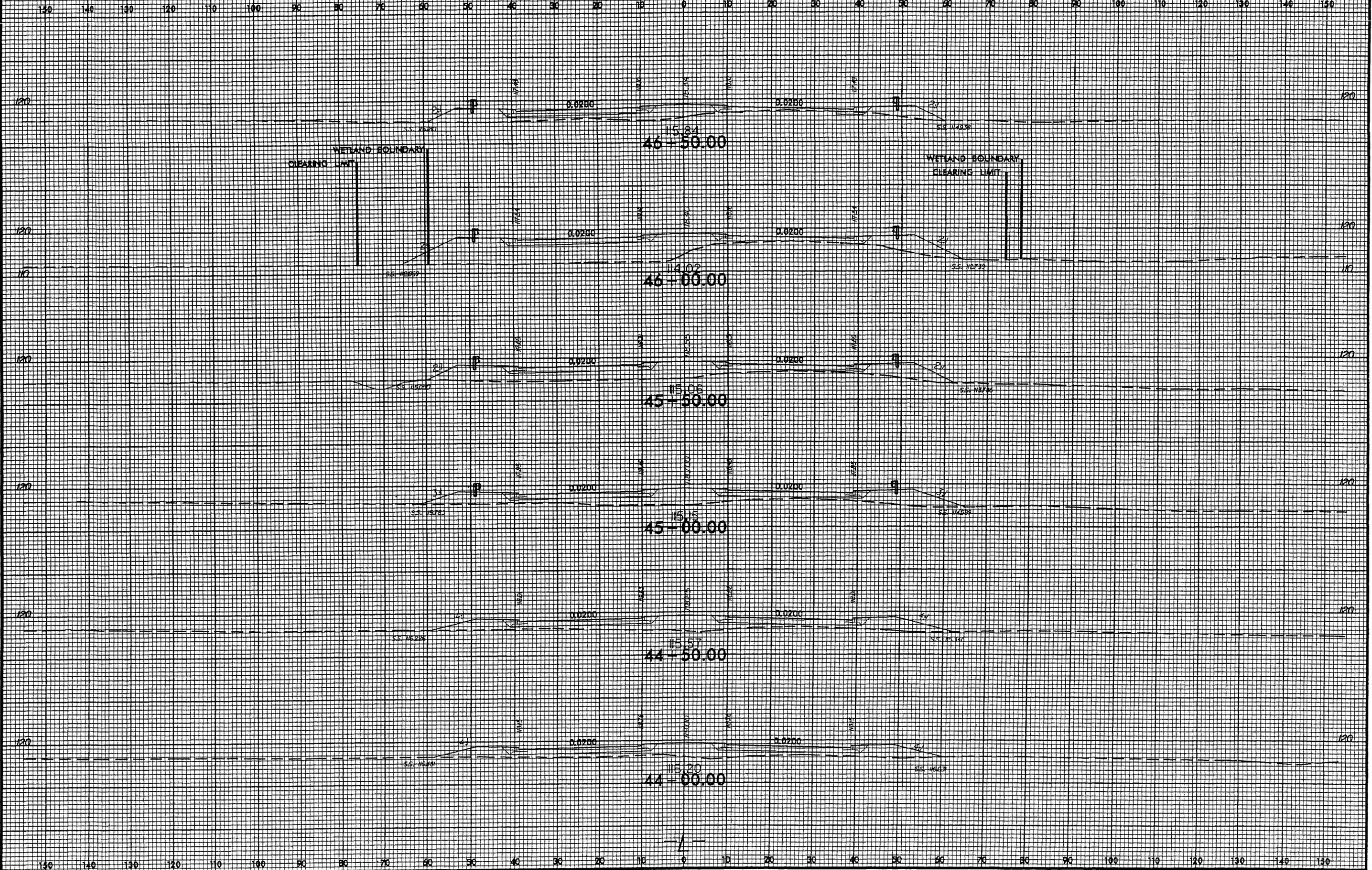
SEE SHEET 7 FOR PLAN VIEW



5/28/07
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8/23/05

0 5 10	PROJ. REFERENCE NO. U-2810	SHEET NO. X-12
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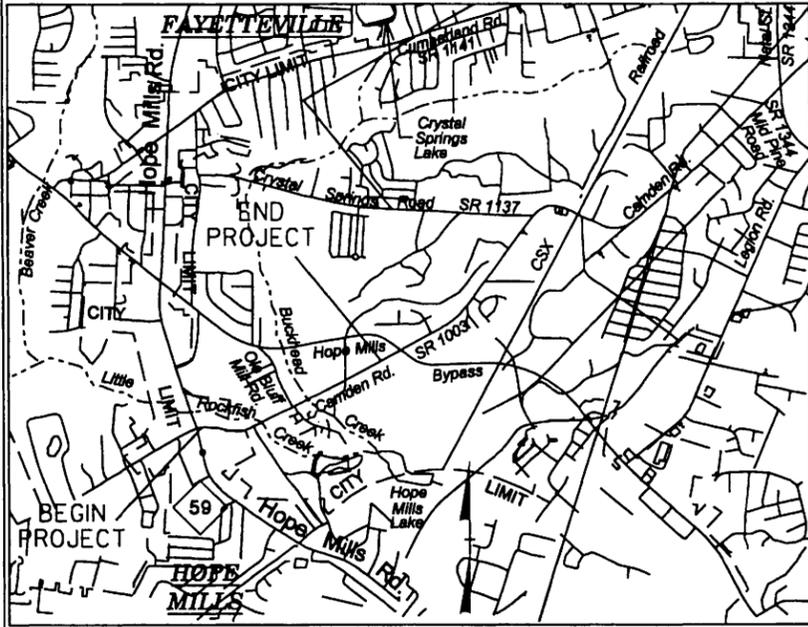
Permit Drawing
Sheet 20 of 20

8/1/88/49

TIP PROJECT: U-2810A

CONTRACT:

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



VICINITY MAP

**STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS**

CUMBERLAND COUNTY

**LOCATION: SR 1003 (CAMDEN ROAD) FROM NC 59
(HOPE MILLS ROAD) TO HOPE MILLS BYPASS**

**TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURES,
CULVERT, RETAINING WALL, RESURFACING,
WIDENING, AND CURB & GUTTER**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2810A	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34866.1.1	STP-1003(22)	P.E.	
34866.2.2	STP-1003(22)	RAW & UTIL	

UTILITY DRAWINGS

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

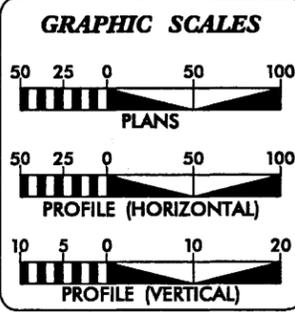
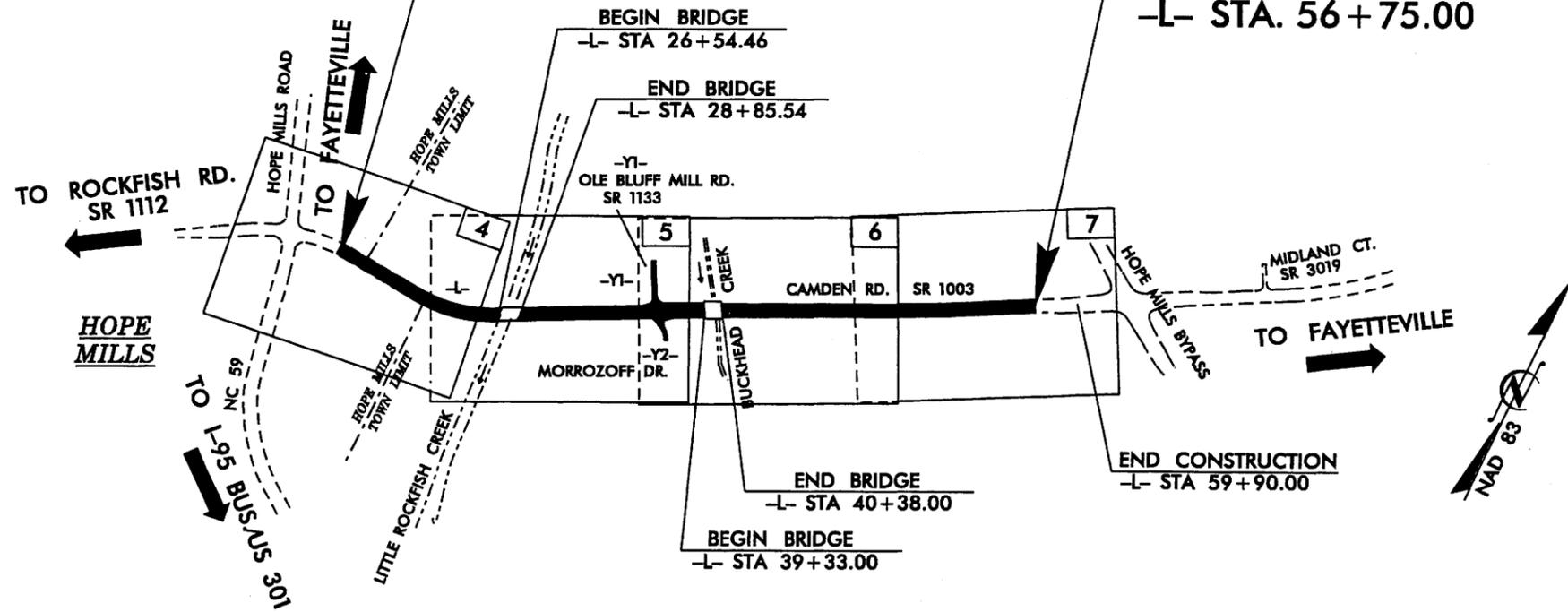
UTILITY
Permit Drawing
Sheet 1 of 5

BEGIN TIP PROJECT U-2810A

-L- STA. 15+00.00
BEGIN CONSTRUCTION

END TIP PROJECT U-2810A

-L- STA. 56+75.00



DESIGN DATA

ADT 2006 =	14,600
ADT 2030 =	23,700
DHV =	60 %
D =	10 %
T =	5 % *
V =	50 MPH
* TTST 1 % + DUAL 4 %	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJ. U-2810A	= 0.727 Miles
LENGTH STRUCTURES TIP PROJ. U-2810A	= 0.064 Miles
TOTAL LENGTH OF TIP PROJ. U-2810A	= 0.791 Miles

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

2006 STANDARD SPECIFICATIONS

LETTING DATE:
FEBRUARY 17, 2009

ROGER D. THOMAS, P.E.
PROJECT ENGINEER

SAMUEL L. ST. CLAIR
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE HIGHWAY DESIGN ENGINEER

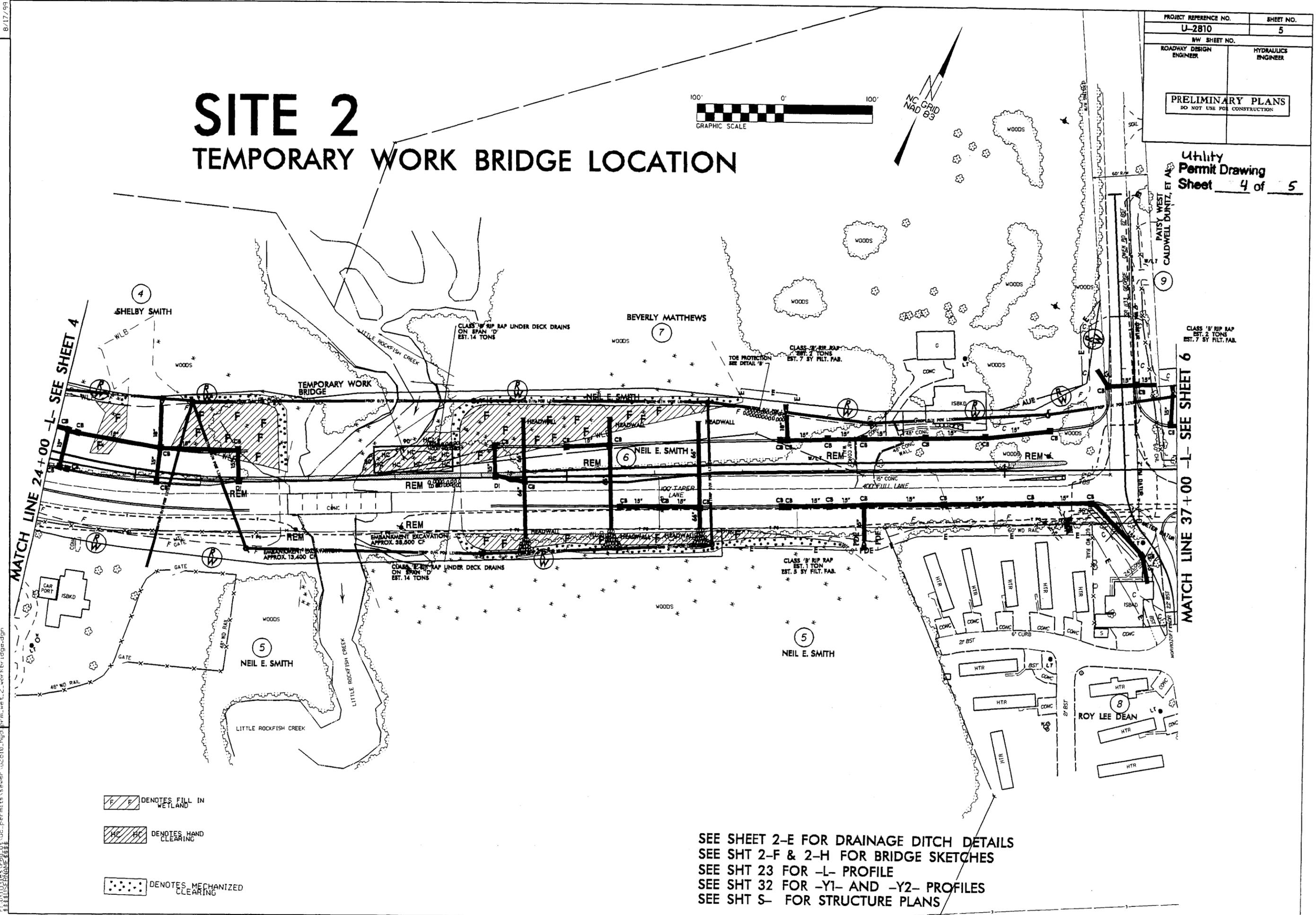
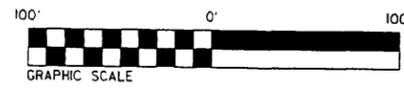
*****SYTIME*****
*****USER*****

PROJECT REFERENCE NO. U-2810	SHEET NO. 5
NW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Utility
Permit Drawing
Sheet **4** of **5**

SITE 2

TEMPORARY WORK BRIDGE LOCATION



REVISIONS
 R/W REV. (5/22/07) - CHANGED PROPERTY OWNER NAME ON PARCEL 9.616

21-FEB-2008 10:21
 C:\Users\vaeser\Documents\2810_hydro\m-wet_2_work\bridge.dgn

- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES MECHANIZED CLEARING

SEE SHEET 2-E FOR DRAINAGE DITCH DETAILS
 SEE SHT 2-F & 2-H FOR BRIDGE SKETCHES
 SEE SHT 23 FOR -L- PROFILE
 SEE SHT 32 FOR -Y1- AND -Y2- PROFILES
 SEE SHT 5- FOR STRUCTURE PLANS

PROJECT REFERENCE NO. U-2810	SHEET NO. 6
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



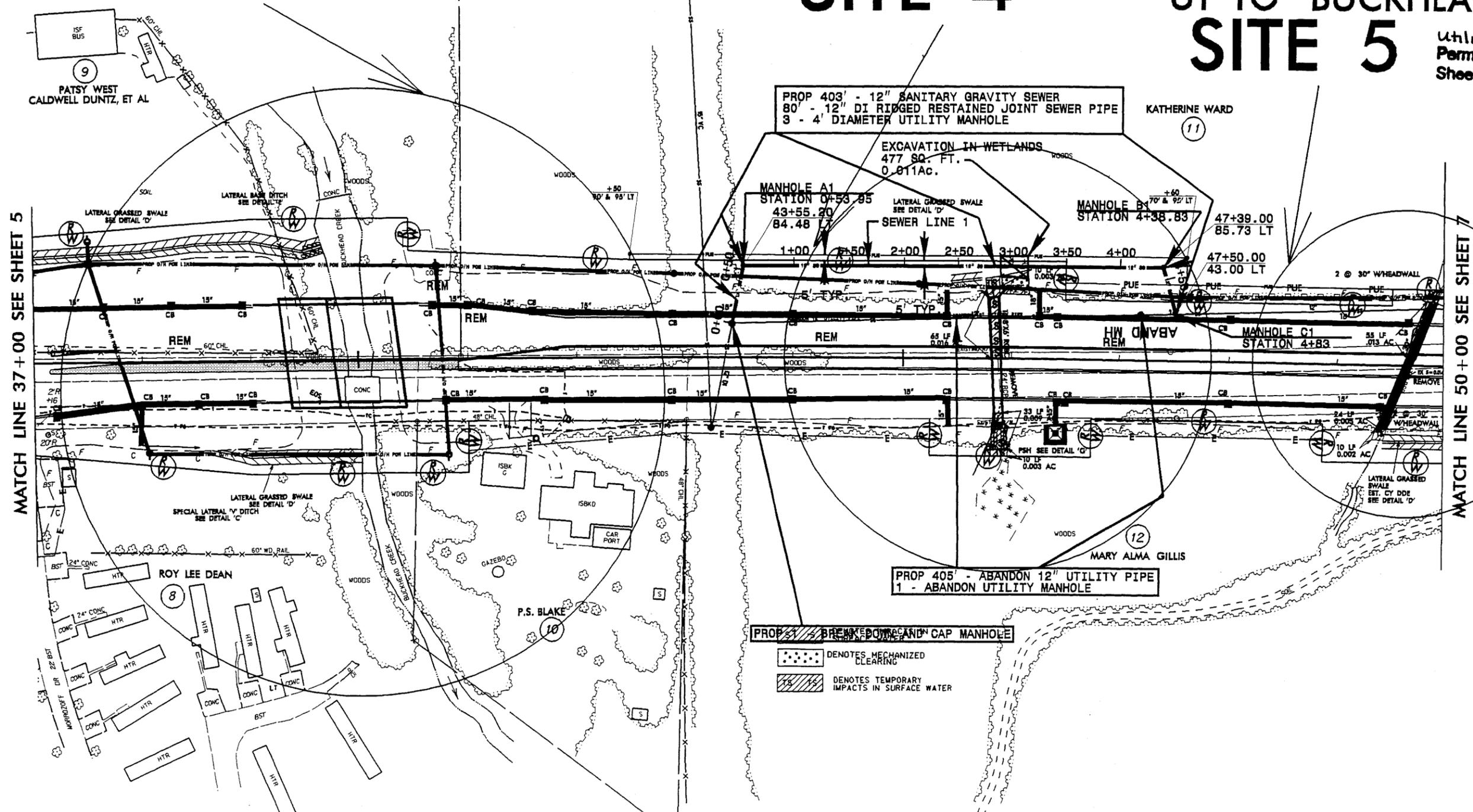
NC GRID
NAD 83

SITE 3

UT TO BUCKHEAD CK SITE 4

UT TO BUCKHEAD CK SITE 5

Utility
Permit Drawing
Sheet **5** of **5**



MATCH LINE 37+00 SEE SHEET 5

MATCH LINE 50+00 SEE SHEET 7

PROP. BREAK DOWN AND CAP MANHOLE

- DENOTES MECHANIZED CLEARING
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SEE SHEET 2-E FOR DRAINAGE DITCH DETAILS
 SEE SHEET 2-G & 2-I FOR BRIDGE SKETCHES
 SEE SHT 24 FOR -L- PROFILE
 SEE SHT S- FOR STRUCTURE PLANS
 SEE SHT C- FOR CULVERT PLANS

REVISIONS

RAW REV.15/22/07 - CHANGED PROPERTY OWNER NAME ON PARCEL 9.618

8/17/99

20-FEB-2008 14:04
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T.I.P. NO.	SHEET NO.
U-2810A	UO-1

Utility By Others
(UBO)
Permit Drawing
Sheet 1 of 5

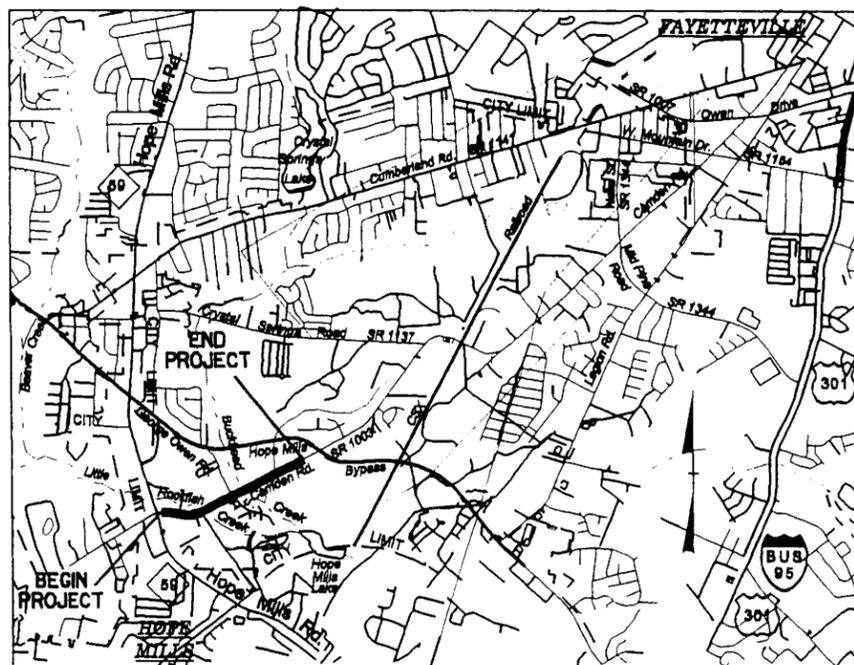
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**UTILITY BY OTHERS PLANS
CUMBERLAND COUNTY**

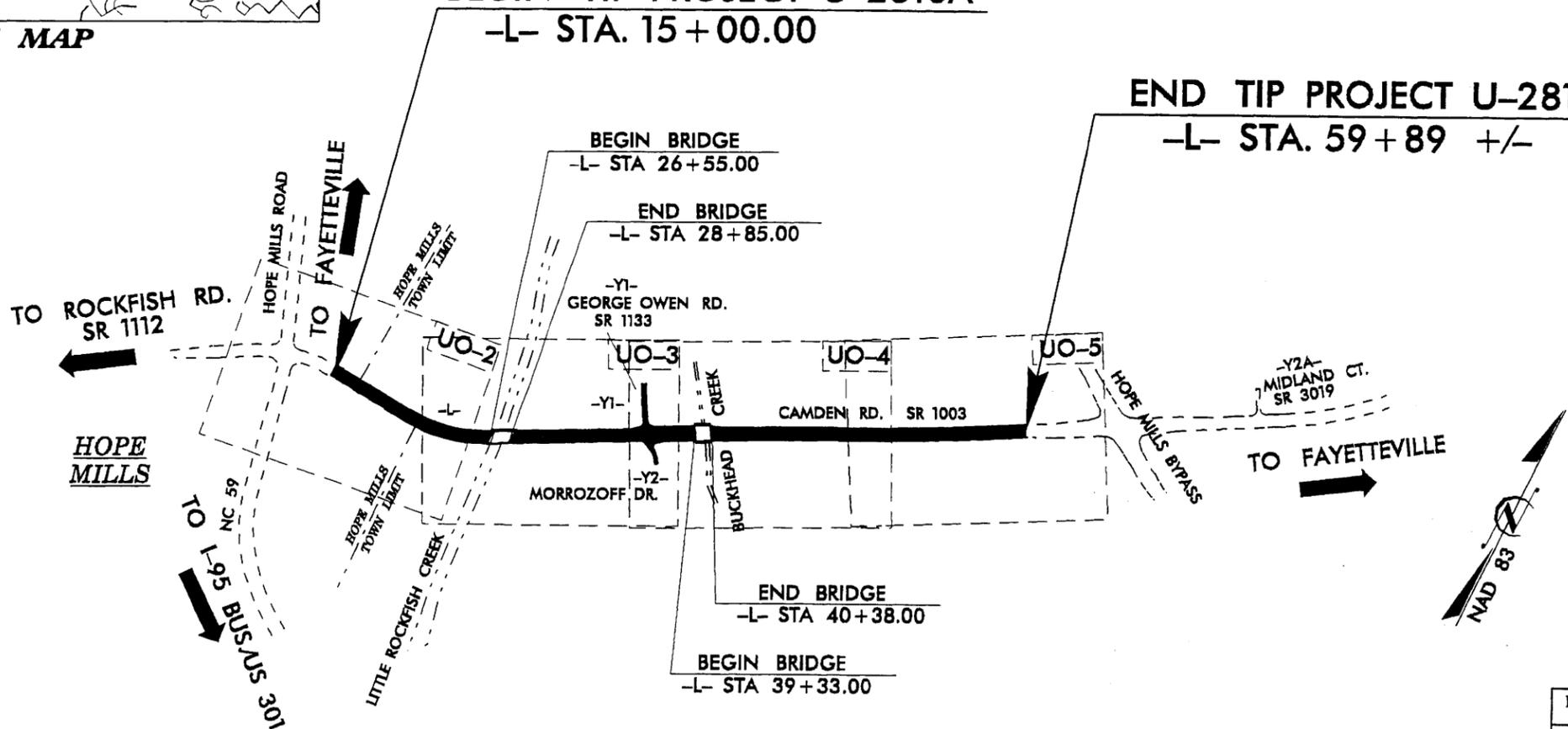
LOCATION: SR 1003 (CAMDEN ROAD) FROM NC 59
(HOPE MILLS ROAD) TO HOPE MILLS BYPASS
TYPE OF WORK: UTILITY CONSTRUCTION BY OTHERS

BEGIN TIP PROJECT U-2810A
-L- STA. 15 + 00.00

END TIP PROJECT U-2810A
-L- STA. 59 + 89 +/-

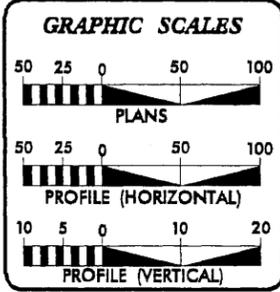


VICINITY MAP



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

TIP PROJECT: U-2810A



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-5	UTILITY BY OTHERS PLAN SHEETS

UTILITY OWNERS ON PROJECT
(1) CITY OF FAYETTEVILLE PWC - ELECTRIC
(2) TIME WARNER CABLE - CABLE TV
(3) EMBARQ - FIBER OPTIC TELEPHONE

PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
PROJECT SERVICES
UTILITY SECTION

1501 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 259-4128
FAX (919) 259-4129

<u>Roger Worthington, P.E.</u>	UTILITIES SECTION ENGINEER
<u>R. B. Wilkins, P.E.</u>	UTILITIES SQUAD LEADER PROJECT ENGINEER
<u>John A. Nigro, P.E.</u>	UTILITIES PROJECT DESIGNER

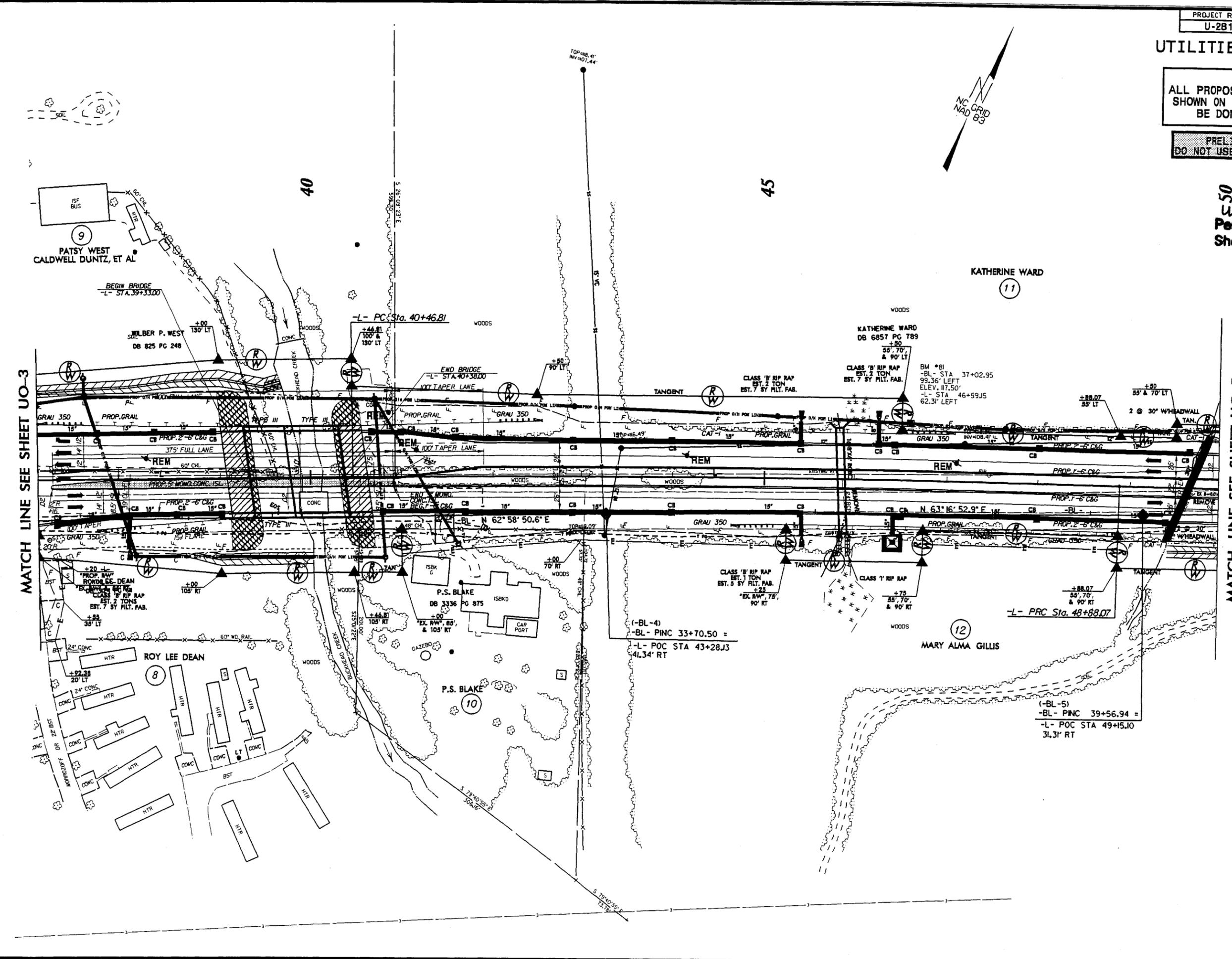
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UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

50
480
Permit Drawing
Sheet 4 of 5



MATCH LINE SEE SHEET UO-3

MATCH LINE SEE SHEET UO-5

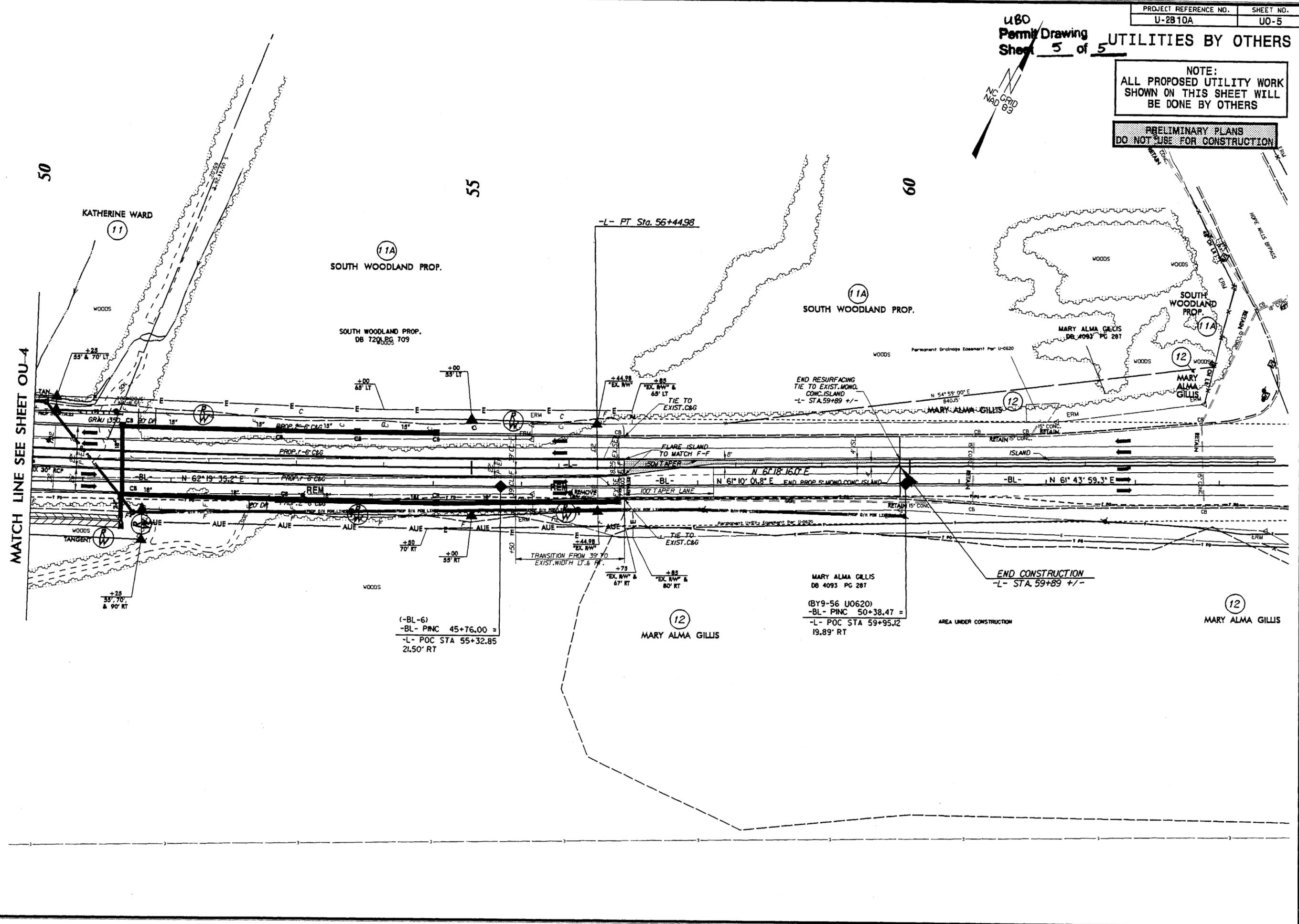
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U80
Permit Drawing
Sheet 5 of 5

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SEE SHEET OU-4

(-BL-6)
-BL- PINC 45+76.00 =
-L- POC STA 55+32.85
21.50' RT

(12)
MARY ALMA GILLIS
MARY ALMA GILLIS
DB 4093 PG 287
(BY9-56 U0620)
-BL- PINC 50+38.47 =
-L- POC STA 59+95.12
19.89' RT

END CONSTRUCTION
-L- STA. 59+89 +/-

AREA UNDER CONSTRUCTION