



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

January 22, 2007

U. S. Army Corps of Engineers  
Regulatory Field Office  
151 Patton Avenue, Room 208  
Asheville, NC 28801-5006

ATTENTION: Mr. Steve Lund  
NCDOT Coordinator

SUBJECT: **Nationwide Permit 14 and Section 401 Water Quality Certification** Application for the proposed widening of the Lenoir Rhyne Blvd. Extension in Hickory from Tate Blvd. To 7<sup>th</sup> Ave. NE in Catawba County. NCDOT Division 12, Federal Project No. MA-STP-1216(8), State Project No. 8.2791701, TIP No. U-2306A. \$200.00 Debit work order 8.2791701, WBS Element 34790.1.2.

Dear Sir:

The North Carolina Department of Transportation (NCDOT) proposes to extend Lenoir Rhyne Blvd. in Hickory from Tate Blvd. To 7<sup>th</sup> Ave. NE in Catawba County. The existing cross section is a four lane curb and gutter facility with an existing right of way of 50 feet. The proposed improvements consist of widening the existing roadway to a five lane 68-foot face to face curb and gutter section. Additionally, the railroad bridge just south of 7<sup>th</sup> Avenue will be replaced with a new bridge designed to accommodate the proposed cross section. The total length of the project is approximately 0.7 mile long and it will require a total of 100 feet of right-of-way. Please find enclosed a copy of the Preconstruction Notification (PCN), permit drawings and roadway design plans for the subject project.

## IMPACTS TO WATERS OF THE UNITED STATES

General Description: The project is located in the Catawba River Basin within HUC 03050102. The single jurisdictional water resource within the project area for U-2306A is the Unnamed Tributary (UT) to Clark Creek. The North Carolina Department of Environment and Natural Resources classifies Clark Creek and its tributaries as "C". The DWQ Index number for the portion of Clark Creek the UT flows into is 11-129-5-(0.3).

Jurisdictional Delineations: NCDOT Biologists verified stream status and mitigation requirements with Steve Lund of the USACE and Polly Lespinasse of the NC Division of Water Quality (NCDWQ) on November 20, 2006. Impacts are reported in Table 1. The channel at Station 17+00 was determined to be non-jurisdictional. There are no jurisdictional wetlands in the project study area.

Permanent Impacts: There is one site in the project area that impacts jurisdictional waters. Site 1: located from station 15+92 to 16+17 -L- Rt. There will be 135 feet of impacts to the UT to Clark Creek due to its location within the proposed fill slope. A 30-inch (750mm) diameter pipe extension will be placed in the main channel to the edge of the fill slope (a distance of 37.7 ft). The remaining portion of the stream within the right of way will be shifted slightly to the east to accommodate the new ditch, and rip rap will be placed in the channel over filter fabric to stabilize the banks. There will be no impacts to jurisdictional wetlands.

**Table 1. Permanent Impacts for TIP Project U-2306A, Catawba County.**

Site	Station No. (from/to)	Stream Name	DWQ Index No.	Stream Impacts (ft)	Wetland Impacts (ac)
1	15+92/16+17 -L- Rt	UT to Clark Creek	11-129-5- (0.3)	135	0
<b>Total</b>				<b>135</b>	<b>0</b>

Temporary Impacts: There will be no temporary impacts associated with this project.

Utility Impacts: There will be no utility impacts associated with this project.

Project Schedule: **This project has a proposed let date of May 15, 2007 and the permit is needed by the review date of March 27, 2007.**

## NEPA DOCUMENT STATUS

An Environmental Assessment (EA) was submitted by the NCDOT in compliance with the National Environmental Policy Act (NEPA). The EA was approved on September 30, 1997. A Finding of No Significant Impact (FONSI) was approved on July 23, 1998. The EA explains the purpose and need for the project; provides a complete description of the

alternatives considered; and characterizes the social, economic and environmental effects. After the EA was approved, it was circulated to the federal and local agencies. Copies of the EA and FONSI have been provided to regulatory review agencies involved in the approval process. Additional copies will be provided upon request.

The subject project, U-2306A, is in compliance with 23 CFR Part 771.111(f) which lists the Federal Highway Administration (FHWA) characteristics of independent utility of a project:

1. The project connects logical termini and is of sufficient length to address environmental matters on a broad scope;
2. The project is usable and a reasonable expenditure, even if no additional transportation improvements are made in the area;
3. The project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

### **FEDERALLY PROTECTED SPECIES**

Plants and animals with federal classifications of Endangered, Threatened, Proposed Endangered, and Proposed Threatened are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. As of December 13, 2006, the United States Fish and Wildlife Service (USFWS) lists two federally protected species for Catawba County. Table 2 lists the species, their status and biological conclusion.

The Bald eagle has been added to the list for Catawba County since the original EA was prepared. A survey for potential nesting habitat was conducted by NCDOT biologists Bill Barrett, Erin Schubert and Jeff Hemphill on November 20, 2006. No individuals, nests or suitable nesting trees were observed in the project area during the survey. A search of the NHP files indicated no occurrence of Bald eagles within 3 miles of the project vicinity. It can therefore be determined that this project will have No Effect on Bald eagles.

**Table 2. Federally Protected Species for Catawba County**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>	<b>Habitat Analysis</b>	<b>Biological Conclusion</b>
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	No Habitat	No Effect
Dwarf-flowered heartleaf	<i>Hexastylis naniflora</i>	T	No Habitat	No Effect

## **CULTURAL RESOURCES**

Archaeology & Historical Structures: There are no known archaeological or historical resources within the project area. The State Historic Preservation Office (SHPO) reviewed pictures of the project area and, based on those photos commented (in a memo dated December 23, 1996) that the structures over fifty years of age “do not appear eligible for listing in the National Register of Historic Places. Therefore, we recommend that no historic architectural survey be conducted for this project.” This memo is found in Appendix F in the EA. In this same memo, SHPO stated that there were no known archaeological sites within the proposed project area. In addition, SHPO stated that it was unlikely any site within the area that may be eligible for the National Register would be affected by the project and recommended, “that no archaeological investigation be conducted in connection with this project.”

## **AVOIDANCE, MINIMIZATION, AND MITIGATION**

Avoidance and Minimization: The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize impacts to jurisdictional waters, and to provide full compensatory mitigation of all remaining impacts. Avoidance measures were taken during the planning and NEPA phases. Minimization measures were incorporated as part of the project design and include minimizing the fill slope (at a 2:1 ratio), extending the existing perched pipe with a junction box to reduce channel erosion and the use of NCDOT’s Best Management Practices for the protection of Surface waters during construction.

Mitigation: There will be 135 linear feet of permanent stream impacts associated with this project. There are no wetlands in the project area, therefore there are no wetland impacts associated with this project. No compensatory mitigation is proposed as the project impacts total less than 150 feet. This was confirmed by Steve Lund (USACE) during the site visit on November 20, 2006.

## **REGULATORY APPROVALS**

Section 404 Permit: It is anticipated that the permanent impacts to UT to Clark Creek will be authorized under a Section 404 Nationwide Permit 14 (Road Crossings). Application is hereby made for Department of the Army Nationwide Permit 14 for the above-described activities.

Section 401 Certification: In compliance with Section 143-215.3D(e) of the NCAC we will provide \$200.00 to act as payment for processing the Section 401 (General Certification Number 3404) permit application previously noted in this application (see Subject line). We are providing five copies of this application to the North Carolina Department of Environment and Natural Resources, Division of Water Quality, for their review.

Thank you for your assistance with this project. If you have any questions or need additional information, please contact Erin Schubert at [ekschubert@dot.state.nc.us](mailto:ekschubert@dot.state.nc.us) or (919) 715-5529.

Sincerely,



*for*

Gregory J. Thorpe, Ph.D.,  
Environmental Management Director  
Project Development and Environmental Analysis Branch

Cc:

W/attachment

- Mr. John Hennessy, NCDWQ (5 Copies)
- Ms. Marella Buncick, USFWS
- Ms. Marla Chambers, NCWRC
- Dr. David Chang, P.E., Hydraulics
- Mr. Greg Perfetti, P.E., Structure Design
- Mr. Mark Staley, Roadside Environmental
- Mr. M.L. Holder, P.E., Division 12 Engineer
- Ms. Trish Simon, Division 12 DEO

W/o attachment

- Mr. Jay Bennett, P.E., Roadway Design
- Mr. Majed Alghandour, P. E., Programming and TIP
- Mr. Art McMillan, P.E., Highway Design
- Mr. Scott McLendon, USACE, Wilmington
- Mr. John Conforti, PDEA Project Planning Engineer

**Office Use Only:**

Form Version March 05

**USACE Action ID No.** \_\_\_\_\_

**DWQ No.** \_\_\_\_\_

(If any particular item is not applicable to this project, please enter "Not Applicable" or "N/A".)

**I. Processing**

1. Check all of the approval(s) requested for this project:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Section 404 Permit              | <input type="checkbox"/> Riparian or Watershed Buffer Rules      |
| <input type="checkbox"/> Section 10 Permit                          | <input type="checkbox"/> Isolated Wetland Permit from DWQ        |
| <input checked="" type="checkbox"/> 401 Water Quality Certification | <input type="checkbox"/> Express 401 Water Quality Certification |

2. Nationwide, Regional or General Permit Number(s) Requested: Nationwide 14

3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here:

4. If payment into the North Carolina Ecosystem Enhancement Program (NCEEP) is proposed for mitigation of impacts, attach the acceptance letter from NCEEP, complete section VIII, and check here:

5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here:

**II. Applicant Information**

1. Owner/Applicant Information

Name: Gregory J. Thorpe, Ph.D., Environmental Management Director

Mailing Address: 1598 Mail Service Center

Telephone Number: (919) 733-3141 Fax Number: (919) 733-9794

E-mail Address: ekschubert@dot.state.nc.us

2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)

Name: \_\_\_\_\_

Company Affiliation: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

### III. Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. Also provide a detailed **site plan** showing property boundaries and development plans in relation to surrounding properties. Both the vicinity map and site plan must include a scale and north arrow. The specific footprints of all buildings, impervious surfaces, or other facilities must be included. If possible, the maps and plans should include the appropriate USGS Topographic Quad Map and NRCS Soil Survey with the property boundaries outlined. Plan drawings, or other maps may be included at the applicant's discretion, so long as the property is clearly defined. For administrative and distribution purposes, the USACE requires information to be submitted on sheets no larger than 11 by 17-inch format; however, DWQ may accept paperwork of any size. DWQ prefers full-size construction drawings rather than a sequential sheet version of the full-size plans. If full-size plans are reduced to a small scale such that the final version is illegible, the applicant will be informed that the project has been placed on hold until decipherable maps are provided.

1. Name of project: Hickory – Lenoir Rhyne Blvd. Extension from Tate Blvd. to 7<sup>th</sup> Ave NE
2. T.I.P. Project Number or State Project Number (NCDOT Only): U-2306A
3. Property Identification Number (Tax PIN): N/A
4. Location  
County: Catawba Nearest Town: Hickory  
Subdivision name (include phase/lot number): N/A  
Directions to site (include road numbers/names, landmarks, etc.): See attached permit drawings.
5. Site coordinates (For linear projects, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)  
Decimal Degrees (6 digits minimum): 35°44'02.45" °N -81°19'31.49" °W
6. Property size (acres): N/A
7. Name of nearest receiving body of water: Clark Creek
8. River Basin: Catawba  
(Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at <http://h2o.enr.state.nc.us/admin/maps/>.)
9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: All portions of the study area have been disturbed and manipulated by human activities in the past. The immediate vicinity of the study area is highly industrialized with a very small forested area about midway through the project.

10. Describe the overall project in detail, including the type of equipment to be used: The proposed improvements consist of widening the existing roadway (Lenoir Rhyne Blvd.) to a five lane 68-foot face to face curb and gutter section. Additionally, the railroad bridge just south of 7<sup>th</sup> Ave. will be replaced with a new bridge designed to accommodate the proposed cross section. Standard construction equipment such as backhoes, bulldozers, cranes, pavers and other heavy machinery will be used.
11. Explain the purpose of the proposed work: The existing street system will not adequately accommodate the projected design year 2020 traffic volumes once the proposed east-west (Highland Avenue/8<sup>th</sup> St. NE) and north-south (Lenoir Rhyne Blvd./8<sup>th</sup> St. NE) corridors in the current thoroughfare plan are completed and open to traffic.

#### IV. Prior Project History

If jurisdictional determinations and/or permits have been requested and/or obtained for this project (including all prior phases of the same subdivision) in the past, please explain. Include the USACE Action ID Number, DWQ Project Number, application date, and date permits and certifications were issued or withdrawn. Provide photocopies of previously issued permits, certifications or other useful information. Describe previously approved wetland, stream and buffer impacts, along with associated mitigation (where applicable). If this is a NCDOT project, list and describe permits issued for prior segments of the same T.I.P. project, along with construction schedules.

Final stream verifications were made November 20, 2006 in the field with Steve Lund (USACE) and Polly Lespinasse (NCDWQ). It was determined verbally that the channel at Station 17+00 was non-jurisdictional, and that the crossing from station 15+92 to 16+17 was jurisdictional on the east side of the road.

#### V. Future Project Plans

Are any future permit requests anticipated for this project? If so, describe the anticipated work, and provide justification for the exclusion of this work from the current application.

N/A

#### VI. Proposed Impacts to Waters of the United States/Waters of the State

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. Each impact must be listed separately in the tables below (e.g., culvert installation should be listed separately from riprap dissipater pads). Be sure to indicate if an impact is temporary. All proposed impacts, permanent and temporary, must be listed, and must be labeled and clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) should be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for

wetland or stream mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts:

There will be 135 feet of permanent impacts to the UT to Clark Creek (located from Station 15+92 to 16+17) due to the fact that it is located within the proposed fill slope. A 30 inch (750mm) diameter pipe 37.7 ft (11.5m) in length will be placed in the main channel up to the edge of the fill slope. The remaining portion of the stream within the right of way will be shifted slightly to the east to accommodate the new ditch, and rip rap will be placed in the channel over filter fabric to stabilize the banks.

2. Individually list wetland impacts. Types of impacts include, but are not limited to mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

Wetland Impact Site Number (indicate on map)	Type of Impact	Type of Wetland (e.g., forested, marsh, herbaceous, bog, etc.)	Located within 100-year Floodplain (yes/no)	Distance to Nearest Stream (linear feet)	Area of Impact (acres)
No wetland impacts					
Total Wetland Impact (acres)					0

3. List the total acreage (estimated) of all existing wetlands on the property: 0 acres

4. Individually list all intermittent and perennial stream impacts. Be sure to identify temporary impacts. Stream impacts include, but are not limited to placement of fill or culverts, dam construction, flooding, relocation, stabilization activities (e.g., cement walls, rip-rap, crib walls, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included. To calculate acreage, multiply length X width, then divide by 43,560.

Stream Impact Number (indicate on map)	Stream Name	Type of Impact	Perennial or Intermittent?	Average Stream Width Before Impact	Impact Length (linear feet)	Area of Impact (acres)
1	UT to Clark Creek	Permanent	Perennial (with an intermittent segment coming in from the North)	3 ft.	135	0.01
Total Stream Impact (by length and acreage)					135	0.01

5. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.). Open water impacts include, but are not limited to fill, excavation, dredging, flooding, drainage, bulkheads, etc.

Open Water Impact Site Number (indicate on map)	Name of Waterbody (if applicable)	Type of Impact	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)	Area of Impact (acres)
No open water impacts				
Total Open Water Impact (acres)				0

6. List the cumulative impact to all Waters of the U.S. resulting from the project:

Stream Impact (acres):	0.01 acre permanent
Wetland Impact (acres):	0
Open Water Impact (acres):	0
Total Impact to Waters of the U.S. (acres)	0.01 acre permanent
Total Stream Impact (linear feet):	135 ft permanent

7. Isolated Waters

Do any isolated waters exist on the property?  Yes  No

Describe all impacts to isolated waters, and include the type of water (wetland or stream) and the size of the proposed impact (acres or linear feet). Please note that this section only applies to waters that have specifically been determined to be isolated by the USACE.

N/A

8. Pond Creation

If construction of a pond is proposed, associated wetland and stream impacts should be included above in the wetland and stream impact sections. Also, the proposed pond should be described here and illustrated on any maps included with this application.

Pond to be created in (check all that apply):  uplands  stream  wetlands

Describe the method of construction (e.g., dam/embankment, excavation, installation of draw-down valve or spillway, etc.):

Proposed use or purpose of pond (e.g., livestock watering, irrigation, aesthetic, trout pond, local stormwater requirement, etc.):

Current land use in the vicinity of the pond:

Size of watershed draining to pond: \_\_\_\_\_ Expected pond surface area: \_\_\_\_\_

**VII. Impact Justification (Avoidance and Minimization)**

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts.

NCDOT's Best Management Practices for the Protection of Surface Waters will be strictly enforced during the construction phase of the project. Temporary construction easements will be used to contain proposed construction outside the 100ft proposed Right of Way.

**VIII. Mitigation**

DWQ - In accordance with 15A NCAC 2H .0500, mitigation may be required by the NC Division of Water Quality for projects involving greater than or equal to one acre of impacts to freshwater wetlands or greater than or equal to 150 linear feet of total impacts to perennial streams.

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on January 15, 2002, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

If mitigation is required for this project, a copy of the mitigation plan must be attached in order for USACE or DWQ to consider the application complete for processing. Any application lacking a required mitigation plan or NCEEP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ’s Draft Technical Guide for Stream Work in North Carolina, available at <http://h2o.enr.state.nc.us/ncwetlands/strmgide.html>.

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.

N/A – Stream impacts total less than 150 feet. No wetland impacts.

2. Mitigation may also be made by payment into the North Carolina Ecosystem Enhancement Program (NCEEP). Please note it is the applicant’s responsibility to contact the NCEEP at (919) 715-0476 to determine availability, and written approval from the NCEEP indicating that they are will to accept payment for the mitigation must be attached to this form. For additional information regarding the application process for the NCEEP, check the NCEEP website at <http://h2o.enr.state.nc.us/wrp/index.htm>. If use of the NCEEP is proposed, please check the appropriate box on page five and provide the following information:

Amount of stream mitigation requested (linear feet): \_\_\_\_\_  
Amount of buffer mitigation requested (square feet): \_\_\_\_\_  
Amount of Riparian wetland mitigation requested (acres): \_\_\_\_\_  
Amount of Non-riparian wetland mitigation requested (acres): \_\_\_\_\_  
Amount of Coastal wetland mitigation requested (acres): \_\_\_\_\_

**IX. Environmental Documentation (required by DWQ)**

1. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? Yes  No

2. If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)?  
 Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation.  
 Yes  No
3. If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter. Yes  No

**X. Proposed Impacts on Riparian and Watershed Buffers (required by DWQ)**

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to required state and local buffers associated with the project. The applicant must also provide justification for these impacts in Section VII above. All proposed impacts must be listed herein, and must be clearly identifiable on the accompanying site plan. All buffers must be shown on a map, whether or not impacts are proposed to the buffers. Correspondence from the DWQ Regional Office may be included as appropriate. Photographs may also be included at the applicant's discretion.

1. Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 02B .0243 (Catawba) 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify \_\_\_\_\_)? Yes  No
2. If "yes", identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

Zone*	Impact (square feet)	Multiplier	Required Mitigation
1		3 (2 for Catawba)	
2		1.5	
Total			

\* Zone 1 extends out 30 feet perpendicular from the top of the near bank of channel; Zone 2 extends an additional 20 feet from the edge of Zone 1.

3. If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Riparian Buffer Restoration / Enhancement, or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0244, or .0260. \_\_\_\_\_

**XI. Stormwater (required by DWQ)**

Describe impervious acreage (existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property. If percent impervious surface exceeds 20%, please provide calculations demonstrating total proposed impervious level. Impervious surfaces will increase slightly as a

result of this project. However, no major streams are crossed by the project and the terrain in the vicinity of the project is rolling with natural draws located so that the project may be drained without difficulty.

**XII. Sewage Disposal (required by DWQ)**

Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.

N/A

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**XIII. Violations (required by DWQ)**

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?

Yes  No

Is this an after-the-fact permit application? Yes  No

**XIV. Cumulative Impacts (required by DWQ)**

Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? Yes  No

If yes, please submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent North Carolina Division of Water Quality policy posted on our website at <http://h2o.enr.state.nc.us/ncwetlands>. If no, please provide a short narrative description: Lenoir Rhyne Blvd. runs right through the city of Hickory. This section of Hickory is already very developed and there is little room for expansion.

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**XV. Other Circumstances (Optional):**

It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g., draw-down schedules for lakes, dates associated with Endangered and Threatened Species, accessibility problems, or other issues outside of the applicant's control).

N/A

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*E. L. Luck*

1-24-07

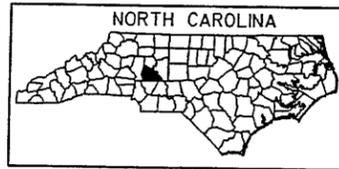
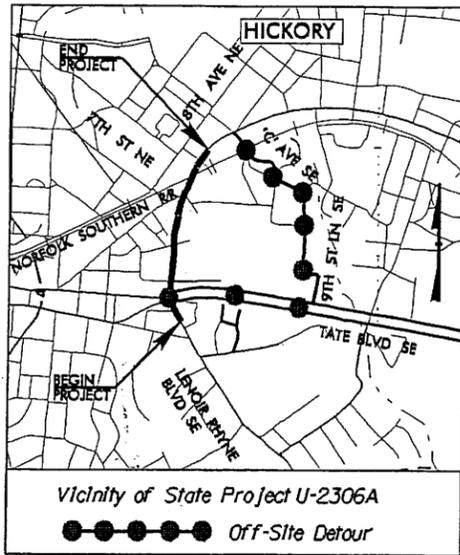
Applicant/Agent's Signature

Date

(Agent's signature is valid only if an authorization letter from the applicant is provided.)

**CONTRACT: C200866 TIP PROJECT: U-2306A**

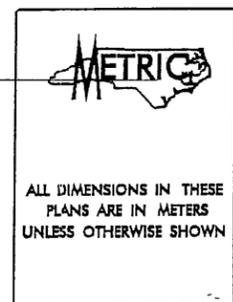
See Sheet 1-A For Index of Sheets  
See Sheet 1-B For Conventional Symbols



# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

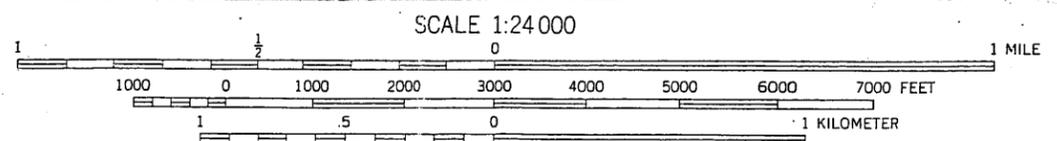
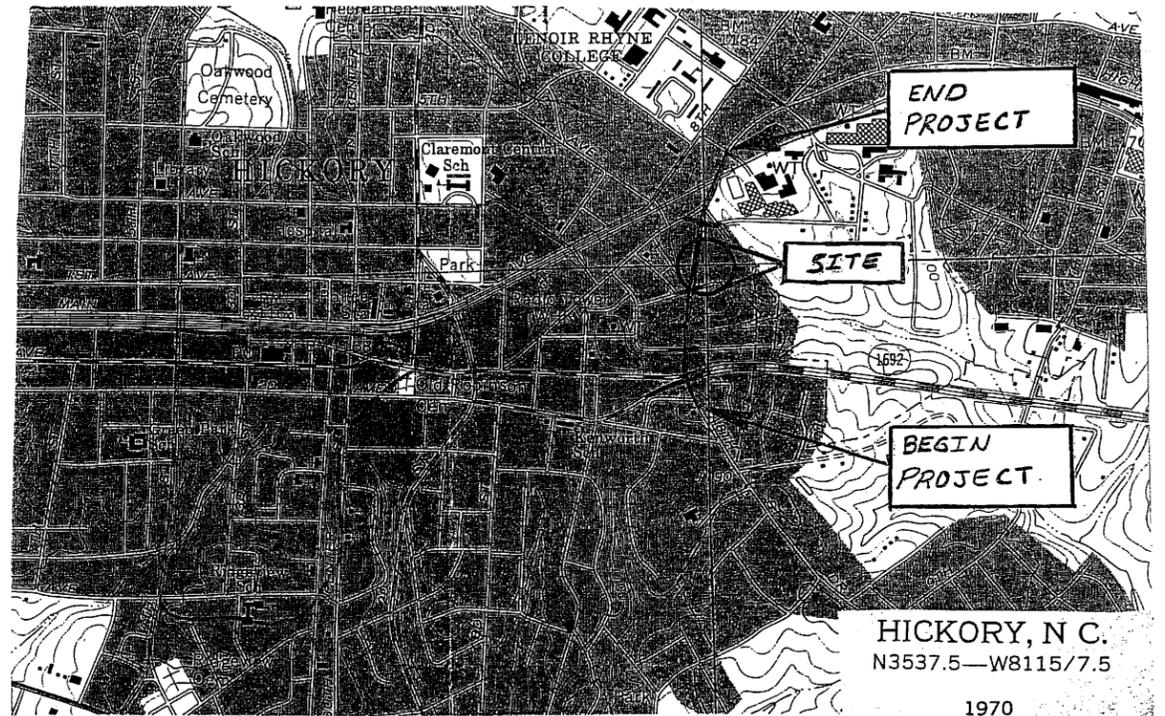
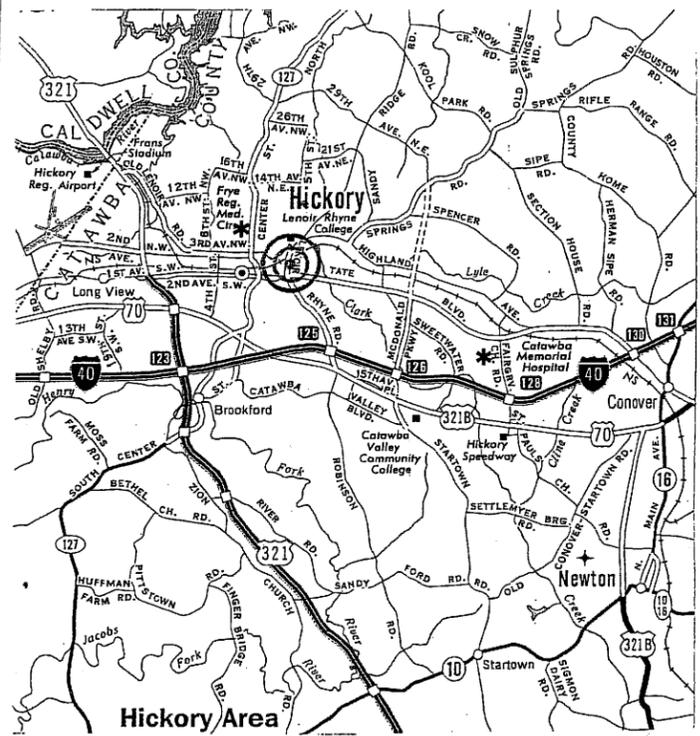
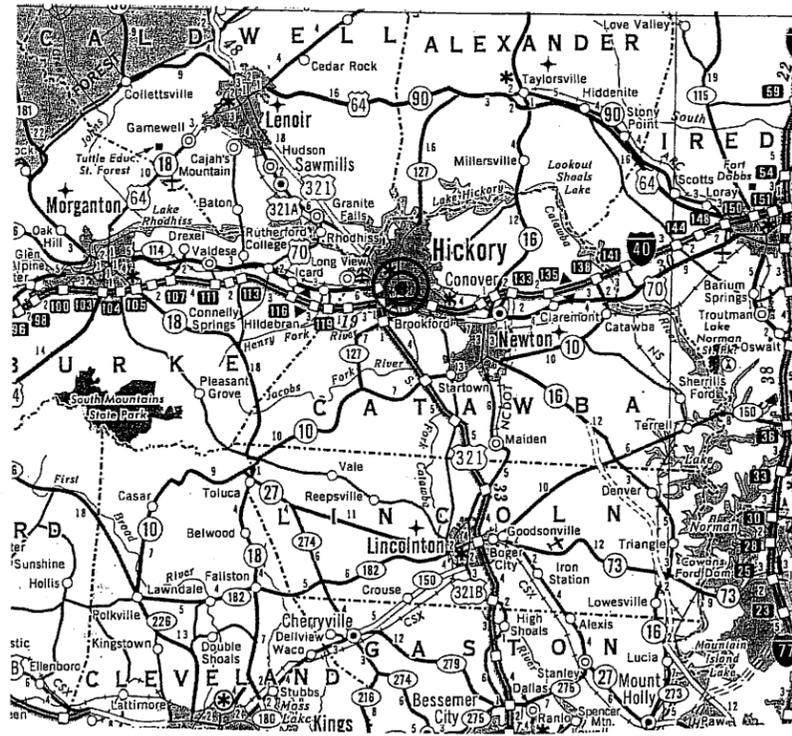
## CATAWBA COUNTY

**LOCATION: HICKORY - LENOIR RHYNE BLVD. EXTENSION  
FROM TATE BLVD. TO 7TH AVE. NE.**

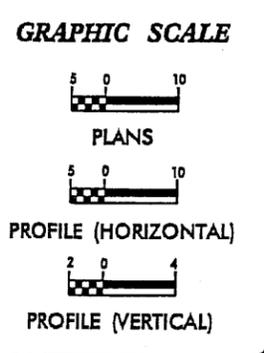


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2306A	I	4
STATE PROGRAM	F.A. PROJECT NO.	DESCRIPTION	
34790.1.2	MA-STP-1216(8)	PE	
34790.2.2	MA-STP-1216(8)	R/W UTIL	
34790.3.2	MA-STP-1216(8)	CONST.	

PERMIT DRAWINGS SHIT 1 OF 4



CONTOUR INTERVAL 20 FEET  
DATUM IS MEAN SEA LEVEL



**DESIGN DATA**

ADT 2007 = 19,286 vpd
ADT 2024 = 27,425 vpd
DHV = 10 %
D = 60 %
T = 10 % *
V = 60 km/h
* TTST 4 % DUAL 6 %

**PROJECT LENGTH**

LENGTH ROADWAY F. A. PROJECT MA-STP-1216(8) = 0.936 km
TOTAL LENGTH STATE TIP PROJECT U-2306A = 0.936 km

Prepared in the Office of:

**DIVISION OF HIGHWAYS**  
1000 BIRCH RIDGE DRIVE, RALEIGH, NC 27610  
2002 STANDARD SPECIFICATIONS

<b>RIGHT OF WAY DATE:</b> JUNE 22, 1999	<b>TONY HOUSER, PE</b> PROJECT ENGINEER
<b>LETTING DATE:</b> MAY 15, 2007	<b>BRUCE PAYNE, PE</b> PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_

**DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA**

STATE DESIGN ENGINEER

**DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION**

APPROVED DIVISION ADMINISTRATOR DATE

**METRIC**

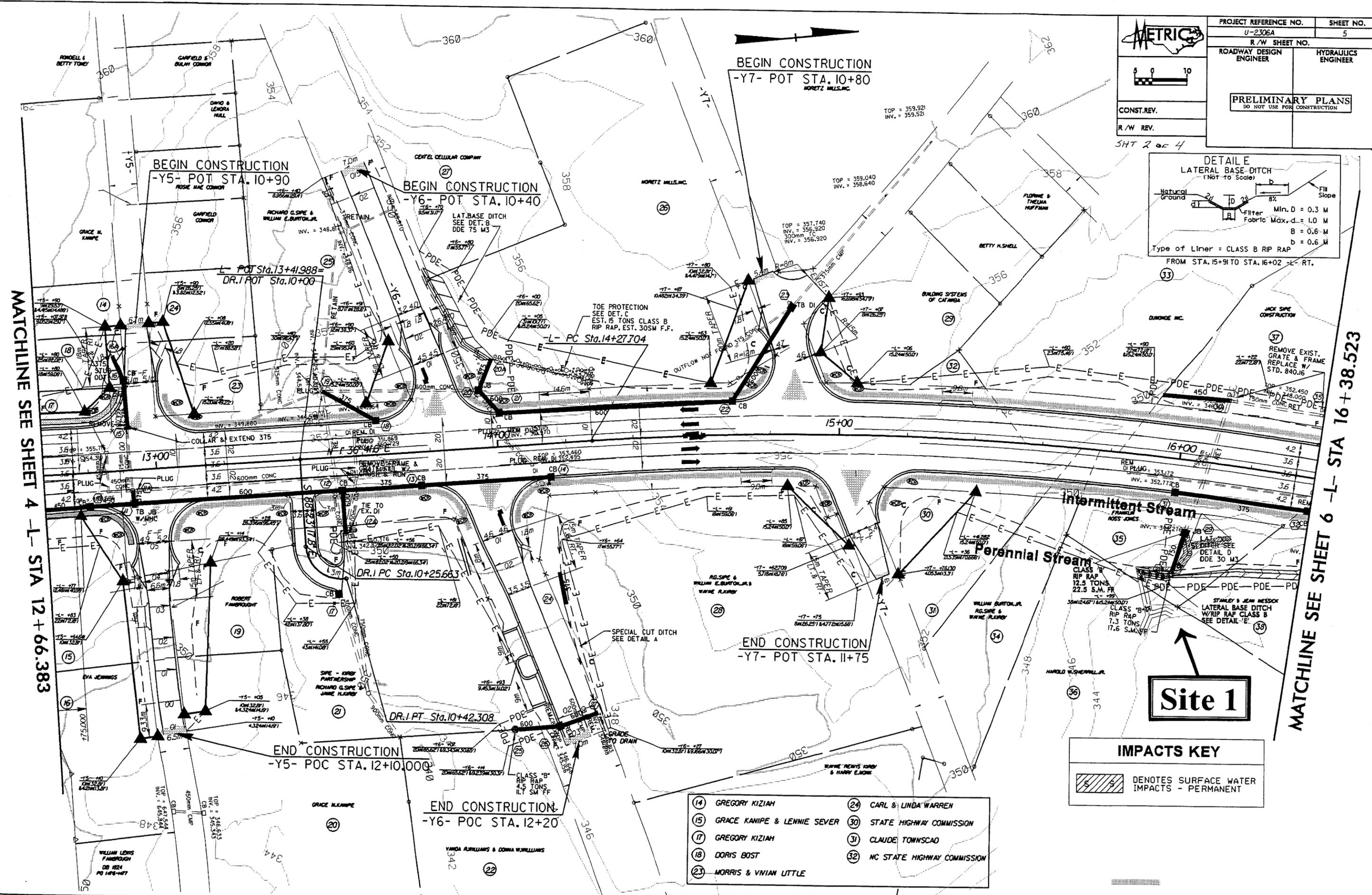
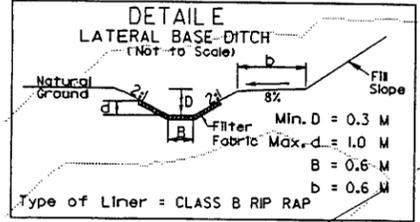
PROJECT REFERENCE NO. U-2306A  
 R/W SHEET NO. 5

ROADWAY DESIGN ENGINEER  
 HYDRAULICS ENGINEER

**PRELIMINARY PLANS**  
 DO NOT USE FOR CONSTRUCTION

CONST. REV.  
 R/W REV.

SHT 2 of 4



MATCHLINE SEE SHEET 4 -L- STA 12+66.383

MATCHLINE SEE SHEET 6 -L- STA 16+38.523

- |                                  |                                  |
|----------------------------------|----------------------------------|
| (14) GREGORY KIZIAH              | (24) CARL & LINDA WARREN         |
| (15) GRACE KANIPE & LENNIE SEVER | (30) STATE HIGHWAY COMMISSION    |
| (17) GREGORY KIZIAH              | (31) CLAUDE TONNSCAD             |
| (18) DORIS BOST                  | (32) NC STATE HIGHWAY COMMISSION |
| (23) MORRIS & VIVIAN UTTLE       |                                  |

**IMPACTS KEY**

DENOTES SURFACE WATER IMPACTS - PERMANENT



## Adjacent Property Owners

Owner/ Business

Address

Franklin Ross Jones

1026 Manchester Ave. Norfolk VA 23509

NC DOT

1546 Mail Service Center Shelby, NC 27699-1546

CWS Properties

PO Box 189 Hickory, NC 28603-0189

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

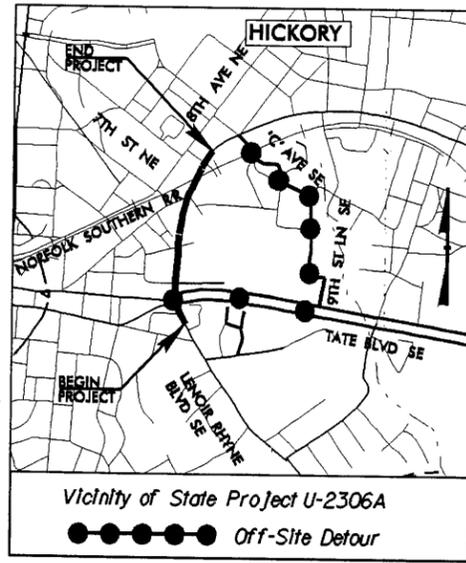
Catawba County  
PROJ - 34790.1.1 (U-2306A)

SHEET 4 of 4 11/28/2006

07/03/97

CONTRACT: C200866 TIP PROJECT: U-2306A

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



# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## CATAWBA COUNTY

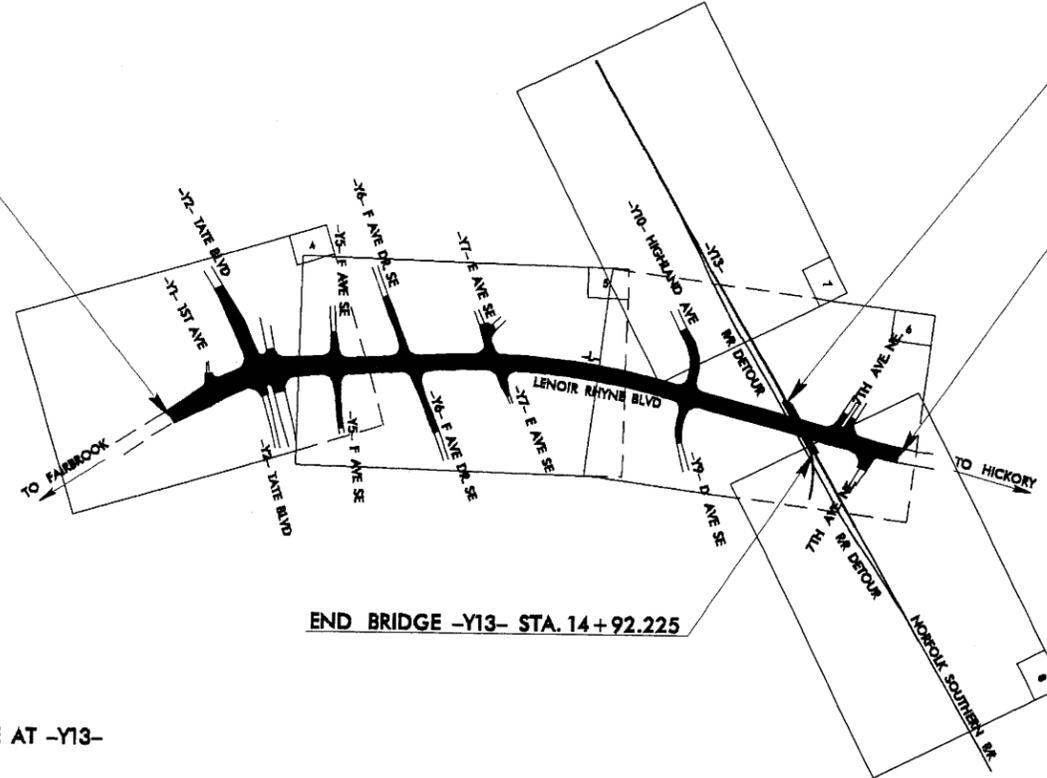
**LOCATION: HICKORY - LENOIR RHYNE BLVD. EXTENSION  
FROM TATE BLVD. TO 7TH AVE. NE.**

**TYPE OF WORK: WIDENING, GRADING, DRAINAGE, PAVING, STRUCTURES,  
SIGNALS, SIGNING AND TRACKWORK**

ALL DIMENSIONS IN THESE PLANS ARE IN METERS UNLESS OTHERWISE SHOWN

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2306A	1	
STATE FUNDING	F.A. FUNDING	DESCRIPTION	
34790.1.2	MA-STP-1216(8)	PE	
34790.2.2	MA-STP-1216(8)	RW, UTIL	
34790.3.2	MA-STP-1216(8)	CONST.	

-L- POT STA. 10+73.873 BEGIN TIP U-2306A



BEGIN BRIDGE -Y13- STA. 14+21.911

-L- POT STA. 20+10.000 END TIP U-2306A

END BRIDGE -Y13- STA. 14+92.225

DESIGN EXCEPTION FOR THE VERTICAL ALIGNMENT  
DESIGN EXCEPTION FOR VERTICAL CLEARANCE ON RAILROAD STRUCTURE AT -Y13-  
THERE IS NO CONTROL OF ACCESS ON THIS PROJECT

### GRAPHIC SCALE



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

### DESIGN DATA

ADT 2007 = 19,286 vpd  
ADT 2024 = 27,425 vpd

DHV = 10 %  
D = 60 %  
T = 10 % \*  
V = 60 km/h

\* TTST 4 % DUAL 6 %

### PROJECT LENGTH

LENGTH ROADWAY F. A. PROJECT MA-STP-1216(8) = 0.936 km  
TOTAL LENGTH STATE TIP PROJECT U-2306A = 0.936 km

Prepared In the Office of:

**DIVISION OF HIGHWAYS**  
1000 BIRCH RIDGE DRIVE, RALEIGH, NC 27610

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
JUNE 22, 1999

LETTING DATE:  
MAY 15, 2007

TONY HOUSER, PE  
PROJECT ENGINEER

BRUCE PAYNE, PE  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE:

ROADWAY DESIGN ENGINEER

SIGNATURE:

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER  
DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED  
DIVISION ADMINISTRATOR

DATE

07-DEC-2006 14:48

07/03/97

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS



PROJ. REFERENCE NO. U-2306A  
SHEET NO. 1-B

\*S.U.E = SUBSURFACE UTILITY ENGINEER

# CONVENTIONAL SYMBOLS

## ROADS & RELATED ITEMS

Edge of Pavement	-----
Curb	-----
Prop. Slope Stakes Cut	----- C
Prop. Slope Stakes Fill	----- F
Prop. Woven Wire Fence	-----
Prop. Chain Link Fence	-----
Prop. Barbed Wire Fence	-----
Prop. Wheelchair Ramp	-----
Exist. Guardrail	-----
Prop. Guardrail	-----
Equality Symbol	-----
Pavement Removal	-----

## RIGHT OF WAY

Baseline Control Point	-----
Existing Right of Way Marker	-----
Exist. Right of Way Line w/Marker	-----
Prop. Right of Way Line with Proposed R/W marker (Iron Pin & Cap)	-----
Prop. Right of Way Line with Proposed (Concrete or Granite) R/W Marker	-----
Exist. Control of Access Line	-----
Prop. Control of Access Line	-----
Exist. Easement Line	----- E
Prop. Temp. Construction Easement Line	----- E
Prop. Temp. Drainage Easement Line	----- TDE
Prop. Perm. Drainage Easement Line	----- PDE

## HYDROLOGY

Stream or Body of Water	-----
Flow Arrow	-----
Disappearing Stream	-----
Spring	-----
Swamp Marsh	-----
Shoreline	-----
Falls, Rapids	-----
Prop Lateral, Tail, Head Ditches	-----

## STRUCTURES

MAJOR	
Bridge, Tunnel, or Box Culvert	----- CONC
Bridge Wing Wall, Head Wall and End Wall	----- CONC WW

## MINOR

Head & End Wall	----- CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Boxes	-----
Paved Ditch Gutter	----- CB

## UTILITIES

Exist. Pole	-----
Exist. Power Pole	-----
Prop. Power Pole	-----
Exist. Telephone Pole	-----
Prop. Telephone Pole	-----
Exist. Joint Use Pole	-----
Prop. Joint Use Pole	-----
Telephone Pedestal	-----
Cable TV Pedestal	-----
Hydrant	-----
Satellite Dish	-----
Exist. Water Valve	-----
Sewer Clean Out	-----
Power Manhole	-----
Telephone Booth	-----
Water Manhole	-----
Light Pole	-----
H-Frame Pole	-----
Power Line Tower	-----
Pole with Base	-----
Gas Valve	-----
Gas Meter	-----
Telephone Manhole	-----
Power Transformer	-----
Sanitary Sewer Manhole	-----
Storm Sewer Manhole	-----
Tank; Water, Gas, Oil	-----
Water Tank With Legs	-----
Traffic Signal Junction Box	-----
Fiber Optic Splice Box	-----
Television or Radio Tower	-----
Utility Power Line Connects to Traffic Signal Lines Cut Into the Pavement	----- TS

Recorded Water Line	-----
Designated Water Line (S.U.E.*)	-----
Sanitary Sewer	----- SS
Recorded Sanitary Sewer Force Main	----- FSS
Designated Sanitary Sewer Force Main(S.U.E.*)	----- FSS
Recorded Gas Line	----- G
Designated Gas Line (S.U.E.*)	----- G
Storm Sewer	----- S
Recorded Power Line	----- P
Designated Power Line (S.U.E.*)	----- P
Recorded Telephone Cable	----- T
Designated Telephone Cable (S.U.E.*)	----- T
Recorded U/G Telephone Conduit	----- TC
Designated U/G Telephone Conduit (S.U.E.*)	----- TC
Unknown Utility (S.U.E.*)	----- PUTL
Recorded Television Cable	----- TV
Designated Television Cable (S.U.E.*)	----- TV
Recorded Fiber Optics Cable	----- FO
Designated Fiber Optics Cable (S.U.E.*)	----- FO
Exist. Water Meter	-----
U/G Test Hole (S.U.E.*)	-----
Abandoned According to U/G Record	----- ATTUR
End of Information	----- E.O.I.

## BOUNDARIES & PROPERTIES

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Property Line Symbol	-----
Exist. Iron Pin	-----
Property Corner	-----
Property Monument	-----
Property Number	----- 123
Parcel Number	----- 6
Fence Line	----- WW & ISBW
Existing Wetland Boundaries	----- WLB
Proposed Wetland Boundaries	----- WLB
Existing Endangered Animal Boundaries	----- EAB
Existing Endangered Plant Boundaries	----- EPB

## BUILDINGS & OTHER CULTURE

Buildings	-----
Foundations	-----
Area Outline	-----
Gate	-----
Gas Pump Vent or U/G Tank Cap	-----
Church	-----
School	-----
Park	-----
Cemetery	-----
Dam	-----
Sign	-----
Well	-----
Small Mine	-----
Swimming Pool	-----

## TOPOGRAPHY

Loose Surface	-----
Hard Surface	-----
Change in Road Surface	-----
Curb	-----
Right of Way Symbol	----- R/W
Guard Post	----- O GP
Paved Walk	-----
Bridge	-----
Box Culvert or Tunnel	-----
Ferry	-----
Culvert	-----
Footbridge	-----
Trail, Footpath	-----
Light House	-----

## VEGETATION

Single Tree	-----
Single Shrub	-----
Hedge	-----
Woods Line	-----
Orchard	-----
Vineyard	----- VINEYARD

## RAILROADS

Standard Gauge	-----
RR Signal Milepost	-----
Switch	-----

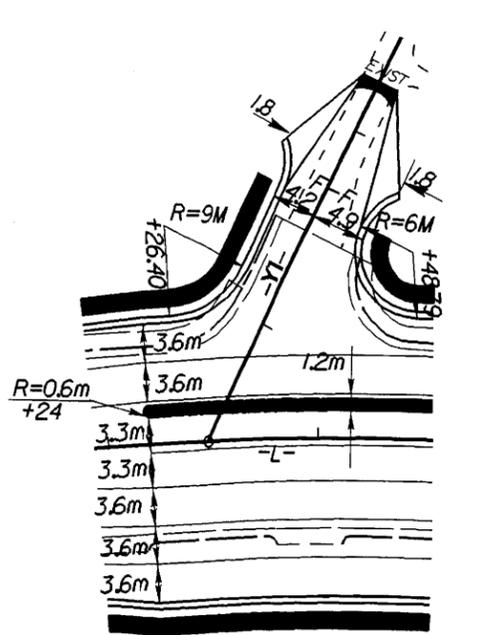
07-1005 (006) 1/97

# INTERSECTIONS DETAIL AND TEMPORARY DRAINAGE DETAIL

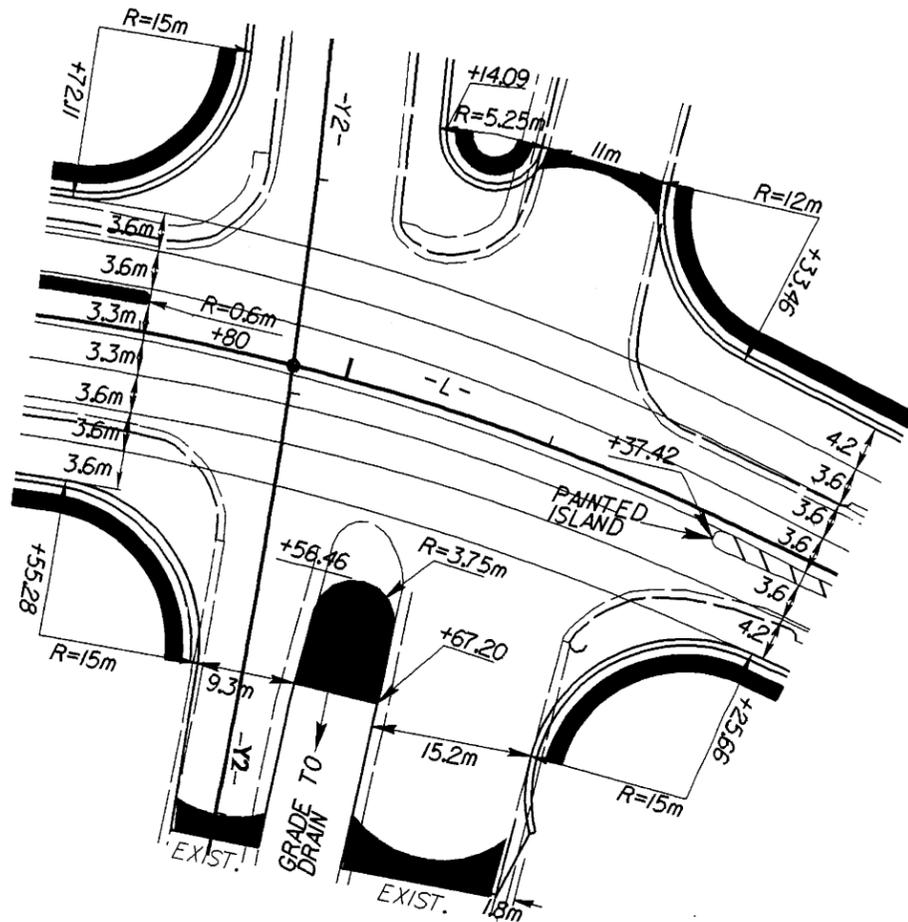
NOT TO SCALE



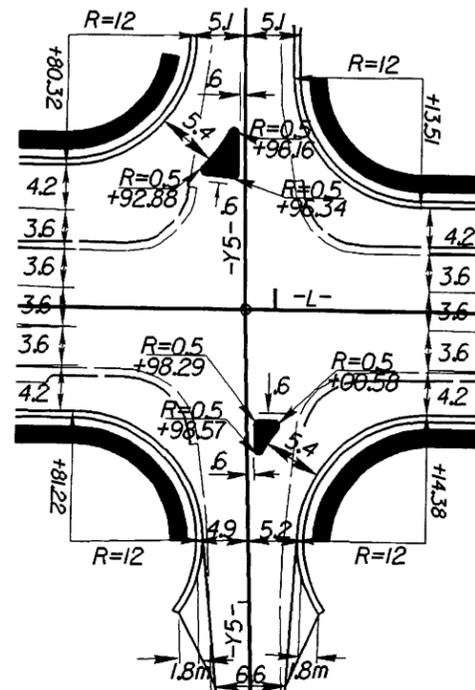
PROJECT REFERENCE NO.	SHEET NO.
U-2306A	2-D
HIGHWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



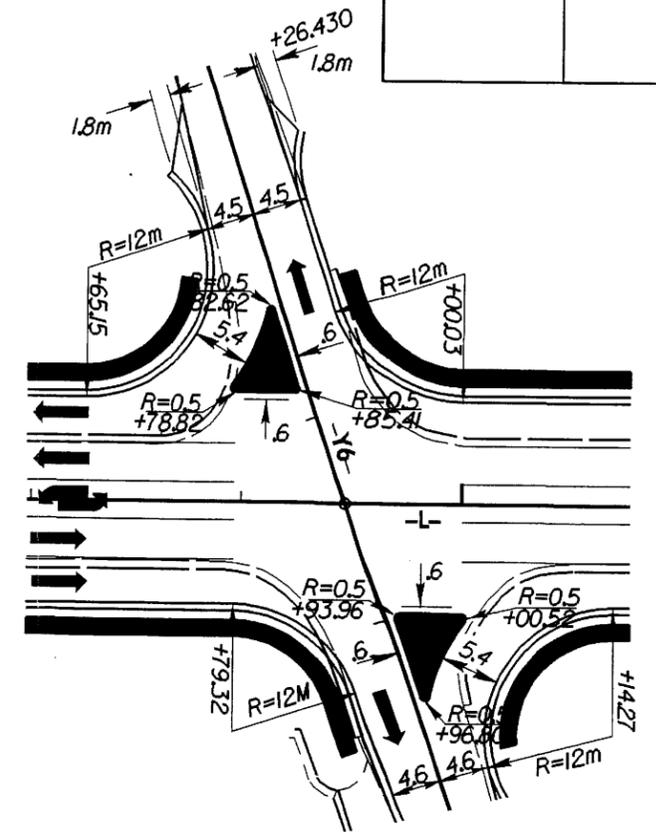
INTERSECTION OF LENOIR RHYNE BLVD AND 1st AVE. PL. (Y1)  
(SEE PLAN SHEET 4)



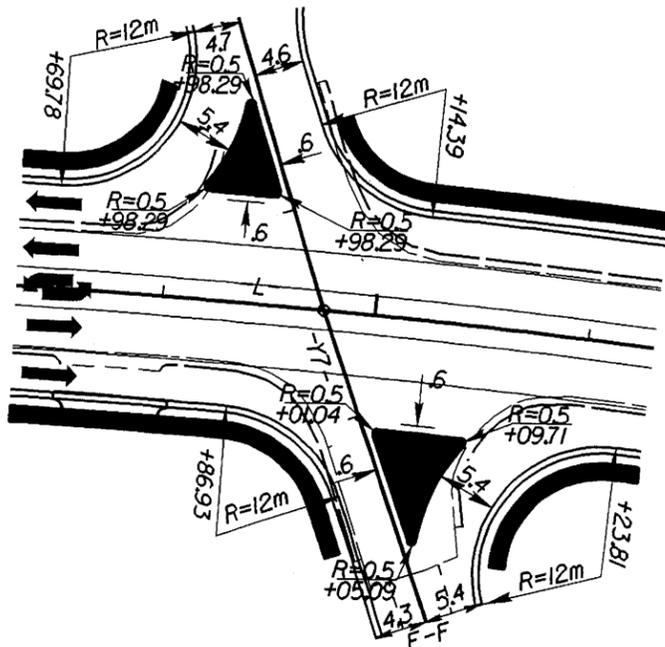
INTERSECTION OF LENOIR RHYNE BLVD AND TATE BLVD. (-Y2-)  
(SEE PLAN SHEET 4)



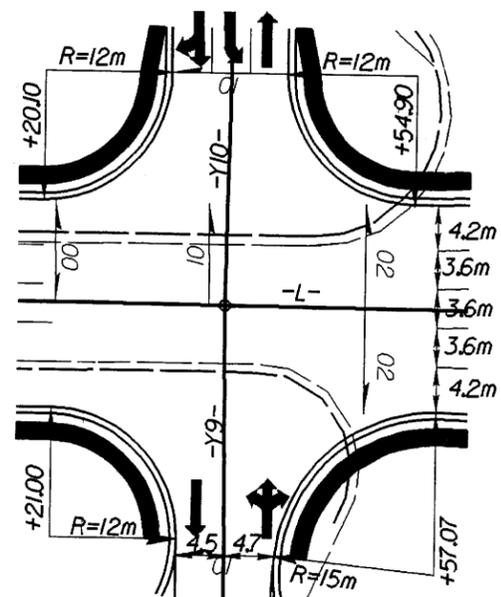
INTERSECTION OF LENOIR RHYNE BLVD AND 'F' AVE. (-Y5-)  
(SEE PLAN SHEET 5)



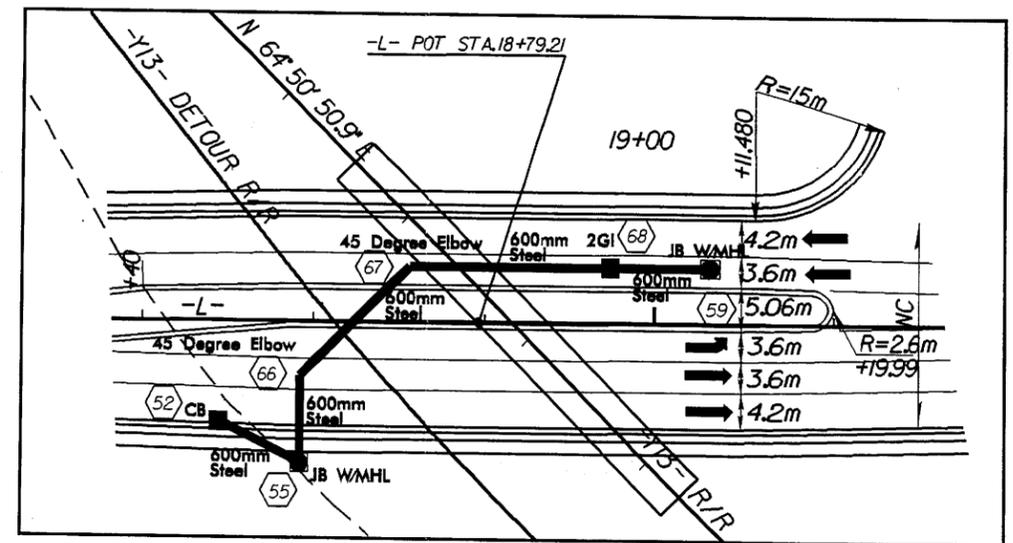
INTERSECTION OF LENOIR RHYNE BLVD AND 'F' AVE. DR. (-Y6-)  
(SEE PLAN SHEET 5)



INTERSECTION OF LENOIR RHYNE BLVD AND 'E' AVE. (-Y7-)  
(SEE PLAN SHEET 5)



INTERSECTION OF LENOIR RHYNE BLVD AND HIGHLAND AVE (-Y10-) AND (-Y9-)  
(SEE PLAN SHEET 6)

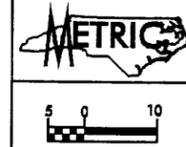


TEMPORARY DRAINAGE SYSTEM DETAIL FOR RAILROAD CONSTRUCTION

NOTE: STRUCTURES 52, 55 AND 59 ARE PERMANENT STRUCTURES

(SEE SHEET 6)

07-03-04



PROJECT REFERENCE NO. <b>U-2306A</b>	SHEET NO. <b>4</b>
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

CONST. REV.  
R/W REV.

**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "U2306A-3001" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 222140.64(46) EASTING: 399187.912(46) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID IS 0.999866076) THE N.C. LAMBERT GRID BEARING LOCALIZED HORIZONTAL GROUND DISTANCE FROM "U2306A-3001" TO "L" STATION 10+73.873 IS 156.49m S 40° 12' 27.7" E ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29

- 3 PETER ROWE DB 1677 PG 811-812
- 5 MURPHY SUDDERTH DB 1199 PG 404 DB 339 PG 569
- 6 ELEANOR DAVIS DB 1270 PG 992
- 9 CITY OF HICKORY DB 1587 PG 237-238
- 10 BURRELL & MARCENIA BROWN DB 756 PG 467
- 12 NC STATE HIGHWAY COMMISSION DB 908 PG 648
- 13 MICHELLE L. DULA DB 1654 PG 911
- 14 AUDREY JOHNSTON DB 1374 PG 938
- 15 GRACE KANIP & LENNIE SEVER DB 2003 PG 1220-1221
- 16 EVA JENNINGS DB 1356 PG 915-916 DB 1331 PG 596
- 17 WILLIAM H. CHAMBLEE DB 1285 PG 440
- 18 DORIS BOST DB 479 PG 350

**BEGIN PROJECT U-2306A**  
-L- POT Sta. 10+73.873

BY-1 PINC 5+00.000 =  
BL-1 PINC 5+00.000 =  
-L- 10+38.00 10.299m (RT)

-L- POT Sta. 10+00.000

BEG. CONSTRUCTION  
-Y2- POS Sta. 11+21.082

-Y2- SC Sta. 11+40.424

-Y1- POT Sta. 10+00.000

BEGIN CONSTRUCTION  
-Y1- POT Sta. 10+55.000

-L- PT Sta. 12+40.542

-L- PC Sta. 11+27.626

BL-2 PINC 5+85.420 =  
BY-2 PINC 6+08.594 =  
-L- 11+23.42 10.529m (RT)

-Y2- STA. 12+85.000  
END CONSTRUCTION

-Y1- POT Sta. 10+92.147 =  
-L- POC Sta. 11+29.337

-L- POC Sta. 11+94.962 =  
-Y2- POC Sta. 12+37.461

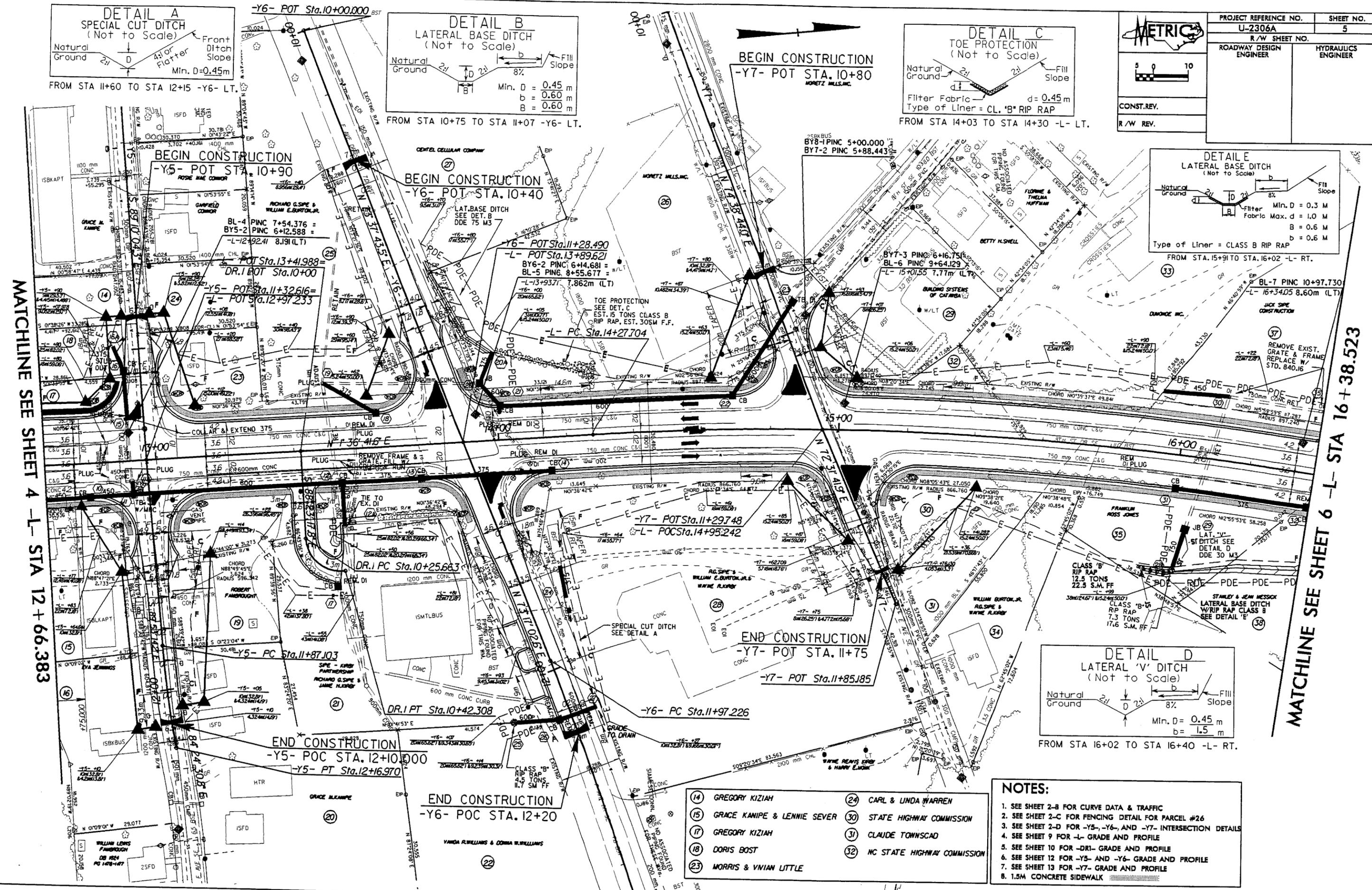
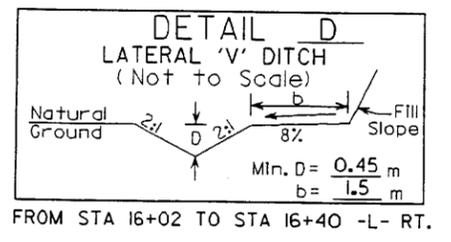
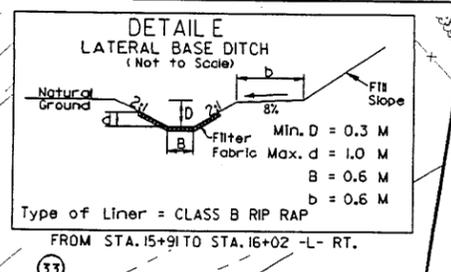
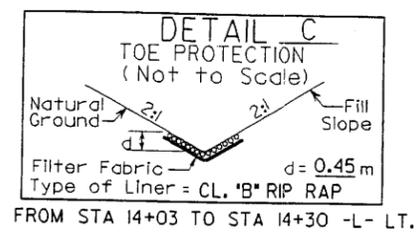
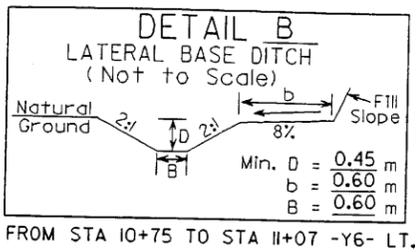
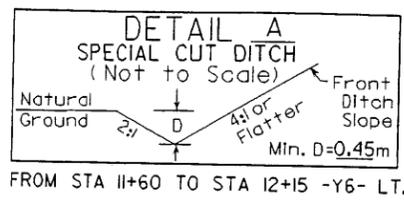
BL-3 PINC 6+94.024 =  
-L- 12+32.34 7.343m (LT)

BY-3 PINC 7+60.666 =  
BY-4 PINC 5+00.000

- NOTES:**
- SEE SHEET 2-B FOR CURVE DATA & TRAFFIC
  - SEE SHEET 9 FOR -L- GRADE AND PROFILE
  - SEE SHEET 10 FOR -Y1- GRADE AND PROFILE
  - SEE SHEET 11 FOR -Y2- GRADE AND PROFILE
  - SEE SHEET 2-C FOR FENCING DETAIL FOR PARCEL #10
  - SEE SHEET 2-D FOR -Y1- AND -Y2- INTERSECTION DETAILS
  - CONCRETE SIDEWALK

MATCHLINE SEE SHEET 5 -L- STA 12+66.383

07-DEC-2006 14:52  
\*\*\*\*\*U2306A-3001.dwg



- |                                  |                                  |
|----------------------------------|----------------------------------|
| (14) GREGORY KIZIAH              | (24) CARL & UNDA WARREN          |
| (15) GRACE KANIPE & LENNIE SEVER | (30) STATE HIGHWAY COMMISSION    |
| (17) GREGORY KIZIAH              | (31) CLAUDE TOWNSCAD             |
| (18) DORIS BOST                  | (32) NC STATE HIGHWAY COMMISSION |
| (23) MORRIS & VIVIAN LITTLE      |                                  |

- NOTES:**
- SEE SHEET 2-B FOR CURVE DATA & TRAFFIC
  - SEE SHEET 2-C FOR FENCING DETAIL FOR PARCEL #26
  - SEE SHEET 2-D FOR -Y5-, -Y6-, AND -Y7- INTERSECTION DETAILS
  - SEE SHEET 9 FOR -L- GRADE AND PROFILE
  - SEE SHEET 10 FOR -DR1- GRADE AND PROFILE
  - SEE SHEET 12 FOR -Y5- AND -Y6- GRADE AND PROFILE
  - SEE SHEET 13 FOR -Y7- GRADE AND PROFILE
  - 1.5M CONCRETE SIDEWALK

MATCHLINE SEE SHEET 4 -L- STA 12 + 66.383

MATCHLINE SEE SHEET 6 -L- STA 16 + 38.523

08-15-2006 (M) 11:23:00 AM C:\p06\2306\5.dwg

07.032497



PROJECT REFERENCE NO.	SHEET NO.
U-2306A	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CONST. REV.  
R/W REV.

**NOTES:**

- SEE SHEET 2-B FOR CURVE DATA & TRAFFIC
  - SEE SHEET 9 AND 10 FOR -L- GRADE AND PROFILE
  - SEE SHEET 13 FOR -Y9- AND -Y10- GRADE AND PROFILE
  - SEE SHEET 2-C FOR FENCING DETAIL FOR PARCEL #40
  - SEE SHEET 2-D FOR TEMP DRAINAGE SYSTEM DETAIL AND -Y9- AND -Y10- INTERSECTION DETAILS
  - SEE SHEETS TW-1 THRU TW-14 FOR TRACKWORK PLANS
  - SEE SHEETS S-1 THRU S-47 FOR STRUCTURE PLANS
8. 1.5M CONCRETE SIDEWALK
- DESIGN EXCEPTION FOR VERTICAL CLEARANCE ON RAILROAD STRUCTURE AT -Y13-

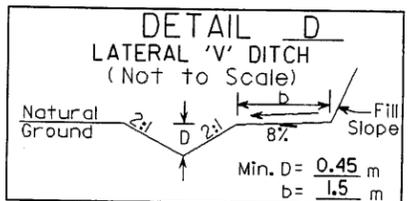
OBLITERATION OF EXIST. ROAD

MATCHLINE SEE SHEET 5 -L- STA 16+38.523

MATCHLINE SEE SHEET 7

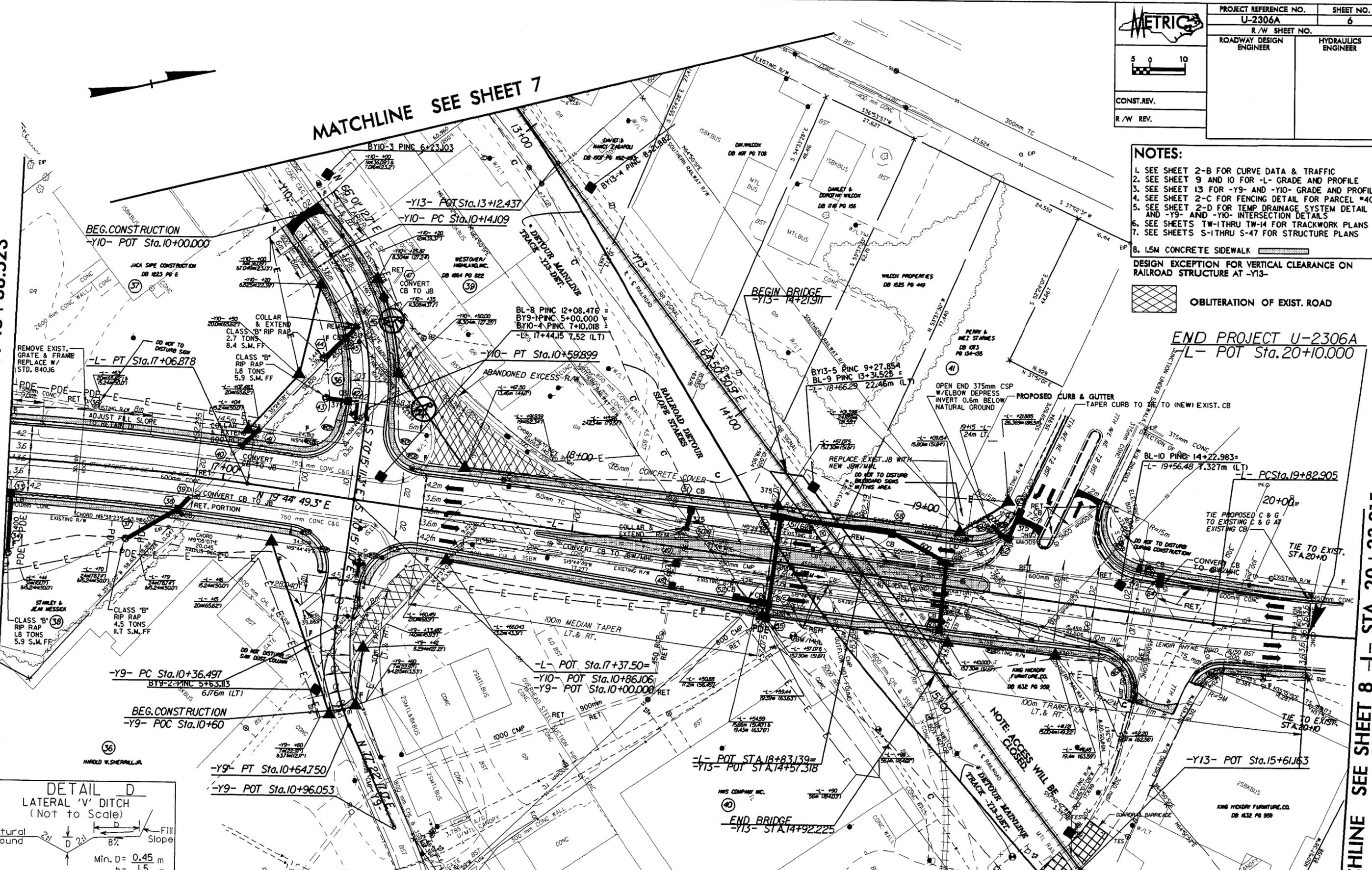
END PROJECT U-2306A  
-L- POT Sta. 20+10.000

MATCHLINE SEE SHEET 8 -L- STA 20+23.215



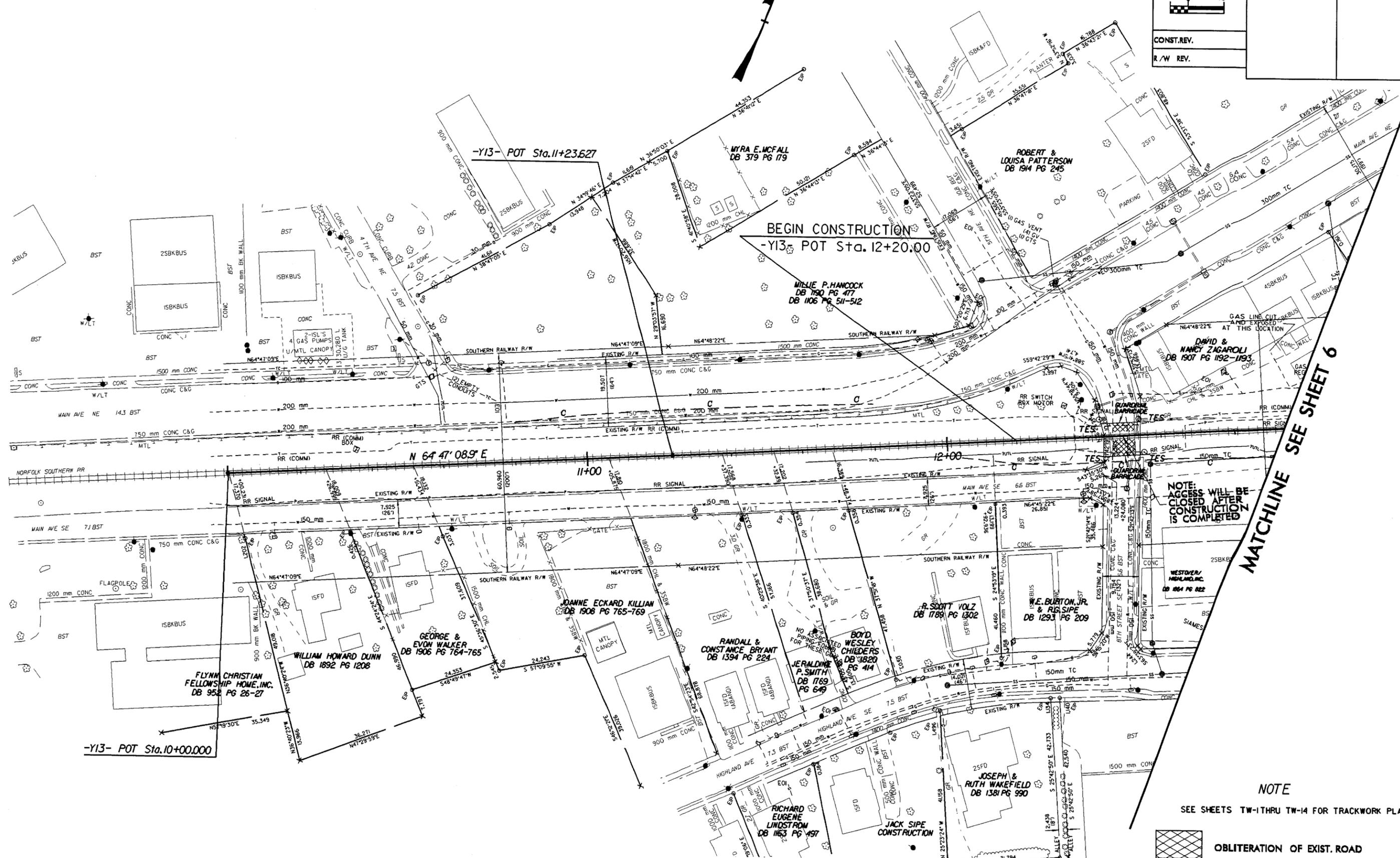
FROM STA 16+02 TO STA 16+40 -L- RT.

MATCHLINE SEE SHEET 8



07-0634.697

PROJECT REFERENCE NO.		SHEET NO.	
U-2306A		7	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
CONST. REV.		R/W REV.	



BEGIN CONSTRUCTION  
-Y13- POT Sta. 12+20.00

-Y13- POT Sta. 10+00.000

NOTE: ACCESS WILL BE CLOSED AFTER CONSTRUCTION IS COMPLETED

MATCHLINE SEE SHEET 6

NOTE

SEE SHEETS TW-1 THRU TW-14 FOR TRACKWORK PLANS



OBLITERATION OF EXIST. ROAD

07-DEC-2006 14:53  
\*\*\*\*\*J:\2306A\7.ppt

