



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

February 28, 2018

U.S. Army Corps of Engineers
Regulatory Field Office
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587-5006

ATTN: Mr. David Bailey
NCDOT Coordinator

Subject: Application for Section 404 Nationwide Permits 13, 23 & 33 and 401 Water Quality Certification and Buffer Authorization for the US 311 (I-74)/NC 68 Interchange Ramp Improvement Project City of High Point in Guilford County, Federal Aid Project No. NHS-0311(32); TIP U-5169, Division 9; Work Order WBS Element 45220.1.ST1.

Dear Sir:

The North Carolina Department of Transportation (NCDOT) and the City of High Point propose to improve the US 311 (US 74) / NC 68 interchange in Guilford County with upgraded ramps, widening of NC 68, and improvement of Y lines to the existing diamond interchange. This action will result in 238 lf feet of permanent impacts resulting from culvert installation. There will be < 0.01 acres (15 lf) of temporary impacts to surface waters from culvert installation and temporary dewatering. There will be <0.01 acre of permanent fill in wetlands. This project will result in 3,719 square feet of allowable buffer impacts to the Randleman Buffer from culvert installation. Mitigation will be required for 238 linear feet of streams, 0.01 acre of wetland and 21,150 square feet of buffer impacts for this project.

Please see enclosed copies of the Pre-Construction Notification (PCN), NCDMS Acceptance Letter, Stormwater Management Plan, Permit Drawings, buffer drawings, and Roadway Plansheets. A Categorical Exclusion (CE) was completed in June 2013 and distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of June 19, 2018 and a review date of May 1, 2018.

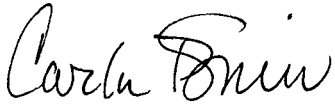
Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
NATURAL ENVIRONMENT SECTION
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

Telephone: (919) 707-6000
Fax: (919) 212-5785
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

A copy of this permit application and its distribution list will be posted on the NCDOT Website at: <http://connect.ncdot.gov/resources/Environmental>. If you have any questions or need additional information, please call Jeff Hemphill at (919) 707-6126.

Sincerely,

for 
Philip S. Harris, P.E., Manager
Environmental Analysis Unit

cc:
NCDOT Permit Application Standard Distribution List



Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits

(along with corresponding Water Quality Certifications)

January 31, 2018 Ver 2.3

*Please note: fields marked with a red asterisk * below are required. You will not be able to submit the form until all mandatory questions are answered.*

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

<https://edocs.deq.nc.gov/WaterResources/0/edoc/624704/PCN%20Help%20File%202018-1-30.pdf>

A. Processing Information

County (or Counties) where the project is located: *

Guilford

Is this project a public transportation project? * (?)

Yes No

Is this a NCDOT Project? *

Yes No

(NCDOT only) T.I.P. or state project number:

U-5169

WBS #

45220.1.2

(for NCDOT use only)

1a. Type(s) of approval sought from the Corps: *

- Section 404 Permit (wetlands, streams and waters, Clean Water Act)
 Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

1b. What type(s) of permit(s) do you wish to seek authorization? *

- Nationwide Permit (NWP)
 Regional General Permit (RGP)

Nationwide Permit (NWP) Number:

23 - Categorical Exclusions

Nationwide Permit (NWP) Number:

33 - Temporary Construction

NWP Number Other:

List all NW numbers you are applying for not on the drop down list.

1c. Type(s) of approval sought from the DWR: *

check all that apply

- 401 Water Quality Certification - Regular
 Non-404 Jurisdictional General Permit
 401 Water Quality Certification - Express
 Riparian Buffer Authorization

1d. Is this notification solely for the record because written approval is not required? *

For the record only for DWR 401 Certification:

Yes No

For the record only for Corps Permit:

Yes No

1e. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts?

If so, attach the acceptance letter from mitigation bank or in-lieu fee program.

Yes No

Acceptance Letter Attachment

Click the upload button or drag and drop files here to attach document

U-5169 DMS Acceptance Letter.pdf

95.48KB

FILE TYPE MUST BE PDF

1f. Is the project located in any of NC's twenty coastal counties? *

Yes No

1h. Is the project located in a designated trout watershed? *

Yes No

Link to trout information: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx>

B. Applicant Information

1a. Who is the Primary Contact? *

NCDOT

1b. Primary Contact Email: *

jhemphill@ncdot.gov

1c. Primary Contact Phone: *

(xxx)xxx-xxxx

(919)707-6126

1d. Who is applying for the permit?

Owner Applicant (other than owner) Agent/Consultant

(Check all that apply)

2. Owner Information

2a. Name(s) on recorded deed:

2b. Deed book and page no.:

2c. Responsible party:

(for Corporations)

2d. Address

Street Address

Address Line 2

City

State / Province / Region

Postal / Zip Code

Country

2e. Telephone Number:

(xxx)xxx-xxxx

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address:*

pharris@ncdot.gov

C. Project Information and Prior Project History

1. Project Information

1a. Name of project:*

U-5169 US 311 (I-74) / NC 68 Interchange Ramp Improvement Project

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town:*

High Point

1d. Driving directions*

If it is a new project and can not easily be found in a GPS mapping system. Please provide directions.

See attached Vicinity map on the Permit Drawings Title Sheet

2. Project Identification

2a. Property Identification Number:

(tax PIN or parcel ID)

2b. Property size:

(in acres)

2c. Project Address

Street Address

Address Line 2

City

State / Province / Region

Postal / Zip Code

Country

2d. Site coordinates in decimal degrees

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

Latitude:*

36.00271

ex: 34.208504

Longitude:*

-79.99130

-77.796371

3. Surface Waters

3a. Name of the nearest body of water to proposed project:*

West Fork Deep River (Oak Hollow Reservoir)

3b. Water Resources Classification of nearest receiving water:*

WS-IV; CA

[Surface Water Lookup](#)

3c. What river basin(s) is your project located in? *

Cape Fear

[River Basin Lookup](#)

4. Project Description

4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: *

Land use in the project vicinity is dominated by the existing interchange with residential and commercial development along the feeder routes and Oak Hollow Reservoir located to the west of the project with parkland along the lake shore.

4b. Attach an 8 1/2 X 11 excerpt from the most recent version of the USGS topographic map indicating the location of the project site. (for DWR)

Click the upload button or drag and drop files here to attach document

File type must be pdf

4c. Attach an 8 1/2 X 11 excerpt from the most recent version of the published County NRCS Soil Survey map depicting the project site. (for DWR)

Click the upload button or drag and drop files here to attach document

File type must be pdf

4d. List the total estimated acreage of all existing wetlands on the property:

<0.01 Acre

4e. List the total estimated linear feet of all existing streams on the property:

(intermittent and perennial)

895'

4f. Explain the purpose of the proposed project: *

The purpose of the project is to increase capacity and reduce congestion at the I-74 (US 311) / NC 68 interchange.

4g. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: *

U-5169 is the improvement of the existing diamond interchange of NC 68/I-74, widening of NC 68 to 3 - 12' travel lanes in each direction with curb and gutter and 5' sidewalks. , and improvement of contributing -Y- lines within the project limits. Improvements to Y-lines includes signal spacing and the elimination of some left turns. Standard road building equipment, such as trucks, dozers, and cranes will be used.

4h. Please upload project drawings for the proposed project.

Click the upload button or drag and drop files here to attach document

U-5169 Final Permit Drawings.pdf

11.51MB

U-5169 Roadway Plans.pdf

5.89MB

File type must be pdf

5. Jurisdictional Determinations

5a. Have the wetlands or streams been delineated on the property or proposed impact areas? *

Yes

No

Unknown

Comments:

May 2012

5b. If the Corps made a jurisdictional determination, what type of determination was made? *

Preliminary

Approved

Unknown

N/A

Corps AID Number:

Example: SAW-2017-99999

5c. If 5a is yes, who delineated the jurisdictional areas?

Name (if known):

Agency/Consultant Company:

ESI

Other:

5d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.

5d1. Jurisdictional determination upload

Click the upload button or drag and drop files here to attach document

File type must be PDF

6. Project History

6a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past? *

Yes

No

Unknown

7. Future Project Plans

7a. Is this a phased project? *

Yes

No

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

D. Proposed Impacts Inventory

1. Impacts Summary

1a. Where are the impacts associated with your project? (check all that apply):

Wetlands

Streams-tributaries

Buffers

Open Waters

Pond Construction

2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

2a. Site # - Reason for impact *	2b. Impact type *	2c. Type of wetland *	2d. Wetland name *	2e. Forested *	2f. Type of Jurisdiction *	2g. Impact area *
Site 1 - Roadway Fill <small>Map label (e.g. Road Crossing 1 - Culvert, dewatering, etc)</small>	P <small>Permanent (P) or Temporary (T)</small>	Headwater Forest	WA	Yes	Both <small>(404, 10) or DWR(401, other)</small>	0.010 <small>(acres)</small>

2g. Total Temporary Wetland Impact

0.000

2g. Total Permanent Wetland Impact

0.010

2g. Total Wetland Impact

0.010

2h. Comments:

Both impacts in wetlands are less than 0.01 acre (<0.01) and added up = <0.01
<0.01 acre of hand Clearing is not determined a jurisdictional impact.

3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

3a. Site # - Reason for impact *	3b. Impact type *	3c. Type of impact *	3d. Stream name *	3e. Stream Type *	3f. Type of Jurisdiction *	3g. Stream width *	3h. Impact length *
Site 2 - Pipe Extension Map label (e.g. Road Crossing 1)	P Permanent (P) or Temporary (T)	Culvert	SB	Intermittent Perennial (PER) or intermittent (INT)	Corps	3 Average (feet)	12 (linear feet)
Site 4 - Culvert Map label (e.g. Road Crossing 1)	P Permanent (P) or Temporary (T)	Culvert	SA	Intermittent Perennial (PER) or intermittent (INT)	Corps	3 Average (feet)	226 (linear feet)
Site 2 - Pipe Extension Map label (e.g. Road Crossing 1)	T Permanent (P) or Temporary (T)	Culvert	SB	Intermittent Perennial (PER) or intermittent (INT)	Corps	3 Average (feet)	5 (linear feet)
Site 4 - Culvert Map label (e.g. Road Crossing 1)	T Permanent (P) or Temporary (T)	Culvert	SA	Intermittent Perennial (PER) or intermittent (INT)	Corps	3 Average (feet)	10 (linear feet)

** All Perennial or Intermittent streams must be verified by DWR or delegated local government.

3i. Total jurisdictional ditch impact in square feet:

0

3i. Total permanent stream impacts:

238

3i. Total temporary stream impacts:

15

3i. Total stream and tributary impacts:

253

3j. Comments:

6. Buffer Impacts (for DWR)

If project will impact a protected riparian buffer, then complete the chart below. Individually list all buffer impacts below.

6a. Project is in which protect basin(s)? *

Check all that apply.

- | | |
|---|---|
| <input type="checkbox"/> Neuse | <input type="checkbox"/> Tar-Pamlico |
| <input type="checkbox"/> Catawba | <input checked="" type="checkbox"/> Randleman |
| <input type="checkbox"/> Goose Creek | <input type="checkbox"/> Jordan Lake |
| <input type="checkbox"/> Other <input type="text"/> | |

6b. Impact Type *	6c. Per or Temp *	6d. Stream name *	6e. Buffer mitigation required? *	6f. Zone 1 impact *	6g. Zone 2 impact *
Site 1 - Allowable Location and Exempt, Allowable, allowable w/ mitigation	P Permanent (P) or Temporary (T)	SE	No	0 (square feet)	394 (square feet)
Site 2 - Allowable Location and Exempt, Allowable, allowable w/ mitigation	P Permanent (P) or Temporary (T)	SB	No	1,970 (square feet)	1,355 (square feet)

6b. Impact Type *	6c. Per or Temp *	6d. Stream name *	6e. Buffer mitigation required? *	6f. Zone 1 impact *	6g. Zone 2 impact *
Site 3 - Mitigable Location and Exempt, Allowable, allowable w/ mitigation	P Permanent (P) or Temporary (T)	SA	Yes	14,740 (square feet)	6,410 (square feet)

6h. Total buffer impacts:

	Zone 1	Zone 2
Temporary impacts:	0.00	0.00

	Zone 1	Zone 2
Permanent impacts:	16,710.00	8,159.00

	Zone 1	Zone 2
Total buffer impacts:	16,710.00	8,159.00

6i. Comments:

Supporting Documentation - i.e. Impact Maps, Plan Sheet, etc.

Click the upload button or drag and drop files here to attach document

U-5169 Final Buffer Drawings.pdf

2.3MB

File must be PDF

E. Impact Justification and Mitigation

1. Avoidance and Minimization

1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project: *

In order to minimize impacts to the Randleman Lake Watershed, filtration basins have been designed in Quadrants B and C to treat runoff from the interchange of NC 68 and I-74. The existing hazardous spill basin at -LSB- Sta 11+00 RT will not be impacted during the construction of the project. Rap pads were used at pipes outlets throughout the project to reduce velocities into wetlands. Grass swales were utilized throughout the project to maintain existing drainage patterns.

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques: *

Best Management Practices for Surface Waters will be used during all phases of construction.

2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?

Yes No

2c. If yes, mitigation is required by (check all that apply):

DWR Corps

2d. If yes, which mitigation option(s) will be used for this project?

Mitigation bank Payment to in-lieu fee program Permittee Responsible Mitigation

4. Complete if Making a Payment to In-lieu Fee Program

4a. Approval letter from in-lieu fee program is attached.

Yes

4b. Stream mitigation requested:

(linear feet)

238

4c. If using stream mitigation, what is the stream temperature:

warm

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's [RIBITS](#) website.

4d. Buffer mitigation requested (DWR only):

(square feet)

21150

4e. Riparian wetland mitigation requested:

(acres)

0.01

4f. Non-riparian wetland mitigation requested:

(acres)

4g. Coastal (tidal) wetland mitigation requested:

(acres)

4h. Comments

6. Buffer mitigation (State Regulated Riparian Buffer Rules) - required by DWR

6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation? If yes, you must fill out this entire form - please contact DWR for more information.

Yes No

6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation calculate the amount of mitigation required in the table below.

6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1			

Zone 2

6f. Total buffer mitigation required

6g. If buffer mitigation is required, is payment to a mitigation bank or NC Division of Mitigation Services proposed?

Yes No

6j. Comments:

See attached DMS Acceptance Letter

F. Stormwater Management and Diffuse Flow Plan (required by DWR)

*** Recent changes to the stormwater rules have required updates to this section .***

1. Diffuse Flow Plan

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

Yes No

1b. All buffer impacts and high ground impacts require diffuse flow or other form of stormwater treatment. If the project is subject to a state implemented riparian buffer protection program, include a plan that fully documents how diffuse flow will be maintained.

All Stormwater Control Measures (SCM)s must be designed in accordance with the [NC Stormwater Design Manual](#). Associated supplement forms and other documentation shall be provided.

What type of SCM are you providing?

- Level Spreader
 Vegetated Conveyance (lower SHWT)
 Wetland Swale (higher SHWT)
 Other SCM that removes minimum 30% nitrogen
(check all that apply)

For a list of options to meet the diffuse flow requirements, click [here](#).

Diffus Flow Documentation

Click the upload button or drag and drop files here to attach document

File type must be PDF

2. Stormwater Management Plan

2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250? *

Yes No

G. Supplementary Information

1. Environmental Documentation

1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? *

Yes No

1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? *

Yes No

1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) *

Yes No

NEPA or SEPA Final Approval Letter

Click the upload button or drag and drop files here to attach document

FILE TYPE MUST BE PDF

2. Violations (DWR Requirement)

2a. Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)? *

Yes No

2b. Is this an after-the-fact permit application? *

Yes No

3. Cumulative Impacts (DWR Requirement)

3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? *

Yes No

3b. If you answered "no," provide a short narrative description.

Due to the minimal transportation impact resulting from this bridge replacement, this project will neither influence nearby land uses nor stimulate growth. Therefore, a detailed indirect or cumulative effects study will not be necessary.

4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? *

Yes No N/A

5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? *

Yes No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? *

Yes No

5d. Is another Federal agency involved? *

Yes No Unknown

5e. Is this a DOT project located within Division's 1-8? *

Yes No

5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? *

USFWS County List, field surveys, and the U.S. Fish and Wildlife Service's (USFWS's) Programmatic BO titled "Northern Long-eared Bat (NLEB) Programmatic Biological Opinion for North Carolina Department of Transportation (NCDOT) Activities in Eastern North Carolina (Divisions 1-8).

6. Essential Fish Habitat (Corps Requirement)

6a. Will this project occur in or near an area designated as an Essential Fish Habitat? *

Yes No

6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? *

NMFS County Index

7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: <http://gis.ncdcr.gov/hpweb/>)

7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? *

Yes No

7b. What data sources did you use to determine whether your site would impact historic or archeological resources? *

North Carolina Department of Cultural Resources' State Historic Preservation Office's (SHPO) Letter of December 23, 2010.

7c. Historic or Prehistoric Information Upload

Click the upload button or drag and drop files here to attach document

File must be PDF

8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: <https://msc.fema.gov/portal/search>

8a. Will this project occur in a FEMA-designated 100-year floodplain? *

Yes No

8c. What source(s) did you use to make the floodplain determination? *

FEMA Maps

Miscellaneous

Miscellaneous attachments not previously requested.

Click the upload button or drag and drop files here to attach document

U-5169 Cover Letter.pdf

724.52KB

File must be PDF

Signature

*

By checking the box and signing below, I certify that:

- I have given true, accurate, and complete information on this form;
- I agree that submission of this PCN form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the PCN form.

Full Name: *

Carla Dagninio

Signature



Date

2/28/2018



Environmental Quality

ROY COOPER
Governor

February 22, 2018

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

Dear Mr. Harris:

Subject: DMS Mitigation Acceptance Letter:

U-5169, NC 68 / US 311 Interchange Improvement, Guilford County

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the stream, wetland and buffer mitigation for the subject project. Based on the information supplied by you on February 21, 2018, the impacts are located in CU 03030003 of the Cap Fear River basin in the Central Piedmont (CP) Eco-Region, and are as follows:

Stream and Wetlands	River Basin	CU Location	Eco-Region	Stream			Wetlands		
				Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	Cape Fear	03030003	CP	0	0	238.0	0.01	0	0

*Some of the impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

All buffer mitigation requests and approvals are administrated through the Riparian Restoration Buffer Fund. The NCDOT will be responsible to ensure that appropriate compensation for the buffer mitigation will be provided in the agreed upon method of fund transfer. Upon receipt of the NCDWR's Buffer Authorization Certification, DMS will transfer funds from the NCDOT 2984 Fund into the Riparian Restoration Buffer Fund. Upon completion of transfer payment, NCDOT will have completed its riparian buffer mitigation responsibility for TIP Number U-5169. Subsequently, DMS will conduct a review of current NCDOT ILF Program mitigation projects in the river basin to determine if available buffer mitigation credits exist. If there are buffer mitigation credits available, then the Riparian Restoration Buffer Fund will purchase the appropriate amount of buffer mitigation credits from NCDOT ILF Program.

Nothing Compares

Mr. Harris
February 22, 2018
Page Two
NCDOT TIP U-5169

Buffer	River Basin	CU	Eco-Region	Buffer Impacts		
				Zone 1	Zone 2	TOTAL
Impacts	Cape Fear	03030003	CP	14,740.0	6,410.0	21,150.0

DMS commits to implementing sufficient compensatory mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from DMS

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

Sincerely,



James B. Stanfill
DMS Credit Management Supervisor

Cc: Mr. David Bailey, USACE – Raleigh Regulatory Field Office
Ms. Amy Chapman, NC Division of Water Resources
File: U-5169

 Nothing Compares



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 2.07; Released October 2016)

WBS Element: 45220.1.2 TIP No.: U-5169 County(ies): Guilford Page 1 of 5

General Project Information

WBS Element:	45220.1.2	TIP Number:	U-5169	Project Type:	Roadway Widening	Date:	2/1/2018
NCDOT Contact:	Bill Elam, Jr. PE		Contractor / Designer:		HNTB North Carolina, P.C.		
Address:	1020 Birch Ridge Rd Raleigh, NC 27610		Address:	343 E. Six Forks Rd Suite 200 Raleigh, NC 27609			
	Phone:	(919) 707-6718		Phone:	(919) 424-0437		
	Email:	belam@ncdot.gov		Email:	jabyrd@hntb.com		
City/Town:	High Point		County(ies):	Guilford			
River Basin(s):	Cape Fear		CAMA County?	No			
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	0.64	Surrounding Land Use:	Residential / Urban					
	Proposed Project		Existing Site					
Project Built-Upon Area (ac.)	25.0	ac.	18.3	ac.				
Typical Cross Section Description:	The proposed typical section for the main line is a 6 - lane divided facility consisting of 3 - 12' travel lanes with 2 - 12' paved shoulders in each direction and a varied width grassed median. It also includes widening to NC 68 to 3 - 12' travel lanes in each direction with curb and gutter and 5' sidewalks.			The existing typical section for the main line is a 4 - lane divided facility consisting of 2 - 12' travel lanes with two paved shoulders in each direction and a 48' grassed median. Existing NC 68 consists of 5 - 10' lanes plus a paved center turn lane bound by curb and gutter with no side walks.				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	72,144	Year:	2038	Existing:	41,584	Year:	2018
General Project Narrative: (Description of Minimization of Water Quality Impacts)	U-5169 is the improvement of the existing diamond interchange of NC 68/I-74, widening of NC 68, and improvement of contributing -Y- lines within the project limits. Half of the interchange lies in the Randleman Lake watershed and is subject to the Randleman Lake buffer rules. In order to minimize impacts to the Randleman Lake Watershed, media filters have been designed in Quadrants B and C to treat runoff from the interchange of NC 68 and I-74. The existing hazardous spill basin at -LSB- Sta 11+00 RT will not be impacted during the construction of the project. Rap pads were used at pipes outlets throughout the project to reduce velocities into wetlands. Grass swales were utilized throughout the project to maintain existing drainage patterns.							

Waterbody Information

Surface Water Body (1):	West Fork Deep River		NCDWR Stream Index No.:	17-3-(1.5)			
NCDWR Surface Water Classification for Water Body	Primary Classification:		Water Supply IV (WS-IV)				
	Supplemental Classification:						
Other Stream Classification:							
Impairments:							
Aquatic T&E Species?	Comments:						
NRTR Stream ID:	UT to West Fork Deep River - SA		Buffer Rules in Effect:	Randleman Lake			
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A		
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)			
(If yes, provide justification in the General Project Narrative)							



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



(Version 2.07; Released October 2016)

WBS Element: 45220.1.2
TIP No.: U-5169
County(ies): Guilford
Page 2 **of** 5

Additional Waterbody Information

Surface Water Body (2):	West Fork Deep River (Oak Hollow Reservoir)		NCDWR Stream Index No.:	17-3-(0.7)	
NCDWR Surface Water Classification for Water Body	Primary Classification:	Water Supply IV (WS-IV)			
	Supplemental Classification:	CA			
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:	UT to West Fork Deep River (Oak Hollow Reservoir) - SB		Buffer Rules in Effect:	Randleman Lake	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A	Dissipator Pads Provided in Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
	(If yes, provide justification in the General Project Narrative)				

09.06/99

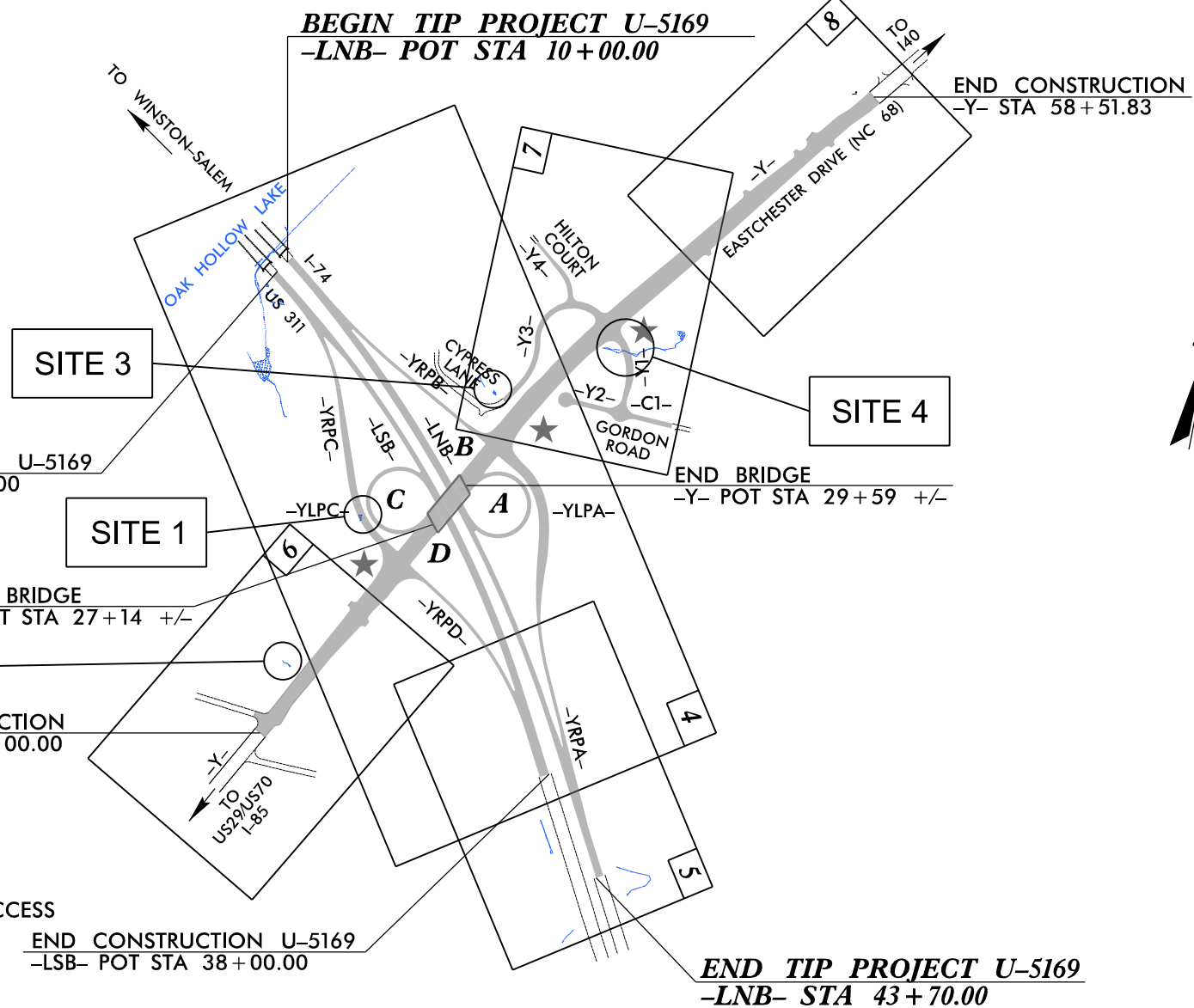
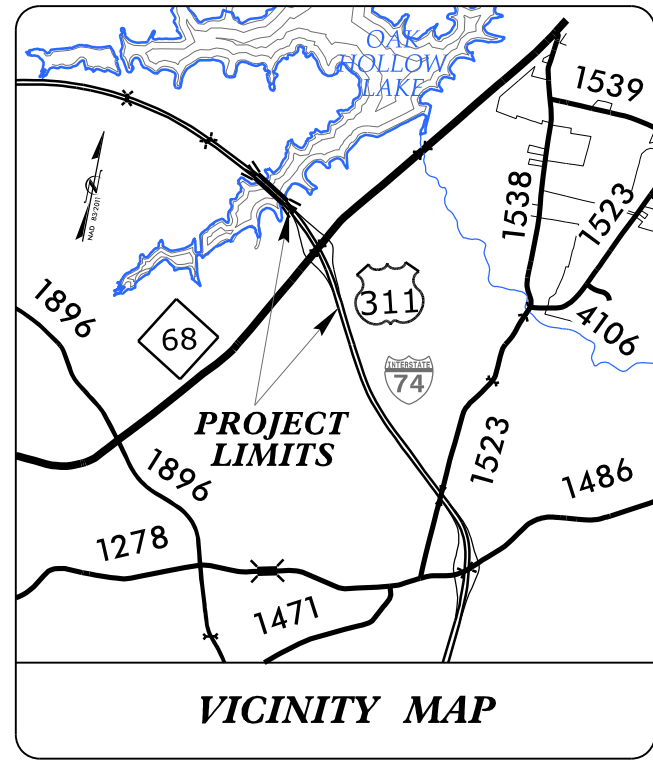
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

GUILFORD COUNTY

LOCATION: I-74/US311 AND NC 68 (EASTCHESTER DRIVE)
INTERCHANGE IMPROVEMENTS
TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURES AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5169	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45220.1.2	NHS-0311(32)	PE	
45220.2.1	NHS-0311(32)	R/W	
45220.2.2	NHS-0311(32)	UTILITIES	
45220.3.1	NHS-0311(32)	CONST.	

TIP PROJECT: U-5169



WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING SHEET 1 OF 20

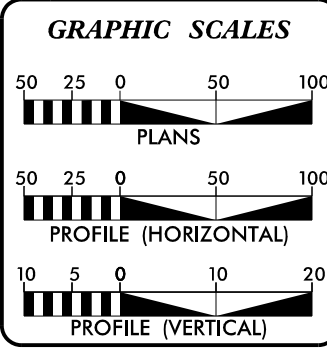


NOTES:

- CLEARING ON THIS PROJECT SHALL BE PREFORMED TO THE LIMITS ESTABLISHED BY METHOD II & III.
- THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF HIGH POINT.
- A PORTION OF THIS PROJECT IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT: C204071



DESIGN DATA

ADT 2018	=	41,584
ADT 2038	=	72,144
K	=	12 %
D	=	60 %
T	=	6 % *
V	=	65 MPH
* TTST = 4% DUAL 2%		
FUNC CLASS = INTERSTATE STATEWIDE TIER		

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5169	=	0.638 MILES
TOTAL LENGTH TIP PROJECT U-5169	=	0.638 MILES

Prepared in the Office of:

HNTB
2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: JUNE 30, 2016

LETTING DATE: JUNE 19, 2018

DOUGLAS M. WHEATLEY, PE
PROJECT ENGINEER

ROY H. TELLIER, PE
PROJECT DESIGN ENGINEER

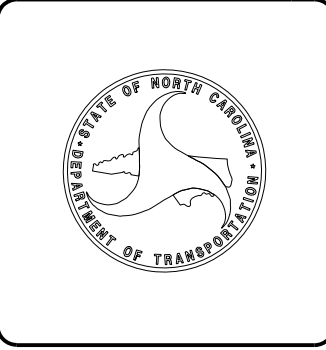
TATIA L. WHITE, PE, PLS
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



2/1/2018
\\dr-awings\U5169_hyd_t-sh.dgn
HNTB

PROJECT REFERENCE NO. U-5169	SHEET NO. 2D-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

FILTRATION BASIN TYPICAL CROSS SECTION DETAILS

NOTES

- FOR BASIN AND FOREBAY LAYOUTS SEE SHEETS 2D-6, 2D-7, AND 2D-8.
- FOREBAYS WITH PIPED INLETS SHALL BE LINED WITH CLASS B RIPRAP.
- ACCESS BERM SHOULD BE PROVIDED FOR MAINTENANCE.
- 6-INCH UNDERDRAIN IS THE PRIMARY DRAWDOWN DEVICE FOR STORMS LESS THAN OR EQUAL TO THE MAGNITUDE OF THE WATER QUALITY EVENT.
- UNDERDRAIN PIPES SHOULD BE PLACED A MAXIMUM OF 5 FEET FROM THE EDGE OF THE BASIN AND MUST HAVE A MAXIMUM OF 10 FEET BETWEEN THE UNDERDRAIN PIPES.
- UNDERDRAIN SHOULD BE BEDDED ON A THIN LAYER OF NO.57 WASHED STONE AND BACKFILLED TO A TOTAL MINIMUM STONE DEPTH OF 12 INCHES.
- PERFORATED PIPE HOLES ARE 3/8 INCH IN DIAMETER AND LONGITUDINALLY SPACED 6 INCHES ON CENTER ALONG 4 ROWS.
- TOP OF MEDIA FILTER MUST BE LEVEL.
- IF BASIN IS USED TO COLLECT SEDIMENTATION AS AN EROSION CONTROL MEASURE, DO NOT INSTALL UNDERDRAIN PIPES, WASHED STONE, NOR ENGINEERED SOIL MEDIA FILTER UNTIL EROSION CONTROL MEASURES INSIDE MEDIA FILTER BASIN ARE REMOVED.

REFERENCED SPECIAL DETAILS

FOR "FOREBAY AND CLEANOUT DETAILS" SEE SHEET 2D-2
 FOR "OUTLET CONTROL STRUCTURE DETAILS" SEE SHEET 2D-3
 FOR "TRASH RACK DETAILS" SEE SHEET 2D-4

SPECIFICATIONS

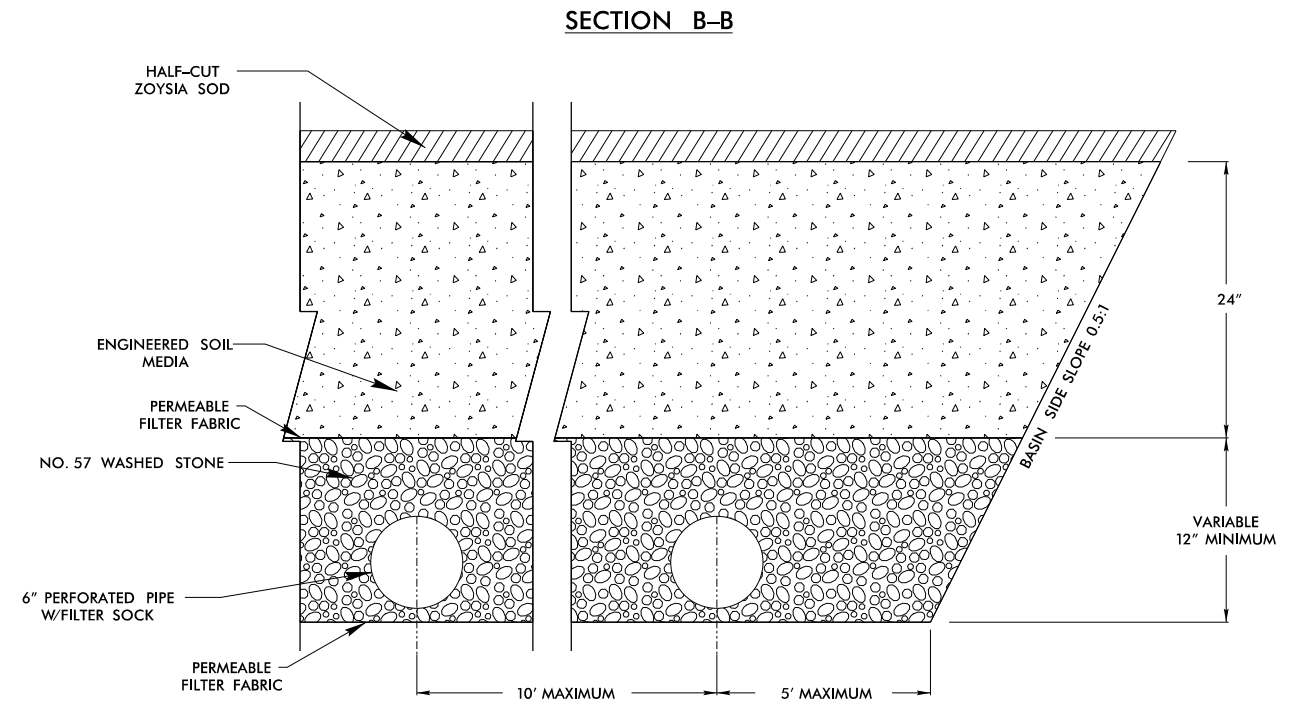
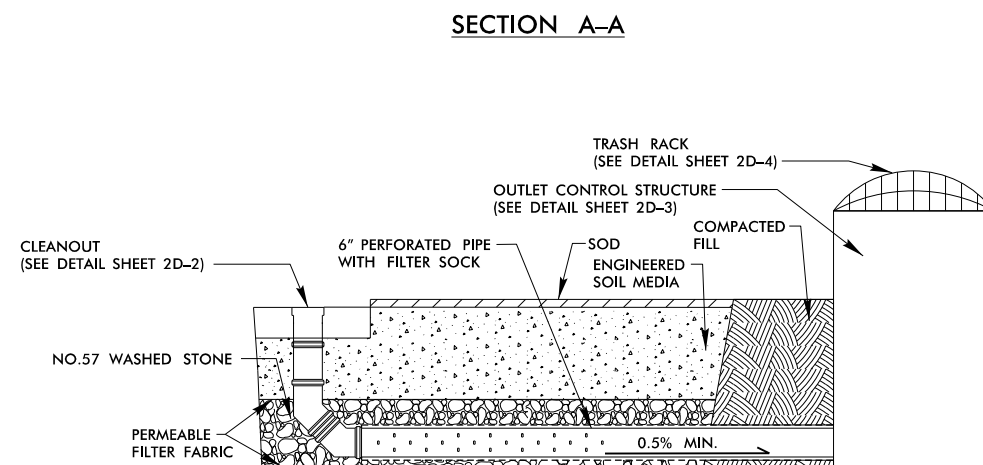
ENGINEERED SOIL MEDIA SHALL CONSIST OF:
 - SEE EXPANDED SLATE MEDIA SPECIAL PROVISION

PLAN
 SEE SHEET 2D-6 FOR "PLAN VIEW - FILTRATION BASIN 1"
 SEE SHEET 2D-7 FOR "PLAN VIEW - FILTRATION BASIN 2"

PROFILE
 SEE SHEET 2D-8 FOR TYPICAL SECTIONS

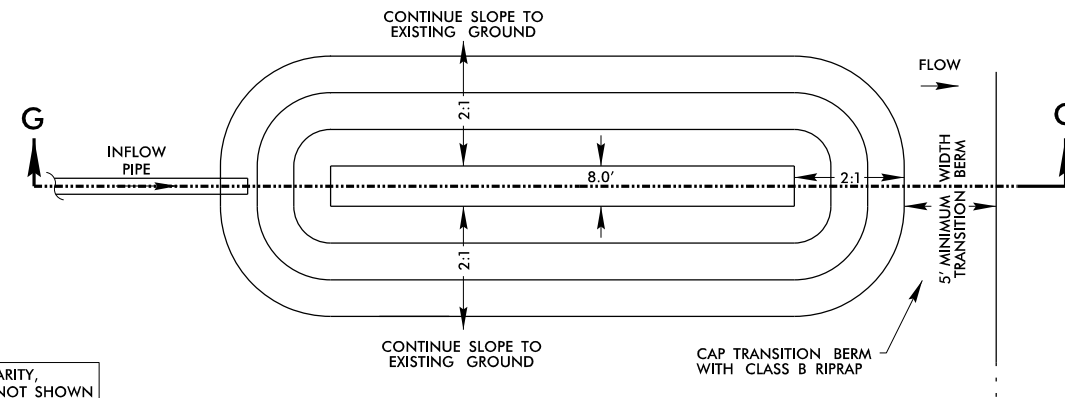
PERMIT DRAWING
SHEET 2 OF 20

REVISIONS



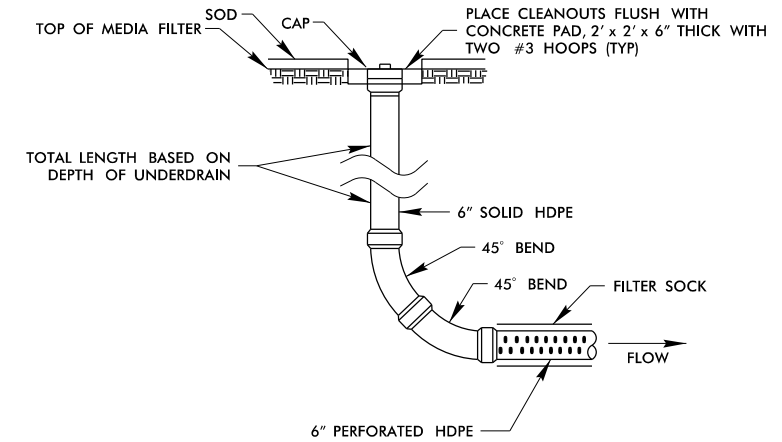
PROJECT REFERENCE NO. U-5169	SHEET NO. 2D-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

FOREBAY AND CLEANOUT DETAILS



FOR CLARITY,
RIPRAP NOT SHOWN

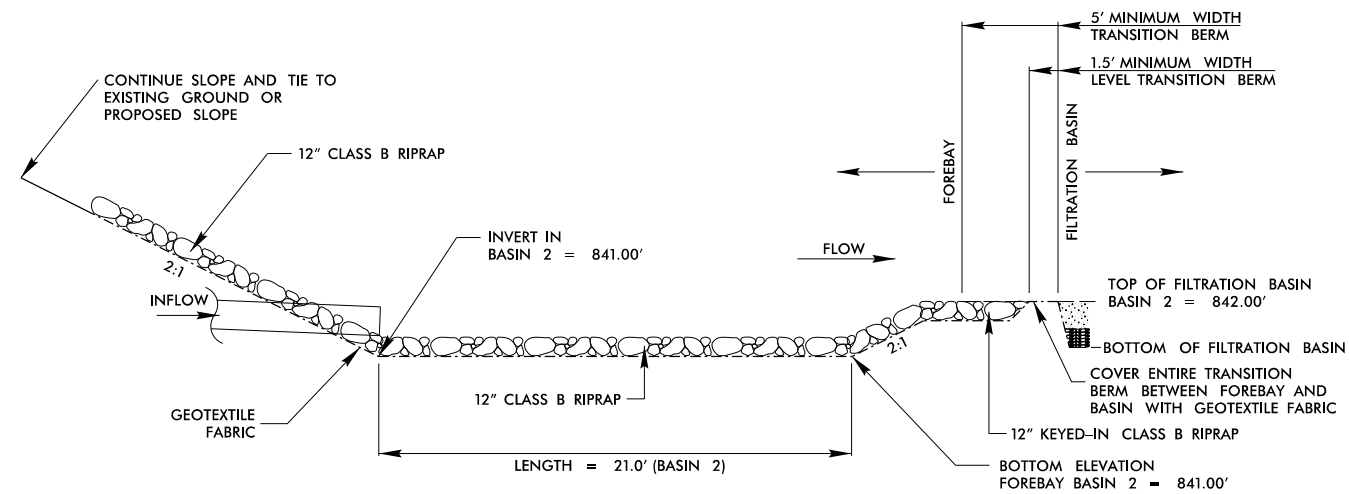
PLAN
LINEAR FOREBAY



NOTES:

1. ONLY UNDERDRAIN PIPE THAT IS LOCATED BENEATH ENGINEERED SOIL MEDIA SHOULD BE PERFORATED.
2. PROVIDE THREADED SCREW CAP.

CLEANOUT DETAIL



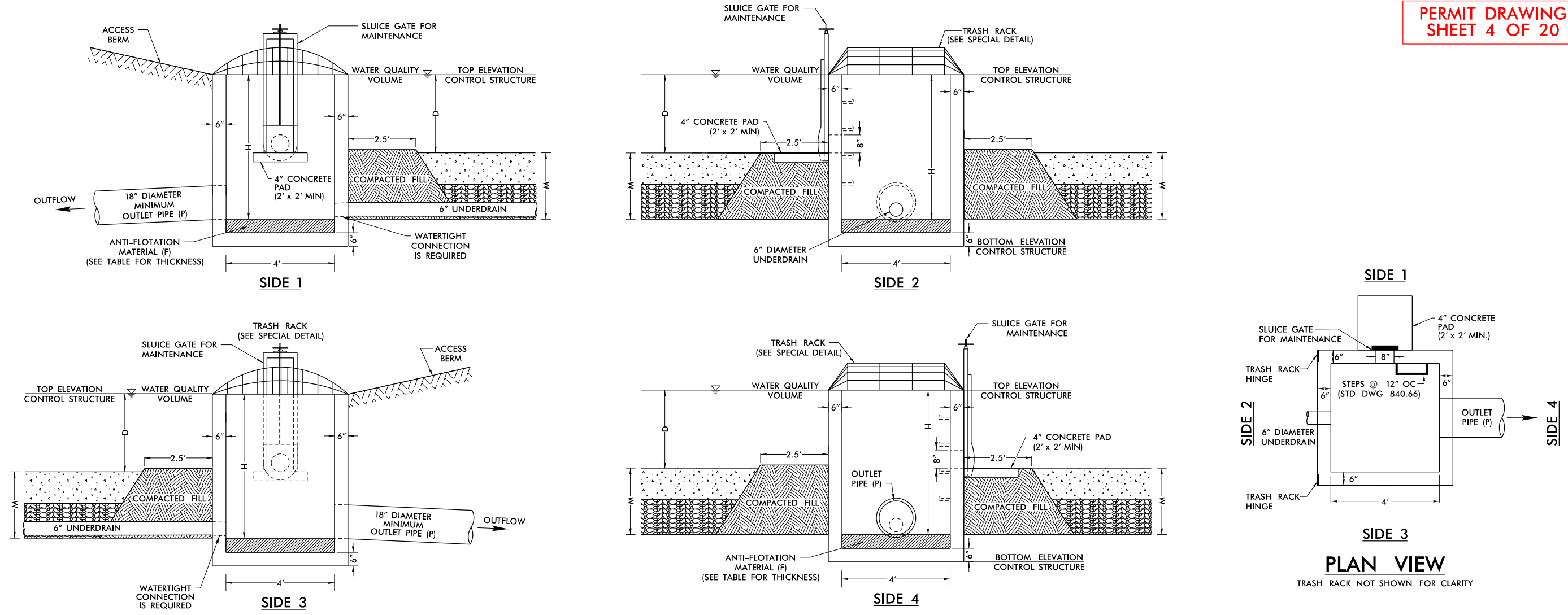
SECTION G-G
FOREBAY

REVISIONS

PERMIT DRAWING
SHEET 3 OF 20

OUTLET CONTROL STRUCTURE DETAILS

PERMIT DRAWING
SHEET 4 OF 20



DIMENSIONS

D = PONDING DEPTH (BASED ON WATER QUALITY ELEVATION)
 M = MEDIA FILTER + AGGREGATE THICKNESS
 F = ANTI-FLOTATION MATERIAL THICKNESS
 SLAB THICKNESS IS 0.5'
 MINIMUM H = D + M

NOTES

1. A SLUICE GATE COVERING AN 8" ORIFICE WILL PROVIDE FOR DRAWDOWN DURING BASIN MAINTENANCE AND SHALL REMAIN CLOSED DURING NORMAL OPERATION.
2. THE SLUICE GATE FOR MAINTENANCE SHALL BE PLACED ON THE OUTSIDE OF THE STRUCTURE.
3. SLUICE GATES SHALL PROVIDE A WATERTIGHT SEAL. PROVIDE ADEQUATE CLEARANCE FOR GATE OPERATION AND FOR PROPER SEATING OF GATE OVER PIPE.
4. ENSURE THAT THE TRASH RACK OPENS FREELY AND WITHOUT INTERFERENCE WITH SLUICE GATES.
5. ANTI-FLOTATION MATERIAL IS REQUIRED AND SHALL BE CONCRETE.

REFERENCED SPECIAL DETAILS

FOR "FILTRATION BASIN TYPICAL CROSS SECTION DETAILS" SEE SHEET 2D-1
 FOR "TRASH RACKS DETAILS" SEE SHEET 2D-4

MINIMUM DIMENSIONS FOR FILTRATION BASIN DRAWDOWN STRUCTURE

OUTLET FOR BASIN	STRUCTURE NUMBER	TOP ELEVATION FILTRATION BASIN	TOP ELEVATION CONTROL STRUCTURE	BASIN DEPTH (D)	MEDIA FILTER + AGGREGATE DEPTH (M)	ANTI-FLOTATION MATERIAL (F) THICKNESS	BOTTOM ELEVATION CONTROL STRUCTURE	DIMENSIONS CONTROL STRUCTURE (W x L x H)	INVERT ELEVATION UNDERDRAIN OUTLET PIPE	DIAMETER OUTLET PIPE (P)	INVERT ELEVATION OUTLET PIPE (P)
BASIN 1	0423	826.00	828.40	2.4'	3.00'	1.0'	821.50	4'x4'x7.0'	823.00	18"	823.00
BASIN 2	0455	842.00	843.50	1.5'	3.00'	1.0'	836.50	4'x4'x7.0'	839.00	18"	838.00

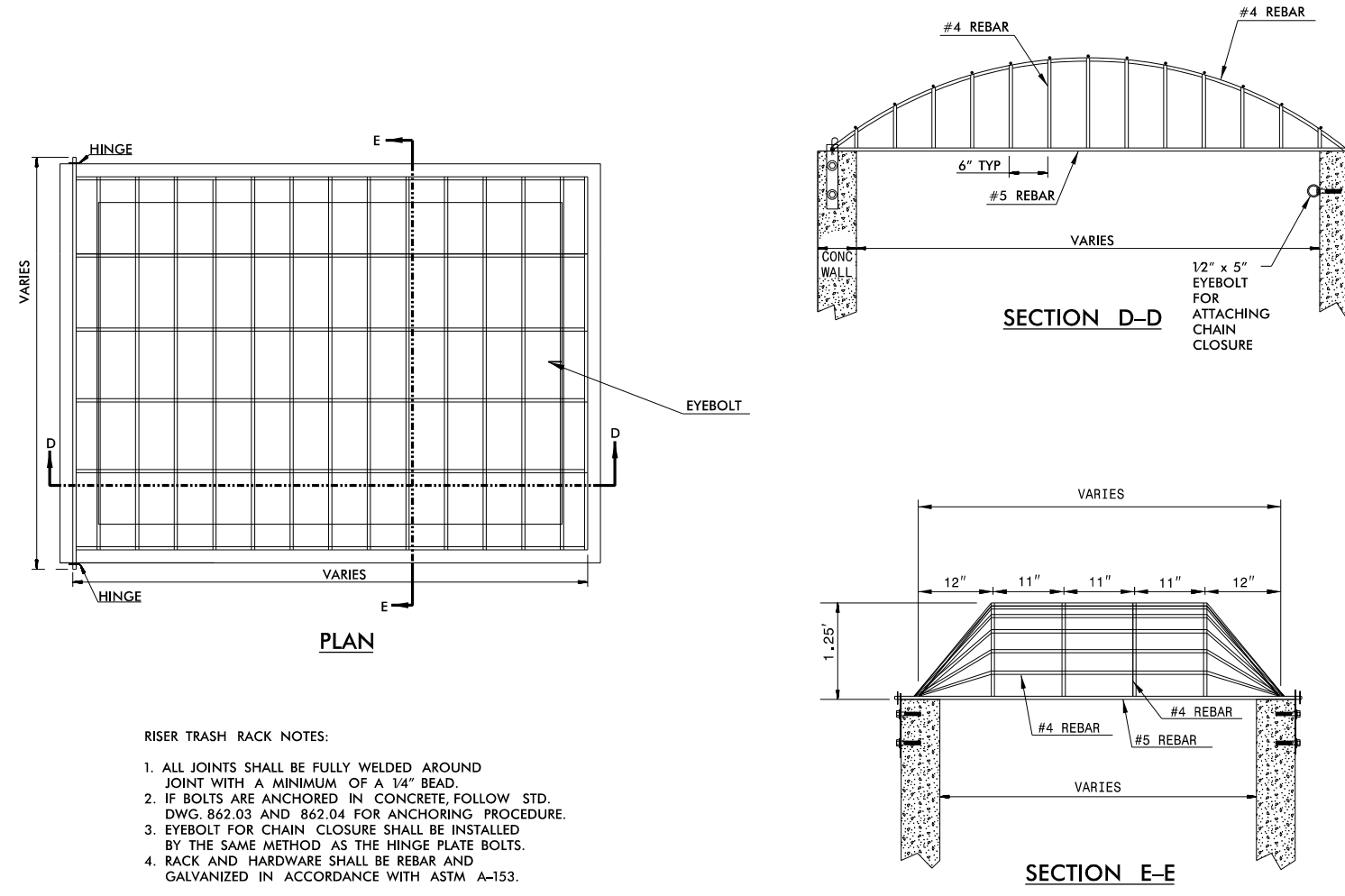
NOT TO SCALE

PROJECT REFERENCE NO. U-5169	SHEET NO. 2D-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

TRASH RACK DETAILS

PERMIT DRAWING
SHEET 5 OF 20

REVISIONS



- RISER TRASH RACK NOTES:
1. ALL JOINTS SHALL BE FULLY WELDED AROUND JOINT WITH A MINIMUM OF A 1/4" BEAD.
 2. IF BOLTS ARE ANCHORED IN CONCRETE, FOLLOW STD. DWG. 862.03 AND 862.04 FOR ANCHORING PROCEDURE.
 3. EYEBOLT FOR CHAIN CLOSURE SHALL BE INSTALLED BY THE SAME METHOD AS THE HINGE PLATE BOLTS.
 4. RACK AND HARDWARE SHALL BE REBAR AND GALVANIZED IN ACCORDANCE WITH ASTM A-153.

REBAR TRASH RACK

PROJECT REFERENCE NO. U-5169	SHEET NO. 2D-5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SUMMARY OF BASIN COMPONENT ITEMS (for Stormwater BMP's)

ITEM DESCRIPTION	UNIT	QUANTITY		
		BASIN 1	BASIN 2	PROJECT TOTALS
OUTLET CONTROL STRUCTURE BOX (840.45) (4'x4' INSIDE WALLS)	EA	1	1	2
CONCRETE PAD, 2' x 2' x 4" THICK	EA	1	1	2
8" SLUICE GATE	EA	1	1	2
RISER TRASH RACK	EA	1	1	2
GEOTEXTILE FOR DRAINAGE (TYPE 2, NON-WOVEN)	SY	99	93	192
WASHED NO. 57 STONE	TON	70	133	203
UNDERDRAIN PIPE - 6" HDPE PERFORATED	LF	208	195	403
UNDERDRAIN PIPE - 6" HDPE NONPERFORATED	LF	11.5	22	33.5
6" x 6" HDPE CROSS	EA	0	1	1
6" x 6" HDPE TEE	EA	1	0	1
6" HDPE 90-DEGREE BEND	EA	2	2	4
6" HDPE 45-DEGREE BEND	EA	4	6	10
6" CLEANOUT	EA	2	3	5
ENGINEERED SOIL MEDIA	CY	94	164	258
CONCRETE PAD, 2' x 2' x 6" THICK WITH TWO #3 HOOPS	EA	2	3	5
6" CLEANOUT CAP (THREADED)	EA	2	3	5
SOD, ZOYSIA, HALF-CUT	SY	152	257	409
RIPRAP, CL. B	TON	58	55	113
18" RCP-III	LF	116	73	189

SUMMARY OF EARTHWORK (for Stormwater BMP's)

ITEM DESCRIPTION	UNIT	QUANTITY		
		BASIN 1	BASIN 2	PROJECT TOTALS
UNCLASSIFIED EXCAVATION (DDE)	CY	1060	711	1771
WASTE (DDE)	CY	1052	711	1763
CLEARING AND GRUBBING	ACR	0.32	0.34	0.66

REVISIONS

PERMIT DRAWING
SHEET 6 OF 20

PLAN VIEW – FILTRATION BASIN 1

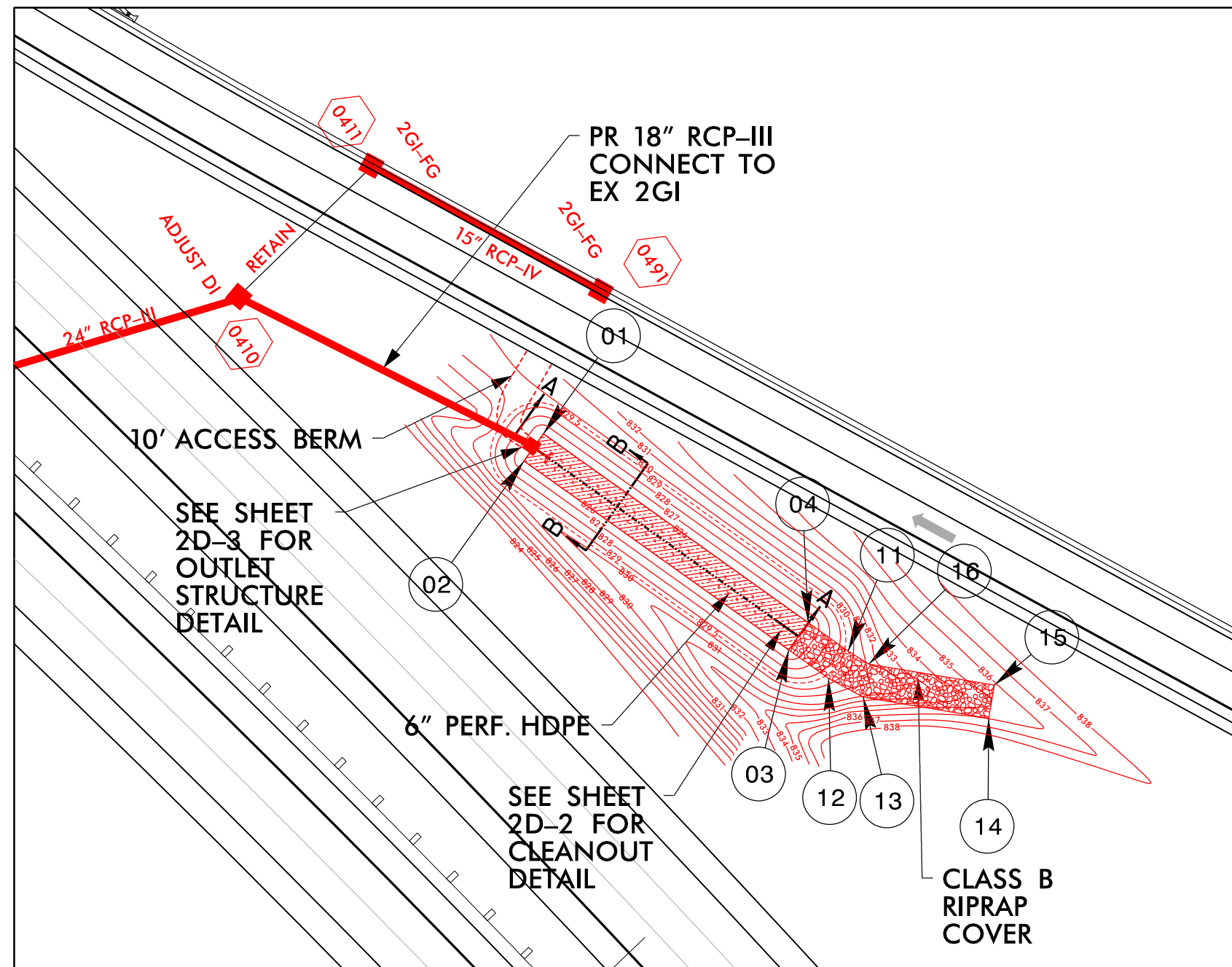
FILTRATION BASIN DIMENSIONS

BASIN	WATER QUALITY VOLUME CALCULATED (cf)	WATER QUALITY VOLUME PROVIDED (cf)	BASIN DEPTH	FILTER LENGTH	FILTER WIDTH	BERM WIDTH	SIDE SLOPE	TOP ELEVATION MEDIA FILTER	RISER ELEVATION	BERM ELEVATION
1	5490	5991	2.4'	116.25'	12'	VARIES	3:1	826.00'	828.40'	829.50'

PERMIT DRAWING
SHEET 7 OF 20

COORDINATE TABLE CORNERS OF TOP OF MEDIA FILTER FOR BASIN 1			
	NORTHING	EASTING	ELEVATION
01	821,593.5945	1,706,338.1123	826.00
02	821,583.8258	1,706,331.1429	826.00
03	821,516.3027	1,706,425.7864	826.00
04	821,526.0714	1,706,432.7558	826.00

COORDINATE TABLE CORNERS OF RIPRAP COVER FOR BASIN 1			
	NORTHING	EASTING	ELEVATION
11	821,515.9076	1,706,447.0018	829.50
12	821,506.1390	1,706,440.0324	829.50
13	821,499.4386	1,706,452.4378	832.00
14	821,491.9008	1,706,497.3134	836.00
15	821,503.7350	1,706,499.3012	836.00
16	821,511.2728	1,706,454.4256	831.00

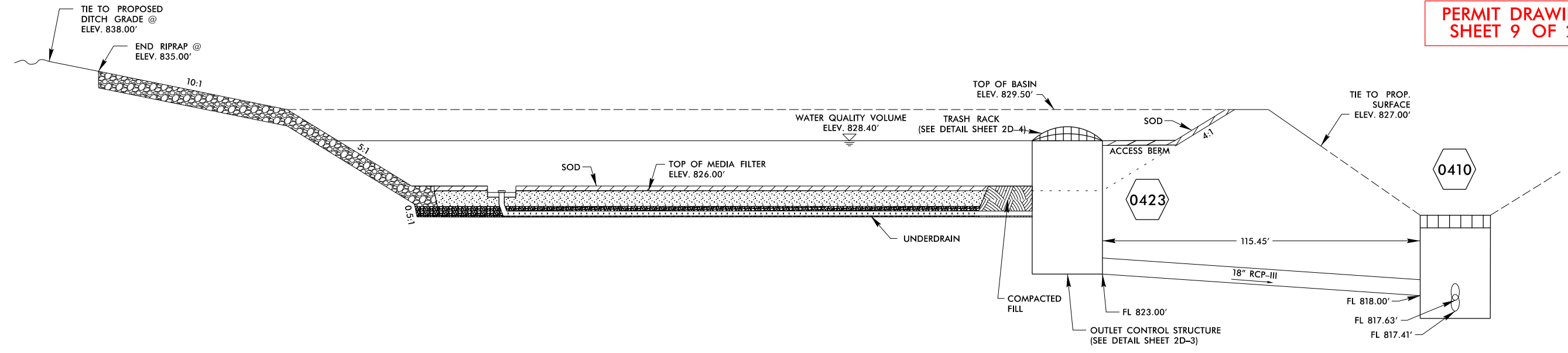


REVISIONS

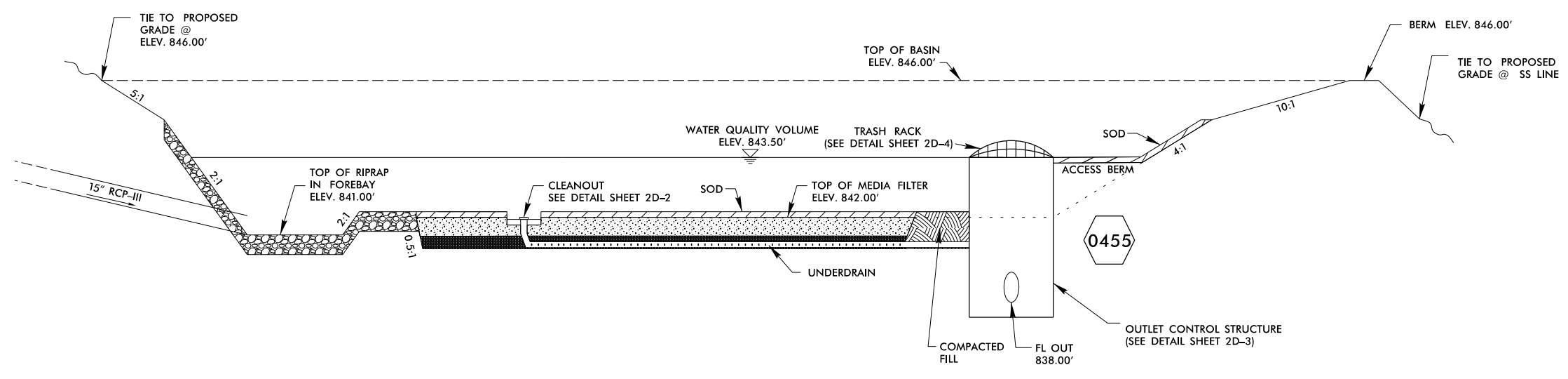
PROJECT REFERENCE NO. U-5169	SHEET NO. 2D-8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

TYPICAL SECTION (NTS) – FILTRATION BASIN 1

PERMIT DRAWING
SHEET 9 OF 20



TYPICAL SECTION (NTS) – FILTRATION BASIN 2



REVISIONS

WETLAND & STREAM IMPACTS

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

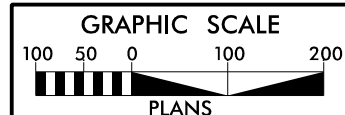
PROJECT REFERENCE NO. U-5169	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 10 OF 20

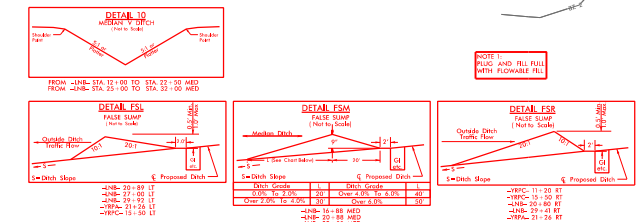
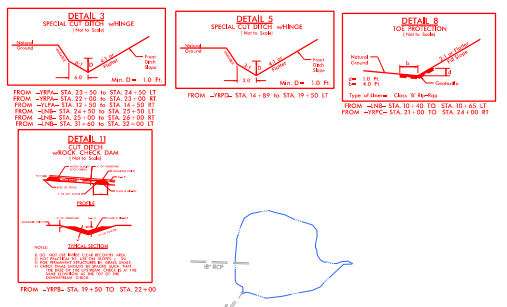
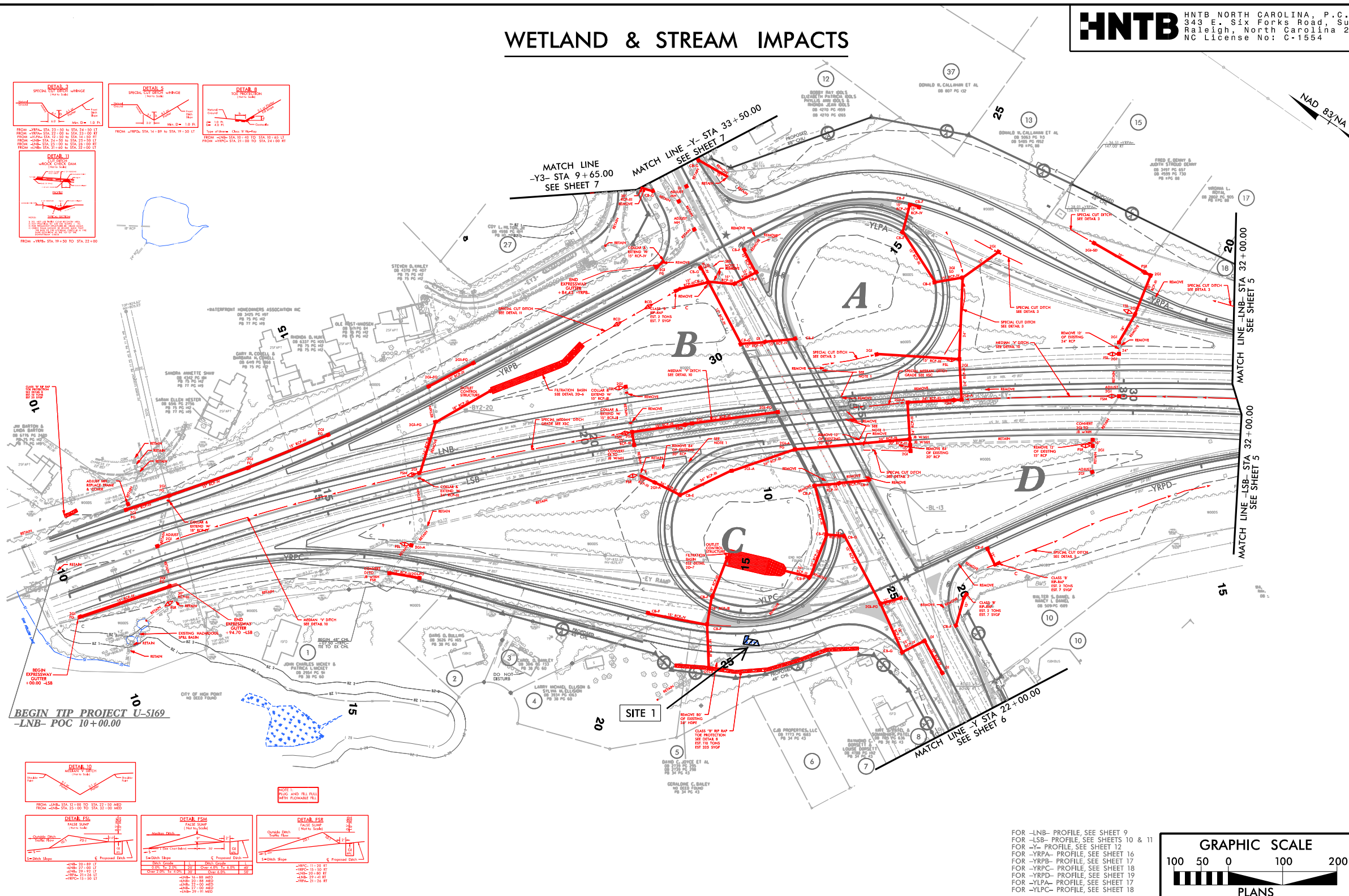
LEGEND

DENOTES FILL IN WETLAND

LOCATION: 1-74US 311 AND NC 68(EAST CHESTER DRIVE) INTERCHANGE RAMP REPLACEMENT	
TIP NO.: U-5169	COUNTY: GUILFORD
DESIGNED BY: BRIAN BLACKWELL, EI	
CHECKED BY:	DATE:



FOR -LNB- PROFILE, SEE SHEET 9
FOR -LSB- PROFILE, SEE SHEETS 10 & 11
FOR -Y- PROFILE, SEE SHEET 12
FOR -YRPA- PROFILE, SEE SHEET 16
FOR -YRPB- PROFILE, SEE SHEET 17
FOR -YRPC- PROFILE, SEE SHEET 18
FOR -YRPD- PROFILE, SEE SHEET 19
FOR -YLPA- PROFILE, SEE SHEET 17
FOR -YLPC- PROFILE, SEE SHEET 18



REVISIONS
1. 08/21/17 REV. REVISIONS TO THE CENTERLINE OF HIGHWAY ON PARCELS 7 AND 8. (WCP)
2. 11/15/16 RW REVISIONS ADJUSTED THE PUE ON PARCELS 1 THROUGH 6 AND THE INCHOT PARCEL. (WCP)
3. 08/21/17 RW REVISIONS ADJUSTED THE PUE ON PARCELS 13 & 14 INTO PARCEL 13. COMBINED PARCELS 15 & 16 INTO PARCEL 15. UPDATED PROPERTY OWNER NAMES AND/OR DEDD INFORMATION ON PARCELS 13 & 37. (RHT)

WETLAND & STREAM IMPACTS

HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

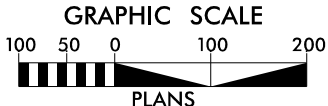
PROJECT REFERENCE NO. U-5169	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

**PERMIT DRAWING
SHEET 11 OF 20**

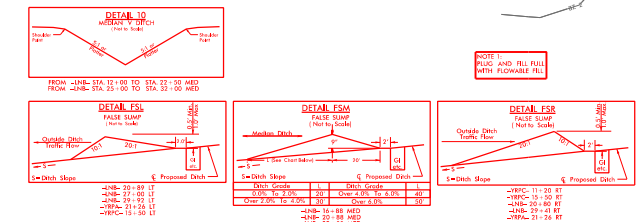
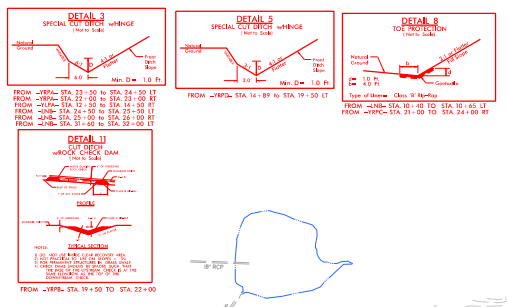
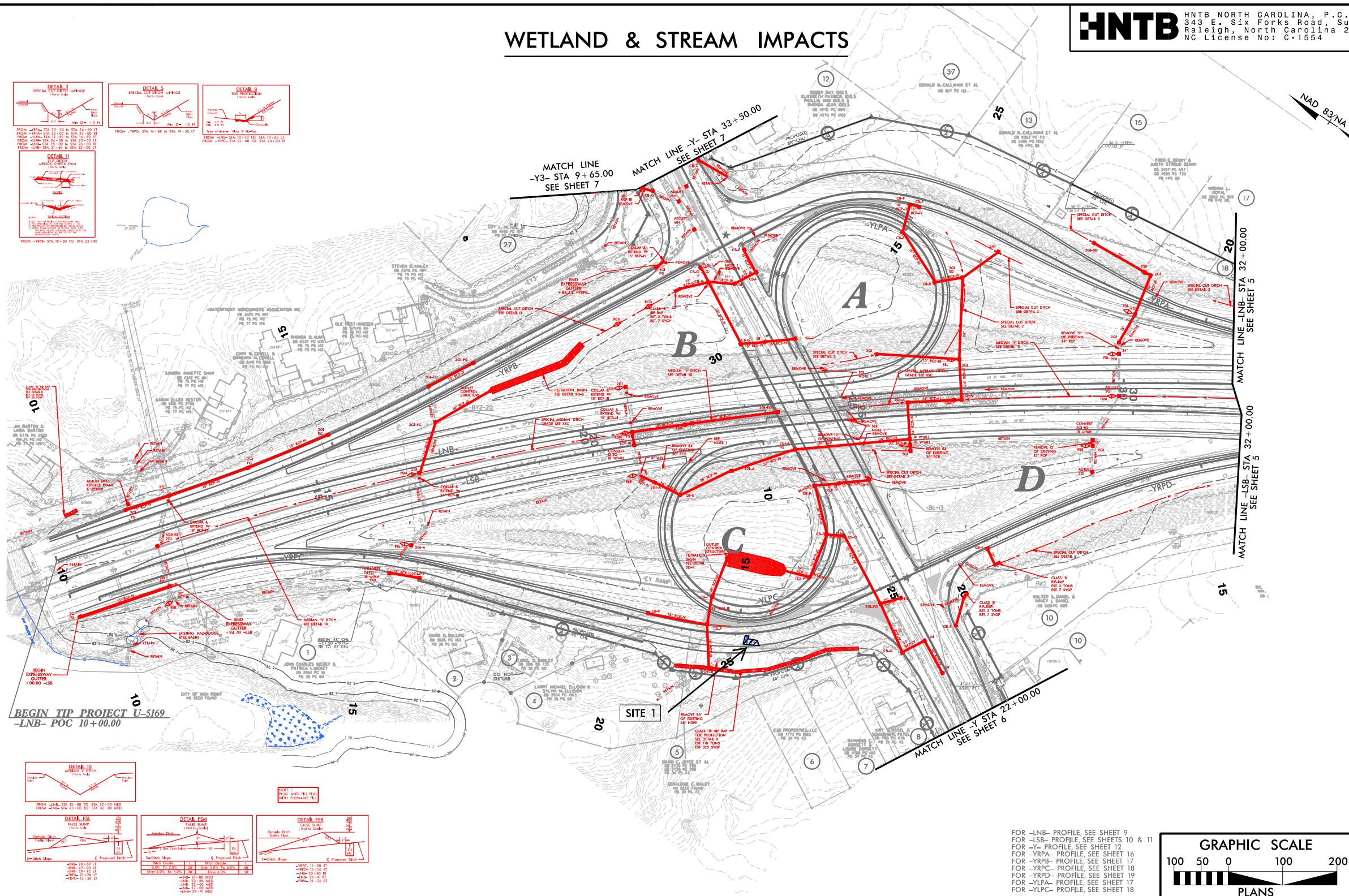
LEGEND



LOCATION: 1-74US 311 AND NC 68(EAST CHESTER DRIVE) INTERCHANGE RAMP REPLACEMENT	
TIP NO.: U-5169	COUNTY: GUILFORD
DESIGNED BY: BRIAN BLACKWELL, EI	
CHECKED BY:	DATE:



FOR -LNB- PROFILE, SEE SHEET 9
 FOR -LSB- PROFILE, SEE SHEETS 10 & 11
 FOR -Y- PROFILE, SEE SHEET 12
 FOR -YRPA- PROFILE, SEE SHEET 16
 FOR -YRPB- PROFILE, SEE SHEET 17
 FOR -YRPC- PROFILE, SEE SHEET 18
 FOR -YRPD- PROFILE, SEE SHEET 19
 FOR -YLPA- PROFILE, SEE SHEET 17
 FOR -YLPC- PROFILE, SEE SHEET 18



REVISIONS
 08/23/17 REV. REVISIONS TO THE CENTERLINE OF HIGHWAY 311 AND 68 INTERCHANGE RAMP REPLACEMENT PROJECT ON PARCELS 13 & 37 (R11)
 11/15/16 REV. REVISIONS TO THE CENTERLINE OF HIGHWAY 311 AND 68 INTERCHANGE RAMP REPLACEMENT PROJECT ON PARCELS 13 & 37 (R11)
 08/23/17 REV. REVISIONS TO THE CENTERLINE OF HIGHWAY 311 AND 68 INTERCHANGE RAMP REPLACEMENT PROJECT ON PARCELS 13 & 37 (R11)

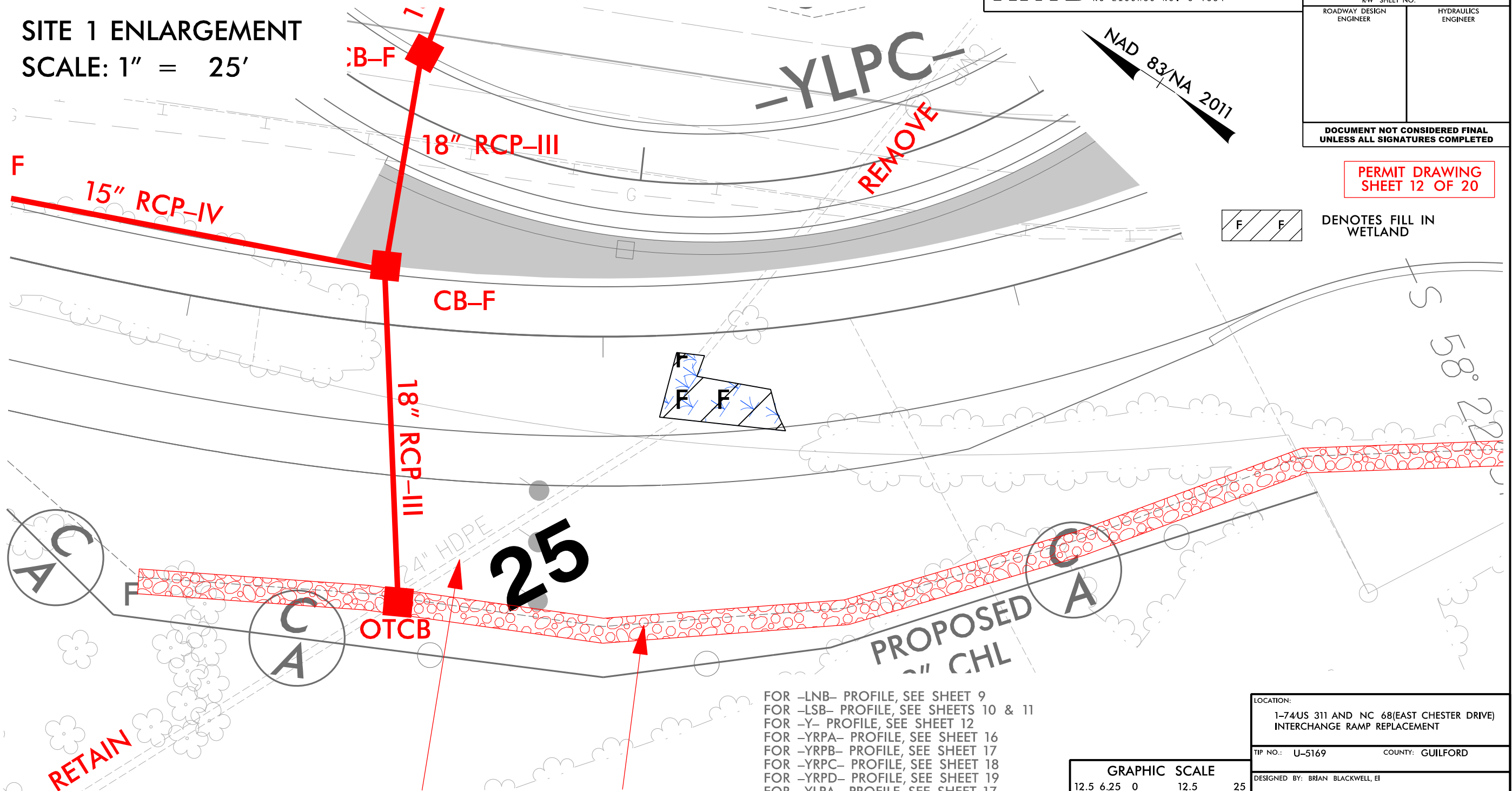
SITE 1 ENLARGEMENT
SCALE: 1" = 25'

HNTB HNTB NORTH CAROLINA, P.C.
 343 E. SIX FORKS ROAD, SUITE 200
 RALEIGH, NORTH CAROLINA 27609
 NC LICENSE NO: C-1554

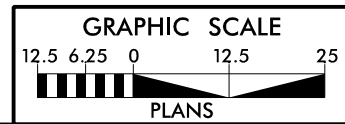
PROJECT REFERENCE NO. U-5169	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

**PERMIT DRAWING
SHEET 12 OF 20**

F F DENOTES FILL IN WETLAND



- FOR -LNB- PROFILE, SEE SHEET 9
- FOR -LSB- PROFILE, SEE SHEETS 10 & 11
- FOR -Y- PROFILE, SEE SHEET 12
- FOR -YRPA- PROFILE, SEE SHEET 16
- FOR -YRPB- PROFILE, SEE SHEET 17
- FOR -YRPC- PROFILE, SEE SHEET 18
- FOR -YRPD- PROFILE, SEE SHEET 19
- FOR -YLPA- PROFILE, SEE SHEET 17
- FOR -YLPC- PROFILE, SEE SHEET 18



LOCATION: 1-74US 311 AND NC 68(EAST CHESTER DRIVE) INTERCHANGE RAMP REPLACEMENT	
TIP NO.: U-5169	COUNTY: GUILFORD
DESIGNED BY: BRIAN BLACKWELL, EI	
CHECKED BY:	DATE:

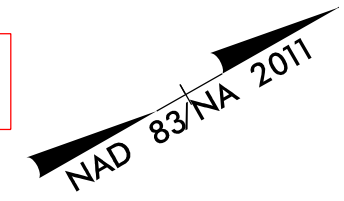
REVISIONS
 08/21/14 REV. REVISIONS REMAINS THE COURSE OF ACTION ON PARCELS 7 AND 8. (WCP)
 11/26/14 REV. REVISIONS ADJUSTED THE PUE ON PARCELS 1 THROUGH 6 AND THE INCOOT PARCEL. (WCP)
 04/27/17 REV. REVISIONS ADJUSTED PUE ON PARCEL 3. COMBINED PARCELS 13 & 14 INTO PARCEL 15. UPDATED PROPERTY OWNER NAMES AND/OR DED INFORMATION ON PARCELS 13 & 37. (RHT)

WETLAND & STREAM IMPACTS

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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

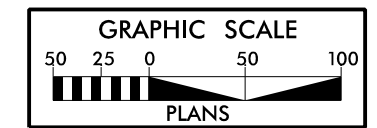
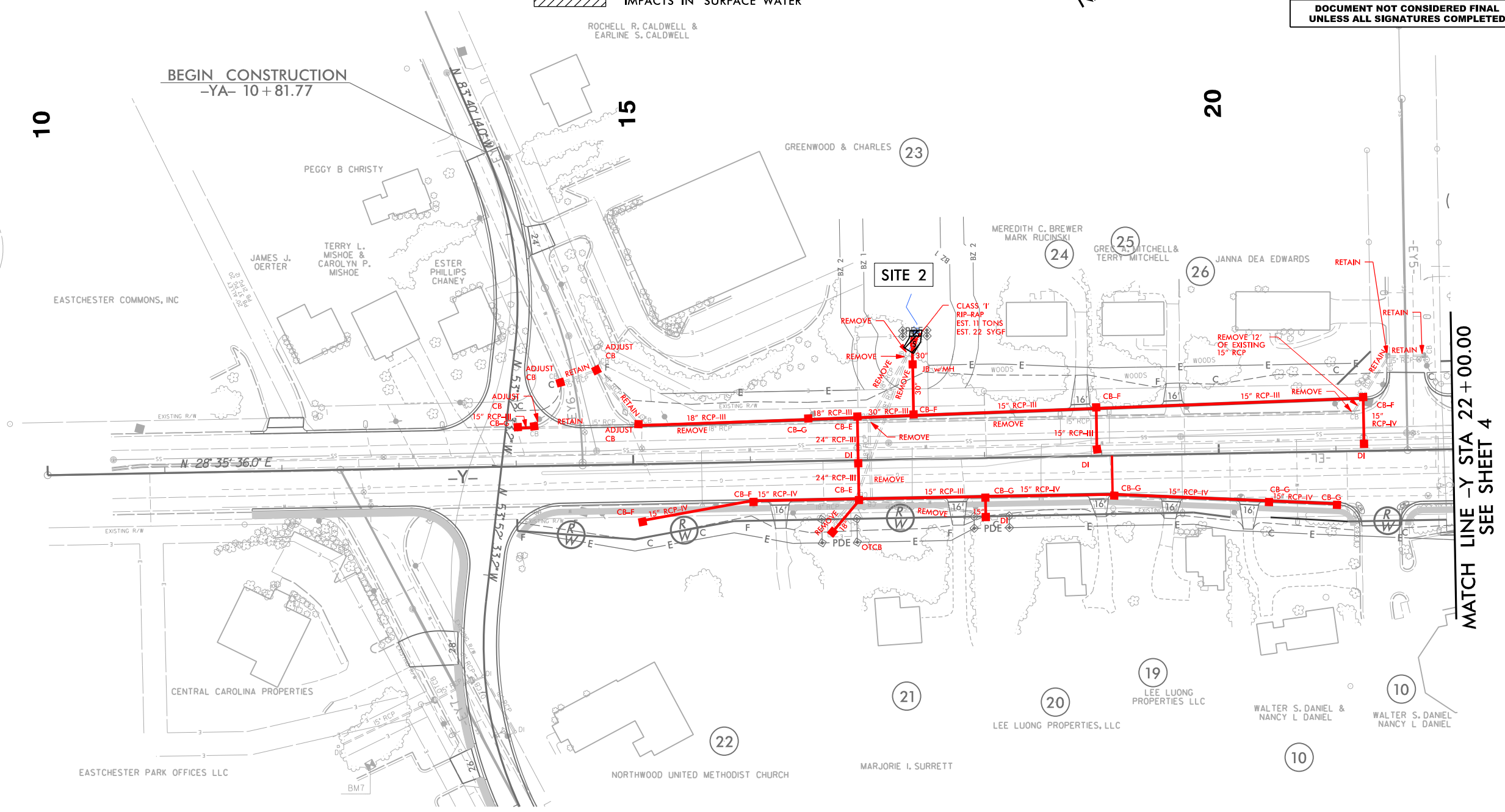
PROJECT REFERENCE NO. U-5169	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 13 OF 20



- LEGEND**
- DENOTES IMPACTS IN SURFACE WATER
 - DENOTES TEMPORARY IMPACTS IN SURFACE WATER

REVISIONS
06/12/17 RW REVISIONS: UPDATED THE EXISTING AND PROPOSED RW ON PARCEL 19. UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 20 & 24. (RHT)



FOR -Y- PROFILE, SEE SHEET 12

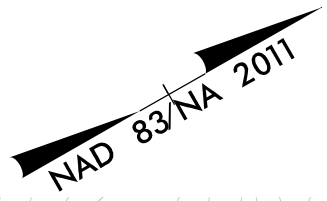
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HNTB

WETLAND & STREAM IMPACTS

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

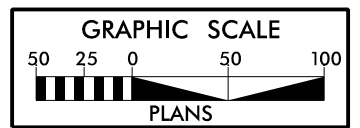
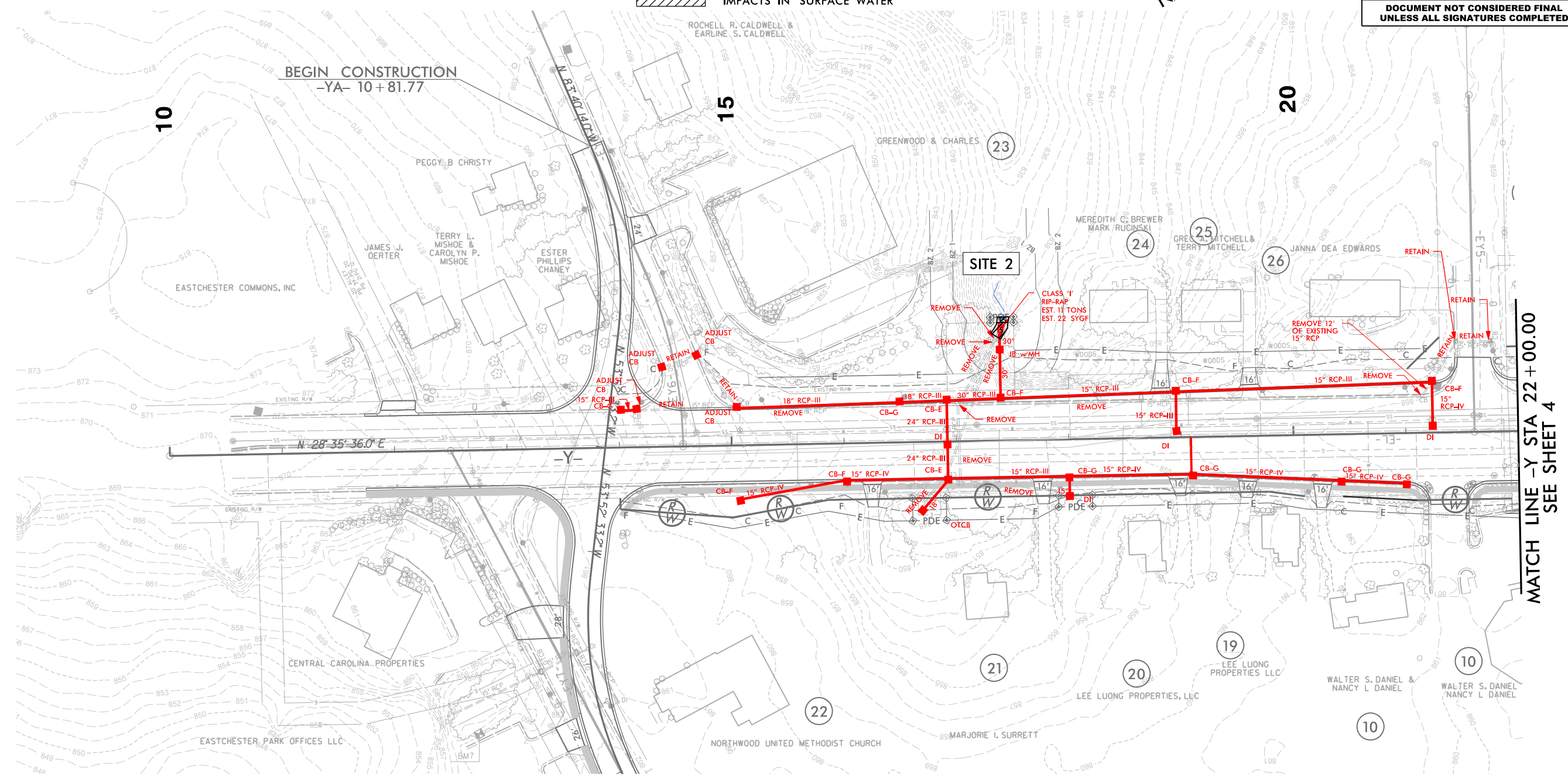
PROJECT REFERENCE NO.	SHEET NO.
U-5169	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 14 OF 20



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

REVISIONS
 06/12/17 RW REVISIONS: UPDATED THE EXISTING AND PROPOSED RW ON PARCEL 19. UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 20 & 24. (RHT)



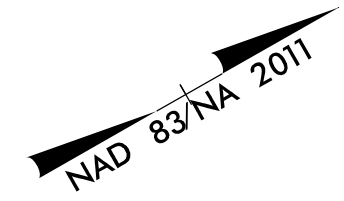
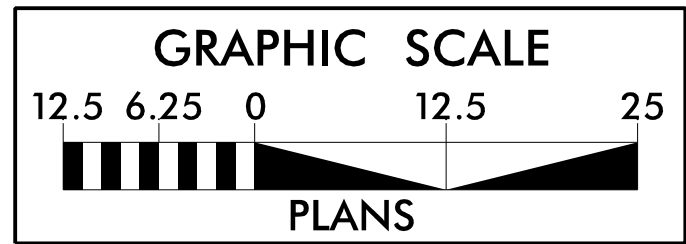
FOR -Y- PROFILE, SEE SHEET 12

2/1/2018 2_hyd_permit_wet.psh6.dgn
 HNTB

PROJECT REFERENCE NO.	SHEET NO.
U-5169	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SITE 2 ENLARGEMENT

SCALE: 1" = 12.5'



PERMIT DRAWING
SHEET 15 OF 20

DENOTES IMPACTS IN SURFACE WATER
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

CLASS 'I'
RIP-RAP
EST. 11 TONS
EST. 22 SYGF

REMOVE

REMOVE

REMOVE

REMOVE

30"

30"

JB w/MH

E

WOOD

15"

10" RCP III

30" RCP III

CR F

REVISIONS
 06/12/17 RW REVISIONS: UPDATED THE EXISTING AND PROPOSED RW ON PARCEL 19. UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 20 & 24. (RHT)

2/1/2018 hyd.permt.ket.Site2.budg
 HNTB

WETLAND & STREAM IMPACTS

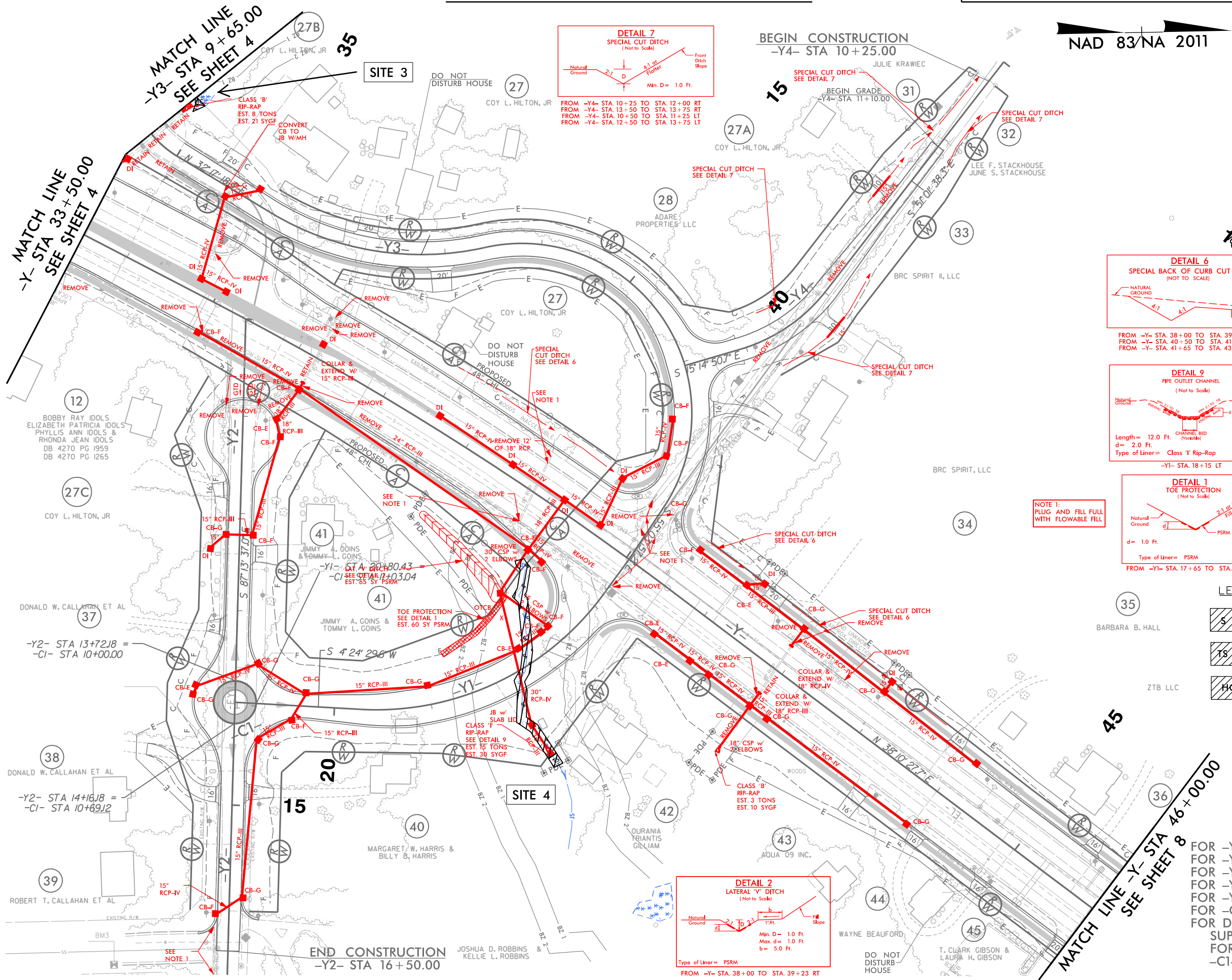
HNTB HNTB NORTH CAROLINA, P.C.
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Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
U-5169	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

NAD 83/NA 2011

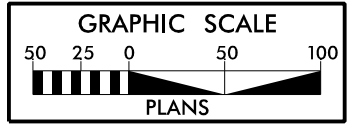
PERMIT DRAWING
SHEET 16 OF 20

REVISIONS
 06/08/17 RW REVISIONS: UPDATED PARCEL NUMBERS AND OWNER INFORMATION ON PARCELS 27, 27A, 27B, AND 27C. REMOVED TCE AND CLAIM FROM PARCEL 29. (RHT)
 06/12/17 RW REVISIONS: REVISED THREE TRACTS OF PARCEL 27 TO PARCELS 27A, 27B AND 27C. UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 27, 27A, 27B, 27C, 32, 34, 37, 38, 39 AND 45. ADJUSTED TCE ON PARCEL 42. (RHT)



LEGEND

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES HAND CLEARING



FOR -Y- PROFILE, SEE SHEET 12 & 13
 FOR -Y1- PROFILE, SEE SHEET 14
 FOR -Y2- PROFILE, SEE SHEET 14
 FOR -Y3- PROFILE, SEE SHEET 15
 FOR -Y4- PROFILE, SEE SHEET 15
 FOR -C1- PROFILE, SEE SHEET 15
 FOR DETAIL OF ALIGNMENTS, SUPERELEVATIONS AND DIMENSIONS FOR -Y-, -Y1-, -Y2-, -Y3-, -Y4-, AND -C1-, SEE SHEET 2B-1

2/1/2018 hgd.permit_wet.psh7.dgn
 HNTB

WETLAND & STREAM IMPACTS

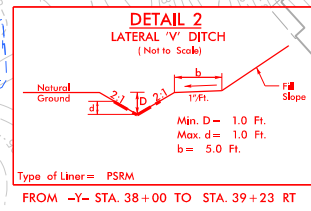
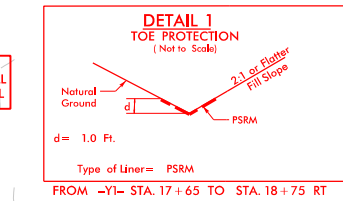
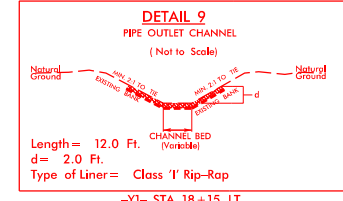
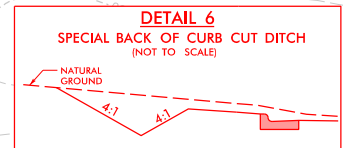
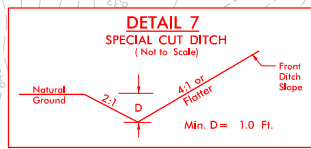
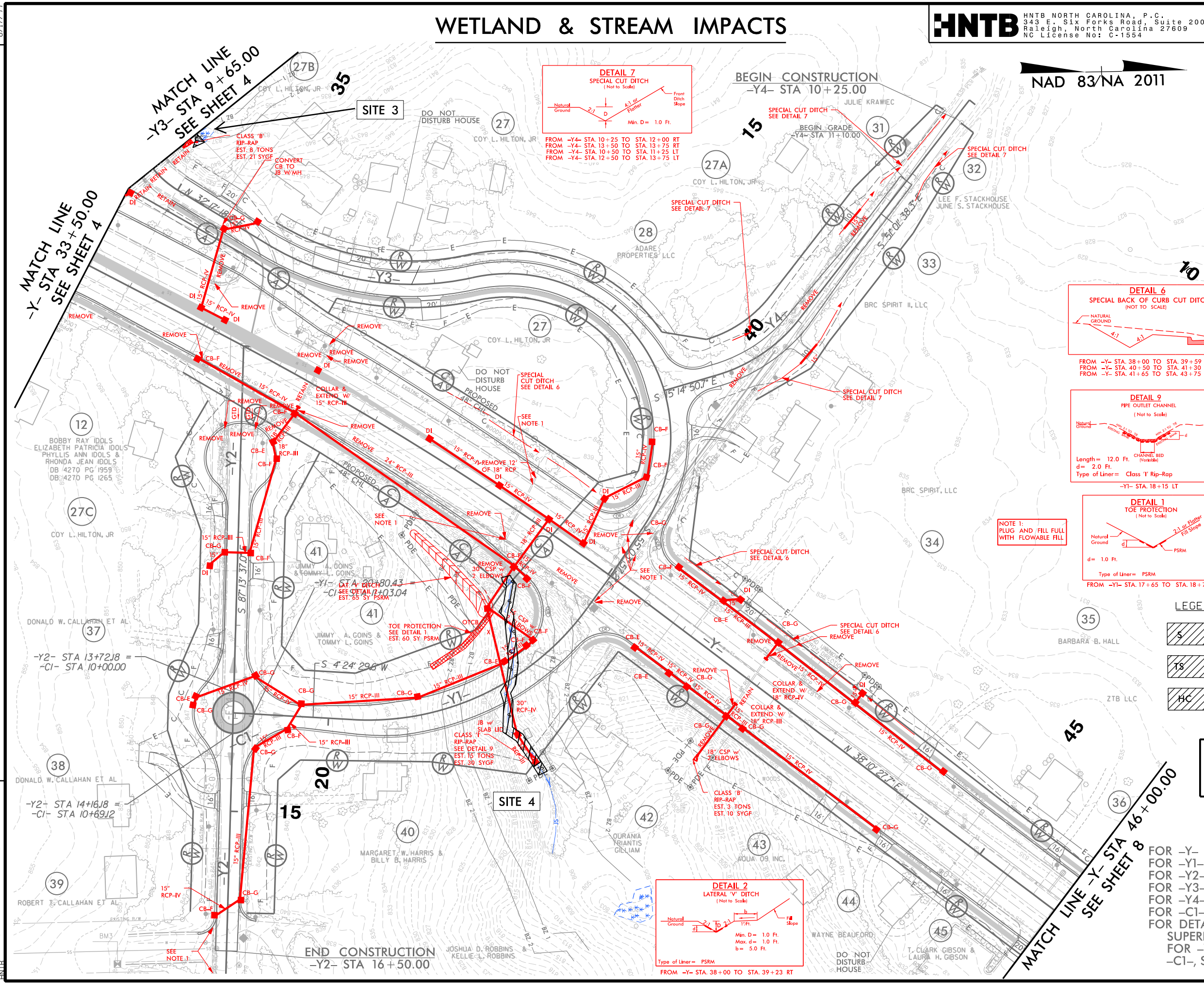
HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO. U-5169	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

NAD 83/NA 2011

PERMIT DRAWING
SHEET 17 OF 20

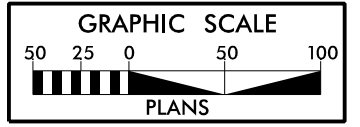
REVISIONS
 060817 RW REVISIONS: UPDATED PARCEL NUMBERS AND OWNER INFORMATION ON PARCELS 27, 27A, 27B, AND 27C. REMOVED TCE AND CLAIM FROM PARCEL 29. (RHT)
 061217 RW REVISIONS: REVISED THREE TRACTS OF PARCEL 27 TO PARCELS 27A, 27B AND 27C. UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 27, 27A, 27B, 27C, 34, 37, 38, 39 AND 45. ADJUSTED TCE ON PARCEL 42. (RHT)



NOTE 1:
PLUG AND FILL FULL WITH FLOWABLE FILL

LEGEND

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES HAND CLEARING



FOR -Y- PROFILE, SEE SHEET 12 & 13
 FOR -Y1- PROFILE, SEE SHEET 14
 FOR -Y2- PROFILE, SEE SHEET 14
 FOR -Y3- PROFILE, SEE SHEET 15
 FOR -Y4- PROFILE, SEE SHEET 15
 FOR -C1- PROFILE, SEE SHEET 15
 FOR DETAIL OF ALIGNMENTS, SUPERELEVATIONS AND DIMENSIONS FOR -Y-, -Y1-, -Y2-, -Y3-, -Y4-, AND -C1-, SEE SHEET 2B-1

2/1/2018 hgd.permit_wet.psh7.dgn
 HNTB

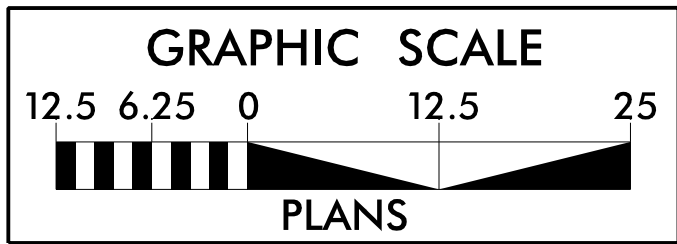
REVISIONS
06/12/17 RW REVISIONS: UPDATED THE EXISTING AND PROPOSED RW ON PARCEL 19. UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 20 & 24. (RHT)

2/1/2018
2115183_hyd_permit_ket.Site3_budg
HNTB

B.17/99

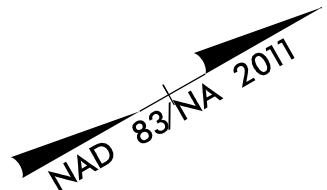
SITE 3 ENLARGEMENT

SCALE: 1" = 12.5'



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RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO: C-1554

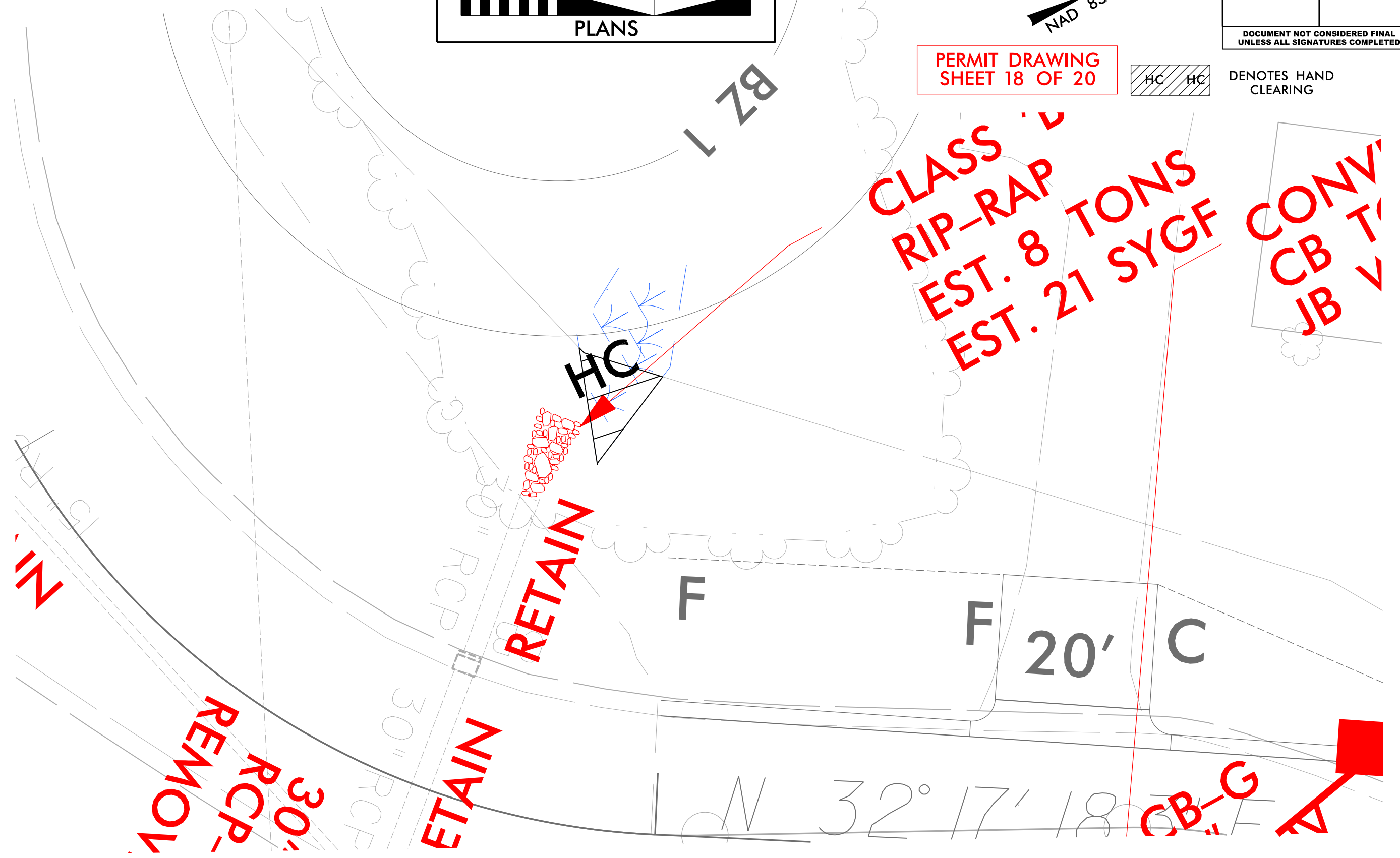
PROJECT REFERENCE NO.	SHEET NO.
U-5169	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



PERMIT DRAWING
SHEET 18 OF 20



DENOTES HAND CLEARING



SITE 4 ENLARGEMENT

SCALE: 1" = 50'

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 Raleigh, North Carolina 27609
 NC License No: C-1554

PROJECT REFERENCE NO. U-5169	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

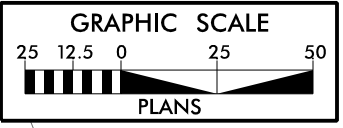
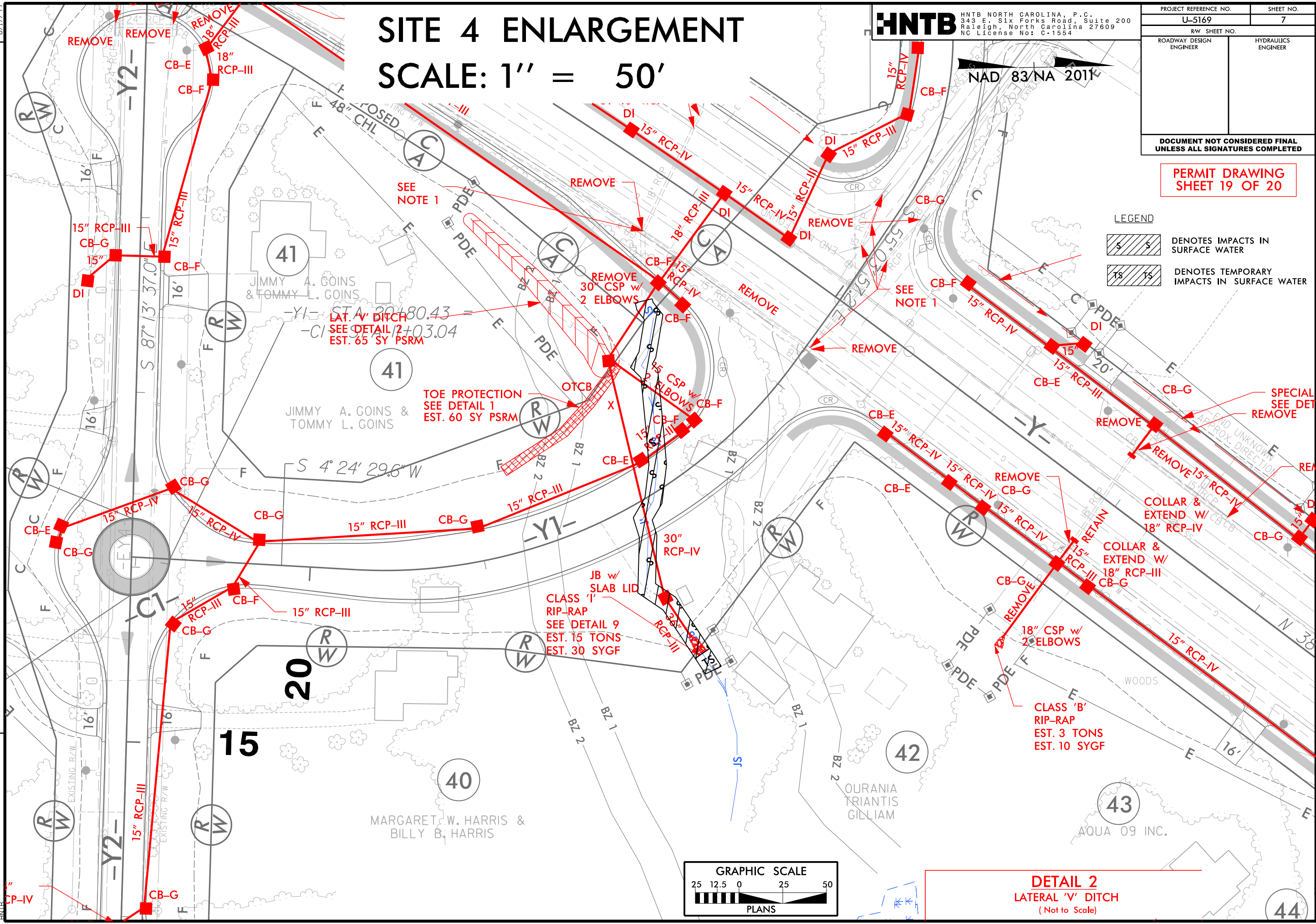
PERMIT DRAWING
SHEET 19 OF 20

NAD 83/NA 2011

LEGEND

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

REVISIONS
 06/08/17 RW REVISIONS: UPDATED PARCEL NUMBERS AND OWNER INFORMATION ON PARCELS 27, 27A, 27B, AND 27C. REMOVED TCE AND CLAIM FROM PARCEL 29. (RHT)
 06/12/17 RW REVISIONS: REVISED THREE TRACTS OF PARCEL 27 TO PARCELS 27A, 27B AND 27C. UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 27, 27A, 27B, 27C, 32, 34, 37, 38, 39 AND 45. ADJUSTED TCE ON PARCEL 42. (RHT)



DETAIL 2
 LATERAL 'V' DITCH
 (Not to Scale)

2/1/2018 hntb.hud.permit.ket.Stee4_budg
 HNTB

WETLAND AND SURFACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS					
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)	
1	-YRBC- 22+13 to 22+41	Roadway Fill	< 0.01										
2	-Y- 17+33 to 17+49	30" Alternate Pipe						< 0.01	< 0.01	12	5		
3	-Y3- 9+67 to 9+96	Rip-Rap Pad						< 0.01					
4	-Y- 39+08 to 40+75	36" RCP						0.05	< 0.01	226	10		
TOTALS*:			< 0.01					< 0.01	0.06	< 0.01	238	15	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 2/1/2018
 Guilford County
 U-5169

TIP PROJECT: U-5169

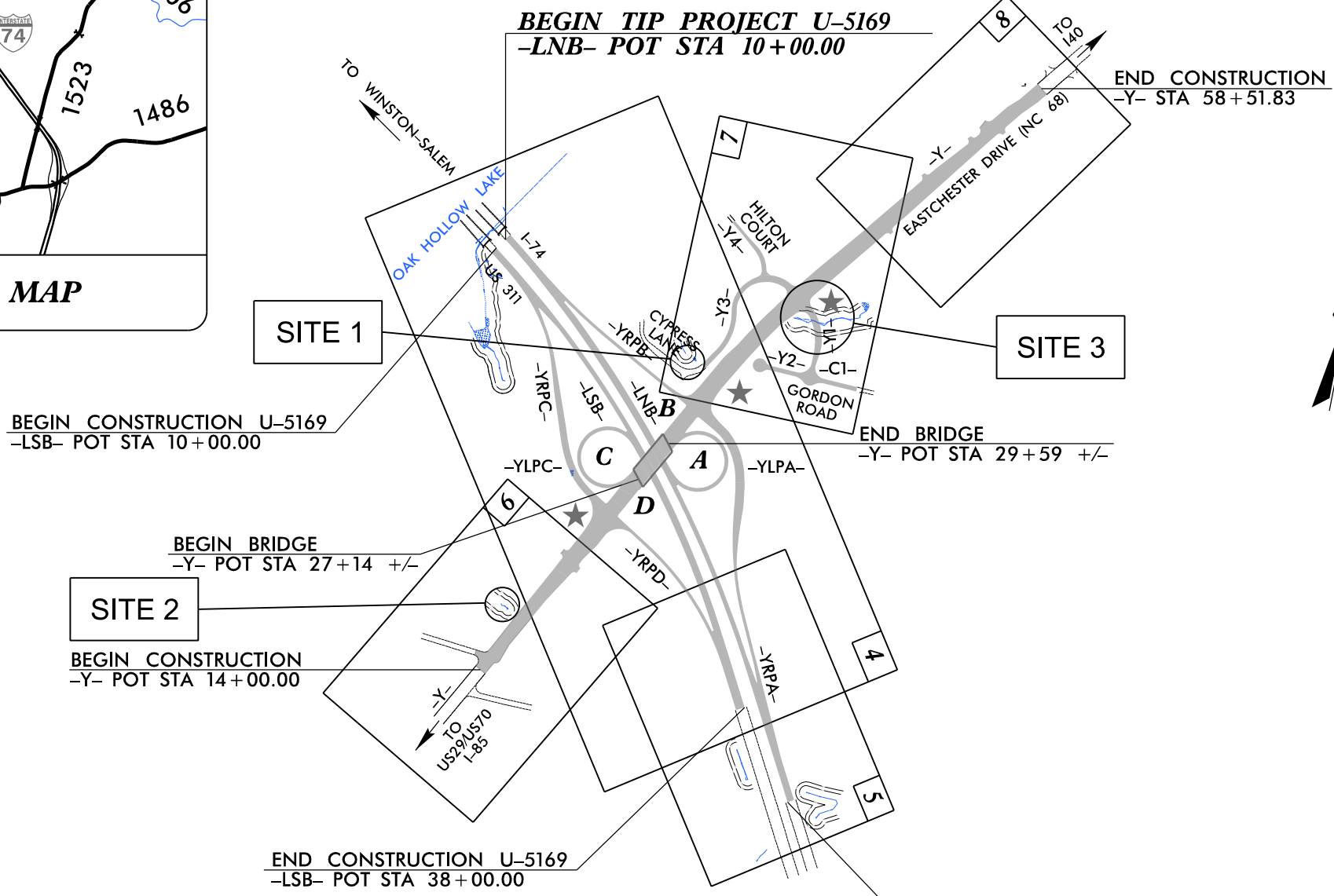
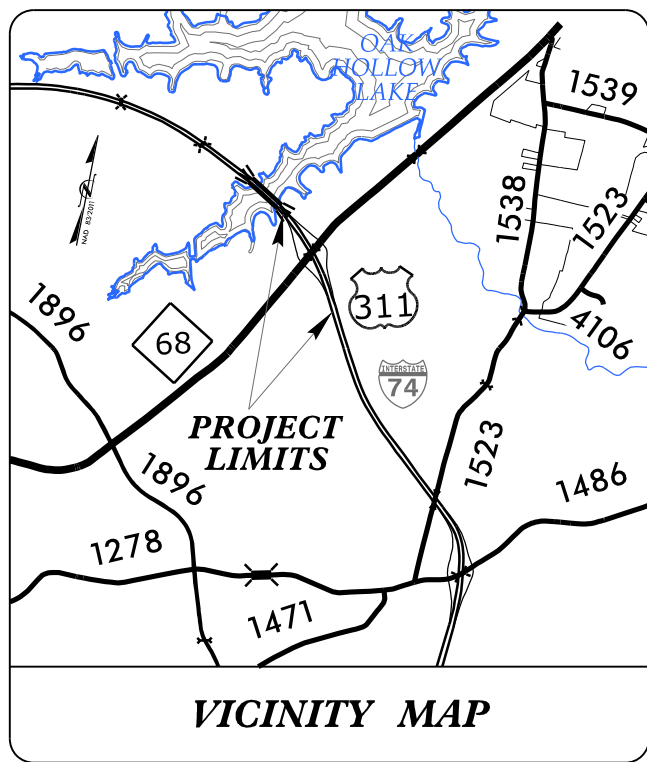
CONTRACT: C204071

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

LOCATION: I-74/US311 AND NC 68 (EASTCHESTER DRIVE)
INTERCHANGE IMPROVEMENTS
TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURES AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5169	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45220.1.2	NHS-0311(32)	PE	
45220.2.1	NHS-0311(32)	R/W	
45220.2.2	NHS-0311(32)	UTILITIES	
45220.3.1	NHS-0311(32)	CONST.	



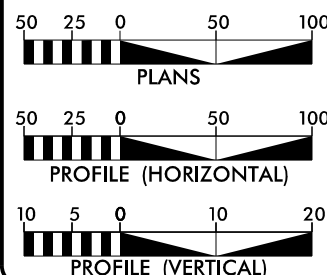
BUFFER IMPACTS PERMIT

BUFFER DRAWING SHEET 1 OF 7



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2018 = 41,584
 ADT 2038 = 72,144
 K = 12 %
 D = 60 %
 T = 6 % *
 V = 65 MPH
 * TTST = 4% DUAL 2%
 FUNC CLASS =
 INTERSTATE
 STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5169 = 0.638 MILES
 TOTAL LENGTH TIP PROJECT U-5169 = 0.638 MILES

Prepared in the Office of:

HNTB
 HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JUNE 30, 2016

LETTING DATE:
JUNE 19, 2018

DOUGLAS M. WHEATLEY, PE
PROJECT ENGINEER

ROY H. TELLIER, PE
PROJECT DESIGN ENGINEER

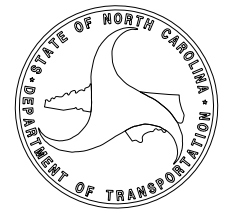
TATIA L. WHITE, PE, PLS
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



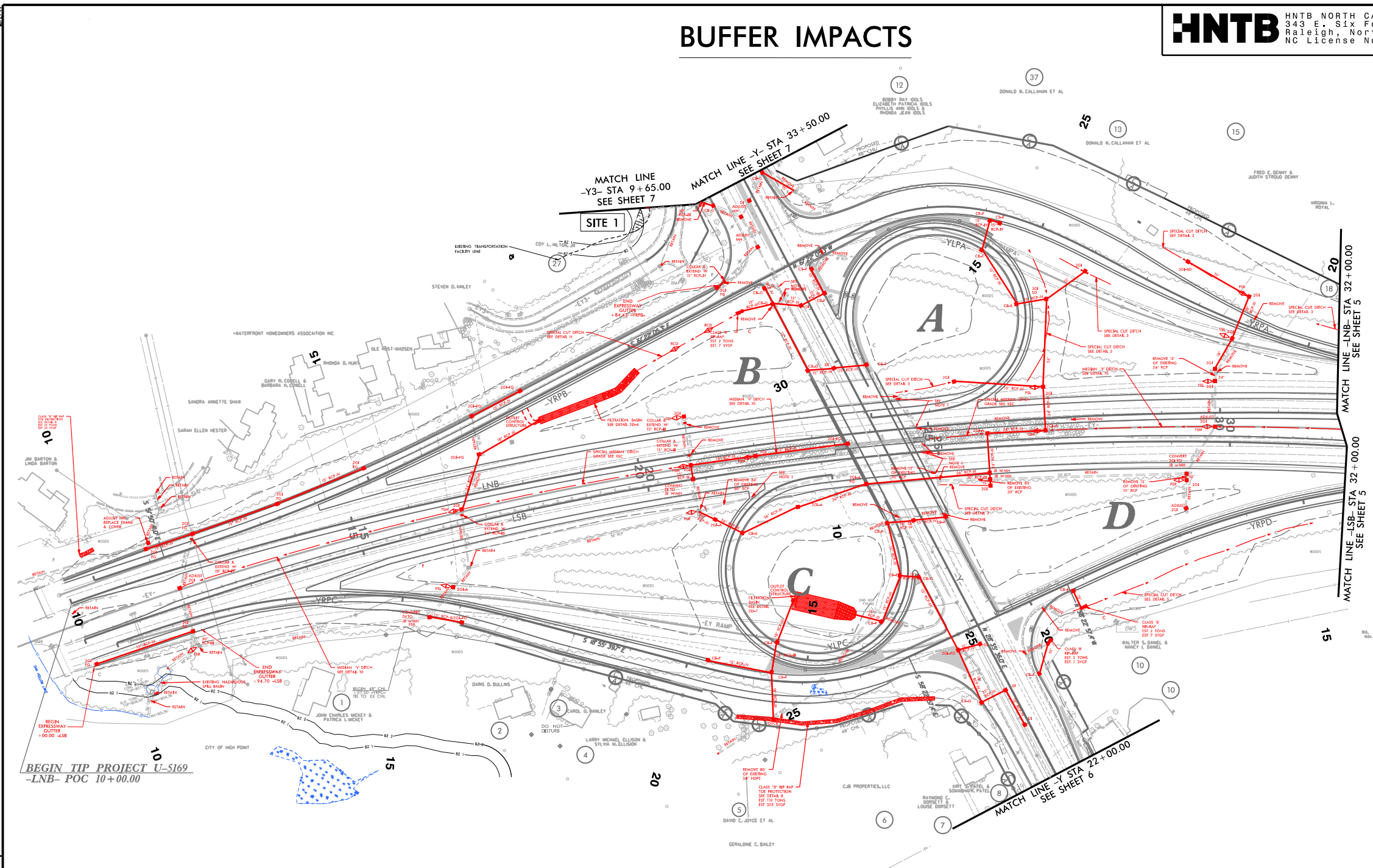
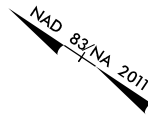
BUFFER IMPACTS

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Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO. U-5169	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

**BUFFER DRAWING
SHEET 2 OF 7**

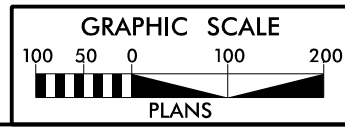
LEGEND
 ALLOWABLE IMPACTS ZONE 2



REVISIONS:
 08/2017 RW REVISIONS ADJUSTED PUE ON PARCEL 3 COMBINED PARCELS 13 & 14 INTO PARCEL 13 COMBINED PARCELS 15 & 16 INTO PARCEL 15. UPDATED PROPERTY OWNER NAMES AND/OR DEDD INFORMATION ON PARCELS 13 & 37. (R11)
 08/2017 RW REVISIONS ADJUSTED PUE ON PARCELS 7 AND 8. (R12)
 08/2017 RW REVISIONS ADJUSTED PUE ON PARCELS 11 AND 12. (R13)
 08/2017 RW REVISIONS ADJUSTED PUE ON PARCELS 13 & 14 INTO PARCEL 13 COMBINED PARCELS 15 & 16 INTO PARCEL 15. (R14)
 08/2017 RW REVISIONS ADJUSTED PUE ON PARCELS 15 & 16 INTO PARCEL 15. (R15)

BEGIN TIP PROJECT U-5169
-LNB- POC 10+00.00

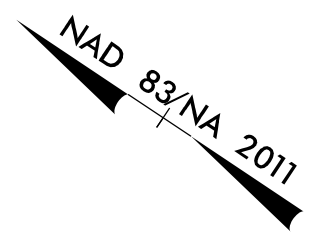
FOR -LNB- PROFILE, SEE SHEET 9
 FOR -LSB- PROFILE, SEE SHEETS 10 & 11
 FOR -Y- PROFILE, SEE SHEET 12
 FOR -YRPA- PROFILE, SEE SHEET 16
 FOR -YRPB- PROFILE, SEE SHEET 17
 FOR -YRPC- PROFILE, SEE SHEET 18
 FOR -YRPD- PROFILE, SEE SHEET 19
 FOR -YLPA- PROFILE, SEE SHEET 17
 FOR -YLPC- PROFILE, SEE SHEET 18



LOCATION: 1-74US 311 AND NC 68(EAST CHESTER DRIVE) INTERCHANGE RAMP REPLACEMENT	
TIP NO.: U-5169	COUNTY: GUILFORD
DESIGNED BY: BRIAN BLACKWELL, EI	
CHECKED BY:	DATE:

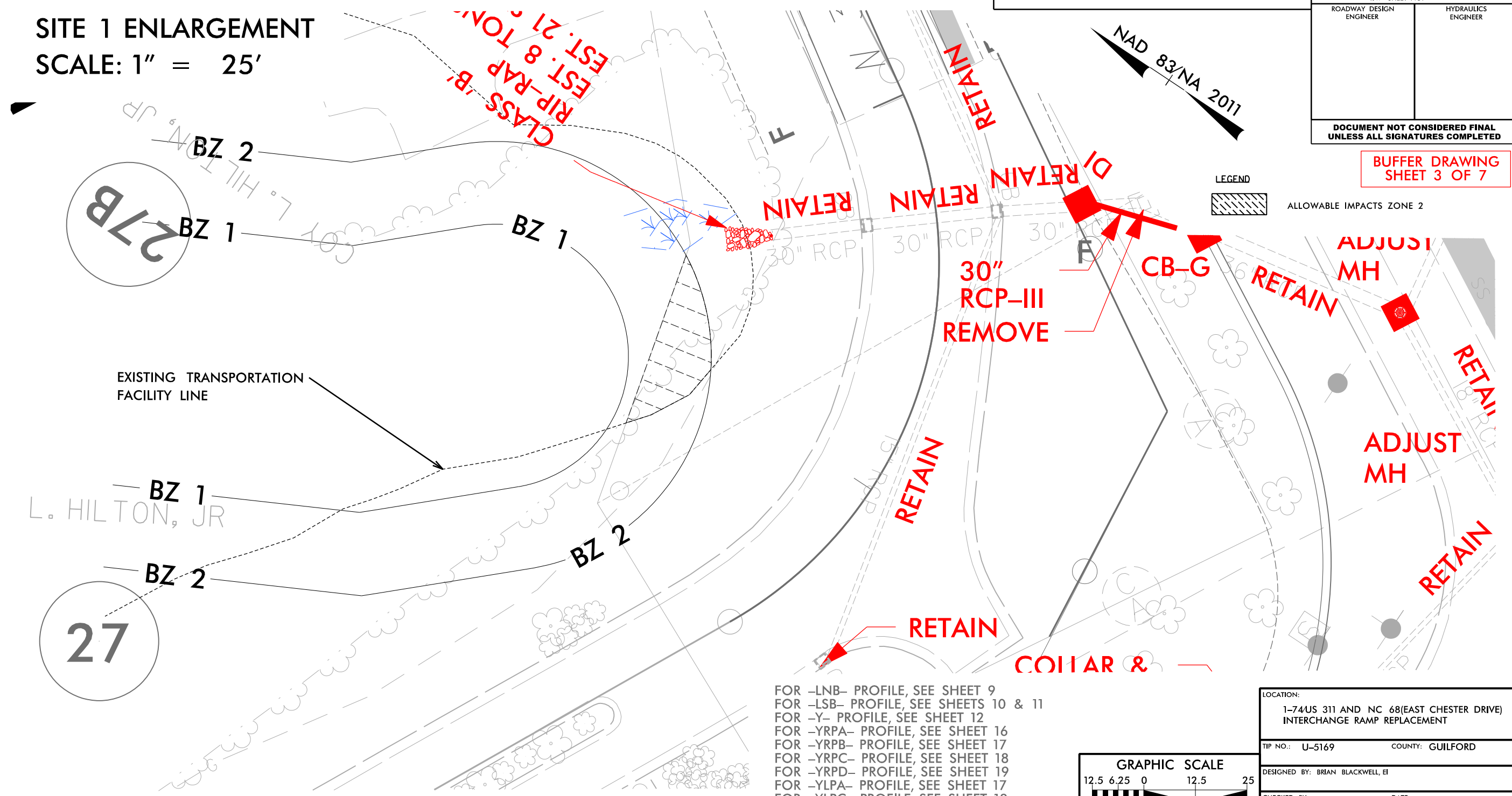
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R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SITE 1 ENLARGEMENT
SCALE: 1" = 25'

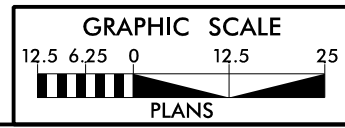


**BUFFER DRAWING
SHEET 3 OF 7**

LEGEND
 ALLOWABLE IMPACTS ZONE 2



- FOR -LNB- PROFILE, SEE SHEET 9
- FOR -LSB- PROFILE, SEE SHEETS 10 & 11
- FOR -Y- PROFILE, SEE SHEET 12
- FOR -YRPA- PROFILE, SEE SHEET 16
- FOR -YRPB- PROFILE, SEE SHEET 17
- FOR -YRPC- PROFILE, SEE SHEET 18
- FOR -YRPD- PROFILE, SEE SHEET 19
- FOR -YLPA- PROFILE, SEE SHEET 17
- FOR -YLPC- PROFILE, SEE SHEET 18



LOCATION: 1-74US 311 AND NC 68(EAST CHESTER DRIVE) INTERCHANGE RAMP REPLACEMENT	
TIP NO.: U-5169	COUNTY: GUILFORD
DESIGNED BY: BRIAN BLACKWELL, EI	
CHECKED BY:	DATE:

REVISIONS
 08/21/17 RW REVISIONS: ADJUSTED THE PUE ON PARCELS 13 & 14 INTO PARCEL 13 COMBINED PARCELS 15 & 16 INTO PARCEL 15. UPDATED PROPERTY OWNER NAMES AND/OR DED INFORMATION ON PARCELS 13 & 37. (R11)
 08/14/17 RW REVISIONS: ADJUSTED THE PUE ON PARCELS 13 & 14 INTO PARCEL 13 COMBINED PARCELS 15 & 16 INTO PARCEL 15. UPDATED PROPERTY OWNER NAMES AND/OR DED INFORMATION ON PARCELS 13 & 37. (R11)
 08/14/17 RW REVISIONS: ADJUSTED THE PUE ON PARCELS 13 & 14 INTO PARCEL 13 COMBINED PARCELS 15 & 16 INTO PARCEL 15. UPDATED PROPERTY OWNER NAMES AND/OR DED INFORMATION ON PARCELS 13 & 37. (R11)

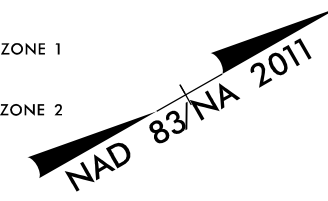
BUFFER IMPACTS

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Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO. U-5169	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

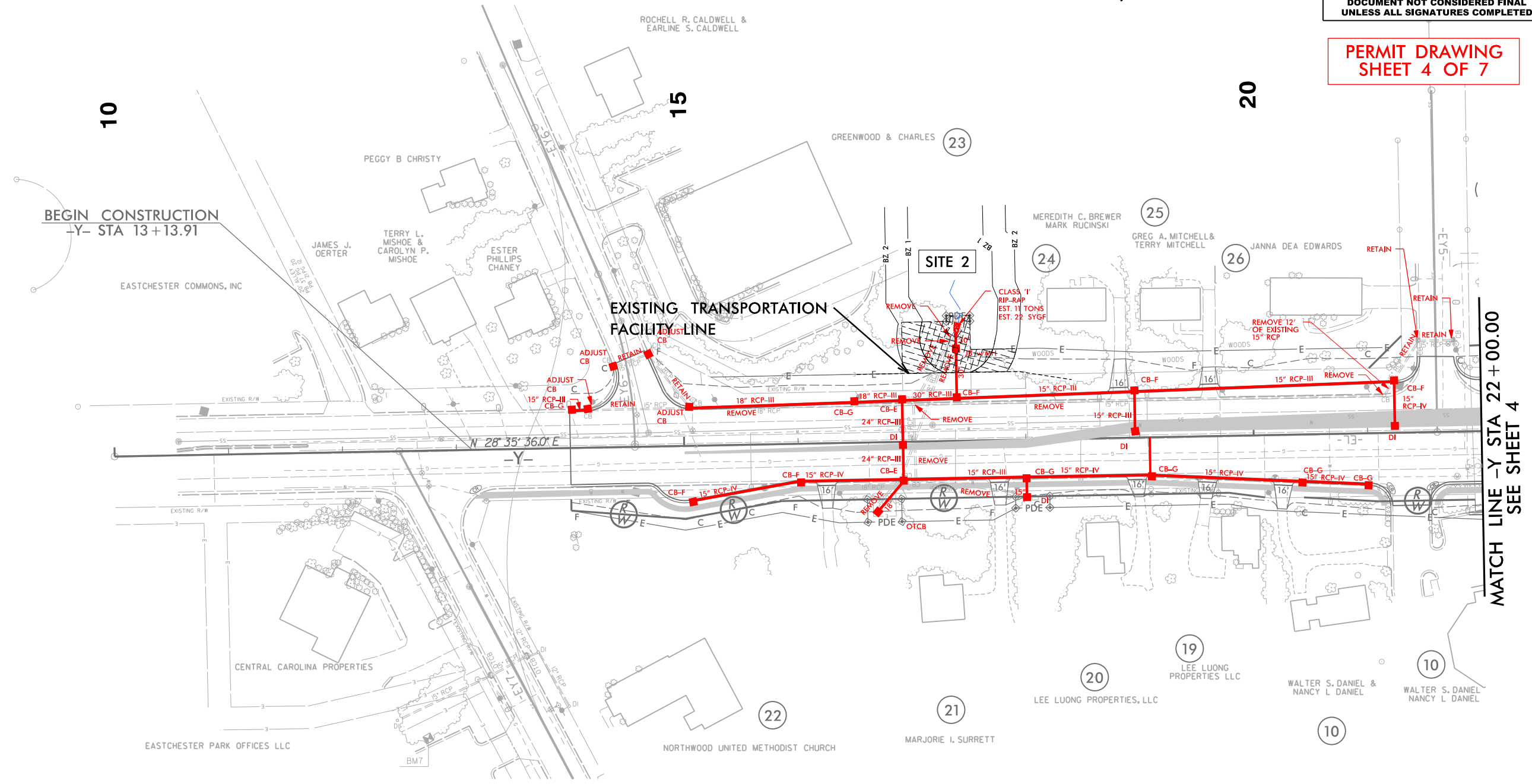
LEGEND

-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

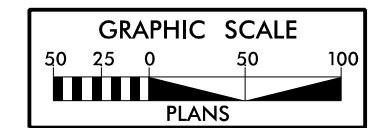


PERMIT DRAWING
SHEET 4 OF 7

REVISIONS
06/12/17 RW REVISIONS: UPDATED THE EXISTING AND PROPOSED RW ON PARCEL 19. UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 20 & 24. (RHT)



MATCH LINE -Y- STA 22+00.00
SEE SHEET 4



FOR -Y- PROFILE, SEE SHEET 12

12/14/2017 11:58:41 hgd.permit_buff_pah6.dgn

BUFFER IMPACTS

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

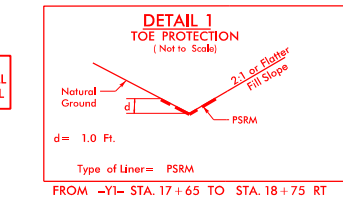
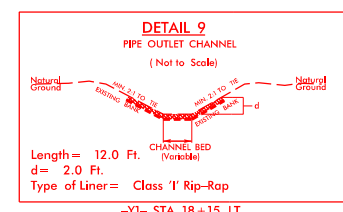
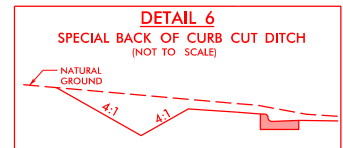
PROJECT REFERENCE NO.	SHEET NO.
U-5169	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

NAD 83/NA 2011

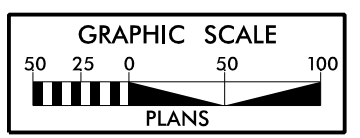
**BUFFER DRAWING
SHEET 5 OF 7**

LEGEND

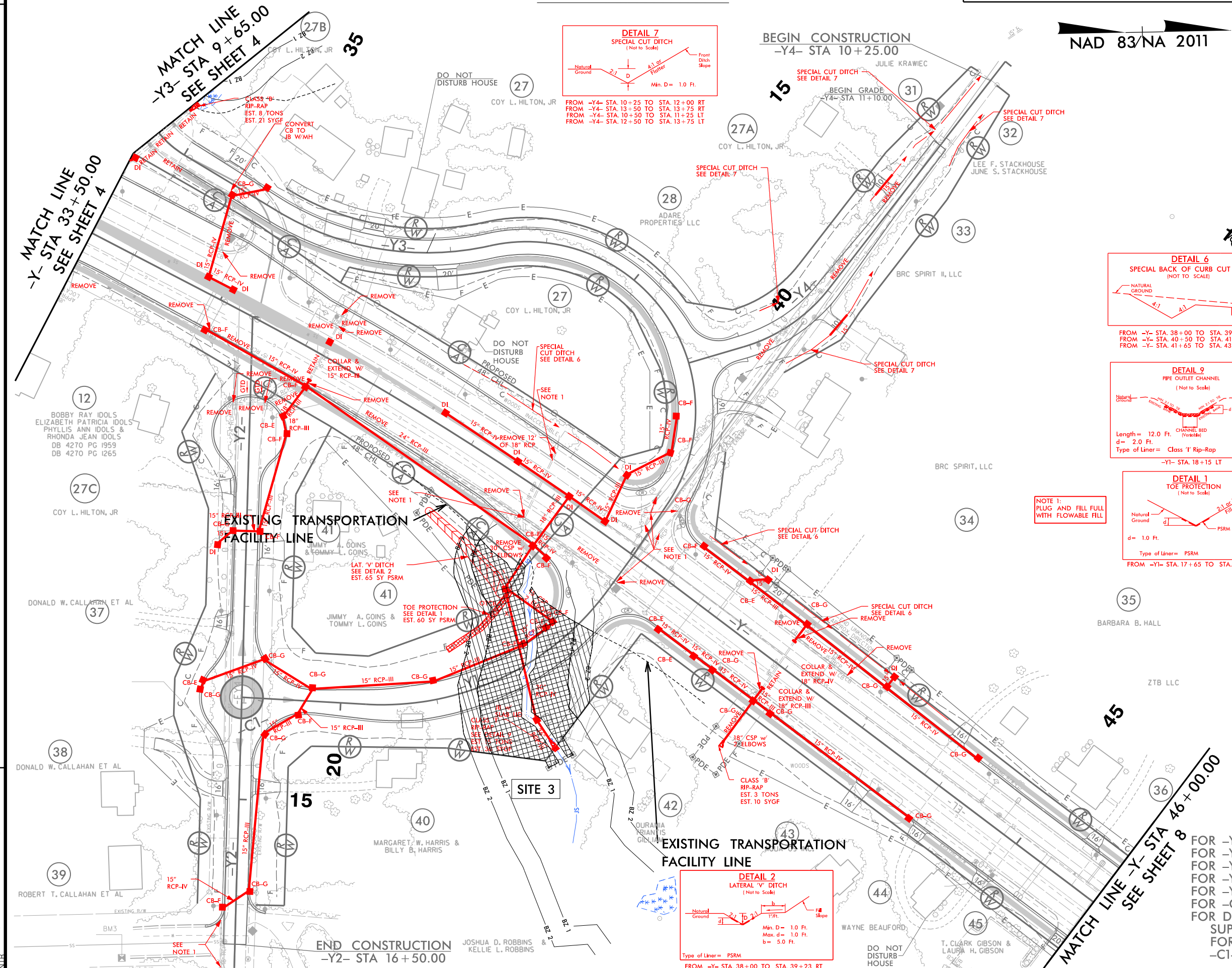
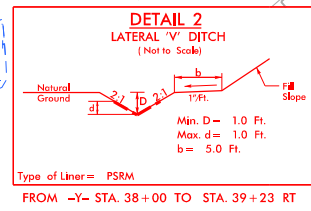
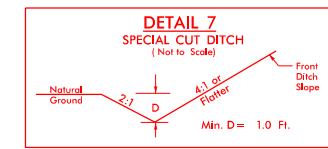
	MITIGABLE IMPACTS ZONE 1
	MITIGABLE IMPACTS ZONE 2



**NOTE 1:
PLUG AND FILL FULL
WITH FLOWABLE FILL**



FOR -Y- PROFILE, SEE SHEET 12 & 13
FOR -Y1- PROFILE, SEE SHEET 14
FOR -Y2- PROFILE, SEE SHEET 14
FOR -Y3- PROFILE, SEE SHEET 15
FOR -Y4- PROFILE, SEE SHEET 15
FOR -C1- PROFILE, SEE SHEET 15
FOR DETAIL OF ALIGNMENTS,
SUPERELEVATIONS AND DIMENSIONS
FOR -Y-, -Y1-, -Y2-, -Y3-, -Y4-, AND
-C1-, SEE SHEET 2B-1



REVISIONS

06/08/17 RW REVISIONS: UPDATED PARCEL NUMBERS AND OWNER INFORMATION ON PARCELS 27, 27A, 27B, AND 27C. REMOVED TCE AND CLAIM FROM PARCEL 29. (RHT)

06/12/17 RW REVISIONS: REVISED THREE TRACTS OF PARCEL 27 TO PARCELS 27A, 27B AND 27C. UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 27, 27A, 27B, 27C, 32, 34, 37, 38, 39 AND 45. ADJUSTED TCE ON PARCEL 42. (RHT)

1/29/2018 hgd.permit_buff_pah7.dgn

RIPARIAN BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft ²)	ZONE 2 (ft ²)
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)		
1	Roadway Fill	-YRPB- 20+95 to 21+27	X			0	394	394					
2	30" Alternate Pipe	-Y- 16+93 to 17+93	X			1970	1355	3325					
3	36" RCP	-Y- 38+45 to 40+78	X						14740	6410	21150		
TOTAL:						1970	1749	3719	14740	6410	21150	0	0

N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

 GUILFORD COUNTY
 PROJECT: U-5169

 DATE 1/29/2018
 SHEET 6 OF 7

WETLANDS IN BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)		WETLANDS IN BUFFERS	
			ZONE 1 (ft ²)	ZONE 2 (ft ²)
X	N/A		0	0
TOTAL:			0	0

N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

 GUILFORD COUNTY
 PROJECT: U-5169

 DATE 1/29/2018
 SHEET 7 OF 7

09/08/19

See Sheet 1A For Index of Sheets
 See Sheet 1B For Conventional Plan Sheet Symbols
 See Sheets 1C-1 thru 1C-3 for Survey Control Sheets

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

GUILFORD COUNTY

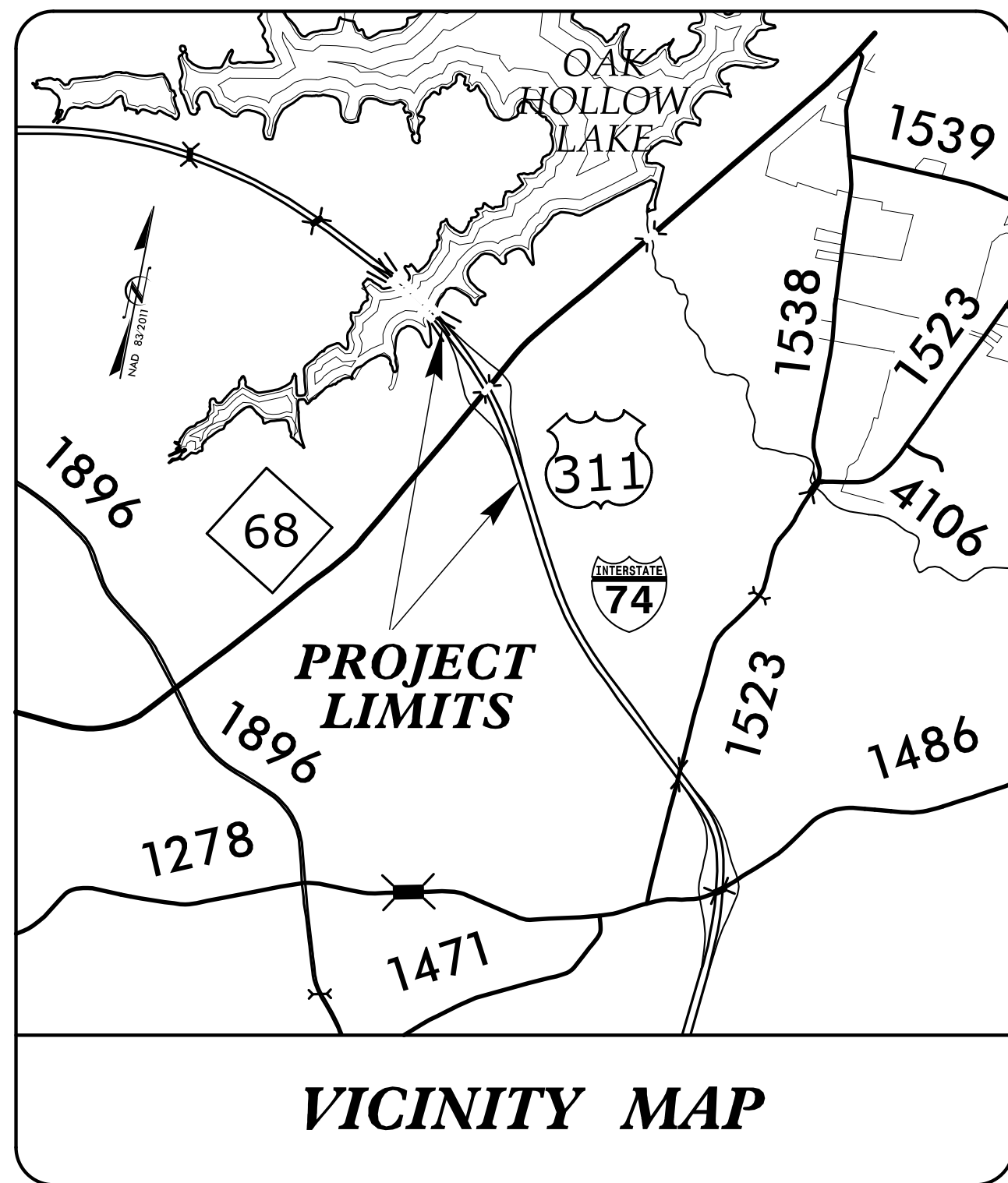
LOCATION: I-74/US311 AND NC 68 (EASTCHESTER DRIVE)

INTERCHANGE IMPROVEMENTS

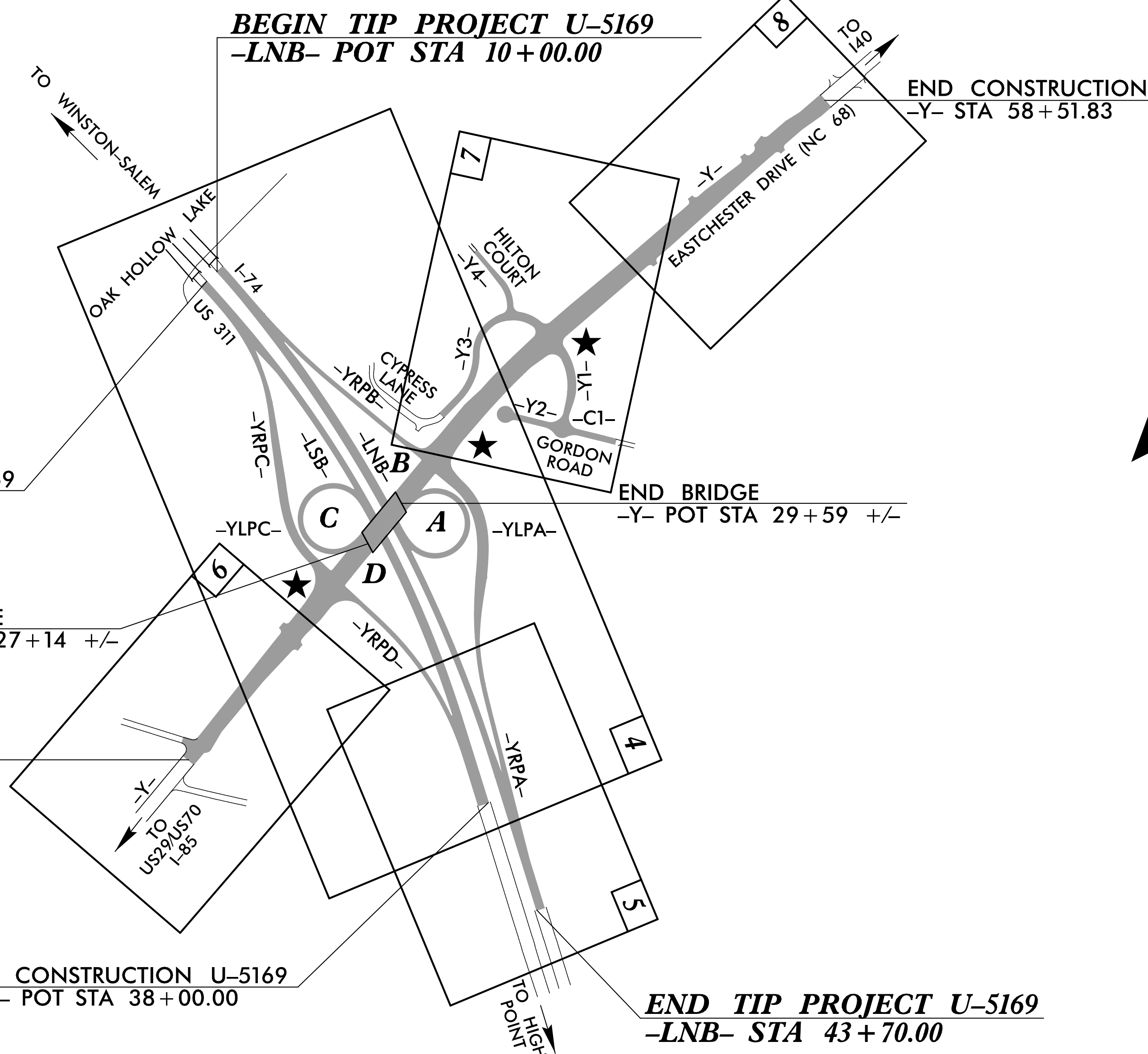
TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURES,
 RETAINING WALLS AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5169	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45220.1.2	NHS-0311(32)	PE	
45220.2.1	NHS-0311(32)	R/W	
45220.2.2	NHS-0311(32)	UTILITIES	
45220.3.1	NHS-0311(32)	CONST.	

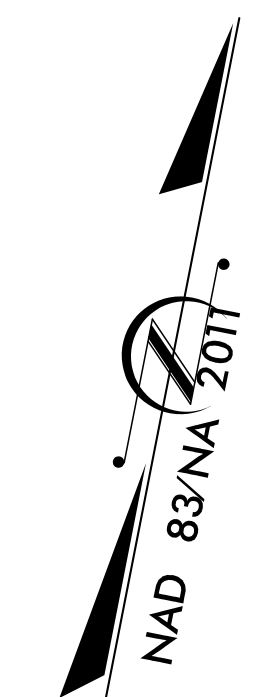
TIP PROJECT: U-5169



PLFI PLANS



★ PROPOSED TRAFFIC SIGNAL



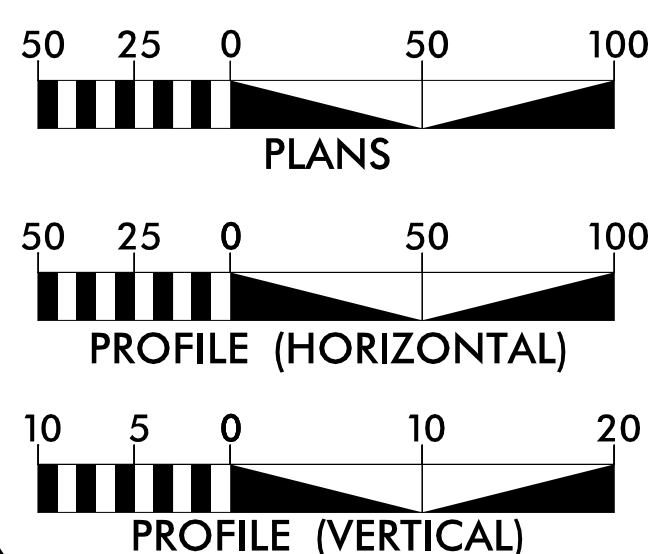
NOTES:

- CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
- THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF HIGH POINT.
- A PORTION OF THIS PROJECT IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

CONTRACT: C204071

GRAPHIC SCALES



DESIGN DATA

ADT 2018 = 41,584
 ADT 2038 = 72,144
 K = 12 %
 D = 60 %
 T = 6 % *
 V = 65 MPH
 * TTST = 4% DUAL 2%
 FUNC CLASS = INTERSTATE STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5169 = 0.638 MILES
 TOTAL LENGTH TIP PROJECT U-5169 = 0.638 MILES

Prepared in the Office of:
HNTB
 HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1954

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 JUNE 30, 2016

LETTING DATE:
 JUNE 19, 2018

DOUGLAS M. WHEATLEY, PE
 PROJECT ENGINEER

ROY H. TELLIER, PE
 PROJECT DESIGN ENGINEER

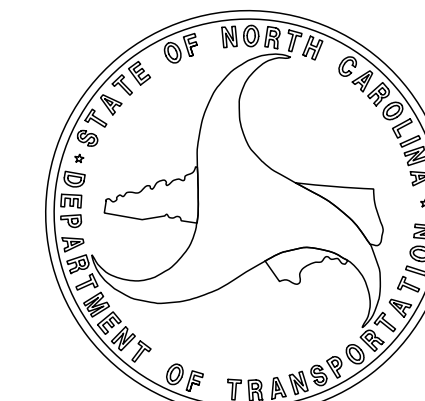
TATIA L. WHITE, PE, PLS
 NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



15-NOV-2017 11:29
 \\Roadway\Proj\U5169_rdy_Tsh.dgn
 HNTB

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Computed Property Corner	-----
Property Monument	□ EDM
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	----- WLB
Proposed Wetland Boundary	----- WLB
Existing Endangered Animal Boundary	----- EAB
Existing Endangered Plant Boundary	----- EPB
Existing Historic Property Boundary	----- HPB
Known Contamination Area: Soil	☠ -s- ☠
Potential Contamination Area: Soil	?? -s- ??
Known Contamination Area: Water	☠ -w- ☠
Potential Contamination Area: Water	?? -w- ??
Contaminated Site: Known or Potential	☠ ??

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	□

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	-----
Jurisdictional Stream	----- JS
Buffer Zone 1	----- BZ 1
Buffer Zone 2	----- BZ 2
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Wetland	-----
Proposed Lateral, Tail, Head Ditch	-----
False Sump	-----

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	●
Exist Permanent Easement Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	⊠
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	----- R/W
New Right of Way Line with Pin and Cap	----- R/W ▲
New Right of Way Line with Concrete or Granite RW Marker	----- R/W ●
New Control of Access Line with Concrete CA Marker	----- C/A
Existing Control of Access	----- C/A
New Control of Access	----- C/A
Existing Easement Line	----- E
New Temporary Construction Easement	----- E
New Temporary Drainage Easement	----- TDE
New Permanent Drainage Easement	----- PDE
New Permanent Drainage / Utility Easement	----- DUE
New Permanent Utility Easement	----- PUE
New Temporary Utility Easement	----- TUE
New Aerial Utility Easement	----- AUE

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	----- C
Proposed Slope Stakes Fill	----- F
Proposed Curb Ramp	----- CR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	-----

VEGETATION:

Single Tree	○
Single Shrub	○

Hedge	-----
Woods Line	-----
Orchard	-----
Vineyard	----- Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	----- CONC
Bridge Wing Wall, Head Wall and End Wall	----- CONC WW
MINOR:	
Head and End Wall	----- CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊙
Storm Sewer	----- S

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊙
Power Line Tower	⊠
Power Transformer	⊠
U/G Power Cable Hand Hole	○
H-Frame Pole	●
U/G Power Line LOS B (S.U.E.*)	----- P
U/G Power Line LOS C (S.U.E.*)	----- P
U/G Power Line LOS D (S.U.E.*)	----- P

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊙
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	○
U/G Telephone Cable LOS B (S.U.E.*)	----- T
U/G Telephone Cable LOS C (S.U.E.*)	----- T
U/G Telephone Cable LOS D (S.U.E.*)	----- T
U/G Telephone Conduit LOS B (S.U.E.*)	----- TC
U/G Telephone Conduit LOS C (S.U.E.*)	----- TC
U/G Telephone Conduit LOS D (S.U.E.*)	----- TC
U/G Fiber Optics Cable LOS B (S.U.E.*)	----- T FO
U/G Fiber Optics Cable LOS C (S.U.E.*)	----- T FO
U/G Fiber Optics Cable LOS D (S.U.E.*)	----- T FO

WATER:

Water Manhole	⊙
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	----- W
U/G Water Line LOS C (S.U.E.*)	----- W
U/G Water Line LOS D (S.U.E.*)	----- W
Above Ground Water Line	----- A/G Water

TV:

TV Pedestal	⊠
TV Tower	⊗
U/G TV Cable Hand Hole	○
U/G TV Cable LOS B (S.U.E.*)	----- TV
U/G TV Cable LOS C (S.U.E.*)	----- TV
U/G TV Cable LOS D (S.U.E.*)	----- TV
U/G Fiber Optic Cable LOS B (S.U.E.*)	----- TV FO
U/G Fiber Optic Cable LOS C (S.U.E.*)	----- TV FO
U/G Fiber Optic Cable LOS D (S.U.E.*)	----- TV FO

GAS:

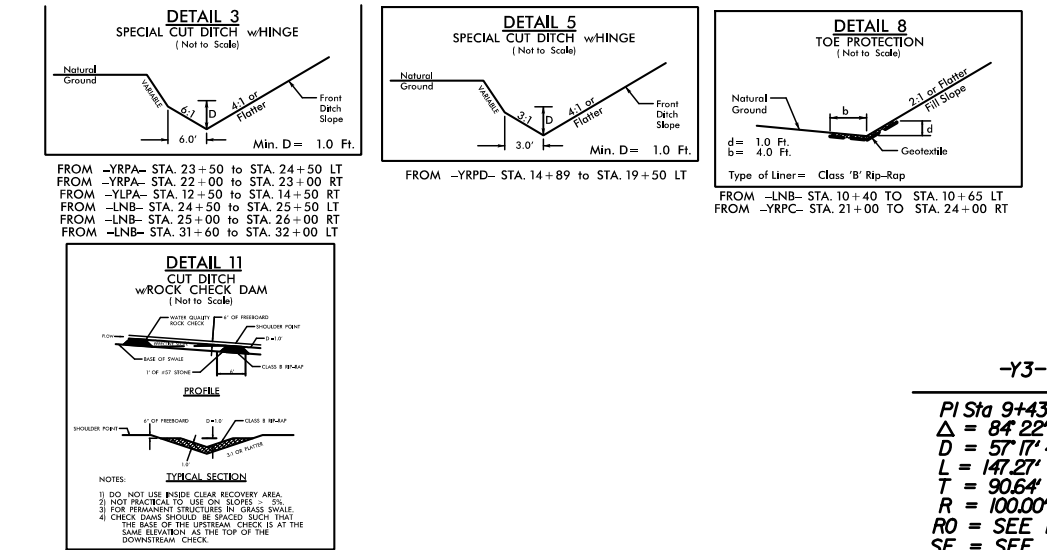
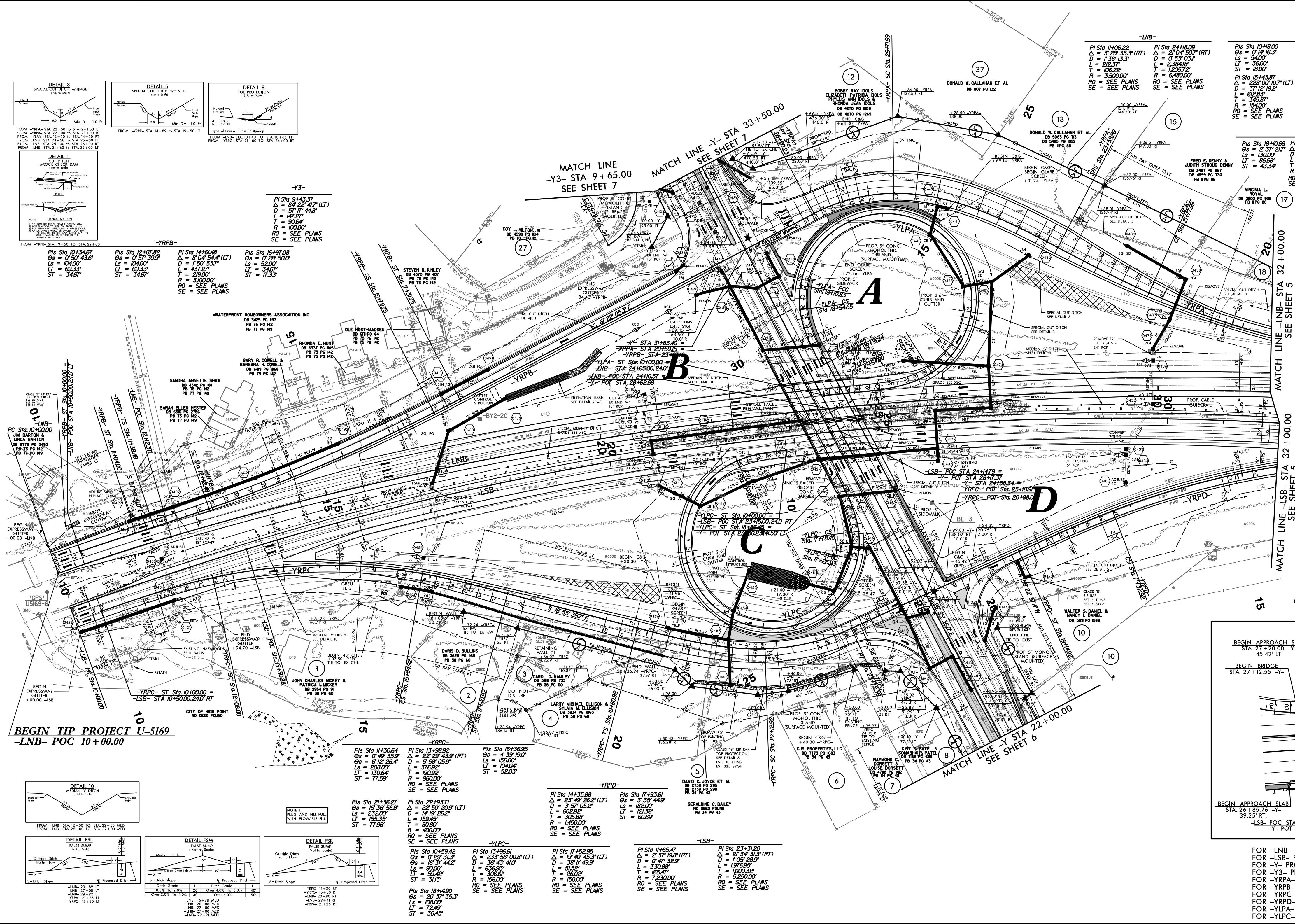
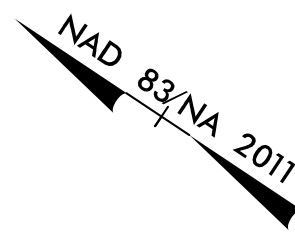
Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	----- G
U/G Gas Line LOS C (S.U.E.*)	----- G
U/G Gas Line LOS D (S.U.E.*)	----- G
Above Ground Gas Line	----- A/G Gas
SANITARY SEWER:	
Sanitary Sewer Manhole	⊙
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	----- SS
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
SS Forced Main Line LOS B (S.U.E.*)	----- FSS
SS Forced Main Line LOS C (S.U.E.*)	----- FSS
SS Forced Main Line LOS D (S.U.E.*)	----- FSS

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	⊠
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	----- 7UTL
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	⊠
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊕
U/G Test Hole LOS A (S.U.E.*)	○
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

★ PROPOSED TRAFFIC SIGNAL



-Y3-
 PI Sta 0+43.37
 $\Delta = 64.22$ (LT)
 $D = 57.77$ (44.8)
 $L = 140.29$
 $R = 300.00$
 $RO = SEE PLANS$
 $SE = SEE PLANS$

-YRPA-
 PI Sta 10+34.67
 $\Delta = 0.57$ (44.8)
 $L = 140.29$
 $ST = 34.67$

-YRPA-
 PI Sta 12+07.82
 $\Delta = 0.57$ (44.8)
 $L = 140.29$
 $ST = 34.67$

-YRPA-
 PI Sta 14+16.48
 $\Delta = 0.04$ (44.8)
 $L = 140.29$
 $ST = 34.67$

-YRPA-
 PI Sta 16+47.08
 $\Delta = 0.57$ (44.8)
 $L = 140.29$
 $ST = 34.67$

-LNB-
 PI Sta 11+06.22
 $\Delta = 2.28$ (35.3) (RT)
 $D = 0.57$ (44.8)
 $L = 140.29$
 $ST = 34.67$

-YRPA-
 PI Sta 24+18.09
 $\Delta = 2.28$ (35.3) (RT)
 $D = 0.57$ (44.8)
 $L = 140.29$
 $ST = 34.67$

-YRPA-
 PI Sta 10+18.00
 $\Delta = 0.14$ (6.3)
 $L = 54.00$
 $LT = 36.00$
 $ST = 36.00$

-YRPA-
 PI Sta 18+19.00
 $\Delta = 20.37$ (35.3)
 $L = 140.29$
 $ST = 34.67$

-YRPA-
 PI Sta 15+43.87
 $\Delta = 2.28$ (35.3) (LT)
 $D = 0.57$ (44.8)
 $L = 140.29$
 $ST = 34.67$

-YRPA-
 PI Sta 18+16.70
 $\Delta = 2.37$ (21.7)
 $L = 130.00$
 $ST = 43.34$

-YRPA-
 PI Sta 20+16.70
 $\Delta = 15.04$ (21.7) (RT)
 $D = 4.02$ (25.7)
 $L = 162.00$
 $ST = 60.69$

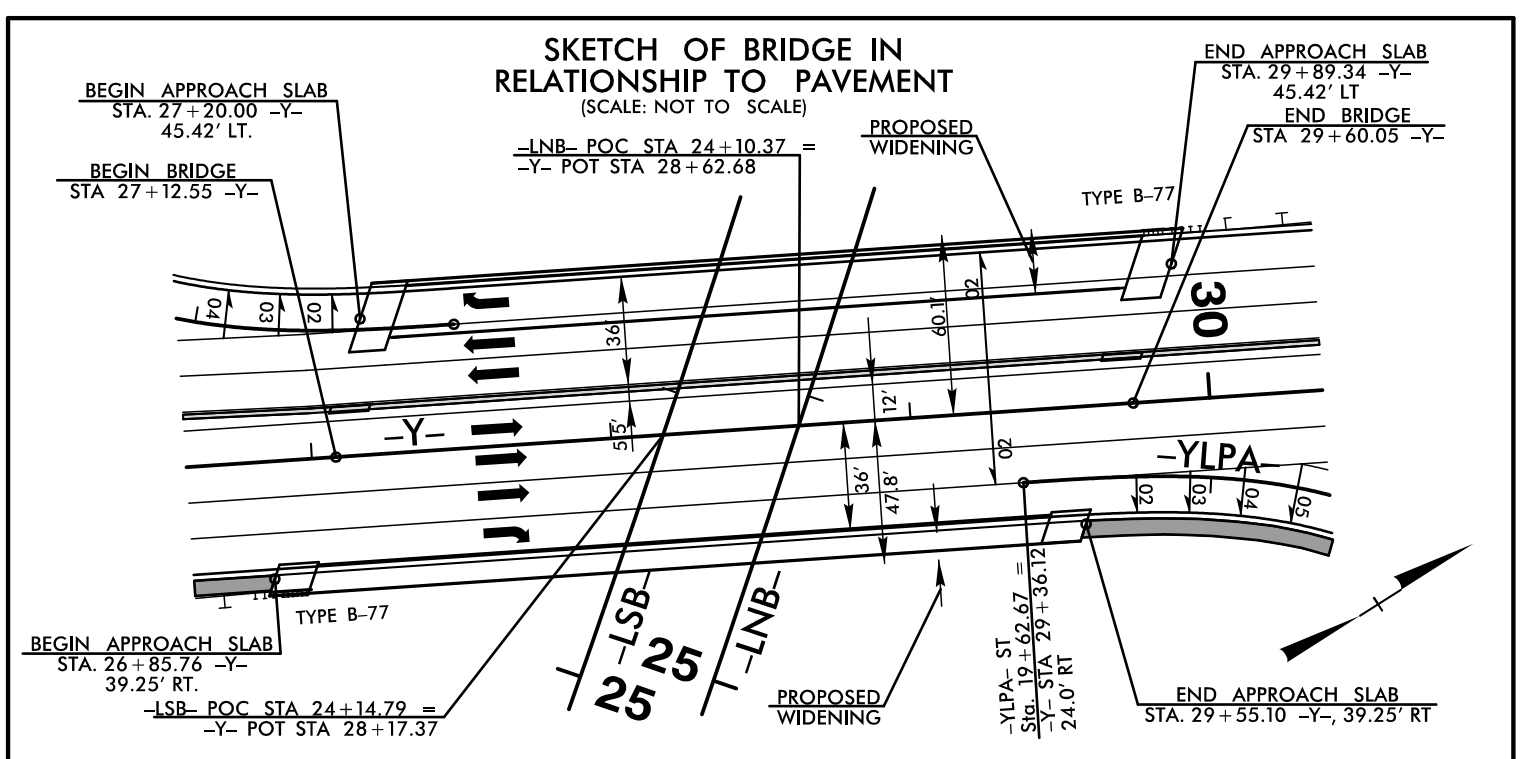
-YRPA-
 PI Sta 22+38.68
 $\Delta = 3.40$ (18.4)
 $L = 312.00$
 $ST = 60.69$

-YRPA-
 PI Sta 25+70.72
 $\Delta = 28.52$ (30.2)
 $L = 180.00$
 $ST = 60.69$

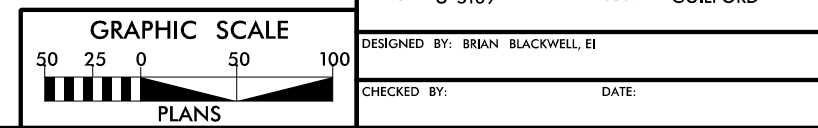
-YRPA-
 PI Sta 27+47.51
 $\Delta = 18.17$ (20.5)
 $L = 175.00$
 $ST = 315.00$

INTERCHANGE OF I-74/US311 (-LNB-) AND NC 68 EASTCHESTER DRIVE (-Y-)

2018 ADT	40,856			
2038 ADT	47,896			
	7,560	9,852		
	37,376		41,584	
	65,216		72,144	
	5,832	7,748		
	8,712	12,068		
			37,024	
			45,184	



FOR -LNB- PROFILE, SEE SHEETS 10 & 11
 FOR -Y- PROFILE, SEE SHEET 12
 FOR -Y3- PROFILE, SEE SHEET 13
 FOR -YRPA- PROFILE, SEE SHEET 16
 FOR -YRPA- PROFILE, SEE SHEET 17
 FOR -YRPC- PROFILE, SEE SHEET 18
 FOR -YRPA- PROFILE, SEE SHEET 19
 FOR -YLPA- PROFILE, SEE SHEET 17
 FOR -YRPA- PROFILE, SEE SHEET 18



101516 RW REMAINS REMAINING THE CONTROL OF ACCESS ON PARCELS 4 AND 8 ADJUSTING THE RUE ON PARCELS 7 AND 8 (NCF)
 111516 RW REMAINS ADJUSTED THE RUE ON PARCELS 1 THROUGH 8 AND THE NCDOT PARCEL (NCF)
 080217 RW REMAINS ADJUSTED THE RUE ON PARCELS 3, COMBINED PARCELS 13 & 14 INTO PARCEL 13, COMBINED PARCELS 15 & 16 INTO PARCEL 15, UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 13 & 15 (NCF)
 080217 RW REMAINS ADJUSTED THE RUE ON PARCEL 9, UPDATED PROPERTY OWNER NAME AND DEED INFORMATION ON PARCEL 9, UPDATED RW ADJUSTMENT CALCULATIONS ON PARCELS 2, 10 & 12, ADJUSTED RW ADJUSTMENT AND RW & TCE CALCULATIONS ON PARCELS 13 & 15 (NCF)

03/18/2018 10:05 AM U:\5169\5169.dwg
 03/18/2018 10:05 AM U:\5169\5169.dwg

PROJECT REFERENCE NO.	SHEET NO.
U-5169	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

NAD 83/NA 2011

END TIP PROJECT U-5169
-LNB- POT STA 43+70.00

-YRPA-
 Pls Sta 18+10.68
 $\Delta = 2^{\circ} 37' 21.7''$
 $L_s = 130.00'$
 $LT = 86.68'$
 $ST = 43.34'$

PI Sta 20+16.70
 $\Delta = 13^{\circ} 04' 21.2''$ (RT)
 $D = 4^{\circ} 02' 05.7''$
 $L = 323.99'$
 $T = 162.70'$
 $R = 1,420.00'$
 $RO = \text{SEE PLANS}$
 $SE = \text{SEE PLANS}$

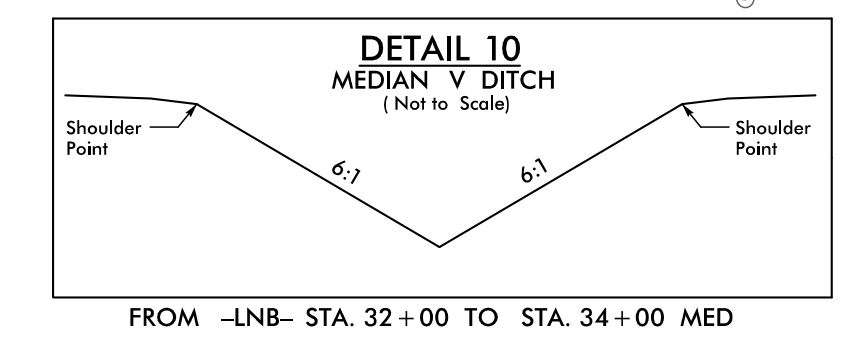
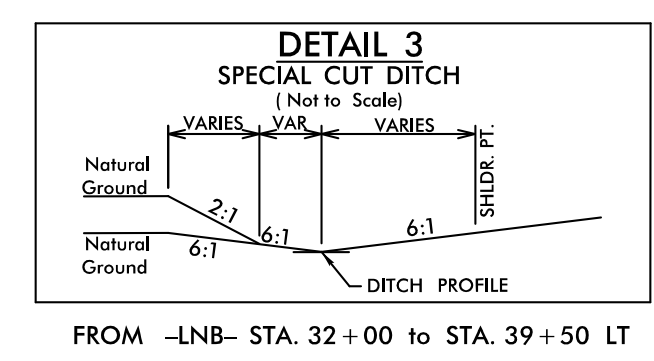
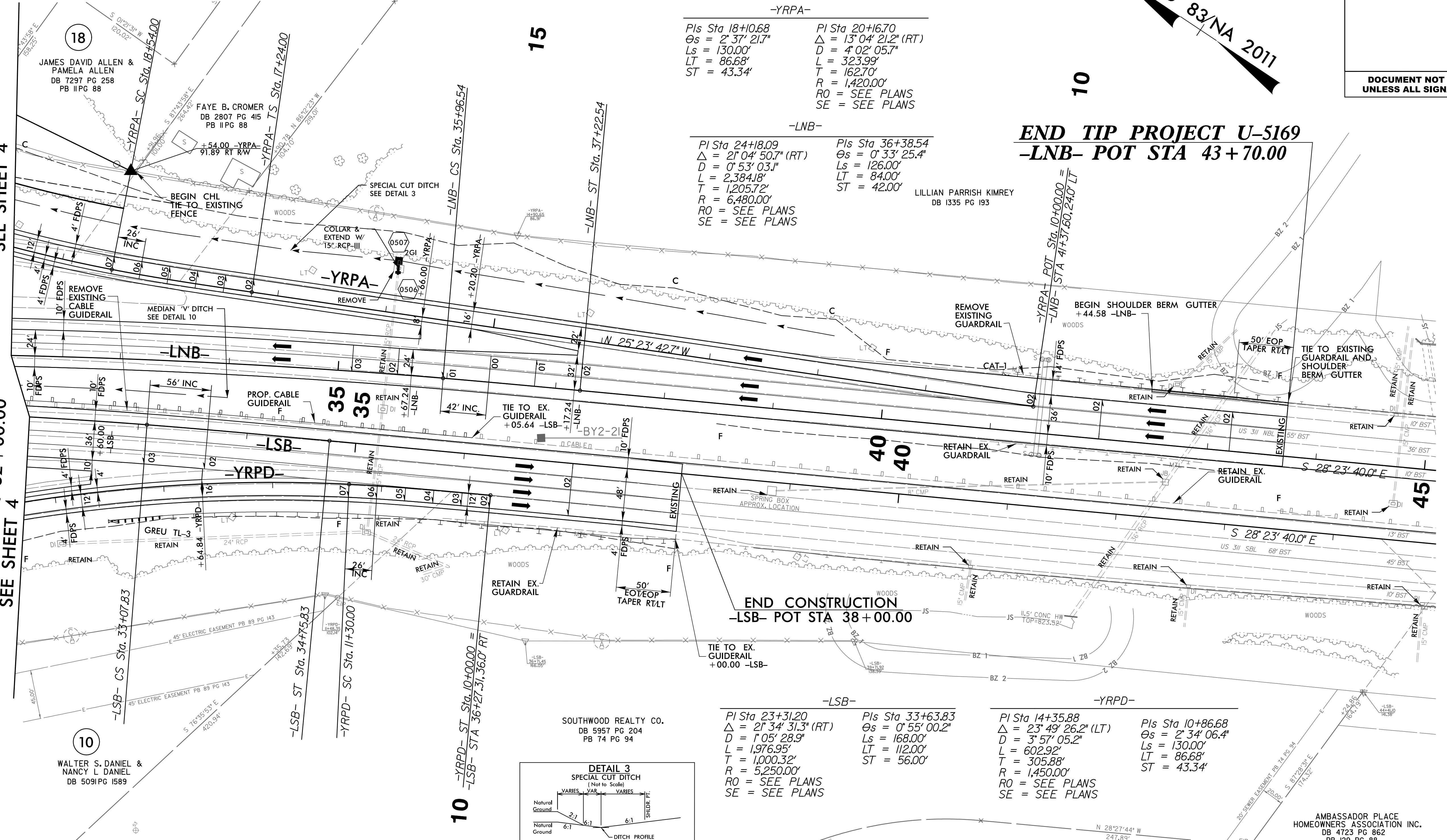
-LNB-
 Pls Sta 24+18.09
 $\Delta = 2^{\circ} 04' 50.7''$ (RT)
 $D = 0^{\circ} 53' 03.1''$
 $L = 2,384.18'$
 $T = 1,205.72'$
 $R = 6,480.00'$
 $RO = \text{SEE PLANS}$
 $SE = \text{SEE PLANS}$

Pls Sta 36+38.54
 $\Delta = 0^{\circ} 33' 25.4''$
 $L_s = 126.00'$
 $LT = 84.00'$
 $ST = 42.00'$

LILLIAN PARRISH KIMREY
 DB 1335 PG 193

MATCH LINE -LNB- STA 32+00.00
 SEE SHEET 4

MATCH LINE -LSB- STA 32+00.00
 SEE SHEET 4



-LSB-
 Pls Sta 23+31.20
 $\Delta = 2^{\circ} 34' 31.3''$ (RT)
 $D = 1^{\circ} 05' 28.9''$
 $L = 1,976.95'$
 $T = 1,000.32'$
 $R = 5,250.00'$
 $RO = \text{SEE PLANS}$
 $SE = \text{SEE PLANS}$

Pls Sta 33+63.83
 $\Delta = 0^{\circ} 55' 00.2''$
 $L_s = 168.00'$
 $LT = 112.00'$
 $ST = 56.00'$

-YRPD-
 Pls Sta 14+35.88
 $\Delta = 23^{\circ} 49' 26.2''$ (LT)
 $D = 3^{\circ} 57' 05.2''$
 $L = 602.92'$
 $T = 305.88'$
 $R = 1,450.00'$
 $RO = \text{SEE PLANS}$
 $SE = \text{SEE PLANS}$

Pls Sta 10+86.68
 $\Delta = 2^{\circ} 34' 06.4''$
 $L_s = 130.00'$
 $LT = 86.68'$
 $ST = 43.34'$

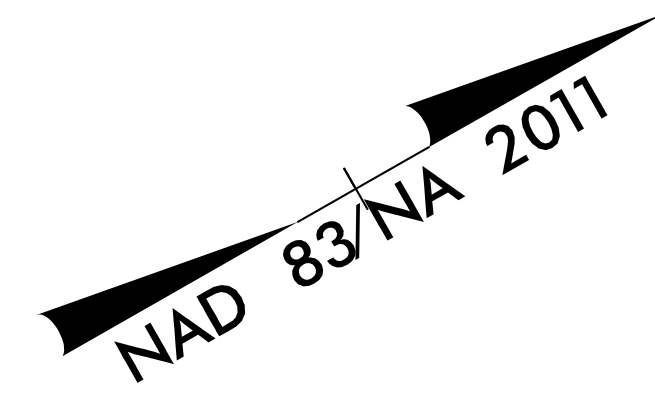
FOR -LNB- PROFILE, SEE SHEET 9 & 10
 FOR -LSB- PROFILE, SEE SHEET 11
 FOR -YRPA- PROFILE, SEE SHEET 16
 FOR -YRPD- PROFILE, SEE SHEET 19

REVISIONS

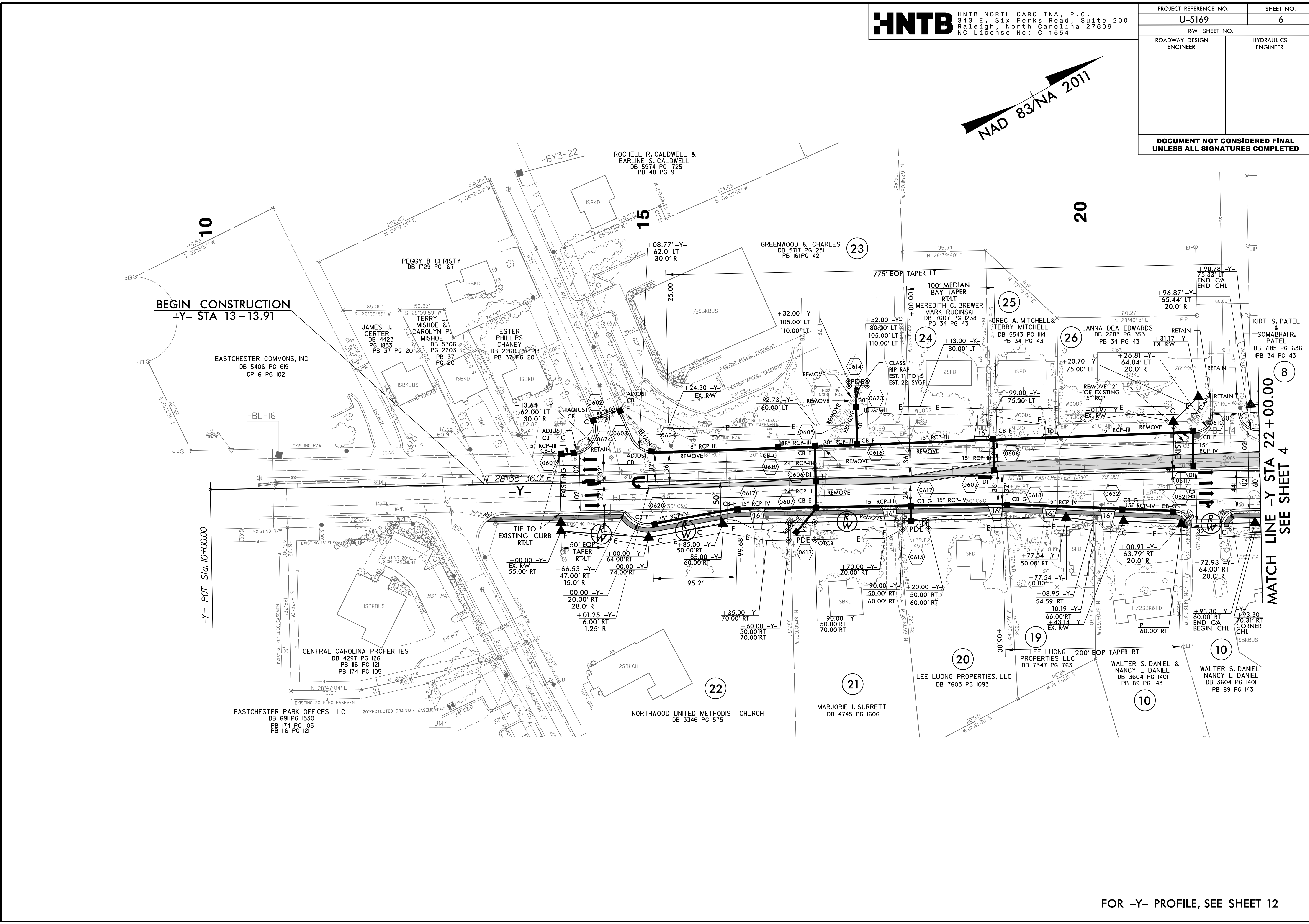
8/17/99

15-NOV-2017, 07:49
 (Roadway) (Proj) U5169_rdy_pah5.dgn
 HNTB

PROJECT REFERENCE NO.	SHEET NO.
U-5169	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REVISIONS
 06/12/17 RW REVISIONS: UPDATED THE EXISTING AND PROPOSED RW ON PARCEL 19. UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 20 & 24. (RHT)

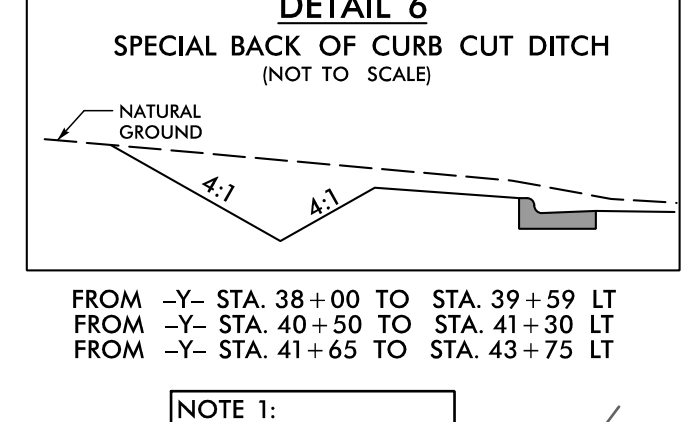
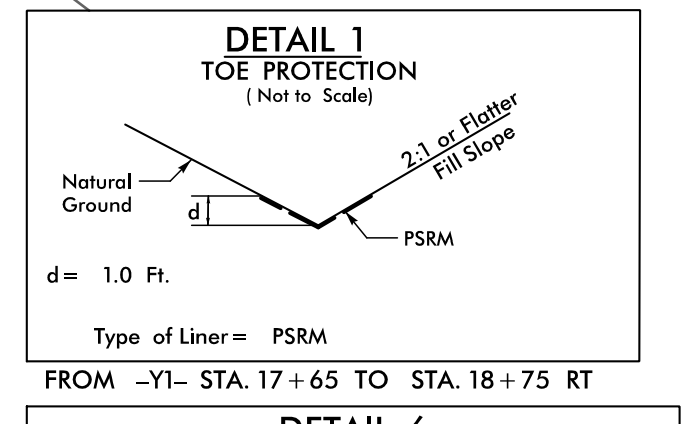
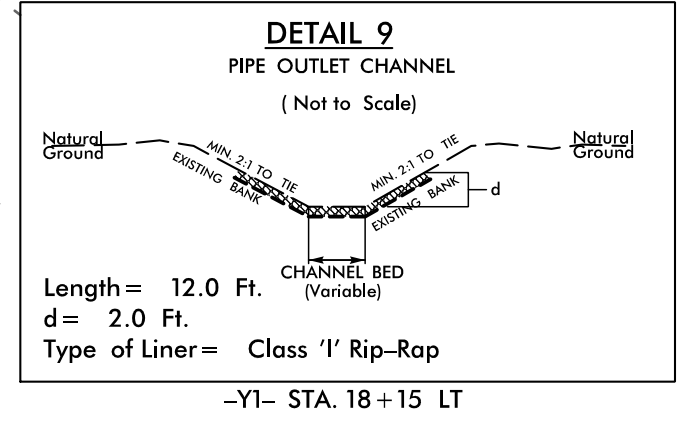
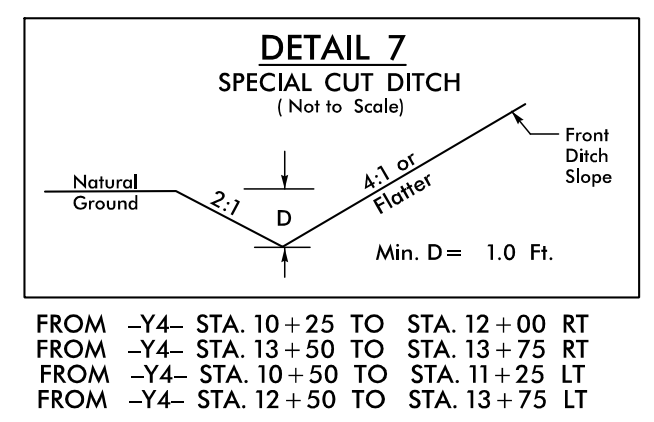
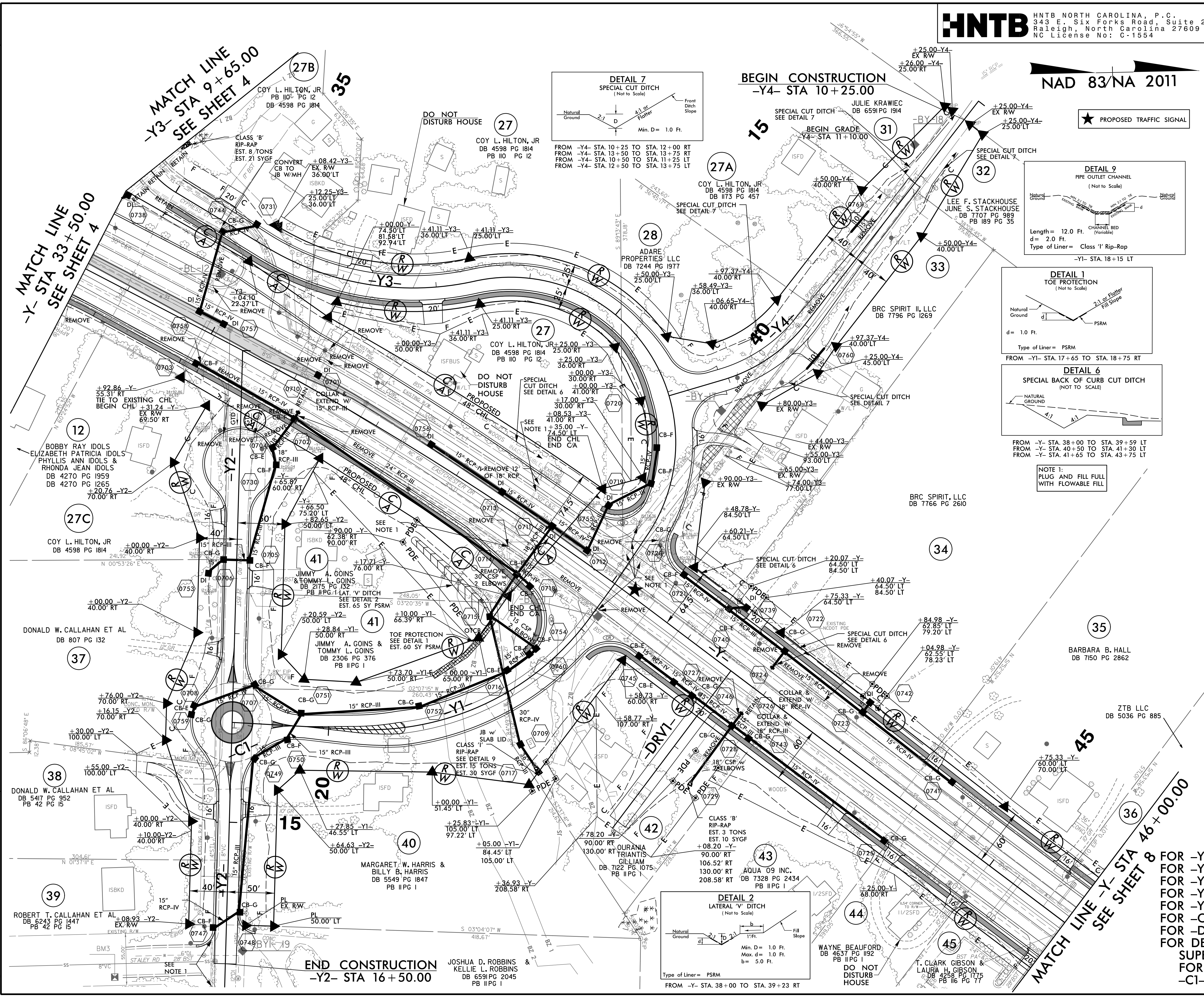


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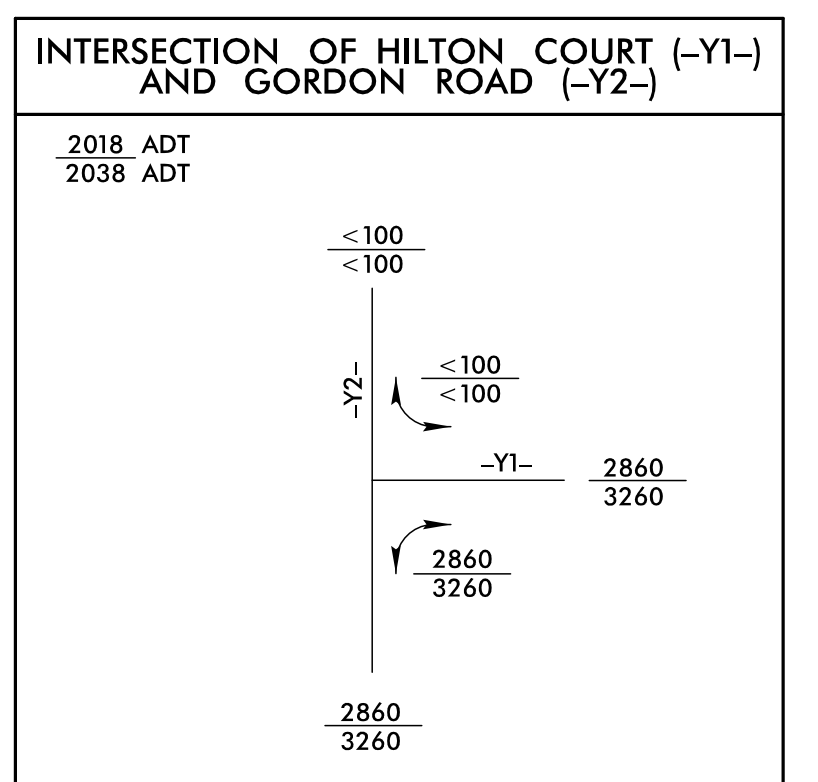
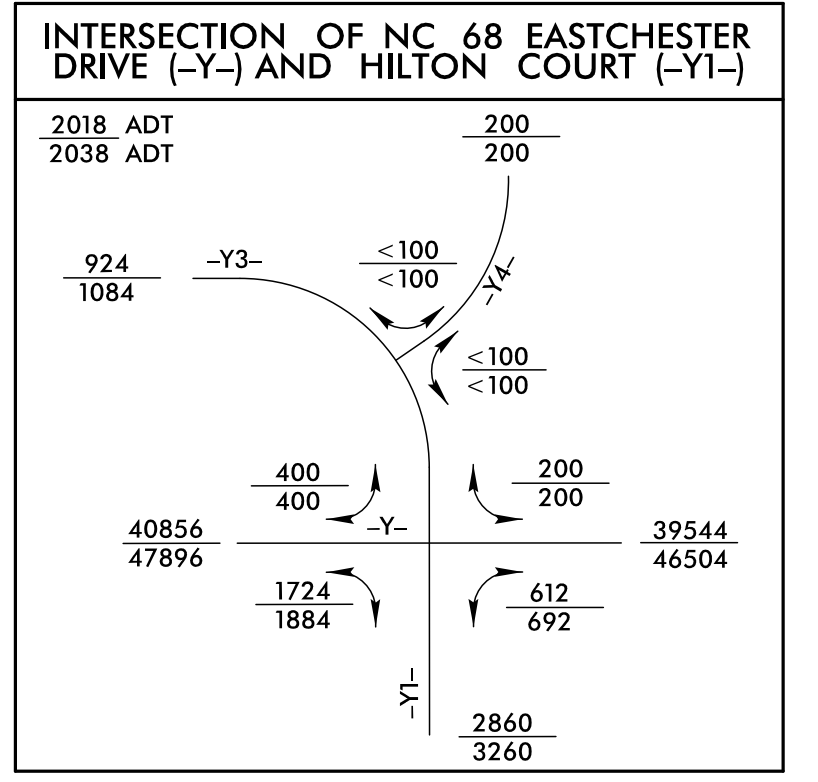
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 (Roadway (Pro)) U5169_rdy_pah6.dgn
 HNTB

PROJECT REFERENCE NO.	SHEET NO.
U-5169	7
RW DESIGN NO.	
ROADWAY SHEET ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS
 0608/17 RW REVISIONS: UPDATED PARCEL NUMBERS AND OWNER INFORMATION ON PARCELS 27, 27A, 27B, AND 27C. REMOVED TCE AND CLAIM FROM PARCEL 29. (RHT)
 06/12/17 RW REVISIONS: REVISED THREE TRACTS OF PARCEL 27 TO PARCELS 27A, 27B AND 27C. UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 27, 27A, 27B, 27C, 34, 37, 38, 39 AND 45. ADJUSTED TCE ON PARCEL 42. (RHT)
 15-NOV-2017, 07:50
 (Roadway-Pro) U5169_rdy_pah7.dgn
 8/17/99

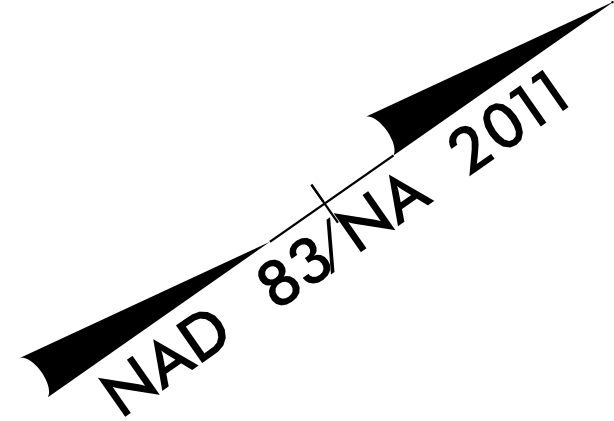


NOTE 1:
 PLUG AND FILL FULL WITH FLOWABLE FILL



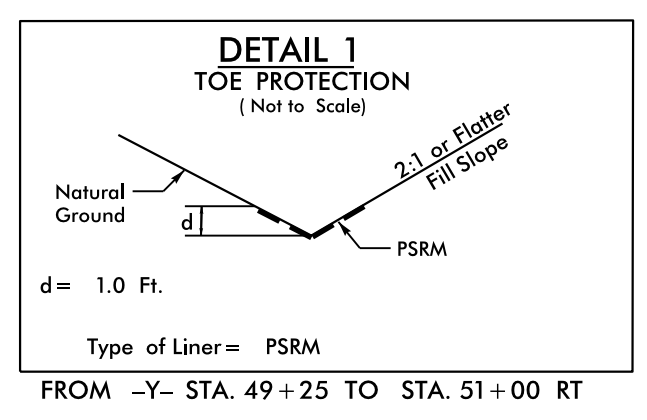
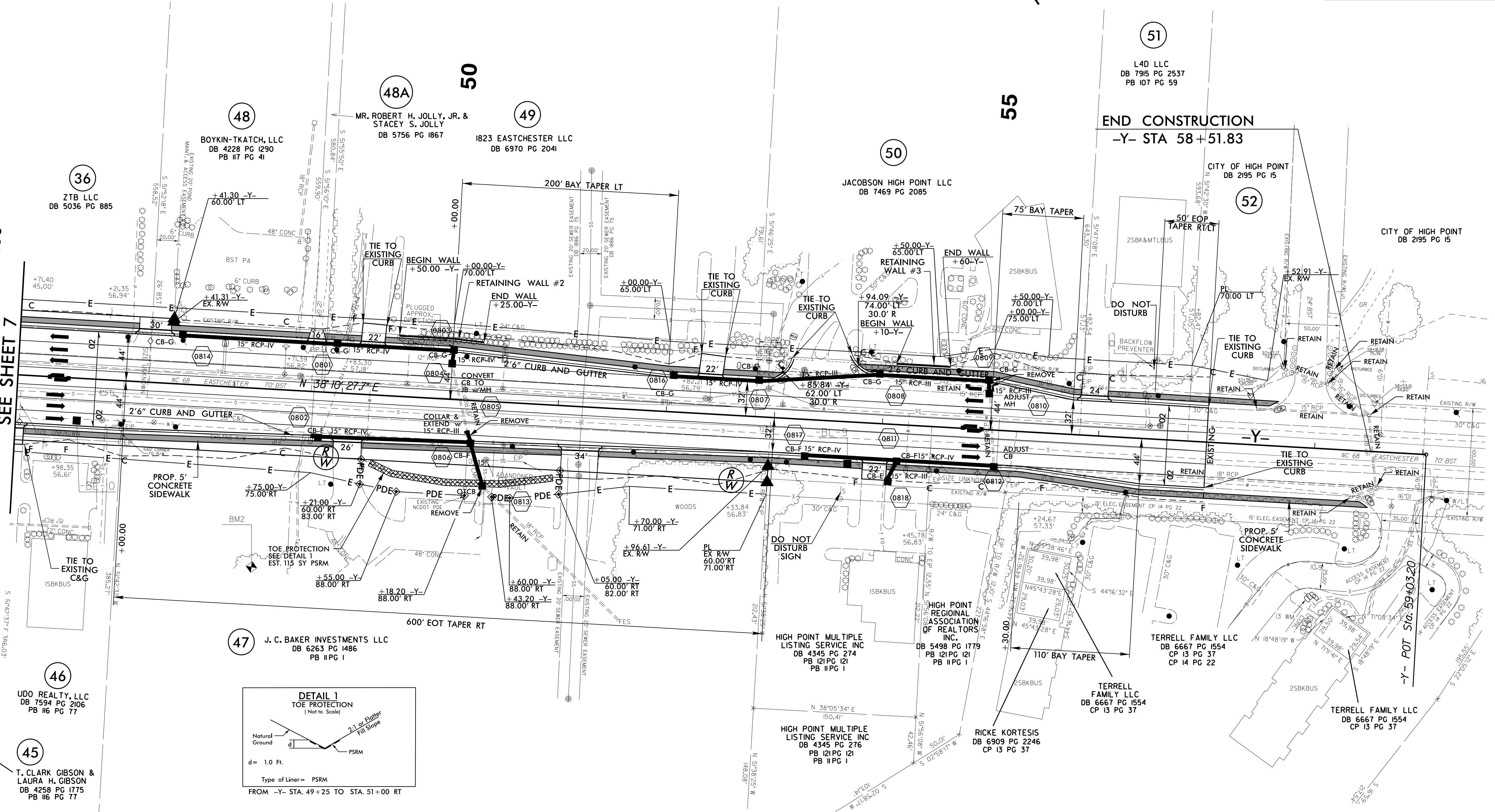
FOR -Y- PROFILE, SEE SHEET 12 & 13
 FOR -Y1- PROFILE, SEE SHEET 14
 FOR -Y2- PROFILE, SEE SHEET 14
 FOR -Y3- PROFILE, SEE SHEET 15
 FOR -Y4- PROFILE, SEE SHEET 15
 FOR -C1- PROFILE, SEE SHEET 15
 FOR -DRV1- PROFILE, SEE SHEET 19
 FOR DETAIL OF ALIGNMENTS, SUPERELEVATIONS AND DIMENSIONS FOR -Y-, -Y1-, -Y2-, -Y3-, -Y4-, AND -C1-, SEE SHEET 2B-1

PROJECT REFERENCE NO.	SHEET NO.
U-5169	8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REVISIONS:
 06/12/17 RW REVISIONS: LABELED PARCEL 45. UPDATED PROPERTY OWNER NAMES AND/OR DEED INFORMATION ON PARCELS 46 AND 48. CREATED PARCEL 48A. (RHT)
 08/02/17 RW REVISIONS: ADDED A "DO NOT DISTURB" NOTE TO THE BACKFLOW PREVENTER ON PARCEL 51. ADJUSTED RW LINE ON PARCEL 48.
 01/02/18 RW REVISIONS: ADJUSTED TCE AND ADDED PDE ON PARCEL 47. RHT

MATCH LINE -Y- STA 46+00.00
 SEE SHEET 7



45
 T. CLARK GIBSON &
 LAURA H. GIBSON
 DB 4258 PG 1775
 PB 116 PG 77

46
 UDO REALTY, LLC
 DB 7594 PG 2106
 PB 116 PG 77

47
 J. C. BAKER INVESTMENTS LLC
 DB 6263 PG 1486
 PB 116 PG 1

36
 ZTB LLC
 DB 5036 PG 885

48
 BOYKIN-TKATCH, LLC
 DB 4228 PG 1290
 PB 117 PG 41

48A
 MR. ROBERT H. JOLLY, JR. &
 STACEY S. JOLLY
 DB 5756 PG 1867

49
 1823 EASTCHESTER LLC
 DB 6970 PG 2041

50
 JACOBSON HIGH POINT LLC
 DB 7469 PG 2085

51
 L4D LLC
 DB 7915 PG 2537
 PB 107 PG 59

52
 CITY OF HIGH POINT
 DB 2195 PG 15

CITY OF HIGH POINT
 DB 2195 PG 15

TERRELL FAMILY LLC
 DB 6667 PG 1554
 CP 13 PG 37
 CP 14 PG 22

TERRELL FAMILY LLC
 DB 6667 PG 1554
 CP 13 PG 37

TERRELL FAMILY LLC
 DB 6667 PG 1554
 CP 13 PG 37

HIGH POINT MULTIPLE LISTING SERVICE INC
 DB 4345 PG 276
 PB 121 PG 121
 PB 116 PG 1

HIGH POINT REGIONAL ASSOCIATION OF REALTORS INC.
 DB 5498 PG 1779
 PB 121 PG 121
 PB 116 PG 1

RICKE KORTESIS
 DB 6909 PG 2246
 CP 13 PG 37

8/17/99

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