



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

August 3, 2006

US Army Corps of Engineers
Raleigh Field Office
6508 Falls of Neuse Road, Suite 120
Raleigh, NC 27615-6814

ATTENTION: Eric Alsmeyer
NCDOT Coordinator, Division 5

Dear Sir:

Subject: Application for Modification to Section 404, Section 401 permits and Neuse Buffer Certificate for the Knightdale Bypass-- US 64 from I-440 (Raleigh Beltline) to existing US 64 near SR 1003, I-440 from 0.83 mile south of US 64 to Poole Road and a portion of the East Wake Expressway from existing US 64 to the proposed US 64 Bypass in Wake County. State Project No. 8.142202, Federal Aid Project No. NHF-DPI-0199 (004), TIP No. R-2547 (Sections BA, BB, C and CC) and R-2641, \$475 Debit Work Order 8.142202, WBS Element 34455.1.7.

Reference: NCDENR-DWQ Water Quality Certification Project No. 011689
USACE Action ID 200220819

The North Carolina Department of Transportation (NCDOT) is currently constructing a new controlled-access six-lane, divided highway to be known as the Knightdale Bypass. The new location of the project consists of the Bypass (R-2547), which would extend from I-440 (Raleigh Beltline) to existing US 64 near SR 1003, and a portion of the Eastern Wake Expressway (R-2641) from existing US 64 to the proposed Bypass. The project also includes the widening of I-440 from 0.83 miles south of US 64 to Poole Road.

The purpose of this submittal is to request a modification to the Section 404 permit and the Section 401 Water Quality Certificate/Neuse Buffer Certification, specifically for the stormwater/hydraulic design at several sites. All of the issues on Section BB, C and CC involve the installation of additional riprap to provide stability to problem areas on the site. The following is a description of the modification that is proposed at each site.

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

TELEPHONE: 919-715-1534
FAX: 919-715-5501
WEBSITE: WWW.NCDOT.ORG

LOCATION:
2728 CAPITAL BLVD.
SUITE 240
RALEIGH NC 27604

SECTION BA

Site 18 Section BA (Revised Permit Drawing 20 of 25 dated 5/5/06) and Construction Plan Sheet 6

Issue: A rip rap pad located at the outlet of a 400 mm structure has been replaced with a pre-formed scour hole.

Resolution: The device has been installed within the transportation facility of old New Hope Road.

Additional buffer impacts do not occur as a result of this change as all construction activity associated with this issue is located within the transportation facility of old New Hope Road.

Site 19 Section BA (Revised Permit Drawing 21 of 25 dated 5/5/06) and Construction Plan Sheet 10

Issue: Additional buffer impact and stream impact is required to adequately stabilize the gore area between Service Road 3 (SR 3) and New Hope Road.

Additional impacts associated with this activity are 15 linear feet (4.5 linear meters) of stream impact, 1,457 square feet of riparian buffer zone 1 impact and 1,518 square feet of riparian buffer zone 2 impact. Mitigation will be required for the additional stream and buffer impacts at this site.

SECTION BB

Site 1 Section BB (Revised Permit Drawings 5 and 6 of 30 dated 6/28/06) and Construction Plan Sheet 6

Issue: Stream bank erosion has occurred in six locations mainly due to lack of vegetation, erosion from high flow stream events, and lack of sunlight and rainwater to provide habitat for vegetation.

Status: Riprap has not yet been installed.

Resolution: Class II riprap with filter fabric is proposed to permanently stabilize these areas. Class II riprap is necessary due to the steepness of the banks and to withstand the stream velocities.

Additional impacts occur as a result of this change as the riprap will be placed below the normal water surface of the stream on the banks. The additional impacts are 0.007 acres (0.0030 hectares) of fill in surface waters and 89 linear feet (27 linear meters) of stream impacts. Additional stream mitigation is not required for this activity based on agreements made at a site visit with DWQ, USACE and NCDOT on May 22, 2006.

Site 3 Section BB (Revised Permit Drawing 13 of 30 dated 6/28/06) and Construction Plan Sheet 7

Issue: Stream bank erosion has occurred in one spot mainly due to lack of vegetation, erosion from high flow stream events, and lack of sunlight and rainwater to provide habitat for vegetation.

Status: Riprap has not yet been installed.

Resolution: Class II riprap with filter fabric is proposed to permanently stabilize these areas. Class II riprap is necessary due to the steepness of the banks and to withstand the stream velocities.

Additional impacts occur as a result of this change as the riprap will be placed below the normal water surface of the stream on the banks. The additional impacts are 0.003 acres (0.0012 hectares) of fill in surface waters and 66 linear feet (20 linear meters) of stream impacts. Additional stream mitigation is not required for this activity based on agreements made at a site visit with DWQ, USACE and NCDOT on May 22, 2006.

Site 3 Section BB (Revised Permit Drawing 17 of 30 dated 6/28/06) and Construction Plan Sheet 8

Issue: On the downhill side of the preformed scour hole, which is located at the outlet of the Type-A detention basin, stability of the area has been a problem.

Status: Riprap apron has been installed and the area is stable.

Resolution: The added riprap apron permanently stabilizes the area and provides non-erosive velocities at the wetland limits.

No additional impacts occur as a result of this change as the riprap is outside of the wetland area.

Issue: Where the v-ditch enters the Type-A detention basin, the ditch is unstable and has eroded.

Status: Riprap has not been installed.

Resolution: Regrade the ditch and line with Class 'B' riprap from the A-basin to the fencing to permanently stabilize the area and prevent further erosion.

No additional impacts occur as a result of this change as the riprap is outside of the riparian buffer and wetland area. The installation of the riprap does not affect the treatment of stormwater as there is adequate grassed ditch length upstream of the riprap to provide treatment. Also, the A-basin provides additional treatment for stormwater.

Site 6 Section BB (Revised Permit Drawing 20 of 30 dated 6/28/06) and Construction Plan Sheets 11B and 11D

Issue: The outlet ditch downstream of the 750mm RCP has eroded and stability of the area has been a problem.

Status: Riprap has not been installed.

Resolution: Adding Class 'B' riprap from the outlet of the pipe to 20 feet beyond the fence line will stabilize the area.

No additional impacts occur as a result of this change as the riprap is located in an area that has already been mitigated.

Issue: From the outlet of the Type-A detention basin to the inlet of the 1050mm RCP, the channel is unstable and has eroded.

Status: Riprap has not been installed.

Resolution: Line the channel with Class 'T' riprap from the A-basin to the 1050mm RCP to permanently stabilize the area and prevent further erosion.

No additional impacts occur as a result of this change as this area of the channel was included in the original permit.

Site 8A Section BB (Revised Permit Drawing 23 of 30 dated 6/28/06) and Construction Plan Sheet 14C

Issue: Class 'B' riprap has been added to the cut ditch where the ditch ties to the stream to provide stability.

Status: Riprap has been installed and the area is stable.

Resolution: The added riprap permanently stabilizes the area and eliminates erosion problems at the site.

No additional impacts occur as a result of this change as the riprap is located within the previously permitted buffer area.

SECTION C

Site 4 Section C (Permit Drawing 12 of 34 dated 6/28/06) and Construction Plan Sheet 8

Issue: An unstable channel within the riparian buffer and along the west bank of Poplar Creek (associated with an ATV crossing) is located underneath the bridge deck.

Status: Riprap has not been installed.

Resolution: Install Class 'B' riprap to permanently stabilize the area.

No additional impacts occur within the riparian buffer as this riprap is located within the previously permitted impact footprint. The addition of riprap below the normal water surface of the stream on the banks will impact 7.0 linear feet (2 linear meters) of Poplar branch and result in 0.001 ac (0.0005 ha) of fill in surface waters. Additional mitigation for the stream impact is not required at this site based on agreements made at a site visit with DWQ, USACE and NCDOT on May 22, 2006.

Site 10 Section C (Permit Drawing 30 of 34 dated 6/28/06) and Construction Plan Sheet 5 Section CC Plans

Issue: Under the bridge in the area where the existing tributary stream channel previously connected to Marks Creek, stability of the area has been a problem.

Status: Riprap has been installed.

Resolution: The added riprap apron permanently stabilizes the area.

No additional impacts occur within the riparian buffer as this riprap is located within the previously permitted impact footprint. The addition of riprap will result in 0.001 ac (0.0005 ha) fill in wetland. The addition of riprap below the normal water surface of the stream on the banks will impact 10 linear feet (3 linear meters) of Mark's Creek and result in 0.001 ac (0.0004 ha) of fill in surface waters. Additional mitigation for the stream and

wetland impact is not required at this site based on agreements made at a site visit with DWQ, USACE and NCDOT on May 22, 2006.

SECTION CC

Site 3 Section CC (Permit Drawings 6 and 7 of 24 dated 6/28/06) and Construction Plan Sheet 6

Issue: Riprap has been installed in the base ditch and at the junction with the stream channel.

Status: Class 'B' riprap has been installed.

Resolution: Riprap has been installed on the bank to provide permanent stabilization so that a head cut does not occur.

No additional impacts occur within the riparian buffer as this riprap is located within area of previously permitted impacts.

Site 6 Section CC (Permit Drawings 12 and 13 of 24 dated 6/28/06) and Construction Plan Sheet 8

Issue: Instability on the south stream bank has been a reoccurring problem at the culvert inlet.

Status: The riprap has been installed.

Resolution: Riprap has been installed along the streambank and within the riparian buffer to provide long-term stability.

No additional impacts occur within the riparian buffer and along the steambank as this riprap is located within the previously permitted impact footprint.

Site 9 Section CC (Permit Drawings 16 and 17 of 24 dated 6/28/06) and Construction Plan Sheet 10D

Issue: Channel bank stability at the outlet of the 1350mm RCP has been a problem.

Status: The riprap has been installed to the cross vane.

Resolution: Riprap has been installed on the bank to provide permanent stabilization in the area of the new channel, but does not extend past the cross vane.

No additional impacts occur within the riparian buffer and at the stream as this riprap is located within the area of previously permitted impacts.

The revised design does not compromise NCDOT's compliance with the existing permit conditions. The revision has been evaluated for compliance with the avoidance/minimization criteria and are in compliance with all previous issues, including the following:

- Protected Species
- Aquatic Life passage
- FEMA compliance
- Cultural Resources

MITIGATION

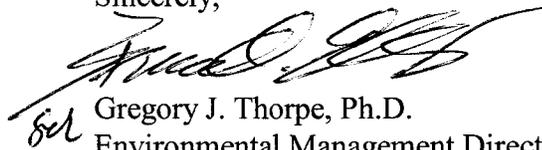
Total additional stream impacts are 187 ft. Total additional wetland impacts are 0.001 ac of wetland fill in Section C. NCDOT personnel (Chris Murray, Tracy Parrott, Steve Leonard and Donald Pearson) met with USACE personnel (Eric Alsmeyer) and DWQ personnel (John Hennessy and Rob Ridings) on May 22, 2006. The USACE and DWQ determined that no mitigation will be required for the additional stream impacts for Sections BB, C and CC. Stream impacts in Section BA are 15 ft of streams and buffer impacts are 1,457 sq ft in Zone 1 and 1,518 sq ft in Zone 2. The NCDOT is proposing to make payment to the EEP for the increased impacts to streams and buffers for Section BA. The acceptance letter from EEP for the mitigation is enclosed with this application.

REGULATORY APPROVALS

Application is hereby made for the modification of the Section 404 Permit from the USACE and Section 401 Water Quality Certification from the NCDENR-DWQ. This project has been designed to comply with the Riparian Buffer Mitigation Program (15A NCAC 2B .0242) and the Neuse River Basin Riparian Buffer Rules (15A NCAC 2B .0233). Therefore, as part of the Modification request, we respectfully request that the NCDENR-DWQ issue an Authorization Certificate pursuant to 15A NCAC 2B .0233 for the proposed use. In compliance with Section 143-215.3D(e) of the NCAA we have provided a method of debiting \$475, as noted in the subject line of this application, as payment for processing the Section 401 Water Quality Certification modification application. We are providing five copies of this application to NCDENR-DWQ, for their use.

If you have any questions or need additional information, please call Ms. Rachelle Beauregard at (919) 715-1383 or Chris Murray (919) 560-6081.

Sincerely,



Gregory J. Thorpe, Ph.D.

Environmental Management Director, PDEA

cc: Mr. John Hennessy, NCDWQ (5 Copies)
Mr. Travis Wilson, NCWRC
Mr. Gary Jordan, USFWS
Ms. Kathy Matthews, USEPA
Mr. Ronald Mikulak, USEPA – Atlanta, GA
Dr. David Chang, P.E., Hydraulics
Mr. Mark Staley, Roadside Environmental
Mr. Greg Perfetti, P.E., Structure Design
Mr. Jon Nance, P.E., Division Engineer
Mr. Chris Murray, DEO

w/o attachment

Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Mr. Scott McLendon, USACE, Wilmington
Ms. Beth Harmon, EEP
Mr. Todd Jones, NCDOT External Audit Branch
Mr. Steve Dewitt, P.E., Director of Construction
Mr. Ellis Powell, P.E., State Construction Engineer
Mr. Roger Rochelle, Alternate Delivery Unit



July 31, 2006

Mr. Gregory J. Thorpe, Ph.D.
Environmental Management Director
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

R-2547, US 64 (Knightdale Bypass) from I-440 (Raleigh Beltline) to Existing US 64 near SR 1003, I-440 from South of US 64 to Poole Road; and a Portion of the East Wake Expressway from Existing US 64 to Proposed US 64 Bypass, Wake County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory stream mitigation and buffer mitigation for the subject project. Based on the information supplied by you in a letter dated July 20, 2006 (received July 28, 2006), the impacts are located in CU 03020201 of the Neuse River Basin in the Central Piedmont (NICP) Eco-Region, and are as follows:

Stream:	15 feet
Zone 1 Buffer:	1,457 square feet
Zone 2 Buffer:	1,518 square feet

The NCDOT estimated buffer impacts in the 7-year Impact Projection Database submitted to EEP in February 2006. The buffer mitigation required for the NCDOT's impact projections was incorporated into EEP's biennial budget that was submitted to the NCDOT for approval in April 2006. All buffer mitigation requests and approvals are administrated through the Riparian Buffer Restoration Fund.

The NCDOT will be responsible to ensure that the appropriate compensation for the buffer mitigation will be provided in the agreed upon method of fund transfer. Upon

Restoring... Enhancing... Protecting Our State



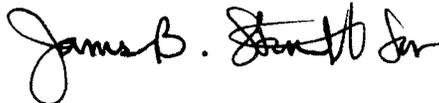
North Carolina Ecosystem Enhancement Program, 1652 Mail Service Center, Raleigh, NC 27699-1652 / 919-715-0476 / www.nceep.net

receipt of the NCDWQ's Buffer Certification, the NCDOT will provide the EEP a copy of the Certification along with a letter verifying the buffer impact/mitigation amounts and requesting a fund transfer to provide the required compensation. The EEP will transfer funds from the MOA Account (Fund 2984) into the Riparian Buffer Restoration Fund (Fund 2982) and commit to provide the appropriate buffer mitigation to offset the impacts associated with this project.

Mitigation for this project will be provided in accordance with the Memorandum of Agreement between the N. C. Department of Environment and Natural Resources, the N. C. Department of Transportation, and the U. S. Army Corps of Engineers. EEP will commit to implementing sufficient compensatory stream mitigation to offset the impacts associated with this project by the end of the MOA year in which this project is permitted. If the above referenced impacts amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

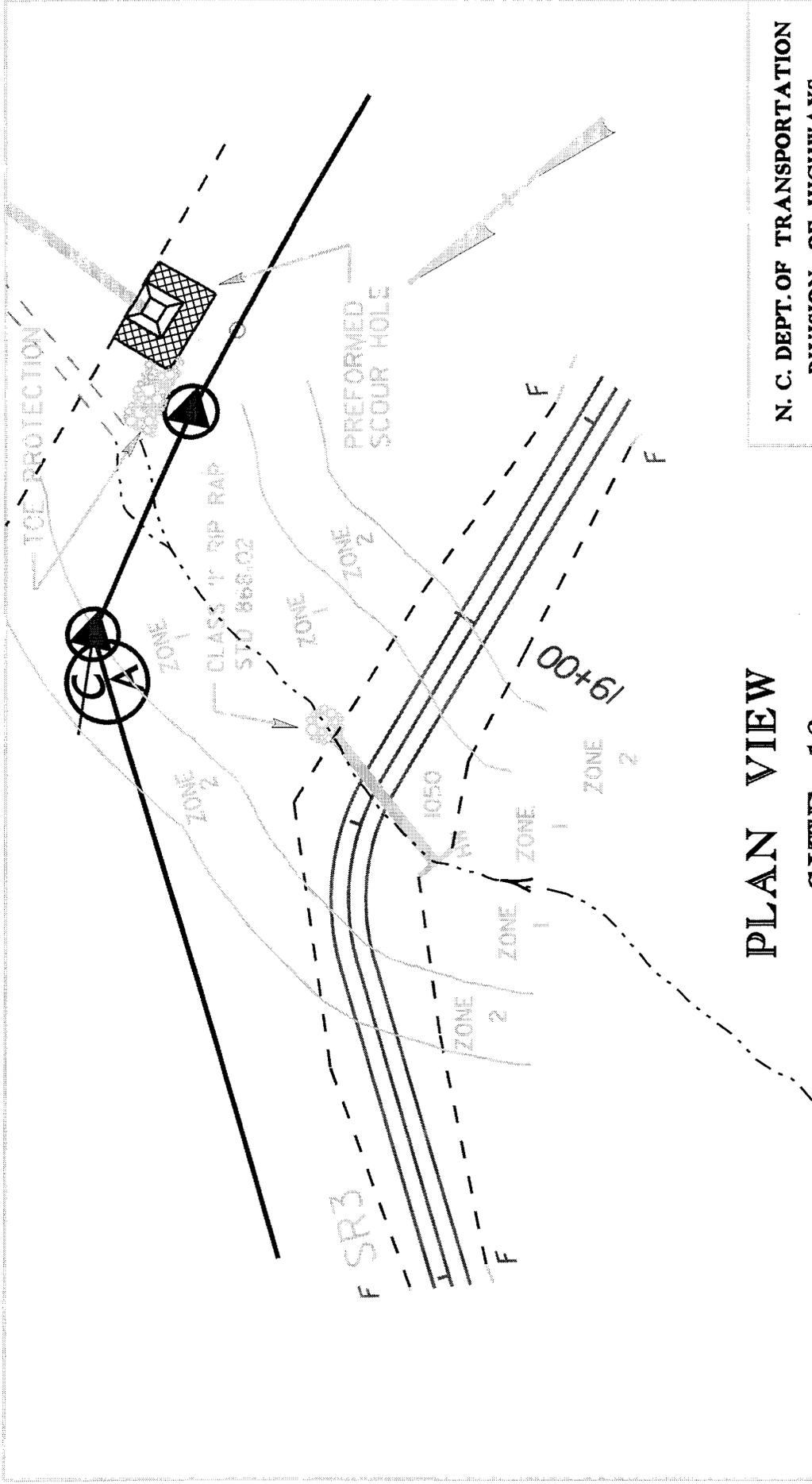
If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

A handwritten signature in black ink, appearing to read "James B. Stentz Sr.", is written over the typed name of William D. Gilmore, P.E.

William D. Gilmore, P.E.
EEP Director

cc: Mr. Eric Alsmeyer, USACE-Raleigh
Mr. John Hennessy, Division of Water Quality, Wetlands/401 Unit
File: R-2547 Additional



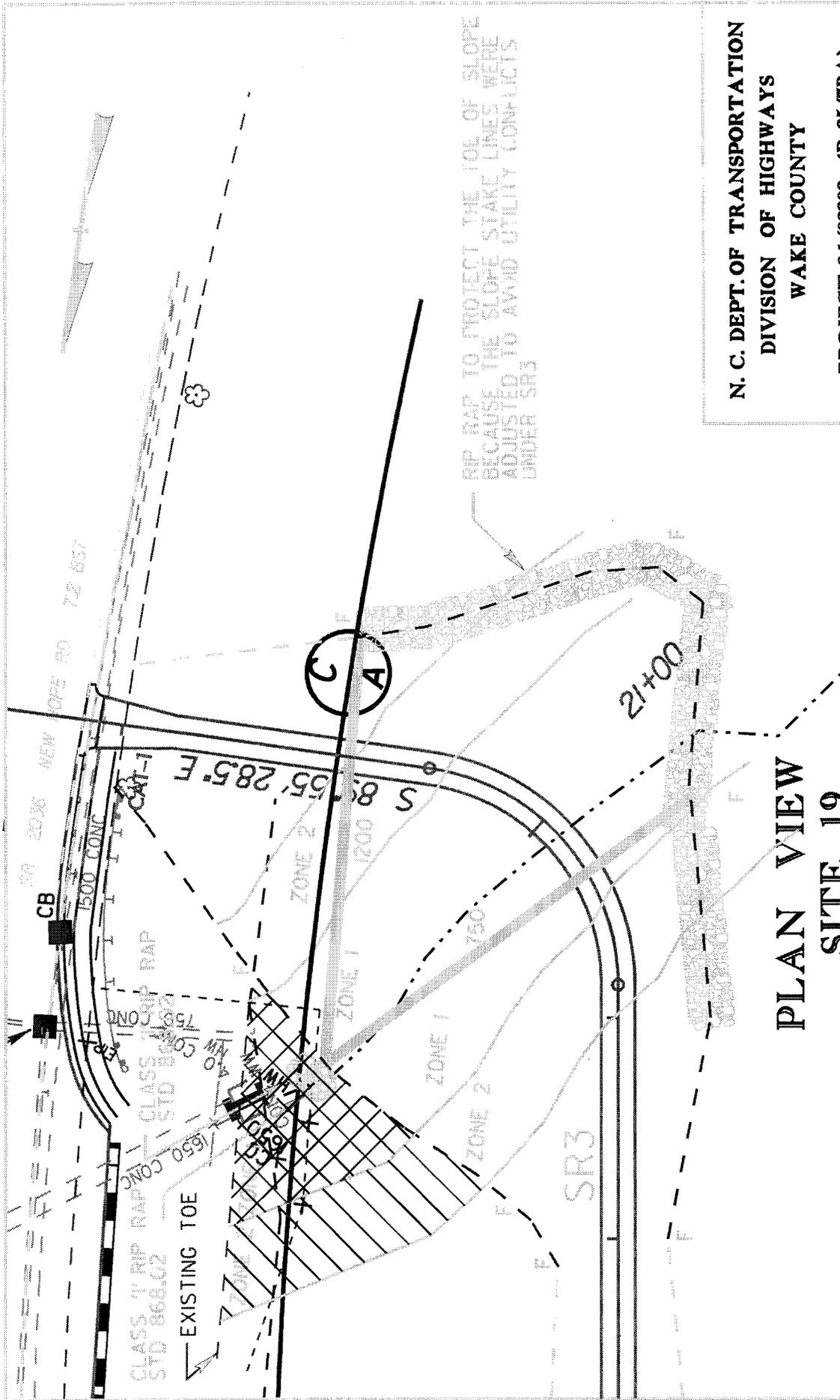
**PLAN VIEW
SITE 18**

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
WAKE COUNTY

PROJECT: 8.1402202 (R-2547BA)
US 64 BYPASS FROM I-440
TO NEW HOPE ROAD



SHEET 20 OF 25 Rev. 5/6/2006



**PLAN VIEW
SITE 19**



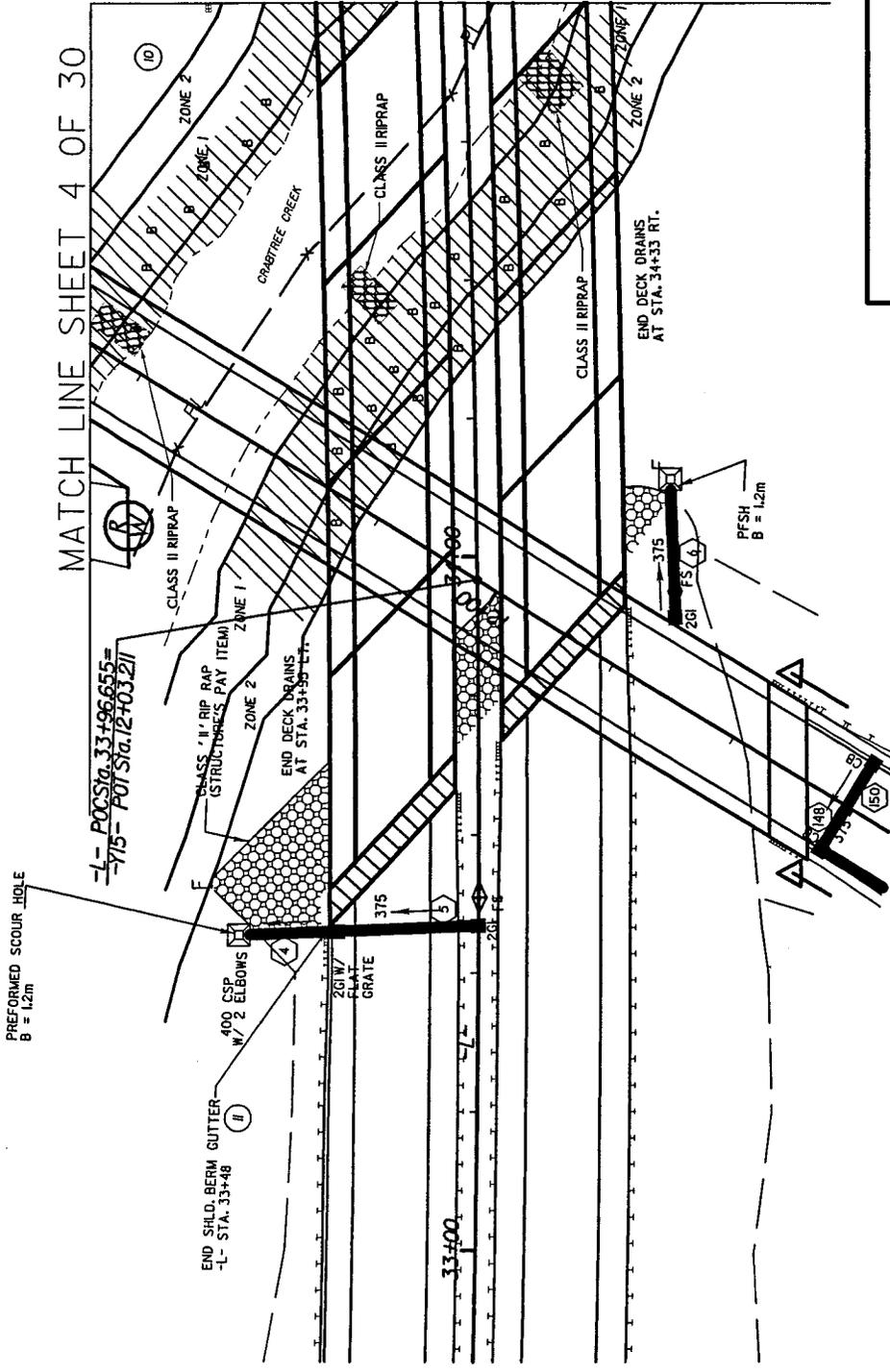
N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
WAKE COUNTY

PROJECT: 8.1402202 (R-2547BA)
US 64 BYPASS FROM I-440
TO NEW HOPE ROAD

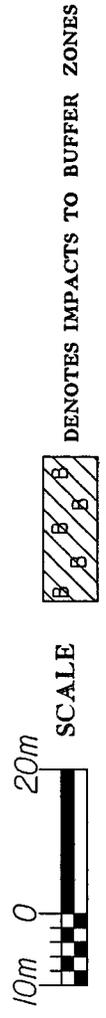
SHEET 21 OF 25 Rev. 6/5/2006

MATCH LINE SHEET 4 OF 30

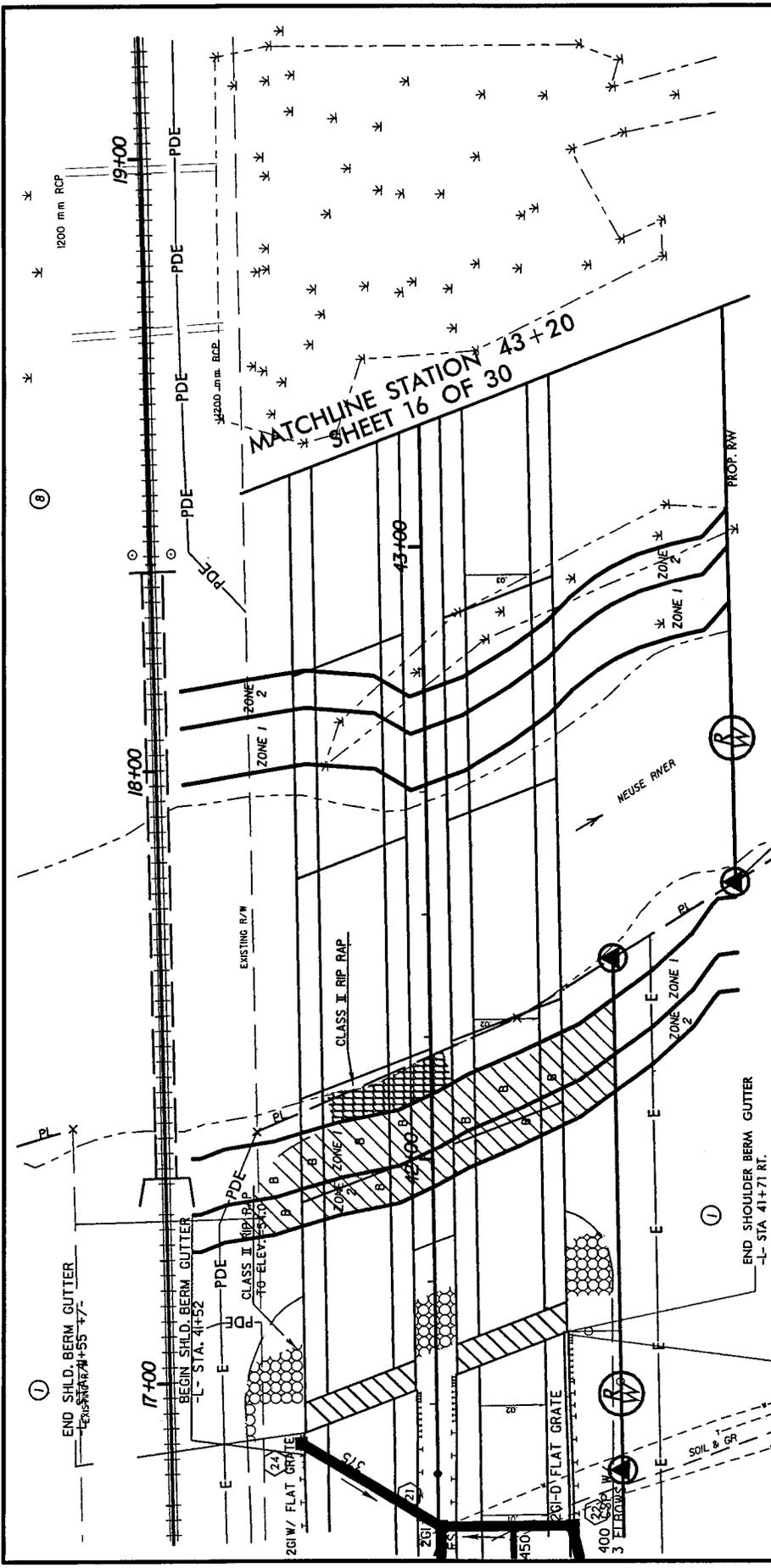
MATCH LINE STA. 34+80
SHEET 6 OF 30



PLAN VIEW
SITE 1



N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
WAKE COUNTY
PROJECT: 8.1.402202 (R-2547BB)
US 64 BYPASS FROM NEW HOPE
ROAD TO EAST OF SR 2601
CLIFTON ROAD
SHEET 5 OF 30 REV 6/28/06

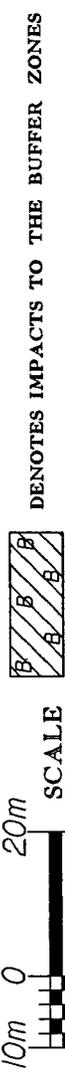


MATCHLINE STATION 43+20
SHEET 16 OF 30

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
WAKE COUNTY
PROJECT: 8.1402202 (R-2547BB)
US 64 BYPASS FROM NEW HOPE
ROAD TO EAST OF SR 2601
CLIFTON ROAD
SHEET 13 OF 30 REV 6/28/06



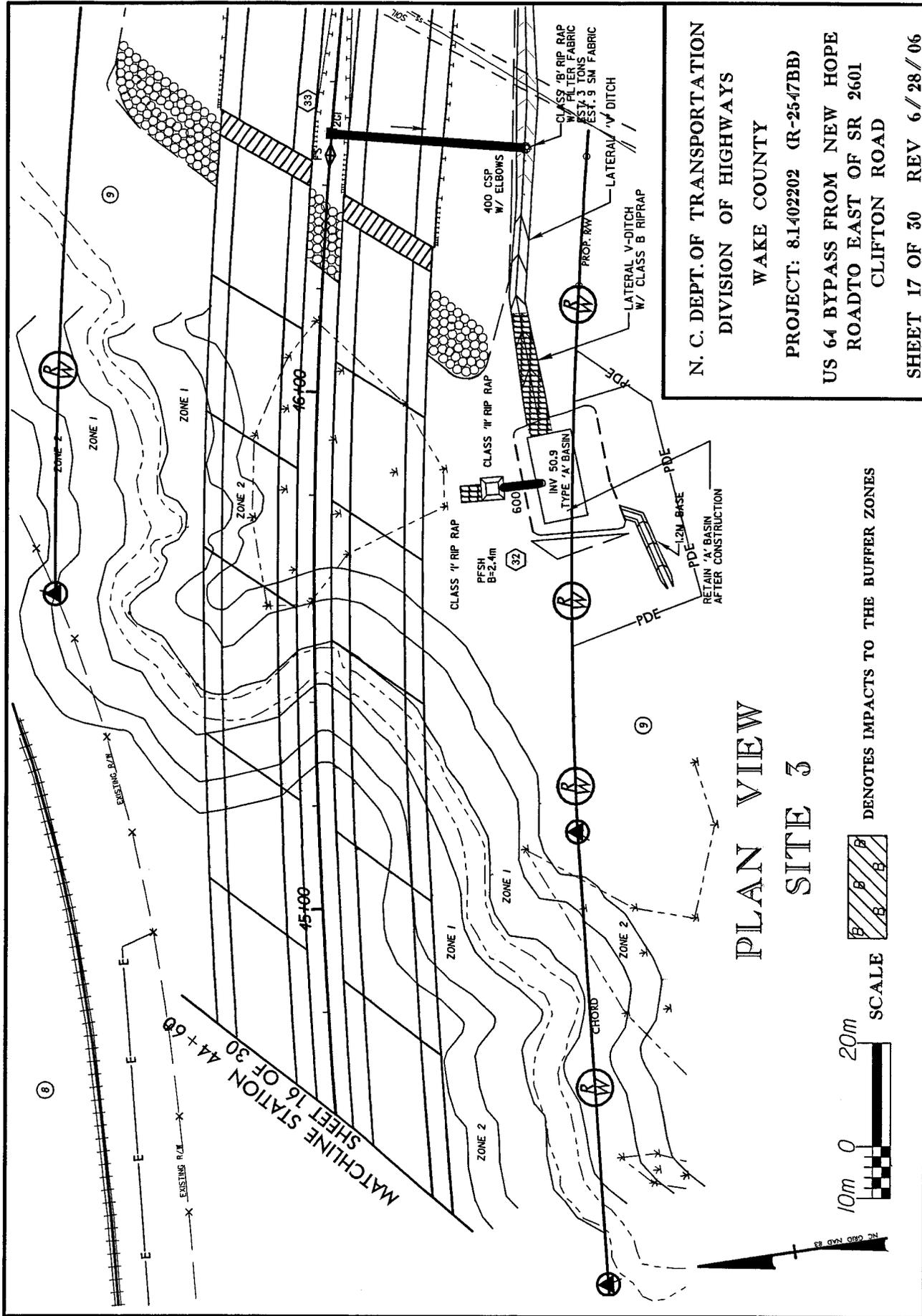
PLAN VIEW
SITE 3



END PRIVACY WALL -L- STA 41+71 +/- RT.
END WOVEN WIRE FENCE -L- STA 41+71 +/- RT.

END SHOULDER BERM GUTTER
-L- STA 41+71 RT.

END SHLD. BERM GUTTER
-L- STA 41+55 +/-



N. C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

WAKE COUNTY

PROJECT: 8.1.402202 (R-2547BB)

US 64 BYPASS FROM NEW HOPE
 ROAD TO EAST OF SR 2601
 CLIFTON ROAD

SHEET 17 OF 30 REV 6/28/06

PLAN VIEW
 SITE 3



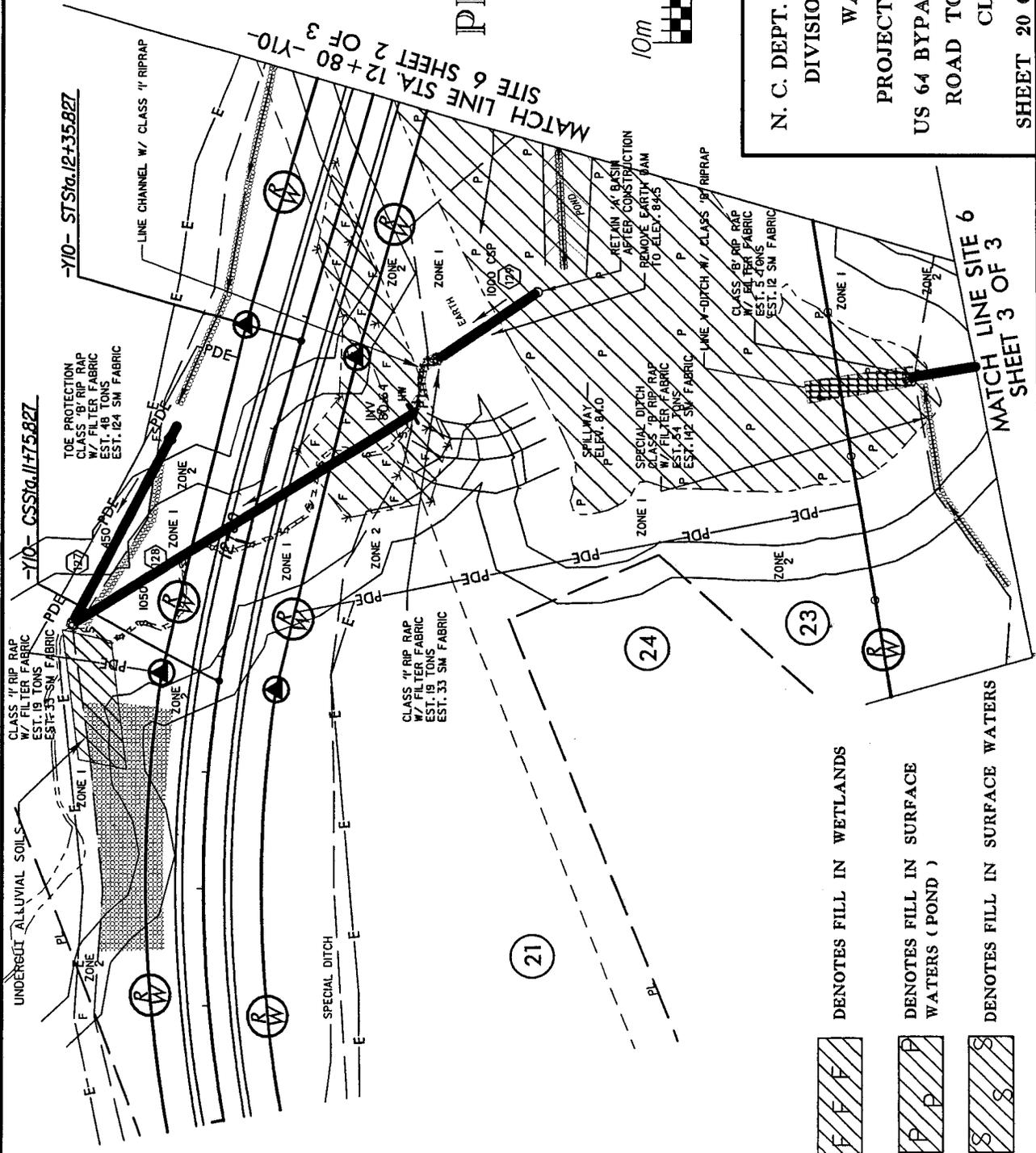
HATCHED PATTERN DENOTES IMPACTS TO THE BUFFER ZONES

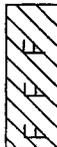


PLAN VIEW SITE 6 SHEET 1 OF 3

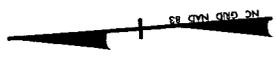


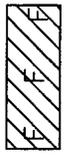
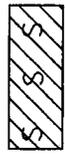
N. C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 WAKE COUNTY
 PROJECT: 8.1402202 (R-2547BB)
 US 64 BYPASS FROM NEW HOPE
 ROAD TO EAST OF SR 2601
 CLIFTON ROAD
 SHEET 20 OF 30 REV 6/28/06



-  DENOTES FILL IN WETLANDS
-  DENOTES FILL IN SURFACE WATERS (POND)
-  DENOTES FILL IN SURFACE WATERS

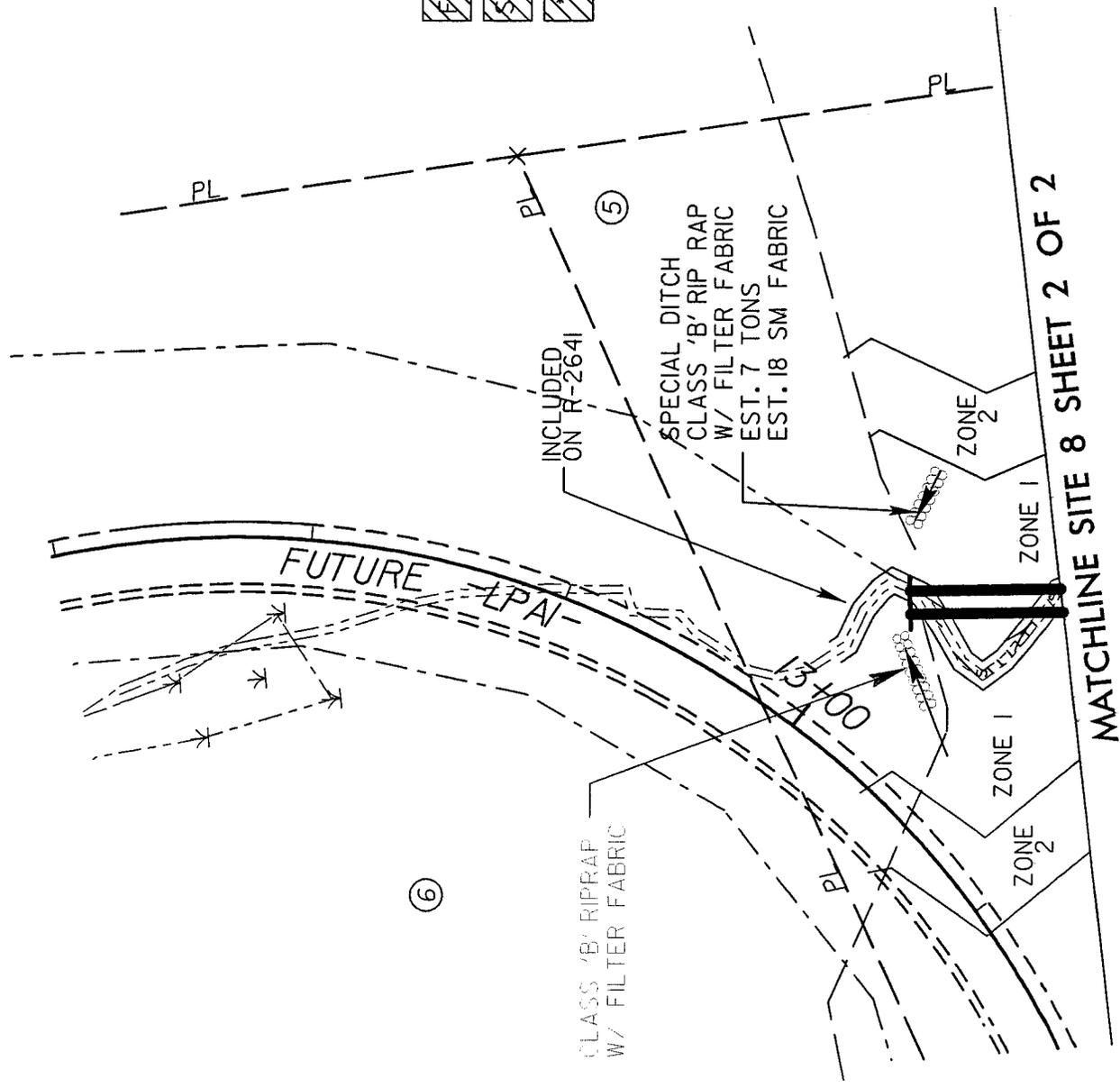
PLAN VIEW
 SITE 8A
 SHEET 1 OF 2



-  DENOTES FILL IN WETLANDS
-  DENOTES FILL IN SURFACE WATERS
-  DENOTES MECHANIZED CLEARING



N. C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 WAKE COUNTY
 PROJECT: 8.1.402202 (R-2547BB)
 US 64 BYPASS FROM NEW HOPE
 ROAD TO EAST OF SR 2601
 CLIFTON ROAD
 SHEET 23 OF 30 REV 6/28/06



IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size	WETLAND IMPACTS			SURFACE WATER IMPACTS					FILL IN BUFFER				
			Fill In Wetlands (ha)	Temp. Fill In Wetlands (ha)	Excavation In Wetlands (ha)	Mechanized Clearing (Method III) (ha)	Fill In SW (Natural) (ha)	Fill In SW (Pond) (ha)	Temp. Fill In SW (ha)	Existing Channel Impacted (m)	Relocated Channel (m)	Enclosed Channel (m)	Zone 1 (ha)	Zone 2 (ha)	
1	33+80-35+80 L	BRIDGE					0.0028				23			0.241	0.002
	12+70 -Y15	BRIDGE					0.0002				4			0.0005	
2	36+80-38+00 L							1.276						0.157	0.085
3	41+80-43+20 L	BRIDGE					0.0012				20			0.043	0.035
4	43+20-43+80 L	---DELETED---BRIDGED													
5	44+60-46+40 L	--DELETED--PART OF 3													
6	11+80-14+40 Y10	1050	0.073				0.005	1.096			93			0.349	0.23
7	71+0072+00 L	1500 RCP						0.71						0.239	0.153
8	12+60-13+00 LPA1 75+20-75+40 L	2 @ 900 RCP	0.0005				0.003				136			0.107	0.07
9	79+20-79+60 L	1 @ 2.7m X 1.8m RCBC	0.565				0.047				87			0.327	0.217
10	11+60 TO 12+80 LPC1		0.42				0.04								
TOTALS:			1.06	0.00	0.00	0.09	0.03	3.08	0.00	363.00	0.00	147.00	0.00	1.46	0.79
			2.62	0.00	0.00	0.22	0.07	7.62	0.00	1191	0	482	0	3.62	1.96

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

WAKE COUNTY

PROJEC 8.1402202 R-2547BB

SHEET 29 OF 30 REVISED 6/28/2006

RECEIVED JUL 1 3 2006

IMPACT SUMMARY

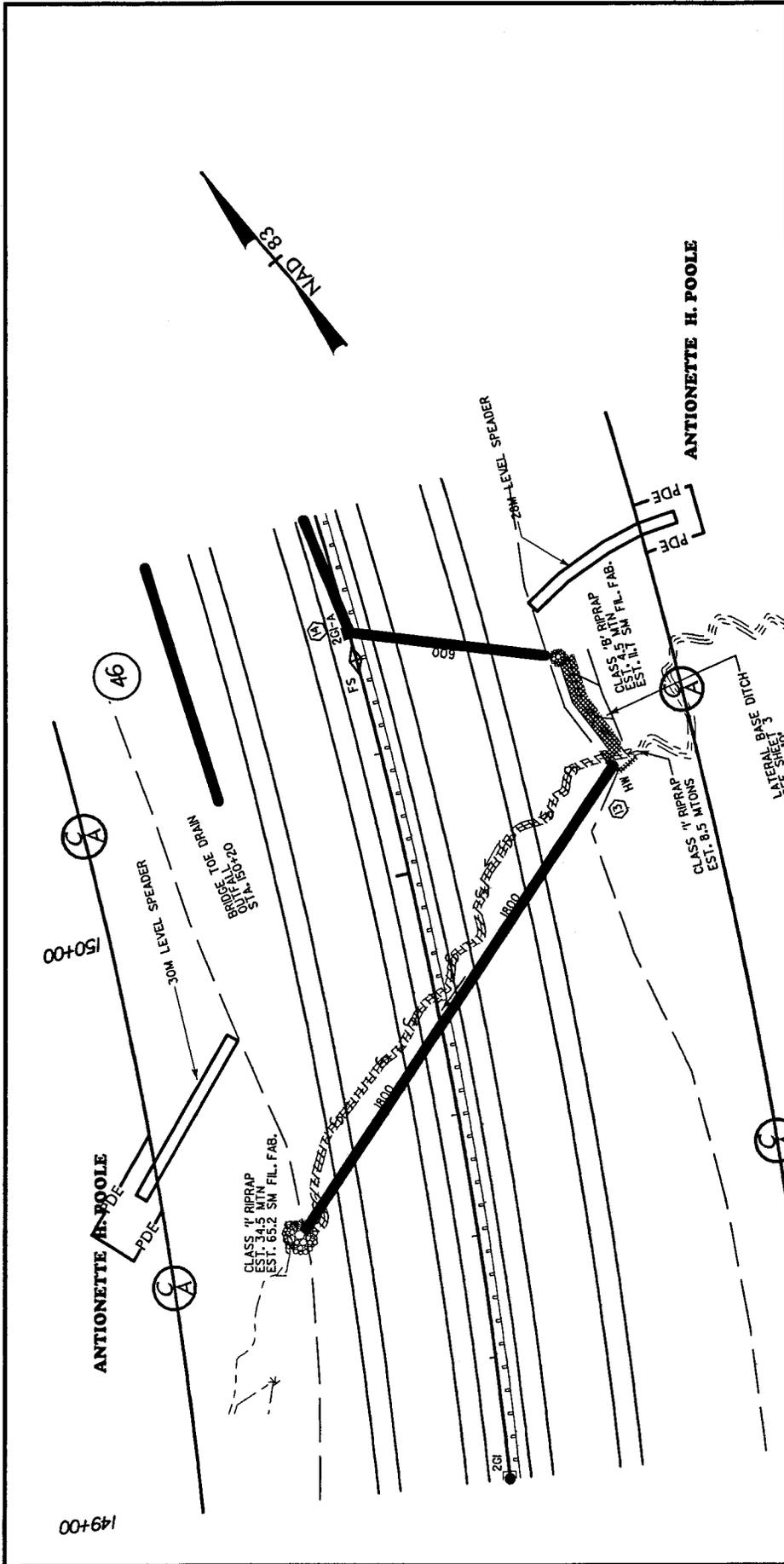
Site No.	Station (From/To)	Structure Size	WETLAND IMPACTS			SURFACE WATER IMPACTS					BUFFER IMPACTS					
			Fill In Wetlands (ha)	Temp. Fill In Wetlands (ha)	Excavation In Wetlands (ha)	Mechanized Clearing (Method III) (ha)	Fill In SW (Natural) (ha)	Fill In SW (Pond) (ha)	Temp. Fill In SW (ha)	Existing Channel Impacted (m)	Relocated Channel (m)	Enclosed Channel (m)	Zone 1 (ha)	Zone 2 (ha)		
1	89+08/89+63 -1-1750 RCP								0.44							
2	95+95/96+62 -1-N/A							0.217								
3	98+20/98+50 -1-N/A							0.012								
4	103/104+80-L-3 @ 28m BRIDGE		0.427	0.0121		0.048	0.0005									
5	10+30 -Y16-1800 RCP						0.002									
5A	110/113 -L-1050 RCP															
6	118/119+60 -L-900 RCP		0.040			0.015			0.315							
7	131/133 -L-1350 RCP		0.033			0.003	0.003									
8A	134+00 -L-1800 RCP		0.038			0.003	0.004									
8B	134+40/137 -L-1500 RCP, 900 RCP		0.225		0.019	0.059	0.023									
9	140/143 -L-1650 RCP		0.456		0.003	0.026	0.019									
10	144/147+80 -L-2@27m, 1@36, 2@23.5m		0.6105	0.274		0.079	0.0004									
11	17/18+40 -Y1011 @ 24m, 2 @ 17m BRIDGE		0.253			0.059										
TOTALS:			2.0825	0.2861	0.022	0.292	0.0819	0.984	0.984	0.00	984	219	627	2.8953	1.844	
			5.15	0.71	0.05	0.72	0.20	2.43	2.43	0.00	3228	719	2057	7.15	4.56	

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

WAKE COUNTY

PROJECT: 8.1402202 (R-2547C)

RECEIVED JUL 1 3 2006



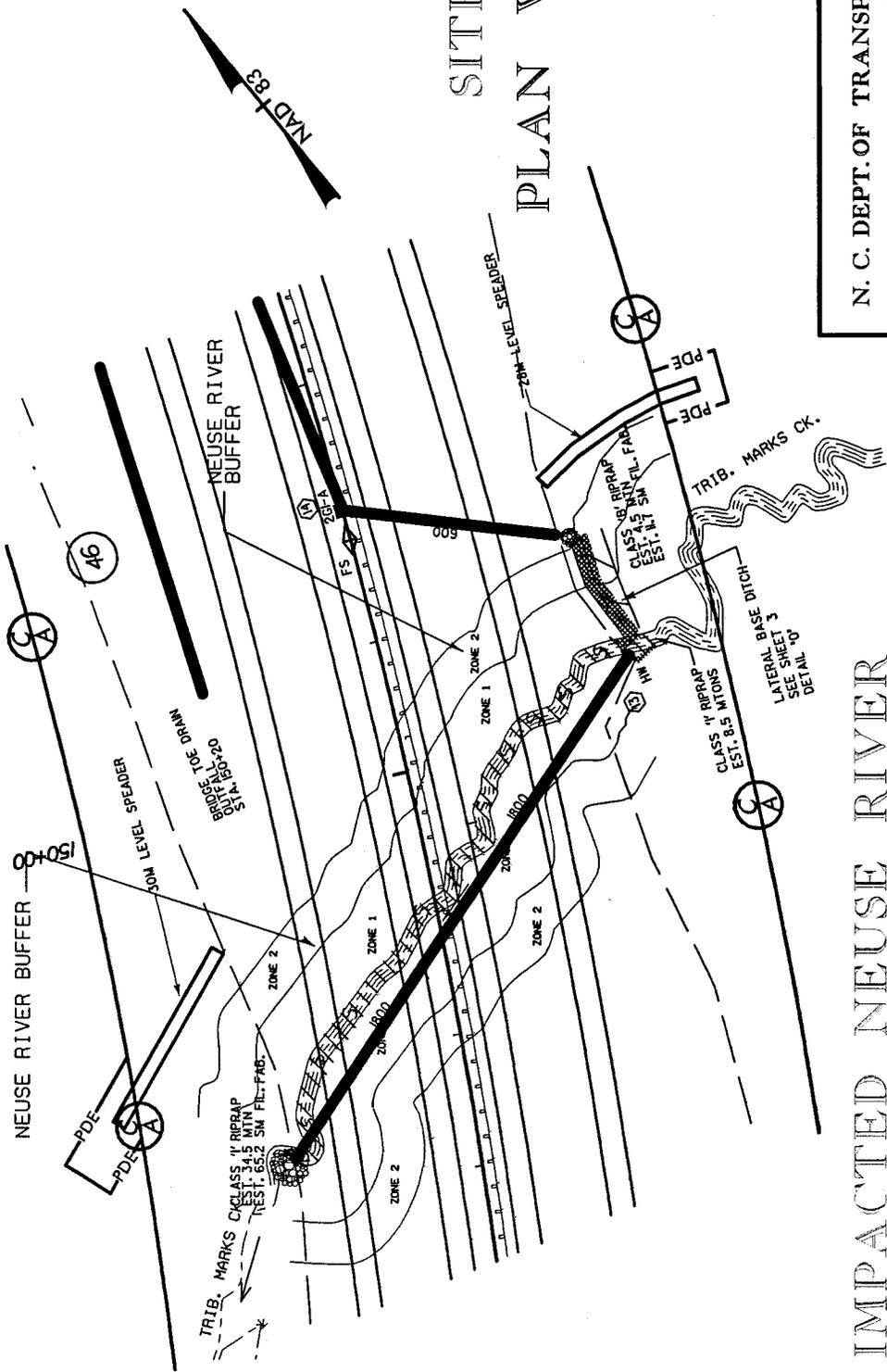
N. C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 WAKE COUNTY
 PROJECT: 8.1402202 (R-2547CC)
 US64 FROM SR2502 TO EXISTING
 US64 NEAR SR1003

SITE 3
 PLAN VIEW



DENOTES FILL IN SURFACE WATERS

RECEIVED JUL 1 3 2006



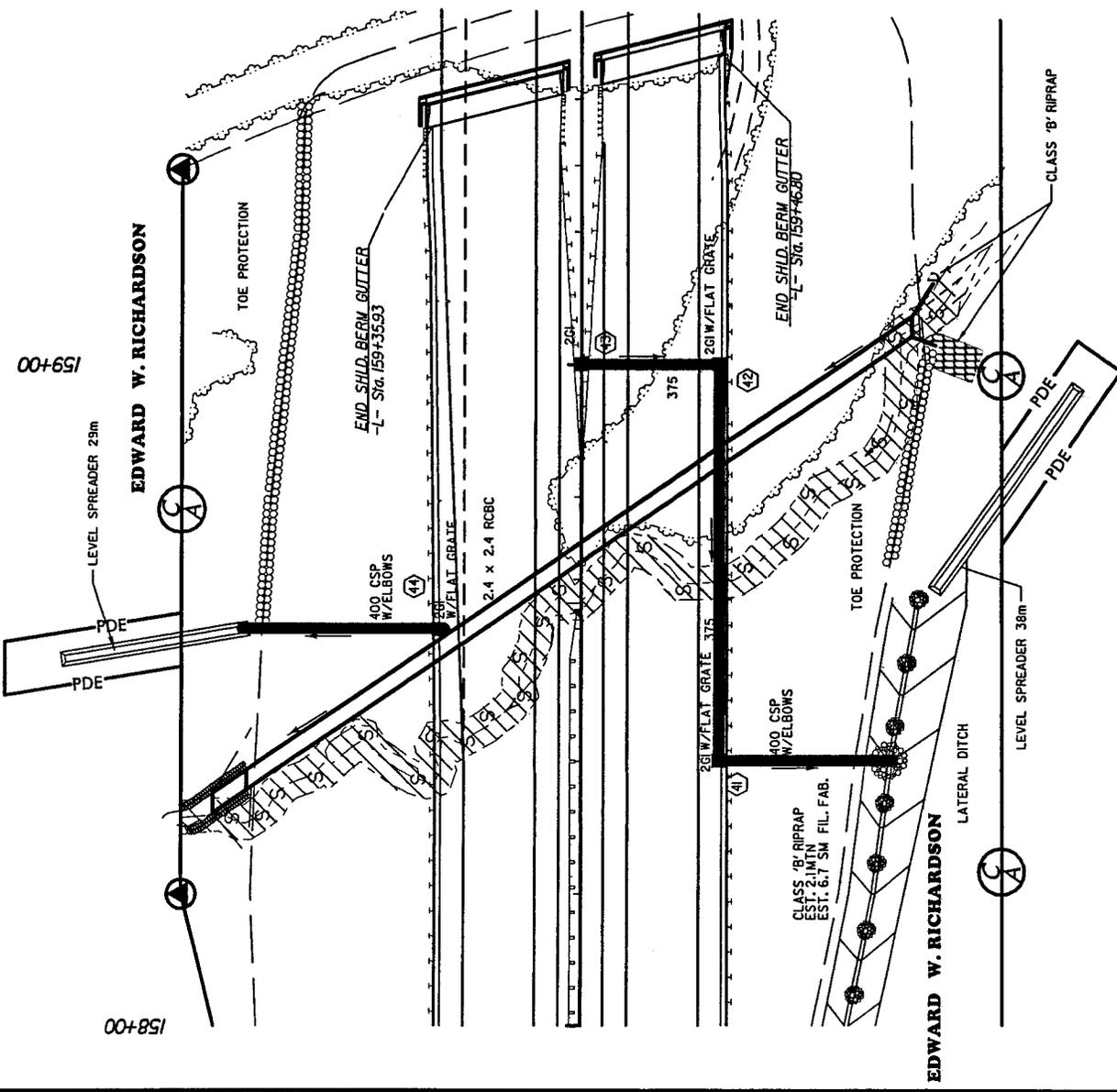
SITE 3
PLAN VIEW

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
WAKE COUNTY
PROJECT: 8.1402202 (R-2547CC)
US64 FROM SR2502 TO EXISTING
US64 NEAR SR1003
SHEET 7 OF 24 REV 6/28/06

IMPACTED NEUSE RIVER
BUFFER ZONES
AND STREAM IMPACTS



SCALE



PLAN VIEW

SITE 6



DENOTES FILL IN SURFACE WATERS



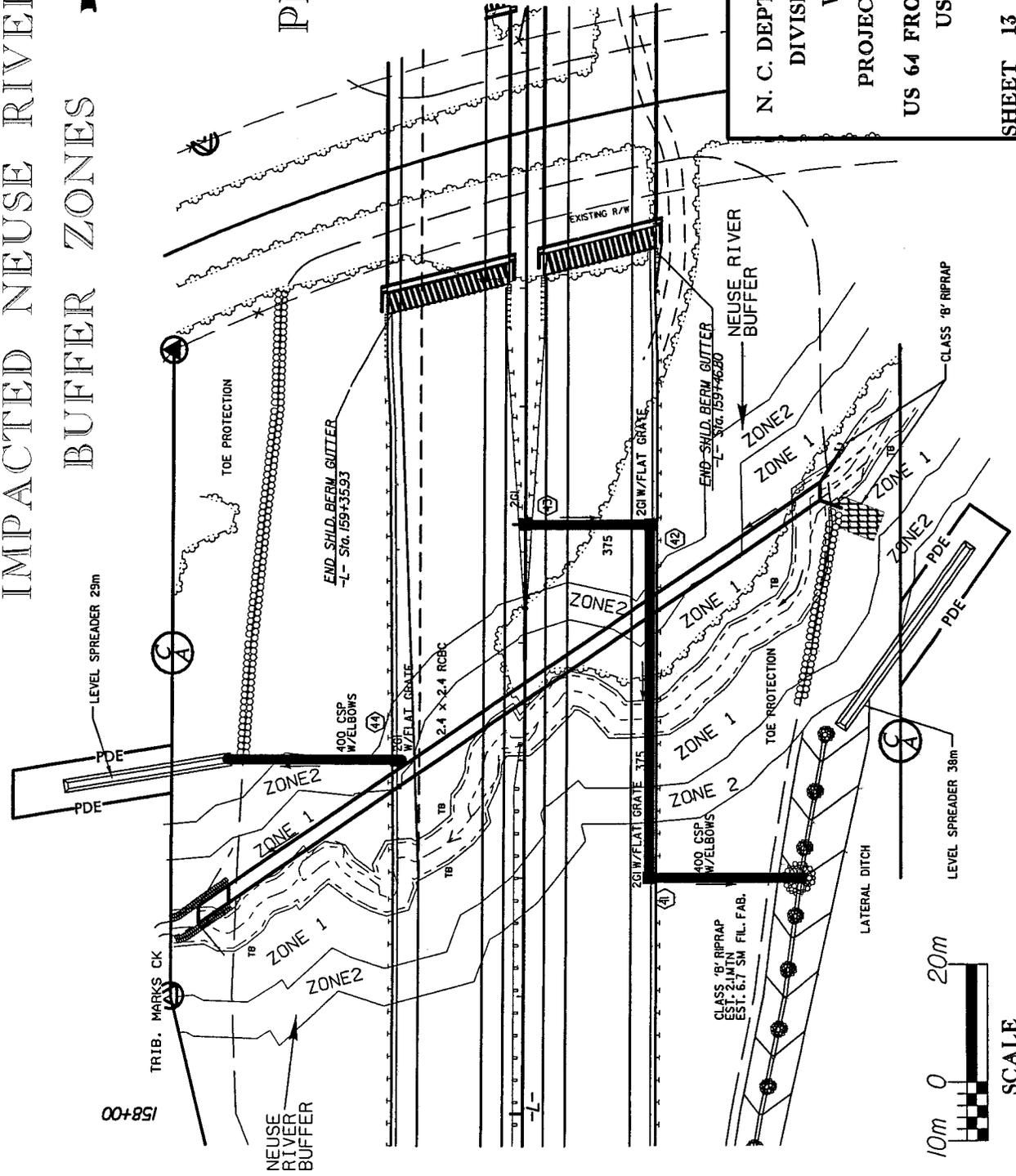
N. C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 WAKE COUNTY
 PROJECT: 8.1.402202 (R-2547CC)
 US 64 FROM SR2502 TO EXISTING
 US 64 NEAR SR1003

SHEET 12 OF 24 REV 6/28/06

IMPACTED NEUSE RIVER BUFFER ZONES

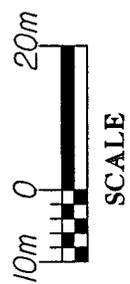


SITE 6 PLAN VIEW



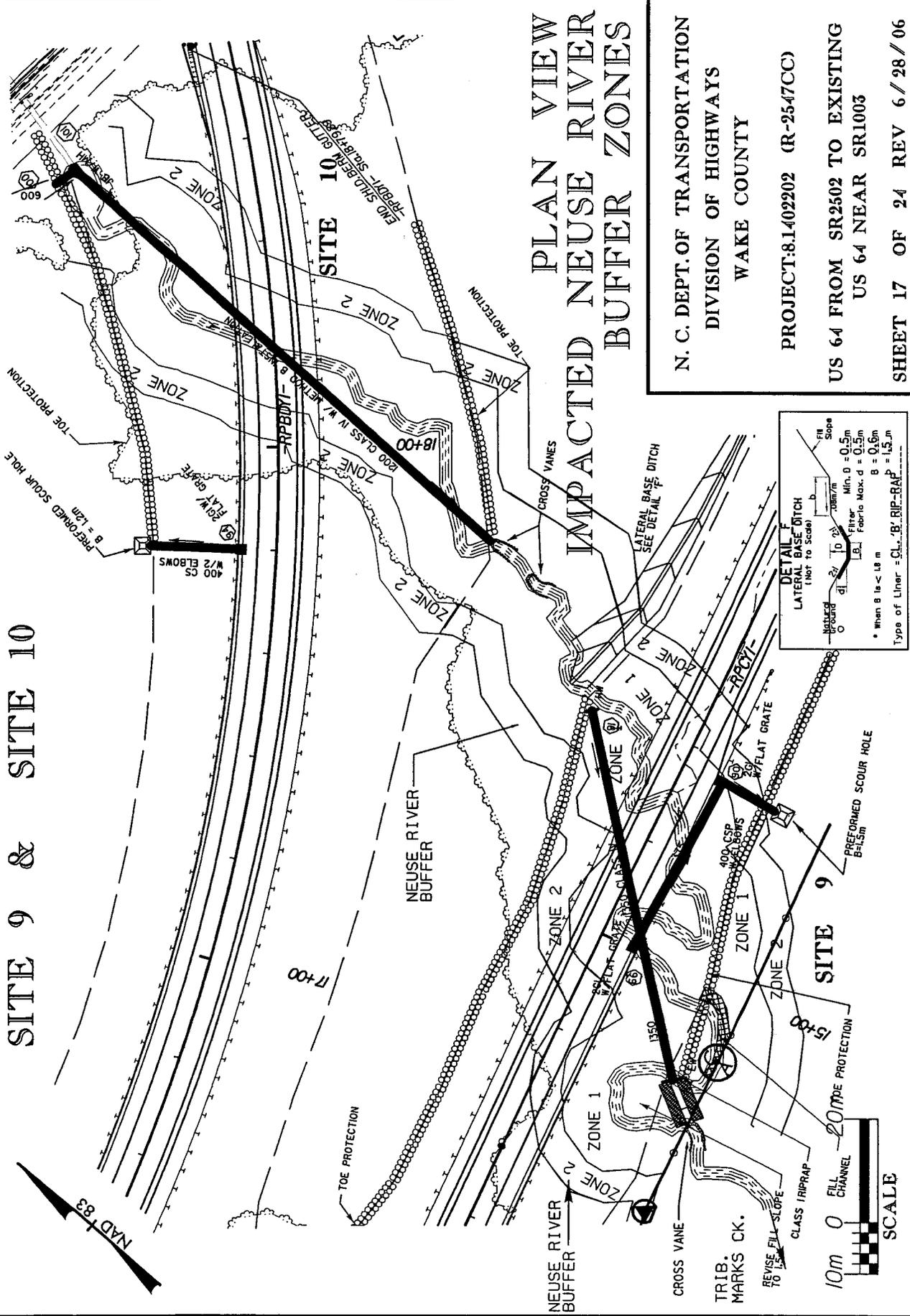
N. C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 WAKE COUNTY
 PROJECT: 8.1402202 (R-2547CC)
 US 64 FROM SR2502 TO EXISTING
 US 64 NEAR SR1003

SHEET 13 OF 24 REV 6/28/06



RECEIVED JUL 13 2006

SITE 9 & SITE 10



PLAN VIEW
IMPACTED NEUSE RIVER
BUFFER ZONES

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
WAKE COUNTY

PROJECT: 8.1402202 (R-2547CC)

US 64 FROM SR2502 TO EXISTING
US 64 NEAR SR1003

SHEET 17 OF 24 REV 6/28/06

