



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY PERDUE
GOVERNOR

EUGENE CONTI
SECRETARY

January 28, 2010

MEMORANDUM TO: Mr. Jay Swain, Jr., PE
Division Thirteen Engineer

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

SUBJECT: Yancey County, from Future I-26 (existing US 19-23) to SR 1186; T.I.P.
Number R-2518A; Federal Aid Project No. BRZ-1318(8); State Project No.
6.869005T

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

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

PSH/gyb

Attachment

Cc: W/attachment
Mr. Randy Garris, P.E. State Contract Officer
Mr. Roger Bryan, Division Environmental Officer
Dr. Charles Nicholson, TVA

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

PROJECT COMMITMENTS

**T.I.P Project No. R-2518A,
From Future I-26 (existing US 19-23) to SR 1186 in Yancey County
Federal Aid Project No. BRZ-1318(8); State Project No. 6.869005T**

This Modification to the R-2518A Individual Section 404 Permit and the 401 Water Quality Certification has resulted in one change to the project green sheets originally issued April 2008. All other previous conditions from the April 2008 greensheets remain valid.

NEU, Division 13

Modification to 401 Water Quality Certification - Condition 2:

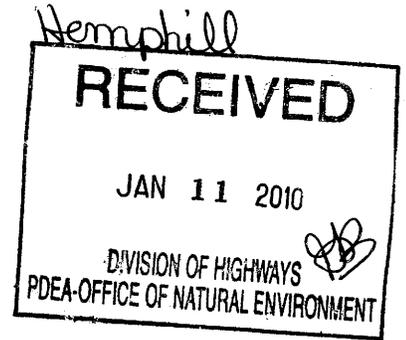
“The proposed 1,228 linear feet of permanent impacts will occur on a stream reach designated in the mitigation plan submitted with the original certification application as preservation mitigation site Q. Using a 4:1 ratio for preservation, the mitigation credits for the portion of this reach of stream to be impacted equal 307 linear feet. These mitigation credits shall be replaced in addition to the mitigation required for the proposed impacts of 1,228 linear feet of stream. The equivalent impacts to be mitigated equals 1,535 linear feet of stream. NCDOT has agreed to mitigate the impacts at a 3:1 mitigation ratio equaling 4,605 linear feet of stream. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Ecosystem Enhancement Program (EEP) and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated November 5, 2009 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the Tri-party MOA signed July 22, 2003 and the Dual Party MOA signed on April 12, 2004.”



REPLY TO
ATTENTION OF:

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

January 6, 2010



Regulatory Division

Action ID No. SAW-2007-2197-357/300, TIP No. R-2518 A/B and R-2519 A

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

Dear Dr. Thorpe:

Reference the Department of the Army (DA) permit issued on April 17, 2008 to the North Carolina Department of Transportation to discharge dredged or fill material into 0.94 acres of wetland and 14,766 linear feet of stream channel within the Little Ivy Creek, Cane River, and South Toe River drainages associated with the widening of approximately 21 miles of US Highway 19/19E in Madison and Yancey Counties, North Carolina (TIP No's. R-2518 A/B and R-2519 A). Also reference your written requests of July 31, 2009 and November 4, 2009 to modify permitted impacts to waters of the United States within two segments of the US Highway 19 construction corridor.

Your July 31, 2009 modification request addresses Section R-2519A of the US 19E widening project. The original permit, based upon preliminary design, authorized impacts of 5,309 linear feet to surface waters and 0.29 acre to jurisdictional wetlands. Current impacts, now based upon final design plans received with your submittal, have been reduced to 4,509 LF of stream loss, increased slightly to 0.30 acre of wetland impacts, and include 1,019 LF of bank stabilization

Your November 4, 2009 modification request addresses the additional piping of 1,228 LF of Ivy Gap Branch as a result of the elimination of a retaining wall which was depicted on the original Roadway Plan Sheets 30-31 within the R-2518A Section of the project. The change is necessary due to poor soil conditions discovered during geotechnical studies. This revision has been coordinated with and agreed to by all NEPA/404 Merger Team members. The resulting additional stream channel loss includes a 307 linear foot segment of stream which was utilized for preservation mitigation credits in the original permit authorization. This segment, coupled with the aforementioned piping of Ivy Gap Branch, will require additional mitigation for the equivalent of 1,535 linear feet of stream channel. NCEEP has indicated in a letter dated November 5, 2009, that they agree to implement the additional mitigation for the project up to a 3:1 ratio within the French Broad HUC 06010105.

We have reviewed the above proposals and in accordance with your written requests have hereby modified your original authorization. The plans submitted with your requests replace those authorized by our original April 17, 2008 permit. Any further modification to the permit plans must be approved by the USACE prior to implementation.

Special Condition No. 15 of the referenced permit is hereby modified to include the additional language:

“ In order to compensate for the additional unavoidable impacts to stream channels, the permittee shall mitigate for unavoidable impacts to 1,535 linear feet of cold-water stream channel associated with this modification by payment to the North Carolina Ecosystem Enhancement Program (NCEEP) in an amount determined by the NCEEP, sufficient to perform 4,605 linear feet of cold-water stream restoration within Cataloging Unit 06010105 of the French Broad River Basin in accordance with the NCEEP Mitigation Acceptance Letter of July 9, 2009 from William D. Gilmore, Director, NCEEP

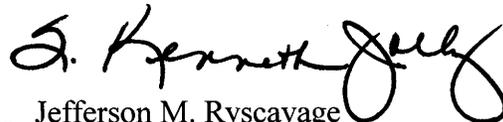
Special Condition No. 19 of the original permit is modified to read as follows:

“All conditions of the North Carolina Division of Water Quality’s Section 401 Water Quality Certification No. 3706, original dated October 11, 2007, and subsequently modified on March 17, 2008, February 20, 2009, September 4, 2009, and December 11, 2009, are hereby incorporated as special conditions of this permit.

It is understood that all other conditions of the original permit remain applicable and that the expiration date is unchanged.

If you have any questions, please contact Mr. David Baker, Asheville Field Office, Regulatory Division, telephone (828) 271-7980, extension 225.

Sincerely,



JM Jefferson M. Ryscavage
Colonel, U.S. Army
District Commander

Copies furnished:

J.J. Swain, Jr., P.E., Division Engineer
NC Department of Transportation, Division 13
Post Office Box 3279
Asheville, North Carolina 28802

Mr. Brian Wrenn
NC Division of Water Quality
Transportation Permitting Unit
1650 Mail Service Center
Raleigh, North Carolina 27699-1650



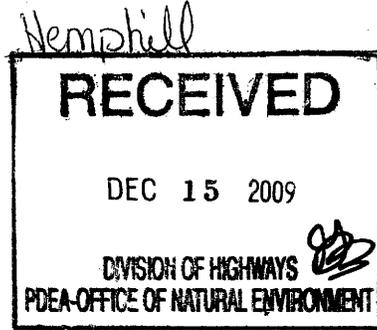
North Carolina Department of Environment and Natural Resources

Division of Water Quality
Coleen H. Sullins
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

December 11, 2009



Dr. Greg Thorpe, PhD., Manager
Project Development and Environmental Analysis
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina, 27699-1548

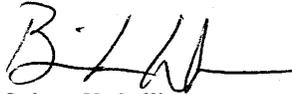
Subject: Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS for Proposed improvements to US 19/US 19E in Yancey County, State Project No. 6.869005T and 6.909001T, TIP R-2518A.
NCDWQ Project No. 20071134 v.5, NCDWQ Individual Certification No. 3706.

Dear Dr. Thorpe:

Attached hereto is a modification of Certification No. 3706 issued to The North Carolina Department of Transportation (NCDOT) dated October 11, 2007, and subsequently modified on March 17, 2008, February 20, 2009, and September 4, 2009, and December 11, 2009.

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

Sincerely,


For Coleen H. Sullins
Director

Attachments

- cc: David Baker, US Army Corps of Engineers, Asheville Field Office
- Roger Bryan, Division 13 Environmental Officer
- Kathy Matthews, Environmental Protection Agency (electronic copy only)
- Marla Chambers, NC Wildlife Resources Commission
- Jason Elliott, NCDOT, Roadside Environmental Unit
- Beth Harmon, Ecosystem Enhancement Program
- Mike Parker, NCDWQ Asheville Regional Office
- File Copy

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

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (NCDWQ) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact 1,264 linear feet of jurisdictional streams in Yancey County. The project shall be constructed pursuant to the modification dated received November 9, 2009. The authorized impacts are as described below:

Stream Impacts in the French Broad River Basin

Site	Permanent Fill in Intermittent Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
Original approved impacts at Site 25	0	0	0	0	0	0
New additional impacts with this approval at Site 25	0	0	1,228	36	1,264	1,228
Total	0	0	1,228	36	1,264	1,228

Total Stream Impact for Project: 1,264 linear feet

The application provides adequate assurance that the discharge of fill material into the waters of the French Broad River Basin in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your modified application dated received November 9, 2009. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated October 11, 2007, March 17, 2008, February 20, 2009, and September 4, 2009 still apply except where superceded by this certification. Should your project change, you are required to notify NCDWQ and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Condition(s) of Certification:

1. All other conditions written into previous Water Quality Certifications dated October 11, 2007, March 17, 2008, February 20, 2009, and September 4, 2009 for this project still apply.
2. Stormwater at Site 25 shall be routed to outlet at Structure 507. The stormwater runoff shall be transported through a vegetated conveyance prior to discharging into Ivey Gap Branch.
3. The proposed 1,228 linear feet of permanent impacts will occur on a stream reach designated in the mitigation plan submitted with the original certification application as preservation mitigation Site Q. Using a 4:1 ratio for preservation, the mitigation credits for the portion of this reach of stream to be impacted equal 307 linear feet. These mitigation credits shall be replaced in addition to the mitigation required for the proposed impacts of 1,228 linear feet of stream. The equivalent impacts to be mitigated

equals 1,535 linear feet of stream. NCDOT has agreed to mitigate the impacts at a 3:1 mitigation ratio equaling 4,605 linear feet of stream.

We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated November 5, 2009 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the Tri-Party MOA signed on July 22, 2003 and the Dual-Party MOA signed on April 12, 2004.

4. The remaining portions of mitigation Site Q shall continue to be monitored. The monitoring shall occur annually for a 5-year period. The following components of Level I monitoring shall be performed: Reference photos; plant survival [i.e., identify specific problem areas, (missing, stressed, damaged or dead plantings), estimated causes and proposed/required remedial action]; and visual inspection of channel stability. A monitoring report shall be submitted annually within sixty (60) days after monitoring is completed.
5. Unless otherwise approved in this certification, placement of culverts and other structures in waters, streams, and wetlands shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
6. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
7. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions.

Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit.

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

This the 11th day of December 2009

DIVISION OF WATER QUALITY


for Coleen H. Sullins
Director

NCDWQ Project No.: _____

County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650. This form may be returned to NCDWQ by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Engineer's Certification

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project, for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No. _____

Date _____



November 3, 2009

Mr. David Baker
U. S. Army Corps of Engineers
Asheville Regulatory Field Office
151 Patton Avenue, Room 208
Asheville, North Carolina 28801-5006

Dear Mr. Baker:

Subject: EEP Mitigation Acceptance Letter:

R-2518A, US 19 from I-26 to 0.8 km East of Yancey County Line, Madison County; French Broad River Basin (Cataloging Unit 06010105); Northern Mountains (NM) Eco-Region

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory stream mitigation for the unavoidable impact associated with the above referenced project. Based on the information supplied by the NCDOT on November 3, 2009, the impacts are located in CU 06010105 of the French Broad River Basin in the Northern Mountains (NM) Eco-Region, and the anticipated mitigation credits needed to offset the impacts are as follows:

Table with 9 columns: French Broad 06010105 NM, Stream (Cold, Cool, Warm), Wetlands (Riparian, Non-Riparian, Coastal Marsh), Buffer (Sq. Ft.) (Zone 1, Zone 2). Rows include Impacts (feet/acres) and Mitigation Units.

Per the mitigation request from the NCDOT, EEP commits to implementing sufficient stream mitigation credits up to a mitigation ratio of 3:1 (with a minimum 1:1 being stream restoration type mitigation credits) to offset the impacts. Mitigation associated with this project will be provided in accordance with Section X of Amendment No. 2 to 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 fully executed on March 8, 2007 (Tri-Party MOA). EEP commits to implement sufficient stream mitigation credits in the appropriate cataloging unit in the amount listed in the above table 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 impact 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,

Handwritten signature of William D. Gilmore, P.E.

William D. Gilmore, P.E.
EEP Director

cc: Mr. Gregory J. Thorpe, Ph.D., NCDOT-PDEA
Mr. Brian Wrenn, Division of Water Quality, Wetlands/401 Unit
File: R-2518A

Restoring... Enhancing... Protecting Our State



WETLAND PERMIT IMPACT SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Fill In Wetlands Permanent (ha)	Fill In Wetlands Temporary (ha)	Excavation In Wetlands (ha)	Mechanized Clearing (Method III) (ha)	Permanent SW impacts (ha)	Temp. SW impacts (ha)	Existing Channel Impacts Permanent (m)	Existing Channel Impacts Temporary (m)	Natural Stream Design (m)	
1	11+47 -Y1-	EXIST. 1350 & 800 CSP					0.001	0.001	4	3		
1A	14+60 -L-	EXIST. 600 & 400 CSP					0.004		44			
2	19+70 -L-	RCBC					0.035	0.004	65	6		
3	21+26 -L-	RCBC					0.023	0.003	45	6		
3A	11+30 -Y2-	BRIDGE						0.009		11		
4	27+18 -L-	1350 CSP					0.001	0.010	26	3		
5	31+61 -L-	RCBC					0.010	0.001	52	3		
6	33+78 -L-	RCBC					0.016	0.004	45	6		
7	37+00 -L-	RCBC & CHANNEL RELOC.					0.094	0.002	356	6		
7A	39+01 -L-	1200 RCP	0.004				0.004	0.001	46	3		
8	45+38 -L-	RCBC					0.017	0.001	47	3		
9	47+20 -L-	1200 CSP	0.067			0.007	0.003	0.001	27	3		
10	51+55 -L-	1200 CSP					0.002	0.001	12	6		
11	56+39 -L-	RCBC & CHANNEL RELOC.					0.055	0.001	326	3		
12	60+00 -L-	600 RCP	0.064									
SHEET TOTALS:			0.135			0.007	0.265	0.039	1095	62		

Note: Natural Stream Design length is included in Mitigation Plan.

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 MADISON / YANCEY COUNTY
 PROJECT # - WBS 34445.1.1 (R-2518A)
 US 19 FROM I-26 TO 0.8 Km EAST OF YANCEY CO. LINE
 Rev. d 10/28/09

SHEET OF

WETLAND PERMIT IMPACT SUMMARY											
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS				SURFACE WATER IMPACTS				
			Fill In Wetlands Permanent (ha)	Fill In Wetlands Temporary (ha)	Excavation In Wetlands (ha)	Mechanized Clearing (Method III) (ha)	Permanent SW impacts (ha)	Temp. SW impacts (ha)	Existing Channel Impacts Permanent (m)	Existing Channel Impacts Temporary (m)	Natural Stream Design (m)
13	65+71 -L-	900 RCP					0.002	0.001	24	6	
13A	67+40 -L-	450 CSP							59		
14	70+10 -L-	RCBC					0.011	0.001	52	3	
15	78+00 -L-	RCBC					0.036	0.002	145	6	
16	79+29 -L-	900 RCP					0.003	0.001	29	3	
17	81+52 -L-	RCBC					0.015	0.001	93	6	
18	82+69 -L-	RCBC & CHANNEL RELOC.					0.033	0.001	194	6	
19	88+14 -L-	1200 RCP	0.023				0.003	0.001	39	6	
20	91+26 -L-	900 RCP					0.002	0.001	34	6	
21	92+89 -L-	1000 CSP					0.009	0.001	99	19	
22	96+48 -L-	800 CSP					0.004	0.001	45	6	
23	98+00 -L-	1200 CSP					0.003	0.001	30	6	
24	109+33 -L-	RCBC					0.014	0.001	70	6	
25	102+60 -L-	1700 CSP(ALUMINIZED)					0.036	0.002	374	11	
SHEET TOTALS:			0.023				0.171	0.015	1287	90	
PROJECT TOTALS			0.158			0.007	0.436	0.054	2382	152	

Note: Natural Stream Design length is included in Mitigation Plan.

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 MADISON / YANCEY COUNTY
 PROJECT # - WBS 34445.1.1 (R-2518A)
 US 19 FROM I-26 TO 0.8 Km EAST OF YANCEY CO. LINE
 Rev'd 10/28/09

SHEET OF

PERMIT MODIFICATION
 NOV 2, 2009 PAGE 2
 OF 9

WETLAND PERMIT IMPACT SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Fill In Wetlands Permanent (ac)	Fill In Wetlands Temporary (ac)	Excavation In Wetlands (ac)	Mechanized Clearing (Method III) (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temporary (ft)	Natural Stream Design (ft)	
1	11+47 -Y1-	EXIST. 1350 & 600 CSP					0.002	0.002	13	10		
1A	14+60 -L-	EXIST. 600 & 400 CSP					0.010	0.010	144	20		
2	19+70 -L-	RCBC					0.09	0.010	213	20		
3	21+26 -L-	RCBC					0.06	0.007	148	20		
3A	11+30 -Y2-	BRIDGE						0.022		36		
4	27+18 -L-	1350 CSP					0.002	0.025	85	10		
5	31+61 -L-	RCBC					0.02	0.002	171	10		
6	33+78 -L-	RCBC					0.04	0.010	148	20		
7	37+00 -L-	RCBC & CHANNEL RELOC.					0.23	0.005	1168	20		
7A	39+01 -L-	1200 RCP	0.01				0.01	0.002	151	10		
8	45+38 -L-	RCBC					0.04	0.002	154	10		
9	47+20 -L-	1200 CSP	0.17			0.02	0.007	0.002	89	10		
10	51+55 -L-	1200 CSP					0.005	0.002	39	20		
11	56+39 -L-	RCBC & CHANNEL RELOC.					0.135	0.002	1071	10		
12	60+00 -L-	600 RCP	0.16									
SHEET TOTALS:			0.34			0.02	0.651	0.093	3594	206		

Note: Natural Stream Design length is included in Mitigation Plan.

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 MADISON / YANCEY COUNTY
 PROJECT # - WBS 34445.1.1 (R-2518A)
 US 19 FROM I-26 TO 0.8 Km EAST OF YANCEY CO. LINE
 Rev.'d 10/28/09

SHEET OF

PERMIT MODIFICATION
 NOV 2, 2009 PAGE 3
 OF 9

WETLAND PERMIT IMPACT SUMMARY											
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS				SURFACE WATER IMPACTS				
			Fill In Wetlands Permanent (ac)	Fill In Wetlands Temporary (ac)	Excavation In Wetlands (ac)	Mechanized Clearing (Method III) (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temporary (ft)	Natural Stream Design (ft)
13	65+71 -L-	900 RCP					0.006	0.002	79	20	
13A	67+40 -L-	450 CSP					0.03	0.002	171	10	
14	70+10 -L-	RCBC					0.09	0.005	476	20	
15	78+00 -L-	RCBC					0.01	0.002	95	10	
16	79+29 -L-	900 RCP					0.04	0.002	305	20	
17	81+52 -L-	RCBC					0.08	0.002	637	20	
18	82+69 -L-	RCBC & CHANNEL RELOC.					0.01	0.002	128	20	
19	88+14 -L-	1200 RCP	0.06				0.006	0.002	111	20	
20	91+26 -L-	900 RCP					0.022	0.002	710	62	
21	92+89 -L-	1000 CSP					0.010	0.002	148	20	
22	96+48 -L-	800 CSP					0.007	0.002	98	20	
23	98+00 -L-	1200 CSP					0.03	0.002	230	20	
24	109+33 -L-	RCBC					0.09	0.005	1228	36	
25	102+60 -L-	1700 CSP (ALUMINIZED)									
SHEET TOTALS:			0.06				0.425	0.037	4603	298	
PROJECT TOTALS			0.40			0.02	1.076	0.130	8197	504	

Note: Natural Stream Design length is included in Mitigation Plan.

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 MADISON / YANCEY COUNTY
 PROJECT # - WBS 34445.1.1 (R-2518A)
 US 19 FROM I-26 TO 0.8 Km EAST OF YANCEY CO. LINE
 Rev. d 10/22/09

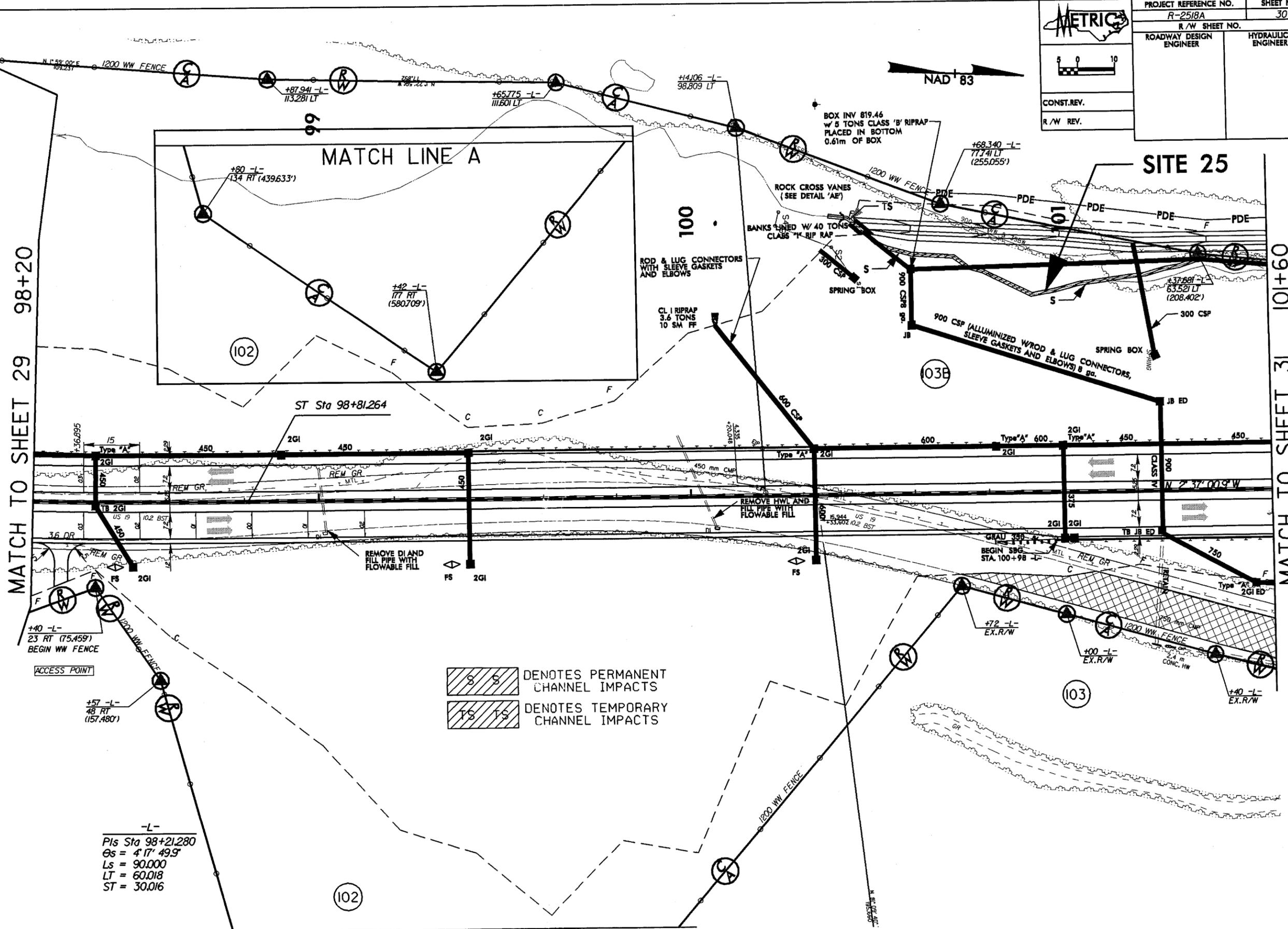
SHEET OF

PERMIT MODIFICATION
 NOV 2, 2009 PAGE 200

	PROJECT REFERENCE NO.	SHEET NO.
	R-2518A	30
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
CONST. REV.		
R/W REV.		



NAD 83



DENOTES PERMANENT CHANNEL IMPACTS
 DENOTES TEMPORARY CHANNEL IMPACTS

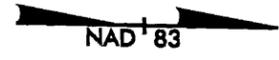
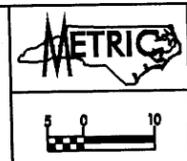
-L-
 PIs Sta 98+21.280
 Gs = 4'17" 49.9"
 Ls = 90.000
 LT = 60.018
 ST = 30.016

FOR -L- PROFILE SEE SHEET #61
FOR WALL SEE SHEET W-3 TO W-5

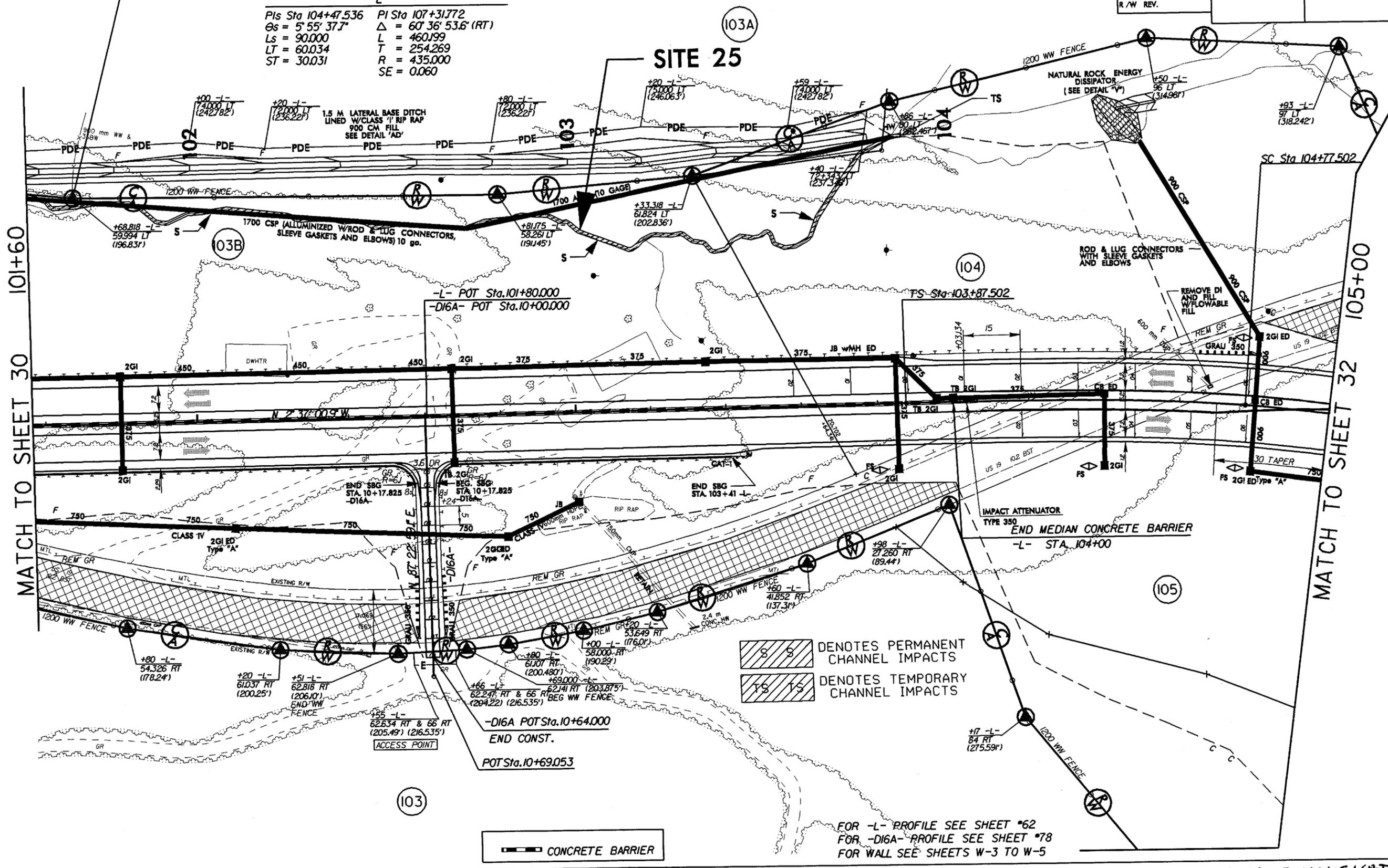
PERMIT MODIFICATION
 NOV 2, 2009 PAGE 5 OF 6

28-OCT-2009 14:35
 R:\Projects\2518A\Drawings\2518A-30-Plan\1.Dwg
 User: j...

PROJECT REFERENCE NO. R-2518A	SHEET NO. 31
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST. REV.	
R/W REV.	



-L-
 Pls Sta 104+47.536 PI Sta 107+31.772
 $\Theta_s = 5^\circ 55' 37.7''$ $\Delta = 60^\circ 36' 53.6''$ (RT)
 $L_s = 90.000$ $L = 460.199$
 $LT = 60.034$ $T = 254.269$
 $ST = 30.031$ $R = 435.000$
 $SE = 0.060$



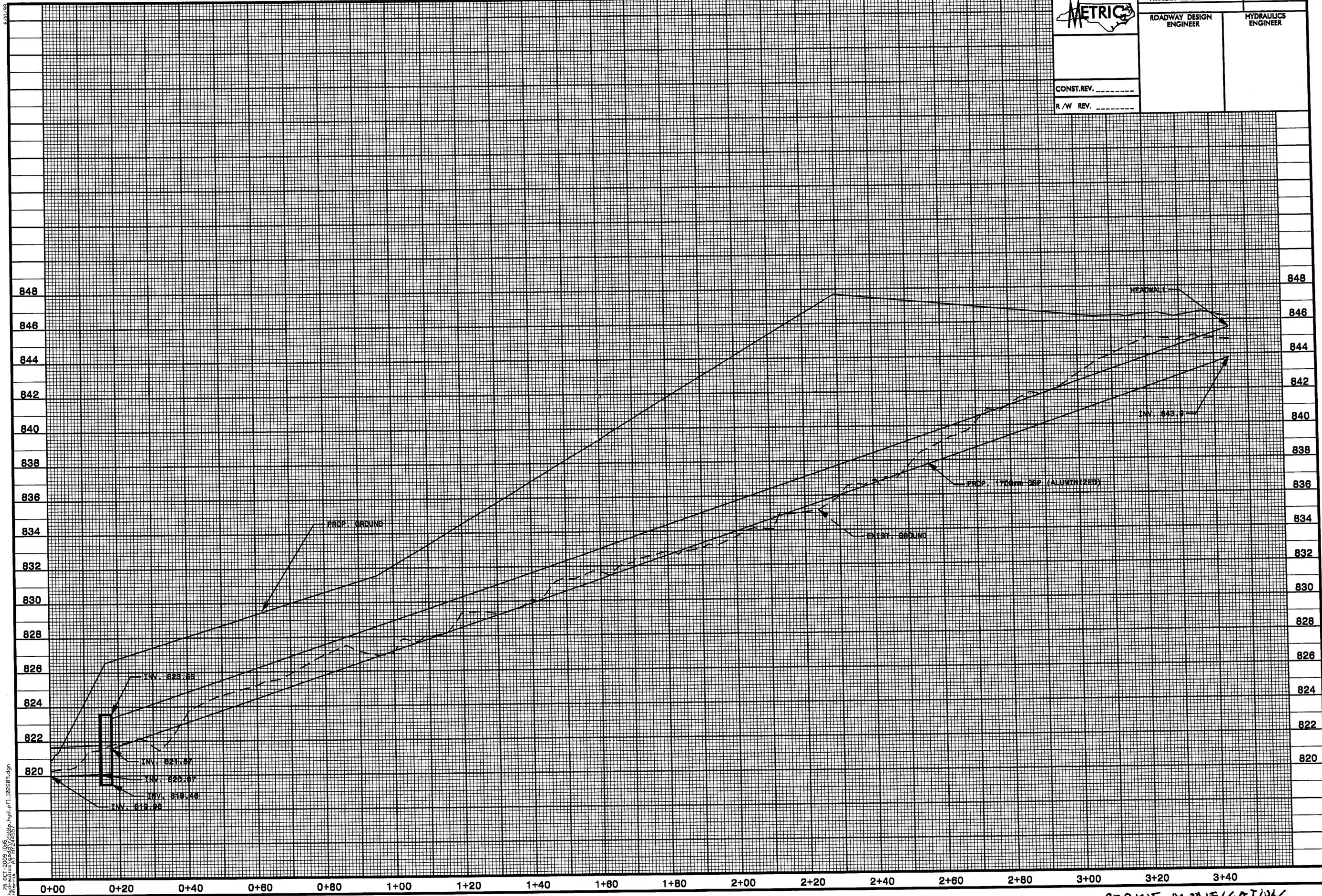
SS DENOTES PERMANENT CHANNEL IMPACTS
 TS TS DENOTES TEMPORARY CHANNEL IMPACTS

CONCRETE BARRIER

FOR -L- PROFILE SEE SHEET #62
 FOR -D16A- PROFILE SEE SHEET #78
 FOR WALL SEE SHEETS W-3 TO W-5



PROJECT REFERENCE NO.	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST. REV. _____	
R/W REV. _____	



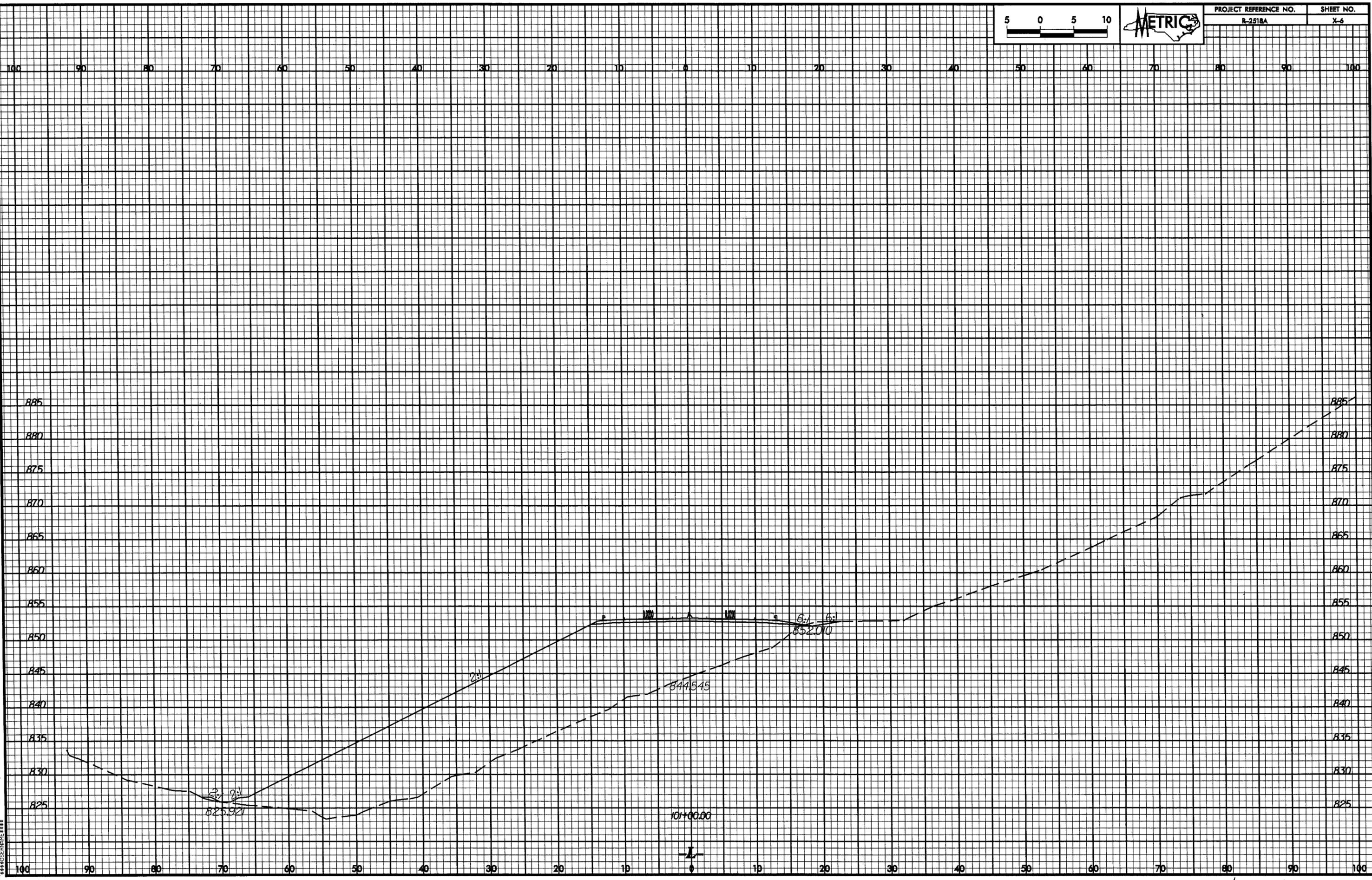
28 OCT 2009 10:15
 r:\projects\2009\10\15\20091015_20091015_20091015.dgn
 sheetname: AT 244557

PERMIT MODIFICATION
 NOV 2, 2009 PAGE 7 OF 9

10/26/08



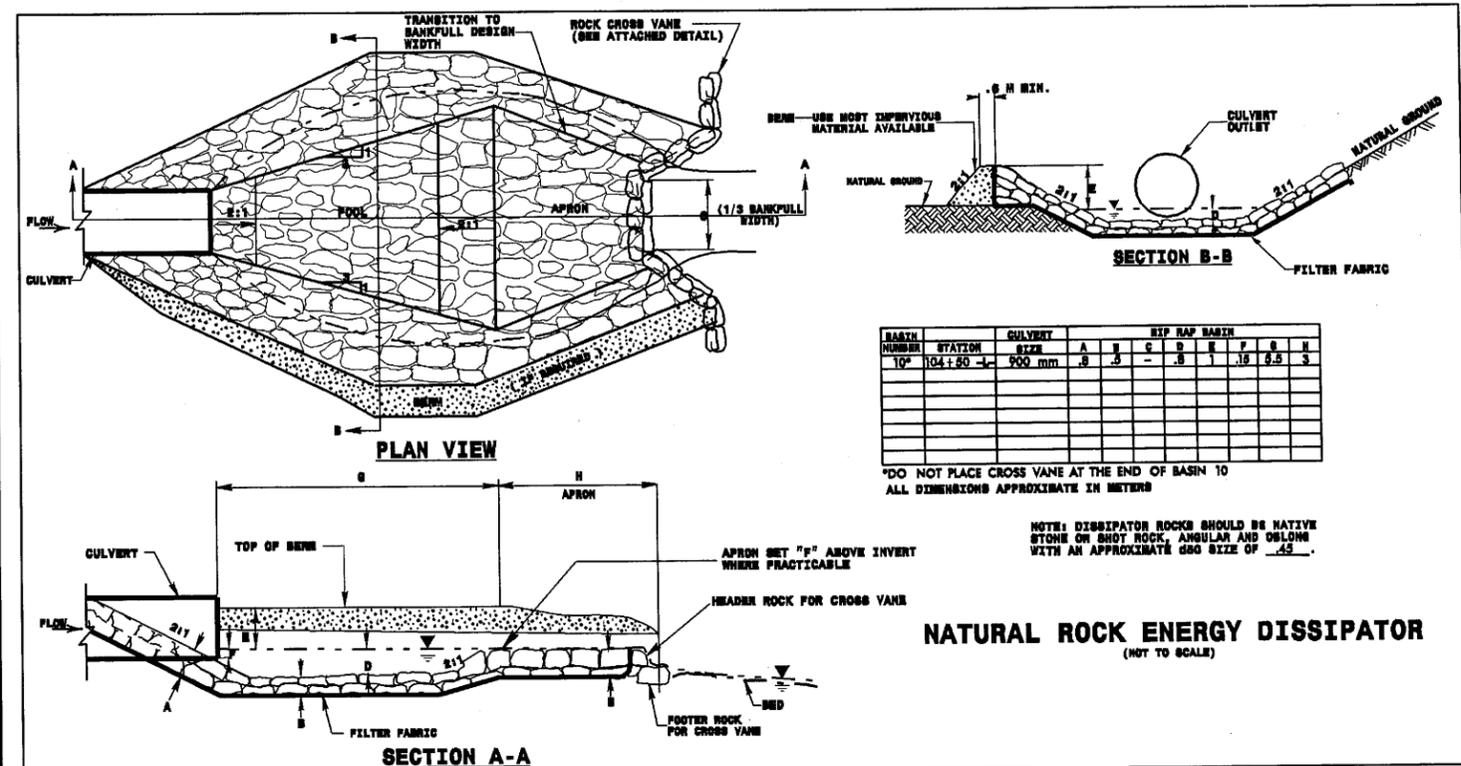
PROJECT REFERENCE NO.	SHEET NO.
R-2518A	X-6



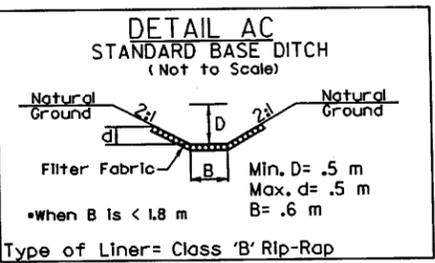
20-01-2009 13:48
 R:\Projects\2518A\10-2518A.rdw\pl.rwdgn



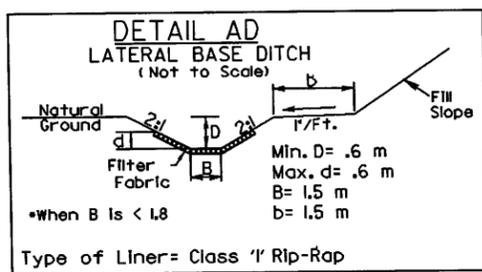
DETAIL 'V'



NATURAL ROCK ENERGY DISSIPATOR (NOT TO SCALE)

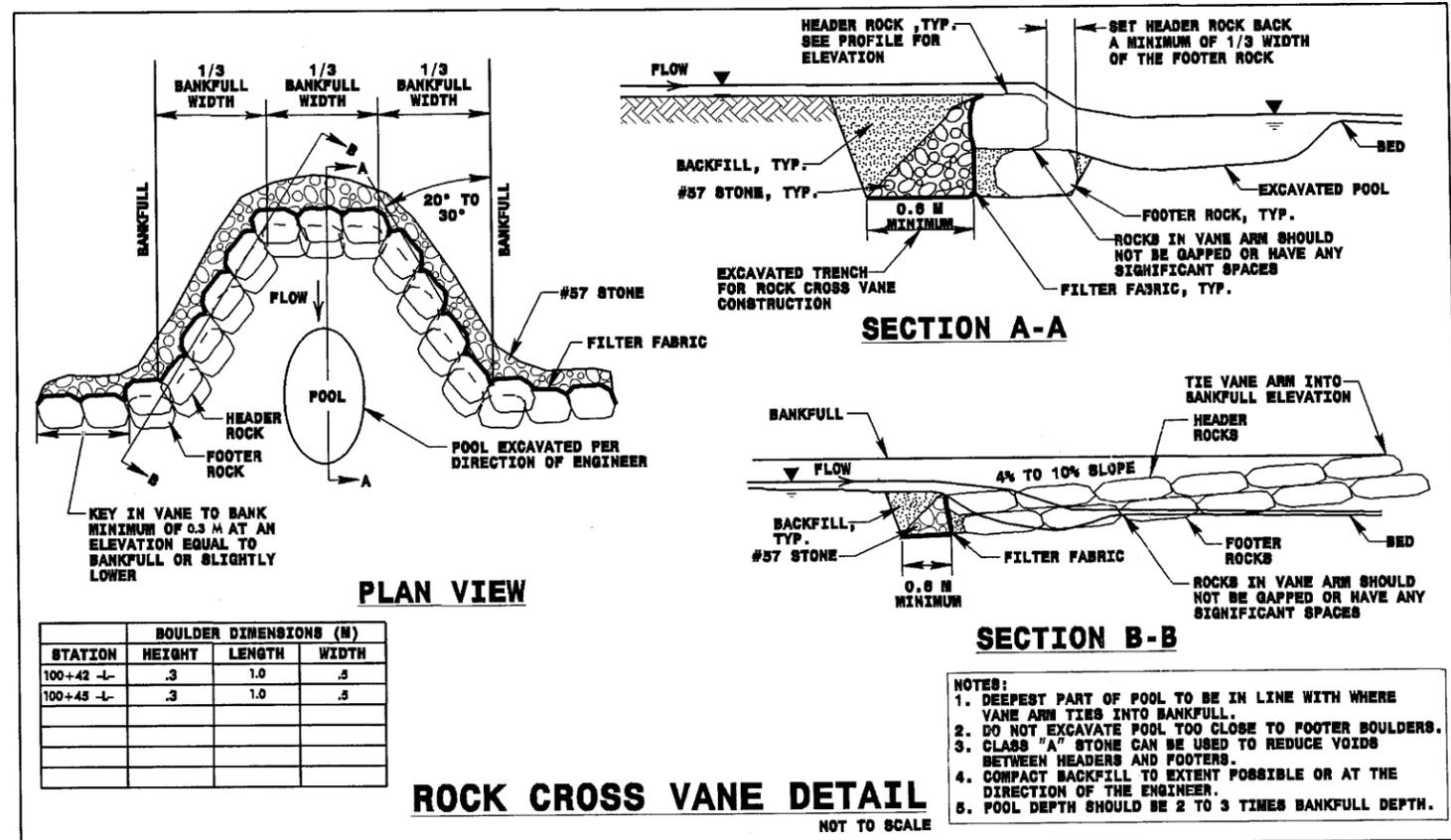


DDE = 20 CM



STA. 100+50 TO 103+85 LT.
900 CM FILL ABOVE SLOPE STAKE

DETAIL 'AE'



ROCK CROSS VANE DETAIL (NOT TO SCALE)

28-OCT-2009 09:56:56 h:\d\1557\dwt.dgn