STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY PERDUE
GOVERNOR

EUGENE CONTI
SECRETARY

September 9, 2010

MEMORANDUM TO: Mr. C. E. Lassiter, Jr., PE
Division Two Engineer

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

SUBJECT: Beaufort County, Improvements to US 17 from US 17 South of SR 1001 (Cherry Run Rd) to North of NC 171; T.I.P. Number R-2510C; Federal Aid Project No. MAF-75-3 (26); State Project 8.T150601

Attached are the modifications to the U.S. Army Corps of Engineers Section 404 Individual Permit, N.C. Division of Water Quality Section 401 Individual Water Quality Certification, Riparian Buffer Authorization and the N.C. Division Coastal Management CAMA Permit 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. Jay B. Johnson, Division Environmental Officer
Andy Blankenship, NCDOT Roadside Environmental Unit
Ms. Beth Harmon, EEP

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. Dewayne Sykes, P.E., Utilities Unit
Mr. Mark Staley, Roadside Environmental
Mr. John F. Sullivan, FHWA
Mr. Ron Hancock, P.E., State Roadway Construction Engineer
Mr. Mike Robinson, P.E., State Bridge Construction Engineer
Mr. Rob Hanson, P.E., PDEA Eastern Region Unit Head

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

TELEPHONE: 919-733-3141
FAX: 919-715-1501

WEBSITE: WWW.DOH.DOT.STATE.NC.US

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

PROJECT COMMITMENTS

Beaufort County
Improvements to US 17 from US 17 South of SR 1001 (Cherry Run Rd.) to North of NC 171
Federal Aid Project MAF-75-3 (26)
State Project 8.T150601
TIP No. R-2510C

Commitments Developed During Project Development and Design:

No commitments developed during the planning phase of this project apply to R-2510C.

Commitments Developed During Permitting:

PDEA-NEU

Compensatory mitigation for impacts to 107,227 square feet of Tar-Pamlico riparian buffers in R-2510 Section C shall be provided as described below:

Riparian Buffer Zone	Area Impacted (sq. ft.)	Mitigation Ratio	Area to Be Mitigated (sq. ft.)
Zone 1	68,152	3:1	204,456
Zone 2	39,075	1.5:1	58,615
		Total	**263,071**

Compensatory mitigation for impacts to protected buffers will be provided by the North Carolina Ecosystem Enhancement Program (EEP). Mitigation for unavoidable impacts to Tar-Pamlico Riparian Buffers shall be provided in the Tar-Pamlico River Basin (HUC 03020103) and done in accordance with 15A NCAC 2B .0259. EEP has indicated in a letter dated October 27, 2006 that they will assume responsibility for satisfying the compensatory mitigation requirements for the above-referenced project, in accordance with the Tri-Party MOA signed on July 22, 2003 and the Dual-Party MOA signed on April 12, 2004.

Compensatory mitigation for impacts to 1.70 acres of jurisdictional wetlands in R-2510 Section C shall be provided as described below:

Wetland Type	Area (ac)	Mitigation Ratio	Acres to Be Mitigated (ac)
Riparian	0.56	2:1	1.12
Non-riparian	1.14	2:1	2.28
		Total	**3.4**

Offsite Compensatory Mitigation
Compensatory mitigation for 0.56 acres of riparian and 1.14 acres non-riparian wetlands not mitigated onsite shall be mitigated in Hydrologic Cataloging Unit 03020103, associated with the proposed project shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated August 4, 2005, and in accordance with the Memorandum of Agreement (MOA) between the State of North Carolina and the US Army Corps of Engineers signed on July 22,2003.

Compensatory mitigation for impacts to 1,230 linear feet of streams shall be done at a replacement ratio of 2: 1. Applying a replacement ratio of 2: 1, total mitigation for 2,460 linear feet of streams shall be provided as described below:

Offsite Compensatory Mitigation
Compensatory mitigation for the unavoidable impacts to 1,230 linear feet of streams in the Hydrologic Cataloging Unit 03020104 associated with the proposed project shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated August 4, 2005, and in accordance with the Memorandum of Agreement (MOA) between the State of North Carolina and the US Army Corps of Engineers signed on July 22, 2003.

Construction within jurisdictional areas on the property shall begin only after the permittee has made full payment to the NC EEP and provided a copy of the payment documentation to the Corps, and the NC EEP has provided written confirmation to the Corps that it agrees to accept responsibility for the mitigation work required, in compliance with the MOU between the North Carolina Department of Environment and Natural Resources and the United States Army Corps of Engineers, Wilmington District, dated November 4, 1998.

Division 2 Construction

The West Indian Manatee, *Trichecus manatus*, which is listed as a federally endangered species, has been reported in North Carolina waters. In order to protect the West Indian manatee all in-water work should be done during the period from November 1 to May 31. If work must be done during the period from June through October the enclosed guidelines prepared by the U.S. Fish and Wildlife Service (USFWS) (rev. 06/2003), entitled "Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters" shall be followed.

The installation of the bridge piles shall be accomplished by pile driving. Should the permittee and/or its contractor desire to utilize another type of pile installation, such as drilled shaft construction or jetting, additional authorization from DCM shall be required.

Unless specifically altered herein, any mitigative measures or environmental commitments specifically made by the permittee in the CAMA permit application, the Final Environmental Impact Statement dated 8/31/04, and/or during the NEPA/404 Merger Process, shall be implemented, regardless of whether or not such commitments are addressed by individual conditions of this permit.

The permittee and/or contractor shall contact the N.C. Division of Coastal Management at (252) 808-2808 to schedule a pre-construction conference prior to project initiation.

Two copies of the final construction drawings shall be furnished to NCDWQ Central Office prior to the pre-construction meeting. The permittee shall provide written verification that the final construction drawings comply with the permit drawings contained in the application dated April 14, 2010. Any deviations from the approved drawings are not authorized unless approved by the NC Division of Water Quality.

Upon completion of the project, the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the 401 Certification has been completed.

Except as shown on the plans, no dredging, excavation, filling, rip-rap, or other work affecting the bottom, shall be done in conjunction with this work.

Division 2 Construction/Hydraulics Unit

Bridge deck drains should not discharge directly into the stream. Stormwater should be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices.*

Division 2 Construction/Roadside Environmental Unit

Turbidity curtains shall be used to isolate all work areas from the waters of Cherry Run and Old Ford Swamp, including pile installation, placement of riprap, and excavation or filling. The turbidity curtains shall be properly maintained and shall be removed when turbidity within the curtains reaches ambient levels.

In accordance with project commitments made within the Final Environmental Impact Statement, dated 8/31/04, the permittee shall follow Design Standards in Sensitive Watersheds, 15A NCAC 4B .0124.

Project Services/Utilities

Subaqueous lines shall be placed a minimum of two feet below the bottom contour of Old Ford Swamp.

Any relocation of utility lines that is not already depicted on the attached work plan drawings, or described within the attached permit application, shall require approval by DCM, either under the authority of this permit, or by the utility company obtaining separate authorization.

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
Washington Regulatory Field Office
Post Office Box 1000
Washington, North Carolina 27889-1000

IN REPLY REFER TO

July 29, 2010

Underwood

RECEIVED
AUG 4 2010
DIVISION OF HIGHWAYS
PDEA-OFFICE OF NATURAL ENVIRONMENT

Regulatory Division

Action ID No. 199301143

Mr. Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Thorpe:

Reference the Department of the Army (DA) permit issued to you on January 17, 2006, and permit modification issued to you on January 17, 2007, both associated with the relocation and widening of approximately 15 miles of US Highway 17 (Washington Bypass, TIP R-2510, Sections A and B). This office received a permit modification request dated April 14, 2010, addressing the proposed relocation and widening of Section C; from US 17 north of SR 1509 (Springs Road) to US 17 north of SR 1418 (Roberson Road). The entire project is located within Beaufort County, North Carolina and the Tar-Pamlico River Basin (HUC 03020104).

The proposed modification will result in 1.70 acres of permanent wetland impacts (0.56 acres riparian & 1.14 non-riparian). These impacts represent a 0.96 acre reduction of riparian and 0.81 increase of non-riparian impacts from the original permit. These impacts are comprised of 1.20 acres of fill, 0.30 acres of excavation in wetlands, 0.20 acres of mechanized land clearing and 0.14 acres of hand clearing in wetlands and are associated with construction of the bridge approach fill slopes and proposed road alignment.

The proposed modification will also result in 1,230 linear feet of permanent stream impacts (a 201 foot reduction from the original permit) and 858 linear feet of temporary stream impacts associated with roadway fill and bridge construction. There will be no jurisdictional impacts as a result of relocation of cable, telephone or power lines. Water lines will be relocated along the length of project using directional bore under jurisdictional wetland areas.

This modification request was discussed and coordinated with the appropriate State and Federal agencies at previous Merger 01 concurrence meetings and the coordination revealed no objections to this modification request. Therefore, the permit is hereby modified in accordance with the specific work activities described above and in the enclosed plans.

In addition, a permit modification request was received in this office on July 22, 2010, requesting a two year extension to the December 31, 2010 expiration date associated with the January 17, 2007 permit modification request. The permit expiration date is hereby modified from December 31, 2010 to December 31, 2012. It is understood that all conditions of the original permit and applicable modifications remain valid. In addition, the permittee will comply with the following special permit conditions:

a.) All work authorized by this permit modification must be performed in strict compliance with the submitted work plans, which are part of this permit. Any modification to the permit plans must be approved by US Army Corps of Engineers (Corps) prior to implementation.

b.) The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit, and any authorized modifications. A copy of this permit, and any authorized modifications, including all conditions, shall be available at the project site during construction and maintenance of this project.

c.) Compensatory mitigation for the unavoidable impacts to 1,230 linear feet of warm water streams, 0.56 acres of riparian wetlands, and 1.14 acres of non-riparian wetlands associated with the construction of the Washington Bypass (TIP Number R-2501, Section C) shall be provided by the North Carolina Ecosystem Enhancement Program (NCEEP), as outlined in the letter dated October 20, 2009, from William D. Gilmore, NCEEP Director. Pursuant to the Tri–Party Memorandum of Agreement (MOA) between the NC Department of Environment and Natural Resources (NCDENR), the NC Department of Transportation (NCDOT) and the US Army Corps of Engineers (USACE) executed on March 8, 2007; and in accordance with Section X of Amendment No. 2 to the MOA, the permittee shall make payment to NCEEP in the amount determined by NCEEP, sufficient to perform the restoration of 2,460 linear feet of warm water stream, 1.12 acres of Riparian wetlands, and 2.28 acres of non-Riparian wetlands (2:1 ratio) in the Tar River Basin, Cataloging Unit (03020103).

Construction within jurisdictional areas on the property shall begin only after the permittee has made full payment to NCEEP and provided a copy of the payment documentation to the Corps, and NCEEP has provided written confirmation to the Corps that it agrees to accept responsibility for the mitigation work required, in compliance with the MOU program.

d.) Prior to commencing construction within jurisdictional waters of the United States for any portion of the proposed project, the permittee shall forward the latest version of project construction drawings to the Corps of Engineers, Washington Regulatory Field Office NCDOT Regulatory Project Manager. Half-size drawings will be acceptable.

Questions regarding this correspondence may be directed to Mr. Tom Steffens, NCDOT Coordinator/Regulatory Project Manager at the Washington Regulatory Field Office, telephone (910) 251-4615. The Wilmington District is committed to providing the highest level of support to the public. To help ensure we continue to do so, please complete the Customer Satisfaction Survey located at http://per2.nwp.usace.army.mil/survey.html to complete the survey online.

Sincerely,

David M. Lekson, P.W.S.
Chief, Washington Regulatory Field Office

Copies furnished w/o attachments:

Mr. Stephen Lane
NC Department of Environment and Natural Resources
Division of Coastal Management
400 Commerce Avenue
Morehead City, North Carolina 28557

Mr. Garcy Ward
Water Quality Section
North Carolina Department of Environment
and Natural Resources
943 Washington Square Mall
Washington, North Carolina 27889

Mr. Travis Wilson
Eastern Region Highway Project Coordinator
Habitat Conservation Program
1142 I-85 Service Road
Creedmoor, North Carolina 27522

Mr. Gary Jordan
U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726

Mr. Chris Militscher
C/O FHWA
U.S. Environmental Protection Agency
Raleigh Office
310 New Bern Avenue, Room 206
Raleigh, North Carolina 27601

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Water Quality
Coleen H. Sullins
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

Underwood
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AUG 20 2010
DIVISION OF HIGHWAYS
PDEA-OFFICE OF NATURAL ENVIRONMENT

August 5, 2010

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 and Tar-Pamlico Buffer Authorization, with ADDITIONAL CONDITIONS for Proposed improvements to US 17 (Washington By-pass) from North of SR 1509 (Springs Rd) to North of SR 1418 (Roberson Rd) in Beaufort County, Federal Aid Project No. MAF-75-3(26), TIP No. R-2510 C. NCDWQ Project No. 20050785 v. 14

Dear Dr. Thorpe:

Attached hereto is a modification of Certification No. 3527 issued to The North Carolina Department of Transportation (NCDOT) dated September 6, 2005. This modification is applicable only to the additional activities in R-2510 section C. All the authorized activities and conditions associated with the original Water Quality Certification dated September 6, 2005 and subsequent modifications still apply except where superceded by this certification.

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

Sincerely,

for Coleen H. Sullins
Director

Attachments

cc: Tom Steffens, US Army Corps of Engineers, Washington Field Office
Neil Lassiter, PE, Division 2 Engineer
Travis Wilson, NC Wildlife Resources Commission
Steve Sollod, Division of Coastal Management, Raleigh
Stephen Lane, Division of Coastal Management, Morehead City
Garcy Ward, NCDWQ, Washington Regional Office
File Copy

Transportation Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 2321 Crabtree Blvd., Raleigh, North Carolina 27604
Phone: 919-733-1786 \ FAX: 919-733-6893
Internet: http://h2o.enr.state.nc.us/ncwetlands/

One NorthCarolina Naturally

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Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act and Tar-Pamlico Buffer Authorization 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 and 15A NCAC 2B .0259. This certification authorizes the NCDOT to impact 1.84 acres of jurisdictional wetlands, 0.47acres of surface waters, 2,088 linear feet of jurisdictional streams and 155,924 square feet of protected riparian buffers in Beaufort County. The project shall be constructed pursuant to the modification request dated received April 16, 2010 and additional information dated received July 13, 2010 and July 26, 2010. The authorized impacts are as described below:

Wetland Impacts in the Tar-Pamlico River Basin Approved in Original Certification

Section C, Site:	Fill (Permanent) (ac)	Fill (Temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)
1A	0.022			0.027		**0.049**
1B			0.074	0.021		**0.095**
1C			0.056	0.019		**0.075**
2						
3	0.093			0.031		**0.124**
4	1.035			0.108		**1.143**
5A						
5B						
5C						
INITIAL TOTAL:	**1.15**		**0.13**	**0.206**		**1.486**

Wetland Impacts in the Tar-Pamlico River Basin Approved By This Certification

Section C, Site:	Fill (Permanent) (ac)	Fill (Temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)
1A	0.01			0.04	0.07	0.05
1B	0.03		0.03	0.01		0.07
1C			0.02	0.02		0.04
2						
3	0.06		0.18	0.05		0.29
4A					0.01	
4B				0.01	0.06	0.01
4C						
4D	1.10			0.04		1.14
5A						
5B	<0.01		0.07	0.03		0.10
5C						
Modified TOTAL:	**1.2**		**0.30**	**0.20**	**0.14**	**1.70***
Difference	**+0.05**		**+0.17**	**-0.006**	**+0.14**	**+0.21**

Total Wetland Impact for project: 1.7 acres

* Total includes 0.56 acres of riparian wetlands and 1.14 acres of non-riparian wetlands. Excludes impacts from Hand Clearing.

Stream Impacts in the Tar-Pamlico River Basin approved in Original Certification

Section C, Site:	Fill Perennial Stream (linear ft)	Temporary Fill Perennial Stream (linear ft)	Permanent Surface Water Impacts (ac)	Temporary Surface Water Impacts (ac)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
1A	-	-	-	-		
1B	-	-	-	-		
1C	-	-	-	-		
2	113.8	-	0.003	-	113.8	
3	159.3	-	0.018	-	159.3	159.3
4	841.6	-	0.287	-	841.6	841.6
5A	107.5	-	0.007	-	107.5	
5B	72.5	-	0.008	-	72.5	
5C	54.4	-	0.006	-	54.4	
INITIAL TOTAL:	**1,349.1**		**0.329**		**1,349.1**	**1,001**

Stream Impacts in the Tar-Pamlico River Basin approved with this Modification

Section C, Site:	Permanent Fill Perennial Stream (linear ft)	Temporary Fill Perennial Stream (linear ft)	Permanent Surface Water Impacts (ac)	Temporary Surface Water Impacts (ac)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
1A	34	262	<0.01	0.17	296	-
1B	-	-	-	-		
1C	-	-	-	-		
2*	n/a	n/a	n/a	n/a		
3	122	116	0.01	0.01	238	-
4A	779	27	0.07	0.01	806	779
4B	0	270	0	0.12	270	-
4C	0	116	0	<0.01	116	-
5A	120	20	0.01	0	140	-
5B	154	20	0.02	<0.01	174	154
5C	21	27	<0.01	<0.01	48	21
MODIFIED TOTAL:	**1,230**	**858**	**0.13**	**0.34**	**2,088**	**954**
Difference	**-119**	**+858**	**-0.199**	**+0.34**	**+ 739**	**- 47**

Total Stream Impact for Project: 2,088 linear feet

2* subsequent site visits by DWQ and Corps of Engineers personnel found no stream feature present

Tar-Pamlico Riparian Buffer Impacts Approved with the Original Certification

Section C Site:	Zone 1 Impact (sq ft)	*minus* Wetlands in Zone 1 (sq ft)	= Zone 1 Buffers (not wetlands) (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sq ft)	*minus* Wetlands in Zone 2 (sq ft)	= Zone 2 Buffers (not wetlands) (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
1A	14,759.6	1,477.4	13,282.2	39,846.6	12,196	453.3	11,742.7	17,614.1
3	10,208.7	521.8	9,686.9	29,060.7	6,621.8	934.7	5,687.1	8,530.7
4	55,506.1	434.6	55,071.5	165,214.5	33,873.3	2.4	33,870.9	50,806.4
5A	8,114.1	0	8,114.1	*n/a	5,294.4	0	5,294.4	*n/a
5B	6,986.8	0	6,986.8	*n/a	4,080.4	0	4,080.4	*n/a
5C	3,976.1	0	3,976.1	*n/a	2,628.6	0	2,628.6	*n/a
Totals	**99,551.4**	**2,433.8**	**97,117.6**	**234,121.8**	**64,694.5**	**1,390.4**	**63,304.1**	**76,951.2**

* n/a = Total for Site is less than 1/3 acre and 150 linear feet of impact, no mitigation required

Total Buffer Impact for Project: 164,245.9 square feet.

Tar-Pamlico Riparian Buffer Impacts Approved with this Modification

Section C Site:	Zone 1 Impact (sq ft)	*minus* Wetlands in Zone 1 (sq ft)	= Zone 1 Buffers (not wetlands) (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sq ft)	*minus* Wetlands in Zone 2 (sq ft)	= Zone 2 Buffers (not wetlands) (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
1A	3,913	20	3,893	11,679	4,506	151	4,355	6,533
1A Bridge	12,918	3,018	9,900	**n/a	3,553	799	2,754	**n/a
3	13,360	469	12,891	38,673	8,411	2,028	6,383	9,575
4	40,228	60	40,168	120,504	23,055	510	22,545	33,818
4 Bridge	12,312	2,280	10,032	**n/a	2,298	493	1,805	**n/a
5A	7,518	0	7,518	*n/a	4,528	0	4,528	*n/a
5B	9,730	1,118	8,612	25,836	6,095	1,214	4,881	7,322
5C	2,588	0	2,588	7,764	911	0	911	1,367
Totals	**102,567**	**6,965**	**95,602**	**204,456**	**53,357**	**5,195**	**48,162**	**58,615**
Difference	**+ 3,016**	**+ 4,531**	**- 1,516**	**- 29,666**	**- 11,338**	**+ 3,805**	**- 15,142**	**- 18,336**

* n/a = Total for Site is less than 1/3 acre and 150 linear feet of impact, no mitigation required

**n/a =Impact due to bridge structure, no mitigation required

Total Buffer Impact for Project: 155,924 square feet.

The application provides adequate assurance that the discharge of fill material into the waters of the Tar-Pamlico 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 herein after set forth.

This approval is only valid for the purpose and design that you submitted in your modification request dated received April 16, 2010 and additional information dated received July 13, 2010 and July 26, 2010. All the authorized activities and conditions associated with the original Water Quality Certification dated September 6, 2005 and all subsequent modifications 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). Additional buffer impacts may require compensatory mitigation as described in 15A NCAC 2B .0260. 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. This modification is applicable only to the additional proposed activities in R-2510 Section C. All of the authorized activities and conditions associated with the original Water Quality Certification dated September 5, 2005 and subsequent modifications still apply except where superceded by this certification.

2. Compensatory mitigation for impacts to 1.7 acres of wetlands in R-2510 Section C shall be provided as described below:

   Off-Site Wetland Mitigation
   Compensatory mitigation for impacts to **0.56 acres** of riparian and **1.14 acres** of non-riparian wetlands in the Hydrologic Cataloging Unit 0302103 is required at a ratio of 2:1. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands 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 July 8, 2010 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

3. Compensatory mitigation for impacts to 954 linear feet of stream in R-2510 Section C shall be provided as described below:

   Off-Site Stream Mitigation
   Compensatory mitigation for 954 linear feet of impact to streams in Hydrologic Cataloging Unit 0302103 is required at a replacement ratio of 1:1. 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 July 8, 2010 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. Compensatory mitigation for impacts to 107,227 square feet of Tar-Pamlico riparian buffer in R-2510 Section C shall be provided as described below:

   Off-Site Buffer Mitigation
   Compensatory mitigation for impacts to 68,152square feet of protected riparian buffers in Zone 1 and 39,075square feet of protected riparian buffers in Zone 2 shall be required. We understand that you have chosen to perform compensatory mitigation for impacts to protected buffers through use of the North Carolina Ecosystem Enhancement Program (EEP). Mitigation for unavoidable impacts to Tar-Pamlico Riparian Buffers shall be provided in the Tar-PamlicoRiver Basin and done in accordance with 15A NCAC 2B .0259. EEP has indicated in a letter dated July 8, 2010 that they will assume responsibility for satisfying the compensatory mitigation requirements for the above-referenced project, in accordance with the Tri-Party MOA signed on July 22, 2003 and the Dual-Party MOA signed on April 12, 2004.

Riparian Buffer Zone	Area To Be Mitigated (sq. ft)	Mitigation Ratio	Area to Be Mitigated (sq. ft)
Zone 1	68,152	3:1	204,456
Zone 2	39,075	1.5:1	58,615
		TOTAL:	**263,071**

5. No in-water work moratorium is in effect for activities in R-2510C as recommended by the NC Wildlife Resources Commission. This replaces condition 8 in the original Water Quality Certification issued on September 6, 2005.

6. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.

7. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If NCDWQ determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, NCDWQ may reevaluate and modify this certification.

8. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.

9. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:

   a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual.*
   b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual.* The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
   c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual.*
   d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

10. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.

11. 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 downstream 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.

12. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.

13. 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.

14. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.

15. 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.

16. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage.

17. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream.

18. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.

19. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.

20. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification.

21. Native riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.

22. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.

23. All stormwater runoff shall be directed as sheetflow through stream buffers at nonerosive velocities, unless otherwise approved by this certification.

24. All riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated. Maintained buffers shall be permanently revegetated with non-woody species by the end of the growing season following completion of construction. For the purpose of this condition, maintained buffer areas are defined as areas within the transportation corridor that will be subject to regular NCDOT maintenance activities including mowing. The area with non-maintained buffers shall be permanently revegetated with native woody species before the next growing season following completion of construction.

25. Pursuant to NCAC15A 2B .0259(6), sediment and erosion control devices shall not be placed in Zone 1 of any Tar-PamlicoBuffer without prior approval by NCDWQ. At this time, NCDWQ has approved no sediment and erosion control devices in Zone 1, outside of the approved project impacts, anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised and that discharge is released as diffuse flow.

26. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species.

27. Strict adherence to the most recent version of NCDOT's Best Management Practices For Bridge Demolition and Removal approved by the US Army Corps of Engineers is a condition of the 401 Water Quality Certification.

28. Bridge deck drains should not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices.*

29. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. More specifically, jetting or other methods of pile driving are prohibited without prior written approval from NCDWQ first.

30. No drill slurry or water that has been in contact with uncured concrete shall be allowed to enter surface waters. This water shall be captured, treated, and disposed of properly.

31. All pile driving or drilling activities shall be enclosed in turbidity curtains unless otherwise approved by NCDWQ in this certification.

32. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.

33. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify NCDWQ when all work included in the 401 Certification has been completed.

34. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.

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 5th day of August, 2010

DIVISION OF WATER QUALITY

for Coleen H. Sullins
Director

WQC No. 3527

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 _____

Permit Class
MODIFICATION/MAJOR AMENDED

Permit Number
29-07

STATE OF NORTH CAROLINA
Department of Environment and Natural Resources
and
Coastal Resources Commission

Permit

for

_X_ Major Development in an Area of Environmental Concern pursuant to NCGS 113A-118

_X_ Excavation and/or filling pursuant to NCGS 113-229

Issued to **N.C. Department of Transportation, 1598 Mail Service Center, Raleigh, NC 27699-1598**

Authorizing development in Beaufort County at Old Ford Swamp, as part of the US 17 bypass of the City of Washington ,as requested in the permittee's application dated 5/27/10 including the attached eighty (80) drawings as referenced in Condition No. 1 of this permit.

This permit, issued on **8/31/10**, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

C-Section of the US 17 Washington Bypass (TIP No. R-2510C)

1) Unless specifically altered herein, all work authorized by this permit shall be carried out in accordance with the following ½-size workplan drawings: four (4) drawings dated 8/25/08; sixteen (16) drawings dated 8/26/08; ten (10) drawings dated 8/27/08; five (5) drawings dated 9/30/08; ten (10) drawings dated 10/6/08; twenty nine (29) drawings dated 8/12/09; one (1) drawing dated 9/8/09; one (1) drawing dated 9/22/09; and four (4) drawings dated revised 7/1/10.

2) The in-water work moratorium previously described in Condition No. 1 of the original permit shall not apply to any stream crossing associated with the R-2510C project.

3) Unless specifically altered herein, the N.C. Department of Transportation's (NCDOT's) document "Best Management Practices for Bridge Demolition and Removal" shall be followed during both demolition and construction activities.

(See attached sheets for Additional Conditions)

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date. An appeal requires resolution prior to work initiation or continuance as the case may be.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.

Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

No Expiration Date, pursuant to GS 136-44.7B

In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.

Signed by the authority of the Secretary of DENR and the Chairman of the Coastal Resources Commission.

Douglas V Huggett
for

James H. Gregson, Director
Division of Coastal Management

This permit and its conditions are hereby accepted.

E. L. Lusk

Signature of Permittee

ADDITIONAL CONDITIONS

4) Turbidity curtains shall be used to isolate all work areas from the waters of Cherry Run and Old Ford Swamp, including pile installation, placement of riprap, and excavation or filling. The turbidity curtains shall be properly maintained and shall only be removed when turbidity within the curtains reaches ambient levels.

5) The placement of riprap shall be limited to the areas as depicted on the attached workplan drawings. The riprap material shall be clean and free from loose dirt or any pollutant except in trace quantities. It shall be of a size sufficient to prevent its movement from the authorized alignment by current action. The riprap material shall consist of clean rock or masonry materials such as, but not limited to, granite, marl or broken concrete.

6) The installation of permanent and temporary bridge piles shall be accomplished by pile driving, vibratory hammer, or similar method. Should the permittee and/or its contractor desire to utilize another type of pile installation, such as drilled shaft construction or jetting, additional authorization from DCM shall be required.

7) Pilings from the existing bridges, as well as any remnant pilings from previous bridges, shall be removed in their entirety, except that in the event that a piling breaks during removal and cannot be removed in its entirety, the piling may be cut off below the mud line approximately three to four inches, allowing the piles to be covered with natural material to the mud line, and DCM shall be notified of each occurrence within one working day.

8) The temporary work bridges shall be removed in their entirety within 90 days after they are no longer needed and saved for reuse, recycled, or disposed of at an approved high ground site.

Utilities Relocation

9) Subaqueous lines shall be placed a minimum of two feet below the bottom contour of Old Ford Swamp.

10) Utility line installation shall not result in any permanent or temporary impacts to wetlands or waters of the State, without authorization from DCM.

11) Any relocation of utility lines that is not specifically depicted on the attached work plan drawings, or described within the attached permit application, shall require approval from the N.C. Division of Coastal Management, either under the authority of this permit, or by the utility company obtaining separate authorization.

General

12) If it is determined that additional permanent and/or temporary impacts will occur that are not shown on the attached permit drawings, additional authorization from DCM shall be required.

ADDITIONAL CONDITIONS

13) This modification shall be attached to the original of Permit No. 29-07, which was issued on March 6, 2007 as well as all subsequent modifications and/or refinements, and copies of all documents must be readily available on site when a Division representative inspects the project for compliance.

14) All conditions and stipulations of the active permit remain in force under this Major Modification unless specifically altered herein.

15) The N.C. Division of Water Quality (DWQ) authorized the proposed project under a modification of Water Quality Certification No. 3527 issued 8/5/10 (DWQ Project No. 20050785 v.14). Any violation of the Certification approved by the DWQ, including any of the mitigation requirements, shall be considered a violation of this CAMA permit.

16) The permittee and/or contractor shall contact the N.C. Division of Coastal Management at (252) 808-2808 to schedule a pre-construction conference prior to project initiation.

NOTE: The U.S. Army Corps of Engineers issued a permit modification pertaining to the C-Section of the Washington Bypass, R-2510C, on 7/29/10. USACE Action ID No. 199301143.

NOTE: This permit does not eliminate the need to obtain any additional permits, approvals or authorizations that may be required.

NOTE: The bridge demolition debris may be suitable for use as artificial reef material. The permittee is encouraged to contact the Artificial Reef Coordinator, and the N.C. Division of Marine Fisheries Morehead City Office at (252) 726-7021 to coordinate review of the suitability of the material and arrangements for such use.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

GUIDELINES FOR AVOIDING IMPACTS TO THE WEST INDIAN MANATEE
Precautionary Measures for Construction Activities in North Carolina Waters

The West Indian manatee (*Trichechus manatus*), also known as the Florida manatee, is a Federally-listed endangered aquatic mammal protected under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) and the Marine Mammal Protection Act of 1972, as amended (16 U.S.C 1461 *et seq.*). The manatee is also listed as endangered under the North Carolina Endangered Species Act of 1987 (Article 25 of Chapter 113 of the General Statutes). The U.S. Fish and Wildlife Service (Service) is the lead Federal agency responsible for the protection and recovery of the West Indian manatee under the provisions of the Endangered Species Act.

Adult manatees average 10 feet long and weigh about 2,200 pounds, although some individuals have been recorded at lengths greater than 13 feet and weighing as much as 3,500 pounds. Manatees are commonly found in fresh, brackish, or marine water habitats, including shallow coastal bays, lagoons, estuaries, and inland rivers of varying salinity extremes. Manatees spend much of their time underwater or partly submerged, making them difficult to detect even in shallow water. While the manatee's principal stronghold in the United States is Florida, the species is considered a seasonal inhabitant of North Carolina with most occurrences reported from June through October.

To protect manatees in North Carolina, the Service's Raleigh Field Office has prepared precautionary measures for general construction activities in waters used by the species. Implementation of these measure will allow in-water projects <u>which do not require blasting</u> to proceed without adverse impacts to manatees. In addition, inclusion of these guidelines as conservation measures in a Biological Assessment or Biological Evaluation, or as part of the determination of impacts on the manatee in an environmental document prepared pursuant to the National Environmental Policy Act, will expedite the Service's review of the document for the fulfillment of requirements under Section 7 of the Endangered Species Act. These measures include:

1. The project manager and/or contractor will inform all personnel associated with the project that manatees may be present in the project area, and the need to avoid any harm to these endangered mammals. The project manager will ensure that all construction personnel know the general appearance of the species and their habit of moving about completely or partially submerged in shallow water. All construction personnel will be informed that they are responsible for observing water-related activities for the presence of manatees.

2. The project manager and/or the contractor will advise all construction personnel that

there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act and the Endangered Species Act.

3. If a manatee is seen within 100 yards of the active construction and/or dredging operation or vessel movement, all appropriate precautions will be implemented to ensure protection of the manatee. These precautions will include the immediate shutdown of moving equipment if a manatee comes within 50 feet of the operational area of the equipment. Activities will not resume until the manatee has departed the project area on its own volition (i.e., it may not be herded or harassed from the area).

4. Any collision with and/or injury to a manatee will be reported immediately. The report must be made to the U.S. Fish and Wildlife Service (ph. 919.856.4520 ext. 16), the National Marine Fisheries Service (ph. 252.728.8762), and the North Carolina Wildlife Resources Commission (ph. 252.448.1546).

5. A sign will be posted in all vessels associated with the project where it is clearly visible to the vessel operator. The sign should state:

> CAUTION: The endangered manatee may occur in these waters during the warmer months, primarily from June through October. Idle speed is required if operating this vessel in shallow water during these months. All equipment must be shut down if a manatee comes within 50 feet of the vessel or operating equipment. A collision with and/or injury to the manatee must be reported immediately to the U.S. Fish and Wildlife Service (919-856-4520 ext. 16), the National Marine Fisheries Service (252.728.8762), and the North Carolina Wildlife Resources Commission (252.448.1546).

6. The contractor will maintain a log detailing sightings, collisions, and/or injuries to manatees during project activities. Upon completion of the action, the project manager will prepare a report which summarizes all information on manatees encountered and submit the report to the Service's Raleigh Field Office.

7. All vessels associated with the construction project will operate at "no wake/idle" speeds at all times while in water where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

8. If siltation barriers must be placed in shallow water, these barriers will be: (a) made of material in which manatees cannot become entangled; (b) secured in a manner that they cannot break free and entangle manatees; and, (c) regularly monitored to ensure that manatees have not become entangled. Barriers will be placed in a manner to allow manatees entry to or exit from essential habitat.

Prepared by (rev. 06/2003):
U.S. Fish and Wildlife Service
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726
919/856-4520

Figure 1. The whole body of the West Indian manatee may be visible in clear water; but in the dark and muddy waters of coastal North Carolina, one normally sees only a small part of the head when the manatee raises its nose to breathe.

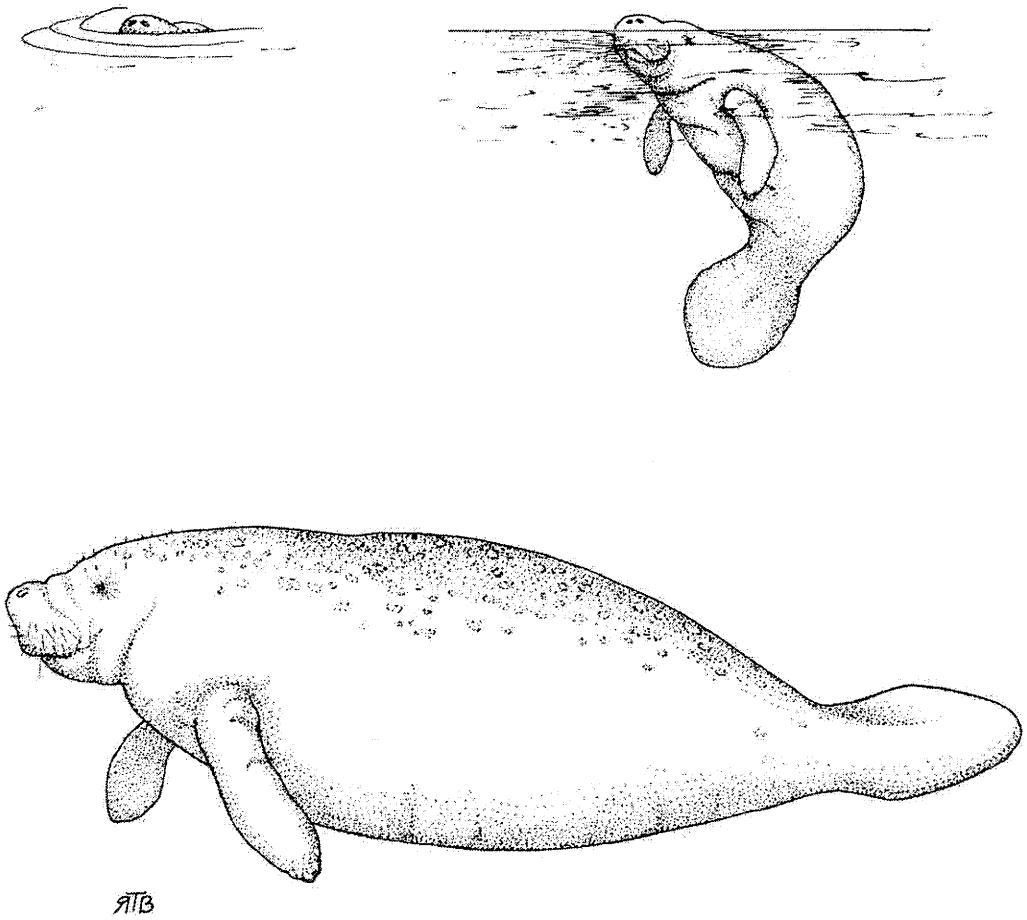
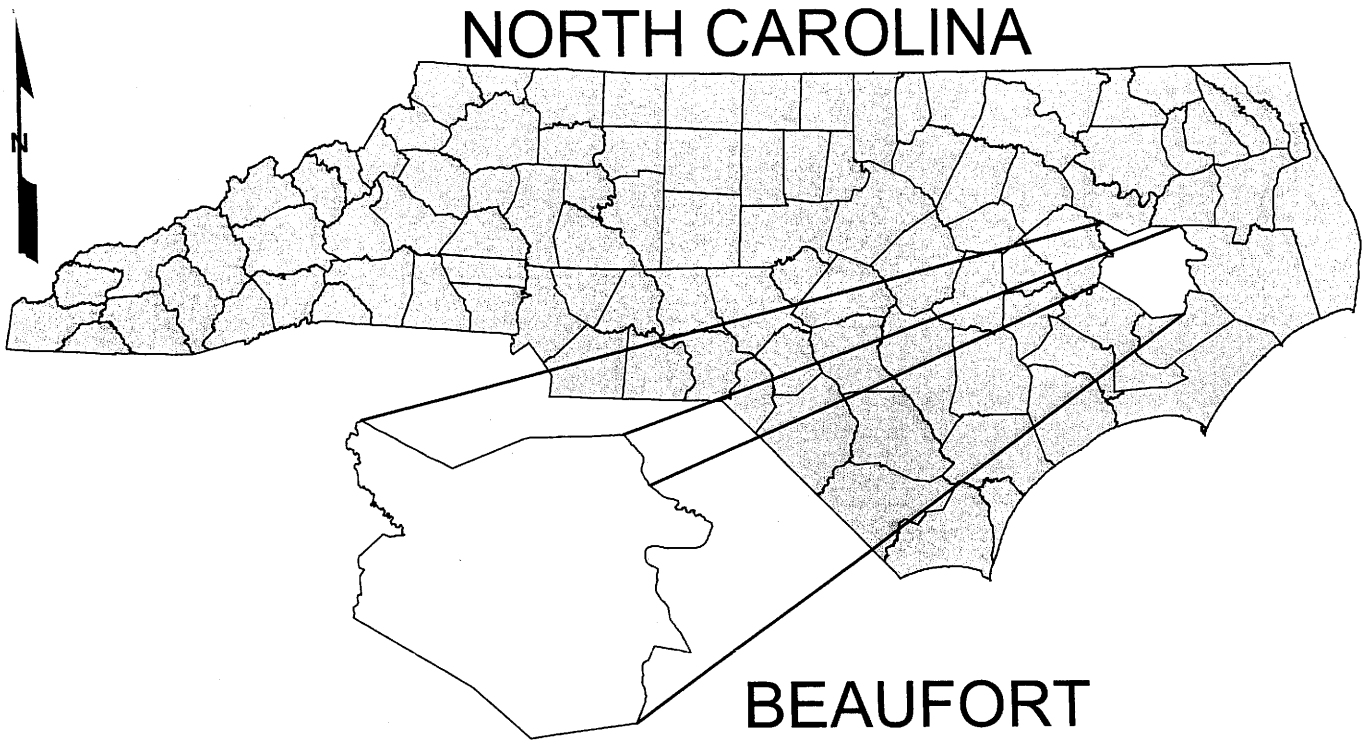
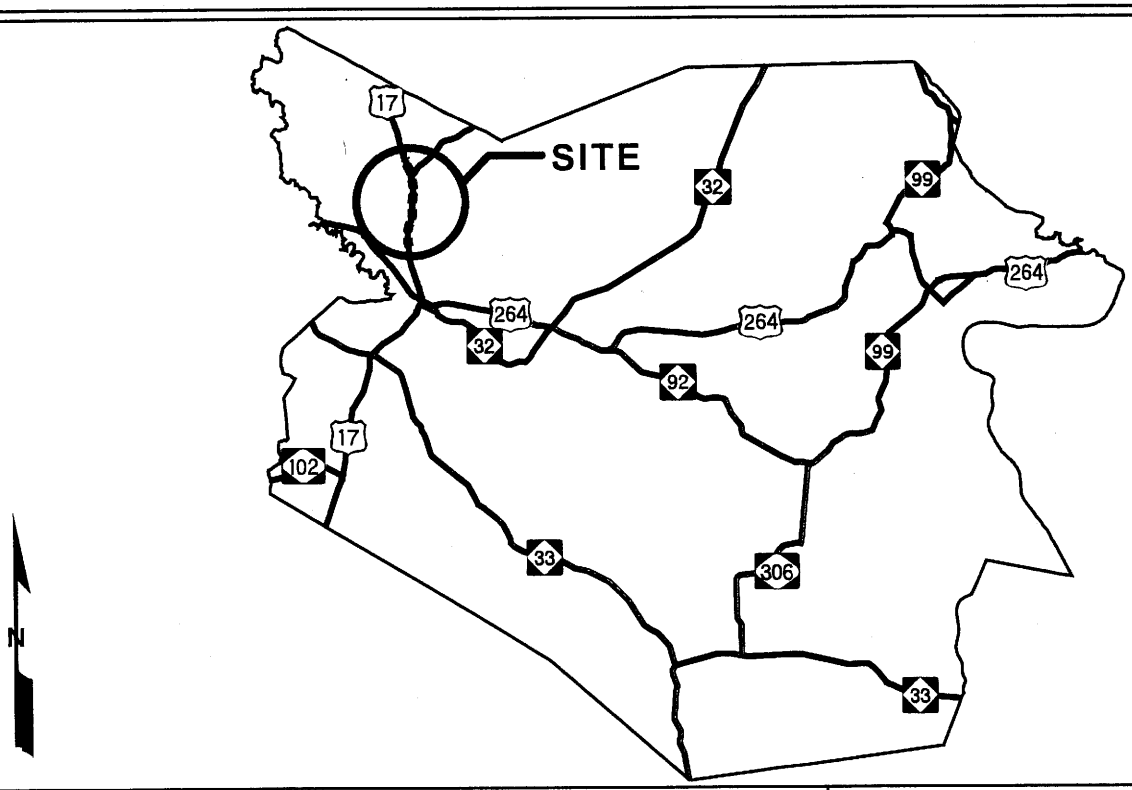


Illustration used with the permission of the North Carolina State Museum of Natural Sciences. Source: Clark, M. K. 1987. Endangered, Threatened, and Rare Fauna of North Carolina: Part I. A re-evaluation of the mammals. Occasional Papers of the North Carolina Biological Survey 1987-3. North Carolina State Museum of Natural Sciences. Raleigh, NC. pp. 52.





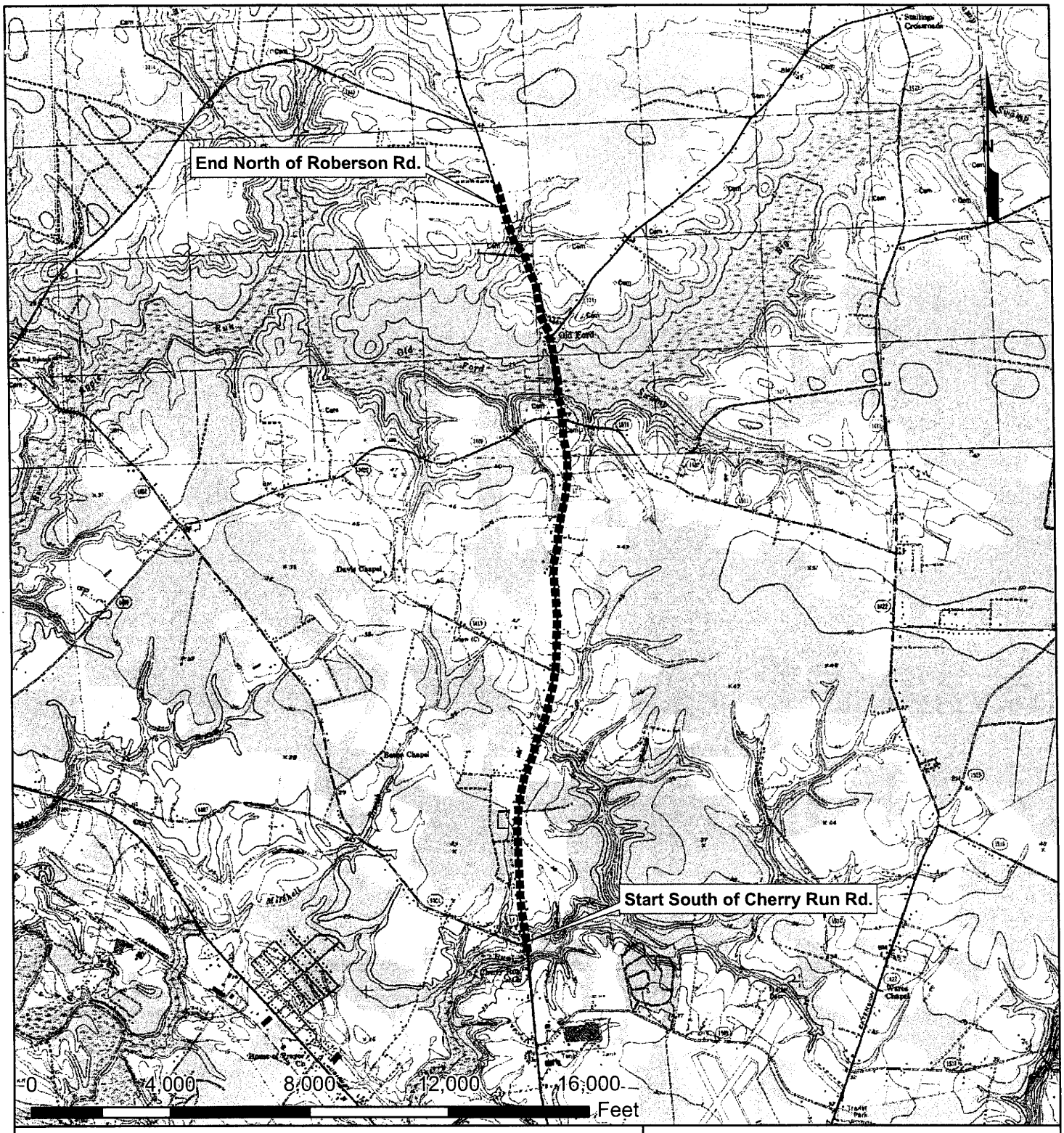
VICINITY MAPS

NCDOT

DIVISION OF HIGHWAYS
BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510C)
US 17 BYPASS

AUGUST 2009

Permit Drawing
Sheet 1 of 41



1 inch = 4,000 feet

LOCATION

NCDOT

DIVISION OF HIGHWAYS
BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510C)
US 17 BYPASS

AUGUST 2009

Source: USGS 7.5 Minute Quadrangle, Washington and Old Ford, NC

Permit Drawing
Sheet 2 of 41

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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)
1A	-L- 54+00 +/-	Roadway / Bridge	0.01			0.04	0.07	<0.01	0.17	34	262	
1B	-L- 62+00 +/-	Roadway	0.03		0.03	0.01						
1C	-Y3- 12+00 +/-	Roadway			0.02	0.02						
2	-L- 104+70 +/-	Roadway						0.02	<0.01	201	10	
3	-L- 119+00 +/-	Roadway	0.06		0.18	0.05		0.01	0.01	122	116	
4A	-L- 220+00+/-	Roadway					0.01	0.07	0.01	779	27	
4B	-L- 223+00+/-	Roadway / Bridge				0.01	0.06		0.12		270	
4C	-L- 223+00+/-	Roadway / Bridge							<0.01		116	
4D	-L- 227+00+/-	Roadway	1.10			0.04						
5A	-L- 256+75 +/-	Roadway						0.01	0.00	120	20	
5B	-L- 263+25+/-	Roadway	<0.01		0.07	0.03		0.02	<0.01	154	20	
5C	-Y9- 10+80 +/-	Roadway						<0.01	<0.01	21	27	
TOTALS:			1.20		0.30	0.20	0.14	0.13	0.31	1431	868	

Site 1A Permanent Surface Impacts due to piers = <0.01 acre
Site 4B Permanent Surface Impacts due to piers = <0.01 acre

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510C)

8/13/2009

Permit Drawing
Sheet 4 of 41

PROP. NO.	PROPERTY OWNER NAME	PROP. OWNER ADDRESS
1	JACK CHERRY, JR.	707 Oakwood Ave. South, Brandon, FL. 33511
2	SMITHWICK PARTNERS, LLC	1589 West 5th St., Washington, NC 27889
38	DONALD W. MANNING, ET UX	3502 US HWY 17 N, Washington, NC 27889
40	EAST CAROLINA FARMS, LLC	1905 Charlestowne Dr. Greenville, NC 27834
45	MARY L. BROWN HOPKINS	952 Wharton Station Rd., Washington, NC 27889
46	REUBEN H. FERRELL	3805 US HWY 17 N, Washington, NC 27889
94	* MINNIE LEE BRANTLEY	5595 HWY 17 N, Washington, NC 27889
97	MILTON E. HODGES, JR. (Land)	5584 US HWY 17 N, Washington, NC 27889
	DAVID ALLEN KEEL (Buildings on parcel 97)	5584 US HWY 17 N, Washington, NC 27889
100	* HAROLD W. ROBINSON, ET UX	244 N Roberson Rd., Washington, NC 27889
108	ARAH BELL GAUTIER CARRAWAY	5124 Congressional Dr., College Station, TX 77845
111	MCDONALD GAUTIER, 111, ET AL	6344 US HWY 17 N, Washington, NC 27889
114	MAXWELL P. CHESNUTT FAMILY TRUST	PO BOX 607, Blowing Rock, NC 28605
115	JOSEPH E PERRY, JR.	6498 US HWY 17 N, Washington, NC 27889
116	DOROTHY ROBERSON ROBINSON, et al	6555 US HWY 17 N, Washington, NC 27889
117	DOROTHY ROBERSON ROBINSON, et al	244 N Roberson Rd., Washington, NC 27889
118	MELVIN R. WILKINS, ET UX	6555 US HWY 17 N, Washington, NC 27889
	Gladys Styons	5666 US HW 17 N, " " "
	James Beatty	5954 " " " " " "

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510C)

8/13/2009

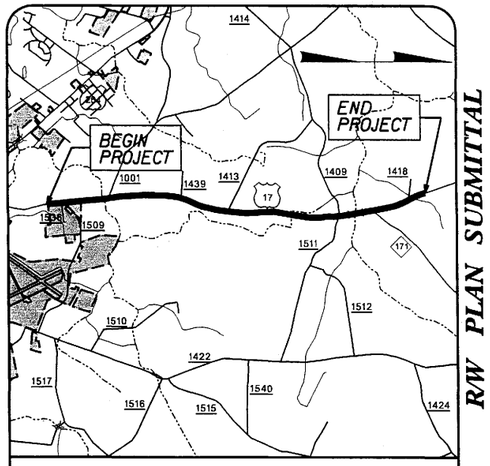
R:/z-misc/Hydro/Permit Drawings/WetProp.xls

Permit Drawing
Sheet 3 of 41

09/08/99

TIP PROJECT: R-2510C

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



VICINITY MAP

R/W PLAN SUBMITTAL

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BEAUFORT COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2510C	1	

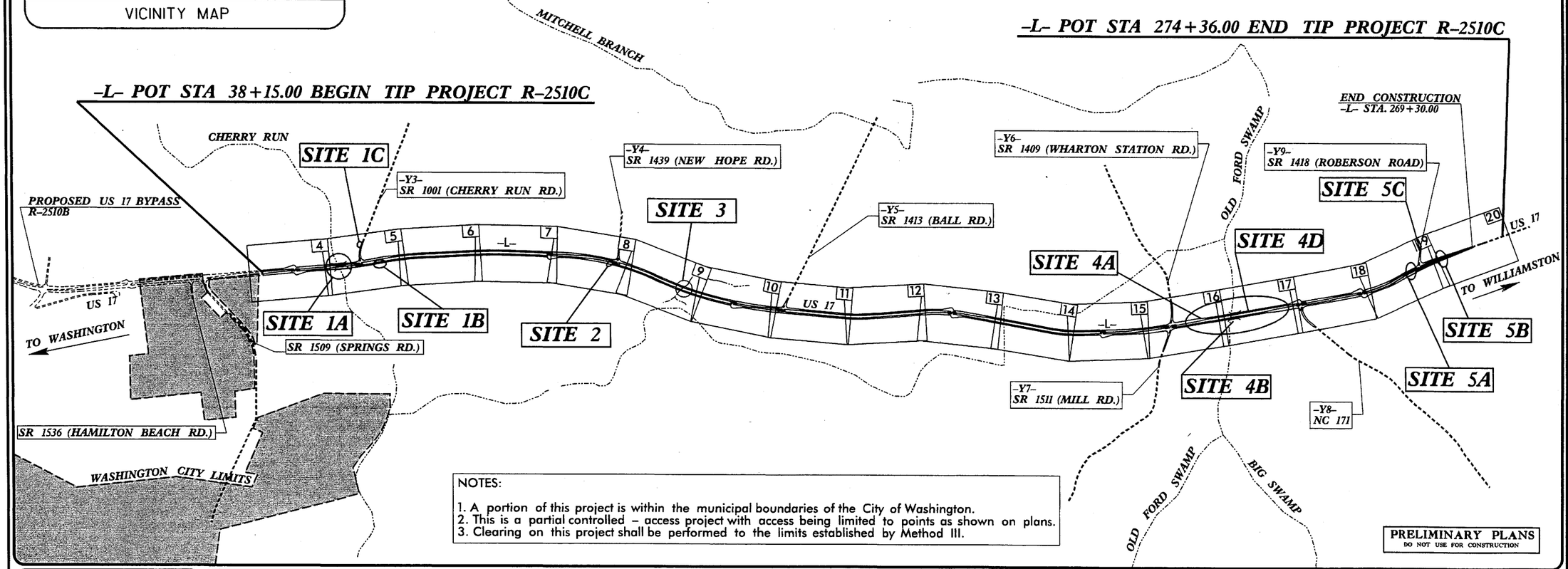
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
34440.1.1	MAF-75-3 (26)	P.E.
34440.2.5	MAF-75-3 (26)	R/W & UTIL

Permit Drawing
Sheet 5 of 41

LOCATION: US 17 FROM US 17 SOUTH OF SR 1001 (CHERRY RUN ROAD) TO NORTH OF NC 171.

TYPE OF WORK: GRADING, DRAINAGE, PAVING, RESURFACING, CULVERT AND STRUCTURES

NAD 83/95



NOTES:

1. A portion of this project is within the municipal boundaries of the City of Washington.
2. This is a partial controlled – access project with access being limited to points as shown on plans.
3. Clearing on this project shall be performed to the limits established by Method III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2014 = 12,710
ADT 2034 = 19,830
DHV = 10 %
D = 55 %
T = 11 % *
V = 60 MPH
CLASS = RURAL ARTERIAL
* (TTST 7% + DUAL 4%)

PROJECT LENGTH

Length Roadway
TIP Project R-2510C ..... 4.474 Mi.

Length Structure*
TIP Project R-2510C ..... 0.066 Mi.

TOTAL LENGTH TIP
Project R-2510C ..... 4.540 Mi.

*Length Based on NBL Structures

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consulting engineers
900 RIDGEFIELD DRIVE, · SUITE 350
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(919) 878-9560
FOR
DIVISION OF HIGHWAYS

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
11/2006 (PROD.)

LETTING DATE:
October 21, 2014

B. Keith Skinner, P.E.
PROJECT ENGINEER

Michael T. Merritt, P.E.
PROJECT DESIGN ENGINEER

NCDOT CONTACT: CATHY S. HOUSER, PE

HYDRAULICS ENGINEER
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER
SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER P.E.

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PROJECT REFERENCE NO.	SHEET NO.
R-2510C	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing Sheet 22 of 41

ENGLISH

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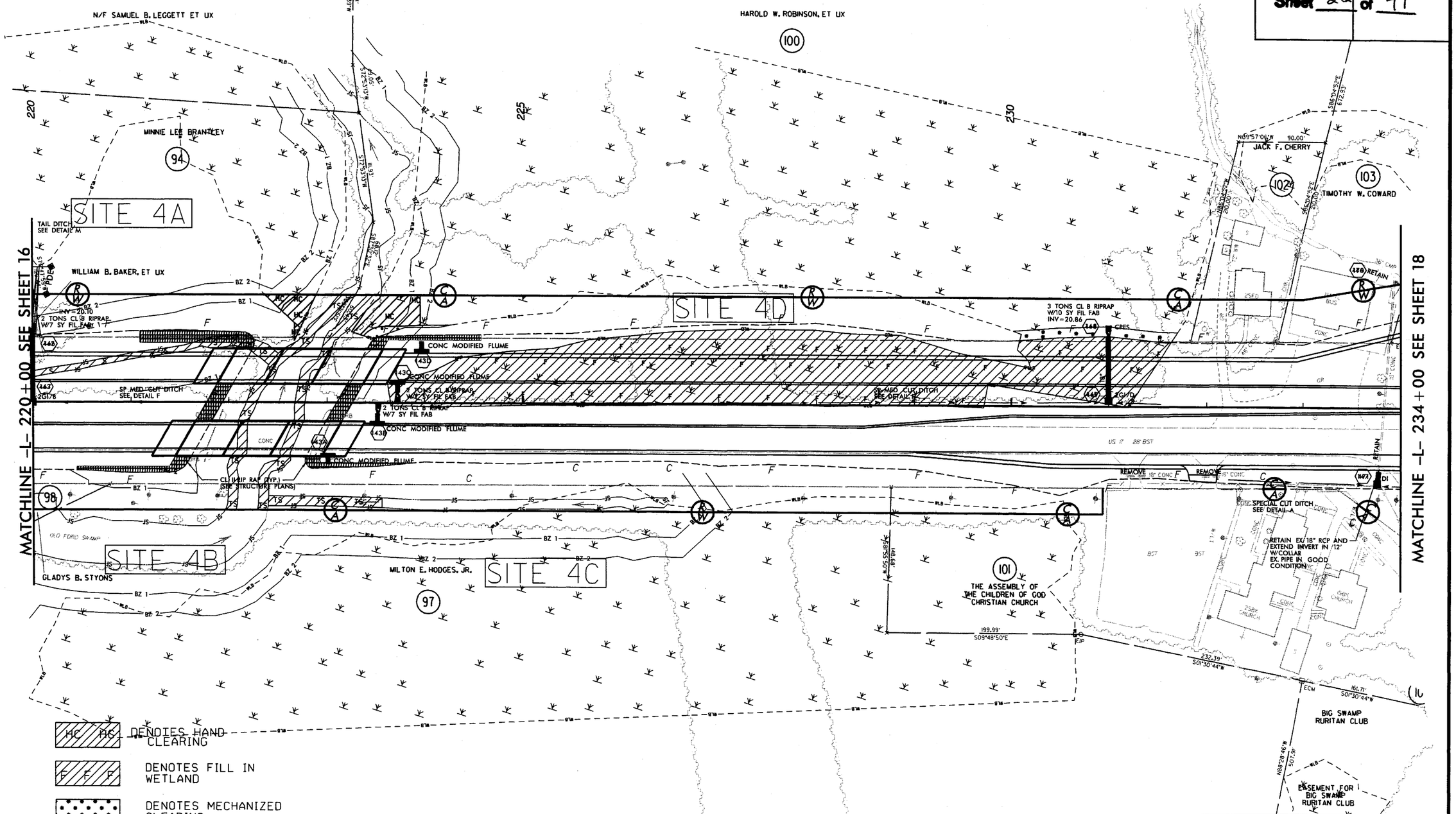

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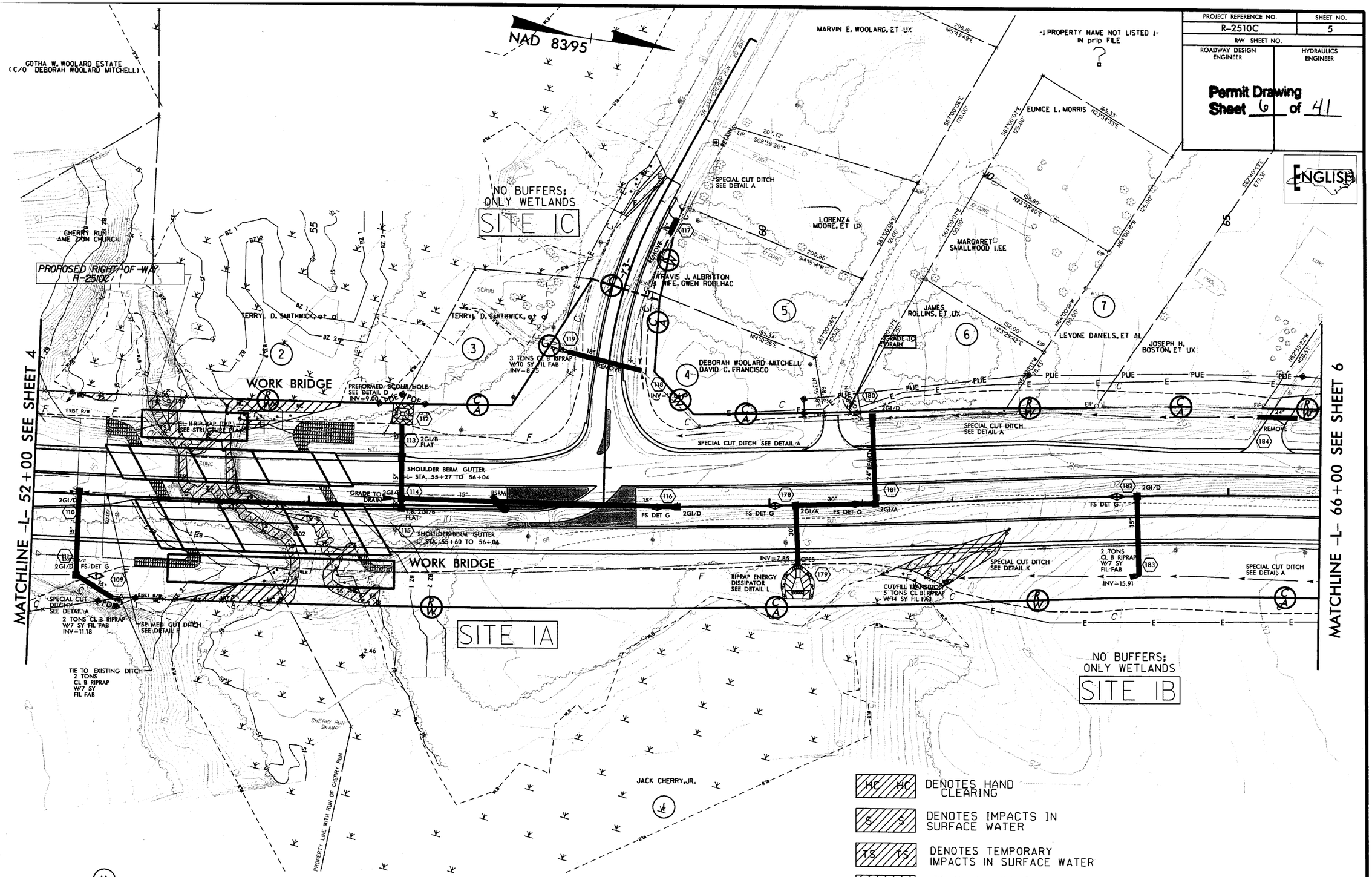
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 6 of 41

ENGLISH



HC HC	DENOTES HAND CLEARING
S S	DENOTES IMPACTS IN SURFACE WATER
TS TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
F F F	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
E E E	DENOTES EXCAVATION IN WETLAND

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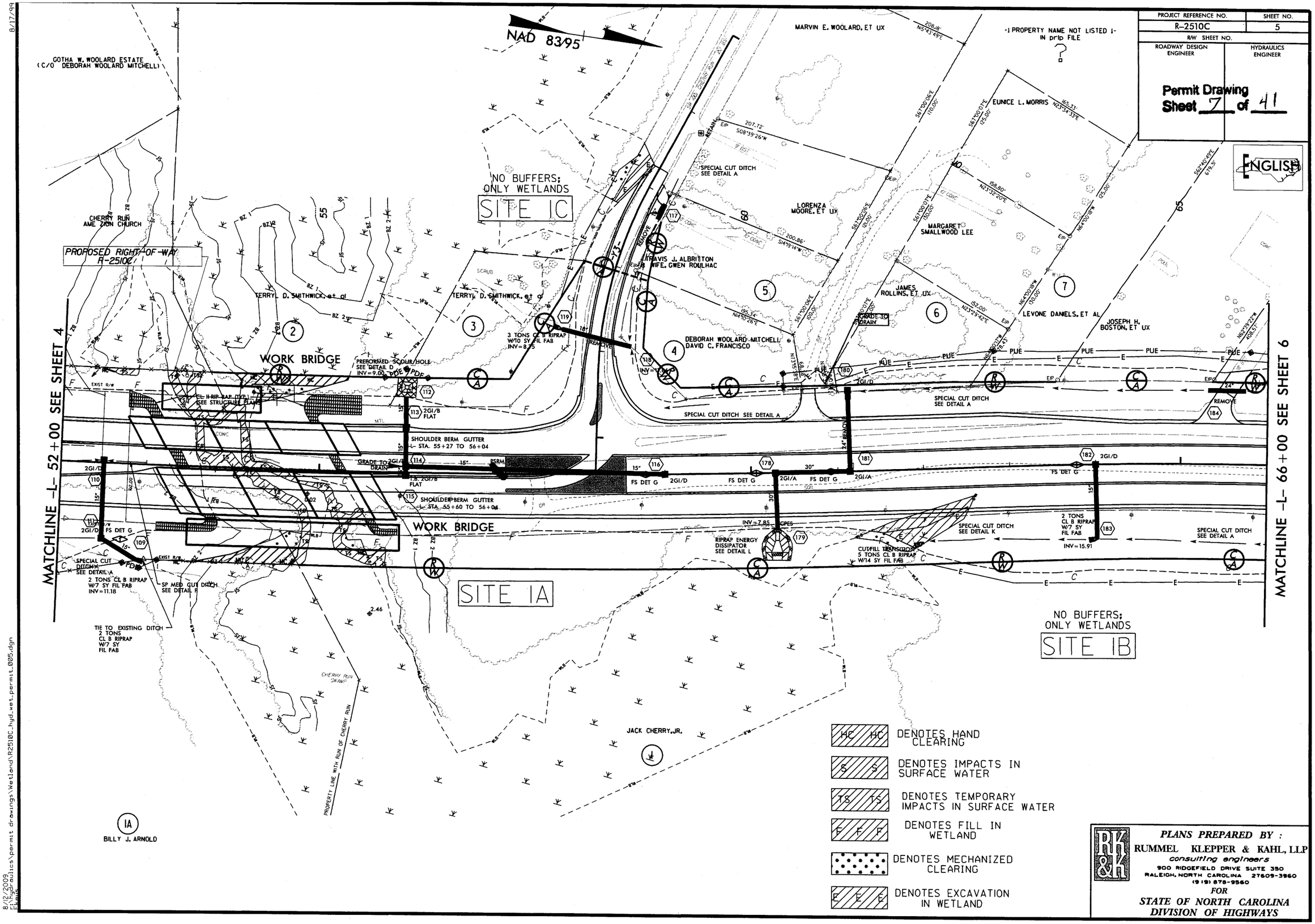
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 7 of 41

ENGLISH



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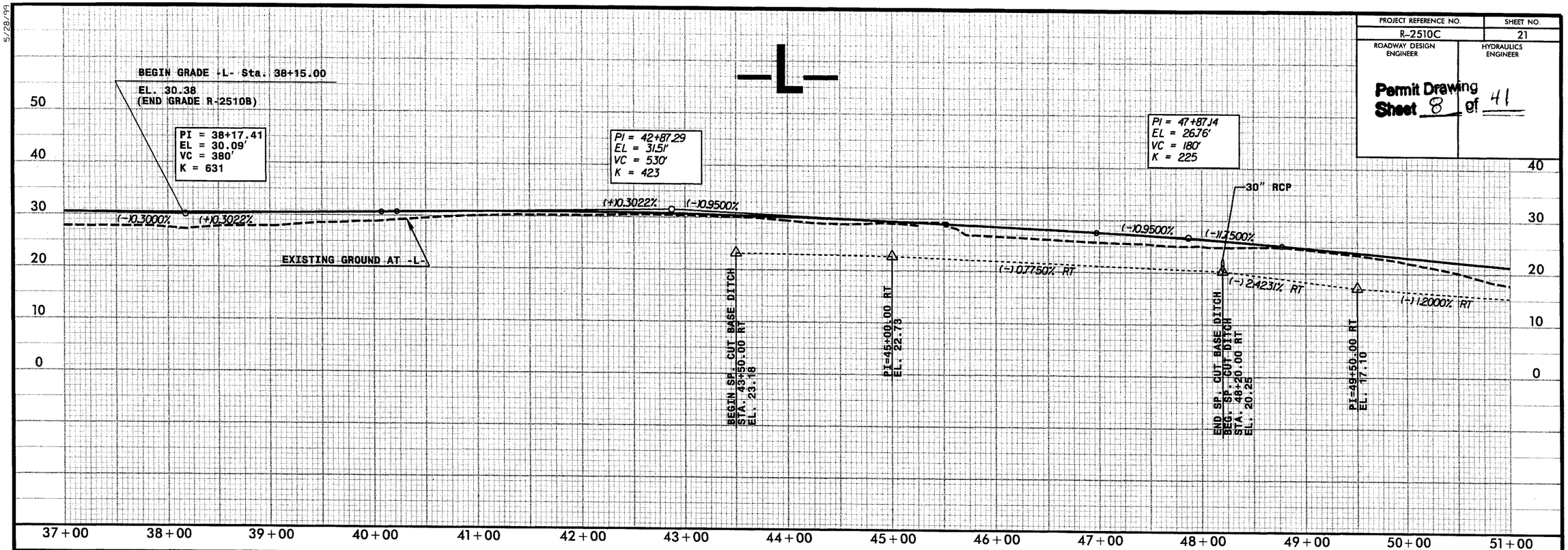
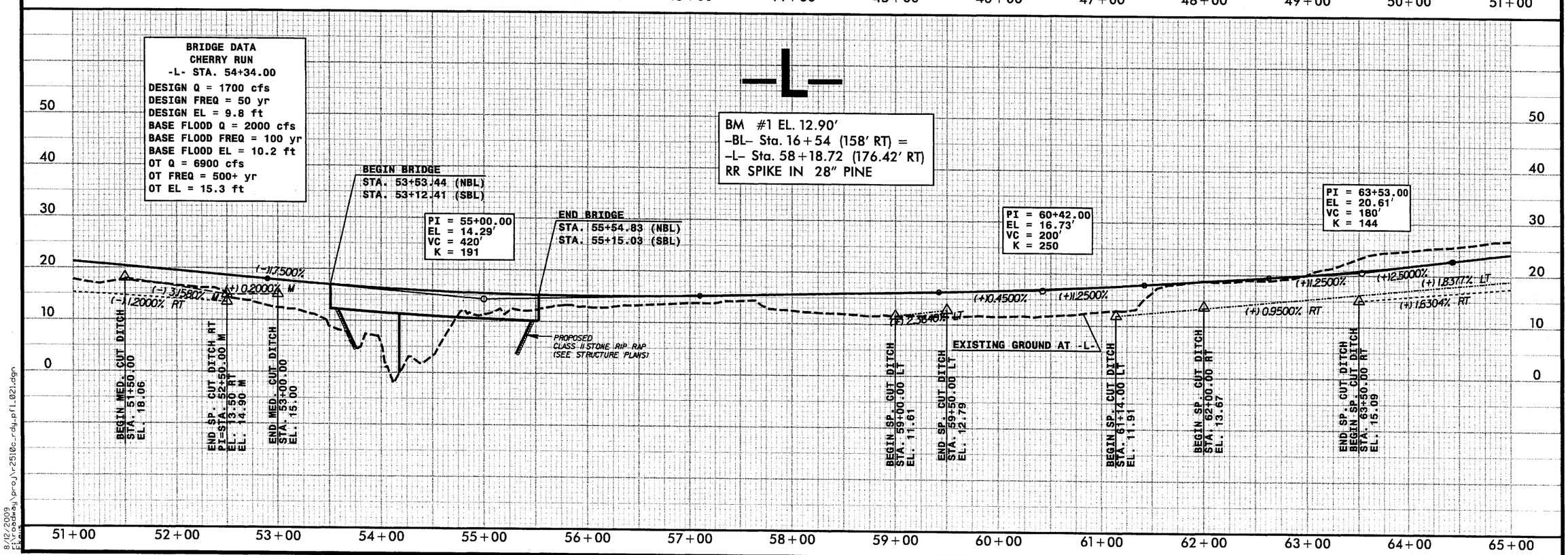
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	21
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 8 of 41





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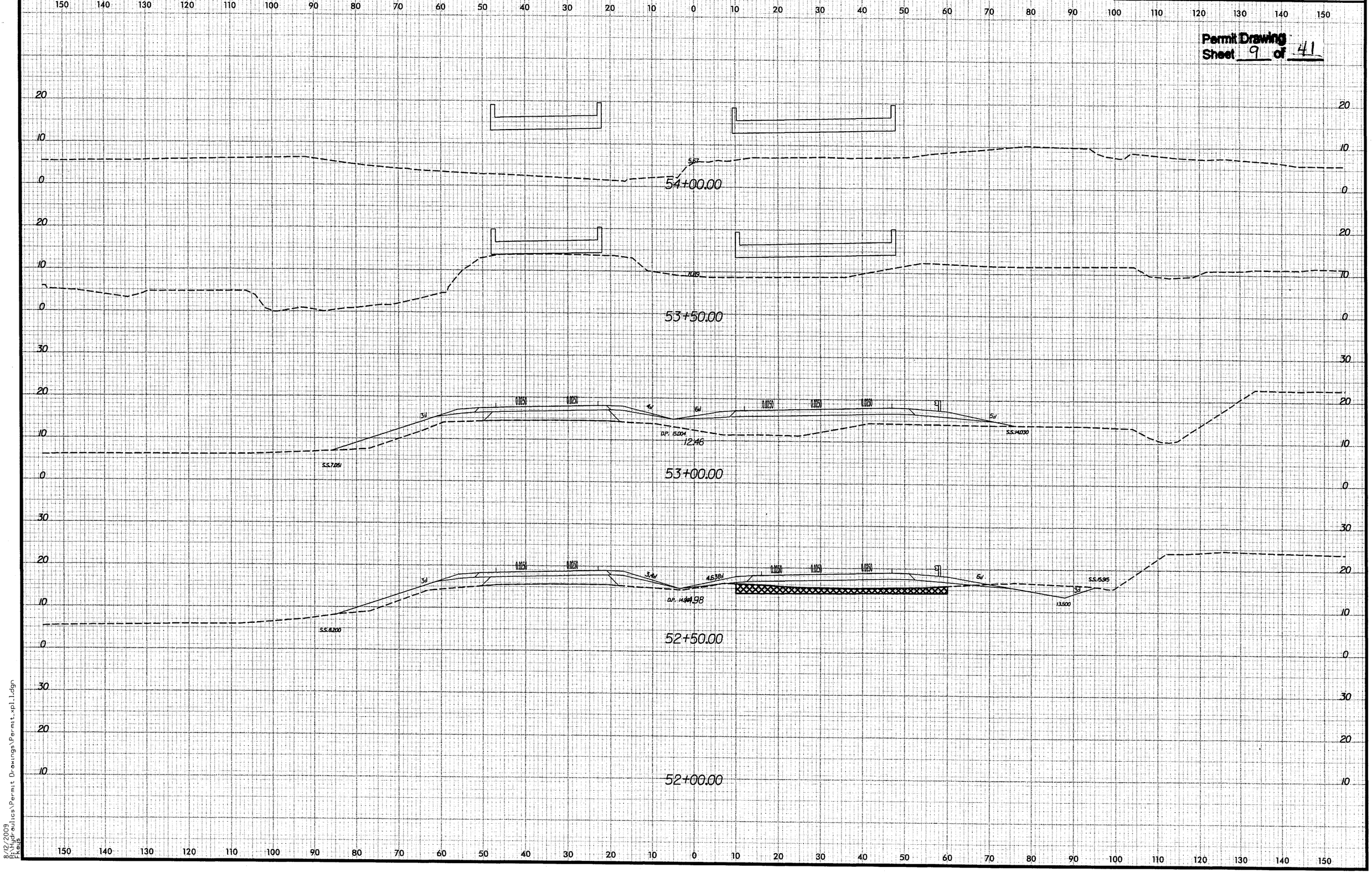
PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-5

Permit Drawing
Sheet 9 of 41



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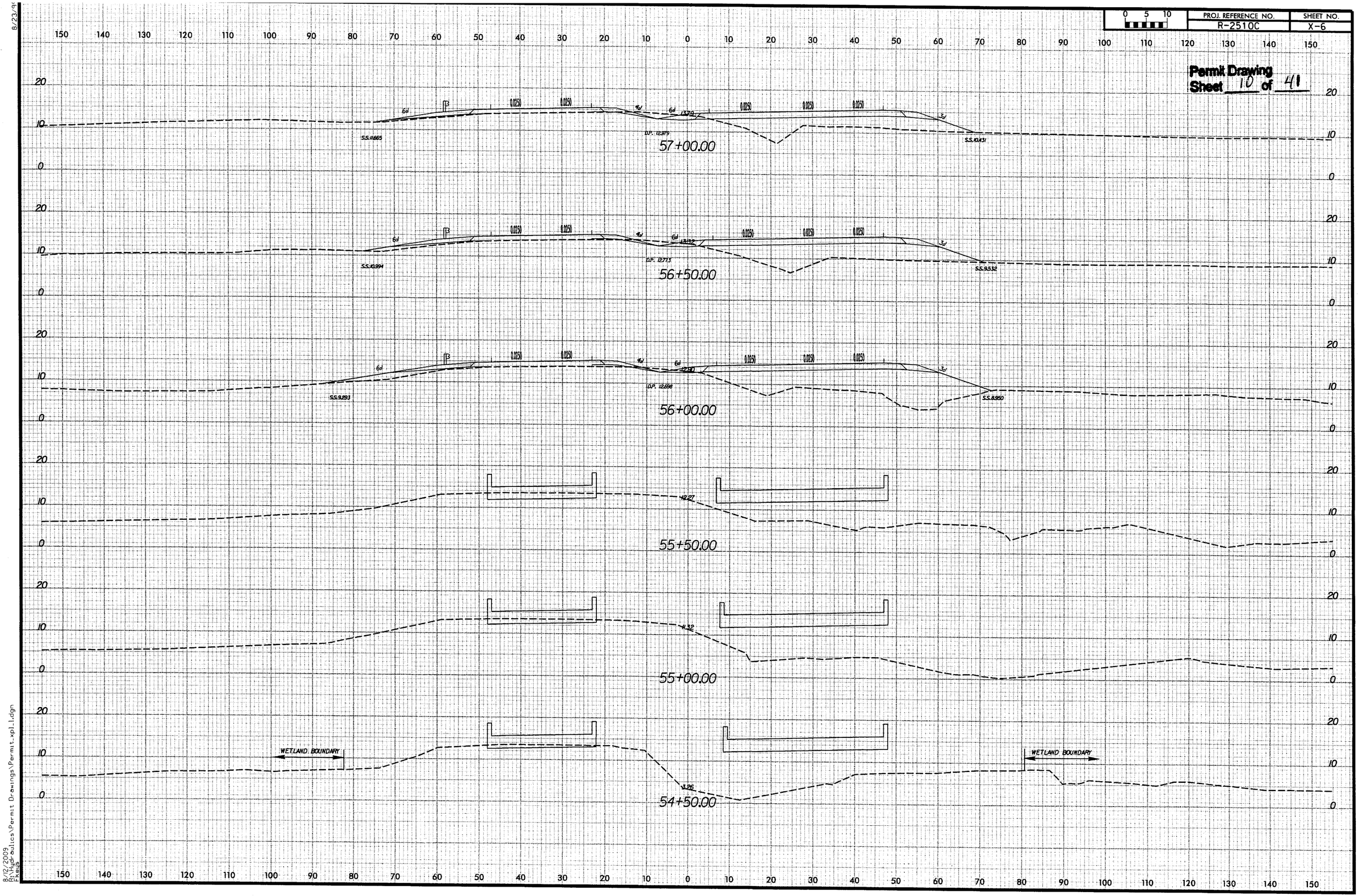
Permit Drawing
Sheet 10 **of** 41



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PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-8

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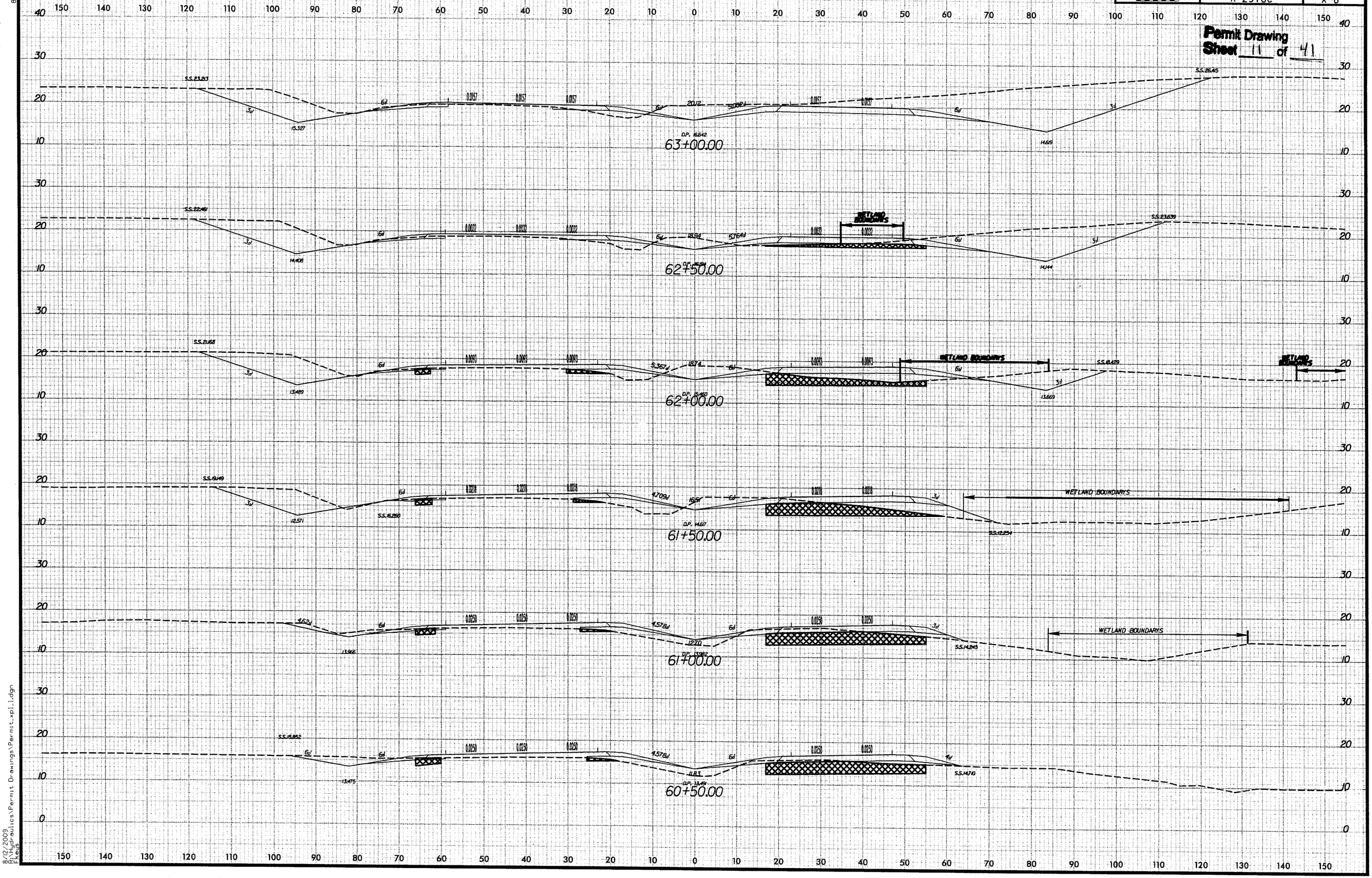
Permit Drawing
Sheet 11 of 41



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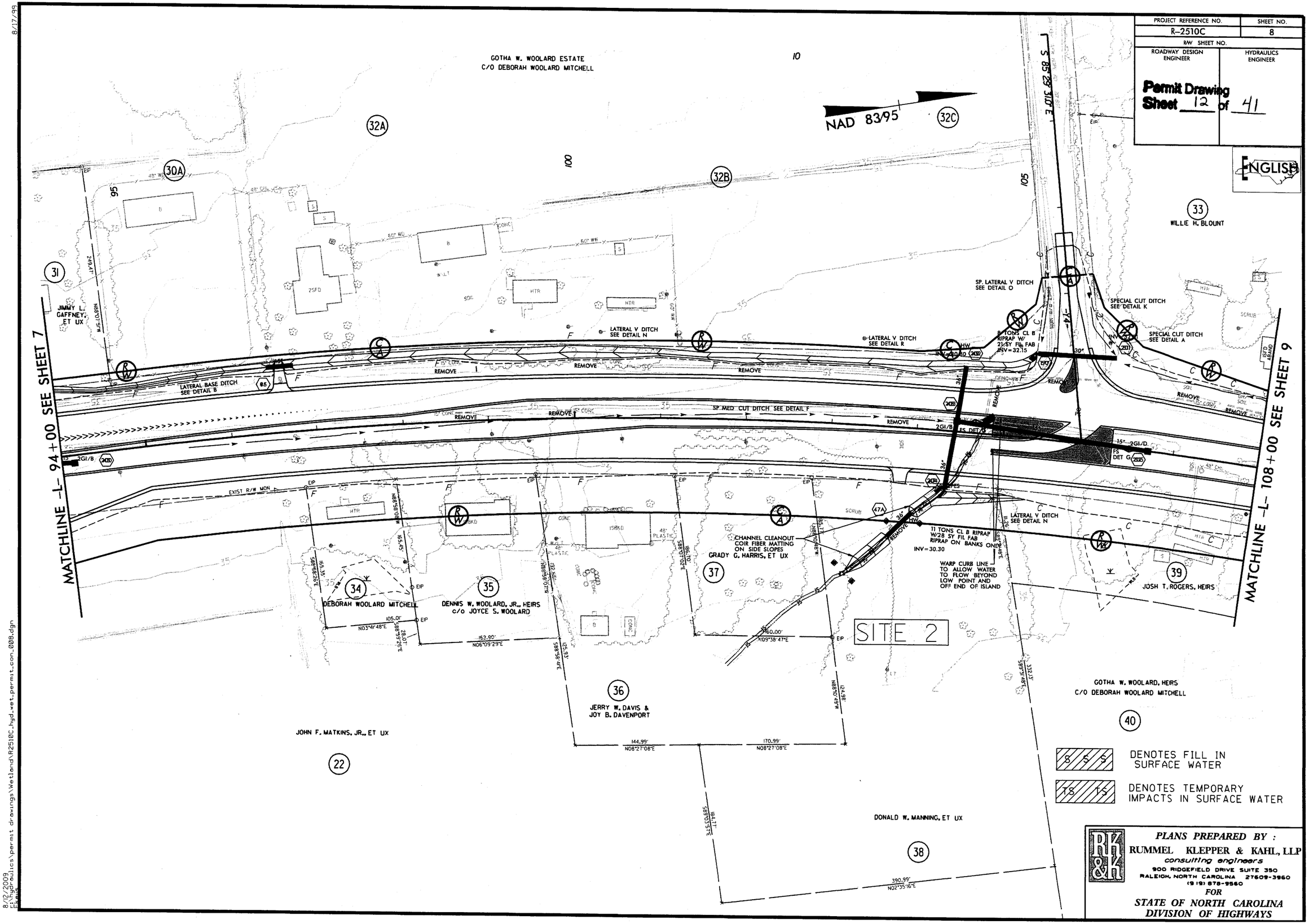
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 12 **of** 41

ENGLISH



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PROJECT REFERENCE NO.	SHEET NO.
R-2510C	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
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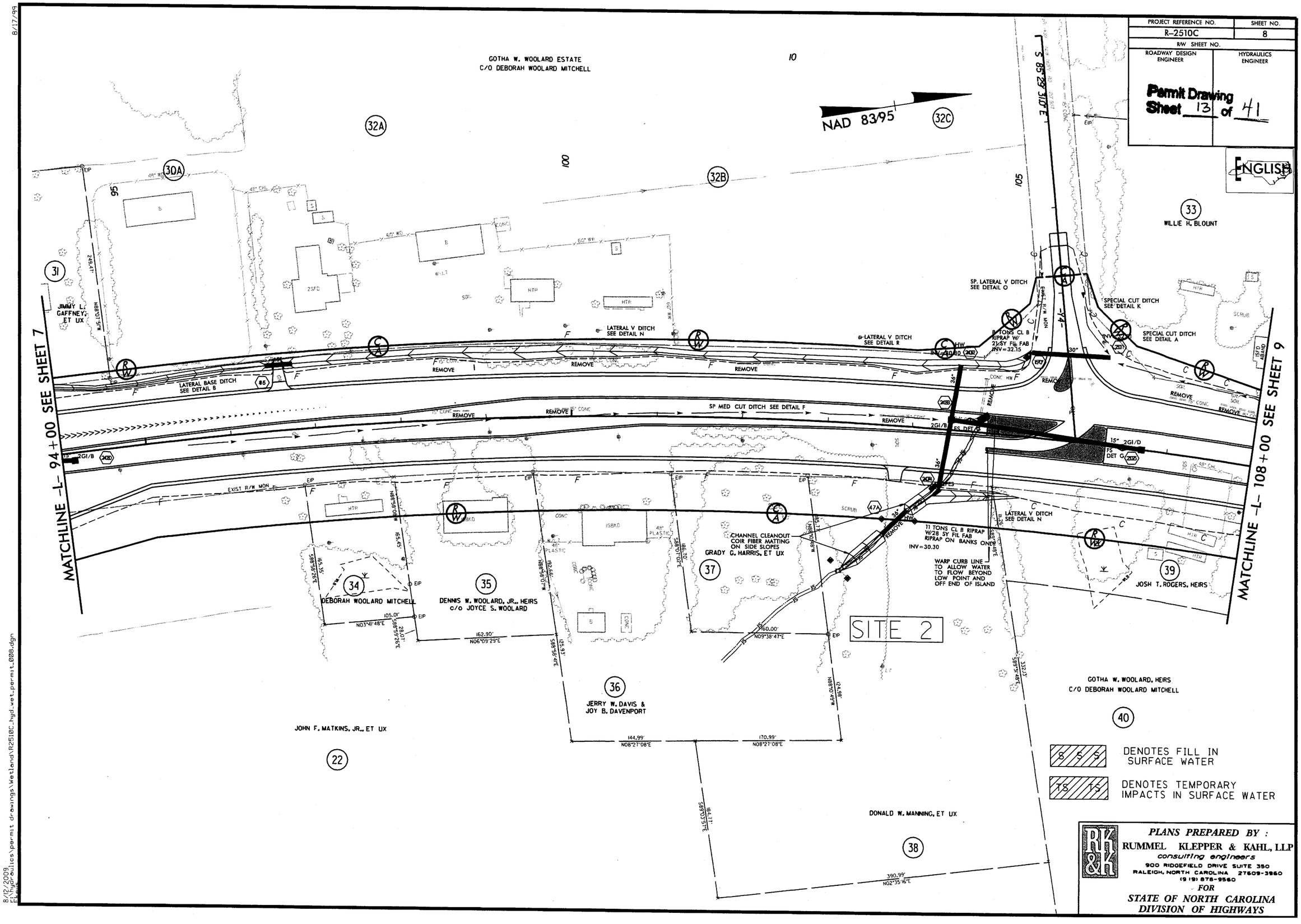
ENGLISH



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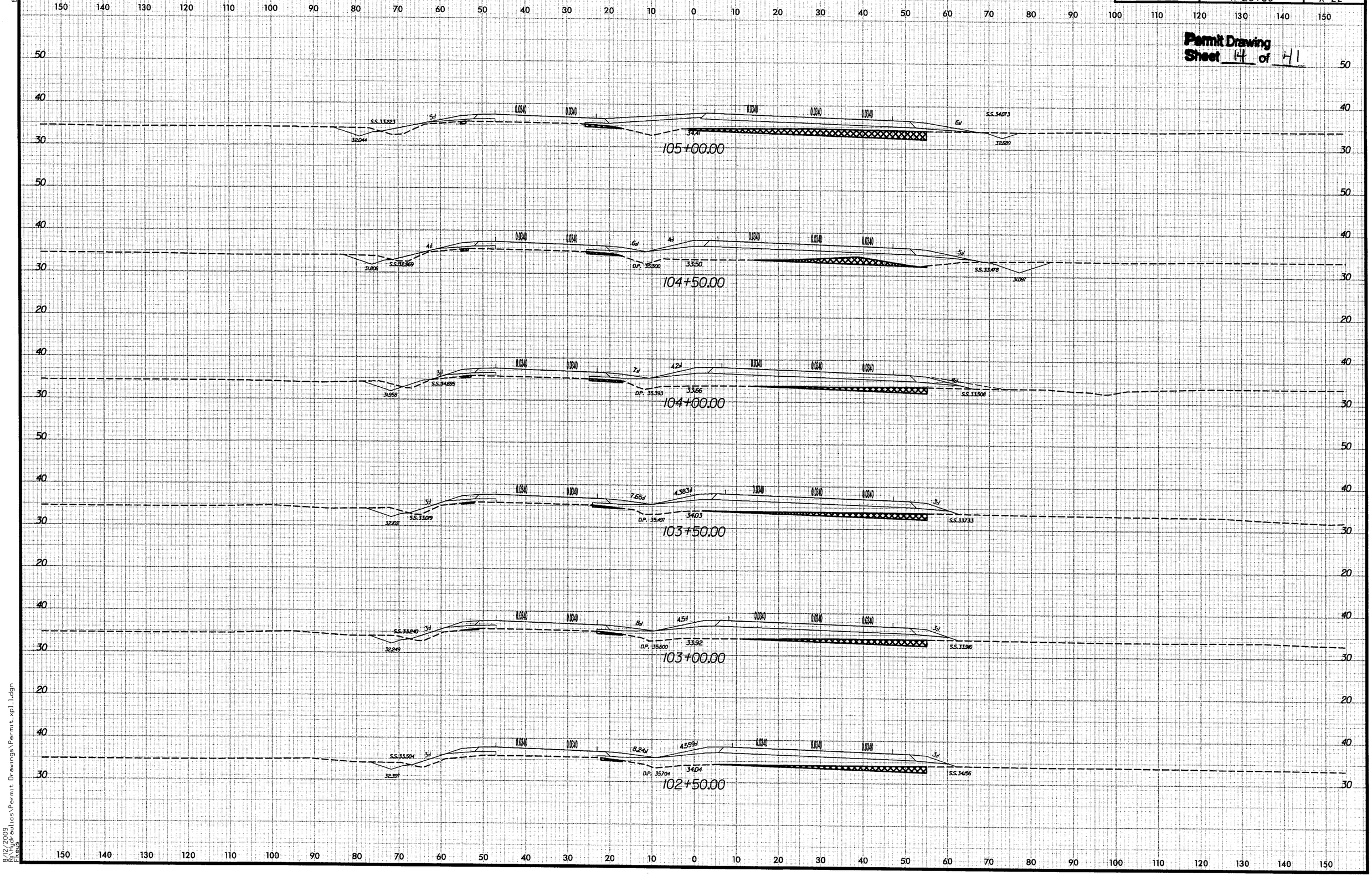
	R-2510C	X-22

Permit Drawing
Sheet 14 of 41



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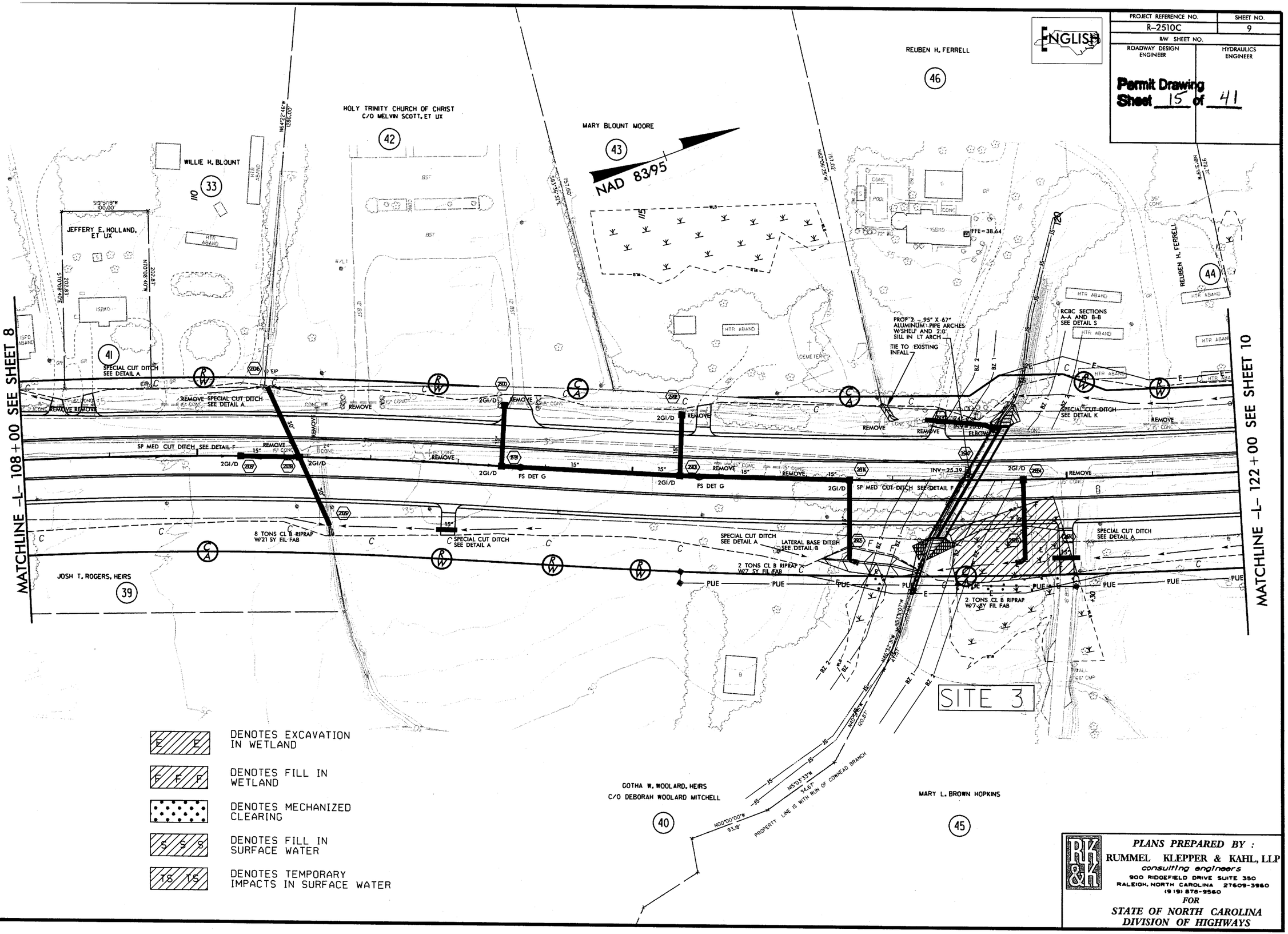
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 15 of 41



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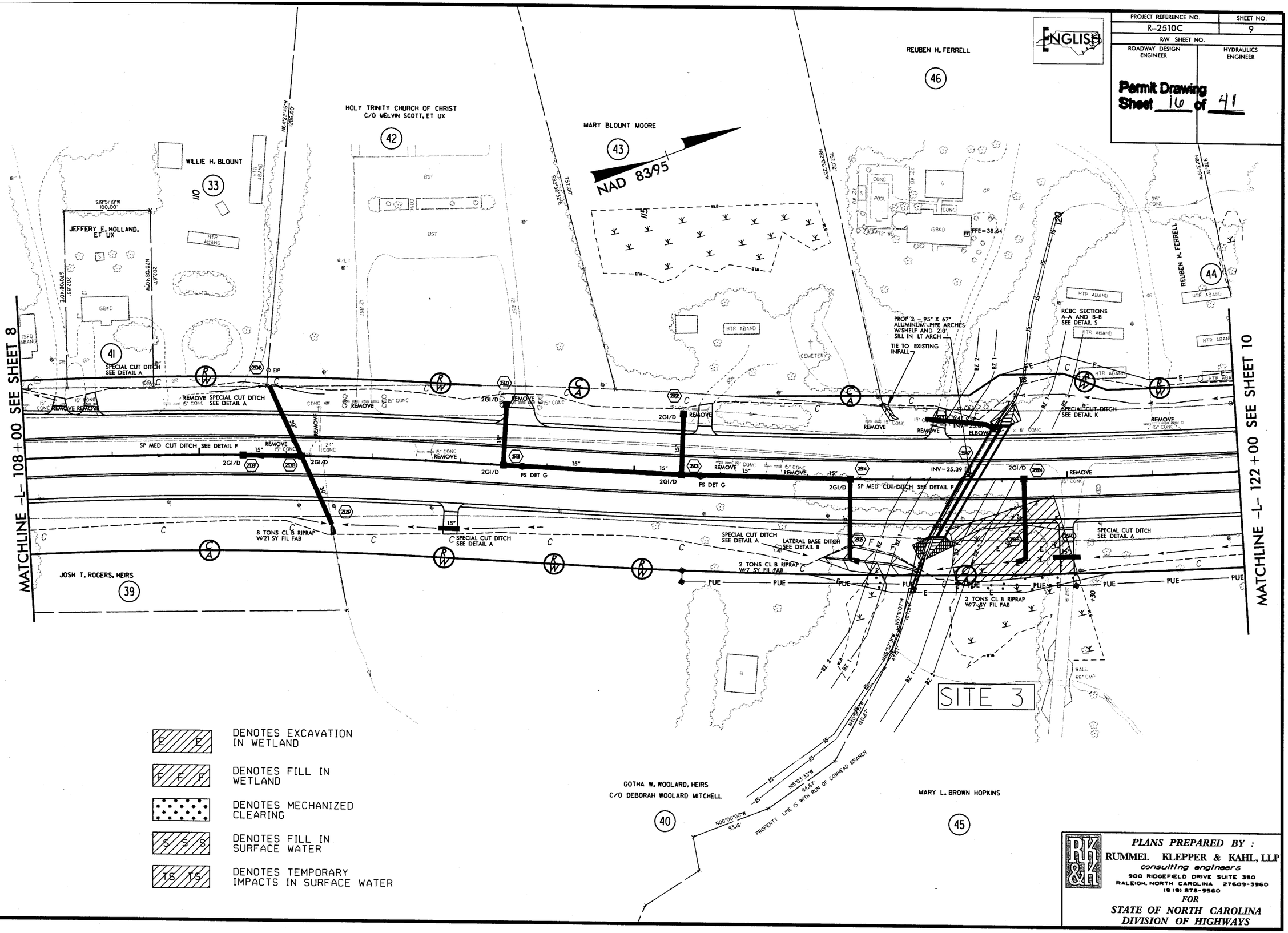
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 16 of 41



DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

DENOTES FILL IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

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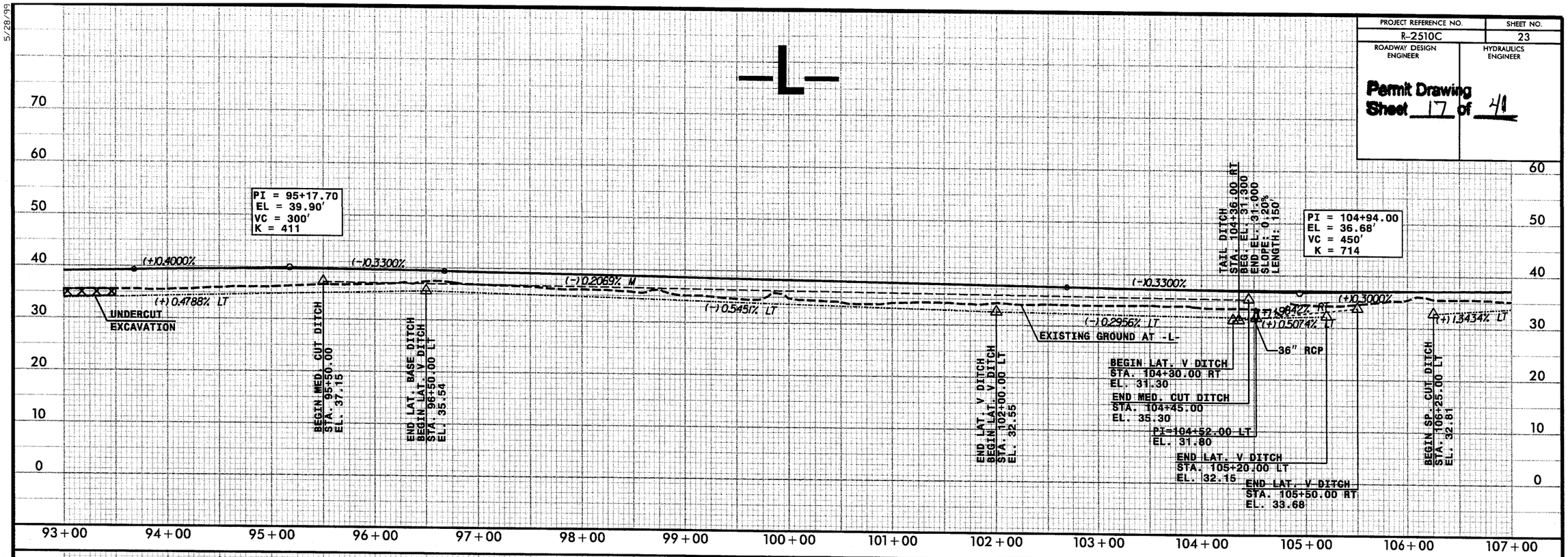
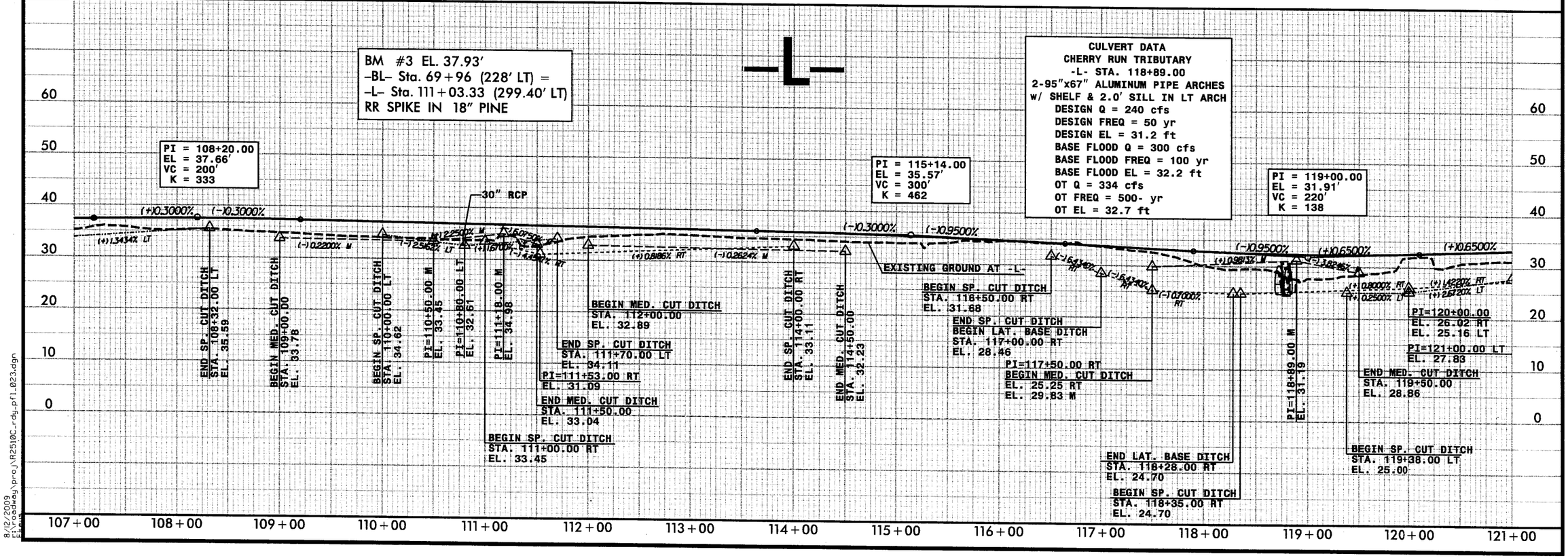
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	23
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 17 of 41





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PROJ. REFERENCE NO.	SHEET NO.
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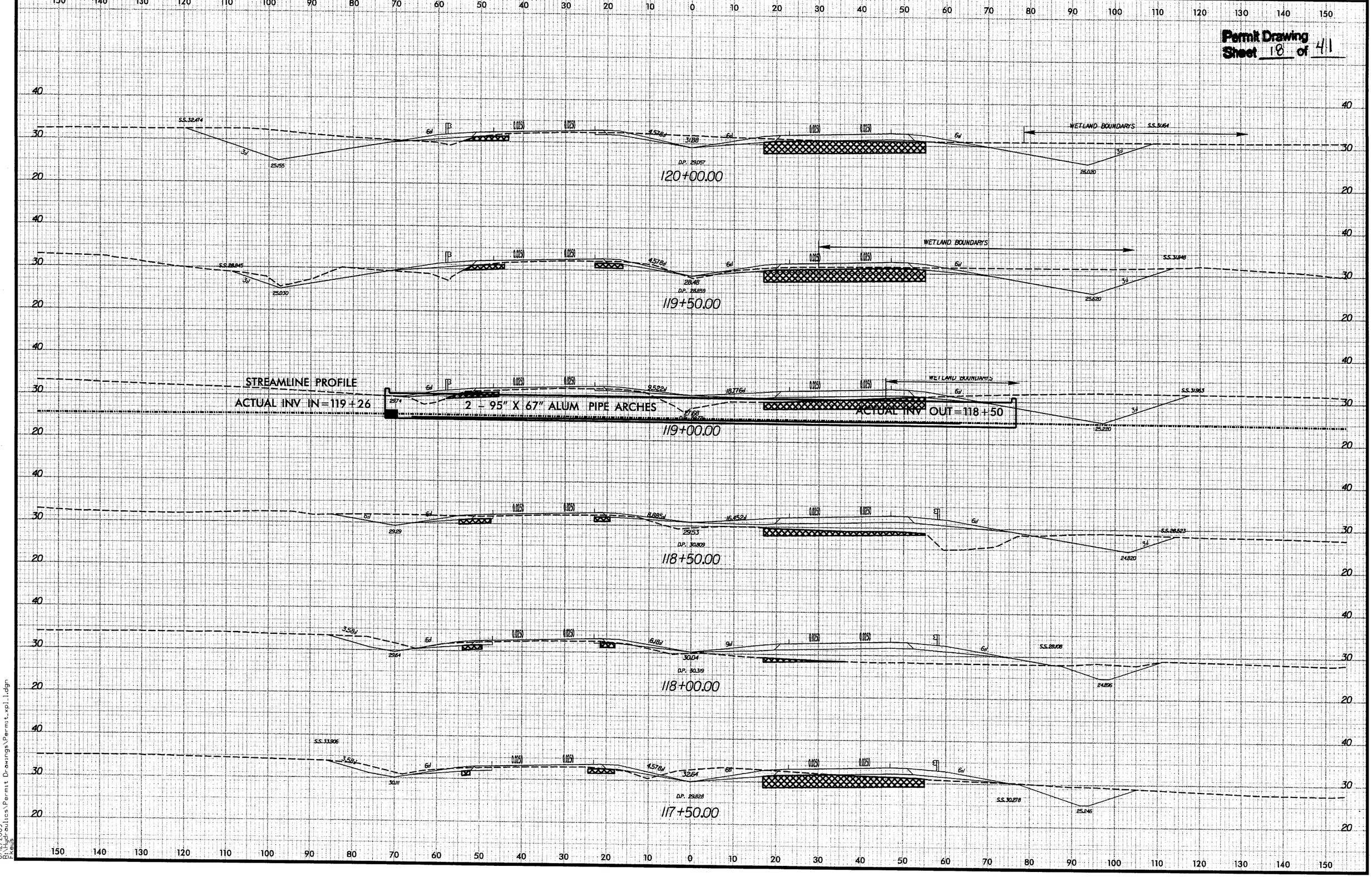
Permit Drawing
Sheet 18 **of** 41



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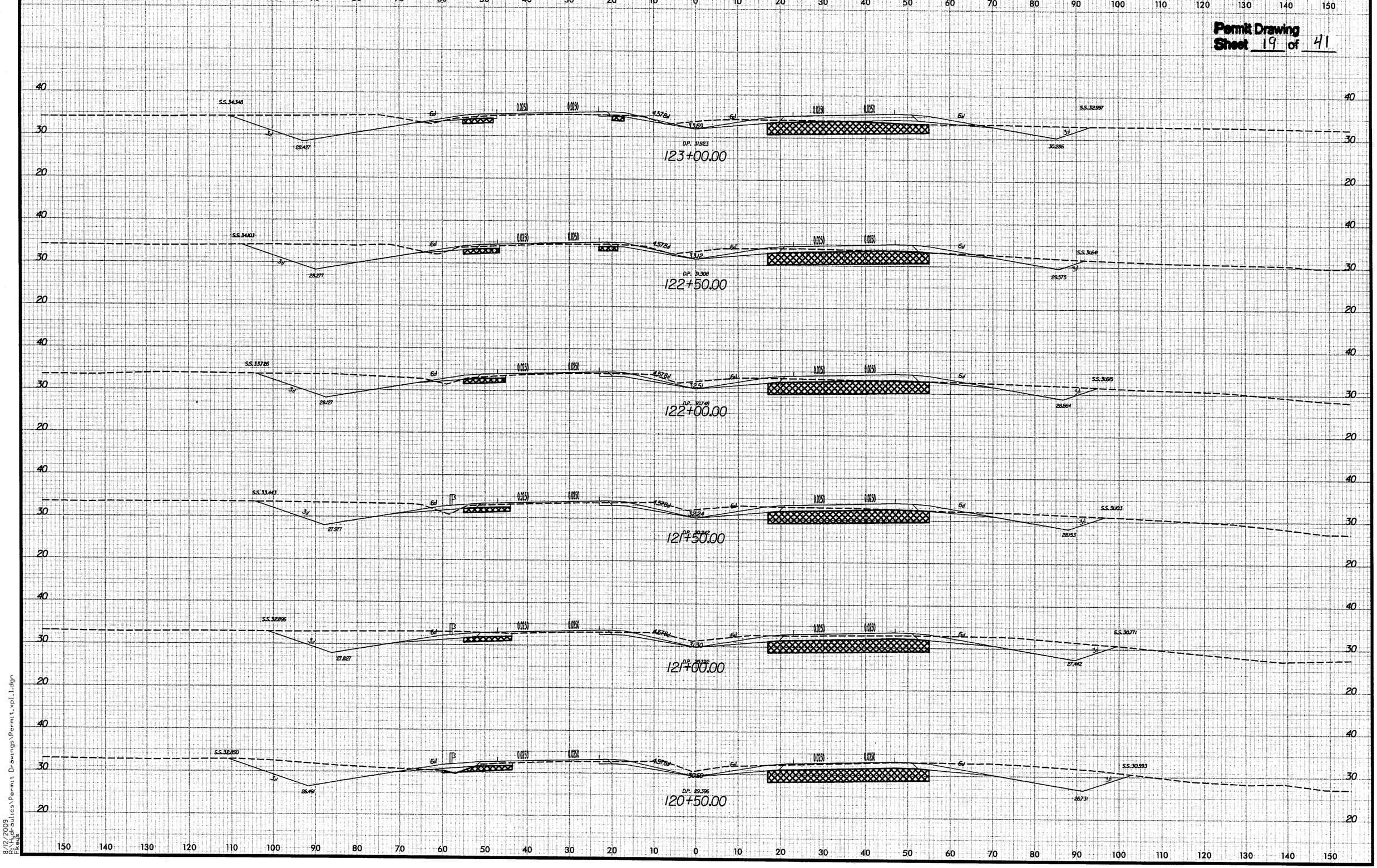
Sheet 19 **of** 41



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PROJECT REFERENCE NO.	SHEET NO.
R-2510C	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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ENGLISH

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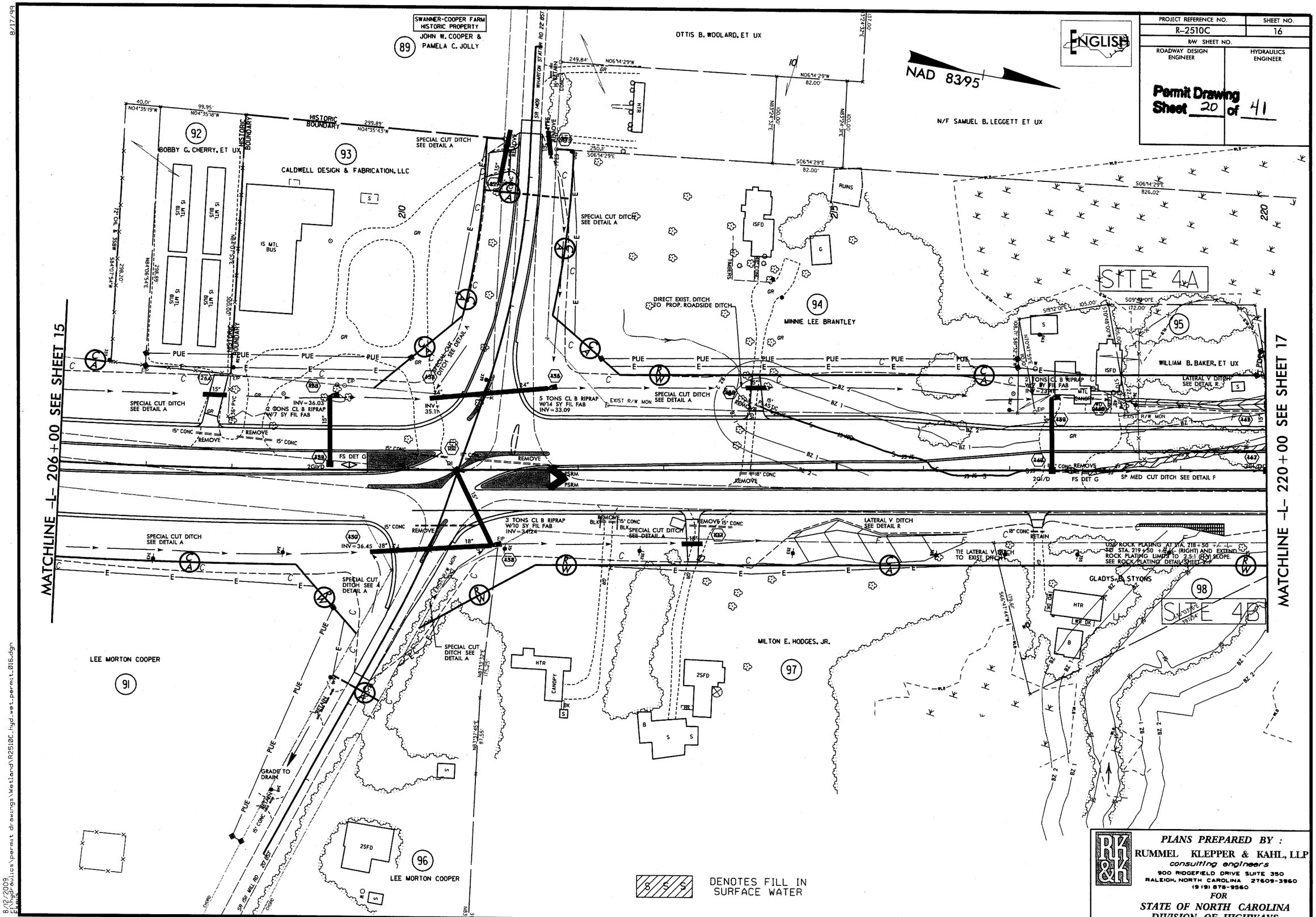

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PROJECT REFERENCE NO.	SHEET NO.
R-2510C	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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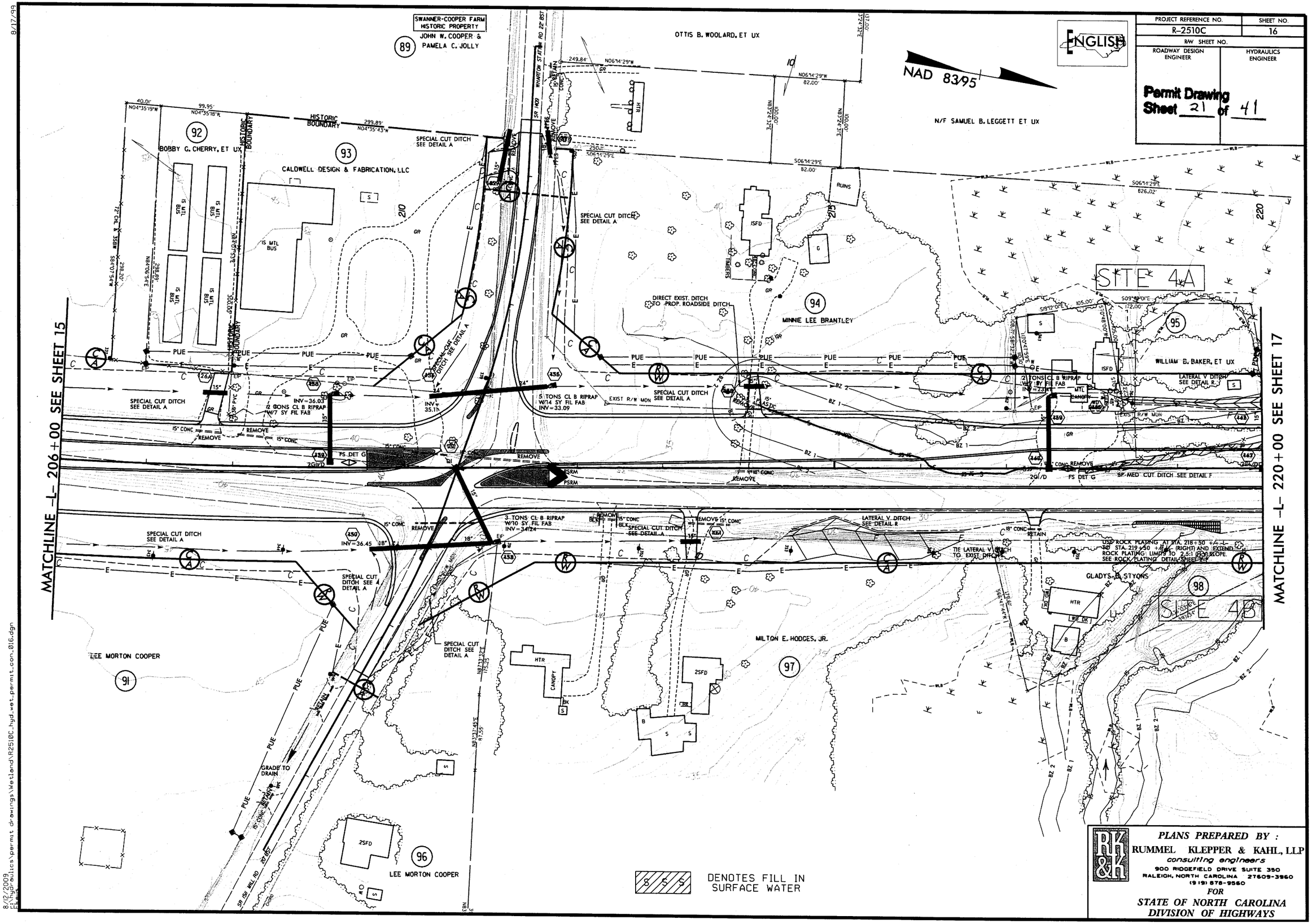

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PROJECT REFERENCE NO.	SHEET NO.
R-2510C	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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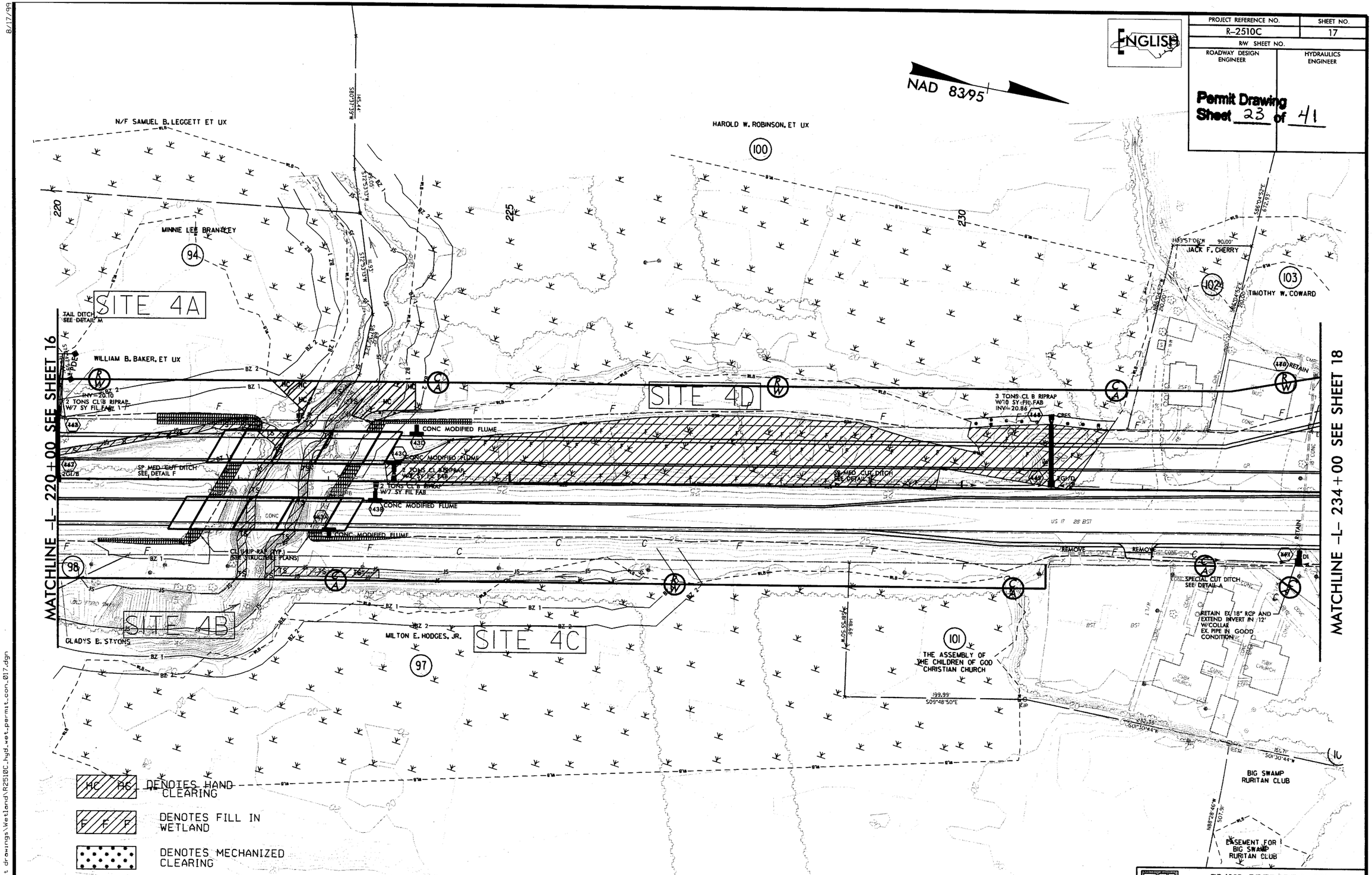

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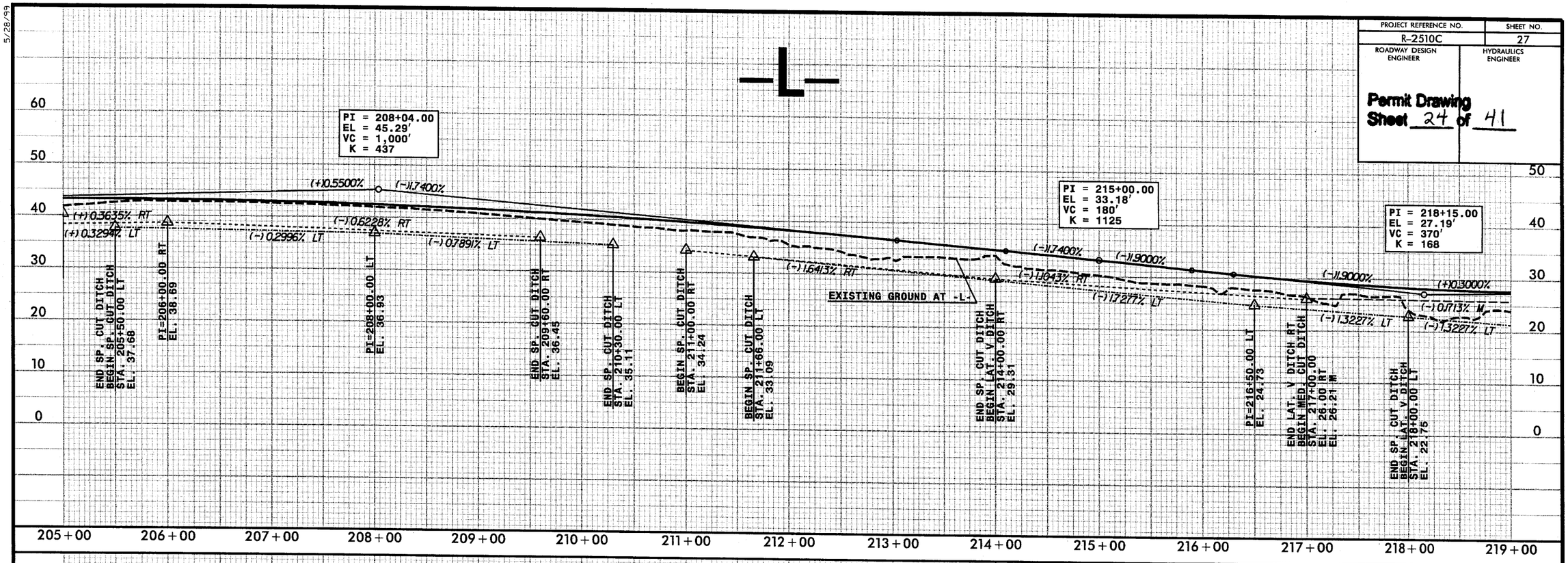
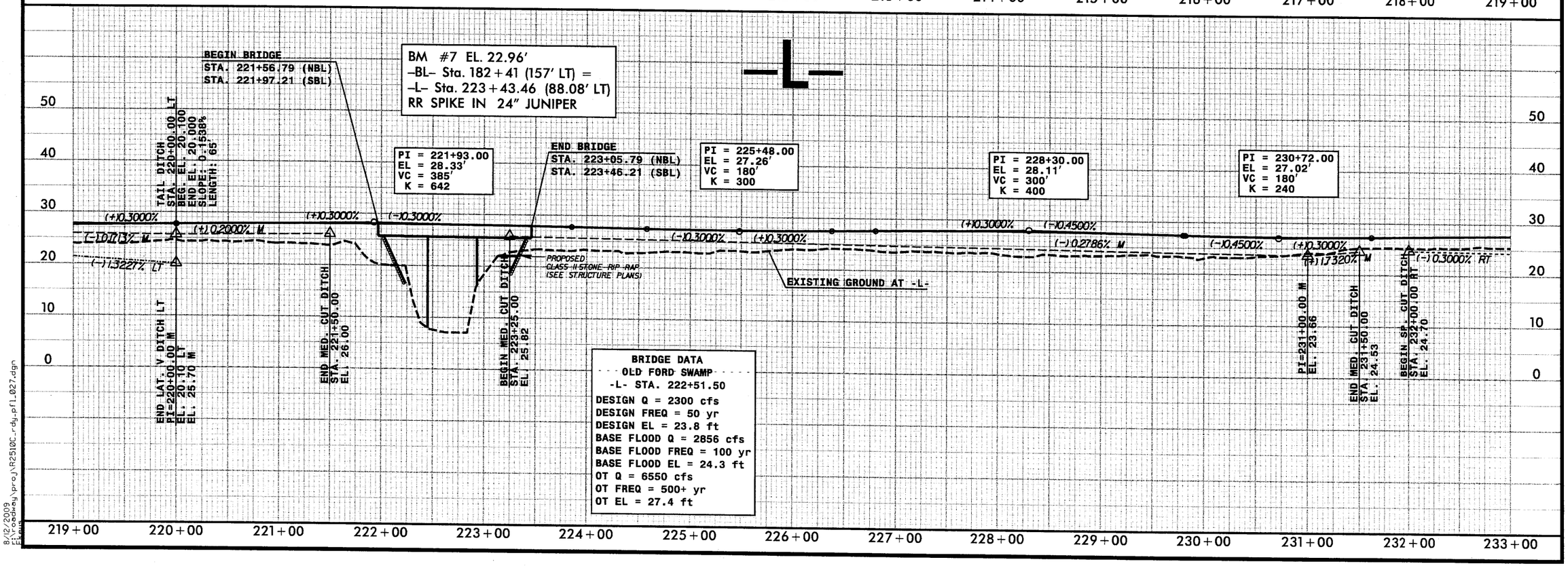
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	27
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 24 of 41





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PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-58

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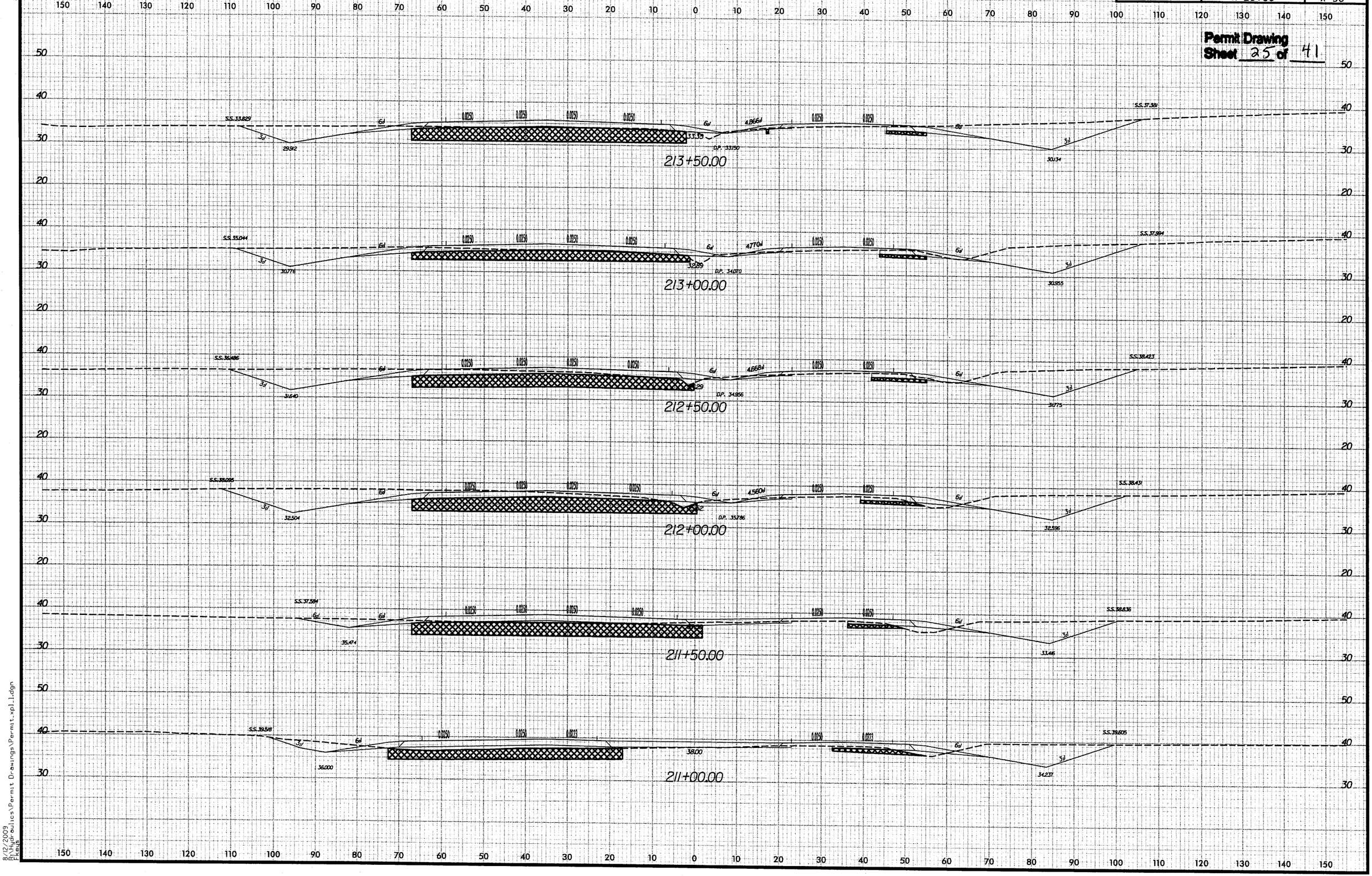
Permit Drawing
Sheet 25 **of** 41



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PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-59

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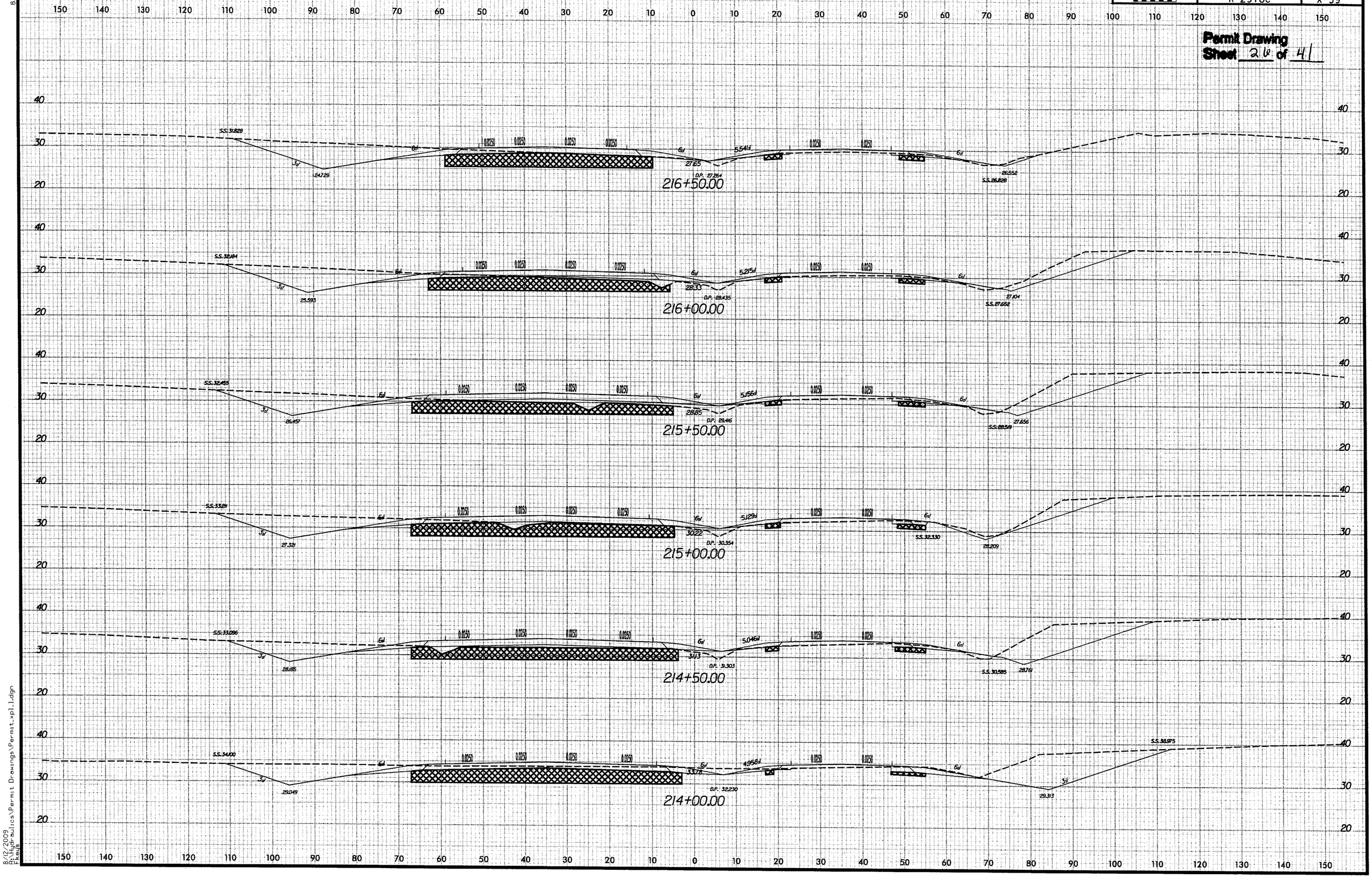
Permit Drawing
Sheet 26 **of** 41



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PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-60

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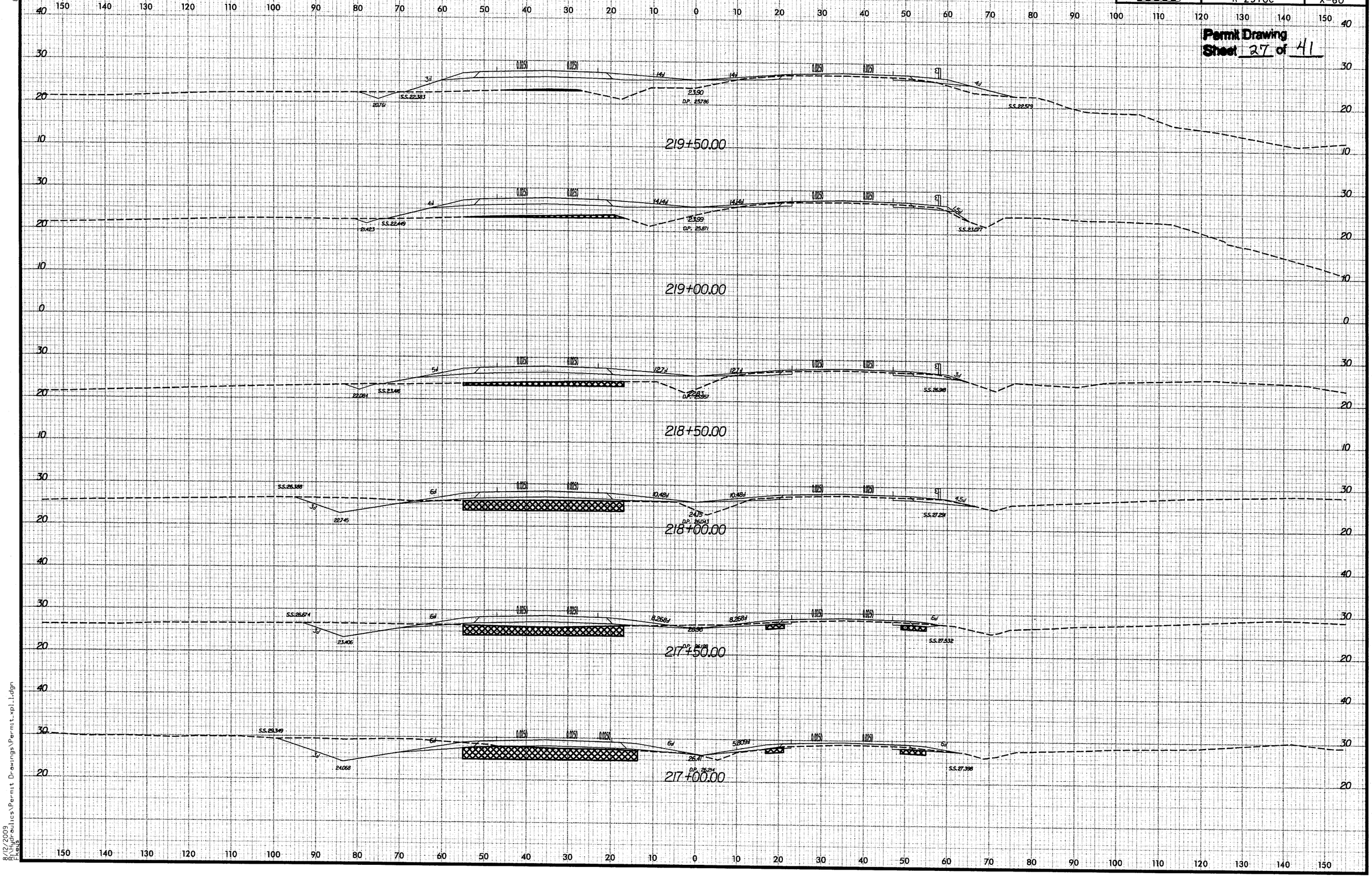
Permit Drawing
Sheet 27 **of** 41



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PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-61

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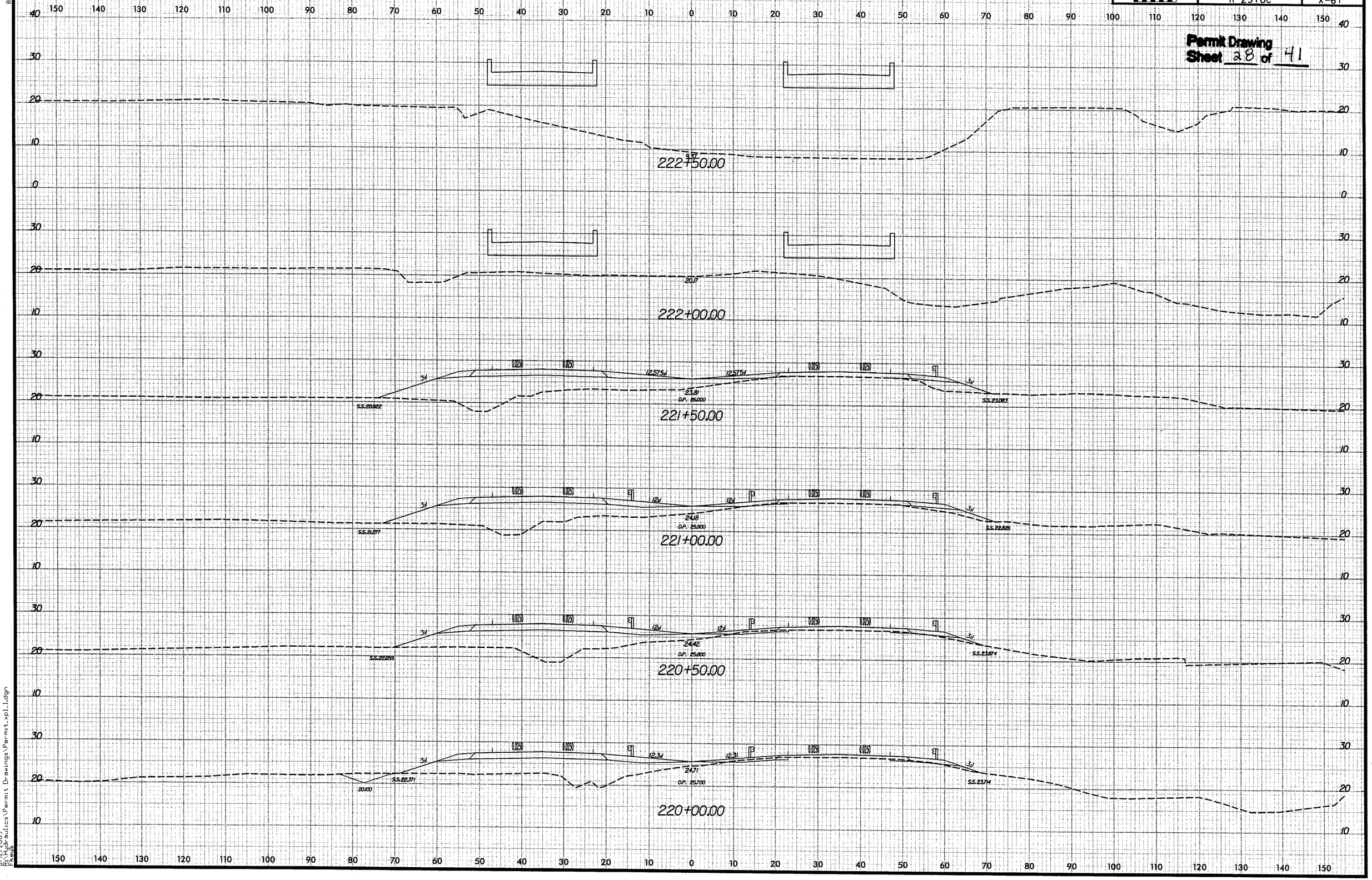
Permit Drawing
Sheet 28 **of** 41



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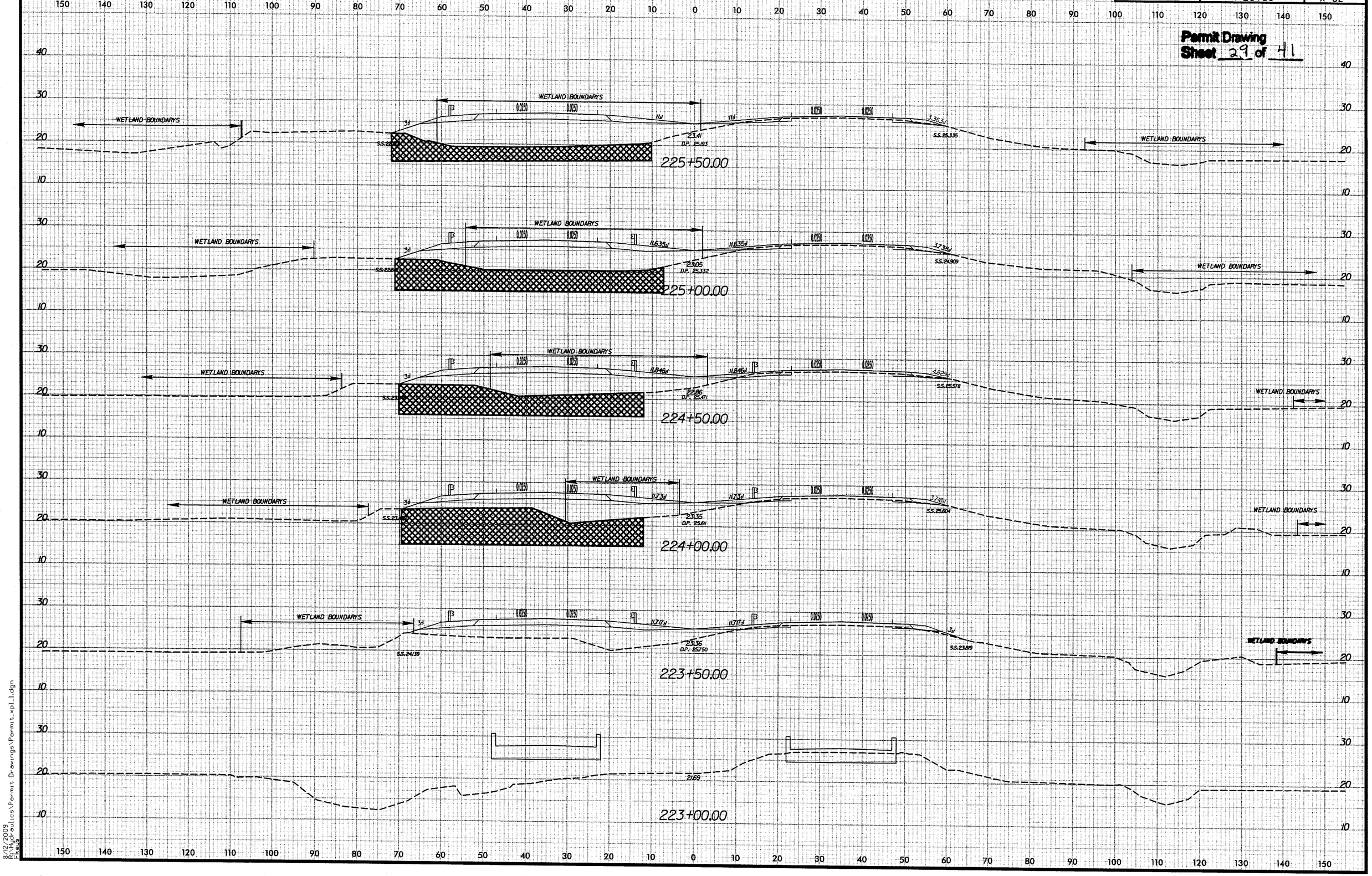
PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-62

Permit Drawing
Sheet 29 of 41



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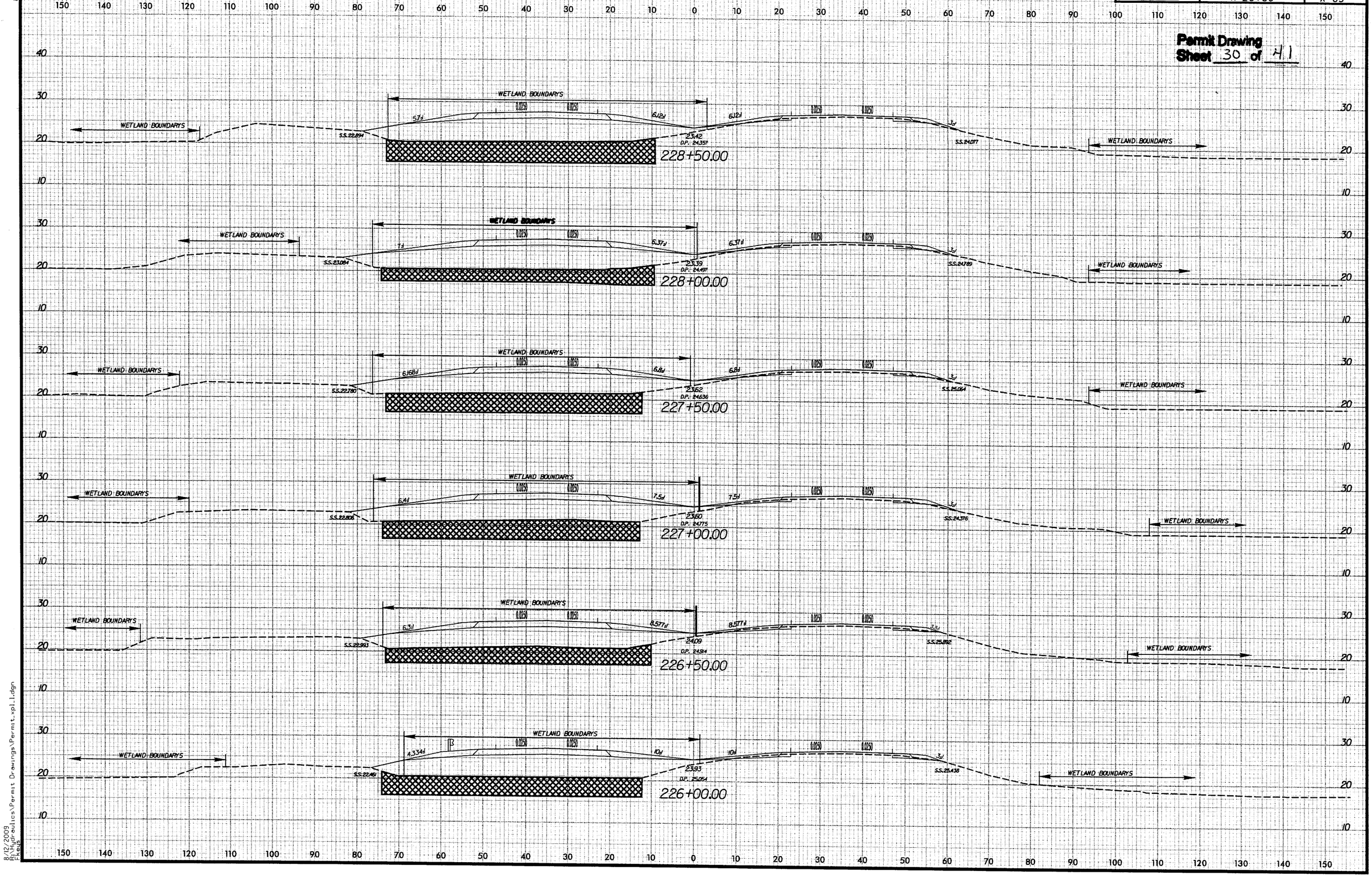
	R-2510C	X-63

Permit Drawing
Sheet 30 **of** 41



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PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-64

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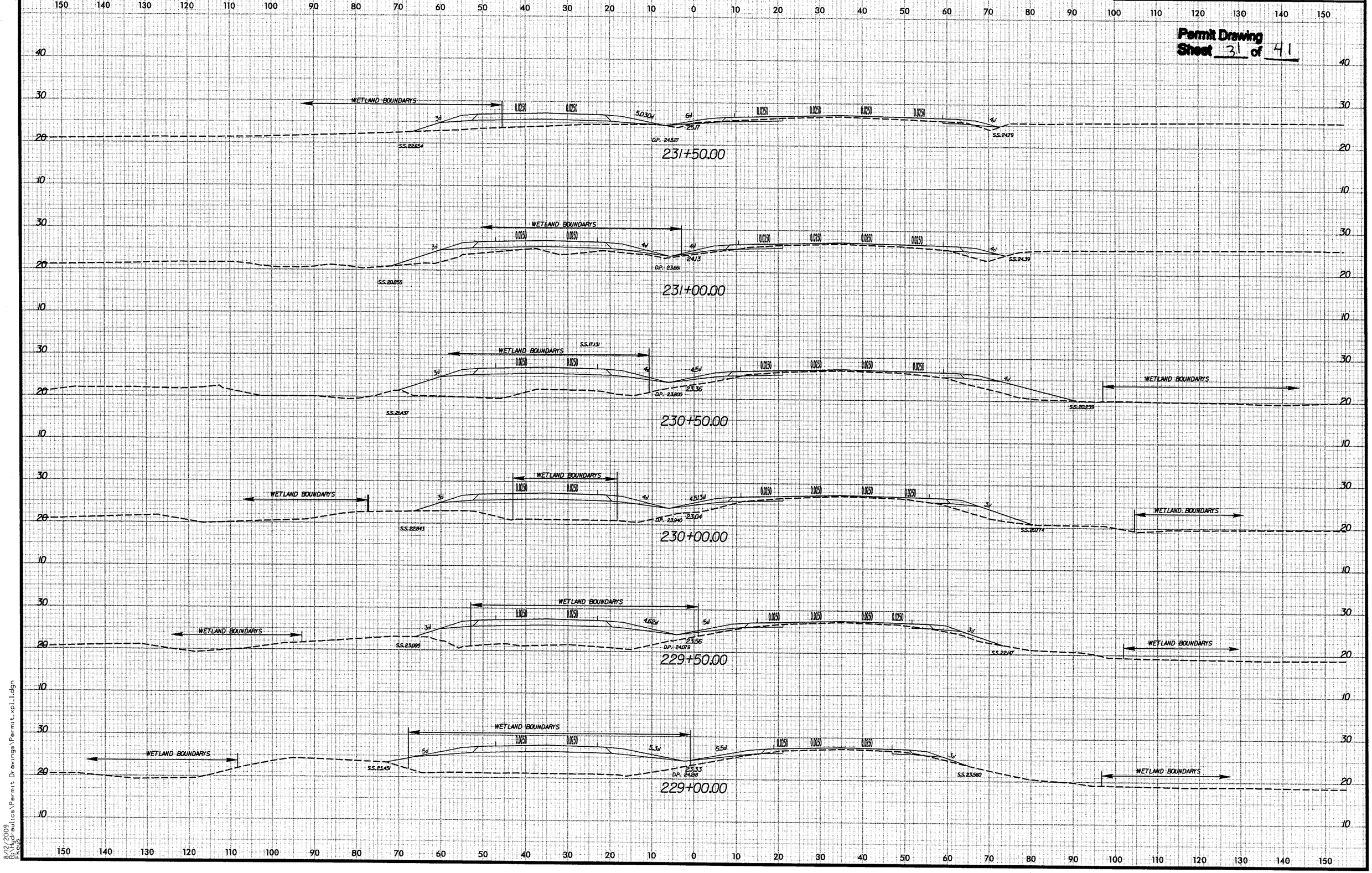
Permit Drawing
Sheet 31 of 41



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PROJECT REFERENCE NO.	SHEET NO.
R-2510C	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 32 of 41

ENGLISH

DENOTES FILL IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NAD 83/95

NO WETLANDS; ONLY BUFFERS

SITE 5C

SITE 5A

KEVIN E. BOYD

ARAH BELL GAUTIER CARRAWAY

WILLIE MCDONALD GAUTIER

DOROTHY ROBERSON ROBINSON, et al

DOROTHY ROBERSON ROBINSON, et al

MCDONALD GAUTIER, III, ET UX

SHIRLEY ANN G. ELROD, ET AL

MCDONALD GAUTIER, III, ET AL

MAXWELL P. CHESNUTT FAMILY TRUST

JOSEPH E. PERRY, JR.

MATCHLINE -L- 248+00 SEE SHEET 18

MATCHLINE -L- 262+00 SEE SHEET 20

57 TONS CL I RIPRAP W/104 SY FIL FAB RIPRAP ON BANKS ONLY

-Y9- +17.00 44.00' RT, 30' RT. 8'-7" X 5'-11" ALUMINUM PIPE ARCH

TIE PROP. FENCE TO FILL SLOPE (STD. 866.02)

-Y9- +67.00 54.00', 30.00' RT.

TIE PROP. FENCE TO HW (STD. 866.02)

LEVEL SPREADER SEE DETAIL E

SPECIAL CUT DITCH SEE DETAIL A

NO OUTLET RIPRAP IN LEVEL SPREADER

11 TONS CL B RIPRAP W/28 SY FIL FAB RIPRAP ON BANKS ONLY

SP MED CUT DITCH SEE DETAIL F

2 TONS CL B RIPRAP W/7 SY FIL FAB

REMOVE

PLANS PREPARED BY :
RUMMEL KLEPPER & KAHL, LLP
consulting engineers
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560

FOR
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
R-2510C	19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 33 of 41

ENGLISH

DENOTES FILL IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NAD 83/95

NO WETLANDS; ONLY BUFFERS

SITE 5C

SITE 5A

KEVIN E. BOYD

57 TONS CL I RIPRAP W/104 SY FIL FAB RIPRAP ON BANKS ONLY

-Y9- +17.00
44.00' RT, 30' RT.
8'-7" X 5'-11" ALUMINUM PIPE ARCH

TIE PROP. FENCE TO FILL SLOPE (STD. 866.02)
-Y9- +67.00
54.00', 30.00' RT.

TIE PROP. FENCE TO HW (STD. 866.02)

ARAH BELL GAUTIER CARRAWAY (108)

DOROTHY ROBERSON ROBINSON, et al (116)

DOROTHY ROBERSON ROBINSON, et al (117)

LEVEL SPREADER SEE DETAIL E

SPECIAL CUT DITCH SEE DETAIL A

NO OUTLET RIPRAP IN LEVEL SPREADER

WILLIE MCDONALD GAUTIER (118A)

11 TONS CL B RIPRAP W/28 SY FIL FAB RIPRAP ON BANKS ONLY

SP MED CUT DITCH SEE DETAIL F

2 TONS CL B RIPRAP W/7 SY FIL FAB

MCDONALD GAUTIER, III, ET UX (112)

SHIRLEY ANN G. ELROD, ET AL (113)

MCDONALD GAUTIER, III, ET AL (111)

JOSEPH E. PERRY, JR. (115)

MAXWELL P. CHESNUTT FAMILY TRUST (114)

MATCHLINE -L- 248+00 SEE SHEET 18

MATCHLINE -L- 262+00 SEE SHEET 20

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FOR
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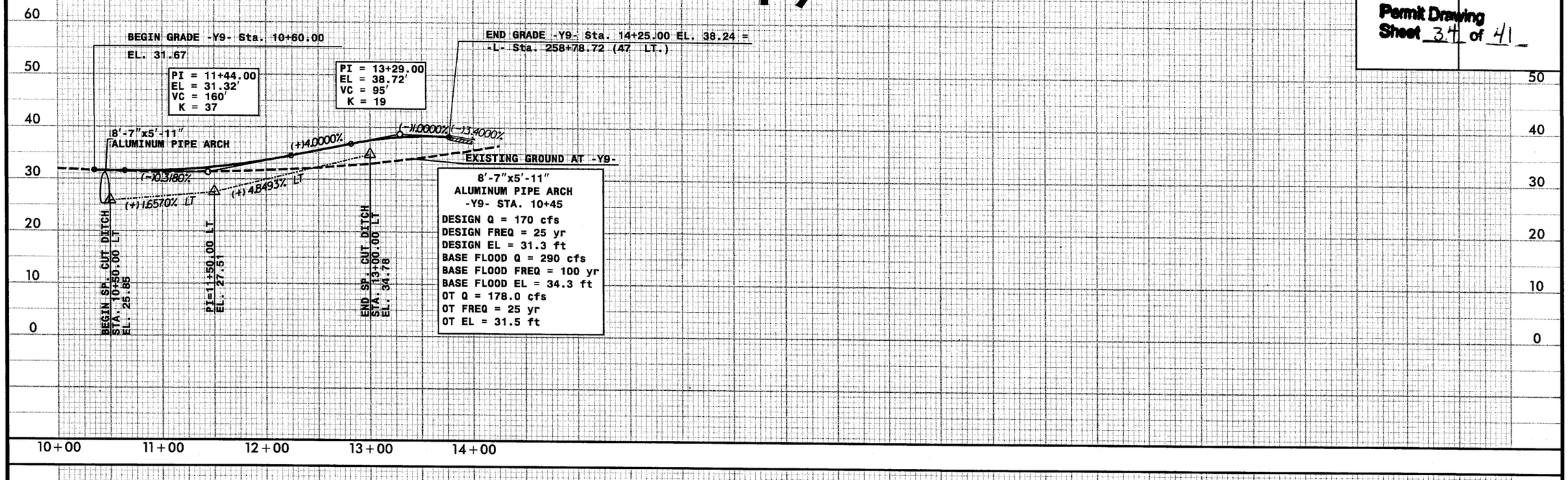
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
R-2510C	33
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 34 of 41

-Y9-



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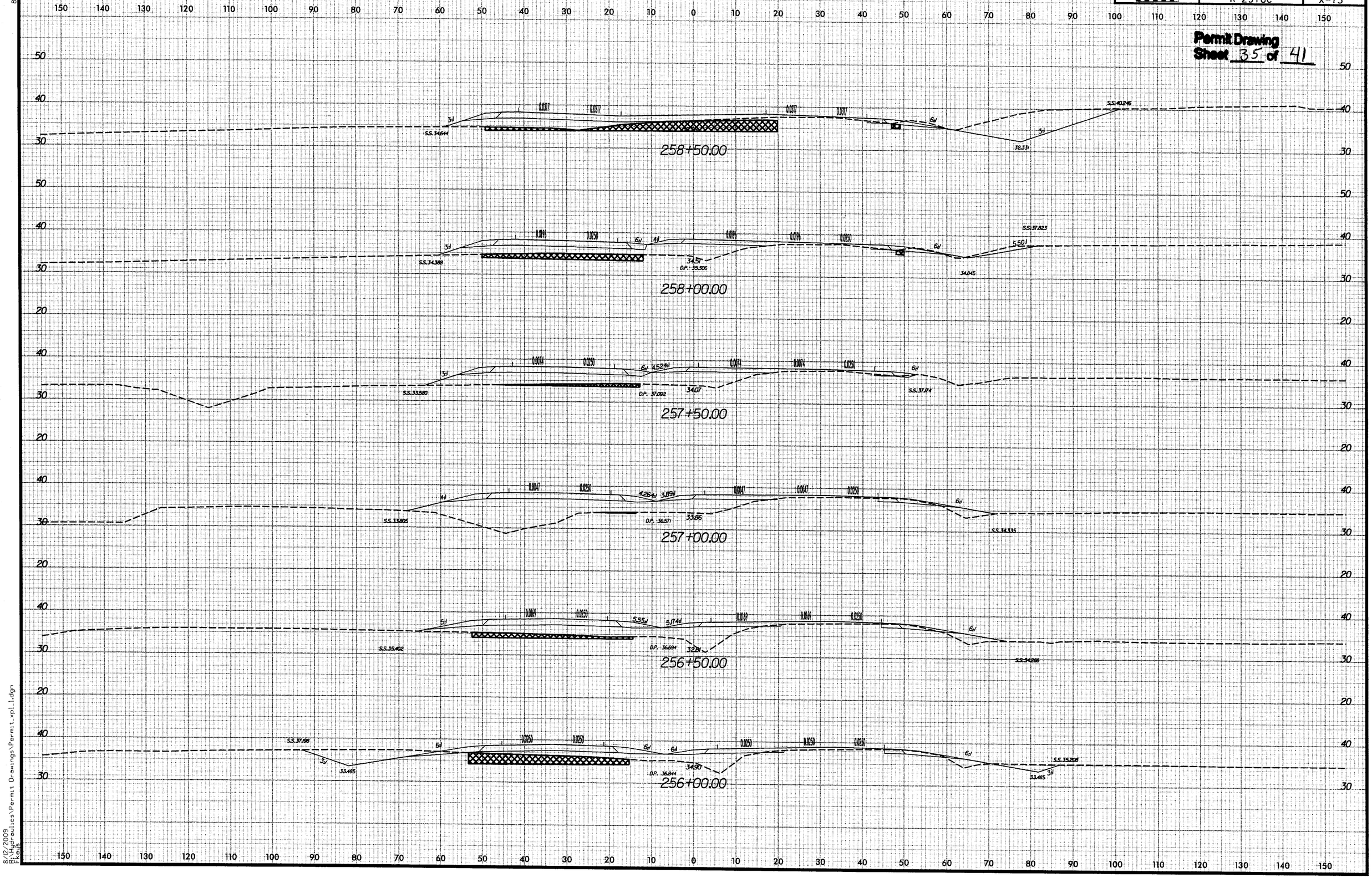
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2510C	X-73

Permit Drawing
Sheet 35 **of** 41



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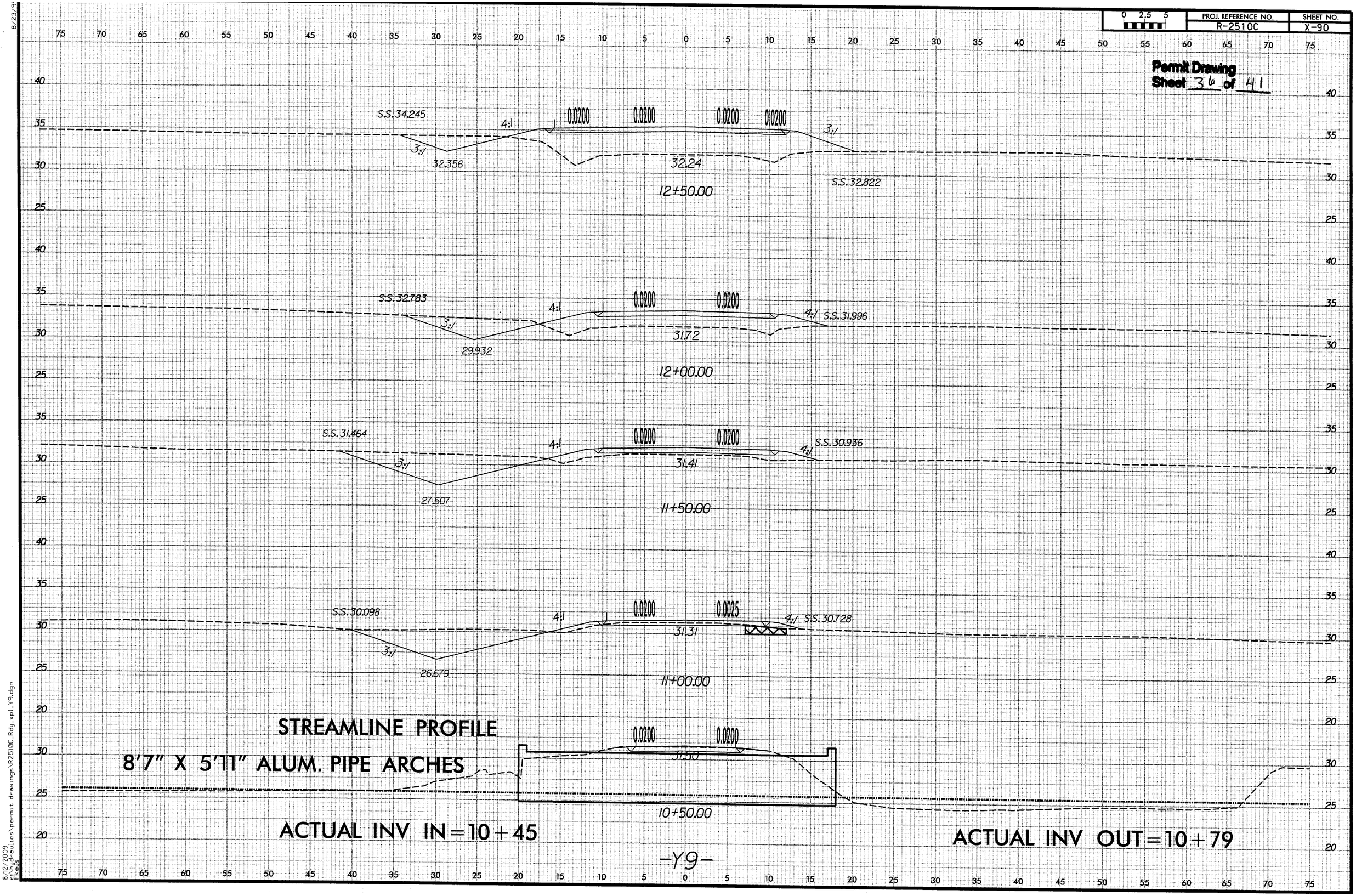
PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-90

Permit Drawing
Sheet 36 of 41



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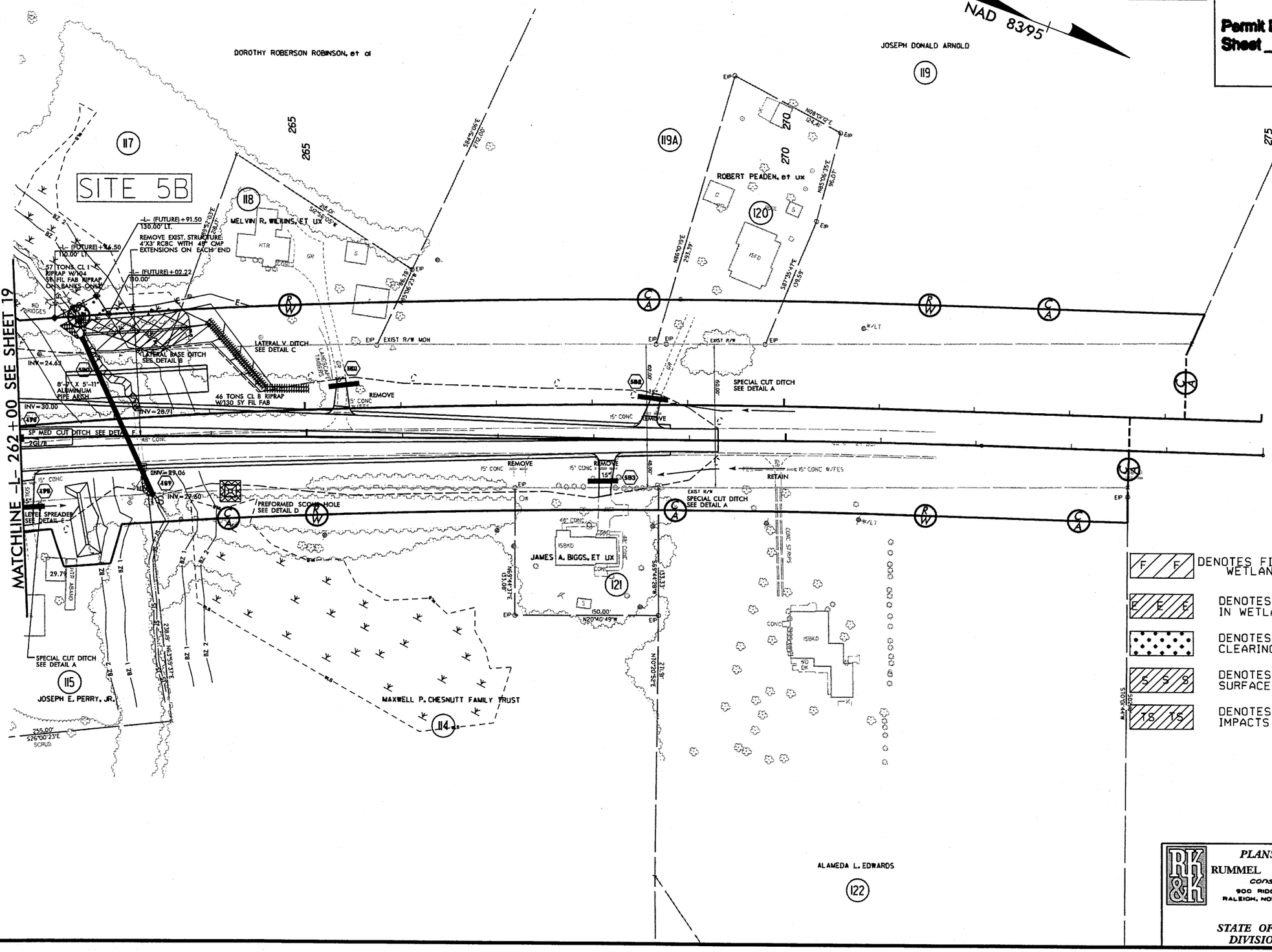
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2510C	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing Sheet 37 of 41



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FOR
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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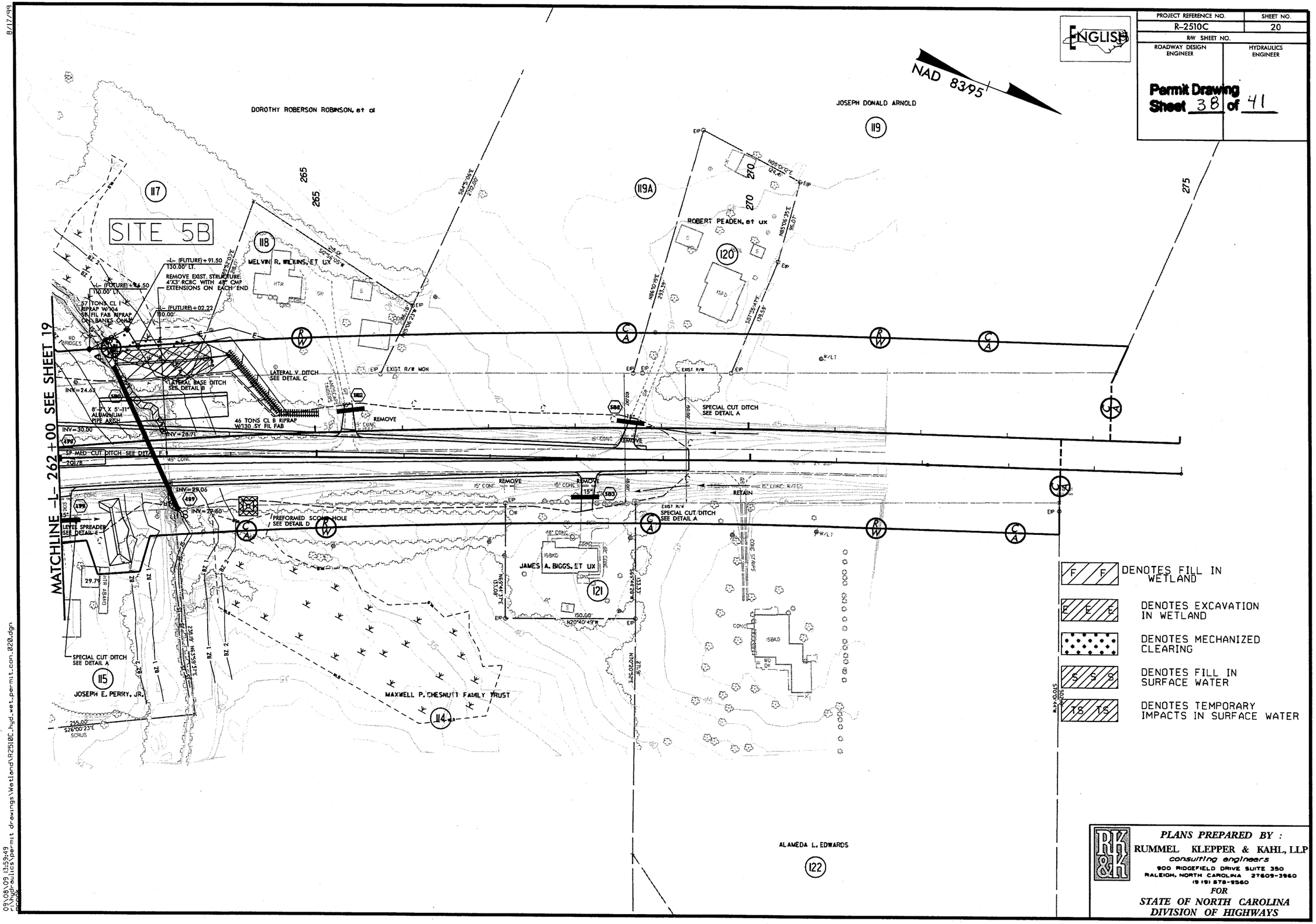
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2510C	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 38 of 41



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DIVISION OF HIGHWAYS

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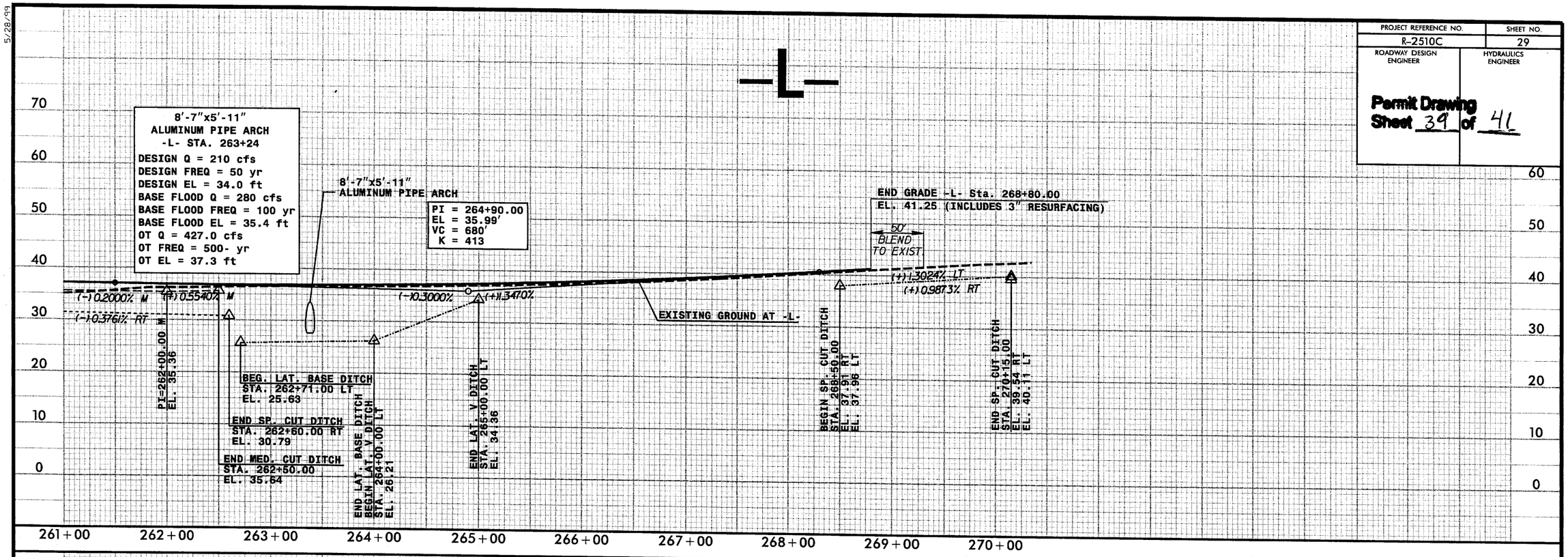
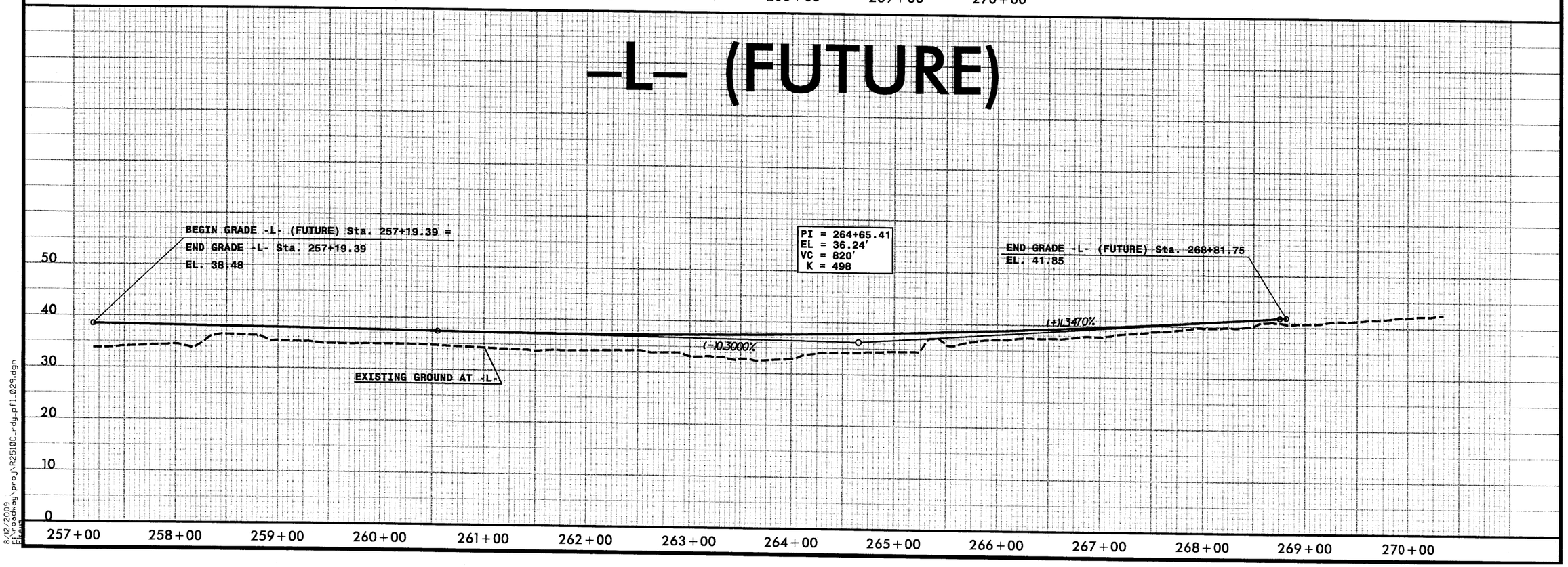
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	29
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 39 of 41





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PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-74

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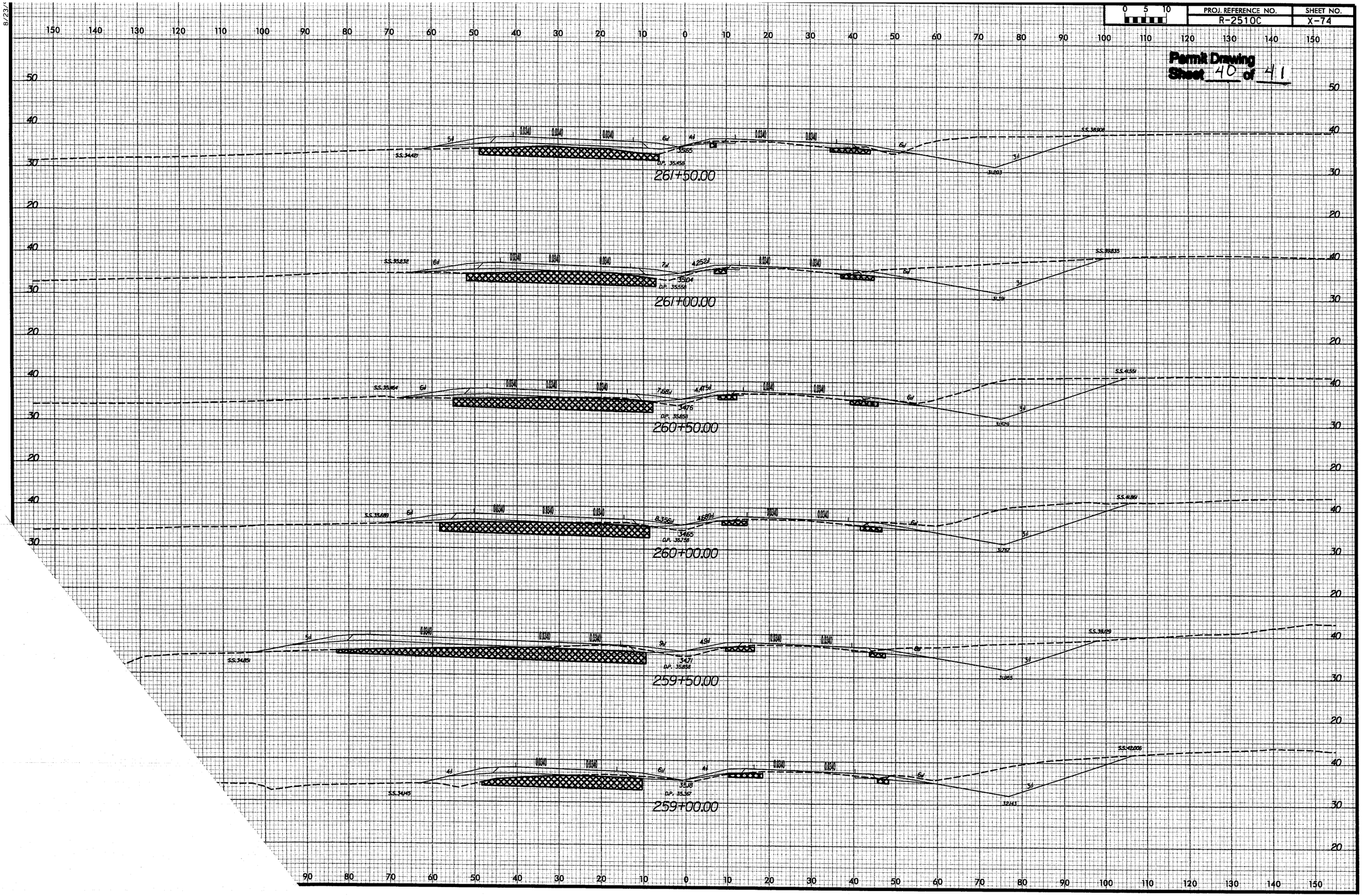
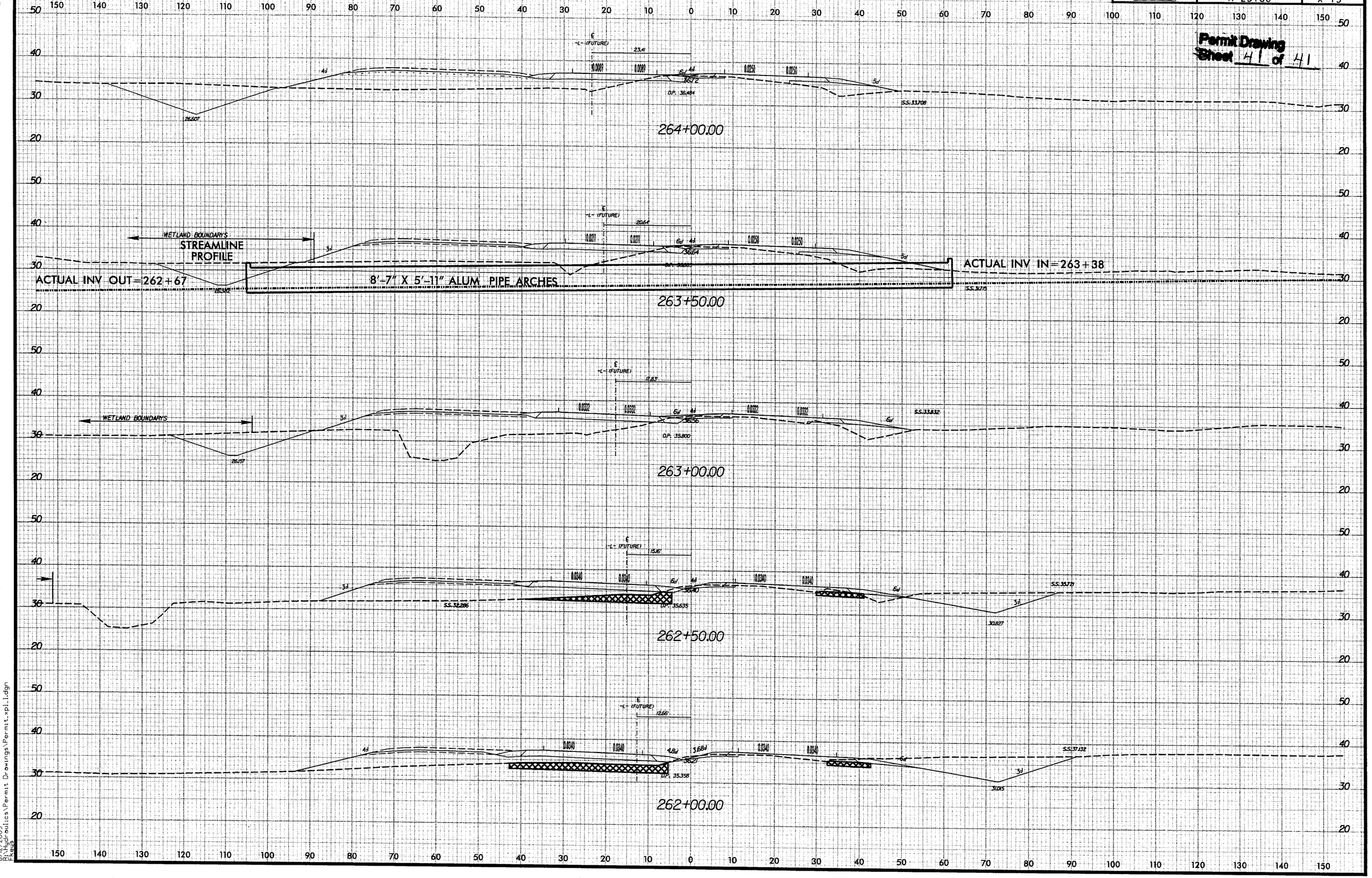
Permit Drawing
Sheet 40 **of** 41



PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-75

Permit Drawing
Sheet 41 of 41



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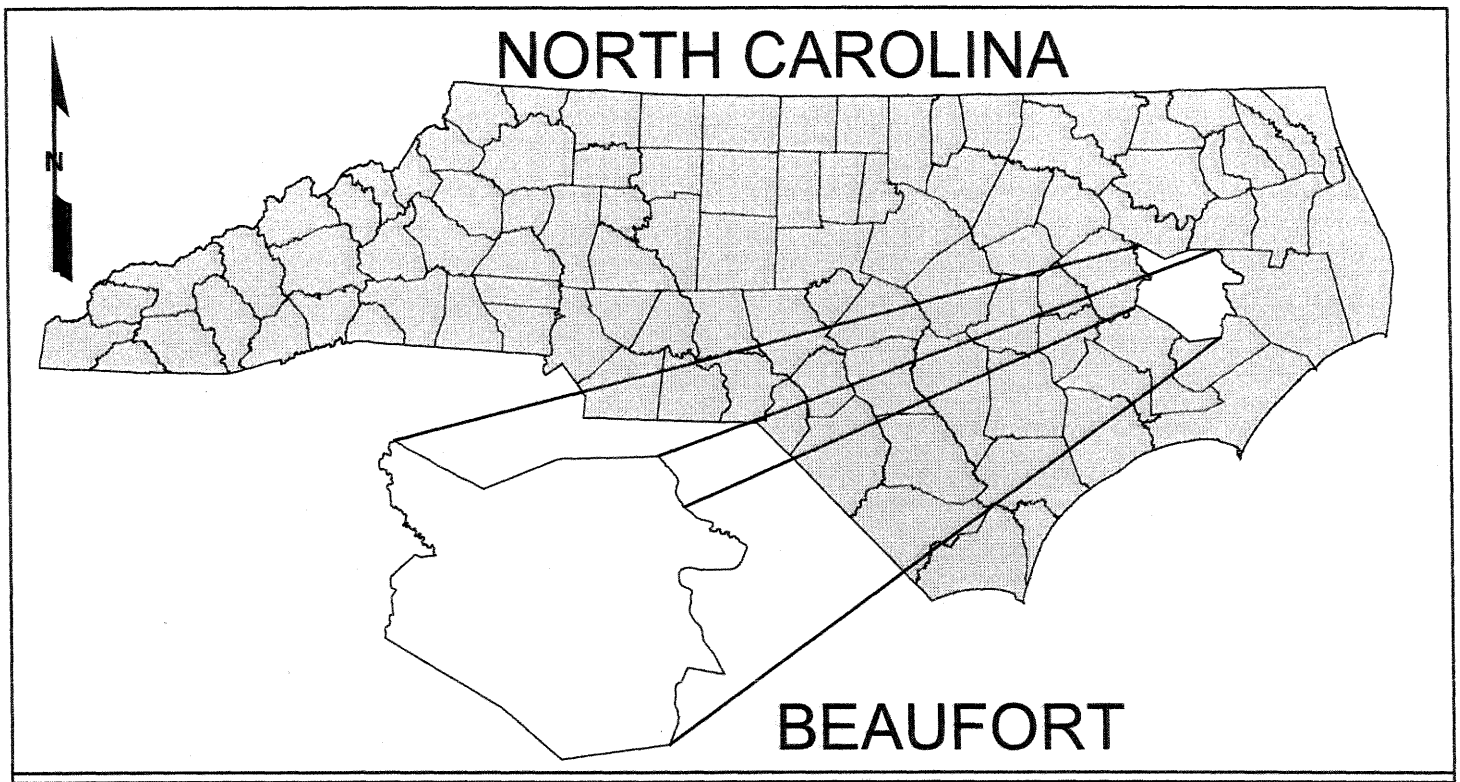
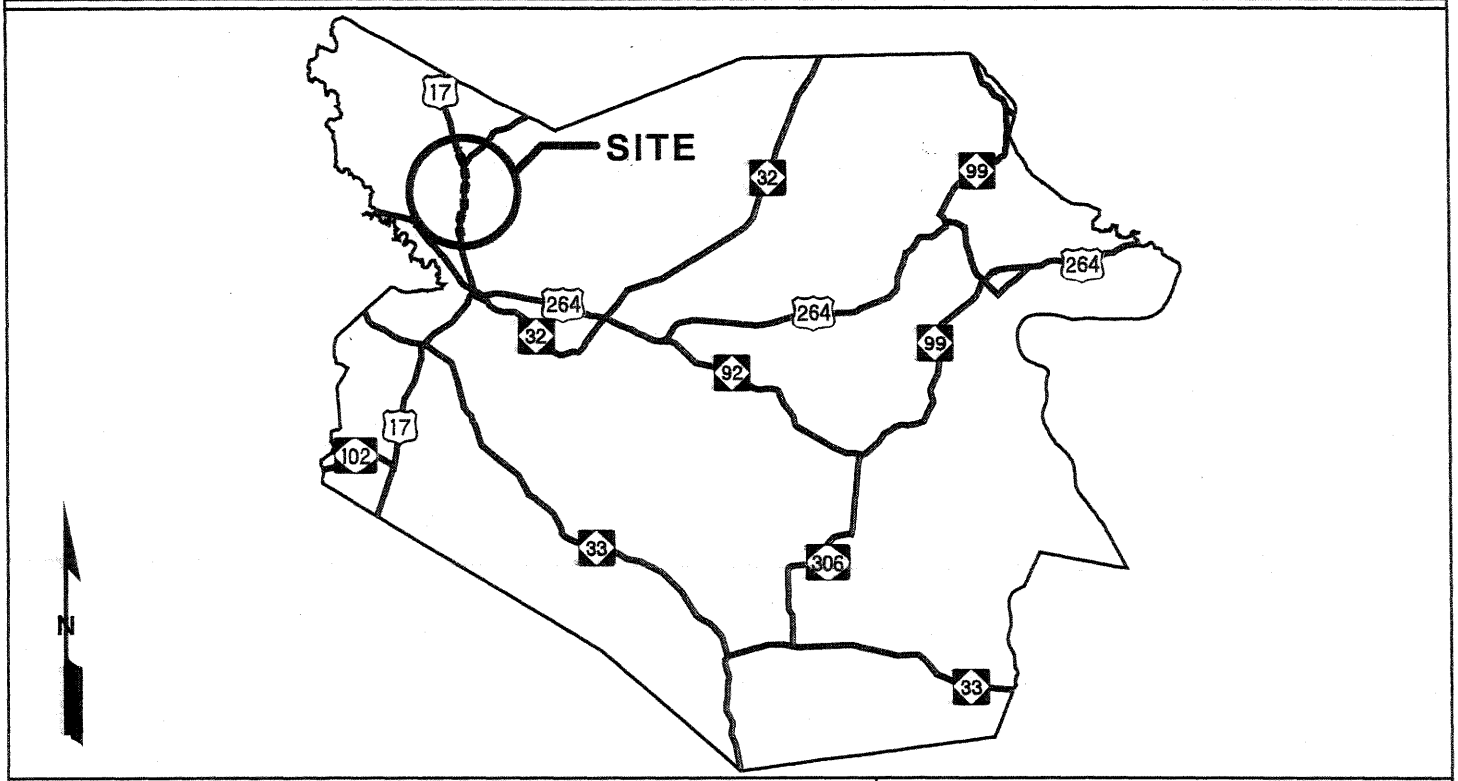




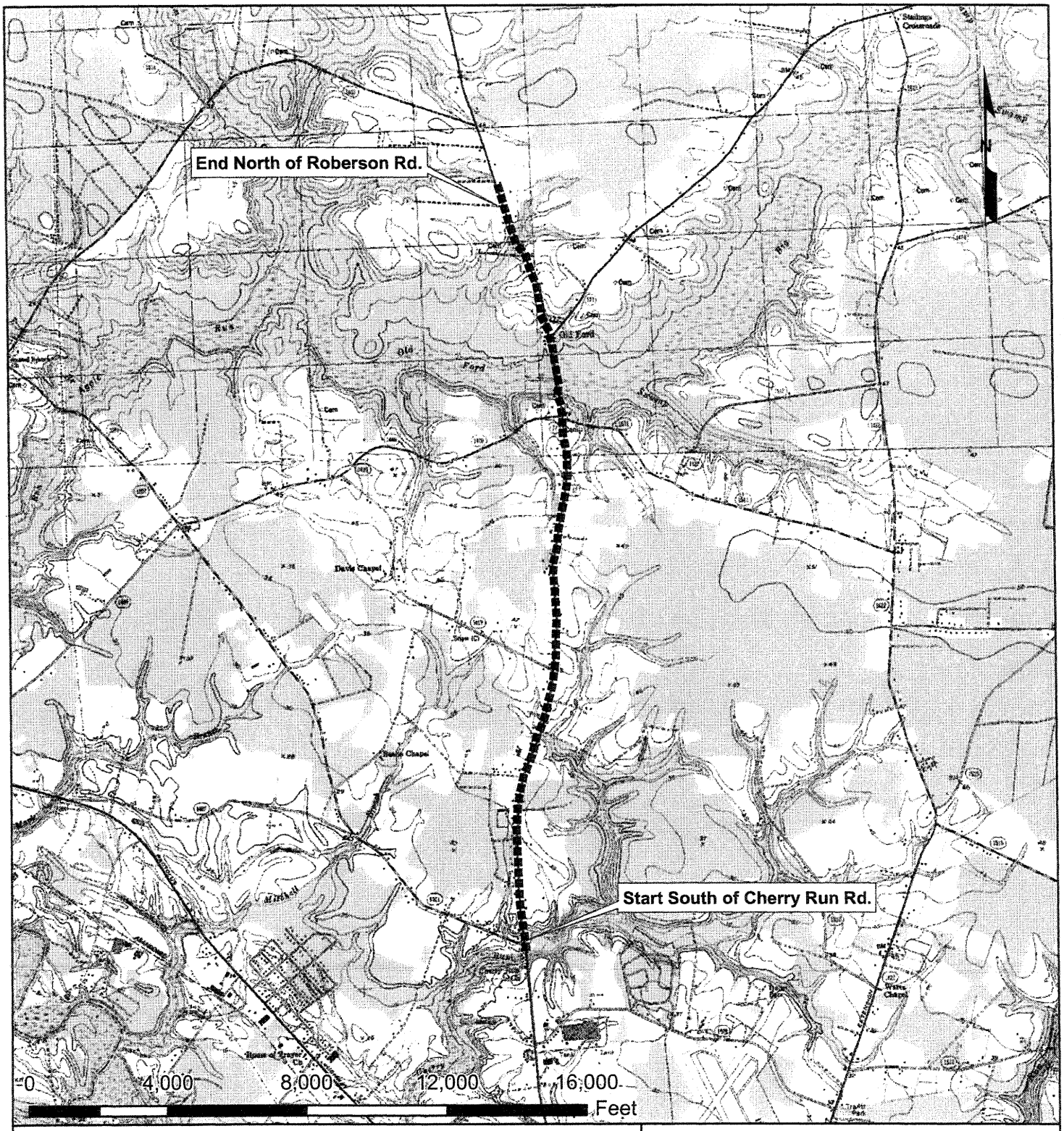
VICINITY MAPS

NCDOT

DIVISION OF HIGHWAYS
BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510C)
US 17 BYPASS

AUGUST 2009

Buffer Drawing
Sheet 1 of 36



1 inch = 4,000 feet

LOCATION

NCDOT

DIVISION OF HIGHWAYS
BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510C)
US 17 BYPASS

AUGUST 2009

Source: USGS 7.5 Minute Quadrangle, Washington and Old Ford, NC

Buffer Drawing
Sheet 2 **of** 36

PROP. NO.	PROPERTY OWNER NAME	PROP. OWNER ADDRESS
1	JACK CHERRY, JR.	707 Oakwood Ave. South, Brandon, FL. 33511
2	SMITHWICK PARTNERS, LLC	1589 West 5th St., Washington, NC 27889
40	EAST CAROLINA FARMS, LLC	1905 Charlestowne Dr. Greenville, NC 27834
45	MARY L. BROWN HOPKINS	952 Wharton Station Rd., Washington, NC 27889
46	REUBEN H. FERRELL	3805 US HWY 17 N, Washington, NC 27889
94	MINNIE LEE BRANTLEY	5595 HWY 17 N, Washington, NC 27889
95	WILLIAM B. BAKER, ET UX	5595 HWY 17 N, Washington, NC 27889
97	MILTON E. HODGES, JR. (Land)	5584 US HWY 17 N, Washington, NC 27889
	DAVID ALLEN KEEL (Buildings on parcel 97)	5584 US HWY 17 N, Washington, NC 27889
98	GLADYS B. STYONS	5666 HWY 17 N, Washington, NC 27889
100	HAROLD W. ROBINSON, ET UX	244 N Roberson Rd., Washington, NC 27889
108	ARAH BELL GAUTIER CARRAWAY	5124 Congressional Dr., College Station, TX 77845
111	MCDONALD GAUTIER, 111, ET AL	6344 US HWY 17 N, Washington, NC 27889
114	MAXWELL P. CHESNUTT FAMILY TRUST	PO BOX 607, Blowing Rock, NC 28605
115	JOSEPH E PERRY, JR.	6498 US HWY 17 N, Washington, NC 27889
116	DOROTHY ROBERSON ROBINSON, et al	6555 US HWY 17 N, Washington, NC 27889
117	DOROTHY ROBERSON ROBINSON, et al	244 N Roberson Rd., Washington, NC 27889
118	MELVIN R. WILKINS, ET UX	6555 US HWY 17 N, Washington, NC 27889

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510C)

8/13/2009

R:/z-misc/Hydro/Permit Drawings/BuffProp.xls

Buffer Drawing
Sheet 3 of 35

BUFFER IN WETLAND IMPACTS SUMMARY

		WETLANDS IN BUFFER	
Site	Station	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1A	-L- 54+00 +/-	3038	950
3	-L- 119+00 +/-	469	2028
4A	-L- 220+00 +/-	56	231
4B	-L- 223+50 +/-	2284	772
5B	-L- 263+25 +/-	1118	1214
		6965	5195

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510C)

8/13/2009

R:\2-misc\Hydro\Permit Drawings\wetlandinbuffer.xls

Buffer Drawing
Sheet 4 of 35

BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	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)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1A	Bridge	-L- 54+00 +/-		X					10434	4174	14608		
	Roadway	-L- 54+00 +/-	X						6414	3880	10294		
3	Roadway	-L- 119+00 +/-	X						13360	8411	21771		
4A	Roadway	-L- 222+00 +/-			X				34588	16797	51385		
	Bridge	-L- 222+00 +/-	X						3427	690	4117		
4B	Roadway	-L- 220+00 +/-	X						1335	1814	3149		
	Roadway	-L- 220+00 +/-			X				2793	2266	5059		
	Bridge	-L- 222+00 +/-		X					6536	1190	7726		
4C	Roadway	-L- 223+00 +/-			X				1547	0	1547		
	Bridge	-L- 223+00 +/-		X					1682	6	1688		
5A	Roadway	-L- 256+75 +/-	X						7518	4528	12046		
5B	Roadway	-L- 263+25 +/-	X						9730	6095	15825		
5C	Roadway	-Y9- 10+80 +/-	X			2588	911	3499					
TOTAL:						2588	911	3499	99364	49851	149215		

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: 34440.1.1 (R-2510C)

9/22/2009

R:/z-misc/Hydro/Permit Drawings/BUFFER IMPACT SUMMARY Rev.xls

Rev. May 2006

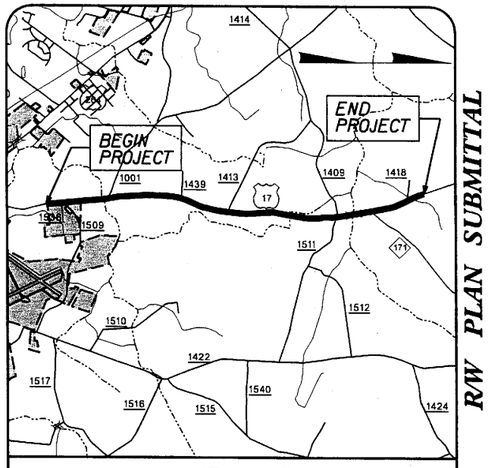
Buffer Drawing
Sheet 5 of 35

09/08/99

TIP PROJECT: R-2510C

CONTRACT:

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



VICINITY MAP

R/W PLAN SUBMITTAL

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BEAUFORT COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2510C	1	

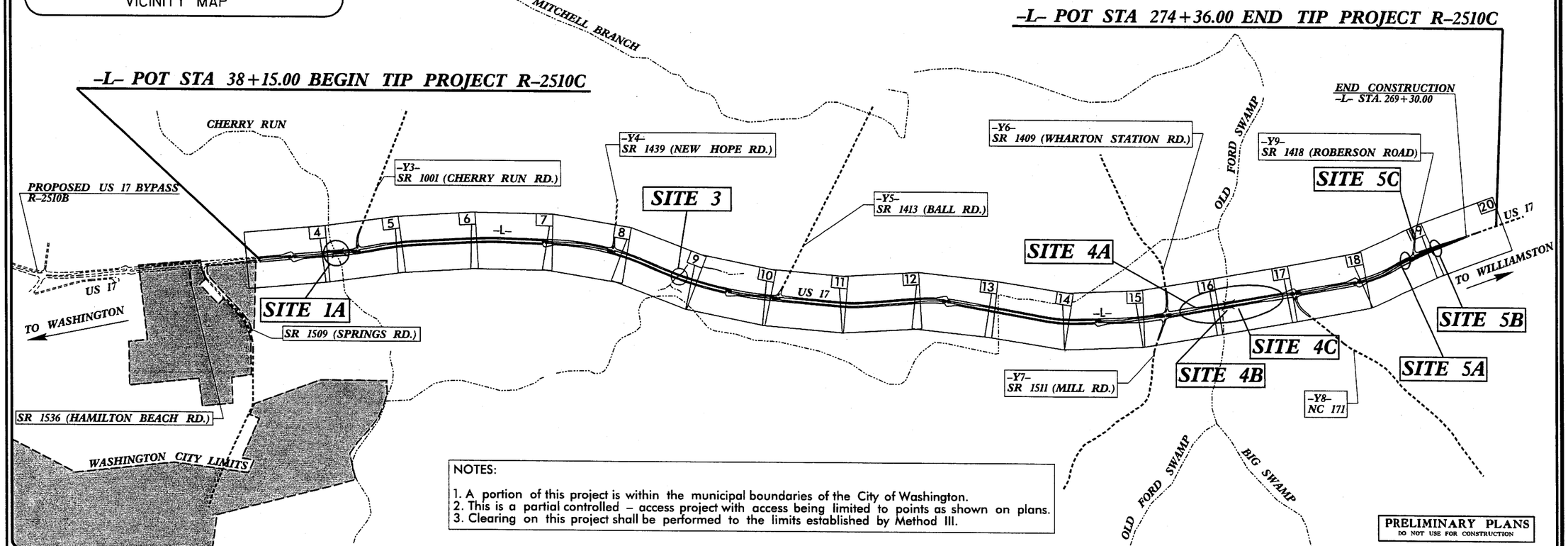
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
34440.1.1	MAF-75-3 (26)	P.E.
34440.2.5	MAF-75-3 (26)	R/W & UTIL

Buffer Drawing Sheet 6 of 35

LOCATION: US 17 FROM US 17 SOUTH OF SR 1001 (CHERRY RUN ROAD) TO NORTH OF NC 171.

TYPE OF WORK: GRADING, DRAINAGE, PAVING, RESURFACING, CULVERT AND STRUCTURES

NAD 83/95



NOTES:

1. A portion of this project is within the municipal boundaries of the City of Washington.
2. This is a partial controlled – access project with access being limited to points as shown on plans.
3. Clearing on this project shall be performed to the limits established by Method III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2014	=	12,710
ADT 2034	=	19,830
DHV	=	10 %
D	=	55 %
T	=	11 % *
V	=	60 MPH

CLASS=RURAL ARTERIAL

* (TTST 7% + DUAL 4%)

PROJECT LENGTH

Length Roadway
TIP Project R-2510C ..... 4.474 Mi.

Length Structure*
TIP Project R-2510C ..... 0.066 Mi.

TOTAL LENGTH TIP
Project R-2510C ..... 4.540 Mi.

*Length Based on NBL Structures

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consulting engineers
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(919) 878-9560
FOR
DIVISION OF HIGHWAYS

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: 11/2006 (PROD.)

LETTING DATE: October 21, 2014

B. Keith Skinner, P.E.
PROJECT ENGINEER

Michael T. Merritt, P.E.
PROJECT DESIGN ENGINEER

NCDOT CONTACT: CATHY S. HOUSER, PE

HYDRAULICS ENGINEER
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER
SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE HIGHWAY DESIGN ENGINEER

8/12/2009
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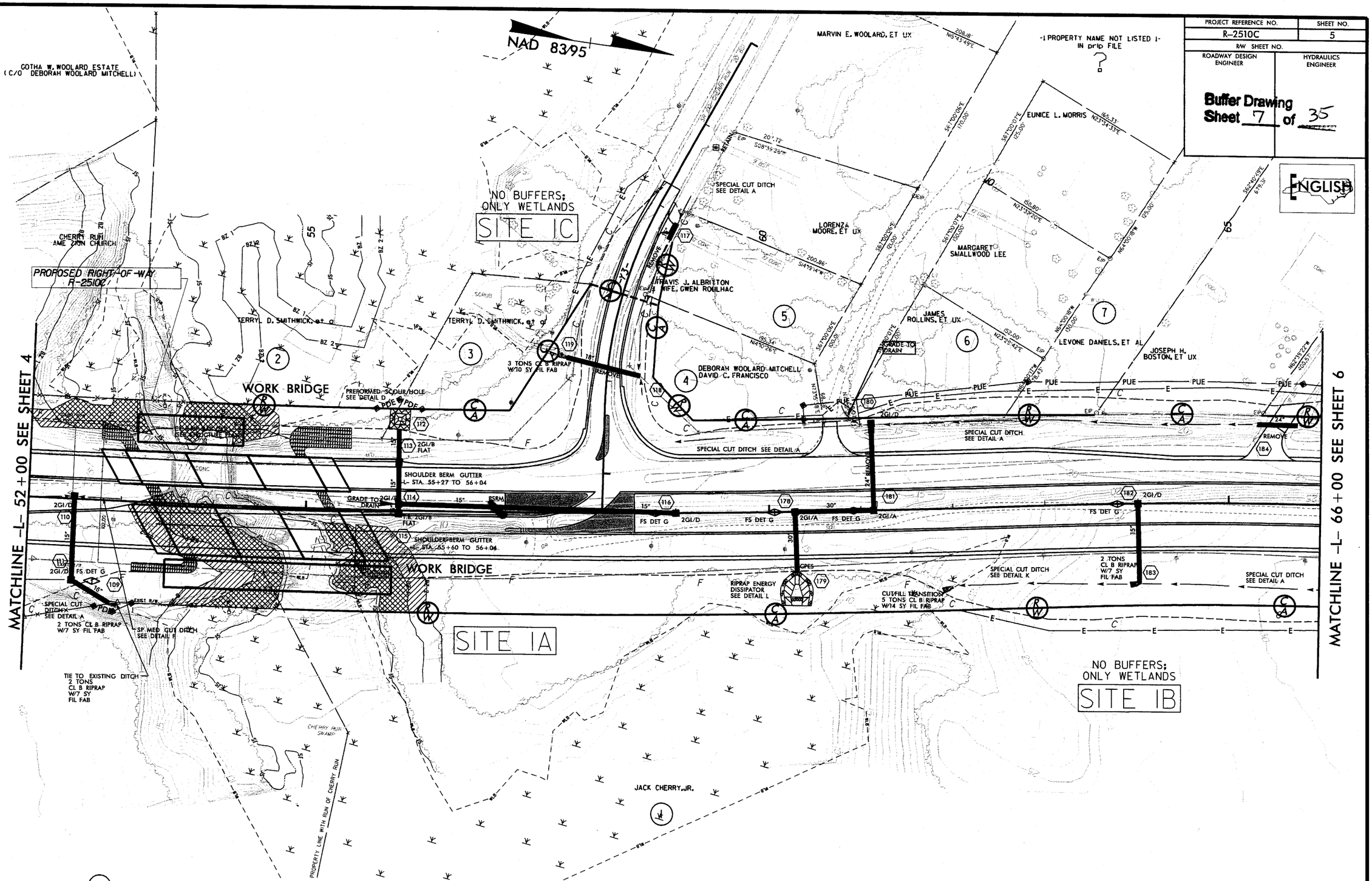
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing Sheet 7 of 35

ENGLISH



MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

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FOR
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8/12/2009
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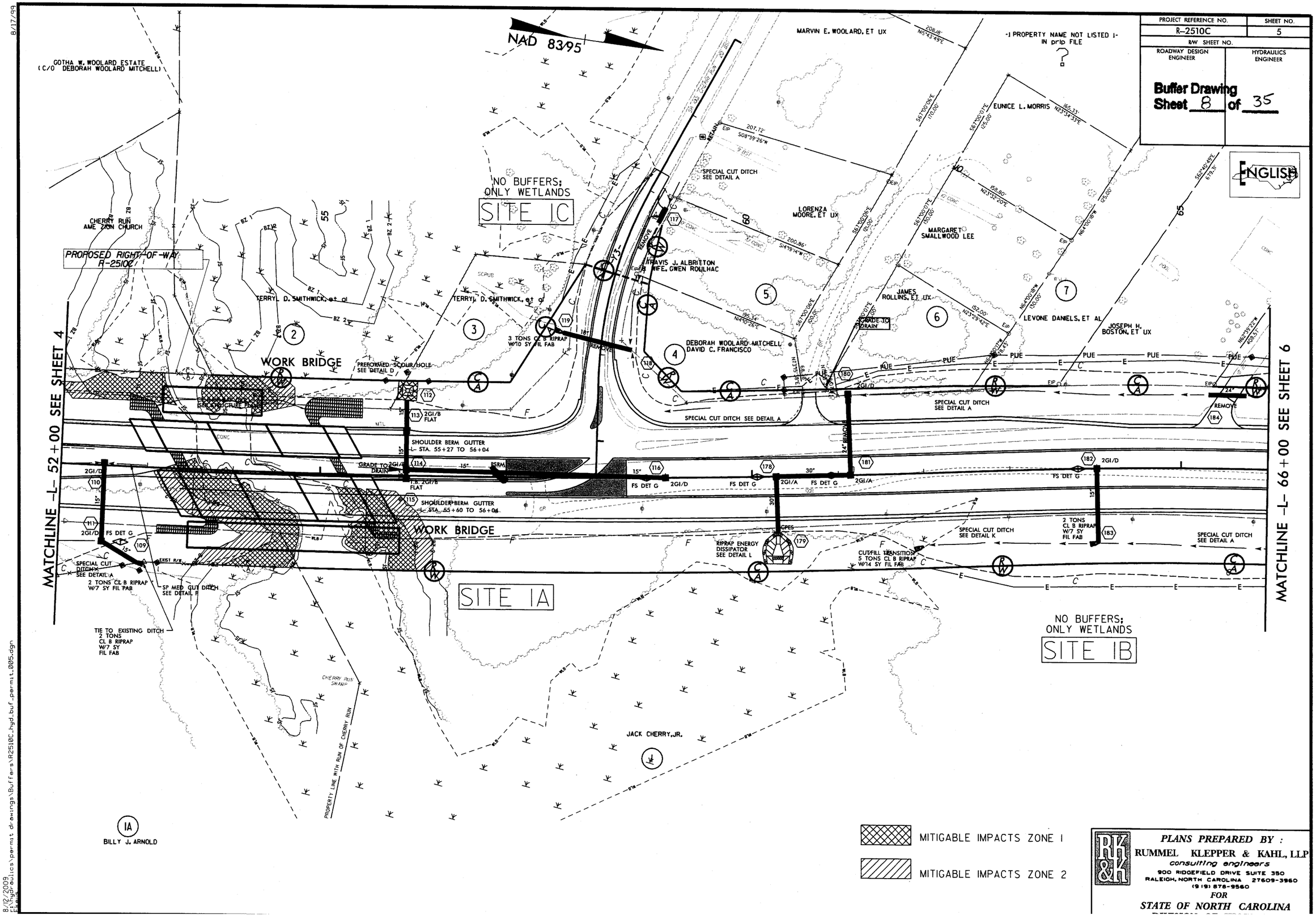
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing
Sheet 8 of 35

ENGLISH



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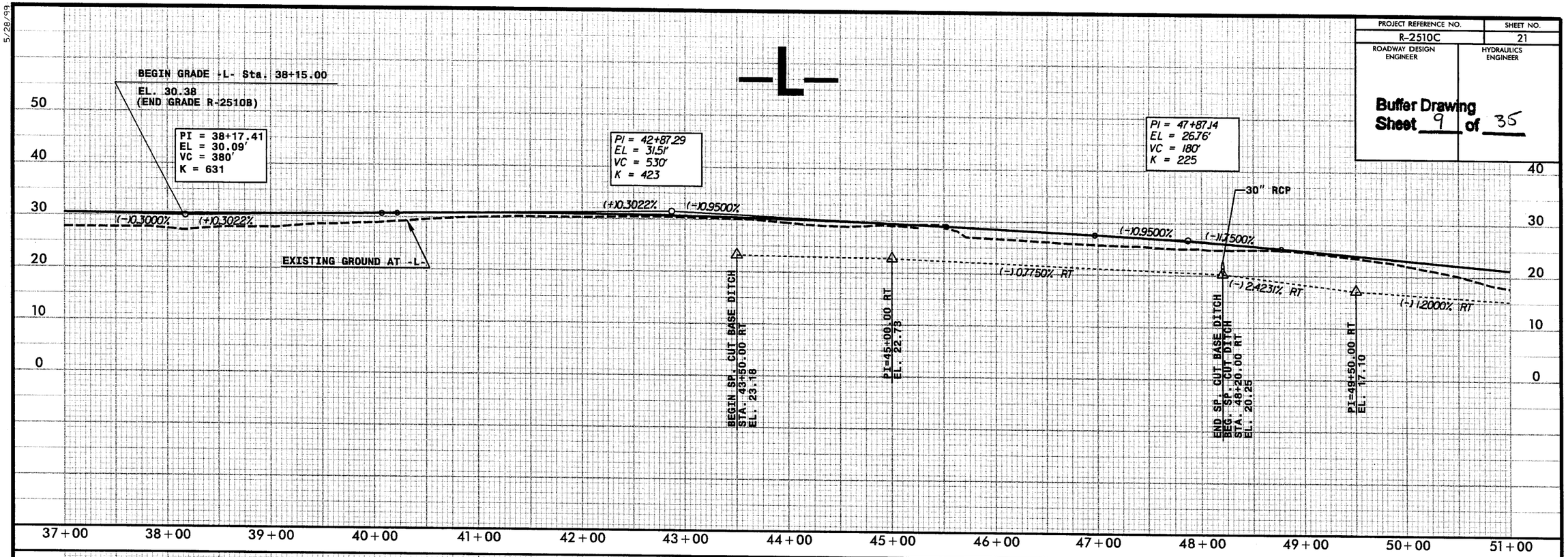
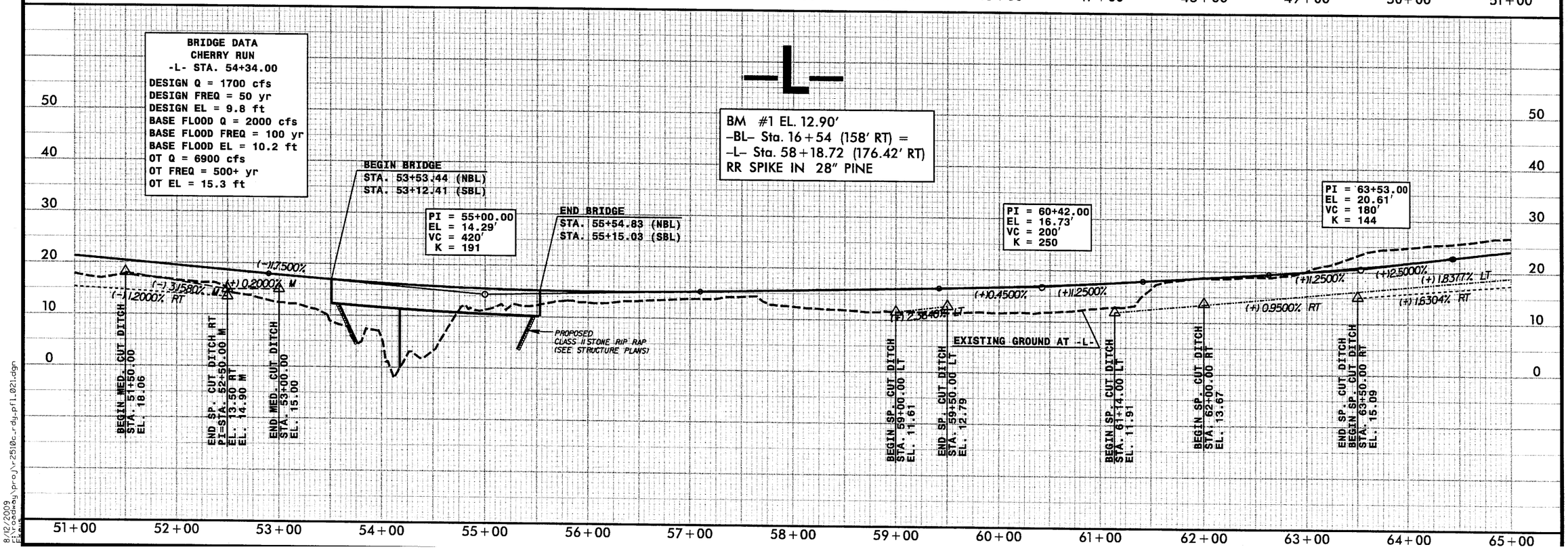
English

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-2510C	21
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing
Sheet 9 of 35





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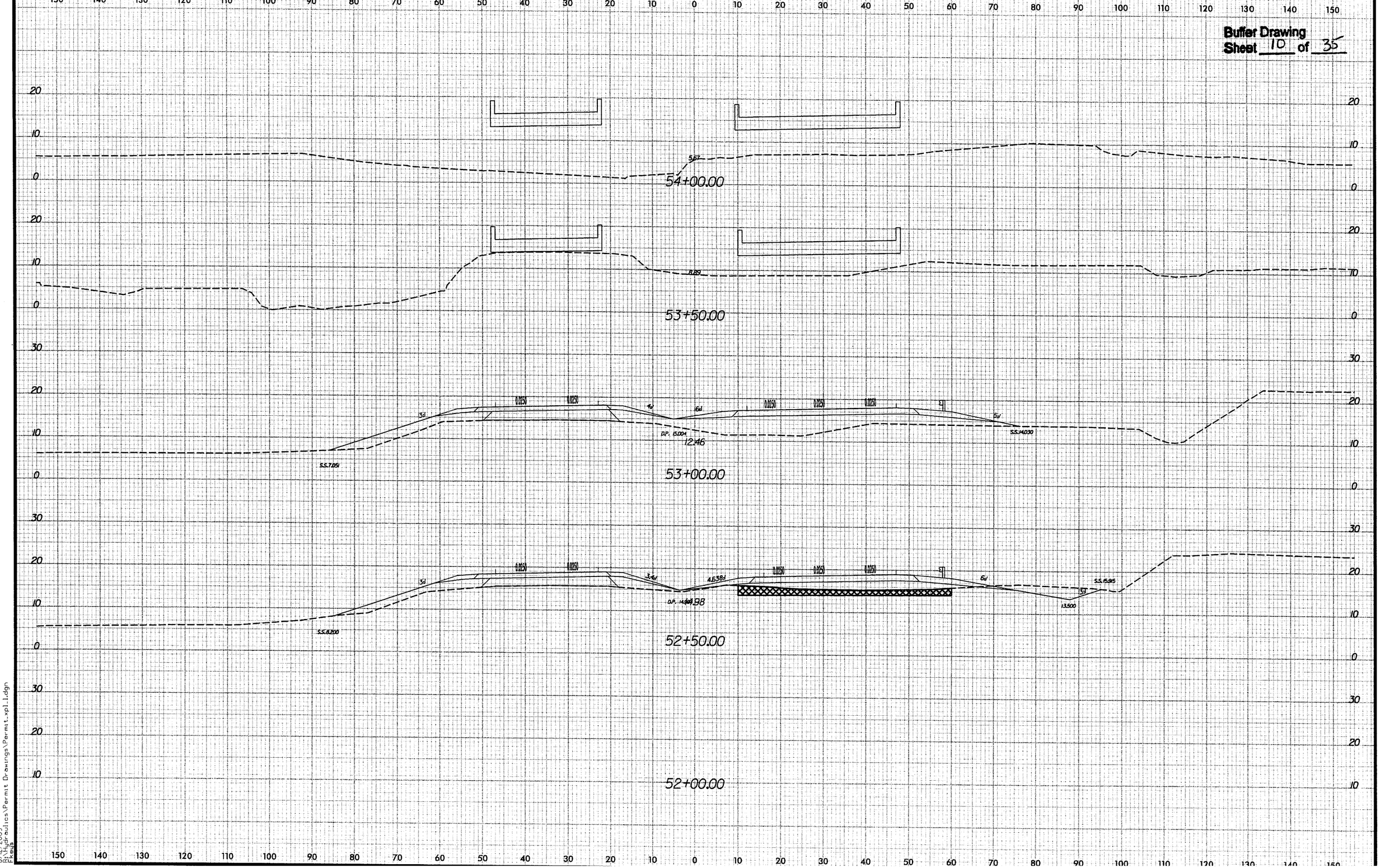
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2510C	X-5

Buffer Drawing
Sheet 10 **of** 35



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PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-6

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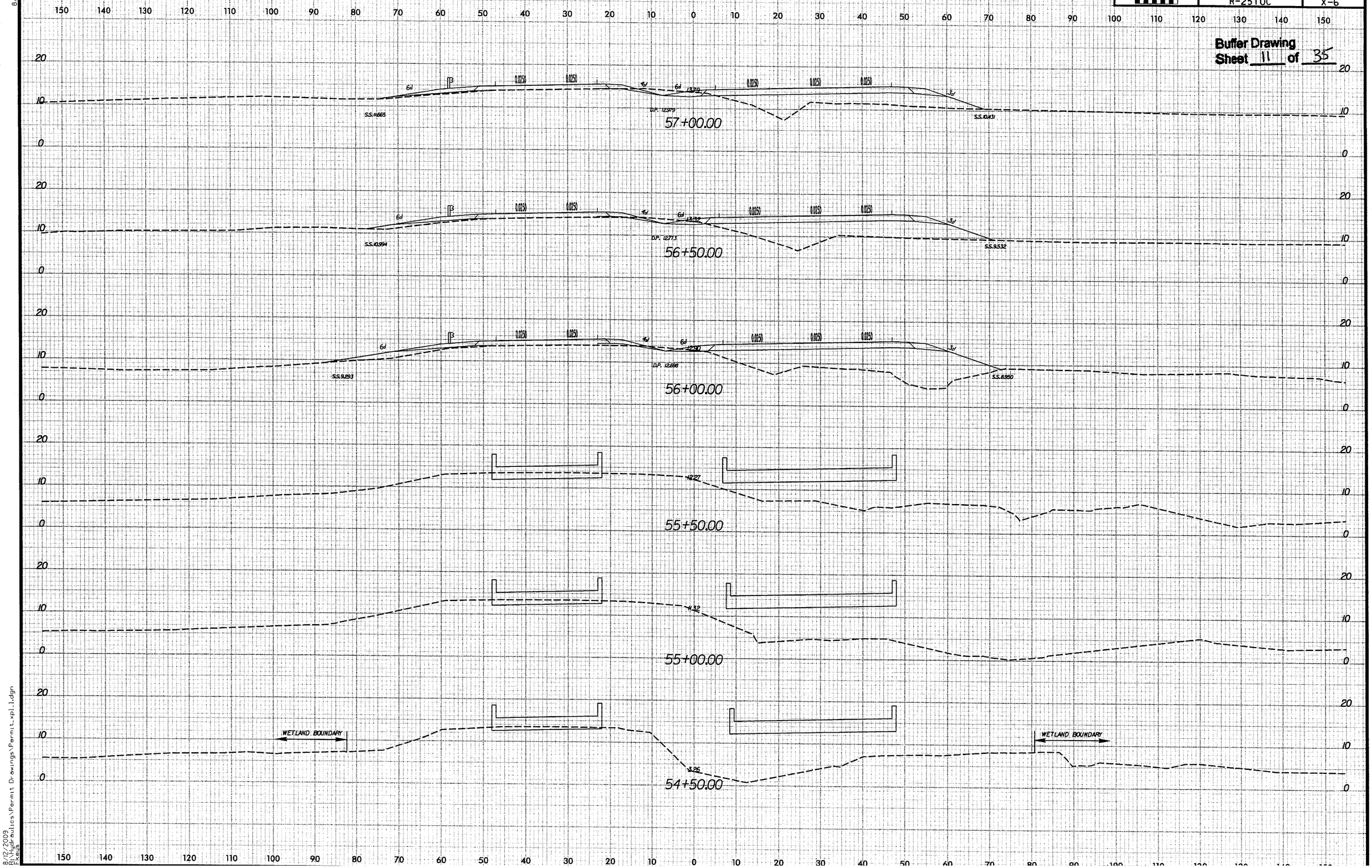
Buffer Drawing
Sheet 11 of 35



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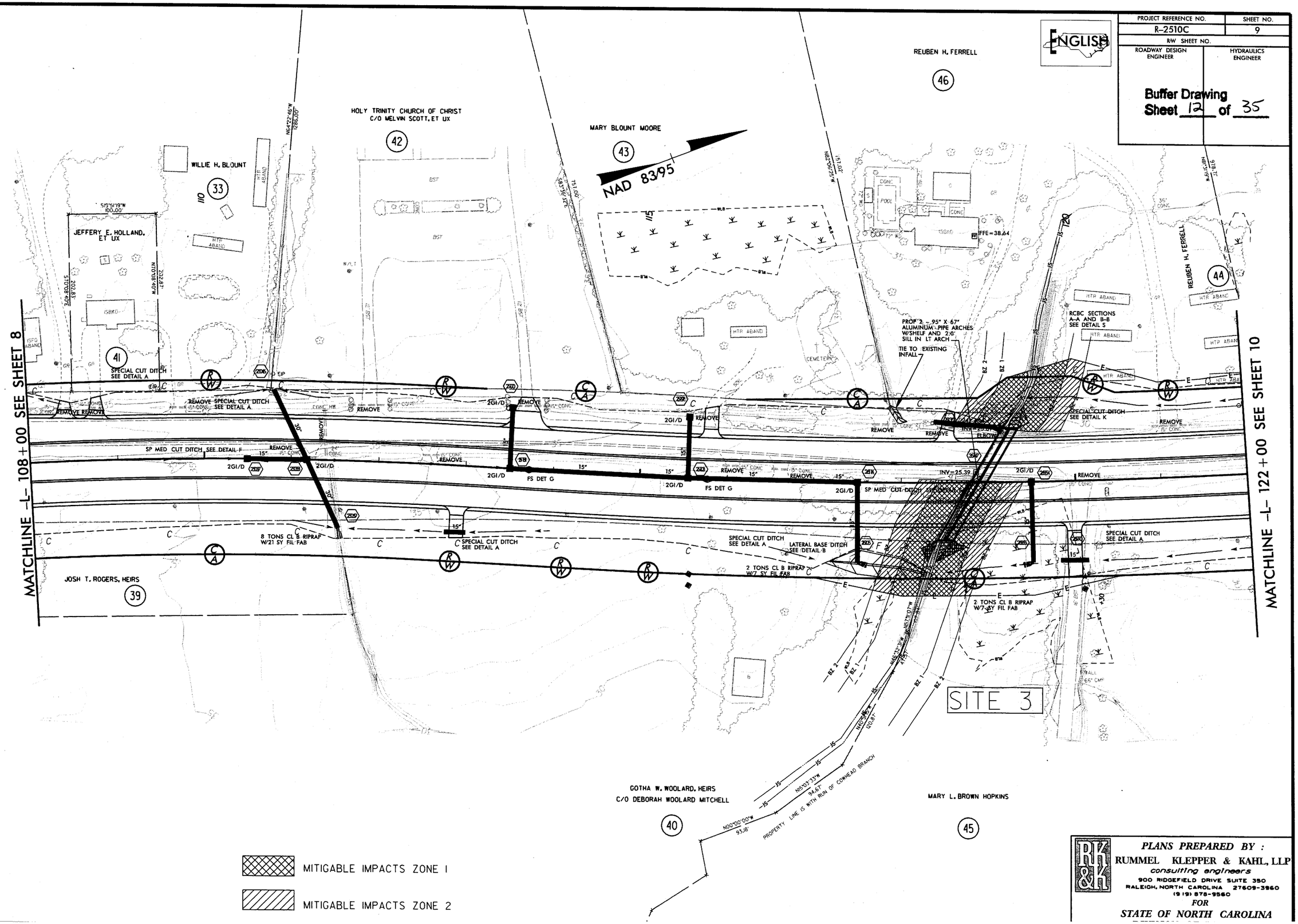
F.Kelly

PROJECT REFERENCE NO.	SHEET NO.
R-2510C	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing
Sheet 12 of 35



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consulting engineers
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
STATE OF NORTH CAROLINA

8/17/99

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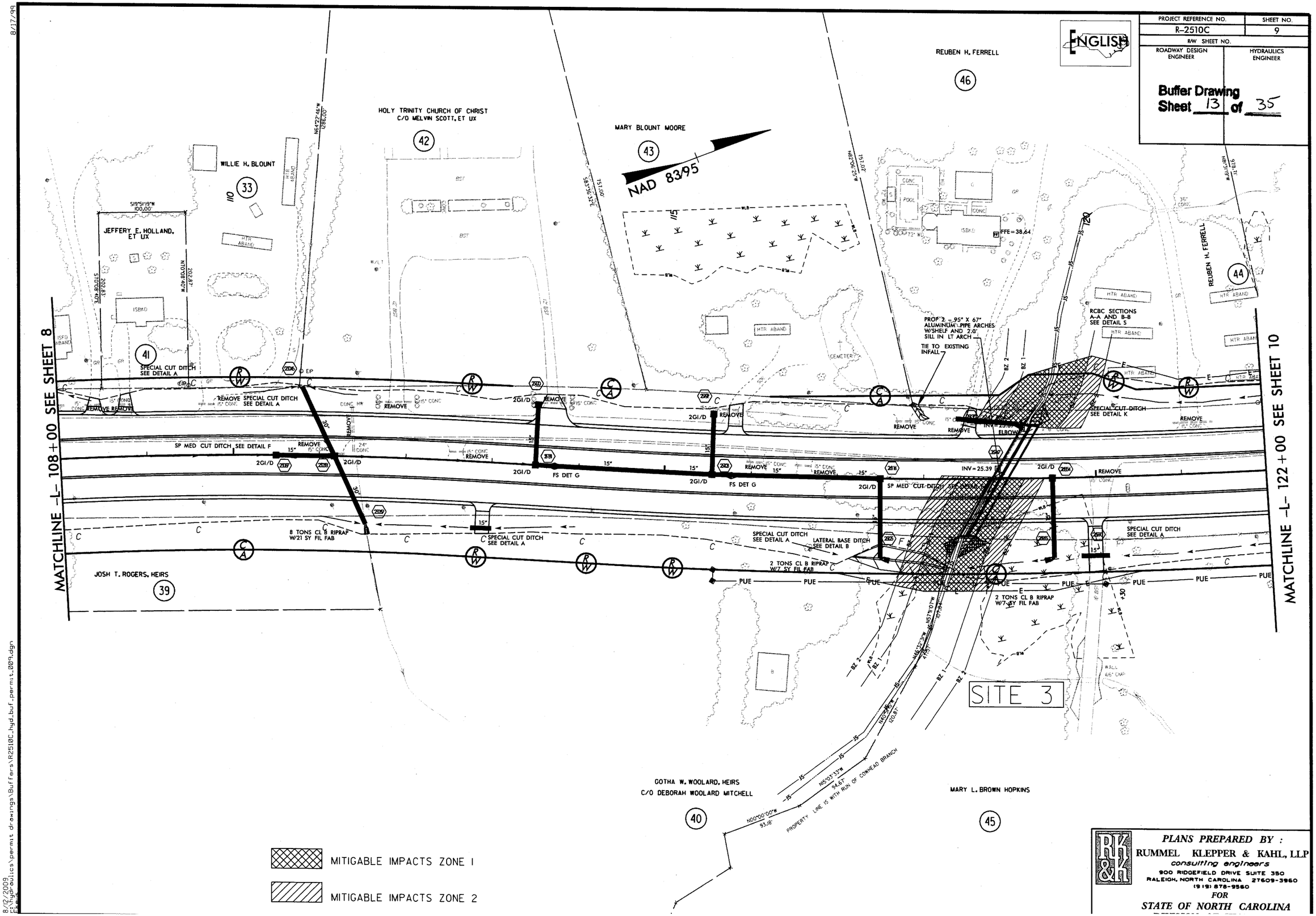
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing Sheet 13 of 35

ENGLISH



MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

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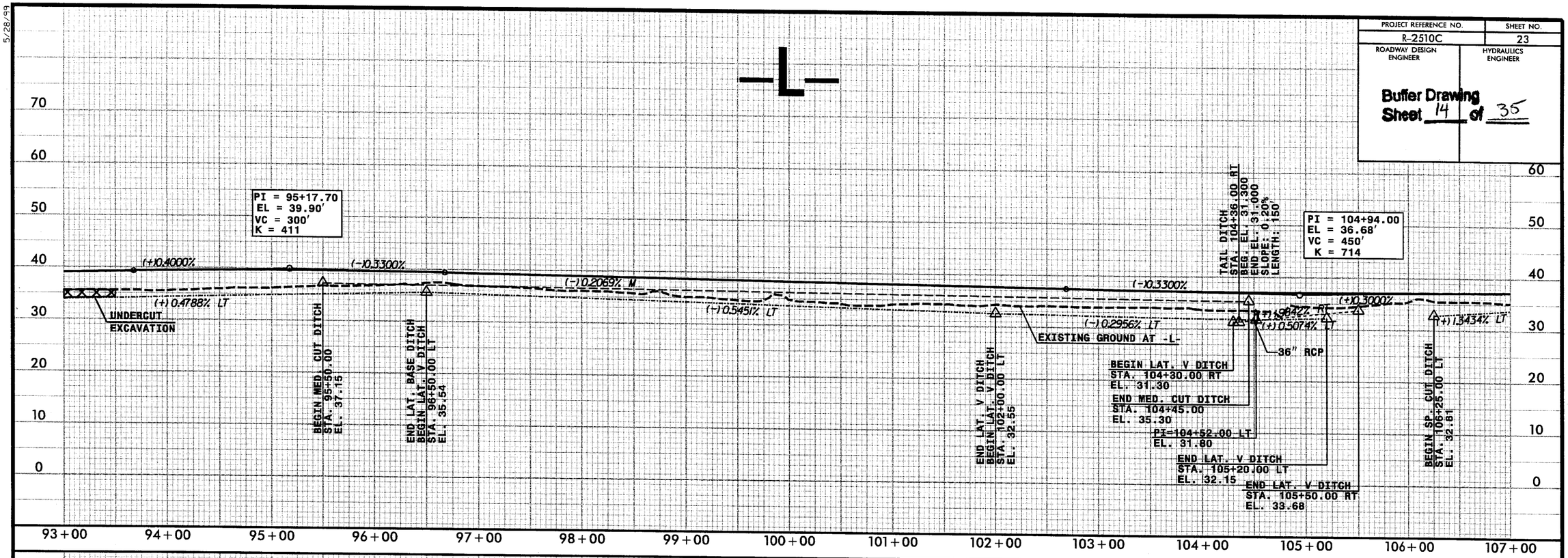
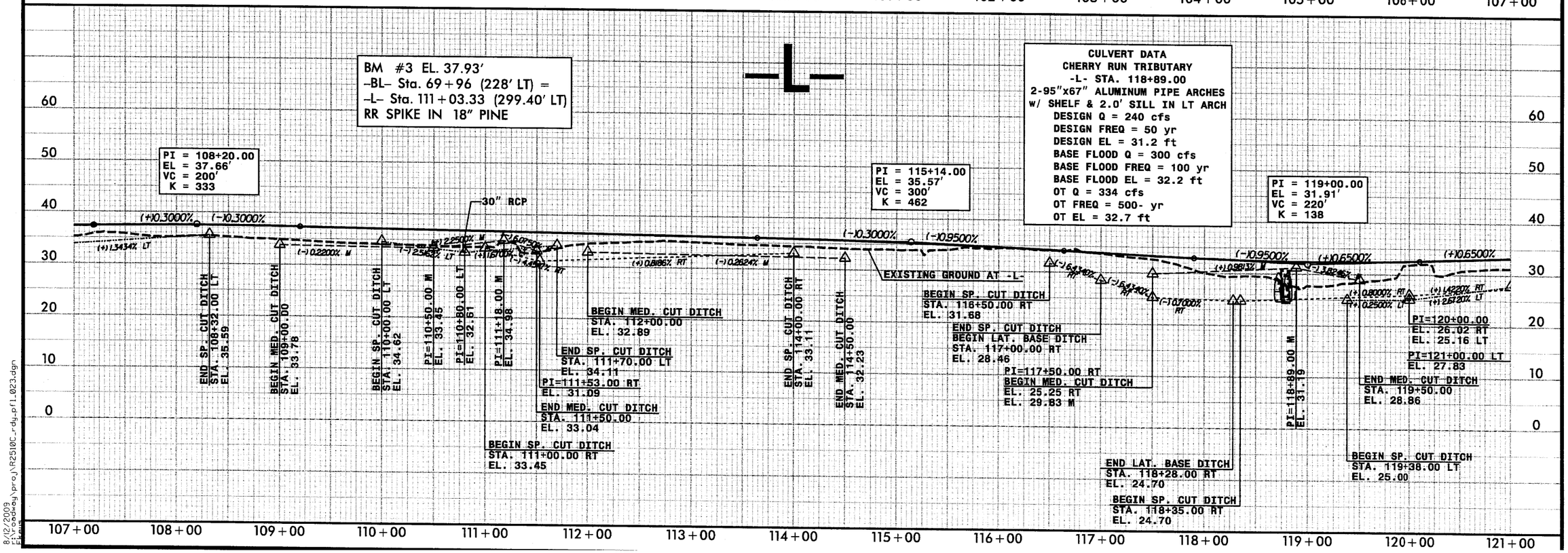
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	23
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing
Sheet 14 of 35





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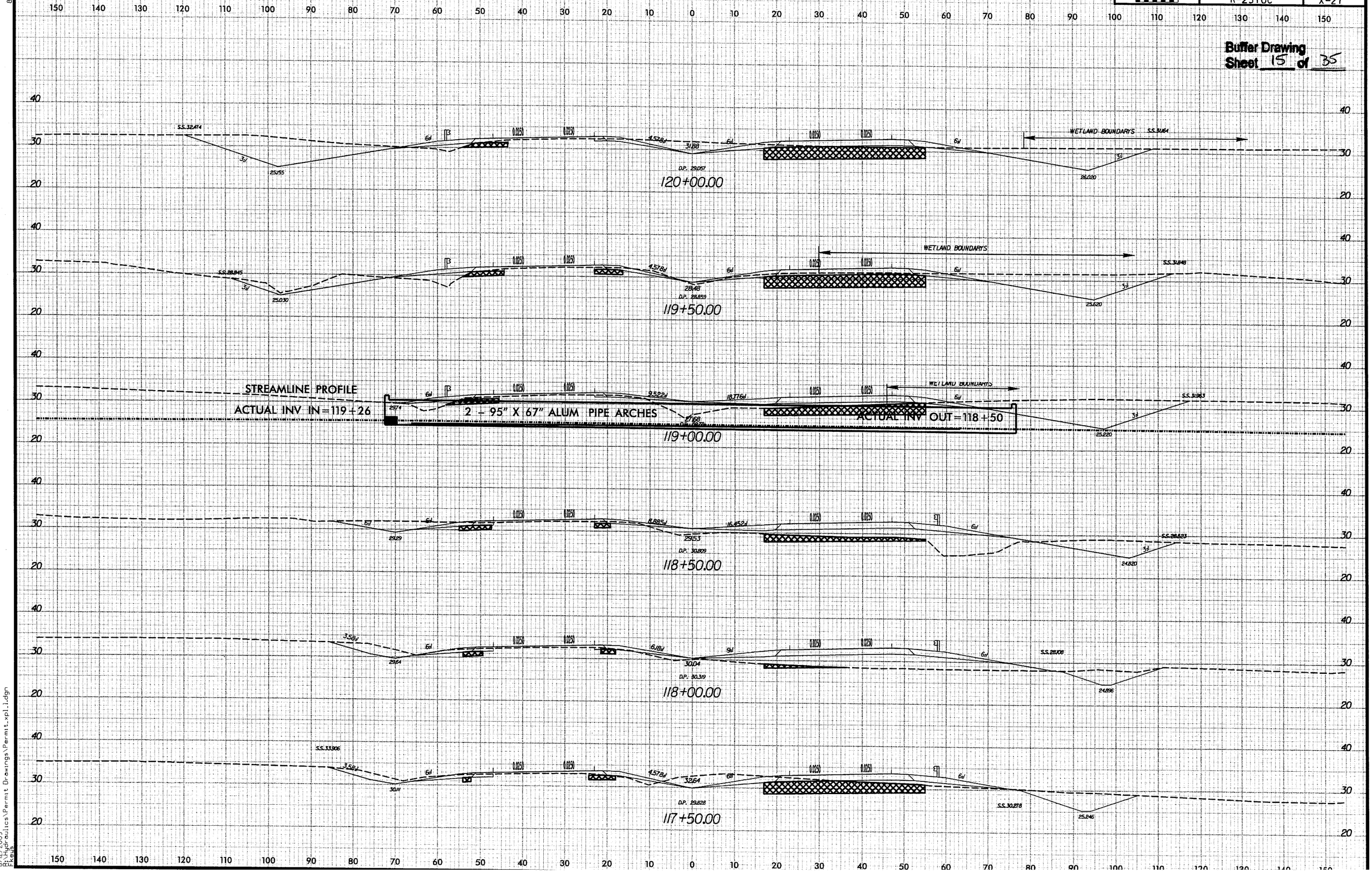

S.S. 32.474
25.55
0.0250
4.578:1
31.88
D.P. 29.057
120+00.00
WETLAND BOUNDARY'S
S.S. 31.161
28.020
S.S. 28.845
25.030
28.48
D.P. 28.859
119+50.00
S.S. 31.848
25.520
STREAMLINE PROFILE
ACTUAL INV IN = 119+26
2 - 95" X 67" ALUM PIPE ARCHES
9.522:1
18.776:1
29.74
27.68
D.P. 28.72
119+00.00
ACTUAL INV OUT = 118+50
S.S. 31.963
25.220
8.885:1
16.452:1
29.29
29.53
D.P. 30.809
118+50.00
S.S. 28.823
24.820
3.58:1
29.64
6.18:1
30.04
D.P. 30.319
118+00.00
S.S. 28.108
24.896
S.S. 33.906
30.11
32.64
D.P. 29.828
117+50.00
S.S. 30.278
25.246

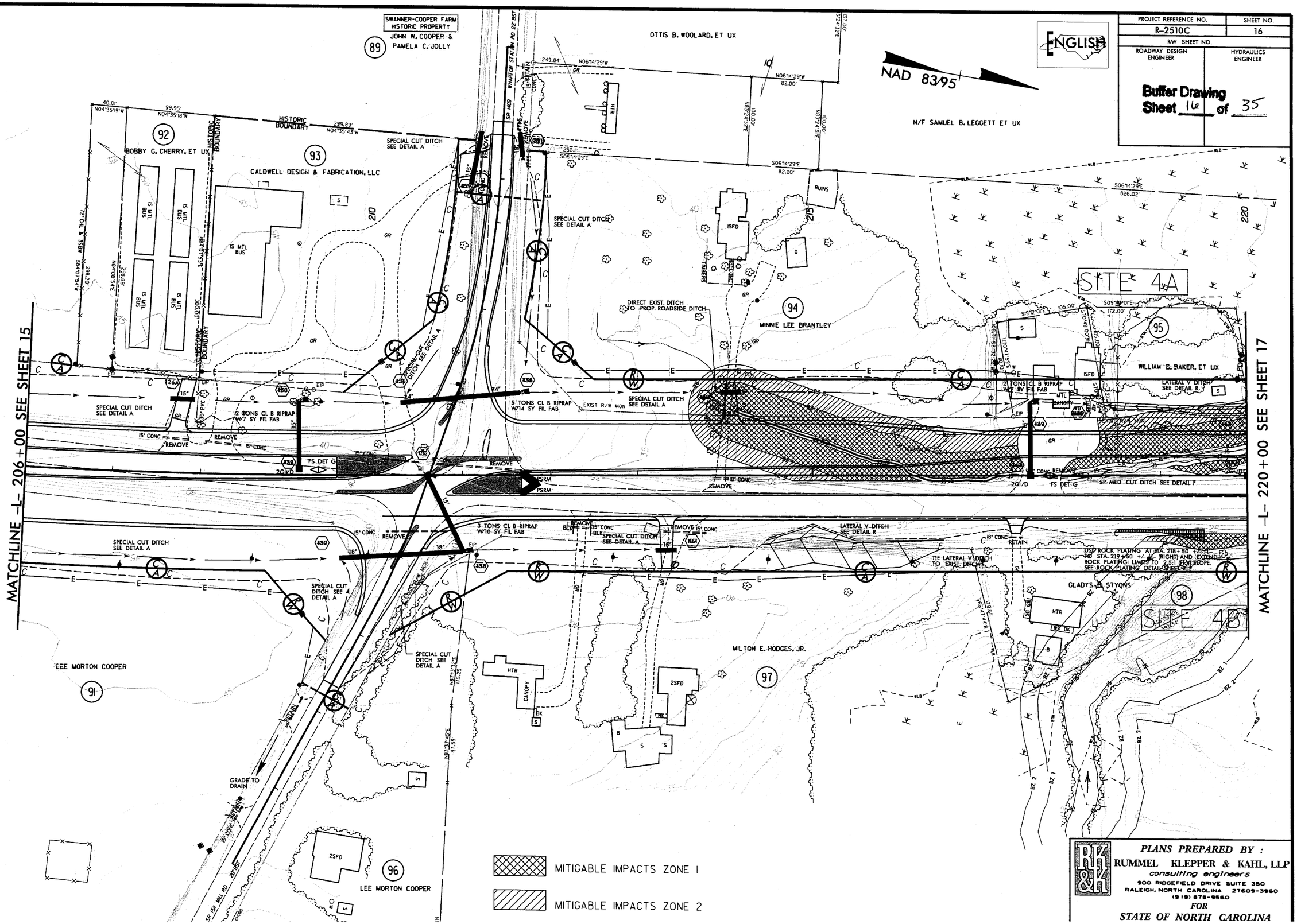
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2510C	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing Sheet 16 of 35

ENGLISH

NAD 83/95



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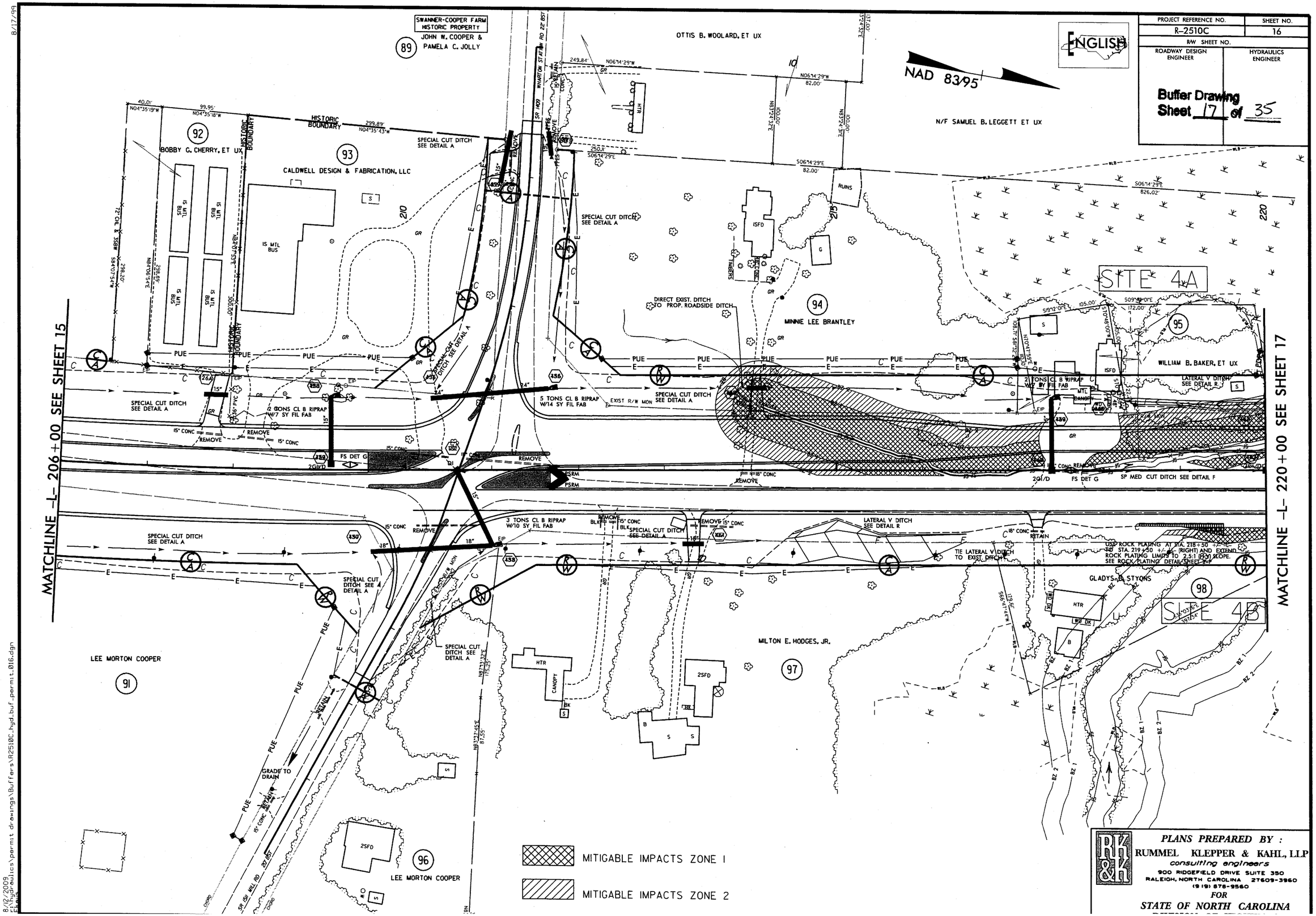
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing Sheet 17 of 35

ENGLISH

NAD 83/95



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PROJECT REFERENCE NO.	SHEET NO.
R-2510C	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing Sheet 18 of 35

ENGLISH

NAD 83/95

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

N/F SAMUEL B. LEGGETT ET UX

HAROLD W. ROBINSON, ET UX

MINNIE LEE BRANTLEY

JACK F. CHERRY

TIMOTHY W. COWARD

SITE 4A

SITE 4B

SITE 4C

SITE 4D

TAIL DITCH SEE DETAIL M

WILLIAM B. BAKER, ET UX

INV=20.10
2 TONS CL B RIPRAP
W/7 SY FIL FAB

CONC MODIFIED FLUME

2 TONS CL B RIPRAP
W/7 SY FIL FAB

SEE DETAIL F

2GI/B

3 TONS CL B RIPRAP
W/10 SY FIL FAB
INV=20.86

CPES

SP MED CUT DITCH SEE DETAIL F

2GI/D

US 17 28' BST

REMOVE

SPECIAL CUT DITCH SEE DETAIL A

RETAIN EX 18" RCP AND EXTEND INVERT IN 12' W/COLLAR EX. PIPE IN GOOD CONDITION

GLADYS B. STYONS

MILTON E. HODGES, JR.

THE ASSEMBLY OF THE CHILDREN OF GOD CHRISTIAN CHURCH

BIG SWAMP RURITAN CLUB

EASEMENT FOR BIG SWAMP RURITAN CLUB

MATCHLINE -L- 220+00 SEE SHEET 16

MATCHLINE -L- 234+00 SEE SHEET 18

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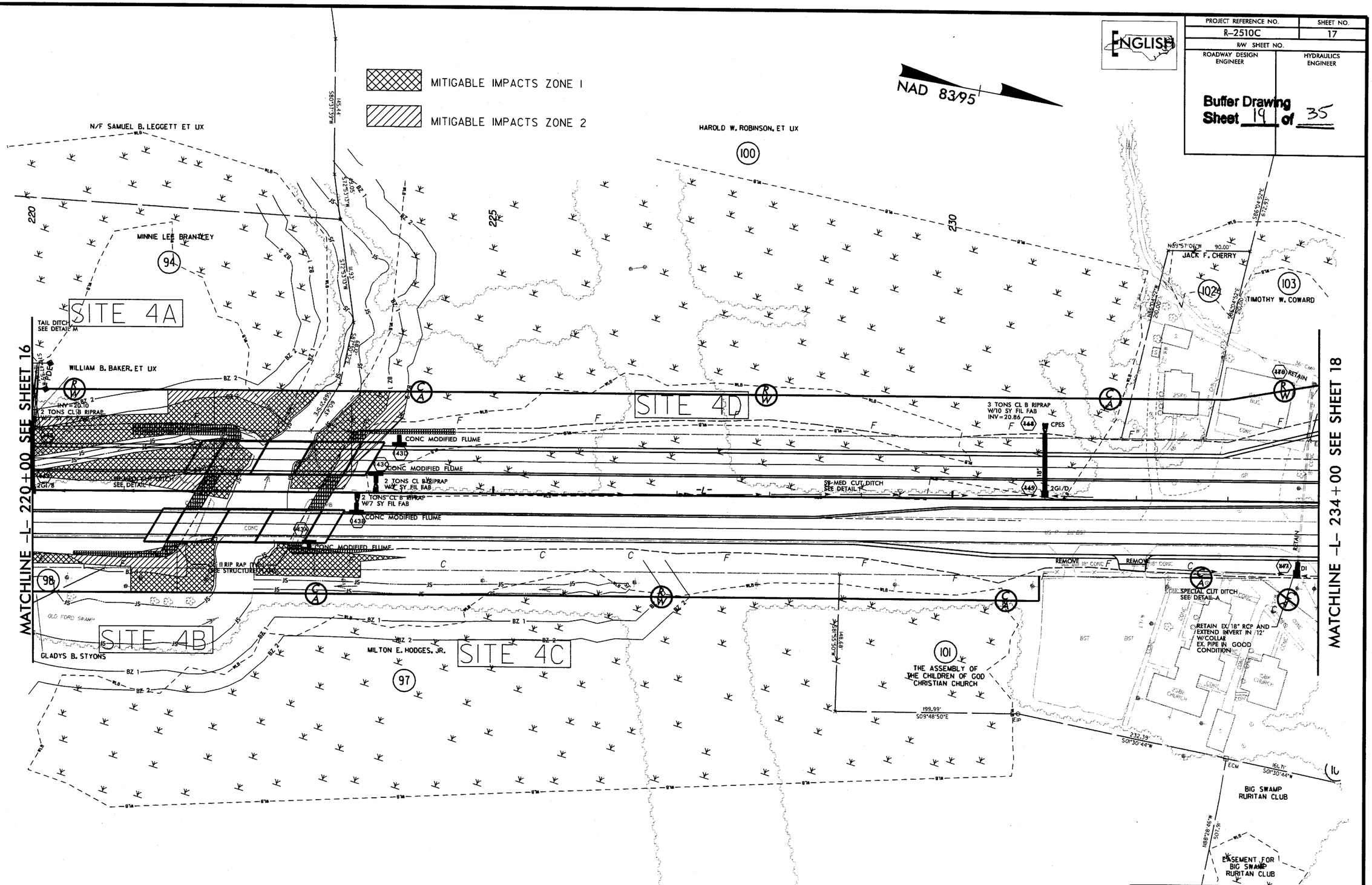
Ekenia

PROJECT REFERENCE NO.	SHEET NO.
R-2510C	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ENGLISH

Buffer Drawing Sheet 19 of 35



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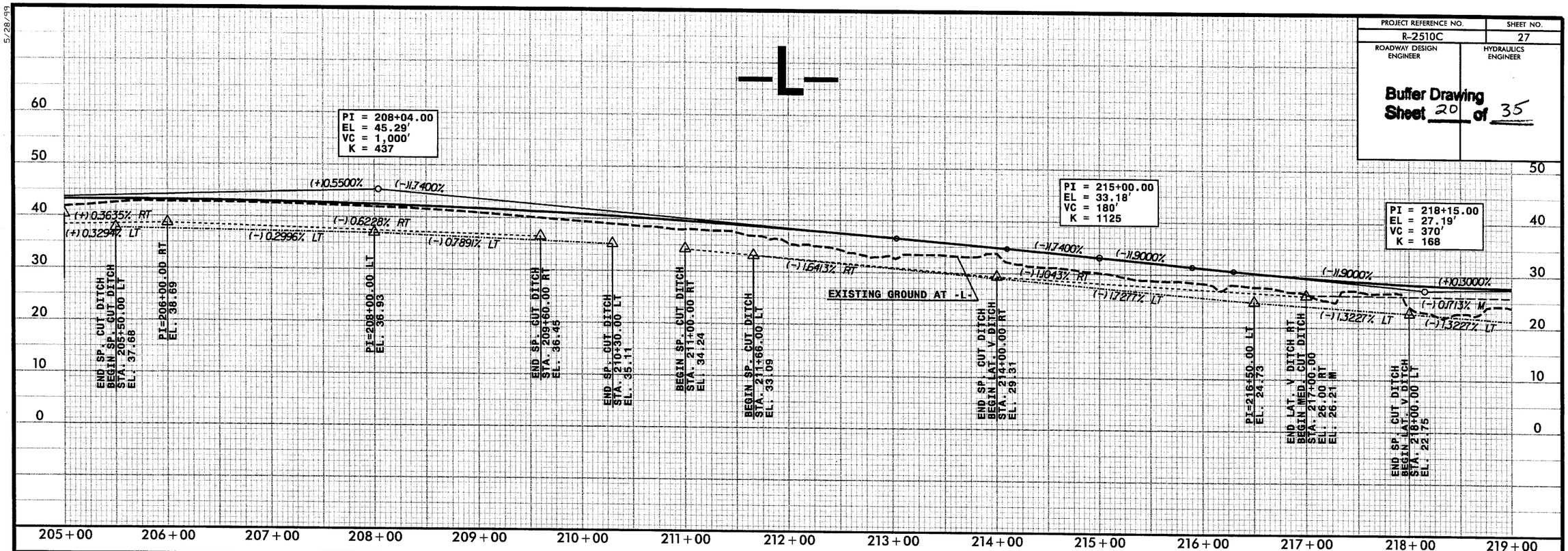
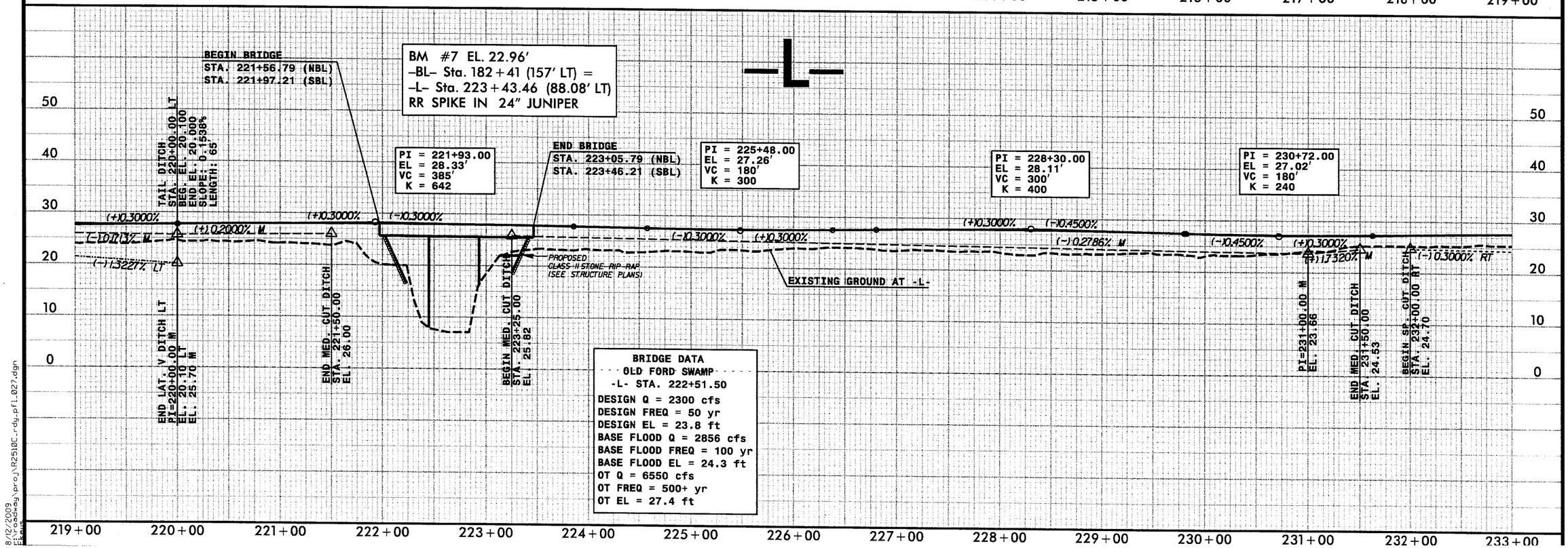
FIEGNS

PROJECT REFERENCE NO.	SHEET NO.
R-2510C	27
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing
Sheet 20 of 35





5/28/99

8/12/2009
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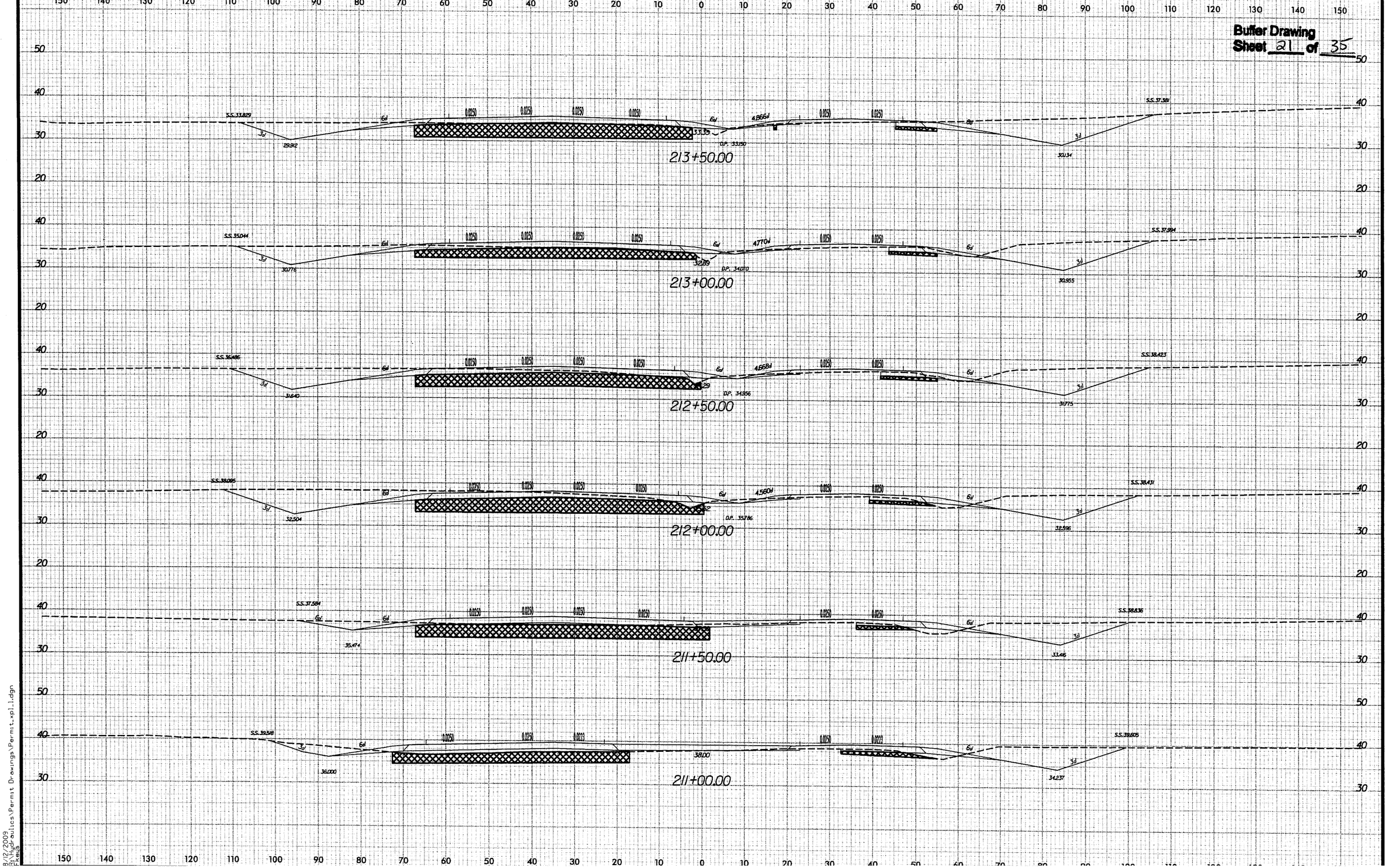
Ekins

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2510C	X-58

Buffer Drawing
Sheet 21 of 35



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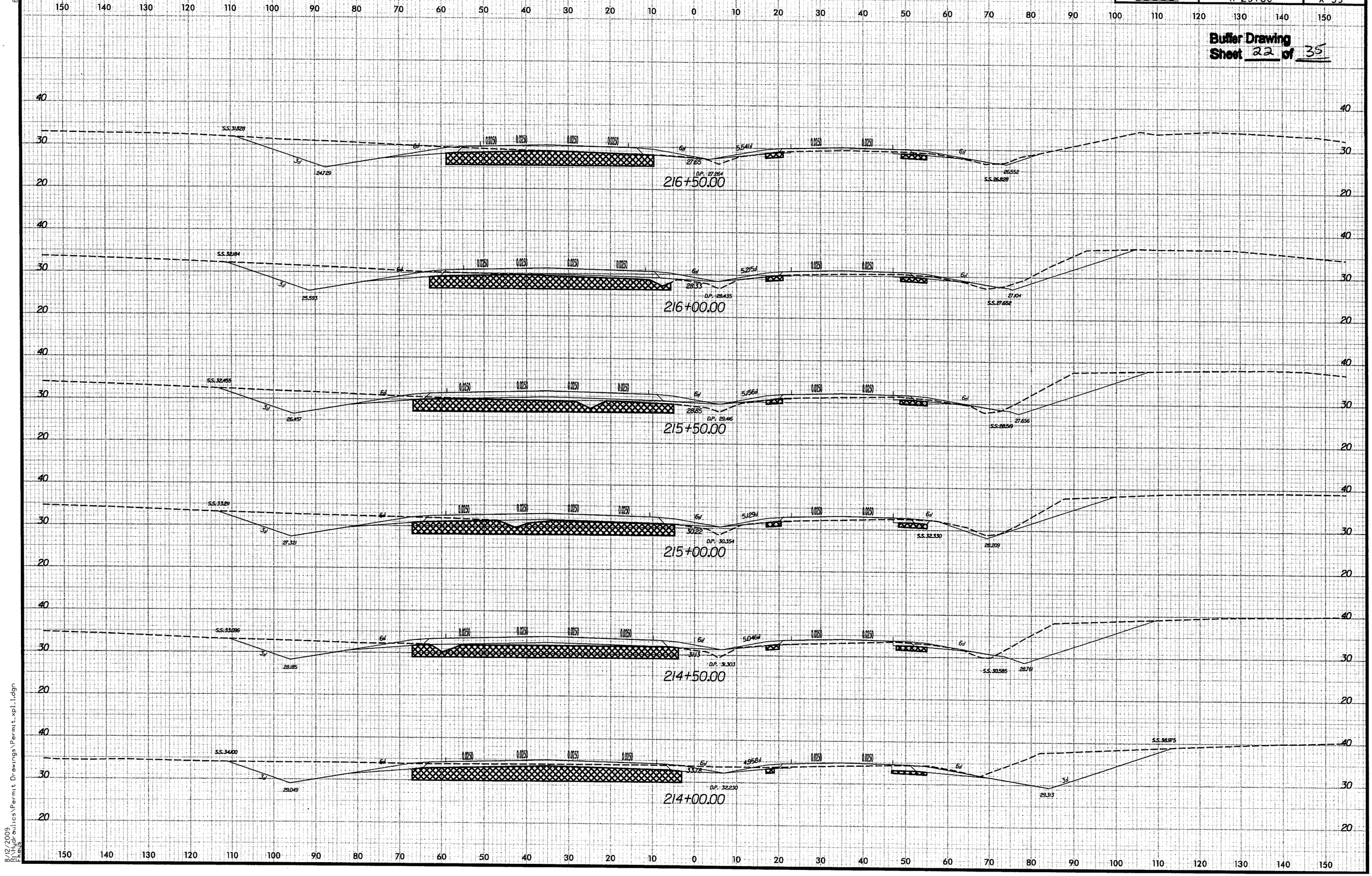
Pfeiffer

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-59

0 5 10

Buffer Drawing
Sheet 22 of 35



8/12/2009
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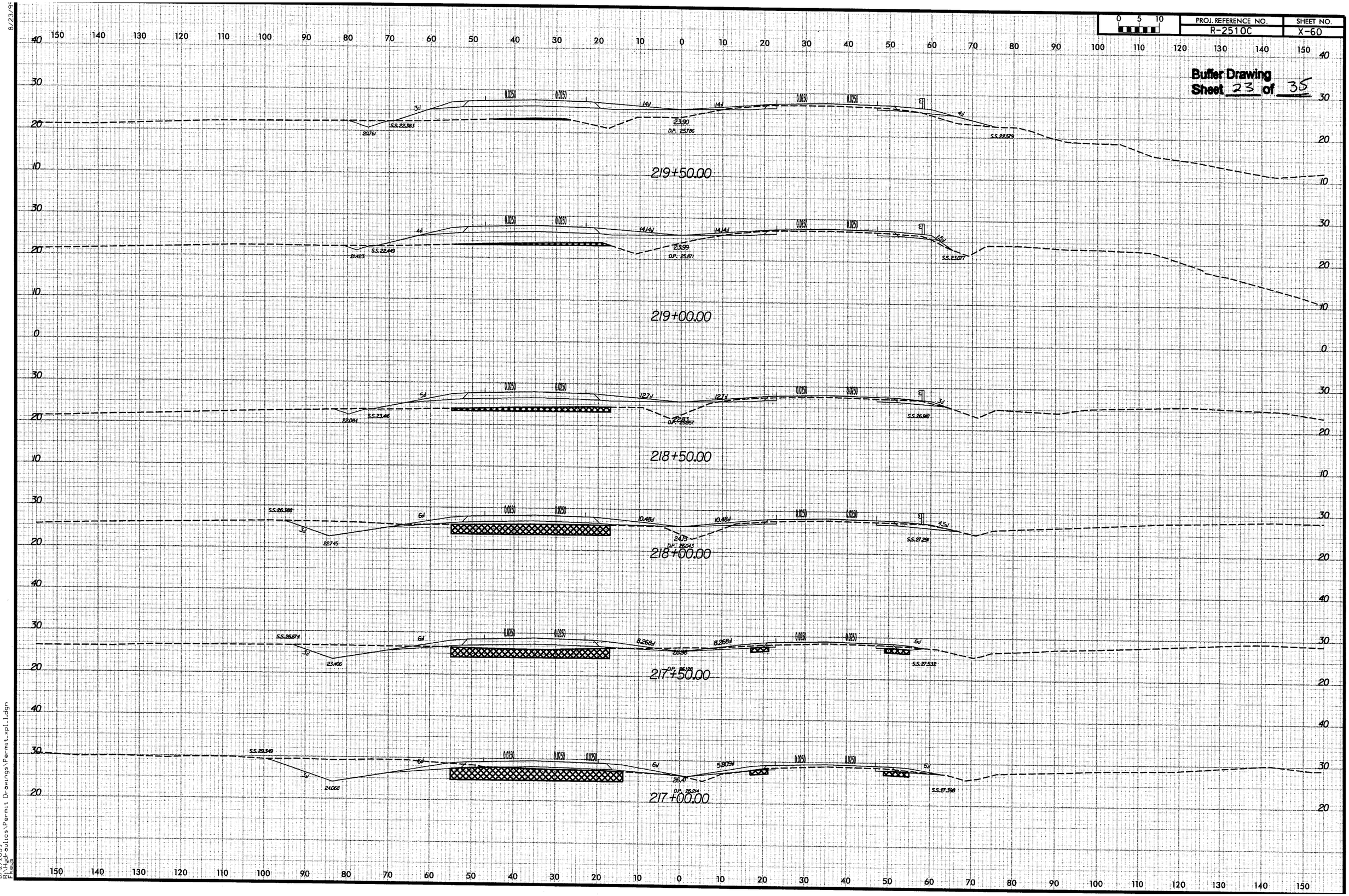
Lewis

8/23/95

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2510C	X-60

Buffer Drawing
Sheet 23 of 35



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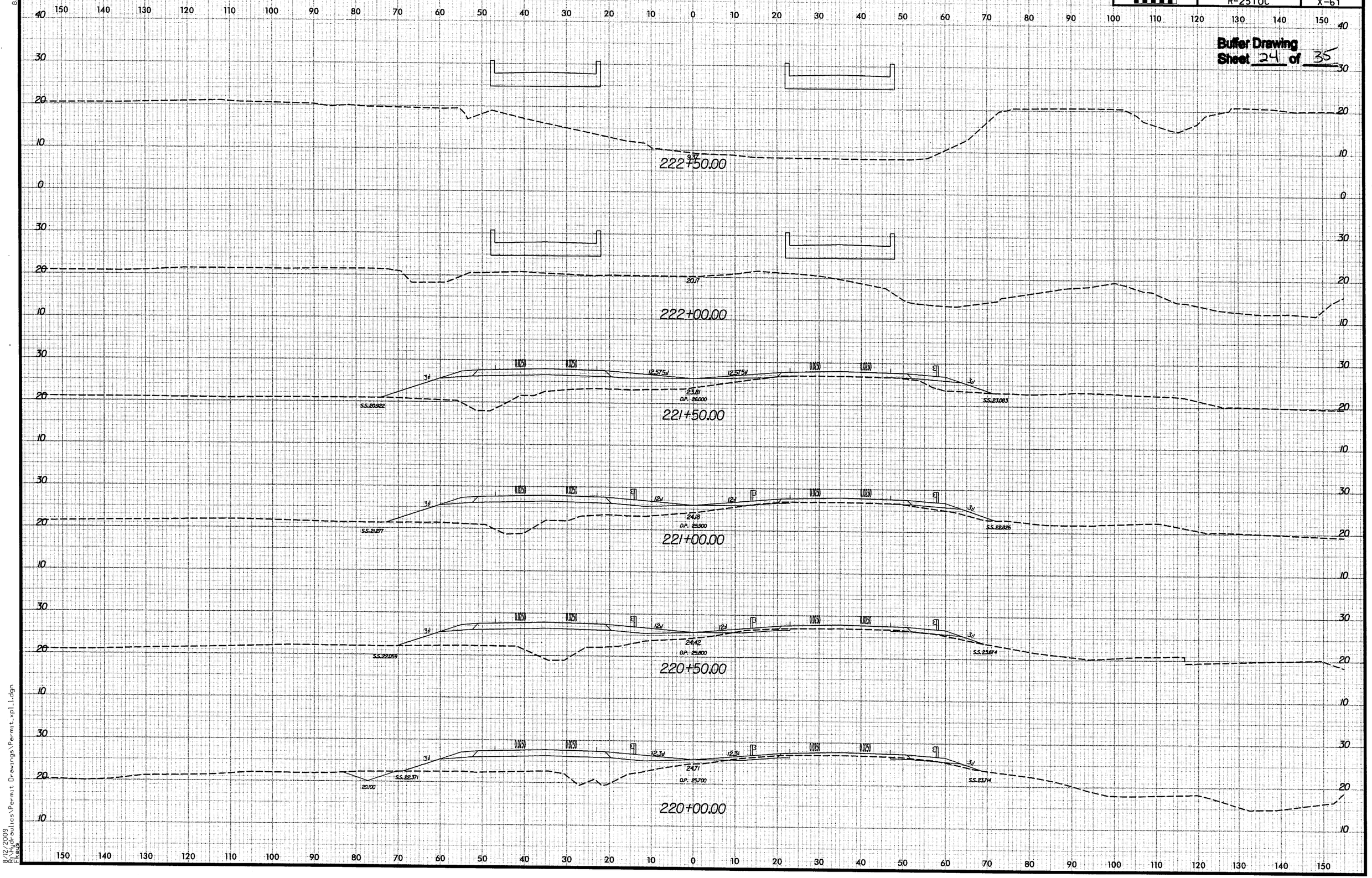
rkeels

Buffer Drawing
Sheet 24 of 35



8/23/99

8/12/2009
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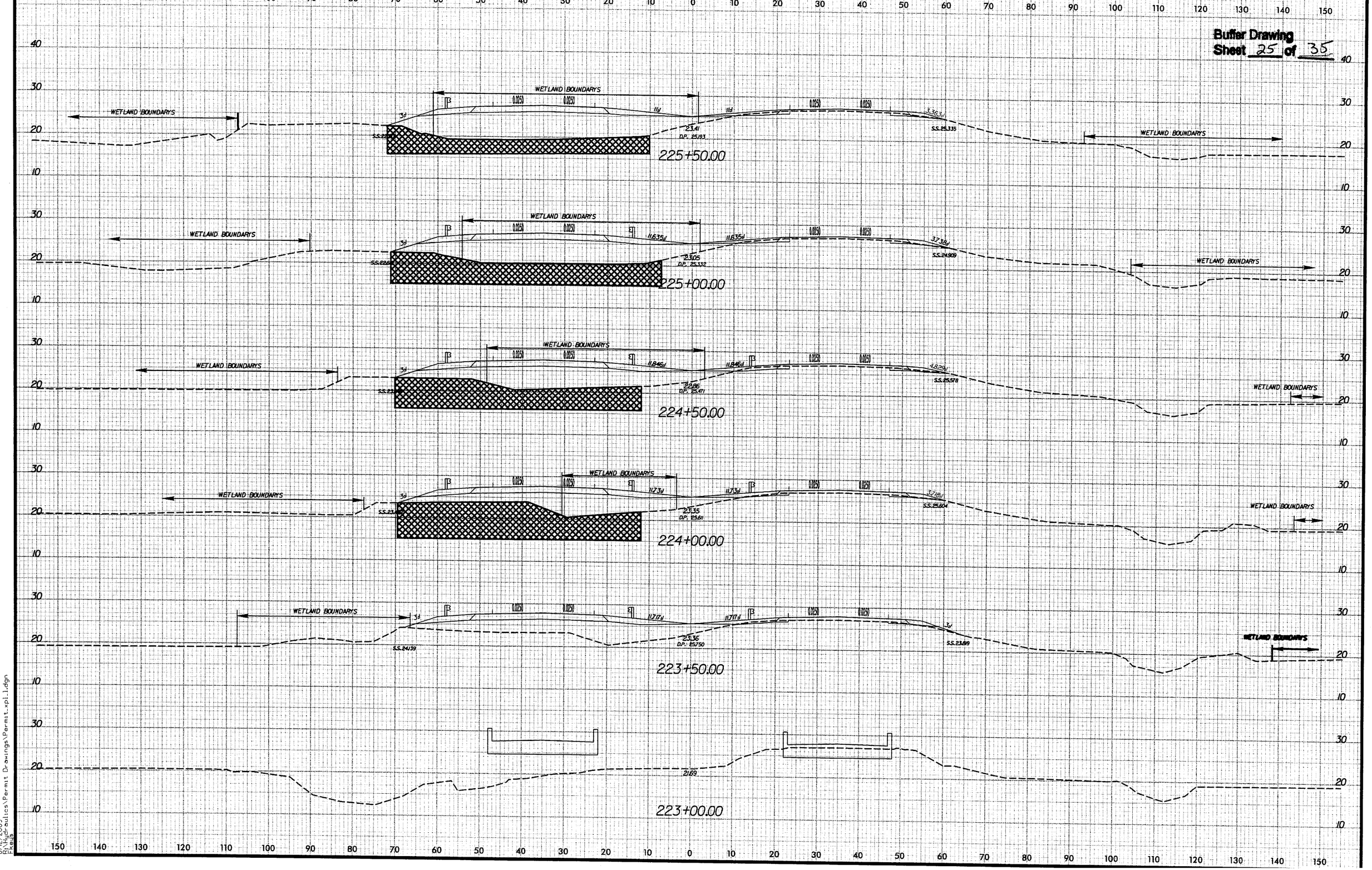
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2510C	X-62

Buffer Drawing
Sheet 25 of 35



8/12/2009
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Fkeels

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2510C	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing
Sheet 26 of 35

ENGLISH

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

NAD 83/95

NO WETLANDS; ONLY BUFFERS

SITE 5C

SITE 5A

KEVIN E. SOYD

57 TONS CL I RIPRAP W/104 SY FIL FAB RIPRAP ON BANKS ONLY

-Y9- +17.00 44.00' RT, 30' RT. 6'-7" X 5'-11" ALUMINUM PIPE ARCH

TIE PROP. FENCE TO FILL SLOPE (STD. 866.02)

-Y9- +67.00 54.00', 30.00' RT.

TIE PROP. FENCE TO HW (STD. 866.02)

ARAH BELL GAUTIER CARRAWAY

108

250

255

260

ROBINSON, et al

116

117

DOROTHY ROBERSON ROBINSON, et al

LEVEL SPREADER SEE DETAIL E

SPECIAL CUT DITCH SEE DETAIL A

NO OUTLET RIPRAP IN LEVEL SPREADER

11 TONS CL B RIPRAP W/28 SY FIL FAB RIPRAP ON BANKS ONLY

WILLIE MCDONALD GAUTIER

S22°57'40"E 200.00'

118A

SPECIAL CUT DITCH SEE DETAIL A

LEVEL SPREADER SEE DETAIL E

SP MED CUT DITCH SEE DETAIL F

REMOVE

2 TONS CL B RIPRAP W/7 SY FIL FAB

MATCHLINE -L- 248+00 SEE SHEET 18

MATCHLINE -L- 262+00 SEE SHEET 20

MCDONALD GAUTIER

112

R5.00'

S22°17'40"E

5.00'

S22°17'46"E

N22°17'39"W 50.00'

113

SHIRLEY ANN G. ELROD, ET AL

200.00'

111

MCDONALD GAUTIER, W. ET AL

32.01

32.20

SCRUB

MAXWELL P. CHESNUTT FAMILY TRUST

114

JOSEPH E. PERRY, JR.

115

JOSE

265.00'

S26°00'23"E

SCRUB

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FOR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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mcook

PROJECT REFERENCE NO.	SHEET NO.
R-2510C	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing
Sheet 27 of 35

ENGLISH

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

NAD 8395

NO WETLANDS; ONLY BUFFERS

SITE 5C

SITE 5A

KEVIN E. BOYD

ARAH BELL GAUTIER CARRAWAY

108

WILLIE MCDONALD GAUTIER

118A

DOROTHY ROBERSON ROBINSON, et al

116

117

DOROTHY ROBERSON ROBINSON, et al

MCDONALD GAUTIER III, ET UX

112

SHIRLEY ANN G. ELROD, ET AL

113

MCDONALD GAUTIER, III, ET AL

111

MAXWELL P. CHESNUTT FAMILY TRUST

114

JOSEPH E. PERRY, JR.

115

MATCHLINE -L- 248+00 SEE SHEET 18

MATCHLINE -L- 262+00 SEE SHEET 20

57 TONS CL I RIPRAP W/104 SY FIL FAB RIPRAP ON BANKS ONLY

-Y9- +17.00 44.00' RT, 30' RT. 8'-7" X 5'-11" ALUMINUM PIPE ARCH

TIE PROP. FENCE TO FILL SLOPE (STD. 866.02)

-Y9- +67.00 54.00', 30.00' RT.

TIE PROP. FENCE TO HW (STD. 866.02)

11 TONS CL B RIPRAP W/29 SY FIL FAB RIPRAP ON BANKS ONLY

2 TONS CL B RIPRAP W/7 SY FIL FAB

SPECIAL CUT DITCH SEE DETAIL A

LEVEL SPREADER SEE DETAIL E

SP MED CUT DITCH SEE DETAIL F

NO OUTLET RIPRAP IN LEVEL SPREADER

REMOVE

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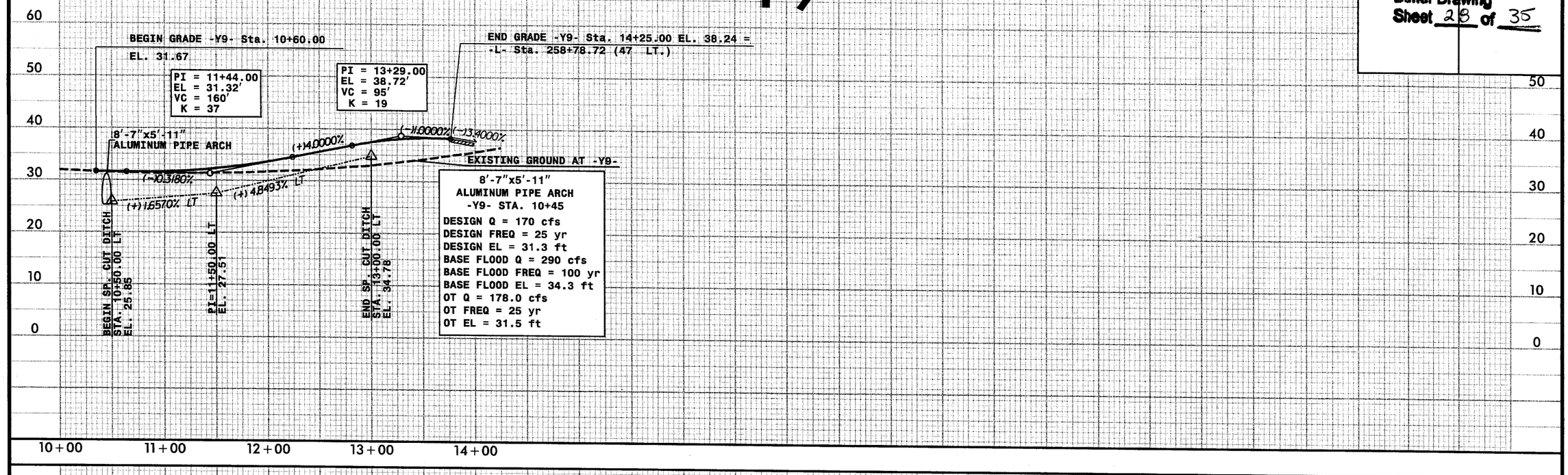
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	33
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing
Sheet 28 of 35

-Y9-



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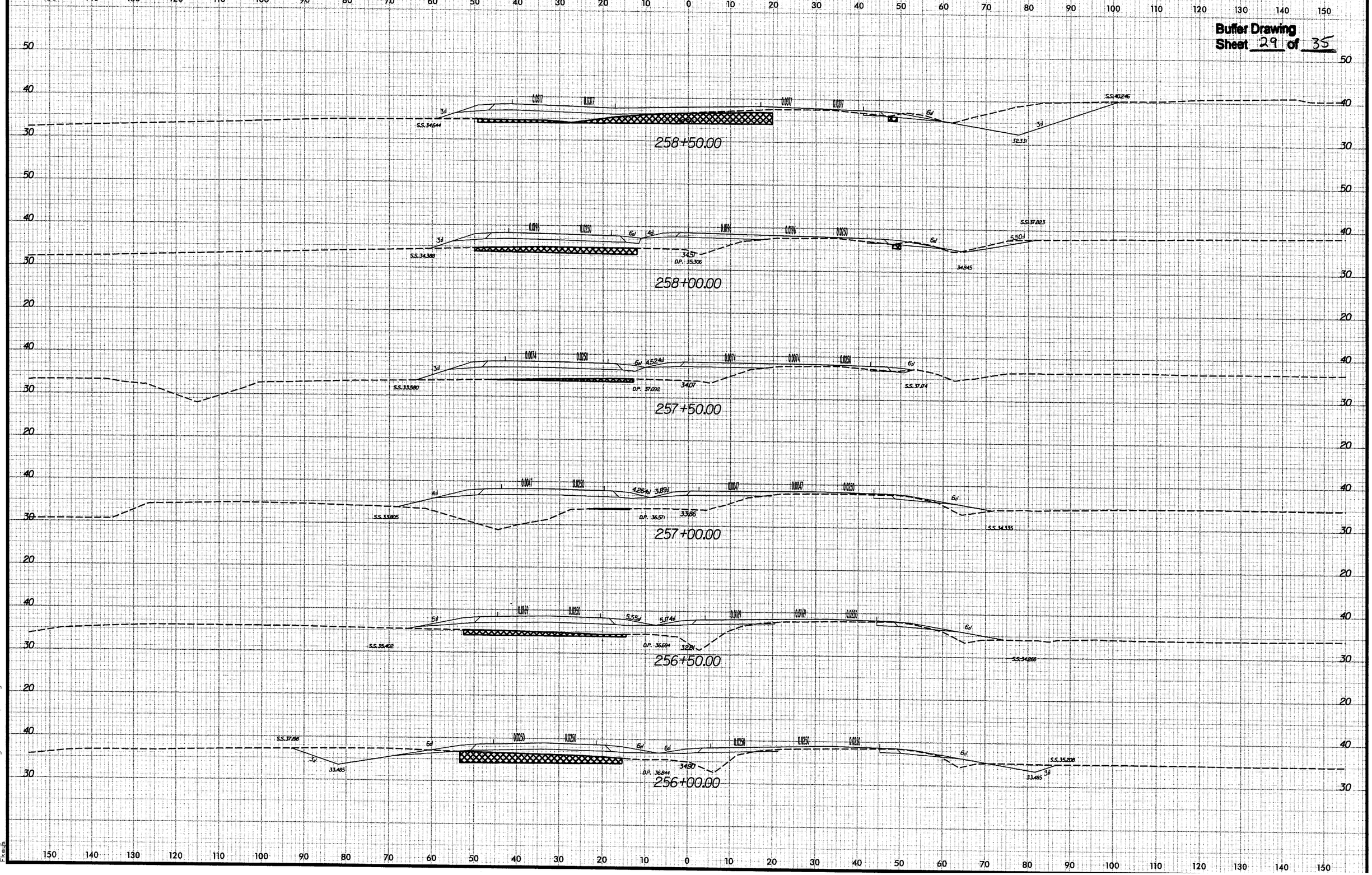
Ekaus

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2510C	X-73

Buffer Drawing
Sheet 29 of 35



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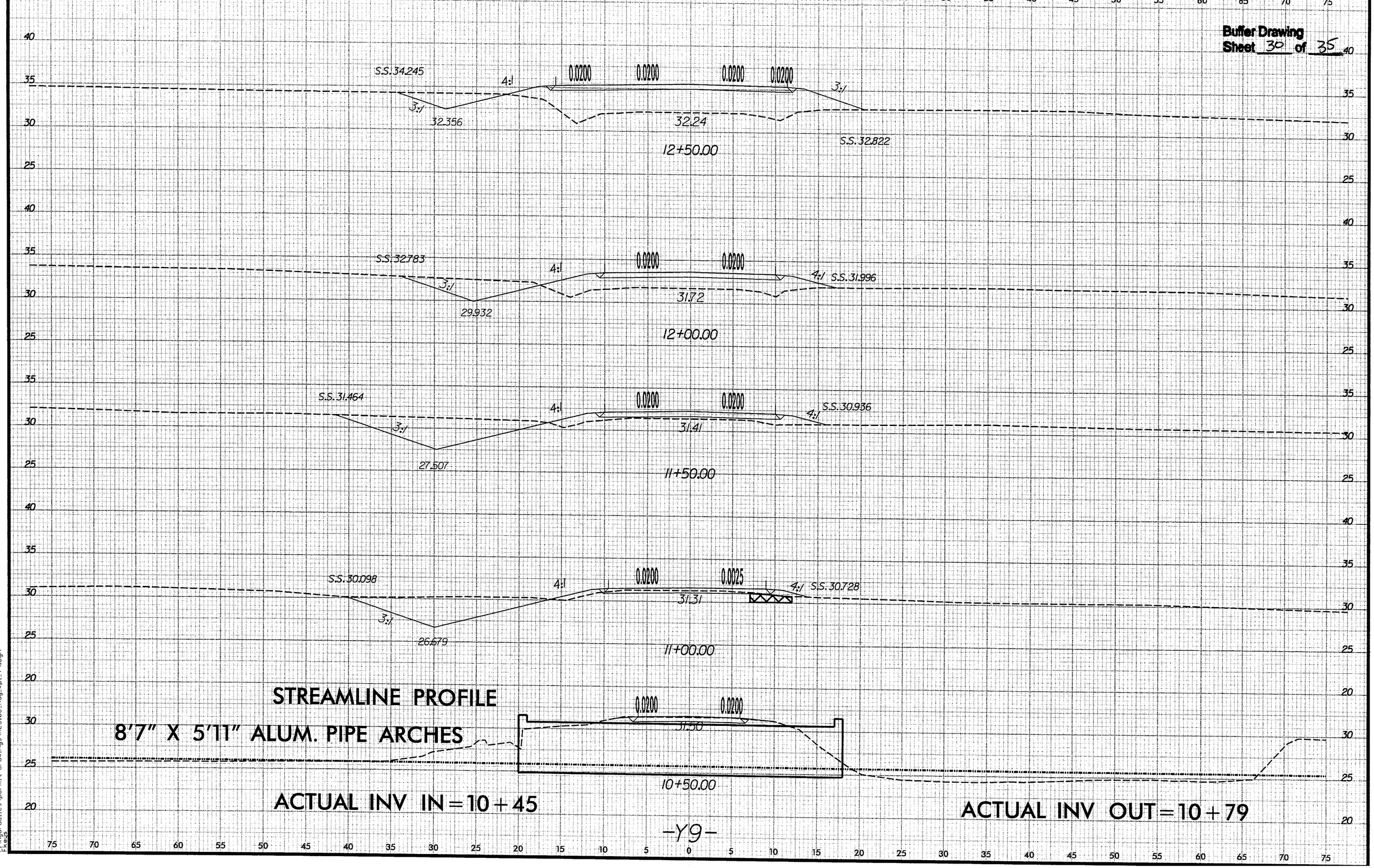
PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-90

0 2.5 5

Buffer Drawing
Sheet 30 of 35



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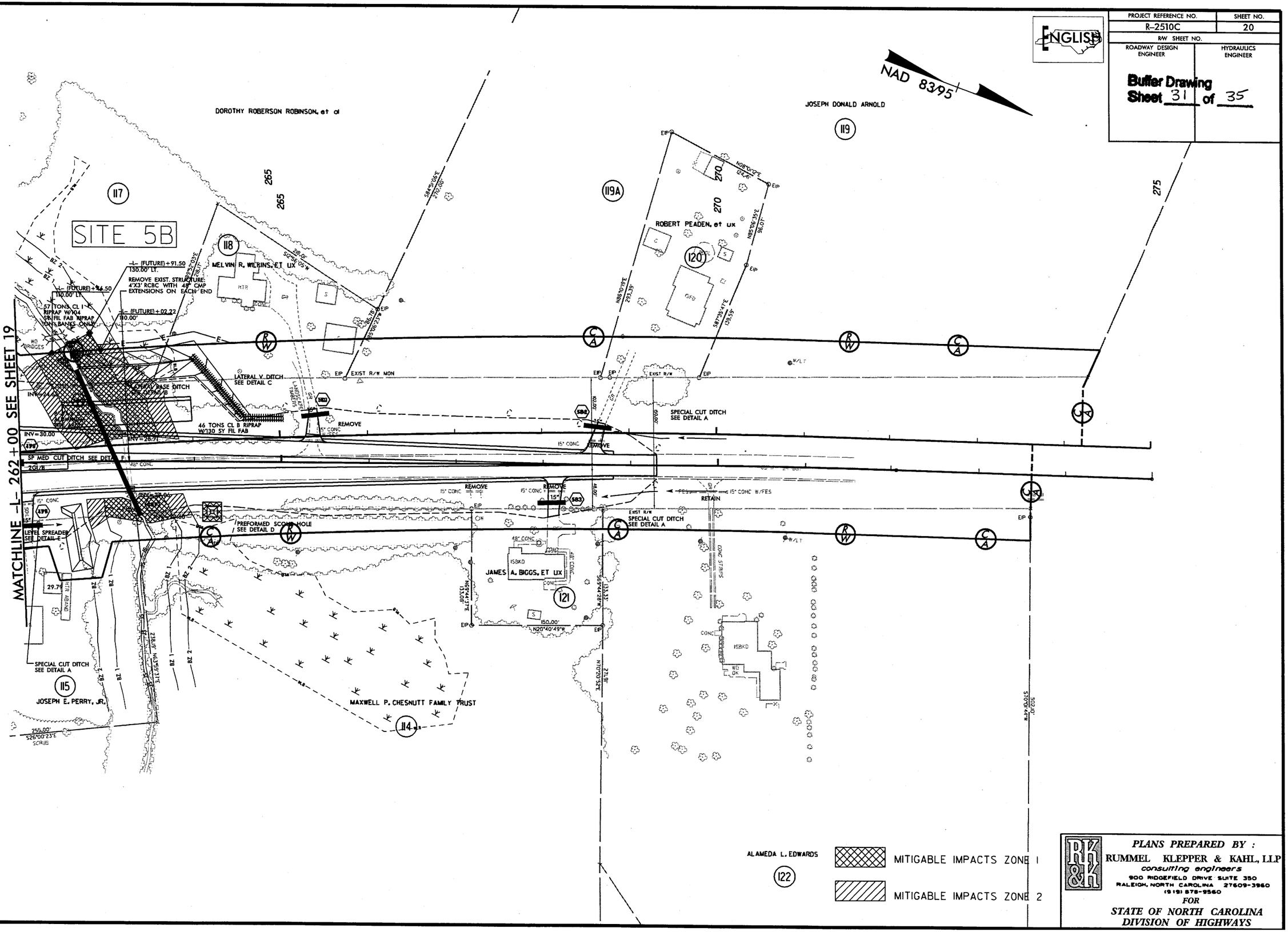
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing Sheet 31 of 35



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FOR
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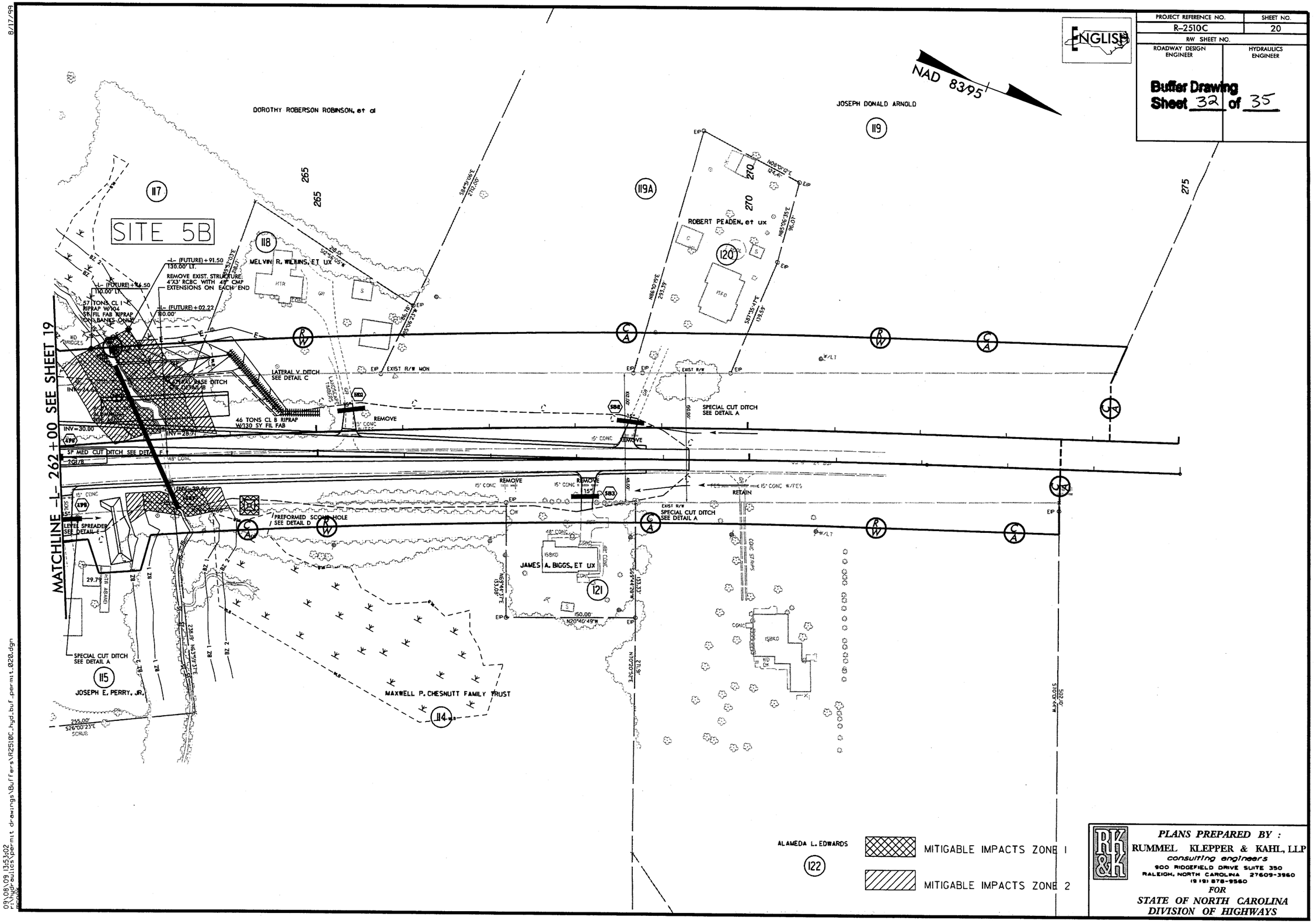
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing
Sheet 32 of 35



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FOR
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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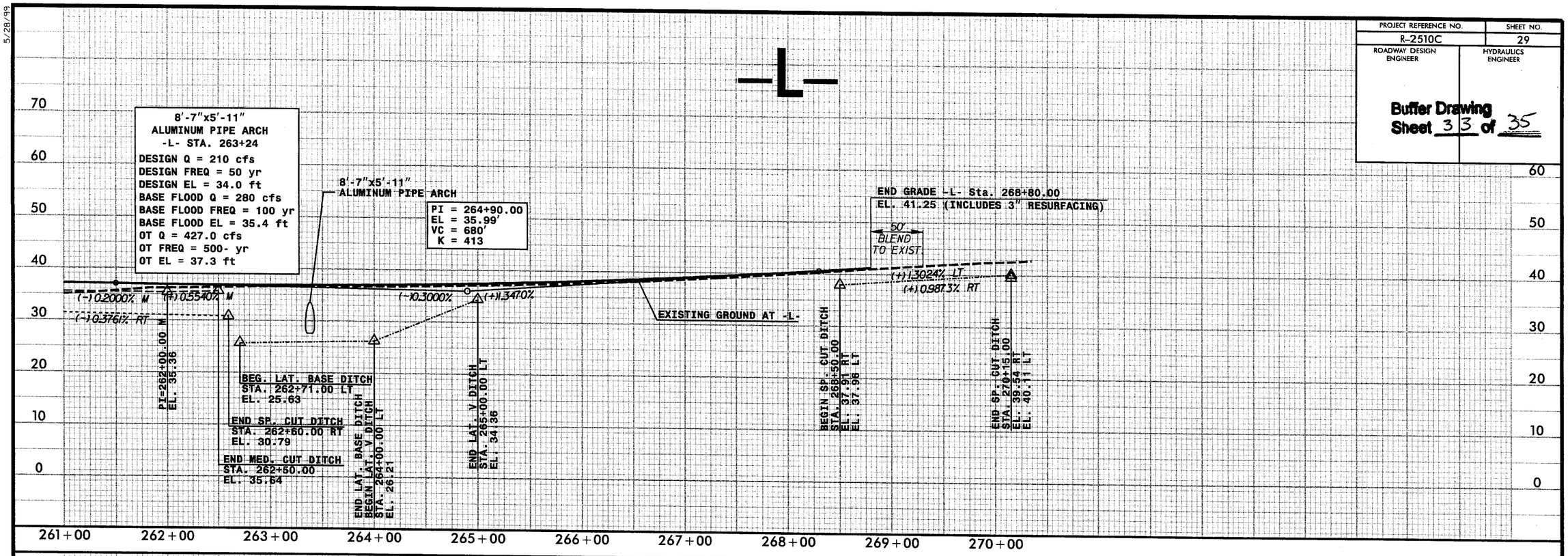
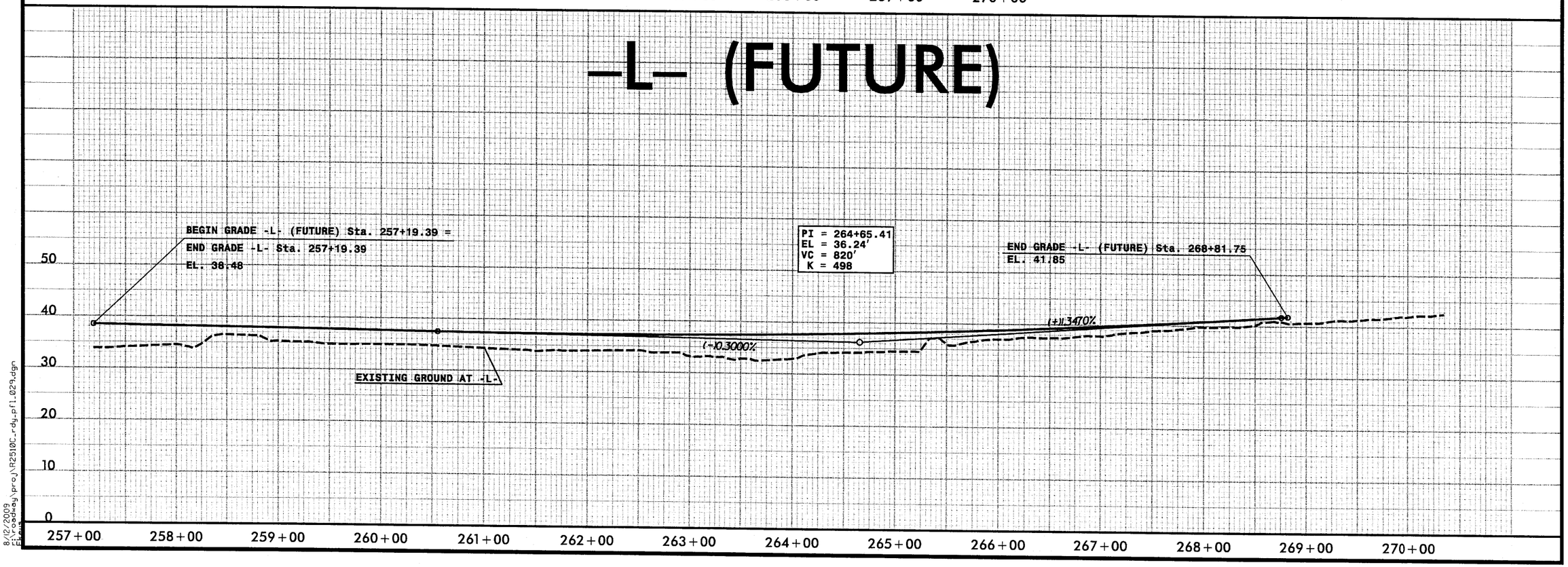
PROJECT REFERENCE NO.	SHEET NO.
R-2510C	29
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Buffer Drawing
Sheet 33 of 35





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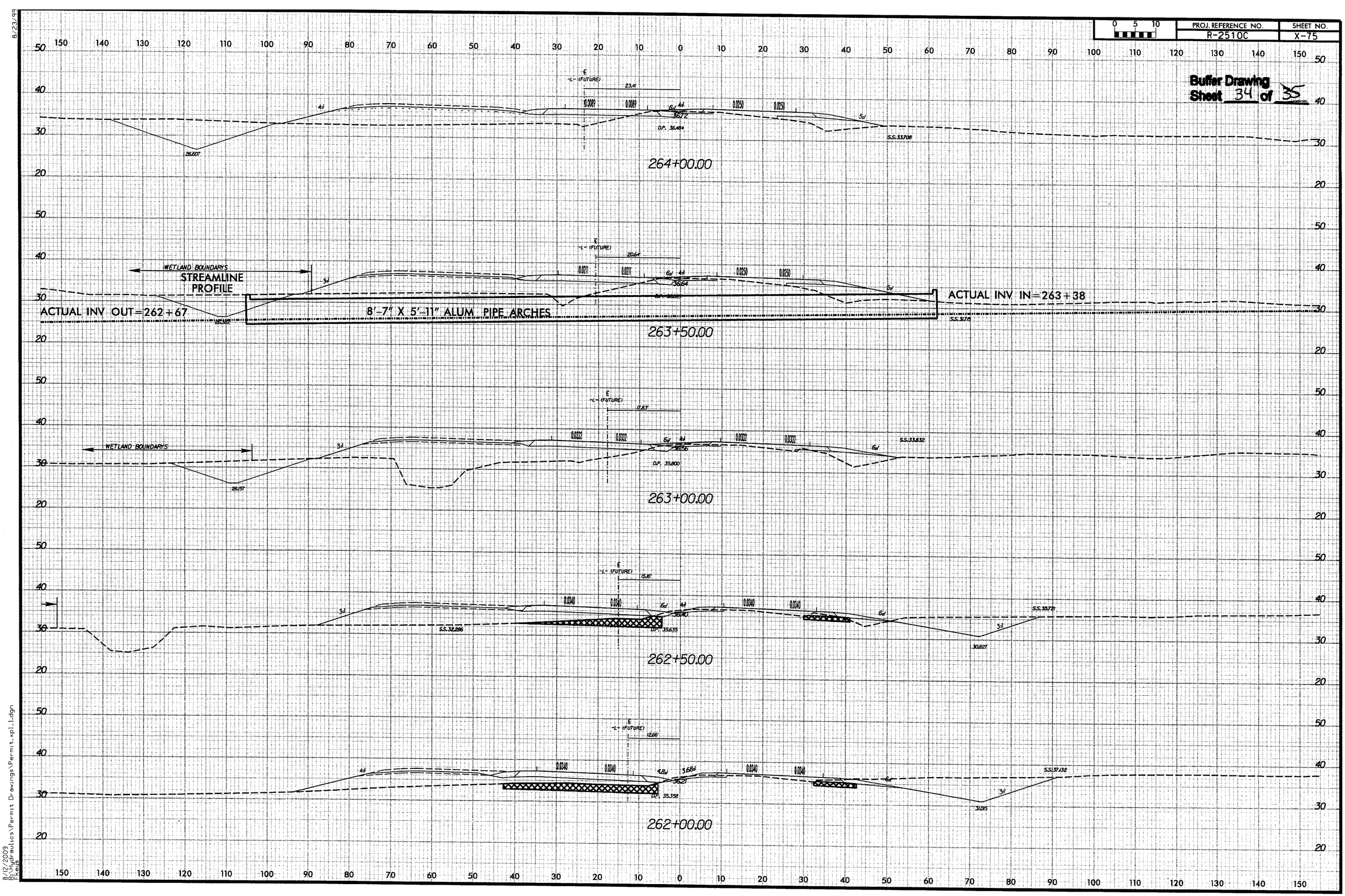
PROJ. REFERENCE NO.
R-2510C
SHEET NO.
X-75
Buffer Drawing
Sheet 34 of 35
264+00.00
263+50.00
263+00.00
262+50.00
262+00.00
WETLAND BOUNDARY'S
STREAMLINE PROFILE
ACTUAL INV OUT=262+67
ACTUAL INV IN=263+38
8'-7" X 5'-11" ALUM. PIPE ARCHES
-L- (FUTURE)
D.P. 36.484
D.P. 36.800
D.P. 35.635
D.P. 35.358
S.S. 33.708
S.S. 33.832
S.S. 32.286
S.S. 35.172
S.S. 37.132
26.60'
26.57'
30.827'
30.015'
8/12/2009
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F.Keels

PROJ. REFERENCE NO.	SHEET NO.
R-2510C	X-76

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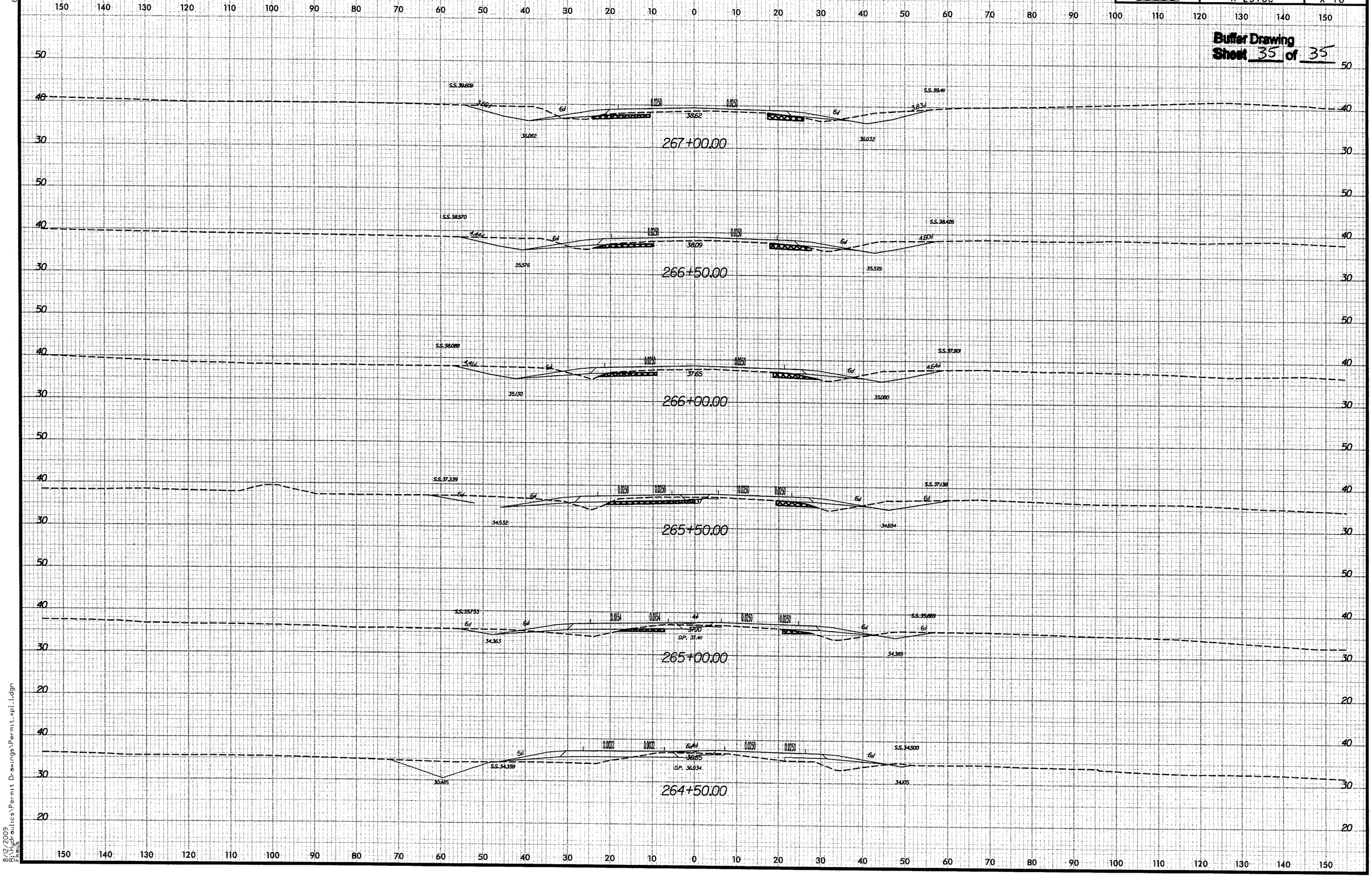
Buffer Drawing
Sheet 35 of 35



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8/12/2009
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kelb