PUBLIC NOTICE

(Supplemental)

US Army Corps
Of Engineers
Wilmington District

Issue Date:
September 2, 2005
Comment Deadline: October 3, 2005
Corps Action ID #: 200530393

All interested parties are herby advised that the Wilmington District, Corps of Engineers (Corps) has received an application for work within jurisdictional waters of the United States. Specific plans and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at www.saw.usace.army.mil/wetlands

Applicant:

Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA
NC Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Authority

The Corps will evaluate this application and a decide whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures of Section 404 of the Clean Water Act (33 U.S.C. 1344).

Location

The proposed project involves the widening of 10.9 miles of US Highway 601 from the South Carolina State Line to north of SR 2105 (Marion Lee Road) southeast of Monroe, Union County, North Carolina. The project would cross Wicker Branch, Cowpens Branch, Lanes Creek, Mill Creek and unnamed tributaries. The project is located in central Union County at approximately 34.8912 degrees north latitude and 80.4604 degrees west longitude and is in the Yadkin River Basin, Hydrologic Unit 03040105.

Background

On August 31 2004, the Federal Highway Administration and the NC Department of Transportation (NCDOT) completed a Reevaluation of Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the proposed project, designated as TIP R-2616 A/B. The Corps of Engineers issued an initial public notice for this project on December 13, 2004. The public notice described potential impacts to surface waters and wetlands from two construction alternatives, "Symmetrical Widening" and "Best Fit Widening" that were being

considered. With input from this public review process, the NEPA/404 Merger Team selected the "Best Fit Widening" alternative as the Least Environmentally Damaging Practicable Alternative (LEDPA).

Applicant's Stated Purpose

The purpose of the proposed project, as stated in the reevaluation of the EA, is to improve highway safety on US Highway 601 and increase the capacity of the facility.

Project Description and Existing Conditions

The following description of the proposed work is taken from data provided by the applicant. The proposed work will widen US Highway 601 from approximately 500 feet north of the South Carolina State Line to approximately 2200 feet north of SR 2105 (Marion Lee Road) at the existing four-lane roadway, a total distance of 10.9 miles. The existing two-lane road will be widened to a four-lane, median divided roadway with shoulders. Travel lanes will be 12 feet wide and will be separated by a 46-foot wide, grassed median. Shoulders will be 10 feet wide, 4 feet of which will be paved. Directional crossovers with median u-turns will be placed at major intersections along the length of the project. Hills will be graded to improve site distances. Partial control of access will also be included to further improve roadway safety. Additional right-of-way and the relocation of homes and businesses will be required for the proposed widening. Representative plans of the proposed work are included with this public notice. A complete set of project plans is available on the Wilmington District Web Site.

Aquatic resources to be impacted by the project include perennial streams, intermittent channels, wetlands and ponds. A total of 0.15 acres of wetlands will be impacted by filling and mechanized clearing activities at five sites ranging in size from 0.01 to 0.04 acres. Wetland types that will be impacted included palustrine forested, deciduous systems that are seasonally flooded. There are also small areas of palustrine scrub shrub and emergent marsh dominated by early-successional vegetation. These wetlands are generally found within floodplains and on the riparian margins of streams. Wetland vegetation includes sweet gum, green ash, red maple, willow oak, black willow, tag alder, Chinese privet, cattail, wool-grass and soft rush. A total of 2969 linear feet of stream channel will be impacted by culvert installation, pipe extension or channel relocation at fifteen sites. Individual channel impacts range from 24 linear feet at Site 6 to 466 linear feet at Site 15. Streams are both intermittent and perennial, range in size from 2 to 40 feet wide, and vary from gravel and rock bed channels with riffle-pool structure to low-gradient, silt and sand bed channels. The existing multiple cell, box culvert at Lanes Creek will be removed and replaced with a dual span bridge. Larger streams, including Wicker Branch, Cowpens Branch and Mill Creek will be crossed utilizing 2-cell or 3-cell concrete box culverts. Other unnamed tributaries will be crossed utilizing single concrete pipes from 24 to 66 inches in diameter. Temporary cofferdams and stream diversions will be utilized to facilitate culvert installation resulting in temporary impacts to 464 linear feet of channel. A total of 3.53 acres of man-made ponds at five sites ranging in size from 0.47 to 0.83 acres would be drained as a result of road widening. All wetlands and surface waters on this project are in the Lower Yadkin River Basin. The applicant will utilize the North Carolina Ecosystem Enhancement Program (NCEEP) to mitigate for unavoidable impacts to waters and wetlands.

Other Required Authorizations

This notice and all applicable application materials are being forwarded to the appropriate State agencies for review. The Corps will generally not make a final permit decision until the North Carolina Division of Water Quality (NCDWQ) issues, denies, or waives State certification required by Section 401 of the Clean Water Act (PL 92-500). The receipt of the application and this public notice in the NCDWQ Central Office in Raleigh serves as application to the NCDWQ for certification. A waiver will be deemed to occur if the NCDWQ fails to act on this request for certification within sixty days of the date of the receipt of this notice in the NCDWQ Central Office. Additional information regarding the Clean Water Act certification may be reviewed at the NCDWQ Central Office, Transportation Permitting Unit, 2321 Crabtree Boulevard, Raleigh, North Carolina 27604-2260. All persons desiring to make comments regarding the application for certification under Section 401 of the Clean Water Act should do so in writing delivered to the North Carolina Division of Water Quality (NCDWQ), 1650 Mail Service Center, Raleigh, North Carolina 27699-1650 Attention: Mr. John Hennessy by September 26, 2005.

Cultural Resources

The Corps has consulted the latest published version of the National Register of Historic Places and is not aware that any registered properties, or properties listed as being eligible for inclusion therein are located within the project area or will be affected by the proposed work. Presently unknown archaeological, scientific, prehistoric, or historical data may be located within the project area and/or could be affected by the proposed work.

Endangered Species

The Corps has reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information, the Corps has determined pursuant to the Endangered Species Act of 1973, that the proposed project will have no effect on Federally listed endangered or threatened species or their formally designated critical habitat.

Evaluation

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

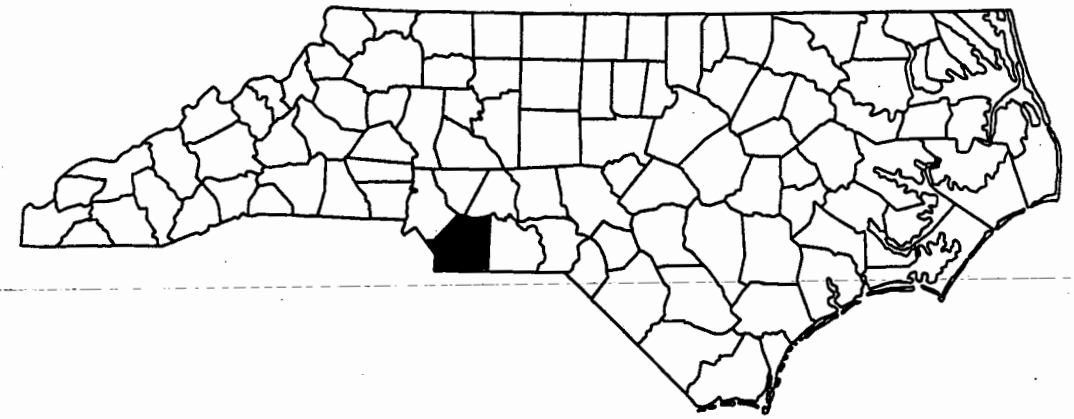
For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

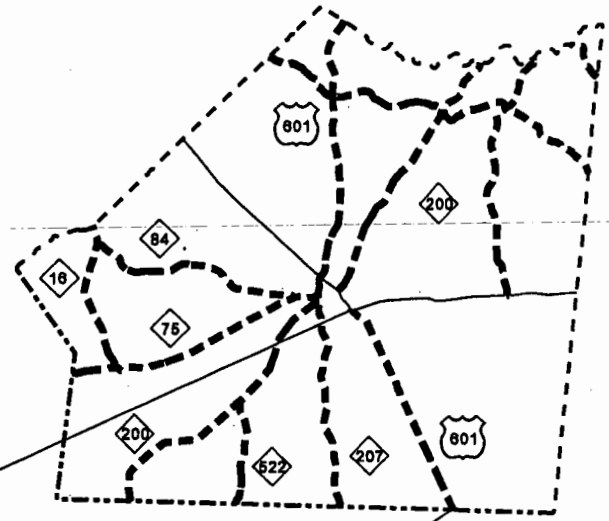
Commenting Information

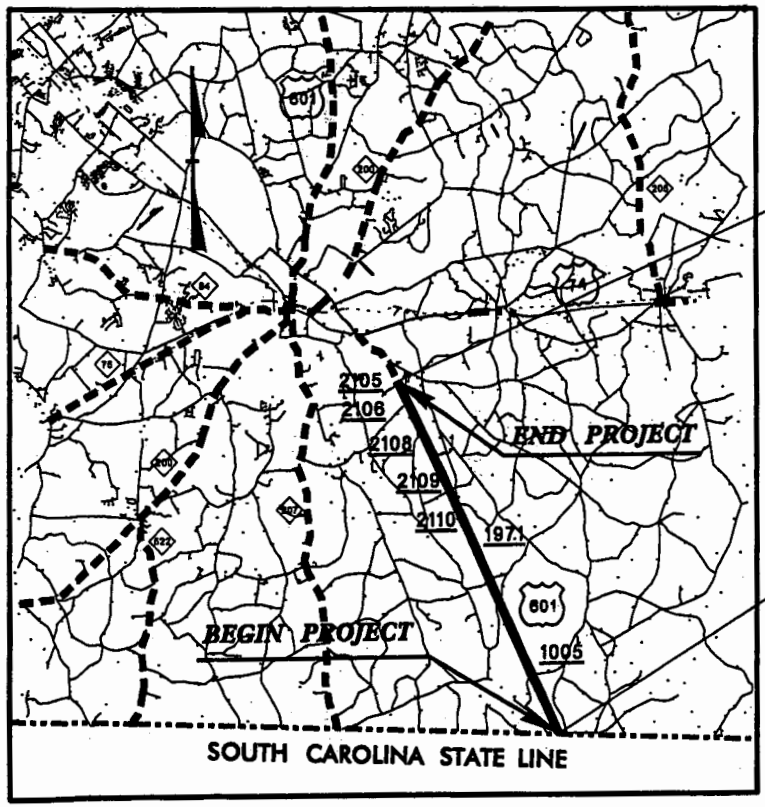
The Corps is soliciting comments from the public; Federal, State and local agencies and officials; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing shall be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

Written comments pertinent to the proposed work, as outlined above, will be received by the Corps of Engineers, Wilmington District, until 5pm, October 3, 2005. Comments should be submitted to Mr. Steven Lund, US Army Corps of Engineers, Asheville Regulatory Field Office, 151 Patton Avenue, Room 208, Asheville, NC 28801-5006.







N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
UNION COUNTY
PROJECT 34485.1.2 (R-2616 A&B)

US 601 FROM THE SOUTH
CAROLINA STATE LINE
TO NORTH OF
SR 2105 (MARION LEE RD.)

SHEET 1 OF 59 APRIL 21, 2005

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)
1	L 102+00 to 106+05	2@54" RCP						0.02	0.01	223	75	
2	L 119+35	3@10'X8' RCBC						0.08	0.009	166	20	
3	L 129+70	(2) 2 SPANS@65' BRIDGE						0.01	0.15		150	
4	L 145+40	42" RCP						0.003	0.001	48	10	
5	L 180+30 RT	48" RCP						0.005	0.001	140	11	
6	L 180+30 LT	48" RCP	0.011			0.004				24		
7	L 180+30 TO 183+00	Earthen Fill						0.03	0.004	192	10	
8	L 215+70 RT	24" RCP	0.006			0.003						
9	L 221+70 LT	Drain Pond						0.83				
10	L 231+30	54" RCP						0.02	0.003	170	22	
11	L 242+35	66" RCP						0.04	0.003	161	20	
12	L 248+30 TO 251+09	48" RCP						0.04	0.003	320	22	
13	L 281+50	12'x10' RCBC						0.04	0.005	128	20	
14	L 288+00	2@8'x7' RCBC						0.04	0.007	124	20	
15	L290+00 to 294+30	2@30" RCP						0.06	0.005	466	24	
16	L 315+75	2@8'x8' RCBC						0.08	0.004	210	20	
17	L 342+00 LT	Drain Pond						0.31				
18	L 349+50 RT	Earthen Fill & Drain Pond	0.04					0.89				
19	L 349+50 LT	Drain Pond						0.47				
20	L 400+00 RT	Drain Pond						0.58				
21	L 422+00 RT	Drain Pond						0.45				
22	L 426+03 to 430+50	54" RCP						0.03	0.001	446	20	
23	L 474+07 to 476+41	24" RCP	0.02			0.005						
24	L 534+20	48" RCP						0.007	0.001	151	20	
25	L 549+60	36" RCP	0.03			0.03						
26	L 575+85	24" RCP						0.290				
TOTALS:			0.11	0.00	0.00	0.04	0.00	4.33	0.21	2969.00	464.00	

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

UNION COUNTY
WBS - 34485.121 (R-2616)

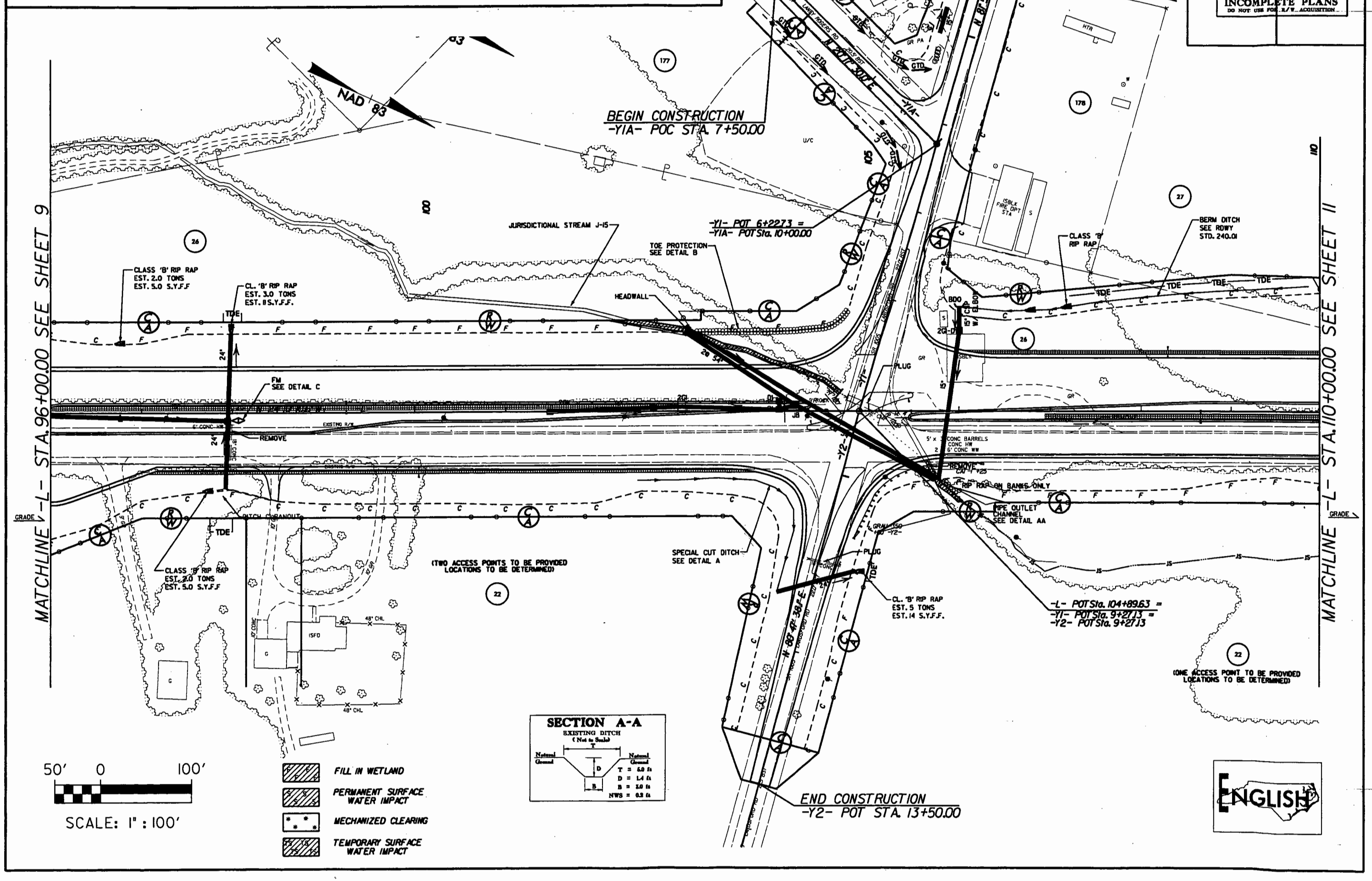
SHEET 2 5/20/2005

ATN Revised 3/31/05

SITE 1 -L- 102 + 40

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



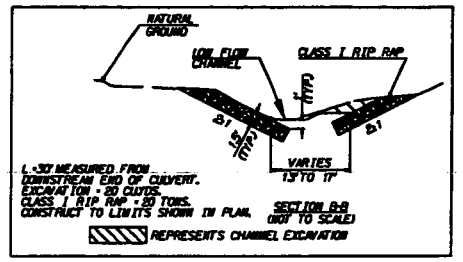
SITE 2 -L- STA 119+35

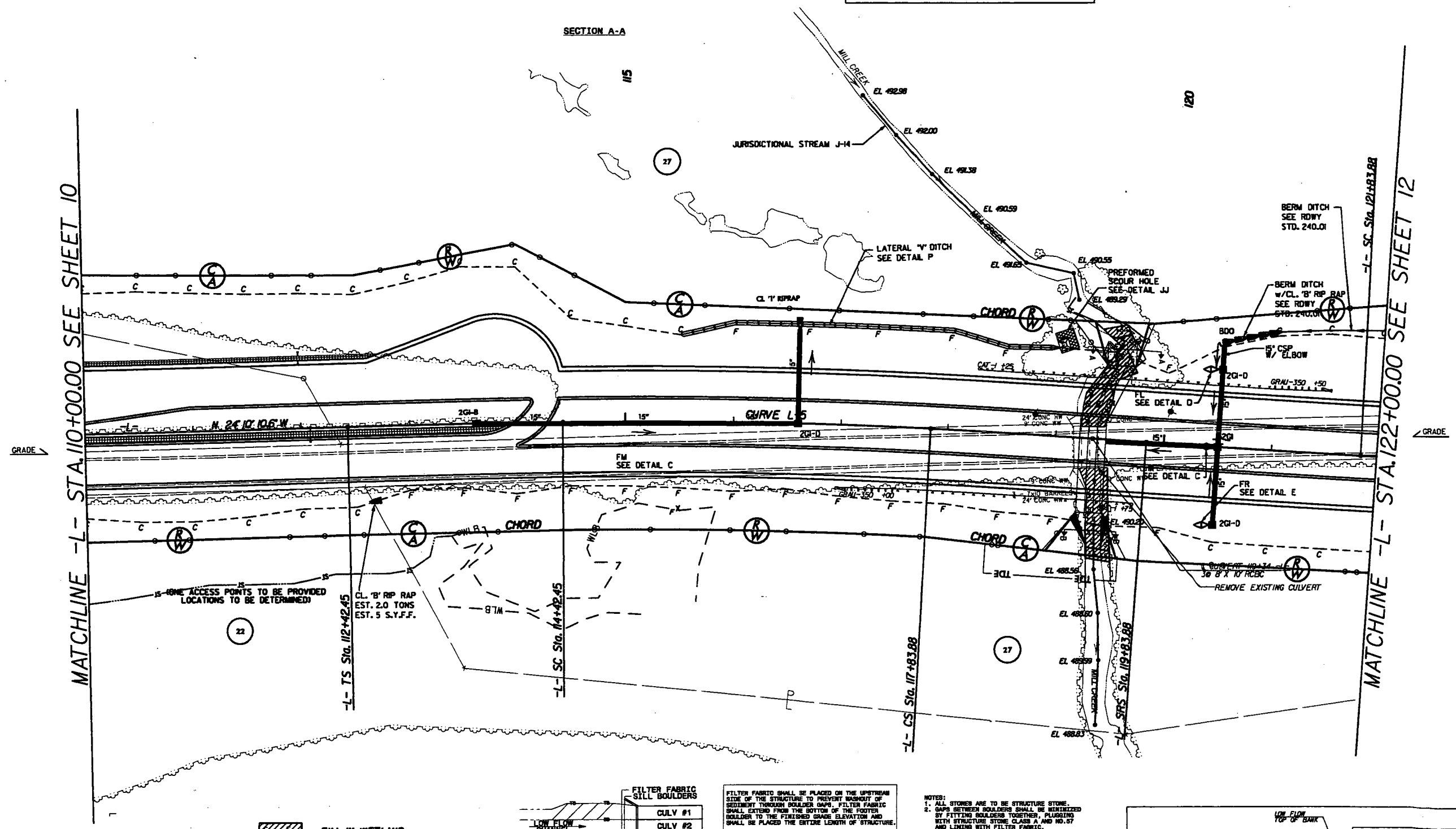
PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

ENGLISH





50' 0 100'

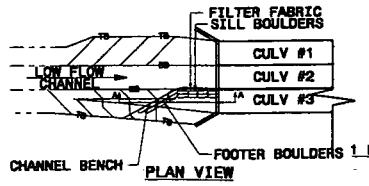
SCALE: 1" : 100'

FILL IN WETLAND

PERMANENT SURFACE WATER IMPACT

MECHANIZED CLEARING

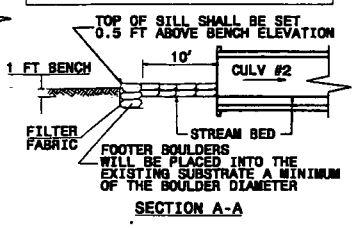
TEMPORARY SURFACE WATER IMPACT



ROCK INLET SILL

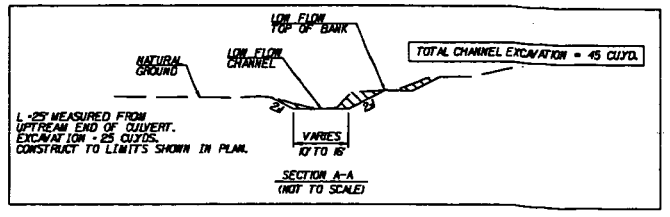
SCALE: NTS

FILTER FABRIC SHALL BE PLACED ON THE UPSTREAM SIDE OF THE STRUCTURE TO PREVENT WASHOUT OF SEDIMENT THROUGH BOULDER GAPS. FILTER FABRIC SHALL EXTEND FROM THE BOTTOM OF THE FOOTER BOULDER TO THE FINISHED GRADE ELEVATION AND SHALL BE PLACED THE ENTIRE LENGTH OF STRUCTURE.



SECTION A-A

NOTES:
1. ALL STONES ARE TO BE STRUCTURE STONE.
2. GAPS BETWEEN BOULDERS SHALL BE MINIMIZED BY FITTING BOULDERS TOGETHER, PLUGGING WITH STRUCTURE STONE CLASS A AND NO.57 AND LINING WITH FILTER FABRIC.
3. DIMENSIONS AND SLOPES MAY BE ADJUSTED TO FIT BY THE ENGINEER.
4. A DOUBLE FOOTER BOULDER SHALL BE UTILIZED IN SAND BED MATERIAL.
5. FOOTER BOULDERS AND SILL BOULDERS SHALL BE NATIVE STONE OR SHOT ROCK, CUBICAL OR RECTANGULAR IN NATURE.
6. ACCEPTABLE BOULDERS SHALL HAVE THE FOLLOWING MINIMUM DIMENSIONS; 3' x 2' x 1'.

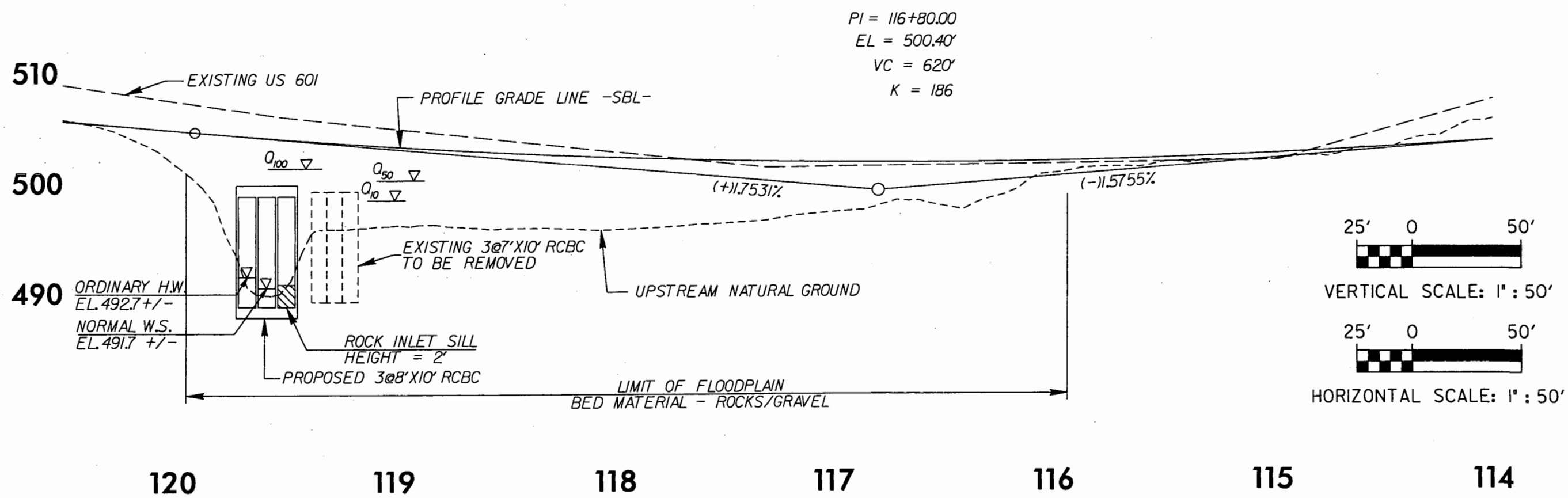


SITE 2 -L- STA 119+35

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	11
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



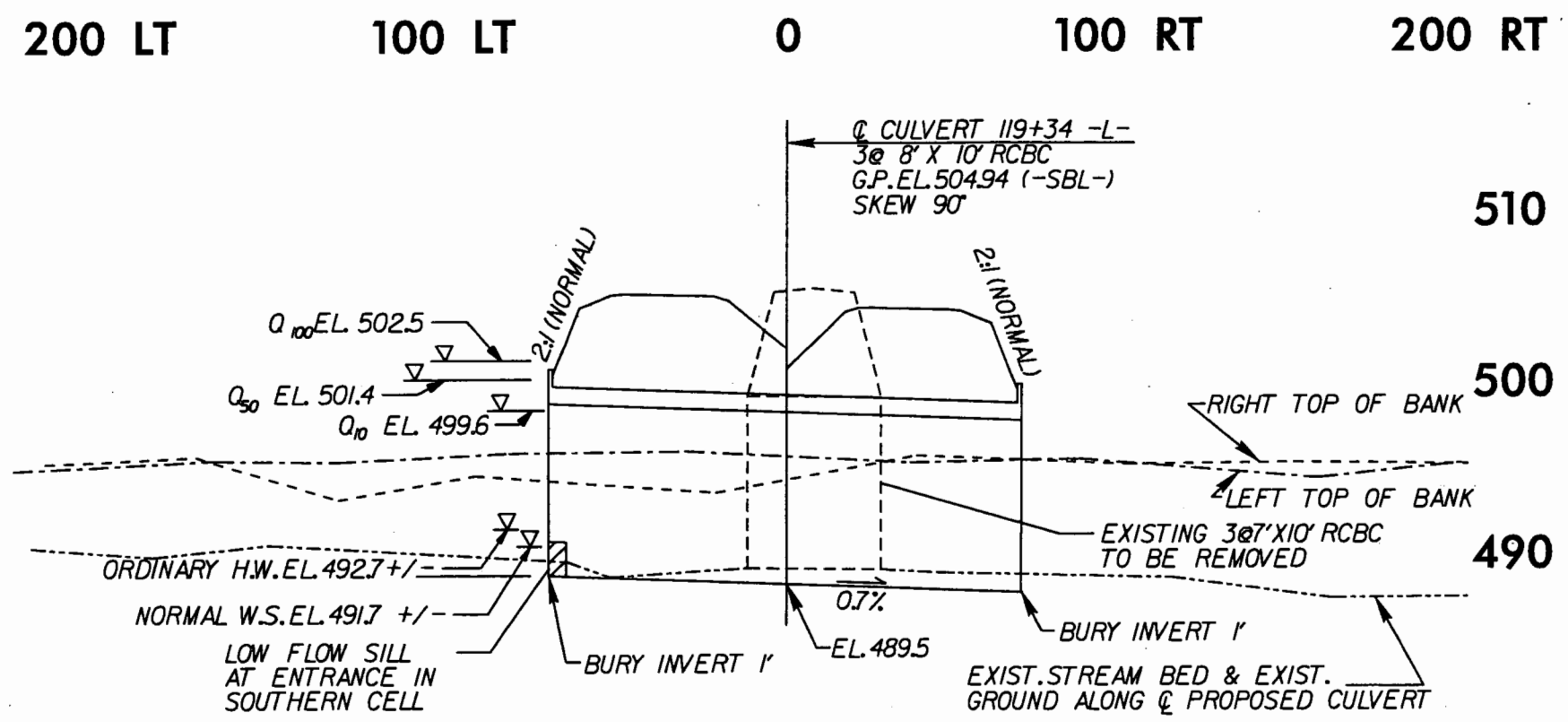
ENGLISH

SITE 2 -L- STA 119+35

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



25' 0 50'

VERTICAL SCALE: 1" : 50'

25' 0 50'

HORIZONTAL SCALE: 1" : 50'

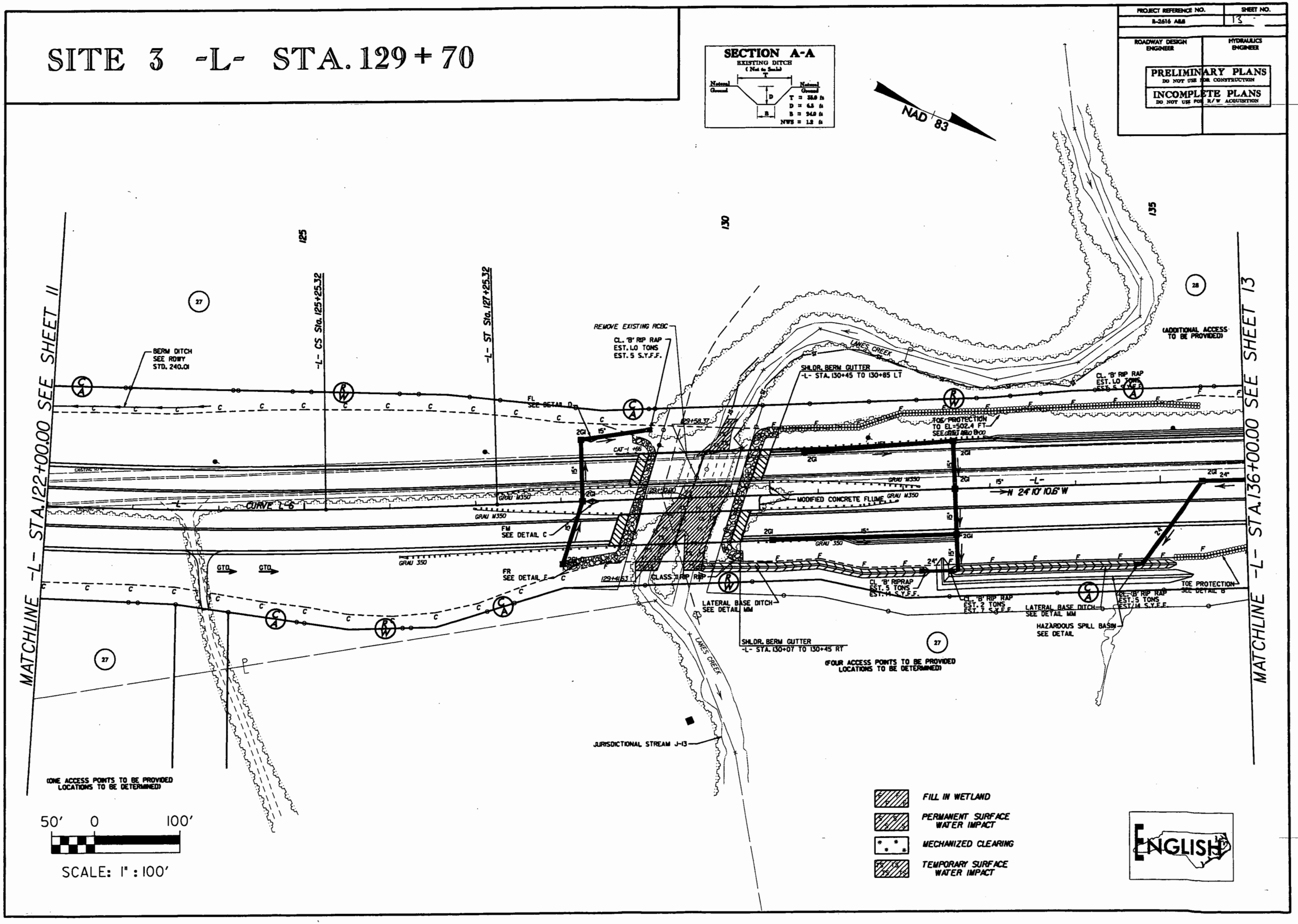
ENGLISH

SITE 3 -L- STA. 129 + 70

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	13
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SITE 3 -L- STA 129+70

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	16
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

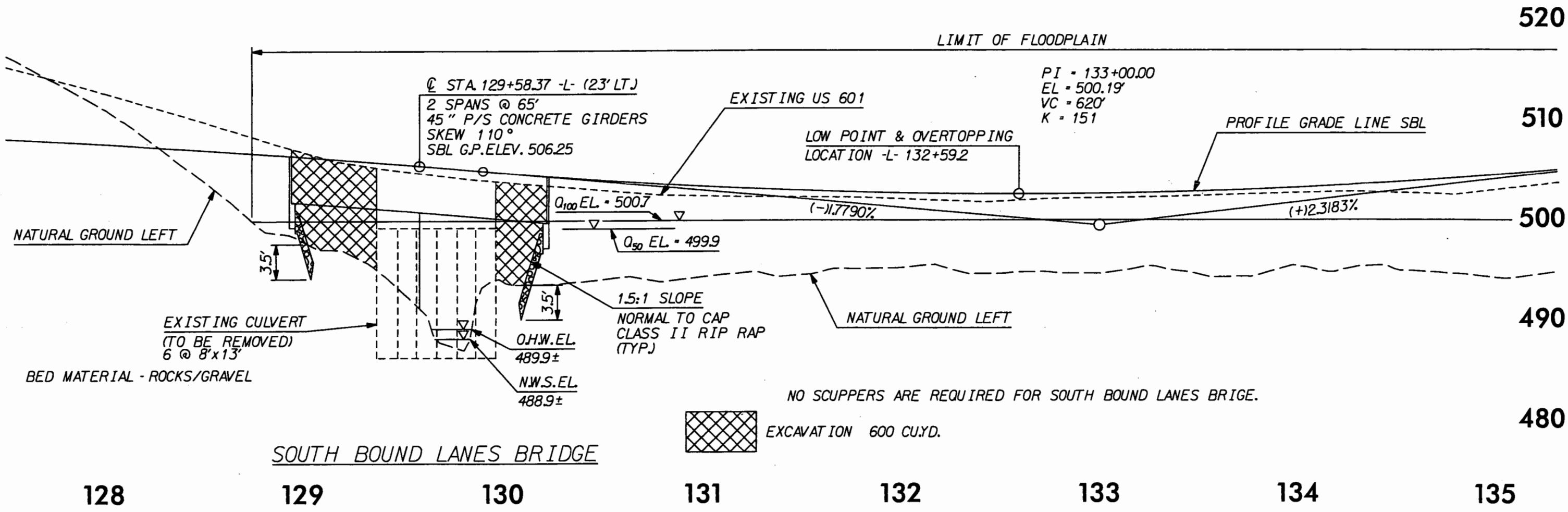
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

25' 0 50'

VERTICAL SCALE: 1" : 50'

25' 0 50'

HORIZONTAL SCALE: 1" : 50'



ENGLISH

SITE 3 -L- STA 129+70

PROJECT REFERENCE NO.	SHEET NO.
R-2616 A&B	15
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

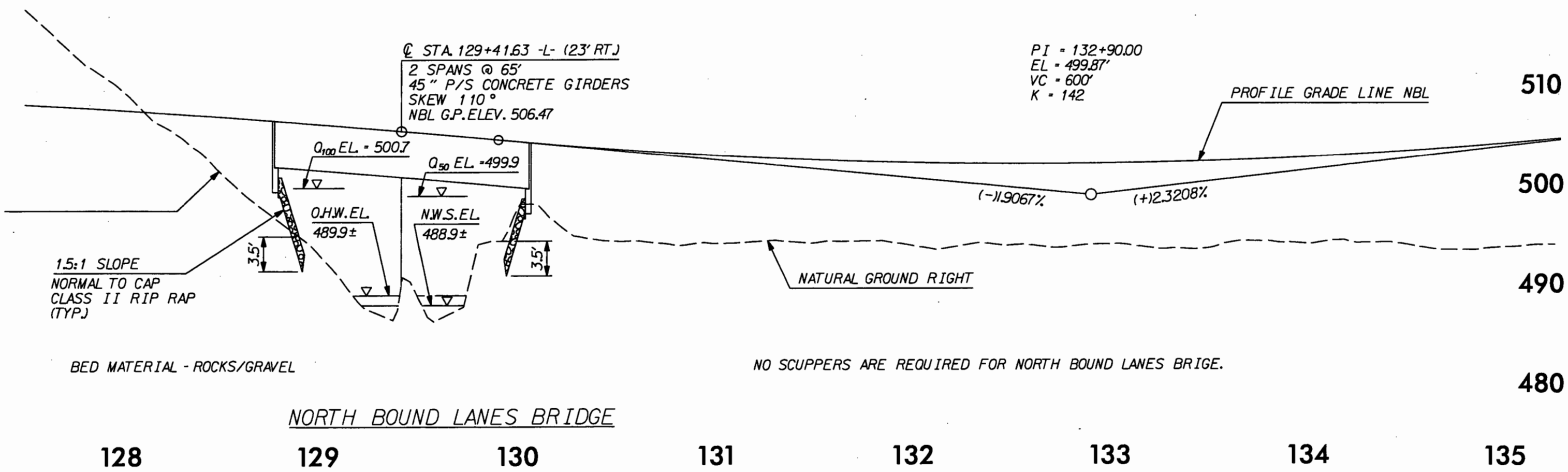
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

25' 0 50'

VERTICAL SCALE: 1" : 50'

25' 0 50'

HORIZONTAL SCALE: 1" : 50'



ENGLISH

SITE 4 -L- STA. 145 + 50

PROJECT REFERENCE NO.	SHEET NO.
R-2616 A&B	17
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
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INCOMPLETE PLANS
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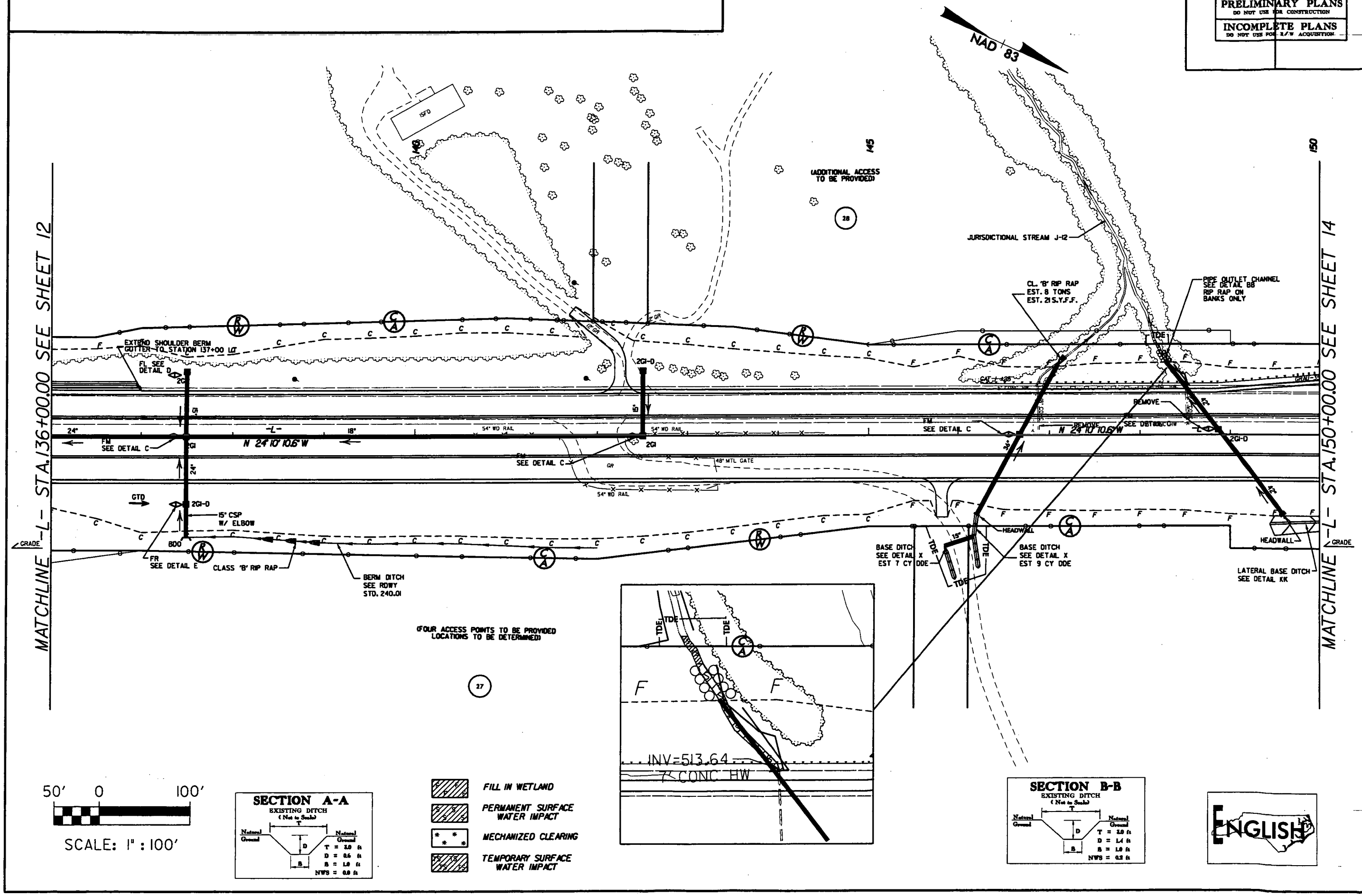

SITE 5 -L- STA. 180 + 00 (RT.)
SITE 6 -L- STA. 180 + 00 (LT.)
SITE 7 -L- STA. 183 + 00 (LT.)

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	19
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
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INCOMPLETE PLANS
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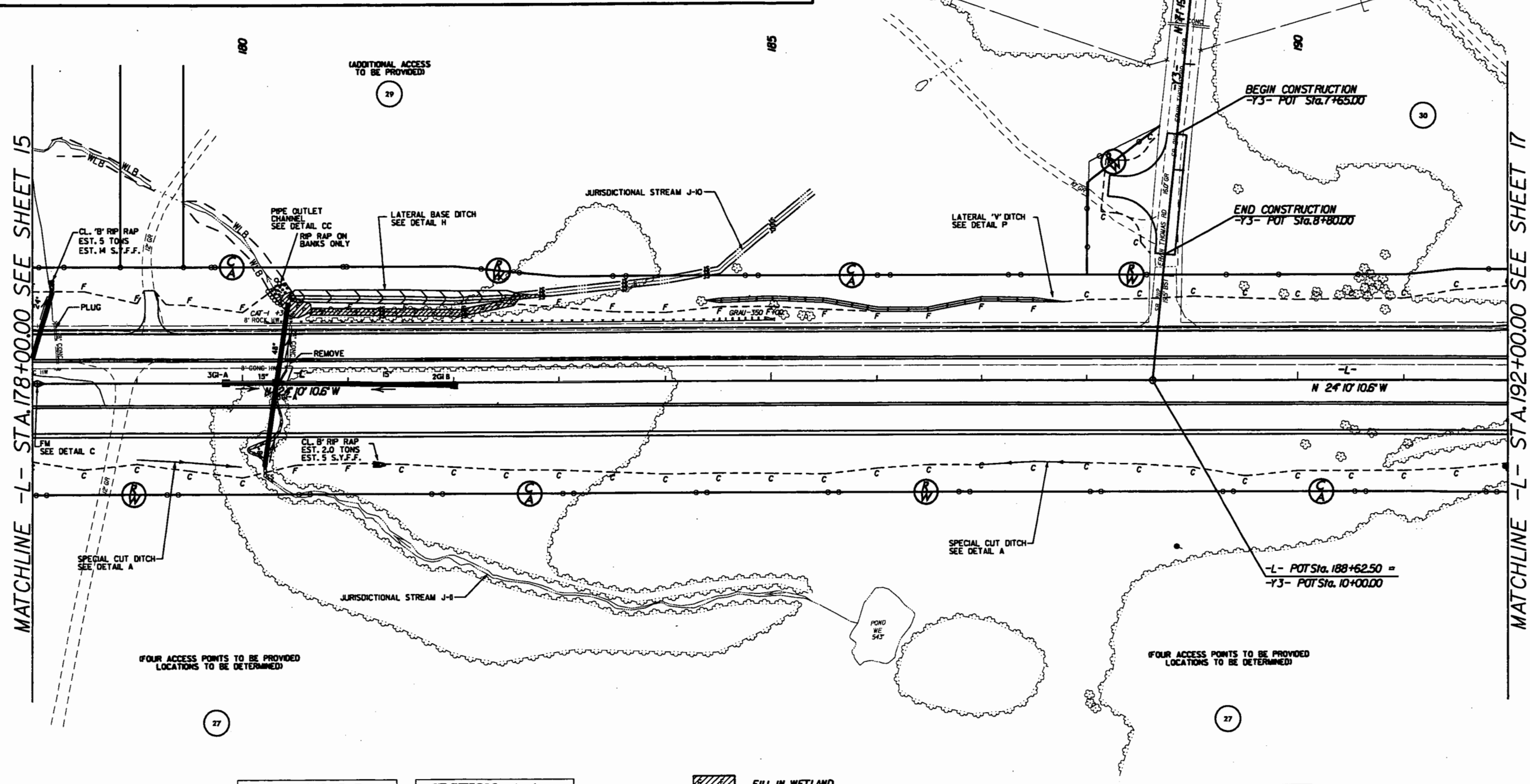
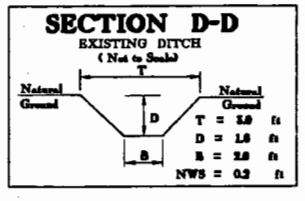
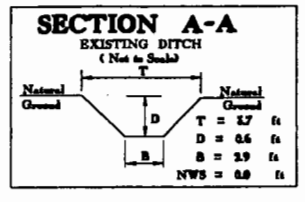


50' 0 100'

SCALE: 1" : 100'



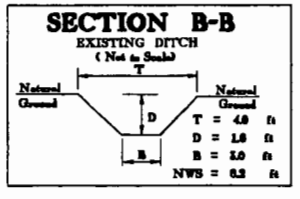


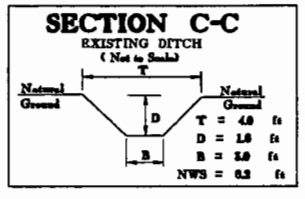
FILL IN WETLAND

PERMANENT SURFACE WATER IMPACT

MECHANIZED CLEARING

TEMPORARY SURFACE WATER IMPACT





ENGLISH

SITE 8 -L- STA. 215 + 70

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	21
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
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INCOMPLETE PLANS
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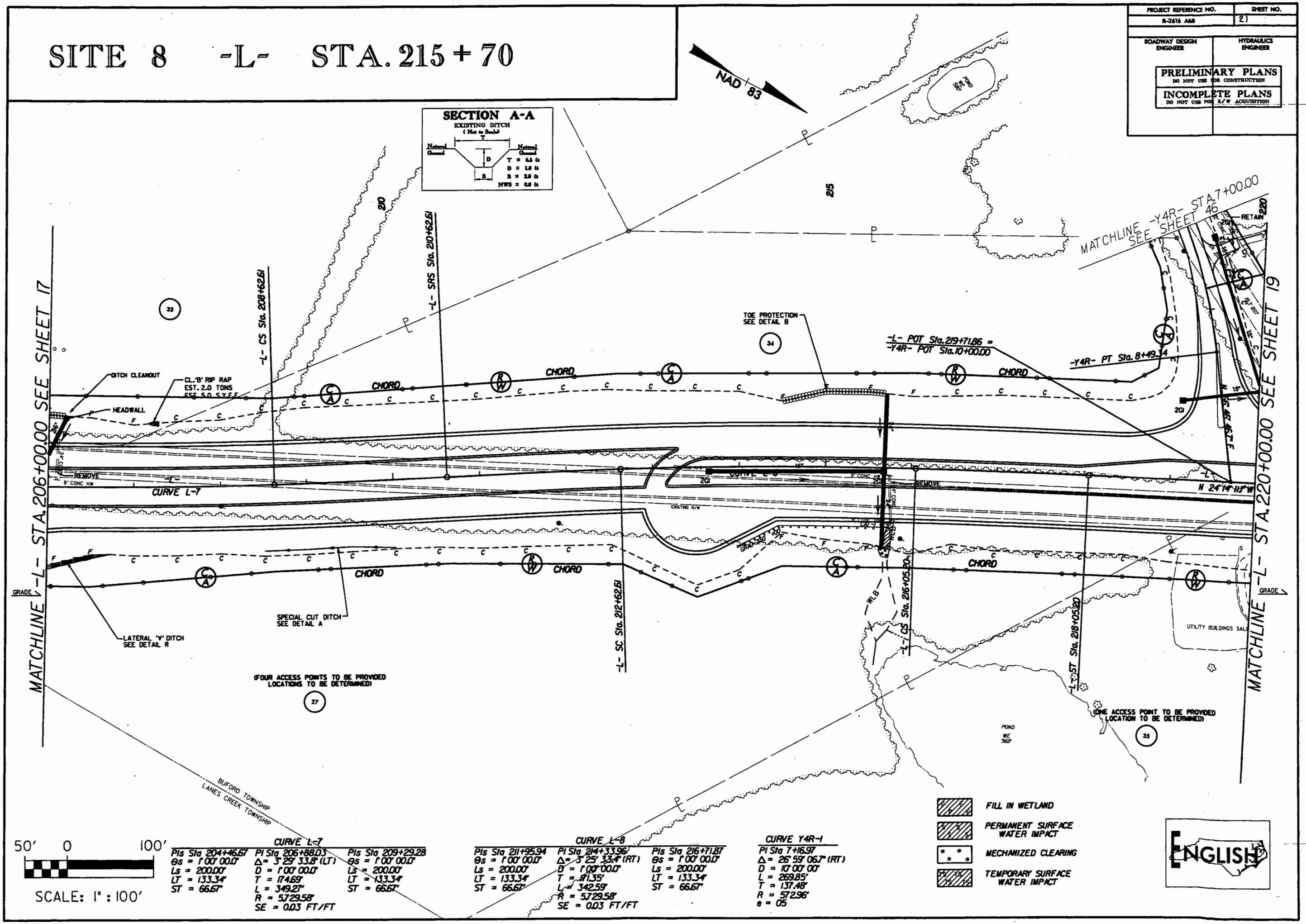

SITE 9 -L- STA. 221 + 00 LT.
SITE 10 -L- STA. 231 + 20

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	23
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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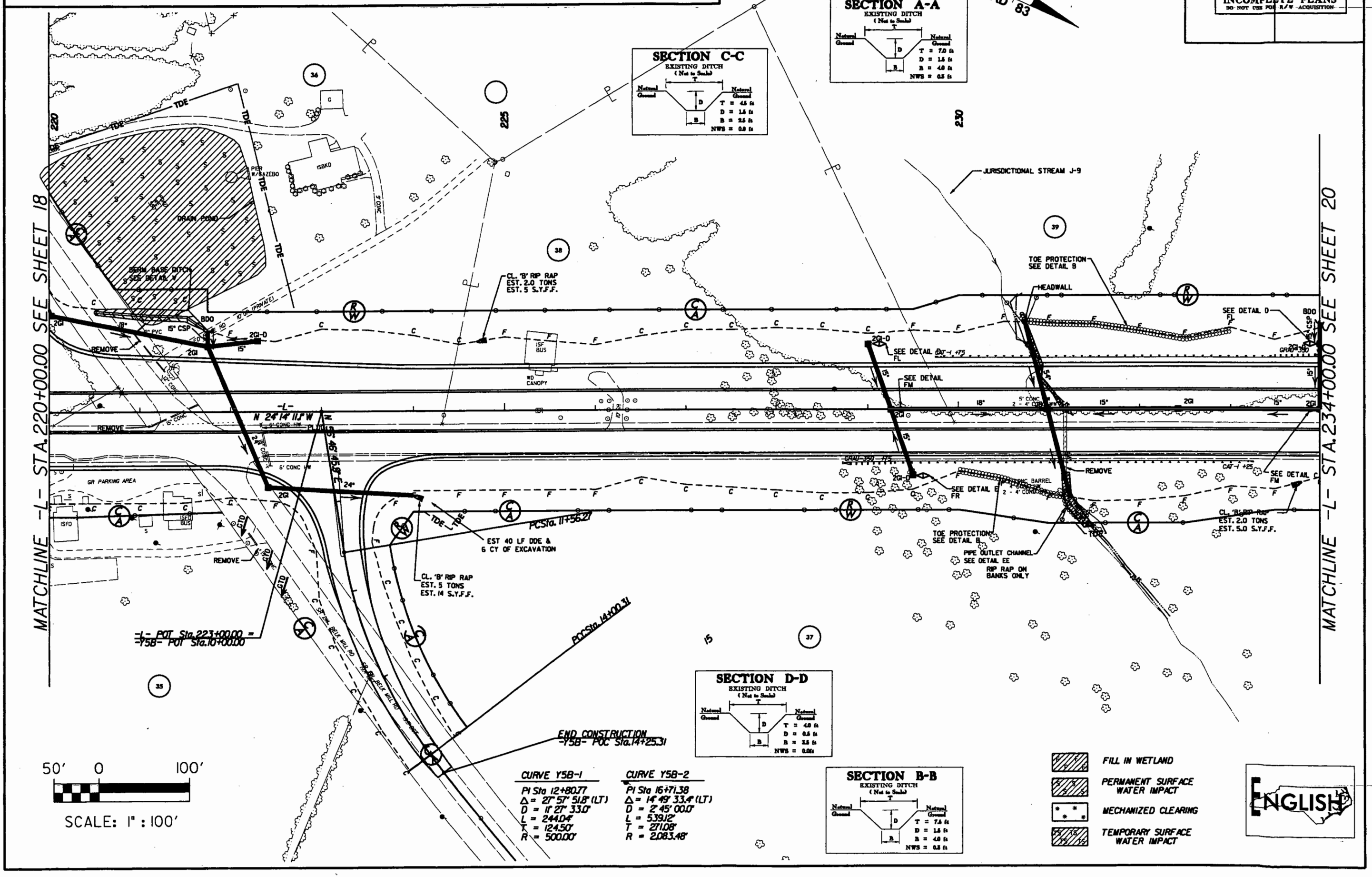

SITE 11 -L- STA. 242 + 35

PROJECT REFERENCE NO.	SHEET NO.
R-2616 A&B	25

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
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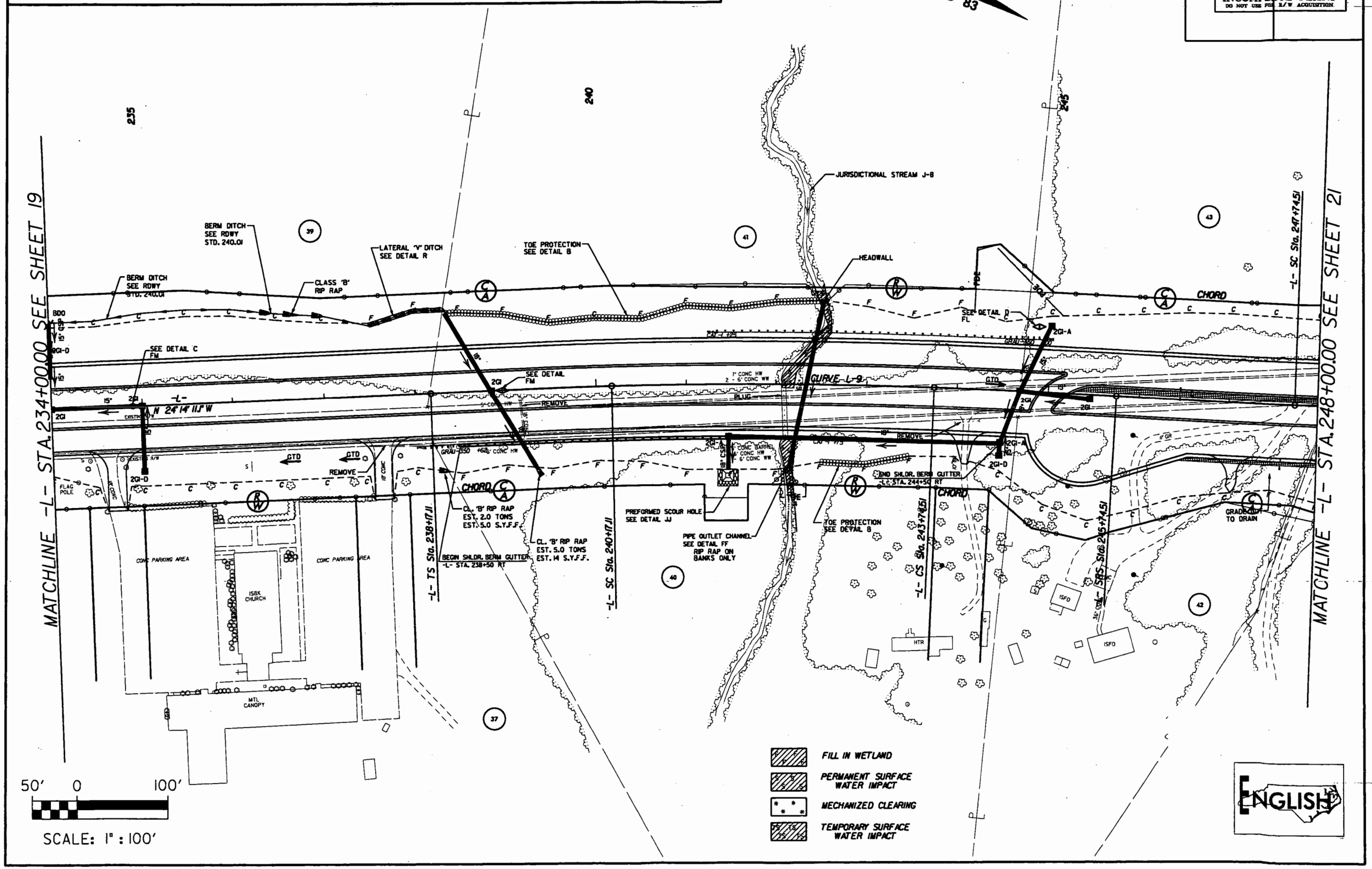
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SITE 11 -L- STA. 242 + 35

25 0 50 HORIZ.
5 0 10 VERT.

PROJECT REFERENCE NO.	SHEET NO.
R-2616A&B	27
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
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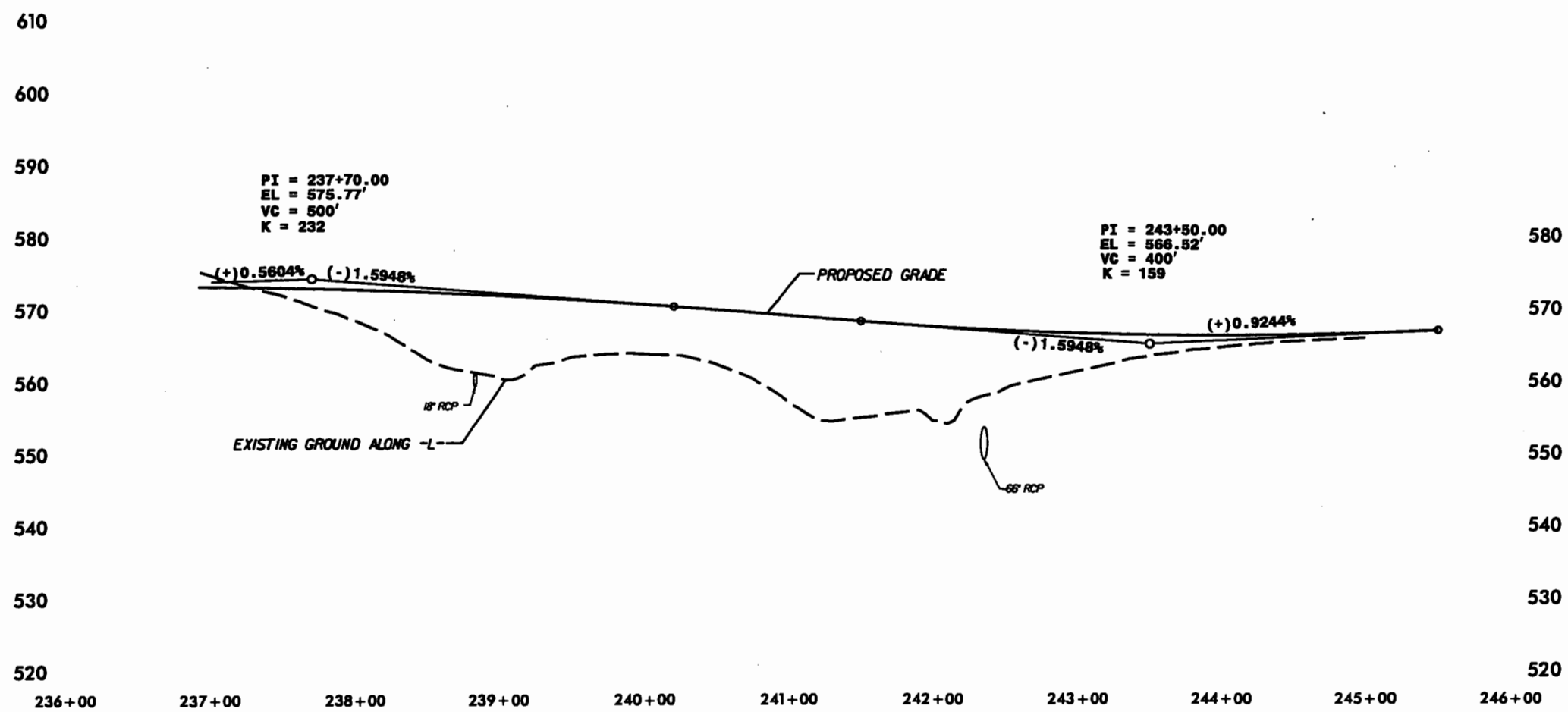
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



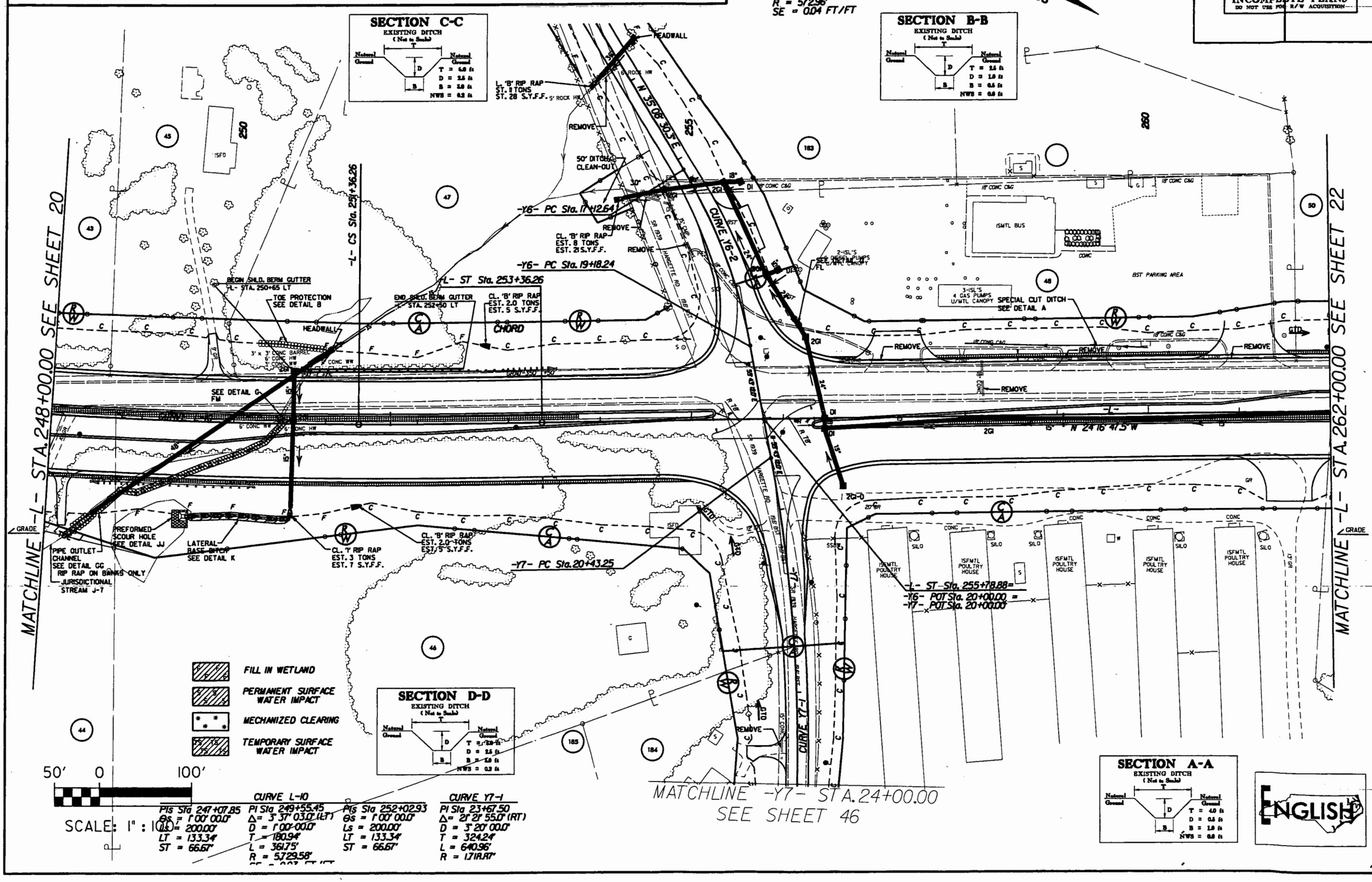
ENGLISH

SITE 12 -L- STA. 250 + 00

PROJECT REFERENCE NO.	SHEET NO.
R-2616 A&B	29
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

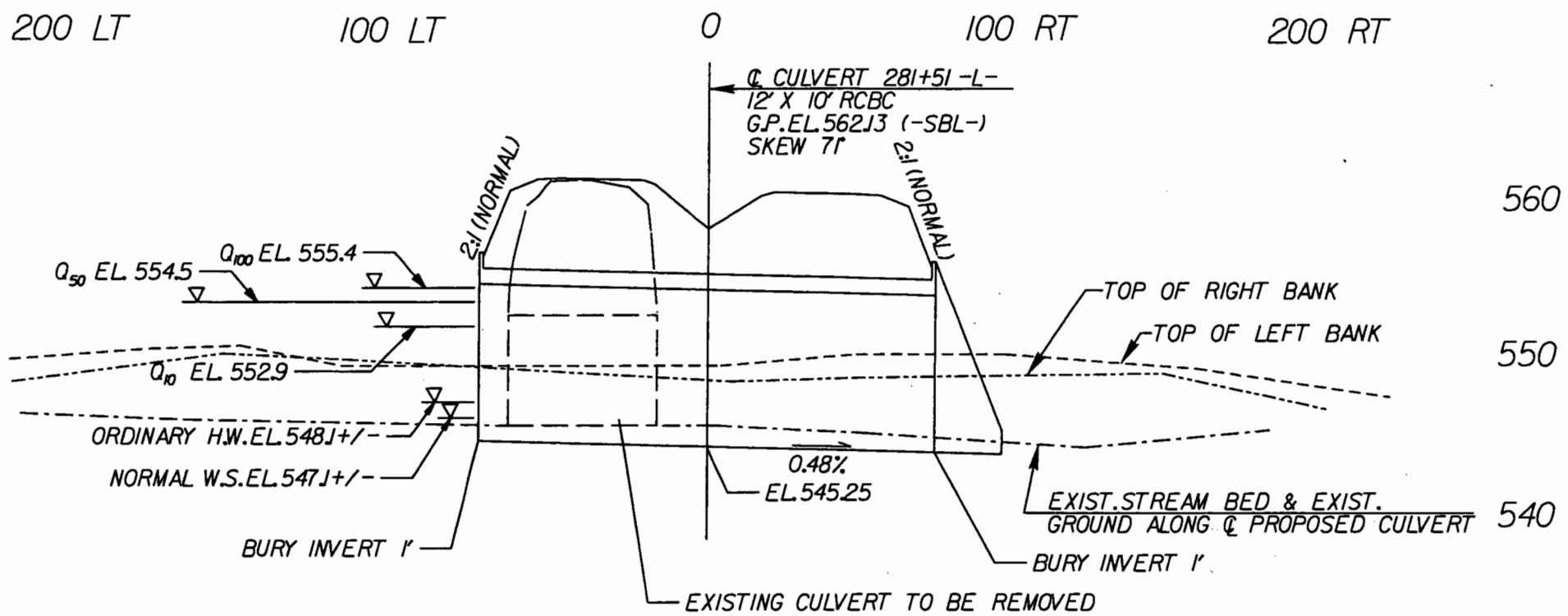
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SITE 12 -L- STA 281 + 50

PROJECT REFERENCE NO.	SHEET NO.
R-2616 A&B	30
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



25' 0 50'

VERTICAL SCALE: 1" : 50'

25' 0 50'

HORIZONTAL SCALE: 1" : 50'

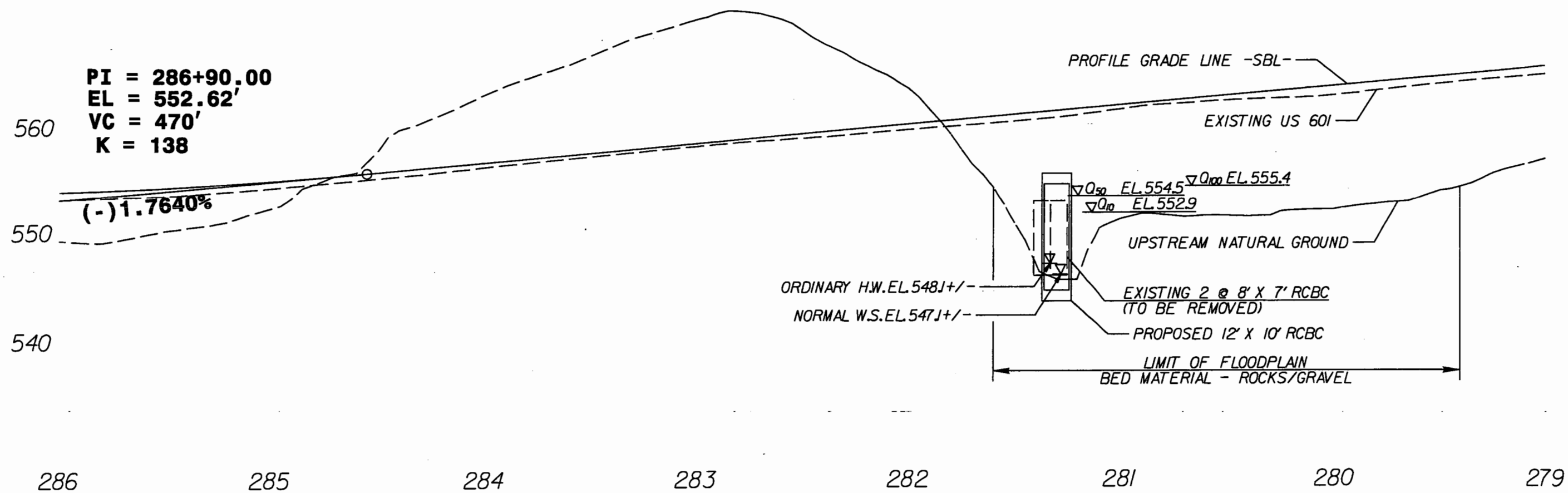
ENGLISH

SITE 12 -L- STA 281 + 50

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



25' 0 50'

VERTICAL SCALE: 1" : 50'

25' 0 50'

HORIZONTAL SCALE: 1" : 50'

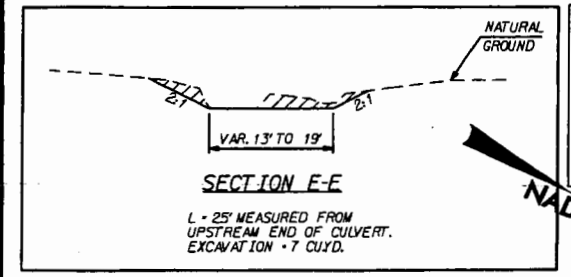
ENGLISH

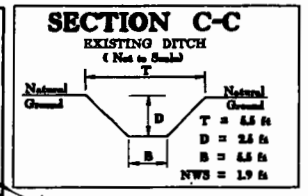
SITE 13 -L- STA. 281 + 50
SITE 14 -L- STA. 288 + 00
SITE 15 -L- STA. 290 + 00 - 294 + 30

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	32
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

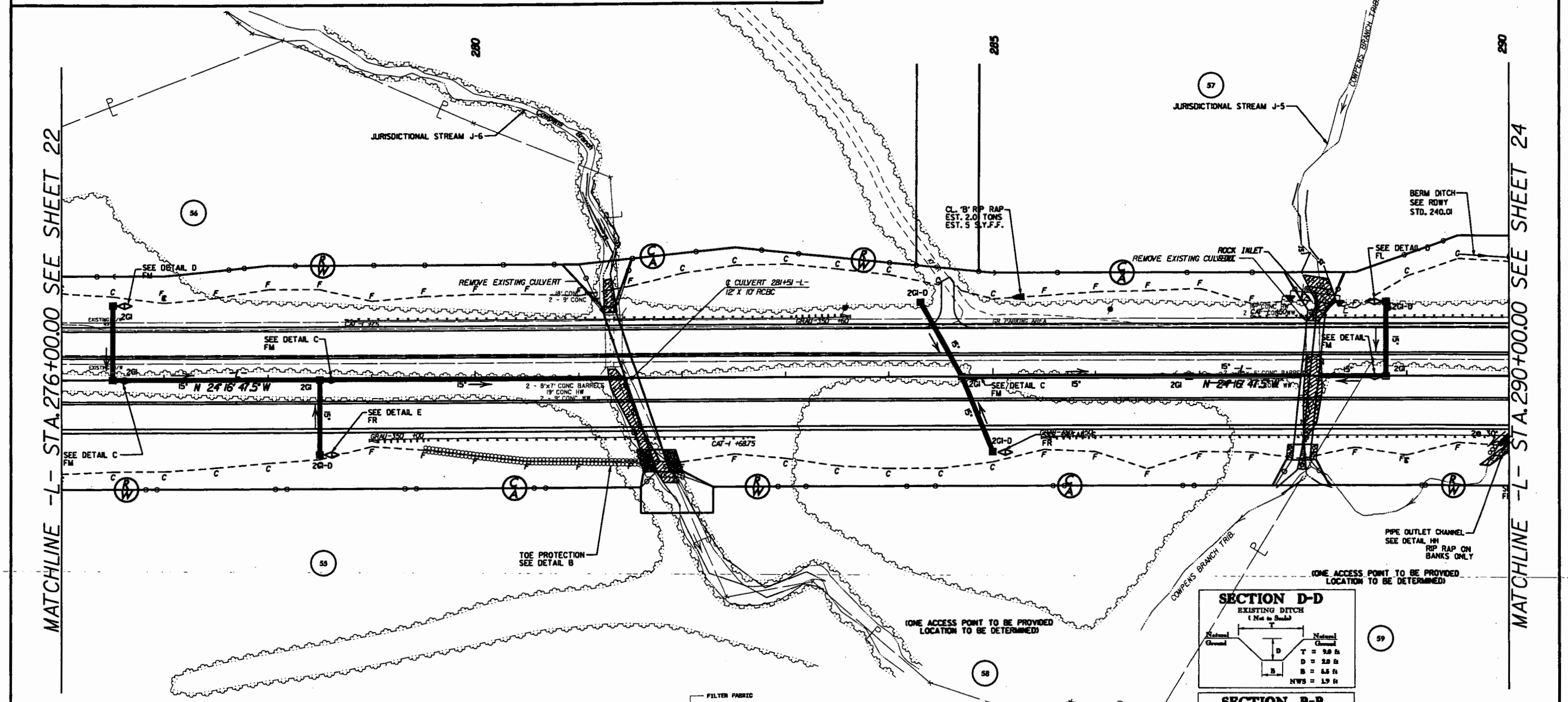
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

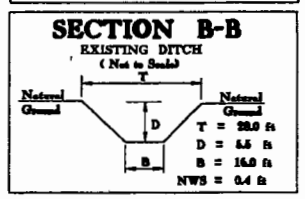
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

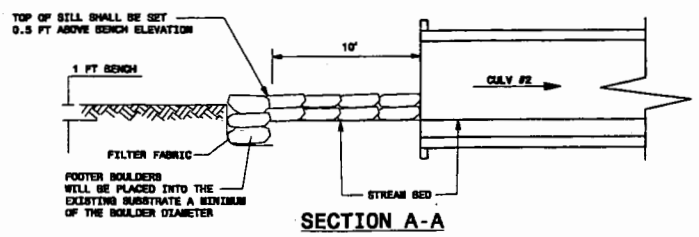




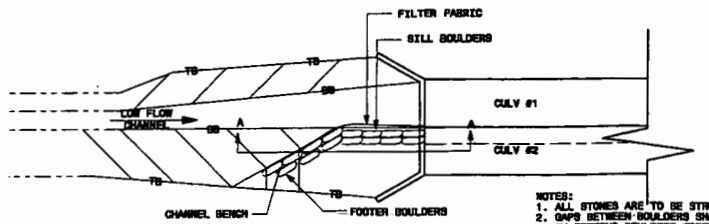
NAD 83







SECTION A-A



FILTER FABRIC SHALL BE PLACED ON THE UPSTREAM SIDE OF THE STRUCTURE TO PREVENT WASHOUT OF SEDIMENT THROUGH BOULDER GAPS. FILTER FABRIC SHALL EXTEND FROM THE BOTTOM OF THE FOOTER BOULDER TO THE FINISHED GRADE ELEVATION AND SHALL BE PLACED THE ENTIRE LENGTH OF STRUCTURE.

PLAN VIEW

ROCK INLET SILL

SCALE: NTS

NOTES:
1. ALL STONES ARE TO BE STRUCTURE STONE.
2. GAPS BETWEEN BOULDERS SHALL BE MINIMIZED BY FITTING BOULDERS TOGETHER, PLUGGING WITH STRUCTURE STONE CLASS A AND NO.57 AND LINING WITH FILTER FABRIC.
3. DIMENSIONS AND SLOPES MAY BE ADJUSTED TO FIT BY THE ENGINEER.
4. A DOUBLE FOOTER BOULDER SHALL BE UTILIZED IN SAND BED MATERIAL.
5. FOOTER BOULDERS AND SILL BOULDERS SHALL BE NATIVE STONE OR SHOT ROCK, CUBICAL OR RECTANGULAR IN NATURE.
6. ACCEPTABLE BOULDERS SHALL HAVE THE FOLLOWING MINIMUM DIMENSIONS: 3' x 2' x 1'.

FILL IN WETLAND

PERMANENT SURFACE WATER IMPACT

MECHANIZED CLEARING

TEMPORARY SURFACE WATER IMPACT

50' 0 100'

SCALE: 1" : 100'

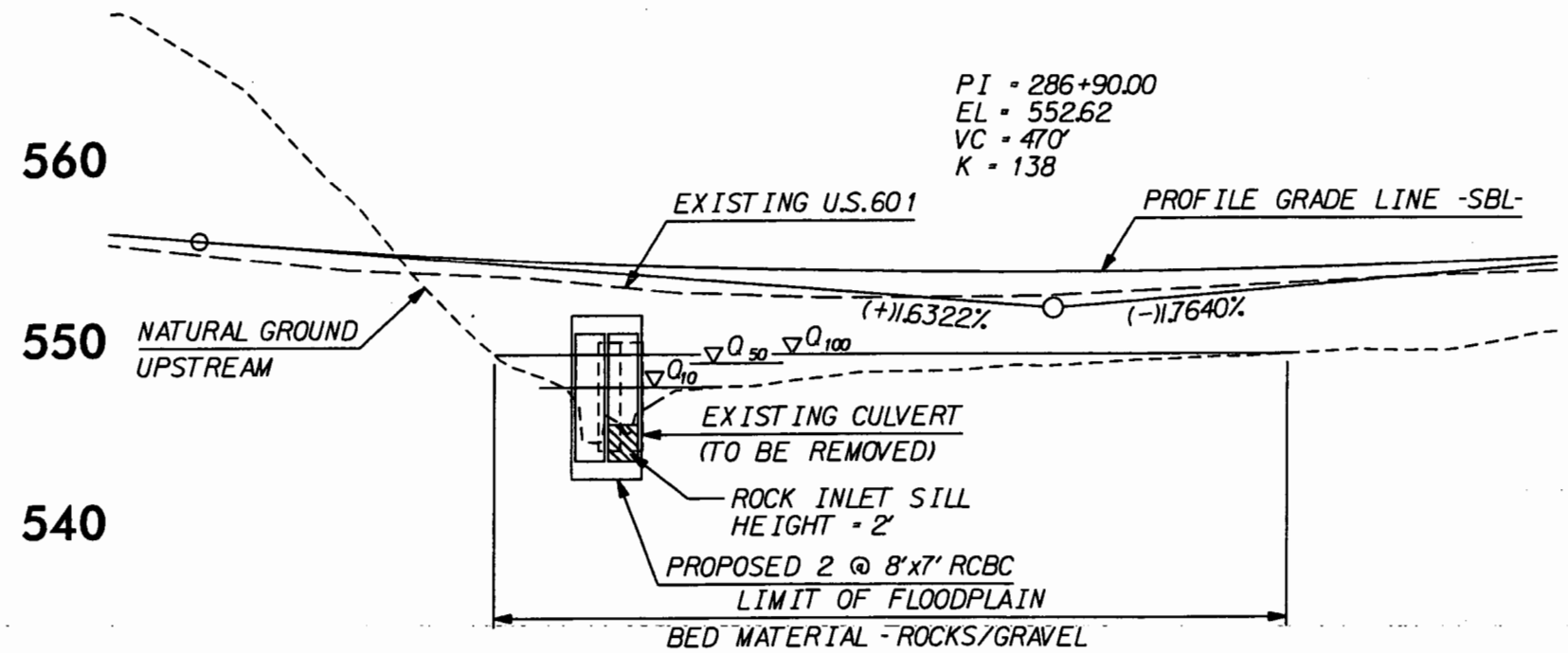
ENGLISH

PROJECT REFERENCE NO.	SHEET NO.
R-2616 A&B	34
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

SITE 14 -L- STA 288 + 00



25' 0 50'

VERTICAL SCALE: 1" : 50'

25' 0 50'

HORIZONTAL SCALE: 1" : 50'

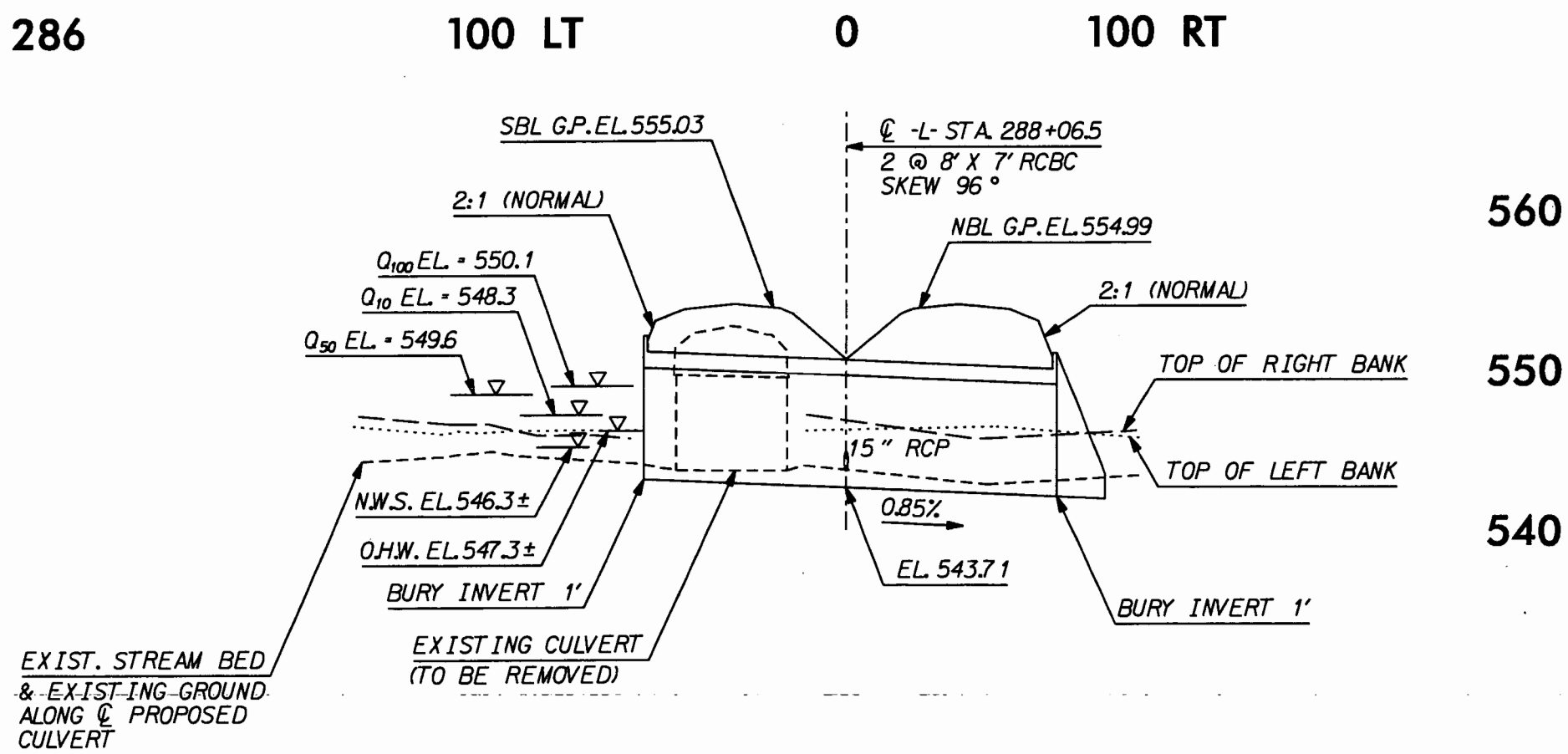
ENGLISH

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	35
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

SITE 14 -L- STA 288 + 00



25' 0 50'

VERTICAL SCALE: 1" : 50'

25' 0 50'

HORIZONTAL SCALE: 1" : 50'

ENGLISH

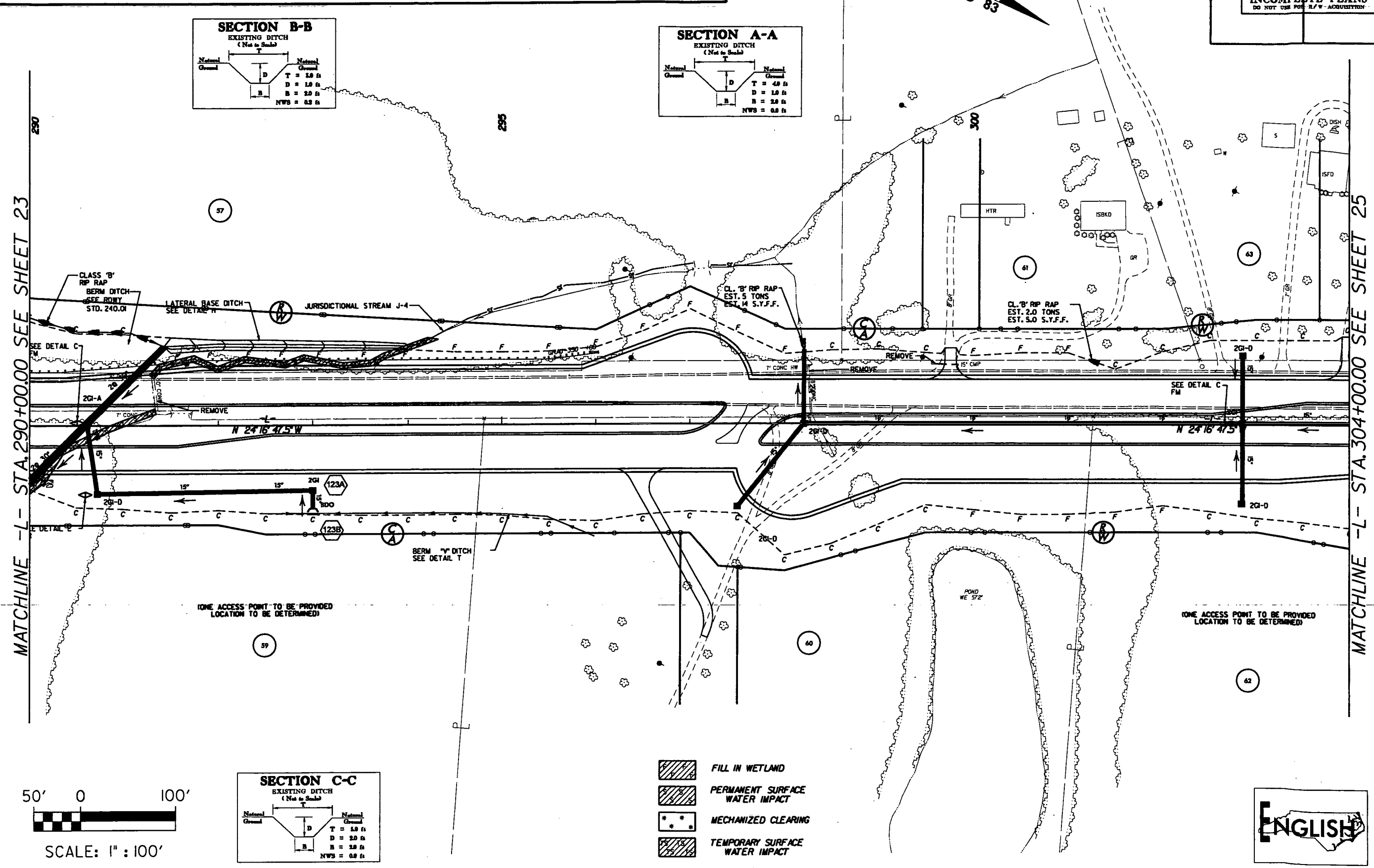
SITE 15 -L- STA. 290 + 55

PROJECT REFERENCE NO.	SHEET NO.
R-2616 A&B	36

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



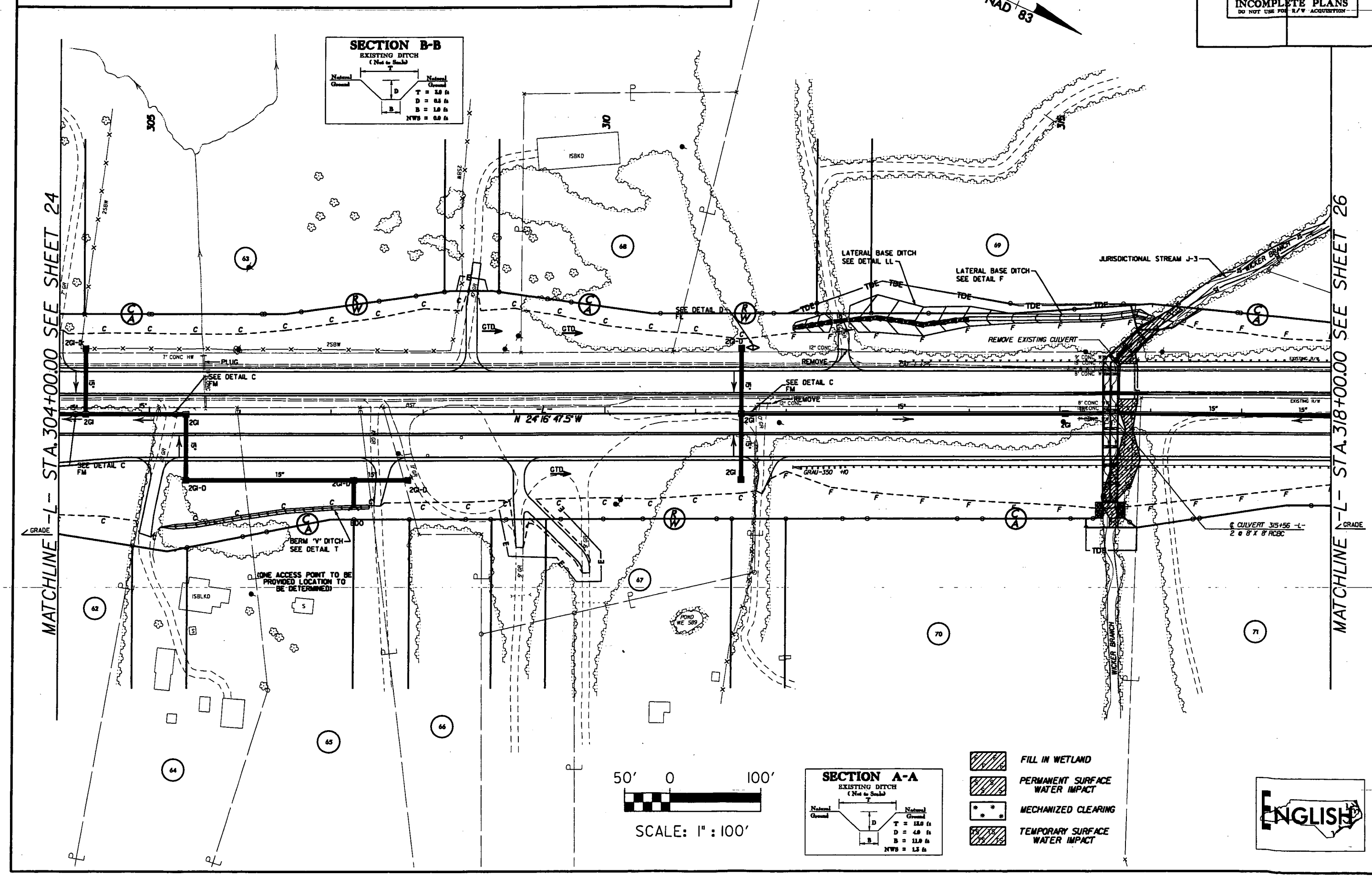
SITE 16 -L- STA. 315+75

PROJECT REFERENCE NO.	SHEET NO.
R-2616 A&B	38

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

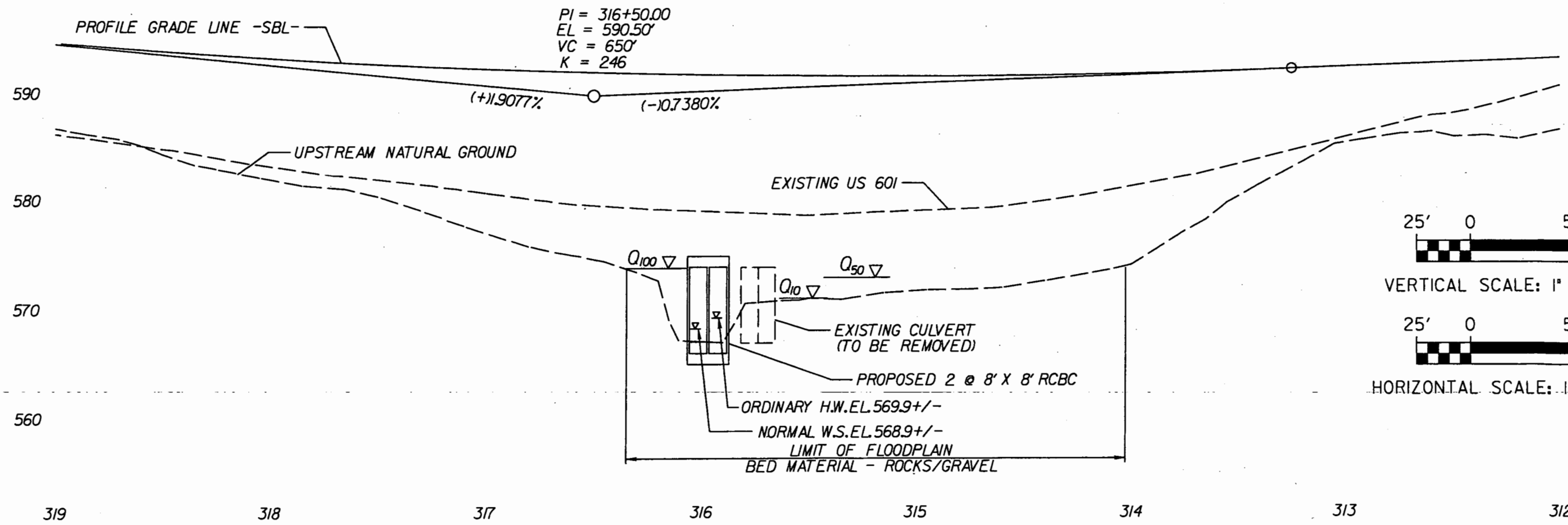


SITE 16 -L- STA 315 + 75

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	40
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



25' 0 50'

VERTICAL SCALE: 1" : 50'

25' 0 50'

HORIZONTAL SCALE: 1" : 50'

ENGLISH

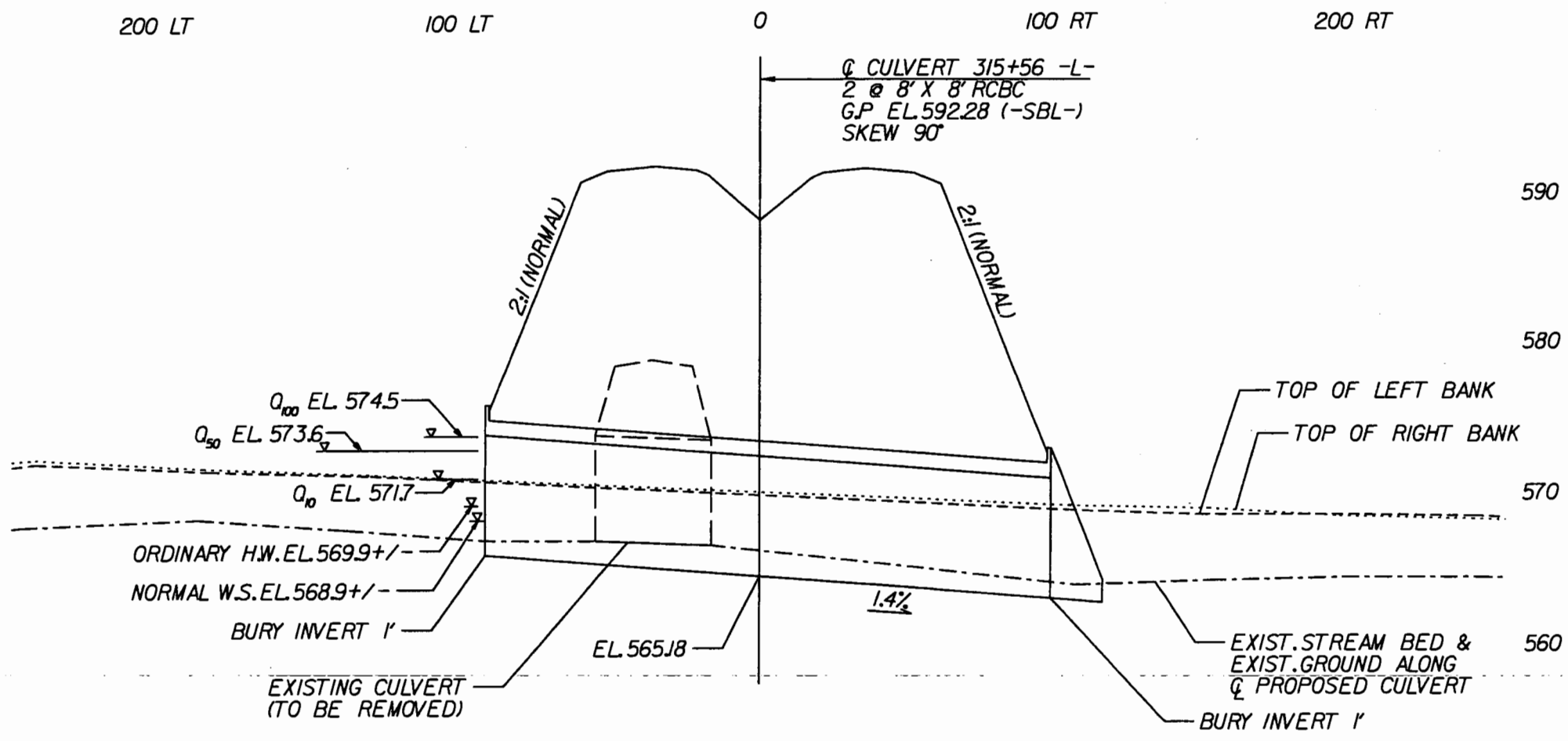
PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	41

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

SITE 16 -L- STA 315 + 75



25' 0 50'

VERTICAL SCALE: 1" : 50'

25' 0 50'

HORIZONTAL SCALE: 1" : 50'

ENGLISH

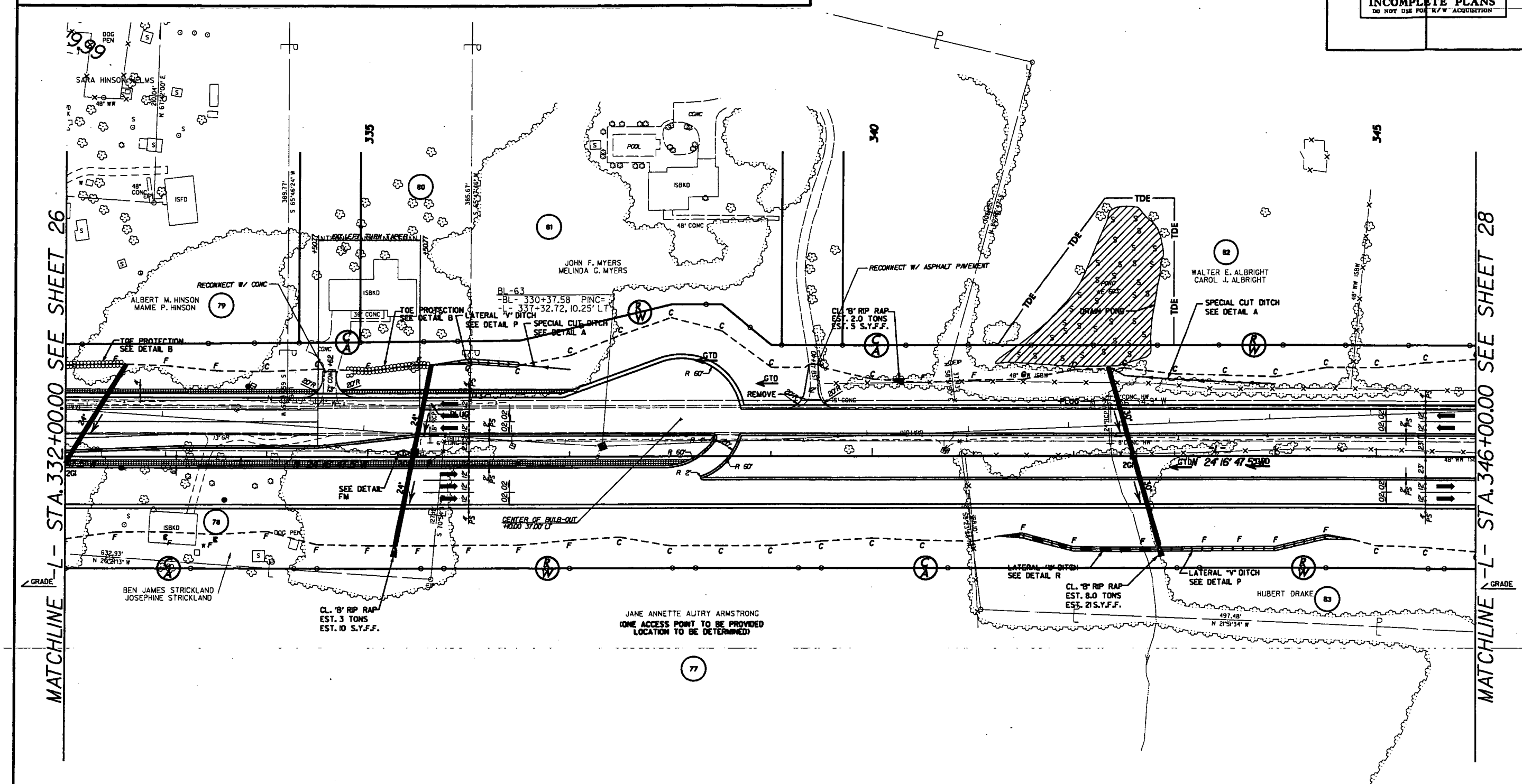
SITE 17 -L- STA. 342 + 00

PROJECT REFERENCE NO.	SHEET NO.
R-2616 A&B	42

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



8/17/99

03:29:09 PM

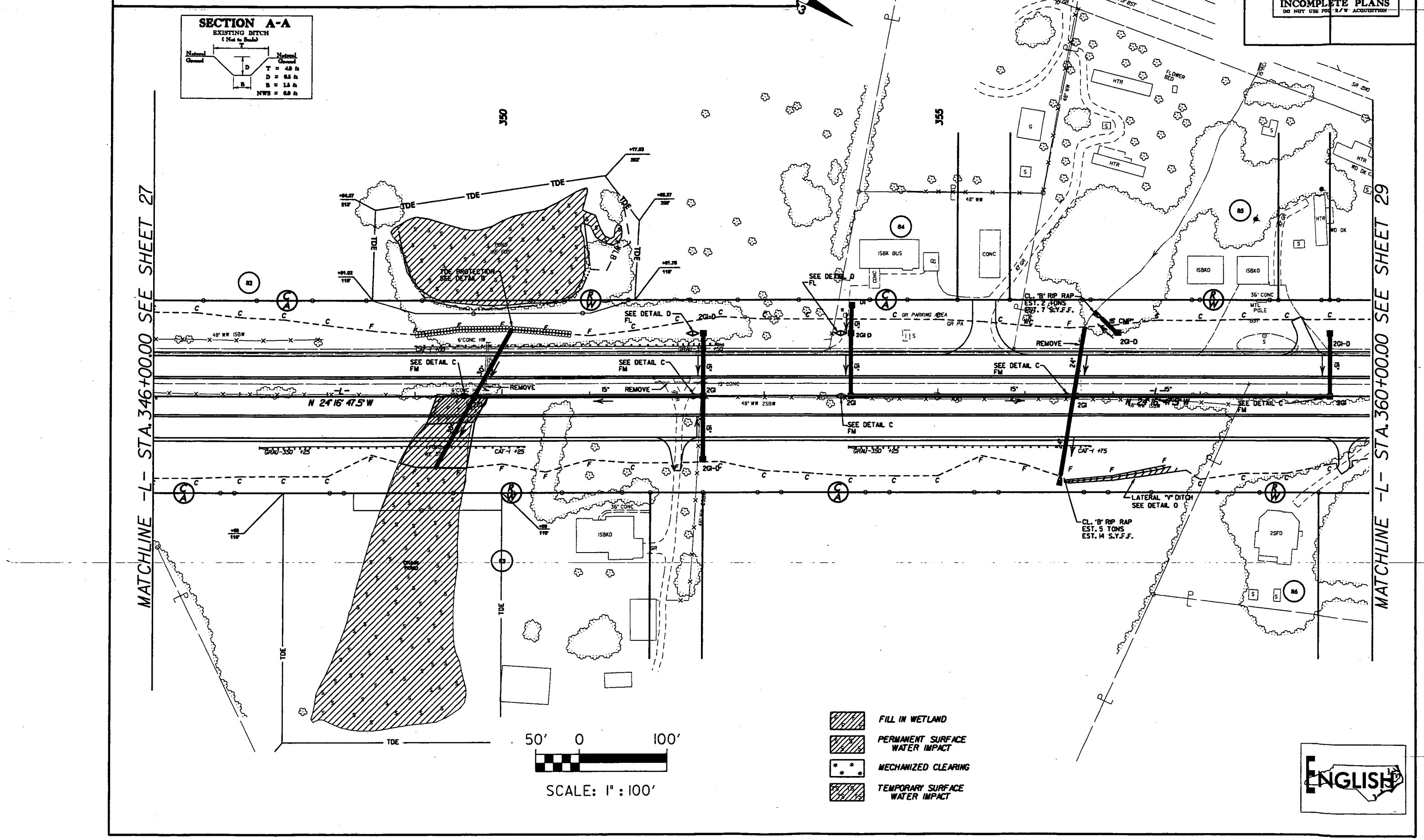
SITE 18 -L- STA. 349 + 50 RT
SITE 19 -L- STA. 349 + 50 LT

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	44

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



8/17/99

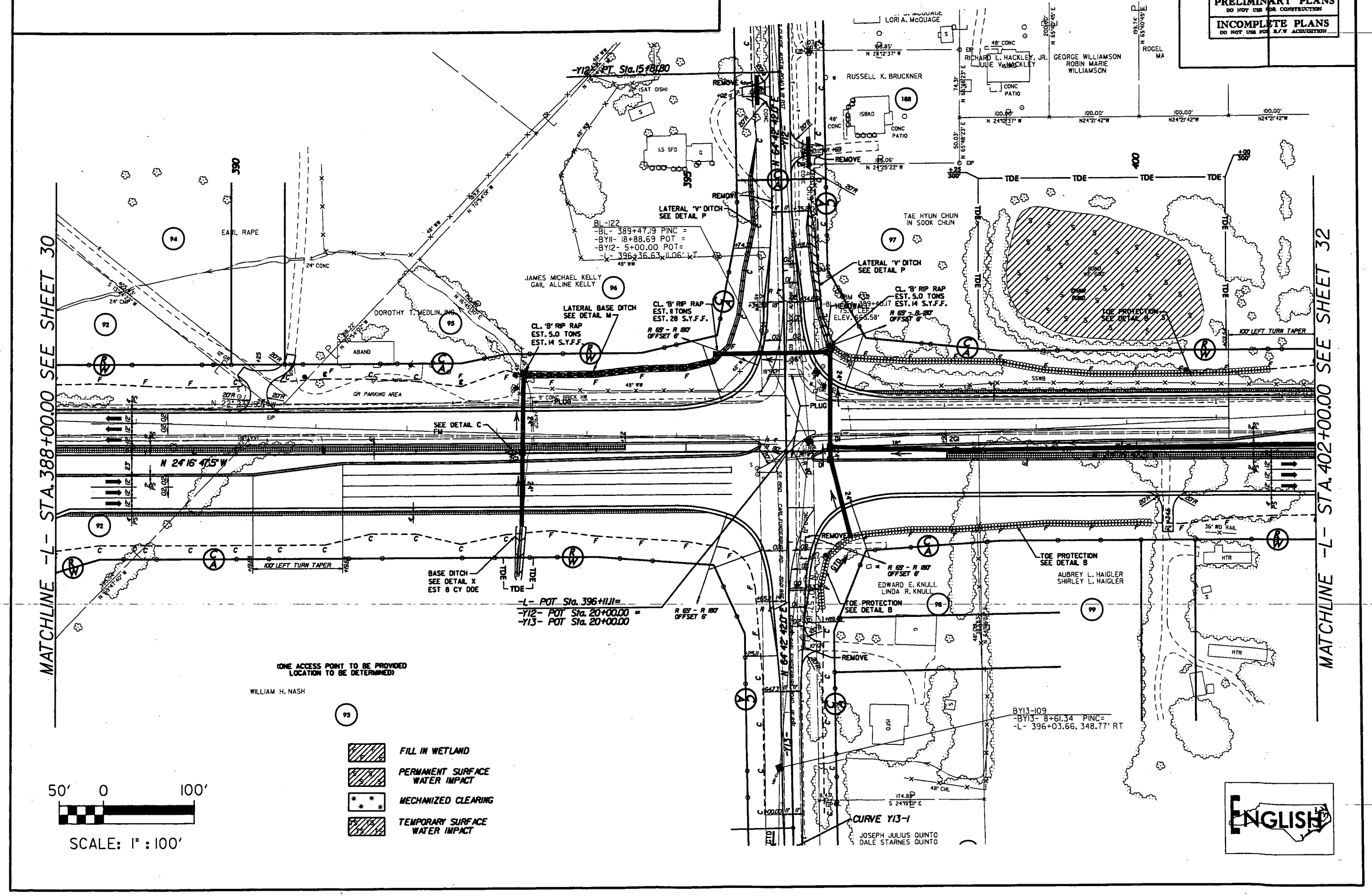
SITE 20 -L- STA. 400 + 00

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	46

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SITE 21 -L- STA. 422 + 00 LT.
SITE 22 -L- STA. 430 + 50 RT.

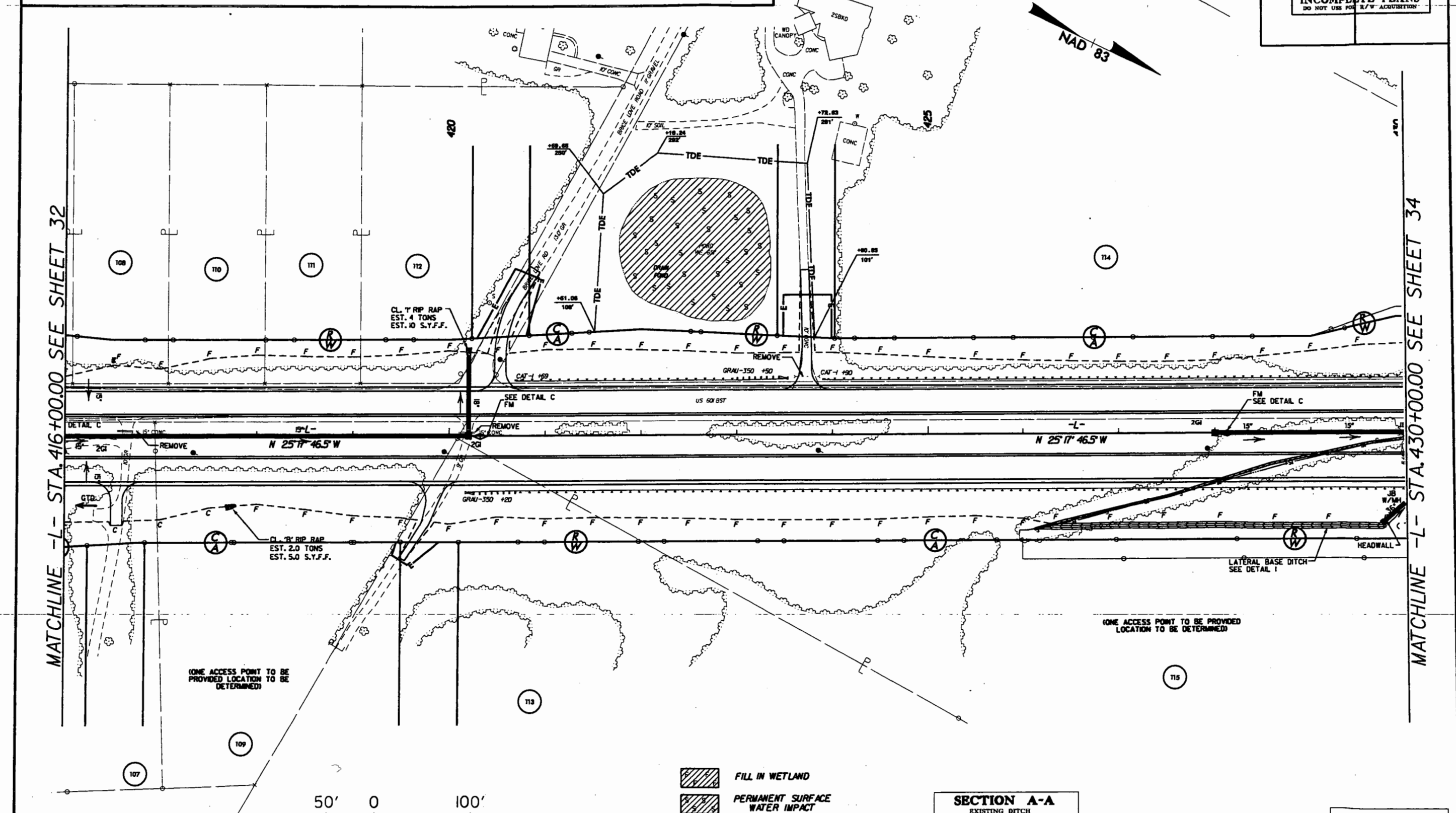
PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	48

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

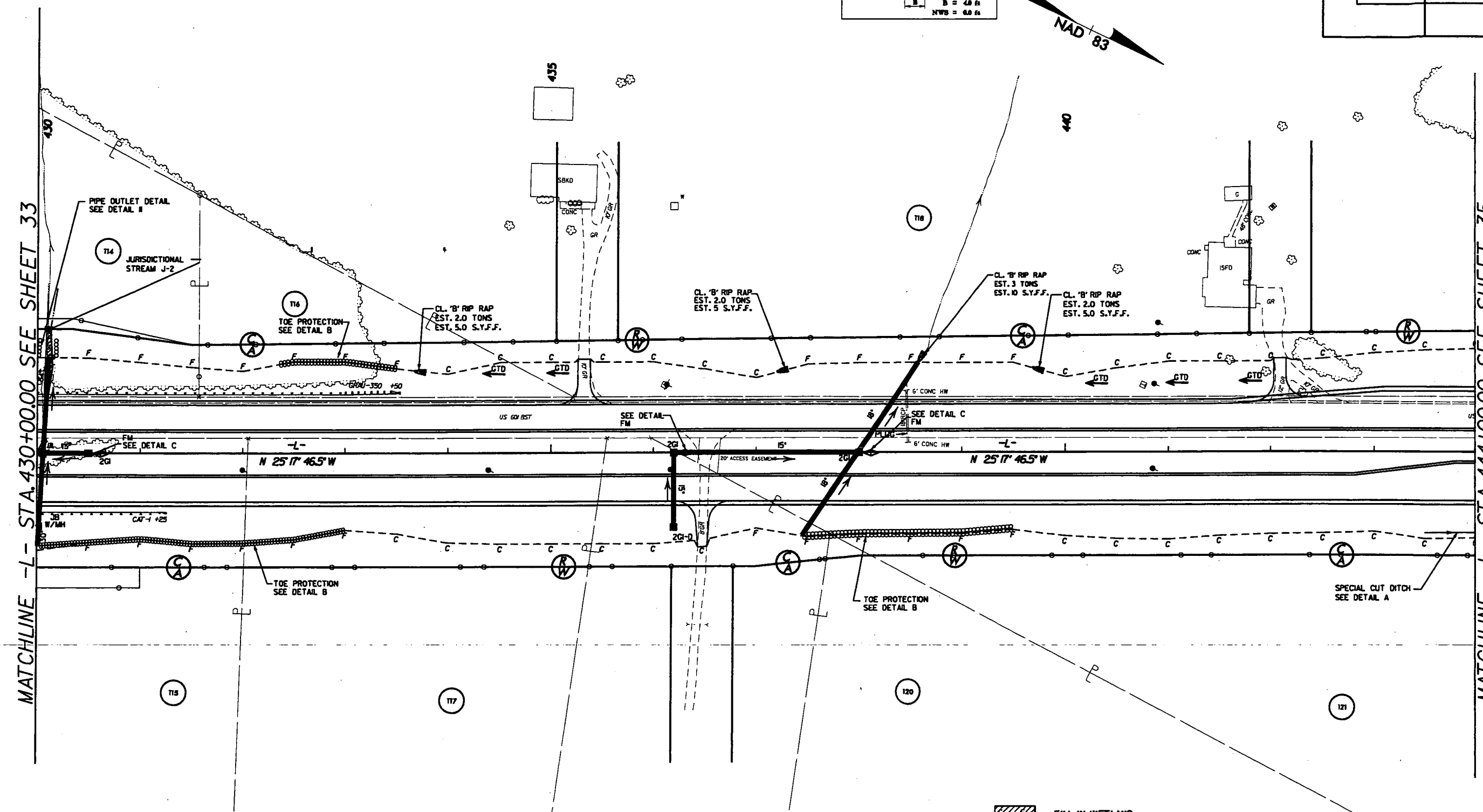


SITE 22 -L- STA. 430 + 50

PROJECT REFERENCE NO.	SHEET NO.
R-2616 A&B	50
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SECTION A-A
EXISTING DITCH
(Not to Scale)

T = 8.0 ft
D = 1.5 ft
B = 4.0 ft
NWS = 6.0 ft

SECTION C-C
EXISTING DITCH
(Not to Scale)

T = 8.0 ft
D = 1.0 ft
B = 2.0 ft
NWS = 0.3 ft

SECTION B-B
EXISTING DITCH
(Not to Scale)

T = 4.0 ft
D = 0.5 ft
B = 1.5 ft
NWS = 8.0 ft

FILL IN WETLAND

PERMANENT SURFACE WATER IMPACT

MECHANIZED CLEARING

TEMPORARY SURFACE WATER IMPACT

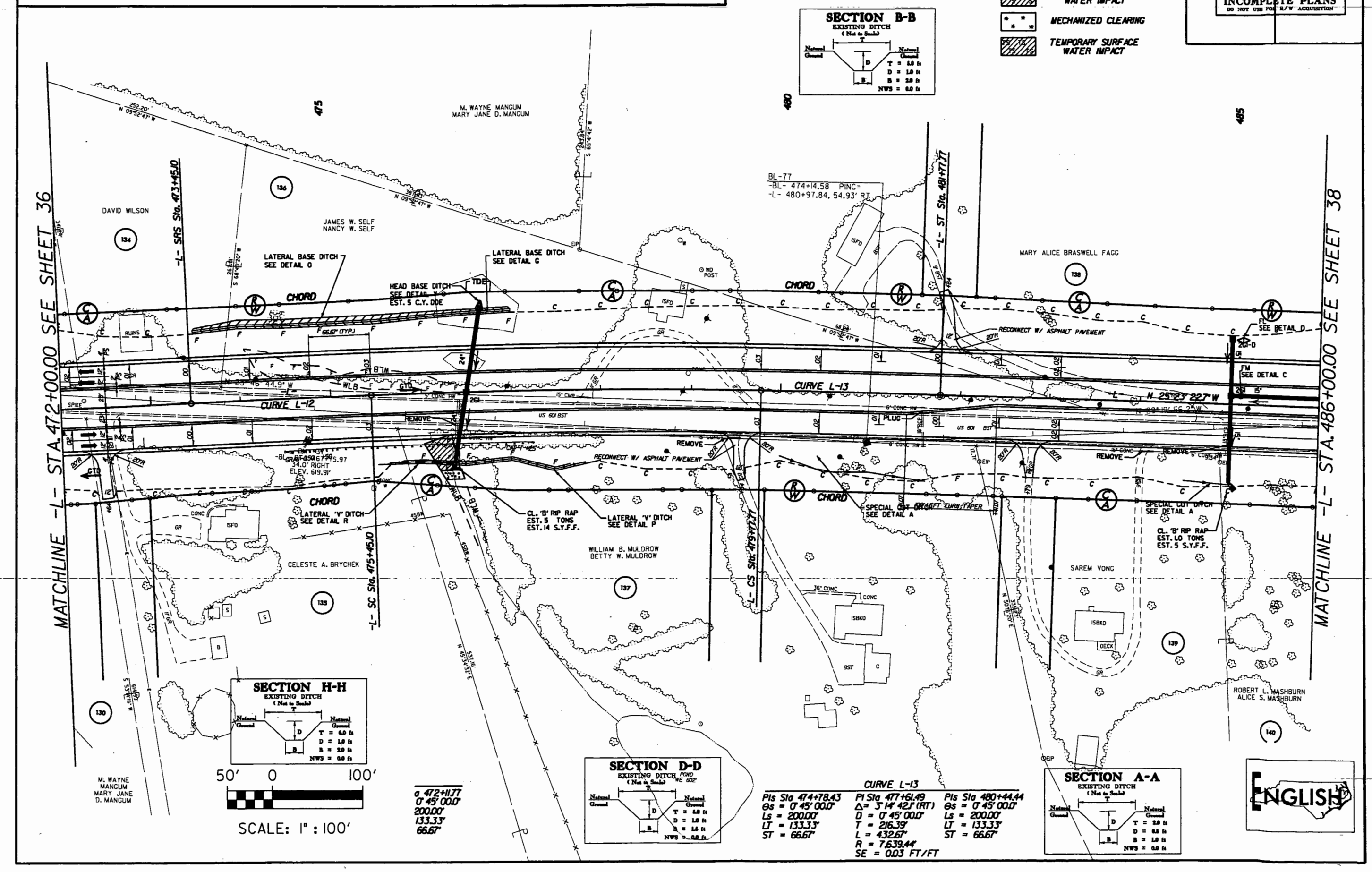
ENGLISH

SITE 23 -L- STA. 476 + 50

PROJECT REFERENCE NO.	SHEET NO.
R-2616 A&B	52
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

FILL IN WETLAND
PERMANENT SURFACE WATER IMPACT
MECHANIZED CLEARING
TEMPORARY SURFACE WATER IMPACT

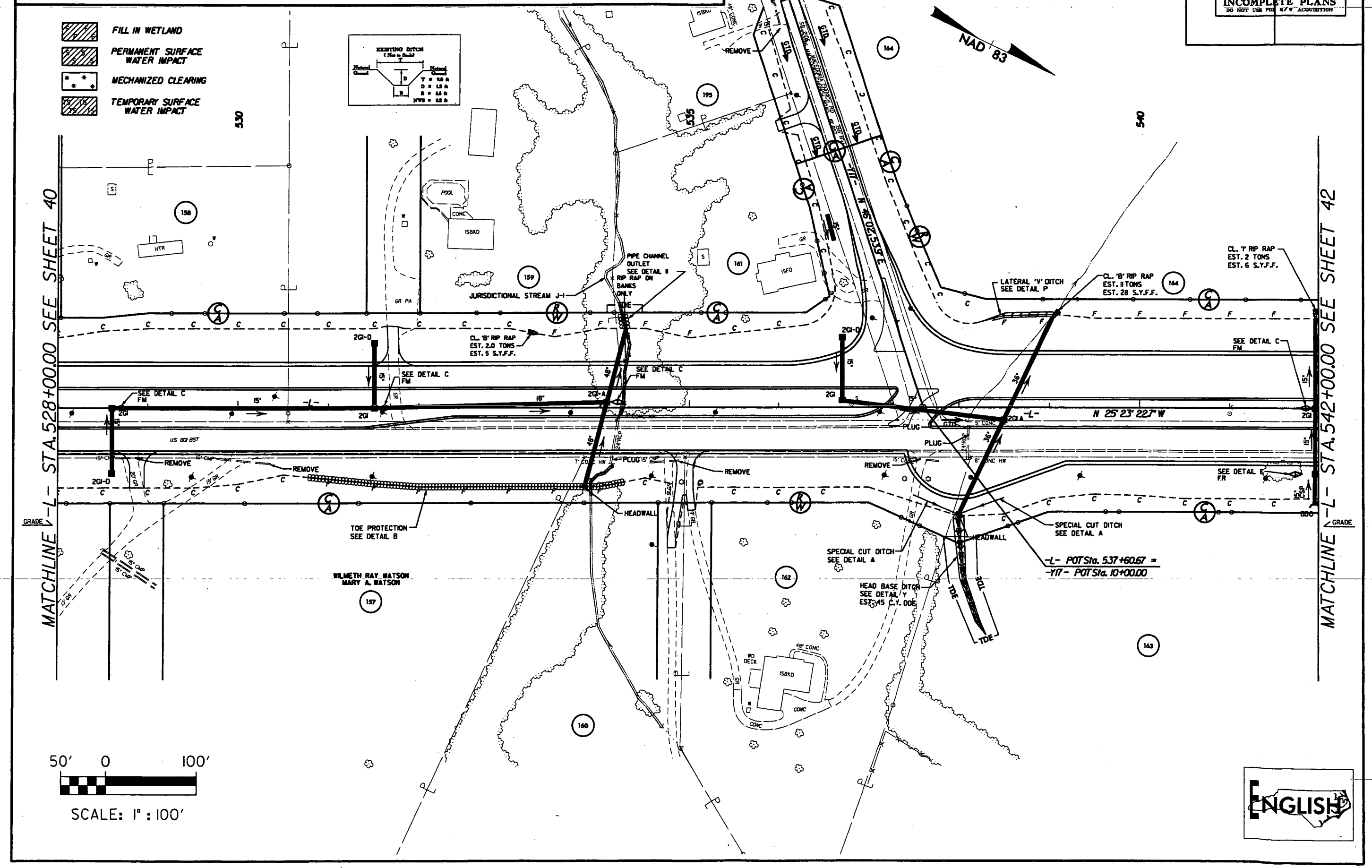


SITE 24 -L- STA. 534 + 20

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	54
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



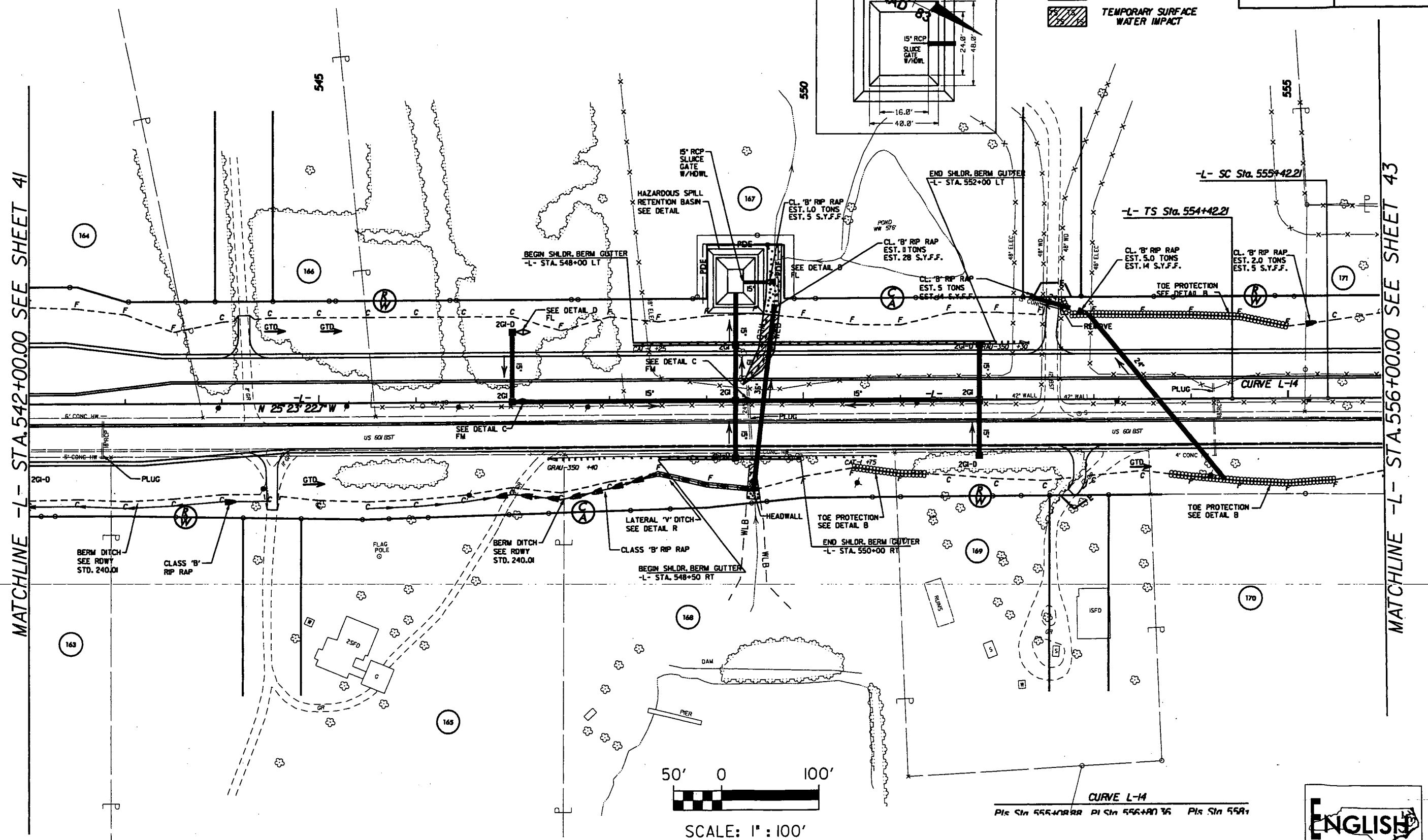
SITE 25 -L- STA. 549 + 60

PROJECT REFERENCE NO.	SHEET NO.
R-2616 A&B	56
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

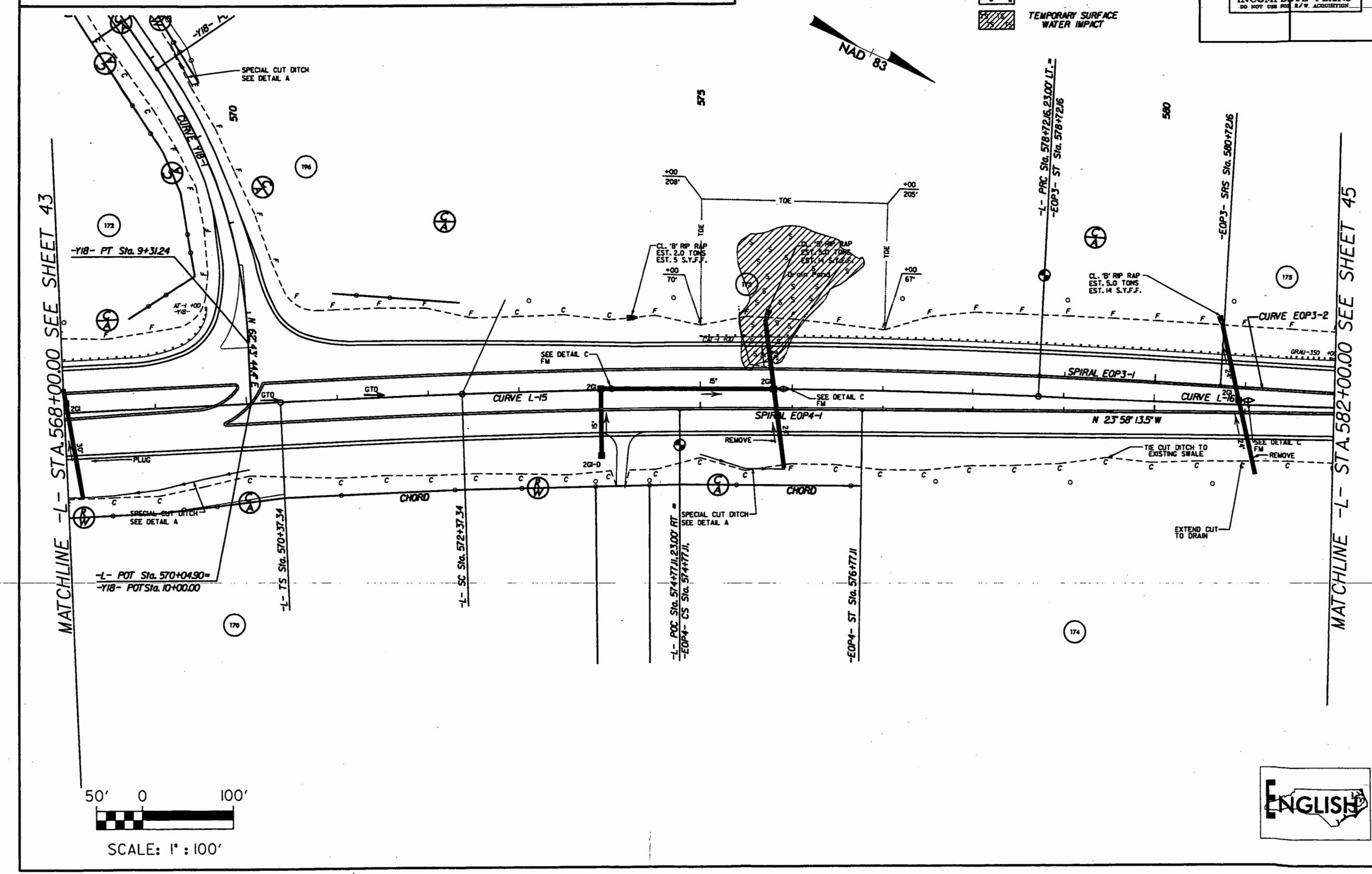
FILL IN WETLAND
PERMANENT SURFACE WATER IMPACT
MECHANIZED CLEARING
TEMPORARY SURFACE WATER IMPACT



ENGLISH

SITE 26 -L- STA. 575 + 85

PROJECT REFERENCE NO.	SHEET NO.
B-2616 A&B	58
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

FILL IN WETLAND
PERMANENT SURFACE WATER IMPACT
MECHANIZED CLEARING
TEMPORARY SURFACE WATER IMPACT