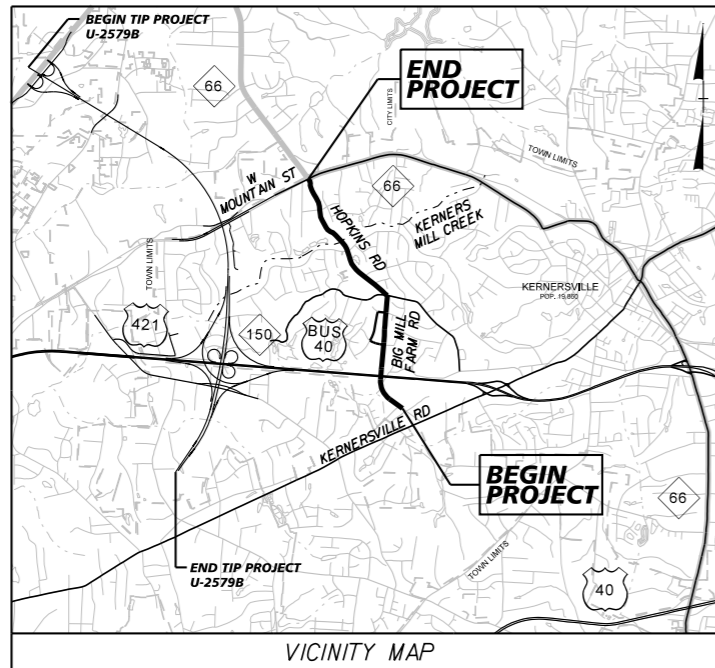


09/08/99

TIP PROJECT: U-5760

See Sheet 1B For Conventional Plan Sheet Symbols



PERMIT DRAWING SHEET 1 OF 27

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

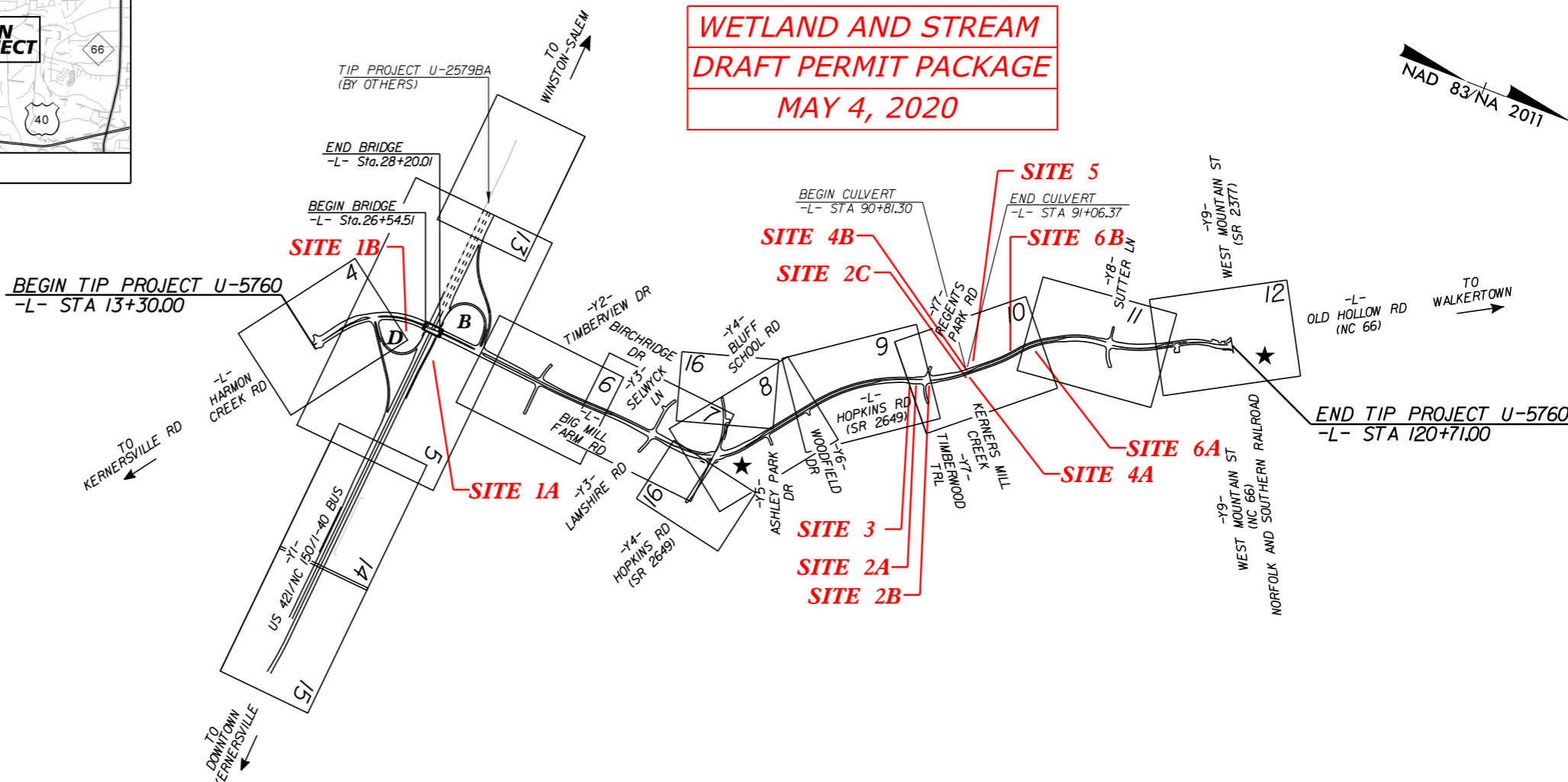
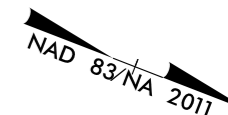
FORSYTH COUNTY

LOCATION: HOPKINS ROAD/BIG MILL FARM ROAD IN KERNERSVILLE FROM SOUTH OF US 421/NC 150 TO NC 66 (W MOUNTAIN ST)

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5760	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46381.1.1		P.E.	
45721.2.1		RW	
45721.2.1		UTL	
45721.3.1		CONST.	

WETLAND AND STREAM DRAFT PERMIT PACKAGE MAY 4, 2020

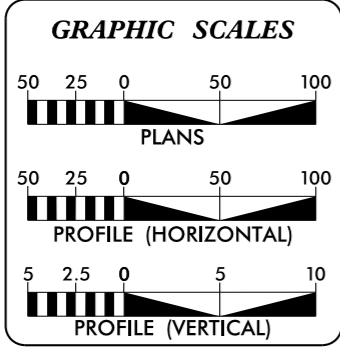


★ TRAFFIC SIGNAL

THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS LIMITED TO POINTS AS SHOWN ON THE PLANS. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III. THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE TOWN OF KERNERSVILLE.

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

AADT 2023 =	10,700
AADT 2040 =	14,900
K =	10%
D =	60%
T =	3%*
V =	50 MPH

* (TTST 1% + DUAL 2%)

FUNCTIONAL CLASSIFICATION:
URBAN COLLECTOR
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5760	=	1.998 MILES
LENGTH STRUCTURES TIP PROJECT U-5760	=	0.036 MILES
TOTAL LENGTH TIP PROJECT U-5760	=	2.034 MILES

PLANS PREPARED FOR THE NCDOT BY: **Kimley»Horn**

2018 STANDARD SPECIFICATIONS	JEFFREY W. MOORE, P.E. PROJECT ENGINEER
RIGHT OF WAY DATE: APRIL 16, 2021	RHODES S. HUNT, P.E. PROJECT DESIGN ENGINEER
LETTING DATE: APRIL 18, 2023	W. AL BLANTON, P.E., P.L.S. PROJECT TEAM LEAD NCDOT DIVISION 9

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



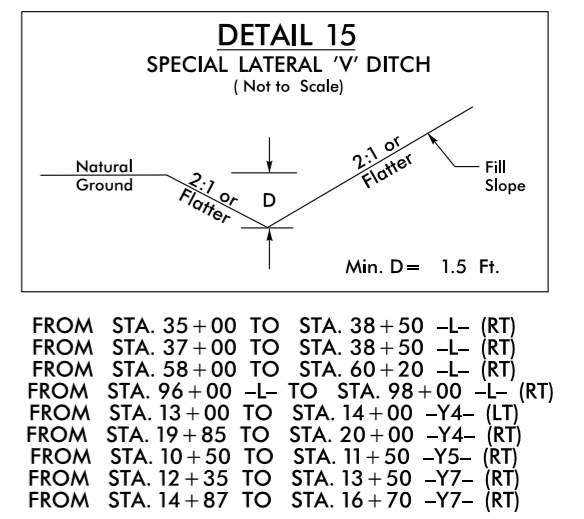
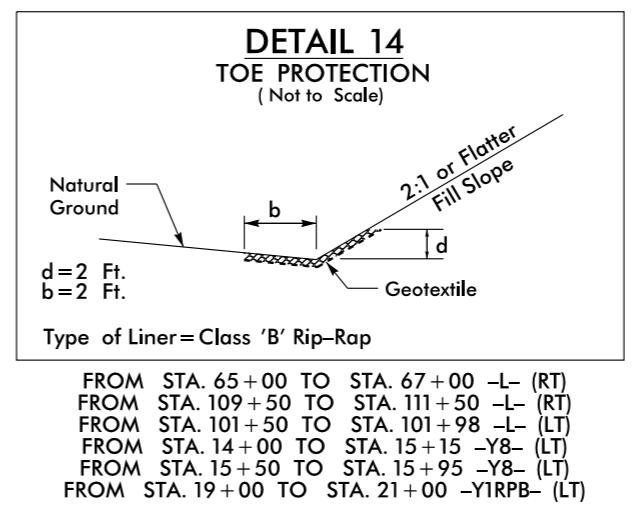
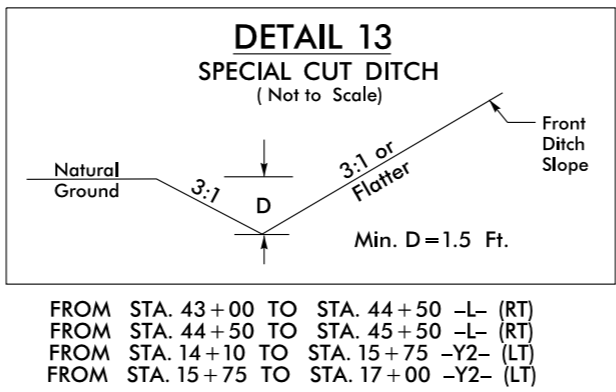
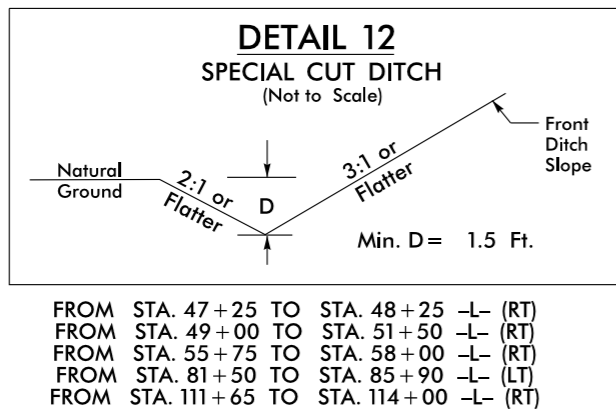
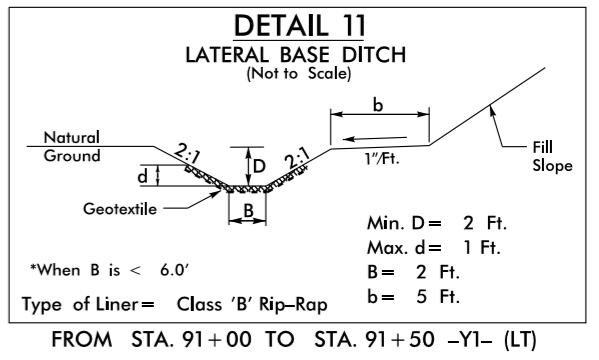
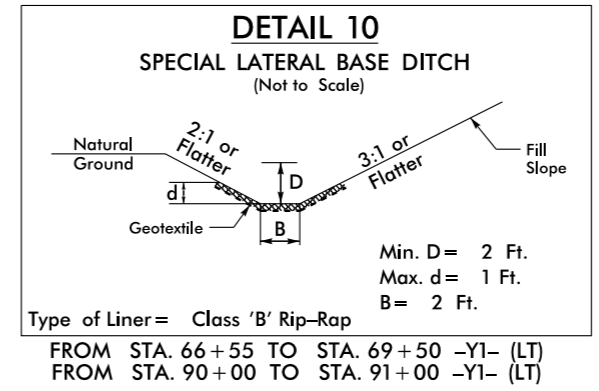
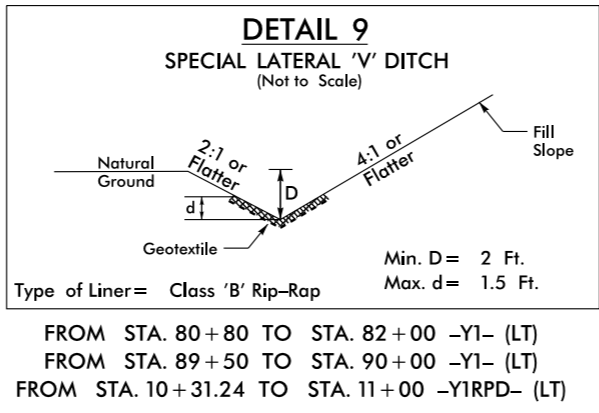
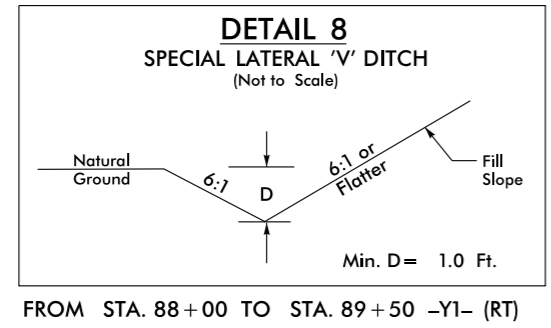
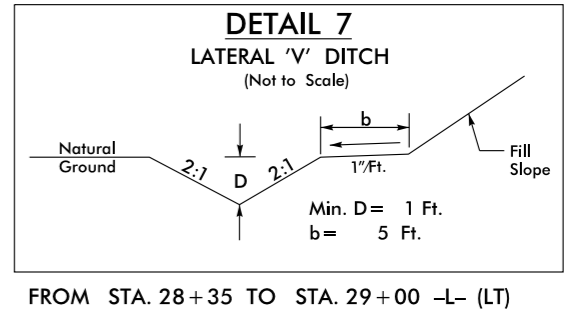
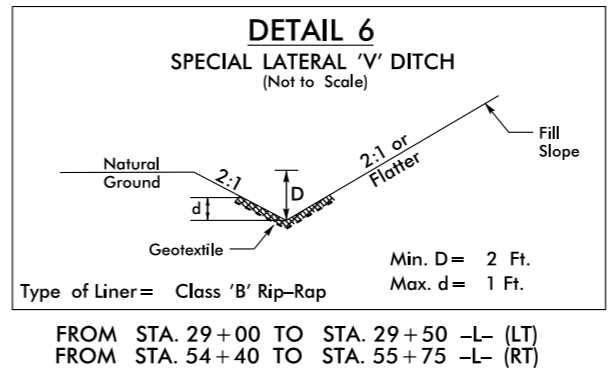
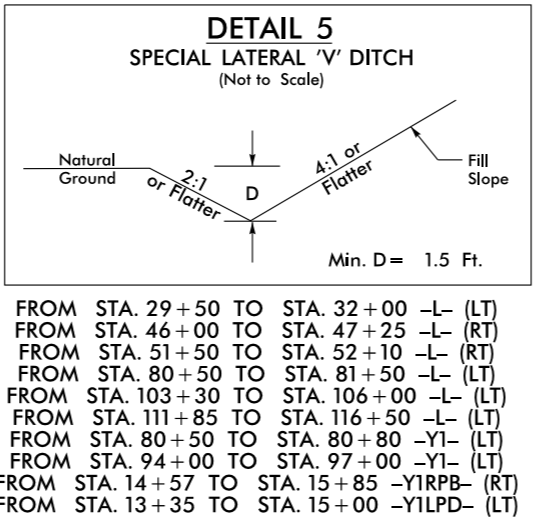
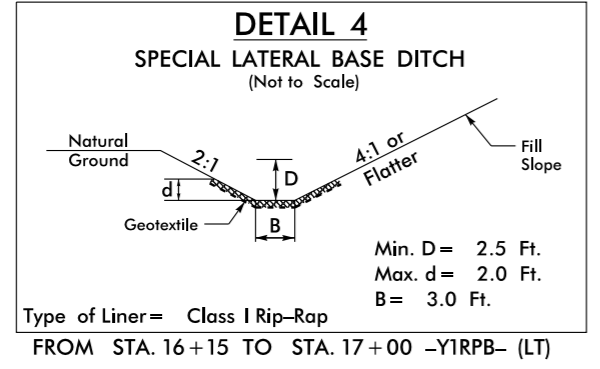
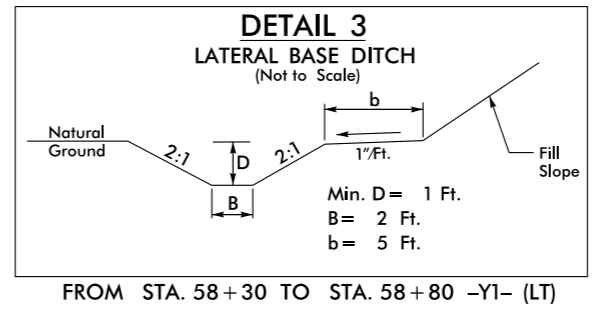
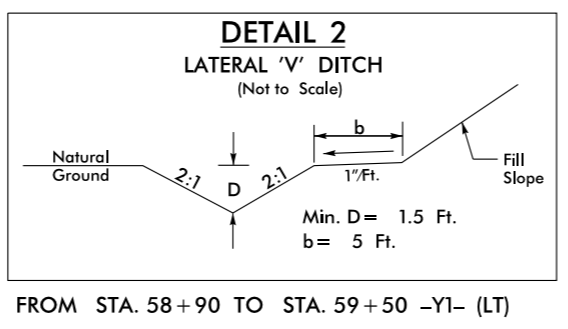
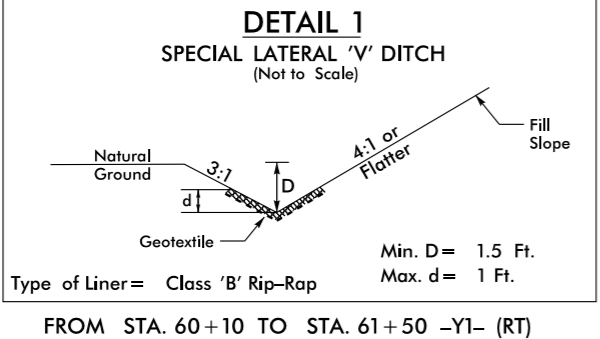
\$DATE\$ \$FILE\$

5/14/99

PROJECT REFERENCE NO. U-5760		SHEET NO. 2D-1	
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

Kimley **Horn**
 421 FAYETTEVILLE STREET, SUITE 600
 RALEIGH, NC 27601
 RIGHT-OF-WAY REV.
 CONST. REV.

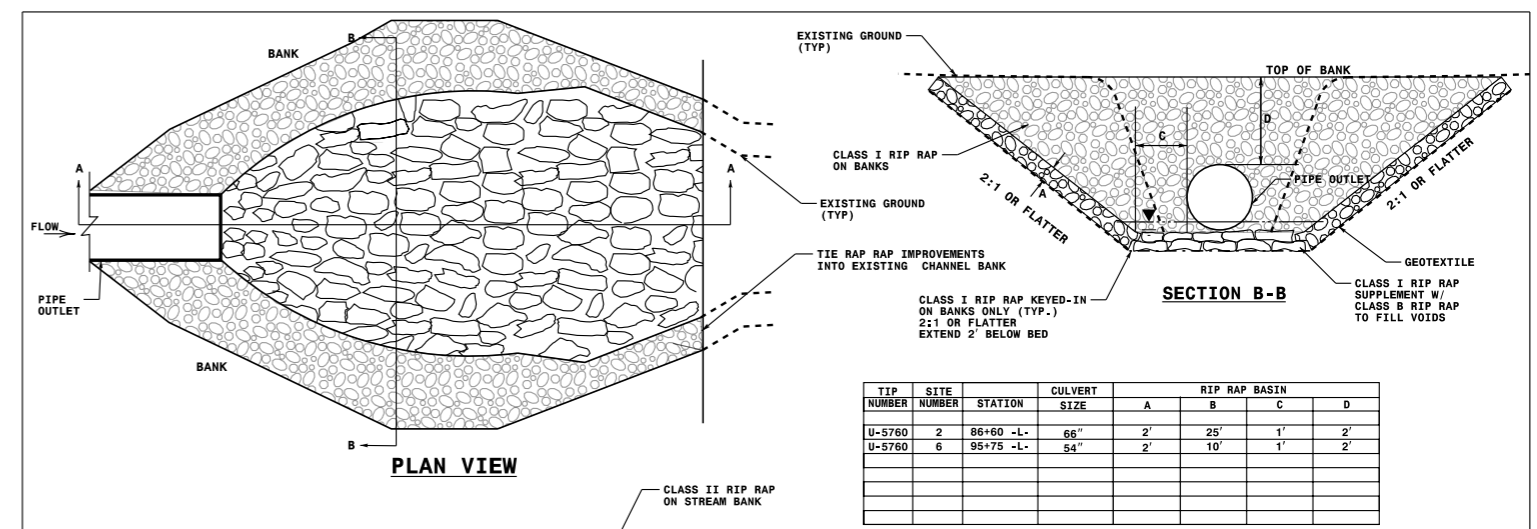
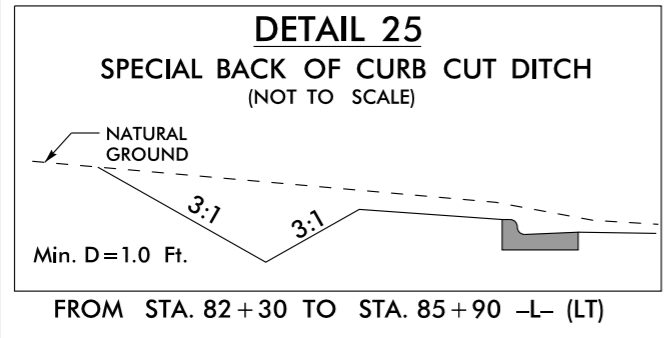
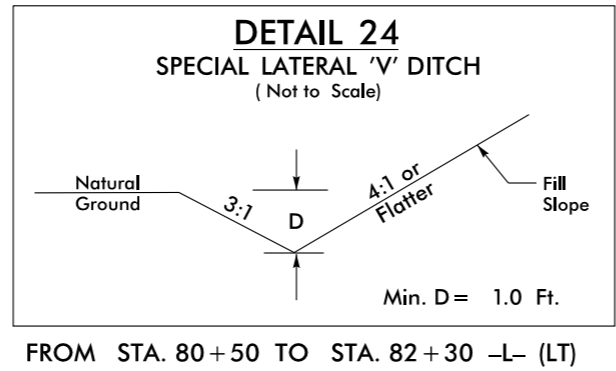
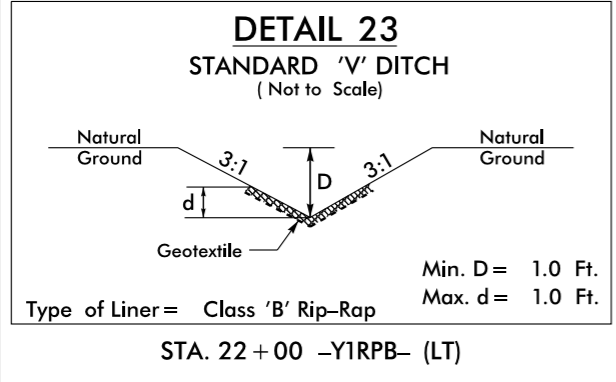
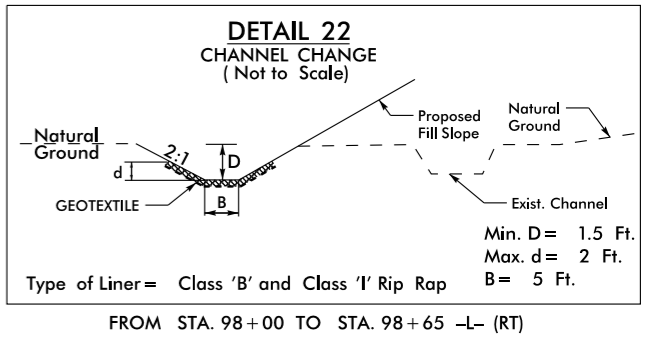
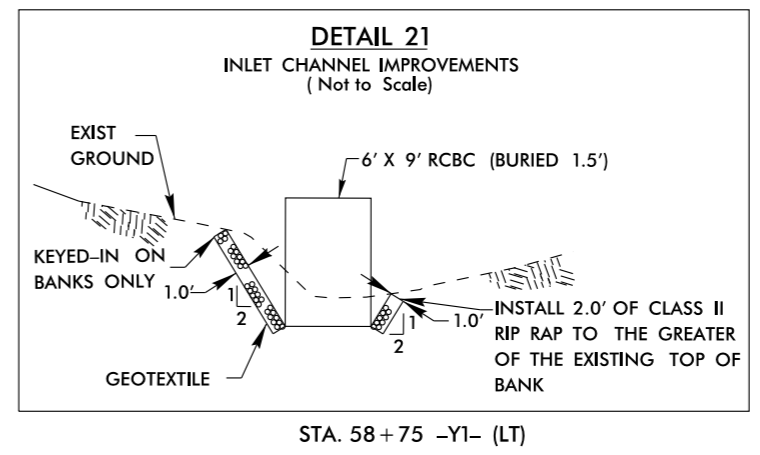
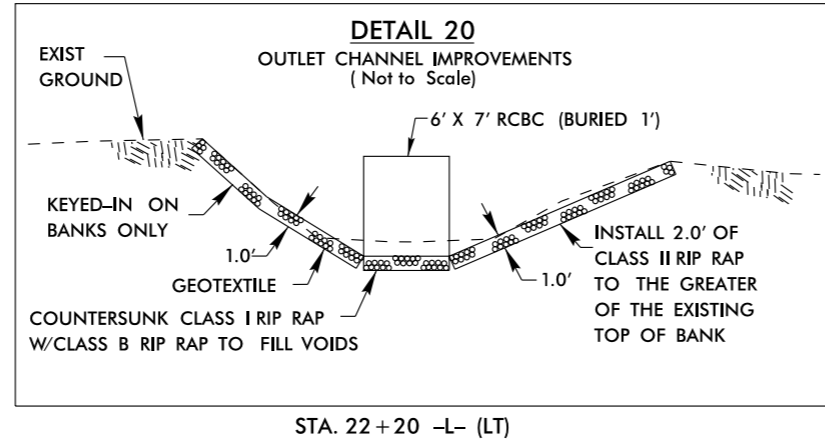
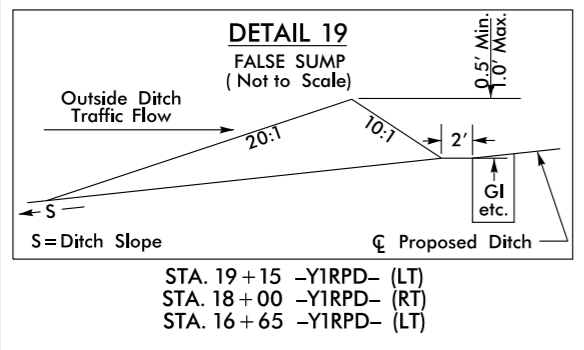
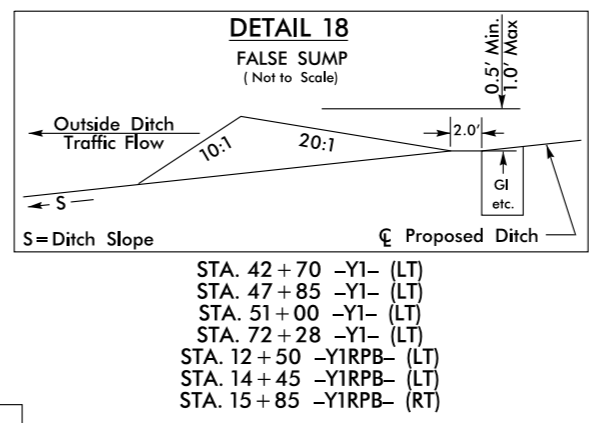
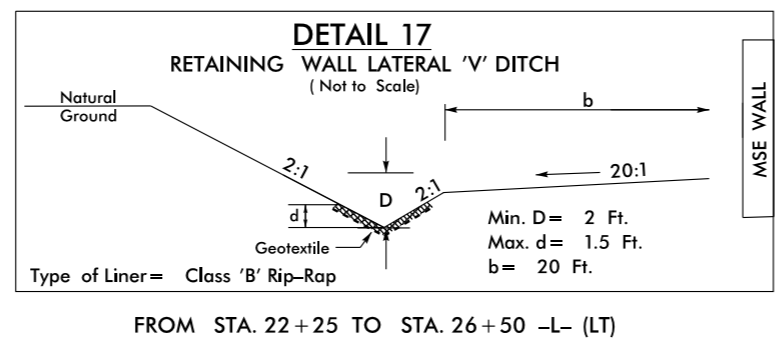
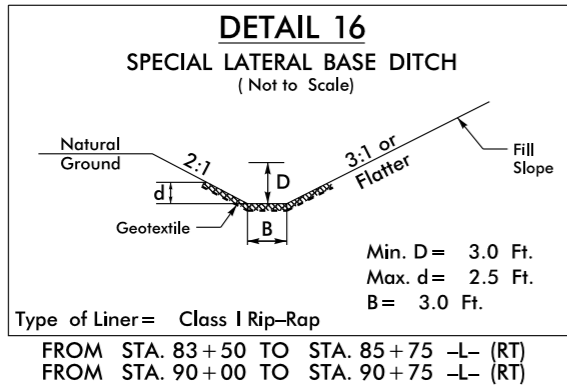
PERMIT DRAWING
 SHEET 2 OF 27



REVISIONS

\$DATE\$

5/14/99

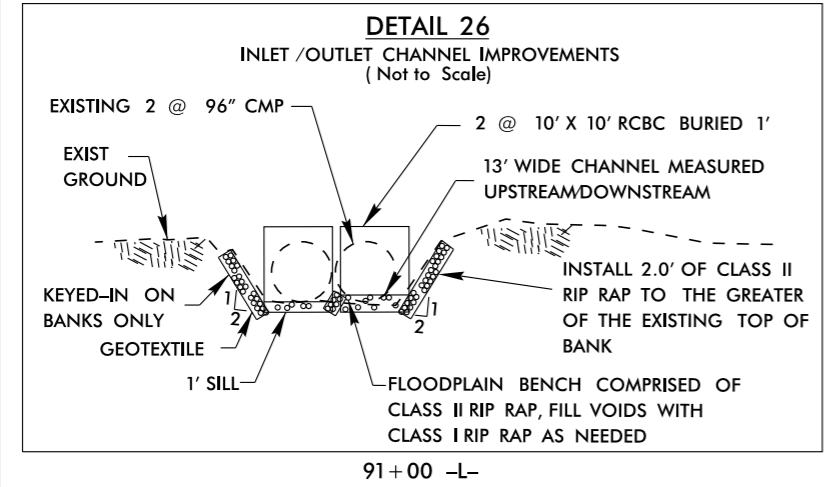


TIP NUMBER	SITE NUMBER	STATION	CULVERT SIZE	A	B	C	D
U-5760	2	86+60 -L-	66"	2'	25'	1'	2'
U-5760	6	95+75 -L-	54"	2'	10'	1'	2'

ALL DIMENSIONS ARE APPROXIMATE

NOTE:
 USE CLASS I RIP RAP IN STREAM BED AND SUPPLEMENT WITH CLASS B TO FILL VOIDS AS NECESSARY

DETAIL 27
SPECIAL OUTLET PROTECTION
 (NOT TO SCALE)



REVISIONS

\$DATE\$

LEGEND



18 15
DENOTES TEMPORARY IMPACTS IN SURFACE WATER

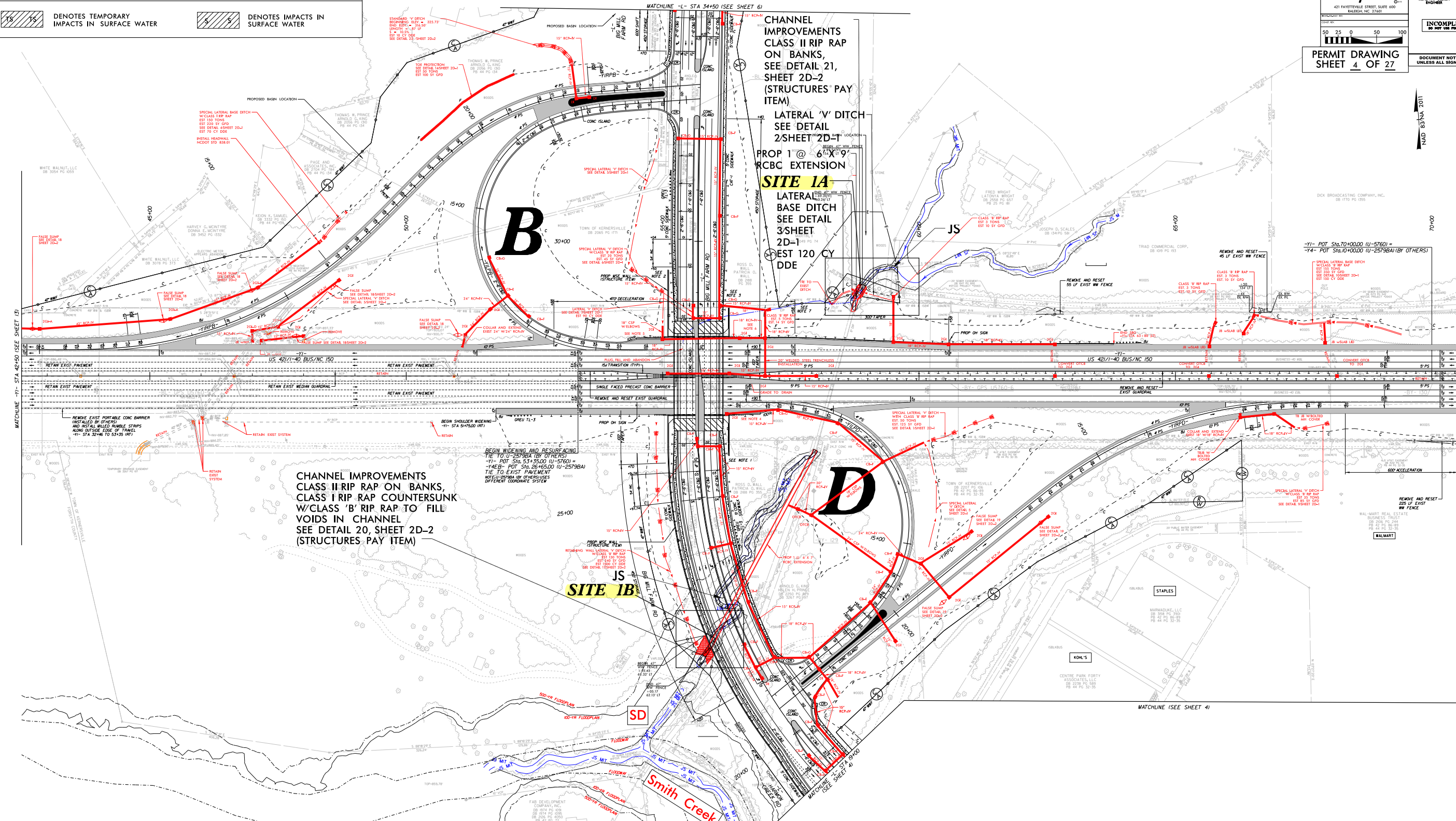


25 25
DENOTES IMPACTS IN SURFACE WATER

INCOMPLETE PLANS
DO NOT USE FOR Bidding

PERMIT DRAWING
SHEET 4 OF 27

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



REVISIONS

NAD 83/NA 2011

\$DATE\$

LEGEND



TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER



S DENOTES IMPACTS IN SURFACE WATER

KimleyHorn
421 FAYETTEVILLE STREET, SUITE 400
RALEIGH, NC 27601

PROJECT REFERENCE NO. U-5760
SHEET NO. 5
ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR Bidding

PERMIT DRAWING
SHEET 5 OF 27

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CHANNEL IMPROVEMENTS
CLASS II RIP RAP
ON BANKS
SEE DETAIL 21,
SHEET 2D-2
(STRUCTURES PAY
ITEM)

LATERAL 'V' DITCH
SEE DETAIL
2/SHEET 2D-1
PROP 1 @ 6' X 9'
RCBC EXTENSION

SITE 1A

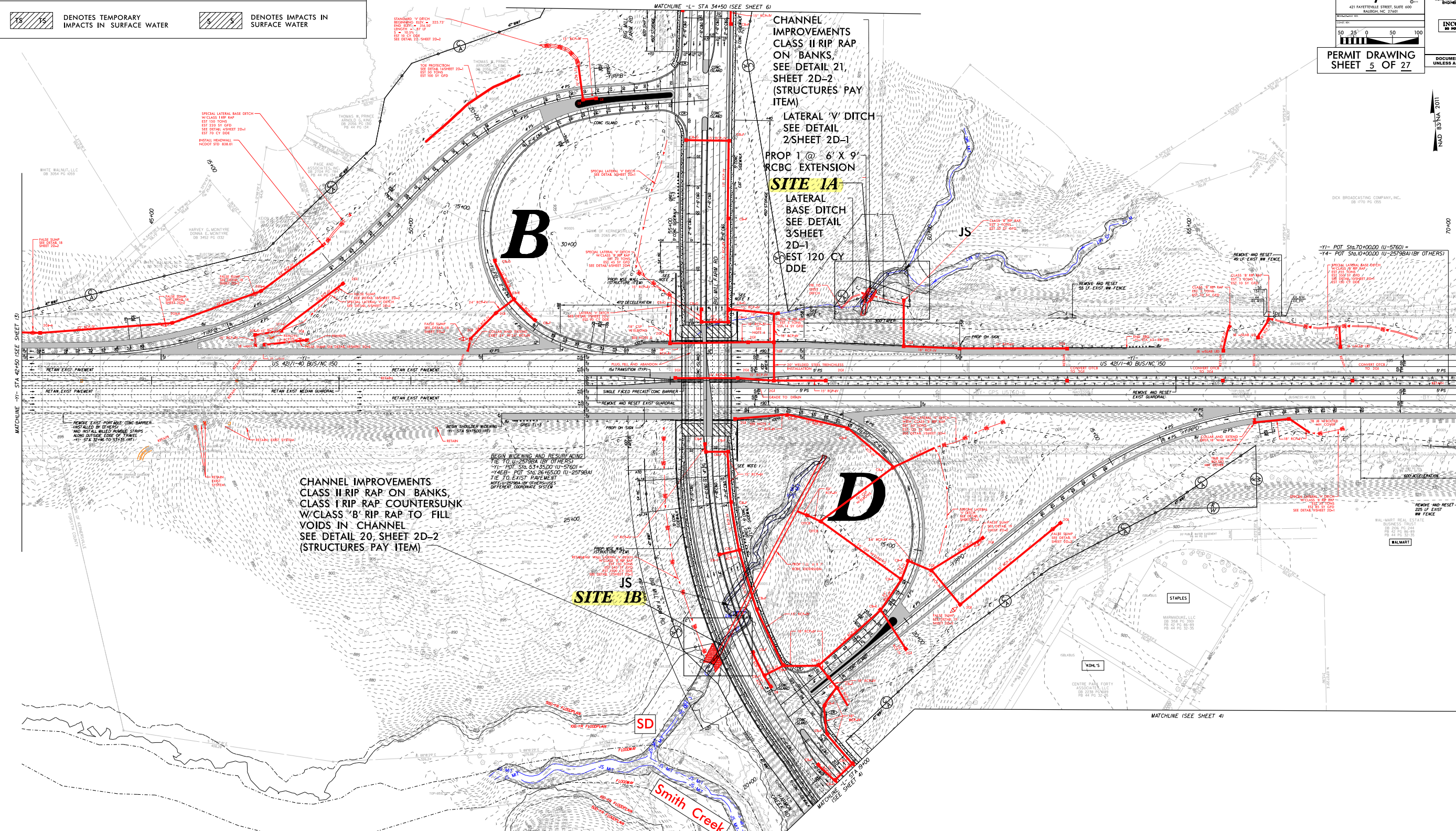
LATERAL
BASE DITCH
SEE DETAIL
3/SHEET
2D-1
EST 120 CY
DDE

CHANNEL IMPROVEMENTS
CLASS II RIP RAP ON BANKS,
CLASS I RIP RAP COUNTERSUNK
W/CLASS 'B' RIP RAP TO FILL
VOIDS IN CHANNEL
SEE DETAIL 20, SHEET 2D-2
(STRUCTURES PAY ITEM)

BEGIN WIDENING AND RESURFACING
TIE TO US 421/1-40 BUS/NC 150
-Y1- POT Sta. 53+35.00 (U-5760)
-Y4EB- POT Sta. 26+65.00 (U-2579BA)
TIE TO EXIST PAVEMENT
NOTE (U-2579BA) BY OTHERS USES
DIFFERENT COORDINATE SYSTEM

SITE 1B

Smith Creek



REVISIONS

\$DATE\$

5/14/99

LEGEND



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN SURFACE WATER

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.

U-5760

SHEET NO.

5A

ROADWAY DESIGN ENGINEER

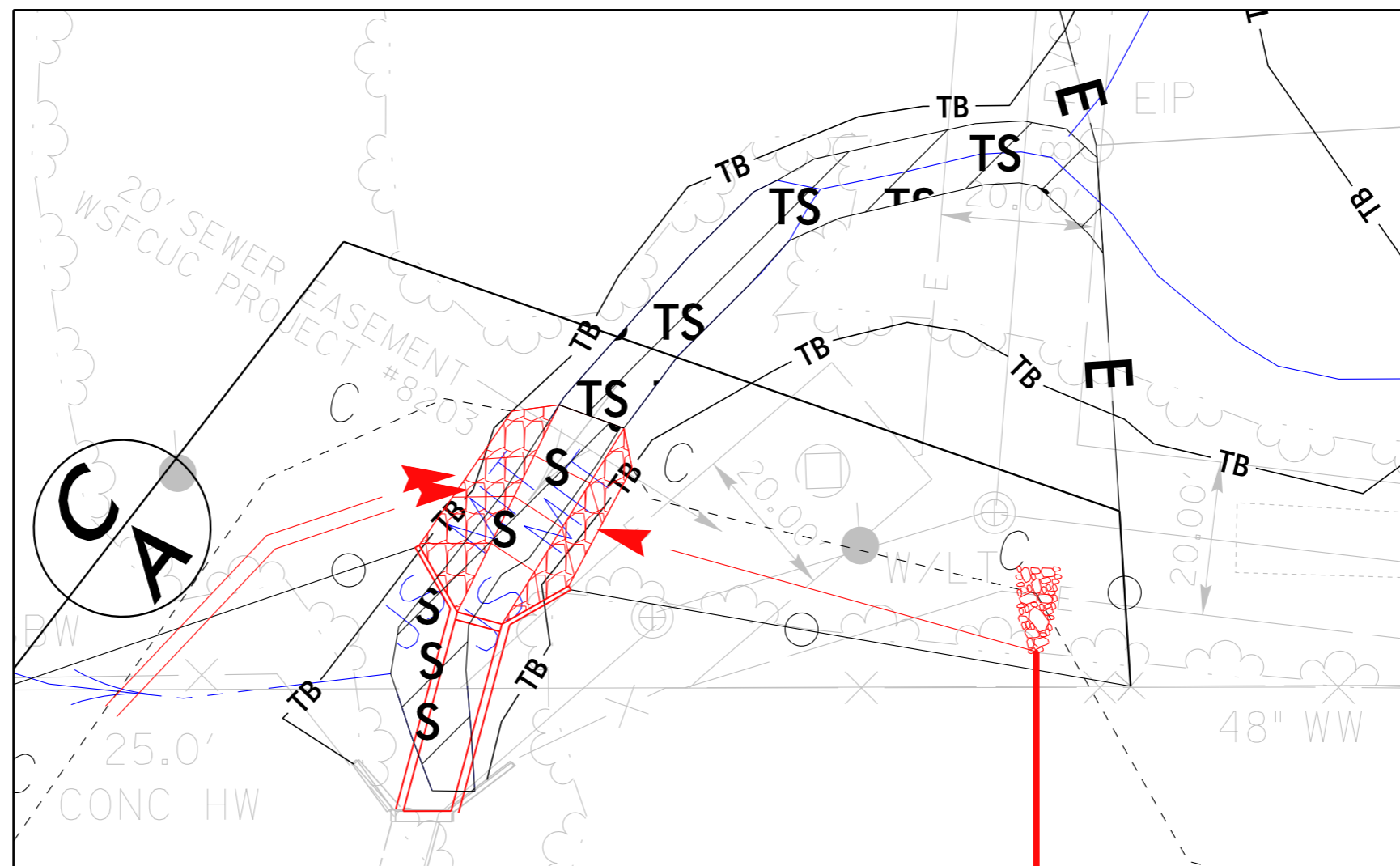
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING
SHEET 6 OF 27

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

SITE IMPACT ZOOM: 1" = 20'



DETAIL SHEET FOR SITE 1A

REVISIONS

\$DATE\$

5/14/99

LEGEND



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN SURFACE WATER

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.

U-5760

SHEET NO.

5A

ROADWAY DESIGN ENGINEER

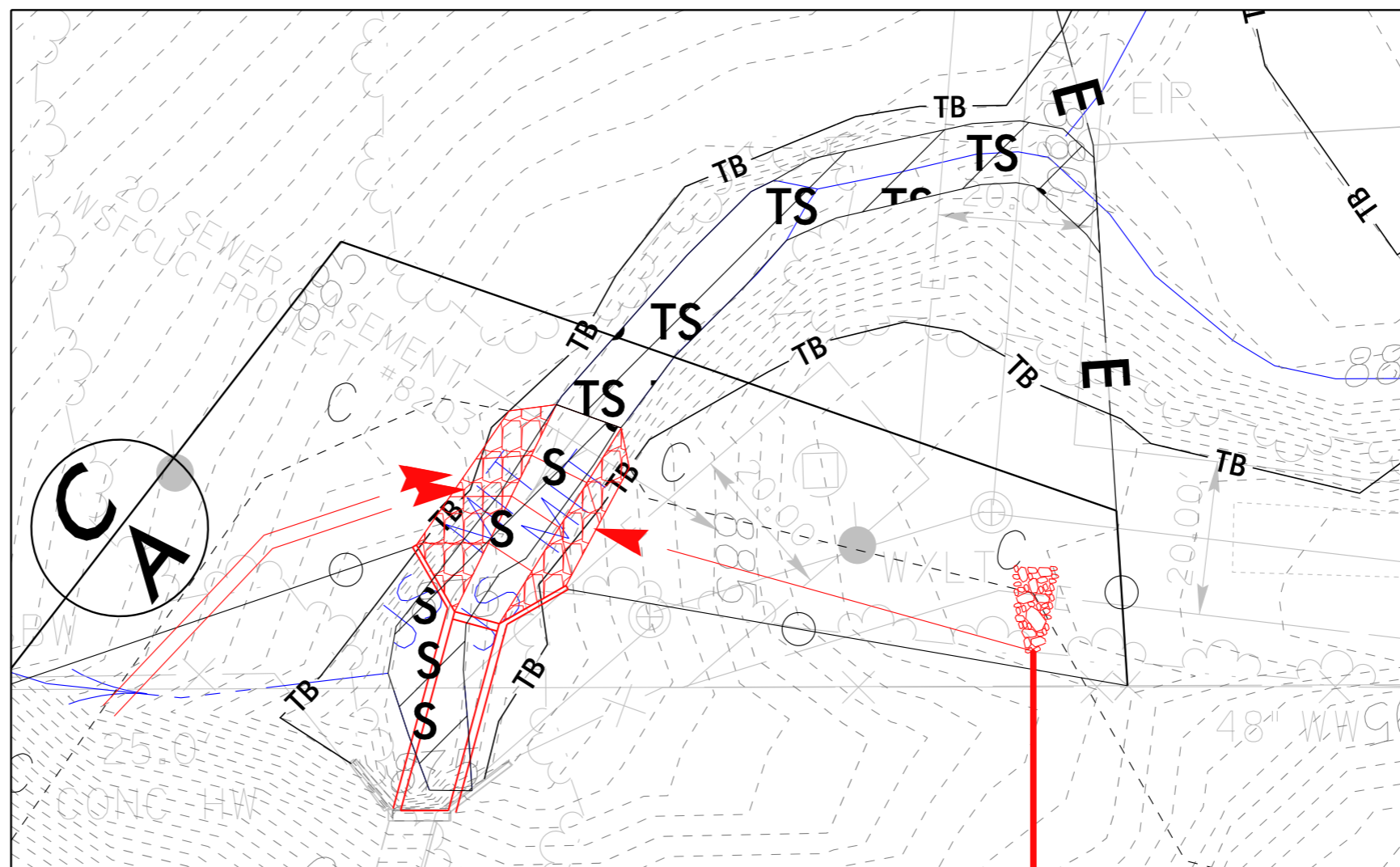
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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING
SHEET 7 OF 27

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

SITE IMPACT ZOOM: 1" = 20'



DETAIL SHEET FOR SITE 1A

REVISIONS

\$DATE\$

5/14/99

LEGEND



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN SURFACE WATER

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.

U-5760

SHEET NO.

5B

ROADWAY DESIGN ENGINEER

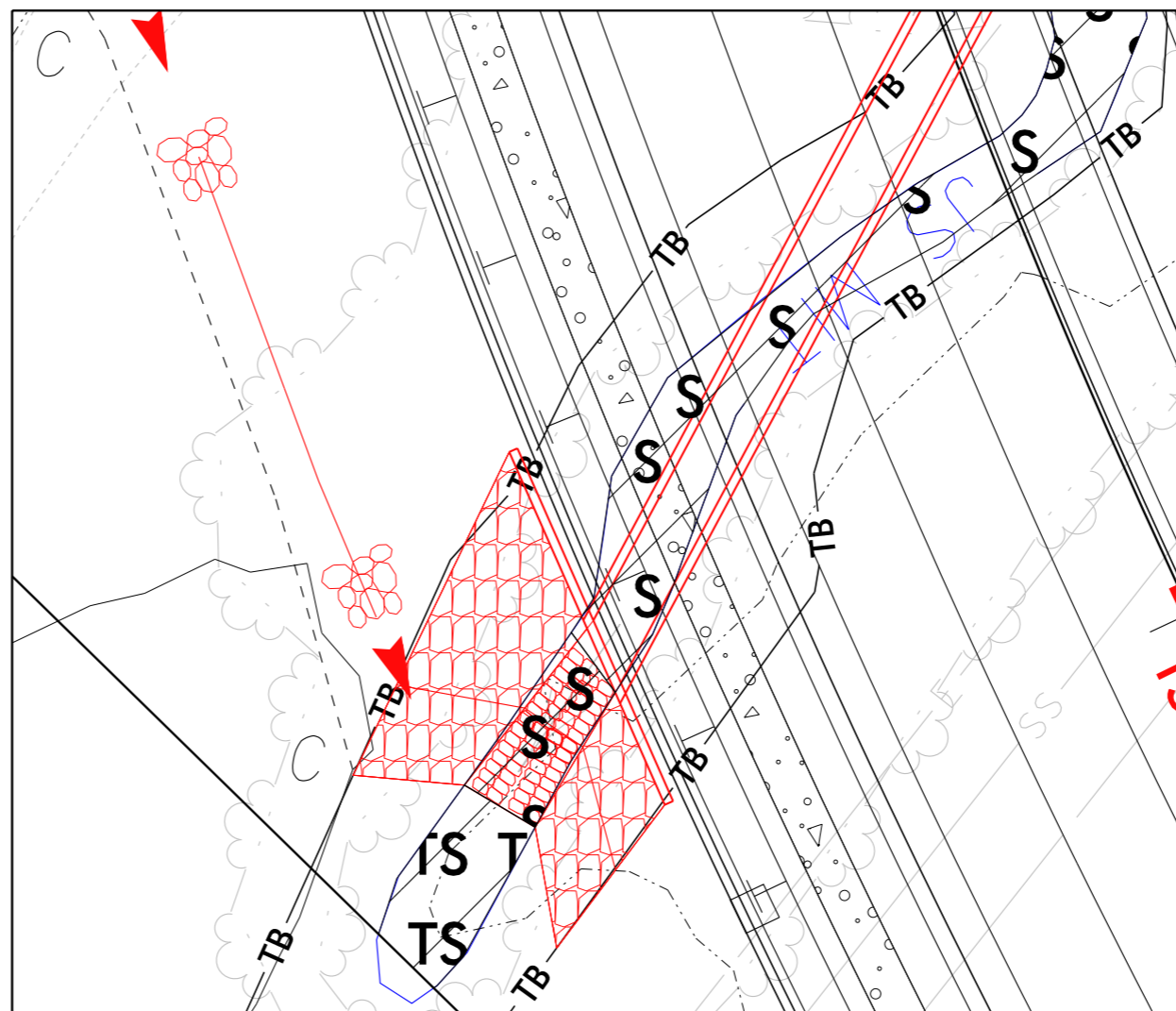
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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING
SHEET 8 OF 27

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

SITE IMPACT ZOOM: 1"=20'



DETAIL SHEET FOR SITE 1B

REVISIONS

\$DATE\$

5/14/99

LEGEND



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN SURFACE WATER

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.

U-5760

SHEET NO.

5B

ROADWAY DESIGN ENGINEER

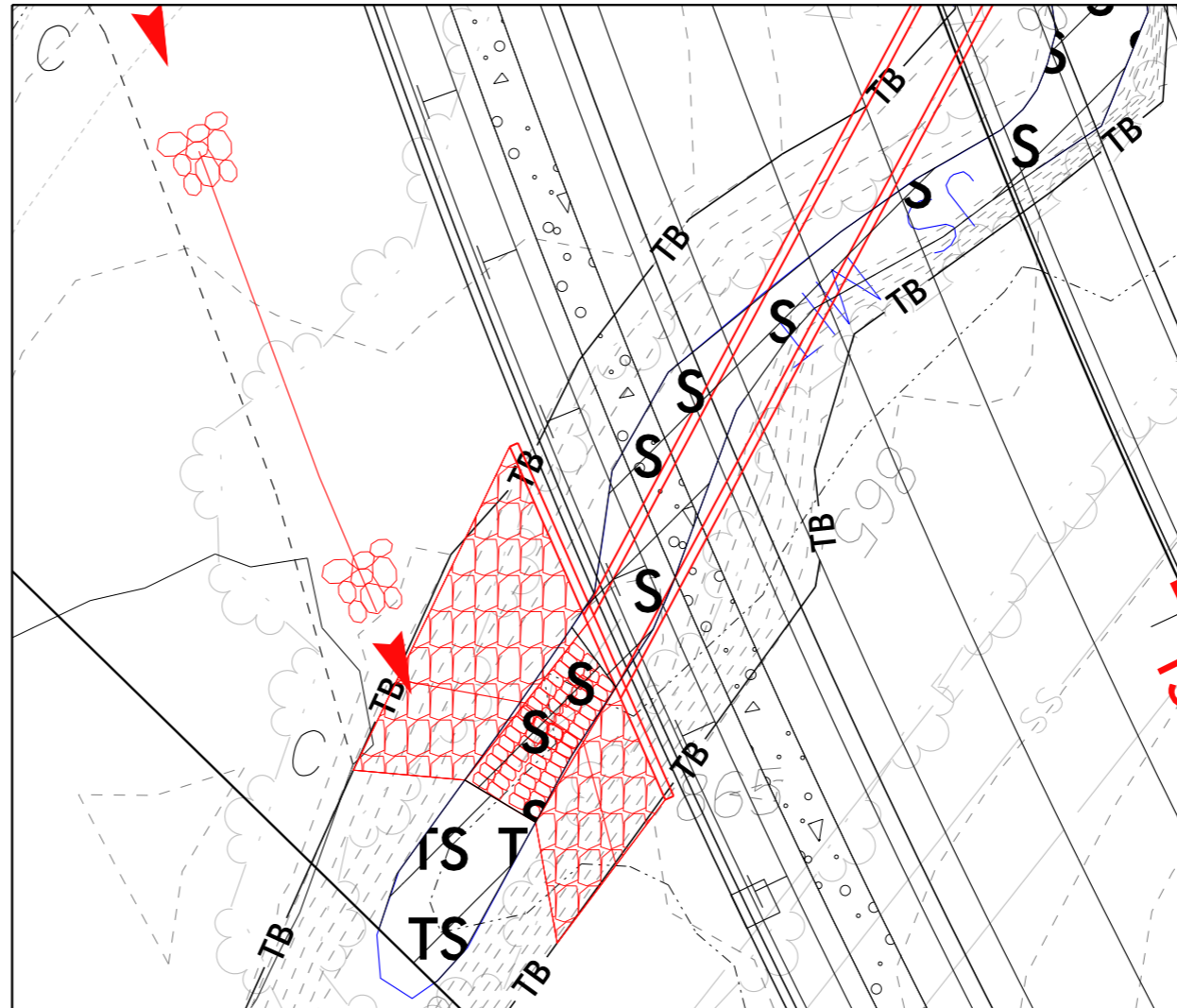
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING
SHEET 9 OF 27

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

SITE IMPACT ZOOM: 1"=20'



NAD 83/NA 2011

DETAIL SHEET FOR SITE 1B

REVISIONS

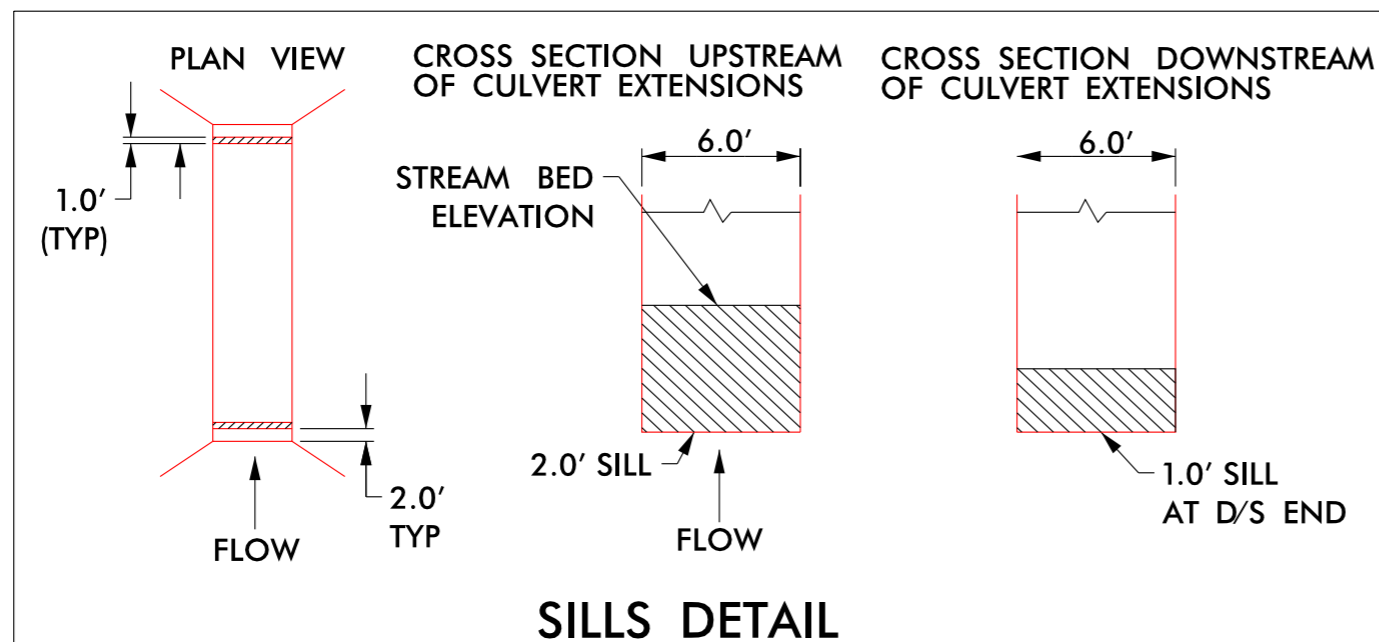
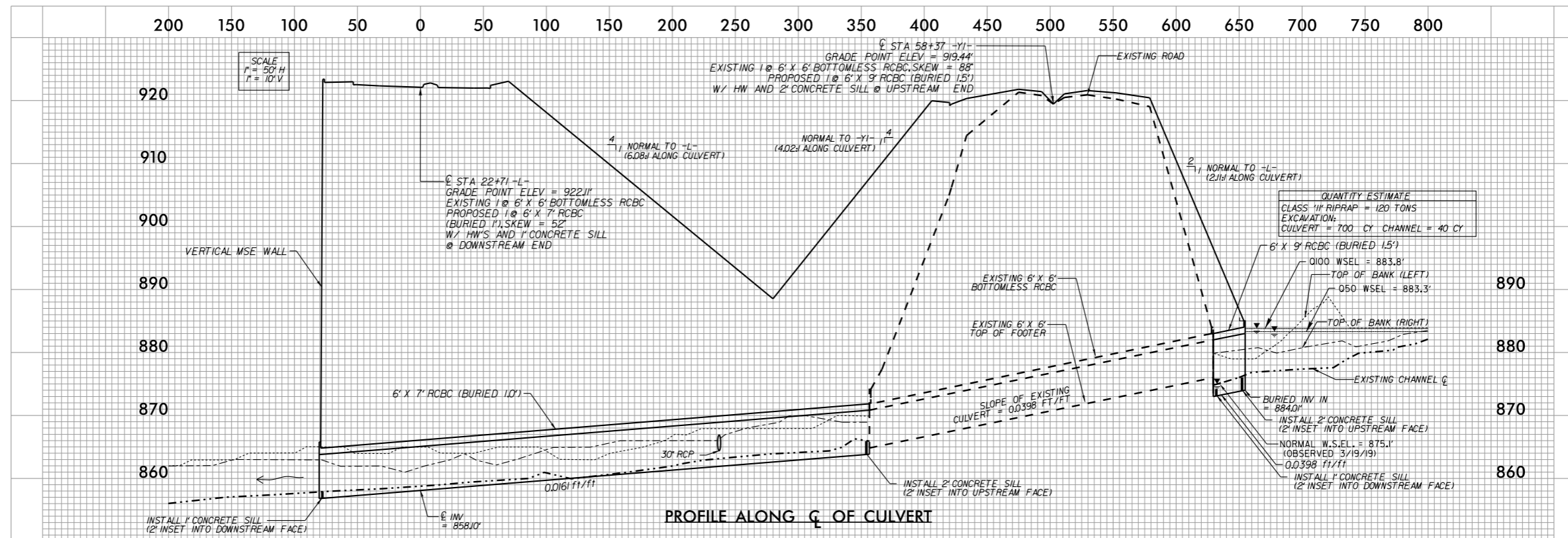
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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING
SHEET 10 OF 27

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

SITE 1A /1B – CULVERT EXTENSION



NOTE: NATIVE BED MATERIAL SHALL BE PLACED IN THE PROPOSED CULVERT EXTENSIONS BETWEEN SILLS. NATIVE MATERIALS CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAM BED OR FLOODPLAIN AT THE PROJECT SITE DURING CULVERT CONSTRUCTION. RIP RAP MAY BE USED TO SUPPLEMENT THE NATIVE MATERIAL. IF RIP RAP IS USED, THE NATIVE MATERIAL SHOULD BE PLACED ON TOP TO FACILITATE ANIMAL PASSAGE. THE TOP SURFACE OF THE NATURAL STREAM BED MATERIAL SHALL BE PLACED AND LEVELED TO A FLAT SURFACE TO ALLOW FOR ANIMAL PASSAGE. NATIVE MATERIAL AND RIP RAP ARE SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.

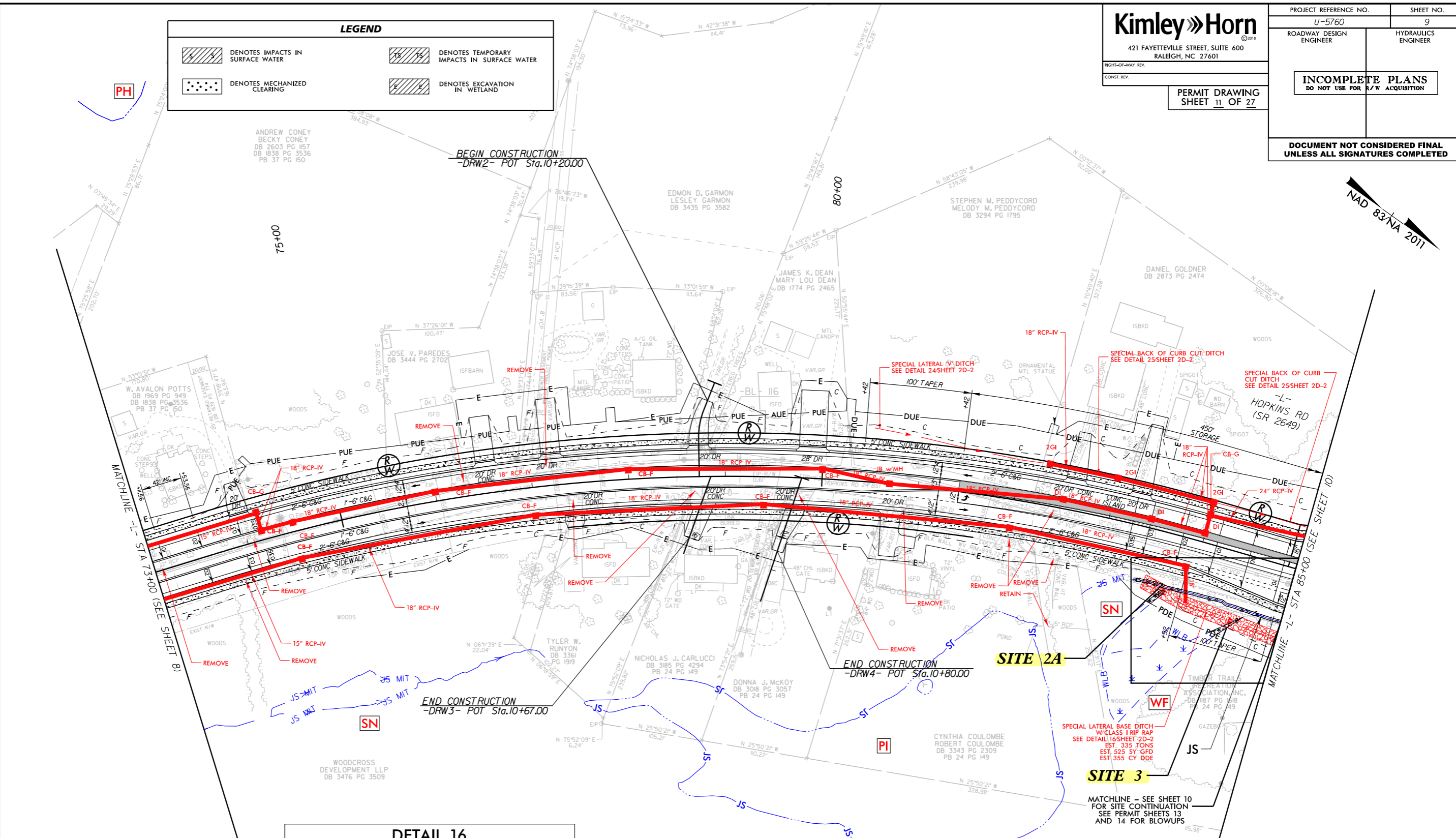
REVISIONS

PROJECT REFERENCE NO. U-5760	SHEET NO. 9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 11 OF 27

LEGEND

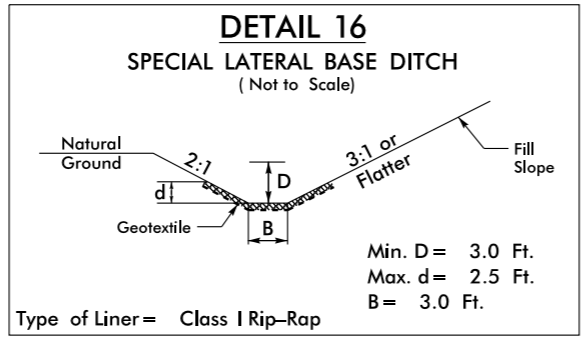
	DENOTES IMPACTS IN SURFACE WATER		DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES MECHANIZED CLEARING		DENOTES EXCAVATION IN WETLAND



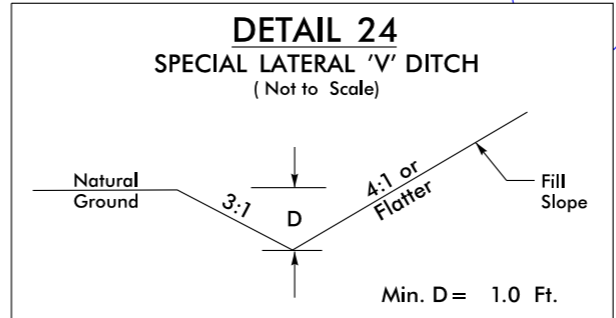
REVISIONS

5/14/99

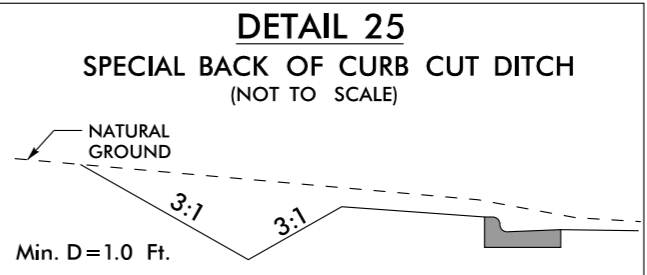
\$ DATES



FROM STA. 83+50 TO STA. 85+75 -L- (RT)
FROM STA. 90+00 TO STA. 90+75 -L- (RT)



FROM STA. 80+50 TO STA. 82+30 -L- (LT)



FROM STA. 82+30 TO STA. 85+90 -L- (LT)

44 HUNTER P. COFER
DB 3333 PG 2638

SEE SHEET 19 FOR -L- PROFILE
SEE SHEET 29 FOR -DRW2-, -DRW3-
AND -DRW4- PROFILES

5/14/99

REVISIONS

\$ DATES

LEGEND

	DENOTES IMPACTS IN SURFACE WATER		DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES MECHANIZED CLEARING		DENOTES EXCAVATION IN WETLAND

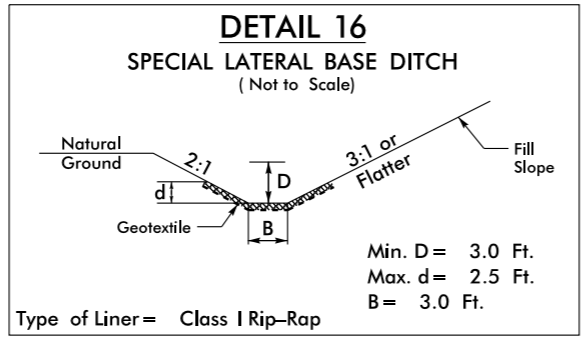
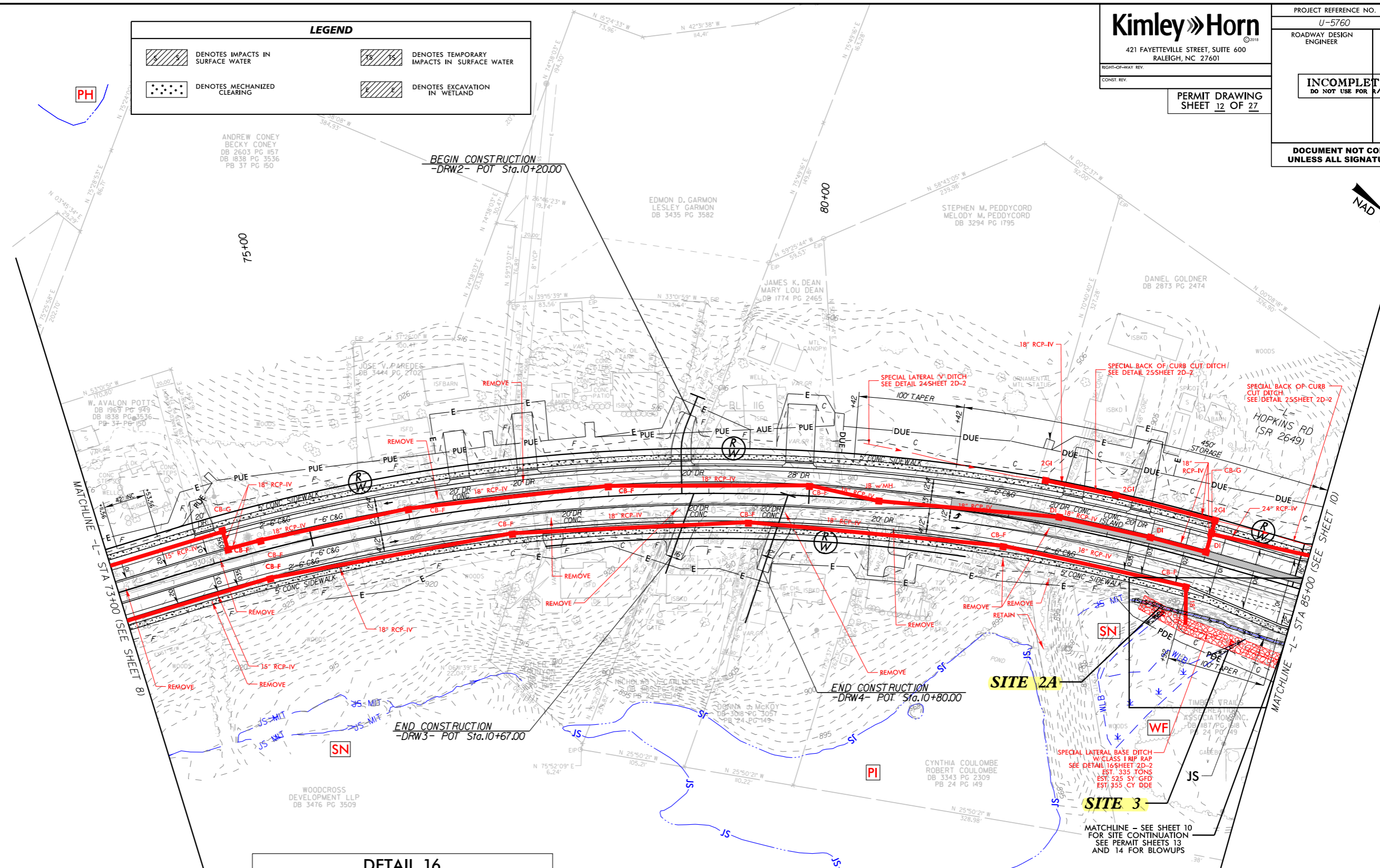
Kimley Horn
 421 FAYETTEVILLE STREET, SUITE 600
 RALEIGH, NC 27601

PROJECT REFERENCE NO. U-5760 SHEET NO. 9
 ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

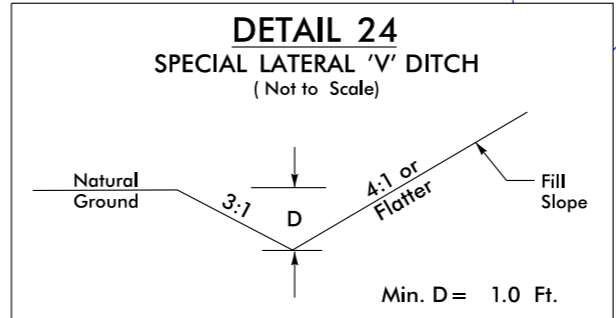
INCOMPLETE PLANS
 DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING SHEET 12 OF 27

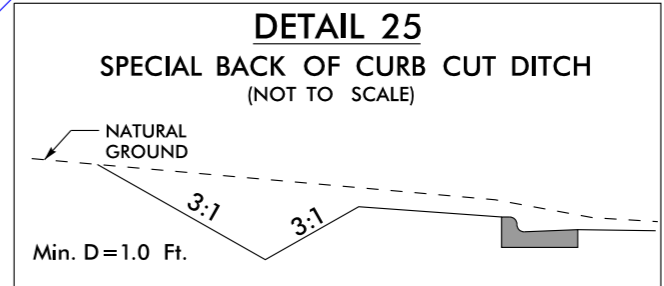
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



FROM STA. 83+50 TO STA. 85+75 -L- (RT)
 FROM STA. 90+00 TO STA. 90+75 -L- (RT)



FROM STA. 80+50 TO STA. 82+30 -L- (LT)



FROM STA. 82+30 TO STA. 85+90 -L- (LT)

44 HUNTER P. COFER
 DB 3333 PG 2638

SEE SHEET 19 FOR -L- PROFILE
 SEE SHEET 29 FOR -DRW2-, -DRW3-
 AND -DRW4- PROFILES

5/14/99

LEGEND



DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES MECHANIZED CLEARING



DENOTES EXCAVATION IN WETLAND

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO. SHEET NO.

U-5760 9A

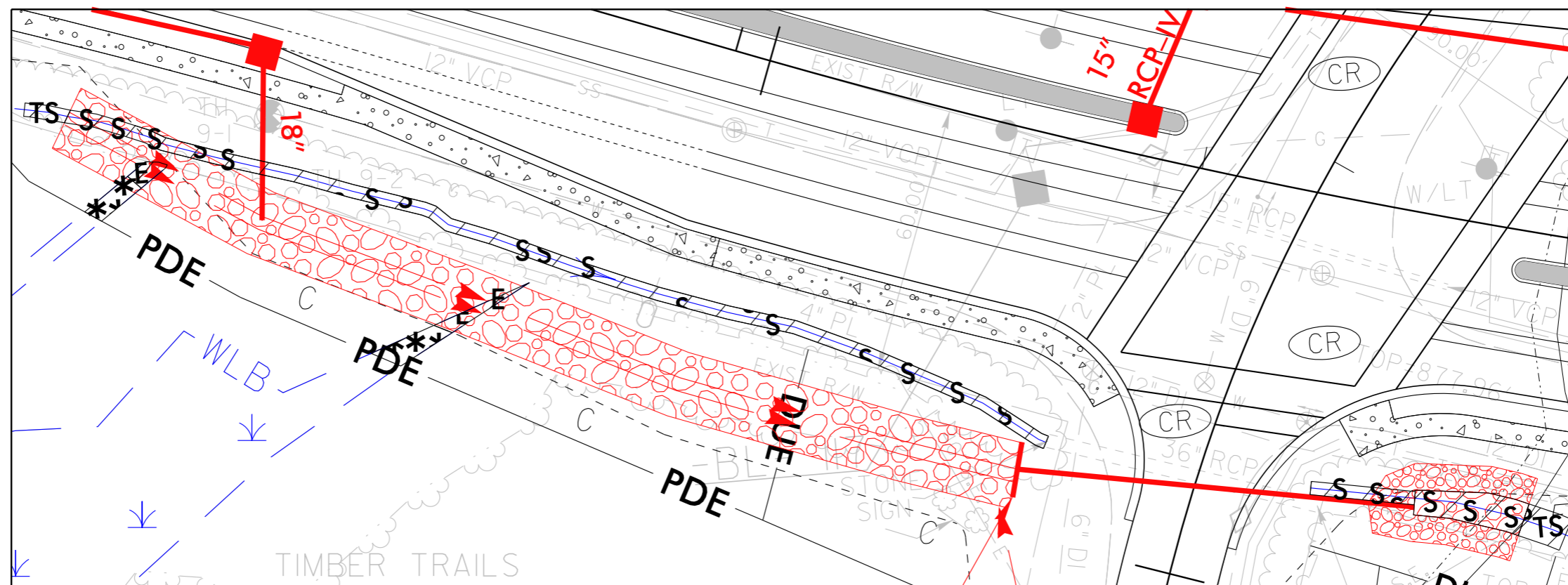
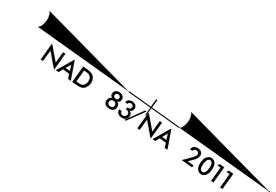
ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING
SHEET 13 OF 27

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

SITE IMPACT ZOOM: 1"=30'



DETAIL SHEET FOR SITES 2A, 2B, 3

REVISIONS

\$DATE\$

5/14/99

LEGEND



DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES MECHANIZED CLEARING



DENOTES EXCAVATION IN WETLAND

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO. SHEET NO.

U-5760 9A

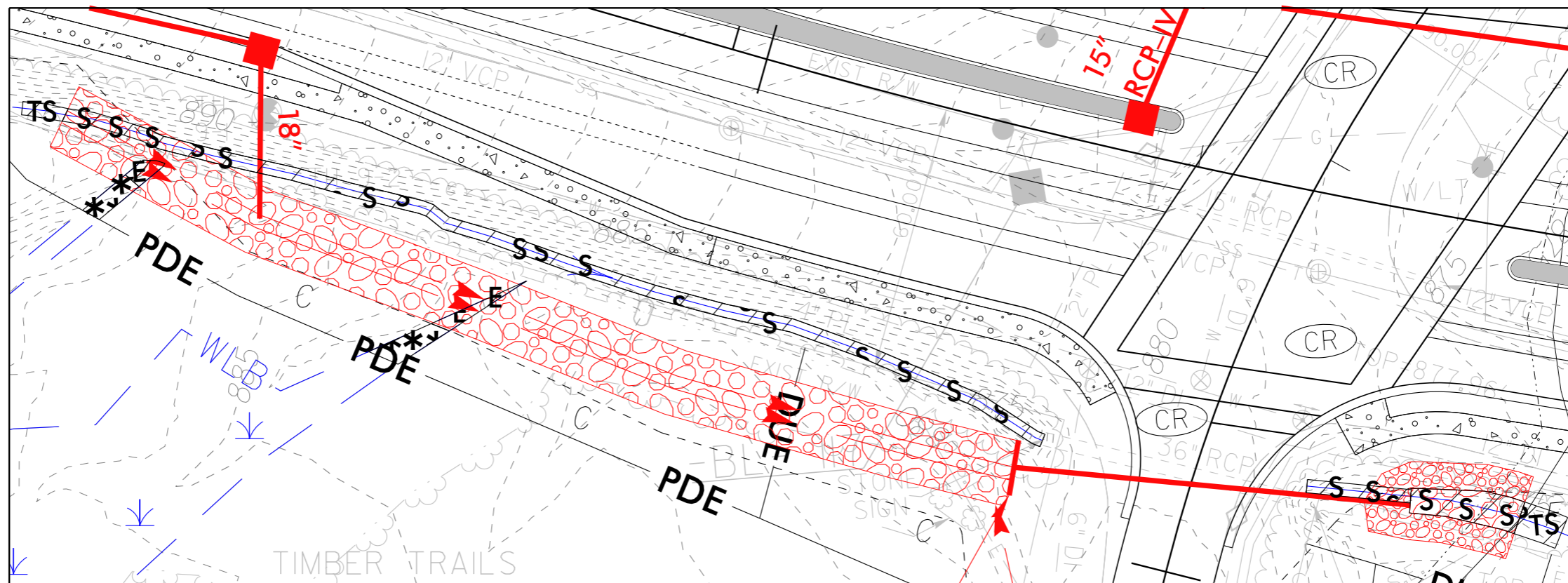
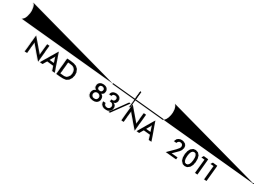
ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING
SHEET 14 OF 27

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

SITE IMPACT ZOOM: 1"=30'

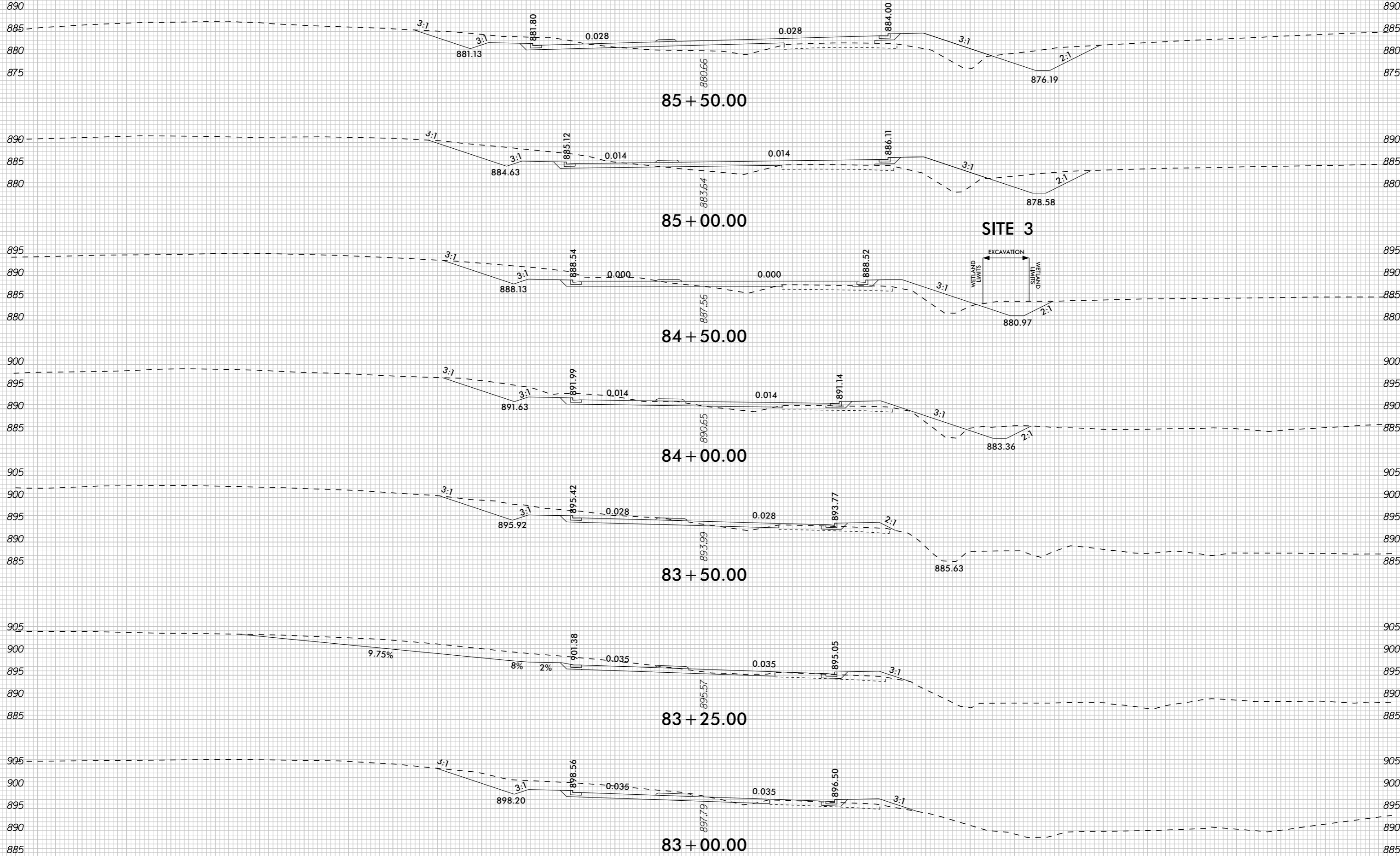


DETAIL SHEET FOR SITES 2A, 2B, 3

REVISIONS

\$DATE\$

8/23/99



-L- HOPKINS RD (SR 2694)

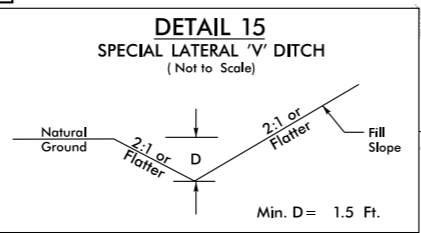
\$DATES

\$7/LE\$

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

LEGEND

	DENOTES IMPACTS IN SURFACE WATER		DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND		DENOTES MECHANIZED CLEARING



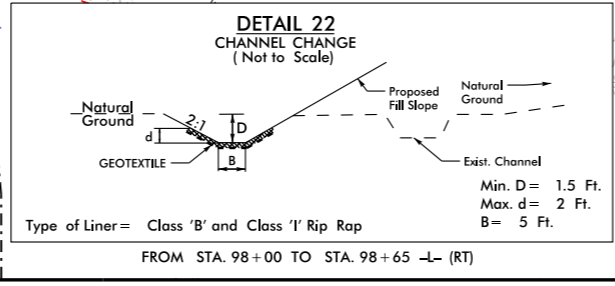
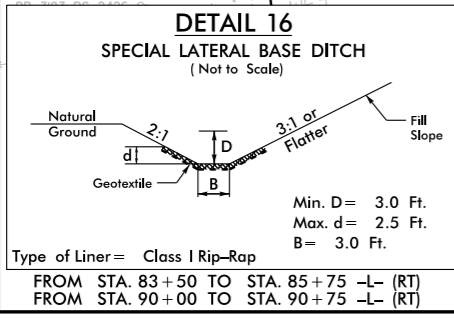
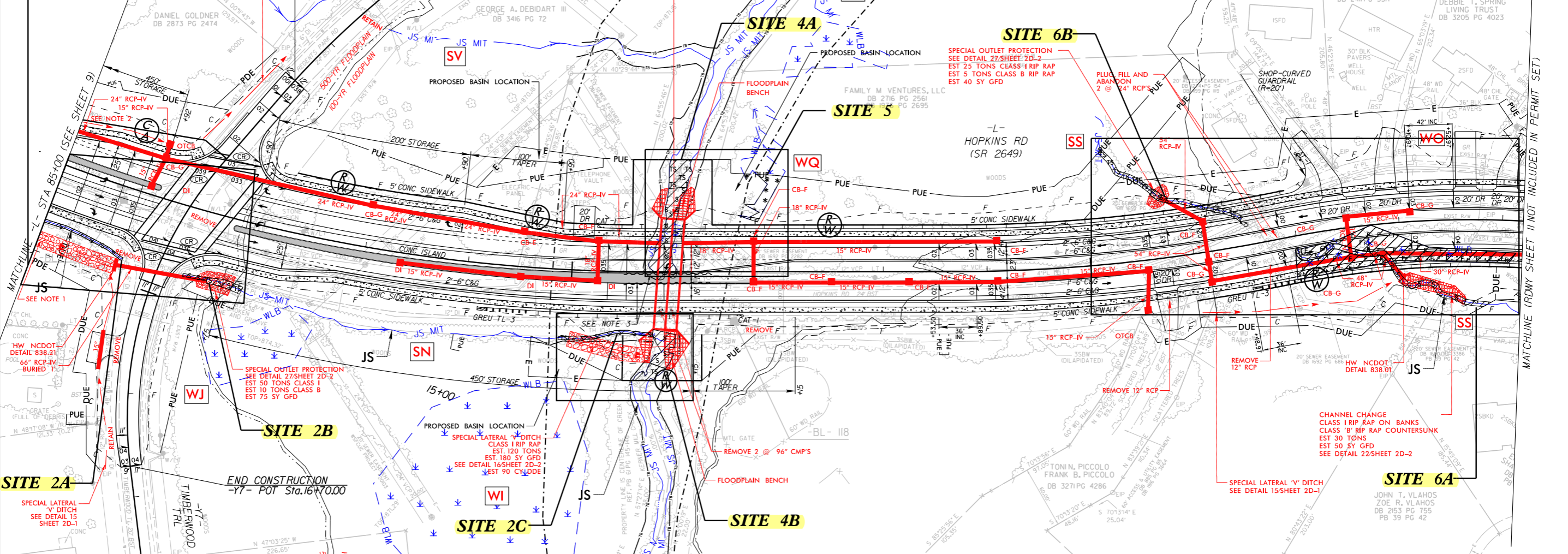
MATCHLINE - SEE SHEET 9 FOR SITE CONTINUATION SEE PERMIT SHEETS 13 AND 14 FOR BLOWUPS

BEGIN CONSTRUCTION -Y7- POC Sta.12+50.00

RECEYNTS PARK RD

CLAIBORNE T. SMITH
AMY J. SMITH
DB 2703 PG 2708
PB 33 PG 56

FROM STA. 35+00 TO STA. 37+00 -L- (RT)
 FROM STA. 37+00 TO STA. 38+50 -L- (RT)
 FROM STA. 58+00 TO STA. 60+20 -L- (RT)
 FROM STA. 96+00 -L- TO STA. 98+00 -L- (RT)
 FROM STA. 13+00 TO STA. 14+00 -Y4- (LT)
 FROM STA. 19+85 TO STA. 20+00 -Y4- (RT)
 FROM STA. 12+50 TO STA. 13+50 -Y7- (RT)
 FROM STA. 14+87 TO STA. 16+70 -Y7- (RT)



NOTES:
 1. SPECIAL LATERAL BASE DITCH W/ CLASS I RIP RAP SEE DETAIL 16, SHEET 2D-2 EST 335 TONS EST 525 SY GFD EST 355 CY DDE
 2. SPECIAL BACK OF CURB CUT DITCH SEE DETAIL 25, SHEET 2D-2
 3. TEMPORARY SHORING (SEE TRANSPORTATION MANAGEMENT PLANS)

(53) TIMBER TRAILS RECREATION ASSOCIATION, INC. DB 883 PG 379 DB 887 PG 197 DB 1010 PG 715 PB 61 PG 145-146

(64) ERIC A. McFARLIN SHAWN R. McFARLIN DB 2172 PG 174 PB 39 PG 42

(56) CAROLINA TELEPHONE & TELEGRAPH DB 1649 PG 4084

SEE SHEET 2B-2 FOR INTERSECTION DETAIL
 SEE SHEET 20 FOR -L- PROFILE
 SEE SHEET 28 FOR -Y7- PROFILE
 SEE SHEETS C-1 THRU C-XX FOR CULVERT PLANS

REVISIONS

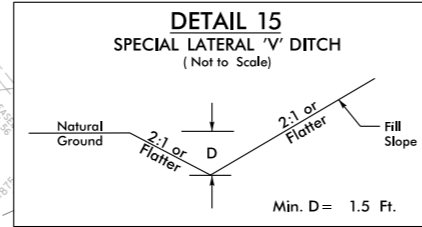
\$DATE\$

PROJECT REFERENCE NO. U-5760	SHEET NO. 10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 17 OF 27

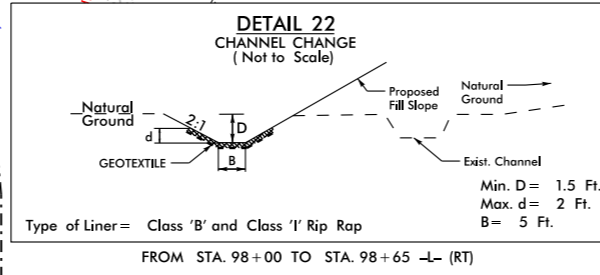
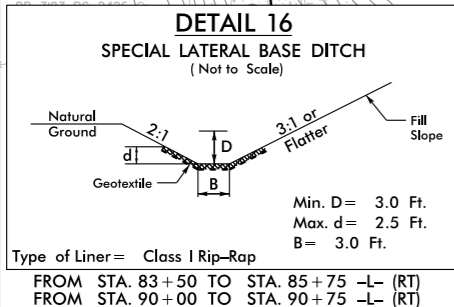
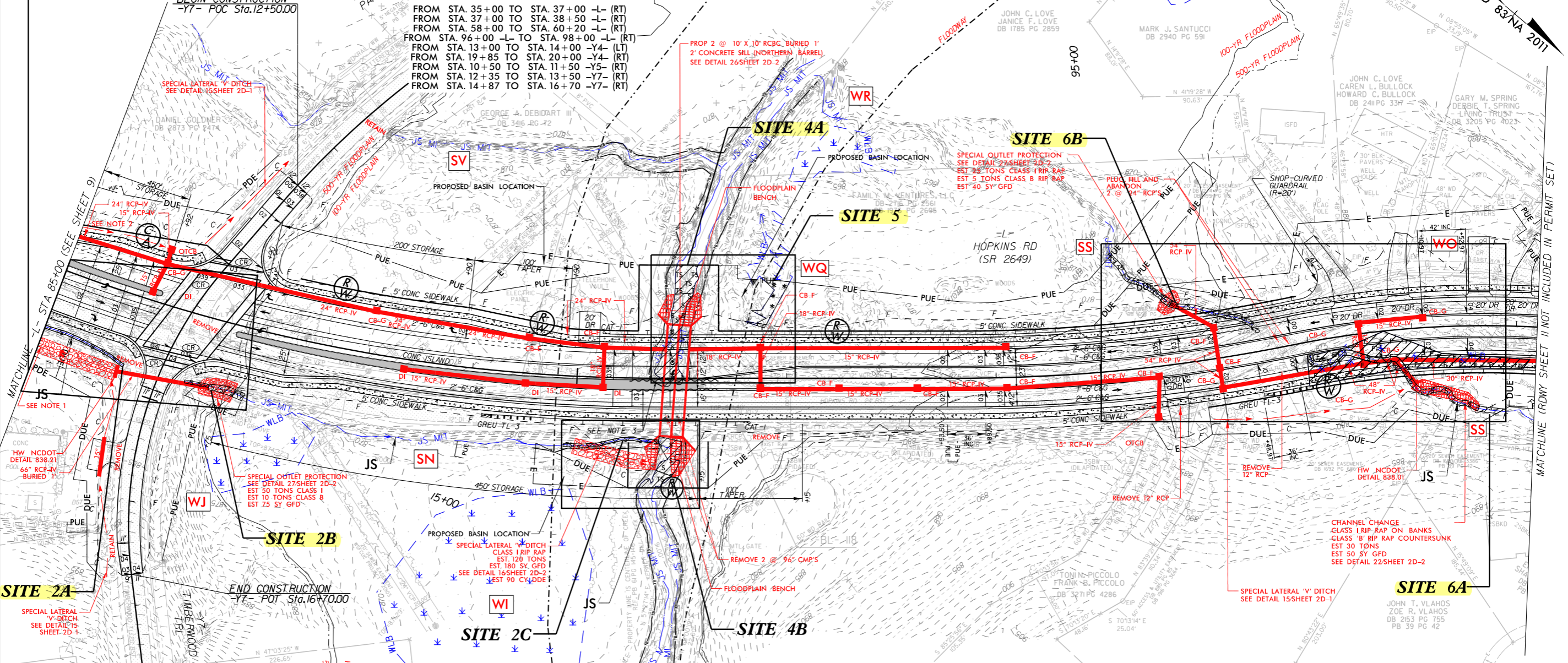
LEGEND

	DENOTES IMPACTS IN SURFACE WATER		DENOTES MECHANIZED CLEARING
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER		
	DENOTES FILL IN WETLAND		



FROM STA. 35+00 TO STA. 37+00 -L- (RT)
FROM STA. 37+00 TO STA. 38+50 -L- (RT)
FROM STA. 58+00 TO STA. 60+20 -L- (RT)
FROM STA. 96+00 -L- TO STA. 98+00 -L- (RT)
FROM STA. 13+00 TO STA. 14+00 -Y4- (LT)
FROM STA. 19+85 TO STA. 20+00 -Y4- (RT)
FROM STA. 10+50 TO STA. 11+50 -Y5- (RT)
FROM STA. 12+35 TO STA. 13+50 -Y7- (RT)
FROM STA. 14+87 TO STA. 16+70 -Y7- (RT)

MATCHLINE - SEE SHEET 9 FOR SITE CONTINUATION
SEE PERMIT SHEETS 13 AND 14 FOR BLOWUPS



NOTES:
1. SPECIAL LATERAL BASE DITCH W/ CLASS I RIP RAP
SEE DETAIL 16, SHEET 20-2
EST 335 TONS
EST 525 SY GFD
EST 355 CY DDE
2. SPECIAL BACK OF CURB CUT DITCH
SEE DETAIL 25, SHEET 20-2
3. TEMPORARY SHORING (SEE TRANSPORTATION MANAGEMENT PLANS)

(53) TIMBER TRAILS RECREATION ASSOCIATION, INC.
DB 187 PG 1618
PB 24 PG 149

(64) ERIC A. McFARLIN SHAWN R. McFARLIN
DB 2712 PG 174
PB 39 PG 42

(56) CAROLINA TELEPHONE & TELEGRAPH
DB 1649 PG 4084

SEE SHEET 2B-2 FOR INTERSECTION DETAIL
SEE SHEET 20 FOR -L- PROFILE
SEE SHEET 28 FOR -Y7- PROFILE
SEE SHEETS C-1 THRU C-XX FOR CULVERT PLANS

DATE\$

5/14/99

LEGEND



DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES FILL IN WETLAND



DENOTES MECHANIZED CLEARING

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.

U-5760

SHEET NO.

10A

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

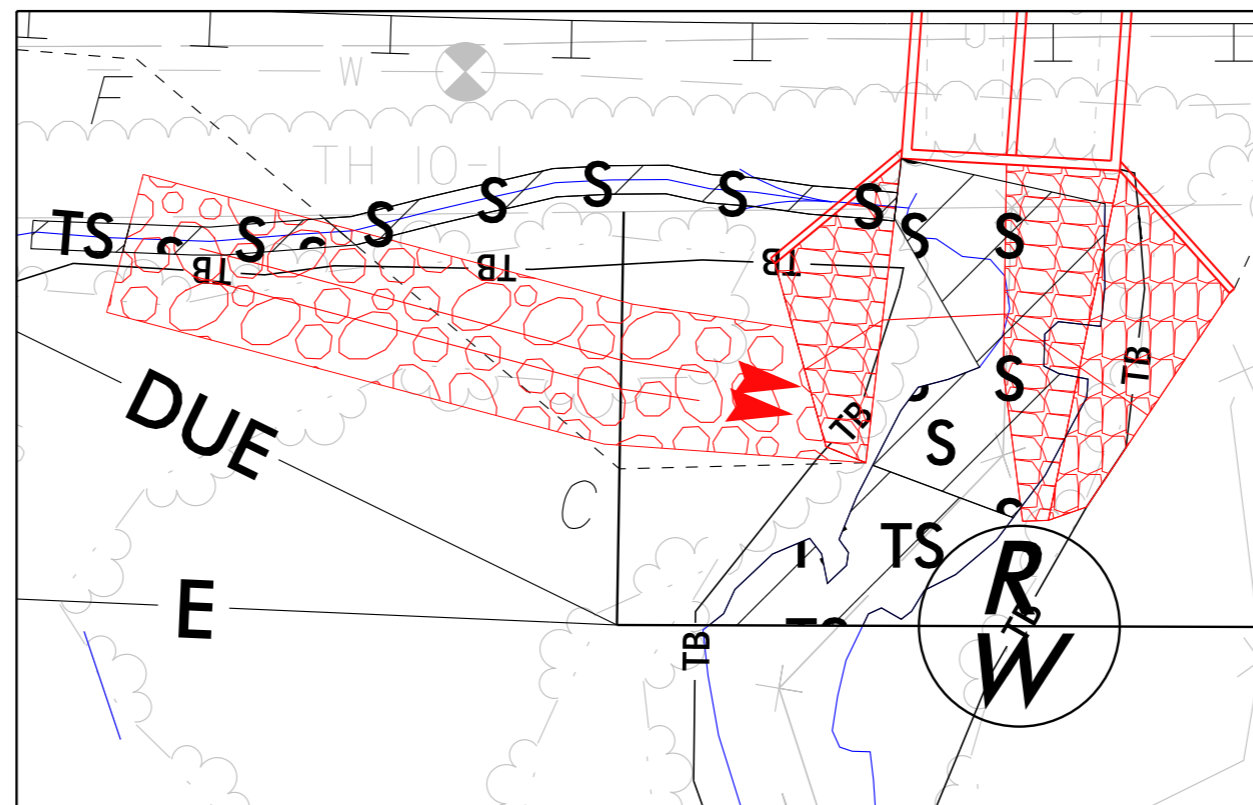
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING
SHEET 18 OF 27

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



SITE IMPACT ZOOM: 1" = 20'



DETAIL SHEET FOR SITES 2C, 4B

REVISIONS

\$DATE\$

5/14/99

LEGEND



DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES FILL IN WETLAND



DENOTES MECHANIZED CLEARING

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO.

U-5760

SHEET NO.

10A

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

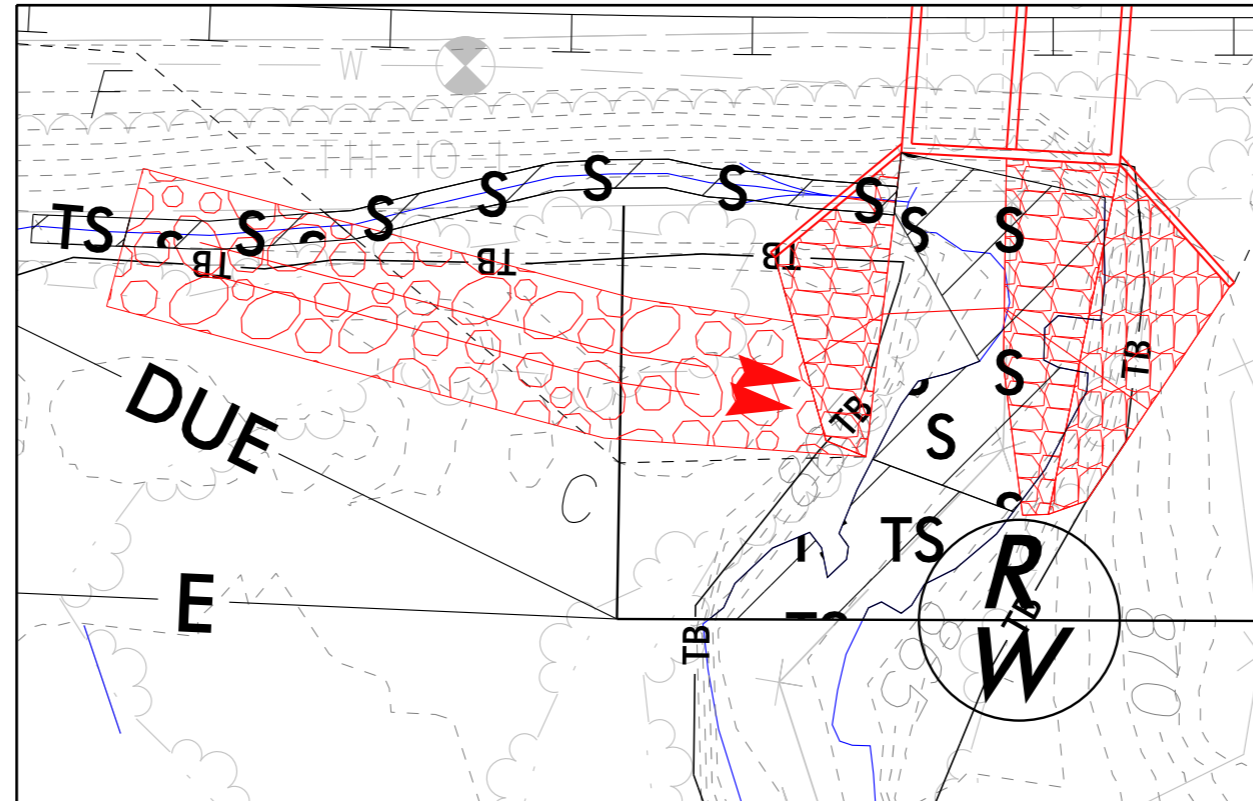
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING
SHEET 19 OF 27

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

NAD 83/NA 2011

SITE IMPACT ZOOM: 1" = 20'



DETAIL SHEET FOR SITES 2C, 4B

REVISIONS

\$DATE\$

5/14/99

LEGEND



DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES FILL IN WETLAND



DENOTES MECHANIZED CLEARING

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.

U-5760

SHEET NO.

10B

ROADWAY DESIGN ENGINEER

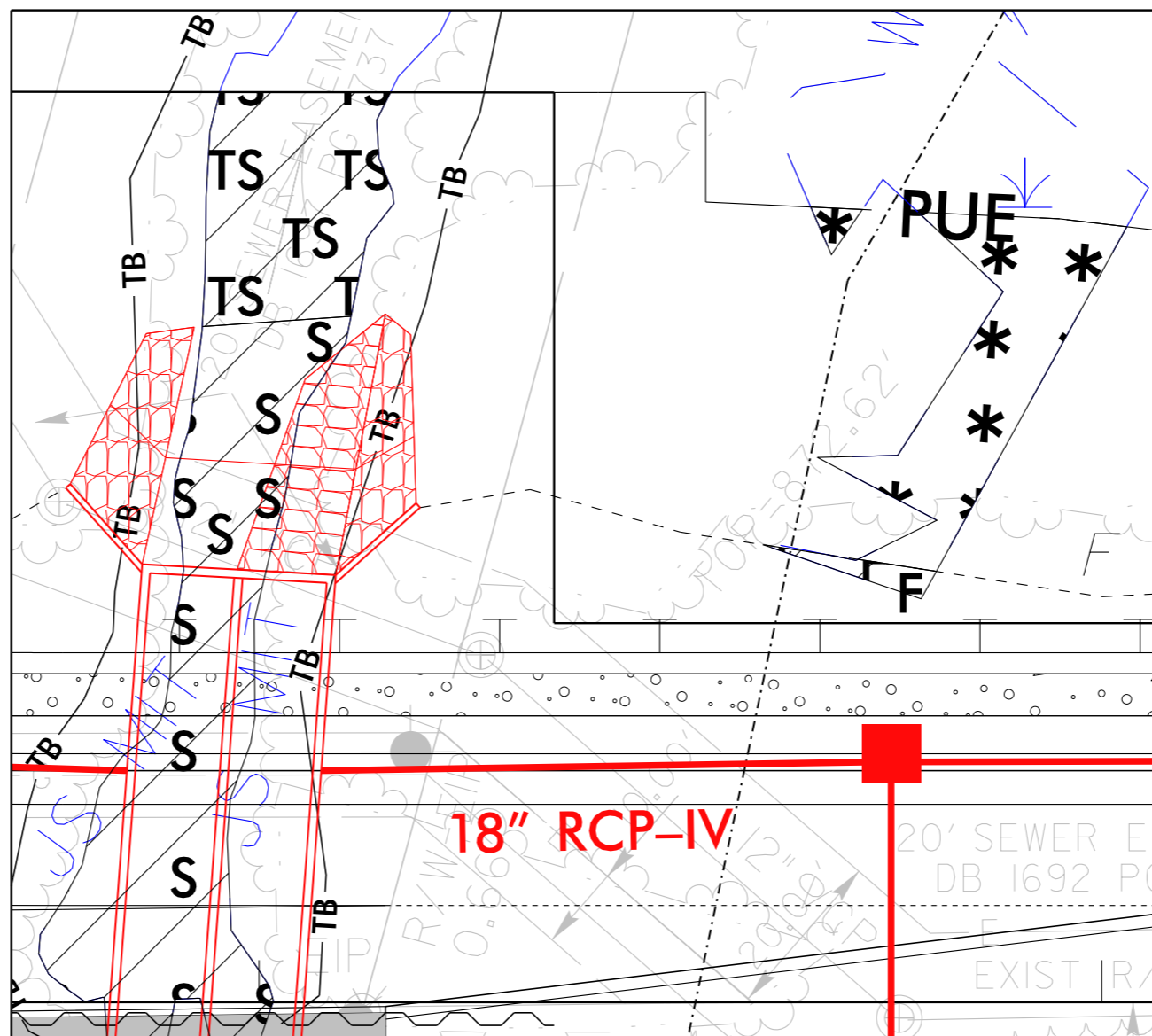
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING
SHEET 20 OF 27

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

SITE IMPACT ZOOM: 1" = 20'



DETAIL SHEET FOR SITES 4A, 5

REVISIONS

\$DATE\$

5/14/99

LEGEND



DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES FILL IN WETLAND



DENOTES MECHANIZED CLEARING

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.

U-5760

SHEET NO.

10B

ROADWAY DESIGN ENGINEER

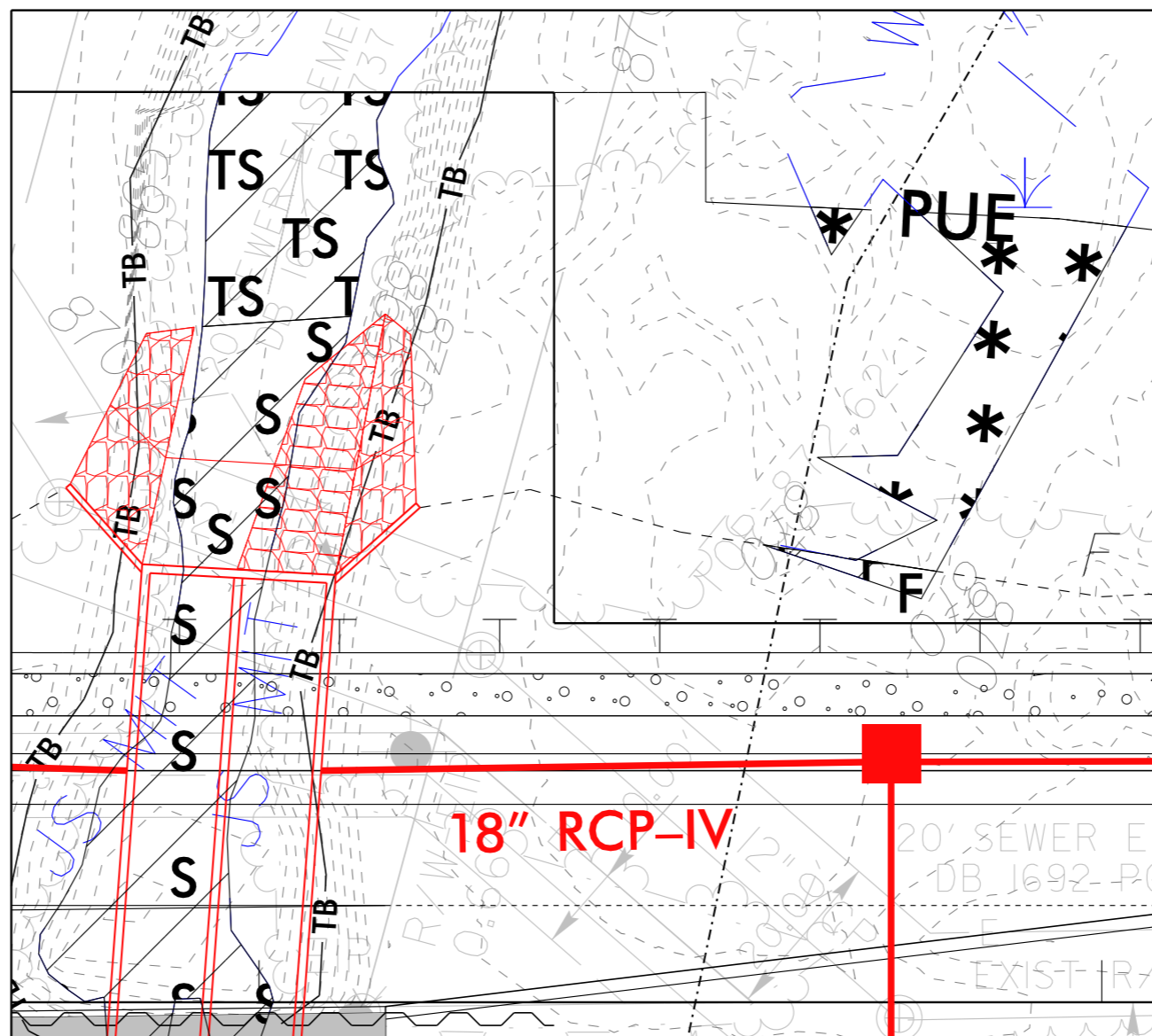
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING
SHEET 21 OF 27

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

SITE IMPACT ZOOM: 1" = 20'







DETAIL SHEET FOR SITES 4A, 5

REVISIONS

\$DATE\$

5/14/99

LEGEND			
	DENOTES IMPACTS IN SURFACE WATER		DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND		DENOTES MECHANIZED CLEARING

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

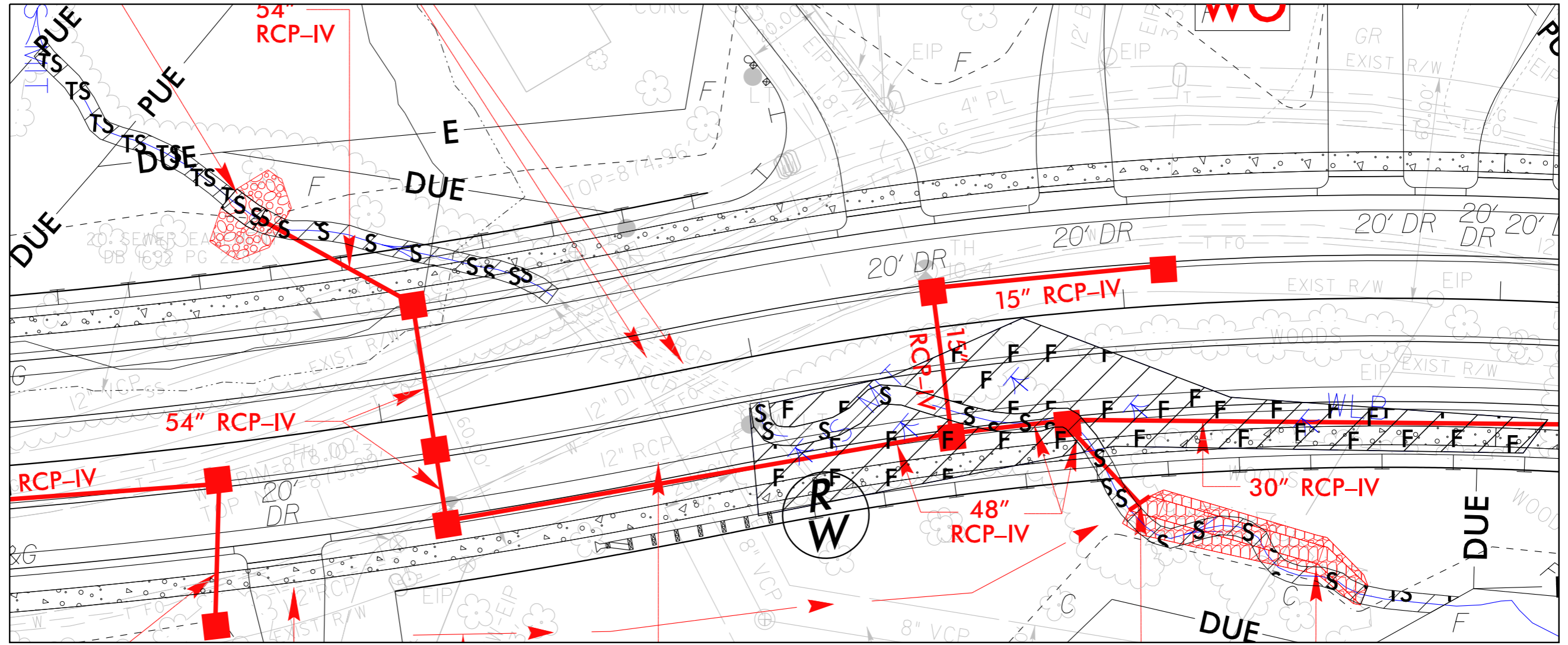
RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO. U-5760	SHEET NO. 10C
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 22 OF 27



SITE IMPACT ZOOM: 1"=30'



DETAIL SHEET FOR SITES 6A, 6B

REVISIONS

\$DATE\$

5/14/99

LEGEND



DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES FILL IN WETLAND



DENOTES MECHANIZED CLEARING

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO. SHEET NO.

U-5760 10C

ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

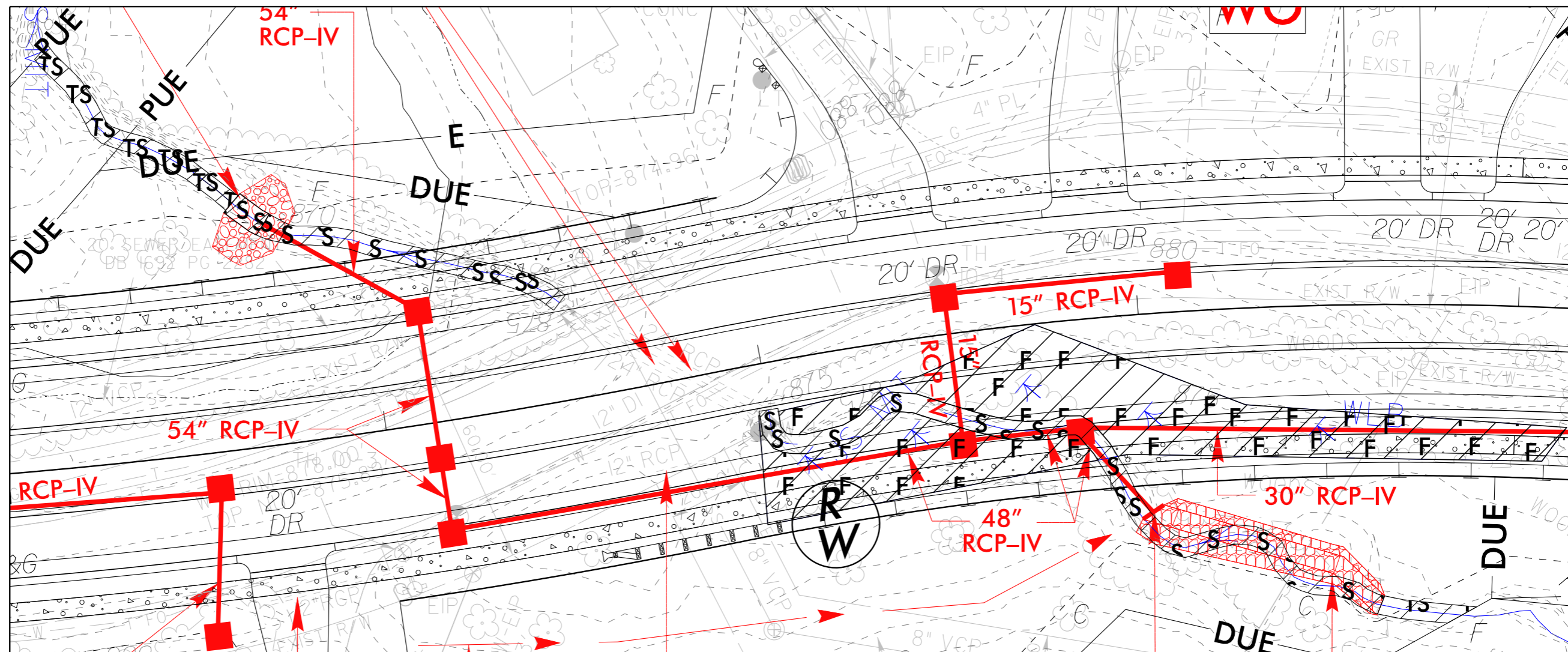
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PERMIT DRAWING
SHEET 23 OF 27

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



SITE IMPACT ZOOM: 1" = 30'

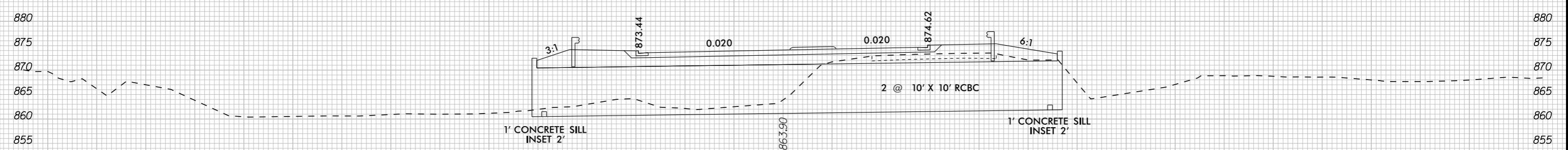
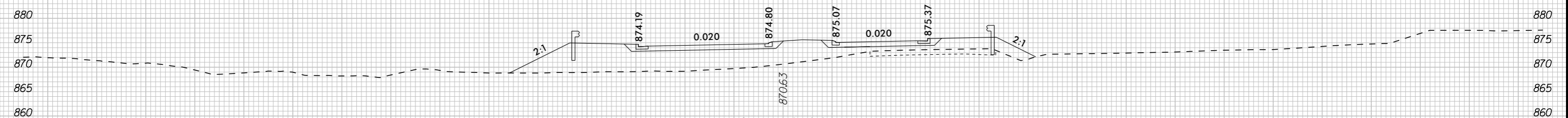
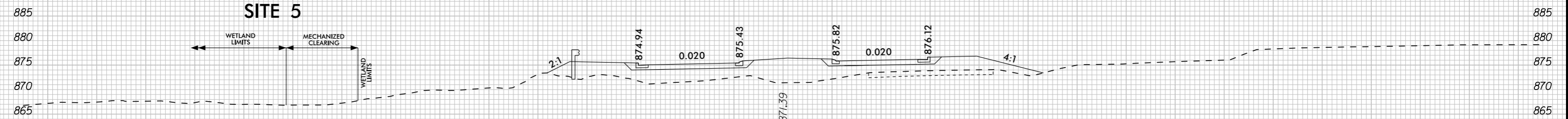
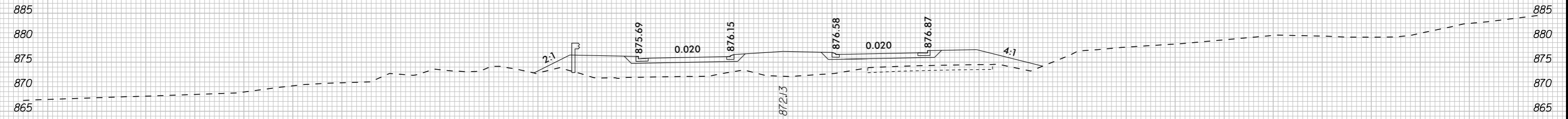
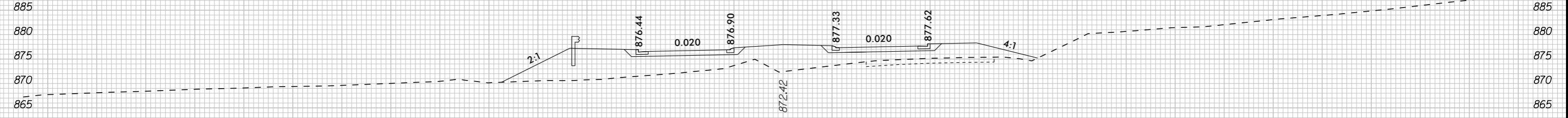


DETAIL SHEET FOR SITES 6A, 6B

REVISIONS

\$DATE\$

8/23/99

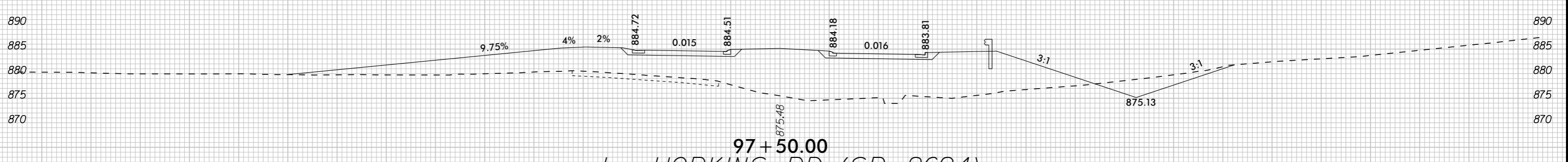
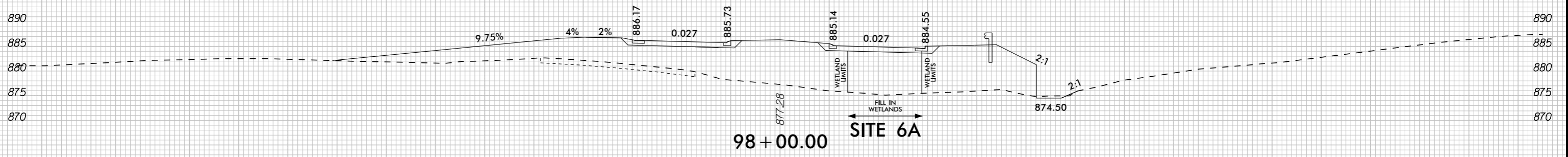
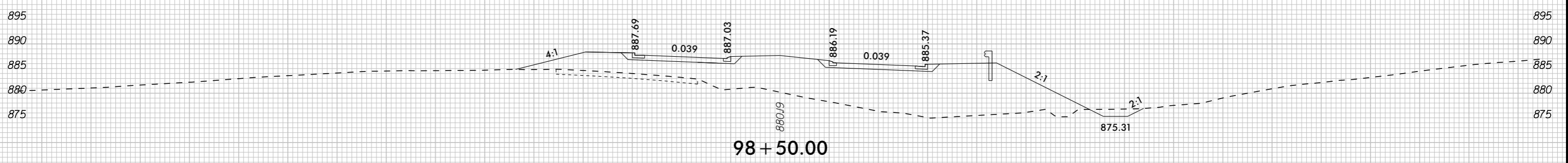
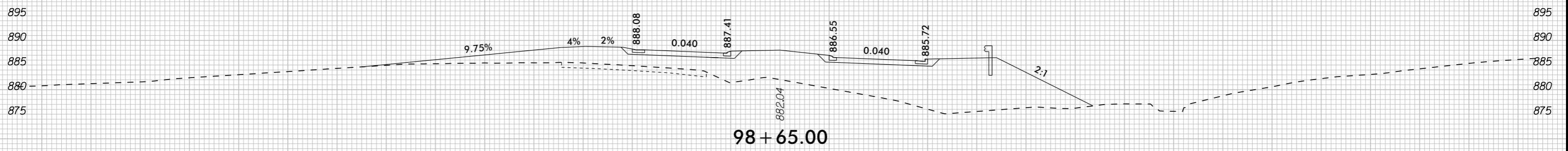
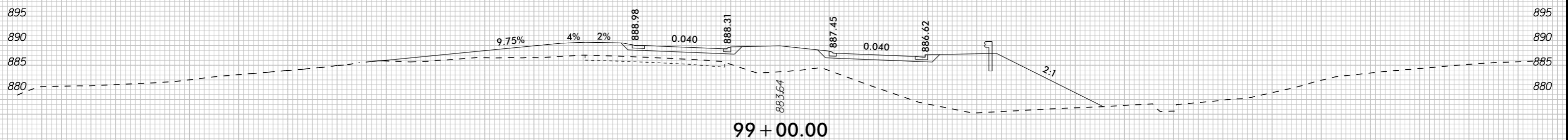


-L- HOPKINS RD (SR 2694)

\$DATES

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8/23/99



-L- HOPKINS RD (SR 2694)

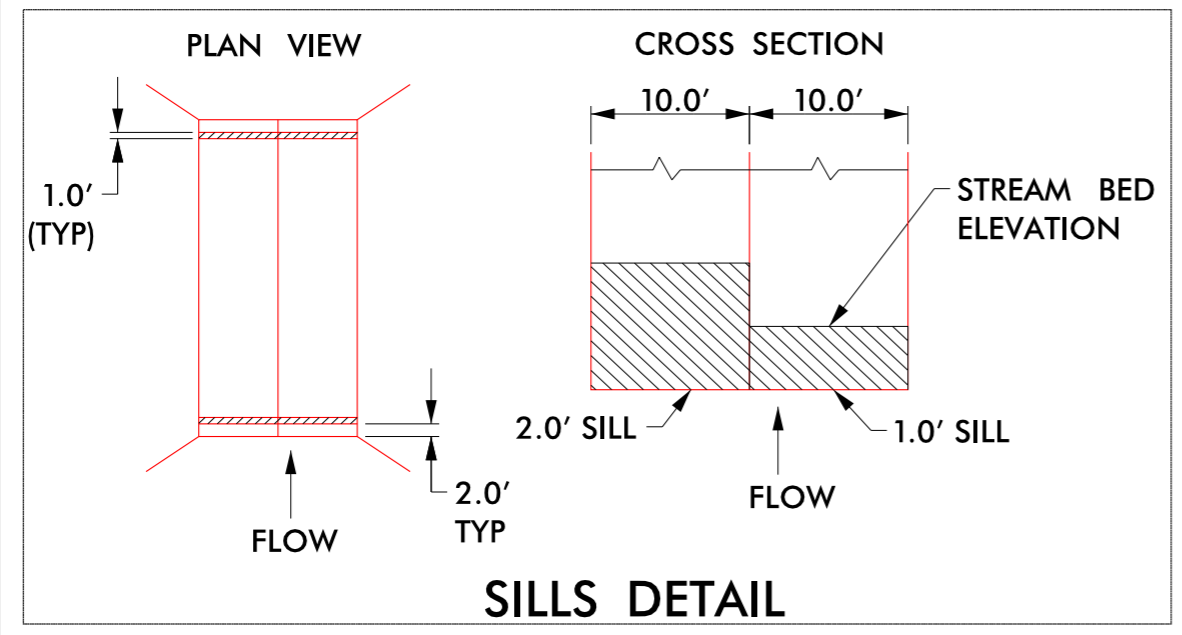
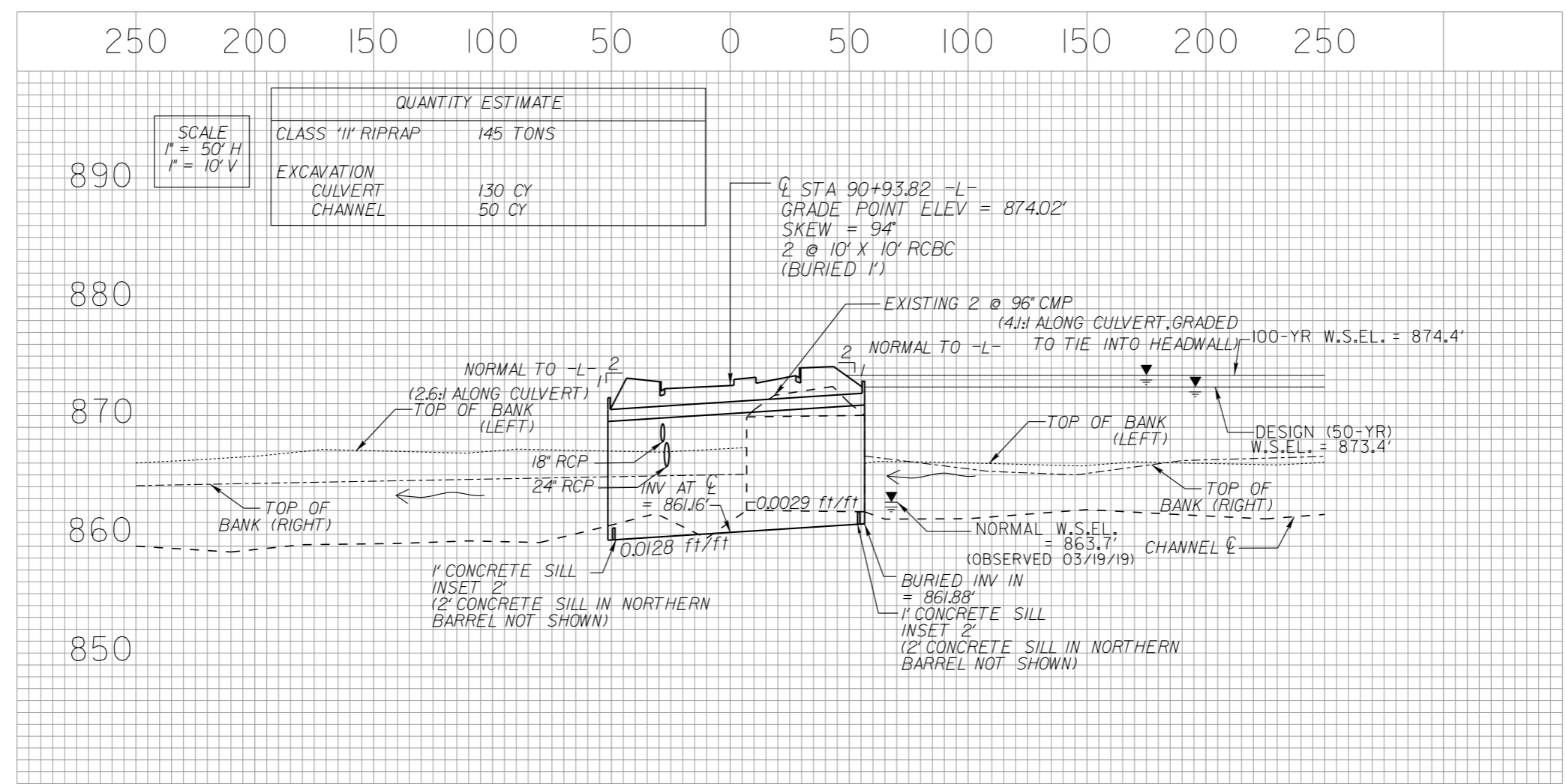
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5/14/99

PROJECT REFERENCE NO. U-5760		SHEET NO.	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

SITE 4A /4B – CULVERT REPLACEMENT

PERMIT DRAWING
SHEET 26 OF 27



NOTE: FOR CUT CONDITION, USE CLASS II RIP RAP FLOODPLAIN BENCH BORDER WITH NATURAL GROUND COVERED WITH COIR FIBER MAT INSIDE BORDER. IN FILL CONDITION, USE CLASS II RIP RAP FILL THROUGHOUT WITH NATIVE BED MATERIAL FILLING THE VOIDS ON TOP.

NOTE: NATIVE BED MATERIAL SHALL BE PLACED BETWEEN THE SILLS IN THE LOW FLOW CULVERT. NATIVE MATERIALS CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAM BED OR FLOODPLAIN AT THE PROJECT SITE DURING CULVERT CONSTRUCTION. RIP RAP MAY BE USED TO SUPPLEMENT THE NATIVE MATERIAL. IF RIP RAP IS USED, THE NATIVE MATERIAL SHOULD BE PLACED ON TOP TO FACILITATE ANIMAL PASSAGE. THE TOP SURFACE OF THE NATURAL STREAM BED MATERIAL SHALL BE PLACED AND LEVELED TO A FLAT SURFACE TO ALLOW FOR ANIMAL PASSAGE. THE HIGH FLOW BARRELS SHALL BE BACK FILLED WITH NATIVE MATERIAL AND/OR RIP RAP. NATIVE MATERIAL AND RIP RAP ARE SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.

REVISIONS

\$DATE\$

WETLAND AND SURFACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1A	58+66/59+59 -Y1- (LT)	1 @ 6' x 9' RCBC Extension						< 0.01		25		
	58+66/59+59 -Y1- (LT)	Channel Improvements						< 0.01	0.02	31	82	
1B	21+97/25+90 -L- (RT)	1 @ 6' x 7' RCBC Extension						0.09		522		
	21+97/25+90 -L- (RT)	Channel Improvements						< 0.01	< 0.01	20	20	
2A	83+40/85+80 -L- (RT)	Roadway Fill			< 0.01	< 0.01		0.02	< 0.01	233	10	
2B	86+38/86+80 -L- (RT)	66" RCP						< 0.01		24		
		Channel Improvements						< 0.01	< 0.01	25	10	
2C	89+96/90+79 -L- (RT)	Roadway Fill						< 0.01	< 0.01	82	10	
3	83+60/84+62 -L- (RT)	Roadway Fill			< 0.01	< 0.01						
4A	90+74/91+16 -L- (LT)	2 @ 10' x 10' RCBC						0.02		61		
		Channel Improvements						< 0.01	0.01	30	28	
4B	90+59/91+00 -L- (RT)	Channel Improvements						0.01	< 0.01	35	19	
5	91+60/92+06 -L- (LT)	Roadway Fill	< 0.01			0.01						
6A	96+98/98+87 -L- (RT)	48" RCP						0.01		122		
		Channel Change						< 0.01	< 0.01	70	22	
		Roadway Fill	0.09									
6B	95+22/96+53 -L- (LT)	54" RCP						< 0.01		82		
		Channel Improvements						< 0.01	< 0.01	10	65	
TOTALS*:			0.09		< 0.01	0.01		0.21	0.04	1372	266	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 03/06/2020
 FORSYTH
 U-5760
 46381.1.1
 SHEET 27 OF 27