



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 2.08; Released April 2018)

WBS Element: 41499.1.3 TIP No.: R-5020B County(ies): Columbus Page 1 of 2

General Project Information

WBS Element:	41499.1.3	TIP Number:	R-5020B	Project Type:	Roadway Widening	Date:	3/25/2019
NCDOT Contact:	Steven Kendall, PE		Contractor / Designer:	William M. Hines, PE			
Address:	NCDOT Division 6 558 Gillespie Street (P.O. Box 1150) Fayetteville, NC 28302		Address:	Sungate Design Group, PA 905 Jones Franklin Road Raleigh, NC 27606			
	Phone:	(910) 364-0603		Phone:	(919) 859-2243		
	Email:	sdkendall@ncdot.gov		Email:	whines@sungatedesign.com		
City/Town:	Whiteville		County(ies):	Columbus			
River Basin(s):	Lumber		CAMA County?	No			
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	2.183 Mi.	Surrounding Land Use:	Urban - Commercial and Residential					
	Proposed Project		Existing Site					
Project Built-Upon Area (ac.)	28.1	ac.	27.4	ac.				
Typical Cross Section Description:	-L- (US 701 Bypass): One 14' travel lane and one 12' travel lane in each direction (four travel lanes total) with 2'-6" curb and gutter drainage, sidewalk, and a 20' raised grass median.			-L- (US 701 Bypass): Two 12' travel lanes in each direction (four travel lanes total), plus a 12' center turn lane, with 2'-6" curb and gutter drainage and sidewalk.				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	26,000	Year:	2040	Existing:	21,417	Year:	2020
General Project Narrative: (Description of Minimization of Water Quality Impacts)	The R-5020B project involves replacing the existing US-701 Bypass within the Town of Whiteville and improving intersections along with other improvements to adjacent roadways. Rip rap dissipation has been incorporated at drainage pipe outlets and outfalls where applicable. 2:1 roadway fill slopes were used in the area of the jurisdictional stream in order to minimize impacts. In areas adjacent to the wetland, 3:1 roadway fill slopes were used to reduce wetland impacts.							

Waterbody Information

Surface Water Body (1):	Soules Swamp		NCDWR Stream Index No.:	15-4-8				
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C					
	Supplemental Classification:		Swamp Waters (Sw)					
Other Stream Classification:								
Impairments:	None							
Aquatic T&E Species?	No	Comments:						
NRTR Stream ID:						Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?				N/A
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)			(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)			
(If yes, provide justification in the General Project Narrative)								



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WBS Element: 41499.1.3 **TIP No.:** R-5020B **County(ies):** Columbus **Page** 2 **of** 2

Additional Waterbody Information

Surface Water Body (2):	Mollie Branch	NCDWR Stream Index No.:	15-4-8-8
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C	
	Supplemental Classification:	Swamp Waters (Sw)	
Other Stream Classification:			
Impairments:	None		
Aquatic T&E Species?	Comments:		
NRTR Stream ID:		Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?	(If yes, provide justification in the General Project Narrative)	(If yes, provide justification in the General Project Narrative)	(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)

Surface Water Body (3):	White Marsh	NCDWR Stream Index No.:	15-4
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C	
	Supplemental Classification:	Swamp Waters (Sw)	
Other Stream Classification:			
Impairments:	None		
Aquatic T&E Species?	Comments:		
NRTR Stream ID:		Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?	(If yes, provide justification in the General Project Narrative)	(If yes, provide justification in the General Project Narrative)	(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)

Surface Water Body (4):		NCDWR Stream Index No.:	
NCDWR Surface Water Classification for Water Body	Primary Classification:		
	Supplemental Classification:		
Other Stream Classification:			
Impairments:			
Aquatic T&E Species?	Comments:		
NRTR Stream ID:		Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?	Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?	(If yes, provide justification in the General Project Narrative)	(If yes, provide justification in the General Project Narrative)	(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)

Surface Water Body (5):		NCDWR Stream Index No.:	
NCDWR Surface Water Classification for Water Body	Primary Classification:		
	Supplemental Classification:		
Other Stream Classification:			
Impairments:			
Aquatic T&E Species?	Comments:		
NRTR Stream ID:		Buffer Rules in Effect:	
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?	Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?	(If yes, provide justification in the General Project Narrative)	(If yes, provide justification in the General Project Narrative)	(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)

09/08/99

See Sheet 1A for Index of Sheets
See Sheet 1B for Conventional Symbols

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

COLUMBUS COUNTY

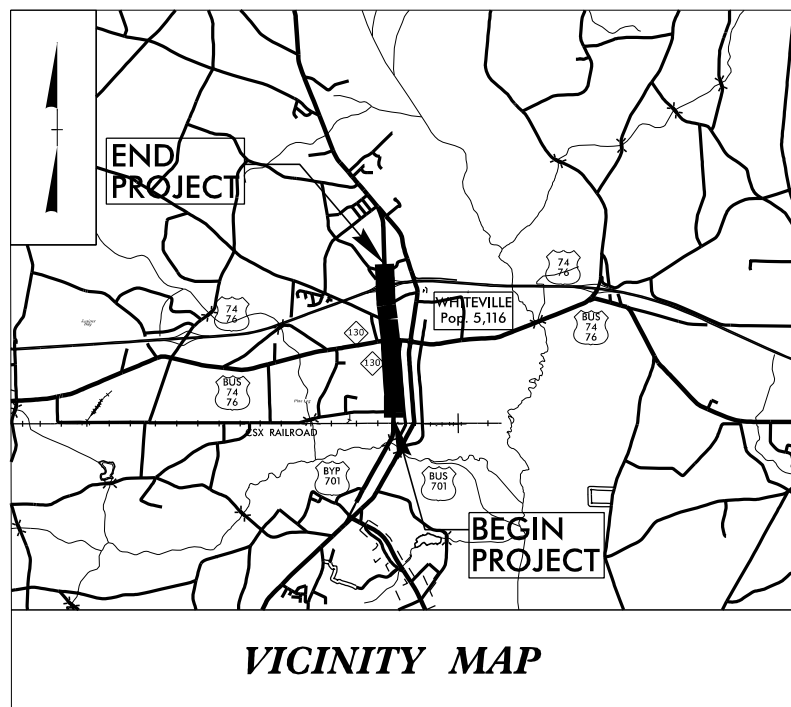
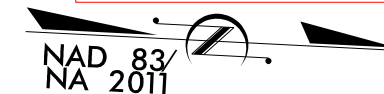
LOCATION: US 701 BYPASS (MADISON STREET - JK POWELL BOULEVARD)
FROM SR 1437 (VIRGIL AVENUE) TO US 7476

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5020B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41499.1.3	NHP-701(33)	P.E.	

25% APPROVED PLANS

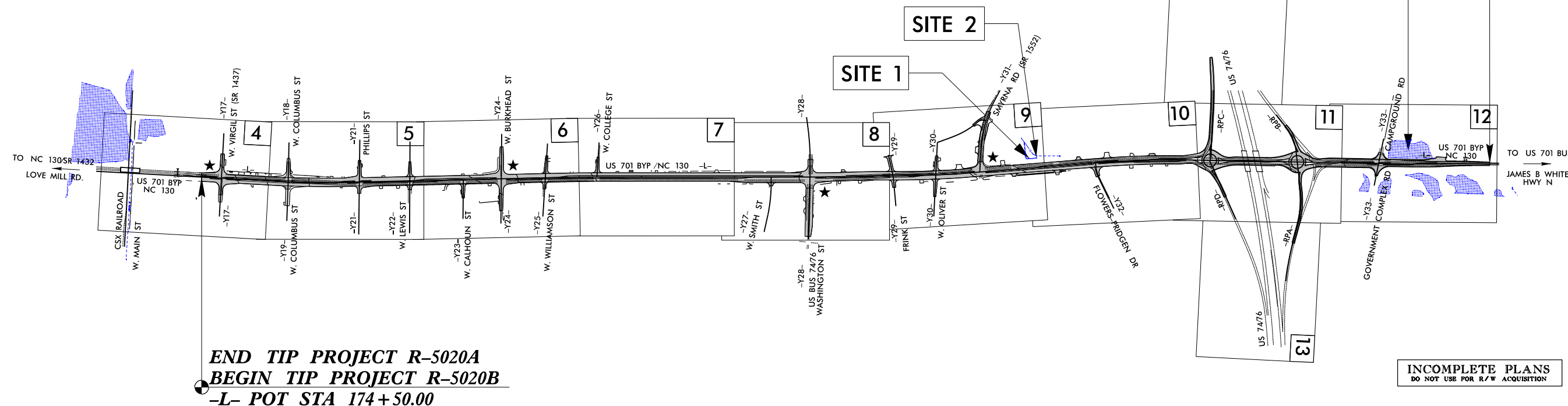
PERMIT DRAWING
SHEET 1 OF 10



VICINITY MAP

WETLAND AND SURFACE WATER IMPACTS PERMIT

END TIP PROJECT R-5020B
-L- POT STA 289+75.00



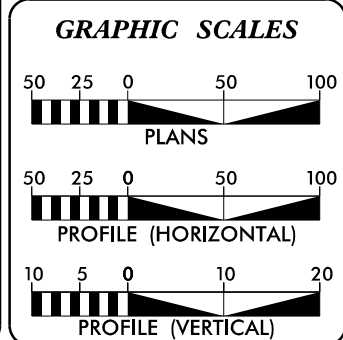
END TIP PROJECT R-5020A
BEGIN TIP PROJECT R-5020B
-L- POT STA 174+50.00

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

- NOTE:
- THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF WHITEVILLE.
 - CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD .



CONTRACT: TIP PROJECT: R-5020B



DESIGN DATA

ADT 2020 =	21,417
ADT 2040 =	26,000
K =	8 %
D =	55 %
T =	6 % *
V =	50 MPH
*(TTST = 3% DUAL 3%)	
FUNC CLASS = URBAN ARTERIAL	

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT R-5020B	=	2.183 MILES
TOTAL LENGTH OF TIP PROJECT R-5020B	=	2.183 MILES

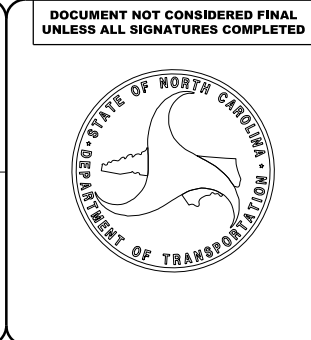
Prepared in the Office of: KCI KCI Associates of N.C., P.A. 4505 Falls of Neuse Road, Suite 400 Raleigh, NC 27609 Phone (919) 783-9214 Fax (919) 783-9266	Plans Prepared For: DIVISION OF HIGHWAYS 558 Gillespie St. Fayetteville NC, 28302
2012 STANDARD SPECIFICATIONS	CHARLES L. FLOWE, P.E. PROJECT ENGINEER
RIGHT OF WAY DATE: FEBRUARY 16, 2018	BARRY C. SMITH, P.E. PROJECT DESIGN ENGINEER
LETTING DATE: FEBRUARY 18, 2020	
NCDOT CONTACT:	STEVEN KENDALL, P.E. PROJECT ENGINEER - DIVISION 6

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



5/2/2019 R5020B_Hyd_prm_wet_psh_01.dgn inarvey

8/17/99

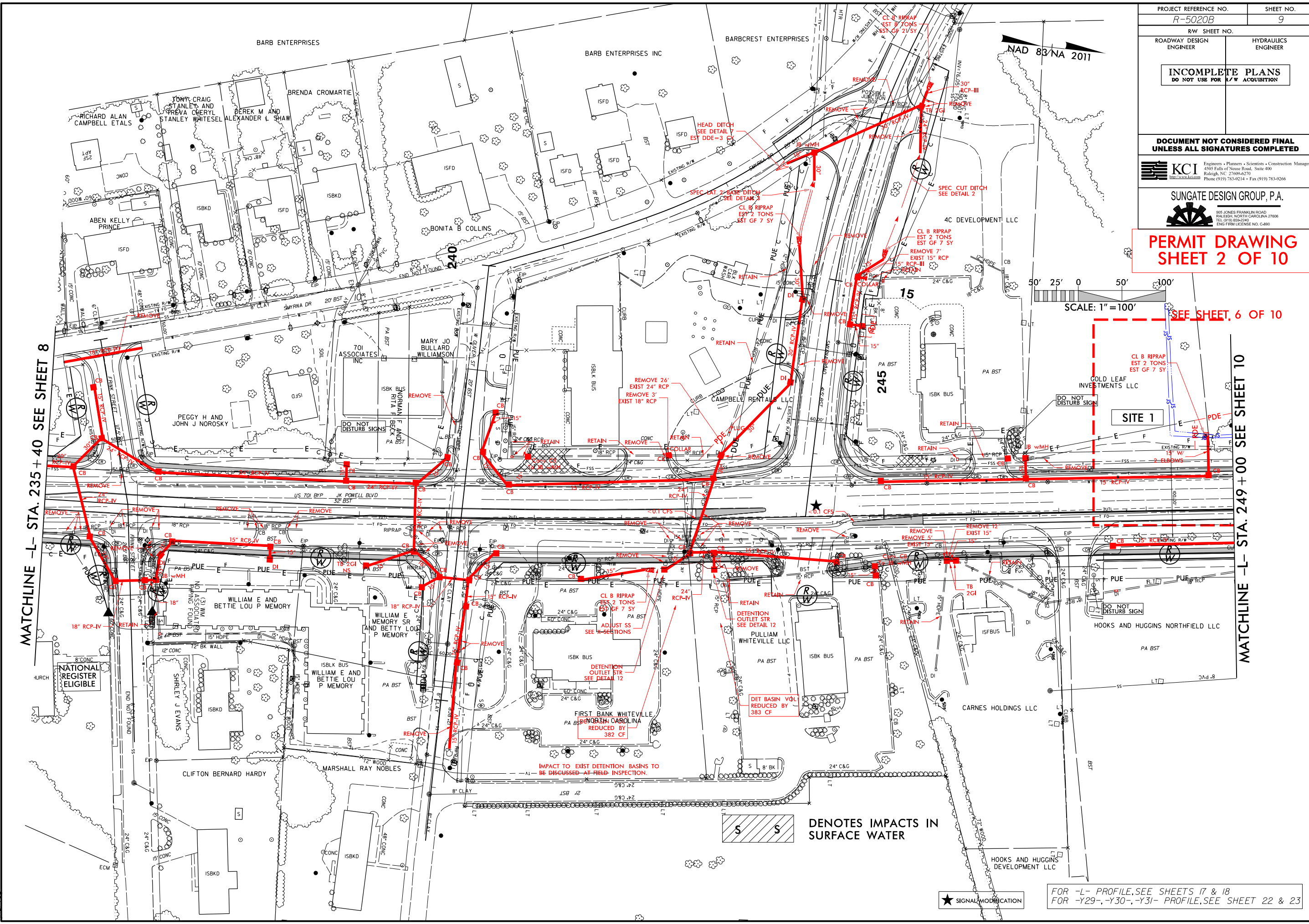
PROJECT REFERENCE NO. R-5020B	SHEET NO. 9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

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805 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL: (919) 858-2292
FAX: (919) 858-2293
ENG. FIRM LICENSE NO. C-480

PERMIT DRAWING
SHEET 2 OF 10



MATCHLINE -L- STA. 235 + 40 SEE SHEET 8

MATCHLINE -L- STA. 249 + 00 SEE SHEET 10

SCALE: 1" = 100'

SEE SHEET, 6 OF 10

■ DENOTES IMPACTS IN SURFACE WATER

★ SIGNAL MODIFICATION

FOR -L- PROFILE, SEE SHEETS 17 & 18
FOR -Y29-, -Y30-, -Y31- PROFILE, SEE SHEET 22 & 23

R662009_Hyd-prm_wet_psh_09.dgn

PROJECT REFERENCE NO. R-5020B	SHEET NO. 9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

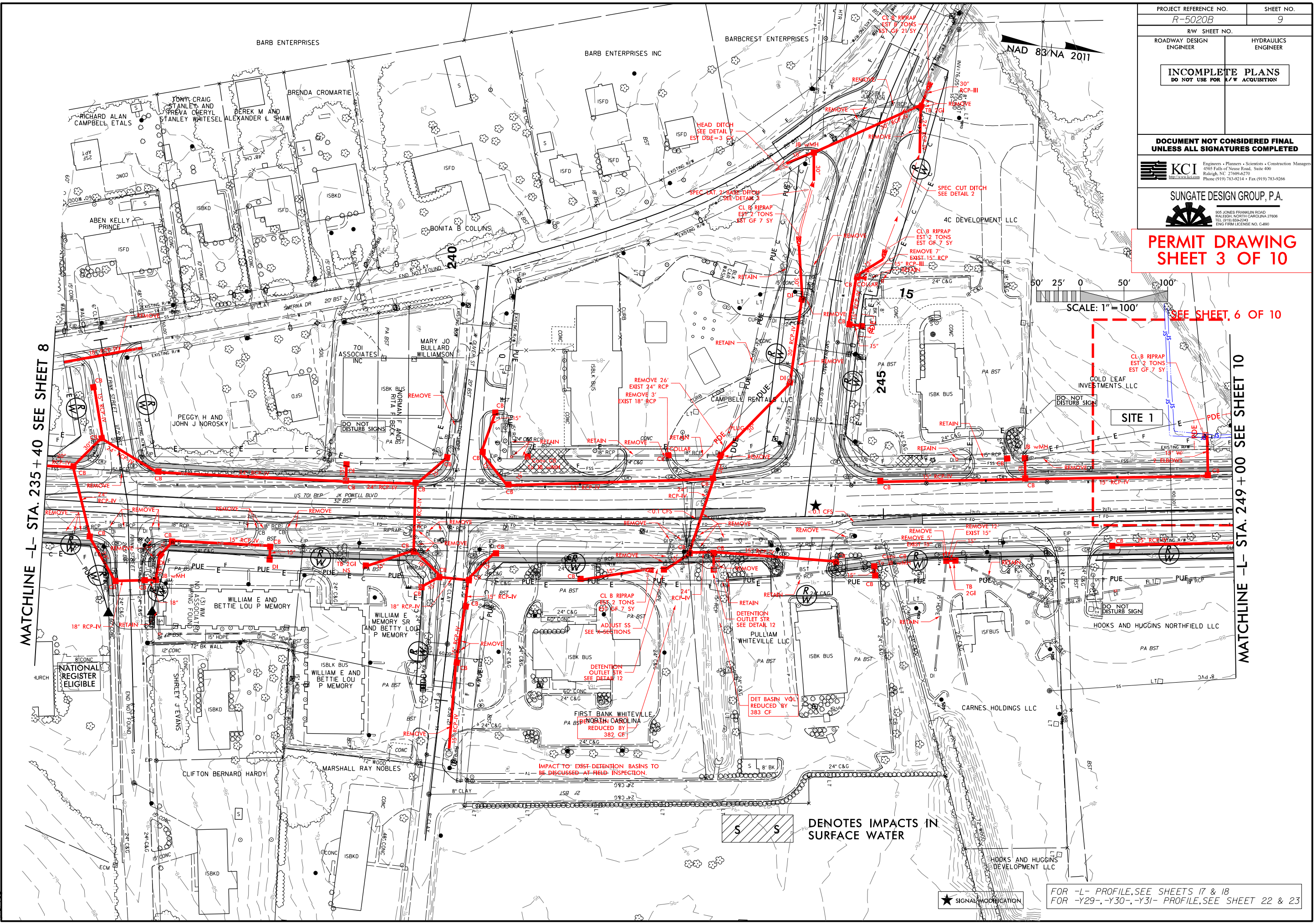
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PERMIT DRAWING
SHEET 3 OF 10



MATCHLINE -L- STA. 235 + 40 SEE SHEET 8

MATCHLINE -L- STA. 249 + 00 SEE SHEET 10



SCALE: 1" = 100'

SEE SHEET 6 OF 10

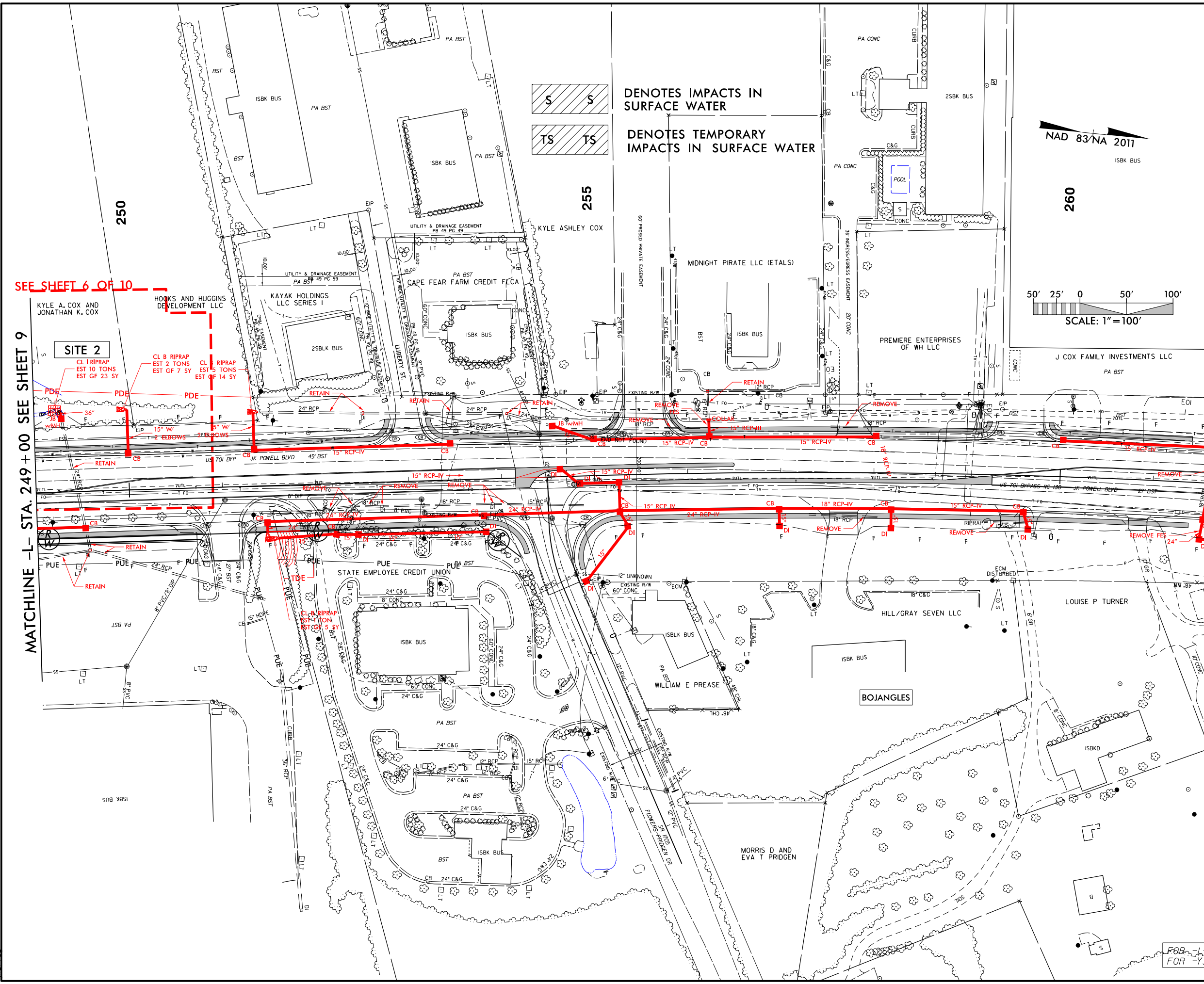
■ DENOTES IMPACTS IN SURFACE WATER


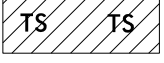
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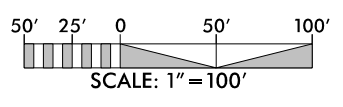
FOR -L- PROFILE, SEE SHEETS 17 & 18
FOR -Y29-, -Y30-, -Y31- PROFILE, SEE SHEET 22 & 23

PROJECT REFERENCE NO. R-5020B	SHEET NO. 10
RW SHEET NO.	
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**PERMIT DRAWING
SHEET 4 OF 10**



 **DENOTES IMPACTS IN SURFACE WATER**
 **DENOTES TEMPORARY IMPACTS IN SURFACE WATER**



SEE SHEET 6 OF 10

MATCHLINE -L- STA. 249 + 00 SEE SHEET 9

MATCHLINE -L- STA. 262 + 00 SEE SHEET 11

FOR -L- PROFILE, SEE SHEET 18
FOR -Y32- PROFILE, SEE SHEET 23

8/17/99
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8/17/99

PROJECT REFERENCE NO. R-5020B	SHEET NO. 10
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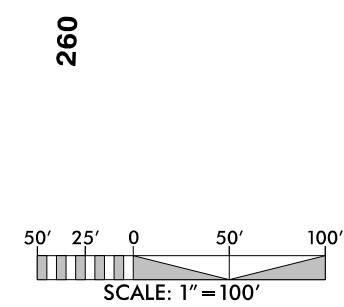
PERMIT DRAWING
SHEET 5 OF 10

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TS TS

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

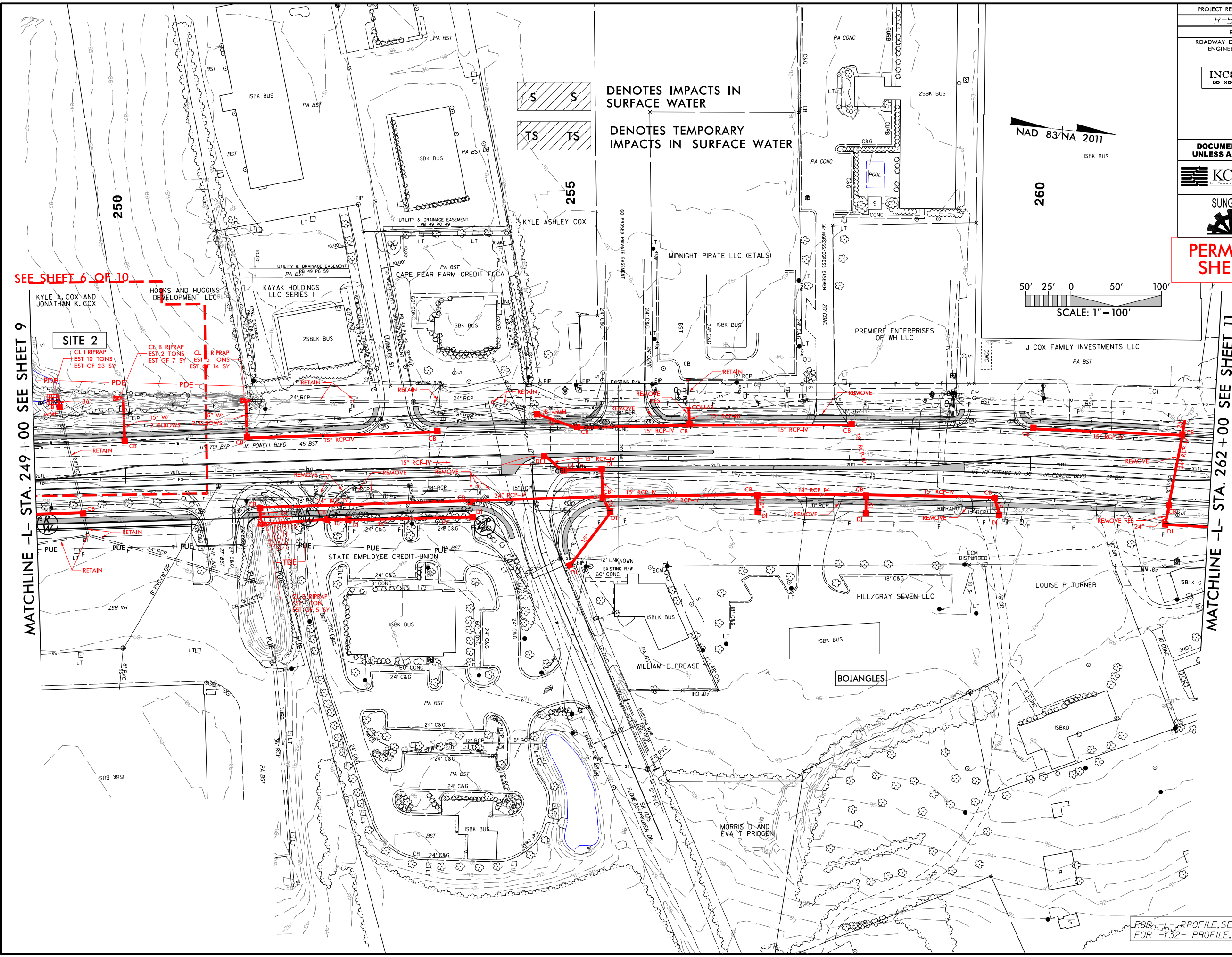
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SEE SHEET 6 OF 10

MATCHLINE -L- STA. 249 + 00 SEE SHEET 9

MATCHLINE -L- STA. 262 + 00 SEE SHEET 11

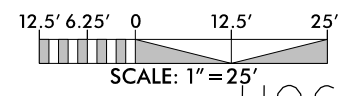
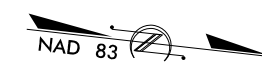


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FOR -L- PROFILE, SEE SHEET 18
FOR -Y32- PROFILE, SEE SHEET 23

8/17/99

PROJECT REFERENCE NO. R-5020B	SHEET NO. 10B
RW SHEET NO.	
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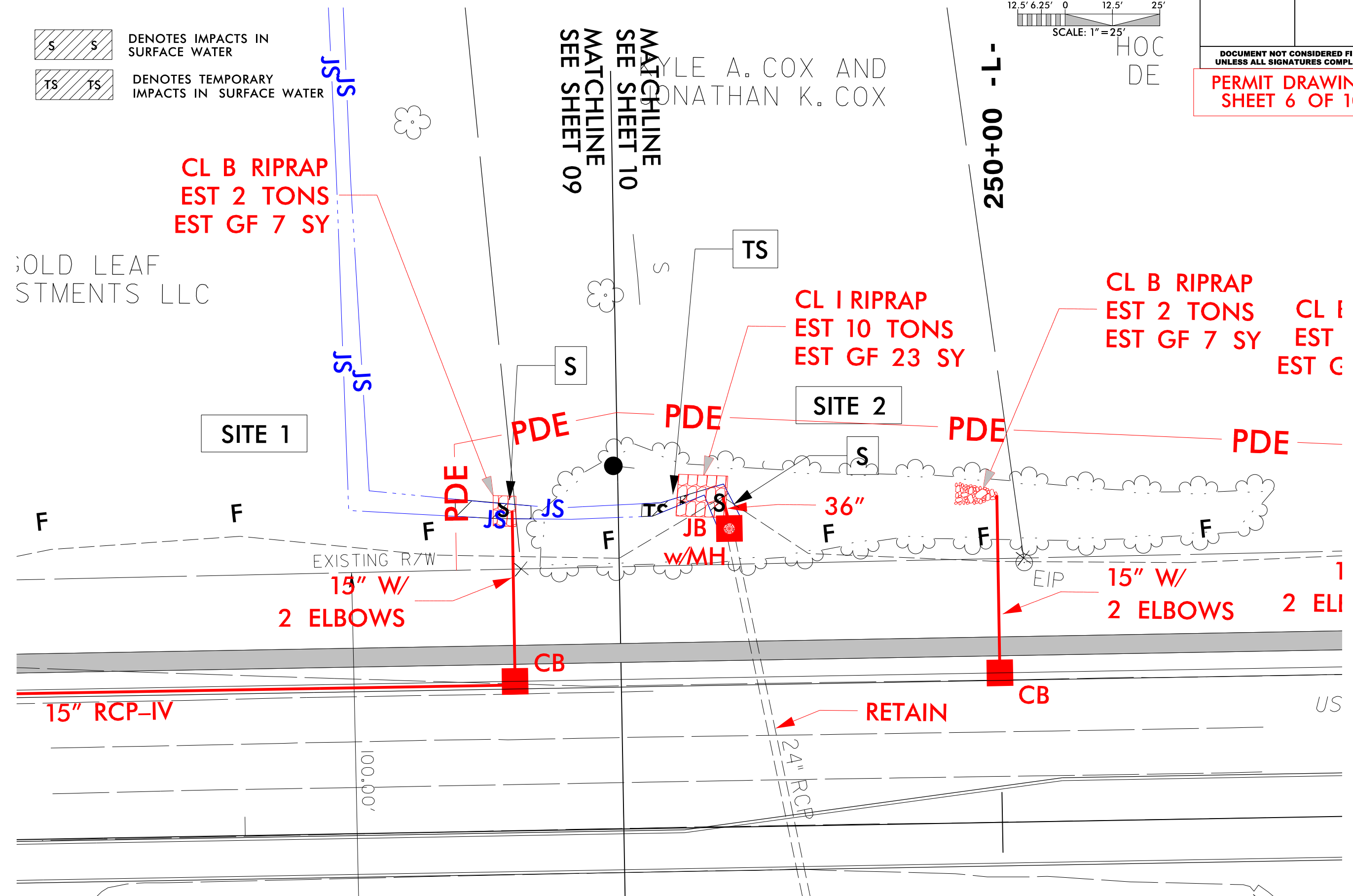


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PERMIT DRAWING
SHEET 6 OF 10

S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER



GOLD LEAF
STMENTS LLC

BY: KYLE A. COX AND
JONATHAN K. COX

5/22/2019 R-5020B-Hyd-prm-wet-psh_10b.dgn

8/17/09

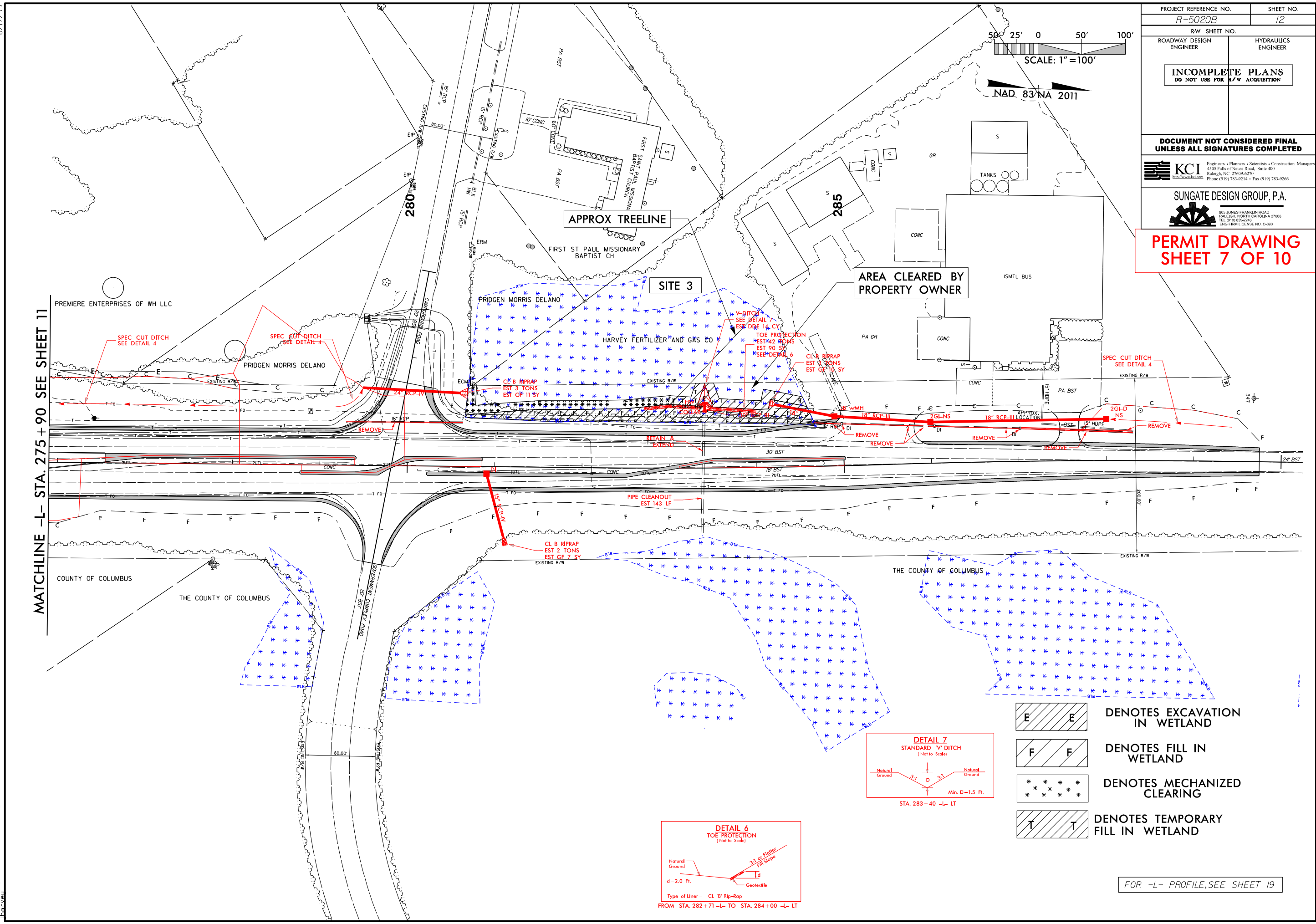
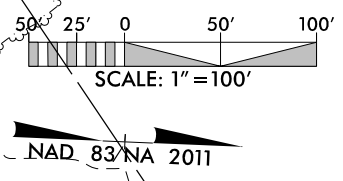
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R/W SHEET NO.	
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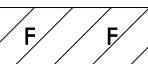


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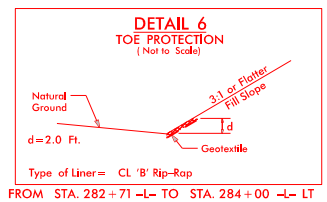
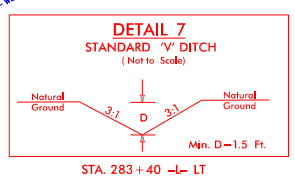
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PERMIT DRAWING SHEET 7 OF 10



MATCHLINE -L- STA. 275 + 90 SEE SHEET 11



-  DENOTES EXCAVATION IN WETLAND
-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING
-  DENOTES TEMPORARY FILL IN WETLAND



FOR -L- PROFILE, SEE SHEET 19

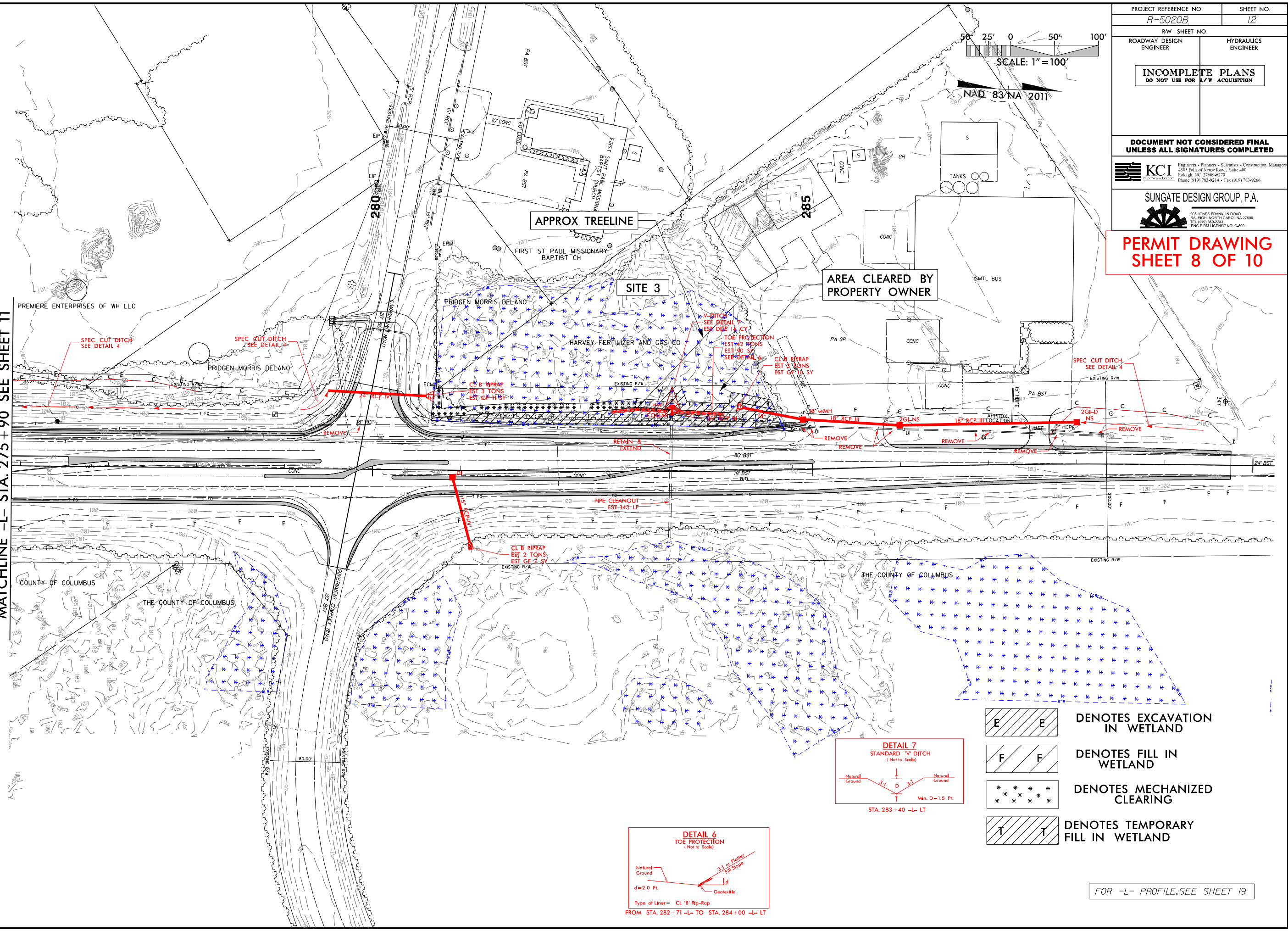
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8/17/09

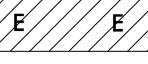



8/17/99

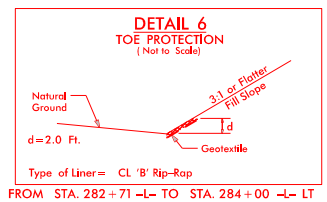
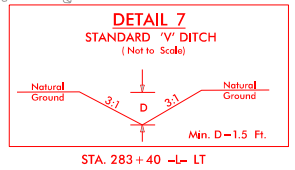
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R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
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PERMIT DRAWING
SHEET 8 OF 10

MATCHLINE -L- STA. 275 + 90 SEE SHEET 11



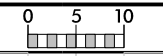
-  DENOTES EXCAVATION IN WETLAND
-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING
-  DENOTES TEMPORARY FILL IN WETLAND



FOR -L- PROFILE, SEE SHEET 19

R45/2019_Hyd_prm_wet_psh_12_con.dgn

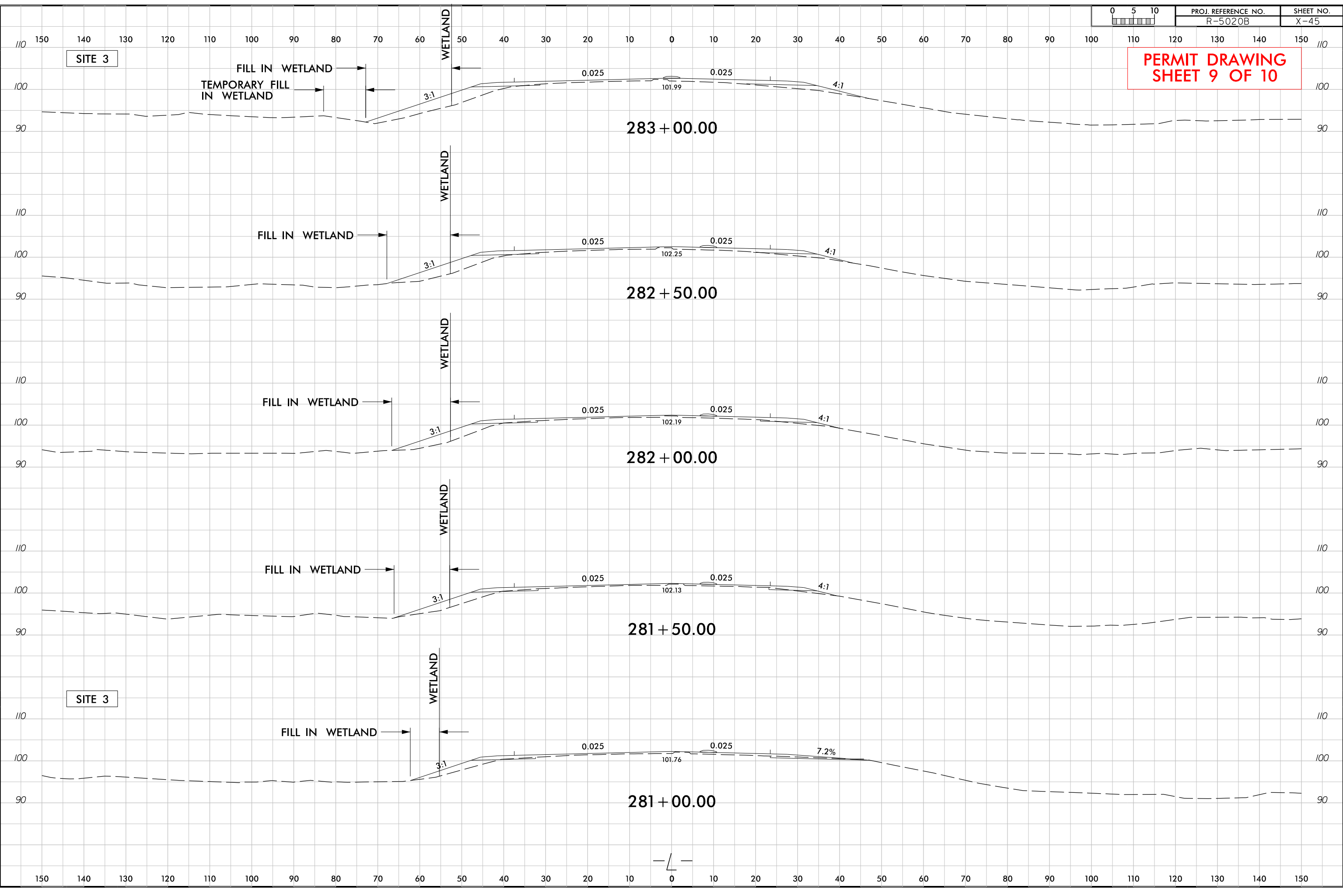
8/23/99



PROJ. REFERENCE NO. R-5020B	SHEET NO. X-45
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SITE 3

PERMIT DRAWING
SHEET 9 OF 10



9/5/2019
R5020B_Hyd-prm-wet_psh_12_xpl.dgn
[unclear]

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)
1	248+57 to 248+77-L-LT	OUTLET PROTECTION						< 0.01		20		
2	249+06 to 249+32-L-LT	36" PIPE						< 0.01	< 0.01	20	11	
3	280+66 to 284.68-L-LT	ROADWAY FILL	0.14	0.04	< 0.01	0.06						
TOTALS*:			0.14	0.04	< 0.01	0.06		< 0.01	< 0.01	40	11	0

*Rounded totals are sum of actual impacts

NOTES:
 Site #3: Due to clearing by property owner, mechanized clearing adjusted and temporary fill in wetland added.

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 8/05/19
 COLUMBUS
 R-5020B
 41499.1.3
 SHEET 10 OF 10