

		North Carolina Department of Transportation Highway Stormwater Program STORMWATER MANAGEMENT PLAN FOR NCDOT PROJECTS					
(Version 2.08; Released April 2018)							
WBS Element: 50205.1.1		TIP No.: R-5709		County(ies): Hoke Moore		Page 1 of 3	
General Project Information							
WBS Element:		50205.1.1		TIP Number: R-5709		Project Type: Roadway Widening	
NCDOT Contact:		Paul Atkinson, PE		Contractor / Designer:		Trent Cormier	
Address:		1202 Birch Ridge Drive Raleigh, NC 27610		Address:		8601 Six Forks Road Forum 1, Suite 700 Raleigh, NC 27615	
Phone:		(919)707-6707		Phone:		(919)878-9560	
Email:		patkinson@ncdot.gov		Email:		tcormier@rkk.com	
City/Town:		Aberdeen, Raeford		County(ies):		Hoke Moore	
River Basin(s):		Lumber		CAMA County?		No No	
Wetlands within Project Limits?		Yes					
Project Description							
Project Length (lin. miles or feet):		15.648 MI.		Surrounding Land Use:		Farmland, Woods, Residential	
Proposed Project				Existing Site			
Project Built-Upon Area (ac.)		222.7 ac.		63.3 ac.			
Typical Cross Section Description:		A typical cross-section - 178 foot-wide will be used; which will include four 12-foot travel lanes with varying grass medians (23 foot, 30 foot, or 46 foot). It also contains varying exterior shoulder sections where 10-feet is paved, curb and gutter, and open shoulder section.		The existing typical cross-section is 24-foot wide with two 12-foot travel lanes and varying 8 to 10-foot unpaved shoulders.			
Annual Avg Daily Traffic (veh/hr/day):		Design/Future: 16,100 / 22,300		Year: 2022 / 2040		Existing: 10,000 Year: 2001	
General Project Narrative: (Description of Minimization of Water Quality Impacts)		R-5709 is a roadway widening project of NC 211 from the existing two lanes to the proposed four lanes in Hoke and Moore Counties. The expansion is 15.648 miles long and begins from US 15-501 in Aberdeen to east of SR 1244 (West Palmer Street) – SR 1311 (Mockingbird Hill Road) in Raeford. Wetlands, perennial streams, and intermittent streams are found within the limits of the project area. The jurisdictional streams within the study area have no impairments and do not provide habitat for any threatened or endangered aquatic species. Design Mitigations for wetlands and streams include: 1. Steepening of roadway fill slopes within jurisdictional areas. 2. Stormwater was designed to avoid direct discharge into jurisdictional features to the maximum extent practicable. 3. Stormwater design velocities entering jurisdictional features have been mitigated to be non-erosive (less than 2 fps). 4. Open shoulder sections were maximized to promote sheet flow from the roadway. 5. Diffuse flow provided at outlets that do not have a well defined outfall.					
Waterbody Information							
Surface Water Body (1):		UT to Devil Gut Branch		NCDWR Stream Index No.:		14-2-11-7	
NCDWR Surface Water Classification for Water Body		Primary Classification:		Class C			
		Supplemental Classification:		None			
Other Stream Classification:		None					
Impairments:		None					
Aquatic T&E Species?		No		Comments:			
NRTR Stream ID:		SA, SB, SD		Buffer Rules in Effect:		N/A	
Project Includes Bridge Spanning Water Body?		No		Deck Drains Discharge Over 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)							

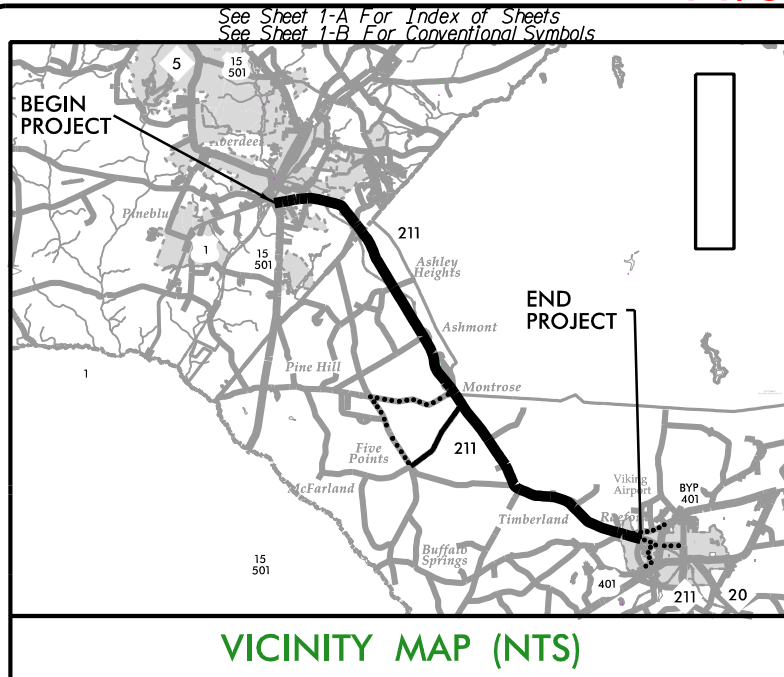
 North Carolina Department of Transportation Highway Stormwater Program STORMWATER MANAGEMENT PLAN FOR NCDOT PROJECTS 									
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WBS Element: 50205.1.1		TIP No.: R-5709		County(ies): Hoke Moore			Page 2 of 3		
Additional Waterbody Information									
Surface Water Body (2):		Devil Gut Branch			NCDWR Stream Index No.:		14-2-11-7		
NCDWR Surface Water Classification for Water Body		Primary Classification:		Class C					
		Supplemental Classification:		None					
Other Stream Classification:		None							
Impairments:		None							
Aquatic T&E Species?		No		Comments:					
NRTR Stream ID:		SC				Buffer Rules in Effect:		N/A	
Project Includes Bridge Spanning Water Body?		No		Deck Drains Discharge Over Buffer?		N/A		Dissipator Pads Provided in Buffer?	
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)							
Surface Water Body (3):		Quewhiffle Creek			NCDWR Stream Index No.:		14-2-14		
NCDWR Surface Water Classification for Water Body		Primary Classification:		Class C					
		Supplemental Classification:		None					
Other Stream Classification:		None							
Impairments:		None							
Aquatic T&E Species?		No		Comments:					
NRTR Stream ID:		SE				Buffer Rules in Effect:		N/A	
Project Includes Bridge Spanning Water Body?		No		Deck Drains Discharge Over Buffer?		N/A		Dissipator Pads Provided in Buffer?	
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)							
Surface Water Body (4):		UT to Quewhiffle Creek			NCDWR Stream Index No.:		14-2-14		
NCDWR Surface Water Classification for Water Body		Primary Classification:		Class C					
		Supplemental Classification:		None					
Other Stream Classification:		None							
Impairments:		None							
Aquatic T&E Species?		No		Comments:					
NRTR Stream ID:		SF, SJ				Buffer Rules in Effect:		N/A	
Project Includes Bridge Spanning Water Body?		No		Deck Drains Discharge Over Buffer?		N/A		Dissipator Pads Provided in Buffer?	
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)							
Surface Water Body (5):		UT to Mountain Creek			NCDWR Stream Index No.:		14-2-16-(2)		
NCDWR Surface Water Classification for Water Body		Primary Classification:		Class C					
		Supplemental Classification:		None					
Other Stream Classification:		None							
Impairments:		None							
Aquatic T&E Species?		No		Comments:					
NRTR Stream ID:		SG				Buffer Rules in Effect:		N/A	
Project Includes Bridge Spanning Water Body?		No		Deck Drains Discharge Over Buffer?		N/A		Dissipator Pads Provided in Buffer?	
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:	50205.1.1	TIP No.:	R-5709	County(ies):	Hoke Moore	Page	3 of 3
Additional Waterbody Information							
Surface Water Body (6):	UT to Buffalo Creek			NCDWR Stream Index No.:	14-2.5		
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C				
		Supplemental Classification:	None				
Other Stream Classification:	None						
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	SH			Buffer Rules in Effect:		N/A	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A		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)					
Surface Water Body (7):	UT to Toney's Creek			NCDWR Stream Index No.:	14-10-1.2		
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C				
		Supplemental Classification:	Swamp Waters (Sw)				
Other Stream Classification:	None						
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	SI, SM			Buffer Rules in Effect:		N/A	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A		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)					
Surface Water Body (8):	UT to Rockfish Creek			NCDWR Stream Index No.:	18-31-(12)		
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class B				
		Supplemental Classification:	None				
Other Stream Classification:	None						
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:	SK, SL			Buffer Rules in Effect:		N/A	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A		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)					

11/5/2025 (For Reverification Purposes)

TIP PROJECT: R-5709

CONTRACT:

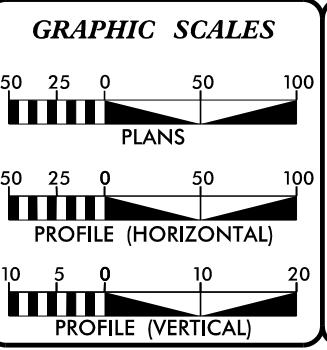


OFFSITE DETOUR

BEGIN TIP PROJECT R-5709
-L- POT Sta. 10+32.11

-L- POT STA. 362+18.44 BK=
-L- POT STA. 361+50.00 AH

NOTE:
1. THIS IS A PARTIAL CONTROLLED ACCESS PROJECT WITH ACCESS
BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.



DESIGN DATA

ADT 2024 = 16,400
ADT 2044 = 23,400
K = 9%
D = 60%
T = 21% *

**V = 50 MPH/60 MPH
* TTST = 16% DUAL 5%
FUNC CLASS = MINOR ARTERIAL
REGIONAL TIER
**DESIGN SPEED CHANGES AT COUNTY LINE

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5709..... 15.607 miles
LENGTH STRUCTURE TIP PROJECT R-5709..... 0.031 miles
TOTAL LENGTH OF PROJECT R-5709..... 15.638 miles

NCDOT CONTACT

Terry E. Farr, PE
PROJECT MANAGER

PLANS PREPARED BY:
RK&K
8601 Six Forks Road, Forum 1 Suite 700
RALEIGH, NORTH CAROLINA 27615-3960
NC LICENSE NO. F-0112
1-888-521-4455 OR 919-878-9560

FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
APRIL 23, 2021

LETTING DATE:
MARCH 19, 2024

Brandon McInnis, PE
PROJECT ENGINEER

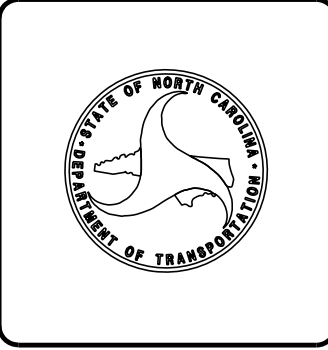
Mary Mays Yahl, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



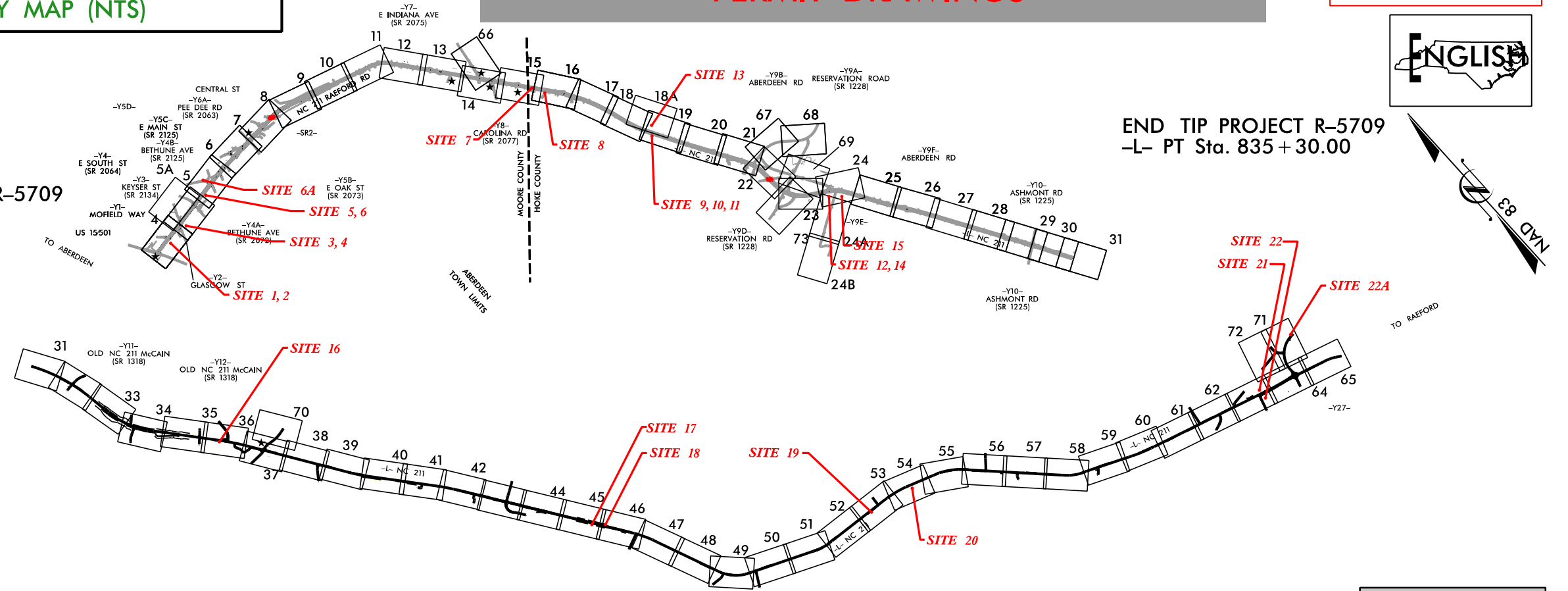
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MOORE/HOKE COUNTIES

**LOCATION: NC 211 FROM US 15/US 501 IN ABERDEEN TO SR 1244
(WEST PALMER ST) /SR 1311 (MOCKINGBIRD HILL RD) IN RAEFORD**

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

WETLAND AND SURFACE WATER IMPACTS PERMIT DRAWINGS



★ PROPOSED SIGNAL

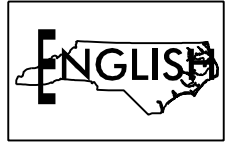
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5709	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50205.1.1		PE	
50205.2.1		ROW	
50205.2.2		UTILITIES	
50205.3.1		CONSTRUCTION	



PERMIT DRAWING
SHEET 1 OF 60

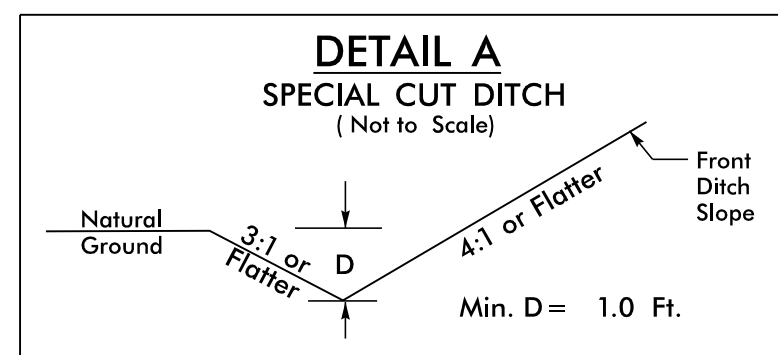
REVISED 12/20/2023



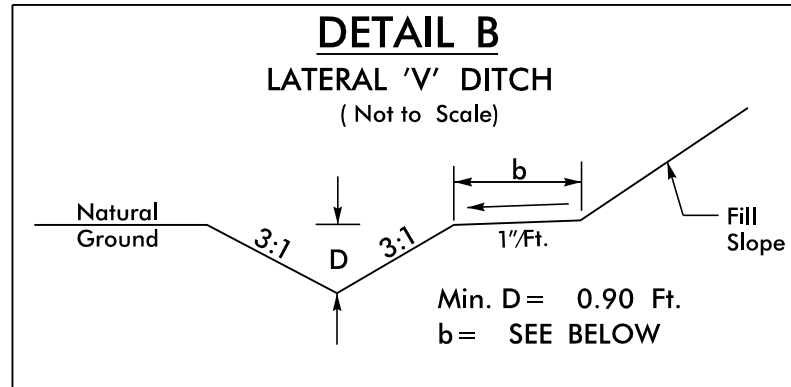
END TIP PROJECT R-5709
-L- PT Sta. 835+30.00

I:\3\2024 R:\Hydraulics\PERMITS_Environmental\Drawings\R5709_Hyd.tsh.dgn
09/08/24
choffman

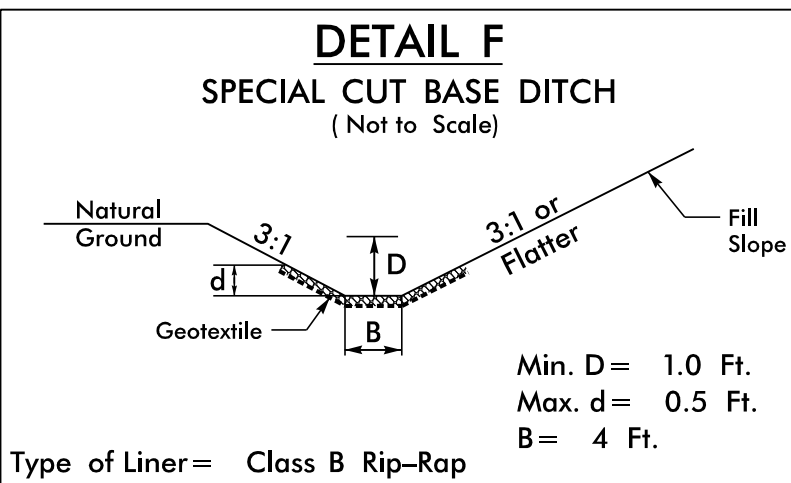
8/17/99



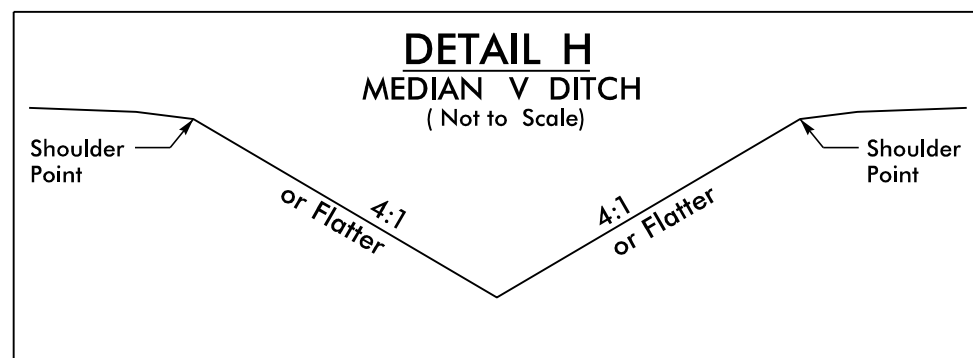
-L- FROM STA. 81+00 TO STA. 89+50 RT
 -L- FROM STA. 94+50 TO STA. 97+50 RT
 -L- FROM STA. 113+50 TO STA. 116+50 RT
 -L- FROM STA. 134+00 TO STA. 135+75 RT
 -L- FROM STA. 144+50 TO STA. 145+66 LT
 -L- FROM STA. 156+00 TO STA. 157+00 LT
 -L- FROM STA. 160+00 TO STA. 164+30 RT
 -L- FROM STA. 165+50 TO STA. 169+50 LT
 -L- FROM STA. 174+00 TO STA. 175+00 LT
 -L- FROM STA. 191+50 TO STA. 192+50 RT
 -L- FROM STA. 194+50 TO STA. 195+00 RT
 -L- FROM STA. 223+00 TO STA. 224+50 LT
 -L- FROM STA. 227+00 TO STA. 227+50 LT
 -L- FROM STA. 238+05 TO STA. 238+50 RT
 -L- FROM STA. 266+00 TO STA. 268+00 LT
 -L- FROM STA. 376+00 TO STA. 376+36 LT
 -L- FROM STA. 384+50 TO STA. 385+00 LT
 -L- FROM STA. 398+50 TO STA. 400+40 LT
 -L- FROM STA. 415+64 TO STA. 417+00 LT
 -L- FROM STA. 424+00 TO STA. 424+82 LT
 -L- FROM STA. 428+00 TO STA. 428+50 RT
 -L- FROM STA. 435+44 TO STA. 438+50 LT
 -L- FROM STA. 464+50 TO STA. 465+50 LT
 -L- FROM STA. 472+00 TO STA. 477+75 LT
 -L- FROM STA. 484+00 TO STA. 487+50 LT
 -L- FROM STA. 524+50 TO STA. 532+00 LT
 -L- FROM STA. 544+00 TO STA. 549+50 LT
 -L- FROM STA. 551+50 TO STA. 552+00 LT
 -L- FROM STA. 573+00 TO STA. 573+50 LT
 -L- FROM STA. 578+00 TO STA. 580+29 LT
 -L- FROM STA. 592+50 TO STA. 596+00 RT
 -L- FROM STA. 623+50 TO STA. 643+00 RT
 -L- FROM STA. 642+50 TO STA. 670+50 LT
 -L- FROM STA. 656+00 TO STA. 665+15 RT
 -L- FROM STA. 671+20 TO STA. 676+00 LT
 -L- FROM STA. 676+50 TO STA. 678+50 LT
 -L- FROM STA. 681+00 TO STA. 684+00 RT
 -L- FROM STA. 685+50 TO STA. 690+00 LT
 -L- FROM STA. 692+00 TO STA. 696+00 RT
 -L- FROM STA. 701+00 TO STA. 707+50 RT
 -L- FROM STA. 708+66 TO STA. 710+03 LT
 -L- FROM STA. 710+00 TO STA. 711+50 RT
 -L- FROM STA. 715+00 TO STA. 715+50 LT
 -L- FROM STA. 725+50 TO STA. 726+50 RT
 -L- FROM STA. 726+50 TO STA. 731+50 LT
 -L- FROM STA. 730+00 TO STA. 731+50 RT
 -L- FROM STA. 733+50 TO STA. 736+00 LT
 -L- FROM STA. 736+00 TO STA. 736+50 RT
 -L- FROM STA. 743+00 TO STA. 745+00 LT
 -L- FROM STA. 745+00 TO STA. 747+00 RT
 -L- FROM STA. 746+50 TO STA. 751+00 LT
 -L- FROM STA. 753+50 TO STA. 755+00 LT
 -L- FROM STA. 756+50 TO STA. 757+00 RT
 -L- FROM STA. 766+50 TO STA. 768+00 LT
 -L- FROM STA. 769+50 TO STA. 772+50 RT
 -L- FROM STA. 773+48 TO STA. 775+50 RT
 -L- FROM STA. 778+50 TO STA. 782+50 LT
 -L- FROM STA. 778+50 TO STA. 779+50 RT
 -L- FROM STA. 786+00 TO STA. 786+97 LT
 -L- FROM STA. 786+50 TO STA. 794+37 RT
 -L- FROM STA. 795+28 TO STA. 795+65 RT
 -L- FROM STA. 812+30 TO STA. 812+33 RT
 -L- FROM STA. 814+00 TO STA. 815+00 RT
 -L- FROM STA. 815+00 TO STA. 816+50 LT
 -L- FROM STA. 818+50 TO STA. 820+50 RT
 -L- FROM STA. 821+50 TO STA. 822+96 LT
 -L- FROM STA. 822+50 TO STA. 822+64 RT
 -L- FROM STA. 826+50 TO STA. 827+50 RT
 -L- FROM STA. 832+00 TO STA. 834+00 LT
 -Y9A- FROM STA. 26+00 TO STA. 27+00 LT
 -Y9D- FROM STA. 13+00 TO STA. 13+50 LT
 -L- /-Y11A- FROM STA. 376+00 TO STA. 376+39 RT
 -Y21- FROM STA. 10+81 TO STA. 11+50 LT
 -Y21- FROM STA. 10+71 TO STA. 12+00 RT
 -Y22- FROM STA. 11+00 TO STA. 11+50 LT
 -Y24A- FROM STA. 10+70 TO STA. 11+00 LT
 -Y24A- FROM STA. 11+50 TO STA. 12+50 RT
 -Y26- FROM STA. 14+00 TO STA. 14+50 RT
 -Y26- FROM STA. 18+50 TO STA. 23+50 RT
 -Y26A- FROM STA. 13+00 TO STA. 15+10 RT
 -DR1- FROM STA. 11+00 TO STA. 12+50 LT
 -DR1- FROM STA. 11+00 TO STA. 12+00 RT
 -DR9- FROM STA. 10+74 TO STA. 11+47 RT



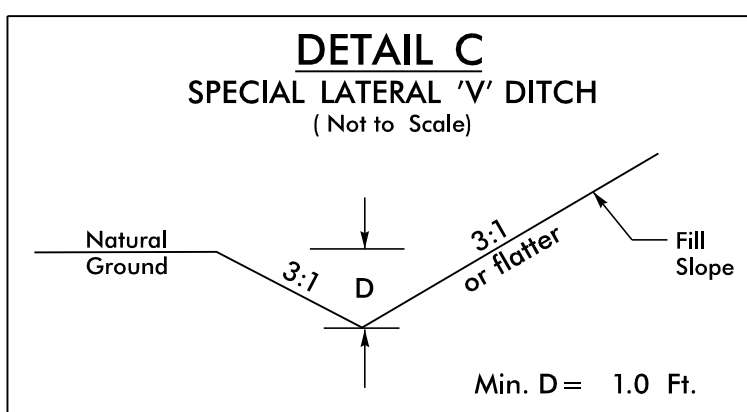
-L- FROM STA. 367+50 TO STA. 371+50 RT, b=5'
 -L- FROM STA. 391+00 TO STA. 393+00 RT, b=2'
 -L- FROM STA. 393+50 TO STA. 396+00 LT, b=2'
 -L- FROM STA. 465+00 TO STA. 466+69 RT, b=2'
 -L- FROM STA. 471+50 TO STA. 473+75 RT, b=5'
 -L- FROM STA. 474+35 TO STA. 477+67 RT, b=5'
 -L- FROM STA. 499+50 TO STA. 502+00 RT, b=2'
 -L- FROM STA. 707+50 TO STA. 708+27 RT, b=5'
 -L- FROM STA. 711+50 TO STA. 716+40 RT, b=5'
 -L- FROM STA. 736+50 TO STA. 737+93 RT, b=2'
 -L- FROM STA. 743+50 TO STA. 745+00 RT, b=5'
 -L- FROM STA. 747+00 TO STA. 748+50 RT, b=5'
 -L- FROM STA. 750+11 TO STA. 756+50 RT, b=5'
 -L- FROM STA. 751+00 TO STA. 753+50 LT, b=5'
 -L- FROM STA. 768+00 TO STA. 772+00 LT, b=4'
 -L- FROM STA. 806+50 TO STA. 808+00 RT, b=5'
 -L- FROM STA. 812+30 TO STA. 813+50 RT, b=5'
 -Y11- FROM STA. 10+64 TO STA. 11+00, b=2'
 -Y11E- FROM STA. 11+00 TO STA. 11+50 LT, b=2'
 -Y12- FROM STA. 11+00 TO STA. 11+50 RT, b=2'
 -Y22- FROM STA. 11+00 TO STA. 11+50 LT, b=5'



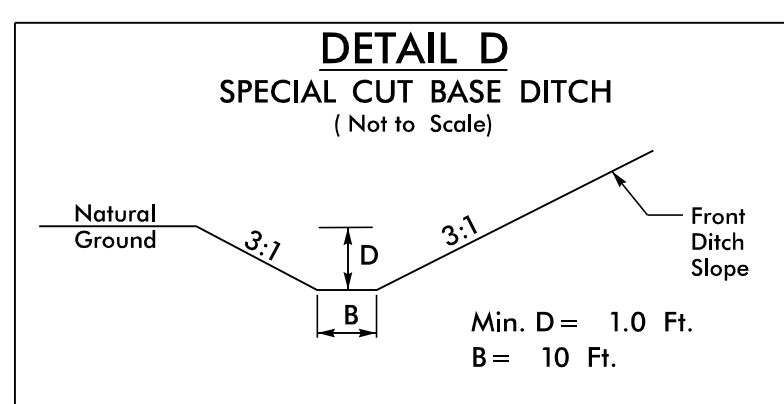
Type of Liner = Class B Rip-Rap
 -L- FROM STA. 426+00 LT TO STA. 431+00 LT



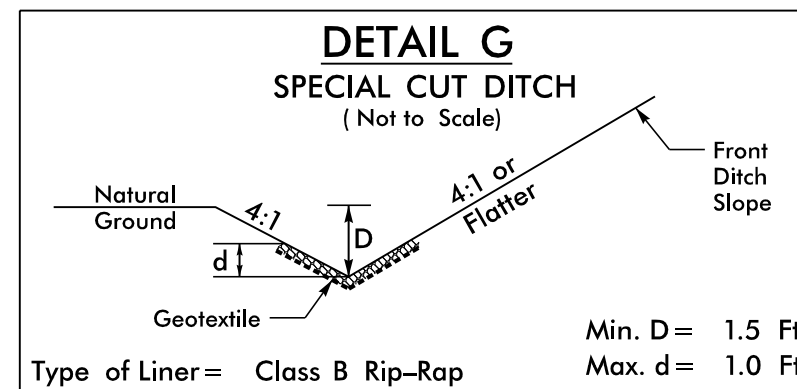
-L- FROM STA. 368+04 TO STA. 368+50 Median
 -L- FROM STA. 389+50 TO STA. 390+50 Median
 -L- FROM STA. 397+50 TO STA. 398+52 Median
 -L- FROM STA. 398+52 TO STA. 399+00 Median
 -L- FROM STA. 415+00 TO STA. 416+00 Median
 -L- FROM STA. 437+50 TO STA. 438+28 Median
 -L- FROM STA. 458+00 TO STA. 460+00 Median
 -L- FROM STA. 465+00 TO STA. 466+50 Median
 -L- FROM STA. 473+00 TO STA. 477+00 Median
 -L- FROM STA. 478+00 TO STA. 483+94 Median
 -L- FROM STA. 513+00 TO STA. 515+00 Median
 -L- FROM STA. 524+50 TO STA. 527+50 Median
 -L- FROM STA. 547+50 TO STA. 549+33 Median
 -L- FROM STA. 562+50 TO STA. 563+50 Median
 -L- FROM STA. 572+00 TO STA. 575+50 Median
 -L- FROM STA. 582+50 TO STA. 587+61 Median
 -L- FROM STA. 594+00 TO STA. 605+56 Median
 -L- FROM STA. 612+00 TO STA. 616+50 Median
 -L- FROM STA. 629+00 TO STA. 633+50 Median
 -L- FROM STA. 640+00 TO STA. 647+75 Median
 -L- FROM STA. 654+00 TO STA. 659+00 Median
 -L- FROM STA. 659+50 TO STA. 665+15 Median
 -L- FROM STA. 696+00 TO STA. 697+50 Median
 -L- FROM STA. 701+00 TO STA. 706+00 Median
 -L- FROM STA. 716+39 TO STA. 717+50 Median
 -L- FROM STA. 724+50 TO STA. 727+00 Median
 -L- FROM STA. 752+00 TO STA. 753+00 Median
 -L- FROM STA. 758+00 TO STA. 760+00 Median
 -L- FROM STA. 763+50 TO STA. 764+50 Median
 -L- FROM STA. 773+41 TO STA. 775+00 Median
 -L- FROM STA. 778+50 TO STA. 779+00 Median
 -L- FROM STA. 780+50 TO STA. 781+50 Median
 -L- FROM STA. 788+50 TO STA. 790+50 Median
 -L- FROM STA. 796+26 TO STA. 803+50 Median
 -L- FROM STA. 810+67 TO STA. 815+00 Median
 -L- FROM STA. 817+00 TO STA. 817+37 Median



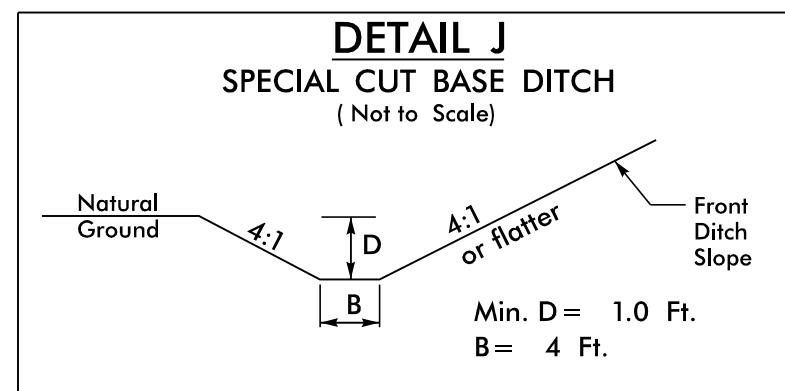
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 -L- FROM STA. 467+49 TO STA. 468+04 RT
 -L- FROM STA. 479+00 TO STA. 480+50 RT
 -L- FROM STA. 502+00 TO STA. 503+00 RT
 -L- FROM STA. 505+35 TO STA. 506+00 RT
 -L- FROM STA. 545+48 TO STA. 547+00 RT
 -L- FROM STA. 568+50 TO STA. 569+00 LT
 -L- FROM STA. 716+39 TO STA. 724+00 RT
 -L- FROM STA. 825+00 TO STA. 826+50 RT
 -SR1- FROM STA. 15+00 TO STA. 17+50 RT
 -Y9C- FROM STA. 11+00 TO STA. 14+50 LT
 -Y11A- FROM STA. 10+25 TO STA. 11+50 LT
 -Y11A- FROM STA. 11+00 TO STA. 11+50 LT
 -Y14- FROM STA. 11+00 TO STA. 14+50 RT
 -Y15- FROM STA. 11+75 TO STA. 14+50 LT
 -Y15- FROM STA. 12+50 TO STA. 14+50 RT
 -Y20- FROM STA. 13+00 TO STA. 14+90 LT
 -Y20- FROM STA. 13+00 TO STA. 15+10 RT
 -Y23- FROM STA. 10+85 TO STA. 11+50 RT
 -Y23- FROM STA. 10+96 TO STA. 12+00 LT
 -Y26- FROM STA. 11+13 TO STA. 14+00 RT
 -Y26- FROM STA. 15+00 TO STA. 18+50 RT
 -Y26- FROM STA. 19+50 TO STA. 25+00 LT
 -Y26A- FROM STA. 10+50 TO STA. 11+00 RT
 -Y26A- FROM STA. 10+50 TO STA. 12+50 LT
 -Y26A- FROM STA. 14+50 TO STA. 15+50 LT
 -Y27- FROM STA. 11+12 TO STA. 12+32 RT



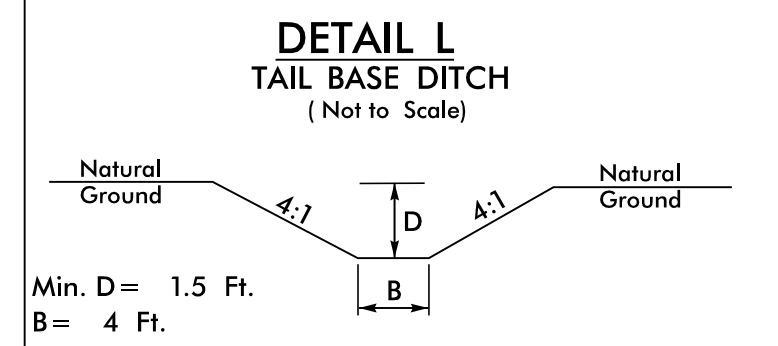
-Y14- FROM STA. 11+00 TO STA. 13+00 LT



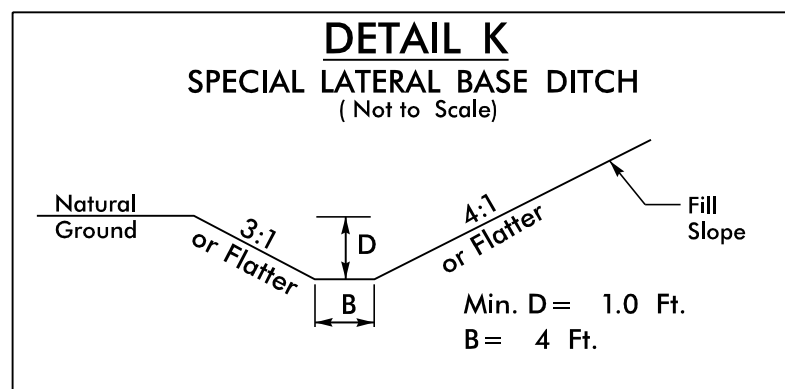
Type of Liner = Class B Rip-Rap
 -L- FROM STA. 385+00 TO STA. 386+00 LT
 -L- FROM STA. 471+00 TO STA. 471+50 LT
 -L- FROM STA. 541+00 TO STA. 542+00 RT
 -L- FROM STA. 772+00 TO STA. 774+00 LT
 -L- FROM STA. 772+50 TO STA. 773+48 RT



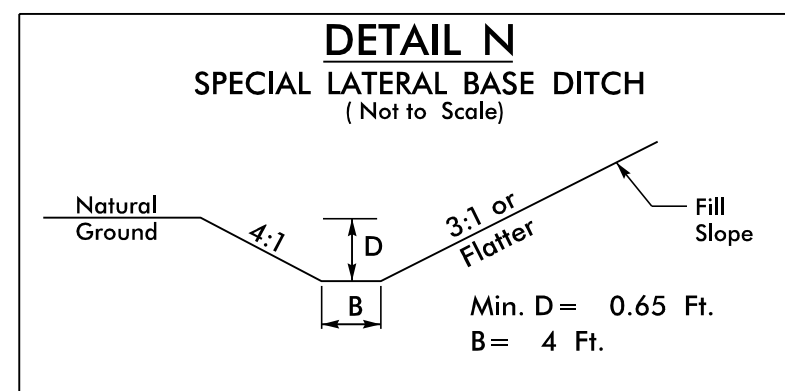
-L- FROM STA. 596+00 TO STA. 607+00 RT
 -L- FROM STA. 718+50 TO STA. 719+00 LT



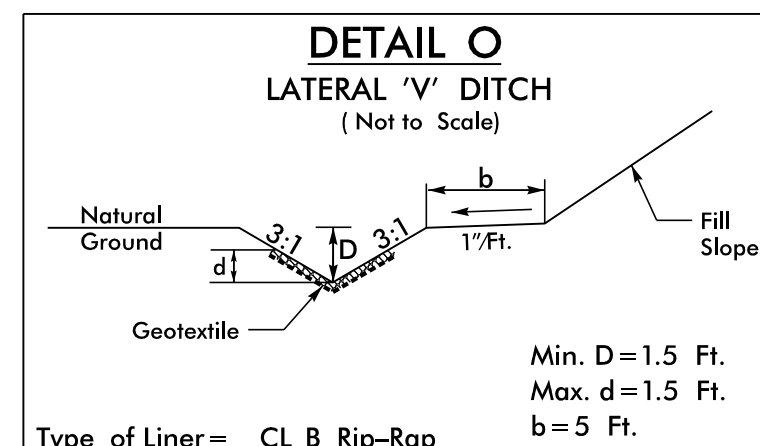
-L- STA. 665+15 RT; S=0.04%; L=60';
 Beg. El.=358.94; End. El.=358.68; DDE=33 CY
 -L- STA. 773+35 LT (RT OF RR); S=1.25%; L=40';
 Beg. El.=297.00; End. El.=296.50; DDE=22 CY
 -L- STA. 773+35 LT (LT OF RR); S=1.08%; L=28';
 Beg. El.=296.19; End. El.=295.89; DDE=16 CY
 -L- STA. 774+00 LT; S=5.24%; L=63';
 Beg. El.=299.80; End. El.=296.50; DDE=35 CY
 -L- STA. 812+30 RT; S=0.00%; L=68';
 Beg. El.=280.58; End. El.=280.58; DDE=120 CY



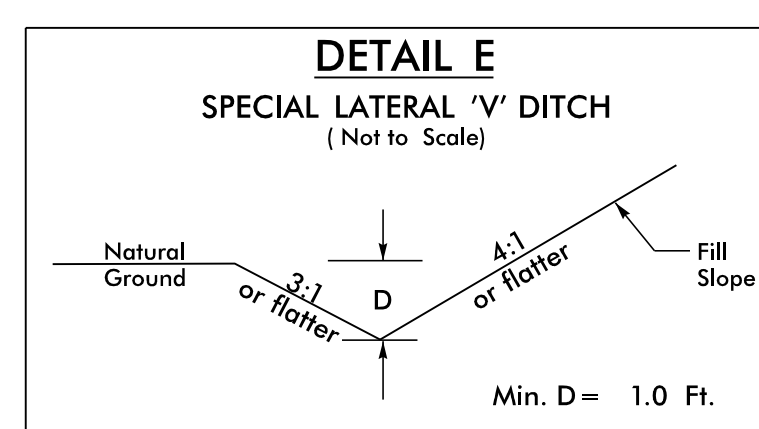
-L- FROM STA. 499+34 TO STA. 501+00 LT
 -L- FROM STA. 717+00 TO STA. 718+50 LT
 -L- FROM STA. 810+49 TO STA. 812+30 RT



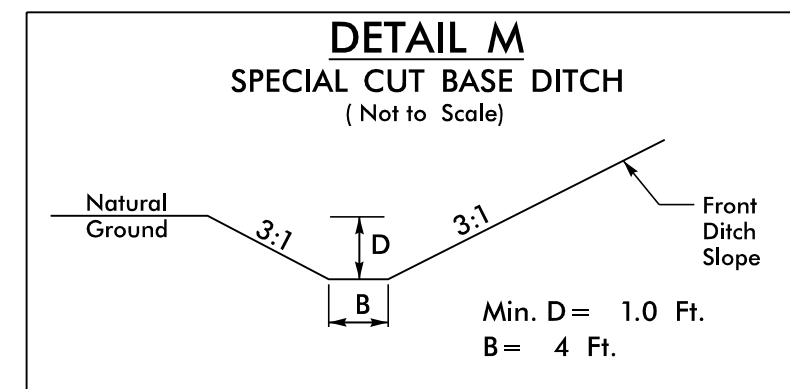
-L- FROM STA. 391+00 TO STA. 393+00 RT
 -L- FROM STA. 505+50 TO STA. 506+00 RT



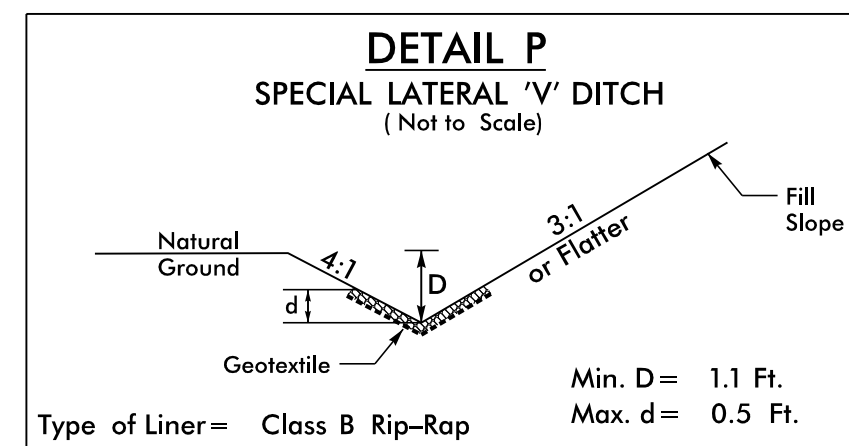
Type of Liner = CL B Rip-Rap
 -L- FROM STA. 499+00 TO STA. 499+37 RT
 -L- FROM STA. 731+50 TO STA. 733+27 RT



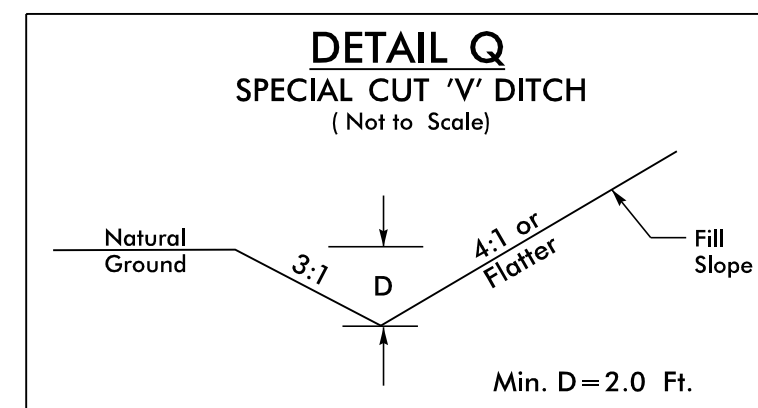
-L- FROM STA. 179+00 TO STA. 185+00 LT
 -L- FROM STA. 189+00 TO STA. 194+00 LT
 -L- FROM STA. 226+00 TO STA. 230+00 RT
 -L- FROM STA. 368+00 TO STA. 371+00 LT
 -L- FROM STA. 379+50 TO STA. 380+50 RT
 -L- FROM STA. 387+50 TO STA. 389+50 RT
 -L- FROM STA. 426+00 TO STA. 428+50 RT
 -L- FROM STA. 430+50 TO STA. 432+50 LT
 -L- FROM STA. 477+75 TO STA. 479+00 LT
 -L- FROM STA. 480+50 TO STA. 483+00 LT
 -L- FROM STA. 497+50 TO STA. 498+35 LT
 -L- FROM STA. 498+00 TO STA. 499+37 RT
 -L- FROM STA. 507+50 TO STA. 511+50 LT
 -L- FROM STA. 524+50 TO STA. 526+91 RT
 -L- FROM STA. 568+50 TO STA. 569+00 LT
 -L- FROM STA. 573+50 TO STA. 576+83 LT
 -L- FROM STA. 685+50 TO STA. 686+25 RT
 -L- FROM STA. 698+00 TO STA. 700+50 LT
 -L- FROM STA. 767+50 TO STA. 769+50 RT
 -L- FROM STA. 820+50 TO STA. 822+49 RT
 -L- FROM STA. 822+96 TO STA. 823+30 LT
 -L- FROM STA. 832+50 TO STA. 834+00 LT
 -DR3- FROM STA. 12+50 TO STA. 13+15 LT
 -DR4- FROM STA. 11+00 TO STA. 12+50 RT
 -Y9A- FROM STA. 32+70 TO STA. 34+00 RT
 -Y9B- FROM STA. 14+00 TO STA. 15+30 LT
 -Y9C- FROM STA. 14+50 TO STA. 15+40 RT
 -Y26- FROM STA. 11+41 TO STA. 12+48 LT



-L- FROM STA. 445+50 TO STA. 447+00 LT
 -L- FROM STA. 592+00 TO STA. 593+50 LT
 -Y24- FROM STA. 12+50 TO STA. 14+75 LT



Type of Liner = Class B Rip-Rap
 -L- FROM STA. 542+00 TO STA. 543+00 RT
 -Y12- FROM STA. 11+07 TO STA. 12+00 RT

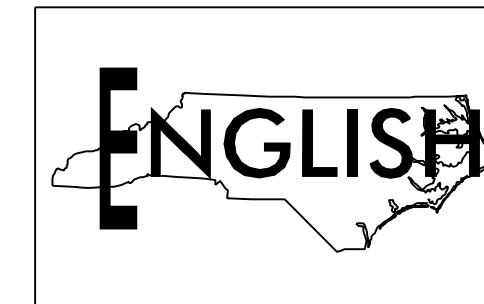


-L- FROM STA. 480+50 TO STA. 481+50 RT
 -L- FROM STA. 489+50 TO STA. 498+00 RT
 -L- FROM STA. 496+00 TO STA. 497+50 LT
 -L- FROM STA. 506+00 TO STA. 507+50 RT
 -L- FROM STA. 787+79 TO STA. 800+30 LT

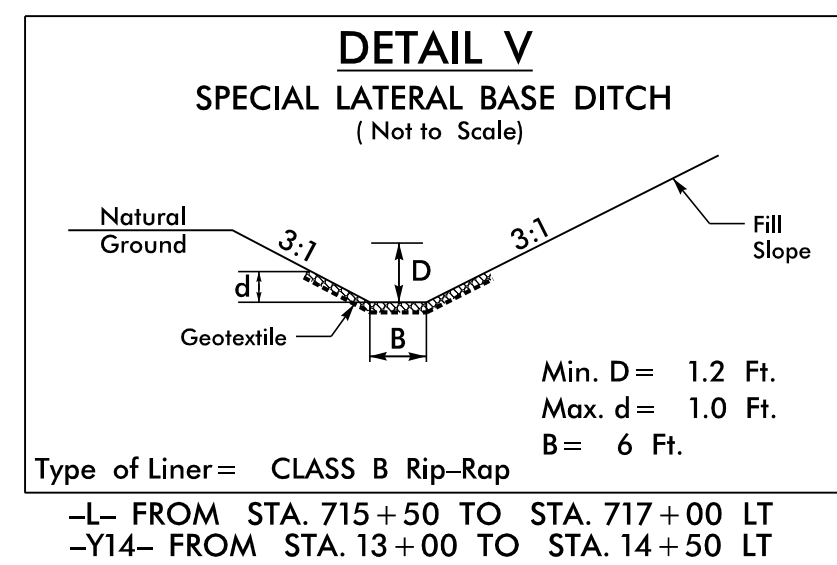
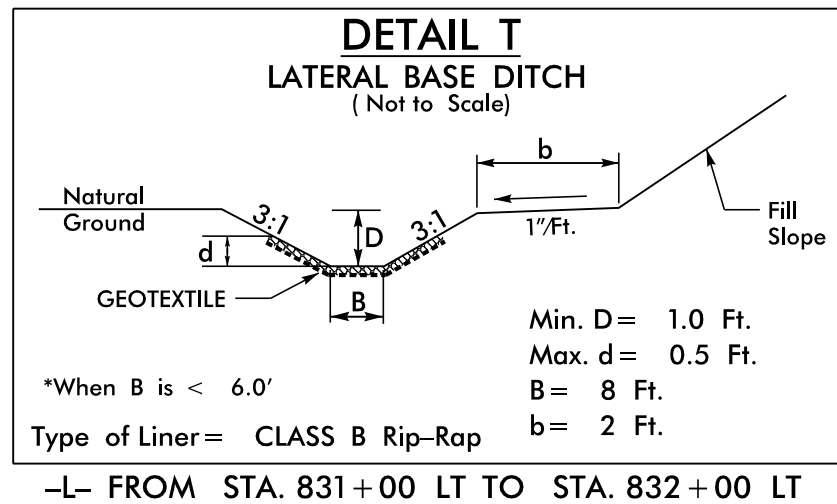
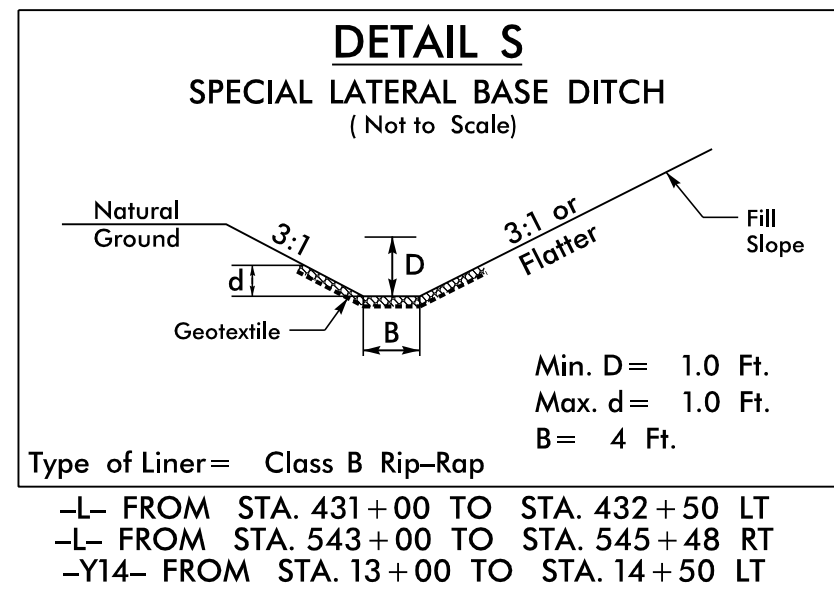
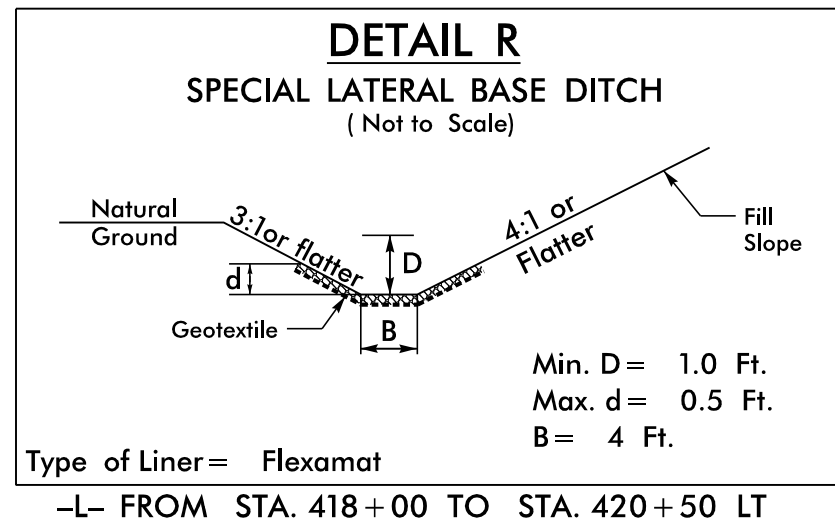
PROJECT REFERENCE NO.	SHEET NO.
R-5709	2D-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 2 OF 60

REVISED 12/20/2023



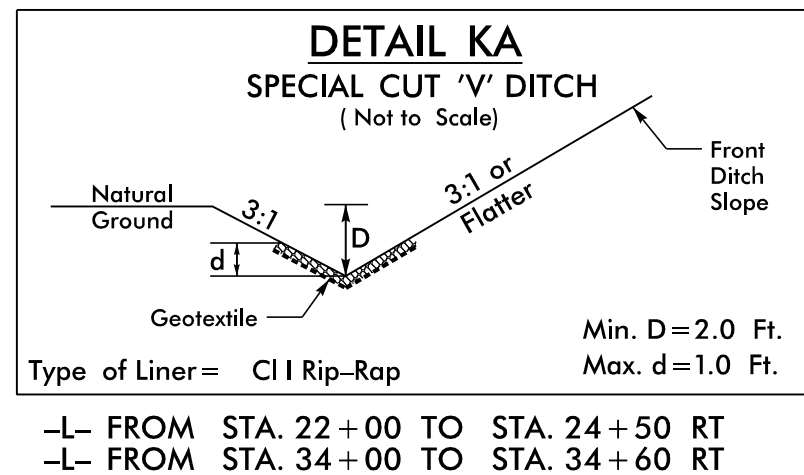
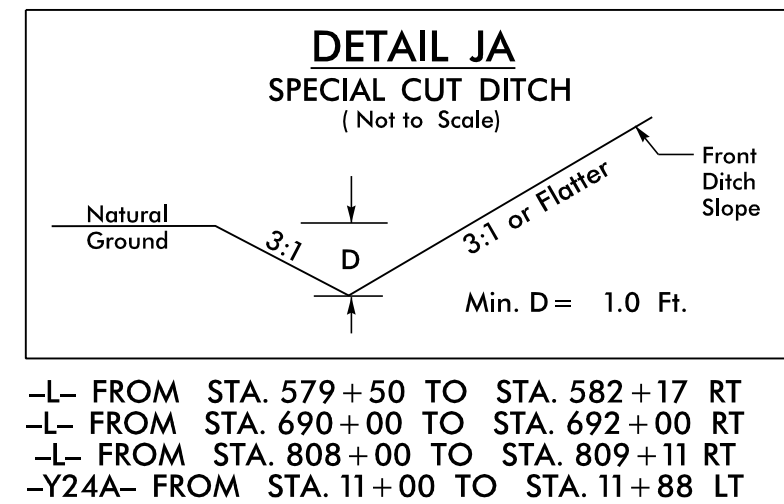
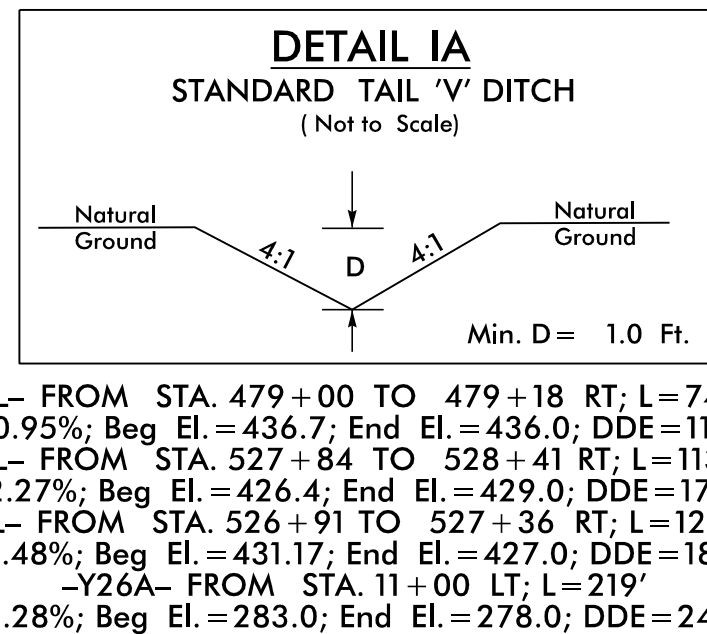
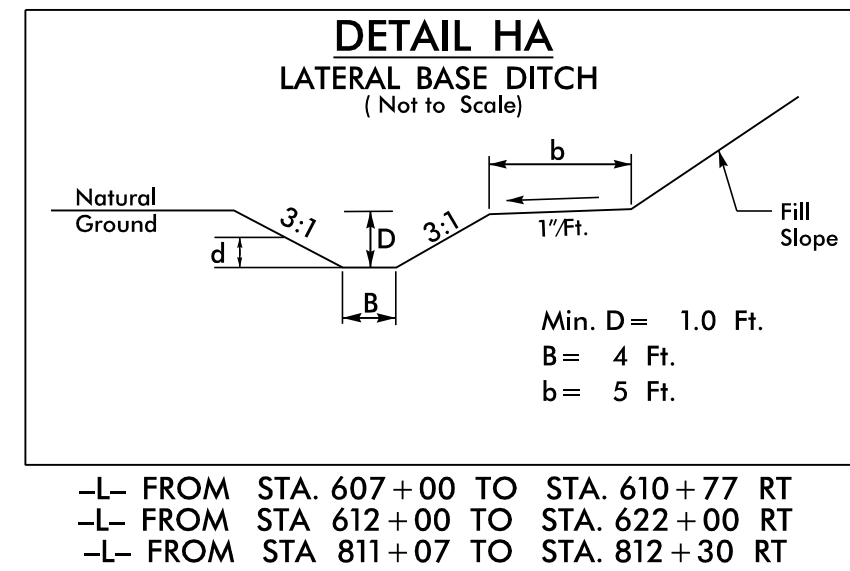
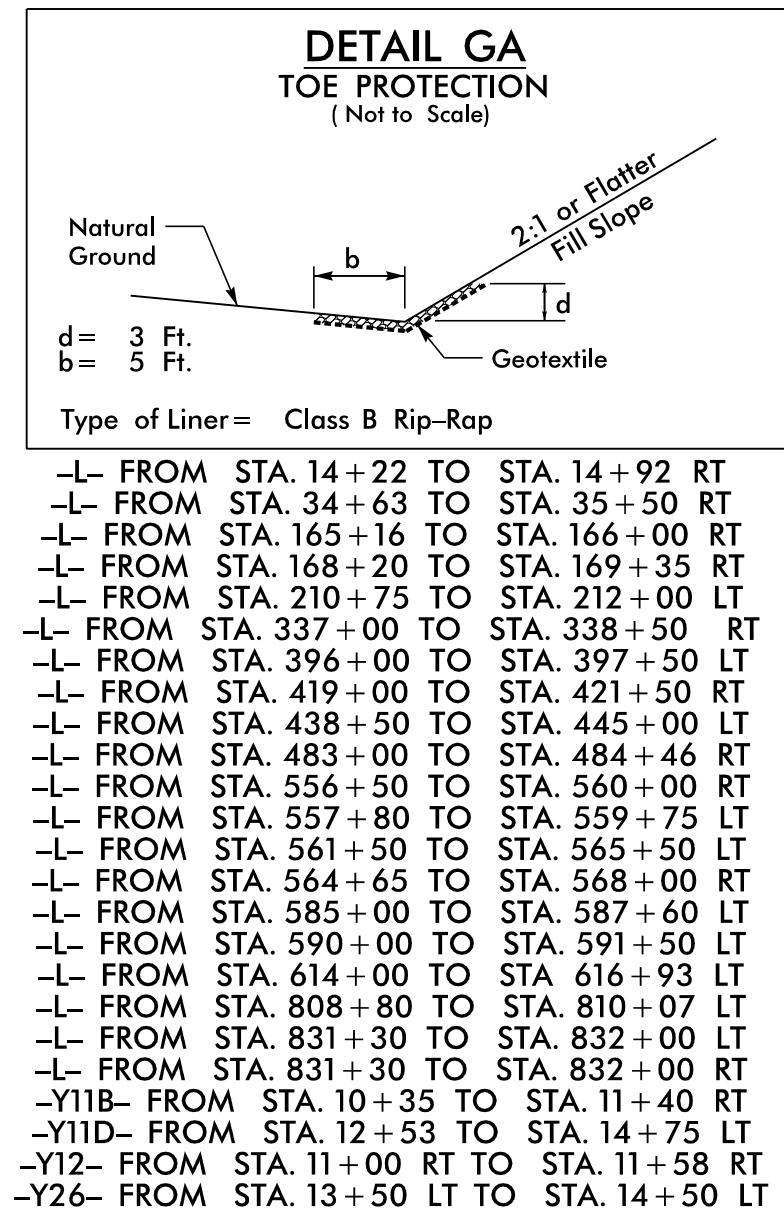
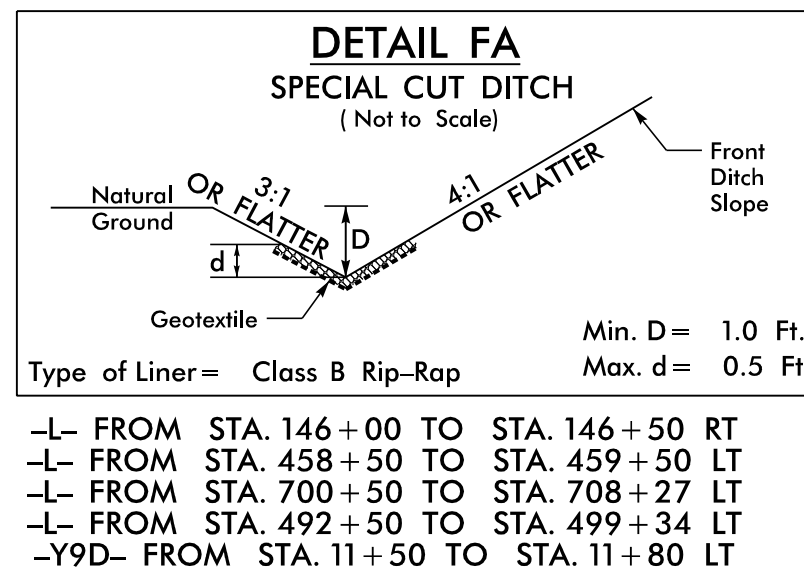
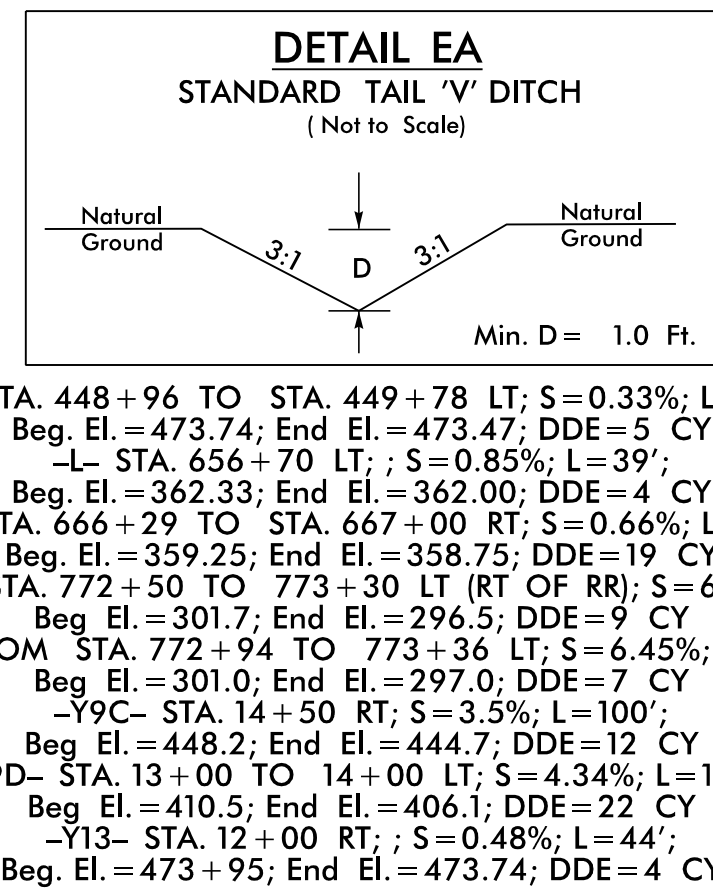
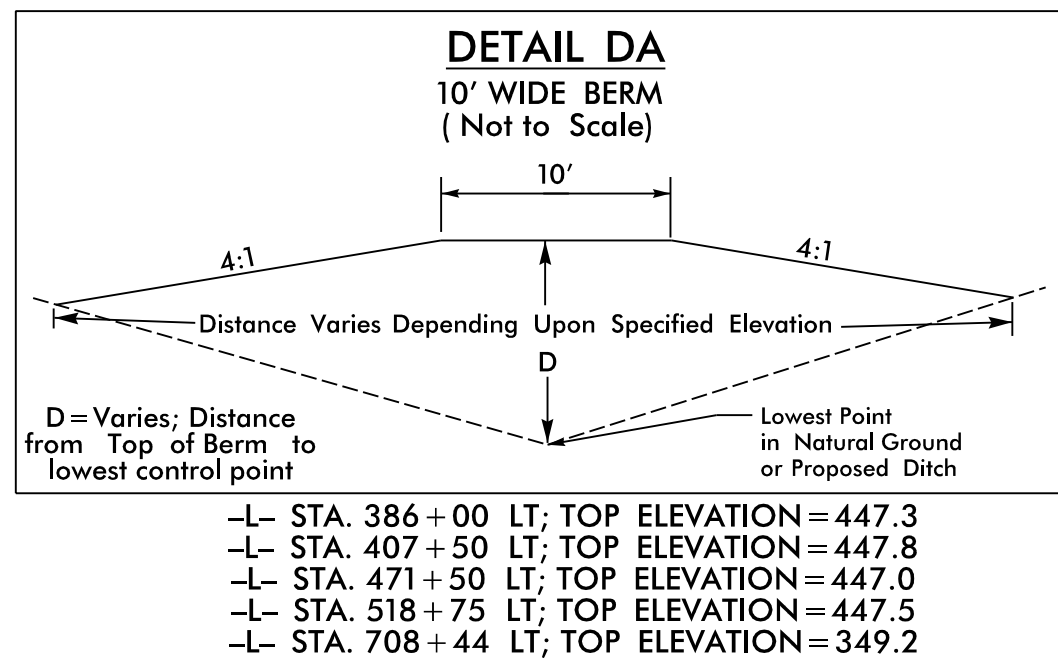
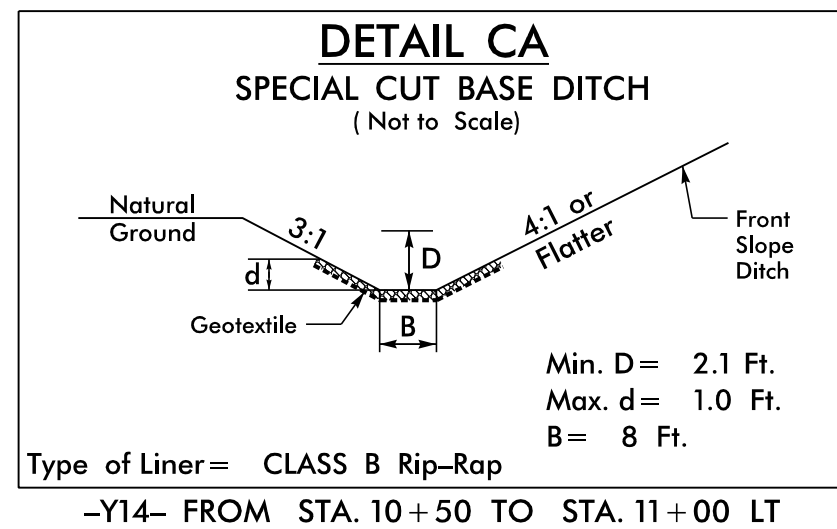
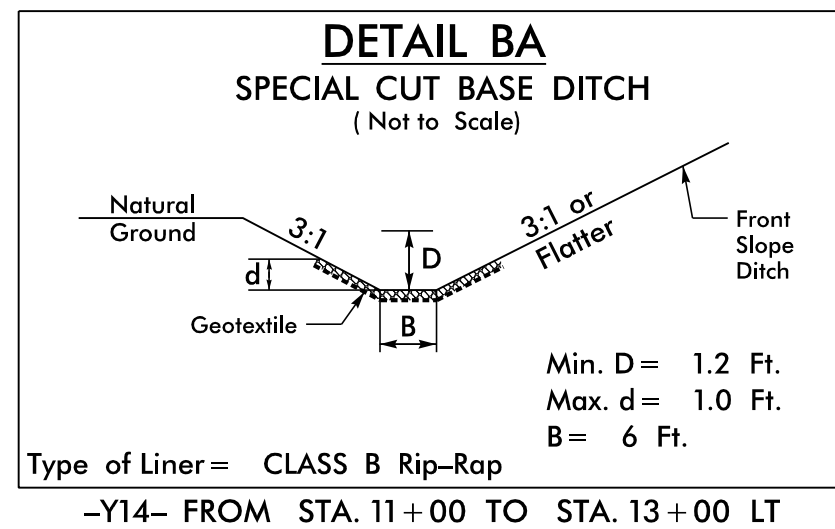
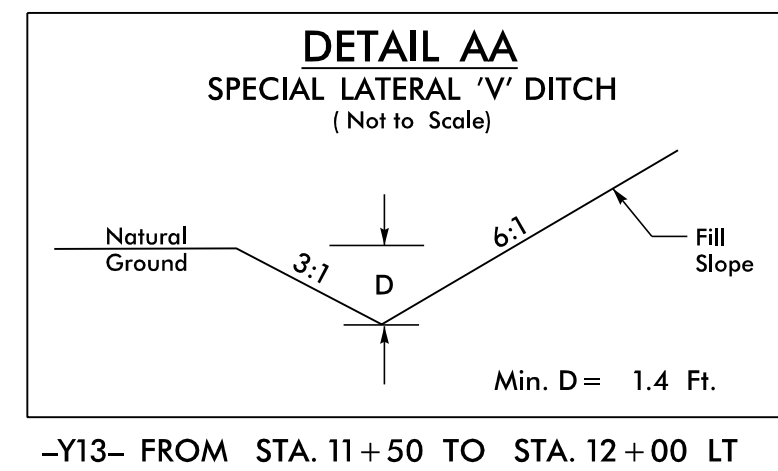
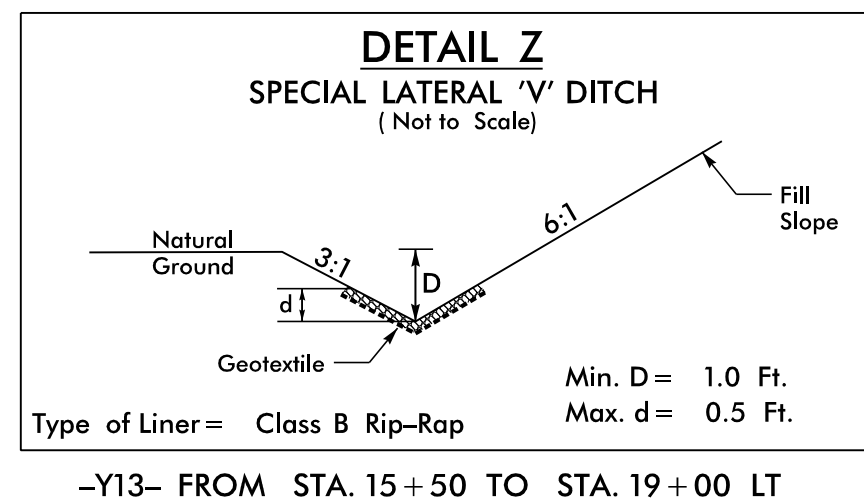
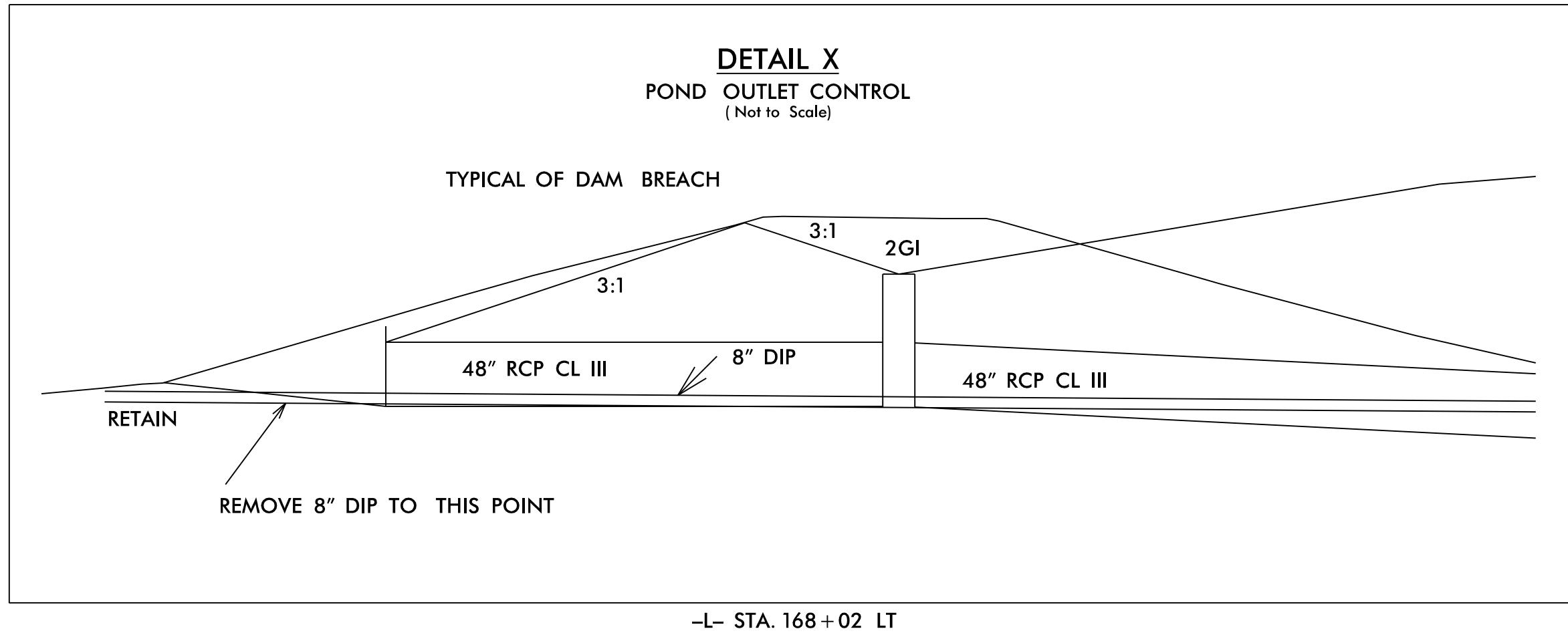
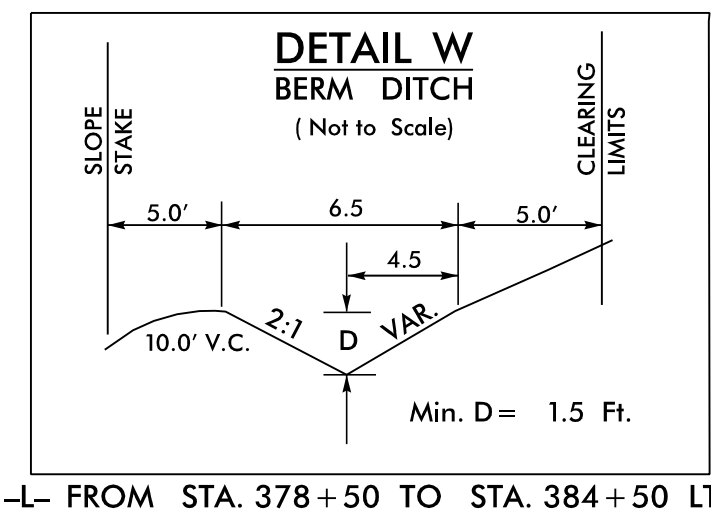
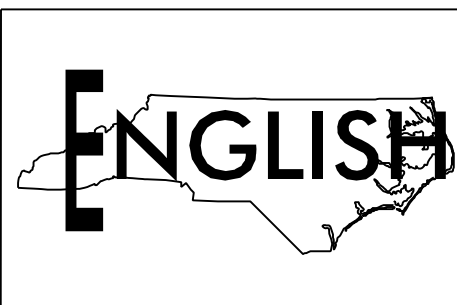
8/17/99



PROJECT REFERENCE NO.		SHEET NO.
R-5709		2D-2
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 3 OF 60

REVISED 12/20/2023



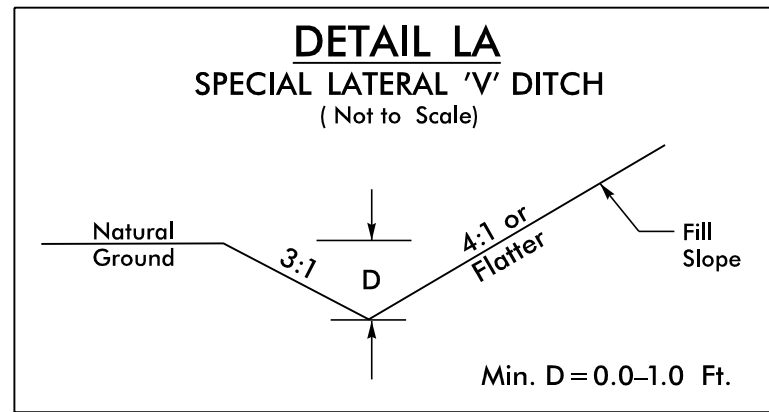
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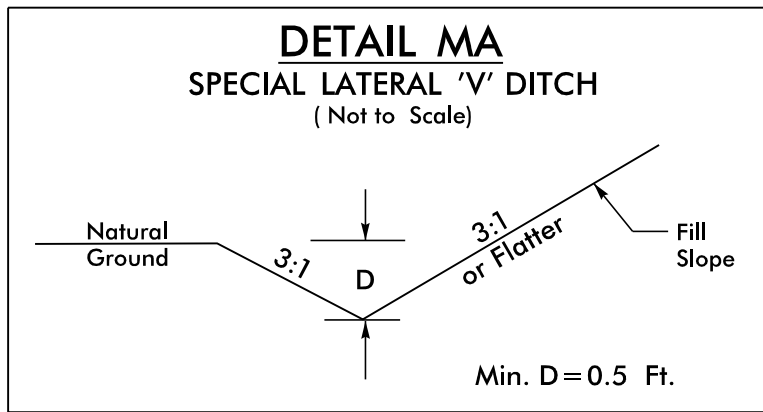
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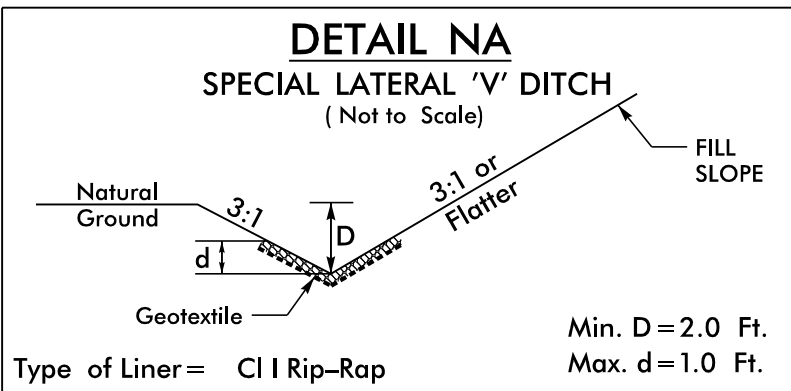
8/17/99



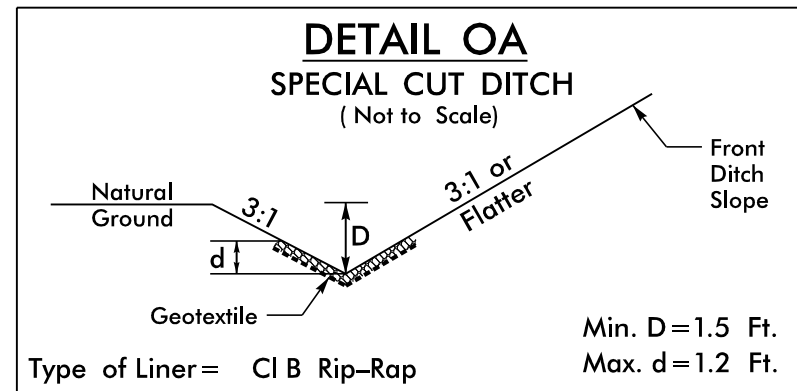
-L- FROM STA. 204+50 TO STA. 205+00 RT
-L- FROM STA. 274+50 TO STA. 275+50 RT
-L- FROM STA. 334+00 TO STA. 334+25 RT



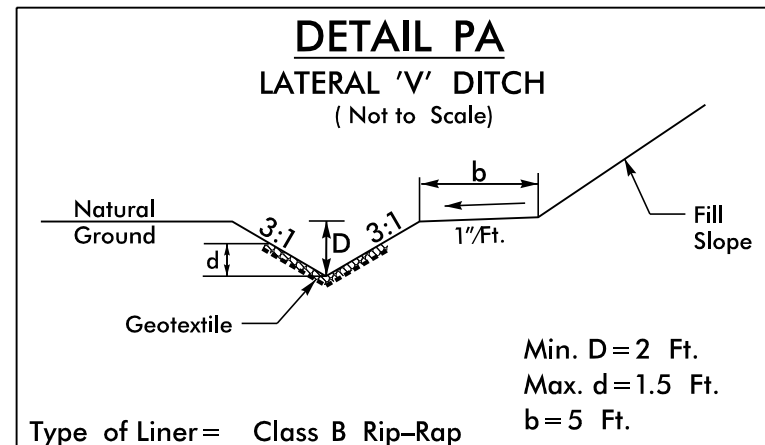
-L- FROM STA. 53+00 TO STA. 56+00 LT
-Y1- FROM STA. 11+00 TO STA. 12+50 RT
-Y2- FROM STA. 19+25 TO STA. 20+50 RT
-Y3- FROM STA. 18+20 TO STA. 18+90 RT
-Y4- FROM STA. 12+00 TO STA. 14+50 RT
-Y4A- FROM STA. 11+00 TO STA. 11+85 RT
-Y4B- FROM STA. 10+50 TO STA. 12+50 LT
-Y6- FROM STA. 13+00 TO STA. 14+50 LT
-Y6A- FROM STA. 11+22 TO STA. 11+75 LT
-Y9F- FROM STA. 20+50 TO STA. 21+00 LT



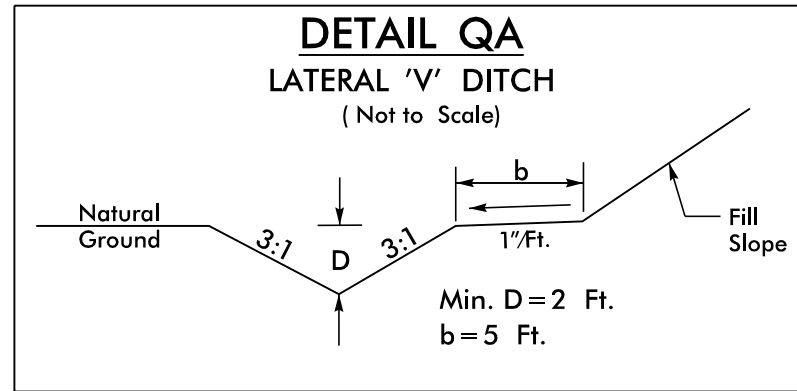
Type of Liner = CI I Rip-Rap
-L- FROM STA. 38+00 TO STA. 39+40 LT
-Y5A- FROM STA. 10+66 TO STA. 12+00 RT



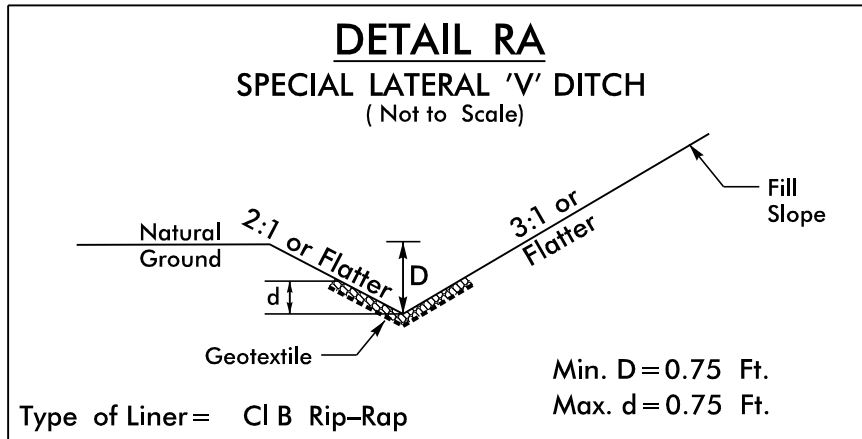
Type of Liner = CI B Rip-Rap
-L- FROM STA. 489+50 TO STA. 498+00 RT



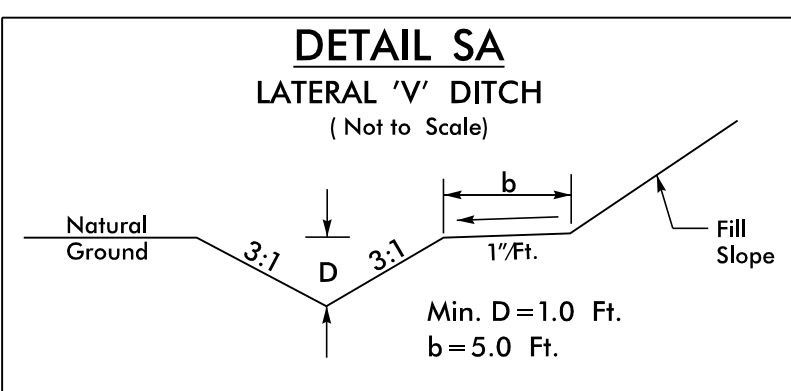
Type of Liner = Class B Rip-Rap
-Y9E- FROM STA. 11+00 TO STA. 12+00 RT



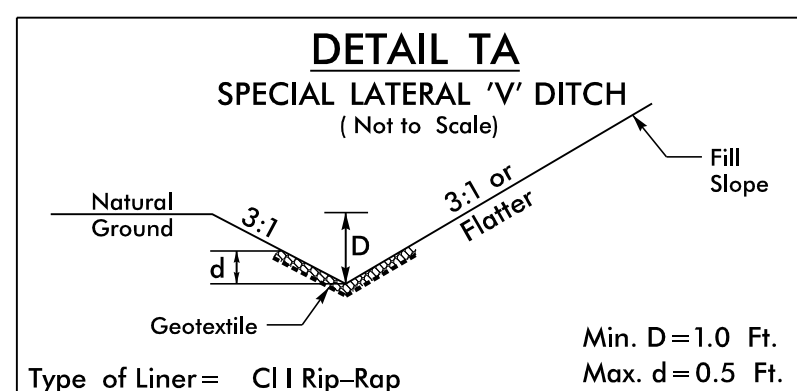
-Y9E- FROM STA. 12+00 TO STA. 13+00 RT
-L- FROM STA. 263+00 TO STA. 264+30 LT
-L- FROM STA. 264+50 TO STA. 266+00 LT



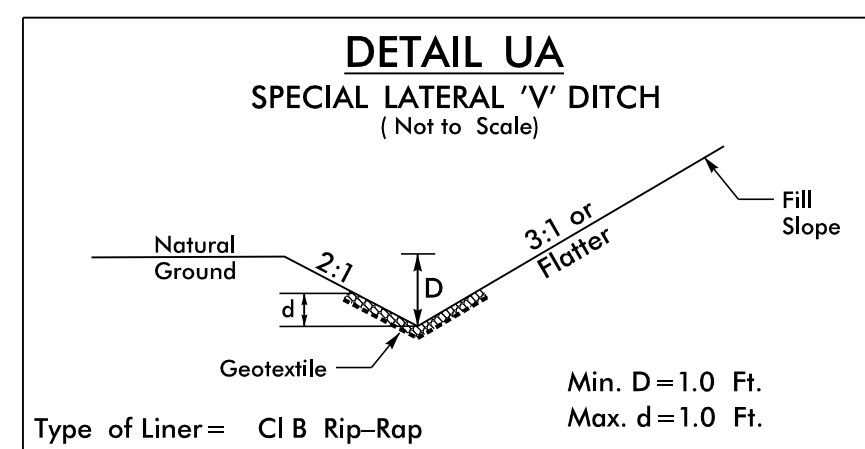
Type of Liner = CI B Rip-Rap
-L- FROM STA. 49+00 TO STA. 51+76.69 LT
-L- FROM STA. 60+32.75 TO STA. 60+75 RT
-Y6- FROM STA. 13+00 TO STA. 15+04 RT



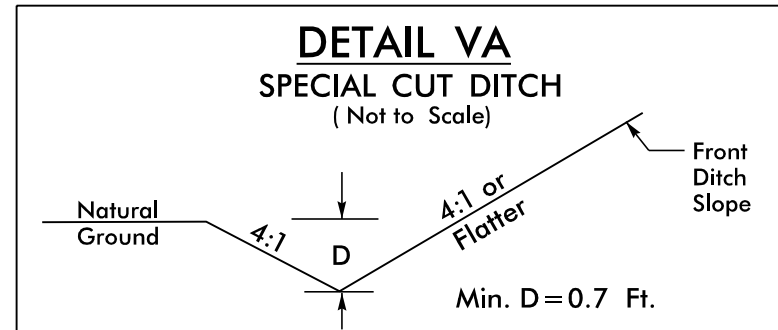
-L- FROM STA. 73+50 TO STA. 74+50 RT
-L- FROM STA. 243+70 TO STA. 244+80 LT
-L- FROM STA. 253+00 TO STA. 255+10 RT
-L- FROM STA. 254+85 TO STA. 260+30 LT
-Y9A- FROM STA. 11+71 TO STA. 12+85 RT



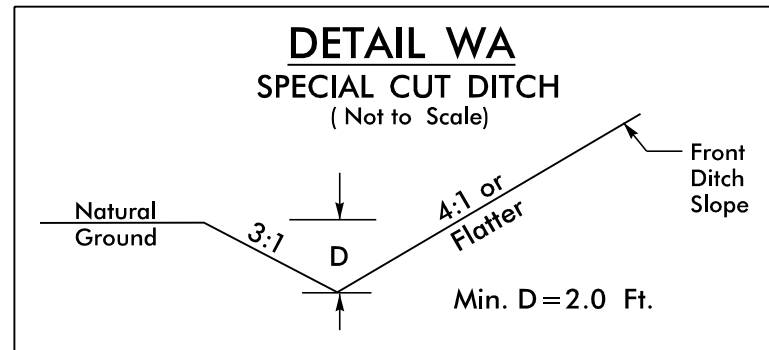
-Y2A- FROM STA. 14+50 TO STA. 14+93.84 RT
-Y11- FROM STA. 11+08 TO STA. 11+50 RT



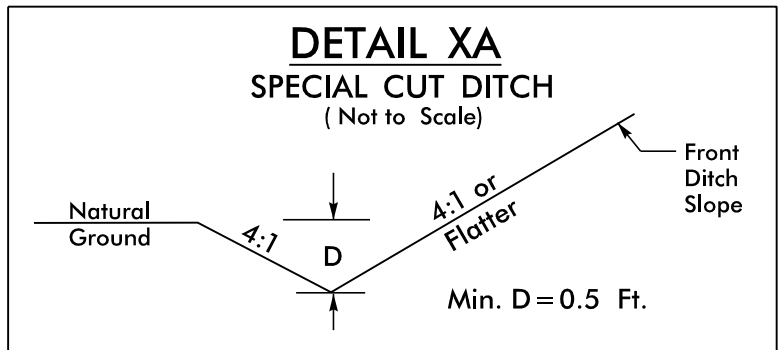
Type of Liner = CI B Rip-Rap
-L- FROM STA. 40+35 TO STA. 44+90 LT



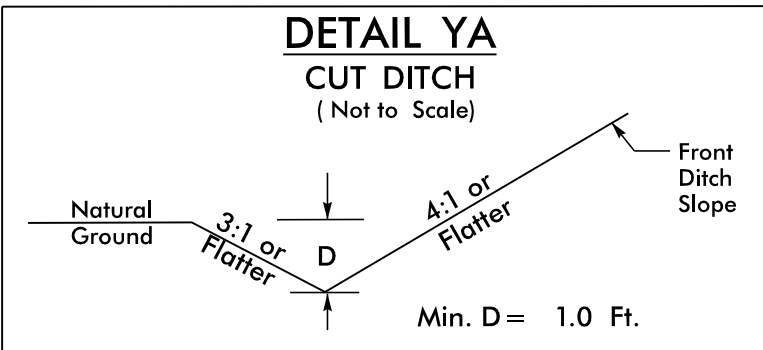
-L- FROM STA. 120+50 TO STA. 121+50 RT
-L- FROM STA. 127+50 TO STA. 128+25 RT



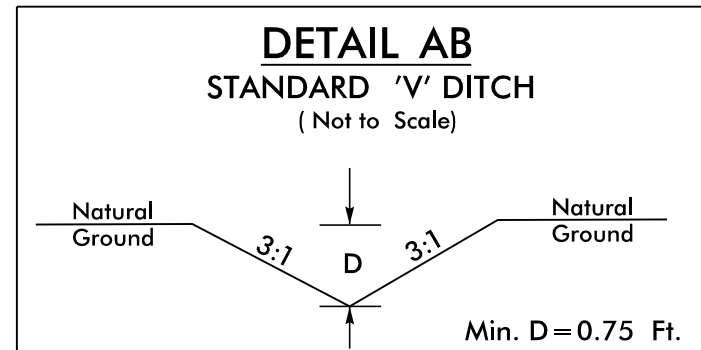
-L- FROM STA. 134+20 TO STA. 135+75 LT



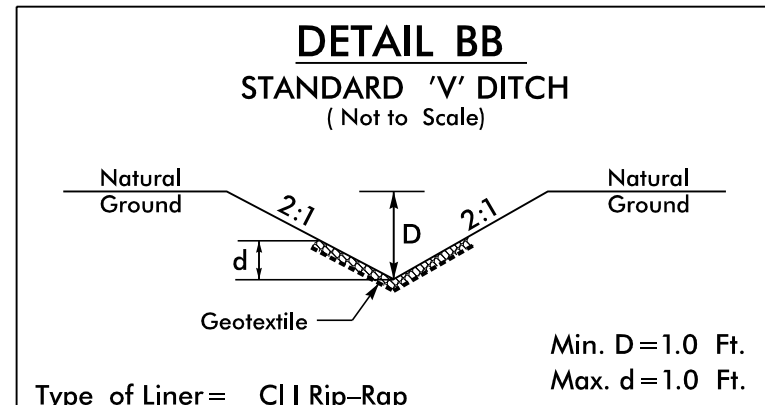
-L- FROM STA. 170+20 TO STA. 172+00 RT



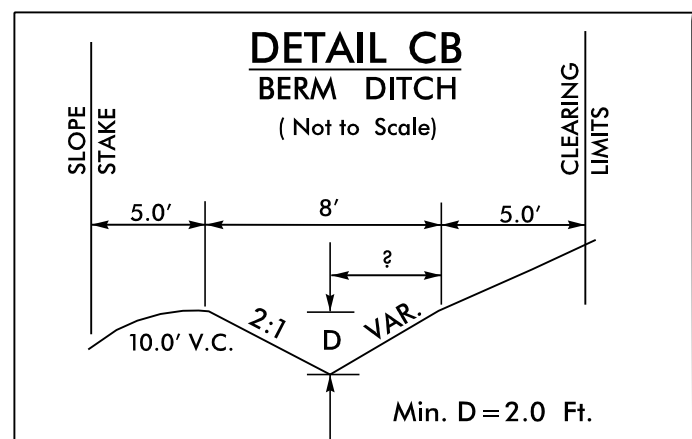
-L- FROM STA. 146+50 TO STA. 151+00 RT



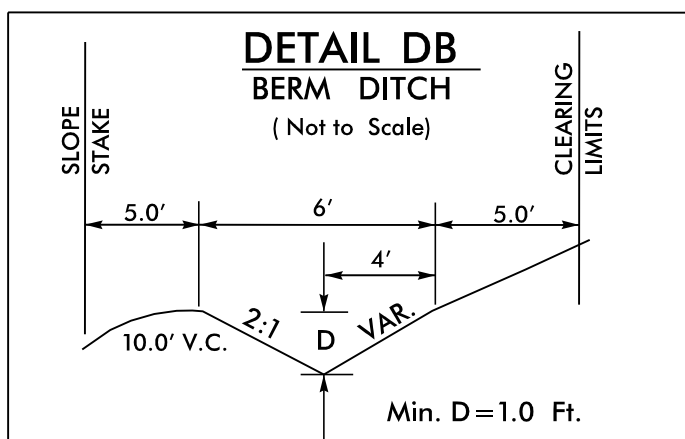
-Y9F- FROM STA. 20+00 TO STA. 20+50 LT; L=50'
S=1.75%; Beg El.=431.8; End El.=430.9; DDE=6 CY



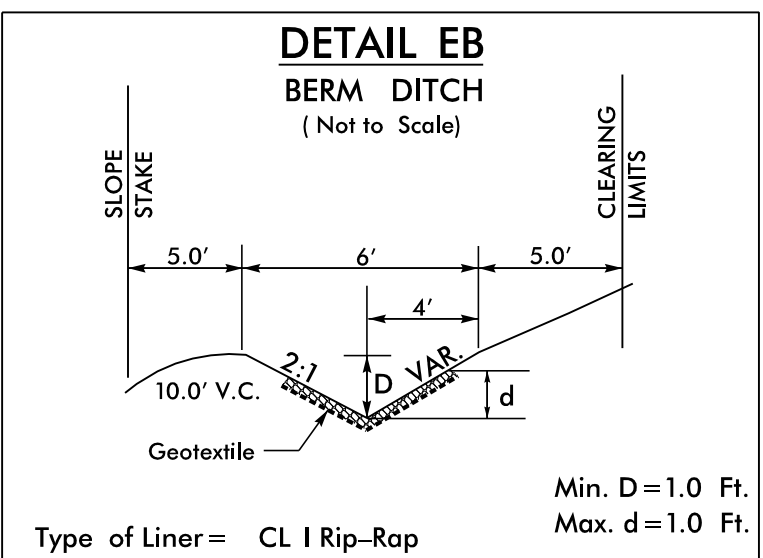
-L- FROM STA. 45+50 TO STA. 45+79 LT
-L- FROM STA. 686+92 TO STA. 687+42 RT; S=5.00%; L=50';
Beg El.=343.60 TO End El.=341.08; DDE=6 CY



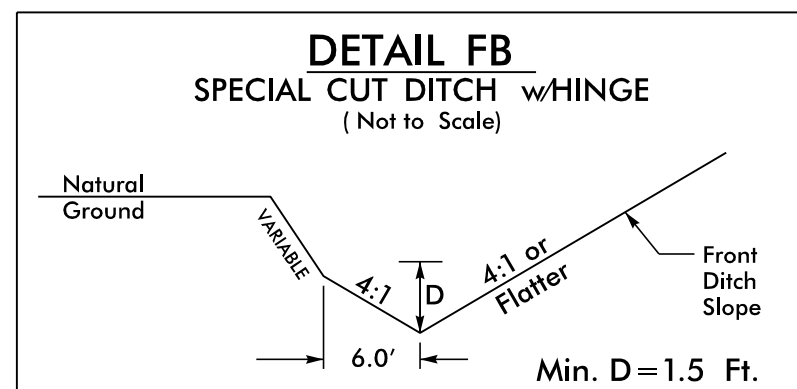
-L- FROM STA. 156+50 TO STA. 157+50 LT



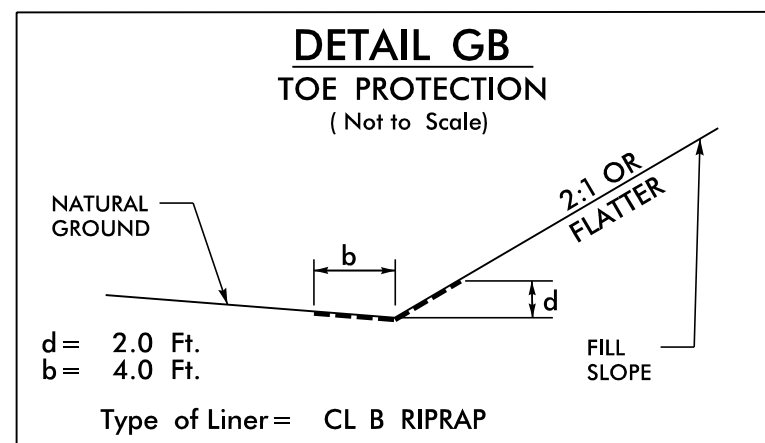
-L- FROM STA. 27+00 TO STA. 30+00 RT
-L- FROM STA. 32+00 TO STA. 33+00 RT
-L- FROM STA. 157+50 TO STA. 160+50 LT
-L- FROM STA. 161+25 TO STA. 163+50 LT



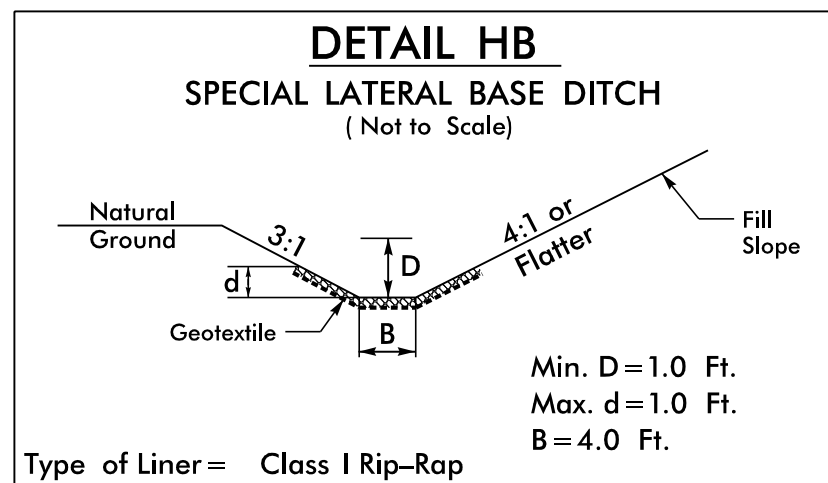
Type of Liner = CL I Rip-Rap
-L- FROM STA. 24+50 TO STA. 27+00 RT
-L- FROM STA. 33+00 TO STA. 34+00 RT



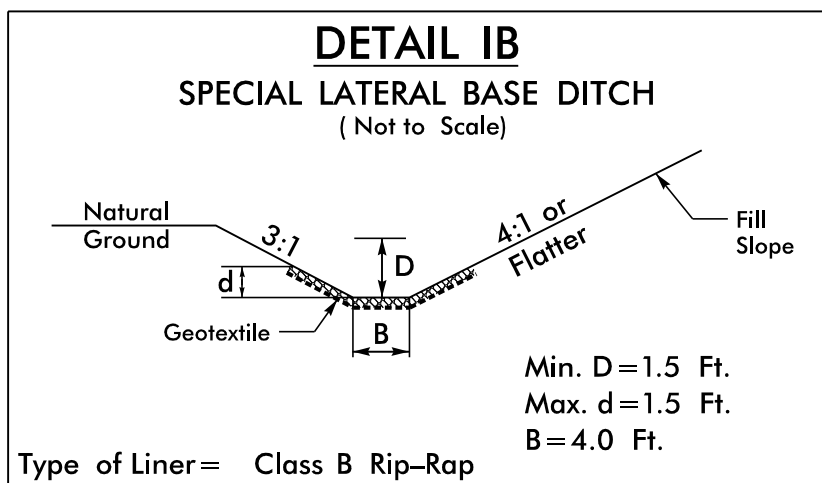
-L- FROM STA. 108+80 TO STA. 112+10 LT
-L- FROM STA. 128+18 TO STA. 131+50 LT
-L- FROM STA. 147+25 TO STA. 148+50 LT



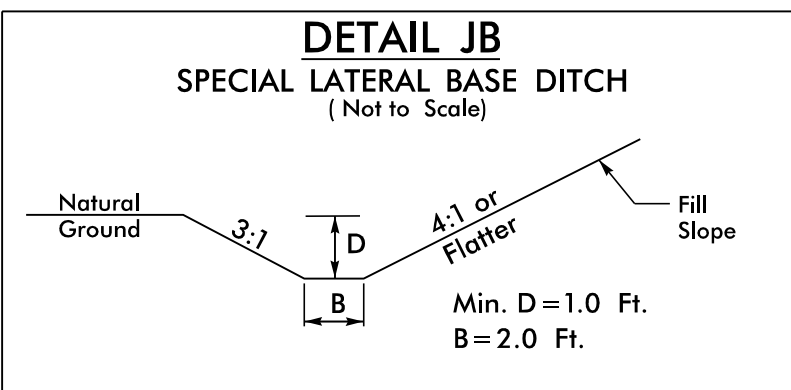
Type of Liner = CL B RIPRAP
-L- FROM STA. 35+45 TO STA. 37+60 LT



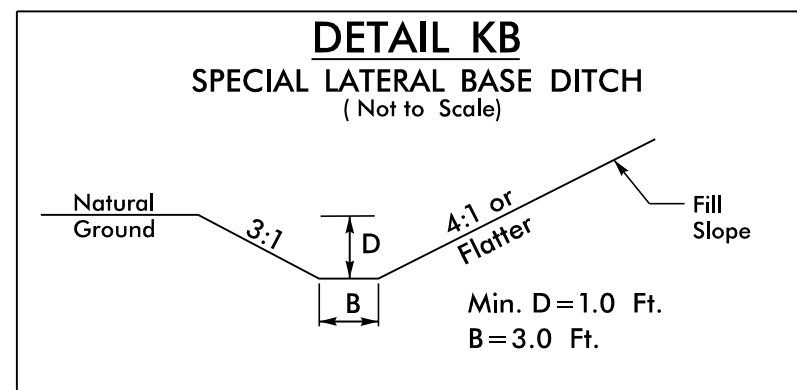
Type of Liner = Class I Rip-Rap
-L- FROM STA. 78+50 TO STA. 79+50 RT
-L- FROM STA. 201+00 TO STA. 201+80 LT



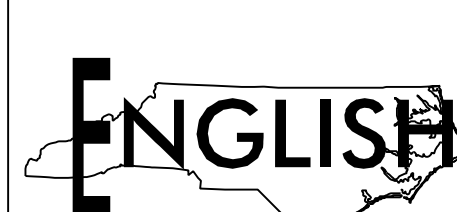
Type of Liner = Class B Rip-Rap
-L- FROM STA. 244+60 TO STA. 244+80 RT
-DR4- FROM STA. 12+50 TO STA. 13+00 RT



-L- FROM STA. 79+50 TO STA. 81+00 RT
-L- FROM STA. 199+50 TO STA. 201+00 LT
-L- FROM STA. 237+50 TO STA. 238+05 RT
-Y9B- FROM STA. 18+50 TO STA. 22+75 RT



-Y9A- FROM STA. 14+15 TO STA. 21+50 RT



PERMIT DRAWING
SHEET 4 OF 60

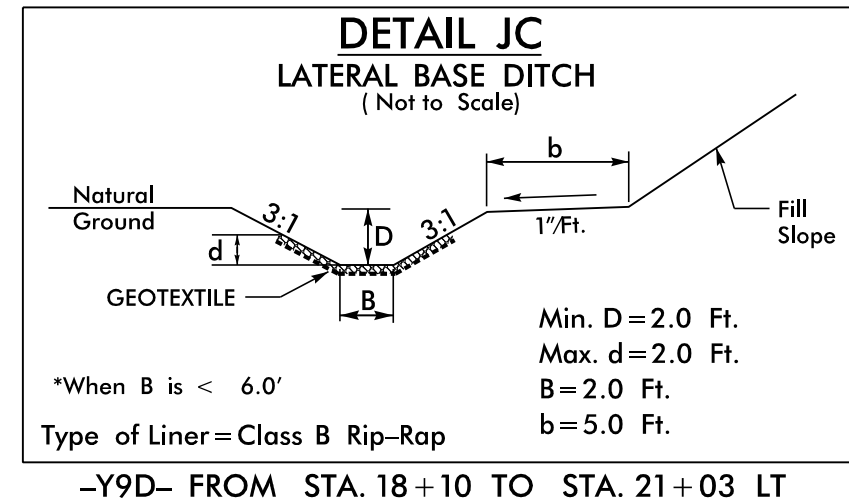
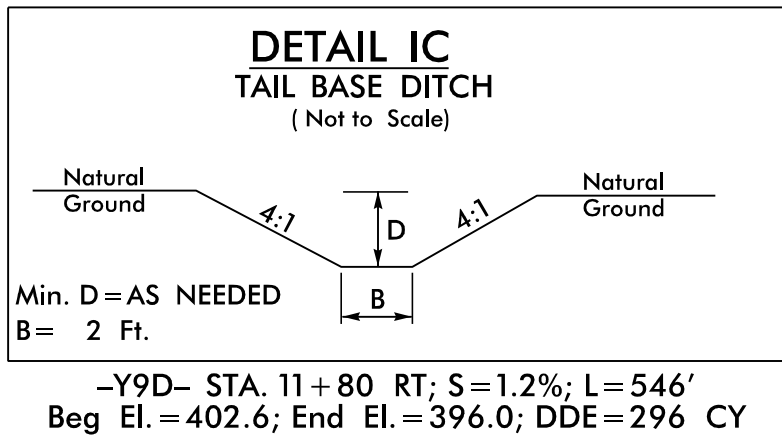
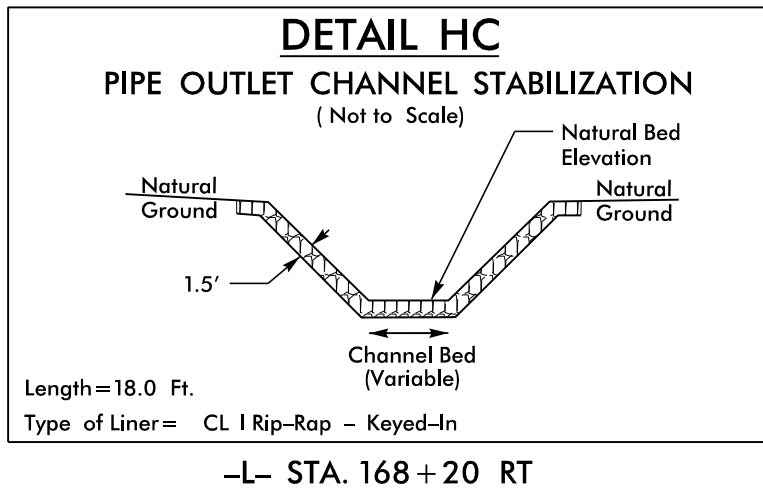
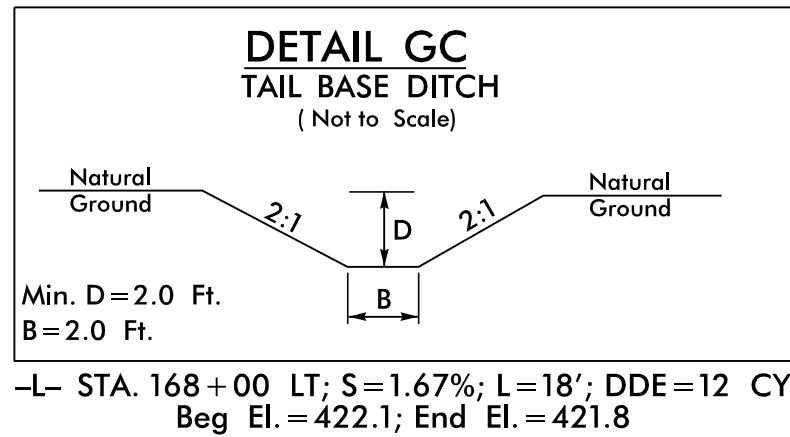
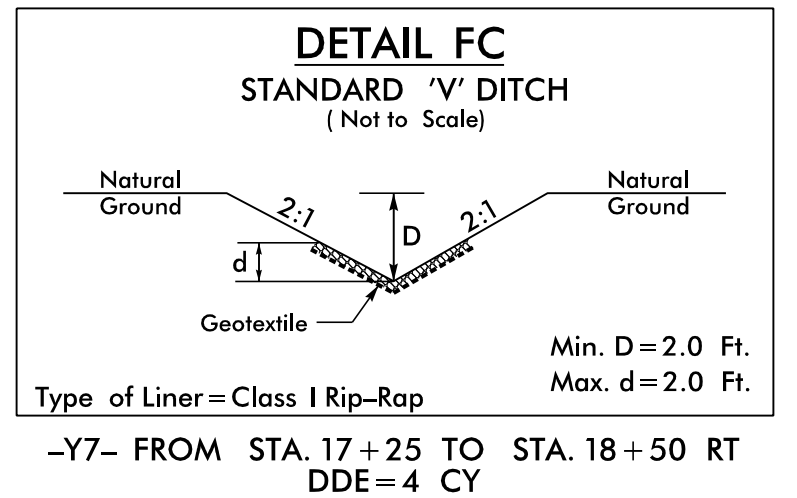
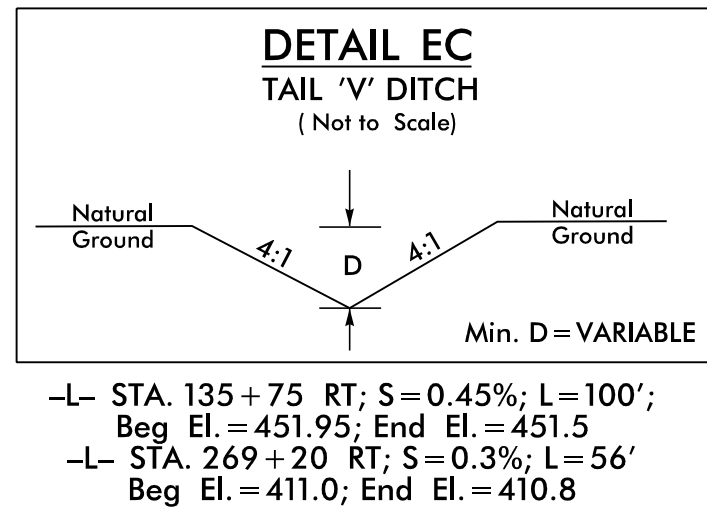
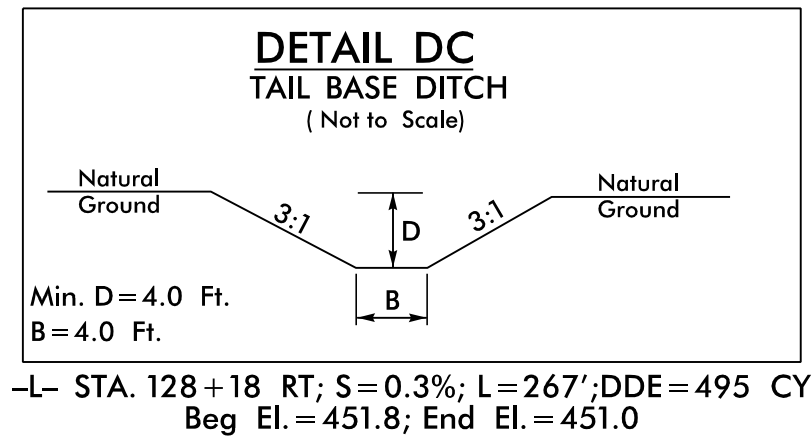
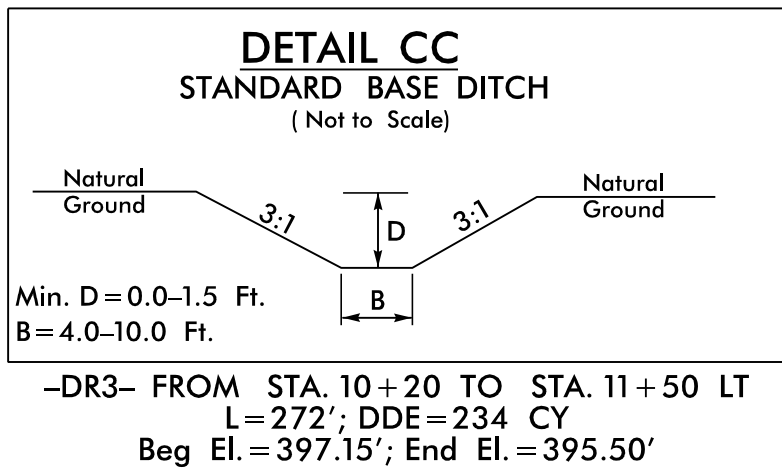
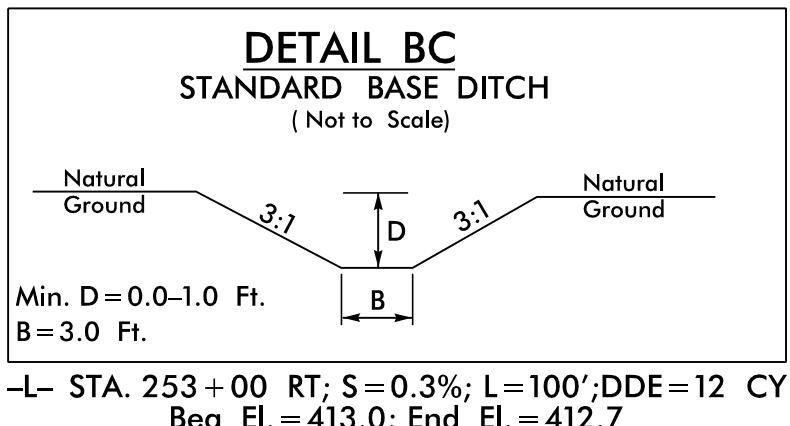
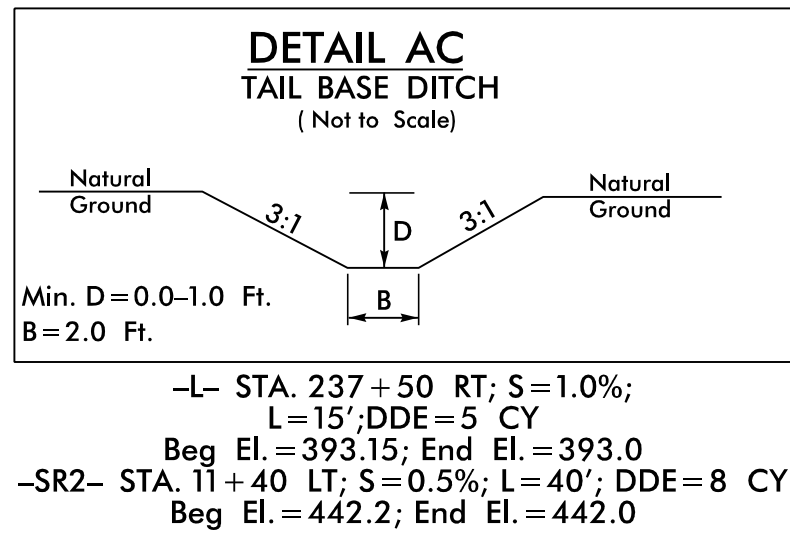
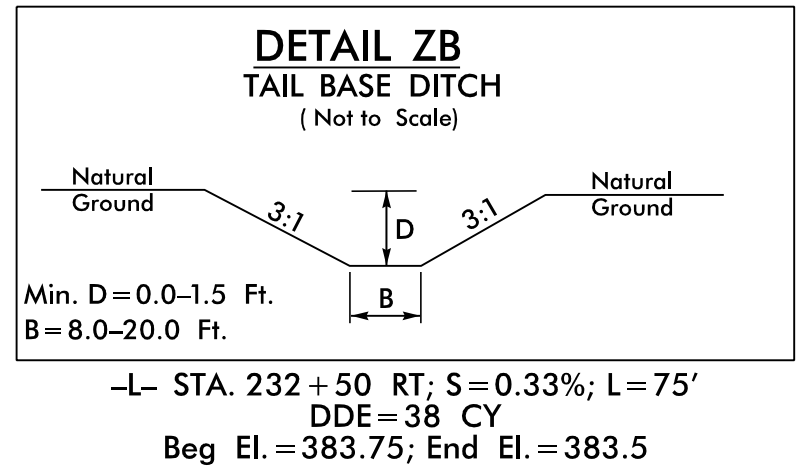
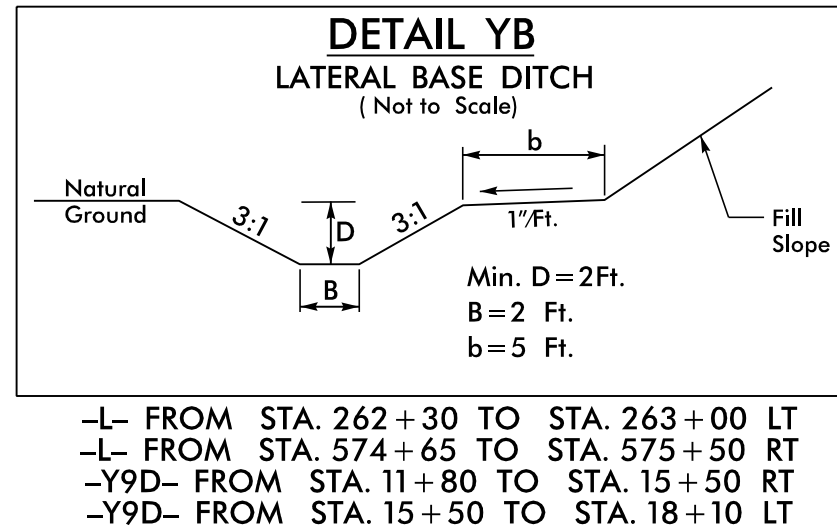
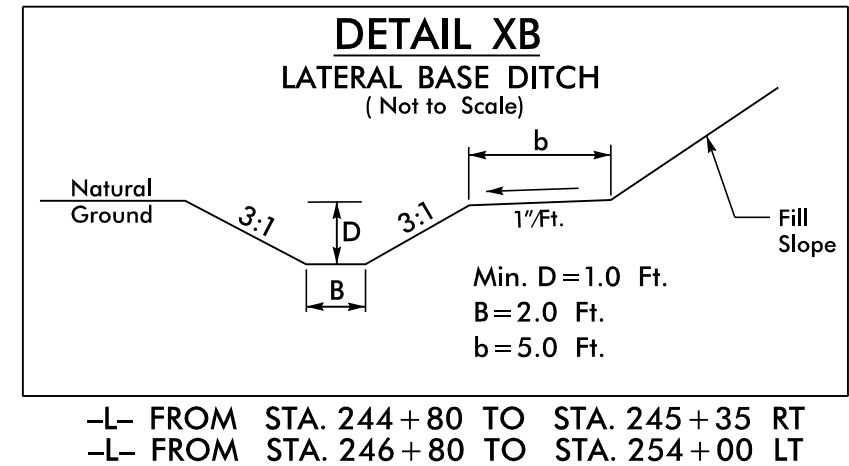
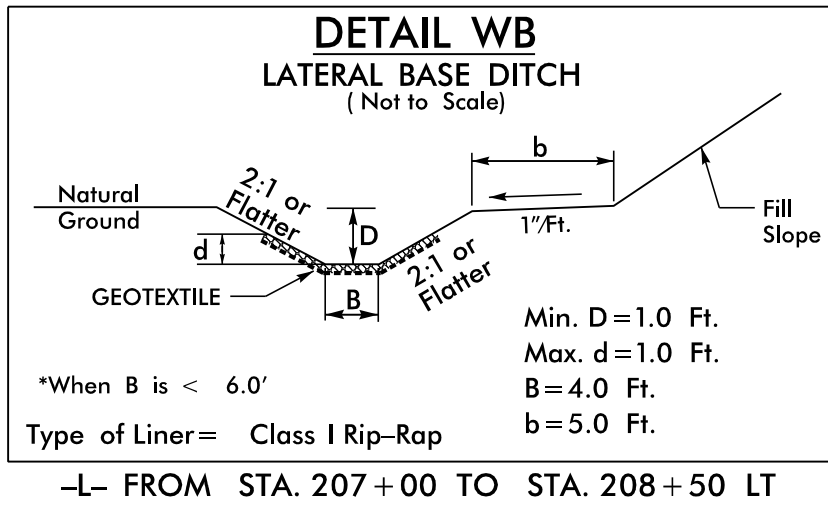
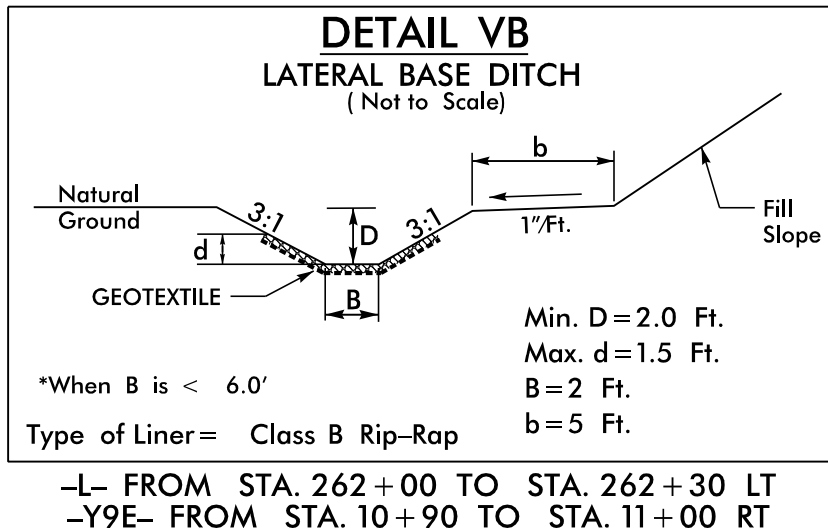
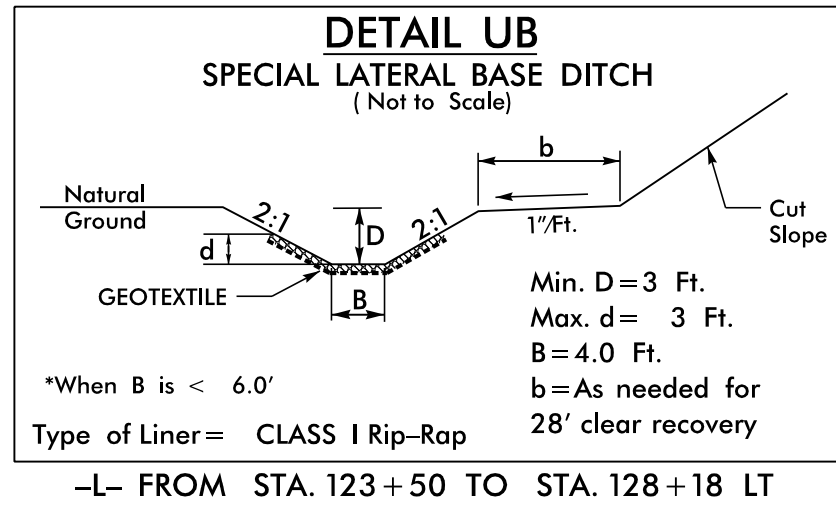
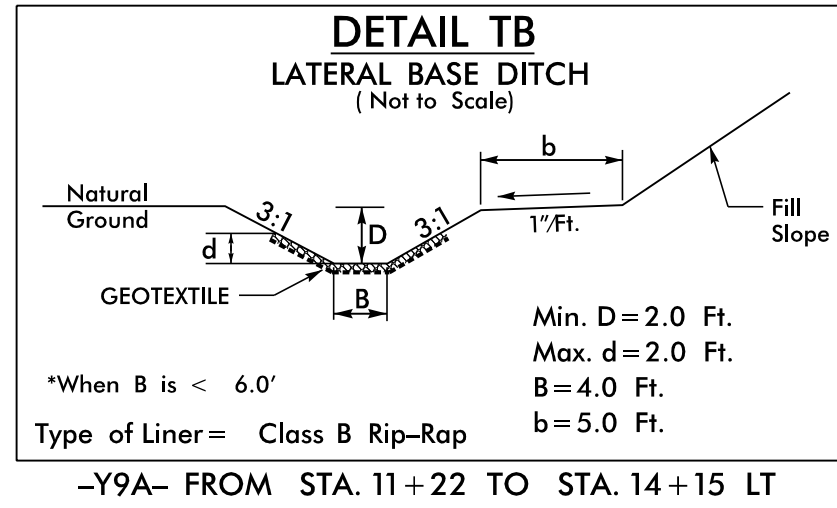
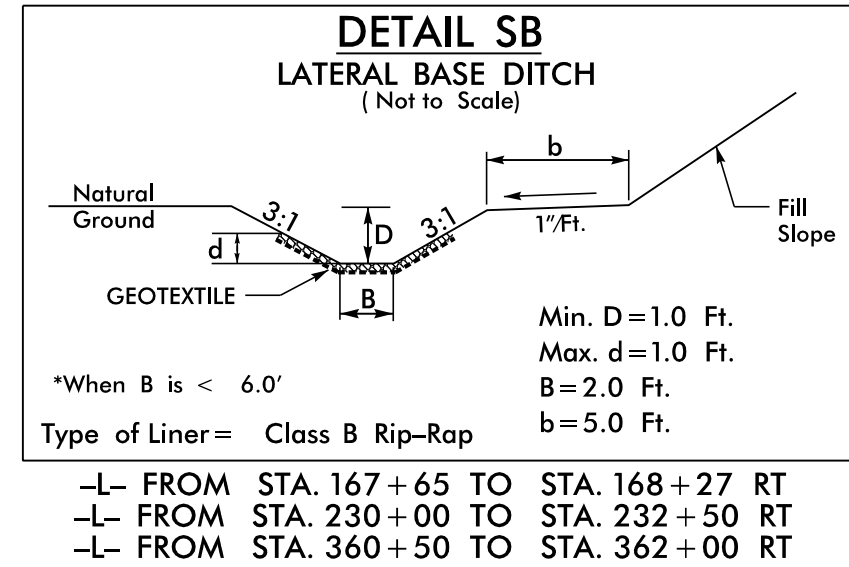
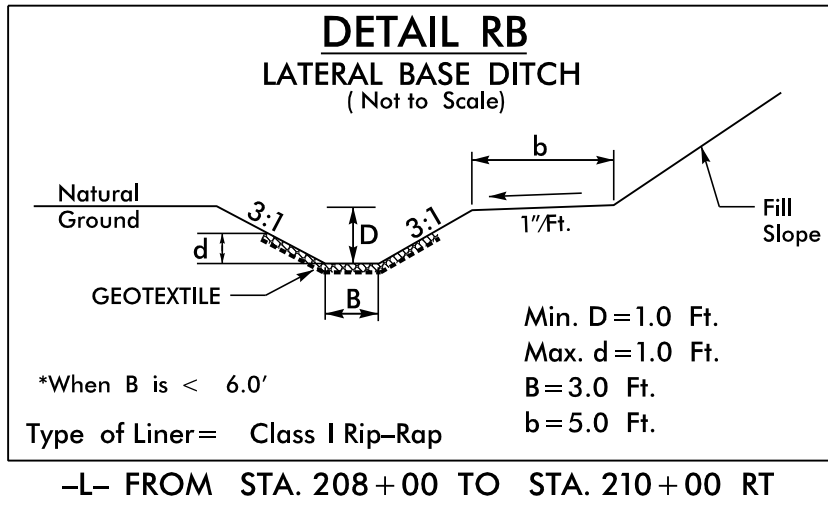
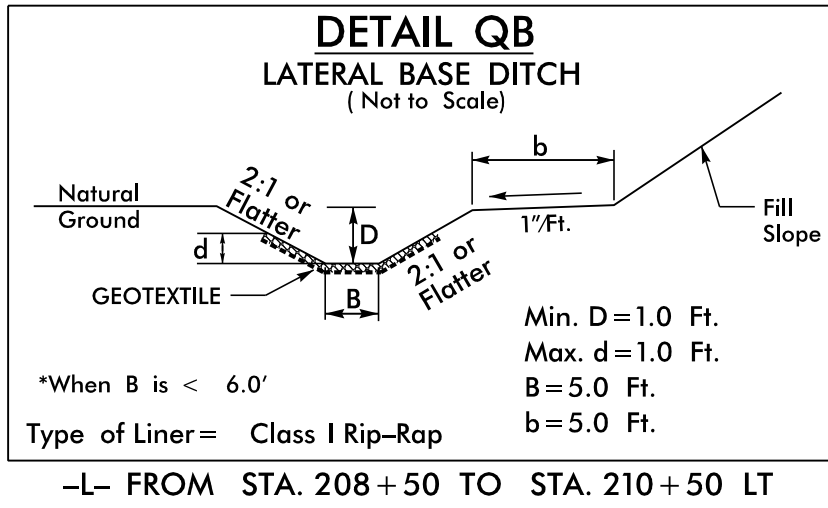
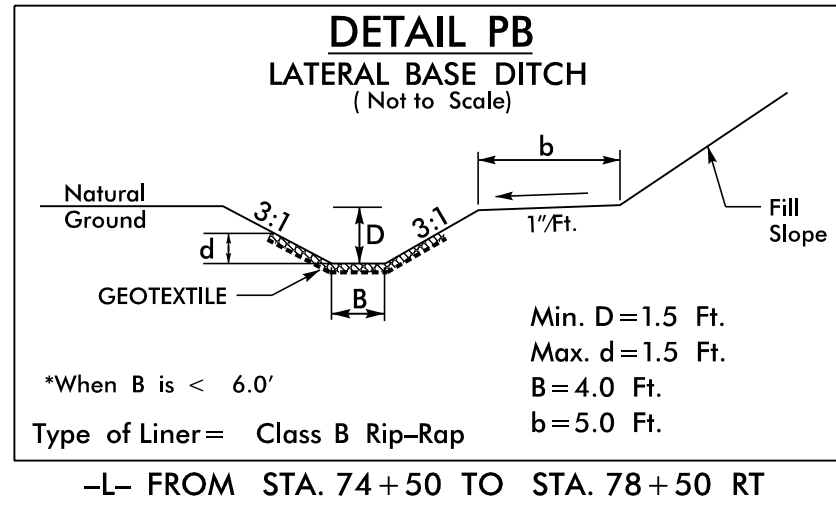
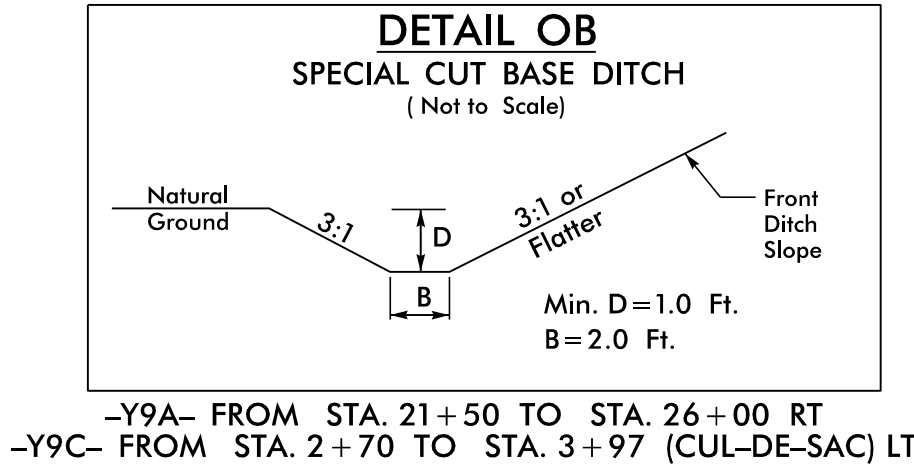
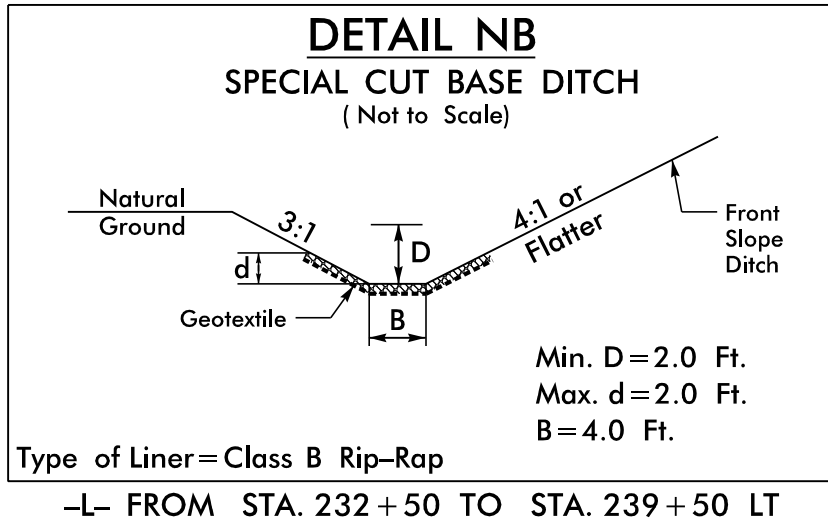
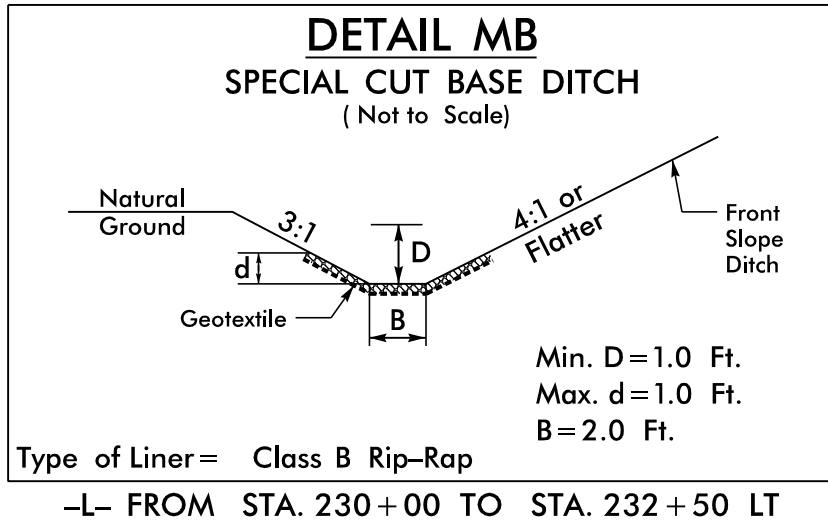
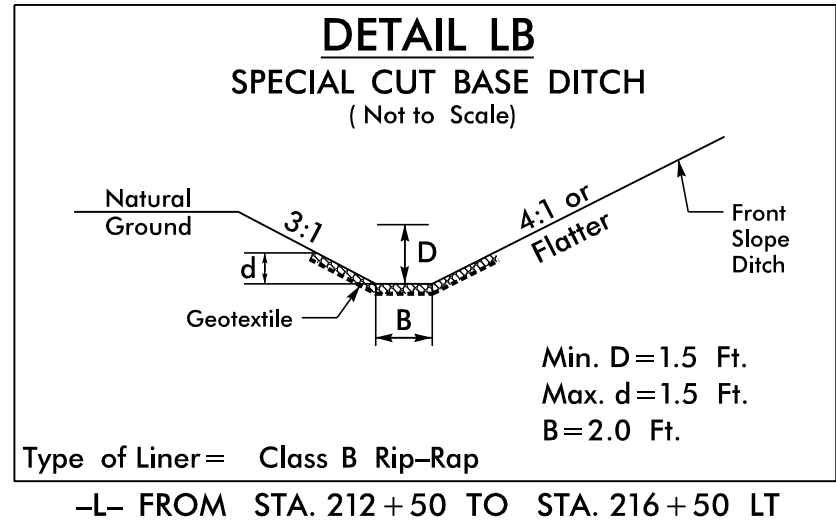
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1223 Jones Franklin Rd.
Raleigh, N.C. 27606
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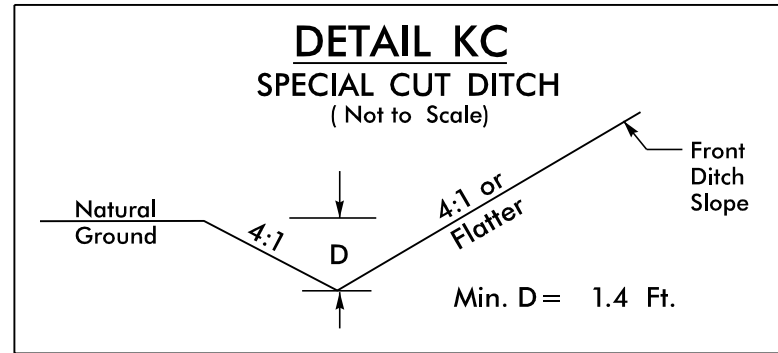
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

RK&K
P: (919) 878-9580
8801 Six Forks Road, Forum 1, Suite 700
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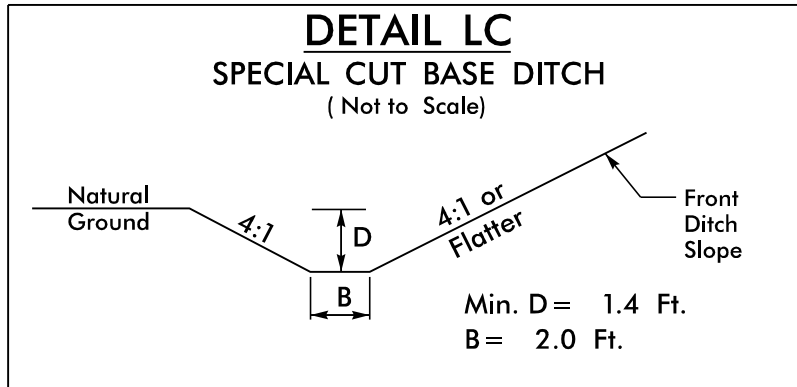
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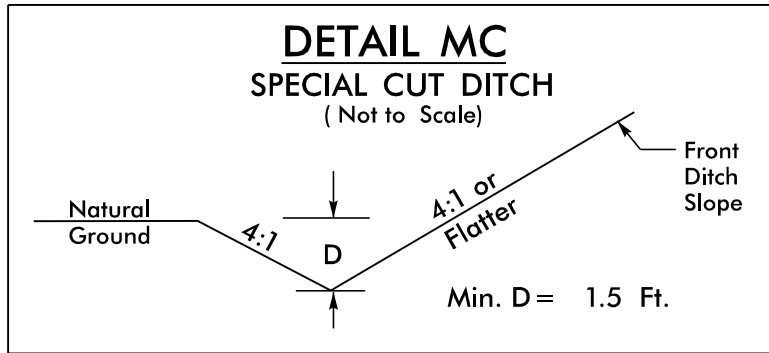
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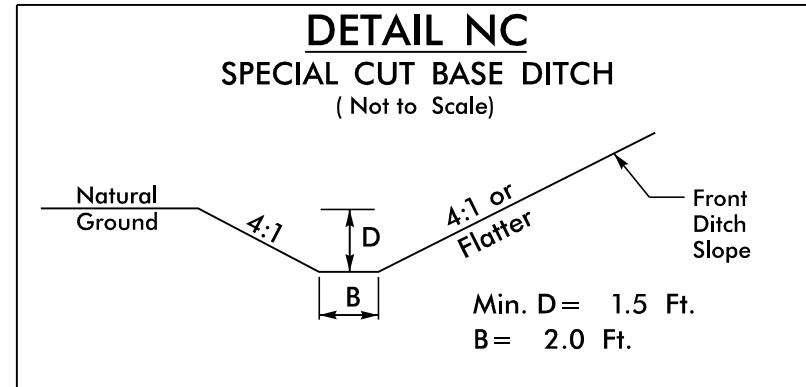
-L- FROM STA. 281+50 TO STA. 282+50 LT



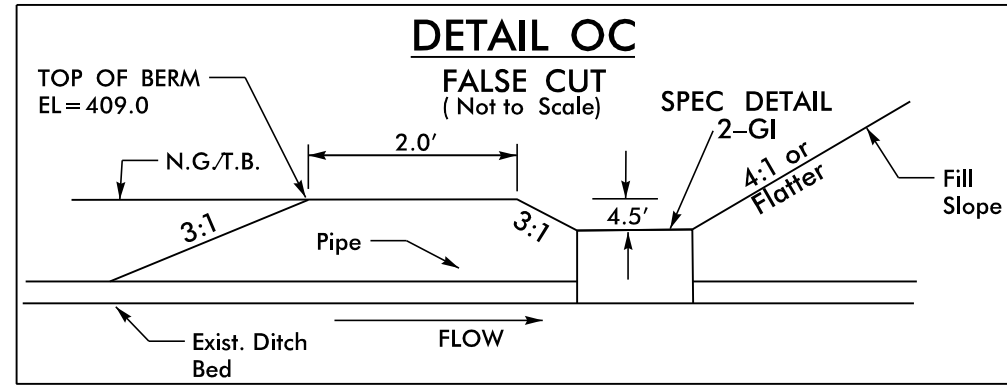
-L- FROM STA. 273+00 TO STA. 275+25 LT
-L- FROM STA. 276+10 TO STA. 281+50 LT



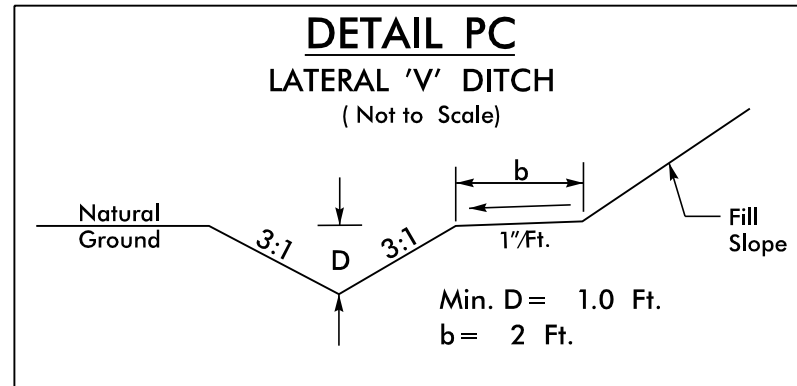
-L- FROM STA. 283+50 TO STA. 284+40 LT
-L- FROM STA. 286+60 TO STA. 295+00 LT
-L- FROM STA. 315+00 TO STA. 329+50 LT
-L- FROM STA. 336+00 TO STA. 339+00 LT
-L- FROM STA. 348+50 TO STA. 352+00 RT
-L- FROM STA. 358+00 TO STA. 358+88 RT
-L- FROM STA. 359+50 TO STA. 360+50 LT
-Y10- FROM STA. 15+00 TO STA. 15+85 RT
-Y10- FROM STA. 18+00 TO STA. 19+50 RT



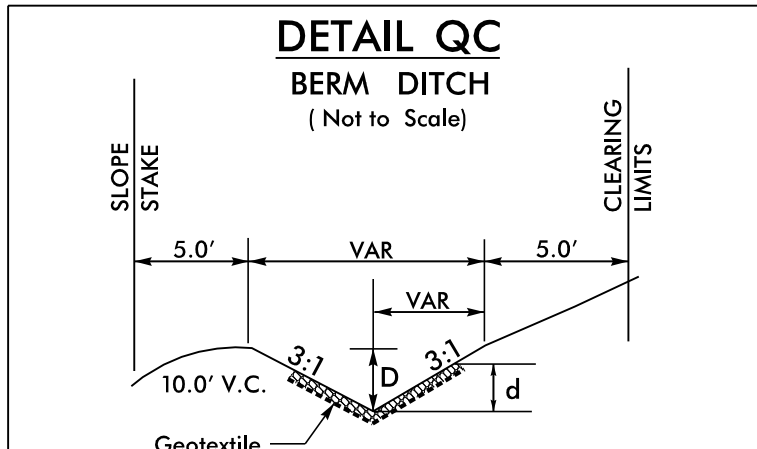
-L- FROM STA. 284+40 TO STA. 285+00 LT



-L- STA. 302+59 TO STA. 303+86 LT

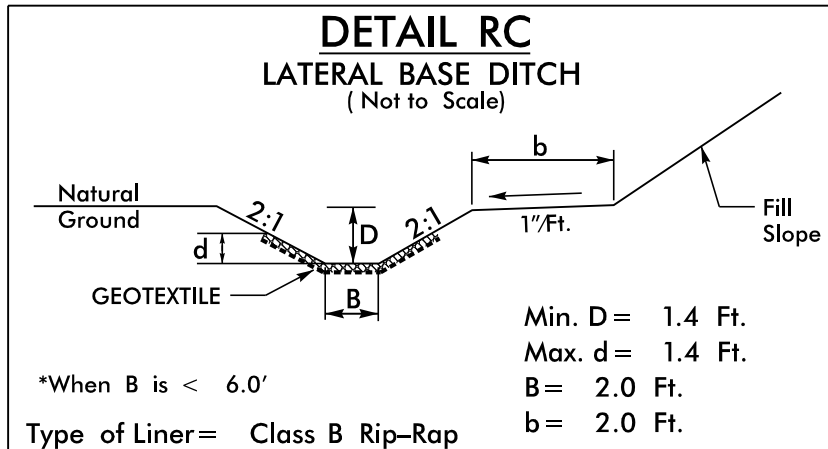


-L- FROM STA. 302+50 TO STA. 303+00 LT



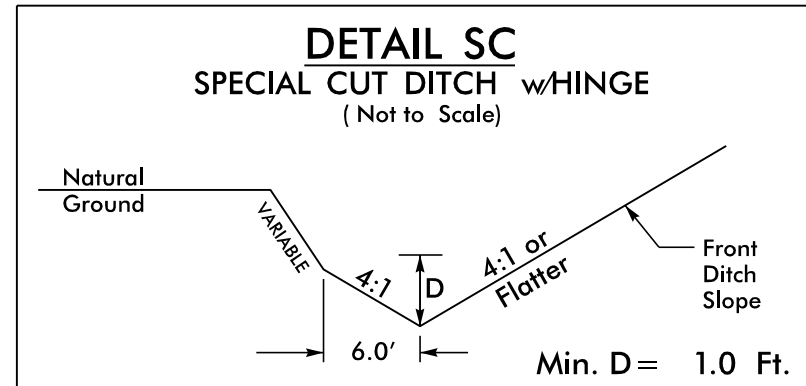
Type of Liner = Class I Rip-Rap
Min. D=1.4 Ft.
Max. d=1.4 Ft.

-L- FROM STA. 310+00 TO STA. 311+50 LT

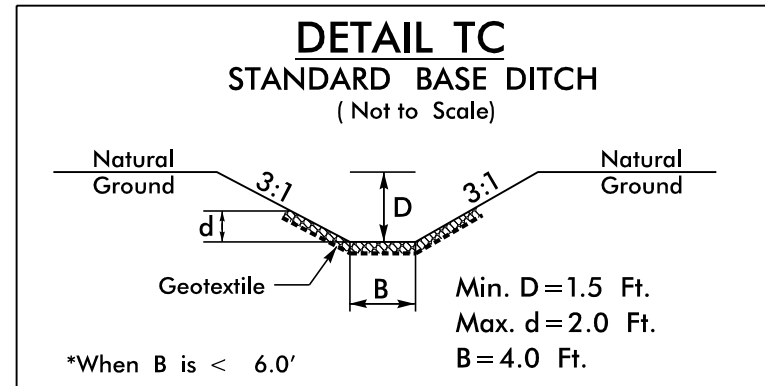


*When B is < 6.0'
Type of Liner = Class B Rip-Rap
Min. D = 1.4 Ft.
Max. d = 1.4 Ft.
B = 2.0 Ft.
b = 2.0 Ft.

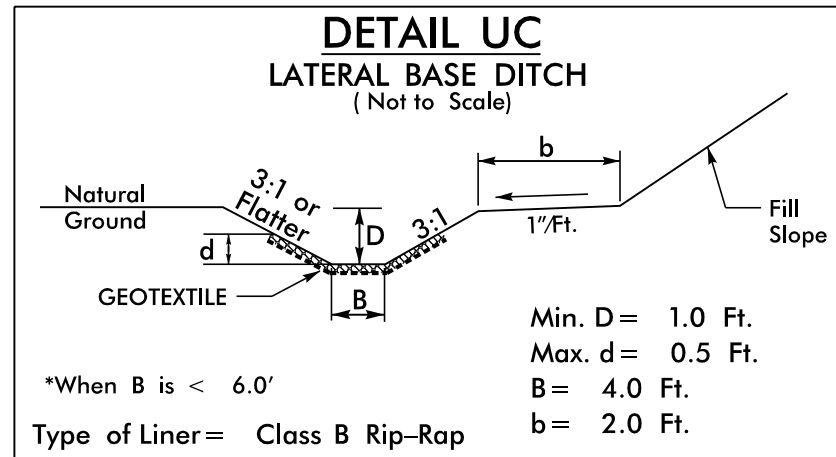
-L- FROM STA. 313+65 TO STA. 314+50 LT



-L- FROM STA. 330+50 TO STA. 333+50 LT
-L- FROM STA. 352+50 TO STA. 359+50 LT

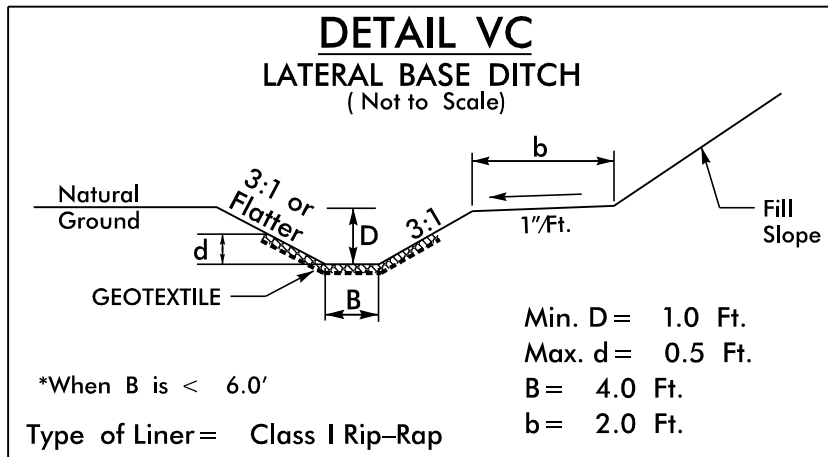


Type of Liner = Class B Rip-Rap
-L- STA. 208+50 LT; S=6.0%; L=25'; B=6'
Beg. El.=373.4; End El.=371.9; DDE=13 CY
-L- STA. 644+46 LT; S=0.33%; L=60'; B=4'
Beg. El.=364.00; End El.=362.00; DDE=62 CY
-L- STA. 75+25 LT; S=4.717%; L=106' B=4'
Beg. El.=434; End El.=429; DDE=105 CY



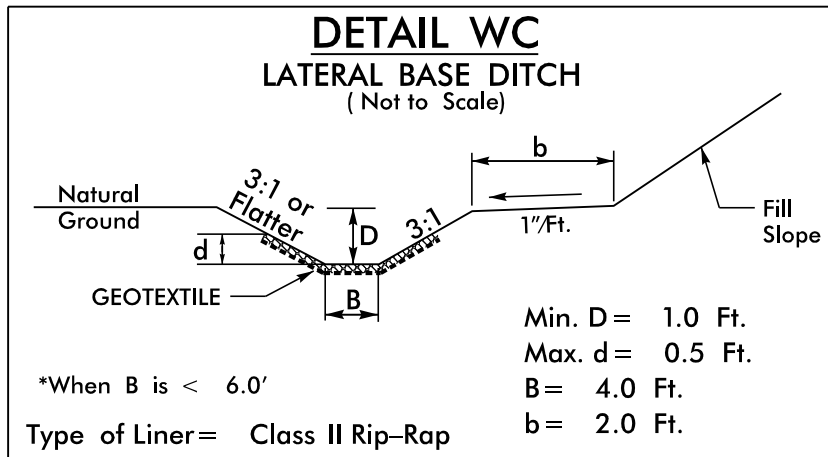
*When B is < 6.0'
Type of Liner = Class B Rip-Rap
Min. D = 1.0 Ft.
Max. d = 0.5 Ft.
B = 4.0 Ft.
b = 2.0 Ft.

-L- FROM STA. 402+50 TO STA. 407+50 LT
-L- FROM STA. 557+00 TO STA. 557+75 LT
-L- FROM STA. 737+93 TO STA. 741+34 RT
-Y11E- FROM STA. 10+64 TO STA. 11+50 RT



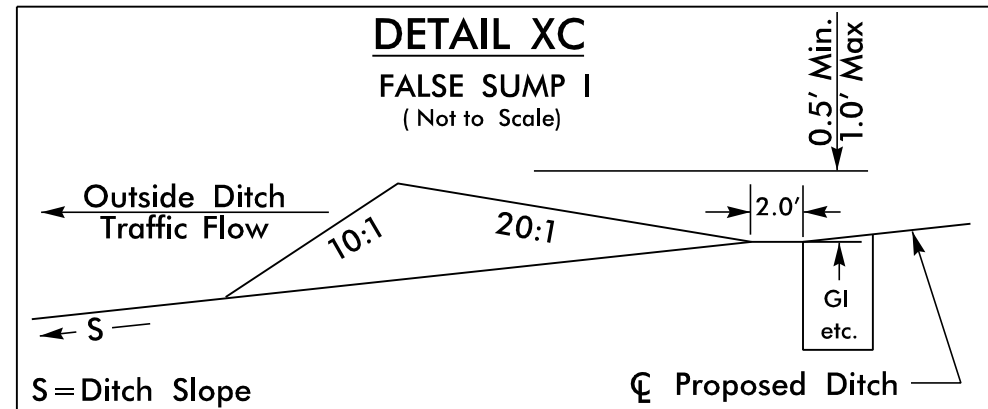
*When B is < 6.0'
Type of Liner = Class I Rip-Rap
Min. D = 1.0 Ft.
Max. d = 0.5 Ft.
B = 4.0 Ft.
b = 2.0 Ft.

-DR3- FROM STA. 11+50 TO STA. 12+50 LT

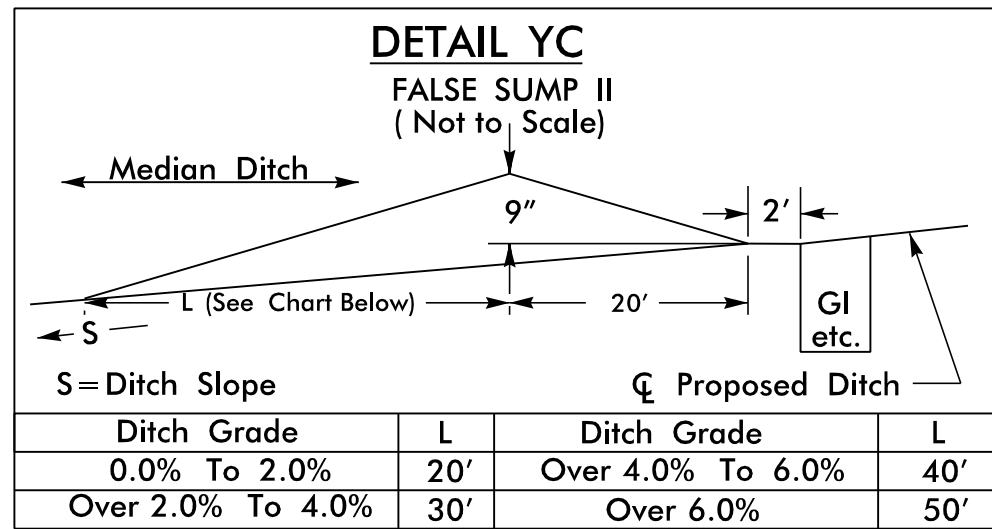


*When B is < 6.0'
Type of Liner = Class II Rip-Rap
Min. D = 1.0 Ft.
Max. d = 0.5 Ft.
B = 4.0 Ft.
b = 2.0 Ft.

-Y11C- FROM STA. 10+67 TO STA. 11+28 RT

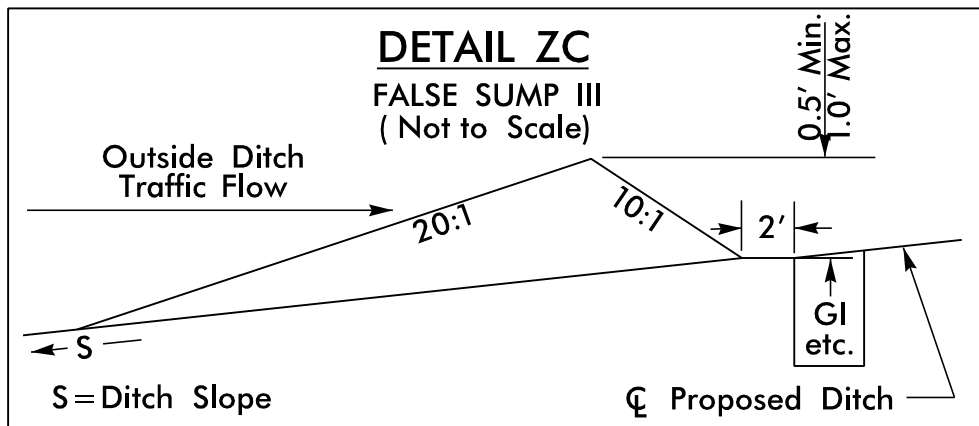


-L- STA. 113+00 LT
-L- STA. 119+50 LT
-L- STA. 135+89 LT
-L- STA. 201+20 RT
-L- STA. 299+30 RT
-L- STA. 311+30 LT
-L- STA. 314+80 LT
-L- STA. 320+80 LT
-L- STA. 339+30 LT
-L- STA. 361+05 LT
-L- STA. 378+00 LT
-L- STA. 390+00 RT
-L- STA. 397+31 LT
-L- STA. 402+00 LT
-L- STA. 421+88 LT
-L- STA. 529+00 LT
-L- STA. 555+80 LT
-Y9B- STA. 10+00 RT
-Y11A- STA. 11+39 LT

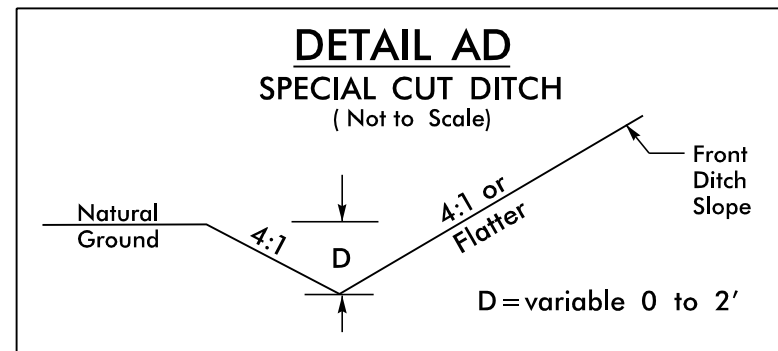


-L- STA. 173+19 MEDIAN
-L- STA. 264+30 TO STA. 269+12 MEDIAN

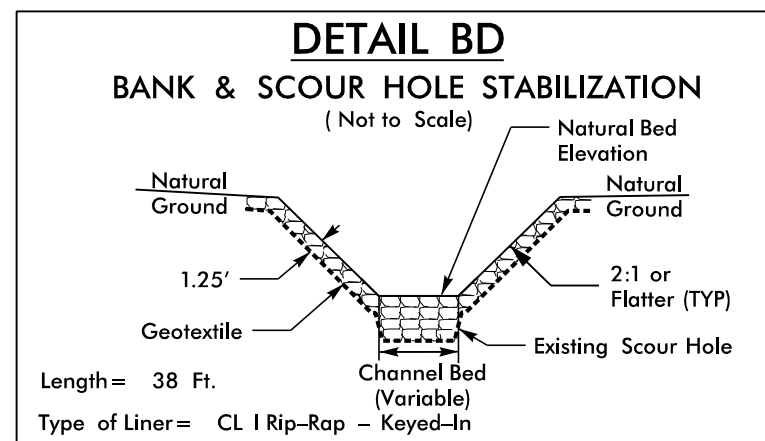
-L- STA. 185+20 MEDIAN
-L- STA. 195+85 MEDIAN
-L- STA. 201+20 MEDIAN
-L- STA. 207+20 MEDIAN
-L- STA. 284+00 MEDIAN
-L- STA. 286+30 MEDIAN
-L- STA. 311+80 MEDIAN
-L- STA. 314+30 MEDIAN
-L- STA. 320+80 MEDIAN
-L- STA. 359+23 MEDIAN
-L- STA. 361+05 MEDIAN
-L- STA. 376+31 MEDIAN
-L- STA. 387+14 MEDIAN
-L- STA. 400+78 MEDIAN
-L- STA. 401+63 MEDIAN
-L- STA. 407+62 MEDIAN
-L- STA. 413+00 MEDIAN
-L- STA. 426+00 MEDIAN
-L- STA. 453+00 MEDIAN
-L- STA. 489+00 MEDIAN
-L- STA. 507+00 MEDIAN
-L- STA. 528+69 MEDIAN
-L- STA. 555+63 MEDIAN
-L- STA. 607+35 MEDIAN
-L- STA. 633+64 MEDIAN
-L- STA. 650+39 MEDIAN
-L- STA. 699+57 MEDIAN
-L- STA. 708+43 MEDIAN
-L- STA. 731+49 MEDIAN
-L- STA. 740+50 MEDIAN
-L- STA. 758+00 MEDIAN
-L- STA. 782+69 MEDIAN



-L- STA. 157+50 TO STA. 165+10 LT
-L- STA. 97+40 LT
-L- STA. 195+75 LT
-L- STA. 303+50 LT
-L- STA. 314+30 RT
-L- STA. 385+12 RT
-L- STA. 422+00 RT
-L- STA. 555+63 RT
-L- STA. 569+00 RT
-L- STA. 644+63 LT



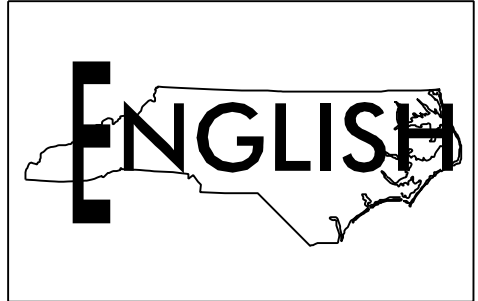
FROM STA. 172+75 TO STA. 173+17 -L- RT



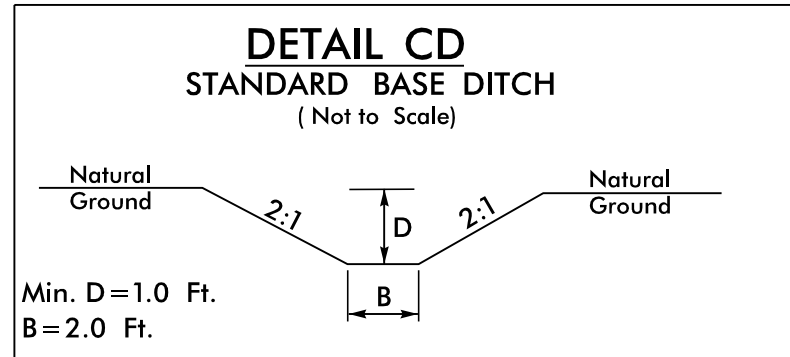
-Y4- STA. 14+62 LT; Length=38 Ft.
-L- STA. 34+64 LT; Length=26 Ft.

PROJECT REFERENCE NO. <i>R-5709</i>		SHEET NO. <i>2D-5</i>	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

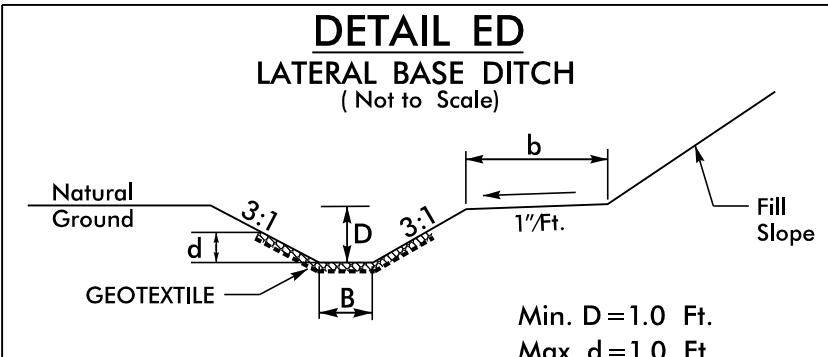
PERMIT DRAWING
SHEET 6 OF 60
REVISED 12/20/2023



11/3/2024
R:\Hydraulics\PERMITS\Environmental\Drawings\4C\VR-5709_HYD_Ditch_Detail.dgn
shotman

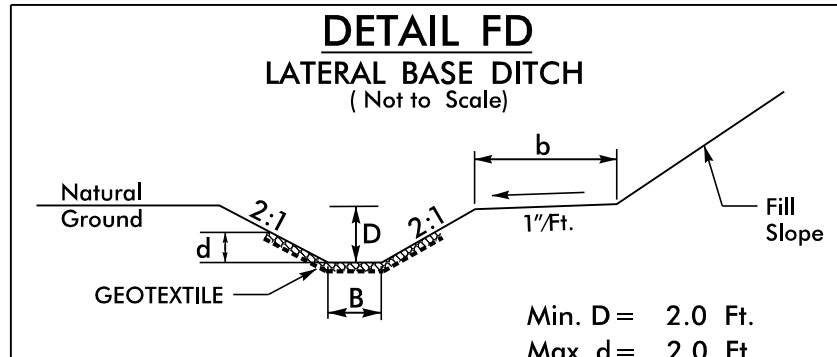


(DITCH CLEANOUT) STA. 146+00 -L- RT
DDE=95 CY



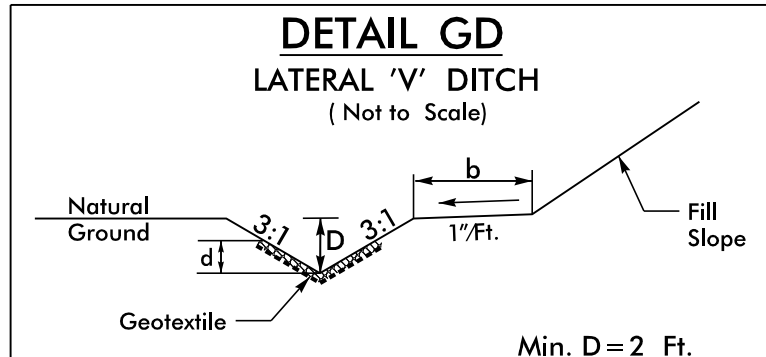
*When B is < 6.0'
Type of Liner= Class I Rip-Rap
Min. D=1.0 Ft.
Max. d=1.0 Ft.
B=2.0 Ft.
b=5.0 Ft.

-L- FROM STA. 306+59 TO STA. 307+50 RT



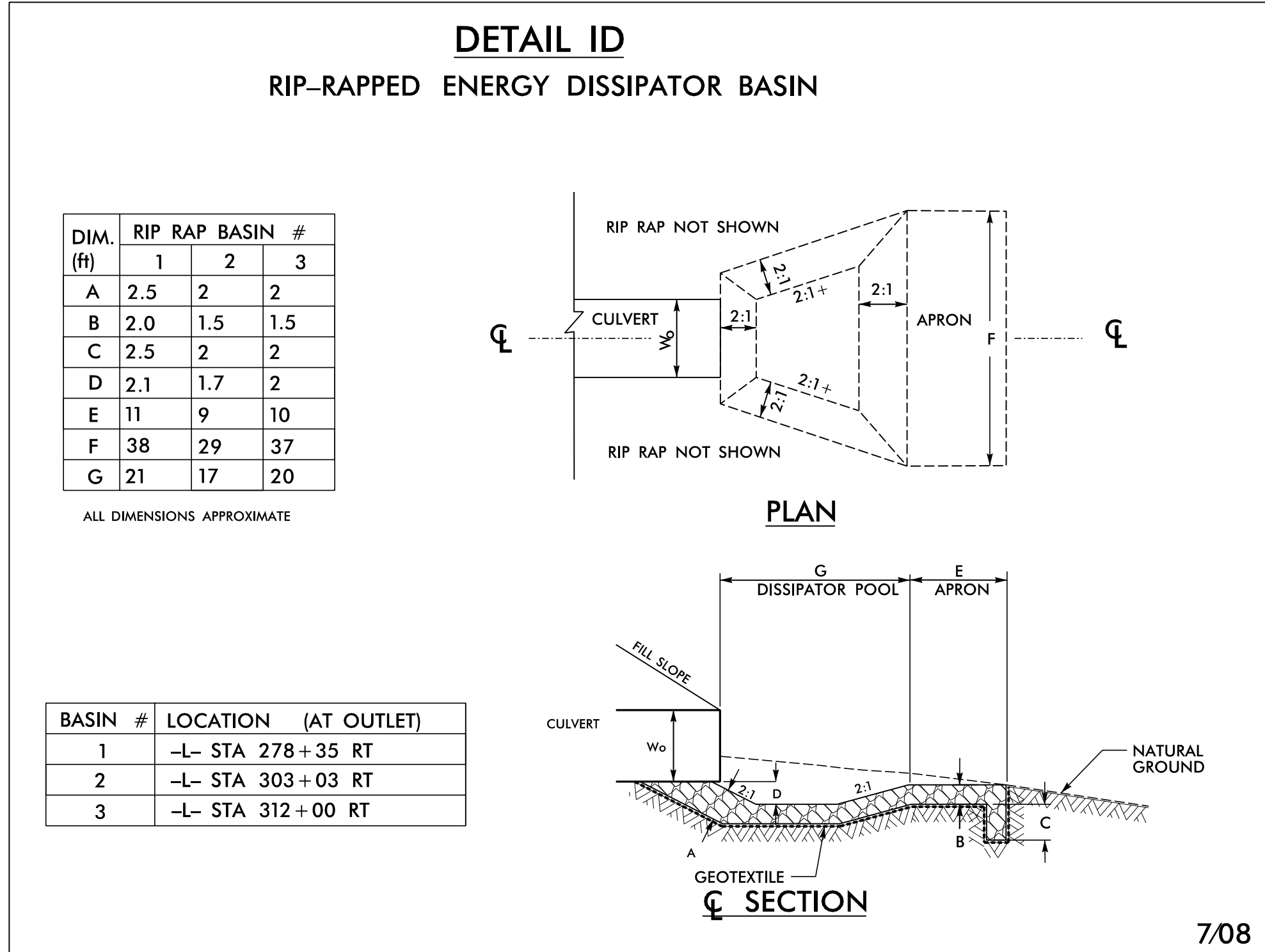
*When B is < 6.0'
Type of Liner= Class I Rip-Rap
Min. D= 2.0 Ft.
Max. d= 2.0 Ft.
B= 4.0 Ft.
b= 2.0 Ft.

-L- FROM STA. 311+50 TO STA. 313+25 LT

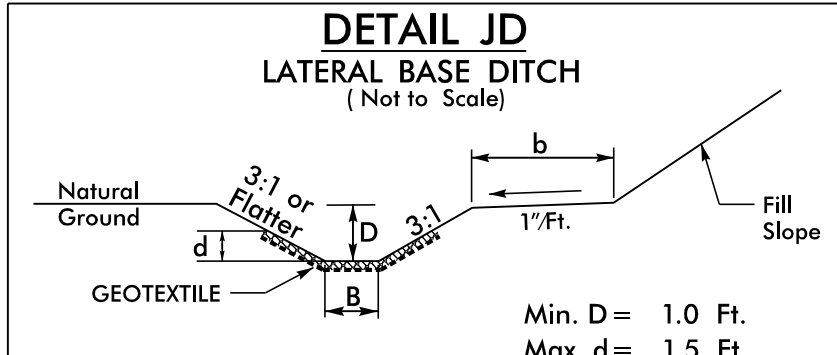


Type of Liner= CL I Rip-Rap
Min. D=2 Ft.
Max. d=1 Ft.
b=5 Ft.

FROM STA. 14+32 TO STA. 15+45 -L- LT

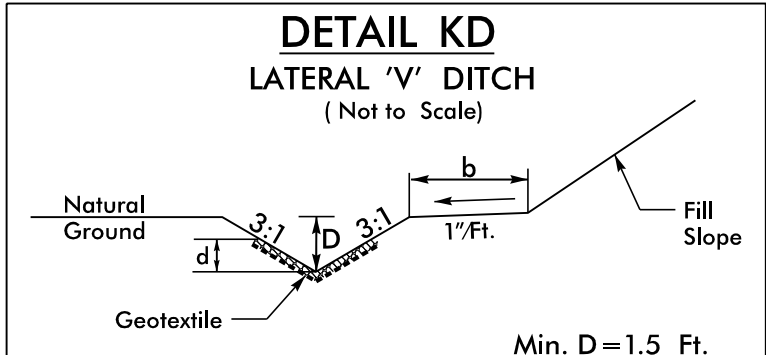


-L- STA 278+35 RT
-L- STA 303+03 RT
-L- STA 312+00 RT



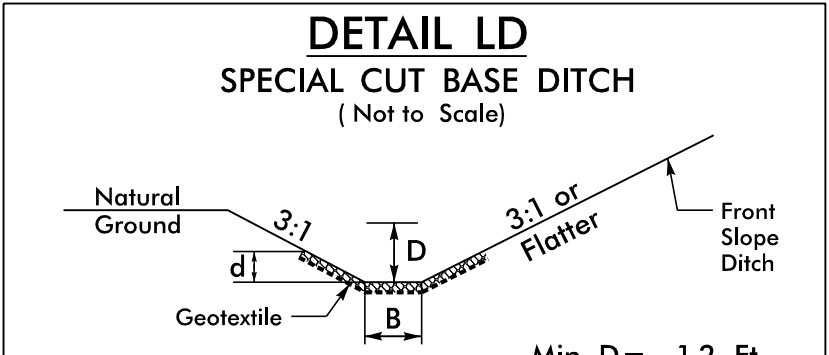
*When B is < 6.0'
Type of Liner= Flexamat
Min. D= 1.0 Ft.
Max. d= 1.5 Ft.
B= 4.0 Ft.
b= 2.0 Ft.

-L- FROM STA. 389+50 TO STA. 393+00 LT



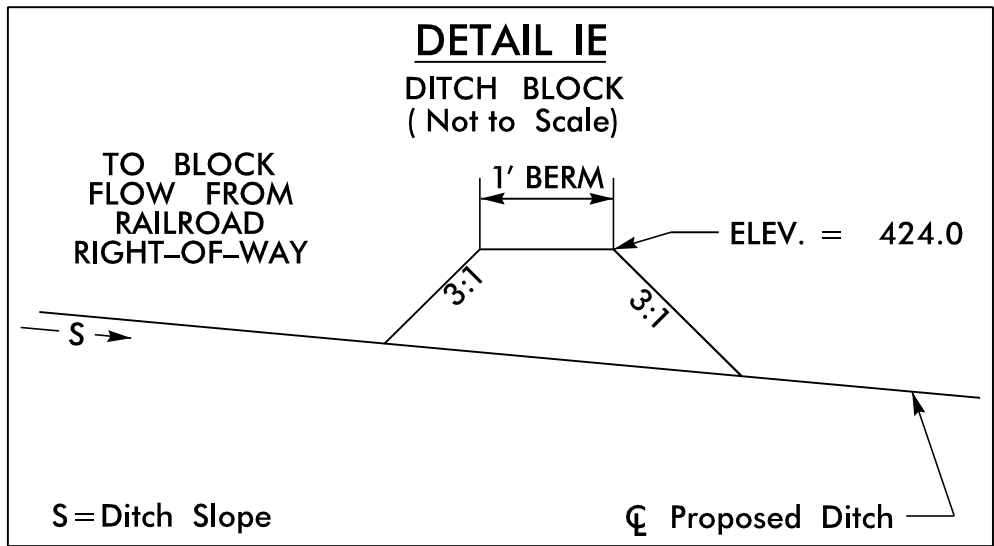
Type of Liner= Flexamat
Min. D=1.5 Ft.
Max. d=1.5 Ft.
b=2.0 Ft.

-L- FROM STA. 393+00 TO STA. 393+50 LT
-L- FROM STA. 407+50 TO STA. 415+64 LT

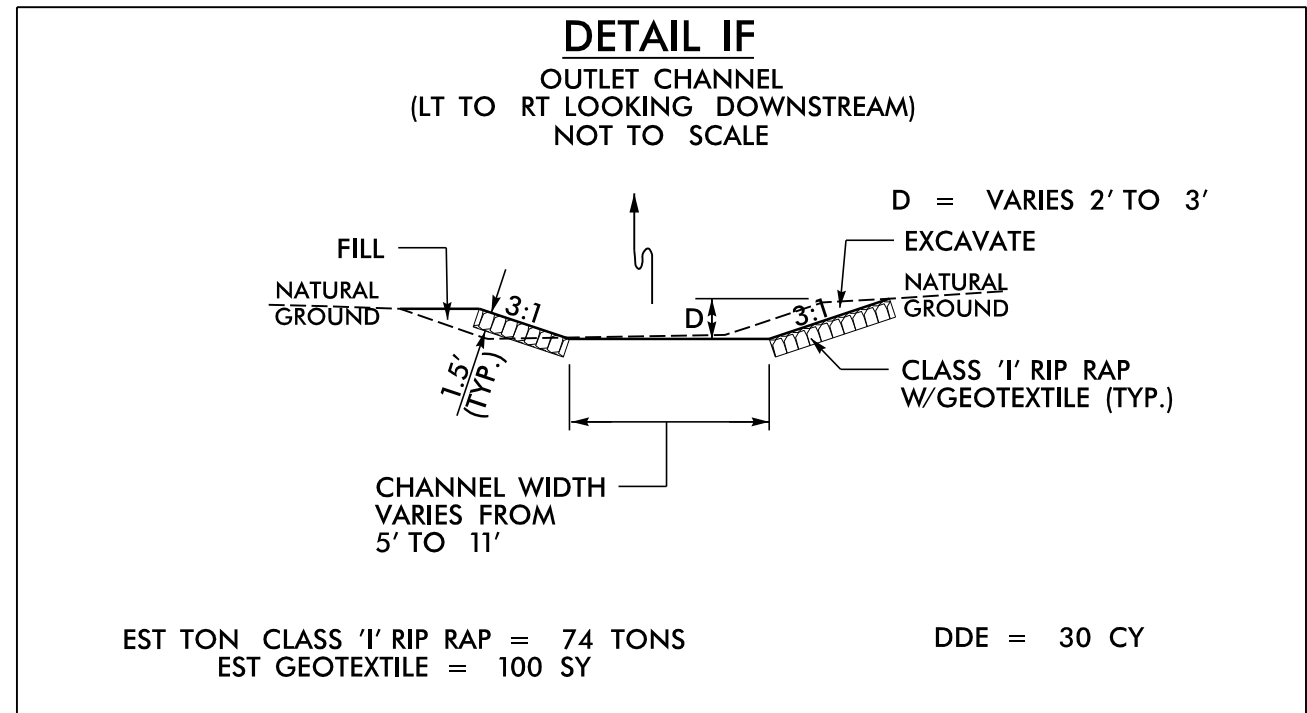


Type of Liner= Flexamat
Min. D= 1.2 Ft.
Max. d= 1.0 Ft.
B= 6 Ft.

-L- FROM STA. 415+64 TO STA. 417+00 LT

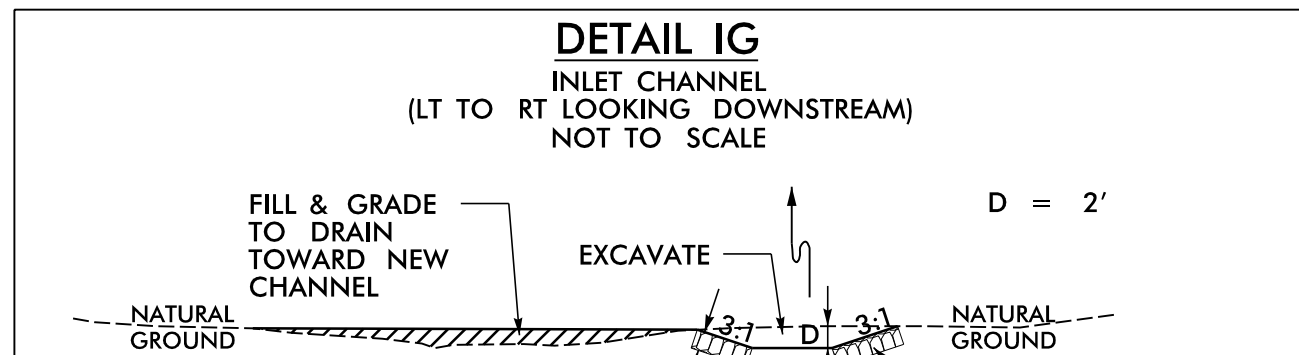


FROM STA. 254+80 -L- LT



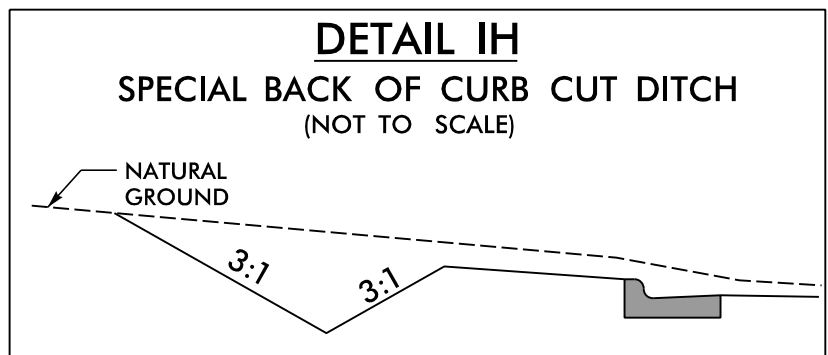
EST TON CLASS 'I' RIP RAP = 74 TONS
EST GEOTEXTILE = 100 SY

FROM STA. 14+10 -L- LT

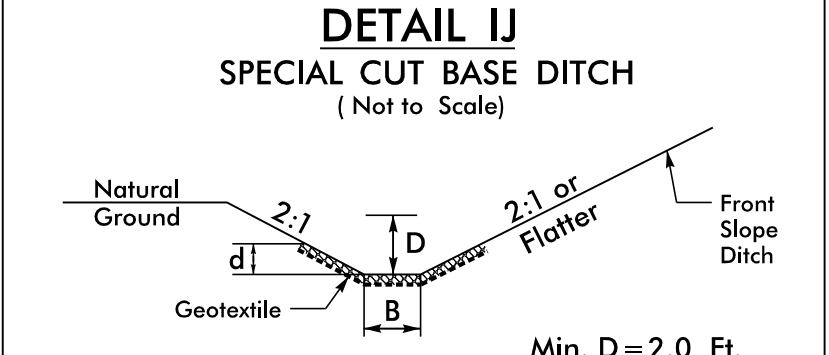


EST TON CLASS 'I' RIP RAP = 29 TONS
EST GEOTEXTILE = 40 SY

FROM STA. 14+65 -L- RT

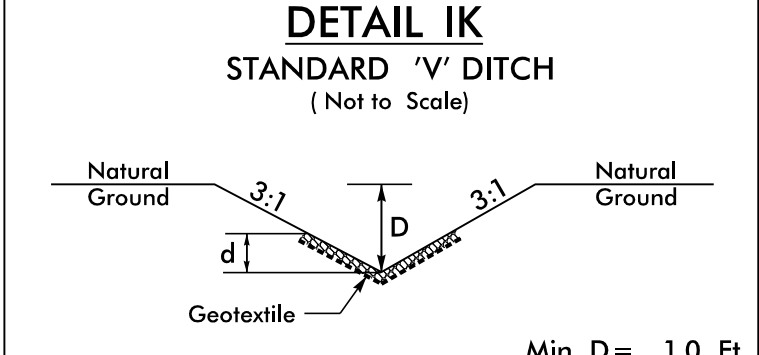


-Y8- FROM STA. 10+41 TO STA. 11+22 RT



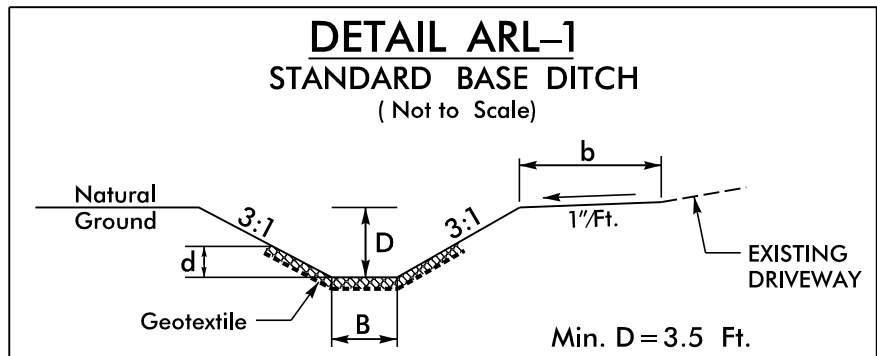
Type of Liner= Class B Rip-Rap
Min. D=2.0 Ft.
Max. d=2.0 Ft.
B=2.0 Ft.
b=2.0 Ft.

-Y9D- FROM STA. 11+80 TO STA. 13+00 LT



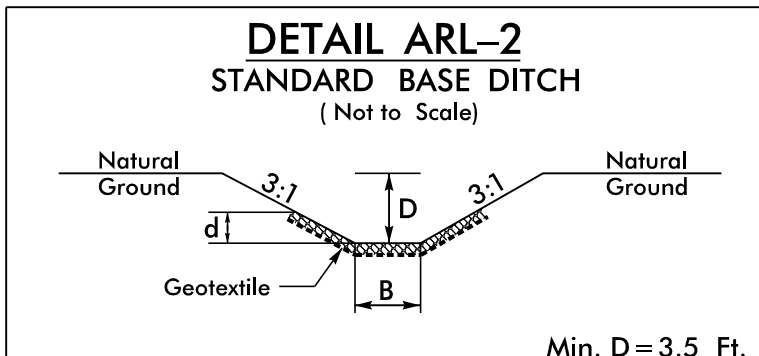
Type of Liner= CL B Rip-Rap
Min. D= 1.0 Ft.
d= 0.75 Ft.

-DRIE- FROM STA. 28+75 TO STA. 29+25 LT



*When B is < 6.0'
Type of Liner= CL I Rip-Rap
EST. 3610 TON, 5350 SY GT
Min. D=3.5 Ft.
Max. d=3.5 Ft.
B=5.0 Ft.
b=6.0 Ft.

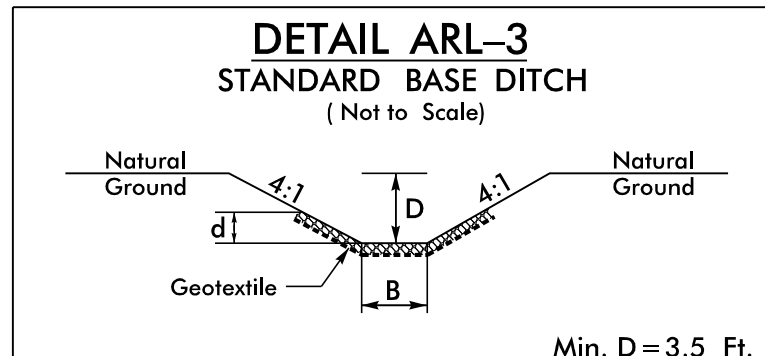
-DR11- STA. 17+17 TO STA. 36+00 RT



Type of Liner= CL I Rip-Rap
EST. 221 TON, 327 SY GT
Min. D=3.5 Ft.
Max. d=3.5 Ft.
B=5.0 Ft.

-DR11- STA. 17+07 LT

L=115'; S=2.50%;
Beg. El.=370.1, End El.=367.15



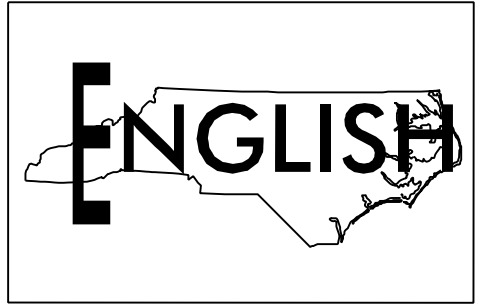
Type of Liner= CL I Rip-Rap
EST. 116 TON, 170 SY GT
Min. D=3.5 Ft.
Max. d=3.5 Ft.
B=10.0 Ft.

-DR11- STA. 16+90 LT

L=50'; S=0.30%;
Beg. El.=367.15, End El.=367.0

PROJECT REFERENCE NO. R-5709		SHEET NO. 2D-6
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

PERMIT DRAWING
SHEET 7 OF 60
REVISED 12/20/2023



11/5/2025 (For Reverification Purposes)

CURB + GUTTER LOCATIONS				
DESCRIPTION	ALN	STATION	STATION	LOC
2'-6"C+G	-L-	10+16.82	14+70.74	LT
2'-6"C+G	-Y1-	10+41.00	11+40.08	LT
2'-6"C+G	-Y1-	10+41.00	11+38.45	RT
2'-6"C+G	-L-	17+06.40	22+96.82	LT
1'-6"C+G	-L-	10+72.04	23+38.59	MEDIAN
2'-6"C+G	-L-	10+79.48	22+66.57	RT

F	F
HC	HC
TS	TS
S	S
E	E

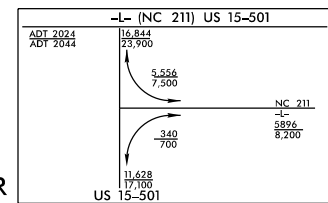
DENOTES FILL IN
WETLAND

DENOTES HAND
CLEARING

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

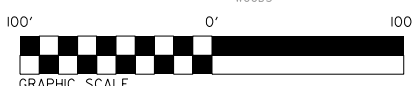
DENOTES IMPACTS IN
SURFACE WATER

DENOTES EXCAVATION
IN WETLAND



PROJECT REFERENCE NO. R-5709	SHEET NO. 4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 8 OF 60



MATCHLINE -L- STA. 22 + 50.00
SEE SHEET 5

FOR -L- PROFILE, SEE SHEET NO. 74
FOR -Y1- PROFILE, SEE SHEET NO. 104
FOR -Y2A- PROFILE, SEE SHEET NO. 104
FOR -DR1- PROFILE, SEE SHEET NO. 121

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH
10-FOOT RADII UNLESS OTHERWISE NOTED
FOR -L- USE RADIUS TYPE DRIVE TURNOUT
MATCH EXISTING DRIVE TYPE UNLESS
OTHERWISE NOTED

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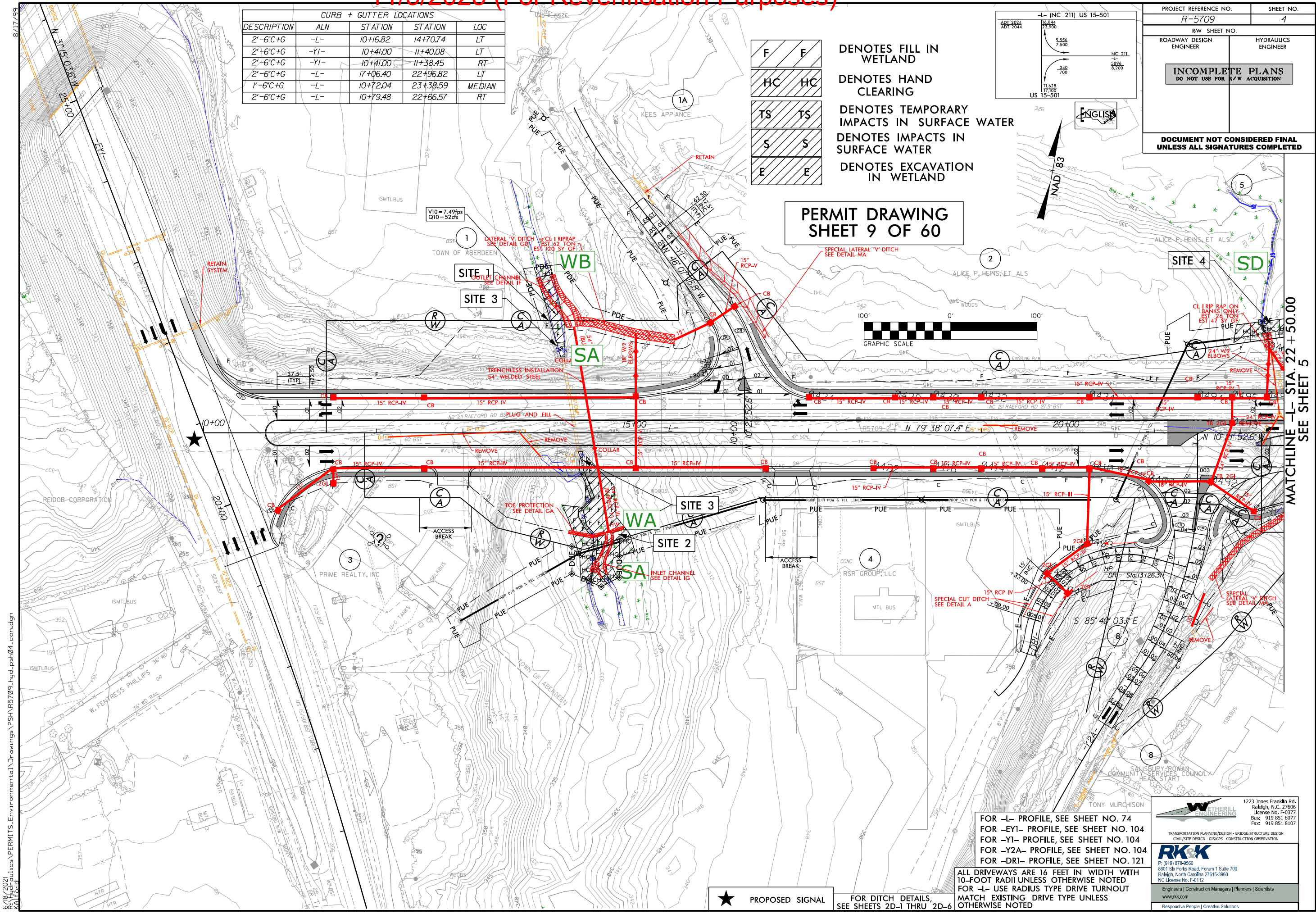
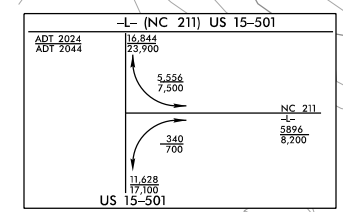
8/17/99
6/18/2021
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KALFORD

PROJECT REFERENCE NO.	SHEET NO.
<i>R-5709</i>	<i>4</i>
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

DENOTES FILL IN
 WETLAND
 DENOTES HAND
 CLEARING
 DENOTES TEMPORARY
 IMPACTS IN SURFACE WATER
 DENOTES IMPACTS IN
 SURFACE WATER
 DENOTES EXCAVATION
 IN WETLAND

100' 0' 100'

GRAPHIC SCALE



6/18/2021
R:\Hydraulics\PERMITS_Environmental\Drawings\PSH\R5709_hyd_psh04_con.dgn
KAlford

FOR -L- PROFILE, SEE SHEET NO. 74
FOR -EY1- PROFILE, SEE SHEET NO. 104
FOR -Y1- PROFILE, SEE SHEET NO. 104
FOR -Y2A- PROFILE, SEE SHEET NO. 104
FOR -DR1- PROFILE, SEE SHEET NO. 121

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10-FOOT RADII UNLESS OTHERWISE NOTED FOR -L- USE RADIUS TYPE DRIVE TURNOUT MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED



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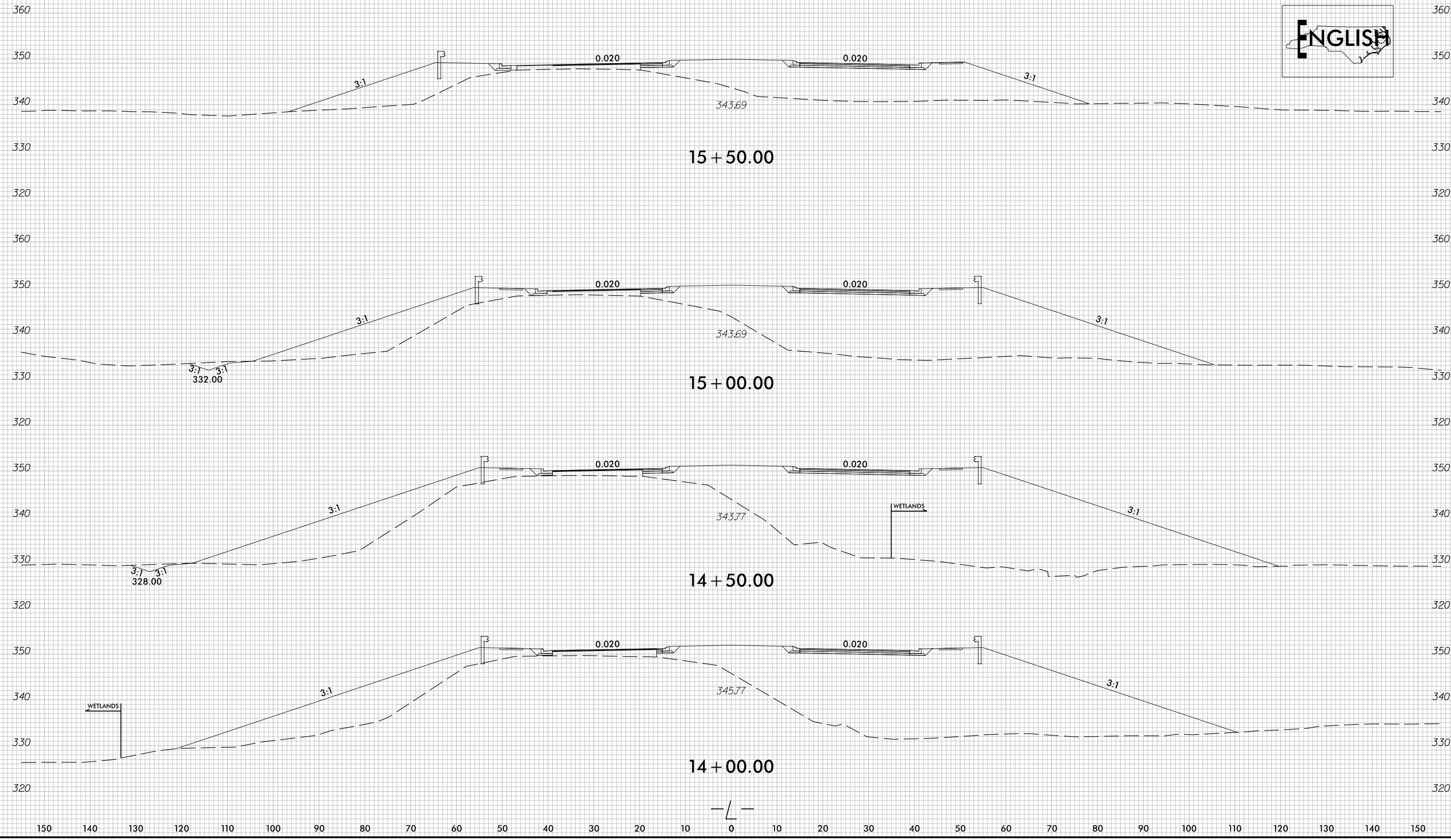
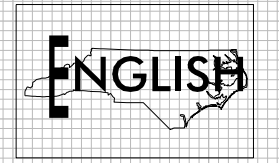
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5709	S1 X-3

SITE 1

SITE 2

PERMIT DRAWING
SHEET 10 OF 60

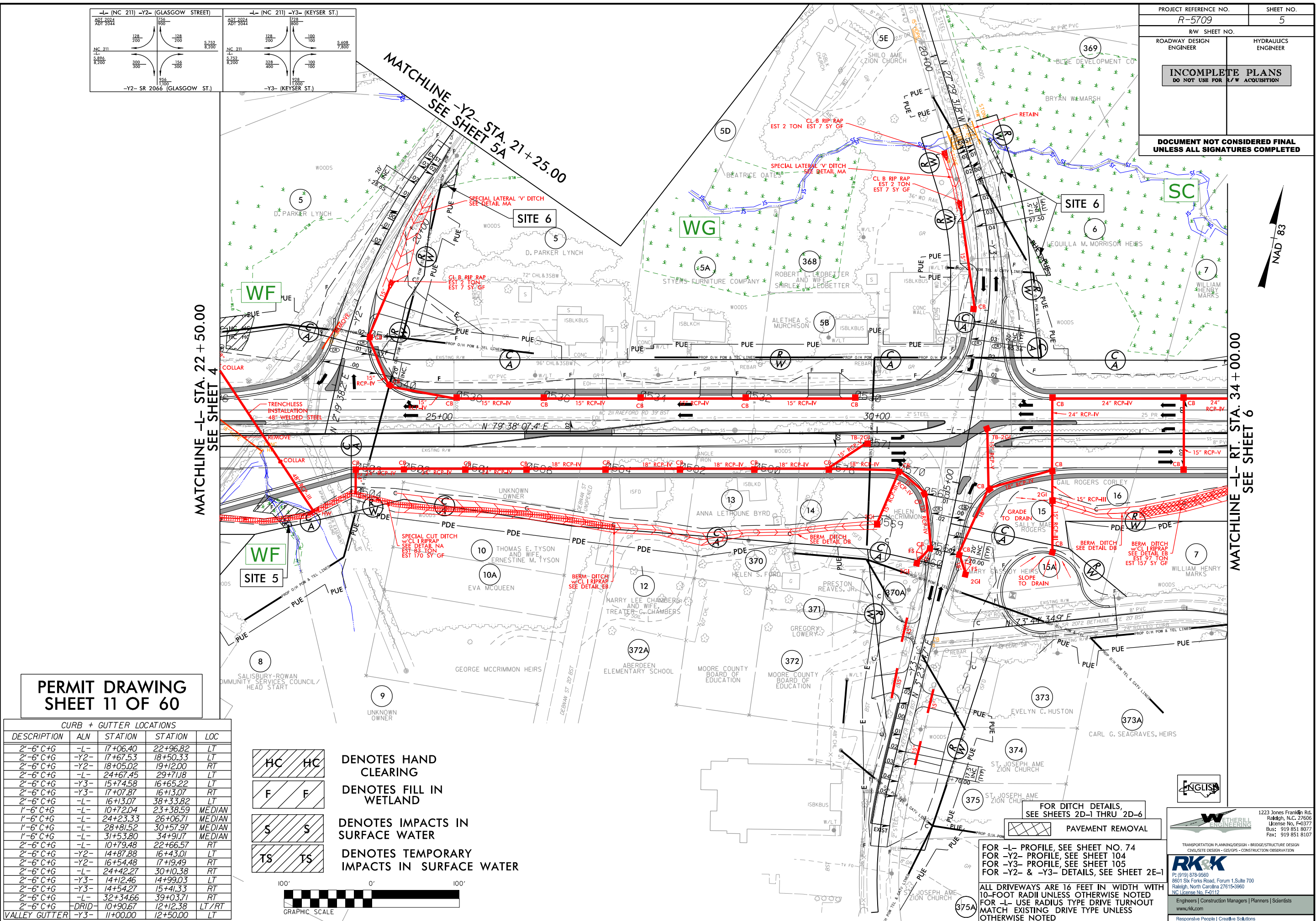


8/17/99

-L- (NC 211) -Y2- (GLASGOW STREET)			
ADT 2024	ADT 2024	ADT 2024	ADT 2024
128	128	128	128
200	200	200	200
5,752	5,752	5,752	5,752
8,200	8,200	8,200	8,200
NC 211	NC 211	NC 211	NC 211
5,876	5,876	5,876	5,876
8,200	8,200	8,200	8,200
-Y2- SR 2066 (GLASGOW ST.)			

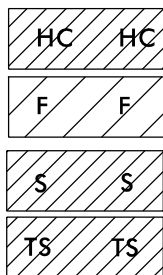
-L- (NC 211) -Y3- (KEYSER ST.)			
ADT 2024	ADT 2024	ADT 2024	ADT 2024
128	128	128	128
200	200	200	200
5,752	5,752	5,752	5,752
8,200	8,200	8,200	8,200
NC 211	NC 211	NC 211	NC 211
5,876	5,876	5,876	5,876
8,200	8,200	8,200	8,200
-Y3- (KEYSER ST.)			

PROJECT REFERENCE NO. <i>R-5709</i>		SHEET NO. <i>5</i>	
R/W SHEET NO.			
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 60

CURB + GUTTER LOCATIONS				
DESCRIPTION	ALN	STATION	STATION	LOC
2'-6" C+G	-L-	17+06.40	22+96.82	LT
2'-6" C+G	-Y2-	17+67.53	18+50.33	LT
2'-6" C+G	-Y2-	18+05.02	19+12.00	RT
2'-6" C+G	-L-	24+67.45	29+71.18	LT
2'-6" C+G	-Y3-	15+74.58	16+65.22	LT
2'-6" C+G	-Y3-	17+07.87	16+13.07	RT
2'-6" C+G	-L-	16+13.07	38+33.82	LT
1'-6" C+G	-L-	10+72.04	23+38.59	MEDIAN
1'-6" C+G	-L-	24+23.33	26+06.71	MEDIAN
1'-6" C+G	-L-	28+81.52	30+57.97	MEDIAN
1'-6" C+G	-L-	31+53.80	34+91.77	MEDIAN
2'-6" C+G	-L-	10+79.48	22+66.57	RT
2'-6" C+G	-Y2-	14+87.88	16+43.01	LT
2'-6" C+G	-Y2-	16+54.48	17+19.49	RT
2'-6" C+G	-L-	24+42.27	30+10.38	RT
2'-6" C+G	-Y3-	14+12.46	14+99.03	LT
2'-6" C+G	-Y3-	14+54.27	15+41.33	RT
2'-6" C+G	-L-	32+34.66	39+03.71	LT
2'-6" C+G	-DRID-	10+90.67	12+12.38	LT/RT
VALLEY GUTTER	-Y3-	11+00.00	12+50.00	LT



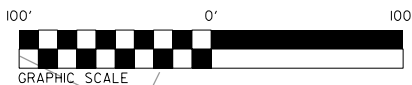
HC HC
F F
S S
TS TS

DENOTES HAND
CLEARING

DENOTES FILL IN
WETLAND

DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

PAVEMENT REMOVAL

FOR -L- PROFILE, SEE SHEET NO. 74
FOR -Y2- PROFILE, SEE SHEET 104
FOR -Y3- PROFILE, SEE SHEET 105
FOR -Y2- & -Y3- DETAILS, SEE SHEET 2E-1

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH
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FOR -L- USE RADIUS TYPE DRIVE TURNOUT
MATCH EXISTING DRIVE TYPE UNLESS
OTHERWISE NOTED

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CIVIL/STRUCTURE DESIGN - CONSTRUCTION OBSERVATION

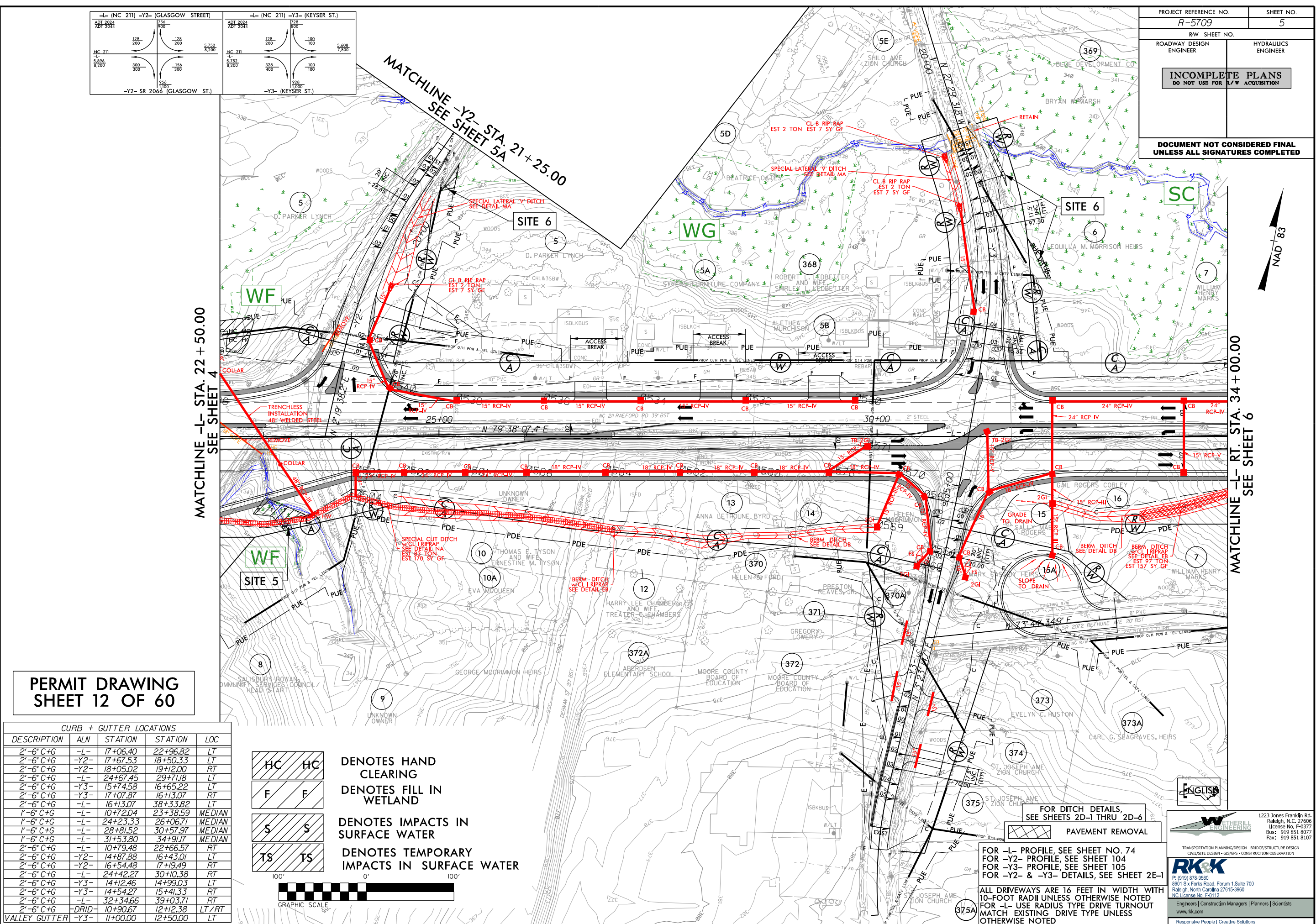
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8/17/99

-L- (NC 211) -Y2- (GLASGOW STREET)				-L- (NC 211) -Y3- (KEYSER ST.)			
ADT 2024	ADT 2024	ADT 2024	ADT 2024	ADT 2024	ADT 2024	ADT 2024	ADT 2024
128	128	128	128	128	128	128	128
200	200	200	200	200	200	200	200
5,752	5,752	5,752	5,752	5,752	5,752	5,752	5,752
8,200	8,200	8,200	8,200	8,200	8,200	8,200	8,200
NC 211	NC 211	NC 211	NC 211	NC 211	NC 211	NC 211	NC 211
5,876	5,876	5,876	5,876	5,876	5,876	5,876	5,876
8,200	8,200	8,200	8,200	8,200	8,200	8,200	8,200
-Y2- SR 2066 (GLASGOW ST.)	-Y2- SR 2066 (GLASGOW ST.)	-Y2- SR 2066 (GLASGOW ST.)	-Y2- SR 2066 (GLASGOW ST.)	-Y3- (KEYSER ST.)	-Y3- (KEYSER ST.)	-Y3- (KEYSER ST.)	-Y3- (KEYSER ST.)

PROJECT REFERENCE NO.		SHEET NO.	
R-5709		5	
RW SHEET NO.			
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 12 OF 60

CURB + GUTTER LOCATIONS				
DESCRIPTION	ALN	STATION	STATION	LOC
2'-6" C+G	-L-	17+06.40	22+96.82	LT
2'-6" C+G	-Y2-	17+67.53	18+50.33	LT
2'-6" C+G	-Y2-	18+05.02	19+12.00	RT
2'-6" C+G	-L-	24+67.45	29+71.18	LT
2'-6" C+G	-Y3-	15+74.58	16+65.22	LT
2'-6" C+G	-Y3-	17+07.87	16+13.07	RT
2'-6" C+G	-L-	16+13.07	38+33.82	LT
1'-6" C+G	-L-	10+72.04	23+38.59	MEDIAN
1'-6" C+G	-L-	24+23.33	26+06.71	MEDIAN
1'-6" C+G	-L-	28+81.52	30+57.97	MEDIAN
1'-6" C+G	-L-	31+53.80	34+91.77	MEDIAN
2'-6" C+G	-L-	10+79.48	22+66.57	RT
2'-6" C+G	-Y2-	14+87.88	16+43.01	LT
2'-6" C+G	-Y2-	16+54.48	17+19.49	RT
2'-6" C+G	-L-	24+42.27	30+10.38	RT
2'-6" C+G	-Y3-	14+12.46	14+99.03	LT
2'-6" C+G	-Y3-	14+54.27	15+41.33	RT
2'-6" C+G	-L-	32+34.66	39+03.71	RT
2'-6" C+G	-DRID-	10+90.67	12+12.38	LT/RT
VALLEY GUTTER	-Y3-	11+00.00	12+50.00	LT

HC	HC
F	F
S	S
TS	TS

DENOTES HAND
CLEARING

DENOTES FILL IN
WETLAND

DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

FOR -L- PROFILE, SEE SHEET NO. 74
FOR -Y2- PROFILE, SEE SHEET 104
FOR -Y3- PROFILE, SEE SHEET 105
FOR -Y2- & -Y3- DETAILS, SEE SHEET 2E-1

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH
10-FOOT RADII UNLESS OTHERWISE NOTED
FOR -L- USE RADIUS TYPE DRIVE TURNOUT
MATCH EXISTING DRIVE TYPE UNLESS
OTHERWISE NOTED

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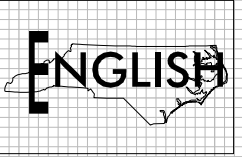
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11/5/2025 (For Reverification Purposes)

6/23/16

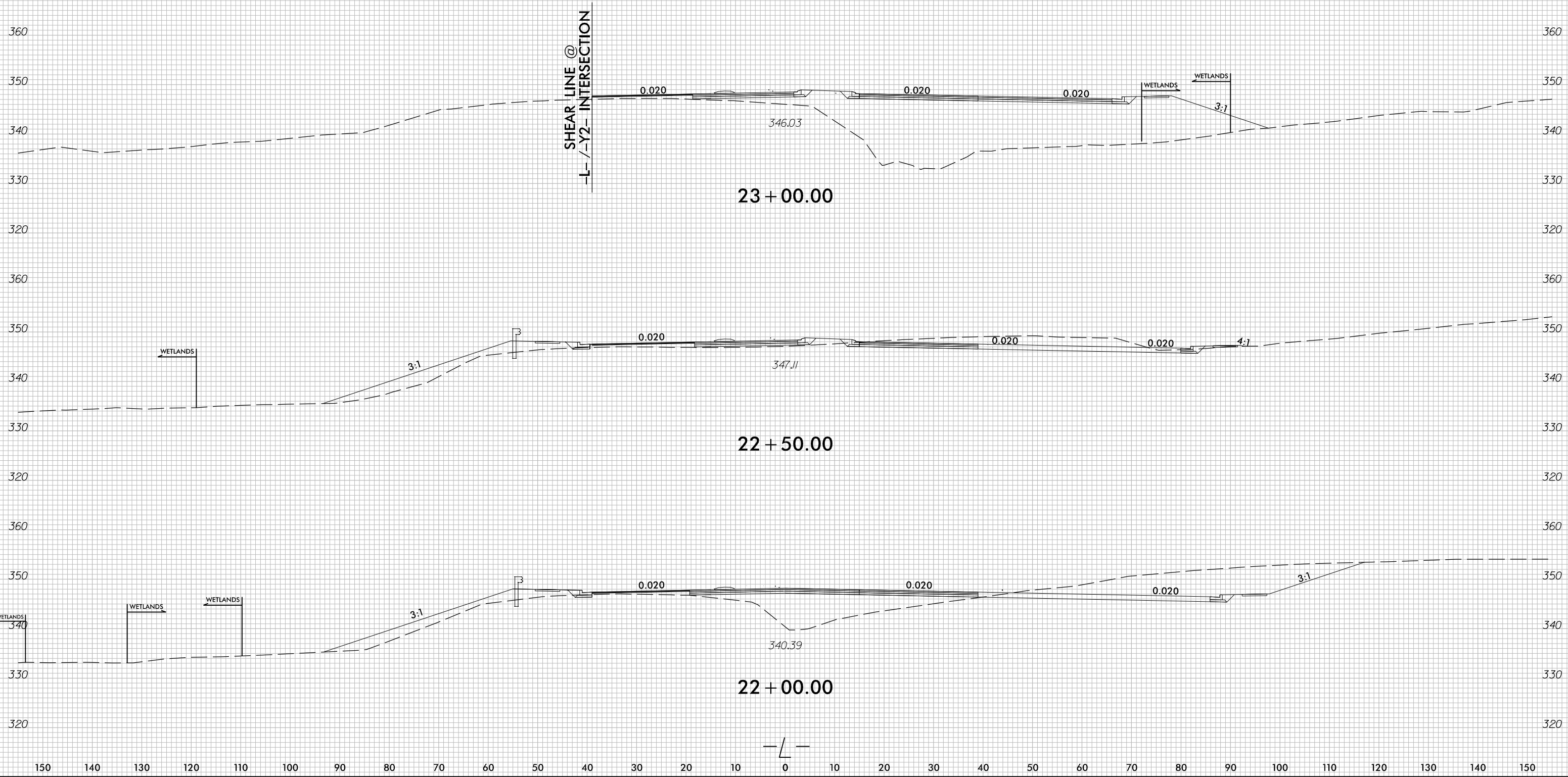
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PERMIT DRAWING
SHEET 13 OF 60



SITE 4

SITE 5



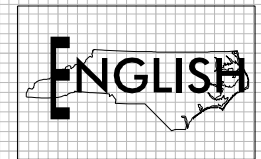
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11/5/2025 (For Reverification Purposes)

	PROJ. REFERENCE NO.	SHEET NO.
	R-5709	S1 X-166

PERMIT DRAWING
SHEET 14 OF 60

SITE 6



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

350 350

340 340

330 330

350 350

340 340

330 330

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

19 + 00.00

18 + 50.00

-Y3-

WETLANDS

342.12
342.65
339.62
340.67
3:1
0.020
0.010
4:1
3:1

6/23/16
6/18/2021
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User: RFBrooks

CURB + GUTTER LOCATIONS				
DESCRIPTION	ALN	STATION	STATION	LOC
2'-6" C+G	-L-	16+13.07	38+33.82	LT
2'-6" C+G	-Y4-	10+41.00	11+16.99	LT
2'-6" C+G	-Y4-	10+52.96	10+70.59	RT
2'-6" C+G	-L-	40+62.28	50+97.53	LT
1'-6" C+G	-L-	31+53.80	34+91.7	MEDIAN
1'-6" C+G	-L-	35+79.63	39+31.87	MEDIAN
1'-6" C+G	-L-	40+30.40	42+23.46	MEDIAN
1'-6" C+G	-L-	42+87.96	47+24.15	MEDIAN
2'-6" C+G	-L-	32+34.66	39+03.71	RT
2'-6" C+G	-Y4A-	10+90.02	13+10.96	LT
2'-6" C+G	-Y4A-	10+90.00	13+11.93	RT
2'-6" C+G	-L-	41+35.19	43+90.61	RT
2'-6" C+G	-Y5A-	11+66.29	11+90.84	LT
2'-6" C+G	-Y5A-	11+59.76	12+00.18	RT
2'-6" C+G	-L-	46+06.52	47+69.30	RT

PERMIT DRAWING
SHEET 15 OF 60

PROJECT REFERENCE NO. <i>R-5709</i>		SHEET NO. <i>6</i>	
RW SHEET NO. _____			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MATCHLINE -L- STA. 34 + 00.00
SEE SHEET 5

MATCHLINE -L- STA. 47 + 00.00
SEE SHEET 7

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

FOR -L- PROFILE, SEE SHEET NOS. 74 & 75
FOR -Y4- PROFILE, SEE SHEET NO. 105
FOR -Y4A- PROFILE, SEE SHEET NO. 105
FOR -Y4B- PROFILE, SEE SHEET NO. 106
FOR -Y5A- PROFILE, SEE SHEET NO. 106
FOR -Y4-, -Y4A-, -Y4B- & -Y5A- DETAILS, SEE SHEET 2E-2
ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH 10-FOOT RADII UNLESS OTHERWISE NOTED
FOR -L- USE RADIUS TYPE DRIVE TURNOUT
MATCH EXISTING DRIVE TYPE UNLESS OTHERWISE NOTED

FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

PAVEMENT REMOVAL

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CURB + GUTTER LOCATIONS				
DESCRIPTION	ALN	STATION	STATION	LOC
2'-6" C+G	-L-	16+13.07	38+33.82	LT
2'-6" C+G	-Y4-	10+41.00	11+16.99	LT
2'-6" C+G	-Y4-	10+52.96	10+70.59	RT
2'-6" C+G	-L-	40+62.28	50+97.53	LT
1'-6" C+G	-L-	31+53.80	34+91.7	MEDIAN
1'-6" C+G	-L-	35+79.63	39+31.87	MEDIAN
1'-6" C+G	-L-	40+30.40	42+23.46	MEDIAN
1'-6" C+G	-L-	42+87.96	47+24.15	MEDIAN
2'-6" C+G	-L-	32+34.66	39+03.71	RT
2'-6" C+G	-Y4A-	10+90.02	13+10.96	LT
2'-6" C+G	-Y4A-	10+90.00	13+11.93	RT
2'-6" C+G	-L-	41+35.19	43+90.61	RT
2'-6" C+G	-Y5A-	11+66.29	11+90.84	LT
2'-6" C+G	-Y5A-	11+59.76	12+00.18	RT
2'-6" C+G	-L-	46+06.52	47+69.30	RT

PERMIT DRAWING
SHEET 16 OF 60

PROJECT REFERENCE NO.
R-5709

SHEET NO.
6

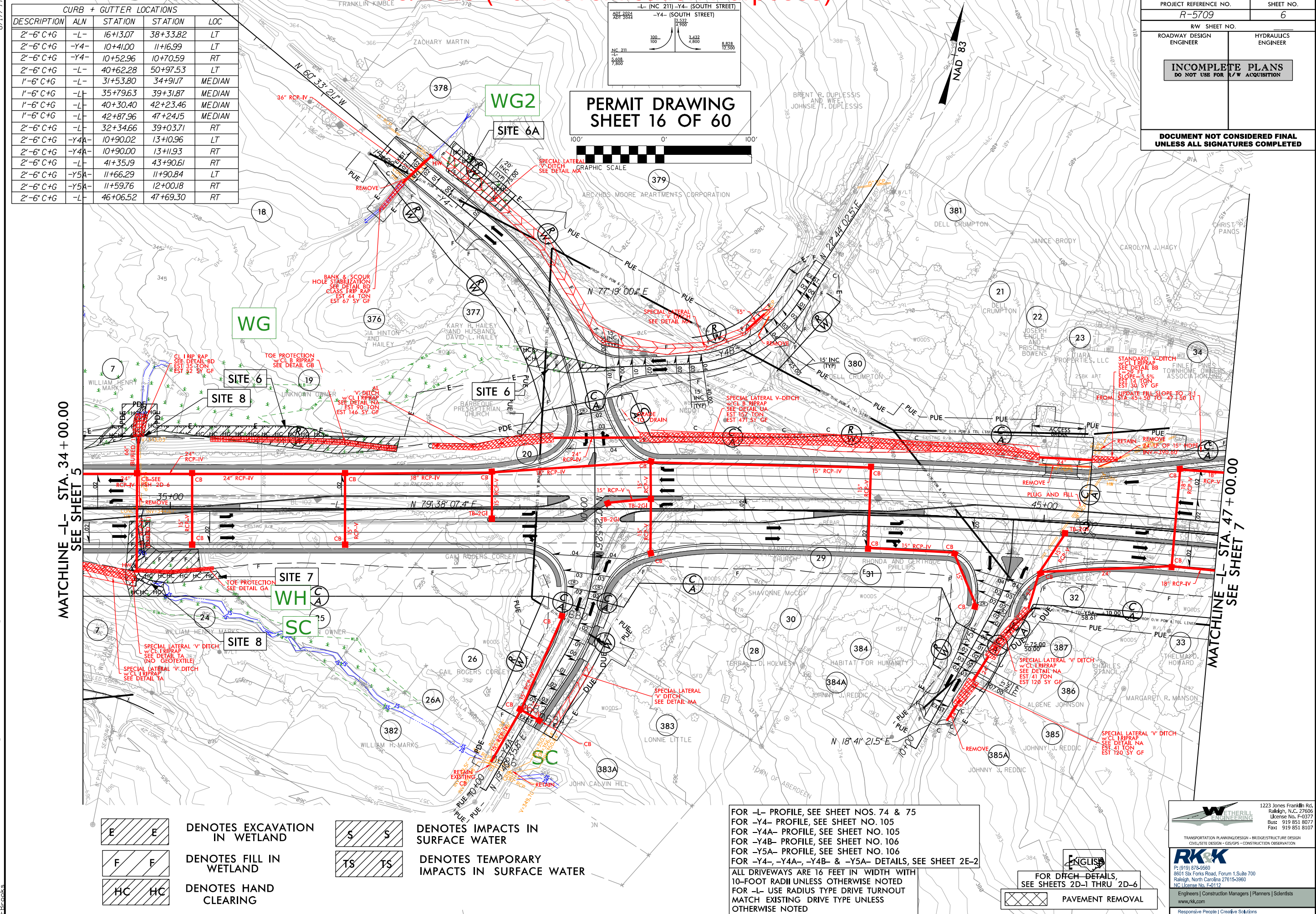
RW SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



MATCHLINE -L- STA. 34 + 00.00
SEE SHEET 5

MATCHLINE -L- STA. 47 + 00.00
SEE SHEET 7

E E

F F

HC HC

DENOTES EXCAVATION
IN WETLAND

DENOTES FILL IN
WETLAND

DENOTES HAND
CLEARING

S S

TS TS

DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

FOR -L- PROFILE, SEE SHEET NOS. 74 & 75
FOR -Y4- PROFILE, SEE SHEET NO. 105
FOR -Y4B- PROFILE, SEE SHEET NO. 106
FOR -Y5A- PROFILE, SEE SHEET NO. 106
FOR -Y4-, -Y4A-, -Y4B-, & -Y5A- DETAILS, SEE SHEET 2E-2
ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH
10-FOOT RADII UNLESS OTHERWISE NOTED
FOR -L- USE RADIUS TYPE DRIVE TURNOUT
MATCH EXISTING DRIVE TYPE UNLESS
OTHERWISE NOTED

FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

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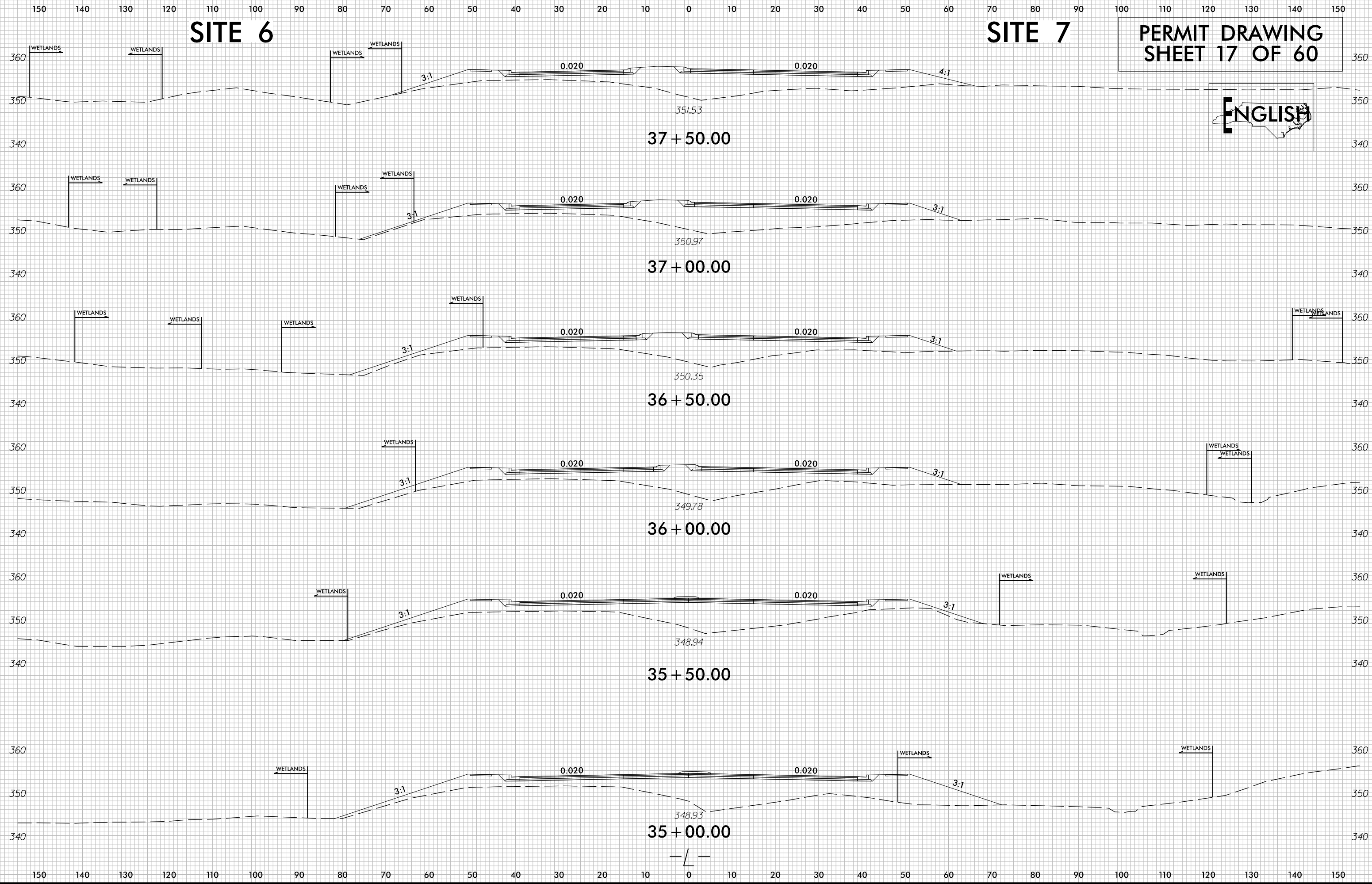
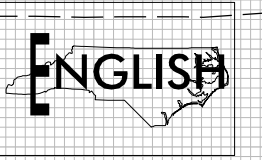
6/23/16

0 5 10	PROJ. REFERENCE NO. R-5709	SHEET NO. S1 X-15
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SITE 6

SITE 7

PERMIT DRAWING
SHEET 17 OF 60

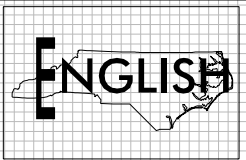


6/18/2021
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Jules Brooks

	PROJ. REFERENCE NO.	SHEET NO.
	R-5709	S1 X-167

SITE 6

PERMIT DRAWING
SHEET 18 OF 60



12 + 00.00

11 + 50.00

11 + 00.00

10 + 50.00

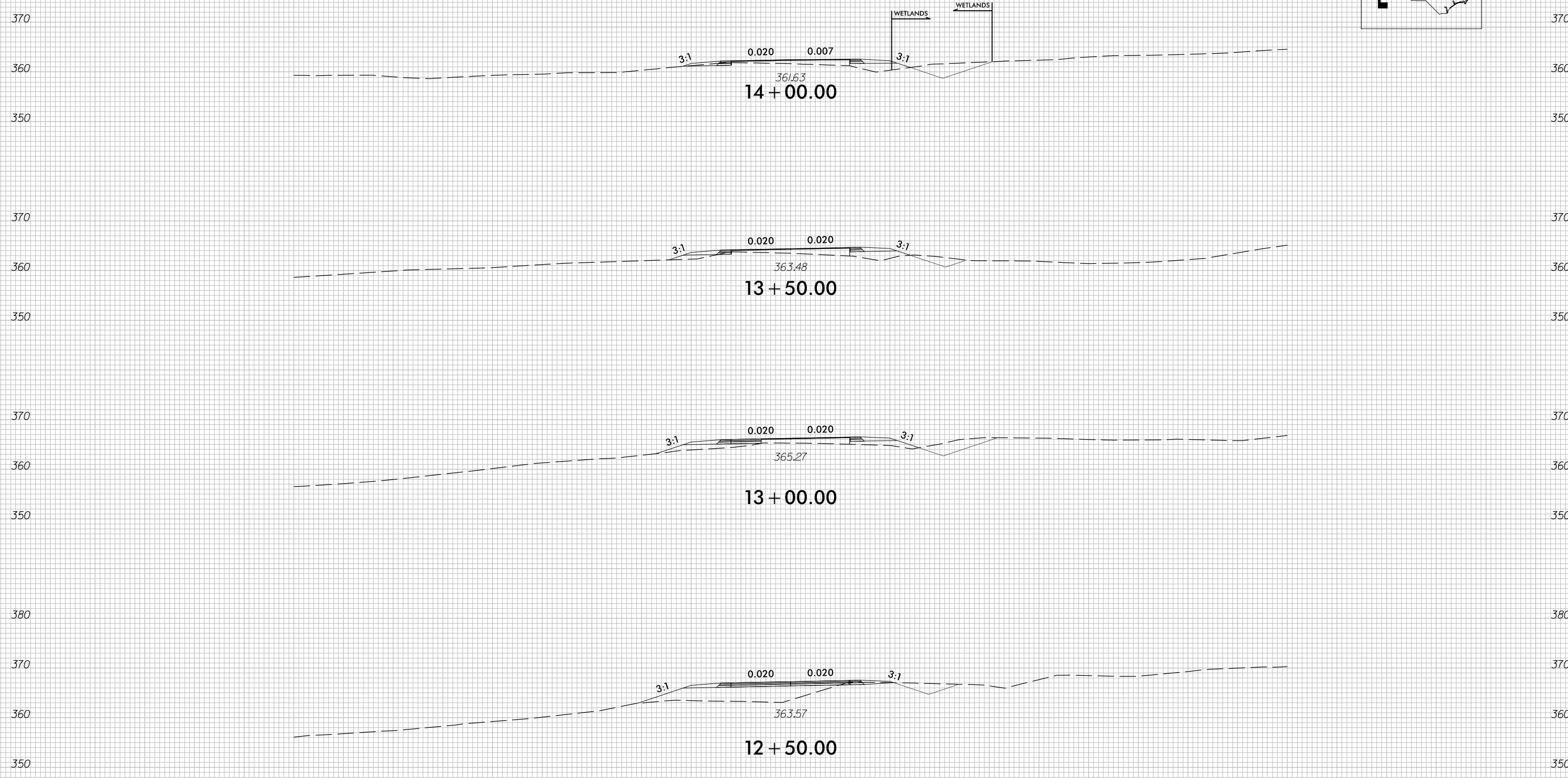
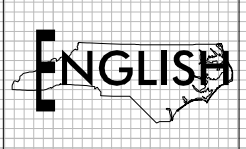
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6/23/16

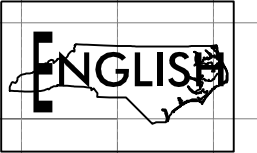
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USER: jules

SITE 6A

PERMIT DRAWING
SHEET 19 OF 60



PERMIT DRAWING
SHEET 20 OF 60



SITE 8
-L- STA. 34 + 62

355

3:1 (skewed 88.4*)

EXISTING ROADWAY

350

66" RCP-IV (BURIED 1')
(length = 152')

345

NWS = 344.9'



PROPOSED ELEVATION
= 345.20'

2.21%

NATURAL GROUND

PROPOSED ELEVATION
= 341.85'

340

-100

CL

100

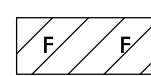
11/5/2025 (For Reverification Purposes)

CURB + GUTTER LOCATIONS			
DESCRIPTION	ALN	STATION	STATION
1'-6" C+G	-L-	155+04.61	160+29.61
1'-6" C+G	-L-	161+18.55	163+93.98
1'-6" C+G	-L-	161+18.55	163+93.98
SBG	-L-	165+23.91	169+57.10

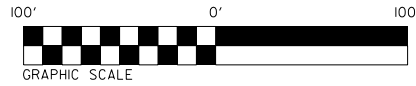
PERMIT DRAWING
SHEET 21 OF 60



DENOTES HAND
CLEARING



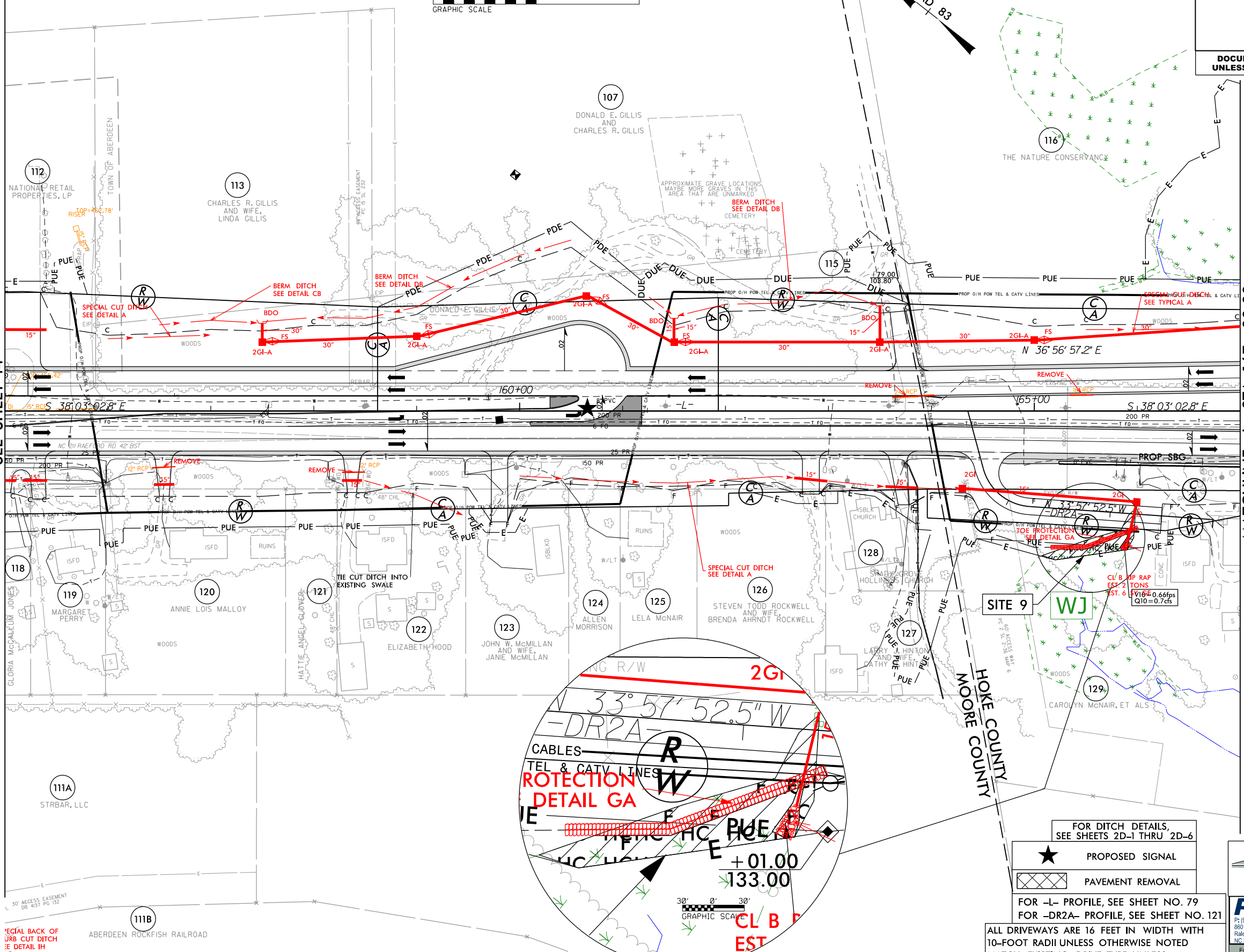
DENOTES FILL IN
WETLAND



PROJECT REFERENCE NO. R-5709	SHEET NO. 15
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE -L- STA. 155 + 00.00
SEE SHEET 14

MATCHLINE -L- STA. 167 + 00.00
SEE SHEET 16



FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

★ PROPOSED SIGNAL

PAVEMENT REMOVAL

FOR -L- PROFILE, SEE SHEET NO. 79
FOR -DR2A- PROFILE, SEE SHEET NO. 121

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH
10-FOOT RADII UNLESS OTHERWISE NOTED
MATCH EXISTING DRIVE TYPE UNLESS
OTHERWISE NOTED

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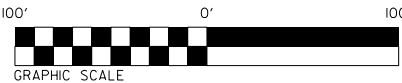
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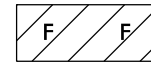
11/5/2025 (For Reverification Purposes)

CURB + GUTTER LOCATIONS			
DESCRIPTION	ALN	STATION	STATION
1'-6" C+G	-L-	155+04.61	160+29.61
1'-6" C+G	-L-	161+18.55	163+93.98
1'-6" C+G	-L-	161+18.55	163+93.98
SBG	-L-	165+23.91	169+57.10

PERMIT DRAWING
SHEET 22 OF 60



DENOTES HAND
CLEARING



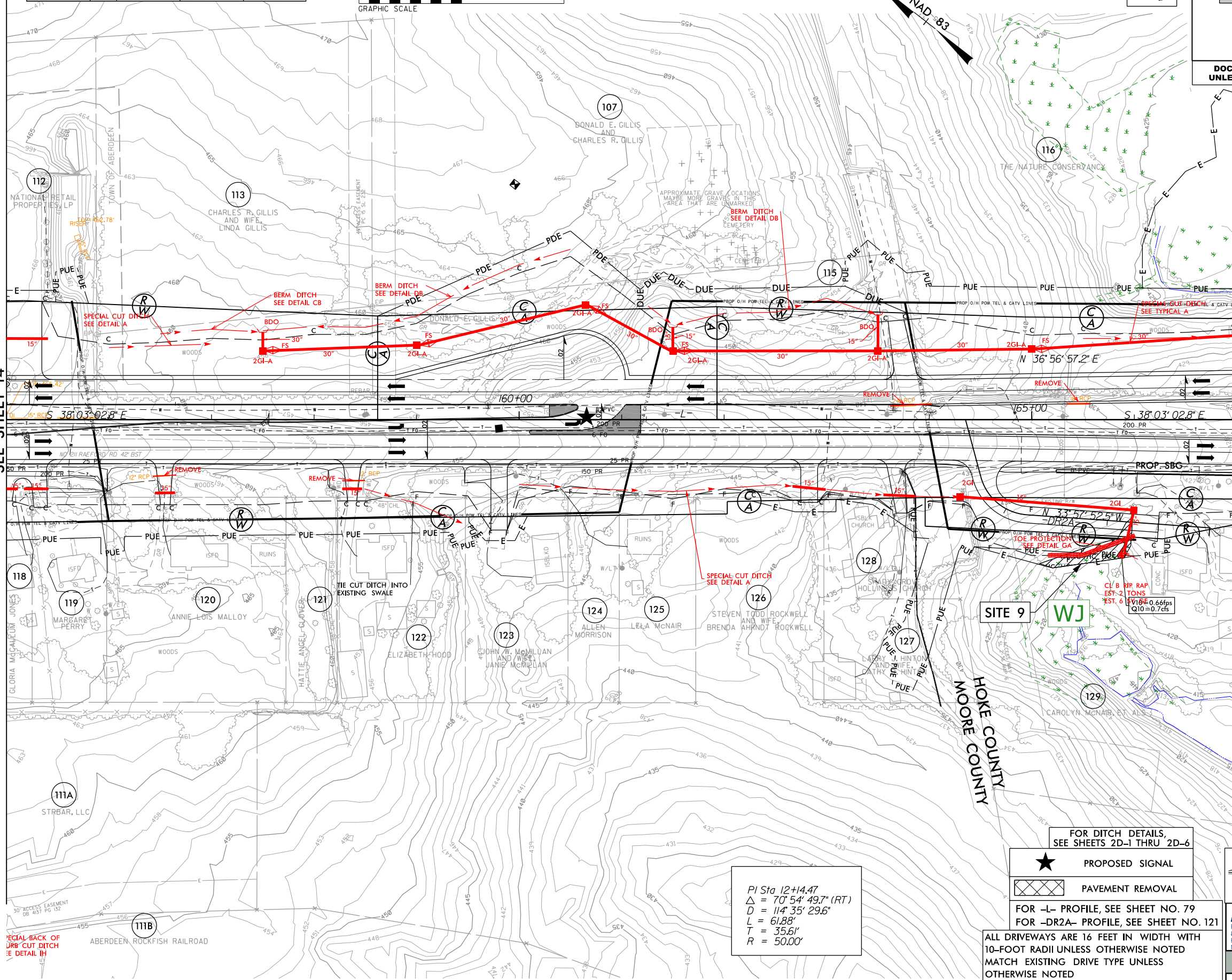
DENOTES FILL IN
WETLAND



PROJECT REFERENCE NO. R-5709	SHEET NO. 15
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE -L- STA. 155 + 00.00
SEE SHEET 14

MATCHLINE -L- STA. 167 + 00.00
SEE SHEET 16



PI Sta 12+14.47
 $\Delta = 70^\circ 54' 49.7''$ (RT)
 $D = 114' 35' 29.6''$
 $L = 61.88'$
 $T = 35.61'$
 $R = 50.00'$

FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

- ★ PROPOSED SIGNAL
- PAVEMENT REMOVAL

FOR -L- PROFILE, SEE SHEET NO. 79
FOR -DR2A- PROFILE, SEE SHEET NO. 121

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH
10-FOOT RADII UNLESS OTHERWISE NOTED
MATCH EXISTING DRIVE TYPE UNLESS
OTHERWISE NOTED

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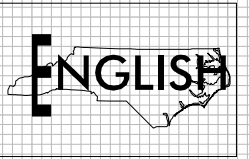
SITE 9



PROJ. REFERENCE NO.
R-5709

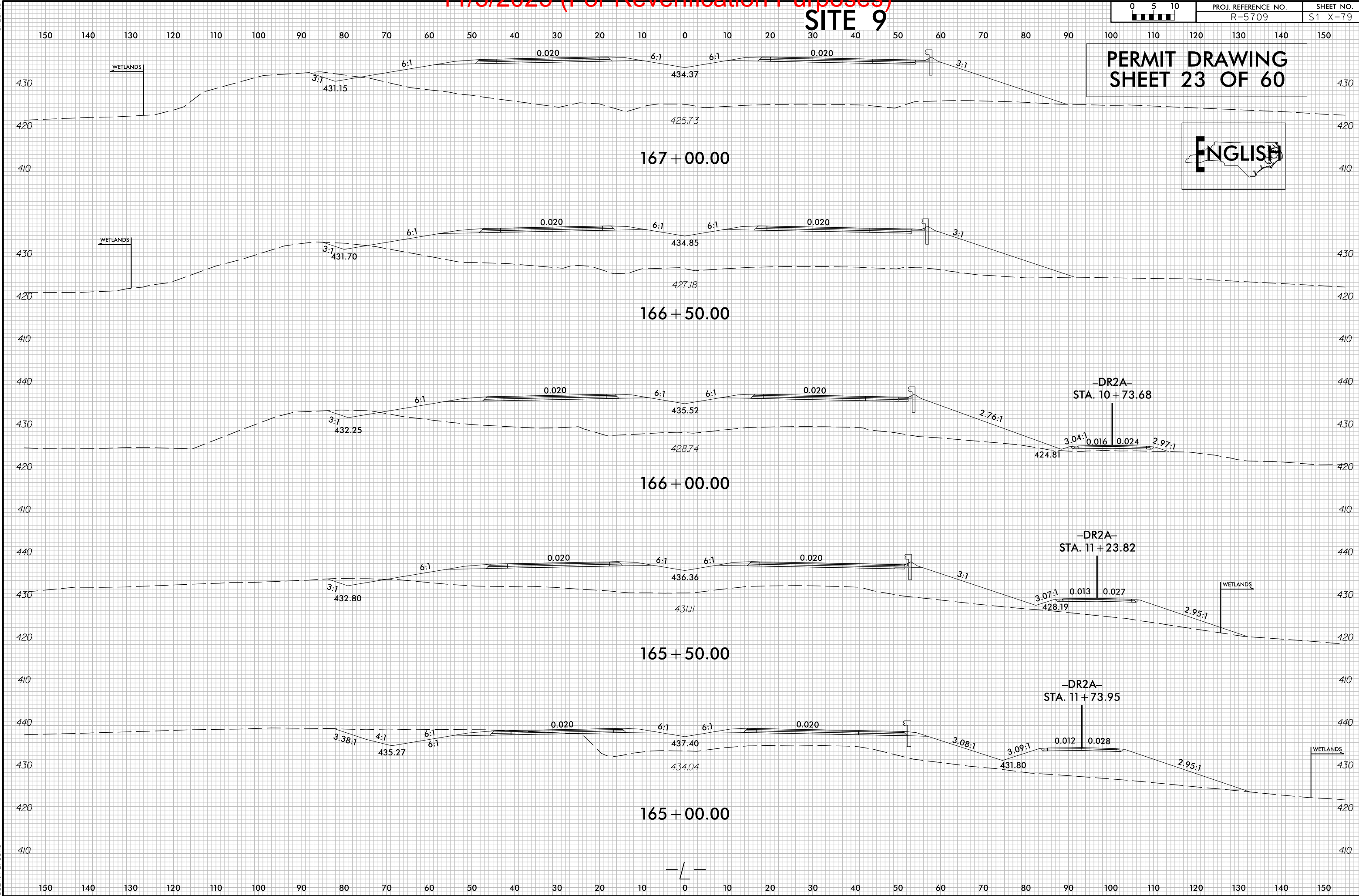
SHEET NO.
S1 X-79

PERMIT DRAWING
SHEET 23 OF 60



6/23/16

6/18/2021
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Jules Brooks



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8/17/99

CURB + GUTTER LOCATIONS				
DESCRIPTION	ALN	STATION	STATION	LOC
SBG	-L-	165+23.91	169+57.10	RT
SBG	-L-	179+34.90	181+92.22	RT

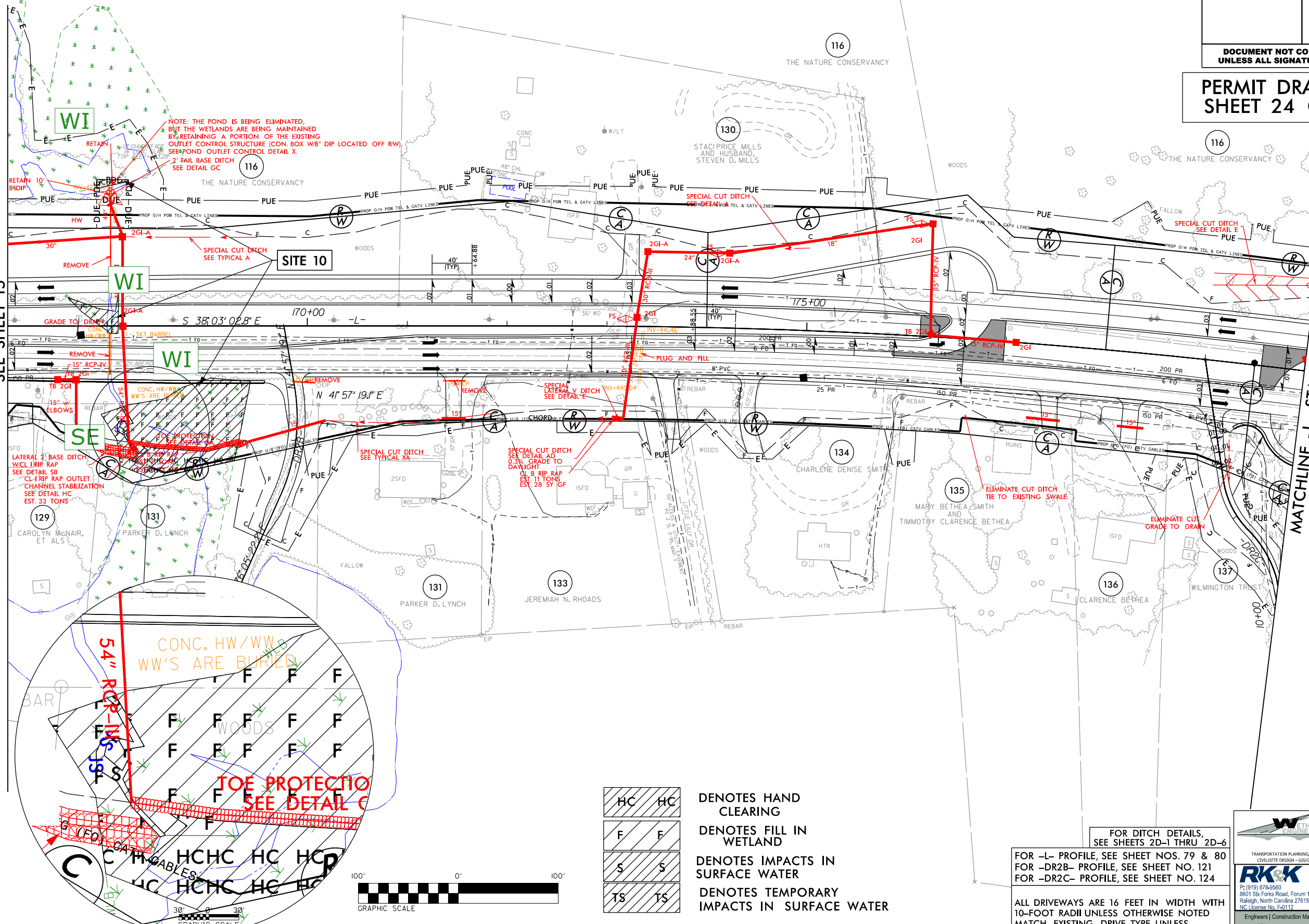


PROJECT REFERENCE NO. <i>R-5709</i>		SHEET NO. <i>16</i>	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

PERMIT DRAWING
SHEET 24 OF 60

MATCHLINE -L- STA. 167 + 00.00
SEE SHEET 15

MATCHLINE -L- STA. 180 + 00.00
SEE SHEET 17



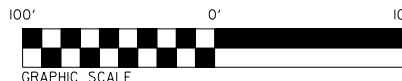
HC	HC
F	F
S	S
TS	TS

DENOTES HAND
CLEARING

DENOTES FILL IN
WETLAND

DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

FOR -L- PROFILE, SEE SHEET NOS. 79 & 80
FOR -DR2B- PROFILE, SEE SHEET NO. 121
FOR -DR2C- PROFILE, SEE SHEET NO. 124

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH
10-FOOT RADII UNLESS OTHERWISE NOTED
MATCH EXISTING DRIVE TYPE UNLESS
OTHERWISE NOTED

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PROJECT REFERENCE NO.
R-5709

SHEET NO.
16

RW SHEET NO.

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 25 OF 60

CWRB + GUTTER LOCATIONS				
DESCRIPTION	ALN	STATION	STATION	LOC
SBG	-L-	165+23.91	169+57.10	RT
SBG	-L-	179+34.90	181+92.22	RT

MATCHLINE -L- STA. 167 + 00.00
SEE SHEET 15

MATCHLINE -L- STA. 180 + 00.00
SEE SHEET 17

HC HC

F F

S S

TS TS

DENOTES HAND
CLEARING

DENOTES FILL IN
WETLAND

DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

FOR -L- PROFILE, SEE SHEET NOS. 79 & 80
FOR -DR2B- PROFILE, SEE SHEET NO. 121
FOR -DR2C- PROFILE, SEE SHEET NO. 124

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH
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MATCH EXISTING DRIVE TYPE UNLESS
OTHERWISE NOTED

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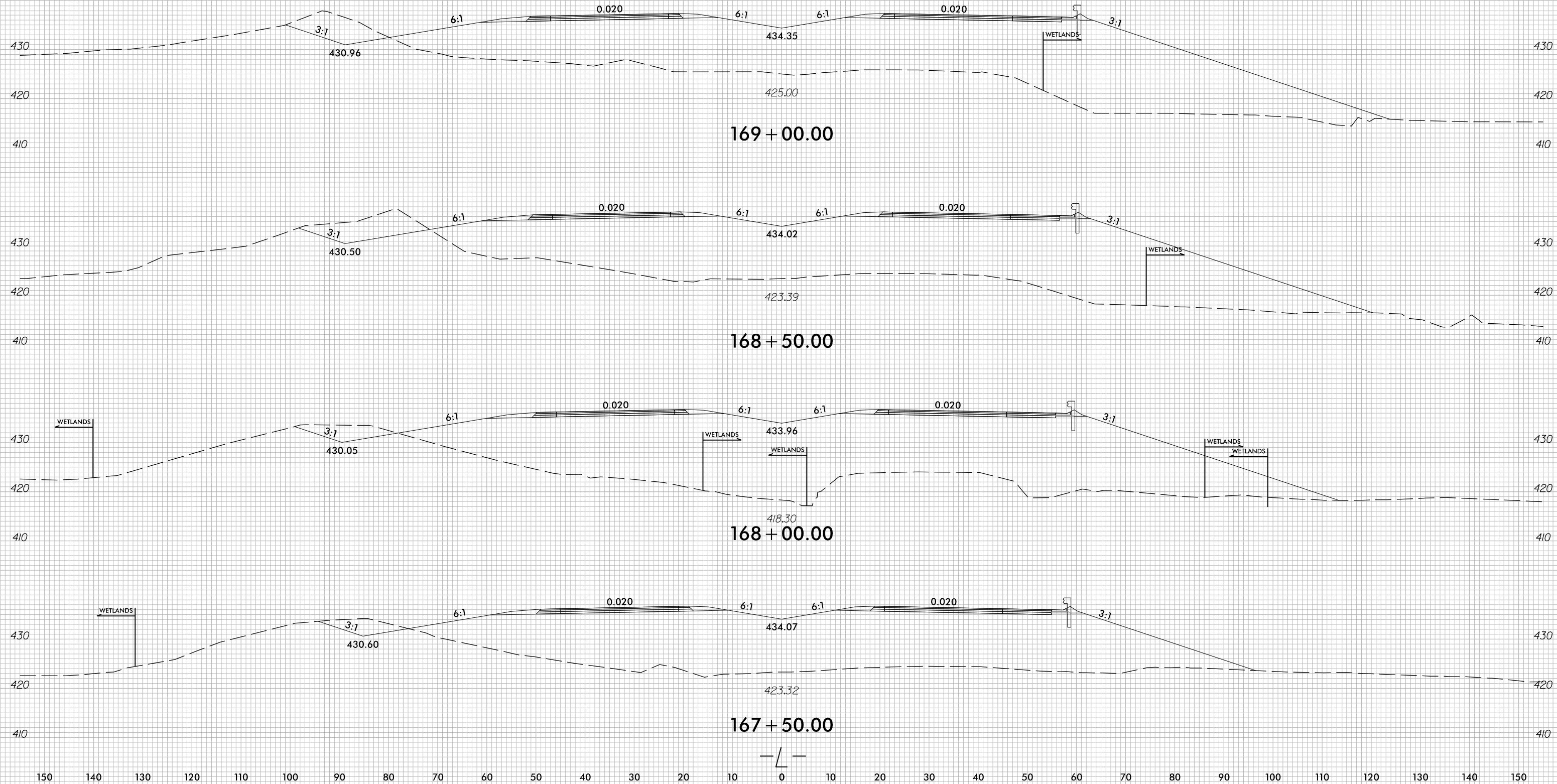
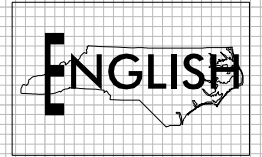
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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5709	S1 X-80

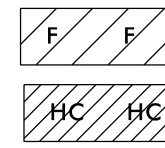
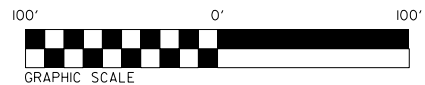
SITE 10

PERMIT DRAWING
SHEET 26 OF 60



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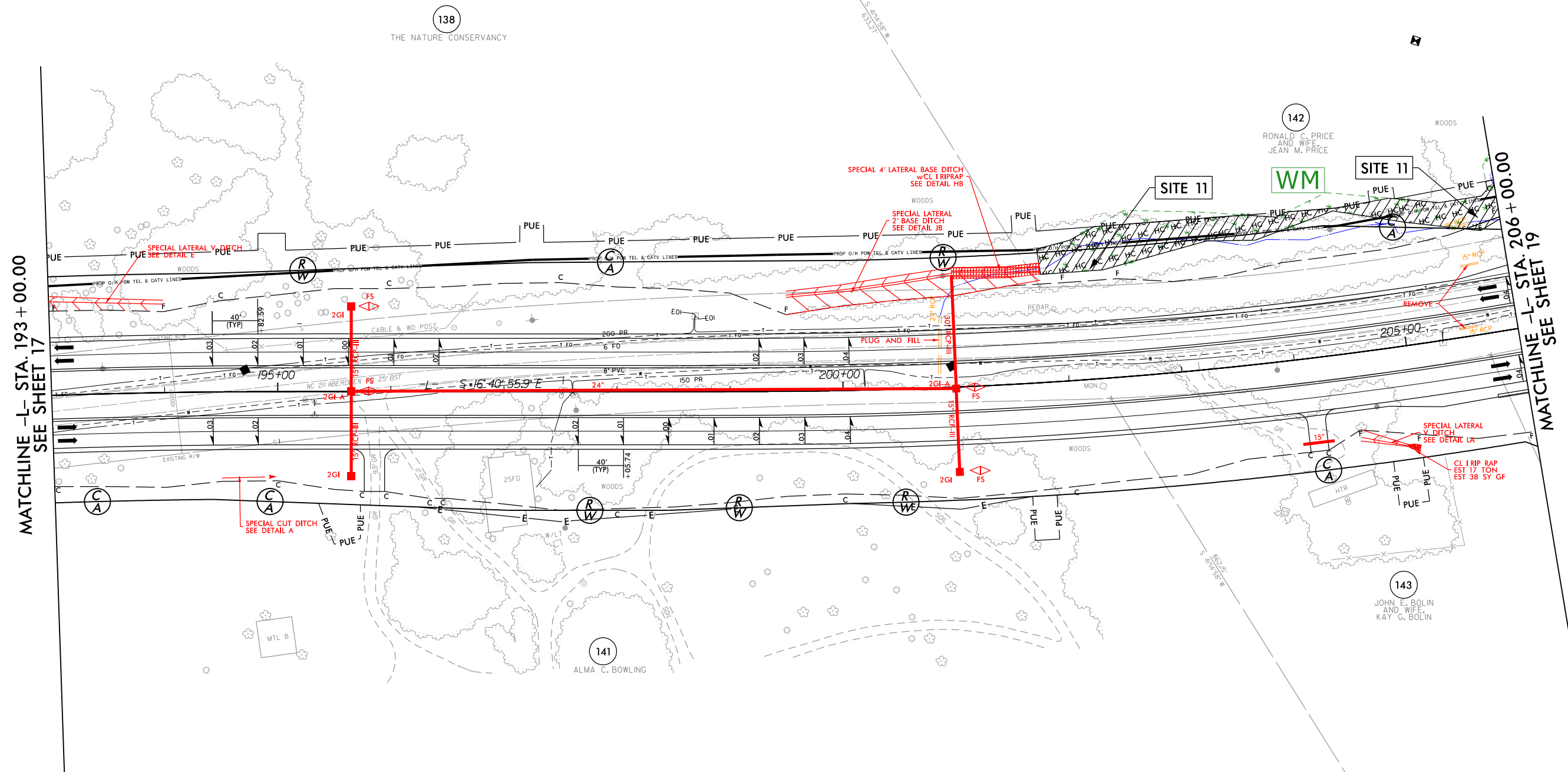
PERMIT DRAWING
SHEET 27 OF 60



DENOTES FILL IN
WETLAND

DENOTES HAND
CLEARING

PROJECT REFERENCE NO. <i>R-5709</i>		SHEET NO. <i>18</i>	
R/W SHEET NO. _____			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



MATCHLINE -L- STA. 193 + 00.00
SEE SHEET 17

MATCHLINE -L- STA. 206 + 00.00
SEE SHEET 19

CURB + GUTTER LOCATION				
DESCRIPTION	ALN	STATION	STATION	LOC
SBG	-L-	205+73.14	206+00.00	RT

FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

FOR -L- PROFILE, SEE SHEET NOS. 80 & 81

ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH
10-FOOT RADII UNLESS OTHERWISE NOTED
MATCH EXISTING DRIVE TYPE UNLESS
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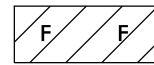
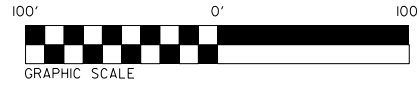
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SHEET 28 OF 60



DENOTES FILL IN
WETLAND



DENOTES HAND
CLEARING

PROJECT REFERENCE NO. <i>R-5709</i>		SHEET NO. <i>18</i>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MATCHLINE -L- STA. 193 + 00.00
SEE SHEET 17

MATCHLINE -L- STA. 206 + 00.00
SEE SHEET 19

CURB + GUTTER LOCATION				
DESCRIPTION	ALN	STATION	STATION	LOC
SBG	-L-	205+73.14	206+00.00	RT

FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

FOR -L- PROFILE, SEE SHEET NOS. 80 & 81

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OTHERWISE NOTED

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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

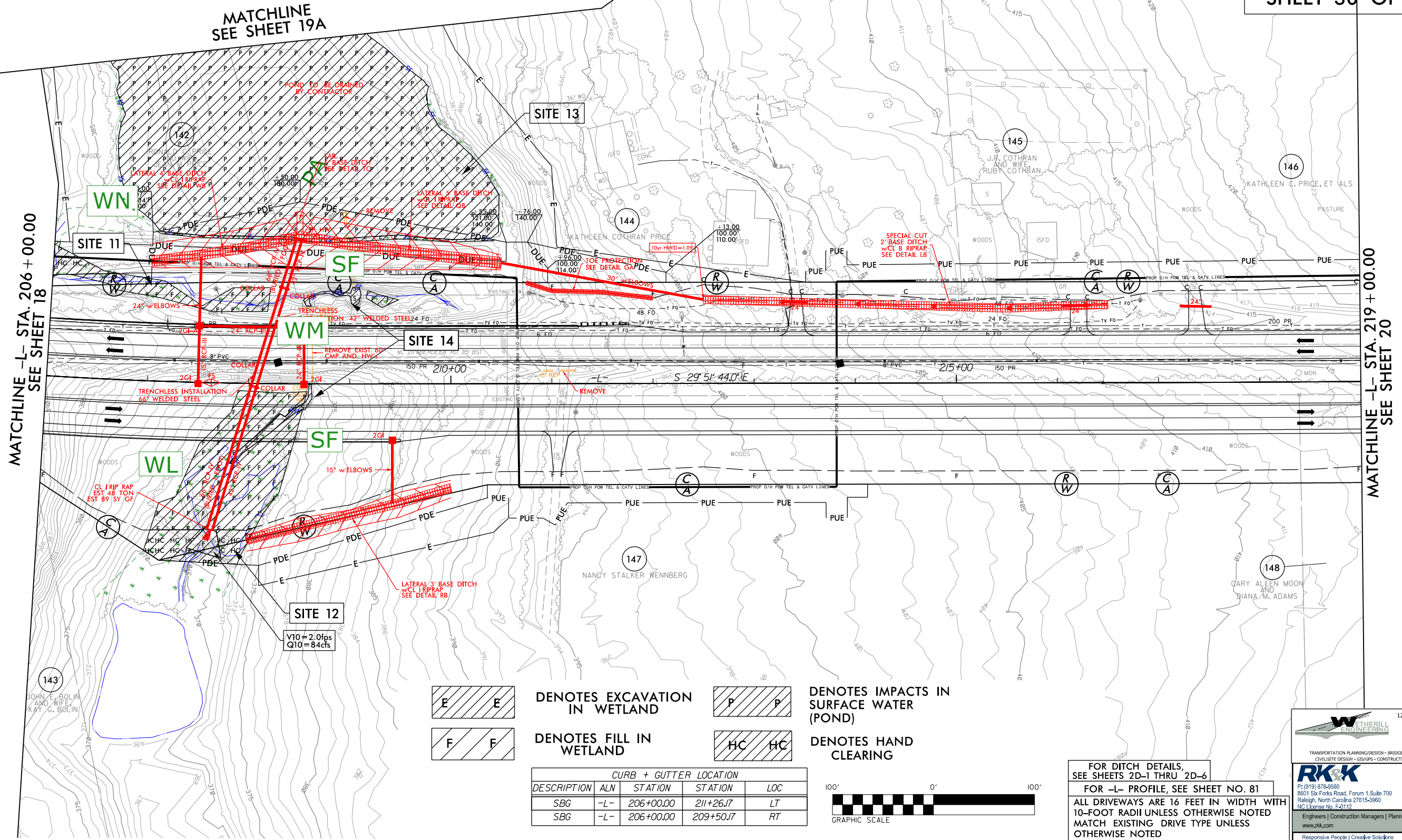
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PROJECT REFERENCE NO. R-5709		SHEET NO. 19	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
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PERMIT DRAWING
SHEET 30 OF 60



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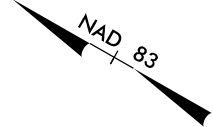
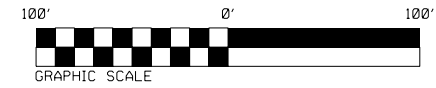
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DENOTES IMPACTS IN
SURFACE WATER
(POND)

PERMIT DRAWING
SHEET 31 OF 60



PROJECT REFERENCE NO. <i>R-5709</i>		SHEET NO. <i>19A</i>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

8/17/99
8/18/2021
B:\Hydraulics\PERMITS\Environmental\Drawings\PSH\R5709_hyd_psh19A.dgn
E:\Brooks

N 32°23'36" W
489.81'

N 32°23'36" W
976.83'

142
RONALD C. PRICE
AND WIFE
JEAN M. PRICE
DB 410 PG 776

144
KATHLEEN COTHRAN PRICE
DB 200 PG 65

MATCHLINE
SEE SHEET 18

MATCHLINE
SEE SHEET 19

MATCHLINE
SEE SHEET 18

MATCHLINE
SEE SHEET 19

POND TO BE DRAINED
BY CONTRACTOR



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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

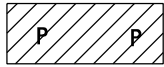


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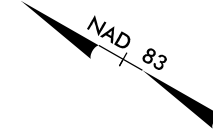
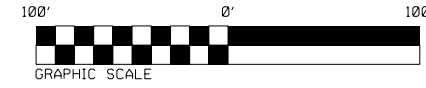
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8/17/99



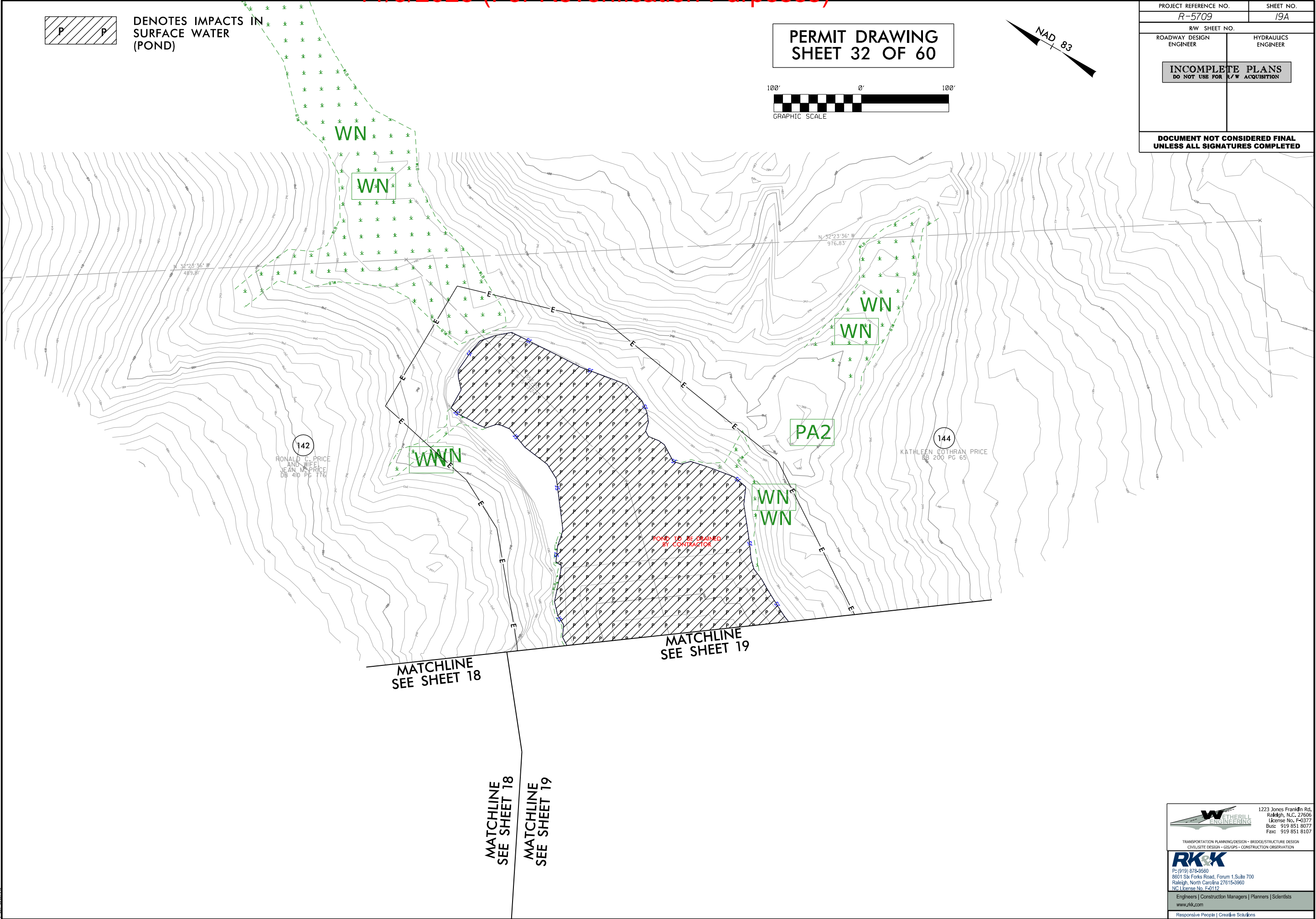
DENOTES IMPACTS IN
SURFACE WATER
(POND)

PERMIT DRAWING
SHEET 32 OF 60



PROJECT REFERENCE NO. <i>R-5709</i>		SHEET NO. <i>19A</i>	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

6/18/2021
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EPB





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CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

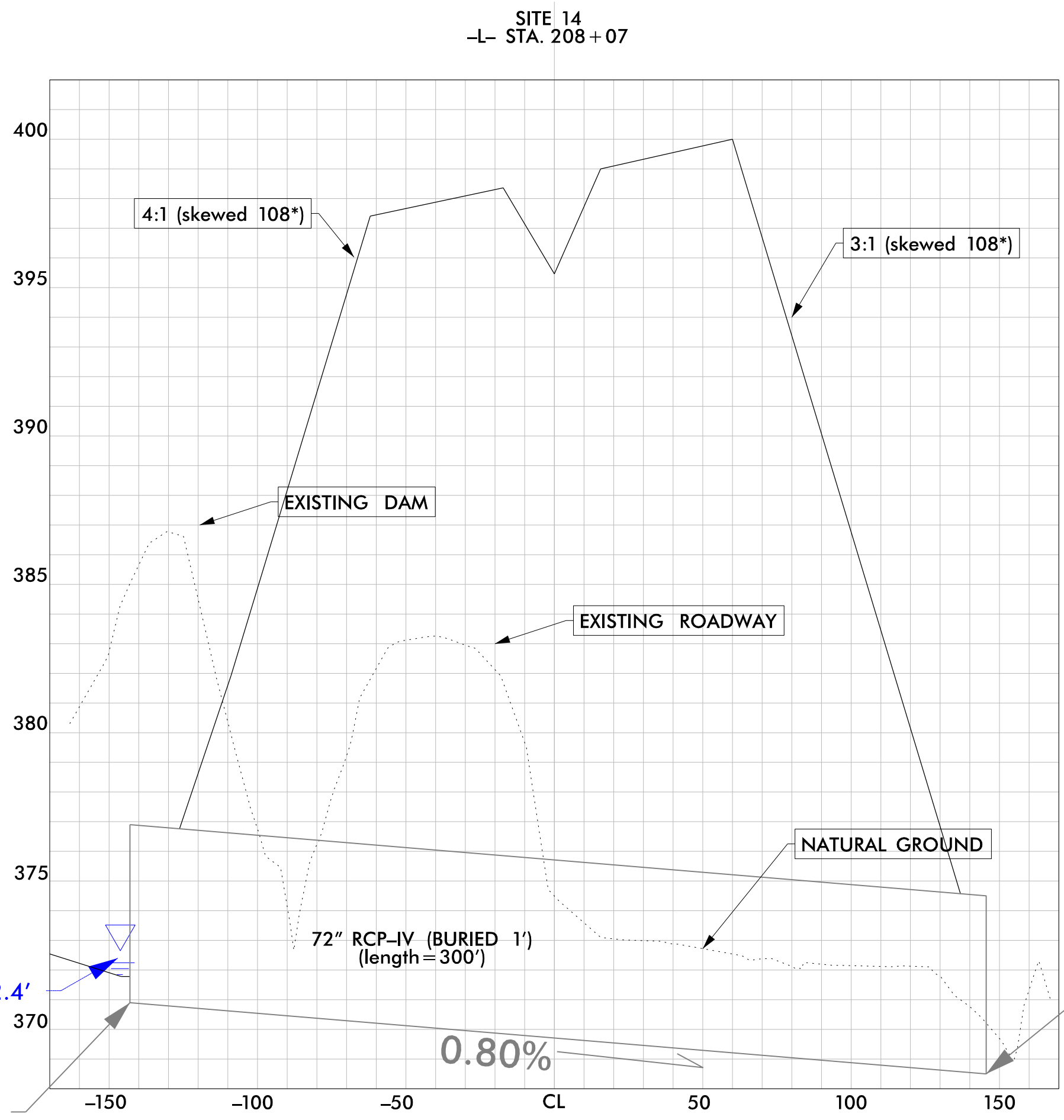


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PERMIT DRAWING
SHEET 33 OF 60



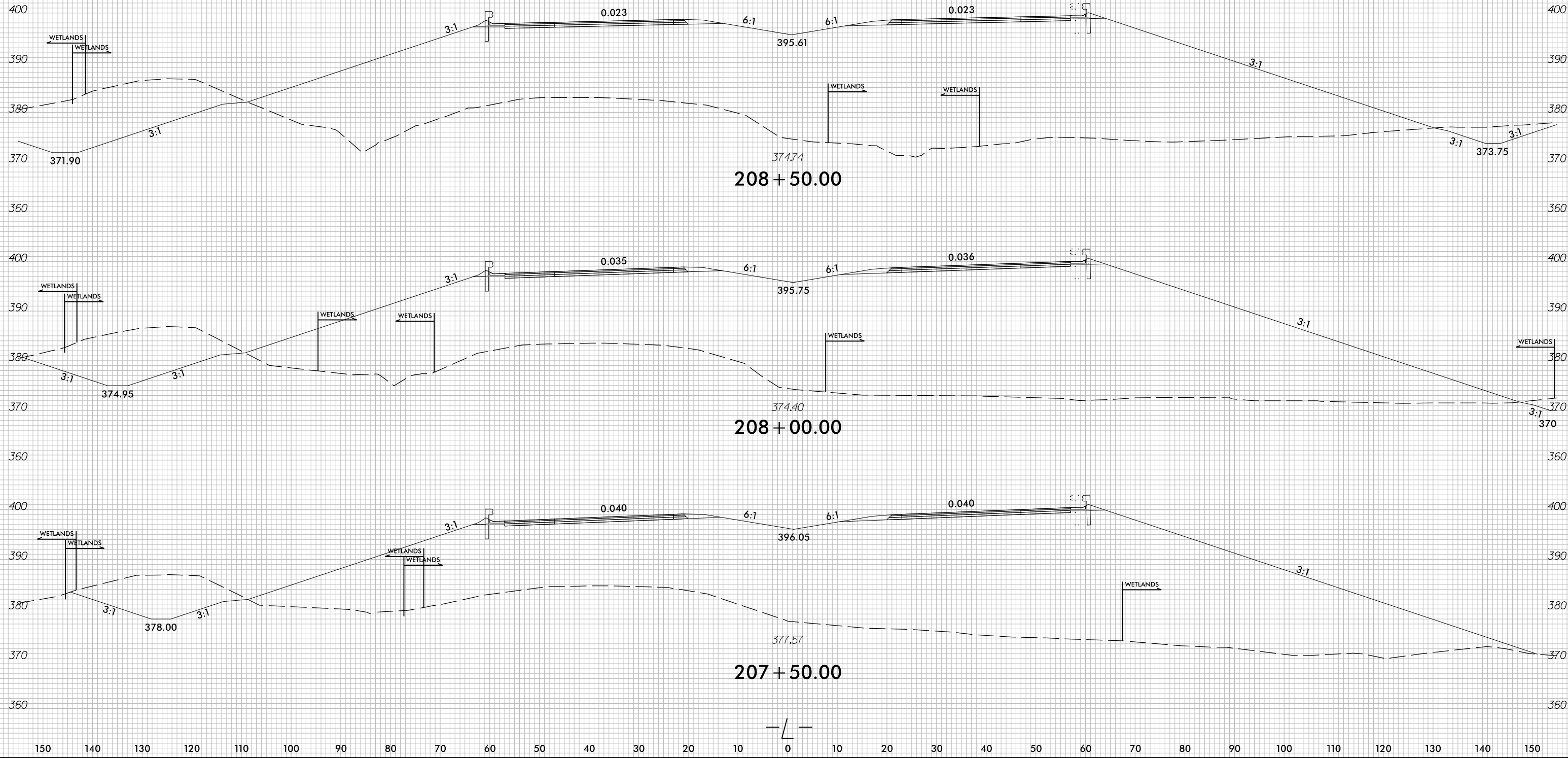
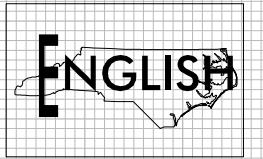
6/23/16

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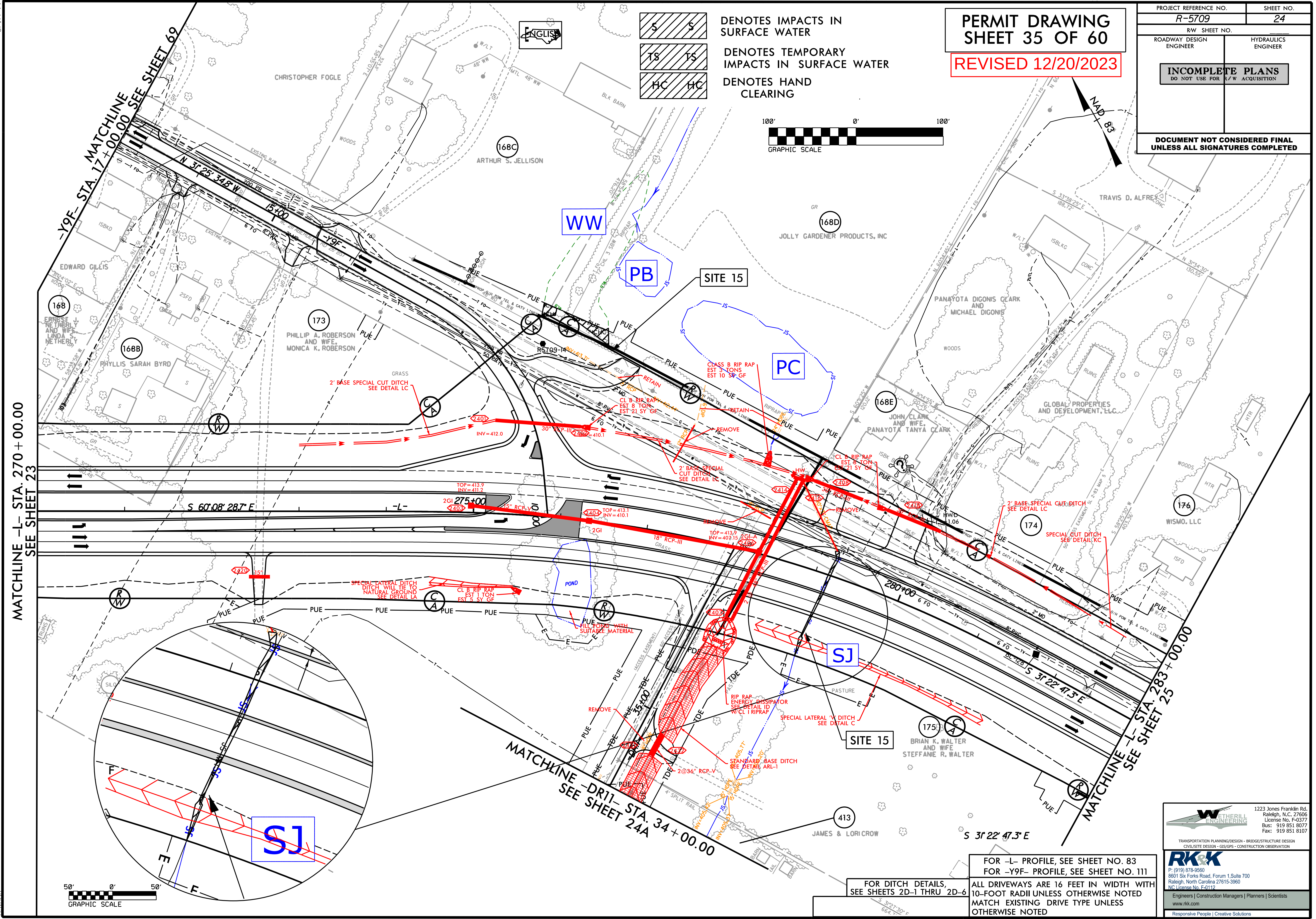
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PERMIT DRAWING
SHEET 34 OF 60



8/17/99

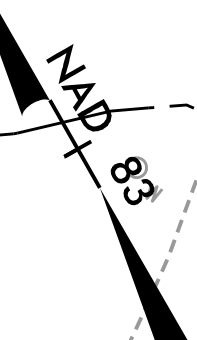
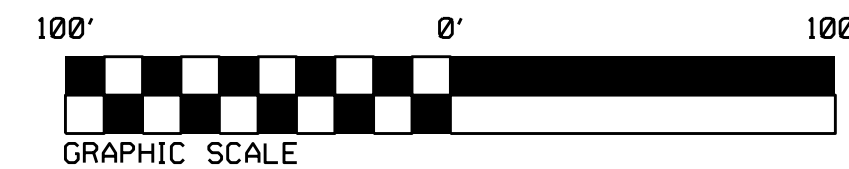
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1/3/2024
RKH



DENOTES IMPACTS IN SURFACE WATER
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER
 DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 35 OF 60

REVISED 12/20/2023

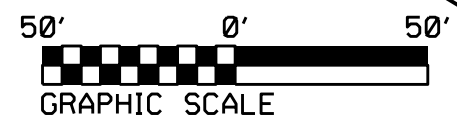


PROJECT REFERENCE NO.		SHEET NO.	
R-5709		24	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MATCHLINE -L- STA. 270+00.00
SEE SHEET 23

MATCHLINE -L- STA. 283+00.00
SEE SHEET 25

MATCHLINE -DR11- STA. 34+00.00
SEE SHEET 24A



FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

FOR -L- PROFILE, SEE SHEET NO. 83
FOR -Y9F- PROFILE, SEE SHEET NO. 111

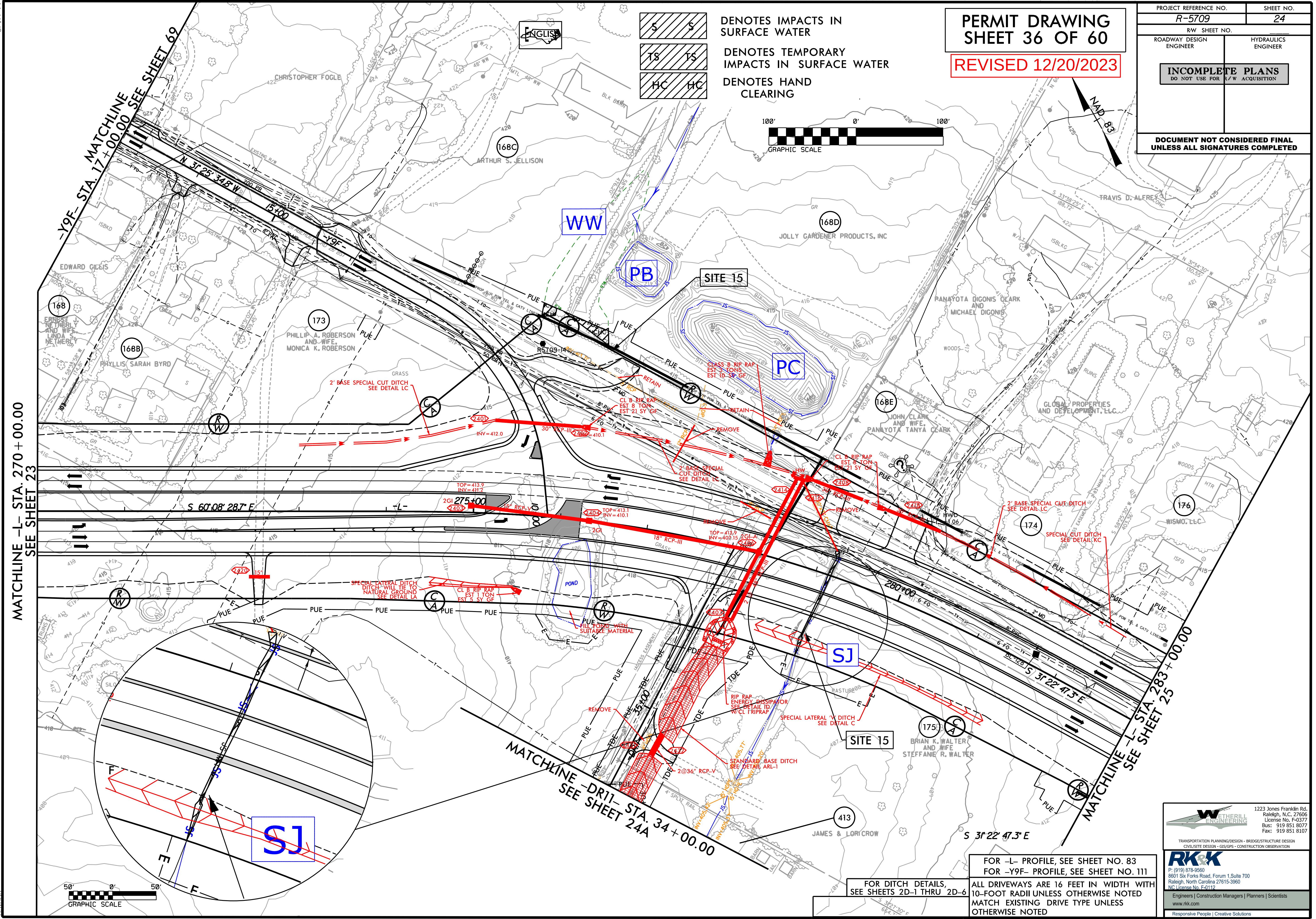
ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH
10-FOOT RADII UNLESS OTHERWISE NOTED
MATCH EXISTING DRIVE TYPE UNLESS
OTHERWISE NOTED

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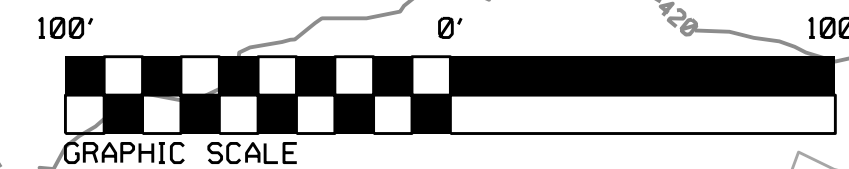
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1/3/2024
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DENOTES IMPACTS IN SURFACE WATER
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER
 DENOTES HAND CLEARING

PERMIT DRAWING
SHEET 36 OF 60

REVISED 12/20/2023

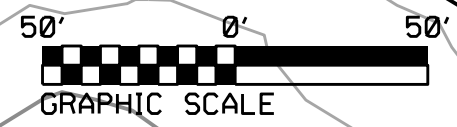


PROJECT REFERENCE NO. <i>R-5709</i>		SHEET NO. <i>24</i>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MATCHLINE -L- STA. 270+00.00
SEE SHEET 23

MATCHLINE -L- STA. 283+00.00
SEE SHEET 25

MATCHLINE -DR11- STA. 34+00.00
SEE SHEET 24A



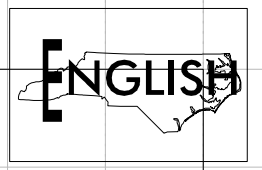
FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

FOR -L- PROFILE, SEE SHEET NO. 83
FOR -Y9F- PROFILE, SEE SHEET NO. 111
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PERMIT DRAWING
SHEET 37 OF 60



SITE 15
-L- STA. 278 + 80

420

4:1 (skewed 72.5*)

EXISTING ROADWAY

415

NATURAL GROUND

2@48" RCP-III
length = 174'

410

NWS = 410.2'

0.98%

PROPOSED ELEVATION
= 409.40'

PROPOSED ELEVATION
= 407.70'

405

-100

CL

100

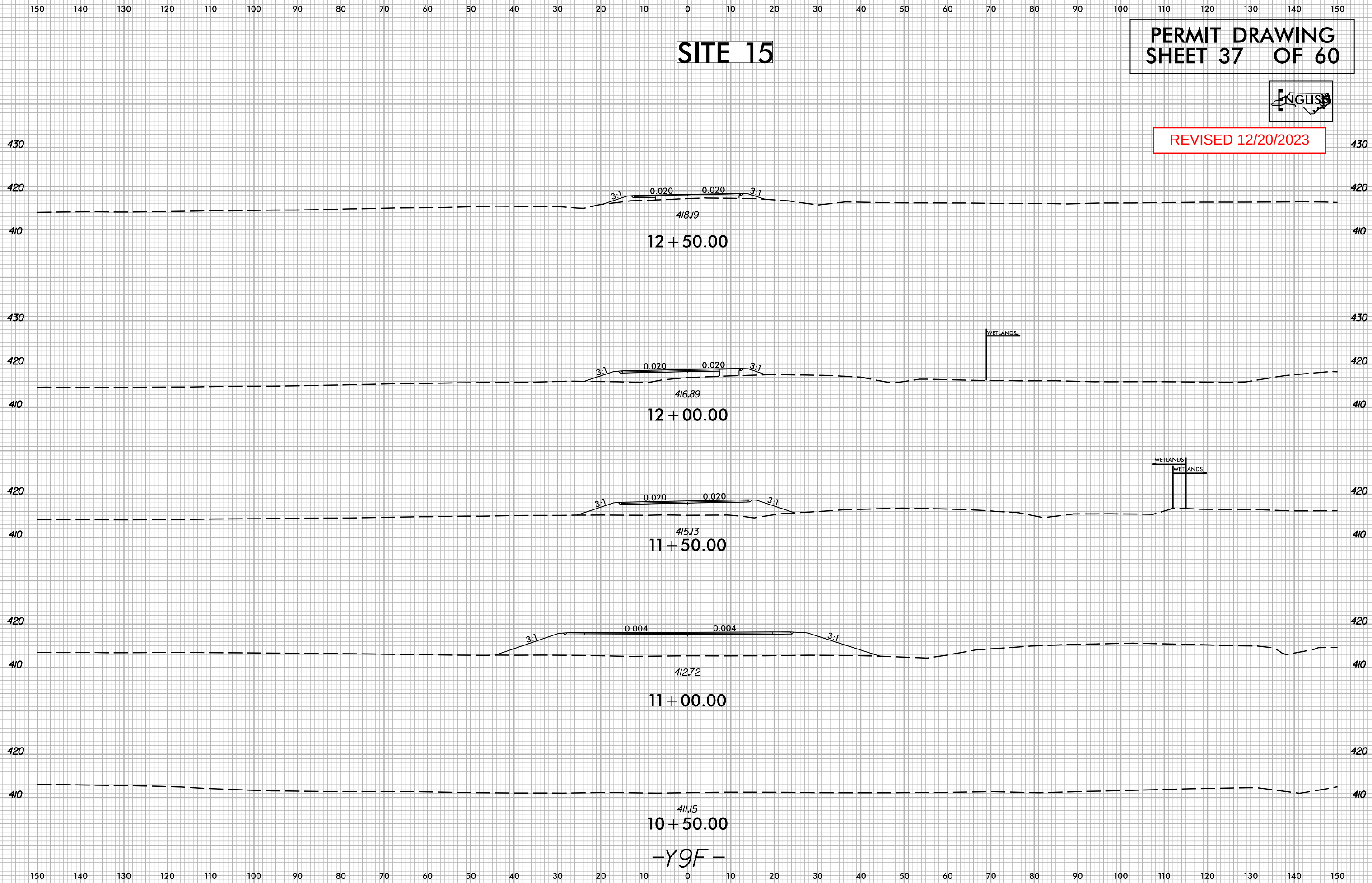
6/18/2021
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USER: TEB-cooks

6/23/16

PERMIT DRAWING
SHEET 37 OF 60



REVISED 12/20/2023



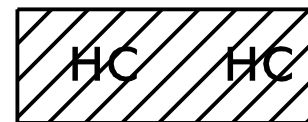
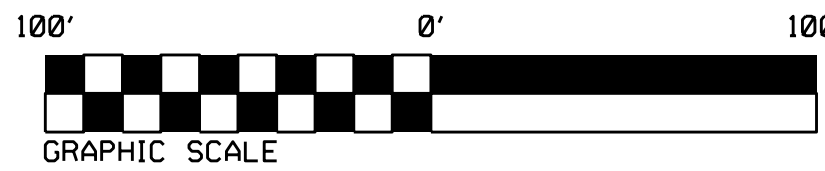
8/17/99

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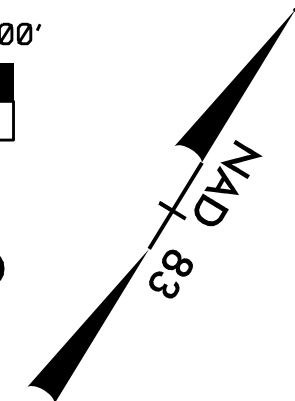


PERMIT DRAWING
SHEET 38 OF 60

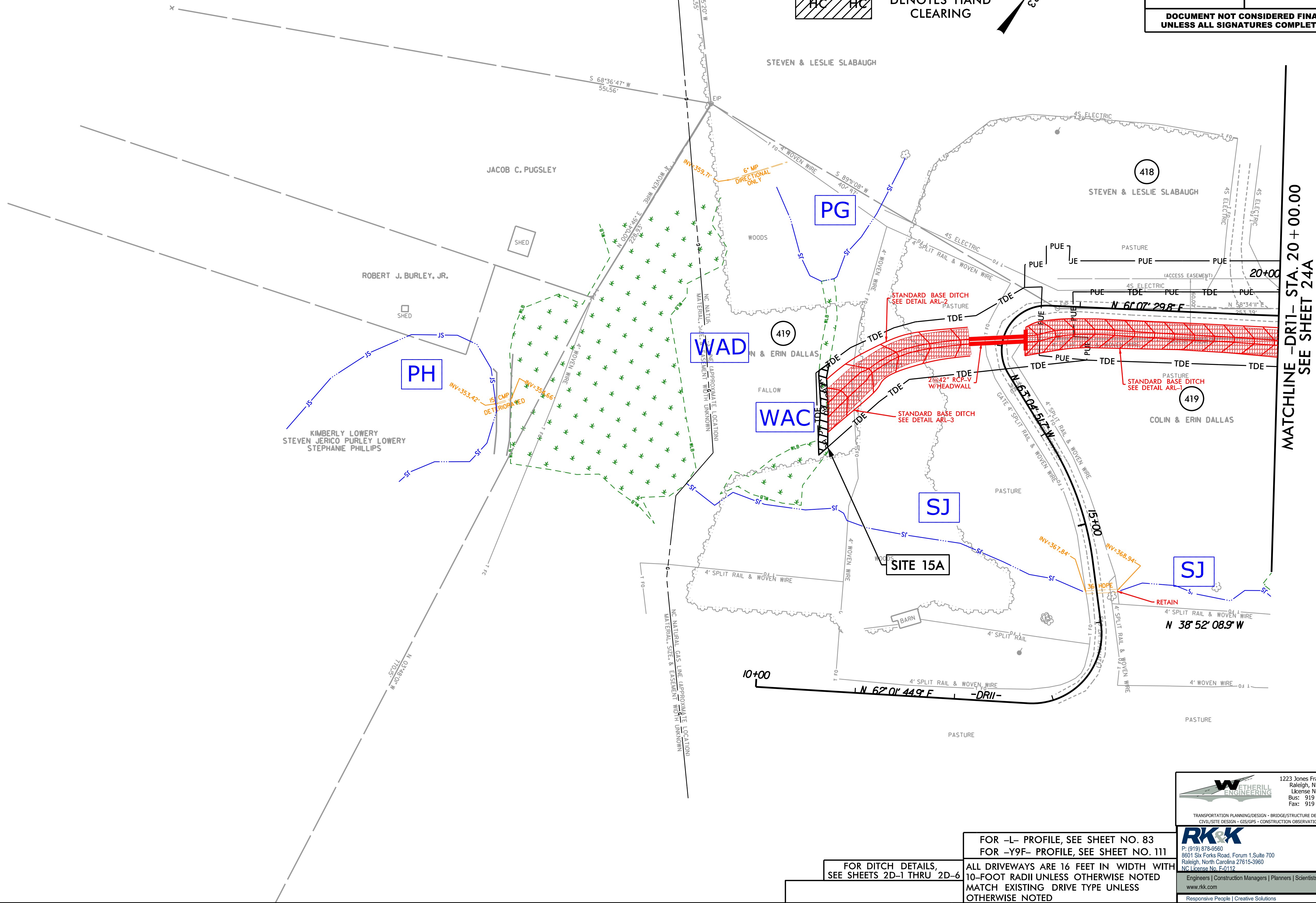
REVISED
12/20/2023



DENOTES HAND
CLEARING



PROJECT REFERENCE NO.		SHEET NO.
R-5709		24B
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		



FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6

FOR -L- PROFILE, SEE SHEET NO. 83
FOR -YF- PROFILE, SEE SHEET NO. 111

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OTHERWISE NOTED



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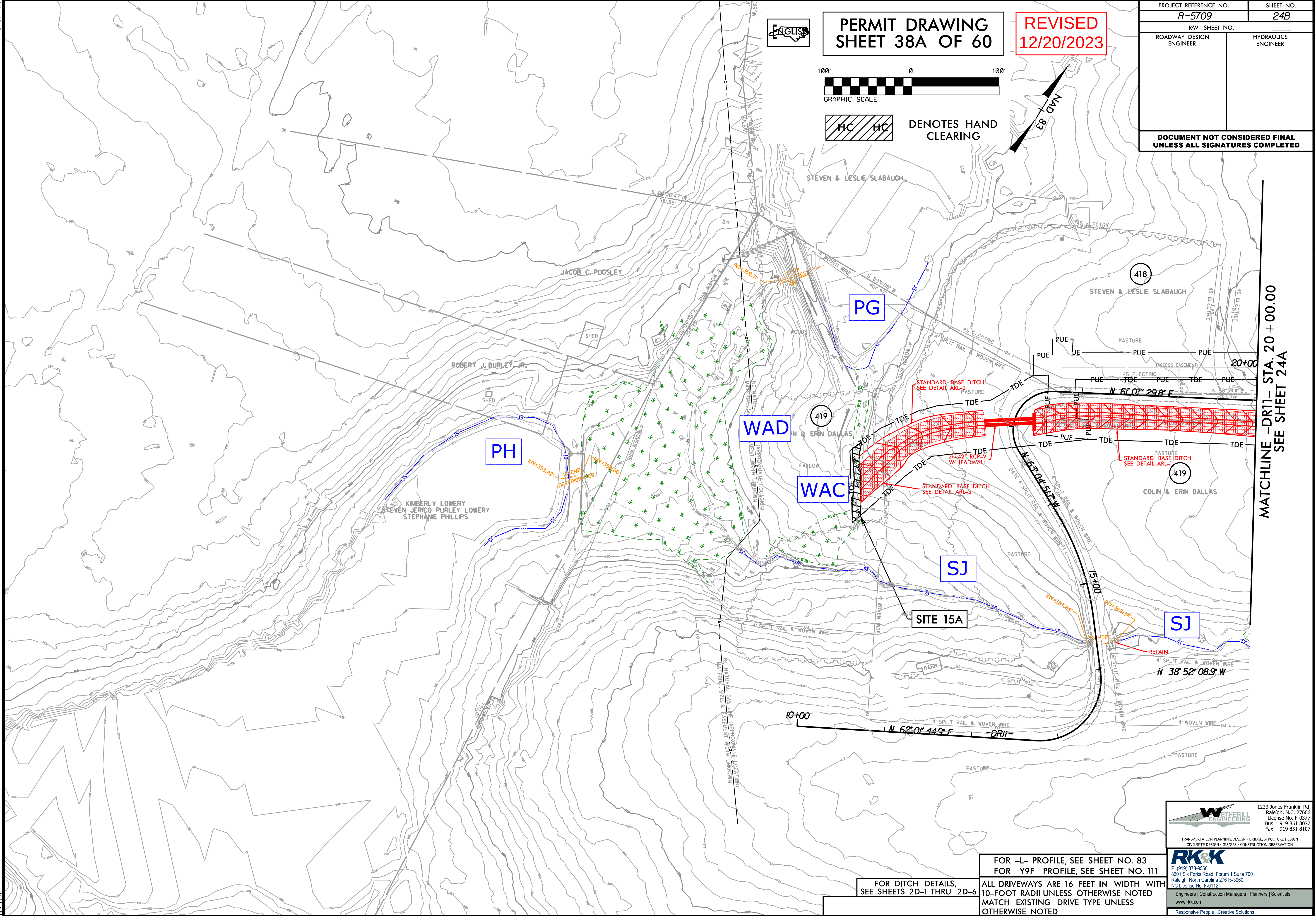


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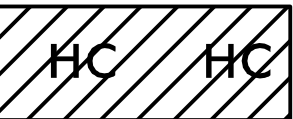
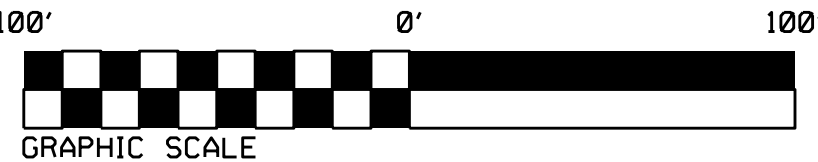
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11/3/2024



PERMIT DRAWING
SHEET 38A OF 60

REVISED
12/20/2023



DENOTES HAND
CLEARING

PROJECT REFERENCE NO. <i>R-5709</i>		SHEET NO. <i>24B</i>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MATCHLINE -DRI1- STA. 20+00.00
SEE SHEET 24A

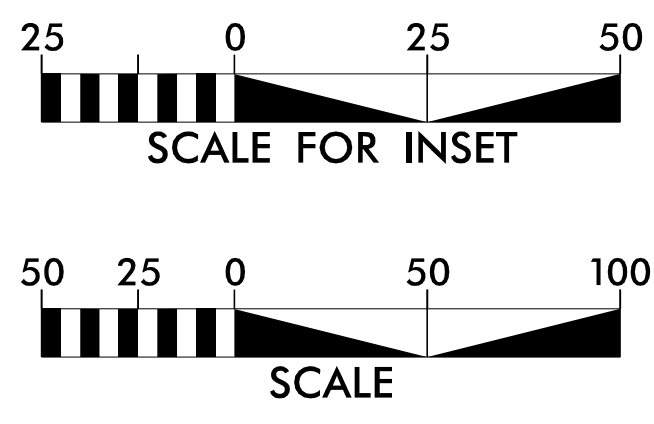
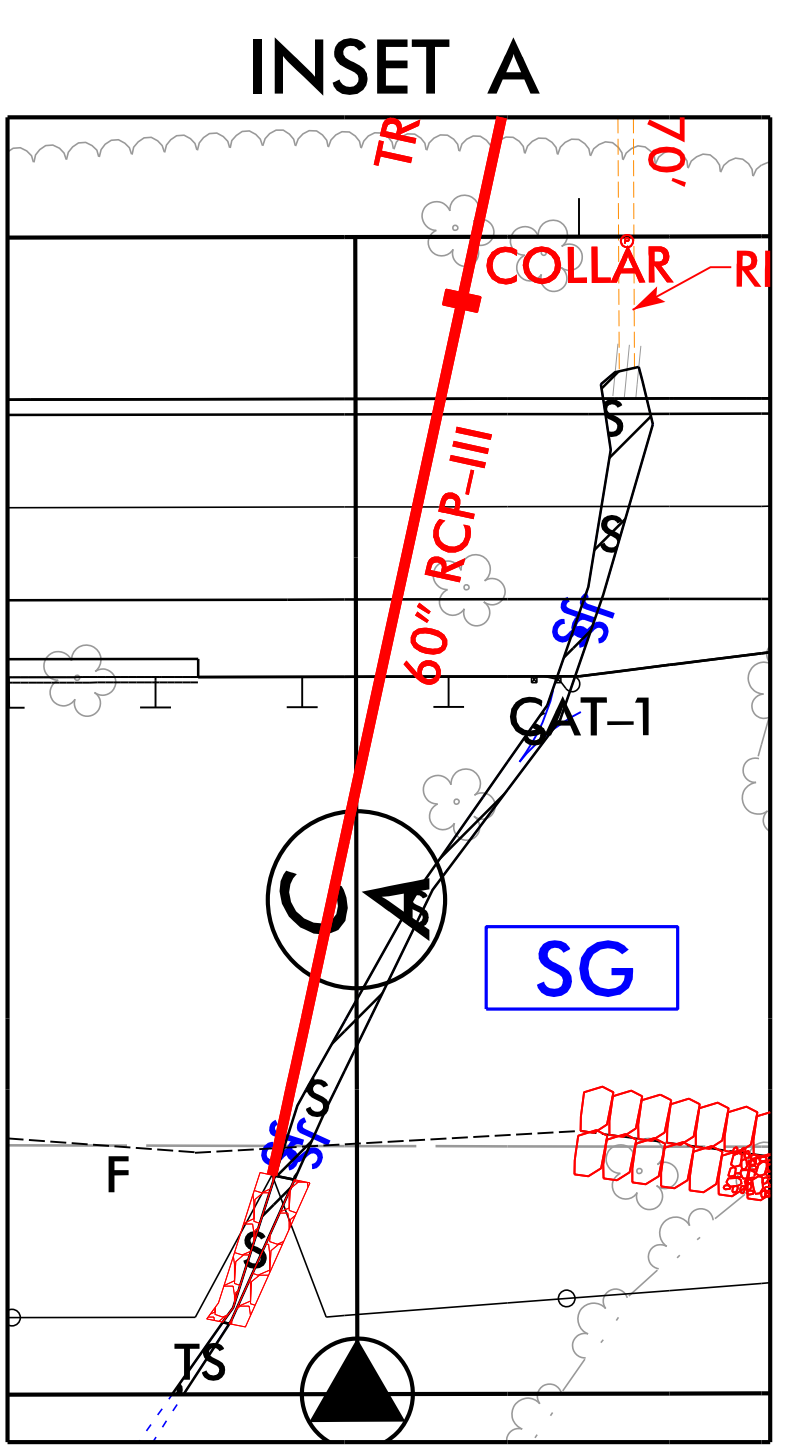
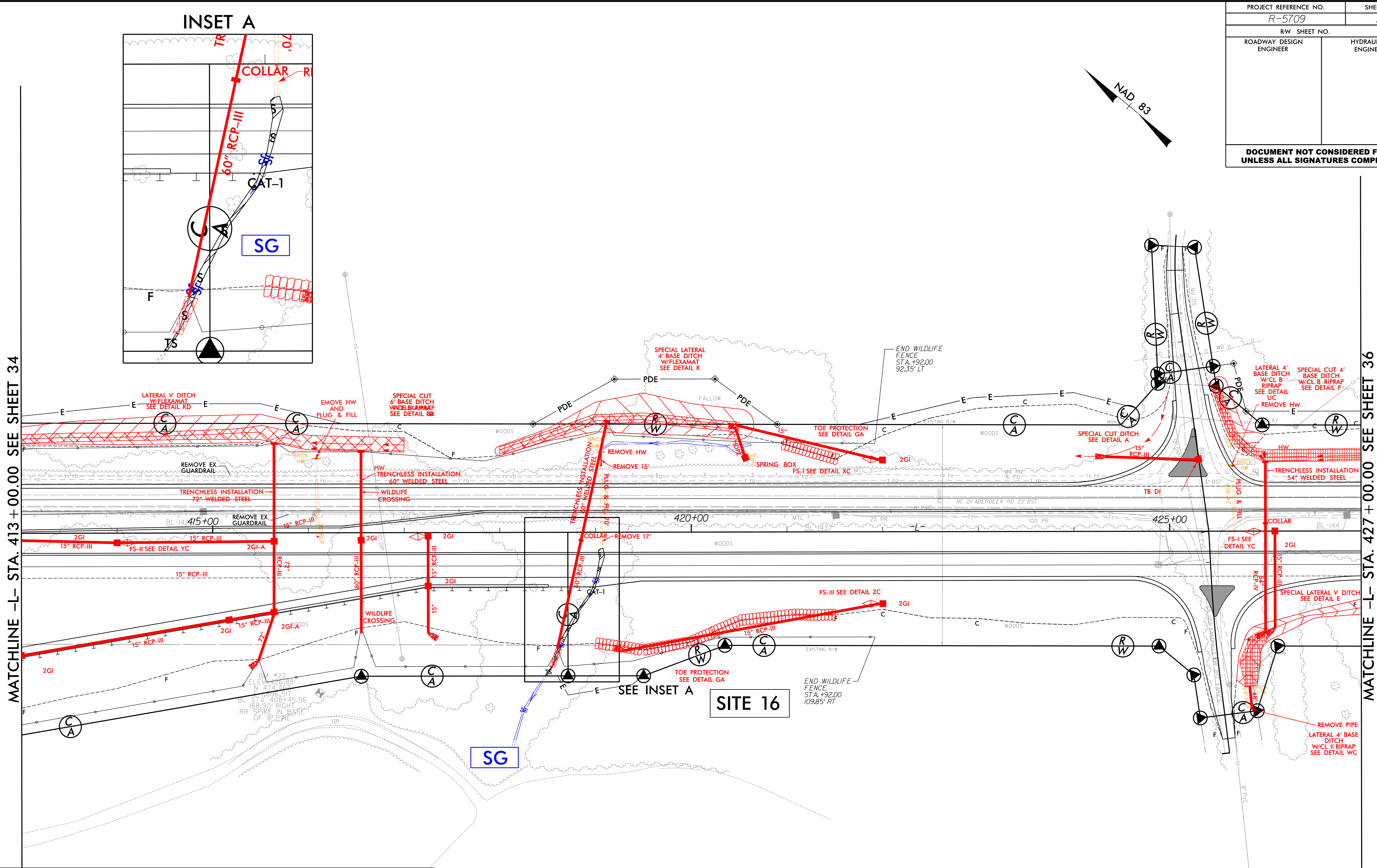
FOR -L- PROFILE, SEE SHEET NO. 83
FOR -Y9F- PROFILE, SEE SHEET NO. 111
FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6
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ENVIRONMENTAL DESIGN - CIVIL/STRUCTURE DESIGN - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
R-5709	35
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



PERMIT DRAWING
SHEET 39 OF 60

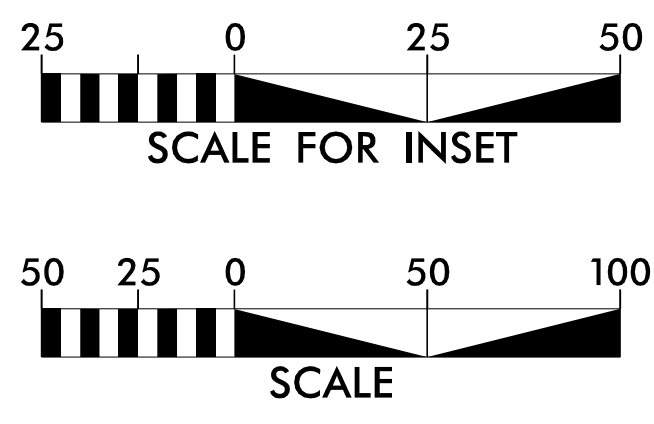
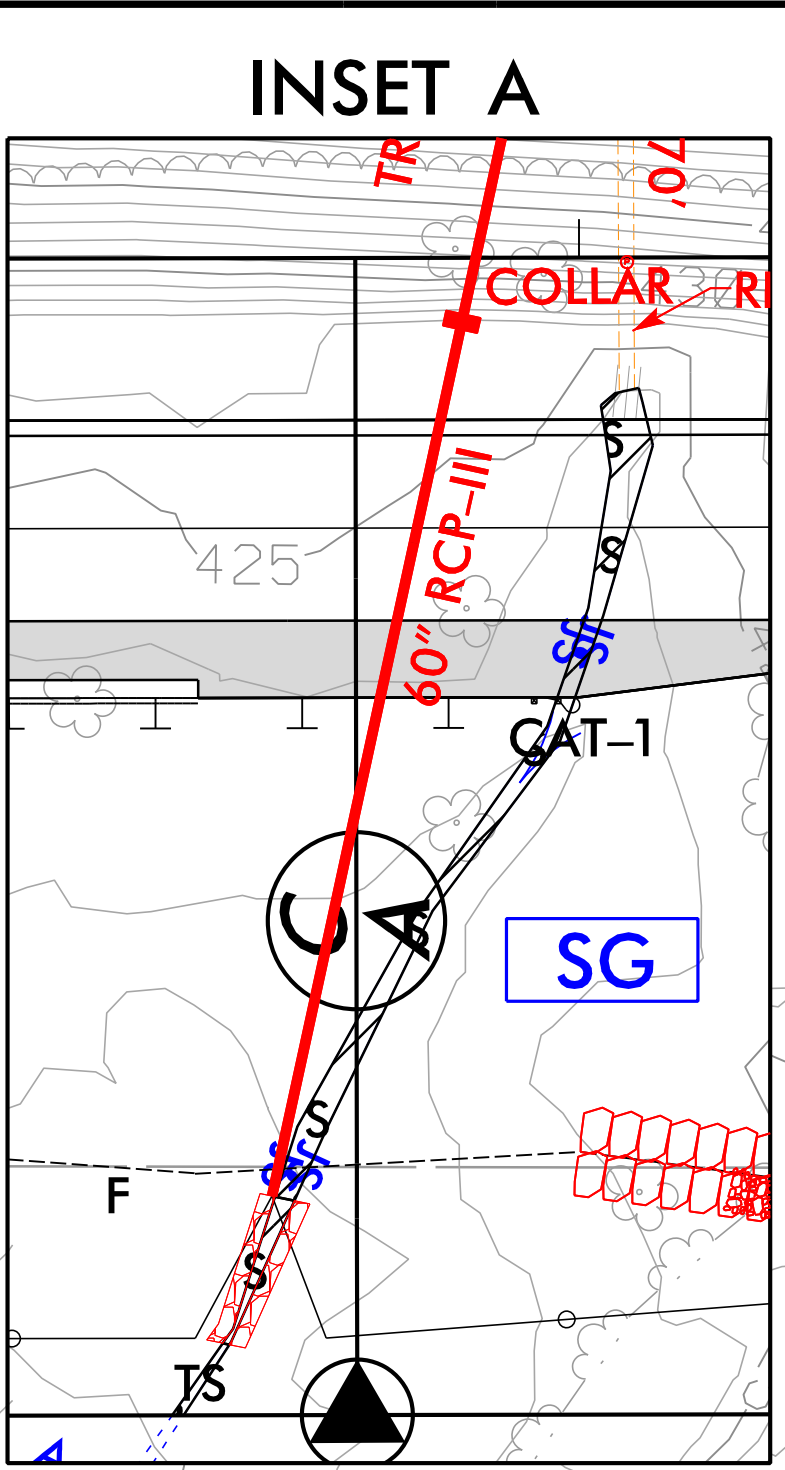
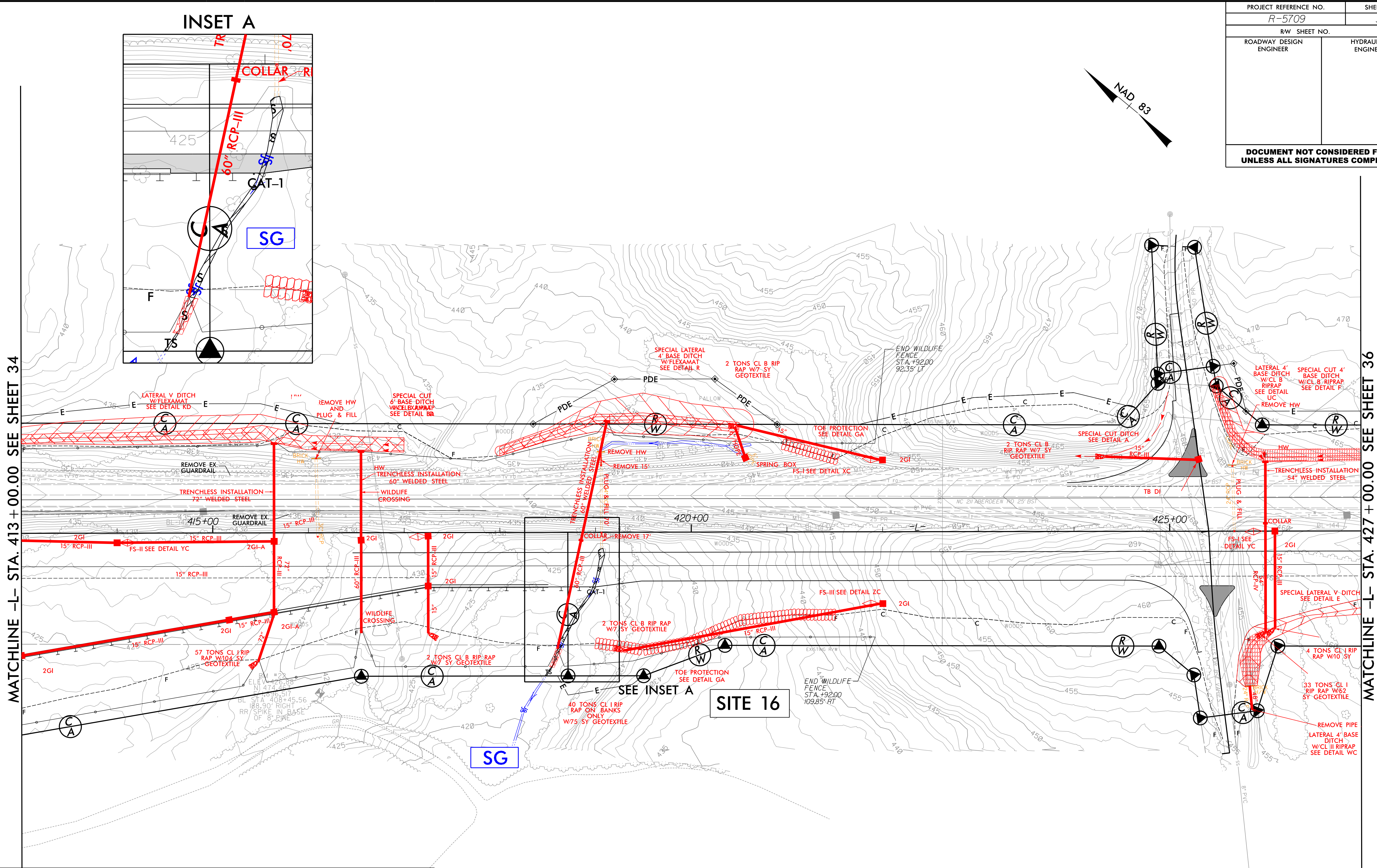
ENGLISH

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

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R-5709		35	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



PERMIT DRAWING
SHEET 40 OF 60

ENGLISH

DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

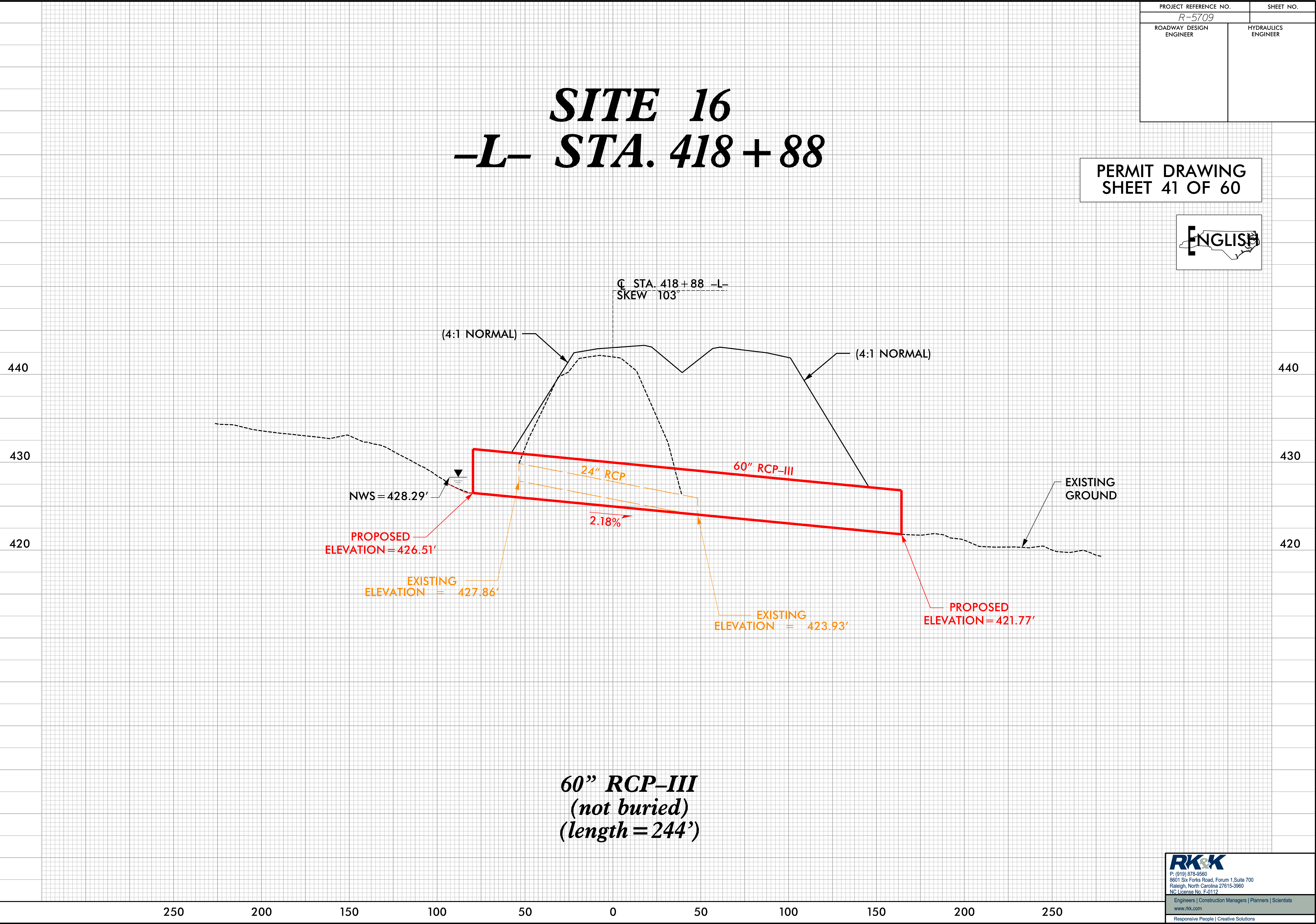
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PROJECT REFERENCE NO.	SHEET NO.
R-5709	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SITE 16
-L- STA. 418+88

PERMIT DRAWING
SHEET 41 OF 60



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PROJECT REFERENCE NO.		SHEET NO.
R-5709		45
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	

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SCALE FOR INSET

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PERMIT DRAWING
SHEET 42 OF 60

ENGLISH

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DENOTES FILL IN
WETLAND

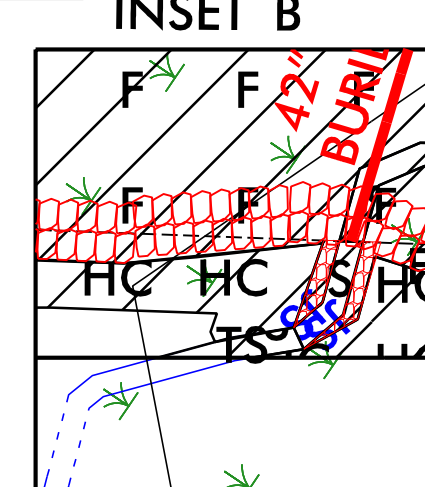
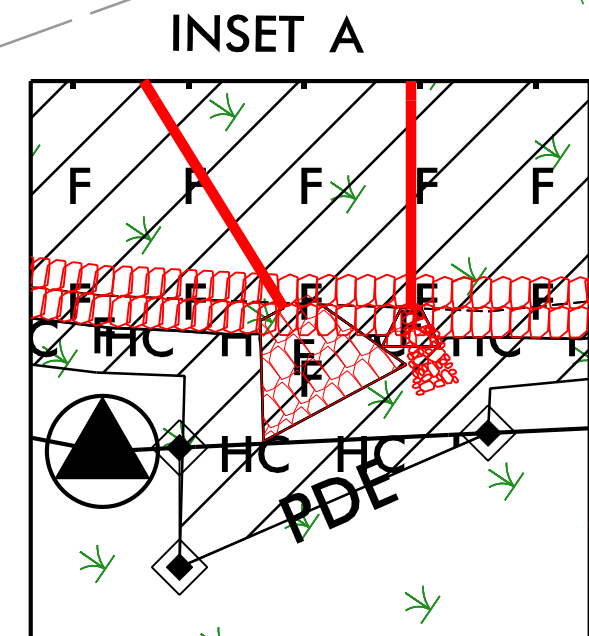
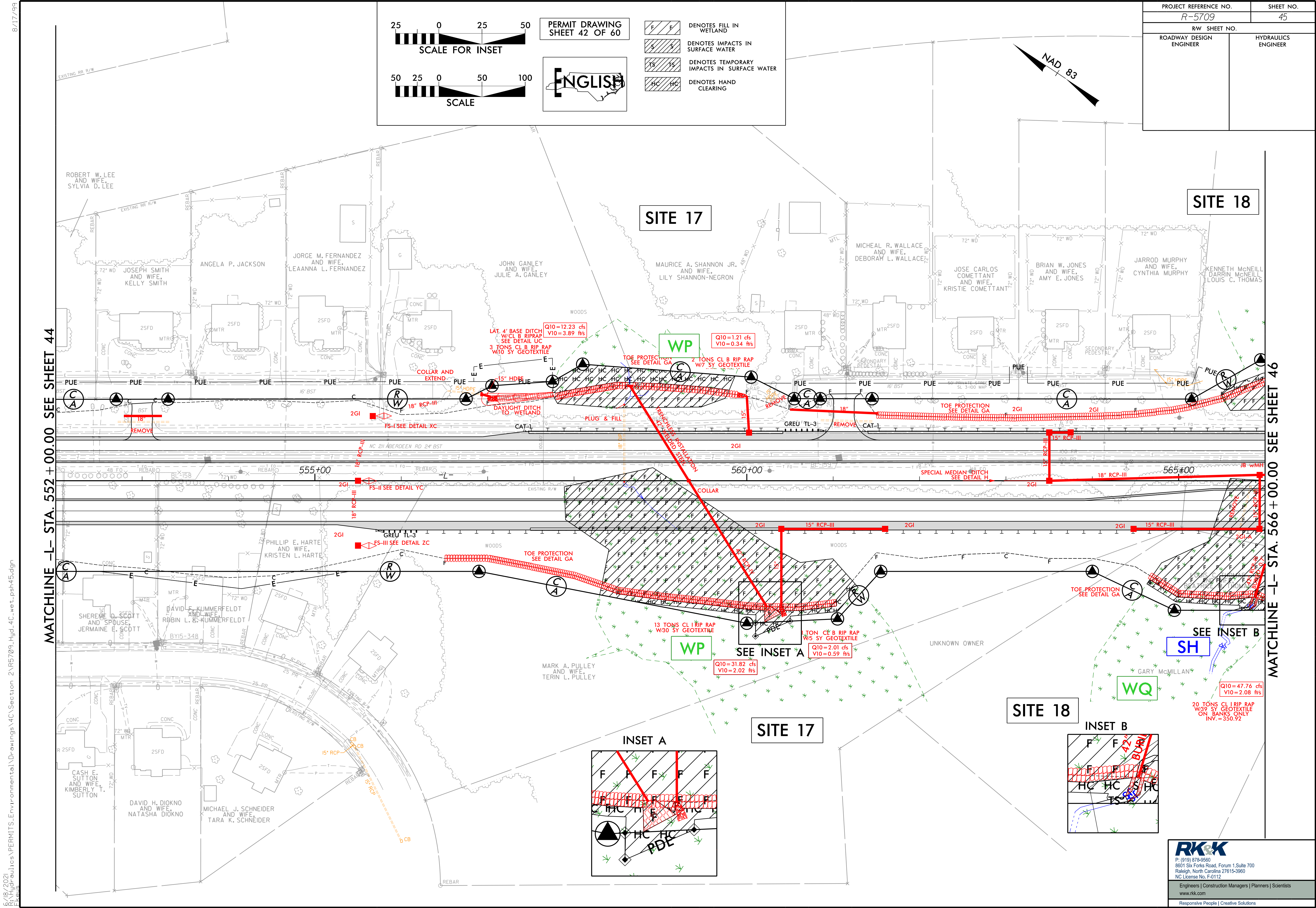
DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

DENOTES HAND
CLEARING

MATCHLINE -L- STA. 552 + 00.00 SEE SHEET 44

MATCHLINE -L- STA. 566 + 00.00 SEE SHEET 46



PROJECT REFERENCE NO.		SHEET NO.
R-5709		45
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	

25

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SCALE FOR INSET

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SCALE

PERMIT DRAWING
SHEET 43 OF 60

ENGLISH

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DENOTES FILL IN
WETLAND

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DENOTES IMPACTS IN
SURFACE WATER

TS

TS

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

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HC

DENOTES HAND
CLEARING

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8/18/2021

MATCHLINE -L- STA. 552 + 00.00 SEE SHEET 44

MATCHLINE -L- STA. 566 + 00.00 SEE SHEET 46

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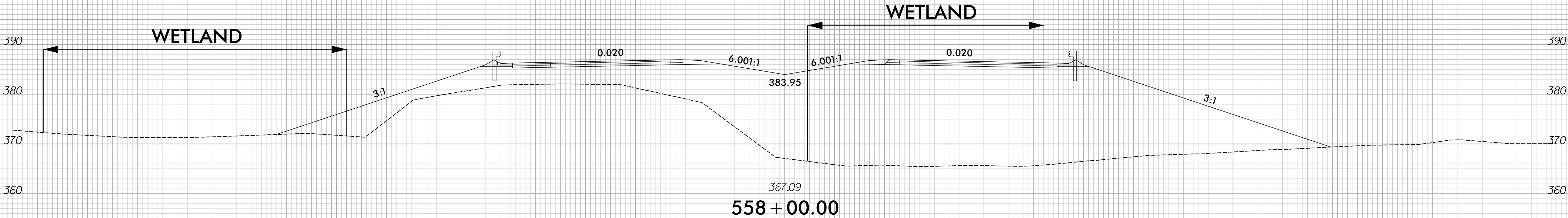
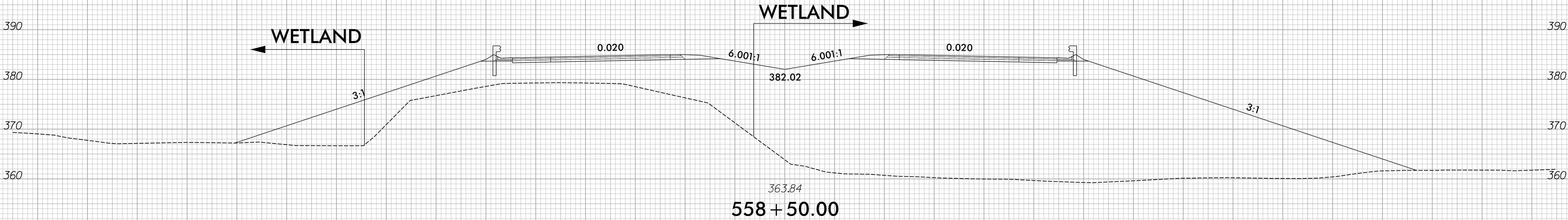
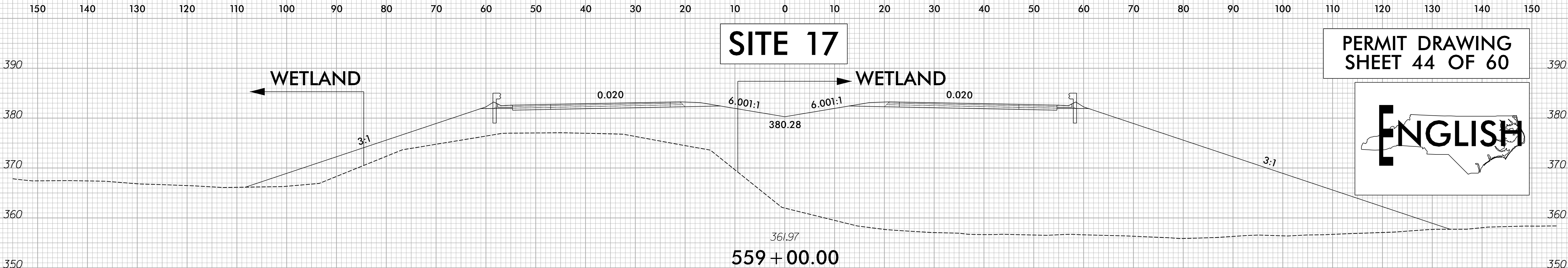
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5709	S2 X-100

SITE 17

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SHEET 44 OF 60

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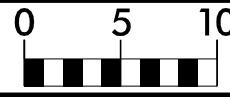
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kyle

6/23/16

6/18/2021
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kelle

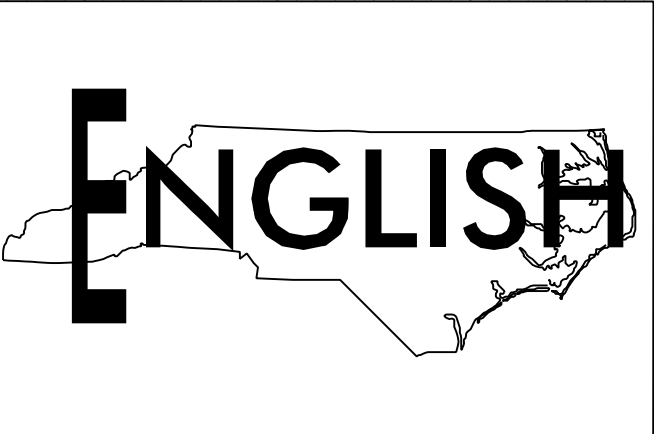
SITE 18

WETLAND



PROJ. REFERENCE NO.	SHEET NO.
R-5709	S2 X-104

PERMIT DRAWING
SHEET 45 OF 60

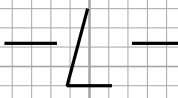


565 + 50.00

565 + 00.00

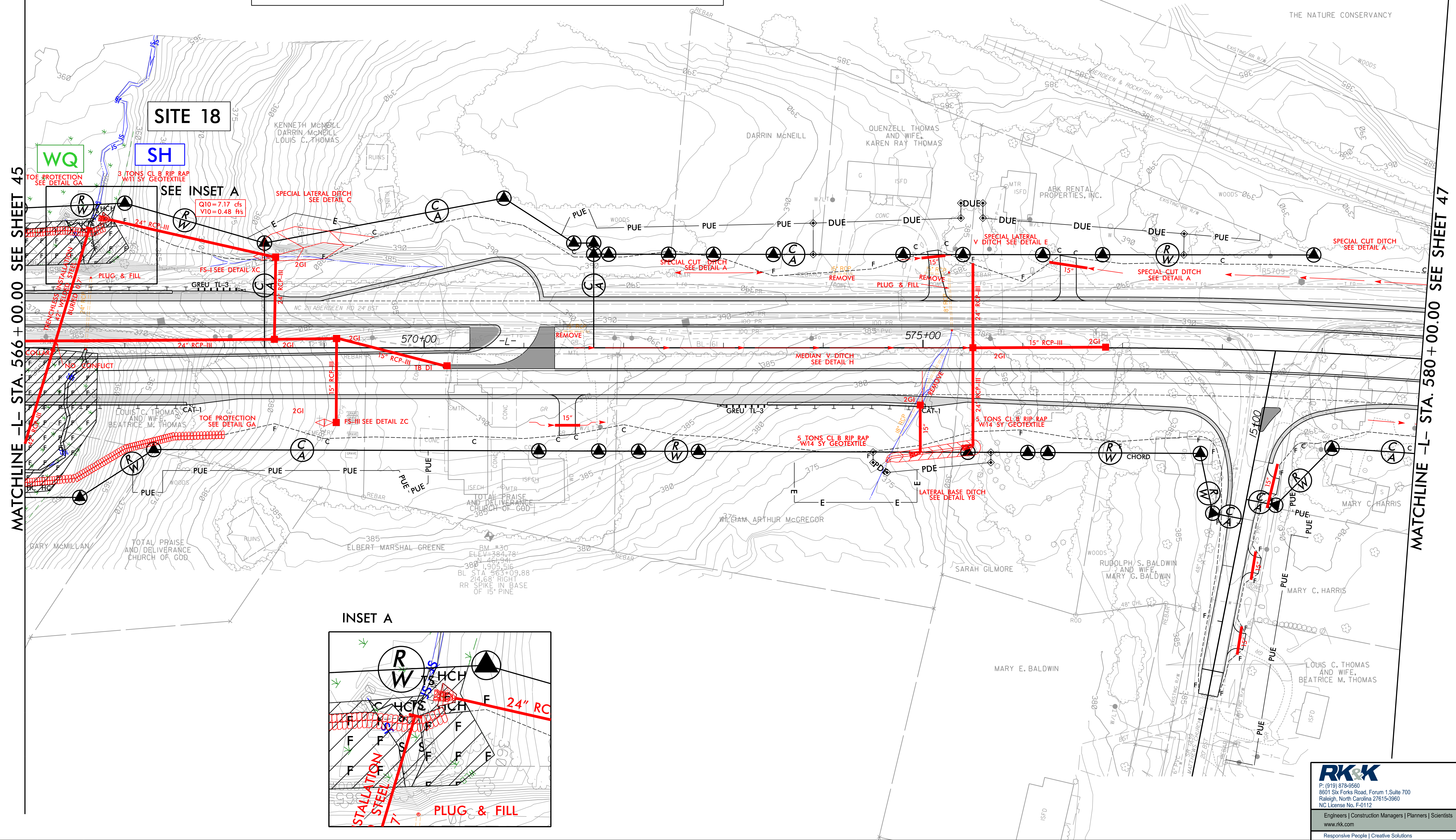
564 + 50.00

564 + 00.00



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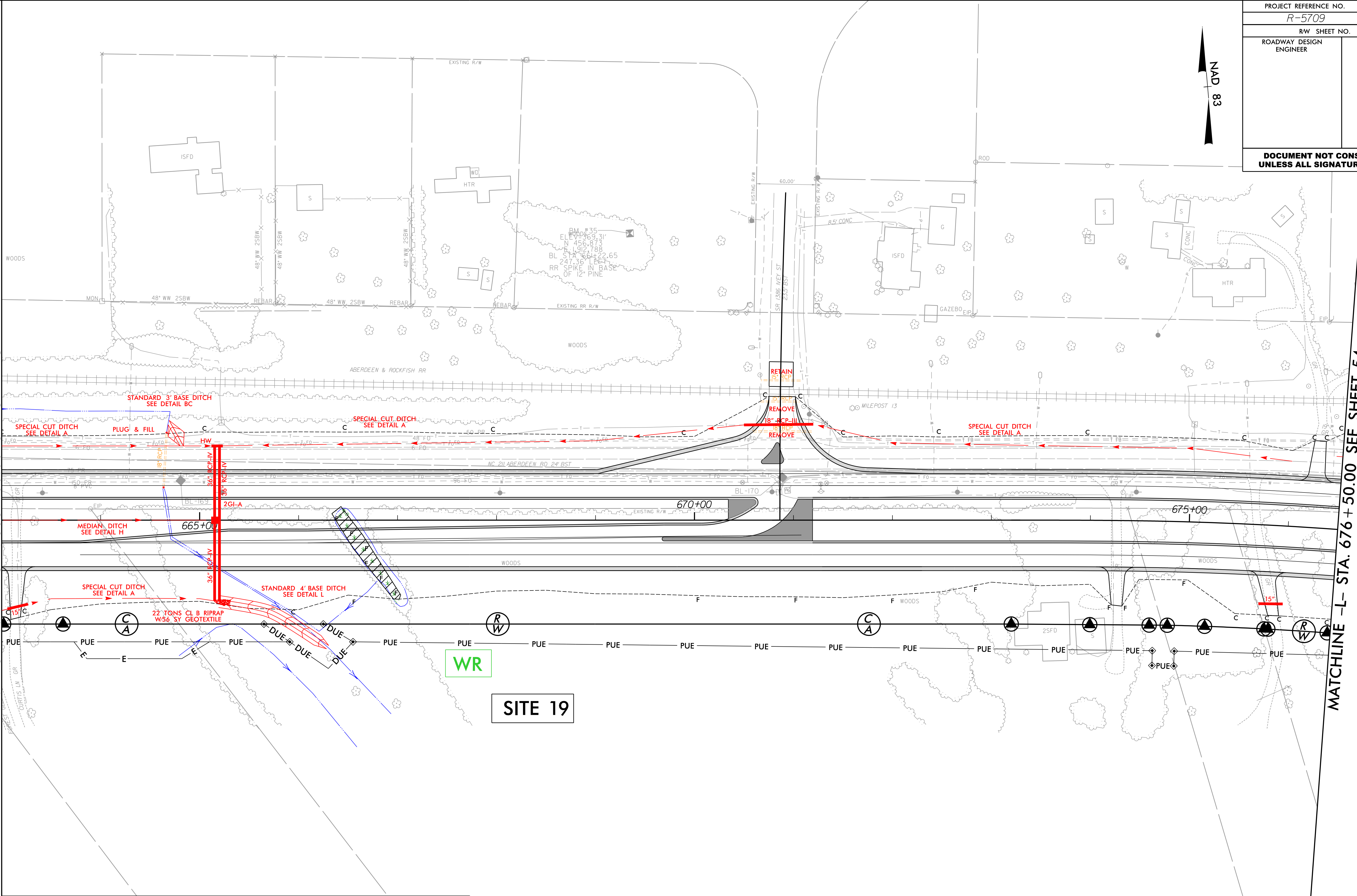
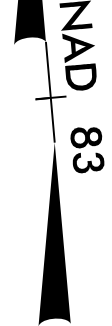
8/17/99

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MATCHLINE -L- STA. 663+00.00 SEE SHEET 52

MATCHLINE -L- STA. 676+50.00 SEE SHEET 54

PROJECT REFERENCE NO.		SHEET NO.	
R-5709		53	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

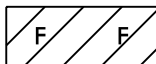
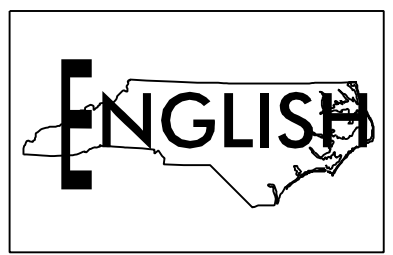


SITE 19



SCALE

PERMIT DRAWING
SHEET 48 OF 60



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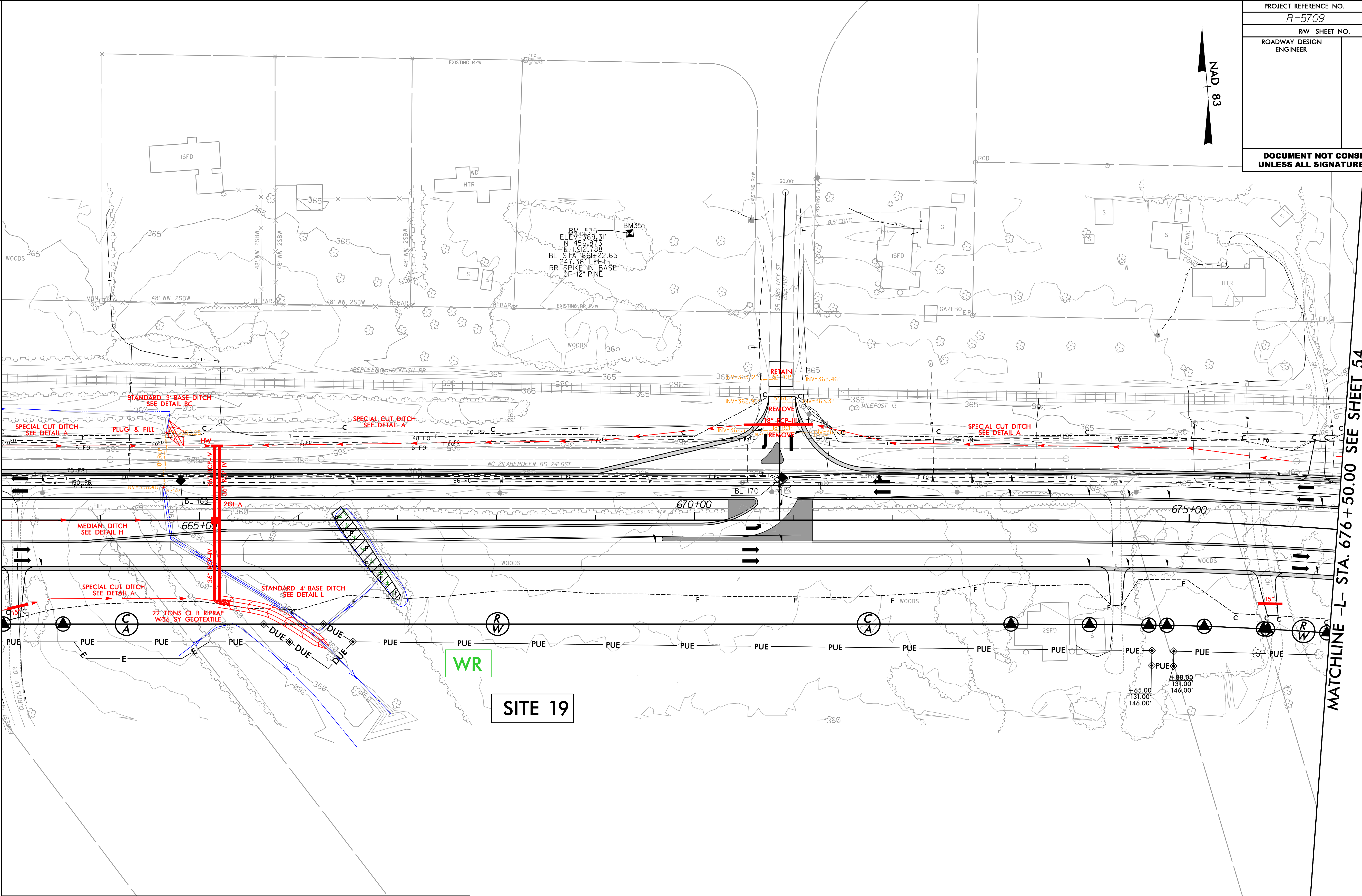
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8/18/2021

MATCHLINE -L- STA. 663+00.00 SEE SHEET 52

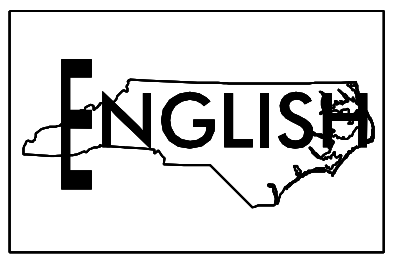
MATCHLINE -L- STA. 676+50.00 SEE SHEET 54



SITE 19



PERMIT DRAWING
SHEET 49 OF 60



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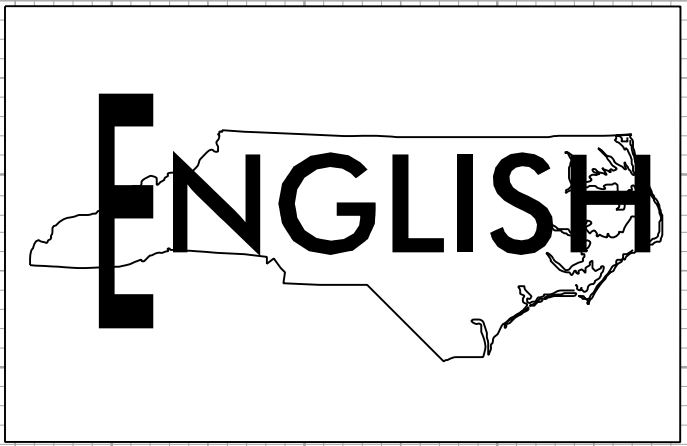
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5709	S2 X-143

SITE 19

PERMIT DRAWING
SHEET 50 OF 60

WETLAND



667 + 00.00

666 + 50.00

666 + 00.00

665 + 50.00

665 + 00.00



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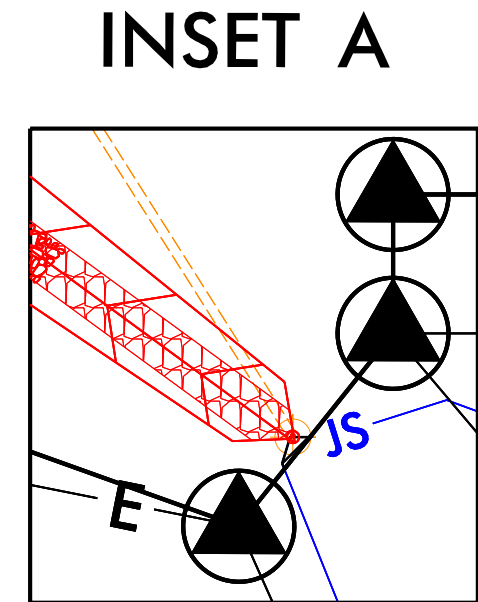
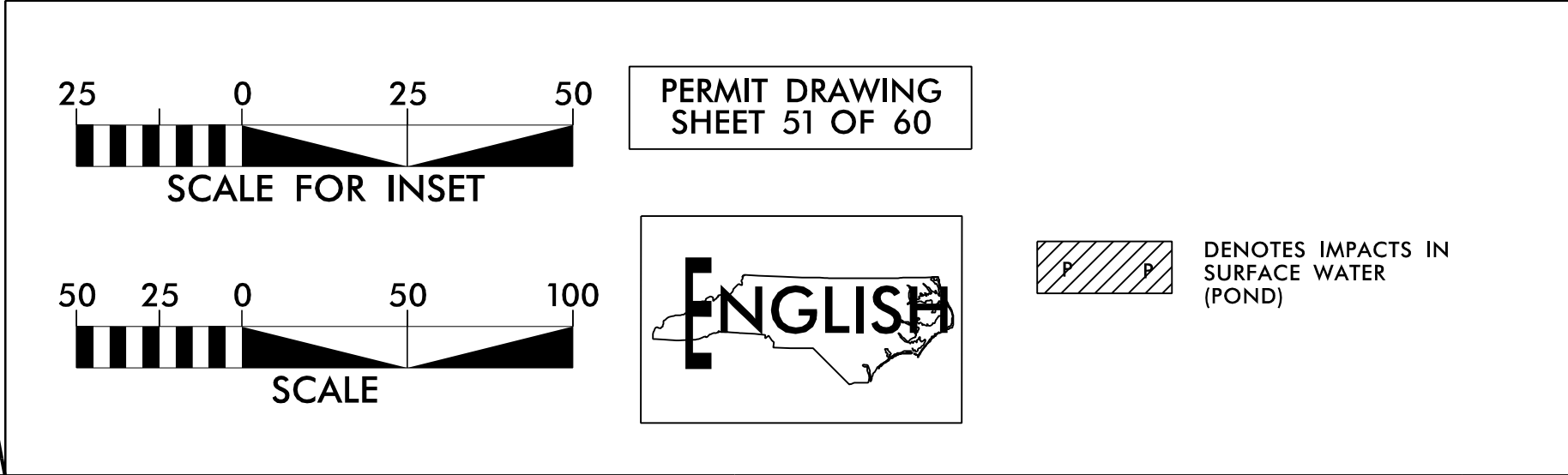
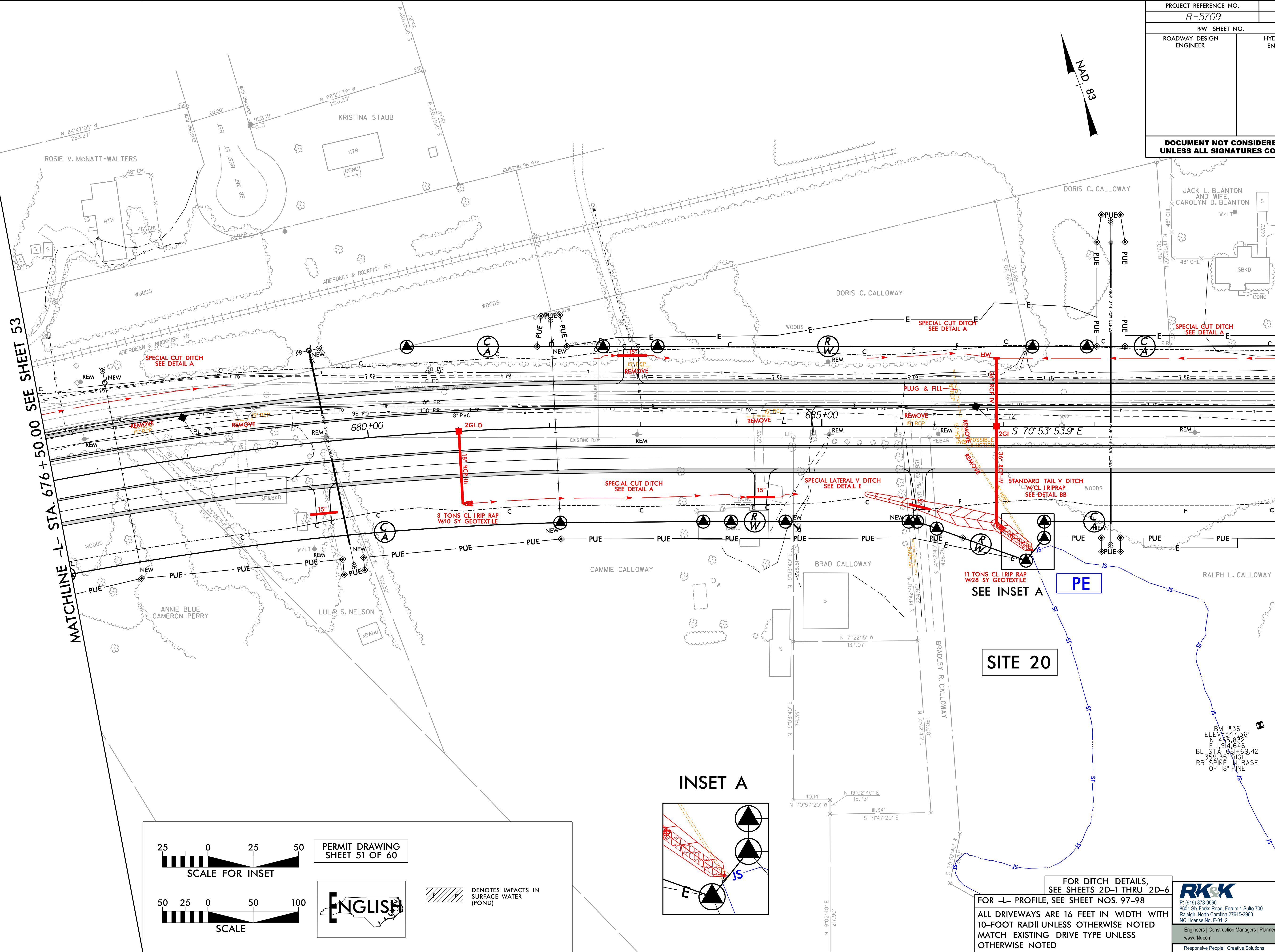
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6/18/2021
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kyle

8/17/99

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8/17/2025

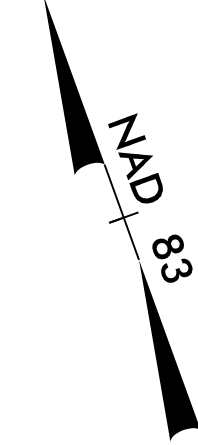
PROJECT REFERENCE NO.		SHEET NO.
R-5709		54
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER



FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6
FOR -L- PROFILE, SEE SHEET NOS. 97-98
ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH
10-FOOT RADII UNLESS OTHERWISE NOTED
MATCH EXISTING DRIVE TYPE UNLESS
OTHERWISE NOTED

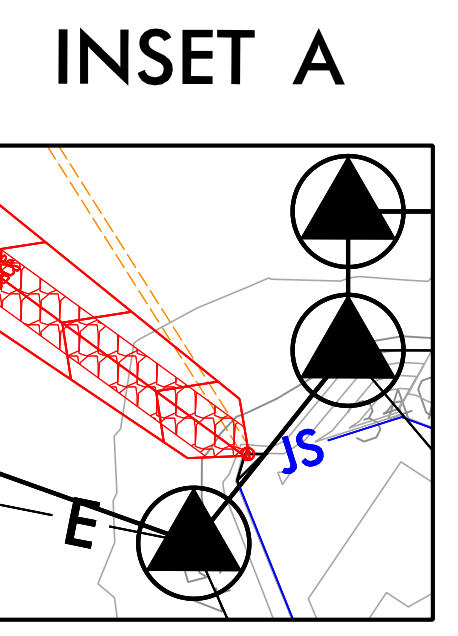
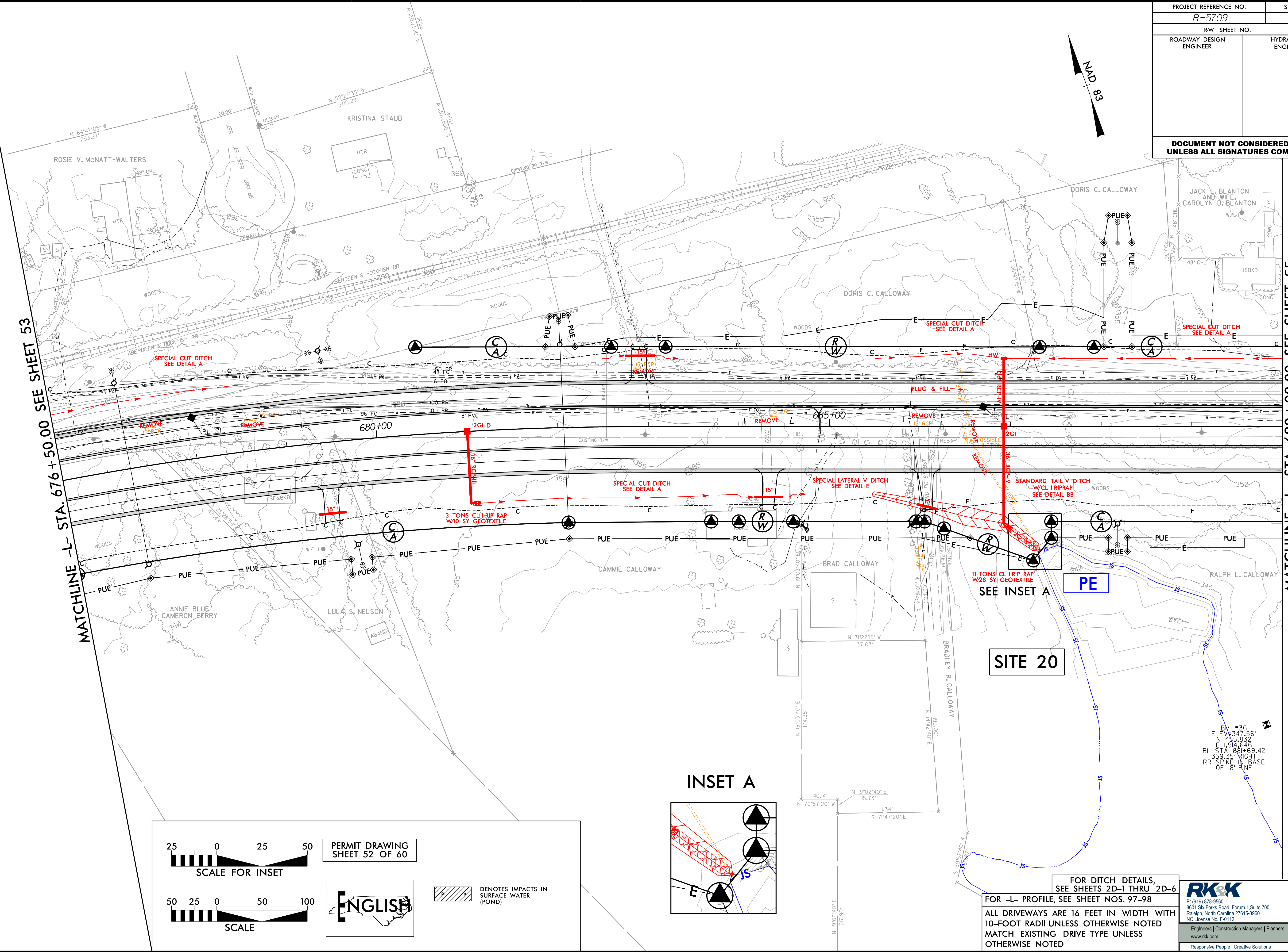
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PROJECT REFERENCE NO.		SHEET NO.
R-5709		54
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
</		



MATCHLINE -L- STA. 676+50.00 SEE SHEET 53

MATCHLINE -L- STA. 690+00.00 SEE SHEET 55



25

0

25

50

SCALE FOR INSET

50

25

0

50

100

SCALE

PERMIT DRAWING
SHEET 52 OF 60

ENGLISH

DENOTES IMPACTS IN
SURFACE WATER
(POND)

FOR DITCH DETAILS,
SEE SHEETS 2D-1 THRU 2D-6
FOR -L- PROFILE, SEE SHEET NOS. 97-98
ALL DRIVEWAYS ARE 16 FEET IN WIDTH WITH
10-FOOT RADII UNLESS OTHERWISE NOTED
MATCH EXISTING DRIVE TYPE UNLESS
OTHERWISE NOTED

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PROJECT REFERENCE NO.		SHEET NO.	
R-5709		63	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

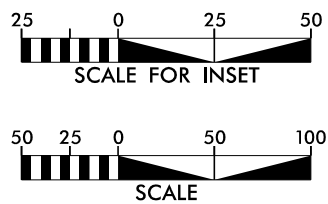
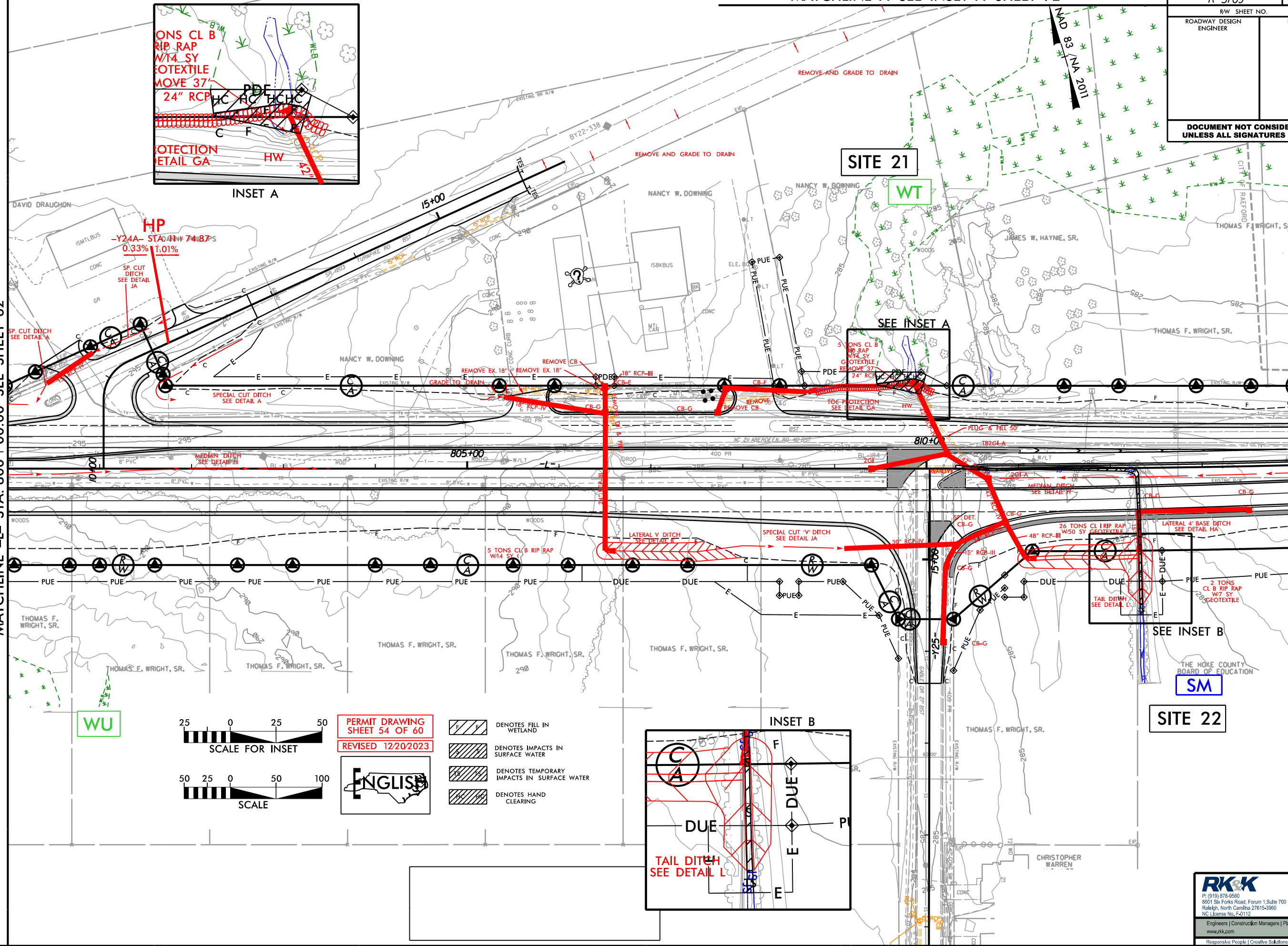
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



PROJECT REFERENCE NO.	SHEET NO.
R-5709	63
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE -L- STA. 800+00.00 SEE SHEET 62

MATCHLINE -L- STA. 814+00.00 SEE SHEET 64



PERMIT DRAWING
SHEET 54 OF 60
REVISED 12/20/2023

ENGLISH

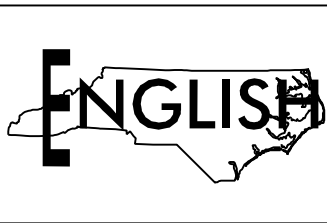
- Denotes Fill in Wetland
- Denotes Impacts in Surface Water
- Denotes Temporary Impacts in Surface Water
- Denotes Hand Clearing

6/23/16

SITE 21

PERMIT DRAWING
SHEET 55 OF 60

REVISED 12/20/2023



WETLAND

WETLAND

SHEAR LINE @
-L+/-Y25-
INTERSECTION

SHEAR LINE @
-L+/-Y25-
INTERSECTION

286.48
810 + 00.00

283.71
809 + 50.00

283.96
809 + 00.00

284.69
808 + 50.00

284.64
808 + 00.00

-L-



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8/17/99

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MATCHLINE -Y26- STA. 14 + 50.00 SEE SHEET 64

MATCHLINE -SR1- STA. 16 + 50.00 SEE SHEET 72

TOE PROTECTION
SEE DETAIL GA

SPECIAL LATERAL V DITCH
SEE DETAIL C

SPECIAL CUT DITCH
SEE DETAIL A

TOE PROTECTION
SEE DETAIL GA

SPECIAL CUT DITCH
SEE DETAIL A

4 TONS CL I RIP RAP
W/10 SY GEOTEXTILE

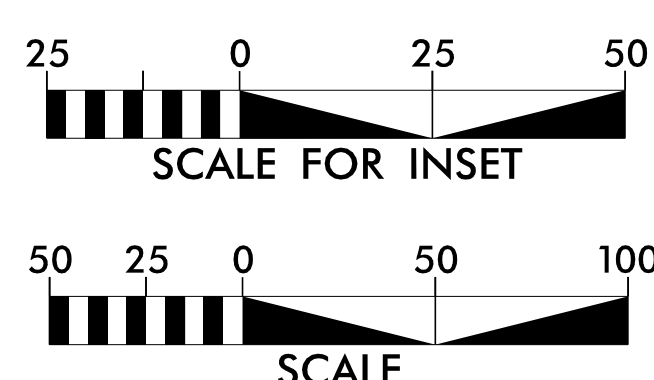
TAIL V DITCH
SEE DETAIL IA

F. BRIAN HINSON
AND WIFE
LESLIE F. HINSON
DB 282 PG 778

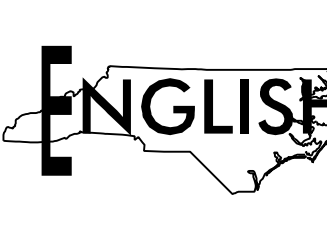
BURLINGTON INDUSTRIES, INC.
DB 588 PG 415
MB 4 PG 9 SL 390

BURLINGTON INDUSTRIES, INC.
DB 588 PG 415
MB 4 PG 9 SL 390

NAD 83



PERMIT DRAWING
SHEET 56 OF 60



1S 1S DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

S S DENOTES IMPACTS IN
SURFACE WATER

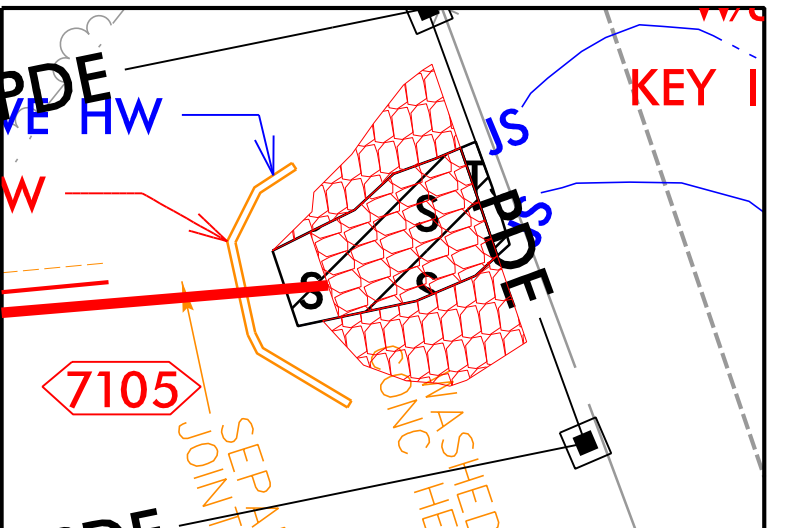
SEE INSET A

SITE 22A

SK

48 TONS CL I RIP RAP
W/87 SY GEOTEXTILE
ON BANKS ONLY
INV. = 255.00

INSET A



RK&K

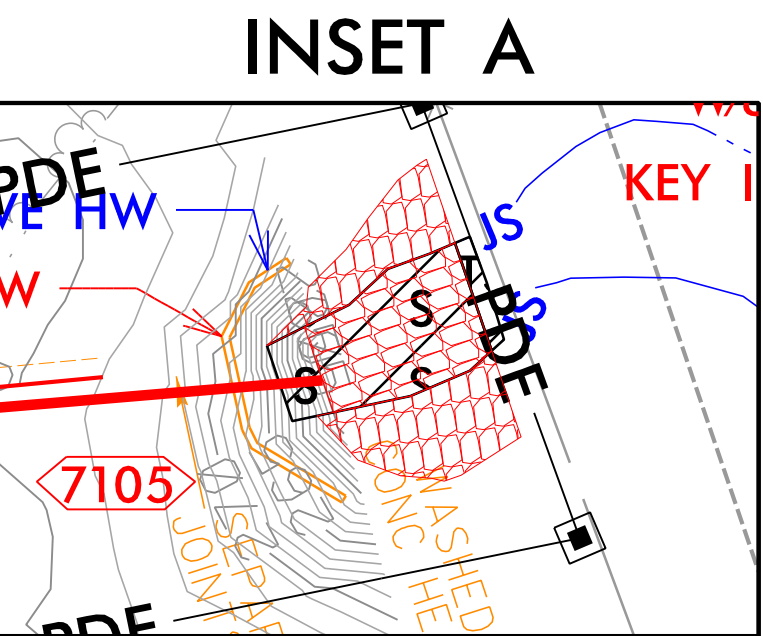
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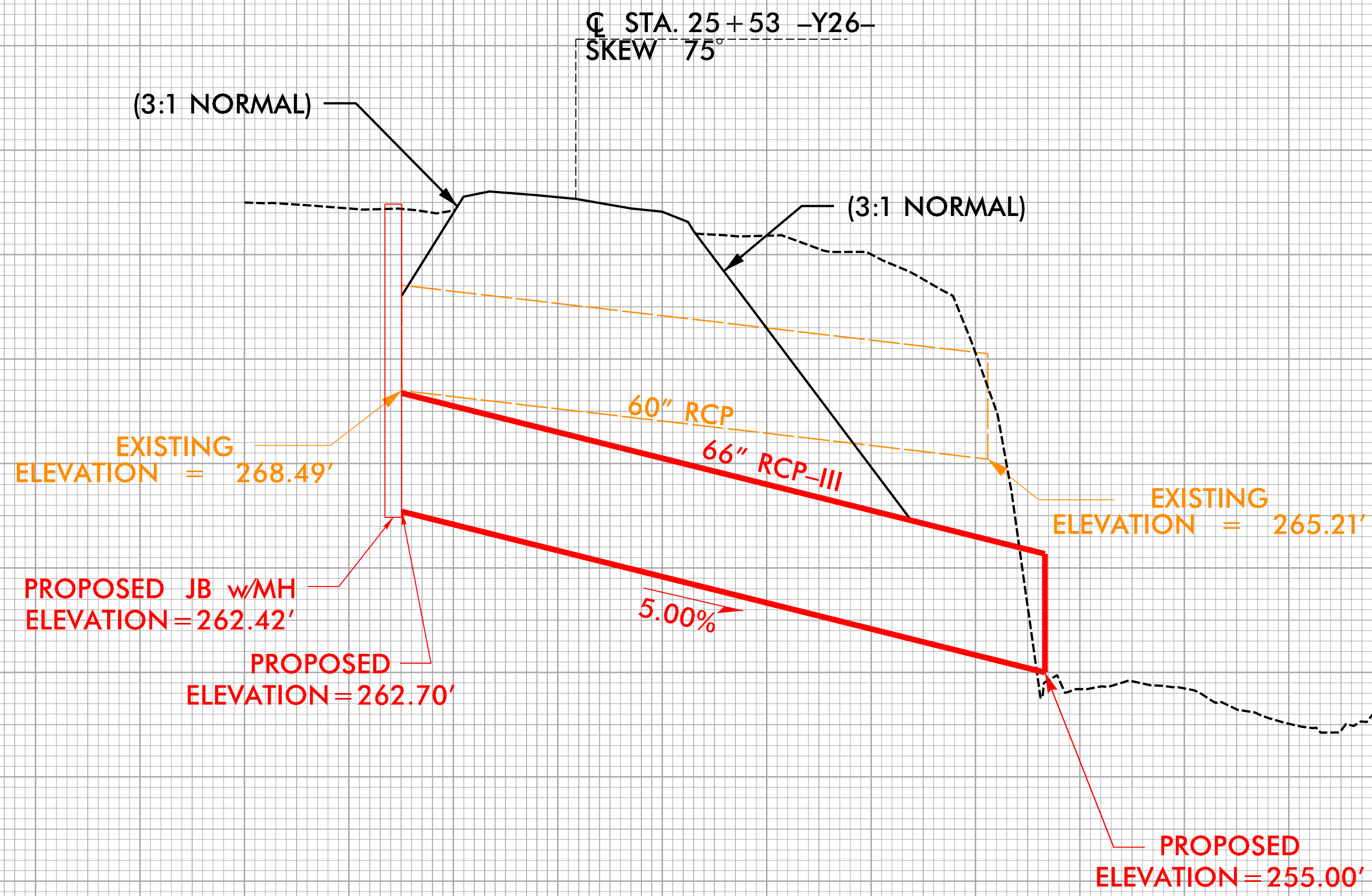
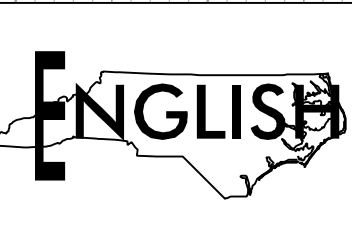
PROJECT REFERENCE NO.	SHEET NO.
R-5709	71
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



PROJECT REFERENCE NO.	SHEET NO.
R-5709	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SITE 22A
-Y26- STA. 25+53

PERMIT DRAWING
SHEET 58 OF 60



66" RCP-III
(length = 154')

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	14+10 -L- LT	ROADWAY FILL -WB	0.02		< 0.01		< 0.01					
2	14+50 -L- RT	ROADWAY FILL -WA	0.07		< 0.01		0.05					
3	14+30 -L-	54" RCP-III (BURIED 1') -SA						0.02	< 0.01	183	20	
4	22+30 -L- LT	BANK STABILIZATION -SD					0.01	< 0.01	< 0.01	20	12	
		ROADWAY FILL -WF					< 0.01					
		UTILITY IMPACTS					0.02					
5	23+25 -L- RT	-Y2- WF	0.02				< 0.01					
6	20+60 -Y2- RT	UTILITY IMPACTS -WG					< 0.01					
6	18+50 -Y3- RT	ROADWAY FILL -WG					< 0.01					
6	36+00 -L- LT	ROADWAY FILL -WG	0.06				0.09					
6	39+50 -L- LT	-Y4- WG	0.03				< 0.01					
6A	14+00 -Y4- RT	ROADWAY FILL -WG2	< 0.01		0.03		0.02					
7	35+00 -L- RT	ROADWAY FILL -WH	0.06		< 0.01		0.03					
8	34+65 -L-	66" RCP IV (BURIED 1') -SC						< 0.01	< 0.01	85	53	
		BANK STABILIZATION						< 0.01		26		
9	165+50 -L- RT	ROADWAY FILL -WJ	0.01				0.02					
10	168+00 -L-	ROADWAY FILL -WI	0.19				0.05					
		54" RCP-III -SE						< 0.01		70		
		UTILITY IMPACTS -WI					< 0.01					
11	203+50 -L- LT	ROADWAY FILL -WM	0.07				0.07					
		UTILITY IMPACTS					0.15					
12	207+80 -L- RT	ROADWAY FILL -WL	0.29				0.06					
13	208+50 -L- LT	**POND DRAINAGE -WN			0.02		< 0.01	3.00				
14	208+61 -L-	72" RCP IV (BURIED 1') -SF						0.02		185		
15	279+00 -L-	2@48" RCP III -SJ						< 0.01	< 0.01	103		
	11+75 -Y9F- RT	UTILITY IMPACTS-WW					0.01					
15A	17+00 -DR11- LT	-DR11- WAC					0.02					
TOTALS*:			0.83		0.06		0.65	3.06	< 0.01	672	85	

*Rounded totals are sum of actual impacts

NOTES:

**Site 13 Pond Drainage - WN is a total pond take.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
February 2024 (Revised October 2025)
HOKE & MOORE COUNTIES
R-5709

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)
16	419+00 -L- RT	60" RCP-III -SG						< 0.01		116		
		BANK STABILIZATION -SG						< 0.01	< 0.01	20	11	
17	557+75 -L-	ROADWAY FILL -WP	0.82				0.14					
18	564+63 -L-	ROADWAY FILL -WQ	0.54				0.05					
		INLET, 42" RCP-III -SH							< 0.01		26	
		CHANNEL RELOCATION -SH						0.02		213		
		BANK STABILIZATION -SH						< 0.01	< 0.01	15	12	
19	666+34 -L- RT	ROADWAY FILL -WR	0.03									
20	687+32 -L- RT	DITCH TO POND -PE						< 0.01				
21	809+80 -L- LT	ROADWAY FILL -WT	0.01				0.01					
22	810+32 -L- RT	ROADWAY FILL AND						0.02	< 0.01	341	12	
		TAIL DITCH -SM										
22A	25+53 -Y26- LT	66" RCP-III - SK						< 0.01	< 0.01	6		
		BANK STABILIZATION -SK						< 0.01		23	3	
	TOTALS for SHEET 1:		0.83		0.06		0.65	3.06	< 0.01	672	85	
	TOTALS for SHEET 2:		1.41				0.20	0.06	< 0.01	734	65	
TOTALS*:			2.23		0.06		0.85	3.12	0.01	1406	150	

*Rounded totals are sum of actual impacts

NOTES:

Site 19 has 13 SF of wetland WR that is outside of the fill slope. This area will be considered a take for the purposes of this summary
There will be 0.08 acre of temporary fill in wetlands in the hand clearing areas for erosion control measures.

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