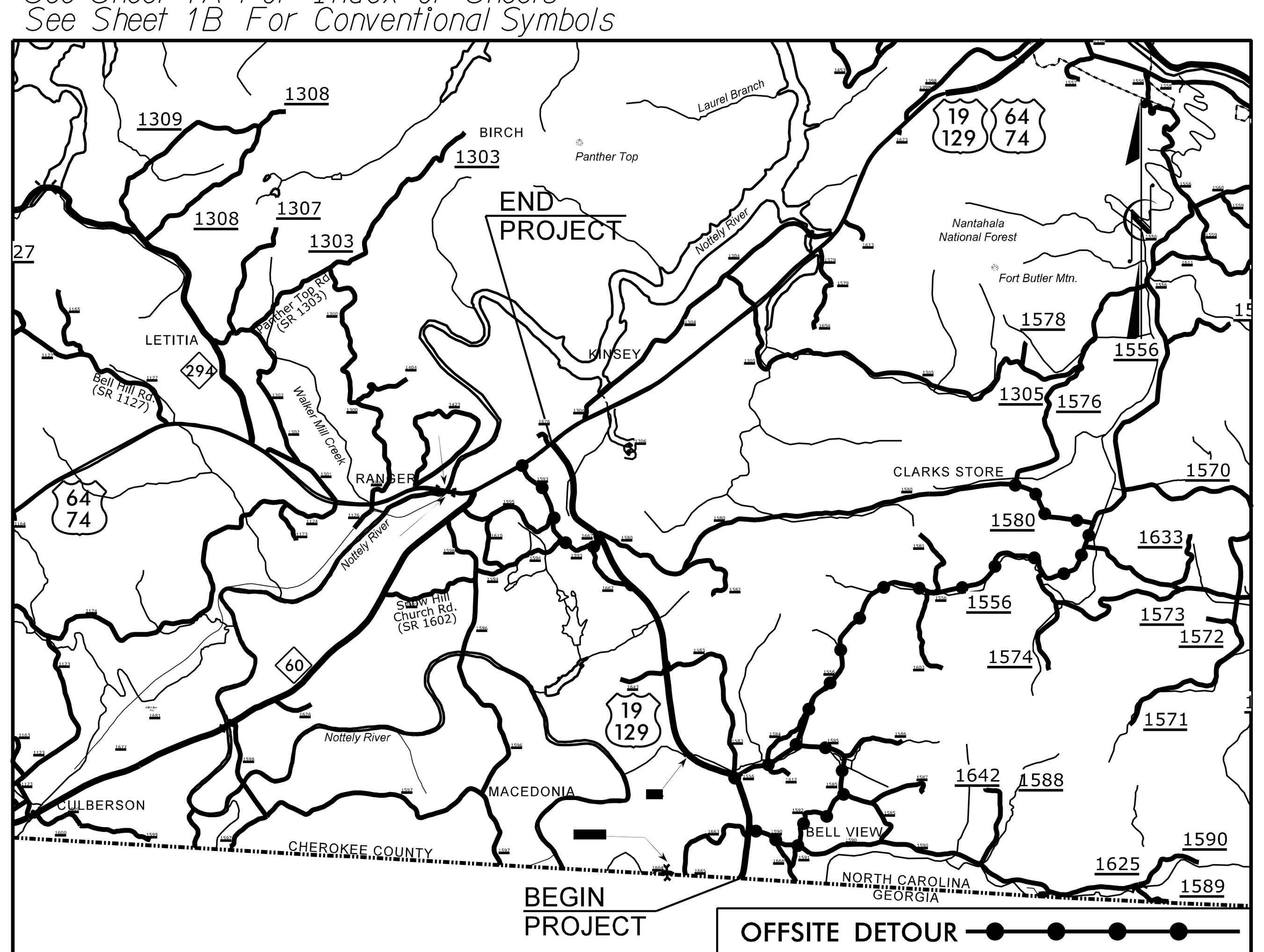
See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



VICINITY MAP (NTS)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

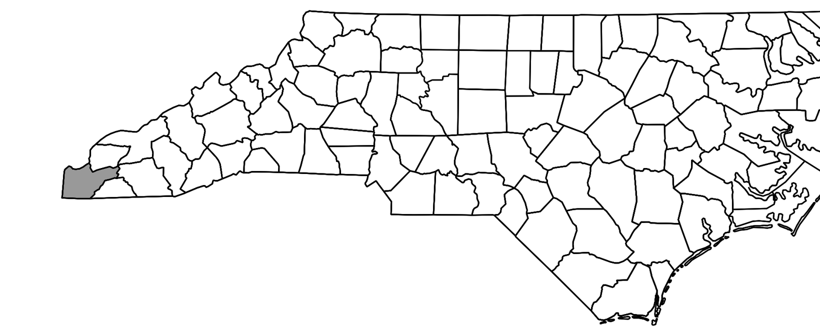
CHEROKEE COUNTY

LOCATION: ***WIDENING US 19 /129 FROM THE GEORGIA STATE LINE TO US 64 /74.***

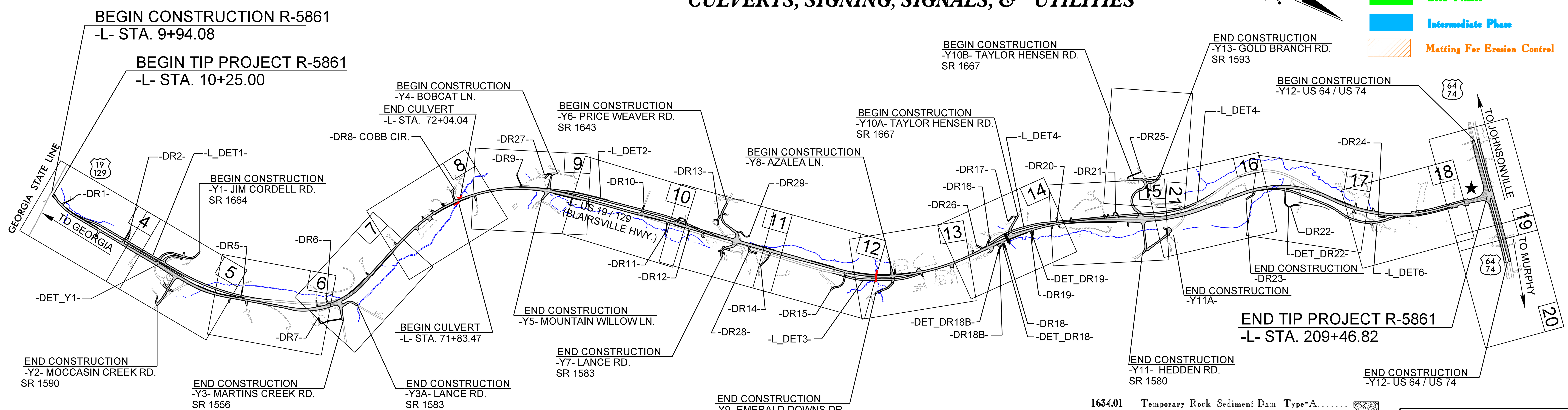
TYPE OF WORK: ***GRADING, PAVING, WIDENING, DRAINAGE, CULVERTS, SIGNING, SIGNALS, & UTILITIES***

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R–5861	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
47427.1.2		PE
47427.2.1		R/W
47427.2.2		UTILITIES
47427.3.1	4742701	CONSTRUCTION



Clearing and Grubbing Phase
Final Phase
Both Phases
Intermediate Phase
Matting For Erosion Control



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
	(Intermediate Phase) Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	Int.
1633.02	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	W / CFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
	(Intermediate Phase) Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	Int.
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
	(Intermediate Phase) Temporary Rock Silt Check Type-A	Int.

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

NOTES:
1. THIS PROJECT IS NOT WITHIN A MUNICIPAL BOUNDARY.
2. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

GRAPHIC SCALE

50 25 0 50 100

PLANS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

Prepared In the Office of:

RK&K
8601 SIX FORKS RD.
FORUM 1, SUITE 700
RALEIGH, NC 27615

Designed by:

ALEXIS BURKE, P.E. 3413
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2018 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

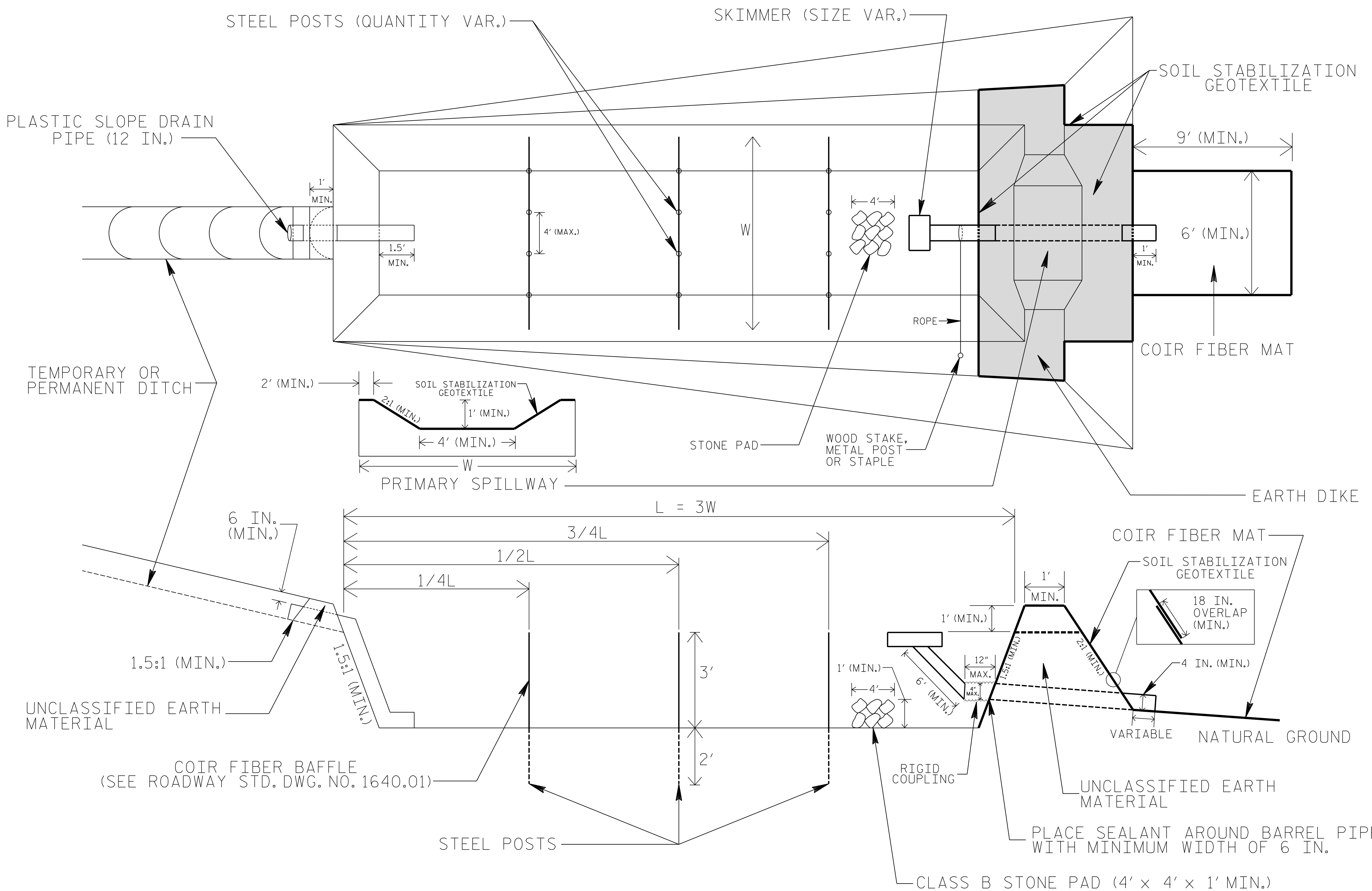
1604.01 Railroad Erosion Control Detail
1605.01 Temporary Silt Fence
1606.01 Special Sediment Control Fence
1607.01 Gravel Construction Entrance
1622.01 Temporary Berms and Slope Drains
1630.01 Riser Basin
1630.02 Silt Basin Type B
1630.03 Temporary Silt Ditch
1630.04 Stilling Basin
1630.05 Temporary Diversion
1630.06 Special Stilling Basin
1631.01 Matting Installation
1632.01 Rock Inlet Sediment Trap Type A
1632.02 Rock Inlet Sediment Trap Type B
1632.03 Rock Inlet Sediment Trap Type C
1633.01 Temporary Rock Silt Check Type A
1633.02 Temporary Rock Silt Check Type B
1634.01 Temporary Rock Sediment Dam Type A
1634.02 Temporary Rock Sediment Dam Type B
1635.01 Rock Pipe Inlet Sediment Trap Type A
1635.02 Rock Pipe Inlet Sediment Trap Type B
1640.01 Coir Fiber Baffle
1645.01 Temporary Stream Crossing

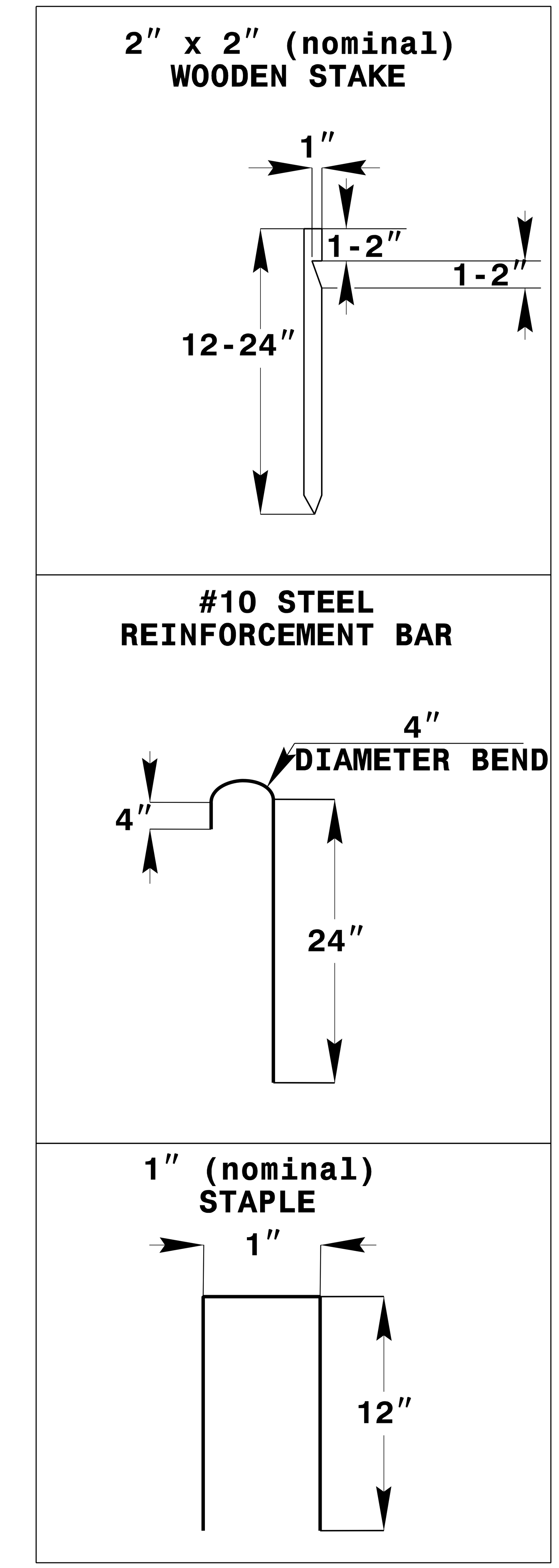
TIP PROJECT: R–5861

CONTRACT: C204887

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-02
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL





COIR FIBER MAT ANCHOR OPTIONS

NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE PRIMARY SPILLWAY WEIR LENGTH (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-02A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

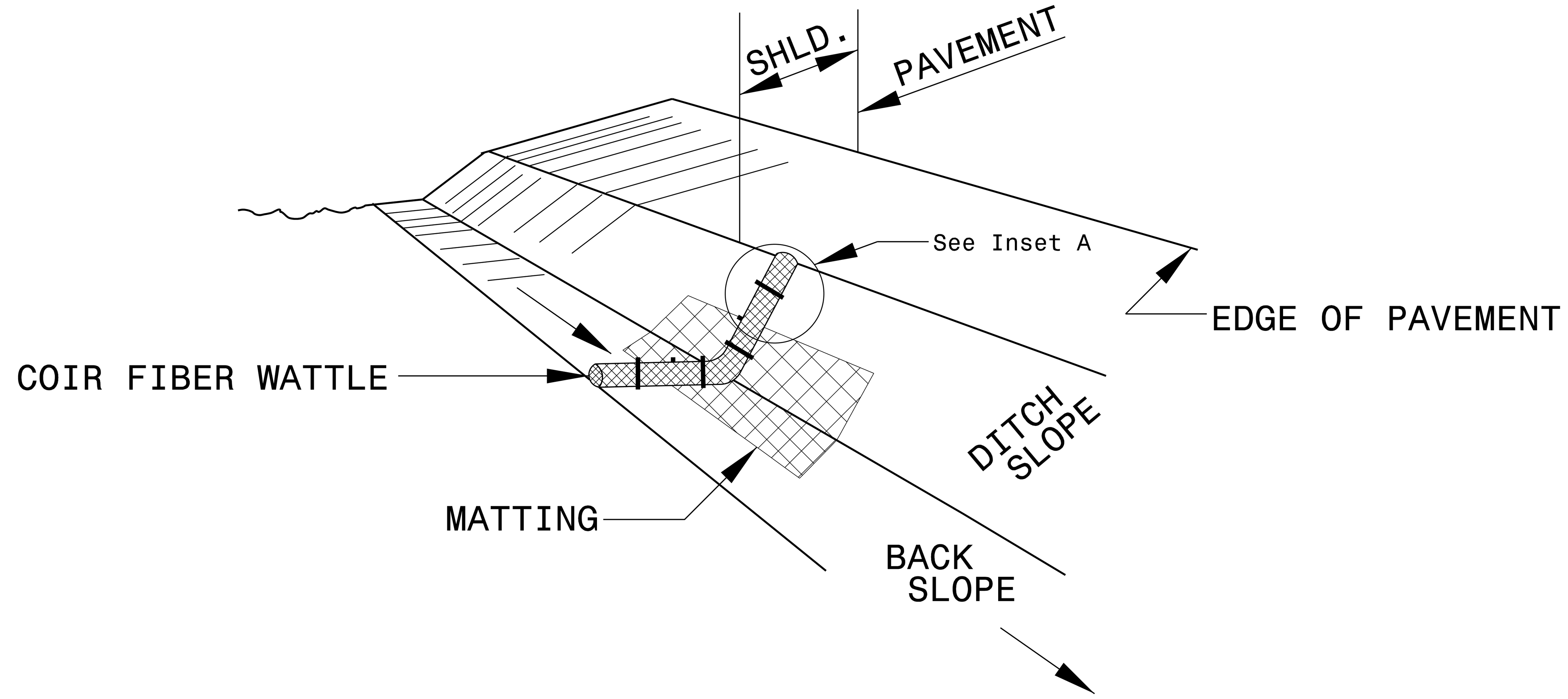
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

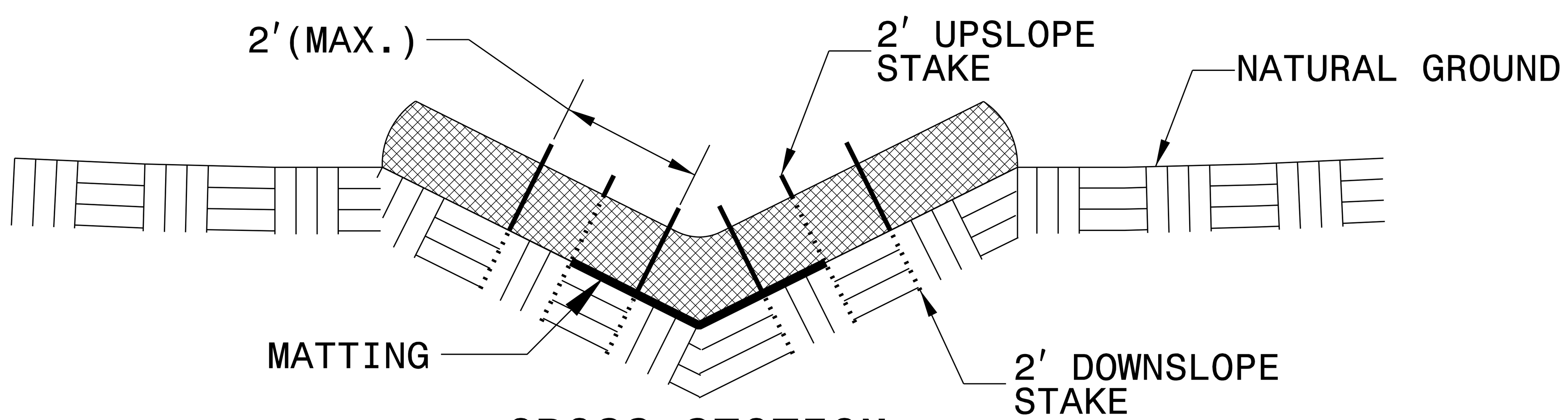
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

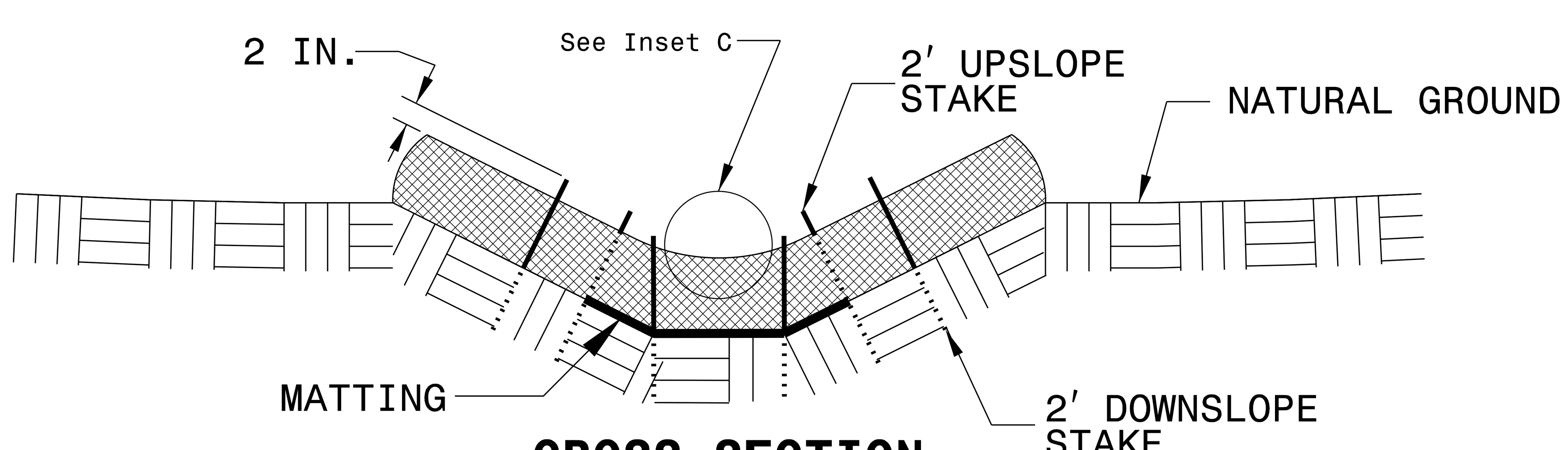
INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



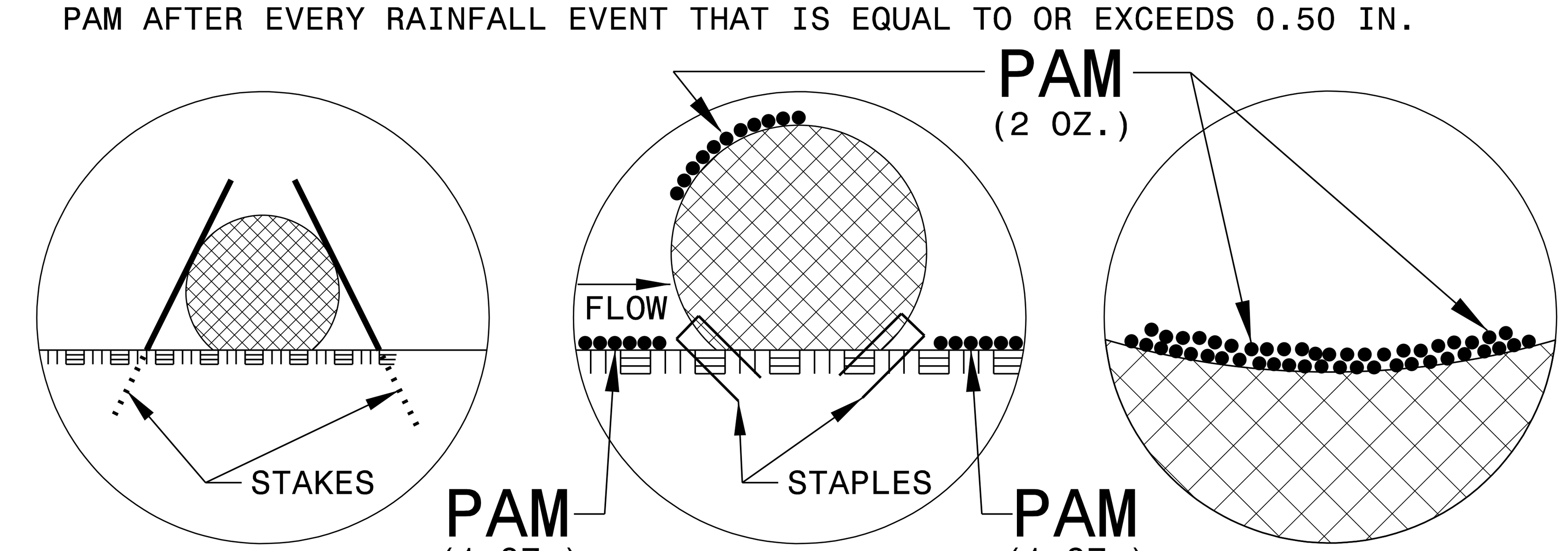
ISOMETRIC VIEW



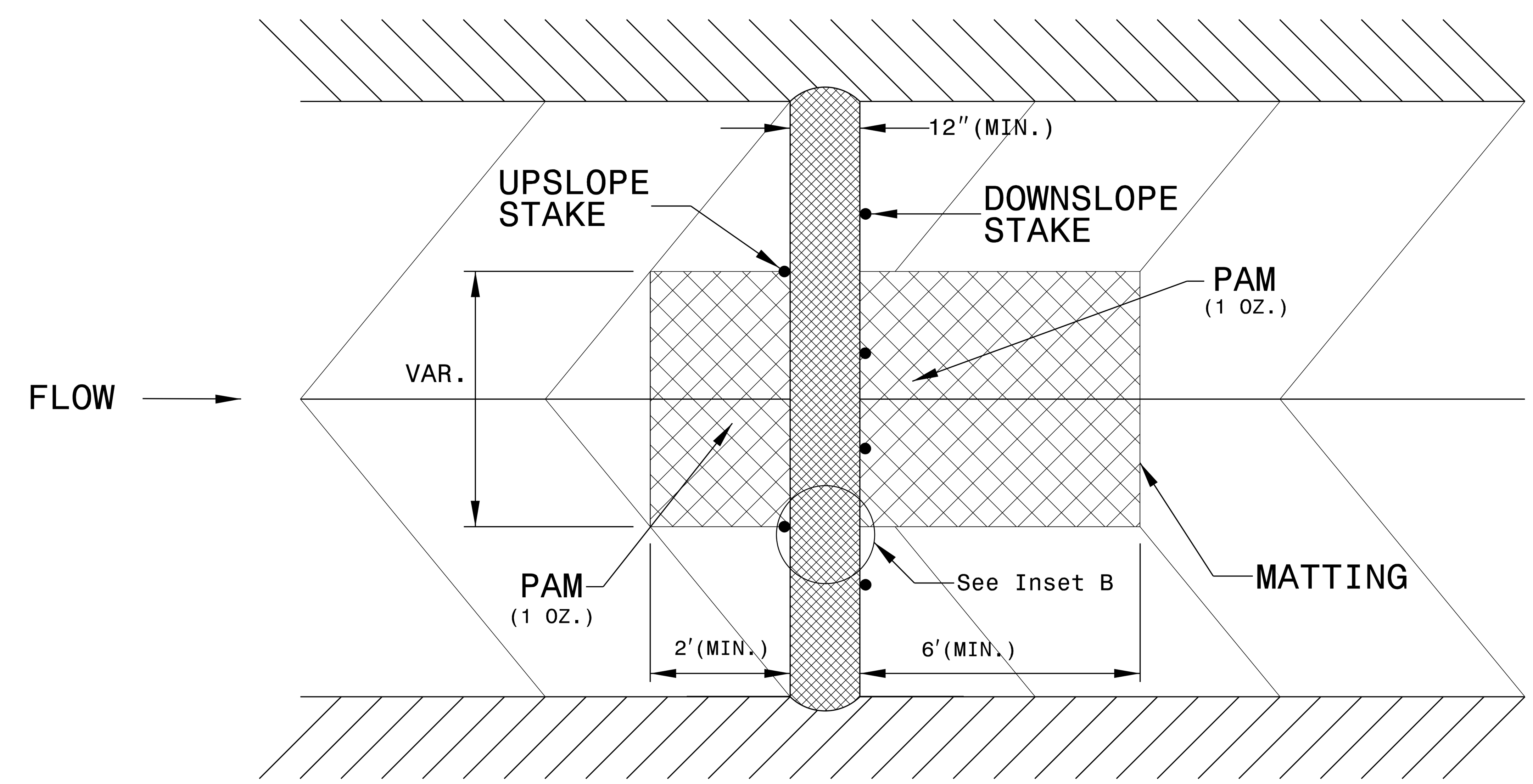
CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH



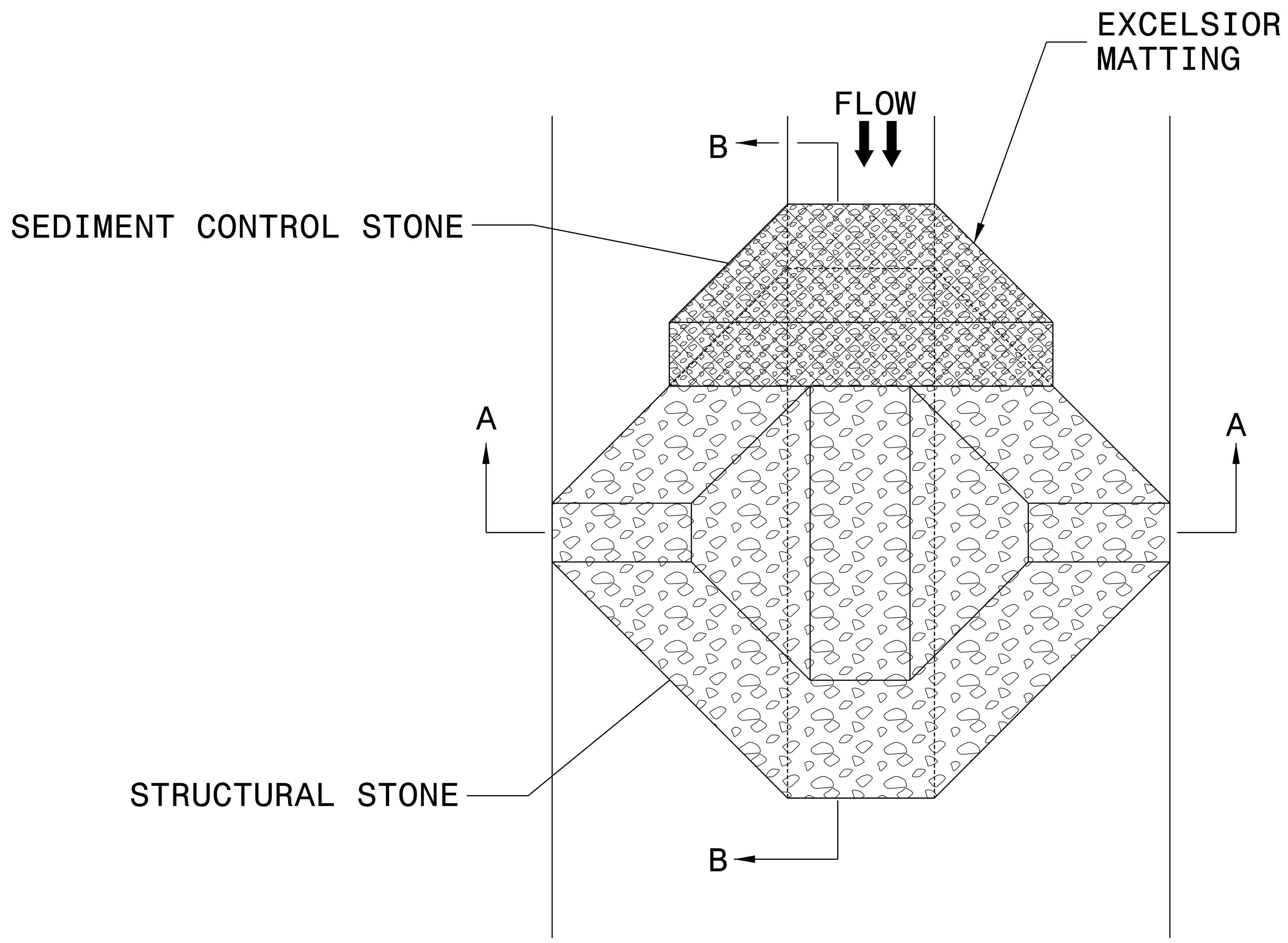
INSET A INSET B INSET C



TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-02B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



PLAN

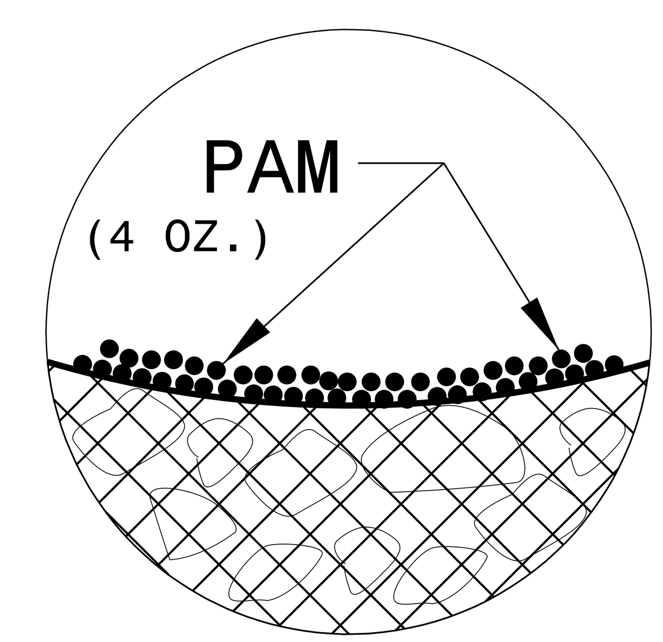
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

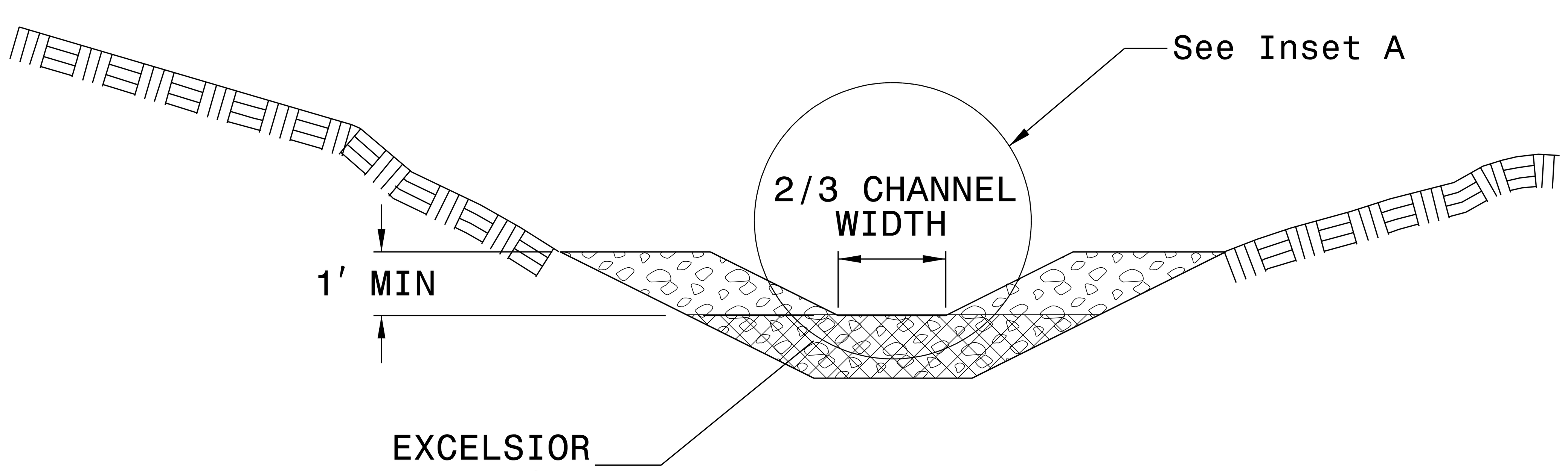
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

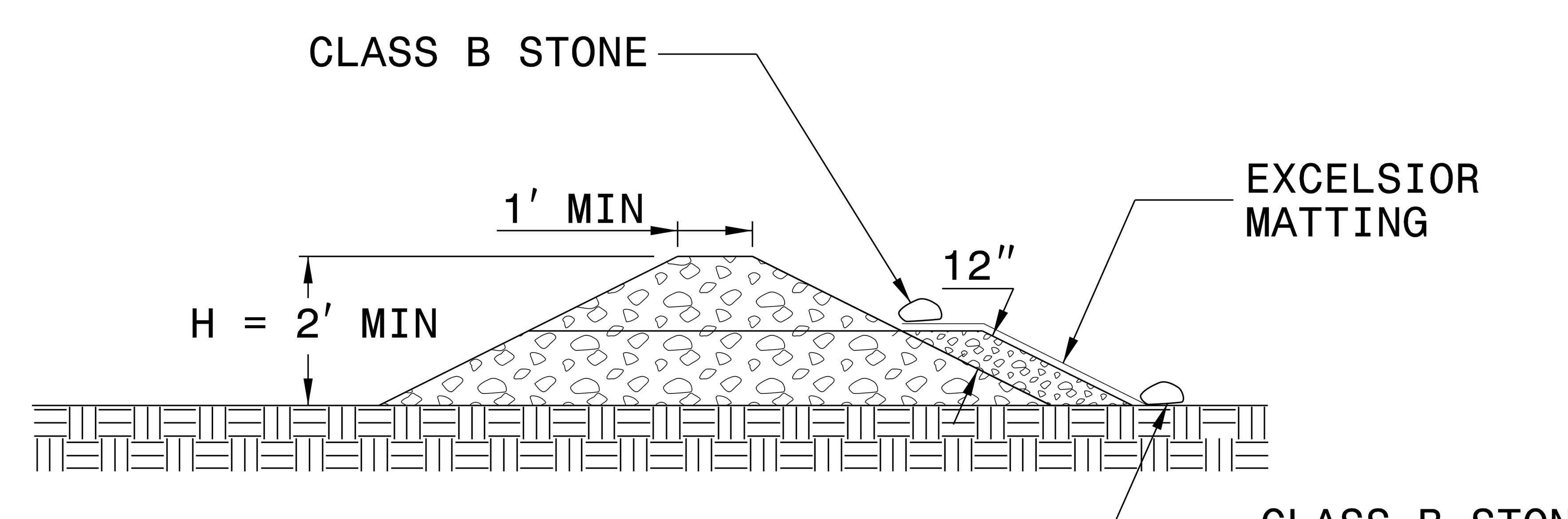
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



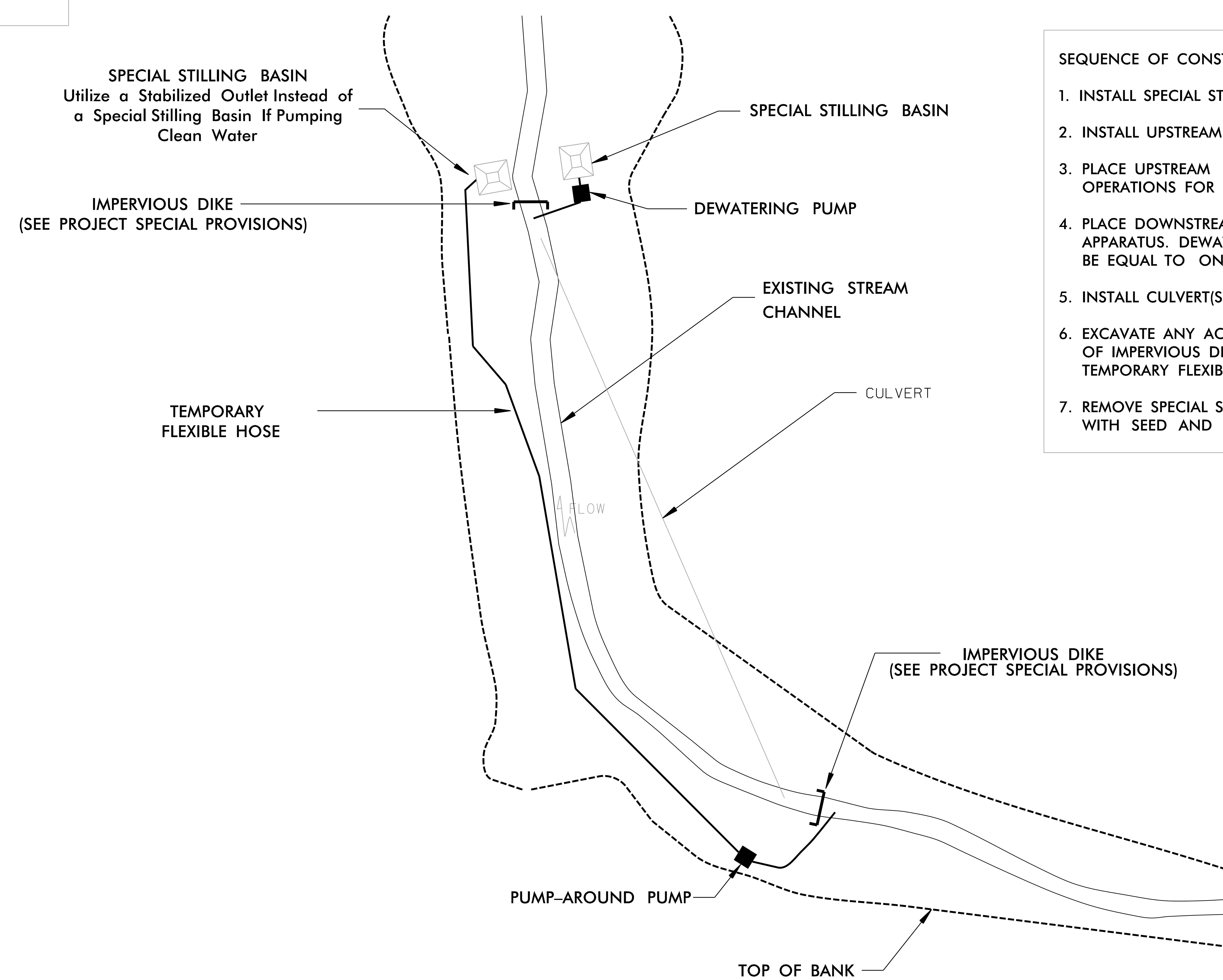
SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-02C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EXAMPLE OF PUMP-AROUND OPERATION

NOTES:
1) All excavation shall be performed in only dry or isolated areas of the work zone.
2) Impervious dikes are to be used to isolate work from stream flow when necessary.
3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
4) Pumps and hoses shall be of sufficient size to dewater the work area.

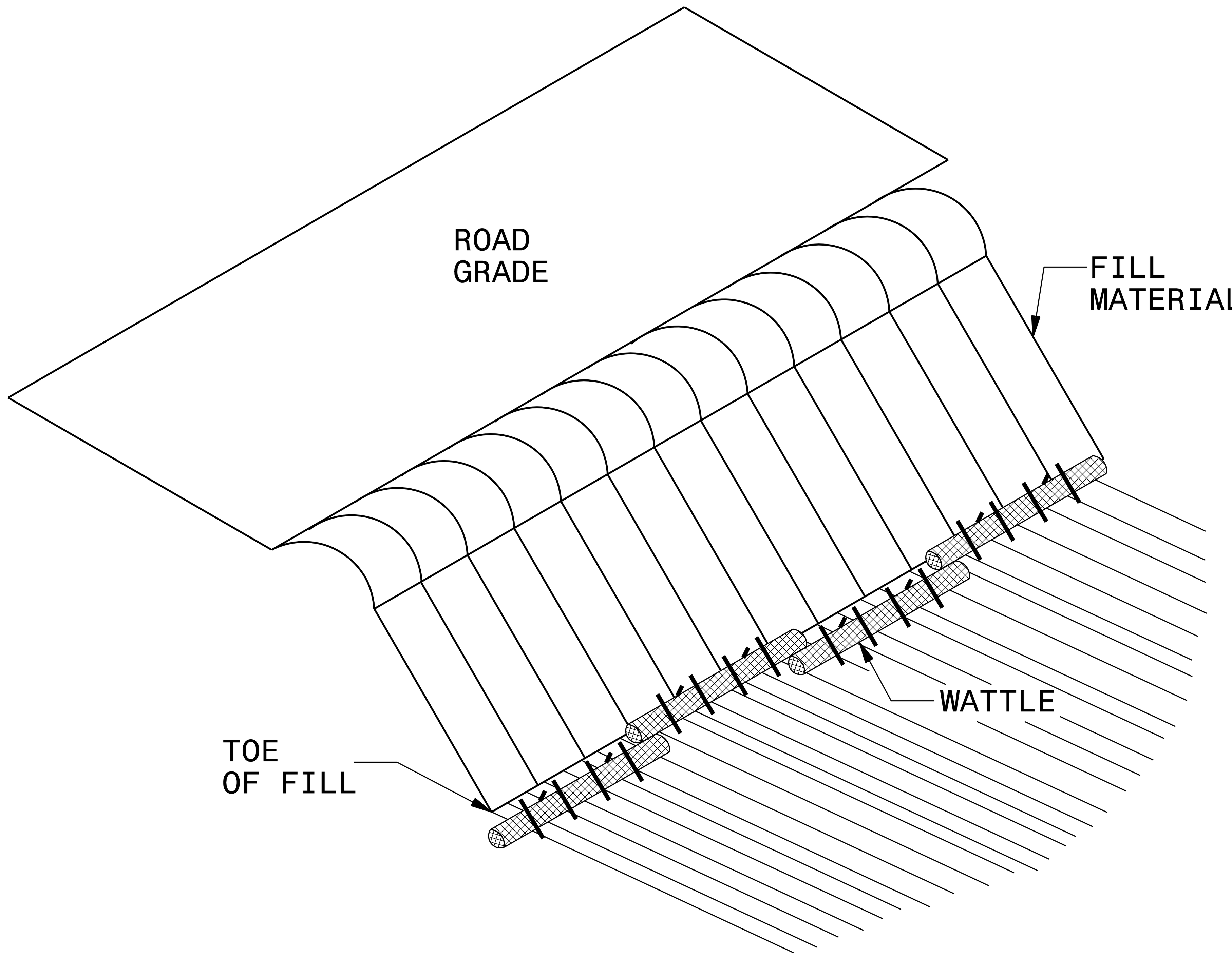


SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-2D
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EXCELSIOR WATTLE BARRIER DETAIL



ISOMETRIC VIEW

NOTES:

USE MINIMUM 18 IN. NOMINAL DIAMETER EXCELSIOR WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 2 TO 3 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLES ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

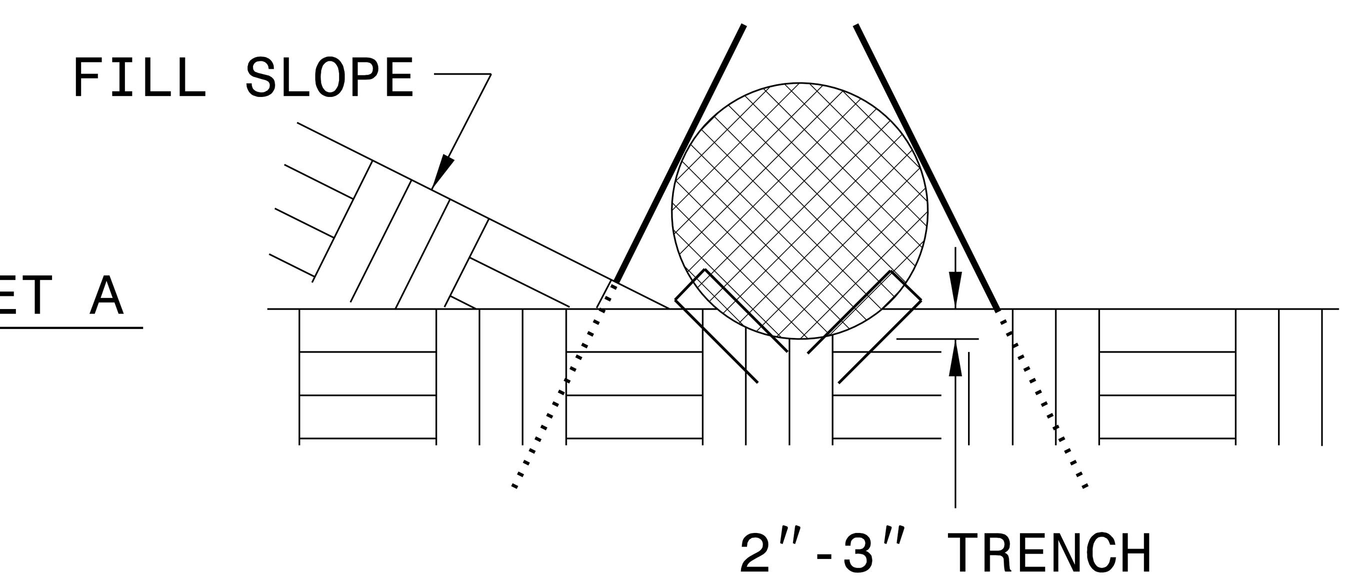
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

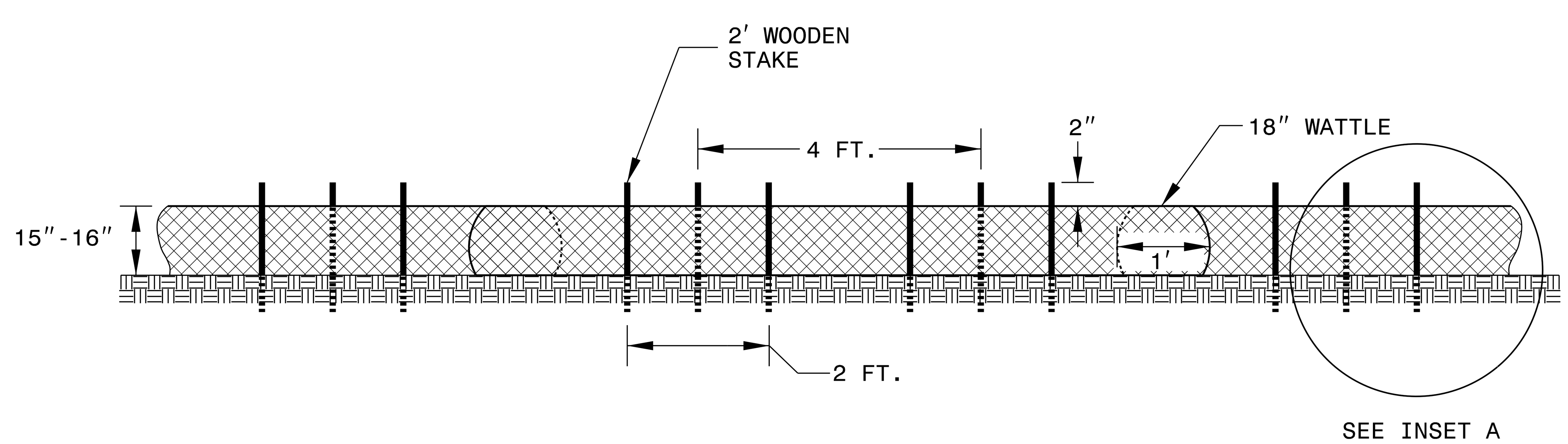
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

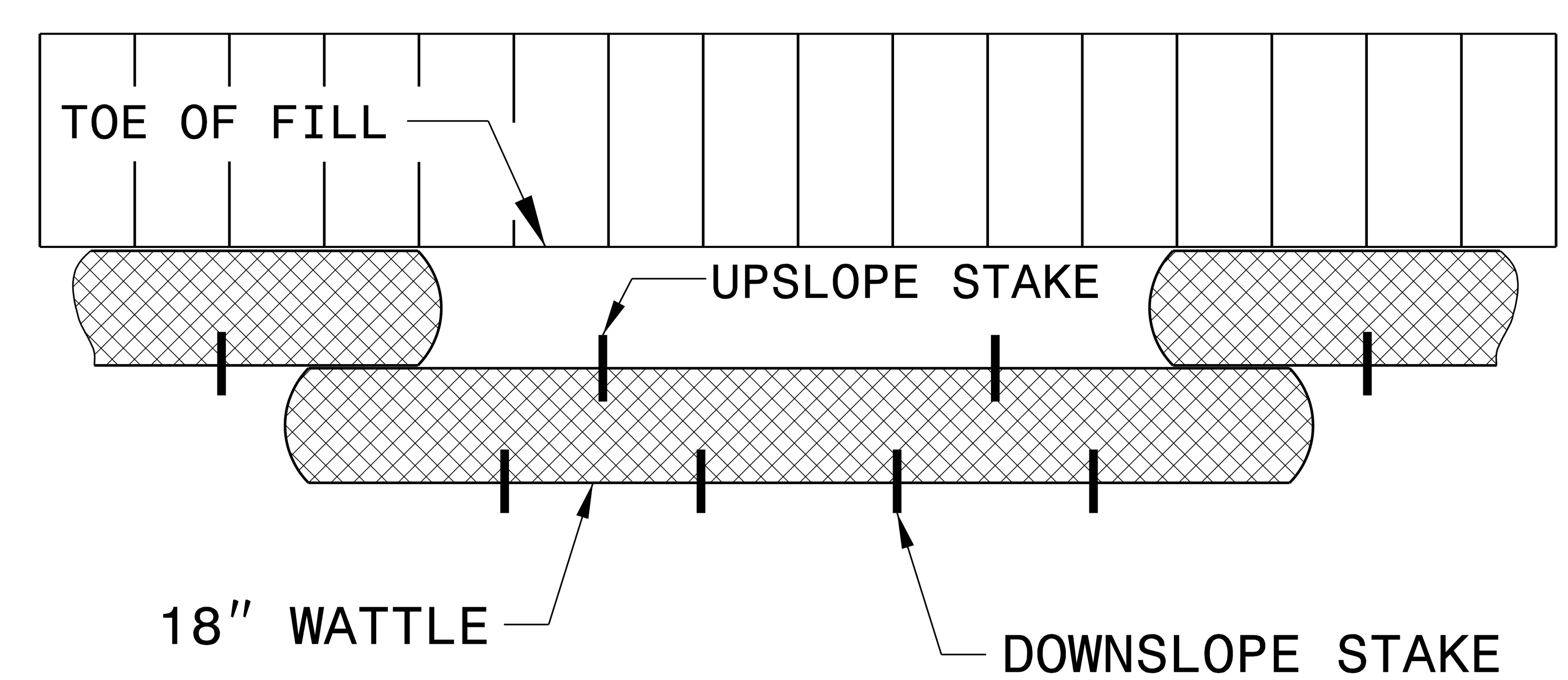
FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 20 FT.

INSET A





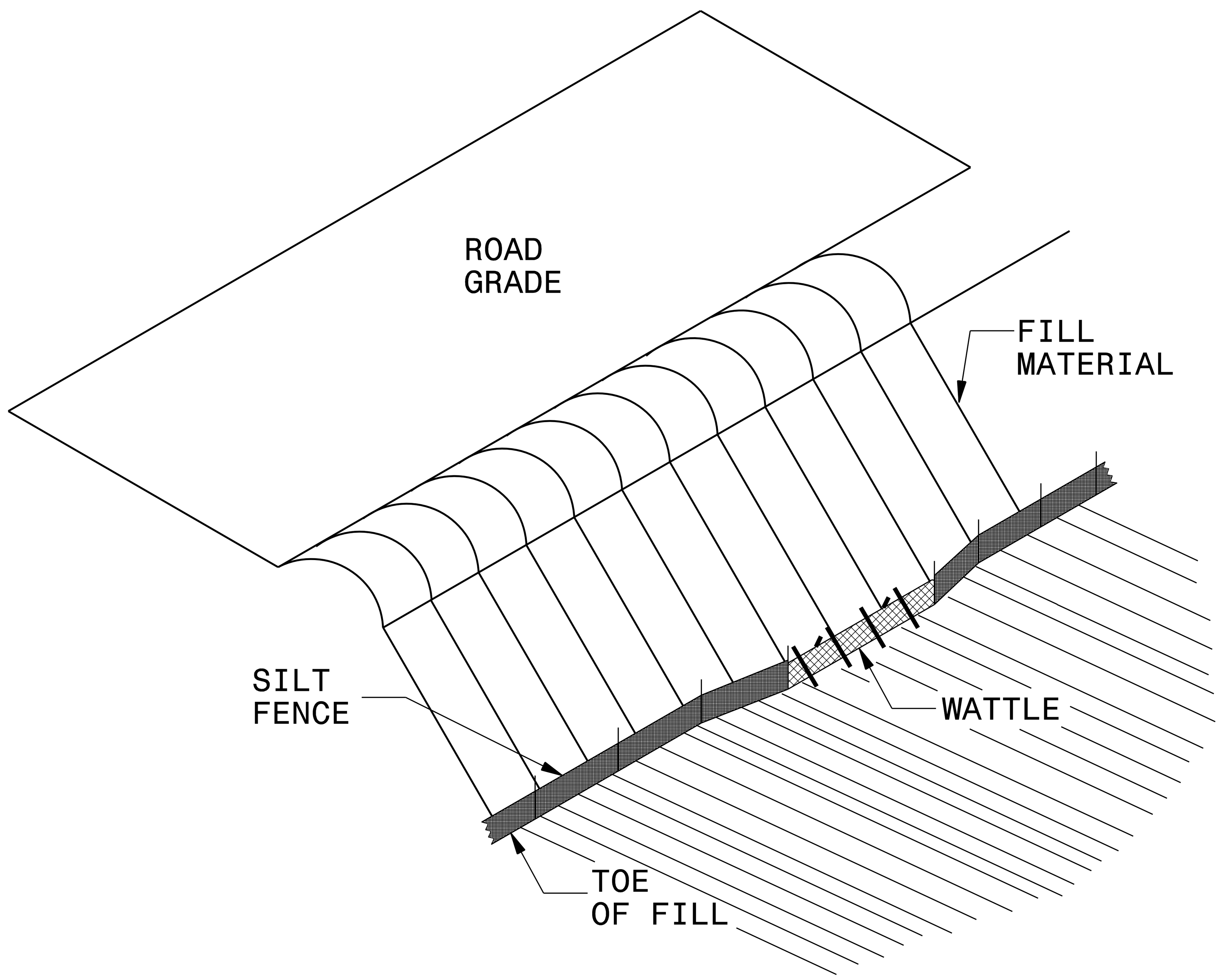
FRONT VIEW



TOP VIEW

SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-2E
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ISOMETRIC VIEW

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

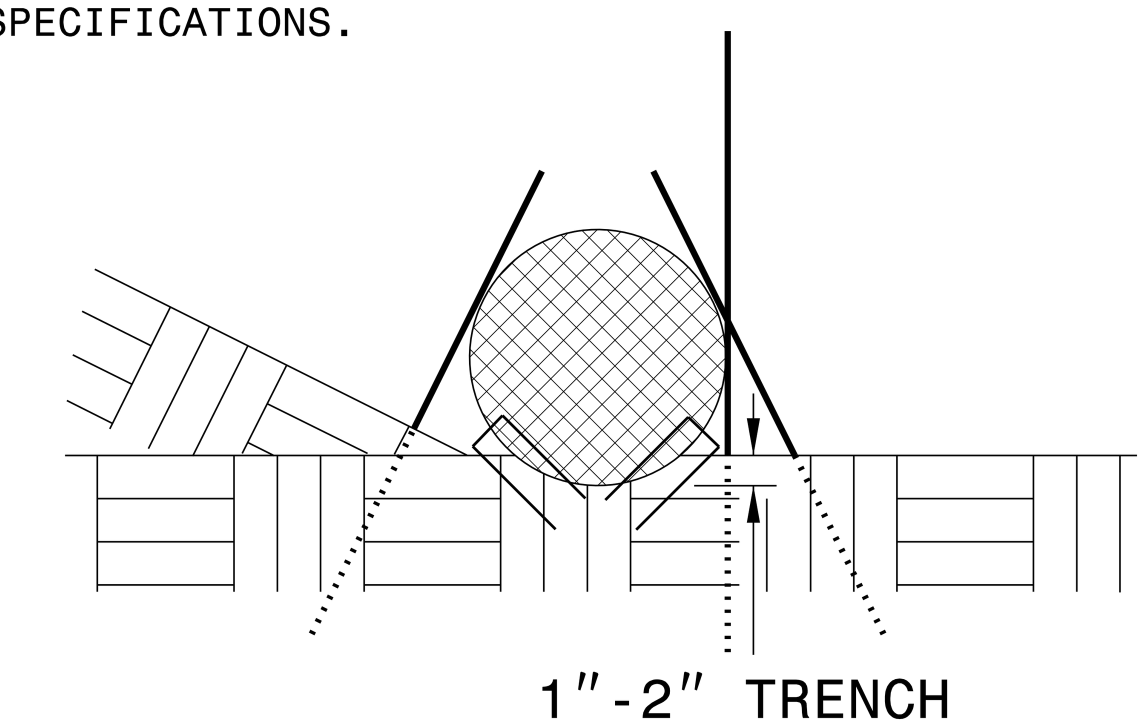
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

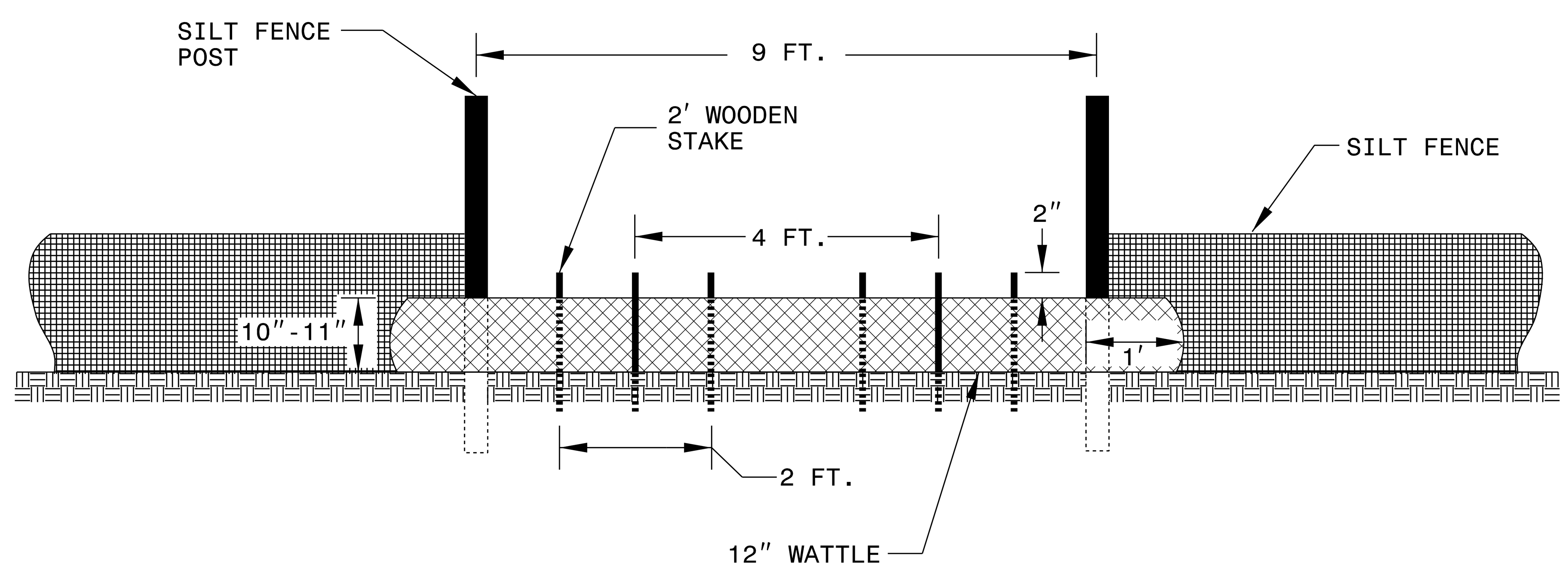
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

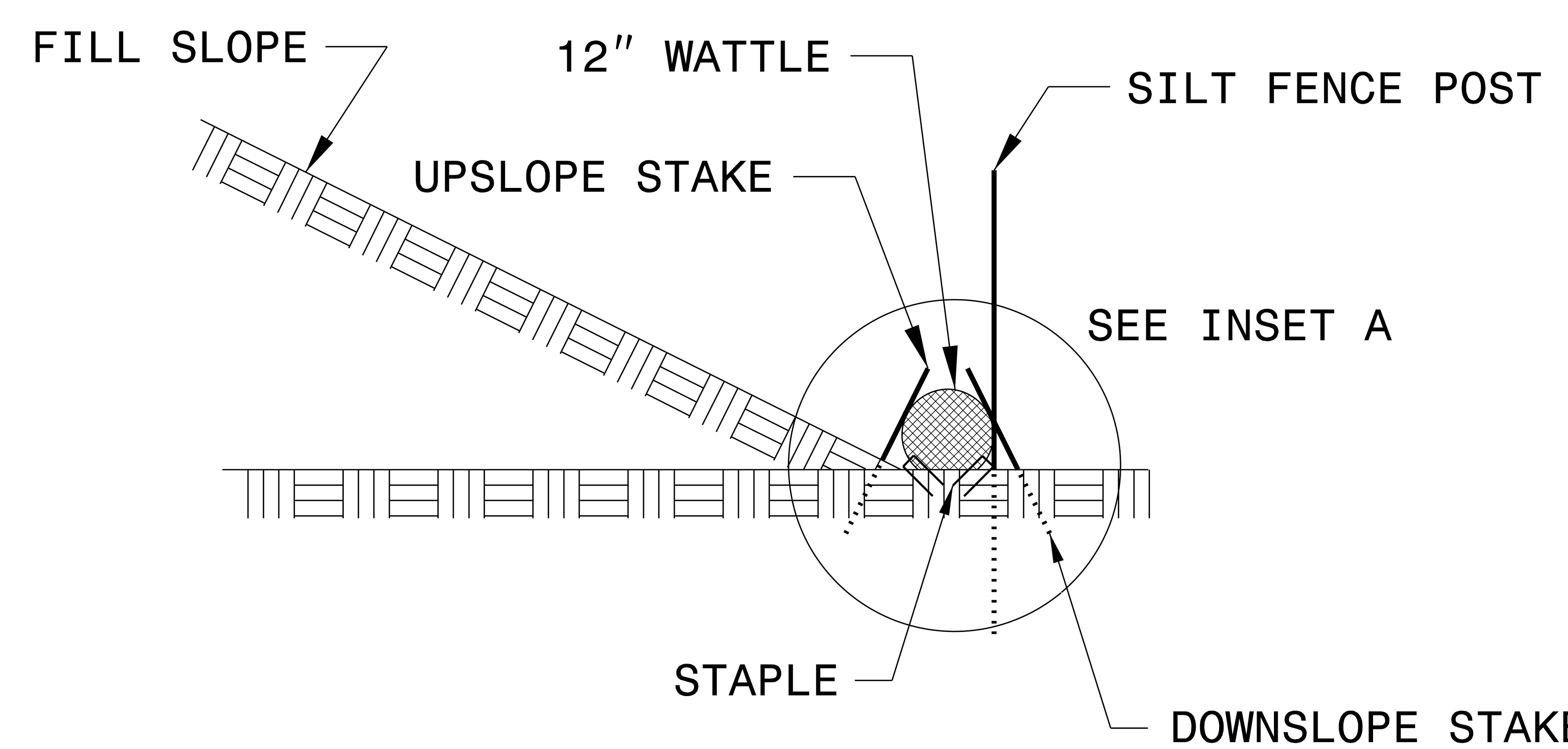
INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A





VIEW FROM SLOPE



SIDE VIEW

9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_psh02e_wattlebreak_.dgn
aburke

D = 6° 09′ 39.0″	D = 7° 01′ 48.6″	D = 21° 37′ 15.8″	D = 52° 05′ 13.5″
L = 391.12′	L = 86.96′	L = 60.53′	L = 55.48′
T = 198.49′	T = 43.52′	T = 30.40′	T = 28.35′
R = 930.00′	R = 815.00′	R = 265.00′	R = 110.00′
SE = 0.06	SE = 0.02	SE = 0.02	SE = 0.02
RO = 150′	DS = 15 MPH	DS = 15 MPH	DS = 15 MPH
DS = 50 MPH			

-L_DET1-

PI Sta 11+93.13	PI Sta 14+78.25
△ = 26° 02′ 45.8″ (LT)	△ = 13° 30′ 33.5″ (RT)
D = 6° 51′ 57.2″	D = 6° 51′ 57.2″
L = 379.36′	L = 196.76′
T = 193.13′	T = 98.90′
R = 835.00′	R = 835.00′
SE = 0.06	SE = 0.06
RO = 140	RO = 140
DS = 50 MPH	DS = 50 MPH

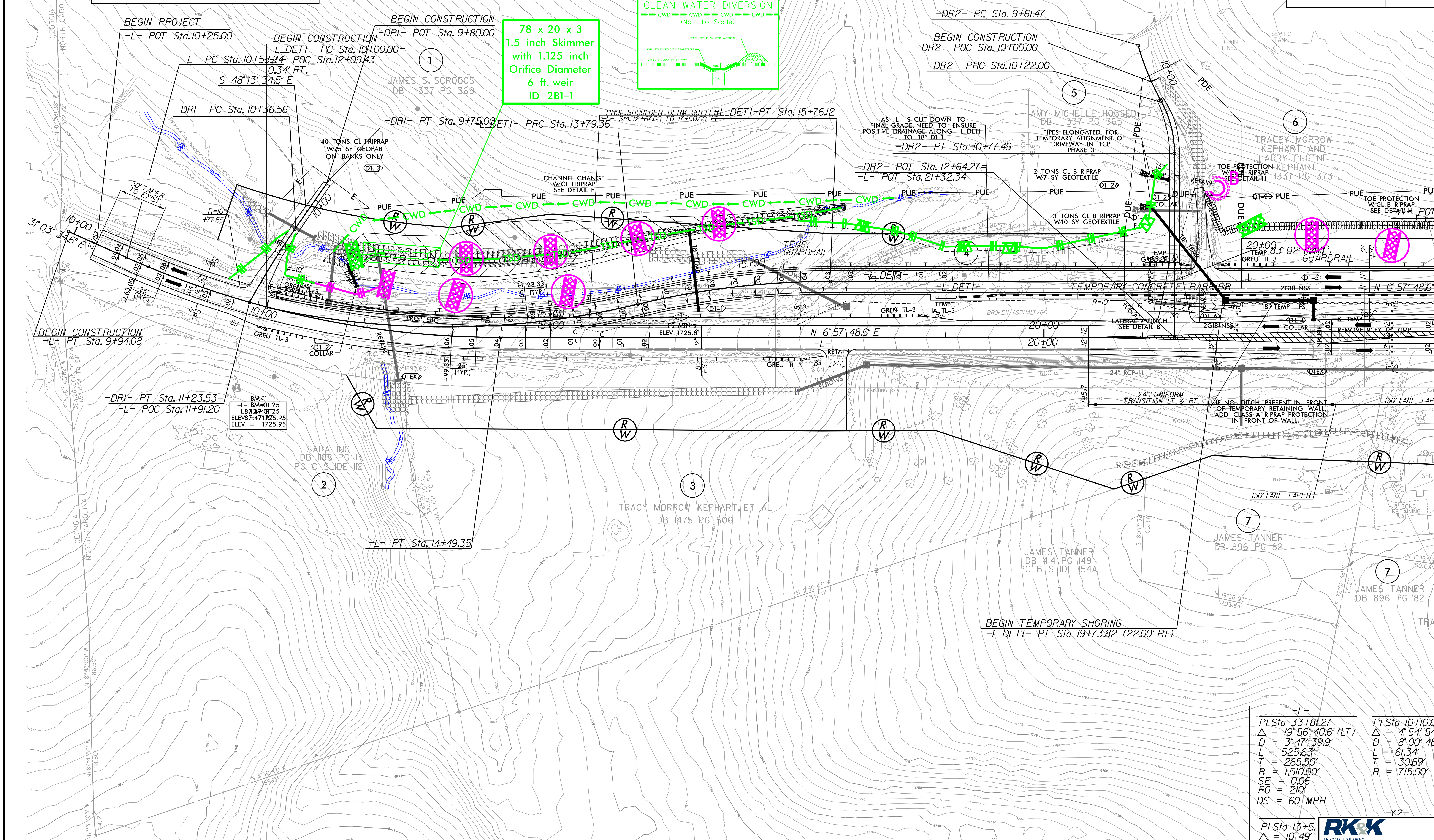
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 2B-1/EC-4

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

-L_DET1-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC12B-11/CONST.2B-1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DO NOT INSTALL EROSION CONTROL DEVICES IN JURISDICTIONAL STREAMS/FLOW



-L-

PI Sta 33+81.27	PI Sta 10+10.69
△ = 19° 56′ 40.6″ (LT)	△ = 4° 54′ 54.8″ (RT)
D = 3° 47′ 39.9″	D = 8° 00′ 48.2″
L = 525.63′	L = 61.34′
T = 265.50′	T = 30.69′
R = 1,510.00′	R = 715.00′
SE = 0.06	
RO = 210′	
DS = 60 MPH	

-Y2-

PI Sta 13+5.
△ = 10° 49′
D = 11° 41′ 3
L = 92.61′
T = 46.44′
R = 490.00

NOTES:
ALL DRIVES ARE 16′ WIDE WITH 10′ RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.

FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHTS. 4 & 5

FOR DITCH DETAILS SEE SHTS. 2D-1 & 2D-2
FOR -L_DET1- PROFILE SEE SHT. 38
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

8/17/99
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_1_psh2B-1.dgn

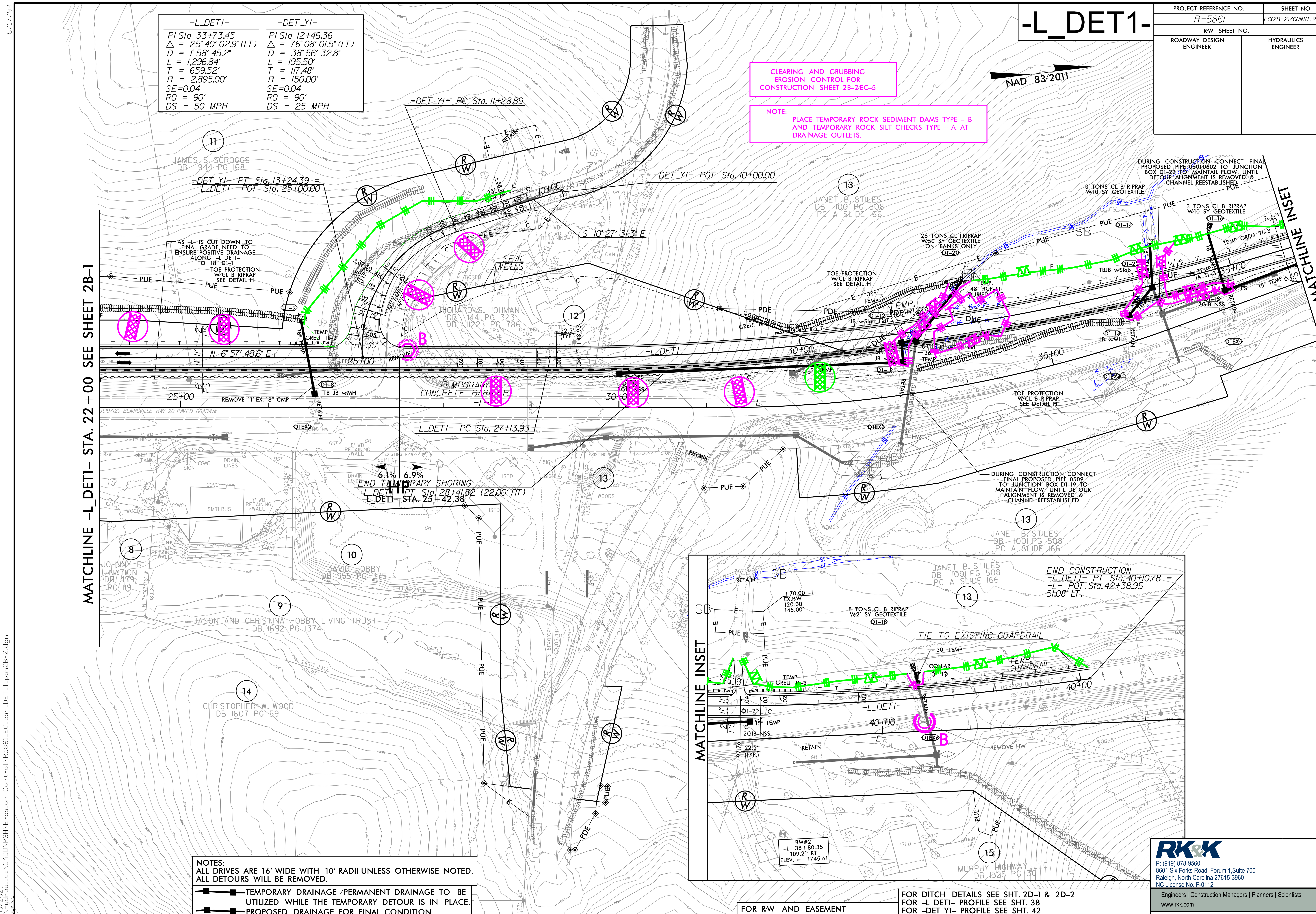
-L_DET1-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC(2B-2)/CONST.2B-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L_DET1-	-DET_Y1-
PI Sta 33+73.45	PI Sta 12+46.36
△ = 25° 40' 02.9" (LT)	△ = 76° 08' 01.5" (RT)
D = 1° 58' 45.2"	D = 38° 56' 32.8"
L = 1,296.84'	L = 195.50'
T = 659.52'	T = 117.48'
R = 2,895.00'	R = 150.00'
SE=0.04	SE=0.04
RO = 90'	RO = 90'
DS = 50 MPH	DS = 25 MPH

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 2B-2/EC-5

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.



NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.

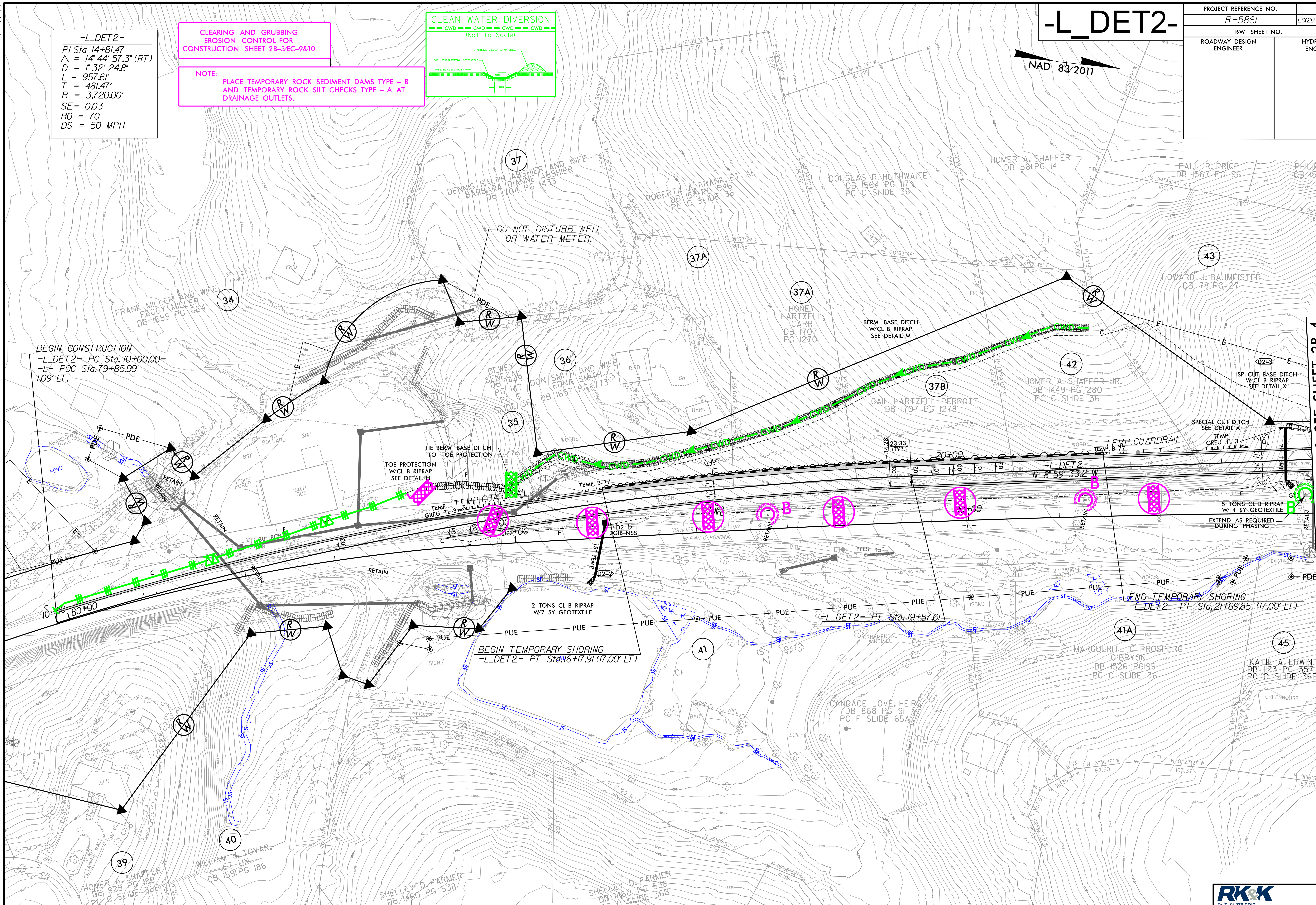
FOR R/W AND EASEMENT STATION/OFFSETS SEE SHTS. 5 AND 6.

FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET1- PROFILE SEE SHT. 38
FOR -DET_Y1- PROFILE SEE SHT. 42
FOR TRAFFIC CONTROL PLANS SEE SHT. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC(2B-3)/CONST.2B-3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L_DET2-



TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.

NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.

FOR R/W AND EASEMENTS STATIONS/OFFSETS SEE SHTS. 9 AND 10.
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET2- PROFILE SEE SHT. 39
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

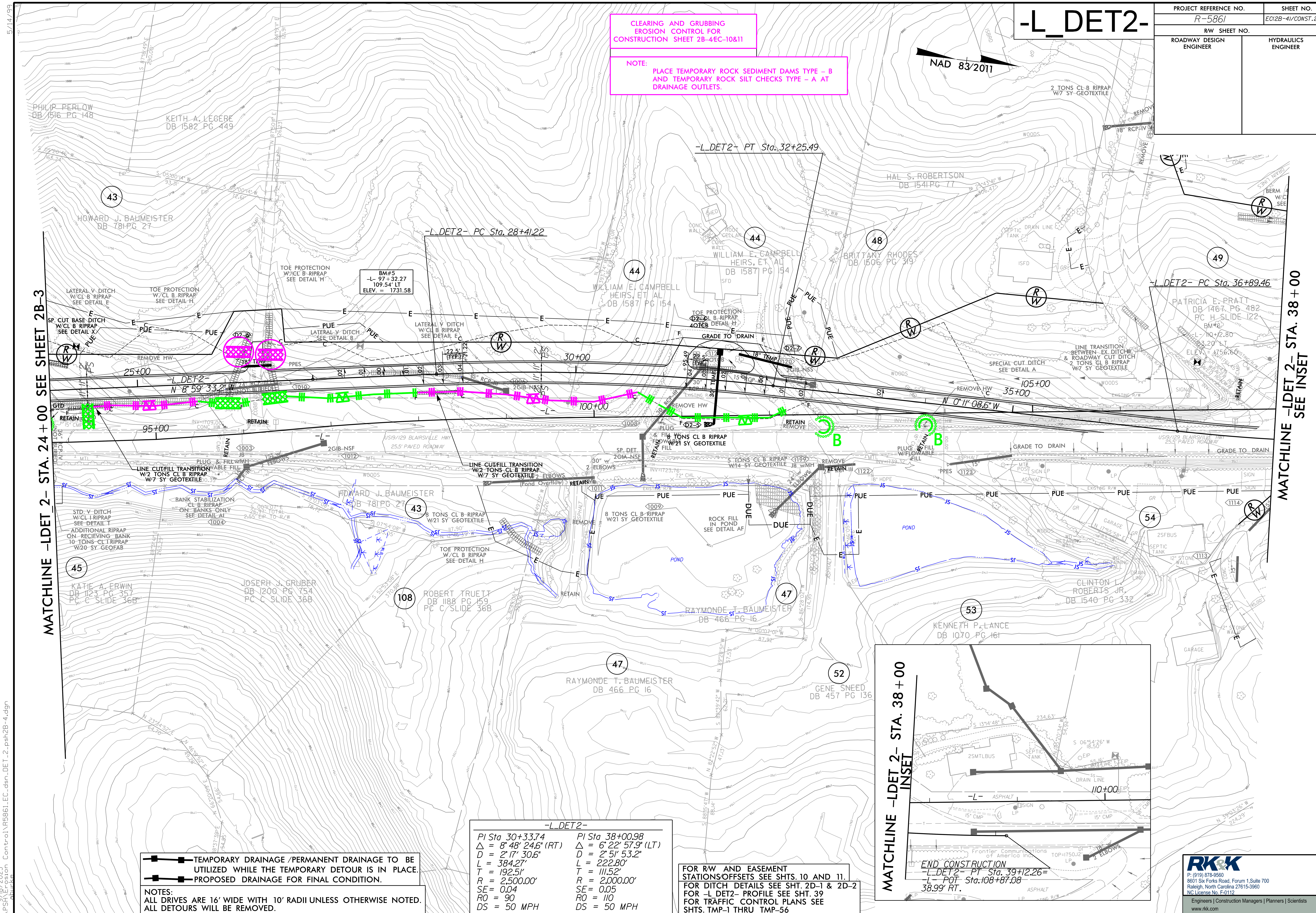
8/17/99
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_2_psh2B-3.dgn

-L_DET2-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC(2B-4)/CONST.2B-4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 2B-4/EC-10&11

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.



TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.

NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.

-L_DET2-

PI Sta 30+33.74	PI Sta 38+00.98
△ = 8° 48' 24.6" (RT)	△ = 6° 22' 57.9" (LT)
D = 2° 17' 30.6"	D = 2° 51' 53.2"
L = 384.27'	L = 222.80'
T = 192.51'	T = 111.52'
R = 2,500.00'	R = 2,000.00'
SE = 0.04	SE = 0.05
RO = 90	RO = 110
DS = 50 MPH	DS = 50 MPH

FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHTS. 10 AND 11.

FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET2- PROFILE SEE SHT. 39
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

9/18/2023
s:\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_2_psh2B-4.dgn

-L_DET3-

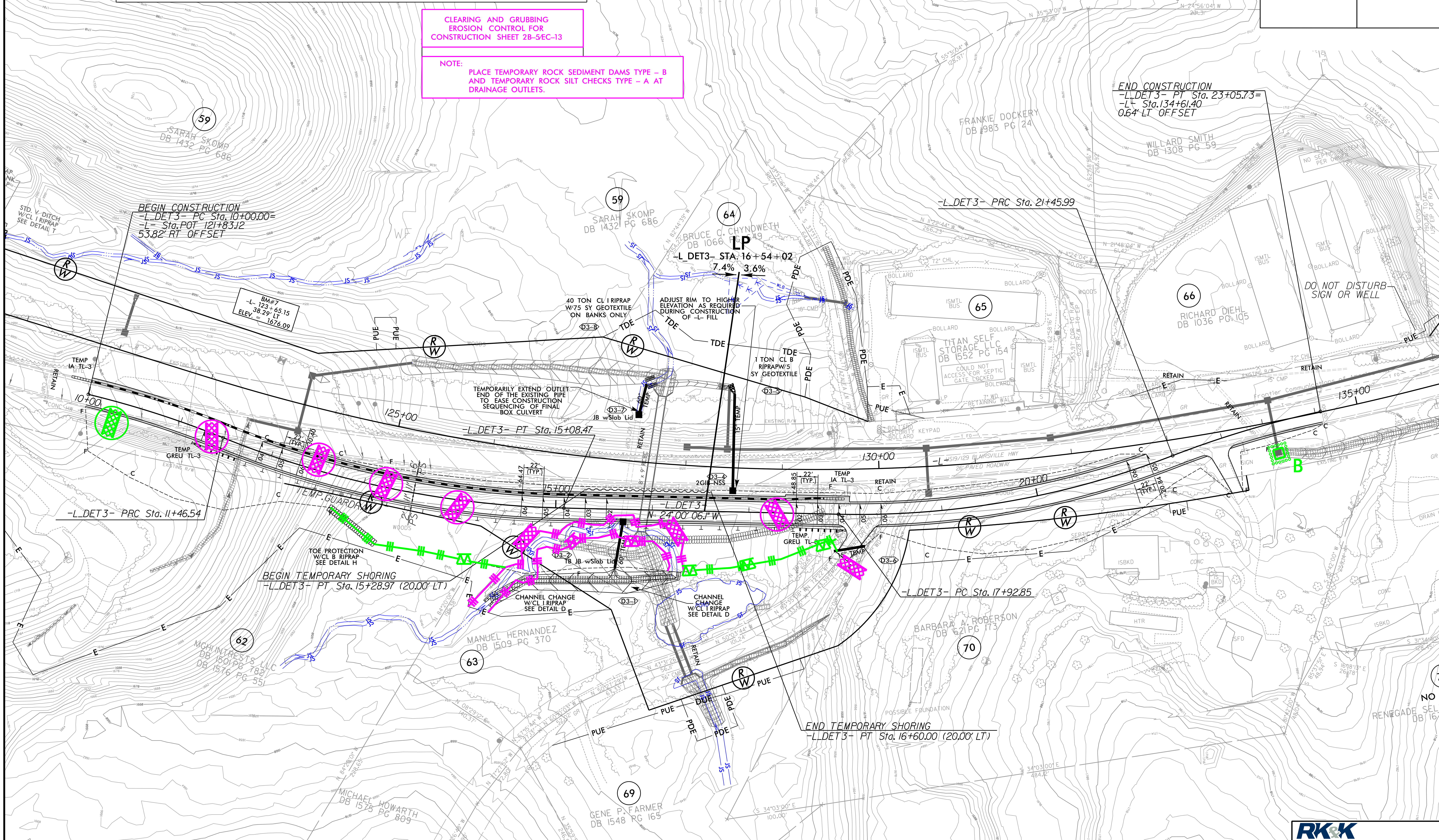
PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC(2B-5)/CONST.2B-5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L_DET3-

PI Sta 10+73.43	PI Sta 13+29.59	PI Sta 19+71.81	PI Sta 22+26.06
Δ = 8° 23′ 59.2″ (RT)	Δ = 20° 44′ 44.1″ (LT)	Δ = 22° 29′ 34.2″ (LT)	Δ = 9° 09′ 23.9″ (RT)
D = 5° 43′ 55.1″	D = 5° 43′ 55.1″	D = 6° 22′ 10.1″	D = 5° 43′ 55.1″
L = 146.54′	L = 361.93′	L = 353.13′	L = 159.75′
T = 73.43′	T = 183.04′	T = 178.96′	T = 80.08′
R = 1,000.00′	R = 1,000.00′	R = 900.00′	R = 1,000.00′
SE = 0.06	SE = 0.06	SE = 0.06	SE = 0.06
RO = 44	RO = 132	RO = 132	
DS = 50 MPH	DS = 50 MPH	DS = 50 MPH	DS = 50 MPH

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 2B-5/EC-13

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.



TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.

PROPOSED DRAINAGE FOR FINAL CONDITION.

NOTES:
ALL DRIVES ARE 16′ WIDE WITH 10′ RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.

FOR R/W AND EASEMENTS STATIONS/OFFSETS SEE SHTS. 12 AND 13.

FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L DET3- PROFILE SEE SHT. 40
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

8/17/99

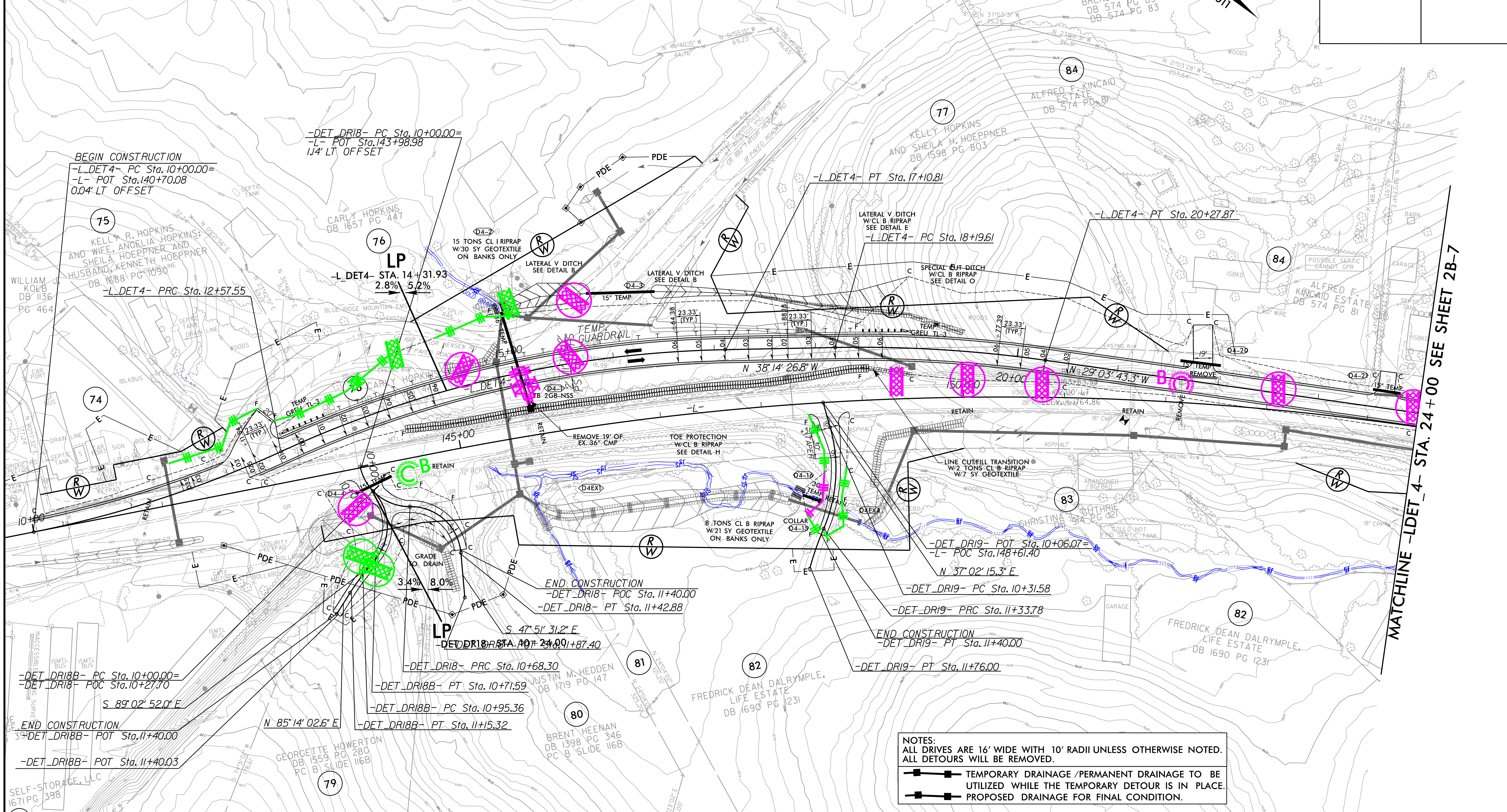
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_3_psh2B-5.dgn

-L_DET4-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC(2B-6)/CONST.2B-6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 2B-6EC-14

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.



NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.

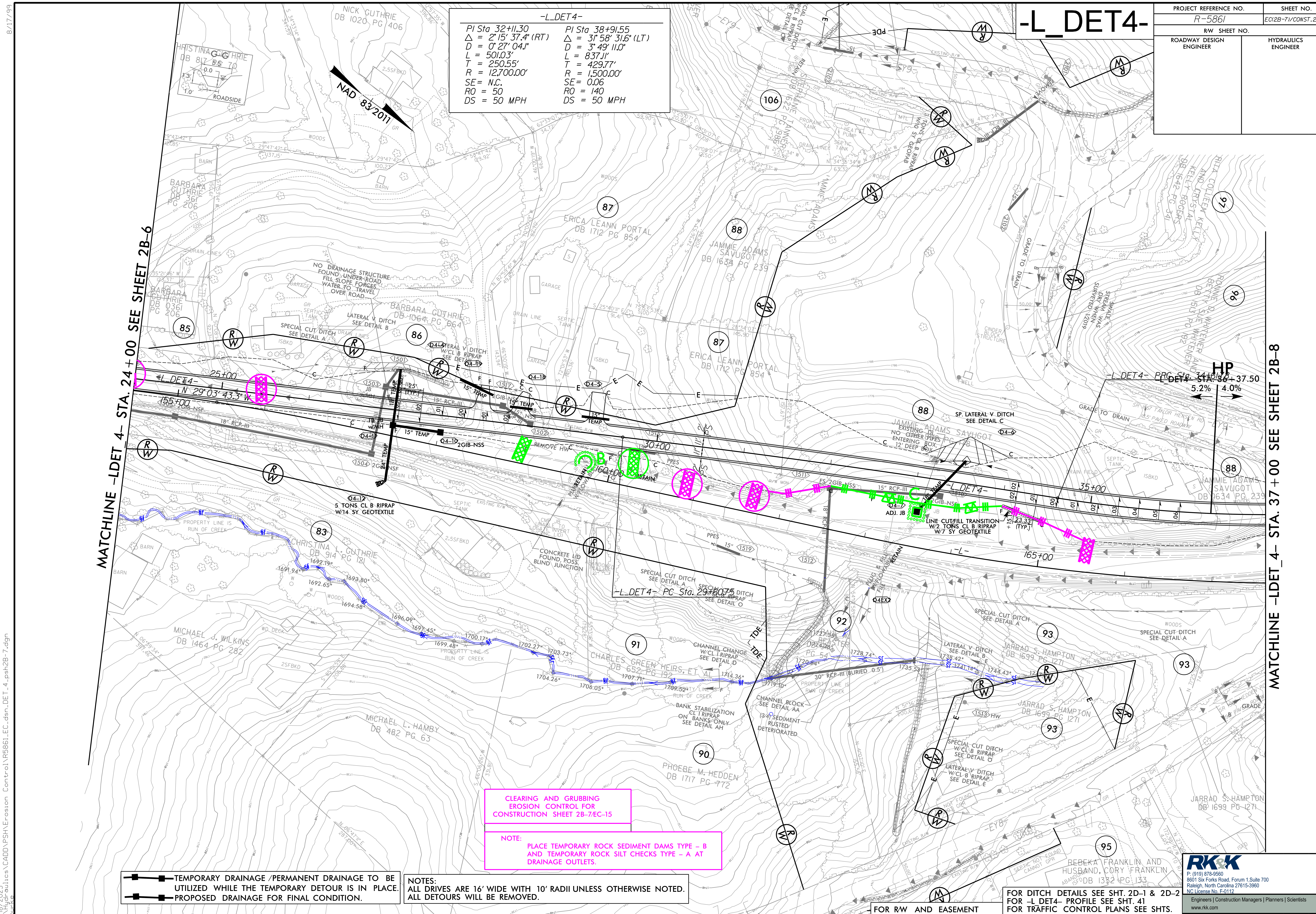
-L_DET4-			-DET_DRI8-		-DET_DRI8B-		-DET_DRI9-	
PI Sta 11+29.41	PI Sta 14+87.52	PI Sta 19+23.97	PI Sta 10+40.68	PI Sta 11+14.49	PI Sta 10+43.49	PI Sta 11+05.35	PI Sta 10+84.76	PI Sta 11+54.93
△ = 13° 25' 10.6" (LT)	△ = 23° 37' 01.0" (RT)	△ = 9° 10' 43.4" (RT)	△ = 78° 15' 52.3" (LT)	△ = 85° 28' 02.8" (RT)	△ = 82° 02' 03.8" (RT)	△ = 5° 43' 05.5" (LT)	△ = 39° 02' 18.7" (RT)	△ = 8° 03' 46.2" (LT)
D = 5° 12' 37.8"	D = 5° 12' 37.8"	D = 4° 24' 26.5"	D = 114° 35' 29.6"	D = 114° 35' 29.6"	D = 114° 35' 29.6"	D = 28° 38' 52.4"	D = 38° 11' 49.9"	D = 19° 05' 54.9"
L = 257.55'	L = 453.26'	L = 208.26'	L = 68.30'	L = 74.58'	L = 71.59'	L = 19.96'	L = 102.20'	L = 42.22'
T = 129.41'	T = 229.97'	T = 104.35'	T = 40.68'	T = 46.19'	T = 43.49'	T = 9.99'	T = 53.17'	T = 21.14'
R = 1,100.00'	R = 1,100.00'	R = 1,300.00'	R = 50.00'	R = 50.00'	R = 50.00'	R = 200.00'	R = 150.00'	R = 300.00'
	SE = 0.06	SE = 0.06						
	RO = 140	RO = 140						
	DS = 50 MPH	DS = 50 MPH						

FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHTS. 14 AND 15.

FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET4- PROFILE SEE SHT. 40
FOR -DET_DRI8- PROFILE SEE SHT. 43
FOR -DET_DRI8B- PROFILE SEE SHT. 43
FOR -DET_DRI9- PROFILE SEE SHT. 43
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

8/17/99
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_4_psh2B-6.dgn
aburke



-L_DET4-	
PI Sta 32+11.30	PI Sta 38+91.55
△ = 2° 15' 37.4" (RT)	△ = 31° 58' 31.6" (LT)
D = 0° 27' 04.1"	D = 3° 49' 11.0"
L = 501.03'	L = 837.11'
T = 250.55'	T = 429.77'
R = 12,700.00'	R = 1,500.00'
SE = N.C.	SE = 0.06
RO = 50	RO = 140
DS = 50 MPH	DS = 50 MPH

-L_DET4-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC(2B-7)/CONST.2B-7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 2B-7/EC-15

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.

NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.

FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHT. 15.

FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET4- PROFILE SEE SHT. 41
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

8/17/99
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_4_psh2B-7.dgn

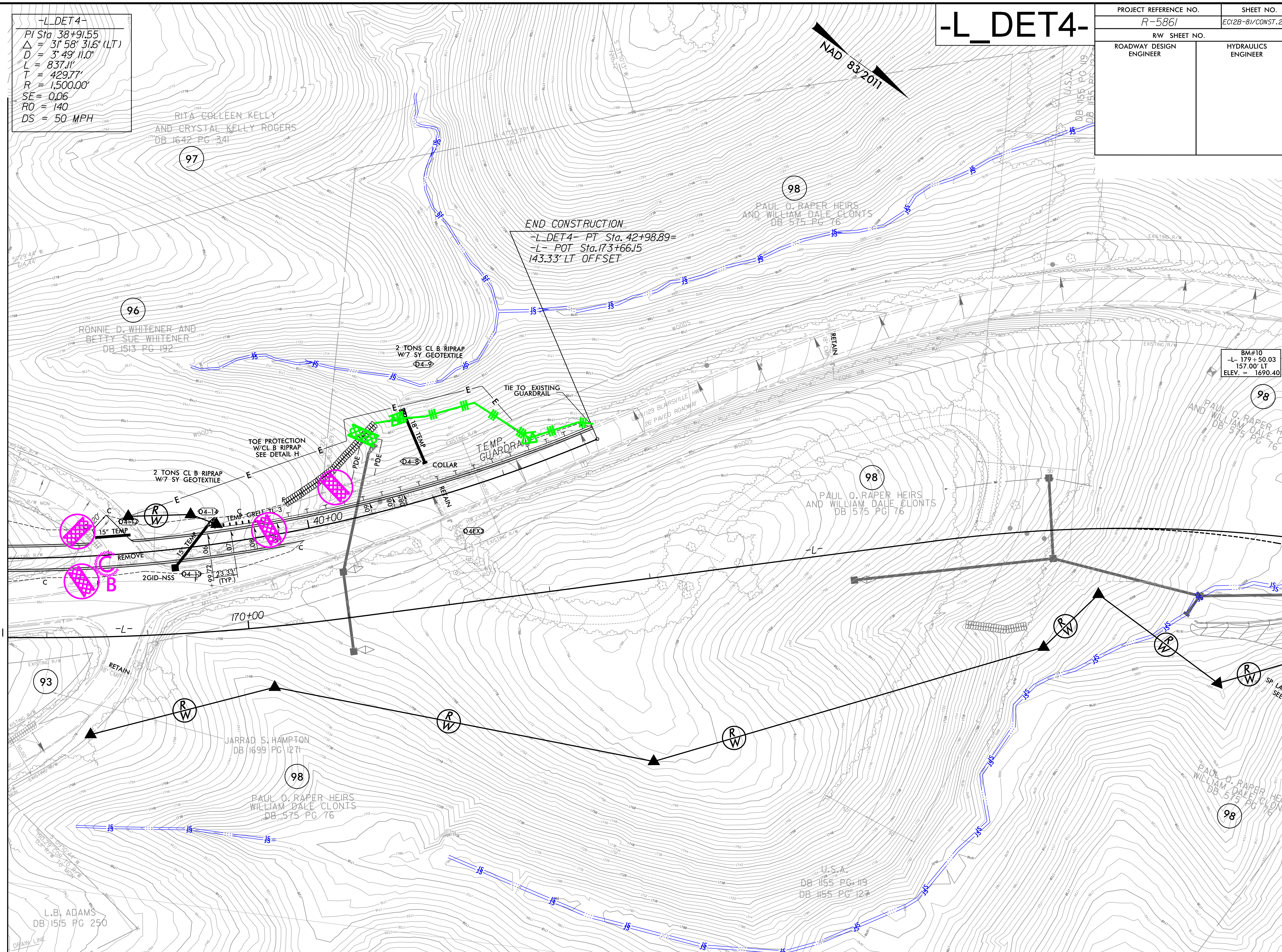
-L_DET4-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC12B-81/CONST.2B-8

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L_DET4-
PI Sta 38+91.55
△ = 31° 58' 31.6" (LT)
D = 3° 49' 11.0"
L = 837.11'
T = 429.77'
R = 1,500.00'
SE = 0.06
RO = 140
DS = 50 MPH



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 2B-8EC-16

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.

NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.
-DET_5- WAS REMOVED FROM THE PLANS.

FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHT. 16.

FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET4- PROFILE SEE SHT. 41
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

8/17/99

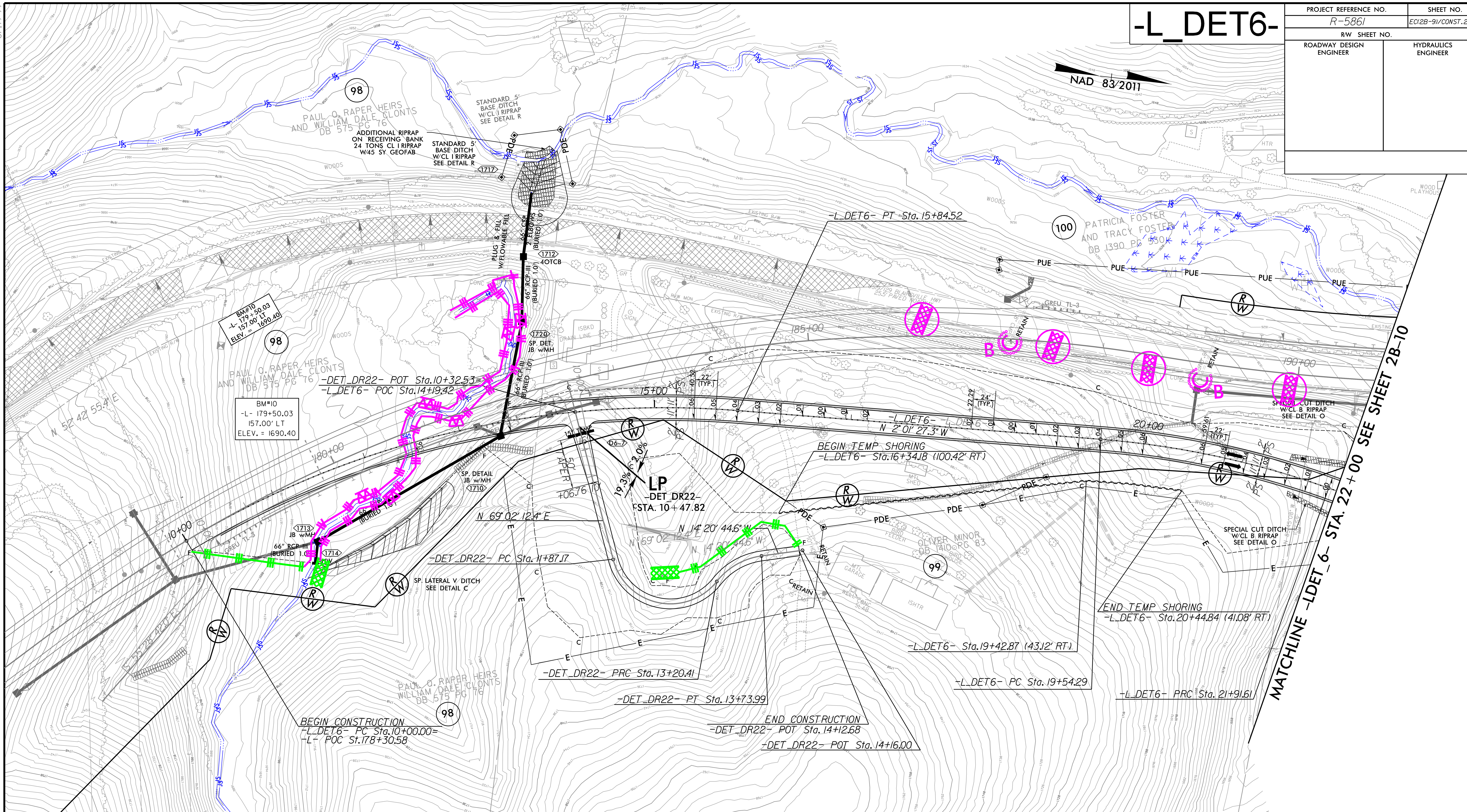
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_4_psh2B-8.dgn

-L_DET6-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC12B-9/CONST.2B-9

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.

NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.
-DET_5- WAS REMOVED FROM THE PLANS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 2B-9/EC-17

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

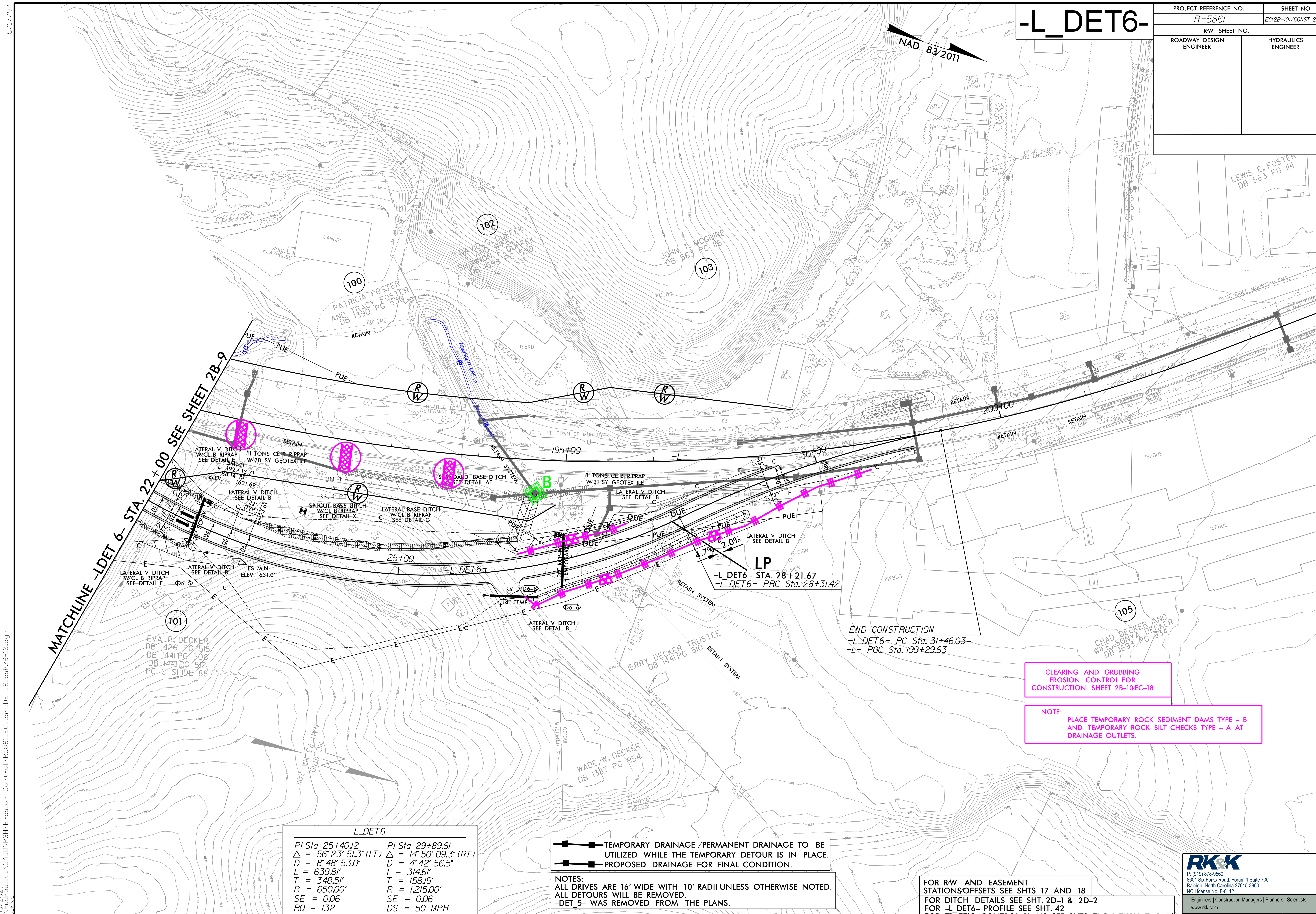
-L_DET6-			-DET_DR22-	
PI Sta 13+02.06	PI Sta 20+73.64	PI Sta 25+40.12	PI Sta 13+08.13	PI Sta 13+48.59
△ = 35° 37' 42.0" (RT)	△ = 15° 06' 30.4" (RT)	△ = 56° 23' 51.3" (LT)	△ = 127° 14' 01.3" (LT)	△ = 43° 51' 04.3" (RT)
D = 6° 05' 43.1"	D = 6° 21' 58.3"	D = 8° 48' 53.0"	D = 95° 29' 34.7"	D = 81° 51' 04.0"
L = 584.52'	L = 237.32'	L = 639.81'	L = 133.24'	L = 53.57'
T = 302.06'	T = 119.35'	T = 348.51'	T = 120.96'	T = 28.18'
R = 940.00'	R = 900.00'	R = 650.00'	R = 60.00'	R = 70.00'
SE = 0.06	SE = 0.06	SE = 0.06	SE = 0.02	SE = 0.02
RO = 132	RO = 132	RO = 132	DS = 15 MPH	DS = 15 MPH
DS = 50 MPH	DS = 50 MPH	DS = 45 MPH		

FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHTS. 16 AND 17.
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET6- PROFILE SEE SHT. 42
FOR -DET_DR22- PROFILE SEE SHT. 43
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

-L_DET6-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC(2B-10)/CONST.2B-10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



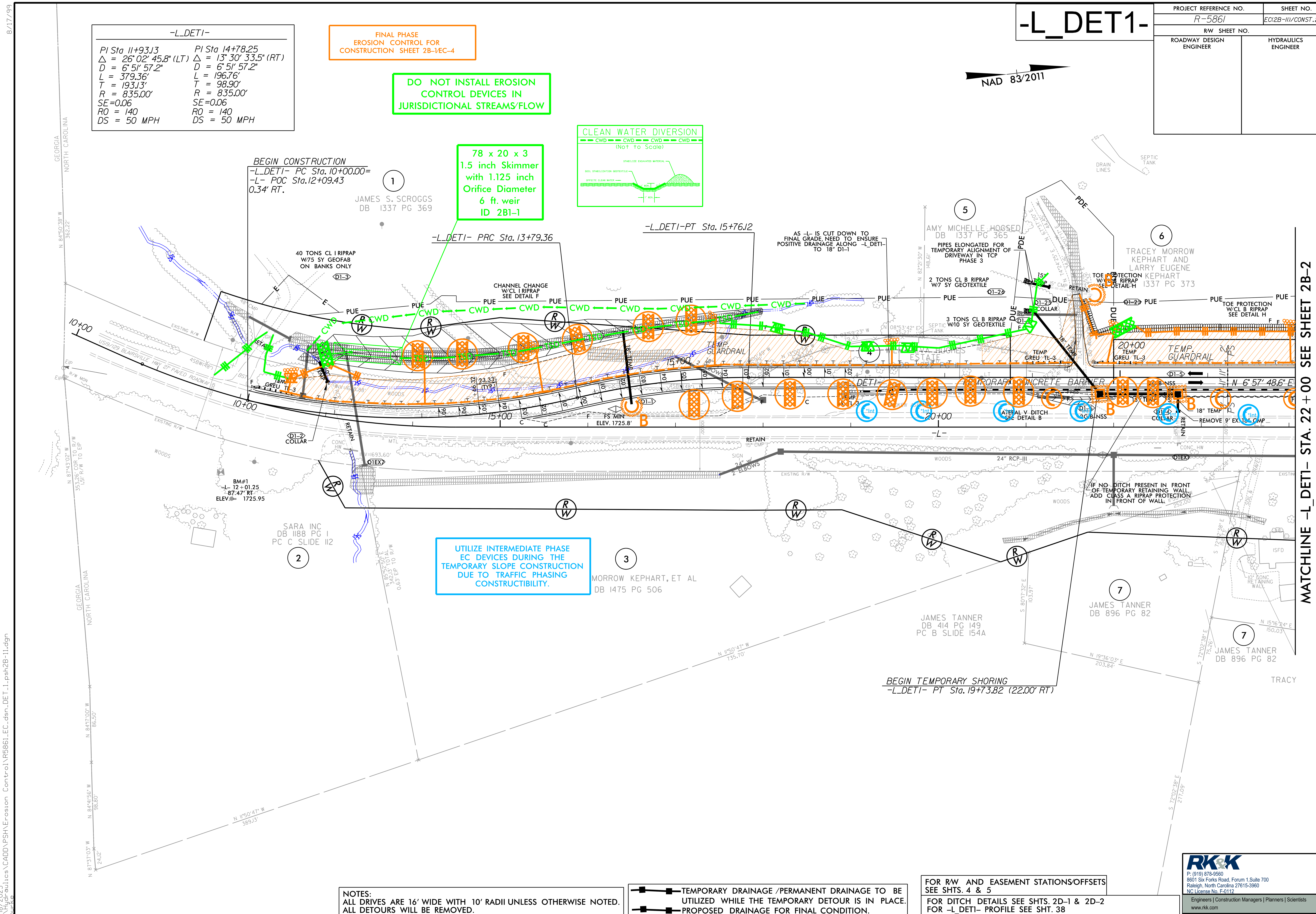
-L_DET6-	
PI Sta 25+40.12	PI Sta 29+89.61
△ = 56° 23' 51.3" (LT)	△ = 14° 50' 09.3" (RT)
D = 8° 48' 53.0"	D = 4° 42' 56.5"
L = 639.81'	L = 314.61'
T = 348.51'	T = 158.19'
R = 650.00'	R = 1,215.00'
SE = 0.06	SE = 0.06
RO = 132	DS = 50 MPH
DS = 45 MPH	

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.

NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.
-DET_5- WAS REMOVED FROM THE PLANS.

FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHTS. 17 AND 18.
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET6- PROFILE SEE SHT. 42
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions



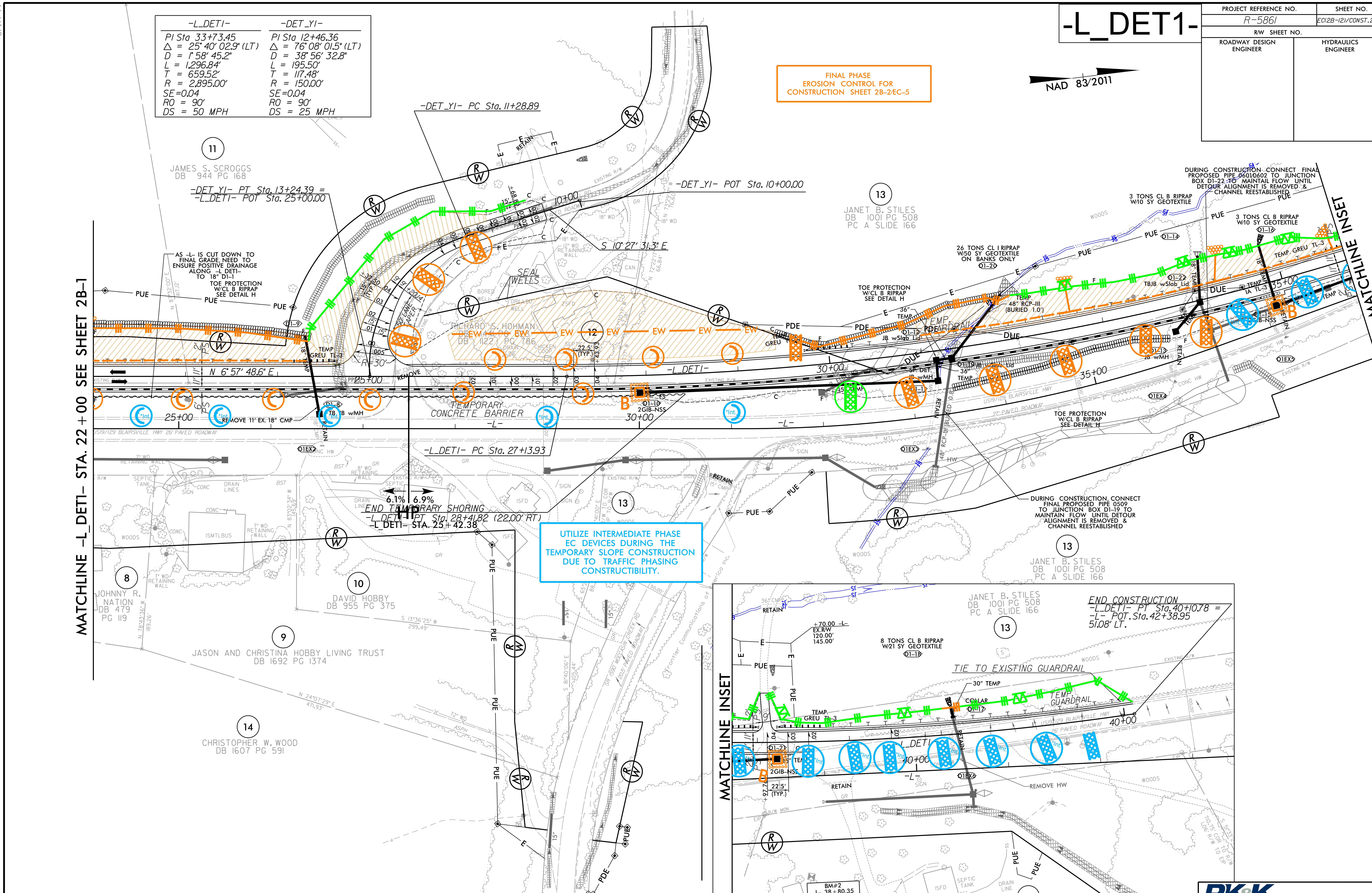
-L_DET1-
PROJECT REFERENCE NO.
R-5861
SHEET NO.
EC12B-III/CONST.2B-1
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
-L_DET1-
PI Sta 11+93.13
△ = 26° 02' 45.8" (LT)
D = 6° 51' 57.2"
L = 379.36'
T = 193.13'
R = 835.00'
SE=0.06
RO = 140
DS = 50 MPH
PI Sta 14+78.25
△ = 13° 30' 33.5" (RT)
D = 6° 51' 57.2"
L = 196.76'
T = 98.90'
R = 835.00'
SE=0.06
RO = 140
DS = 50 MPH
FINAL PHASE EROSION CONTROL FOR CONSTRUCTION SHEET 2B-1/EC-4
DO NOT INSTALL EROSION CONTROL DEVICES IN JURISDICTIONAL STREAMS/FLOW
CLEAN WATER DIVERSION
(Not to Scale)
78 x 20 x 3
1.5 inch Skimmer with 1.125 inch Orifice Diameter
6 ft. weir
ID 2B1-1
NAD 83/2011
BEGIN CONSTRUCTION
-L_DET1- PC Sta. 10+00.00=
-L- POC Sta.12+09.43
0.34' RT.
JAMES S. SCROGGS
DB 1337 PG 369
-L_DET1- PRC Sta. 13+79.36
-L_DET1-PT Sta. 15+76.12
AMY MICHELLE HOGSED
DB 1337 PG 365
TRACEY MORROW KEPHART AND LARRY EUGENE KEPHART
DB 1337 PG 373
40 TONS CL I RIPRAP W/75 SY GEOFAB ON BANKS ONLY
CHANNEL CHANGE W/CL I RIPRAP SEE DETAIL F
AS -L- IS CUT DOWN TO FINAL GRADE, NEED TO ENSURE POSITIVE DRAINAGE ALONG -L_DET1- TO 18" D1-1
PIPES ELONGATED FOR TEMPORARY ALIGNMENT OF DRIVEWAY IN TCP PHASE 3
2 TONS CL B RIPRAP W/7 SY GEOTEXTILE
3 TONS CL B RIPRAP W/10 SY GEOTEXTILE
TOE PROTECTION W/CL B RIPRAP SEE DETAIL H
TEMP GUARDRAIL
TEMPORARY CONCRETE BARRIER
LATERAL V DITCH SEE DETAIL B
FS MIN ELEV. 1725.8'
N 6° 57' 48.6" E
BM#1 -L- 12+01.25 87.47' RT ELEV = 1725.95
SARA INC
DB 1188 PG 1
PC C SLIDE 112
UTILIZE INTERMEDIATE PHASE EC DEVICES DURING THE TEMPORARY SLOPE CONSTRUCTION DUE TO TRAFFIC PHASING CONSTRUCTIBILITY.
MORROW KEPHART, ET AL
DB 1475 PG 506
IF NO DITCH PRESENT IN FRONT OF TEMPORARY RETAINING WALL, ADD CLASS A RIPRAP PROTECTION IN FRONT OF WALL.
JAMES TANNER
DB 414 PG 149
PC B SLIDE 154A
JAMES TANNER
DB 896 PG 82
BEGIN TEMPORARY SHORING
-L_DET1- PT Sta. 19+73.82 (22.00' RT)
MATCHLINE -L_DET1- STA. 22+00 SEE SHEET 2B-2
NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.
TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.
FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHTS. 4 & 5
FOR DITCH DETAILS SEE SHTS. 2D-1 & 2D-2
FOR -L_DET1- PROFILE SEE SHT. 38
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56
RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions
8/17/99
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_1_psh2B-11.dgn

-L_DET1-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC12B-121/CONST.2B-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L_DET1-	-DET_Y1-
PI Sta 33+73.45	PI Sta 12+46.36
△ = 25° 40' 02.9" (LT)	△ = 76° 08' 01.5" (LT)
D = 1° 58' 45.2"	D = 38° 56' 32.8"
L = 1,296.84'	L = 195.50'
T = 659.52'	T = 117.48'
R = 2,895.00'	R = 150.00'
SE = 0.04	SE = 0.04
RO = 90'	RO = 90'
DS = 50 MPH	DS = 25 MPH

FINAL PHASE EROSION CONTROL FOR CONSTRUCTION SHEET 2B-2/EC-5



NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.

FOR R/W AND EASEMENT STATION/OFFSETS SEE SHTS. 5 AND 6.

FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET1- PROFILE SEE SHT. 38
FOR -DET_Y1- PROFILE SEE SHT. 42
FOR TRAFFIC CONTROL PLANS SEE SHT. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC12B-13 / CONST. 2B-3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

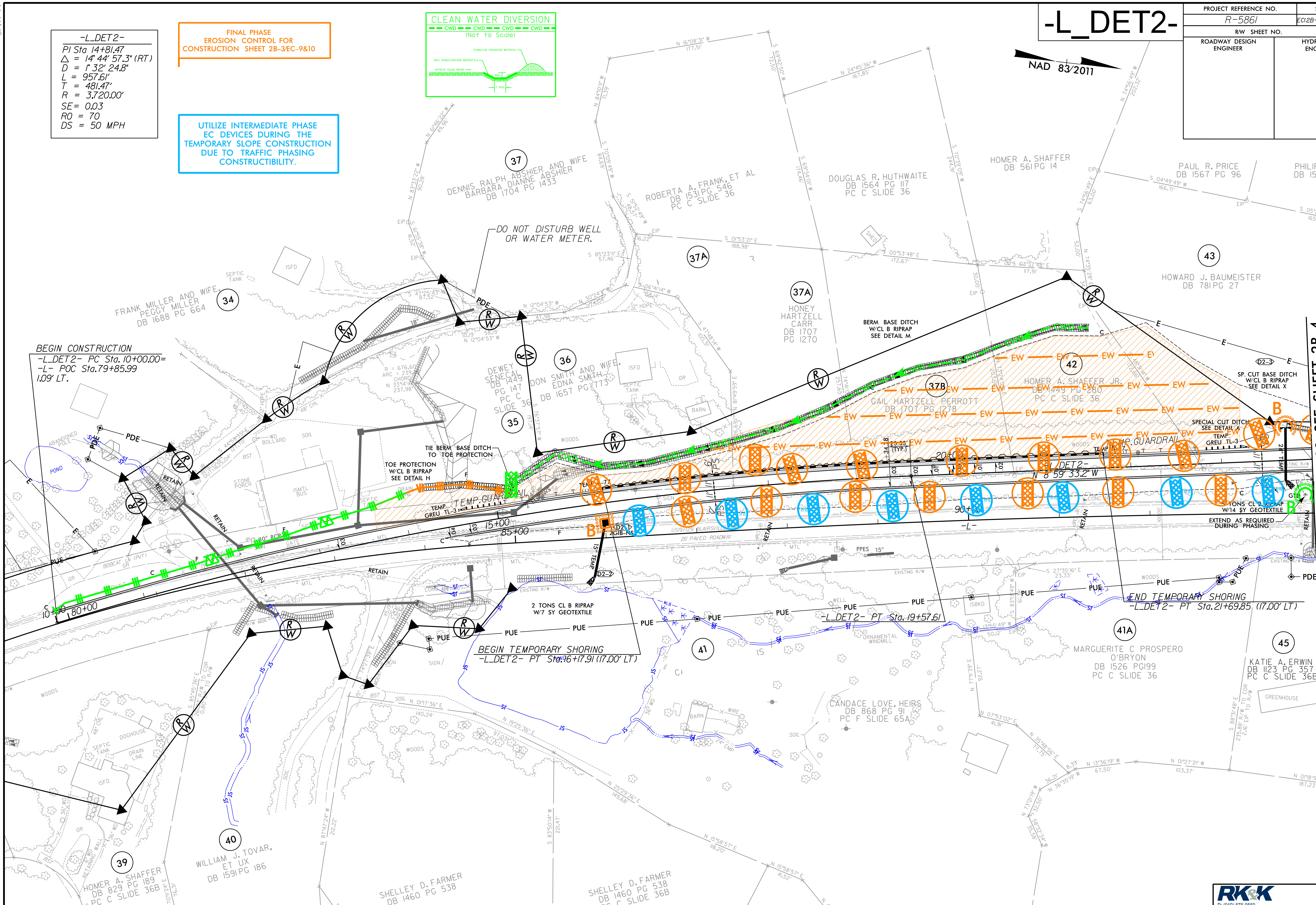
-L_DET2-

NAD 83/2011

-L_DET2-
PI Sta 14+81.47
Δ = 14° 44' 57.3" (RT)
D = 1° 32' 24.8"
L = 957.61'
T = 481.47'
R = 3,720.00'
SE = 0.03
RO = 70
DS = 50 MPH

FINAL PHASE EROSION CONTROL FOR CONSTRUCTION SHEET 2B-3EC-9&10

UTILIZE INTERMEDIATE PHASE EC DEVICES DURING THE TEMPORARY SLOPE CONSTRUCTION DUE TO TRAFFIC PHASING CONSTRUCTIBILITY.



▬■▬■▬	TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
▬■▬■▬	PROPOSED DRAINAGE FOR FINAL CONDITION.

NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.

FOR R/W AND EASEMENTS STATIONS/OFFSETS SEE SHTS. 9 AND 10.

FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET2- PROFILE SEE SHT. 39
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

8/17/99

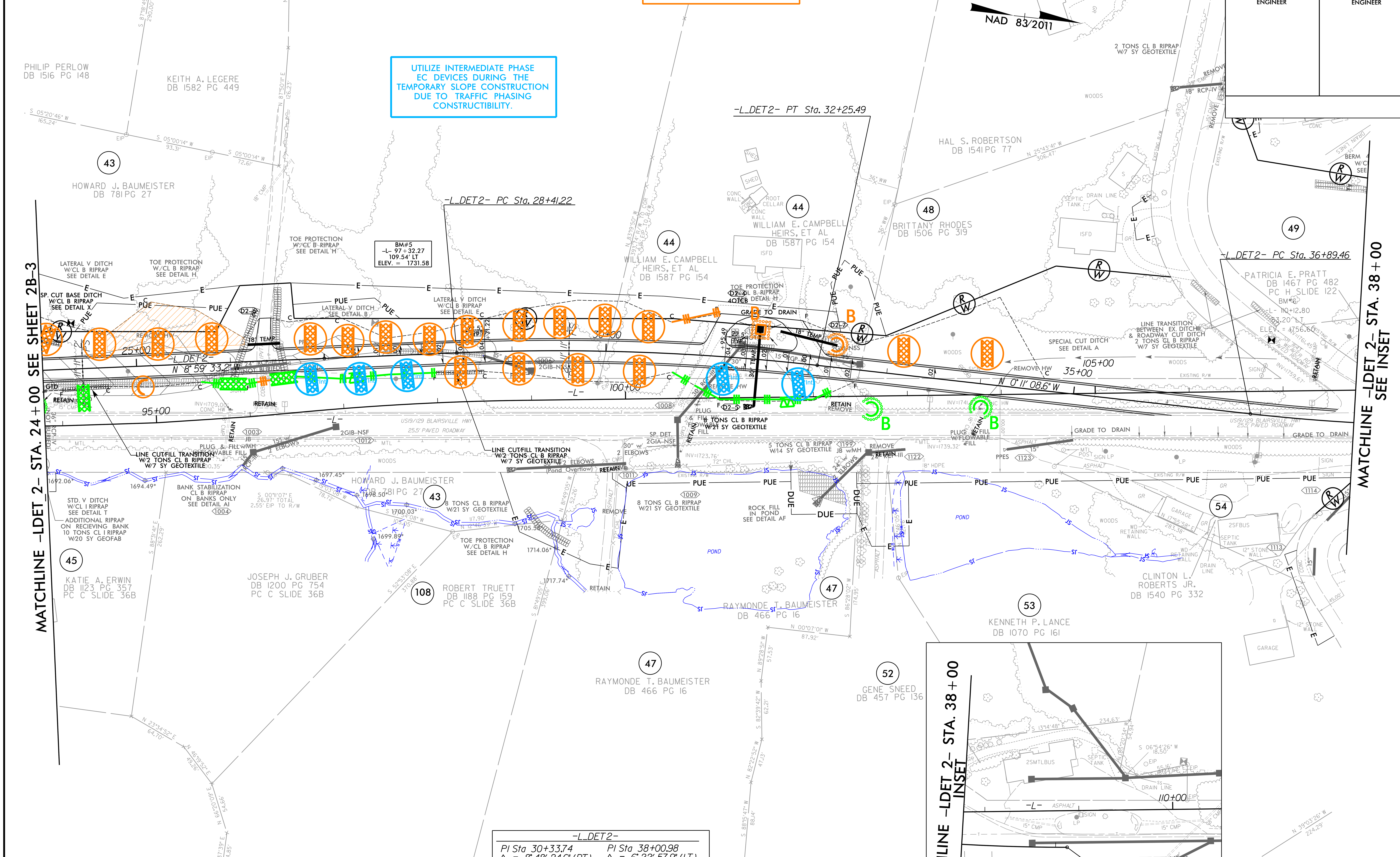
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_2_psh2B-13.dgn

-L_DET2-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC12B-14I/CONST.2B-4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FINAL PHASE
EROSION CONTROL FOR
CONSTRUCTION SHEET 2B-4/EC-10&11

UTILIZE INTERMEDIATE PHASE
EC DEVICES DURING THE
TEMPORARY SLOPE CONSTRUCTION
DUE TO TRAFFIC PHASING
CONSTRUCTIBILITY.



(symbol)	TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
(symbol)	PROPOSED DRAINAGE FOR FINAL CONDITION.

NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.

-L_DET2-

PI Sta 30+33.74	PI Sta 38+00.98
Δ = 8° 48' 24.6" (RT)	Δ = 6° 22' 57.9" (LT)
D = 2° 17' 30.6"	D = 2° 51' 53.2"
L = 384.27'	L = 222.80'
T = 192.51'	T = 111.52'
R = 2,500.00'	R = 2,000.00'
SE = 0.04	SE = 0.05
RO = 90	RO = 110
DS = 50 MPH	DS = 50 MPH

FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHTS. 10 AND 11.
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET2- PROFILE SEE SHT. 39
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

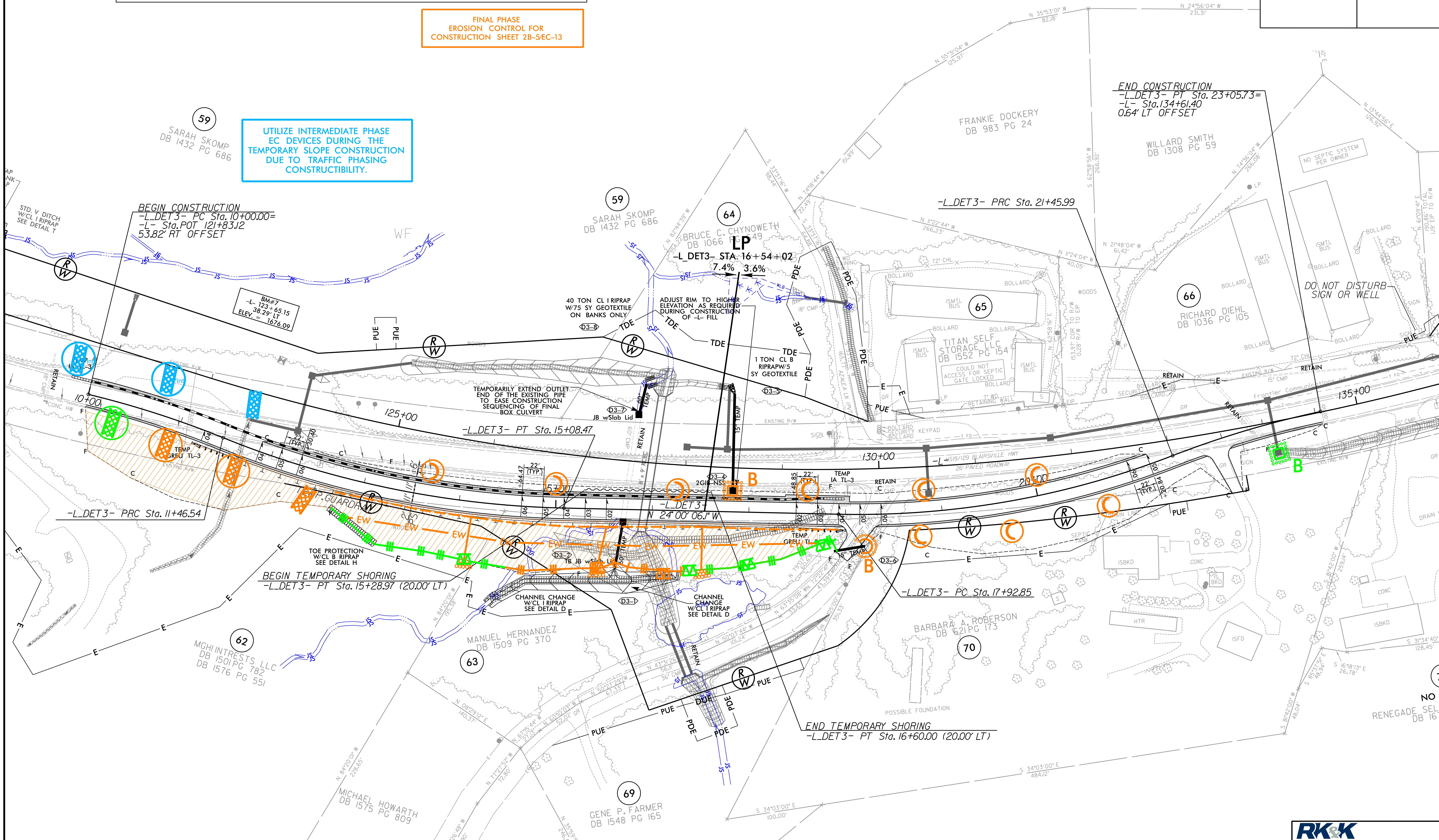
9/18/2023
..\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_2_psh2B-14.dgn

-L_DET3-			
PI Sta 10+73.43	PI Sta 13+29.59	PI Sta 19+71.81	PI Sta 22+26.06
Δ = 8° 23' 59.2" (RT)	Δ = 20° 44' 44.1" (LT)	Δ = 22° 29' 34.2" (LT)	Δ = 9° 09' 23.9" (RT)
D = 5° 43' 55.1"	D = 5° 43' 55.1"	D = 6° 22' 10.1"	D = 5° 43' 55.1"
L = 146.54'	L = 361.93'	L = 353.13'	L = 159.75'
T = 73.43'	T = 183.04'	T = 178.96'	T = 80.08'
R = 1,000.00'	R = 1,000.00'	R = 900.00'	R = 1,000.00'
SE = 0.06	SE = 0.06	SE = 0.06	SE = 0.06
RO = 44	RO = 132	RO = 132	
DS = 50 MPH	DS = 50 MPH	DS = 50 MPH	DS = 50 MPH

FINAL PHASE EROSION CONTROL FOR CONSTRUCTION SHEET 2B-5EC-13

-L_DET3-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC12B-15I/CONST.2B-5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



TEMPORARY DRAINAGE / PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.	
PROPOSED DRAINAGE FOR FINAL CONDITION.	

NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.

FOR R/W AND EASEMENTS STATIONS/OFFSETS SEE SHTS. 12 AND 13.

FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET3- PROFILE SEE SHT. 40
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

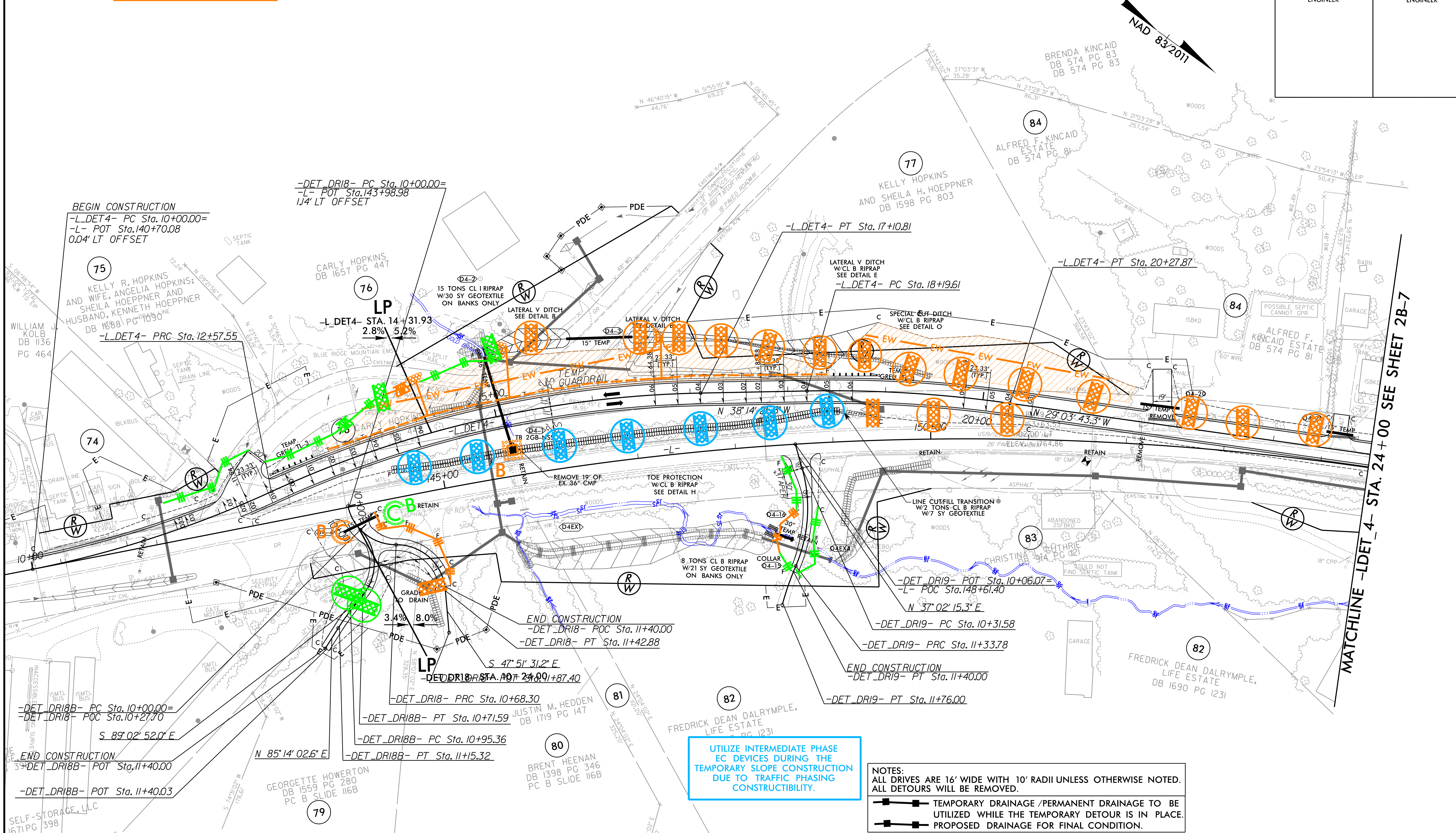
-L_DET4-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC(2B-16)/CONST. 2B-6

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

FINAL PHASE EROSION CONTROL FOR CONSTRUCTION SHEET 2B-6EC-14



UTILIZE INTERMEDIATE PHASE EC DEVICES DURING THE TEMPORARY SLOPE CONSTRUCTION DUE TO TRAFFIC PHASING CONSTRUCTIBILITY.

NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.

PROPOSED DRAINAGE FOR FINAL CONDITION.

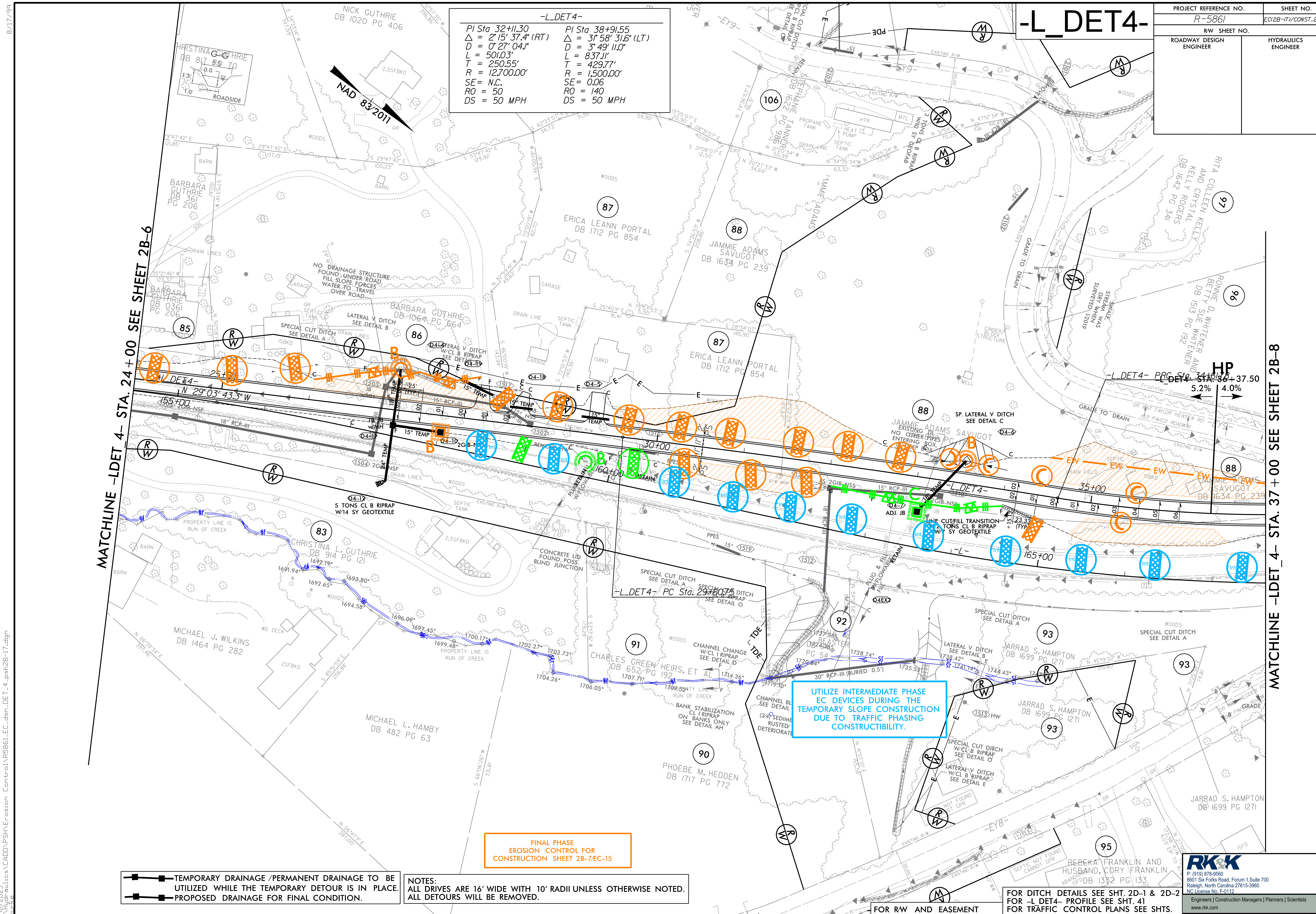
-L_DET4-			-DET_DRI8-		-DET_DRI8B-		-DET_DRI9-	
PI Sta 11+29.41	PI Sta 14+87.52	PI Sta 19+23.97	PI Sta 10+40.68	PI Sta 11+14.49	PI Sta 10+43.49	PI Sta 11+05.35	PI Sta 10+84.76	PI Sta 11+54.93
Δ = 13° 25' 10.6" (LT)	Δ = 23° 37' 01.0" (RT)	Δ = 9° 10' 43.4" (RT)	Δ = 78° 15' 52.3" (LT)	Δ = 85° 28' 02.8" (RT)	Δ = 82° 02' 03.8" (RT)	Δ = 5° 43' 05.5" (LT)	Δ = 39° 02' 18.7" (RT)	Δ = 8° 03' 46.2" (LT)
D = 5° 12' 37.8"	D = 5° 12' 37.8"	D = 4° 24' 26.5"	D = 114° 35' 29.6"	D = 114° 35' 29.6"	D = 114° 35' 29.6"	D = 28° 38' 52.4"	D = 38° 11' 49.9"	D = 19° 05' 54.9"
L = 257.55'	L = 453.26'	L = 208.26'	L = 68.30'	L = 74.58'	L = 71.59'	L = 19.96'	L = 102.20'	L = 42.22'
T = 129.41'	T = 229.97'	T = 104.35'	T = 40.68'	T = 46.19'	T = 43.49'	T = 9.99'	T = 53.17'	T = 21.14'
R = 1,100.00'	R = 1,100.00'	R = 1,300.00'	R = 50.00'	R = 50.00'	R = 50.00'	R = 200.00'	R = 150.00'	R = 300.00'
	SE= 0.06	SE= 0.06						
	RO = 140	RO = 140						
	DS = 50 MPH	DS = 50 MPH						

FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHTS. 14 AND 15.

FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET4- PROFILE SEE SHT. 40
FOR -DET_DRI8- PROFILE SEE SHT. 43
FOR -DET_DRI8B- PROFILE SEE SHT. 43
FOR -DET_DRI9- PROFILE SEE SHT. 43
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

8/17/99
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_4_psh2B-16.dgn
aburke

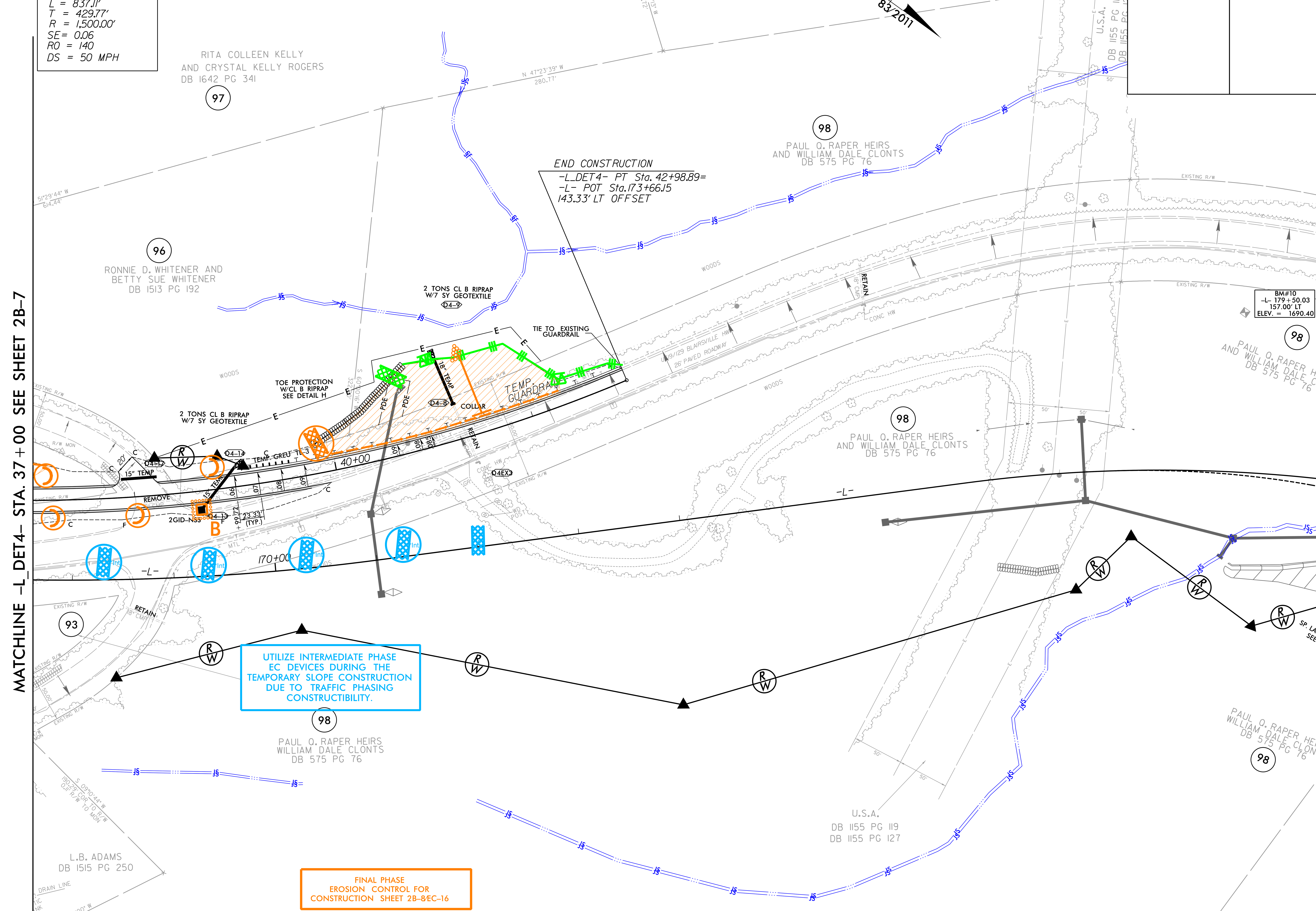


-L_DET4-
PROJECT REFERENCE NO.
R-5861
SHEET NO.
EC12B-17/CONST.2B-7
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
-L_DET4-
PI Sta 32+11.30
Δ = 2° 15' 37.4" (RT)
D = 0° 27' 04.1"
L = 501.03'
T = 250.55'
R = 12,700.00'
SE = N.C.
RO = 50
DS = 50 MPH
PI Sta 38+91.55
Δ = 31° 58' 31.6" (LT)
D = 3° 49' 11.0"
L = 837.11'
T = 429.77'
R = 1,500.00'
SE = 0.06
RO = 140
DS = 50 MPH
NAD 83/2011
MATCHLINE -LDET 4- STA. 24+00 SEE SHEET 2B-6
MATCHLINE -LDET_4- STA. 37+00 SEE SHEET 2B-8
NICK GUTHRIE DB 1020 PG 406
BARBARA GUTHRIE DB 361 PG 206
BARBARA GUTHRIE DB 1064 PG 664
ERICA LEANN PORTAL DB 1712 PG 854
JAMMIE ADAMS SAVUGOT DB 1634 PG 239
RITA COLLEEN KELLY AND CRYSTAL KELLY ROGERS DB 1642 PG 341
RONNIE D. WHITENER AND BETTY SUE WHITENER DB 1513 PG 192
CHRISTINA L. GUTHRIE DB 914 PG 121
MICHAEL J. WILKINS DB 1464 PG 282
MICHAEL L. HAMBY DB 482 PG 63
CHARLES GREEN HEIRS, ET AL
PHOEBE M. HEDDEN DB 1717 PG 772
JARRAD S. HAMPTON DB 1699 PG 1271
REBEKA FRANKLIN AND HUSBAND, CORY FRANKLIN DB 1332 PG 133
NO DRAINAGE STRUCTURE FOUND UNDER ROAD. FILL SLOPE FORCES WATER TO TRAVEL OVER ROAD.
-L_DET4- PC Sta. 29+60.75
-L_DET4- PRC Sta. 34+61.78
HP
-L_DET4- STA. 36+37.50
5.2% 4.0%
UTILIZE INTERMEDIATE PHASE EC DEVICES DURING THE TEMPORARY SLOPE CONSTRUCTION DUE TO TRAFFIC PHASING CONSTRUCTIBILITY.
FINAL PHASE EROSION CONTROL FOR CONSTRUCTION SHEET 2B-7/EC-15
TEMPORARY DRAINAGE/PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.
NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.
FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHT. 15.
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET4- PROFILE SEE SHT. 41
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56
RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_4_psh2B-17.dgn
8/17/99

-L_DET4-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC(2B-18)/CONST.2B-8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L_DET4-
PI Sta 38+91.55
△ = 31° 58′ 31.6″ (LT)
D = 3° 49′ 11.0″
L = 837.11′
T = 429.77′
R = 1,500.00′
SE = 0.06
RO = 140
DS = 50 MPH



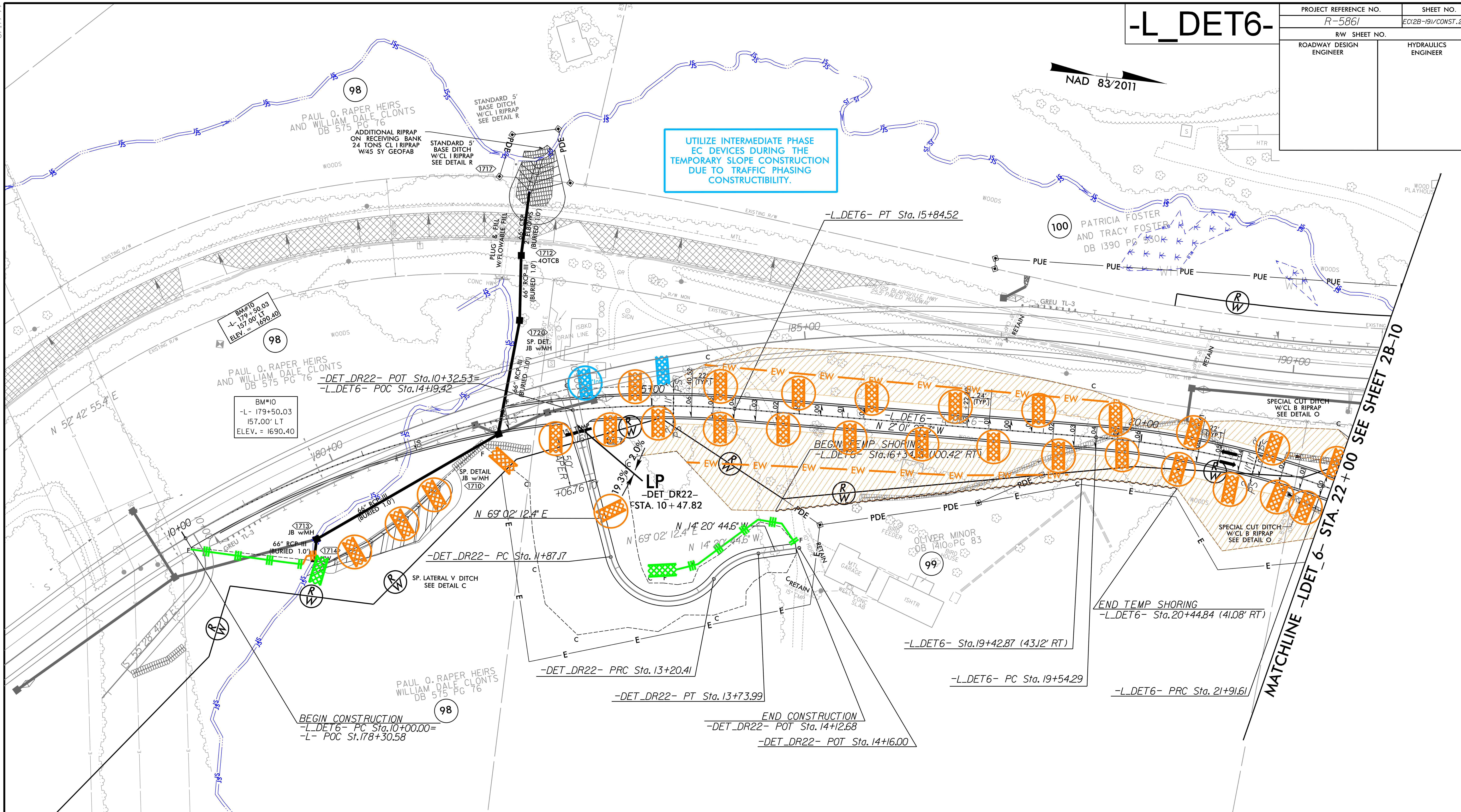
MATCHLINE -L_DET4- STA. 37+00 SEE SHEET 2B-7

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.

NOTES:
ALL DRIVES ARE 16′ WIDE WITH 10′ RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.
-DET_5- WAS REMOVED FROM THE PLANS.

FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHT. 16.
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET4- PROFILE SEE SHT. 41
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions



TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.

PROPOSED DRAINAGE FOR FINAL CONDITION.

NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.
-DET_5- WAS REMOVED FROM THE PLANS.

FINAL PHASE EROSION CONTROL FOR CONSTRUCTION SHEET 2B-9/EC-17

-L_DET6-

PI Sta 13+02.06	PI Sta 20+73.64	PI Sta 25+40.12
Δ = 35° 37' 42.0" (RT)	Δ = 15° 06' 30.4" (RT)	Δ = 56° 23' 51.3" (LT)
D = 6° 05' 43.1"	D = 6° 21' 58.3"	D = 8° 48' 53.0"
L = 584.52'	L = 237.32'	L = 639.81'
T = 302.06'	T = 119.35'	T = 348.51'
R = 940.00'	R = 900.00'	R = 650.00'
SE = 0.06	SE = 0.06	SE = 0.06
RO = 132	RO = 132	RO = 132
DS = 50 MPH	DS = 50 MPH	DS = 45 MPH

-DET_DR22-

PI Sta 13+08.13	PI Sta 13+48.59
Δ = 127° 14' 01.3" (LT)	Δ = 43° 51' 04.3" (RT)
D = 95° 29' 34.7"	D = 81° 51' 04.0"
L = 133.24'	L = 53.57'
T = 120.96'	T = 28.18'
R = 60.00'	R = 70.00'
SE = 0.02	SE = 0.02
DS = 15 MPH	DS = 15 MPH

FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHTS. 16 AND 17.
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET6- PROFILE SEE SHT. 42
FOR -DET_DR22- PROFILE SEE SHT. 43
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

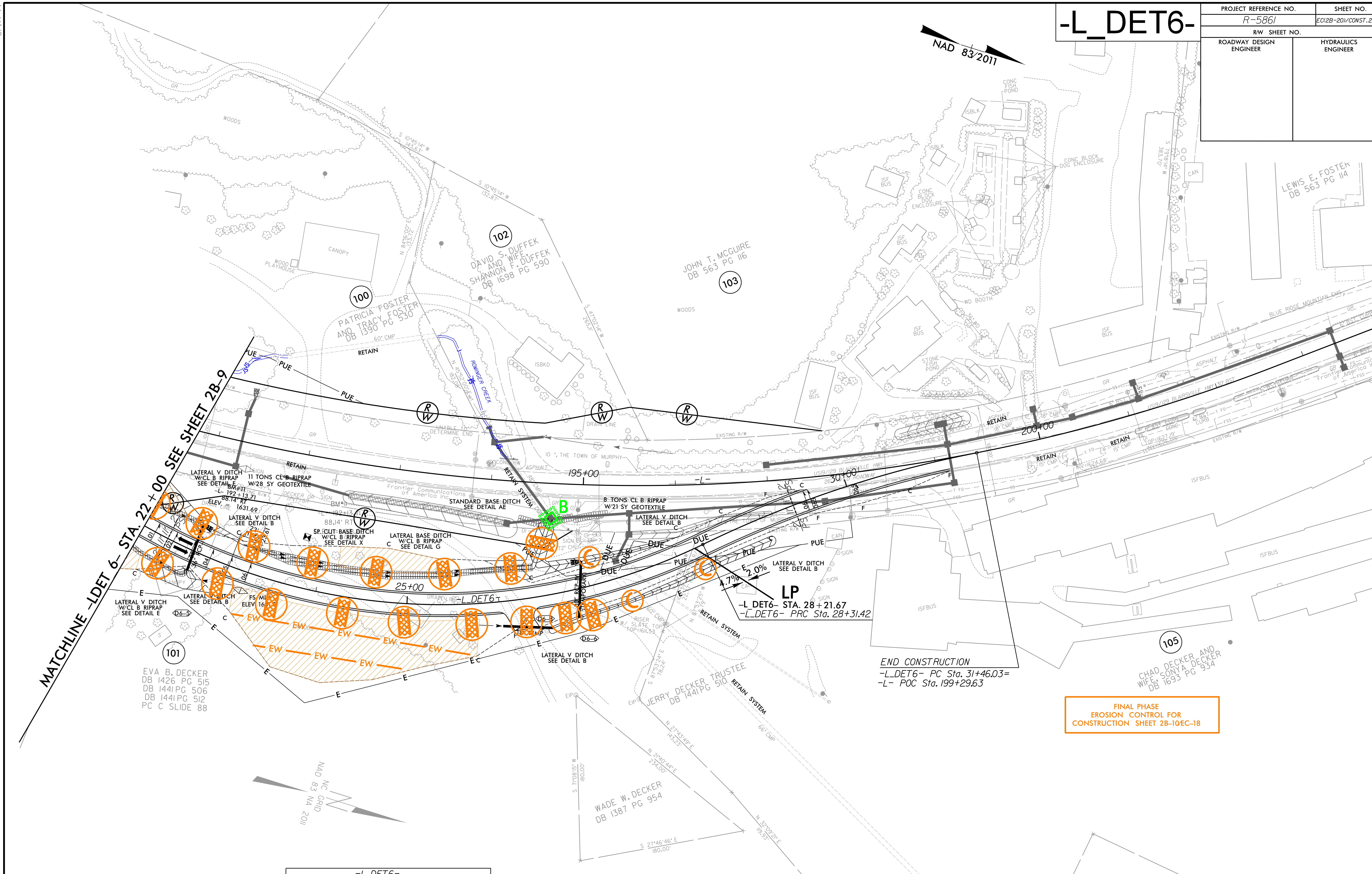
RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

-L_DET6-

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC12B-20/CONST.2B-10

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



FINAL PHASE EROSION CONTROL FOR CONSTRUCTION SHEET 2B-10-EC-18

-L_DET6-	
PI Sta 25+40.12	PI Sta 29+89.61
Δ = 56° 23' 51.3" (LT)	Δ = 14° 50' 09.3" (RT)
D = 8° 48' 53.0"	D = 4° 42' 56.5"
L = 639.81'	L = 314.61'
T = 348.51'	T = 158.19'
R = 650.00'	R = 1,215.00'
SE = 0.06	SE = 0.06
RO = 132	DS = 50 MPH
DS = 45 MPH	

TEMPORARY DRAINAGE /PERMANENT DRAINAGE TO BE UTILIZED WHILE THE TEMPORARY DETOUR IS IN PLACE.
PROPOSED DRAINAGE FOR FINAL CONDITION.

NOTES:
ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.
ALL DETOURS WILL BE REMOVED.
-DET_5- WAS REMOVED FROM THE PLANS.

FOR R/W AND EASEMENT STATIONS/OFFSETS SEE SHTS. 17 AND 18.
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L_DET6- PROFILE SEE SHT. 42
FOR TRAFFIC CONTROL PLANS SEE SHTS. TMP-1 THRU TMP-56

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

8/17/99
9/8/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_dsn_DET_6_psh2B-20.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

EROSION CONTROL MATTING IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	22+00	23+00	RT	55
7	-L-	59+00	61+75	LT	265
7	-L-	60+32	62+30	RT-TSD	215
8	-L-	32+14	66+50	LT	505
8	-L-	65+46	67+12	RT	195
9	-L-	78+00	81+50	RT	270
11	-L-	102+50	105+71	LT	250
11	-L-	105+71	108+50	LT	215
11	-L-	106+00	108+40	RT	185
7	-L-	57+00	58+74	LT	145
7	-Y3-	12+00	13+50	RT	120
8	-L-	71+09	72+39	RT	145
10	-L-	99+00	100+50	LT	120
12	-L-	122+50	124+00	LT	120
8	-L-	72+39	73+50	RT	110
9	-Y4-	14+10	14+80	LT	60
13	-L-	130+50	133+22	RT	210
13&14	-L-	136+00	140+50	LT	350
13&14	-L-	137+81	139+50	RT	135
15	-L-	159+00	162+50	LT	270
15&16	-L-	164+00	171+00	LT	540
16	-L-	167+00	171+00	RT	310
11	-L-	104+00	107+00	LT	235
11	-L-	112+00	112+97	RT	80
17	-L-	183+50	187+00	LT	270
18	-L-	195+00	197+50	LT	195
13	-L-	126+50	127+77	LT	150
14	-L-	143+50	144+00	RT	45
2B-1	-L_DET1-	18+93	19+93	RT	85
2B-3	-L_DET2-	23+20	23+71	LT	40
			SUBTOTAL		5,890

EROSION CONTROL MATTING IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
14	-L-	145+67	148+15	RT	590
14	-L-	150+50	152+00	RT	120
14	-Y10A-	11+73	12+50	LT	55
14	-Y10A-	10+50	11+50	RT	80
14	-DRI7-	10+50	10+97	LT	40
15	-L-	156+00	157+00	LT	80
15	-L-	157+00	157+40	LT	30
15	-Y11-	10+50	11+30	LT	55
2B-7	-L_DET4-	33+00	33+52	LT	45
2B-9	-L_DET6-	11+04	12+69	RT	135
2B-9	-L_DET6-	26+35	-	RT	80
2B-10	-L_DET6-	22+58	23+12	RT	45
2B-10	-L_DET6-	26+90	29+11	RT	180
2B-10	-L_DET6-	26+90	28+00	LT	90
17	-L-	179+50	181+00	RT	245
18	-L-	194+60	196+00	LT	110
2B-1	-L_DET1-	19+77	20+65	RT	70
2B-1	-L_DET1-	20+65	25+42	RT	370
2B-2	-L_DET1-	16+43	25+42	RT	690
2B-2	-L_DET1-	25+42	30+37	RT	380
2B-2	-L_DET1-	34+20	40+11	RT	455
2B-2	-L_DET1-	25+43	29+42	LT	310
2B-4	-L_DET2-	24+70	25+67	RT	75
18	-L-	195+50	197+00	RT	85
18	-L-	198+50	199+00	LT	110
20	-L-	208+50	209+00	RT	45
20	-Y10B-	11+50	12+00	LT	40
21	-Y10B-	13+00	13+24	LT	20
2B-4	-L_DET2-	26+66	31+70	RT	390
2B-5	-L_DET3-	10+00	11+69	LT	130
			SUBTOTAL		5,150

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

EROSION CONTROL MATTING IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
2B-5	-L_DET3-	18+87	21+43	RT	200
2B-6	-L_DET4-	13+84	17+93	RT	315
2B-6	-L_DET4-	18+95	20+48	RT	120
2B-7	-L_DET4-	27+53	33+49	RT	535
2B-7	-L_DET4-	30+05	32+05	RT	155
2B-7	-L_DET4-	34+00	36+42	LT	190
2B-7	-L_DET4-	34+49	36+42	RT	150
2B-7	-L_DET4-	34+49	41+29	RT	525
4	-L-	14+00	-	LT-TD	25
4	-L-	14+68	17+00	LT-TSD	130
5	-L-	22+00	25+50	RT	270
5	-L-	25+50	28+50	RT	290
5	-L-	28+50	32+00	LT	270
2B-7	-L_DET4-	36+42	39+32	LT	225
2B-9	-L_DET6-	14+18	21+99	LT	600
2B-9	-L_DET6-	14+18	15+17	LT	80
2B-10	-L_DET6-	23+12	25+81	RT	210
4	-L-	14+68	17+00	LT	130
5	-L-	33+72	-	RT	25
7	-L-	54+51	-	RT	25
			SUBTOTAL		4,470
			TOTAL		15,510

EROSION CONTROL EXCELSIOR MATTING IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	10+00	10+50	RT	40
4	-L-	23+00	23+75	RT	45
6	-L-	37+00	39+00	RT	155
6	-L-	39+31	40+60	RT	100
6	-L-	40+60	48+00	RT	570
6	-L-	39+50	49+80	LT	795
5	-L-	32+50	33+15	RT	85
5	-L-	33+15	34+35	RT	160
5	-L-	34+35	35+50	RT	95
5	-L-	35+50	36+36	RT	70
5	-Y2-	13+50	15+00	LT	175
5	-Y1-	10+00	11+50	LT	175
5	-Y1-	12+50	14+00	LT	190
5	-Y1-	14+00	16+00	LT	255
6	-L-	41+25	42+50	RT	130
7	-Y3-	10+75	12+00	RT	145
10	-L-	88+50	92+50	RT	310
11	-Y6-	16+00	16+00	LT	120
11	-Y6-	17+00	17+00	LT	80
11	-Y6-	17+00	17+00	RT	155
11	-L-	110+00	113+00	RT	235
12	-L-	114+50	118+00	LT	270
12	-L-	117+00	119+89	RT	225
12	-L-	119+89	123+50	RT	280
8&9	-L-	73+50	77+50	RT	330
14	-L-	149+50	152+00	LT	195
15	-L-	152+50	156+00	LT	270
16	-L-	171+00	177+00	LT	465
16	-L-	171+00	176+00	RT	385
16	-L-	176+00	178+00	RT	155
			SUBTOTAL		6,660

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-3B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

EROSION CONTROL EXCELSIOR MATTING IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
11	-Y6-	14+50	16+00	LT	3,950
12	-L-	114+75	116+50	RT	95
17	-L-	183+00	189+00	RT	465
17	-L-	189+00	191+25	RT	175
13	-Y9-	12+00	13+00	LT	105
14	-L-	140+00	141+75	RT	135
2B-5	-L_DET3-	14+78	15+63	RT	115
2B-5	-L_DET3-	15+63	16+24	RT	105
14	-DR19-	10+75	11+13	LT	40
14	-Y10A-	10+50	11+73	LT	95
14	-L-	147+00	148+50	LT	105
2B-7	-L_DET4-	33+52	34+00	LT	40
2B-10	-L_DET6-	22+58	23+66	LT	135
2B-10	-L_DET6	25+81	26+90	RT	90
15&16	-L-	164+09	166+00	LT	250
16	-L-	177+00	178+00	LT	80
2B-1	-L_DET1-	14+42	18+93	RT	350
2B-2	-DET_Y1-	11+50	13+00	LT	115
2B-3	-L_DET2-	15+18	23+20	LT	615
2B-3	-L_DET2-	16+17	23+70	RT	580
2B-3	-L_DET2-	16+18	23+20	RT	540
18	-L-	199+00	199+25	LT	55
20	-Y12-	26+75	29+08	RT	190
2B-4	-L_DET2-	28+69	30+70	RT	155
2B-5	-L_DET3-	10+17	12+20	RT	160
2B-5	-L_DET3-	18+36	20+92	LT	200
2B-7	-L_DET4-	28+54	33+04	LT	345
4	-L-	1+50	13+00	RT	195
4	-L-	18+00	22+00	RT	310
			SUBTOTAL		9,790

EROSION CONTROL EXCELSIOR MATTING IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4&5	-L-	18+00	28+50	LT	810
2B-9	-L_DET6-	13+68	21+49	RT	600
2B-1	-L_DET1-	11+74	15+93	LT	230
			SUBTOTAL		1,640
				TOTAL	18,090
	TOTAL MATTING AND EXCELSIOR MATTING				33,600
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					466,735
				SAY	500,335

9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_psh03_MATTING.dgn
aburke

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-3C
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

EROSION CONTROL PSRM IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	12+39	13+13	LT	155
4	-L-	13+56	17+50	RT	405
4	-L-	13+13	17+50	LT	885
4	-L-	13+48	16+94	RT	65
4	-DR1-	10+35	-	RT	60
4	-L-	20+70	22+00	RT	30
4	-DR2-	11+36	12+00	LT	95
5	-L-	32+50	33+39	LT	50
5	-L-	33+39	-	LT	50
5	-L-	33+40	-	RT-TD	20
5	-L-	35+23	35+80	RT-TD	35
5	-Y2-	10+50	13+50	LT	235
5	-Y2-	10+40	13+00	RT	205
5	-Y1-	10+50	12+00	RT	120
6	-L-	48+00	50+00	RT	155
7	-DR7-	10+60	13+75	RT	245
7	-DR7-	10+60	13+75	LT	245
7	-L-	59+00	-	RT-TD	30
5	-Y2-	14+00	15+00	RT	120
5	-Y1-	10+00	10+50	RT	60
6	-L-	39+60	40+60	RT	130
6	-L-	40+60	41+25	RT	70
6	-L-	42+50	44+85	RT	130
8	-L-	69+89	-	RT-TD	65
8	-L-	73+08	73+79	RT-TSD	60
9	-L-	77+44	77+88	RT-TSD	25
9&10	-L-	85+00	92+75	LT	600
11	-Y6-	11+50	14+50	LT	235
6	-L-	44+85	47+00	RT	120
7	-L-	50+33	51+37	LT	60
				SUBTOTAL	4,760

EROSION CONTROL PSRM IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
7	-L-	54+44	-	RT	215
8	-DR8-	12+50	13+40	RT	50
8	-L-	68+50	71+00	LT	205
8	-L-	68+00	71+09	RT	335
8	-L-	66+91	68+00	LT	130
11	-Y7-	10+50	12+50	LT	155
11	-Y7-	10+50	13+00	RT	195
11	-DR14-	10+50	13+00	LT	195
11	-DR14-	10+50	12+00	RT	120
12	-L-	114+00	117+00	RT	235
13	-Y9-	11+00	11+50	LT	40
8	-L-	71+85	72+31	LT	25
8	-L-	72+31	72+86	LT	45
9	-L-	77+50	78+25	RT	80
9	-L-	81+64	-	RT	200
9	-L-	83+80	84+59	RT	150
9	-Y4-	13+00	14+10	LT	140
9&10	-L-	16+75	91+30	LT	595
10	-L-	93+80	95+74	LT	115
10	-L-	96+40	97+50	LT	90
10	-L-	97+50	98+50	LT	55
15&21	-Y10B-	12+00	17+50	LT	425
15&21	-Y10B-	12+00	17+50	RT	425
16&17	-L-	172+30	81+61	RT	505
11	-L-	111+00	112+50	LT	155
11	-L-	112+50	114+12	LT	170
11	-Y6-	11+00	12+35	LT	160
11	-Y6-	16+00	16+30	LT	35
11	-Y6-	16+30	16+71	LT	45
11	-L-	110+00	111+00	LT	105
				SUBTOTAL	5,395

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-3D
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

EROSION CONTROL PSRM IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
12	-L-	125+00	125+50	LT	60
12	-DR15-	12+88	13+50	RT	75
12	-DR15-	10+30	12+50	RT	255
17	-DR22-	10+50	11+00	LT	40
17	-DR22-	10+50	11+50	RT	80
17	-L-	179+28	181+66	LT/RT-TD	130
13	-Y9-	13+00	-	LT	185
13	-Y9-	13+00	-	RT	230
13	-L-	126+83	127+00	RT	45
13	-L-	127+00	127+67	RT	170
13	-L-	125+50	126+50	LT	120
13	-L-	127+77	128+42	LT	55
13	-Y9-	11+50	12+00	LT	55
13	-L-	136+00	136+50	RT	55
13	-L-	136+50	137+00	RT	65
2B-1	-L_DET1-	10+64	11+03	LT	65
2B-1	-L_DET1-	11+03	12+90	LT	295
2B-1	-L_DET1-	12+90	14+42	LT	240
2B-1	-L_DET1-	14+42	15+93	LT	240
2B-3	-L_DET2-	15+18	21+70	LT	670
2B-3	-L_DET2-	23+71	24+20	LT	60
2B-5	-L_DET3-	14+41	14+78	RT	50
2B-6	-L_DET4-	15+02	17+42	LT	195
2B-6	-L_DET4-	17+42	18+44	LT	60
2B-6	-L_DET4-	18+44	19+46	LT	120
15	-Y11-	10+50	11+68	RT	90
15	-Y11-	11+30	13+00	LT	200
2B-10	-L_DET6-	21+49	22+58	RT	60
2B-10	-L_DET6-	21+49	22+58	LT	60
2B-10	-L_DET6-	23+12	25+81	LT	340
				SUBTOTAL	4,365

EROSION CONTROL PSRM IN DITCHES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
2B-10	-L_DET6-	25+81	26+35	LT	65
15	-Y11-	13+00	13+39	LT	25
15	-Y11A-	10+15	11+50	RT	105
15	-L-	162+50	162+89	RT	35
15	-L-	157+40	158+00	LT	35
15	-Y10B-	18+00	18+96	LT	125
17	-L-	188+50	189+00	RT	55
17	-L-	189+00	189+50	RT	55
2B-4	-L_DET2-	24+20	30+70	LT	500
18	-L-	192+00	193+50	RT	175
18	-L-	193+50	194+20	RT	85
4	-L-	13+13	17+48	LT-CWD	590
4	-L-	12+45	13+26	LT-CWD	70
4	-L-	12+45	13+26	LT-CWD	70
4	-L-	14+10	-	LT-TD	20
5	-L-	32+80	33+23	RT-CWD	25
4	-L-	15+33	-	LT	20
5	-L-	32+80	33+23	RT	25
8	-L-	71+66	72+36	LT	80
14	-DR19-	10+42	11+13	LT	40
15	-Y11-	11+32	12+90	LT	90
17	-L-	179+13	180+46	RT	75
2B-1	-L_DET1-	10+58	15+87	LT	430
			SUBTOTAL		2,795
				TOTAL	17,315
				SAY	17,585

9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_psh03_MATTING.dgn
aburke

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-3E
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

-L-	-DR1-	-DR2-	
PI Sta 12+56.73	PI Sta 10+80.09	PI Sta 9+91.87	PI Sta 10+50.35
△ = 24° 05′ 46.1″ (LT)	△ = 6° 06′ 49.5″ (LT)	△ = 13° 05′ 15.7″ (LT)	△ = 28° 53′ 59.0″ (RT)
D = 6° 09′ 39.0″	D = 7° 01′ 48.6″	D = 21° 37′ 15.8″	D = 52° 05′ 13.5″
L = 391.12′	L = 86.96′	L = 60.53′	L = 55.48′
T = 198.49′	T = 43.52′	T = 30.40′	T = 28.35′
R = 930.00′	R = 815.00′	R = 265.00′	R = 110.00′
SE = 0.06	SE = 0.02	SE = 0.02	SE = 0.02
RO = 150′	DS = 15 MPH	DS = 15 MPH	DS = 15 MPH
DS = 50 MPH			

CLEAN WATER DIVERSION
(Not to Scale)

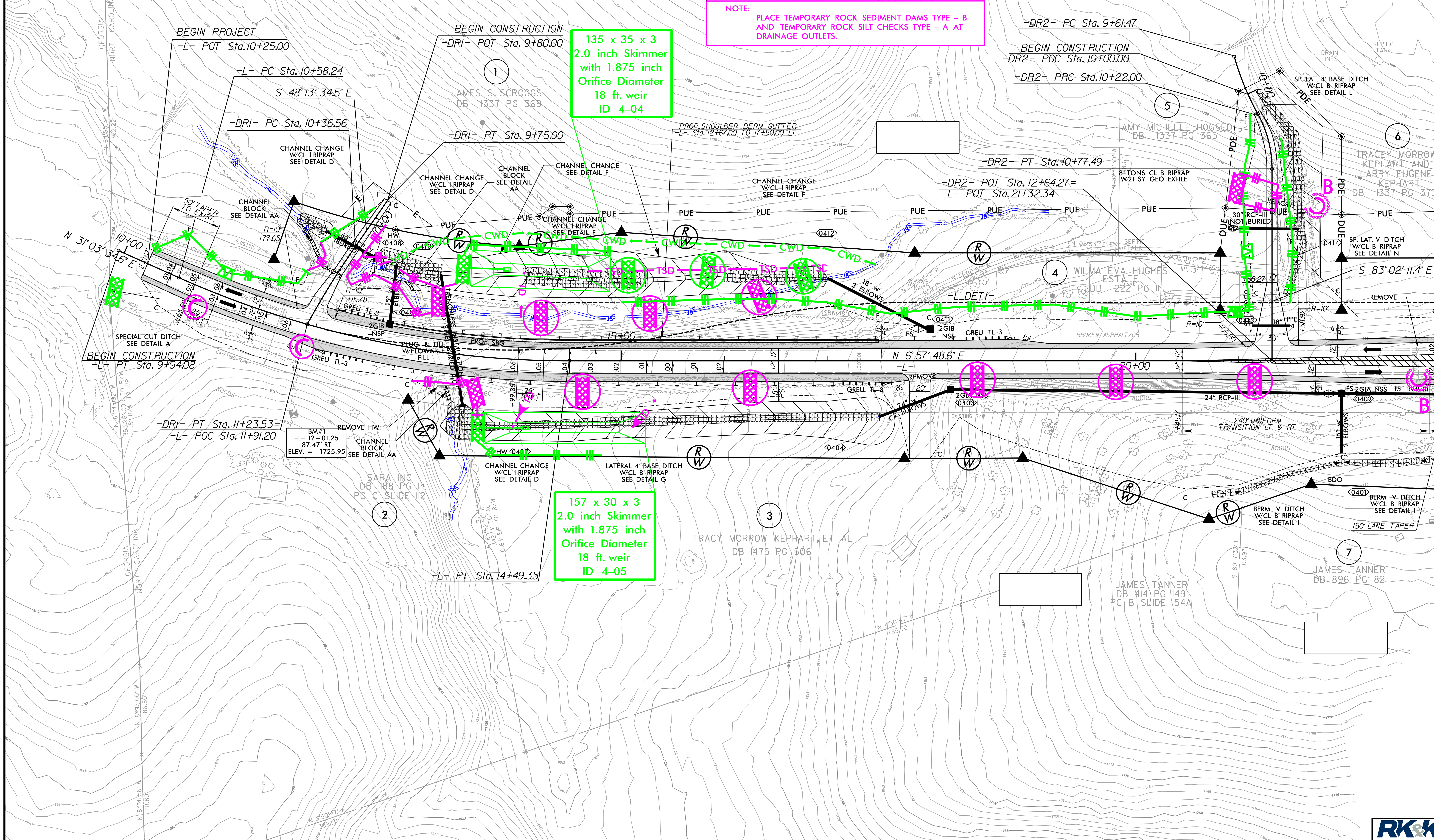
DO NOT INSTALL EROSION CONTROL DEVICES IN JURISDICTIONAL STREAMS/FLOW

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/2011



NOTES: ALL DRIVES ARE 16′ WIDE WITH 10′ RADII UNLESS OTHERWISE NOTED.

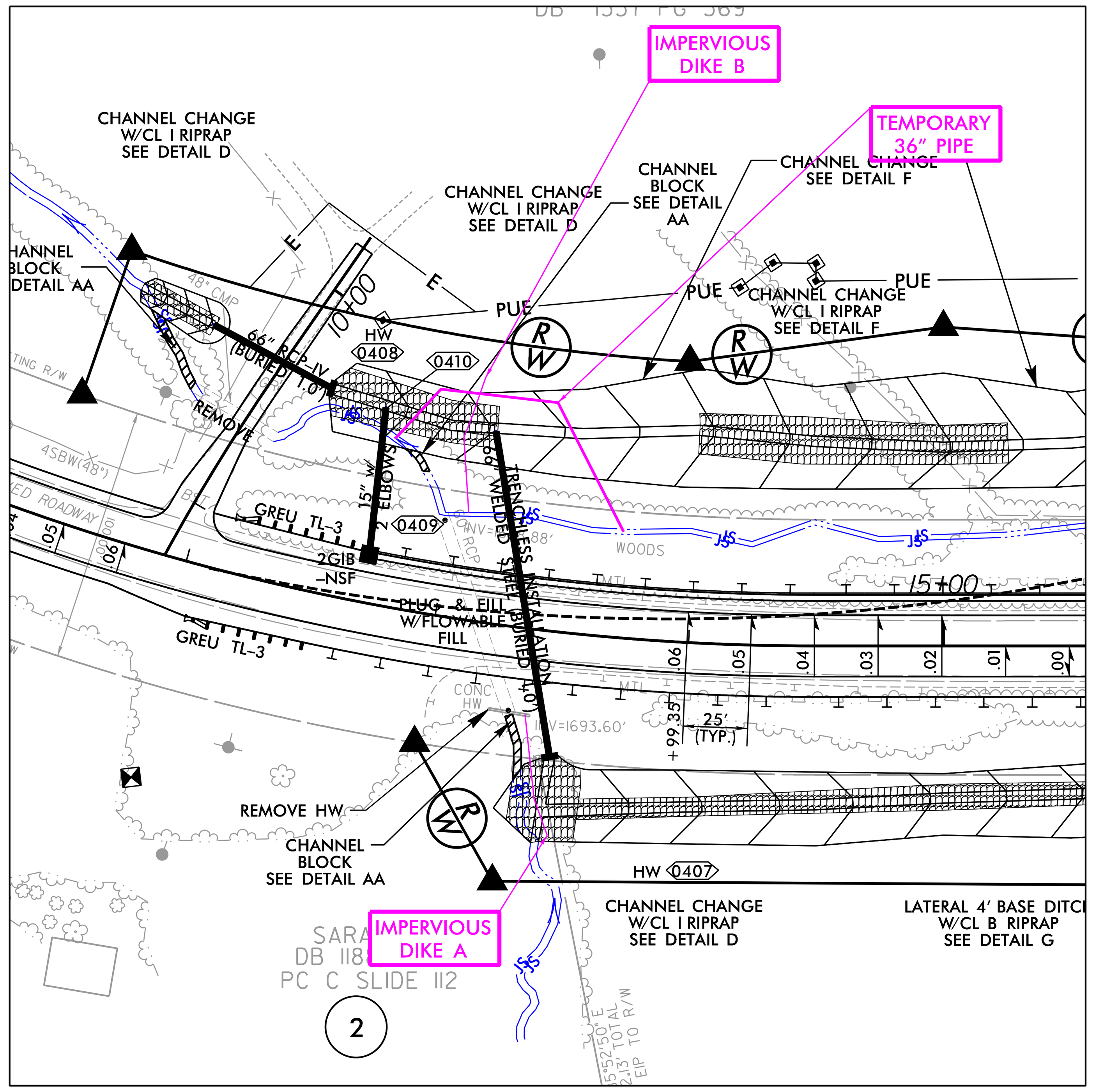
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2
FOR -L- PROFILE SEE SHT. 22
FOR -DR1- PROFILE SEE SHT. 34
FOR -DR2- PROFILE SEE SHT. 34

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

8/17/99

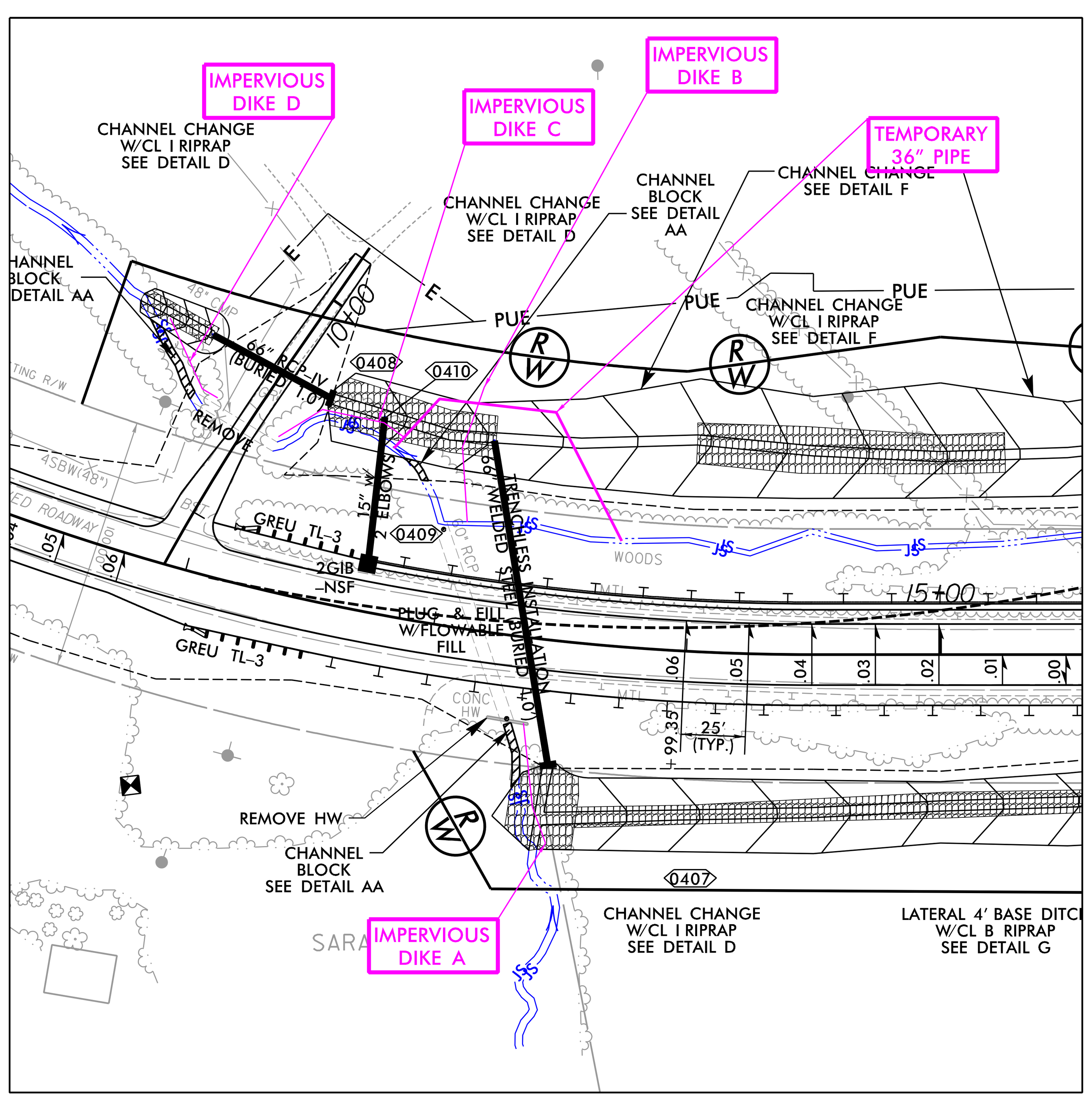
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_psh04.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-4A/CONST.4A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



PIPE INSTALLATION SEQUENCE 1 STA. 13+37 –L–

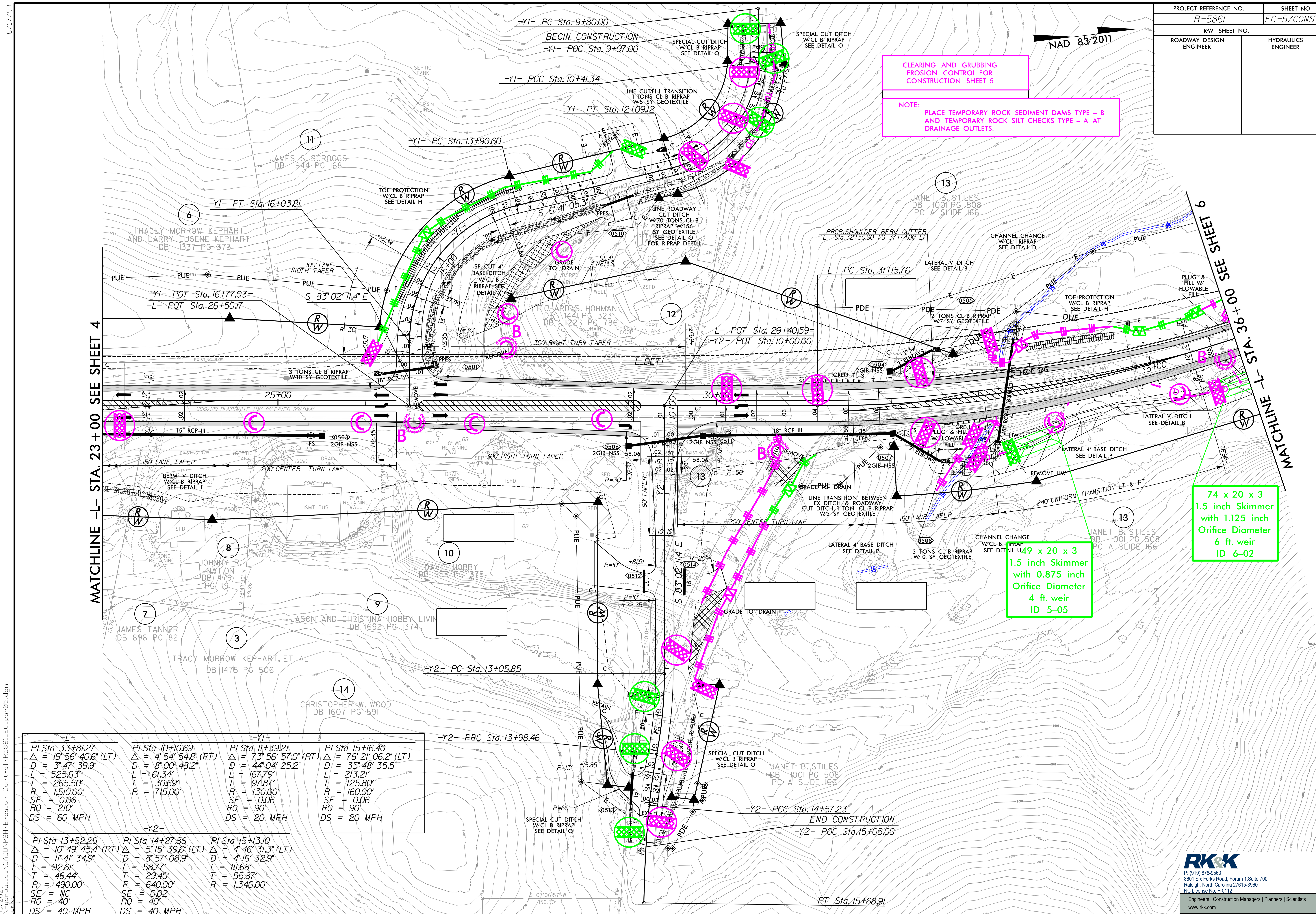
1. INSTALL SPECIAL STILLING BASIN(S) AS NEEDED
2. INSTALL IMPERVIOUS DIKES 'A' & 'B' AS SHOWN ON PLANS.
3. INSTALL TEMPORARY 36" PIPE TO DIVERT WATER IN EXISTING DITCH AWAY FROM WORK AREA.
4. INSTALL ENTRANCE AND RECEIVING BORE PITS AS NECESSARY.
5. INSTALL TRENCHLESS INSTALLATION 66" RCP.



PIPE INSTALLATION SEQUENCE 1 STA. 10+35 –DRI–

1. INSTALL ADDITIONAL IMPERVIOUS DIKES 'C' & 'D' AS SHOWN ON PLANS.
2. INSTALL 66" RCP–IV UNDER DRIVEWAY.
3. CONSTRUCT INLET AND OUTLET CHANNEL IMPROVEMENTS.
3. REMOVE IMPERVIOUS DIKES, TEMPORARY PIPE AND SPECIAL STILLING BASIN(S).
4. DIVERT WATER THROUGH NEWLY CONSTRUCTED PIPES AND INSTALL CHANNEL BLOCKS AS SHOWN ON PLANS.

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions



-L-

PI Sta 33+81.27
Δ = 19° 56' 40.6" (LT)
D = 3° 47' 39.9"
L = 525.63'
T = 265.50'
R = 1,510.00'
SE = 0.06
RO = 210'
DS = 60 MPH

-Y1-

PI Sta 10+10.69	PI Sta 11+39.21	PI Sta 15+16.40
Δ = 4° 54' 54.8" (RT)	Δ = 73° 56' 57.0" (RT)	Δ = 76° 21' 06.2" (LT)
D = 8° 00' 48.2"	D = 44° 04' 25.2"	D = 35° 48' 35.5"
L = 61.34'	L = 167.79'	L = 213.21'
T = 30.69'	T = 97.87'	T = 125.80'
R = 715.00'	R = 130.00'	R = 160.00'
	SE = 0.06	SE = 0.06
	RO = 90'	RO = 90'
	DS = 20 MPH	DS = 20 MPH

-Y2-

PI Sta 13+52.29	PI Sta 14+27.86	PI Sta 15+13.10
Δ = 10° 49' 45.4" (RT)	Δ = 5° 15' 39.6" (LT)	Δ = 4° 46' 31.3" (LT)
D = 11° 41' 34.9"	D = 8° 57' 08.9"	D = 4° 16' 32.9"
L = 92.61'	L = 58.77'	L = 111.68'
T = 46.44'	T = 29.40'	T = 55.87'
R = 490.00'	R = 640.00'	R = 1,340.00'
SE = NC	SE = 0.02	
RO = 40'	RO = 40'	
DS = 40 MPH	DS = 40 MPH	

8/17/99

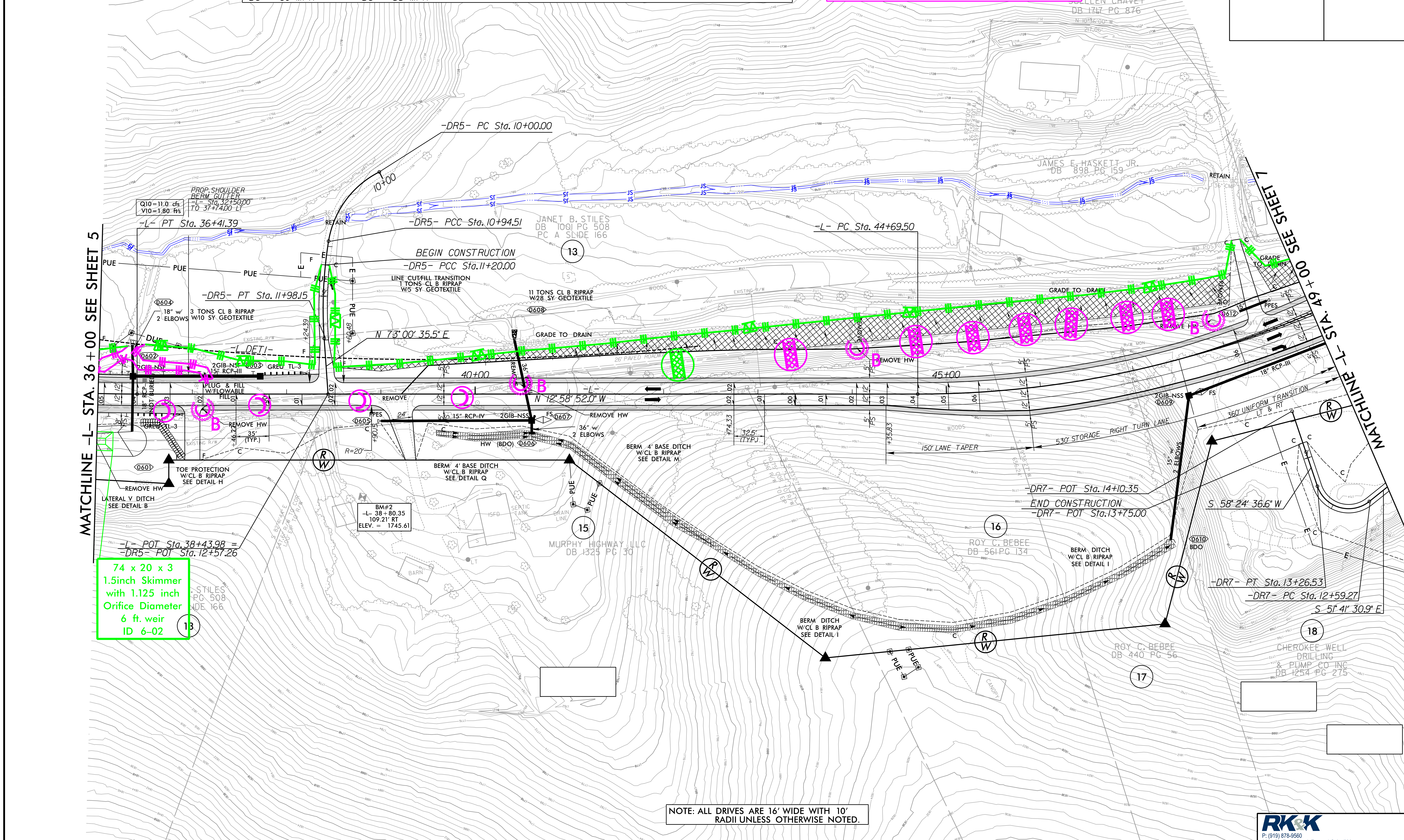
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_psh05.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-6/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-		-DR5-		-DR7-
PI Sta 33+81.27	PI Sta 50+66.87	PI Sta 10+51.11	PI Sta 11+46.56	PI Sta 13+09.35
Δ = 19° 56' 40.6" (LT)	Δ = 58° 48' 26.3" (LT)	Δ = 54° 08' 51.5" (LT)	Δ = 13° 11' 45.2" (LT)	Δ = 110° 06' 07.5" (RT)
D = 3° 47' 39.9"	D = 5° 24' 18.9"	D = 57° 17' 44.8"	D = 12° 43' 56.6"	D = 163° 42' 08.0"
L = 525.63'	L = 1,087.96'	L = 94.51'	L = 103.64'	L = 67.26'
T = 265.50'	T = 597.37'	T = 51.11'	T = 52.05'	T = 50.08'
R = 1,510.00'	R = 1,060.00'	R = 100.00'	R = 450.00'	R = 35.00'
SE = 0.06	SE = 0.06	SE = 0.02	SE = 0.02	SE = 0.02
RO = 210'	RO = 195'	DS = 15 MPH	DS = 15 MPH	DS = 15 MPH
DS = 60 MPH	DS = 55 MPH			

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.



NOTE: ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.

FOR -L- PROFILE SEE SHT. 23
FOR -DR5- PROFILE SEE SHT. 34
FOR -DR7- PROFILE SEE SHT. 35
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-7/CONST.7

R/W SHEET NO.

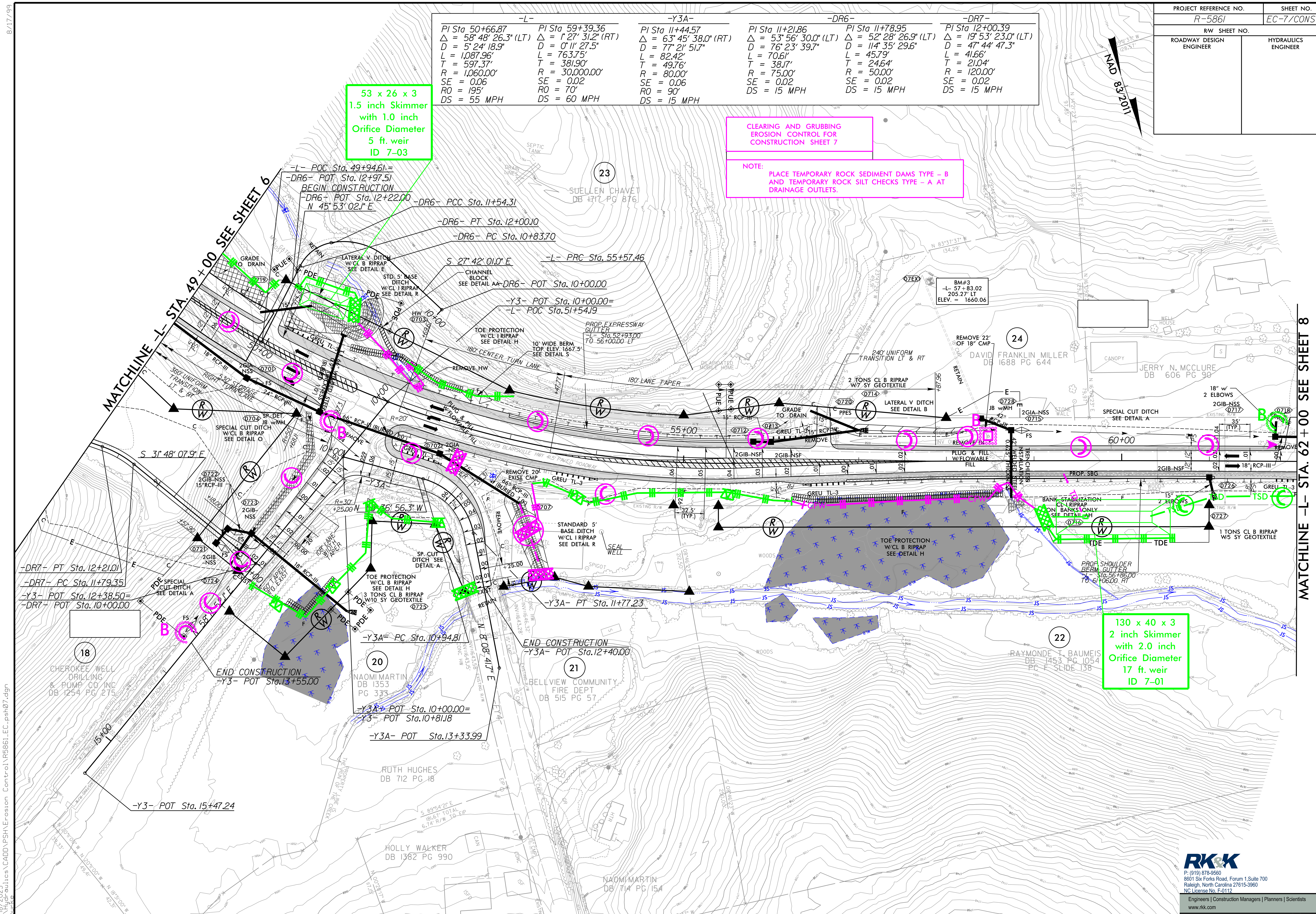
ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

-L-	-L-	-Y3A-	-DR6-	-DR6-	-DR7-
PI Sta 50+66.87	PI Sta 59+39.36	PI Sta 11+44.57	PI Sta 11+21.86	PI Sta 11+78.95	PI Sta 12+00.39
Δ = 58° 48' 26.3" (LT)	Δ = 1° 27' 31.2" (RT)	Δ = 63° 45' 38.0" (RT)	Δ = 53° 56' 30.0" (LT)	Δ = 52° 28' 26.9" (LT)	Δ = 19° 53' 23.0" (LT)
D = 5° 24' 18.9"	D = 0° 11' 27.5"	D = 77° 21' 51.7"	D = 76° 23' 39.7"	D = 114° 35' 29.6"	D = 47° 44' 47.3"
L = 1,087.96'	L = 763.75'	L = 82.42'	L = 70.61'	L = 45.79'	L = 41.66'
T = 597.37'	T = 381.90'	T = 49.76'	T = 38.17'	T = 24.64'	T = 21.04'
R = 1,060.00'	R = 30,000.00'	R = 80.00'	R = 75.00'	R = 50.00'	R = 120.00'
SE = 0.06	SE = 0.02	SE = 0.06	SE = 0.02	SE = 0.02	SE = 0.02
RO = 195'	RO = 70'	RO = 90'	DS = 15 MPH	DS = 15 MPH	DS = 15 MPH
DS = 55 MPH	DS = 60 MPH	DS = 15 MPH			

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 7

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.



8/17/99

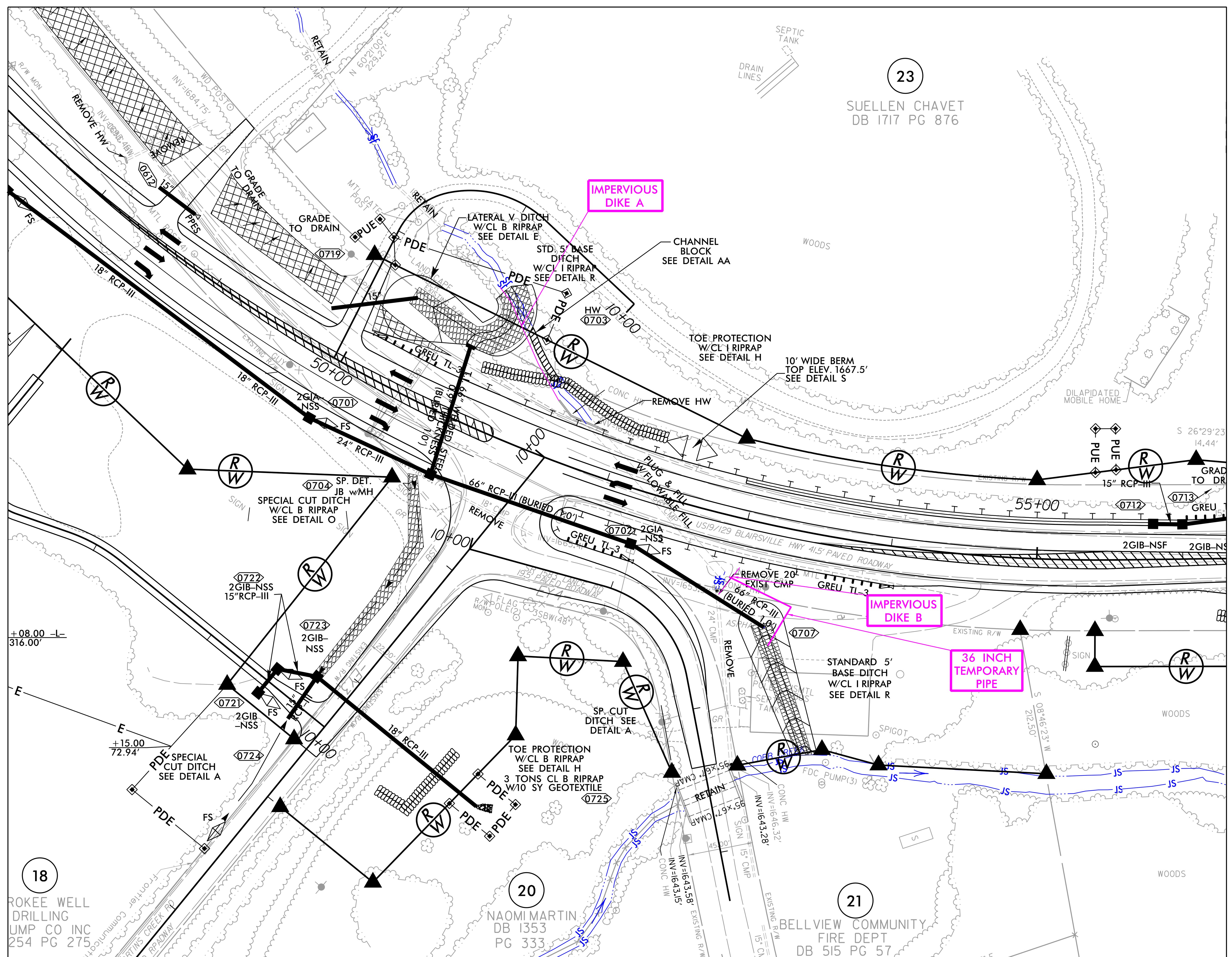
9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_psh07.dgn

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-7A/CONST.7A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PIPE INSTALLATION SEQUENCE 1 STA. 50+82 -L-

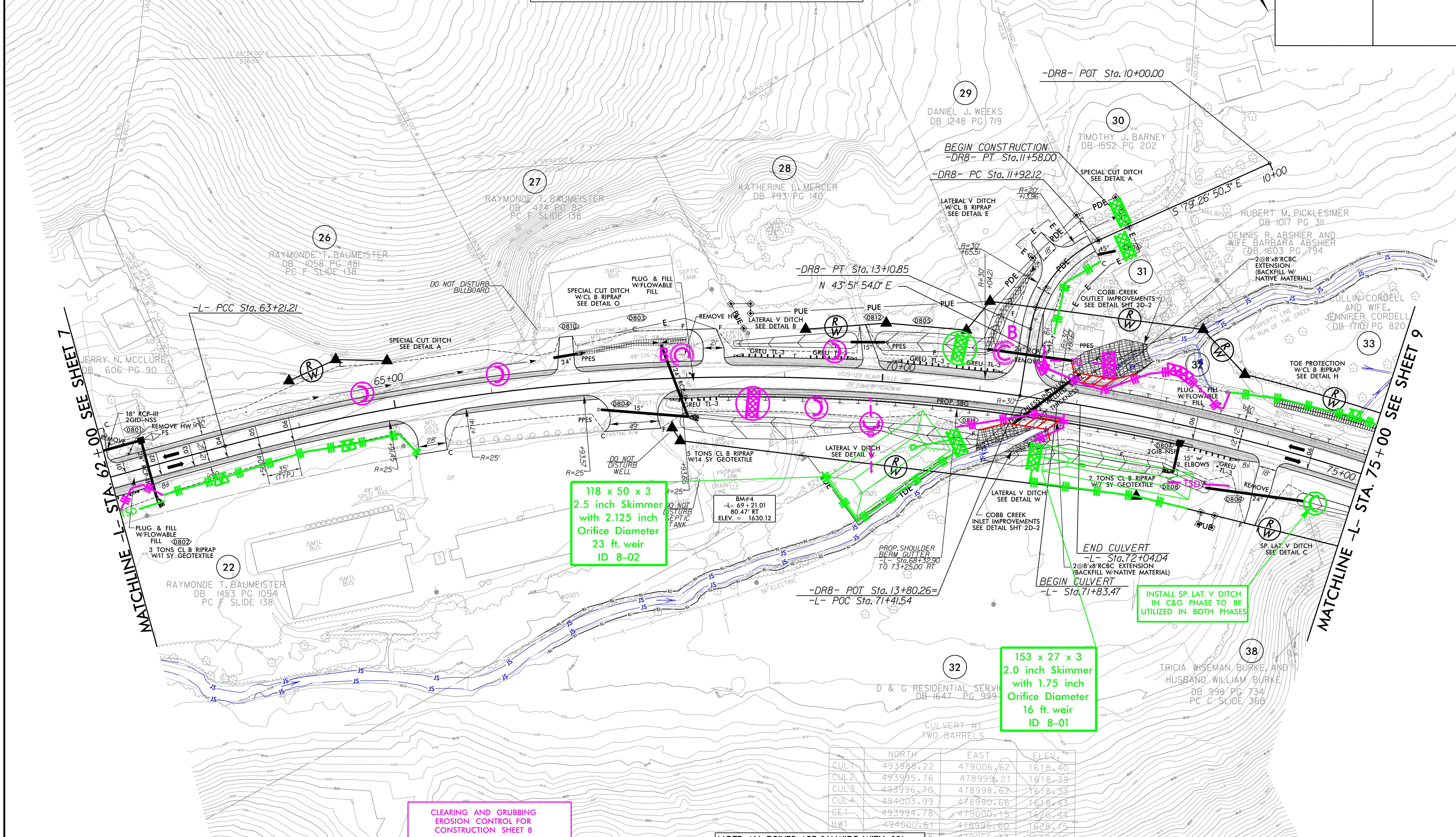
1. INSTALL SPECIAL STILLING BASIN(S) AS NEEDED
2. INSTALL IMPERVIOUS DIKE 'A' AS SHOWN ON PLANS TO MAINTAIN FLOW THROUGH EXISTING 66" CMP
3. INSTALL ENTRANCE AND RECEIVING BORE PITS AS NECESSARY.
4. INSTALL TRENCHLESS INSTALLATION 66" WELDED STEEL PIPE.
5. INSTALL JB W/MH & 2GIA-NSS, STRUCTURE NOs. 0704 & 0702.
6. INSTALL 66" RCP-III BETWEEN L- RT AND DRIVEWAY.
7. INSTALL IMPERVIOUS DIKE 'B' AS SHOWN ON PLANS.
8. INSTALL PROPOSED OUTLET CHANNEL (STD. 5' BASE DITCH, DETAIL R)
9. INSTALL 36" TEMPORARY PIPE AS SHOWN ON PLANS TO DIVERT EXISTING 66" CMP WATER TO NEW OUTLET CHANNEL
10. INSTALL PROPOSED 66" RCP-III, REMOVING 24" CMP AS NECESSARY
11. REMOVE IMPERVIOUS DIKES, TEMPORARY PIPE & SPECIAL STILLING BASIN(S).



RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

8/17/99
9/8/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_psh07A.dgn

-L-		-DR8-
PI Sta 59+39.36	PI Sta 75+17.07	PI Sta 12+56.85
△ = 1° 27′ 31.2″ (RT)	△ = 60° 30′ 48.9″ (RT)	△ = 56° 41′ 15.7″ (LT)
D = 0° 11′ 27.5″	D = 2° 47′ 41.7″	D = 47° 44′ 47.3″
L = 763.75′	L = 2,165.13′	L = 118.73′
T = 381.90′	T = 1,195.85′	T = 64.73′
R = 30,000.00′	R = 2,050.00′	R = 120.00′
SE = 0.02	SE = 0.06	SE = 0.02
RO = 70′	RO = 210′	DS = 15 MPH
DS = 60 MPH	DS = 60 MPH	



	NORTH	EAST	ELEV.
CUL1	493988.22	479006.62	1618.40
CUL2	493995.76	478999.21	1618.39
CUL3	493996.70	478998.62	1618.33
CUL4	494003.99	478990.66	1618.43
CE1	493994.78	479000.15	1626.44
HW1	494000.61	478995.60	1628.15
[illegible]	[illegible]	479066.33	1618.45
[illegible]	[illegible]	479058.53	1618.40
CUL7	493999.27	479057.78	1618.37
CUL8	494005.81	479049.69	1618.54
CE2	493999.96	479055.77	1626.49
HW2	493997.29	479057.40	1628.27

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 8

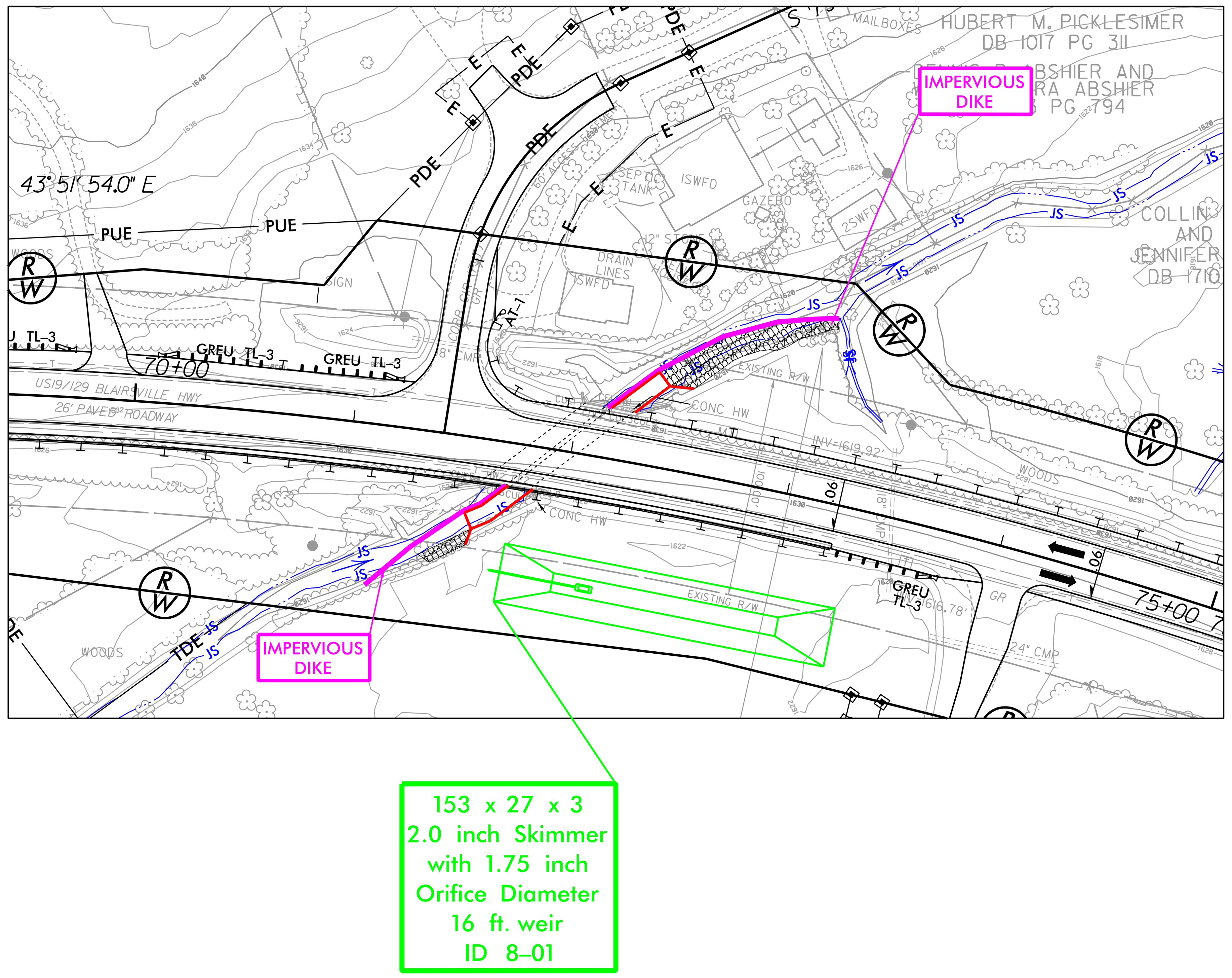
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: ALL DRIVES ARE 16′ WIDE WITH 10′ RADII UNLESS OTHERWISE NOTED.

FOR -L- PROFILE SEE SHTS. 23-24
FOR -DR8- PROFILE SEE SHT. 35
FOR DITCH DETAILS SEE SHT. 2D-1 & 2D-2

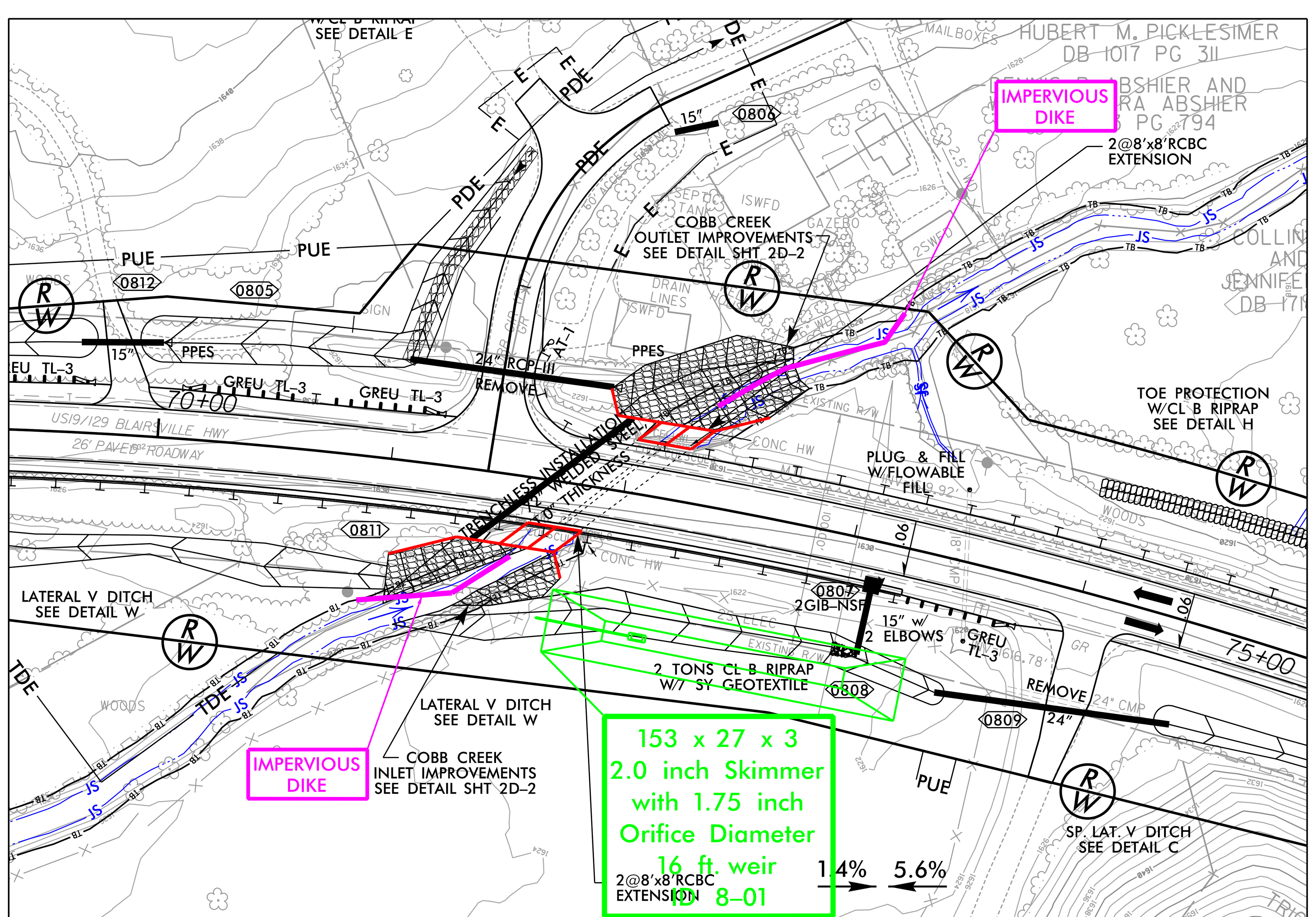
RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-8A/CONST.8A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CULVERT INSTALLATION SEQUENCE 1
STA. 71+92 -L-

1. UTILIZE SKIMMER BASIN 8-01 AS STILLING BASIN WITH MINIMUM CAPACITY OF 96 CY.
2. INSTALL IMPERVIOUS DIKES AS SHOWN ON PLAN.
3. EXCAVATE SEDIMENT FROM SOUTH BARREL OF EXISTING CULVERT.
4. DIVERT STREAM THROUGH SOUTH BARREL OF EXISTING CULVERT.
5. INSTALL APPROX. 28 LF OF PROPOSED 8'x8' RCBC WITH HEADWALL, WINGWALL, AND CHANNEL IMPROVEMENTS AT INLET OF EXISTING CULVERT NORTH BARREL.
6. INSTALL APPROX. 24 LF OF PROPOSED 8'x8' RCBC WITH HEADWALL, WINGWALL, AND CHANNEL IMPROVEMENTS AT OUTLET OF EXISTING CULVERT NORTH BARREL.



CULVERT INSTALLATION SEQUENCE 2
STA. 71+92 -L-

1. REVISE LOCATION OF IMPERVIOUS DIKES BY ADJUSTING APPROXIMATELY 63 LF AT INLET AND APPROXIMATELY 62 LF AT OUTLET AS SHOWN ON PLANS.
2. DIVERT STREAM THROUGH NORTH BARREL OF PROPOSED RCBC.
3. INSTALL APPROX. 18 LF OF PROPOSED 8'x8' RCBC WITH HEADWALL, WINGWALL, SILLS AND CHANNEL IMPROVEMENTS AT INLET OF EXISTING CULVERT SOUTH BARREL.
4. INSTALL APPROX. 34 LF OF PROPOSED 8'x8' RCBC WITH HEADWALL, WINGWALL, SILLS AND CHANNEL IMPROVEMENTS AT OUTLET OF EXISTING CULVERT SOUTH BARREL.
5. BORE AND JACK APPROXIMATELY 125 LF 72" WELDED STEEL PIPE.
6. REMOVE IMPERVIOUS DIKES AND DIVERT STREAM THROUGH BOTH BARRELS.

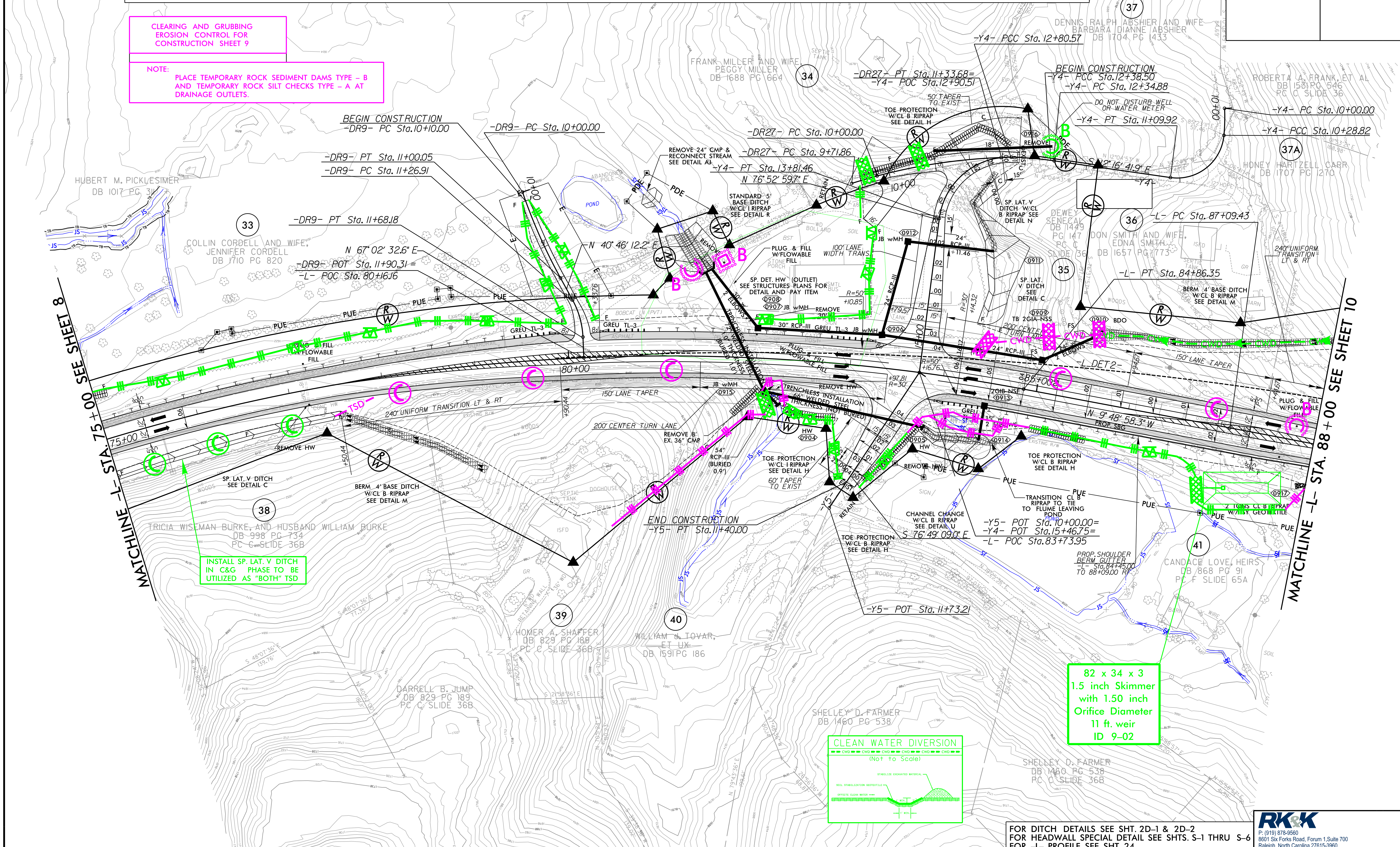
RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

8/17/99
9/8/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_psh08A.dgn

-DR9-		-L-		-Y4-				-DR27-
PI Sta 10+50.15	PI Sta 11+47.91	PI Sta 75+17.07	PI Sta 90+43.98	PI Sta 10+14.44	PI Sta 10+81.45	PI Sta 12+57.81	PI Sta 13+48.53	PI Sta 10+53.28
Δ = 9° 53' 01.0" (LT)	Δ = 26° 16' 20.4" (RT)	Δ = 60° 30' 48.9" (RT)	Δ = 2° 47' 40.83" (RT)	Δ = 7° 51' 52.2" (RT)	Δ = 92° 55' 38.0" (RT)	Δ = 6° 28' 50.8" (LT)	Δ = 84° 21' 27.6" (LT)	Δ = 15° 42' 55.45" (RT)
D = 9° 52' 42.9"	D = 63° 39' 43.1"	D = 2° 47' 41.7"	D = 0° 25' 03.9"	D = 27° 17' 01.3"	D = 114° 35' 29.6"	D = 14° 10' 59.9"	D = 83° 37' 14.3"	D = 9° 42' 40.1"
L = 100.05'	L = 41.27'	L = 2,165.13'	L = 668.97'	L = 28.82'	L = 81.09'	L = 45.69'	L = 100.88'	L = 161.83'
T = 50.15'	T = 21.00'	T = 1,195.85'	T = 334.55'	T = 14.44'	T = 52.62'	T = 22.93'	T = 67.96'	T = 81.43'
R = 580.00'	R = 90.00'	R = 2,050.00'	R = 13,715.00'	R = 210.00'	R = 50.00'	R = 405.00'	R = 75.00'	R = 590.00'
SE = 0.02	SE = 0.02	SE = 0.06	SE = 0.02		SE = 0.02	SE = 0.02	SE = 0.02	
DS = 15 MPH	DS = 15 MPH	RO = 210'	RO = 70'		RO = 30'	RO = 30'	RO = 30'	
		DS = 60 MPH	DS = 60 MPH		DS = 15 MPH	DS = 15 MPH	DS = 15 MPH	

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.



NOTES: ALL DRIVES ARE 16' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.

FOR DITCH DETAILS SEE SHT. 2D–1 & 2D–2
FOR HEADWALL SPECIAL DETAIL SEE SHTS. S–1 THRU S–6
FOR –L– PROFILE SEE SHT. 24
FOR –Y4– PROFILE SEE SHT. 30
FOR –Y5– PROFILE SEE SHT. 31
FOR –DR9– PROFILE SEE SHT. 35
FOR –DR27– PROFILE SEE SHT. 43

PROJECT REFERENCE NO.	SHEET NO.
R-5861	EC-9/CONST.9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1,Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

8/17/99

9/18/2023
R:\Hydraulics\CADD\PSH\Erosion Control\R5861_EC_psh09.dgn