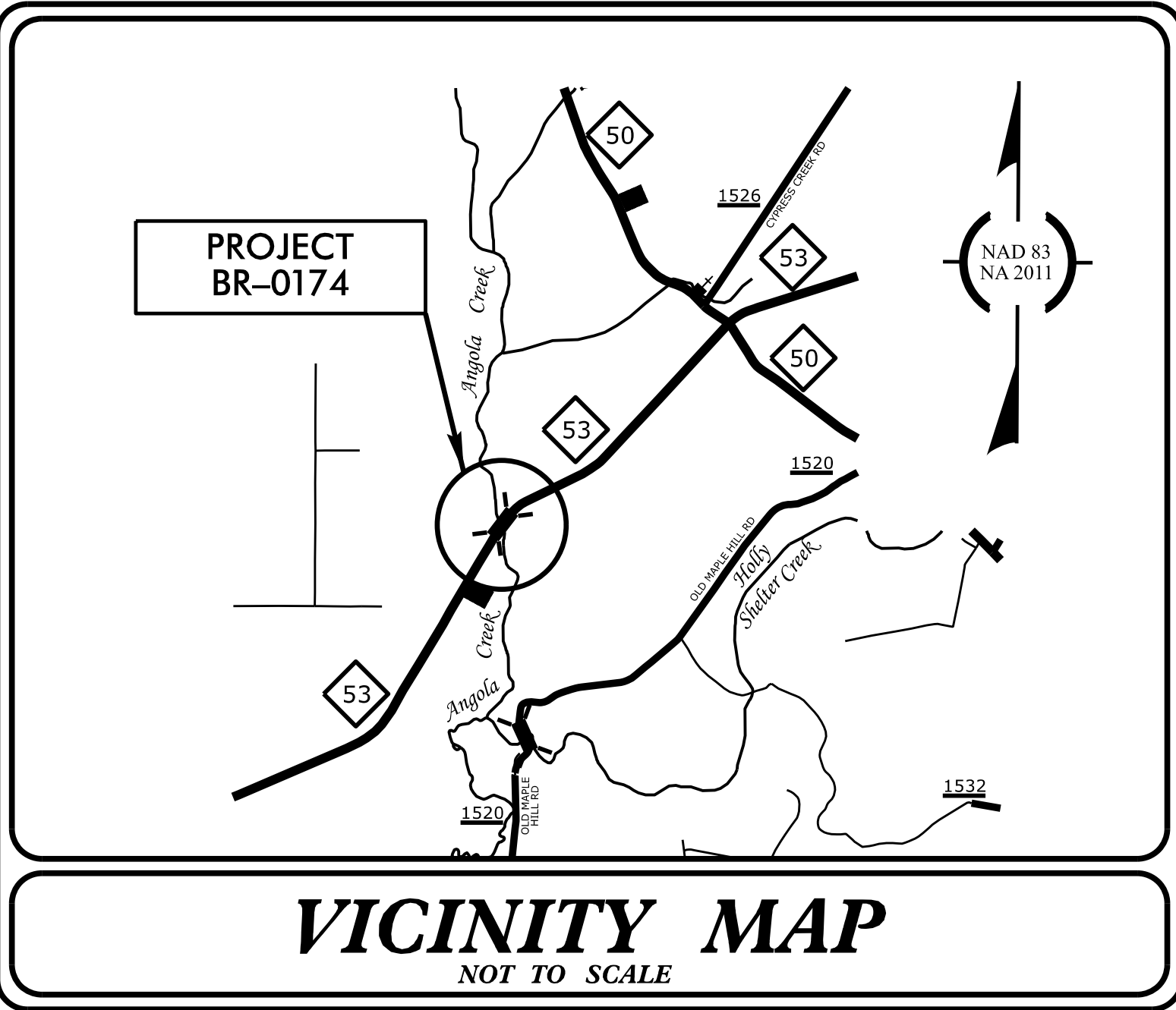


PROJECT: BR-0174



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

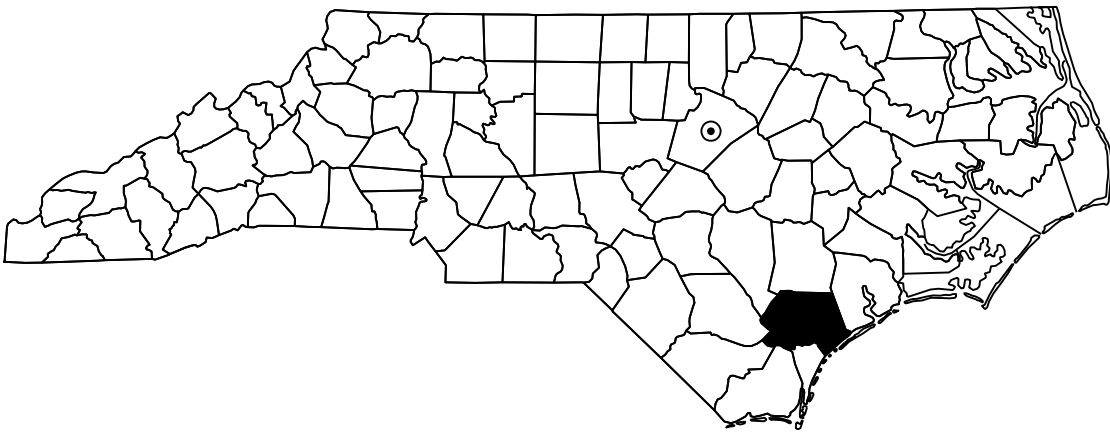
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

PENDER COUNTY

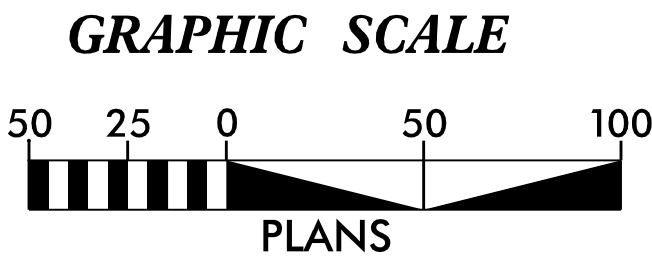
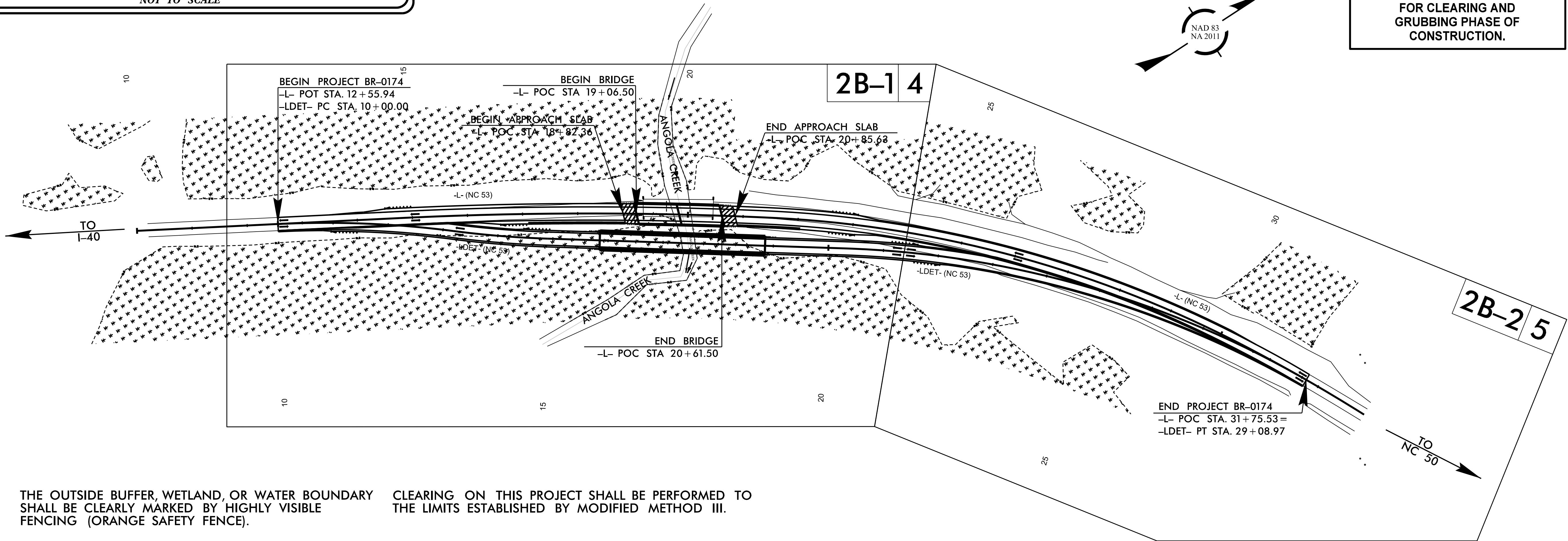
LOCATION: REPLACE BRIDGE 700037 ON NC 53
OVER ANGOLA CREEK

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0174	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
67174.1.1	N/A	PE	
67174.2.1	N/A	UTIL.	
67174.2.2	N/A	ROW	
67174.3.1	N/A	CONST.	



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



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES

CDM
Smith

Prepared In the Office of:
CDM Smith Inc.
4130 Parklake Avenue
Suite 350
Raleigh, NC 27612-4461
NC COA No. F-1255

Designed by:
HEATHER HARKENRIDER 3281
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2024 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

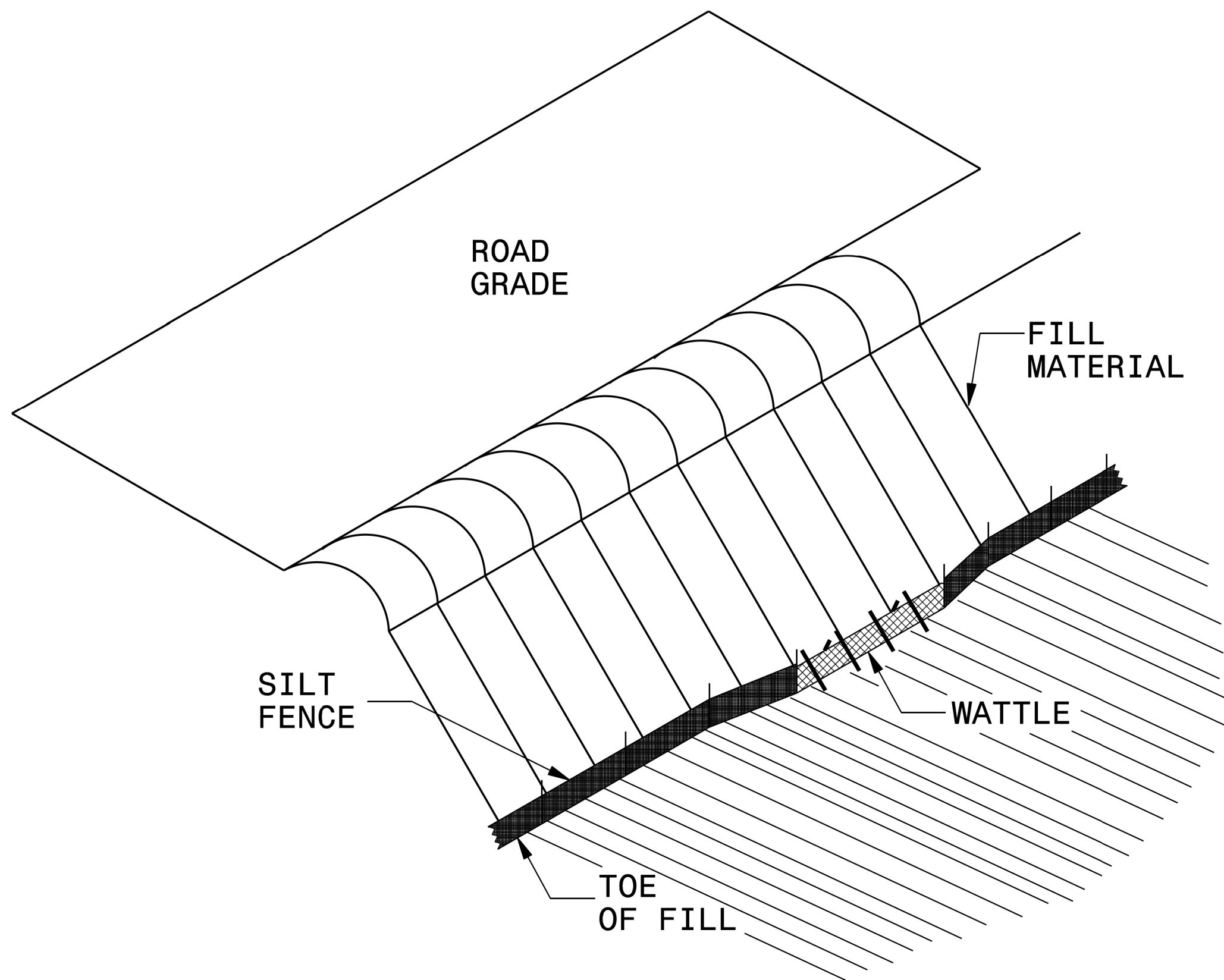
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
BR-0174	EC-02

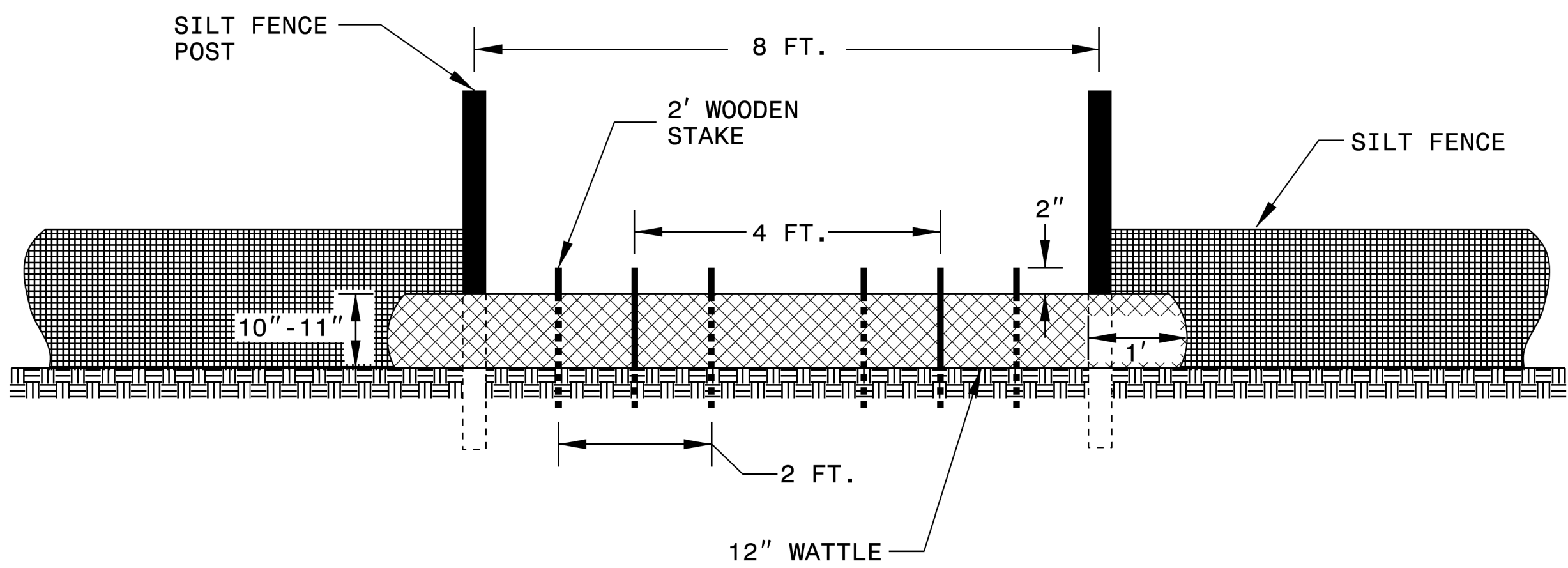
EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol	Std. #	Description	Symbol
1605.01	Temporary Silt Fence		1633.01	Temporary Rock Silt Check Type A	
1606.01	Special Sediment Control Fence		1633.02	Temporary Rock Silt Check Type B	
1622.01	Temporary Berms and Slope Drains		1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1630.02	Silt Basin Type B		1634.01	Temporary Rock Sediment Dam Type A	
1630.03	Temporary Silt Ditch		1634.02	Temporary Rock Sediment Dam Type B	
1630.04	Stilling Basin		1635.01	Rock Pipe Inlet Sediment Trap Type A	
1630.05	Temporary Diversion		1635.02	Rock Pipe Inlet Sediment Trap Type B	
1630.06	Special Stilling Basin		1636.01	Excelsior Wattle Check	
1630.07	Skimmer Basin		1636.01	Excelsior Wattle Check with Flocculant	
1630.08	Tiered Skimmer Basin		1636.01	Coir Fiber Wattle Check	
1630.09	Earthen Dam with Skimmer		1636.01	Coir Fiber Wattle Check with Flocculant	
	Infiltration Basin		1636.02	Silt Fence Excelsior Wattle Break	
	Rock Inlet Sediment Trap:			Silt Fence Coir Fiber Wattle Break	
1632.01	Type A		1636.03	Excelsior Wattle Barrier	
1632.02	Type B		1636.03	Coir Fiber Wattle Barrier	
1632.03	Type C				

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW



VIEW FROM SLOPE

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.

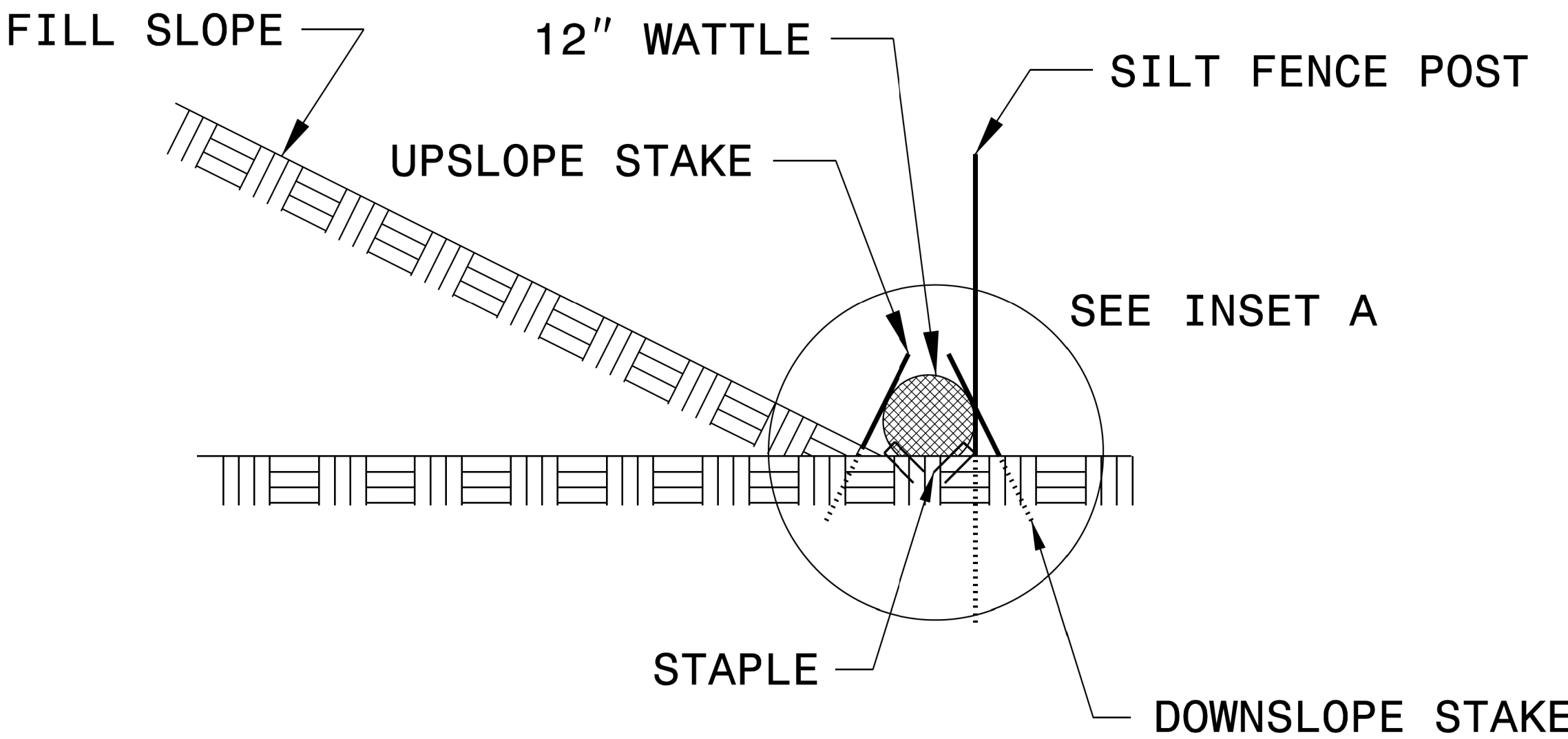
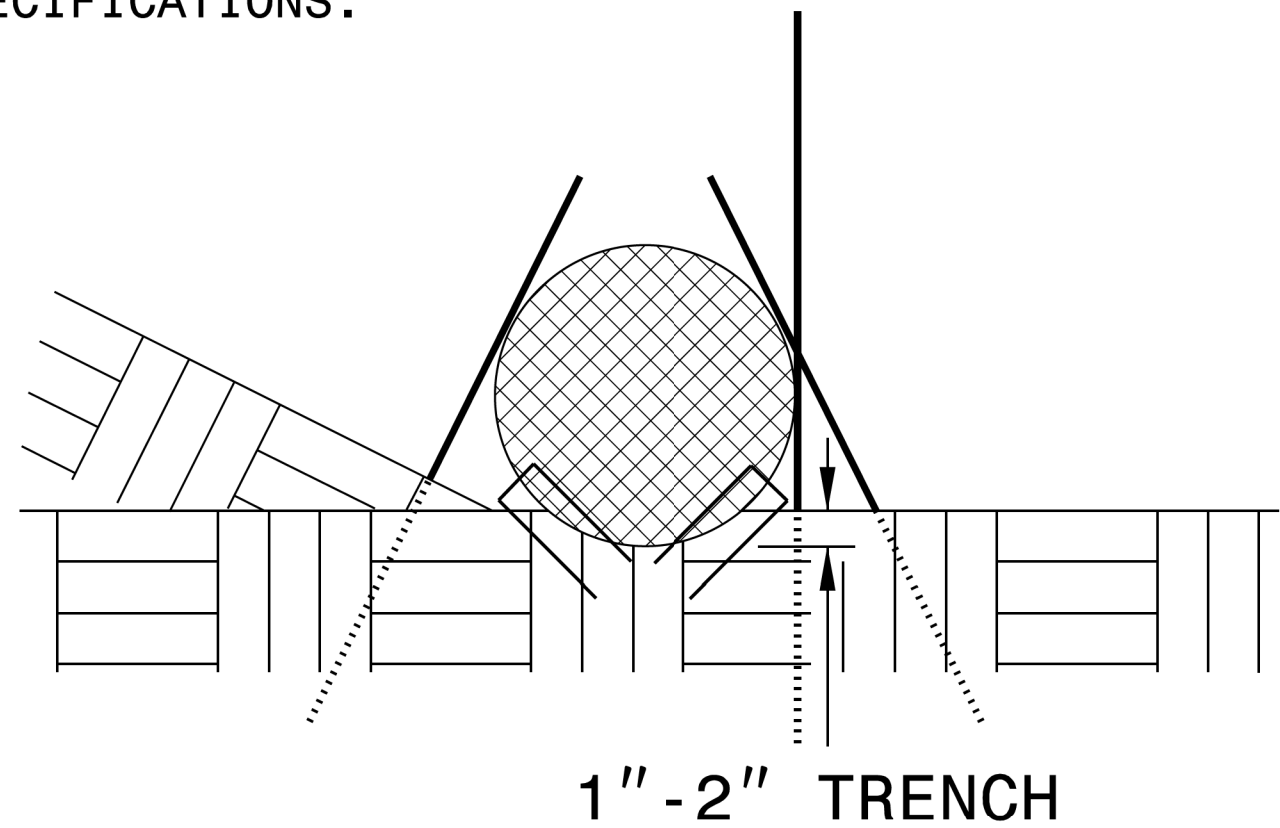
PROVIDE STAPLES MADE OF 11 GAUGE STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 6" IN LENGTH.

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.

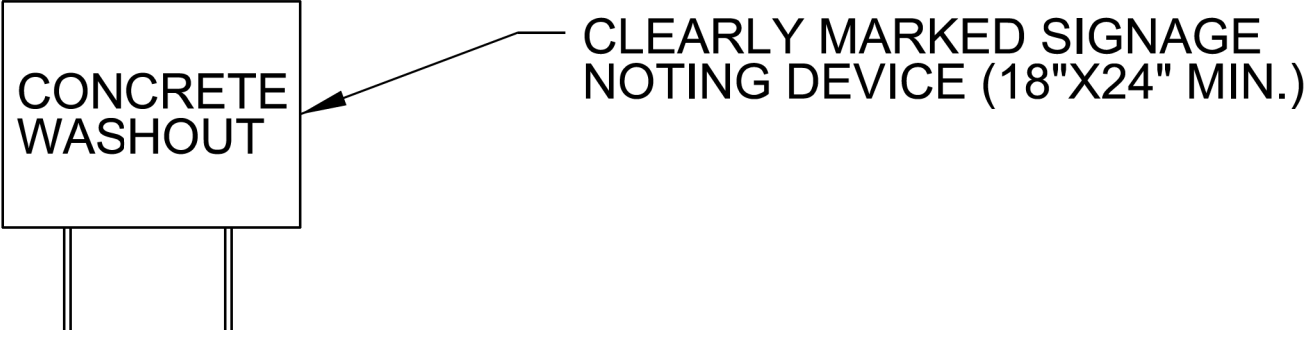
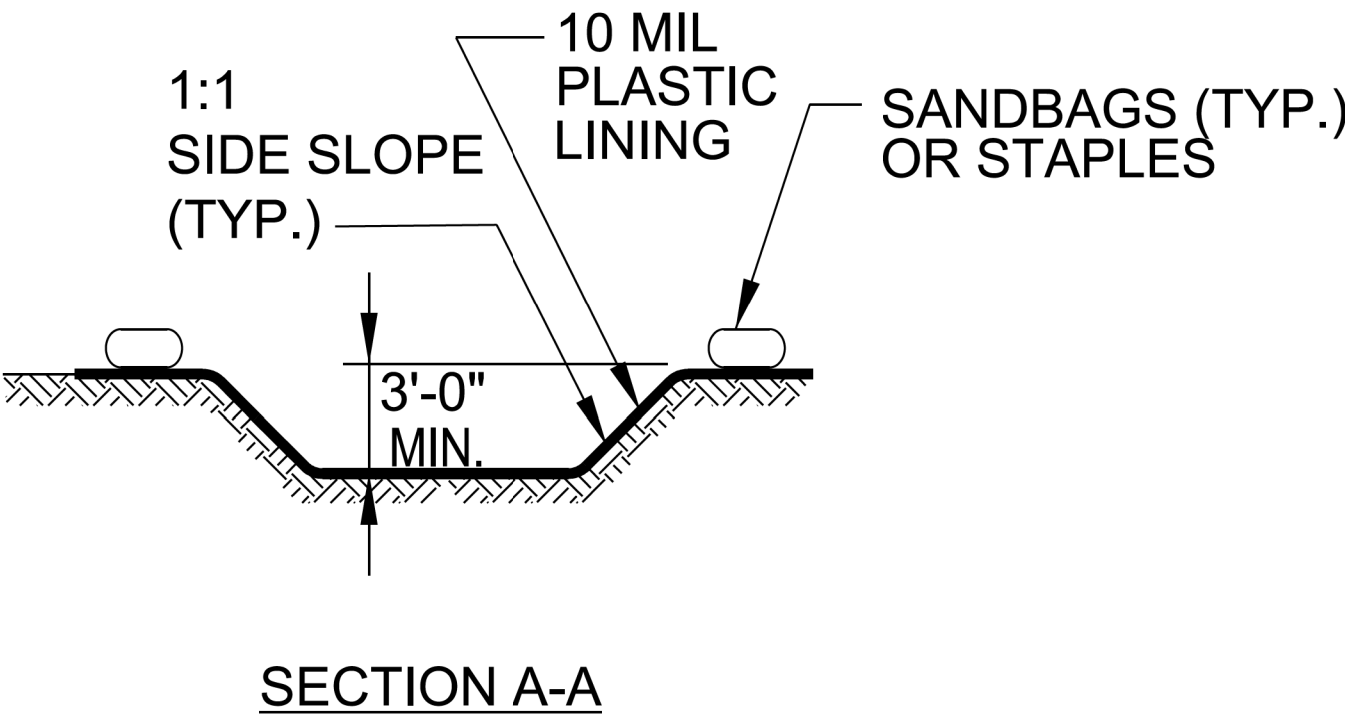
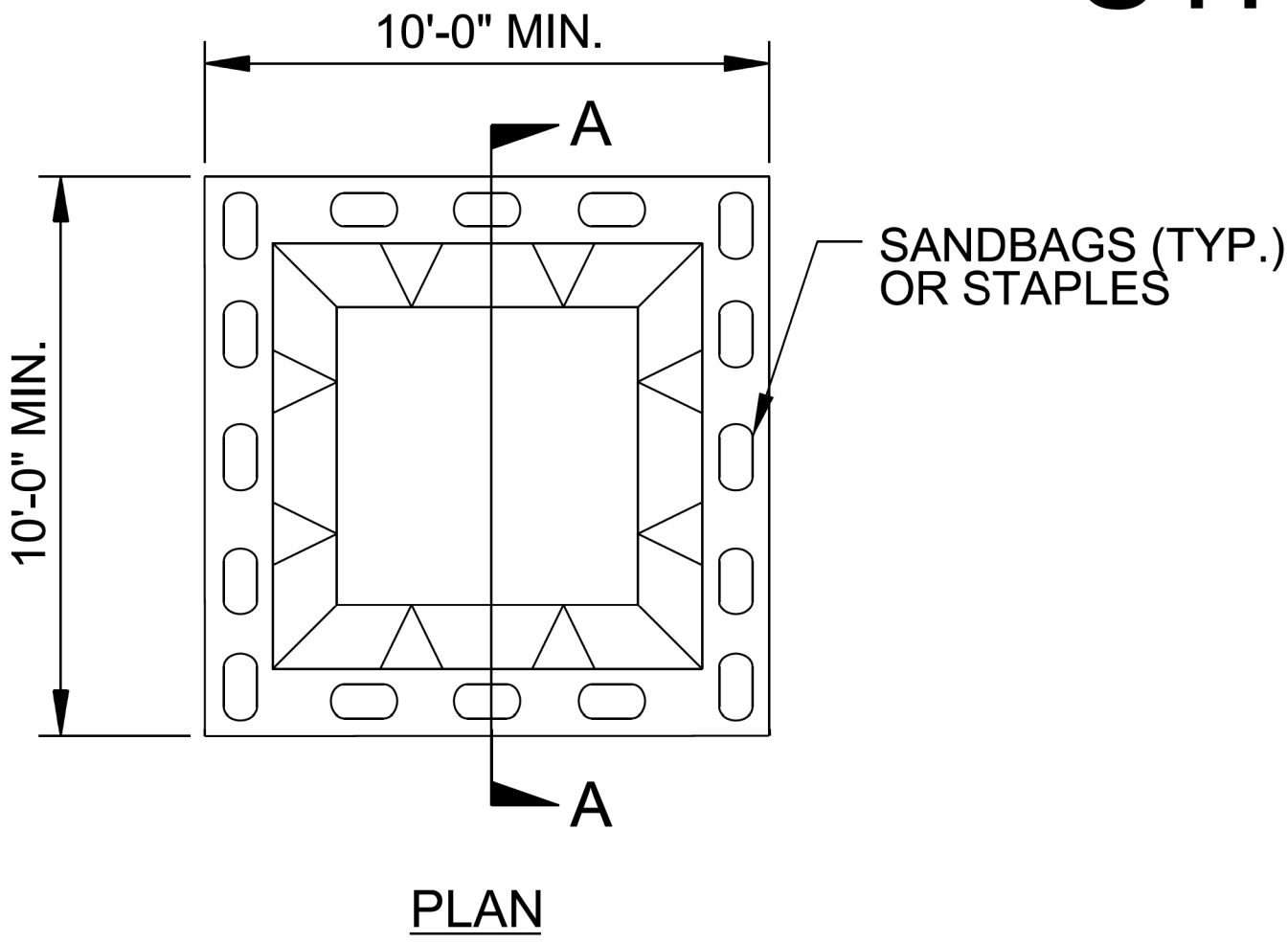
INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A



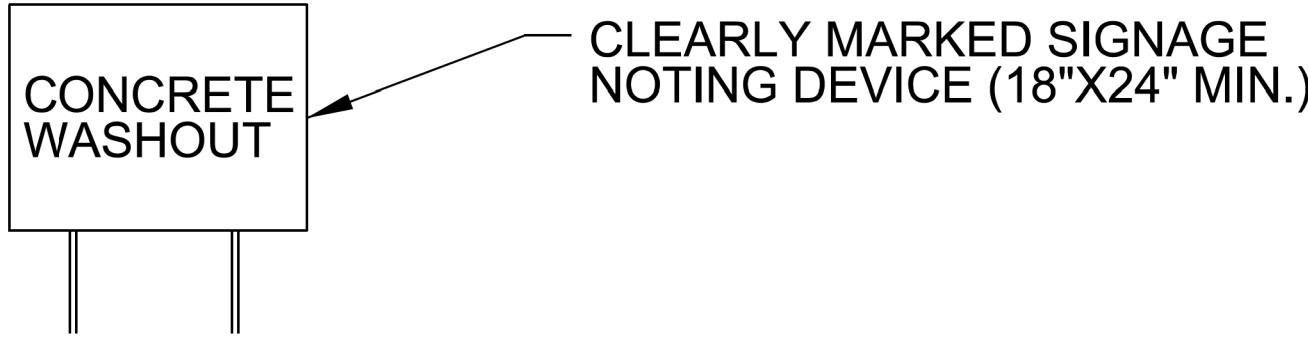
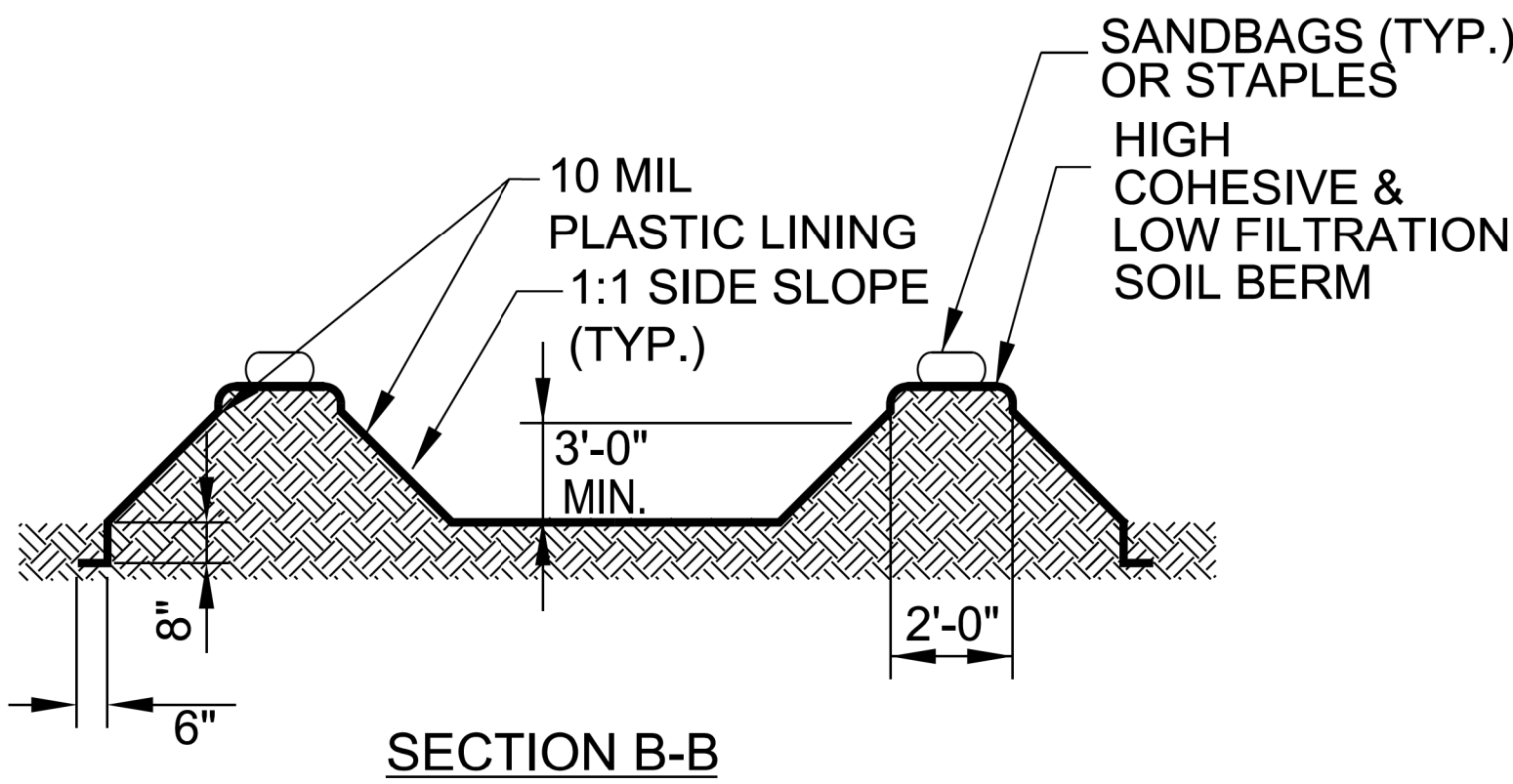
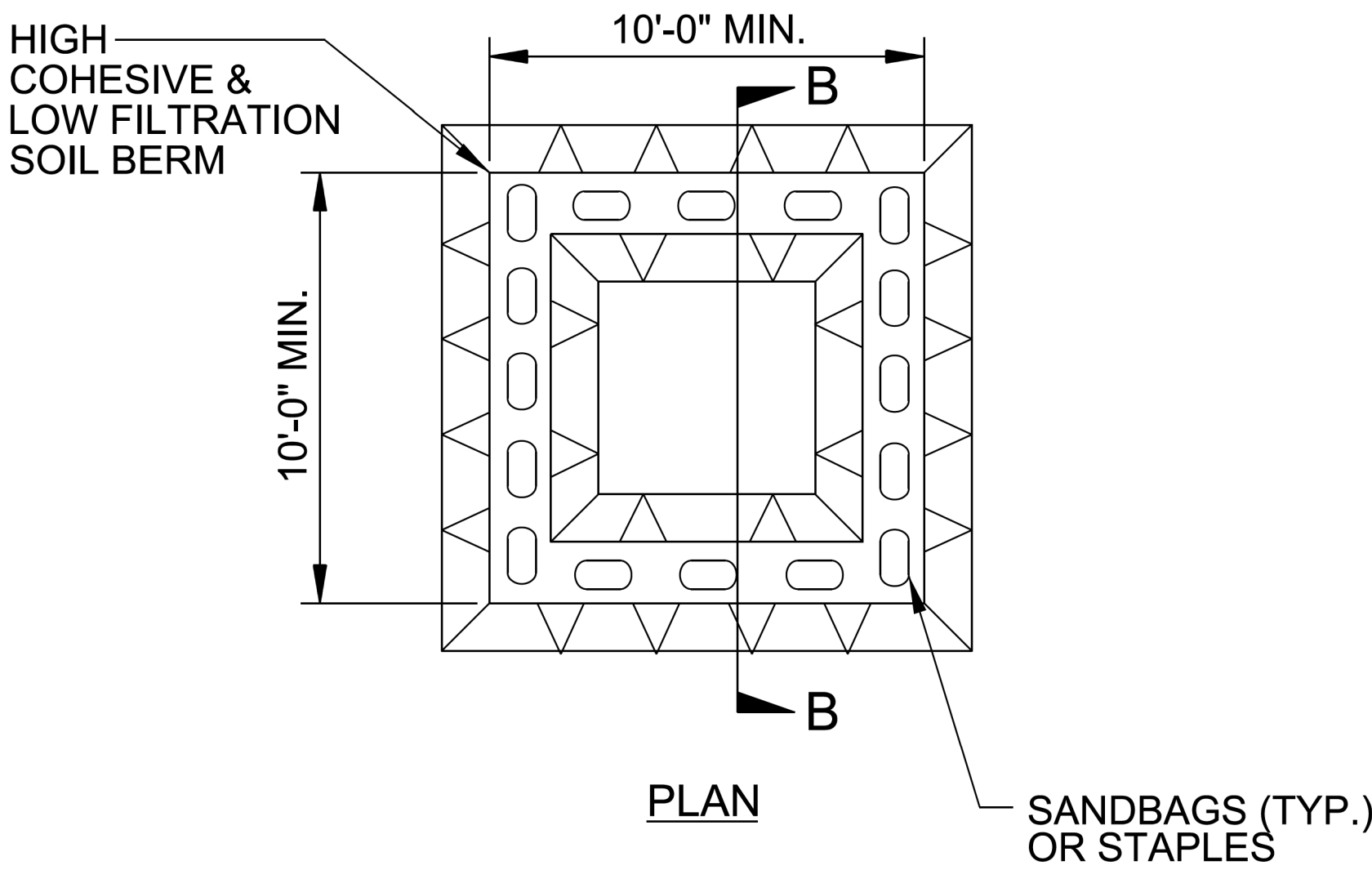
SIDE VIEW

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:**
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:**
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

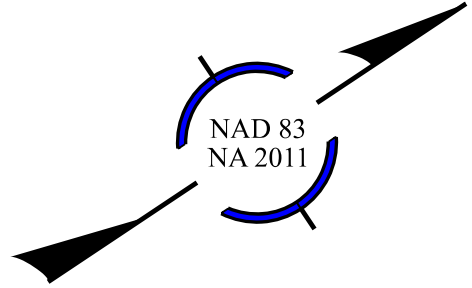
SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 TO 4:1	14 DAYS	7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

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
2B-1	-LDET-	10+00	15+60	R	850
2B-1	-LDET-	19+06	21+35	R	515
2B-1	-LDET-	13+07	15+75	L	230
2B-1	-LDET-	18+85	21+35	L	405
2B-2	-LDET-	21+35	29+09	R	2,120
2B-2	-LDET-	21+35	23+04	L	95
04	-L-	13+50	16+75	R	650
04	-L-	22+64	24+00	R	695
04	-L-	13+50	14+75	L	450
04	-L-	22+75	24+00	L	520
05	-L-	24+00	30+65	R	2,040
05	-L-	24+00	30+65	L	1,605
			SUBTOTAL		10,175
Miscellaneous matting to be installed as directed by the Engineer					1,525
				TOTAL	11,700
				SAY	11,700

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

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

NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING
BASIN(S) AS STILLING BASIN WHERE APPLICABLE.



①
JUSTIN COUSINS LLC
PB 65 / PG 48
DB 4758 / PG 557

③
THE WILLOUGHBY TOWNSEND LLC
DB 4676 / PG 0441

20

15

10

MATCHLINE -L- POC STA. 24+00.00 SEE SHEET 2B-2

④
CHARLES T SCARBOROUGH
PB 4 / PG 97
DB 4184 / PG 281

BR-0174

4R01

EC-04
/CONST. 2B-1

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PENDER COUNTY

DIVISION 3

PREPARED BY

CDM Smith Inc.
4133 Parkside Avenue
Suite 300
Raleigh, NC 27612-4481
NC CDA No. F-1250

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 2B-2

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

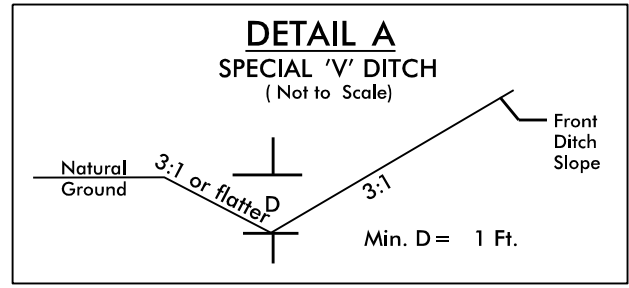
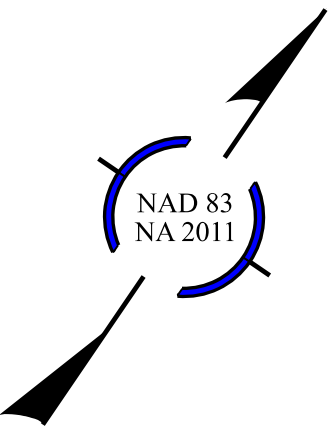
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3

MATCHLINE -L- POC STA. 24+00.00 SEE SHEET 2B-1

4

-LDET- POE 29+08.97



BR-0174

4R01	CE-05/ CONST. 2B-2
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PENDER COUNTY	
DIVISION 3	

PREPARED BY

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4100 Parkside Avenue
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Fayetteville, NC 27902-4481
NC CDA No. F-1255

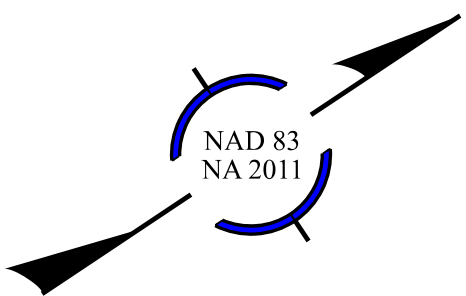
NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING
BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

Place Matting for Erosion Control
on Slope as Work Allows.
-LDET- Sta. 10+00 to Sta. 29+08

Utilize coir fiber matting adjacent
to wetland/jurisdictional areas and
as directed by the Engineer.

①
JUSTIN COUSINS LLC
PB 65 / PG 48
DB 4758 / PG 557

③
THE WILLOUGHBY TOWNSEND LLC
DB 4676 / PG 0441



BR-0174

4R01

EC-DG / CONST. 2B-1

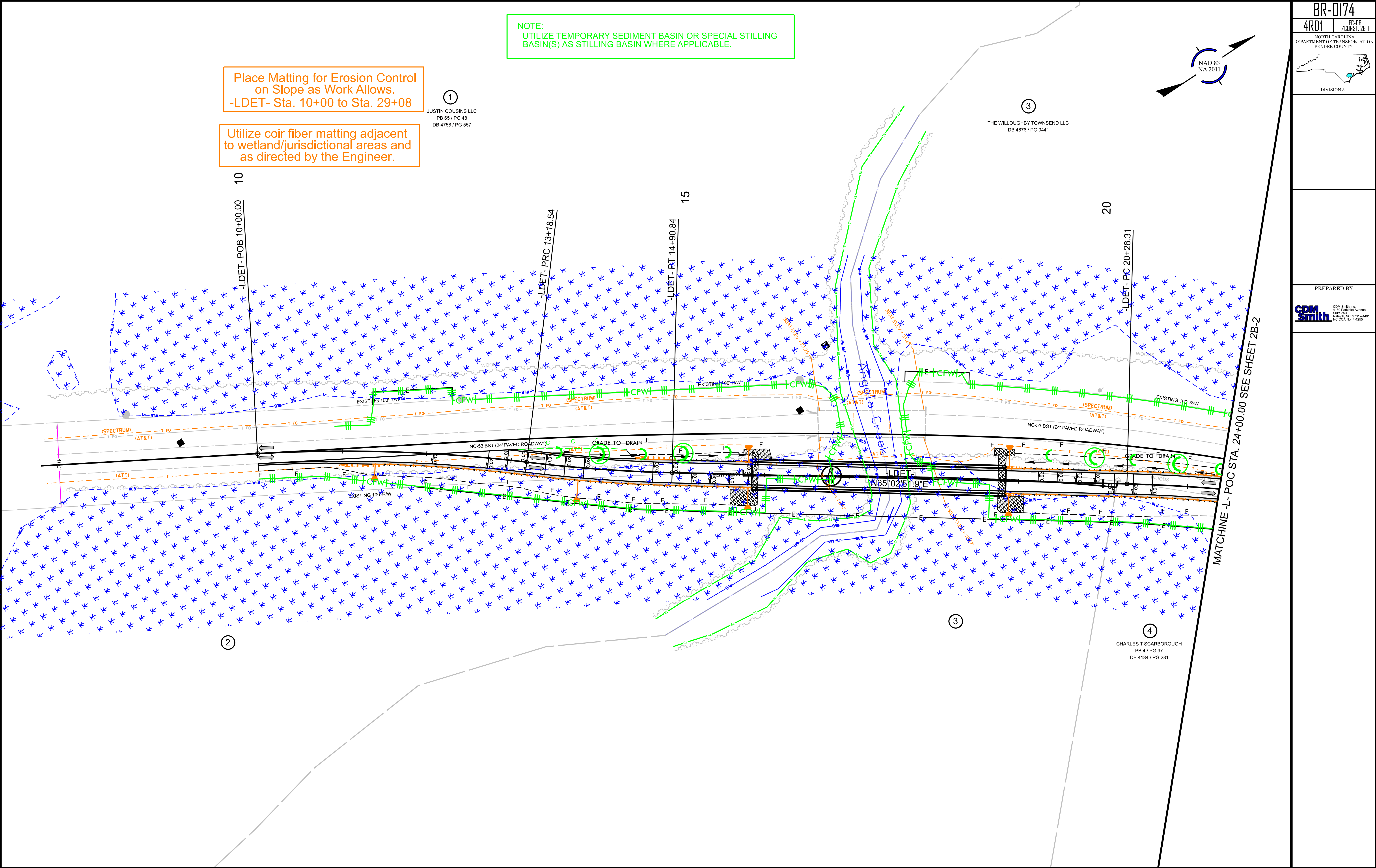
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PENDER COUNTY

DIVISION 3

PREPARED BY

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4133 Parkside Avenue
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Raleigh, NC 27612-4481
NC CDA No. F-1250



②

③

④

CHARLES T SCARBOROUGH
PB 4 / PG 97
DB 4184 / PG 281

Place Matting for Erosion Control
on Slope as Work Allows.
-LDET- Sta. 10+00 to Sta. 29+08

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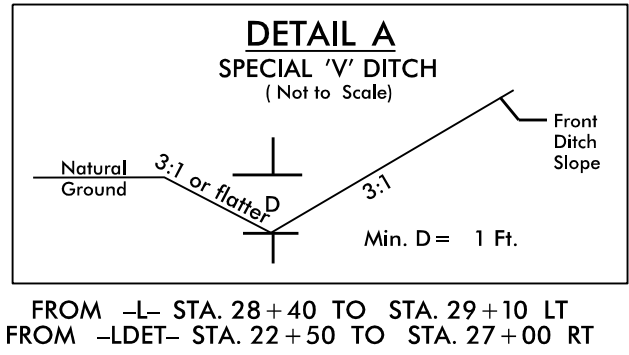
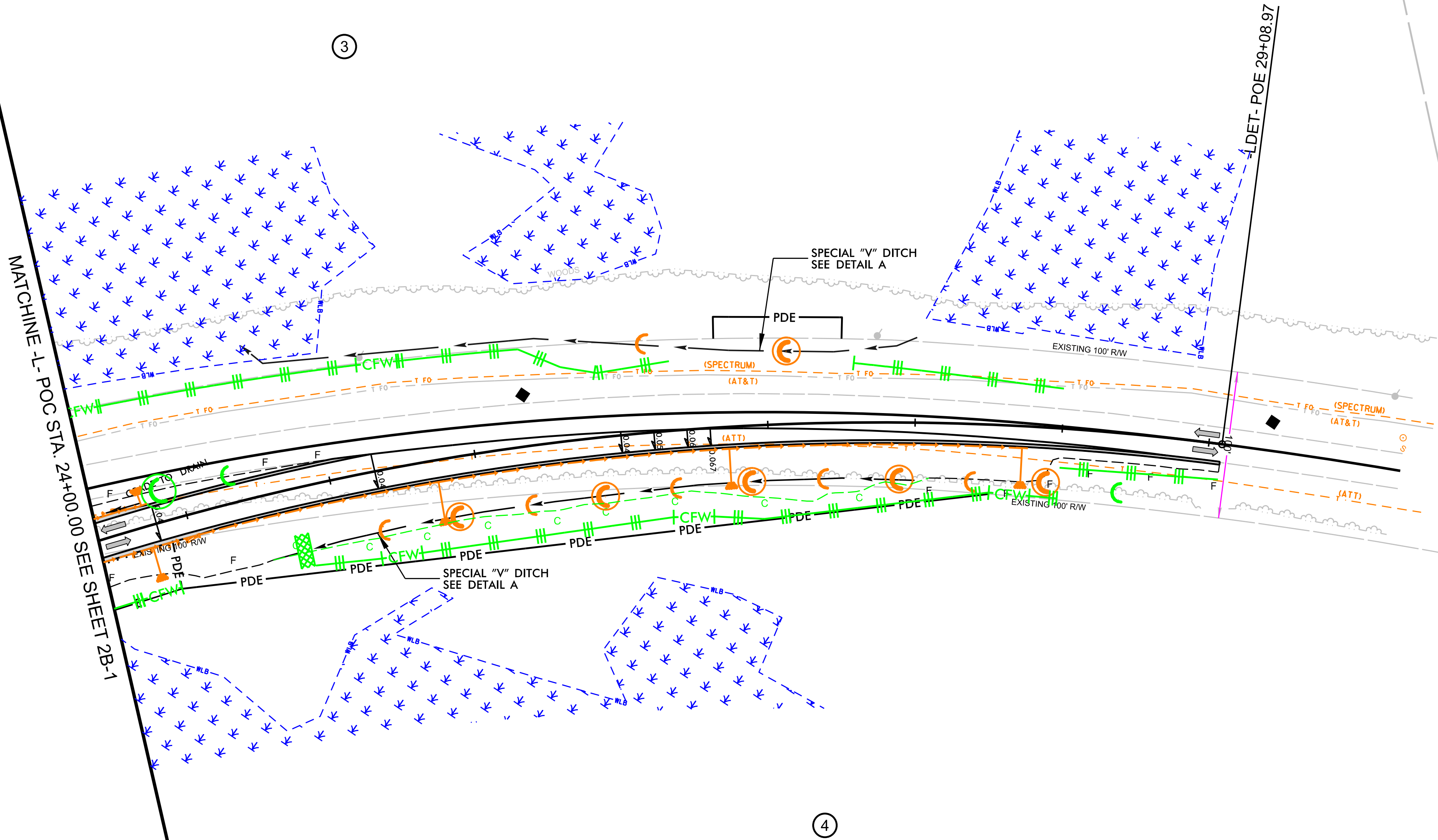
BR-0174

4R01

EC-07/
CONST. 2B-2

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PENDER COUNTY

DIVISION 3

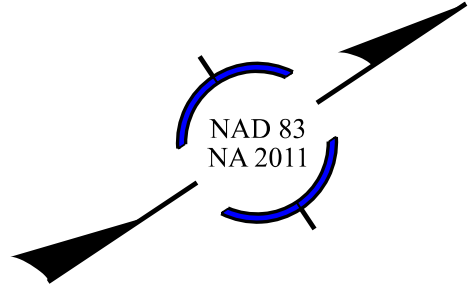


CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

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

NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING
BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

NOTE:
SILT FENCE OFFSETS:
-SLOPES LESS THAN 10' USE A 5' OFFSET FROM TOE OF SLOPE
-SLOPES 10' OR GREATER USE 10' OFFSET FROM TOE OF SLOPE



①
JUSTIN COUSINS LLC
PB 65 / PG 48
DB 4758 / PG 557

③
THE WILLOUGHBY TOWNSEND LLC
DB 4676 / PG 041

④
CHARLES T SCARBOROUGH
PB 4 / PG 97
DB 4184 / PG 281

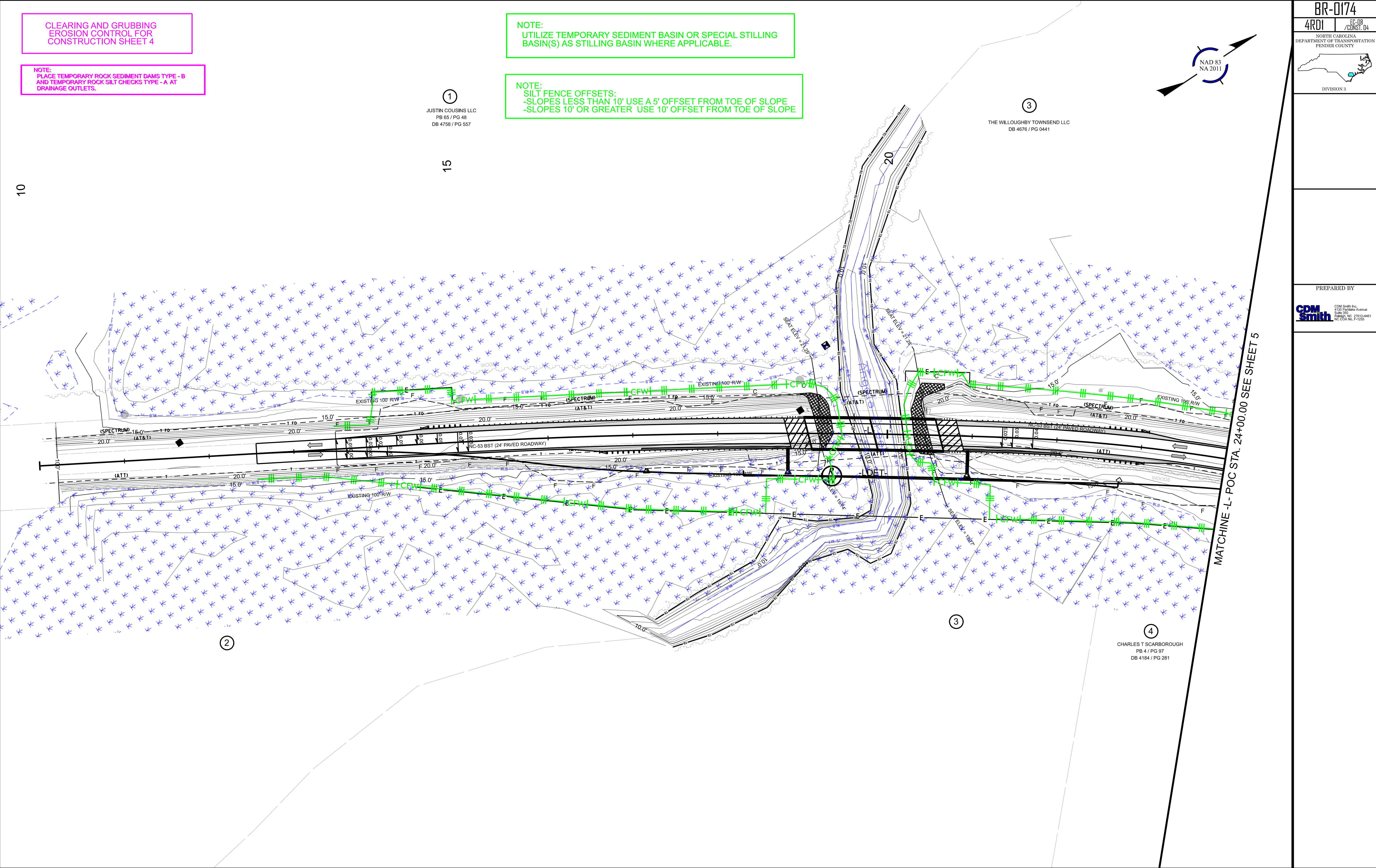
BR-0174

4R01	EC-08 /CONST. 04
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PENDER COUNTY	
DIVISION 3	

PREPARED BY

CDM Smith

CDM Smith Inc.
4100 Parkside Avenue
Suite 300
Raleigh, NC 27612-4461
NC CDA No. F-1250



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

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

NOTE:
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BR-0174

4R01

CC-09/
CONST. 05

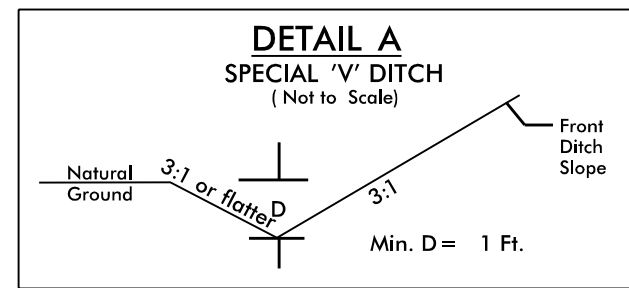
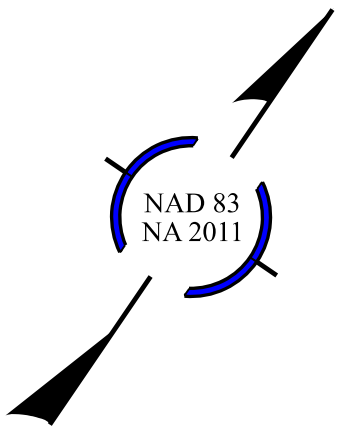
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PENDER COUNTY

DIVISION 3

PREPARED BY

CDM Smith Inc.
4100 Parkside Avenue
Suite 300
Raleigh, NC 27612-4481
NC CDA No. F-1255

MATCHLINE -L- POC STA. 24+00.00 SEE SHEET 4

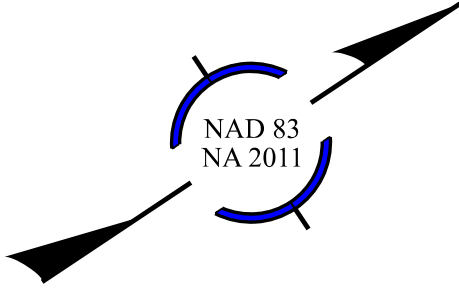


FROM -LDET- STA. 22+50 TO STA. 27+00 RT

NOTE:
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NOTE:
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Utilize coir fiber matting adjacent to wetland/jurisdictional areas and as directed by the Engineer.



BR-0174

4R01

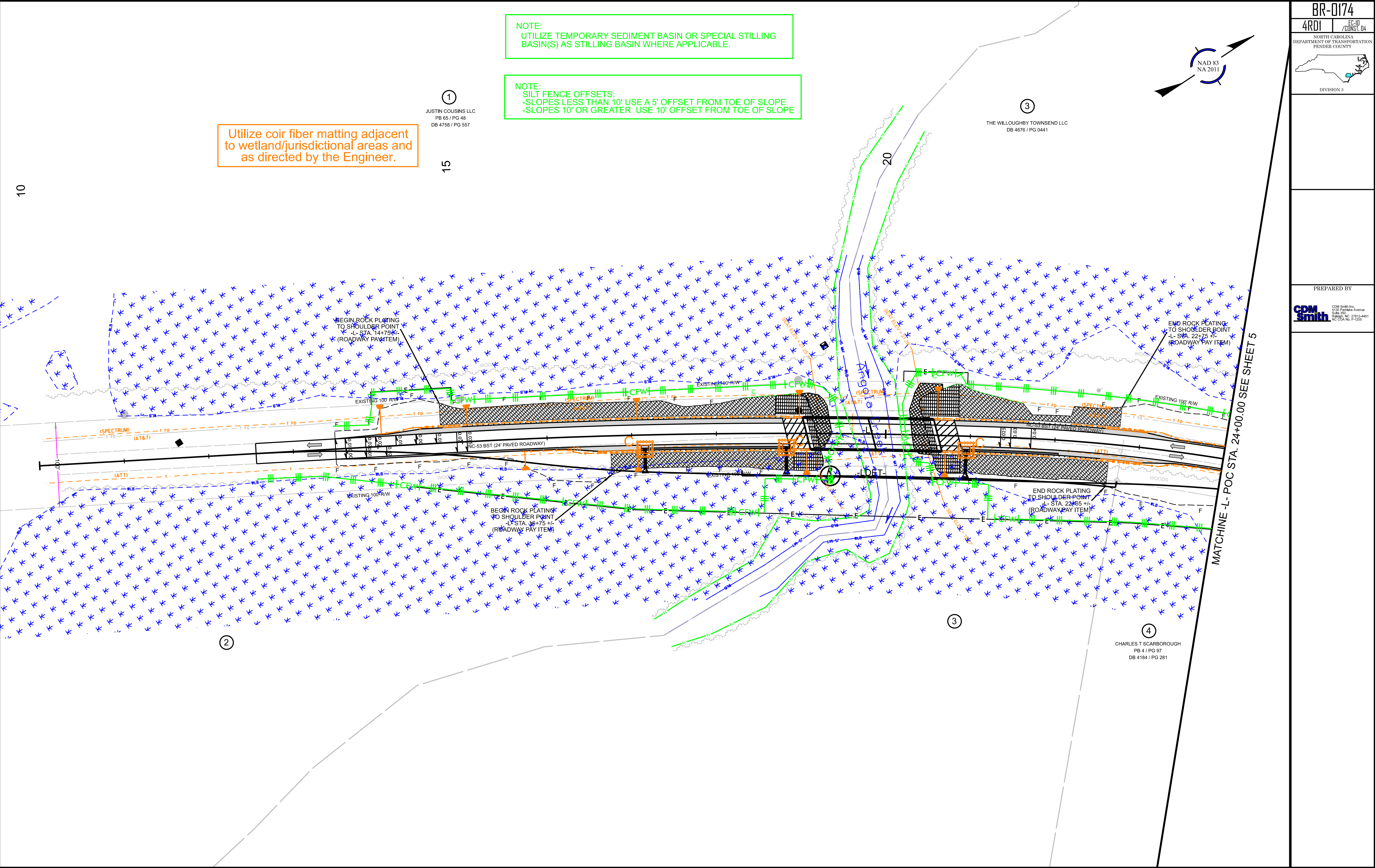
EC-10 / CONST. 04

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PENDER COUNTY

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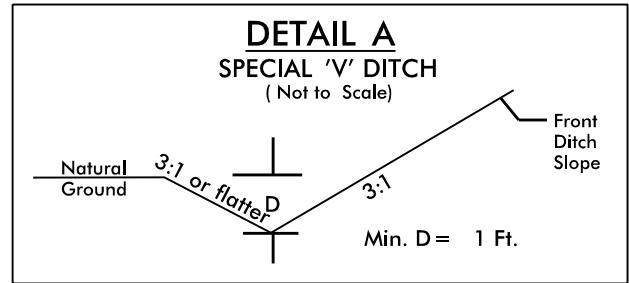
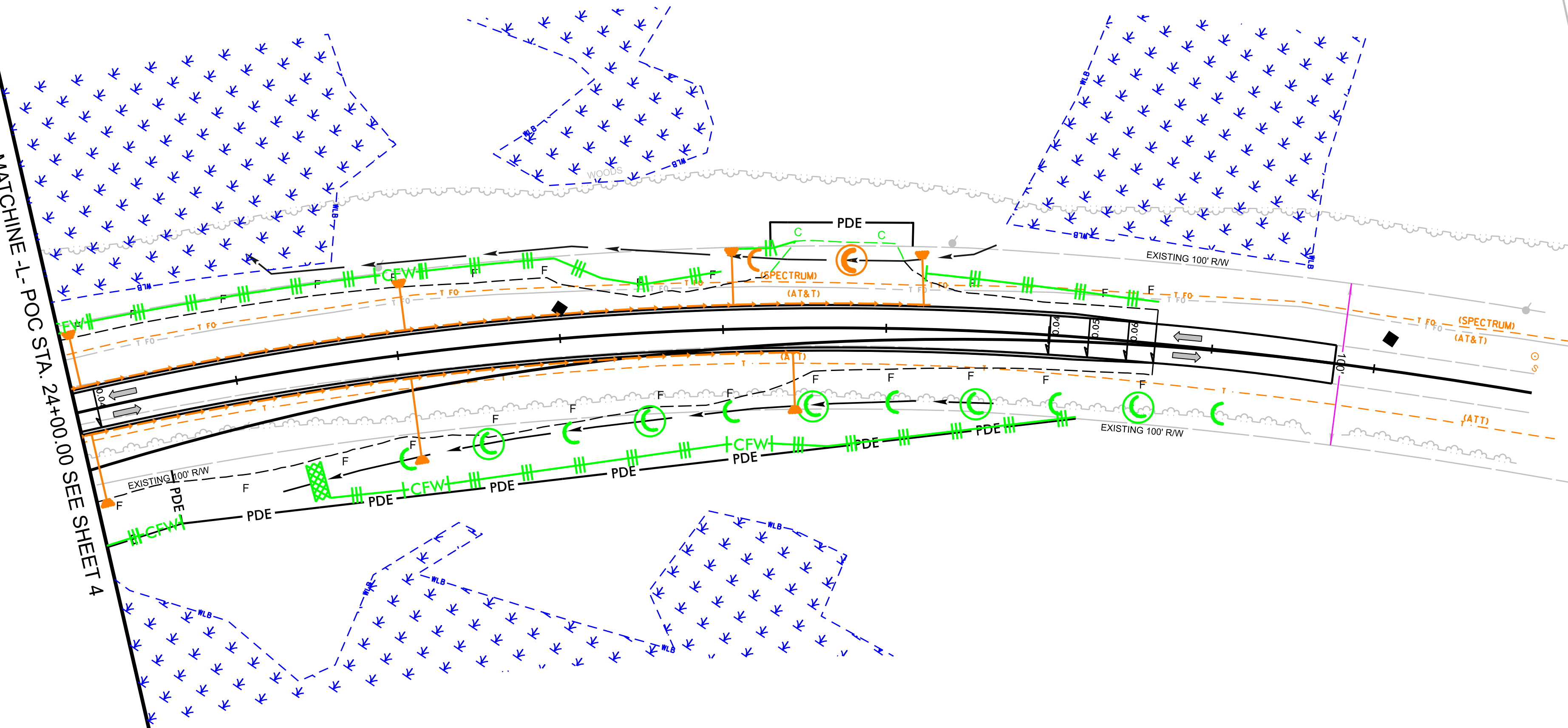
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MATCHLINE -L- POC STA. 24+00.00 SEE SHEET 4



FROM -LDET- STA. 22+50 TO STA. 27+00 RT

BR-0174

4R01

EC-11/ CONST. 05

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PENDER COUNTY

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