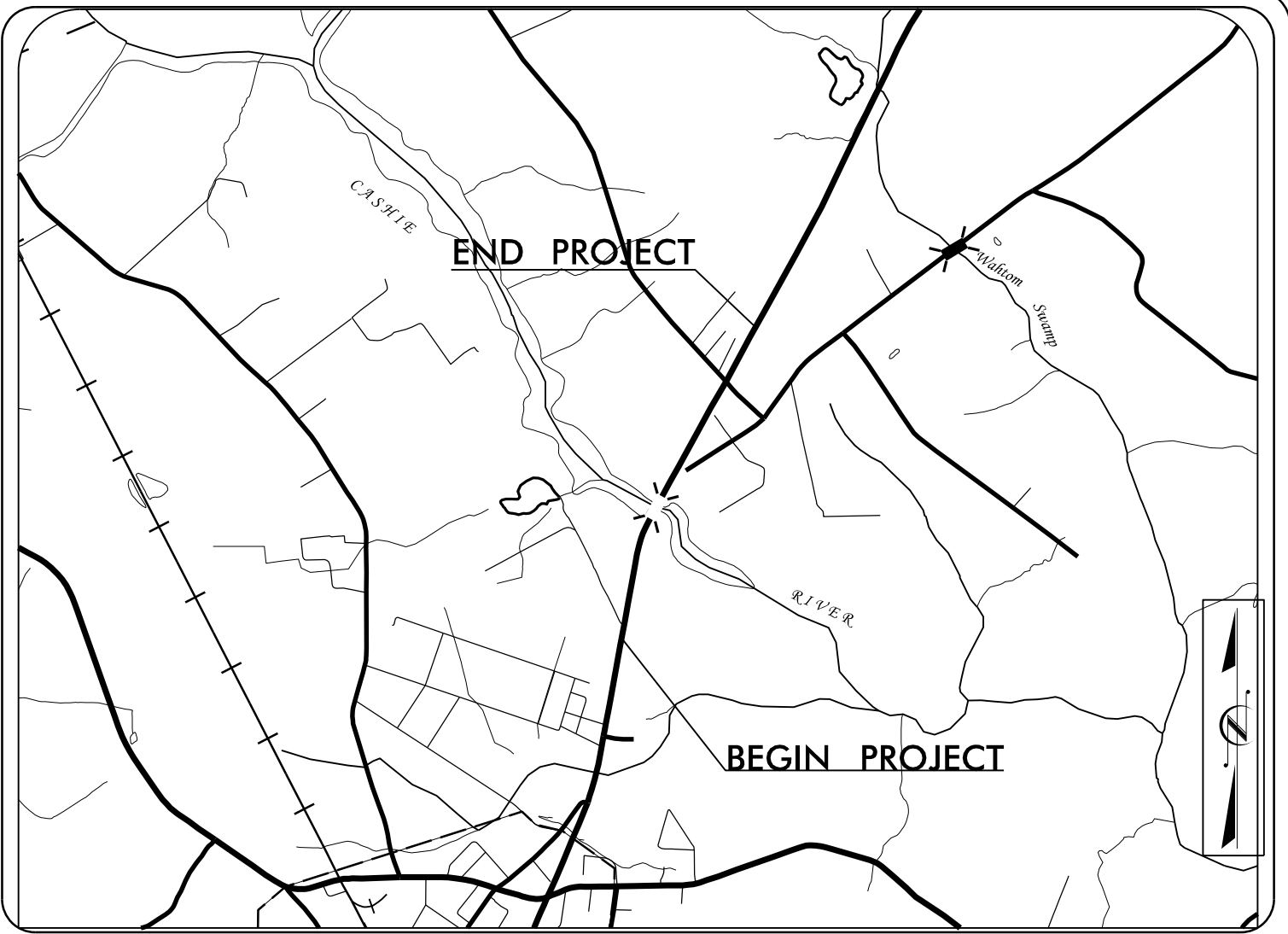


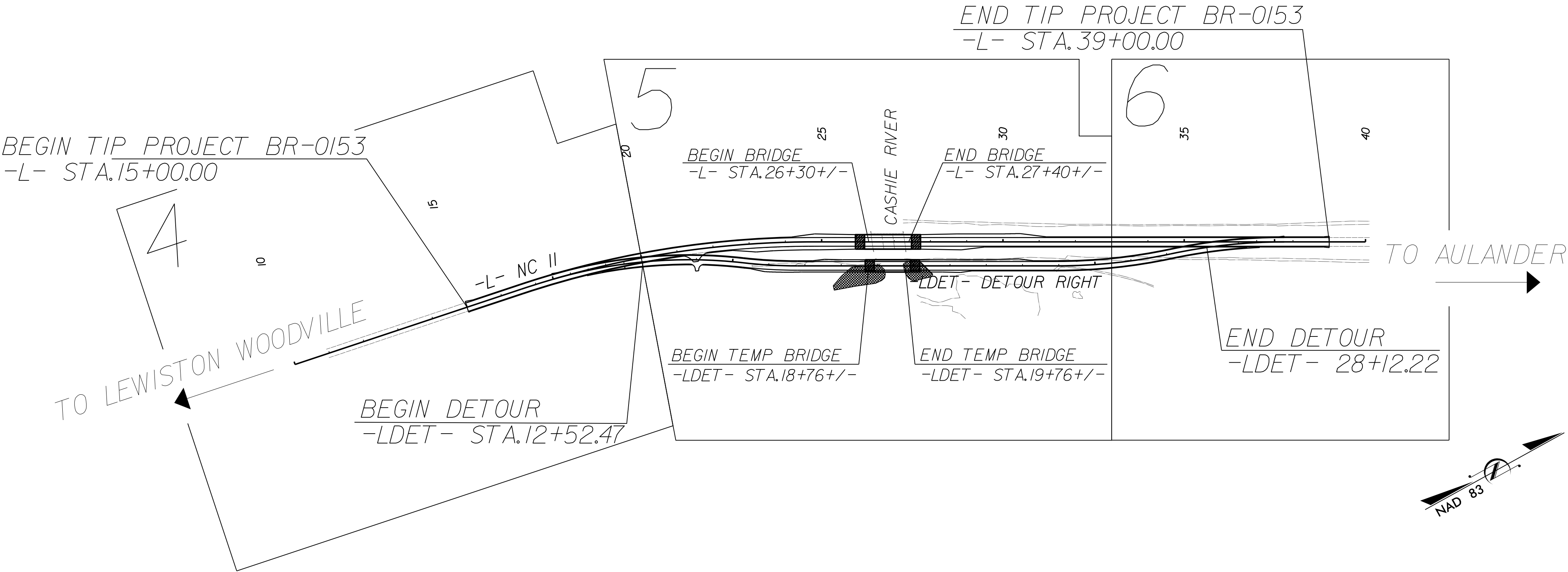
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0153	EC-1	15
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

TIP PROJECT: BR-0153

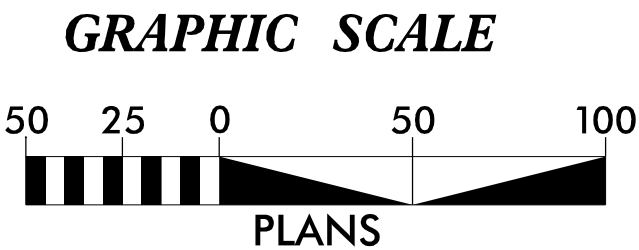


VICINITY MAP
NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
BERTIE COUNTY
LOCATION: BRIDGE 24 ON NC 11 OVER CASHIE RIVER
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES



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



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



Prepared in the Office of:
BENESCH
NC FIRM LICENSE NO: F-1320
8000 REGENCY PARKWAY, STE 175
CARY, NC 27518
(984)275-2490
Designed by:
Nichole Palen 4831
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-0153	EC-02
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	
1630.04	Stilling Basin	
1630.05	Temporary Diversion	
1630.06	Special Stilling Basin	
1630.07	Skimmer Basin	
1630.08	Tiered Skimmer Basin	
1630.09	Earthen Dam with Skimmer	
	Infiltration Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	
1632.02	Type B	
1632.03	Type C	

Std. #	Description	Symbol
1633.01	Temporary Rock Silt Check Type A	
1633.02	Temporary Rock Silt Check Type B	
1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
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	
1636.01	Excelsior Wattle Check	
1636.01	Excelsior Wattle Check with Flocculant	
1636.01	Coir Fiber Wattle Check	
1636.01	Coir Fiber Wattle Check with Flocculant	
1636.02	Silt Fence Excelsior Wattle Break	
	Silt Fence Coir Fiber Wattle Break	
1636.03	Excelsior Wattle Barrier	
1636.03	Coir Fiber Wattle Barrier	

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
<i>BR-0153</i>	<i>EC-3</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

[illegible]

MATTING FOR EROSION CONTROL

[illegible]

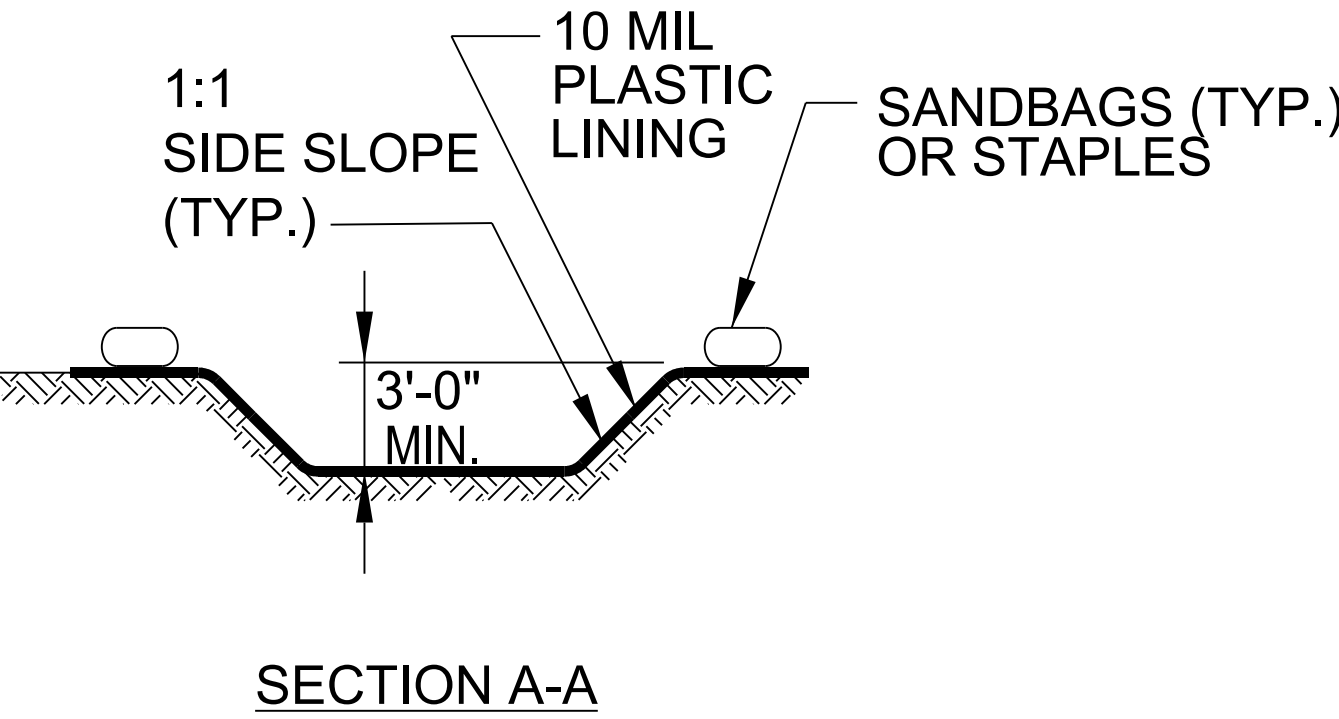
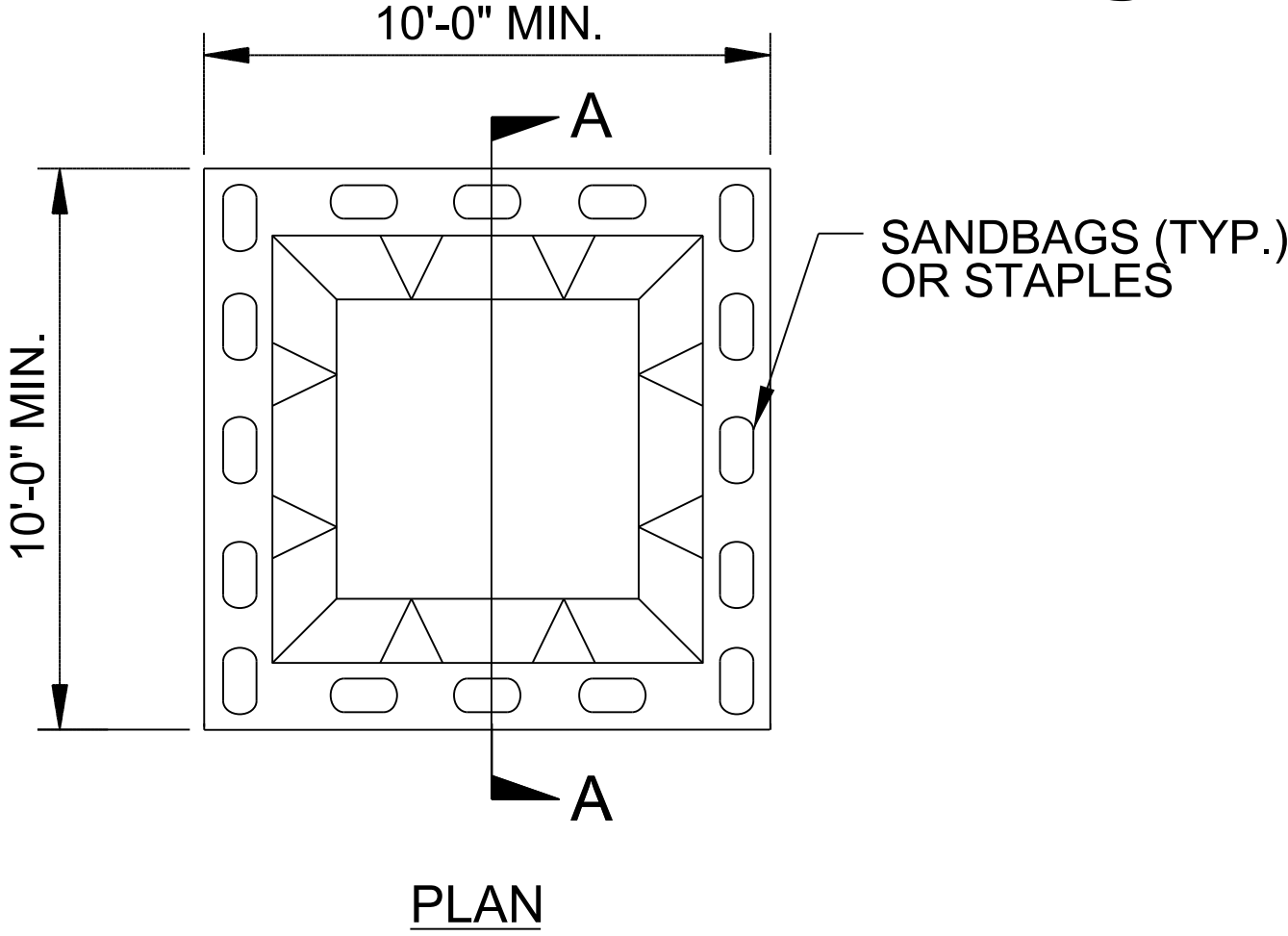
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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

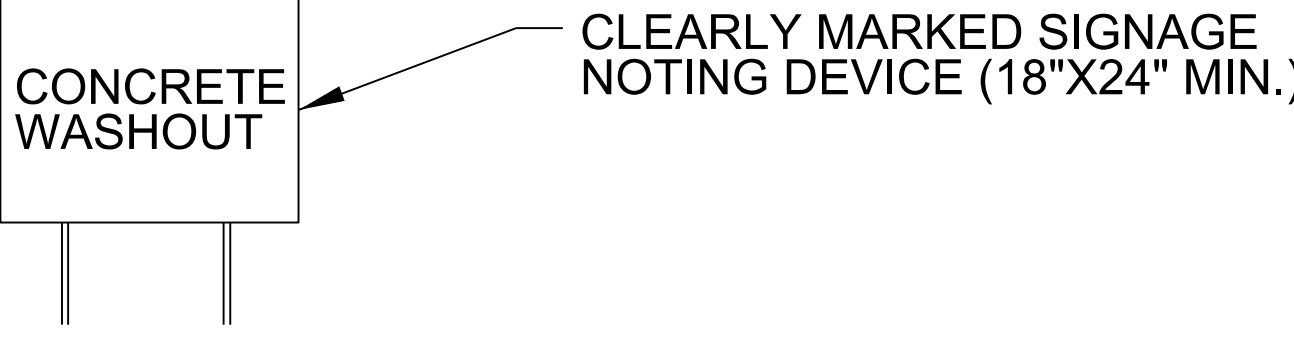
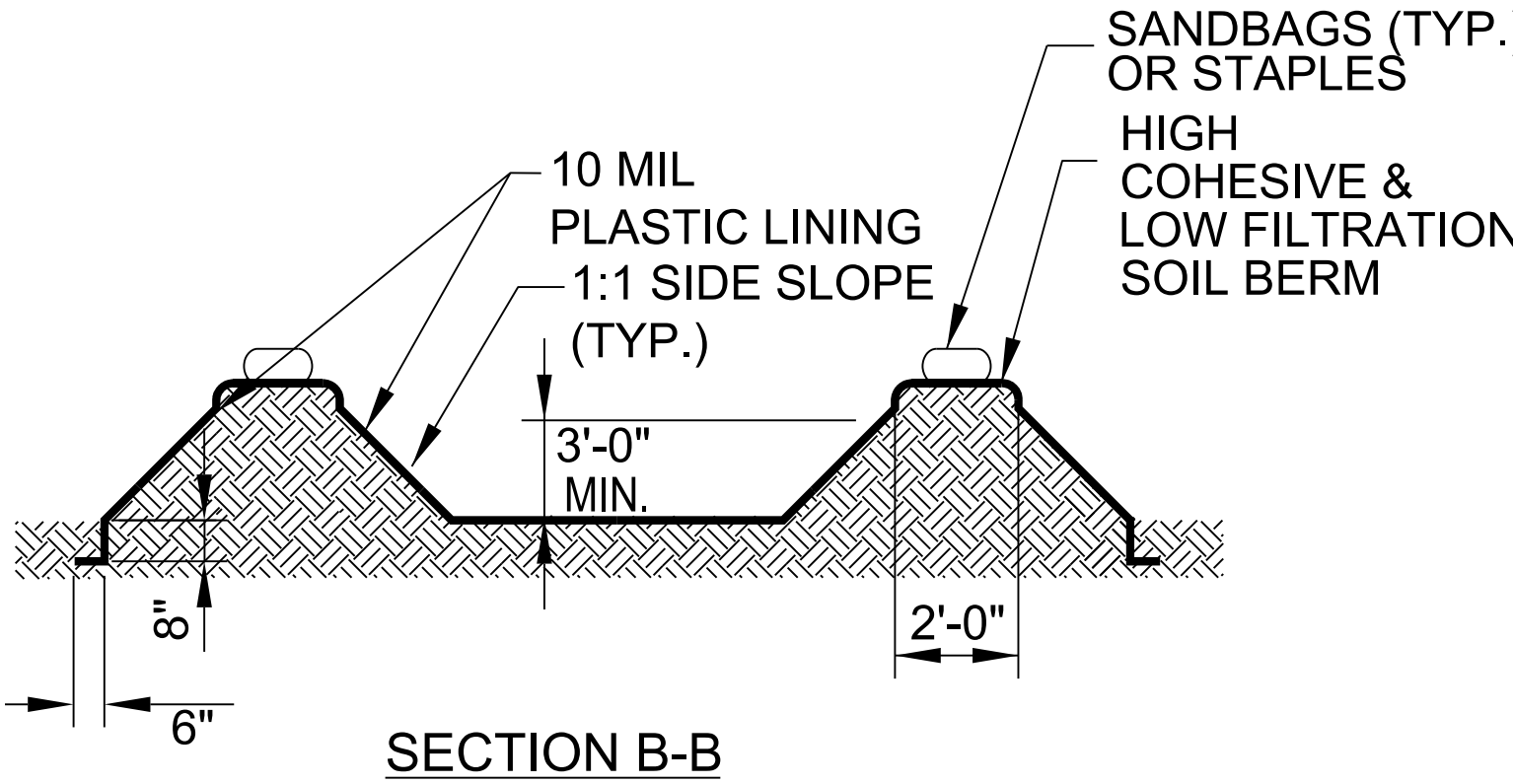
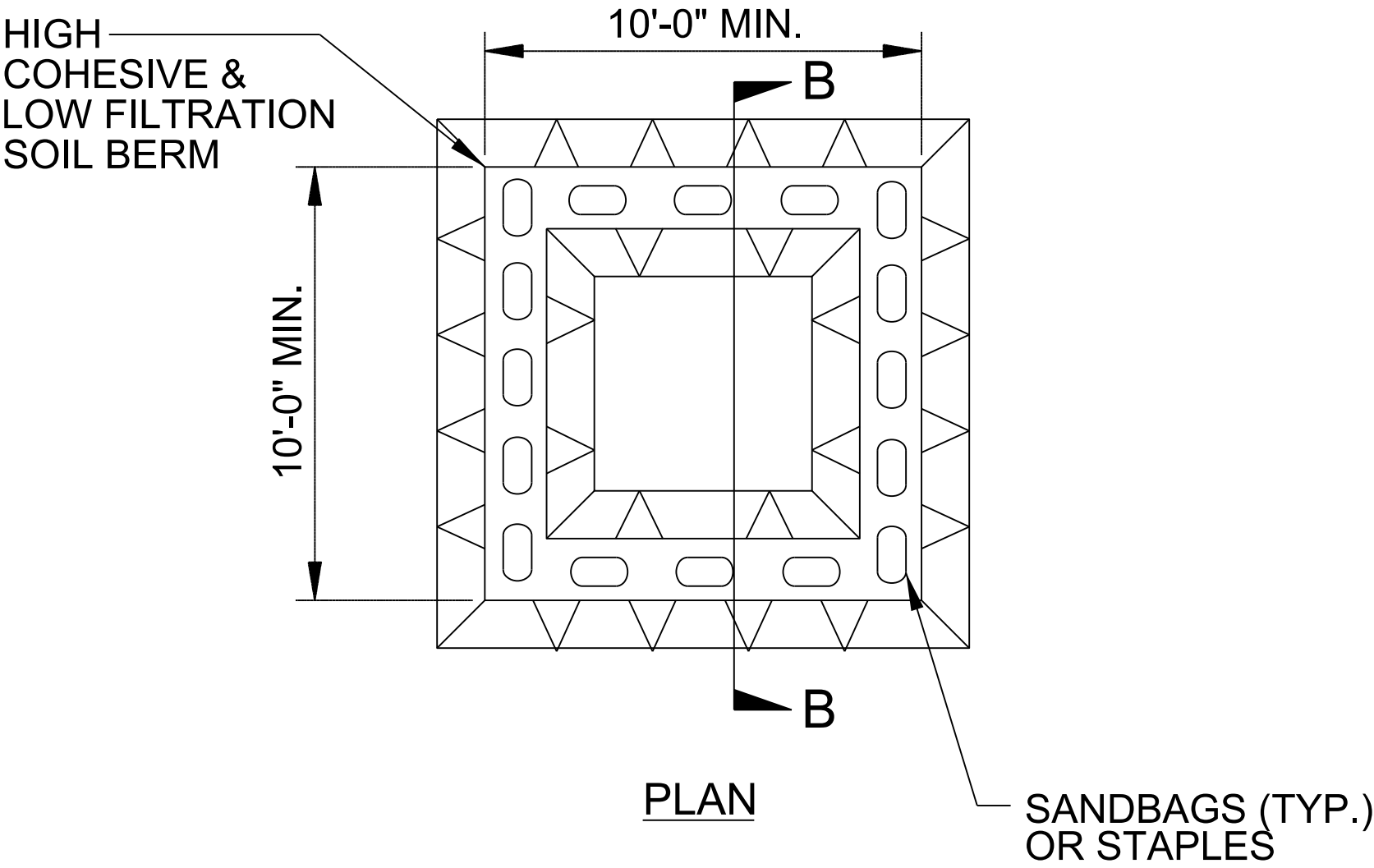
ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

PROJECT REFERENCE NO.		SHEET NO.
X-XXXX		EC-XX
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER



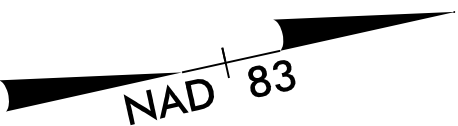
BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

- 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.



-L-
PI Sta 20+70.30
 $\Delta = 18^{\circ} 23' 20.0" (RT)$
 $D = 2' 14' 48.8"$
 $L = 818.41'$
 $T = 412.76'$
 $R = 2,550.00'$
 $Super = 0.05$
 $LR = 135'$
 $DS = 60$

Place Matting for Erosion Control
on Slopes Adjacent to Permitted
Wetlands as Work Allows.

Matting with nylon mesh cannot
be used within 25' of the top
of stream bank or open waters.

BEGIN TIP PROJECT BR-0153
-L- STA.15+00.00

MATCH LINE -L- STA.20+00
SEE SHEET 5

5/14/99
7/31/2025
BR-0153-EC.psh5_CG.dgn
11:52:31 AM

PROJECT REFERENCE NO.	SHEET NO.
BR-0153	EC-5/CONST.5
benesch NC FIRM LICENSE No: E-1120 8000 REGENCY PARKWAY, STE 175 CARY, NC 27513 (919) 275-2490	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCH LINE -L- STA. 20+00
SEE SHEET 4

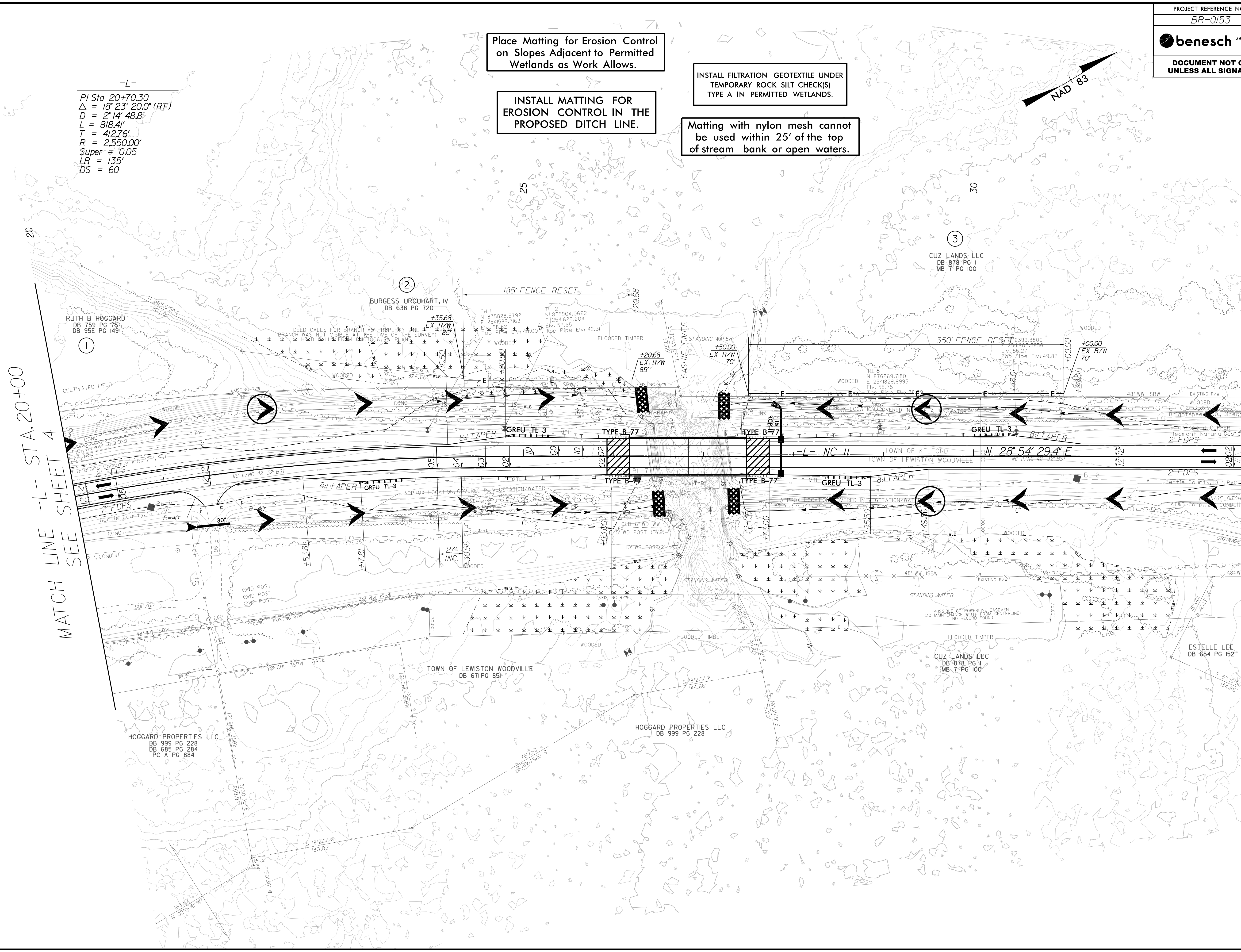
-L-
PI Sta 20+70.30
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 $D = 2^{\circ} 14' 48.8"$
 $L = 818.41'$
 $T = 412.76'$
 $R = 2,550.00'$
 $Super = 0.05$
 $LR = 135'$
 $DS = 60'$

Place Matting for Erosion Control
on Slopes Adjacent to Permitted
Wetlands as Work Allows.

INSTALL MATTING FOR
EROSION CONTROL IN THE
PROPOSED DITCH LINE.

INSTALL FILTRATION GEOTEXTILE UNDER
TEMPORARY ROCK SILT CHECK(S)
TYPE A IN PERMITTED WETLANDS.

Matting with nylon mesh cannot
be used within 25' of the top
of stream bank or open waters.

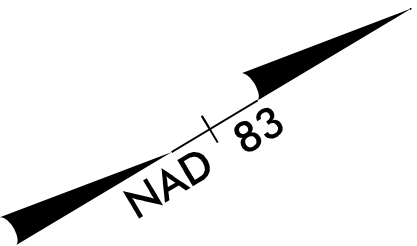


MATCH LINE -L- STA. 33+00
SEE SHEET 6

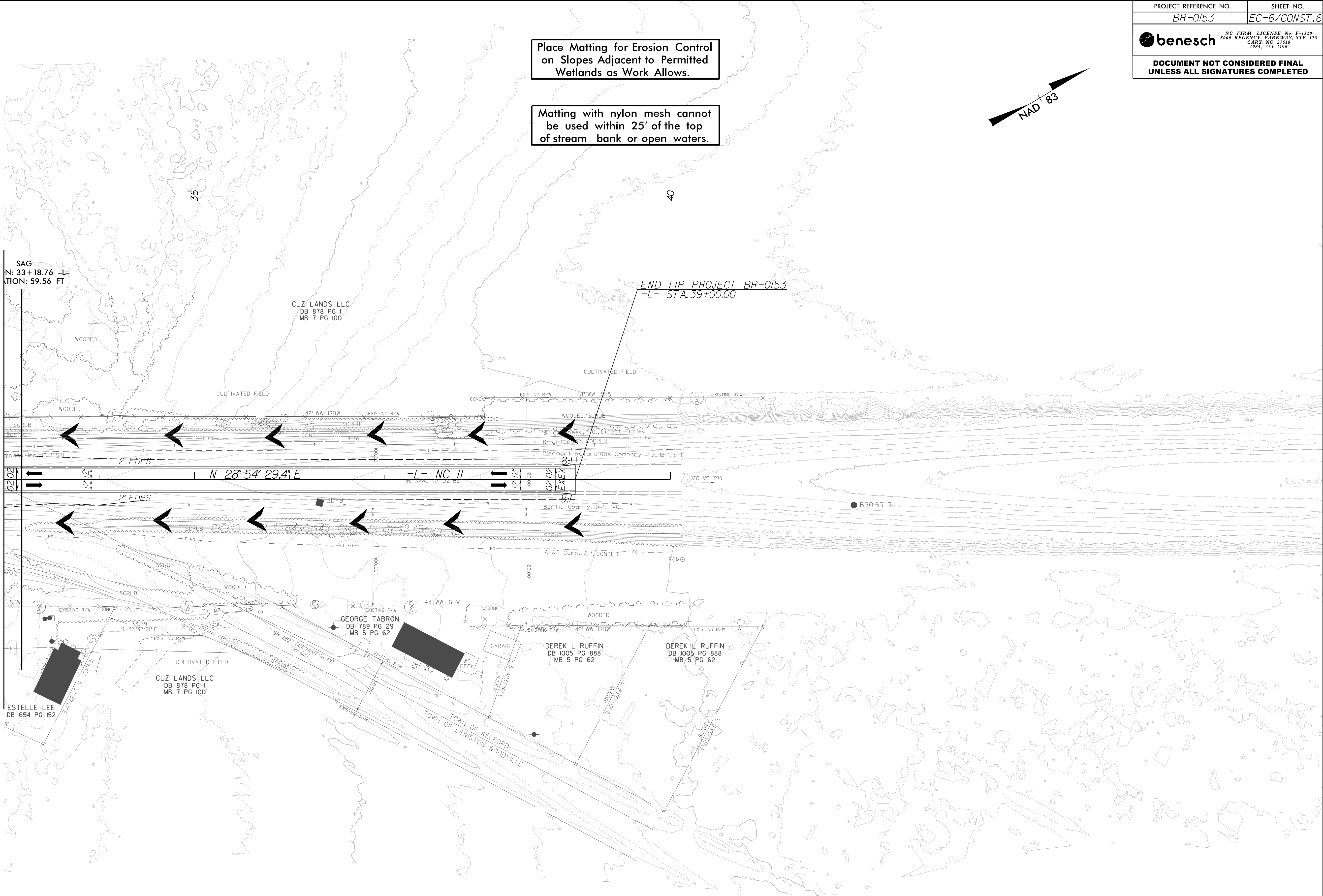
5/14/99

7/31/2025
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PROJECT REFERENCE NO.	SHEET NO.
BR-0153	EC-6/CONST.6
 NC FIRM LICENSE No: E-1320 8000 REGENCY PARKWAY, STE 175 CARY, NC 27513 (919) 275-2490	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCH LINE -L- STA.33+00
SEE SHEET 5



Place Matting for Erosion Control
on Slopes Adjacent to Permitted
Wetlands as Work Allows.

Matting with nylon mesh cannot
be used within 25' of the top
of stream bank or open waters.

END TIP PROJECT BR-0153
-L- STA.39+00.00

5/14/99
7/31/2023 EC-psht2B-L.Final.dgn
USF:Rcd:overu

DETOUR

-LDET-

PI Sta 12+67.84	PI Sta 16+03.68
$\Delta = 22^\circ 46' 20.4''$ (RT)	$\Delta = 6^\circ 27' 38.8''$ (LT)
D = 4'18" 28.6"	D = 4'18" 28.6"
L = 528.61'	L = 149.97'
T = 267.84'	T = 75.07'
R = 1,330.00'	R = 1,330.00'
Super = 0.05	Super = 0.05
LR = 115'	LR = 115'
DS = 45 MPH	DS = 45 MPH

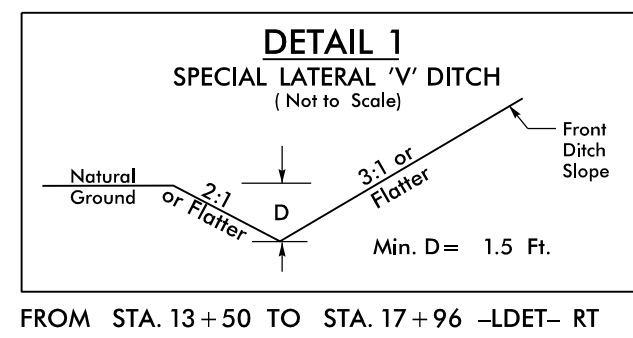
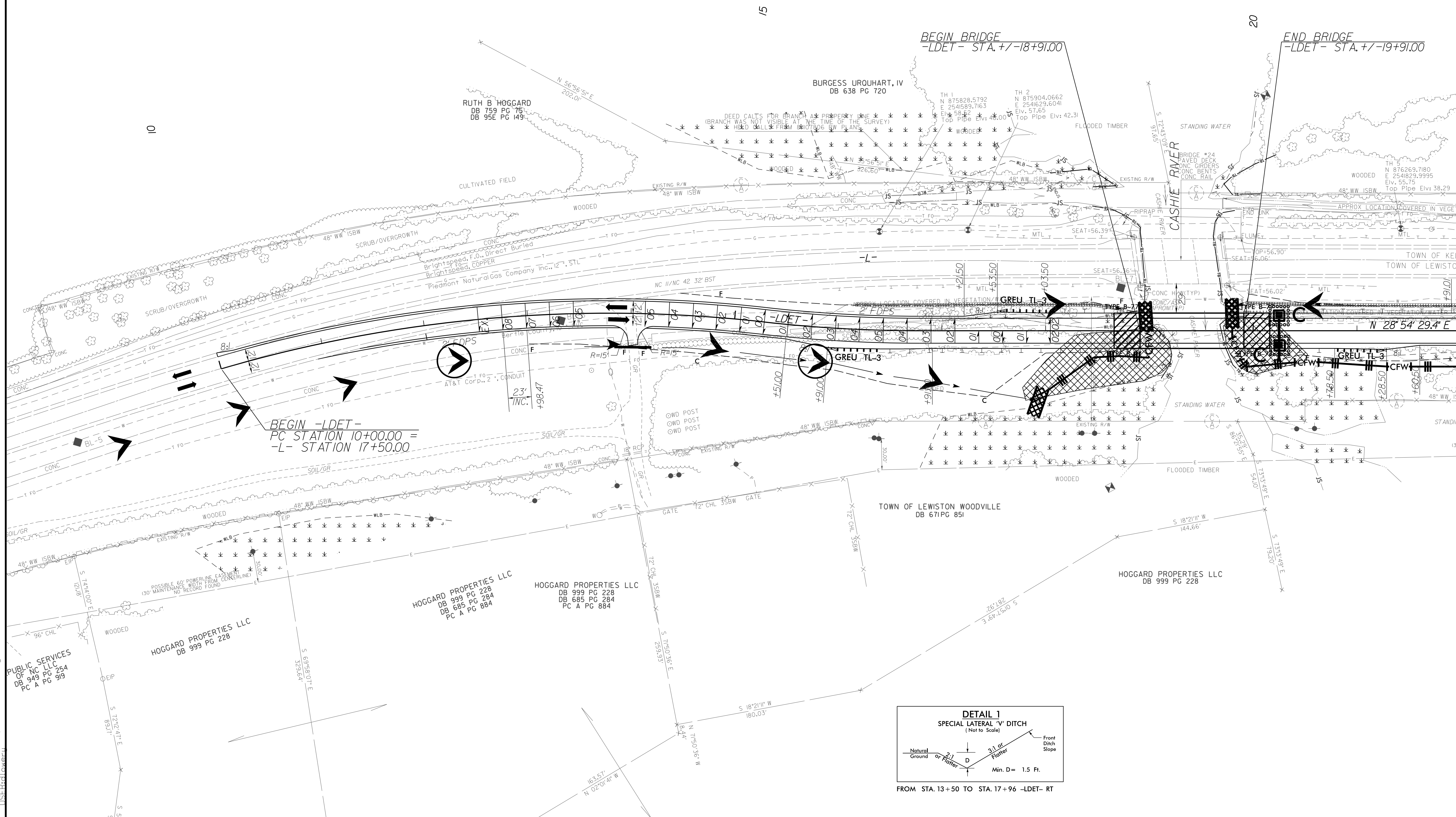
INSTALL DRIVEWAY PIPE DURING
CLEARING & GRUBBING PHASE

INSTALL FILTRATION GEOTEXTILE UNDER
TEMPORARY ROCK SILT CHECK(S)
TYPE A IN PERMITTED WETLANDS.

Matting with nylon mesh cannot
be used within 25' of the top
of stream bank or open waters.

PROJECT REFERENCE NO.	SHEET NO.
BR-0153	EC-7/CONST.2B-1
 NC FIRM LICENSE No: E-1320 8000 REGENCY PARKWAY, STE 175 CARY, NC 27513 (919) 275-2490	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCH LINE -L- STA.22+00
SEE SHEET EC-5/CONST.2B-2



5/14/99

7/31/2025 EC-psb2B-2_Final.dgn

USF Redover

PROJECT REFERENCE NO.	SHEET NO.
BR-0153	EC-8/CONST.2B-2
benesch NC FIRM LICENSE No: E-1120 8000 REGENCY PARKWAY, STE 175 CARY, NC 27513 (919) 275-2490	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

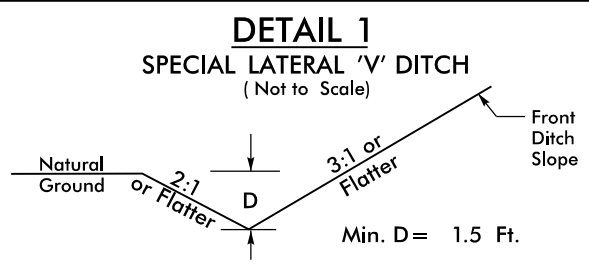
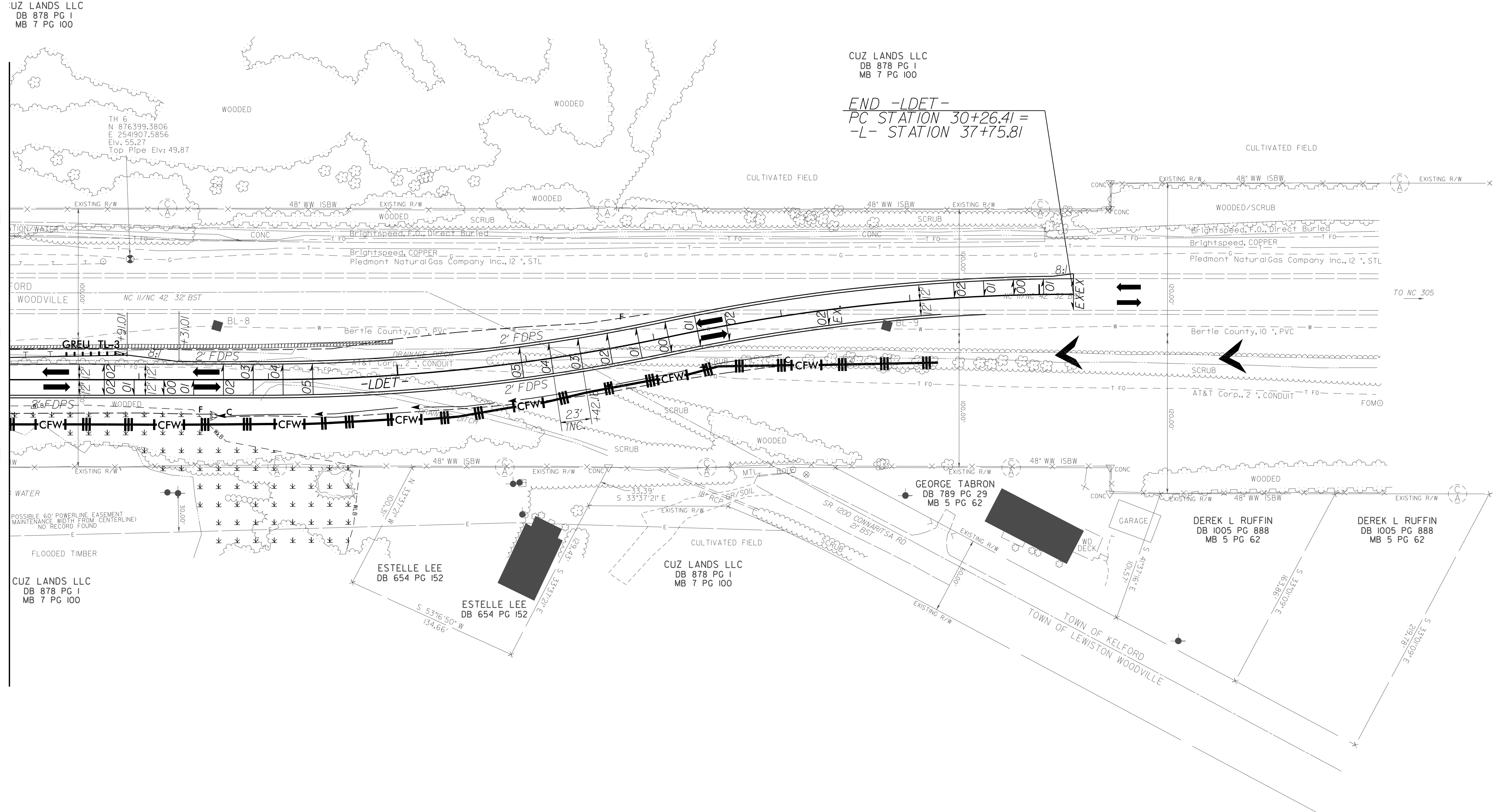
DETOUR

-LDET-

PI Sta 25+54.16	PI Sta 28+69.38
$\Delta = 12^{\circ} 02' 26.2" (LT)$	$\Delta = 12^{\circ} 02' 26.2" (RT)$
$D = 3^{\circ} 49' 11.0"$	$D = 3^{\circ} 49' 11.0"$
$L = 315.22'$	$L = 315.22'$
$T = 158.19'$	$T = 158.19'$
$R = 1,500.00'$	$R = 1,500.00'$
$Super = 0.05$	$Super = 0.05$
$LR = 115'$	$LR = 115'$
$DS = 45 MPH$	$DS = 45 MPH$

Matting with nylon mesh cannot
be used within 25' of the top
of stream bank or open waters.

MATCH LINE -L- STA. 22+00
SEE SHEET EC-4/CONST.2B-1



FROM STA. 13+50 TO STA. 17+96 -LDET- RT
FROM STA. 23+60 TO STA. 28+00 -LDET- RT

5/14/99

7/3/2005
BR-0153-EC-psh4_Final.dgn
USF:dlower

PROJECT REFERENCE NO.	SHEET NO.
BR-0153	EC-9/CONST.4
benesch NC FIRM LICENSE No: E-1120 8000 REGENCY PARKWAY, STE 175 CARY, NC 27513 (919) 275-2490	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



-L-
PI Sta 20+70.30
 $\Delta = 18^{\circ} 23' 20.0''$ (RT)
 $D = 2' 14' 48.8''$
 $L = 818.41'$
 $T = 412.76'$
 $R = 2,550.00'$
 $Super = 0.05$
 $LR = 135'$
 $DS = 60$

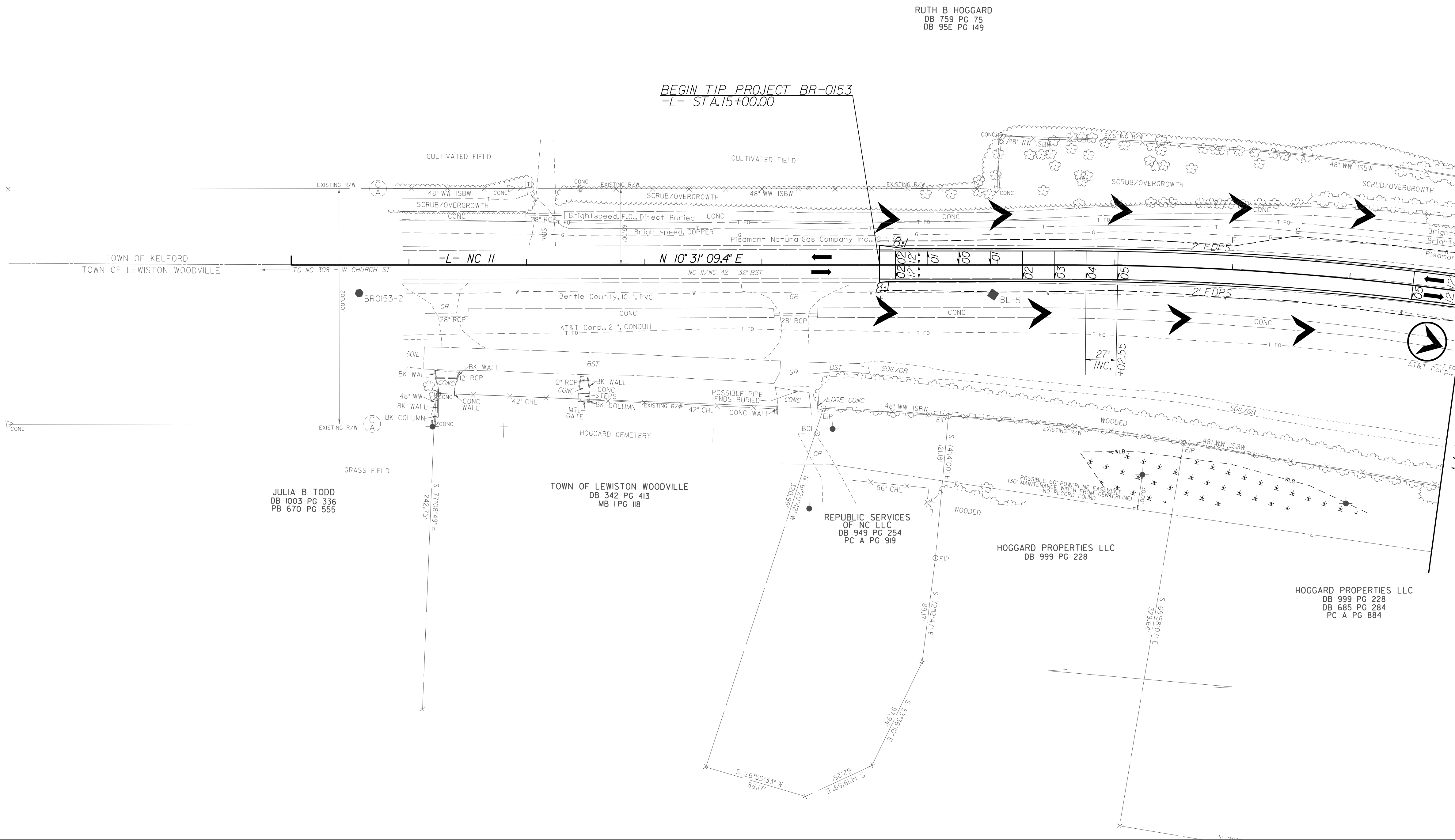
Place Matting for Erosion Control
on Slopes Adjacent to Permitted
Wetlands as Work Allows.

Matting with nylon mesh cannot
be used within 25' of the top
of stream bank or open waters.

10

15

20

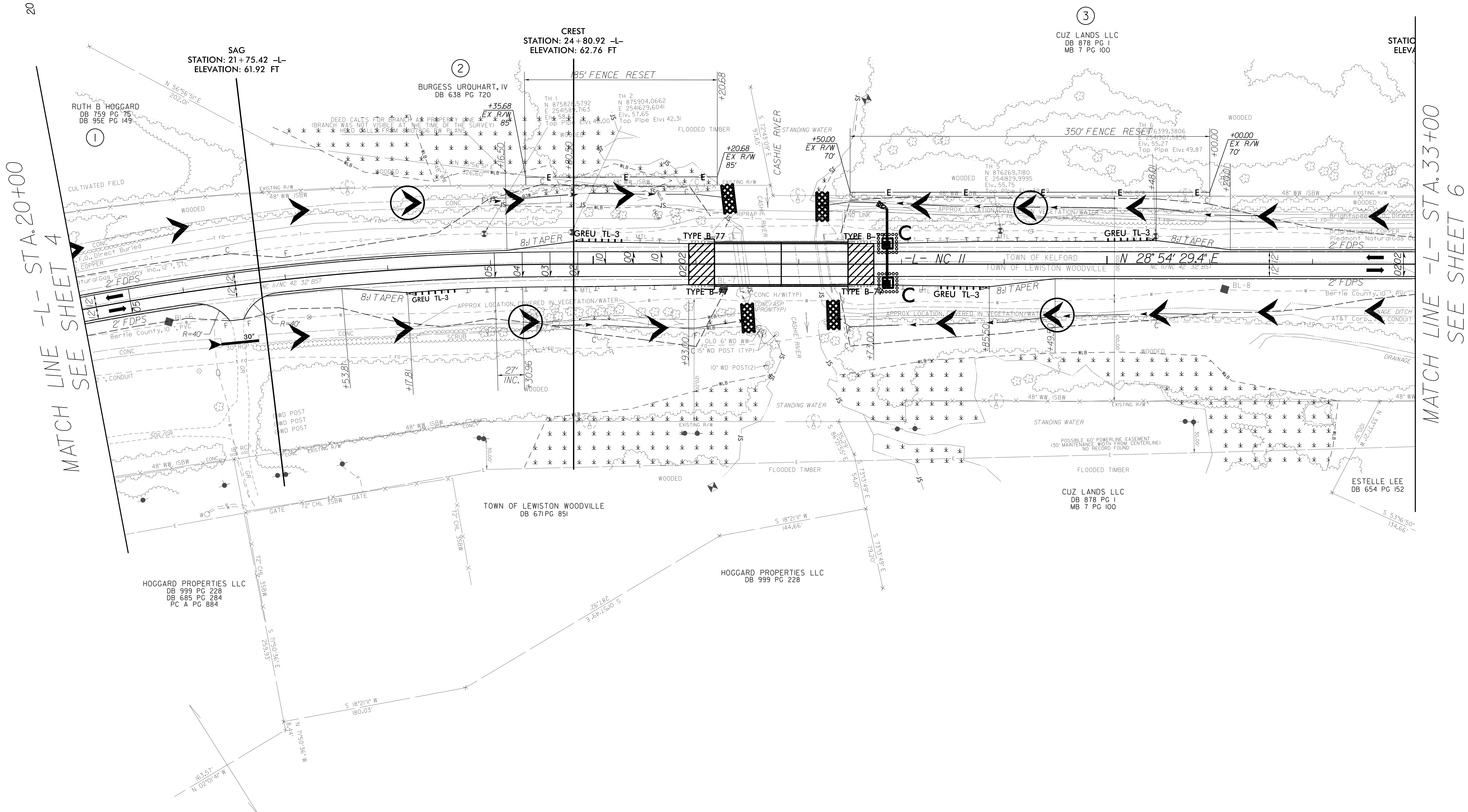


MATCH LINE -L- STA. 20+00
SEE SHEET 5

5/14/99

8/4/2025
153-EC.psh5.Final.dgn
User: jlowery

PROJECT REFERENCE NO.	SHEET NO.
BR-0153	EC-10/CONST.5
 NC FIRM LICENSE No: E-1120 8000 REGENCY PARKWAY, STE 175 CARY, NC 27513 (919) 275-2490	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



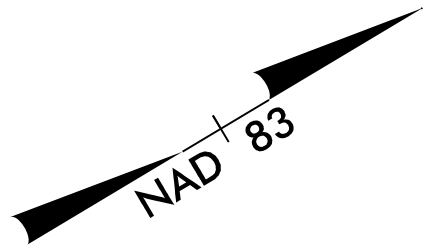
-L-
PI Sta 20+70.30
 $\Delta = 18^{\circ}23'20.0''$ (RT)
 $D = 2^{\circ}14'48.8''$
 $L = 818.41'$
 $T = 412.76'$
 $R = 2,550.00'$
 $Super = 0.05$
 $LR = 135'$
 $DS = 60$

Place Matting for Erosion Control
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Wetlands as Work Allows.

INSTALL MATTING FOR
EROSION CONTROL IN THE
PROPOSED DITCH LINE.

INSTALL FILTRATION GEOTEXTILE UNDER
TEMPORARY ROCK SILT CHECK(S)
TYPE A IN PERMITTED WETLANDS.

Matting with nylon mesh cannot
be used within 25' of the top
of stream bank or open waters.



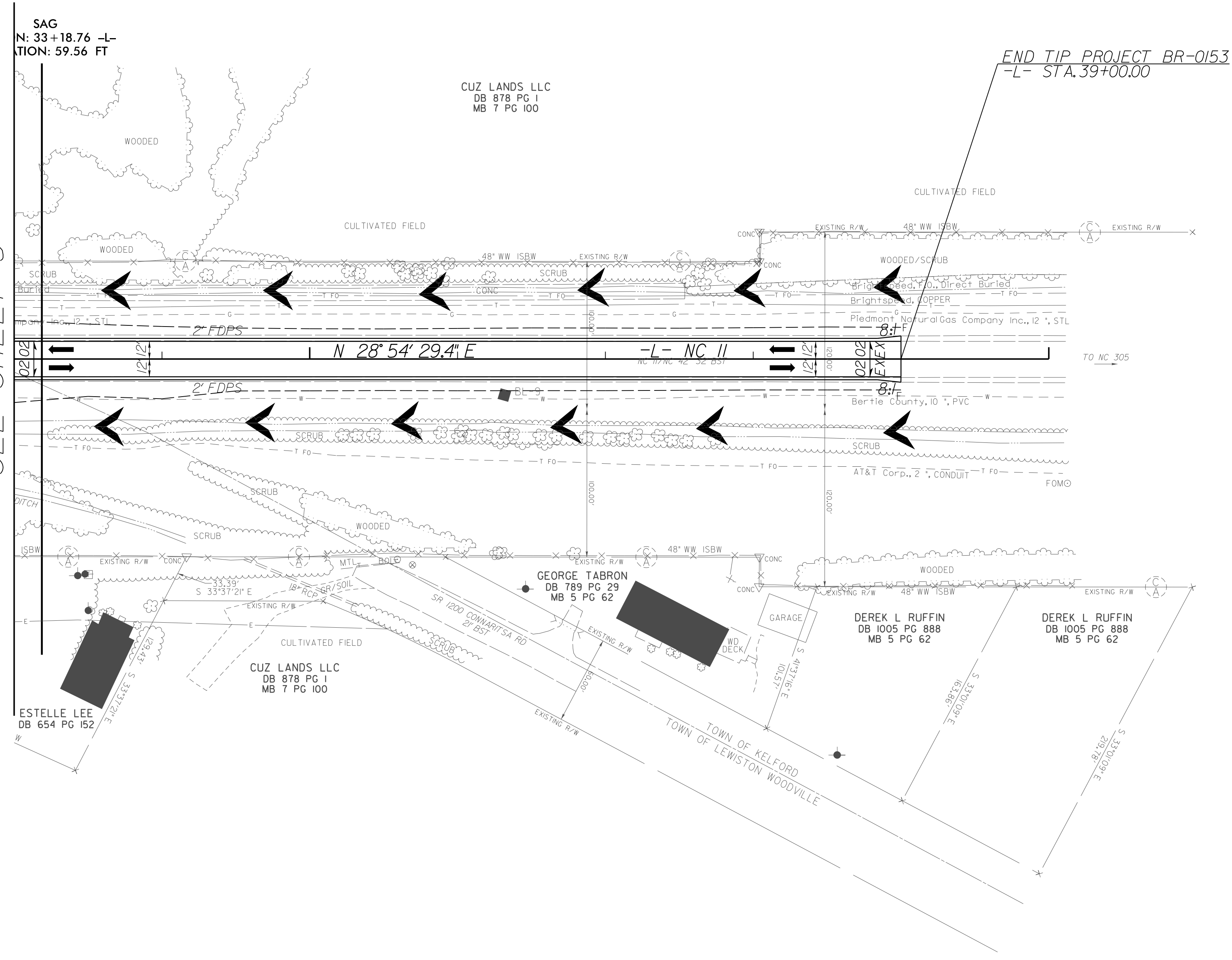
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7/31/2005

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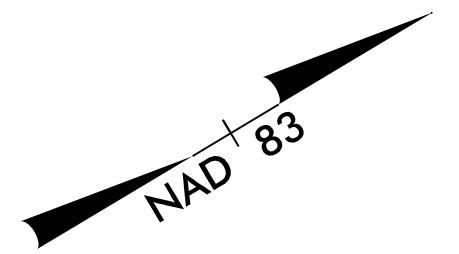
USF&D

MATCH LINE -L- STA.33+00
SEE SHEET 5



Place Matting for Erosion Control
on Slopes Adjacent to Permitted
Wetlands as Work Allows.

Matting with nylon mesh cannot
be used within 25' of the top
of stream bank or open waters.



PROJECT REFERENCE NO.	SHEET NO.
BR-0153	EC-II/CONST.6
NC FIRM LICENSE No: E-1320 8000 REGENCY PARKWAY, STE 175 CARY, NC 27513 (919) 275-2490	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	