

TIP PROJECT: HE-0016

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

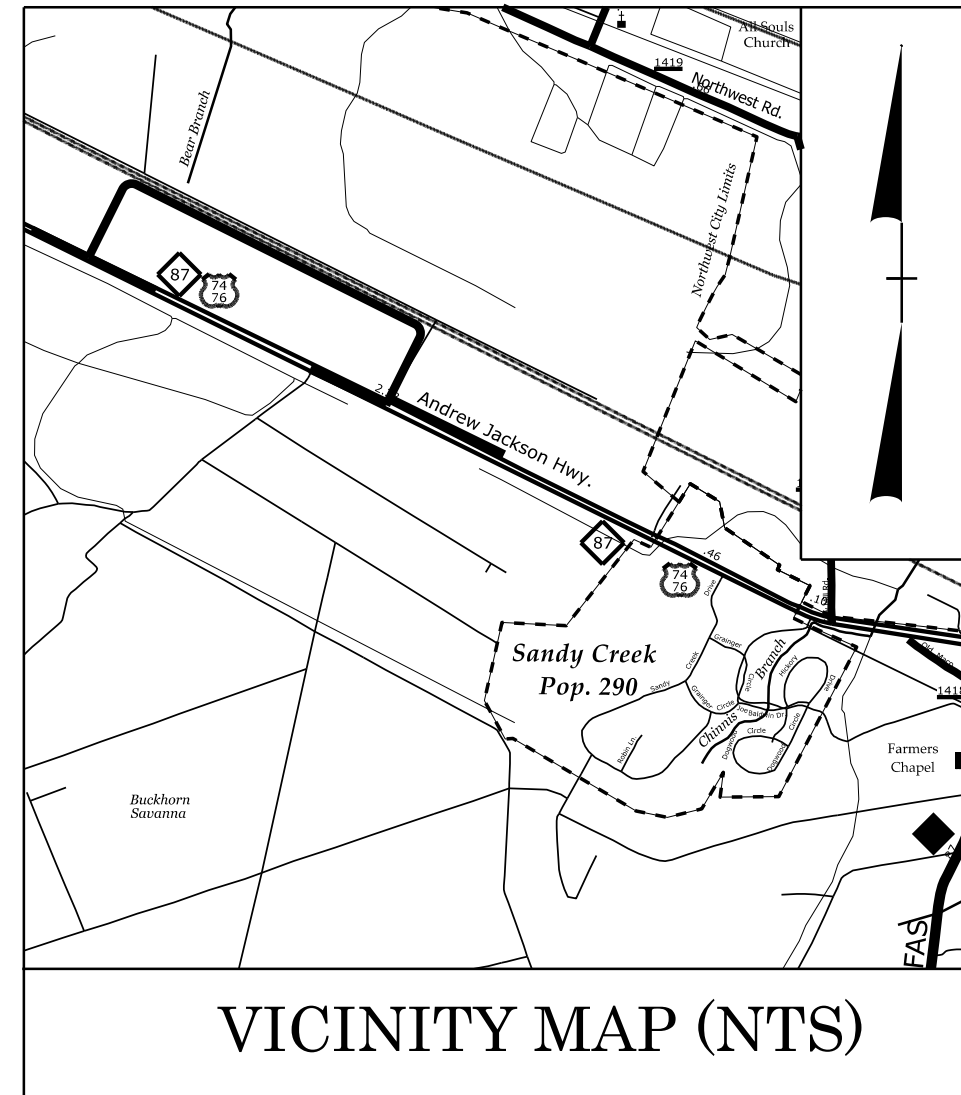
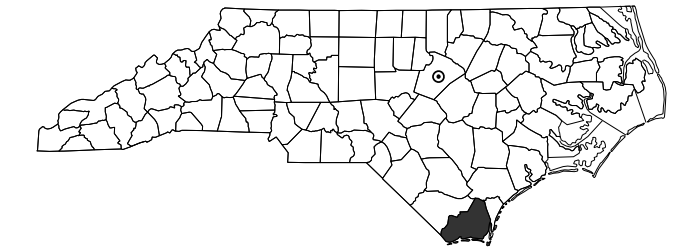
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

BRUNSWICK COUNTY

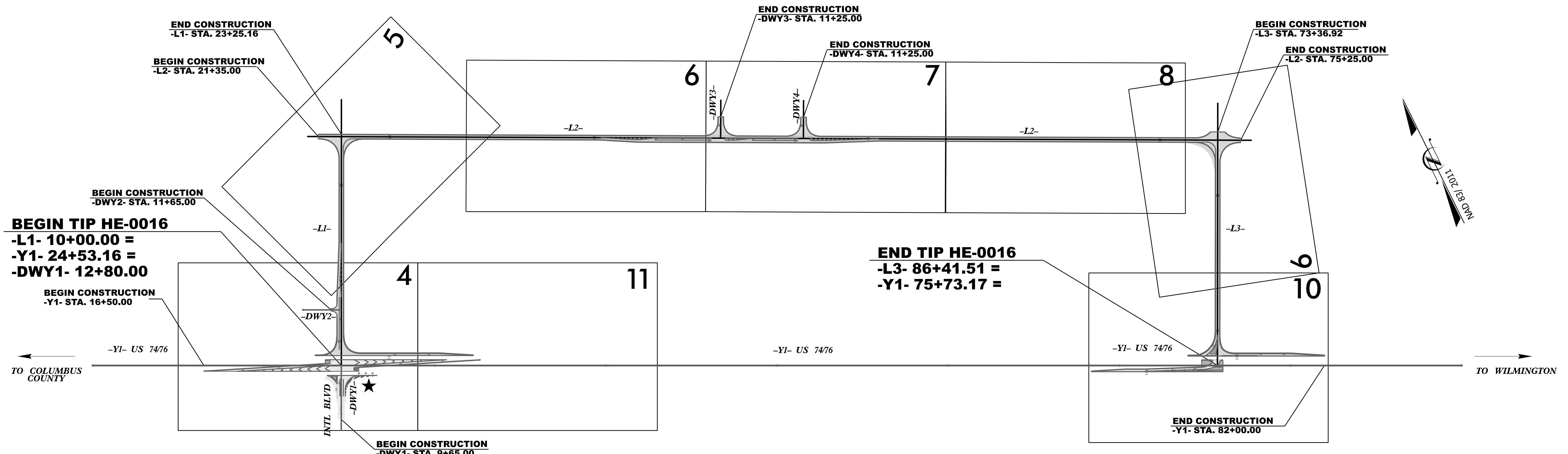
LOCATION: *CONSTRUCT ROAD ON NEW LOCATION
AND CONSTRUCT INTERSECTIONS
WITH US 74 ON EAST AND WEST
TERMINI*

TYPE OF WORK: *GRADING, DRAINAGE, PAVING,
AND WIDENING*

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HE-0016	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
51325.1.1		PE	

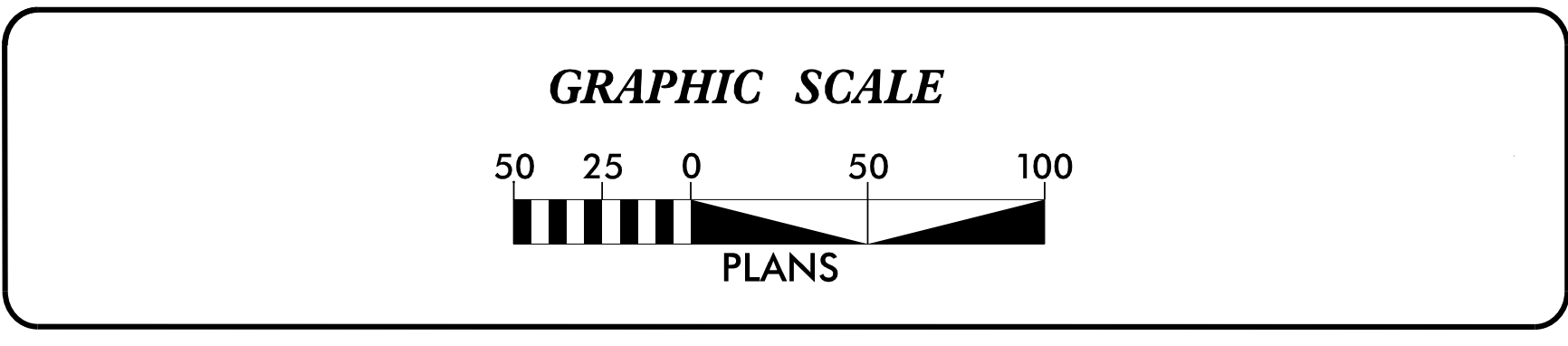


VICINITY MAP (NTS)



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

THE OUTSIDE BUFFER, WETLAND, OR WATER BOUNDARY SHALL BE CLEARLY MARKED BY HIGHLY VISIBLE FENCING (ORANGE SAFETY FENCE).



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.

1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

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

Prepared in the Office of:
WETHEIRLL ENGINEERING
1223 JONES FRANKLIN ROAD
RALEIGH, NC 27606

Designed by:
KATIE ESTEP 4485
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.

7/10/2025 11:53 AM HE0016-EC-TSH.dgn USER: TSH

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

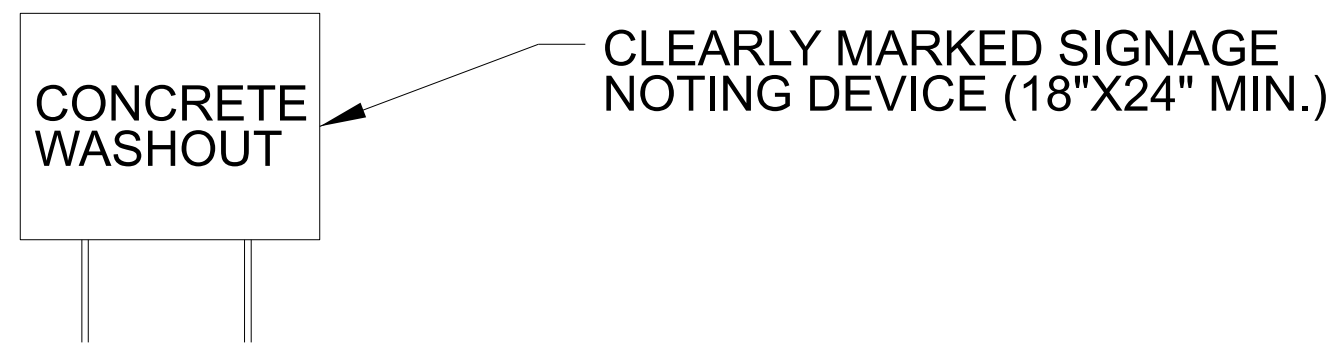
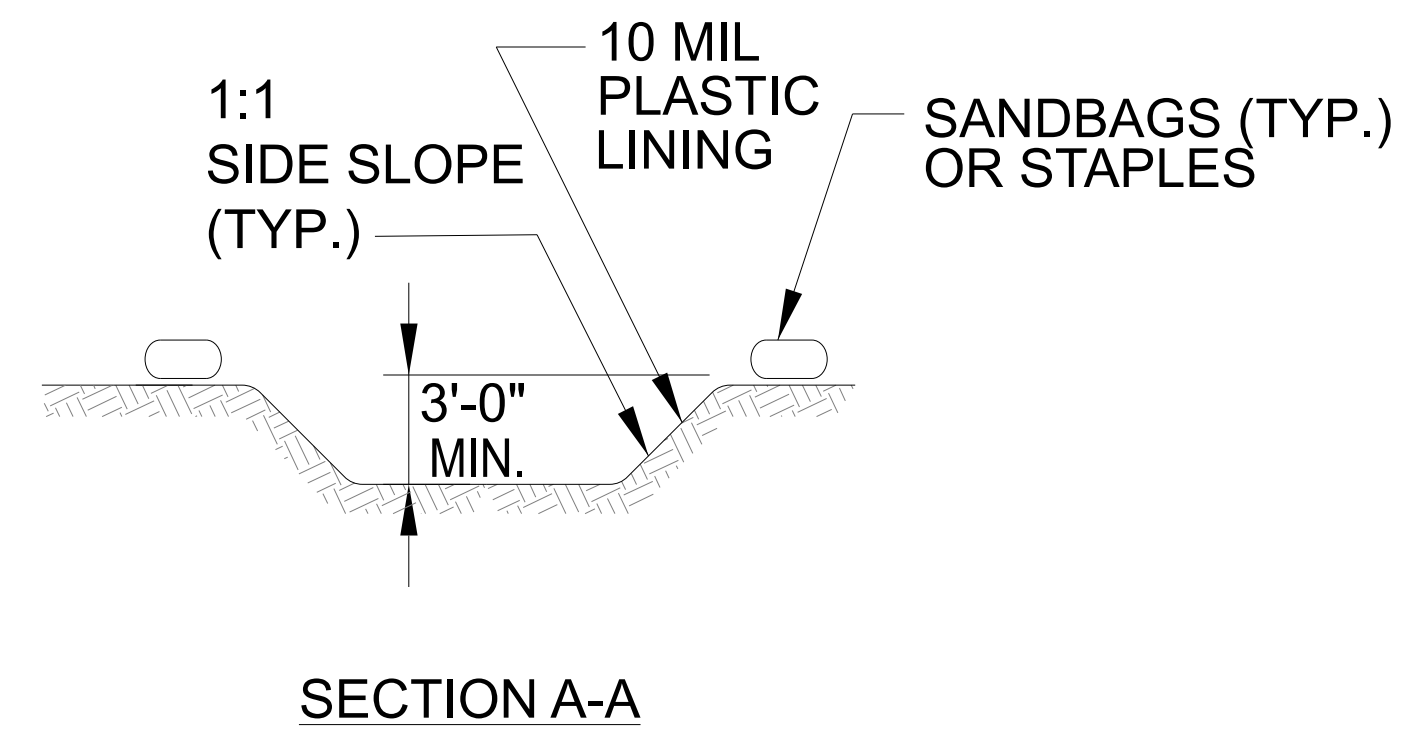
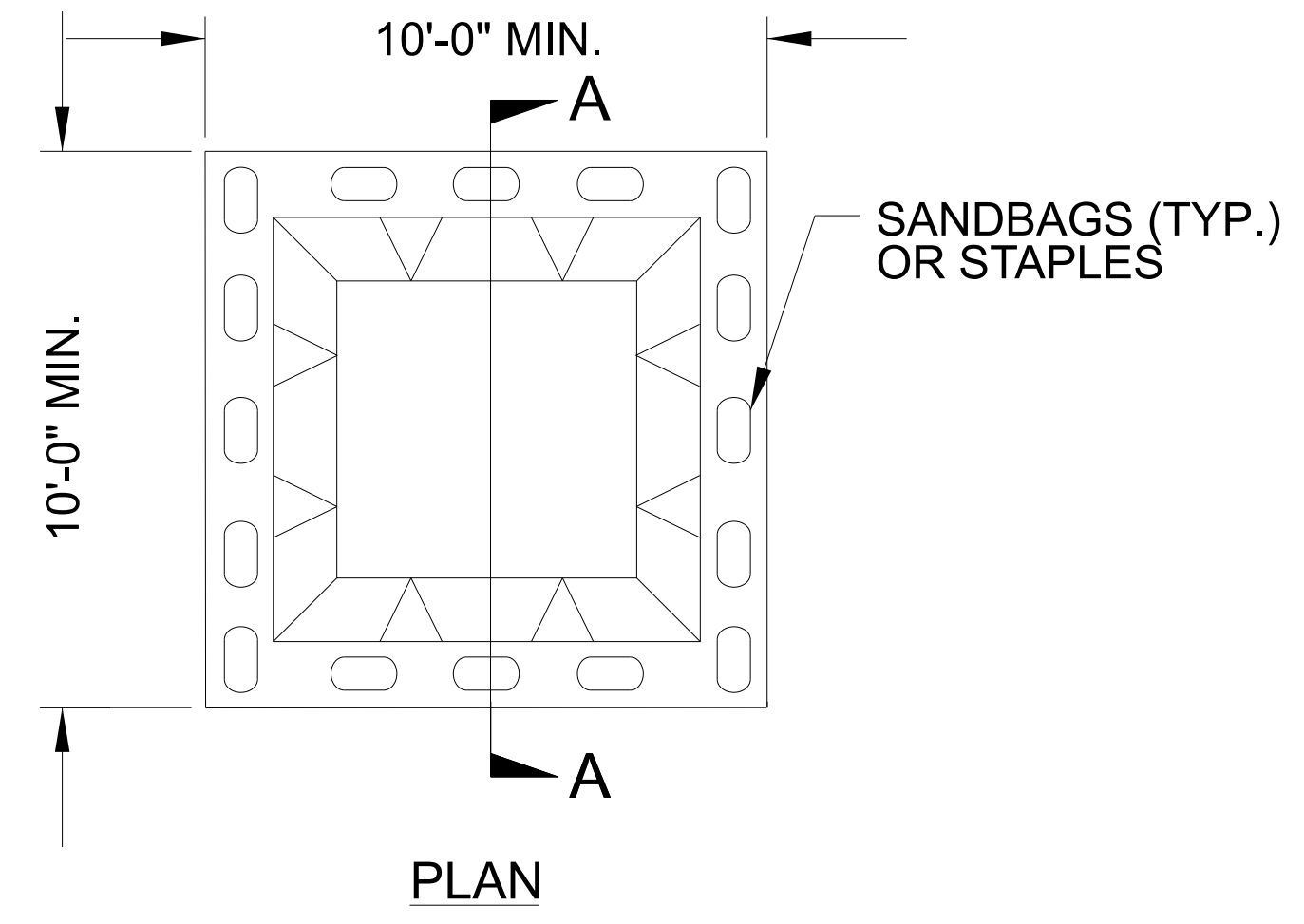
PROJECT REFERENCE NO. <i>HE-0016</i>	SHEET NO. <i>EC-2</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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				

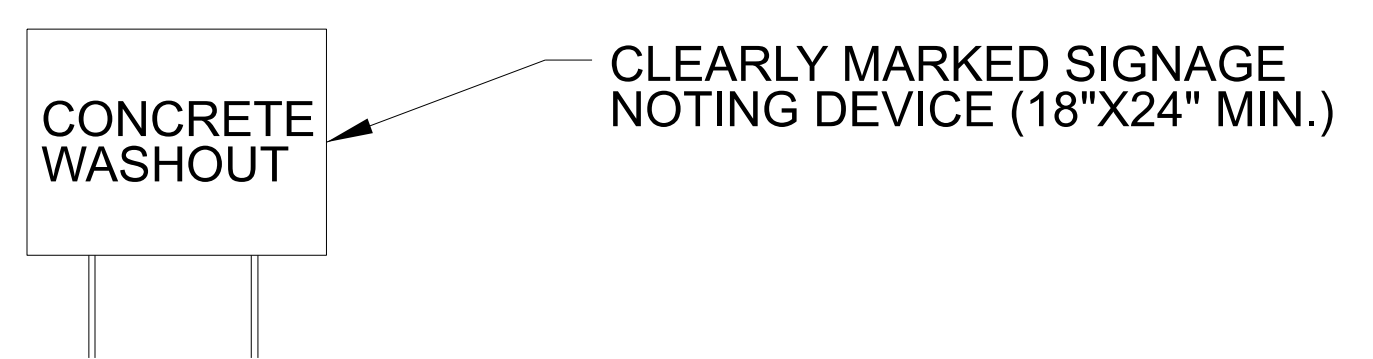
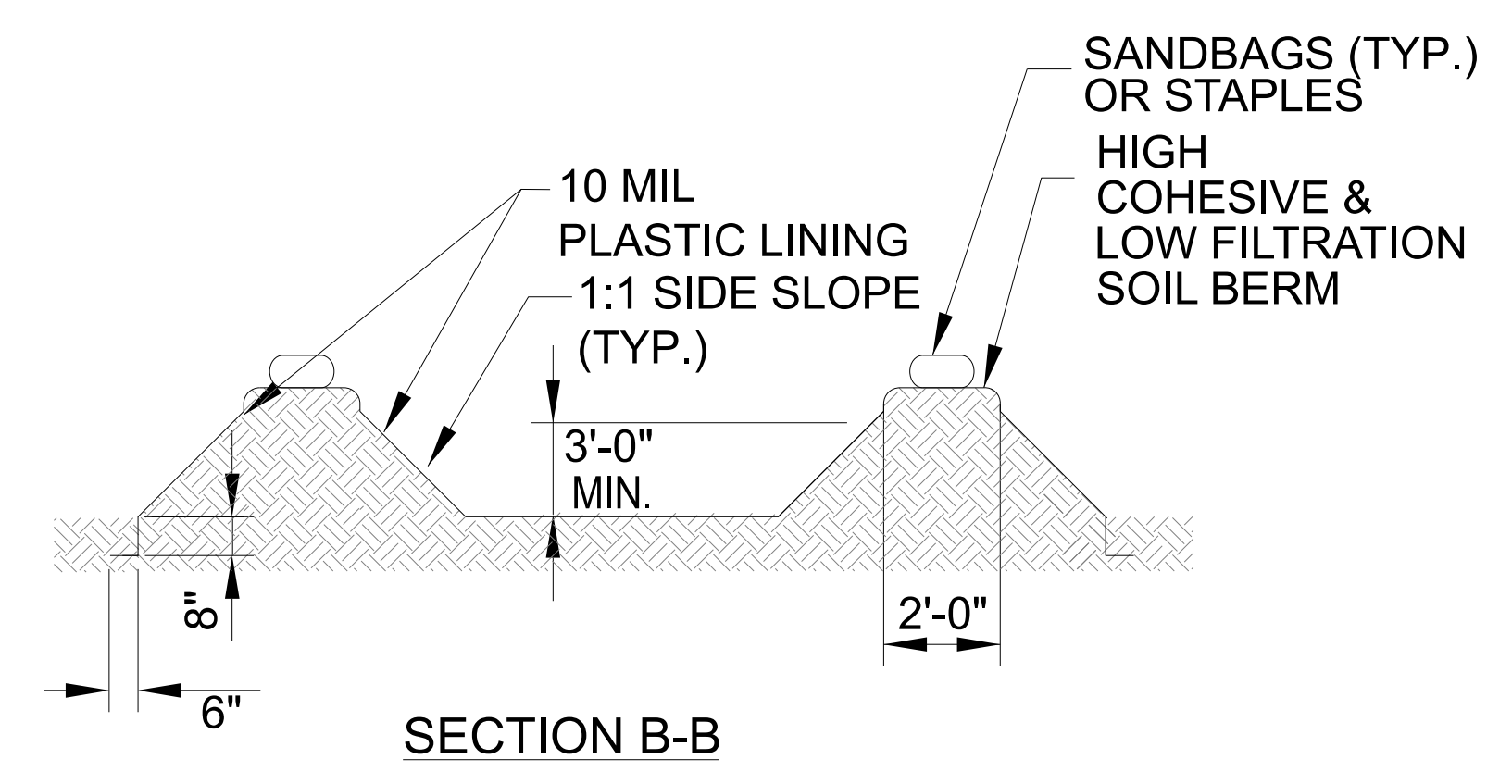
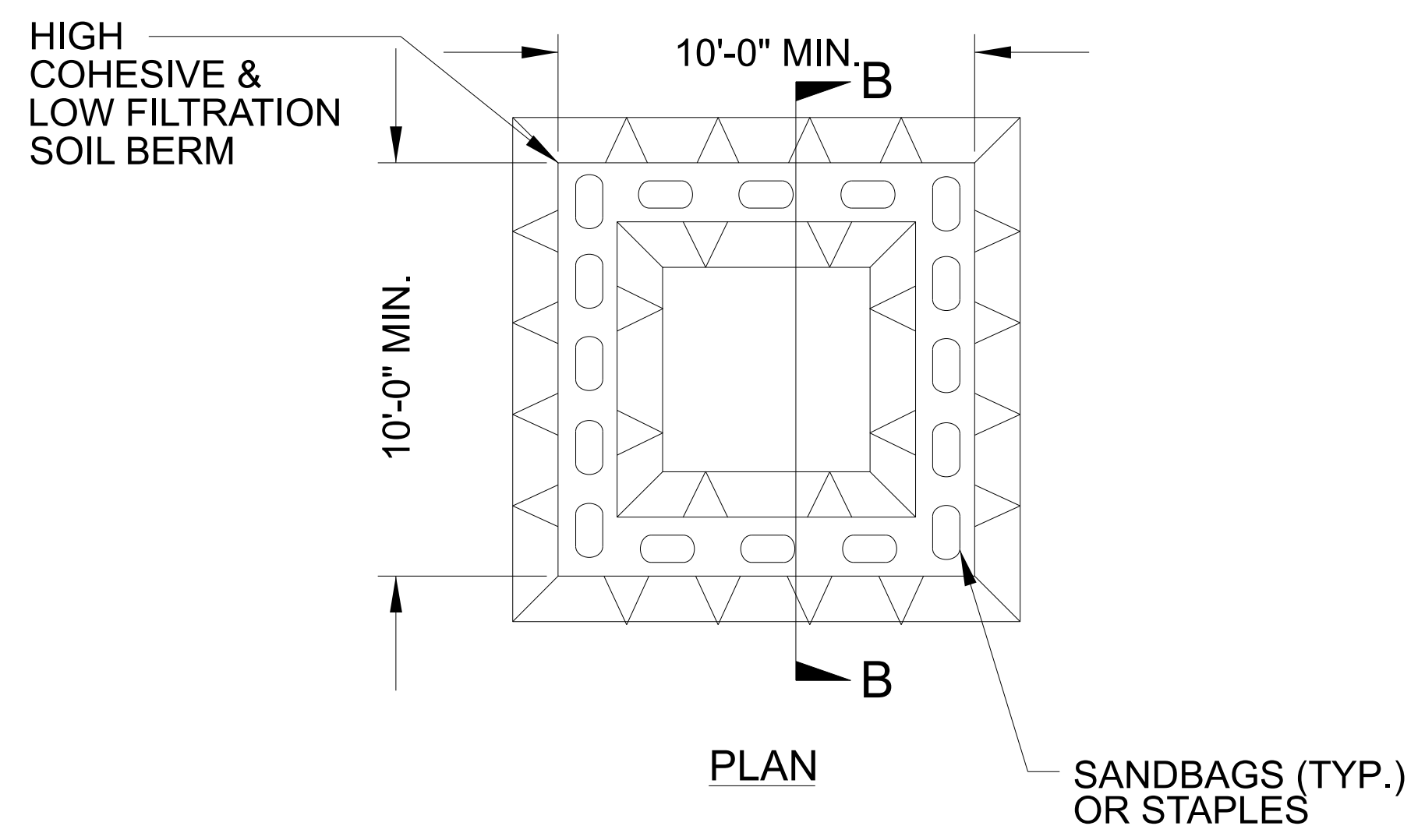
PROJECT REFERENCE NO. <i>HE-0016</i>	SHEET NO. <i>EC-2A</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.



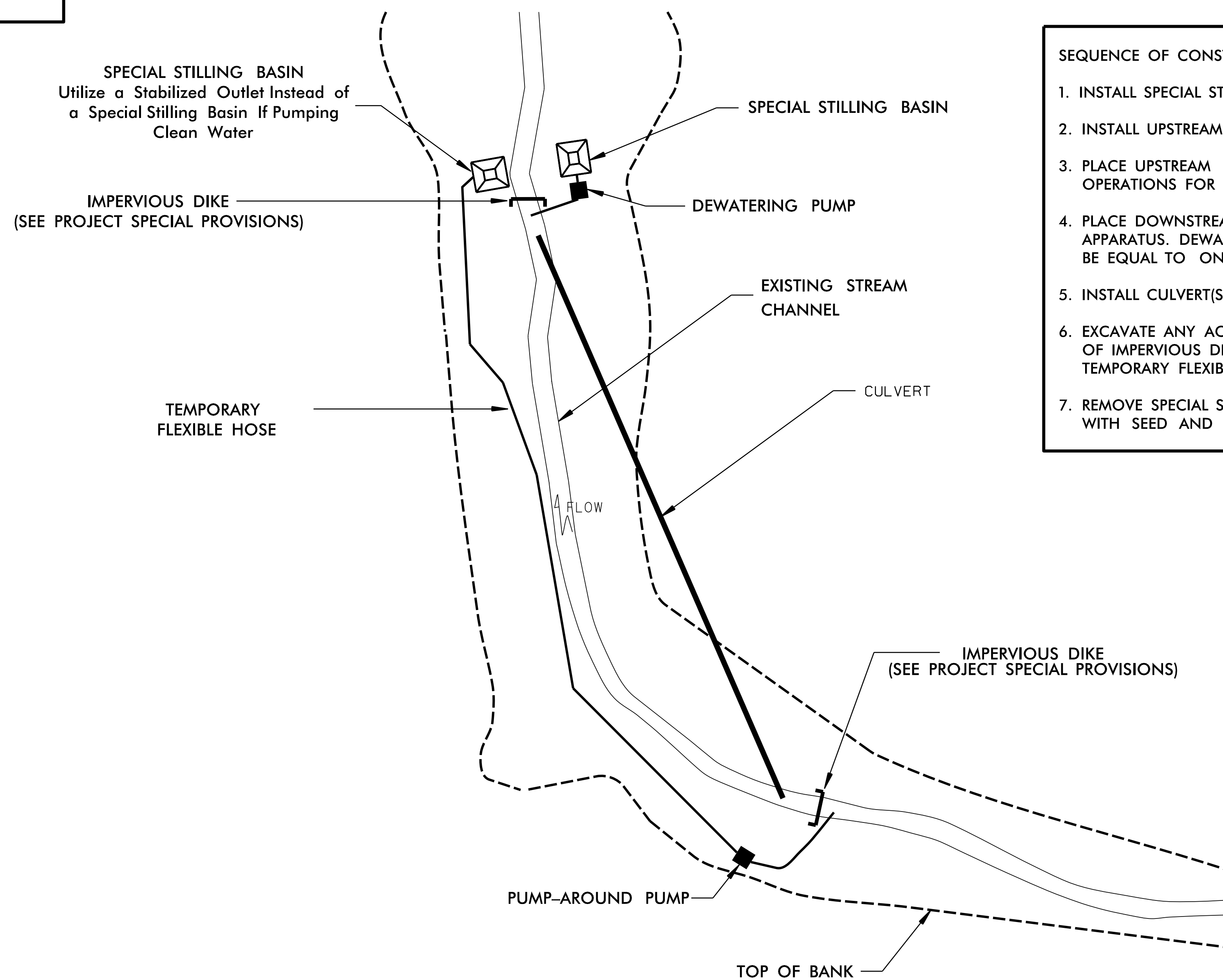
ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

- 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.

PROJECT REFERENCE NO.	SHEET NO.
HE-0016	EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EXAMPLE OF PUMP-AROUND OPERATION

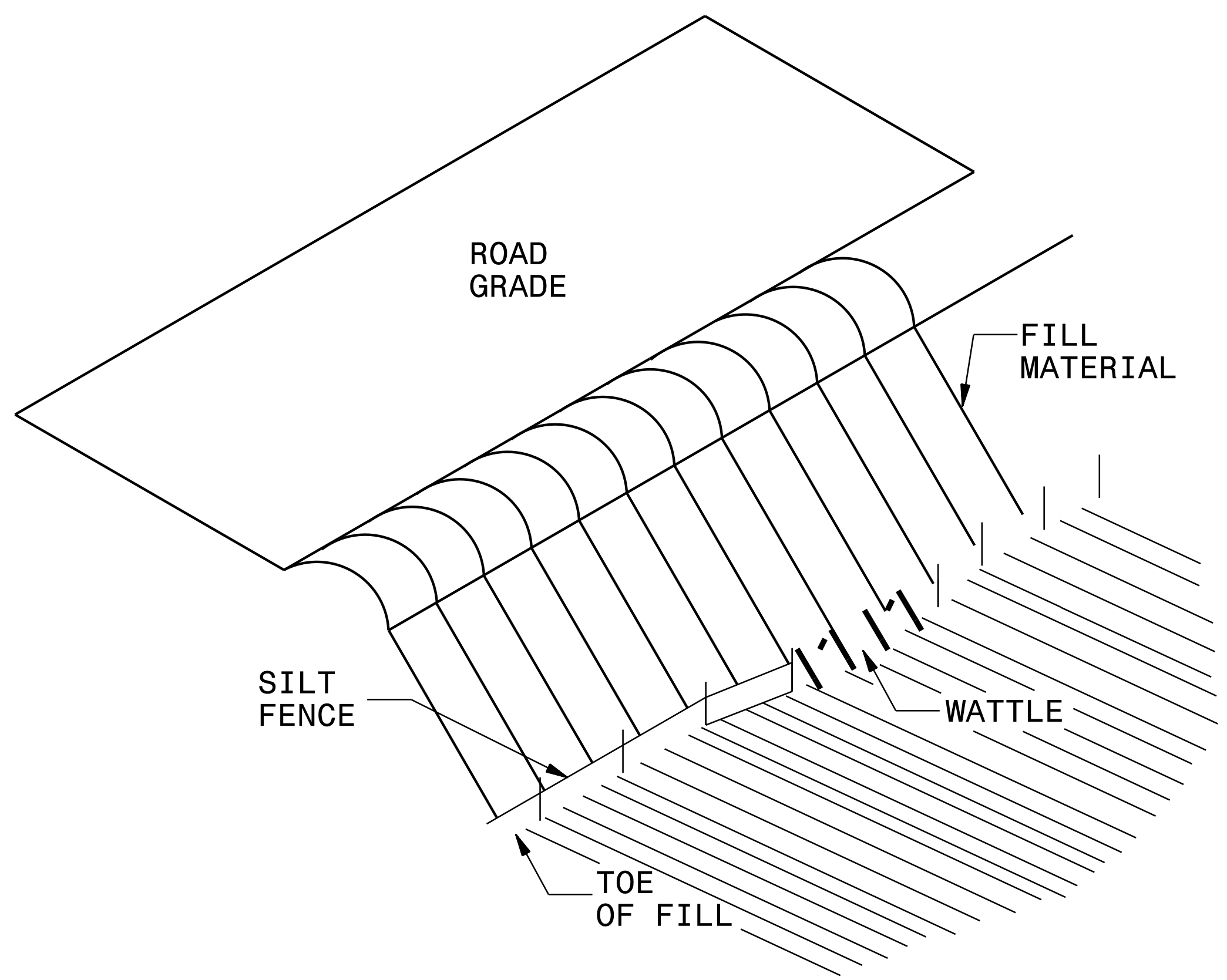
- NOTES:
- 1) All excavation shall be performed in only dry or isolated areas of the work zone.
 - 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
 - 3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion 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.

SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO. <i>HE-0016</i>	SHEET NO. <i>EC-2C</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

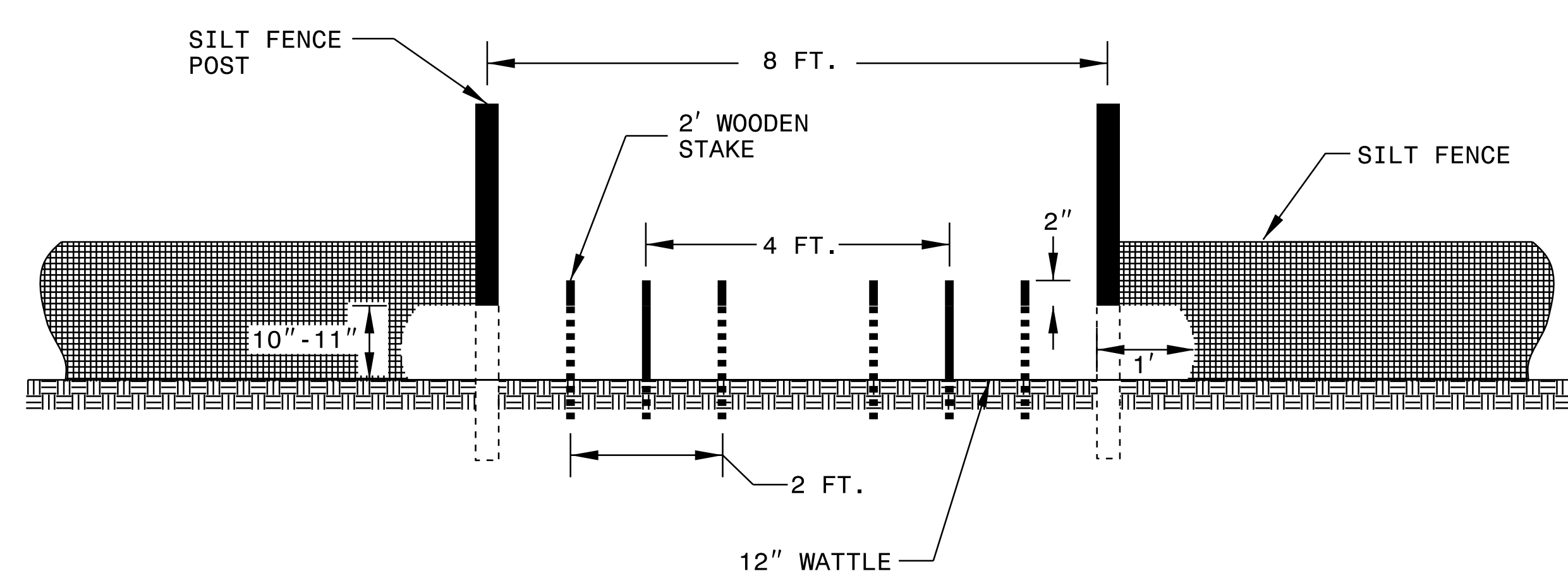
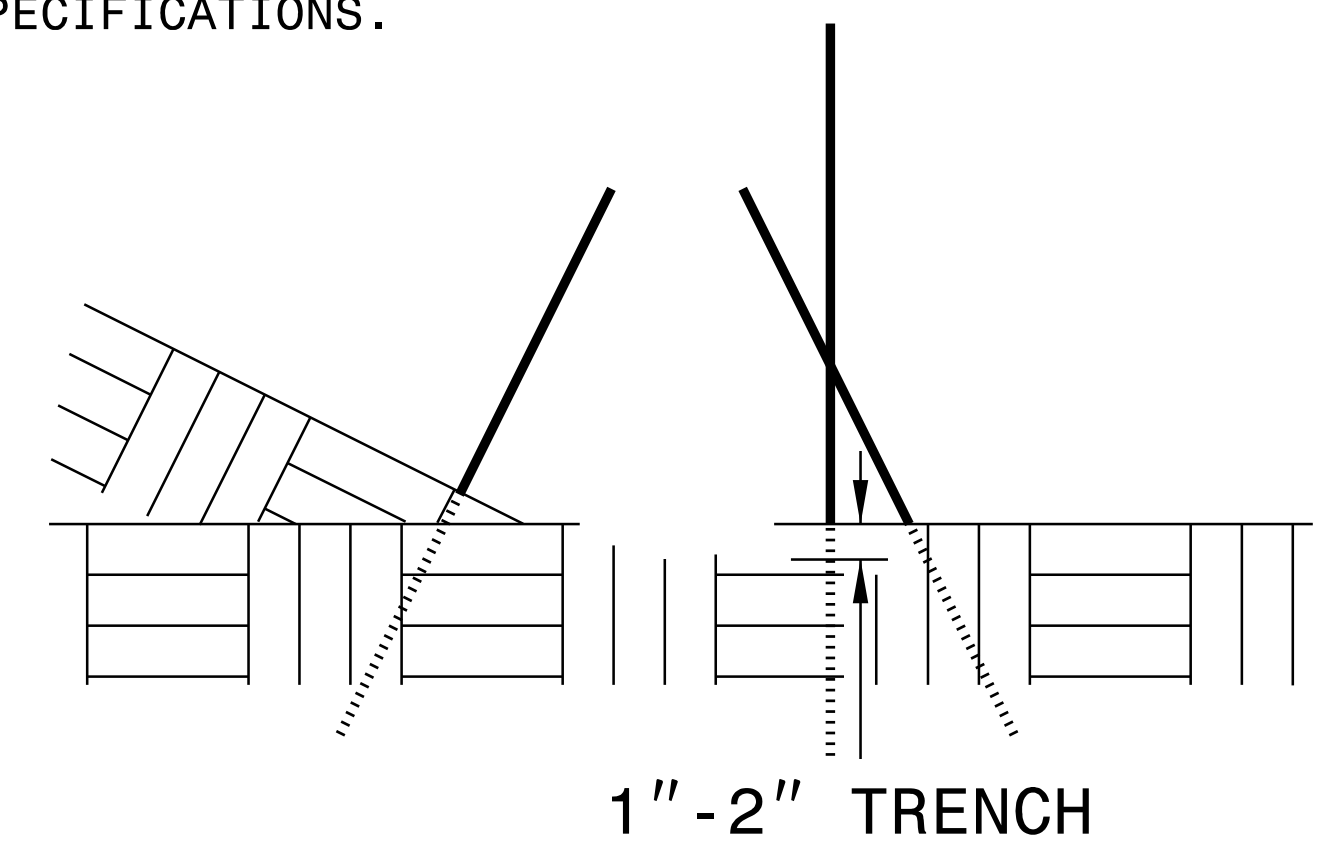


ISOMETRIC VIEW

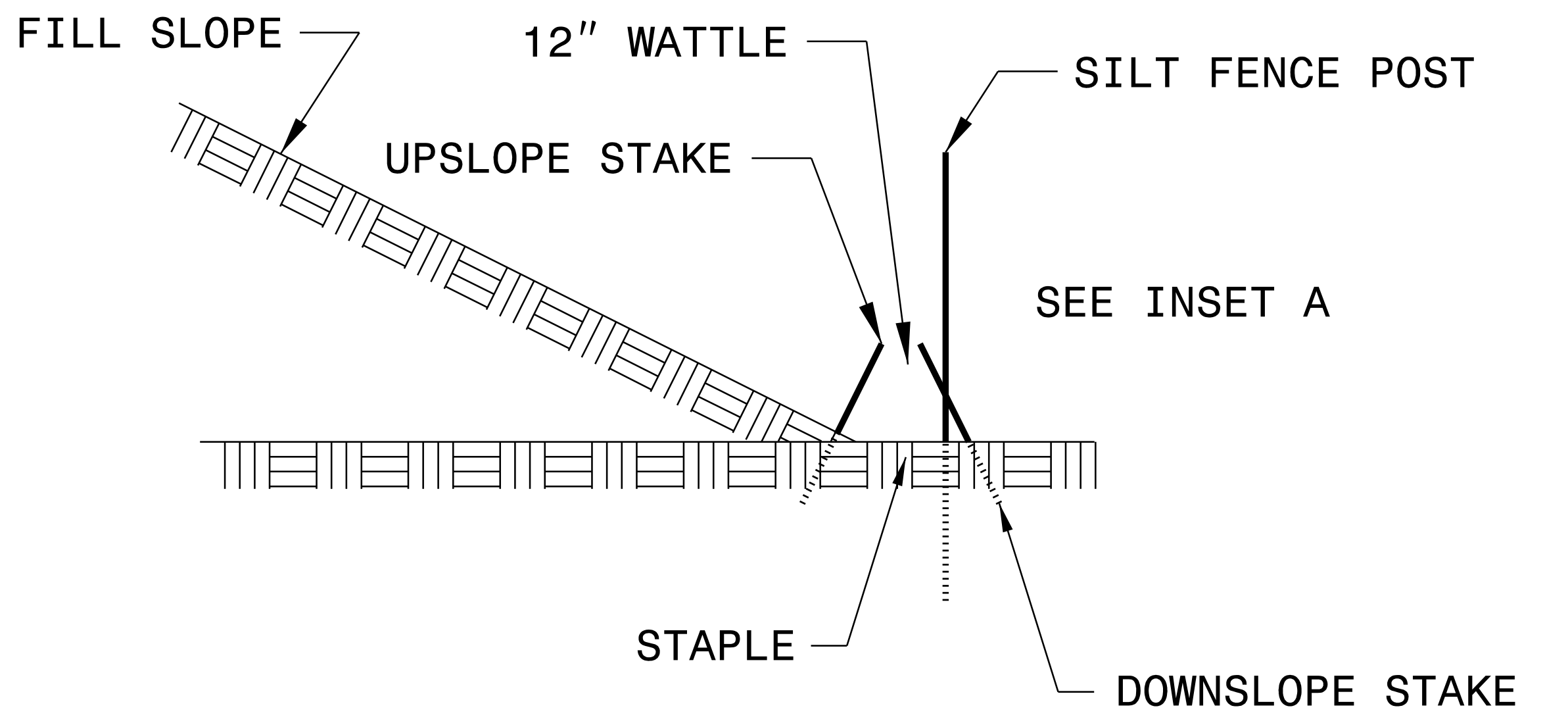
NOTES:

- 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 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



VIEW FROM SLOPE



SIDE VIEW

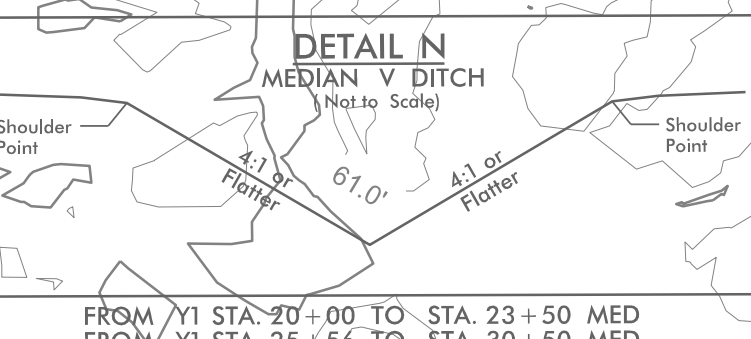
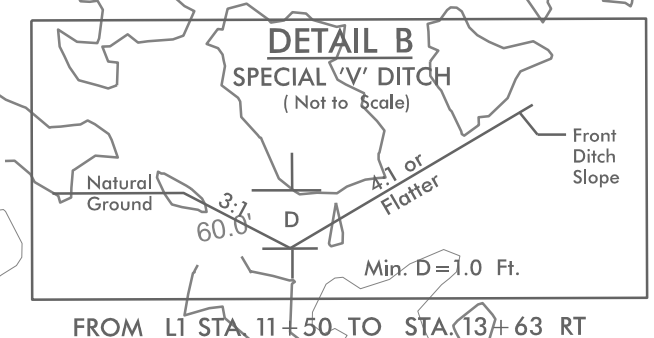
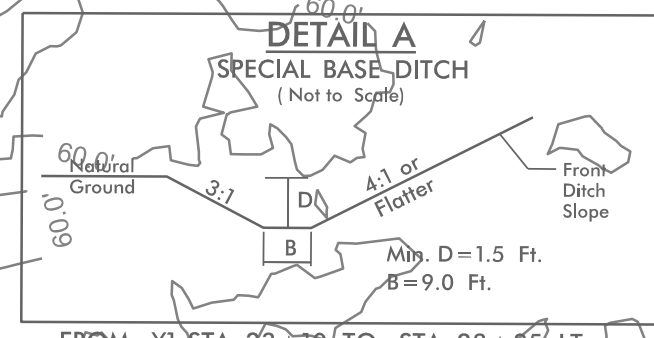
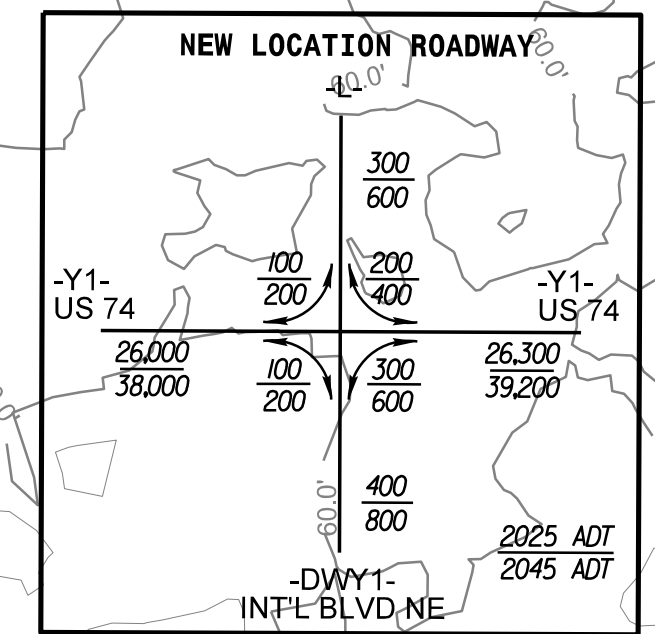
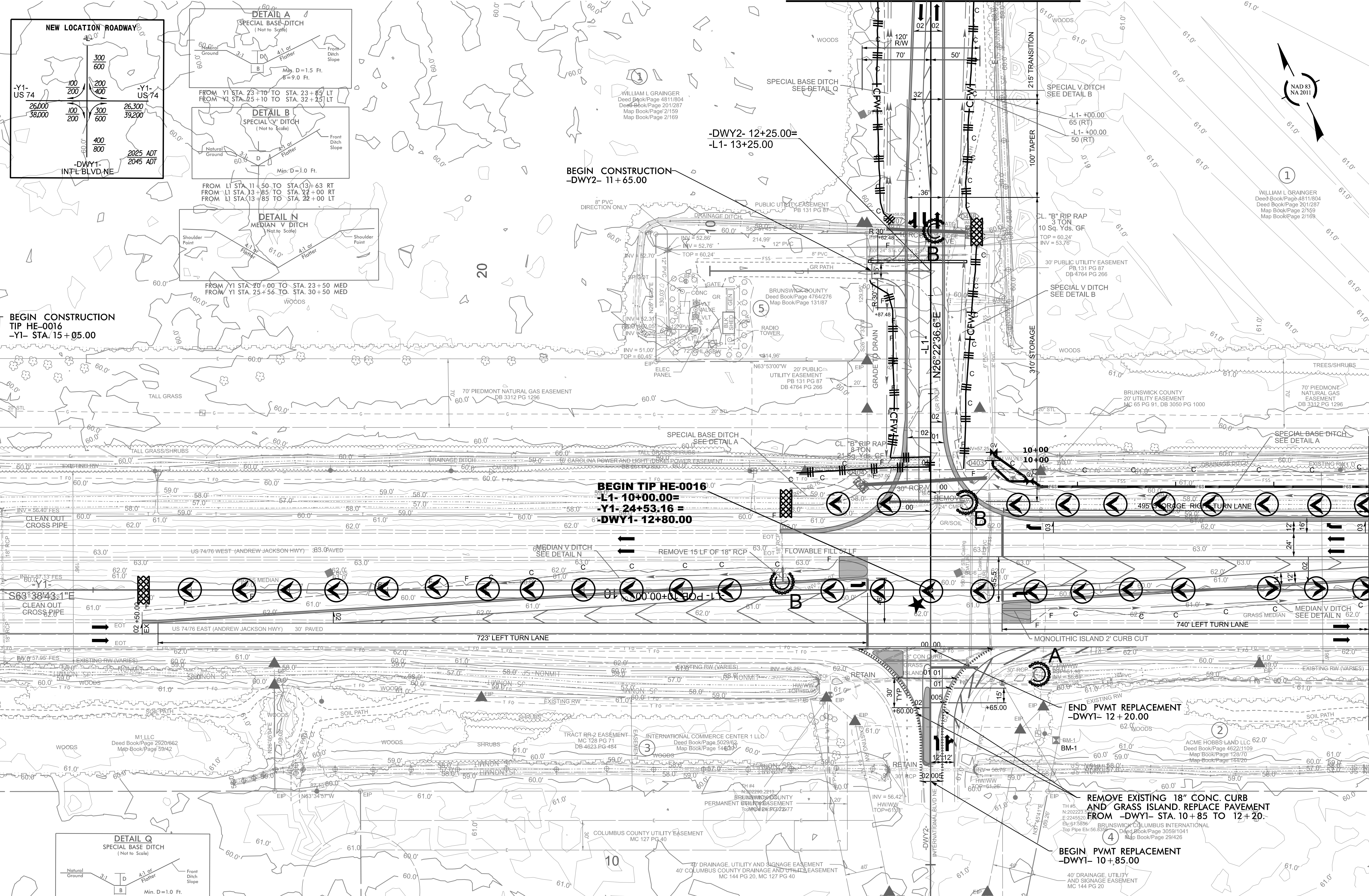
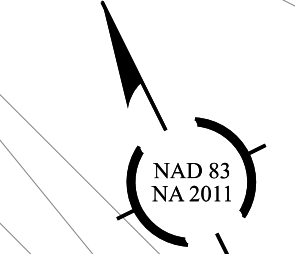
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>HE-0016</i>	SHEET NO. <i>EC-3</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
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

MATCH LINE -L1- STA 16+00.00 SEE SHEET 5



BEGIN CONSTRUCTION
TIP HE-0016
-Y1- STA. 15+05.00

BEGIN CONSTRUCTION
-DWY2- 11+65.00

BEGIN TIP HE-0016
-L1- 10+00.00=
-Y1- 24+53.16 =
-DWY1- 12+80.00

END PVMT REPLACEMENT
-DWY1- 12+20.00

REMOVE EXISTING 18" CONC. CURB
AND GRASS ISLAND. REPLACE PAVEMENT
FROM -DWY1- STA. 10+85 TO 12+20.

BEGIN PVMT REPLACEMENT
-DWY1- 10+85.00

BEGIN CONSTRUCTION
-DWY1- 9+60.00

MATCH LINE -Y1- STA 29+00.00 SEE SHEET 11

CLEARING & GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

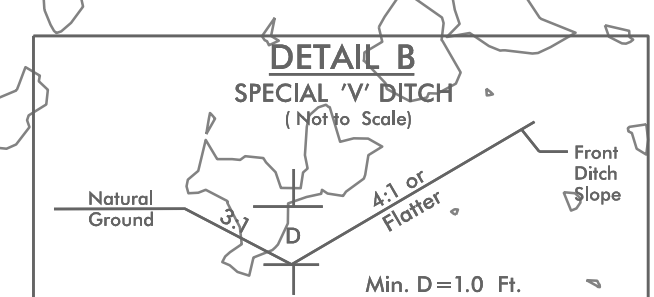
NOTE: UTILIZE COIR FIBER MATTING ADJACENT
TO WETLANDS/JURISDICTIONAL AREAS,
AND AS DIRECTED BY THE ENGINEER.

★ PROPOSED SIGNAL

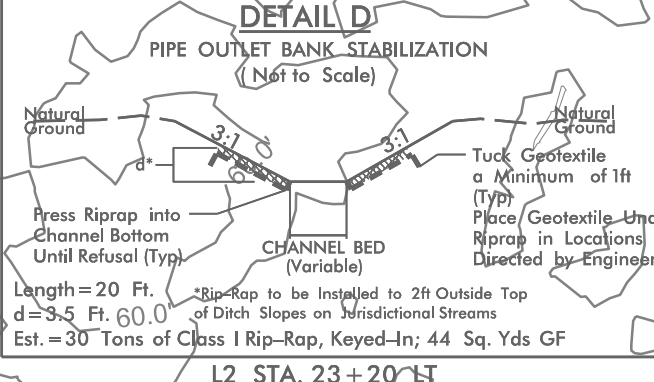
FOR -L- PROFILE, SEE SHEET NO. 012
FOR -Y1- PROFILE, SEE SHEET NO. 015 - 017
FOR -DWY1- PROFILE, SEE SHEET NO. 018
FOR -DWY2- PROFILE, SEE SHEET NO. 018

CLEARING & GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

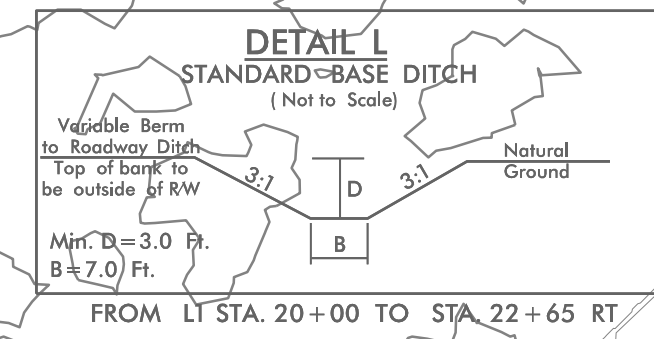
NOTE: UTILIZE COIR FIBER MATTING ADJACENT
TO WETLANDS/JURISDICTIONAL AREAS,
AND AS DIRECTED BY THE ENGINEER.



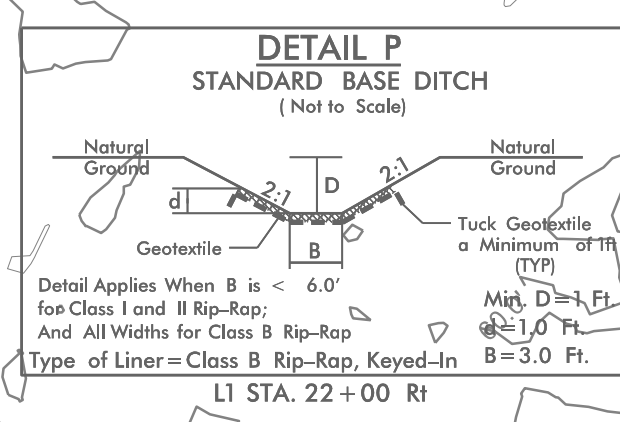
FROM L1 STA. 11+50 TO STA. 13+63 RT
FROM L1 STA. 13+85 TO STA. 22+00 RT
FROM L1 STA. 22+00 TO STA. 22+70 LT
FROM L2 STA. 21+40 TO STA. 22+06 RT
FROM L2 STA. 23+25 TO STA. 33+80 RT
FROM L2 STA. 23+25 TO STA. 33+85 LT



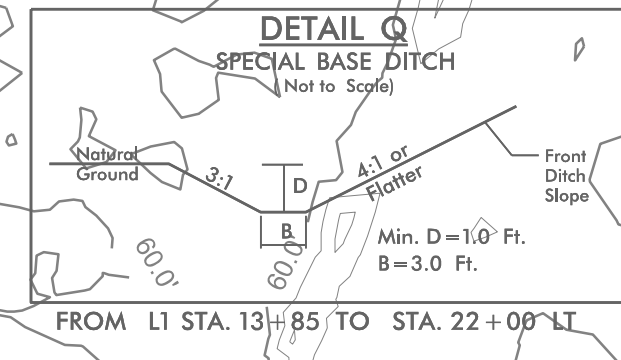
Length=20 Ft. 20 Riprap to be installed to 2ft Outside Top of Ditch Slopes on Jurisdictional Streams
Est. = 30 Tons of Class B Riprap, Keyed-In 44 Sq. Yds GF



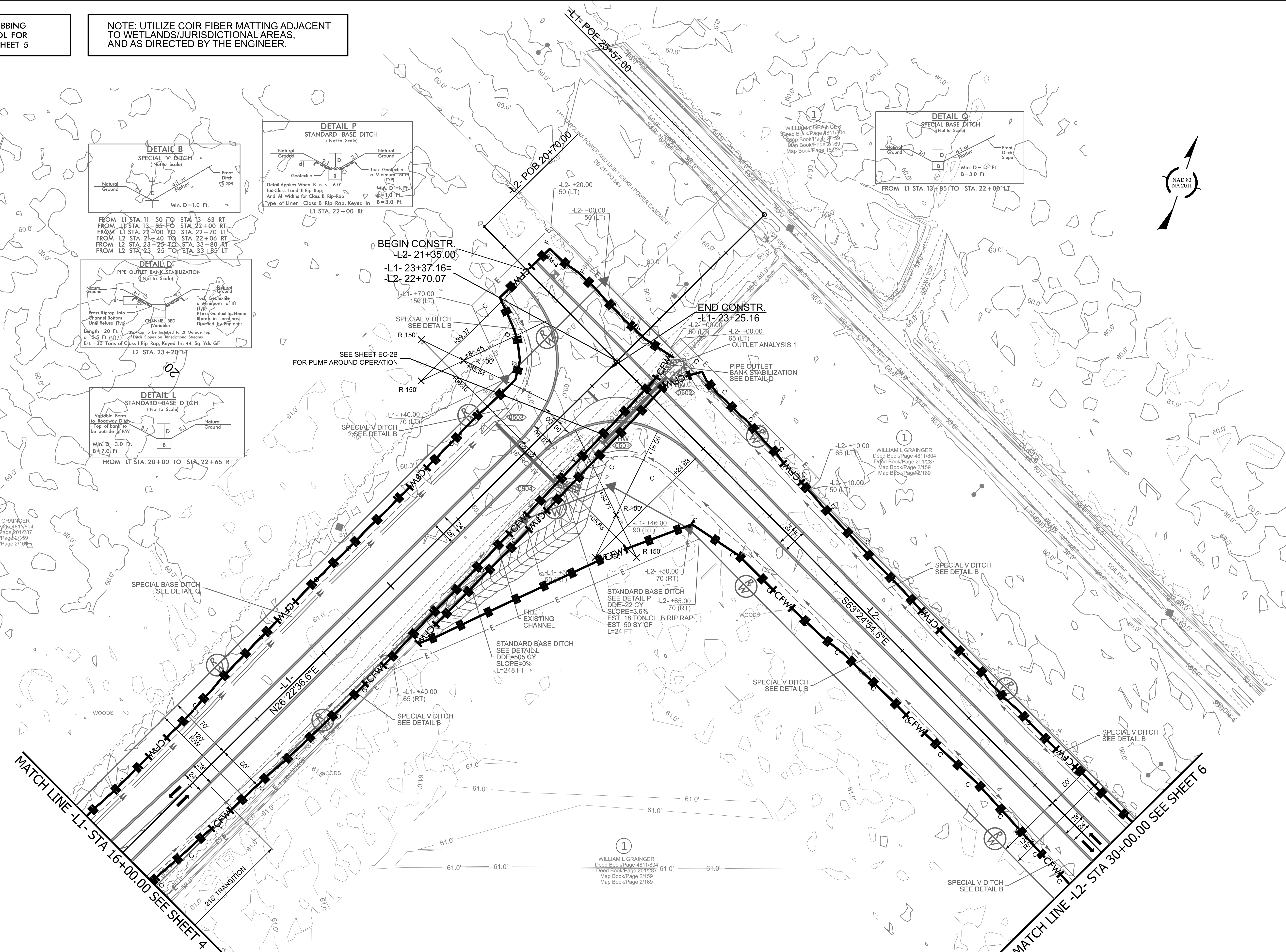
FROM LT STA. 20+00 TO STA. 22+65 RT



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap
Type of Liner=Class B Rip-Rap, Keyed-In
L1 STA. 22+00 RT



FROM L1 STA. 13+85 TO STA. 22+00 LT



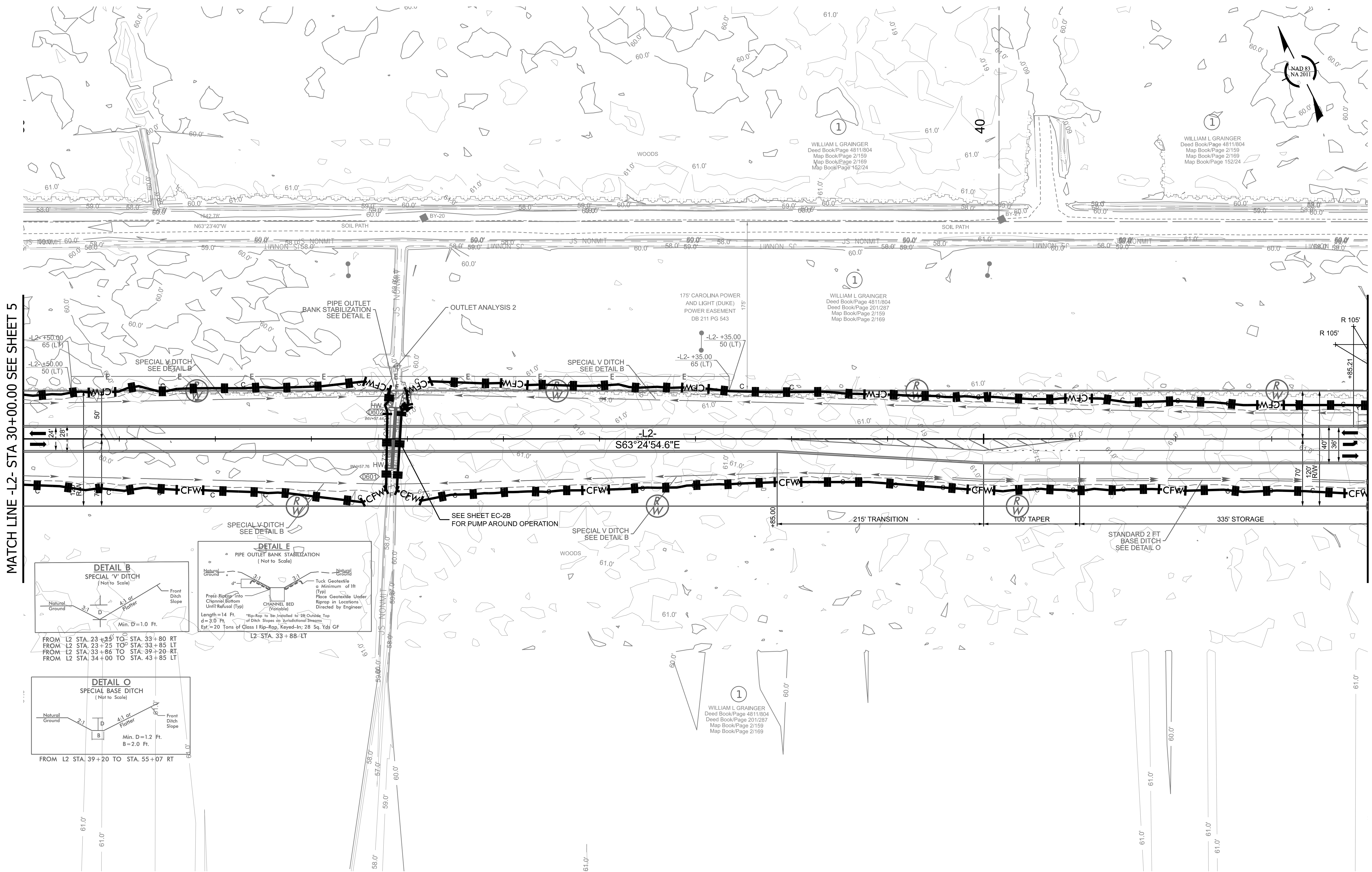
MATCH LINE -L1- STA 16+00.00 SEE SHEET 4

MATCH LINE -L2- STA 30+00.00 SEE SHEET 6

1
WILLIAM L GRAINGER
Deed Book/Page 4811/804
Deed Book/Page 2012/267
Map Book/Page 2/159
Map Book/Page 2/169

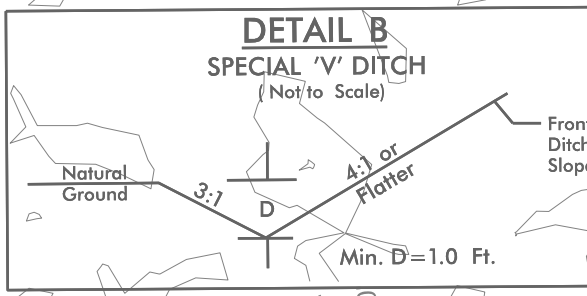
CLEARING & GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6

NOTE: UTILIZE COIR FIBER MATTING ADJACENT
TO WETLANDS/JURISDICTIONAL AREAS,
AND AS DIRECTED BY THE ENGINEER.

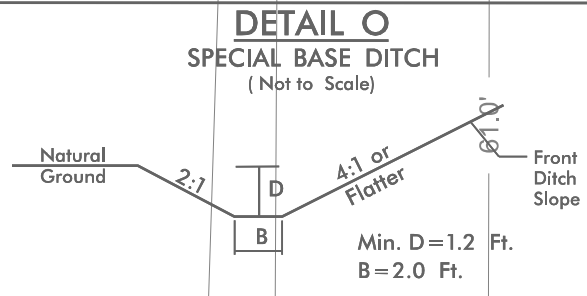
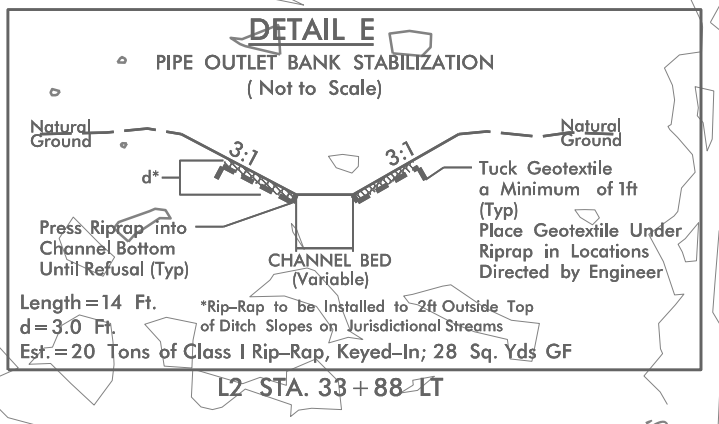


MATCH LINE -L2- STA 30+00.00 SEE SHEET 5

MATCH LINE -L2- STA 44+00.00 SEE SHEET 7

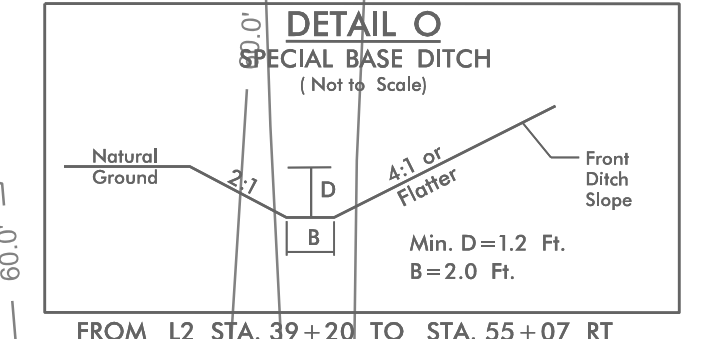
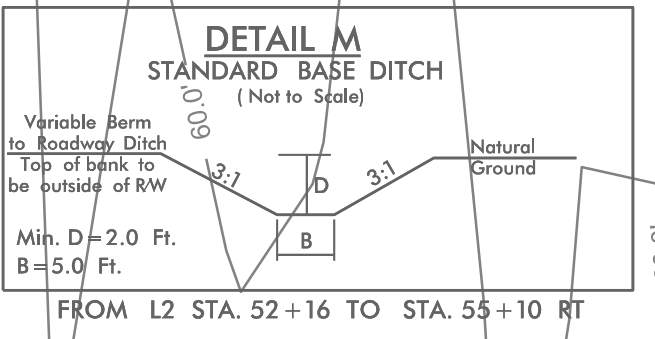
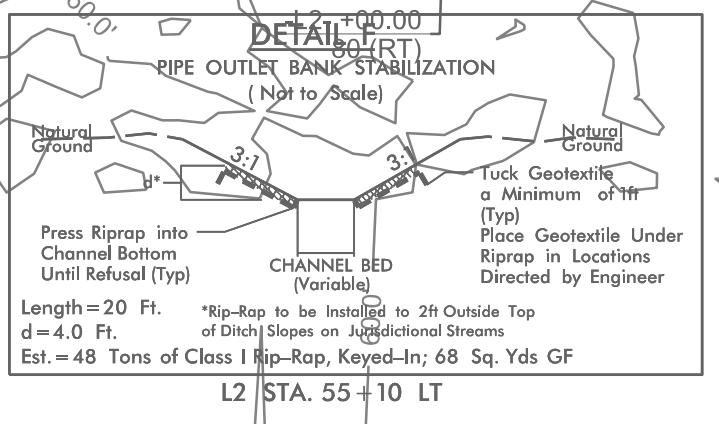
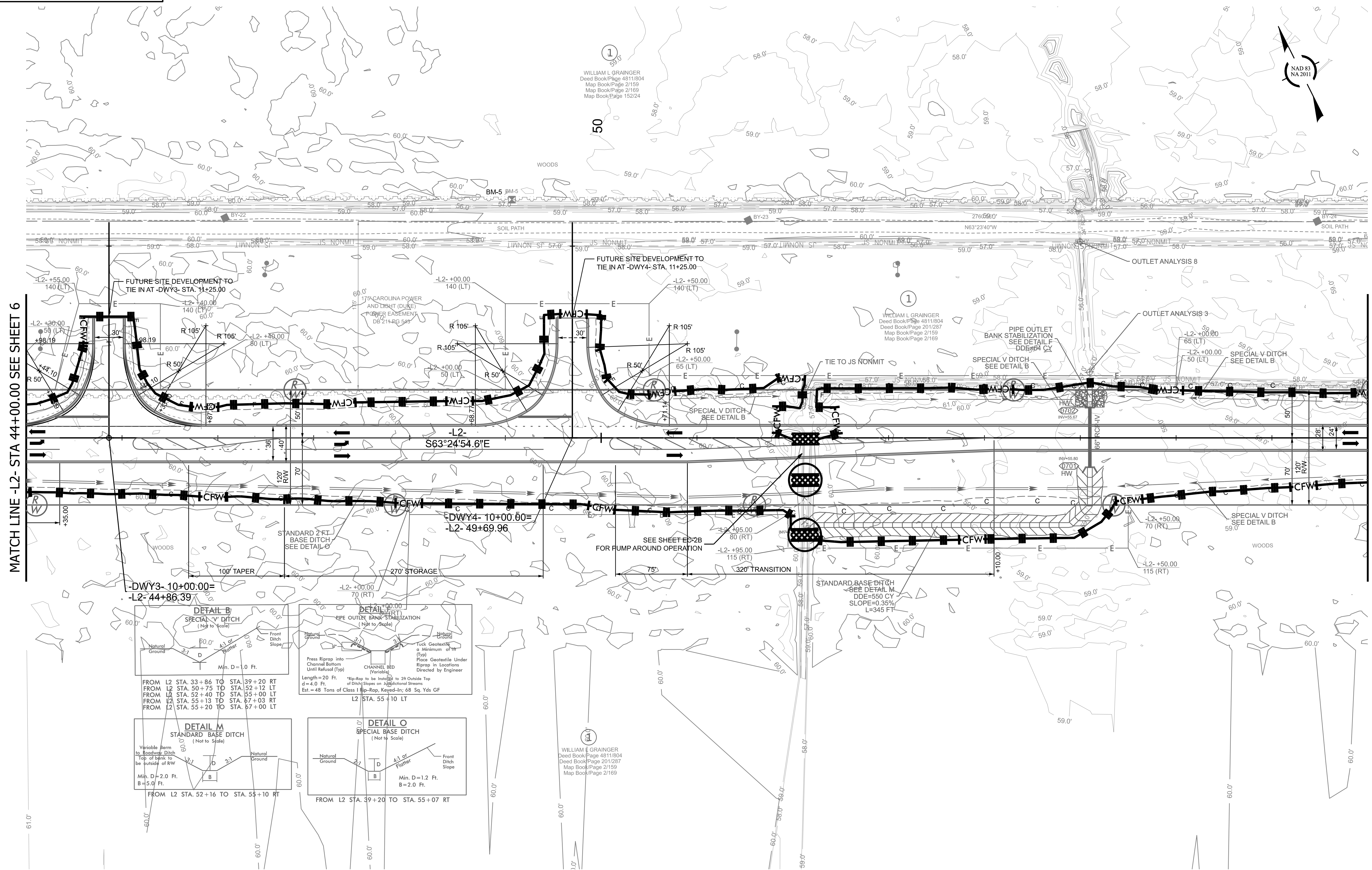


FROM L2 STA. 23+25 TO STA. 33+80 RT
FROM L2 STA. 23+25 TO STA. 33+85 LT
FROM L2 STA. 33+86 TO STA. 39+20 RT
FROM L2 STA. 34+00 TO STA. 43+85 LT



FROM L2 STA. 39+20 TO STA. 55+07 RT

CLEARING & GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7



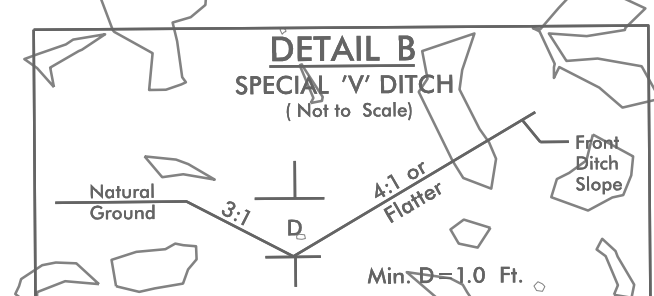
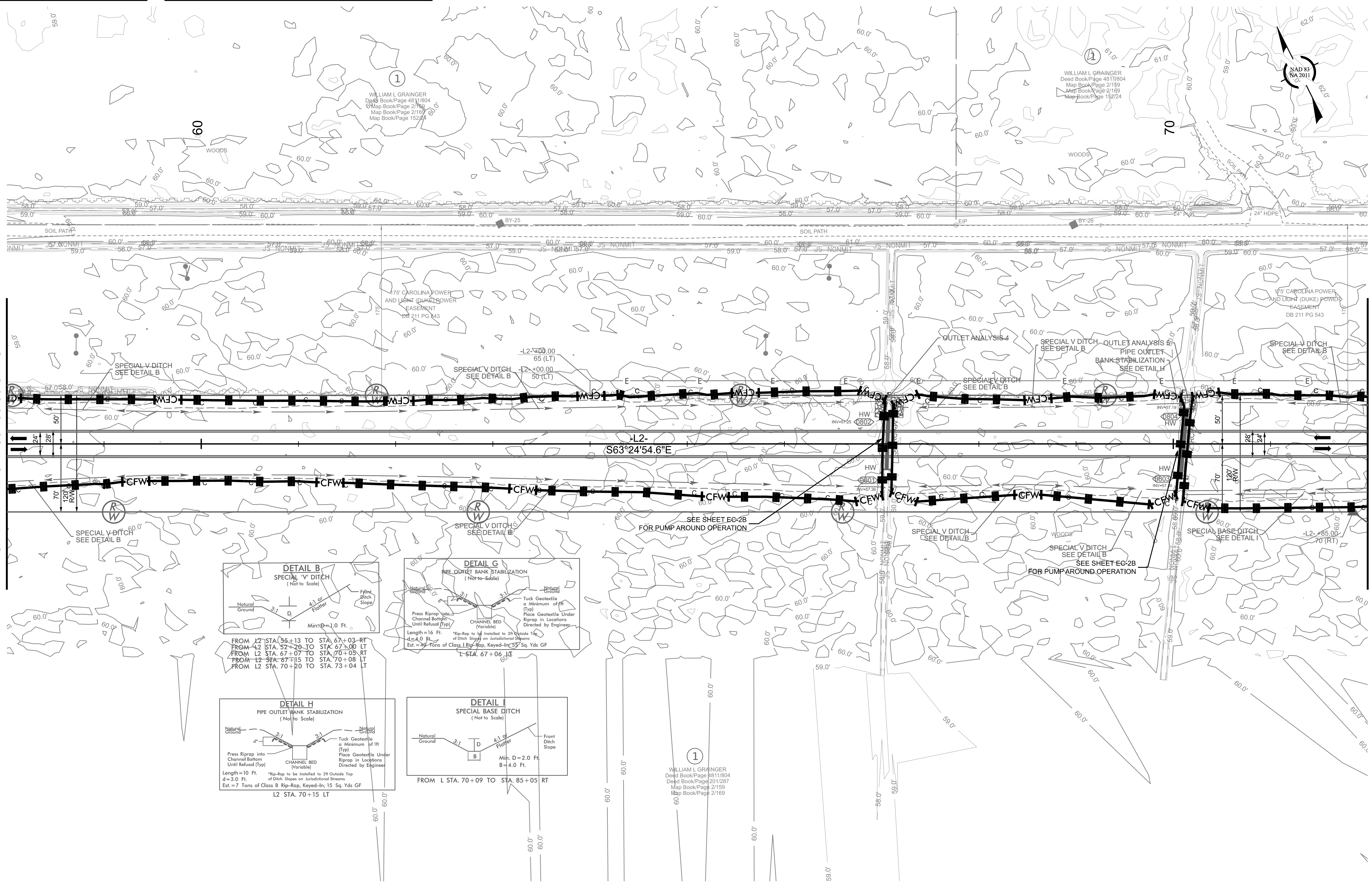
FOR -L- PROFILE, SEE SHEET NO. 013
FOR -DWY3- PROFILE, SEE SHEET NO. 018
FOR -DWY4- PROFILE, SEE SHEET NO. 018

CLEARING & GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 8

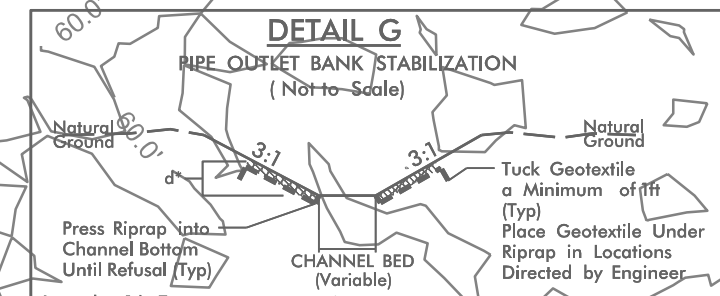
NOTE: UTILIZE COIR FIBER MATTING ADJACENT
TO WETLANDS/JURISDICTIONAL AREAS,
AND AS DIRECTED BY THE ENGINEER.

MATCH LINE -L2- STA 58+00.00 SEE SHEET 7

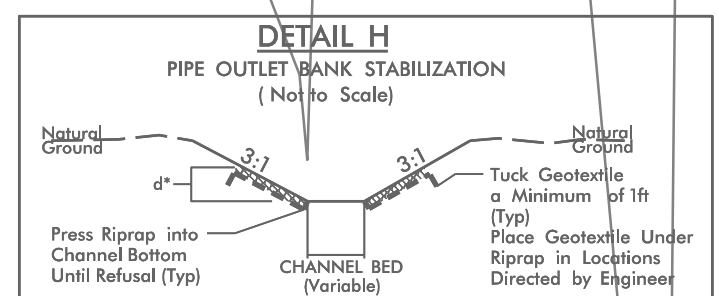
MATCH LINE -L2- STA 72+00.00 SEE SHEET 9



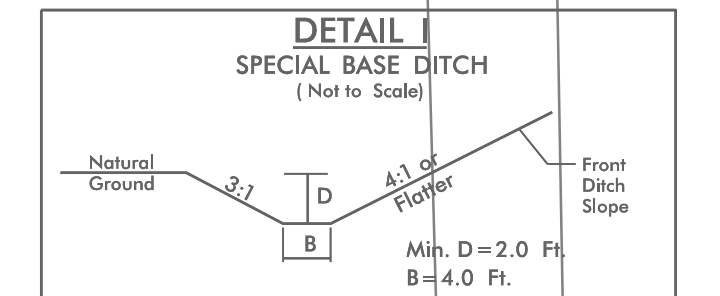
FROM L2 STA. 56+13 TO STA. 67+03 RT
FROM L2 STA. 57+28 TO STA. 67+00 LT
FROM L2 STA. 67+07 TO STA. 70+05 RT
FROM L2 STA. 67+15 TO STA. 70+08 LT
FROM L2 STA. 70+20 TO STA. 73+04 LT



Length = 16 Ft. *Rip-rap to be installed to 2ft outside top of ditch slope on Jurisdictional Streams.
Est. = 30 Tons of Class 1 Rip-Rap, Keyed-In; 35 Sq. Yds GF
L STA. 67+06 LT

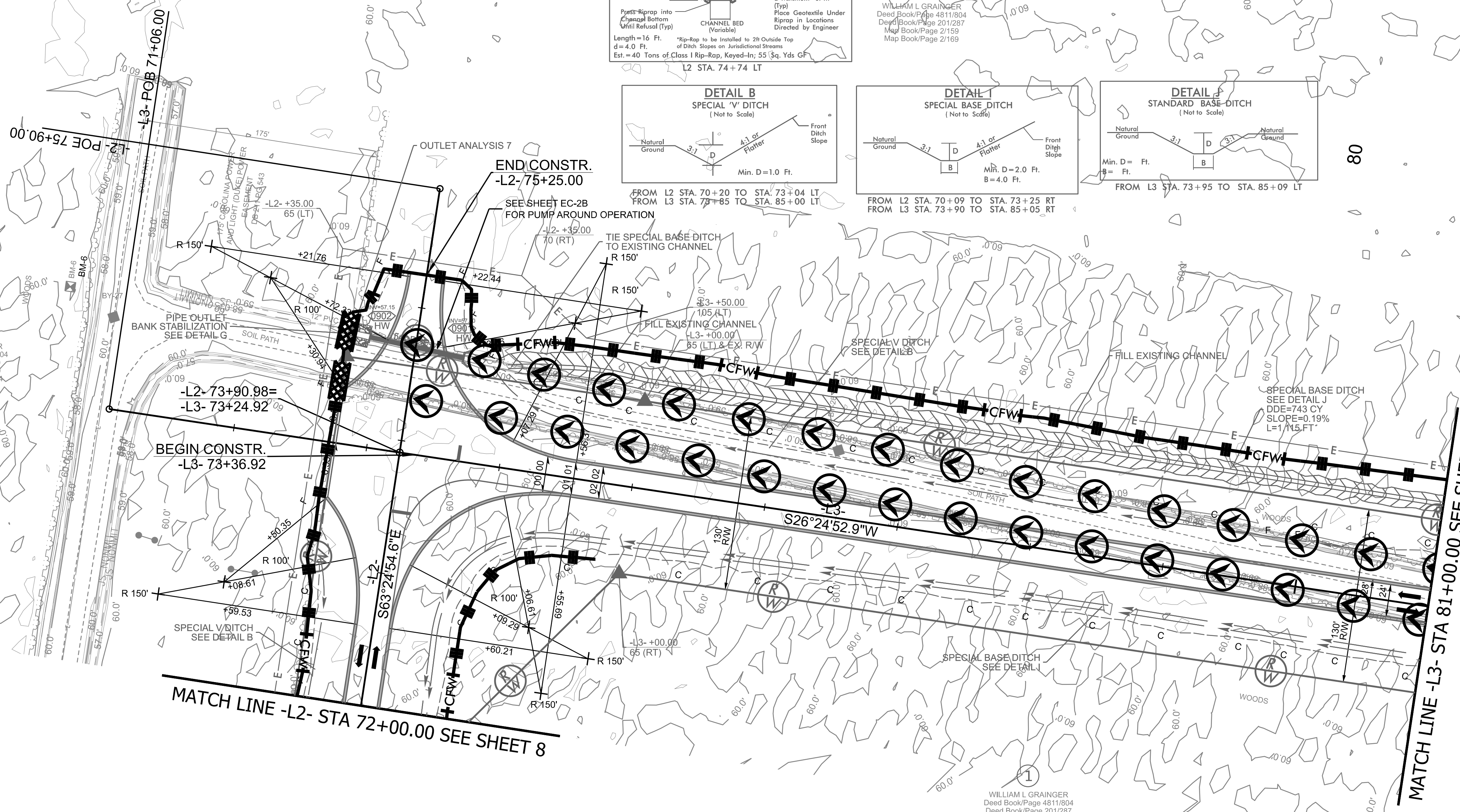
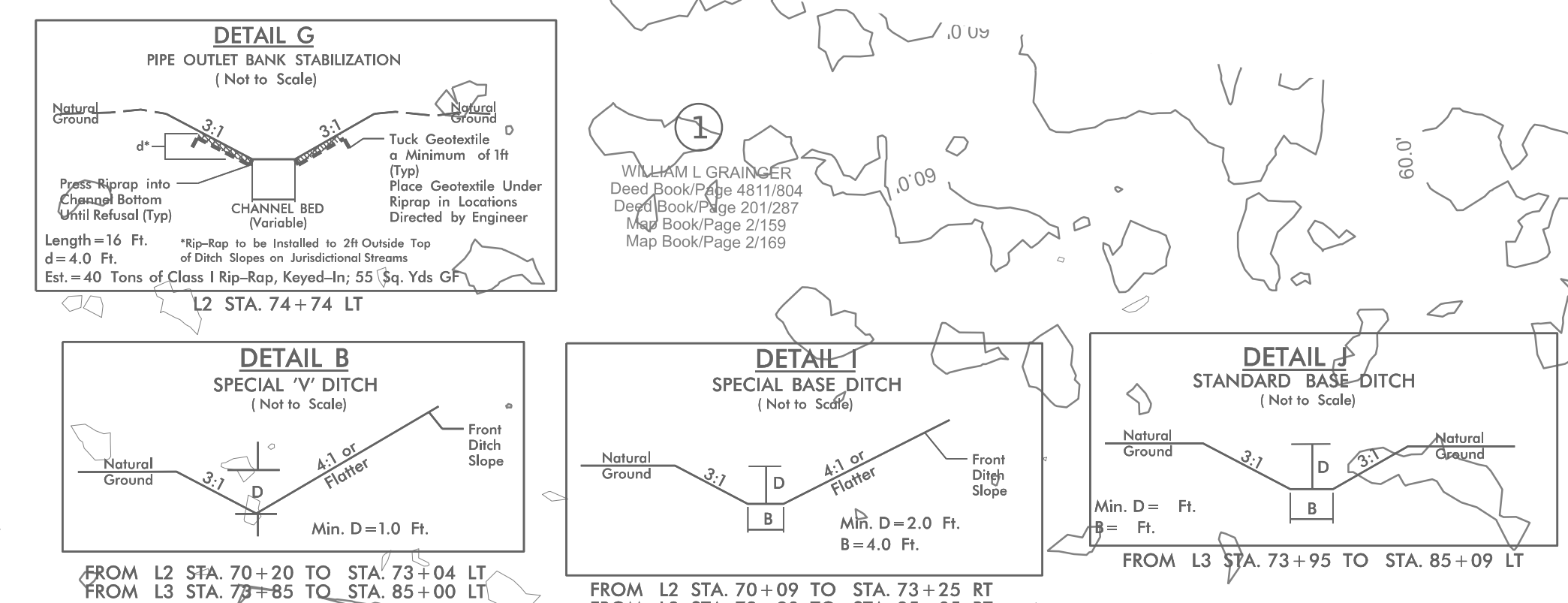


Length = 10 Ft. *Rip-rap to be installed to 2ft outside top of ditch slope on Jurisdictional Streams.
Est. = 7 Tons of Class B Rip-Rap, Keyed-In; 15 Sq. Yds GF
L2 STA. 70+15 LT



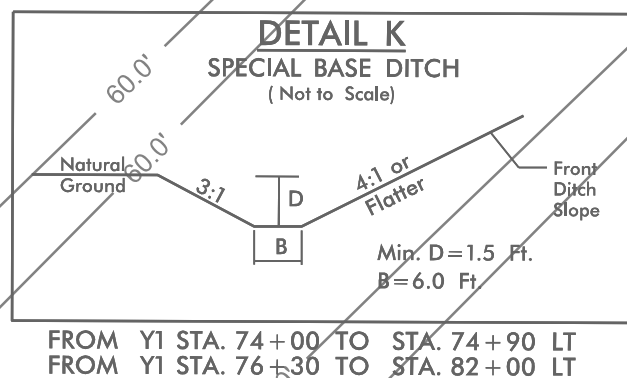
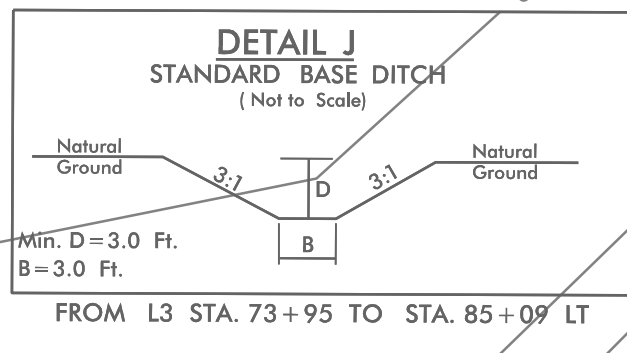
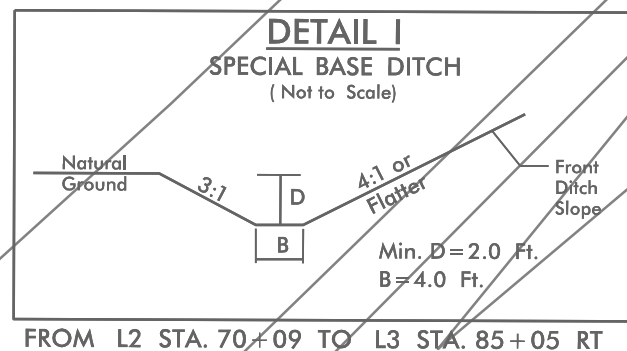
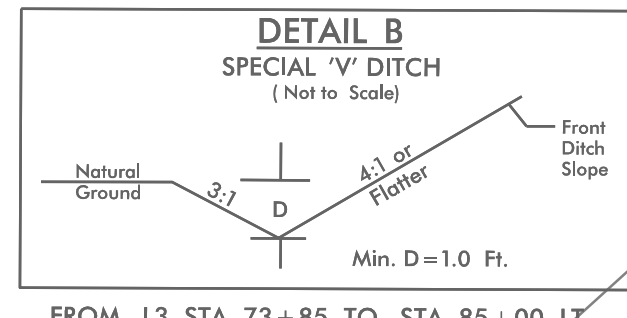
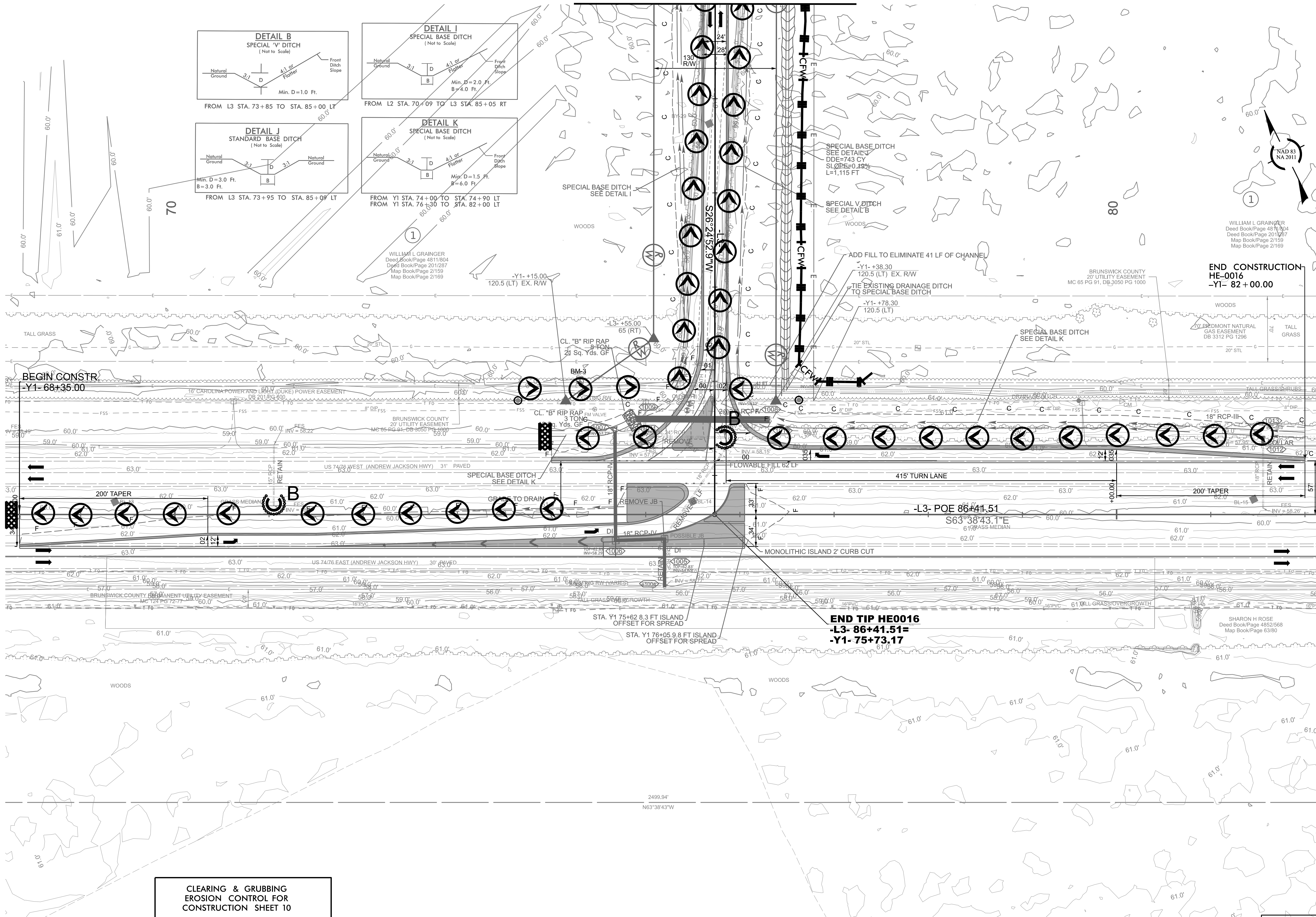
FROM L STA. 70+09 TO STA. 85+05 RT

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CLEARING & GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

MATCH LINE -L3- STA 81+00.00 SEE SHEET 9



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Map Book/Page 2/159
Map Book/Page 2/169

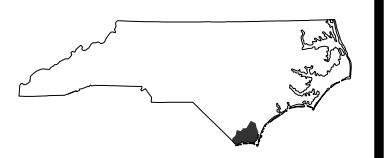
END CONSTRUCTION
HE-0016
-Y1- 82+00.00

END TIP HE0016
-L3- 86+41.51=
-Y1- 75+73.17

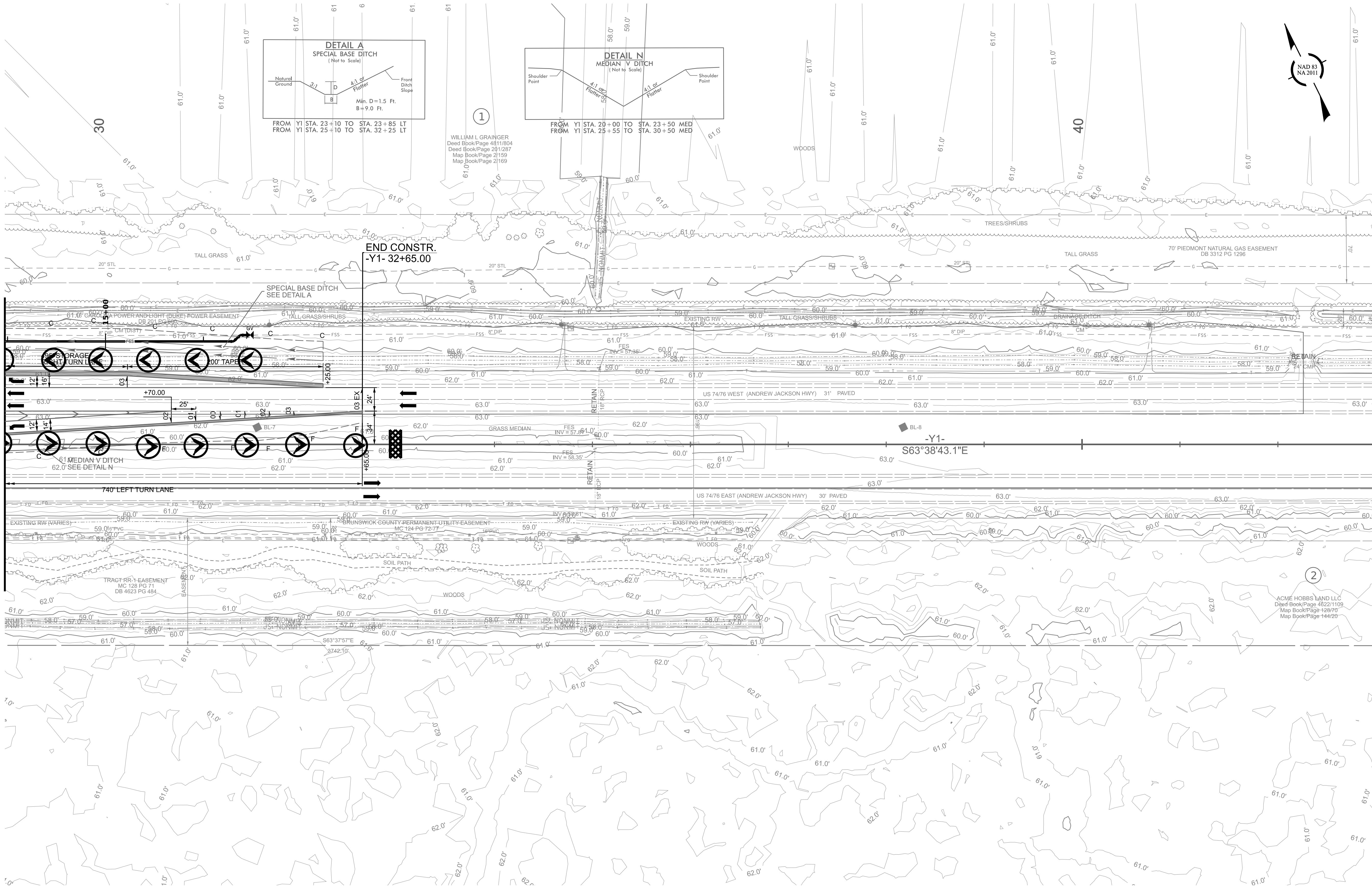
CLEARING & GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10

FOR -L- PROFILE, SEE SHEET NO. 014
FOR -Y1- PROFILE, SEE SHEET NO. 015 & 017

CLEARING & GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 11



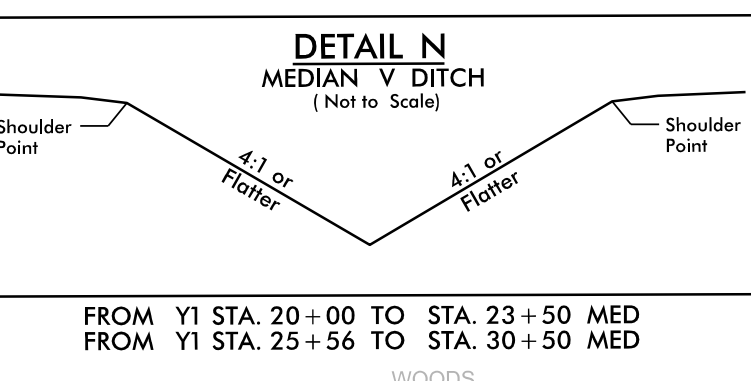
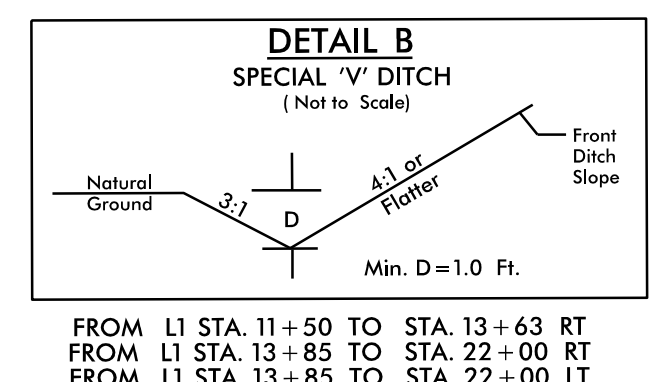
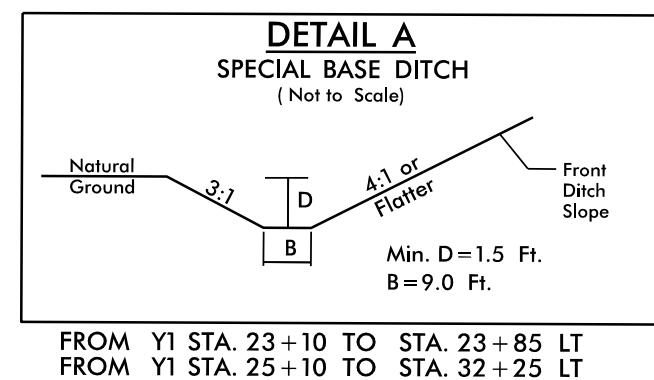
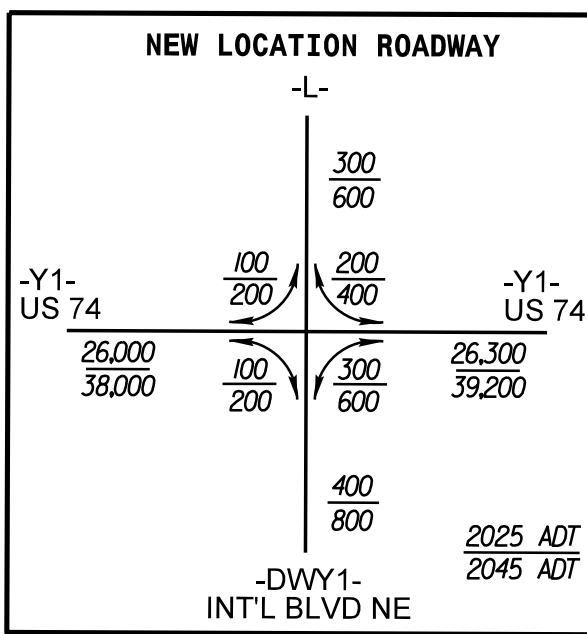
MATCH LINE -Y1- STA 29+00.00 SEE SHEET 4



FOR -Y1- PROFILE, SEE SHEET NO. 017

NOTE: UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED BY THE ENGINEER.

MATCH LINE -L1- STA 16+00.00 SEE SHEET 5



BEGIN CONSTRUCTION
TIP HE-0016
-Y1- STA. 15 + 05.00

BEGIN CONSTRUCTION
-DWY2- 11 + 65.00

BEGIN TIP HE-0016
-L1- 10+00.00=
-Y1- 24+53.16 =
-DWY1- 12+80.00

END PVMT REPLACEMENT
-DWY1- 12 + 20.00

REMOVE EXISTING 18" CONC. CURB
AND GRASS ISLAND. REPLACE PAVEMENT
FROM -DWY1- STA. 10 + 85 TO 12 + 20.

BEGIN PVMT REPLACEMENT
-DWY1- 10 + 85.00

BEGIN CONSTRUCTION
-DWY1- 9 + 60.00



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Map Book/Page 21159
Map Book/Page 21169

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Deed Book/Page 201/287
Map Book/Page 21159
Map Book/Page 21169

★ PROPOSED SIGNAL

FOR -L- PROFILE, SEE SHEET NO. 012
FOR -Y1- PROFILE, SEE SHEET NO. 015 - 017
FOR -DWY1- PROFILE, SEE SHEET NO. 018
FOR -DWY2- PROFILE, SEE SHEET NO. 018

NOTE: UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED BY THE ENGINEER.

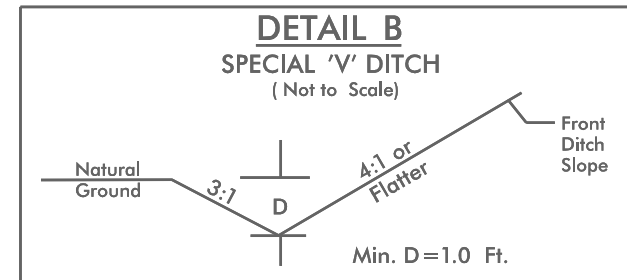


ROADWAY DESIGN UNIT ROADWAY DESIGN ENGINEER

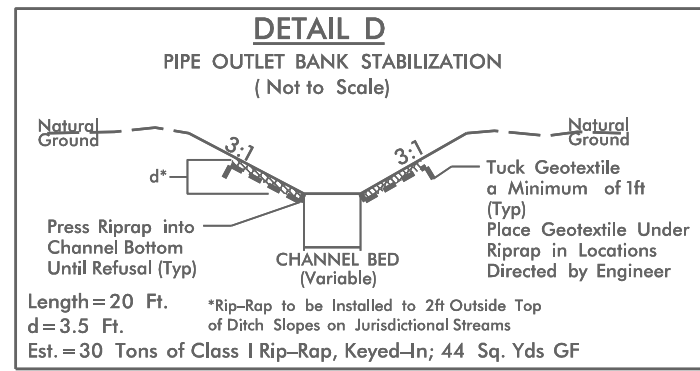
HYDRAULICS ENGINEER

PREPARED BY

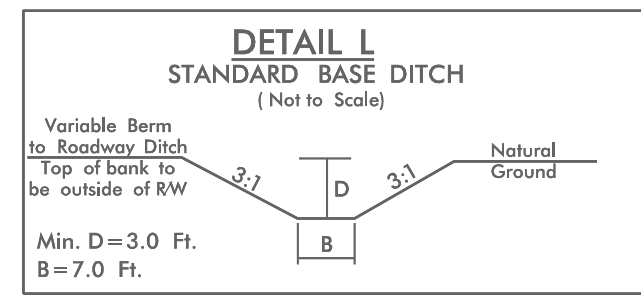
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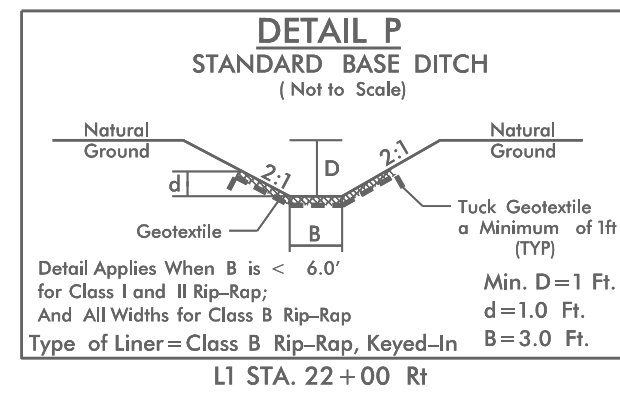
FROM L1 STA. 11+50 TO STA. 13+63 RT
FROM L1 STA. 13+85 TO STA. 22+00 RT
FROM L1 STA. 22+00 TO STA. 22+70 LT
FROM L2 STA. 21+40 TO STA. 22+06 RT
FROM L2 STA. 23+25 TO STA. 33+80 RT
FROM L2 STA. 23+25 TO STA. 33+85 LT



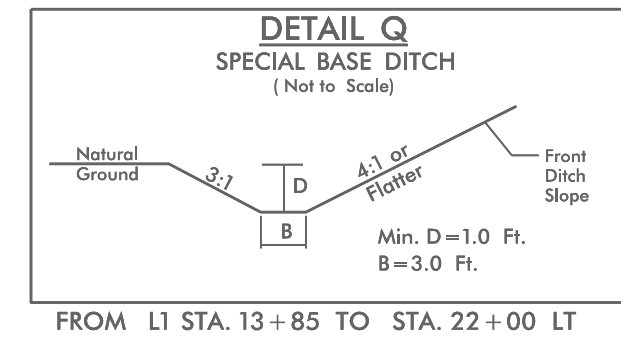
Length=20 Ft. *Rip-Rap to be installed to 2ft Outside Top of Ditch Slopes on Jurisdictional Streams
d=3.5 Ft. Est.=30 Tons of Class B Rip-Rap, Keyed-In 44 Sq. Yds GF



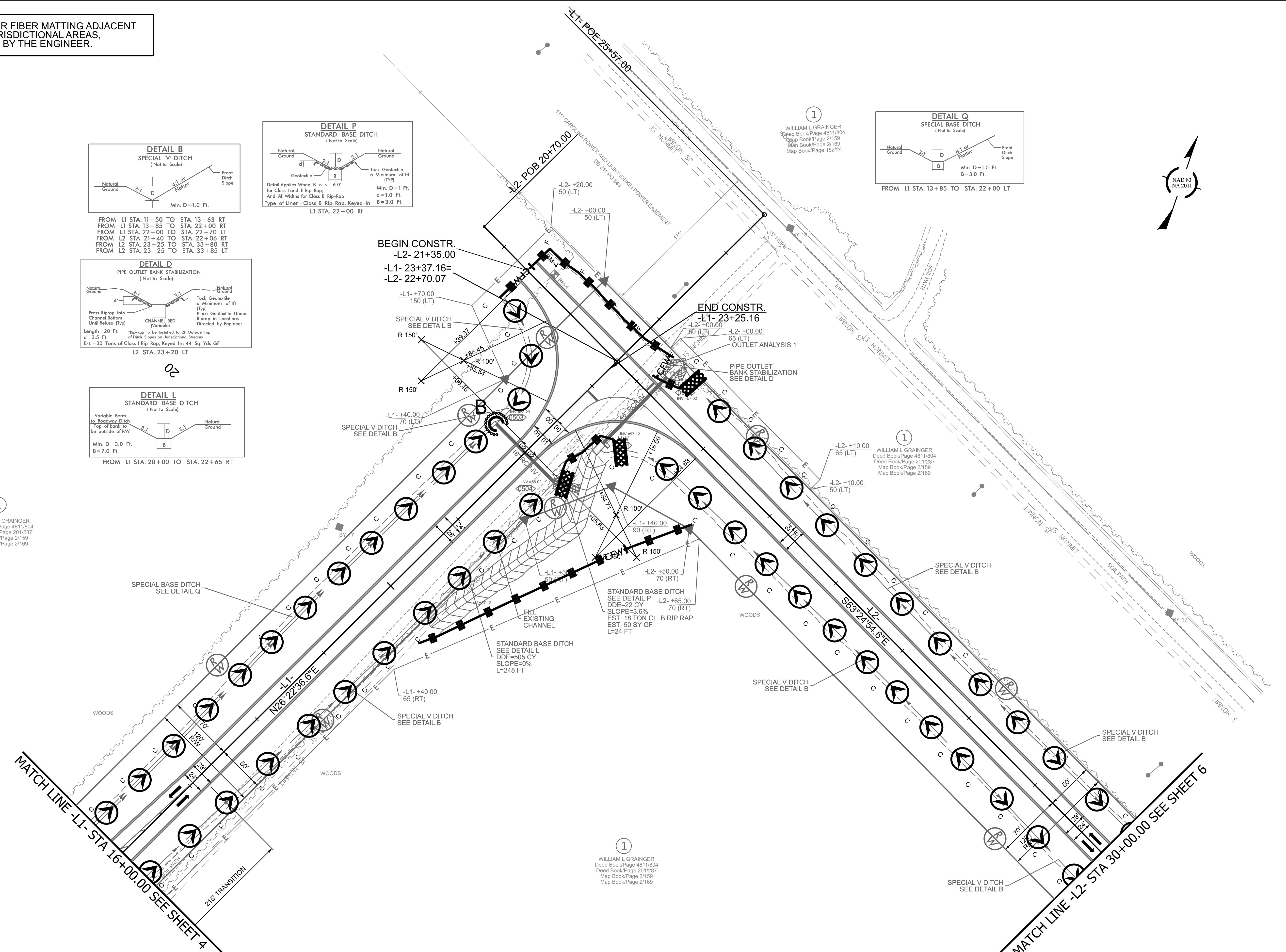
FROM L1 STA. 20+00 TO STA. 22+65 RT



Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap. Type of Liner=Class B Rip-Rap, Keyed-In



FROM L1 STA. 13+85 TO STA. 22+00 LT



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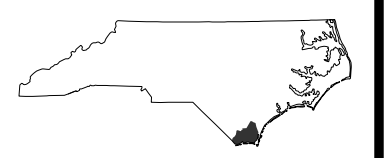
1 WILLIAM L GRAINGER Deed Book/Page 4811/804 Deed Book/Page 201/287 Map Book/Page 2/159 Map Book/Page 2/169

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MATCH LINE -L1- STA 16+00.00 SEE SHEET 4

MATCH LINE -L2- STA 30+00.00 SEE SHEET 6

NOTE: UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED BY THE ENGINEER.



ROADWAY DESIGN UNIT ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

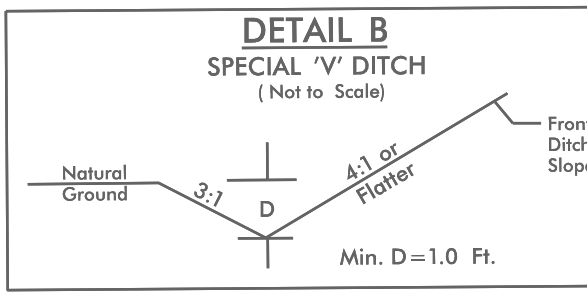
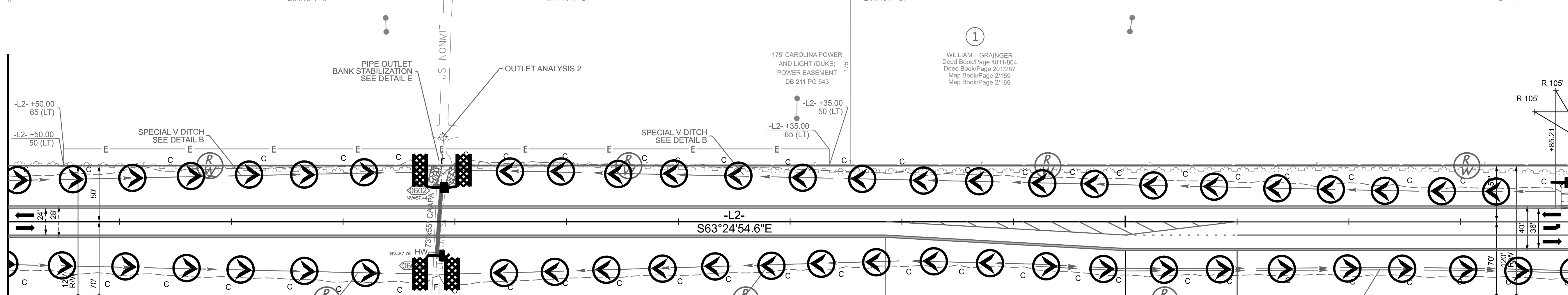
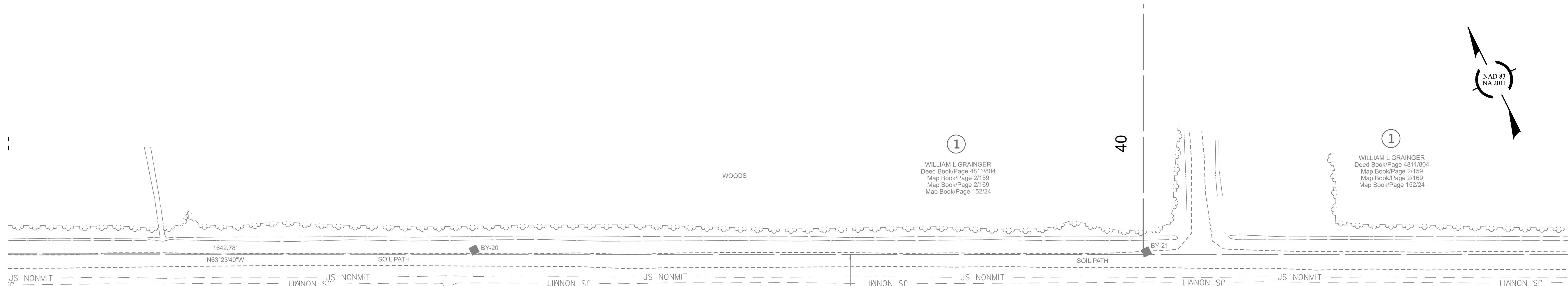
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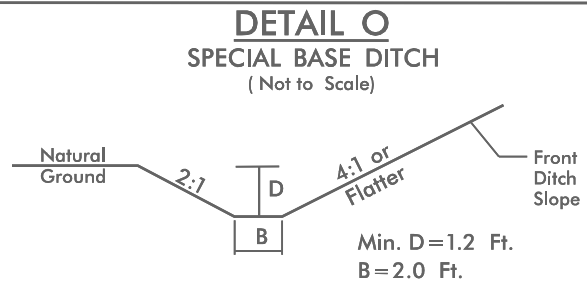
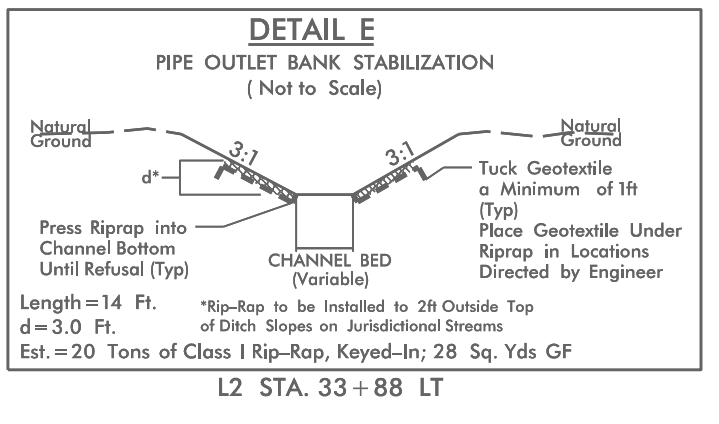


MATCH LINE -L2- STA 30+00.00 SEE SHEET 5

MATCH LINE -L2- STA 44+00.00 SEE SHEET 7

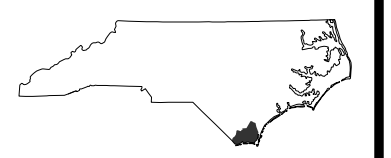


FROM L2 STA. 23+25 TO STA. 33+80 RT
FROM L2 STA. 23+25 TO STA. 33+85 LT
FROM L2 STA. 33+86 TO STA. 39+20 RT
FROM L2 STA. 34+00 TO STA. 43+85 LT

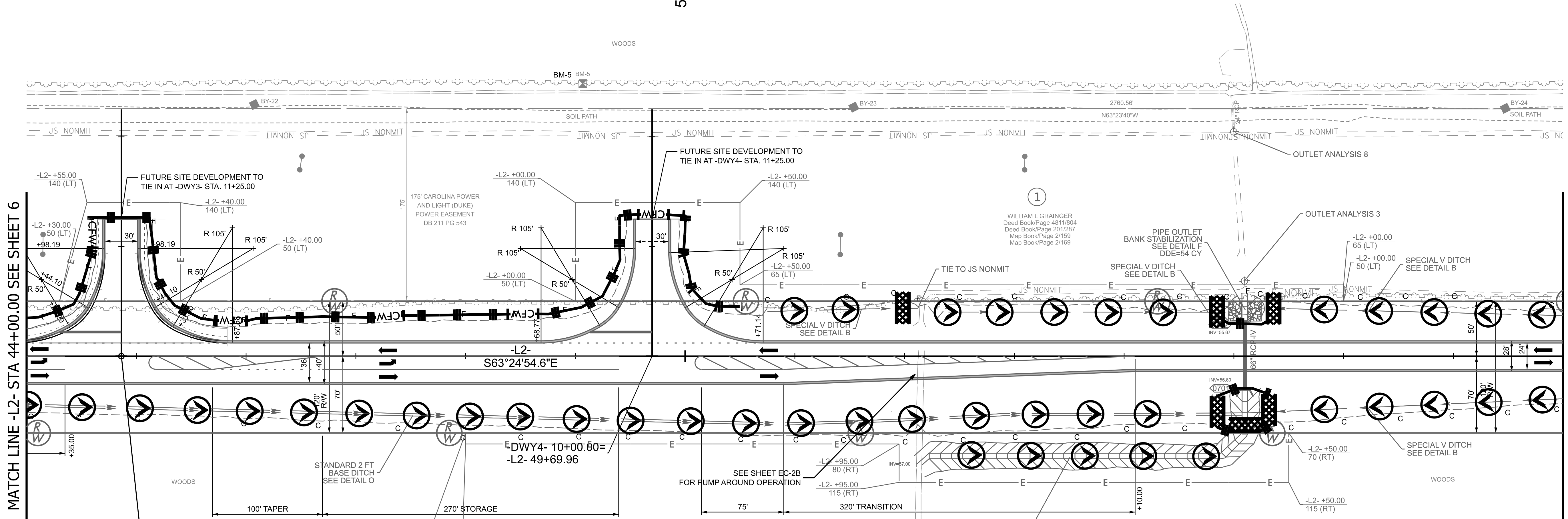
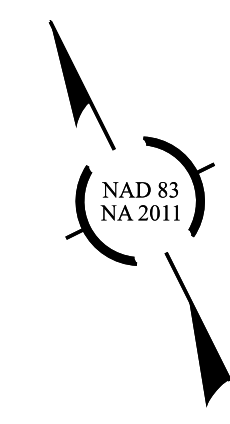


FROM L2 STA. 39+20 TO STA. 55+07 RT

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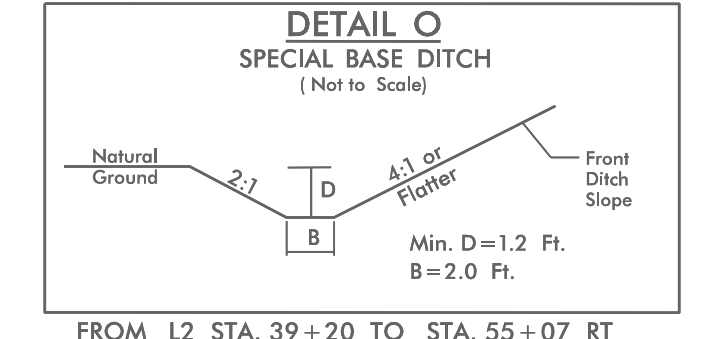
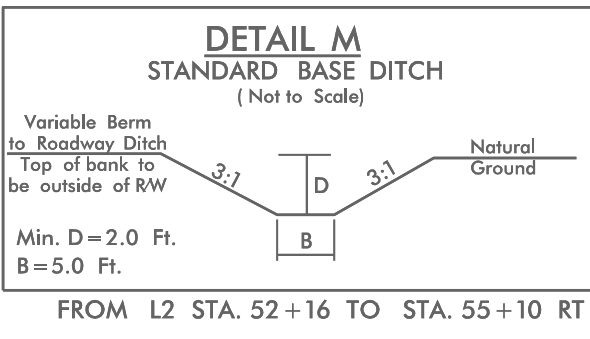
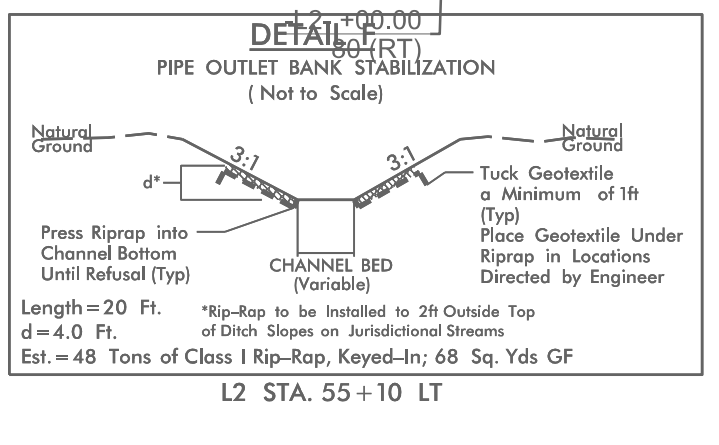
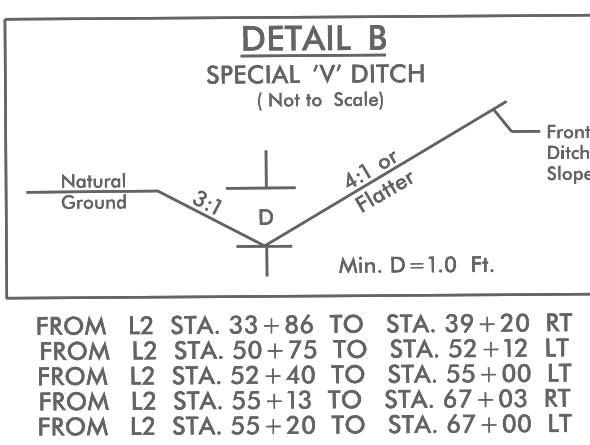
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Map Book/Page 2/159
Map Book/Page 2/169
Map Book/Page 152/24
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MATCH LINE -L2- STA 44+00.00 SEE SHEET 6

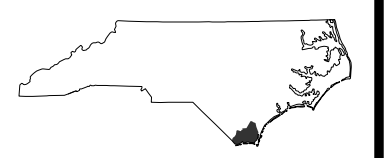
MATCH LINE -L2- STA 58+00.00 SEE SHEET 8

-DWY3- 10+00.00=
-L2- 44+86.39



1
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NOTE: UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED BY THE ENGINEER.



ROADWAY DESIGN UNIT ROADWAY DESIGN ENGINEER

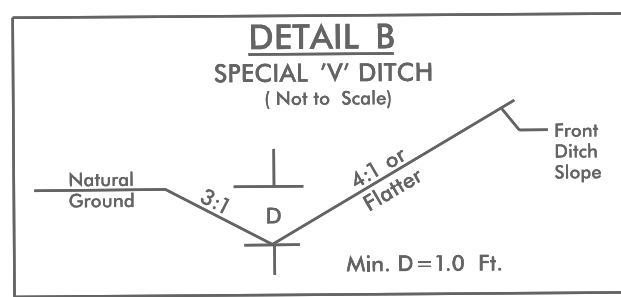
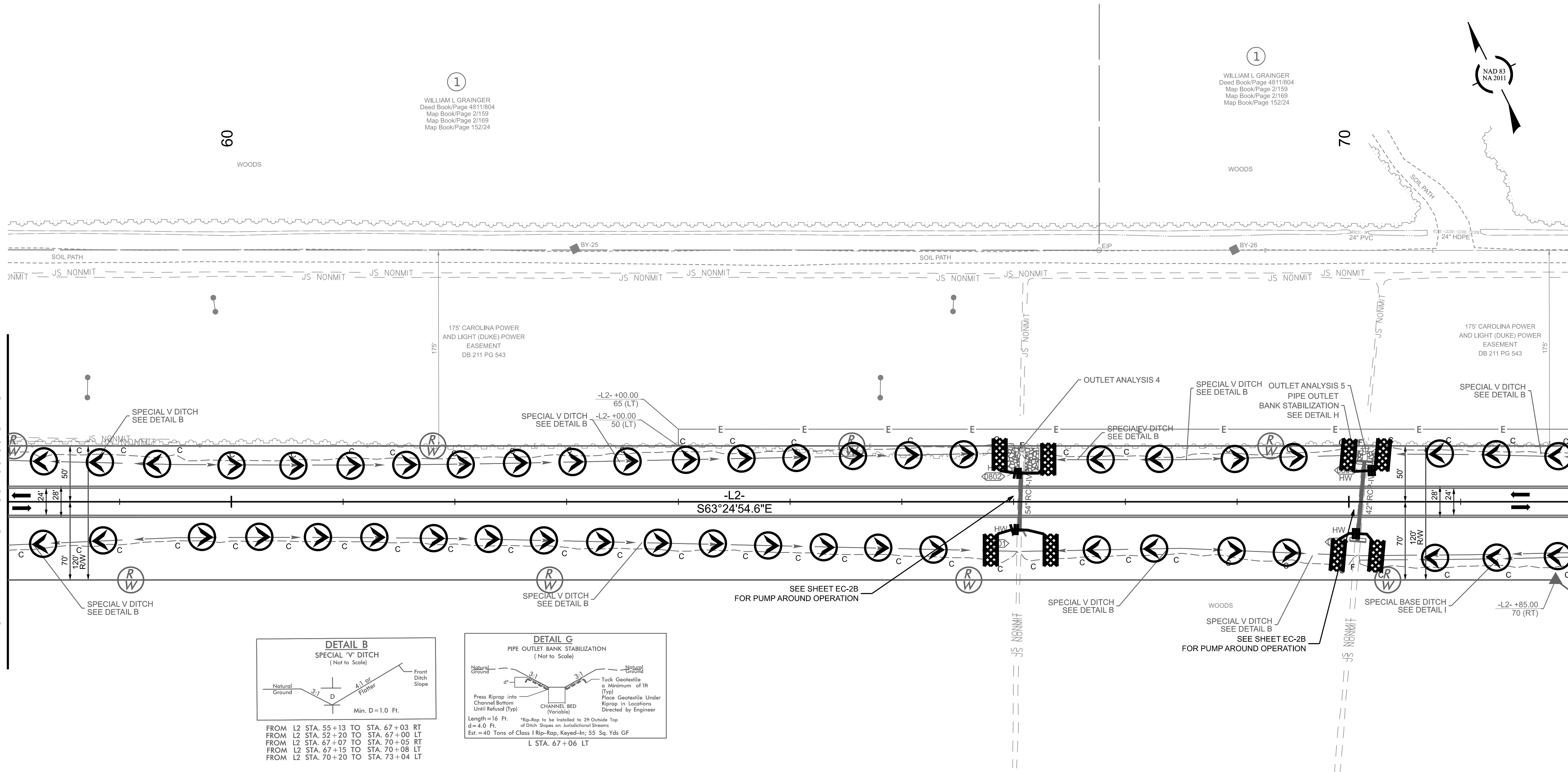
HYDRAULICS ENGINEER

PREPARED BY

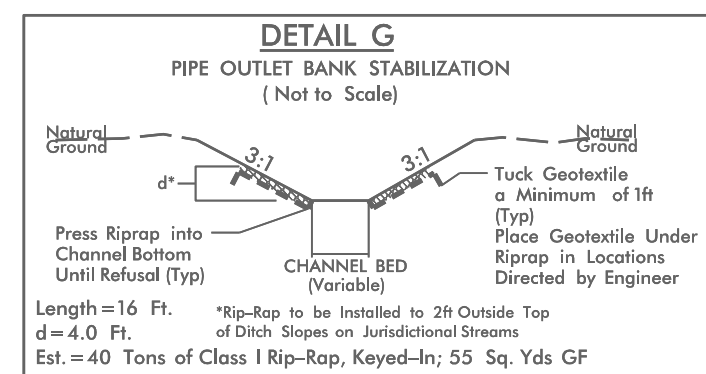
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MATCH LINE -L2- STA 58+00.00 SEE SHEET 7

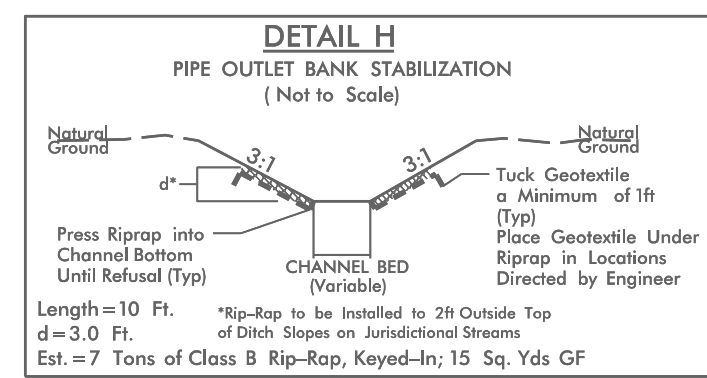
MATCH LINE -L2- STA 72+00.00 SEE SHEET 9



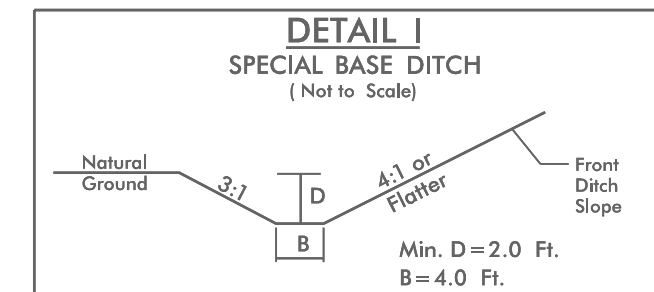
FROM L2 STA. 55+13 TO STA. 67+03 RT FROM L2 STA. 52+20 TO STA. 67+00 LT FROM L2 STA. 67+07 TO STA. 70+05 RT FROM L2 STA. 67+15 TO STA. 70+08 LT FROM L2 STA. 70+20 TO STA. 73+04 LT



Length = 16 Ft. *Rip-Rap to be installed to 2ft Outside Top of Ditch Slopes on Jurisdictional Streams Est. = 40 Tons of Class I Rip-Rap, Keyed-In; 55 Sq. Yds GF L STA. 67+06 LT

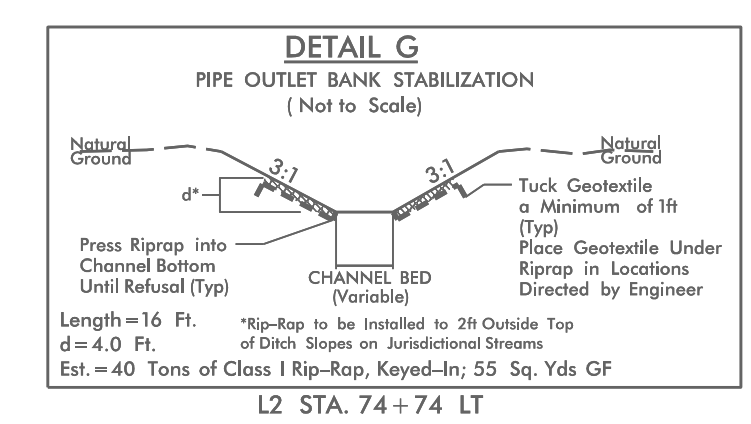


Length = 10 Ft. *Rip-Rap to be installed to 2ft Outside Top of Ditch Slopes on Jurisdictional Streams Est. = 7 Tons of Class B Rip-Rap, Keyed-In; 15 Sq. Yds GF L2 STA. 70+15 LT

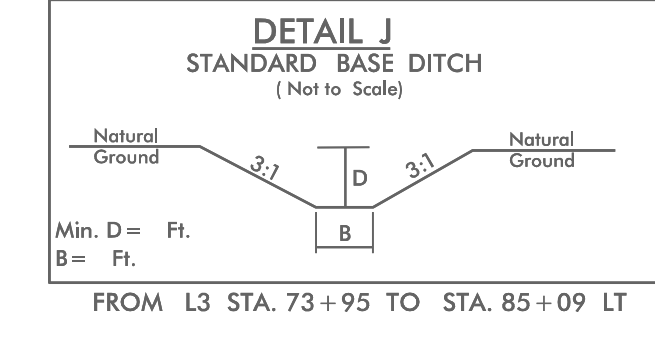
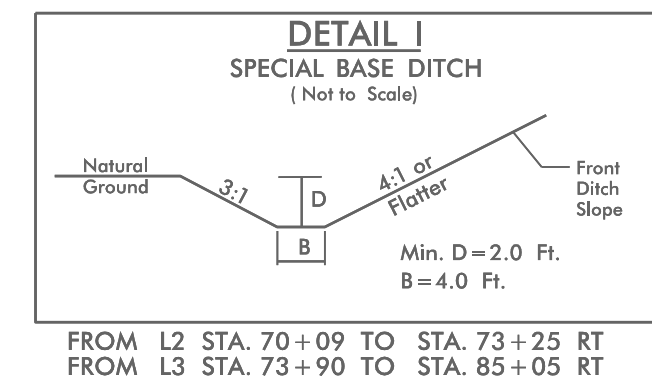
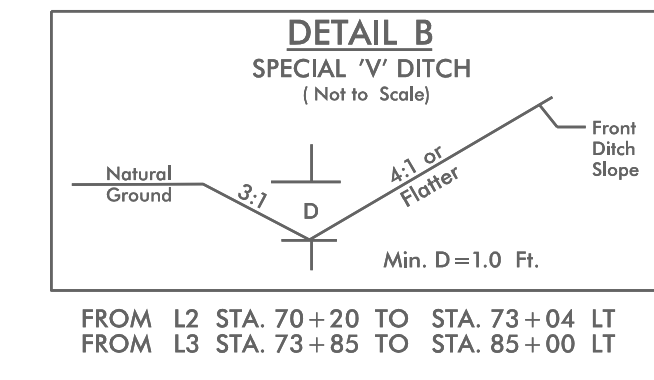


FROM L STA. 70+09 TO STA. 85+05 RT

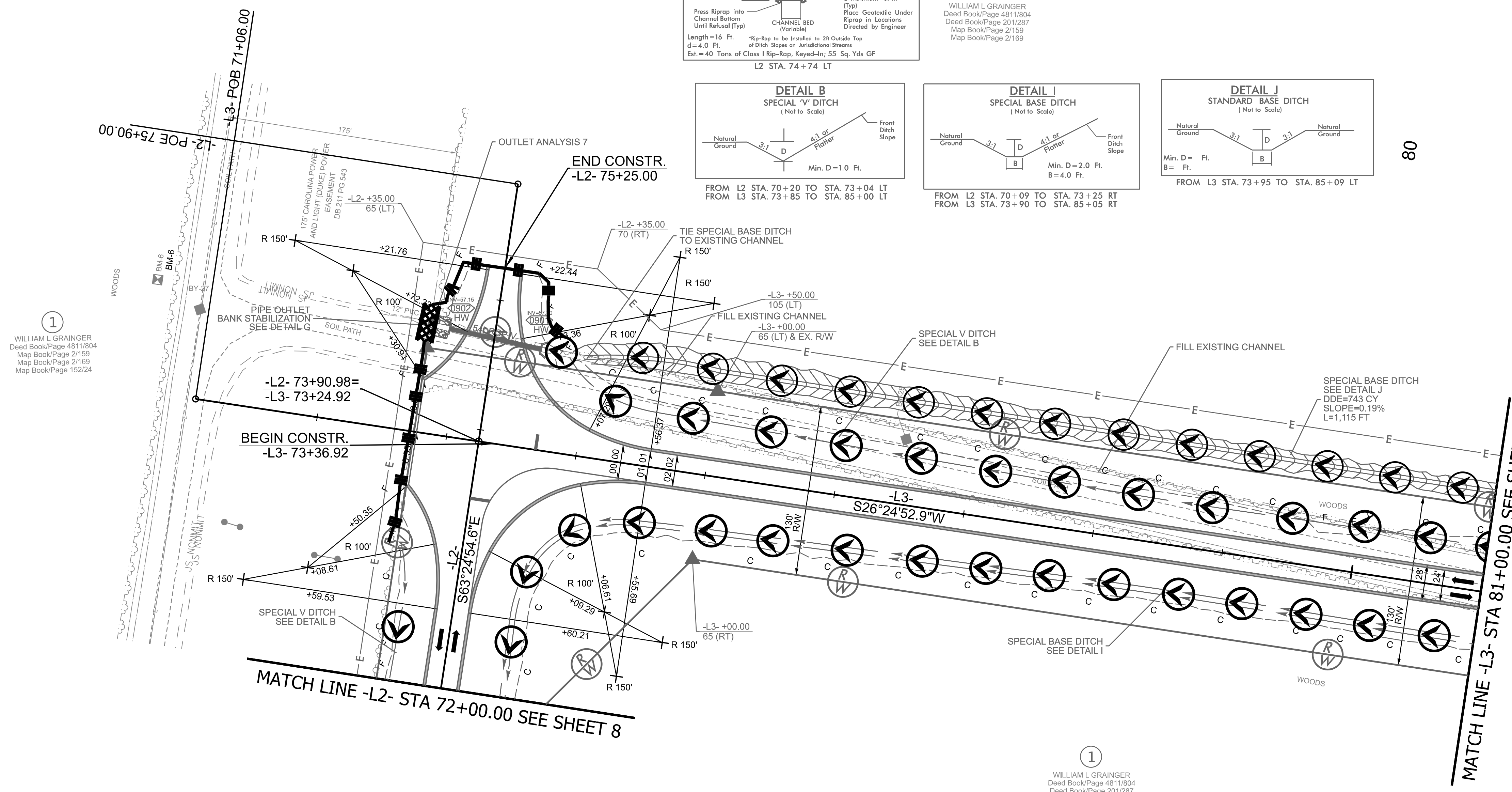
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Deed Book/Page 201/287
Map Book/Page 2/169
Map Book/Page 152/24

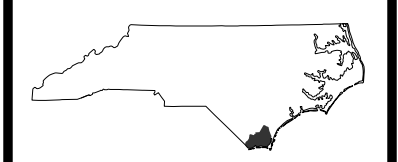
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WILLIAM L GRAINGER
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Deed Book/Page 201/287
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MATCH LINE -L3- STA 81+00.00 SEE SHEET 9

HE-0016

EC 18 | CONSTR. 010

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
BRUNSWICK COUNTY

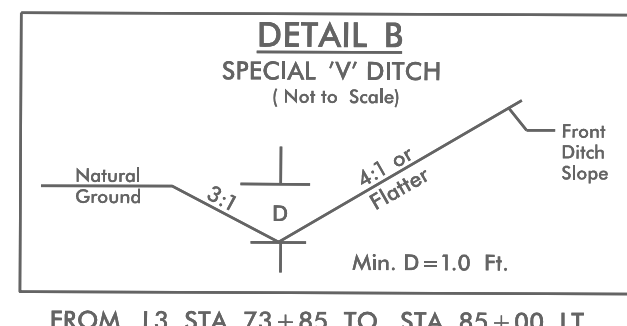


ROADWAY DESIGN UNIT
ROADWAY DESIGN
ENGINEER

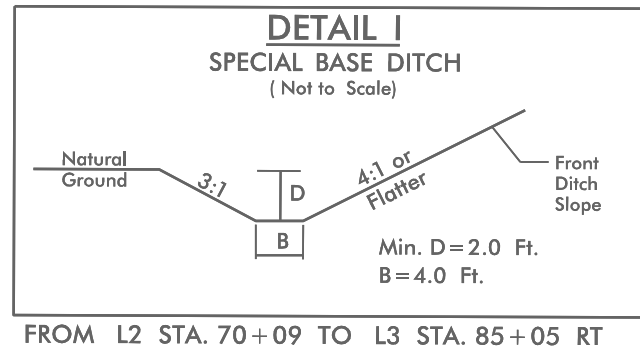
HYDRAULICS
ENGINEER

PREPARED BY

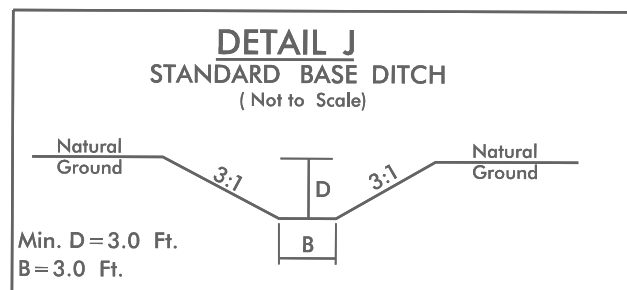
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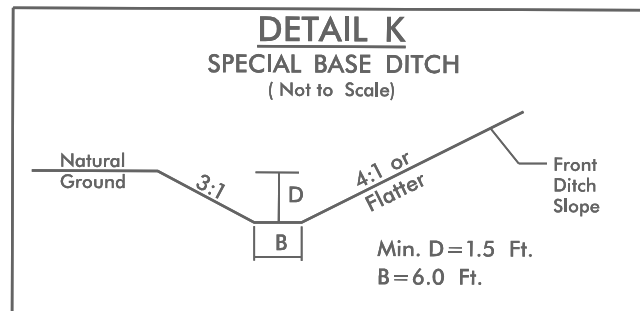
FROM L3 STA. 73+85 TO STA. 85+00 LT



FROM L2 STA. 70+09 TO L3 STA. 85+05 RT



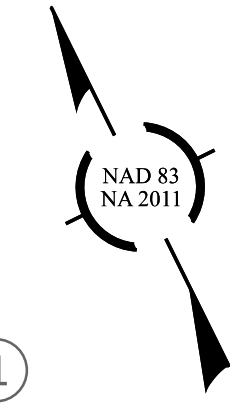
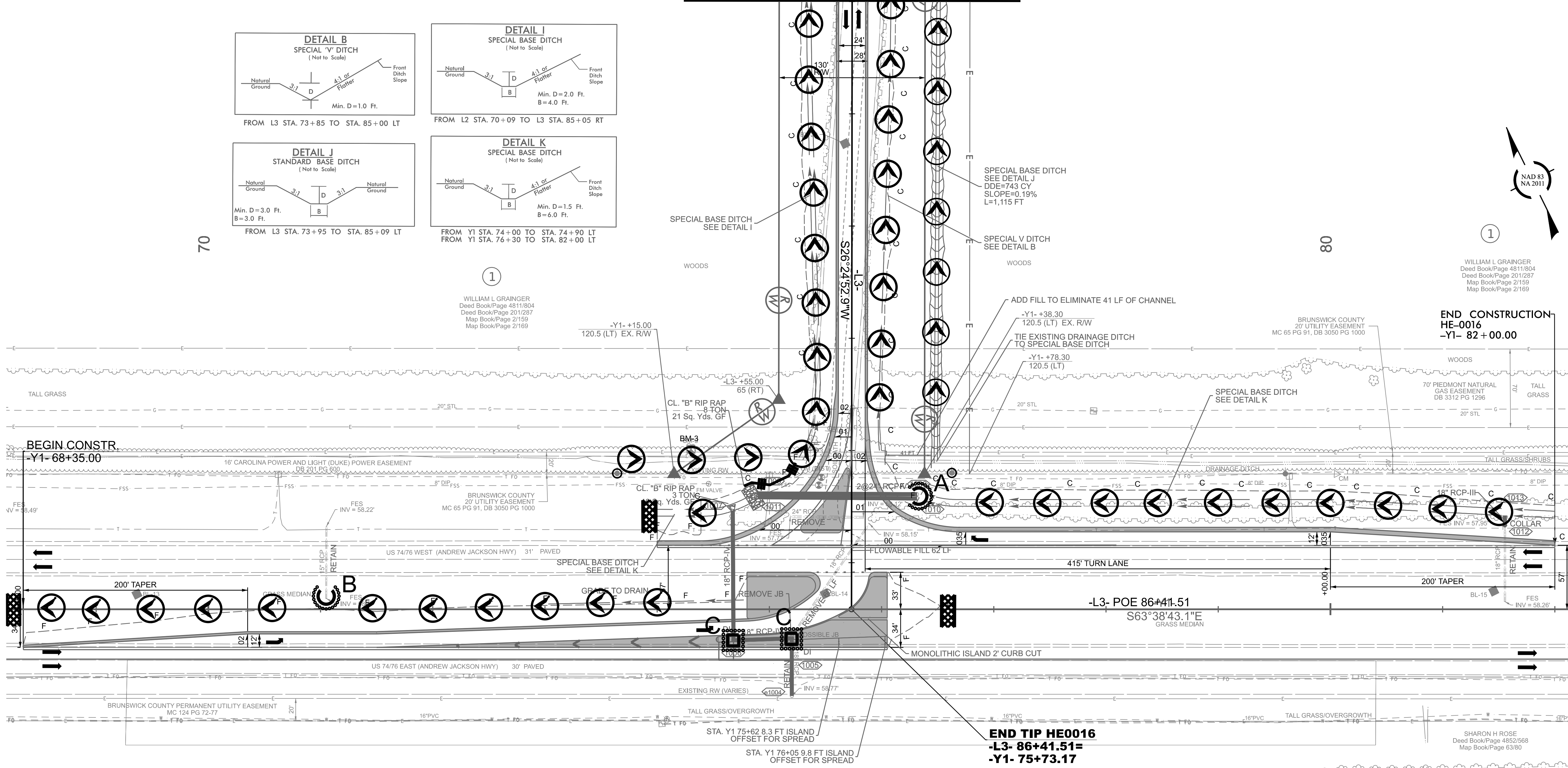
FROM L3 STA. 73+95 TO STA. 85+09 LT



FROM Y1 STA. 74+00 TO STA. 74+90 LT
FROM Y1 STA. 76+30 TO STA. 82+00 LT

1

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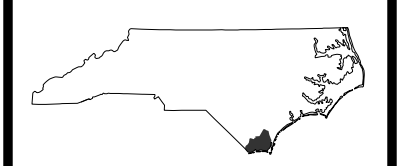
WILLIAM L GRAINGER
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Deed Book/Page 201/287
Map Book/Page 2/159
Map Book/Page 2/169

END CONSTRUCTION
HE-0016
-Y1- 82+00.00

BEGIN CONSTR.
-Y1- 68+35.00

END TIP HE0016
-L3- 86+41.51=
-Y1- 75+73.17

FOR -L- PROFILE, SEE SHEET NO. 014
FOR -Y1- PROFILE, SEE SHEET NO. 015 & 017

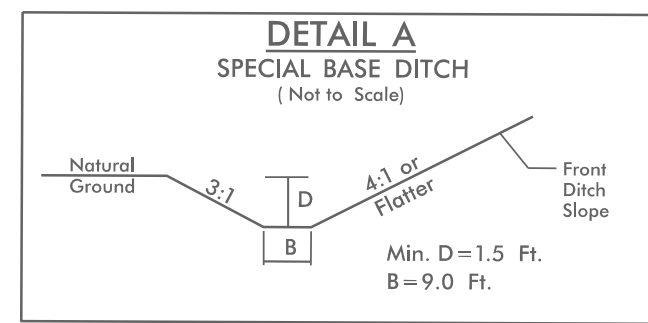
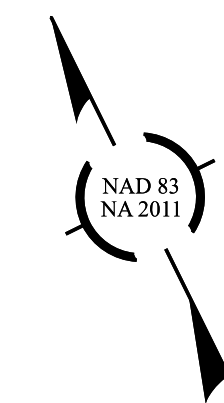


ROADWAY DESIGN UNIT
ROADWAY DESIGN
ENGINEER

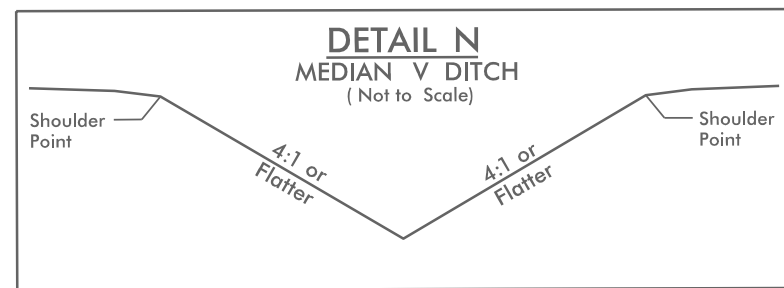
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ENGINEER

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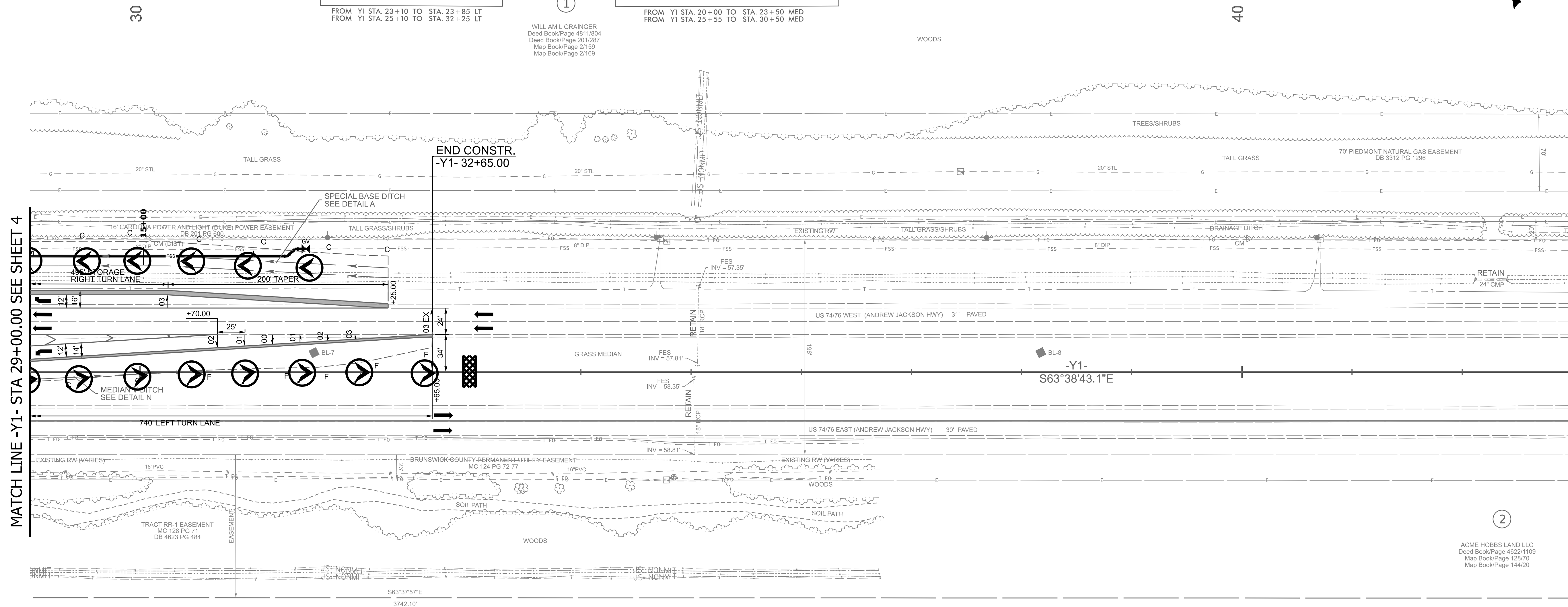
FROM Y1 STA. 23+10 TO STA. 23+85 LT
FROM Y1 STA. 25+10 TO STA. 32+25 LT



FROM Y1 STA. 20+00 TO STA. 23+50 MED
FROM Y1 STA. 25+55 TO STA. 30+50 MED

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WOODS



MATCH LINE -Y1- STA 29+00.00 SEE SHEET 4

END CONSTR.
-Y1- 32+65.00

2

ACME HOBBS LAND LLC
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Map Book/Page 128/70
Map Book/Page 144/20