STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.7.R.114	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION

PROJECT: 17BP.7.R.114

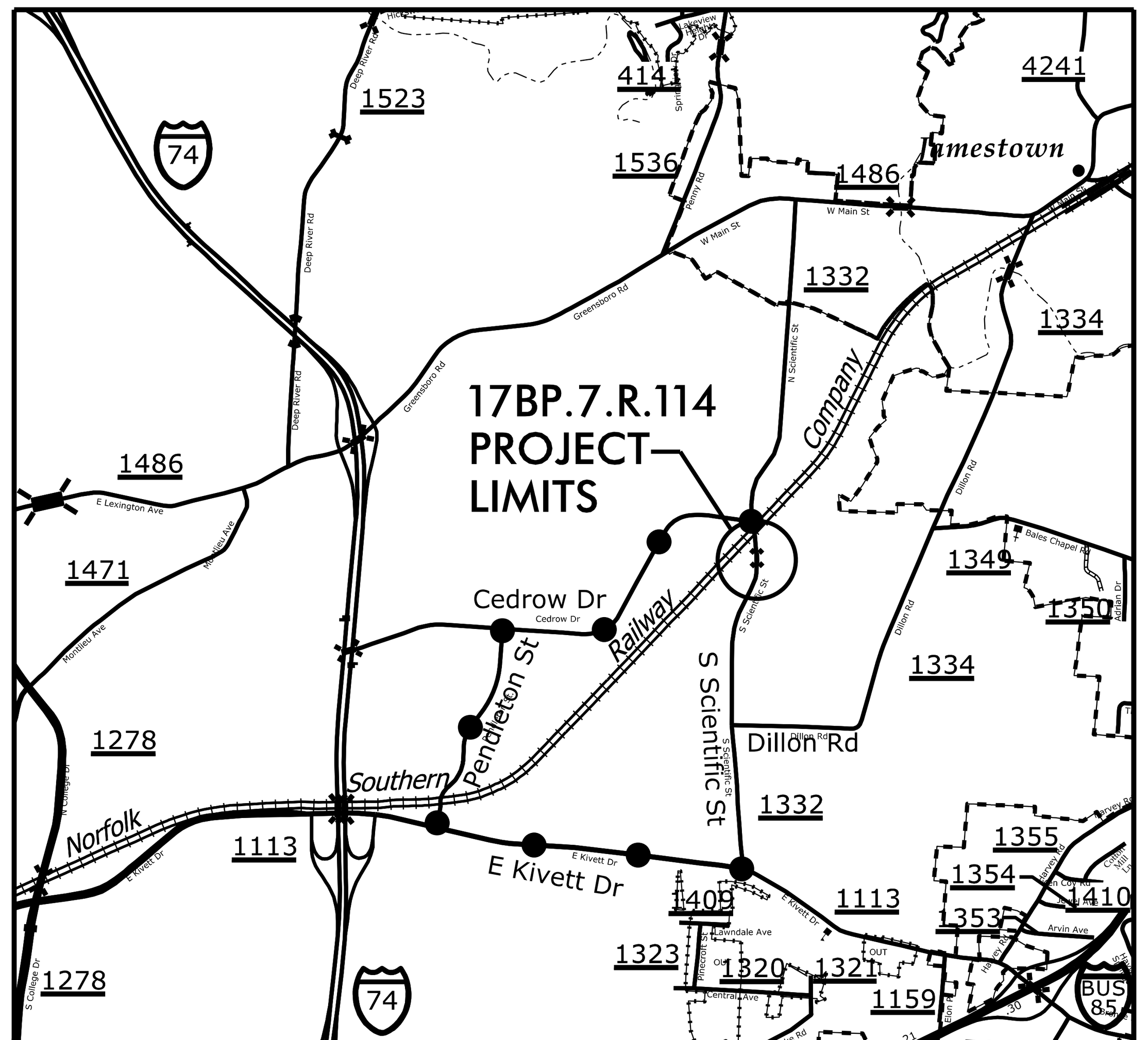
CONTRACT:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

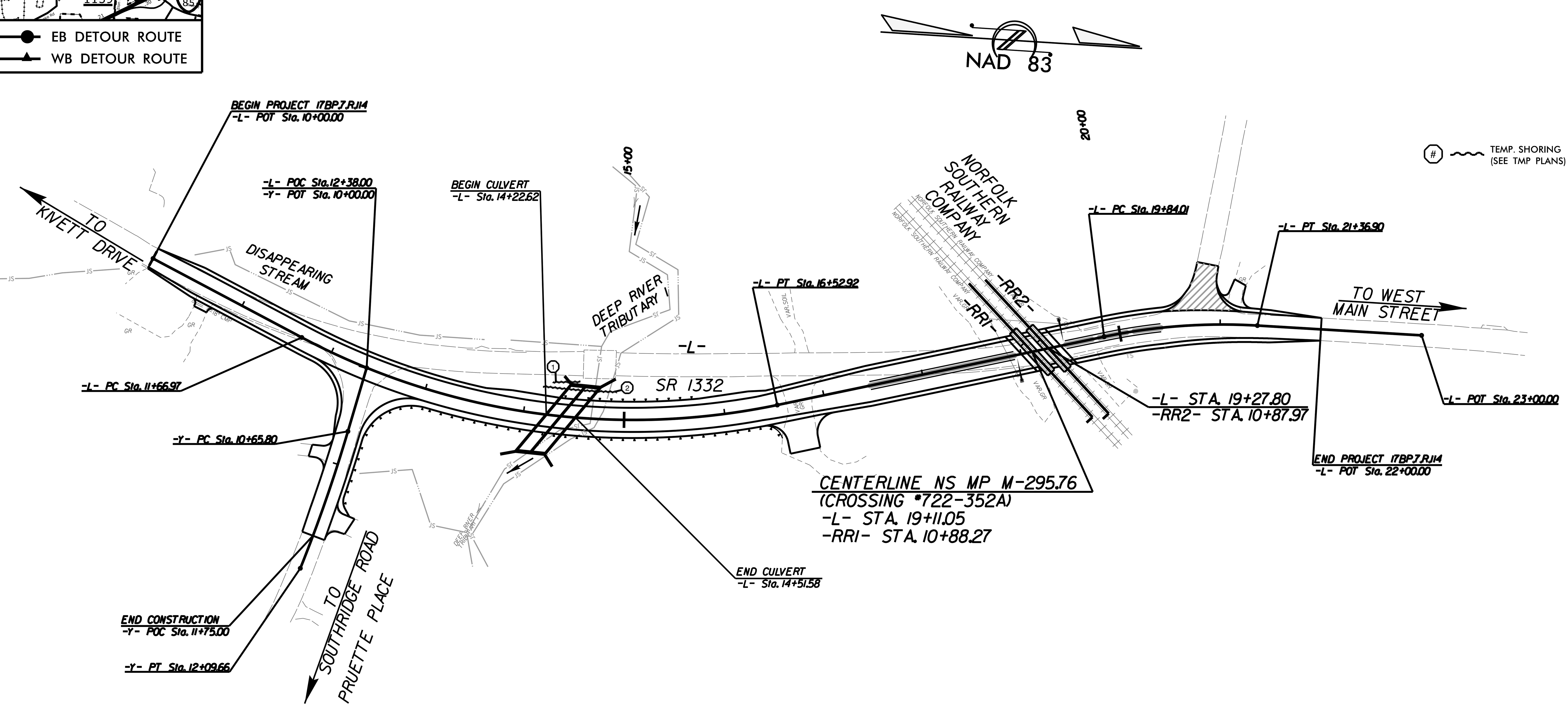
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

GUILFORD COUNTY

LOCATION: BRIDGE NO. 52 OVER DEEP RIVER TRIBUTARY 1 ON SR 1332 (SCIENTIFIC STREET)
TYPE OF WORK: GRADING, PAVING, DRAINAGE AND CULVERT



VICINITY MAP (NOT TO SCALE)
OFF-SITE DETOUR
EB DETOUR ROUTE
WB DETOUR ROUTE



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

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

Refer To E. C. Special Provisions for Special Considerations.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

GRAPHIC SCALE

50 25 0 50 100

PLANS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG010000 GENERAL STORMWATER CONSTRUCTION PERMIT ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES.

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

PREPARED IN THE OFFICE OF:

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

2024 STANDARD SPECIFICATIONS

DESIGNED BY:

David R. Wagner II — 4286
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 revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1/23/2026 ...0052_EC_TSH.dgn 1:01:14 PM

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.R.114	EC-02
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

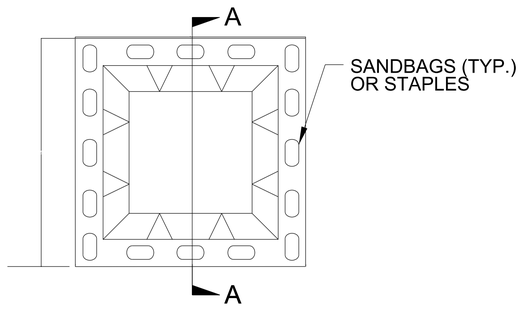
EROSION & SEDIMENT CONTROL LEGEND

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	TSD
1630.04	Stilling Basin	
1630.05	Temporary Diversion	TD
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	A
1632.02	Type B	B
1632.03	Type C	C

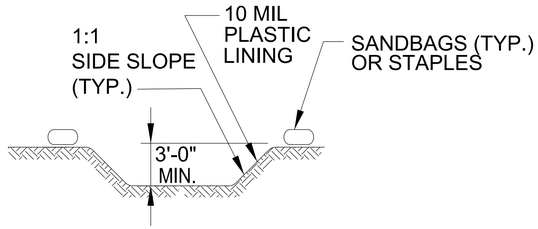
Std. #	Description	Symbol
1633.01	Temporary Rock Silt Check Type A	
1633.02	Temporary Rock Silt Check Type B	
1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1634.01	Temporary Rock Sediment Dam Type A	
1634.02	Temporary Rock Sediment Dam Type B	
1635.01	Rock Pipe Inlet Sediment Trap Type A	A
1635.02	Rock Pipe Inlet Sediment Trap Type B	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	FF
	Silt Fence Coir Fiber Wattle Break	FFF
1636.03	Excelsior Wattle Barrier	EW EW EW
1636.03	Coir Fiber Wattle Barrier	CFW CFW CFW

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.RJ14	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



PLAN



SECTION A-A

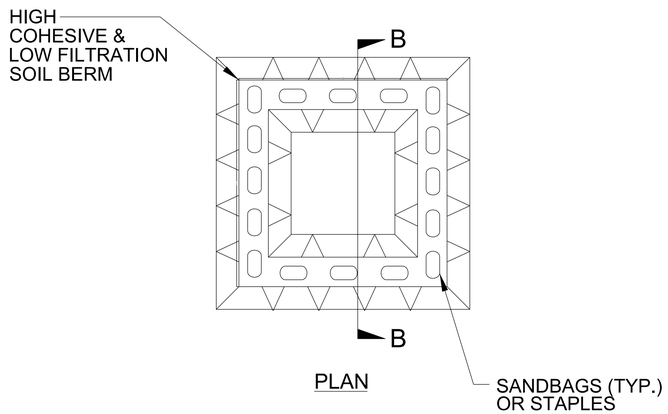
NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

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.

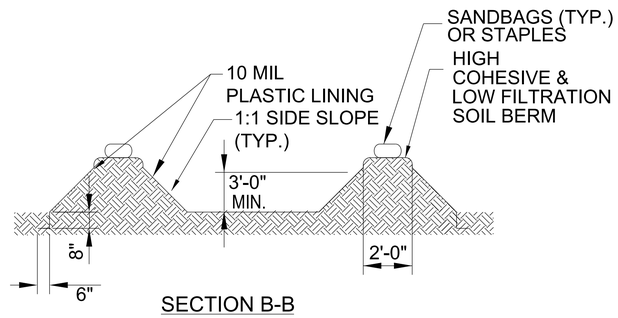
3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE

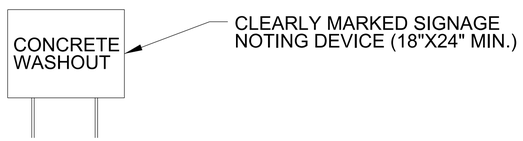
NOT TO SCALE



PLAN



SECTION B-B



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

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PROJECT REFERENCE NO.	SHEET NO.
17BP.7.RJ14	EC-03

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING ON SLOPES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-Y-	10+25	11+50	LT	350
4	-L-	14+00	16+25	LT	630
4	-L-	12+75	16+50	RT	1410
				TOTAL	2390
	MATTING FOR DITCHES - STRAW				
4	-L-	10+25	12+00	RT	55
			TOTAL FOR DITCHES		55
			TOTAL FOR SLOPES		2390
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					7645
				TOTAL	10090

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.RJ14	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

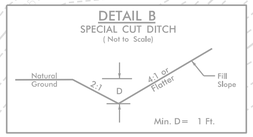
SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 TO 4:1	14 DAYS	7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

PROJECT REFERENCE	SHEET NO.
17BP.7.R.114 – GUILFORD 52	EC-04/CONST.04

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

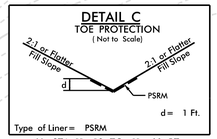
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

DETAIL B
SPECIAL CUT DITCH
(Not to Scale)



–L– STA. 10+25 TO 12+00 RT

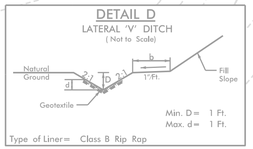
DETAIL C
TOE PROTECTION
(Not to Scale)



Type of Liner = PSRM

–Y– STA. 11+12 TO 11+60 RT

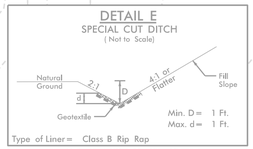
DETAIL D
LATERAL 'V' DITCH
(Not to Scale)



Type of Liner = Class B Rip Rap

–L– STA. 14+25 TO 16+40 RT
–L– STA. 17+00 TO 18+70 RT

DETAIL E
SPECIAL CUT DITCH
(Not to Scale)



Type of Liner = Class B Rip Rap

–L– STA. 21+03 TO 21+85 LT
–Y– STA. 10+23 TO 10+86 RT

NAD 83/NA 2011

BEGIN PROJECT 17BP.7.RJ14
–L– POT Sta. 10+00.00

–L– POC Sta.12+38.00
–Y– POT Sta. 10+00.00

BEGIN CULVERT
–L– Sta. 14+22.62

–L– PC Sta. 11+66.97

–Y– PC Sta. 10+65.80

END CONSTRUCTION
–Y– POC Sta. 11+75.00

–Y– PT Sta. 12+09.66

END CULVERT
–L– Sta. 14+51.58

–L– PT Sta. 16+52.92

–RRI– POT Sta. 11+80.63

–RR2– POT Sta. 11+80.62

–L– PC Sta. 19+84.01

–L– PT Sta. 21+36.90

END PROJECT 17BP.7.RJ14
–L– POT Sta. 22+00.00

–L– STA. 19+27.80
–RR2– STA. 10+87.97

–RR2– POT Sta. 10+00.00

–RRI– POT Sta. 10+00.00

CENTERLINE NS MP M-295.76 (CROSSING °722-352A)
SR 1332 (SCIENTIFIC ST.) –L– STA. 19+11.05
–RRI– STA. 10+88.27

REMOVE EXISTING RETAINING WALL

CLASS B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE

CLASS II RIP RAP ON FLOOD BENCH BORDER

95 LF OF OUTLET CHANNEL IMPROVEMENTS
EST. 225 TONS RIP RAP
EST. 270 SY GEOTEXTILE

IMPERVIOUS DIKE

PIPE CLEANOUT
EST. 76 LF

SPECIAL CUT DITCH
SEE DETAIL B

SPECIAL CUT DITCH
SEE DETAIL E
EST. 20 TONS RIP RAP
EST. 35 SY GEOTEXTILE

TOE PROTECTION
SEE DETAIL C
EST. 35 SY PSRM

CLASS B RIP RAP
EST. 8 TONS
EST. 21 SY GEOTEXTILE

PROPOSED TOP OF BANK

CLASS II RIP RAP ON FLOOD BENCH BORDER

40 LF OF OUTLET CHANNEL IMPROVEMENTS
EST. 125 TONS RIP RAP
EST. 155 SY GEOTEXTILE

LATERAL V DITCH
SEE DETAIL D
EST. 70 TONS RIP RAP
EST. 125 SY GEOTEXTILE
EST. 30 CY DDE

CLASS B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

LATERAL V DITCH
SEE DETAIL D
EST. 55 TONS RIP RAP
EST. 95 SY GEOTEXTILE
EST. 30 CY DDE

ADDITIONAL OVERLAY AREA

SPECIAL CUT DITCH
SEE DETAIL E
EST. 25 TONS RIP-RAP
EST. 55 SY GEOTEXTILE

CLASS B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE

NO DEED REFERENCE FOUND

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

DB 8241 PG 277
PB 20 PG 73

DB 7637 PG 946
PB 20 PG 73

DB 7759 PG 516
PB 13 PG 88

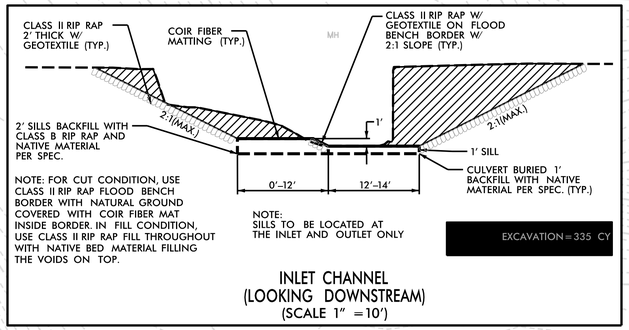
DB 5286 PG 1191
DB 6063 PG 239
PB 25 PG 63
PB 154 PG 80

DB 6075 PG 2620
PB 25 PG 63

DB 8172 PG 2562
PB 28 PG 51

DB 7906 PG 2389
PB 28 PG 51

DB 8241 PG 773
DB 7035 PG 3004

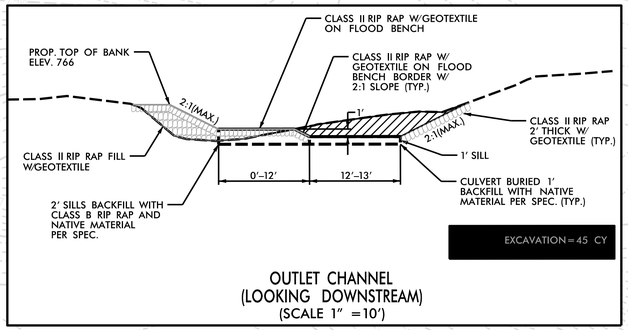


NOTE: FOR CUT CONDITION, USE CLASS II RIP RAP FLOOD BENCH BORDER WITH NATURAL GROUND COVERED WITH COIR FIBER MAT INSIDE BORDER. IN FILL CONDITION, USE CLASS II RIP RAP FILL THROUGHOUT WITH NATIVE BED MATERIAL FILLING THE VOIDS ON TOP.

NOTE:
SILLS TO BE LOCATED AT THE INLET AND OUTLET ONLY

EXCAVATION = 335 CY

INLET CHANNEL
(LOOKING DOWNSTREAM)
(SCALE 1" =10')



EXCAVATION = 45 CY

OUTLET CHANNEL
(LOOKING DOWNSTREAM)
(SCALE 1" =10')

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Raleigh, NC 27606
www.mottmac.com

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St. Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

GRAPHIC SCALE
25' 0 25' 50'

TEMP. SHORING (SEE TMP PLANS)

1:01:42 PM
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1/23/2026
1/23/2026

5/14/99

CONSTRUCTION SEQUENCE

NAD 83/NA 2011

GRAPHIC SCALE
3.0 0 3.0 6.0

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.RJ14	EC-4A/CONST.4

BRIDGE NO. 52 OVER UT
TO DEEP RIVER ON
SR 1332 (SCIENTIFIC STREET)
GUILFORD COUNTY, NC

PHASE 1

1.) INSTALL ALL TEMPORARY SEDIMENT CONTROL DEVICES NECESSARY FOR CULVERT CONSTRUCTION.

2.) INSTALL 89' x 56' x 3' STILLING BASIN PER NCDOT STANDARD DRAWING 1630.04.

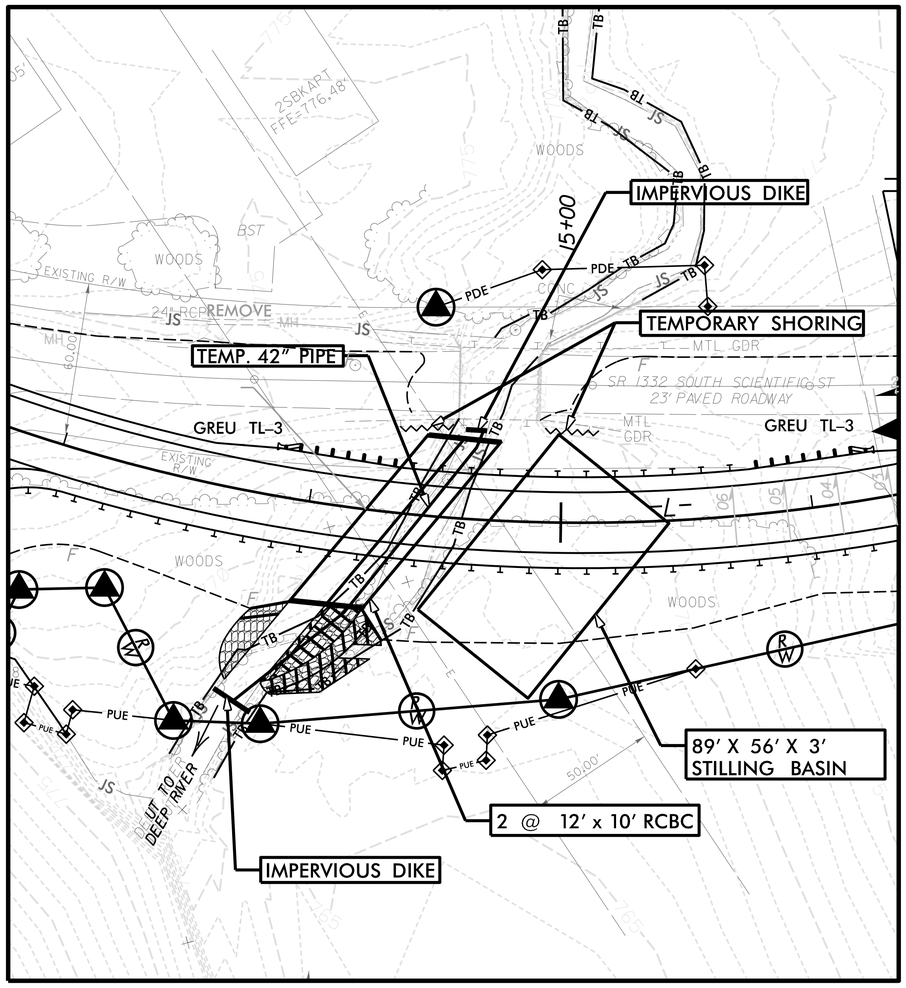
3.) INSTALL IMPERVIOUS DIKES AND INSTALL 42" TEMP. PIPE.

4.) DE-WATER EFFLUENT FROM WORK SITE INTO STILLING BASIN.

5.) INSTALL TEMPORARY SHORING.

6.) CONSTRUCT BARREL 2 OF PROPOSED 12'x10' RCBC, DOWNSTEAM WING WALLS, AND DOWNSTREAM CHANNEL IMPROVEMENTS PER PLANS.

7.) MOVE TEMPORARY 42" PIPE INTO NEWLY CONSTRUCTED BARREL 2 AND CONSTRUCT BARREL 1.



PHASE 2

8.) REMOVE 89' x 56' x 3' STILLING BASIN AND UTILIZE SPECIAL STILLING BASIN(S) AS NECESSARY.

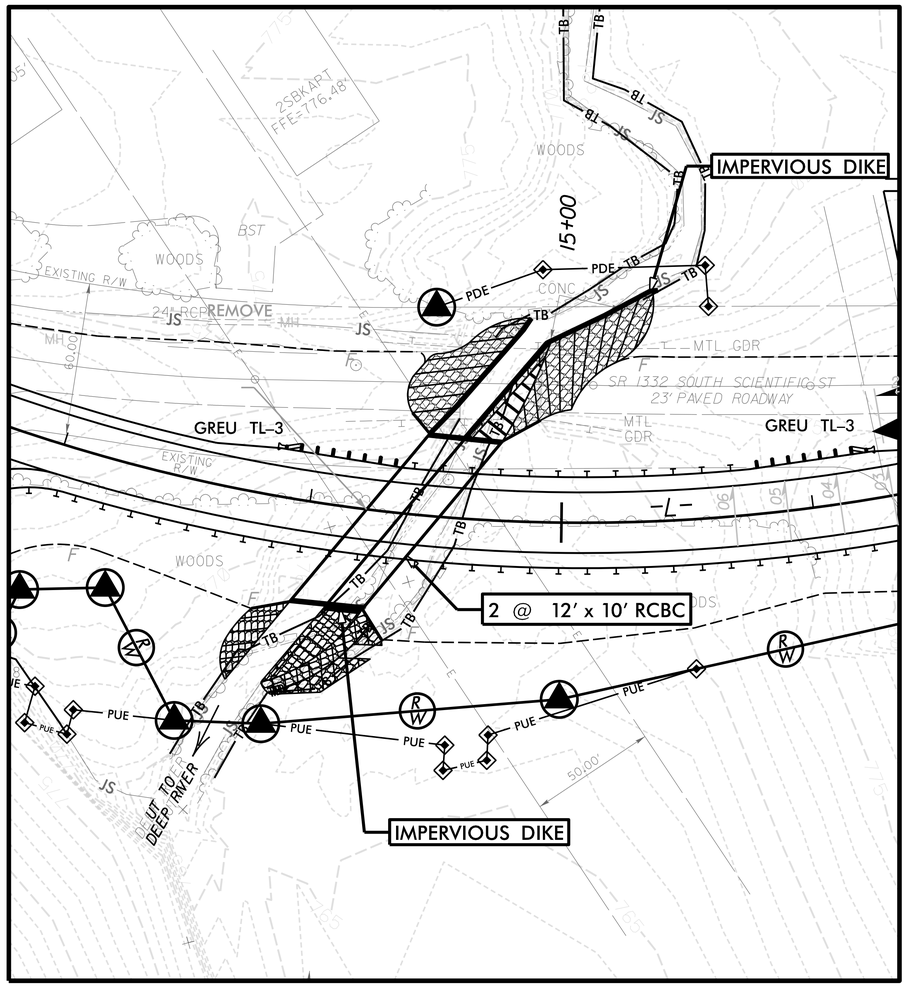
9.) CONSTRUCT PROPOSED ROADWAY.

10.) REMOVE EXISTING BRIDGE AND TEMPORARY SHORING.

11.) INSTALL IMPERVIOUS DIKES AS SHOWN.

12.) CONSTRUCT UPSTREAM WING WALLS AND CHANNEL IMPROVEMENTS PER PLANS.

13.) UPON STABILIZATION OF ALL DISTURBED AREAS, REMOVE ALL TEMPORARY SEDIMENT CONTROL DEVICES AND IMPERVIOUS DIKES.



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PROJECT REFERENCE	SHEET NO.
17BP.7.R.114 – GUILFORD 52	EC-05/CONST.04

Prepared in the Office of:

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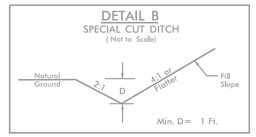
Raleigh, NC 27606
www.mottmac.com

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St. Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

GRAPHIC SCALE
25' 0 25' 50'

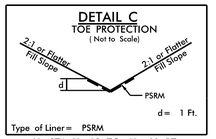
TEMP. SHORING (SEE TMP PLANS)

DETAIL B
SPECIAL CUT DITCH
(Not to Scale)



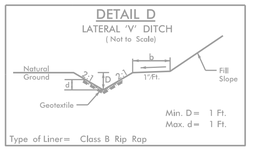
–L– STA. 10+25 TO 12+00 RT

DETAIL C
TOE PROTECTION
(Not to Scale)



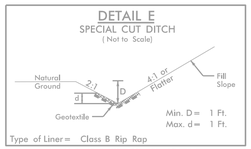
–Y– STA. 11+12 TO 11+60 RT

DETAIL D
LATERAL 'V' DITCH
(Not to Scale)



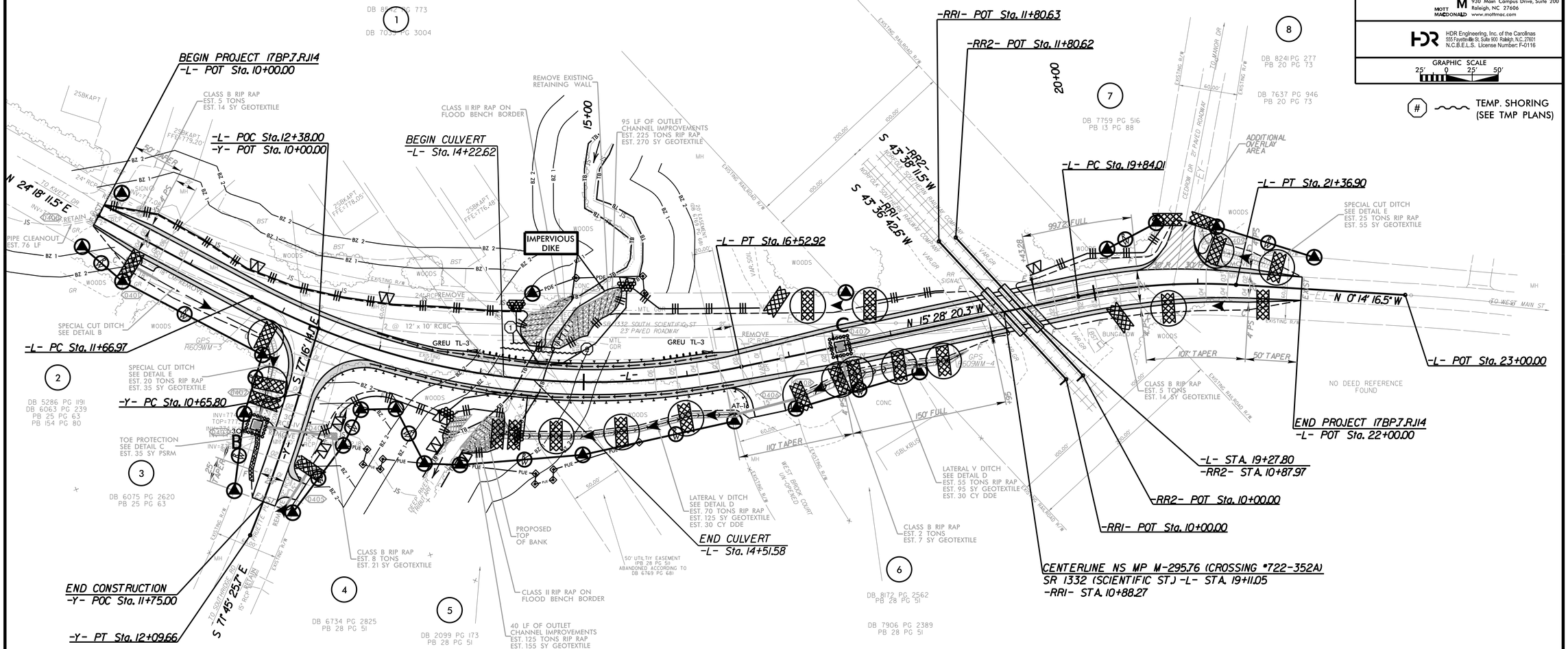
–L– STA. 14+25 TO 16+40 RT
–L– STA. 17+00 TO 18+70 RT

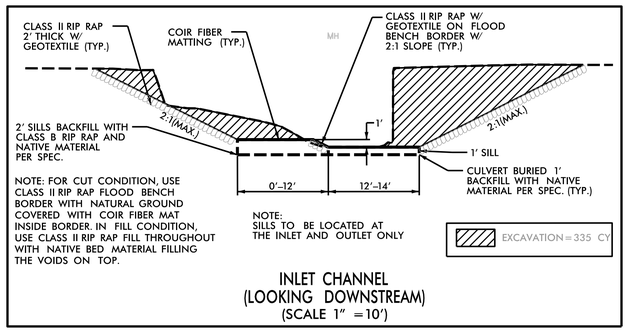
DETAIL E
SPECIAL CUT DITCH
(Not to Scale)



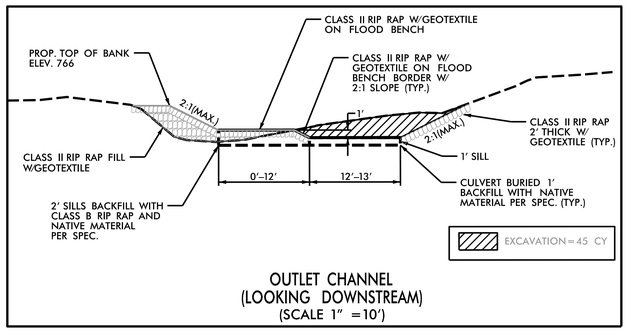
–L– STA. 21+03 TO 21+85 LT
–Y– STA. 10+23 TO 10+86 RT

NAD 83/NA 2011





INLET CHANNEL
(LOOKING DOWNSTREAM)
(SCALE 1" = 10')



OUTLET CHANNEL
(LOOKING DOWNSTREAM)
(SCALE 1" = 10')

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