

**TIP PROJECT: K-4703**

STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS  
 PLAN FOR PROPOSED  
 HIGHWAY EROSION CONTROL

**WILKES COUNTY**

**LOCATION: NEW REST AREA - NORTHBOUND US 421  
 WEST OF NC 115**

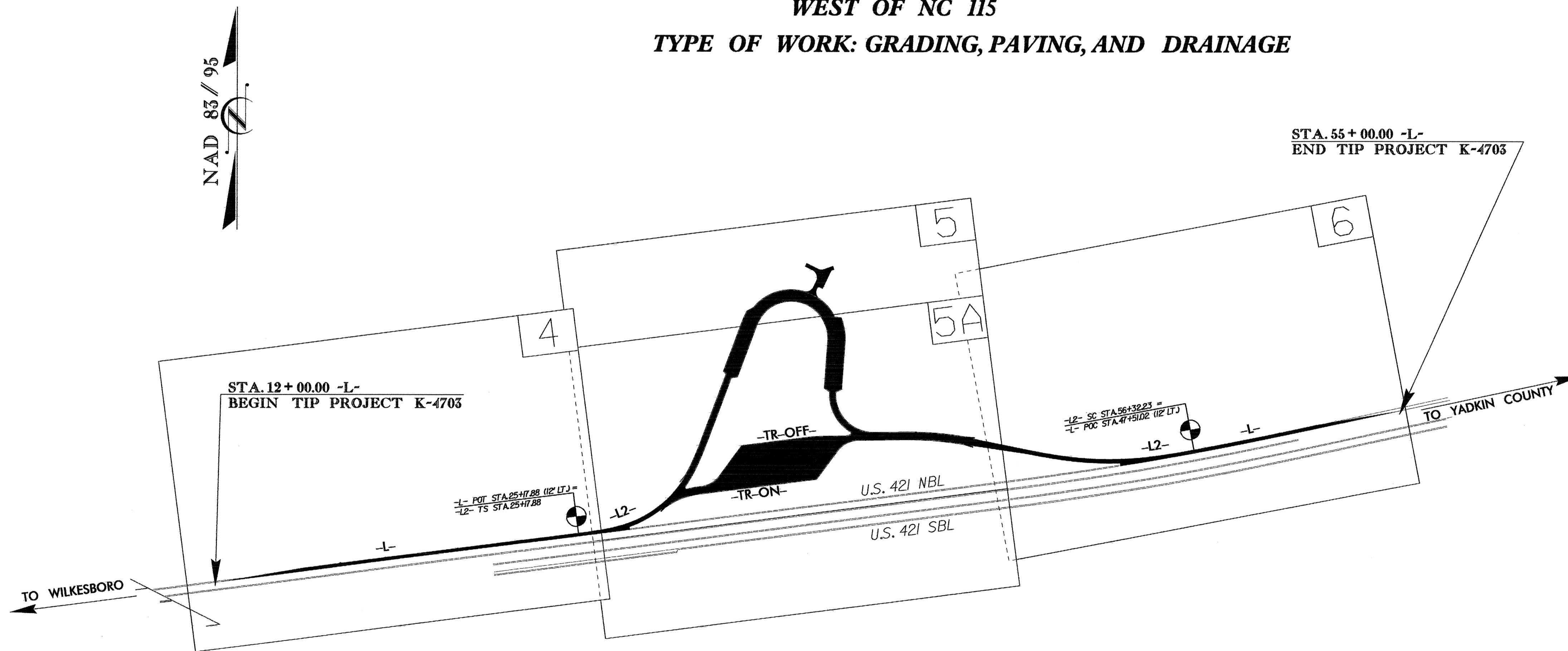
**TYPE OF WORK: GRADING, PAVING, AND DRAINAGE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	K-4703	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

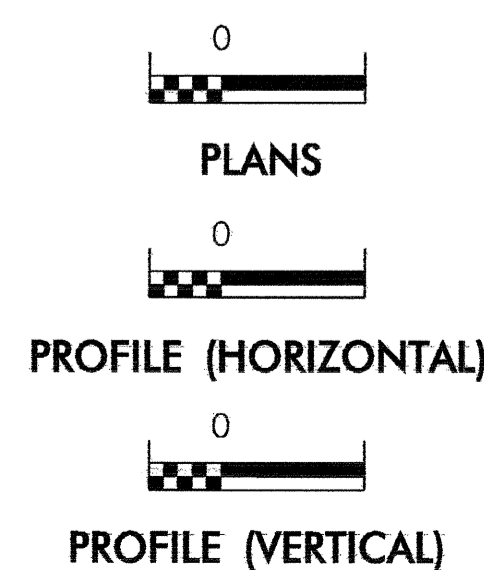
**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
	Streambank Reforestation.....	
1630.03	Temporary Silt Ditch.....	
1630.05	Temporary Diversion.....	
1605.01	Temporary Silt Fence.....	
1606.01	Special Sediment Control Fence.....	
1622.01	Temporary Berms and Slope Drains.....	
1630.01	Riser Basin.....	
1630.02	Silt Basin Type B.....	
1633.01	Temporary Rock Silt Check Type-A.....	
	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.....	
1630.04	Stilling Basin.....	
	Rock Inlet Sediment Trap:	
1632.01	Type A.....	
1632.02	Type B.....	
1632.03	Type C.....	
	Skimmer Basin.....	
	Tiered Skimmer Basin.....	

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



**GRAPHIC SCALE**



ROADSIDE ENVIRONMENTAL UNIT  
 DIVISION OF HIGHWAYS  
 STATE OF NORTH CAROLINA

Prepared in the Office of:  
**ROADSIDE ENVIRONMENTAL UNIT**  
 1 South Wilmington St.  
 Raleigh, NC 27611  
**2006 STANDARD SPECIFICATIONS**

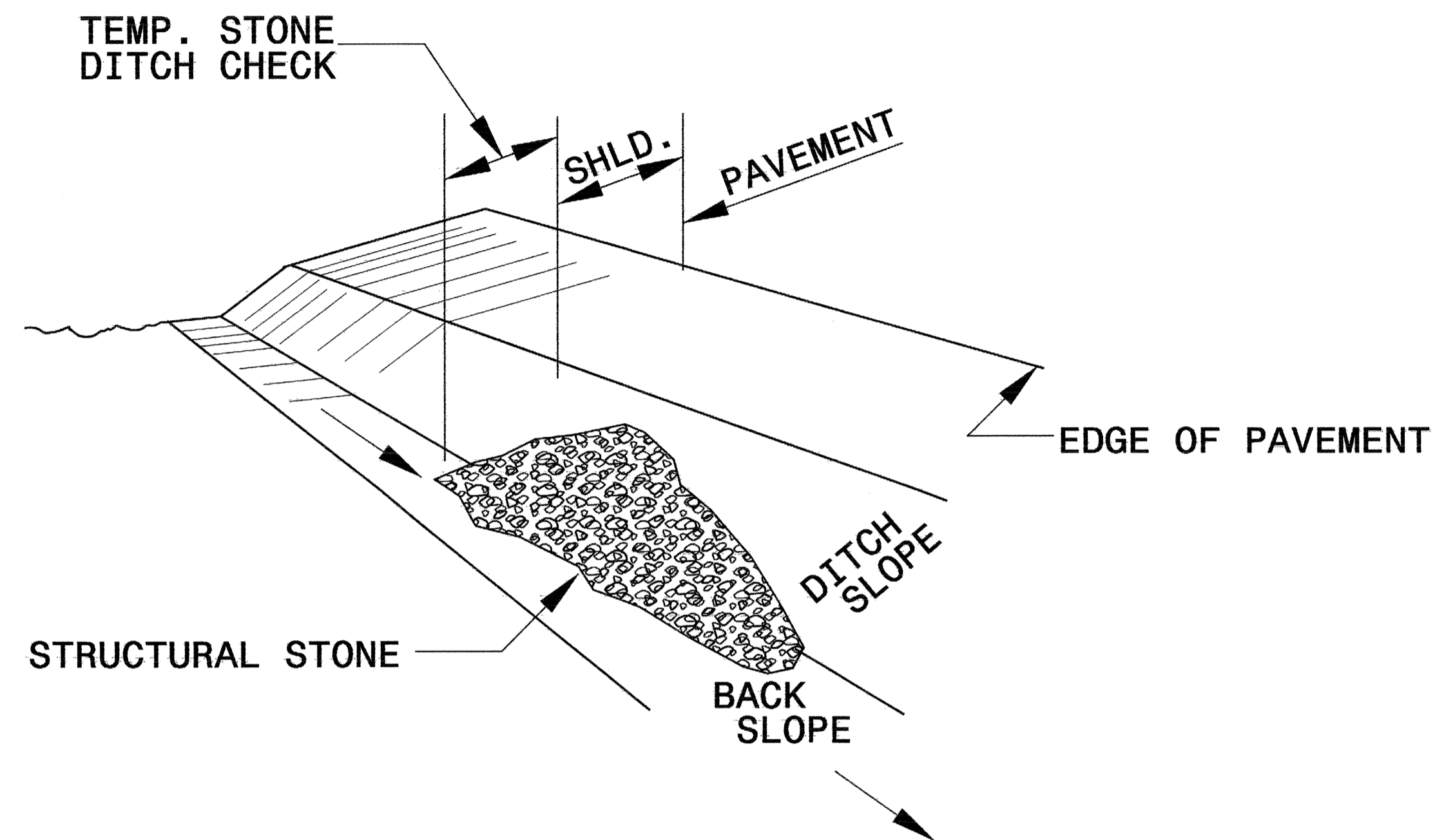
**Roadway Standard Drawings**

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

- |  |  |
|--|--|
| 1605.01 Temporary Silt Fence             | 1632.01 Rock Inlet Sediment Trap Type A      |
| 1606.01 Special Sediment Control Fence   | 1632.02 Rock Inlet Sediment Trap Type B      |
| 1607.01 Gravel Construction Entrance     | 1632.03 Rock Inlet Sediment Trap Type C      |
| 1622.01 Temporary Berms and Slope Drains | 1633.01 Temporary Rock Silt Check Type A     |
| 1630.02 Silt Basin Type B                | 1634.02 Temporary Rock Sediment Dam Type B   |
| 1630.03 Temporary Silt Ditch             | 1635.01 Rock Pipe Inlet Sediment Trap Type A |
| 1630.05 Temporary Diversion              |  |

PROJECT REFERENCE NO. K-4703	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

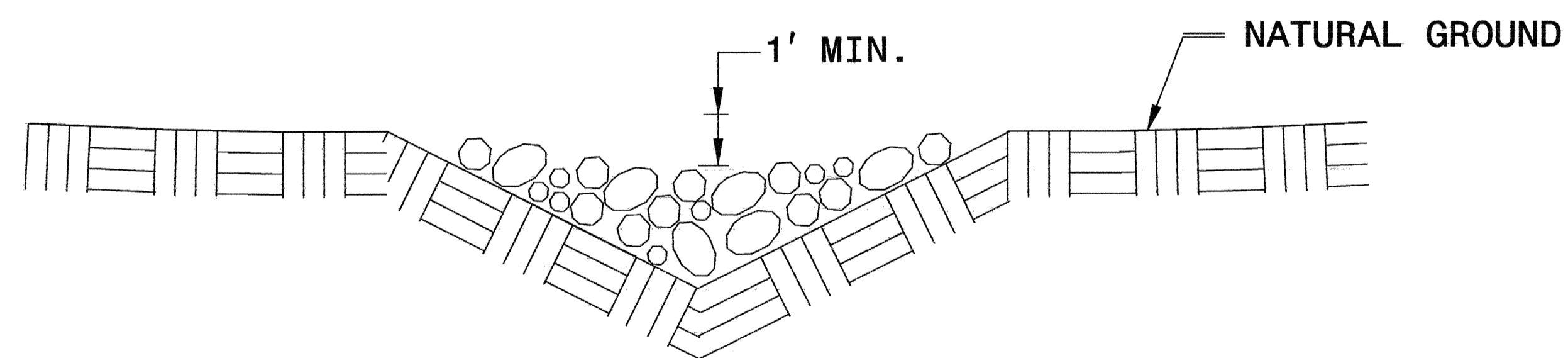


**ISOMETRIC VIEW**

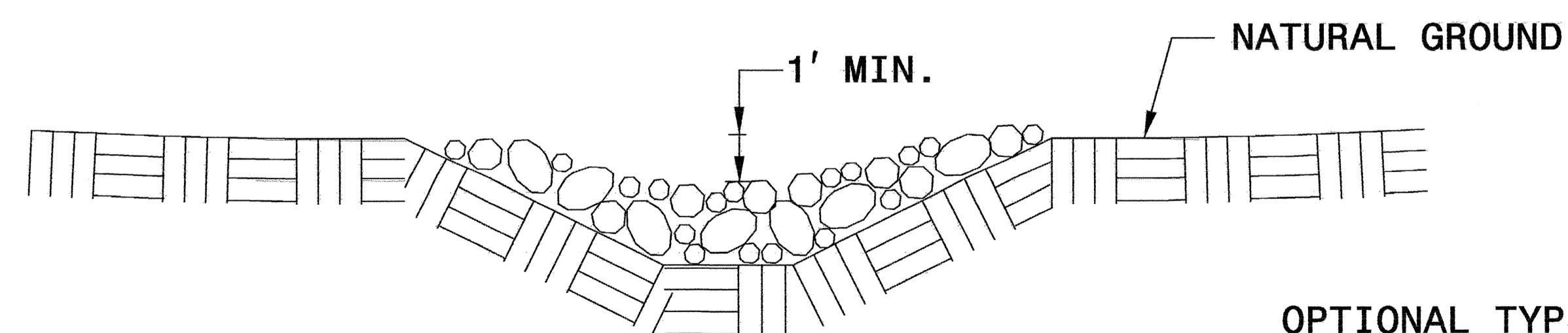
**NOTES:**

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

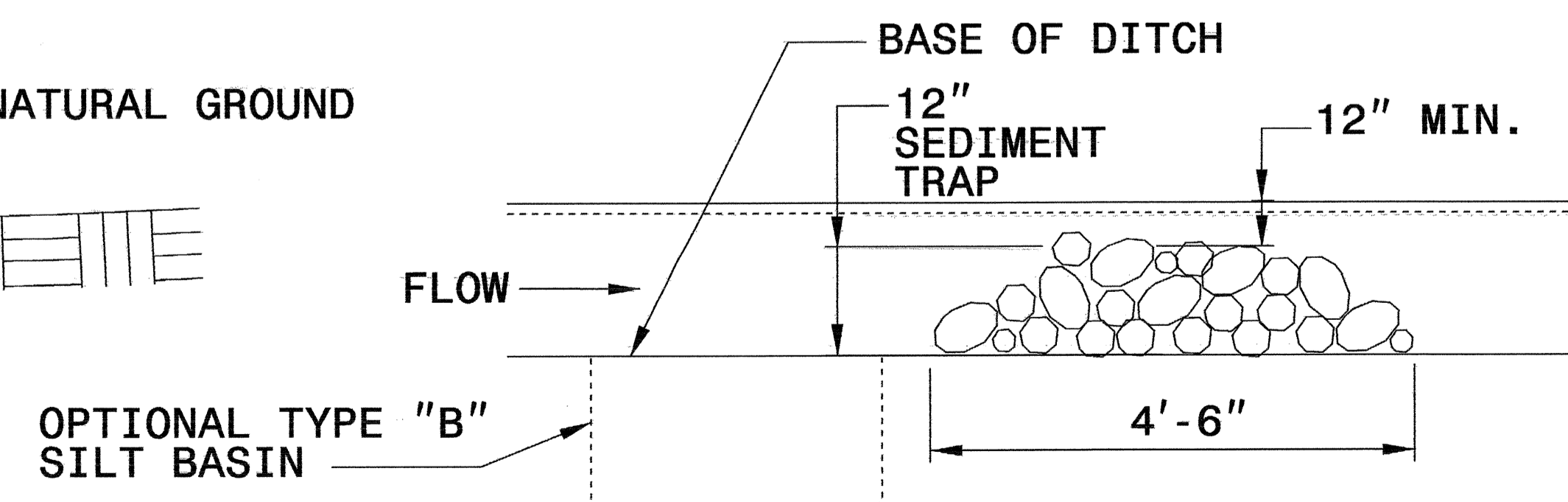
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



**CROSS SECTION VEE DITCH**



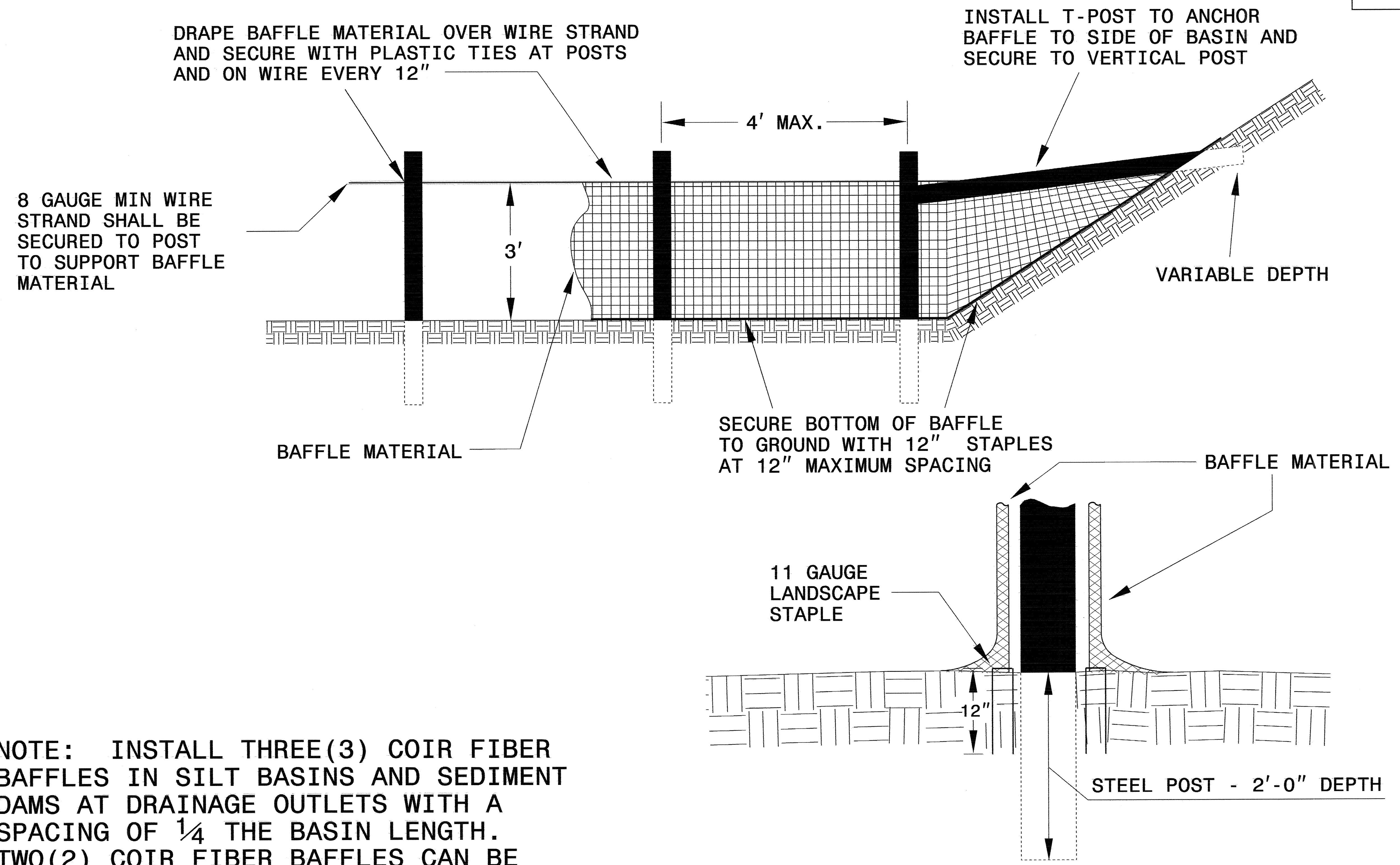
**CROSS SECTION TRAPEZOIDAL DITCH**



**ELEVATION VIEW**

PROJECT REFERENCE NO. K-4703	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# COIR FIBER BAFFLE DETAIL

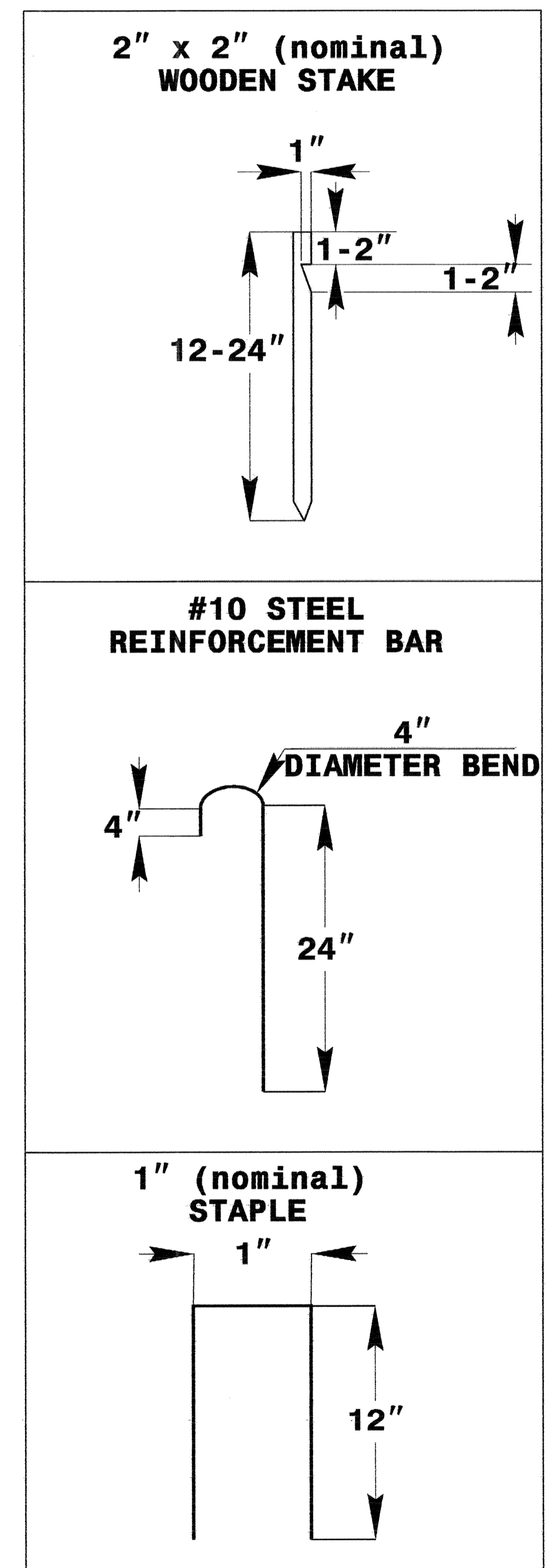
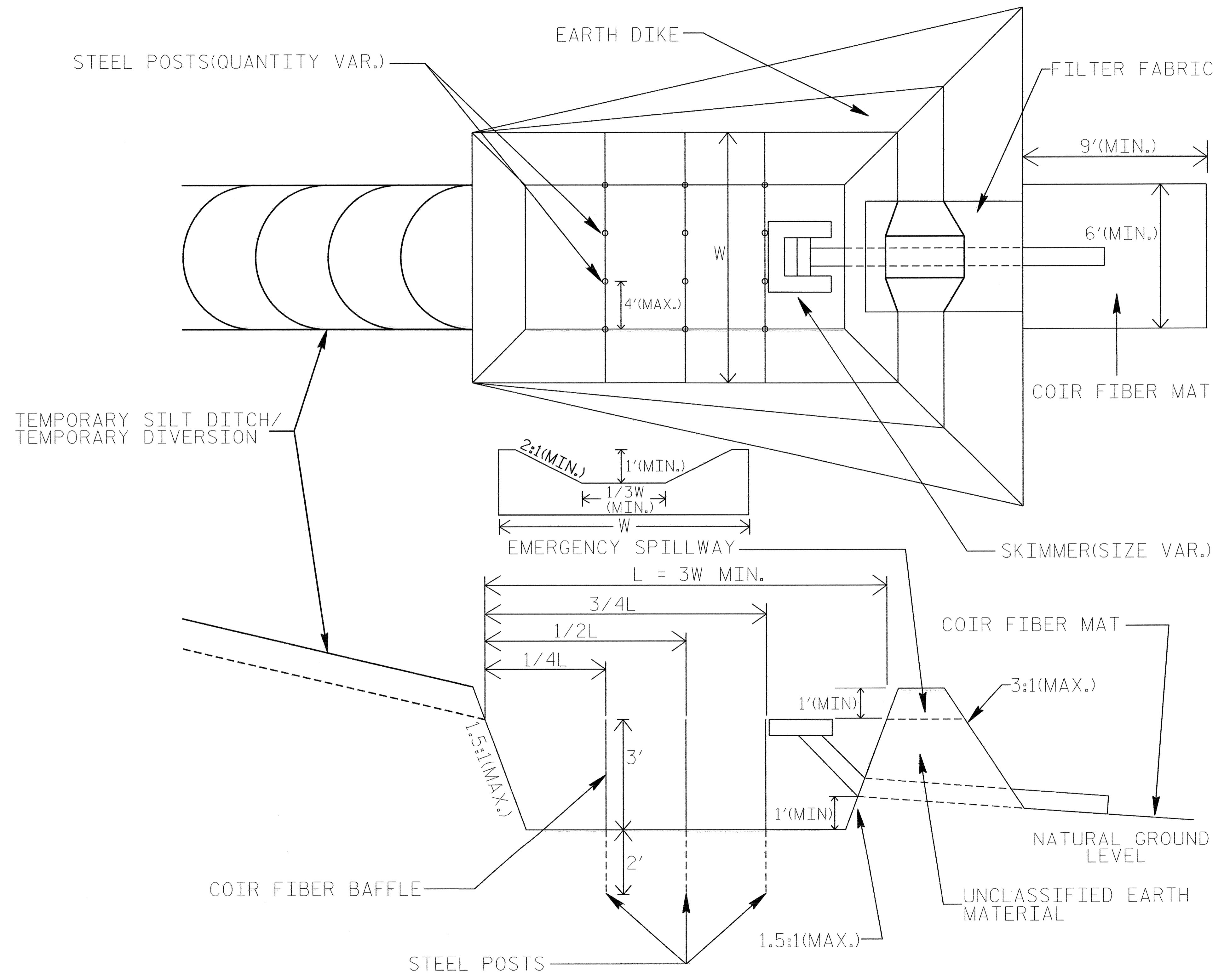


NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF  $\frac{1}{4}$  THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF  $\frac{1}{3}$  THE BASIN LENGTH.

BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

# SKIMMER BASIN WITH BAFFLES DETAIL

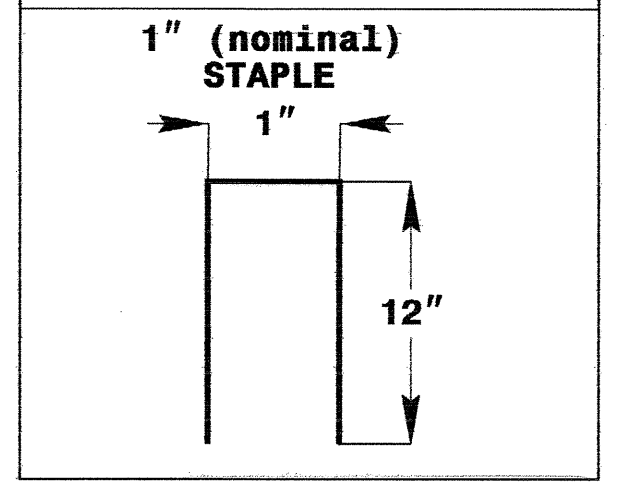
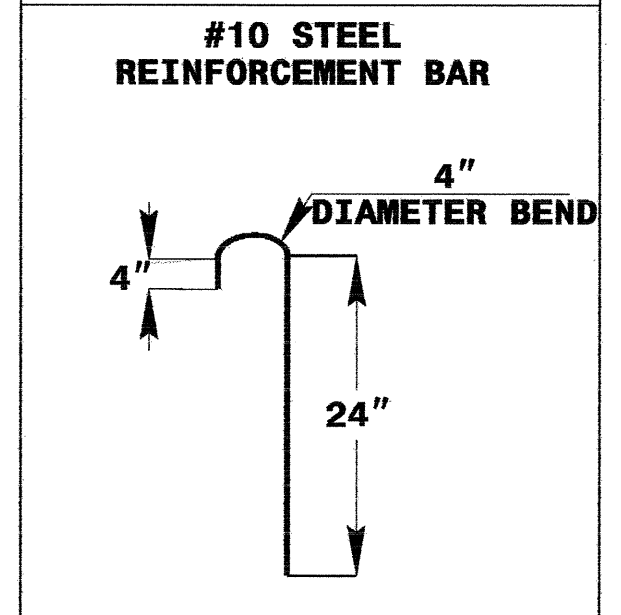
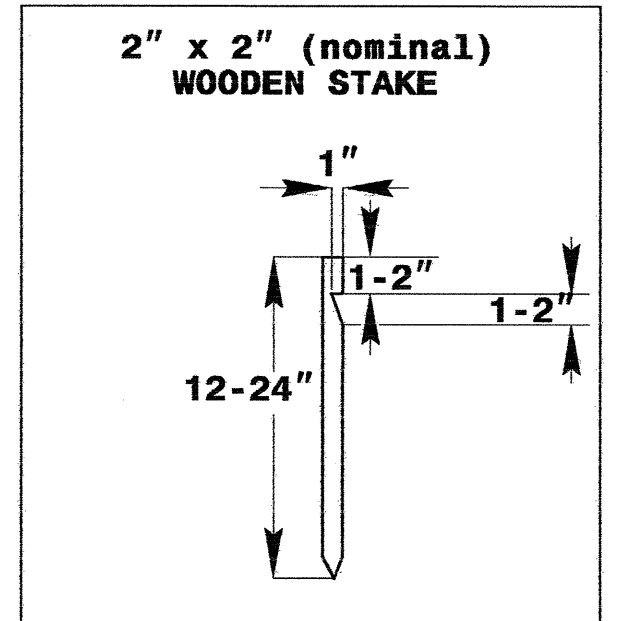
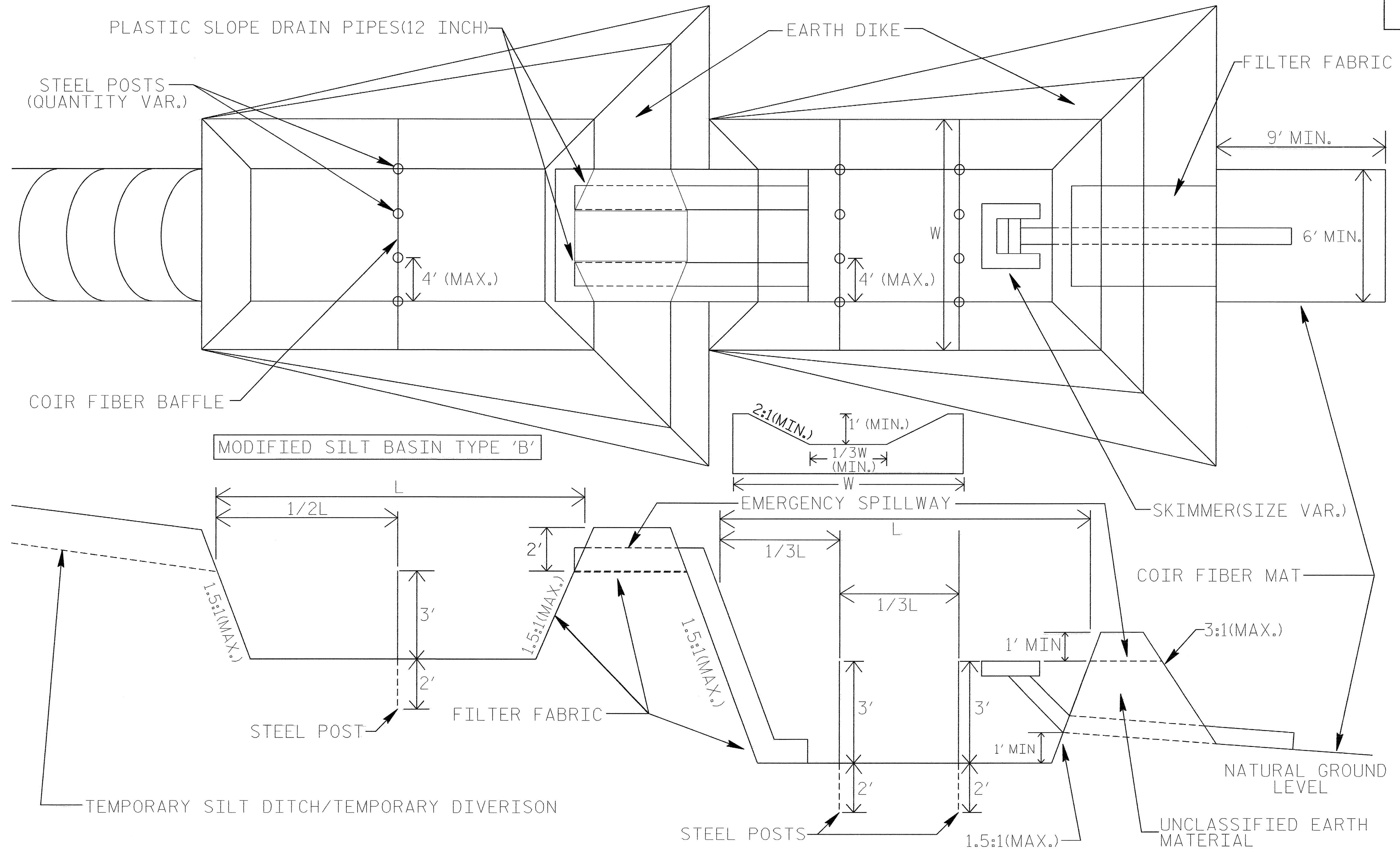
PROJECT REFERENCE NO. K-4703	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**COIR FIBER MAT  
ANCHOR OPTIONS**

# TIERED SKIMMER BASIN DETAIL

PROJECT REFERENCE NO. K-4703	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**COIR FIBER MAT ANCHOR OPTIONS**

**NOTE**  
ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. K-4703	SHEET NO. EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**SOIL STABILIZATION SUMMARY SHEET**

**MATTING FOR EROSION CONTROL**

**PERMANENT SOIL REINFORCEMENT MAT**

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	L	12+00	15+50	LT	395
4	L	23+00	26+50	LT	340
5	L2	26+50	29+50	LT	365
5	L2	30+00	35+00	RT	1340
5	L2	43+00	45+56	LT-BERM	130
			SUBTOTAL		2570
	MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER				2945
			TOTAL		5515
			SAY		5600

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
5	L2	42+30	49+69	LT	1190
5	L2	45+56	46+06	LT-BERM	25
			SUBTOTAL		1215
		ADDITIONAL PRGM TO BE INSTALLED			0
			TOTAL		1215
			SAY		1250

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 04

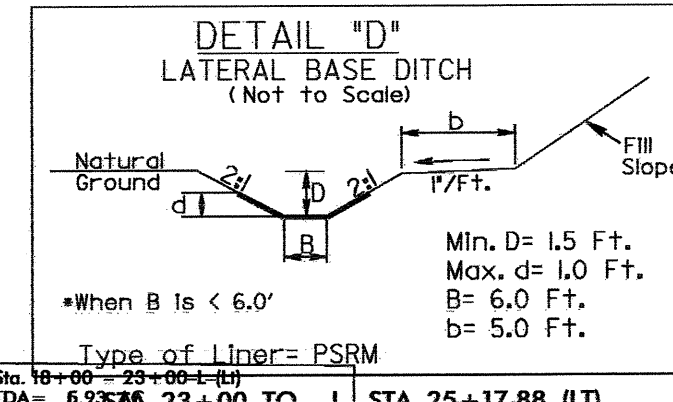
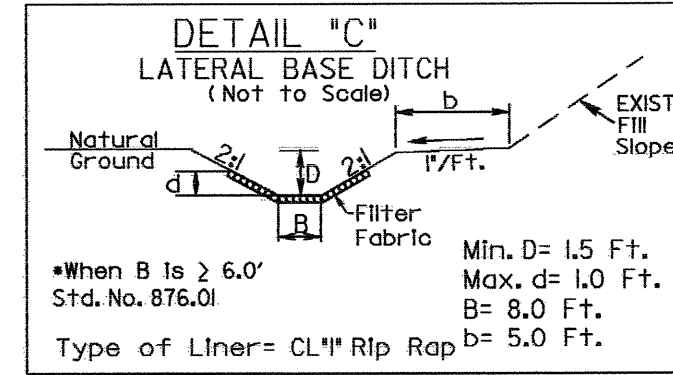
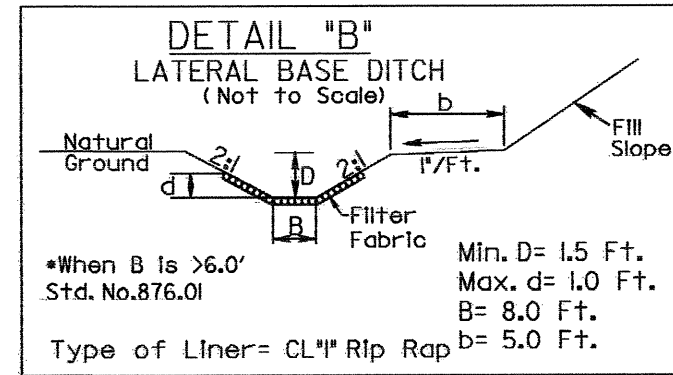
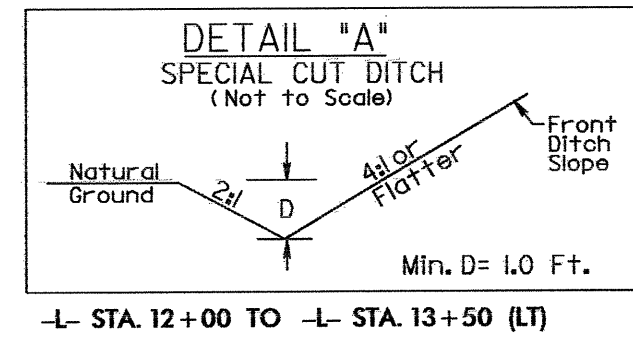
NOTE:  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

-L2- SPIRAL DATA

Pls Sta 26+51.65  
 $\Theta_s = 14' 19' 26.2''$   
 $L_s = 200.00'$   
 $LT = 133.77'$   
 $ST = 67.07'$



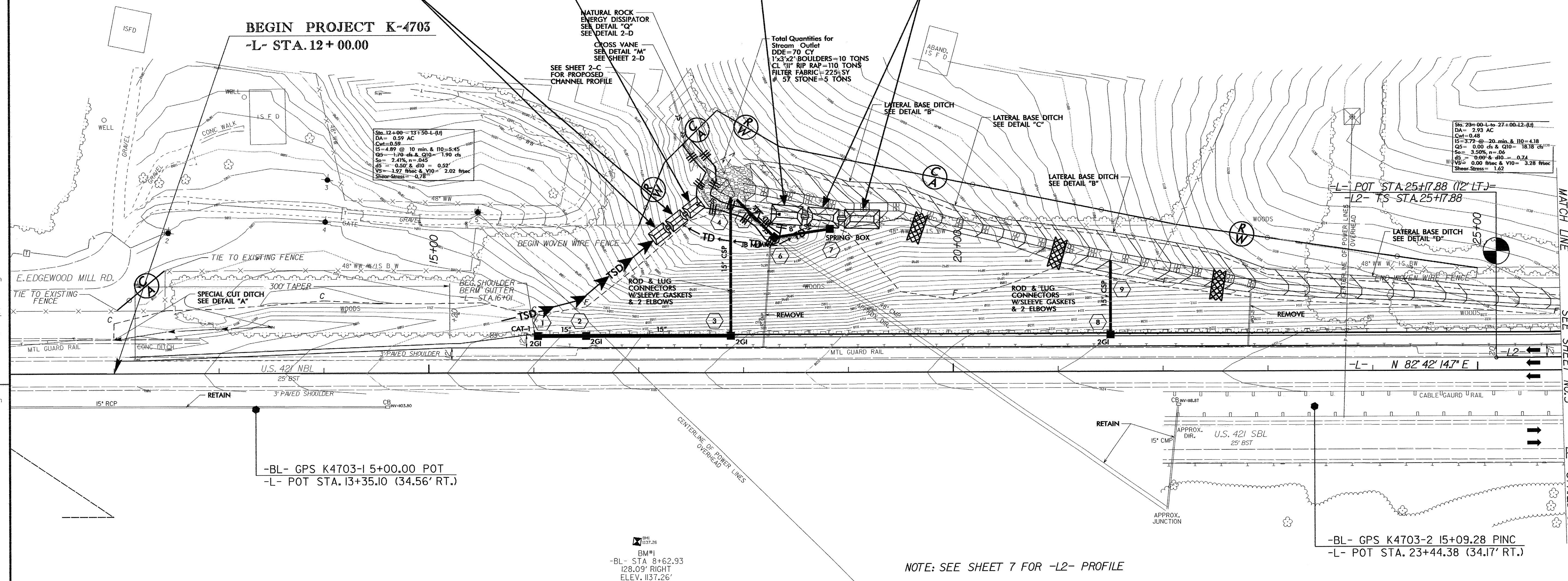
PROJECT REFERENCE NO. K-4703	SHEET NO. EC-04/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



Type of Liner= PSMR  
Sta. 18+00=23+00-10  
IDA= 6.75% STA. 23+00 TO -L- STA. 25+17.88 (LT)  
Cwt= 0.48  
IS= 3.64% STA. 26+00 TO -L- STA. 27+00 (LT)  
Q5= 0.00 cfs & Q10= 24.18 cfs  
S0= 11.635% n= 0.04  
d5= 0.00' & d10= 0.64'  
V5= 0.00 fsec & V10= 4.07 fsec  
Shear Stress= 4.64

- Modified Silt Basin Type 'B' 19 x 13 x 3 with 1.5 inch Skimmer with 1.5 inch Orifice Diameter 5 ft. weir (See Tiered Skimmer Basin Detail) ID 4.1
- 19 x 13 x 3 1.5 inch Skimmer with 1.5 inch Orifice Diameter 5 ft. weir (See Tiered Skimmer Basin Detail) ID 4.1
- 32 x 18 x 3 2.5 inch Skimmer with 2.375 inch Orifice Diameter 12 ft. weir (See Tiered Skimmer Basin Detail) ID 4.2
- Modified Silt Basin Type 'B' 32 x 18 x 3 with 2.5 inch Skimmer with 2.375 inch Orifice Diameter 12 ft. weir (See Tiered Skimmer Basin Detail) ID 4.2

BEGIN PROJECT K-4703  
-L- STA. 12+00.00



Sta. 20+00 to Sta. 27+00-12 (LT)  
DA= 2.93 AC  
Cwt= 0.48  
IS= 3.72% @ 20 min & 110= 4.18  
Q5= 0.00 cfs & Q10= 18.18 cfs  
S0= 3.50% n= .06  
d5= 0.00' & d10= 0.74'  
V5= 0.00 fsec & V10= 3.28 fsec  
Shear Stress= 1.62

-L- POT STA. 25+17.88 (12' LT)  
-L2- TS STA. 25+17.88

-L- N 82° 42' 14.7" E

-BL- GPS K4703-1 5+00.00 POT  
-L- POT STA. 13+35.10 (34.56' RT.)

-BL- GPS K4703-2 15+09.28 PINC  
-L- POT STA. 23+44.38 (34.17' RT.)

BM#1  
-BL- STA 8+62.93  
128.09' RIGHT  
ELEV. 1137.26'

NOTE: SEE SHEET 7 FOR -L2- PROFILE

REVISIONS

s:\gn\k-4703.ec.csn.psm04.dgn

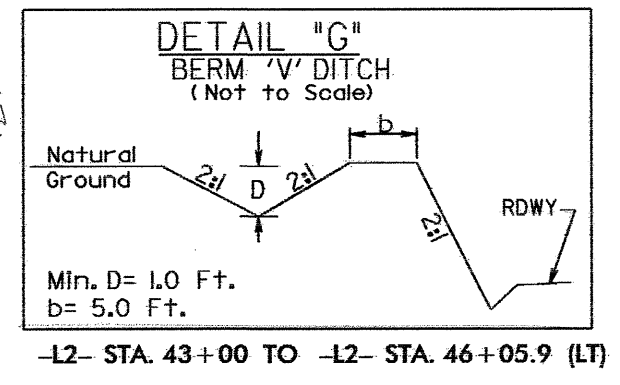
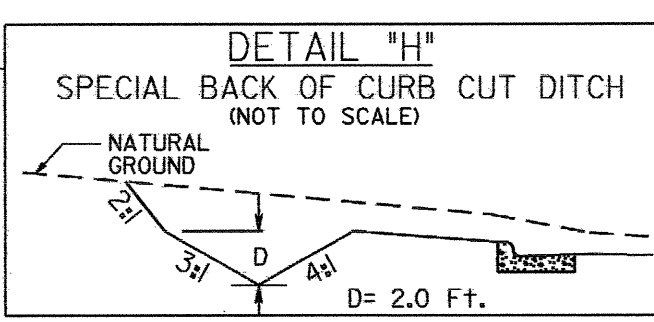
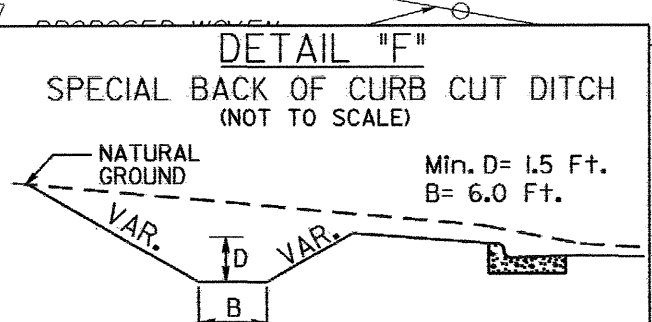
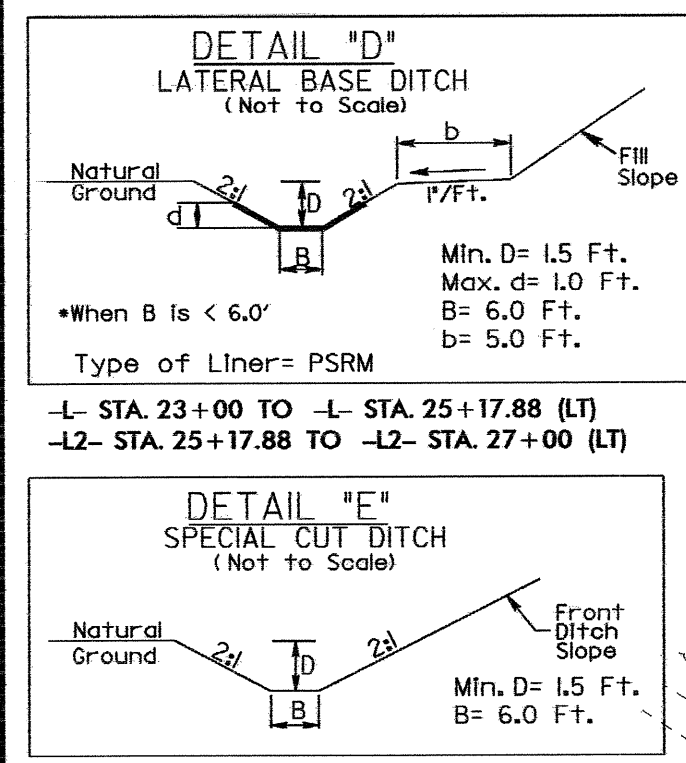
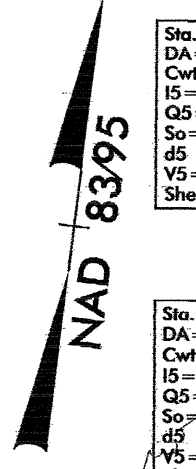
MATCH LINE SEE SHEET NO. 5 -L2- STA. 25+80.00

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 05

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

NOTES: (1) SEE SHEETS 8 & 9 FOR -L2- PROFILE  
(2) SEE SHEET 10 FOR -TR-ON-, -TR-OFF-, & -PAD- PROFILES

PROJECT REFERENCE NO.	K-4703	SHEET NO.	EC-05/CONST.05
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			

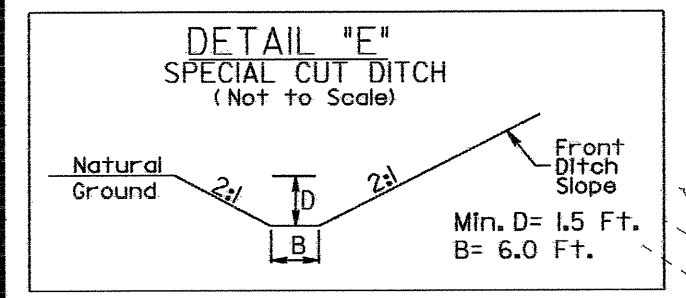


150 x 49 x 3  
5 inch Skimmer  
with 4.25 inch  
Orifice Diameter  
X ft. weir  
ID 5.1

CLASS 'B' RIP RAP  
EST. 4 TONS  
12 SY FILTER FABRIC

BIO-RETENTION BASIN  
CONTROL STRUCTURE  
SEE SHEET 2-J

CLASS 'B' RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC



Proposed Ditch  
337 LF @ 0.3% grade  
Beg. Elev= 1127.0  
End Elev= 1126.0  
4:1 Front & Back Slope

BIO-RETENTION BASIN  
SEE SHEET 2-I

ENGINEERED  
SOILS AREA

SEDIMENT FOREBAY  
SEE SHEET 2-I

Sta. 27+00 - 29+00-L2- (R)  
DA= 1.06 AC  
Cwt=0.63  
IS= 4.89 @ 10 min. & I10= 5.45  
QS= 0.00 cfs & Q10= 14.24 cfs  
So= 0.5%, n= .06  
d5= 0.00' & d10= 1.11'  
VS= 0.00 ft/sec & V10= 1.56 ft/sec  
Shear Stress= 0.55

HAZARDOUS SPILL BASIN  
CONTROL STRUCTURE  
SEE SHEET 2-G

HAZARDOUS SPILL BASIN  
SEE SHEET 2-F

CLASS 'B' RIP RAP  
EST. 8 TONS  
24 SY FILTER FABRIC

CLASS 'B' RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

CLASS 'B' RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

CLASS 'B' RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

CLASS 'B' RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

CLASS 'B' RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

CLASS 'B' RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

CLASS 'B' RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

CLASS 'B' RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

CLASS 'B' RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

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MATCH LINE  
-L2- STA. 25+80.00 SEE SHEET NO. 4

MATCH LINE  
-L2- STA. 49+10.00 SEE SHEET NO. 6

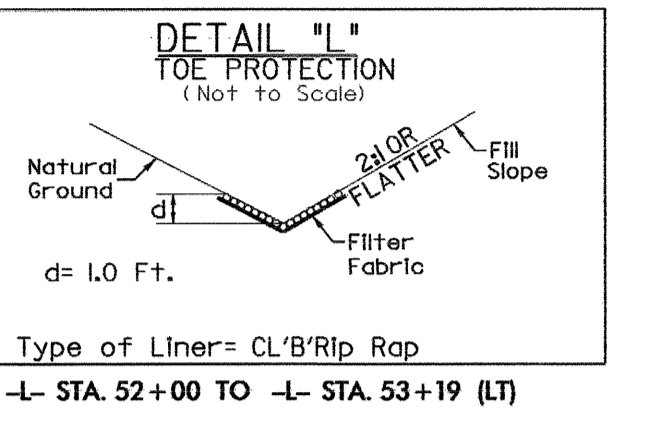
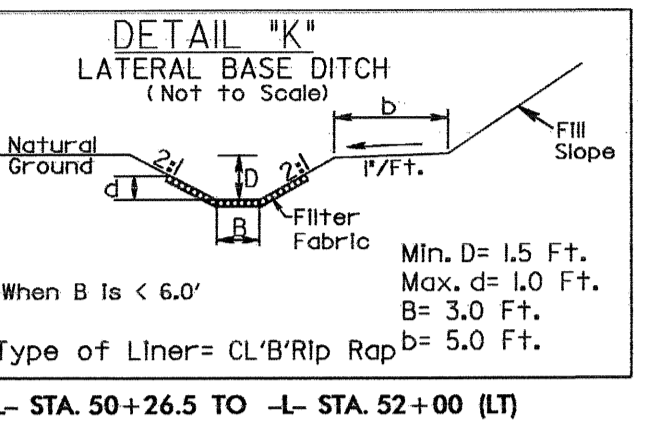
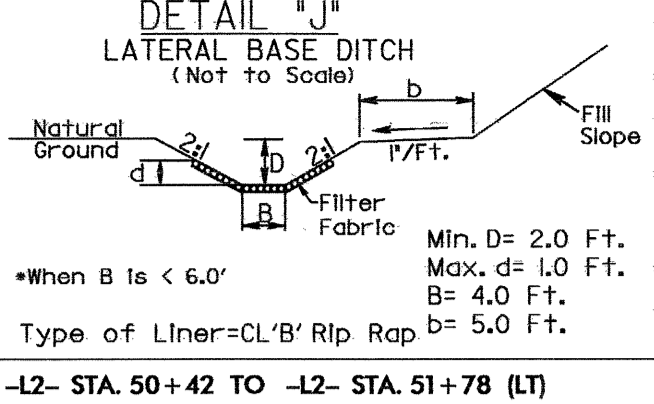
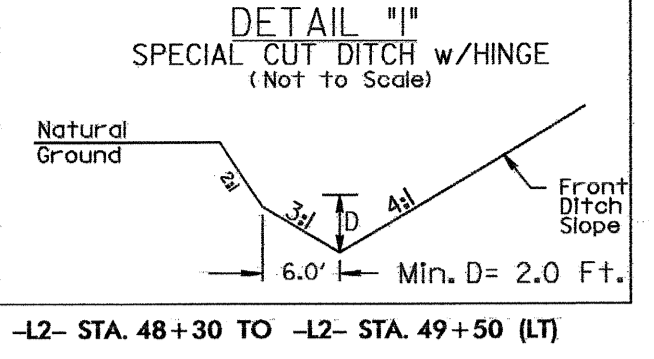
U.S. 421 NBL  
25' BST

U.S. 421 NBL

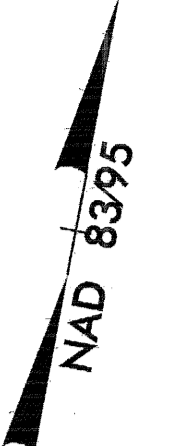


CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 06

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



PROJECT REFERENCE NO. K-4703	SHEET NO. EC-06/CONST.06
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



Modified Silt Basin  
Type 'B'  
32 x 15 x 3  
(See Tiered Skimmer  
Basin Detail)  
ID 6.3

32 x 15 x 3  
2.5 inch Skimmer  
with 2.25 inch  
Orifice Diameter  
10 ft. weir  
(See Tiered Skimmer  
Basin Detail)  
ID 6.3

Modified Silt Basin  
Type 'B'  
19 x 13 x 3  
(See Tiered Skimmer  
Basin Detail)  
ID 6.1

19 x 13 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
4 ft. weir  
(See Tiered Skimmer  
Basin Detail)  
ID 6.1

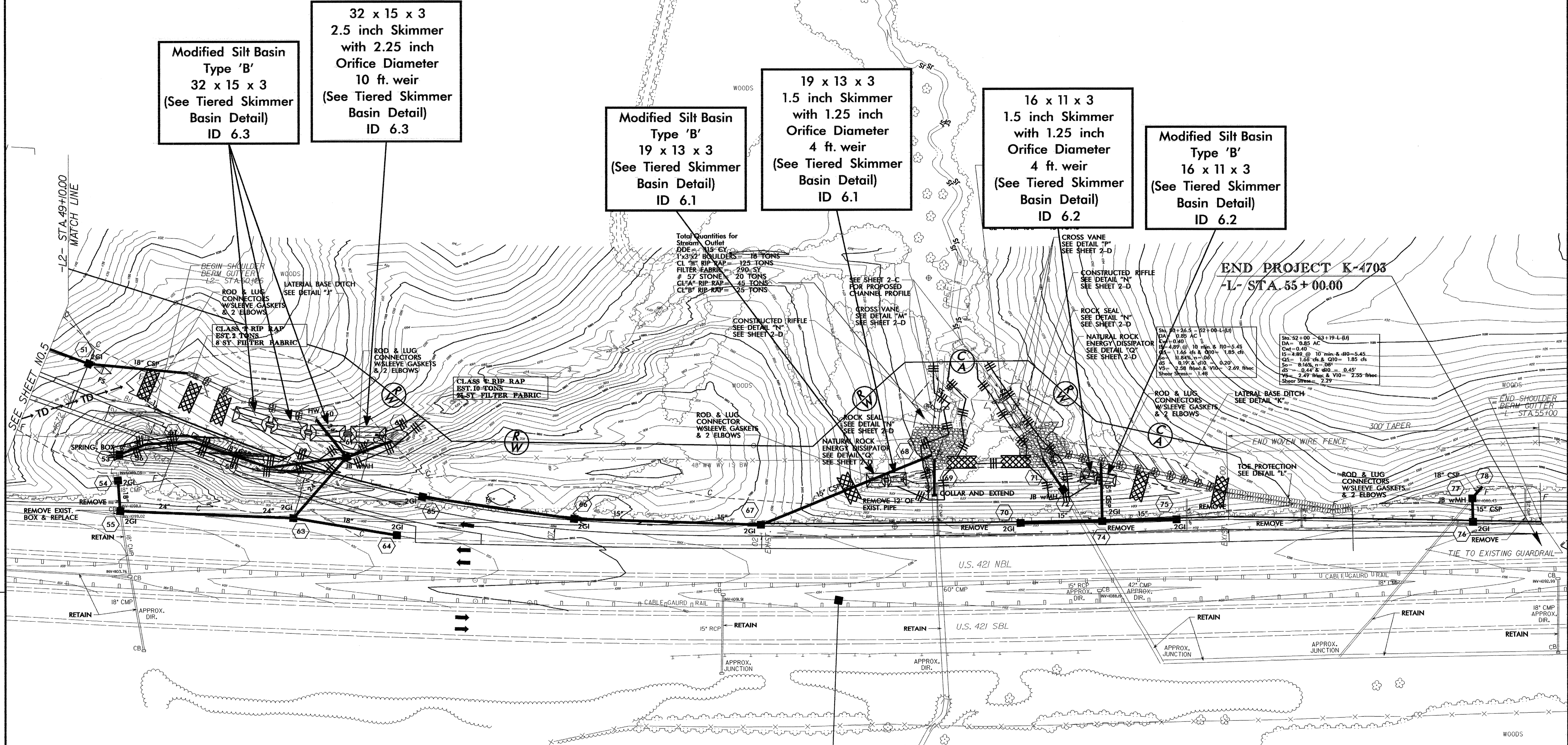
16 x 11 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
4 ft. weir  
(See Tiered Skimmer  
Basin Detail)  
ID 6.2

Modified Silt Basin  
Type 'B'  
16 x 11 x 3  
(See Tiered Skimmer  
Basin Detail)  
ID 6.2

Total Quantities for  
Stream Outlet  
1x3x2' BOULDERS = 16 TONS  
CL #1 RIP RAP = 125 TONS  
FILTER FABRIC = 290 SF  
# 57 STONE = 20 TONS  
CL #1 RIP RAP = 45 TONS  
CL #1 RIP RAP = 25 TONS

END PROJECT K-4703  
-L- STA. 55+00.00

Sta. 50+26.5 - 52+00 (L)	DA = 0.85 AC
Sta. 52+00 - 53+19 (L)	Cut = 0.49
Sta. 53+19 - 54+00 (L)	DA = 0.85 AC
Sta. 54+00 - 55+00 (L)	Cut = 0.49
Sta. 55+00 - 56+00 (L)	DA = 0.85 AC
Sta. 56+00 - 57+00 (L)	Cut = 0.49
Sta. 57+00 - 58+00 (L)	DA = 0.85 AC
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Sta. 59+00 - 60+00 (L)	DA = 0.85 AC
Sta. 60+00 - 61+00 (L)	Cut = 0.49
Sta. 61+00 - 62+00 (L)	DA = 0.85 AC
Sta. 62+00 - 63+00 (L)	Cut = 0.49
Sta. 63+00 - 64+00 (L)	DA = 0.85 AC
Sta. 64+00 - 65+00 (L)	Cut = 0.49
Sta. 65+00 - 66+00 (L)	DA = 0.85 AC
Sta. 66+00 - 67+00 (L)	Cut = 0.49
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Sta. 70+00 - 71+00 (L)	Cut = 0.49
Sta. 71+00 - 72+00 (L)	DA = 0.85 AC
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Sta. 73+00 - 74+00 (L)	DA = 0.85 AC
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Sta. 83+00 - 84+00 (L)	DA = 0.85 AC
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Sta. 91+00 - 92+00 (L)	DA = 0.85 AC
Sta. 92+00 - 93+00 (L)	Cut = 0.49
Sta. 93+00 - 94+00 (L)	DA = 0.85 AC
Sta. 94+00 - 95+00 (L)	Cut = 0.49
Sta. 95+00 - 96+00 (L)	DA = 0.85 AC
Sta. 96+00 - 97+00 (L)	Cut = 0.49
Sta. 97+00 - 98+00 (L)	DA = 0.85 AC
Sta. 98+00 - 99+00 (L)	Cut = 0.49
Sta. 99+00 - 100+00 (L)	DA = 0.85 AC



-BL-7 39+91.54 PINC  
-L- POC STA. 48+24.57 (37.78' RT.)

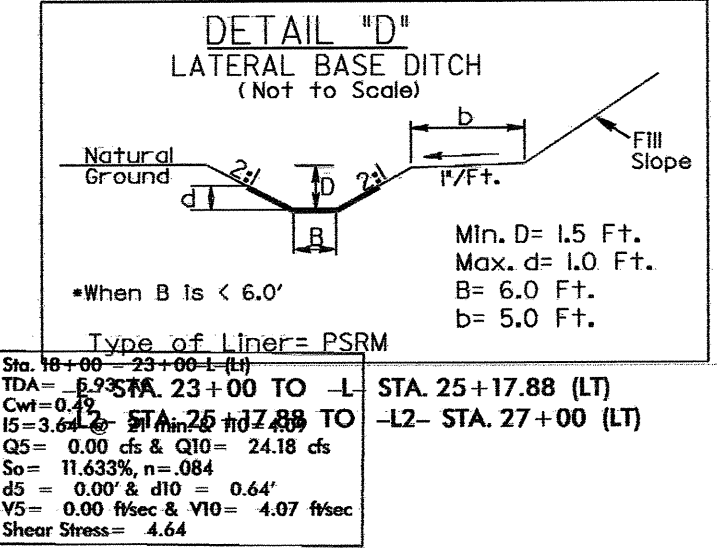
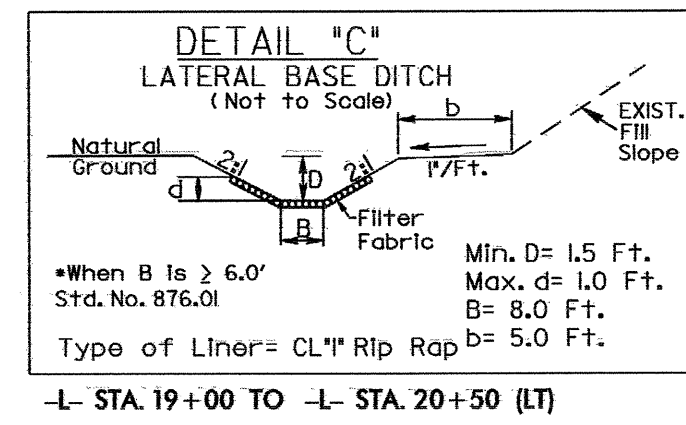
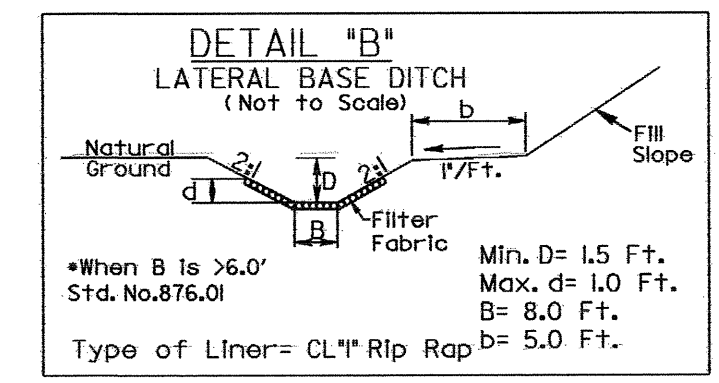
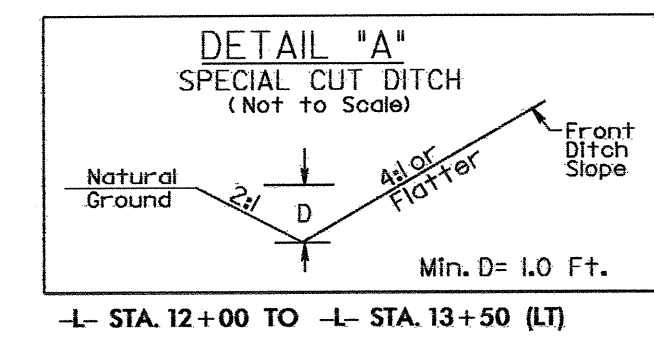
NOTES: SEE SHEET 9 & 10 FOR -L2- PROFILE

REVISIONS

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PROJECT REFERENCE NO. K-4703	SHEET NO. EC-07/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L2- SPIRAL DATA  
 PIs Sta 26+51.65  
 Os = 14° 19' 26.2"  
 Ls = 200.00'  
 LT = 133.77'  
 ST = 67.07'

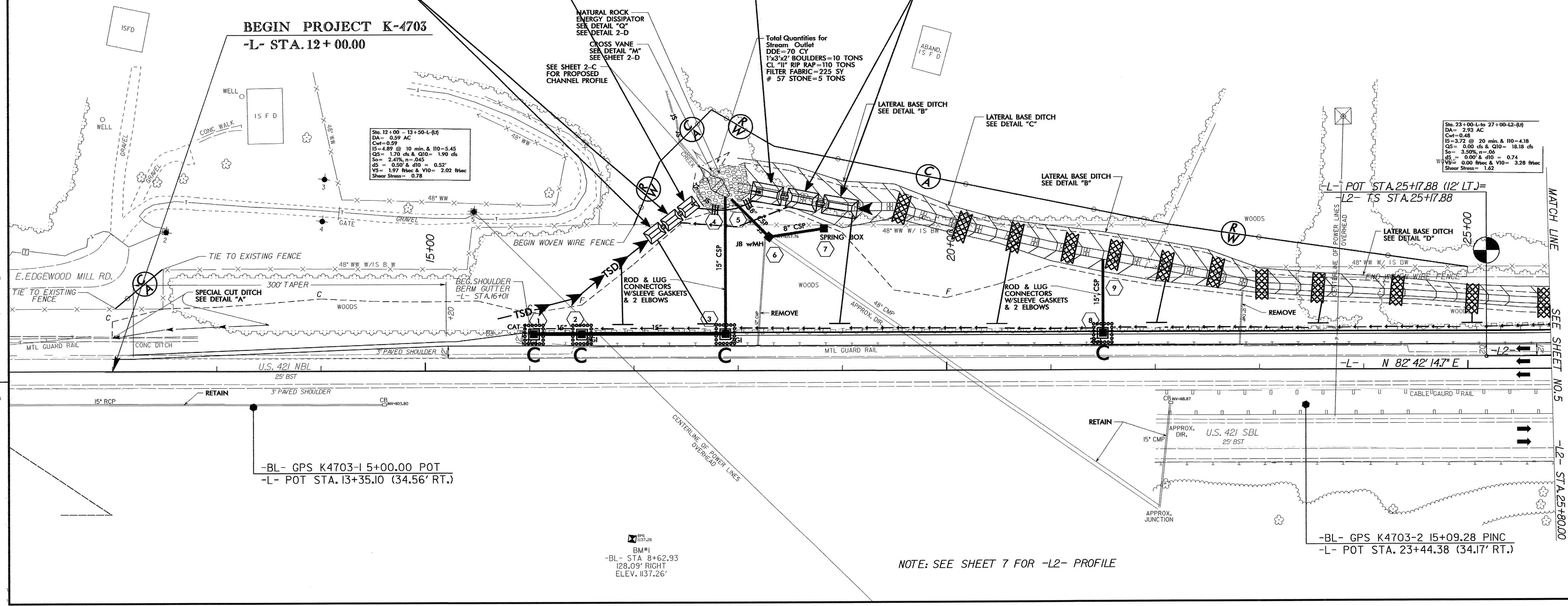


Modified Silt Basin  
 Type 'B'  
 19 x 13 x 3  
 (See Tiered Skimmer  
 Basin Detail)  
 ID 4.1

19 x 13 x 3  
 1.5 inch Skimmer  
 with 1.5 inch  
 Orifice Diameter  
 5 ft. weir  
 (See Tiered Skimmer  
 Basin Detail)  
 ID 4.1

32 x 18 x 3  
 2.5 inch Skimmer  
 with 2.375 inch  
 Orifice Diameter  
 12 ft. weir  
 (See Tiered Skimmer  
 Basin Detail)  
 ID 4.2

Modified Silt Basin  
 Type 'B'  
 32 x 18 x 3  
 (See Tiered Skimmer  
 Basin Detail)  
 ID 4.2



REVISIONS

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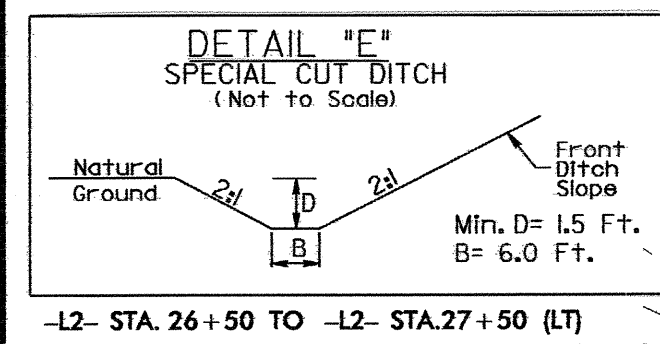
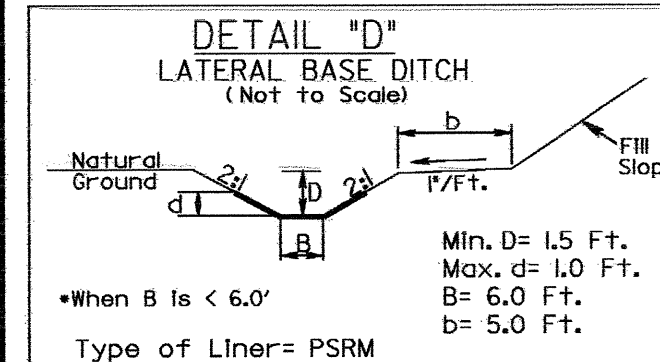
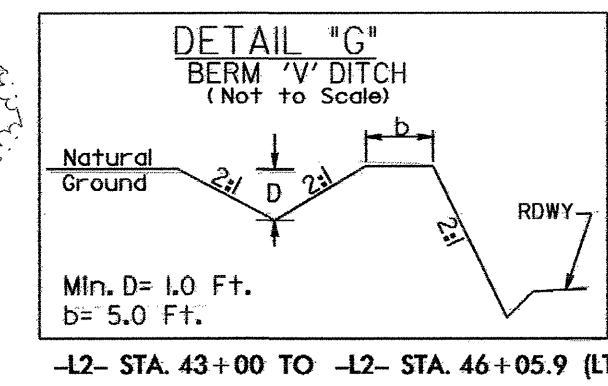
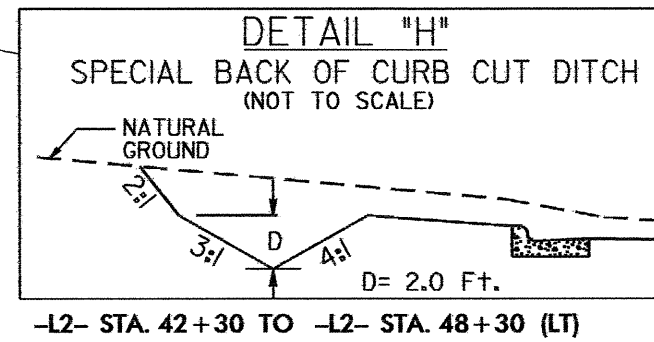
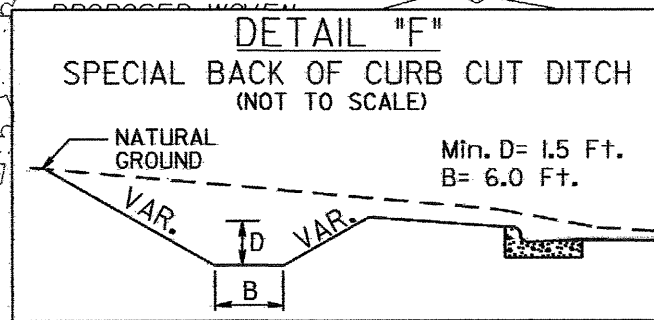
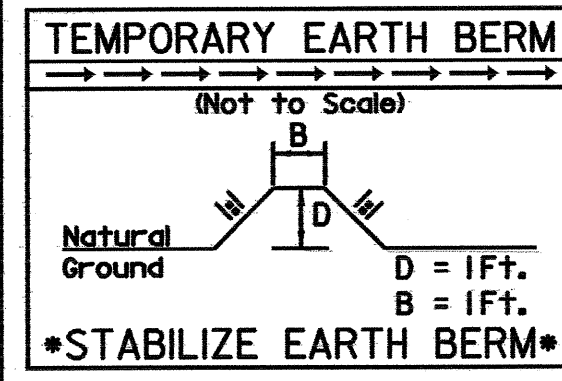
-BL- GPS K4703-1 5+00.00 POT  
 -L- POT STA. 13+35.10 (34.56' RT.)

BM#1  
 -BL- STA 8+62.93  
 128.09' RIGHT  
 ELEV. 1137.26'

NOTE: SEE SHEET 7 FOR -L2- PROFILE

-BL- GPS K4703-2 15+09.28 PINC  
 -L- POT STA. 23+44.38 (34.17' RT.)

MATCH LINE  
 SEE SHEET NO. 5  
 -L2- STA. 25+00.00



Proposed Ditch  
337 LF @ 0.3% grade  
Beg. Elev=1127.0  
End Elev=1126.0  
4:1 Front & Back Slope

BIO-RETENTION BASIN  
SEE SHEET 2-J

ENGINEERED SOILS AREA

HAZARDOUS SPILL BASIN  
CONTROL STRUCTURE  
SEE SHEET 2-G

HAZARDOUS SPILL BASIN  
CONTROL STRUCTURE  
SEE SHEET 2-F

CLASS "B" RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

CLASS "B" RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

CLASS "B" RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

150 x 49 x 3  
5 inch Skimmer  
with 4.25 inch  
Orifice Diameter  
X ft. weir  
ID 5.1

CLASS "T" RIP RAP  
EST. 4 TONS  
12 SY FILTER FABRIC

CLASS "B" RIP RAP  
EST. 2 TONS  
7 SY FILTER FABRIC

Proposed Ditch  
272 LF @ 0.34% grade  
Beg. Elev=1127.0  
End Elev=1126.0  
4:1 Front & Back Slope

SPLITTER BOX  
SEE SHEET 2-H

SPECIAL BACK OF CURB CUT DITCH  
SEE DETAIL "F"

ROD & LUG  
CONNECTORS  
W/SLEEVE GASKETS  
& 2 ELBOWS

SPECIAL BACK OF CURB CUT DITCH  
SEE DETAIL "F"

BERM "V" DITCH  
SEE DETAIL "G"

SPECIAL BACK OF CURB CUT DITCH  
SEE DETAIL "H"

ROD & LUG  
CONNECTORS  
W/SLEEVE GASKETS  
& 2 ELBOWS

BERM "V" DITCH  
SEE DETAIL "G"

SPECIAL BACK OF CURB CUT DITCH  
SEE DETAIL "H"

ROD & LUG  
CONNECTORS  
W/SLEEVE GASKETS  
& 2 ELBOWS

BERM "V" DITCH  
SEE DETAIL "G"

SPECIAL BACK OF CURB CUT DITCH  
SEE DETAIL "H"

ROD & LUG  
CONNECTORS  
W/SLEEVE GASKETS  
& 2 ELBOWS

BERM "V" DITCH  
SEE DETAIL "G"

SPECIAL BACK OF CURB CUT DITCH  
SEE DETAIL "H"

ROD & LUG  
CONNECTORS  
W/SLEEVE GASKETS  
& 2 ELBOWS

BERM "V" DITCH  
SEE DETAIL "G"

SPECIAL BACK OF CURB CUT DITCH  
SEE DETAIL "H"

ROD & LUG  
CONNECTORS  
W/SLEEVE GASKETS  
& 2 ELBOWS

BERM "V" DITCH  
SEE DETAIL "G"

SPECIAL BACK OF CURB CUT DITCH  
SEE DETAIL "H"

ROD & LUG  
CONNECTORS  
W/SLEEVE GASKETS  
& 2 ELBOWS

NOTES: (1) SEE SHEETS 8 & 9 FOR -L2- PROFILE  
(2) SEE SHEET 10 FOR -TR-ON-, -TR-OFF-, & -PAD- PROFILES

Sta. 30+00 to 31+75-L2-(R)  
DA= 0.35 AC  
Cw=0.40  
IS= 4.89 @ 10 min. & I10= 5.45  
Q5= .69 cfs & Q10= 0.73 cfs  
So= 0.79% & Ss= 0.045 n=0.045  
ds = 0.14' & d10 = 0.14'  
V5= 0.8 fsec & V10= 0.8 fsec  
Shear Stress= 0.1

Sta. 31+75 to 35+00-L2-(R)  
DA= 2.48 AC  
Cw=0.43  
IS= 4.43 @ 13 min. & I10= 4.94  
Q5= 4.72 cfs & Q10= 5.27 cfs  
So= 7.49% & Ss= 4.00% n=0.045  
ds = 0.22' & d10 = 0.22'  
V5= 3.1 fsec & V10= 3.3 fsec  
Shear Stress= 1.17

Sta. 45+32 to 46+05.9-L2-(L) BERM  
DA= 0.39 AC  
Cw=0.40  
IS= 3.72 @ 20 min. & I10= 4.18  
Q5= 0.58 cfs & Q10= 0.65 cfs  
So= 7.85% & Ss= 0.045  
ds = 0.41' & d10 = 0.41'  
V5= 1.72 fsec & V10= 1.76 fsec  
Shear Stress= 2.11

Sta. 43+00 to 45+32-L2-(R) BERM  
DA= 0.68 AC  
Cw=0.40  
IS= 3.88 @ 18 min. & I10= 4.35  
Q5= 1.05 cfs & Q10= 1.18 cfs  
So= 1.17% & Ss= 3.76% n=0.045  
ds = 0.60' & d10 = 0.50'  
V5= 1.48 fsec & V10= 2.36 fsec  
Shear Stress= 1.17

Sta. 42+30 to 45+32-L2-(R)  
DA= 0.24 AC  
Cw=0.40  
IS= 4.89 @ 10 min. & I10= 5.45  
Q5= 0.47 cfs & Q10= 0.52 cfs  
So= 2.20% & Ss= 7.00% n=0.045  
ds = 0.29' & d10 = 0.26'  
V5= 1.59 fsec & V10= 2.19 fsec  
Shear Stress= 1.14

Sta. 45+32 to 47+96-L2-(R)  
DA= 0.45 AC  
Cw=0.40  
IS= 4.89 @ 10 min. & I10= 5.45  
Q5= 0.88 cfs & Q10= 0.98 cfs  
So= 7.05% & Ss= 0.045  
ds = 0.31' & d10 = 0.33'  
V5= 2.62 fsec & V10= 2.57 fsec  
Shear Stress= 1.44

REVISIONS

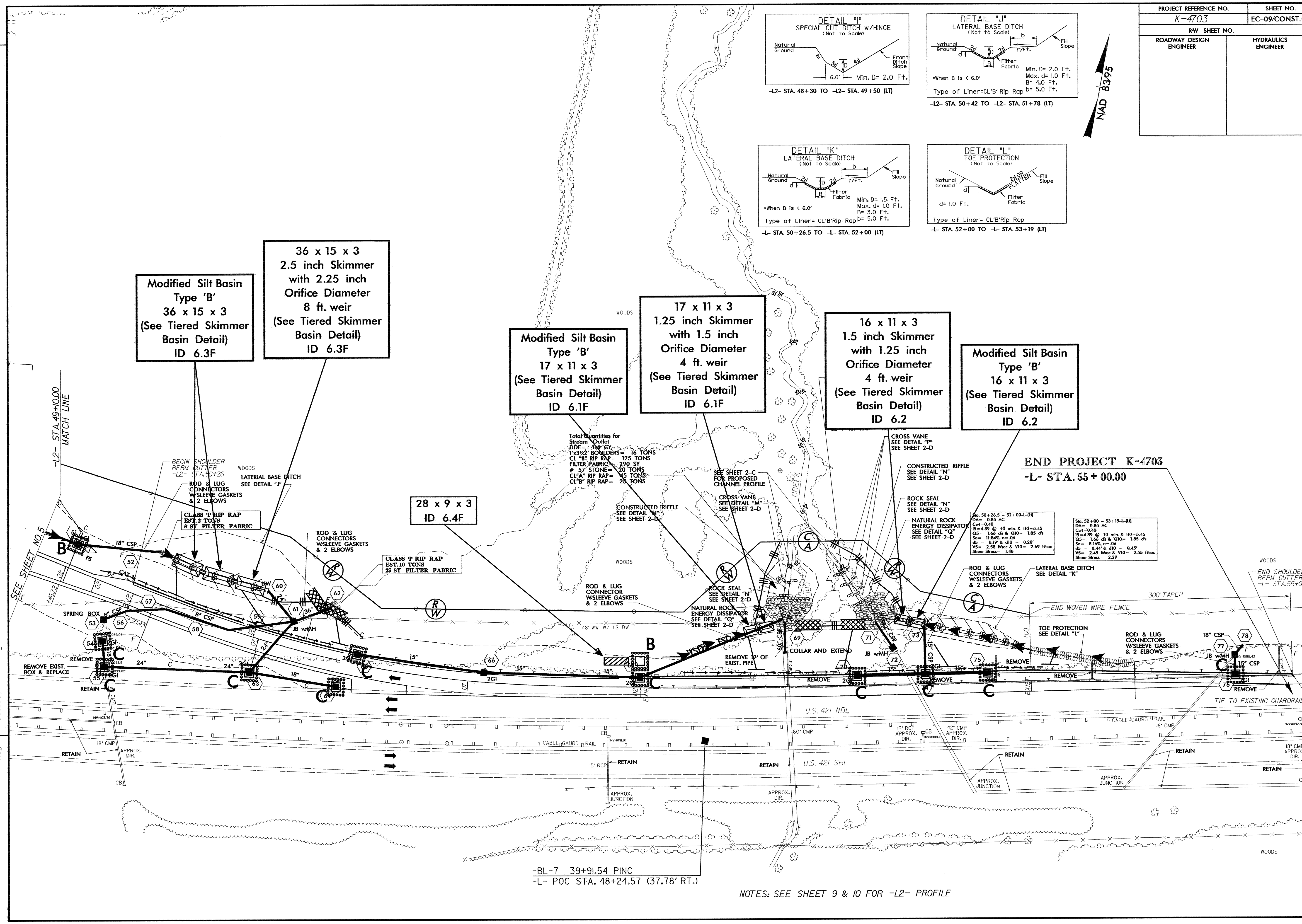
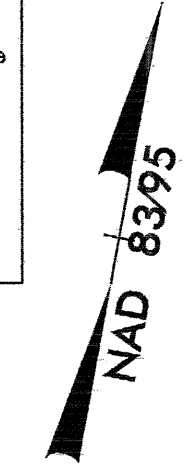
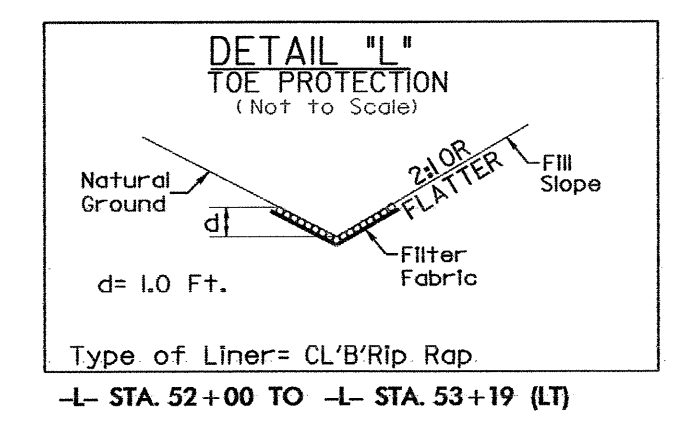
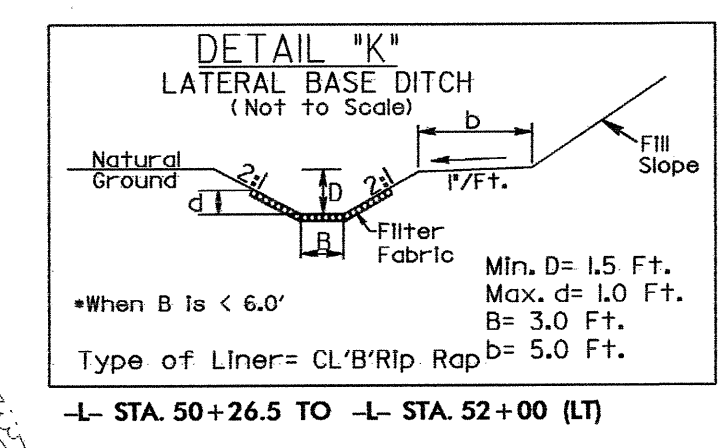
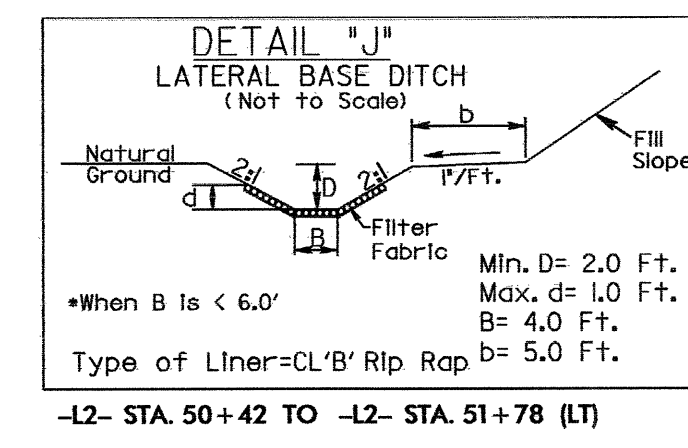
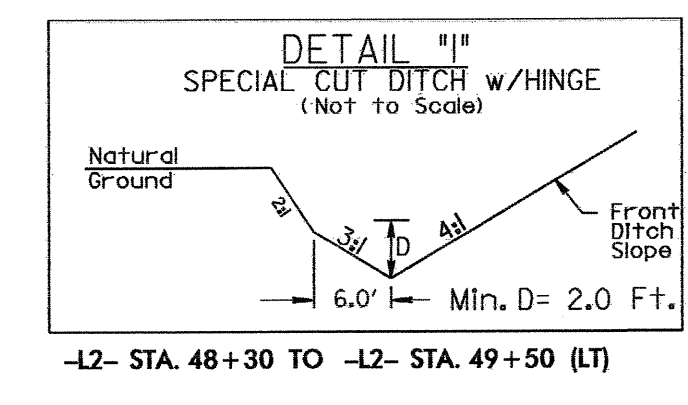
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MATCH LINE  
-L2- STA. 28+00.0  
SEE SHEET NO. 4

MATCH LINE  
-L2- STA. 49+100.0  
SEE SHEET NO. 6

U.S. 421 NBL  
25' BST  
3' BST SHOULDER  
18" CMP  
CONC. DITCH  
RETAIN  
U.S. 421 NBL

PROJECT REFERENCE NO.	SHEET NO.
K-4703	EC-09/CONST.06
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



Modified Silt Basin  
Type 'B'  
36 x 15 x 3  
(See Tiered Skimmer  
Basin Detail)  
ID 6.3F

36 x 15 x 3  
2.5 inch Skimmer  
with 2.25 inch  
Orifice Diameter  
8 ft. weir  
(See Tiered Skimmer  
Basin Detail)  
ID 6.3F

Modified Silt Basin  
Type 'B'  
17 x 11 x 3  
(See Tiered Skimmer  
Basin Detail)  
ID 6.1F

17 x 11 x 3  
1.25 inch Skimmer  
with 1.5 inch  
Orifice Diameter  
4 ft. weir  
(See Tiered Skimmer  
Basin Detail)  
ID 6.1F

16 x 11 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
4 ft. weir  
(See Tiered Skimmer  
Basin Detail)  
ID 6.2

Modified Silt Basin  
Type 'B'  
16 x 11 x 3  
(See Tiered Skimmer  
Basin Detail)  
ID 6.2

28 x 9 x 3  
ID 6.4F

Total Quantities for  
Stream Outlet  
DDE = 16 TONS  
1-3/4" BONDERS = 16 TONS  
CL "H" RIP RAP = 125 TONS  
FILTER FABRIC = 290 SY  
# 57 STONE = 220 TONS  
CL "A" RIP RAP = 45 TONS  
CL "B" RIP RAP = 25 TONS

END PROJECT K-4703  
-L- STA. 55 + 00.00

Sta. 50+26.5 - 52+00-L(L)	DA= 0.85 AC
Sta. 52+00 - 53+19-L(L)	DA= 0.85 AC
CS= 4.89 @ 10 min. & 110=5.45	CS= 4.89 @ 10 min. & 110=5.45
CS= 1.66 cfs & Q10= 1.85 cfs	CS= 1.66 cfs & Q10= 1.85 cfs
S= 11.84% n= .04	S= 11.84% n= .04
d5 = 0.19' & d10 = 0.20'	d5 = 0.19' & d10 = 0.20'
V5= 2.58 ft/sec & V10= 2.69 ft/sec	V5= 2.58 ft/sec & V10= 2.69 ft/sec
Shear Stress = 1.48	Shear Stress = 1.48

-BL-7 39+91.54 PINC  
-L- POC STA. 48+24.57 (37.78' RT.)

NOTES: SEE SHEET 9 & 10 FOR -L2- PROFILE

REVISIONS

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