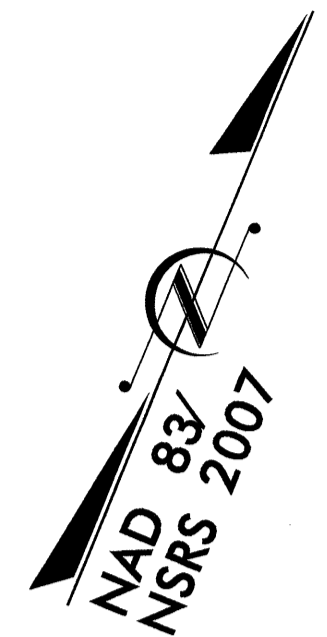


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	K-5002	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

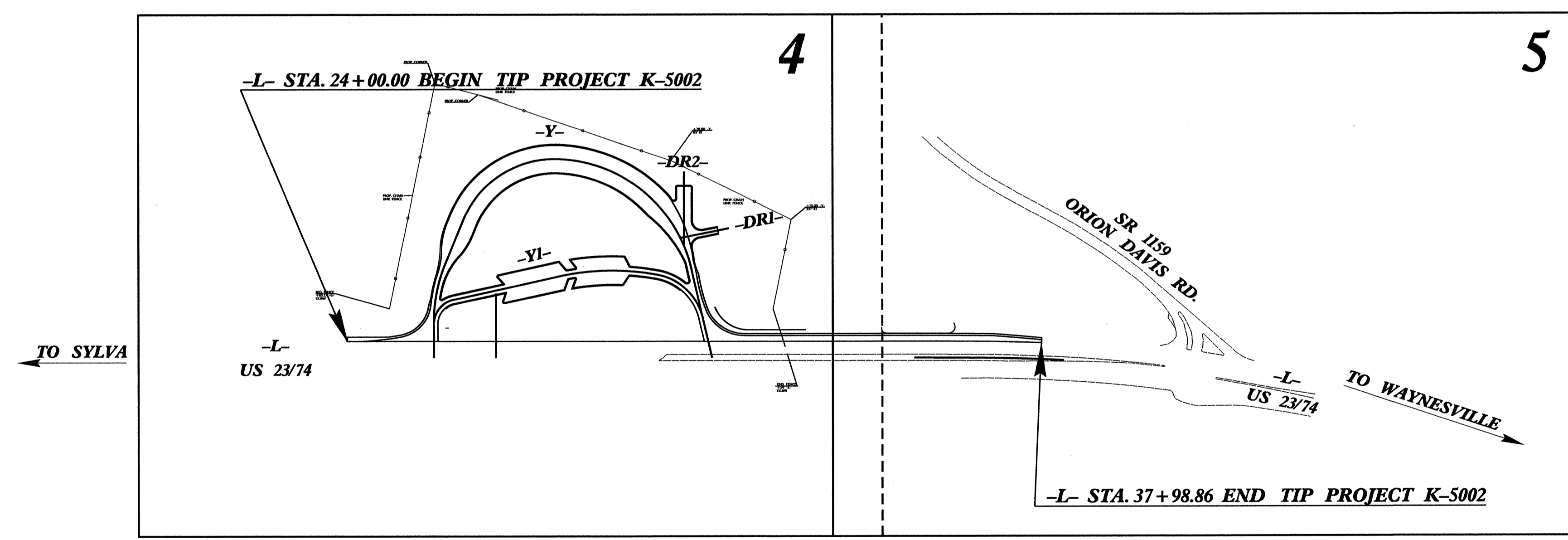
TIP PROJECT: K-5002

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



HAYWOOD COUNTY

**LOCATION: US 23/74 - SOUTHBOUND REST AREA ON NEW LOCATION
AS A COMPANION TO THE EXISTING NORTHBOUND REST AREA
TYPE OF WORK: GRADING, PAVING, DRAINAGE, TRAFFIC CONTROL AND SIGNING**



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	△△△△△
1622.01	Temporary Berms and Slope Drains	—
1630.02	Silt Basin Type B	▧
1633.01	Temporary Rock Silt Check Type-A	⊗
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	⊗
1633.02	Temporary Rock Silt Check Type-B	▶
	Wattle / Coir Fiber Wattle	⌒
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	⌒
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	▭
1630.06	Special Stilling Basin	▭
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	▭
	Tiered Skimmer Basin	▭
	Infiltration Basin	▭

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

**THIS PROJECT HAS
BEEN DESIGNED TO
SENSITIVE WATERSHED
STANDARDS.**

**ENVIRONMENTALLY
SENSITIVE AREA(S) EXIST
ON THIS PROJECT**
*Refer To E. C. Special Provisions
for Special Considerations.*

GRAPHIC SCALE

0
PLANS
0
PROFILE (HORIZONTAL)
0
PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE
NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared In the Office of:
ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611
2012 STANDARD SPECIFICATIONS

Roadway Standard Drawings

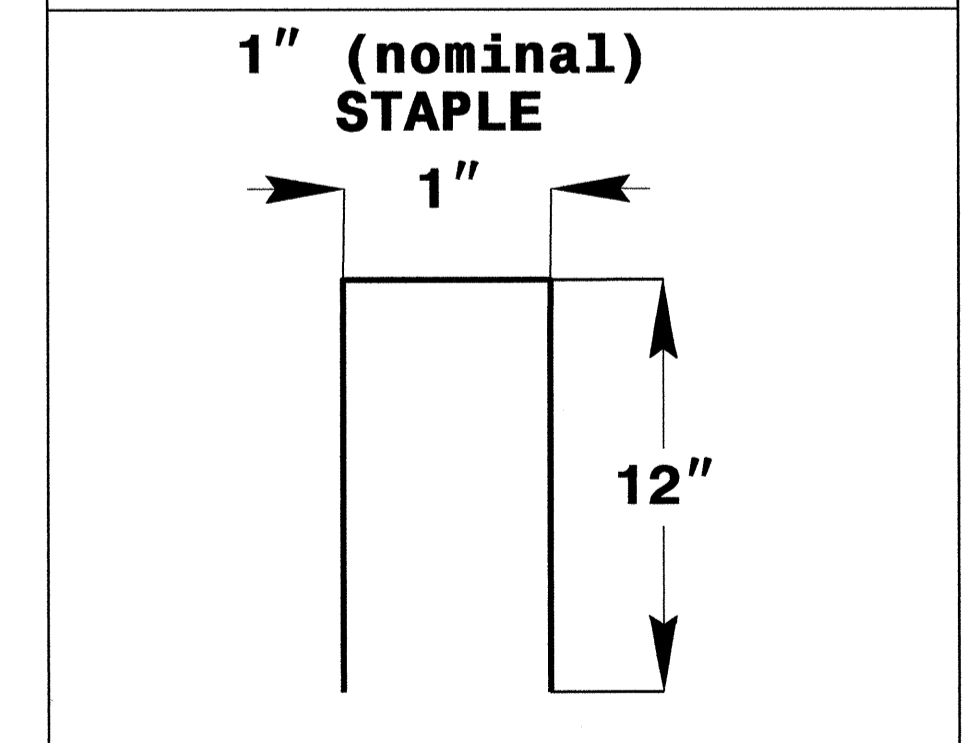
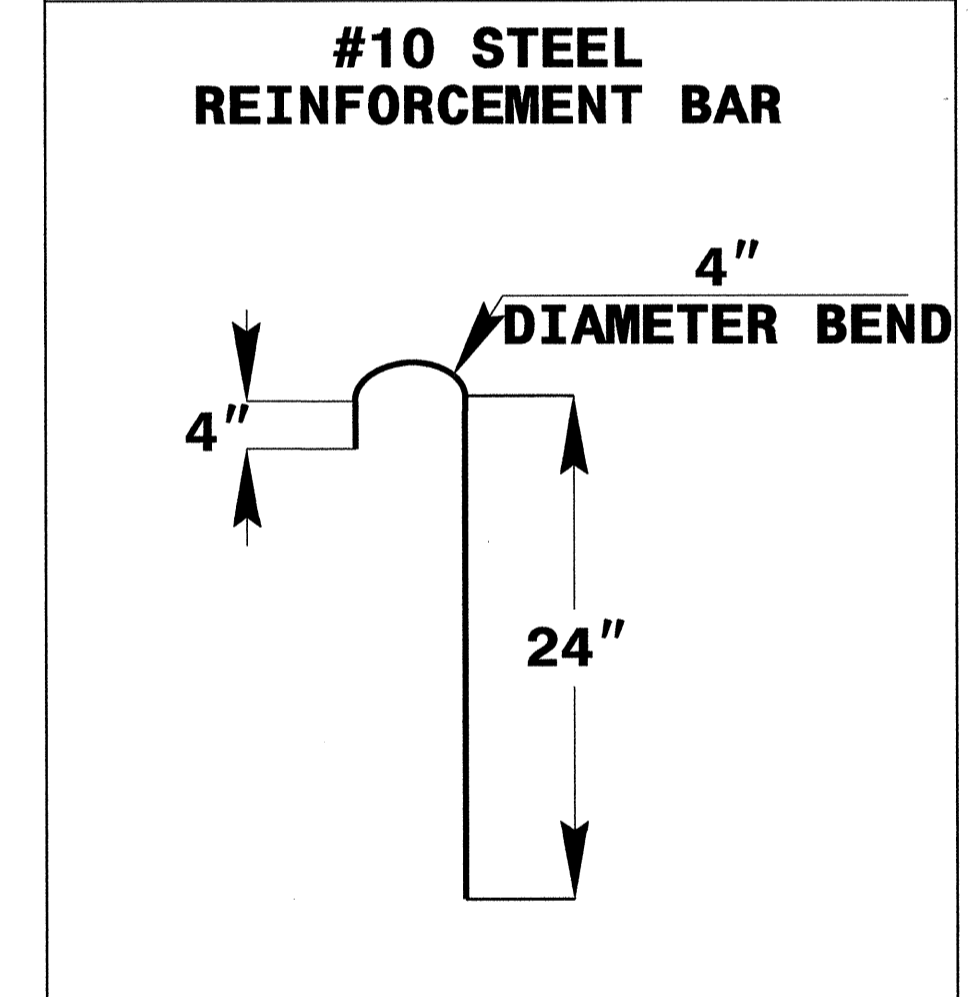
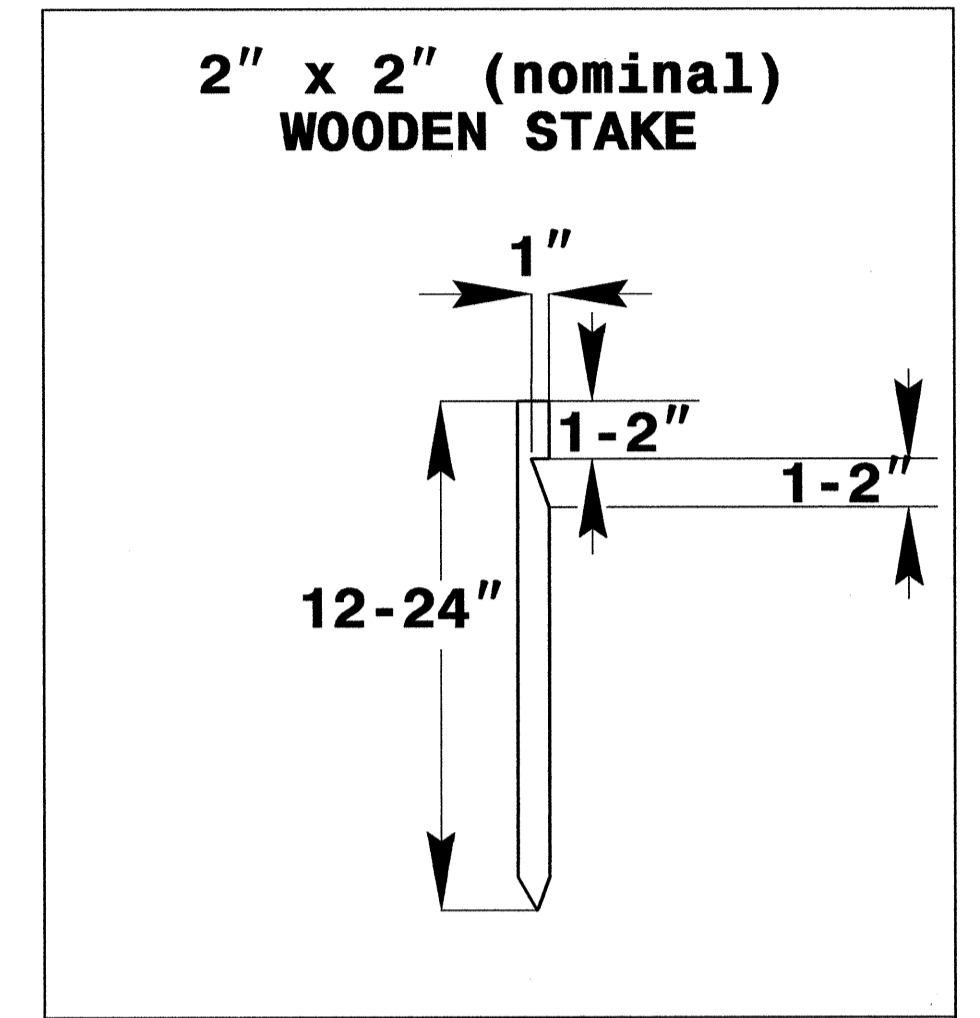
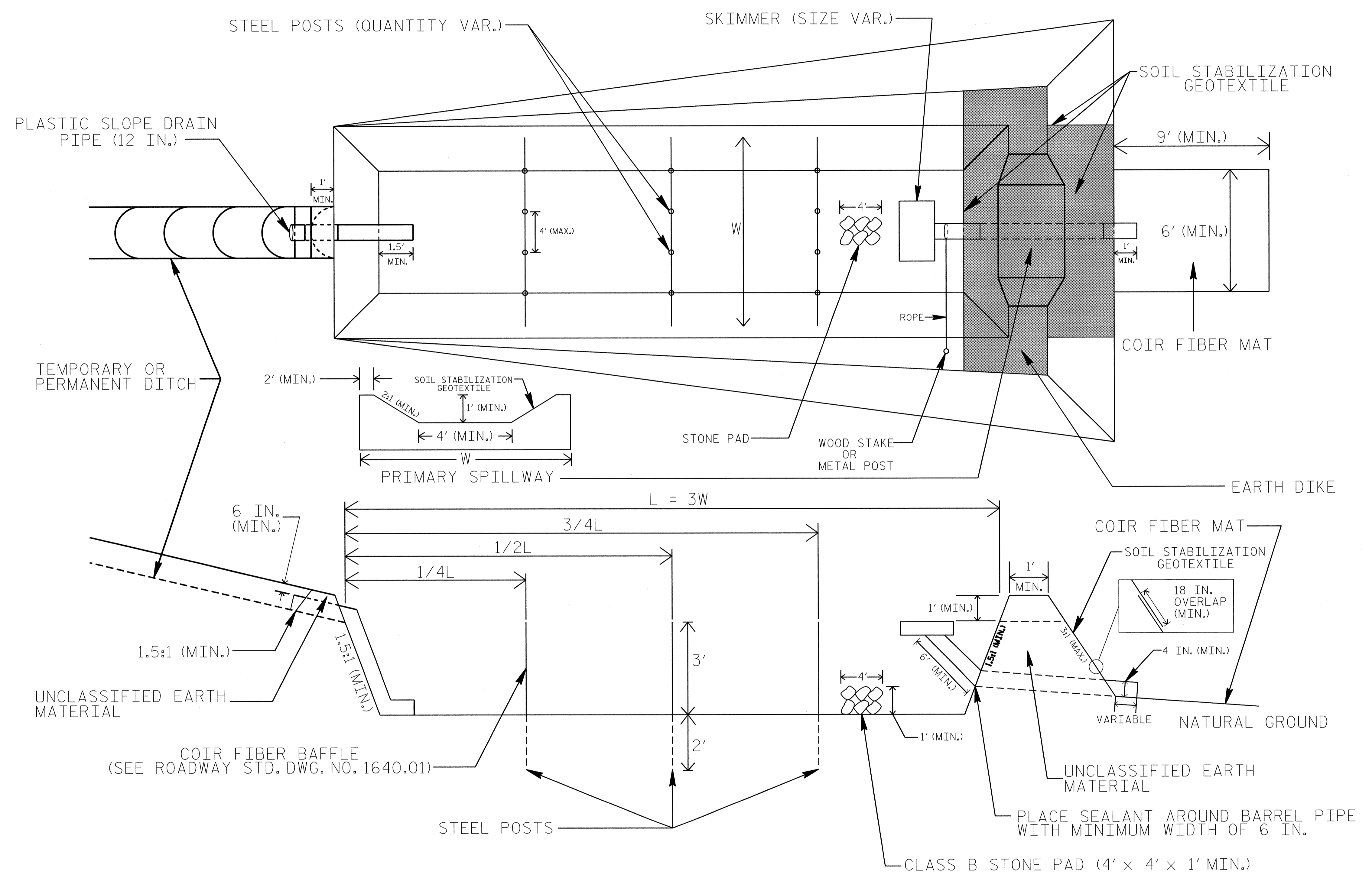
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam 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
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

01-NOV-2013 16:39 Environmental Design/Projects/Projects/Volunteering/5002-EC-1.dgn

PROJECT REFERENCE NO. K-5002	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL



COIR FIBER MAT ANCHOR OPTIONS

NOTES

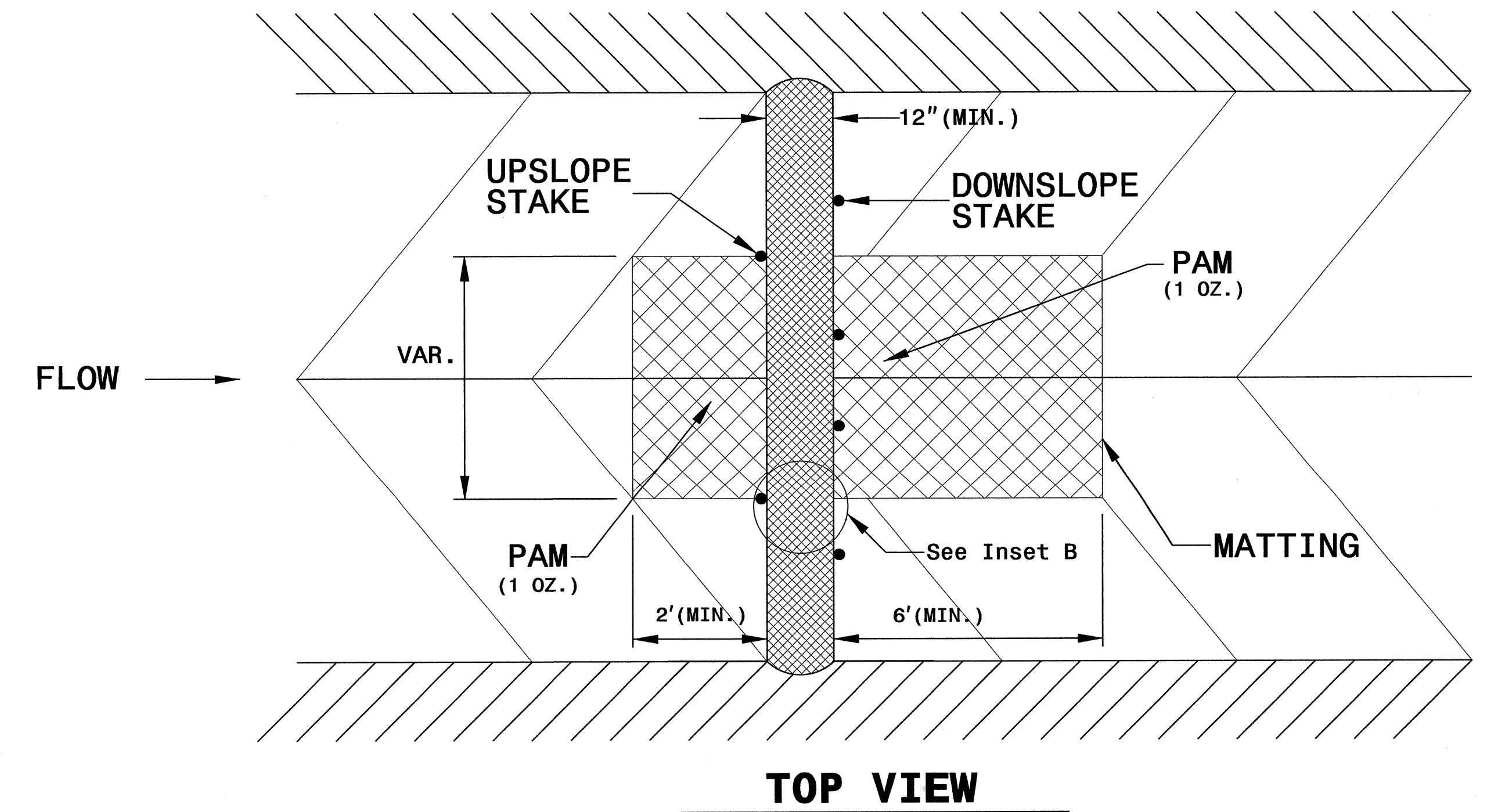
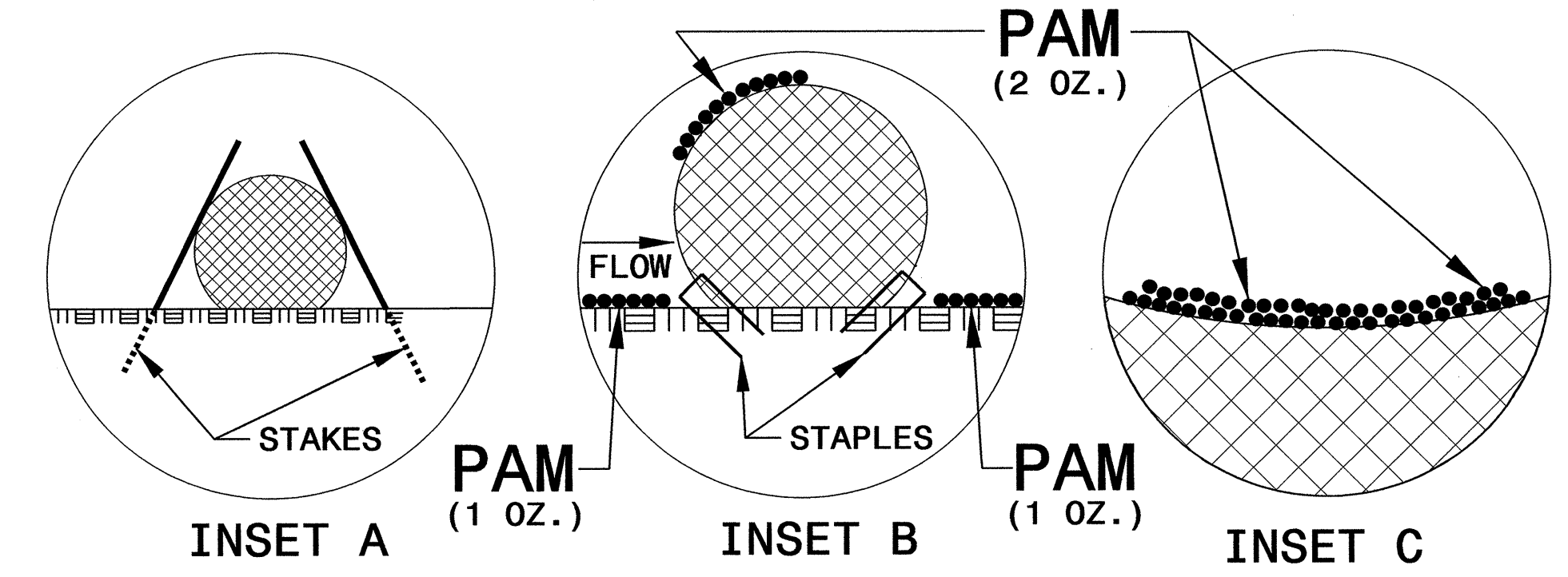
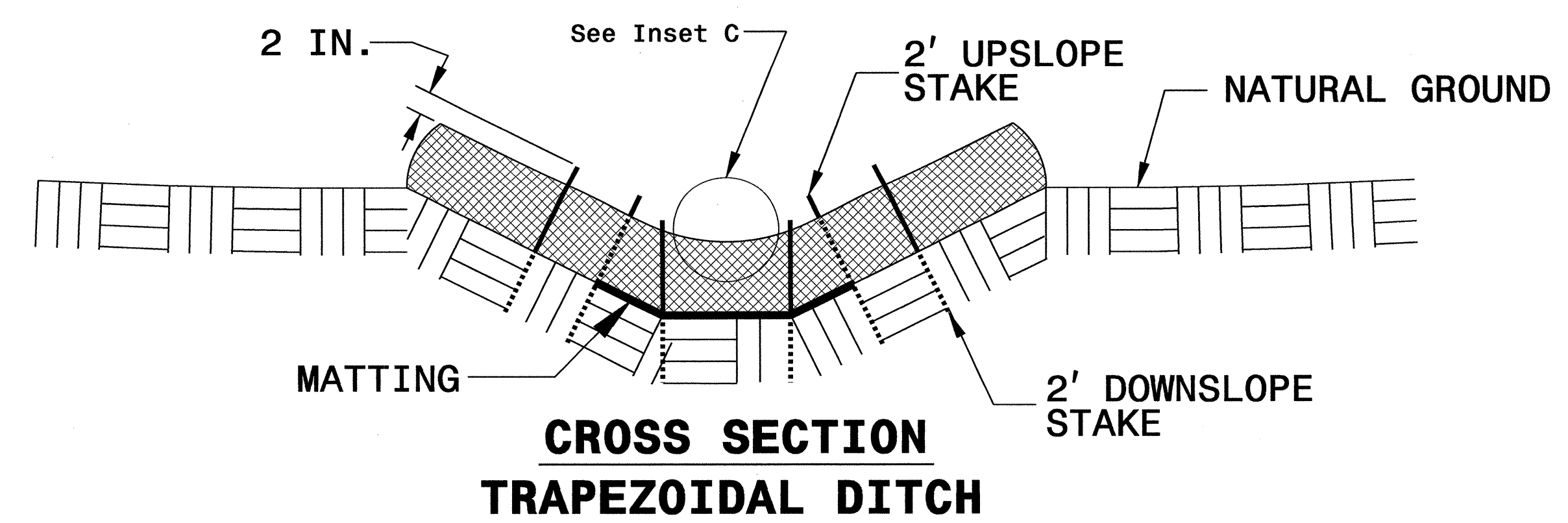
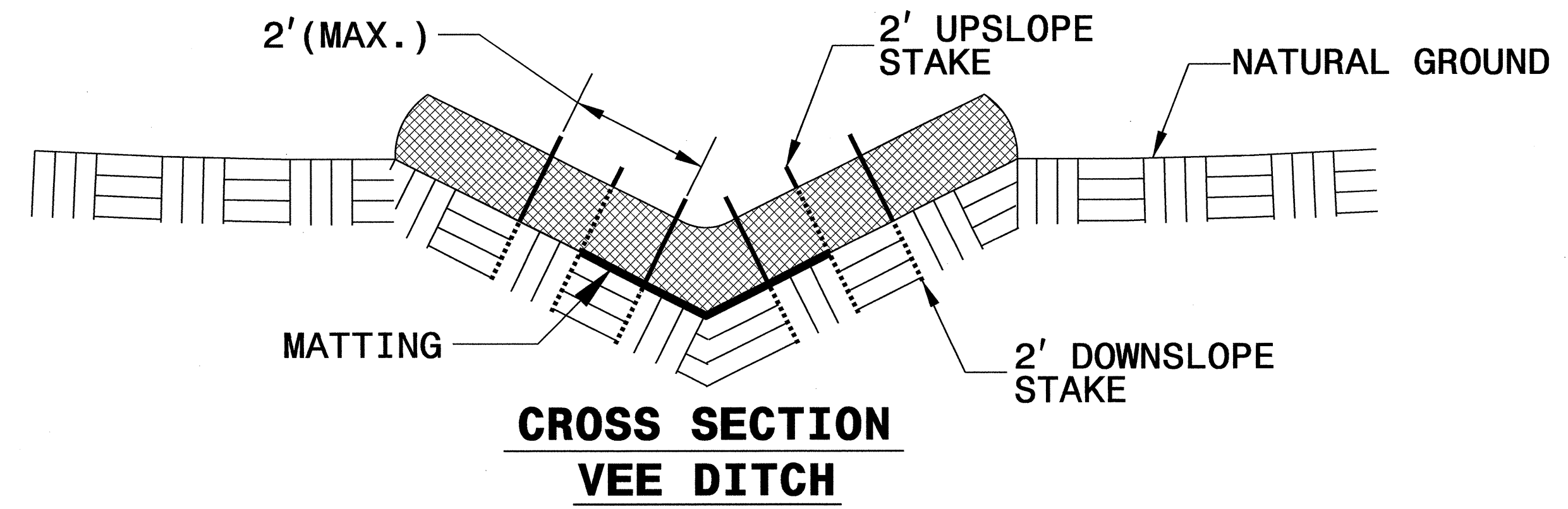
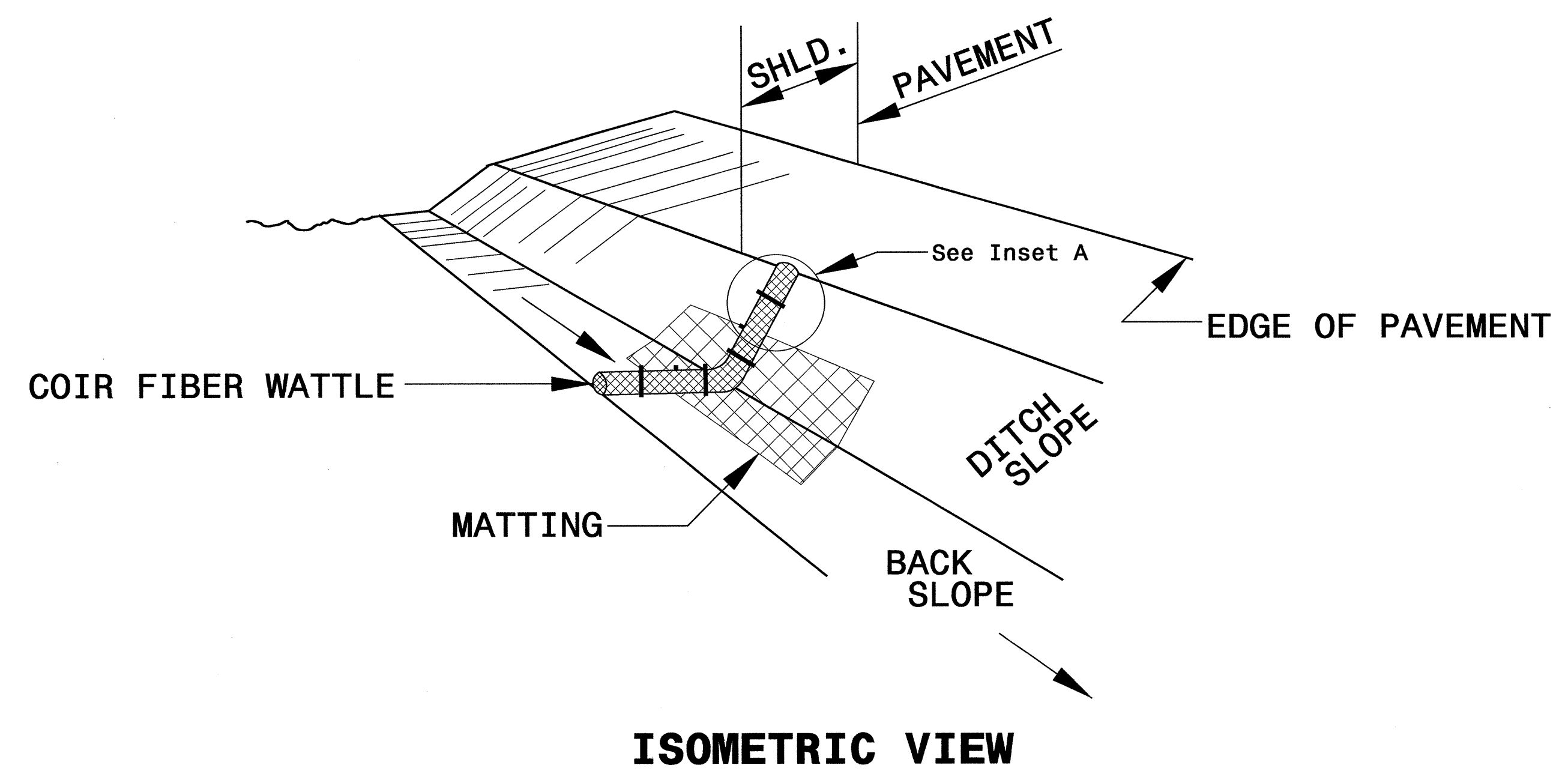
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE PRIMARY SPILLWAY WEIR LENGTH (FT.) USING $Q/0.4$, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO. K-5002		SHEET NO. EC-2A	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

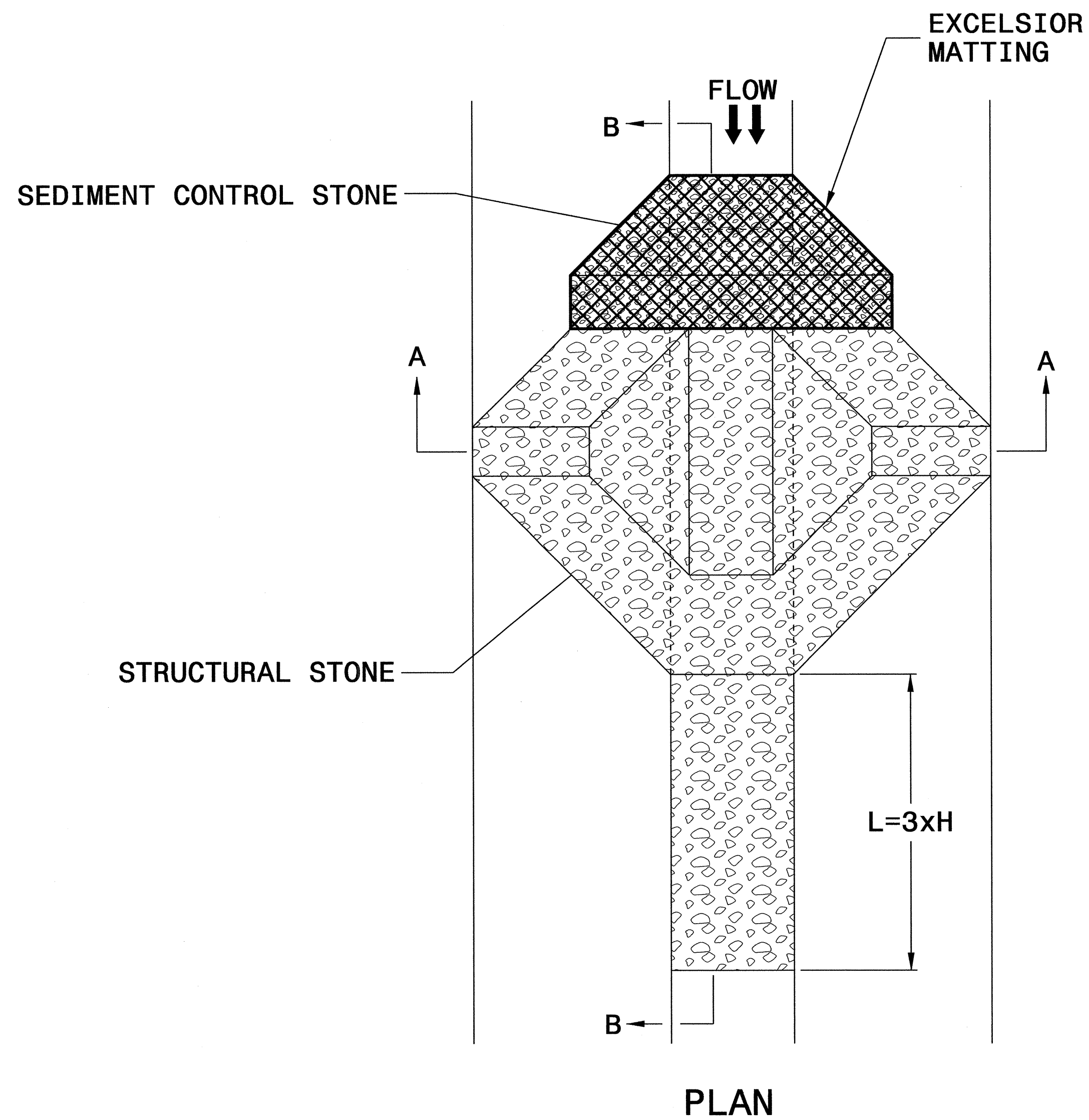
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

- NOTES:
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
 - PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
 - INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
 - INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
 - PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.
 - INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



PROJECT REFERENCE NO. K-5002	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)

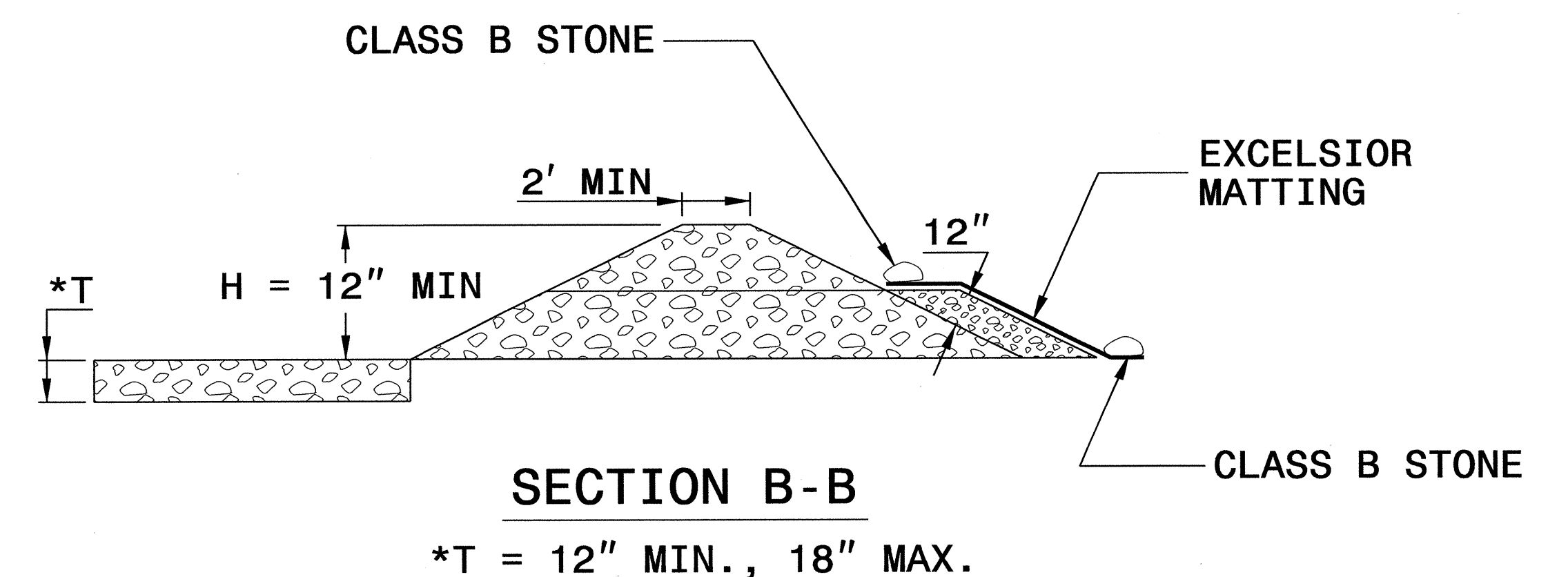
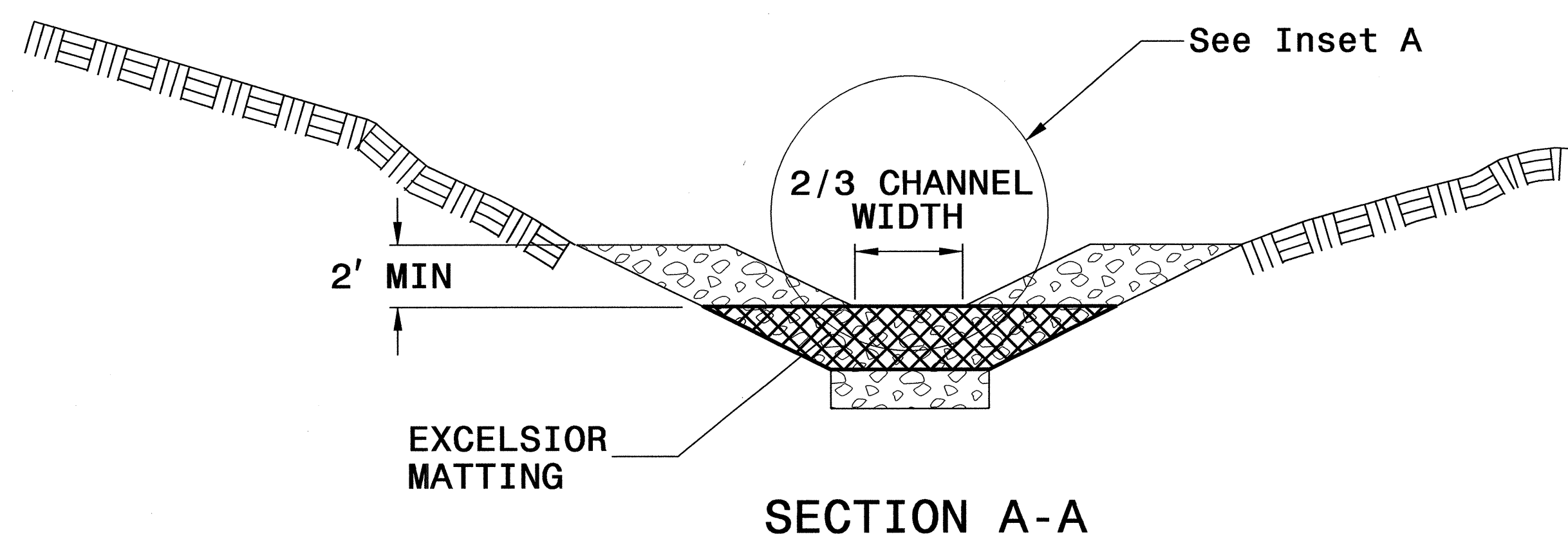
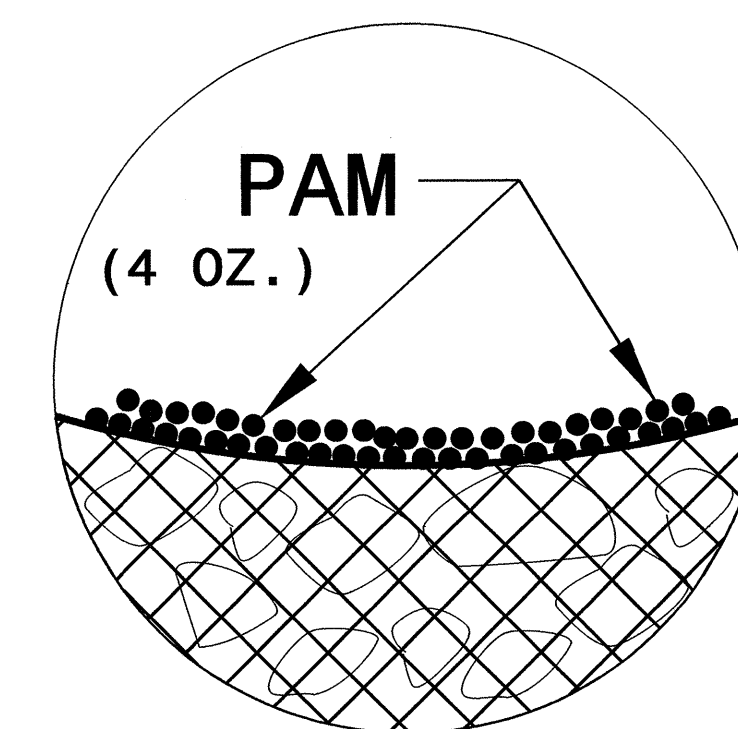


NOTES

USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

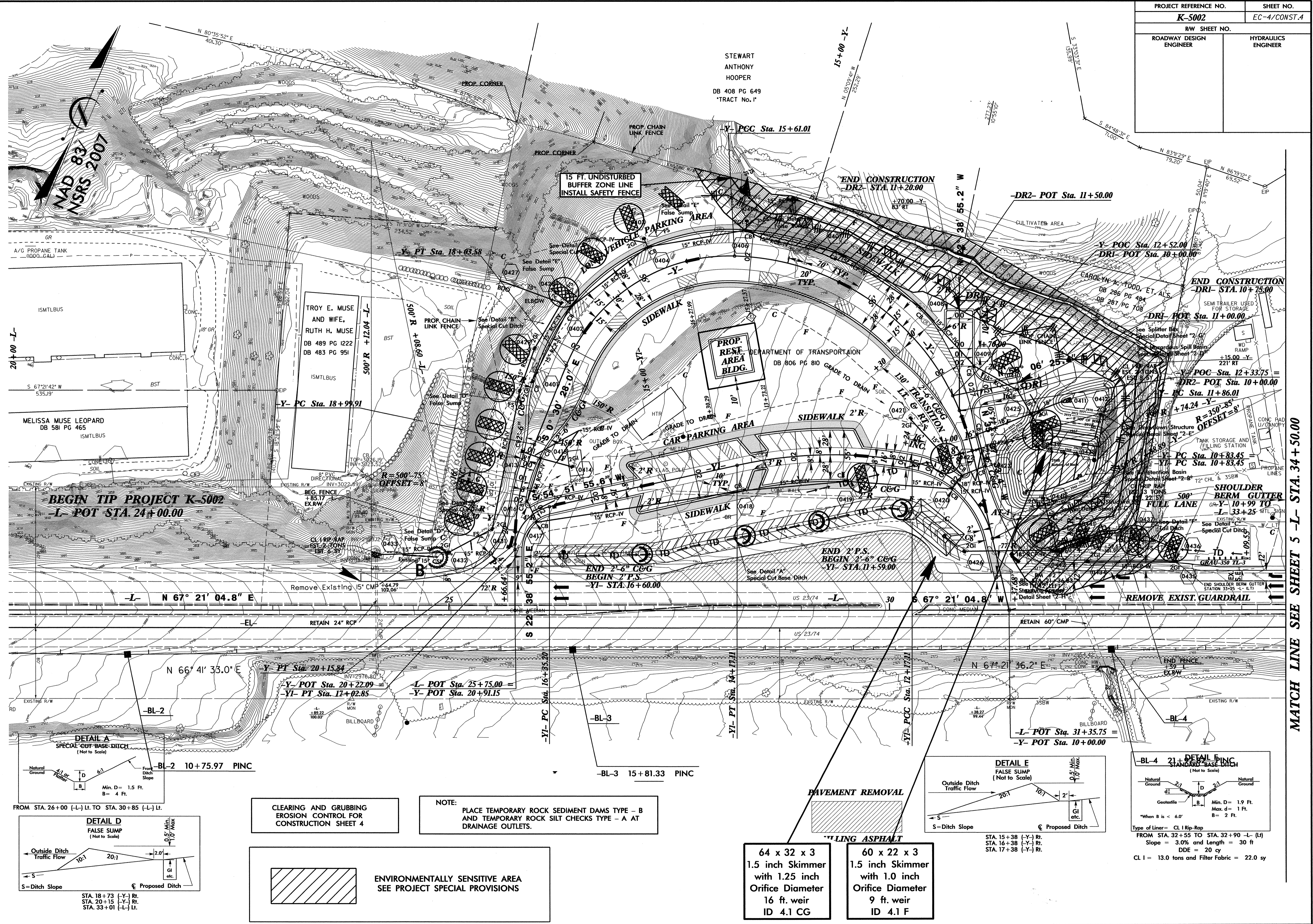
PROJECT REFERENCE NO. <i>K-5002</i>	SHEET NO. <i>EC-3</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

PROJECT REFERENCE NO.	SHEET NO.
K-5002	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99
04 NOV 2013 15:42
C:\Users\j\Documents\Projects\K5002\EC-psd\04.dgn
j\ent\ent.dwg



STEWART
ANTHONY
HOOPER
DB 408 PG 649
"TRACT No. 1"

MAD 83
NSRS 2007

A/G PROPAANE TANK (1000 GAL)

ISMTLBUS

TROY E. MUSE AND WIFE, RUTH H. MUSE
DB 489 PG 1222
DB 483 PG 951

MELISSA MUSE LEOPARD
DB 581 PG 465

BEGIN TIP PROJECT K-5002
-L- POT STA 24+00.00

-L- N 67° 21' 04.8" E

RETAIN 24" RCF

N 66° 41' 33.0" E

-Y- POT Sta. 20+22.09 =
-Y- POT Sta. 20+91.15

DETAIL A
SPECIAL CUT-BASE-DITCH
(Not to Scale)

BL-2 10+75.97 PINC

DETAIL D
FALSE SUMP
(Not to Scale)

Outside Ditch Traffic Flow

S=Ditch Slope

Proposed Ditch

0.5' Min. Slope
10:1 Max.

STA 18+73 (-Y-) Rt.
STA 20+15 (-Y-) Rt.
STA 33+01 (-L-) Lt.

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.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

PAVEMENT REMOVAL

ILLING ASPHALT

64 x 32 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
16 ft. weir
ID 4.1 CG

60 x 22 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
9 ft. weir
ID 4.1 F

DETAIL E
FALSE SUMP
(Not to Scale)

Outside Ditch Traffic Flow

S=Ditch Slope

Proposed Ditch

0.5' Min. Slope
10:1 Max.

STA 15+38 (-Y-) Rt.
STA 16+38 (-Y-) Rt.
STA 17+38 (-Y-) Rt.

DETAIL F
STANDARD BASE-DITCH
(Not to Scale)

BL-4 21+00 PINC

Natural Ground

Geotextile

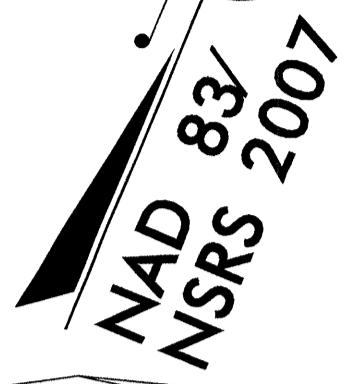
Min. D = 1.9 Ft.
Max. d = 1 Ft.
B = 2 Ft.

*When B is < 6.0'

Type of Liner = CL 1 Rip-Rap
FROM STA. 32+55 TO STA. 32+90 (-L-) Lt.
Slope = 3.0% and Length = 30 ft
DDE = 20 cy
CL 1 = 13.0 tons and Filter Fabric = 22.0 sy

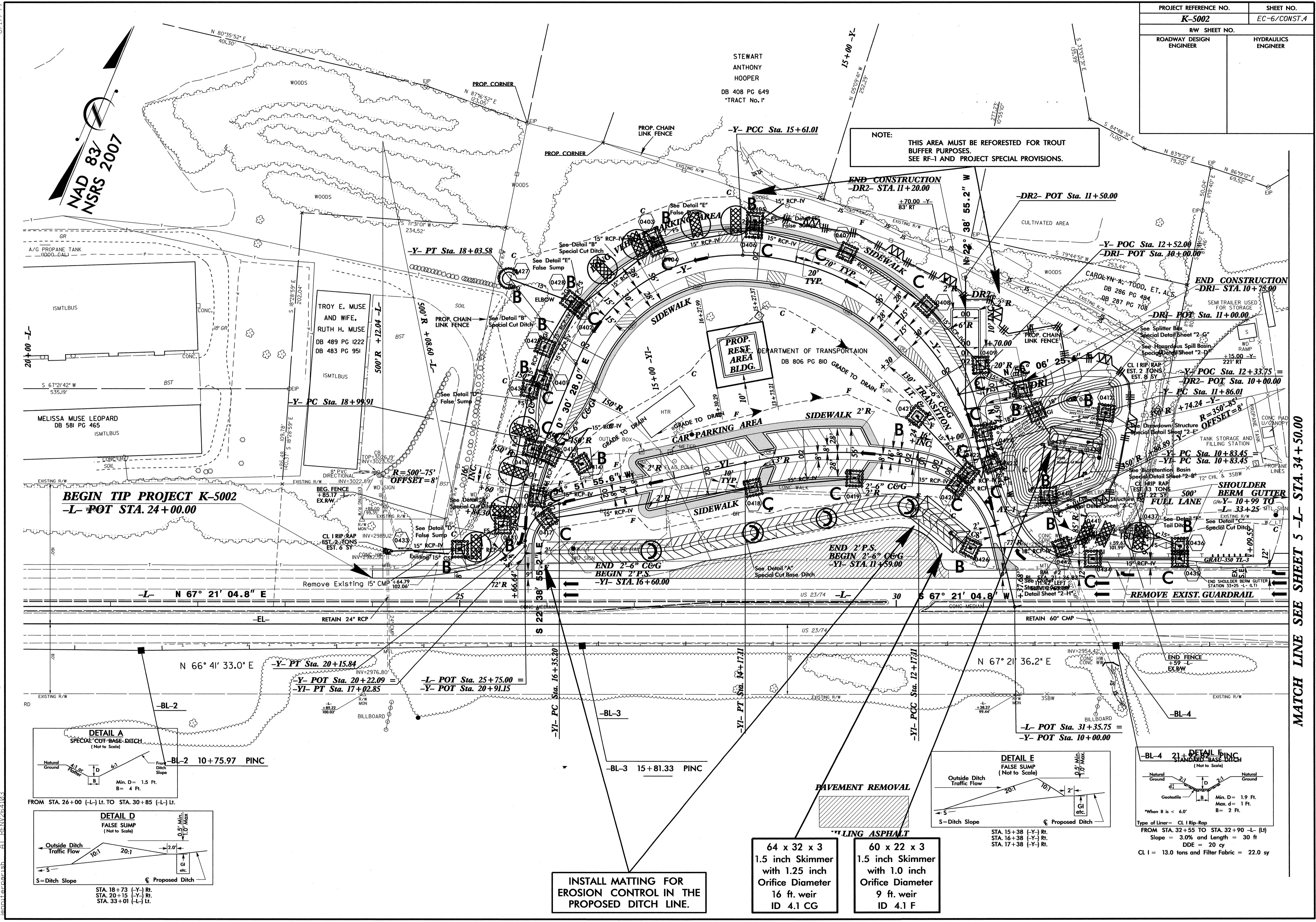
MATCH LINE SEE SHEET 5 - L - STA. 34+50.00

PROJECT REFERENCE NO.		SHEET NO.	
K-5002		EC-6/CONST.4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

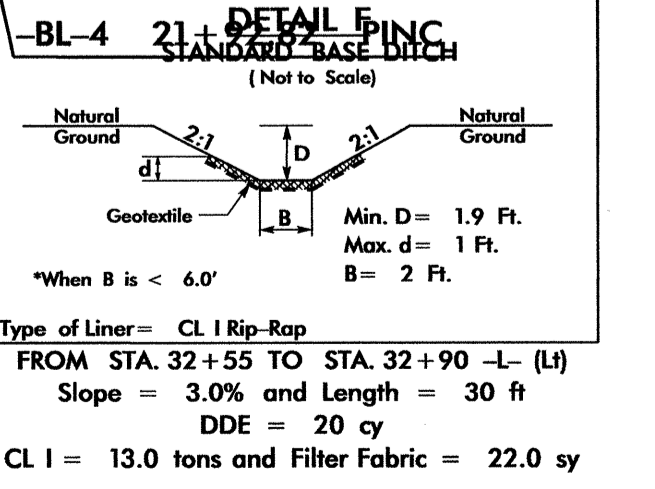
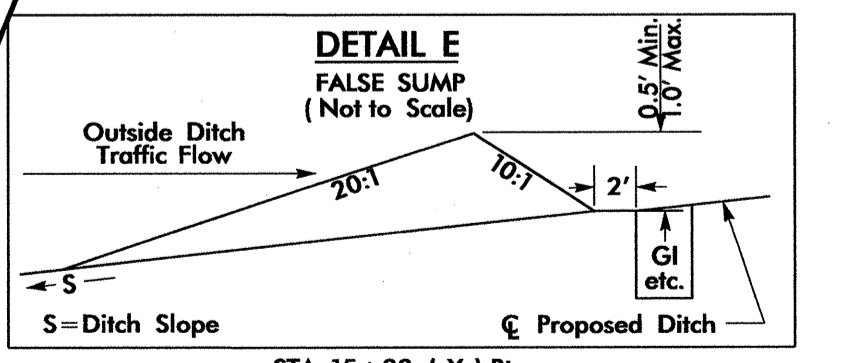
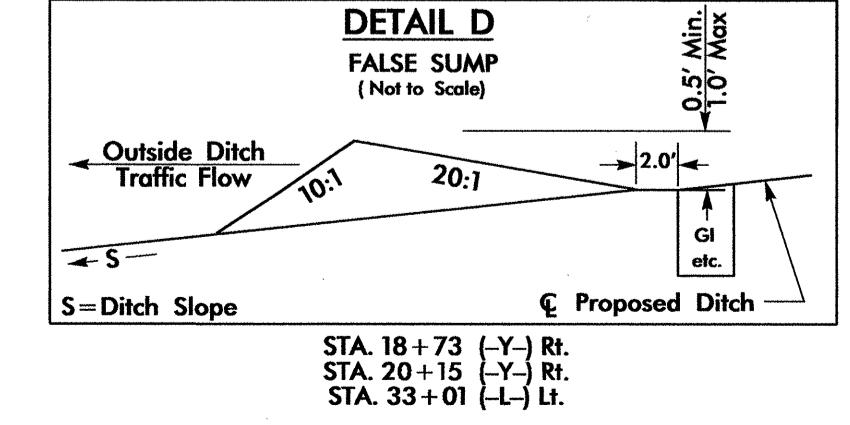
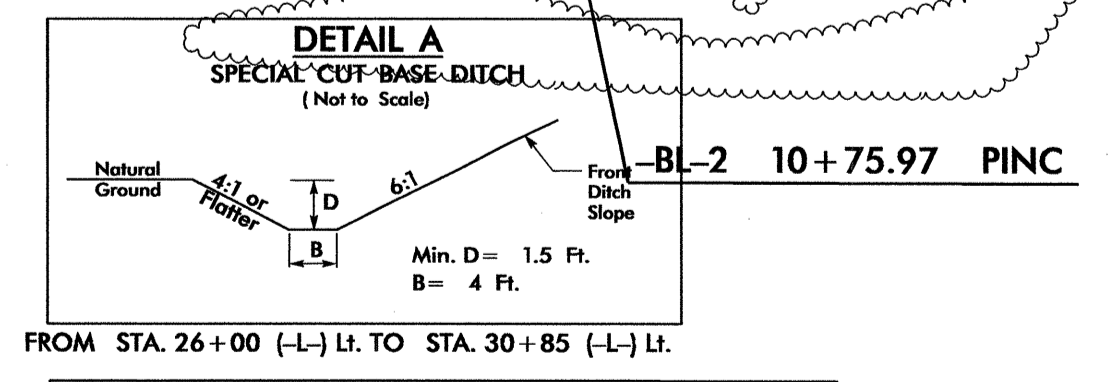


STEWART
ANTHONY
HOOPER
DB 408 PG 649
TRACT No. 1

NOTE: THIS AREA MUST BE REFORESTED FOR TROUT BUFFER PURPOSES. SEE RF-1 AND PROJECT SPECIAL PROVISIONS.



BEGIN TIP PROJECT K-5002
-L- POT STA. 24+00.00



INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

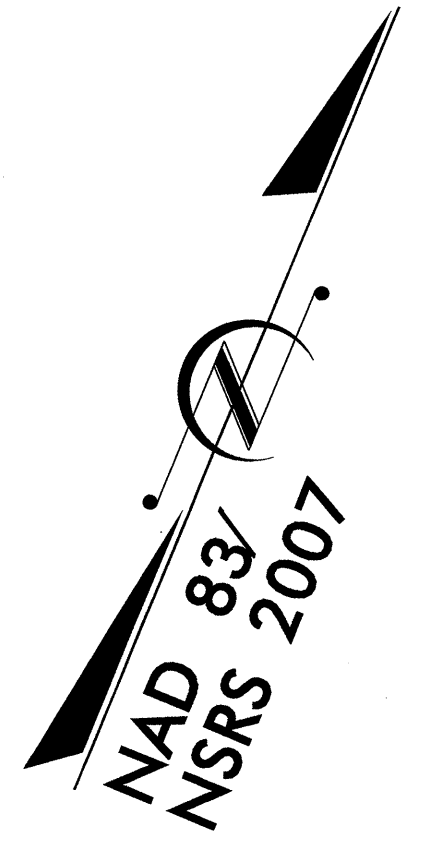
64 x 32 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
16 ft. weir
ID 4.1 CG

60 x 22 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
9 ft. weir
ID 4.1 F

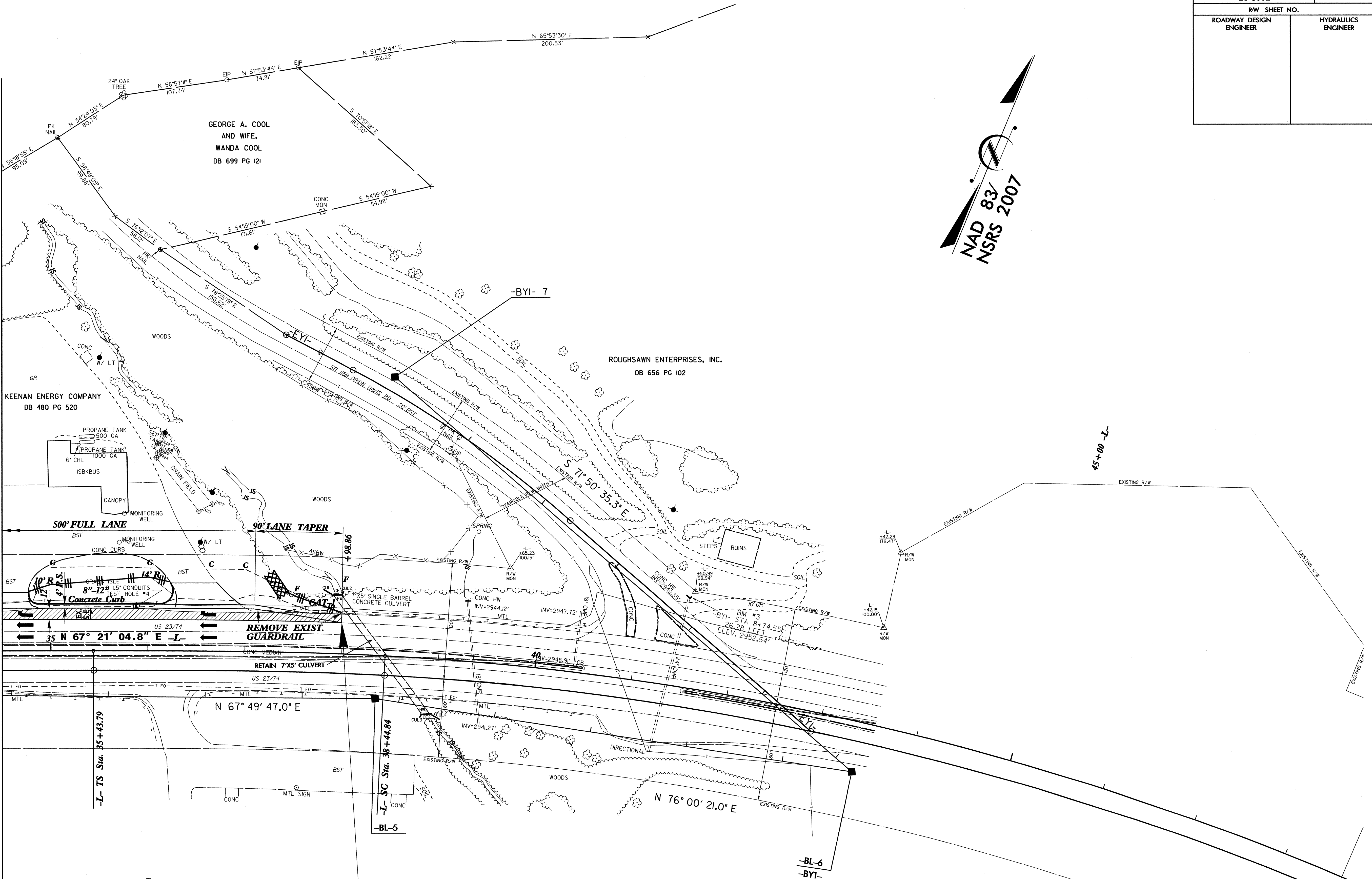
MATCH LINE SEE SHEET 5 - L - STA. 34+50.00

8/17/99
04 NOV 2013 15:43
C:\E:\V\Design\T\out\variance\K5002-EC.psh04.dgn
leant@parish.com

PROJECT REFERENCE NO.	SHEET NO.
K-5002	EC-7/CONST.5
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



MATCH LINE SEE SHEET 4 -L- STA. 34+50.00



-L-

PIs Sta 37+44.52	PI Sta 43+91.07
$\theta_s = 2^\circ 59' 22.7''$	$\Delta = 21^\circ 26' 37.3''$ (RT)
$L_s = 301.05'$	$D = 1^\circ 59' 10.1''$
$LT = 200.73'$	$L = 1,079.67'$
$ST = 100.38'$	$T = 546.23'$
	$R = 2,884.79'$
	$S 88^\circ 12' 55.2'' E$ (AHEAD)

END TIP PROJECT K-5002

	NORTH	EAST	ELEV.
-L- POC STA 37+98.86	645344.76	794168.02	2944.98
CUL1	645344.76	794168.92	2944.75
HW1	645344.46	794168.89	2949.90
CUL3	645263.66	794297.28	2942.67

NOTE:
1.) NO PROFILE PROVIDED FOR -L- WIDEN OFF THE EXISTING.

8/17/99
Q:\NOV-2013 15:24
RA\Environmental\1 - All\11\11\254103
small\p05.dgn