



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37243-0350**

INSTRUCTIONAL BULLETIN NO. 04-9

Regarding Erosion Control And Landscaping Drawings
To Be Printed With The Plans

Effective for the July 16, 2004 bid letting, the various erosion control drawings attached to this instructional bulletin are to be printed with the plans. They shall be identified on the lower left hand corner of the index sheet-**"To be printed with the plans"**.

Copies of these drawings are attached to this instructional bulletin.

Instructional Bulletin No. 03-12 is to be voided.

ROADWAY DESIGN STANDARDS

<u>Drawing Number</u>	<u>Current Revision Date</u>	<u>Drawing Title</u>
RD-L-5 RDM-L-5	4-15-04	STANDARD LEGEND FOR EROSION AND SEDIMENT CONTROL
RD-L-6 RDM-L-6	4-15-04	STANDARD LEGEND FOR EROSION AND SEDIMENT CONTROL

EROSION CONTROL AND LANDSCAPING

<u>Drawing Number</u>	<u>Current Revision Date</u>	<u>Drawing Title</u>
EC-STR-1 ECM-STR-1	3-15-04	PAY ITEMS, GENERAL NOTES & TEMPORARY DEWATERING STRUCTURE
EC-STR-2 ECM-STR-2	10-26-03	TEMPORARY SEDIMENT FILTER BAGS
EC-STR-3A ECM-STR-3A	12-18-03	TEMPORARY FILTER BARRIER
EC-STR-3B ECM-STR-3B	12-18-03	TEMPORARY SILT FENCE
EC-STR-3C ECM-STR-3C	12-18-03	TEMPORARY SILT FENCE WITH BACKING
EC-STR-3D ECM-STR-3D	12-18-03	TEMPORARY ENHANCED SILT FENCE
EC-STR-4 ECM-STR-4	3-15-04	TEMPORARY EROSION DITCH CHECK USING ENHANCED SILT FENCE
EC-STR-4A ECM-STR-4A	3-15-04	TEMPORARY EROSION CHECK/FILTER USING ENHANCED SILT FENCE IN A TRIANGULAR CROSS-SECTION DITCH
EC-STR-5 ECM-STR-5	10-26-03	STRAW OR HAY BALE OR FABRIC TEMPORARY EROSION CHECKS
EC-STR-19 ECM-STR-19	3-15-04	CATCH BASIN PROTECTION
EC-STR-25 ECM-STR-25	7-29-03	TEMPORARY ROAD STABILIZATION AND TEMPORARY CULVERT CROSSING
EC-STR-40 ECM-STR-40		CATCH BASIN FILTER ASSEMBLY FOR CIRCULAR STRUCTURES
EC-STR-41 ECM-STR-41		CATCH BASIN FILTER ASSEMBLY (TYPE 1)


EC-STR-41A ECM-STR-41A	CATCH BASIN FILTER ASSEMBLY (TYPE 1) SLIPCOVER DETAILS
EC-STR-42 ECM-STR-42	CATCH BASIN FILTER ASSEMBLY (TYPE 2)
EC-STR-42A ECM-STR-42A	CATCH BASIN FILTER ASSEMBLY (TYPE 2) SLIPCOVER DETAILS
EC-STR-43 ECM-STR-43	CATCH BASIN FILTER ASSEMBLY (TYPE 3)
EC-STR-43A ECM-STR-43A	CATCH BASIN FILTER ASSEMBLY (TYPE 3) SLIPCOVER DETAILS
EC-STR-44 ECM-STR-44	CATCH BASIN FILTER ASSEMBLY (TYPE 4)
EC-STR-44A ECM-STR-44A	CATCH BASIN FILTER ASSEMBLY (TYPE 4) SLIPCOVER DETAILS
EC-STR-45 ECM-STR-45	CATCH BASIN FILTER ASSEMBLY (TYPE 5)
EC-STR-45A ECM-STR-45A	CATCH BASIN FILTER ASSEMBLY (TYPE 5) SLIPCOVER DETAILS
EC-STR-46 ECM-STR-46	CATCH BASIN FILTER ASSEMBLY (TYPE 6)
EC-STR-46A ECM-STR-46A	CATCH BASIN FILTER ASSEMBLY (TYPE 6) SLIPCOVER DETAILS
EC-STR-47 ECM-STR-47	CATCH BASIN FILTER ASSEMBLY (TYPE 7)
EC-STR-47A ECM-STR-47A	CATCH BASIN FILTER ASSEMBLY (TYPE 7) SLIPCOVER DETAILS
EC-STR-48 ECM-STR-48	CATCH BASIN FILTER ASSEMBLY (TYPE 8)
EC-STR-48A ECM-STR-48A	CATCH BASIN FILTER ASSEMBLY (TYPE 8) SLIPCOVER DETAILS

EC-STR-49
ECM-STR-49

CATCH BASIN FILTER ASSEMBLY (TYPE 9)

EC-STR-49A
ECM-STR-49A

CATCH BASIN FILTER ASSEMBLY (TYPE 9)
SLIPCOVER DETAILS



Jeff C. Jones, C. E. Director
Design Division

JW:mbd
Attachment
April 1, 2004

STANDARD LEGEND

	RIP-RAP		TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 6)
	PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)		TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 7)
	PERMANENT RIP-RAP ENERGY DISSIPATOR		TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 8)
	SEDIMENT BASIN (TYPE 1) WITH DAM		TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 9)
	TEMPORARY BERM		TEMPORARY CATCH BASIN HAY OR STRAW BALE SILT TRAP
	TEMPORARY BALED HAY OR STRAW EROSION CHECK		TEMPORARY CATCH BASIN SILT FENCE SILT TRAP
	TEMPORARY BRUSH SEDIMENT BARRIERS		TEMPORARY CONSTRUCTION ROAD ENTRANCE AND/OR EXIT
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 1)		TEMPORARY CULVERT CROSSING
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 2)		TEMPORARY DEWATERING STRUCTURE
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 3)		TEMPORARY DIVERSION CHANNEL (DESCRIBE - SIZE AND TYPE OF LINING)
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 4)		TEMPORARY ENHANCED SILT FENCE
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 5)		TEMPORARY FILTER BARRIER

REV. 10-26-94: MOVED EROSION AND SEDIMENT CONTROL LEGENDS FROM RD-L-2 AND THE ESC-SM SERIES OF DETAIL SHEETS.

REV. 5-27-95: ADDED NEW SYMBOLS, FOR TEMPORARY CATCH BASIN.

REV. 5-27-96: MODIFIED SYMBOL FOR TEMPORARY CATCH BASIN.

REV. 7-29-97: CHANGED LEGEND FOR PERMANENT SLOPE DRAIN PIPE.

REV. 5-27-01: CHANGED REFERENCE RIP-LEND FROM DIMED ROCK TO PERMANENT SLOPE DRAIN PIPE.

REV. 12-18-02: REMOVED SYMBOLS FOR PERMANENT SLOPE DRAIN PIPE AND SEDIMENT DITCH CHECKS. ADDED SYMBOL FOR TYPE 1 EROSION DITCH (WITH BAKKINON) AND TEMPORARY ENHANCED SILT FENCE.

REV. 1-29-03: ADDED SYMBOL FOR TYPE 1A FILTER BARRIER DITCH CHECK.

REV. 10-26-03: DELETED LEGEND FOR TYPE EG V FILTER BARRIER.

REV. 3-15-04: MOVED PART OF LEGEND BEGINNING WITH TEMPORARY ROCK AND SEDIMENT DAM TO NEW SHEET RD-L-5. CHANGED LEGEND FOR SILT TRAP AND TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 1 THROUGH 9).

REV. 4-15-04: CHANGED DRAWING NUMBER FROM RD-L-4 TO RD-L-5.

MINOR REVISION ... FEMA APPROVAL NOT REQUIRED.

STANDARD LEGEND



TEMPORARY ROCK AND SEDIMENT DAM



TEMPORARY SEDIMENT TRAP WITH TEMPORARY SILT SCREEN CHECK DAM



PERMANENT ROCK AND SEDIMENT DAM

* SF * SF * SF *

TEMPORARY SILT FENCE (WITHOUT BACKING)



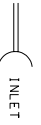
TEMPORARY ROCK CATCH BASIN PROTECTION (MULTI-DIRECTIONAL FLOW)

* SFB * SFB * SFB *

TEMPORARY SILT FENCE (WITH BACKING)



TEMPORARY ROCK CATCH BASIN PROTECTION (SINGLE DIRECTIONAL FLOW)



TEMPORARY SLOPE DRAIN PIPE (SHOW SIZE)



TEMPORARY ROCK CATCH BASIN PROTECTION (TYPE A)



TEMPORARY STABILIZED CONSTRUCTION FORD



TEMPORARY ROCK CHECK DAM IN TRAPEZOIDAL DITCH



TEMPORARY TYPE EC 1 FILTER BARRIER EROSION DITCH CHECK



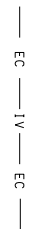
TEMPORARY ROCK CHECK DAM IN V - DITCH



TEMPORARY TYPE EC 1A FILTER BARRIER EROSION DITCH CHECK



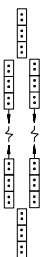
TEMPORARY ROCK SEDIMENT DAM



TEMPORARY TYPE EC 1V FILTER BARRIER USED FOR EROSION CHECK AT TOE OF EMBANKMENT SLOPE



TEMPORARY ROCK SILT SCREEN AT PIPE INLETS



TEMPORARY TYPE EC VI BALED STRAW OR HAY EROSION CHECK USED ALONG EMBANKMENT SLOPES



TEMPORARY ROCK SILT SCREEN USED IN CHANNELS



TEMPORARY ROCK SILT SCREEN USED IN ROADSIDE DITCHES



TEMPORARY SEDIMENT FILTER BAGS

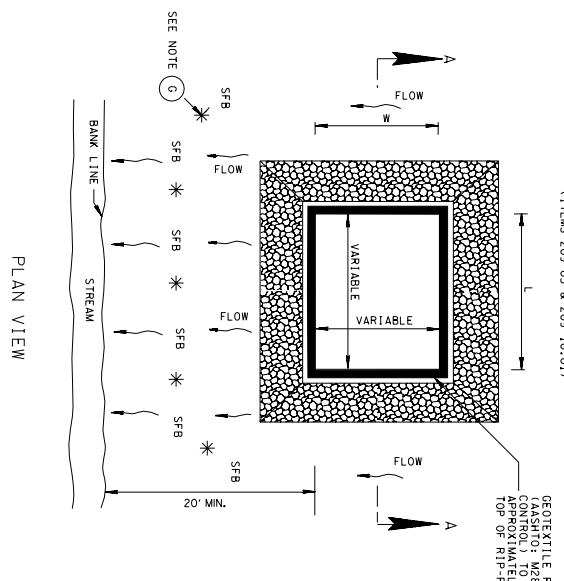
REV. 3-15-04: CHANGED LEGEND FOR TEMPORARY ROCK CATCH BASIN PROTECTION (MULTI-DIRECTIONAL FLOW), TEMPORARY ROCK CATCH BASIN PROTECTION (TYPE A), TEMPORARY TYPE EC 1 FILTER BARRIER EROSION DITCH CHECK, AND TEMPORARY TYPE EC 1A FILTER BARRIER EROSION DITCH CHECK.
 REV. 4-15-04: CHANGED DRAWING NUMBER FROM RD-L-5 TO RD-L-6. ADDED SYMBOL FOR TEMPORARY SEDIMENT FILTER BAGS.

MINOR REVISION ... PERM APPROVAL NOT REQUIRED.

TEMPORARY EROSION & SEDIMENT CONTROL PAY ITEMS

ITEM NO.	DESCRIPTION (UNCLASSIFIED)	UNIT
203-01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED)	CUBIC YARD
209-02-03	8" TEMPORARY SLOPE DRAIN	LINEAR FOOT
209-02-04	10" TEMPORARY SLOPE DRAIN	LINEAR FOOT
209-02-05	12" TEMPORARY SLOPE DRAIN	LINEAR FOOT
209-02-06	15" TEMPORARY SLOPE DRAIN	LINEAR FOOT
209-02-07	18" TEMPORARY SLOPE DRAIN	LINEAR FOOT
209-03	CHECK DAMS	SQUARE FOOT
209-04	BRUSH BARRIERS	LINEAR FOOT
209-05	SEDIMENT REMOVAL	CUBIC YARD
209-06	BALD HAY OR STRAW EROSION CHECKS	BALE
209-08-01	TEMPORARY FILTER BARRIER	LINEAR FOOT
209-08-02	TEMPORARY SILT FENCE (WITH BACKING)	LINEAR FOOT
209-08-03	TEMPORARY SILT FENCE (WITHOUT BACKING)	LINEAR FOOT
209-08-04	TEMPORARY ENHANCED SILT FENCE	LINEAR FOOT
209-09-01	SANDBAGS	BAG
209-09-02	TEMPORARY SEDIMENT FILTER BAGS (14'-6" X 2'-0" X 13'-3")	EACH
209-10-01	TEMPORARY DEWATERING STRUCTURE	CUBIC YARD
209-11-01 TO 209-11-09	TEMPORARY BASIN FILTER TRAP	CUBIC YARD
209-11-10	TEMPORARY BASIN FILTER TRAP	EACH
209-11-20	SEDIMENT BASIN BAGGIES	LINEAR FOOT
209-20-03	POLYETHYLENE SHEETING (6 MIL MINIMUM)	SQUARE YARD
209-40-41	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EACH
209-40-42	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EACH
209-40-43	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EACH
209-40-44	CATCH BASIN FILTER ASSEMBLY (TYPE 4)	EACH
209-40-45	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EACH
209-40-46	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EACH
209-40-47	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EACH
209-40-48	CATCH BASIN FILTER ASSEMBLY (TYPE 8)	EACH
209-40-49	CATCH BASIN FILTER ASSEMBLY (TYPE 9)	EACH
303-10-01	MINERAL AGGREGATE (SIZE 57)	TON
604-01-01	STEEL & CONCRETE (ROADWAY)	CUBIC YARD
604-01-02	STEEL BAR REINFORCEMENT (ROADWAY)	POUNDS
607-41-03	18" SLOPE DRAIN PIPE	LINEAR FOOT
607-41-04	24" SLOPE DRAIN PIPE	LINEAR FOOT
607-41-05	30" SLOPE DRAIN PIPE	LINEAR FOOT
607-41-06	36" SLOPE DRAIN PIPE	LINEAR FOOT
621-03-02	18" TEMPORARY DRAINAGE PIPE	LINEAR FOOT
621-03-03	24" TEMPORARY DRAINAGE PIPE	LINEAR FOOT
621-03-04	30" TEMPORARY DRAINAGE PIPE	LINEAR FOOT
621-03-05	36" TEMPORARY DRAINAGE PIPE	LINEAR FOOT
621-03-06	48" TEMPORARY DRAINAGE PIPE	LINEAR FOOT
621-03-07	54" TEMPORARY DRAINAGE PIPE	LINEAR FOOT
621-03-08	60" TEMPORARY DRAINAGE PIPE	LINEAR FOOT
621-03-09	66" TEMPORARY DRAINAGE PIPE	LINEAR FOOT
621-03-10	66" TEMPORARY DRAINAGE PIPE	LINEAR FOOT
709-01-01	RUBBLE STONE RIP-RAP	CUBIC YARD
709-01-02	RUBBLE STONE RIP-RAP (ROUTED)	TON
709-02-01	RUBBLE STONE RIP-RAP (ROUTED)	CUBIC YARD
709-05-05	MACHINED RIP-RAP (CLASS A-3)	TON
709-05-06	MACHINED RIP-RAP (CLASS A-1)	TON
709-05-07	MACHINED RIP-RAP (CLASS A-2)	TON
740-10-01	GEOTEXTILE - TYPE I (SUBSURFACE DRAINAGE)	SQUARE YARD
740-10-02	GEOTEXTILE - TYPE II (SEDIMENT CONTROL)	SQUARE YARD
740-10-03	GEOTEXTILE - TYPE III (SEDIMENT CONTROL)	SQUARE YARD
740-10-04	GEOTEXTILE - TYPE IV (STABILIZATION)	SQUARE YARD
740-10-05	GEOTEXTILE - TYPE V (DESCRIPTION)	SQUARE YARD
801-01	SEEDING (WITH MULCH)	UNIT
801-01-07	TEMPORARY SEEDING (WITH MULCH)	UNIT
801-02	SEEDING (WITHOUT MULCH)	UNIT
801-02-01	CROWN VEICH MIXTURE (WITHOUT MULCH)	UNIT
801-03	WATER (SEEDING AND SOODING)	THOUSAND GALLON
805-12-01	EROSION CONTROL BLANKET (TYPE I)	SQUARE YARD
805-12-02	EROSION CONTROL BLANKET (TYPE II)	SQUARE YARD
805-12-03	EROSION CONTROL BLANKET (TYPE III)	SQUARE YARD
805-12-04	EROSION CONTROL BLANKET (TYPE IV)	SQUARE YARD
805-13-03	FLEXIBLE CHANNEL LINER (CLASS III)	SQUARE YARD

TEMPORARY DEWATERING STRUCTURE



TEMPORARY DEWATERING STRUCTURE GENERAL NOTES

- (A) THE PRIMARY USE OF THE TEMPORARY DEWATERING STRUCTURE IS FOR DEWATERING COFFERDAMS, TRENCHES, ENCLOSED DITCHES, ETC.
- (B) THE MINIMUM REQUIRED VOLUME OF STORAGE IN CUBIC FEET FOR THE TEMPORARY DEWATERING STRUCTURE IS DETERMINED BY LISTING THE PUMPING RATE (IN ACCOMPANYING TABLE) IN GALLONS PER MINUTE BY 15.
- (C) ALL MATERIALS USED TO CONSTRUCT THE TEMPORARY DEWATERING STRUCTURE SHALL BE PAID FOR UNDER ITEM NUMBER 209-10-01 TEMPORARY DEWATERING STRUCTURE PER CUBIC YARD.
- (D) THE ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE BASIN IS HALF FULL AND PAID FOR AT THE PRICE BID FOR ITEM 209-05, SEDIMENT REMOVAL PER CUBIC YARD.
- (E) DIVERT ANY STORMWATER AWAY FROM THE TEMPORARY DEWATERING STRUCTURES.
- (F) THE USE OF SOCKS TO COLLECT SEDIMENT WHEN PUMPING FROM TEMPORARY DEWATERING STRUCTURE INTO AN ADJACENT STREAM MAY BE USED WHEN APPROVED BY THE ENGINEER.
- (G) INSTALL TEMPORARY SILT FENCE (WITH BACKING) BETWEEN STREAM AND/OR DRAINAGE DITCH AND NO. 209-08-02 TEMPORARY SILT FENCE (WITH BACKING) PER LINEAR FOOT. SEE STANDARD DRAWING EC-STR-3C FOR FURTHER DETAILS.
- (H) FOR TRENCHING OF GEOTEXTILE FABRIC INTO GROUND, SEE EC-STR-3 SERIES OF STANDARD DRAWINGS FOR DETAILS.

TEMPORARY DEWATERING STRUCTURE VOLUMES

PUMP TYPE (DIA.)	MANUF. CAPACITY (GPM)	RATE (GPM PER MINUTE)	STRUCTURE VOLUME REQ. (CUBIC FEET)
2 IN.	8,400 GPM	140 GPM	2,240 C.F.F.
3 IN.	15,600 GPM	260 GPM	4,160 C.F.F.
4 IN.	30,000 GPM	500 GPM	8,000 C.F.F.
6 IN.	66,000 GPM	1,100 GPM	17,600 C.F.F.

VOLUME OF DEWATERING STRUCTURE SHOWN IN EROSION AND SEDIMENT CONTROL PLANS IS TO BE BASED ON USE OF 4 INCH CONSTRUCTION PUMP SHOWN IN THE ABOVE TABLE.

EROSION CONTROL PLAN LEGEND: (TEMPORARY DEWATERING STRUCTURE)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PAY ITEMS,
GENERAL NOTES
& TEMPORARY
DEWATERING
STRUCTURE

10-26-92 EC-STR-1

MINOR REVISION -- SHMA
APPROVAL NOT REQUIRED.

REV. 3-15-04, ADDED PAY ITEM FOR CATCH BASIN FILTER ASSEMBLIES.

REV. 12-18-95, CHANGED DRAWING NO. FROM EC-STR-1 TO EC-STR-1.

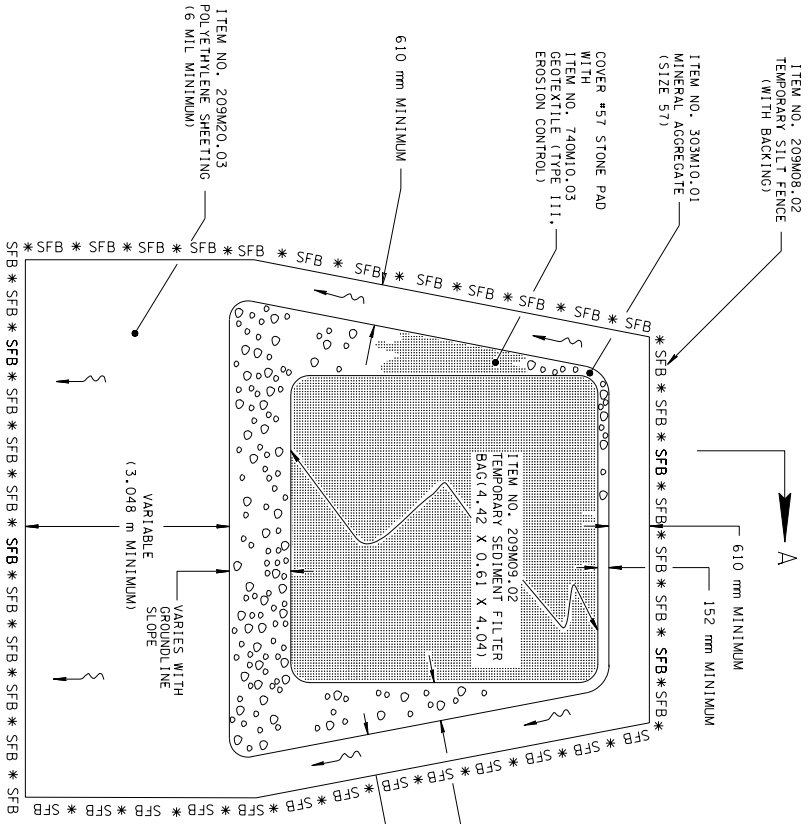
REV. 10-26-90, IN TEMPORARY PAY ITEMS BLOCK CHANGED PAY ITEM NUMBERS AND DESCRIPTIONS TO CONCUR WITH CHANGES MADE BY CONSTRUCTION 01/13/90.

REV. 5-27-01, REVISED PAY ITEMS AND GENERAL NOTES TO COMPLY WITH OCTOBER 26, 2001, IN EFFECT SHEET NAME.

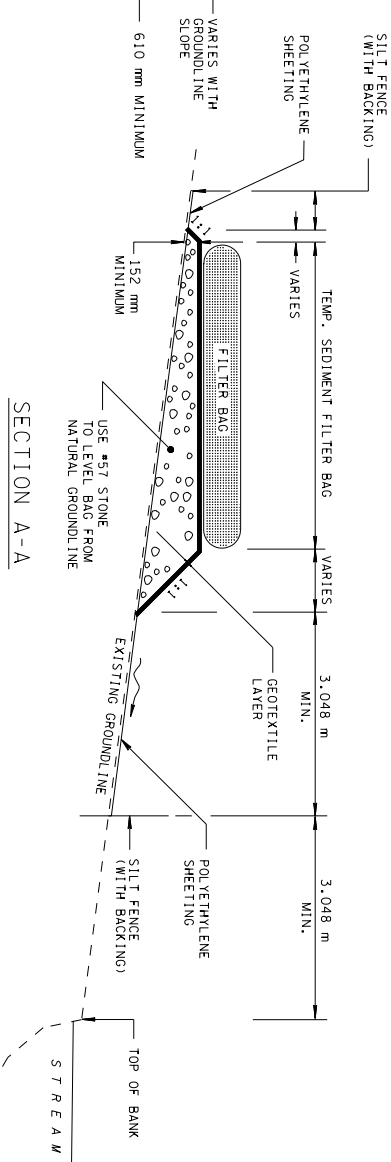
REV. 12-18-92, ADDED PAY ITEM NOS. 209-08-02 AND 209-08-04, CHANGED SHEET NAME.

NOTE (3): CHANGED GENERAL

TEMPORARY SEDIMENT FILTER BAG



PLAN VIEW



SECTION A-A

- GENERAL NOTES**
- SPECIAL PROVISION 209B 15 TO BE USED FOR TEMPORARY SEDIMENT FILTER BAG. ALL REFERENCES IN SPECIAL PROVISION 209B TO PUMPING FROM SEDIMENT TRAPS ALSO APPLIES TO PUMPING FROM COFFER DAMS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO BURST OR DAMAGE THE TEMPORARY SEDIMENT FILTER BAG WHEN PUMPING.
 -

APPROXIMATE QUANTITIES (PER EACH)		
ITEM NO.	DESCRIPTION	UNIT
209M08.02	TEMPORARY SILT FENCE (WITH BACKING)	METER
209M09.02	TEMPORARY SEDIMENT FILTER BAGS (4.42 m x 0.61 m x 4.04 m)	EACH
209M20.03	POLYETHYLENE SHEETING (6 MIL MINIMUM)	SQUARE METER
303M10.01	MINERAL AGGREGATE (SIZE 57)	TONNE
740M10.03	GEOTEXTILE (TYPE III, EROSION CONTROL)	SQUARE METER

EROSION CONTROL PLAN LEGEND: (TEMPORARY SEDIMENT FILTER BAGS)



- REV. 5-27-01: CHANGED ITEM NOS. 209M08.02, 209M09.02 TO 209M08.02, 209M09.01. CHANGED DESCRIPTION IN ITEM NO. 209-20.03.
- REV. 12-18-02: CHANGED SILT FENCE (WITHOUT BACKING) TO SILT FENCE (WITH BACKING) IN PLAN AND SECTIONAL VIEW. CHANGED PAY ITEM FROM 209M08.03 TO 209M08.02 FOR SILT FENCE.
- REV. 10-26-03: ADDED EROSION CONTROL SYMBOL.



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 MINOR REVISION -- FINAL APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

TEMPORARY
 SEDIMENT
 FILTER BAGS

10-26-00 ECM-STR-2

TEMPORARY FILTER BARRIER

(ITEM NO. 209-08.01)

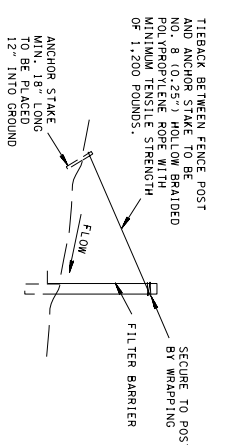
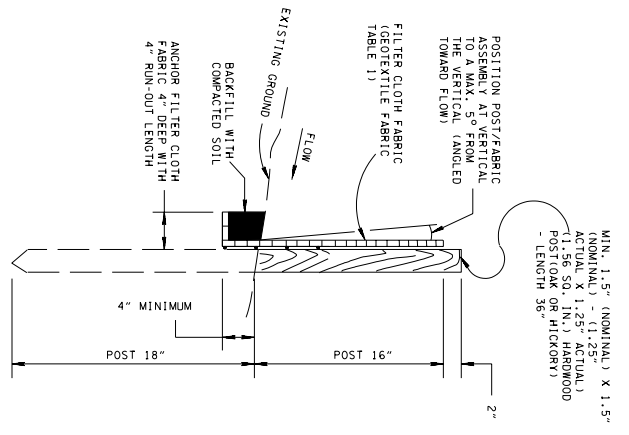
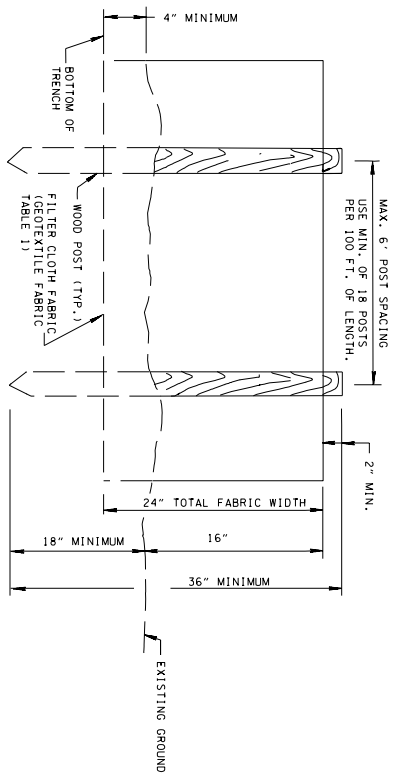


TABLE 1
TEMPORARY SILT FENCE FABRIC SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MEAN VALUES OF TEST DATA)
FABRIC TYPE	WOVEN SILT FILM
APARENT OPENING SIZE (ASTM D4751)	# 30 TO #70 STANDARD SIEVE
PERCENT OPEN AREA (90A)	1 X TO 10 X
WATER FLUX (ASTM D4491)	≥ 15 GPM/FT ²
TENSILE STRENGTH (ASTM D4632)	≥ 125 LB. (HARP DIRECTION) X 125 LB. (FILL DIRECTION)
UL TRAVIQUET STABILITY (AFTER 500 HRS PER ASTM D4355)	≥ 90%
ELONGATION (ASTM D4632)	≤ 20% (MAX)
BURST STRENGTH (ASTM D3786)	≥ 300 PSI
PUNCTURE STRENGTH (ASTM D4633)	≥ 70 LB.
TRAPEZOIDAL TEAR (ASTM D4533)	≥ 65 LB. (WARP DIRECTION) X 65 LB. (FILL DIRECTION)

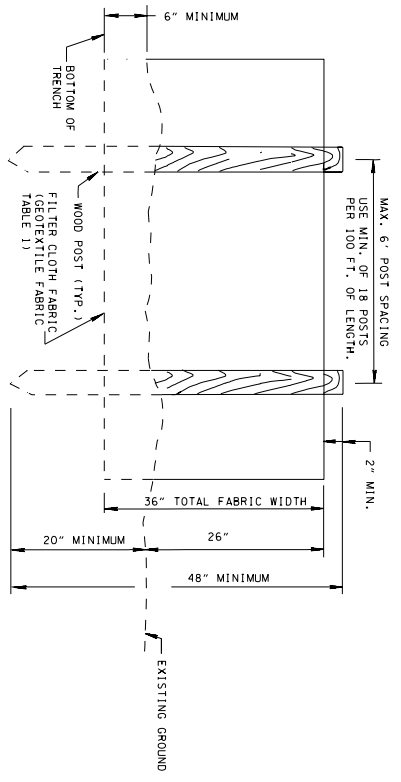
TEMPORARY FILTER BARRIER GENERAL NOTES

- A ALL LABOR AND MATERIALS SHOWN ON THE ELEVATION AND SECTIONAL VIEWS USED TO CONSTRUCT TEMPORARY FILTER BARRIERS ARE TO BE INCLUDED IN THE PRICE BID FOR ITEM 209-08.01 TEMPORARY FILTER BARRIER PER LINEAR FOOT.
- B FILTER BARRIERS ARE USED TO INTERCEPT SMALL AMOUNTS OF SEDIMENT AND REDUCE VELOCITY FROM SHEET FLOW IN COMMERCIAL AND RESIDENTIAL AREAS ONLY.
- C THE MAXIMUM DRAINAGE AREA SIZE FOR A CONTINUOUS BARRIER SHALL BE 1/4 ACRE PER 100 LINEAR FEET OF BARRIER LENGTH. MAXIMUM SLOPE LENGTH BEHIND FENCE ON UPSLOPE SIDE SHALL BE 100 FEET (AS MEASURED ALONG THE GROUND SURFACE).
- D WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING EC-STR-3E.
- E MAINTENANCE SHALL BE PERFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BOULGERS" DEVELOP IN THE FILTER BARRIER AND/OR OTHER EVIDENCE OF FILTER CLOGGING IS OBSERVED.
- F THE FILTER FABRIC SHALL BE STAPLED TO THE WOODEN STAKES. HEAVY DUTY WIRE STAPLES WITH 1/2 INCH LEG AND 1 INCH WIDTH SHALL BE USED AND EVENLY SPACED WITH THREE PER POST FOR FILTER BARRIERS. MATERIAL SHALL NOT BE STAPLED TO TREES.
- G FILTER BARRIERS SHOULD BE PLACED ALONG OR NEAR THE GROUND CONTOUR. THE BOTTOM OF BARRIER AT GROUNDLINE SHOULD BE ON A ZERO PERCENT (0%) GRADE, PLUS OR MINUS FIVE TENTHS OF ONE PERCENT (+0.5%), A PREASSEMBLED FILTER BARRIER MEETING THE REQUIREMENTS OF THIS DRAWING IS ACCEPTABLE IN LIEU OF A FIELD CONSTRUCTED FILTER BARRIER.
- H STATIC SLICING IS THE PREFERRED METHOD OF FILTER BARRIER INSTALLATION. STATIC SLICING INVOLVES THE INSERTION OF A NARROW CUTTING BLADE, PLACED AT THE SPECIFIED ANCHOR DEPTH FOR THE GIVEN FABRIC AS SHOWN ON THE APPLICABLE DETAIL, AND SIMULTANEOUSLY PULLING THE FABRIC INTO THE TRENCH AS THE TRENCH IS BEING BARRIERS. ALL TRENCH-BARRIER JOINTS AND STAPLES SHALL BE INSTALLED IN THE FOLLOWING ORDER: 1. FILTER BARRIER SHALL BE INSTALLED PER THE FOLLOWING STEPS AND IN THE FOLLOWING ORDER:
 - ENGRAVE TRENCH A MAXIMUM OF 4 INCHES WIDE AND AT THE SPECIFIED DEPTH AS SHOWN ON THE APPLICABLE DETAIL. THE TRENCH SHALL BE HAND-DIGGED AND EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLODS FROM THE TRENCH.
 - INSTALL FABRIC IN TRENCH.
 - BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
 - COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).
 - DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL. PLACE TIEBACKS PER DETAIL. DRIVE SUPPORT POSTS INTO GROUND FIRST, FOLLOWED BY FABRIC PLACEMENT IN TRENCH.
 - ATTACH FABRIC TO THE POSTS USING WIRE TIES OR STAPLES. SPACING AND DENSITY OF TIES OR STAPLES SHALL BE INSTALLED AS GIVEN ON THE APPLICABLE DETAIL.

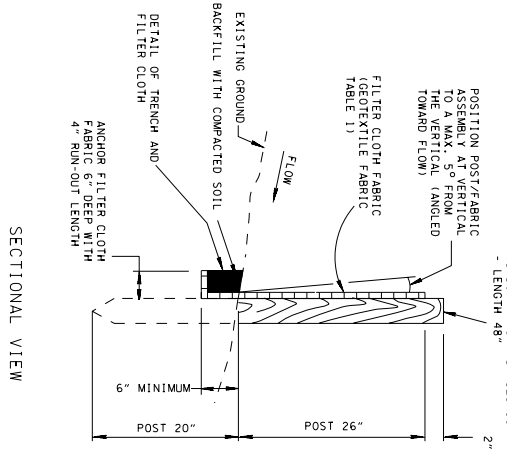
SECTIONAL VIEW

EROSION CONTROL PLAN LEGEND: * FB * FB * FB * TEMPORARY FILTER BARRIER

TEMPORARY SILT FENCE
(ITEM NO. 209-08.03)

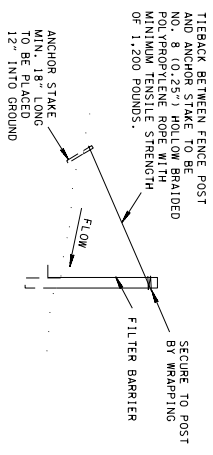


ELEVATION VIEW



SECTIONAL VIEW

SILT FENCE TIEBACK FOR STEEL POSTS OR WOOD POSTS



(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS, COST TO BE INCLUDED IN THE ITEMS FOR TEMPORARY SILT FENCE)

EROSION CONTROL PLAN LEGEND: * SF * SF * SF * SF * (TEMPORARY SILT FENCE)

TABLE 1
TEMPORARY SILT FENCE FABRIC SPECIFICATIONS

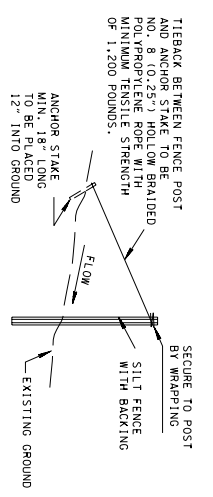
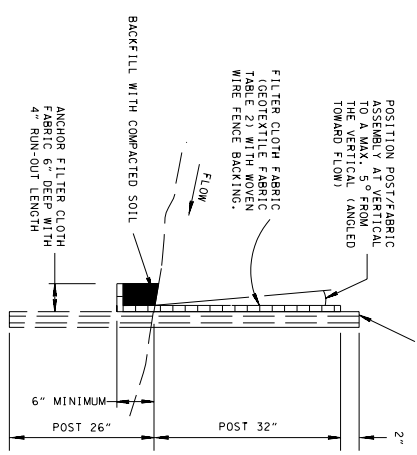
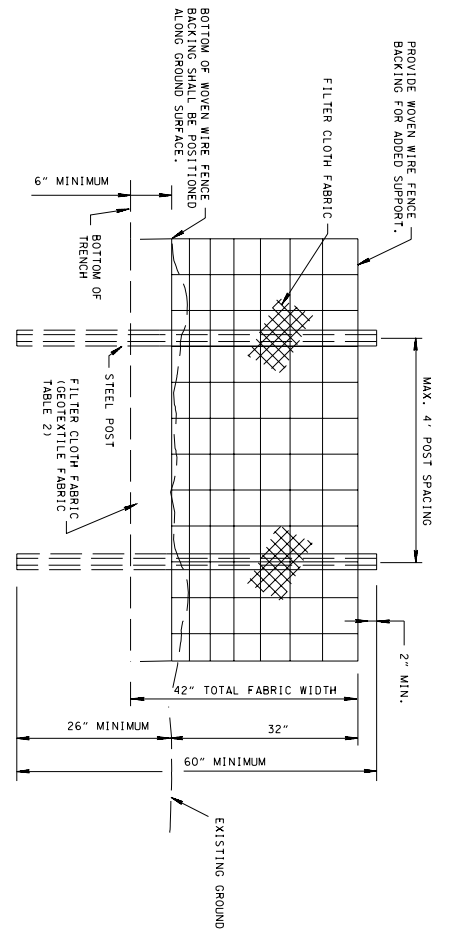
FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MEAN VALUES OF TEST DATA)
FABRIC TYPE	WOVEN SILT FILM
APPROXIMATE OPENING SIZE (ASTM D4751)	# 50 TO # 70 STANDARD SIEVE
PERCENT OPEN AREA (POA)	1 % TO 10 %
WATER FLUX (ASTM D4491)	> 15 GPM/FT ²
TENSILE STRENGTH (ASTM D4632)	> 125 LB. (WARP DIRECTION) X 125 LB. (FILL DIRECTION)
UL TRAWLOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	> 90%
ELONGATION (ASTM D4632)	≤ 20% (MAX)
BURST STRENGTH (ASTM D3786)	> 300 PSI
PUNCTURE STRENGTH (ASTM D4833)	> 70 LB.
TRAPEZOIDAL TEAR (ASTM D4533)	> 65 LB. (WARP DIRECTION) X 65 LB. (FILL DIRECTION)

TEMPORARY SILT FENCE GENERAL NOTES

- (A) ALL LABOR AND MATERIALS SHOWN ON THE ELEVATION AND SECTIONAL VIEWS USED TO CONSTRUCT TEMPORARY SILT FENCE ARE TO BE INCLUDED IN THE PRICE BID FOR ITEM 209-08.03 TEMPORARY SILT FENCE (WITHOUT BACKING) PER LINEAR FOOT.
- (B) SILT FENCES ARE USED TO INTERCEPT SMALL AMOUNTS OF SEDIMENT AND REDUCE VELOCITY FROM SHEET FLOW ONLY. DO NOT USE IT ADJACENT TO SENSITIVE WATER RESOURCES (WETLANDS OR STREAMS).
- (C) THE MAXIMUM DRAINAGE AREA SIZE FOR A CONTINUOUS BARRIER SHALL BE 1/4 ACRE PER 100 LINEAR FEET OF FENCE LENGTH. MAXIMUM SLOPE LENGTH BEHIND FENCE ON UPSLOPE SIDE SHALL BE 100 FEET (AS MEASURED ALONG THE GROUND SURFACE).
- (D) WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING EC-STR-3E.
- (E) MAINTENANCE SHALL BE PERFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND/OR OTHER EVIDENCE OF FILTER CLOGGING IS OBSERVED.
- (F) STEEL POSTS SHALL BE 1.33 LB./FT. ROLLED FROM HIGH CARBON STEEL AND SHALL BE GALVANIZED OR HOT-DIPPED IN FLUORANT POLYMER COATING. WOOD POSTS SHALL BE 2 INCH DIAMETER AND SHALL BE PAINTED. POSTS SHALL BE STORED, EMBOSSED, OR PUNCHED TO AID IN THE ATTACHMENT OF WIRE.
- (G) WHEN STEEL POSTS ARE USED THEY SHALL HAVE A PROJECTION FOR FASTENING WIRE TO THEM. THE WIRE FASTENERS SHOULD BE EVENLY SPACED WITH AT LEAST FIVE PER POST.
- (H) IF THE FILTER MATERIAL IS STAPLED TO THE WOODEN STAKES, HEAVY DUTY WIRE STAPLES WITH 1/2 INCH LEG SHALL NOT BE STAPLED TO TREES.
- (I) SILT FENCES SHOULD BE PLACED ALONG OR NEAR THE GROUND CONTOUR. THE BOTTOM OF FENCE AT GROUNDLINE SHOULD BE ON A ZERO PERCENT (0%) GRADE. PLUS OR MINUS FIVE TENTHS OF ONE PERCENT (+0.5%).
- (J) A PREASSEMBLED SILT FENCE MEETING THE REQUIREMENTS OF THIS DRAWING IS ACCEPTABLE IN LIEU OF A FIELD CONSTRUCTED SILT FENCE.
- (K) STATIC SLICING IS THE PREFERRED METHOD OF FENCE INSTALLATION. STATIC SLICING INVOLVES THE INSERTION OF A HORIZONTAL CUTTING BLADE, PLACED AT THE SPECIFIED ANCHOR DEPTH FOR THE FILTER FABRIC AS SHOWN ON THE APPROPRIATE DETAIL. ALTERNATE TRENCH-BASED METHODS ARE ALSO ACCEPTABLE. FOR TRENCH-BASED INSTALLATIONS, FENCING SHALL BE INSTALLED PER THE FOLLOWING STEPS AND IN THE FOLLOWING ORDER:
 - EXCAVATE TRENCH A MAXIMUM OF 4 INCHES WIDE AND AT THE SPECIFIED DEPTH AS SHOWN ON THE APPLICABLE DETAIL. THE TRENCH SHALL BE HAND-CLEANED FOLLOWING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLODS FROM THE TRENCH.
 - INSTALL FABRIC IN TRENCH.
 - BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
 - COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (OVERMOUND FABRIC SHALL BE REPLACED).
 - DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL. FOR PRE-ASSEMBLED SILT FENCE, DRIVE SUPPORT IN TO GROUND FIRST, FOLLOWED BY FABRIC PLACEMENT IN TRENCH.
 - ATTACH FABRIC TO THE POSTS USING WIRE TIES OR STAPLES. SPACING AND DENSITY OF TIES OR STAPLES SHALL BE INSTALLED AS GIVEN ON THE APPLICABLE DETAIL.

TEMPORARY SILT FENCE WITH BACKING

(ITEM NO. 209-08.02)



SECTIONAL VIEW

ELEVATION VIEW

SILT FENCE TIEBACK

WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS, COST TO BE INCLUDED IN THE ITEMS FOR TEMPORARY SILT FENCE (WITH BACKING)

EROSION CONTROL PLAN LEGEND: * SFB * SFB * SFB * (TEMPORARY SILT FENCE WITH BACKING)

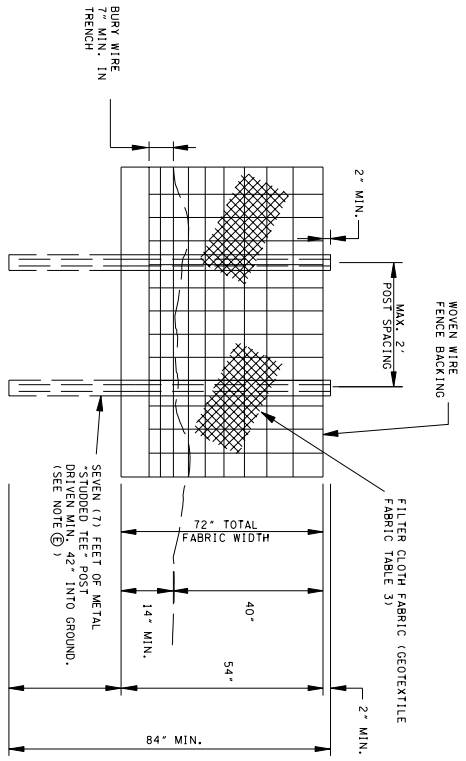
TABLE 2
TEMPORARY SILT FENCE WITH BACKING
FABRIC SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MEAN VALUES OF TEST DATA)
FABRIC TYPE	WOVEN MONOFILAMENT
APARENT OPENING SIZE (ASTM D4751)	#70 TO #100 STANDARD SIEVE
PERCENT OPEN AREA (FOA)	1 % TO 10 %
WATER FLUX (ASTM D4491)	> 20 GPM/FT ²
TENSILE STRENGTH (ASTM D4632)	> 375 LB. (WARP DIRECTION) X 240 LB. (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	> 90%
BURST STRENGTH (ASTM D3786)	> 460 PSI
PUNCTURE STRENGTH (ASTM D4833)	> 140 LB.
TRAPEZOIDAL TEAR (ASTM D4533)	> 120 LB. (WARP DIRECTION) X 80 LB. (FILL DIRECTION)

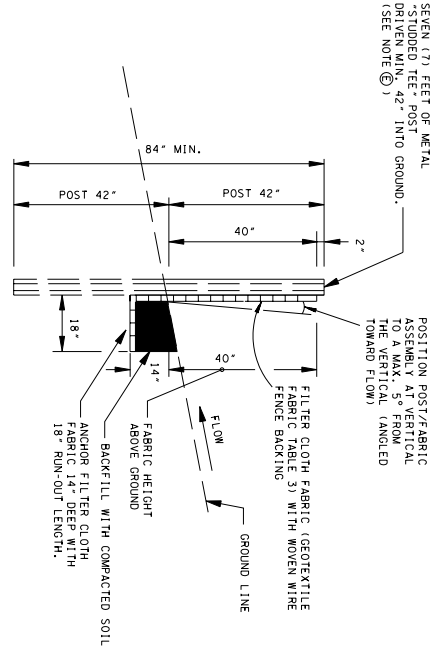
TEMPORARY SILT FENCE WITH BACKING GENERAL NOTES

- A SILT FENCES WITH BACKING ARE USED TO INTERCEPT SMALL AMOUNTS OF SEDIMENT AND REDUCE VELOCITY FROM SHEET FLOW ONLY. USE TEMPORARY SILT FENCES WITH BACKING UPGRADIENT OF AND ADJACENT TO WETLANDS, STREAMS, AND OTHER SENSITIVE WATER RESOURCES.
- B THE MAXIMUM GRAINAGE AREA SIZE FOR A CONTINUOUS SILT FENCE WITH BACKING SHALL BE 1/8" PER 150 LINEAR FEET OF FENCE LENGTH. MAXIMUM SLOPE LENGTH BEHIND FENCE ON UPSLOPE SIDE SHALL BE 300 FEET (AS MEASURED ALONG THE GROUND SURFACE).
- C WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING EC-STR-3E.
- D MAINTENANCE SHALL BE PERFORMED AS NEEDED: CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND/OR WHEN EVIDENCE OF FILTER CLOGGING IS OBSERVED.
- E STEEL POSTS SHALL BE 1.33 LB./FT. ROLLED FROM HIGH CARBON STEEL AND SHALL BE GALVANIZED OR HOT-DIPPED AND PAINTED WITH ONE OR MORE COATS OF HIGH-GRADE WEATHER RESISTANT STEEL PAINT. POSTS SHALL BE STUDED, EMBOSSED, OR POUNGED TO AID IN THE ATTACHMENT OF WIRE.
- F STEEL POSTS SHALL HAVE A PROJECTION FOR FASTENING WIRE TO THEM. WOVEN WIRE FENCE BACKING TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FABRIC SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE BACKING WITH THE TIES SPACED EVERY 24 INCHES ALONG TOP AND MIDSECTION. THE WIRE FASTENERS SHOULD BE EMBEDDED WITH AT LEAST SIX TEN (6) INCHES.
- G WOVEN WIRE FENCE BACKING SHALL MEET THE REQUIREMENTS FOR ASTM A-116 FOR NO. 11 FARM. DESIGN NO. 832-6-11, CLASS 3 COATING.
- H SILT FENCES SHOULD BE PLACED ALONG OR NEAR THE GROUND CONTOUR. THE BOTTOM OF FENCE AT GROUNDLINE SHOULD BE ON A ZERO PERCENT (0%) GRADE, PLUS OR MINUS FIVE TENTHS OF ONE PERCENT (±0.5%).
- I STATIC SLICING IS THE PREFERRED METHOD OF FENCE INSTALLATION. STATIC SLICING INVOLVES THE INSERTION OF A NARROW CUTTING BLADE, PLACED AT THE SPECIFIED ANCHOR DEPTH FOR THE GIVEN FABRIC AS SHOWN ON ITS MANUFACTURER'S INSTALLATION INSTRUCTIONS. STATIC SLICING IS ACCEPTABLE FOR TRENCH-BASED INSTALLATIONS. FENCING SHALL BE INSTALLED PER THE FOLLOWING STEPS AND IN THE FOLLOWING ORDER:
 - EXCAVATE TRENCH A MAXIMUM OF 4 INCHES WIDE AND AT THE SPECIFIED DEPTH AS SHOWN ON THE APPLICABLE INSTALLATION INSTRUCTIONS AND FOLLOWING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLOS FROM THE TRENCH.
 - INSTALL FABRIC IN TRENCH.
 - BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
 - COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).
 - DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL.
 - ATTACH FABRIC TO THE POSTS USING WIRE TIES. SPACING AND DENSITY OF TIES SHALL BE INSTALLED AS SHOWN ON THE APPLICABLE DETAIL.

ENHANCED SILT FENCE
(ITEM NO. 209-08.04)



ELEVATION VIEW



SECTIONAL VIEW

EROSION CONTROL PLAN LEGEND: * ESF * ESF * ESF * (ENHANCED SILT FENCE)

TABLE 3
ENHANCED SILT FABRIC SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MEAN VALUES OR TEST DATA)
FABRIC TYPE	WOVEN MONOFILAMENT
APARENT OPENING SIZE (ASTM D4751)	# 30 TO # 80 STANDARD SIEVE
WATER FLUX (ASTM D4491)	≥ 130 GPW/FT ²
TENSILE STRENGTH (ASTM D4632)	≥ 390 LBS. (WARP DIRECTION) X 260 LBS (FILL DIRECTION)
UL TRAVIQUET STABILITY (AFTER 500 HRS PER ASTM D4355)	≥ 90%
BLURST STRENGTH (ASTM D3786)	≥ 530 PSI
PUNCTURE STRENGTH (ASTM D4833)	≥ 140 LB.
TRAPEZOIDAL TEAR (ASTM D4533)	≥ 120 LB. (WARP DIRECTION) X 80 LB. (FILL DIRECTION)
PERMEABILITY (ASTM D4491)	≥ 0.04 INCHES/SEC
THICKNESS (ASTM D5199)	≤ 30 MILS

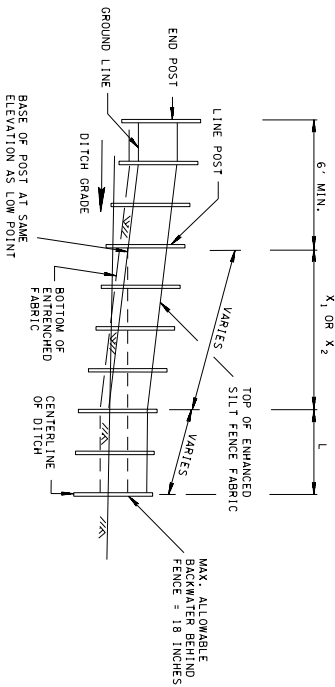
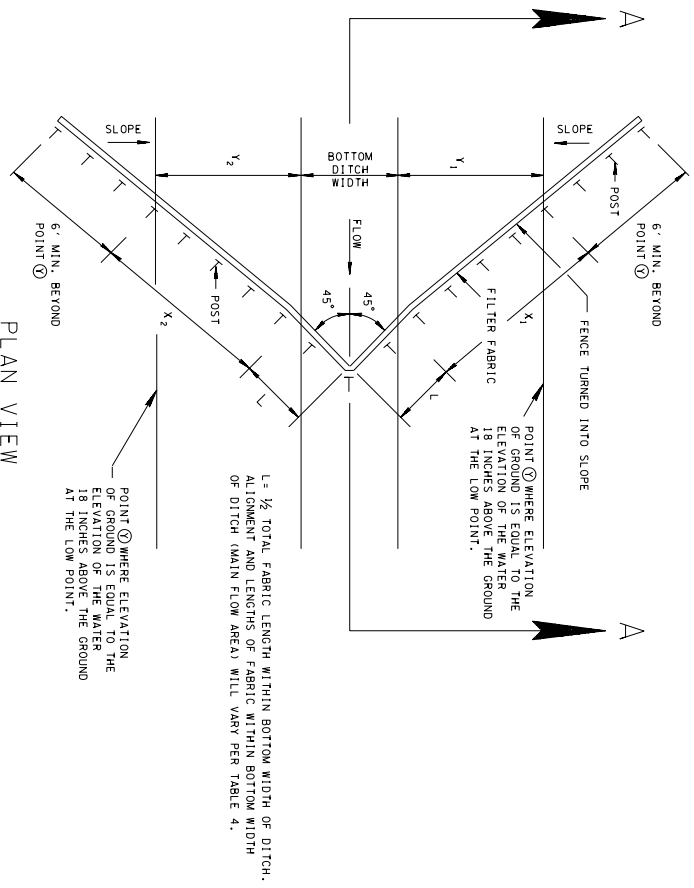
ENHANCED SILT FENCE GENERAL NOTES

- A ALL LABOR AND MATERIALS SHOWN ON THE ELEVATION AND SECTIONAL VIEWS USED TO CONSTRUCT ENHANCED SILT FENCE ARE TO BE INCLUDED IN THE PRICE BID FOR ITEM NO. 209-08.04 TEMPORARY ENHANCED SILT FENCE PER LINEAR FOOT.
- B ENHANCED SILT FENCE IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (e.g. SWALES, DITCHES, RUTS ALONG SLOPE) ARE ANTICIPATED. LIMITS SHALL BE AS SHOWN ON STANDARD DRAWINGS EC-STR-4 AND EC-STR-4A, RESPECTIVELY.
- C WHEN TWO SECTIONS OF ENHANCED SILT FABRIC ADJOIN EACH OTHER THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING EC-STR-3E.
- D MAINTENANCE SHALL BE PERFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND/OR WHEN EVIDENCE OF FILTER BLINDING IS NOTED.
- E STEEL POSTS SHALL BE 1.33 LB./FT. ROLLED FROM HIGH CARBON STEEL AND SHALL BE GALVANIZED OR HOT-DIPPED AND PAINTED WITH ONE OR MORE COATS OF EPOXY ENAMEL. THE ENAMEL SHALL BE APPLIED TO ALL EXPOSED SURFACES OF THE POSTS, EMBOSSED, OR PUNCHED TO AID IN THE ATTACHMENT OF WIRE.
- F STEEL POSTS SHALL HAVE A PROJECTION FOR FASTENING WIRE TO THEM. WOVEN WIRE SHALL BE FASTENED TO THE PROJECTIONS OF THE POSTS WITH WIRE TIES. THE WIRE FASTENERS SHOULD BE EVENLY SPACED WITH AT LEAST SIX PER POST.
- G WIRE FENCE FABRIC SHALL MEET THE REQUIREMENTS FOR ASTM A-116 FOR NO. 11 FARM, DESIGN NO. 1047-6-11, CLASS 3 COATING.
- H FILTER FABRIC SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE BACKING WITH TIES SPACED EVERY 24 INCHES ALONG TOP AND MID SECTION.
- I FOR TRENCH-BASED INSTALLATIONS, FENCING SHALL BE INSTALLED PER THE FOLLOWING STEPS AND IN THE FOLLOWING ORDER:
 - EXCAVATE TRENCH A MAXIMUM OF 18 INCHES WIDE AND AT THE SPECIFIED DEPTH FROM THE TRENCH LINE TO THE SPECIFIED DEPTH. THE TRENCH SHALL BE FOLLOING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLODS FROM THE TRENCH.
 - INSTALL FABRIC IN TRENCH.
 - BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
 - COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).
 - DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL.
 - ATTACH WOVEN WIRE FENCE BACKING TO POSTS AND FABRIC TO THE WIRE BACKING USING WIRE TIES. SPACING AND DENSITY OF TIES SHALL BE INSTALLED AS GIVEN ON THE APPLICABLE DETAIL.

REV. 12-18-03, REPLACED TABLE 3 AND MODIFIED GENERAL NOTES @, @ AND @

LURING REVISION - FINAL APPROVAL NOT REQUIRED.
 STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 TEMPORARY ENHANCED SILT FENCE
 12-18-02 EC-STR-3D

TYPE EC I



EROSION CONTROL PLAN LEGEND: ① TEMPORARY TYPE EC I FILTER BARRIER EROSION DITCH CHECK

SPACING FOR ENHANCED SILT FENCE

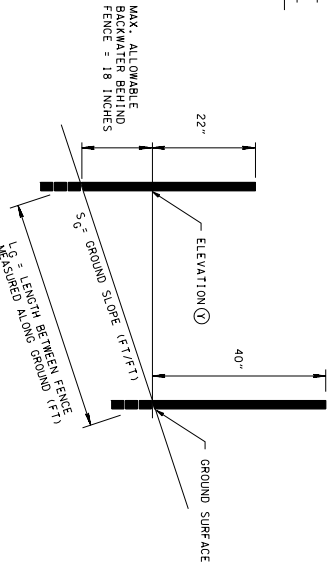


TABLE 4

WIDTH OF DITCH (FEET)	TOTAL ENHANCED SILT FENCE LENGTH (L) WITHIN FLAT-BOTTOM ZONE OF DITCH, (FT)		TOTAL AVAILABLE SURFACE AREA OF FABRIC IN DITCH AT 18 INCHES OF FLOW DEPTH (FT ²)			MAXIMUM ALLOWABLE DESIGN PEAK FLOW FROM WATERSHED (CFS) AT 18 INCH HEAD		
	X ₁ OR X ₂ (FT)	③	① 2:1	① 3:1	① 4:1	① 2:1	① 3:1	① 4:1
3	4.2 (2.1)	4.2	6.4	8.5	12.6	15.8	19.0	9.9
4	5.7 (2.9)	5.7	6.4	8.5	14.9	18.0	21.2	14.0
5	7.0 (3.5)	7.0	6.4	8.5	16.8	20.0	23.2	15.8
6	8.5 (4.3)	8.5	6.4	8.5	19.1	22.2	25.4	15.9
7	9.9 (5.0)	9.9	6.4	8.5	21.2	24.3	27.5	17.9
8	11.3 (5.7)	11.3	6.4	8.5	23.4	26.4	29.6	19.9
9	12.7 (6.4)	12.7	6.4	8.5	25.4	28.5	31.7	21.8
10	14.1 (7.1)	14.1	6.4	8.5	27.5	30.6	33.8	23.8
12	17.0 (8.5)	17.0	6.4	8.5	31.8	35.0	38.2	27.9
15	21.2 (10.6)	21.2	6.4	8.5	38.1	41.3	44.5	33.8

① RECOMMENDED SPACING REFERS TO SPACING BETWEEN ENHANCED SILT FENCE FILTER LOCATIONS, BASED ON BACKWATER EFFECTS (USING 18 INCHES MAXIMUM BACKWATER BEHIND FENCE)

② MAXIMUM ALLOWABLE DESIGN PEAK FLOW FROM WATERSHED (CFS) AT 18 INCH HEAD

③ TOTAL AVAILABLE SURFACE AREA OF FABRIC IN DITCH AT 18 INCHES OF FLOW DEPTH (FT²)

④ RECOMMENDED SPACING, (L₀) BETWEEN ENHANCED SILT FENCE (FT)

GROUND SLOPE S _G (FT/FT)	0.01	0.02	0.03	0.04	0.05
RECOMMENDED SPACING, (L ₀) BETWEEN ENHANCED SILT FENCE (FT)	150	75	50	40	30
0.06 AND STEEPER	25				

⑤ UNIFORM SPACING FOR ENHANCED SILT FENCE DETAIL AND ADDED SUPPORTING TABLE. NOTES REFER TO TABLE 4 AND GENERAL NOTES.

⑥ REV. 3/15/04. CHANGED PLANS LEGEND SYMBOL.

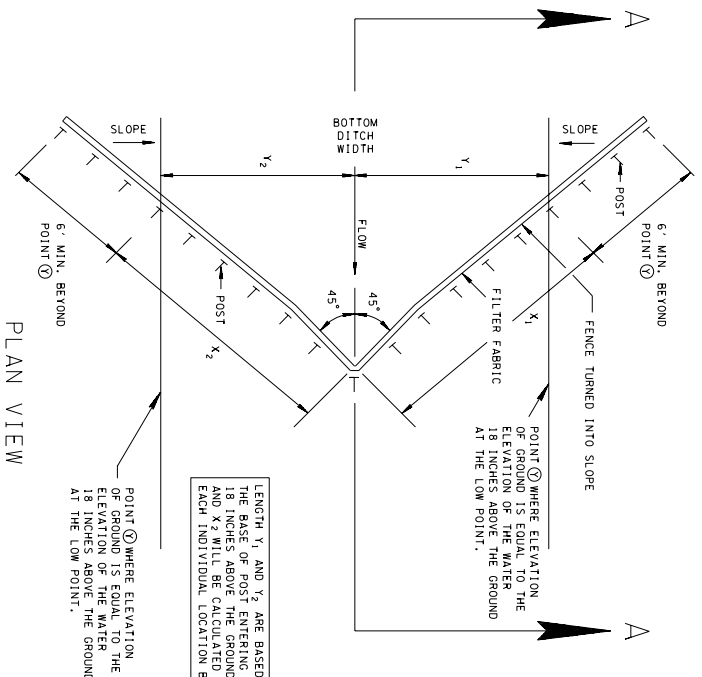
- HORIZONTAL TO VERTICAL MEASUREMENT RATIOS ARE SHOWN
- ALLOWABLE FLOWS DO NOT INCLUDE HYDRAULIC REDUCTION DUE TO ACCUMULATION OF CAPTURED SOIL PARTICLES ON FILTER SURFACE AREA
- THIS LENGTH IS TO BE ADDED TO CALCULATED LENGTHS X₁ AND X₂. LENGTH Y₁ AND Y₂ ARE BASED ON PERPENDICULAR SLOPE LENGTHS TO A POINT WHERE THE BASE OF POST ENTERING THE GROUND IS AT THE SAME ELEVATION AS A POINT 18 INCHES ABOVE THE GROUND AT THE LOW POINT OF THE DITCH. LENGTHS X₁ AND X₂ WILL BE CALCULATED BY MULTIPLYING THE LENGTHS OF SLOPE Y₁ OR Y₂ AT EACH INDIVIDUAL LOCATION BY 1.414.
- BASED ON 130 GPM/FT² (0.04 INCHES/SEC PERMEABILITY) ENHANCED SILT FENCE FABRIC AND TRAPEZOIDAL DITCH CROSS SECTION. SEE TABLE 3 FOR ENHANCED SILT FENCE FABRIC SPECIFICATIONS ON STANDARD DRAWING EC-STR-30. A HEAD OF 18 INCHES BEHIND THE FENCE WAS USED TO DETERMINE MAXIMUM ALLOWABLE DESIGN PEAK FLOW THROUGH FILTER FABRIC.

GENERAL NOTES

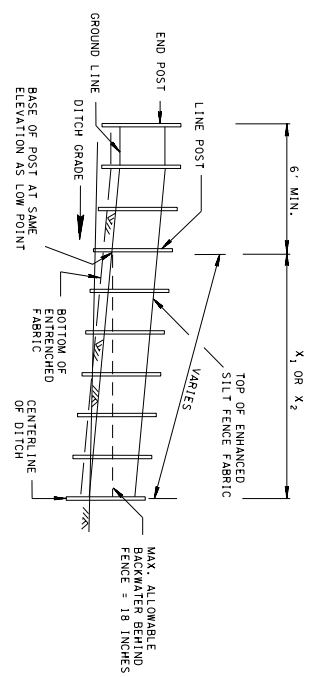
- A DITCH WITH A TRAPEZOIDAL CROSS-SECTION IS ASSUMED WITH SIDESLOPES AS NOTED.
- FENCE LENGTH DESIGNATED IN TABLE 4 INCLUDES THE LENGTH OF FENCE STAKED WITHIN THE BOTTOM WIDTH OF DITCH (Z₀).
- DESIGN FLOWS FOR STORMWATER TREATMENT (E.G., 2 YEAR/24 HOUR STORM EVENT FLOWS) SHOULD BE ROUTED THROUGH ENHANCED SILT FENCE FILTERS WITH NO BYPASSING OR OVERTOPS. FLOWS IN EXCESS OF THE FLOW THROUGH CAPACITIES GIVEN IN TABLE 4 ABOVE SHOULD BE ACCOMMODATED BY BYPASSING EXCESS FLOWS.
- ANCHOR AND INSTALL TEMPORARY ENHANCED SILT FENCE PER DETAILS AND SPECIFICATIONS SHOWN ON STANDARD DRAWING EC-STR-30. THE LOCATIONS AND SPACING OF ENHANCED SILT FENCE FILTERS, ALONG A DITCH SHOULD BE BASED ON COMBINATION OF HYDRAULIC PROPERTIES OF THE FENCE MATERIAL (TABLE 4) AND THE SPACING TABLE (SHOWN ABOVE). TO INSURE THAT THE TREATMENT REQUIREMENTS OF NOTE ⑤ ARE ACHIEVED, AND TO PREVENT OVERTOPPING, IT IS ALSO RECOMMENDED THAT BACKWATER ANALYSIS BE PERFORMED (E.G., STANDARD STEP METHOD).
- THE FLOW VALUES IN TABLE 4 ASSUME NO CLOGGING EFFECTS AT THE ENHANCED SILT FENCE SURFACE WITH THE SOILS. IN ORDER TO INSURE MINIMAL INFLUENCE FROM FILTER CLOGGING, FILTER FENCES SHOULD BE REGULARLY CLEANED BY DRYBRUSHING OF FABRIC SURFACE AND/OR PRESSURE WASHING OF FILTER.

DESIGN REVISION - FROM APPROVAL NOT REQUIRED.
 DATE OF TREATMENT DEPARTMENT OF TRANSPORTATION
 TEMPORARY EROSION DITCH CHECK USING ENHANCED SILT FENCE
 12-28-02 EC-STR-4

TYPE EC IA

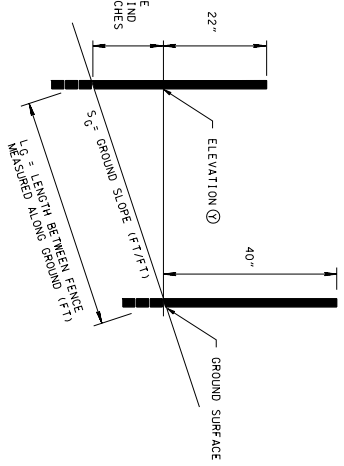


EROSION CONTROL PLAN LEGEND: > TEMPORARY TYPE EC IA FILTER BARRIER EROSION DITCH CHECK



LENGTH Y_1 AND Y_2 ARE BASED ON PERPENDICULAR SLOPE LENGTHS TO A POINT WHERE THE BASE OF POST ENTERING THE GROUND IS AT THE SAME ELEVATION AS A POINT 18 INCHES ABOVE THE GROUND AT THE LOW POINT OF THE DITCH. LENGTHS Y_1 AND Y_2 WILL BE CALCULATED BY MULTIPLYING THE LENGTHS OF SLOPE Y_1 OR Y_2 AT EACH INDIVIDUAL LOCATION BY 1.414.

SPACING FOR ENHANCED SILT FENCE



GROUND SLOPE S_0 (FT/FT)	RECOMMENDED SPACING (1.0 G) BETWEEN ENHANCED SILT FENCE (FT)
0.01	150
0.02	75
0.03	50
0.04	40
0.05	30
0.06 AND STEEPER	25

RECOMMENDED SPACING REFERS TO SPACING BETWEEN ENHANCED SILT FENCE BEHIND BACKWATER BEHIND FENCE. BACKWATER BEHIND FENCE IS 18 INCHES MAXIMUM.

TABLE 5

DITCH SIDE SLOPES	X_1 OR X_2 (FT)	TOTAL AVAILABLE SURFACE AREA OF FABRIC IN DITCH AT 2' (FT ²)	MAX. ALLOWABLE DESIGN PEAK FLOW FROM WATERSHED (CFS)
2:1	4.2	6.4	3.6
3:1	6.4	9.5	5.4
4:1	8.5	12.7	7.2
5:1	10.6	15.9	9.0
6:1	12.7	19.1	10.8
7:1	14.8	22.3	12.6
8:1	17.0	25.4	14.3
9:1	19.1	28.6	16.1
10:1	21.2	31.8	17.9

* BASED ON 130 GPM/FT² (0.04 INCHES/SEC PENETRABILITY) ENHANCED SILT FENCE FABRIC AND MAXIMUM ALLOWABLE BACKWATER BEHIND FABRIC FENCE OF 18 INCHES FOR TRIANGULAR CROSS-SECTION DITCH - SEE TABLE 3 FOR ENHANCED SILT FENCE FABRIC SPECIFICATION ON STANDARD DRAINING EC-SIR-30.

GENERAL NOTES

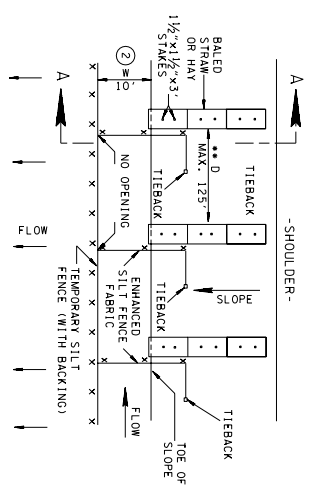
- A A DITCH WITH A TRIANGULAR CROSS-SECTION IS ASSUMED.
- B DESIGN FLOWS FOR STORMWATER TREATMENT (E.G., 24 HOUR STORM EVENT FLOWS) SHOULD BE ROUTED THROUGH CAPACITIES GIVEN IN TABLE 5 ABOVE SHOULD BE ACCOMMODATED BY BYPASSING EXCESS FLOWS.
- C ANCHOR AND INSTALL TEMPORARY ENHANCED SILT FENCE PER DETAILS AND SPECIFICATIONS SHOWN ON STANDARD DRAINING EC-SIR-30. THE LOCATIONS AND SPACING OF ENHANCED SILT FENCES ALONG A DITCH SHOULD BE BASED ON COMBINATION OF HYDRAULIC PROPERTIES OF THE FENCE MATERIAL (TABLE 5) AND THE SPACING TABLE (SHOWN ABOVE). TO INSURE THAT THE TREATMENT REQUIREMENTS OF NOTE @ ARE ACHIEVED, AND TO PREVENT OVERTOPPING, IT IS ALSO RECOMMENDED THAT BACKWATER ANALYSIS BE PERFORMED (E.G., STANDARD-STEP METHOD). THE FLOW VALUES IN TABLE 5 ASSUME NO CLOGGING EFFECTS AT THE ENHANCED SILT FENCE SURFACE WITH SOLIDS. IN ORDER TO INSURE MINIMAL INFLUENCE FROM FILTER CLOGGING, FILTER FENCES SHOULD BE REGULARLY CLEANED BY DRYBRUSHING OF FABRIC SURFACE AND/OR PRESSURE WASHING OF FILTER.
- D

REV. 12-18-03, MODIFIED SPACING FOR ENHANCED SILT FENCE DETAIL AND MODIFIED TABLE 5 AND GENERAL NOTES.
 REV. 3-15-04, CHANGED PLANS
 LEGEND SYMBOL.

DESIGN REVIEW - FINAL APPROVAL NOT REQUIRED.
 STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION
 TEMPORARY EROSION CHECK/FILTER USING ENHANCED SILT FENCE IN A TRIANGULAR CROSS-SECTION DITCH
 12-28-02 EC-SIR-4A

- REV. 12-18-95: CHANGED DRAINING NO. FROM EC-STR-5 TO EC-STR-5.
- REV. 5-27-01: CHANGED ITEM NO. 209-08 TO 209-08-033.
- REV. 7-29-02: REMOVED DETAILS FOR AND TYPE EC 10.
- REV. 13-18-03: CHANGED ALL REFERENCES TO SILT FENCE AND FILTER BARRIER TO ENHANCED SILT FENCE.
- REV. 10-26-03: DELETED DETAIL FOR TYPE EC V FILTER BARRIER.

MAXIMUM OF 10,000 SF FLOW AREA BETWEEN CONTINUOUS FABRIC AND SHOULDER

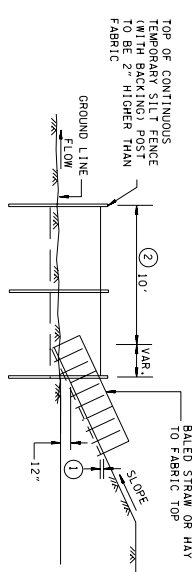


PLAN

TYPE EC (IV)	CASE I FILL SLOPES H (FT)	D (FT)
150-125	30	40
125-100	40	50
100-75	50	75
75-50	75	100
50-25	100	125
25-0	125	

SEE STD. DWG. NO. RD-S-11

TYPICAL LOCATIONS AT TOE OF SLOPES



SECTION A-A

EROSION CONTROL PLAN LEGEND: — EC — IV — EC —

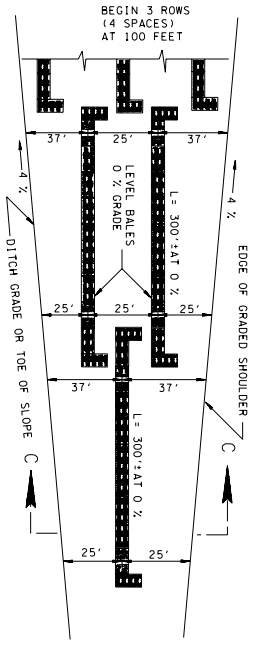
- FOOTNOTES
- 1 ELEVATION TO BE MINIMUM OF 6 INCHES ABOVE TOP OF FABRIC OR HAY BALE IN CENTER OF DITCH.
 - 2 "w" = 10 FEET UNLESS OTHERWISE NOTED ON THE PLANS.

GENERAL NOTES FOR FILTER FABRIC BALED HAY OR STRAW EROSION CHECKS

- A THE DRAINAGE AREA FOR THE FILTER FABRIC, BALED HAY OR STRAW EROSION CHECKS SHALL BE 2 ACRES OR LESS. THEY SHALL BE UTILIZED TO DECREASE FLOW VELOCITY AND TO RETAIN SMALL AMOUNTS OF SEDIMENT.
- B HAY OR STRAW BALES SHALL BE A MINIMUM OF 5 CUBIC FEET IN VOLUME WITH A MINIMUM DIMENSION OF 36" X 18" X 14" (LENGTH X WIDTH X HEIGHT).
- C ALL BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED AND THE BALES SHALL BE PLACED IN POSITION TO MAINTAIN THE BINDING IN A HORIZONTAL POSITION.
- D ALL BALES SHALL BE BURIED A MINIMUM OF 4 INCHES.
- E SEE EC-STR-3G FOR TEMPORARY SILT FENCE (WITH BACKING) DETAILS. GENERAL NOTES AND SPECIFICATIONS.
- F SEE EC-STR-3B FOR ENHANCED SILT FENCE DETAILS, GENERAL NOTES AND SPECIFICATIONS.
- G PAYMENT FOR CONTINUOUS FABRIC FILTER BARRIER AND TEMPORARY EROSION CHECKS WILL BE MADE AS FOLLOWS:
 - ITEM NO. 209-06: BALED HAY OR STRAW EROSION CHECKS PER BALE.
 - ITEM NO. 209-08-.02: TEMPORARY SILT FENCE (WITH BACKING) PER LINEAR FOOT.
 - ITEM NO. 209-08-.04: TEMPORARY ENHANCED SILT FENCE PER LINEAR FOOT.

BALED HAY OR STRAW ON FILL SLOPES

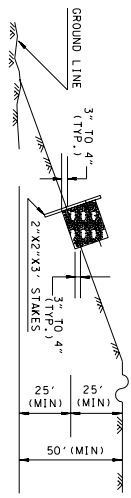
TYPE EC VI



TYPICAL LONGITUDINAL VIEW (EXAMPLE)

(DIMENSIONS ARE MEASURED VERTICALLY) WHEN DITCH TOE OF SLOPE OR SHOULDER GRADE CHANGES, "L" WILL CHANGE ACCORDINGLY

EROSION CONTROL PLAN LEGEND: — EC — VI — EC —

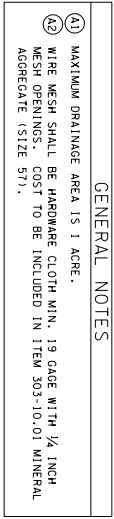
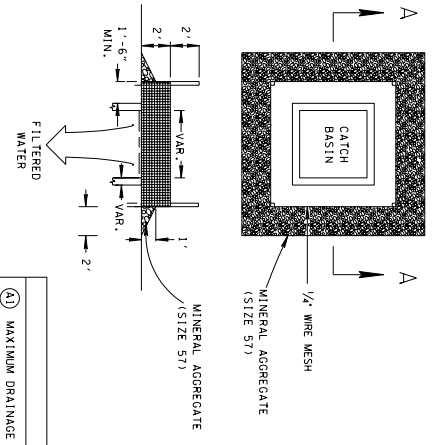


SECTION C-C

(ONE ROW OF BALES SHOWN - 2 OR MORE MAY BE SPECIFIED)

TEMPORARY ROCK CATCH BASIN PROTECTION
(ITEM NO. 303-10.01)

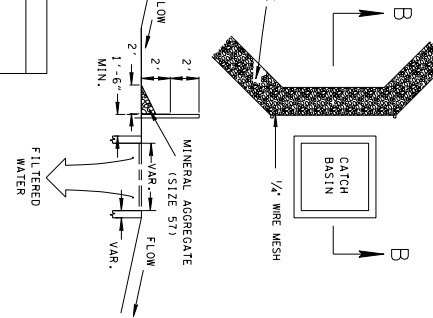
MULTI-DIRECTIONAL FLOW



GENERAL NOTES

- (1) MAXIMUM DRAINAGE AREA IS 1 ACRE.
- (2) WIRE MESH SHALL BE HARDWARE CLOTH MIN. 19 GAGE WITH 1/4 INCH MESH OPENINGS. COST TO BE INCLUDED IN ITEM 303-10.01 MINERAL AGGREGATE (SIZE 57).

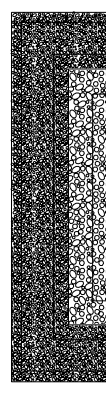
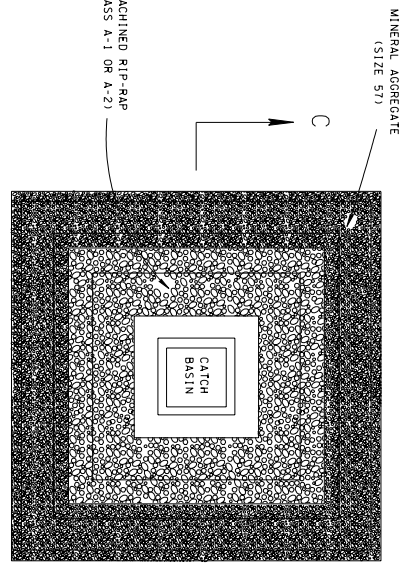
SINGLE-DIRECTIONAL FLOW



GENERAL NOTES

- (1) MAXIMUM DRAINAGE AREA IS 1 ACRE.
- (2) WIRE MESH SHALL BE HARDWARE CLOTH MIN. 19 GAGE WITH 1/4 INCH MESH OPENINGS. COST TO BE INCLUDED IN ITEM 303-10.01 MINERAL AGGREGATE (SIZE 57).

TEMPORARY ROCK CATCH BASIN PROTECTION
(ITEM NOS. 303-10.01, 709-05.06, & 709-05.07)



GENERAL NOTES

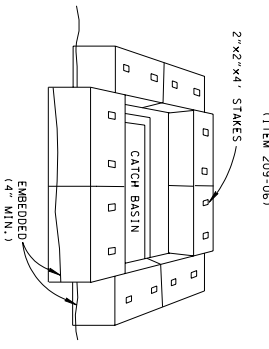
- (1) MAXIMUM DRAINAGE AREA IS 1 ACRE.
- (2) WIRE MESH SHALL BE HARDWARE CLOTH MIN. 19 GAGE WITH 1/4 INCH MESH OPENINGS. COST TO BE INCLUDED IN ITEM 303-10.01 MINERAL AGGREGATE (SIZE 57).

- REV. 3-15-04: CHANGED LEGENDS FOR TEMPORARY ROCK AND SILT FENCE CATCH BASIN PROTECTION.
- REV. 12-18-02: IN CATCH BASIN SILT FENCE SILT RIP-RAP CHANGED FENCE (WITHOUT BACKING) TO SILT FENCE (WITH BACKING) AND PAY ITEM FROM 209-08 TO 209-08.02.
- REV. 1-13-18 95: CHANGED DRAWING NO. FROM EC5-STR-19 TO EC-STR-19.
- REV. 1-5-27-01: CHANGED ITEM NO. 303-15.01 TO 303-10.01.

EROSION CONTROL PLAN LEGEND: [Symbol] TEMPORARY ROCK CATCH BASIN PROTECTION (MULTI-DIRECTIONAL FLOW)

EROSION CONTROL PLAN LEGEND: [Symbol] TEMPORARY ROCK CATCH BASIN PROTECTION (SINGLE-DIRECTIONAL FLOW)

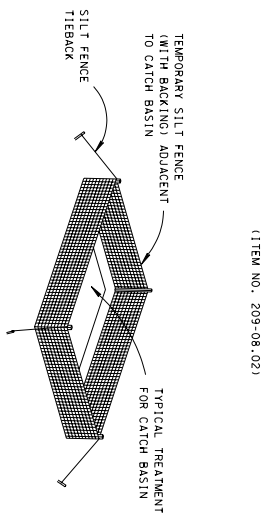
CATCH BASIN HAY OR STRAW BALE SILT TRAP
(ITEM 209-06)



GENERAL NOTES

- (1) MAXIMUM DRAINAGE AREA IS 1 ACRE.
- (2) HAY OR STRAW BALES ARE TO BE EMBEDDED A MINIMUM OF FOUR (4) INCHES INTO GROUND.

CATCH BASIN SILT FENCE SILT TRAP
(ITEM NO. 209-08.02)

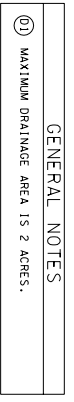


GENERAL NOTES

- (1) MAXIMUM DRAINAGE AREA IS 1 ACRE.
- (2) SEE EC-STR-3C FOR SILT FENCE DETAILS. GENERAL NOTES AND SPECIFICATIONS.
- (3) CATCHBASIN SILT TRAPS WILL BE MEASURED FOR PAYMENT IN METERS OF TEMPORARY SILT FENCE (WITH BACKING).

EROSION CONTROL PLAN LEGEND: [Symbol] TEMPORARY ROCK CATCH BASIN PROTECTION (TYPE A)

EROSION CONTROL PLAN LEGEND: [Symbol] TEMPORARY ROCK CATCH BASIN PROTECTION



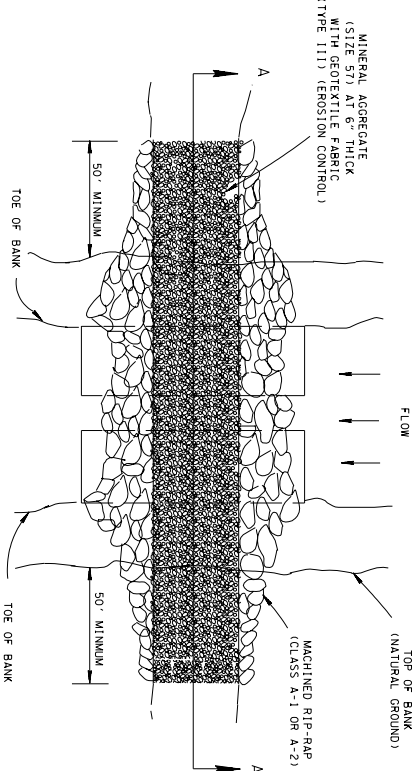
GENERAL NOTES

- (1) MAXIMUM DRAINAGE AREA IS 2 ACRES.

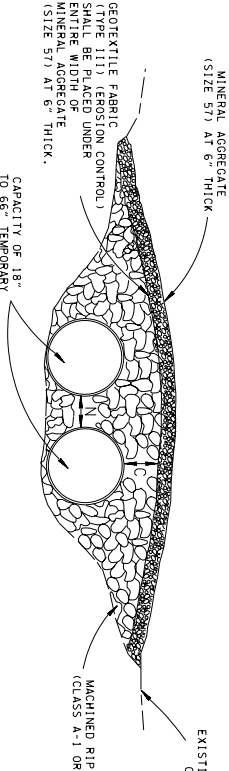
EROSION CONTROL PLAN LEGEND: [Symbol] TEMPORARY CATCH BASIN HAY OR STRAW BALE SILT TRAP

EROSION CONTROL PLAN LEGEND: [Symbol] TEMPORARY CATCH BASIN SILT FENCE SILT TRAP

TEMPORARY CULVERT CROSSING
(ITEM NOS. 203-01, 303-10.01, 621-03.02 THRU 621-03.10, 709-05.06 & 709-05.07)

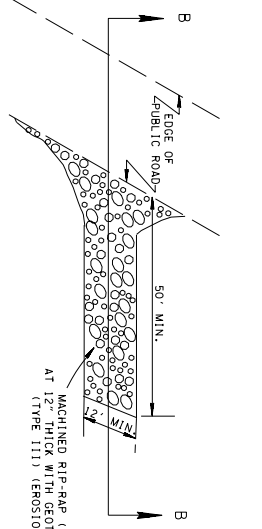


PLAN VIEW OF TEMPORARY CULVERT STREAM CROSSING

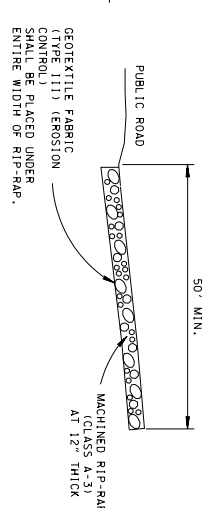


SECTION A - A

TEMPORARY CONSTRUCTION ROAD ENTRANCE AND/OR EXIT
(ITEM NOS. 203-01 & 303-10.01)

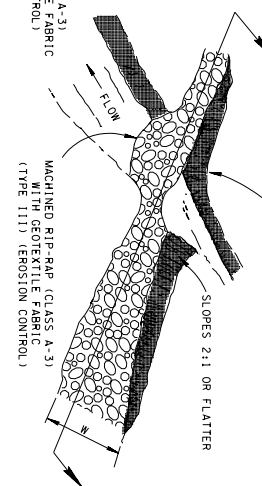


PLAN VIEW OF TEMPORARY CONSTRUCTION ROAD ENTRANCE AND/OR EXIT

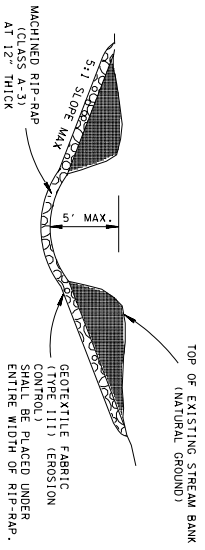


SECTION B - B

TEMPORARY STABILIZED CONSTRUCTION FORD
(ITEM NOS. 203-01, 709-05.05 & 740-10.01)



PLAN VIEW OF STABILIZED CONSTRUCTION FORD



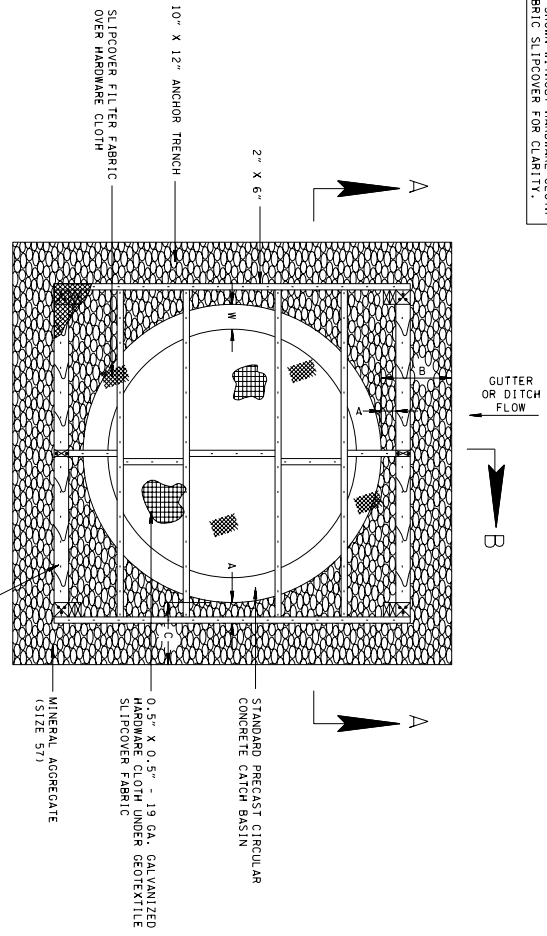
SECTION C - C

GENERAL NOTES

- Ⓐ DIMENSIONS SHOWN ON THESE DETAILS ARE THE MINIMUM THAT WILL BE ACCEPTABLE UNLESS OTHERWISE SPECIFIED BY THE PROJECT ENGINEER.
- Ⓑ GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS OF THE STANDARD SPECIFICATION FOR GEOTEXTILES AASHTO DESIGNATION M-288, EROSION CONTROL.
- Ⓒ TEMPORARY CULVERT CROSSINGS SHALL CONSIST OF ONE OR MORE CULVERTS BEING PROTECTED BY RIP-RAP. THE RIP-RAP SHALL BE PLACED UNDER THE ENTIRE WIDTH OF THE CULVERTS TO SIXTY-SIX INCHES IN DIAMETER. TEMPORARY CULVERTS SHALL BE SIZED BASED ON A 5-YEAR-FREQUENCY STORM. THE CULVERTS SHALL BE PAID FOR AS TEMPORARY DRAINAGE PIPE.
- Ⓓ TEMPORARY CULVERT CROSSINGS SHALL BE BID UNDER THE FOLLOWING PAY ITEMS :
 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED) PER CUBIC YARD
 621-03.02 18" TEMPORARY DRAINAGE PIPE PER LINEAR FOOT
 621-03.03 24" TEMPORARY DRAINAGE PIPE PER LINEAR FOOT
 621-03.04 30" TEMPORARY DRAINAGE PIPE PER LINEAR FOOT
 621-03.05 36" TEMPORARY DRAINAGE PIPE PER LINEAR FOOT
 621-03.06 42" TEMPORARY DRAINAGE PIPE PER LINEAR FOOT
 621-03.07 48" TEMPORARY DRAINAGE PIPE PER LINEAR FOOT
 621-03.08 54" TEMPORARY DRAINAGE PIPE PER LINEAR FOOT
 621-03.09 60" TEMPORARY DRAINAGE PIPE PER LINEAR FOOT
 621-03.10 66" TEMPORARY DRAINAGE PIPE PER LINEAR FOOT
 709-05.06 MACHINED RIP-RAP (CLASS A-1) PER TON
 709-05.07 MACHINED RIP-RAP (CLASS A-2) PER TON
 740-10.03 GEOTEXTILE (TYPE 111) (EROSION CONTROL) PER SQUARE YARD
- Ⓔ TEMPORARY CONSTRUCTION ROAD ENTRANCES AND/OR EXITS SHALL BE BUILT TO REDUCE SEDIMENT LEAVING THE CONSTRUCTION SITE VIA CONSTRUCTION VEHICLES AND TO REDUCE EROSION OF THE PUBLIC ROAD SURFACE.
- Ⓕ TEMPORARY CONSTRUCTION ROAD ENTRANCES AND/OR EXITS SHALL BE BID UNDER THE FOLLOWING PAY ITEMS :
 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED) PER CUBIC YARD
 709-05.05 MACHINED RIP-RAP (CLASS A-3) PER TON
 740-10.03 GEOTEXTILE (TYPE 111) (EROSION CONTROL) PER SQUARE YARD
- Ⓖ TEMPORARY STABILIZED CONSTRUCTION FORDS ARE EFFECTIVE FOR INFREQUENT CROSSING OR WIDE SHALLOW DEPRESSIONS.
- Ⓗ TEMPORARY STABILIZED CONSTRUCTION FORDS SHALL BE BID UNDER THE FOLLOWING PAY ITEMS :
 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED) PER CUBIC YARD
 709-05.05 MACHINED RIP-RAP (CLASS A-3) PER TON
 740-10.03 GEOTEXTILE (TYPE 111) (EROSION CONTROL) PER SQUARE YARD



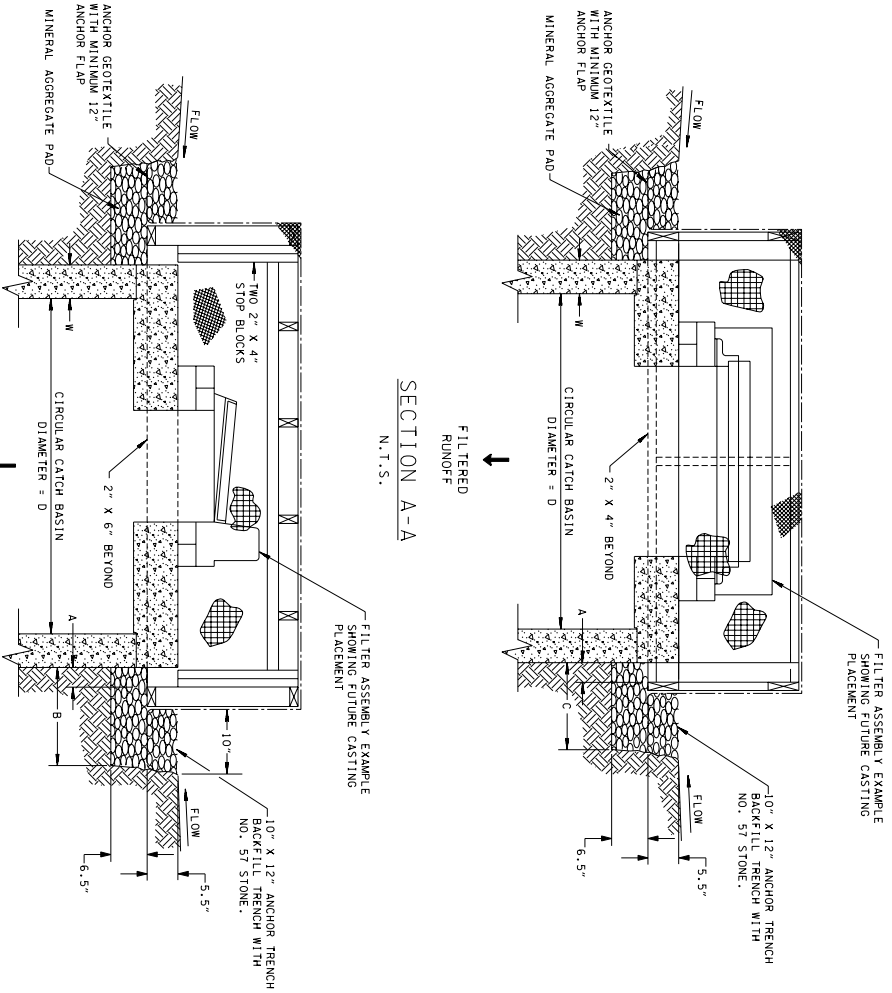
FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



PLAN VIEW - CATCH BASIN FILTER ASSEMBLY
N.T.S.

60-INCH DIAMETER CIRCULAR STRUCTURE WITH CORRESPONDING TYPE 3 CATCH BASIN FILTER ASSEMBLY SHOWN ON THIS SHEET FOR REFERENCE PURPOSES. FOR OTHER SIZES-SEE APPLICABLE STANDARD DRAWINGS.

- CIRCULAR CATCH BASIN FILTER ASSEMBLY GENERAL NOTES**
- A DRAWING TO BE USED WITH STANDARD PRECAST CIRCULAR CATCH BASINS. DIMENSIONS AND DETAILS.
 - B THE INLET AND FILTER ASSEMBLY SHOWN ON THIS STANDARD DRAWING APPLIES REPRESENTATIVE OF HOW THE EC-STR-40 SERIES OF STANDARD DRAWINGS APPLIES REGARDING STANDARD SPECIFICATIONS ON SLIPCOVER FABRIC AND INLET FOR APPLICABLE STANDARD DRAWING REFERENCED IN THE TABLE ON THIS SHEET.
 - C PAYMENT FOR CATCH BASIN FILTER ASSEMBLY FOR CIRCULAR STRUCTURES WILL BE MADE UNDER THE ITEM NUMBER LISTED ON THE APPLICABLE STANDARD DRAWING REFERENCED IN THE TABLE ON THIS SHEET.



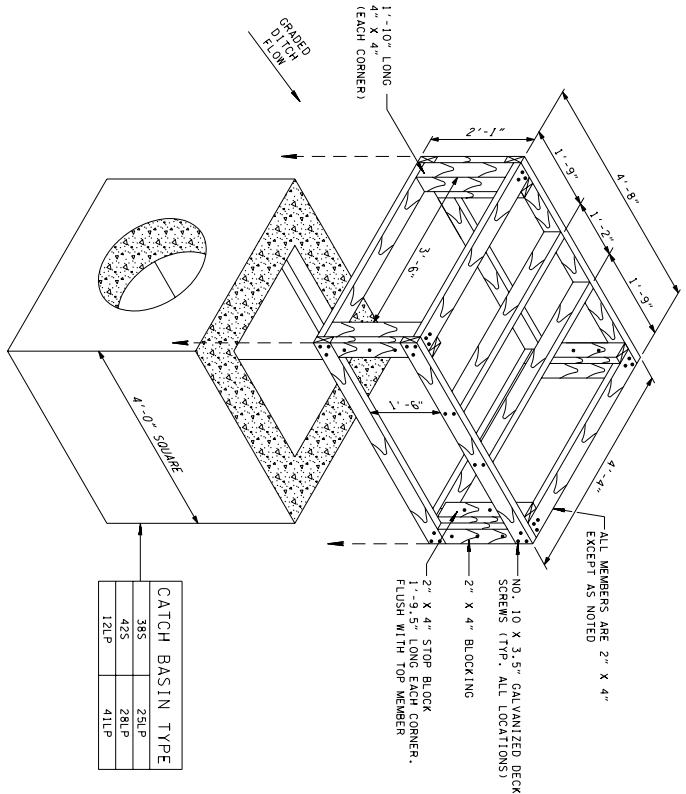
SECTION A-A
N.T.S.

SECTION B-B
N.T.S.

CIRCULAR STRUCTURE DIMENSION TABLE

INSIDE DIA. OF CATCH BASIN (D) (INCHES)	WALL THICKNESS (W) (INCHES)	CATCH BASIN FILTER ASSEMBLY TYPE	APPLICABLE STANDARD DRAWINGS	DIMENSION		
				A (INCHES)	B (INCHES)	C (INCHES)
48	5	2	EC-STR-42 & 42A	3.5	17	15
60	6	3	EC-STR-43 & 43A	4.0	17.5	15.5
72	7	4	EC-STR-44 & 44A	8.0	21.5	19.5
84	8	4	EC-STR-44 & 44A	1.0	14.5	12.5
96	9	5	EC-STR-45 & 45A	8.0	21.5	19.5
108	10	5	EC-STR-45 & 45A	1.0	14.5	12.5

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.

EROSION CONTROL PLAN LEGEND:



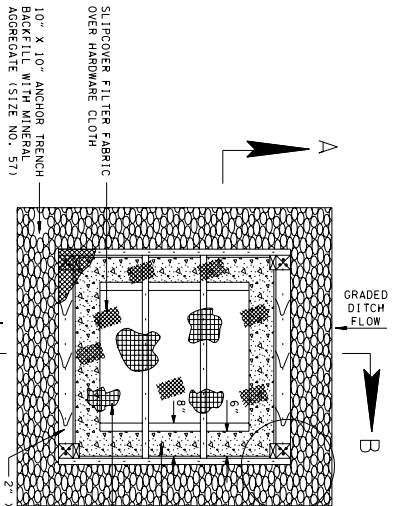
1

CATCH BASIN FILTER ASSEMBLY (TYPE 1)

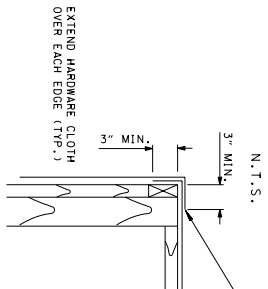
CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

- A DRAWING TO BE USED WITH STANDARD TYPES 385, 425, AND D-C8 SERIES LP CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
- B THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (e.g., DITCHES AND SMALLEST) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
- C TYPICAL ACTUAL DIMENSIONS ARE 1.5 x 3.5 INCH AND 3.5 x 3.5 INCH RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD MAY VARY EVEN GREATER. RESPECTIVELY. ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
- D PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY SHALL BE CLEANED AT AN APPROPRIATE LOCAL MAINTENANCE AND OPERATING STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.

CATCH BASIN TYPE		
385	25LP	
425	28LP	
12LP	41LP	



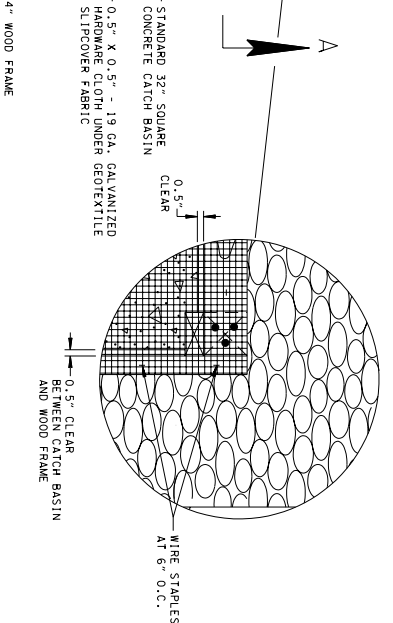
PLAN VIEW - CATCH BASIN FILTER ASSEMBLY
N.T.S.



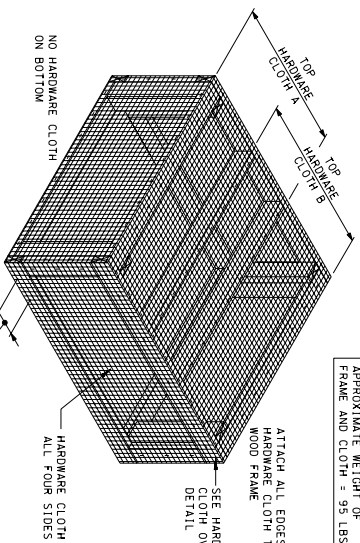
HARDWARE CLOTH OVERLAP DETAIL
N.T.S.

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)

- E DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPAIRED AS NECESSARY TO INSURE PROPER FUNCTIONING OF FILTER ASSEMBLY. REUSE OF ASSEMBLIES IS ACCEPTABLE PROVIDED THE UNIT IS IN PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY TOOT ENGINEER.
- F ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPGRADE VEGETATION HAS BEEN ESTABLISHED. AFTER SEDIMENT CONTROL STRIP IS IN PLACE, BACKFILL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
- G IF NECESSARY, AT DIRECTION OF TOOT ENGINEER, SLIPCOVER MAY BE SECURED OR OTHER SUITABLE MATERIAL.
- H WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, DITCH GRADE, ETC., CONSTRUCTION PREVENTION CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- I ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209-40-41, CATCH BASIN FILTER ASSEMBLY (TYPE 1), PER EACH.



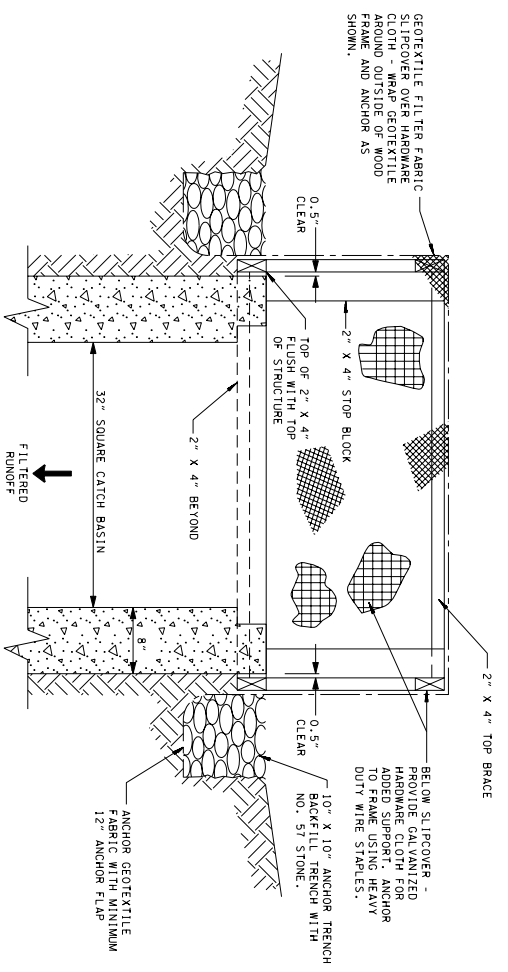
APPROXIMATE WEIGHT OF FRAME AND CLOTH = 95 LBS.



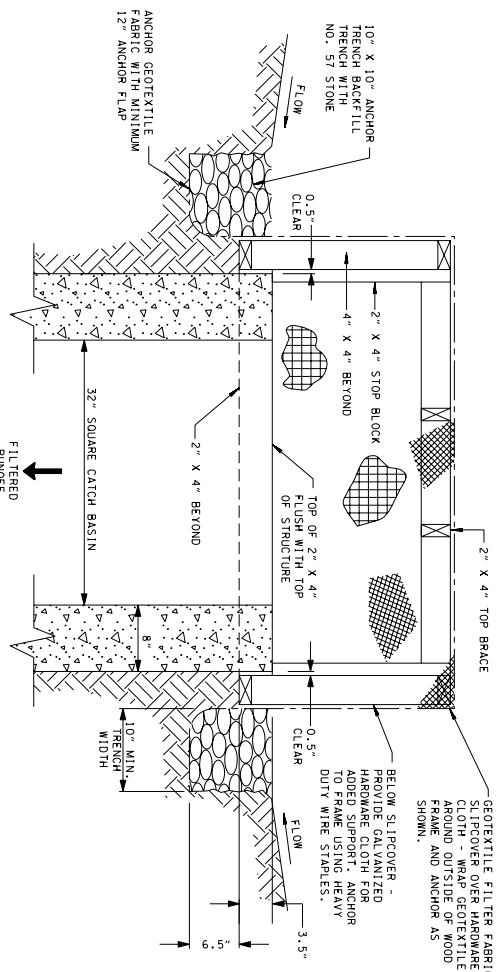
ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH
N.T.S.

INSTALLATION SEQUENCE FOR HARDWARE CLOTH

- INSTALL TOP HARDWARE CLOTH A. PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH B. OVERLAPPING CLOTH A, PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE END OF WIRE STAPLES TO ATTACH TO FRAME. PULL CLOTH TIGHT, AND OVERLAPPING SIDES REQUIRED TO BE TIGHT, AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
- TRIM EXCESS ALONG BOTTOM AS NECESSARY.



SECTION A-A
N.T.S.



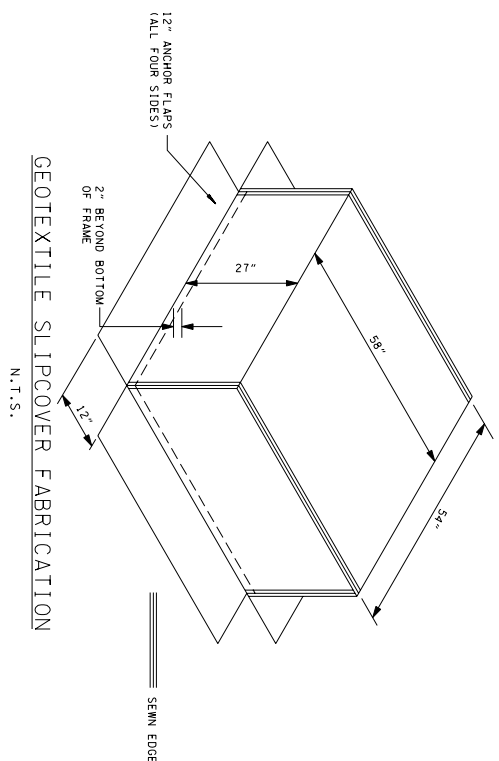
SECTION B-B
N.T.S.

EROSION CONTROL PLAN LEGEND: CATCH BASIN FILTER ASSEMBLY (TYPE 1)

SLIPCOVER FILTER SPECIFICATIONS	
FABRIC TYPE : NON-MOVEN, NEEDLE-PUNCHED GEOTEXTILE	
FABRIC PROPERTY	ASTM TEST METHOD
GRAB TENSILE STRENGTH	ASTM D4632
GRAB ELONGATION	ASTM D4632
MULLEN BURST	ASTM D3786
PUNCTURE STRENGTH	ASTM D4833
TRAPEZOIDAL TEAR	ASTM D4533
APPARENT OPENING SIZE (AOS)	ASTM D4751
PERMEABILITY	ASTM D4491
PERMITTIVITY	ASTM D4491
WATER FLUX	ASTM D4491
UV RESISTANCE	ASTM D4355
WEIGHT	ASTM D3776
MINIMUM 6 OZ/YD ²	
MINIMUM AVERAGE ROLL VALUES (MAYV'S)	
MINIMUM AVERAGE ROLL VALUES (MAYV'S)	2180 LBS
MINIMUM AVERAGE ROLL VALUES (MAYV'S)	250%
MINIMUM AVERAGE ROLL VALUES (MAYV'S)	2330 PSI
MINIMUM AVERAGE ROLL VALUES (MAYV'S)	2105 LBS
MINIMUM AVERAGE ROLL VALUES (MAYV'S)	275 LBS
MINIMUM AVERAGE ROLL VALUES (MAYV'S)	FINER THAN OR EQUAL TO #80 U.S. STANDARD SIEVE
MINIMUM AVERAGE ROLL VALUES (MAYV'S)	20.12 INCHES/SEC
MINIMUM AVERAGE ROLL VALUES (MAYV'S)	21.5 SEC ⁻¹
MINIMUM AVERAGE ROLL VALUES (MAYV'S)	2110 GAL/MIN/FT ²
MINIMUM AVERAGE ROLL VALUES (MAYV'S)	270% AT 500 HOURS
MINIMUM AVERAGE ROLL VALUES (MAYV'S)	MINIMUM 6 OZ/YD ²

HARDWARE CLOTH SPECIFICATIONS

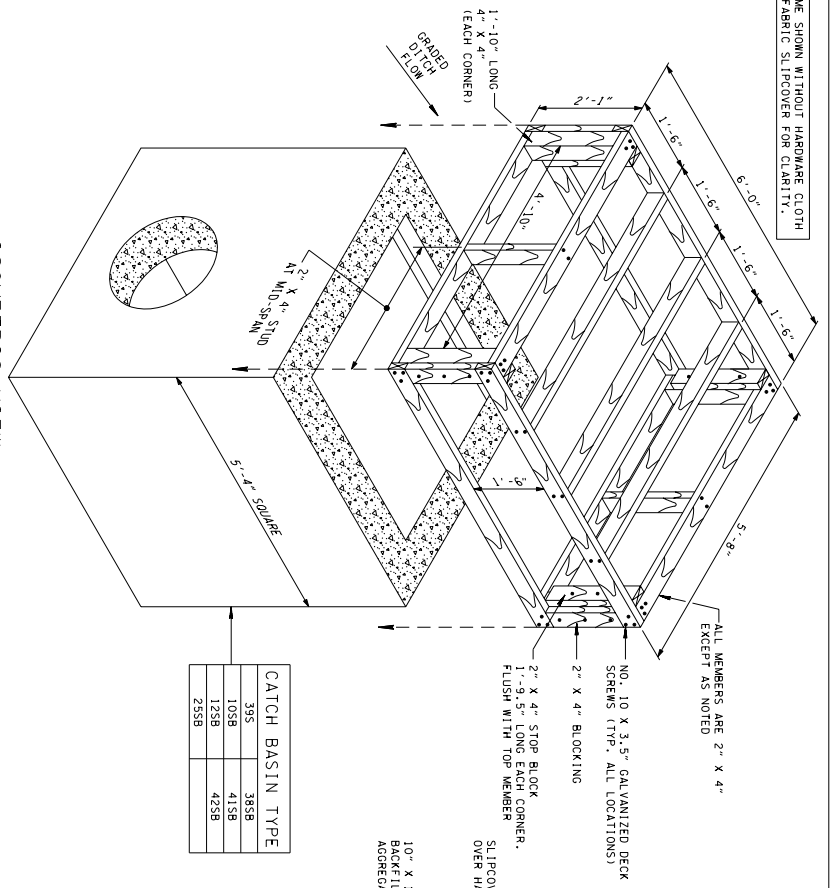
STANDARD SPECIFICATION	ASTM A710
OPENING SIZE	0.5 INCH X 0.5 INCH
WIRE SIZE	19 GAUGE
WIRE DIAMETER	0.041 INCHES
WEIGHT	4.0.2 LBS/SF
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC



GEOTEXTILE SLIPCOVER FABRICATION
N.T.S.

- FABRICATION SPECIFICATIONS:
1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
 2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 138 POUNDS) WITH MINIMUM OF SIX STITCHES PER INCH.
 3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 0.5" FROM HEAT-CUT FABRIC EDGES.

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.

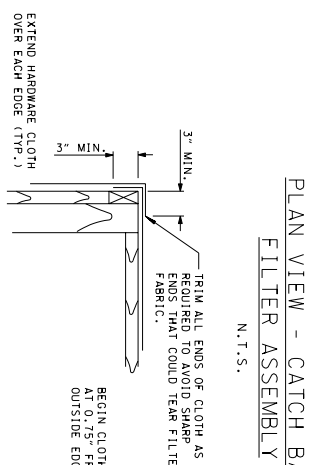
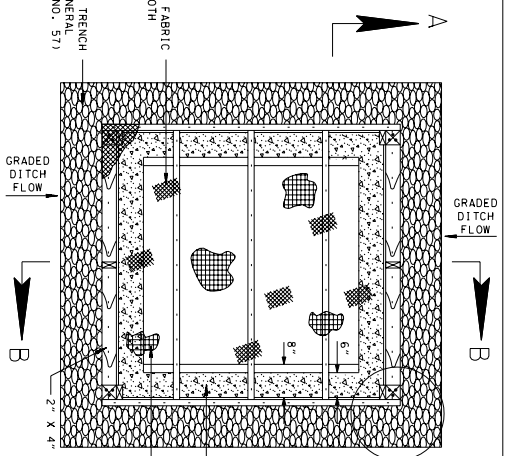


CATCH BASIN TYPE

395	3858
1058	4158
1258	4258
2558	

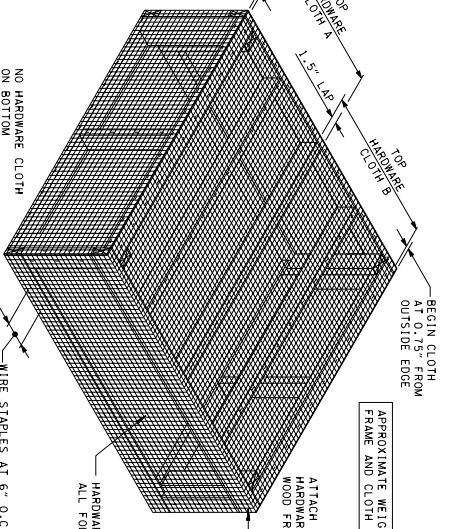
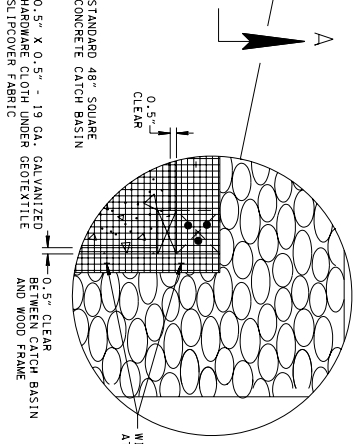
ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.
EROSION CONTROL PLAN LEGEND: 2

- CATCH BASIN FILTER ASSEMBLY GENERAL NOTES**
- A DRAWING TO BE USED WITH STANDARD TYPE 395 AND 0-58-SERIES SB CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
 - B THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CURBSIDE RUNOFF AND PREVENTION OF EROSION AND WEAR OF DRIVEWAYS AND STRUCTURES ARE CONSIDERED BUT PRIOR TO ESTABLISHING VEGETATION.
 - C TYPICAL ACTUAL DIMENSIONS ARE 1.5" X 3.5" INCH AND 3.5" X 3.5" INCH DEPENDING ON MOISTURE CONTENT. ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
 - D PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY SHALL BE MAINTAINED CLEAN WITH COMPRESSED AIR. MAINTENANCE AND CLEANING OF STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.

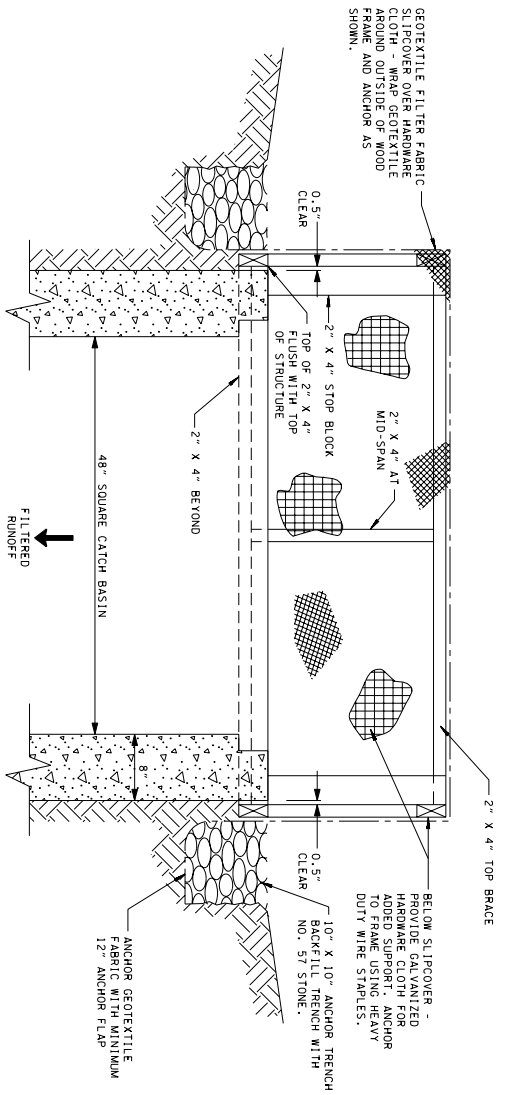


PLAN VIEW - CATCH BASIN FILTER ASSEMBLY
N.T.S.
HARDWARE CLOTH OVERLAP DETAIL
N.T.S.

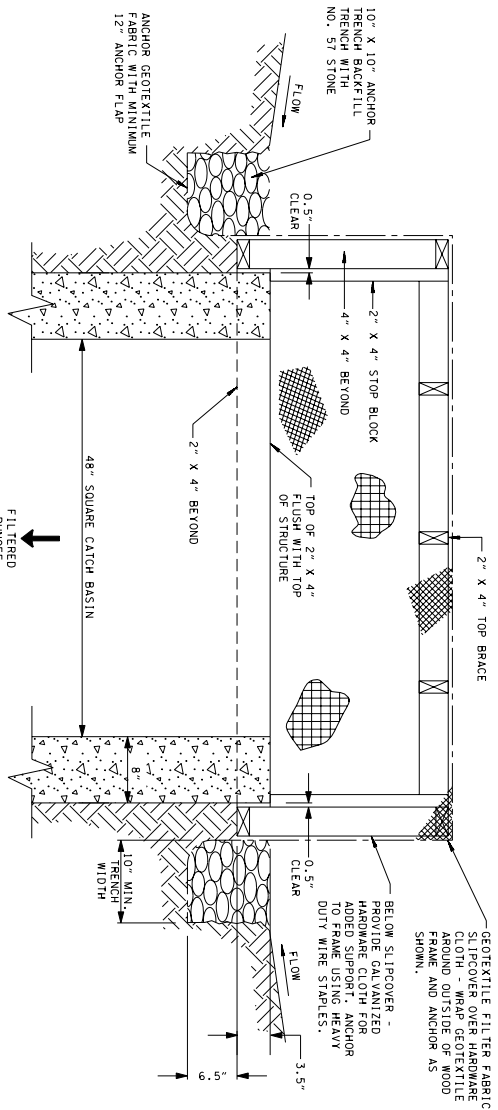
- CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)**
- E DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY TO INSURE PROPER FUNCTIONING OF FILTER ASSEMBLY. REUSE OF ASSEMBLIES IS ACCEPTABLE PROVIDED THE UNIT IS IN PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY TOOT ENGINEER.
 - F ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED OR OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. BACKFILL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
 - G IF NECESSARY, AT DIRECTION OF TOOT ENGINEER, SLIPCOVER MAY BE SECURED IN PLACE AT THE LOWEST PRACTICAL POINT WITH WELON STRING, TWINE, WIRE OR OTHER SUITABLE MATERIAL.
 - H WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER OR ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, OTHER GRADE, OR OTHER SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
 - I ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND ASSEMBLY (TYPE 2) IS PER EACH.



- INSTALLATION SEQUENCE FOR HARDWARE CLOTH**
N.T.S.
- 1 INSTALL TOP HARDWARE CLOTH A. PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM SHARP EDGES.
 - 2 INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A AT CENTER TOP BRACE. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
 - 3 INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
 - 4 TRIM EXCESS ALONG BOTTOM AS NECESSARY.



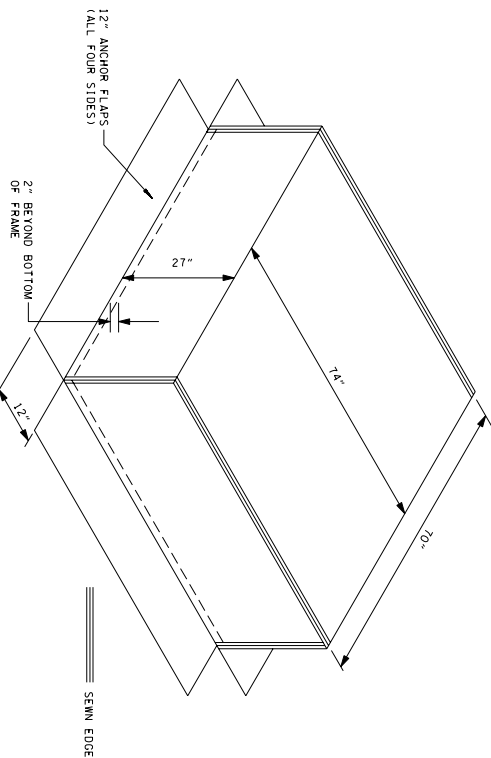
SECTION A-A
N. T. S.



SECTION B-B
N. T. S.

EROSION CONTROL PLAN LEGEND: CATCH BASIN FILTER ASSEMBLY (TYPE 2)

SLIPCOVER FILTER SPECIFICATIONS			
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE			
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MAYV'S)	
GRAB TENSILE STRENGTH	ASTM D4632	2180 LBS	
GRAB ELONGATION	ASTM D4632	250%	
MULLEN BURST	ASTM D3786	2330 PSI	
PUNCTURE STRENGTH	ASTM D4833	2105 LBS	
TRAPEZOIDAL TEAR	ASTM D4533	275 LBS	
APARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO #80 U.S. STANDARD SIEVE	
PERMEABILITY	ASTM D4491	≥ 0.12 INCHES/SEC	
PERMITTIVITY	ASTM D4491	≥ 1.5 SEC ⁻¹	
WATER FLUX	ASTM D4491	≥ 110 GAL./MIN./FT ²	
UV RESISTANCE	ASTM D4355	270% AT 500 HOURS	
WEIGHT	ASTM D3776	MINIMUM 6 OZ/YD ²	
HARDWARE CLOTH SPECIFICATIONS			
STANDARD SPECIFICATION	ASTM A1740		
OPENING SIZE	0.5 INCH X 0.5 INCH		
WIRE SIZE	19 GAUGE		
WIRE DIAMETER	0.041 INCHES		
WEIGHT	± 0.2 LBS/SF		
GRADE	LOW CARBON STEEL (C1008)		
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC		

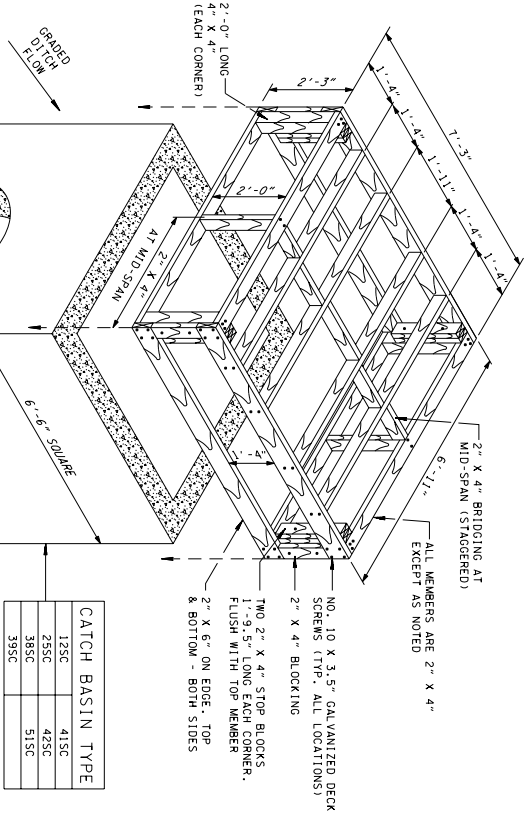


GEOTEXTILE SLIPCOVER FABRICATION
N. T. S.

FABRICATION SPECIFICATIONS:

1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 138 POUNDS) WITH MINIMUM OF SIX STITCHES PER INCH.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 0.5" FROM HEAT-CUT FABRIC EDGES.

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.

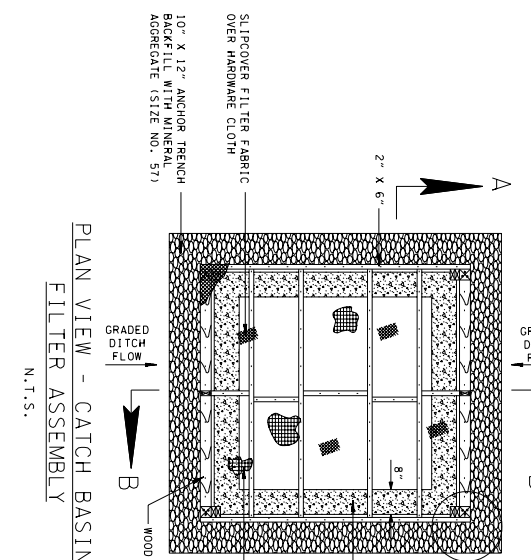


ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.

EROSION CONTROL PLAN LEGEND: [Symbol] 3

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

- A DRAWING TO BE USED WITH STANDARD TYPE D-CB-SERIES SC CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
- B THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (E.G., DITCHES AND SMALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
- C 2' x 4', 2' x 6', AND 4' x 4' PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 1.5" x 3.5" INCH, 1.5" x 5.5" INCH, AND 3.5" x 3.5" INCH, RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD MAY VARY EVEN GREATER DEPENDING ON MOISTURE CONTENT. ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
- D PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY MAY BE CLEANED AT AN ACCEPTABLE LOCATION WITH WATER OR BY BRUSHING AND BLOWING CLEAN WITH COMPRESSED AIR. MAINTENANCE AND CLEANING OF STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.
- E APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR TO ASSURE BALANCED HANDLING DURING INSTALLATION AND REMOVAL OF THE FILTER ASSEMBLY.

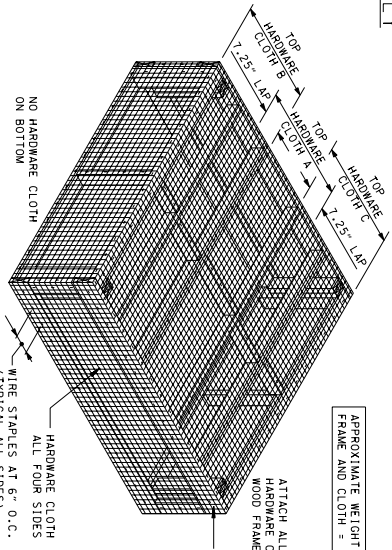


HARDWARE CLOTH OVER LAP DETAIL
N.T.S.

CATCH BASIN FILTER ASSEMBLY (TYPE 3)

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)

- F DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY TO INSURE PROPER FUNCTIONING OF THE FILTER ASSEMBLY, RESIDE OF CONDITION. APPROVAL MUST BE GIVEN BY DOT ENGINEER.
- G ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED OR OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. ALL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
- H IF NECESSARY, AT DIRECTION OF TROT ENGINEER, SLIPCOVER MAY BE SECURED IN PLACE AT THE LOWEST PRACTICAL POINT WITH NYLON STRING, TWINE, WIRE OR OTHER SUITABLE MATERIAL.
- I WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, DITCH GRADE, ETC., OTHER EROSION PREVENTION AND SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- J ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209-40.43, CATCH BASIN FILTER ASSEMBLY (TYPE 3), PER EACH.



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH
N.T.S.

INSTALLATION SEQUENCE FOR HARDWARE CLOTH

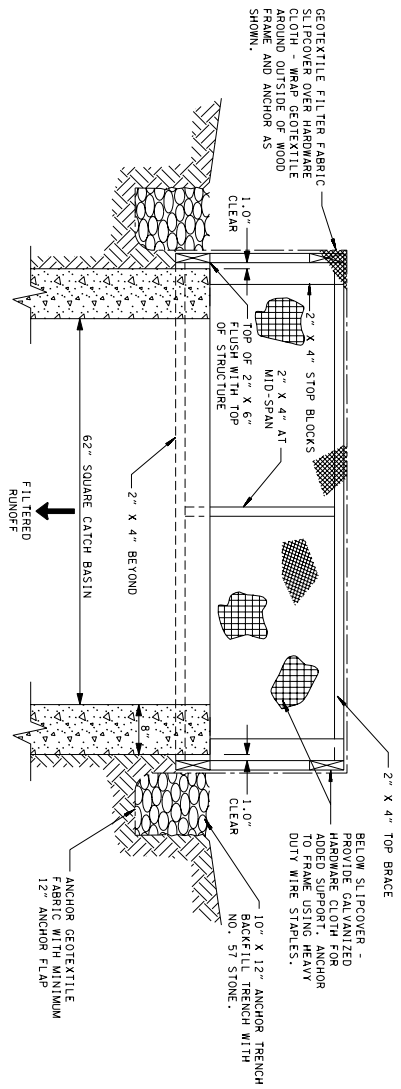
- INSTALL TOP HARDWARE CLOTH A - PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A AT SECOND TOP BRACE. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH C - OVERLAPPING CLOTH A AT THIRD TOP BRACE. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE END OVERLAP AS SHOWN. PULL CLOTH TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES. TRIM EXCESS ALONG BOTTOM AS NECESSARY.

SLIPCOVER FILTER SPECIFICATIONS

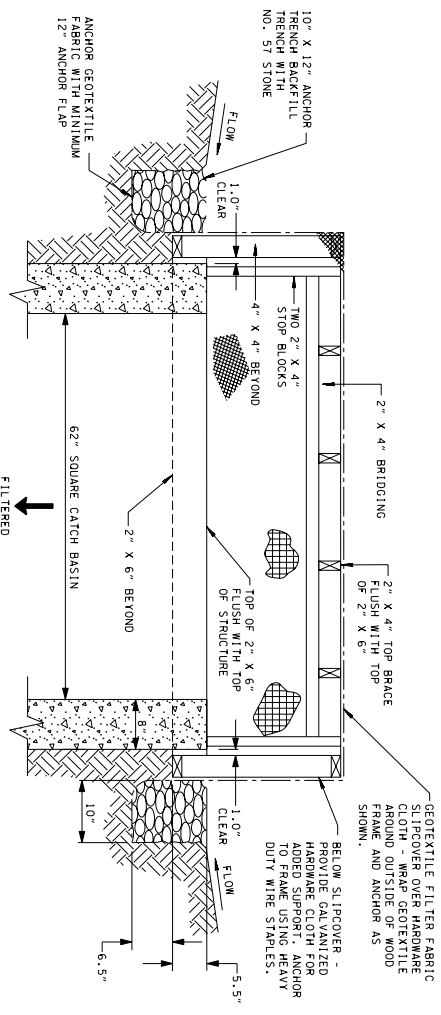
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARV'S)
GAB TENSILE STRENGTH	ASTM D4632	2180 LBS
GAB ELONGATION	ASTM D4632	250%
MULLEN BURST	ASTM D3786	2330 PSI
PUNCTURE STRENGTH	ASTM D4933	2105 LBS
TRAPEZOIDAL TEAR	ASTM D4533	375 LBS
APPARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO #80 U.S. STANDARD SIEVE
PERMEABILITY	ASTM D4491	20.12 INCHES/SEC
PERMITTIVITY	ASTM D4491	21.5 SEC ⁻¹
WATER FLUX	ASTM D4491	2110 GAL/MH/FT ²
UV RESISTANCE	ASTM D4355	270% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 6 OZ/YD ²

HARDWARE CLOTH SPECIFICATIONS

STANDARD SPECIFICATION	ASTM A170
OPENING SIZE	0.5 INCH X 0.5 INCH
WIRE SIZE	19 GAUGE
WIRE DIAMETER	0.041 INCHES
WEIGHT	± 0.2 LBS/5F
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC

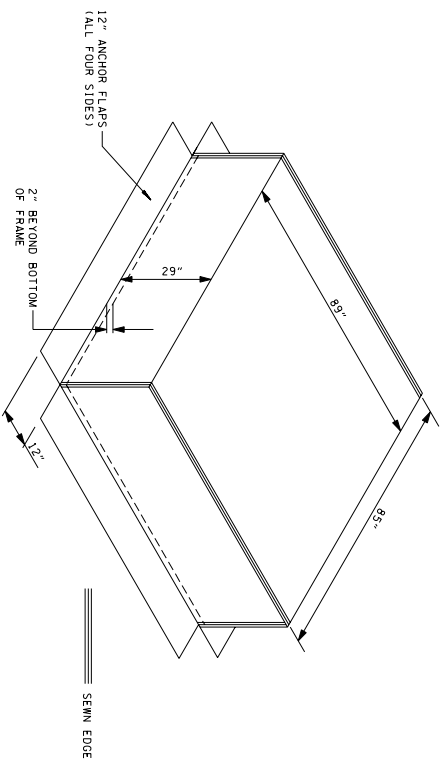


SECTION A-A
N.T.S.



SECTION B-B
N.T.S.

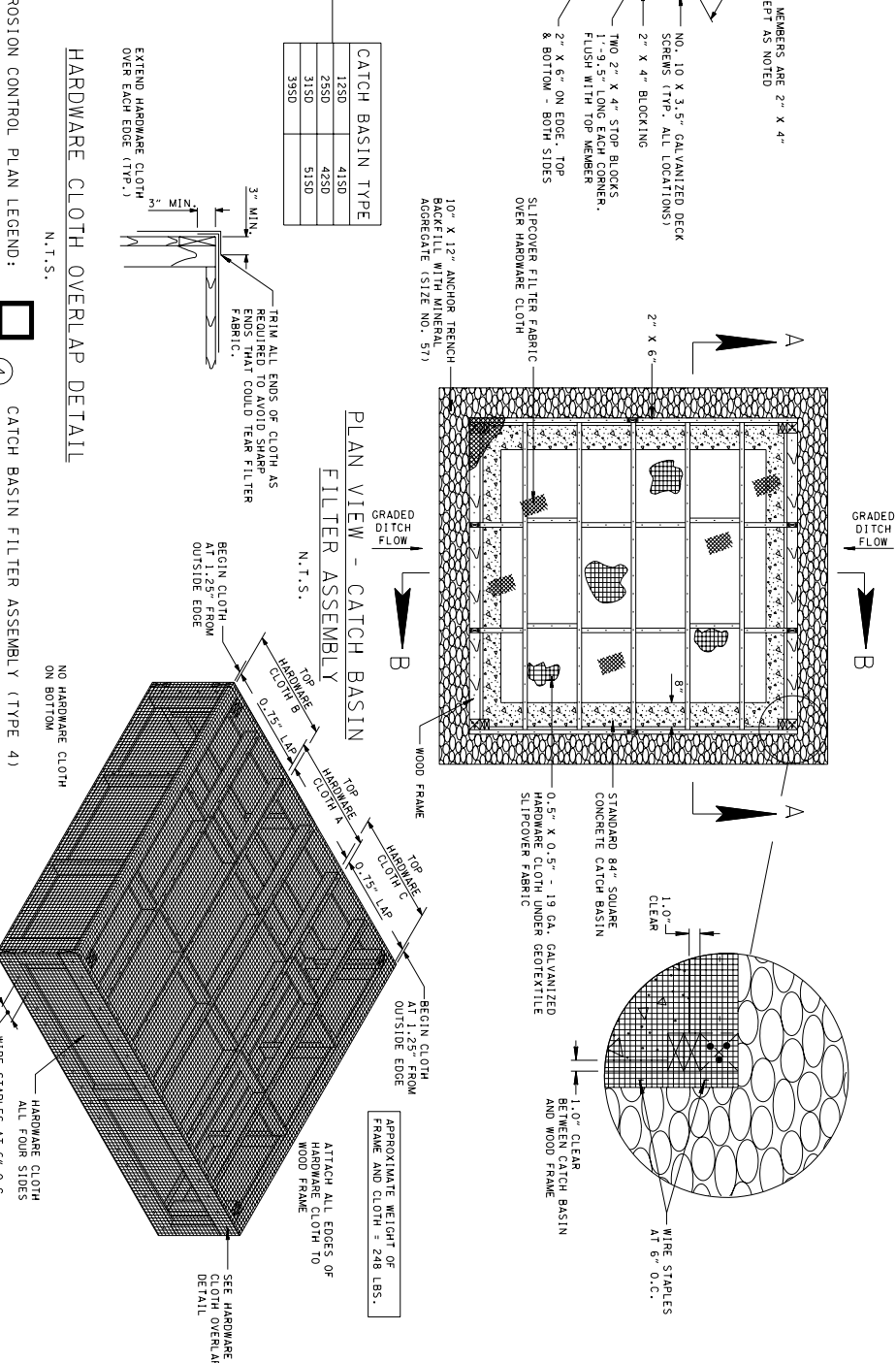
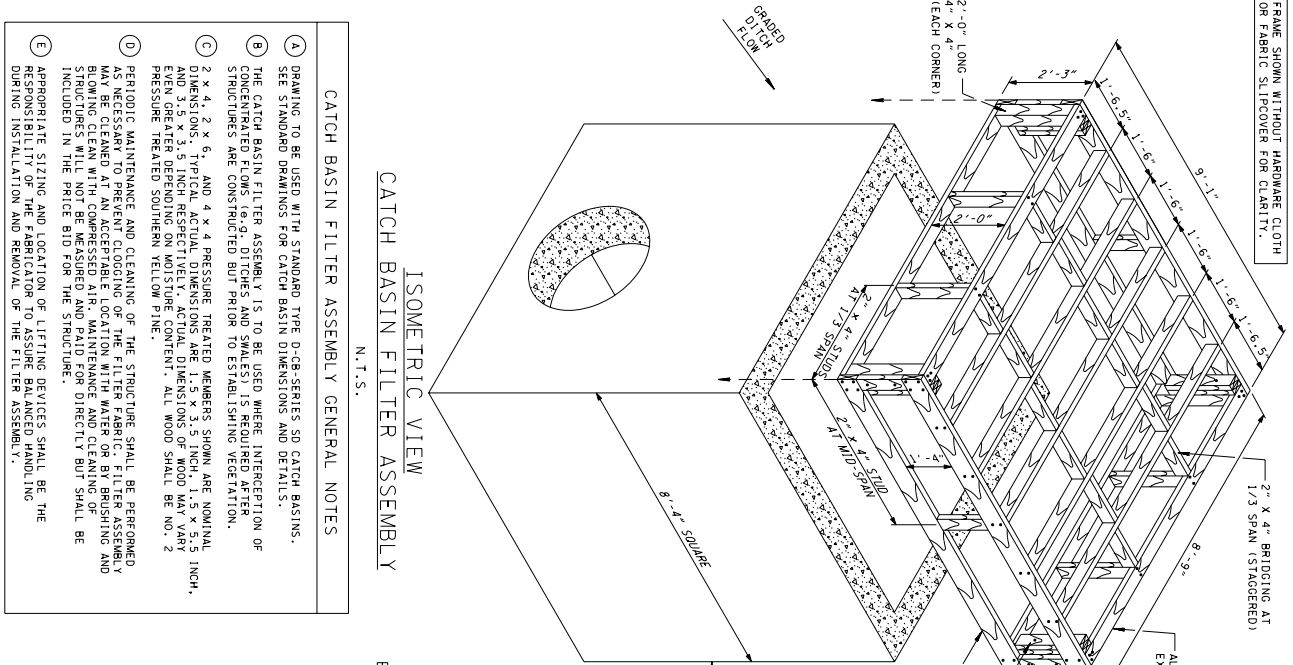
EROSION CONTROL PLAN LEGEND:  CATCH BASIN FILTER ASSEMBLY (TYPE 3)



GEOTEXTILE SLIPCOVER FABRICATION

FABRICATION SPECIFICATIONS:

1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 138 POUNDS) WITH MINIMUM OF SIX STITCHES PER INCH.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 0.5" FROM HEAT-CUT FABRIC EDGES.



CATCH BASIN TYPE			
1250	4150		
2550	4250		
3150	5150		
3950			

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)

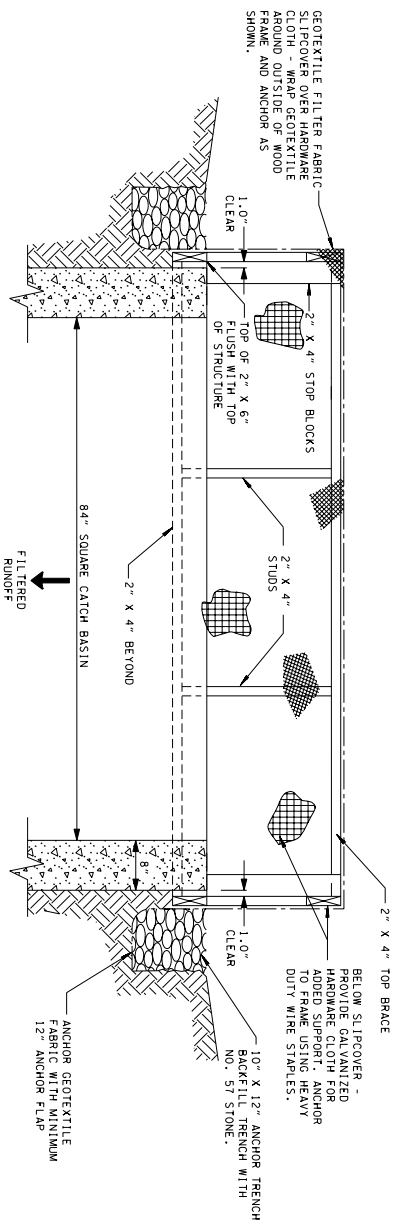
- ③ DEFECTIVE WOOD HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPAIRED AS NECESSARY TO INSURE PROPER FUNCTIONING OF FILTER ASSEMBLY. REUSE OF ASSEMBLIES IS ACCEPTABLE PROVIDED THE UNIT IS IN PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY TOOT ENGINEER.
- ④ ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED OR OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. BACKFILL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
- ⑤ IF NECESSARY, AT DIRECTION OF TOOT ENGINEER, SLIPCOVER MAY BE SECURED OR OTHER SUITABLE MATERIAL.
- ⑥ WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER ARE ANTICIPATED, OTHER SEDIMENT PREVENTION AND CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- ⑦ ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209-40.44, CATCH BASIN FILTER ASSEMBLY (TYPE 4), PER EACH.

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

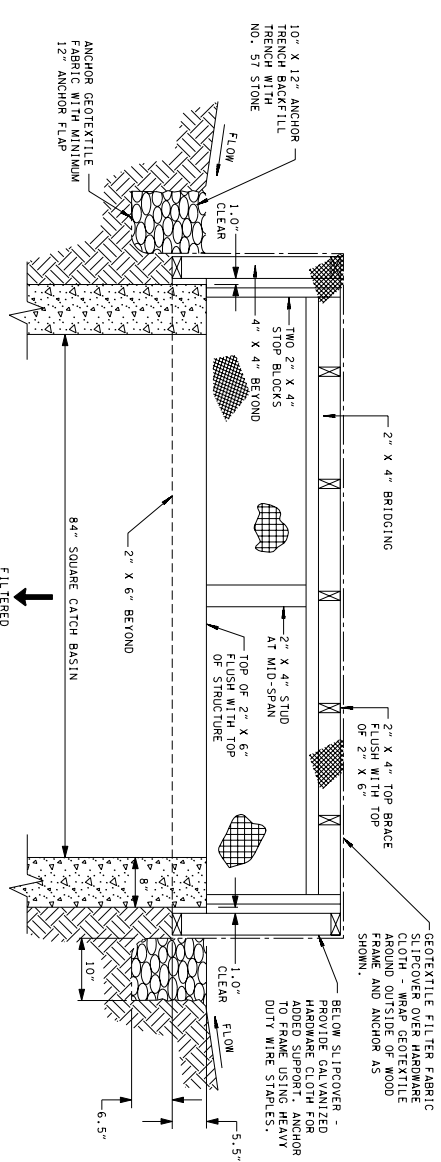
- ① DRAWING TO BE USED WITH STANDARD TYPE D-CR-SECT-65 TO CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS.
- ② THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (E.G., DITCHES AND SPOULES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
- ③ 2' x 4', 2' x 6', AND 4' x 4' PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 1.5' x 3.5' INCH, 1.5' x 5.5' INCH, AND 3.5' x 3.5' INCH RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD MAY VARY AND WOOD SHALL BE TREATED TO PREVENT DECAY. ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
- ④ PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY SHALL BE CLEANED WITH COMPRESSED AIR. MAINTENANCE AND CLEANING OF STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.
- ⑤ APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR TO ASSURE BALANCED HANDLING DURING INSTALLATION AND REMOVAL OF THE FILTER ASSEMBLY.

FRAME WITH HARDWARE CLOTH ISOMETRIC VIEW

- ① INSTALL TOP HARDWARE CLOTH A ACROSS CENTER OF FRAME. PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM SHARP EDGES.
- ② INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A AT SECOND TOP BRACE. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- ③ INSTALL TOP HARDWARE CLOTH C - OVERLAPPING CLOTH A AT FOURTH TOP BRACE. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- ④ INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
- ⑤ TRIM EXCESS ALONG BOTTOM AS NECESSARY.



SECTION A-A
N.T.S.



SECTION B-B
N.T.S.

EROSION CONTROL PLAN LEGEND:



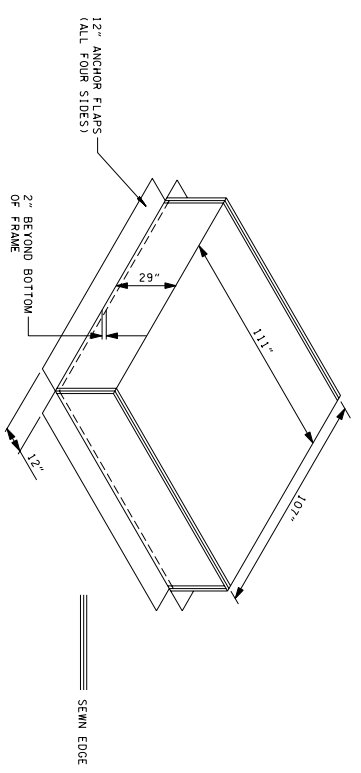
4 CATCH BASIN FILTER ASSEMBLY (TYPE 4)

SLIPCOVER FILTER SPECIFICATIONS

FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MIN/3)
GRAB TENSILE STRENGTH	ASTM D4632	2180 LBS
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	2330 PSI
PUNCTURE STRENGTH	ASTM D4833	2105 LBS
TRAPEZOIDAL TEAR	ASTM D4833	275 LBS
APPARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO #80 U.S. STANDARD SIEVE
PERMEABILITY	ASTM D4491	>0.12 INCHES/SEC
PERMITTIVITY	ASTM D4491	≥1.5 SEC ⁻¹
WATER FLUX	ASTM D4491	2110 GAL./MIN./FT ²
UV RESISTANCE	ASTM D4355	≥70% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 6 OZ./YD ²

HARDWARE CLOTH SPECIFICATIONS

STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	0.5 INCH X 0.5 INCH
WIRE SIZE	19 GAUGE
WIRE DIAMETER	0.041 INCHES
WEIGHT	4 0.2 LBS./SF
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC



N.T.S.

GEOTEXTILE SLIPCOVER FABRICATION

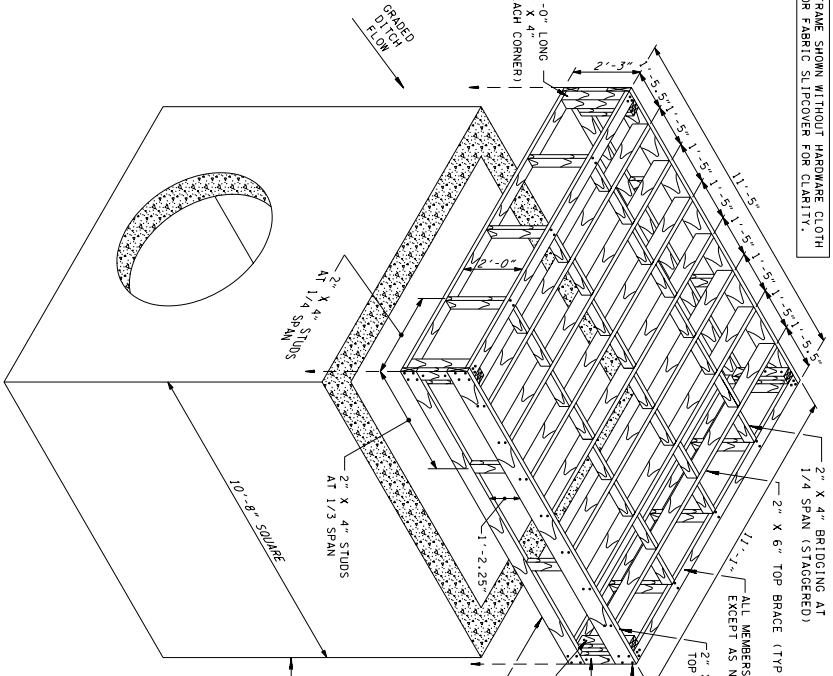
FABRICATION SPECIFICATIONS:

1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE SEWING WITH A MINIMUM OF SIX STITCHES PER INCH. (MINIMUM OF 138 POUNDS)
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 0.5" FROM HEAT-CUT FABRIC EDGES.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 4)
SLIPCOVER DETAILS

4-15-04
EC-STR-44A

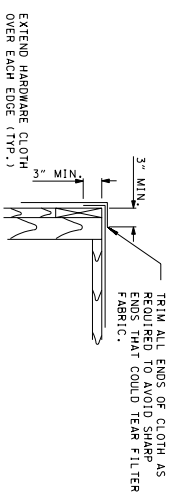


ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.

- CATCH BASIN FILTER ASSEMBLY GENERAL NOTES
- A DRAWING TO BE USED WITH STANDARD TYPE D-CR-SERIES SEE CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
 - B THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (e.g., DITCHES AND SWALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
 - C 2" x 4", 2" x 6", 2" x 8", AND 4" x 4" PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 1.5" x 3.5" INCH, 1.5" x 5.5" INCH, MAY VARY LEVER GREATER DEPENDING ON WOOD SPECIES. ACTUAL DIMENSIONS OF WOOD NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
 - D PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY MAY BE CLEANED AT AN ACCEPTABLE LOCATION WITH WATER OR ST BRUSHING AND STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.
 - E APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE PROPER REMOVAL OF THE FILTER ASSEMBLY DURING INSTALLATION AND REMOVAL OF THE FILTER ASSEMBLY.

CATCH BASIN TYPE

12SE	39SE
14SE	41SE
25SE	44SE
31SE	46SE



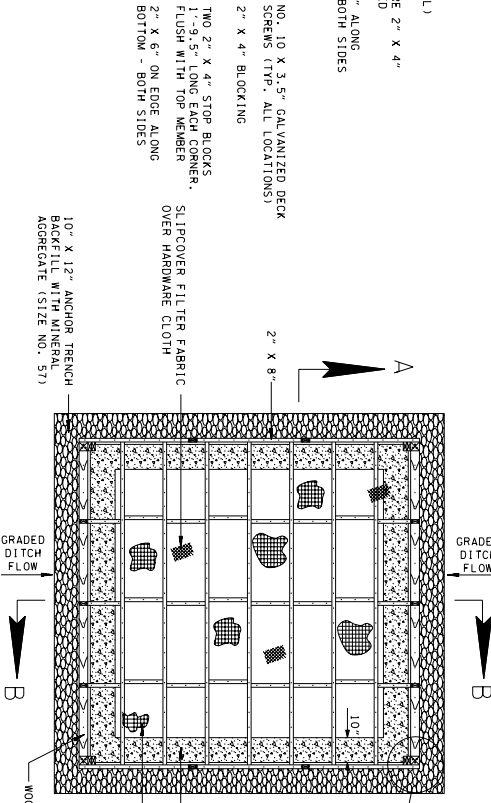
HARDWARE CLOTH OVERLAP DETAIL
N.T.S.

EROSION CONTROL PLAN LEGEND:

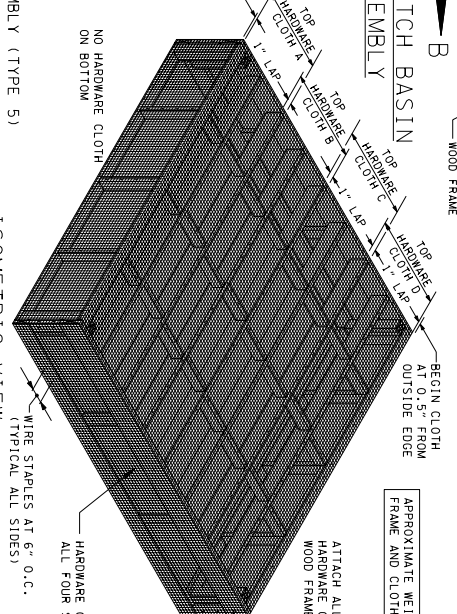


5 CATCH BASIN FILTER ASSEMBLY (TYPE 5)
N.T.S.

- CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)
- F DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER USE OF ASSEMBLIES IS ACCEPTABLE PROVIDED THE UNIT IS IN PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY TOTT ENGINEER.
 - G ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS ESTABLISHED. BACKFILL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
 - H IF NECESSARY, AT DIRECTION OF TOTT ENGINEER, SLIPCOVER MAY BE SECURED OR OTHER SUITABLE MATERIAL.
 - I WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, DITCH GRADE, NECESSARY UPSTREAM OF FILTER ASSEMBLY.
 - J ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRAMPERS, BACKFILLING, STONE, AND SLIPCOVER SHALL BE UNDER ITEM NUMBER 209-40-45, CATCH BASIN FILTER ASSEMBLY (TYPE 5), PER EACH.



PLAN VIEW - CATCH BASIN FILTER ASSEMBLY
N.T.S.



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH
N.T.S.

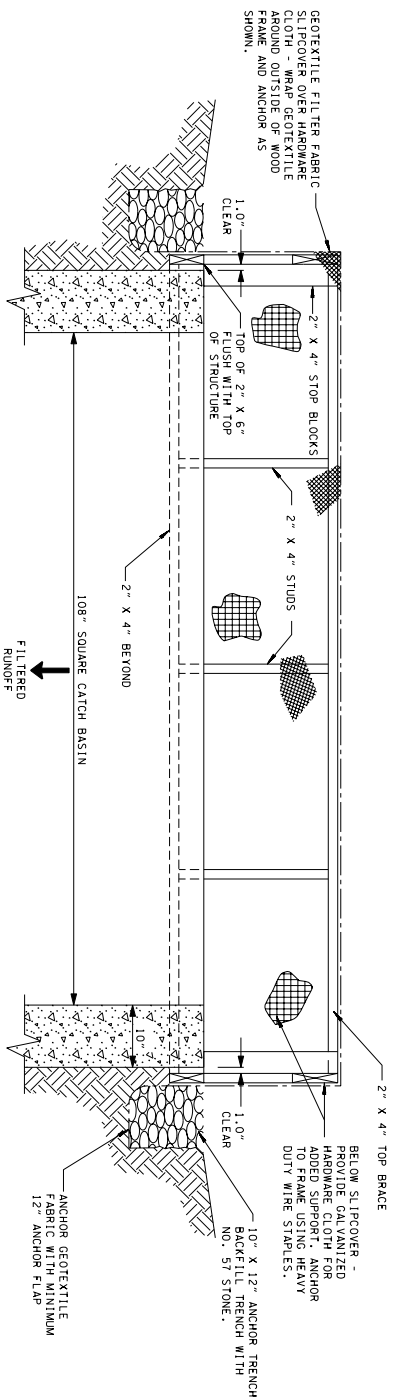
- INSTALLATION SEQUENCE FOR HARDWARE CLOTH
- INSTALL TOP HARDWARE CLOTH A - PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM SHARP EDGES.
 - INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A AT SECOND TOP BRACE. PULL MATERIAL TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM SHARP EDGES.
 - INSTALL TOP HARDWARE CLOTH C - OVERLAPPING CLOTH B AT FOURTH TOP BRACE. PULL MATERIAL TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM SHARP EDGES.
 - INSTALL TOP HARDWARE CLOTH D - OVERLAPPING CLOTH C AT SIXTH TOP BRACE. PULL MATERIAL TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM SHARP EDGES.
 - INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE END OF WIRE STAPLES AT 6\"/>

SLIPCOVER FILTER SPECIFICATIONS

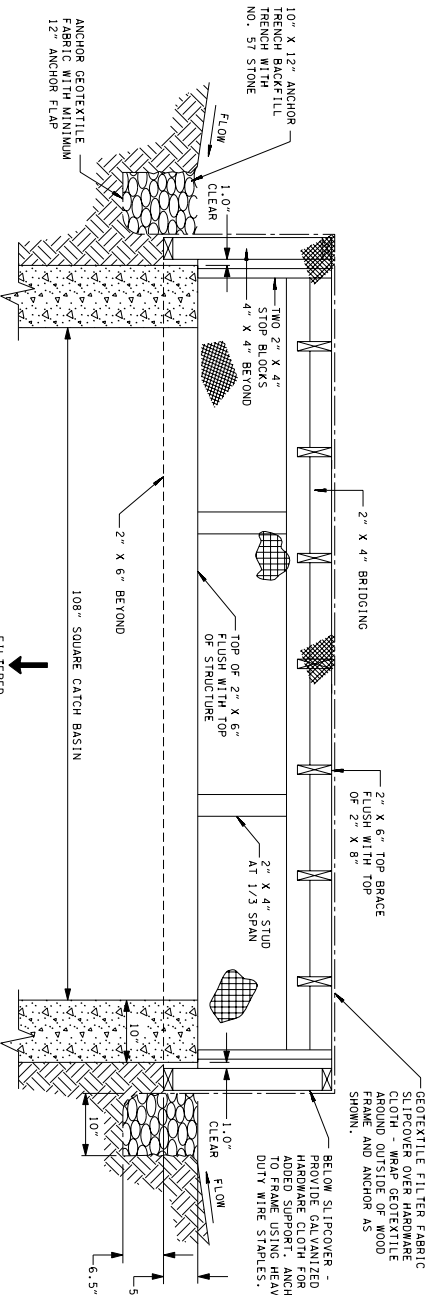
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MIN/MS)
GRAB TENSILE STRENGTH	ASTM D4832	≥180 LBS
GRAB ELONGATION	ASTM D4832	≥50%
MULLER BURST	ASTM D3786	≥330 PSI
PUNCTURE STRENGTH	ASTM D4833	≥105 LBS
TRAPEZOIDAL TEAR	ASTM D4833	≥75 LBS
APPARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO #80 U.S. STANDARD SIEVE
PERMEABILITY	ASTM D4491	≥2.12 INCHES/SEC
PERMITTIVITY	ASTM D4491	≥1.5 SEC-1
WATER FLUX	ASTM D4491	≥110 GAL/MIN/FT ²
UV RESISTANCE	ASTM D4355	≥70X AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 6 OZ/70'²

HARDWARE CLOTH SPECIFICATIONS

STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	0.5 INCH X 0.5 INCH
WIRE SIZE	19 GAUGE
WIRE DIAMETER	0.041 INCHES
WEIGHT	± 0.2 LBS/SF
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC



SECTION A-A
N.T.S.

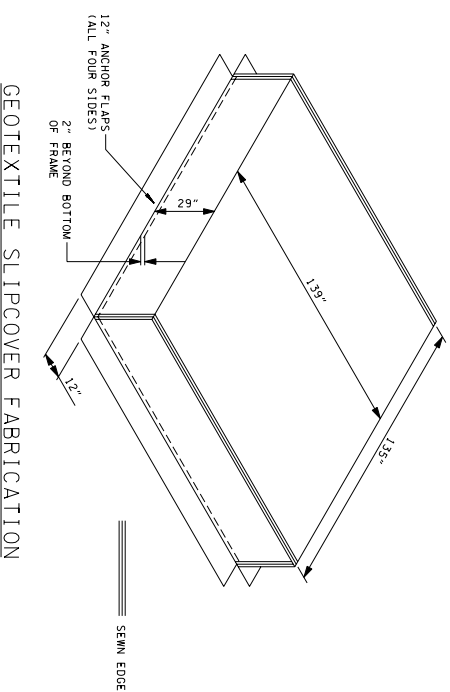


SECTION B-B
N.T.S.

EROSION CONTROL PLAN LEGEND:



5 CATCH BASIN FILTER ASSEMBLY (TYPE 5)

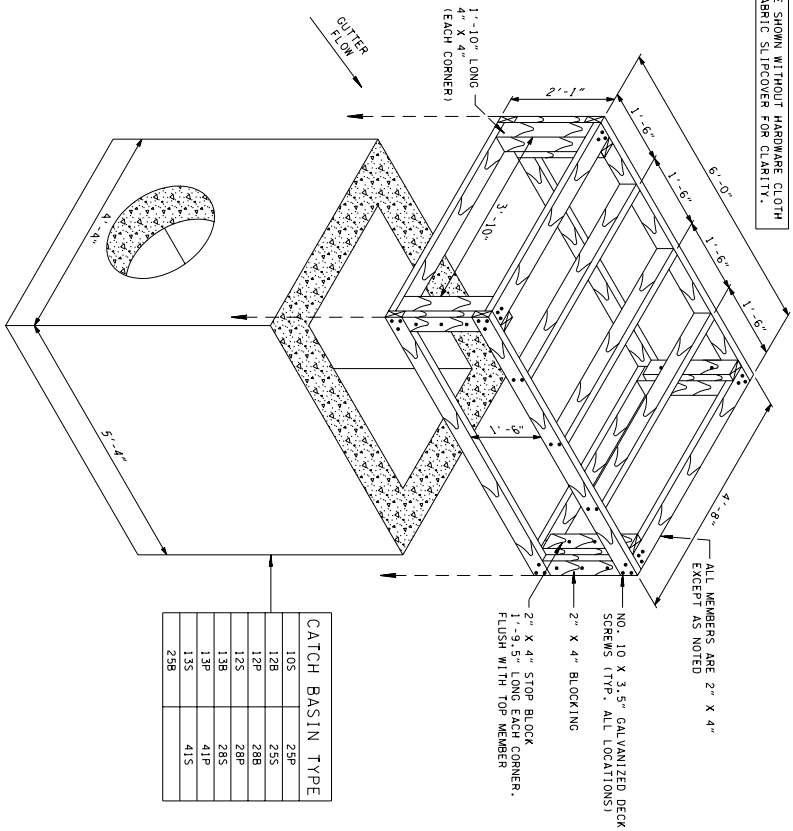


N.T.S.

FABRICATION SPECIFICATIONS:

1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 138 POUNDS) WITH MINIMUM OF SIX STITCHES PER INCH.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 0.5" FROM HEAT-CUT FABRIC EDGES.

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



CATCH BASIN TYPE	25P
10S	25P
12B	25S
12P	28B
12S	28P
13B	28S
13P	41P
13S	41S
25B	

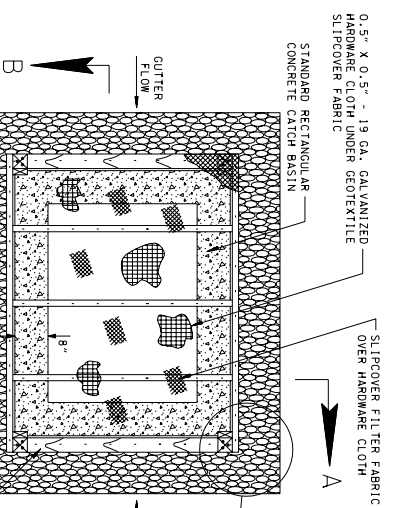
**ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY**
N.T.S.

EROSION CONTROL PLAN LEGEND:



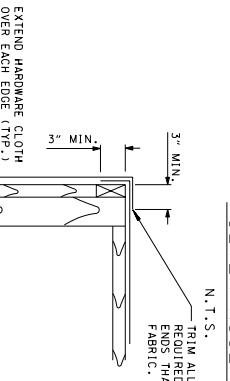
6 CATCH BASIN FILTER ASSEMBLY (TYPE 6)

- CATCH BASIN FILTER ASSEMBLY GENERAL NOTES**
- DRAWING TO BE USED WITH STANDARD TYPES 10S, 41P, 41S AND 25P FOR ALL TYPES OF CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
 - THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (e.g., DITCHES AND SLEALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
 - TYPICAL ACTUAL DIMENSIONS OF WOOD SHALL BE NOMINAL DIMENSIONS. RESPECTIVELY, ACTUAL DIMENSIONS OF WOOD MAY VARY EVEN GREATER DEPENDING ON MOISTURE CONTENT. ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
 - PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY MAY BE CLEANED AT AN ACCEPTABLE LOCATION WITH WATER OR BY BRUSHING AND STRIKING WITH A WOODEN Mallet. CLEANING SHALL BE CONSIDERED A MAINTENANCE ITEM AND SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.

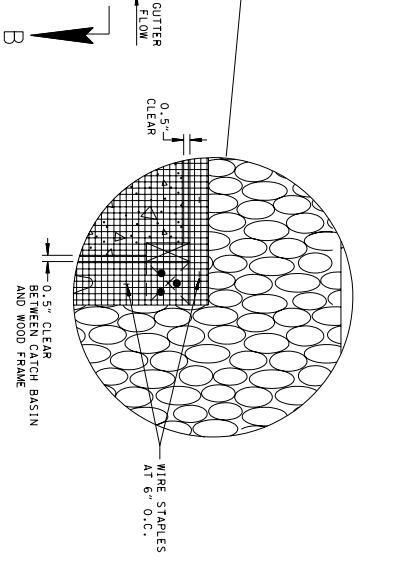


**PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY**
N.T.S.

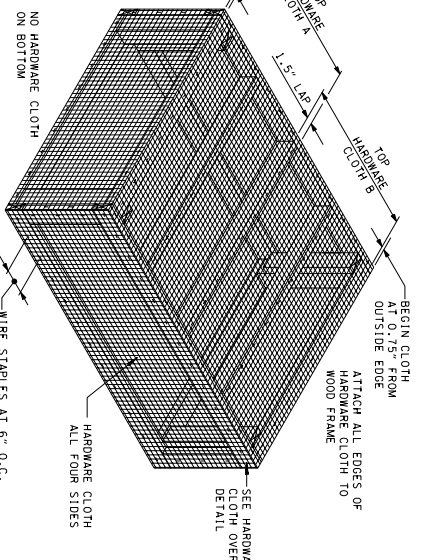
**HARDWARE CLOTH
OVERLAP DETAIL**
N.T.S.



- CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)**
- DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY. THE REPLACEMENT SHALL BE OF EQUAL OR BETTER QUALITY AND CONDITION. APPROVAL MUST BE GIVEN BY TDT ENGINEER.
 - ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED. OTHER STRUCTURES ARE TO BE REMOVED AS REQUIRED AFTER REMOVAL.
 - IF NECESSARY, AT DIRECTION OF TDT ENGINEER, SLIPCOVER MAY BE SECURED ON OTHER SUITABLE MATERIAL.
 - WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROXIMATING WATER ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, DITCH GRADE, ETC., OTHER EROSION PREVENTION AND SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
 - ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209-40-46, CATCH BASIN FILTER ASSEMBLY (TYPE 6), PER EACH.

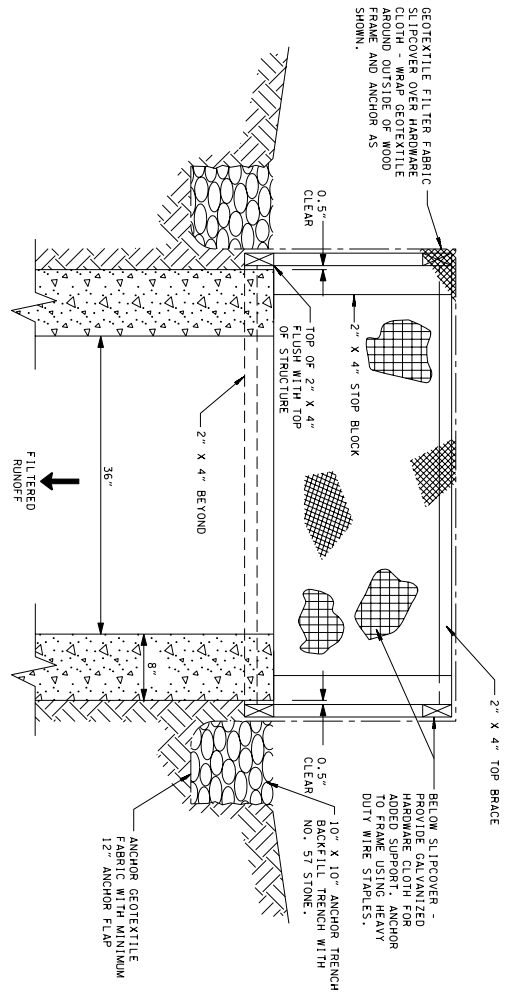


APPROXIMATE WEIGHT OF FRAME AND CLOTH = 108 LBS.

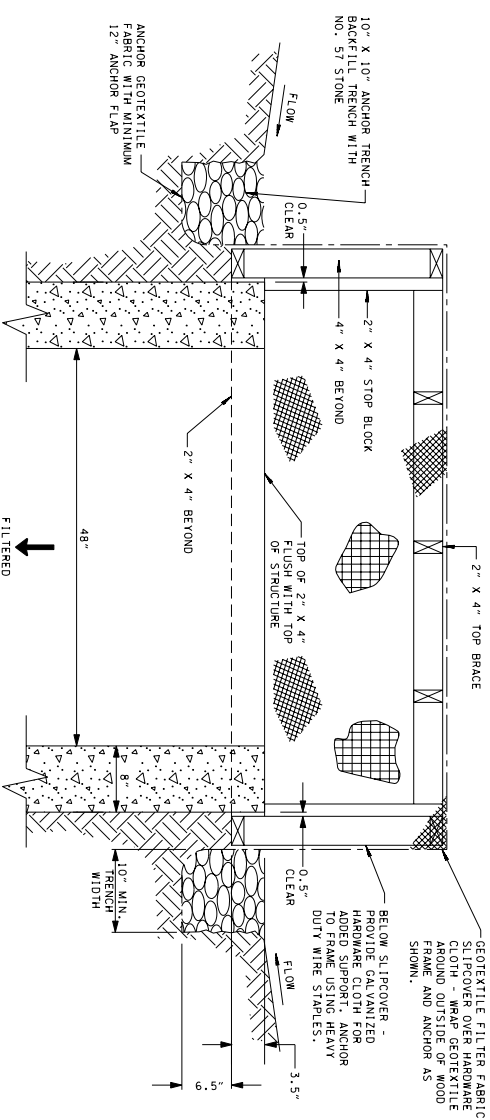


**ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH**
N.T.S.

- INSTALLATION SEQUENCE FOR HARDWARE CLOTH**
- INSTALL TOP HARDWARE CLOTH A, PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM SHARP EDGES.
 - INSTALL TOP HARDWARE CLOTH B, PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM SHARP EDGES.
 - INSTALL HARDWARE CLOTH A AT CENTER TOP BRACE, PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
 - INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
 - TRIM EXCESS ALONG BOTTOM AS NECESSARY.



SECTION A-A
N.T.S.



SECTION B-B
N.T.S.

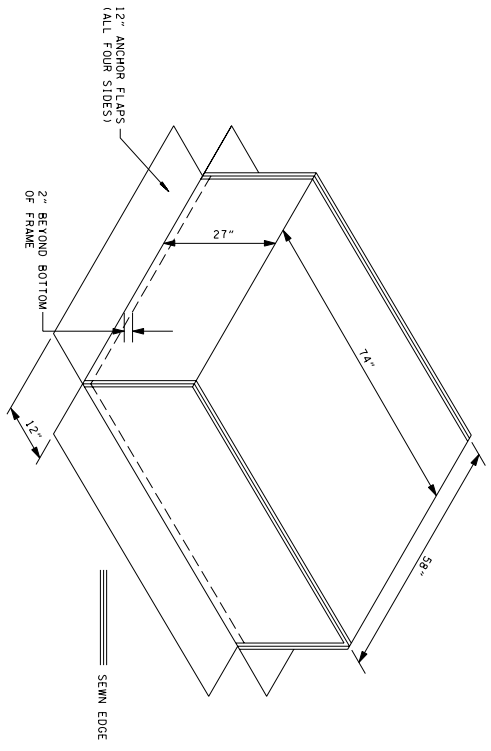
EROSION CONTROL PLAN LEGEND:



6 CATCH BASIN FILTER ASSEMBLY (TYPE 6)

SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MAYV'S)
GRAB TENSILE STRENGTH	ASTM D4632	≥180 LBS
GRAB ELONGATION	ASTM D4632	≥50%
MILLEN BURST	ASTM D3786	≥330 PSI
PUNCTURE STRENGTH	ASTM D4833	≥105 LBS
TRAPEZOIDAL TEAR	ASTM D4533	≥75 LBS
APARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO #80 U.S. STANDARD SIEVE
PERMEABILITY	ASTM D4491	≥0.12 INCHES/SEC
PERMITTIVITY	ASTM D4491	≥1.5 SEC-1
WATER FLUX	ASTM D4491	≥110 GAL./MIN./FT ²
UV RESISTANCE	ASTM D4355	≥70% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 6 OZ./YD ²

HARDWARE CLOTH SPECIFICATIONS	
STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	0.5 INCH X 0.5 INCH
WIRE SIZE	19 GAUGE
WIRE DIAMETER	0.041 INCHES
WEIGHT	+ 0.2 LBS/SF
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC

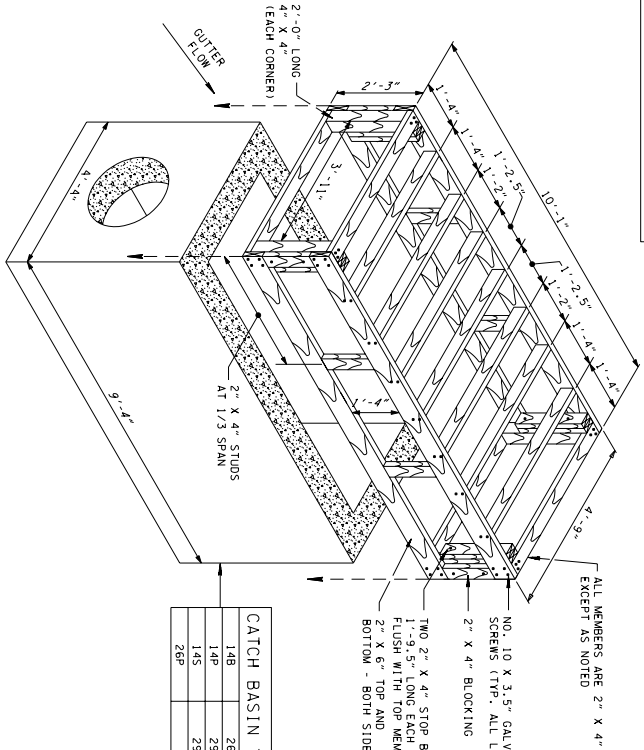


GEOTEXTILE SLIPCOVER FABRICATION
N.T.S.

FABRICATION SPECIFICATIONS:

1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 138 POUNDS) WITH MINIMUM OF SIX STITCHES PER INCH.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 0.5" FROM HEAT-CUT FABRIC EDGES.

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



CATCH BASIN TYPE		
14B	265	
14P	29P	
14S	29S	
26P		

ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY

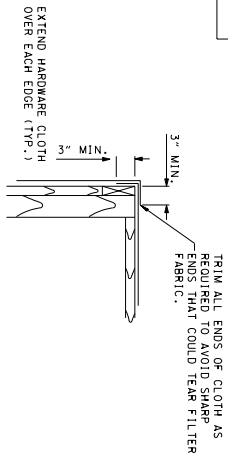
N.T.S.

EROSION CONTROL PLAN LEGEND:



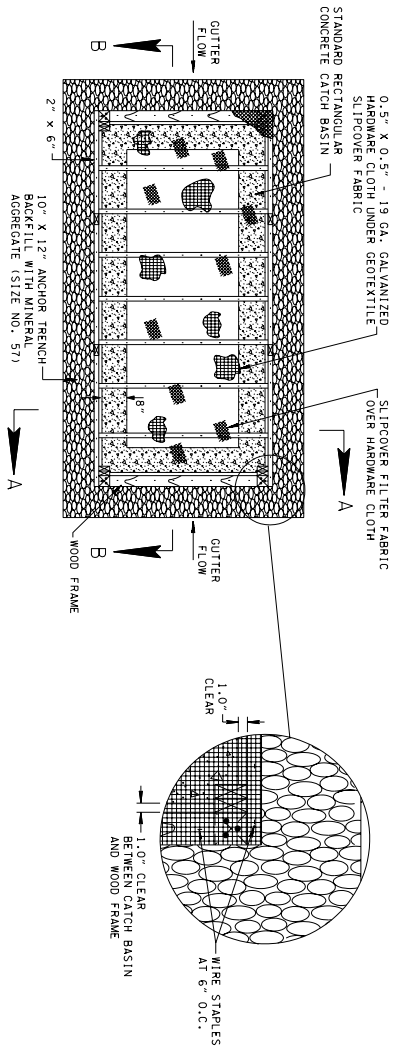
(7)

HARDWARE CLOTH OVERLAP DETAIL



N.T.S.

PLAN VIEW - CATCH BASIN FILTER ASSEMBLY



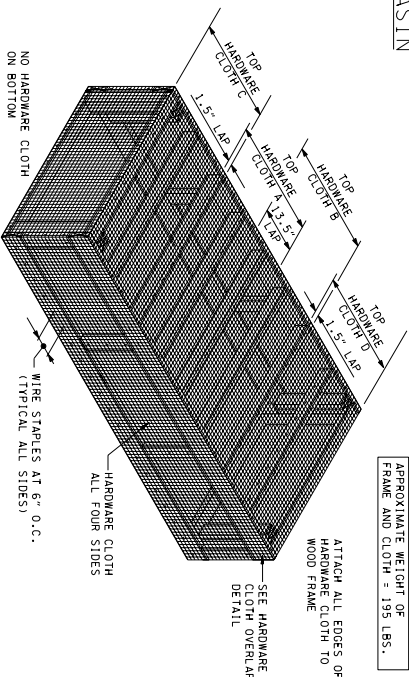
APPROXIMATE WEIGHT OF FRAME AND CLOTH = 195 LBS.

ATTACH ALL EDGES OF HARDWARE CLOTH TO WOOD FRAME

SEE HARDWARE CLOTH OVERLAP DETAIL

ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH

N.T.S.



INSTALLATION SEQUENCE FOR HARDWARE CLOTH

INSTALLATION SEQUENCE FOR HARDWARE CLOTH

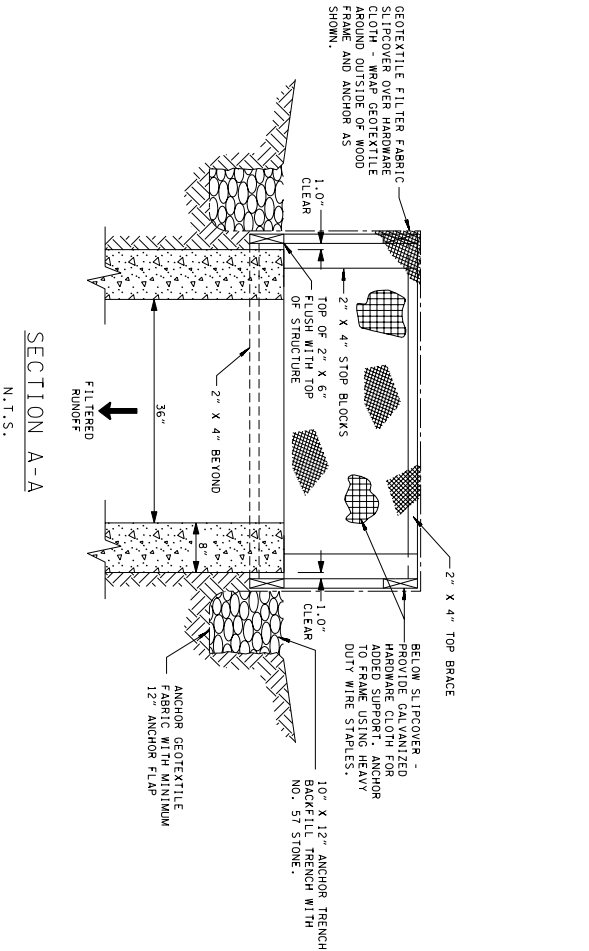
- (A) INSTALL TOP HARDWARE CLOTH A - PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM SHARP EDGES.
- (B) INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A 13.5 INCHES, PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- (C) INSTALL TOP HARDWARE CLOTH C - OVERLAPPING CLOTH A, PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- (D) INSTALL TOP HARDWARE CLOTH D - OVERLAPPING CLOTH B, PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- (E) INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, BEFORE PROCEEDING WITH SUBSEQUENT SIDES. TRIM EXCESS ALONG BOTTOM AS NECESSARY.

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)

- (F) DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY. REPAIRS SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S ASSEMBLY INSTRUCTIONS OR AS APPROVED BY THE DESIGN ENGINEER. APPROVAL MUST BE GIVEN BY THE DESIGN ENGINEER.
- (G) ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED OR OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. REMOVE ALL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- (H) IF NECESSARY, AT DIRECTION OF THE DESIGN ENGINEER, SLIPCOVER MAY BE SECURED IN PLACE AT THE LOWEST PRACTICAL POINT WITH NYLON STRIPING, TWINE, WIRE OR OTHER SUITABLE MATERIAL.
- (I) WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, DITCH GRADE, ETC., OTHER EROSION PREVENTION AND SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- (J) ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209-40.47, CATCH BASIN FILTER ASSEMBLY (TYPE 7), PER EACH.

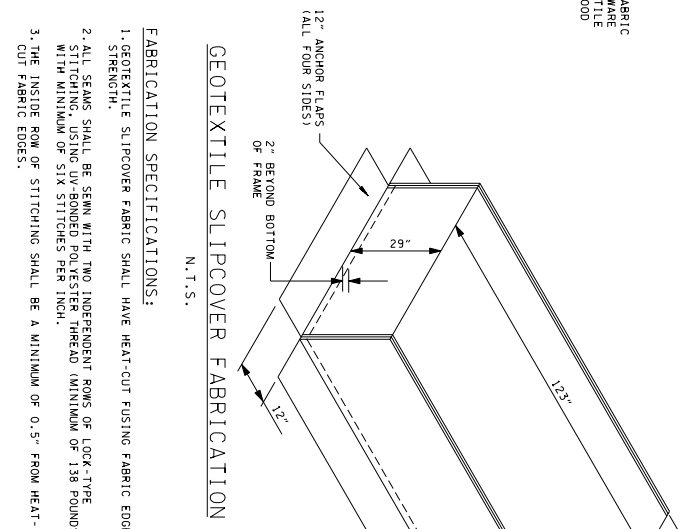
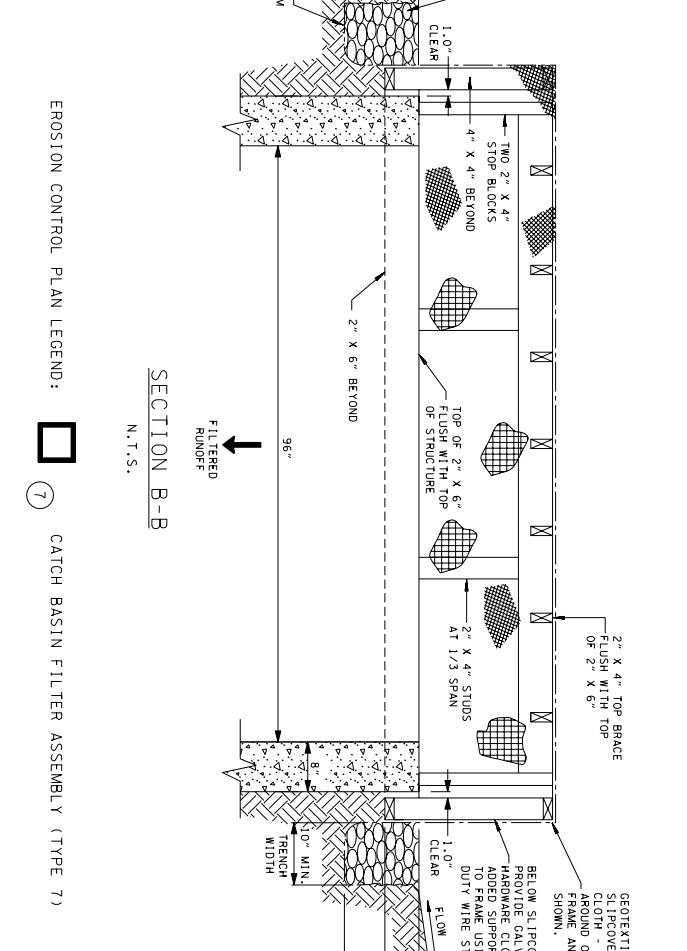
CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

- (A) DRAWING TO BE USED WITH STANDARD TYPES 14B AND D-CB-SERIES P & S FOR BASIN DIMENSIONS AND DETAILS.
- (B) THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (E.G., DITCHES AND SWALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
- (C) 2 x 4, 2 x 6 AND 4 x 4 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 1.5 x 3.5 INCH, 1.5 x 5.5 INCH AND 3.5 x 3.5 INCH RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD MAY VARY EVEN GREATER DEPENDING ON MOISTURE CONTENT. ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
- (D) PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY MAY BE CLEANED AT AN ACCEPTABLE LOCATION WITH WATER OR BY BRUSHING AND CLEANING. CLEANING OF THE STRUCTURE SHALL BE DONE AT A LOCATION THAT CAN BE REACHED BY TRUCKS AND TRAILERS. TRUCKS AND TRAILERS SHALL NOT BE MESSED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.
- (E) APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR TO ASSURE BALANCED HANDLING DURING INSTALLATION AND REMOVAL OF THE FILTER ASSEMBLY.



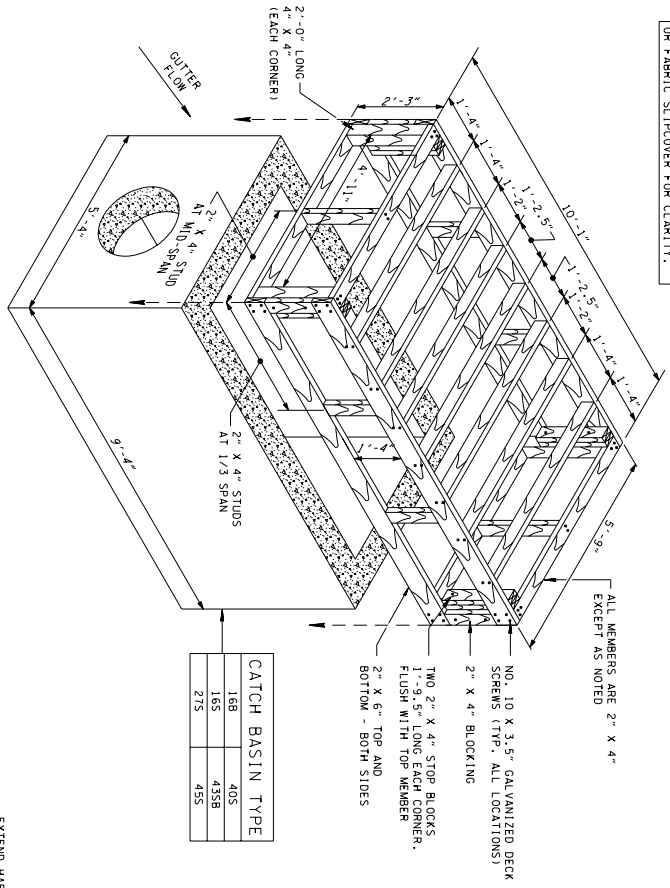
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MIRV'S)
GRAB TENSILE STRENGTH	ASTM D4632	≥180 LBS
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥330 PSI
PUNCTURE STRENGTH	ASTM D4833	≥105 LBS
TRAPEZOIDAL TEAR	ASTM D4533	≥75 LBS
APPARENT OPENING SIZE	ASTM D4751	FINER THAN OR EQUAL TO #80 U.S. STANDARD SIEVE
PERMEABILITY	ASTM D4491	≥0.12 INCHES/SEC
PERMITTIVITY	ASTM D4491	≥1.5 SEC ⁻¹
WATER FLUX	ASTM D4491	≥110 GAL/MIN/FT ²
UV RESISTANCE	ASTM D4355	≥10% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 6 OZ/YD ²

HARDWARE CLOTH SPECIFICATIONS	
STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	0.5 INCH X 0.5 INCH
WIRE SIZE	19 GAUGE
WIRE DIAMETER	0.041 INCHES
WEIGHT	± 0.2 LBS/SF
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC




- FABRICATION SPECIFICATIONS:
1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
 2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BOUNDED POLYESTER THREAD (MINIMUM OF 138 POUNDS) WITH MINIMUM OF SIX STITCHES PER INCH.
 3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 0.5" FROM HEAT-CUT FABRIC EDGES.

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



CATCH BASIN TYPE		
168	40S	
165	43SB	
275	45S	

ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY

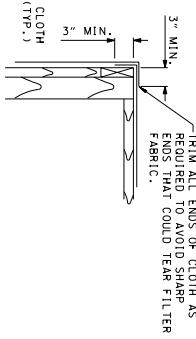
N.T.S.
EROSION CONTROL PLAN LEGEND: 

- A** DRAWING TO BE USED WITH STANDARD TYPES 168, 165, 275, 40S, 43SB, AND 45S DETAILS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
- B** THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (e.g., DITCHES AND SWALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
- C** 2 X 4, 2 X 6 AND 4 X 4 PRESURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 1.5" X 3.5" INCH, 1.5" X 5.5" INCH AND 3.5" X 3.5" INCH RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD MAY VARY EVEN GREATER DEPENDING ON MOISTURE CONTENT. ALL WOOD SHALL BE NO. 2 PRESURE TREATED SOUTHERN YELLOW PINE.
- D** PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING. LOCATION WITH WATER OR BY BRUSHING AND STRIPPER CAN NOT BE MESSAGED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.
- E** APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR TO ASSURE BALANCED HANDLING DURING INSTALLATION AND REMOVAL OF THE FILTER ASSEMBLY.

CATCH BASIN FILTER ASSEMBLY (TYPE 8)

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)

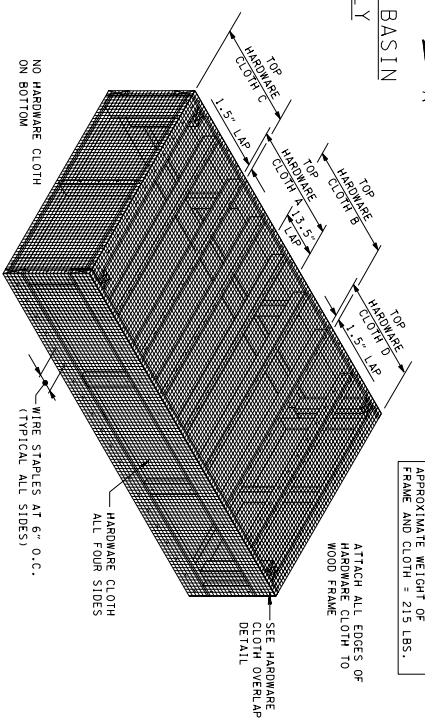
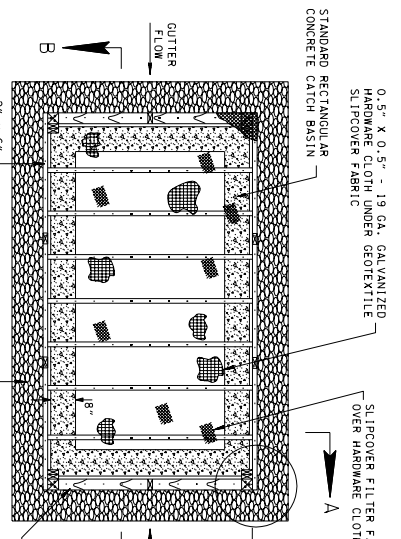
- F** DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY. THE FABRICATOR SHALL BE RESPONSIBLE FOR THE PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY DOT ENGINEER.
- G** ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED OR OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. REMOVAL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- H** IF NECESSARY, AT DIRECTION OF DOT ENGINEER, SLIPCOVER MAY BE SECURED IN PLACE AT THE LOWEST PRACTICAL POINT WITH NYLON STRIPING, TWINE, WIRE OR OTHER SUITABLE MATERIAL.
- I** WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, DITCH GRADE, ETC., OTHER EROSION PREVENTION AND SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- J** ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209-40-4B, CATCH BASIN FILTER ASSEMBLY (TYPE 8), PER EACH.



HARDWARE CLOTH OVERLAP DETAIL

N.T.S.

PLAN VIEW - CATCH BASIN FILTER ASSEMBLY



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH

N.T.S.

- INSTALLATION SEQUENCE FOR HARDWARE CLOTH**
- INSTALL TOP HARDWARE CLOTH A - PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A 13.5 INCHES. PULL CLOTH TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH C - OVERLAPPING CLOTH A, PULL CLOTH TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH D - OVERLAPPING CLOTH B, PULL CLOTH TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, BEFORE PROCEEDING WITH SUBSEQUENT SIDES. TRIM EXCESS ALONG BOTTOM AS NECESSARY.

SLIPCOVER FILTER SPECIFICATIONS

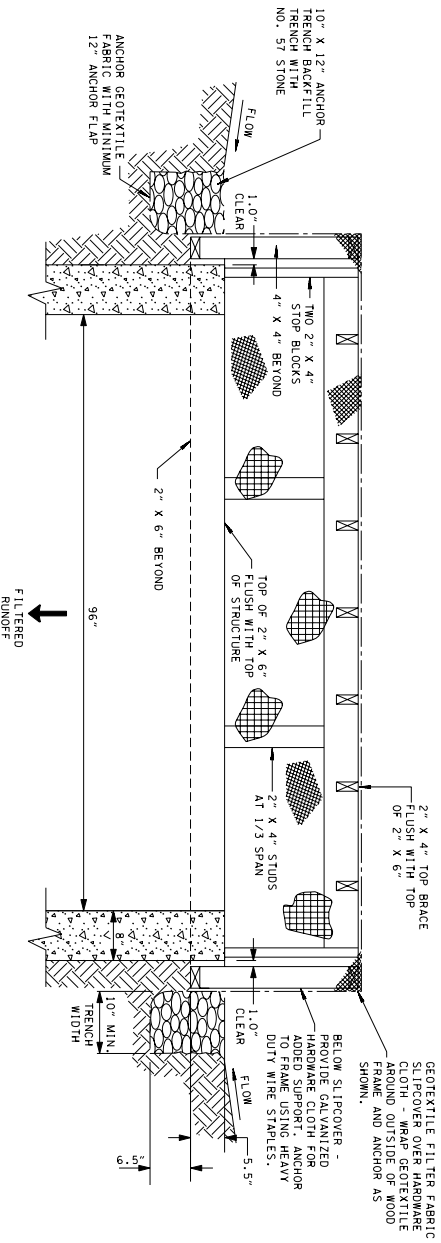
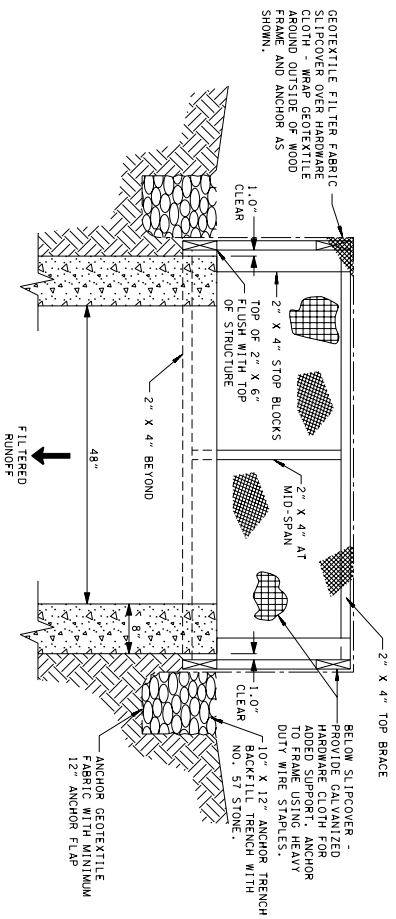
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE

FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MAYV'S)
GRAB TENSILE STRENGTH	ASTM D4632	≥180 LBS
GRAB ELONGATION	ASTM D4632	≥50%
MULEN BURST	ASTM D3786	≥330 PSI
PUNCTURE STRENGTH	ASTM D4833	≥105 LBS
TRAPEZOIDAL TEAR	ASTM D4533	≥75 LBS
APARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO #80 U.S. STANDARD SIEVE
PERMEABILITY	ASTM D4491	≥0.12 INCHES/SEC
PERMITTIVITY	ASTM D4491	≥1.5 SEC ⁻¹
WATER FLUX	ASTM D4491	≥110 GAL./MIN./FT ²
UV RESISTANCE	ASTM D4355	≥70% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 6 OZ/YD ²

HARDWARE CLOTH SPECIFICATIONS

STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	0.5 INCH X 0.5 INCH
WIRE SIZE	19 GAUGE
WIRE DIAMETER	0.041 INCHES
WEIGHT	+ 0.2 LBS/SF
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC

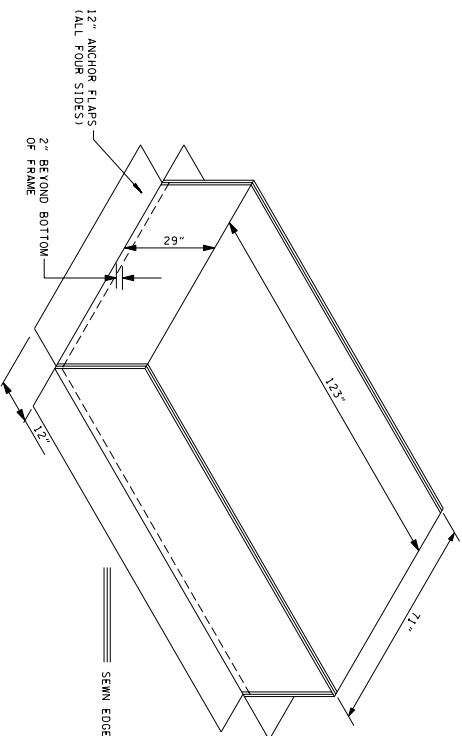
SECTION A-A N.T.S.



SECTION B-B N.T.S.

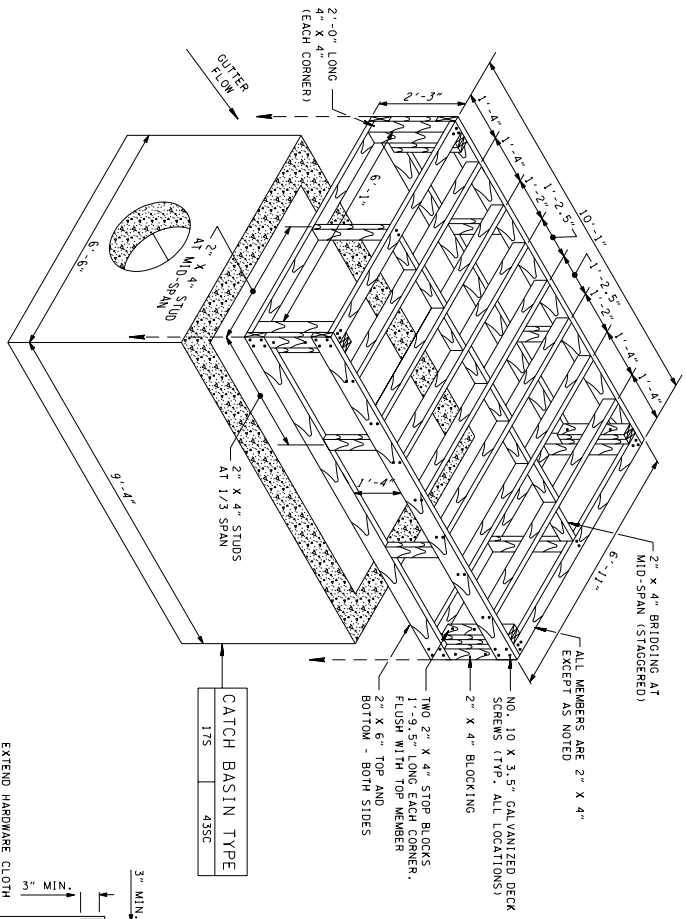
EROSION CONTROL PLAN LEGEND: CATCH BASIN FILTER ASSEMBLY (TYPE 8)

GEOTEXTILE SLIPCOVER FABRICATION N.T.S.



- FABRICATION SPECIFICATIONS:**
1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
 2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING USING STITCHING FOOT (MINIMUM OF 138 POUNDS) WITH MINIMUM OF SIX STITCHES PER INCH.
 3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 0.5" FROM HEAT-CUT FABRIC EDGES.

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY

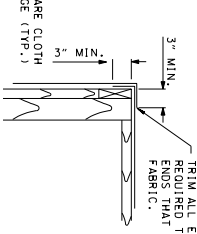
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EROSION CONTROL PLAN LEGEND:



9

- CATCH BASIN FILTER ASSEMBLY GENERAL NOTES**
- A DRAWING TO BE USED WITH STANDARD TYPES 115, AND 433C CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
 - B THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (E.G., DITCHES AND SWALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
 - C 2" x 4", 2" x 6" AND 4" x 4" PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 1.5" x 3.5" INCH, 1.5" x 5.5" INCH AND 3.5" x 3.5" INCH RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
 - D PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY MAY BE CLEANED AT AN ACCEPTABLE LOCATION WITH WATER OR BY BRUSHING AND BLOWING CLEAN WITH COMPRESSED AIR. MAINTENANCE AND CLEANING OF STRUCTURES SHALL BE ASSIGNED TO THE USER OR CONTRACTOR BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.
 - E APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR TO ASSURE BALANCED HANDLING DURING INSTALLATION AND REMOVAL OF THE FILTER ASSEMBLY.

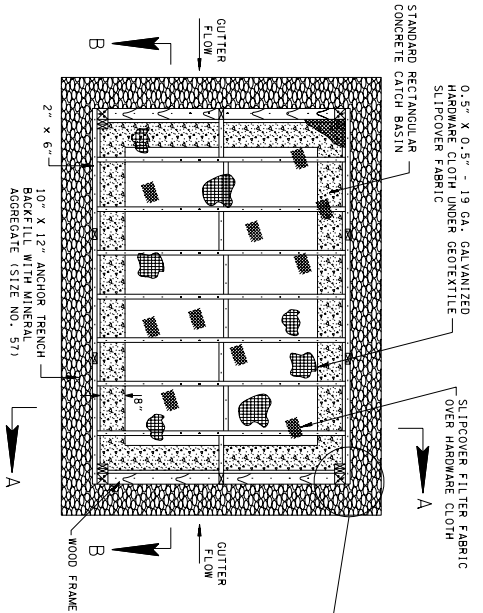


HARDWARE CLOTH OVERLAP DETAIL

N.T.S.

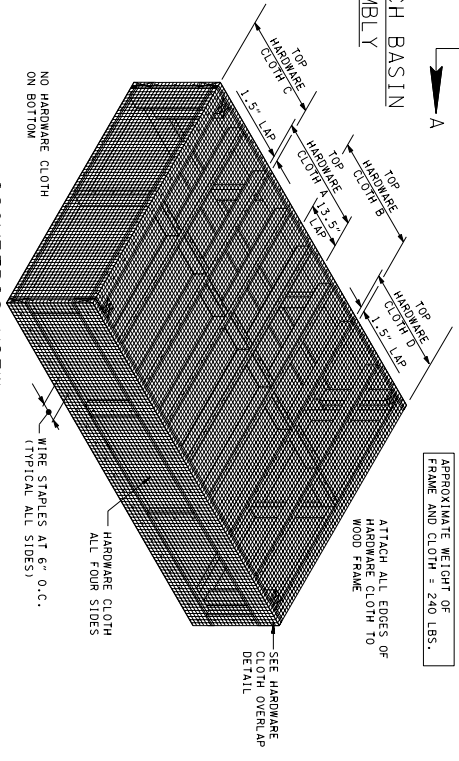
CATCH BASIN FILTER ASSEMBLY (TYPE 9)

- CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)**
- F DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY TO MAINTAIN AN ACCEPTABLE CONDITION. APPROVAL MUST BE GIVEN BY THE DESIGNER.
 - G ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED OR OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. REMOVAL AND COMPACTION SHOULD BE TO FINAL GRADE AS REQUIRED AFTER NECESSARY UPSTREAM OF FILTER ASSEMBLY.
 - H IF NECESSARY, AT DIRECTION OF THE DESIGNER, SLIPCOVER MAY BE SECURED IN PLACE AT THE LOWEST PRACTICAL POINT WITH NYLON STRINGS, TWINE, WIRE OR OTHER SUITABLE MATERIAL.
 - I WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, DITCH GRADE, ETC., OTHER EROSION PREVENTION AND SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
 - J ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209-40-49, CATCH BASIN FILTER ASSEMBLY (TYPE 9), PER EACH.



PLAN VIEW - CATCH BASIN FILTER ASSEMBLY

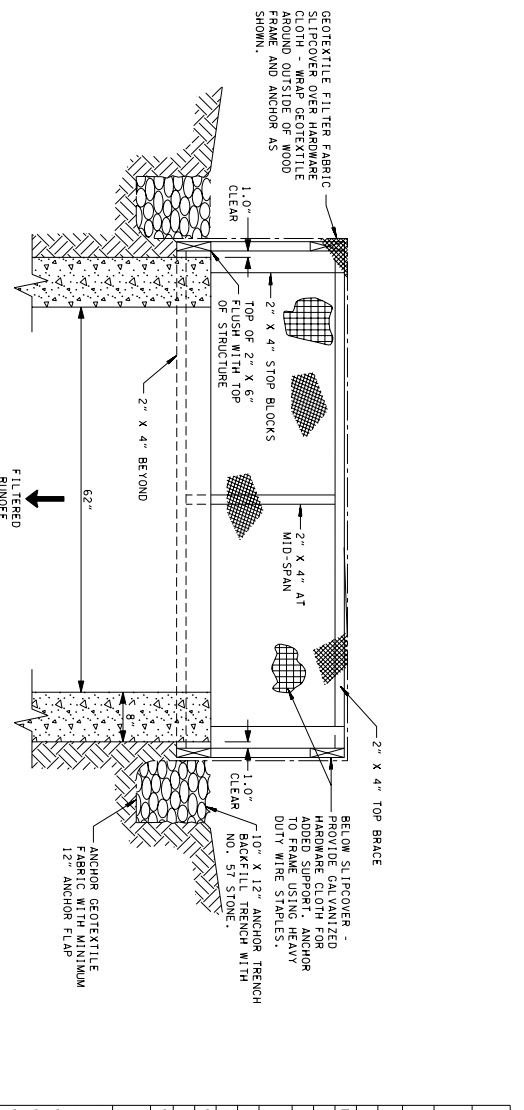
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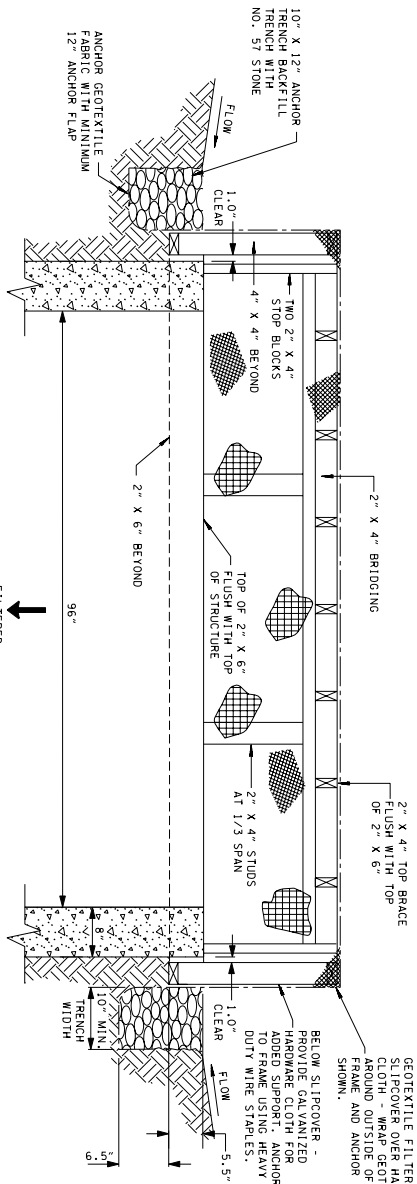
ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH

N.T.S.

- INSTALLATION SEQUENCE FOR HARDWARE CLOTH**
- INSTALL TOP HARDWARE CLOTH A - PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM SHARP EDGES.
 - INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A 13.5 INCHES. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
 - INSTALL TOP HARDWARE CLOTH C - OVERLAPPING CLOTH A, PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
 - INSTALL TOP HARDWARE CLOTH D - OVERLAPPING CLOTH B, PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
 - INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
 - TRIM EXCESS ALONG BOTTOM AS NECESSARY.



SECTION A-A
N.T.S.

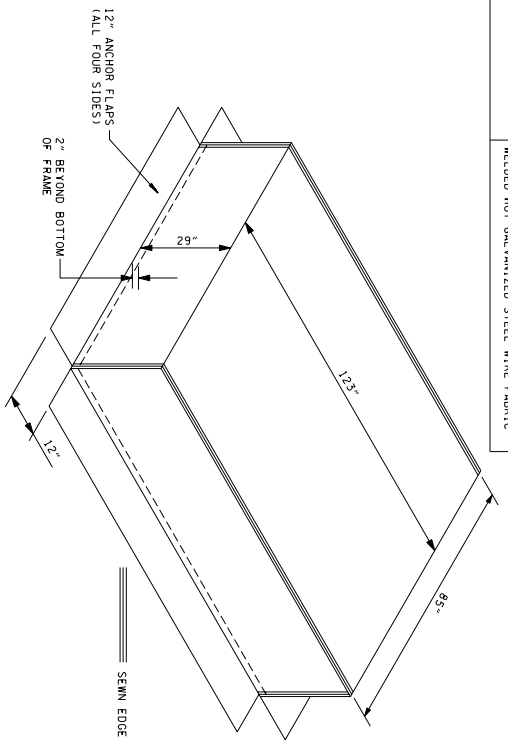


SECTION B-B
N.T.S.

EROSION CONTROL PLAN LEGEND: CATCH BASIN FILTER ASSEMBLY (TYPE 9)

SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MAYV'S)
GRAB TENSILE STRENGTH	ASTM D4632	≥180 LBS
GRAB ELONGATION	ASTM D4632	≥50%
MILLEN BURST	ASTM D3786	≥330 PSI
PUNCTURE STRENGTH	ASTM D4833	≥105 LBS
TRAPEZOIDAL TEAR	ASTM D4533	≥75 LBS
APPARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO #80 U.S. STANDARD SIEVE
PERMEABILITY	ASTM D4491	20.12 INCHES/SEC
PERMITIVITY	ASTM D4491	≥1.5 SEC ⁻¹
WATER FLUX	ASTM D4491	≥110 GAL/MIN/FT ²
UV RESISTANCE	ASTM D4355	≥70% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 6 OZ/YD ²




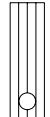
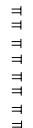


















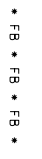
HARDWARE CLOTH SPECIFICATIONS	
STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	0.5 INCH X 0.5 INCH
WIRE SIZE	19 GAUGE
WIRE DIAMETER	0.041 INCHES
WEIGHT	± 0.2 LBS/SF
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC



GEOTEXTILE SLIPCOVER FABRICATION
N.T.S.

- FABRICATION SPECIFICATIONS:**
1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
 2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING USING RINGED POLYESTER THREAD (MINIMUM OF 138 POUNDS) WITH MINIMUM OF SIX STITCHES PER INCH.
 3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 0.5" FROM HEAT-CUT FABRIC EDGES.

STANDARD LEGEND

	RIP-RAP		
	PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)		
	PERMANENT RIP-RAP ENERGY DISSIPATOR		
	SEDIMENT BASIN (TYPE 1) WITH DAM		
	TEMPORARY BERM		
	TEMPORARY BALED HAY OR STRAW EROSION CHECK		
	TEMPORARY BRUSH SEDIMENT BARRIERS		
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 1)		
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 2)		
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 3)		
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 4)		
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 5)		
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 6)		
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 7)		
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 8)		
	TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 9)		
	TEMPORARY CATCH BASIN HAY OR STRAW BALE SILT TRAP		
	TEMPORARY CATCH BASIN SILT FENCE SILT TRAP		
	TEMPORARY CONSTRUCTION ROAD ENTRANCE AND/OR EXIT		
	TEMPORARY CULVERT CROSSING		
	TEMPORARY DEWATERING STRUCTURE		
	TEMPORARY DIVERSION CHANNEL (DESCRIBE - SIZE AND TYPE OF LINING)		
	TEMPORARY ENHANCED SILT FENCE		
	TEMPORARY FILTER BARRIER		

- ☐ REV. 11-1-95: CHANGED TO METRIC.
- ☐ REV. 5-27-96: MODIFIED SYMBOL FOR TEMPORARY CATCH BASIN.
- ☐ REV. 7-29-97: CHANGED LEGEND FOR PERMANENT SLOPE DRAIN PIPE.
- ☐ REV. 5-27-01: CHANGED REFERENCE TO LEGEND FROM DAMPED ROCK TO RIP-RAP.
- ☐ REV. 12-18-02: REMOVED SYMBOLS FOR PERMANENT SLOPE DRAIN PIPE AND EROSION DITCH CHECKS. ADDED SYMBOL FOR TYPE 1 EROSION DITCH (WITH BACKING) AND TEMPORARY ENHANCED SILT FENCE.
- ☐ REV. 1-22-03: ADDED SYMBOL FOR TYPE 1A FILTER BARRIER DITCH CHECK.
- ☐ REV. 10-26-03: DELETED LEGEND FOR TYPE 5 V FILTER BARRIER.
- ☐ REV. 3-15-04: MOVED PART OF LEGEND BEGINNING WITH TEMPORARY DIVERSION CHANNEL TO NEW SHEET RDM-L-5. CHANGED LEGEND FOR TEMPORARY CATCH BASIN SILT FENCE SILT TRAP. ADD TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 1 THROUGH 9).
- ☐ REV. 4-15-04: CHANGED DRAWING NUMBER FROM RDM-L-4 TO RDM-L-5.



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 ☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

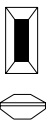
STANDARD LEGEND

REV. 3-15-04: CHANGED LEGEND TO SHOW PROTECTION (MULTIDIRECTIONAL FLOW), TEMPORARY ROCK CATCH BASIN PROTECTION (TYPE A), TEMPORARY TYPE EC I FILTER BARRIER EROSION DITCH FILTER BARRIER EROSION DITCH CHECK.

REV. 4-15-04: CHANGED DRAWING NUMBER FROM RDM-L-5 TO RDM-L-6. ADDED SYMBOL FOR TEMPORARY SEDIMENT FILTER BAGS.



TEMPORARY ROCK AND SEDIMENT DAM



TEMPORARY SEDIMENT TRAP WITH TEMPORARY SILT SCREEN CHECK DAM



PERMANENT ROCK AND SEDIMENT DAM

• SF • SF • SF •

TEMPORARY SILT FENCE (WITHOUT BACKING)



TEMPORARY ROCK CATCH BASIN PROTECTION (MULTI-DIRECTIONAL FLOW)

• SFB • SFB • SFB •

TEMPORARY SILT FENCE (WITH BACKING)



TEMPORARY ROCK CATCH BASIN PROTECTION (SINGLE DIRECTIONAL FLOW)



TEMPORARY SLOPE DRAIN PIPE (SHOW SIZE)



TEMPORARY ROCK CATCH BASIN PROTECTION (TYPE A)



TEMPORARY STABILIZED CONSTRUCTION FORD



TEMPORARY ROCK CHECK DAM IN TRAPEZOIDAL DITCH



TEMPORARY TYPE EC I FILTER BARRIER EROSION DITCH CHECK



TEMPORARY ROCK CHECK DAM IN V - DITCH



TEMPORARY TYPE EC IA FILTER BARRIER EROSION DITCH CHECK



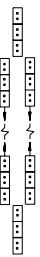
TEMPORARY ROCK SEDIMENT DAM

— EC — IV — EC —

TEMPORARY TYPE EC IV FILTER BARRIER USED FOR EROSION CHECK AT TOE OF EMBANKMENT SLOPE



TEMPORARY ROCK SILT SCREEN AT PIPE INLETS



TEMPORARY TYPE EC VI BALED STRAW OR HAY EROSION CHECK USED ALONG EMBANKMENT SLOPES



TEMPORARY ROCK SILT SCREEN USED IN CHANNELS



TEMPORARY ROCK SILT SCREEN USED IN ROADSIDE DITCHES



TEMPORARY SEDIMENT FILTER BAGS



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 MINOR REVISION -- FHMA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

STANDARD
 LEGEND FOR
 EROSION AND
 SEDIMENT CONTROL

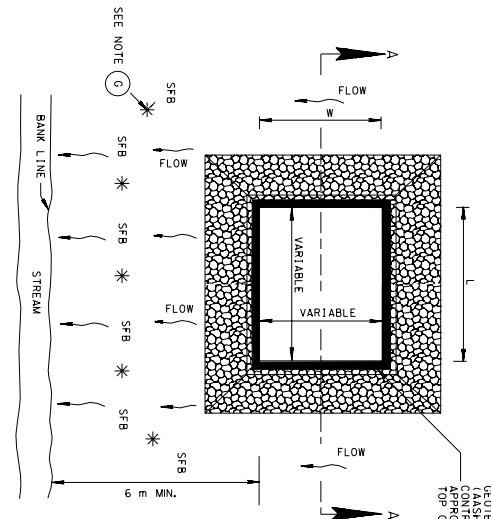
3-15-04

RDM-L-6

ITEM NO.	DESCRIPTION	UNIT
203M01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED)	CUBIC METER
203M02.03	200 mm TEMPORARY SLOPE DRAIN	METER
203M02.04	250 mm TEMPORARY SLOPE DRAIN	METER
203M02.05	300 mm TEMPORARY SLOPE DRAIN	METER
203M02.06	375 mm TEMPORARY SLOPE DRAIN	METER
203M02.07	450 mm TEMPORARY SLOPE DRAIN	METER
203M03	CHECK DAMS	SQUARE METER
203M04	BRUSH BARRIERS	METER
203M05	SEDIMENT REMOVAL	CUBIC METER
203M06	BALED HAY OR STRAW EROSION CHECKS	BALE
203M08.01	TEMPORARY FILTER BARRIER	METER
203M08.02	TEMPORARY SILT FENCE (WITH BACKING)	METER
203M08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	METER
203M08.04	TEMPORARY ENHANCED SILT FENCE	METER
203M09.01	SANDBAGS	BAG
203M09.02	TEMPORARY SEDIMENT FILTER BAGS (4.42 X 0.61 X 4.04)	EACH
203M10.01	TEMPORARY DEWATERING STRUCTURE	CUBIC METER
203M10.02	TEMPORARY SEDIMENT TRAP	CUBIC METER
203M11.01 TO 203M11.09	SEDIMENT BASIN RISER (--- mm)	EACH
203M11.20	SEDIMENT BASIN BAFFLES	METER
203M20.03	POLYETHYLENE SHEETING (6 mm MINIMUM)	SQUARE METER
203M40.41	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EACH
203M40.42	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EACH
203M40.43	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EACH
203M40.44	CATCH BASIN FILTER ASSEMBLY (TYPE 4)	EACH
203M40.45	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EACH
203M40.46	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EACH
203M40.47	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EACH
203M40.48	CATCH BASIN FILTER ASSEMBLY (TYPE 8)	EACH
203M40.49	CATCH BASIN FILTER ASSEMBLY (TYPE 9)	EACH
303M10.01	MINERAL AGGREGATE (SIZE 57)	TONNE
60M01.01	CLASS A CONCRETE (ROADWAY)	CUBIC METER
60M01.02	STEEL BAR REINFORCEMENT (ROADWAY)	KILOGRAMS
60M11.03	450 mm SLOPE DRAIN PIPE	METER
60M11.04	500 mm SLOPE DRAIN PIPE	METER
60M11.05	550 mm SLOPE DRAIN PIPE	METER
60M11.06	600 mm SLOPE DRAIN PIPE	METER
621M03.02	450 mm TEMPORARY DRAINAGE PIPE	METER
621M03.03	600 mm TEMPORARY DRAINAGE PIPE	METER
621M03.04	750 mm TEMPORARY DRAINAGE PIPE	METER
621M03.05	900 mm TEMPORARY DRAINAGE PIPE	METER
621M03.06	1050 mm TEMPORARY DRAINAGE PIPE	METER
621M03.07	1200 mm TEMPORARY DRAINAGE PIPE	METER
621M03.08	1350 mm TEMPORARY DRAINAGE PIPE	METER
621M03.09	1500 mm TEMPORARY DRAINAGE PIPE	METER
621M03.10	1650 mm TEMPORARY DRAINAGE PIPE	METER
703M01.01	RIBBLE STONE RIP-RAP	CUBIC METER
703M01.02	RIBBLE STONE RIP-RAP	TONNE
703M02.01	RIBBLE STONE RIP-RAP (ROUTED)	CUBIC METER
703M05.06	MACHINED RIP-RAP (CLASS A-3)	TONNE
703M05.05	MACHINED RIP-RAP (CLASS A-1)	TONNE
703M05.07	MACHINED RIP-RAP (CLASS A-2)	TONNE
740M10.01	GEOTEXTILE - TYPE I (SUBSURFACE DRAINAGE)	SQUARE METER
740M10.02	GEOTEXTILE - TYPE II (SEDIMENT CONTROL)	SQUARE METER
740M10.03	GEOTEXTILE - TYPE III (EROSION CONTROL)	SQUARE METER
740M10.04	GEOTEXTILE - TYPE IV (STABILIZATION)	SQUARE METER
740M10.05	GEOTEXTILE - TYPE V (DESCRIPTION)	SQUARE METER
801M01	SEEDING (M/T/M/CM)	UNIT
801M02	SEEDING (M/T/M/CM)	UNIT
801M02.01	SEEDING MIXTURE (WITHOUT MULCH)	UNIT
801M03	WATER (SEEDING AND SOODING)	SQUARE METER
805M12.01	EROSION CONTROL BLANKET (TYPE 1)	SQUARE METER
805M12.02	EROSION CONTROL BLANKET (TYPE 11)	SQUARE METER
805M12.03	EROSION CONTROL BLANKET (TYPE 111)	SQUARE METER
805M12.04	EROSION CONTROL BLANKET (TYPE 1V)	SQUARE METER
805M13.03	FLEXIBLE CHANNEL LINER (CLASS 111)	SQUARE METER

TEMPORARY DEWATERING STRUCTURE

(ITEMS 203M05 & 203M10.01 THROUGH 203M10.09)



PLAN VIEW

SECTIONAL VIEW A-A

EROSION CONTROL PLAN LEGEND: (TEMPORARY DEWATERING STRUCTURE)

TEMPORARY DEWATERING STRUCTURE GENERAL NOTES

- (A) THE PRIMARY USE OF THE TEMPORARY DEWATERING STRUCTURE IS FOR DEWATERING COFFERDAMS, TRENCHES, ENCLOSED DITCHES, ETC.
- (B) THE MINIMUM REQUIRED VOLUME OF STORAGE IN CUBIC METERS FOR THE TEMPORARY DEWATERING STRUCTURE CAN BE FOUND IN THE ACCOMPANYING TABLE.
- (C) ALL MATERIALS USED TO CONSTRUCT THE TEMPORARY DEWATERING STRUCTURE SHALL BE PAID FOR UNDER ITEM NUMBER 203M10.01. TEMPORARY DEWATERING STRUCTURE PER CUBIC METER.
- (D) THE ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE BASIN IS HALF FULL AND PAID FOR AT THE PRICE BID FOR ITEM 203M05. SEDIMENT REMOVAL PER CUBIC METER.
- (E) DIVERT ANY STORMWATER AWAY FROM THE TEMPORARY DEWATERING STRUCTURES.
- (F) THE USE OF SOGS TO COLLECT SEDIMENT WHEN PUMPING FROM TEMPORARY DEWATERING STRUCTURE INTO AN ADJACENT STREAM MAY BE USED WHEN APPROVED BY THE ENGINEER.
- (G) INSTALL TEMPORARY SILT FENCE (WITH BACKING) BETWEEN STREAM AND/OR DRAINAGE DITCH AND NO. 203M09.02 TEMPORARY SILT FENCE (WITH BACKING) PER METERS. SEE STANDARD DRAWING ECM-STR-3C FOR FURTHER DETAILS.
- (H) FOR TEMPORING OF GEOTEXTILE FABRIC INTO GROUND, SEE ECM-STR-3 SERIES OF STANDARD DRAWINGS FOR DETAILS.

TEMPORARY DEWATERING STRUCTURE VOLUMES			
PUMP TYPE (DIA.)	MANUF. CAPACITY (CUBIC METERS PER MINUTE)	RATE (m ³ /min)	STRUCTURE VOLUME (CUBIC METERS)
50 mm	32 m ³ /h	0.53 m ³ /min	63 m ³
75 mm	59 m ³ /h	0.98 m ³ /min	118 m ³
100 mm	114 m ³ /h	1.89 m ³ /min	227 m ³
150 mm	250 m ³ /h	4.16 m ³ /min	498 m ³

VOLUME OF DEWATERING STRUCTURE SHOWN IN EROSION AND SEDIMENT CONTROL PLAN SHALL BE BASED ON USE OF 100 mm CONSTRUCTION PUMP SHOWN IN THE ABOVE TABLE.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

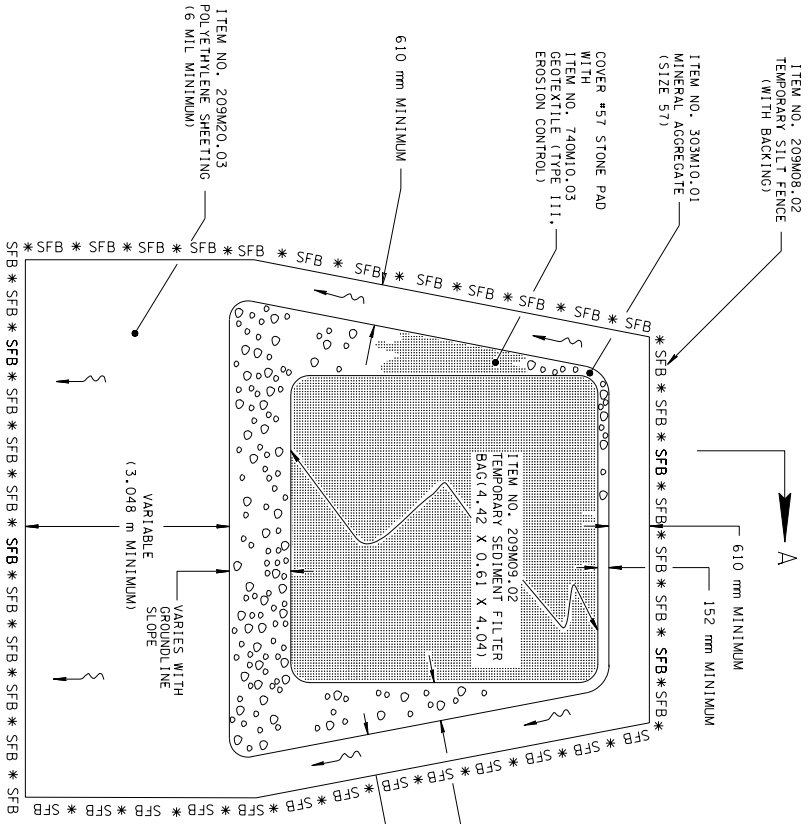
MINOR REVISION -- FHMA APPROVAL NOT REQUIRED.



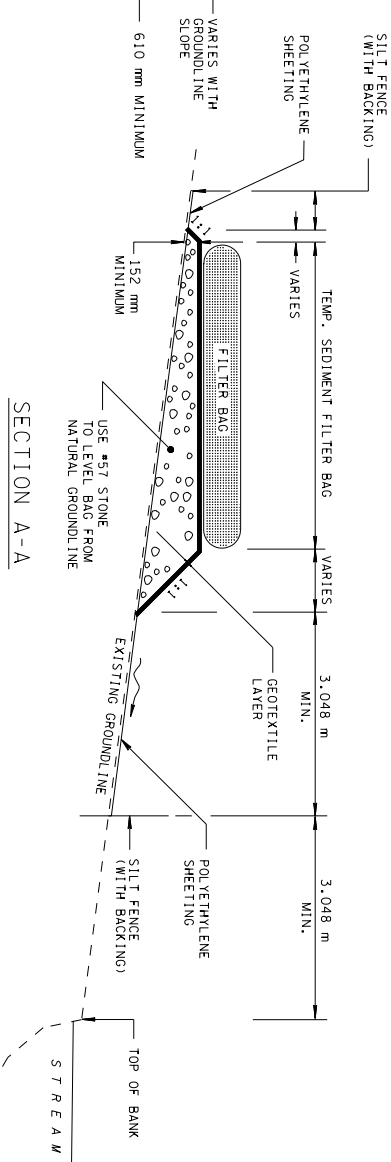
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PLAY ITEMS,
GENERAL NOTES
& TEMPORARY
DEWATERING
STRUCTURE

TEMPORARY SEDIMENT FILTER BAG



PLAN VIEW



- GENERAL NOTES**
- SPECIAL PROVISION 209B 15 TO BE USED FOR TEMPORARY SEDIMENT FILTER BAG. ALL REFERENCES IN SPECIAL PROVISION 209B TO PUMPING FROM SEDIMENT TRAPS ALSO APPLIES TO PUMPING FROM COFFER DAMS. CONTRACTOR SHALL EXERCISE CAUTION NOT TO BURST OR DAMAGE THE TEMPORARY SEDIMENT FILTER BAG WHEN PUMPING.
 -

ITEM NO.	DESCRIPTION	UNIT
209M08.02	TEMPORARY SILT FENCE (WITH BACKING)	METER
209M09.02	TEMPORARY SEDIMENT FILTER BAGS (4.42 m x 0.61 m x 4.04 m)	EACH
209M20.03	POLYETHYLENE SHEETING (6 MIL MINIMUM)	SQUARE METER
303M10.01	MINERAL AGGREGATE (SIZE 57)	TONNE
740M10.03	GEOTEXTILE (TYPE III, EROSION CONTROL)	SQUARE METER

EROSION CONTROL PLAN LEGEND: (TEMPORARY SEDIMENT FILTER BAGS)

- REV. 5-27-01: CHANGED ITEM NOS. 209M08.02, 209M09.02, 209M10.01 TO 209M08.02, 209M09.02, 209M10.01. CHANGED DESCRIPTION IN ITEM NO. 209-20.03.
- REV. 12-18-02: CHANGED SILT FENCE (WITHOUT BACKING) TO SILT FENCE (WITH BACKING) IN PLAN AND SECTIONAL VIEW. CHANGED PAY ITEM FROM 209M08.03 TO 209M08.02 FOR SILT FENCE.
- REV. 10-26-03: ADDED EROSION CONTROL SYMBOL.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

MINOR REVISION -- FINAL APPROVAL NOT REQUIRED.

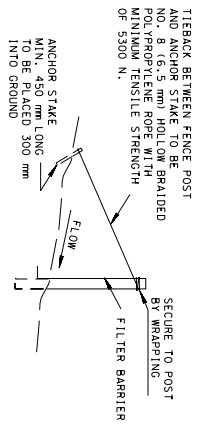
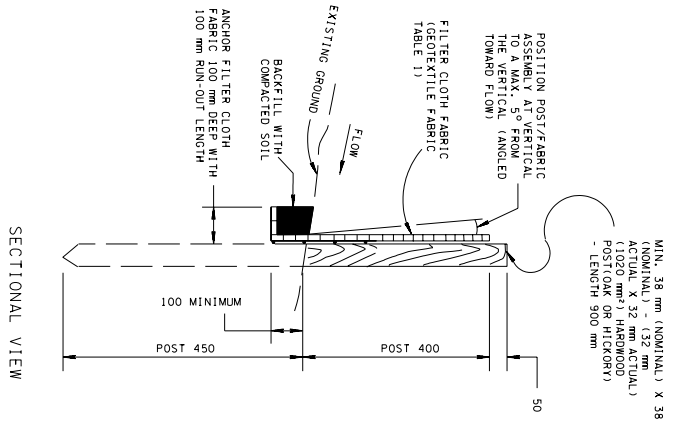
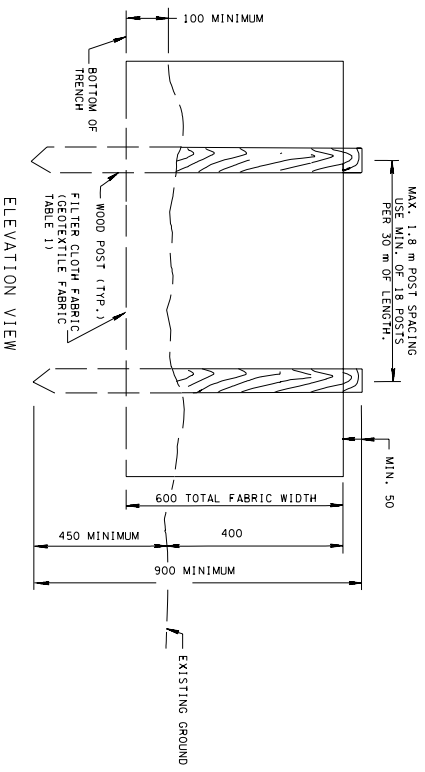
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TEMPORARY
SEDIMENT
FILTER BAGS

10-26-00 ECM-STR-2

TEMPORARY FILTER BARRIER

(ITEM NO. 209M08.01)



ANCHOR STAKE TO BE PLACED 900 mm INTO GROUND
 TIEBACK BETWEEN FENCE POST AND ANCHOR STAKE TO BE NO. 8 (6.5 mm) HOLLOW BRAIDED POLYPROPYLENE ROPE WITH POLYPROPYLENE TENSILE STRENGTH OF 1500 N.
 SECURE TO POST BY WRAPPING
 FILTER BARRIER
 FILTER BARRIER TIEBACK DETAIL
 (WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS, COST TO BE INCLUDED IN THE ITEMS FOR TEMPORARY FILTER BARRIERS)

TEMPORARY FILTER BARRIER GENERAL NOTES

- (A) ALL LABOR AND MATERIALS SHOWN ON THE ELEVATION AND SECTIONAL VIEWS USED TO CONSTRUCT TEMPORARY FILTER BARRIERS ARE TO BE INCLUDED IN THE PRICE BID FOR ITEM 209M08.01 TEMPORARY FILTER BARRIER PER METER.
- (B) FILTER BARRIERS ARE USED TO INTERCEPT SMALL AMOUNTS OF SEDIMENT AND REDUCE VELOCITY FROM SHEET FLOW IN COMMERCIAL AND RESIDENTIAL AREAS ONLY.
- (C) THE MAXIMUM DRAINAGE AREA SIZE FOR A CONTINUOUS BARRIER SHALL BE 0.10 HA PER 30 M OF BARRIER LENGTH. MAXIMUM SLOPE LENGTH BEHIND FENCE ON UPSLOPE SIDE SHALL BE 30 M AS MEASURED ALONG THE GROUND SURFACE.
- (D) WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING EGM-STR-3E.
- (E) MAINTENANCE SHALL BE PERFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE FILTER BARRIER AND/OR OTHER EVIDENCE OF FILTER CLOSING IS OBSERVED.
- (F) THE FILTER FABRIC SHALL BE STAPLED TO THE WOODEN STAKES. HEAVY DUTY WIRE STAPLES WITH 13 mm LEG AND 25 mm WIDTH SHALL BE USED AND EVENLY SPACED WITH THREE PER POST FOR FILTER BARRIERS. FILTER MATERIAL SHALL NOT BE STAPLED TO TREES.
- (G) FILTER BARRIERS SHOULD BE PLACED ALONG OR NEAR THE GROUND CONTOUR. THE BOTTOM OF BARRIER AT GROUNDLINE SHOULD BE ON A ZERO PERCENT (0%) GRADE, PLUS OR MINUS FIVE TENTHS (+0.5%).
- (H) A PREASSEMBLED FILTER BARRIER MEETING THE REQUIREMENTS OF THIS DRAWING IS ACCEPTABLE IN LIEU OF A FIELD CONSTRUCTED FILTER BARRIER.
- (I) STATIC SLICING IS THE PREFERRED METHOD OF FILTER BARRIER INSTALLATION. STATIC SLICING INVOLVES THE INSERTION OF A NARROW CUTTING BLADE, PLACED AT THE SPECIFIED ANCHOR DEPTH FOR THE GIVEN FABRIC AS SHOWN ON THE APPLICABLE DETAIL, AND SIMULTANEOUSLY PULLING THE FENCE FABRIC INTO THE TRENCH AS THE TRENCH IS BEING EXCAVATED. ALTERNATE, TRENCH-BASED METHODS ARE ALSO ACCEPTABLE, FOR TRENCH-BASED INSTALLATIONS. FILTER BARRIER SHALL BE INSTALLED PER THE FOLLOWING STEPS AND IN THE FOLLOWING ORDER:
 - EXCAVATE TRENCH A MAXIMUM OF 100 mm WIDE AND AT THE SPECIFIED DEPTH AS SHOWN ON THE APPLICABLE DETAIL. THE TRENCH SHALL BE HAND CLEANED FOLLOWING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLODS FROM THE TRENCH.
 - INSTALL FABRIC IN TRENCH.
 - BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
 - COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).
 - DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL. SUPPORT POSTS SHALL BE PLACED AT THE SPECIFIED SPACING AND DENSITY OF TIES OR STAPLES.
 - ATTACH FABRIC TO THE POSTS USING WIRE TIES OR STAPLES. SPACING AND DENSITY OF TIES OR STAPLES SHALL BE INSTALLED AS GIVEN ON THE APPLICABLE DETAIL.

TABLE 1
TEMPORARY SILT FENCE FABRIC SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MEAN VALUES OF TEST DATA)
FABRIC TYPE	WOVEN SILT FILM
APPEARANT OPENING SIZE (ASTM D4751)	#30 TO #70 STANDARD SIEVE
PERCENT OPEN AREA (POA)	1 % TO 10 %
WATER FLUX (ASTM D4491)	> 1.0 L/SEC/M ²
TENSILE STRENGTH (ASTM D4632)	> 51 kg (WEAP DIRECTION) X 57 kg (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	> 90%
ELONGATION (ASTM D4632)	< 20% (MAX)
BURST STRENGTH (ASTM D3786)	> 2068 kg
PUNCTURE STRENGTH (ASTM D4833)	> 32 kg
TRAPEZOIDAL TEAR (ASTM D4533)	> 30 kg (WEAP DIRECTION) X 30 kg (FILL DIRECTION)

EROSION CONTROL PLAN LEGEND: * FB * FB * FB * TEMPORARY FILTER BARRIER

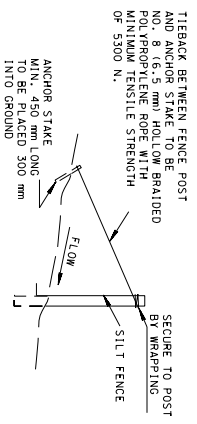
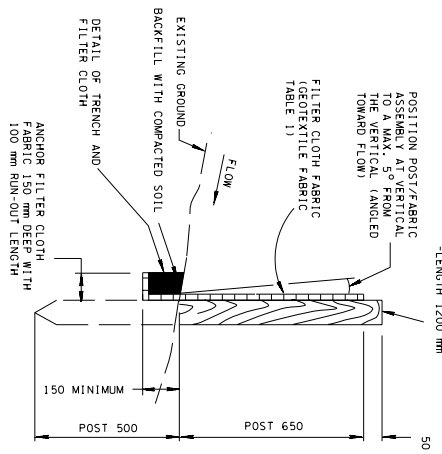
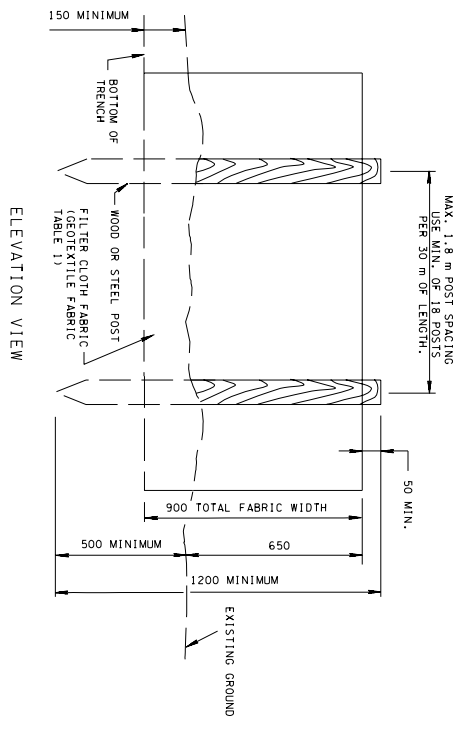
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION



TEMPORARY
 FILTER
 BARRIER

12-18-02 EGM-STR-3A

TEMPORARY SILT FENCE
(ITEM NO. 209M08.03)



SILT FENCE TIEBACK FOR STEEL POSTS OR WOOD POSTS
(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS, COST TO BE INCLUDED IN THE ITEMS FOR TEMPORARY SILT FENCE)

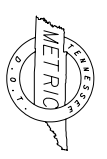
EROSION CONTROL PLAN LEGEND: * SF * SF * SF * (TEMPORARY SILT FENCE)

TABLE 1
TEMPORARY SILT FENCE SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MEAN VALUES OF TEST DATA)
FABRIC TYPE	WOVEN SILT FILM
APPROXIMATE OPENING SIZE (ASTM D4751)	#30 TO #70 STANDARD SIEVE
PERCENT OPEN AREA (POA)	1 % TO 10 %
WATER FLUX (ASTM D4491)	2.10 L/SEC/M ²
TENSILE STRENGTH (ASTM D4632)	2.57 KG (WARP DIRECTION) X 57 KG (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	2.90Z
ELONGATION (ASTM D4632)	5.20Z (MAX)
BURST STRENGTH (ASTM D3786)	2.2068 MPa
PUNCTURE STRENGTH (ASTM D4833)	2.32 KG
TRAPEZOIDAL TEAR (ASTM D4533)	2.30 KG (WARP DIRECTION) X 30 KG (FILL DIRECTION)

TEMPORARY SILT FENCE GENERAL NOTES

- A ALL LABOR AND MATERIALS SHOWN ON THE ELEVATION AND SECTIONAL VIEWS USED TO CONSTRUCT TEMPORARY SILT FENCE ARE TO BE INCLUDED IN THE PRICE BID FOR ITEM 209M08.03 TEMPORARY SILT FENCE (WITHOUT BACKING) PER METER.
- B SILT FENCES ARE USED TO INTERCEPT SMALL AMOUNTS OF SEDIMENT AND REDUCE VELOCITY FROM SHEET FLOW ONLY. DO NOT USE IT ADJACENT TO SENSITIVE WATER RESOURCES (WETLANDS OR STREAMS).
- C THE MAXIMUM DRAINAGE AREA SIZE FOR A CONTINUOUS BARRIER SHALL BE 0.10 HA PER 30 M OF FENCE LENGTH. MAXIMUM SLOPE LENGTH BEHIND FENCE ON UPSLOPE SIDE SHALL BE 30 M (AS MEASURED ALONG THE GROUND SURFACE).
- D WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING ECM-STR-3E.
- E MAINTENANCE SHALL BE PERFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE FILTER BARRIER AND/OR OTHER EVIDENCE OF FILTER CLOGGING IS OBSERVED.
- F STEEL POSTS SHALL BE 2.0 kg/90 ROLLED FROM HIGH CARBON STEEL AND SHALL BE GALVANIZED OR HOT-DIPPED AND PAINTED WITH ONE OR MORE COATS OF HIGH-GRADE WEATHER RESISTANT STEEL PAINT. POSTS SHALL BE STUDDER, EMBOSSED, OR PUNCHED TO AID IN THE ATTACHMENT OF WIRE.
- G WHEN STEEL POSTS ARE USED THEY SHALL HAVE A PROJECTION FOR FASTENING WIRE TO THEM. THE WIRE FASTENERS SHOULD BE EVENLY SPACED WITH AT LEAST FIVE PER POST.
- H IF THE FILTER MATERIAL IS STAPLED TO THE WOODEN STAKES, HEAVY DUTY WIRE STAPLES WITH 13 mm LEG AND 25 mm WIDTH SHALL BE USED AND EVENLY SPACED WITH AT LEAST FOUR PER POST. FILTER MATERIAL SHALL NOT BE STAPLED TO TREES.
- I SILT FENCES SHOULD BE PLACED ALONG OR NEAR THE GROUND CONTOUR. THE BOTTOM OF FENCE AT GROUND LINE SHOULD BE ON A ZERO PERCENT (0%) GRADE, PLUS OR MINUS FIVE TENTHS OF ONE PERCENT (+0.5%).
- J A PREASSEMBLED SILT FENCE MEETING THE REQUIREMENTS OF THIS DRAWING IS ACCEPTABLE IN LIEU OF A FIELD CONSTRUCTED SILT FENCE.
- K STATIC SILTING IS THE PREFERRED METHOD OF FENCE INSTALLATION. STATIC SILTING INVOLVES THE INSERTION OF BRUSHES INTO THE TRENCH BEHIND THE FENCE. SPECIALIZED EQUIPMENT SHOULD BE USED TO BRUSH THE APPLICABLE DETAIL, AND SIMULTANEOUSLY PULLING THE FENCE FABRIC INTO THE TRENCH AS THE TRENCH IS BEING EXCAVATED. ALTERNATE TRENCH-BASED METHODS ARE ALSO ACCEPTABLE. FOR TRENCH-BASED INSTALLATIONS, FENCING SHALL BE INSTALLED PER THE FOLLOWING STEPS AND IN THE FOLLOWING ORDER:
 - EXCAVATE TRENCH A MAXIMUM OF 100 mm WIDE AND AT THE SPECIFIED DEPTH AS SHOWN ON THE APPLICABLE DETAIL. THE TRENCH SHALL BE HAND-CLEARED FOLLOWING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLODS FROM THE TRENCH.
 - INSTALL FABRIC IN TRENCH.
 - BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
 - COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).
 - DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL. POSTS SHALL BE ASSEMBLED SILT FENCE, DRIVE SUPPORT POSTS INTO GROUND FIRST, FOLLOWED BY FABRIC PLACEMENT IN TRENCH.
 - ATTACH FABRIC TO THE POSTS USING WIRE TIES OR STAPLES. SPACING AND DENSITY OF TIES OR STAPLES SHALL BE INSTALLED AS GIVEN ON THE APPLICABLE DETAIL.



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TEMPORARY SILT FENCE

12-18-02 ECM-STR-3B

TEMPORARY SILT FENCE WITH BACKING
(ITEM NO. 209-08-02)

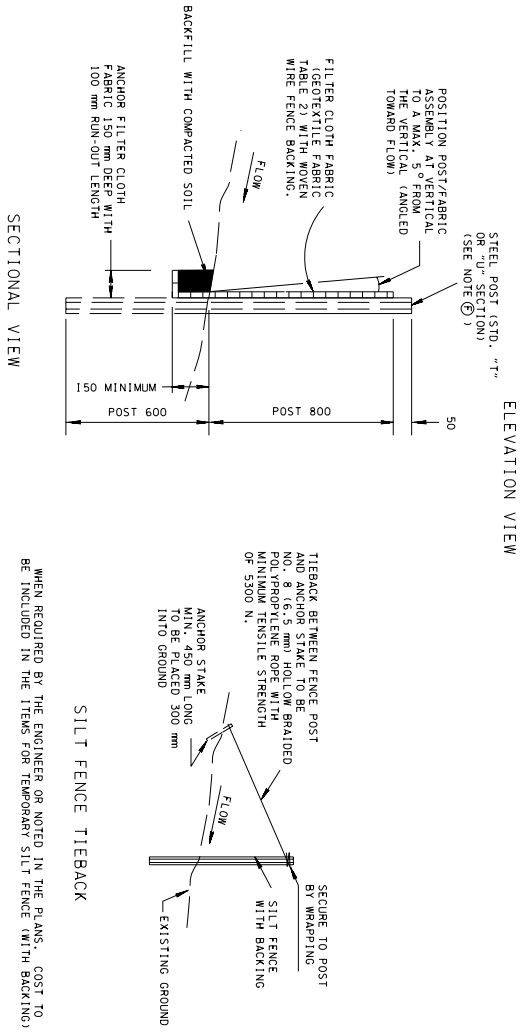
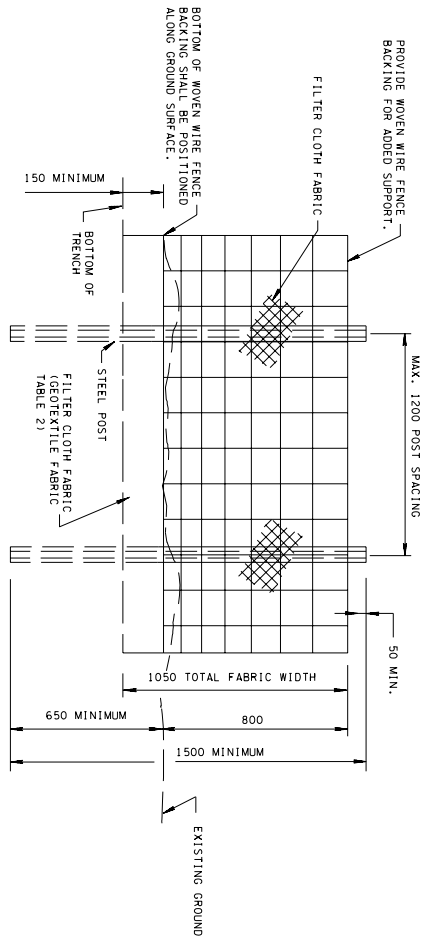


TABLE 2
TEMPORARY SILT FENCE WITH BACKING
FABRIC SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MEAN VALUES OF TEST DATA)
FABRIC TYPE	WOVEN SILT FILM
APPEARANT OPENING SIZE (ASTM D4751)	#30 TO #40 STANDARD SIEVE
PERCENT OPEN AREA (P90)	1 % TO 10 %
WATER FLOW (ASTM D4491)	≥ 14 L/SEC/M ²
TENSILE STRENGTH (ASTM D4632)	≥ 170 K9 (WARP DIRECTION) X 109 K9 (FILL DIRECTION)
UL TRAVIULET STABILITY (AFTER 500 HRS PER ASTM D4355)	≥ 90%
BURST STRENGTH (ASTM D3786)	≥ 3172 KPa
PUNCTURE STRENGTH (ASTM D4833)	≥ 64 K9
TRAPEZOIDAL TEAR (ASTM D4533)	≥ 54 K9 (WARP DIRECTION) X 36 K9 (FILL DIRECTION)

TEMPORARY SILT FENCE WITH BACKING GENERAL NOTES

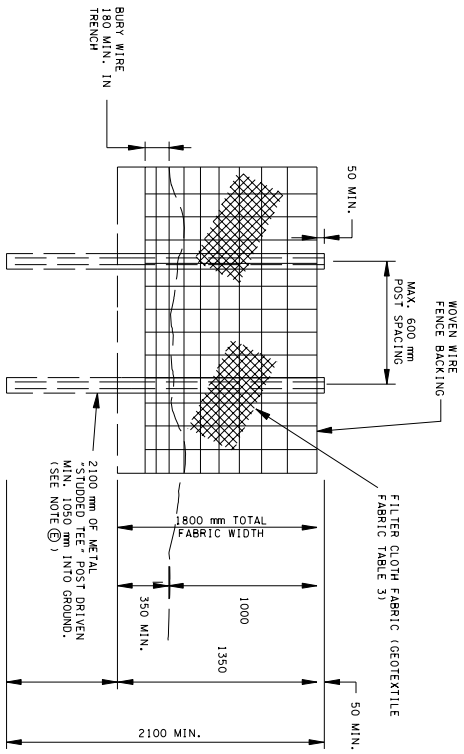
- A ALL LABOR AND MATERIALS SHOWN ON THE ELEVATION AND SECTIONAL VIEWS USED TO CONSTRUCT SILT FENCE WITH BACKING ARE TO BE INCLUDED IN THE PRICE BID FOR ITEM 20908.02 TEMPORARY SILT FENCE WITH BACKING) PER METER.
- B SILT FENCES WITH BACKING ARE USED TO INTERCEPT SMALL AMOUNTS OF SEDIMENT AND REDUCE VELOCITY FROM SHEET FLOW ONLY. USE TEMPORARY SILT FENCES WITH BACKING UPGRADIENT OF AND ADJACENT TO WETLANDS, STREAMS, AND OTHER SENSITIVE WATER RESOURCES.
- C THE MAXIMUM DRAINAGE AREA SIZE FOR A CONTINUOUS BARRIER SHALL BE 0.4 ha PER 45 m OF BARRIER LENGTH. THE MAXIMUM SLOPE LENGTH BEHIND FENCE ON UPSLOPE SIDE SHALL BE 90 m (AS MEASURED ALONG THE GROUND SURFACE).
- D WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON EGM-STR-3E.
- E MAINTENANCE SHALL BE PERFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND/OR OTHER EVIDENCE OF FILTER CLOGGING IS OBSERVED.
- F STEEL POSTS SHALL BE 2.0 KG/M ROLLED FROM HIGH CARBON STEEL AND SHALL BE GALVANIZED OR HOT-DIPPED AND PAINTED WITH ONE OR MORE COATS OF HIGH-GRADE WEATHER RESISTANT STEEL PAINT. POSTS SHALL BE STUDDO, EMBOSSED, OR PUNCHED TO AID IN THE ATTACHMENT OF WIRE.
- G STEEL POSTS SHALL HAVE A PROJECTION FOR FASTENING WIRE TO THEM. WOVEN WIRE FENCE BACKING TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FABRIC SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE BACKING WITH THE TIES SPACED EVERY 600 mm ALONG TOP AND MIDSECTION. THE WIRE FASTENERS SHOULD BE EVENLY SPACED WITH AT LEAST SIX PER POST.
- H WOVEN WIRE FENCE BACKING SHALL MEET THE REQUIREMENTS FOR ASTM A-116 FOR NO. 11 FARM, DESIGN NO. 832-6-11, CLASS 3 COATING.
- I SILT FENCES SHOULD BE PLACED ALONG OR NEAR THE GROUND CONTOUR. THE BOTTOM OF FENCE AT GROUNDLINE SHOULD BE ON A ZERO PERCENT (0%) GRADE. FLOWS ON WINDS OF ONE PERCENT (10.5%).
- J STATIC SLICING IS THE PREFERRED METHOD OF FENCE INSTALLATION. STATIC SLICING INVOLVES THE INSERTION OF A NARROW CUTTING BLADE, PLACED AT THE SPECIFIED ANCHOR DEPTH FOR THE GIVEN FABRIC AS SHOWN ON THE APPLICABLE DETAIL, AND SMALL, CAREFUL PULLING OF THE FENCE FABRIC INTO THE TRENCH AS THE TRENCH IS BEING EXCAVATED. THE TRENCH SHOULD BE EXCAVATED IN THE FOLLOWING ORDER:
 - EXCAVATE TRENCH A MAXIMUM OF 100 mm WIDE AND AT THE SPECIFIED DEPTH AS SHOWN ON THE APPLICABLE DETAIL. THE TRENCH SHALL BE HAND-CLEANED FOLLOWING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLODS FROM THE TRENCH.
 - INSTALL FABRIC IN TRENCH.
 - BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
 - COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).
 - DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL.
 - ATTACH FABRIC TO THE POSTS USING WIRE TIES. SPACING AND DENSITY OF TIES SHALL BE INSTALLED AS GIVEN ON THE APPLICABLE DETAIL.

EROSION CONTROL PLAN LEGEND: * SFB * SFB * SFB * SFB * (TEMPORARY SILT FENCE WITH BACKING)

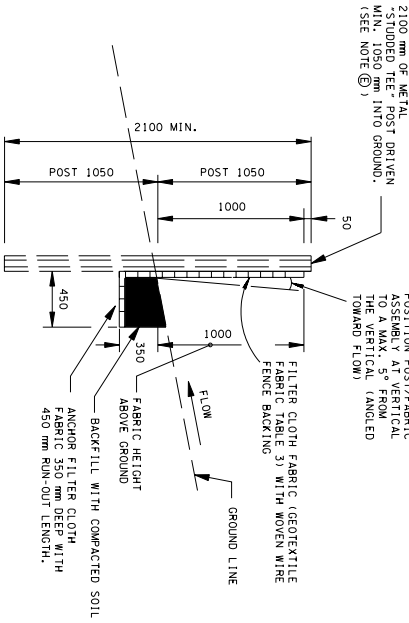


ENHANCED SILT FENCE

(ITEM NO. 209M08.04)



ELEVATION VIEW



SECTIONAL VIEW

EROSION CONTROL PLAN LEGEND: * ESF * ESF * ESF * ESF * (ENHANCED SILT FENCE)

TABLE 3
ENHANCED SILT FENCE SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MEAN VALUES OR TEST DATA)
FABRIC TYPE	WOVEN MONOFILAMENT
APPEARANT OPENING SIZE (ASTM D4751)	# 60 TO # 100 STANDARD SIEVE
WATER FLUX (ASTM D4491)	> 41 L/SEC/M ²
TENSILE STRENGTH (ASTM D4632)	> 117 KG (WARP DIRECTION) X 127 KG (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D3355)	> 90%
BURST STRENGTH (ASTM D3786)	> 3792 KPa
PUNCTURE STRENGTH (ASTM D4833)	> 73 KG
TRAPEZOIDAL TEAR (ASTM D4533)	> 54 KG (WARP DIRECTION) X 36 KG (FILL DIRECTION)
PERMEABILITY (ASTM D4491)	> 0.10 CW/SEC
THICKNESS (ASTM D5199)	< 30 MILS

ENHANCED SILT FENCE GENERAL NOTES

- A ALL LABOR AND MATERIALS SHOWN ON THE ELEVATION AND SECTIONAL VIEWS USED TO CONSTRUCT ENHANCED SILT FENCE ARE TO BE INCLUDED PER THE PRICE BID FOR ITEM NO. 209M08.04 TEMPORARY ENHANCED SILT FENCE PER METRIC.
- B ENHANCED SILT FENCE IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (e.g., SWALES, DITCHES, RUTS ALONG SLOPE) ARE ANTICIPATED. LIMITS OF FLOW APPLICATIONS FOR USE OF ENHANCED FILTER FENCE ARE GIVEN IN RESPECTIVE TABLES ON STANDARD DRAWINGS ECM-STR-4 AND ECM-STR-4A, RESPECTIVELY.
- C WHEN TWO SECTIONS OF ENHANCED SILT FENCE ADJOIN EACH OTHER THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING ECM-STR-3E. MAINTENANCE SHALL BE PERFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND/OR WHEN EVIDENCE OF FILTER BLINDING IS NOTED.
- D STEEL POSTS SHALL BE 2.0 KG/M² ROLLED FROM HIGH CARBON STEEL AND SHALL BE GALVANIZED OR HOT-DIPPED AND PAINTED WITH ONE OR MORE COATS OF HIGH-GRADE HEAVY RESISTANT STEEL PAINTING. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED TO AID IN THE ATTACHMENT OF WIRE.
- E STEEL POSTS SHALL HAVE A PROTECTION FOR FASTENING WIRE TO THEM. MOVEN WIRE SHALL BE SPACED TO BE SEVEN (7) TIMES THE DIAMETER OF THE WIRE. TIES, THE WIRE FASTENERS SHOULD BE SEVEN (7) SPACED WITH AT LEAST SIX PER POST.
- F WIRE FENCE FABRIC SHALL MEET THE REQUIREMENTS FOR ASTM A-116 FOR NO. 11 FARM. DESIGN NO. 1047-6-11, CLASS 3 COATING.
- G FILTER FABRIC SHALL BE FASTENED SECURELY TO MOVEN WIRE FENCE BACKING WITH TIES SPACED EVERY 600 MM ALONG TOP AND MID SECTION.
- H FOR TRENCH-BASED INSTALLATIONS, FENCING SHALL BE INSTALLED PER THE FOLLOWING STEPS AND IN THE FOLLOWING ORDER:
 - EXCAVATE TRENCH A MAXIMUM OF 450 MM WIDE AND AT THE SPECIFIED DEPTH AS SHOWN ON THE APPLICABLE DETAIL. THE TRENCH SHALL BE HAND-CLEANED FOLLOWING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLODS FROM THE TRENCH.
 - INSTALL FABRIC IN TRENCH.
 - BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
 - COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).
 - DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL.
 - ATTACH MOVEN WIRE FENCE BACKING TO POSTS AND FABRIC TO THE WIRE BACKING USING WIRE TIES. SPACING AND DENSITY OF TIES SHALL BE INSTALLED AS GIVEN ON THE APPLICABLE DETAIL.

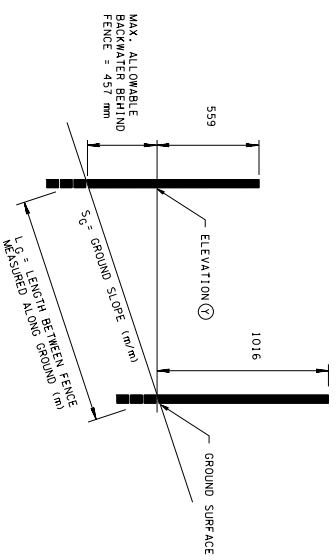
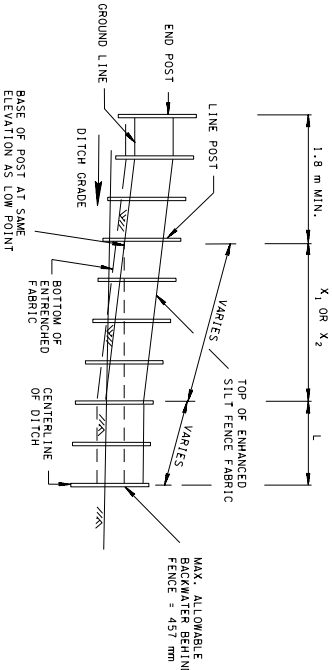
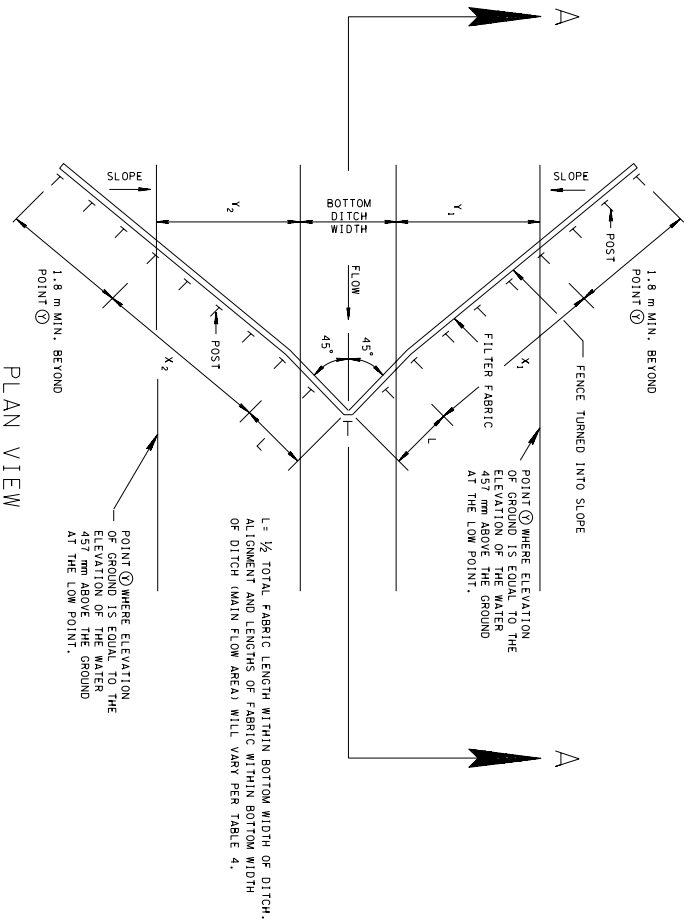


MINOR REVISION -- FINAL APPROVAL NOT REQUIRED. ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TEMPORARY
ENHANCED
SILT FENCE
12-18-02 ECM-STR-3D

TYPE EC 1



SPACING FOR ENHANCED SILT FENCE

GROUND SLOPE S_g (m/m)	RECOMMENDED SPACING BETWEEN ENHANCED SILT FENCE (m)
0.01	46
0.02	23
0.03	15
0.04	12
0.05	9
0.06 AND STEEPER	8

② RECOMMENDED SPACING REFERS TO SPACING BETWEEN ENHANCED SILT FENCE LOCATIONS, BASED ON BACKWATER EFFECTS (USING 457 mm MAXIMUM BACKWATER BEHIND FENCE)

WIDTH OF DITCH BOTTOM (m)	TOTAL ENHANCED SILT FABRIC FENCE LENGTH ZL (LENGTHENED ZONE OF DITCH, (PER LINEAR METERS))		TOTAL AVAILABLE SURFACE AREA OF FABRIC OF DITCH FLOW DEPTH (m ²)				MAXIMUM ALLOWABLE DESIGN PEAK FLOW FROM WATERSHED (L/SEC) AT 0.46 m HEAD			
	X ₁ OR X ₂ (m)	Y ₁ OR Y ₂ (m)	① 2:1 SIDESLOPE	① 3:1 SIDESLOPE	① 4:1 SIDESLOPE	① 2:1 SIDESLOPE	① 3:1 SIDESLOPE	① 4:1 SIDESLOPE		
0.9	1.3 (0.7)	1.3	1.9	2.6	1.17	1.47	1.77	280.37	334.18	350.82
1.2	1.7 (0.9)	1.3	1.9	2.6	1.38	1.67	1.97	339.84	396.48	453.12
1.5	2.1 (1.1)	1.3	1.9	2.6	1.56	1.86	2.16	390.82	447.46	504.10
1.8	2.6 (1.3)	1.3	1.9	2.6	1.77	2.06	2.36	450.29	506.93	563.57
2.1	3.0 (1.5)	1.3	1.9	2.6	1.97	2.26	2.55	506.93	563.57	620.21
2.4	3.4 (1.7)	1.3	1.9	2.6	2.16	2.45	2.75	563.57	617.38	674.02
2.7	3.9 (2.0)	1.3	1.9	2.6	2.36	2.65	2.94	617.38	674.02	730.66
3.0	4.3 (2.2)	1.3	1.9	2.6	2.55	2.84	3.14	674.02	730.66	787.30
3.7	5.2 (2.6)	1.3	1.9	2.6	2.95	3.25	3.55	787.30	846.77	903.41
4.5	6.5 (3.3)	1.3	1.9	2.6	3.54	3.84	4.13	957.22	1013.86	1070.50

EROSION CONTROL PLAN LEGEND: ➤ ① TEMPORARY TYPE EC 1 FILTER BARRIER EROSION DITCH CHECK

- HORIZONTAL TO VERTICAL MEASUREMENT RATIOS ARE SHOWN
- ALLOWABLE FLOWS DO NOT INCLUDE HYDRAULIC REDUCTION DUE TO ACCUMULATION OF CAPTURED SOIL PARTICLES ON FILTER SURFACE AREA
- THIS LENGTH IS TO BE ADDED TO CALCULATED LENGTHS X₁ AND X₂. LENGTH Y₁ AND Y₂ ARE BASED ON PERPENDICULAR SLOPE LENGTHS TO A POINT WHERE THE BASE OF POST ENTERING THE GROUND IS AT THE SAME ELEVATION AS A POINT ON THE DITCH BOTTOM. POINTS 1, 2, 3, 4, AND X₂ WILL BE CALCULATED BY MULTIPLYING THE LENGTHS OF SLOPE 1, OR 2, AT EACH INDIVIDUAL LOCATION BY 1.414.
- BASED ON 2445 LITERS PER MIN./M² (0.10 CM/SEC PERMEABILITY) ENHANCED SILT FENCE FABRIC AND TRAPEZOIDAL DITCH CROSS SECTION. SEE TABLE 3 FOR ENHANCED SILT FENCE FABRIC SPECIFICATIONS ON STANDARD DRAINING ECM-STR-30. A HEAD OF 0.46 METERS BEHIND THE FENCE WAS USED TO DETERMINE MAXIMUM ALLOWABLE DESIGN PEAK FLOW THROUGH FILTER FABRIC.

GENERAL NOTES

- A DITCH WITH A TRAPEZOIDAL CROSS-SECTION IS ASSUMED WITH SIDESLOPES AS NOTED.
- FENCE LENGTH DESIGNATED IN TABLE 4 INCLUDES THE LENGTH OF FENCE STAKED WITHIN THE BOTTOM WIDTH OF DITCH (2U).
- DESIGN FLOWS FOR STORMWATER TREATMENT (E.G., 2 YEAR/24 HOUR STORM EVENT FLOWS) SHOULD BE ROUTED THROUGH ENHANCED SILT FENCE FILTERS WITH NO BYPASSING OR OVERFLOWS. FLOWS IN EXCESS OF THE FLOW THROUGH CAPACITIES GIVEN IN TABLE 4 ABOVE SHOULD BE ACCOMMODATED BY BYPASSING EXCESS FLOWS.
- ANCHOR AND INSTALL TEMPORARY ENHANCED SILT FENCE PER DETAILS AND SPECIFICATIONS SHOWN ON STANDARD DRAWING ECM-STR-30. THE LOCATIONS AND SPACING OF ENHANCED SILT FENCE FILTERS, ALONG A DITCH SHOULD BE BASED ON COMBINATION OF HYDRAULIC PROPERTIES OF THE FENCE MATERIAL (TABLE 4) AND THE SPACING TABLE (SHOWN ABOVE). TO INSURE THAT THE TREATMENT REQUIREMENTS OF NOTE ② ARE ACHIEVED, AND TO PREVENT OVERTOPPING, IT IS ALSO RECOMMENDED THAT BACKWATER ANALYSIS BE PERFORMED (E.G., STANDARD-STEP METHOD). THE FLOW VALUES IN TABLE 4 ASSUME NO CLOGGING EFFECTS AT THE ENHANCED SILT FENCE SURFACE WITH SOILS. IN ORDER TO INSURE MINIMAL INFLUENCE FROM FILTER CLOGGING, FILTER FENCES SHOULD BE REGULARLY CLEANED BY DRYBRUSHING OF FABRIC SURFACE AND/OR PRESSURE WASHING OF FILTER.



DATE REVISION: -- FINAL APPROVAL NOT REQUIRED. ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

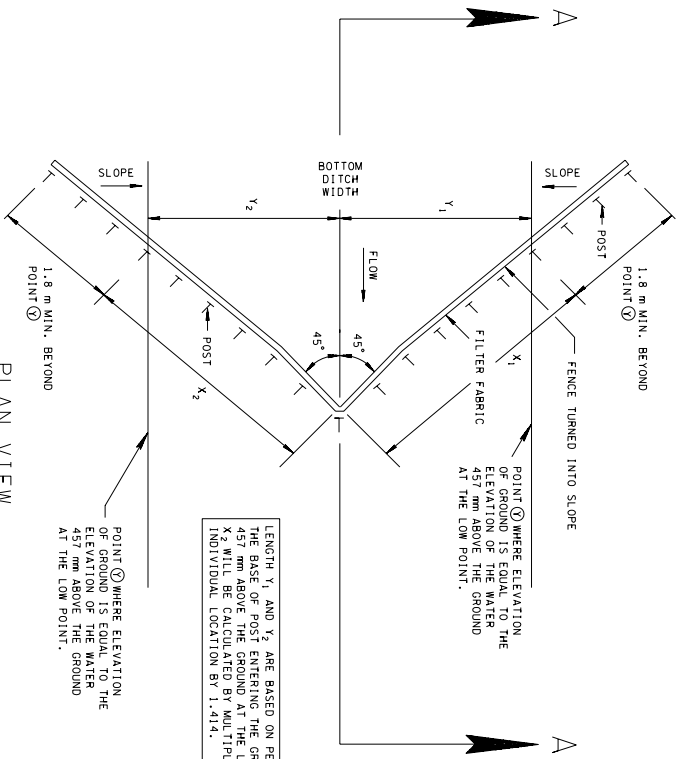
STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION DITCH CHECK USING ENHANCED SILT FENCE

ECM-STR-4

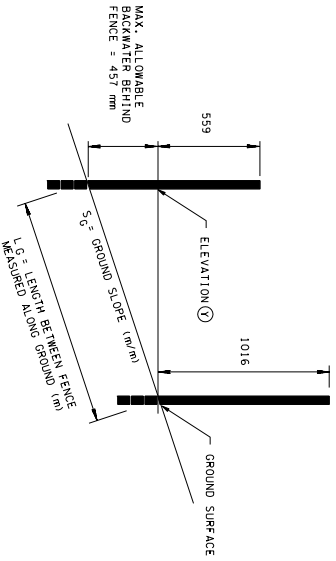
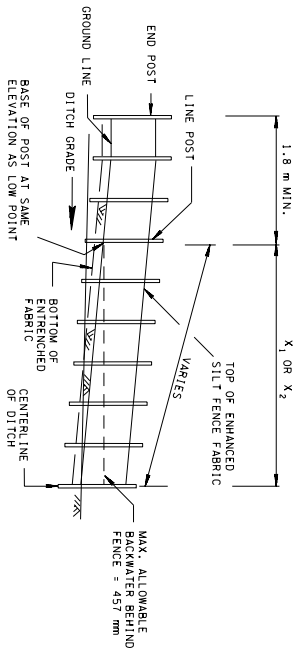
REV. 12-18-03: MODIFIED SPACING AND ADDED SUPPORTING TABLE AND MODIFIED TABLE 4 AND GENERAL NOTES.
REV. 3-15-04: CHANGED PLANS LEGEND SYMBOL.

TYPE EC IA



LENGTH Y_1 AND Y_2 ARE BASED ON PERPENDICULAR SLOPE LENGTHS TO A POINT WHERE THE BASE OF POST ENTERING THE GROUND IS AT THE SAME ELEVATION AS IN POINT 1. POINT 1 IS THE POINT WHERE THE ELEVATION OF THE GROUND IS EQUAL TO THE ELEVATION OF THE WATER. POINT 2 WILL BE CALCULATED BY MULTIPLYING THE LENGTHS OF SLOPE Y_1 OR Y_2 AT EACH INDIVIDUAL LOCATION BY 1.414.

EROSION CONTROL PLAN LEGEND: > TEMPORARY TYPE EC IA FILTER BARRIER EROSION DITCH CHECK



SPACING FOR ENHANCED SILT FENCE

GROUND SLOPE S_G (m/m)	RECOMMENDED SPACING, (L _G) BETWEEN ENHANCED SILT FENCE (m)
0.01	46
0.02	23
0.03	15
0.04	12
0.05	9
0.06 AND STEEPER	8

RECOMMENDED SPACING REFERS TO SPACING BETWEEN ENHANCED SILT FENCE FILTER LOCATIONS, BASED ON BACKWATER EFFECTS (USING 457 mm MAXIMUM BACKWATER BEHIND FENCE)

DITCH SIDESLOPES	X_1 OR X_2 (m)	TOTAL AVAILABLE SURFACE AREA OF FABRIC IN DITCH AT 0.46 m OF FLOW DEPTH (m ²)	* MAX. ALLOWABLE DESIGN PEAK FLOW FROM WATERSED (CFS)
2:1	1.3	0.59	101.95
3:1	2.0	0.88	152.93
4:1	2.6	1.18	203.90
5:1	3.2	1.48	254.88
6:1	3.9	1.77	305.86
7:1	4.5	2.07	356.83
8:1	5.2	2.36	404.98
9:1	5.8	2.66	455.95
10:1	6.5	2.95	506.93

* BASED ON 2445 LITERS PER MIN./m²/0.10 CM/SEC PERMEABILITY ENHANCED SILT FENCE FABRIC. MAXIMUM ALLOWABLE BACKWATER BEHIND FABRIC FENCE = 0.46 m TRIANGULAR CROSS-SECTION DITCH. 3' FOR ENHANCED SILT FENCE FABRIC SPECIFICATION ON STANDARD DRAWING ECM-STR-3D.

GENERAL NOTES

- A DITCH WITH A TRIANGULAR CROSS-SECTION IS ASSUMED.
- B DESIGN FLOWS FOR STORMWATER TREATMENT (E.G., 2-YEAR/24-HOUR STORM EVENT FLOWS) SHOULD BE ROUTED THROUGH ENHANCED SILT FENCE FILTERS WITH NO BYPASSING OR OVERTOWNS. FLOWS IN EXCESS OF THE FLOW THROUGH CAPACITIES GIVEN IN TABLE 5 ABOVE SHOULD BE ACCOMMODATED BY BYPASSING EXCESS FLOWS.
- C ANCHOR AND INSTALL TEMPORARY ENHANCED SILT FENCE PER DETAILS AND SPECIFICATIONS SHOWN ON STANDARD DRAWING ECM-STR-3D. THE LOCATIONS AND SPACING OF ENHANCED SILT FENCE (TABLE 5) AND THE SPACING TABLE (SHOWN ABOVE), TO INSURE THAT THE TREATMENT REQUIREMENTS OF NOTE ② ARE ACHIEVED, AND TO PREVENT OVERTOPPING, IT IS ALSO RECOMMENDED THAT BACKWATER ANALYSIS BE PERFORMED (E.G., STANDARD-STEM METHOD). IN ORDER TO INSURE MINIMAL INFLUENCE FROM FILTER FLOTTING, FILTER FENCES SHOULD BE REGULARLY CLEANED BY BRUSHING OF FABRIC SURFACE AND/OR PRESSURE WASHING OF FILTER.
- D THE FLOW VALUES IN TABLE 5 ASSUME NO CLOGGING EFFECTS AT THE ENHANCED SILT FENCE SURFACE WITH 30.105.



REVISION: FINAL APPROVAL NOT REQUIRED. ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION TEMPORARY EROSION CHECK/FILTER USING ENHANCED SILT FENCE IN A TRIANGULAR CROSS-SECTION DITCH

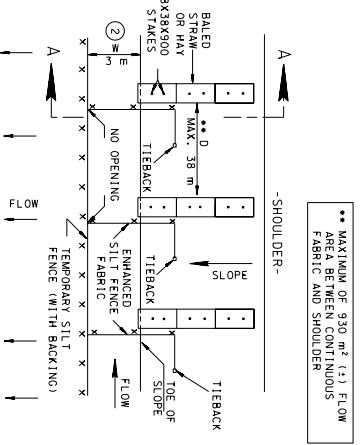
12-18-02 ECM-STR-4A

REV. 12-18-03, MODIFIED SPACING FOR ENHANCED SILT FENCE DETAIL AND ADDED SUPPORTING TABLE. NOTES: TABLE 5 AND GENERAL NOTES. REV. 3-15-04, CHANGED PLANS LEGEND SYMBOL.

- REV. 11-1-95: CHANGED TO METRIC.
- REV. 5-27-01: CHANGED ITEM NO. 209M08 TO 209M09.03.
- REV. 7-29-02: REMOVED DETAILS FOR TYPE EC TYPE EC 1B, TYPE EC 1C, AND TYPE EC 1D.
- REV. 12-21-02: CHANGED ALL ENHANCED SILT FENCE BARRIER TO ENHANCED SILT FENCE.
- REV. 10-26-03: DELETED DETAIL FOR TYPE EC V FILTER BARRIER.

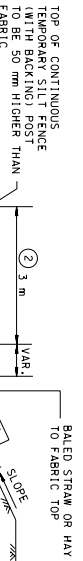
TYPE EC IV

TYPICAL LOCATIONS AT TOE OF SLOPES



TYPE EC (IV)	CASE I FILL SLOPES	H (m)	D (m)
1	45.7-38.1	9	
2	38.1-30.5	12	
3	30.5-22.9	15	
4	22.9-15.2	23	
5	15.2-7.6	30	
6	7.6-0	38	

SEE STD. DWG. NO. RDM-5-111



EROSION CONTROL PLAN LEGEND: — EC — IV — EC —

FOOTNOTES

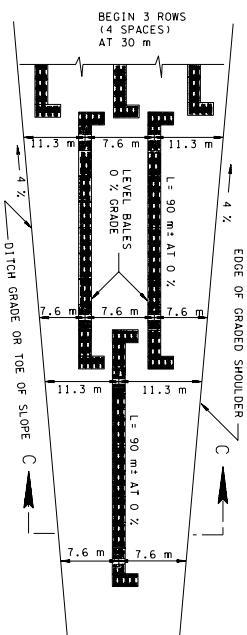
- 1 ELEVATION TO BE MINIMUM OF 150 mm ABOVE TOP OF FABRIC OR HAY BALE IN CENTER OF DITCH.
- 2 "W" 3 m UNLESS OTHERWISE NOTED ON THE PLANS.

GENERAL NOTES FOR FILTER FABRIC BALED HAY OR STRAW EROSION CHECKS

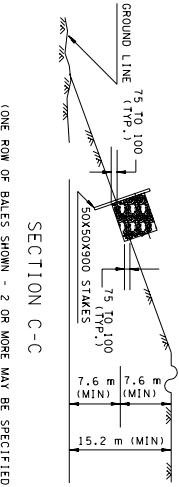
- A THE DRAINAGE AREA FOR THE FILTER FABRIC, BALED HAY OR STRAW EROSION CHECKS SHALL BE 0.8 ha OR LESS. THEY SHALL BE UTILIZED TO DECREASE FLOW VELOCITY AND TO RETAIN SMALL AMOUNTS OF SEDIMENT.
- B HAY OR STRAW BALES SHALL BE A MINIMUM OF 0.14 m² IN VOLUME WITH A MINIMUM DIMENSION OF 900X600X300 (LENGTH X WIDTH X HEIGHT).
- C ALL BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED AND THE BALES SHALL BE PLACED IN POSITION TO MAINTAIN THE BINDING IN A HORIZONTAL POSITION.
- D ALL BALES SHALL BE BURIED A MINIMUM OF 100 mm.
- E SEE ECU-STR-3C FOR TEMPORARY SILT FENCE (WITH BACKING) DETAILS, GENERAL NOTES AND SPECIFICATIONS.
- F SEE ECU-STR-3D FOR ENHANCED SILT FENCE DETAILS, GENERAL NOTES AND SPECIFICATIONS.
- G PAYMENT FOR CONTINUOUS FABRIC FILTER BARRIER AND TEMPORARY EROSION CHECKS WILL BE MADE AS FOLLOWS:
 ITEM NO. 209M06, BALED HAY OR STRAW EROSION CHECKS PER BALE.
 ITEM NO. 209M08.02, TEMPORARY SILT FENCE (WITH BACKING) PER METER.
 ITEM NO. 209M08.04, TEMPORARY ENHANCED SILT FENCE PER METER.

TYPE EC VI

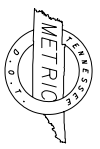
BALED HAY OR STRAW ON FILL SLOPES



(DIMENSIONS ARE MEASURED VERTICALLY)
 WHEN DITCH TOE OF SLOPE OR SHOULDER GRADE CHANGES, "L" WILL CHANGE ACCORDINGLY



EROSION CONTROL PLAN LEGEND: — EC — VI — EC —



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 □ MINOR REVISION -- FHMA APPROVAL NOT REQUIRED.

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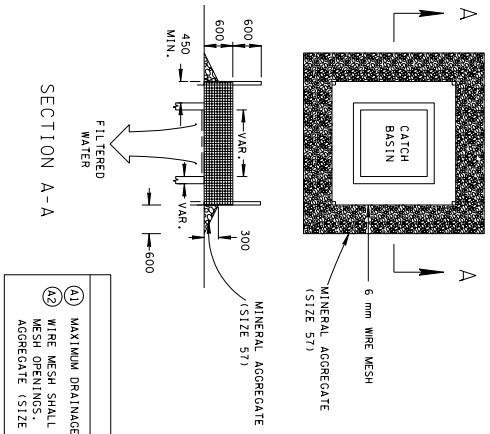
STRAW OR HAY BALE OR FABRIC TEMPORARY EROSION CHECKS

11-1-95 ECM-STR-5

TEMPORARY ROCK CATCH BASIN PROTECTION

(ITEM NO. 303M10.01)

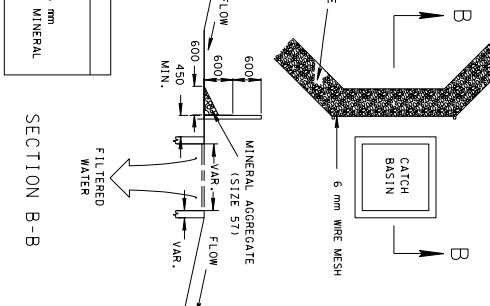
MULTI-DIRECTIONAL FLOW



GENERAL NOTES

(A1) MAXIMUM DRAINAGE AREA IS 0.4 ha.
 (A2) WIRE MESH SHALL BE HARDWARE CLOTH MIN. 1.06 mm WITH 6 mm MESH OPENINGS. COST TO BE INCLUDED IN ITEM 303M10.01 MINERAL AGGREGATE (SIZE 57).

SINGLE-DIRECTIONAL FLOW

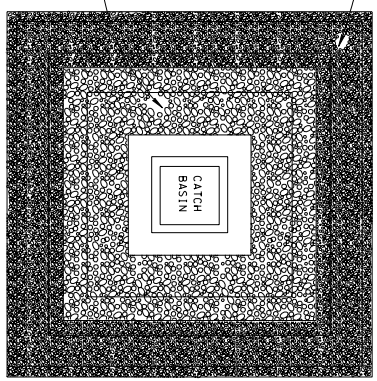


GENERAL NOTES

(A1) MAXIMUM DRAINAGE AREA IS 0.4 ha.
 (A2) WIRE MESH SHALL BE HARDWARE CLOTH MIN. 1.06 mm WITH 6 mm MESH OPENINGS. COST TO BE INCLUDED IN ITEM 303M10.01 MINERAL AGGREGATE (SIZE 57).

TEMPORARY ROCK CATCH BASIN PROTECTION

(ITEM NOS. 303M10.01, 709M05.06, & 709M05.07)



REV. 3-15-04: CHANGED LEGENDS FOR TEMPORARY ROCK AND SILT FENCE CATCH BASIN PROTECTION.

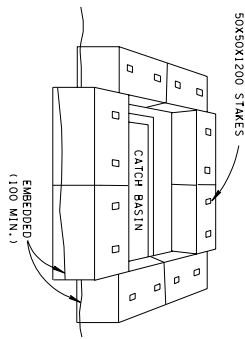
REV. 5-27-01: CHANGED ITEM NO. 303M15.01 TO 303M10.01.
 REV. 12-18-02: IN CATCH BASIN SILT FENCE SILT TRAP CHANGED TYPE OF SILT FENCE FROM SILT FENCE (WITHOUT BACKING) TO SILT FENCE (WITH BACKING) AND PAY ITEM FROM 209M08 TO 209M08.02.

EROSION CONTROL PLAN LEGEND: TEMPORARY ROCK CATCH BASIN PROTECTION (MULTI-DIRECTIONAL FLOW)

EROSION CONTROL PLAN LEGEND: TEMPORARY ROCK CATCH BASIN PROTECTION (SINGLE-DIRECTIONAL FLOW)

CATCH BASIN HAY OR STRAW BALE SILT TRAP

(ITEM NO. 209M06)



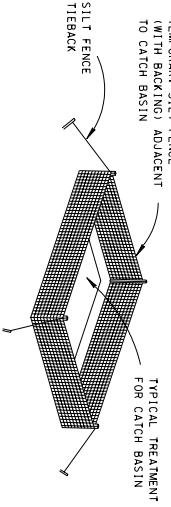
GENERAL NOTES

(B1) MAXIMUM DRAINAGE AREA IS 0.4 ha.
 (B2) HAY OR STRAW BALES ARE TO BE EMBEDDED A MINIMUM OF 100 mm INTO GROUND.

EROSION CONTROL PLAN LEGEND: HAY OR STRAW BALE SILT TRAP

CATCH BASIN SILT FENCE SILT TRAP

(ITEM NO. 209M08.02)



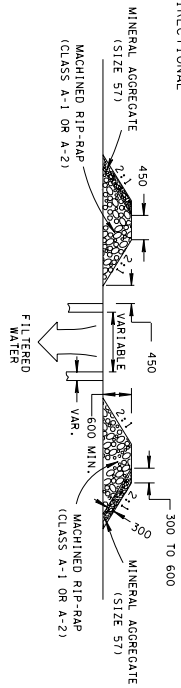
GENERAL NOTES

(C1) MAXIMUM DRAINAGE AREA IS 0.4 ha.
 (C2) SEE ECM-STR-3C FOR SILT FENCE DETAILS, GENERAL NOTES AND SPECIFICATIONS.
 (C3) CATCHBASIN SILT TRAPS WILL BE MEASURED FOR PAYMENT IN METERS OF TEMPORARY SILT FENCE (WITH BACKING).

EROSION CONTROL PLAN LEGEND: TEMPORARY CATCH BASIN SILT FENCE SILT TRAP

CATCH BASIN SILT TRAP

(ITEM NO. 209M08.02)



GENERAL NOTES

(D1) MAXIMUM DRAINAGE AREA IS 0.8 ha.

EROSION CONTROL PLAN LEGEND: TEMPORARY ROCK CATCH BASIN PROTECTION (TYPE A)

GENERAL NOTES

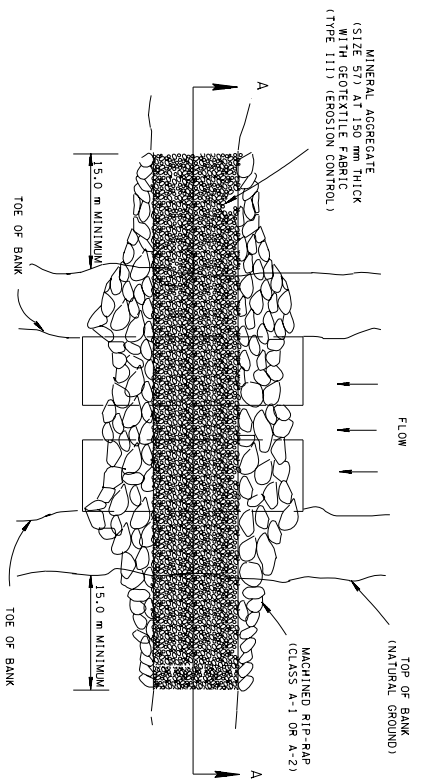
ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 MINOR REVISION -- FHMA APPROVAL NOT REQUIRED.



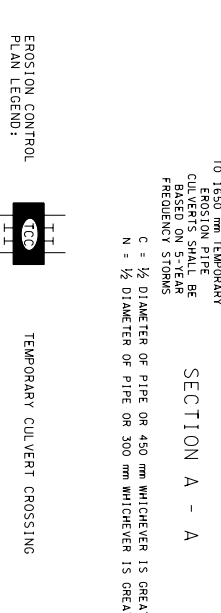
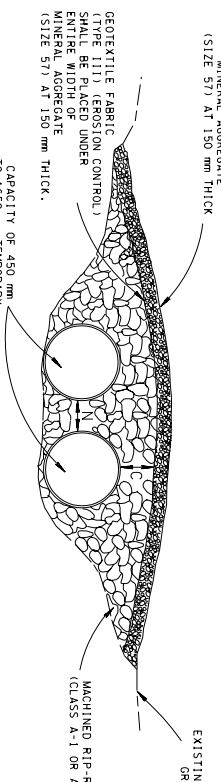
STATE OF TENNESSEE
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CATCH BASIN
 PROTECTION

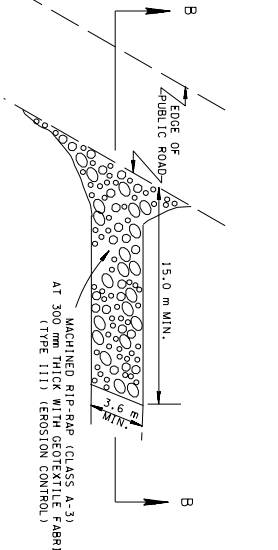
TEMPORARY CULVERT CROSSING
(ITEM NOS. 203M01, 303M10.01, 621M03.02 THRU 621M03.10, 709M05.06 & 709M05.07)



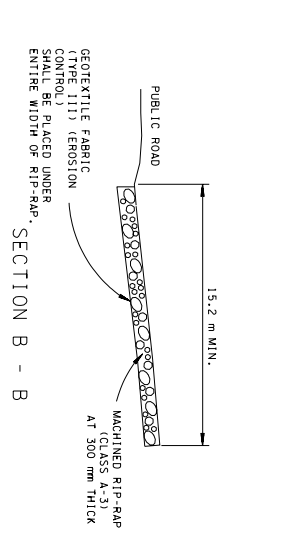
PLAN VIEW OF TEMPORARY CULVERT STREAM CROSSING



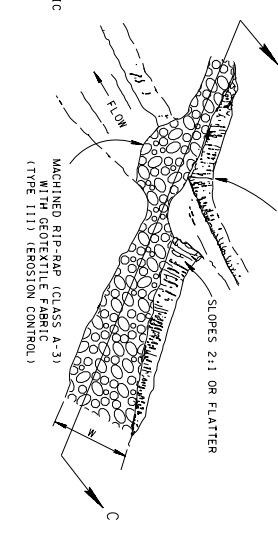
TEMPORARY CONSTRUCTION ROAD ENTRANCE AND/OR EXIT
(ITEM NOS. 203M01 & 303M10.01)



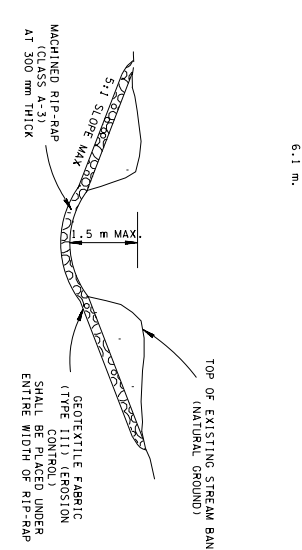
PLAN VIEW OF TEMPORARY CONSTRUCTION ROAD ENTRANCE AND/OR EXIT



TEMPORARY STABILIZED CONSTRUCTION FORD
(ITEM NOS. 203M01, 709M05.05 & 709M10.01)



PLAN VIEW OF STABILIZED CONSTRUCTION FORD



GENERAL NOTES

- 1) DIMENSIONS SHOWN ON THESE DETAILS ARE THE MINIMUM THAT WILL BE ACCEPTABLE UNLESS OTHERWISE SPECIFIED BY THE PROJECT ENGINEER.
- 2) GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS OF THE STANDARD SPECIFICATION FOR GEOTEXTILES AASHTO DESIGNATION M-288, EROSION CONTROL.
- 3) TEMPORARY CULVERT CROSSINGS SHALL CONSIST OF ONE OR MORE CULVERTS BEING 450 mm TO 1650 mm DIAMETER. TEMPORARY CULVERTS SHALL BE SIZED BASED ON A 5-YEAR FREQUENCY STORM. THE CULVERTS SHALL BE PAID FOR AS TEMPORARY DRAINAGE PIPE.
- 4) TEMPORARY CULVERT CROSSINGS SHALL BE BID UNDER THE FOLLOWING PAY ITEMS:

203M01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED) PER CUBIC METER
621M03.01	450 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.02	600 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.03	900 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.04	1200 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.05	1500 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.06	1800 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.07	1200 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.08	1350 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.09	1500 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.10	1650 mm TEMPORARY DRAINAGE PIPE PER METER
709M05.06	MACHINED RIP-RAP (CLASS A-1) PER TONNE
709M05.07	MACHINED RIP-RAP (CLASS A-2) PER TONNE
740M10.03	GEOTEXTILE (TYPE 111) (EROSION CONTROL) PER SQUARE METER

- 5) TEMPORARY CONSTRUCTION ROAD ENTRANCES AND/OR EXITS SHALL BE BUILT TO REDUCE SEDIMENT LEAVING THE CONSTRUCTION SITE SURFACE.
- 6) TEMPORARY CONSTRUCTION ROAD ENTRANCES AND/OR EXITS SHALL BE BID UNDER THE FOLLOWING PAY ITEMS:

203M01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED) PER CUBIC METER
709M05.05	MACHINED RIP-RAP (CLASS A-3) PER TONNE
740M10.03	GEOTEXTILE (TYPE 111) (EROSION CONTROL) PER SQUARE METER

- 7) TEMPORARY STABILIZED CONSTRUCTION FORDS ARE EFFECTIVE FOR INFREQUENT CROSSING OF WIDE SHALLOW CONDUCTIONS.
- 8) TEMPORARY STABILIZED CONSTRUCTION FORDS SHALL BE BID UNDER THE FOLLOWING PAY ITEMS:

203M01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED) PER CUBIC METER
709M05.05	MACHINED RIP-RAP (CLASS A-3) PER TONNE
740M10.03	GEOTEXTILE (TYPE 111) (EROSION CONTROL) PER SQUARE METER

- REV. 1-29-03: ADDED GEOTEXTILE FABRIC TO TEMPORARY CULVERT CROSSING AND CHANGED MINERAL AGGREGATE TO CLASS 57 RIP-RAP IN TEMPORARY CONSTRUCTION ROAD ENTRANCE DETAIL. CHANGED GENERAL NOTES 1 AND 2.
- REV. 12-18-02: CHANGED GENERAL NOTE 1.
- REV. 1-22-03: CORRECTED GENERAL NOTE 1.
- REV. 11-1-95: CHANGED TO METRIC.
- REV. 5-27-01: CHANGED ITEM NO. 303M10.01 TO 303M10.01 AND CHANGED 621M03.02 TO 621M03.10, AND 709M05.05 TO 709M05.07.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

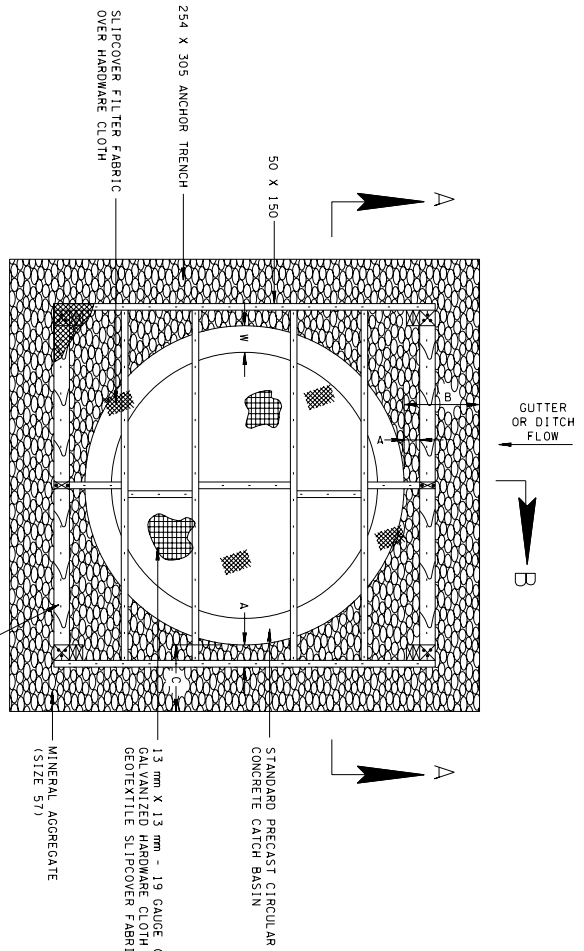
MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

TEMPORARY ROAD STABILIZATION AND TEMPORARY CULVERT CROSSING

11-1-95 ECM-STR-25

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.

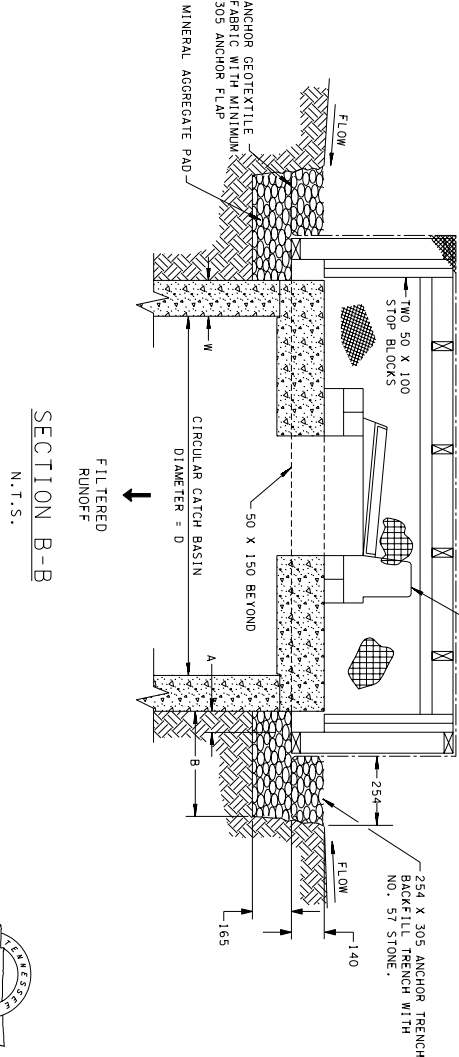
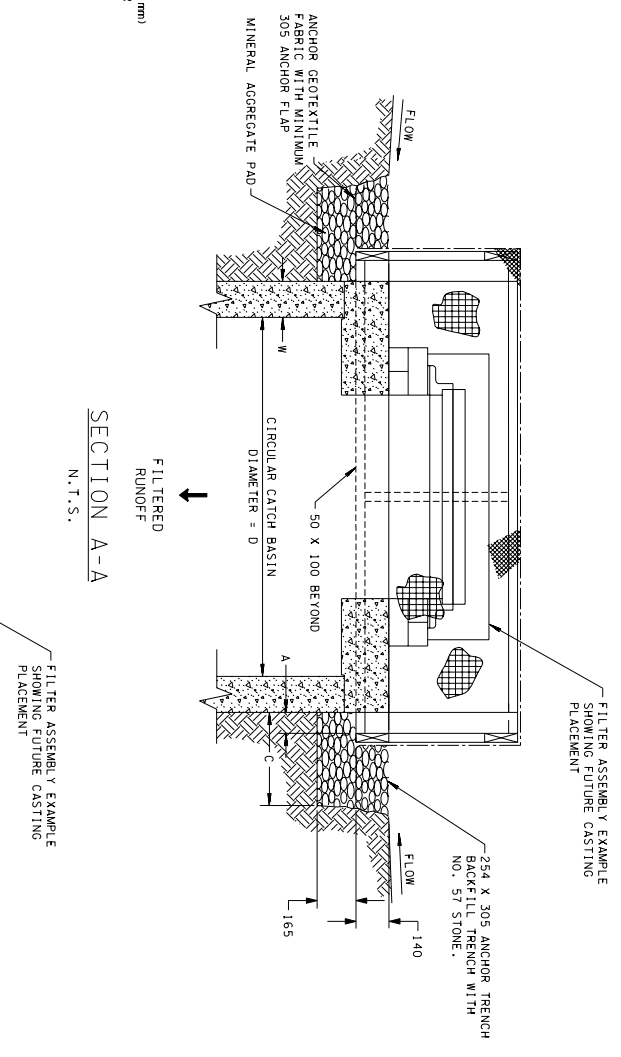


1524 mm DIAMETER CIRCULAR STRUCTURE WITH CORRESPONDING TYPE 3 CATCH BASIN FILTER ASSEMBLY SHOWN ON THIS SHEET FOR REFERENCE PURPOSES - FOR OTHER SIZES - SEE APPLICABLE STANDARD DRAWINGS.

PLAN VIEW - CATCH BASIN FILTER ASSEMBLY
N.T.S.

CIRCULAR CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

- (A) DRAWING TO BE USED WITH STANDARD PRECAST CIRCULAR CATCH BASINS. SEE CM-CB-SERIES STANDARD DRAWINGS FOR CIRCULAR CATCH BASIN DIMENSIONS AND DETAILS.
- (B) THE INLET AND FILTER ASSEMBLY SHOWN ON THIS STANDARD DRAWING ARE REPRESENTATIVE OF NEW REGULUS-STANDARD SERIES OF PRECAST CIRCULAR STRUCTURES REGARDING FRAMING, SPECIFICATIONS, OR SLIPCOVER FABRICATION, SEE THE APPLICABLE STANDARD DRAWING REFERENCED IN THE TABLE ON THIS SHEET.
- (C) PAYMENT FOR CATCH BASIN FILTER ASSEMBLY FOR CIRCULAR STRUCTURES WILL BE MADE UNDER THE ITEM NUMBER LISTED ON THE APPLICABLE STANDARD DRAWING REFERENCED IN THE TABLE ON THIS SHEET.



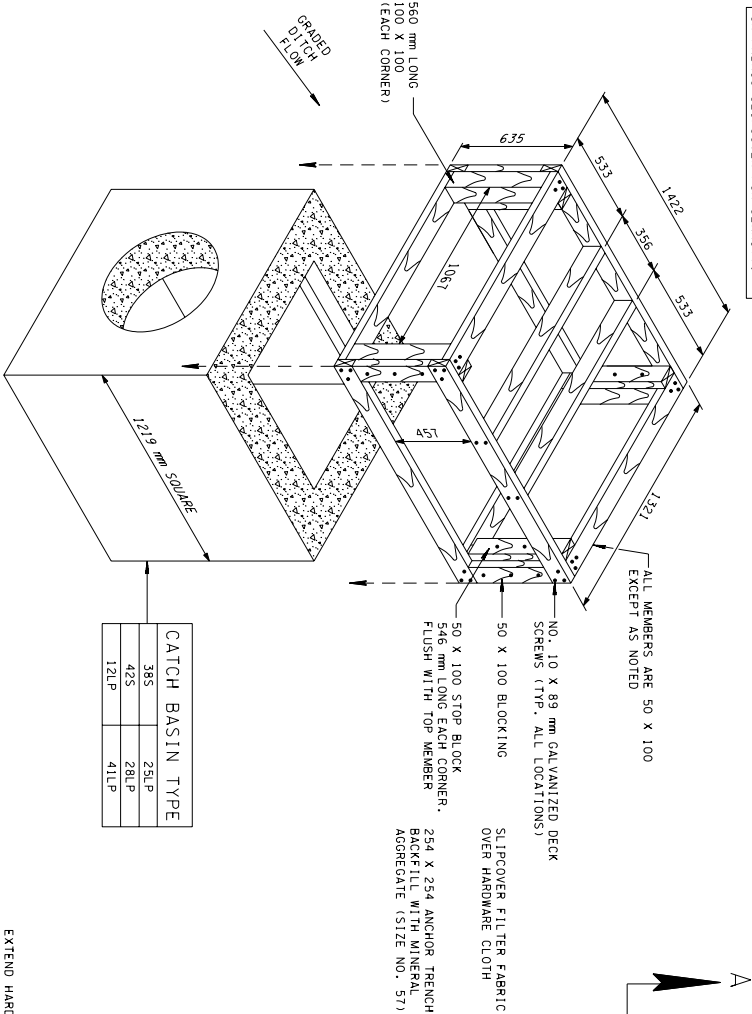
CIRCULAR STRUCTURE DIMENSION TABLE

INSIDE DIA. OF CATCH BASIN D (mm)	WALL THICKNESS W (mm)	CATCH BASIN FILTER ASSEMBLY TYPE	APPLICABLE STANDARD DRAWINGS	DIMENSION		
				A (mm)	B (mm)	C (mm)
1219	127	2	ECM-STR-42 & 42A	89	432	381
1524	152	3	ECM-STR-43 & 43A	102	444	394
1828	178	4	ECM-STR-44 & 44A	203	546	495
2134	203	4	ECM-STR-44 & 44A	25	368	318
2438	229	5	ECM-STR-45 & 45A	203	546	495
2743	254	5	ECM-STR-45 & 45A	25	368	318

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 STATE OF TEXAS
 DEPARTMENT OF TRANSPORTATION
 CATCH BASIN FILTER ASSEMBLY FOR CIRCULAR STRUCTURES
 4-15-04 ECM-STR-40



FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



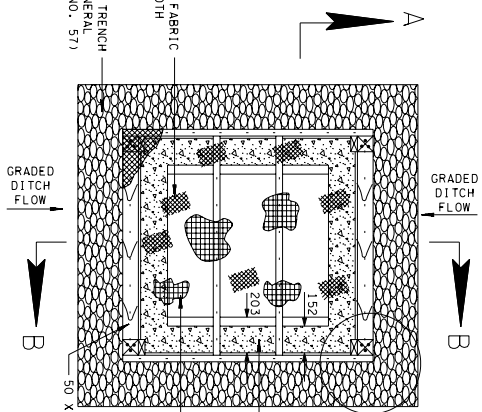
ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.

EROSION CONTROL PLAN LEGEND:

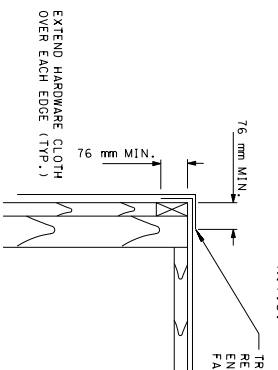


1 CATCH BASIN FILTER ASSEMBLY (TYPE 1)

CATCH BASIN TYPE	38S	28LP	42S	28LP	41LP



PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY
N.T.S.



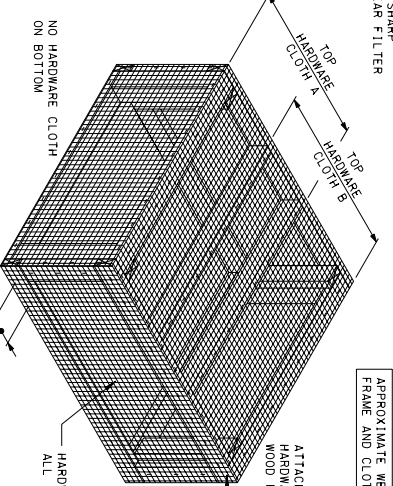
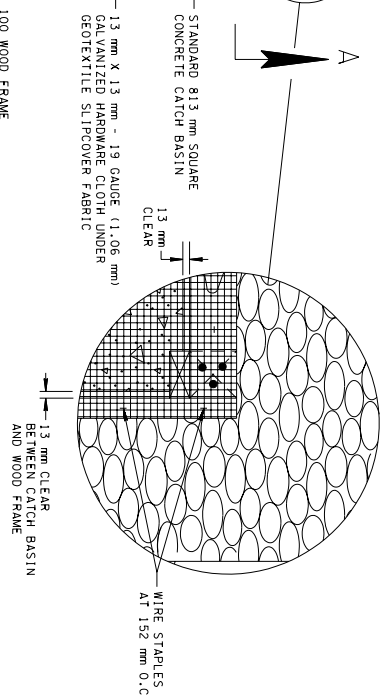
HARDWARE CLOTH
OVERLAP DETAIL
N.T.S.

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)

- E DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY TO INSURE PROPER FUNCTIONING OF FILTER ASSEMBLY. REUSE OF ASSEMBLIES IS ACCEPTABLE PROVIDED THE UNIT IS IN PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY TROT ENGINEER.
- F ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED ON OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. REUSE OF ASSEMBLY AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
- G IF NECESSARY, AT DIRECTION OF TROT ENGINEER, SLIPCOVER MAY BE SECURED OR OTHER SUITABLE MATERIAL.
- H WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING FLOWS ARE ANTICIPATED, STABILIZATION OF SOILS, VEGETATION, EROSION CONTROL, ETC. OTHER EROSION PREVENTION AND SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- I ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 29M40.41, CATCH BASIN FILTER ASSEMBLY (TYPE 1), PER EACH.

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

- A DRAWING TO BE USED WITH STANDARD TYPES 38S, 42S, AND DM-CB-SERIES LP CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
- B THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (e.g., DITCHES AND SMALLER) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
- C 50 X 100 AND 100 X 100 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 38 mm X 89 mm AND 89 mm X 89 mm RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD MAY VARY EVEN GREATER DEPENDING ON MOISTURE CONTENT. ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
- D PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO MAINTAIN OPERATIONAL EFFICIENCY. THE STRUCTURE SHOULD BE CLEANED AT AN ACCEPTABLE LOCATION WITH WATER OR BY BRUSHING AND STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH
N.T.S.

APPROXIMATE WEIGHT OF FRAME AND CLOTH = 4.5 KG

INSTALLATION SEQUENCE FOR HARDWARE CLOTH

- 1 INSTALL TOP HARDWARE CLOTH A. PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM SHARP EDGES.
- 2 INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- 3 INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTOUR OF FRAME AS GUIDE. PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
- 4 TRIM EXCESS ALONG BOTTOM AS NECESSARY.

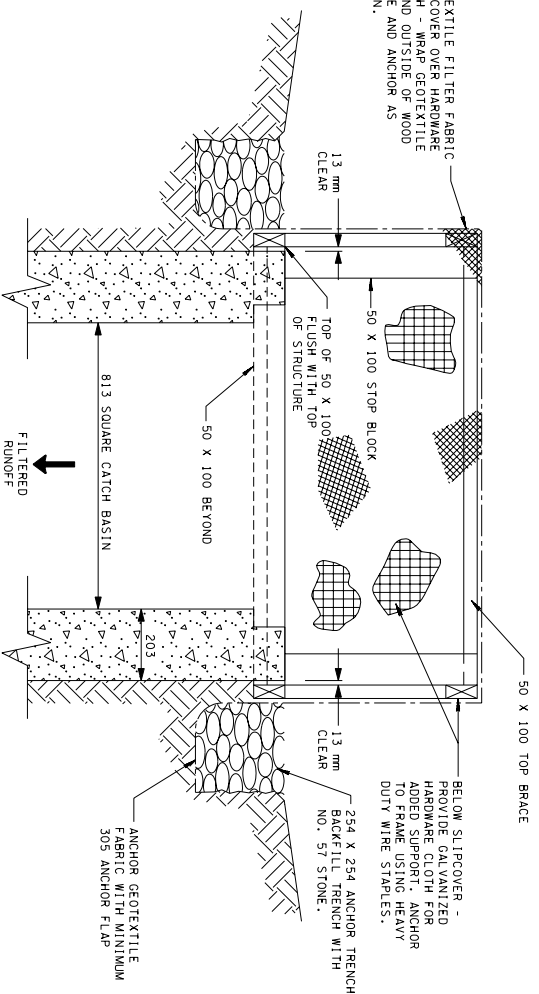


ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

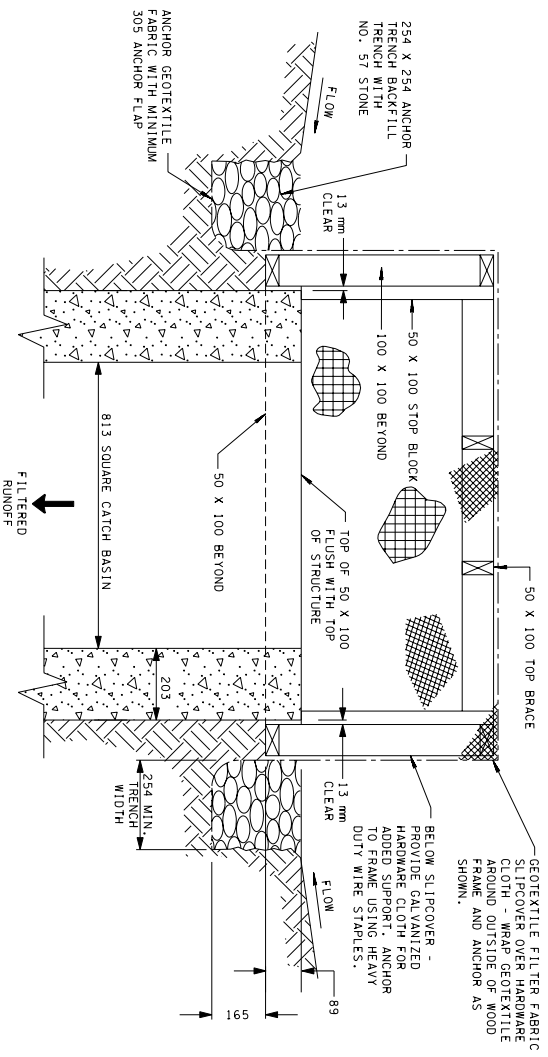
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 1)

GEOTEXTILE FILTER FABRIC SLIPCOVER OVER HARDWARE CLOTH - WRAP GEOTEXTILE AROUND OUTSIDE OF WOOD FRAME AND ANCHOR AS SHOWN.



SECTION A-A
N.T.S.



SECTION B-B
N.T.S.

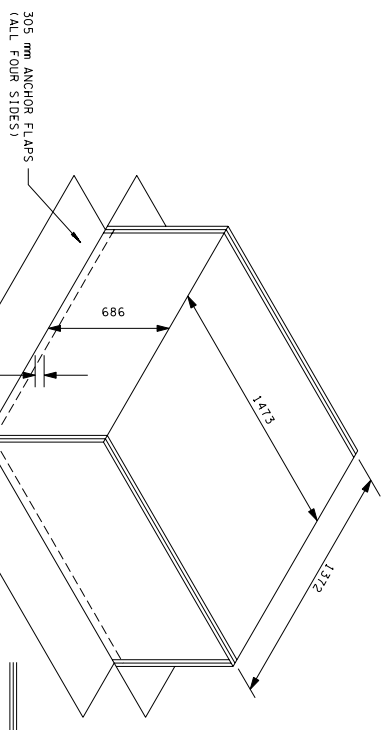
EROSION CONTROL PLAN LEGEND: CATCH BASIN FILTER ASSEMBLY (TYPE 1)

SLIPCOVER FILTER SPECIFICATIONS

FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARRS)
GRAB TENSILE STRENGTH	ASTM D4632	≥82 kg
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥2275 kPa
PUNCTURE STRENGTH	ASTM D4833	≥48 kg
TRAPEZOIDAL TEAR	ASTM D4533	≥34 kg
APPARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO 0.180 mm STANDARD SIEVE
PERMEABILITY	ASTM D4491	≥0.003 m/s
PERMITTIVITY	ASTM D4491	≥1.5 SEC ⁻¹
WATER FLUX	ASTM D4491	≥4480 L/MIN/M ²
UV RESISTANCE	ASTM D4355	≥70% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 0.203 kg/m ²

HARDWARE CLOTH SPECIFICATIONS

STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	13 mm X 13 mm
WIRE SIZE	19 GAUGE (1.06 mm)
WIRE DIAMETER	1 mm
WEIGHT	1.0 kg/m ²
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC



GEOTEXTILE SLIPCOVER FABRICATION
N.T.S.

FABRICATION SPECIFICATIONS:

1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 63 KG) WITH MINIMUM OF SIX STITCHES PER EVERY 25 MILLIMETERS.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 13 mm FROM HEAT-CUT FABRIC EDGES.



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

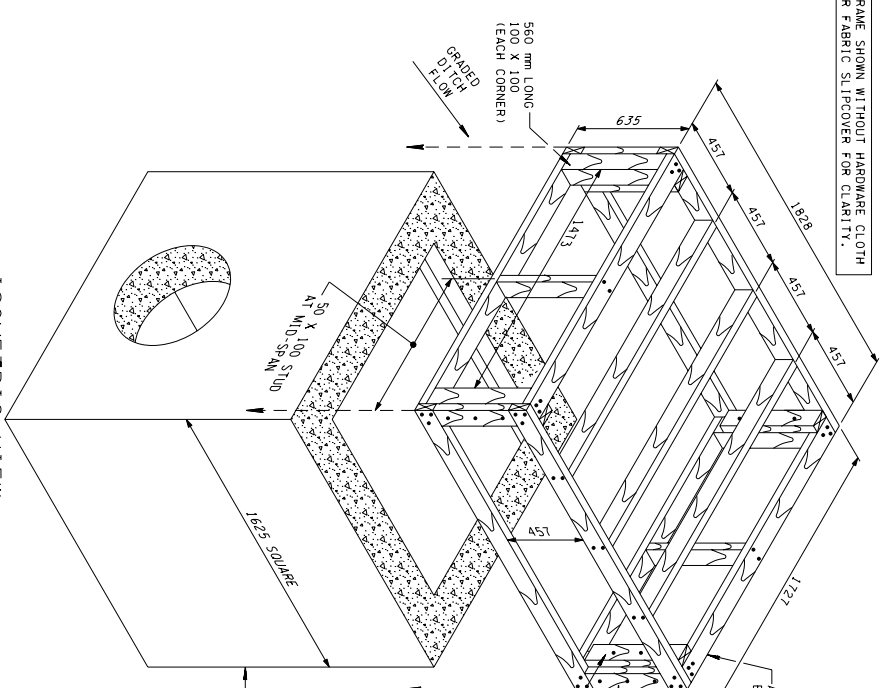
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 1)

SLIPCOVER DETAILS

4-15-04 ECM-STR-41A

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.

EROSION CONTROL PLAN LEGEND:



2 CATCH BASIN FILTER ASSEMBLY (TYPE 2)
N.T.S.

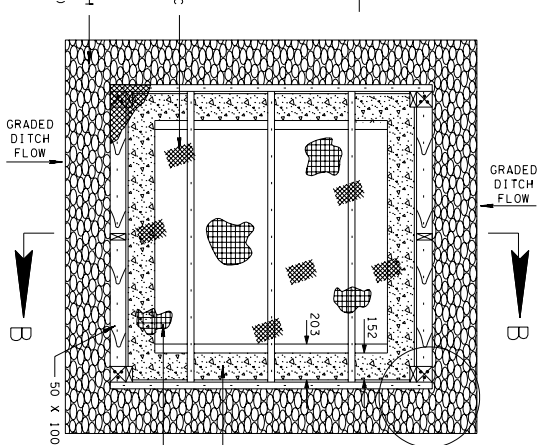
CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

- A DRAWING TO BE USED WITH STANDARD TYPE 395 AND DM-CB-SERIES SB CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
- B THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (E.G., DITCHES AND SWALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
- C 50 X 100 AND 100 X 100 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 38 mm X 89 mm AND 89 mm X 89 mm RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD MAY VARY EVEN TREATED SOUTHERN YELLOW PINE.
- D PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY MAY BE CLEANED AT AN ACCEPTABLE LOCATION WITH WATER OR BY BRUSHING AND BLOWING CLEAN WITH COMPRESSED AIR. MAINTENANCE AND CLEANING OF STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.

ALL MEMBERS ARE 50 X 100 EXCEPT AS NOTED

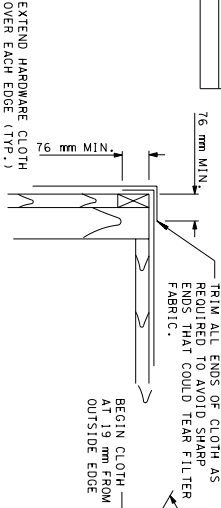
CATCH BASIN TYPE	395	385B	105B	415B	125B	425B	255B

- NO. 10 X 89 mm GALVANIZED DECK SCREWS (TYP. ALL LOCATIONS)
- 50 X 100 BLOCKING
- 50 X 100 STOP BLOCK
- 546 mm LONG EACH CORNER. FLUSH WITH TOP MEMBER
- SLIPCOVER FILTER FABRIC OVER HARDWARE CLOTH
- 254 X 254 ANCHOR TRENCH BACKFILL WITH MINERAL AGGREGATE (SIZE NO. 57)



PLAN VIEW - CATCH BASIN FILTER ASSEMBLY
N.T.S.

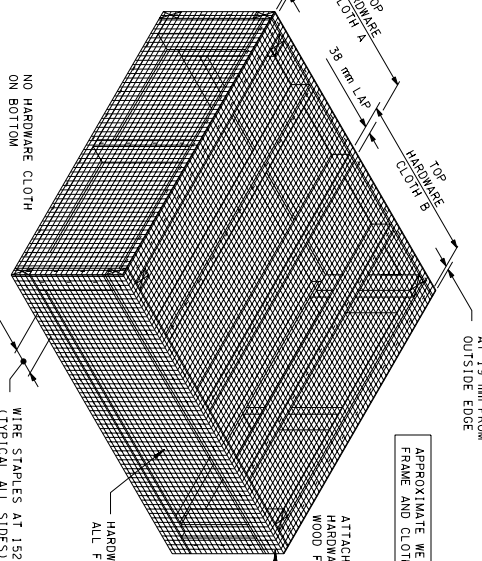
HARDWARE CLOTH OVERLAP DETAIL
N.T.S.



CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)

- E DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY TO INSURE PROPER FUNCTIONING OF FILTER ASSEMBLY. REUSE OF ASSEMBLIES IS ACCEPTABLE PROVIDED THE JOINTS FIT IN PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY TDD ENGINEER.
- F ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED OR OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. BACKFILL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
- G IF NECESSARY, AT DIRECTION OF TDD ENGINEER, SLIPCOVER MAY BE SECURED OR OTHER SUITABLE MATERIAL.
- H WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, DITCH GRADE, ETC., OTHER EROSION PREVENTION AND SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- I ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE REMOVAL (TYPE 2), PER EACH.

ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH
N.T.S.



INSTALLATION SEQUENCE FOR HARDWARE CLOTH

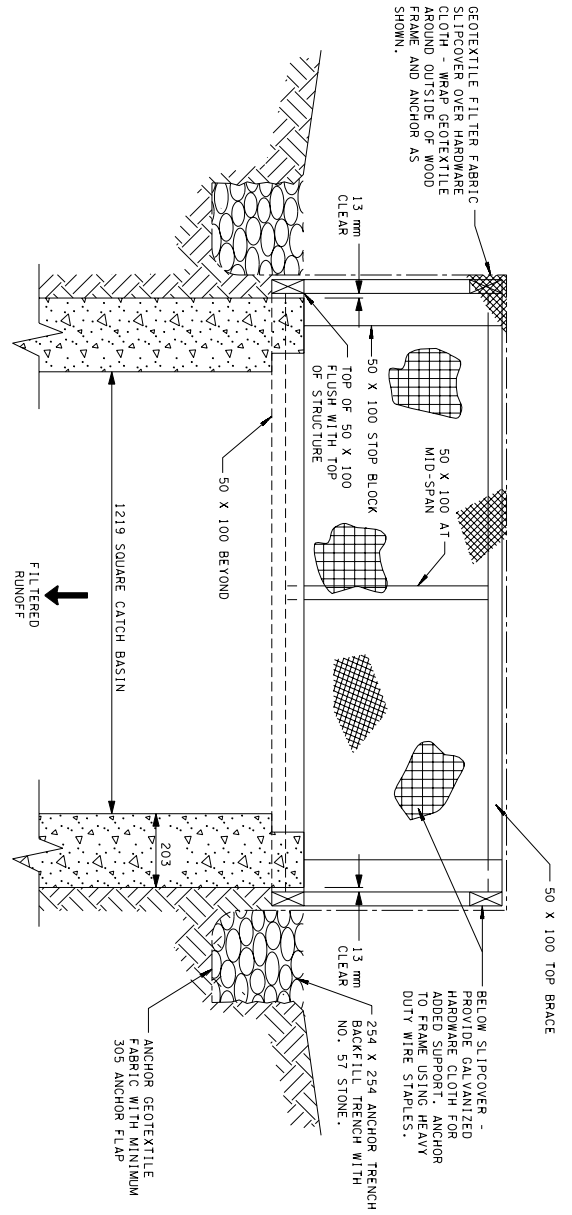
- 1 INSTALL TOP HARDWARE CLOTH A. PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM SHARP EDGES.
- 2 INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A AT CENTER TOP BRACE. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- 3 INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH THE SUBSEQUENT SIDES.
- 4 TRIM EXCESS ALONG BOTTOM AS NECESSARY.



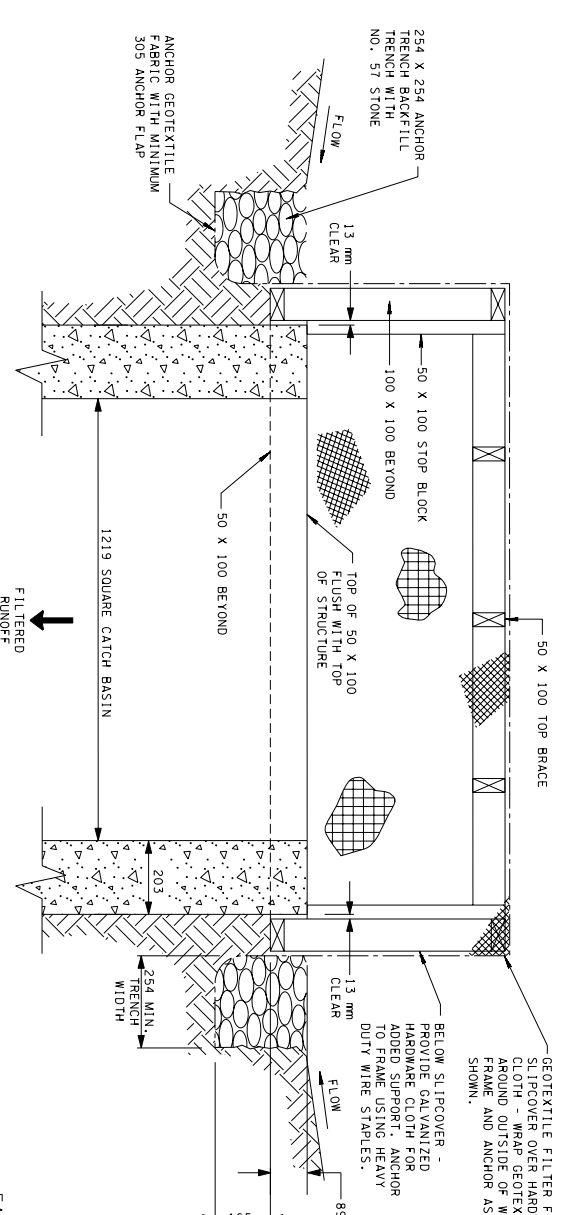
ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 2)
4-15-04 ECM-STR-42



SECTION A-A
N.T.S.

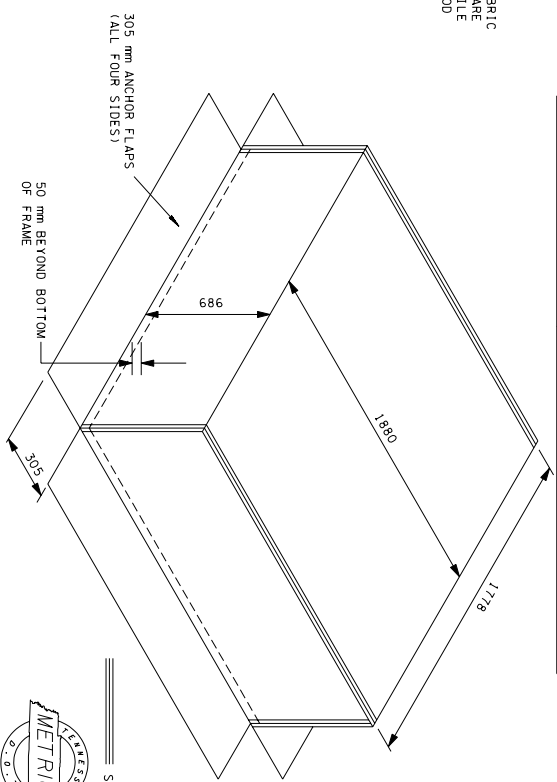


SECTION B-B
N.T.S.

EROSION CONTROL PLAN LEGEND: CATCH BASIN FILTER ASSEMBLY (TYPE 2)

SLIPCOVER FILTER SPECIFICATIONS	
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE	
FABRIC PROPERTY	ASTM TEST METHOD
GRAB TENSILE STRENGTH	ASTM D4632
GRAB ELONGATION	ASTM D4632
MILLEN BURST	ASTM D3786
PUNCTURE STRENGTH	ASTM D4833
TRAPEZOIDAL TEAR	ASTM D4533
APPEARANT OPENING SIZE (AOS)	ASTM D4751
PERMEABILITY	ASTM D4491
PERMITTIVITY	ASTM D4491
WATER FLUX	ASTM D4491
UV RESISTANCE	ASTM D4355
WEIGHT	ASTM D3776

HARDWARE CLOTH SPECIFICATIONS	
STANDARD SPECIFICATION	MINIMUM AVERAGE ROLL VALUES (MARV'S)
ASTM A740	282 kg
13 mm X 13 mm	250%
19 GAUGE (1.06 mm)	22275 kPa
WIRE SIZE	248 kg
WIRE DIAMETER	234 kg
1 mm	FINER THAN OR EQUAL TO 0.180 mm STANDARD SIEVE
1.0 kg/m ²	20.003 m/s
LOW CARBON STEEL (C1008)	21.5 SEC ⁻¹
WELODED HOT GALVANIZED STEEL WIRE FABRIC	24480 L/MIN/M ²
	2700 AT 500 HOURS
	MINIMUM 0.203 kg/m ²



GEOTEXTILE SLIPCOVER FABRICATION
N.T.S.

FABRICATION SPECIFICATIONS:

1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 63 KG) WITH MINIMUM OF SIX STITCHES PER EVERY 25 MILLIMETERS.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 13 mm FROM HEAT-CUT FABRIC EDGES.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 2)

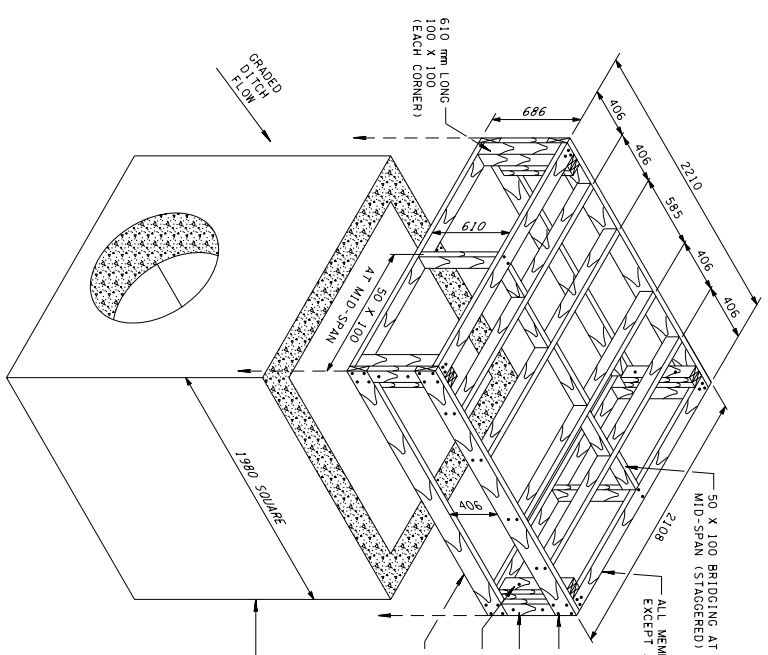
SLIPCOVER DETAILS

4-15-04 ECM-STR-42A

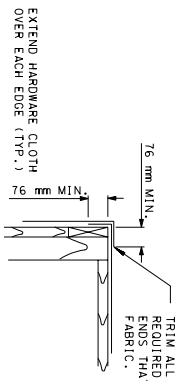


ALL UNITS ARE IN MILLIMETERS
UNLESS NOTED OTHERWISE.

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



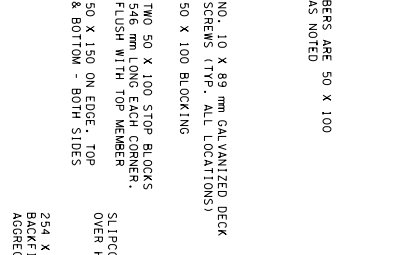
CATCH BASIN TYPE	
123C	413C
253C	423C
383C	513C
393C	



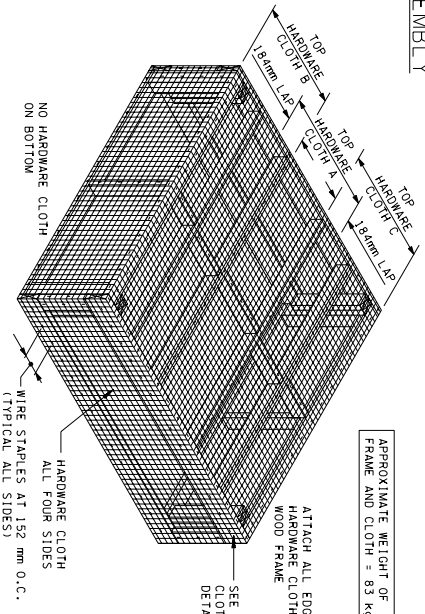
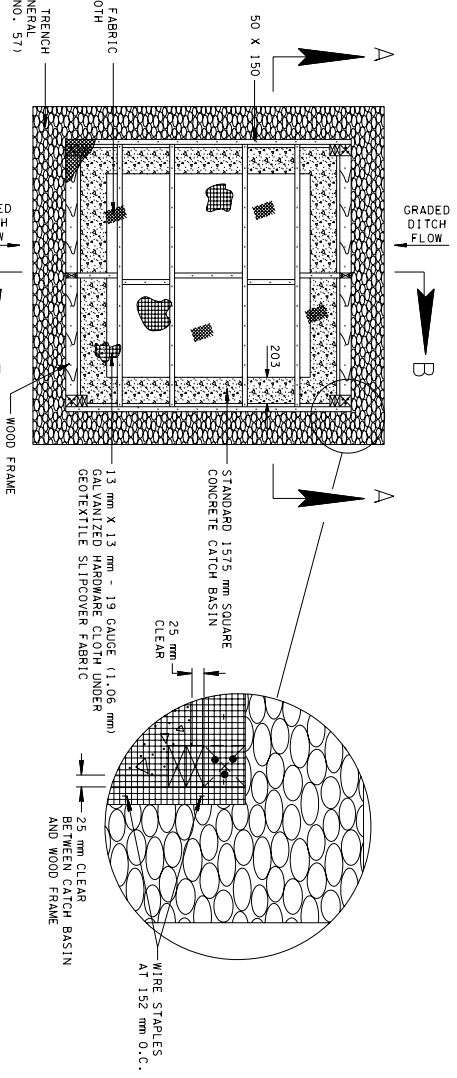
ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.

EROSION CONTROL PLAN LEGEND: CATCH BASIN FILTER ASSEMBLY (TYPE 3)

- CATCH BASIN FILTER ASSEMBLY GENERAL NOTES**
- A DRAWING TO BE USED WITH STANDARD TYPE DM-CB-SERIES SC CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
 - B THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (e.g., DITCHES AND SNALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
 - C 50 x 100, 50 x 150, AND 100 x 100 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 38 mm x 89 mm, 38 mm x 140 mm, AND 89 mm x 89 mm, RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD MAY VARY EVEN GREATER DEPENDING ON MOISTURE CONTENT.
 - D PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY MAY BE CLEANED AT AN ACCEPTABLE LOCATION WITH WATER OR BY BRUSHING AND BLOWING CLEAN WITH AN ACCEPTABLE AIR. MAINTENANCE AND CLEANING OF STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.
 - E APPROPRIATE SIZING AND LOCATION OF LETTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR TO ASSURE BALANCED HANDLING DURING INSTALLATION AND REMOVAL OF THE FILTER ASSEMBLY.



PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY
N.T.S.

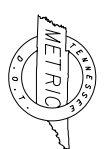


ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH
N.T.S.

- CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)**
- F DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY TO INSURE PROPER FUNCTIONING OF FILTER ASSEMBLY. REUSE OF ASSEMBLY IS ACCEPTABLE PROVIDED THE UNIT IS IN PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY TOOT ENGINEER.
 - G ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS ESTABLISHED. STAPLES AND WIRE SHALL BE REMOVED AFTER REMOVAL OF BACKFILL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
 - H IF NECESSARY, AT DIRECTION OF TOOT ENGINEER, SLIPCOVER MAY BE SECURED IN PLACE AT THE LOWEST PRACTICAL POINT WITH NYLON STRIPING, TWINE, WIRE OR OTHER SUITABLE MATERIAL.
 - I WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, DITCH GRADE, ETC... OTHER EROSION PREVENTION AND SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
 - J ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY AND PERMANENT STRUCTURES SHALL BE PAID FOR UNDER ITEM NUMBER 20940-43, CATCH BASIN FILTER ASSEMBLY (TYPE 3), PER EACH.

INSTALLATION SEQUENCE FOR HARDWARE CLOTH

- 1 INSTALL TOP HARDWARE CLOTH A - PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM SHARP EDGES.
- 2 INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A AT SECOND TOP AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE AT SAME CORNER, BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
- 3 INSTALL TOP HARDWARE CLOTH C - OVERLAPPING CLOTH A AT THIRD TOP AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE AT SAME CORNER, BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
- 4 TRIM ALL SHARP EDGES.
- 5 INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
- 6 TRIM EXCESS ALONG BOTTOM AS NECESSARY.



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 3)

4-15-04 ECM-STR-43

SLIPCOVER OVER HARDWARE
FABRIC TO BE PLACED
AROUND OUTSIDE OF WOOD
FRAME AND ANCHOR AS
SHOWN.

254 X 305 ANCHOR TRENCH WITH
MINIMUM 305 ANCHOR FLAP

25 mm CLEAR

1575 SQUARE CATCH BASIN

50 X 100 BRIDGING

50 X 100 AT
TOP OF 50 X 150
FLUSH WITH TOP
OF STRUCTURE

50 X 100 STOP BLOCKS
MID-SPAN

175 SQUARE CATCH BASIN

50 X 100 BEYOND

203

254 X 305 ANCHOR TRENCH WITH
MINIMUM 305 ANCHOR FLAP

25 mm CLEAR

BELOW SLIPCOVER -
PROVIDE GALVANIZED
HARDWARE CLOTH FOR
ADDED SUPPORT. ANCHOR
DUTY WIRE STAPLES.

50 X 100 TOP BRACE

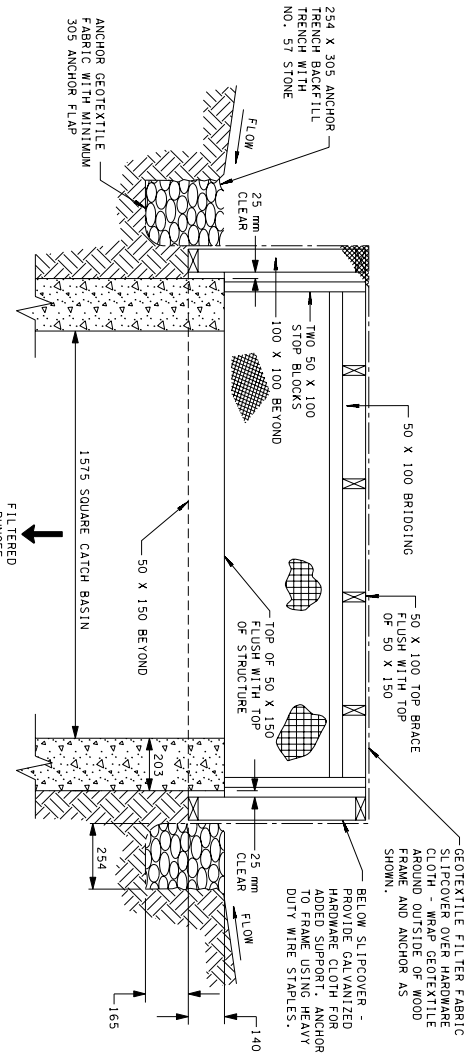
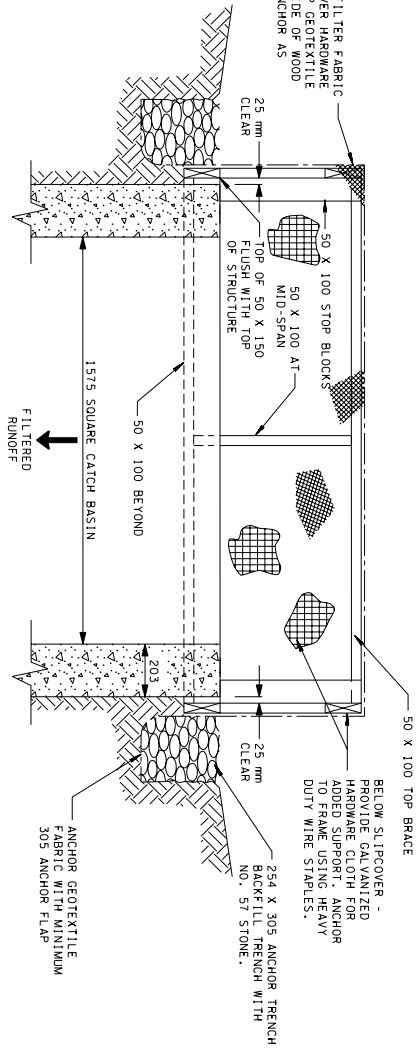
254 X 305 ANCHOR TRENCH WITH
MINIMUM 305 ANCHOR FLAP

25 mm CLEAR

GEOTEXTILE FILTER FABRIC
SLIPCOVER OVER HARDWARE
CLOTH - WRAP GEOTEXTILE
AROUND OUTSIDE OF WOOD
FRAME AND ANCHOR AS
SHOWN.

SECTION A-A

N.T.S.

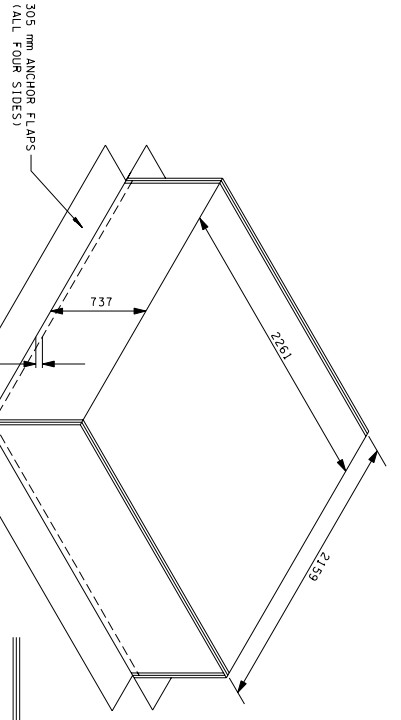


SECTION B-B

N.T.S.

EROSION CONTROL PLAN LEGEND:
[Symbol] CATCH BASIN FILTER ASSEMBLY (TYPE 3)

SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-MOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARV'S)
GRAB TENSILE STRENGTH	ASTM D4632	282 KG
GRAB ELONGATION	ASTM D4632	250%
MULLEN BURST	ASTM D3786	2275 kPa
PUNCTURE STRENGTH	ASTM D4833	248 KG
TRIANGULAR TEAR	ASTM D4533	234 KG
APPARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO 0.180 mm STANDARD SIEVE
PERMEABILITY	ASTM D4491	>0.003 m/s
PERMITTIVITY	ASTM D4491	>1.5 sec ⁻¹
WATER FLUX	ASTM D4491	>4480 L/MIN/M ²
UV RESISTANCE	ASTM D4355	>70% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 0.203 kg/m ²
HARDWARE CLOTH SPECIFICATIONS		
STANDARD SPECIFICATION	ASTM A1740	
OPENING SIZE	13 mm X 13 mm	
WIRE SIZE	19 GAUGE (1.06 mm)	
WIRE DIAMETER	1 mm	
WEIGHT	1.0 kg/m ²	
GRADE	LOW CARBON STEEL (C1008)	
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC	



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

FABRICATION SPECIFICATIONS:

- 1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
- 2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 63 KG) WITH MINIMUM OF SIX STITCHES PER EVERY 25 MILLIMETERS.
- 3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 13 mm FROM HEAT-CUT FABRIC EDGES.



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

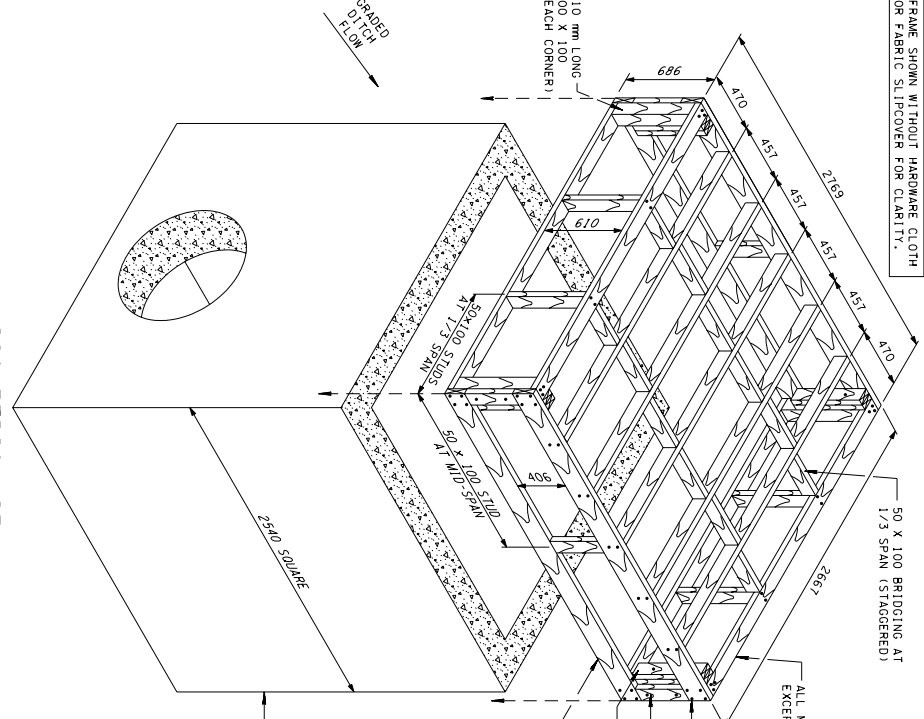
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 3)

SLIPCOVER DETAILS

4-15-04 ECM-STR-43A

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.

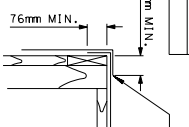
EROSION CONTROL PLAN LEGEND:



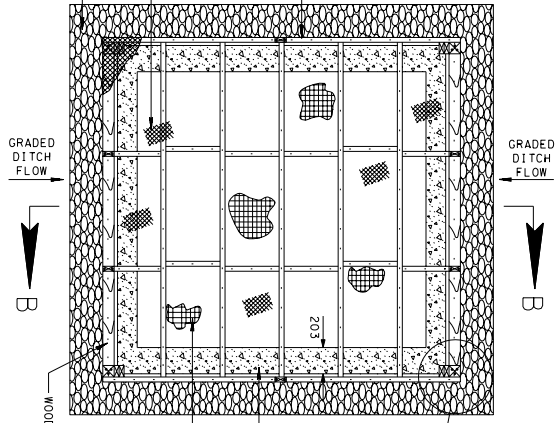
CATCH BASIN FILTER ASSEMBLY (TYPE 4)

CATCH BASIN TYPE	1250	4150
2550	4250	
3150	5150	
3950		

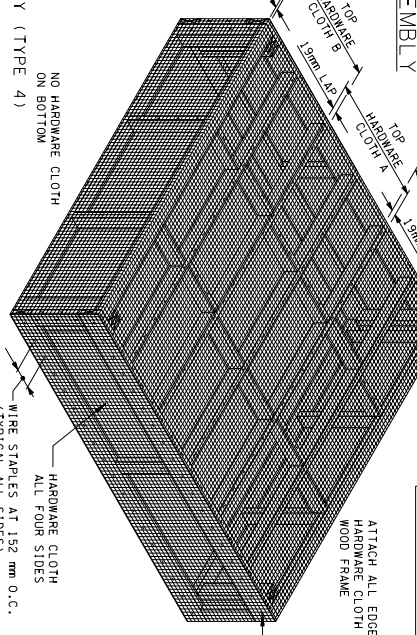
HARDWARE CLOTH OVERLAP DETAIL
N.T.S.



PLAN VIEW - CATCH BASIN FILTER ASSEMBLY
N.T.S.



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH
N.T.S.



INSTALLATION SEQUENCE FOR HARDWARE CLOTH
N.T.S.

INSTALL TOP HARDWARE CLOTH A ACROSS CENTER OF FRAME. PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM SHARP EDGES.

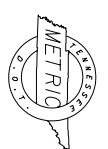
INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A AT SECOND TOP BRACE. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.

INSTALL TOP HARDWARE CLOTH C - OVERLAPPING CLOTH A AT FOURTH TOP BRACE. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.

INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.

TRIM EXCESS ALONG BOTTOM AS NECESSARY.

ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 4)

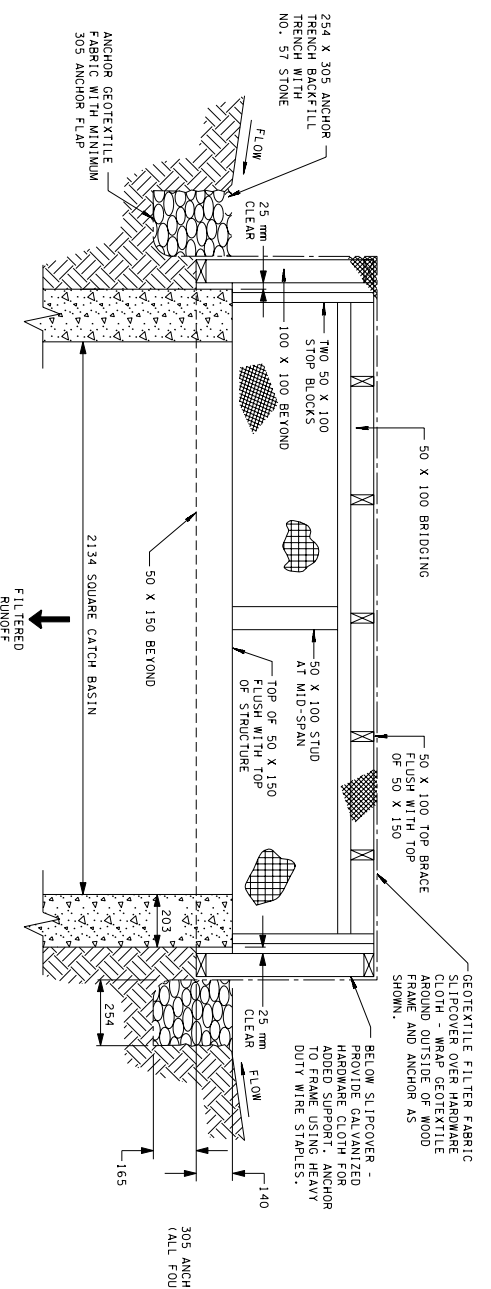
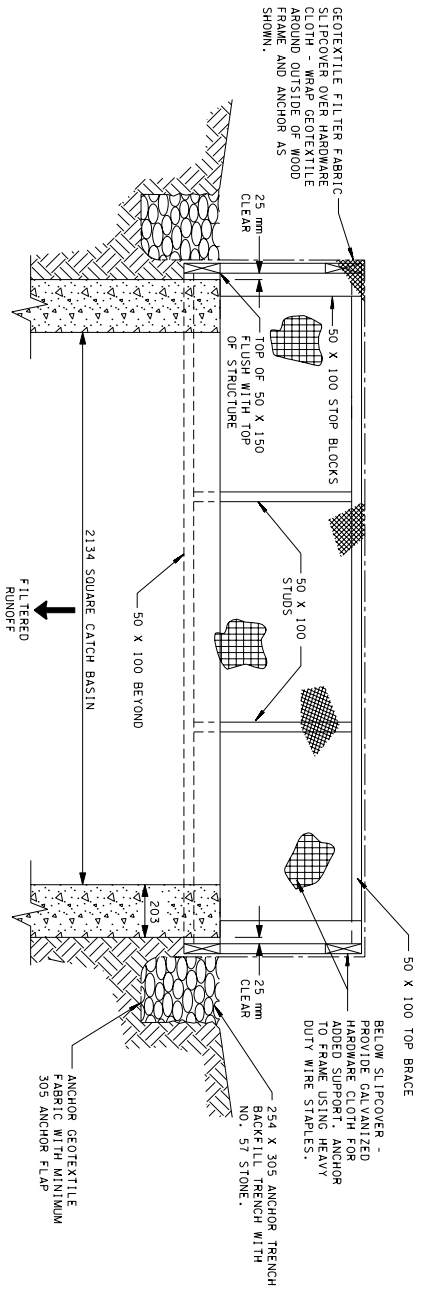
4-15-04 ECM-STR-44

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)

- F DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY TO INSURE PROPER FUNCTIONING OF FILTER ASSEMBLY. REUSE OF ASSEMBLIES IS ACCEPTABLE PROVIDED THE UNIT IS IN PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY TOOT ENGINEER.
- G ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED ON OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. BACKFILL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
- H IF NECESSARY, AT DIRECTION OF TOOT ENGINEER, SLIPCOVER MAY BE SECURED IN PLACE AT THE LOWEST PRACTICAL POINT WITH NYLON STRING, TWINE, WIRE OR OTHER SUITABLE MATERIAL.
- I WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING FLOWS ARE ENCOUNTERED, THE TOOT ENGINEER SHALL BE NOTIFIED. OTHER EROSION CONTROL DEVICES, SUCH AS SPINNING LOGS, MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- J ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209M04.44, CATCH BASIN FILTER ASSEMBLY (TYPE 4), PER EACH.

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

- A DRAWING TO BE USED WITH STANDARD TYPE DM-CB-SERIES 50 CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
- B THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (E.G., DITCHES AND SMALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
- C 50 X 100, 50 X 150, AND 100 X 100 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS - TYPICAL ACTUAL DIMENSIONS ARE 38 mm X 89 mm, 50 mm X 125 mm, AND 100 mm X 100 mm, RESPECTIVELY. DIMENSIONS OF ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
- D PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY SHALL BE CLEANED WITH COMPRESSIBLE AIR. MAINTENANCE AND CLEANING AND REPAIRS WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.
- E APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR TO ASSURE BALANCED HANDLING DURING INSTALLATION AND REMOVAL OF THE FILTER ASSEMBLY.



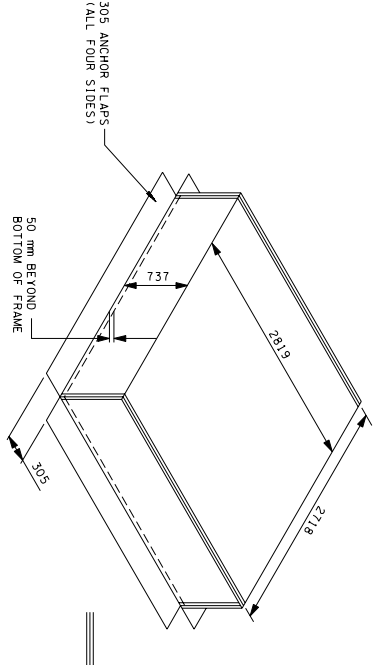
SLIPCOVER FILTER SPECIFICATIONS

FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE

FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MAYV'S)
GRAB TENSILE STRENGTH	ASTM D4632	≥282 kg
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥2275 kPa
PUNCTURE STRENGTH	ASTM D4833	≥48 kg
TRAPEZOIDAL TEAR	ASTM D4533	≥34 kg
APPARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO 0.180 mm STANDARD SIEVE
PERMEABILITY	ASTM D4491	≥0.003 m/s
PERMITTIVITY	ASTM D4491	≥1.5 SEC-1
WATER FLUX	ASTM D4491	≥4480 L/MIN/M ²
UV RESISTANCE	ASTM D4355	≥70% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 0.203 kg/m ²

HARDWARE CLOTH SPECIFICATIONS

STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	13 mm X 13 mm
WIRE SIZE	19 GAUGE (1.06 mm)
WIRE DIAMETER	1 mm
WEIGHT	1.0 kg/m ²
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC



EROSION CONTROL PLAN LEGEND: 4 CATCH BASIN FILTER ASSEMBLY (TYPE 4)

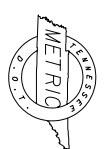
- FABRICATION SPECIFICATIONS:**
1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
 2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 63 kg) WITH MINIMUM OF SIX STITCHES PER EVERY 25 MILLIMETERS.
 3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 13 mm FROM HEAT-CUT FABRIC EDGES.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

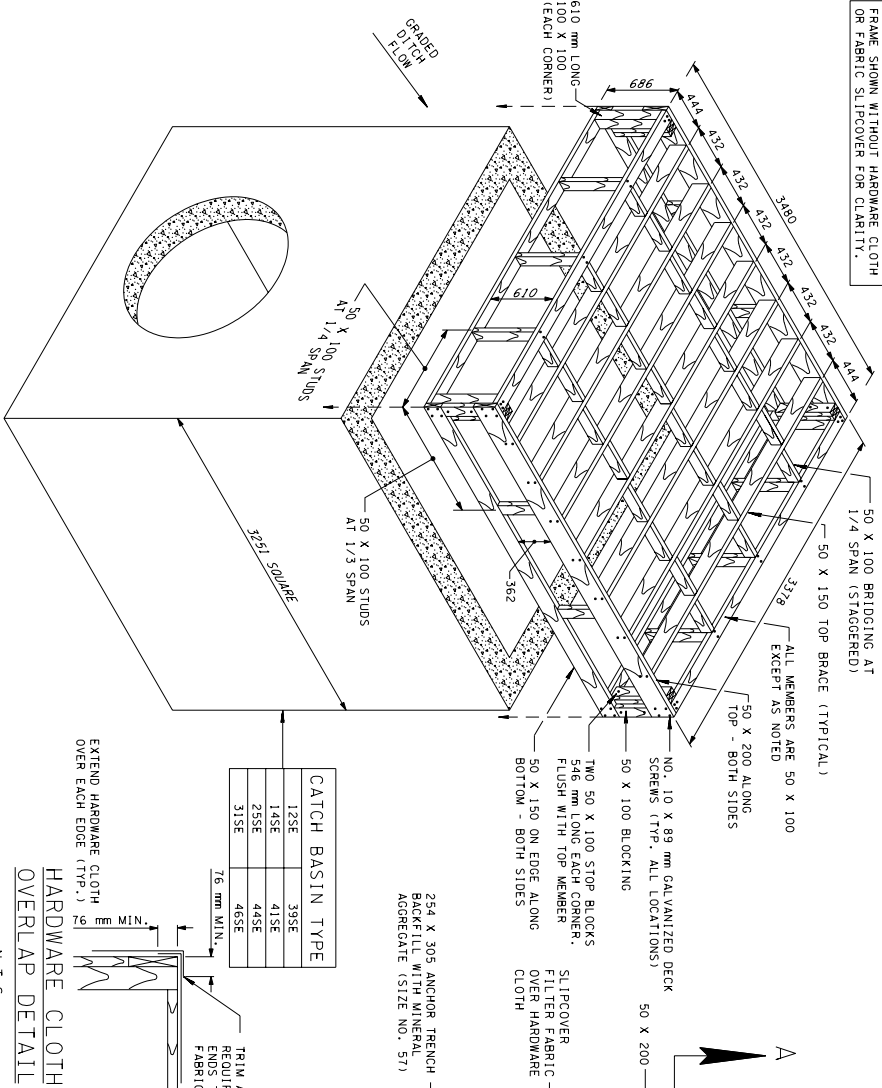
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 4)
SLIPCOVER DETAILS

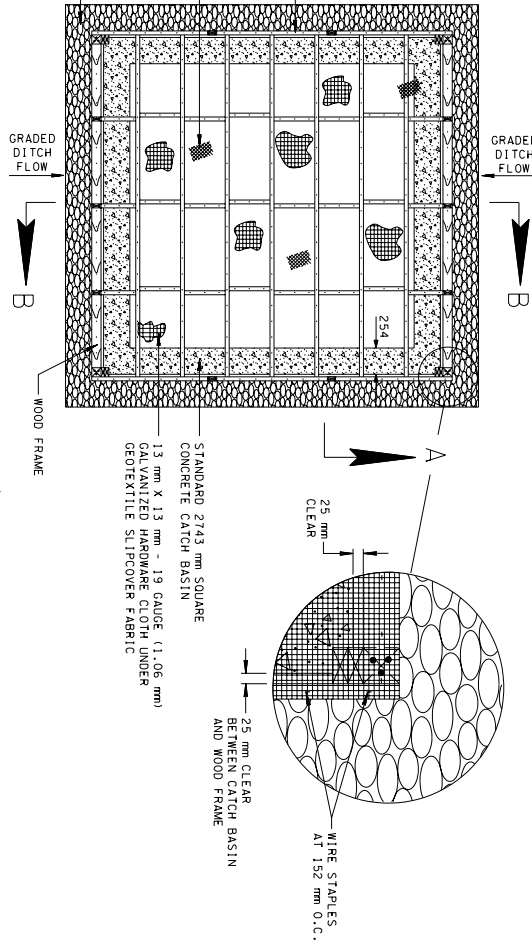
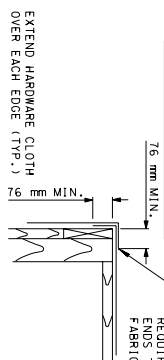
4-15-04 ECM-STR-44A



FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



CATCH BASIN TYPE	
12SE	39SE
14SE	41SE
25SE	44SE
31SE	46SE



ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY

N.T.S.

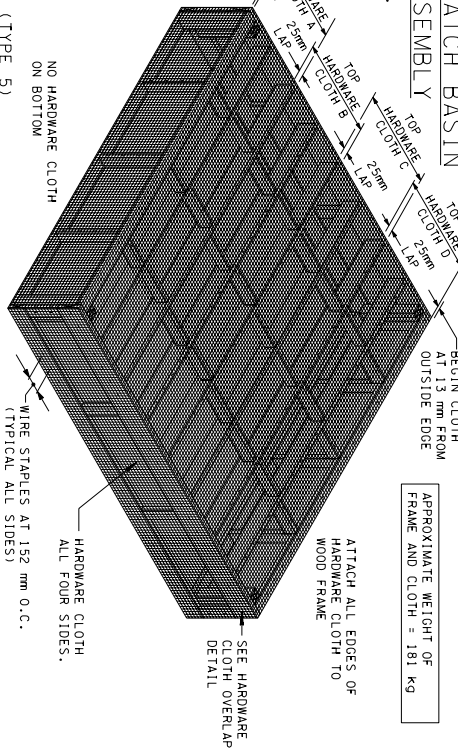
EROSION CONTROL PLAN LEGEND:



5 CATCH BASIN FILTER ASSEMBLY (TYPE 5)

FRAME WITH HARDWARE CLOTH

N.T.S.



INSTALLATION SEQUENCE FOR HARDWARE CLOTH

- A DRAWING TO BE USED WITH STANDARD TYPE DM-CB-SERIES SE CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
- B THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (e.g. DITCHES AND SMALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
- C 50 X 100, 50 X 150, 50 X 200, AND 100 X 100 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 38 mm X 89 mm, 50 mm X 125 mm, 50 mm X 152 mm, AND 100 mm X 100 mm. FINAL DIMENSIONS OF WOOD MAY VARY EVEN GREATER DEPENDING ON MOISTURE CONTENT. ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
- D PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY SHOULD BE CLEANED WITH COMPRESSED AIR FOR MAINTENANCE AND CLEANING AND STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.
- E APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR TO ASSURE BALANCED HANDLING DURING INSTALLATION AND REMOVAL OF THE FILTER ASSEMBLY.

- F DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY TO INSURE PROPER FUNCTIONING OF FILTER ASSEMBLY. REUSE OF ASSEMBLIES IS UNACCEPTABLE PROVIDED THE UNIT IS IN PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY TOOL ENGINEER.
- G ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED ON OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. BACKFILL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
- H IF NECESSARY, AT DIRECTION OF TOOL ENGINEER, SLIPCOVER MAY BE SECURED IN PLACE AT THE LOWEST PRACTICAL POINT WITH NYLON STRING, TWINE, WIRE OR OTHER SUITABLE MATERIAL.
- I WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING FLOWS ARE EXPECTED, SPECIAL EROSION CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- J ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209M40.45, CATCH BASIN FILTER ASSEMBLY (TYPE 5), PER EACH.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 5)

4-15-04 EGM-STR-45

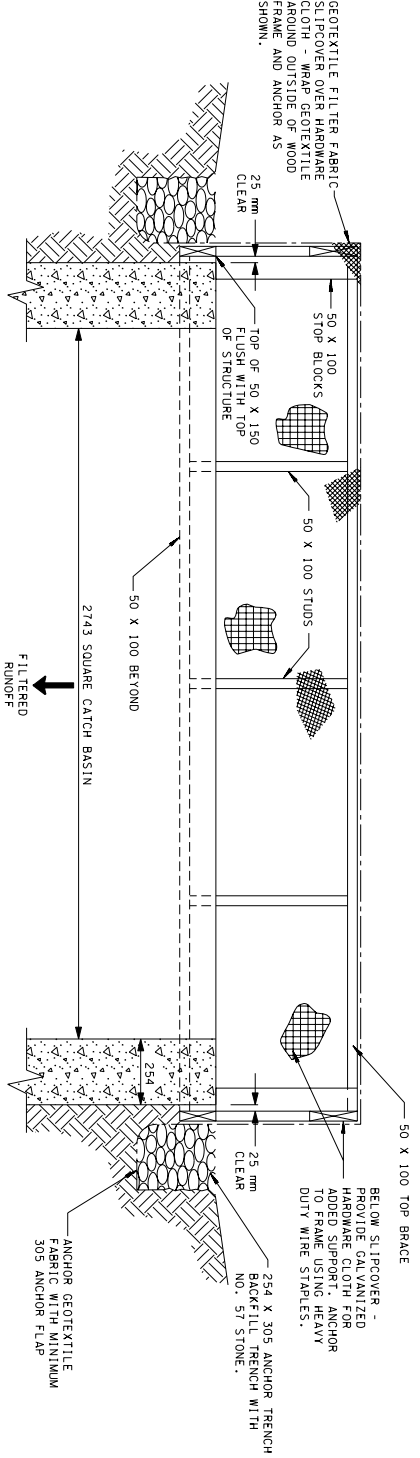
ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

SLIPCOVER FILTER SPECIFICATIONS

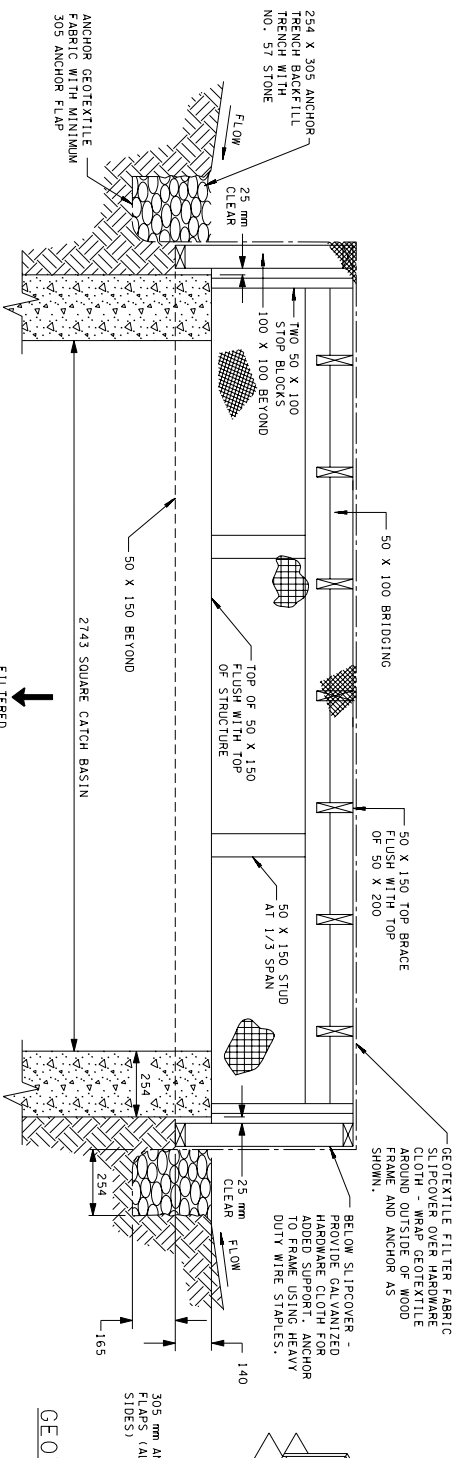
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARV'S)
GRAB TENSILE STRENGTH	ASTM D4632	282 kg
GRAB ELONGATION	ASTM D4632	2.50%
MULLEN BURST	ASTM D3786	22275 HRG
PUNCTURE STRENGTH	ASTM D4833	248 kg
TRAPEZOIDAL TEAR	ASTM D4533	234 kg
APPARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO 0.180 mm STANDARD SIEVE
PERMEABILITY	ASTM D4491	>0.003 m/s
PERMITTIVITY	ASTM D4491	>1.5 SEC-1
WATER FLUX	ASTM D4491	24480 L/MIN/M ²
UV RESISTANCE	ASTM D4355	270X AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 0.203 kg/m ²

HARDWARE CLOTH SPECIFICATIONS

STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	13 mm X 13 mm
WIRE SIZE	19 GAUGE (1.06 mm)
WIRE DIAMETER	1 mm
WEIGHT	1.0 kg/m ²
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC

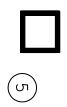


SECTION A-A
N.T.S.



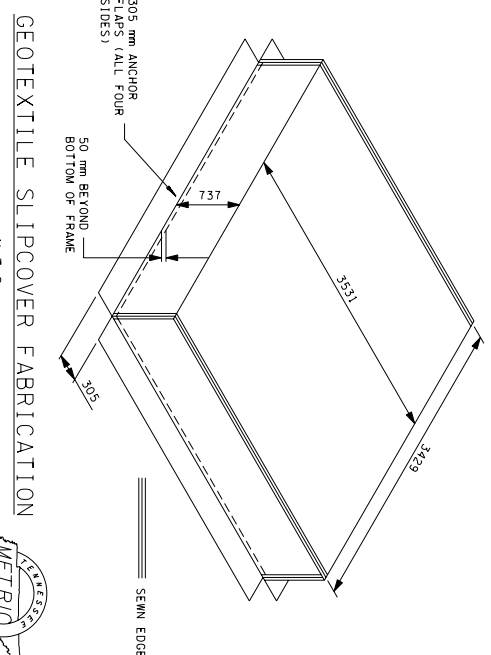
SECTION B-B
N.T.S.

EROSION CONTROL PLAN LEGEND:



□ CATCH BASIN FILTER ASSEMBLY (TYPE 5)

- FABRICATION SPECIFICATIONS:**
1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
 2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING USING SIX STITCHES PER EVERY 23 MILLIMETERS.
 3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 13 mm FROM HEAT-CUT FABRIC EDGES.

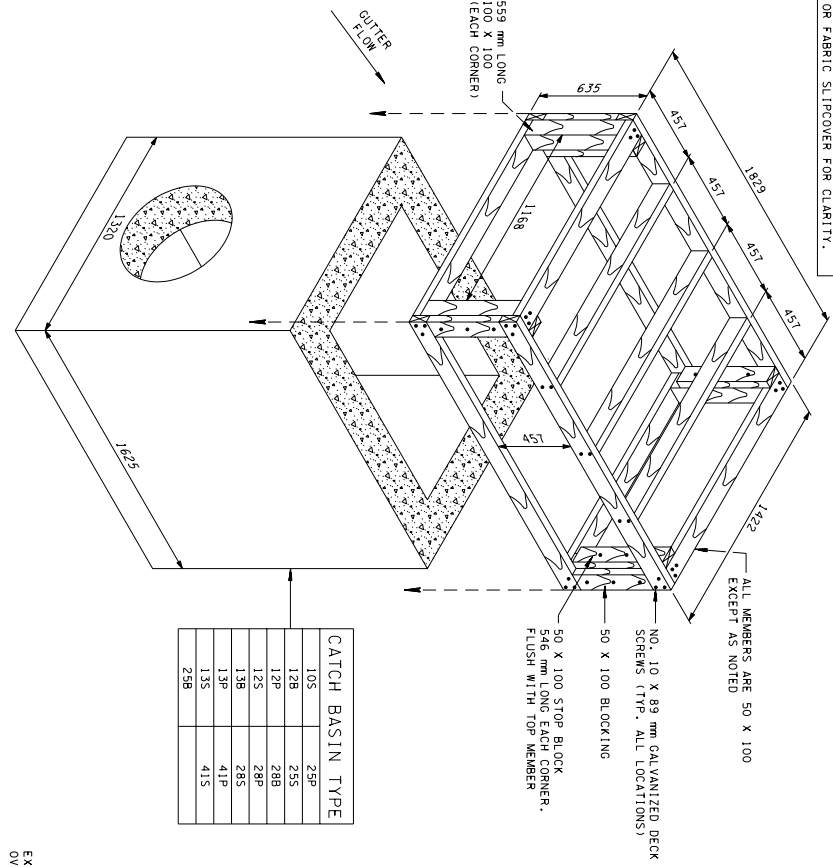


ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
CATCH BASIN
FILTER ASSEMBLY
(TYPE 5)
SLIPCOVER DETAILS
4-15-04 ECM-STR-45A

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



CATCH BASIN TYPE	
10S	25P
12B	25S
12P	28B
12S	28P
13B	28S
13P	41P
13S	41S
25B	

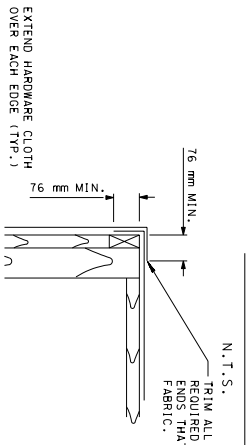
CATCH BASIN FILTER ASSEMBLY PLAN LEGEND: (6) CATCH BASIN FILTER ASSEMBLY (TYPE 6)

CATCH BASIN FILTER ASSEMBLY (TYPE 6)

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

- (A) DRAWING TO BE USED WITH STANDARD TYPES 10S, 41P, 41S AND 500-SERIES BAF, OR 3 FOR TYPE 12, 13, 29, AND 28 CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
- (B) THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (E.G., DITCHES AND SWALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
- (C) 50 x 100 AND 100 x 100 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 38 mm AND 89 mm RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD MAY VARY EVEN GREATER DEPENDING ON MOISTURE CONTENT. ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
- (D) PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED BY THE DESIGNER. THE CLEANING OF THE FILTER ASSEMBLY SHALL BE PERFORMED AT AN ACCEPTABLE LOCATION WITH WATER OR BY BRUSHING AND BLOWING CLEAN WITH COMPRESSED AIR. MAINTENANCE AND CLEANING OF STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.

HARDWARE CLOTH OVERLAP DETAIL

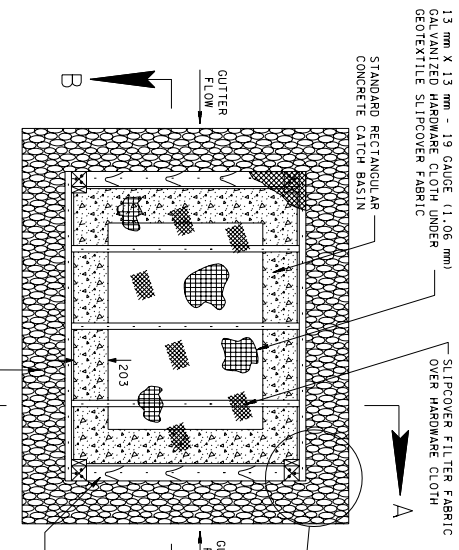


N.T.S.

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)

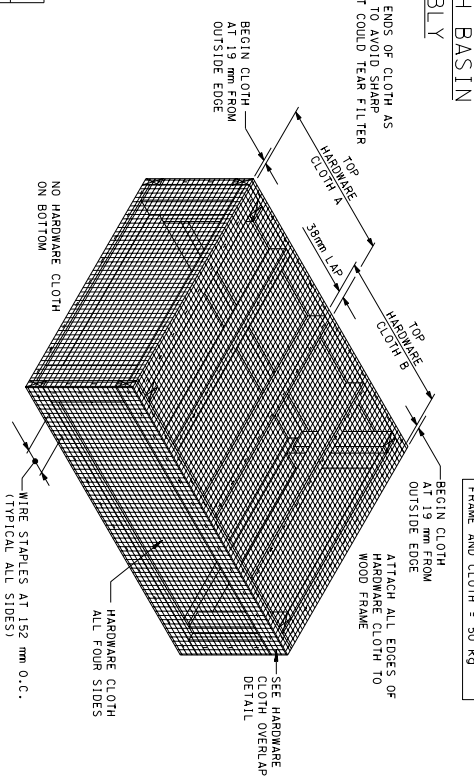
- (E) DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY TO INSURE PROPER FUNCTIONING OF FILTER ASSEMBLY. REUSE OF NECESSARY MATERIALS SHALL BE APPROVED BY THE DESIGNER. APPROVAL MUST BE GIVEN BY THE DESIGNER.
- (F) ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED OR OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. BACKFILL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
- (G) IF NECESSARY, AT DIRECTION OF TOOL ENGINEER, SLIPCOVER MAY BE SECURED IN PLACE AT THE LOWEST PRACTICAL POINT WITH NYLON STRING, TWINE, WIRE OR OTHER SUITABLE MATERIAL.
- (H) WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER ARE ANTICIPATED, THE DESIGNER SHALL BE ADVISED. OTHER EROSION PREVENTION AND SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- (I) ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND CATCH BASIN FILTER ASSEMBLY SHALL BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR EACH.

PLAN VIEW - CATCH BASIN FILTER ASSEMBLY



N.T.S.

ISOMETRIC VIEW FRAME WITH HARDWARE CLOTH



N.T.S.

INSTALLATION SEQUENCE FOR HARDWARE CLOTH

- INSTALL TOP HARDWARE CLOTH A. PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH B. - OVERLAPPING CLOTH A AT CENTER TOP BRACE. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
- TRIM EXCESS ALONG BOTTOM AS NECESSARY.

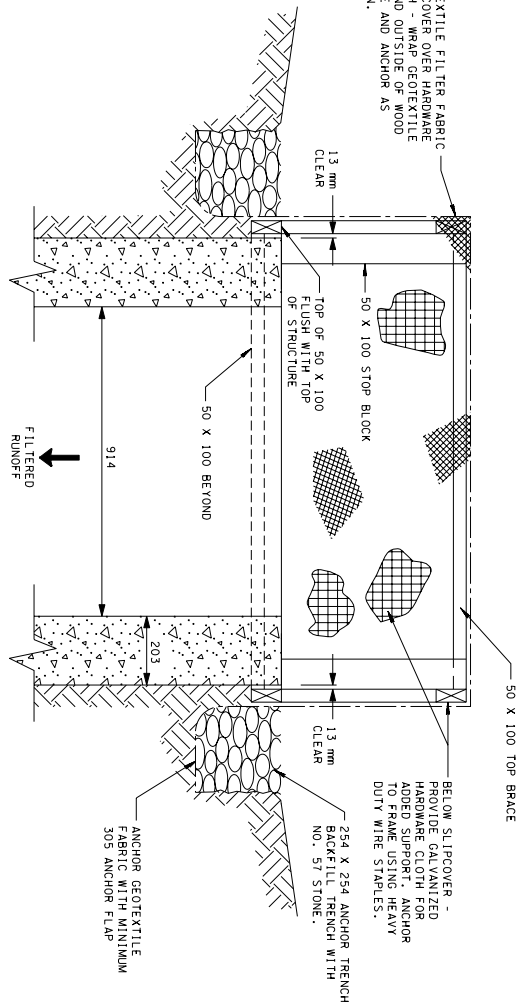
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 6)

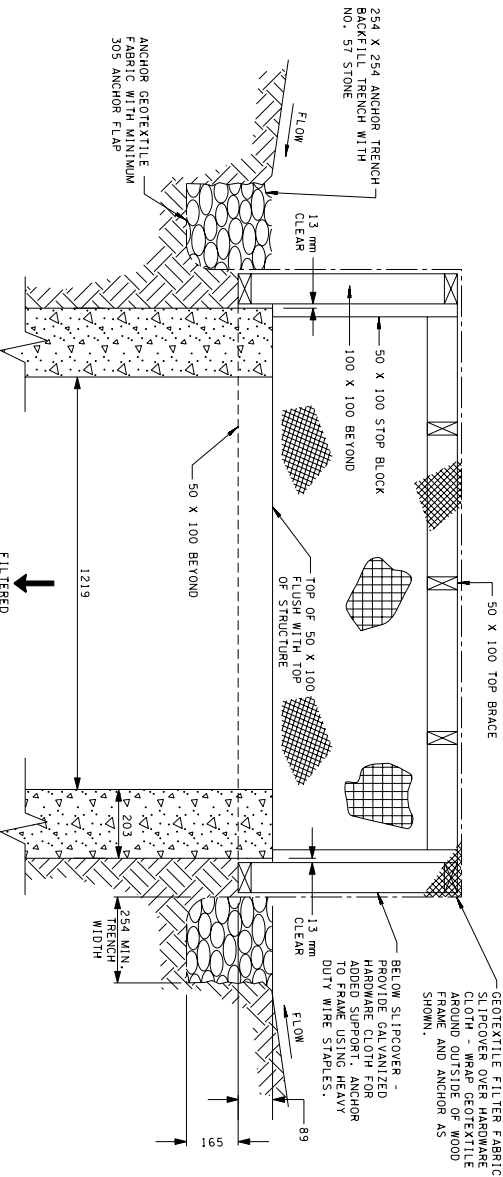
4-15-04 ECM-STR-46



GEOTEXTILE FILTER FABRIC SLIPCOVER OVER HARDWARE CLOTH - WRAP GEOTEXTILE AROUND OUTSIDE OF WOOD FRAME AND ANCHOR AS SHOWN.



SECTION A-A
N.T.S.



SECTION B-B
N.T.S.

EROSION CONTROL PLAN LEGEND:



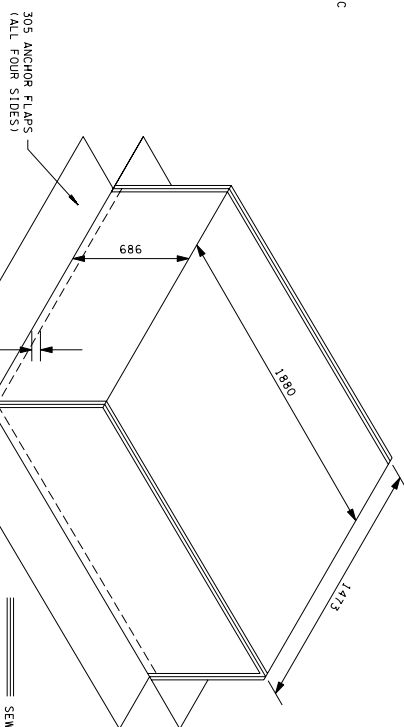
CATCH BASIN FILTER ASSEMBLY (TYPE 6)

SLIPCOVER FILTER SPECIFICATIONS

FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MAYV'S)
GRAB TENSILE STRENGTH	ASTM D4632	282 kg
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥2275 kPa
PUNCTURE STRENGTH	ASTM D4833	≥48 kPa
TRAPEZOIDAL TEAR	ASTM D4533	≥34 kg
APPEARANT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO 0.180 mm STANDARD SIEVE
PERMEABILITY	ASTM D4491	≥0.003 m/s
PERMITTIVITY	ASTM D4491	≥1.5 SEC ⁻¹
WATER FLUX	ASTM D4491	≥4480 L/MIN/M ²
UV RESISTANCE	ASTM D4355	≥70% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 0.203 kg/m ²

HARDWARE CLOTH SPECIFICATIONS

STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	13 mm x 13 mm
WIRE SIZE	19 GAUGE (1.06 mm)
WIRE DIAMETER	1 mm
WEIGHT	1.0 kg/m ²
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

FABRICATION SPECIFICATIONS:

1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 63 kg) WITH MINIMUM OF SIX STITCHES PER EVERY 25 MILLIMETERS.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 13 mm FROM HEAT-CUT FABRIC EDGES.



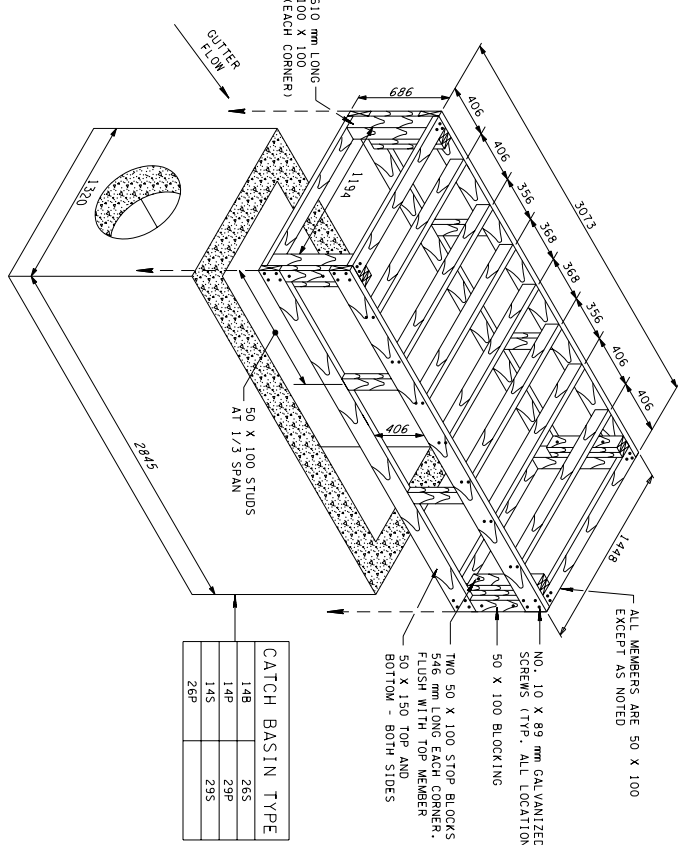
ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 6)
SLIPCOVER DETAILS

4-15-04 EGM-STR-46A

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.

EROSION CONTROL PLAN LEGEND:

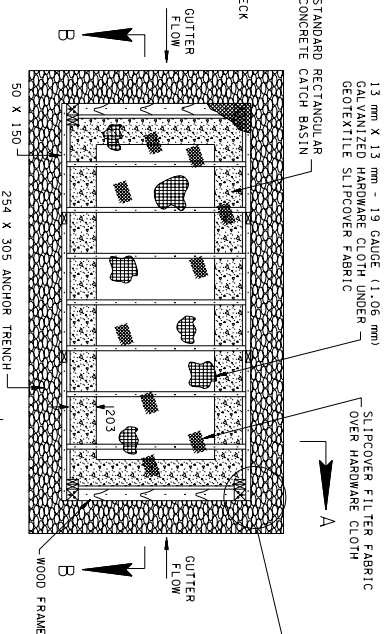


7 CATCH BASIN FILTER ASSEMBLY (TYPE 7)

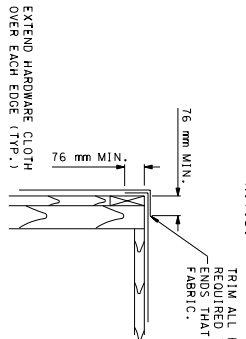
CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

- (A) FRAMING TO BE USED WITH STANDARD TYPES 14B AND 26P OR SERIES P & S FOR TYPE 14, 26 AND 29 CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
- (B) THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (e.g., DITCHES AND SVALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
- (C) 50 X 100, 50 X 150 AND 100 X 100 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 38 mm x 89 mm, 38 mm x 140 mm AND 89 mm x 89 mm RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD MAY VARY EVEN GREATER DEPENDING ON MOISTURE CONTENT. ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
- (D) PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY MAY BE CLEANED AT AN ACCEPTABLE LOCATION WITH WATER OR BY BRUSHING AND BLOWING CLEAN WITH COMPRESSED AIR. MAINTENANCE AND CLEANING OF STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.
- (E) APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR TO ASSURE BALANCED HANDLING DURING INSTALLATION AND REMOVAL OF THE FILTER ASSEMBLY.

CATCH BASIN TYPE		
14B	26S	
14P	29P	
14S	29S	
26P	29S	



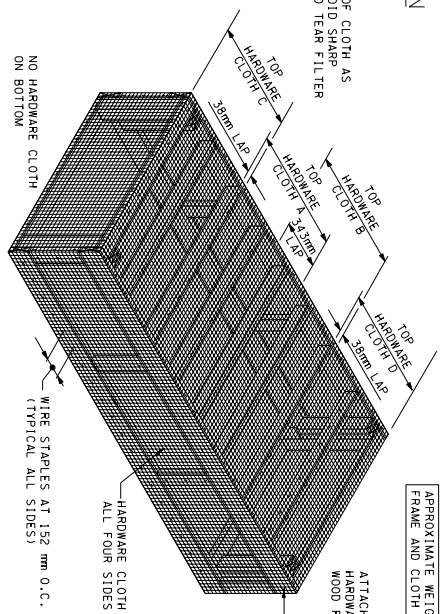
PLAN VIEW - CATCH BASIN FILTER ASSEMBLY
N.T.S.



HARDWARE CLOTH OVERLAP DETAIL
N.T.S.

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)

- (F) DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY TO INSURE PROPER FUNCTIONING OF FILTER ASSEMBLY. REUSE OF ASSEMBLIES IS ACCEPTABLE PROVIDED THE UNIT IS IN PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY TDDT ENGINEER.
- (G) ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED OR OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. REMOVE ALL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
- (H) IF NECESSARY, AT DIRECTION OF TDDT ENGINEER, SLIPCOVER MAY BE SECURED IN PLACE AT THE LOWEST PRACTICAL POINT WITH NYLON STRAP, TWINE, WIRE OR OTHER SUITABLE MATERIAL.
- (I) WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, DITCH GRADE ETC., OTHER EROSION PREVENTION AND SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- (J) ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND ANCHOR SHALL BE PAID FOR UNDER ITEM NUMBER 209M40-41, CATCH BASIN FILTER ASSEMBLY (TYPE 7), PER EACH.



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH
N.T.S.

INSTALLATION SEQUENCE FOR HARDWARE CLOTH

- INSTALL TOP HARDWARE CLOTH A - PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A 343 mm. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH C - OVERLAPPING CLOTH A. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH D - OVERLAPPING CLOTH B. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
- TRIM EXCESS ALONG BOTTOM AS NECESSARY.

APPROXIMATE WEIGHT OF FRAME AND CLOTH = 88 kg

ATTACH ALL EDGES OF FRAME TO WOOD FRAME

SEE HARDWARE CLOTH OVERLAP DETAIL

WIRE STAPLES AT 152 mm O.C. (TYPICAL ALL SIDES)



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF THURGOOD
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 7)

SLIPCOVER FILTER SPECIFICATIONS

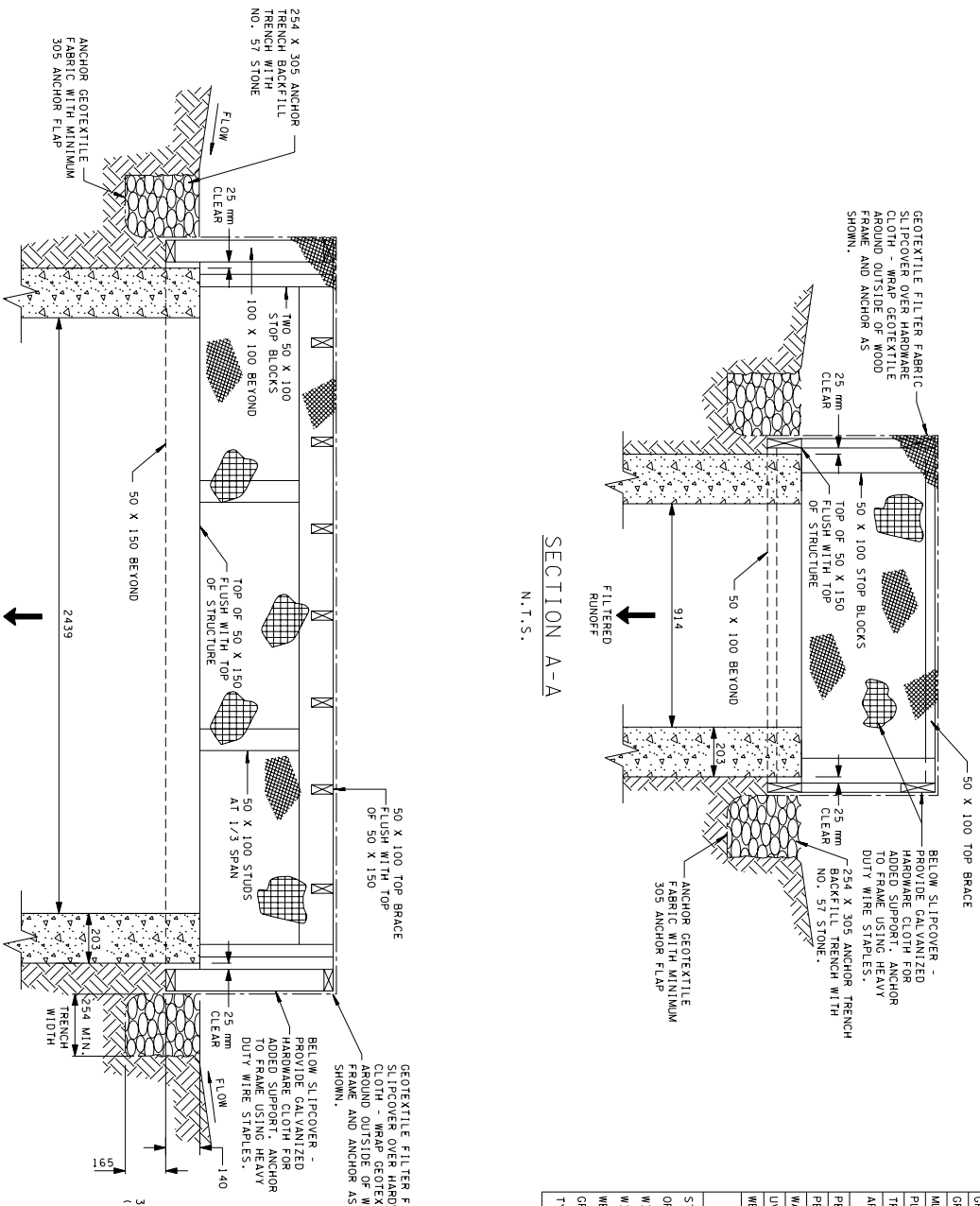
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARV'S)
GRAB TENSILE STRENGTH	ASTM D4632	282 KG
GRAB ELONGATION	ASTM D4632	250%
MULLEN BURST	ASTM D3786	22275 kPa
PUNCTURE STRENGTH	ASTM D4833	248 KG
TRAPEZOIDAL TEAR	ASTM D4533	234 KG
APPARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO 0.150 mm STANDARD SIEVE
PERMEABILITY	ASTM D4491	≥ 0.003 m/s
PERMITTIVITY	ASTM D4491	≥ 1.5 SEC-1
WATER FLOW	ASTM D4491	≥ 4480 L/MIN/M ²
UV RESISTANCE	ASTM D4355	≥ 70% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 0.203 KG/M ²

HARDWARE CLOTH SPECIFICATIONS

STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	13 mm X 13 mm
WIRE SIZE	19 GAUGE (1.06 mm)
WIRE DIAMETER	1 mm
WEIGHT	1.0 KG/M ²
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC

SECTION A-A

N.T.S.



SECTION B-B

N.T.S.

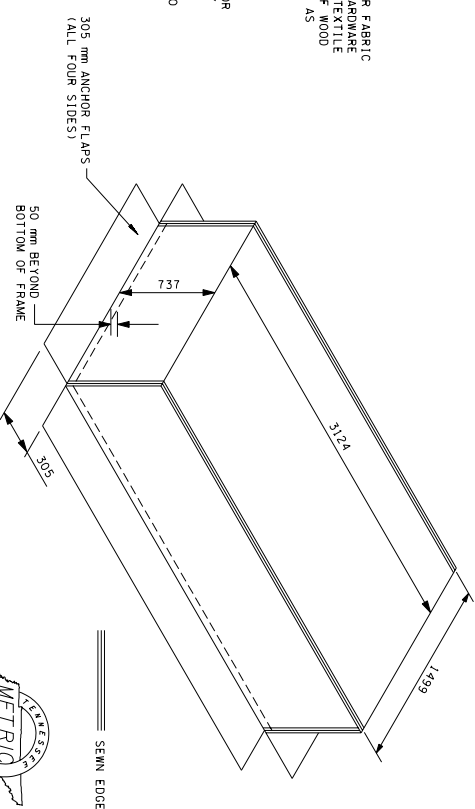
EROSION CONTROL PLAN LEGEND: CATCH BASIN FILTER ASSEMBLY (TYPE 7)

GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

FABRICATION SPECIFICATIONS:

1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 63 KG) WITH MINIMUM OF SIX STITCHES PER EVERY 25 MILLIMETERS.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 13 mm FROM HEAT-CUT FABRIC EDGES.



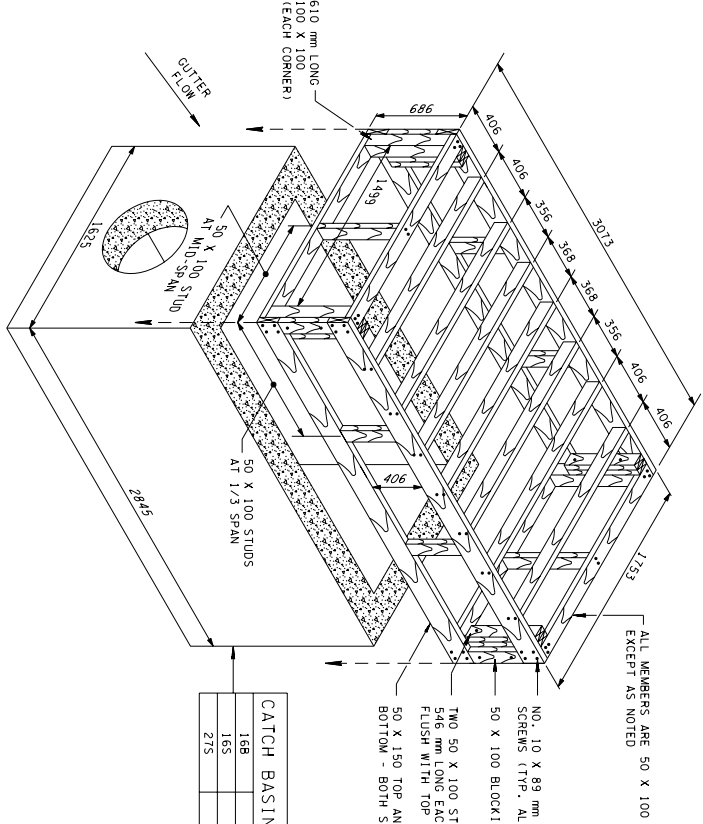
ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 7)

SLIPCOVER DETAILS
4-15-04 ECM-STR-47A

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



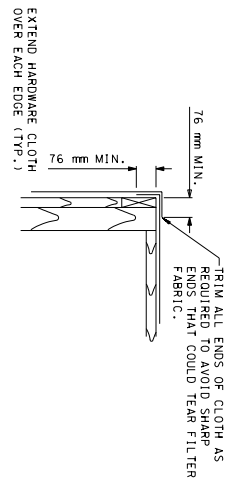
**ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY**
N.T.S.

EROSION CONTROL PLAN LEGEND:



8 CATCH BASIN FILTER ASSEMBLY (TYPE 8)

CATCH BASIN TYPE	168	165	275
	405	438	495



**PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY**
N.T.S.

**HARDWARE CLOTH
OVERLAP DETAIL**
N.T.S.

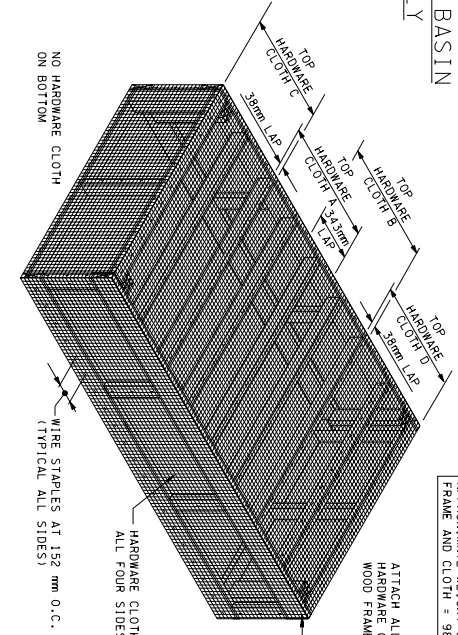
76 mm MIN. TRIM ALL ENDS OF CLOTH AS REQUIRED TO AVOID SHARP ENDS THAT COULD TEAR FILTER FABRIC.

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

- A DRAWING TO BE USED WITH STANDARD TYPES 168, 165, 275, 405, 438B, AND 495 CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
- B THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF STRUCTURED FLOWS (e.g., DITCHES AND SWALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
- C 50 x 100, 50 x 150 AND 100 x 100 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 38 mm x 89 mm, 38 mm x 140 mm AND 89 mm x 89 mm RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD MAY VARY GREATER DEPENDING ON MOISTURE CONTENT. ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
- D PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT CLOGGING OF THE FILTER FABRIC. FILTER ASSEMBLY MAY BE CLEANED AT AN ACCEPTABLE LOCATION WITH WATER OR BY BRUSHING AND BLOWING CLEAN WITH COMPRESSED AIR. MAINTENANCE AND CLEANING OF STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.
- E APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE FABRICATOR TO ASSURE BALANCED HOISTING DURING INSTALLATION AND REMOVAL OF THE FILTER ASSEMBLY.

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)

- F DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY TO INSURE PROPER FUNCTIONING OF FILTER ASSEMBLY. REUSE OF ASSEMBLIES IS ACCEPTABLE PROVIDED THE UNIT IS IN PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY TDD ENGINEER.
- G ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED OR OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. BACKFILL AND COMPACT ANCHOR TRENCH TO FINAL GRADE AS REQUIRED AFTER REMOVAL.
- H IF NECESSARY, AT DIRECTION OF TDD ENGINEER, SLIPCOVER MAY BE SECURED IN PLACE AT THE LOWEST PRACTICAL POINT WITH NYLON STRING, TWINE, WIRE OR OTHER SUITABLE MATERIAL.
- I WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROXIMATING WATER ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, DITCH GRADE ETC., OTHER EROSION PREVENTION AND SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
- J ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TRENCHING, BACKFILLING, STONE, AND HARDWARE CLOTH SHALL BE SHOWN UNDER ITEM NUMBER 209M0.48, CATCH BASIN FILTER ASSEMBLY (TYPE 8), PER EACH.



**ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH**
N.T.S.

INSTALLATION SEQUENCE FOR HARDWARE CLOTH

- INSTALL TOP HARDWARE CLOTH A - PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A 343 mm. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN. CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH C - OVERLAPPING CLOTH A. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL TOP HARDWARE CLOTH D - OVERLAPPING CLOTH B. PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM ALL SHARP EDGES.
- INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
- TRIM EXCESS ALONG BOTTOM AS NECESSARY.

APPROXIMATE WEIGHT OF FRAME AND CLOTH = 98 KG

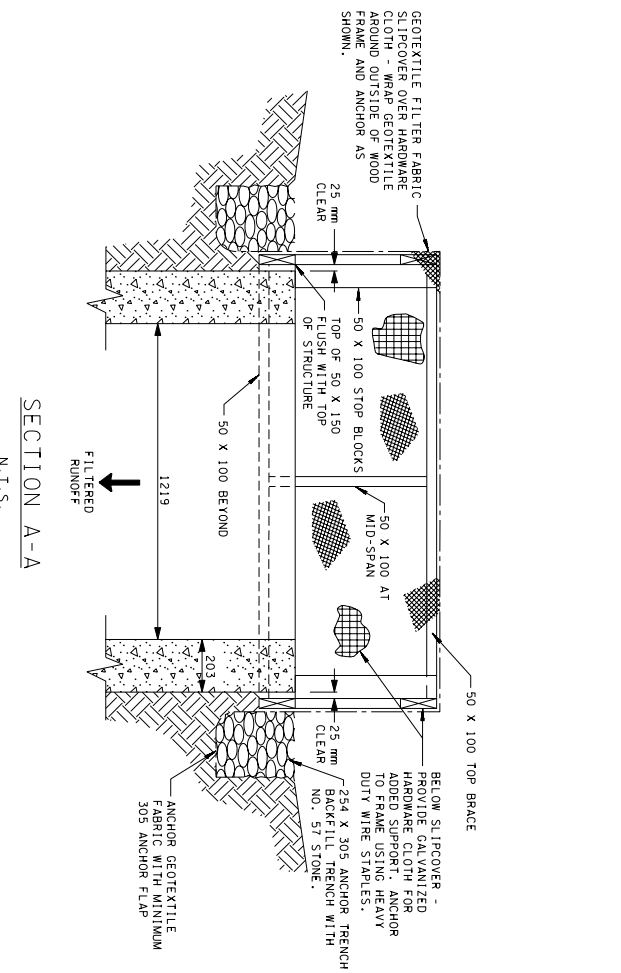
ATTACH ALL EDGES OF HARDWARE CLOTH TO WOOD FRAME



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 8)



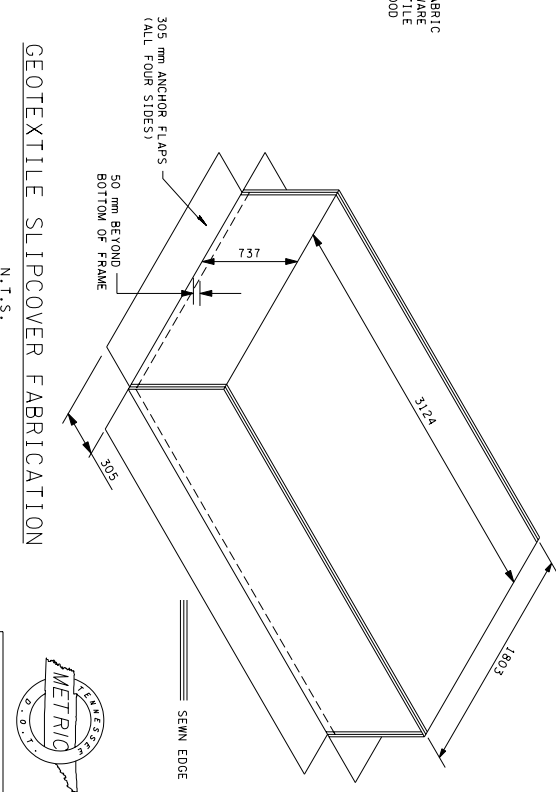
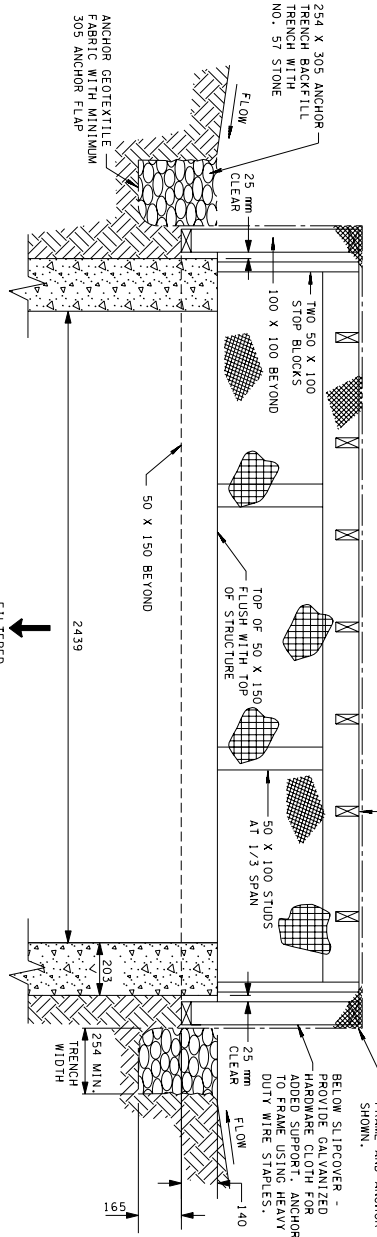
SILPCOVER FILTER SPECIFICATIONS

FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE

FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MAYV'S)
GRAB TENSILE STRENGTH	ASTM D4632	282 kg
GRAB ELONGATION	ASTM D4632	250%
MULLEN BURST	ASTM D3786	2275 Pfq
PUNCTURE STRENGTH	ASTM D4833	248 kg
TRAPEZOIDAL TEAR	ASTM D4833	234 kg
APARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO 0.180 mm STANDARD SIEVE
PERMEABILITY	ASTM D4491	20.003 m/s
PERMITIVITY	ASTM D4491	21.5 SEC-1
WATER FLUX	ASTM D4491	24480 L/MIN/M ²
UV RESISTANCE	ASTM D4355	270% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 0.203 kg/m ²

HARDWARE CLOTH SPECIFICATIONS

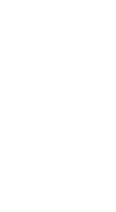
STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	13 mm x 13 mm
WIRE SIZE	19 GAUGE (1.106 mm)
WIRE DIAMETER	1 mm
WEIGHT	1.0 kg/m ²
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC



SECTION A-A
N.T.S.

SECTION B-B
N.T.S.

EROSION CONTROL PLAN LEGEND:



FABRICATION SPECIFICATIONS:

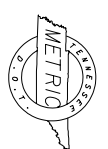
1. GEOTEXTILE SILPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 63 KG) WITH MINIMUM OF SIX STITCHES PER EVERY 25 MILLIMETERS.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 13 mm FROM HEAT-CUT FABRIC EDGES.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

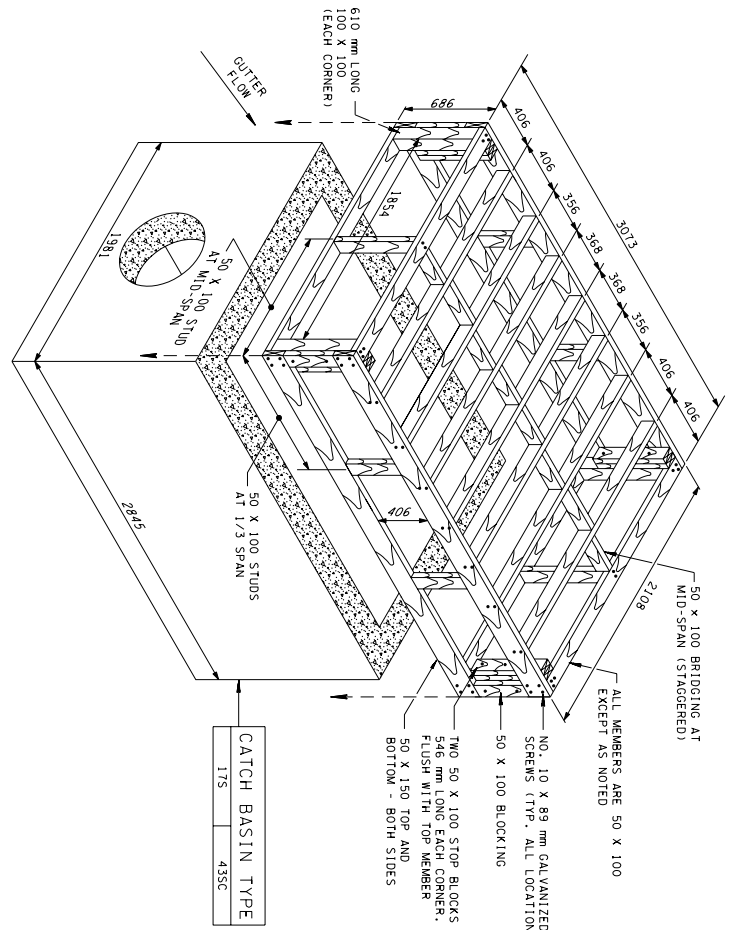
ALL UNITS ARE IN MILLIMETERS
UNLESS NOTED OTHERWISE.

CATCH BASIN
FILTER ASSEMBLY
(TYPE 8)
SILPCOVER DETAILS

4-15-04 ECM-STR-48A



FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.

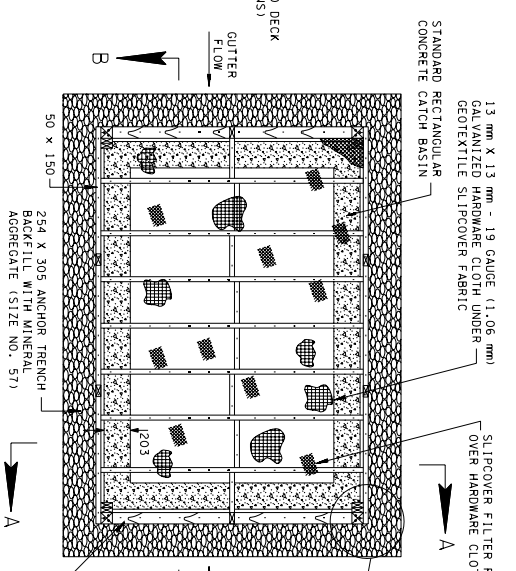


**ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY**
N.T.S.

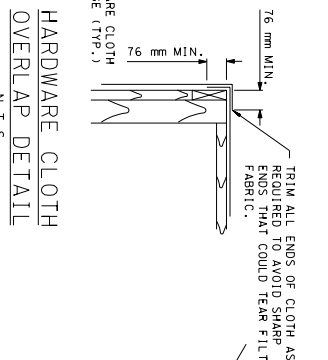
EROSION CONTROL PLAN LEGEND: CATCH BASIN FILTER ASSEMBLY (TYPE 9)

- CATCH BASIN FILTER ASSEMBLY GENERAL NOTES**
- A. DRAWING TO BE USED WITH STANDARD TYPES 17S AND 435C CATCH BASINS. SEE STANDARD DRAWINGS FOR CATCH BASIN DIMENSIONS AND DETAILS.
 - B. THE CATCH BASIN FILTER ASSEMBLY IS TO BE USED WHERE INTERCEPTION OF CONCENTRATED FLOWS (e.g., DITCHES AND SWALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.
 - C. 50 X 100, 50 X 150 AND 100 X 100 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. TYPICAL ACTUAL DIMENSIONS ARE 38 mm X 89 mm X 140 mm AND 89 mm X 89 mm RESPECTIVELY. ACTUAL DIMENSIONS OF WOOD MAY VARY GREATLY DEPENDING ON MOISTURE CONTENT. ALL WOOD SHALL BE NO. 2 PRESSURE TREATED SOUTHERN YELLOW PINE.
 - D. PERIODIC MAINTENANCE AND CLEANING OF THE STRUCTURE SHALL BE PERFORMED AS NECESSARY TO PREVENT ACCUMULATION OF SEDIMENT. STRUCTURES MAY BE CLEANED AT AN ACCEPTABLE LOCATION WITH WATER OR BY BRUSHING AND BLOWING CLEAN WITH COMPRESSED AIR. MAINTENANCE AND CLEANING OF STRUCTURES WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE STRUCTURE.
 - E. APPROPRIATE SIZING AND LOCATION OF LIFTING DEVICES SHALL BE THE RESPONSIBILITY OF THE ARCHITECT TO ASSURE BALANCED HANDLING DURING INSTALLATION AND REMOVAL OF THE FILTER ASSEMBLY.

CATCH BASIN TYPE	
17S	435C

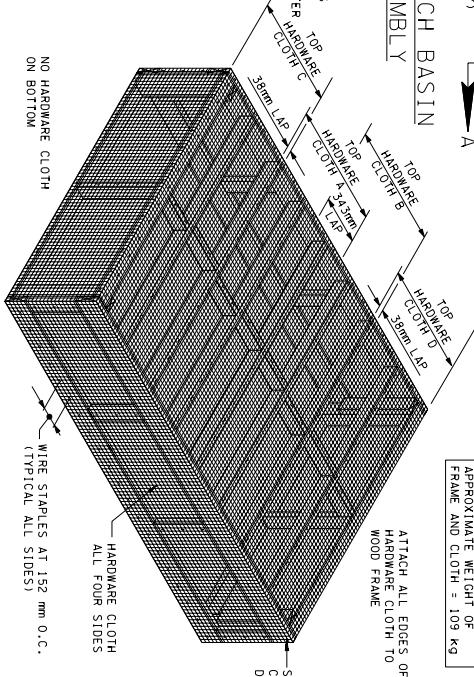


**PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY**
N.T.S.



**HARDWARE CLOTH
OVERLAP DETAIL**
N.T.S.

- CATCH BASIN FILTER ASSEMBLY GENERAL NOTES (CONT.)**
- F. DEFECTIVE WOOD, HARDWARE CLOTH OR FILTER FABRIC SHALL BE REPLACED AS NECESSARY TO INSURE PROPER FUNCTIONING OF FILTER ASSEMBLY. REUSE OF ASSEMBLIES IS ACCEPTABLE PROVIDED THE UNIT IS IN PROPER WORKING CONDITION. APPROVAL MUST BE GIVEN BY TROT ENGINEER.
 - G. ASSEMBLY AND STONE SHALL BE REMOVED AFTER UPSTREAM VEGETATION HAS BEEN ESTABLISHED OR OTHER SEDIMENT CONTROL STRUCTURES ARE IN PLACE. TRIM ALL ENDS OF CLOTH AS REQUIRED TO AVOID SHARP EDGES. TRIM SHOULD BE REMOVED TO PREVENT DAMAGE TO FABRIC. IF NECESSARY, AT DIRECTION OF TROT ENGINEER, SLIPCOVER MAY BE SECURED IN PLACE AT THE LOWEST PRACTICAL POINT WITH NYLON STRIPING, TWINE, WIRE OR OTHER SUITABLE MATERIAL.
 - H. WHERE LARGE QUANTITIES OF SEDIMENT OR HIGH VELOCITIES OF APPROACHING WATER ARE ANTICIPATED DUE TO SPACING OF CATCH BASINS, DITCH GRADE ETC., OTHER EROSION PREVENTION AND SEDIMENT CONTROL DEVICES MAY BE NECESSARY UPSTREAM OF FILTER ASSEMBLY.
 - I. ALL LABOR AND MATERIALS NECESSARY TO CONSTRUCT AND INSTALL TEMPORARY CATCH BASIN FILTER ASSEMBLY INCLUDING TREMCHING, BACKFILLING, STONE, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 204M0-49, CATCH BASIN FILTER ASSEMBLY (TYPE 9), PER EACH.



**ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH**
N.T.S.

- INSTALLATION SEQUENCE FOR HARDWARE CLOTH**
- 1. INSTALL TOP HARDWARE CLOTH A - PULL MATERIAL TIGHT, LAP AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM SHARP EDGES.
 - 2. INSTALL TOP HARDWARE CLOTH B - OVERLAPPING CLOTH A 343 mm, PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM ALL SHARP EDGES.
 - 3. INSTALL TOP HARDWARE CLOTH C - OVERLAPPING CLOTH A, PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM ALL SHARP EDGES.
 - 4. INSTALL TOP HARDWARE CLOTH D - OVERLAPPING CLOTH B, PULL CLOTH TIGHT, LAP, AND STAPLE AS SHOWN, CUT TO LENGTH AND TRIM ALL SHARP EDGES.
 - 5. INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.
 - 6. TRIM EXCESS ALONG BOTTOM AS NECESSARY.



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 9)

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SLIPCOVER FILTER SPECIFICATIONS

FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE

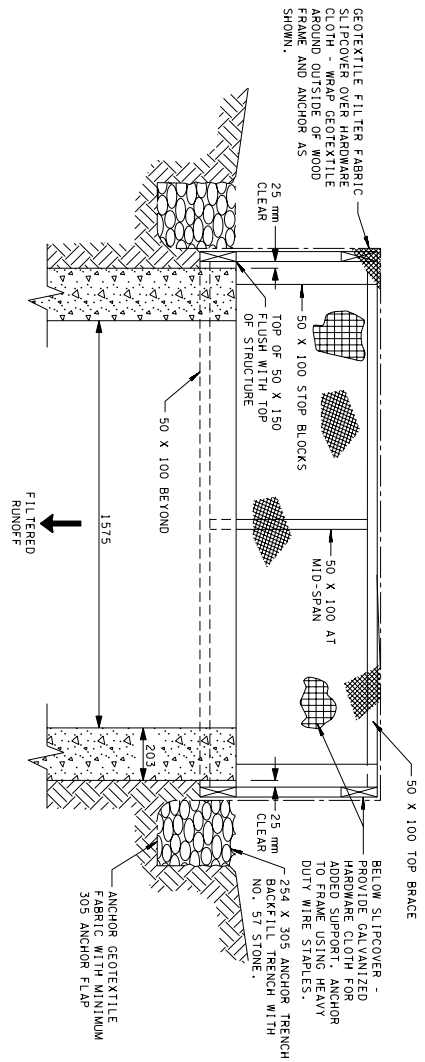
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MAYV5)
GRAB TENSILE STRENGTH	ASTM D4632	≥282 kg
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥2275 kPa
PUNCTURE STRENGTH	ASTM D4833	≥48 kg
TRAPEZOIDAL TEAR	ASTM D4533	≥34 kg
APPARENT OPENING SIZE (AOS)	ASTM D4751	FINER THAN OR EQUAL TO 0.180 mm STANDARD SIEVE
PERMEABILITY	ASTM D4491	≥0.003 m/s
PERMITTIVITY	ASTM D4491	≥1.5 sec ⁻¹
WATER FLUX	ASTM D4491	≥4480 L/MIN/M ²
UV RESISTANCE	ASTM D4355	≥70% AT 500 HOURS
WEIGHT	ASTM D3776	MINIMUM 0.203 kg/m ²

HARDWARE CLOTH SPECIFICATIONS

STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	13 mm X 13 mm
FABRIC GAUGE	19 GAUGE (1.06 mm)
WIRE DIAMETER	1 mm
WEIGHT	1.0 kg/m ²
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC

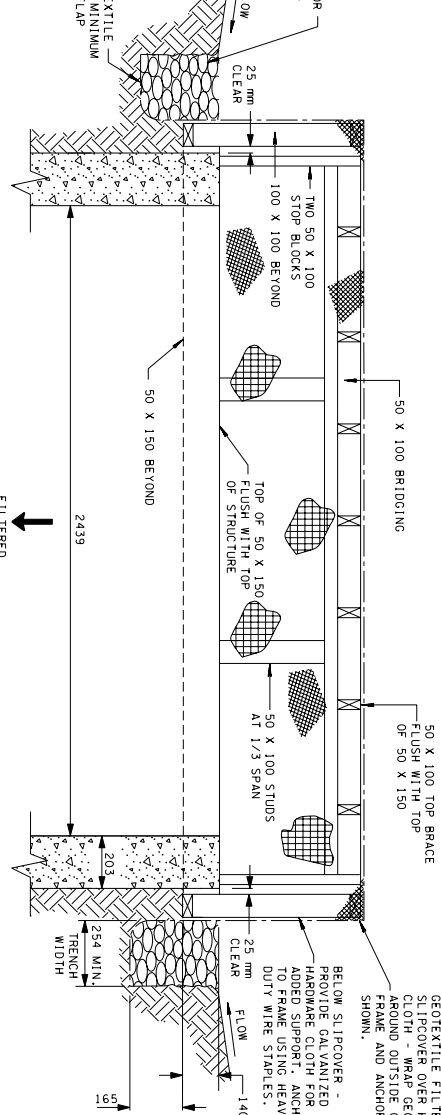
SECTION A-A

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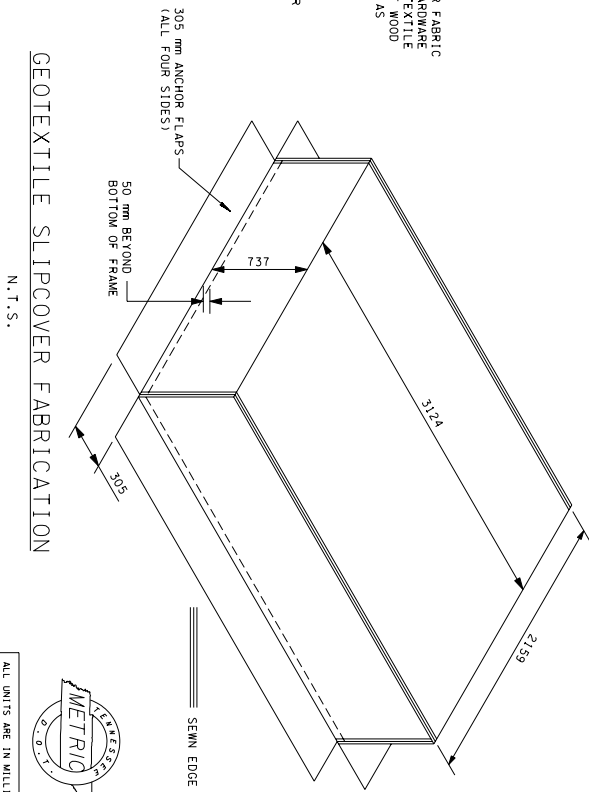
SECTION B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.



FABRICATION SPECIFICATIONS:

1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 63 KG) WITH MINIMUM OF SIX STITCHES PER EVERY 25 MILLIMETERS.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM OF 13 mm FROM HEAT-CUT FABRIC EDGES.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

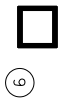
CATCH BASIN FILTER ASSEMBLY (TYPE 9) SLIPCOVER DETAILS

4-15-04 ECM-STR-49A



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

EROSION CONTROL PLAN LEGEND:



9 CATCH BASIN FILTER ASSEMBLY (TYPE 9)