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

Drawing Number	Current Revision Date	Drawing Title
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

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

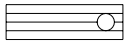
April 1, 2004

STANDARD LEGEND

RIP-RAP

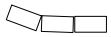
PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)

PERMANENT RIP-RAP ENERGY DISSIPATOR



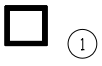
SEDIMENT BASIN (TYPE 1) WITH DAM

TEMPORARY BERM



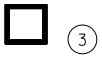
TEMPORARY BALED HAY OR STRAW EROSION CHECK

TEMPORARY BRUSH SEDIMENT BARRIERS



TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 1)

TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 2)

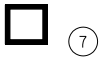


TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 3)

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

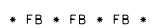
TEMPORARY CONSTRUCTION ROAD
ENTRANCE AND/OR EXIT

TEMPORARY CULVERT CROSSING

TEMPORARY DEWATERING STRUCTURE

TEMPORARY DIVERSION CHANNEL (DESCRIBE - SIZE
AND TYPE OF LINING)

TEMPORARY ENHANCED SILT FENCE



TEMPORARY FILTER BARRIER

- REV. 10-26-94: MOVED EROSION AND SEDIMENT CONTROL LEGENDS FROM OLD STANDARD DRAWING NO. RD-L-2 AND THE ESC-STR SERIES OF DETAIL SHEETS.
- REV. 5-27-95: ADDED NEW SYMBOLS.
- REV. 5-27-96: MODIFIED SYMBOL FOR TEMPORARY CATCH BASIN.
- REV. 7-29-97: CHANGED LEGEND FOR TEMPORARY SLOPE DRAIN PIPE.
- REV. 5-27-01: CHANGED REFERENCE IN LEGEND FROM DUMPED ROCK TO RIP-RAP.
- REV. 12-18-02: REMOVED SYMBOLS FOR TYPE IA, IB, IC, AND ID EROSION DITCH CHECKS. ADDED SYMBOL FOR TYPE I EROSION DITCH CHECK, TEMPORARY SILT FENCE (WITH BACKING), AND TEMPORARY ENHANCED SILT FENCE.
- REV. 1-22-03: ADDED SYMBOL FOR TYPE EC IA FILTER BARRIER DITCH CHECK.
- REV. 10-26-03: DELETED LEGEND FOR TYPE EC 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 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 RD-L-4 TO RD-L-5.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STANDARD LEGEND FOR EROSION AND SEDIMENT CONTROL

10-26-94 RD-L-5

STANDARD LEGEND

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

TEMPORARY ROCK AND SEDIMENT DAM

PERMANENT ROCK AND SEDIMENT DAM

TEMPORARY ROCK CATCH BASIN PROTECTION (MULTI-DIRECTIONAL FLOW)

TEMPORARY ROCK CATCH BASIN PROTECTION (SINGLE DIRECTIONAL FLOW)

TEMPORARY ROCK CATCH BASIN PROTECTION (TYPE A)

TEMPORARY ROCK CHECK DAM IN TRAPEZOIDAL DITCH

TEMPORARY ROCK CHECK DAM IN V - DITCH

TEMPORARY ROCK SEDIMENT DAM

TEMPORARY ROCK SILT SCREEN AT PIPE INLETS

TEMPORARY ROCK SILT SCREEN USED IN CHANNELS

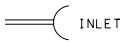
TEMPORARY ROCK SILT SCREEN USED IN ROADSIDE DITCHES

TEMPORARY SEDIMENT FILTER BAGS

TEMPORARY SEDIMENT TRAP WITH TEMPORARY SILT SCREEN CHECK DAM

TEMPORARY SILT FENCE (WITHOUT BACKING)

TEMPORARY SILT FENCE (WITH BACKING)

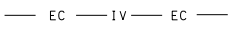


TEMPORARY SLOPE DRAIN PIPE (SHOW SIZE)

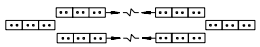
TEMPORARY STABILIZED CONSTRUCTION FORD

TEMPORARY TYPE EC I FILTER BARRIER EROSION DITCH CHECK

TEMPORARY TYPE EC IA FILTER BARRIER EROSION DITCH CHECK



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



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

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STANDARD LEGEND FOR EROSION AND SEDIMENT CONTROL

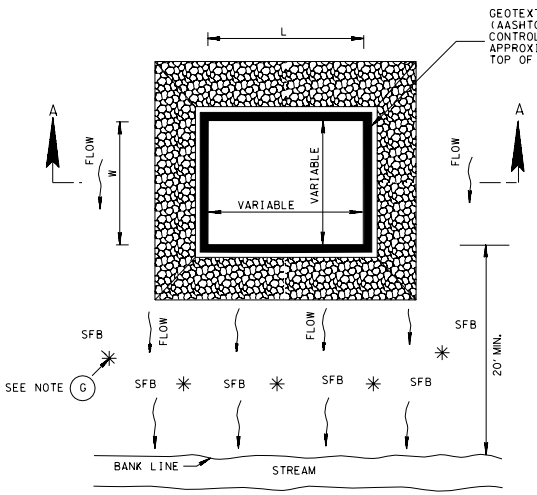
3-15-04 | RD-L-6

TEMPORARY EROSION & SEDIMENT CONTROL PAY ITEMS

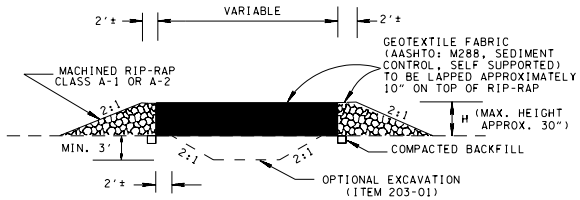
ITEM NO.	DESCRIPTION	UNIT
203-01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED)	CUBIC YARD
209-02.03	8" TEMPORARY SLOPE DRAIN	LINEAR FOOT
209-02.04	10" TEMPORARY SLOPE DRAIN	LINEAR FOOT
209-02.05	12" TEMPORARY SLOPE DRAIN	LINEAR FOOT
209-02.06	15" TEMPORARY SLOPE DRAIN	LINEAR FOOT
209-02.07	18" TEMPORARY SLOPE DRAIN	LINEAR FOOT
209-03	CHECK DAMS	SQUARE FOOT
209-04	BRUSH BARRIERS	LINEAR FOOT
209-05	SEDIMENT REMOVAL	CUBIC YARD
209-06	BALED 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
209-10.20	TEMPORARY SEDIMENT TRAP	CUBIC YARD
209-11.01 TO 209-11.09	SEDIMENT BASIN RISER (__")	EACH
209-11.20	SEDIMENT BASIN BAFFLES	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	CLASS A 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	42" TEMPORARY DRAINAGE PIPE	LINEAR FOOT
621-03.07	48" TEMPORARY DRAINAGE PIPE	LINEAR FOOT
621-03.08	54" TEMPORARY DRAINAGE PIPE	LINEAR FOOT
621-03.09	60" 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	TON
709-02.01	RUBBLE STONE RIP-RAP (GROUTED)	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 (EROSION 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 VETCH MIXTURE (WITHOUT MULCH)	UNIT
801-03	WATER (SEEDING AND SODDING)	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

(ITEMS 209-05 & 209-10.01)



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 FEET FOR THE TEMPORARY DEWATERING STRUCTURE IS OBTAINED BY MULTIPLYING THE PUMPING RATE (IN ACCOMPANYING TABLE) IN GALLONS PER MINUTE, BY 16.

(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 THE TEMPORARY DEWATERING STRUCTURE. IT IS TO BE PAID FOR UNDER THE PRICE BID FOR ITEM 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		RATE		STRUCTURE VOLUME REQD. (CUBIC FEET)
TYPE	(DIA.)	MANUF. CAPACITY	GPM (GALLONS PER MINUTE)	
CONSTRUCTION	2 IN.	8,400 GPH	140 GPM	2,240 C.F.
	3 IN.	15,600 GPH	260 GPM	4,160 C.F.
	4 IN.	30,000 GPH	500 GPM	8,000 C.F.
	6 IN.	66,000 GPH	1,100 GPM	17,600 C.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.

- REV. 3-15-04: ADDED PAY ITEMS FOR CATCH BASIN FILTER ASSEMBLIES.
- REV. 12-18-95: CHANGED DRAWING NO. FROM ESC-STR-1 TO EC-STR-1.
- REV. 10-26-00: IN TEMPORARY EROSION AND SEDIMENT CONTROL PAY ITEMS BLOCK CHANGED PAY ITEM NUMBERS AND DESCRIPTIONS TO CONCUR WITH CHANGES MADE BY CONSTRUCTION DIVISION.
- REV. 5-27-01: REVISED PAY ITEMS AND GENERAL NOTES TO COMPLY WITH NEW PAY ITEM SYSTEM GOING IN EFFECT OCTOBER 26, 2001.
- REV. 12-18-02: ADDED PAY ITEM NOS. 209-08.02 AND 209-08.04. CHANGED SHEET NAME.
- REV. 1-22-03: CHANGED GENERAL NOTE (H)

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

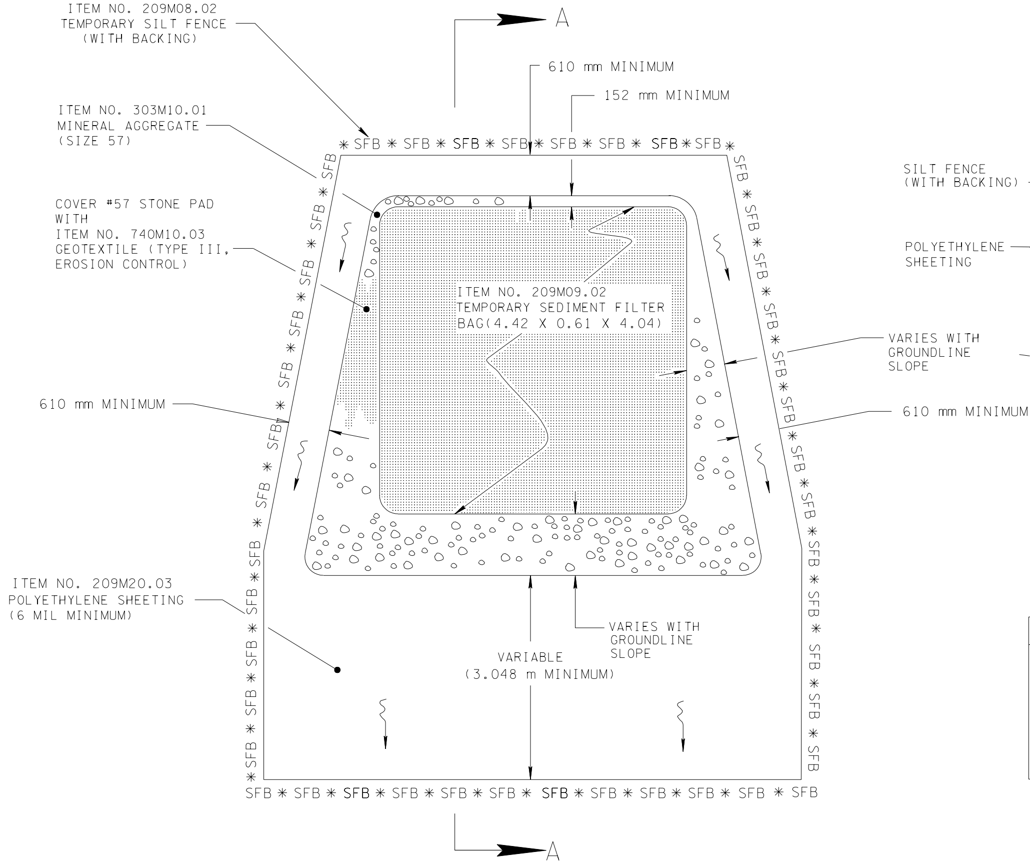
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PAY ITEMS, GENERAL NOTES & TEMPORARY DEWATERING STRUCTURE

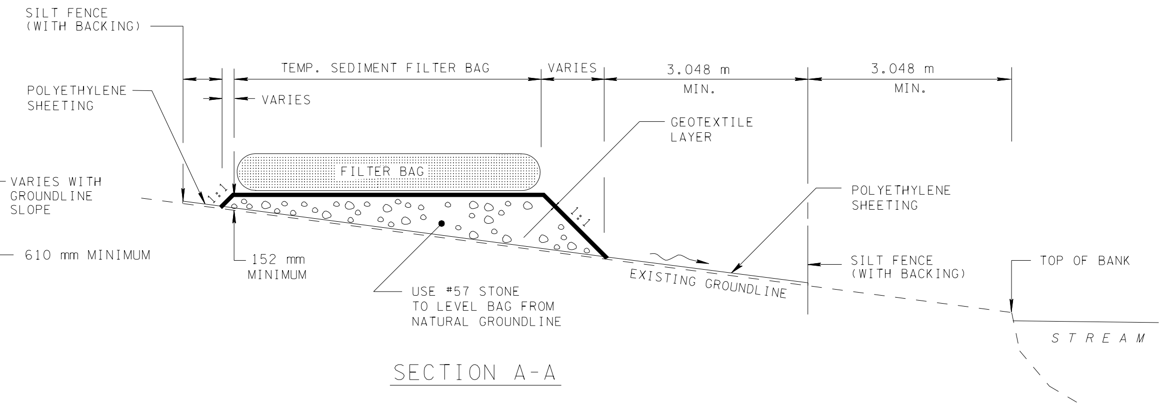
10-26-92 | EC-STR-1

TEMPORARY SEDIMENT FILTER BAG

- REV. 5-27-01: CHANGED ITEM NOS. 209M08 TO 209M08.03, 209M08.10 TO 209M09.02 AND 303M15.01 TO 303M10.01. 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.



PLAN VIEW



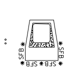
SECTION A-A

GENERAL NOTES

1. SPECIAL PROVISION 209B IS 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.
2. 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)

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

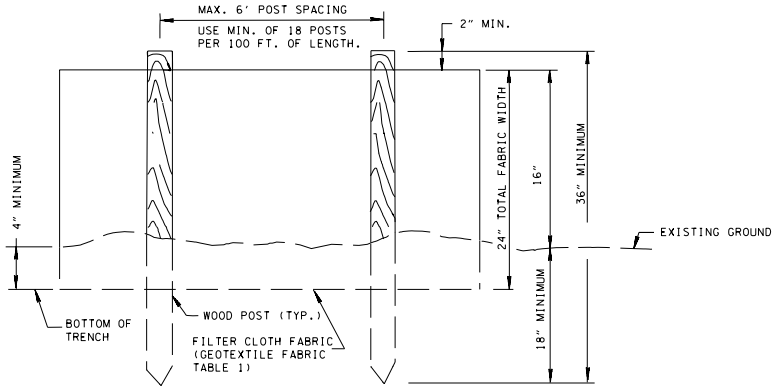
TEMPORARY SEDIMENT FILTER BAGS

10-26-00 ECM-STR-2

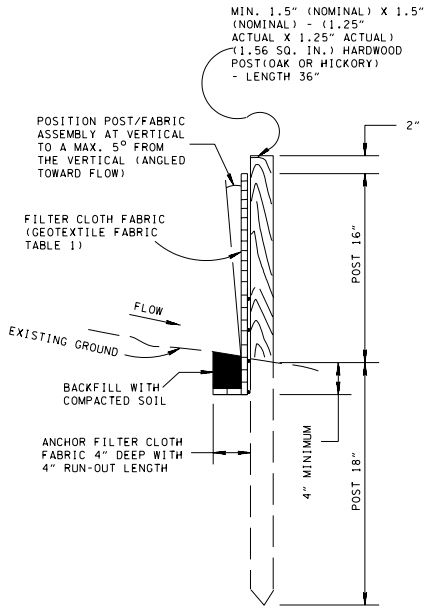
REV. 12-18-03: MODIFIED TABLE (1) AND GENERAL NOTE (E).

TEMPORARY FILTER BARRIER

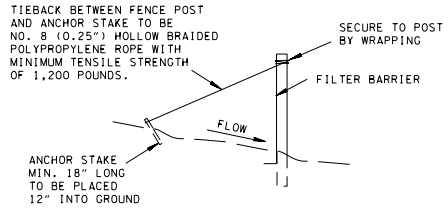
(ITEM NO. 209-08.01)



ELEVATION VIEW



SECTIONAL VIEW



FILTER BARRIER TIEBACK DETAIL

(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS. COST TO BE INCLUDED IN THE ITEMS FOR TEMPORARY FILTER BARRIER)

TABLE 1
TEMPORARY SILT FENCE FABRIC SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MEAN VALUES OF TEST DATA)
FABRIC TYPE	WOVEN SLIT FILM
APPARENT OPENING SIZE (ASTM D4751)	#30 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)
ULTRAVIOLET 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 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 RESIDENTAL AREAS ONLY.

(C) THE MAXIMUM DRAINAGE AREA SIZE FOR A CONTINUOUS BARRIER SHALL BE ¼ 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 "BULGES" 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 ½ INCH LEG AND 1 INCH 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 OF ONE PERCENT (±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 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 (DAMAGED FABRIC SHALL BE REPLACED).
- DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL. FOR PRE-ASSEMBLED FILTER BARRIER, 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.

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

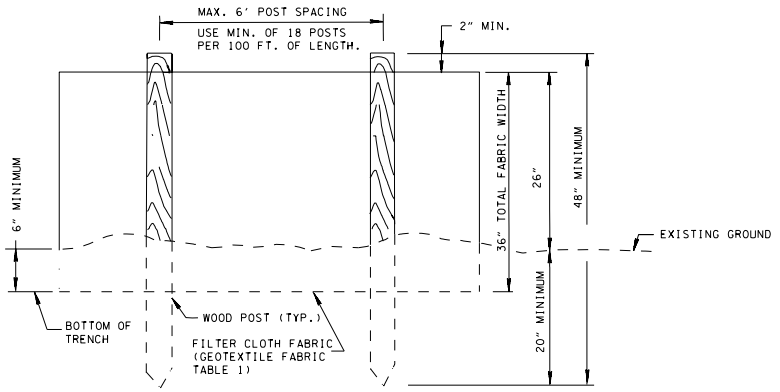
TEMPORARY FILTER BARRIER

12-18-02 | EC-STR-3A

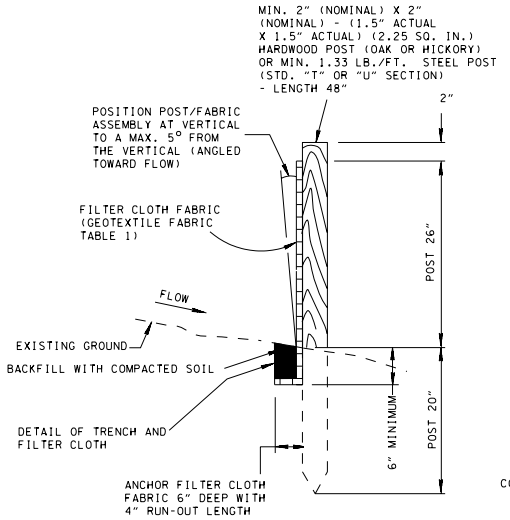
REV. 12-18-03: MODIFIED TABLE (I) AND GENERAL NOTE (E).

TEMPORARY SILT FENCE

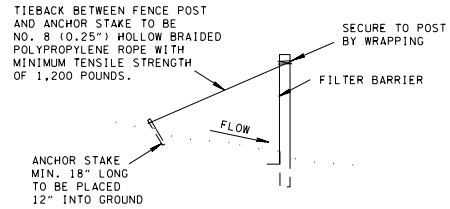
(ITEM NO. 209-08.03)



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 * (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 SLIT FILM
APPARENT OPENING SIZE (ASTM D4751)	#30 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)
ULTRAVIOLET 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 ¼ 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 AND PAINTED WITH ONE OR MORE COATS OF HIGH-GRADE WEATHER RESISTANT STEEL PAINT. POSTS SHALL BE STUDDED, 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 ½ INCH LEG AND 1 INCH 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 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 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, 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 (DAMAGED 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.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

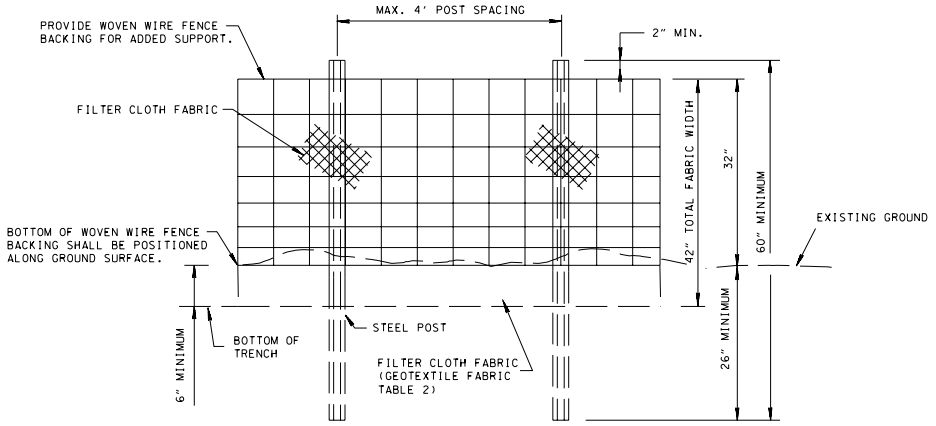
TEMPORARY SILT FENCE

12-18-02 | EC-STR-3B

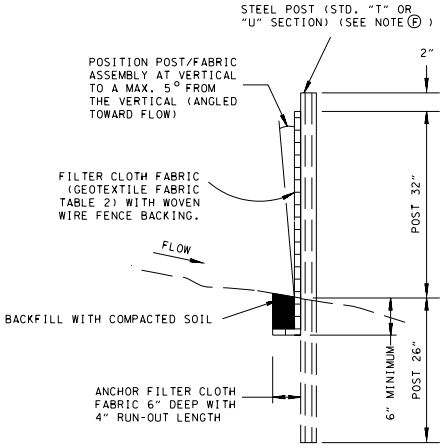
REV. 12-18-03: MODIFIED TABLE (2) AND GENERAL NOTE (E).

TEMPORARY SILT FENCE WITH BACKING

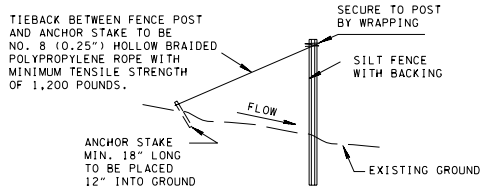
(ITEM NO. 209-08.02)



ELEVATION VIEW



SECTIONAL 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)

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
APPARENT OPENING SIZE (ASTM D4751)	# 70 TO # 100 STANDARD SIEVE
PERCENT OPEN AREA (POA)	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 DRAINAGE AREA SIZE FOR A CONTINUOUS SILT FENCE WITH BACKING SHALL BE 1 ACRE 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 STUDDED, EMBOSSED, OR PUNCHED 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 EVENLY SPACED WITH AT LEAST SIX PER POST.

(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 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 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 (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 * (TEMPORARY SILT FENCE WITH BACKING)

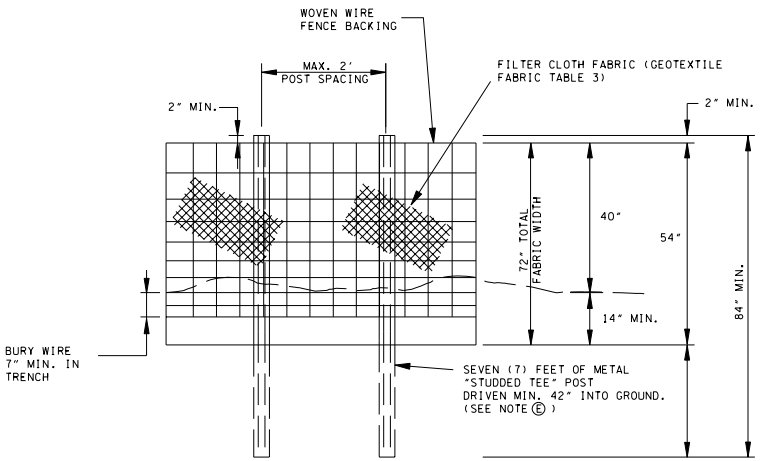
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TEMPORARY SILT FENCE WITH BACKING

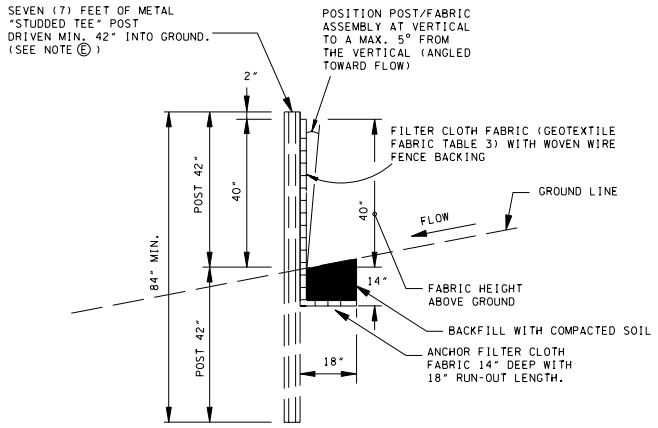
12-18-02 | EC-STR-3C

ENHANCED SILT FENCE

(ITEM NO. 209-08.04)



ELEVATION VIEW



SECTIONAL VIEW

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

REV. 12-18-03: REPLACED TABLE ③ AND MODIFIED GENERAL NOTES Ⓑ, Ⓓ, AND Ⓘ.

TABLE 3
ENHANCED SILT FABRIC SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MEAN VALUES OF TEST DATA)
FABRIC TYPE	WOVEN MONOFILAMENT
APPARENT OPENING SIZE (ASTM D4751)	#30 TO #80 STANDARD SIEVE
WATER FLUX (ASTM D4491)	≥ 130 GPM/FT^2
TENSILE STRENGTH (ASTM D4632)	≥ 390 LBS. (WARP DIRECTION) X 260 LBS (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	≥ 90%
BURST 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

Ⓐ 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.

Ⓑ 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 TABLE 4 AND TABLE 5 ON STANDARD DRAWINGS EC-STR-4 AND EC-STR-4A, RESPECTIVELY.

Ⓒ WHEN TWO SECTIONS OF ENHANCED SILT FABRIC ADJOIN EACH OTHER THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING EC-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.

Ⓔ 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 STUDDED, EMBOSSED, OR PUNCHED TO AID IN THE ATTACHMENT OF WIRE.

Ⓕ 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. THE WIRE FASTENERS SHOULD BE EVENLY SPACED WITH AT LEAST SIX PER POST.

Ⓖ WIRE FENCE FABRIC SHALL MEET THE REQUIREMENTS FOR ASTM A-116 FOR NO. 11 FARM, DESIGN NO. 1047-6-11, CLASS 3 COATING.

Ⓗ FILTER FABRIC SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE BACKING WITH TIES SPACED EVERY 24 INCHES ALONG TOP AND MID SECTION.

Ⓘ 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 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 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.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

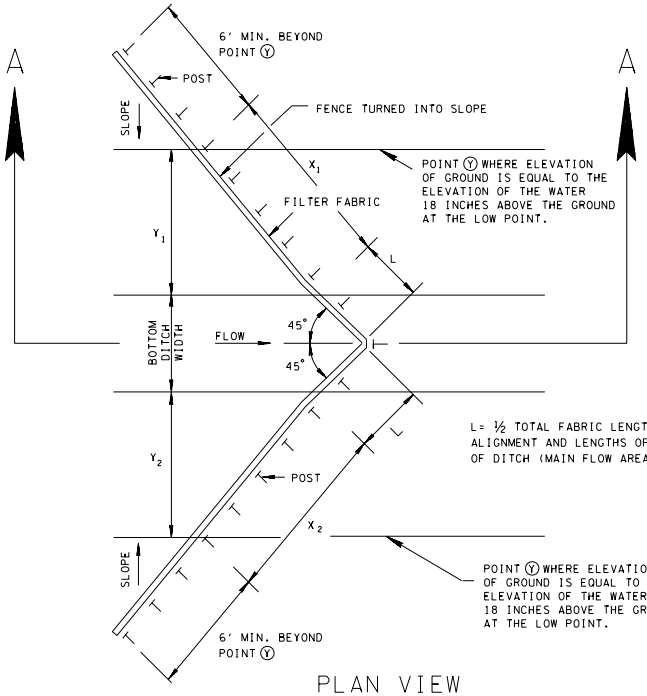
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TEMPORARY ENHANCED SILT FENCE

12-18-02 | EC-STR-3D

TYPE EC I

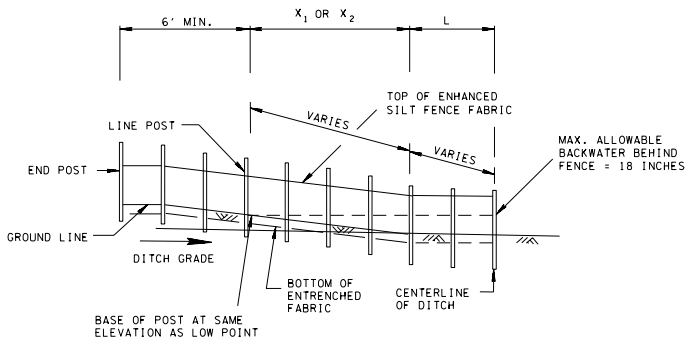
- REV. 12-18-03: MODIFIED SPACING FOR ENHANCED SILT FENCE DETAIL AND ADDED SUPPORTING TABLE. MODIFIED TABLE 4 AND GENERAL NOTES.
- REV. 3-15-04: CHANGED PLANS LEGEND SYMBOL.

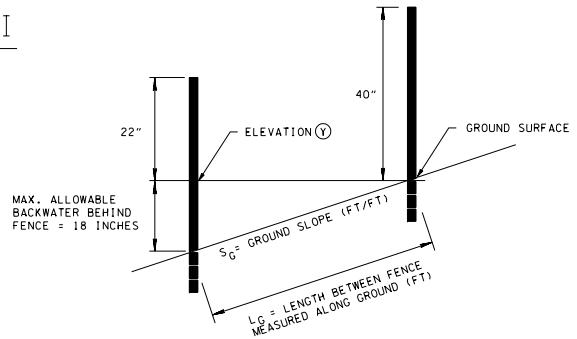


L= ½ TOTAL FABRIC LENGTH WITHIN BOTTOM WIDTH OF DITCH. ALIGNMENT AND LENGTHS OF FABRIC WITHIN BOTTOM WIDTH OF DITCH (MAIN FLOW AREA) WILL VARY PER TABLE 4.

PLAN VIEW

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





SPACING FOR ENHANCED SILT FENCE

GROUND SLOPE S_G (FT/FT)	⊕ RECOMMENDED SPACING, (L_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 FILTER LOCATIONS, BASED ON BACKWATER EFFECTS (USING 18 INCHES MAXIMUM BACKWATER BEHIND FENCE)

TABLE 4

WIDTH OF DITCH BOTTOM (FT)	③ TOTAL ENHANCED SILT FABRIC FENCE LENGTH 2L (LENGTH L) WITHIN FLAT-BOTTOM ZONE OF DITCH, (FT)	X_1 OR X_2 (FT)			TOTAL AVALABLE SURFACE AREA OF FABRIC IN DITCH AT 18 INCHES OF FLOW DEPTH (FT^2)			② MAXIMUM ALLOWABLE DESIGN PEAK FLOW FROM WATERSHED (CFS) AT 18 INCH HEAD		
		2:1	3:1	4:1	① 2:1 SIDESLOPE	① 3:1 SIDESLOPE	① 4:1 SIDESLOPE	① 2:1 SIDESLOPE	① 3:1 SIDESLOPE	① 4:1 SIDESLOPE
3	4.2 (2.1)	4.2	6.4	8.5	12.6	15.8	19.0	9.9	11.8	13.8
4	5.7 (2.9)	4.2	6.4	8.5	14.9	18.0	21.2	12.0	14.0	16.0
5	7.0 (3.5)	4.2	6.4	8.5	16.8	20.0	23.2	13.8	15.8	17.8
6	8.5 (4.3)	4.2	6.4	8.5	19.1	22.2	25.4	15.9	17.9	19.9
7	9.9 (5.0)	4.2	6.4	8.5	21.2	24.3	27.5	17.9	19.9	21.9
8	11.3 (5.7)	4.2	6.4	8.5	23.3	26.4	29.6	19.9	21.8	23.8
9	12.7 (6.4)	4.2	6.4	8.5	25.4	28.5	31.7	21.8	23.8	25.8
10	14.1 (7.1)	4.2	6.4	8.5	27.5	30.6	33.8	23.8	25.8	27.8
12	17.0 (8.5)	4.2	6.4	8.5	31.8	35.0	38.2	27.9	29.9	31.9
15	21.2 (10.6)	4.2	6.4	8.5	38.1	41.3	44.5	33.8	35.8	37.8

① HORIZONTAL TO VERTICAL MEASUREMENT RATIOS ARE SHOWN

② ALLOWABLE FLOWS DO NOT INCLUDE HYDRAULIC REDUCTION DUE TO ACCUMULATION OF CAPTURED SOIL PARTICLES ON FILTER SURFACE AREA

③ THIS LENGTH IS TO BE ADDED TO CALCULATED LENGTHS X_1 AND X_2. 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 X_1 AND X_2 WILL BE CALCULATED BY MULTIPLYING THE LENGTHS OF SLOPE Y_1 OR Y_2 AT EACH INDIVIDUAL LOCATION BY 1.414.

④ BASED ON 130 GPM/FT^2 (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-3D. 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 (2L).

Ⓒ 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 CAPACITES GIVEN IN TABLE 4 ABOVE SHOULD BE ACCOMODATED BY BYPASSING EXCESS FLOWS.

Ⓓ ANCHOR AND INSTALL TEMPORARY ENHANCED SILT FENCE PER DETAILS AND SPECIFICATIONS SHOWN ON STANDARD DRAWING EC-STR-3D. 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 Ⓒ 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 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.

- MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

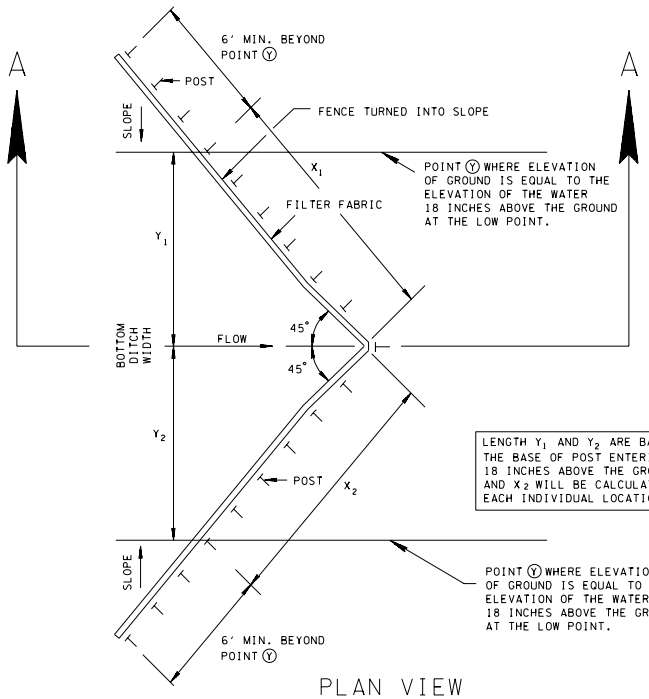
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION DITCH CHECK USING ENHANCED SILT FENCE

12-28-02 | EC-STR-4

TYPE EC IA

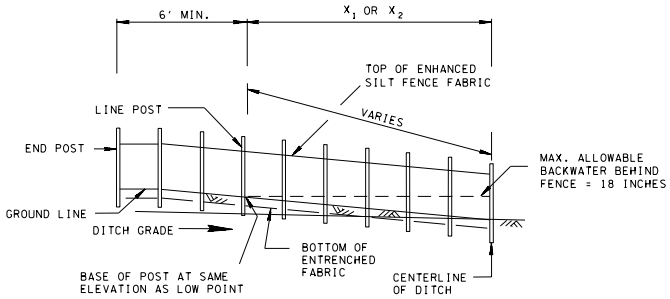
- REV. 12-18-03: MODIFIED SPACING FOR ENHANCED SILT FENCE DETAIL AND ADDED SUPPORTING TABLE. MODIFIED TABLE 5 AND GENERAL NOTES.
- REV. 3-15-04: CHANGED PLANS LEGEND SYMBOL.

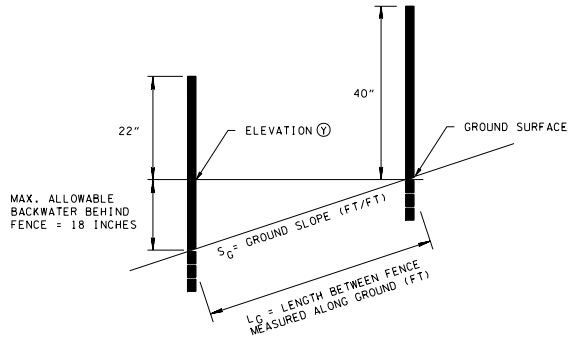


PLAN VIEW

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 THE DITCH. LENGTHS X_1 AND X_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 (FT/FT)	⊕ RECOMMENDED SPACING, (L_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 FILTER LOCATIONS, BASED ON BACKWATER EFFECTS (USING 18 INCHES MAXIMUM BACKWATER BEHIND FENCE)

TABLE 5

DITCH SIDESLOPES	X_1 OR X_2 (FT)	TOTAL AVALABLE SURFACE AREA OF FABRIC IN DITCH AT 18 INCHES OF FLOW DEPTH (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/FT^2 (0.04 INCHES/SEC PERMEABILITY) 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 DRAWING EC-STR-3D.

GENERAL NOTES

Ⓐ A DITCH WITH A TRINANGULAR CROSS-SECTION IS ASSUMED.

Ⓑ 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 CAPACITES GIVEN IN TABLE 5 ABOVE SHOULD BE ACCOMODATED BY BYPASSING EXCESS FLOWS.

Ⓒ ANCHOR AND INSTALL TEMPORARY ENHANCED SILT FENCE PER DETAILS AND SPECIFICATIONS SHOWN ON STANDARD DRAWING EC-STR-3D. 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 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.

- MINOR REVISION -- FHWA 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 DRAWING NO. FROM ESC-STR-5 TO EC-STR-5.

REV. 5-27-01: CHANGED ITEM NO. 209-08 TO 209-08.03.

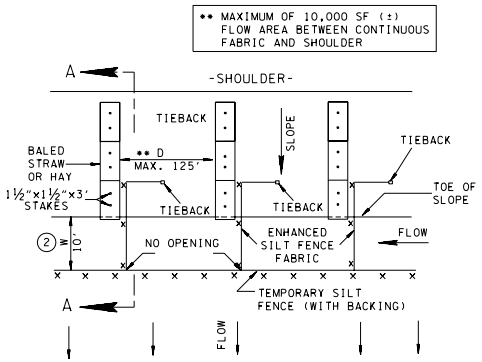
REV.7-29-02: REMOVED DETAILS FOR TYPE EC IA,TYPE EC IB, TYPE EC IC, AND TYPE EC ID.

REV. 12-18-02: 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.

TYPE EC IV

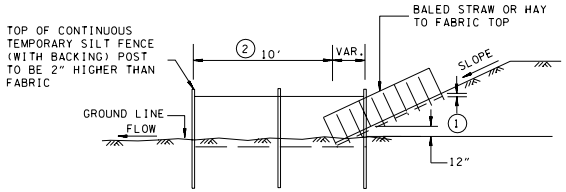
TYPICAL LOCATIONS AT TOE OF SLOPES



PLAN

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

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



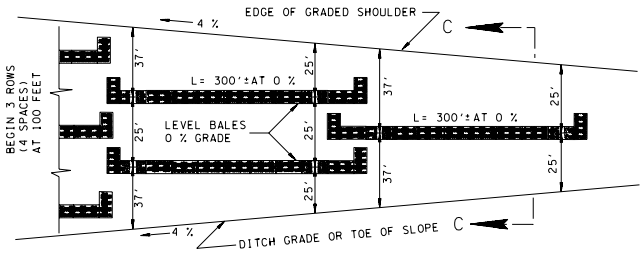
SECTION A-A

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.

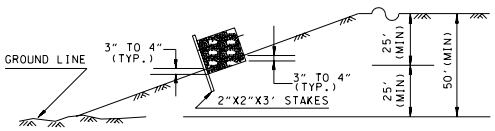
TYPE EC VI

BALED HAY OR STRAW ON FILL SLOPES



TYPICAL LONGITUDINAL VIEW (EXAMPLE)

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



SECTION C-C

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

EROSION CONTROL PLAN LEGEND:

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"X18"X14" (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-3C FOR TEMPORARY SILT FENCE (WITH BACKING) DETAILS, GENERAL NOTES AND SPECIFICATIONS.

(F) SEE EC-STR-3D FOR ENHANCED SILT FENCE DETAILS, GENERAL NOTES AND SPECIFICATIONS.

(F) 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.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STRAW OR HAY BALE OR FABRIC TEMPORARY EROSION CHECKS

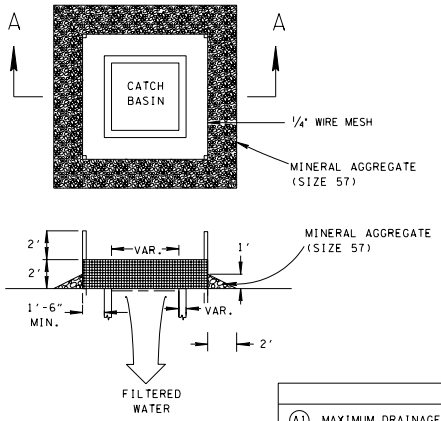
10-26-92 | EC-STR-5

TEMPORARY ROCK CATCH BASIN PROTECTION

(ITEM NO. 303-10.01)

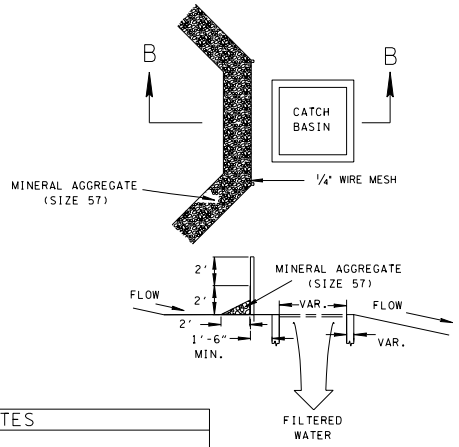
- REV. 3-15-04; CHANGED LEGENDS FOR TEMPORARY ROCK AND SILT FENCE CATCH BASIN PROTECTION.
- REV. 12-18-95: CHANGED DRAWING NO. FROM ESC-STR-19 TO EC-STR-19.
- REV. 5-27-01: CHANGED ITEM NO. 303-15.01 TO 303-10.01.
- REV. 12-18-02: IN CATCH BASIN SILT FENCE SILT TRAP CHANGED TYPE OF SILT FENCE FROM SILT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

MULTI-DIRECTIONAL FLOW



SECTION A-A

SINGLE-DIRECTIONAL FLOW



SECTION B-B

GENERAL NOTES

(A1) MAXIMUM DRAINAGE AREA IS 1 ACRE.

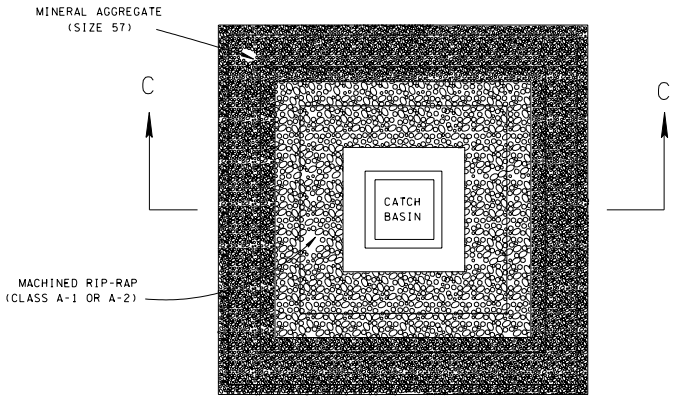
(A2) WIRE MESH SHALL BE HARDWARE CLOTH MIN. 19 GAGE WITH ¼ INCH MESH OPENINGS. COST TO BE INCLUDED IN ITEM 303-10.01 MINERAL AGGREGATE (SIZE 57).

EROSION CONTROL PLAN LEGEND: (M1) TEMPORARY ROCK CATCH BASIN PROTECTION (MULTI-DIRECTIONAL FLOW)

EROSION CONTROL PLAN LEGEND: (S1) TEMPORARY ROCK CATCH BASIN PROTECTION (SINGLE-DIRECTIONAL FLOW)

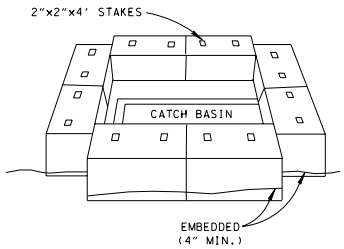
TEMPORARY ROCK CATCH BASIN PROTECTION

(ITEM NOS. 303-10.01, 709-05.06, & 709-05.07)



CATCH BASIN HAY OR STRAW BALE SILT TRAP

(ITEM 209-06)



GENERAL NOTES

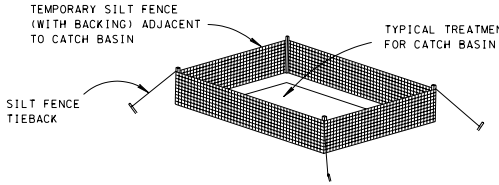
(B1) MAXIMUM DRAINAGE AREA IS 1 ACRE.

(B2) HAY OR STRAW BALES ARE TO BE EMBEDDED A MINIMUM OF FOUR(4)INCHES INTO GROUND.

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

CATCH BASIN SILT FENCE SILT TRAP

(ITEM NO. 209-08.02)



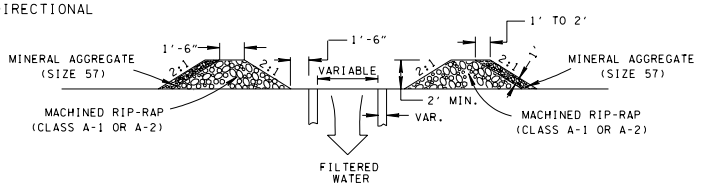
GENERAL NOTES

(C1) MAXIMUM DRAINAGE AREA IS 1 ACRE.

(C2) SEE EC-STR-3C FOR SILT FENCE DETAILS, GENERAL NOTES AND SEPECIFICATIONS.

(C3) CATCHBASIN SILT TRAPS WILL BE MEASURED FOR PAYMENT IN METERS OF TEMPORARY SILT FENCE (WITH BACKING).

EROSION CONTROL PLAN LEGEND: (SF) TEMPORARY CATCH BASIN SILT FENCE SILT TRAP



SECTION C-C

GENERAL NOTES

(D1) MAXIMUM DRAINAGE AREA IS 2 ACRES.

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

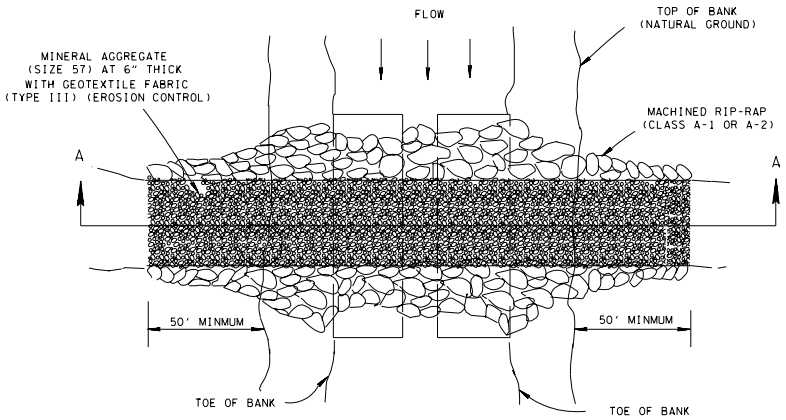
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN PROTECTION

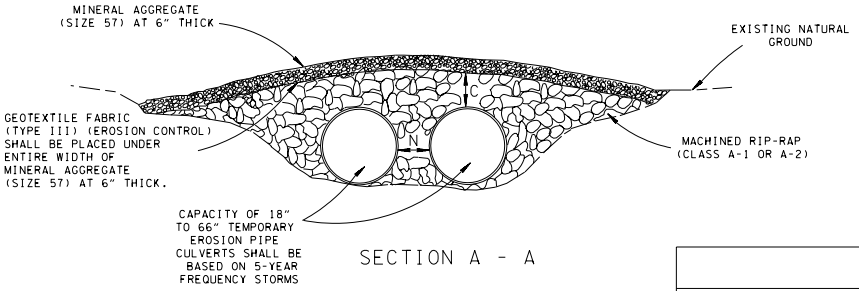
10-26-92 EC-STR-19

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

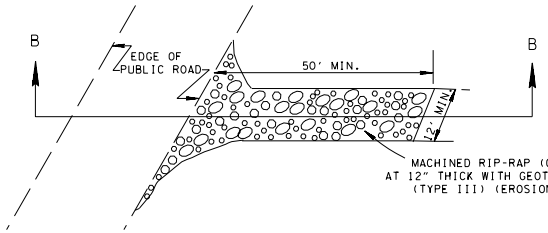


SECTION A - A

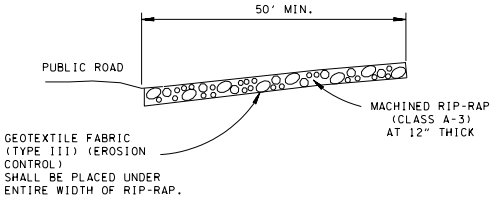
C = ½ DIAMETER OF PIPE OR 18" WHICHEVER IS GREATER.
N = ½ DIAMETER OF PIPE OR 12" WHICHEVER IS GREATER.

TEMPORARY CONSTRUCTION ROAD ENTRANCE AND/OR EXIT

(ITEM NOS. 203-01 & 303-10.01)



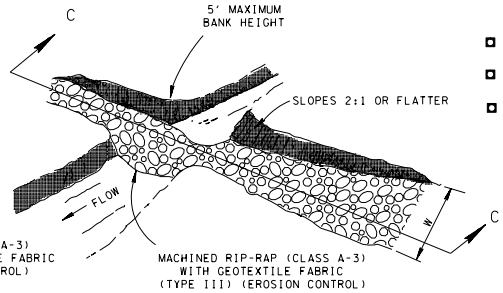
PLAN VIEW OF TEMPORARY CONSTRUCTION
ROAD ENTRANCE AND/OR EXIT



SECTION B - B

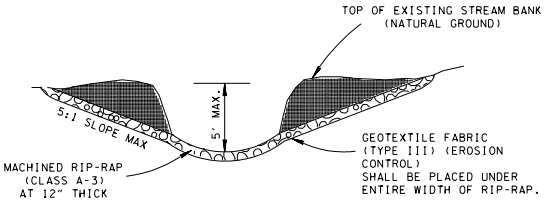
TEMPORARY STABILIZED CONSTRUCTION FORD

(ITEM NOS. 203-01,709-05.05 & 740-10.01)



PLAN VIEW OF STABILIZED CONSTRUCTION FORD

W = FORD WIDTH SHALL VARY FROM A MINIMUM
WIDTH OF 12' TO A MAXIMUM WIDTH OF 20'.



SECTION C - C

EROSION CONTROL
PLAN LEGEND:

TCC — TEMPORARY CULVERT CROSSING

TCR — TEMPORARY CONSTRUCTION ROAD
ENTRANCE AND/OR EXIT

TSF — TEMPORARY STABILIZED
CONSTRUCTION FORD

GENERAL NOTES

(A) DIMENSIONS SHOWN ON THESE DETAILS ARE THE MINIMUM THAT WILL BE ACCEPTABLE UNLESS OTHERWISE SPECIFIED BY THE PROJECT ENGINEER.

(B) GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS OF THE STANDARD SPECIFICATION FOR GEOTEXTILES AASHTO DESIGNATION M-288, EROSION CONTROL.

(C) TEMPORARY CULVERT CROSSINGS SHALL CONSIST OF ONE OR MORE CULVERTS BEING EIGHTEEN INCHES IN DIAMETER OR GREATER. THEIR SIZE WILL VARY FROM EIGHTEEN 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.

(D) TEMPORARY CULVERT CROSSINGS SHALL BE BID UNDER THE FOLLOWING PAY ITEMS :

203-01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED) PER CUBIC YARD
303-10.01	MINERAL AGGREGATE (SIZE 57) PER TON
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 DRAINAGR 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 III) (EROSION CONTROL) PER SQUARE YARD

(E) 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.

(F) 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 III) (EROSION CONTROL) PER SQUARE YARD

(G) TEMPORARY STABILIZED CONSTRUCTION FORDS ARE EFFECTIVE FOR INFREQUENT CROSSING OF WIDE SHALLOW DEPRESSIONS.

(H) 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 III) (EROSION CONTROL) PER SQUARE YARD

REV. 12-18-95: CHANGED DRAWING NO. FROM ESC-STR-25 TO EC-STR-25.

■ REV. 5-27-01: CHANGED ITEM NO. 303-15.01 TO 303-10.01. CHANGED DESCRIPTIONS IN ITEM NOS. 621-03.02 TO 621-03.10, AND 709-05.05 TO 709-05.07.

■ REV. 12-18-02: CHANGED GENERAL NOTE (B).

■ REV. 1-22-03: CORRECTED GENERAL NOTE (C).

■ REV.7-29-03: ADDED GEOTEXTILE FABRIC TO TEMPORARY CULVERT CROSSING AND TEMPORARY CONSTRUCTION ROAD ENTRANCE DETAILS. CHANGED MINERAL AGGREGATE TO CLASS A-3 RIP-RAP IN TEMPORARY CONSTRUCTION ROAD ENTRANCE DETAIL. CHANGED GENERAL NOTES (D) AND (E).

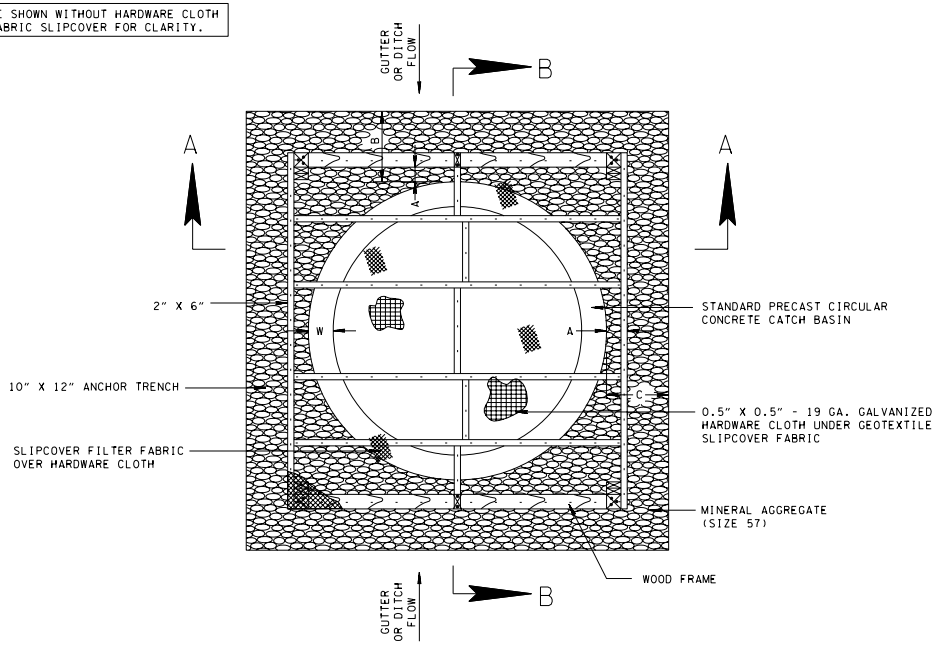
■ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TEMPORARY ROAD STABILIZATION AND TEMPORARY CULVERT CROSSING

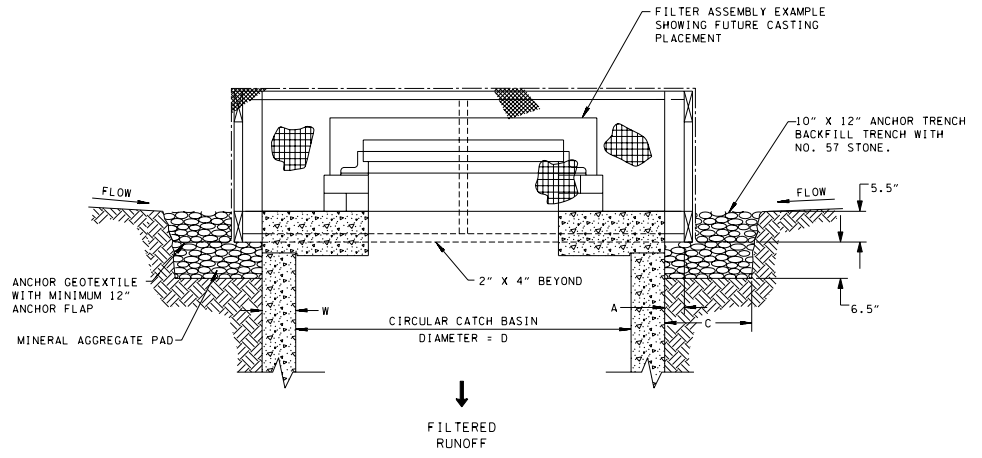
10-26-92 | EC-STR-25

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



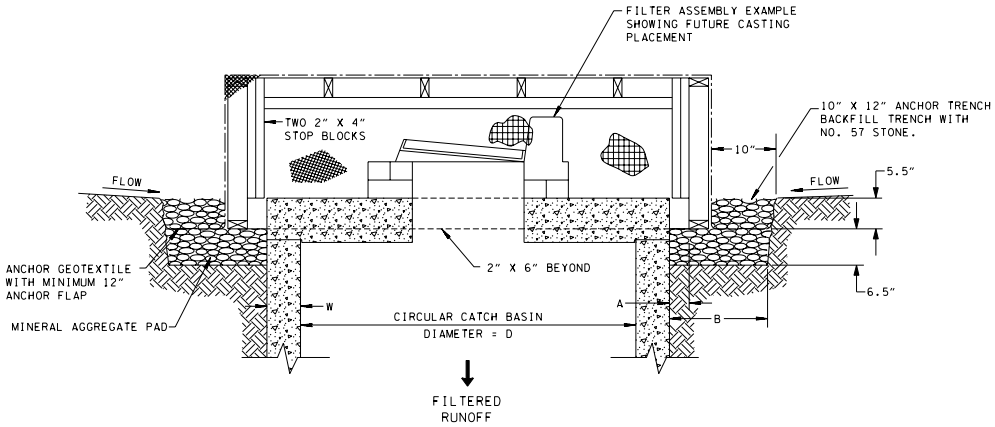
PLAN VIEW - CATCH BASIN FILTER ASSEMBLY

N.T.S.



SECTION A-A

N.T.S.



SECTION B-B

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. SEE D-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 HOW THE EC-STR-40 SERIES OF STANDARD DRAWINGS APPLIES TO PRECAST CIRCULAR STRUCTURES. FOR SPECIFIC DETAILS AND INSTRUCTIONS 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

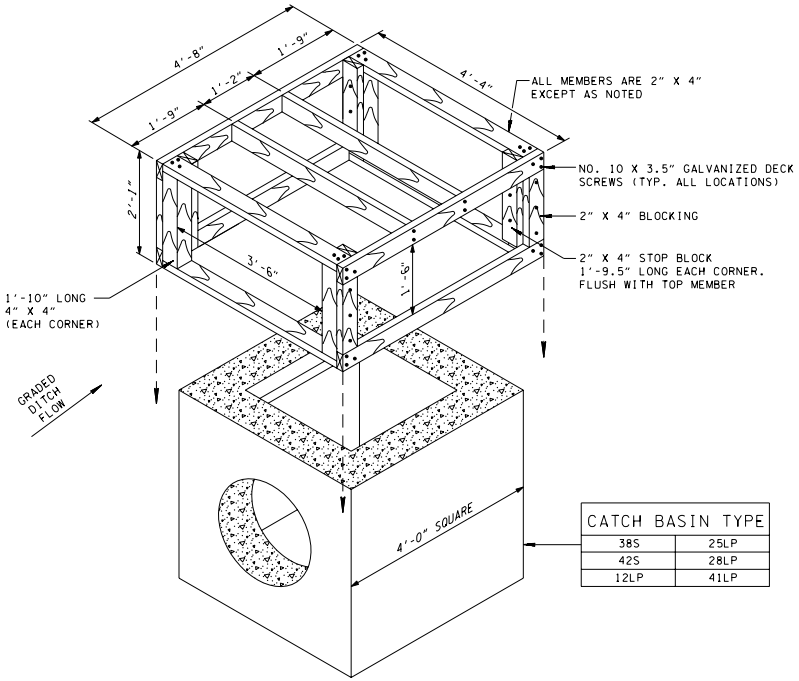
INSIDE DIA. OF CATCH BASIN D (INCHES)	WALL THICKNESS W (INCHES)	CATCH BASIN FILTER ASSEMBLY TYPE	APPLICABLE STANDARD DRAWINGS	DIMENSION		
				A (INCHES)	B (INCHES)	C (INCHES)
48	5	2	EC-STR-42 & 42A	3.5	17	15
60	6	3	EC-STR-43 & 43A	4.0	17.5	15.5
72	7	4	EC-STR-44 & 44A	8.0	21.5	19.5
84	8	4	EC-STR-44 &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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY FOR CIRCULAR STRUCTURES

4-15-04 | EC-STR-40

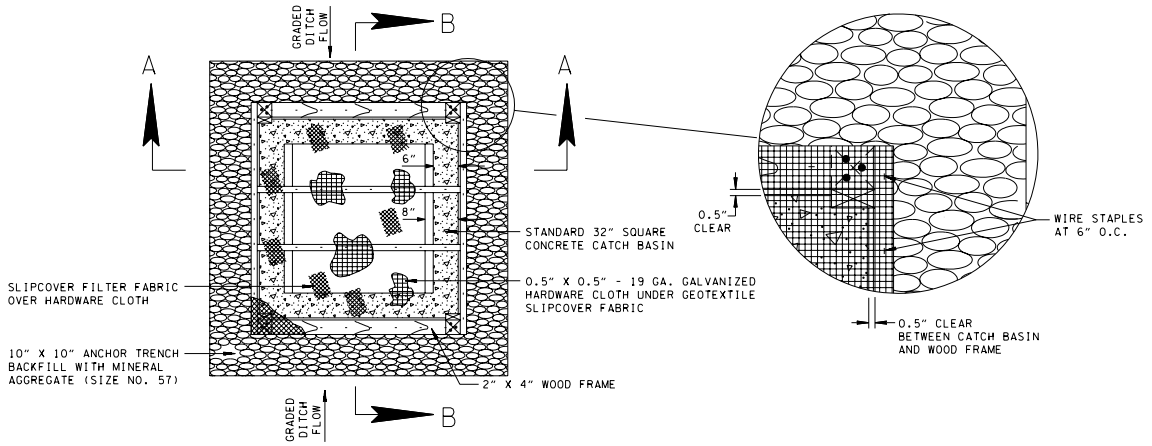
FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



CATCH BASIN TYPE	
38S	25LP
42S	28LP
12LP	41LP

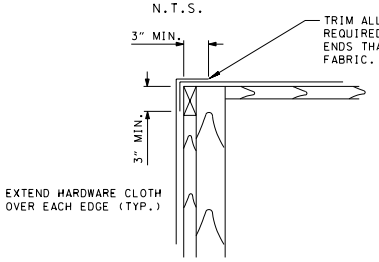
ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY

N.T.S.



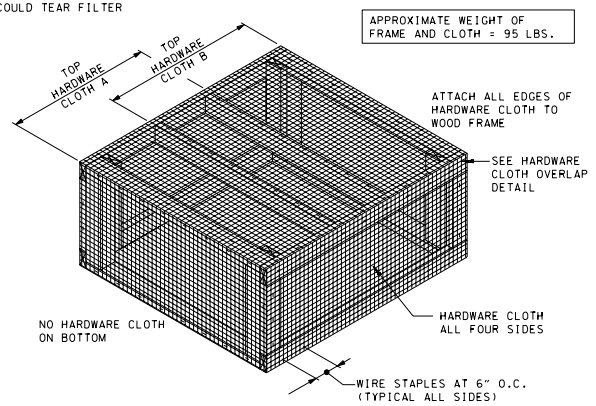
PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY

N.T.S.



HARDWARE CLOTH
OVERLAP DETAIL

N.T.S.



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH

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 38S, 42S, AND D-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 SWALES) IS REQUIRED AFTER STRUCTURES ARE CONSTRUCTED BUT PRIOR TO ESTABLISHING VEGETATION.

(C) 2 x 4 AND 4 x 4 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. 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 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.

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 TDOT 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 TDOT 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 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, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209-40.41, CATCH BASIN FILTER ASSEMBLY (TYPE 1), PER EACH.

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.

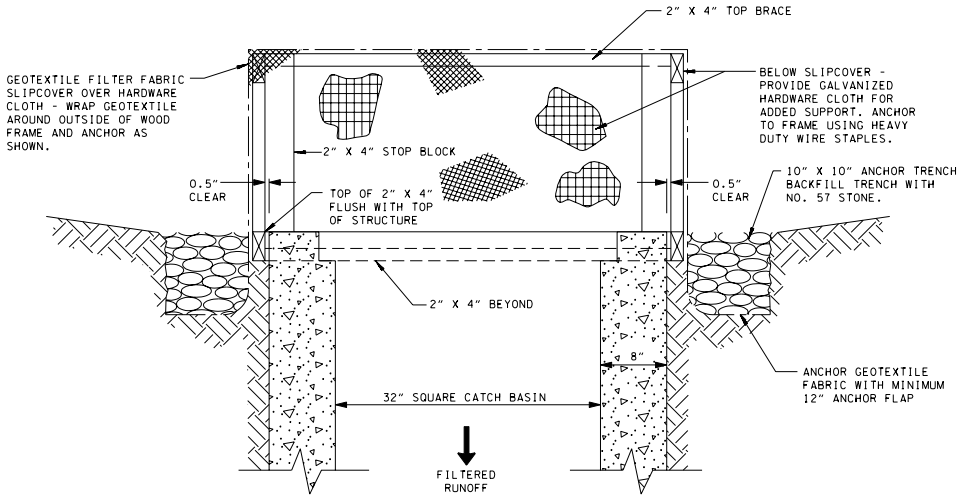
INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.

TRIM EXCESS ALONG BOTTOM AS NECESSARY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 1)

4-15-04 | EC-STR-41

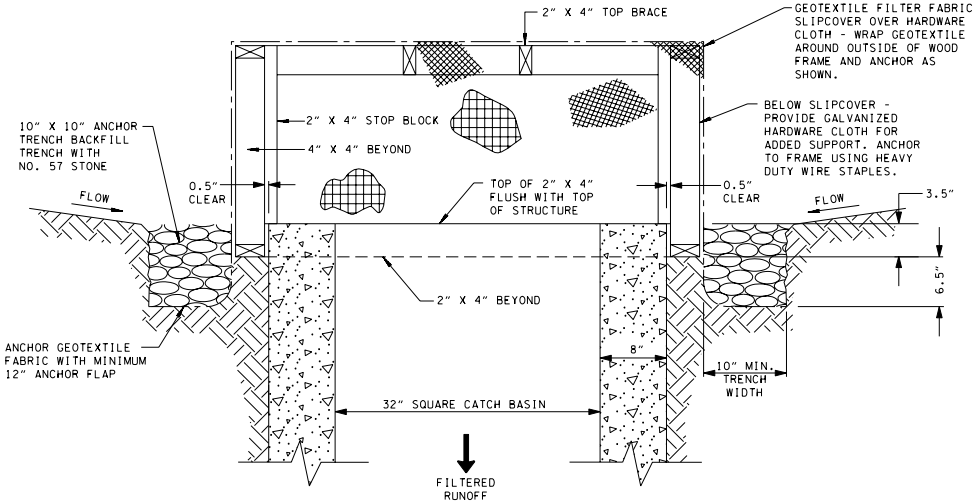


SECTION A-A

N.T.S.

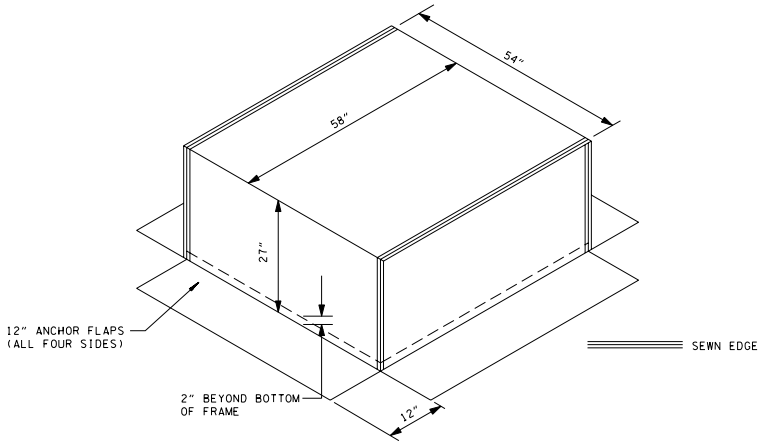
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥180 LBS
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥330 PSI
PUNCTURE STRENGTH	ASTM D4833	≥105 LBS
TRAPEZOIDAL TEAR	ASTM D4533	≥75 LBS
APPARENT OPENING SIZE (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 B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

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

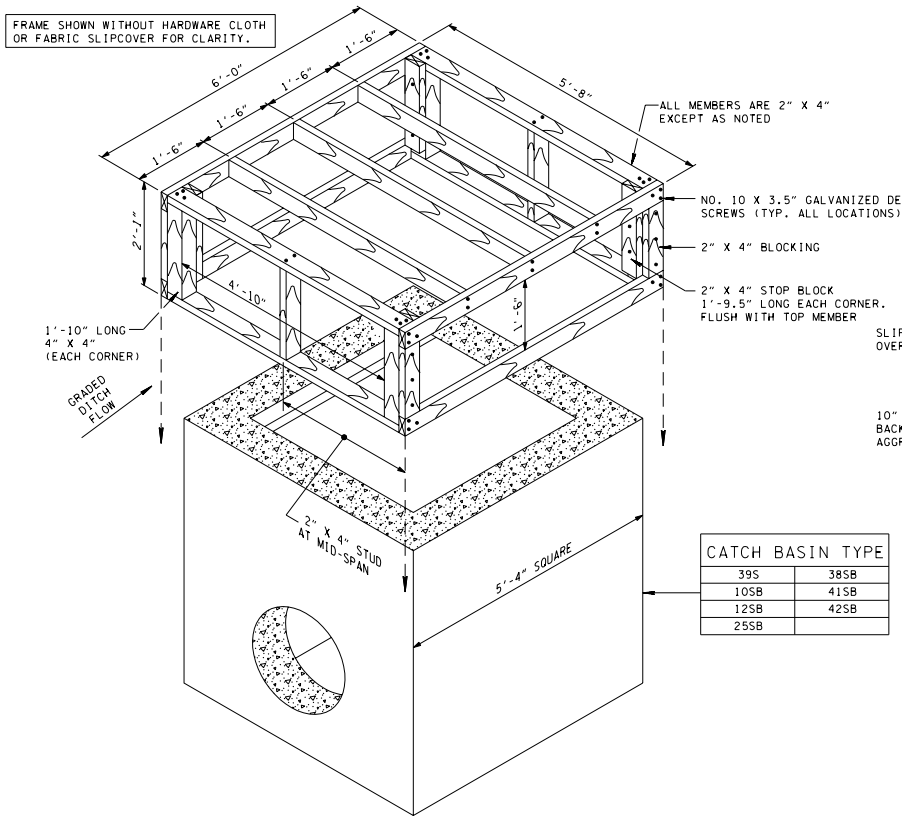
FABRICATION SPECIFICATIONS:

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.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

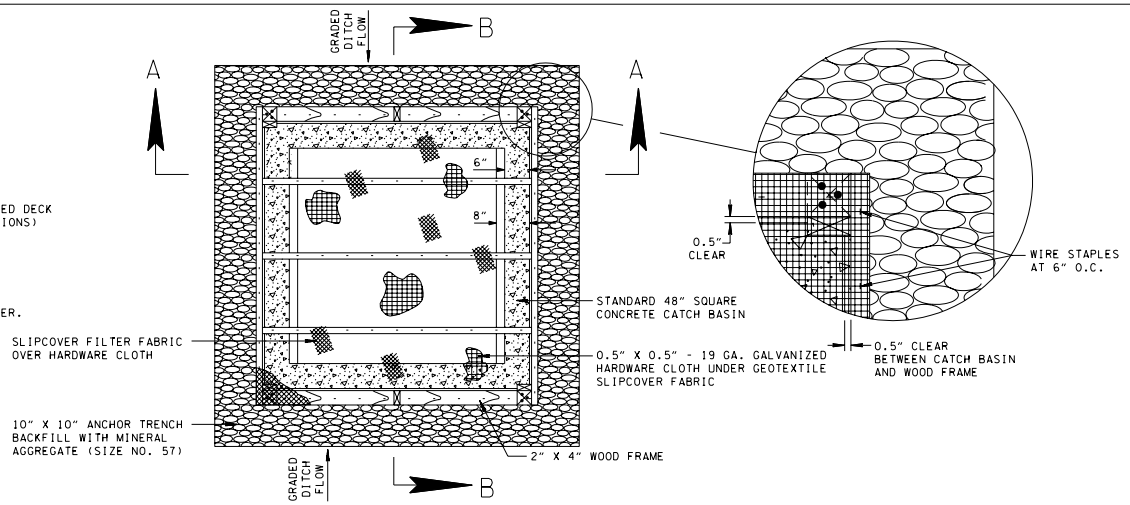
CATCH BASIN FILTER ASSEMBLY (TYPE 1) SLIPCOVER DETAILS

4-15-04 | EC-STR-41A

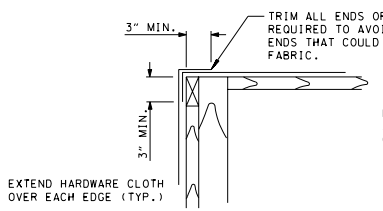


ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.

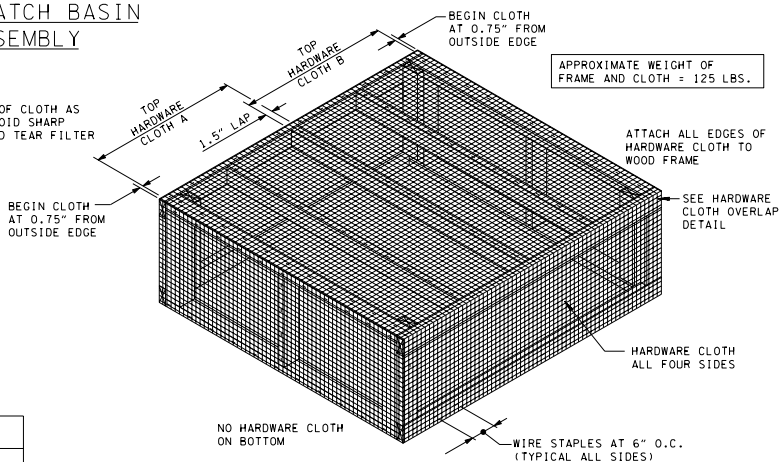
CATCH BASIN TYPE	
39S	38SB
10SB	41SB
12SB	42SB
25SB	



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



HARDWARE CLOTH
OVERLAP DETAIL
N.T.S.



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

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

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD TYPE 39S AND D-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) 2 x 4 AND 4 x 4 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. 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 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.

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 TDOT 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 TDOT 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 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, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209-40.42, CATCH BASIN FILTER ASSEMBLY (TYPE 2), PER EACH.

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.

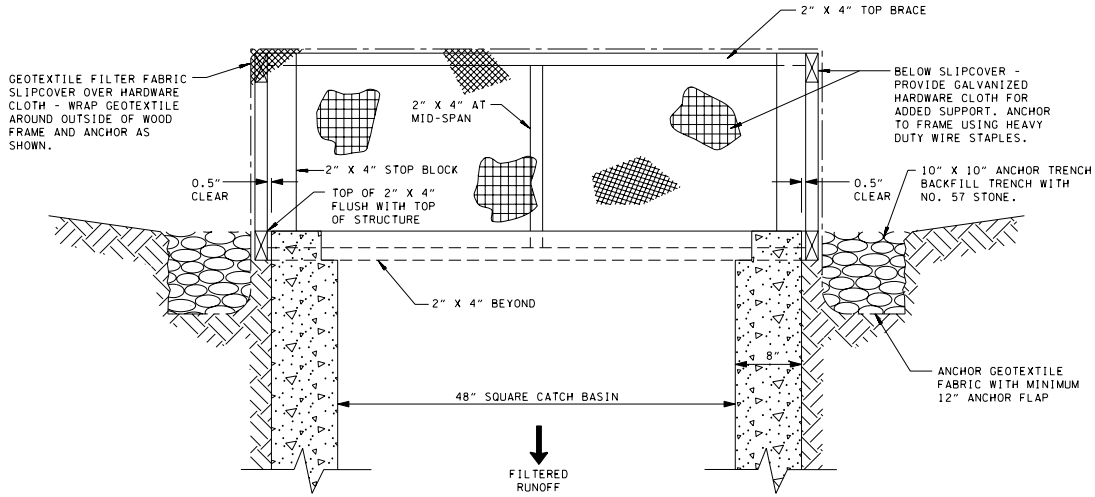
INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.

TRIM EXCESS ALONG BOTTOM AS NECESSARY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 2)

4-15-04 EC-STR-42

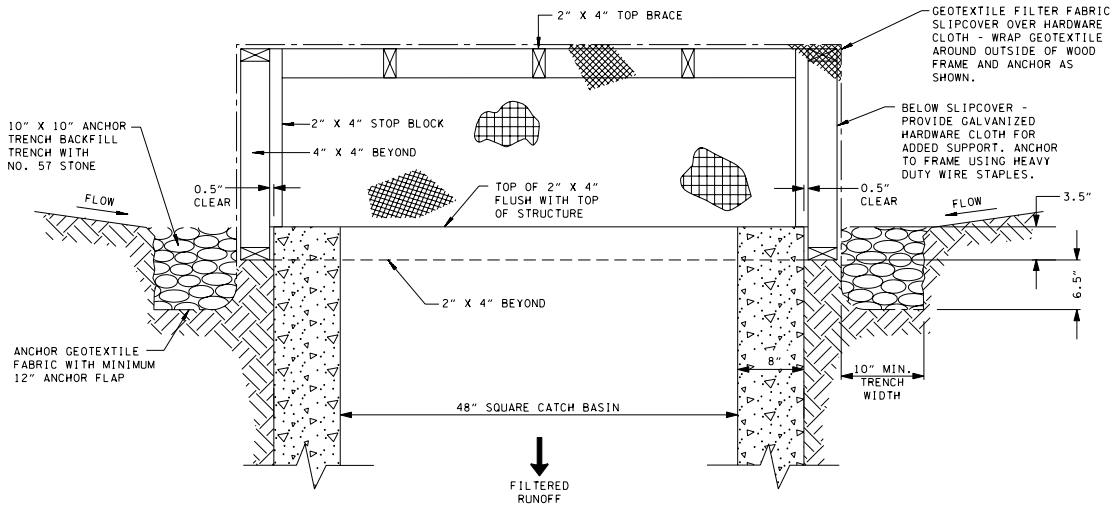


SECTION A-A

N.T.S.

SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
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 (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

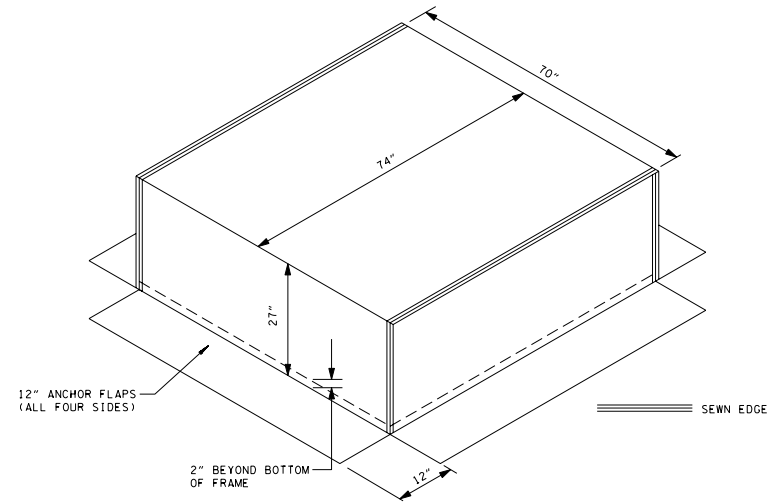
HARDWARE CLOTH SPECIFICATIONS	
STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	0.5 INCH X 0.5 INCH
WIRE SIZE	19 GAUGE
WIRE DIAMETER	0.041 INCHES
WEIGHT	± 0.2 LBS/SF
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC



SECTION B-B

N.T.S.

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



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

FABRICATION SPECIFICATIONS:

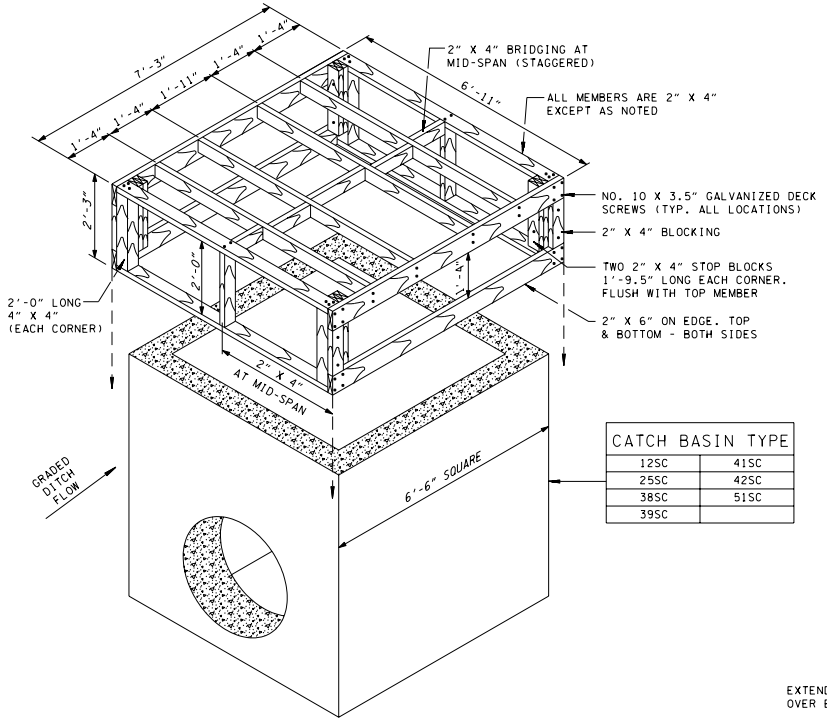
1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 138 POUNDS) WITH MINIMUM OF SIX STITCHES PER INCH.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 2) SLIPCOVER DETAILS

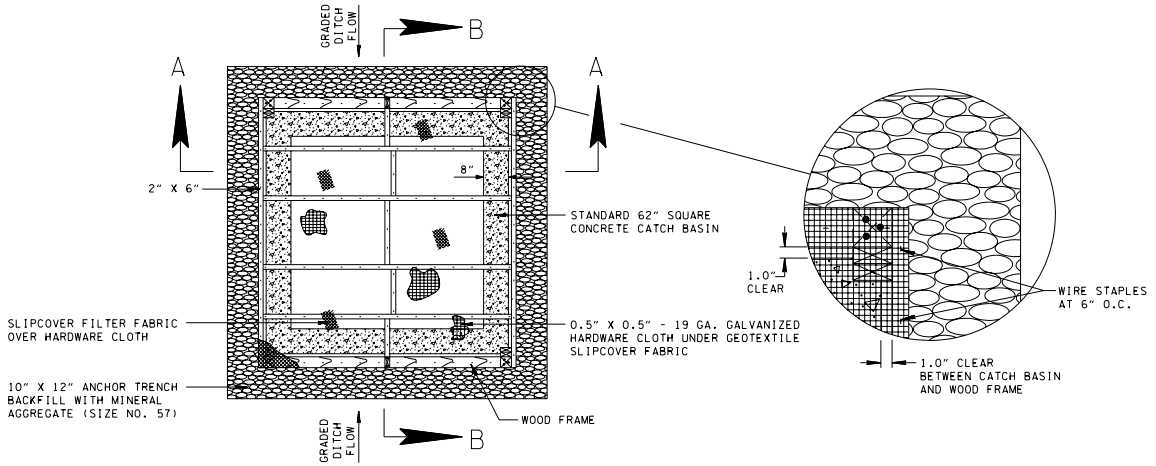
4-15-04 | EC-STR-42A

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.

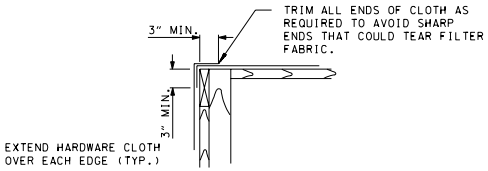


CATCH BASIN TYPE	
12SC	41SC
25SC	42SC
38SC	51SC
39SC	

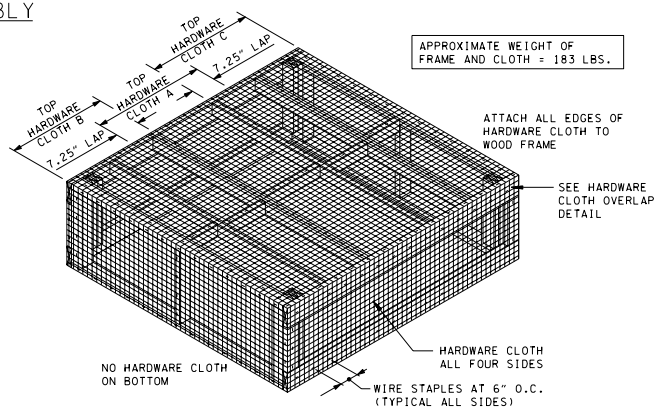
ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.



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



HARDWARE CLOTH
OVERLAP DETAIL
N.T.S.



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

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

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.

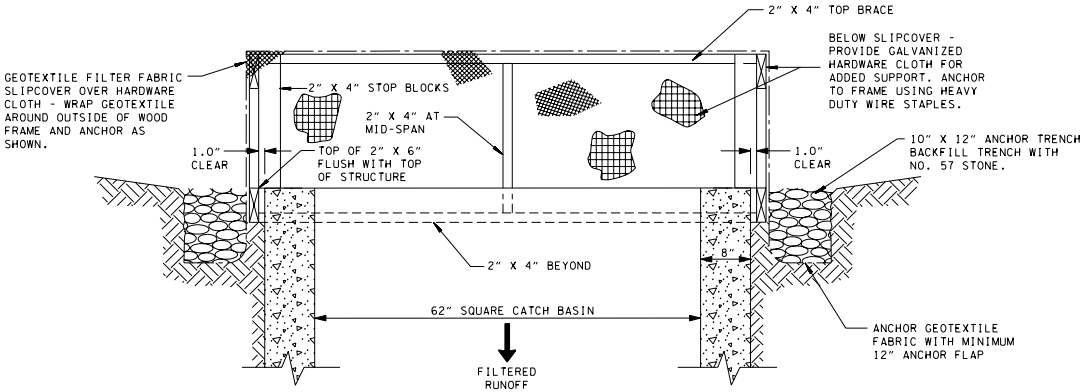
INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.

TRIM EXCESS ALONG BOTTOM AS NECESSARY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

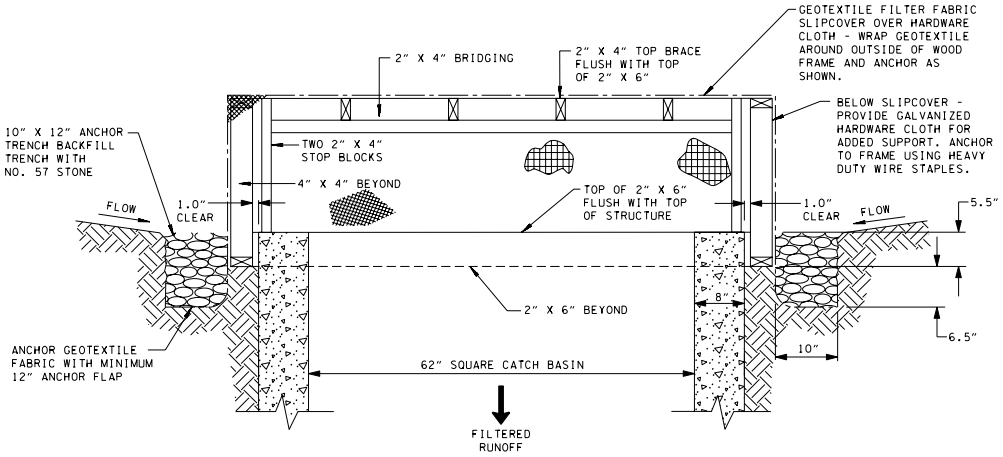
CATCH BASIN
FILTER ASSEMBLY
(TYPE 3)

4-15-04 | EC-STR-43



SECTION A-A

N.T.S.



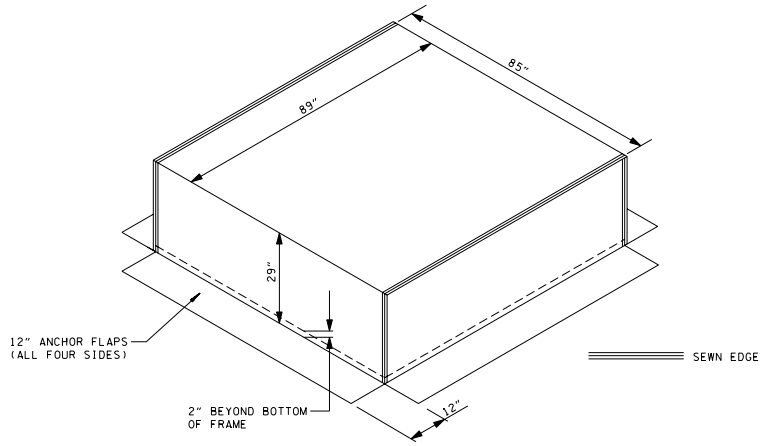
SECTION B-B

N.T.S.

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

SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
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 (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.

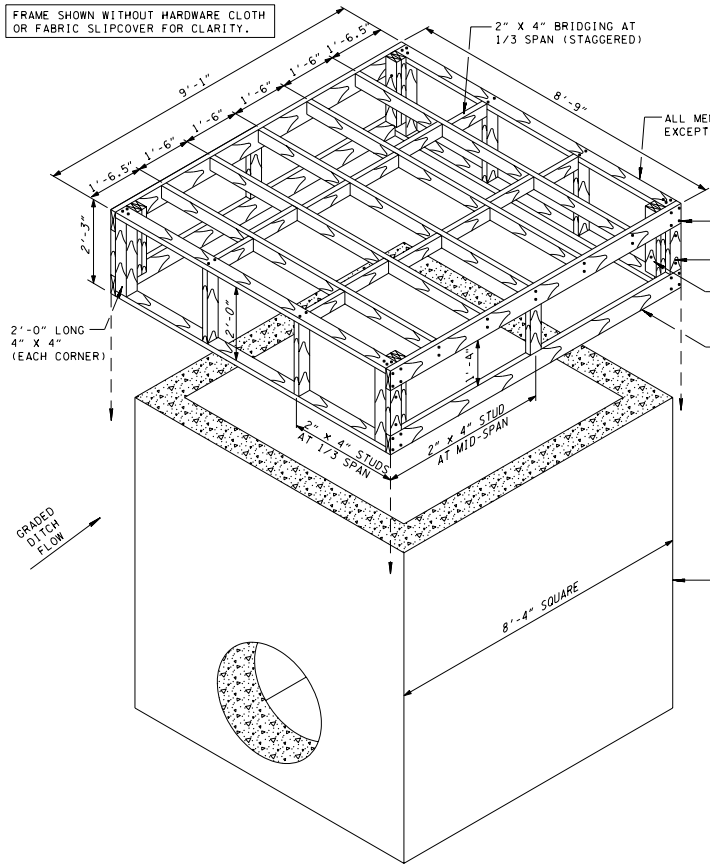
FABRICATION SPECIFICATIONS:

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.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 3) SLIPCOVER DETAILS

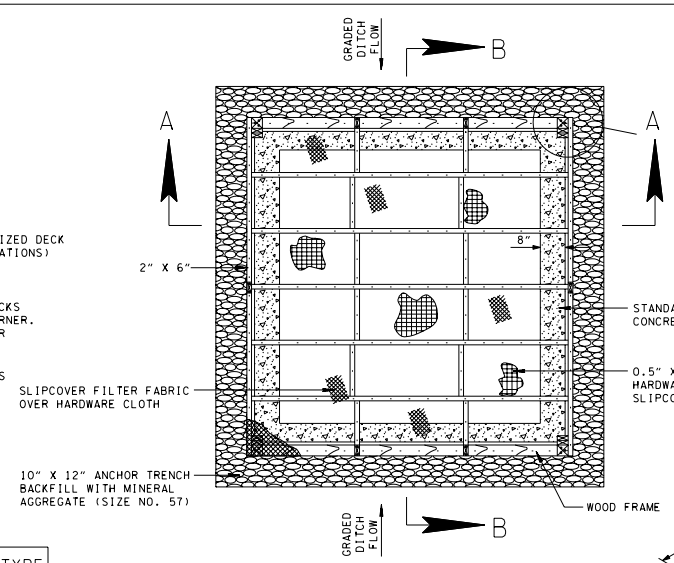
4-15-04 | EC-STR-43A



ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY

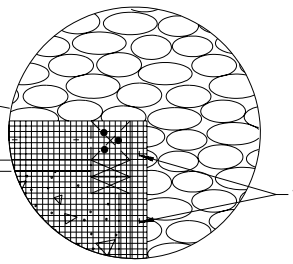
N.T.S.

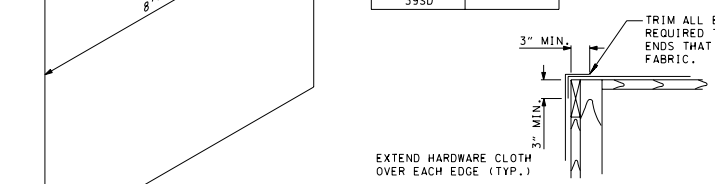
CATCH BASIN TYPE	
12SD	41SD
25SD	42SD
31SD	51SD
39SD	



PLAN VIEW - CATCH BASIN FILTER ASSEMBLY

N.T.S.

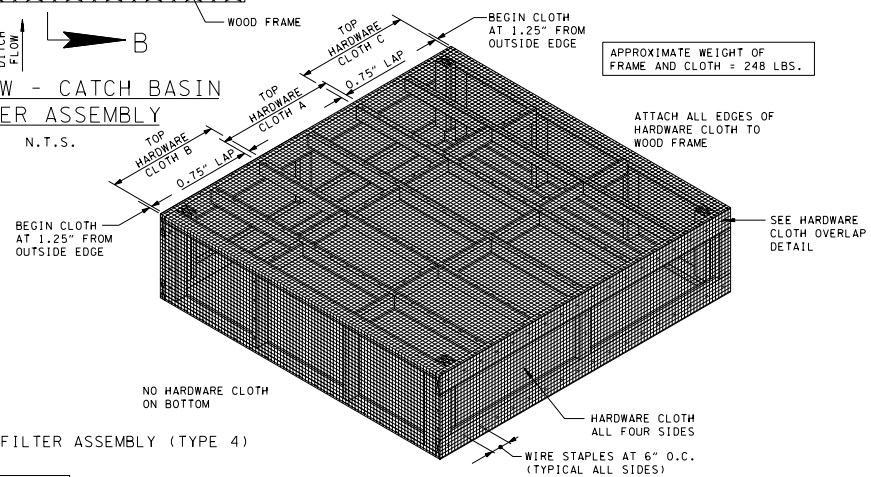




HARDWARE CLOTH OVERLAP DETAIL

N.T.S.

APPROXIMATE WEIGHT OF FRAME AND CLOTH = 248 LBS.



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH

N.T.S.

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

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD TYPE D-CB-SERIES SD 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 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 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 TDOT 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 TDOT 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 209-40.44, CATCH BASIN FILTER ASSEMBLY (TYPE 4), PER EACH.

INSTALLATION SEQUENCE FOR HARDWARE CLOTH

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.

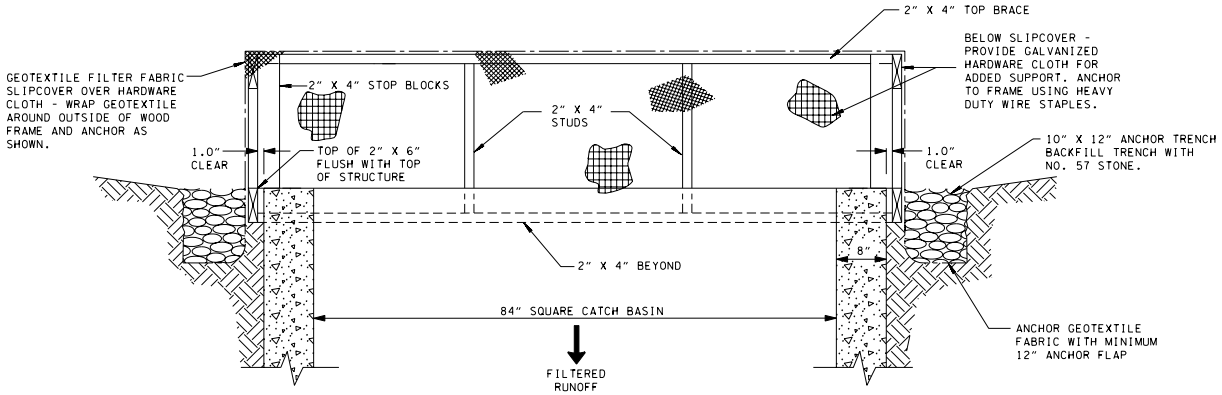
INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.

TRIM EXCESS ALONG BOTTOM AS NECESSARY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 4)

4-15-04 | EC-STR-44

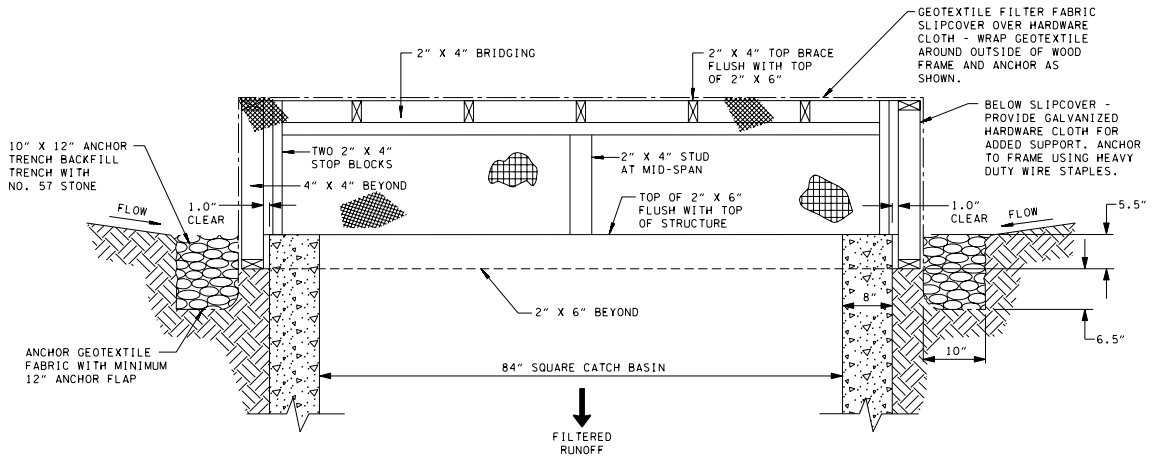


SECTION A-A

N.T.S.

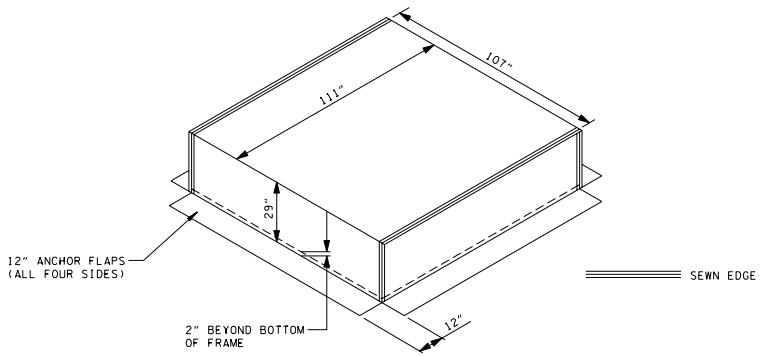
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥180 LBS
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥330 PSI
PUNCTURE STRENGTH	ASTM D4833	≥105 LBS
TRAPEZOIDAL TEAR	ASTM D4533	≥75 LBS
APPARENT OPENING SIZE (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 B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

FABRICATION SPECIFICATIONS:

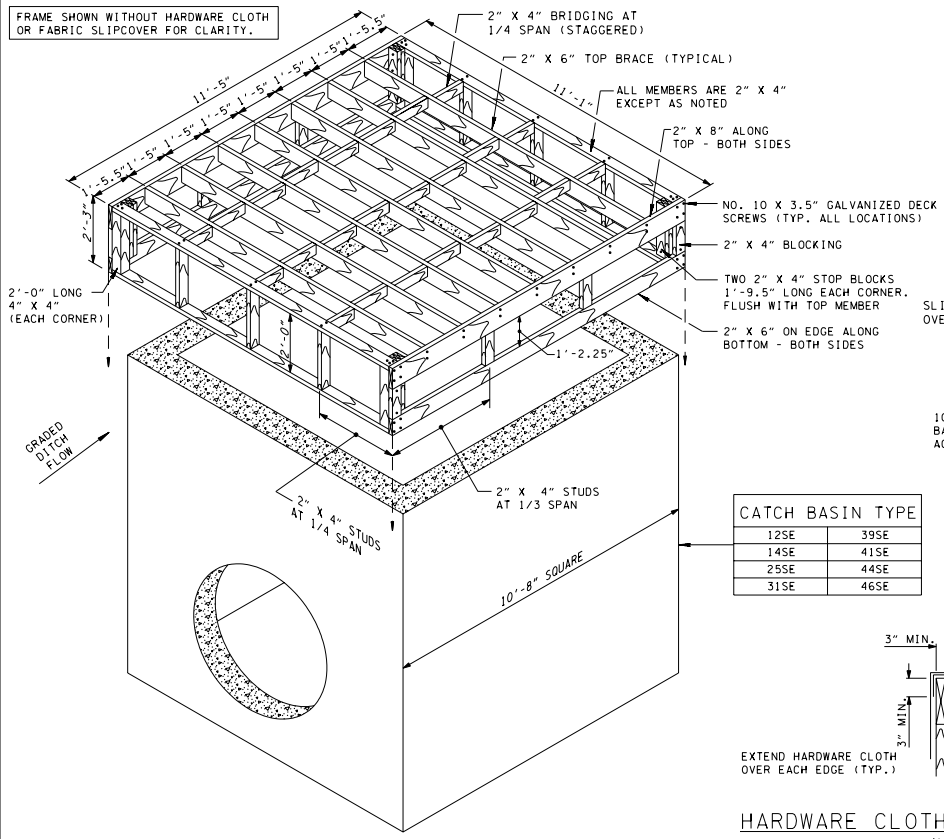
1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 138 POUNDS) WITH MINIMUM OF SIX STITCHES PER INCH.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM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

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

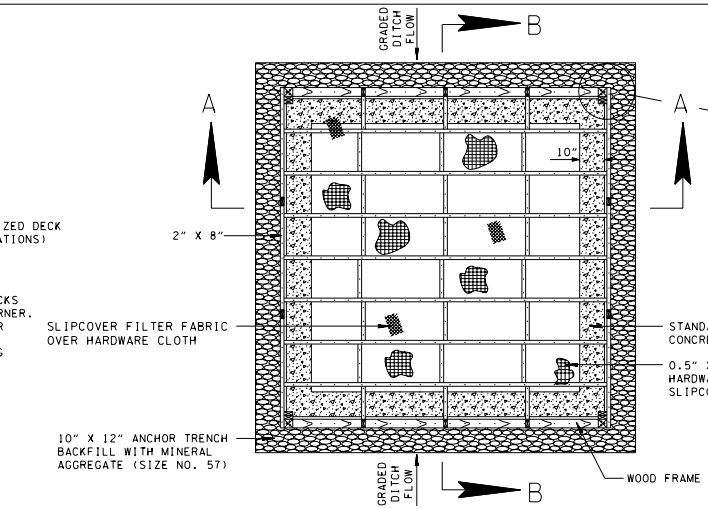
CATCH BASIN FILTER ASSEMBLY (TYPE 4) SLIPCOVER DETAILS

4-15-04 EC-STR-44A

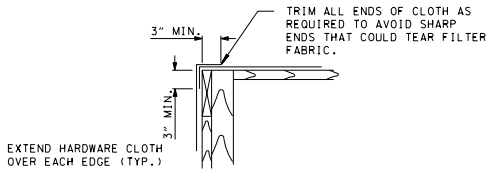


ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.

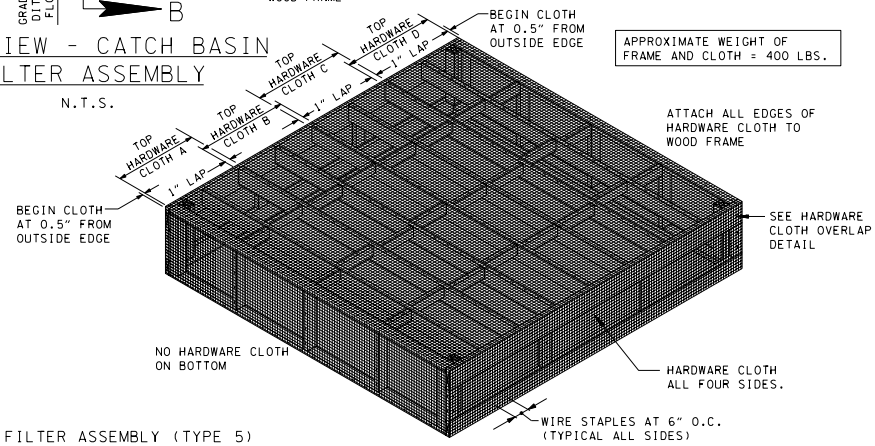
CATCH BASIN TYPE	
12SE	39SE
14SE	41SE
25SE	44SE
31SE	46SE



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



HARDWARE CLOTH OVERLAP DETAIL
N.T.S.



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

EROSION CONTROL PLAN LEGEND: (5) CATCH BASIN FILTER ASSEMBLY (TYPE 5)

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD TYPE D-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 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, 1.5 x 7.25 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.

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 TDOT 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 TDOT 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 209-40.45, CATCH BASIN FILTER ASSEMBLY (TYPE 5), PER EACH.

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.

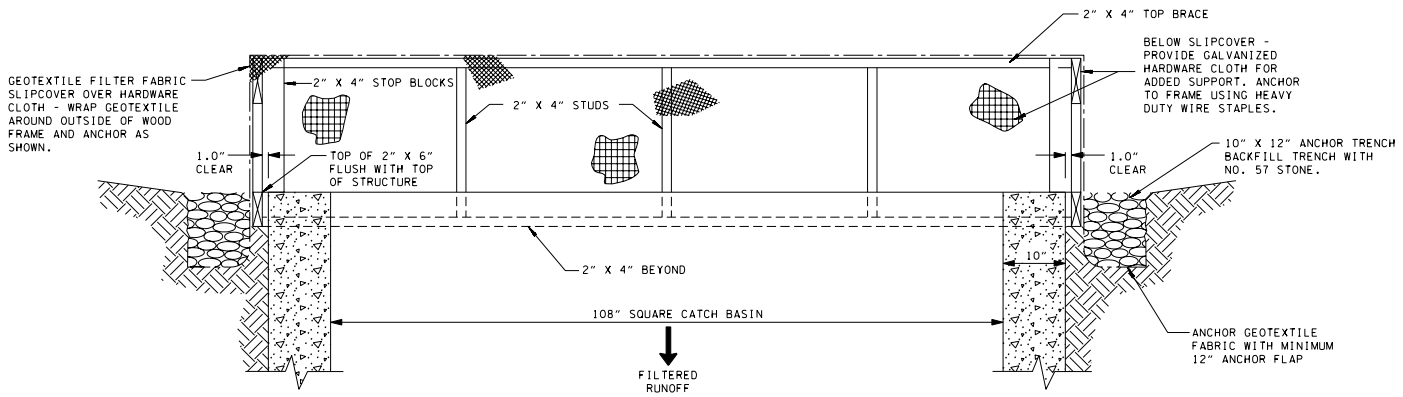
INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.

TRIM EXCESS ALONG BOTTOM AS NECESSARY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 5)

4-15-04 | EC-STR-45

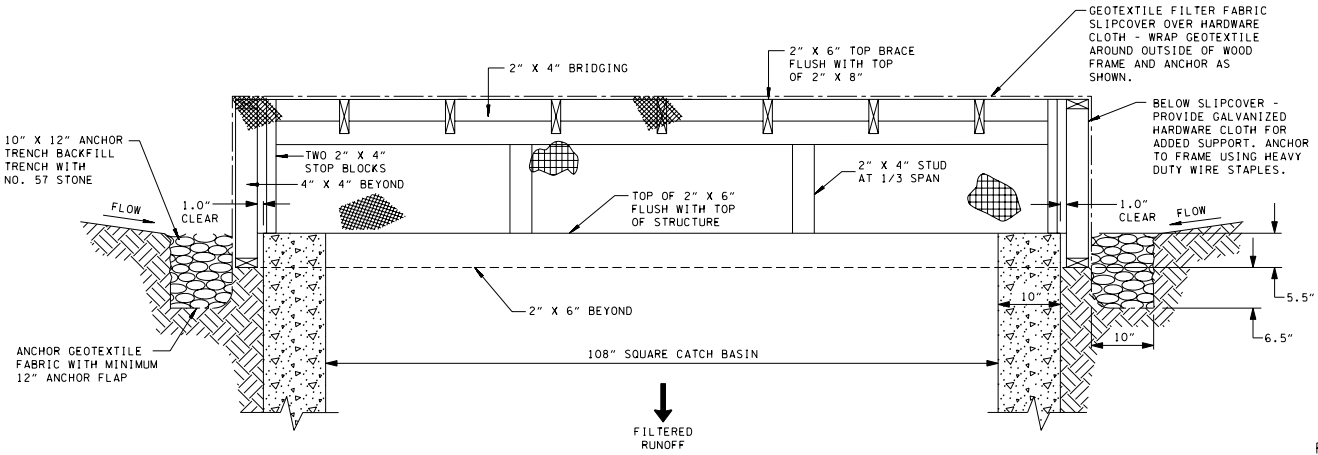


SECTION A-A

N.T.S.

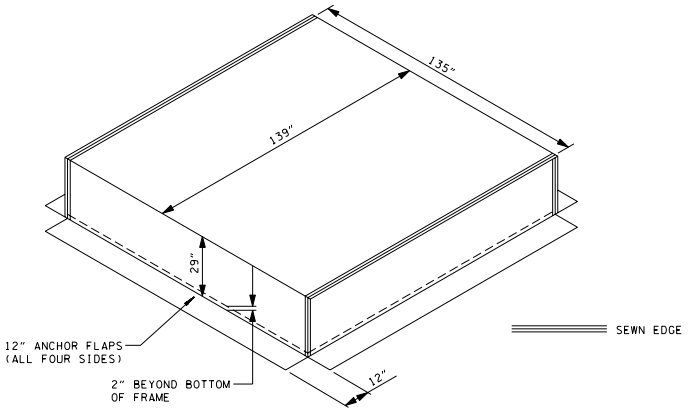
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥180 LBS
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥330 PSI
PUNCTURE STRENGTH	ASTM D4833	≥105 LBS
TRAPEZOIDAL TEAR	ASTM D4533	≥75 LBS
APPARENT OPENING SIZE (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 B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

EROSION CONTROL PLAN LEGEND: ☐ (5) CATCH BASIN FILTER ASSEMBLY (TYPE 5)

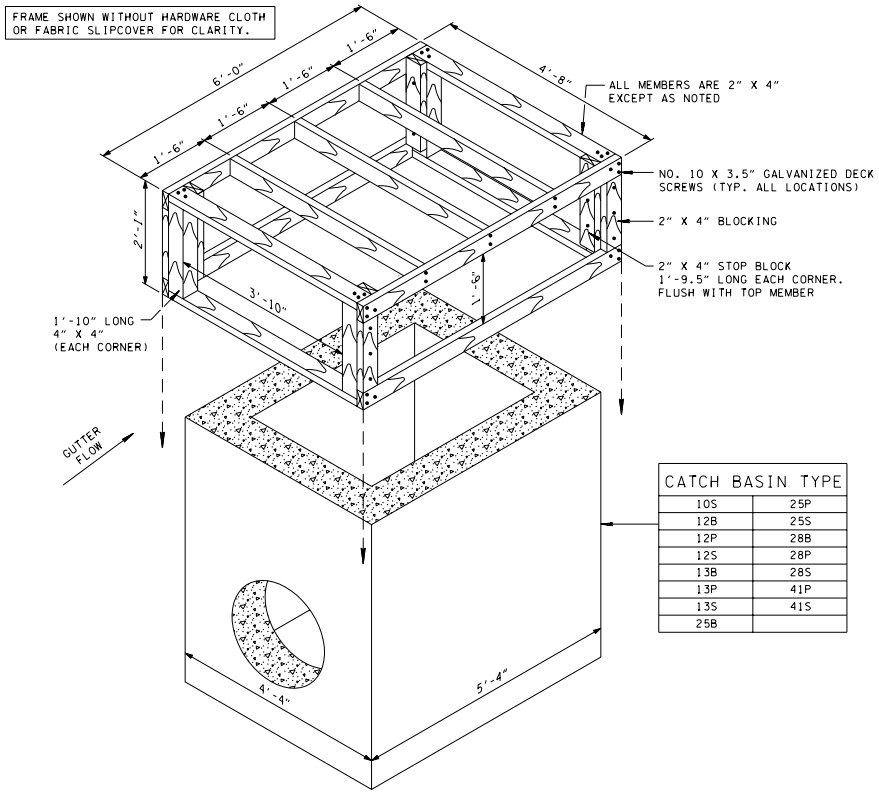
FABRICATION SPECIFICATIONS:

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 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.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 5) SLIPCOVER DETAILS

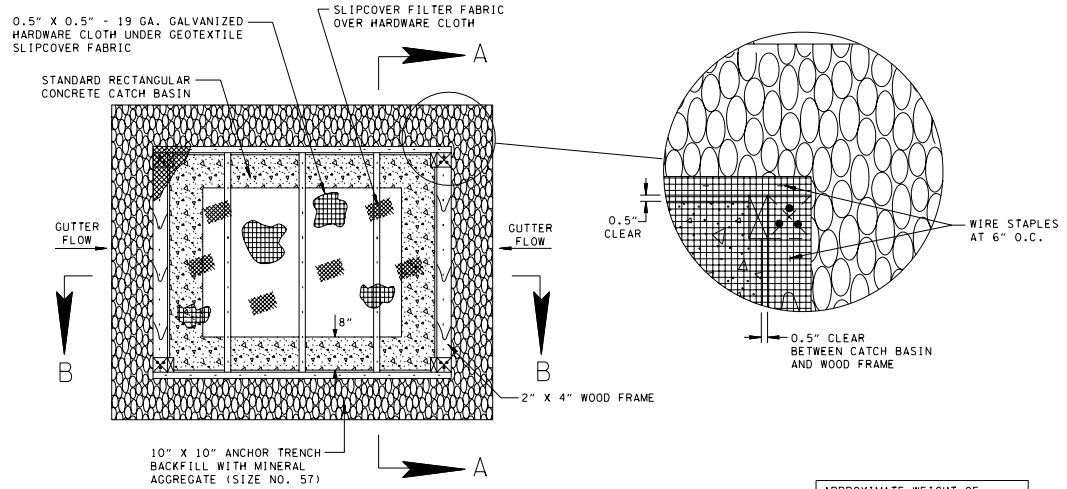
4-15-04 | EC-STR-45A



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

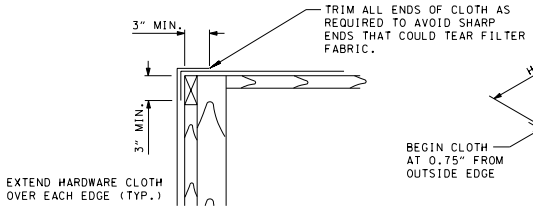
ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY

N.T.S.



PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY

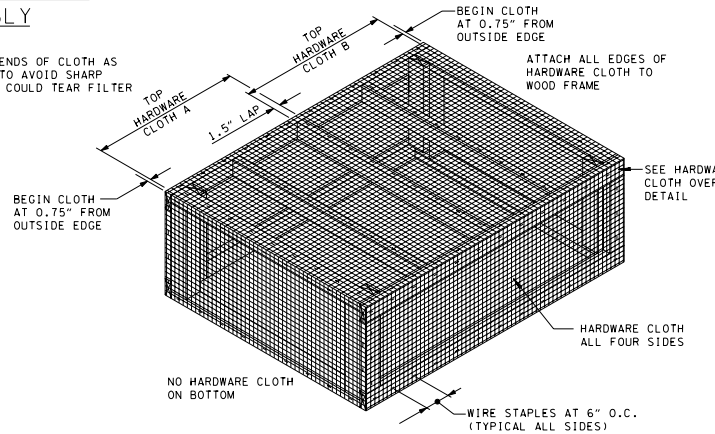
N.T.S.



HARDWARE CLOTH
OVERLAP DETAIL

N.T.S.

APPROXIMATE WEIGHT OF FRAME AND CLOTH = 108 LBS.



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH

N.T.S.

EROSION CONTROL PLAN LEGEND: ☐ (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 D-CB-SERIES B,P, OR S FOR TYPE 12, 13, 25, 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) 2 x 4 AND 4 x 4 PRESSURE TREATED MEMBERS SHOWN ARE NOMINAL DIMENSIONS. 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 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.

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 TDOT 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 TDOT 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 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, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209-40.46, CATCH BASIN FILTER ASSEMBLY (TYPE 6), PER EACH.

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.

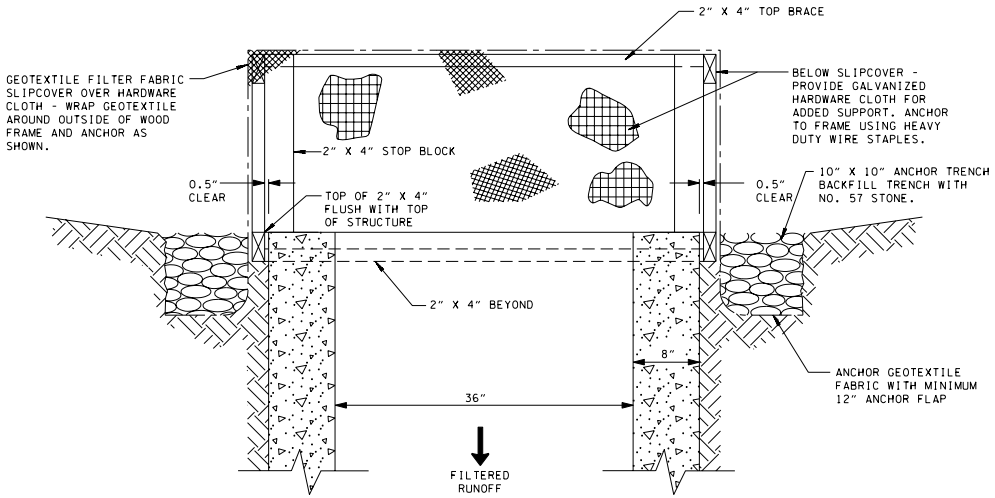
INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.

TRIM EXCESS ALONG BOTTOM AS NECESSARY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 6)

4-15-04 | EC-STR-46

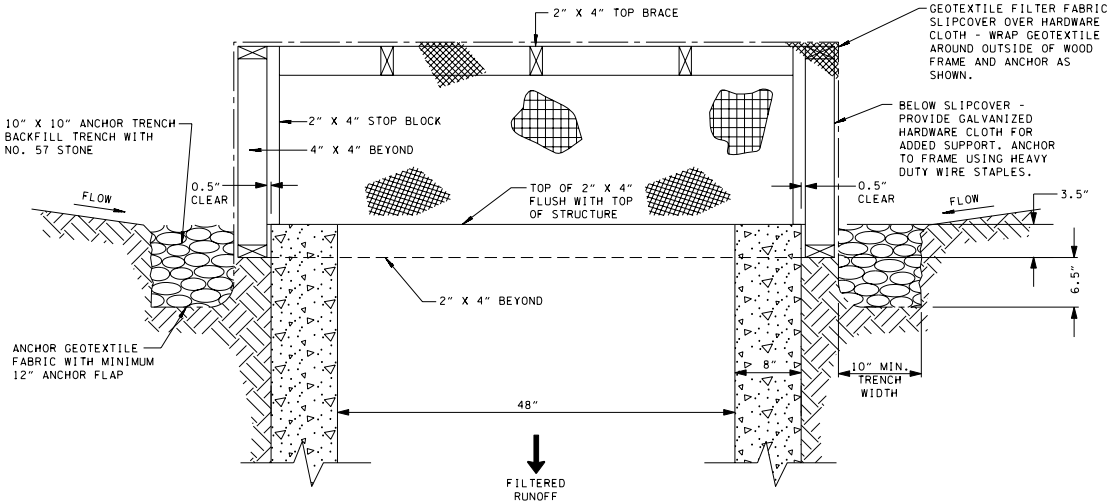


SECTION A-A

N.T.S.

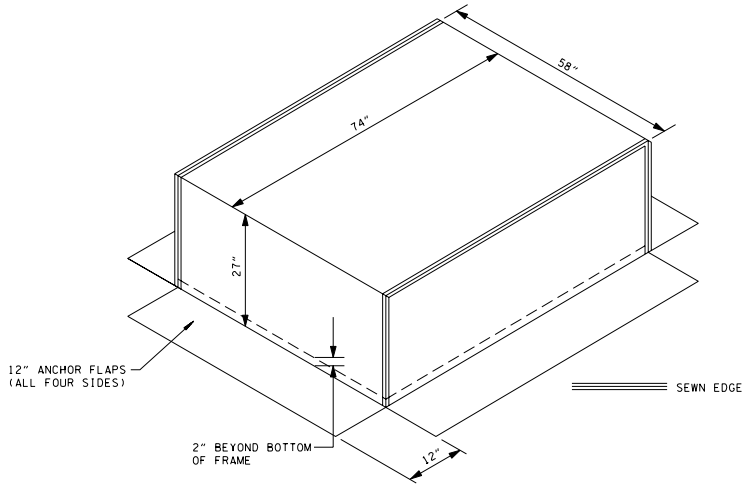
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥180 LBS
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥330 PSI
PUNCTURE STRENGTH	ASTM D4833	≥105 LBS
TRAPEZOIDAL TEAR	ASTM D4533	≥75 LBS
APPARENT OPENING SIZE (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 B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

FABRICATION SPECIFICATIONS:

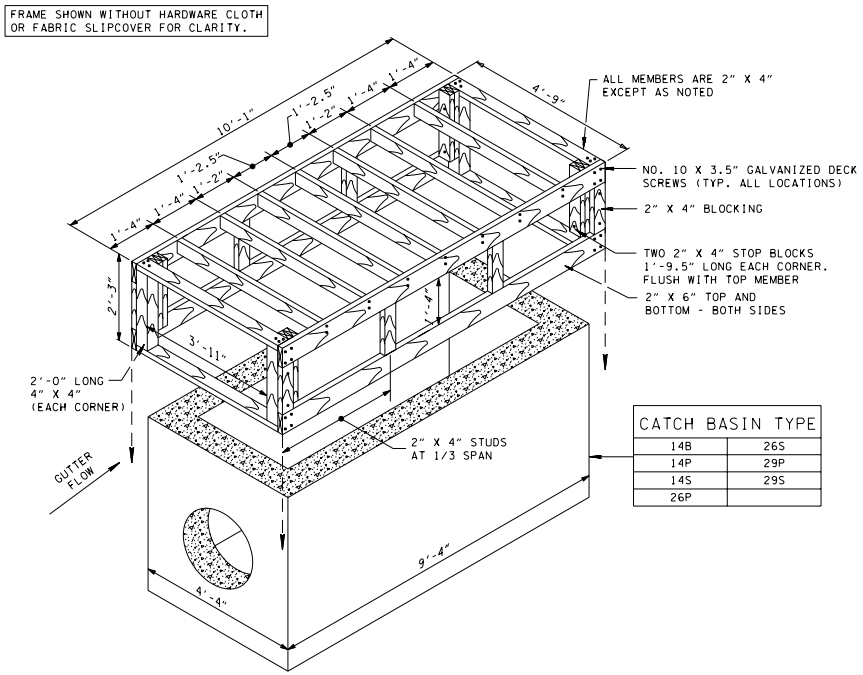
1. GEOTEXTILE SLIPCOVER FABRIC SHALL HAVE HEAT-CUT FUSING FABRIC EDGES FOR STRENGTH.
2. ALL SEAMS SHALL BE SEWN WITH TWO INDEPENDENT ROWS OF LOCK-TYPE STITCHING, USING UV-BONDED POLYESTER THREAD (MINIMUM OF 138 POUNDS) WITH MINIMUM OF SIX STITCHES PER INCH.
3. THE INSIDE ROW OF STITCHING SHALL BE A MINIMUM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

EROSION CONTROL PLAN LEGEND: ☐ (6) CATCH BASIN FILTER ASSEMBLY (TYPE 6)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

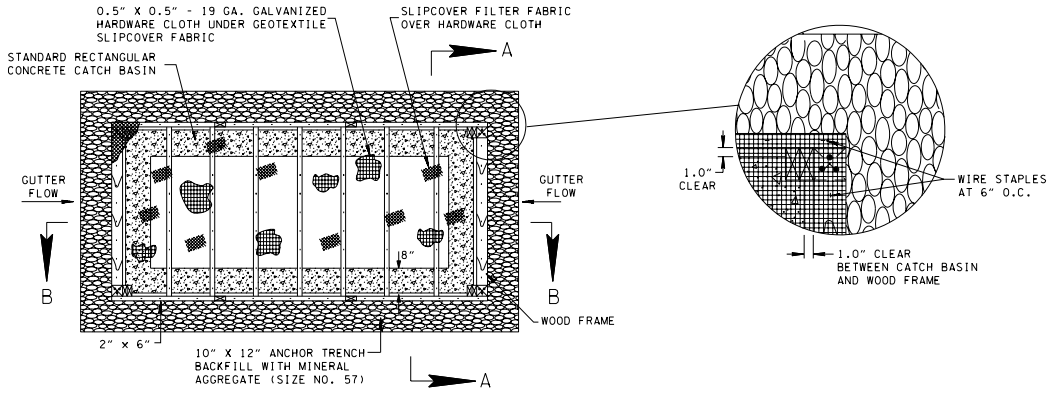
CATCH BASIN FILTER ASSEMBLY (TYPE 6) SLIPCOVER DETAILS

4-15-04 | EC-STR-46A



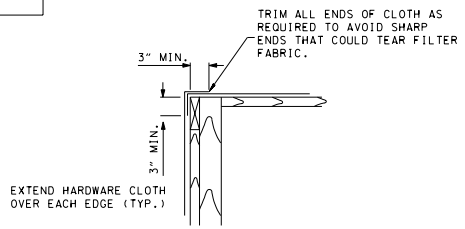
ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY

N.T.S.



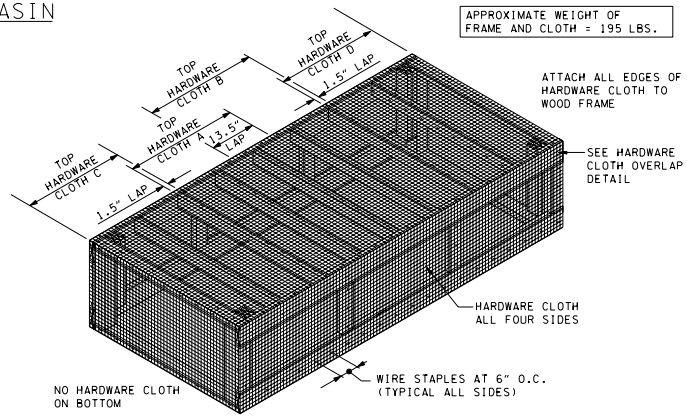
PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY

N.T.S.



HARDWARE CLOTH OVERLAP DETAIL

N.T.S.



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH

N.T.S.

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

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD TYPES 14B AND D-CB-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 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 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 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 GIVEN BY TDOT 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 TDOT 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 209-40.47, CATCH BASIN FILTER ASSEMBLY (TYPE 7), PER EACH.

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.

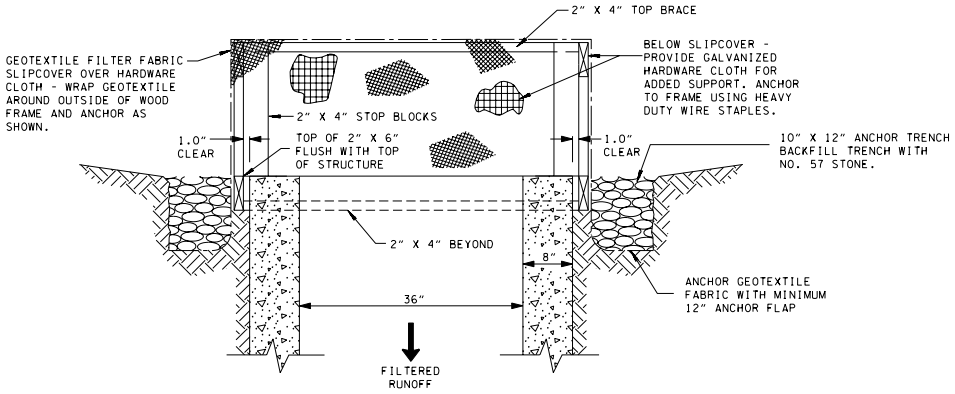
INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.

TRIM EXCESS ALONG BOTTOM AS NECESSARY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 7)

4-15-04 | EC-STR-47

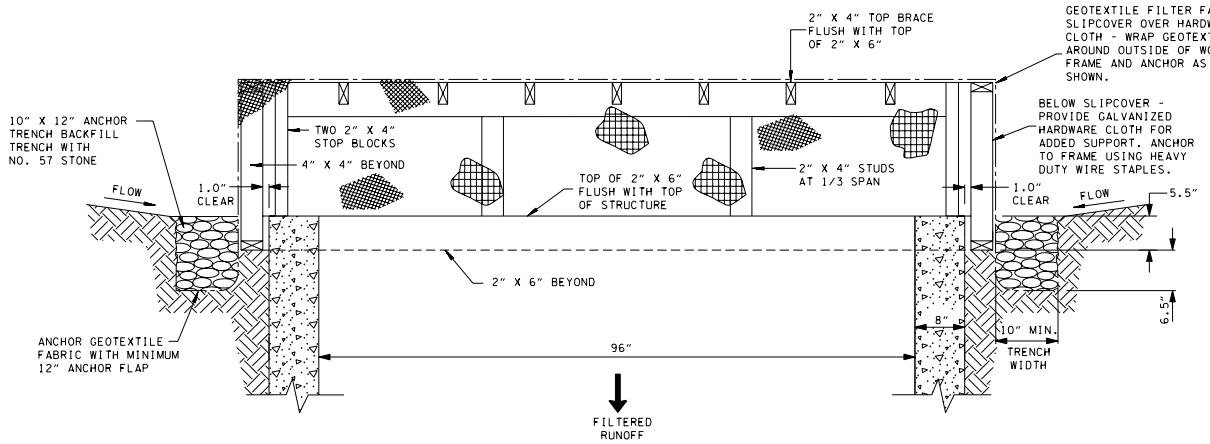


SECTION A-A

N.T.S.

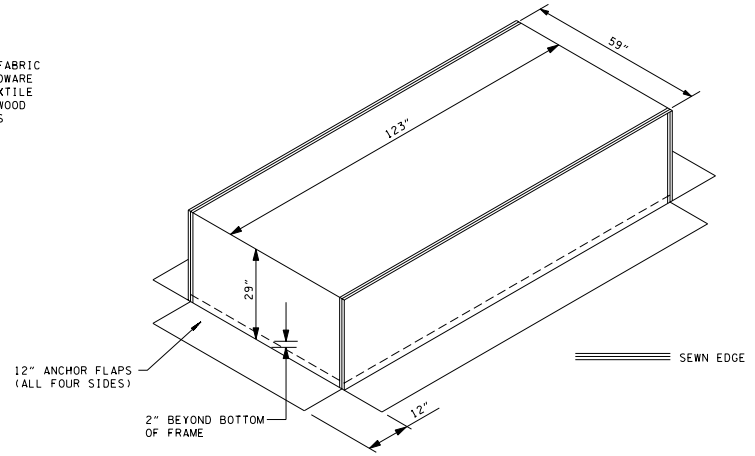
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥180 LBS
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥330 PSI
PUNCTURE STRENGTH	ASTM D4833	≥105 LBS
TRAPEZOIDAL TEAR	ASTM D4533	≥75 LBS
APPARENT OPENING SIZE (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 B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

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

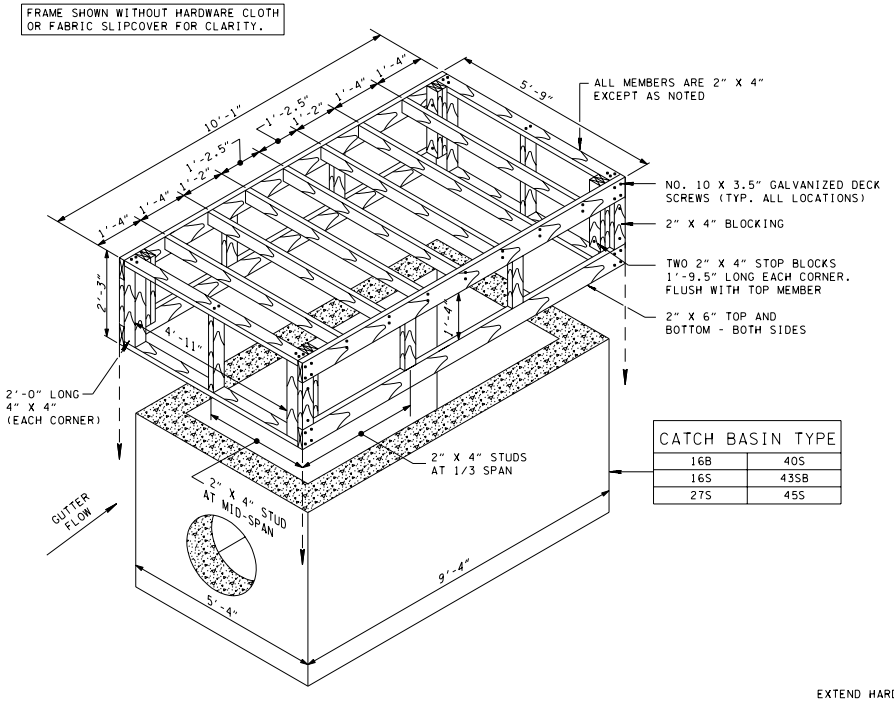
FABRICATION SPECIFICATIONS:

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.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

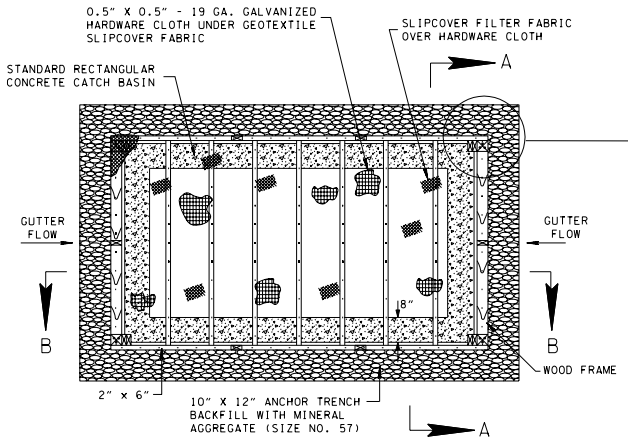
CATCH BASIN FILTER ASSEMBLY (TYPE 7) SLIPCOVER DETAILS

4-15-04 EC-STR-47A



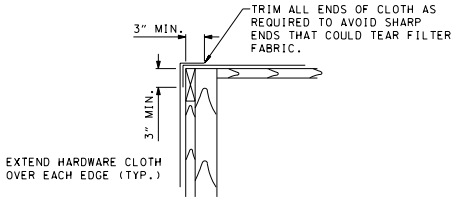
ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY

N.T.S.



PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY

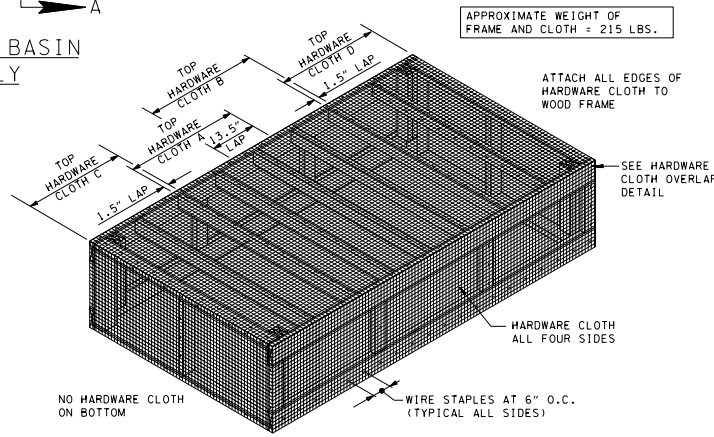
N.T.S.



HARDWARE CLOTH OVERLAP DETAIL

N.T.S.

APPROXIMATE WEIGHT OF FRAME AND CLOTH = 215 LBS.



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH

N.T.S.

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

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD TYPES 16B, 16S, 27S, 40S, 43SB, AND 45S 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 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 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 GIVEN BY TDOT 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 TDOT 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 209-40.48, CATCH BASIN FILTER ASSEMBLY (TYPE 8), PER EACH.

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.

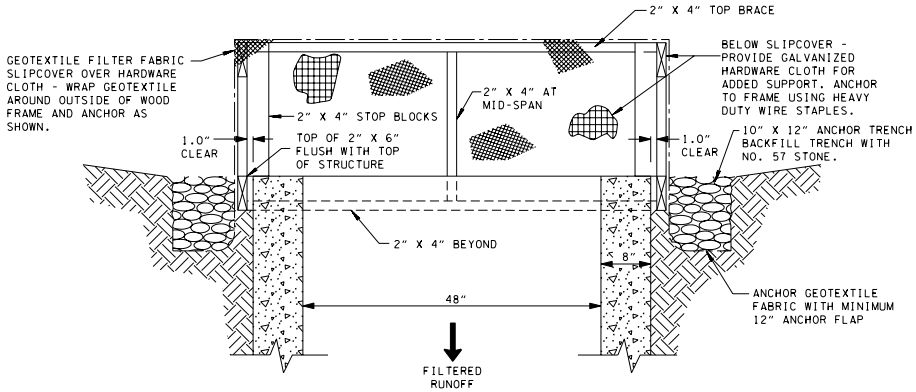
INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.

TRIM EXCESS ALONG BOTTOM AS NECESSARY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 8)

4-15-04 EC-STR-48

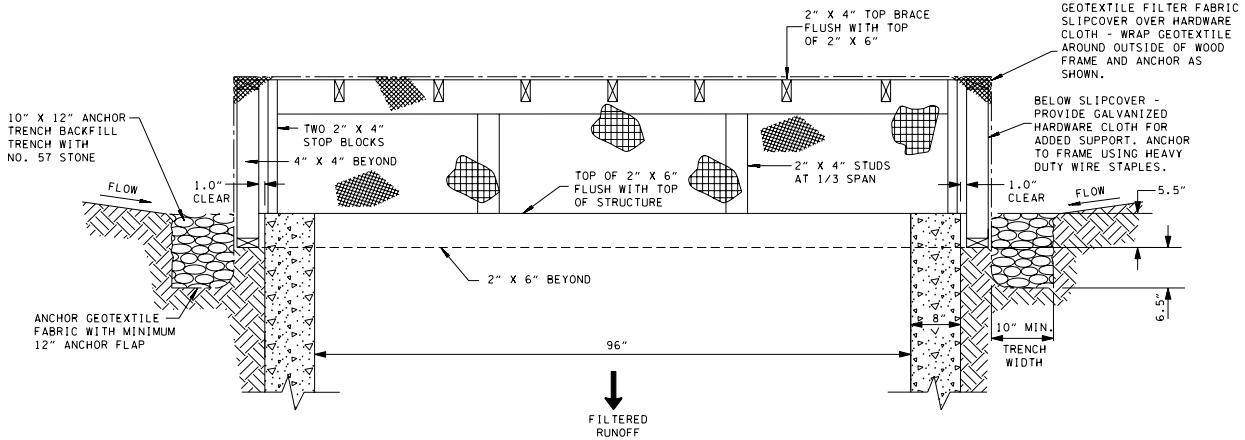


SECTION A-A

N.T.S.

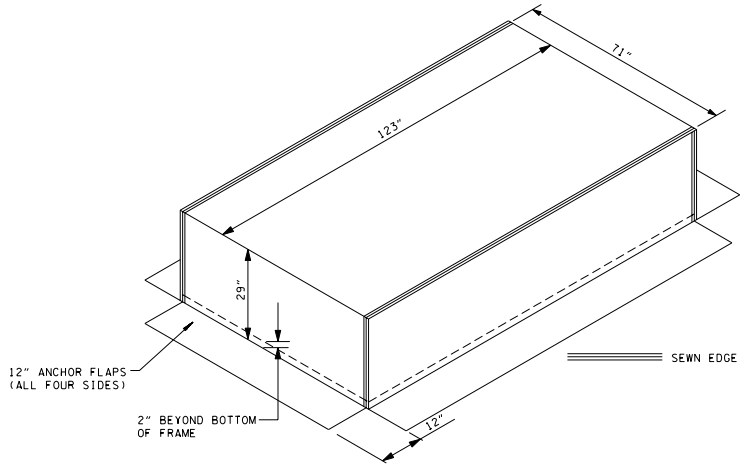
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥180 LBS
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥330 PSI
PUNCTURE STRENGTH	ASTM D4833	≥105 LBS
TRAPEZOIDAL TEAR	ASTM D4533	≥75 LBS
APPARENT OPENING SIZE (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 B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

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

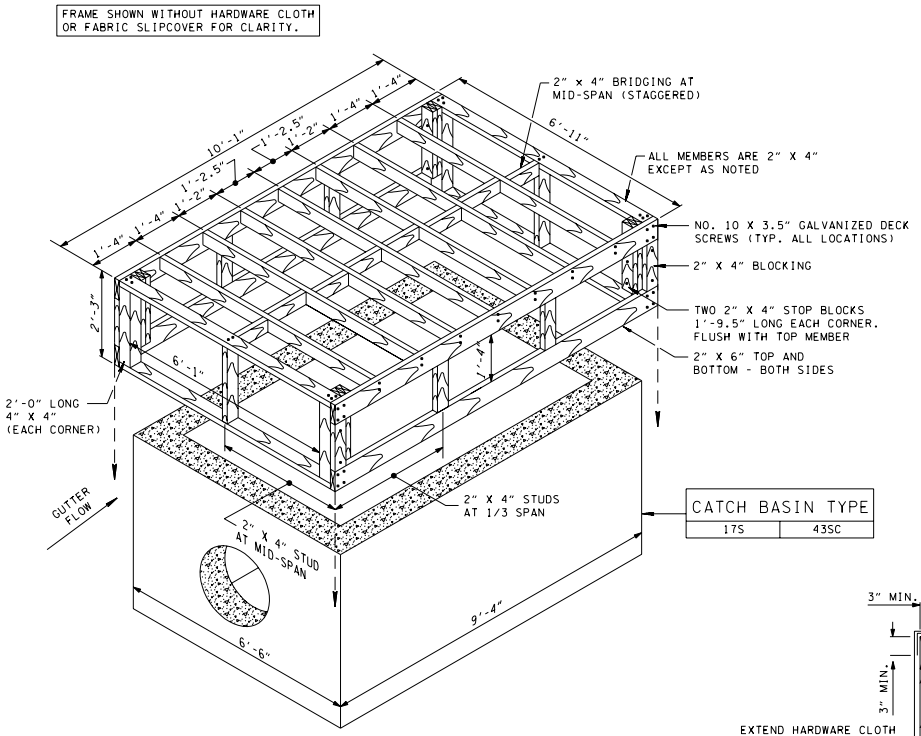
FABRICATION SPECIFICATIONS:

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.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

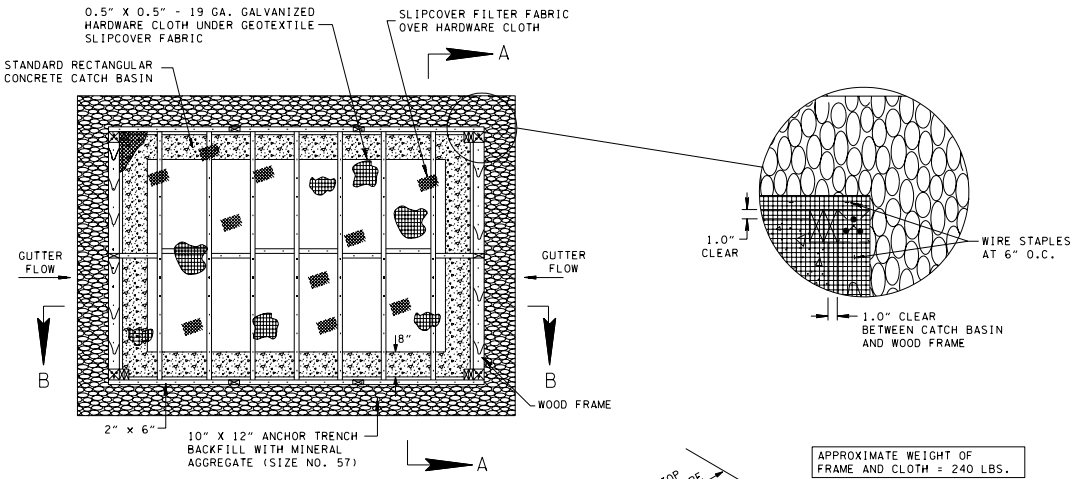
CATCH BASIN FILTER ASSEMBLY (TYPE 8) SLIPCOVER DETAILS

4-15-04 | EC-STR-48A

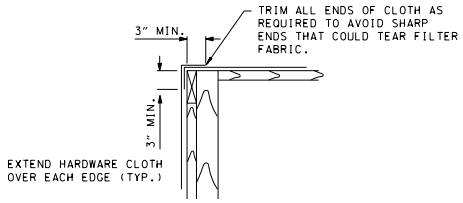


CATCH BASIN TYPE	
17S	43SC

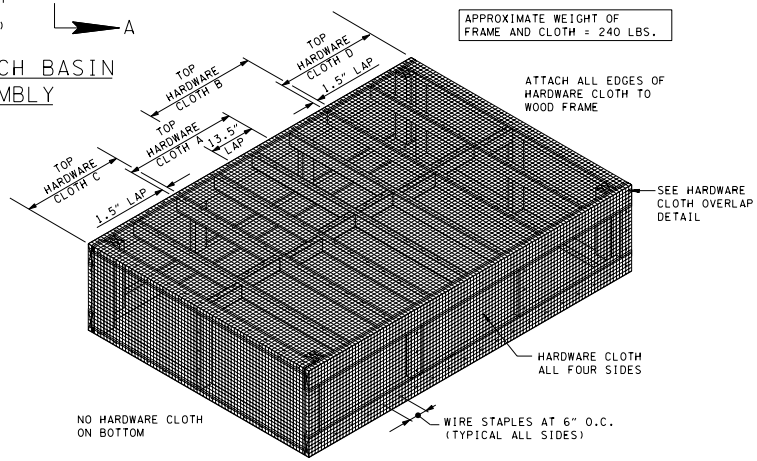
ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.



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



HARDWARE CLOTH
OVERLAP DETAIL
N.T.S.



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

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

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD TYPES 17S, AND 43SC 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 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 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 GIVEN BY TDOT 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 TDOT 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 209-40.49, CATCH BASIN FILTER ASSEMBLY (TYPE 9), PER EACH.

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.

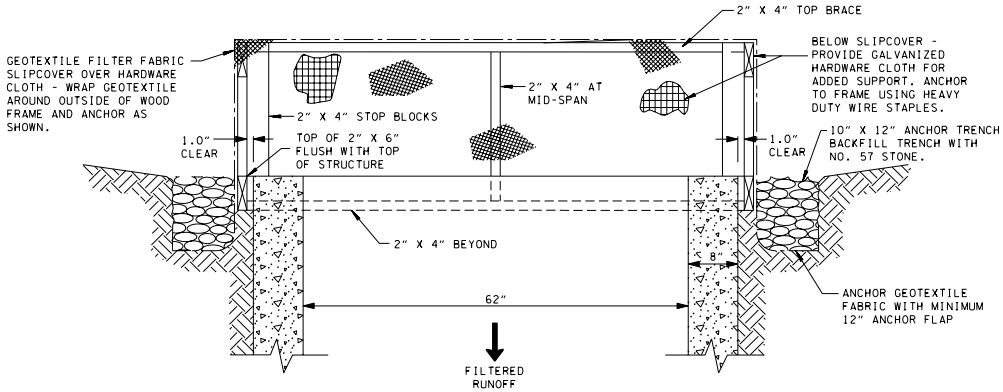
INSTALL HARDWARE CLOTH AROUND EXTERIOR OF WOOD FRAME USING ONE CONTINUOUS PIECE BEGINNING AT A CORNER, ENDING AT SAME CORNER, AND OVERLAPPING AS REQUIRED. PULL TIGHT AND STAPLE EACH SIDE BEFORE PROCEEDING WITH SUBSEQUENT SIDES.

TRIM EXCESS ALONG BOTTOM AS NECESSARY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 9)

4-15-04 | EC-STR-49

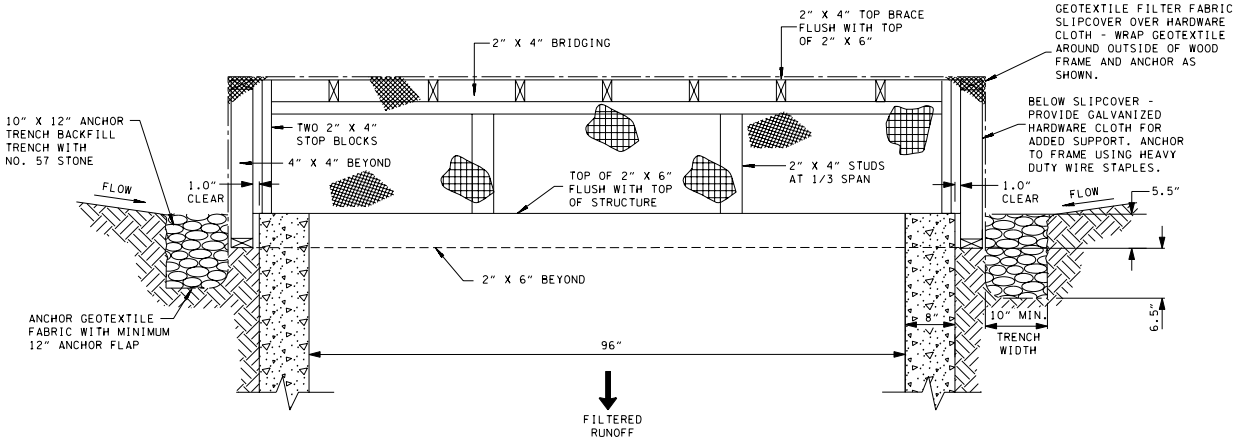


SECTION A-A

N.T.S.

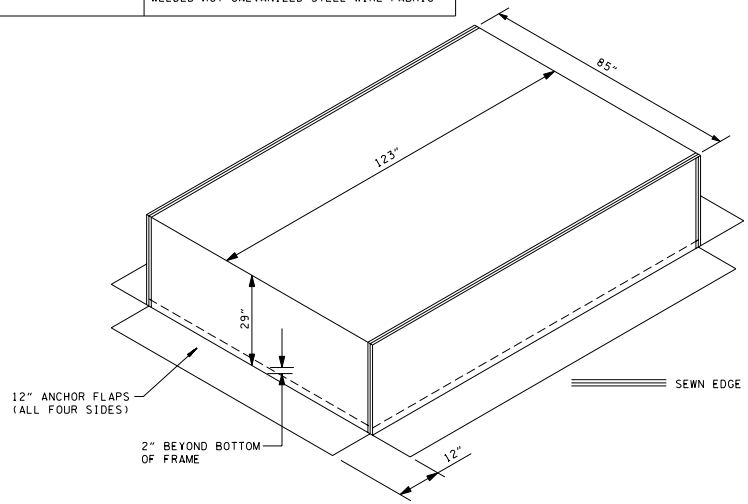
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥180 LBS
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥330 PSI
PUNCTURE STRENGTH	ASTM D4833	≥105 LBS
TRAPEZOIDAL TEAR	ASTM D4533	≥75 LBS
APPARENT OPENING SIZE (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 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 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.

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 9) SLIPCOVER DETAILS

4-15-04 | EC-STR-49A

STANDARD LEGEND

- RIP-RAP
- PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)
- PERMANENT RIP-RAP ENERGY DISSIPATOR (RP ED)
- 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) (1)
- TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 2) (2)
- TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 3) (3)
- TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 4) (4)
- TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 5) (5)
- TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 6) (6)
- TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 7) (7)
- TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 8) (8)
- TEMPORARY CATCH BASIN FILTER ASSEMBLY (TYPE 9) (9)
- TEMPORARY CATCH BASIN HAY OR STRAW BALE SILT TRAP
- TEMPORARY CATCH BASIN SILT FENCE SILT TRAP (SF)
- TEMPORARY CONSTRUCTION ROAD ENTRANCE AND/OR EXIT (TCR)
- TEMPORARY CULVERT CROSSING (TCC)
- TEMPORARY DEWATERING STRUCTURE
- TEMPORARY DIVERSION CHANNEL (DESCRIBE - SIZE AND TYPE OF LINING)
- * ESF * ESF * ESF * TEMPORARY ENHANCED SILT FENCE
- * FB * FB * FB * 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 TEMPORARY SLOPE DRAIN PIPE.

REV. 5-27-01: CHANGED REFERENCE IN LEGEND FROM DUMPED ROCK TO RIP-RAP.

REV. 12-18-02: REMOVED SYMBOLS FOR TYPE IA, IB, IC, AND ID EROSION DITCH CHECKS. ADDED SYMBOL FOR TYPE I EROSION DITCH CHECK, TEMPORARY SILT FENCE (WITH BACKING), AND TEMPORARY ENHANCED SILT FENCE.

REV. 1-22-03: ADDED SYMBOL FOR TYPE EC IA FILTER BARRIER DITCH CHECK.

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

REV.3-15-04: MOVED PART OF LEGEND BEGINNING WITH TEMPORARY ROCK AND SEDIMENT DAM 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.

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

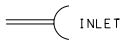
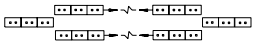
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STANDARD LEGEND FOR EROSION AND SEDIMENT CONTROL

11-1-95 | RDM-L-5

STANDARD LEGEND

- REV. 3-15-04: CHANGED LEGEND FOR TEMPORARY ROCK CATCH BASIN PROTECTION (MULTIDIRECTIONAL FLOW), TEMPORARY ROCK CATCH BASIN PROTECTION (TYPE A), TEMPORARY TYPE EC I FILTER BARRIER EROSION DITCH CHECK, AND TEMPORARY TYPE EC IA 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		TEMPORARY SILT FENCE (WITHOUT BACKING)
	TEMPORARY ROCK CATCH BASIN PROTECTION (MULTI-DIRECTIONAL FLOW)		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		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 -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

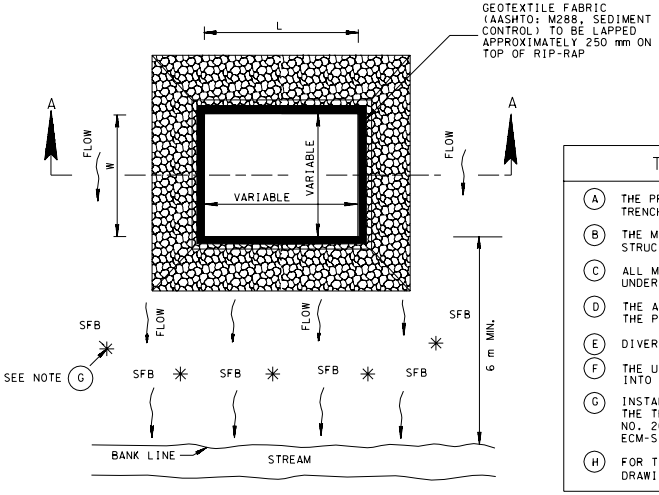
STANDARD LEGEND FOR EROSION AND SEDIMENT CONTROL

3-15-04 | RDM-L-6

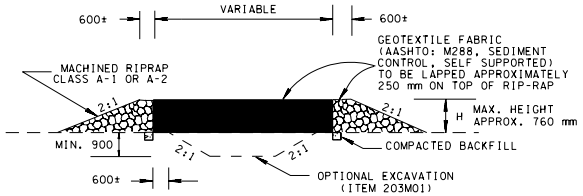
TEMPORARY EROSION & SEDIMENT CONTROL PAY ITEMS		
ITEM NO.	DESCRIPTION	UNIT
203M01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED)	CUBIC METER
209M02.03	200 mm TEMPORARY SLOPE DRAIN	METER
209M02.04	250 mm TEMPORARY SLOPE DRAIN	METER
209M02.05	300 mm TEMPORARY SLOPE DRAIN	METER
209M02.06	375 mm TEMPORARY SLOPE DRAIN	METER
209M02.07	450 mm TEMPORARY SLOPE DRAIN	METER
209M03	CHECK DAMS	SQUARE METER
209M04	BRUSH BARRIERS	METER
209M05	SEDIMENT REMOVAL	CUBIC METER
209M06	BALED HAY OR STRAW EROSION CHECKS	BALE
209M08.01	TEMPORARY FILTER BARRIER	METER
209M08.02	TEMPORARY SILT FENCE (WITH BACKING)	METER
209M08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	METER
209M08.04	TEMPORARY ENHANCED SILT FENCE	METER
209M09.01	SANDBAGS	BAG
209M09.02	TEMPORARY SEDIMENT FILTER BAGS (4.42 X 0.61 X 4.04)	EACH
209M10.01	TEMPORARY DEWATERING STRUCTURE	CUBIC METER
209M10.20	TEMPORARY SEDIMENT TRAP	CUBIC METER
209M11.01 TO 209M11.09	SEDIMENT BASIN RISER (__ mm)	EACH
209M11.20	SEDIMENT BASIN BAFFLES	METER
209M20.03	POLYETHYLENE SHEETING (6 mm MINIMUM)	SQUARE METER
209M40.41	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EACH
209M40.42	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EACH
209M40.43	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EACH
209M40.44	CATCH BASIN FILTER ASSEMBLY (TYPE 4)	EACH
209M40.45	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EACH
209M40.46	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EACH
209M40.47	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EACH
209M40.48	CATCH BASIN FILTER ASSEMBLY (TYPE 8)	EACH
209M40.49	CATCH BASIN FILTER ASSEMBLY (TYPE 9)	EACH
303M10.01	MINERAL AGGREGATE (SIZE 57)	TONNE
604M01.01	CLASS A CONCRETE (ROADWAY)	CUBIC METER
604M01.02	STEEL BAR REINFORCEMENT (ROADWAY)	KILOGRAMS
607M41.03	450 mm SLOPE DRAIN PIPE	METER
607M41.04	600 mm SLOPE DRAIN PIPE	METER
607M41.05	750 mm SLOPE DRAIN PIPE	METER
607M41.06	900 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
709M01.01	RUBBLE STONE RIP-RAP	CUBIC METER
709M01.02	RUBBLE STONE RIP-RAP	TONNE
709M02.01	RUBBLE STONE RIP-RAP (GROUTED)	CUBIC METER
709M05.05	MACHINED RIP-RAP (CLASS A-3)	TONNE
709M05.06	MACHINED RIP-RAP (CLASS A-1)	TONNE
709M05.07	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 (WITH MULCH)	UNIT
801M01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT
801M02	SEEDING (WITHOUT MULCH)	UNIT
801M02.01	CROWN VETCH MIXTURE (WITHOUT MULCH)	UNIT
801M03	WATER (SEEDING AND SODDING)	SQUARE METER
805M12.01	EROSION CONTROL BLANKET (TYPE I)	SQUARE METER
805M12.02	EROSION CONTROL BLANKET (TYPE II)	SQUARE METER
805M12.03	EROSION CONTROL BLANKET (TYPE III)	SQUARE METER
805M12.04	EROSION CONTROL BLANKET (TYPE IV)	SQUARE METER
805M13.03	FLEXIBLE CHANNEL LINER (CLASS III)	SQUARE METER

TEMPORARY DEWATERING STRUCTURE

(ITEMS 209M05 & 209M10.01 THROUGH 209M10.09)



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 209M10.01, 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 209M05, SEDIMENT REMOVAL PER CUBIC METER.

(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 THE TEMPORARY DEWATERING STRUCTURE. IT IS TO BE PAID FOR UNDER THE PRICE BID FOR ITEM NO. 209M08.02 TEMPORARY SILT FENCE (WITH BACKING) PER METERS. SEE STANDARD DRAWING ECM-STR-3C FOR FURTHER DETAILS.

(H) FOR TRENCHING OF GEOTEXTILE FABRIC INTO GROUND, SEE ECM-STR-3 SERIES OF STANDARD DRAWINGS FOR DETAILS.

TEMPORARY DEWATERING STRUCTURE VOLUMES

PUMP		RATE		STRUCTURE VOLUME REQD. (CUBIC METERS)
TYPE	(DIA.)	MANUF. CAPACITY	m^3/min (CUBIC METERS PER MINUTE)	
CONSTRUCTION	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 PLANS IS TO BE BASED ON USE OF 100 mm CONSTRUCTION PUMP SHOWN IN THE ABOVE TABLE.

- REV. 11-1-95: CHANGED TO METRIC.
- REV. 10-26-00: IN TEMPORARY EROSION AND SEDIMENT CONTROL PAY ITEMS BLOCK CHANGED PAY ITEM NUMBERS AND DESCRIPTIONS TO CONCUR WITH CHANGES MADE BY CONSTRUCTION DIVISION.
- REV. 5-27-01: REVISED PAY ITEMS AND GENERAL NOTES TO COMPLY WITH NEW PAY ITEM SYSTEM GOING IN EFFECT OCTOBER 26, 2001.
- REV. 12-18-02: ADDED PAY ITEM NOS. 209M08.02 AND 209M08.04. CHANGED SHEET NAME.
- REV. 1-22-03: CHANGED GENERAL NOTE (H).
- REV. 10-26-03: CORRECTED PAY ITEMS.
- REV. 3-15-04: ADDED PAY ITEMS FOR CATCH BASIN FILTER ASSEMBLIES.

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

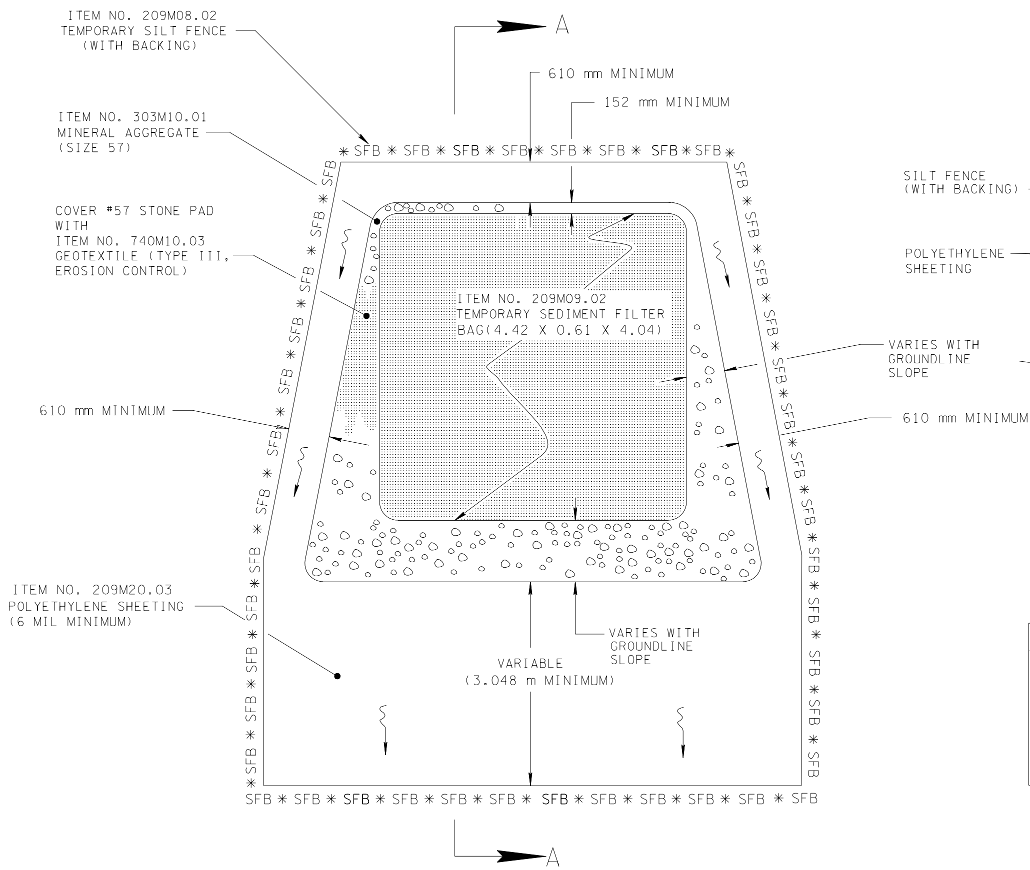
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PAY ITEMS, GENERAL NOTES & TEMPORARY DEWATERING STRUCTURE

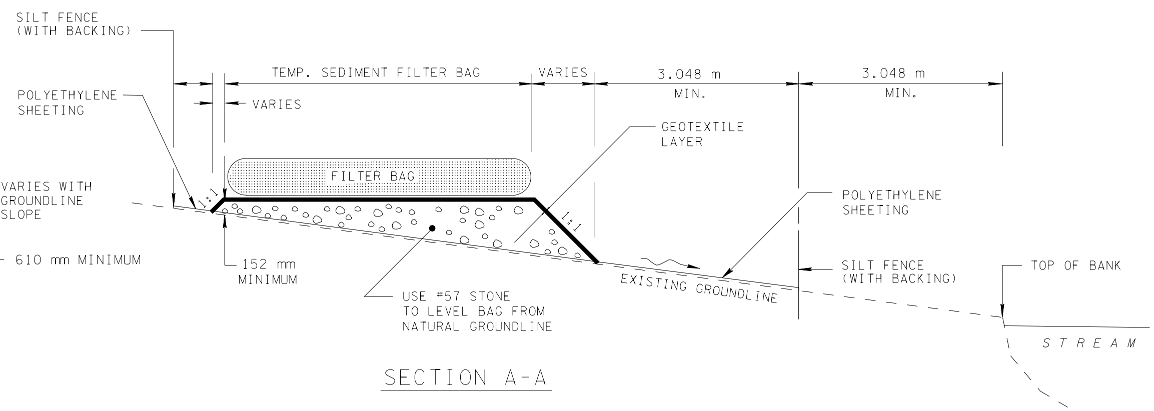
11-1-95 | ECM-STR-1

TEMPORARY SEDIMENT FILTER BAG

- REV. 5-27-01: CHANGED ITEM NOS. 209M08 TO 209M08.03, 209M08.10 TO 209M09.02 AND 303M15.01 TO 303M10.01. 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.



PLAN VIEW



SECTION A-A

GENERAL NOTES

1. SPECIAL PROVISION 209B IS 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.
2. 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)

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

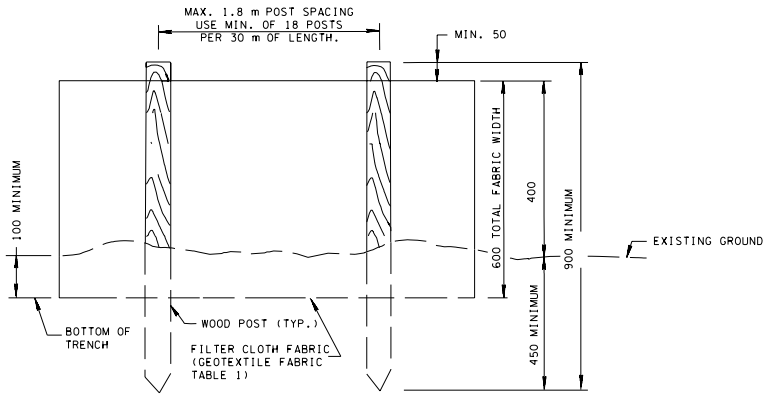
TEMPORARY SEDIMENT FILTER BAGS

10-26-00 ECM-STR-2

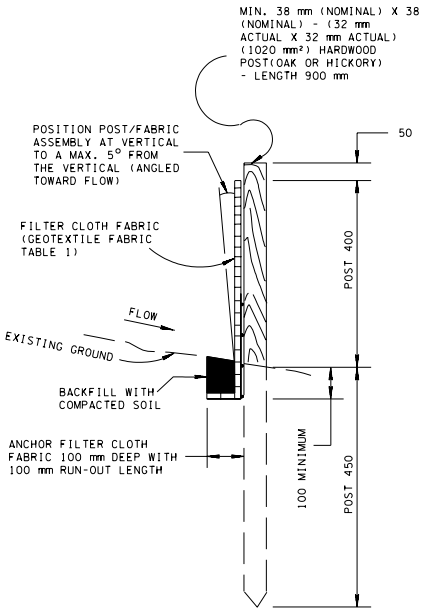
REV. 12-18-03: MODIFIED TABLE (1) AND GENERAL NOTE (E).

TEMPORARY FILTER BARRIER

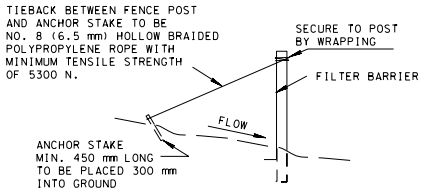
(ITEM NO. 209M08.01)



ELEVATION VIEW



SECTIONAL VIEW



FILTER BARRIER TIEBACK DETAIL

(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS. COST TO BE INCLUDED IN THE ITEMS FOR TEMPORARY FILTER BARRIER)

TABLE 1
TEMPORARY SILT FENCE FABRIC SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MEAN VALUES OF TEST DATA)
FABRIC TYPE	WOVEN SLIT FILM
APPARENT OPENING SIZE (ASTM D4751)	#30 TO #70 STANDARD SIEVE
PERCENT OPEN AREA (POA)	1 % TO 10 %
WATER FLUX (ASTM D4491)	≥ 10 L/SEC/m^2
TENSILE STRENGTH (ASTM D4632)	≥ 57 kg (WARP 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 kPa
PUNCTURE STRENGTH (ASTM D4833)	≥ 32 kg
TRAPEZOIDAL TEAR (ASTM D4533)	≥ 30 kg (WARP DIRECTION) X 30 kg (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 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 RESIDENTAL 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 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) 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 OF ONE PERCENT (±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. FOR PRE-ASSEMBLED FILTER BARRIER, 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.

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

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

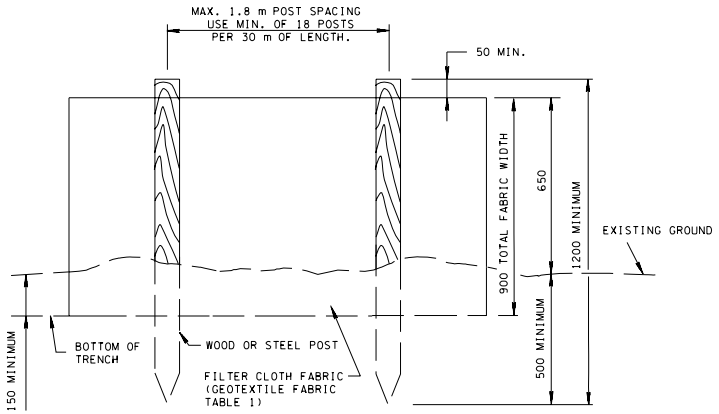
TEMPORARY FILTER BARRIER

12-18-02 ECM-STR-3A

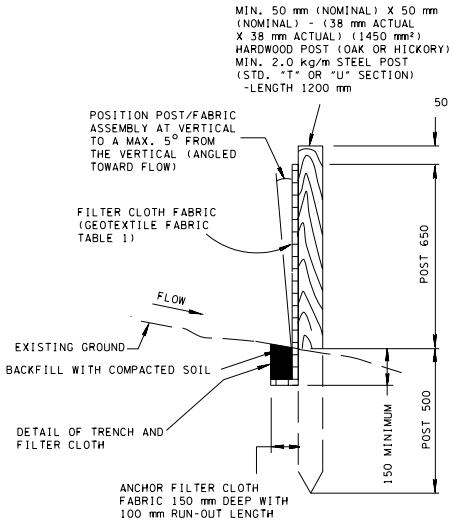
REV. 12-18-03: MODIFIED TABLE ① AND GENERAL NOTE Ⓔ.

TEMPORARY SILT FENCE

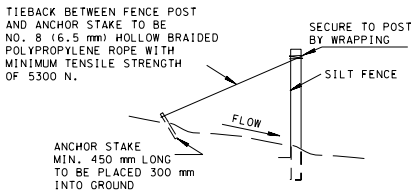
(ITEM NO. 209M08.03)



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 * (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 SLIT FILM
APPARENT OPENING SIZE (ASTM D4751)	#30 TO #70 STANDARD SIEVE
PERCENT OPEN AREA (POA)	1 % TO 10 %
WATER FLUX (ASTM D4491)	≥ 10 L/SEC/m^2
TENSILE STRENGTH (ASTM D4632)	≥ 57 kg (WARP 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 kPa
PUNCTURE STRENGTH (ASTM D4833)	≥ 32 kg
TRAPEZOIDAL TEAR (ASTM D4533)	≥ 30 kg (WARP DIRECTION) X 30 kg (FILL DIRECTION)

TEMPORARY SILT FENCE GENERAL NOTES

Ⓐ ALL LABOR AND MATERIALS SHOWN ON THE ELEVATION AND SECTIONAL VIEWS USED TOCONSTRUCT TEMPORARY SILT FENCE ARE TO BE INCLUDED IN THE PRICE BID FOR ITEM 209M08.03 TEMPORARY SILT FENCE (WITHOUT BACKING) PER METER.

Ⓑ 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).

Ⓒ 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).

Ⓓ WHEN TWO SECTIONS OF FILTER FABRIC 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 FILTER BARRIER AND/OR OTHER EVIDENCE OF FILTER CLOGGING IS OBSERVED.

Ⓕ 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 STUDDED, EMBOSSED, OR PUNCHED TO AID IN THE ATTACHMENT OF WIRE.

Ⓖ 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.

Ⓗ 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.

Ⓘ 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%).

Ⓙ A PREASSEMBLED SILT FENCE MEETING THE REQUIREMENTS OF THIS DRAWING IS ACCEPTABLE IN LIEU OF A FIELD CONSTRUCTED SILT FENCE.

Ⓚ 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 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-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. FOR PRE-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.

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

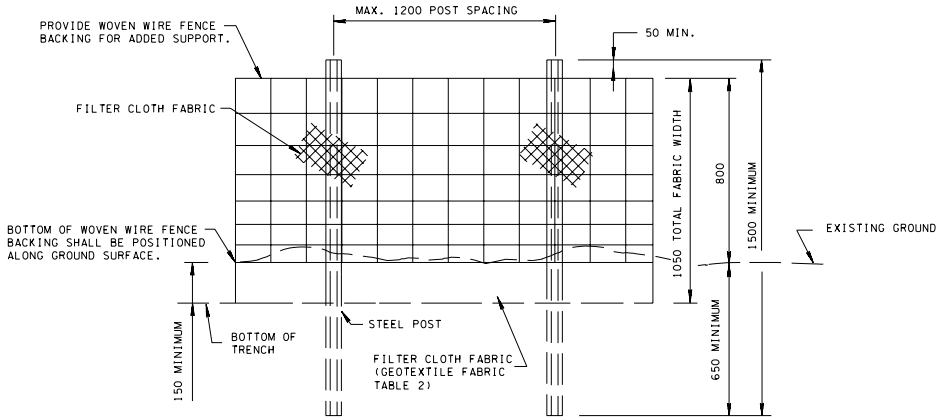
TEMPORARY SILT FENCE

12-18-02 ECM-STR-3B

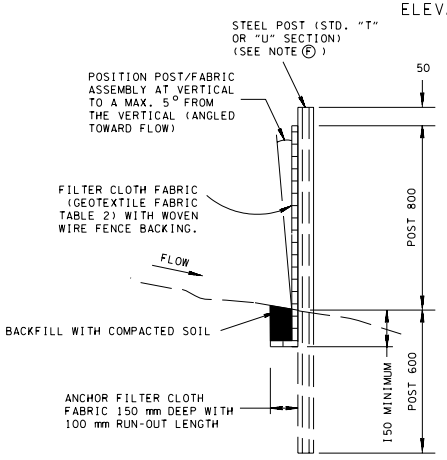
REV. 12-18-03: MODIFIED TABLE (2) AND GENERAL NOTE (E).

TEMPORARY SILT FENCE WITH BACKING

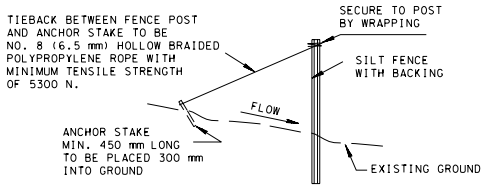
(ITEM NO. 209-08.02)



ELEVATION VIEW



SECTIONAL 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)

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 SLIT FILM
APPARENT OPENING SIZE (ASTM D4751)	#30 TO #70 STANDARD SIEVE
PERCENT OPEN AREA (POA)	1 % TO 10 %
WATER FLUX (ASTM D4491)	≥ 14 L/SEC/m^2
TENSILE STRENGTH (ASTM D4632)	≥ 170 kg (WARP DIRECTION) X 109 kg (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	≥ 90%
BURST STRENGTH (ASTM D3786)	≥ 3172 kPa
PUNCTURE STRENGTH (ASTM D4833)	≥ 64 kg
TRAPEZOIDAL TEAR (ASTM D4533)	≥ 54 kg (WARP DIRECTION) X 36 kg (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 209M08.02 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. 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 TOTHE DETAILS ON ECM-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 STUDDED, 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, PLUS OR MINUS FIVE TENTHS OF ONE PERCENT (±0.5%).

(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 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-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 * (TEMPORARY SILT FENCE WITH BACKING)

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

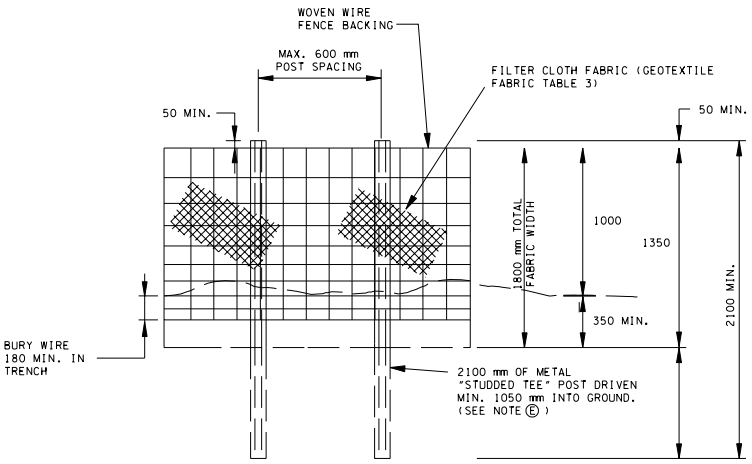
TEMPORARY SILT FENCE WITH BACKING

12-18-02 ECM-STR-3C

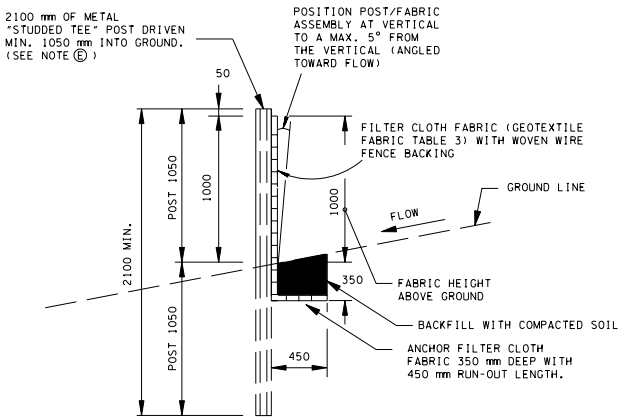
REV. 12-18-03: REPLACED TABLE (3) AND MODIFIED GENERAL NOTES (B), (D), AND (I).

ENHANCED SILT FENCE

(ITEM NO. 209M08.04)



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 OF TEST DATA)
FABRIC TYPE	WOVEN MONOFILAMENT
APPARENT OPENING SIZE (ASTM D4751)	#60 TO #100 STANDARD SIEVE
WATER FLUX (ASTM D4491)	≥ 41 L/SEC/m^2
TENSILE STRENGTH (ASTM D4632)	≥ 177 kg (WARP DIRECTION) X 127 kg (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	≥ 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 CM/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. 209M08.04 TEMPORARY ENHANCED SILT FENCE PER METER.

(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 TABLE 4 AND TABLE 5 ON STANDARD DRAWINGS ECM-STR-4 AND ECM-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 ECM-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 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 STUDDED, EMBOSSED, OR PUNCHED 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. 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 600 mm 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 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 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.

TENNESSEE METRIC D.O.T.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

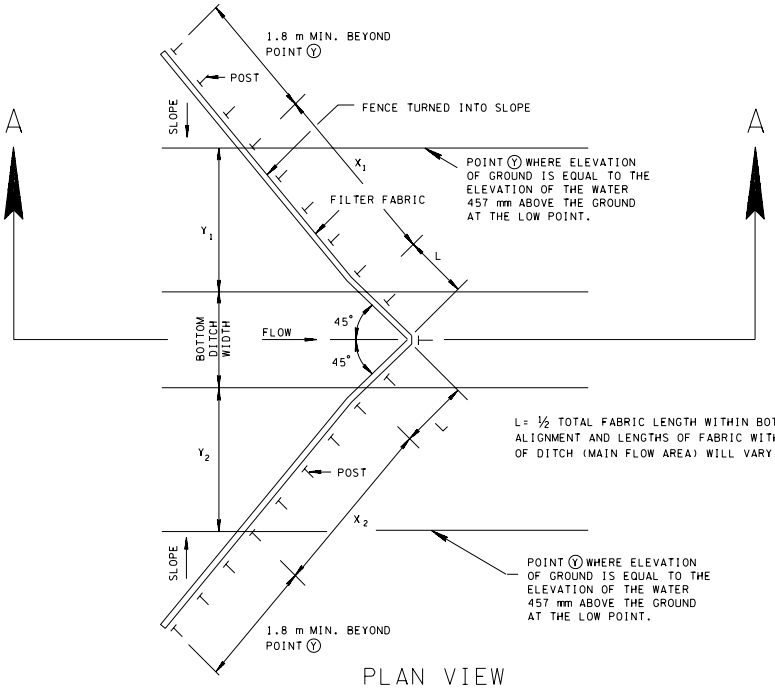
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TEMPORARY ENHANCED SILT FENCE

12-18-02 ECM-STR-3D

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

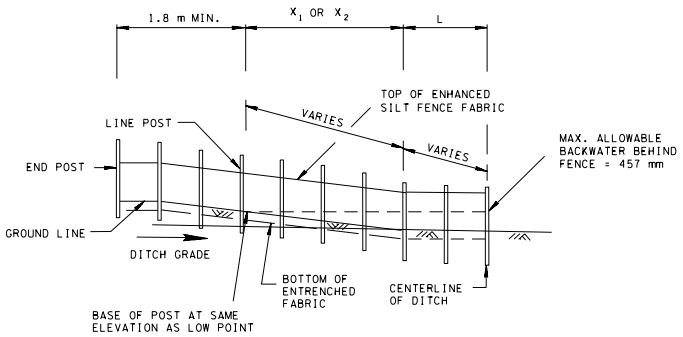
TYPE EC I

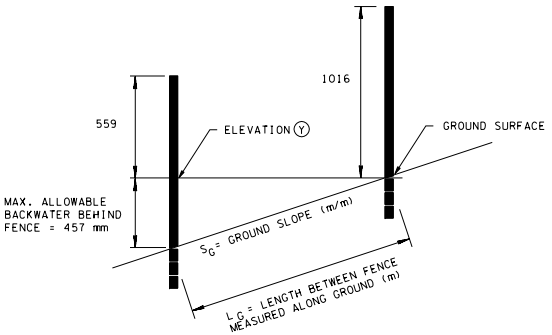


L= ½ TOTAL FABRIC LENGTH WITHIN BOTTOM WIDTH OF DITCH. ALIGNMENT AND LENGTHS OF FABRIC WITHIN BOTTOM WIDTH OF DITCH (MAIN FLOW AREA) WILL VARY PER TABLE 4.

PLAN VIEW

EROSION CONTROL PLAN LEGEND: > ① TEMPORARY TYPE EC I 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)

TABLE 4

WIDTH OF DITCH BOTTOM (m)	③ TOTAL ENHANCED SILT FABRIC FENCE LENGTH 2L (LENGTH L) WITHIN FLAT-BOTTOM ZONE OF DITCH, (PER LINEAR METER)	X_1 OR X_2 (m)			TOTAL AVALABLE SURFACE AREA OF FABRIC IN DITCH AT 0.46 m OF FLOW DEPTH (m^2)			② MAXIMUM ALLOWABLE DESIGN PEAK FLOW FROM WATERSHED (L/SEC) AT 0.46 m HEAD		
		2:1	3:1	4:1	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	390.82
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	790.13	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

① HORIZONTAL TO VERTICAL MEASUREMENT RATIOS ARE SHOWN

② ALLOWABLE FLOWS DO NOT INCLUDE HYDRAULIC REDUCTION DUE TO ACCUMULATION OF CAPTURED SOIL PARTICLES ON FILTER SURFACE AREA

③ THIS LENGTH IS TO BE ADDED TO CALCULATED LENGTHS X_1 AND X_2. 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 457 mm ABOVE THE GROUND AT THE LOW POINT OF THE DITCH. LENGTHS X_1 AND X_2 WILL BE CALCULATED BY MULTIPLYING THE LENGTHS OF SLOPE Y_1 OR Y_2 AT EACH INDIVIDUAL LOCATION BY 1.414.

④ BASED ON 2445 LITERS PER MIN./m^2(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 DRAWING ECM-STR-3D. 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 (2L).

Ⓒ 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 CAPACITES GIVEN IN TABLE 4 ABOVE SHOULD BE ACCOMODATED BY BYPASSING EXCESS FLOWS.

Ⓓ 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 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 Ⓒ 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 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.

TENNESSEE METRIC D.O.T.

- MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

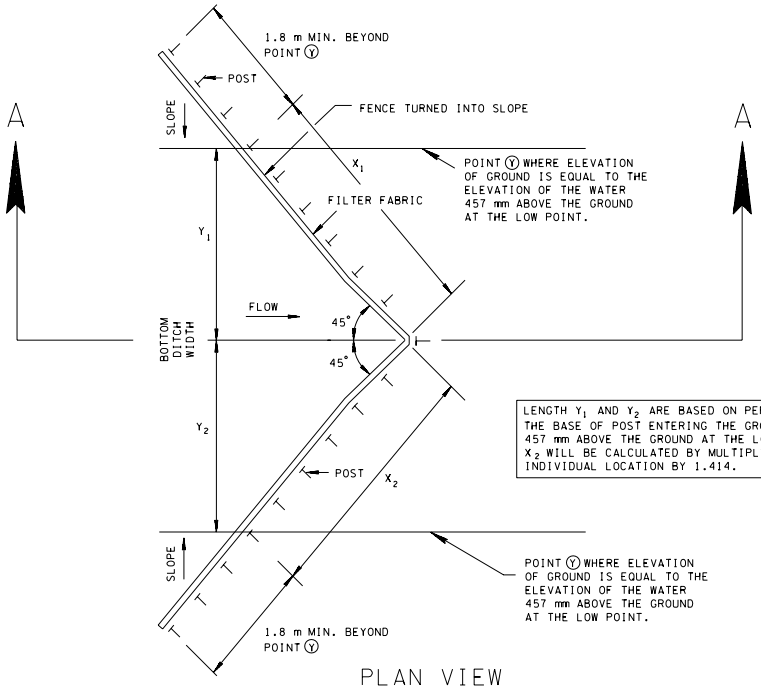
TEMPORARY EROSION DITCH CHECK USING ENHANCED SILT FENCE

12-18-02 | ECM-STR-4

REV. 12-18-03: MODIFIED SPACING FOR ENHANCED SILT FENCE DETAIL AND ADDED SUPPORTING TABLE. MODIFIED TABLE 5 AND GENERAL NOTES.

REV. 3-15-04: CHANGED PLANS LEGEND SYMBOL.

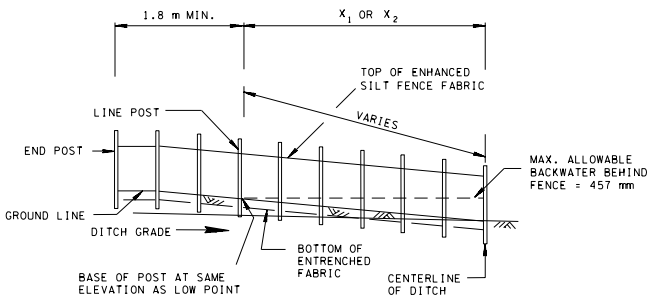
TYPE EC IA

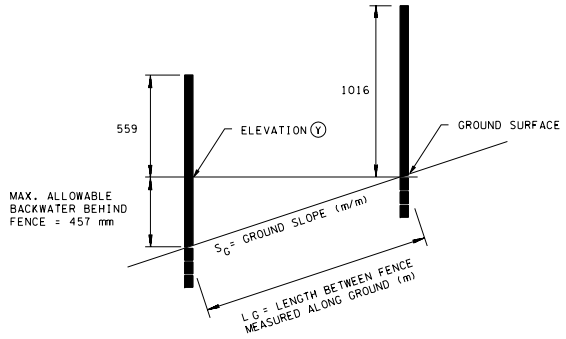


PLAN VIEW

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 457 mm ABOVE THE GROUND AT THE LOW POINT OF THE THE DITCH. LENGTHS X_1 AND X_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)

TABLE 5

DITCH SIDESLOPES	X_1 OR X_2 (m)	TOTAL AVALABLE SURFACE AREA OF FABRIC IN DITCH AT 0.46 m OF FLOW DEPTH (m^2)	✱ MAX. ALLOWABLE DESIGN PEAK FLOW FROM WATERSHED (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./m^2(0.10 CM/SEC PERMEABILITY) ENHANCED SILT FENCE FABRIC AND MAXIMUM ALLOWABLE BACKWATER BEHIND FABRIC FENCE OF 0.46 m FOR TRIANGULAR CROSS-SECTION DITCH. SEE TABLE 3 FOR ENHANCED SILT FENCE FABRIC SPECIFICATION ON STANDARD DRAWING ECM-STR-3D.

GENERAL NOTES

(A) A DITCH WITH A TRINANGULAR 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 OVERFLOWS. FLOWS IN EXCESS OF THE FLOW-THROUGH CAPACITES GIVEN IN TABLE 5 ABOVE SHOULD BE ACCOMODATED 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 FILTERS, 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 (B) ARE ACHIEVED, AND TO PREVENT OVERTOPPING, IT IS ALSO RECOMMENDED THAT BACKWATER ANALYSIS BE PERFORMED (E.G., STANDARD-STEP METHOD).

(D) 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.

TENNESSEE METRIC D.O.T.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

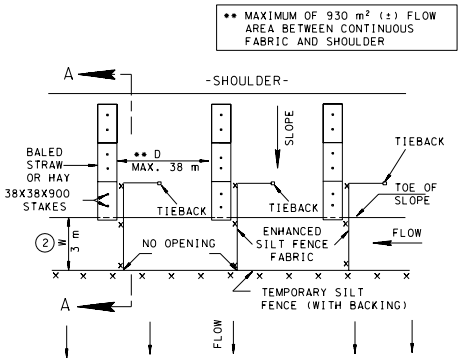
TEMPORARY EROSION CHECK/FILTER USING ENHANCED SILT FENCE IN A TRIANGULAR CROSS-SECTION DITCH

12-18-02 | ECM-STR-4A

- REV. 11-1-95: CHANGED TO METRIC.
- REV. 5-27-01: CHANGED ITEM NO. 209M08 TO 209M08.03.
- REV.7-29-02: REMOVED DETAILS FOR TYPE EC 1A,TYPE EC 1B, TYPE EC 1C, AND TYPE EC 1D.
- REV. 12-18-02: 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.

TYPE EC IV

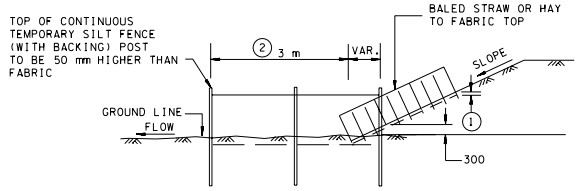
TYPICAL LOCATIONS AT TOE OF SLOPES



PLAN

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

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



SECTION A-A

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 m^3 IN VOLUME WITH A MINIMUM DIMENSION OF 900X460X360 (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 ECM-STR-3C FOR TEMPORARY SILT FENCE (WITH BACKING) DETAILS, GENERAL NOTES AND SPECIFICATIONS.

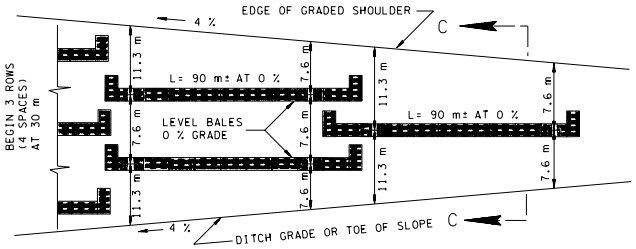
(F) SEE ECM-STR-3D FOR ENHANCED SILT FENCE DETAILS, GENERAL NOTES AND SPECIFICATIONS.

(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.

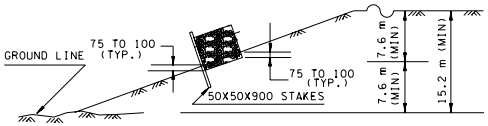
TYPE EC VI

BALED HAY OR STRAW ON FILL SLOPES



TYPICAL LONGITUDINAL VIEW (EXAMPLE)

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



SECTION C-C

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

EROSION CONTROL PLAN LEGEND:

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

- MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STRAW OR HAY BALE OR FABRIC TEMPORARY EROSION CHECKS

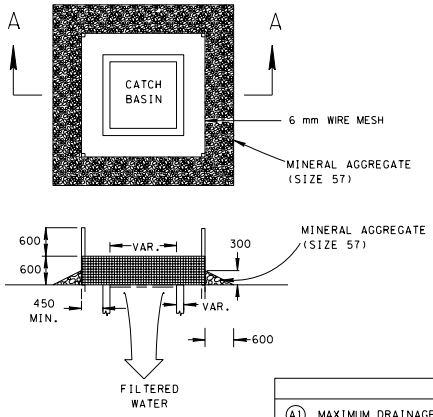
11-1-95 ECM-STR-5

- 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.

TEMPORARY ROCK CATCH BASIN PROTECTION

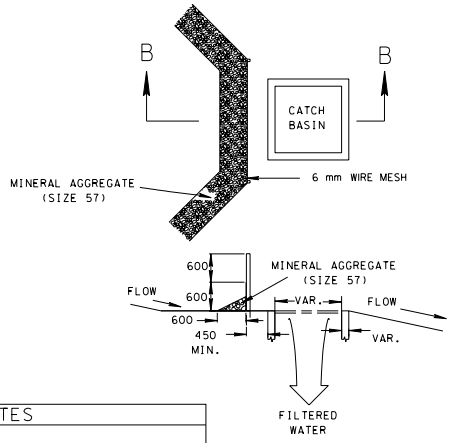
(ITEM NO. 303M10.01)

MULTI-DIRECTIONAL FLOW



SECTION A-A

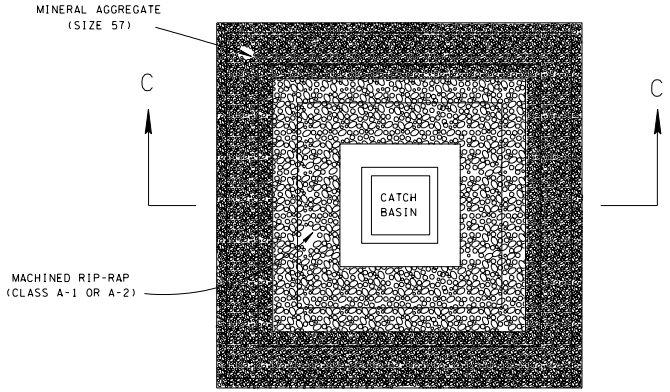
SINGLE-DIRECTIONAL FLOW



SECTION B-B

TEMPORARY ROCK CATCH BASIN PROTECTION

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



GENERAL NOTES

(A1) MAXIMUM DRAINAGE AREA IS 0.4 ha.

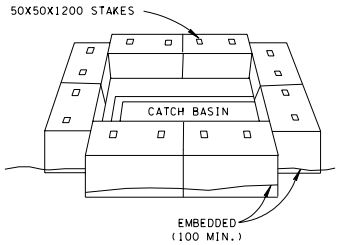
(A2) WIRE MESH SHALL BE HARDWARE CLOTH MIN. 1.06 mm WITH 6 mm MESH OPENINGS. COST TO BE INCLUDED IN ITEM 303M10.01 MINERAL AGGREGATE (SIZE 57).

EROSION CONTROL PLAN LEGEND: ☐ (M1) TEMPORARY ROCK CATCH BASIN PROTECTION (MULTI-DIRECTIONAL FLOW)

EROSION CONTROL PLAN LEGEND: (S1) TEMPORARY ROCK CATCH BASIN PROTECTION (SINGLE-DIRECTIONAL FLOW)

CATCH BASIN HAY OR STRAW BALE SILT TRAP

(ITEM NO. 209M06)



GENERAL NOTES

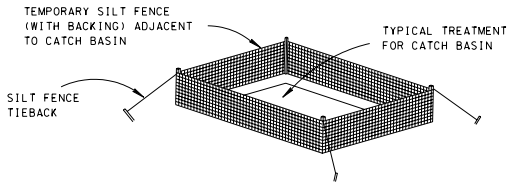
(B1) MAXIMUM DRAINAGE AREA IS 0.4 ha.

(B2) HAY OR STRAW BALES ARE TO BE EMBEDDED A MINIMUM OF 100 mm INTO GROUND.

EROSION CONTROL PLAN LEGEND: ▣ TEMPORARY CATCH BASIN HAY OR STRAW BALE SILT TRAP

CATCH BASIN SILT FENCE SILT TRAP

(ITEM NO. 209M08.02)



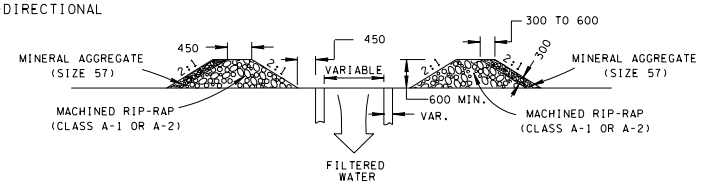
GENERAL NOTES

(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: ☐ (SF) TEMPORARY CATCH BASIN SILT FENCE SILT TRAP



SECTION C-C

GENERAL NOTES

(D1) MAXIMUM DRAINAGE AREA IS 0.8 ha.

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

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

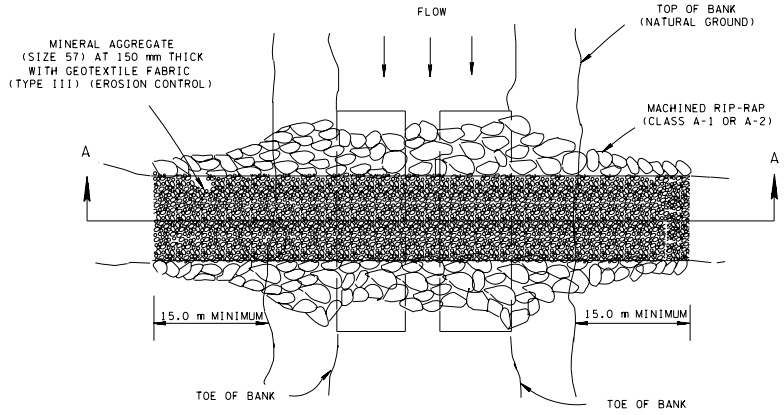
CATCH BASIN PROTECTION

11-1-95 ECM-STR-19

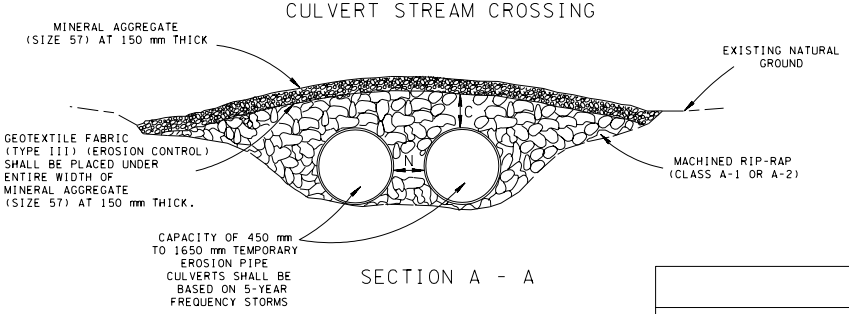
- REV.7-29-03: ADDED GEOTEXTILE FABRIC TO TEMPORARY CULVERT CROSSING AND TEMPORARY CONSTRUCTION ROAD ENTRANCE DETAILS. CHANGED MINERAL AGGREGATE TO CLASS A-3 RIP-RAP IN TEMPORARY CONSTRUCTION ROAD ENTRANCE DETAIL. CHANGED GENERAL NOTES (D) AND (F).
- REV. 12-18-02: CHANGED GENERAL NOTE (B).
- REV. 1-22-03: CORRECTED GENERAL NOTE (C).
- REV. 11-1-95: CHANGED TO METRIC.
- REV. 5-27-01: CHANGED ITEM NO. 303M15.01 TO 303M10.01. CHANGED DESCRIPTIONS IN ITEM NOS. 621M03.02 TO 621M03.10, AND 709M05.05 TO 709M05.07.

TEMPORARY CULVERT CROSSING

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



PLAN VIEW OF TEMPORARY CULVERT STREAM CROSSING



SECTION A - A

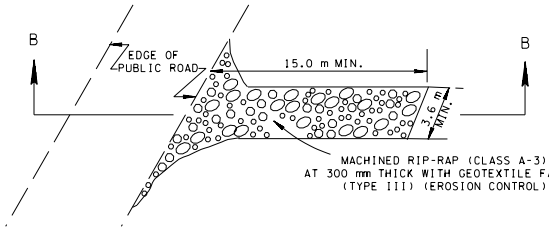
C = ½ DIAMETER OF PIPE OR 450 mm WHICHEVER IS GREATER.
N = ½ DIAMETER OF PIPE OR 300 mm WHICHEVER IS GREATER.

EROSION CONTROL PLAN LEGEND:

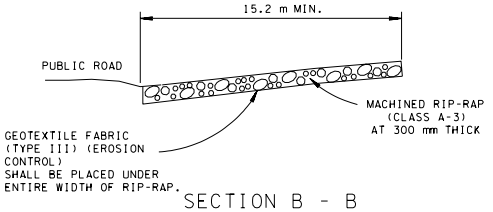
- TCC — TEMPORARY CULVERT CROSSING
- TCR — TEMPORARY CONSTRUCTION ROAD ENTRANCE AND/OR EXIT
- TSF — TEMPORARY STABILIZED CONSTRUCTION FORD

TEMPORARY CONSTRUCTION ROAD ENTRANCE AND/OR EXIT

(ITEM NOS. 203M01 & 303M10.01)



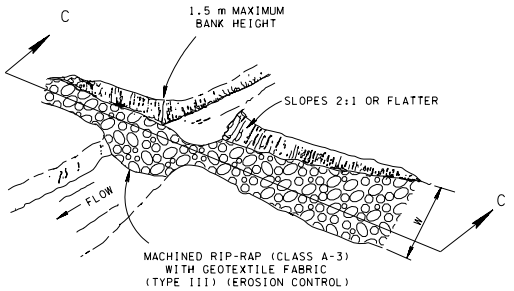
PLAN VIEW OF TEMPORARY CONSTRUCTION ROAD ENTRANCE AND/OR EXIT



SECTION B - B

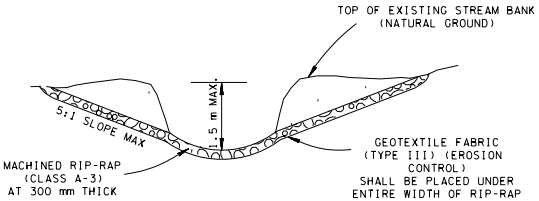
TEMPORARY STABILIZED CONSTRUCTION FORD

(ITEM NOS. 203M01,709M05.05 & 740M10.01)



PLAN VIEW OF STABILIZED CONSTRUCTION FORD

W = FORD WIDTH SHALL VARY FROM A MINIMUM WIDTH OF 3.6 m TO A MAXIMUM WIDTH OF 6.1 m.



SECTION C - C

GENERAL NOTES

(A) DIMENSIONS SHOWN ON THESE DETAILS ARE THE MINIMUM THAT WILL BE ACCEPTABLE UNLESS OTHERWISE SPECIFIED BY THE PROJECT ENGINEER.

(B) GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS OF THE STANDARD SPECIFICATION FOR GEOTEXTILES AASHTO DESIGNATION M-288, EROSION CONTROL.

(C) TEMPORARY CULVERT CROSSINGS SHALL CONSIST OF ONE OR MORE CULVERTS BEING 450 mm IN DIAMETER OR GREATER. THEIR SIZE WILL VARY FROM 450 TO 1650 mm IN DIAMETER. TEMPORARY CULVERTS SHALL BE SIZED BASED ON A 5-YEAR FREQUENCY STORM. THE CULVERTS SHALL BE PAID FOR AS TEMPORARY DRAINAGE PIPE.

(D) TEMPORARY CULVERT CROSSINGS SHALL BE BID UNDER THE FOLLOWING PAY ITEMS :

203M01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED) PER CUBIC METER
303M10.01	MINERAL AGGREGATE (SIZE 57) PER TONNE
621M03.02	450 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.03	600 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.04	750 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.05	900 mm TEMPORARY DRAINAGE PIPE PER METER
621M03.06	1050 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 III) (EROSION CONTROL) PER SQUARE METER

(E) 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.

(F) 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 III) (EROSION CONTROL) PER SQUARE METER

(G) TEMPORARY STABILIZED CONSTRUCTION FORDS ARE EFFECTIVE FOR INFREQUENT CROSSING OF WIDE SHALLOW DEPRESSIONS.

(H) 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 III) (EROSION CONTROL) PER SQUARE METER

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

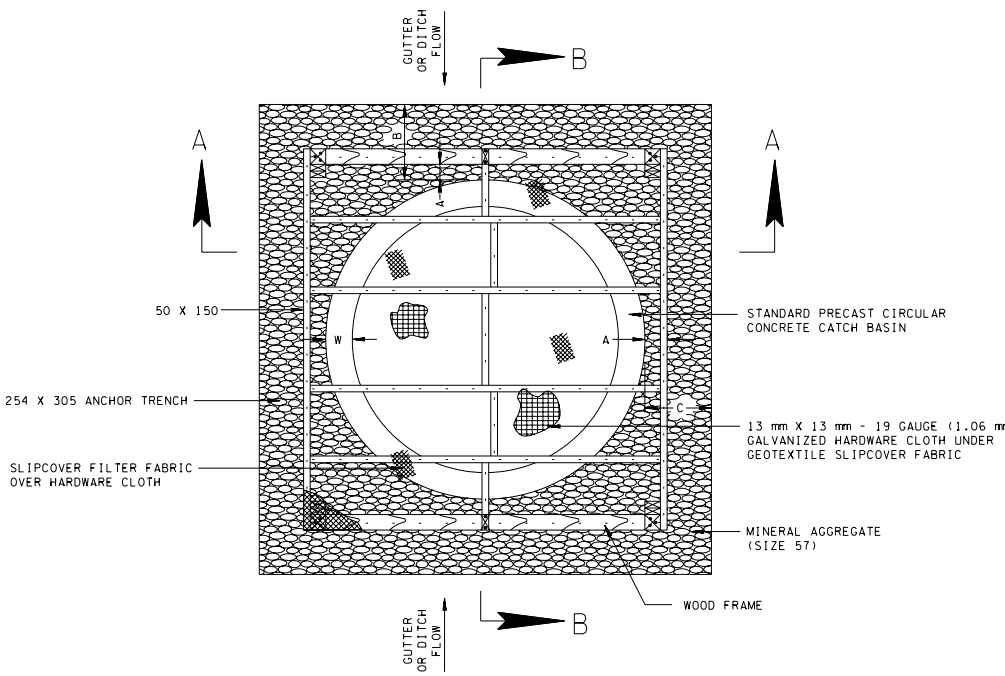
MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TEMPORARY ROAD STABILIZATION AND TEMPORARY CULVERT CROSSING

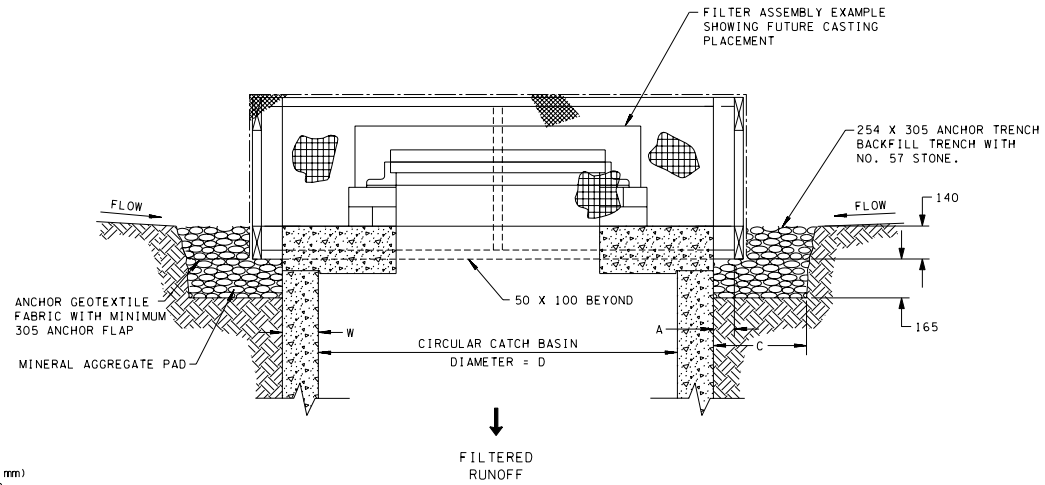
11-1-95 ECM-STR-25

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



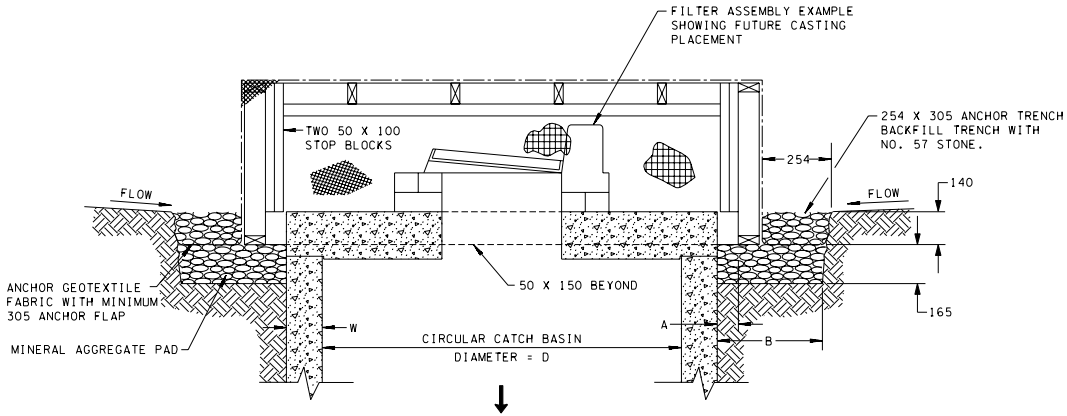
PLAN VIEW - CATCH BASIN FILTER ASSEMBLY

N.T.S.



SECTION A-A

N.T.S.



SECTION B-B

N.T.S.

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.

CIRCULAR CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD PRECAST CIRCULAR CATCH BASINS. SEE DM-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 HOW THE ECM-STR-40 SERIES OF STANDARD DRAWINGS APPLIES TO PRECAST CIRCULAR STRUCTURES. FOR SPECIFIC DETAILS AND INSTRUCTIONS 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

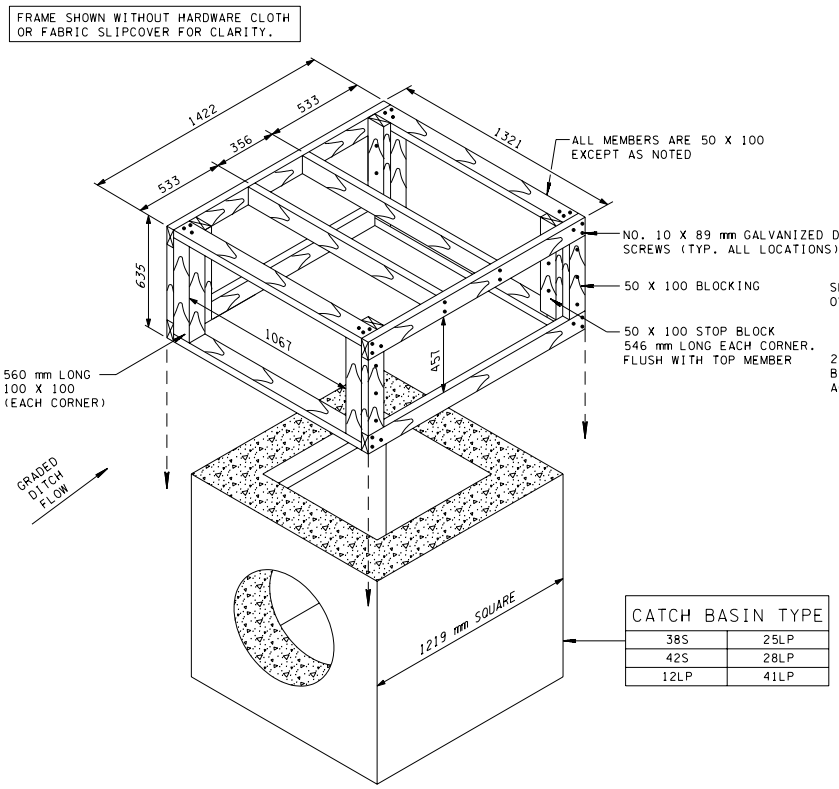
TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

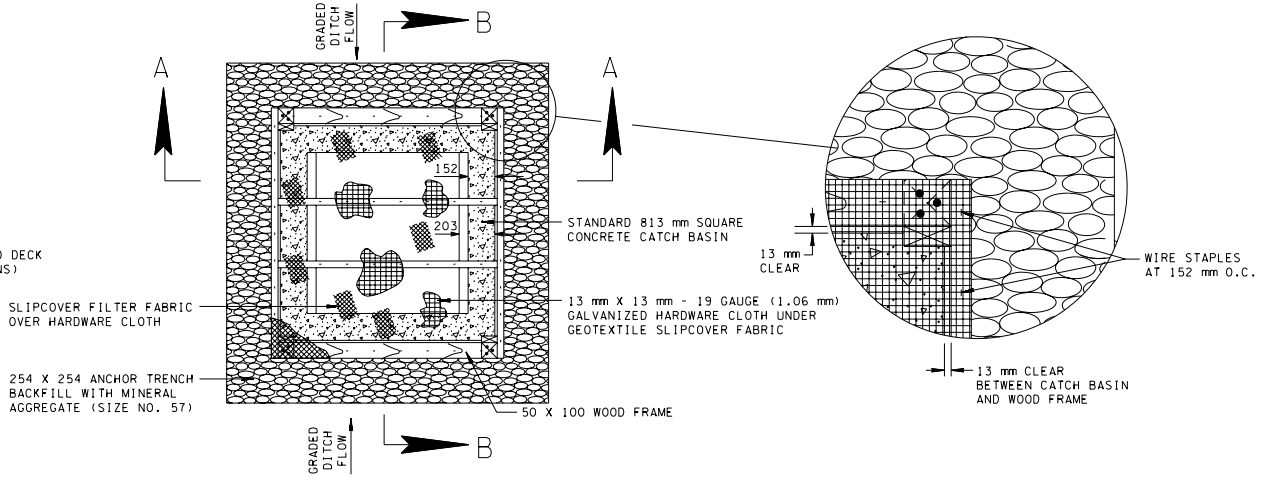
CATCH BASIN FILTER ASSEMBLY FOR CIRCULAR STRUCTURES

4-15-04 ECM-STR-40

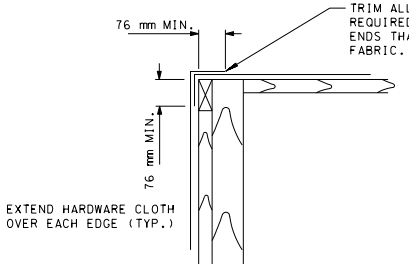


CATCH BASIN TYPE	
38S	25LP
42S	28LP
12LP	41LP

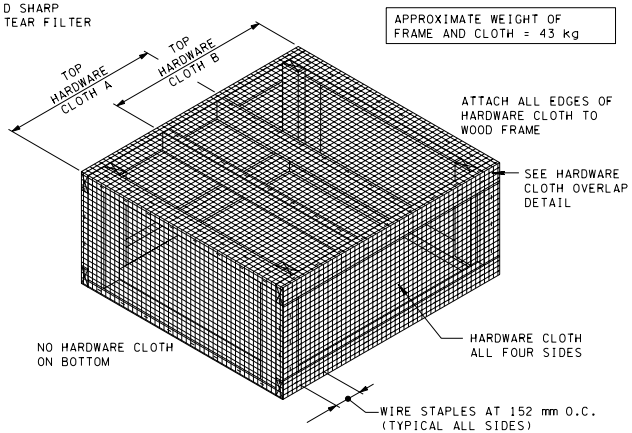
ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.



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



HARDWARE CLOTH
OVERLAP DETAIL
N.T.S.



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH
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 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 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 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.

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 TDOT 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 TDOT 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 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, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209M40.41, CATCH BASIN FILTER ASSEMBLY (TYPE 1), PER EACH.

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 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.

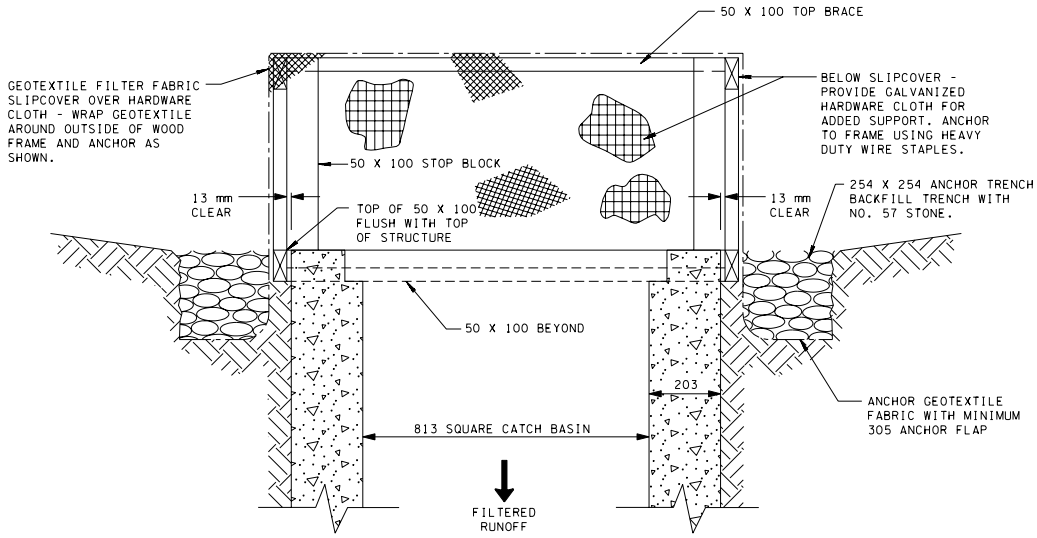
TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 1)

4-15-04 | ECM-STR-41

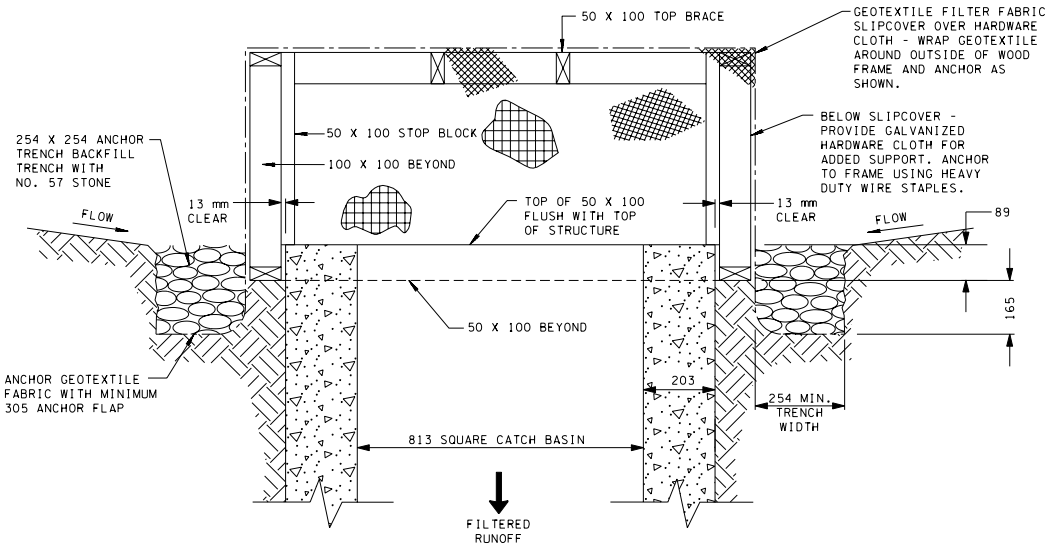


SECTION A-A

N.T.S.

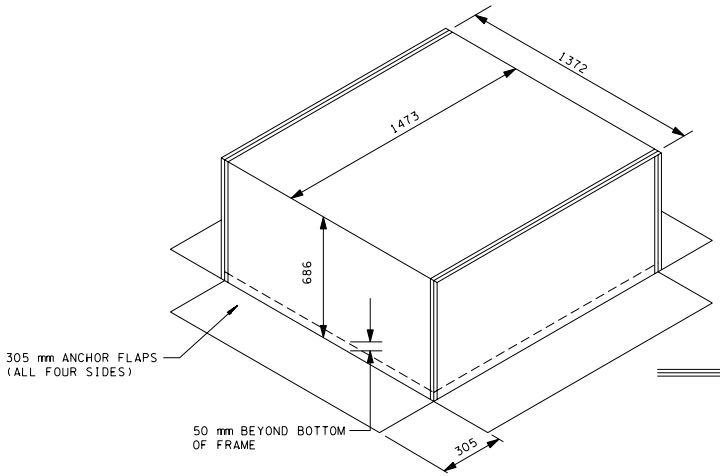
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥82 kg
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥2275 kPa
PUNCTURE STRENGTH	ASTM D4833	≥48 kg
TRAPEZOIDAL 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	MINUMUM 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 B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

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

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.

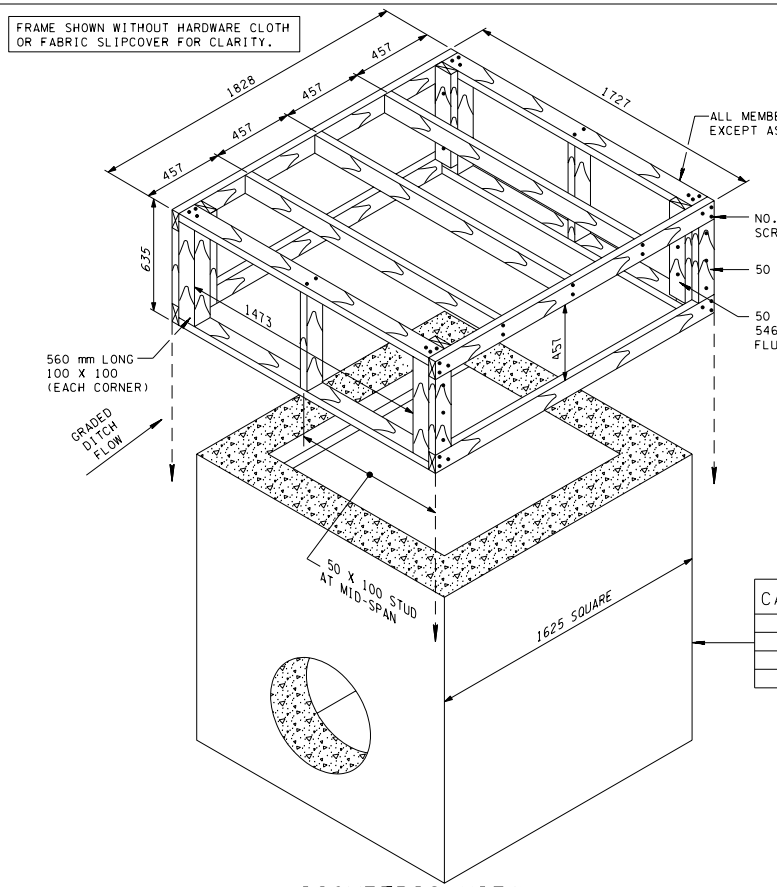
TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

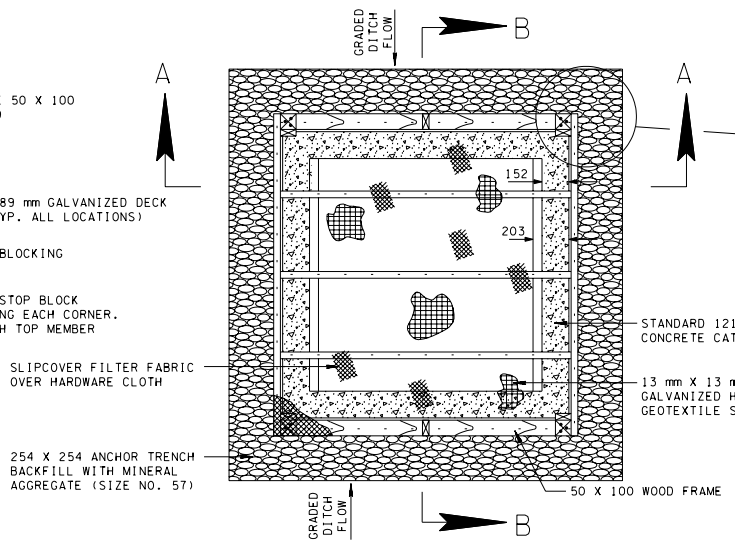
CATCH BASIN FILTER ASSEMBLY (TYPE 1) SLIPCOVER DETAILS

4-15-04 ECM-STR-41A

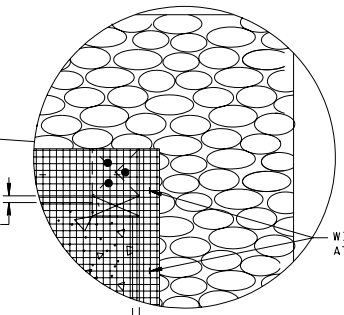


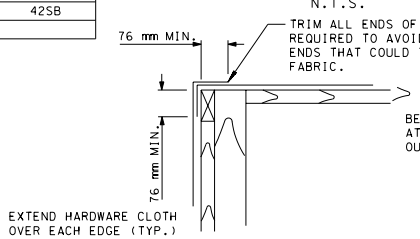
ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY
N.T.S.

CATCH BASIN TYPE	
39S	38SB
10SB	41SB
12SB	42SB
25SB	

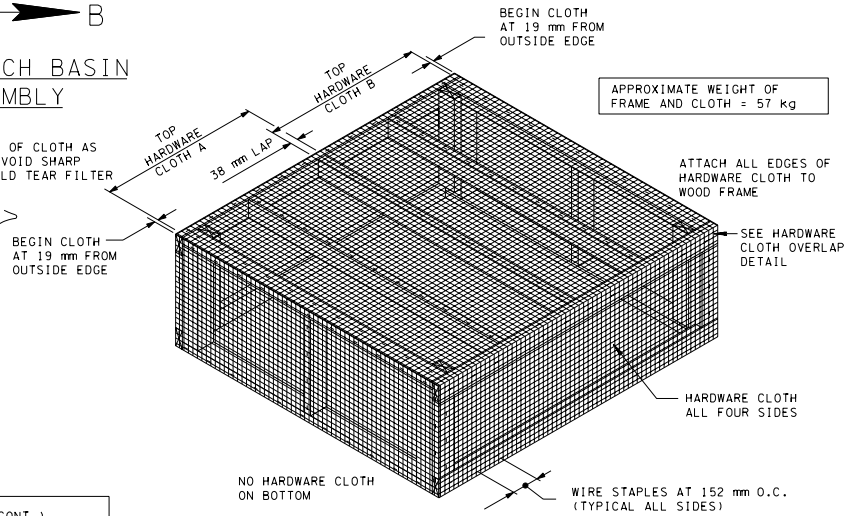


PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY
N.T.S.





HARDWARE CLOTH
OVERLAP DETAIL
N.T.S.



APPROXIMATE WEIGHT OF FRAME AND CLOTH = 57 kg

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

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

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD TYPE 39S 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 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.

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 TDOT 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 TDOT 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 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, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209M40.42, CATCH BASIN FILTER ASSEMBLY (TYPE 2), PER EACH.

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.

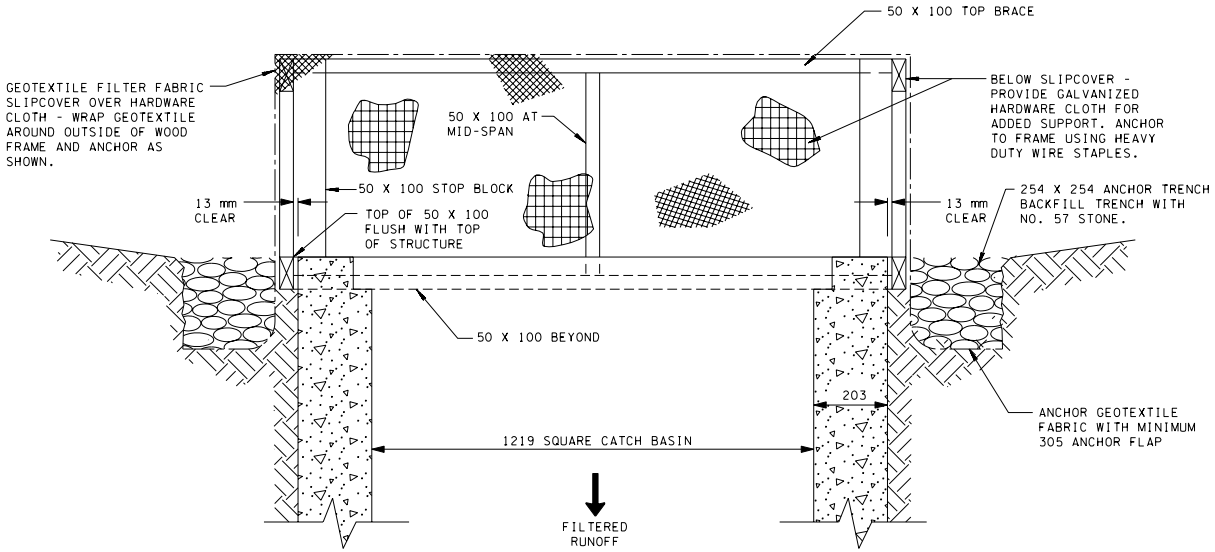
TENNESSEE METRIC D.O.T.

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

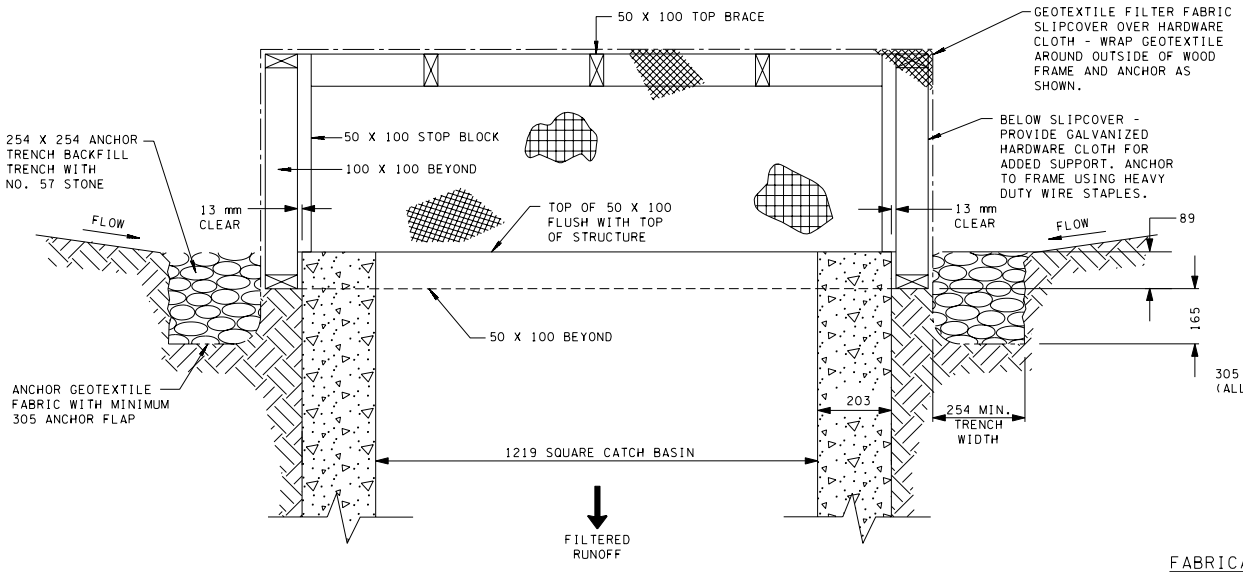


SECTION A-A

N.T.S.

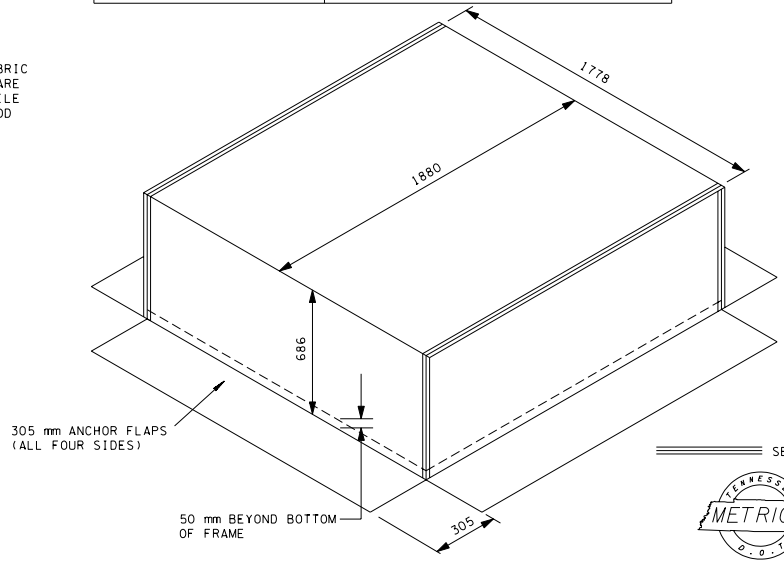
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥82 kg
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥2275 kPa
PUNCTURE STRENGTH	ASTM D4833	≥48 kg
TRAPEZOIDAL 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	MINUMUM 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 B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

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

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.

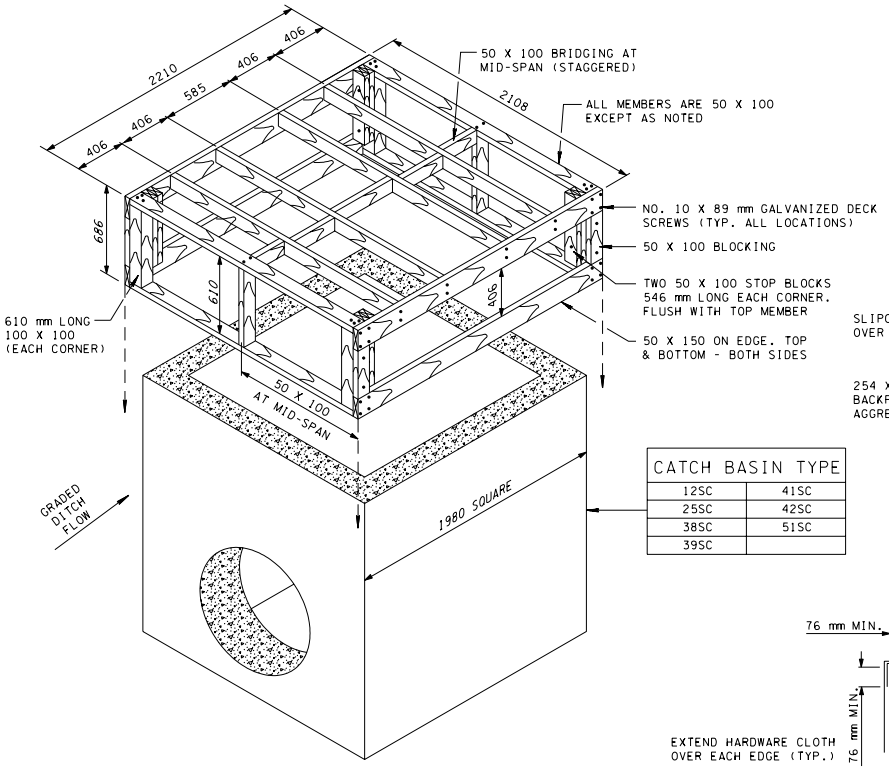
ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 2) SLIPCOVER DETAILS

4-15-04 ECM-STR-42A

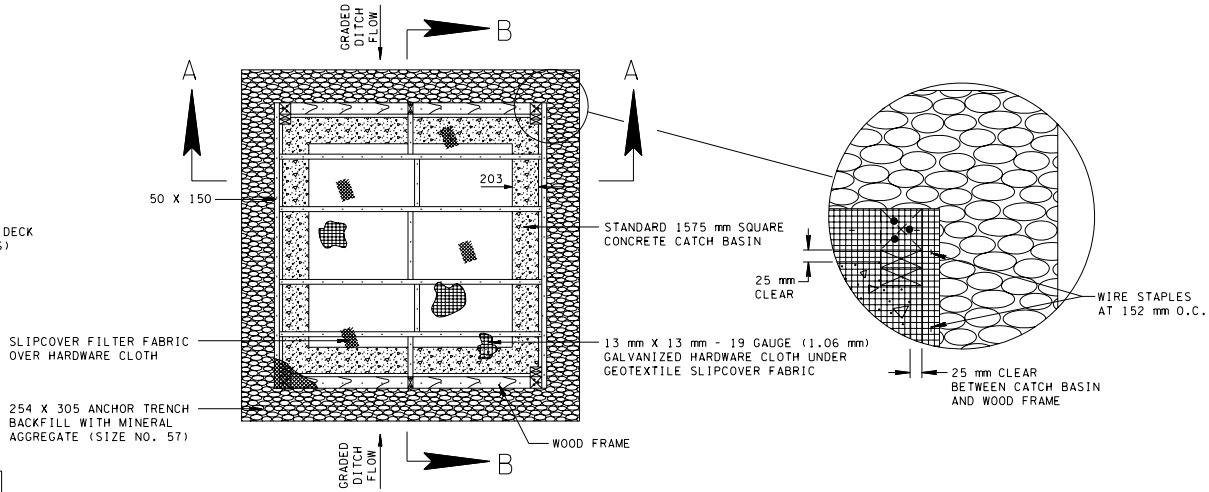
FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.



CATCH BASIN TYPE	
12SC	41SC
25SC	42SC
38SC	51SC
39SC	

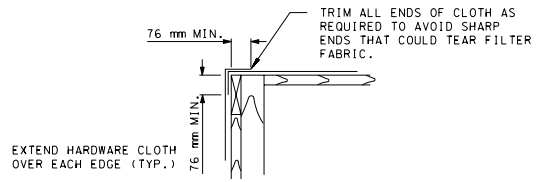
ISOMETRIC VIEW CATCH BASIN FILTER ASSEMBLY

N.T.S.



PLAN VIEW - CATCH BASIN FILTER ASSEMBLY

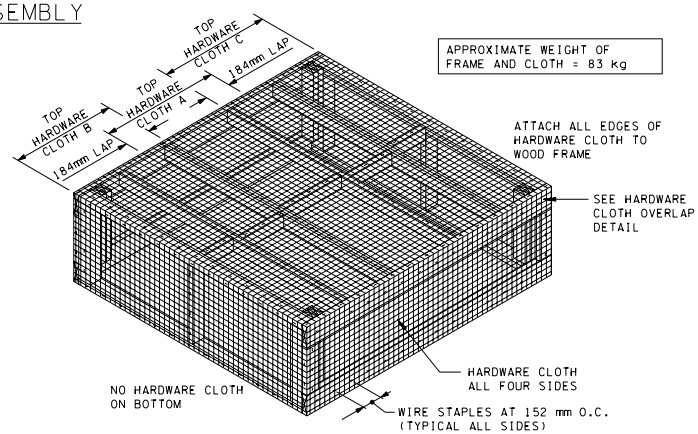
N.T.S.



HARDWARE CLOTH OVERLAP DETAIL

N.T.S.

APPROXIMATE WEIGHT OF FRAME AND CLOTH = 83 kg



ISOMETRIC VIEW FRAME WITH HARDWARE CLOTH

N.T.S.

EROSION CONTROL PLAN LEGEND: ③ 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 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 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 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 TDOT 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 TDOT 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 209M40.43, CATCH BASIN FILTER ASSEMBLY (TYPE 3), PER EACH.

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 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.

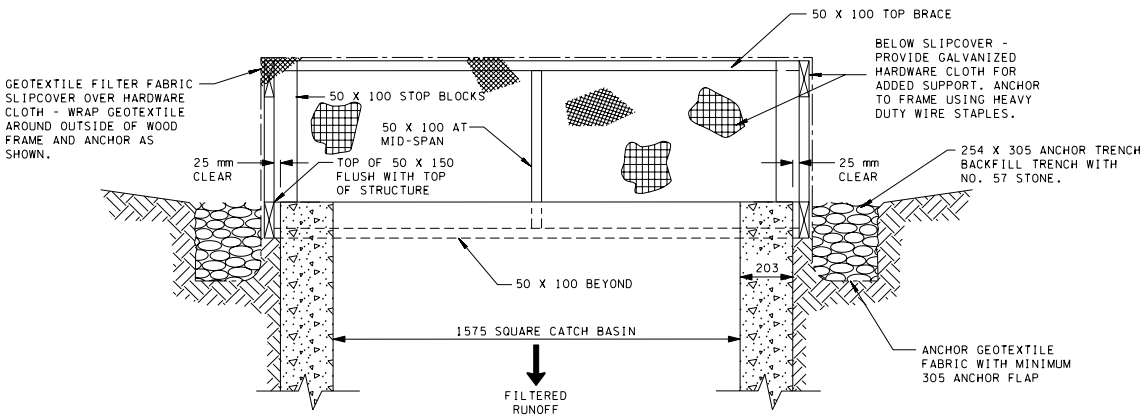
TENNESSEE METRIC D.O.T.

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

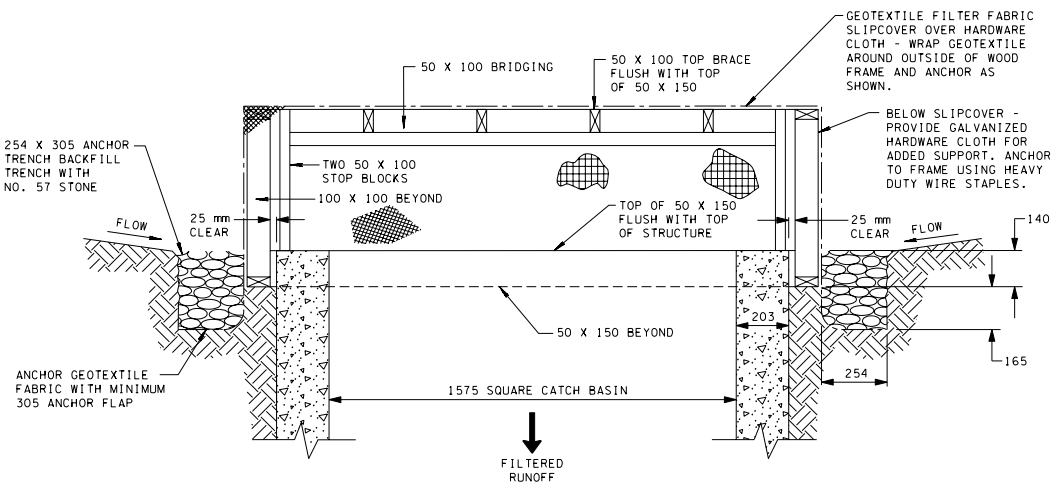


SECTION A-A

N.T.S.

SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
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	MINUMUM 0.203 kg/m^2

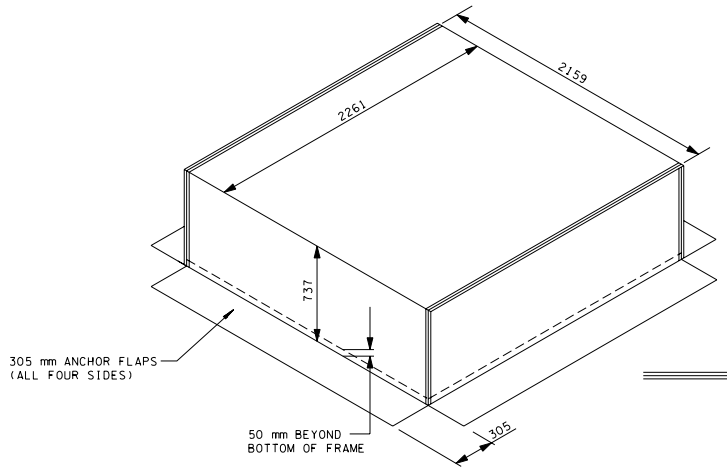
HARDWARE CLOTH SPECIFICATIONS	
STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	13 mm X 13 mm
WIRE SIZE	19 GAUGE (1.06 mm)
WIRE DIAMETER	1 mm
WEIGHT	1.0 kg/m^2
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC



SECTION B-B

N.T.S.

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



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.

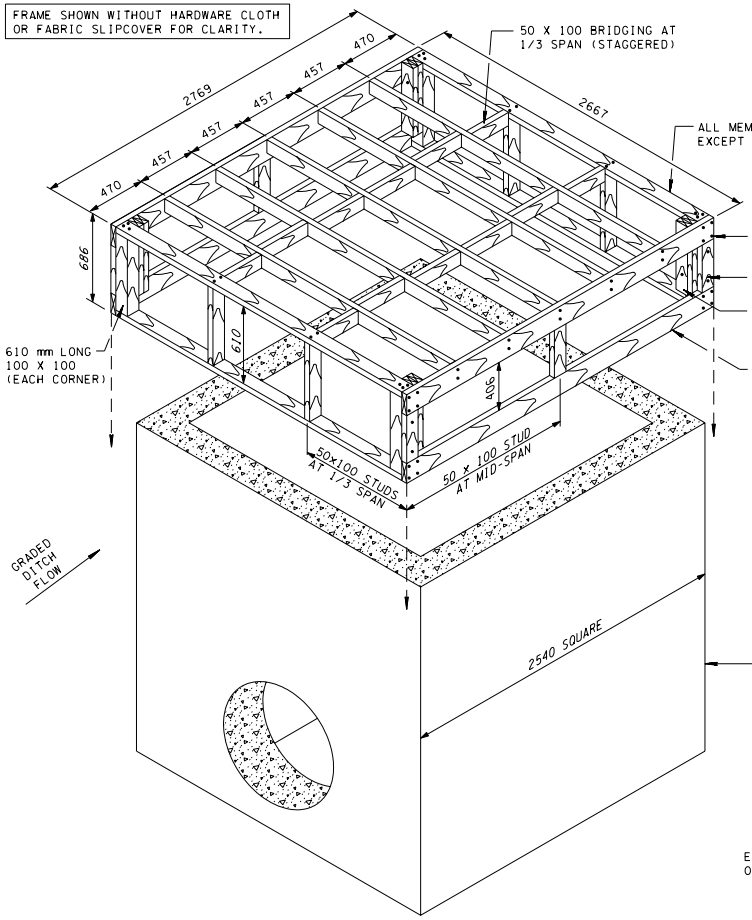
TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

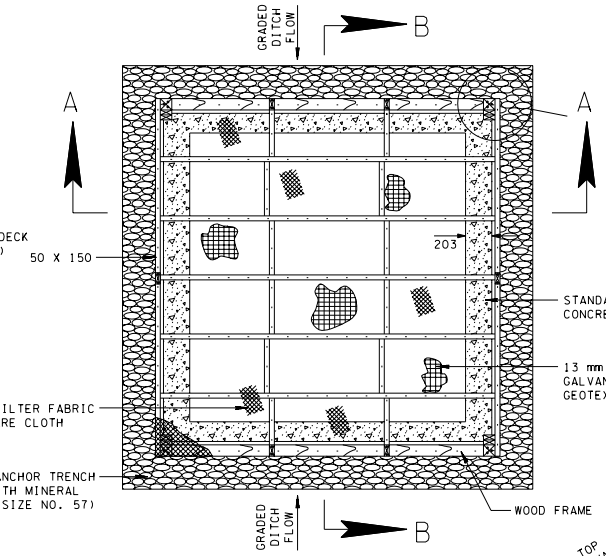
CATCH BASIN FILTER ASSEMBLY (TYPE 3) SLIPCOVER DETAILS

4-15-04 ECM-STR-43A



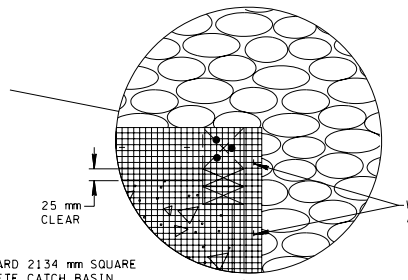
ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY

N.T.S.

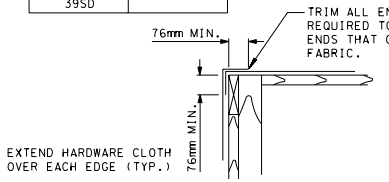


PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY

N.T.S.

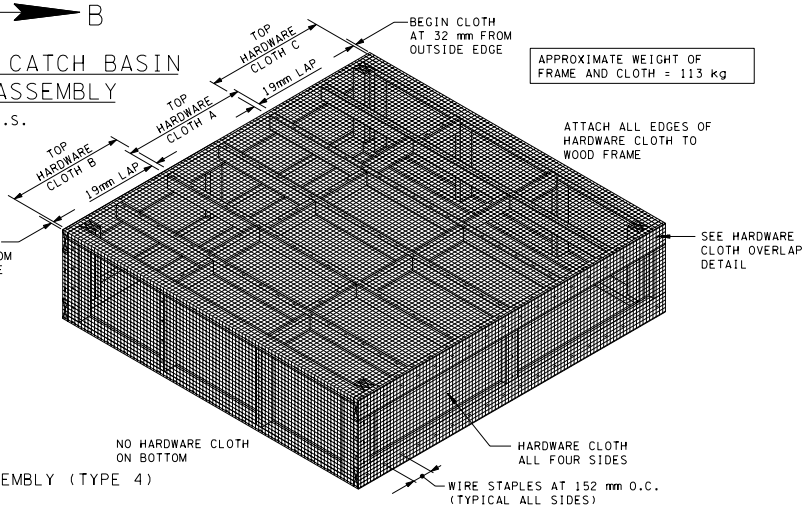


CATCH BASIN TYPE	
12SD	41SD
25SD	42SD
31SD	51SD
39SD	



HARDWARE CLOTH
OVERLAP DETAIL

N.T.S.



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

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD TYPE DM-CB-SERIES SD 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, 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 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 TDOT 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 TDOT 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 209M40.44, CATCH BASIN FILTER ASSEMBLY (TYPE 4), PER EACH.

ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH

N.T.S.

INSTALLATION SEQUENCE FOR HARDWARE CLOTH

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.

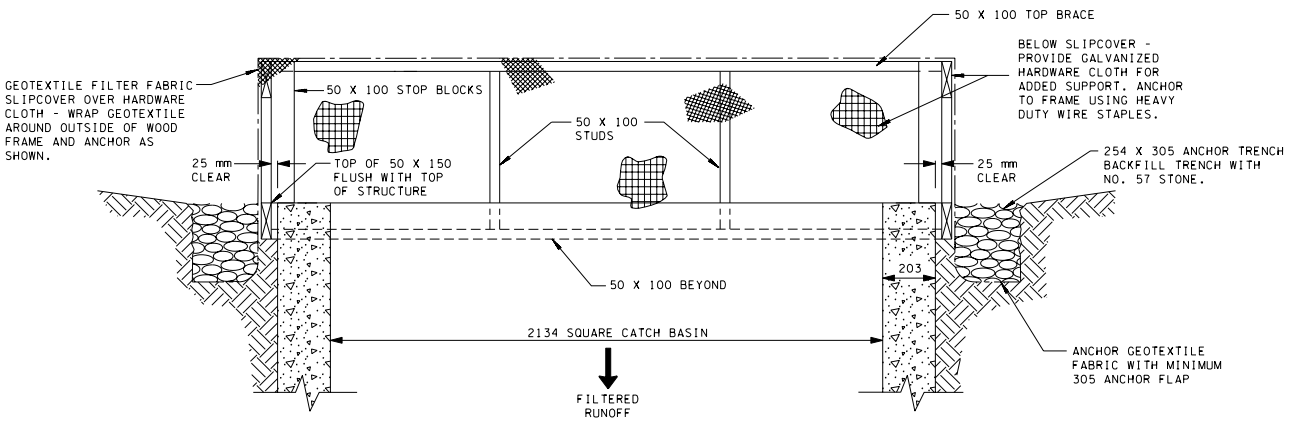
TENNESSEE METRIC D.O.T.

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

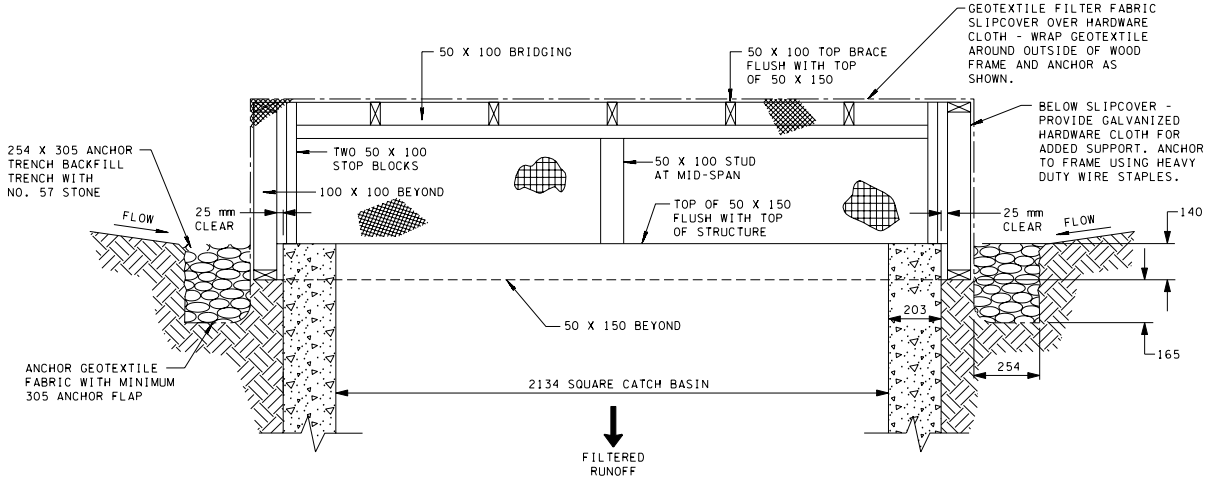


SECTION A-A

N.T.S.

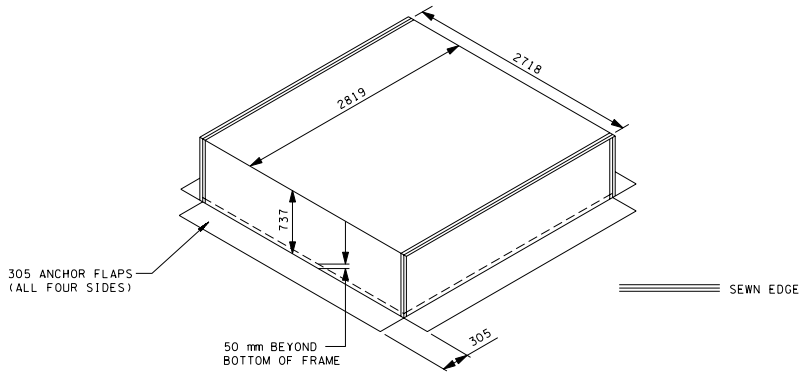
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥82 kg
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥2275 kPa
PUNCTURE STRENGTH	ASTM D4833	≥48 kg
TRAPEZOIDAL 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	MINUMUM 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 B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

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.

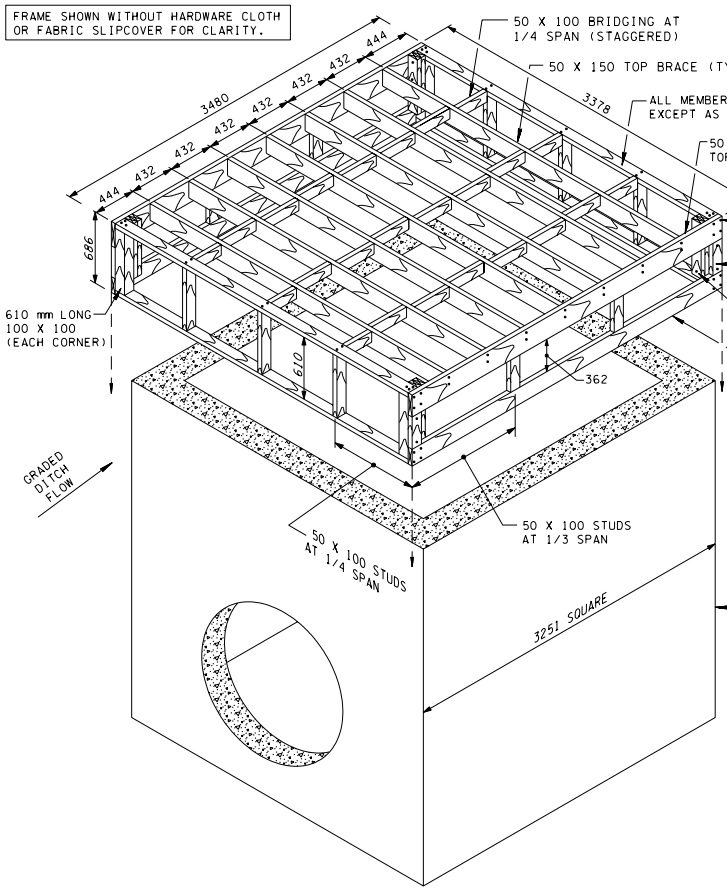
TENNESSEE METRIC

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 4) SLIPCOVER DETAILS

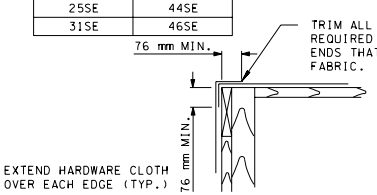
4-15-04 ECM-STR-44A



ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY

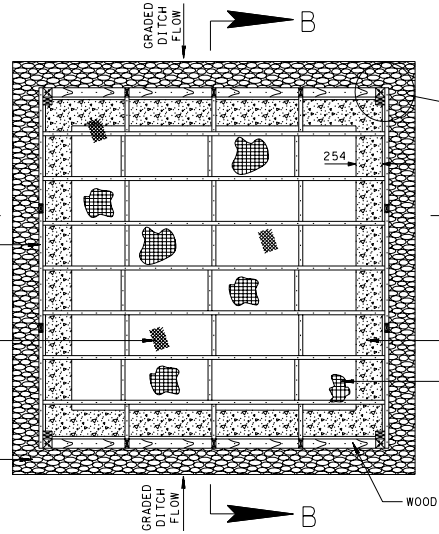
N.T.S.

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



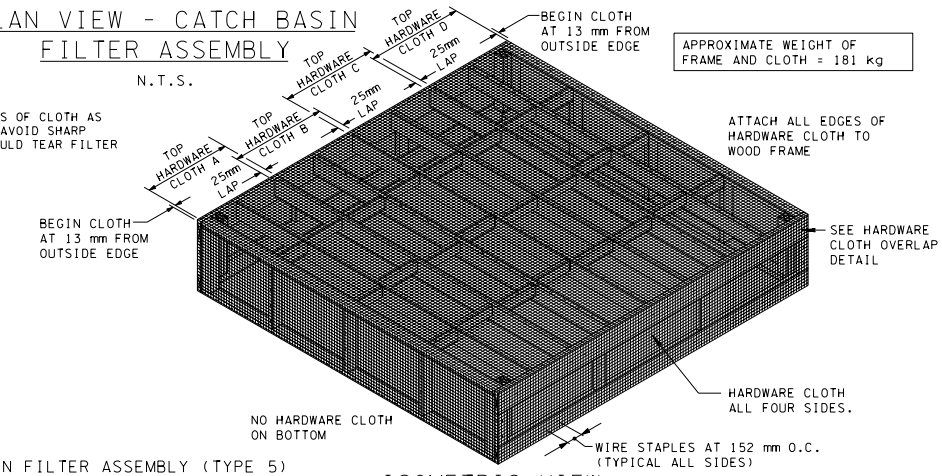
HARDWARE CLOTH
OVERLAP DETAIL

N.T.S.



PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY

N.T.S.



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH

N.T.S.

EROSION CONTROL PLAN LEGEND: ☐ (5) CATCH BASIN FILTER ASSEMBLY (TYPE 5)

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(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 SWALES) 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, 38 mm x 140 mm, 38 mm x 184 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 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 TDOT 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 TDOT 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 209M40.45, CATCH BASIN FILTER ASSEMBLY (TYPE 5), PER EACH.

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 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.

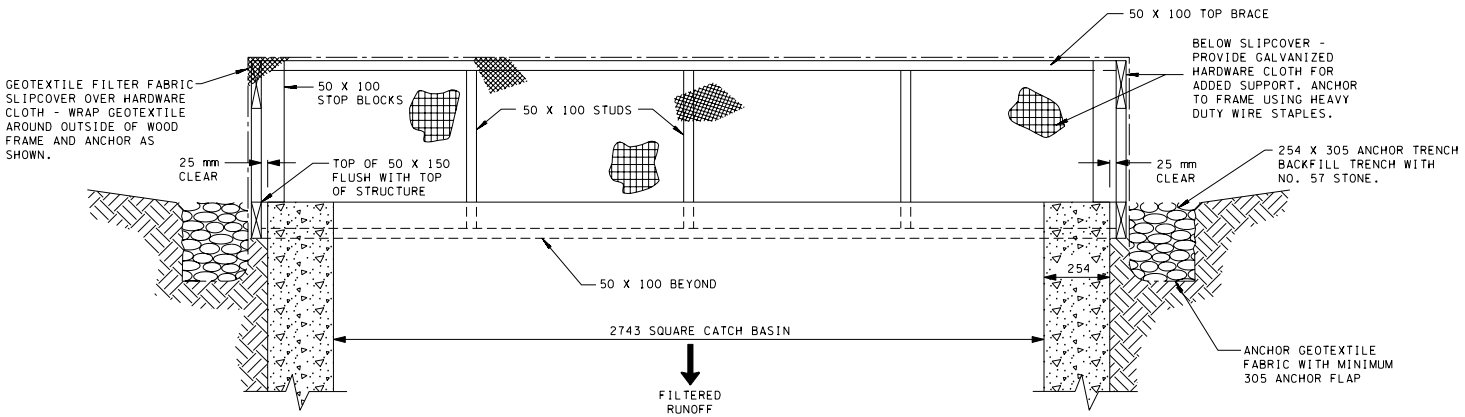
TENNESSEE METRIC

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 5)

4-15-04 | ECM-STR-45

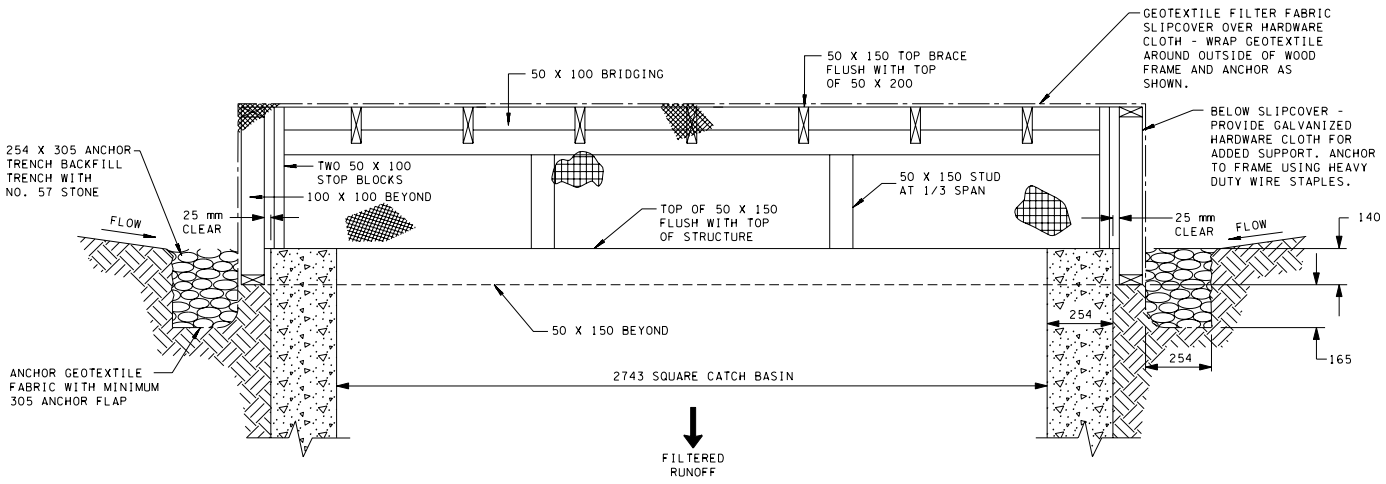


SECTION A-A

N.T.S.

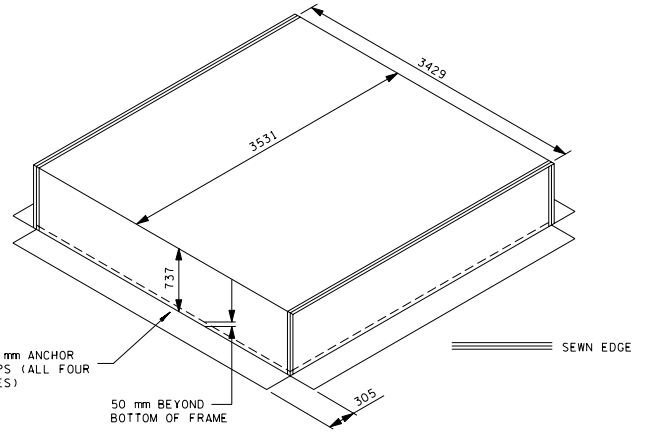
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥82 kg
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥2275 kPa
PUNCTURE STRENGTH	ASTM D4833	≥48 kg
TRAPEZOIDAL 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	MINUMUM 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 B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

EROSION CONTROL PLAN LEGEND: ☐ (5) 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 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.

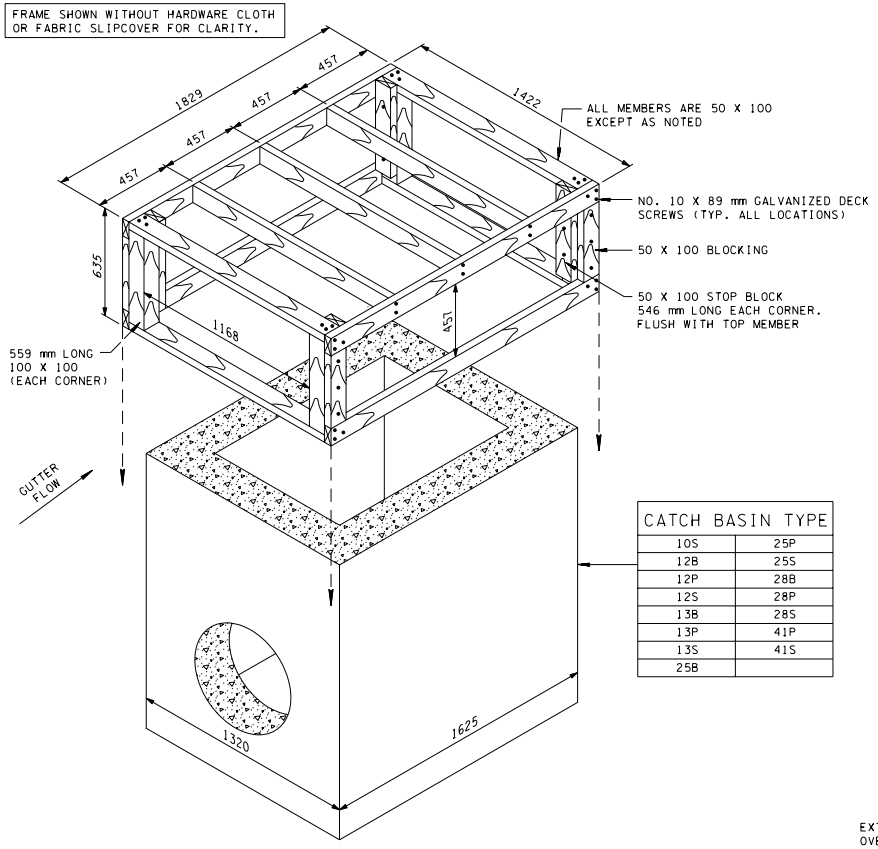
TENNESSEE METRIC D.O.T.

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

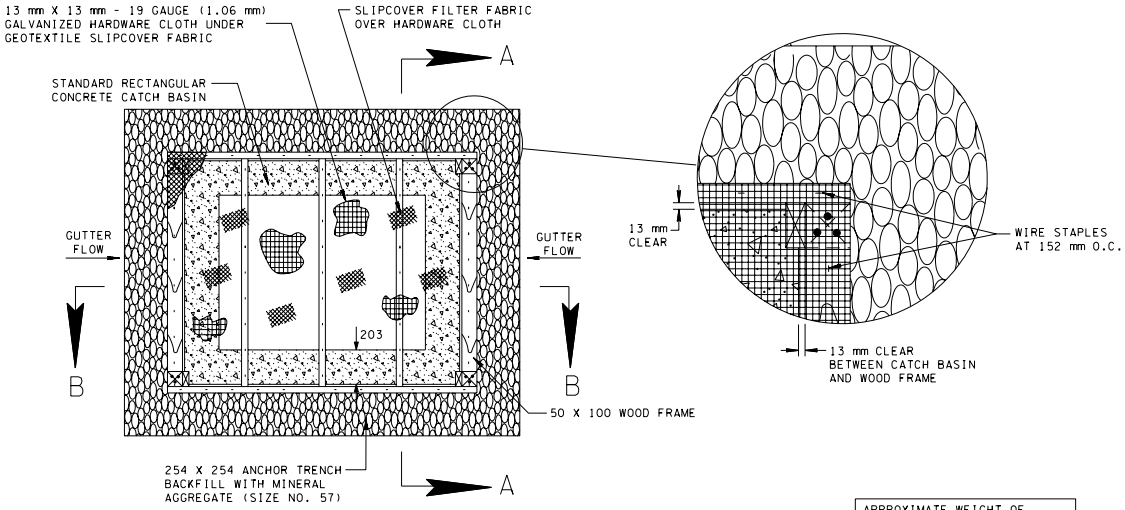


CATCH BASIN TYPE	
10S	25P
12B	25S
12P	28B
12S	28P
13B	28S
13P	41P
13S	41S
25B	

ISOMETRIC VIEW
CATCH BASIN FILTER ASSEMBLY

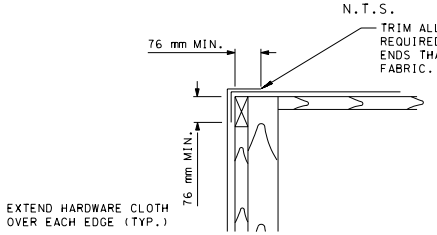
N.T.S.

EROSION CONTROL PLAN LEGEND: ☐ (6) CATCH BASIN FILTER ASSEMBLY (TYPE 6)



PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY

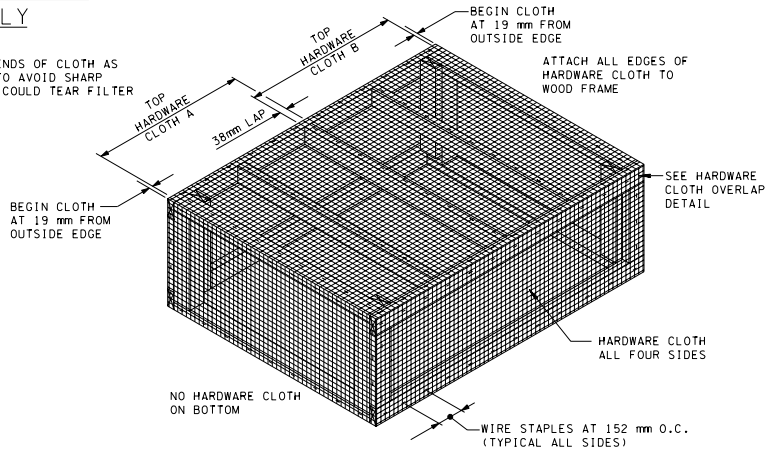
N.T.S.



HARDWARE CLOTH
OVERLAP DETAIL

N.T.S.

APPROXIMATE WEIGHT OF FRAME AND CLOTH = 50 Kg



ISOMETRIC VIEW
FRAME WITH HARDWARE CLOTH

N.T.S.

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD TYPES 10S, 41P, 41S AND DM-CB-SERIES B,P, OR S FOR TYPE 12, 13, 25, 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 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 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.

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 TDOT 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 TDOT 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 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, AND SLIPCOVER SHALL BE PAID FOR UNDER ITEM NUMBER 209M40.46, CATCH BASIN FILTER ASSEMBLY (TYPE 6), PER EACH.

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 SUBSEQUEN SIDES.

TRIM EXCESS ALONG BOTTOM AS NECESSARY.

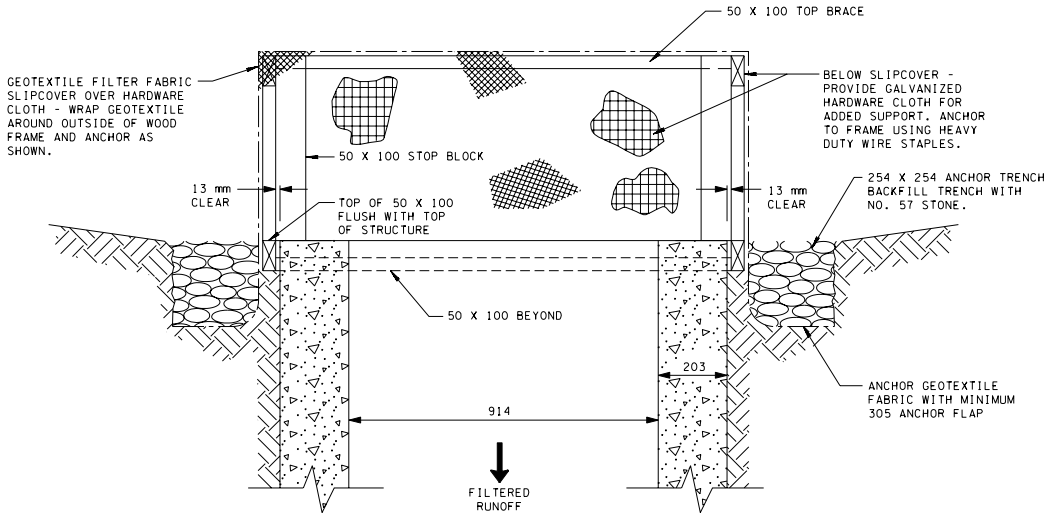
TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 6)

4-15-04 ECM-STR-46

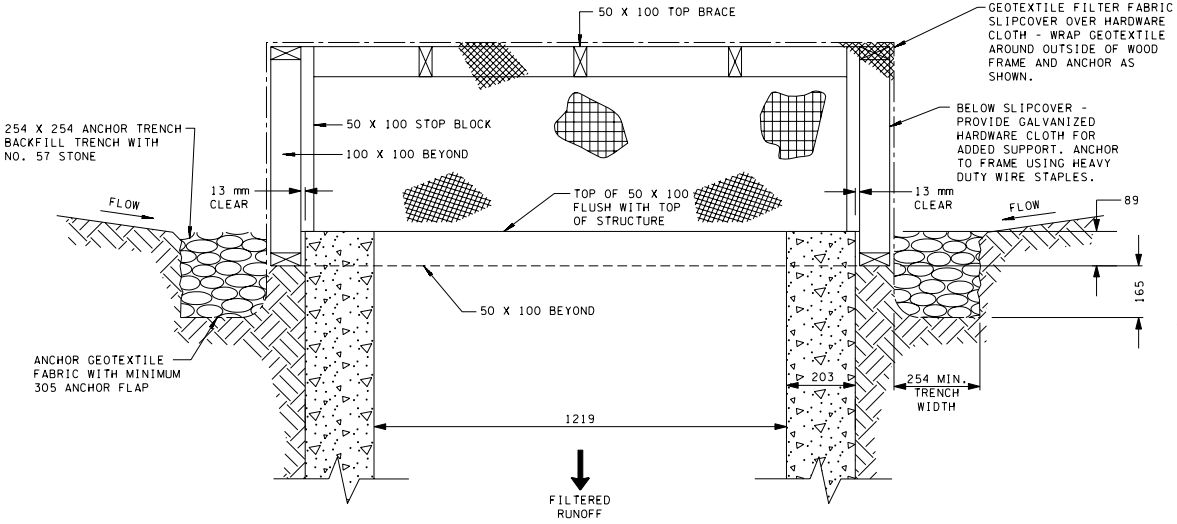


SECTION A-A

N.T.S.

SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
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	MINUMUM 0.203 kg/m^2

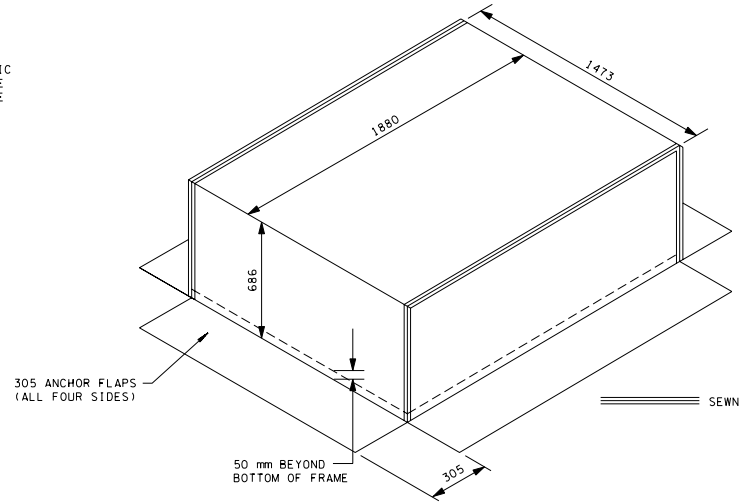
HARDWARE CLOTH SPECIFICATIONS	
STANDARD SPECIFICATION	ASTM A740
OPENING SIZE	13 mm X 13 mm
WIRE SIZE	19 GAUGE (1.06 mm)
WIRE DIAMETER	1 mm
WEIGHT	1.0 kg/m^2
GRADE	LOW CARBON STEEL (C1008)
TYPE	WELDED HOT GALVANIZED STEEL WIRE FABRIC



SECTION B-B

N.T.S.

EROSION CONTROL PLAN LEGEND: ☐ (6) CATCH BASIN FILTER ASSEMBLY (TYPE 6)



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.

TENNESSEE METRIC D.O.T.

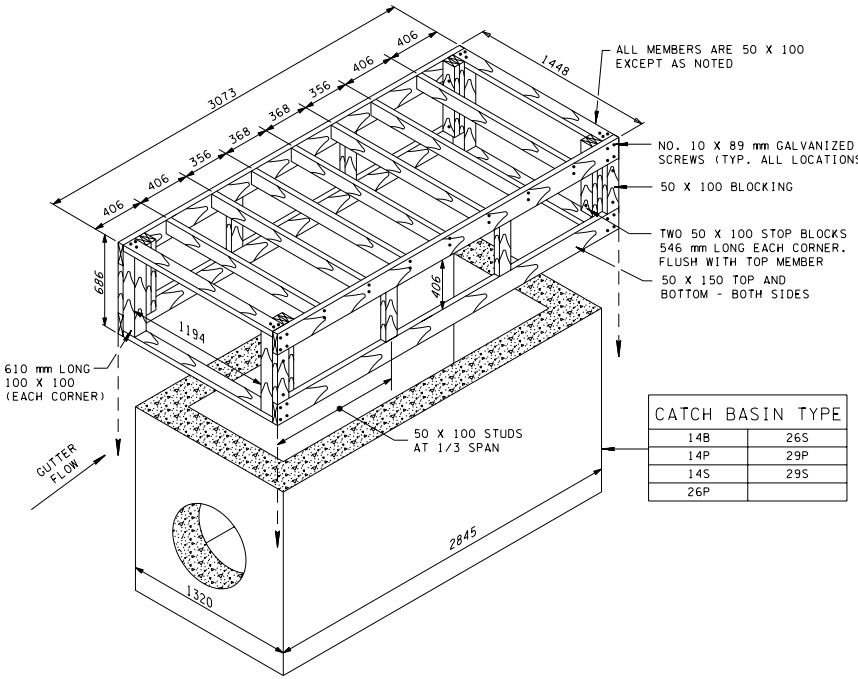
ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 6) SLIPCOVER DETAILS

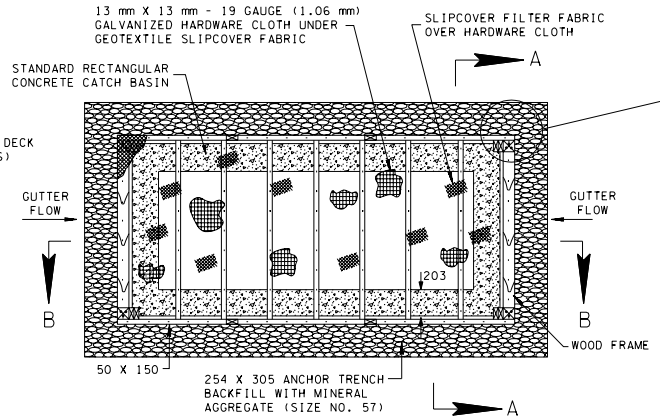
4-15-04 ECM-STR-46A

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.

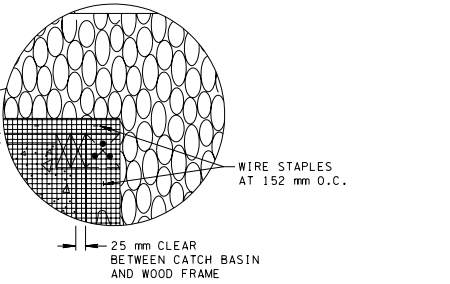


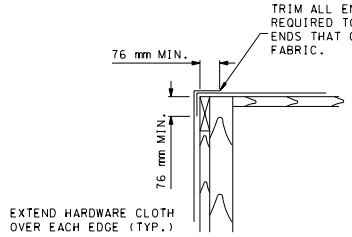
CATCH BASIN TYPE	
14B	26S
14P	29P
14S	29S
26P	

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



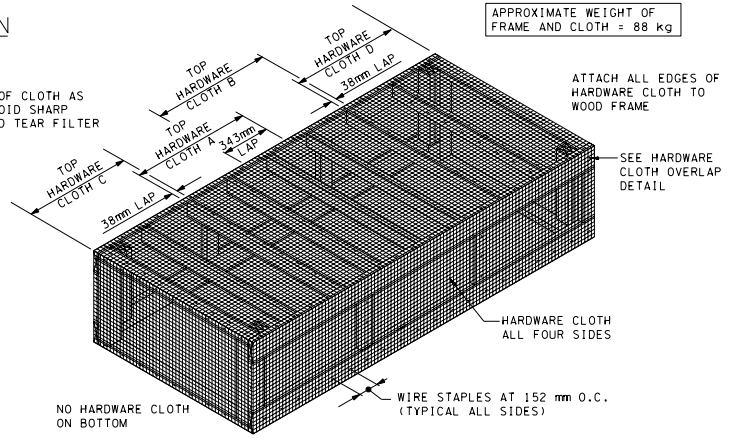
PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY
N.T.S.





HARDWARE CLOTH
OVERLAP DETAIL
N.T.S.

APPROXIMATE WEIGHT OF FRAME AND CLOTH = 88 kg



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

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

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD TYPES 14B AND DM-CB-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 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 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 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 GIVEN BY TDOT 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 TDOT 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 209M40.47, CATCH BASIN FILTER ASSEMBLY (TYPE 7), PER EACH.

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.

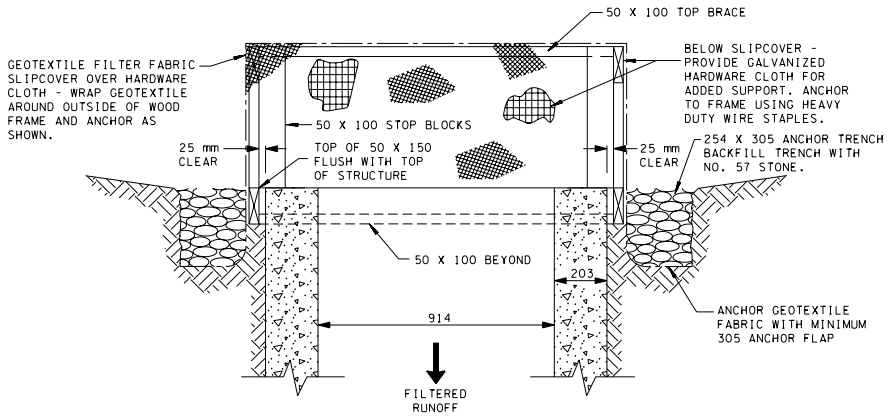
TENNESSEE METRIC O.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 7)

4-15-04 ECM-STR-47

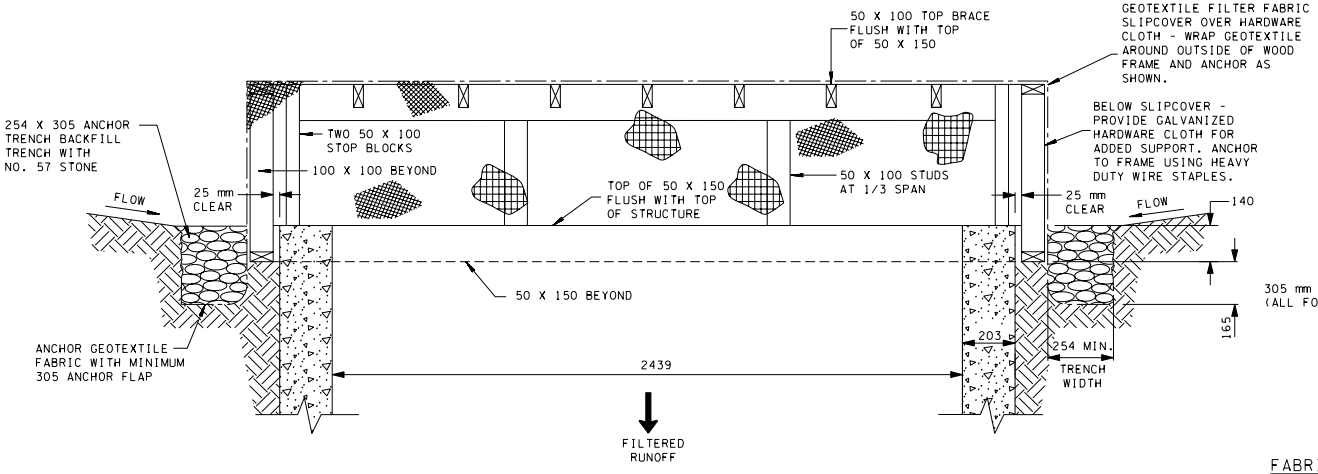


SECTION A-A

N.T.S.

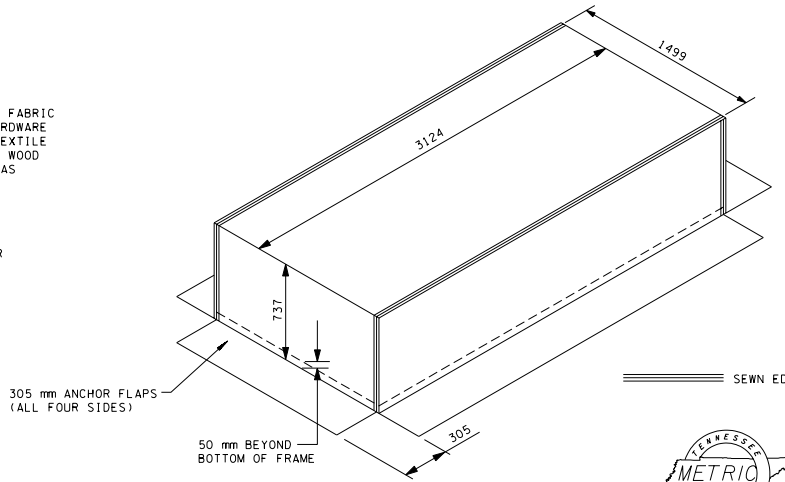
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥82 kg
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥2275 kPa
PUNCTURE STRENGTH	ASTM D4833	≥48 kg
TRAPEZOIDAL 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	MINUMUM 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 B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

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

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.

TENNESSEE METRIC D.O.T.

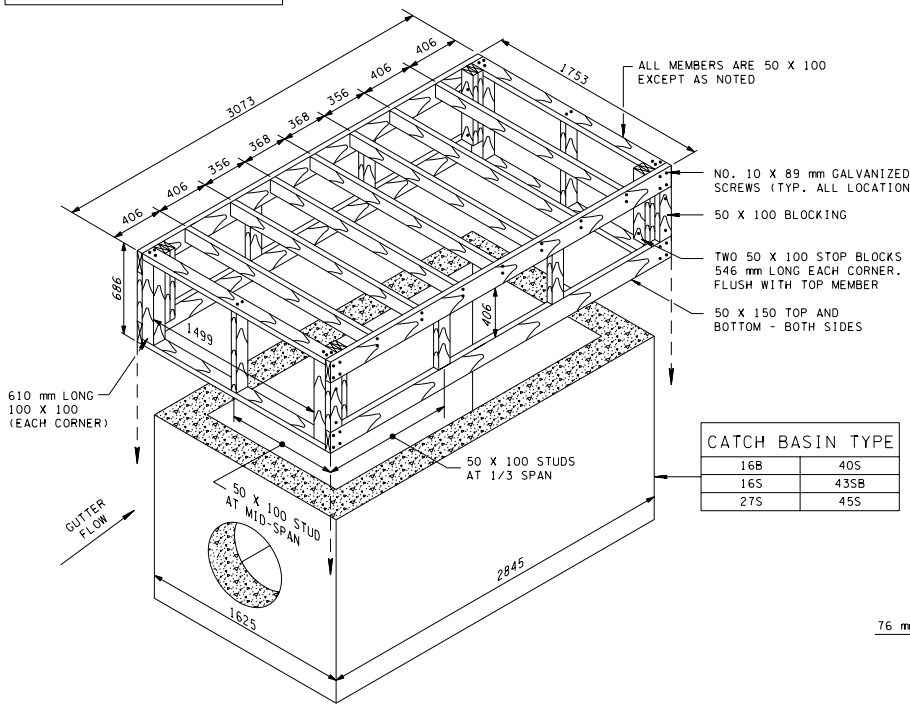
ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 7) SLIPCOVER DETAILS

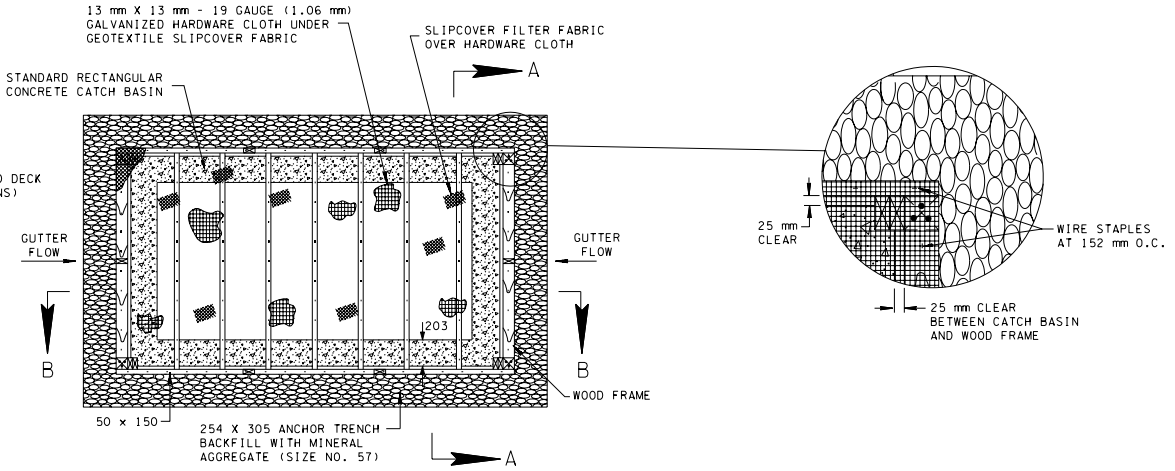
4-15-04 | ECM-STR-47A

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.

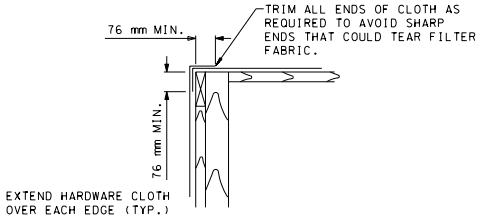


CATCH BASIN TYPE	
16B	40S
16S	43SB
27S	45S

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

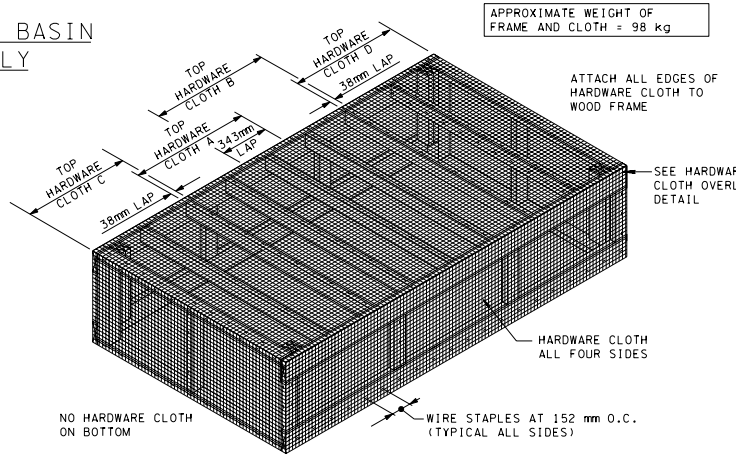


PLAN VIEW - CATCH BASIN FILTER ASSEMBLY
N.T.S.



HARDWARE CLOTH OVERLAP DETAIL
N.T.S.

APPROXIMATE WEIGHT OF FRAME AND CLOTH = 98 kg



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

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

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD TYPES 16B, 16S, 27S, 40S, 43SB, AND 45S 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, 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 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 GIVEN BY TDOT 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 TDOT 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 209M40.48, CATCH BASIN FILTER ASSEMBLY (TYPE 8), PER EACH.

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.

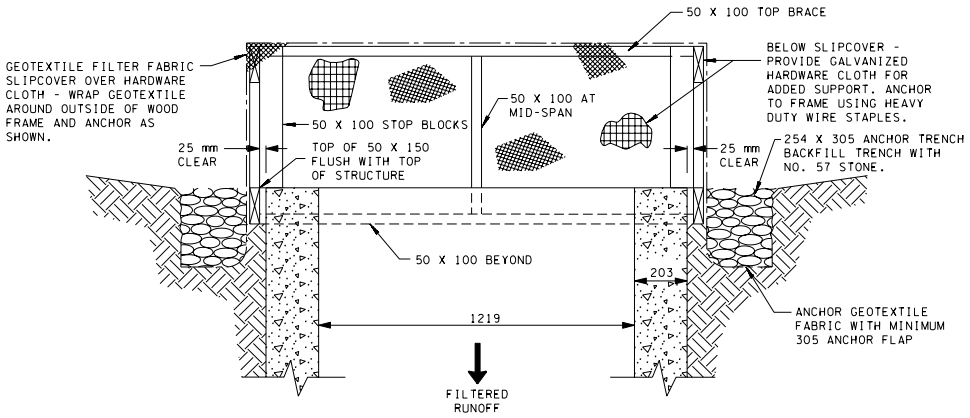
TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 8)

4-15-04 ECM-STR-48

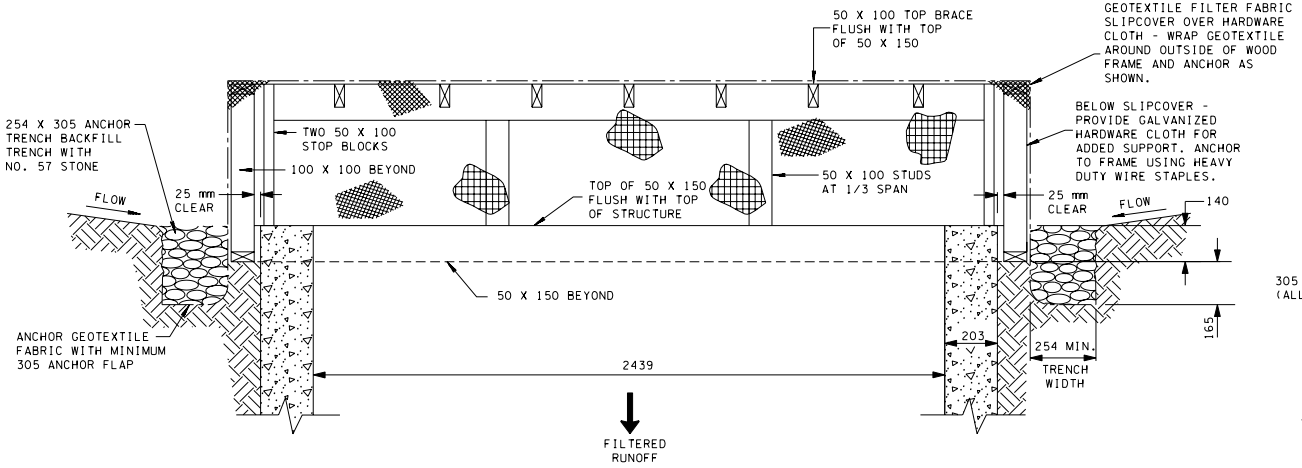


SECTION A-A

N.T.S.

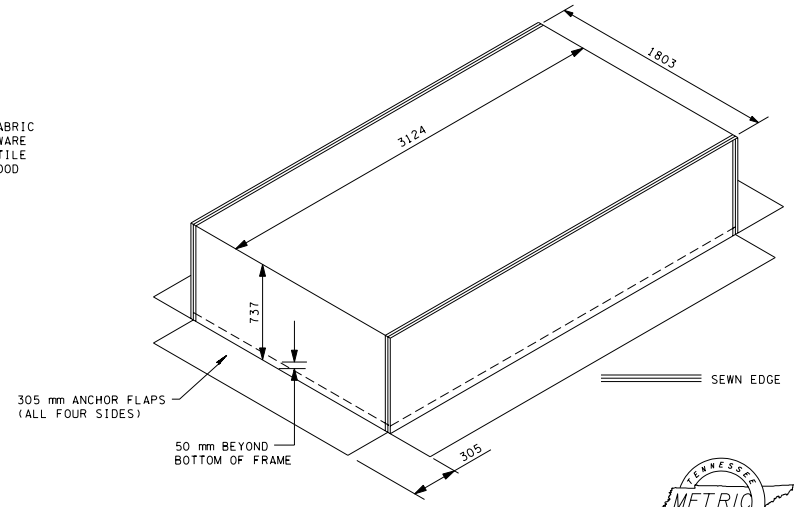
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥82 kg
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥2275 kPa
PUNCTURE STRENGTH	ASTM D4833	≥48 kg
TRAPEZOIDAL 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	MINUMUM 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 B-B

N.T.S.



GEOTEXTILE SLIPCOVER FABRICATION

N.T.S.

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

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.

TENNESSEE METRIC

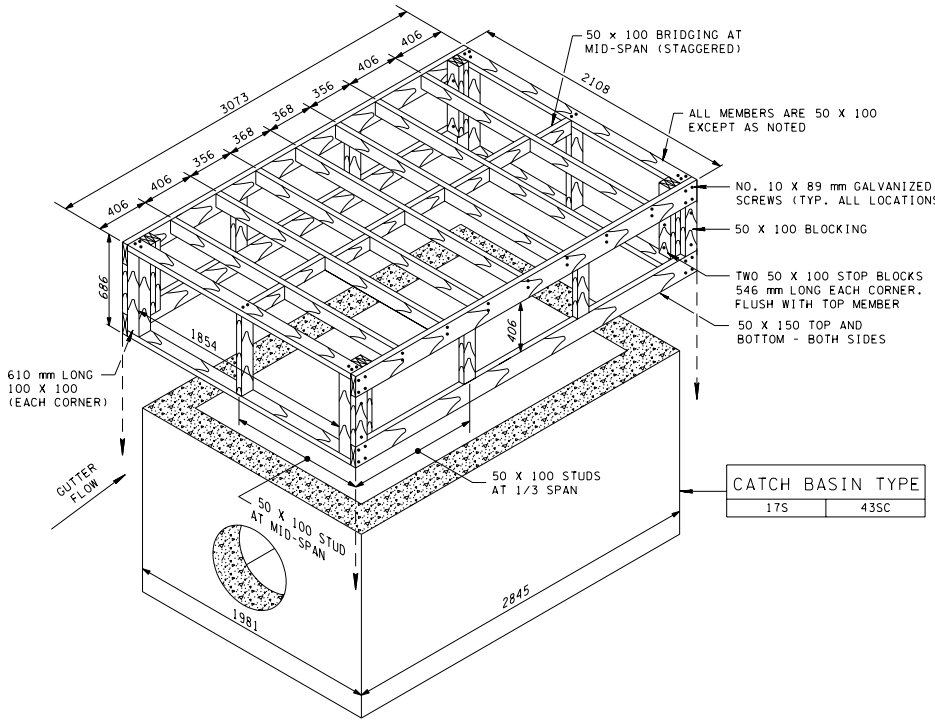
ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 8) SLIPCOVER DETAILS

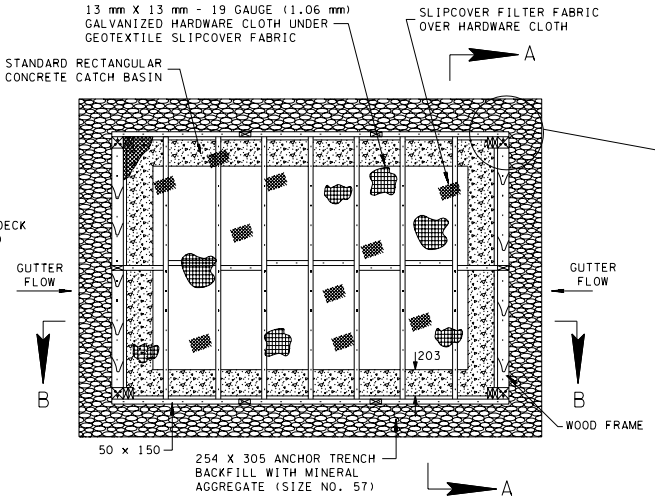
4-15-04 | ECM-STR-48A

FRAME SHOWN WITHOUT HARDWARE CLOTH OR FABRIC SLIPCOVER FOR CLARITY.

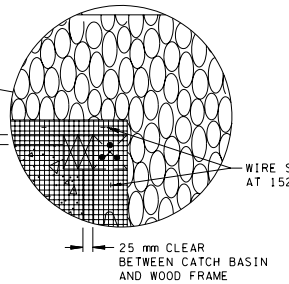


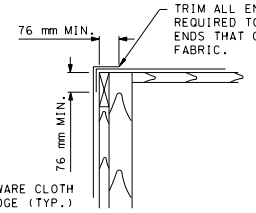
CATCH BASIN TYPE	
17S	43SC

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



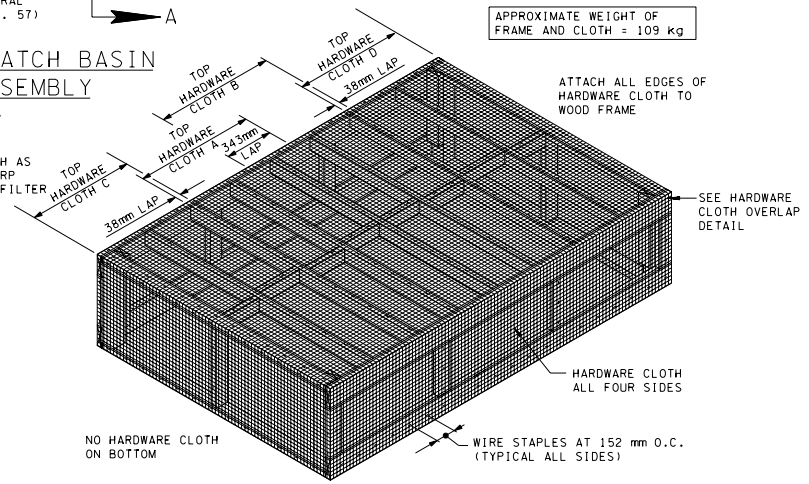
PLAN VIEW - CATCH BASIN
FILTER ASSEMBLY
N.T.S.





HARDWARE CLOTH
OVERLAP DETAIL
N.T.S.

APPROXIMATE WEIGHT OF FRAME AND CLOTH = 109 Kg



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

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

CATCH BASIN FILTER ASSEMBLY GENERAL NOTES

(A) DRAWING TO BE USED WITH STANDARD TYPES 17S, AND 43SC 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, 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 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 GIVEN BY TDOT 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 TDOT 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 209M40.49, CATCH BASIN FILTER ASSEMBLY (TYPE 9), PER EACH.

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.

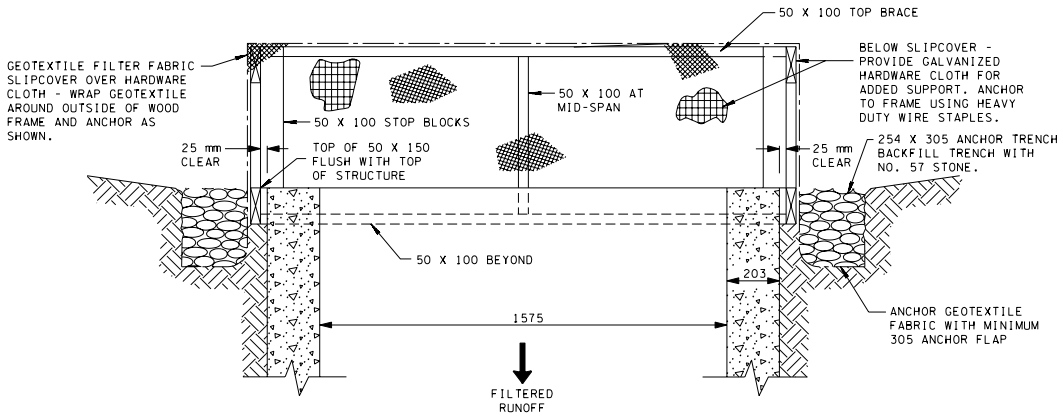
TENNESSEE METRIC O.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN
FILTER ASSEMBLY
(TYPE 9)

4-15-04 | ECM-STR-49

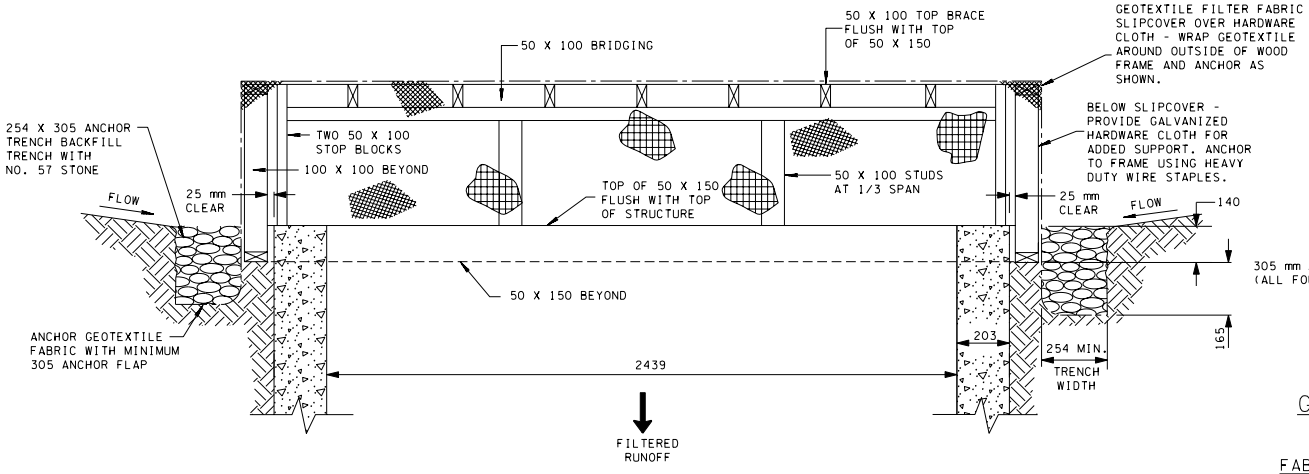


SECTION A-A

N.T.S.

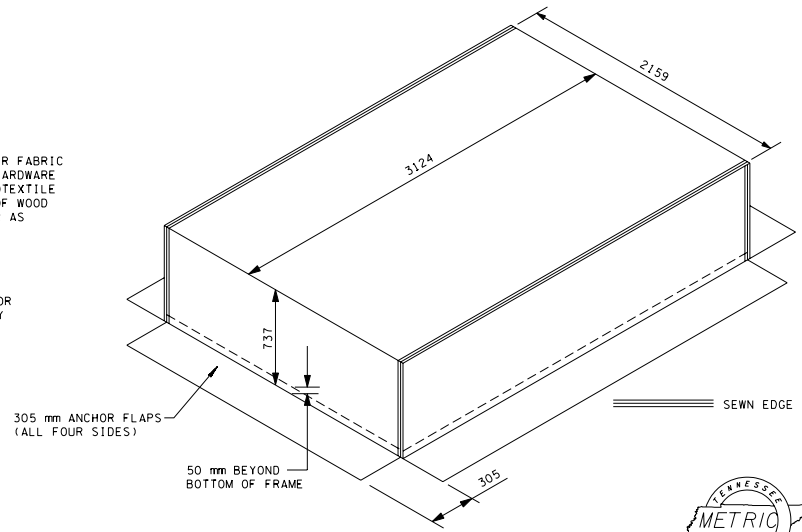
SLIPCOVER FILTER SPECIFICATIONS		
FABRIC TYPE : NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE		
FABRIC PROPERTY	ASTM TEST METHOD	MINIMUM AVERAGE ROLL VALUES (MARVS)
GRAB TENSILE STRENGTH	ASTM D4632	≥82 kg
GRAB ELONGATION	ASTM D4632	≥50%
MULLEN BURST	ASTM D3786	≥2275 kPa
PUNCTURE STRENGTH	ASTM D4833	≥48 kg
TRAPEZOIDAL 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	MINUMUM 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 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.

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

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN FILTER ASSEMBLY (TYPE 9) SLIPCOVER DETAILS

4-15-04 ECM-STR-49A