

## EROSION AND SEDIMENT CONTROL INDEX

### DESCRIPTION

### DETAIL NUMBER

EROSION AND SEDIMENTATION CONTROL NOTES	EC-1
EROSION AND SEDIMENTATION CONTROL NOTES (CONT'D)	EC-2
SILTATION FENCE	EC-3
HAYBALES AND SILT FENCE	3C-4
ONSITE DEWATERING BASIN	EC-5
DRAIN INLET PROTECTION	EC-6
TEMPORARY CONSTRUCTION ENTRANCE	EC-7
EROSION CONTROL MATTING	EC-8
EROSION CONTROL MATTING INSTRUCTIONS	EC-9
EROSION CONTROL FIBER ROLL	EC-10
SILT SACK	EC-11
DEWATERING SUMP DETAIL	EC-12
LOAM AND SEED DETAIL	EC-13

CHECKED BY:

AT

APPROVED BY:

RR



Town of Durham Engineering Division

## EROSION AND SEDIMENT CONTROL INDEX

SECTION:

EROSION

DWG #:

EC-INDEX

DATE:

JAN 2022

PAGE:

67

## GENERAL

THIS PLAN PROPOSES EROSION CONTROL MEASURES TO ADEQUATELY CONTROL ACCELERATED SEDIMENTATION AND REDUCE THE DANGER FROM STORM WATER RUNOFF AT THE SITE. THE RUNOFF SHALL BE CONTROLLED BY THE INTERCEPTION, DIVERSION, AND SAFE DISPOSAL OF PRECIPITATION. RUNOFF SHALL ALSO BE CONTROLLED BY STAGING CONSTRUCTION ACTIVITY AND PRESERVING NATURAL VEGETATION WHEREVER POSSIBLE.

## SEDIMENTATION CONTROL

ALL AREAS SHALL BE PROTECTED FROM SEDIMENTATION DURING AND AFTER CONSTRUCTION, PARTICULARLY THE STORAGE OF EXCAVATED OR STOCKPILED MATERIAL. THE CONTRACTOR SHALL CAREFULLY STRIP ALL TOPSOIL, LOAM, OR ORGANIC MATTER PRIOR TO THE TRENCHING OR OTHER OPERATIONS AND SHALL STORE THEM SEPARATELY FROM ALL OTHER MATERIALS DURING EXCAVATION. EACH STOCKPILE MUST BE ADEQUATELY RINGED WITH SEDIMENT CONTROL MATERIAL (i.e. HAY BALES AND/OR FILTER FIBER ROLL).

DEBRIS AND OTHER WASTE RESULTING FROM EQUIPMENT MAINTENANCE AND CONSTRUCTION WILL NOT BE DISCARDED ON SITE.


## EROSION AND SEDIMENTATION CONTROL PLAN

SEDIMENTATION CONTROL SYSTEM - THE SEDIMENTATION CONTROL SYSTEM SHALL CONSIST OF FILTER FABRIC BARRIER FENCE & HAY BALES. THE SEDIMENTATION CONTROL SYSTEM SHALL BE INSTALLED IMMEDIATELY AFTER A CUT SLOPE HAS BEEN GRADED, BEFORE A FILL SLOPE HAS BEEN CREATED AND AS INDICATED ON THE PLANS. THE SYSTEM DESIGNED TO INTERCEPT SILT AND SEDIMENT BEFORE IT REACHES THE WETLANDS OR WATERCOURSES. DEPOSITS OF SEDIMENT AND SILT ARE TO BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE FENCE. THIS MATERIAL IS TO BE SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. THE SEDIMENTATION IS TO REMAIN IN PLACE AND BE MAINTAINED TO ENSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE SYSTEM ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.

STACKED HAY BALES - HAY OR STRAW BALES USED FOR EROSION CONTROL SHALL BE STACKED AT CATCH BASINS WHERE SEDIMENT MAY ENTER THE CATCH BASIN OR AS DIRECTED BY THE RESIDENT ENGINEER. DEPOSITS OF SEDIMENT AND SILT ARE TO BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE EROSION CHECKS. THIS MATERIAL IS TO SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. HAY OR STRAW BALES ARE TO BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. THE SYSTEM IS TO REMAIN IN PLACE AND BE MAINTAINED TO ENSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE EROSION CHECKS ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.

EROSION CONTROL MATTING - MATTING SHALL BE USED FOR EROSION CONTROL ON SLOPES GREATER THAN 3:1. SOIL ON SLOPES SHALL BE PREPARED BEFORE INSTALLING MATTING, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. THE SYSTEM IS TO REMAIN IN PLACE AND BE MAINTAINED TO ENSURE EFFICIENT EROSION CONTROL UNTIL VEGETATION HAS BEEN ESTABLISHED.

IN ALL AREAS, REMOVAL OF TREES BUSHES, AND OTHER VEGETATION, AND DISTURBANCE TO THE SOIL, IS TO BE KEPT TO AN ABSOLUTE MINIMUM WHILE ALLOWING PROPER DEVELOPMENT OF THE SITE.

CHECKED BY: AT	 <b>Town of Durham Engineering Division</b>	SECTION: EROSION
APPROVED BY: RR		DWG #: EC-1
		DATE: JAN 2022
<b>EROSION AND SEDIMENT CONTROL NOTES</b>		

## EROSION AND SEDIMENT CONTROL MAINTENANCE PROCEDURES


DURING CONSTRUCTION, AS SMALL AN AREA OF SOIL AS POSSIBLE SHOULD BE EXPOSED FOR AS SHORT A TIME AS POSSIBLE. AFTER CONSTRUCTION, GRADE, RE-SPREAD TOPSOIL, AND STABILIZE SOIL BY SEEDING AND MULCHING AS TO PREVENT EROSION.

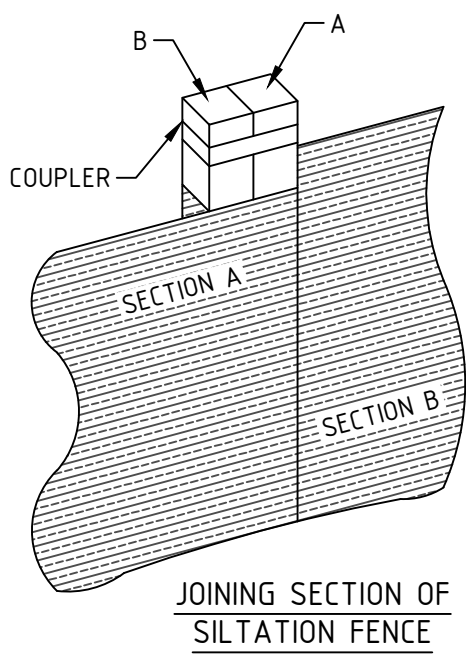
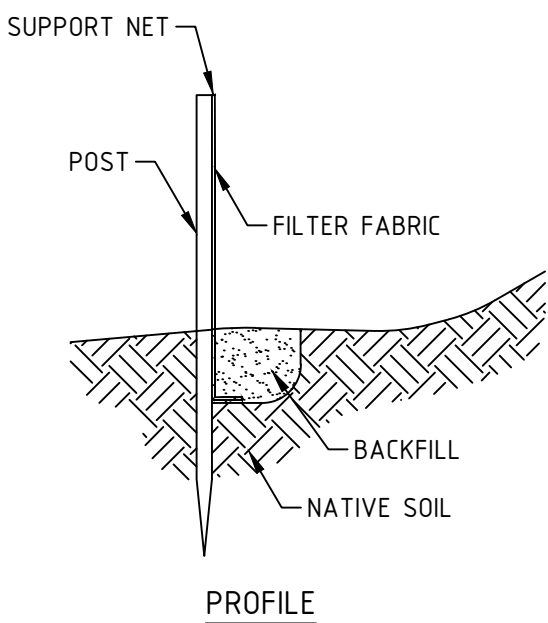
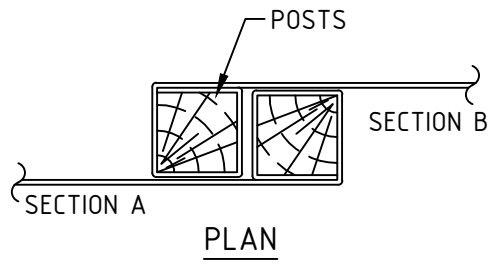
ALL SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE INSPECTED DURING CONSTRUCTION ON A DAILY BASIS AND FOLLOWING ALL STORMS BY THE RESIDENT ENGINEER. THE CONTRACTOR SHALL MAINTAIN AND MAKE REPAIRS AND REMOVE SEDIMENT AS REQUESTED BY THE RESIDENT ENGINEER. THIS WORK SHALL BE PERFORMED WITHIN 24 HOURS OF REQUEST.

THE CONTRACTOR SHALL CLEAN SEDIMENT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, AND PIPES AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REPAIR ALL ERODED AREAS AND ENSURE A GOOD STANDARD OF TURF IS ESTABLISHED THROUGHOUT. THE CONTRACTOR SHALL REPAIR ALL ERODED OR DISPLACED RIPRAP, AND CLEAN SEDIMENT COVERED STONES.

## CONSTRUCTION PROCEDURES

1. HAY BALES SHALL BE PLACED AROUND EXISTING CATCH BASINS AND DROP INLETS TO PREVENT SEDIMENTATION AND OTHER DEBRIS FROM ACCUMULATING ON THE GRATE OR IN THE SUMP. HAY BALES SHOULD BE KEPT CLEAN AND FREE OF DEBRIS TO FACILITATE FLOW.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR TWO REBARS DRIVEN THROUGH THE BALE. THE FIRST STAKE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

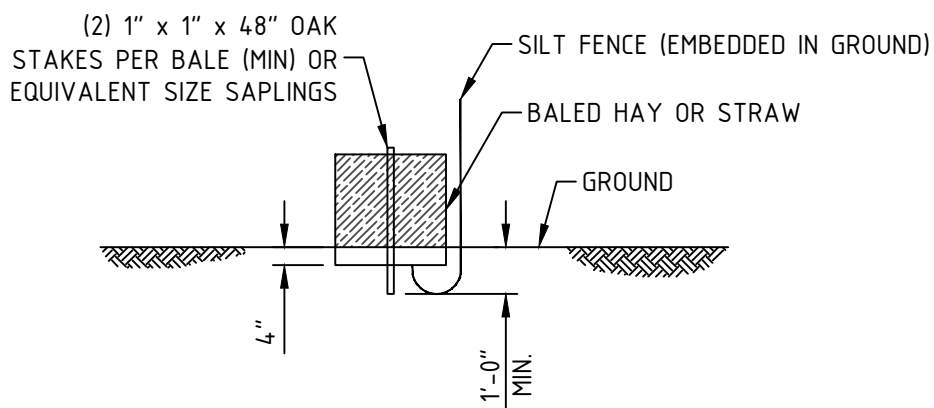
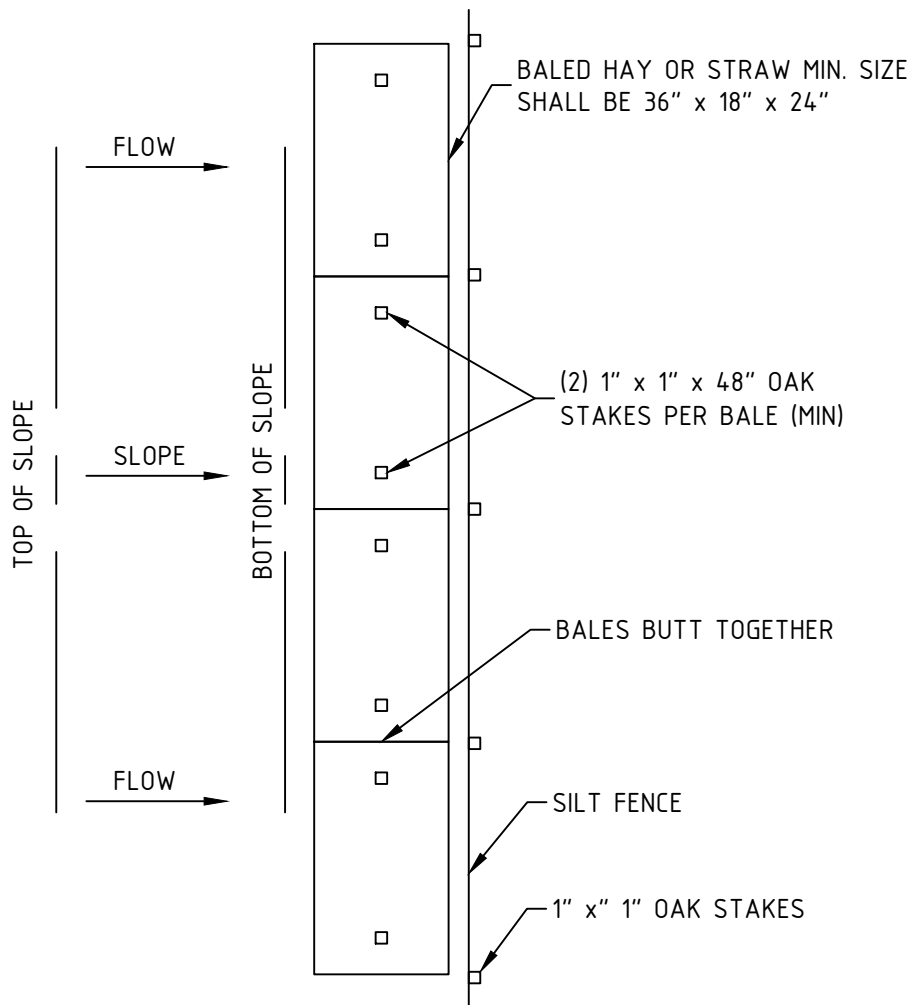
CHECKED BY: AT		Town of Durham Engineering Division	SECTION: EROSION
APPROVED BY: RR		EROSION AND SEDIMENT CONTROL NOTES (CONTINUED)	DWG #: EC-2
			DATE: JAN 2022



CONSTRUCTION NOTES

1. WOVEN WIRE DENCE TO BE FASTENED SECURELY TO FENCE POST WITH WIRE TIES OR STAPLES.
2. FILTER FABRIC TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM WATER FLOW OR DRAINAGE.

CHECKED BY: AT		Town of Durham Engineering Division	SECTION: EROSION
APPROVED BY: RR		<h2 style="margin: 0;">SILTATION FENCE</h2>	DWG #: EC-3
			DATE: JAN 2022



CHECKED BY:  
AT

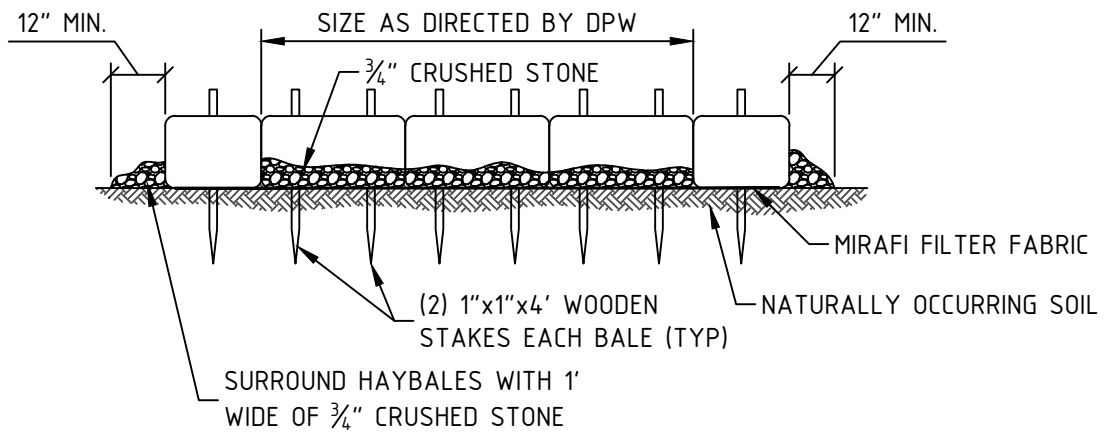
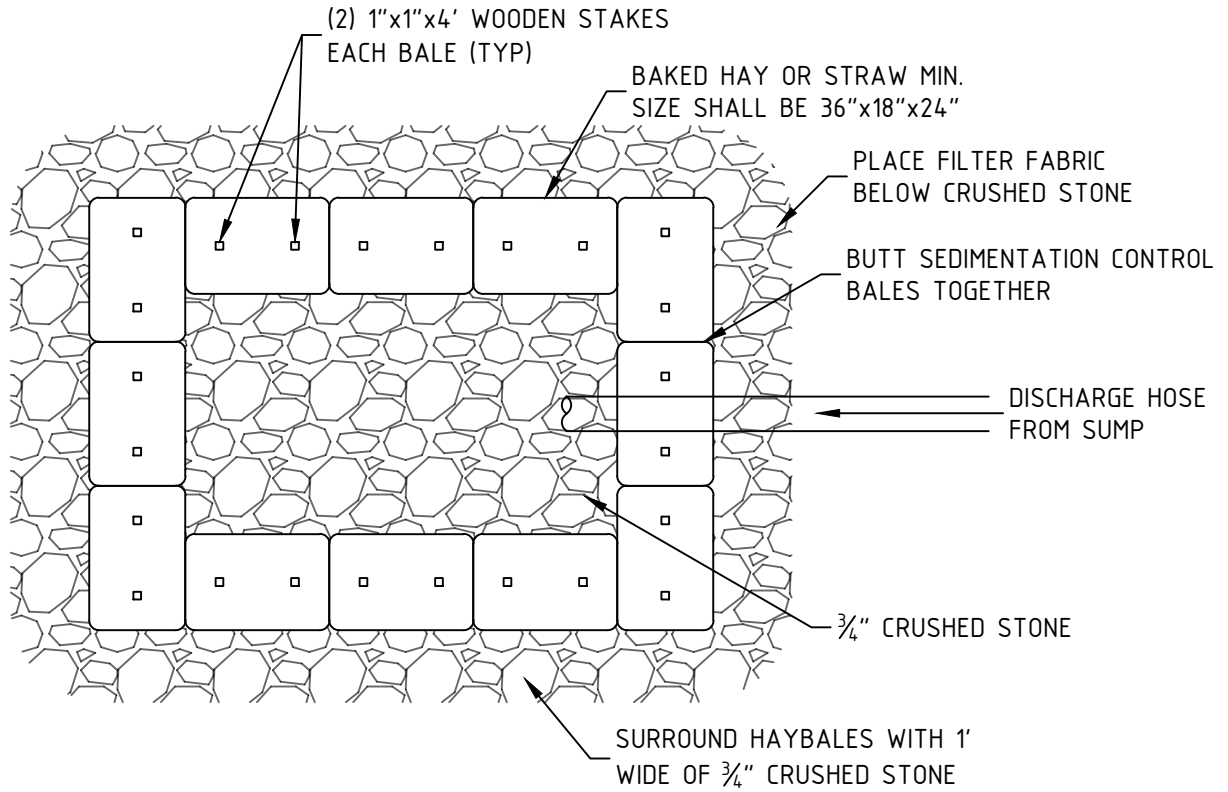
APPROVED BY:  
RR



Town of Durham Engineering Division

# HAYBALES AND SILT FENCE

SECTION:	EROSION
DWG #:	EC-4
DATE:	PAGE:
JAN 2022	71



CHECKED BY:  
AT

APPROVED BY:  
RR



Town of Durham Engineering Division

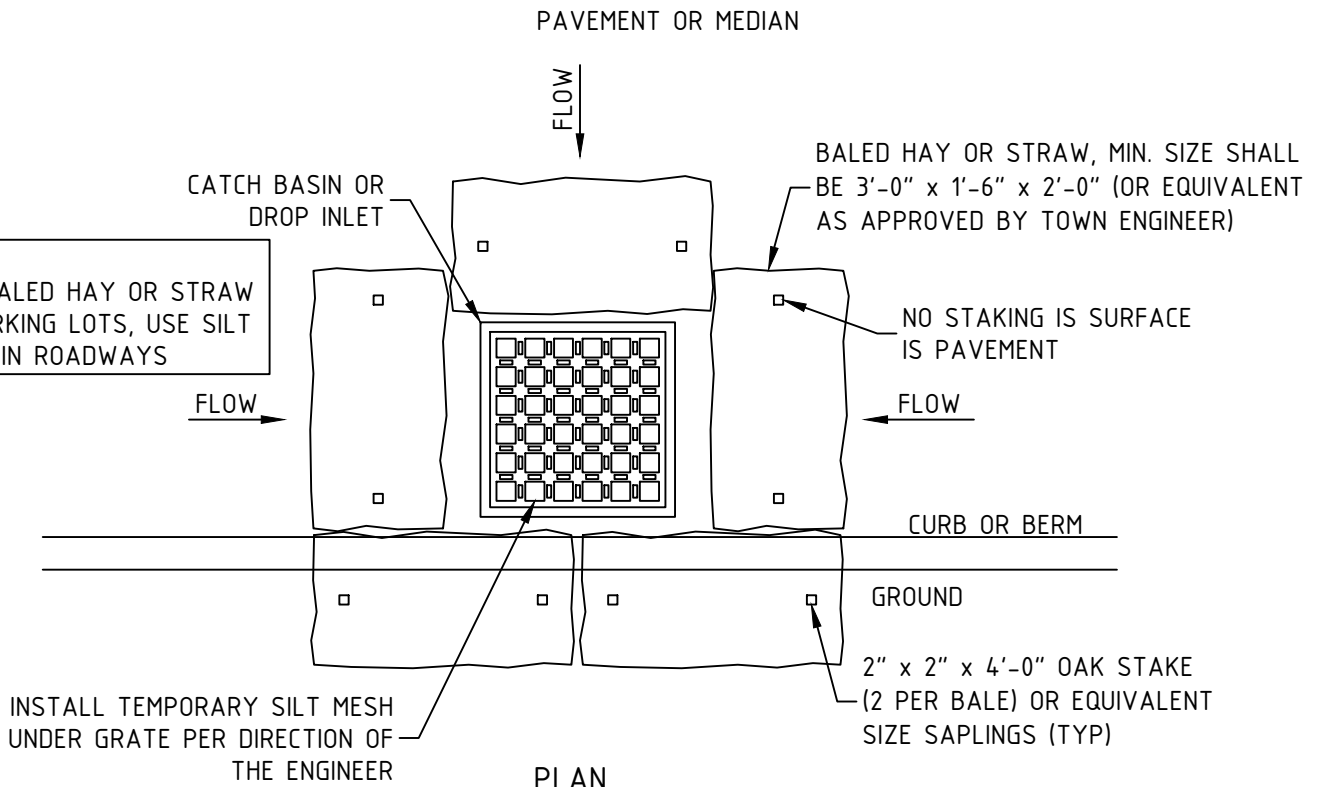
# ONSITE DEWATERING BASIN

SECTION: EROSION

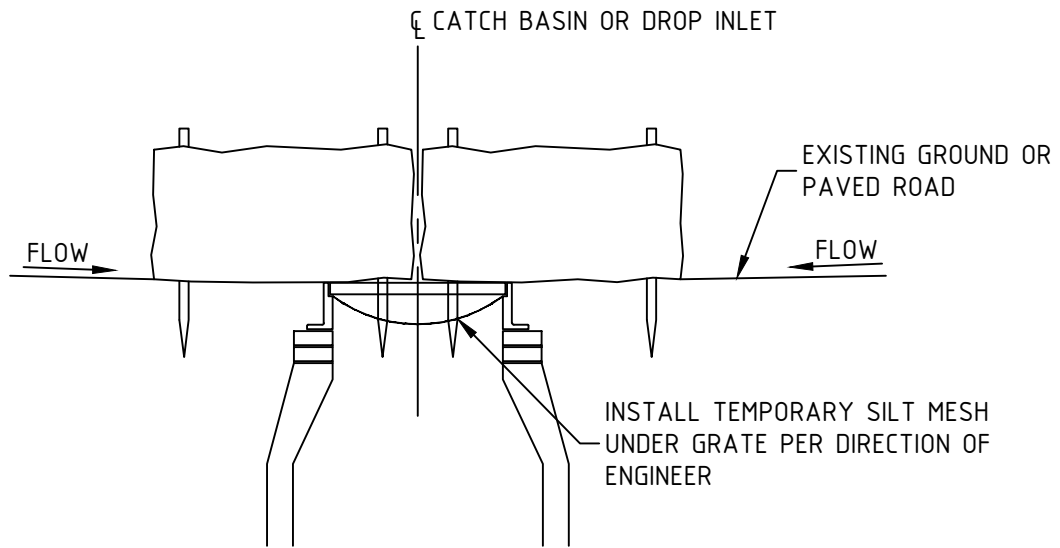
DWG #: EC-5

DATE: JAN 2022

PAGE: 71



PLAN



SECTION

CHECKED BY:

AT

APPROVED BY:

RR



Town of Durham Engineering Division

# DRAIN INLET PROTECTION

SECTION:

EROSION

DWG #:

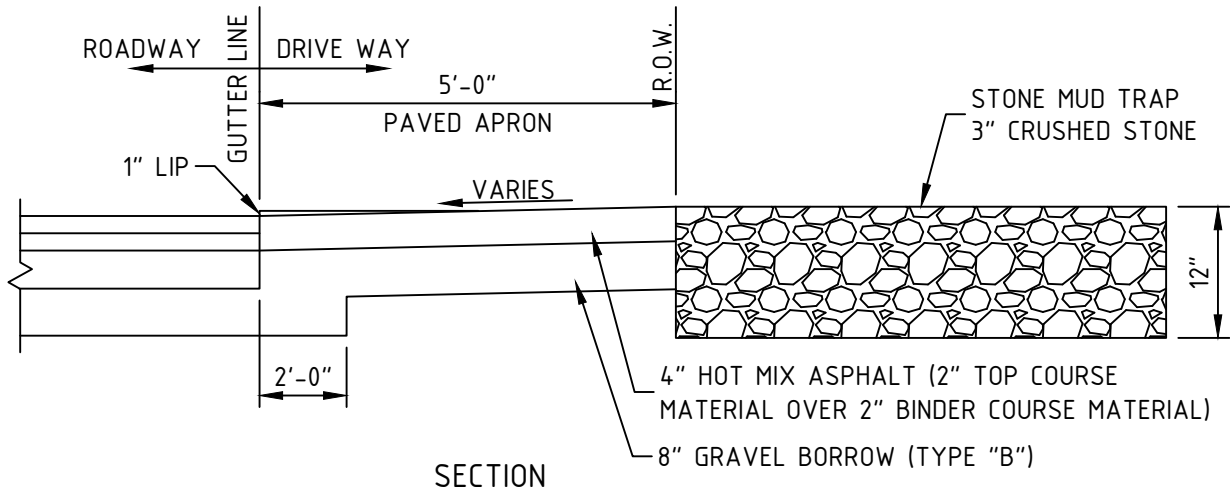
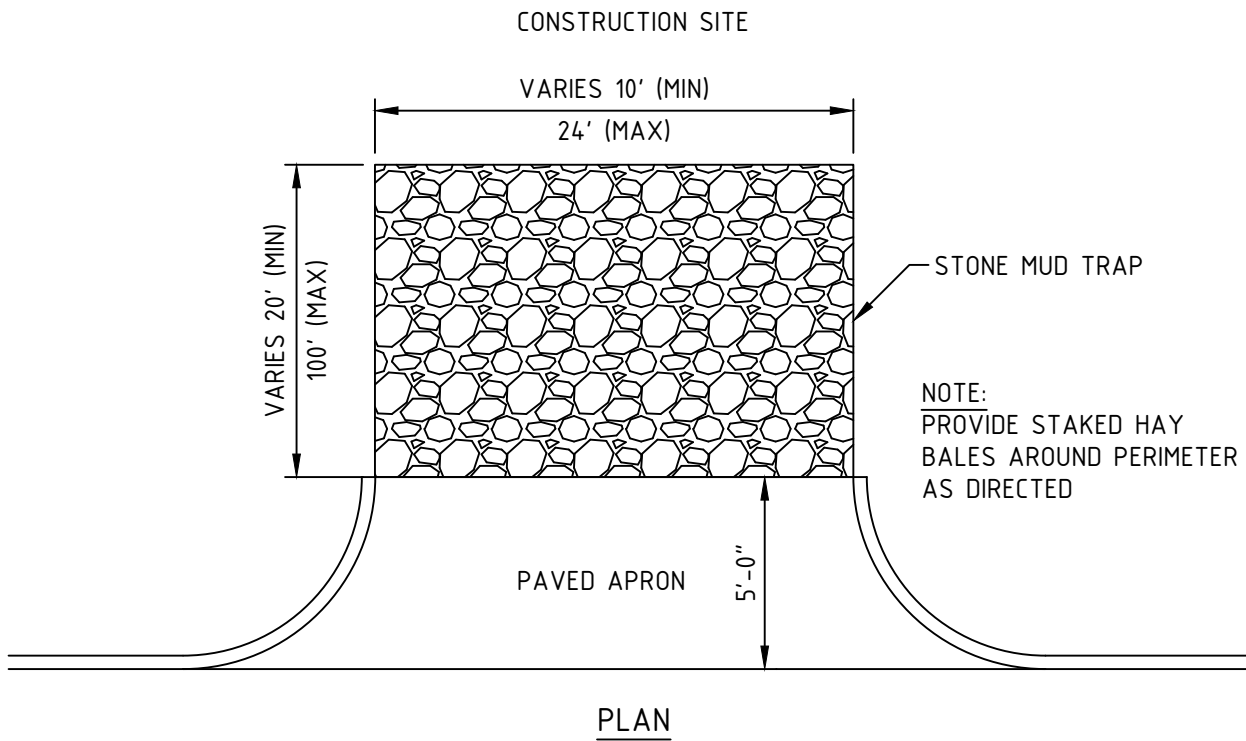
EC-6

DATE:

JAN 2022

PAGE:

73



NOTE:  
STONE MUD TRAP SHALL BE REMOVED AND  
REPLACED WHEN FILLED WITH SEDIMENT OR AS  
REQUIRED BY THE TOWN ENGINEER OR DESIGNER.

CHECKED BY:

AT

APPROVED BY:

RR



Town of Durham Engineering Division

TEMPORARY CONSTRUCTION  
ENTRANCE

SECTION:

EROSION

DWG #:

EC-7

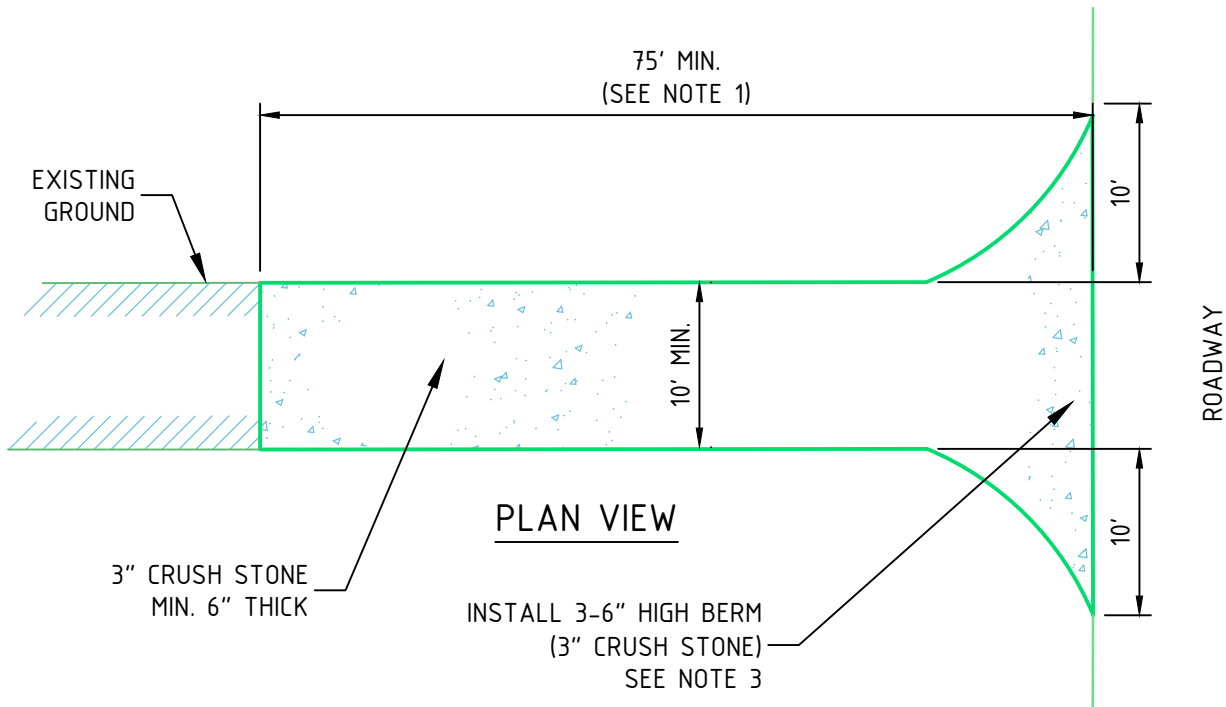
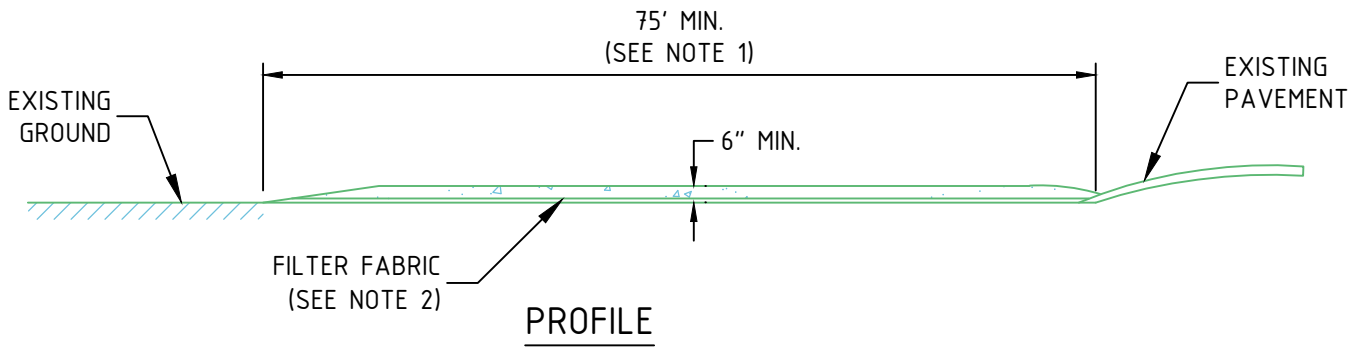
DATE:

JAN 2022

PAGE:

74





NOTES:

1. LENGTH OF ENTRANCE MAY BE 50' WHERE DIVERSION RIDGE IS PROVIDED.
2. GRADE AND COMPACT ACCESS ROAD ENTRANCE AS NECESSARY. PLACE FILTER FABRIC AND 6" OF 3" CRUSHED STONE TO MATCH SLOPE OF EXISTING ROAD.
3. PROVIDE NECESSARY SWALES OR DIVERSIONS TO MINIMIZE DIRECT FLOW OF WATER ONTO STONE AREA.
4. CONSTRUCTION ENTRANCE SHALL BE MAINTAINED AS NECESSARY TO REMOVE SILT FROM TIRES PRIOR TO ENTERING PUBLIC ROADS. A SMALL SWALE SHALL BE CONSTRUCTED ON THE DOWN GRADIENT SIDE TO TRAP ANY SILT WASHED FROM THE STONE ENTRANCE.

CHECKED BY:  
AT

APPROVED BY:  
RR



Town of Durham Engineering Division

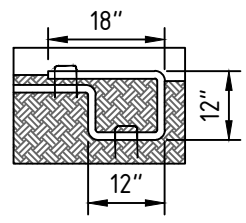
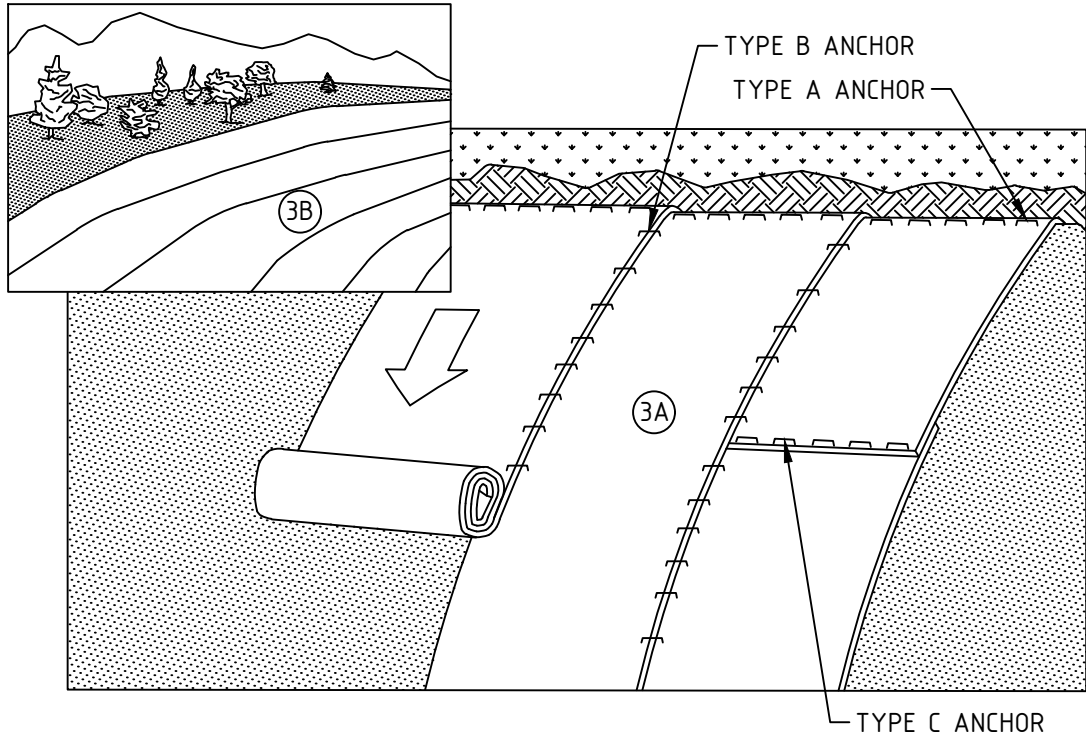
**CONSTRUCTION ENTRANCE  
(ALT)**

SECTION: EROSION

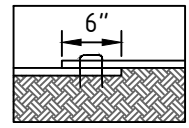
DWG #: EC-7A

DATE: JAN 2022

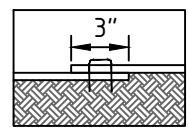
PAGE: XX



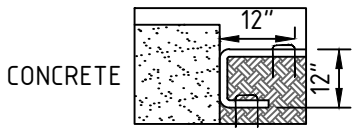
A TYPE ANCHOR  
(TOP OF SLOPE/CREST. TERMINATION OF TRM)



B TYPE ANCHOR  
(LENGTH OF OVERLAP)



A TYPE ANCHOR  
(WIDTH OF OVERLAP)



A TYPE ANCHOR  
(CONCRETE/MASONRY INTERFACE)

CHECKED BY:  
AT  
APPROVED BY:  
RR



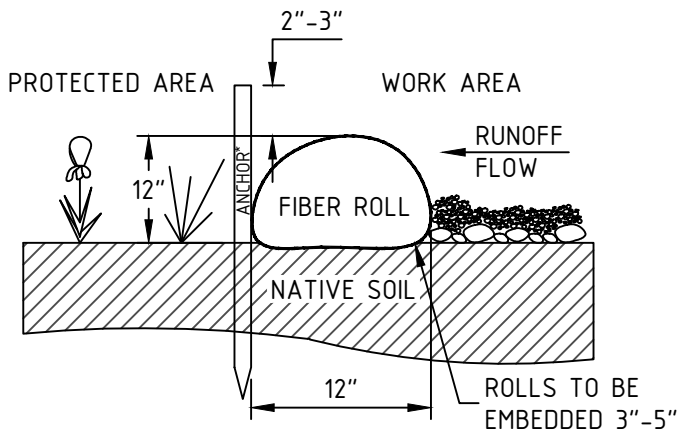
Town of Durham Engineering Division  
**EROSION CONTROL MATTING**

SECTION:	EROSION
DWG #:	EC-8
DATE:	JAN 2022
PAGE:	75

EROSION CONTROL MATTING INSTALLATION NOTES

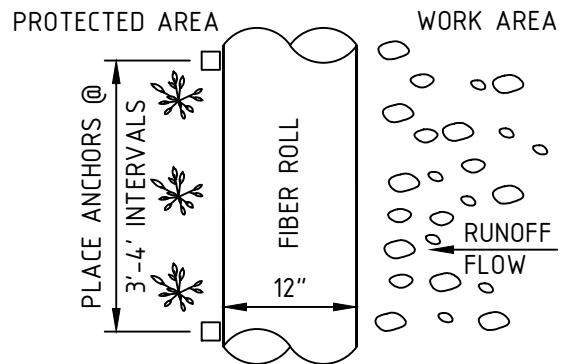
1. INSTALL TURF REINFORCEMENT MAT (TRM) IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
  2. PREPARE SOIL BEFORE INSTALLING TRM, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED. NOTE: WHEN USING CELL DO NOT SEED PREPARED AREAS. CELL-0-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
  3. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE TRM IN A 6" d x 6" w TRENCH WITH APPROXIMATELY 12" OF TRM EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE TRM WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF TRM BACK OVER SEED AND COMPACTED SOIL. SECURE TRM OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE TRM.
  4. ROLL THE TRM (A.) DOWN, OR (B.) HORIZONTALLY ACROSS THE SLOPE. TRM WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL TRM MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
  5. THE EDGES OF PARALLEL TRM MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON TRM TYPE.
  6. CONSECUTIVE TRM SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE TRM WIDTH.
- NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE TRM.
7. WHERE THE BLANKETS RUN PARALLEL TO CONCRETE OR STONE MASONRY WALL, PLACE AND SECURE BLANKET WITH D-TYPE ANCHOR.

CHECKED BY: AT		Town of Durham Engineering Division	SECTION: EROSION	
APPROVED BY: RR		<b>EROSION CONTROL MATTING INSTALLATION NOTES</b>	DWG #: EC-9	
DATE: JAN 2022			PAGE: 76	

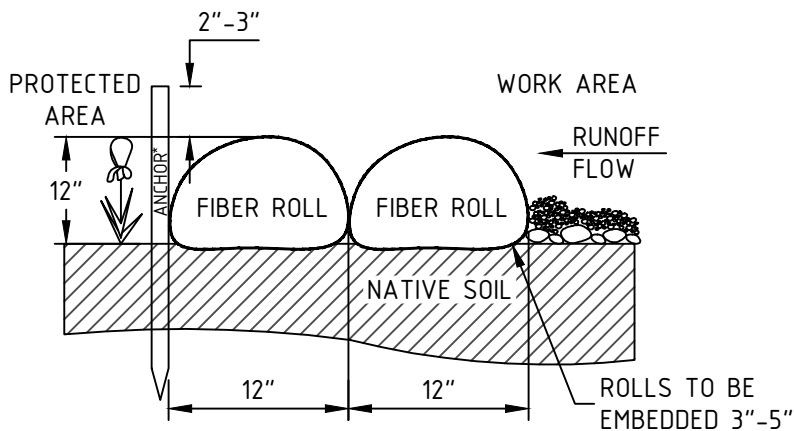


FIBER ROLL  
END VIEW

\*ANCHOR STAKES TO BE 1"x1"x24"  
WOOD, AND DRIVEN TO 2"-3"  
ABOVE THE TOP OF THE FIBER ROLL

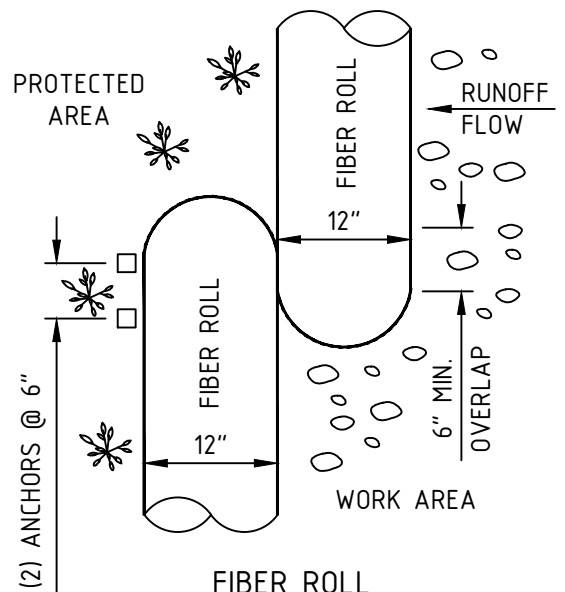


FIBER ROLL  
TOP VIEW



FIBER ROLL  
OVERLAP END VIEW

\*ANCHOR STAKES TO BE 1"x1"x24"  
WOOD, AND DRIVEN TO 2"-3"  
ABOVE THE TOP OF THE FIBER ROLL



FIBER ROLL  
OVERLAP TOP VIEW

CHECKED BY:

AT

APPROVED BY:

RR



Town of Durham Engineering Division

**EROSION CONTROL FIBER  
ROLL DETAIL**

SECTION:

EROSION

DWG #:

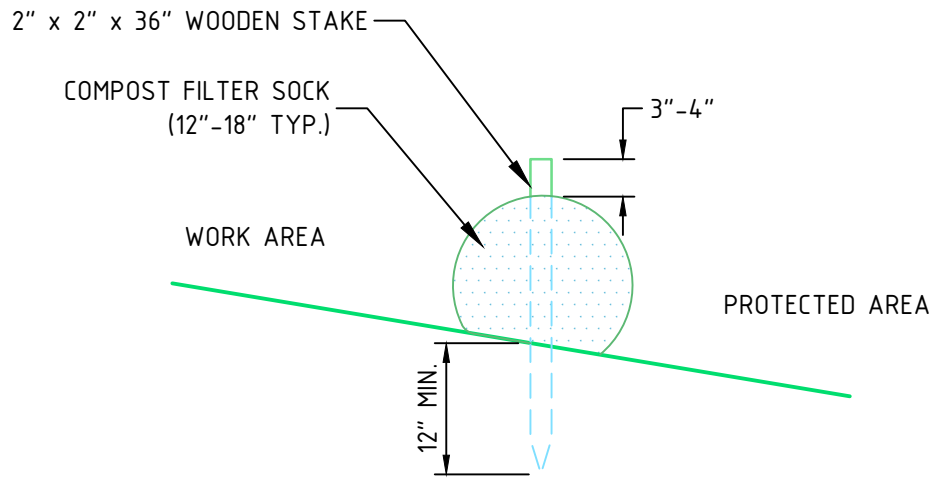
EC-10

DATE:

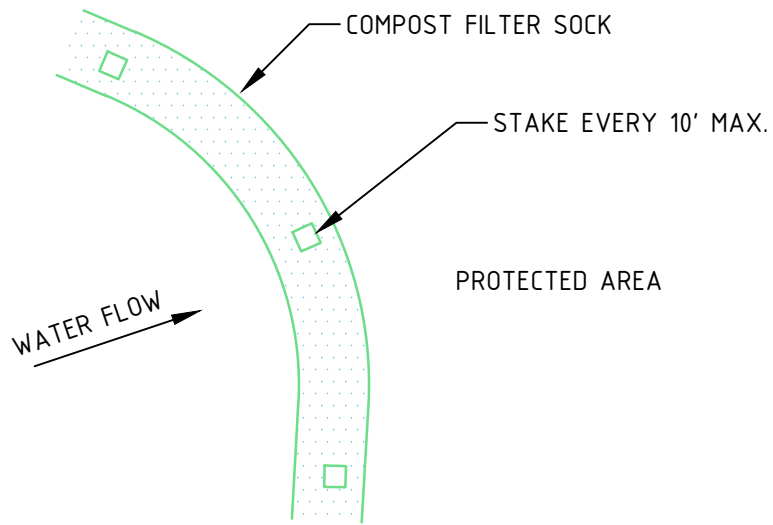
JAN 2022

PAGE:

77



CROSS-SECTION



PLAN VIEW

NOTES:

1. ALL COMPOST MATERIAL TO MEET MANUFACTURES SPECIFICATIONS.
2. FILTER SOCKS SHOULD BE INSTALLED FOLLOWING EXISTING CONTOURS.

CHECKED BY:

AT

APPROVED BY:

RR



Town of Durham Engineering Division

COMPOST FILTER SOCK  
DETAIL

SECTION:

EROSION

DWG #:

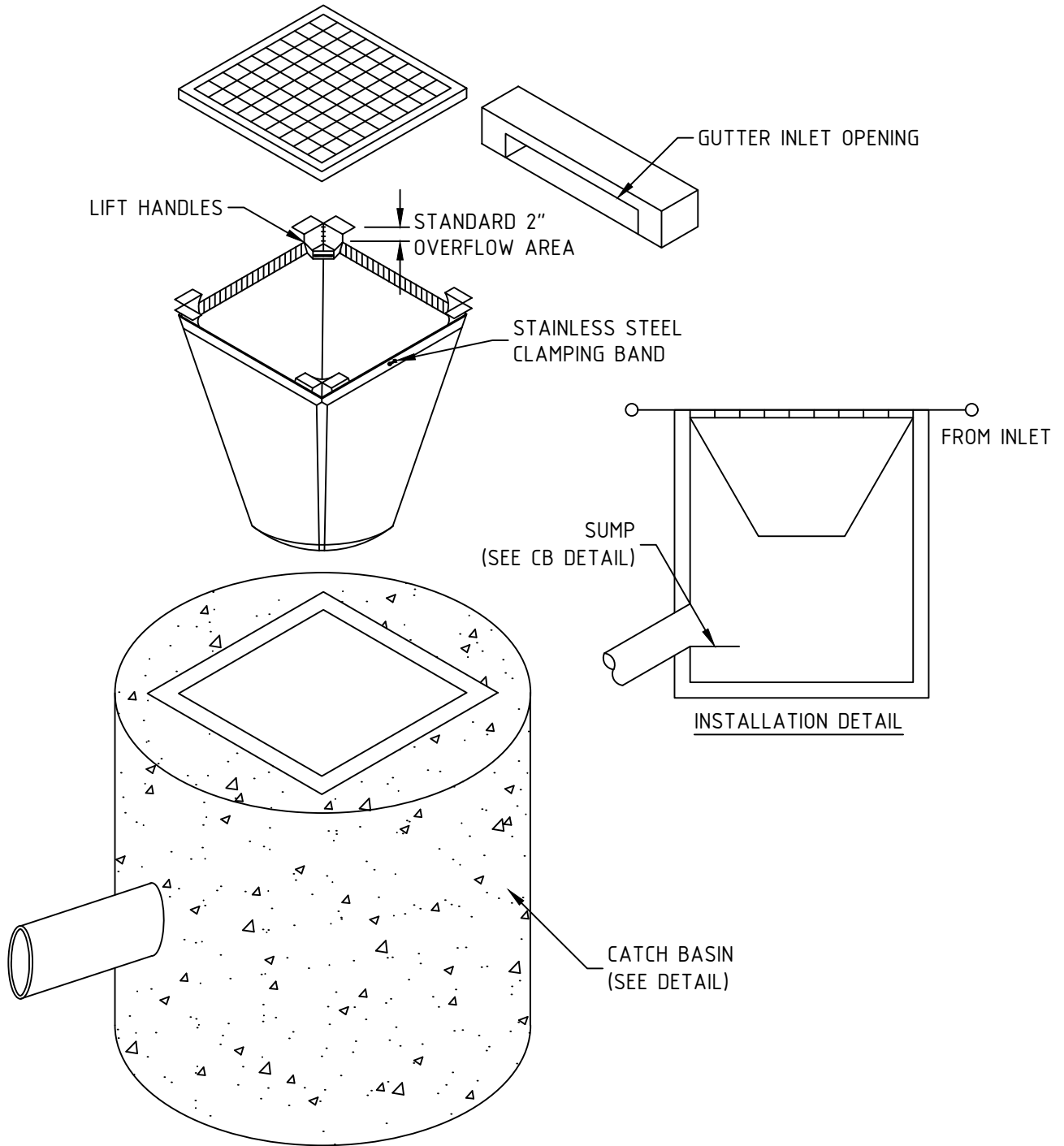
EC-10A

DATE:

JAN 2022

PAGE:

XX



**NOTES:**

1. SILTSACK SHALL BE ACF REGULAR FLOW SILTSACK OR APPROVED EQUAL.
2. SILTSACKS SHALL BE INSTALLED IN ALL CATCH BASINS UNTIL DRAINAGE AREA HAS BEEN FULLY STABILIZED.
3. CONTRACTOR SHALL CHECK AND CLEAN ON A REGULAR BASIS AND PRIOR TO RAIN EVENT.

CHECKED BY:  
AT

APPROVED BY:  
RR



Town of Durham Engineering Division

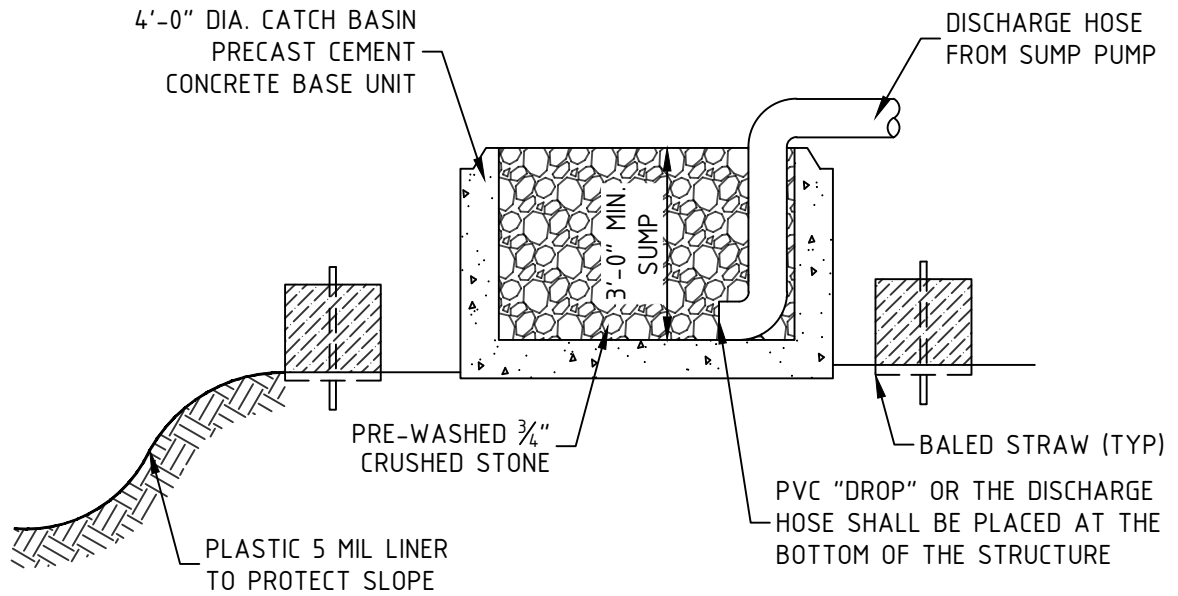
**EROSION CONTROL  
SILT SOCK DETAIL**

SECTION: EROSION

DWG #: EC-11

DATE: JAN 2022

PAGE: 78



CHECKED BY:

AT

APPROVED BY:

RR



Town of Durham Engineering Division

DEWATERING SUMP DETAIL

SECTION:

EROSION

DWG #:

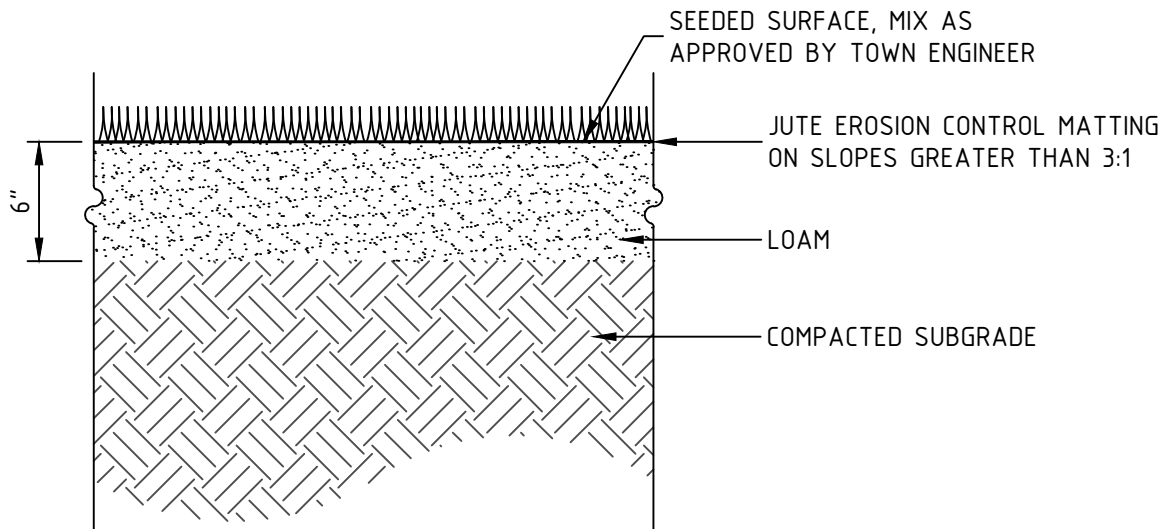
EC-12

DATE:

JAN 2022

PAGE:

79



CHECKED BY:

AT

APPROVED BY:

RR



Town of Durham Engineering Division

LOAM AND SEED DETAIL

SECTION:

EROSION

DWG #:

EC-13

DATE:

JAN 2022

PAGE:

80