

iSWM Construction Controls Standard Details

Addendum to: iSWM Technical Manual – Construction Controls

The following are a selection of iSWM construction control BMP schematics chosen to be provided in standard details.

- 1. TEMPORARY EROSION CONTROL BLANKET
- 2. ANCHOR EXAMPLE FOR TEMPORARY EROSION CONTROL BLANKET
- 3. PERMANENT TURF REINFORCEMENT MATS 1 of 3
- 4. PERMANENT TURF REINFORCEMENTS MATS 2 of 3
- PERMANENT TURF REINFORCEMENTS MATS 3 of 3
- SCHEMATIC OF ROCK RIPRAP 1 of 2
- 7. SCHEMATIC OF ROCK RIPRAP 2 of 2
- 8. VELOCITY DISSIPATION DEVICE
- FILTER FABRIC AREA INLET PROTECTION
- 10. EXCAVATED INLET PROTECTION
- 11. EXCAVATED STONE OUTLET SEDIMENT TRAP 1 of 2
- 12. EXCAVATED STONE OUTLET SEDIMENT TRAP 2 of 2
- 13. CONCRETE WASHOUT CONTAINMENT
- 14. TRASH RACK ISOMETRIC
- 15. TRASH RACK PLAN
- 16. TRASH SCREEN/CATCH DETAIL
- 17. OUTLET TRASH SCREEN BAG

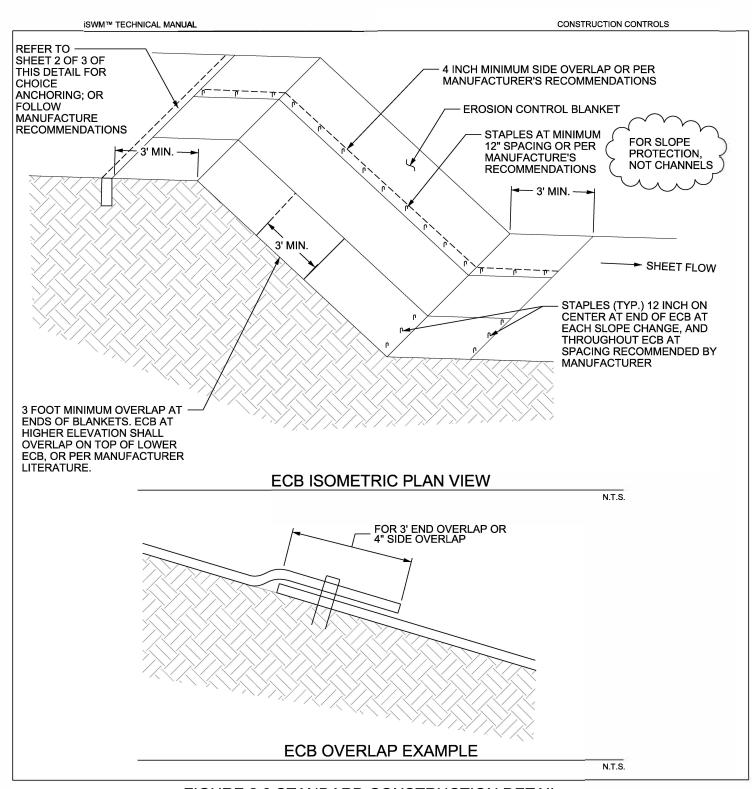


FIGURE 2.8 STANDARD CONSTRUCTION DETAIL - TEMPORARY EROSION CONTROL BLANKETS (1 OF 3)

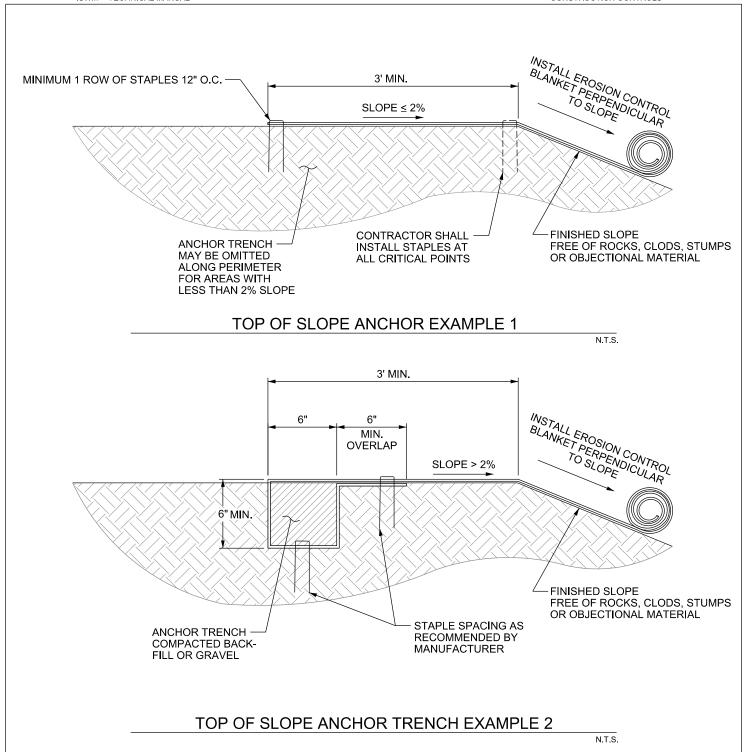
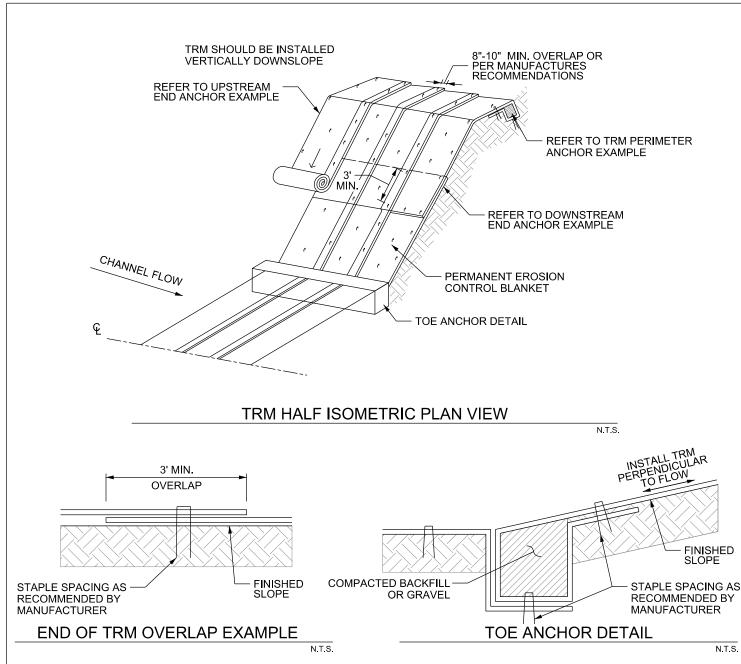


FIGURE 2.8 STANDARD CONSTRUCTION DETAIL - ANCHOR EXAMPLES FOR TEMPORARY EROSION CONTROL BLANKETS (2 OF 3)

EROSION CONTROL BLANKETS GENERAL NOTES:

- 1. SEE NCTCOG STANDARD SPECIFICATIONS (2017) SECTION 202.15.
- 2. EROSION CONTROL BLANKET SHALL BE INSTALLED VERTICALLY DOWN SLOPE AS SHOWN.
- 3. PRIOR TO THE INSTALLATION: ALL ROCKS, DIRT CLODS, STUMPS, ROOTS, TRASH AND ANY OTHER OBSTRUCTIONS THAT WOULD PREVENT THE BLANKET FROM DIRECT CONTACT WITH THE FINISHED SLOPE, SHALL BE REMOVED.
- 4. ANCHORING METHODS PROVIDED ARE EXAMPLES OF THE TYPE OF ANCHORING THE ECB MANUFACTURER MAY RECOMMEND. ALWAYS FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR ANCHORING BASED ON THE SITE-SPECIFIC APPLICATION.
- 5. INSTALLATION AND ANCHORING SHALL CONFORM TO THE RECOMMENDATIONS SHOWN WITHIN THE MANUFACTURER'S PUBLISHED LITERATURE FOR THE APPROVED EROSION CONTROL BLANKET. PARTICULAR ATTENTION MUST BE PAID TO JOINTS AND OVERLAPPING MATERIAL. AT A MINIMUM, THE END OF EACH ROLL OF ECB SHALL OVERLAP THE NEXT ROLL BY 3 FEET AND THE SIDES OF ROLLS SHALL OVERLAP 4 INCHES.
- 6. IN ABSENCE OF MANUFACTURER'S LITERATURE, A MINIMUM 11-GUAGE WIRE STAPLES, 6-INCHES IN LENGTH AND 1-INCH WIDTH WILL BE USED.
- 7. AFTER APPROPRIATE INSTALLATION, THE BLANKETS SHOULD BE CHECKED FOR UNIFORM CONTACT WITH THE SOIL, SECURITY OF THE LAP JOINTS, AND FLUSHNESS OF THE STAPLES WITH THE GROUND.
- 8. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP.

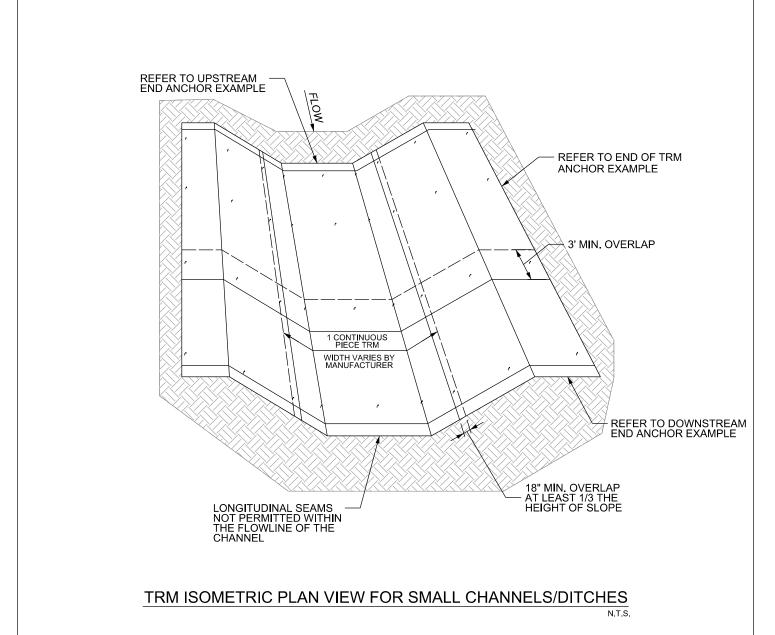
FIGURE 2.8 NOTES ON TEMPORARY EROSION CONTROL BLANKETS (3 OF 3)



TURF REINFORCEMENT MATS NOTES:

- 1. TURF REINFORCEMENT MATS SHALL BE INSTALLED VERTICALLY DOWN SLOPE AS SHOWN.
- 2. PRIOR TO THE INSTALLATION: ALL ROCKS, DIRT CLODS, STUMPS, ROOTS, TRASH AND ANY OTHER OBSTRUCTIONS THAT WOULD PREVENT THE MAT FROM DIRECT CONTACT WITH THE FINISHED SLOPE, SHALL BE REMOVED.

FIGURE 2.11 SCHEMATICS OF PERMANENT TURF REINFORCEMENT MATS (1 OF 3)



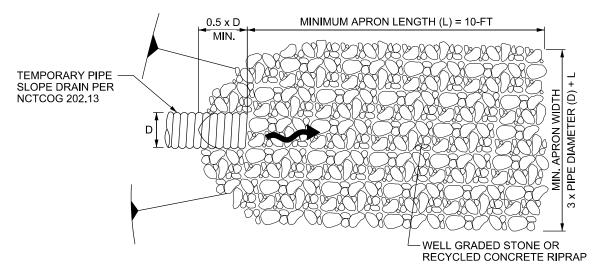
NOTE: LONGITUDINAL INSTALLATION OF TURF REINFORCEMENT MAT PERMITTED ONLY FOR CHANNEL WIDTHS 0' TO 8'. CONTRACTOR SHALL VERIFY MAT MEETS OVERLAP AND SLOPE REQUIREMENTS STATED ABOVE.

FIGURE 2.11 SCHEMATICS OF PERMANENT TURF REINFORCEMENT MATS (2 OF 3)

ISWM™ TECHNICAL MANUAL CONSTRUCTION CONTROLS INSTALL EROSION
CONTROL BLANKET
PERPENDICULAR TO SLOPE 3' MIN. 6" 6" **FINISHED** SLOPE STAPLE SPACING AS COMPACTED BACKFILL RECOMMENDED BY OR GRAVEL MANUFACTURER TRM PERIMETER ANCHOR EXAMPLE N.T.S. **CHANNEL** STAPLE TYPE & **FLOW** PATTERN PER MANUFACTURER RECOMMENDATION **FINISHED** SLOPE STAPLE SPACING AS **RECOMMENDED BY** COMPACTED BACKFILL MANUFACTURER OR GRAVEL TRM UPSTREAM END ANCHOR EXAMPLE N.T.S. **CHANNEL** 6" 6" STAPLE TYPE & -**FLOW** PATTERN PER MANUFACTURER RECOMMENDATION 6" **FINISHED** SLOPE STAPLE SPACING AS RECOMMENDED BY COMPACTED BACKFILL **MANUFACTURER** OR GRAVEL TRM DOWNSTREAM END ANCHOR EXAMPLE N.T.S.

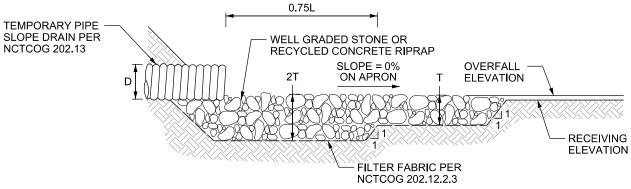
FIGURE 2.11 SCHEMATICS OF PERMANENT TURF REINFORCEMENT MATS (3 OF 3)

* SPECIFIC DESIGN INFORMATION ON THE EROSION CONTROL PLANS IS REQUIRED FOR EACH INSTALLATION



TEMPORARY VELOCITY DISSIPATION DEVICE PLAN VIEW

N.T.S.



TEMPORARY VELOCITY DISSIPATION DEVICE PROFILE VIEW

N.T.S.

NOTE: DIMENSIONS OF THE RIPRAP APRON SHALL BE DESIGNED BASED ON FLOW CONDITIONS. TEMPORARY CONTROL DESIGN STORM (2-YEARS, 24-HOUR). PROVIDE CALCULATIONS THAT DOCUMENT THE FOLLOWING PARAMETERS USED TO DESIGN THE APRON.

- PIPE DIAMETER (OR EQUIVALENT FOR FLUME, SWALE, ETC.), D, FEET
- \bullet DISCHARGE VELOCITY FROM DRAINAGE STRUCTURE, $V_{\mbox{\footnotesize pipe}}$ FT/S
- DETERMINE GRADATION FOR d₅₀ WELL GRADED STONE OR RECYCLED CONCRETE RIPRAP
- ullet MEDIAN STONE DIAMETER ${
 m d}_{50}$ AND MAXIMUM STONE DIAMETER $({
 m d}_{100})$, FEET

FIGURE 2.13 SCHEMATICS OF VELOCITY DISSIPATION DEVICE

ISWM™ TECHNICAL MANUAL CONSTRUCTION CONTROLS ATTACH FILTER FABRIC FOR CLOSURE OVERLAP AND 1/2 WIRE MESH TO FILTER FABRIC TO FRAME USING 1/2 2"x4" WOOD PNEUMATIC STAPLES **NEXT STAKE** FRAMED 4 OR CAP NAILS **SIDES** 18" MAX. FILTER FABRIC (NCTCOG 202.5) SEE NOTE 2 - 6" MIN. 36" **INLET THROAT** FL. ELEV. INLET 12" MIN. **BOTTOM OF** DROP FILTER FABRIC ANCHOR TRENCH 6"x6" INLET 4 **BACKFILLED WITH** COMPACTED EARTH VARIES CONCRETE OR GRAVEL **APRON** FILTER FABRIC DROP INLET PROTECTION CROSS SECTION (A-A) ATTACH FILTER FABRIC FOR CLOSURE OVERLAP AND 1/2 WIRE MESH TO FILTER FABRIC TO FRAME USING 1/2 PNEUMATIC STAPLES **NEXT STAKE** 2"x4" WOOD OR CAP NAILS FRAMED 4 SIDES FILTER FABRIC (NCTCOG 202.5) 18" MAX. SEE NOTE 2 - 6" MIN. 36" TOP OF GRATE 12" MIN. **BOTTOM OF** FILTER FABRIC **GRATE INLET** ANCHOR TRENCH 6"x6" **BACKFILLED WITH VARIES** COMPACTED EARTH OR GRAVEL FILTER FABRIC GRATE INLET PROTECTION CROSS SECTION (A-A) TOP OF INLET (DROP OR GRATE) Ton 2"x4" WOOD FRAME NOTE: 1. STAKES SHALL CONFORM TO SPECIFICATIONS SECTION 202.5.2.2 2. HEIGHT OF INLET PROTECTION SURROUNDING THE INLET SHALL BE SHOWN ON THE PLANS AND FOR CLOSURE MUST BE CHECKED TO VERIFY PONDING WATER OVERLAP FILTER WILL NOT CAUSE FLOODING OF PROPERTY OR FABRIC TO NEXT DAMAGE. STAKE 3. CONCENTRATED DITCH FLOW COMING FROM (VARIES) ADDITIONAL MIDSPAN ONE OR MORE SIDES TOWARD THE INLET MAY POST IF REQUIRED REQUIRE A STONE OVERFLOW STRUCTURE TO BE ALL SIDES SEE NOTE 4 CONSTRUCTED ON ONE SIDE OF THE INLET. 4. POST SHALL BE INSTALLED AT EACH CORNER AND BETWEEN CORNERS IF THE DISTANCE IS GREATER THAN 6' BETWEEN CORNER POSTS.

N.T.S.

AREA INLET PROTECTION FILTER BARRIER PLAN VIEW

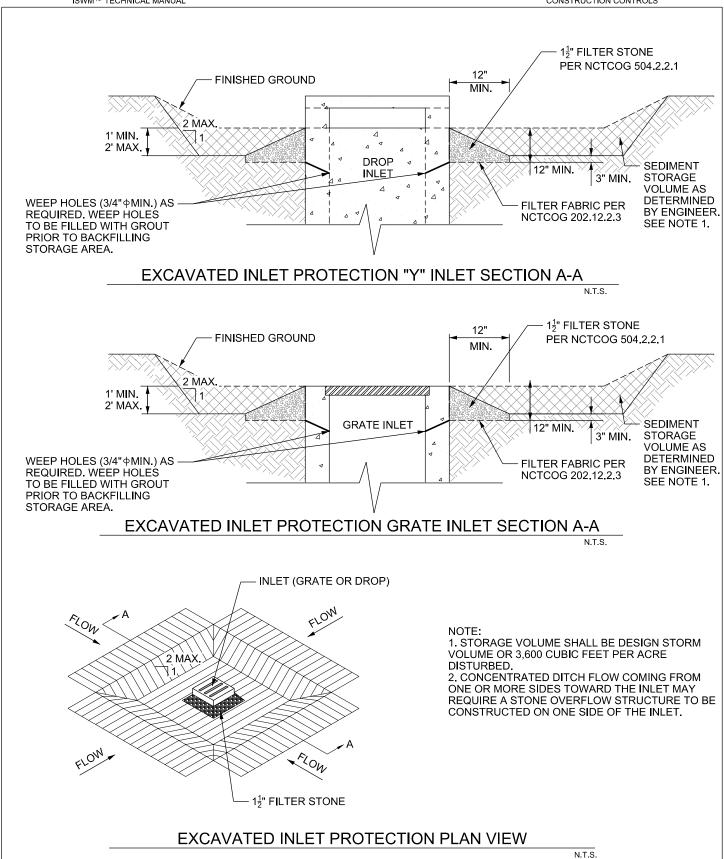
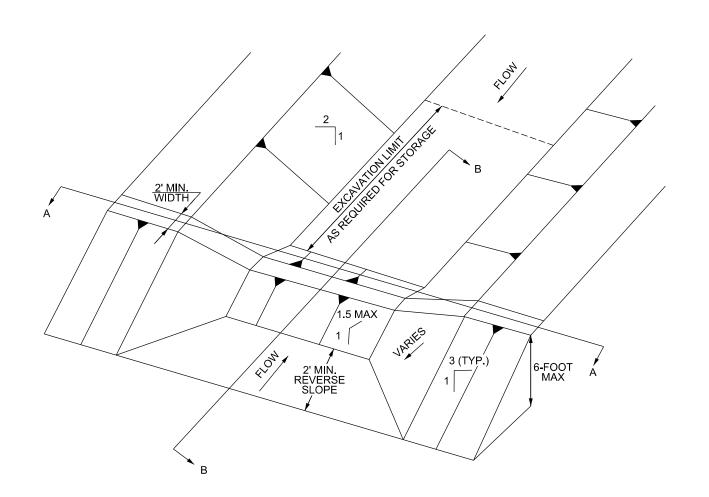


FIGURE 3.11 SCHEMATICS OF EXCAVATED INLET PROTECTION

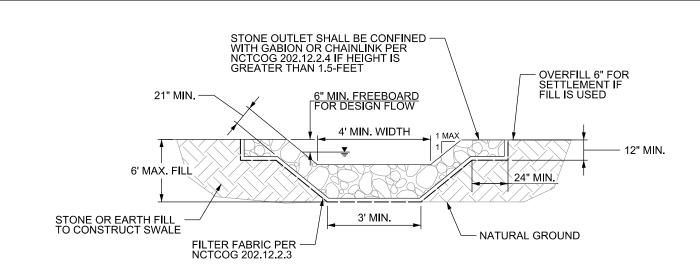


EXCAVATED STONE OUTLET SEDIMENT TRAP ISOMETRIC VIEW

NOTE: ACTUAL DIMENSIONS OF THE SEDIMENT TRAP SHALL BE DESIGNED BASED ON FLOW CONDITIONS AND SITE TOPOGRAPHY. PROVIDE CALCULATIONS THAT DOCUMENT THE FOLLOWING PARAMETER USED TO DESIGN THE TRAP.

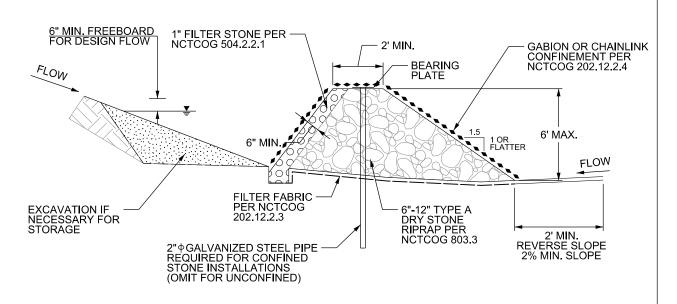
•SIZE OF CONTRUBUTING DRAINAGE AREA
•DESIGN STORM VOLUME AND FLOW RATE AT THE TRAP
•HEIGHT, SLOPE, AND LENGTH OF STONE OUTLET
•STORAGE VOLUME
•EXTENT OF GRADING TO PROVIDE THE CONTROLLED OUTLET

FIGURE 3.30 SCHEMATICS OF EXCAVATED STONE OUTLET SEDIMENT TRAP (1 OF 2)



EXCAVATED STONE OUTLET SEDIMENT TRAP VIEW LOOKING UPSTREAM (A-A)

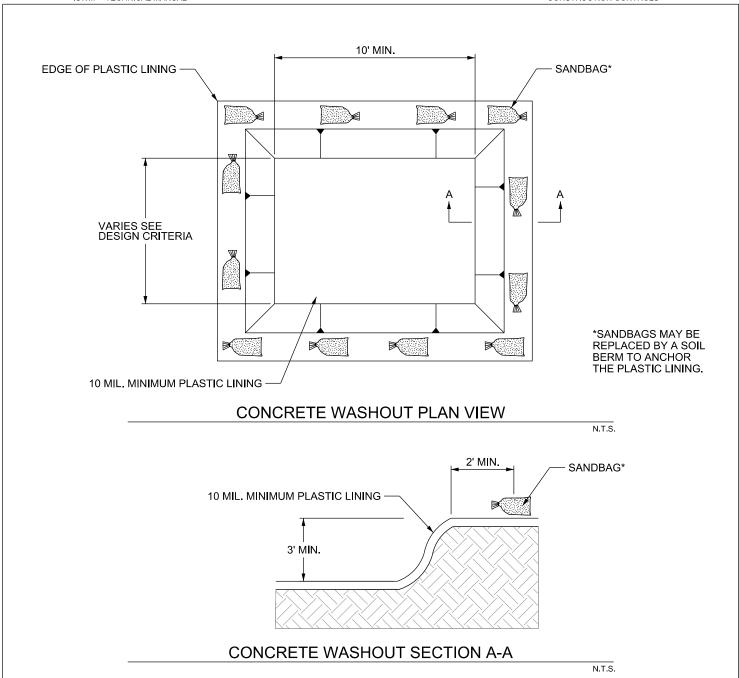
N.T.S.



EXCAVATED STONE OUTLET SEDIMENT TRAP SECTION VIEW (B-B)

N.T.S.

FIGURE 3.30 SCHEMATICS OF EXCAVATED STONE OUTLET SEDIMENT TRAP (2 OF 2)



CONCRETE WAHSOUT NOTES:

- 1. WASHOUT AREA MUST BE CLEARLY MARKED WITH SIGNAGE NOTING THE WASHOUT AREA.
- 2. WASHOUT STRUCTURES SHALL BE CLEANED OUT WHEN THE STRUCTURE IS 75% FULL. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY.

FIGURE 4.1 SCHEMATICS OF CONCRETE WASHOUT CONTAINMENT

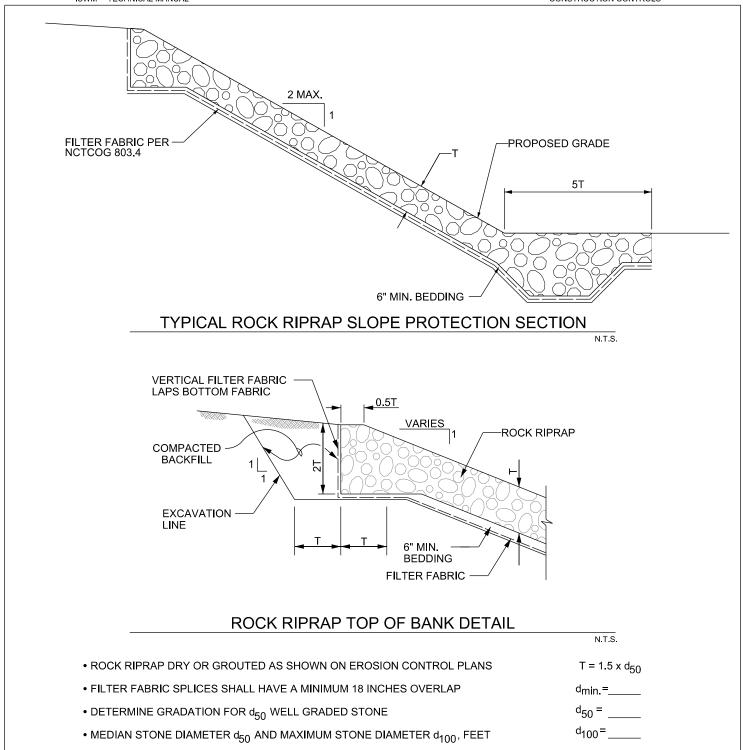
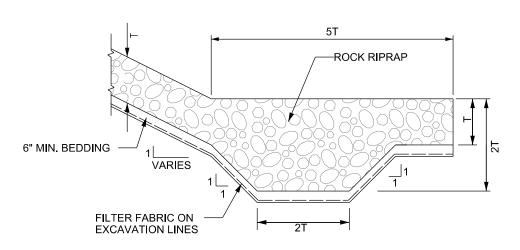
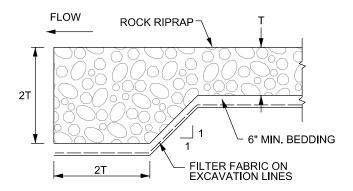


FIGURE X.XX RIPRAP SCHEMATICS OF ROCK RIPRAP (SHEET 1 OF 2)



ROCK RIPRAP TOE OF SLOPE DETAIL

N.T.S.



UPSTREAM ROCK RIPRAP TOE WALL DETAIL

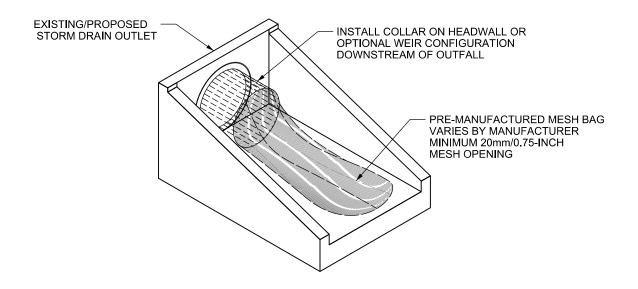
N.T.S.

FIGURE X.XX RIPRAP SCHEMATICS OF ROCK RIPRAP (SHEET 2 OF 2)

ISWM™ TECHNICAL MANUAL CONSTRUCTION CONTROLS LOCATE STONE OVERFLOW STRUCTURE IN APPROACH T" POST 3/8" GUY WIRE W/ -TURN BUCKLE CHAIN LINK FENCE "T" POST -6' MIN. FLOW **SPACING** 6' (TYP.) 6' (TYP.) C.L. OF GRASSY WATERWAY OR DITCH TEMPORARY TRASH SCREEN DETAIL N.T.S. 3/8" TENSION 1. CONCENTRATED DITCH FLOW COMING TOWARD CABLE THE INSTALLATION WILL REQUIRE A STONE OVERFLOW STRUCTURE TO BE CONSTRUCTED. PAINTED STEEL "T" POST 8-FOOT 2. HEIGHT OF INSTALLATION SHALL BE SHOWN ON PLANS AND MUST BE CHECKED TO VERIFY PONDING WATER WILL NOT CAUSE FLOODING OF PROPERTY CHAINLINK PER NCTCOG OR DAMAGE. 801.4.2.1 CONNECT TO 42" POST USING TIE WIRE OR 3. ENGINEER TO VERIFY APPLICABILITY OF METAL BANDS TEMPORARY TRASH SCREEN. NATURAL GROUND 18" MIN. PROFILE OF TEMPORARY TRASH SCREEN DETAIL

FIGURE X.XX TRASH SCREEN/CATCH DETAIL (SHEET 1 OF 2)

N.T.S.



OUTLET TRASH SCREEN BAG

N.T.S.

FIGURE X.XX TRASH SCREEN/CATCH DETAIL (SHEET 2 OF 2)

iSWM™ TECHNICAL MANUAL CONSTRUCTION CONTROLS BLOCK OFF PLATE TRASH BASKET WING WALL MOUNTING PLATE HALF ISOMETRIC VIEW HEAD WALL WING WALL MOUNTING BRACKET BLOCK OFF LATERAL BRACING AS ENGINEER PLATE OR MANUFACTURE SPECIFIED TRASH BASKET PROPOSED OR EXISTING CONCRETE CHANNEL RIPRAP FLOW MOUNTING BRACKET **ENGINEER TO VERIFY** POST INSTALLED · MIN. CONCRETE THICKNESS CONCRETE ANCHORAGE FOR STRUCTURE ANCHORAGE SIDE VIEW WITH HEADWALL

iSWM™ TECHNICAL MANUAL CONSTRUCTION CONTROLS LIFTING I-BEAM LIFTING I-BEAM HINGE PIN FRONT OPEN SQUARE TUBING ROUND BAR MESH SQUARE TUBING ANGLE IRON TRASH BASKET TRASH BASKET FRONT VIEW **TOP VIEW** LIFTING I-BEAM ROUND BAR LIFTING MESH ANGLE IRON I-BEAM HINGE PIN HINGE PIN SQUARE TUBING ROUND BAR ANGLE IRON MESH TRASH BASKET TRASH BASKET SIDE VIEW ISOMETRIC VIEW MOUNTING BRACKET I-BEAM NOTES: 1. OVERALL SIZE AND LOCATION TO BE DETERMINED BY THE ENGINEER. 2. SIZE AND SPACING OF MESH VARIES AS NEEDED. SQUARE TUBING MOUNTING PLATE MOUNTING BRACKET