

FIGURE 6.514 HARDWARE CLOTH AND GRAVEL INLET PROTECTION PLAN

CONSTRUCTION SPECIFICATIONS

- UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING INLET.
- DRIVE 3-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET SPACE. EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
- SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM, PLACING A 2-FOOT FLAT WOOD BOARD UNDER THE WIRE MESH TO PROTECT THE WIRE MESH FROM DAMAGE.
- PLACE CLEAN GRAVEL (NO. 55 OR #57 STONE) ON A 2:1 SLOPE WITH A 1/4 INCH OF GRAVEL AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
- ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
- COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUND COVER.

MAINTENANCE

INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY SEDIMENT OR OTHER OBSTRUCTION. PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

REFERENCES

- INLET PROTECTION
- 6.52, BLOWN AND WASHED STONE
- 6.54, ROUGHNESS INLET PROTECTION
- NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROADS AND STRUCTURES

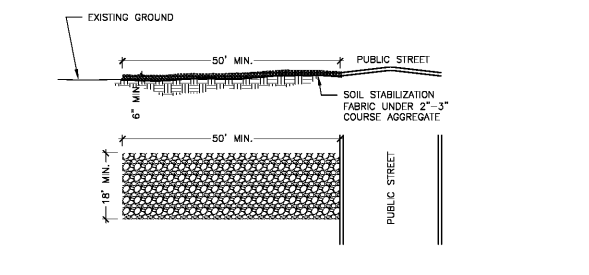
8 Hardware Cloth and Gravel Inlet Protection NCDEQ 6.51

SEEDING MIXTURE
SPECIES RYE (GRAIN) RATE (LB/ACRE) 120
SEEDING DATES MOUNTAINS-AUG. 15 - DEC. 30 COASTAL PLAIN AND PIEDMONT-AUG. 15 - DEC. 30
SOIL AMENDMENTS FOLLOW SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER.
MULCH APPLY 4,000 LB/ACRE STRAW, ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.
MAINTENANCE REPAIR AND RE-FERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBE (PIEDMONT) AND COASTAL PLAIN) OR KOREAN (MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.
TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

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TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

SEEDING MIXTURE SPECIES GERMAN MILLET RATE (LB/ACRE) 40
SEEDING DATES IN THE PITMONT AND MOUNTAINS, A SMALL-STEMMED SUDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE.
CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT, OR ANY SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY.
WHEN APPROPRIATE, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE, WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.
SOIL STABILIZATION FABRIC (AS SPECIFIED BY THE DESIGNER) SHALL BE USED.

3 Seeding Specifications for Temporary Erosion Control NCDEQ 6.10

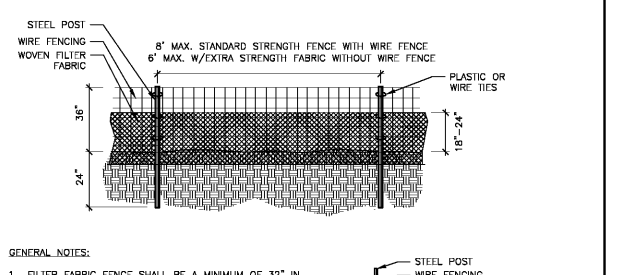


- NOTES:
- A STABILIZED ENTRANCE PAD OF 2"-3" COURSE AGGREGATE SHALL BE LOCATED WHERE TRAFFIC WILL ENTER OR LEAVE THE CONSTRUCTION SITE ONTO A PUBLIC STREET.
 - FILTER FABRIC OR COMPACTED CRUSHER RUN STONE MAY BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS WARRANT AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 - ANY SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY.
 - WHEN APPROPRIATE, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE, WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.
 - SOIL STABILIZATION FABRIC (AS SPECIFIED BY THE DESIGNER) SHALL BE USED.

MAINTENANCE NOTES:

- MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED OR TRACKED ONTO PUBLIC ROADWAYS.

2 Temporary Gravel Construction Entrance NCDEQ 6.06

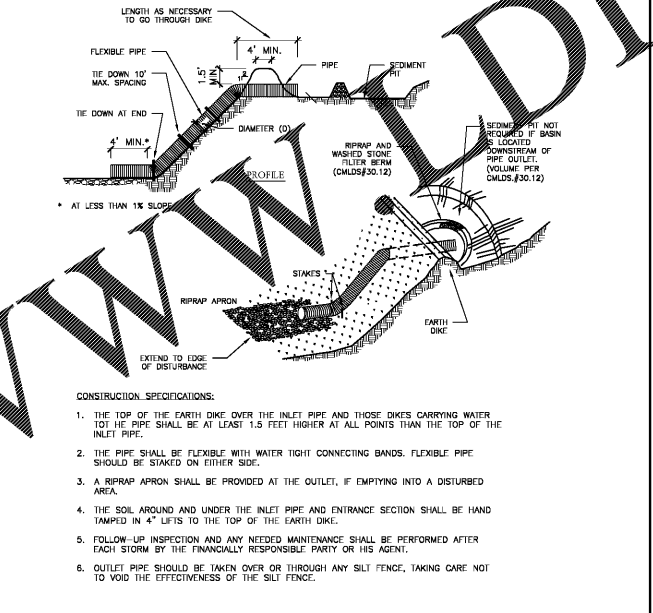


- GENERAL NOTES:
- FILTER FABRIC FENCE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
 - WOVEN FILTER FABRIC BE USED WHERE SILT FENCE IS TO REMAIN FOR A PERIOD OF MORE THAN 30 DAYS.
 - STEEL POSTS SHALL BE 2'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
 - WIRE FENCING SHALL BE AT LEAST #10 GAGE WITH A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
 - TURN SILT FENCE UP SLOPE AT ENDS.
 - WIRE MESH SHALL BE MIN. 14 GAGE WITH MAXIMUM 6" OPENINGS.
 - ORANGE SAFETY FENCE IS REQUIRED AT BACK OF SILT FENCE (WITHIN 5 FT.) WHEN GRADING IS ADJACENT TO SWIM BUFFERS, OR WETLANDS (REFER TO SWIM BUFFER GUIDELINES).

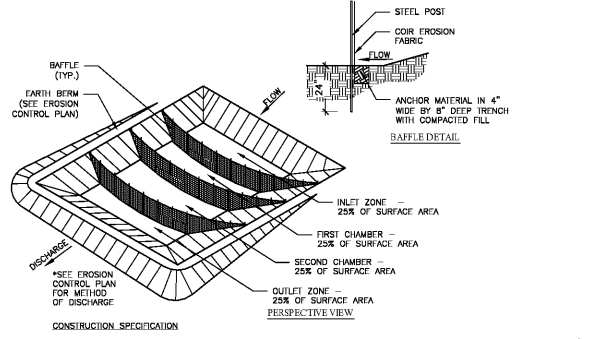
MAINTENANCE NOTES:

- INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
- SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
- REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
- REMOVE ALL FENCING MATERIALS AND UNSOLUBLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

1 Temporary Silt Fence NCDEQ 6.02



7 Temporary Pipe Slope Drain N.T.S.

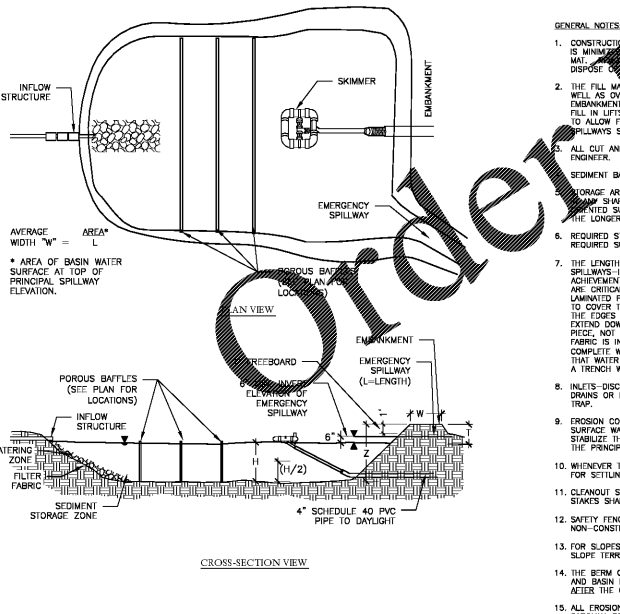


- CONSTRUCTION SPECIFICATIONS
- GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
 - INSTALL POSTS ACROSS THE WIDTH OF THE SEDIMENT TRAP, SEDIMENT BASIN AND/OR SKIMMER BASIN AS SHOWN. POSTS SHALL BE DRIVEN TO A DEPTH OF 24 INCHES, SPACED A MAXIMUM OF 4 FEET APART, AND INSTALLED UP THE SIDES OF THE BASIN AS WELL. THE TOP OF THE FABRIC SHOULD BE 6 INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF BATTLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS.
 - BATTLE MATERIAL SHALL BE 700 GRAV COIR EROSION FABRIC.
 - INSTALL AT LEAST THREE ROWS OF BATTLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BATTLES LESS THAN 20 FEET IN LENGTH MAY USE 2 BATTLES THAT DIVIDE THE BASIN IN THIRDS.
 - ADD A SUPPORT WIRE OR ROPE ACROSS THE TOP OF THE MEASURE TO OVERHANGING.
 - WRAP BATTLE MATERIAL OVER THE TOP WIRE. ATTACH FABRIC TO A ROPE AND A SUPPORT STRUCTURE WITH ZIP TIES, WIRE, OR STAPLES. USE 3 TIES PER FOOT ALL WITHIN TOP OF FABRIC.
 - THE BOTTOM AND SIDES OF THE FABRIC SHOULD BE ANCHORED IN A TRENCH 4 DEEP. IN LIFE OF ENGINEERING TRENCH FABRIC MAY BE INSTALLED OVER A TRENCH. SPECIAL EQUIPMENT SPECIFICALLY DESIGNED TO SLICE THE GROUND WITH A DISC.
 - DO NOT SPICE THE FABRIC, BUT USE A CONTINUOUS PIECE ACROSS THE BASIN.
- MAINTENANCE
- INSPECT BATTLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL.
 - REQUIRED REPAIRS IMMEDIATELY.
 - BE SURE TO MAINTAIN ACCESS TO THE BATTLES. SHOULD THE FABRIC COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE PROMPTLY.
 - REMOVE SEDIMENT DEPOSITS WHEN IT REACHES FULL TO PREVENT STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BATTLE DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

6 Temporary Porous Baffle NCDEQ 6.05

8 Not Used N.T.S.

5 Temporary Diversion NCDEQ 6.20



9 Temporary Skimmer Sediment Basin NCDEQ 6.64

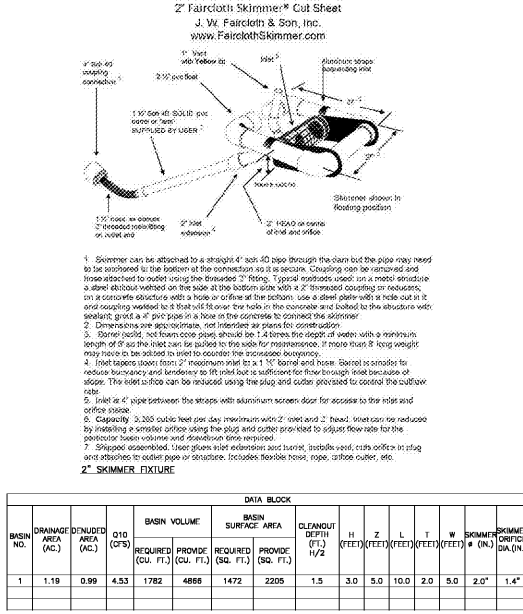
SKIMMER CONSTRUCTION SPECIFICATIONS

- SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMING DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
- PLACE THE BARREL (TYPICALLY 4-INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE OR AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MINIMUM DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
- ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURER'S INSTRUCTIONS, OR AS DESIGNED.
- LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.

MAINTENANCE

- INSPECT SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BATTLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN. NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
- REPAIR THE BATTLES IF THEY ARE DAMAGED. RE-ANCHOR THE BATTLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
- IF THE SKIMMER IS CLOGGED WITH TRASH, THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE, WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLOCATE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE IT.
- IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
- CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.
- FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

2" SKIMMER FIXTURE



BASIN NO.	DRAINAGE DENOTED AREA (AC)				DATA BLOCK				SKIMMER							
	ORANGE	RED	GREEN	WHITE	BASIN VOLUME (CU. FT.)	BASIN SURFACE AREA (SQ. FT.)	CLEANOUT DEPTH (FT.)	H	Z	L	T	B	W	SKIMMER DIA. (IN.)	SKIMMER DIA. (IN.)	
1	1.19	0.99	4.53	1782	4868	1472	2205	1.5	3.0	5.0	10.0	2.0	5.0	2.0"	1.4"	