**NOTES:**

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

**STANDARD CONSTRUCTION DETAIL #3-1**

**ROCK CONSTRUCTION ENTRANCE**

NOT TO SCALE
NOTES:

WASH RACK SHALL BE 20 FEET (MIN.) WIDE OR TOTAL WIDTH OF ACCESS.

WASH RACK SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE ANTICIPATED CONSTRUCTION VEHICULAR TRAFFIC.

A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXITING THE SITE.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACE UNDER WASH RACK SHALL BE KEPT OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. ALL SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-2
ROCK CONSTRUCTION ACCESS WITH WASH RACK
NOT TO SCALE
NOTES:

CUT AND FILL SLOPES SHALL BE STABILIZED IMMEDIATELY UPON COMPLETION OF ROADWAY GRADING. THESE AREAS SHALL BE BLANKETED WHEREVER THEY ARE LOCATED WITHIN 50 FEET OF A SURFACE WATER OR WITHIN 100 FEET OF AN HQ OR EV SURFACE WATER OR WHERE A SUITABLE VEGETATIVE FILTER STRIP DOES NOT EXIST.

A TOP DRESSING COMPOSED OF HARD, DURABLE STONE SHALL BE PROVIDED FOR SOILS HAVING LOW STRENGTH.

ROADSIDE DITCHES SHALL BE PROVIDED WITH ADEQUATE PROTECTIVE LINING WHEREVER RUNOFF CANNOT SHEET FLOW AWAY FROM THE ROADWAY.

ADEQUATELY SIZED CULVERTS OR OTHER SUITABLE CROSS DRAINS SHALL BE PROVIDED AT ALL SEEPS, SPRINGS, AND DRAINAGE COURSES. DITCH RELIEF CULVERTS OR TURNOUTS SHALL BE PROVIDED AT THE INTERVALS INDICATED ON TABLE 3.3 OR TABLE 3.4 OF THE PA DEP EROSION CONTROL MANUAL FOR ROADSIDE DITCHES. RIPRAP OUTLET PROTECTION TO BE SIZED ACCORDING TO ANTICIPATED DISCHARGE VELOCITY.

ROADWAY SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED ROADWAYS, DITCHES, OR CROSS DRAINS SHALL BE REPAIRED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #3-3
CROWNED ROADWAY

NOT TO SCALE
NOTES:

CUT AND FILL SLOPES SHALL BE STABILIZED IMMEDIATELY UPON COMPLETION OF ROADWAY GRADING. THESE AREAS SHALL BE BLANKETED WHEREVER THEY ARE LOCATED WITHIN 50 FEET OF A SURFACE WATER OR WITHIN 100 FEET OF AN HQ OR EV SURFACE WATER OR WHERE A SUITABLE VEGETATIVE FILTER STRIP DOES NOT EXIST.

A TOP DRESSING COMPOSED OF HARD, DURABLE STONE SHALL BE PROVIDED FOR SOILS HAVING LOW STRENGTH.

ROADSIDE DITCHES SHALL BE PROVIDED WITH ADEQUATE PROTECTIVE LINING.

ADEQUATELY SIZED CULVERTS OR OTHER SUITABLE CROSS DRAINS SHALL BE PROVIDED AT ALL SEEPS, SPRINGS, AND DRAINAGE COURSES. DITCH RELIEF CULVERTS SHALL BE PROVIDED AT THE INTERVALS INDICATED ON TABLE 3.3 OR TABLE 3.4 OF THE PA DEP EROSION CONTROL MANUAL. RIPRAP OUTLET PROTECTION TO BE SIZED ACCORDING TO ANTICIPATED DISCHARGE VELOCITY.

ROADWAY SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED ROADWAYS, DITCHES, OR CROSS DRAINS SHALL BE REPAIRED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #3-4

INSLOPED ROADWAY

NOT TO SCALE
NOTES:

WATERBARS SHALL DISCHARGE TO A STABLE AREA.

WATERBARS SHALL BE INSPECTED WEEKLY (DAILY ON ACTIVE ROADS) AND AFTER EACH RUNOFF EVENT. DAMAGED OR ERODED WATERBARS SHALL BE RESTORED TO ORIGINAL DIMENSIONS WITHIN 24 HOURS OF INSPECTION.

MAINTENANCE OF WATERBARS SHALL BE PROVIDED UNTIL ROADWAY, SKIDTRAIL, OR RIGHT-OF-WAY HAS ACHIEVED PERMANENT STABILIZATION.

WATERBARS ON RETIRED ROADWAYS, SKIDTRAILS, AND RIGHT-OF-WAYS SHALL BE LEFT IN PLACE AFTER PERMANENT STABILIZATION HAS BEEN ACHIEVED.

SEE PA DEP EROSION CONTROL MANUAL TABLE 3.1 FOR WATERBAR SPACING.

STANDARD CONSTRUCTION DETAIL #3-5
WATERBAR

NOT TO SCALE
NOTES:

BROAD–BASED DIPS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN AND AT THE LOCATIONS SHOWN ON THE PLAN DRAWINGS.

DIPS SHALL BE ORIENTED SO AS TO DISCHARGE TO THE LOW SIDE OF THE ROADWAY.

DIPS SHALL BE INSPECTED DAILY. DAMAGED OR NON–FUNCTIONING DIPS SHALL BE REPAIRED BY THE END OF THE WORKDAY.

MAXIMUM SPACING OF BROAD–BASED DIPS SHALL BE AS SHOWN IN TABLE 3.2 OF THE PA DEP EROSION CONTROL MANUAL.
NOTES:

BROAD–BASED DIPS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN AND AT THE LOCATIONS SHOWN ON THE PLAN DRAWINGS.

DIPS SHALL BE ORIENTED SO AS TO DISCHARGE TO THE LOW SIDE OF THE ROADWAY.

DIPS SHALL BE INSPECTED DAILY. DAMAGED OR NON–FUNCTIONING DIPS SHALL BE REPAIRED BY THE END OF THE WORKDAY.

MAXIMUM SPACING OF BROAD–BASED DIPS SHALL BE AS SHOWN IN TABLE 3.2 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #3-7
BROAD BASED DIP FOR HIGH GRADIENT (5%-10%) ROADWAYS

NOT TO SCALE
NOTES:

CULVERTS SHALL BE INSPECTED WEEKLY AND AFTER RUNOFF EVENTS.

DAMAGED OR NON-FUNCTIONING CULVERTS SHALL BE REPAIRED BY THE END OF THE WORKDAY.

ACCUMULATED SEDIMENT SHALL BE REMOVED WITHIN 24 HOURS OF INSPECTION.

MAXIMUM SPACING OF OPEN-TOP CULVERTS SHALL BE AS SHOWN IN TABLE 3.2 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #3-8
OPEN TOP CULVERT

NOT TO SCALE
NOTES:

DEFLECTOR SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

ACCUMULATED SEDIMENT SHALL BE REMOVED FROM DEFLECTOR WITHIN 24 HOURS OF INSPECTION.

BELT SHALL BE REPLACED WHEN WORN AND NO LONGER EFFECTIVE.

MAXIMUM SPACING OF DEFLECTORS SHALL BE AS SHOWN IN TABLE 3.2 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #3-9
WATER DEFLECTOR

NOT TO SCALE
NOTES:

MINIMUM DIAMETER FOR ANY CULVERT IS 12"; OTHERWISE CULVERT SHALL BE SIZED FOR ANTICIPATED PEAK FLOW. PLACE CULVERT SO BOTTOM IS AT SAME LEVEL AS BOTTOM OF DITCH OR ADJOINING SLOPE. CULVERTS SHALL BE PLACED WITH A SLOPE OF 2 TO 4%. LOWER END SHALL BE AT LEAST 2" BELOW UPPER END.

EXTEND CULVERT 12" BEYOND BASE OF ROAD FILL ON BOTH SIDES. FIRMLY PACK FILL AROUND CULVERT, ESPECIALLY THE BOTTOM HALF.

PROVIDE SUITABLE OUTLET PROTECTION* AND, WHERE APPROPRIATE, INLET PROTECTION.

INSPECT CULVERT WEEKLY: REMOVE ANY FLOW OBSTRUCTIONS AND MAKE NECESSARY REPAIRS IMMEDIATELY.

THIS DETAIL MAY BE USED FOR DITCH RELIEF CULVERTS AND FOR CROSSINGS OF ROADSIDE DITCHES. IT IS NOT APPROPRIATE FOR STREAM CROSSINGS.

* FOR STEEP SLOPE (>2H:1V) OUTFALLS, A MINIMUM 20 FOOT LONG R-5 APRON IS RECOMMENDED FOR TEMPORARY ACCESS ROADS WHERE THE RECOMMENDED CULVERT SPACING IS USED. FOR PERMANENT ACCESS ROADS, A MINIMUM R-6 ROCK SIZE IS RECOMMENDED.

STANDARD CONSTRUCTION DETAIL #3-10
DITCH RELIEF CULVERT

NOT TO SCALE
**DESIGN NOTES:**

1. COMPOST SOCK SEDIMENT TRAP SHALL BE SIZED TO PROVIDE 2000 CUBIC FEET OF STORAGE CAPACITY FOR EACH ACRE TRIBUTARY TO THE TRAP.
2. MINIMUM BASE WIDTH IS EQUAL TO THE HEIGHT.
3. SEDIMENT ACCUMULATION SHALL NOT EXCEED 1/3 THE TOTAL HEIGHT OF THE TRAP.
4. SOCKS SHALL BE OF LARGER DIAMETER AT THE BASE OF THE TRAP AND DECREASE IN DIAMETER FOR SUCCESSIVE LAYERS AS SHOWN ON THE PLAN VIEW.
5. ENDS OF THE TRAP SHALL BE A MINIMUM OF 1 FOOT HIGHER IN ELEVATION THAN THE MID-SECTION, WHICH SHALL BE LOCATED AT THE POINT OF DISCHARGE.

**NOTES:**

SOCK MATERIAL SHALL MEET THE STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST SOCK SEDIMENT TRAPS SHALL NOT EXCEED THREE SOCKS IN HEIGHT AND SHALL BE STACKED IN PYRAMIDAL FORM AS SHOWN ABOVE. MINIMUM TRAP HEIGHT IS ONE 24" DIAMETER SOCK. ADDITIONAL STORAGE MAY BE PROVIDED BY MEANS OF AN EXCAVATED SUMP 12" DEEP EXTENDING 1 TO 3 FEET UPSLOPE OF THE SOCKS ALONG THE LOWER SIDE OF THE TRAP.

COMPOST SOCK SEDIMENT TRAPS SHALL PROVIDE 2,000 CUBIC FEET STORAGE CAPACITY WITH 12" FREEBOARD FOR EACH TRIBUTARY DRAINAGE ACRE. (SEE MANUFACTURER FOR ANTICIPATED SETTLEMENT.)

THE MAXIMUM TRIBUTARY DRAINAGE AREA IS 5.0 ACRES. SINCE COMPOST SOCKS ARE "FLOW-THROUGH," NO SPILLWAY IS REQUIRED.

COMPOST SOCK SEDIMENT TRAPS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/3 THE HEIGHT OF THE SOCKS.

PHOTODEGRADABLE AND BIODEGRADABLE SOCKS SHALL NOT BE USED FOR MORE THAN 1 YEAR.

**STANDARD CONSTRUCTION DETAIL #3-11**

**COMPOST SOCK SEDIMENT TRAP**

**NOT TO SCALE**
NOTES:
WATERBARS AND BROAD–BASED DIPS SHALL DISCHARGE TO SEDIMENT REMOVAL FACILITY.
CLEAN ROCK SHALL CONFORM TO CHAPTER 105 PERMITTING REQUIREMENTS.
FOLLOW PERMIT CONDITIONS REGARDING REMOVAL OF CROSSING.

STANDARD CONSTRUCTION DETAIL #3-12
TEMPORARY STREAM CROSSING - PLAN VIEW
NOT TO SCALE
NOTES:

PROVIDE 50' STABILIZED ACCESS TO CROSSING ON BOTH SIDES OF STREAM CHANNEL (SEE STANDARD CONSTRUCTION DETAIL #3–12).

PIPES SHALL EXTEND BEYOND THE TOE OF THE ROADWAY.

RUNOFF FROM THE ROADWAY SHALL BE DIVERTED OFF THE ROADWAY AND INTO A SEDIMENT REMOVAL BMP BEFORE IT REACHES THE ROCK APPROACH TO THE CROSSING.

MAINTENANCE

1. TEMPORARY STREAM CROSSINGS SHALL BE INSPECTED ON A DAILY BASIS.
2. DAMAGED CROSSINGS SHALL BE REPAIRED WITHIN 24 HOURS OF THE INSPECTION AND BEFORE ANY SUBSEQUENT USE.
3. SEDIMENT DEPOSITS ON THE CROSSING OR ITS APPROACHES SHALL BE REMOVED WITHIN 24 HOURS OF THE INSPECTION.

AS SOON AS THE TEMPORARY CROSSING IS NO LONGER NEEDED, IT SHALL BE REMOVED. ALL MATERIALS SHALL BE DISPOSED OF PROPERLY AND DISTURBED AREAS STABILIZED.

STANDARD CONSTRUCTION DETAIL #3-13
TEMPORARY STREAM CROSSING

NOT TO SCALE
CROSS-SECTIONS

NOTES:

MULTIPLE PIPES AND MULTIPLE SPAN BRIDGES AND CULVERTS WHICH MAY TEND TO COLLECT DEBRIS, CONTRIBUTE TO THE FORMATION OF ICE JAMS AND INCREASE HEAD LOSSES SHALL BE AVOIDED TO THE MAXIMUM EXTENT PRACTICABLE. CROSSINGS OF LESS THAN 15 FEET SHALL BE BY ONE SPAN, EXCEPT WHERE CONDITIONS MAKE IT IMPRACTICAL TO AFFECT THE CROSSING WITHOUT MULTIPLE SPANS (SECTION 105.162).

SEE TABLE 3.5 OF THE PA DEP EROSION CONTROL MANUAL FOR DISTANCE VALUES ‘F’ AND ‘FF’. FOR ARCH PIPES, USE CLOSEST AVAILABLE STANDARD SIZES THAT PROVIDE THE SAME WATERWAY OPENING AREA. SHOULDN'T SIZES WITHIN THE TABLE BE UNAVAILABLE.

PROVIDE 50’ STABILIZED ACCESS TO CROSSING ON BOTH SIDES OF STREAM CHANNEL (SEE STANDARD CONSTRUCTION DETAIL #3–12).

PIPES SHALL EXTEND BEYOND THE TOE OF THE ROADWAY.

RUNOFF FROM THE ROADWAY SHALL BE DIVERTED OFF THE ROADWAY AND INTO A SEDIMENT REMOVAL BMP BEFORE IT REACHES THE ROCK APPROACH TO THE CROSSING.

MAINTENANCE

1. TEMPORARY STREAM CROSSINGS SHALL BE INSPECTED ON A DAILY BASIS.
2. DAMAGED CROSSINGS SHALL BE REPAIRED WITHIN 24 HOURS OF THE INSPECTION AND BEFORE ANY SUBSEQUENT USE.
3. SEDIMENT DEPOSITS ON THE CROSSING OR ITS APPROACHES SHALL BE REMOVED WITHIN 24 HOURS OF THE INSPECTION.

AS SOON AS THE TEMPORARY CROSSING IS NO LONGER NEEDED, IT SHALL BE REMOVED. ALL MATERIALS SHALL BE DISPOSED OF PROPERLY AND DISTURBED AREAS STABILIZED.

STANDARD CONSTRUCTION DETAIL #3-14
TEMPORARY STREAM CROSSING - MULTIPLE PIPES

NOT TO SCALE
IMPERVIOUS MEMBRANE

SANDBAGS

STACKED SANDBAGS OPTION

2 BAG MIN. HEIGHT ABOVE NORMAL BASE FLOW

SANDBAG TO HOLD IMPERVIOUS LINER IN PLACE

IMPERVIOUS LINER EXTENDED TO STREAM BOTTOM AND SECURED WITH SANDBAGS

JERSEY BARRIER

SANDBAG (TYP.)

WORK AREA

NORMAL STREAM FLOW

OPTIONAL SANDBAG PLATFORM

JERSEY BARRIER OPTION

STANDARD CONSTRUCTION DETAIL #3-15
SANDBAG DIVERSION DAM OR COFFERDAM

NOT TO SCALE
LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>ASTM METHOD</th>
<th>MINIMUM STANDARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVG. WIDTH WIDTH STRENGTH</td>
<td>D-4884</td>
<td>60 LB/IN</td>
</tr>
<tr>
<td>GRAB TENSILE</td>
<td>D-4632</td>
<td>205 LB</td>
</tr>
<tr>
<td>PUNCTURE</td>
<td>D-4833</td>
<td>110 LB</td>
</tr>
<tr>
<td>MULLEN BURST</td>
<td>D-3786</td>
<td>350 PSI</td>
</tr>
<tr>
<td>UV RESISTANCE</td>
<td>D-4355</td>
<td>70%</td>
</tr>
<tr>
<td>AOS % RETAINED</td>
<td>D-4751</td>
<td>80 SIEVE</td>
</tr>
</tbody>
</table>

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAP TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAP ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5% FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.
NOTES:

LOCATE SUMP AT LOW POINT IN WORK AREA AND OUTSIDE OF CONSTRUCTION ACTIVITY. WHEREVER RUNOFF FROM A WORK AREA FLOWS DIRECTLY TO THE SUMP AREA, A FILTER BAG SHALL BE ATTACHED AT THE DISCHARGE POINT UNLESS PUMPING TO A SEDIMENT BASIN OR SEDIMENT TRAP.

MINIMUM DIAMETER OF PIT BOTTOM SHALL BE 24" LARGER THAN PIPE DIAMETER. MINIMUM DEPTH OF PIT SHALL BE 24" BELOW WATER LEVEL IN WORK AREA (INCLUDING THE AASHTO #57 STONE). 12" TO 24" PERFORATED CMP OR PVC PIPE SHALL BE SET ON 12" OF CLEAN AASHTO # 57 STONE.

VOID SPACE AROUND PIPE SHALL BE FILLED WITH AASHTO # 57 STONE. PIPE TO EXTEND 12" MIN. ABOVE TOP OF STONE AND/OR WATER BEING PUMPED FROM WORK AREA.

SET PUMP INTAKE INSIDE STANPIPE.

DISCHARGE FROM PUMP SHALL BE TO A STABLE AREA BELOW DISTURBANCES FROM THE WORK ZONE.

SUMP MAY BE USED IN CONJUNCTION WITH FILTER BAG WHERE ADDITIONAL FILTERING IS NEEDED.

STANDARD CONSTRUCTION DETAIL #3-17

SUMP PIT

NOT TO SCALE
COMPOST FILTER SOCK
BLOWN/PLACED
FILTER MEDIA
DISTURBED AREA

2 IN. x 2 IN. WOODEN STAKES PLACED 10 FT ON CENTER

UNDISTURBED AREA

SECTION

DISTURBED AREA

FLOW

EXISTING CONTOURS

COMPOST FILTER SOCK
UNDISTURBED AREA

2 IN. x 2 IN. WOODEN STAKES PLACED 10 FT ON CENTER

PLAN VIEW

NOTES:

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.


STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK

NOT TO SCALE
COMPOST FILTER BERM

DISTURBED AREA

FLOW

SECTION

UNDISTURBED AREA

48 IN.

DISTURBED AREA

FLOW

EXISTING CONTOURS

COMPOST FILTER BERM

UNDISTURBED AREA

PLAN VIEW

NOTES:

COMPOST SHALL MEET STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER BERM SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BERM SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BERM ALIGNMENT.

THE MAXIMUM SLOPE LENGTH ABOVE A COMPOST FILTER BERM SHALL NOT EXCEED THAT SHOWN IN TABLE 4.4 OF THE PA DEP EROSION CONTROL MANUAL FOR THE STANDARD SILT FENCE (18 IN. HIGH FENCE).

TALL GRASS SHALL BE CUT PRIOR TO INSTALLATION TO MINIMIZE POTENTIAL FOR UNDERCUTTING. BERM SHALL BE NETTED OR OTHERWISE ANCHORED AFTER INSTALLATION.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE ABOVE GROUND HEIGHT OF THE BERM.

ANY SECTION COMPOST FILTER BERM WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED. CONCENTRATED FLOWS SHALL NOT BE DIRECTED TOWARD ANY COMPOST FILTER BERM.

STANDARD CONSTRUCTION DETAIL #4-2
COMPOST FILTER BERM

NOT TO SCALE
NOTES:

A SEDIMENT TUBE PLACEMENT AREA SHALL BE PREPARED SO THAT IT IS FREE OF ALL DEBRIS, INCLUDING ROCKS, STICKS, ROOTS, ETC. A 2" LAYER OF AASHTO #57 STONE SHALL BE PLACED WHERE THE LOGS COME TOGETHER. ENDS OF TUBES MAY BE OVERLAPPED ACCORDING TO MANUFACTURER’S SPECIFICATIONS INSTEAD OF THE AASHTO #57 STONE.

SEDIMENT TUBES SHALL BE PLACED AT EXISTING LEVEL GRADE. ENDS SHALL BE EXTENDED UPSLOPE AT 45 DEGREES TO THE MAIN FILTER LOG ALIGNMENT FOR A MINIMUM OF 8 FEET.

SEDIMENT TUBES SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

SEDIMENT DEPOSITS SHALL BE CLEANED FROM THE LOG WHEN IT REACHES HALF THE HEIGHT OF THE TUBE.

DAMAGED TUBES SHALL BE REPLACED WITHIN 24 HOURS OF INSPECTION. A SUPPLY OF TUBES SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE.

STANDARD CONSTRUCTION DETAIL #4-3
WEIGHTED SEDIMENT FILTER TUBE INSTALLATION

NOT TO SCALE
NOTE:

- Metal T-Posts shall be installed at the center and at each end of the tube. Additional T-Posts shall be installed as needed to meet the maximum 2-foot spacing.

- Sediment tubes shall be inspected weekly and after each runoff event.

- Accumulated sediment shall be removed when it reaches half the height of the tube and disposed as directed elsewhere in the E&S plan.

- Damaged tubes shall be repaired or replaced within 24 hours of inspection. A supply of tubes shall be kept on site for this purpose.

STANDARD CONSTRUCTION DETAIL #4-4
WEIGHTED SEDIMENT FILTER TUBE INSTALLATION
CONCENTRATED FLOW AREA

NOT TO SCALE
NOTES:

METAL T–POSTS SHALL BE INSTALLED AT THE CENTER AND AT EACH END OF THE TUBE. ADDITIONAL T–POSTS SHALL BE INSTALLED AS NEEDED TO MEET THE MAXIMUM 2–FOOT SPACING. SLIGHTLY ANGLE STAKES WITH TOP FACING TOWARDS DIRECTION OF FLOW.

SEDIMENT TUBES SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE TUBE AND DISPOSED AS DIRECTED ELSEWHERE IN THE E&S PLAN.

DAMAGED TUBES SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION. A SUPPLY OF TUBES SHALL BE KEPT ON SITE FOR THIS PURPOSE.

STANDARD CONSTRUCTION DETAIL #4-5
WEIGHTED SEDIMENT FILTER TUBE INSTALLATION ACROSS A WIDE FLOW PATH

NOT TO SCALE
OUTLET CROSS-SECTION

UP-SLOPE FACE

NOTES:

A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

STANDARD CONSTRUCTION DETAIL #4-6
ROCK FILTER OUTLET

NOT TO SCALE
JOINING FENCE SECTIONS

SECTION VIEW

NOTES:

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.

SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

STANDARD CONSTRUCTION DETAIL #4-7
STANDARD SILT FENCE (18" HIGH)

NOT TO SCALE
NOTES:

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

FABRIC WIDTH SHALL BE 42 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES. AN 18 IN. SUPPORT STAKE SHALL BE DRIVEN 12 IN. MINIMUM INTO UNDISTURBED GROUND.

SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4–6).

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

STANDARD CONSTRUCTION DETAIL #4-8
REINFORCED SILT FENCE (30" HIGH)

NOT TO SCALE
NOTES:

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

THIS BMP IS NOT SUITABLE FOR PROJECTS LASTING LONGER THAN 3 MONTHS UNLESS BALES ARE REPLACED QUARTERLY.

FABRIC WIDTH SHALL BE 42 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.

SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.
* POSTS SPACED AT 10 FT. MAX. USE 2–1/2 IN. DIA HEAVY DUTY GALVANIZED OR ALUMINUM POSTS.

** CHAIN LINK TO POST FASTENERS SPACED AT 14 IN. MAX. USE NO. 9 GA. ALUMINUM WIRE OR NO. 9 GALVANIZED STEEL WIRE. FABRIC TO SHAIN FASTENERS SPACED AT 24 IN. MAX. ON CENTER.

NOTES:

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

FABRIC WIDTH SHALL BE 42 IN. MINIMUM.

POSTS SHALL BE INSTALLED USING A POSTHOLE DRILL.

CHAIN LINK SHALL BE GALVANIZED NO. 11.5 GA. STEEL WIRE WITH 2–1/4 IN. OPENING, NO. 11 GA. ALUMINUM COATED STEEL WIRE IN ACCORDANCE WITH ASTM–A–491, OR GALVANIZED NO. 9 GA. STEEL WIRE TOP AND BOTTOM WITH GALVANIZED NO. 11 GA. STEEL INTERMEDIATE WIRES. NO. 7 GAGE TENSION WIRE TO BE INSTALLED HORIZONTALLY THROUGH HOLES AT TOP AND BOTTOM OF CHAIN–LINK FENCE OR ATTACHED WITH HOG RINGS AT 5 FT MAX. CENTERS.

SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

STANDARD CONSTRUCTION DETAIL #4-10
SUPER SILT FENCE

NOT TO SCALE
NOTES:

SEDIMENT LOG PLACEMENT AREA SHALL BE PREPARED SO THAT IT IS FREE OF ALL DEBRIS, INCLUDING ROCKS, STICKS, ROOTS, ETC. A 2 IN. LAYER OF COMPACTED FILL MATERIAL SHALL BE PLACED ON THE UPSLOPE SIDE OF THE LOG TO PREVENT UNDERCUTTING. WHERE MORE THAN ONE LOG IS REQUIRED TO OBTAIN SPECIFIED LENGTH, LOGS SHALL BE TIGHTLY ABUTTED AND SECURELY STAKED (OR OVERLAPPED BY 12 IN. MIN.). A LAYER OF AASHTO NO. 57 STONE SHALL BE PLACED WHERE ABUTTING LOGS COME TOGETHER (EXTENDING 2 FT. ON BOTH SIDES OF THE LOG). A 6 IN. THICK LAYER OF COMPOST ON THE UPSLOPE SIDE MAY BE SUBSTITUTED FOR THE STONE, SEDIMENT FILTER LOGS SHALL BE PLACED AT EXISTING LEVEL GRADE. ENDS SHALL BE EXTENDED UPSLOPE AT 45 DEG. TO THE MAIN FILTER LOG ALIGNMENT FOR A MINIMUM OF 8 FEET.

SEDIMENT FILTER LOGS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT DEPOSITS SHALL BE CLEANED FROM THE LOG WHEN IT REACHES HALF THE HEIGHT OF THE LOG. DAMAGED FILTER LOGS SHALL BE REPLACED WITHIN 24 HOURS OF INSPECTION. A SUPPLY OF FILTER LOGS SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE.

STANDARD CONSTRUCTION DETAIL #4-11
SEDIMENT FILTER LOG (FIBER LOG)

NOT TO SCALE
NOTES:

PRIOR TO PLACEMENT OF THE BERM, OBSTRUCTIONS SUCH AS TREE LIMBS, LARGE ROCKS, ETC. SHALL BE REMOVED.

WOOD CHIP FILTER BERM SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BERM SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BERM ALIGNMENT. WOOD CHIP BERMS SHALL NOT BE LOCATED IN AREAS OF CONCENTRATED FLOW OR USED TO CONSTRUCT SEDIMENT TRAPS OR OTHER IMPOUNDMENTS.

A 6 IN. THICK LAYER OF COMPOST SHALL BE ADDED TO THE UPSLOPE SIDE OF ANY WOOD CHIP FILTER BERM LOCATED IN AN HQ WATERSHED. THIS BMP SHALL NOT BE ROUTINELY USED IN EV WATERSHEDS.

BERMS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE HEIGHT OF THE BERM. DAMAGED OR DETERIORATED PORTIONS OF THE BERM SHALL BE REPLACED IMMEDIATELY UPON INSPECTION.

BERMS MAY BE LEVELED WHEN THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED OR LEFT IN PLACE.

STANDARD CONSTRUCTION DETAIL #4-12
WOOD CHIP FILTER BERM

NOT TO SCALE
NOTES:

STRAW BALE BARRIERS SHALL NOT BE USED FOR PROJECTS EXTENDING MORE THAN 3 MONTHS.

STRAW BALE BARRIERS SHALL BE PLACED AT EXISTING LEVEL GRADE WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALE. FIRST STAKE OF EACH BALE SHALL BE ANGLED TOWARD ADJACENT BALE TO DRAW BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE TOP OF THE BALE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT.

COMPACTED BACKFILL SHALL EXTEND APPROXIMATELY 4 IN. ABOVE GROUND LEVEL.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE ABOVE GROUND HEIGHT OF THE BARRIER. DAMAGED OR DETERIORATED BALES SHALL BE REPLACED IMMEDIATELY UPON INSPECTION.

ANY SECTION OF STRAW BALE BARRIER WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL #4-6).

BALES SHALL BE REMOVED WHEN THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED.
NOTES:

SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS.

IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

STANDARD CONSTRUCTION DETAIL #4-14
ROCK FILTER

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FOR D ≥ 2 FT. TO D < 3 FT. – USE R—3
NOT APPLICABLE FOR D < 2 FT.
NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-15
FILTER BAG INLET PROTECTION - TYPE C INLET

NOT TO SCALE
NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERRMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE Eempted AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-16
FILTER BAG INLET PROTECTION - TYPE M INLET

NOT TO SCALE
NOTES:

MAXIMUM DRAINAGE AREA = 1 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-17.
STONE AND CONCRETE BLOCK INLET PROTECTION - TYPE C INLET

NOT TO SCALE
NOTES:

MAXIMUM DRAINAGE AREA = 1 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT A LOW POINT.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.

TOP OF BLOCK SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #4-18
STONE AND CONCRETE BLOCK INLET PROTECTION - TYPE M INLET

NOT TO SCALE
NOTES:

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. A 6 IN. MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

STONE INLET PROTECTION AND BERM FOR A TYPE C INLET CAN BE USED IN ONE ACRE MAXIMUM DRAINAGE AREA WITH 15 IN OVERFLOW PIPE AND 4 IN. HEAD. A PERFORATED PLATE WELDED TO A METAL RISER MAY NOT BE SUBSTITUTED FOR THE WIRE MESH. A SLOTTED PLATE WELDED TO THE RISER MAY BE USED IN CONJUNCTION WITH THE WIRE MESH IF CALCULATIONS ARE PROVIDED TO SHOW SUFFICIENT CAPACITY OF THE INLET TO ACCEPT THE PEAK RUNOFF FOR A 2-YEAR STORM EVENT FROM THE TRIBUTARY DRAINAGE AREA.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 IN. THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-19
STONE INLET PROTECTION AND BERM - TYPE C INLET

NOT TO SCALE
NOTES:

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT A LOW POINT.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.

STONE INLET PROTECTION AND BERM FOR A TYPE M INLET CAN BE USED IN ONE ACRE MAXIMUM DRAINAGE AREA WITH 15 IN. OVERFLOW PIPE AND 4 IN. HEAD. A PERFORATED PLATE WELDED TO A METAL RISER MAY NOT BE SUBSTITUTED FOR THE WIRE MESH. A SLOTTED PLATE WELDED TO THE RISER MAY BE USED IN CONJUNCTION WITH THE WIRE MESH IF CALCULATIONS ARE PROVIDED TO SHOW SUFFICIENT CAPACITY OF THE INLET TO ACCEPT THE PEAK RUNOFF FOR A 2-YEAR STORM EVENT FROM THE TRIBUTARY DRAINAGE AREA. TOP OF PIPE SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADWAY IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC. EARTHEN BERM SHALL BE ROLLED.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 IN. THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-20
STONE INLET PROTECTION AND BERM - TYPE M INLET

NOT TO SCALE
NOTES:

STONE PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENTATION BASINS AND SEDIMENT TRAPS.

SHOULD INCLUDE OPENINGS OF 1/4 IN. MAXIMUM FOR WIRE OR PLASTIC MESH.

HOLES MAY BE DRILLED IN CONCRETE BOX.

EARTHEEN BERM IN ROADWAY SHALL NOT BE REQUIRED.

ALTERNATE STONE INLET PROTECTION FOR TYPE M INLET CAN BE USED ON ONE ACRE MAXIMUM DRAINAGE AREA WITH 15 IN. OVERFLOW PIPE AND 4 IN. HEAD.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 IF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #4-21
ALTERNATE STONE INLET PROTECTION - TYPE M INLET - AT GRADE

NOT TO SCALE
NOTES:

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLETS TRIBUTARY TO SEDIMENT BASINS OR SEDIMENT TRAPS. ALTERNATE TYPE C INLET PROTECTION CAN BE USED ON ONE ACRE MAXIMUM DRAINAGE AREA WITH 15 IN. OVERFLOW PIPE AND 4 IN. HEAD.

BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT LOW POINTS. EARTHEN BERM SHALL BE STABILIZED WITH VEGETATION AND MAINTAINED UNTIL ROADWAY IS STONED OR TRIBUTARY AREA IS PERMANENTLY VEGETATED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED.

INLETS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #4-22
ALTERNATE TYPE C INLET PROTECTION - NOT AT GRADE
NOTES:

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLETS TRIBUTARY TO SEDIMENT BASINS OR SEDIMENT TRAPS. ALTERNATE TYPE C INLET PROTECTION CAN BE USED ON ONE ACRE MAXIMUM DRAINAGE AREA WITH 15 IN. OVERFLOW PIPE AND 4 IN. HEAD.

BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT LOW POINTS. EARTEN BERMS SHALL BE STABILIZED WITH VEGETATION AND MAINTAINED UNTIL ROADWAY IS STONED OR TRIBUTARY AREA IS PERMANENTLY VEGETATED. ROAD SUBBASE BERMS SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED.

INLETS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #4-23
ALTERNATE TYPE M INLET PROTECTION - NOT AT GRADE

NOT TO SCALE
NOTES:

MAXIMUM DRAINAGE AREA =1 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT A LOW POINT.

SHOULD CONTAIN OPENINGS 1/4 IN. MAXIMUM FOR WIRE OR PLASTIC MESH.

HOLES MAY BE DRILLED IN CONCRETE BOX.

EARTHEN BERM IN ROADWAY IS NOT REQUIRED.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 IF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #4-24
ALTERNATE STONE INLET PROTECTION - TYPE M INLET - ABOVE GRADE

NOT TO SCALE
PREPARE SOIL AND APPLY SEED BEFORE INSTALLING BLANKETS, MATS, OR OTHER TEMPORARY CHANNEL LINER SYSTEM.

* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

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<th>CHANNEL NO.</th>
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NOTES:

ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION.

SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

STANDARD CONSTRUCTION DETAIL #6-1
VEGETATED CHANNEL

NOT TO SCALE
SOD NOTES:
1. USE PEGS OR STAPLES TO FASTEN SOD FIRMLY AT THE END OF STRIPS AND IN THE CENTER, OR EVERY 3–4 FT IF THE STRIPS ARE LONG. WHEN READY TO MOW, DRIVE PEGS OR STAPLES FLUSH WITH THE GROUND.
2. IN CRITICAL AREAS, SECURE SOD WITH STAPLED NETTING.

CHANNEL CROSS-SECTION

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<th>CHANNEL NO.</th>
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<th>BOTTOM WIDTH B (FT)</th>
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NOTES:

CARE SHALL BE TAKEN TO PREPARE THE SOIL ADEQUATELY PRIOR TO SOD PLACEMENT. PLANT SPECIES SHALL BE SUITABLE FOR THE ANTICIPATED PEAK FLOW VELOCITY.

DURING 2 TO 3 WEEK ESTABLISHMENT STAGE, SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE IN THE ROOT ZONE AND PREVENT DORMANCY OF SOD.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

STANDARD CONSTRUCTION DETAIL #6-2
SODDED CHANNEL

NOT TO SCALE
(LOOKING DOWNSTREAM)
CHANNEL CROSS-SECTION

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<td>8</td>
<td>88</td>
<td>1234567890</td>
<td>88</td>
</tr>
</tbody>
</table>

NOTES:
FILTER STONE UNDERLayment FOR BED SLOPES ≥ 0.10 FT/FT (10 %) SHALL BE USED.

CHANNEL DIMENSIONS ARE FOR THE COMPLETED CHANNEL AFTER ROCK PLACEMENT. CHANNEL MUST BE OVER-EXCAVATED A SUFFICIENT AMOUNT TO ALLOW FOR THE VOLUME OF ROCK PLACED WITHIN THE CHANNEL WHILE PROVIDING THE SPECIFIED FINISHED DIMENSIONS.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE.

DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

THE MINIMUM ROCK THICKNESS (t) SHALL BE 1.5 TIMES THE MAX ROCK SIZE.

STANDARD CONSTRUCTION DETAIL #6-3
RIPRAP CHANNEL

NOT TO SCALE
NOTES:

TEMPORARY BERMS SHALL BE PLACED, MAINTAINED, AND ADJUSTED CONTINUOUSLY UNTIL 90% VEGETATIVE GROWTH IS ESTABLISHED ON THE EXTERIOR SLOPES WITH PERMANENT STORM DRAINAGE FACILITIES FUNCTIONING.

BERMS SHALL OUTLET TO SLOPE PIPES, CHANNELS, OR OTHER APPROVED MEANS OF CONVEYING RUNOFF TO A SEDIMENT TRAP, SEDIMENT BASIN, OR COLLECTOR CHANNEL.

CHANNEL BEHIND BERM SHALL HAVE POSITIVE GRADE TO OUTLET AND AN APPROPRIATE PROTECTIVE LINING.

BERM SHALL BE ADEQUATELY COMPACTED TO PREVENT FAILURE.

AN ACCEPTABLE ALTERNATIVE TO TOP-OF-SLOPE BERM IS TO CONTINUOUSLY GRADE THE TOP OF FILL TO DIRECT RUNOFF AWAY FROM THE FILLSLOPE TO A COLLECTOR CHANNEL, SEDIMENT TRAP, OR SEDIMENT BASIN.
SLOPE PIPE WITH TRANSVERSE BERM

PROVIDE SUFFICIENT LENGTH (L) OF TRANSVERSE BERM TO DIRECT RUNOFF INTO TEMPORARY SLOPE PIPE, WHEREVER TEMPORARY SLOPE PIPE IS LOCATED AT LOW POINT, NO TRAVERSE BERM IS REQUIRED.

TOP OF SLOPE BERM SHALL EXTEND VERTICALLY ABOVE PIPE FOR 1/2 PIPE DIAMETER OR 12 IN. WHICHEVER IS GREATER.

PLAN VIEW

<table>
<thead>
<tr>
<th>SLOPE PIPE NO.</th>
<th>Outlet Protection Type</th>
<th>Riprap Size or Material</th>
<th>Apron Length (FT)</th>
<th>Apron Width (FT)</th>
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<tbody>
<tr>
<td>88</td>
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<td>R-?</td>
<td>88</td>
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</tbody>
</table>

NOTES:

THE MAXIMUM DISTANCE BETWEEN ANCHOR STAKES SHALL BE 10 FEET.

TRANSVERSE BERM SHALL BE USED WHENEVER TEMPORARY SLOPE PIPE IS NOT LOCATED AT LOW POINT.

SLOPE PIPES SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ANY ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE INLET IMMEDIATELY.

DAMAGED PIPE SECTIONS SHALL BE REPLACED WITHIN 24 HOURS. LEAKING CONNECTIONS SHALL BE REPAIRED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #6-5
TEMPORARY SLOPE PIPE

NOT TO SCALE
NOTES:

BENCHES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT.

BENCHES SHALL BE MAINTAINED TO DESIGN DIMENSIONS AT ALL TIMES.

NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION.

STANDARD CONSTRUCTION DETAIL #6-6
Bench Detail

Not to Scale
NOTES:

ORIFICE DIAMETER MUST BE EQUAL TO OR LESS THAN ARM DIAMETER

A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.

SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.

SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE LANDING DEVICE.

A SEMI-CIRCULAR LANDING ZONE MAY BE SUBSTITUTED FOR THE GUIDE RAILS (STANDARD CONSTRUCTION DETAIL #7-3).

STANDARD CONSTRUCTION DETAIL #7-1
SKIMMER

NOT TO SCALE
### Table 1: Skimmer Specifications

<table>
<thead>
<tr>
<th>BASIN NO.</th>
<th>WATER SURFACE ELEV. WSE (FT)</th>
<th>ORIFICE</th>
<th>SKIMMER ARM (SAd)</th>
<th>FLEXIBLE HOSE</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>DIA. (IN)</td>
<td>HEAD (FT)</td>
<td>LENGTH (SAL FT)</td>
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<tr>
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### Table 2: Riser Specifications

<table>
<thead>
<tr>
<th>TEMPORARY STUB</th>
<th>PERMANENT RISER</th>
<th>RISER EXTENSION</th>
<th>BARREL</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSIDE DIA (IN)</td>
<td>INVERT ELEV TSIE (FT)</td>
<td>CREST ELEV PSCE (FT)</td>
<td>HORIZ OPENING LENGTH (IN) Width (IN)</td>
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### Notes:

- **NOTES:**
  - All orifices on permanent riser below temporary riser extension shall have water-tight temporary seals provided. Temporary stub invert elevation shall be set at or below sediment clean-out elevation.
  - A rope shall be attached to the skimmer arm to facilitate access to the skimmer once installed.
  - Skimmer shall be inspected weekly and after each runoff event. Any malfunctioning skimmer shall be repaired or replaced within 24 hours of inspection.
  - Ice or sediment buildup around the principal spillway shall be removed so as to allow the skimmer to respond to fluctuating water elevations.
  - Sediment shall be removed from the basin when it reaches the level marked on the sediment clean-out stake or the top of the stone berm. See standard construction detail #7-3 for configuration of stone berm.

---

**STANDARD CONSTRUCTION DETAIL #7-2**

**SKIMMER ATTACHED TO PERMANENT RISER**

**NOT TO SCALE**
NOTES:
NO GUIDE RAILS SHALL BE REQUIRED FOR THIS INSTALLATION.
THIS DETAIL SHALL BE USED IN CONJUNCTION WITH STANDARD CONSTRUCTION DETAILS #7-2 AND #7-4.

STANDARD CONSTRUCTION DETAIL #7-3
SKIMMER WITH STONE LANDING BERM

NOT TO SCALE
### Table: Basin and Embankment Details

<table>
<thead>
<tr>
<th>BASIN NO.</th>
<th>Z1 (FT)</th>
<th>Z2 (FT)</th>
<th>TEMP RISER EXT. ELEV TRE (FT)</th>
<th>EMBANKMENT</th>
<th>CLEAN OUT ELEV COE (FT)</th>
<th>BOTTOM ELEV BE (FT)</th>
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</thead>
<tbody>
<tr>
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### Table: Skimmer and Outlet Barrel Details

<table>
<thead>
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<th>DIA (IN)</th>
<th>LENGTH (FT)</th>
<th>MATL</th>
<th>DIA (IN)</th>
<th>INLET ELEV BIE (FT)</th>
<th>MATL</th>
<th>LENGTH (FT)</th>
<th>OUTLET ELEV BOE (FT)</th>
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</tr>
</tbody>
</table>

### Notes:

SEDIMENT BASINS, INCLUDING ALL APPURTEINANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S PLAN DRAWINGS.

AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. IN ORDER TO FACILITATE MAINTENANCE AND RESTORATION, THE POOL AREA SHALL BE CLEARED OF ALL BRUSH, TREES, AND OBJECTIONABLE MATERIAL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LiftS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.

UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED, MULCHED, BLANKETED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.

INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. PROVIDE ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE E&S PLAN.

BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS SHALL BE INSPECTED FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE IMMEDIATELY. DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATER SHALL BE REPLACED IMMEDIATELY.

ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.

**STANDARD CONSTRUCTION DETAIL #7-4**

**SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS - SKIMMER**

**NOT TO SCALE**
STANDARD CONSTRUCTION DETAIL #7-5
TRASH RACK AND ANTI-VORTEX DEVICE

#4 BARS (TYP) WELDED TO THE ANGLES AND AT EACH INTERSECTION OF THE BARS.

STEEL PLATE (3/16 IN. THICKNESS)

ANTIVORTEX DEVICE

T = THICKNESS OF RISER PIPE
D = DIAMETER OF RISER PIPE
d = DIAMETER OF OUTLET PIPE

L = D + d + 2T
* ALSO REFER TO SEDIMENT BASIN TEMPORARY RISER, EMERGENCY SPILLWAY, ENERGY DISSIPATER, TRASH RACK AND ANTI-VORTEX DEVICE, AND SEDIMENT STORAGE DEWATERING FACILITY DETAILS.

<table>
<thead>
<tr>
<th>BASIN NO.</th>
<th>Z1 (FT)</th>
<th>Z2 (FT)</th>
<th>DIAM. TRD (IN)</th>
<th>CREST ELEV. (FT)</th>
<th>MAT'L</th>
<th>DIA. BD (IN)</th>
<th>INLEY ELEV. (FT)</th>
<th>MAT'L</th>
<th>LENGTH (FT)</th>
<th>OUTLET ELEV. (BOE) (FT)</th>
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</thead>
<tbody>
<tr>
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<td>888</td>
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</tbody>
</table>

**NOTES:**

SEDIMENT BASINS, INCLUDING ALL APPURTEINANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S PLAN DRAWINGS.

AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS. UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.

ACCESS SHALL BE PROVIDED FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES.

A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE E&S PLAN.

INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. CHECK BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE MADE IMMEDIATELY. DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATER SHALL BE REPLACED IMMEDIATELY. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.

**STANDARD CONSTRUCTION DETAIL #7-6**

**SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS**

**PERFORATED RISER**

**NOT TO SCALE**
* SEE STANDARD CONSTRUCTION DETAIL #7-5, TRASH RACK AND ANTI-VORTEX DEVICE
** LOWEST ROW OF HOLES AT SEDIMENT CLEAN-OUT ELEVATION

<table>
<thead>
<tr>
<th>BASIN NO.</th>
<th>TEMPORARY RISER</th>
<th>PERFORATIONS</th>
<th>CONCRETE BASE</th>
<th>BARREL</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>DIA TRd (IN)</td>
<td>CREST ELEV TRCE (FT)</td>
<td>MAT'L</td>
<td>LOWEST ROW OF HOLES ELEV (FT)</td>
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NOTES:

A MINIMUM OF 2--#8 REBAR SHALL BE PLACED AT RIGHT ANGLES AND PROJECTING THROUGH SIDES OF RISER TO ANCHOR IT TO CONCRETE BASE. REBAR SHALL PROJECT A MINIMUM OF 1/4 RISER DIAMETER BEYOND OUTSIDE OF RISER.

CONCRETE BASE SHALL BE POURED IN SUCH A MANNER SO AS TO INSURE THAT CONCRETE FILLS BOTTOM OF RISER TO INVERT OF THE OUTLET PIPE TO PREVENT RISER FROM BREAKING AWAY FROM THE BASE. MINIMUM BASE WIDTH EQUALS 2 TIMES RISER DIAMETER.

EMBEDDED SECTION OF ALUMINUM OR ALUMINIZED PIPE SHALL BE PAINTED WITH ZINC CHROMATE OR EQUIVALENT.

CLOGGED OR DAMAGED SPILLWAYS SHALL BE REPAIRED IMMEDIATELY. TRASH AND OTHER DEBRIS SHALL BE REMOVED FROM THE BASIN AND RISER.

STANDARD CONSTRUCTION DETAIL #7-7
SEDIMENT BASIN TEMPORARY RISER
NOT TO SCALE
EMBANKMENT SECTION ALONG PRINCIPAL SPILLWAY

<table>
<thead>
<tr>
<th>BASIN NO.</th>
<th>Z1 (FT)</th>
<th>Z2 (FT)</th>
<th>Dia Trd (IN)</th>
<th>Crest Elev Trce (FT)</th>
<th>Mat'L</th>
<th>Temp Risr Ext Elev Tre (FT)</th>
<th>Dia Bd (IN)</th>
<th>Inley Elev Bie (FT)</th>
<th>Mat'L</th>
<th>Length Bi (FT)</th>
<th>Outlet Elev Boe (FT)</th>
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</thead>
<tbody>
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EMBANKMENT

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<tr>
<th>Top Elev ETE (FT)</th>
<th>Top Width Etw (FT)</th>
<th>Key Trench Depth (FT)</th>
<th>Key Trench Width (FT)</th>
<th>Cleanout Elev Coe (FT)</th>
<th>Bottom Elev Be (FT)</th>
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<tr>
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</table>

NOTES:

SEDIMENT BASINS, INCLUDING ALL APPURTENANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S PLAN DRAWINGS.

AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS. UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.

ALL SEDIMENT BASINS SHALL BE INSPECTED ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT.

ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES SHALL BE PROVIDED.

A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE E&S PLAN.

BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS SHALL BE CHECKED FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE MADE IMMEDIATELY. DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATOR SHALL BE REPLACED IMMEDIATELY. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS INSIDE THE BASIN STABILIZED BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 MAY BE USED TO Dewater SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.

STANDARD CONSTRUCTION DETAIL #7-8
SEDIMENT BASIN DETENTION POND EMBANKMENT AND SPILLWAY DETAILS

NOT TO SCALE
*SEE STANDARD CONSTRUCTION DETAIL #7–5, TRASH RACK AND ANTI–VORTEX DEVICE AND STANDARD CONSTRUCTION DETAIL #7–7, SEDIMENT BASIN TEMPORARY RISER. TOP OF TEMPORARY RISER EXTENSION (TRE) SHALL BE EQUAL TO OR ABOVE TEMPORARY RISER CREST ELEVATION (TRCE) AND 6 IN. MIN. BELOW CREST OF EMERGENCY SPILLWAY. REMOVE FLAT GRATE FROM PERMANENT RISER FOR AS LONG AS BASIN FUNCTIONS AS A SEDIMENT REMOVAL BMP.

** LOWEST ROW OF HOLES AT SEDIMENT CLEAN-OUT ELEVATION

<table>
<thead>
<tr>
<th>BASIN NO.</th>
<th>TEMPORARY RISER</th>
<th>PERFORATIONS</th>
<th>CONCRETE BASE</th>
</tr>
</thead>
<tbody>
<tr>
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<td>DIAM. TRd (IN)</td>
<td>CREST ELEV. TRCE (FT)</td>
<td>MAT'L</td>
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<th>BASIN NO.</th>
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<th>PERMANENT STRUCTURE</th>
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<td>CREST ELEV. SBIE (FT)</td>
<td>MAT'L</td>
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NOTES:

A MINIMUM OF 2–#8 REBAR SHALL BE PLACED AT RIGHT ANGLES AND PROJECTING THROUGH SIDES OF RISER TO锚ANCHOR IT TO CONCRETE BASE. REBAR SHALL PROJECT A MINIMUM OF 1/4 RISER DIAMETER BEYOND OUTSIDE OF RISER.

CONCRETE BASE SHALL BE Poured IN SUCH A MANNER SO AS TO INSURE THAT CONCRETE FILLS BOTTOM OF RISER TO INVERT OF THE OUTLET PIPE TO PREVENT RISER FROM BREAKING AWAY FROM THE BASE. MINIMUM BASE WIDTH EQUALS 2 TIMES RISER DIAMETER.

EMBEDDED SECTION OF ALUMINUM OR ALUMINIZED PIPE SHALL BE PAINTED WITH ZINC CHROMATE OR EQUIVALENT.

CLOGGED OR DAMAGED SPILLWAYS SHALL BE REPAIRED IMMEDIATELY. TRASH AND OTHER DEBRIS SHALL BE REMOVED FROM THE BASIN AND RISER.

STANDARD CONSTRUCTION DETAIL #7-9
SEDIMENT BASIN/DETENTION POND RISER STRUCTURES

NOT TO SCALE
NOTES:

1. 3/4 in. Pressure treated plywood box with 2 in. x 2 in. pressure treated corner supports, set into 1-1/2 in. grate offsets, caulk all seams to form watertight seals.
2. Trash rack composed of 1 in. x 1 in. x 1/8 in. L (typ.) and #4 bars (typ.) welded to the angles and at each intersection of the bars; #4 bars spaced at half the diameter of the barrel max.

BOX SHALL BE BOLTED, STRAPPED, OR OTHERWISE SECURED TO THE PERMANENT RISER.

TOP OF TEMPORARY RISER EXTENSION SHALL BE AT LEAST AS HIGH AS SEDIMENT BASIN TEMPORARY RISER AND SHALL BE 6 IN. (MINIMUM) BELOW CREST OF EMERGENCY SPILLWAY.

ALL JOINTS SHALL BE WATER TIGHT.

CLOGGED OR DAMAGED SPILLWAYS SHALL BE REPAIRED IMMEDIATELY. TRASH AND OTHER DEBRIS SHALL BE REMOVED FROM THE BASIN AND RISER.

STANDARD CONSTRUCTION DETAIL #7-10
TEMPORARY RISER EXTENSION AND
TRASH RACK FOR PERMANENT STRUCTURE

NOT TO SCALE
* SEE STANDARD CONSTRUCTION DETAIL #7-5, TRASH RACK AND ANTI-VORTEX DEVICE

<table>
<thead>
<tr>
<th>BASIN NO.</th>
<th>TEMPORARY RISER</th>
<th>PERFORATIONS</th>
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<th>BARREL</th>
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<td>12345 88</td>
<td>88 8888.88</td>
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NOTES:

A MINIMUM OF 2—#8 REBAR SHALL BE PLACED AT RIGHT ANGLES AND PROJECTING THROUGH SIDES OF RISER TO ANCHOR IT TO CONCRETE BASE. REBAR SHALL PROJECT A MINIMUM OF 1/4 RISER DIAMETER BEYOND OUTSIDE OF RISER.

CONCRETE BASE SHALL BE POURED IN SUCH A MANNER SO AS TO INSURE THAT CONCRETE FILLS BOTTOM OF RISER TO INVERT OF THE OUTLET PIPE TO PREVENT RISER FROM BREAKING AWAY FROM THE BASE. MINIMUM BASE WIDTH EQUALS 2 TIMES RISER DIAMETER.

EMBEDDED SECTION OF ALUMINUM OR ALUMINIZED PIPE SHALL BE PAINTED WITH ZINC CHROMATE OR EQUIVALENT.

CLOGGED OR DAMAGED SPILLWAYS SHALL BE REPAIRED IMMEDIATELY. TRASH AND OTHER DEBRIS SHALL BE REMOVED FROM THE BASIN AND RISER.

STANDARD CONSTRUCTION DETAIL #7-11
DRY SEDIMENT BASIN TEMPORARY RISER

NOT TO SCALE
EMBANKMENT SECTION ALONG EMERGENCY SPILLWAY

<table>
<thead>
<tr>
<th>BASIN NO.</th>
<th>Z3 (FT)</th>
<th>Z4 (FT)</th>
<th>TOP ELEV. WTE (FT)</th>
<th>CREST ELEV. WCE (FT)</th>
<th>WIDTH Ww (FT)</th>
<th>RIPRAP SIZE (R—I)</th>
<th>RIPRAP THICK. Lrt (IN)</th>
<th>Z5 (FT)</th>
<th>DEPTH Cd (FT)</th>
<th>LENGTH DI (FT)</th>
<th>WIDTH Dw (FT)</th>
<th>RIPRAP SIZE (R—I)</th>
<th>RIPRAP THICK. Drt (IN)</th>
</tr>
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</tbody>
</table>

NOTES:

DIMENSION PI SHALL BE 5' MINIMUM.
DISPLACED RIPRAP WITHIN THE SPILLWAY AND/OR OUTLET CHANNEL SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #7-12
SEDIMENT BASIN EMERGENCY SPILLWAY
WITH RIPRAP LINING

NOT TO SCALE
OVERLAPPED TERMINAL END OF TRM

KEY TRENCH AT TOE OF SLOPE OF SPILLWAY

PLAN VIEW
RIPRAP OUTLET DISSIPATOR

EMBANKMENT SECTION ALONG EMERGENCY SPILLWAY
SECTION X–X

<table>
<thead>
<tr>
<th>BASIN NO.</th>
<th>Z3 (FT)</th>
<th>Z4 (FT)</th>
<th>TOP ELEV. WTE (FT)</th>
<th>CREST ELEV. WCE (FT)</th>
<th>WIDTH Ww (FT)</th>
<th>TRM TYPE</th>
<th>STAPLE PATTERN</th>
<th>Z5 (FT)</th>
<th>DEPTH Cд (FT)</th>
<th>LENGTH DI (FT)</th>
<th>WIDTH Dw (FT)</th>
<th>RIPRAPH SIZE (R—)</th>
<th>RIPRAPH THICK. DRt (IN)</th>
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NOTES:

HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING.

DISPLACED LINER WITHIN THE SPILLWAY AND/OR OUTLET CHANNEL SHALL BE REPLACED IMMEDIATELY.

RIPRAP AT TOE OF EMBANKMENT SHALL BE EXTENDED A SUFFICIENT LENGTH IN BOTH DIRECTIONS TO PREVENT SCOUR.

THE USE OF BAFFLES THAT REQUIRE SUPPORT POSTS ARE RESTRICTED FROM USE IN BASINS REQUIRING IMPERVIOUS LINERS.

STANDARD CONSTRUCTION DETAIL #7-13
SEDIMENT BASIN EMERGENCY SPILLWAY WITH TRM LINING

NOT TO SCALE
NOTES:

SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.

AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION

IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.

BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.

SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.

DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.

BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

STANDARD CONSTRUCTION DETAIL #7-14

BAFFLE

NOT TO SCALE
NOTES:

COLLAR SHALL BE OF SAME GAGE AND WITH SAME COATING AS PIPE WITH WHICH IT IS USED.

INSTALL WITH CORRUGATIONS VERTICAL.

MINIMUM DISTANCE TO PIPE JOINT SHALL BE 2 FEET.

ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT. THE LAP BETWEEN THE TWO HALF SECTIONS AND BETWEEN THE PIPE AND CONNECTING BAND SHALL BE CAULKED WITH ASPHALT MASTIC AT TIME OF INSTALLATION.

COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

STANDARD CONSTRUCTION DETAIL #7-15
METAL ANTI-SEEPE COLLAR FOR TEMPORARY BASINS OR TRAPS

NOT TO SCALE
12 IN. THICK (MIN.)
CAST-IN-PLACE OR PRECAST
CONCRETE COLLAR (MIN. 2000 PSI)

PROVIDE WATERTIGHT CONNECTION

<table>
<thead>
<tr>
<th>BASIN OR TRAP NO.</th>
<th>PIPE SIZE (IN)</th>
<th>S (IN)</th>
<th>NO. OF COLLARS</th>
<th>RISER TO FIRST COLLAR (FT)</th>
<th>COLLAR SPACING (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>88</td>
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</tbody>
</table>

NOTES:

ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT.

COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

STANDARD CONSTRUCTION DETAIL #7-16
CONCRETE ANTI-SEEP COLLAR FOR
PERMANENT BASINS OR TRAPS

NOT TO SCALE
NOTES:
A CONCRETE CRADLE MAY BE USED IN CONJUNCTION WITH ANTI-SEEPE COLLARS AND/OR FILTER DIAPHRAGM.
ANTI-SEEPE COLLAR NUMBER, SIZE AND SPACING SHALL BE AS SHOWN ELSEWHERE IN PLAN.
FILTER DIAPHRAGM LOCATION (Lfd) SHALL BE AS SHOWN IN FIGURE 7.8 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #7-17
CONCRETE CRADLE FOR BASIN OR TRAP OUTLET BARREL

NOT TO SCALE
30 TO 55 GALLON BARREL WITH 1 IN DIA.
PERFORATIONS AT 6 IN. HORIZONTAL AND 6 IN.
VERTICAL SPACING

PLACE 2 IN. x 2 IN. VERTICAL WOOD SLATS @ 6
IN. HORIZONTAL SPACING AROUND THE BARREL

WRAP FILTER FABRIC AROUND THE BARREL AND
SLATS

NOTES:

DEWATERING FACILITY SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF BASIN/TRAP.

PRIOR TO INITIATING OPERATION OF DEWATERING FACILITY, ALL ACCUMULATED SEDIMENT SHALL
BE CLEARED FROM THE INSIDE OF THE BARREL.

DEWATERING FACILITY SHALL BE CONTINUOUSLY MONITORED DURING OPERATION. IF FOR ANY
REASON THE DEWATERING FACILITY CEASES TO FUNCTION PROPERLY, IT SHALL BE IMMEDIATELY
SHUT DOWN AND NOT RESTARTED UNTIL THE PROBLEM HAS BEEN CORRECTED.

STANDARD CONSTRUCTION DETAIL #7-18
SEDIMENT BASIN OR SEDIMENT TRAP
SEDIMENT STORAGE DEWATERING FACILITY

NOT TO SCALE
### Table: Sediment Traps Details

<table>
<thead>
<tr>
<th>TRAP NO.</th>
<th>Z1 (FT)</th>
<th>Z2 (FT)</th>
<th>H (FT)</th>
<th>h (FT)</th>
<th>EMBANK. TOP ELEV. (FT)</th>
<th>SPILLWAY CREST ELEV. (FT)</th>
<th>CLEAN OUT ELEV. (FT)</th>
<th>BOTTOM ELEV. (FT)</th>
<th>SPILLWAY WIDTH SW (FT)</th>
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### Notes:

- Embankment outlet shall be composed entirely of rock above cleanout elevation (COE); main body R-3 or larger -- R-4 to be used for drainage areas greater than 3.0 acres, inside face AASHTO #57 stone or smaller. A 6 in. thick layer of compost, compost sock, or clean sand shall be installed on top of the AASHTO #57 stone and securely anchored in HQ watersheds. 24 in. diameter compost sock(s) shall be used in place of filter fabric and AASHTO #57 stone in EV watersheds.

- Fill material for the embankments shall be free of roots, or other woody vegetation, organic material, large stones, and other objectionable materials. The embankment shall be compacted in layered lifts of not more than 9 in. The maximum rock size shall be no greater than 6 in.

- Upon completion, the embankment shall be seeded and mulched or otherwise stabilized according to the specifications of the E&S Plan drawings.

- All sediment traps shall be inspected at least weekly and after each runoff event.

- Access for sediment removal and other required maintenance activities shall be provided.

- A cleanout stake shall be placed near the center of each trap. Accumulated sediment shall be removed when it has reached the cleanout elevation on the stake and the trap restored to its original dimensions. Dispose of materials removed from the trap in the manner described in the E&S Plan.

- Check embankments, spillways, and outlets for erosion, piping and settlement. Clogged or damaged spillways and/or embankments shall be immediately restored to the design specifications.

- Displaced riprap within the spillway or outlet protection shall be replaced immediately.

- Accumulated sediment shall be removed and disturbed areas inside the trap shall be stabilized before conversion to a stormwater management facility. To assist in removing sediment, which may be saturated, a device such as is shown in standard construction detail #7-18 may be used to dewater the sediment prior to its removal.

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**STANDARD CONSTRUCTION DETAIL #8-1**  
**EMBANKMENT SEDIMENT TRAP**

---

**NOT TO SCALE**
NOTES:

SEE DETAIL #8–3 TEMPORARY RISER FOR DETAILS OF THE TEMPORARY RISER CONSTRUCTION.

FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED UFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.

UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS.

ALL SEDIMENT TRAPS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT.

ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES SHALL BE PROVIDED.

A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH TRAP. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE TRAP IN THE MANNER DESCRIBED IN THE E&S PLAN.

CHECK EMBANKMENTS, SPILLWAYS, AND OUTLETS FOR EROSION, PIPING AND SETTLEMENT. CLOGGED OR DAMAGED SPILLWAYS AND/OR EMBANKMENTS SHALL BE IMMEDIATELY RESTORED TO THE DESIGN SPECIFICATIONS.

DISPLACED RIPRAP WITHIN THE OUTLET PROTECTION SHALL BE REPLACED IMMEDIATELY.

ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS INSIDE THE TRAP SHALL BE STABILIZED BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. TO ASSIST IN REMOVING SEDIMENT, WHICH MAY BE SATURATED, A DEVICE SUCH AS IS SHOWN IN STANDARD CONSTRUCTION DETAIL #7–18 MAY BE USED TO DEWATER THE SEDIMENT PRIOR TO ITS REMOVAL.

STANDARD CONSTRUCTION DETAIL #8-2
BARREL/RISER SEDIMENT TRAP

NOT TO SCALE
* SEE STANDARD CONSTRUCTION DETAIL #7-5, TRASH RACK AND ANTI-VORTEX DEVICE
** LOWEST HOLE AT SEDIMENT CLEAN-OUT ELEVATION

<table>
<thead>
<tr>
<th>TRAP NO.</th>
<th>DIA TRd (IN)</th>
<th>CREST ELEV TRCE (FT)</th>
<th>MAT'L</th>
<th>CLEAN OUT ELEV. COE (FT)</th>
<th>LENGTH CBI (IN)</th>
<th>WIDTH CBw (IN)</th>
<th>THICK. CBT (IN)</th>
<th>INLET ELEV. BIE (FT)</th>
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NOTES:

A MINIMUM OF 2—#8 REBAR SHALL BE PLACED AT RIGHT ANGLES AND PROJECTING THROUGH SIDES OF RISER TO ANCHOR IT TO CONCRETE BASE. REBAR SHALL PROJECT A MINIMUM OF 1/4 RISER DIAMETER BEYOND OUTSIDE OF RISER.

CONCRETE BASE SHALL BE POURED IN SUCH A MANNER SO AS TO INSURE THAT CONCRETE FILLS BOTTOM OF RISER TO INVERT OF THE OUTLET PIPE TO PREVENT RISER FROM BREAKING AWAY FROM THE BASE. MINIMUM BASE WIDTH EQUALS 2 TIMES RISER DIAMETER.

EMBEDDED SECTION OF ALUMINUM OR ALUMINIZED PIPE SHALL BE PAINTED WITH ZINC CHROMATE OR EQUIVALENT.

CLOGGED OR DAMAGED SPILLWAYS SHALL BE REPAIRED IMMEDIATELY. TRASH AND OTHER DEBRIS SHALL BE REMOVED FROM THE BASIN AND RISER.

STANDARD CONSTRUCTION DETAIL #8-3
SEDIMENT TRAP TEMPORARY RISER

NOT TO SCALE
TRAP NO. | Z1 (FT) | Z2 (FT) | MAT'L | RISER | DIAM. (IN) | CREST ELEV (FT) | BOT PERF ELEV (FT) | MAT'L | DIA. (IN) | INLET ELEV (FT) | LENGTH BI (FT) | OUTLET ELEV BOE (FT) | TOP ELEV ETE (FT) | TOP WIDTH Etw (FT) | TOP WIDTH Etw (FT) | CLEAN OUT ELEV COE (FT) | BOTTOM ELEV BE (FT) | CONCRETE BASE | OUTLET BASIN
88 | 88 | 88 | 12345 | 88 | 8888.88 | 8888.88 | 12345 | 88 | 8888.88 | 8888.88 | 8888.88 | 8888.88 | 8888.88 | 8888.88

**NOTES:**

SEE DETAIL #8–5 DRY SEDIMENT TRAP TEMPORARY RISER FOR DETAILS OF THE TEMPORARY RISER CONSTRUCTION.

IN SPECIAL PROTECTION – HQ OR EV – WATERSHEDS, ADD 6 IN. LAYER OF COMPOST ON TOP OF STONE OR REPLACE STONE WITH SUITABLE COMPOST FILTER SOCK.

FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LiftS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.

UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS.

ALL SEDIMENT TRAPS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT.

ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES SHALL BE PROVIDED.

A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH TRAP. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE TRAP IN THE MANNER DESCRIBED IN THE E&S PLAN.

CHECK EMBANKMENTS, SPILLWAYS, AND OUTLETS FOR EROSION, PIPING AND SETTLEMENT. CLOGGED OR DAMAGED SPILLWAYS AND/OR EMBANKMENTS SHALL BE IMMEDIATELY RESTORED TO THE DESIGN SPECIFICATIONS.

DISPLACED RIPRAP WITHIN THE OUTLET PROTECTION SHALL BE REPLACED IMMEDIATELY.

ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS INSIDE THE TRAP SHALL BE STABILIZED BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. TO ASSIST IN REMOVING SEDIMENT, WHICH MAY BE SATURATED, A DEVICE SUCH AS IS SHOWN IN STANDARD CONSTRUCTION DETAIL #7–18 MAY BE USED TO DEWATER THE SEDIMENT PRIOR TO ITS REMOVAL.

**STANDARD CONSTRUCTION DETAIL #8-4**

**DRY BARREL/RISER SEDIMENT TRAP**

NOT TO SCALE
### Standard Construction Detail #7-5

**Trash Rack and Anti-Vortex Device**

*See standard construction detail #7-5, trash rack and anti-vortex device*

<table>
<thead>
<tr>
<th>Trap No.</th>
<th>Dia Trd (in)</th>
<th>Crest Elev Trce (ft)</th>
<th>Matl</th>
<th>Coe Elev (ft)</th>
<th>Length Cbi (in)</th>
<th>Width Cbw (in)</th>
<th>Thickness Cbt (in)</th>
<th>Inlet Elev Cbi (ft)</th>
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**Notes:**

In Special Protection Watersheds, anchor a 6 in. layer of compost shall be securely anchored on top of stone (HQ) or replace stone with suitable compost filter sock (HQ or EV).

A minimum of 2-#8 rebar shall be placed at right angles and projecting through sides of riser to anchor it to concrete base. Rebar shall project a minimum of 1/4 riser diameter beyond outside of riser.

Concrete base shall be poured in such a manner so as to insure that concrete fills bottom of riser to invert of the outlet pipe to prevent riser from breaking away from the base. Minimum base width equals 2 times riser diameter.

Embedded section of aluminum or aluminized pipe shall be painted with zinc chromate or equivalent.

Clogged or damaged spillways shall be repaired immediately. Trash and other debris shall be removed from the basin and riser.

**Standard Construction Detail #8-5**

**Dry Sediment Trap Temporary Riser**

*Not to Scale*
NOTES:

ALL SEDIMENT TRAP OUTLET BASINS SHALL BE INSPECTED ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT.

DISPLACED RIPRAP WITHIN THE OUTLET BASIN SHALL BE REPLACED IMMEDIATELY.

SIDE SLOPES SHALL NOT EXCEED 1.5H:1V.

STANDARD CONSTRUCTION DETAIL #8-6
SEDIMENT TRAP OUTLET BASIN DETAIL

NOT TO SCALE
### Fabricated Steel Riser Detail

<table>
<thead>
<tr>
<th>TRAP NO.</th>
<th>Z1 (FT)</th>
<th>Z2 (FT)</th>
<th>FABRICATED RISER</th>
<th>STEEL RISER ELEV. SRE (FT)</th>
<th>PERF. ELEV COE (FT)</th>
<th>STORM SEWER INVERT ELEV. SSIE (FT)</th>
<th>INLET CREST ELEV. ICE (FT)</th>
<th>EMBANK. TOP ELEV. ETE (FT)</th>
<th>BOTTOM ELEV. BE (FT)</th>
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</table>

**NOTES:**

FILL MATERIAL FOR THE BERM SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE BERM SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS. ELEVATION BTE SHALL BE MINIMUM 24 IN. ABOVE INLET CREST ELEVATION (ICE).

UPON COMPLETION, THE BERM SHALL BE SEEDED, MULCHED, BLANKETED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E& S PLAN DRAWINGS. ALL SEDIMENT TRAPS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT.

ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES SHALL BE PROVIDED.

A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH TRAP. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE TRAP IN THE MANNER DESCRIBED IN THE E& S PLAN.

CHECK BERMS FOR EROSION, PIPING AND SETTLEMENT. CLOGGED OR DAMAGED INLETS SHALL BE IMMEDIATELY RESTORED TO THE DESIGN SPECIFICATIONS.

REMOVE ACCUMULATED SEDIMENT AND STABILIZE DISTURBED AREAS INSIDE THE TRAP BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY.

**STANDARD CONSTRUCTION DETAIL #8-7**

**TYPE M INLET SEDIMENT TRAP**

**NOT TO SCALE**
ELEV. AT 1.5 CFS PER ACRE DISCHARGE
TRASH RACK AND ANTI-VORTEX DEVICE
TRCE (2000 CF/AC)
BOTTOM HOLE AT COE (700 CF/AC) THEN ONE 1 IN. DIA. HOLE PER VERT. FT.

12 IN. MIN.
5 FT. MIN.

Z1
Z2
1:1 MAX
1:1 MAX
EARTHEN BERM

Z1
Z2

Bi

GEOTEXTILE OUTLET BASIN

TRASH RACK (SEE TRASH RACK DETAIL)

RT
D

OBL

BIE

OBL

BE

GEOTEXTILE OUTLET BASIN

TYPE M INLET

1 IN. DIA HOLE AT TOP OF SEDIMENT STORAGE ZONE

PLUG WITH WATERPROOF MATERIAL OR PLATE

TRAP NO. Z1 (FT) Z2 (FT) TRAP NO. Z1 (FT) Z2 (FT)
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88
88
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12345
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8888.88

RISER

BARREL

BOT ELEV (FT)
PERF ELEV (FT)
MAT'L
DIAM (IN)
INLET ELEV BIE (FT)
LENGTH Bi (FT)
OUTLET ELEV BOE (FT)

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EMBANKMENT CLEAN OUT ELEV ELEV COE (FT) (FT)

OUTLET BASIN

TOP ELEV ETE (FT)
TOP WIDTH Etw (FT)
BOTTOM ELEV BIE (FT)

RIPRIP SIZE (R--
(FT)
ROCKTHICKNESS Rt (IN)
DEPTH D (IN)
WIDTH OBW (FT)
LENGTH OBL (FT)

88
88
88
88
88
88

NOTES:
FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.

UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS.

ALL SEDIMENT TRAPS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT.

ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES SHALL BE PROVIDED.

A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH TRAP. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE TRAP IN THE MANNER DESCRIBED IN THE E&S PLAN.

CHECK EMBANKMENTS, SPILLWAYS, AND OUTLETS FOR EROSION, PIPING AND SETTLEMENT. CLOGGED OR DAMAGED SPILLWAYS AND/OR EMBANKMENTS SHALL BE IMMEDIATELY RESTORED TO THE DESIGN SPECIFICATIONS. DISPLACED RIPRAP WITHIN THE OUTLET PROTECTION SHALL BE REPLACED IMMEDIATELY.

ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS INSIDE THE TRAP SHALL BE STABILIZED BEFORE CONVERSION TO STORMWATER MANAGEMENT FACILITY.

STANDARD CONSTRUCTION DETAIL #8-8
CONCRETE RISER WITH TEMPORARY DEWATERING HOLES

NOT TO SCALE
<table>
<thead>
<tr>
<th>OUTLET NO.</th>
<th>PIPE DIA Pd (IN)</th>
<th>RIPRAP SIZE R-</th>
<th>THICK. Rt (IN)</th>
<th>LENGTH A1 (FT)</th>
<th>APRON INITIAL WIDTH Aiw (FT)</th>
<th>TERMINAL WIDTH Atw (FT)</th>
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NOTES:

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-1

RIPRAP APRON AT PIPE OUTLET

WITH FLARED END SECTION OR ENDWALL

NOT TO SCALE
OUTLET NO. | PIPE DIAM (IN) | RIPRAP | APRON |
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</tr>
<tr>
<td>88</td>
<td>88</td>
<td>88</td>
<td>88</td>
</tr>
</tbody>
</table>

NOTES:

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

EXTEND RIPRAP ON BACK SIDE OF APRON TO AT LEAST 1/2 DEPTH OF PIPE ON BOTH SIDES TO PREVENT SCOUR AROUND THE PIPE.

STANDARD CONSTRUCTION DETAIL #9-2
RIPRAP APRON AT PIPE OUTLET
NO FLARED ENDWAll

NOT TO SCALE
NOTES:

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-3
RIPRAP APRON AT PIPE OUTLET TO AN EXISTING CHANNEL

<table>
<thead>
<tr>
<th>OUTLET NO.</th>
<th>PIPE DIA (IN)</th>
<th>RIPRAP</th>
<th>APRON</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SIZE</td>
<td>THICK.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R--</td>
<td>Rt (IN)</td>
</tr>
<tr>
<td>88</td>
<td>88</td>
<td>8</td>
<td>88</td>
</tr>
</tbody>
</table>

NOT TO SCALE
NOTES:
RIPRAP THICKNESS SHALL BE 1.5 TIMES THE MAXIMUM STONE SIZE.

STANDARD CONSTRUCTION DETAIL #9-4
STILLING BASIN

<table>
<thead>
<tr>
<th>OUTLET NO.</th>
<th>X (FT)</th>
<th>h (FT)</th>
<th>RIPRAP SIZE (IN)</th>
<th>d50 STONE SIZE (IN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>88</td>
<td>88</td>
<td>88</td>
<td>8</td>
<td>88</td>
</tr>
</tbody>
</table>
SECTION A–A

0.00% GRADE

MAX. GRADE OF 1.00% FOR A TRANSITION OF 20 FT. MIN.

DIVERSION DIKE

PLAN VIEW

VEGETATED DIVERSION

TRANSITION TO 0.00% GRADE

ISOMETRIC VIEW

STANDARD CONSTRUCTION DETAIL #9-5
EARTHEN LEVEL SPREADER

NOT TO SCALE
NOTES:
THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER THE LOT EXTENDS MORE THAN 150 FEET ABOVE THE ROADWAY OR WHERE RUNOFF FORM AREAS ABOVE THE LOT IS NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNEL.

STANDARD CONSTRUCTION DETAIL #10-1
TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

NOT TO SCALE
NOTES:

THE AREA DOWNSLOPE OF THE FILTER FENCE/COMPOST SOCK BARRIER/SEDIMENT FILTER LOG MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED.

STANDARD CONSTRUCTION DETAIL #10-2
TYPICAL ON-LOT BMPs FOR LOT BELOW ROADWAY

NOT TO SCALE
OUTLET SWALE TO STABLE AREA OR ADEQUATE DRAINAGEWAY

FILTER FABRIC FENCE, COMPOST FILTER SOCK OR SEDIMENT FILTER LOG (TYP.)

HOUSE

DIVERSION SWALE

SLOPE

50 FT. MIN.

TOP SOIL

ROCK CONSTRUCTION ENTRANCE

STREET OR ROADWAY

PLAN VIEW

NOTES:

THE AREA DOWNSLOPE OF THE FILTER FENCE/COMPOST SOCK BARRIER/SEDIMENT FILTER LOG MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED.

THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER RUNOFF FROM AREAS ABOVE THE LOT ARE NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNEL.

IN AREAS WHERE SLOPE IS AT AN OBLIQUE ANGLE TO THE ROADWAY, BMPs SHALL BE ADJUSTED ACCORDINGLY.

DIVERSION CHANNEL MAY OUTLET TO ROADSIDE DITCH OR STORM SEWER SYSTEM, BUT NOT ONTO STREET OR ROADWAY.

STANDARD CONSTRUCTION DETAIL #10-3

TYPICAL ON-LOT BMPs FOR LOT ALONG ASCENDING OR DESCENDING ROADWAY

NOT TO SCALE
NOTES:

SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.

PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER’S RECOMMENDATIONS.

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

STANDARD CONSTRUCTION DETAIL #11-1
EROSION CONTROL BLANKET INSTALLATION

NOTE TO SCALE
NOTES:

GRUBBING SHALL NOT TAKE PLACE WITHIN 50 FEET OF TOP-OF-BANK UNTIL ALL MATERIALS REQUIRED TO COMPLETE CROSSING ARE ON SITE AND PIPE IS READY FOR INSTALLATION.

PIPE CULVERT FOR ACCESS ROAD AND FLUME PIPE MAY BE ONE CONTINUOUS PIPE.

TRENCH PLUGS SHALL BE INSTALLED WITHIN THE TRENCH ON BOTH SIDES OF THE STREAM CHANNEL (STANDARD CONSTRUCTION DETAIL #13-4).

WATER ACCUMULATING WITHIN THE WORK AREA SHALL BE PUMPED TO A PUMPED WATER FILTER BAG OR SEDIMENT TRAP PRIOR TO DISCHARGING INTO ANY SURFACE WATER.

HAZARDOUS OR POLLUTANT MATERIAL STORAGE AREAS SHALL BE LOCATED AT LEAST 100 FEET BACK FROM THE TOP OF STREAMBANK.

ALL EXCESS EXCAVATED MATERIAL SHALL BE IMMEDIATELY REMOVED FROM THE STREAM CROSSING AREA.

ALL DISTURBED AREAS WITHIN 50 FEET OF TOP-OF-BANK SHALL BE BLANKETED OR MATTED WITHIN 24 HOURS OF INITIAL DISTURBANCE FOR MINOR STREAMS OR 48 HOURS OF INITIAL DISTURBANCE FOR MAJOR STREAMS UNLESS OTHERWISE AUTHORIZED. APPROPRIATE STREAMBANK PROTECTION SHALL BE PROVIDED WITHIN THE CHANNEL.

STANDARD CONSTRUCTION DETAIL #13-1
TYPICAL UTILITY LINE STREAM CROSSING
WITH OPTIONAL ACCESS ROAD

NOT TO SCALE
NOTES:

GRUBBING SHALL NOT TAKE PLACE WITHIN 50 FEET OF TOP–OF–BANK UNTIL ALL MATERIALS REQUIRED TO COMPLETE CROSSING ARE ON SITE AND PIPE IS READY FOR INSTALLATION.

BYPASS PUMP INTAKE SHALL BE MAINTAINED A SUFFICIENT DISTANCE FROM THE BOTTOM TO PREVENT PUMPING OF CHANNEL BOTTOM MATERIALS.

TRENCH PLUGS SHALL BE INSTALLED WITHIN THE TRENCH ON BOTH SIDES OF THE STREAM CHANNEL (STANDARD CONSTRUCTION DETAIL #13–4).

WATER ACCUMULATING WITHIN THE WORK AREA SHALL BE PUMPED TO A PUMPED WATER FILTER BAG OR SEDIMENT TRAP PRIOR TO DISCHARGING INTO ANY SURFACE WATER.

HAZARDOUS OR POLLUTANT MATERIAL STORAGE AREAS SHALL BE LOCATED AT LEAST 100 FEET BACK FROM THE TOP OF STREAMBANK.

ALL EXCESS EXCAVATED MATERIAL SHALL BE IMMEDIATELY REMOVED FROM THE STREAM CROSSING AREA.

ALL DISTURBED AREAS WITHIN 50 FEET OF TOP–OF–BANK SHALL BE BLANKETED OR MATTED WITHIN 24 HOURS OF INITIAL DISTURBANCE FOR MINOR STREAMS OR 48 HOURS OF INITIAL DISTURBANCE FOR MAJOR STREAMS UNLESS OTHERWISE AUTHORIZED.

APPROPRIATE STREAMBANK PROTECTION SHALL BE PROVIDED WITHIN THE CHANNEL.

STANDARD CONSTRUCTION DETAIL #13-2
TYPICAL UTILITY LINE STREAM CROSSING
WITH PUMP BYPASS

NOT TO SCALE
NOTES:

GRUBBING SHALL NOT TAKE PLACE WITHIN 50 FEET OF TOP–OF–BANK UNTIL ALL MATERIALS REQUIRED TO COMPLETE CROSSING ARE ON SITE AND PIPE IS READY FOR INSTALLATION.

TRENCH PLUGS SHALL BE INSTALLED WITHIN THE TRENCH ON BOTH SIDES OF THE STREAM CHANNEL (STANDARD CONSTRUCTION DETAIL #13–4).

WATER ACCUMULATING WITHIN THE WORK AREA SHALL BE PUMPED TO A PUMPED WATER FILTER BAG OR SEDIMENT TRAP PRIOR TO DISCHARGING INTO ANY SURFACE WATER.

HAZARDOUS OR POLLUTANT MATERIAL STORAGE AREAS SHALL BE LOCATED AT LEAST 100 FEET BACK FROM THE TOP OF STREAMBANK.

ALL EXCESS EXCAVATED MATERIAL SHALL BE IMMEDIATELY REMOVED FROM THE STREAM CROSSING AREA.

ALL DISTURBED AREAS WITHIN 50 FEET OF TOP–OF–BANK SHALL BE BLANKETED OR MATTED WITHIN 24 HOURS OF INITIAL DISTURBANCE FOR MINOR STREAMS OR 48 HOURS OF INITIAL DISTURBANCE FOR MAJOR STREAMS UNLESS OTHERWISE AUTHORIZED.

APPROPRIATE STREAMBANK PROTECTION SHALL BE PROVIDED WITHIN THE CHANNEL.
PA DEP EROSION CONTROL MANUAL TABLE 13.1
MAXIMUM SPACING AND MATERIALS FOR TRENCH PLUGS

<table>
<thead>
<tr>
<th>TRENCH SLOPE (%)</th>
<th>SPACING L (FT)</th>
<th>PLUG MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5</td>
<td>1000</td>
<td>* CLAY, BENTONITE, OR CONCRETE FILLED SACKS</td>
</tr>
<tr>
<td>5 - 15</td>
<td>500</td>
<td>* CLAY, BENTONITE, OR CONCRETE FILLED SACKS</td>
</tr>
<tr>
<td>15 - 25</td>
<td>300</td>
<td>* CLAY, BENTONITE, OR CONCRETE FILLED SACKS</td>
</tr>
<tr>
<td>25 - 35</td>
<td>200</td>
<td>* CLAY, BENTONITE, OR CONCRETE FILLED SACKS</td>
</tr>
<tr>
<td>35 - 100</td>
<td>100</td>
<td>* CLAY, BENTONITE, OR CONCRETE FILLED SACKS</td>
</tr>
<tr>
<td>&gt; 100</td>
<td>50</td>
<td>CEMENT BAGS (WETTED) OR MORTARED STONE</td>
</tr>
</tbody>
</table>

* TOPSOIL MAY NOT BE USED TO FILL SACKS

NOTES:

IMPERVIOUS TRENCH PLUGS ARE REQUIRED FOR ALL STREAM, RIVER, WETLAND, OR OTHER WATER BODY CROSSINGS.