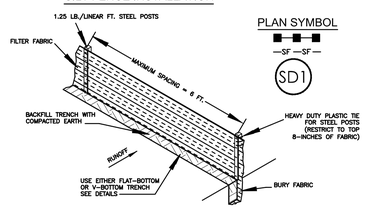
SILT FENCE INSTALLATION



PLAN SYMBOL

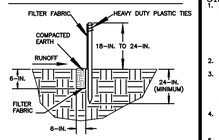
—SF—SF—

SD1

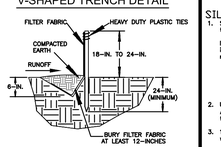
SILT FENCE – GENERAL NOTES

1. Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.
2. Maximum sheet or overland flow path length to the silt fence shall be 100–feet.
3. Maximum slope steepness (normal (perpendicular) to the fence line) shall be 2:1.
4. Silt fence joints, when necessary, shall be completed by one of the following options:
   - Wrap each fabric together at a support post with both ends fastened to the post, with a 1–foot minimum overlap;
   - Overlap silt fence by installing 3–feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy–duty plastic ties; or,
   - Overlap entire width of each silt fence roll from one support post to the next support post.
5. Attach filter fabric to the steel posts using heavy–duty plastic ties that are evenly spaced within the top 8–inches of the fabric.
6. Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
7. Install Silt Fence Checks (Tie–Backs) every 50–100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL



South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC–03 Page 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

SILT FENCE – POST REQUIREMENTS

1. Silt fence posts must be 48–inch long steel posts that meet, at a minimum, the following physical characteristics:
   - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
   - Include a standard "T" section with a nominal face width of 1.38–inches and a nominal "T" length of 1.48–inches.
   - Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17–square inches and be composed of 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
4. Install posts to a minimum of 24–inches. A minimum height of 1– to 2–inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
5. Post spacing shall be at a maximum of 6–feet on center.

SILT FENCE – FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
   - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
   - Free of any treatment or coating which might adversely alter its physical properties after installation;
   - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
   - Have a minimum width of 36–inches.
2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12–inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24–inches above the ground.

SILT FENCE – INSPECTION & MAINTENANCE

1. The key to functional silt fence is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of silt fence shall be conducted once every calendar week and, as recommended, within 24–hours after each rainfall even that produces 1/2–inch or more of precipitation.
3. Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the silt fence.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie–backs and/or reinstall silt fence, as necessary.
7. Check for tears within the silt fence, areas where silt fence has begun to decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence immediately.
8. Silt fence should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

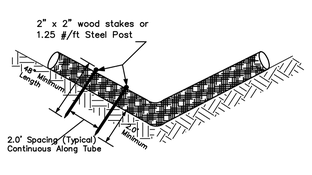
South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC–03 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

SEDIMENT TUBE INSTALLATION



PLAN SYMBOL

ST1

SEDIMENT TUBE SPACING

SLOPE	MAX. SEDIMENT TUBE SPACING
LESS THAN 2%	150-FEET
2%	100-FEET
3%	75-FEET
4%	50-FEET
5%	40-FEET
6%	30-FEET
GREATER THAN 6%	25-FEET

South Carolina Department of Health and Environmental Control

SEDIMENT TUBES

STANDARD DRAWING NO. SC–05 PAGE 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

SEDIMENT AND EROSION CONTROL NOTES

1. If necessary, slopes, which exceed eight (8) vertical feet should be stabilized with synthetic or vegetative mats, in addition to hydroseeding. It may be necessary to install temporary slope drains during construction.
2. Temporary berms may be needed until the slope is brought to grade.
3. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than fourteen (14) days after work has ceased, except as stated below.
4. Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions stabilization measures must be initiated as soon as practicable.
5. Where construction activity on a portion of the Site is temporarily ceased, and earth-disturbing activities will be resumed within 14 days, temporary stabilization measures do not have to be initiated on that portion of the Site.
6. All sediment and erosion control devices shall be inspected every seven (7) days. Damaged or ineffective devices shall be repaired or replaced, as necessary. OR
   All sediment and erosion control devices shall be inspected at least once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. Damaged or ineffective devices shall be repaired or replaced, as necessary.
7. Provide silt fence and/or other control devices, as may be required, to control soil erosion during utility construction. All disturbed areas shall be cleaned, graded, and stabilized with grassing immediately after the utility installation. Fill, cover, and temporary seeding at the end of each day are recommended. If water is encountered while trenching, the water should be filtered to remove any sediments before being pumped back into any waters of the State.
8. All erosion control devices shall be properly maintained during all phases of construction until the completion of all construction activities and all disturbed areas have been stabilized. Additional control devices may be required during construction in order to control erosion and/or offsite sedimentation. All temporary control devices shall be removed once construction is complete and the site is stabilized.
9. The contractor must take necessary action to minimize the tracking of mud onto the paved roadway construction areas. The contractor shall daily remove mud/soil from pavement, as may be required.
10. All waters of the State (WoS), including wetlands, are to be flagged or otherwise clearly marked in the field. A double row of silt fence is to be installed in all areas where a 50-foot buffer can't be maintained between the disturbed area and all WoS. A 10-foot buffer should be maintained between the last row of silt fence and all WoS.
11. Litter, construction debris, oils, fuels, and building products with significant potential for impact (such as stockpiles of freshly treated lumber) and construction chemicals that could be exposed to storm water must be prevented from becoming a pollutant source in storm water discharges.
12. Provide written proof that all off-ste easements have been obtained. (include implementation of all stormwater and sediment controls in the first phase of construction).

PLAN REVISIONS

NO.	DESCRIPTION:	DATE:	BY:
1			
2			
3			
4			
5			
6			
7			
8			

NOT FOR CONSTRUCTION — BIDDING

1.25 LB./LINEAR FT. STEEL POSTS

POST INSTALLATION DETAIL

FILTER FABRIC INSTALLATION DETAIL

BURY & TRENCH MINIMUM OF 12–INCHES OF FILTER FABRIC

FILTER FABRIC BURIAL DETAIL

PLAN SYMBOL

A

South Carolina Department of Health and Environmental Control

Type A

FILTER FABIC INLET PROTECTION

STANDARD DRAWING NO. SC–07 PAGE 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

TYPE A – FILTER FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
   - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
   - Free of any treatment or coating which might adversely alter its physical properties after installation;
   - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
   - Have a minimum width of 36–inches.
2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12–inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24–inches above the ground.

TYPE A – POST REQUIREMENTS

1. Silt Fence posts must be 48–inch long steel posts that meet, at a minimum, the following physical characteristics:
   - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
   - Include a standard "T" section with a nominal face width of 1.38–inches and a nominal "T" length of 1.48–inches.
   - Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Install posts to a minimum of 24–inches. A minimum height of 1– to 2– inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
4. Post spacing shall be at a maximum of 3–feet on center.

TYPE A – INSPECTION & MAINTENANCE

1. The key to functional inlet protection is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of inlet protection shall be conducted once every calendar week and, as recommended, within 24–hours after each rainfall even that produces 1/2–inch or more of precipitation.
3. Attention to sediment accumulations along the filter fabric is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the filter fabric. When a sump is installed in front of the fabric, sediment should be removed when it fills approximately 1/3 the depth of the sump.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the filter fabric, or where the fabric has sagged or collapsed due to runoff overtopping the inlet protection.
7. Check for tears within the filter fabric, areas where fabric has begun to decompose, and for any other circumstance that may render the inlet protection ineffective. Removed damaged fabric and reinstall new filter fabric immediately.
8. Inlet protection structures should be removed after all the disturbed areas are permanently stabilized. Remove all construction material and sediment, and dispose of them properly. Grade the disturbed area to the elevation of the drop inlet structure crest. Stabilize all bare areas immediately.

South Carolina Department of Health and Environmental Control

Type A

FILTER FABIC INLET PROTECTION

STANDARD DRAWING NO. SC–07 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

SEDIMENT TUBES – GENERAL NOTES

1. Sediment tubes may be installed along contours, in drainage conveyance channels, and around inlets to help prevent off–site discharge of sediment–laden stormwater runoff.
2. Sediment tubes are elongated tubes of compacted geotextiles, curled excelsior wood, natural coconut fiber, or hardwood mulch. Straw, pine needle, and leaf mulch–filled sediment tubes are not permitted.
3. The outer netting of the sediment tube should consist of seamless, high–density polyethylene photodegradable materials treated with ultraviolet stabilizers or a seamless, high–density polyethylene non–degradable material.
4. Sediment tubes, when used as checks within channels, should range between 18–inches and 24–inches depending on channel dimensions. Diameters outside this range may be allowed where necessary when approved.
5. Curled excelsior wood, or natural coconut products that are rolled up to create a sediment tube are not allowed.
6. Sediment tubes should be staked using wooden stakes (2–inch X 2–inch) or steel posts (standard "U" or "T" sections with a minimum weight of 1.25 pounds per foot) at a minimum of 48–inches in length placed on 2–foot centers.
7. Install all sediment tubes to ensure that no gaps exist between the soil and the bottom of the tube. Manufacturer's recommendations should always be consulted before installation.
8. The ends of adjacent sediment tubes should be overlapped 6–inches to prevent flow and sediment from passing through the field joint.
9. Sediment tubes should not be stacked on top of one another, unless recommended by manufacturer.
10. Each sediment tube should be installed in a trench with a depth equal to 1/5 the diameter of the sediment tube.
11. Sediment tubes should continue up the side slopes a minimum of 1–foot above the design flow depth of the channel.
12. Install stakes at a diagonal facing incoming runoff.

SEDIMENT TUBES – INSPECTION & MAINTENANCE

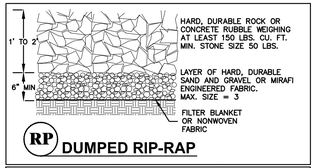
1. The key to functional sediment tubes is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of sediment tubes shall be conducted once every calendar week and, as recommended, within 24–hours after each rainfall even that produces 1/2–inch or more of precipitation.
3. Attention to sediment accumulations in front of the sediment tube is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the sediment tube.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Large debris, trash, and leaves should be removed from in front of tubes when found.
7. If erosion causes the edges to fall to a height equal to or below the height of the sediment tube, repairs should be made immediately to prevent runoff from bypassing tube.
8. Sediment tubes should be removed after the contributing drainage area has been completely stabilized. Permanent vegetation should replace areas from which sediment tubes have been removed.

South Carolina Department of Health and Environmental Control

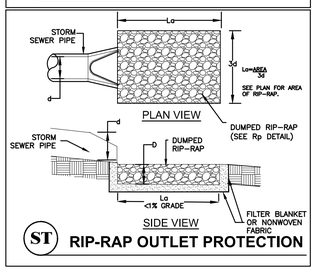
SEDIMENT TUBES

STANDARD DRAWING NO. SC–05 PAGE 2 of 2

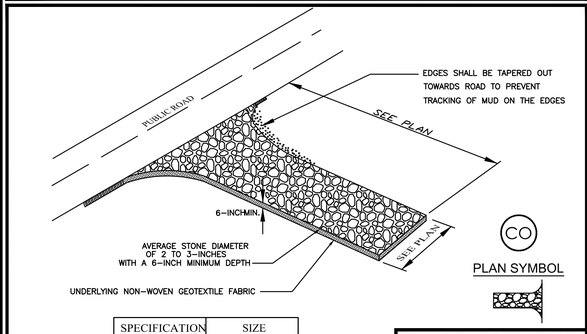
GENERAL NOTES — FEBRUARY 2014 DATE



RP **DUMPED RIP-RAP**



ST **RIP-RAP OUTLET PROTECTION**



SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	SEE PLAN
ROCK PAD LENGTH	SEE PLAN
ROCK PAD STONE SIZE	D = 2–3 INCHES

PLAN SYMBOL

CO

South Carolina Department of Health and Environmental Control

CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. SC–06 PAGE 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

CONSTRUCTION ENTRANCE – GENERAL NOTES

1. Stabilized construction entrances should be used at all points where traffic will egress/ingress a construction site onto a public road or any impervious surfaces, such as parking lots.
2. Install a non–woven geotextile fabric prior to placing any stone.
3. Install a culvert pipe across the entrance when needed to provide positive drainage.
4. The entrance shall consist of 2–inch to 3–inch D50 stone placed at a minimum depth of 6–inches.
   Minimum dimensions of the entrance shall be as shown on plans, and may be modified as necessary to accommodate site constraints.
5. The edges of the entrance shall be tapered out towards the road to prevent tracking at the edge of the entrance.
7. Divert all surface runoff and drainage from the stone pad to a sediment trap or basin or other sediment trapping structure.
8. Limestone may not be used for the stone pad.

CONSTR. ENTRANCE – INSPECTION & MAINTENANCE

1. The key to functional construction entrances is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of construction entrances shall be conducted once every calendar week and, as recommended, within 24–hours after each rainfall even that produces 1/2–inch or more of precipitation.
3. During regular inspections, check for mud and sediment buildup and pad integrity. Inspection frequencies may need to be more frequent during long periods of wet weather.
4. Reshape the stone pad as necessary for drainage and runoff control.
5. Wash or replace stones as needed and as directed by site inspector. The stone in the entrance should be washed or replaced whenever the entrance fails to reduce the amount of mud being carried off–site by vehicles. Frequent washing will extend the useful life of stone pad.
6. Immediately remove mud and sediment tracked or washed onto adjacent impervious surfaces by brushing or sweeping. Flushing should only be used when the water can be discharged to a sediment trap or basin.
7. During maintenance activities, any broken pavement should be repaired immediately.
8. Construction entrances should be removed after the site has reached final stabilization. Permanent vegetation should replace areas from which construction entrances have been removed, unless area will be converted to an impervious surface to serve post–construction.

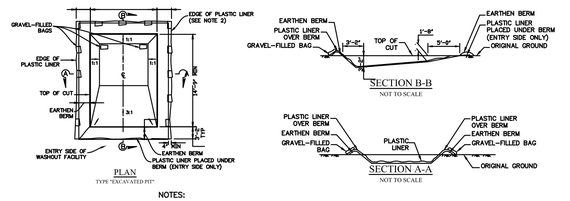
South Carolina Department of Health and Environmental Control

CONSTRUCTION ENTRANCE

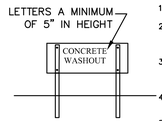
STANDARD DRAWING NO. SC–06 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

EXCAVATED PIT CONCRETE WASHOUT



LETTERS A MINIMUM OF 5" IN HEIGHT



CONCRETE WASHOUT SIGN DETAIL

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. INSTALL CONCRETE WASHOUT SIGN (24"X24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
4. CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
5. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
6. SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
7. A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

South Carolina Department of Health and Environmental Control

CONCRETE WASHOUT

EXCAVATED PIT

STANDARD DRAWING NO. RC–08 PAGE 1 of 1

NOT TO SCALE — FEBRUARY 2014 DATE

Andrews Engineering
2712 Bull Street Suite A
Beaufort, SC 29902
843.379.2222
Fax 843.379.2223

Preliminary Site Plan
For
Kitties Crossing Lot 4
S.C. Hwy. 46
Town of Bluffton
Beaufort County, SC

Sediment and Erosion Control Details
Sheet 1

Date Drawn:	07/30/15
Last Revised:	03/01/17
Drawn By:	R. Lyle
Engineer:	S. Andrews

SHEET #: 3

JOB: 150041

F:\Projects\2015\2015 Projects\150041 Kitties Crossing Lot 4\DWG\150041 SEC details.dwg