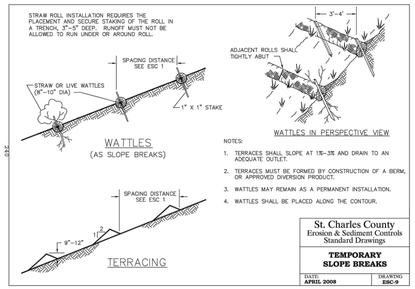


1 STRAW WATTLE

NTS

60.20.3.7 Log and Wattle Products

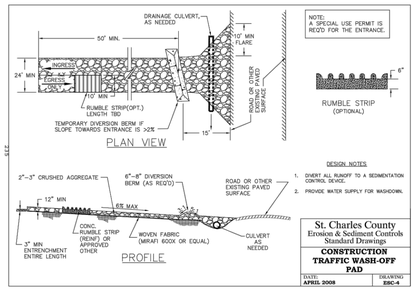
Log or wattle products are tubes of open weave containment material filled with straw, rice or wheat straw, excelsior, coir, or coconut. These products are used for disturbed areas of ¼ acre or less and where the runoff does not exceed 1 cfs. They come in a variety of diameters and lengths. The engineer must specify the product, size and method of installation. Logs or wattles can be used as perimeter control where sediment fence is not practical. Logs and wattles can be used along contours as slope breaks, for inlet protection, as ditch checks, and for stream bank protection. Ground slopes should not be steeper than 1.5:1 at natural channel banks and rivulets. Ground slopes should not be steeper than 2:1 as slope breaks for sheet flow.

60.20.3.8 Slope Breaks

Slope breaks, such as diversions, compost berms, log or wattle products, or other devices as appropriate, will reduce the slope length of cut and-fill slopes, limit sheet and rill erosion, and help prevent the formation of gullies. Slope breaks are a function of ground slope as shown in **Table 60-11**. Refer to Drawing ESC 1 for a graphical representation of the spacing of slope breaks.

Table 60-11 Terrace & Diversion Berm Spacing

Ground Slope	Spacing between Berms
3:1 to 4:1	30'
At 15%	60'
At 10%	80'
At 5%	100'
At 2%	125'

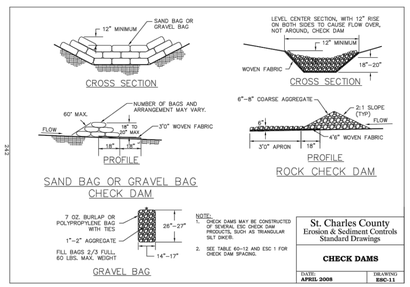


2 CONSTRUCTION ENTRANCE AND WASHDOWN STATION

NTS

60.20.3.1 Vehicle Wash-Off Pad & Construction Entrance

A vehicle wash-off pad is designed to provide a buffer area where mud and soil can be cleaned from construction vehicles and deposited to avoid tracking it onto public roads. The wash-off pad must be located where traffic leaves a construction site. Only one construction entrance will be permitted for grading/trucking operations. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance. Permits may be required to be obtained from the state, county, or municipal authority that is responsible for maintaining the intersecting street before constructing the entrance. ESC plans shall show the location, dimensions, culvert as required, and water source of the entrance wash-off pad. Depending upon the slope at the entrance, a mountable diversion berm or soil sock should be shown to divert all surface water flowing toward the connecting public road. See Drawing ESC 4.



3 CHECK DAMS

NTS

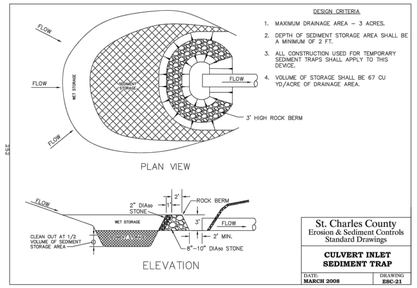
60.20.3.9 Check Dams

Check dams are small temporary dams constructed across a swale or drainage ditch having a drainage area no more than 3 acres. Check dams reduce the runoff velocity, which, in turn reduces the erosion of the swale or ditch, and they will trap sediment behind the dam. In highly erodible drainage areas and steep channels, swale sediment traps are used in conjunction with check dams. In highly erodible ditches, erosion control blankets shall be installed on the downstream side of the check dam. Check dams can be constructed of 6"-8" diameter rock, sand bags, staked straw bales, or several ESC products, such as Triangular Silt Dike™. The following design guidelines should be used:

1. Maximum drainage area is 3 acres (1 acre for straw bale checks).
2. In all cases the dam spacing must be established where the downstream top of the check dam is equal to or higher than the ground elevation at the upstream check **Table 60-12** below provides general spacing guidelines.
3. The dam shall span the ditch bottom and banks until the bottom edge of the check dam is at least 6 inches higher than the top of the check dam at its lowest point. See Drawings ESC 11 and ESC 12.
4. Once vegetation has been permanently established, the check dams should be removed and vegetated.
5. Swale Sediment Traps are used in conjunction with check dams. Traps are excavated upstream of check dams. Check dams can be any of the permitted types listed in this manual. The use of this trap is limited to swales having drainage areas less than 2 acres. This type of trap cannot be used in live streams. See Drawing ESC 13.

Table 60-12 Check Dam Spacing

Ditch Slope (%)	Check Dam Maximum Spacing (ft)	
	Check Dam Only	Check Dam with Sediment Trap
9	---	25
8	---	30
6	25	40
5	30	50
4	40	60
3	50	80
2	75	---

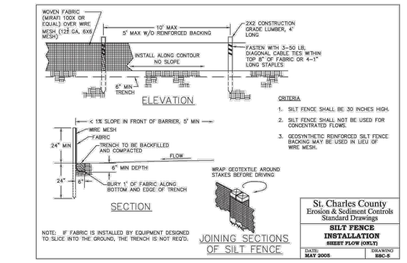


4 CULVERT INLET PROTECTION

NTS

60.20.4.2.4 Culvert Inlet Overflow

During the phase of a project where elevation and drainage patterns change, causing original control measures to be ineffective, there is a need to provide sediment control at points where runoff will leave the area through existing or newly installed piping. A sediment trap is placed in front of the pipe allowing proper settlement to occur before discharging over a weir into the pipe. The trap volume shall be a minimum of 67 yd3/drainage area in acres. No other calculations are required for drainage areas 3 acres or less. See Drawing ESC 21.



5 SILT FENCE

NTS

60.20.3.2 Silt Fence Barrier

Silt fence is a temporary sediment barrier consisting of a synthetic fabric stretched across and attached to supporting posts and entrenched or sliced in place. A properly installed silt fence will detain small amounts of sediment from disturbed areas of limited extent in order to prevent sediment from leaving the construction site and it will decrease the velocity of sheet flows. Silt fence can be used for sheet flow with less than ½ acre drainage area per 100 linear feet of barrier. Silt fence should be placed at least 10 feet from the toe of slopes steeper than 15% to provide a broad shallow sediment pool. The fence should be installed on the contour where fence can intercept runoff as sheet flow only. The ends of the fence should be flared uphill to temporarily impound water. Silt fence cannot be used in channels, waterways, or other concentrated flow paths. Limitations for using silt fence are shown in Drawing ESC 5.

Support Posts

- 4-inch diameter hardwood or 1.33 lb./linear foot steel, buried or driven to a depth of 24 inches.
- 1-1/4" square hardwood to be used when they are prefabricated with backing.
- Posts shall be placed at 10 foot spacing with support backing, or 5 foot spacing for high strength fabric without support backing.

Support Backing

- Wire backing
- Plastic net backing

Sediment Fence Fabric

- Filtering Efficiency 75% ASTM 5141
- Flow Rate 0.2 gal./sq.ft./minute ASTM 5141
- Standard strength 30 lb./ linear inch ASTM 4632

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DARDENNE CREEK BLUEWAY TRAIL AND STREAM STABILIZATION - SITE 2
Saint Charles County, Missouri

Professional Engineer Seal
Timothy Patrick Dean - Engineer
MO# E-2008019536
STATE OF MISSOURI
TIMOTHY P DEAN
NUMBER PE-2008019536
5-2-24
PROFESSIONAL ENGINEER
Expiration Date: DEC. 31, 2024

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Date:	
Drawn by:	JMS
Checked by:	MSA
Approved by:	TPD

PROJECT NO. 2306

SHEET TITLE:

SWPPP DETAILS

SHEET NUMBER:

C-504