City of Watertown, South Dakota

Erosion Control Guide

This brochure contains guidelines, procedures, and basic Best Management Practices to minimize sediment and other construction-related debris leaving your construction site. Please note that federal mandates require that a Storm Water Permit for Construction Activities be obtained from South Dakota's Department of Environment and Natural Resources (DENR) for construction projects that disturb 1 acre or more. Additional information including requirements for sites smaller than 1 acre but part of a larger common plan of development is available in the **Watertown Erosion and Sediment Control Best Management Practices Manual** and at **http://www.state.sd.us/denr/des/surfacewater/stormcon.htm** or by calling **1-800-SDSTORM.**

Watertown's Erosion Control Standards

Sediment eroded and washed away from construction sites can result in damage to adjacent property and the city's storm sewer system. It also is a major contributor to pollution in streams and lakes. The City of Watertown is required to maintain and enforce erosion and sediment control standards as part of the city's stormwater permit from the State Department of Environment and Natural Resources (DENR). All construction activity within the city is expected to be conducted following these guidelines to control the release of sediment from construction sites.

Protected Catch Basin

Concrete Washout Area

Source:
US EPA
http://cfpub1.epa.gov/npdes/stormwater/enuofbmps/index.cfm?action=browseRbutton=detail&bmp=117

Best Management Practices

The following Best Management Practices (BMPs) can significantly reduce pollutant discharges from your site:

1. Limit access to the site. Install and maintain a dedicated site entrance stabilized with 1" or larger clean rock, preferably crushed, to minimize tracking.

2. Preserve or establish vegetated buffer in the boulevard area of the street right-of-way.

3. Install access barriers or silt fence to direct construction traffic to the dedicated site entrance and to protect vegetated boulevard buffer areas.

4. Install down-gradient perimeter erosion and sediment controls (such as seeded topsoil berms, silt fence, or waddles) to prevent sediment and other construction materials from being eroded off the site onto neighboring properties or the street.

5. Wash out concrete trucks and all other concrete equipment, and wash off concrete placement and finishing tools in designated and properly contained washout areas to prevent the discharge of washwater onto neighboring properties or the street. *(See lower photo on left sidebar.)*

6. Sweep, don't wash dirt and debris from paved surfaces. When sediment has left your site, recover it no later than the end of the day. Accomplish street cleaning using mechanical sweepers, vacuum equipment, or brooms.

7. Protect nearby storm drain inlets, streams, and lakes to prevent sediment-laden water from entering the storm sewer system, drainage ditches, streams, and lakes. *(See upper photo on left sidebar.)*

8. Protect stockpiles and construction materials from wind and rain by storing them under a roof, secured impermeable tarp or plastic sheeting. Stockpiles may also be seeded with temporary vegetation.

9. Clean up spills immediately using dry clean-up methods (for example absorbent materials such as cat litter, sand or rags for liquid spills; sweeping for dry spills such as cement, mortar, or fertilizer). Properly dispose of material.

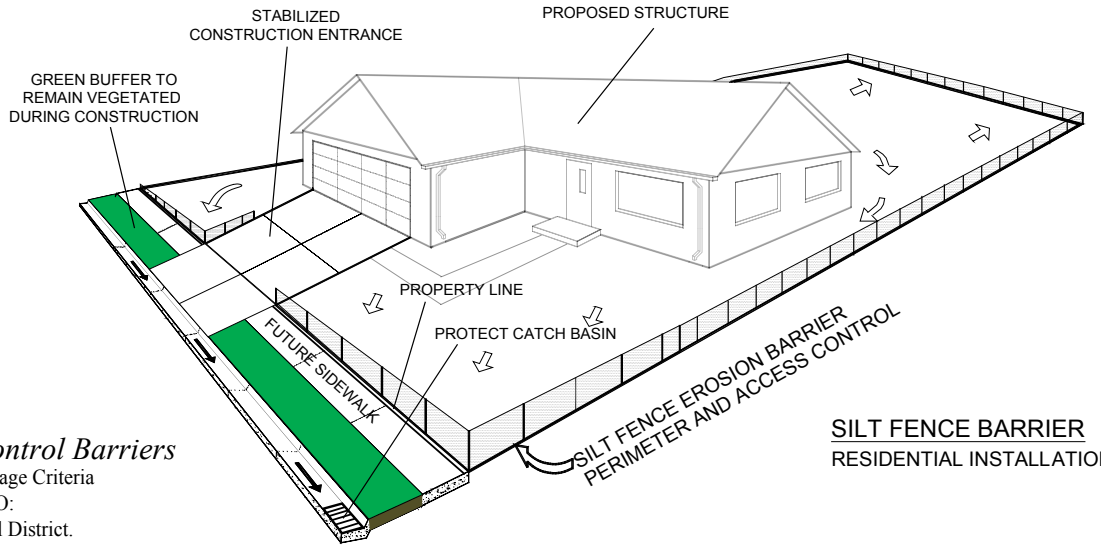
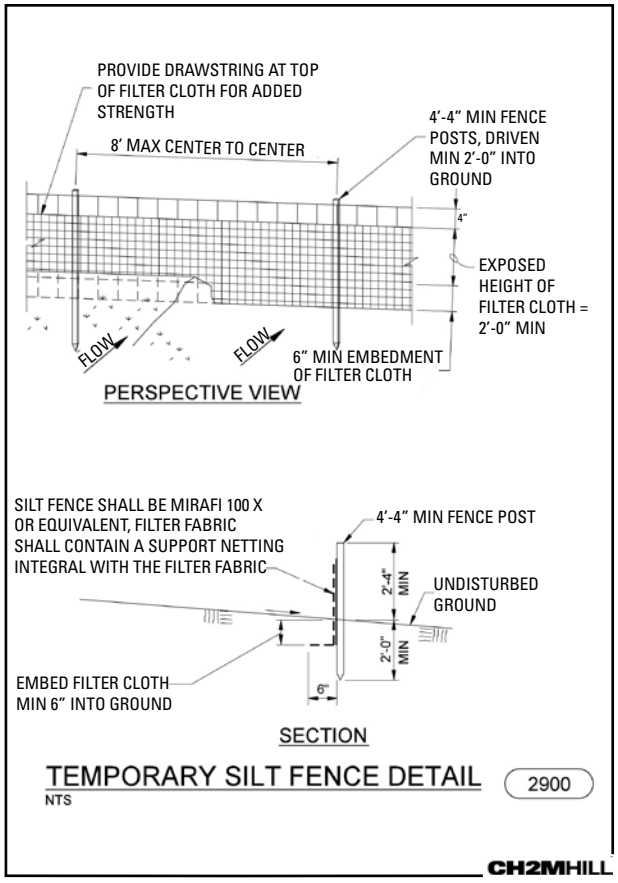


Figure 1.
Residential Erosion Control Barriers
Adapted from: Urban Storm Drainage Criteria Manual (Vol. 3), 1999, Denver, CO: Urban Drainage and Flood Control District.

Silt Fence

A silt fence can be used to prevent sediment from leaving the site. Properly placed, a silt fence can last more than one season. Silt fence may be mechanically installed utilizing a machine slicing method. For typical manual silt fence construction, installation details are shown in Figure 2 and should follow these steps:

1. **Excavate anchor trench.**
2. **Set wood or steel posts on a slight angle toward the runoff source a minimum of 2'-0" into the ground.** Maximum post spacing should be 8'-0" on center. Dig a 6" x 6" trench upslope along the base of posts.
3. **Attach filter fabric (Mirafi 100 x or equivalent) to the upslope side of each support post and extend it into the trench. Filter fabric shall contain a support netting.**
4. **Backfill and compact the excavated soil to anchor the filter fabric below grade.**
5. **Inspect silt fence after rainfalls and repair as necessary.**
6. **Maintenance includes removing and properly disposing of accumulated sediment and debris.**



Revegetation

The City of Watertown's Erosion Control Ordinance requires permanent stabilization with permanent vegetation and final hard surfacing to be completed within the timeframe specified in the project's permit issued by the city. Revegetation, either temporary or permanent, is recommended within 14 days of the completion of construction. Erosion and sediment controls must remain in place and be maintained until final permanent stabilization is achieved. The topsoil should be preserved during excavation and replaced prior to reseeding or sodding. This process follows these general steps:

1. **Till the subsoil to improve drainage and remove any construction debris.** Rough grade the site. The land should slope away from any buildings and conform to the layout of the area.
2. **Replace top soil to a minimum depth of 3"– 4" and add any necessary additives, such as fertilizer.** Soil testing, at a soil analysis lab, can help determine site specific additive requirements.
3. **Plant seed or lay sod.** If seeding, apply a layer of mulch, such as straw. On steep slopes, use an erosion control mat.
4. **Water regularly until the sod has rooted into the soil or the seed has germinated.**