

Storm Drain Inlet Protection

Protecting the direct pathway to storm drains

Save time and resources while protecting Wisconsin's waterways

Proper planning will make maintenance easier, reduce the need for post-construction pond and pipe cleaning, prevent non-compliance fines and help you avoid wasting time and money by having to rebuild an incorrect barrier.

Inlet protection devices are necessary for any construction site that is **one acre or more**. The devices must be installed before soil is disturbed. The device must stay in place and be properly maintained until the area is completely stabilized.

Planning ahead

- Read the WDNR Technical Standard 1060 to find the details for different protection methods. If using any fabric, check the WisDOT product acceptability

Photo of Protection Method Type A.
Photo from UW Extension



list for approved fabric options.

- The best way to prevent sediment erosion and save you time on maintenance is to stabilize the site as soon as possible.
- Review the entire area **and** the area around the site. Blocking the closest drain, while allowing the sediment to spill into the next drain, is not acceptable. **All inlets must be protected.**
- Inlet protection can change during construction. Plan ahead for the transitions from unpaved areas to pre-curb and gutter installation to inlets with grates and curb boxes.

Maintenance

- Devices should be inspected weekly and within **24 hrs** of precipitation of **over 0.5 inches of rain** for damage, clogs and pooled sediment.
- Designate a person responsible for required inspections and maintenance.
- Inlet protection is only as strong as the filter or barrier.
- Other than intentional holes for overflow, there must be no **gaps, holes or tears** in the fabric. Sediment flowing through an improperly maintained fabric has the same negative effect as never installing a device at all.
- Sediment deposit must be removed when it accumulates **1/3 to 1/2** the design depth of the device, or sooner if the device is no longer functioning.
- Make sure sediment does not fall in during removal. Place removed sediment in a suitable, stabilized area.

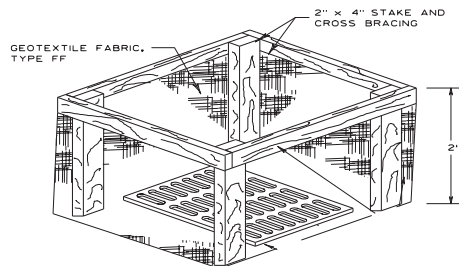
Situations in which additional BMPs might be needed

- In larger sites where runoff must pass through a sediment trapping or settling device upstream of the inlet.
- In areas that will cause excessive ponding in an inconvenient location. If this is the case plan ahead for an adequate overflow mechanism.
- If there are large amounts of fine silt and clay which will pass through these filter materials.

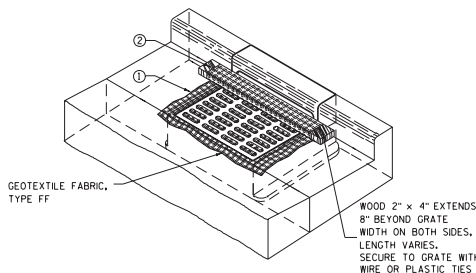
Storm drain inlet protection considerations are an important part of all project phases--from preliminary planning to site clean-up.

Four Methods of Protection for Storm Drain Inlets

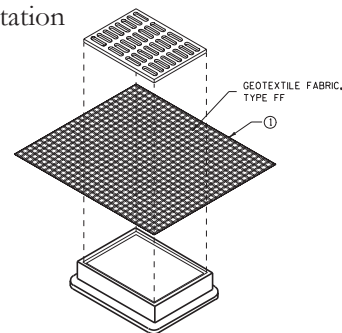
Diagrams from Wisconsin Department of Transportation



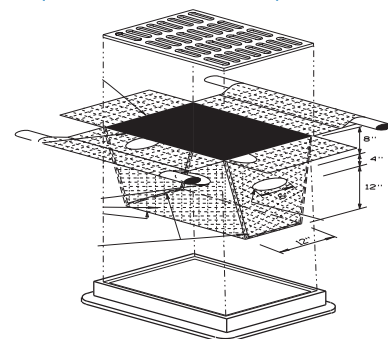
Inlet Protection Type A



Inlet Protection Type C (with curb box)



Inlet Protection Type B (without curb box)



Inlet Protection Type D

Unpaved Areas or Pre-Paving Phase

Protection Method **Type A**

- Inlet protection **Type A** should be used as a fabric barrier for unpaved inlets.
- Inlet protection barriers can be made of straw bales, sandbags, stone weepers, or other material filled bags.
- Follow Technical Standards for all settlement and diversion methods: 1060 for manufactured bags, 1055 for straw bale installation and 1063 for stone weeper installation.

Post Paving and Curbing Phase

Protection Method **Types B, C and D**

- **Type D** is recommended for most situations because it works well and is considered easier to install and maintain. **Type D** must be used in areas where other options are incompatible with road and traffic conditions because ponding will occur.
- **Type B** can be used in situations when there is no curb box.
- **Type C**, following the technical standard, can be used in situations where there is a curb box. Make sure wood is not blocking the entire opening and is secured to the grate.

Visit www.cleanwaterbrightfuture.org for more information, resources and tips.

*For complete Wisconsin Department of Natural Resources Stormwater Management Technical Standards, including 1060, go to <http://dnr.wi.gov/runoff/stormwater/techstds.htm>



Information is provided by the Rock River Stormwater Group. *Clean Water. Bright Future.* is a public campaign to encourage homeowners, businesses and communities to protect our region's waterways.