

Erosion and Sediment Control

A Guide for Individual Building Sites

Protecting Water Quality

Construction activities without proper erosion and sediment control protection can contribute large amounts of sediment and other pollutants to streams, rivers, and lakes.

Following the Law

It is illegal to discharge sediment-laden water and other construction-related pollutants to the storm sewers or waterways.



Understanding Your Legal Liability

Construction projects that disturb more than one acre or are part of a larger development plan are subject to permit requirements. A storm water pollution prevention plan (SWPPP) is required to receive a permit. SWPPPs must identify practices that will reduce erosion, prevent sediment loss from construction sites and address pollution prevention.

While the ownership of residential property may change hands during development, compliance is required until all house construction is completed. Storm water permits require that erosion and sediment controls are in place on each lot during the home construction phase.

Developers can transfer storm water permit and pollution prevention plan responsibility to the home builder or new lot owners. But to do this, the new owner must sign a contract agreeing to the terms of the existing storm water permit. Signing a contract requires that the new owner implement all necessary erosion and sediment control measures. Without a contract transfer, the developer remains responsible for compliance on any lot that has been sold.



The lack of controls at these individual home sites will result in water quality degradation and may result in compliance violations.

Understanding The Differences

Erosion Control Prevents

Erosion control practices are used to prevent erosion from occurring at construction sites with bare soils. Practices include mulch, compost blankets, temporary and permanent seeding, minimized land clearing, and rolled erosion control products (RECPs).

Sediment Control Captures

Sediment control practices are used to capture eroded or eroding sediments and keep them on-site and away from surface waters. Practices include silt fences, sediment basins, compost berms, and compost socks.

Both erosion and sediment control practices are required on construction sites to prevent excessive sediment from leaving the site.

Common Pollutants at Construction Sites

- ◆ sediment from grading operations and bare soil
- ◆ concrete wash from tools and trucks
- ◆ sanitary waste and pathogens from porta-potties
- ◆ debris from discarded building materials
- ◆ oil and grease from equipment and vehicles
- ◆ paint, chemicals and solvents
- ◆ litter

Recommended Single Family Lot E

Preventing Erosion

Evaluate the Site

This diagram illustrates the key points to protecting individual building sites. Every building site is unique and should be evaluated for potential erosion and sediment loss. It is not difficult to predict where soil will erode. Rain falling and water flowing over bare ground will create erosion. Understanding the drainage on the site and where storm water runoff will flow is critical in planning for erosion control.



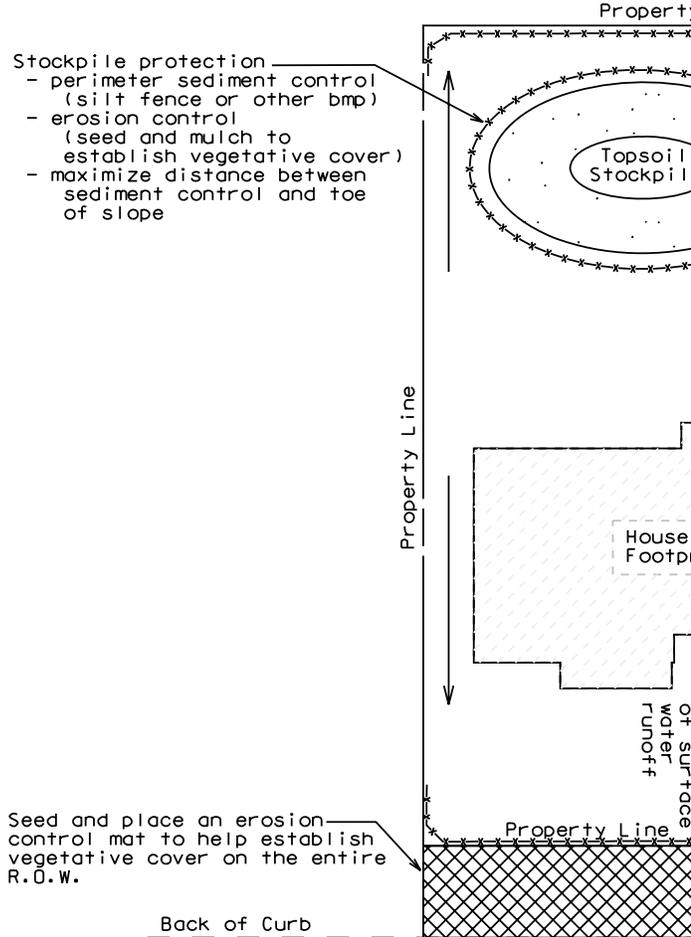
Revegetate the Site

Prevent erosion on individual lots with ground cover. The soils are not left bare during home construction. Sites are covered with straw mulch and/or vegetation to prevent erosion from occurring.



This rolled erosion control product (RECP) is used to prevent erosion and keep the streets clean while homes are being built. A sediment barrier is needed until vegetative cover is established.

If surface water flowage ea
seed and mulch for establis



Clean Streets
- No sediment or tracking onto streets

x-x-x-x-x Sediment Control (silt fence, compo
Note: Additional rows of sedimen
break-up slope length. Place con
contour, the base of each end of
as the top of the center of the f

Gravel construction entrance
Note: Install the entrance immedi
foundation structures.

Direction of surface water runoff

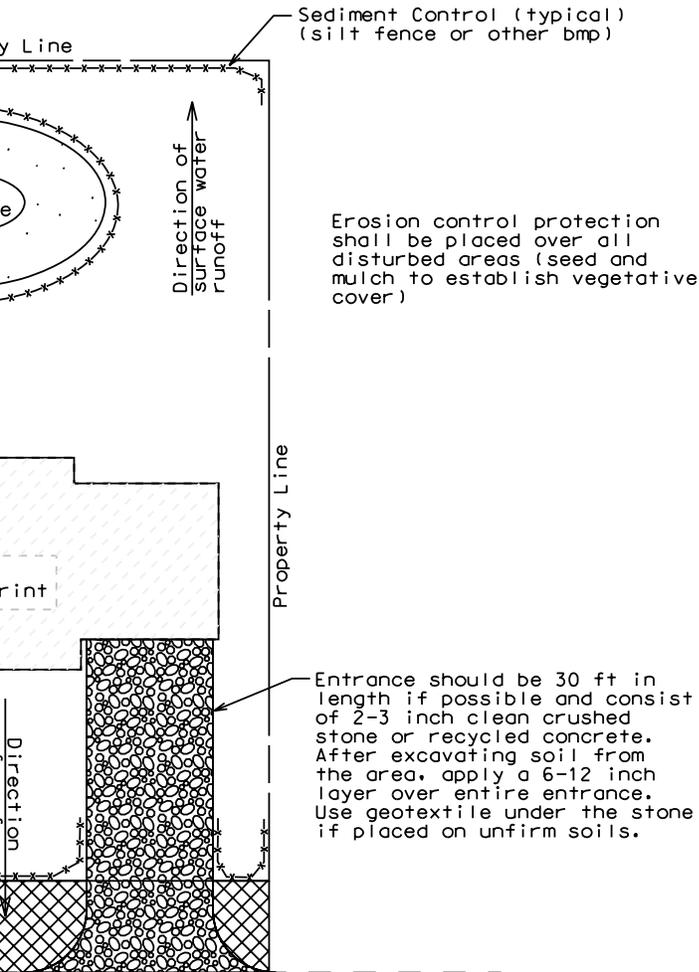
Erosion control mat and vegetation

Waste containment
Note: Indicate where wastes will
concrete washout, sanitary waste,
you will use regional/development

Final Stabilization and Soil Quality
It is recommended that post const
matter and 40% soil pore space.
minimum of 2 inches of organic m
depth of 12 inches.

Erosion and Sediment Control Plans

sement feature present then
 nment of permanent vegetation.



st socks, wattles, or other similar bmps)
 t control may be needed on steeper slopes to
 ntrols on the contour. When installing on the
 silt fence should be at the same elevation
 fence in order to impound water.

mediately following the placement of footing and

be contained on-site (construction debris,
 paint and other chemicals or indicate that
 structures)

y Restoration
 ruction soils have a minimum of 5% organic
 This can be achieved by incorporating a
 material such as compost while tilling to a minimum

Protecting Streets & Inlets

Rock Entrances are a best management practice used to reduce tracking of sediment onto roadways. All traffic off and onto a home site should use the rock entrance. Routing traffic onto the driveway



will protect areas with seed and mulch along the curb and prevent sediment loss into the street and storm drain inlets.



This rock entrance provides mud-free access for construction workers and building materials.

Special care should be given to street inlets, as they are a direct conduit to local waterways. Inlet



protection should be the last line of defense for protecting local streams and surface water.

A street view and the inside of one type of inlet protection device.



Effective Individual Lot Best Management Practices

Temporary Mulching & Seeding

◆ Establish vegetation to protect soils from erosion and keep sites clean.

◆ Protect exposed soils from erosion until vegetation is established.

◆ Use straw or wood mulch, compost, hydroseeding, or RECPs when temporary seeding is not practical. Mulch can be utilized in any weather at any time.



Wood mulch from lumber waste covers bare ground.

Sediment Control Practices

◆ Install straw wattles (fiber rolls), silt fences, compost socks, or other sediment controls on the contour to prevent concentrated flow and protect perimeters.



Construction Entrances & Tracking

◆ As vehicles leave construction sites, sediment is tracked onto adjacent roads. Those pollutants can get washed into storm drains, are a nuisance to drivers and vehicles, and can cause accidents.

◆ Stabilize driveway with a rock base over geotextile fabric to prevent tracking onto roadways.

◆ Immediately clean up tracking in streets with brooms, shovels, or a skid loader. Do not use water to clean pavements.



Without a proper entrance, sediment was tracked into the street and inlets carry sediment to the river.

Inlet Protection

◆ Protect drainage inlets from receiving polluted storm water through the use of inlet protection devices.

Concrete Washout

◆ Use a designated concrete washout area to avoid wash water from concrete tools or trucks from entering storm drains.

◆ Maintain washout area and dispose of concrete waste on a regular basis.



This designated concrete washout keeps pollutants from entering inlets and surface water.

Waste Containment

◆ Keep your site clean. Pick up construction waste each day. Potential pollutants should be stored so they do not become sources of storm water contamination.

Soil Stockpile Placement and Protection

◆ Place stockpiled soil away from critical areas such as streams, drainage ways, and storm drain inlets. Temporarily seed or mulch stockpiles immediately to protect against erosion. Use sediment control around the base of stockpiled soil.

Training & Inspections

◆ Site must be inspected weekly and after each storm event greater than 1/2 inch. Maintain BMPs on a regular basis and replace as necessary.

◆ Train and educate construction crews to better understand the effects of storm water pollution from construction projects and learn ways to prevent or minimize pollution on the job.

Sediment is the biggest source of pollution from construction sites, but other pollutants include concrete washout, petroleum products, construction chemicals and construction debris.



Iowa Storm Water Education Program

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This publication was developed for Iowa Storm Water Education Program Members.