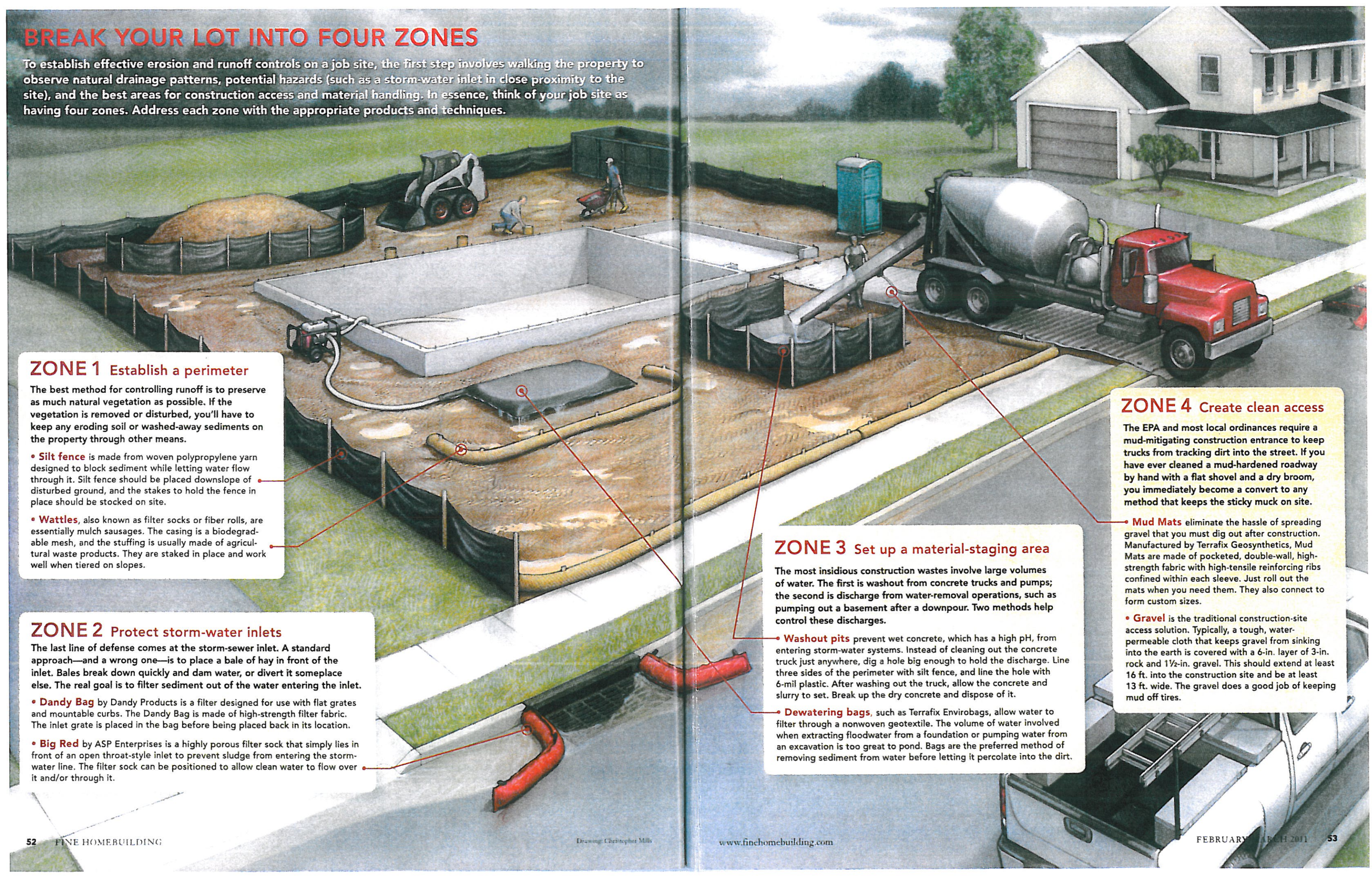
BREAK YOUR LOT INTO FOUR ZONES

To establish effective erosion and runoff controls on a job site, the first step involves walking the property to observe natural drainage patterns, potential hazards (such as a storm-water inlet in close proximity to the site), and the best areas for construction access and material handling. In essence, think of your job site as having four zones. Address each zone with the appropriate products and techniques.



ZONE 1 Establish a perimeter

The best method for controlling runoff is to preserve as much natural vegetation as possible. If the vegetation is removed or disturbed, you'll have to keep any eroding soil or washed-away sediments on the property through other means.

- **Silt fence** is made from woven polypropylene yarn designed to block sediment while letting water flow through it. Silt fence should be placed downslope of disturbed ground, and the stakes to hold the fence in place should be stocked on site.
- **Wattles**, also known as filter socks or fiber rolls, are essentially mulch sausages. The casing is a biodegradable mesh, and the stuffing is usually made of agricultural waste products. They are staked in place and work well when tiered on slopes.

ZONE 2 Protect storm-water inlets

The last line of defense comes at the storm-sewer inlet. A standard approach—and a wrong one—is to place a bale of hay in front of the inlet. Bales break down quickly and dam water, or divert it someplace else. The real goal is to filter sediment out of the water entering the inlet.

- **Dandy Bag** by Dandy Products is a filter designed for use with flat grates and mountable curbs. The Dandy Bag is made of high-strength filter fabric. The inlet grate is placed in the bag before being placed back in its location.
- **Big Red** by ASP Enterprises is a highly porous filter sock that simply lies in front of an open throat-style inlet to prevent sludge from entering the storm-water line. The filter sock can be positioned to allow clean water to flow over it and/or through it.

ZONE 3 Set up a material-staging area

The most insidious construction wastes involve large volumes of water. The first is washout from concrete trucks and pumps; the second is discharge from water-removal operations, such as pumping out a basement after a downpour. Two methods help control these discharges.

- **Washout pits** prevent wet concrete, which has a high pH, from entering storm-water systems. Instead of cleaning out the concrete truck just anywhere, dig a hole big enough to hold the discharge. Line three sides of the perimeter with silt fence, and line the hole with 6-mil plastic. After washing out the truck, allow the concrete and slurry to set. Break up the dry concrete and dispose of it.
- **Dewatering bags**, such as Terrafix Envirobags, allow water to filter through a nonwoven geotextile. The volume of water involved when extracting floodwater from a foundation or pumping water from an excavation is too great to pond. Bags are the preferred method of removing sediment from water before letting it percolate into the dirt.

ZONE 4 Create clean access

The EPA and most local ordinances require a mud-mitigating construction entrance to keep trucks from tracking dirt into the street. If you have ever cleaned a mud-hardened roadway by hand with a flat shovel and a dry broom, you immediately become a convert to any method that keeps the sticky muck on site.

- **Mud Mats** eliminate the hassle of spreading gravel that you must dig out after construction. Manufactured by Terrafix Geosynthetics, Mud Mats are made of pocketed, double-wall, high-strength fabric with high-tensile reinforcing ribs confined within each sleeve. Just roll out the mats when you need them. They also connect to form custom sizes.
- **Gravel** is the traditional construction-site access solution. Typically, a tough, water-permeable cloth that keeps gravel from sinking into the earth is covered with a 6-in. layer of 3-in. rock and 1½-in. gravel. This should extend at least 16 ft. into the construction site and be at least 13 ft. wide. The gravel does a good job of keeping mud off tires.

Drawing: Christopher Mills