

RAIN GARDENS

Green Infrastructure For Stormwater Management



WHAT ARE RAIN GARDENS?

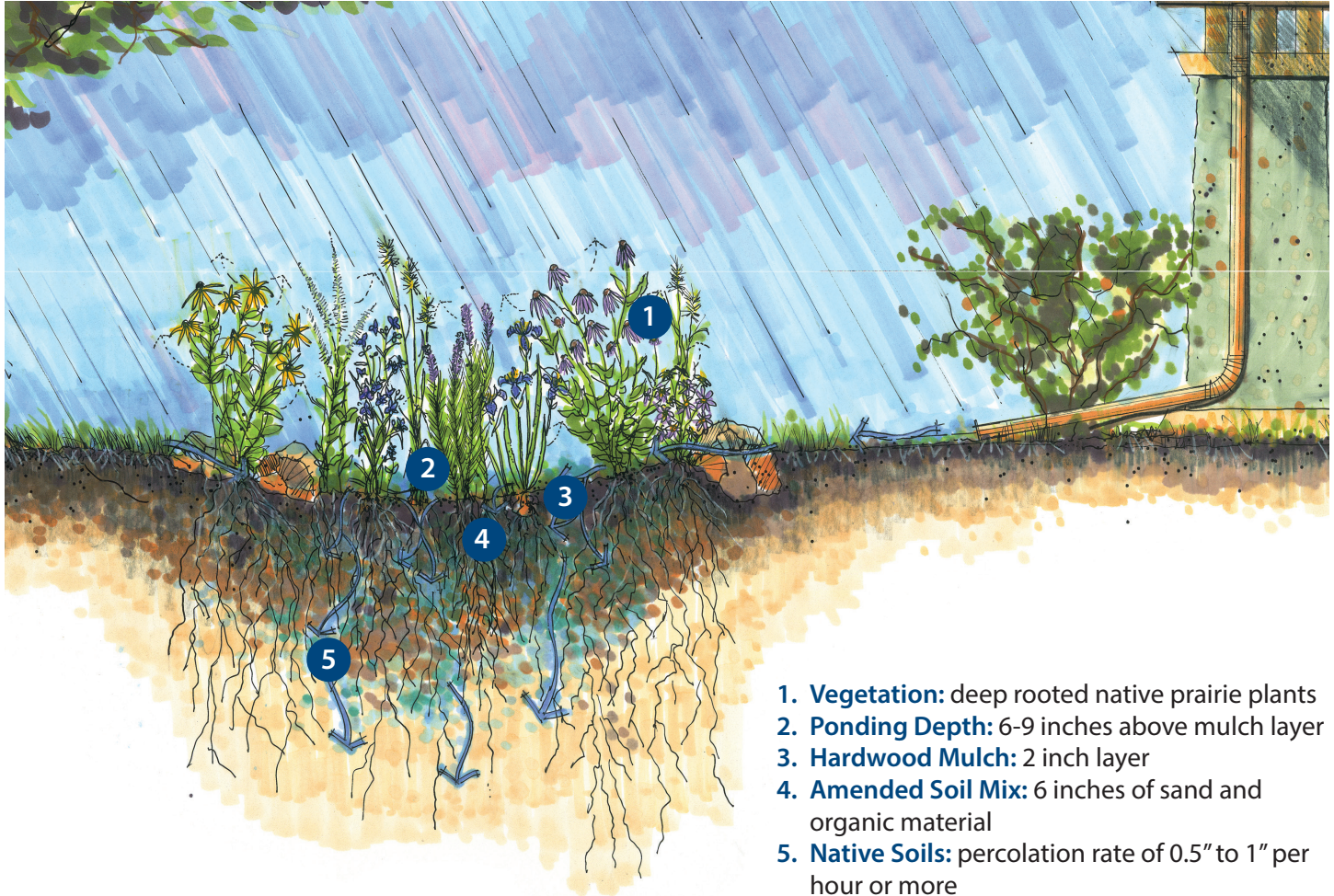
A rain garden is a landscaped depression that captures rainwater runoff from roofs, driveways, streets, or parking lots. Runoff captured in a rain garden is temporarily ponded before infiltrating and percolating down through the natural soils. These soils must have adequate percolation rates that allow water to drain in 12 to 24 hours. This allows time for plants to use the water and for the pollutants to be filtered out.

WHY INSTALL RAIN GARDENS?

Installing a rain garden helps restore a landscape's ability to manage water more sustainably. Historically, the prairies and savannas of Iowa held and infiltrated most rainfall, and surface runoff was rare. Rainfall was absorbed and moved down through the soil to become groundwater flow. Cool, clean groundwater fed and maintained rivers, streams, wetlands and lakes.

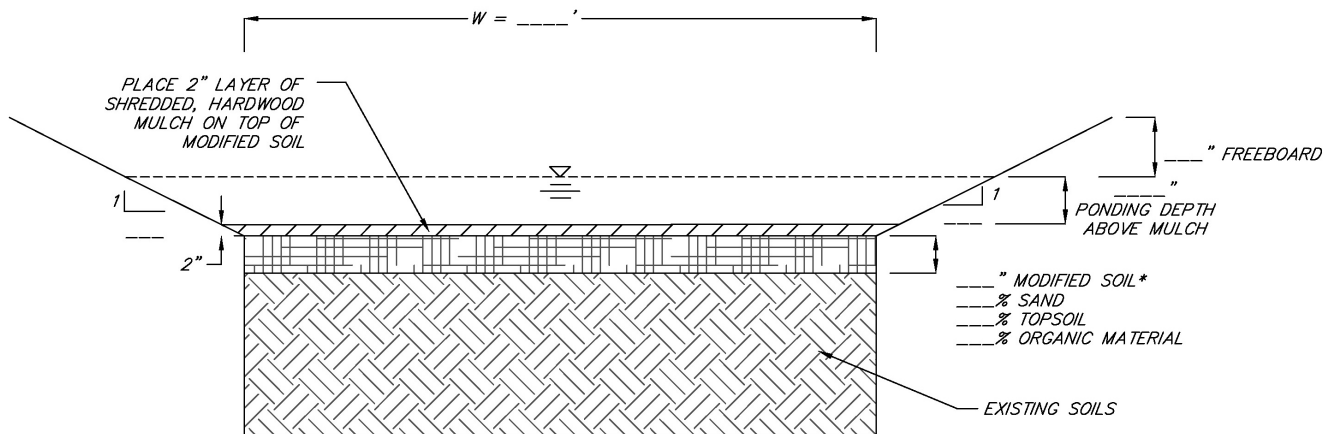
Today, our impervious and compacted urban surfaces shed dirty runoff with almost every rain. This dirty runoff goes to receiving streams, which causes water quality problems and contributes to flooding. Rain gardens help reduce runoff and protect water quality.

RAIN GARDEN COMPONENTS



1. **Vegetation:** deep rooted native prairie plants
2. **Ponding Depth:** 6-9 inches above mulch layer
3. **Hardwood Mulch:** 2 inch layer
4. **Amended Soil Mix:** 6 inches of sand and organic material
5. **Native Soils:** percolation rate of 0.5" to 1" per hour or more

RAIN GARDEN CROSS SECTION



RAIN GARDEN AREA

L _____' x W _____' = _____ SF

*SOILS NOTE

- MODIFIED SOIL LAYER WILL BE INSTALLED _____ (Y/N)

- SUITABLE HIGH QUALITY TOPSOIL IS AVAILABLE AND DEPTH OF TOPSOIL IS 12" OR GREATER. THEREFORE MODIFIED SOIL WILL NOT BE INSTALLED. _____ (Y/N)

RAIN GARDEN INSTALLATION



Step 1 Layout the rain garden



Step 2 Excavate existing soil



Step 3 Fill with amended soil



Step 4 Plant and mulch

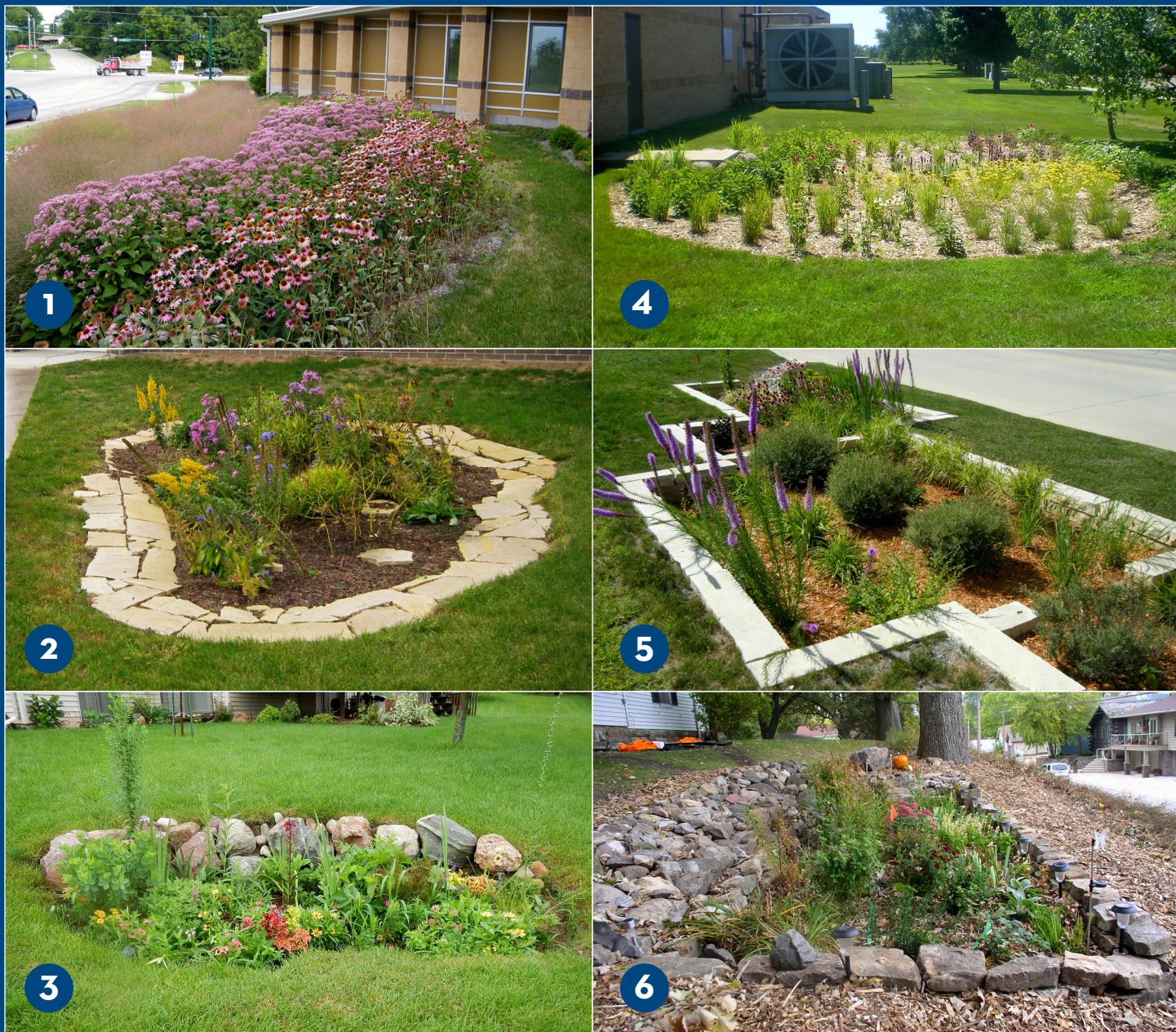
RAIN GARDEN DESIGN CONSIDERATIONS

- » Must be more than 10 feet from buildings
- » Avoid utilities by marking location prior to install
- » Floor of the rain garden must be level
- » Conduct percolation tests prior to install
- » Determine size by impervious area draining into the garden and percolation rate
- » Ponded water should infiltrate with 12-24 hours
- » Slopes leading into the rain garden should be 3:1
- » Use the Iowa Rain Garden Manual to ensure the rain garden is designed and installed correctly



Know the direction water flows on your property. Rain gardens should be located in an area that has the ability to intercept runoff.

RAIN GARDENS OF IOWA



1 Iowa City - Fire Station

2 Coralville - Fire Station

3 Des Moines - Easter Lake Neighborhood

4 Okoboji - High School

5 Coralville - Forever Green

6 Clear Lake - Residence

