

Mayfield Heights Green Infrastructure Demonstration & Showcase Project



Project	1 Raingarden	2 Forested Parking Lot	3 Permeable Parking
Showcase Type	Residential Small Commercial	Industrial Large Commercial Small Commercial	Parking Lanes in Public ROW Public/Institutional Sidewalks/Driveways
Existing Conditions	 2,000 SF Impermeable roof surface	 31,000 SF Impermeable asphalt parking lot	 5,000 SF Impermeable concrete parking lot
Schematic Design	 Perennials, 2.5' raingarden soil (to accommodate clay soils), downspout disconnection, mow edge, underdrain, sidewalk runnel, interpretive signage	 Shade trees, bioswale trees, perennials, 2.5' bioswale soil (to accommodate clay soils), tree soil, bumper blocks, underdrain, permeable concrete strips, gravel base, interpretive signage	 Concrete demolition & excavation, permeable concrete, 2' gravel base, underdrain, interpretive signage
Project Elements	Perennials, 2.5' raingarden soil (to accommodate clay soils), downspout disconnection, mow edge, underdrain, sidewalk runnel, interpretive signage	Shade trees, bioswale trees, perennials, 2.5' bioswale soil (to accommodate clay soils), tree soil, bumper blocks, underdrain, permeable concrete strips, gravel base, interpretive signage	Concrete demolition & excavation, permeable concrete, 2' gravel base, underdrain, interpretive signage
Built Example			
Project Purpose	The raingarden at the front door of City Hall will be sized to capture roof runoff from disconnected downspouts (the equivalent size of a typical residential roof), demonstrating the use of raingardens to enhance water quality, provide basement flood relief and beautify a neighborhood.	A forested parking lot contains shade tree bumper islands, permeable concrete strips, and bioswale end islands, functioning as the canopy, understory and soil/duff layers of a mature forest. The forested parking lot will capture rainfall & parking lot runoff, create habitat, provide carbon sequestration, reduce the urban heat island effect and increase desirability of businesses.	Permeable concrete parking bays will replace impervious asphalt to infiltrate road and parking lot runoff and capture pollutants, demonstrating how permeable pavements can be used to replace crumbling parking lanes on streets, sidewalks, and driveways.

Timeline

