



1 226 W. 40th St. \$

- **Site Issues:** Steep front yard, bare soil erodes into stormsewer system. Owners wanted low-maintenance solution
- **Best Management Practices:** Underground infiltration, turf reinforcement, and rooftop disconnection
- **Project Description:** Two systems on this lot collect water from downspouts and allow it to infiltrate (similar to a raingarden) without giving up lawn. The Netlon System was installed on the west side of the front walkway and consists of thousands of small 2” X 4” polypropylene mesh elements blended into the soil to provide high-load bearing capabilities, stabilize the soil and reduce compaction. Depending upon existing soils, infiltration can be increased by up to 90%. On the east side of the walkway, the Environmental Passive Integrative Chamber (EPIC) system collects and holds 125 gallons of stormwater in 3 underground pans with overflow to a French drain. In addition to stormwater storage, the system provides irrigation for the grass.
- **Size of treatment area:** Techniques treat 611 square feet impervious surface, equal to 39% of the site’s total impervious surfaces
- **Stormwater Credit:** 19% of bill or \$1.34 per month
- **Implementation Costs:**
Excavation: \$1,213
EPIC & Netlon Systems: \$1,000*
Gutter: \$921

* discounted pricing provided

2 3936 Harriet Ave. \$

- **Site Issues:** Compacted soils, runoff from driveway area and garage drains to alley
- **Best Management Practices:** Pervious pavers, rooftop disconnection
- **Project Description:** Gutters were installed along the garage and discharge to a 192 sq. ft. porous paver parking area. The paver area was calculated to hold 67 cubic feet of water, more than the amount that will come from the garage. In the design considerations for the paver parking area a shallower infiltration area was not selected due to the freeze thaw cycle and the concern of the pavers shifting. This extra storage space leaves open the possibility of routing additional storm water to this area in the future.
- **Size of treatment area:** Techniques treat 885 square feet of impervious surface, equal to 44% of the site’s total impervious surfaces
- **Stormwater Credit:** 22% of bill or \$2.69 per month
- **Implementation Costs:**
Porous Paver Installation: \$3,654*
Gutter: \$171
Homeowner Labor: 14 hours

* discounted pricing provided



5 Victor’s 1959 Café - 3756 Grand Ave. \$

- **Site Issues:** Highly impervious area (building, patio, parking lot) draining directly into catch basins
- **Best Management Practices:** Porous pavers, parking lot raingarden, rooftop disconnection
- **Project Description:** This site was almost entirely impervious and drained directly to catch basins in the street. A porous paver patio, three parking stalls with a turn-around, and a raingarden provide significant stormwater treatment. The porous patio allows rainwater to “soak in” instead of running off into the street. Below the pavers is a layer of rock that stores water and allows it to slowly infiltrate into soils beneath. The roof gutter collects and delivers runoff via underground piping into the raingarden, which also captures and infiltrates runoff from the parking lot.
- **Size of treatment area:** Techniques treat 2,620 square feet of impervious surface, equal to 50% of the site’s total impervious surfaces
- **Stormwater Credit:** 25% of bill or \$7.62 per month
- **Implementation Costs:**
Excavation & Removal: \$5,733
Porous Paver & Base Installation: \$7,730
Gutter & Drain: \$930
Plantings & Soil: \$1,045
Retaining Wall & Curb: \$2,004
Asphalt Replacement & Grading: \$2,004



3 3641/3645 Pleasant Ave. \$

- **Site Issues:** Portion of roof drainage connected to sanitary sewer. Roof drainage (no gutters) disturbs landscaping between houses and caused basement moisture issues.
- **Best Management Practices:** Raingarden, rooftop disconnection, and underdrain
- **Project Description:** A shallow vegetated basin planted with Minnesota native plants (a.k.a. a raingarden) was constructed in the front yard between two houses. Water is conveyed to the raingarden by a splash pad with river rock and a 3” perforated shallow drain tile. Approximately 725 square feet of roof drains to the garden from the two homes, and the garden will hold greater than a 1” rainfall. In the event of a large rain, the rain garden will overflow to the street through a shallow depression at the edge of the garden.
- **Size of treatment area:** Raingarden treats 814 square feet of impervious surface, equal to 15.3% of the site’s total impervious surfaces
- **Stormwater Credit:** 8% of the bill or \$1.12 per property
- **Implementation Costs:**
Raingarden Materials: \$105
Raingarden Plants: \$336
Mileage: \$32
Homeowner Labor: 39 hours



Construction



After

4 4034 Blaisdell Ave. \$

- **Site Issues:** Large impervious surface drained directly to street
- **Best Management Practices:** Raingarden, vegetated swale, rooftop disconnection, impervious area reduction
- **Project Description:** The existing backyard and garage area was highly impervious and directed substantial rainwater runoff into the street and stormwater system. The owners implemented a site plan that provides a great deal of stormwater treatment by removing over 1,600 square feet of impervious surface. A garage was torn down and a backyard parking pad was removed, allowing water to soak into the ground. A vegetated swale drains to a raingarden which also collects and treats stormwater from portions of the remaining driveway, house roof, and deck.
- **Size of treatment area:** Raingarden and vegetated swale treats 1,225 square feet of impervious surface, equal to 61% of the site’s total impervious surfaces
- **Stormwater Credit:** 30.5% of the bill or \$3.83 per month
- **Implementation Costs:**
Excavation & Removal: \$3,291
Tree Removals: \$1,350
Grading: \$2,900
Soil & Plant Material: \$2,036
Gutters: \$3,000



Before



After

Kingfield Stormwater Project Site Locations

