

Blue Thumb Raingarden Project

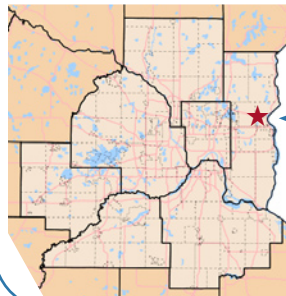
~Valley Ridge Mall~



Above: The raingarden in front of Acapulco Restaurant one week after installation

Project: Three raingardens were installed to treat stormwater runoff from the parking lots at the Valley Ridge Mall in Stillwater, MN. True North Investments LLC paid for half of the cost of the raingardens, while a grant from the MN DNR covered the rest. The Middle St. Croix WMO and the Washington Conservation District designed the project.

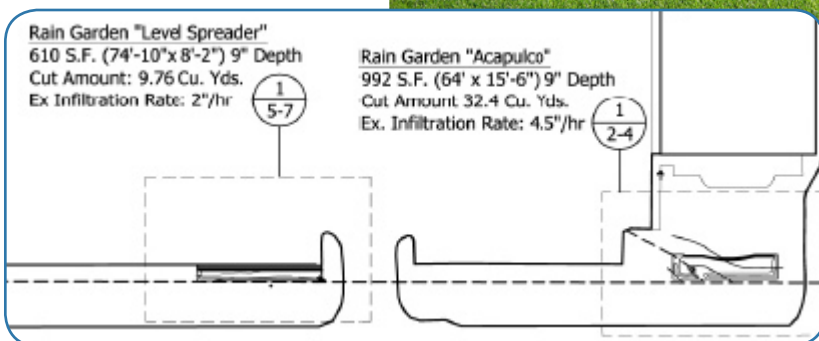
Location:
Stillwater, MN
St. Croix River Basin



Above and left: Artist rendering of how the raingardens will look when mature



Below: Layout plan for two of the parking lot raingardens



Practices:

- ~ Raingardens
- ~ Vegetated swale
- ~ Dry creek

Benefits:

- ~ Reduces runoff
- ~ Filters pollutants
- ~ Reduces parking lot flooding
- ~ Provides attractive landscaping
- ~ Educates public about water pollution

Partners:

- ~ True North Investments, LLC
- ~ Minnesota DNR
- ~ Washington Conservation District
- ~ Middle St. Croix Watershed

Watershed:

- ~ Middle St. Croix

Constructed:

- ~ September 2009



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Project Costs:

~ \$23,468 to All-Weather Services for landscaping

~ \$7,600 to CMC Construction for concrete work

~ **TOTAL \$31,068***

*True North Investments, LLC received an \$18,000 grant from the MN DNR for this project.

Raingarden #1:

~ 576 sq. ft / 6in. deep

~ Infiltrates 1.5 in./hr

~ Treats runoff from 4096 sq.ft pavement

- Captures 0.75in rain

Raingarden #2:

~ 610 sq. ft / 9in. deep

~ Infiltrates 2in./hr

~ Treats runoff from 61,440 sq.ft pavement

- Captures 0.1in rain

Raingarden #3:

~ 992 sq. ft / 9in. deep

~ Infiltrates 4.5 in./hr

~ Treats runoff from 50,176 sq.ft pavement

- Captures 0.25in rain



During excavation of Raingarden #2, the contractor used silt fence to prevent soil from washing into the ditch. Stockpiles and machinery were kept outside the garden to avoid compacting the soil.



Raingarden #1, the smallest of the three, catches water from a street intersection near Valley Ridge Mall.



A curb cut directs stormwater off the parking lot and into Raingarden #2. A concrete level spreader distributes the water evenly into the garden.



At Raingarden #3, a curb cut leads stormwater runoff into a dry creek bed made of rocks.



From the dry creek bed, the water enters Raingarden #3.



When Raingarden #3 is full, it overflows a rock waterfall into the county ditch.

For info: Rusty Schmidt, 651-275-1136 x.36, rusty.schmidt@mnwcd.org