



Douglas Streetscape Rain Gardens

Douglas Street, S 24th to S 20th Streets

City of Omaha Stormwater Program

SITE AND PROJECT SUMMARY

The Douglas Streetscape Project, a four block stretch along Douglas Street from South 24th Street to South 20th Street, features six rain gardens. These rain gardens were completed in Fall 2013 by the City of Omaha Stormwater Program with grant funding from the Nebraska Department of Environmental Quality Control. This demonstration project provided an opportunity to incorporate aesthetically beautiful landscapes, within an urban area, that promote stormwater management. In addition, this project builds on previous green infrastructure projects in order to improve their performance in a variety of urban soils and conditions.

These rain gardens are designed as flow-through gardens to capture and filter stormwater runoff from the surrounding street and sidewalk areas. Water flows into the gardens from the west and into a pretreatment area. The pretreatment area consists of a curb cut and an open cell containing permeable pavers. Sediment and debris usually settles out as water flows over the pavers and a short curb into the rain garden. After water ponds within the rain gardens it then flows through a small trash

screen, on the east side of the garden, flowing back into the street gutter. In this sense, these rain gardens act similar to vegetated swales by reducing runoff velocity, trapping sediment, and slowly infiltrating water into the soil.

The plant selection for the rain gardens incorporated several native and adaptive plants, including Fox Sedge, Palm Sedge, and Shenandoah Switch Grass.



PROJECT DETAILS

	RAIN GARDENS
Number of Rain Gardens	6
Combined System Footprint	1,700 ft ²
Total Contributing Area	1.6 acres
Total Design Volume	Approximately 480 ft ³ (3,590 gal)
Percent Impervious (%)	Approximately 95%
Underdrain	None
Pre-Treatment System	Forebay w/ Cell Permeable Paver Base
Predominant Land Use	Street and Sidewalk
Predominant Soil Types	Native: Silty Clay, Loam to Silty Clay Growing Media: Native with 12" 50/50 Topsoil/Compost

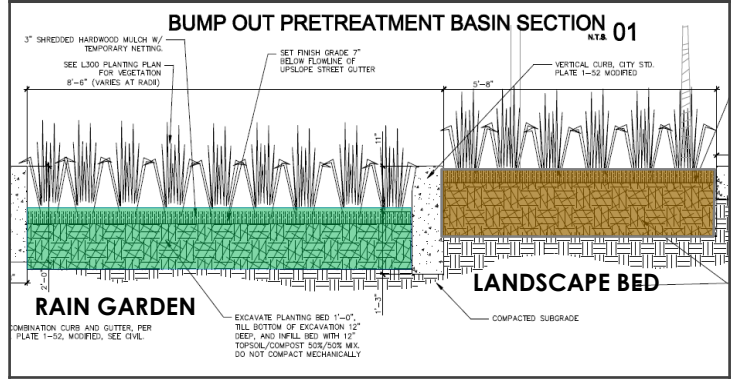


DESIGNED BY	CONSTRUCTED BY	MAINTENANCE BY
Ehrhart, Griffin, & Associates; Vireo	CBJ Construction	City of Omaha Stormwater Program

SITE LOCATION – 2217 Douglas St



RAIN GARDEN CROSS SECTION VIEW



PHOTOS



PROJECT LAYOUT

