FERGUSON WATERWORKS

UPPER CHESAPEAKE MEDICAL CENTER

BEL AIR, MD

INITIAL CONCERN

A large expansion was planned for the Kaufman Cancer Center in Bel Air, MD in an attempt to modernize and grow their healthcare offerings. As part of this expansion, a large parking area was necessary in addition to a bioretention system to meet stormwater requirements. Unfortunately a traditional bioretention system would reduce the amount of parking spots available, so the team hoped to use a more space-efficient solution to meet stormwater needs.

Goal

Utilize a space-efficient biofiltration system in three parking areas to maximize the amount of parking spaces at the medical facility.

Installation/Solution

The site engineer suggested using FocalPoint biofiltration system instead, as it would treat the same quantity of stormwater while shrinking the footprint by 70-80% and the ponding area by 50%. As a result, 1,078 sf of FocalPoint was installed throughout 12 areas within the three lots. In addition, expanded R-Tank underground stormwater systems were included, with 2,062 R-Tank modules used to help meet stormwater regulations, offer channel protection, and to provide stormwater storage to reduce the likelihood of any flooding or ponding in the lot. In order to protect the system, 9 Rain Guardian Turrets were installed for pretreatment (with a focus on low-lying areas) and 12 Beehive Overflow filters were installed for protection against heavy rain events.

Once the installation was finished, the FocalPoint biofiltration systems were “capped and covered” with a geotextile for the remainder of construction to protect them from heavy construction sediment loads. The geotextile was removed for system activation when construction finished, with the mulch, plantings, and gravel added to create the ponding areas and nutrient uptake. A benefit of this system, is the mulch and plantings create aesthetically pleasing areas, that average visitors or patients would not recognize as a stormwater system.

FocalPoint post-installation (lot A)

Curb riprap (lot A)

Tight space in median (lot A)

RESULTS

The high flow rate “k-factor” of the FocalPoint media bed allowed for the bioretention footprint sizes to be shrunk drastically, maximizing the amount of parking spots available and helping to meet the clients parking area goals. Maintenance has been simple and the client is pleased with the outcome.

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ADDITIONAL DETAILS AND PHOTOS

Riprap inlet to FocalPoint planted system (lot N).

Easy maintenance around ponding area (Westgate lot).

Geotextile cover warning on mulch (Westgate lot).

Small triangular FocalPoint system (lot A).

Smaller footprint size for more parking (lot A).

Covered Beehive Overflow filter, gravel and mulch.