

CASE STUDY

Vicksburg Marketplace

Plymouth, Minnesota

Basin A

Storage Required: 24,112 cubic feet
Area Used: 14,278 square feet
Model: Recharger® 150XLHD
Number of Units: 411

Basin B

Storage Required: 12,332 cubic feet
Area Used: 4,871 square feet
Model: Recharger® V8HD
Number of Units: 114
Engineer: Sambatek
Minnetonka, Minnesota



Recently, construction began on Vicksburg Marketplace, a new retail development on the corner of Highway 55 and Vicksburg Lane in Plymouth, MN. This new shopping center will include a 29,000-square-foot Fresh Thyme grocery store, a 20,600-square-foot Goodwill store and a 2,080-square-foot Starbucks coffee shop with a drive-through. Located adjacent to one of the city's most busy intersections, the engineering team was faced with stringent city regulations for the development of this previously vacant area.

Beginning in early 2015, engineers from Sambatek collaborated with the sales and technical staff at CULTEC, Inc. to develop the stormwater management for the 6.5 acre site. The site's layout needed to adhere to the City's watershed district regulations requiring abstraction, or permanent retention of runoff, of the first inch of rainfall on new

developments or redevelopments over the entire site for permeability. Since the soil at the site consisted of clay, the area to be developed cannot meet this infiltration requirement naturally and the project team was required to find a stormwater management solution that could allow for adequate storage until filtration could occur. Because of the limited green space of the area, the team found they would need to explore an underground chamber system.

As the project team began to research underground stormwater solutions, they were faced with a major challenge: the connection point for the storm sewer was uncharacteristically high which resulted in the need for a low profile solution with high volume capability. After extensive inquiry, it was discovered

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that CULTEC stormwater management chambers could accommodate this low-height requirement while providing the much needed high volume capability. While competitive chamber manufacturers may also produce low profile chamber units, most do so at the expense of chamber capacity. However, CULTEC's Recharger® 150XLHD measuring at only 18.5" (470 mm) tall offers a significant storage capacity per foot when compared to competitive models. This lower profile chamber was developed for use with installations with depth restrictions or when a larger infiltrative area is required — exactly what the project team was looking for.

"Finding a system that was small enough in height, with enough chamber capacity and enough cover between the stormwater chambers and the soon-to-be parking lot was very difficult," said Mike Bultman, Project Manager at Sambatek. "Fortunately for the design team, and thanks to the breadth of the CULTEC chamber product line, we were able to find a solution to this unique issue — other low-height options simply didn't have enough storage capacity to be effective."

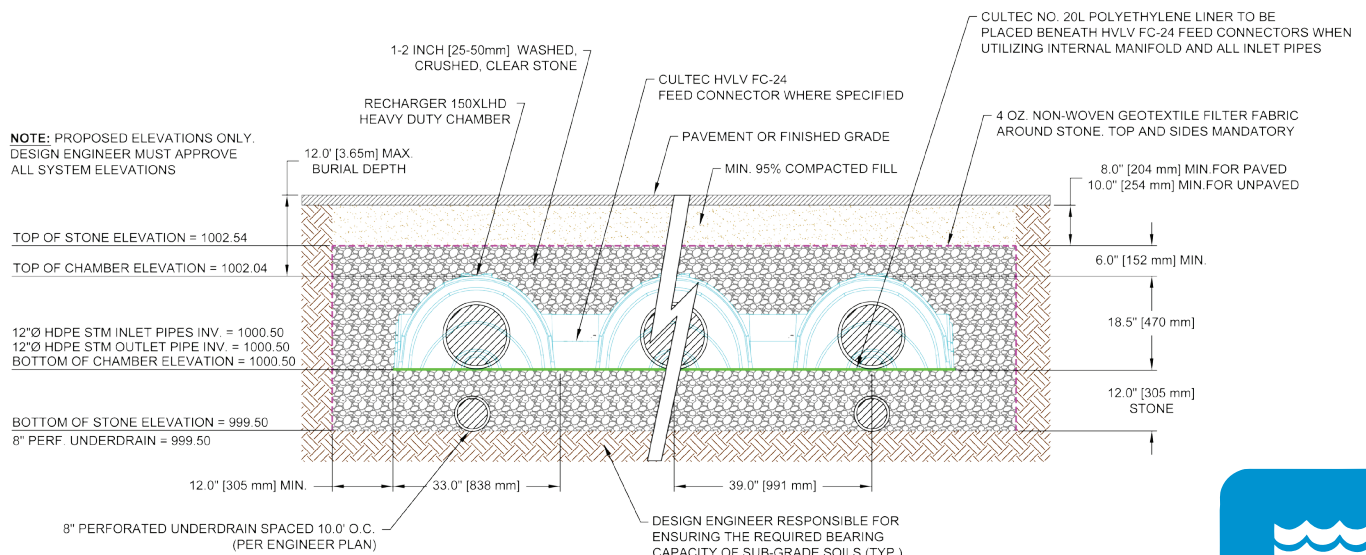
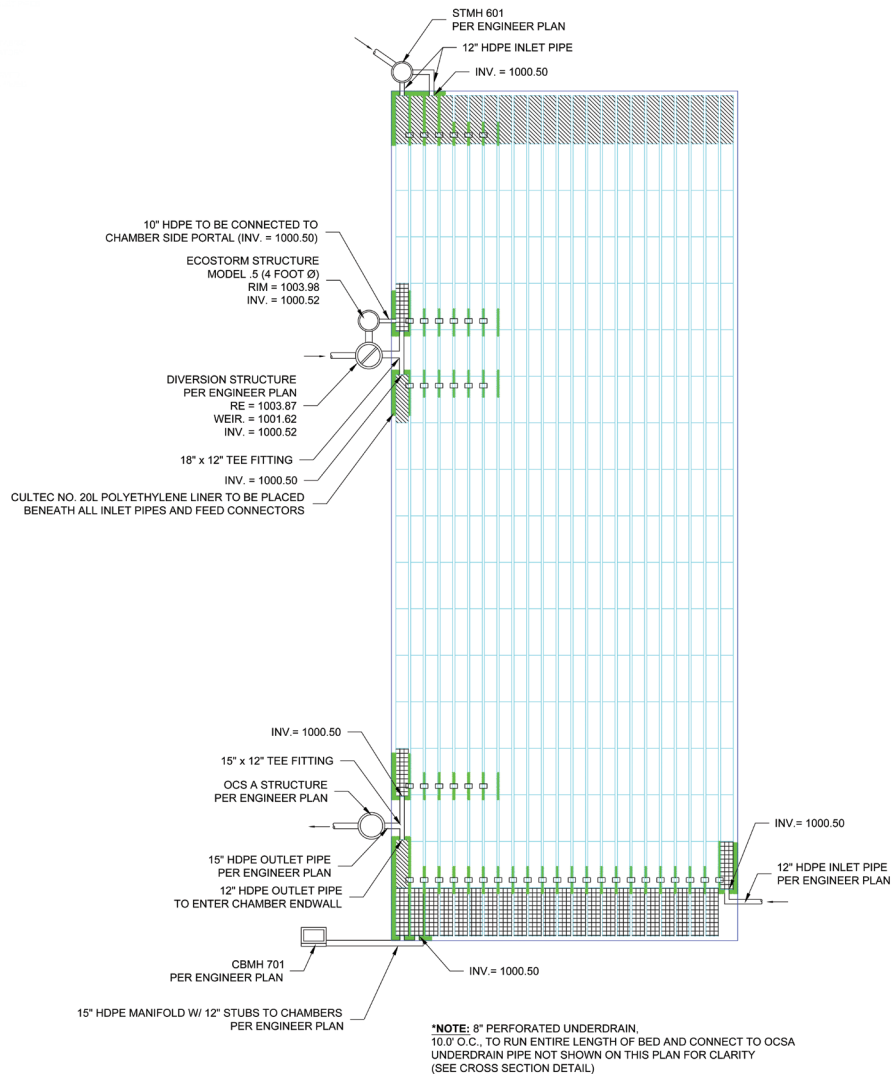


As the result of an easy installation and quick response time from their CULTEC representative, the team was able to install the largest portion of the stormwater system within a few days, allowing for quick project progression in this busy area. In addition, the project team specified CULTEC's higher profile/larger capacity Recharger V8HD chambers in another area of the site that did not have the same depth restrictions. A CULTEC Separator™ Row and an ecoStorm® system were installed to treat the stormwater run-off for water quality. The entire project is marked for completion in 2016.



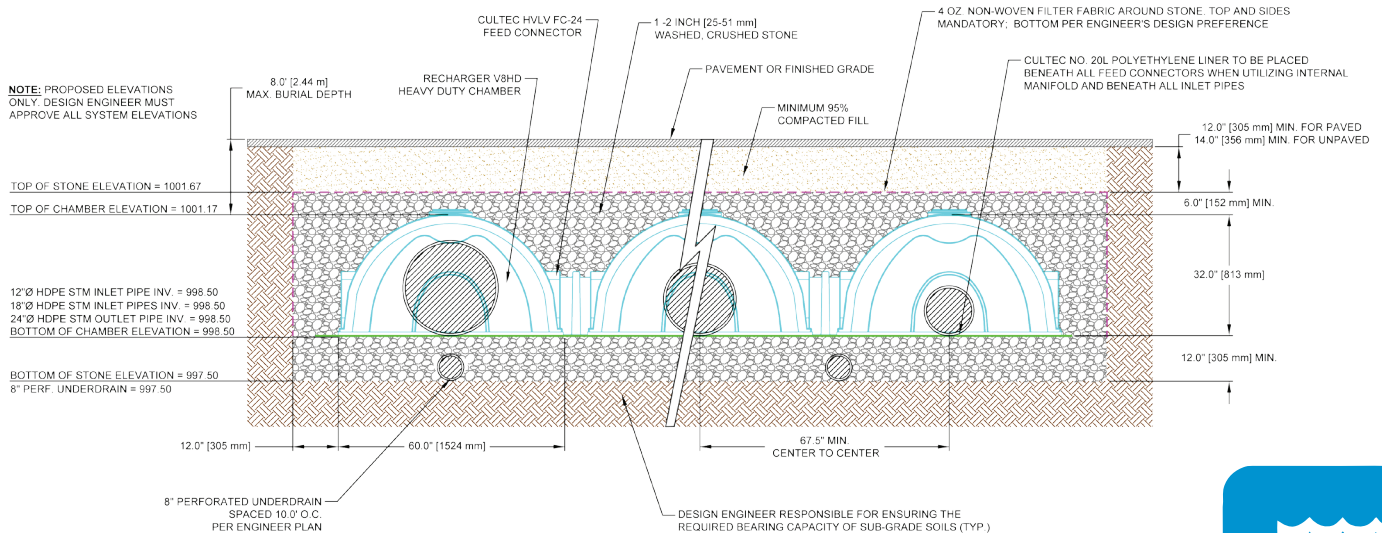
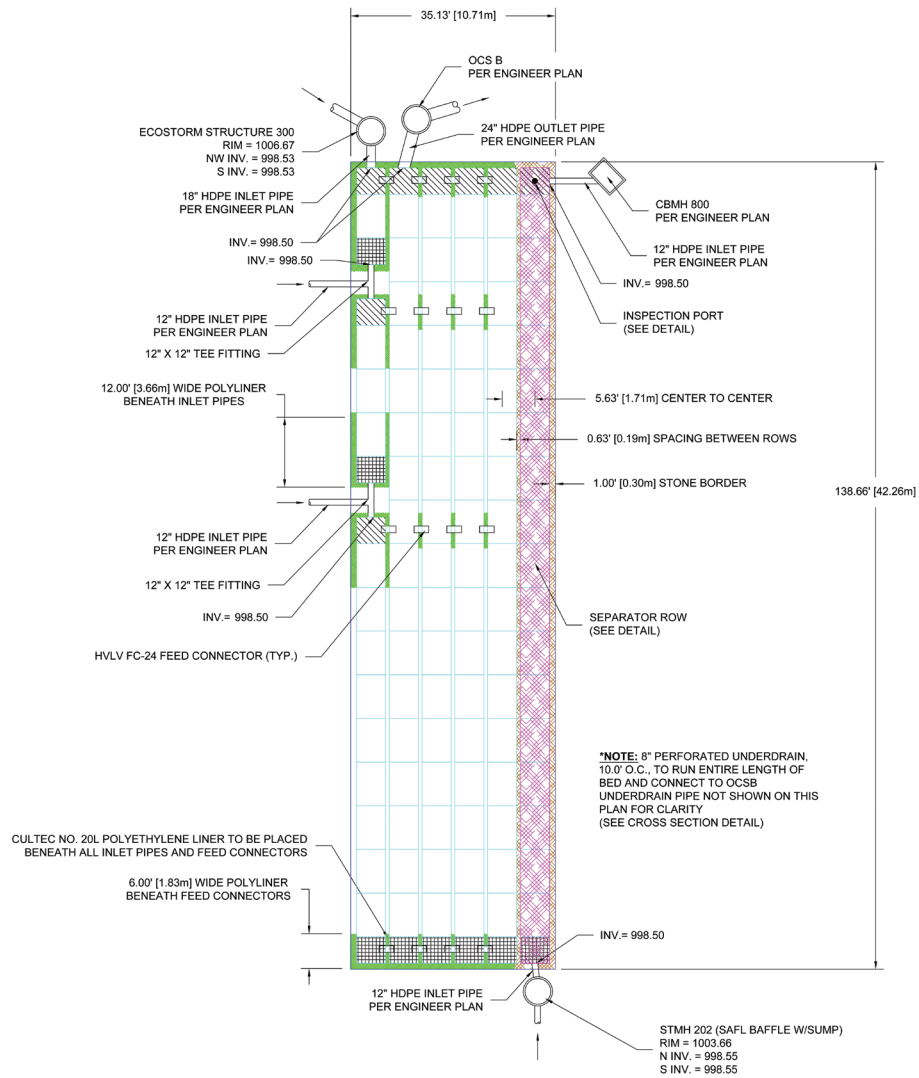
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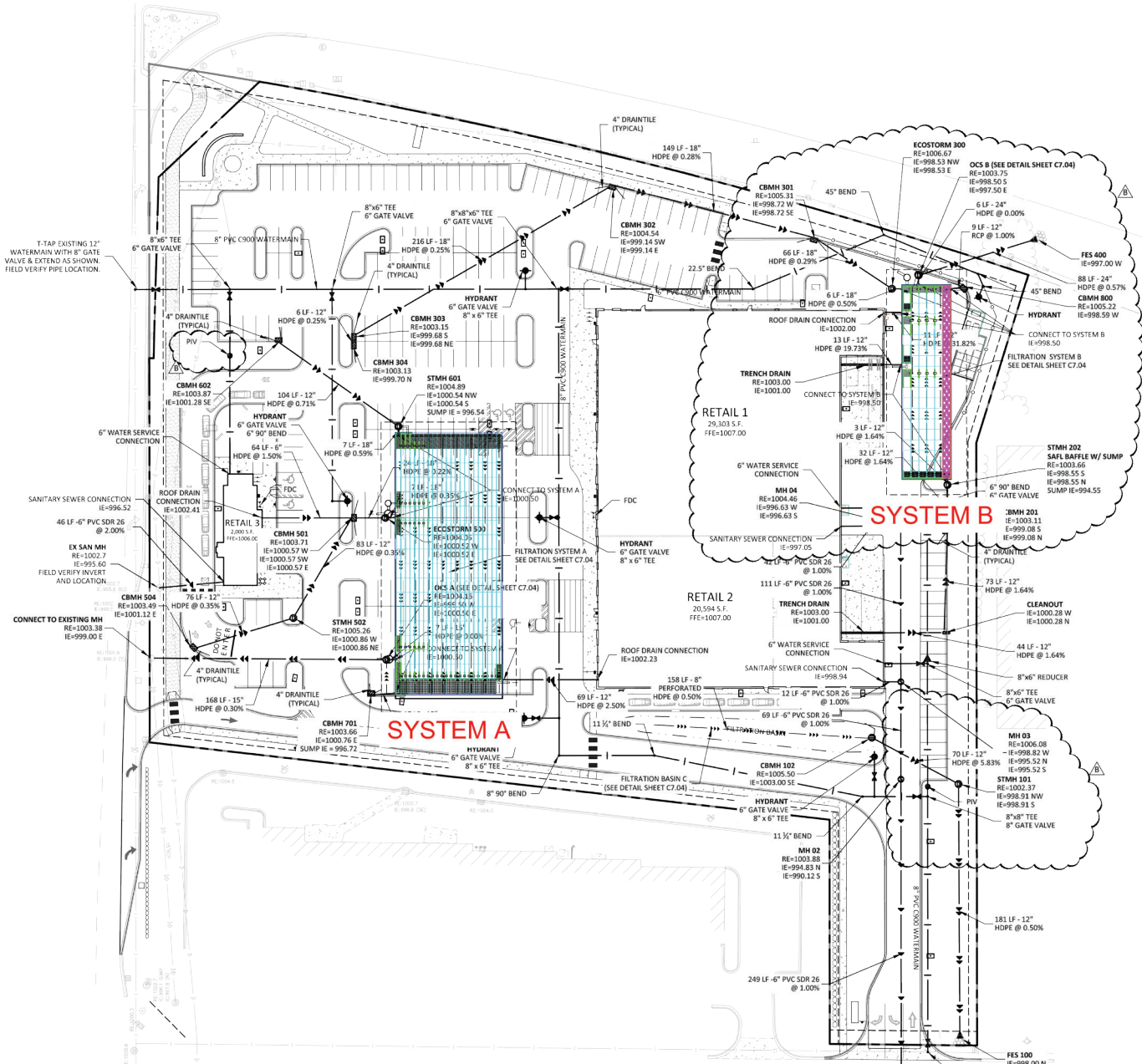
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