

CASE STUDY



Wawa Convenience Store

Sarasota, FL

Storage Provided:	34,742 ft ³
Area:	23,899 ft ²
Model:	Recharger® 180HD
Number of Units:	1,023
Installed:	November 2017
Engineer:	Bohler Engineering Tampa, FL
Contractor:	Elite Development Services Orlando, FL



A Florida construction firm realized enormous cost and time savings for their Philadelphia area client by using CULTEC chambers in building a new 24-hour convenience store in Sarasota, Fla.

Elite Development Services of Sarasota, Fla. faced several challenges in building an elaborate and complex system with CULTEC's Recharger® 180HD chambers. They measure 7.33 feet (2.33 meters) and are 36 inches (914 millimeters) wide and offer 163 gallons of storage, or 3.45 ft³/ft.

The project centers around the construction of a new Wawa, a Philadelphia-based 24-hour convenience store with locations across the East Coast. Its Sarasota location is expected to open in October 2018.

Scott Tonitis, Director of Elite Development Services in Sarasota, Fla. faced many problems while installing a new storm water management system for this Wawa location. Tonitis, his team at Elite Development Services, and Bohler Engineering decided

to switch from initial plans to use concrete materials to CULTEC's plastic chambers. The switch saved an estimated \$500,000 for Wawa's owners. The plastic chambers also allowed for more flexibility in the design and saved substantial time.

Sharing property with a furniture store at the site of the new Wawa location, Tonitis and his team had to make sure the store remained open during construction. This drastically reduced the space in which Tonitis and his team could store equipment. The stackable feature of the CULTEC chambers helped keep the area clear for shoppers at the furniture store.

The overall site of the installation was challenging. Tonitis and his team found that groundwater sat close to the surface of the site. In addition, several ponds at the location needed to be filled to meet parking requirements for Wawa customers. Unknown underground electrical vaults and fire suppression piping

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also required adjustments as the team discovered them and many went unnoticed until they started to construct the stormwater management lines.

“There were a lot of existing landscaping, trees, and utility valve vaults. We knew about some of them,” Tonitis said. “We had to go around them and modify the system as we went. We installed the system according to the engineer’s requirements for water storage, but we had to get creative in how we solved it.”

CULTEC’s plastic chambers were already available compared to traditional concrete products, which needed to be manufactured and, then delivered. “I knew we could get it done much more quickly with the CULTEC products,” Tonitis said. “The concrete vault system was about two and a half times costlier than the CULTEC system and would save about 50 percent on labor costs. I told the owner we could save about a half million dollars by using the plastic chambers. He was thrilled.”

Elite Development and Bohler Engineering also developed a new stormwater management strategy. CULTEC’s website allowed them to work with a computer-assisted program to create a system that included 21 different sections of various sizes.

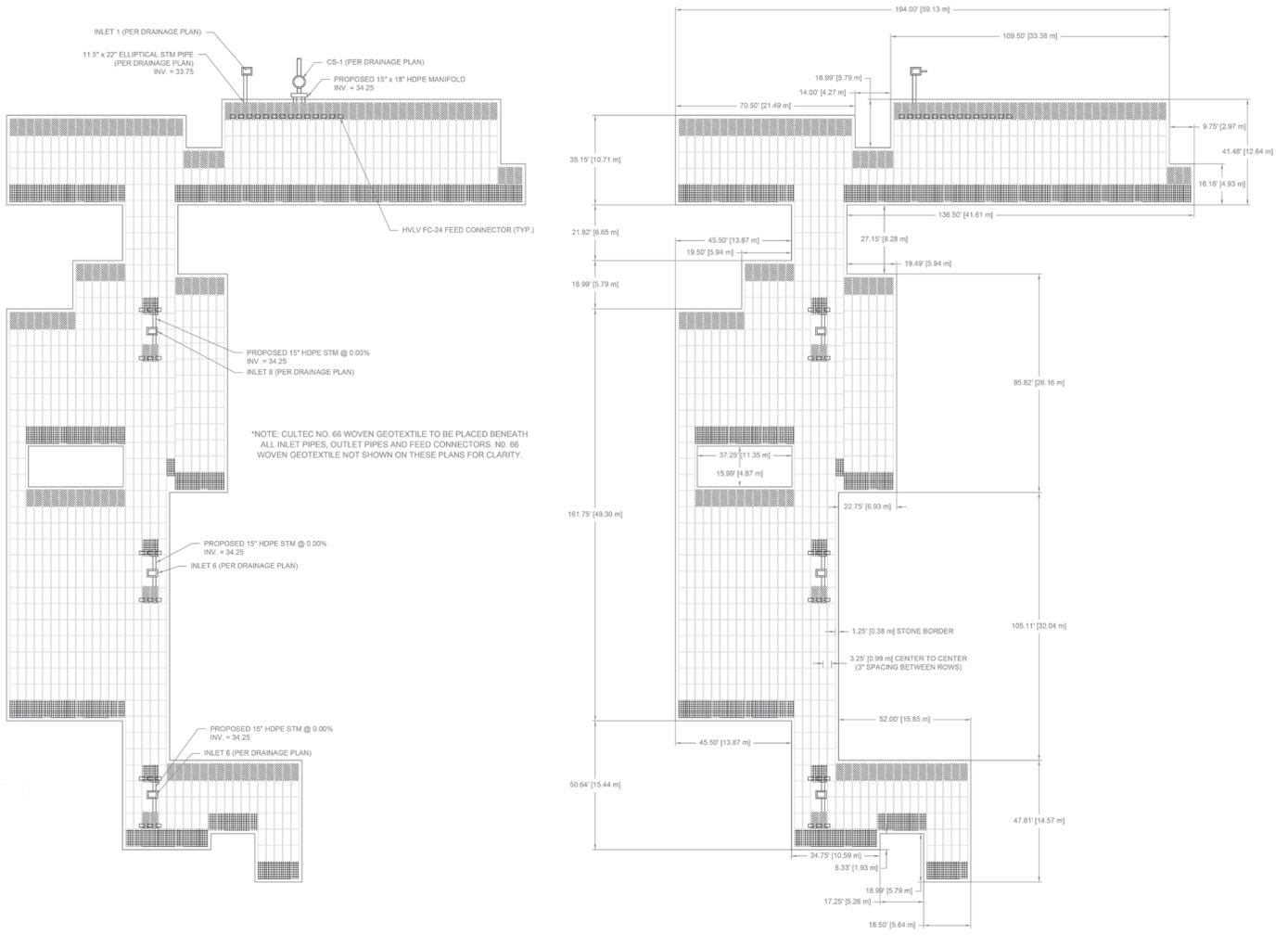
The final design included 1,023 Recharger® 180HD chambers. The mid-size chamber is typically used for installations with depth restrictions or when a larger infiltrative area is needed. The chamber is typically used for installations with depth restrictions or when a larger infiltrative area is needed. In all, Elite Development laid down 116 rows to manage nearly 23,900 ft³. The system was topped with 2,178 tons of crushed stone.

Tonitis, who has installed stormwater management systems for over 30 years, called the design the most complex he has built to date. “In the end, we designed and installed a system that is going to do a great job and last for a very long time,” he said.



Wawa

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