

## 2003 Walser Honda

Located south of the Twin Cities in Burnsville, Minnesota, Walser Honda needed to expand their parking lot to maximize the usable area for both retail sales and customer parking. The site did not allow room for traditional storm water storage, but required an underground system to be installed under the entire parking lot site. Triton Stormwater Solutions in Brighton, Michigan was selected as the storm water system provider.

Triton's proprietary design and patented construction offers larger-capacity, lighter-weight, easier-to-install stormwater chambers that are more than 50 percent stronger than traditional products. Triton stormwater chambers have 46 percent greater capacity per linear foot and withstand 16,000 more pounds of pressure than traditional chambers, according to independent tests.

Triton is also environmentally friendly, manufacturing materials from the same soy-based resin that has been in use for more than 50 years in the heavy equipment and automotive industries. The products have achieved carbon neutral certification, provide up to 21 LEED credits and come with an industry leading lifetime systems warranty.



The site of the water retention system is backfilled up to six inches past the crown of the chambers.



The Walser Honda dealership in Burnsville, MN is expanding.

"The Triton system is an improvement on other systems," says Lance Hoff, Water Resource Engineer, at Royal Environmental Systems, part of Royal Enterprises. "I like that it is made of sustainable materials—that, to me, is smart and that's what the push is now."

Hoff explains that Triton materials and design result in a stronger product with more storage capabilities.

"Ultimately when you consider the excavation savings and need for less rock, it beats the competition on cost," he says. "Once you add in the sustainable materials, the fact that there is less work involved to install the system and the LEED credits, it is a smart choice all around."

A Triton retention system was chosen for its strength, design flexibility and ability to be serviced and maintained with the use of the patented main header row system. The 106' long by 70' wide excavation uses 420 chambers that can retain over 135,500 gallons.

This particular site is very sandy and the local water shed district encourages infiltration to minimize the impact of development. "The district wants to keep run-off conditions as close to existing conditions as possible and the only way to get rid of volume is to infiltrate," explains Hoff. "That's why systems like Triton are beneficial because you do get that infiltration component."



The Installation

First, the crew dug down to elevation and put down a six inch base layer of stone. Next, the chambers were placed and the walls of the trench were lined with a class 2 non-woven geo fabric. The site was backfilled with stone up to six inches past the crown of the chambers and the geo fabric was folded back and backfilled with material to the desired elevation, leaving the Triton system under 12 feet of cover.

The depth of the installation required significant excavation work, including hauling dirt to another site. It took two days to dig the hole, two days to install and backfill the chamber system and another day to get it back to grade.

A key feature of the Triton chambers is that they weigh only 32 pounds apiece, enabling workers to carry two or three at a time.

A sediment pond on the site feeds the Triton system so the use of the Triton main header row system ensures that the water infiltrating back into the ground is extremely clean and that the infiltration rate for which the system was designed will not be reduced over time.

"The sediment pond is said to collect 65 to 70% of all sediments and the rest is collected into the Triton main header row," explains Joe Miskovich, president of Triton Stormwater Solutions. "Any water now in the Triton drainage field is virtually free of fines or sediments."

Miskovich says that the infiltration rate used to determine the drainage, and the footprint and number of chambers, ensures that the system should last a very long time as long as the pond and the system maintenance cycles are An overview of the installation site, which will be located under a new parking lot behind the showroom.



Triton chambers easily snap together.



Triton main header row feeds into the distribution rows.

not neglected. "Even if the maintenance is delinquent, the Triton main header system serves as a secondary fail-safe backup system to help catch and reduce the sediment that is coming from the pond."

For more information about Triton, visit www.tritonsws.com.

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