

Costco, Puerto Vallarta, Mexico

Situated off the Mexican coast, Puerto Vallarta is prone to heavy storms. As local development has increased, underground stormwater systems currently in place — city sewers, irrigation channels and waterways — have become insufficient to handle the stormwater run-off of large-scale developments.

When construction of a Costco warehouse began in Puerto Vallarta, CULTEC stormwater chambers were selected over a series of concrete detention tanks. CULTEC was a completely new technology, according to the local contractor Constuctora Maiz Mier. “I have been in the construction industry for 18 years and have never seen anything like it, nor have my colleagues and co-workers,” said Alfredo Garcia Martinez of Maiz Mier.

It took Maiz Mier two weeks to install 297 Heavy Duty Recharger V8 chambers, which took up 1,106 sq. meters of the 50,000-sq. meter site. Interestingly, the CULTEC system will both detain and retain water on the site. Detention involves temporary or short-term storage of excess of stormwater, while in retention, it can be stored indefinitely. Specific to this application, the entire bed is wrapped with CULTEC 410 Filter Fabric and the sides are lined with a thick polyethylene liner to detain the stormwater and prevent it from infiltrating through the sides of the bed. At the same time, infiltration will be achieved at the foot of the bed.

(continued on back)



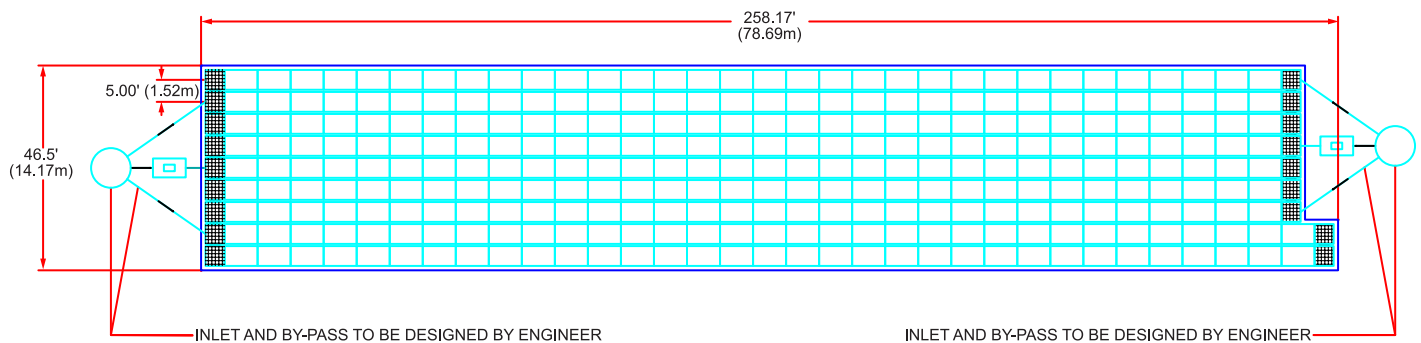
CASE STUDY

Costco

The single-layer system includes two CULTEC Stormfilter 400 filtration chambers located at both sides of the bed to prevent silt and fines from entering the system of storage chambers. Six inches of stone lines the bottom of the chamber bed and 18 inches of backfill is installed above the V8 chambers. The installed system has the storage capacity of 30,000 cubic feet.

“After the installation was completed, we were all amazed by how simple it was to work with CULTEC chambers,” said Garcia. “The structure of the chamber itself and the principle of water management it uses all made me wonder why we had never used it before.”

CULTEC Recharger V8 stormwater chambers have more than 40% greater storage capacity than CULTEC’s next largest model and can be used for retention, detention, recharging, or controlling the flow of on-site stormwater run-off. The chamber incorporates all of the distinctive key benefits of CULTEC chambers, including built-in endwalls for strength throughout the system and a patented, overlapping rib connection, which allows for easy installation and a stronger connection between chambers. The Recharger V8 stormwater system uses a unique in-line manifold system which allows for additional design flexibility.



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Protected by one or more of the following patents: U.S. Patent No. 5,087,151, U.S. Patent No. 5,419,838, U.S. Patent No. 6,129,482, U.S. Patent No. 6,322,288 B1. Other U.S. and Foreign patents. Other U.S. patents pending. RECHARGER®, CONTACTOR®, HVLV™ and STORMFILTER® are trade names of CULTEC, Inc.

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