

# CASE STUDY

## Orange County Choppers Newburgh, New York

<b>Storage Required:</b>	50,000 CF
<b>Storage Provided:</b>	52,913.73 CF
<b>Area:</b>	17,000 SF
<b>Model:</b>	Recharger V8
<b>Number of Units:</b>	400
<b>Tons of Stone:</b>	2,910 Required
<b>Installed:</b>	August 2007
<b>Project Engineer:</b>	M.A. Day Engineering Wappingers Falls, NY
<b>Contractor:</b>	Ultimate Land Developers, Inc. New Windsor, NY



When civil engineers from Day Engineering began designing a stormwater system for the new Orange County Choppers' headquarters and showroom facility in Newburgh, N.Y., they met with a variety of on-site challenges. These included a lack of available land, a high water table with a neighboring protected stream and a zero discharge restriction. In addition, the engineers wanted to ensure that the stormwater system would create minimum land disturbance in the eco-friendly development. The engineers also planned to use the stormwater captured on the site for irrigation.

Stone-filled trenches and above-ground detention ponds that the engineering firm had relied on previously could not fulfill the site's requirements. Instead, for the first time the town of Newburgh used CULTEC underground plastic chambers as the site's Best Management Practice for controlling stormwater.

"When an open detention pond is used to control stormwater run-off, the site loses acreage," said Larry Ruscitti, Site Supervisor at Ultimate Land Developers, Inc. "At (the) Orange County Choppers' development, they needed to use a smaller footprint because there was a water stream at the back of the property. The CULTEC system allowed for some extra space they wouldn't have had with an above-ground system. That space was later used to add to a parking lot and create a grassy area."

The Recharger V8 — currently CULTEC's largest-capacity stormwater storage chamber — was selected. The stormwater system collects water in catch basins

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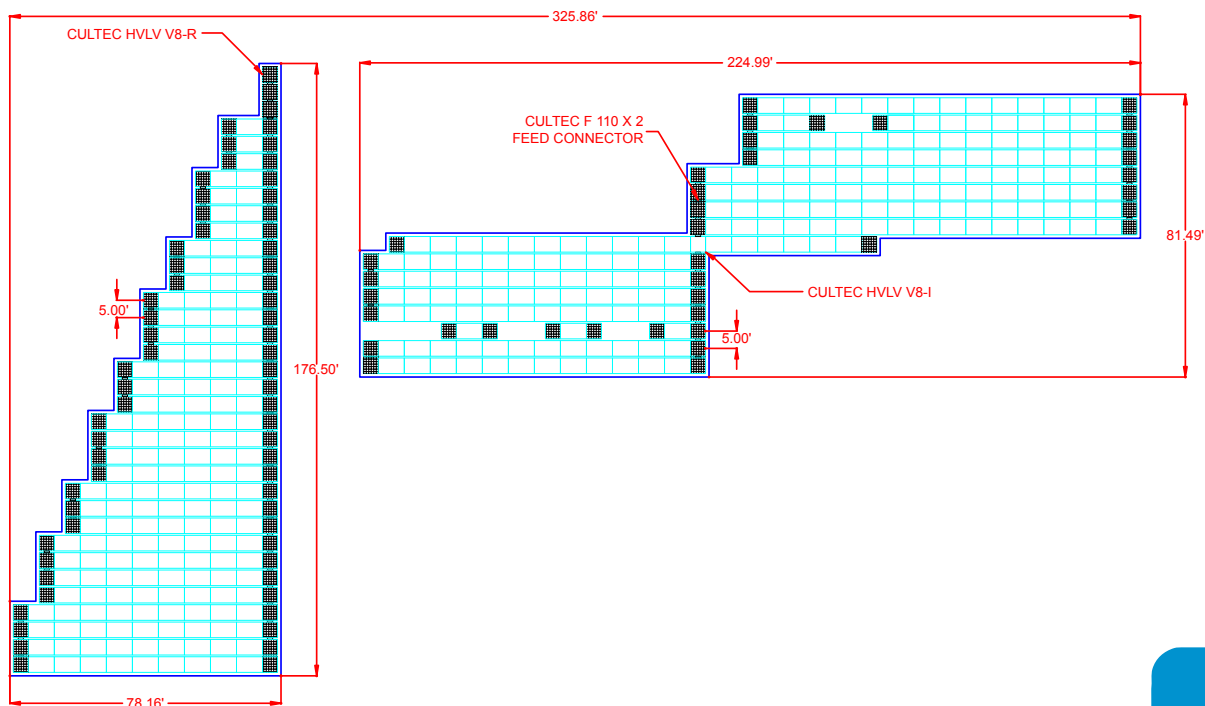
# Orange County Choppers

## Newburgh, New York *(continued)*

and feeds it into the underground chambers where it is treated and retained until it can be infiltrated back into the ground. That satisfies the zero discharge requirement that all stormwater run-off be captured, treated and stored on-site to preserve water quality of the local waterways.

The 400-chamber system occupies 17,000 sq. feet of the 3.2-acre development area, offering approximately 50,000 cubic feet of storage capacity. The installation began with excavating a bed, laying filter fabric along the sides and the bottom and adding a layer of crushed stone. After the V8 chambers were in place they were backfilled with stone, covered with a layer of filter fabric, and prepared for asphalt. The filter fabric encapsulated all the stone to ensure protection from soil intrusion. The entire system was installed in a week and a half, with the excavation process taking most of that time.

“The CULTEC system was installed very quickly, with only half a day needed to install the chambers,” said Dennis Lynch, Field Engineer at Day Engineering. “It was the first time we ever used an underground system, and CULTEC walked us through every step of its design, layout and configuration.” Larry Ruscitti continued to say, “It was so easy a 15-year old could have done it.”



**CULTEC, Inc.**

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