

CASE STUDY

Acton Faith Bible Church

Acton, California

Storage Provided:	25,027 cu. ft.
Area:	10,646 SF
Models:	Recharger® V8
Number of Units:	258
Installed:	November 2010
Project Engineer:	Carlton Pacific Inc. Palmdale, CA
Contractor:	Stormwater Central Inc. Santa Clarita, CA



Within the community of Acton, California, located in the Sierra Pelona Mountains, Acton Faith Bible Church has served the spiritual needs of the residents for more than 30 years. Since 2006, the church has been developing a place of worship on its 10-acre property on Soledad Canyon Road to accommodate the growing congregation. The finished facility, including the construction of the sanctuary, pastor's residence and school, will feature seven buildings with about 200 parking spaces and landscaped areas.

The Acton Faith Bible Church site is regulated by the Los Angeles County Department of Public Works, which mandates that stormwater discharge from a development be kept to pre-development levels. To address the requirement, the engineers at Carlton Pacific Inc. had to design a detention system that would reduce peak discharge rates and then release runoff slowly into the swale that had handled stormwater off the site previously.

An initial design featured an open detention basin at the front of the site, which required the use of a retention wall. That stormwater solution cost \$318,000, according to Ray Hensley with Stormwater Central Inc., the project contractor who also served on the church's building committee.

"The site did not have adequate space for a detention basin," said Hensley. "Some people in the community were also concerned about the visual impact of the retaining wall along Soledad Canyon Road, a scenic route."

Hensley, a 15-year stormwater industry veteran, recommended CULTEC's underground stormwater chambers as an alternative, which brought the cost of the stormwater management solution down to about \$106,000.

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Acton, California *(continued)*

“CULTEC’s system enabled the church to utilize the space that would have otherwise been taken up by an open detention basin,” said Blaine Carlton, engineer with Carlton Pacific. “The basin would have also required an expensive retaining wall and yearly maintenance.”

The design of the subsurface system called for two beds constructed of a total of 258 Recharger® V8 chambers. Each unit has a bare chamber capacity of 8.68 cubic feet per linear foot. The Recharger V8 offered the largest storage volume while featuring the smallest footprint from CULTEC’s nine chamber sizes.

The system has a storage capacity of 25,027 cubic feet and is designed to detain stormwater from the parking lot located above it and other impervious surfaces. It then discharges runoff to the swale and public right-of-way via a 10-inch pipe. Catchments installed on four inlets on both sides of the system collect debris, oil and sediment to prevent them from entering the detention system.

At Acton Faith Bible Church, Hensley and his crew installed CULTEC’s system for the first time. Randy Jevas with Better Practices, CULTEC’s sales representative, was onsite during the installation to ensure that the process went smoothly and quickly. The entire installation took less than 10 days, including excavation of two beds, laying filter fabric along the sides and the bottoms of each bed and adding 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.



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