

Building Expansion Project Tackles Storm Water

Orange United Methodist Church is the oldest Methodist Church in Orange County, N.C., and has been in existence for more than 180 years. The church has grown exponentially in the last 10 years and needed to expand its buildings and parking lot to accommodate its growing congregation.

The church is in the early stages of the expansion and recently completed the storm water portion of the project. The church and Philip Post & Associates, the engineering company selected for the project, chose StormTrap to design and manufacture the storm water management system, which meets the water quality and attenuation requirements of the entire site. The DoubleTrap system was chosen because of its ability to maximize the site's storage volume while minimizing the footprint and overall costs.

"We have used other products in the past—mostly circular [corrugated metal pipe] for storage," said Ernest Dodson, P.E. with Philip Post & Associates. "Because of the large volume of storage required for the current development at the church, and to accommodate planned

future development with limited footprint area, we determined that the StormTrap system provided the most efficient configuration."

The system is designed to allow the runoff to enter the sediment chamber and flow over the weir wall into the sand filter chamber. The runoff infiltrates through the sand and then exits through the underdrain pipes. The treated runoff is then conveyed to the outlet control unit and sent downstream.

"We were able to provide the needed volume and the water quality feature (sand filter) for this project within the available space under a parking area. To achieve the same volume using circular products would have taken more than the available area with the required separation of the pipes and the volume lost in the haunches. The vertical walls of the StormTrap units made the best use of the available area," Dodson said.

The system consists of 194 pieces, and the entire installation process took three days, including the setting of the pieces and assembling the sand filter.



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