Water Retention Case Study

TRITON STORMWATER SOLUTIONS

University of St. Thomas gets the Triton SWS Advantage

Heavy bedrock layers required extensive excavating at The St. Thomas University Anderson Athletic Complex sites. The use of a modified floor design, coupled with the Triton SWS chambers' unrivaled storage capacity, allowed infiltration rate requirements to be met. Chamber placement at the two locations took only a day.

The Situation:

The University of St. Thomas needed a cutting-edge stormwater management system to support construction of a 180,000-square-foot athletic facility. The Anderson Athletic and Recreation Complex – which houses an aquatic center, 2,000-seat arena, a field house with 200m track, fitness facilities, locker rooms, and department offices for Athletics and Health and Human Performance – will become a showcase center for the St. Paul, Minn., school.

The Challenge:

Because of the layout of the building, stormwater management needed to be done at two separate locations. This required coordination of equipment and manpower – but the Triton SWS' lightweight chambers, which require no heavy machinery for placement, helped ease this burden.

Additionally, initial soil infiltration estimates based on borings done at the site proved to be incorrect. Actual infiltration was much slower – creating a potentially serious problem. However, collaboration between the engineers, watershed district and Triton SWS resulted in a modification to the Triton SWS bed design – increasing the amount of stone and stone/soil interface. The system's flexibility was crucial to this change, and allowed the project to move ahead without serious, and costly, delays and changes.

The Solution:

Project managers chose the Triton Stormwater Solutions' innovative underground chambers to create more than 41,000 cubic feet of storage – draining 145,000 square feet at the south site and 16,300 square feet at the east site. The Triton SWS Chambers' unrivaled storage capacity, and the system's flexibility were key to the project's success.

The Installation:

After initial site excavation at the two locations, a four-man crew was able to complete the chamber placement in a little over one day. The sides of each trench were lined with geofabric and the chambers were covered with a crushed stone backfill, to prepare for final site usage – a courtyard over the system on the east side, and green space and sidewalk over the south side system.

"One of the best aspects of using the Triton SWS System was the engineering support we received . . . it was outstanding."

— Mark Anderson, P.E., MFRA, Inc.

The Result:

The new athletic complex opened to students in 2011 – and with the Triton SWS System in place, the facility will serve the university for generations to come!

Both site locations utilized a single-tier chamber design with Main Header Row. Typical of most installations, geofabric was used to line the sides of the trench and crushed stone was used to backfill around the chambers. In total, more than 41,000 cubic feet of storage was produced with a footprint of just over 10,000 square feet.

Triton Stormwater Solutions is the proven, comprehensive solution to stormwater management challenges. On your next project, turn to Triton Stormwater Solutions, the stronger, lighter, larger, greener, easier-to-install, cost-effective stormwater solution. Triton Stormwater Solutions gives you Power Over Water™.

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