

INSTALLATION DATE

Summer 2012

PROJECT ENGINEER

AMEC

CONTRACTOR

Bess-Con Construction

CHALLENGE

Designing a subsurface stormwater storage system to collect roof rainwater and runoff from the parking lot above. The system would also be required to accommodate inlet and outlet pipe connections with over 1m difference in inverts.

SOLUTION

Triton Stormwater System, with a total storage volume of 465m³, was selected as a solution for subsurface stormwater storage.

PROJECT OVERVIEW

AMEC was faced with the challenge of designing a stormwater system permitting inlet and outlet pipe connections with over 1m difference in inverts.

Terrafix collaborated with AMEC to come up with a Triton Stormwater system in a double-stacked configuration. The top and bottom rows would have a clear stone separation of 250mm with biaxial geogrid in the middle layer.

A total of 314 Triton S-29 chambers were installed by Bess-Con Construction in approximately 1 week.

Rainwater is collected from two sources; 1) roof rainwater and 2) runoff from pavement. Due to the open-bottom feature of the chambers, stormwater is gradually released into the subsoils. Stormwater is also released through an outlet pipe leading to a manhole with an orifice pipe to control flows leaving the site.

Header rows are included in the system as they provide filtration of the stormwater before it enters the distribution chambers.

Triton chambers are manufactured from environmentally friendly soy-based resin and are light enough (14.5kg) for one person to carry and install. With a minimum cover of 450mm (not including the pavement layer), the Triton stormwater system is able to withstand heavy traffic loading.





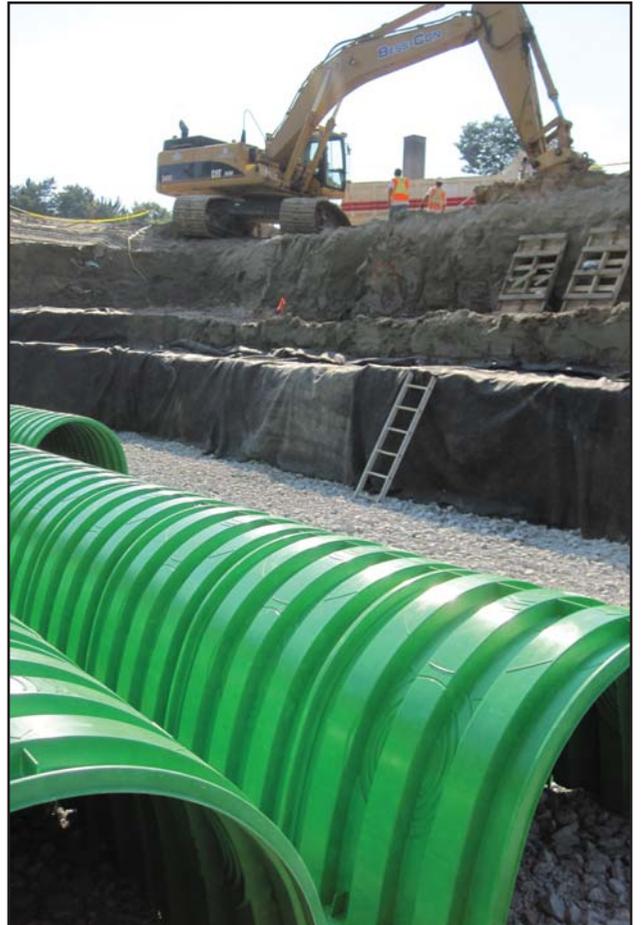
Excavation of trench



152mm of clear stone bedding. Carefully lowering skid of chambers in the trench



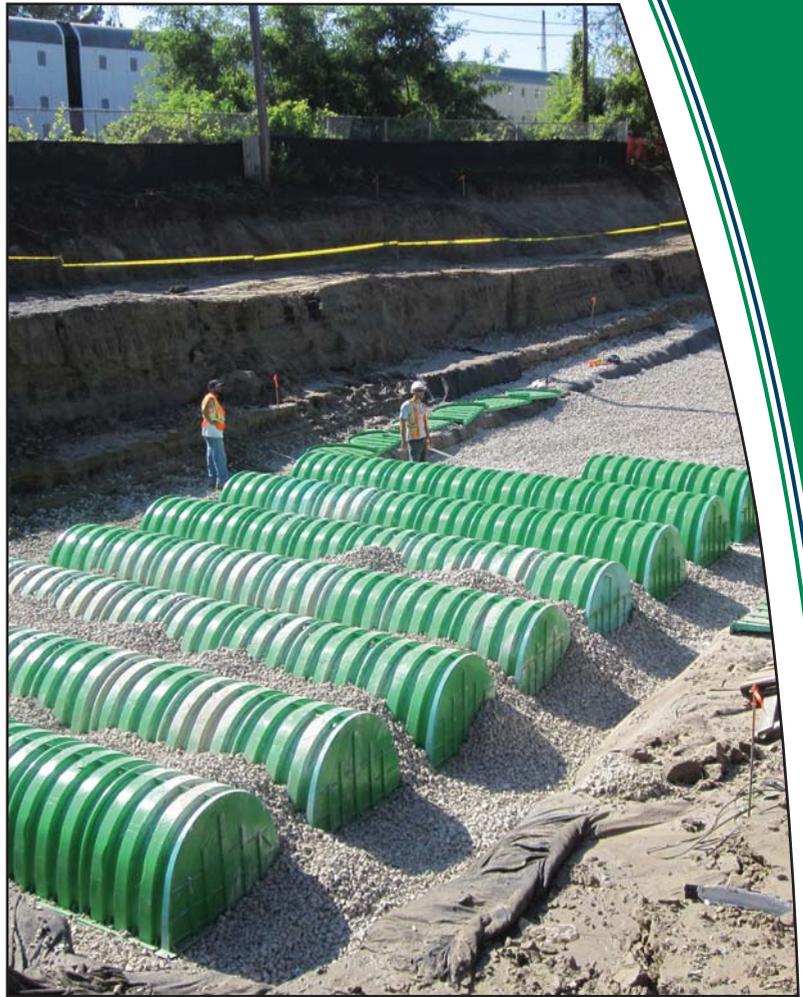
Connecting the chambers



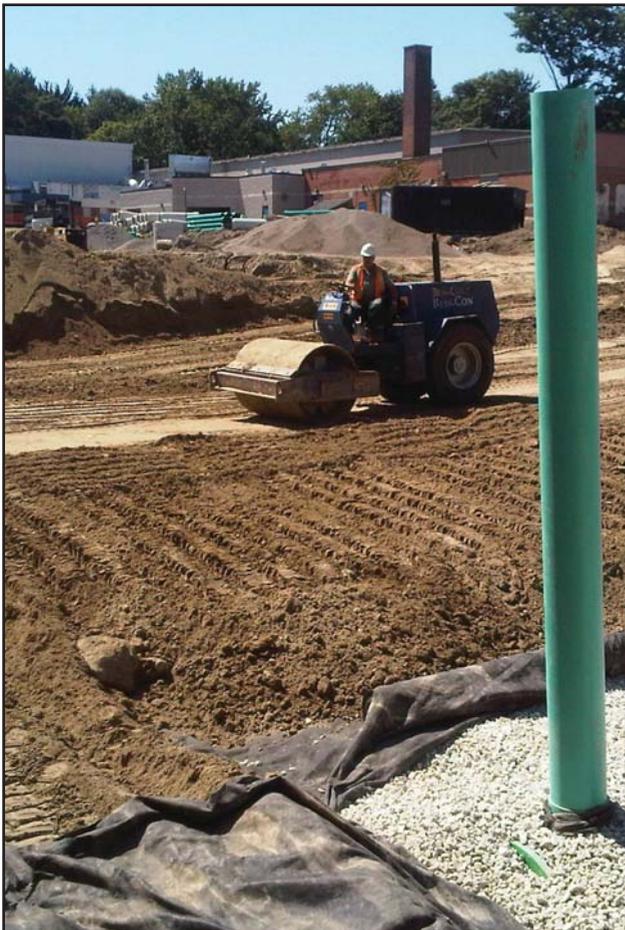
Installation of bottom rows of chambers



Biaxial geogrid in middle layer



Installation of top rows of chambers



Geotextile placed over stone cover with backfill material placed and compacted above in lifts



Paved surface over Triton System

What's new at terrafix® Geosynthetics?



ScourStop™ transition mat is a biotechnical replacement for hard armor. It is a mechanically-anchored 4 ft. X 4 ft. X .5 inch semi-rigid, polymer mat designed with voids throughout the structure which enable vegetative growth. Transition mats provide mechanical protection over highly erosive areas; like stormwater pipe outfalls, curb outfalls, over-flow structures and shorelines. Transition mats provide protection against much higher shear stress and velocities than vegetation alone or rock rip rap; and are comparable in performance to Articulated Concrete Blocks.

Lunch and Learn



terrafix® offers a project specific approach to solving your erosion & sediment and stormwater management solutions.

We offer detailed assistance from the design stage to onsite support. With a professional staff of experienced engineers and specialists, we are available to assist designers and clients in selecting cost effective solutions.

If you are interested in an office Lunch & Learn, please contact our office at (416)674-0363, ext. 241.

Additional Information

For stormwater and erosion control challenges, please call us at 416-674-0363, ext. 241 or e-mail jjbreede@terrafixgeo.com



terrafix®
geosynthetics inc.

455 Horner Avenue
Toronto, Ontario • M8W 4W9
Telephone (416) 674-0363
Fax (416) 674-1159

January 2014

terrafix®
geosynthetics inc

At terrafix®, we provide powerful new technologies in geosynthetic products and services for construction and environmental applications. These new technologies can save you installation time and money.... and we can prove it!

terrafix® offers a turnkey approach to solving your environmental problems. From engineering to construction, our team of professionals are committed to providing the most advanced engineering solutions to today's environmental challenges.

We have technical experts available every day to answer your technical questions and to give you engineering solutions in which you can have confidence.

Because we carry the complete line of geosynthetic products you can count on us to have inventory available when you need it. And, many of our products can be custom cut and fabricated to fit the requirements of your project which will save you labour costs, installation time and minimize waste. Ask us about it!

terrafix® has been in business for 40 years. We have a track record of success and reliability. You can be certain that we will be here when you need us.

Call on terrafix® for all your geosynthetic product or service applications!