

Frontenac Residential Detention Case Study



The Midwest's Most Trusted Site Solutions Provider

Project: Residential Detention

Salesperson: Royce Michaels

Location: Frontenac, Missouri

Engineer: Buescher Ditch and Associates

Application/Solution:

Contractor: Mike Terry Enterprises

Underground Detention/Infiltration

Installed: April 2014

Market Sector: Stormwater Management

case study

case study

Challenge

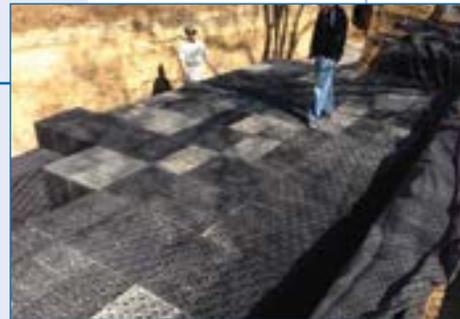
In order to reduce the damage caused by increase impervious surfaces, the city of Frontenac requires residential developers to detain any additional runoff as a result of increasing the impervious surface. With most of these re-developments, there is very little space to have above ground detention and even then, no one really wants to give up their backyard to a detention basin.

Solutions

116 Double Atlantis Raintanks were assembled and installed in a section of the side yard. All downspouts and surface drains were then directed into the tanks after utilizing the Envirohood pre-treatment system in the Nyloplast catch basins. The final design included a control structure that would slowly release the water unless the tank was full. If the rain event was long and strong enough to completely fill the Raintanks, the water would top an internal weir in the control structure and flow out into the existing stormwater system.

Results

After several adjustments to the original design, the contractor installed all of the tanks and made all the necessary connections in approximately 3 days. Connecting all of the downspouts proved to be challenging while working around all the other existing utilities. One large yard drain was also connected to the system, again with an Envirohood pre-treatment device included to reduce any sediment of organic materials entering the tank system. Inspection and flush ports were also installed so proper maintenance could be performed when needed.



1 After excavation, the tanks are laid on top of the 6 oz. fabric.



2 Once all the tanks are place, fabric is wrapped around the whole tank system.



3 A 1 foot space is minimum on the sides with compacted rock placed for stability.



Frontenac Residential Detention Case Study continued



Products

Manufacturers included in solutions and product:

Product:
Double Raintanks

Manufacturer:
Atlantis

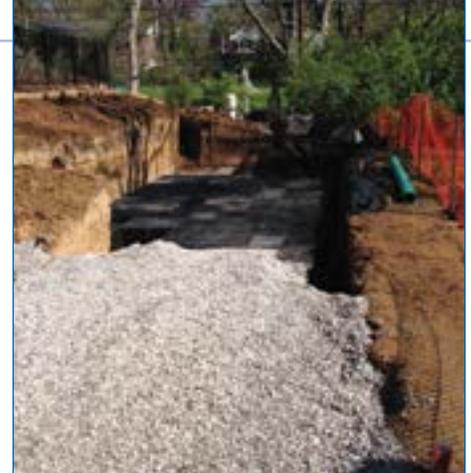
Product:
Mirafi 160N

Manufacturer:
Tencate Mirafi

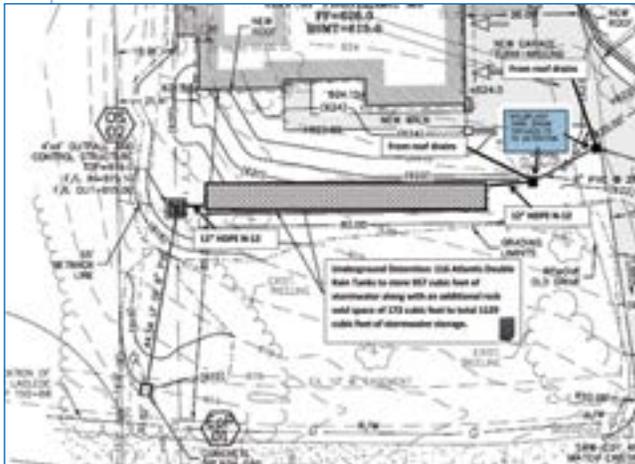
Product:
Nyloplast with Envirohood
Manufacturer:
Advanced Drainage Systems



4 The Nyloplast Drain Basin is connected to the tanks with pipe.



5 A minimum of 18" of compacted stone is placed on top of the tank.



Plan View



6 Continuing to place the rock backfill.

Company Information

ASP Enterprises, Inc. and Quick Supply Co. For more than three decades, A.S.P. Enterprises and Quick Supply Co. has served the erosion control industry with integrity and expertise. We provide engineers and landscape contractors the exceptional value for their money and have grown to become the Midwest's full-line distributor of erosion-control, geosynthetics, storm water management products, wall block, landscape pavers, and drainage products.

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