WATER MANAGEMENT

PROJECT PROFILE

Nilex Head Office Stormwater Management

Stormwater Chambers maximize yard space for inventory storage.

LOCATION:
Edmonton, Alberta

PRODUCT:
Stormwater Chambers

PROJECT PARTNERS:

Owner
Nilex Inc.

Consultant
Stantec

Contractor
Cormode Dickson
Gopher Trenching

Completion Date
July 2013

Nilex Inc., a distributor of geosynthetics, had outgrown their 3.5 acre head office facility. To accommodate their expansion needs, Nilex acquired a 7.5 acre parcel in the Maple Ridge Industrial Park. The new development required a solution for site water storage that could withstand (house/retain) 400 cubic meters of water in the event of a 1 in 100 year storm.

Challenge

The original design included a costly installation of an over-sized concrete pipe. Alternatively, a stormwater pond would reduce the amount of available land space. Nilex required a cost effective solution to effectively manage stormwater while maximizing yard space for inventory storage.

Solution

Nilex decided to utilize Stormwater Chambers. Stormwater Chambers are designed as underground retention systems allowing stormwater to be contained on-site and released into the City's stormwater system at a controlled rate or infiltrated into the aquifer. The chambers used are produced from high-density polyethylene (HDPE) to resist attack from harsh chemicals and hydrocarbons found in stormwater runoff. Used in conjunction with 25 mm to 50 mm stone cover, these open bottom chambers would provide the structural stability, site water storage and the H20 loading for large vehicles typically associated with an industrial yard.

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Nilex Head Office Stormwater Management

Installation

The installation began with a deep excavation (7m x 29m x 2.3m) which was lined with 40 mil HDPE. The inlet/outlet pipe penetrations were booted and sealed to create a waterproof detention system. A 12 ounce non-woven geotextile was used to cover the HDPE liner followed by the placement of 150 mm of stone to provide a bed for the Stormwater Chambers. The chambers were easily lifted into place by a team of two labourers. The bed consisted of 144 Stormwater Chambers (6 rows x 24 chambers) with no screws or mechanical ties being required. Stone was then placed to an elevation of 300 mm above the chambers, and covered with a 4 ounce non-woven geotextile. The granular road structure and pavement layers completed the installation.

Results

Using the Stormwater Chambers provided approximately 40% cost savings when compared to the concrete pipe solution. The Stormwater Chambers also allowed for maximum land use while a stormwater pond would have reduced the amount of space available for material storage.

The Nilex Advantage

Nilex is committed to unearthing better results. Whether it's for a civil, resource or environmental project, we offer the latest engineered and technically superior materials and techniques to save our customers time and money, and minimize the need to move or remove earth, and reduce the need for granular materials.

With over 35 years experience, a long-standing commitment to the environment and highly qualified staff, Nilex delivers the products and technologies that give clients an economic advantage with environmental benefit.