



SOLENO

Mastering Storm Water

1ST
DEVELOPER
OF SUSTAINABLE SOLUTIONS
FOR MASTERING STORM WATER



CONVERTING DITCHES IN AESTHETICALLY PLEASING AND SAFE ENVIRONMENTS IN RESIDENTIAL NEIGHBOURHOODS, CHARLOTTETOWN, PEI

Ditch Piping: Creation of a non-roadway storm water sewer system in Solflo Max pipes.

The City of Charlottetown's ditch infill program, which began several years ago, conducts two or three projects annually in the residential areas of its territory. In the summer of 2019, two ditch piping and storm sewer installation projects were put forward; Phase A was carried out by contractor Birt & MacKay Construction on Thorndale Drive and Lower Malpeque Road, and Phase B was carried out by contractor Island Coastal Services Ltd. on Green Meadow Drive, Hughes Court and Parent Street. Satisfied with Soleno's high-density polyethylene (HDPE) products for its public works projects, the capital of Prince Edward Island has been advocating, for several years, for the use of HDPE catch tees that are standardized in the municipality's specifications.

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THE CONTEXT

Since 2012, the City of Charlottetown, as part of its ditch infill piping project, has installed more than 26 km of high-density polyethylene (HDPE) pipes and nearly 450 access chimneys welded to the pipes (catch tees). These projects allow resident homeowners full and unrestricted access to their property, thus promoting lawn mowing and aesthetic landscaping.

In addition, ditch infill piping in residential areas eliminates the nuisance of stagnant water and increases safety around the walkways and sidewalks in these family neighbourhoods. Recognized for their quick and easy installation, only Soleno HDPE products were specified for the complete realization of projects related to this program.



THE SOLUTION

For Phase A of this ditch piping and storm water sewer installation project, contractor Birt & MacKay Construction proceeded to install 1915 linear meters of 300 mm (12 in) to 750 mm (30 in) diameter Solflo Max pipes, as well as approximately forty 300 mm (12 in) and 450 mm (18 in) diameter manhole/catch basin chimneys type, welded into Solflo Max pipes (catch tees).

Finally, for Phase B of this project, contractor Island Coastal Services Ltd. proceeded to install 1455 linear meters of 300 mm (12 in) to 450 mm (18 in) diameter Solflo Max pipes, as well as approximately twenty 300 mm (12 in) and 450 mm (18 in) diameter manhole/catch basin chimneys type, welded into Solflo Max pipes (catch tees).



THE BENEFITS

Resistant to corrosion, abrasion, de-icing salts and vibration, high-density polyethylene (HDPE) ensures the sustainability of infrastructures. The ditch piping and the installation of complete storm water sewer systems in HDPE, a high-performance and sustainable material, allow the City of Charlottetown to ensure the viability of its new infrastructures.



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THE BENEFITS (CONT'D)

Lightweight and easy to handle, HDPE products don't require the use of specialized equipment, such as a crane, thus making the installation easier and the execution of the work quicker, key factors that were much appreciated by the two contractors who can manually move the pipes. The 6 m (20 ft) long pipes, equipped with bell with integrated gasket (BIG) - patented and exclusive to Soleno - greatly increased installation speed while facilitating the connection of on-site piping. Fitted with clips to validate the quality of the installation as well as the depth of the nesting, the use of watertight bells provides powerful joints and ensure the watertightness of the storm sewer network.

The use of HDPE Solflo Max pipes and their direct welded access chimneys (catch tees) are a solution regularly recommended by Soleno engineers and an important selection criterion for the City of Charlottetown. This powerful and custom-made solution provides substantial savings, such as reducing the amount of required pipes and limiting the excavation due to the use of existing trenches. The technique developed by Soleno allows access chimneys to be installed directly on the pipes, the diameter of which can be equivalent to that of the pipes. This know-how thus avoids the oversizing of structures, as well as lowers the cost of the entire system.



The realization of this project was made possible thanks to: the contractors [Birt & MacKay Construction](#) et [Island Coastal Services Ltd.](#) and the distributor [Campbell's Concrete Ltd.](#)

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