SOLENO

MASTERING WATER SUSTAINABLY



CASE STUDY: AUTUMN 2023

RESTAURATION OF MONTREAL CITY HALL: CUSTOM STORMWATER RETENTION SYSTEM, KUSTOMFLO

To protect Montreal's 150-year-old City Hall, the stormwater retention system had to be built without heavy machinery. This was just one of the many challenges this project faced. KustomFlo pipes provided the perfect solution, ensuring compliance with the city's strict environmental standards while fitting seamlessly into the confined space. A forward-thinking solution serving the past.

READ MORE

THE CONTEXT

The city of Montreal undertook a major project to replace the water retention system near City Hall. The goal was to design a sustainable stormwater network capable of addressing both current and future climate realities. It needed to effectively manage a large volume of rainwater during periods of intense precipitation.

The project faced three main challenges: retention capacity, space constraints, and accessibility. First, the system needed to store a large volume of rainwater to prevent flooding while meeting Montreal's strict environmental standards. Additionally, the proximity to the historic building restricted the installation of large stormwater infrastructure, necessitating a solution that could fit within the confined space. Lastly, to protect the building's integrity, the installation had to be carried out without heavy equipment, requiring a lightweight, easy-to-handle system.

THE SOLUTION

In partnership with CEVECO Inc., Soleno proposed a retention system made from custom-designed high-density polyethylene (HDPE) KustomFlo pipes with a diameter of 1,800mm (70 in). This solution was the only one suitable for the project's requirements due to its exceptional performance and adaptability.

The KustomFlo solution enabled the installation of an "L"-shaped stormwater network with a capacity of 242.45 m^3, with one side of the "L" measuring over 66 meters, while minimizing the impact on the available space. The lightness of the pipes and their greater length, more than 2.5 times longer than traditional concrete pipes, not only facilitated and accelerated the installation process but also reduced the number of joints, thereby decreasing the risk of leaks. Finally, the exceptional flexibility of HDPE made it possible to replace large structures, such as manholes, with four chimneys made of Solflo Max pipes with a 900 mm diameter, which were factory-welded to KustomFlo pipes, further optimizing space efficiency.



THE BENEFITS

This project demonstrates the many advantages of KUSTOMFLO's unique customization capabilities, particularly in wall thickness, rigidity, and the more than 100 available profile types, allowing for precise compliance with all technical specifications. By manufacturing pipes and chimneys tailored to the site's constraints, Soleno facilitated the installation of a high-performance network while minimizing the impact on the limited space surrounding the historic building and accelerating installation.

Made from HDPE, KustomFlo pipes offer a lifespan of over 100 years, ensuring a durable and long-lasting infrastructure. They also significantly reduce transportation costs and ease handling on site, being up to 21 times lighter than an equivalent concrete pipe.

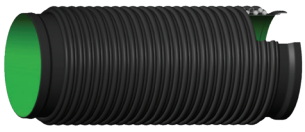


RESTAURATION OF MONTREAL CITY HALL: CUSTOM STORMWATER RETENTION SYSTEM, KUSTOMFLO

PRODUCTS USED

KUSTOMFLO PIPE

Our KUSTOMFLO pipe is made using world-renowned KRAH technology, resulting from an ADAPTIVE process that allows the optimization of the pipe profile to meet the specific needs of any project or applicable standard. This custom manufacturing approach, drawing on over 100 different profiles, lets you build to your unique specifications today to help connect communities for generations to come.



MANHOLE/CATCH BASIN CHIMNEY TYPE

Our custom-made chimneys are factory welded directly onto the main pipe. Their diameter can be equal to or less than that the main pipe, which prevents oversizing it, reduces the amount of work during installation and at the same time, lowering the cost of the whole system.



DISCOVER OUR PRODUCT

KUSTOMFLO

Chimney

SOLENO

MASTERING WATER SUSTAINABLY

For further information and to learn more about our services and products, please visit: soleno.com.

RESTAURATION OF MONTREAL CITY HALL: CUSTOM STORMWATER RETENTION SYSTEM, KUSTOMFLO





