CASE STUDY

StormTech® Chambers Retain Stormwater At Milwaukee Airport

Milwaukee, WI

OWNER
Crow Holdings, Dallas, TX

ENGINEER
Sigma Group, Milwaukee, WI

CONTRACTOR
Veit & Company, Inc., New Berlin, WI

INSTALLATION DATE
Fall 2025

PRODUCTS
862 MC-3500 StormTech Chambers
10 30" (750 mm) Nyloplast® Basins
1,260' (384 m) of 6" (150 mm) N-12® perf with sock
340' (104 m) of 10" (250 mm) N-12
1,180' (360 m) of 12" (300 mm) N-12
940' (287 m) of 18" (450 mm) N-12
1,380' (420 m) of 24" (600 mm) N-12
100' (30 m) of 30" (750 mm) N-12
1,420' (433 m) of 36" (900 mm) N-12

CHALLENGE

Milwaukee's Mitchell Airport is upgrading its facilities for air-cargo operations to support faster and more cost-efficient freight movement by constructing a new building. The new building, located on a former military base that once housed C-130 aircraft, will accommodate up to five Boeing 747-400s.

SOLUTION

Because the project required slowing stormwater discharge into the municipal sewer, an underground retention system was designed using StormTech MC-3500 chambers. While the Sigma Group considered the larger MC-7200 chambers, the site's high groundwater levels from an underground stream and challenging soil conditions made the MC-3500 the optimal choice.

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Stormwater is captured through ten 30” (750 mm) Nyloplast Drain Basins and conveyed via various sizes of N-12 HDPE Dual Wall pipe to the StormTech system. Isolator® Rows were incorporated to capture sediment and improve water quality before the stormwater is released into the city system.

Additionally, N-12 perforated pipe with a protective sock was installed as underdrain infrastructure to help remove subsurface water, keeping soils dry and minimizing the risk of pavement damage caused by freeze-thaw cycles.

PRODUCT DESCRIPTIONS

StormTech chambers are designed to save valuable land, reduce flooding risks and protect water resources. The chambers provide a durable structural system and are designed in accordance with AASHTO LRFD Bridge Design specification for HS-20 live loads. StormTech chambers are available in a variety of sizes to meet any project need and are injection molded for uniform wall thickness. StormTech end caps can be either pre-cut or cut in the field to fit the manifolds, which saves installation time. The end caps also add to the structural integrity of the system and provide storage capacity.

Nyloplast drain basins and curb inlets were custom built for the project as they are for each application. Nyloplast products are more durable and corrosion resistant than precast basins and combine a rugged PVC structure with ductile iron grates. The basins can be easily adjusted in the field to meet the final grade. The structures are shipped with rubber gaskets to ensure a watertight connection.

N-12 dual wall pipe, made using high-density polyethylene (HDPE), has a corrugated exterior and smooth interior wall that provide exceptional strength and hydraulics. The inert HDPE material is resistant to the effects of chemicals, abrasions and hot soils. N-12 is available in 4”-60” (100-1,500 mm) diameters and in 20’ (6 m) lengths. The inline bell design allows for pipe ends to be pushed together for easy installation. N-12 ASTM pipe meets the requirements of ASTM F2648, while the fittings conform to ASTM F2306.

Advanced Drainage Systems, Inc. is a leading manufacturer of innovative stormwater and onsite septic wastewater solutions that manages the world’s most precious resource: water. ADS and its subsidiary, Infiltrator Water Technologies, provide superior stormwater drainage and onsite septic wastewater products used in a wide variety of markets and applications including infrastructure, aviation, transportation, commercial and residential, while delivering unparalleled customer service.

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