

Project Info

-  01 / 02 / 17
-  CC5™ Bulk Rolls
-  1000m²
-  Transverse layers
-  Colón, Querétaro, Mexico
-  AM Developer of Industrial Parks
-  CC5™ was used for slope protection in a storm cistern in Colón, Mexico



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Completed installation at Colón, Querétaro (Mexico)

In February 2017, Concrete Canvas® GCCM* (CC) was used for slope protection in a storm cistern in the Airport Industrial Park of Colón in Querétaro, Mexico.

The urbanization of the Industrial Park PIA Airport by AM Developers required a rainwater catchment area for infiltration, or its treatment and reuse. This area was thought of as a storm cistern in which the most important point is to prevent damage caused by erosion on the slopes.

Other erosion control options were considered using geosynthetic solutions; shortcrete was even considered, but the combination of short execution times, no need for specialised equipment or personnel, long lifespan and integral system costs resulted in the Client's decision to use Concrete Canvas' CC5™.

The works were carried out by AM Developer of Industrial Parks in association with Parque Industrial Aeropuerto Queretaro and G&G (Geomembranas & Geosinteticos).

The CC5™ perimeter anchor was made by a combination of trench at the top and foot of the slopes. Each piece of CC was cut and installed after confirmation of slope length to minimise waste of material. The CC was manually cut from bulk rolls that were mounted on a steel bar to facilitate unroll, measurement and cutting.

*Geosynthetic Cementitious Composite Mat





Site before installation of CC5™



CC5™ was delivered to site in Bulk Rolls



CC was anchored in a trench and covered with concrete for reinforcement



CC was secured at regular intervals with screws



CC5™ was laid vertically down the slope



CC was hydrated with a hose



Completed installation

The ends of the CC5™ were secured using three stakes of 9.5mm rods; these were inserted one at each 10cm overlap, and one at the centre of each CC width inside the trenches, in order to fill them after the hydration and hardening of the material.

Along the overlap, down the length of the slopes, additional rods were placed at intervals of every 2 metres to support the weight of the CC and to keep it fixed to the profile of the slope.

The hydration was gradually given along with the installation of CC5™ in such a way that the material was not exposed without the adequate hydration that generated a poor setting, but that allowed the achievement of the works. For the hydration process a pipe was used, and it was applied by spraying mainly with the pressure generated only by gravity.

The project was executed in a total of approximately five work days of eight hours, with a crew of 6-8.