

**DEMIX QUARRY
MONTREAL, QUEBEC, CANADA**

Suspended Drapery

Problem

A former quarry site in East Montréal is being converted into a biogas plant by the City of Montréal as part of its plan to reduce the carbon footprint of the City.

During the period of 2006 – 2012, the City issued a series of tenders to install rockfall drapery systems in the quarry in order to mitigate the potential of rockfall hazards to equipment and personnel that work at the base of the rock slopes, some of which exceed 120m in height.

Solution

Engineers with the City of Montréal designed the rockfall drapery system and anchorage. As the side walls of the quarry were very high and access very difficult to the narrow, mid-face benches, the City wanted a drapery system that could be installed in one single piece that would drape the entire slope. No mid-face rock pinning would be done and a regular maintenance program that included cleaning up the rock debris was to be implemented.

The RockMesh M4000 is typically manufactured in standard 45.7m lengths, but custom lengths can be accommodated. As part of some of the phases, single rolls of up to 110m in length were manufactured and installed. The large 8mm diameter wire ropes woven into the mesh help to carry the self-weight of the larger rolls.

According to research done in 2005 by the Washington State Department of Transportation, in cooperation with U.S. Department of Transportation (Analysis and Design of wire mesh/cable net slope protection; Muhunthan et al., 2005), it is possible to reduce the stress concentration on the mesh by including longitudinal ropes along the mesh. These ropes must be woven into the mesh during the manufacturing process, and not applied and fixed to the mesh on the job site.

The reduction of the stress on the mesh can increase the total load capacity of the mesh and consequently improve the life span.

Client: CIMOTA

Designer / Consultant: VILLE DE MONTREAL

Contractor: CIMOTA

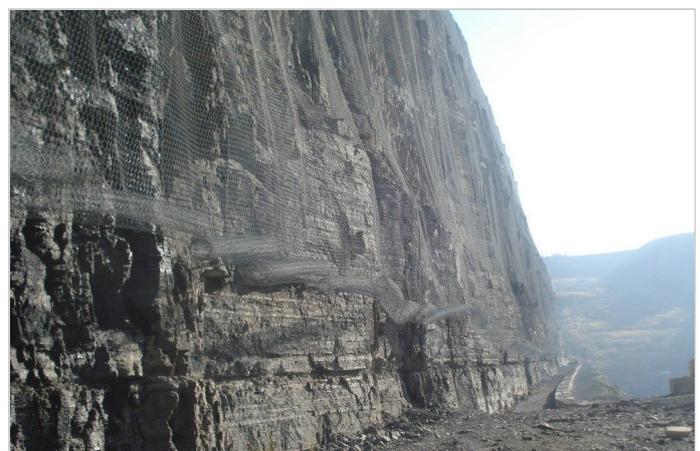
Products used (Qty.)

- Road Mesh 70,000m²

Date of construction: 05/2006 - 12/2012



General overview of the rock slopes protected with Rockmesh



Installation of Rockmesh M4000



Detail of the 8 mm longitudinal cable of Rockmesh M4000



General view of the rock cut draped by the Rockmesh M4000