

 **Slope Stabilization****Reference Details:**

Owner City of Hamilton,
Ontario, Canada +++

Main Contractor
Dufferin Construction
Company, Oakville,
Ontario, Canada +++

Consulting Engineers
McCormick Rankin
Corporation,
Mississauga, Ontario,
Canada +++

**Drilling
Sub-Contractor**

Birmingham
Foundation Solutions,
Hamilton, Ontario,
Canada +++

**Rock
Anchor Subcontractor**
Canadian BBR,
Agincourt, Ontario,
Canada

DSI Unit DSI Canada,
Eastern Division,
Gormley, Ontario,
Canada

DSI Services Supply of
95 triple corrosion
protection DYWIDAG
Rock Anchors with
lengths of 22.1 m to
31.7 m, accessories and
technical assistance



DYWIDAG Triple Corrosion Protection Threadbars anchor Landfill Retaining Wall

Red Hill Valley Project, Rennie Street Landfill, City of Hamilton, Ontario, Canada

The Red Hill Creek lies in a 68 km² watershed located on the southern shore of Lake Ontario. On the west side of the creek within the city of Hamilton is the former Rennie Street landfill site. The landfill was closed in 1962 after it had been in operation for nearly 20 years.

The Red Hill Valley Project, an integrated infrastructure project, is highly controversial. The included expressway required a retaining wall to be built through the south corner of the former landfill. The retaining wall served to separate the remaining landfill to the west and the waste to be excavated to the east. Once the wall construction was completed, the city of Hamilton proceeded with the removal of about 70,000 m³ of waste from the closed landfill. To permanently secure the retaining wall, DYWIDAG Post-Tensioned Rock Anchors with triple corrosion protection were chosen. Technical performance, cost and local availability were among the criteria that made

DYWIDAG Anchors the winning choice for installation in the extremely challenging underground created by decomposed toxic waste material that include industrial grade dumping.

The 22.1 to 31.7 m long DYWIDAG Rock Anchors consisted of galvanized DYWIDAG Threadbars Ø 46 mm (835/1030 N/mm²). A polyethylene sheathing (yellow jacket) was extruded on the free length portion of the bar. This assembly was encased over its entire length in a corrugated plastic sheathing, with the annular space between the sheathing and the bar grouted in DSI Canada's shop.

A smooth PVC pipe covered the corrugated sheathing in the free length to create a bond break between the anchor and the outside grout during stressing. The entire fabrication was subject to strict quality requirements and controls. All anchors were successfully tested to the project requirements.

DSI's dedicated customer support and high quality products met another challenge and confirmed once more the leading role of DSI Canada in the geotechnical field.