

Highway Cut Slopes

DUBAI – FUJAIRAH FREEWAY

Slope Stability Audit - Slope Stabilization and Rockfall Protection Design

United Arab Emirates

Project

Slope stabilization and rockfall protection design at the Dubai-Fujairah Freeway. Geotechnical evaluation and determination of the required preventative and protective measures, as well as repair and remedial works

Construction Cost

Total cost: approx. 300 m AED

Project Schedule

Design: 2009 - 2010

Construction: 2009 - 2011

Project Description

Assessment of the cut slope stability and determination of the necessary slope stabilization works and rockfall protection measures

Design Length: 22.0 km

Geomorphology - Geology

Mountainous terrain with steep rocky slopes of significant height (exceeding 50m up to 110m)

Ophiolite complex (gabbros, basalts, dunites, peridotites, serpentinites, breccia)

Our Services

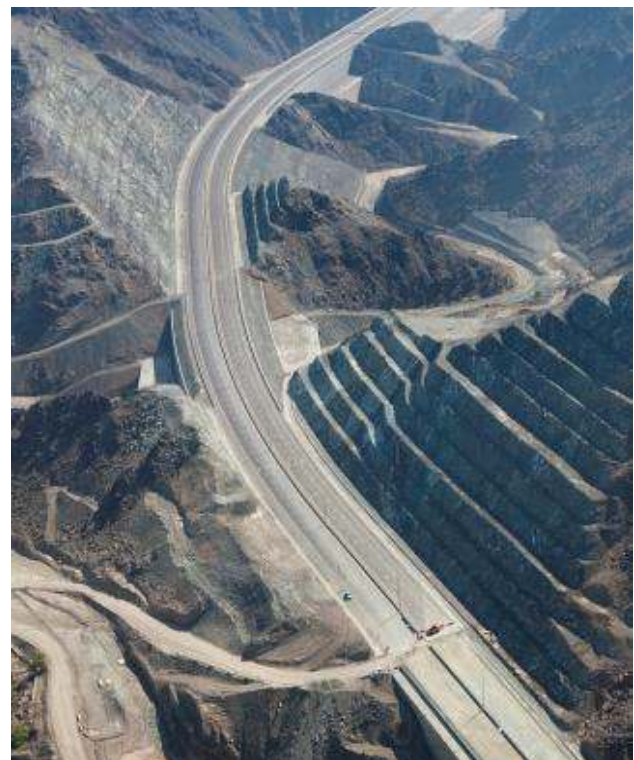
- Technical advisor - consultant services and special expertise in geotechnical engineering and rock-soil mechanics
- Geotechnical design
- Identification of the encountered geotechnical problems and evaluation of the potential slope failure mechanisms – elaboration of detailed stability audit
- Execution of stability analysis (planar, wedge, rockfalls, composite failures)
- Determination of the necessary support - stabilization measures
- Detailed dimensioning of the mitigation systems, technical specifications and construction method statement
- Elaboration of technical report, construction drawings and BOQ's
- On site technical expertise and consulting services
- Inspection, monitoring and maintenance plan

Construction Details

- Cut slope re-profile
- Scaling works
- Reinforced concrete, shotcrete, anchored buttress
- Pre-stressed anchors
- Rockfall barriers (low, medium, high energy absorption capacity)
- Slope surface stabilization systems (anchored wire mesh, spider net)



Existing rocky cut slopes



View of the freeway after the completion of the construction works

Client

UAE - Ministry of Public Works, Al Ahmadiyah Aktor