

Highway Embankments

“Construction of “Struma” Lot 4 Highway, section “Sandanski-Kulata” from km 423+800 to km 438+500, Bulgaria”

Bulgaria

Project

Final designs, techniques, mechanical mixing guidelines and documentation for the construction of the embankments of the motorway project “Struma” Lot 4, section “Sandanski-Kulata” from km 423+800 to km 438+500, Bulgaria

Construction Cost

Total cost: approx. € 35m

Project Schedule

Design: 2012- 2013

Construction: 2012- 2013

Project Description

Earthworks aggregate excavation volume 2,000,000m³ and embankment fills volume 1,700,000m³ (out of which an important portion consists of upgrading the existing alignment through lateral extension to a four lanes motorway)

Embankments mainly low in height

Max. embankment height: 8m

Geology

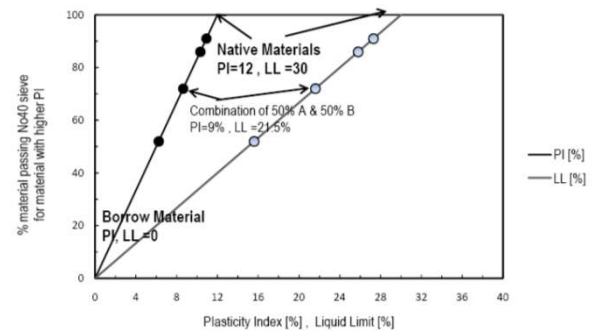
Alignment crossing plains featured with alluvial deposits (consisting of clays, silts and sands and mixtures) and hills of weathered peridotites

Our Services

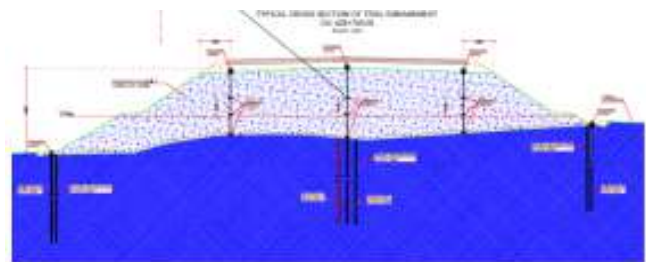
- Evaluation of available laboratory tests on the parent (“unsuitable”) soil materials for embankment’s fill use
- Evaluation of available laboratory tests on the potential “borrow” materials for embankment’s fill use
- Substantiated design, for mechanical mixing of the “unsuitable” materials of the project with the “borrow” materials (mixing proportions, laboratory tests, field trials etc.)
- Substantiated design for the construction of two (2) test embankments and monitoring instrumentation program
- Interpretation of the monitoring results of the two test embankments

Client

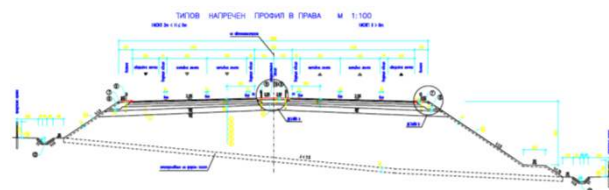
AKTOR JOINT-STOCK CONSTRUCTION COMPANY



Graphical representation of PI, LL estimates of resulting soil mixtures



Trial embankment (H=8m) cross section



Typical cross section of the motorway at embankment's position