

Project datasheet

Project name: Pericumã Bridge



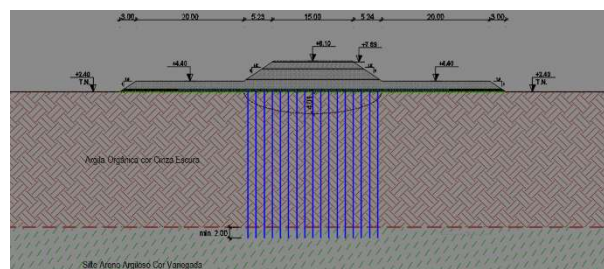
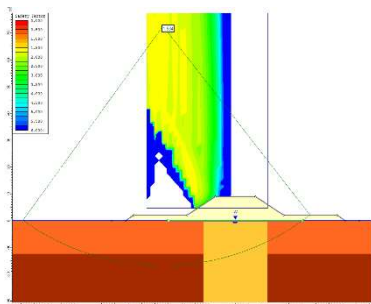
Location: Maranhão, Brazil

Client: Epeng Contractors

Description: This is a 500 m long bridge over Pericumã River. Terratek was responsible in 2018 and 2019 for the onshore site investigation and detailed foundation design, as well as the bridge abutments embankments and an additional 7 km of roads.

Services provided by Terratek:

- Site investigation including in situ CPTU and VST and lab testing;
- Structural analysis and design
- Bridge foundation design;
- 5 km of access roads on soft soils
- Embankment design: geogrid reinforced embankments with temporary surcharge and soft soil improvement with 1.5 m spaced wickdrains;
- Instrumentation design.



Project datasheet Bridges

Project name: Ayrton Senna
Stayed Bridge

Location: Rio de Janeiro, Brazil

Client: Andrade Gutierrez
Contractors



Description: As part of the Olympic Project in Rio de Janeiro, the Ayrton Senna Stayed Bridge was designed and built by 2013-14. Terratek was in charge of the site investigation, foundation design, quality control through integrity and pile loading tests. All foundations were piled with 2.5 to 3 m diameter bored piles socketed in rock.

Services provided by Terratek

- Site investigation: drilling, sampling, CPTU and VST
- Geotechnical consultancy and foundation design
- Site supervision during construction
- Crosshole integrity testing
- Pile loading tests with expansive hydraulic cells
- Instrumentation and monitoring



Project datasheet Bridges

Project name: Mosquito Bridge

Location: Maranhão, Brazil

Client: Vale Railway

Description: Mosquito Bridge was built in the early '70s and by 2006 already presented structural damage.



Services provided by Terratek

- Bridge inspection;
- Concrete damage assessment
- Structural monitoring through high precision accelerometers
- Mode extraction and spectrum analysis
- Mathematical modelling
- Damage detection
- Integrity assessment
- Structural rehabilitation design



Project datasheet Bridges

Project name: Bridge 4B

Location: Sebiu – Bintulu Road, Malaysia

Client: JKR Works Department, Malaysia



Description: The JKR was concerned about the design loading of this bridge, which was increased in recent structural standards. The JKR hired Terratek to carry out a dynamic loading testing and integrity assessment of the structure

Services provided by Terratek

- Bridge inspection;
- Concrete damage assessment
- Structural monitoring utilizing high precision accelerometers
- Mode extraction and spectrum analysis, employing an up-to-date technique named stochastic subspace identification (SSI)
- Mathematical modelling
- Damage detection
- Integrity assessment

