



Engineering Structures for Life



TRANSPORTS - BRIDGES & VIADUCTS

Bua Bridge

ABOUT

The Bua Bridge project is part of the contract "Upgrading of Old Airport – Kwanyanda–Santhe and the Kwanyanda–Kasiya Spur (S117/1342) Road Project".

The project for the transposition of the Bua River is an [alternative solution](#) to the original design requested by the contractor in order to adapt to the materials and construction techniques available on-site.

Structural solution

The bridge is built-up with 4 simply supported spans, defining a total length of 82.55 m between abutment axes. The deck, with a total width of 10.85 m, consists of 7 precast and prestressed I-beams and a complementary slab over pre-slabs. The abutments are type closed and based on [pile caps](#). The column alignments are made up of 2 units Ø200 cm on a single pile cap. The columns' cap beam was designed to be precast, which allowed a faster construction sequence for the structure.

According to client's demand, GEG also developed the reinforcement plans, with [BIM modelling methodologies](#) which allowed the creation of the three-dimensional and parameterized modelling of all the geometry and reinforcement details for the entire structure.

FACTS

Year: 2015-2016

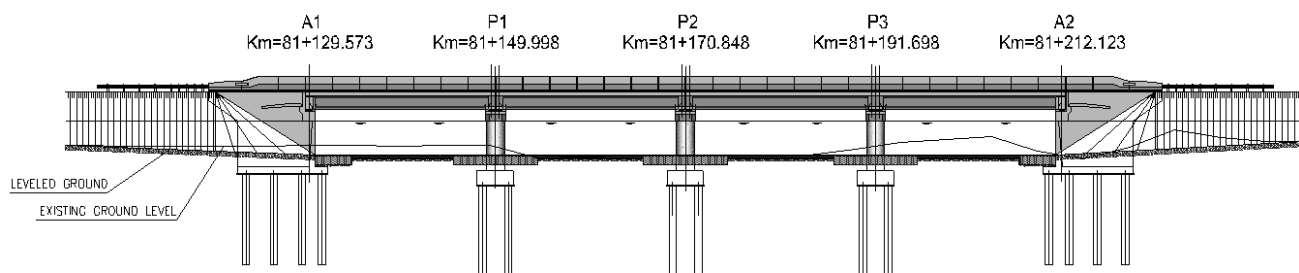
Client: Mota-Engil Africa

Services: Detailed design, Structural Engineering, Foundations design

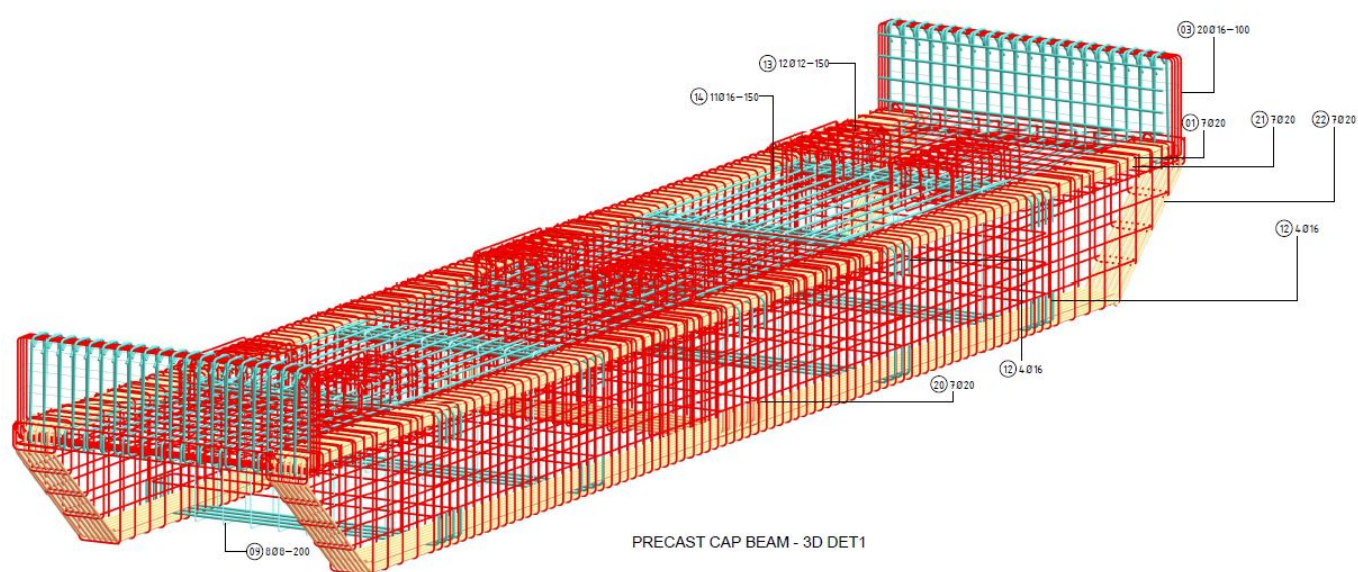
TEAM

LOCATION

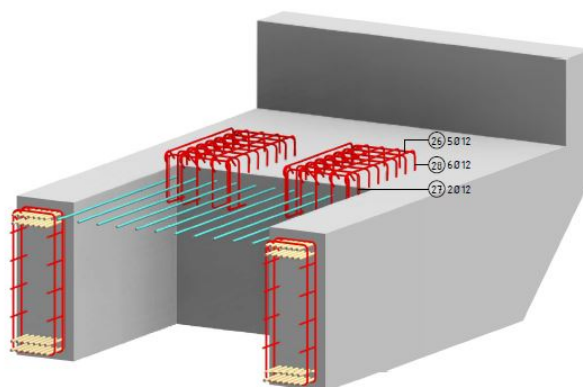
Lilongwe, Malawi



PRECAST CAP BEAM - 3D LAYOUT



PRECAST CAP BEAM - 3D DET1



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