

STRENGTHENING OF BRIDGE 5179 & STRENGTHENING OF BRIDGE 5128

VALUE \$980K & \$1M

YEAR 2018

DURATION 8 months

CLIENT ACT Government

REFEREE Alvaro Amorim

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SUMMARY

Strengthening of bridge 5179 and 5128 included fabrication and installation of welded steel beams at equal spacing between the existing concrete I-girders. Each beam was spliced, bolted together in situ, laterally restrained and mounted on fabricated steel bearing seating brackets. The project encompassed several highly technical elements, including the complex task of positioning the 16 tonne welded steel beam sections underneath the existing bridge structures.

Complex developed a bespoke trolley system to allow each beam section to be transversely positioned into alignment, hydraulically jacked 2 metres, longitudinally shifted over the abutment shelf and bolted together in position. The initial concept was developed at tender stage and brought to reality by the highly skilled project delivery team, who added further functionality to the design by using the trolley as a platform and catch deck during overhead grouting operations between the steel girder and existing deck.

PROJECT FEATURES

Waterways works licence

Working in flood prone locations

Fabrication, supply and installation of steel girders, bearing brackets and lateral restraints

GPR concrete scanning

Temporary works design for complex lifting operations

Complex scaffold access and load bearing requirements

Bridge jacking and bearing replacement

Working in a remote location

Complex overhead grout pumping operations

Crane lifting, lift studies and safety management

AWARDS

2018 MBA Awards – Winner

2018 CCF Earth Awards - Winner