



Description of the work :

Construction of an underpass through an embankment to link the town of Hazelbrook to the Great Western Highway. 20m wide, 7.6 m high reinforced post-tensioned concrete box culvert. The culvert is cast adjacent to the embankment on a launch way. The jacking of the underpass through the embankment is a continuous process. The underpass is pushed forward using jacks at the rear of the structure working off and transferring the load on to the thrust blocks tied into the bedrock. As the underpass structure is jacked forward, match-cast, reinforced concrete blocks are used to span the distance between the anchor block and forward moving jacks. The magnitude of the jacking force required to forward the underpass through the railway embankment will vary during the installation process.

Freyssinet mission :

Menard Bachy supplied 12 installed rock anchors consisting of 12 x 15.2mm Strand. Anchors were drilled installed through precast sleeves through the concrete slab into Class 3 Sandstone. Freyssinet Australia were awarded the post-tensioning and jacking of operation contract in 2006 for the supply and installation of 5 C15.2 slab tendons in the casting beds and culvert roof. We are responsible for the supply of all equipment, metalwork and labour necessary for the jacking of the sheet piles into the rail embankment to the required depth of 12.5m, and the jacking frames and labour for the safe jacking of the box through the embankment to an estimated 24 m. The jacks supplied for the initial launch will have a working capacity of 200 tonnes, and the main jacks a working load of 3000 tonnes.

Companie(s) :	Lainge O'Rourke
Owner :	Roads & Traffic Authority
Engineering consultant :	Taylor & Herbert
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Subsidiary(ies) :	Freyssinet Australia
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Beginning of works :	12/2006
End of works :	04/2007

