

New England Highway (Australia)



Project description

The New England Highway in New South Wales, the inland alternative to the Pacific Highway between Sydney and Brisbane, crosses challenging terrain in places, especially at Bolivia Hill, where the highway traverses a particularly adverse landscape.

A newly constructed bridge enables the traffic to pass through this area much more safely and quickly. The cast in-situ concrete box girder bridge, constructed by the balanced cantilever method with a superstructure depth of up to 8.5 m, has a main span of 150 m and outer spans of 80 m and 86 m respectively.

Added to these impressive dimensions and the lack of symmetry is the bridge's enormous gradient of 8.2%, which is an exceptionally high slope for a major road bridge.

The project is located at Bolivia Hill, New South Wales



mageba scope

In order to support the superstructure at its ends, where its design requires movements to be accommodated, 4 RESTON®SPHERICAL bearings were designed and installed at the same gradient as the bridge's surface.

This type of bearing was selected for use as it can accommodate very high rotations and offers high strength and durability. The installed bearings were designed to carry a normal load of 11,500 kN and to accommodate either unidirectional or multidirectional movements.

The spherical bearings were equipped with anchor plates for easier future repair or replacement, and with an inclined transition plate beneath each bearing to enable it to be installed on a horizontal substructure.

Before installation, the bearings were tested at mageba Australia's in-house nationally-certified testing laboratory in Sydney.

Fabrication and assembly of the bearings was carried out in mageba's Shanghai factory



Highlights & Facts

mageba products:

Type: RESTON®SPHERICAL bearings
Installation: 2020

Structure:

Location: Bolivia Hill
Country: Australia
Type: Concrete box girder bridge
Length: 150 m
Owner: Transport for New South Wales
Contractor: Georgiou-SRG JV
Designer: ARCADIS

Testing of a bearing, at mageba Australia's in-house NATA-accredited (ILAC MRA) laboratory in Sydney

