

**DSI References**

Owner Queensland State Government, Australia +++
General Contractor Joint Venture consisting of Thies, Southbank, Australia; Sinclair Knight Merz (SKM), Brisbane, Australia and Queensland Transport, Brisbane, Australia

DSI Units DSI Pty. Ltd., Bennetts Green, Australia; DSI Austria, Pasching/Linz, Austria

DSI Scope Supply of approximately 7,000m of the AT-139 Pipe Umbrella Support System; 735 resin anchored AX Rock Bolts, 350 Fiberglass Face Bolts, 450 Friction Bolts and 12 DCP 40mm Ø GEWI[®] Anchors



Faster Public Transport in Brisbane: DSI Supplies Systems for Bus Tunnel

In May 2006, work started on the Boggo Road Busway in Brisbane, Australia. Boggo Road is a special busway that will create a much needed connection between the southern and eastern districts of Queensland University without going through the city centre. The Boggo Road Busway is part of a plan issued by the state government of Queensland that is aimed at improving public transport.

Because use of the 1.5km long lane is limited to buses only, city buses will not depend on the traffic situation, and traveling times will be shortened. The new bus route will also ensure easy access to the Park Road Train Station and to other bus lines. The busway will be used by approximately 600 buses per day, which will considerably improve traffic for all in the city of Brisbane.

In order to minimize the impact on residential areas near the busway, part of the Boggo Road Busway runs underground in a 430m long tunnel that will run below the Cleveland railway line and the Pacific Highway. The tunnel will be 14m wide and will accommodate two bus lanes.

Construction work must be carried out with special care for two reasons. First of all, the geological conditions near the tunnel are exceptionally diverse, which also makes them harder to evaluate than usual. Secondly, the tunnel runs below the historical Boggo Road Gaol, a listed building. This means that work had to be carried out with minimal soil movements. The tunnel walls are stabilized by lattice girders and a thick layer of sprayed concrete.

For achieving an even better degree of stabilization, DSI Austria and DSI Australia were contracted to supply special products. Approximately 7,000m of the AT-139 Pipe Umbrella Support System were used for stabilizing the tunnel.

This special self-drilling pipe umbrella system reduces displacements of the surrounding rock mass by immediately supporting the drill hole. Due to the easy extension of the casing tubes, the system is especially flexible and is used for drill holes in lengths of 9-18m.

Once again, DSI's systems proved their efficiency and easy application to the client. Due to its high degree of safety, the general contractors plan to use the AT-Pipe Umbrella Support System in future projects as well.

In addition, DSI Australia supplied a wide range of other ground support products such as permanent and temporary DCP bolts. Among other products, DSI Australia supplied 735 resin anchored AX Rock Bolts, 350 Fiberglass Face Bolts, 450 Friction Bolts and 12 DCP 40mm Ø GEWI[®] Anchors.

