



## The Metro Tunnel Project

**Client/s:** CYP Design & Construction

**Location:** Melbourne, Australia

**Services:** Concrete and Soil Testing

**Construction Sciences Units:**  
VIC Metro Melbourne Laboratories

### Project Description:

The Metro Tunnel Project is the largest upgrade of Melbourne's train network since the City Loop and the first step towards a metro-style rail network, with the tunnel enabling more services and opening up new destinations.

The Metro Tunnel will create additional rail network capacity during peak periods, by creating a new end-to-end rail line from Sunbury in the west to Cranbourne/Pakenham in the south east. The project consists of twin nine kilometre rail tunnels, five new underground stations and Melbourne's first tram/train interchange at Anzac Station on St Kilda Road.

### Our Role:

Construction Sciences was awarded the concrete testing for the Metro Tunnel Project. The concrete is sampled in the field and returned to the Melbourne laboratory for testing.

Testing is carried out in accordance with the Australian Standard test methods for compressive strength, slump and flow. The surface resistivity was measured in accordance with an American Test Method AASHTO T-358, and a British Test Method BS EN 14651 was used to measure the flexural tensile strength (limit of proportionality (LOP), residual). This consists of a notched beam specimen tested under a central line load.

For a large project like the Metro Tunnel Project, Construction Sciences tailored a specific share file system for the entire project, allowing easy result retrieval for a project casting as many as 60 to 100 cylinders in any shift. A team of six field testers are currently working around the clock to ensure samples have been collected from one of the eight stations.

As an added initiative to the project and the larger state wide industry, Construction Sciences, in partnership with Holmesglen, established a working laboratory at the new Victorian Tunnelling Centre (VTC) in Chadstone. The lab provides testing services to the public as well as to help train the centre participants.

\*Images courtesy of Metro Tunnel Project Office (MTPPO)

[www.constructionsciences.net](http://www.constructionsciences.net) | [info@constructionsciences.net](mailto:info@constructionsciences.net)

 **Construction Sciences**  
a kiwa company