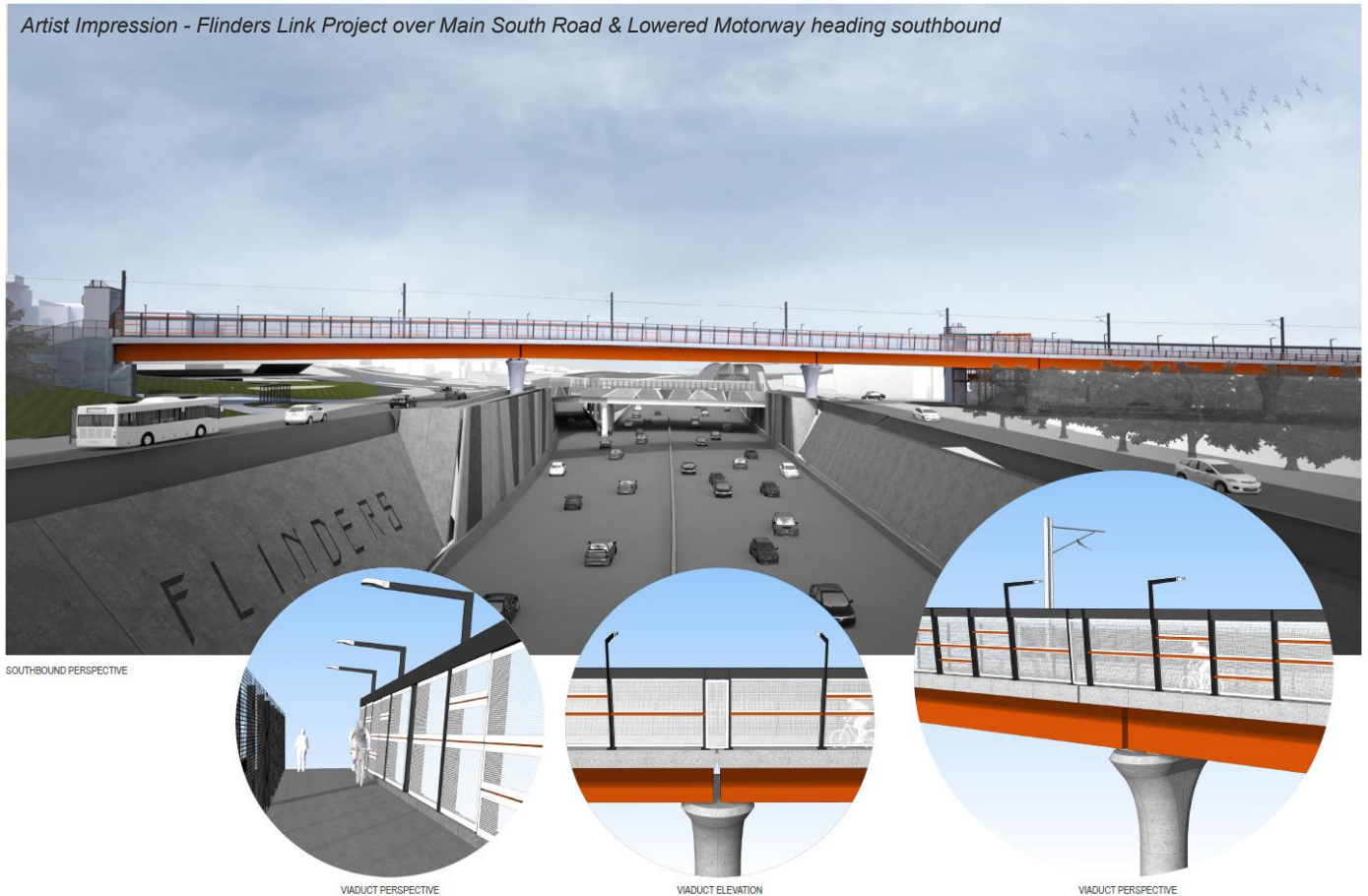


Flinders Link Project

Bridge Construction Fact Sheet

October 2019

Artist Impression - Flinders Link Project over Main South Road & Lowered Motorway heading southbound



The Australian and South Australian Governments are jointly funding the \$125 million Flinders Link Project to extend the existing Tonsley rail line to the Flinders Medical Centre, creating new connections to the health, innovation and education precincts.

The project will include:

- A 650 metre extension of the current Tonsley rail line, including an elevated single track over Sturt Road, Laffers Triangle and Main South Road, linking Flinders Medical Centre and Flinders University to the passenger rail network;
- Construction of a new Flinders Station and removal of the existing Tonsley Station; and
- An integrated shared pedestrian/cycle path adjacent the rail line from the new ramp located at the corner of Sturt Road and Birch Crescent to the new Flinders Station.

Piles for support

Reinforced concrete piles, which extend between 17-20 metres below surface level, will support the new rail viaduct structure and transfers loads from the structure to the ground.

A total of 147 piles will be installed as part of the Flinders Link Project. 82 piles have been installed for the new rail bridge and 65 are being installed for the elevated walkway and lift and stair facilities.

The primary method of piling used will be Continuous Flight Auger (CFA) piling. CFA piling is formed by drilling a shaft into the ground with an auger (a drill resembling a large corkscrew) by a piling rig. Concrete is then injected under pressure through the hollow stem of the auger, and the auger is removed. On completion of concreting, a steel reinforcing cage is inserted into the wet concrete to complete the pile.



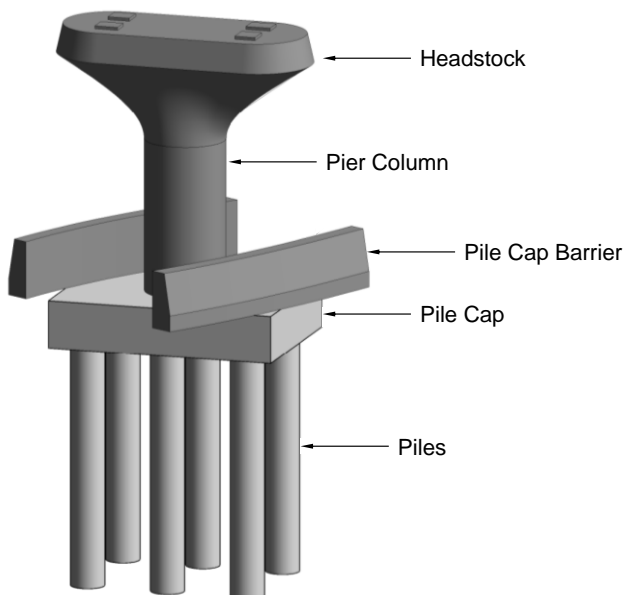
Flinders Link Project pile cap and commencement of pier column

Construction of piers

Nine piers (pillars to support the elevated rail bridge) will be located across the project site to support the completed viaduct.

- Pier 1 will be located at the corner of Birch Crescent and Sturt Road;
- Piers 2, 3, 4 and 5 will be located between Sturt Road and Laffer Drive;
- Piers 6 & 7 will be located between Laffer Drive and Main South Road; and
- Piers 8 and 9 will be located on either side of Main South Road

Steel reinforcement for the pile cap, pier column and headstock is assembled on site. Concrete is then poured inside temporary formwork to construct the pier structure.



Example of a pier structure

Installation of bridge girders

20 steel bridge girders (example below), ranging in length between 30-50 metres, will form the 10 spans to be installed as part of the project.

The steel girders will be lifted into place using two cranes and placed on top of the piers and abutments forming the base of the bridge deck.



Example of a bridge girder

Construction of the concrete deck

180 pre-cast concrete deck panels will be installed on top of the 20 steel girders. Concrete will be poured over the precast deck panels to complete the bridge deck.

New railway track installation

New railway tracks will be installed directly on top of the concrete deck along the elevated bridge and approaches.

More information

To find out more about the Flinders Link Project and register for future email updates, you can contact the project team using the contact details below.

Contact us:

Contact the Flinders Link Project team by:

- Phone: 1300 928 345
- Email: dpti.flinderslink@sa.gov.au
- Visit: dpti.sa.gov.au/FlindersLink

Translation of project information can be provided upon request. Please call the project enquiry line if you wish more details on how to access this service.