

EOI – PROOF ENGINEERING AND INDEPENDENT VERIFICATION

Gateway South shall undertake Proof Engineering AND Independent Verification for the Darlington Upgrade Project and all Arterial roads to, as a minimum the following elements shall be addressed:

Road Geometry	Proof Engineering/Independent Verification
Structures and Major Temporary Works	Proof Engineering
Geotechnical Matters	Independent Verification
Stormwater Management and Drainage Design	Independent Verification
Pavements	Proof Engineering
Electrical, Control and ITS Systems	Independent Verification

Road Geometry – Proof Engineering/Independent Verification

All roads including:

- Surface Arterial Roads
- Lowered Motorway
- Council Roads
- Temporary Pavements

Structures – Proof Engineering

ITEM	ELEMENT	LOCATION	DESCRIPTION	REFERENCE
1	Bridge 01	MSR Sturt River Bridge	New structure to replace the existing bridge for the north bound carriageway of Main South Road. The structure comprises a proprietary Precast concrete arch on piled foundations spanning approx 20m and forms part of the approach ramp to Bridges 02 & 03	Tender Dwgs GS-DRG-1-BR01-200011/T & 200012/T
2	Bridge 02	MSR over SEXY	3-Span structure (single lane plus separate cycle path) with an overall length 178m approx and comprising a	??

			<p>concrete deck on twin steel box sections on RC concrete columns on piled foundations. Approach and departure ramps formed using RSS Walls. Entire deck superstructure will be assembled offline and transported and installed as one</p>	
3	Bridge 03	MSR over SEXY	<p>3-Span structure (two lanes) with an overall length 180m approx comprising a concrete deck on twin steel box sections on RC concrete columns on piled foundations. Approach and departure ramps formed using RSS Walls. Entire deck superstructure will be assembled offline and transported and installed as one</p>	??
4	Bridge 04	Flinders Drive Bridge	<p>Top Down construction single span structure over the 2-lane departure ramp from the lowered motorway at Flinders Drive Intersection. Structure comprises pre-cast planks on insitu capping beams with piled foundations</p>	<p>Tender Dwgs GS-DRG-1-BR04-200011/T & 200012/T</p>

5	Bridge 05	Flinders Drive Bridge	Top Down construction 35m approx single span Super-T structure over the lowered motorway with integral abutments	Tender Dwgs GS-DRG-1-BR05-200011/T & 200012/T
6	Bridge 06	Sturt Road Bridge	Top Down construction 2-span Super-T structure (each span 31m approx) over the lowered motorway with integral abutments	Tender Dwgs GS-DRG-1-BR06-200011/T & 200012/T
7	Bridge 11	Tonsley Intersection Bridge	Top Down construction. Structure incorporates a 29m approx single span Super-T structure over the lowered motorway to accommodate traffic movements into and out of the Tonsley precinct in conjunction with a reinforced concrete deck sections on portal beams to accommodate northbound MSR traffic.	Tender Dwgs GS-DRG-1-BR011-200011/T & 200012/T
8	Bridge 12	Ayliffes Road Stormwater Culvert	Small span concrete deck structure on piles to span across the existing stormwater channel inlet headwall structure on the south side of Ayliffes Road to facilitate road widening at this location	??
9	Bridge 13	Sutton/Mimosa Bridge	Top Down construction 2-span Super-T	Tender Dwgs GS-DRG-1-BR013-

			structure (each span 24m approx) over the lowered motorway with integral abutments	200011/T & 200012/T
10	Bridge 14	Ayliffes Flyover	6 or 7-span structure (2 lanes) with an overall length of 400m approx and comprising a concrete deck on twin steel box sections on RC concrete columns on piled foundations. Approach and departure ramps formed using RSS Walls. Deck superstructure may be constructed insitu or may be assembled offline and transported and installed as one	Tender Dwgs GS-DRG-1-BR014-200011/T; 200012/T; 200013/T; 200014/T & 200015/T
11	Motorway Retaining Walls	Piled	CFA piled wall with shotcrete face behind PC Concrete fascia panels	
12	Motorway Retaining Walls	Soil nailed walls	Vertical soil nailed walls with shotcrete face behind PC concrete fascia panels	
13	Motorway Retaining Walls	60 Degree revetments	Shotcrete face behind PC concrete fascia panels	
14	Project Perimeter Retaining Walls		2-3m high lengths of retaining walls at certain locations along the alignment to either	Refer Sammy's wall location plan

			support the road carriageways or to retain adjacent land. These walls are likely to be constructed using precast full height L-shaped wall units or using steel posts and concrete panels	
15	Noise Walls	Various locations along the project	These walls are likely to be 3.0-3.5m high and comprise PC wall panels supported by steel column sections at 5.5-6.0m centres on piles	
16	Stormwater Detention Tanks	Under lowered motorway at Tonsley and beside the Sturt River	These detention tanks are likely to comprise insitu reinforced concrete and precast components. Approx volumes of 720m ³ & 350m ³ respectively	
17	ITS and Signage Gantries	Numerous locations	Steel cantilever and portal structures on piles foundations	
18	RSS Wall - Facia Units	Bridges 02, 03 & 14	RSS Ramps will have pre-cast concrete facia panels. These units may or may not need to be Proof Engineered	

