Bridge Summary Information

Appendix F4

DWG C101: Gympie St North Underpass Concept Design Only

Appx 82815 down track km

Crossing Over:	It crosses over the railway corridor, bikeway, and a pedestrian underpass. The bridge is likely to carry two traffic lanes and shared cycle and footway on either side.
Structural Type:	The deck may comprise 1700 deep precast prestressed TeeRoff girders with a composite insitu concrete deck slab and diaphragms at each support (Refer typical detail 2 on typical bridge details drawings). TeeRoff girders will be supported on bridge bearings. Piers may be reinforced concrete multi column supports at each support line. Provision for jacking for the purpose of future bearing replacement should be made at each pier (Refer typical detail 5 on the typical bridge details drawings). The abutments are likely to comprise bankseats on piles foundations (Refer typical detail 6 and 8 on typical bridge details drawings).
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven piles depending on the soil profile.
Span Arrangement:	Likely to comprise 4 x 30m g spans and 4 x 25m back spans at approximately 40 deg skew. The span arrangement will be adjusted and the overall bridge length rationalised during the detailed design phase.
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab may be continuous over the piers. Four movement joint may be anticipated, one at each abutment and at intermediate piers.
Cross section Arrangement:	Two traffic lanes with shared cycle/footpath to either side
Existing structures:	Existing Gympie St North is assumed to be closed during the construction and access through Landsborough is used.
Constraints:	Rail to remain operational during the construction of the proposed bridge.
Batter slope and treatment:	Typically rock pitch protected embankment with maximum 1:2 slope. Allowance for abutment access and inspection will be made.

DWG C102 - Rail Bridge Concept Design Only

Appx 82580 down track km

Crossing Over:	Addlington Ck
Bridge Type:	Reinforced concrete Box Culvert
Bridge Length	To reflect the existing culvert, approximately 7m long. Additional, similar but smaller culverts at higher level will be required to either end of the bridge for the fauna crossing on each embankment.
Bridge Clear Width:	7680+ two 1200 wide walkways to each side
100yr Flood Level:	No information provided
Existing structures:	Two existing box culverts. No detailed information has been made available.
Constraints:	Existing railway to remain operational during the construction of the proposed bridge
Proposed Construction sequence:	Remove the culvert eastern headwall. Extend the culvert whilst the rail is operational. Construct the two fauna crossing culverts to either side. Backfill and construct the rail. Extend the fauna crossing culverts to the West once the existing rail is closed.
Four Track Option:	Extend the culverts similar to construction sequence above.

DWG C106: Rail Bridge Concept Design Only

Appx CH 86090

Crossing Over:	Creek
Structural Type:	The deck may comprise 1500 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. Piers will be multi column/pile supports at each support line. The abutments are likely to comprise bankseats on piles foundations. OLE Masts can be located on extended headstocks.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	3 x 15m spans at 0 skew
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab will be continuous over the piers. Movement joint will be provided at one abutment.
Bridge Width (two track option):	7680 + 2x1200 The two 1200 wide walkways to each side may be bolted on steel walkways.
100yr Flood Level:	Estimated at 30 AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection
Four Track Option:	A separate bridge structures similar and parallel to each other are recommended. The two future tracks are a considerable distance, therefore additional two single track bridges are recommended. Pier arrangement may be made to suit the direction of the water flow. The three bridges may be slightly staggered to suit the topography and minimise the earthworks.
DWG Reference	Refer Typical Cross-section for the Three Bridge Structures Four Track Option on typical bridge details drawing.

DWG C107 Rail Bridge Concept Design Only

Appx 86275 down track km

Crossing Over:	South Mooloolah River
Structural Type:	The deck may comprise 1500 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. Piers will be multi column/pile supports at each support line. The abutments are likely to comprise bankseats on piles foundations. OLE Masts can be located on extended headstocks.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	3 x 18m spans
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab will be continuous over the piers. Expansion joint will be provided at one abutment.
Bridge Width:	7680 + 2x1200 The two 1200 wide walkways to each side may be bolted on steel walkways.
Existing structures:	Existing railway bridge. No detailed information is available.
Constraints:	Existing railway to remain operational during the construction of the proposed bridge.
Proposed Construction sequence:	Assuming that there may be adequate clearance; remove the west side barrier/walkway from the existing bridge construct the new bridge with out the inclusion of the bolt-on walkway to the east whilst the existing rail remains operational divert the rail traffic onto the new track and then complete the bridge and the walkway
100yr Flood Level:	Estimated at 30 AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection
Four Track Option:	A separate bridge structures similar and parallel to each other are recommended. The two future tracks are a considerable distance, therefore additional two single track bridges are recommended. Pier arrangement may be made to suit the direction of the water flow. The three bridges may be slightly staggered to minimise the earthworks and the impact on the creek flow.
DWG Reference	Refer Typical Cross-section for the Three Bridge Structures Four Track Option on typical bridge details drawing.

DWG C107: Jones St Underpass Concept Design Only

Appx 86400down track km

Crossing Over:	The bridge is likely to carry two traffic lanes and a shared cycle and footway on one side. It crosses over the railway corridor, bikeway, and a pedestrian underpass.
Structural Type:	The proposed scheme has a complex geometrical arrangement where the alignment sits on a tight horizontal curve, vertical curve, and one-way superelevation. The bridge will need to built over the operational existing rail track. Post-tension in-situ concrete deck may need to be considered. Bridge span arrangement and articulation need to be resolved in a detailed design phase. The abutments are likely to comprise bankseats on bored piles foundations.
Existing structures:	No existing structures
100yr Flood Level:	Estimated at 30m AHD
Four Track Option:	Bridge for two tracks to be built to suit four track arrangements.

DWG C108: Rail Bridge Concept Design Only

Appx 86928 down track km

Crossing Over:	Mooloolah River and Proposed Road Under
Structural Type:	Two parallel bridge structures are proposed to carry the three tracks in the phase one. Both bridges may be the same width making an allowance for the future fourth track that can be used as a maintenance access in the interim. The deck may comprise 1700 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. Piers will be multi column/pile supports at each support line. Vehicle barrier will be required for the pier protection along the road under. The abutments are likely to comprise bankseats on piles foundations. OLE Masts can be located on extended headstocks.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	The bridge extent shown on the drawings allows the viaduct across the area of anticipated flood planes. This option requires 13 x 24m long spans. Further hydraulic modelling is recommended to investigate an option of reducing the overall length of structure to 6 x 24m long spans.
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab will be continuous over the piers. 6 expansion joints may be anticipated.
Bridge Width:	Two bridge structures, each 7680 + 2x1200 The 1200 wide walkways to each side of each bridge may be bolted on steel walkways.
100yr Flood Level:	Estimated at 31.5 AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection
Four Track Option:	See notes above.
DWG Reference:	Refer Typical Cross-section for the Two Bridge Structures Four Track Option 1 on typical bridge details drawing.

DWG C109: Neill Road Underpass Concept Design Only

Appx 87885 down track km

Crossing Over:	The bridge is likely to carry two traffic lanes and shared cycle and footway on either side. It crosses over the railway corridor, bikeway, and a pedestrian underpass.
Structural Type:	The deck may comprise 900 deep precast prestressed Deck Units with a composite insitu concrete deck slab (Refer typical detail 4 on typical bridge details drawings). The Deck Units will be supported on elastomeric bearings. Piers may be reinforced concrete blade walls at each support line. Provision for jacking for the purpose of future bearing replacement should be made at each pier (Refer typical detail 4, 5, and 11 on the typical bridge details drawings). The abutments are likely to comprise bankseats on piles foundations (Refer typical detail 10 on typical bridge details drawings).
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven piles depending on the soil profile.
Span Arrangement:	Likely to comprise 1 x 24m span over the rail and 2 x 20m backs pans on a 45 skew angle. For the four tracks option the bridge is likely to comprise 2 x 24m spans and 2 x 20m backs pans on a 45 skew angle. The alignment and the bridge length will be rationalised during the detailed design phase.
Articulation Arrangement:	The deck slab may be continuous over the piers. One expansion joints may be anticipated for the two track option, two for the four tracks option.
Cross section Arrangement:	Two traffic lanes with shared cycle/footpath to either side
Existing structures:	Existing Neil Rd is assumed to be closed during the construction.
Constraints:	Rail to remain operational during the construction of the proposed bridge.
Batter slope and treatment:	Typically rock pitch protected embankment with maximum 1:2 slope. Allowance for abutment access and inspection will be made.

DWG C112/C113 Rail Bridge Concept Design Only

Appx 90409 down track km

Crossing Over:	Logwoods Rd, Highlands Rd, Flood Plane
Structural Type:	The deck may comprise of 1700 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. Piers will be multi column/pile supports at each support line. The abutments are likely to comprise bankseats on piles foundations. OLE Masts can be located on extended headstocks.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	The bridge extent shown on the drawings allows the viaduct across the area of anticipated flood planes. This option requires 24 x 25m spans long spans. Further hydraulic modelling is recommended to investigate an option of reducing the overall length of structure and replacing the 600m long viaduct with three shorter bridges with the following span arrangements; 3 x 25m long spans for the bridge crossing over Logwoods Rd, 3 x 15m long spans for the bridge crossing over the Creek, 2 x 25m long spans for the bridge over Highlands Rd. Minor Creek relocation would be required for this scheme,
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab will be continuous over the piers. 6 expansion joints may be anticipated.
Bridge Width:	7680 + 2x1200 The 1200 wide walkways to each side of the bridge may be bolted on steel walkways.
100yr Flood Level:	Estimated at 25m AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection
Four Track Option:	A separate bridge structures similar and near parallel to each other are recommended. Piers may be staggered to suit the water flow and the alignments of the roads under.
DWG Reference:	Refer Typical Cross-section for the Two Bridge Structures Four Track Option 1 on typical bridge details drawing.

DWG C113 Rail Bridge Concept Design Only

Appx 91300 down track km

Crossing Over:	Eudlo Creek
Structural Type:	The deck may comprise 1700 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. Piers will be multi column/pile supports at each support line. The abutments are likely to comprise bankseats on piles foundations. OLE Masts can be located on extended headstocks.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	The bridge extent shown on the drawings allows the viaduct across the area of anticipated flood planes. This option requires 9 x 25m long spans. Further hydraulic modelling is recommended to investigate an option of reducing the overall length of structure.
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab will be continuous over the piers. 4 expansion joints may be anticipated.
Bridge Width:	7680 + 2x1200 The 1200 wide walkways to each side of the bridge may be bolted on steel walkways.
100yr Flood Level:	25 AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection
Four Track Option:	A separate bridge structures similar and near parallel to each other are recommended. Pier arrangement may be made to suit the direction of the water flow.
DWG Reference:	Refer Typical Cross-section for the Two Bridge Structures Four Track Option 1 on typical bridge details drawing.

DWG C114: Eudlo School Road Overpass Concept Design Only

Appx 91610 down track km

Crossing Over:	It crosses over the railway corridor. The bridge is likely to carry two traffic lanes.
Structural Type:	The deck may comprise 900 deep precast prestressed Deck Units with a composite insitu concrete deck slab (Refer typical detail 4 on typical bridge details drawings). The Deck Units will be supported on elastomeric bearings. Piers may be reinforced concrete blade walls at each support line. Provision for jacking for the purpose of future bearing replacement should be made at each pier (Refer typical detail 4, 5, and 11 on the typical bridge details drawings). The abutments are likely to comprise bankseats on piles foundations (Refer typical detail 10 on typical bridge details drawings). This bridge has a skew of 45 degrees and this may be able to be reduced slightly in the project land requirements.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven piles depending on the soil profile.
Span Arrangement:	Likely to comprise 1 x 24m span over the rail and 2 x 20m backs pans on approximately 22 deg skew angle. For the four tracks option the bridge is likely to comprise 2 x 24m spans and 2 x 20m backs pans on approximately 22 deg skew angle. The alignment and the bridge length will be rationalised during the detailed design phase.
Articulation Arrangement:	The deck slab may be continuous over the piers. One movement joint may be anticipated for the two track option, two for the four tracks option.
Cross section Arrangement:	Two traffic lanes with shared cycle/footpath to either side
Existing structures:	Existing Eudlo School Rd is assumed to be closed during the construction.
Constraints:	Rail to remain operational during the construction of the proposed bridge.
Batter slope and treatment:	Typically rock pitch protected embankment with maximum 1:2 slope. Allowance for abutment access and inspection will be made.

DWG C115 Rail Bridge Concept Design Only

Appx 91300 down track km

Crossing Over:	Property access road
Structural Type:	The deck may comprise 1700 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. The abutments are likely to comprise bankseats on piles foundations.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	Two x 25m long span.
Articulation Arrangement:	One (1) expansion joints may be anticipated.
Bridge Width:	7680 + 2x1200 The 1200 wide walkways to each side of the bridge may be bolted on steel walkways.
100yr Flood Level:	25 AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection
Four Track Option:	A two separate bridge structures similar and parallel to each other are recommended
DWG Reference:	Refer Typical Cross-section for the Thwo Bridge Structures Four Track Option 1 on typical bridge details drawing.

DWG C116: Leeons Road Underpass Concept Design Only

Appx 93300 down track km

Crossing Over:	Crosses over the railway corridor. The bridge is likely to carry two traffic lanes.
Structural Type:	The deck may comprise 900 deep precast prestressed Deck Units with a composite insitu concrete deck slab (Refer typical detail 4 on typical bridge details drawings). The Deck Units will be supported on elastomeric bearings. Piers may be reinforced concrete blade walls at each support line. Provision for jacking for the purpose of future bearing replacement should be made at each pier (Refer typical detail 4, 5, and 11 on the typical bridge details drawings). The abutments are likely to comprise bankseats on piles foundations (Refer typical detail 10 on typical bridge details drawings).
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven piles depending on the soil profile.
Span Arrangement:	Likely to comprise 1 x 24m span over the rail and 2 x 20m backs pans on approximately 15 deg skew angle. For the four tracks option the bridge is likely to comprise 2 x 24m spans and 2 x 20m backs pans on approximately 15 deg skew angle. The alignment and the bridge length will be rationalised during the detailed design phase.
Articulation Arrangement:	The deck slab may be continuous over the piers. One expansion joints may be anticipated for the two track option, two for the four tracks option.
Cross section Arrangement:	Two traffic lanes with shared cycle/footpath to either side
Existing structures:	Existing Leeons Rd is assumed to be closed during the construction.
Constraints:	Rail to remain operational during the construction of the proposed bridge.
Batter slope and treatment:	Typically rock pitch protected embankment with maximum 1:2 slope. Allowance for abutment access and inspection will be made.

DWG C119 Rail Bridge Concept Design Only

Appx 95400 down track km

Crossing Over:	Proposed Chevallum R, Existing Rail track, Woombye Palmwoods Rd, Paynther Ck Lakes, Spackman Lane
Structural Type:	The deck may comprise of 1700 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. Piers will be multi column/pile supports at each support line. OLE Masts can be located on extended headstocks. North abutment is likely to comprise bankseats on piles foundations. South abutment is likely to comprise of a 7m high RSS retaining structure with a precast façade face. The elevated section of the proposed Palmwood Station crosses over Chevallum Rd. A separate bridge structures will be required to support the platforms to that supporting the rail tracks. Pier arrangement will be similar to that of the rail bridge.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	36 x 25m long spans
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab will be continuous over the piers. 8 expansion joints may be anticipated.
Bridge Width:	7680 + 2x1200 The 1200 wide walkways to each side of the bridge may be bolted on steel walkways.
100yr Flood Level:	Estimated at 21.5 AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection.
Four Track Option:	A separate bridge structures similar and near parallel to each other are recommended. Piers may be staggered to suit the alignment of the roads under.
DWG Reference:	Refer Typical Cross-section for the Two Bridge Structures Four Track Option 1 on typical bridge details drawing.

DWG C121 Rail Bridge Concept Design Only

Appx 97200 down track km

Crossing Over:	Paynter Creek flood plane
Structural Type:	The deck may comprise 1700 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. Piers will be multi column/pile supports at each support line. The abutments are likely to comprise bankseats on piles foundations. OLE Masts can be located on extended headstocks.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	The bridge extent shown on the drawings allows the viaduct across the area of anticipated flood planes. This option requires 19 x 25m long spans. Further hydraulic modelling is recommended to investigate an option of replacing the bridge structure with series of culverts.
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab will be continuous over the piers. 4 expansion joints may be anticipated.
Bridge Width:	7680 + 2x1200 The 1200 wide walkways to each side of the bridge may be bolted on steel walkways.
100yr Flood Level:	25 AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection
Four Track Option:	A separate bridge structures similar and near parallel to each other are recommended. Pier arrangement may be made to suit the direction of the water flow.
DWG Reference:	Refer Typical Cross-section for the Two Bridge Structures Four Track Option 1 on typical bridge details drawing.

DWG C123 Rail Bridge Concept Design Only

Appx 98800 down track km

Crossing Over:	Paynter Creek
Structural Type:	The deck may comprise 1700 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. Piers will be multi column/pile supports at each support line. The abutments are likely to comprise bankseats on piles foundations. OLE Masts can be located on extended headstocks.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	4 x 25m long spans
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab will be continuous over the piers. 4 expansion joints may be anticipated.
Bridge Width:	7680 + 2x1200 The 1200 wide walkways to each side of the bridge may be bolted on steel walkways.
100yr Flood Level:	19.5 AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection
Four Track Option:	A separate bridge structures similar and near parallel to each other are recommended.
DWG Reference:	Refer Typical Cross-section for the Two Bridge Structures Four Track Option 1 on typical bridge details drawing.

DWG C123: Back Woombye Road Underbridge Concept Design Only

Appx 98495 down track km

Crossing Over:	It crosses over the existing and the proposed railway corridor and a creek.
Structural Type:	The deck may comprise 1500 deep precast prestressed TeeRoff girders with a composite insitu concrete deck slab and diaphragms at each support (Refer typical detail 2 on typical bridge details drawings). TeeRoff girders will be supported on bridge bearings. Piers may be reinforced concrete multi column supports at each support line except for the supports near the track where reinforced concrete blade walls will be used. Provision for jacking for the purpose of future bearing replacement should be made at each pier (Refer typical detail 5 on the typical bridge details drawings). The abutments are likely to comprise bankseats on piles foundations (Refer typical detail 6 and 8 on typical bridge details drawings).
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven piles depending on the soil profile.
Span Arrangement:	Likely to comprise 6 x 30m spans and 4 x 24m back spans at approximately 25 deg skew. The span arrangement will be adjusted and the overall bridge length rationalised during the detailed design phase. Alternative alignment should be considered to minimise the overall length and the cost of the bridge structure and maintenance.
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab may be continuous over the piers. Four expansion joint may be anticipated, one at each abutment and at intermediate piers.
Cross section Arrangement:	Two traffic lanes
Existing structures:	Existing Woombye Rd is assumed to be closed during the construction.
Constraints:	Rail to remain operational during the construction of the proposed bridge.
Batter slope and treatment:	Typically rock pitch protected embankment with maximum 1:2 slope. Allowance for abutment access and inspection will be made.

DWG C124: Blackall Range Road Underbridge Concept Design Only

Appx 99650 down track km

Crossing Over:	Crosses over the existing and the proposed railway corridor.
Structural Type:	The deck may comprise 1700 deep precast prestressed TeeRoff girders with a composite insitu concrete deck slab and diaphragms at each support (Refer typical detail 2 on typical bridge details drawings). TeeRoff girders will be supported on bridge bearings. Piers may be reinforced concrete multi column supports at each support line except for the supports near the track where reinforced concrete blade walls will be used. Provision for jacking for the purpose of future bearing replacement should be made at each pier (Refer typical detail 5 on the typical bridge details drawings). The abutments are likely to comprise bankseats on piles foundations (Refer typical detail 6 and 8 on typical bridge details drawings).
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven piles depending on the soil profile.
Span Arrangement:	Likely to comprise 5 x 25m spans at approximately 45 deg skew. The span arrangement will be adjusted and the overall bridge length rationalised during the detailed design phase. Alternative alignment should be considered to minimise the overall length and the cost of the bridge structure and maintenance.
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab may be continuous over the piers. Two expansion joint may be anticipated.
Cross section Arrangement:	Two traffic lanes
Existing structures:	Existing Blackall Range Rd and single lane bridge over the existing rail. The Blackall Range Rd is assumed to be closed during the construction. The structural inspection and evaluation of the existing bridge should be carried out to assess the suitability of the structure for the inclusion in the new scheme. To shorten the overall length of the bridge and therefore minimise the cost of construction and future maintenance, backfilling over the existing railway corridor once the new track is constructed may be considered.
Constraints:	Rail to remain operational during the construction of the proposed bridge. The new track alignment would have to be constructed before the existing structure can be replaced. The remaining bridge length may be constructed ahead of all other works.
Batter slope and treatment:	Typically rock pitch protected embankment with maximum 1:2 slope. Allowance for abutment access and inspection will be made.

DWG C126 Rail Bridge Concept Design Only

Appx 100870 down track km

Crossing Over:	Petrie Creek
Structural Type:	The deck may comprise of 1700 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. Piers will be multi column/pile supports at each support line. The abutments are likely to comprise bankseats on piles foundations. OLE Masts can be located on extended headstocks.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	The bridge extent shown on the drawings allows the viaduct across the area of anticipated flood planes. This option requires 10 x 25m spans long spans. Further hydraulic modelling is recommended to investigate an option of reducing the overall length of structure.
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab will be continuous over the piers. 4 expansion joints may be anticipated.
Bridge Width:	7680 + 2x1200 The 1200 wide walkways to each side of the bridge may be bolted on steel walkways.
100yr Flood Level:	Estimated at 16.5m AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection
Four Track Option:	A separate bridge structures similar and near parallel to each other are recommended. Piers may be staggered to suit the water flow and the alignments of the roads under.
DWG Reference:	Refer Typical Cross-section for the Two Bridge Structures Four Track Option 1 on typical bridge details drawing.

DWG C126 Rail Bridge Concept Design Only

Appx 101150 down track km

Crossing Over:	Petrie Creek flood plane
Structural Type:	The deck may comprise of 1700 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. Piers will be multi column/pile supports at each support line. The abutments are likely to comprise bankseats on piles foundations. OLE Masts can be located on extended headstocks.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	The bridge extent shown on the drawings allows the viaduct across the area of anticipated flood planes. This option requires 5 x 25m spans long spans. Further hydraulic modelling is recommended to investigate an option of deleting the bridge or reducing the overall length.
Articulation Arrangement:	Each span may have one fixed and one free support. The deck slab will be continuous over the piers. 2 expansion joints may be anticipated.
Bridge Width:	7680 + 2x1200 The 1200 wide walkways to each side of the bridge may be bolted on steel walkways.
100yr Flood Level:	Estimated at 16.5m AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection
Four Track Option:	A separate bridge structures similar and near parallel to each other are recommended. Piers may be staggered to suit the water flow and the alignments of the roads under.
DWG Reference:	Refer Typical Cross-section for the Two Bridge Structures Four Track Option 1 on typical bridge details drawing.

DWG C126 Rail Bridge Concept Design Only

Appx 101300 down track km

Crossing Over:	Petrie Creek
Structural Type:	The deck may comprise of 1500 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. Piers will be multi column/pile supports at each support line. The abutments are likely to comprise bankseats on piles foundations. OLE Masts can be located on extended headstocks.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	2 x 20m long spans
Articulation Arrangement:	On (1) expansion joints may be anticipated.
Bridge Width:	7680 + 2x1200 The 1200 wide walkways to each side of the bridge may be bolted on steel walkways.
100yr Flood Level:	Estimated at 16.5m AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection
Four Track Option:	A separate bridge structures similar and near parallel to each other are recommended. Piers may be staggered to suit the water flow and the alignments of the roads under.
DWG Reference:	Refer Typical Cross-section for the Two Bridge Structures Four Track Option 1 on typical bridge details drawing.

DWG C127 Rail Bridge Concept Design Only

Appx 102000 down track km

Crossing Over:	Property access road
Structural Type:	The deck may comprise 1700 deep precast prestressed T beams with a composite insitu concrete deck slab and diaphragms at each support. The abutments are likely to comprise bankseats on piles foundations.
Foundation Type:	There is no adequate geotechnical information to ascertain the type of foundations; however these are likely to be piled foundations either bored or driven depending on the soil profile.
Span Arrangement:	One x 25m long span.
Articulation Arrangement:	One (1) expansion joints may be anticipated.
Bridge Width:	7680 + 2x1200 The 1200 wide walkways to each side of the bridge may be bolted on steel walkways.
100yr Flood Level:	16 AHD
Batter slope and treatment:	1:2, allow room for provision for abutment access and inspection
Four Track Option:	A two separate bridge structures similar and parallel to each other are recommended. The abutments may be staggered to suit the alignment of the road under.
DWG Reference:	Refer Typical Cross-section for the Two Bridge Structures Four Track Option 1 on typical bridge details drawing.