CITY WEST CONNECTOR TRAFFIC IMPACT STATEMENT

PROPOSAL

To construct:
- a link from James Congdon Drive across to South Road, including the installation of traffic signals at James Congdon Drive and Railway Terrace South
- upgrading signals at the intersection of Sir Donald Bradman Drive and James Congdon Drive
- South Road and the City West Connector.

Installation of a shared path along the full length of the City West Connector, including the signalised crossings at the three main junctions.

BACKGROUND

The Western Bypass study was initiated to determine the feasibility of a four lane divided carriageway arterial road extension between Port Road / East Terrace and the junction of South Road / London Road and Deacon Road. The proposed route extends along East Terrace under the Bakewell Bridge along James Congdon Drive and through an industrial precinct between Sir Donald Bradman Drive and South Road. The route is an Adelaide Better Roads project and forms an important link in the Inner City Ring Route.

The Western Bypass will be a controlled access arterial road catering for 2020 traffic volumes and forms an integral part of the Inner City Ring Route. The strategic objective of implementing the Western Bypass is to provide for the safe and efficient movement of vehicular traffic between the south western and north eastern suburbs of Adelaide. This corridor will provide this strategic link with sufficient capacity and directness from the Port Road / East Terrace intersection on the Inner City Ring Route to the South Road / Deacon Avenue intersection on the Outer City Ring Route.

The Bakewell Bridge is reaching the end of its life and needs to be replaced. High maintenance costs are required to extend the life of this bridge and this may not be economically sound. The bridge also has sub standard clearance from the underside of the superstructure to the roadway below.

The general features of the Western Bypass are:
- Four lane, dual carriageway with wide median (minimum 5 metres) and sheltered turning lanes.
- Bike lanes on each carriageway.
- New Bakewell Bridge to be grade separated with Western Bypass.
- Tree planting and other landscaping in verges and median.
- Pedestrian crossing linking Mile End to the Mile End Station and Park Lands, perhaps as part of the new Bakewell Bridge.
- Boundary fencing or walls and noise attenuation measures where required.
- Street lighting and upgraded drainage systems where required.
EXISTING CONDITIONS

Locality

The Western Bypass route is located on the western side of the Adelaide Park Lands adjacent to railway lines and extends through Mile End. The northern end has a series of businesses fronting the roadway, the centre section skirts around adjoining residences and the southern section lies in a Transport SA road reserve through a heavy industrial precinct.

Road

East Terrace extends between Port Road and Henley Beach Road and is generally 9.0m wide. East Terrace will remain as the northbound carriageway and the space on the eastern side of the existing road adjacent to SA Water will be utilised for the southbound carriageway.

James Congdon Drive extends between Henley Beach Road and Sir Donald Bradman Drive. The existing roadway will form a significant portion of the northbound carriageway of the Western Bypass.

Bridge

The existing structure is a multi-span reinforced concrete structure, constructed in 1925, and supports two lanes of traffic in both directions and a 2m wide footpath on the southern edge.

Previous evaluation of the structure has been undertaken by Transport SA to establish the viability of replacement. A 1995 bridge inspection report noted “the bridge is in a bad state of repair” and “repairs are considered necessary if the life of the bridge is to last to the year 2005, which is its assessed replacement year”

It is believed feasible to partially demolish the existing structure while maintaining some form of traffic flow. However any proposals for the partial demolition should be undertaken with a conservative approach to minimise the impact on the existing substandard structure.

The bridge has substandard clearance under the bridge for vehicles travelling along James Congdon Drive and East Terrace restricting the size of vehicles using this route. In addition the clearance for rail vehicles is also substandard, however the bridges (at Port Road and Hilton Bridges) either side of this bridge also have reduced clearances for rail operations.

Transport and Movement

The existing daily traffic volumes along the route range from 11,600 vehicles (vpd) to 20,600 vpd with 7.5% of commercial vehicles (CVs). Daily volumes on Railway Terrace (south) are up to 13,700 vpd (10.3% CVs), and on South Road up to 42,500 vpd (10% CVs).

The existing roads in general operate satisfactorily during peak periods, except the unsignalised intersection of Railway Terrace/James Congdon Drive which is at capacity.
The study area is well served by east – west bus services, however, no bus services run along East Terrace, James Congdon Drive or Railway Terrace. Trains to/from the southern suburbs stop at Mile End Station in peak periods and are mainly used by the Temple Christian College students.

There is significant pedestrian demand between the Mile End residential area and the Park Lands for recreational purposes, and between the Temple Christian College and the Park Lands north of Glover Avenue (to access sports grounds) and the Mile End Station.

On-road bicycle lanes exist on Sir Donald Bradman Drive east of South Road, James Congdon Drive, and Henley Beach Road/Glover Avenue east of South Road. The Bay to City path extends as an off-road and on road facility from Deacon Avenue to the Torrens Linear Park. A bike route also exists on King Street as part of a route from Lockleys to Mile End.

Access to the existing road along East Terrace/James Congdon Drive/Railway Terrace varies, whereas along James Congdon Drive there is no direct access. Direct access from abutting properties and side streets occurs along South Road, although limited in some instances.

Road Safety

Analysis of accident statistics indicate that there are no major safety concerns on the major arterial and local roads within the study area.

IMPACT

Road network

The adjoining road network carries significant traffic. A major portion of this traffic travels along South Road. The junctions with major links are starting to become congested and will continue to deteriorate over time without an alternate route for this traffic. The Western Bypass will remove some of the traffic from these junctions as well as help remove some traffic from the Adelaide City centre.

Intersections

There is unlikely to be significant changes to the layout of major intersections on the existing road network between now and 2020 prior to the provision of the Western Bypass. It is expected that the only major change would be the signalisation of the junction with Railway Terrace and Railway Terrace south for safety and traffic operation requirements.

Traffic

Future (year 2020) daily volumes on the existing road network are expected to result in a reduction in the travel times along the major arterial roads and significantly increased delays at the signalised intersections.
Land Use and Development

Re-development in the industrial precinct is occurring as the area changes from heavy industrial to retail and commercial.

Pedestrian Access

The future proposal for the Western Bypass is to prevent pedestrian access at grade across the Bypass. The new Bakewell Bridge will be the only pedestrian route to the Park Lands. The preferred proposal for the new bridge will provide disabled pedestrian access from Mile End to the Park Lands after completion of the structure.

The new structure will also provide an access stair on the south-western side in a similar location to the existing stairs. At present the proposal assumes that access to the existing station will be provided. However funding arrangements for this have not been confirmed.

Temple College requested that pedestrian access to their playing fields in the Park Lands be maintained at all times. This would mean that the preferred option of total closure of Henley Beach Road would require provision of temporary access.

The provision of an alternative access during construction would reduce the cost benefits of the total closure of Henley Beach Road. At present the school children do not use the access route via the station. With proper supervision and a temporary crossing on James Congdon Drive then this route could provide a viable and safe means of access to the station and the Park Lands.

Traffic Operation Impacts

The reconstruction of the bridge will have impacts on traffic flows both on the arterial and local road network, in particular on changes in travel patterns, delays and bus movements.

For the full closure of Henley Beach Road, the diversion impact on traffic and bus services would be significant. The PTB has provided information relating to the estimated costs to bus operations of travelling the extra distances and these have been included in the assessment.

Businesses along Henley Beach Road would lose some income due to the bridge construction works. This may be significant in the case where the Bakewell Bridge is totally closed.

Railway

At present the Southern O'Bahn scheme is under development and may involve realignment of the rail tracks below Bakewell Bridge. Following discussions with ARTC and TransAdelaide various requirements were incorporated into the new bridge.

It is apparent that the adjacent structures do not provide the maximum required clearance and Transport SA recommended that only 6.1m clearance be provided. Any new structure should however have the ability to accommodate the lowering of the track without any adverse affect to the substructure.
ENVIRONMENTAL EFFECTS OF GENERAL ALIGNMENT

Air Quality

The only potential impacts on air quality may be increased traffic emissions at the Western Bypass intersections such as South Road and Sir Donald Bradman Drive. This, however, will only be a slight increase and it is envisaged that levels will remain within relevant standards.

Socio-Economic and Land Use

Potential socio-economic affects of the proposed Western Bypass are expected to be predominantly favourable in the East Terrace Precinct due to the possibilities involved with upgrading and developing commercial areas.

Potential impacts would include:

- Increased traffic delay at intersections.
- Reduced access to side streets north of Henley Beach Road, and to several businesses in the vicinity of South Road.
- Necessary acquisition and demolition of adjacent properties to accommodate the width of the Henley Beach Road ramp.
- Increased noise impacts.
- Reduced on and off-street parking.
- Potential loss of the economic value of land due to the final footprint of intersections.
- There could be a slight concentration of traffic emissions, but not to the extent of increasing levels such that they exceed the NEPM guidelines.

Positive Impacts include:

- The Industrial Precinct would profit from the development of the Bypass through the area. The Bypass would enhance the prominence of the area, improve accessibility and potentially act as a catalyst in the improvement and gradual upgrade of this Precinct.
- There will be improved drainage through the enhancement of Keswick Creek for all options.

Noise

A preliminary assessment of the types of acoustic treatment that may be required under the Transport SA interim guidelines for road traffic noise has been undertaken.

Various residences and a school along the route will be affected and will require some form of acoustic treatment to reduce noise to acceptable levels. These measures include external barriers, general measures (such as an open graded surface) and attenuation of noise at the facades.

The design of James Congdon Drive incorporated a depressed road and acoustic barriers to provide acceptable noise levels at the recently developed residential land to the west. In addition, restrictions were placed on the development to protect the upper levels of dwellings from the noise.
CONSULTATION

Extensive consultation has occurred internally involving SOC, Metropolitan Region and Planning and Design.

Also public consultation program has been undertaken and Cabinet and Public Works Committee approval received.

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