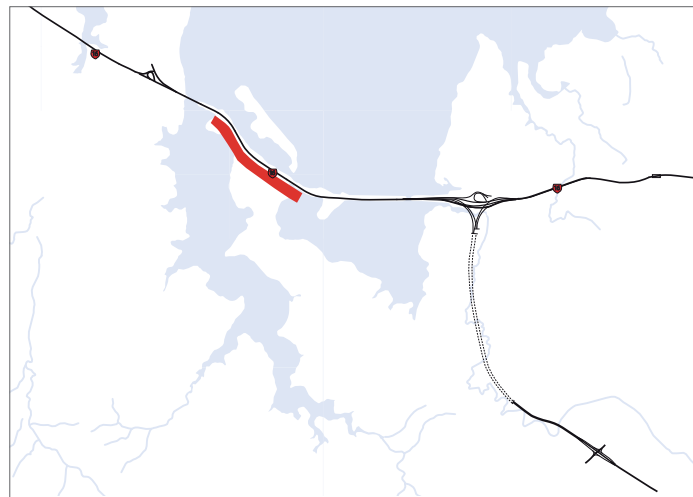


C3 Sector 3: Rosebank – Terrestrial



Sector 3 of the project involves the re-configuration of the existing interchange ramps to improve traffic merging. The outside lane westbound lane will be “dropped” at the Rosebank exit ramp.

Between the Rosebank Interchange and the Te Atatu Interchange additional lanes will be added to provide four lanes east and westbound. A bus shoulder will also be provided in both directions where space permits between ramps.



Figure C-3.1: Aerial view of Sector 3 from the north

C3.1 Patiki Road

C3.1.1 Existing situation

Movement and connectivity

- Rosebank and Patiki Road operate as a single interchange
- Mainline shifts from a left to right-hand curve passing Rosebank Domain
- Constrained off-ramp bridge width does not limit operation of interchange
- Local road layout connecting to ramps creates conflicting movements and safety concerns
- Local demand for HOV lane to bypass on-ramp signals
- Cycleway route would benefit from additional connection on east side of ramps
- Local road adjacent mainline to west of ramps gives vehicle access to Rosebank Domain, forms part of cycleway
- No need for local connectivity across the corridor.

Landscape, planting, views

- Low amenity views to industrial area travelling east near the raceway
- Grassed areas edging the motorway are more extensive and part of the motorist’s outlook
- Views from the corridor to Te Atatu landform and Whau estuary.

Urban form

- Highly developed industrial / commercial area
- Large, high-value industrial buildings very close to mainline
- Consistent, functional building and street character.

Structures

- Dominant form of dramatic curving concrete off-ramp with steel railing
- Cycleway overbridge is narrow with sharp corners and sub-standard approach grades
- Cycleway bridge is prominent from several approach angles, but is also dominated by the visual strength of the off-ramp bridge.



Figure C-3.4: Photo 3-1 Existing view eastwards approaching Patiki overbridge on off-road route



Figure C-3.3: Photo 3-2 Existing view westwards from Patiki Photo



Figure C-3.2: Photo 3-3 Existing view eastwards immediately west of Patiki Road on off-road route

Western Ring Route ▶ Waterview Connection



Figure C-3.5: Patiki Road existing plan

Section C ▶ Sector Design Concepts

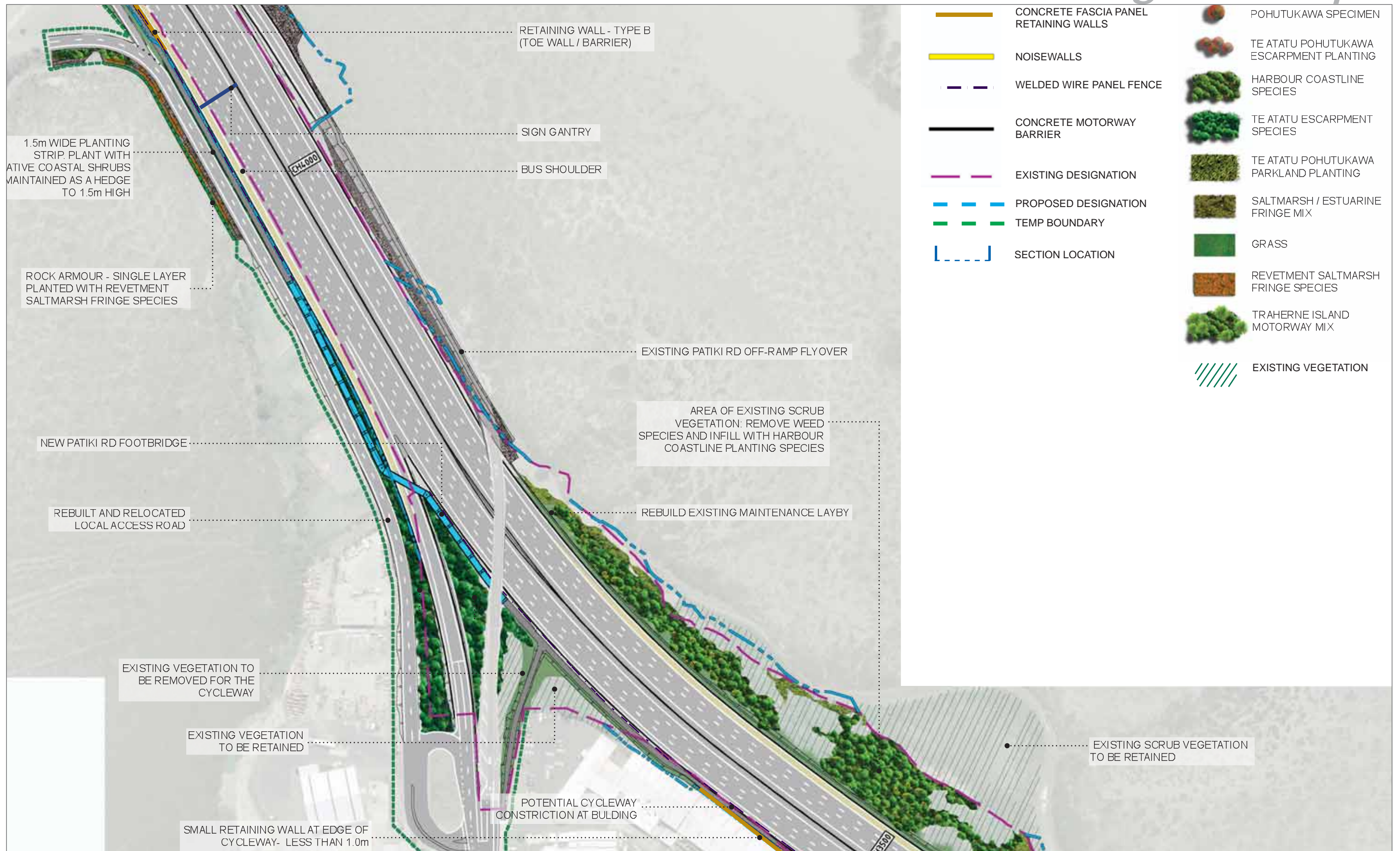


Figure C-3.6: Patiki Road concept plan

Western Ring Route ▶ Waterview Connection

C3.1.2 Design concept

Movement and connectivity

- On-ramp revised to accommodate the widened mainline. New on-ramp alignment requires rebuilding of the overbridge
- New connection between cycleway and local network on east side of ramps
- Cycleway width east of the ramps may be constrained to 2.5m width (compliant with Austroads guidance) between the wider mainline and existing high value building and installations. Detail design is to increase this to 3.5m if possible
- Local road to Rosebank Domain to be relocated to allow mainline widening, and rebuilt with separated vehicle and cycle / pedestrian lanes.

Landscape, planting, views

- Saltmarsh species are to be planted into the new 'rip-rap' boulders forming the coastal armour on the southern edge of the motorway, as soon as areas of armour are completed to minimise establishment of weed species. In cases where additional boulder armour needs to be provided as part of the contract, for example due to settlement, additional plantings should be provided in the same manner
- Coastal harbour species planted in strategic location on northern edge of motorway.

Urban form

- A strip of land is to be acquired from adjacent land owners, enabling all current uses to be retained.

Structures

- Replacement cycleway overbridge with a design that complements other structures in the corridor (Fig. C-3.7 & 8) and contributes to a sense of identity for the cycleway through SH16
- Wider overbridge, more sweeping turns and shallower approach grades
- White anti-graffiti paint to be applied to all existing ramp columns, extending to underside of the spreader head units
- Existing ramp abutment and adjacent cycleway layout to receive planting and fencing to minimise casual vandalism and accumulation of litter.

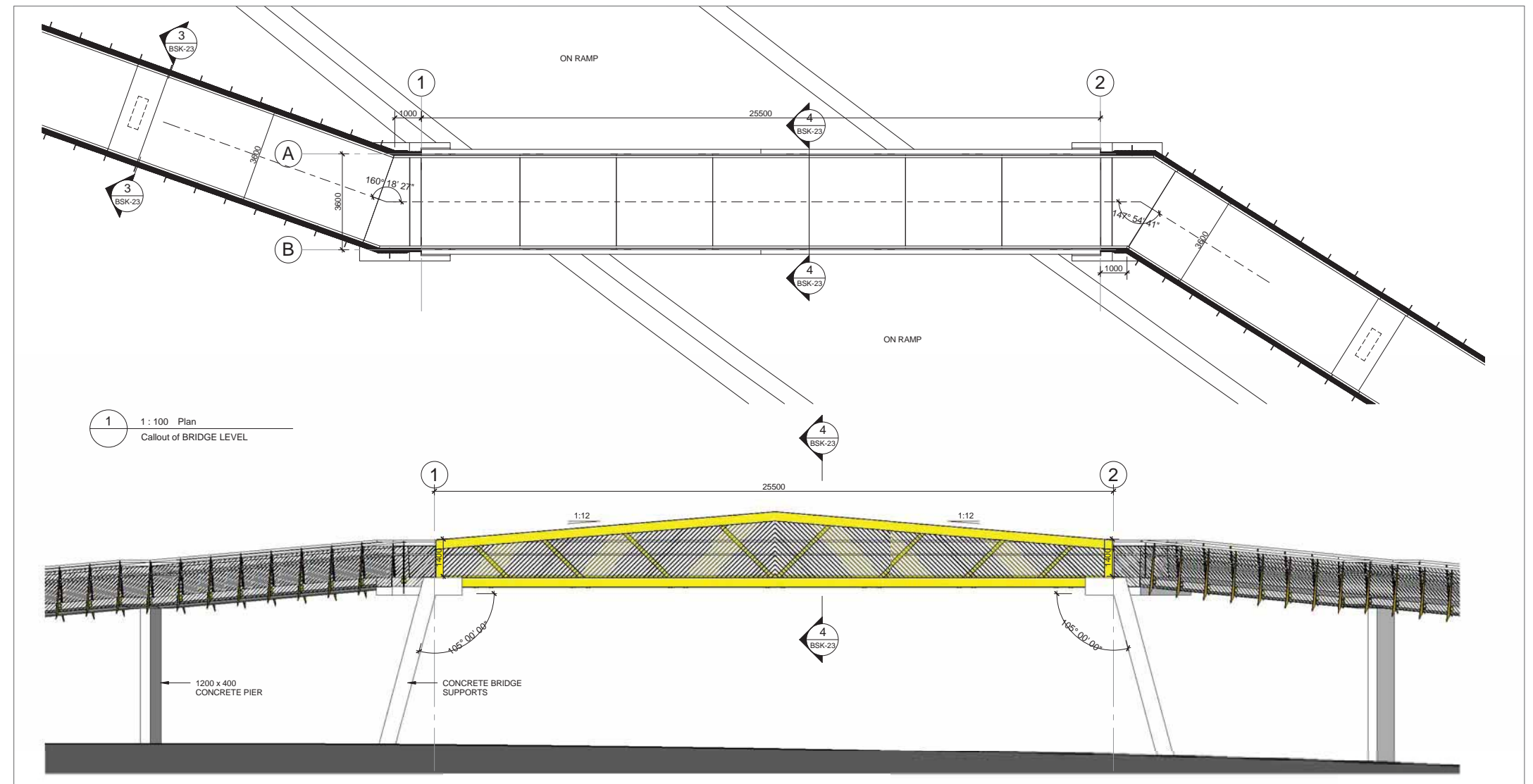


Figure C-3.8: New cycleway bridge at Patiki Road. Note: minimum headroom clearance at ramps = 6.2m

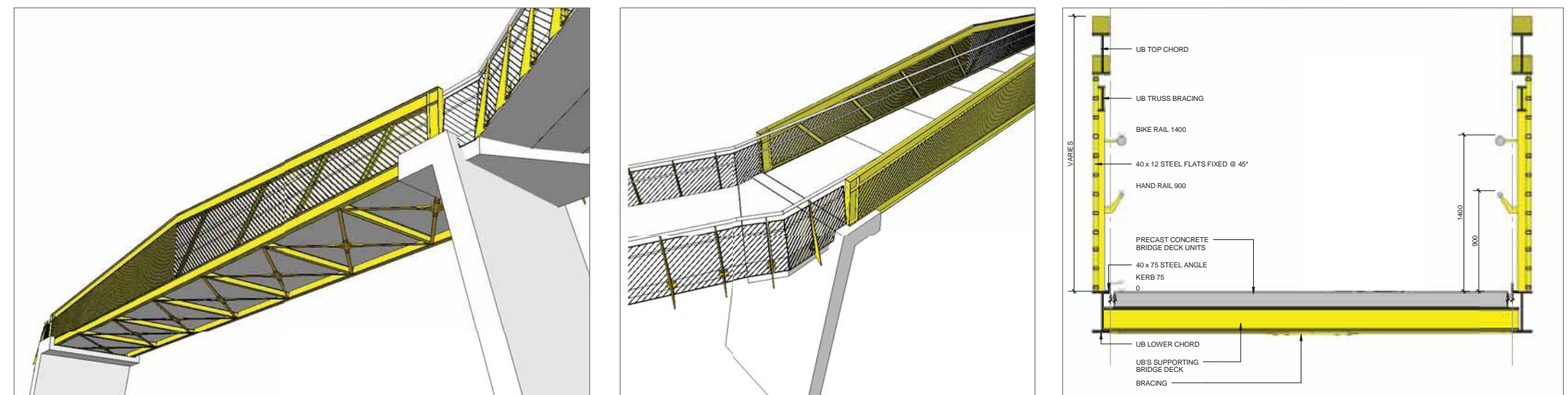


Figure C-3.7: New bridge arrangement over Patiki Road on-ramp

Section C ▶ Sector Design Concepts

C3.2 Rosebank Road

C3.2.1 Existing situation

Movement and connectivity

- Rosebank and Patiki Road operate as a single fully-directional interchange
- Interchange capacity limited by the width of on and off-ramp bridges
- Local road layouts link the two halves of this interchange via a roundabout
- Cycleway route would benefit from additional connection on east side of ramps
- Cycleway boardwalk under off-ramp is narrow and has no guardrail
- No need for local connectivity across the corridor.

Landscape, planting, views

- Varying contours contrast with the horizontal causeway
- Coastal edge appears truncated by the motorway
- Elevation and sweeping corner create a changing set of views, most noticeable from eastbound mainline and cycleway
- Pollen Island and low-lying mud banks are apparent from elevated areas
- Westbound views towards less attractive but prominent parts of the industrial area, with limited screening vegetation
- Views into and over the corridor from adjacent commercial buildings.

Urban form

- Highly developed industrial / commercial close to corridor
- Consistent, functional building and street character
- Key lots near the corridor offer redevelopment potential recognised.

Structures

- Ramps are dramatic concrete sweeps with steel railing
- Rosebank cycleway boardwalk is narrow and without guarding.



Figure C-3.9: Photo 3-4 Existing cycleway boardwalk underneath Rosebank off-ramp



Figure C-3.10: Photo 3-5 Existing view westbound, between Rosebank ramps



Figure C-3.11: Photo 3-6 Existing view westbound, between Rosebank ramps

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Figure C-3.12: Rosebank Road existing plan

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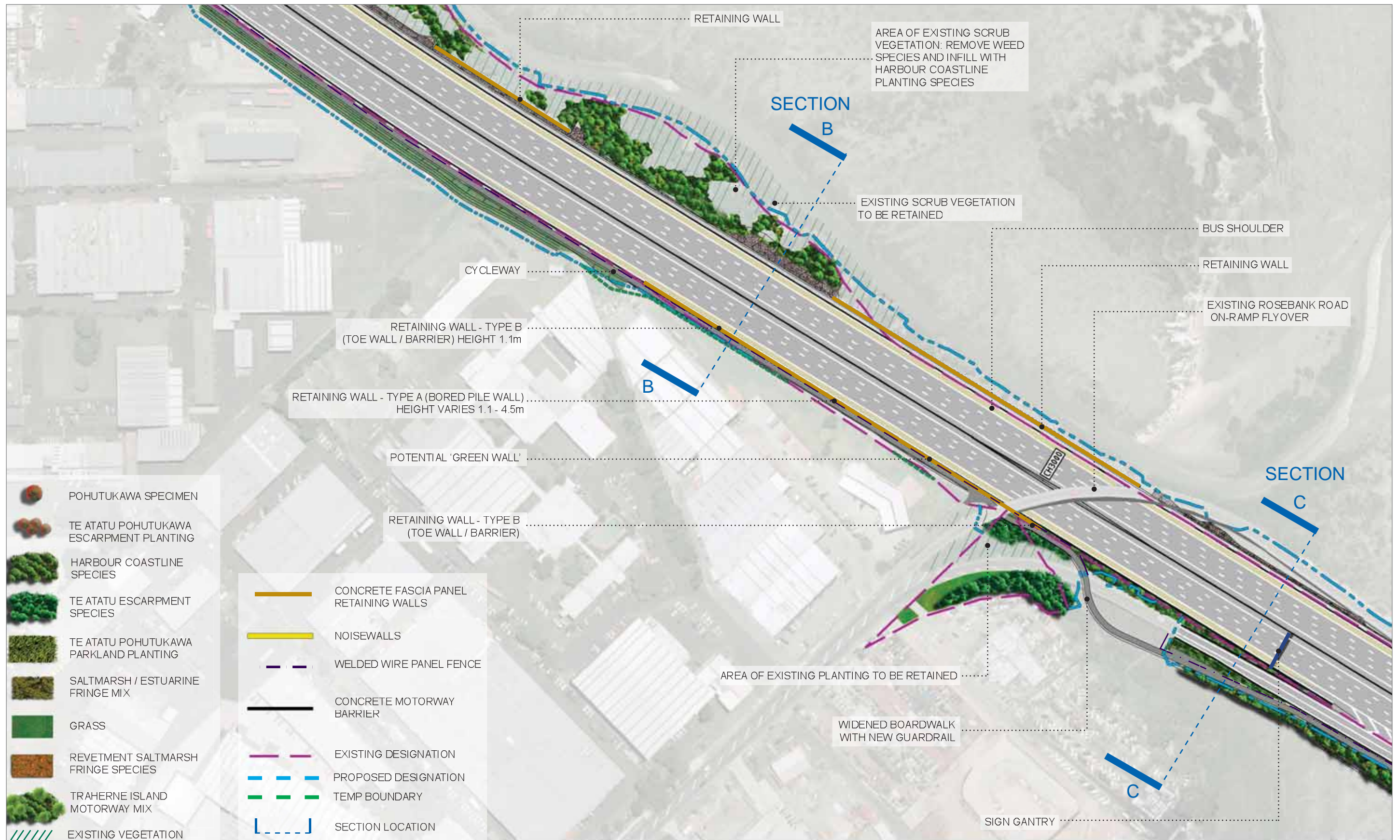


Figure C-3.13: Rosebank Road concept plan

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D3.2.2 Design concept

Movement and connectivity

- Increased off-ramp length to minimise queueing problems
- Mainline widening is achieved without changing on-ramp bridge structures
- Cycleway realigned to accommodate mainline widening
- Connection from cycleway to local network remains on west side of ramps
- Off-road connection to east of ramps when adjacent land is redeveloped
- Existing timber boardwalk to be widened and provided with guardrail, all arrangements and finishes to be to Austroads standards (refer Figure D-3.14).

Landscape, planting, views

- Harbour coastal planted on northern side of motorway, replacing existing weed species
- Pattern of planting strategically designed to emphasis views by screening in some areas and revealing in others, and to achieve some vegetative screening of motorway and development when viewed from the harbour.

Urban form

- A strip of land is to be acquired from adjacent land owners, enabling all current uses to be retained.

Structures

- Retaining wall up to 5.5m high west of the on-ramp, with cycleway on top (refer Figure D-3.15)
- Walls are bored pile with concrete panels; concrete vehicle barrier at base
- Spill-through areas adjacent the cycleway under the on-ramp are to be finished with clay pavers to the full width of the spill-through. Cycleway lights fixed to overbridges should be replaced with new units
- White anti-graffiti paint to be applied to all existing ramp columns, extending to underside of the spreader head units.

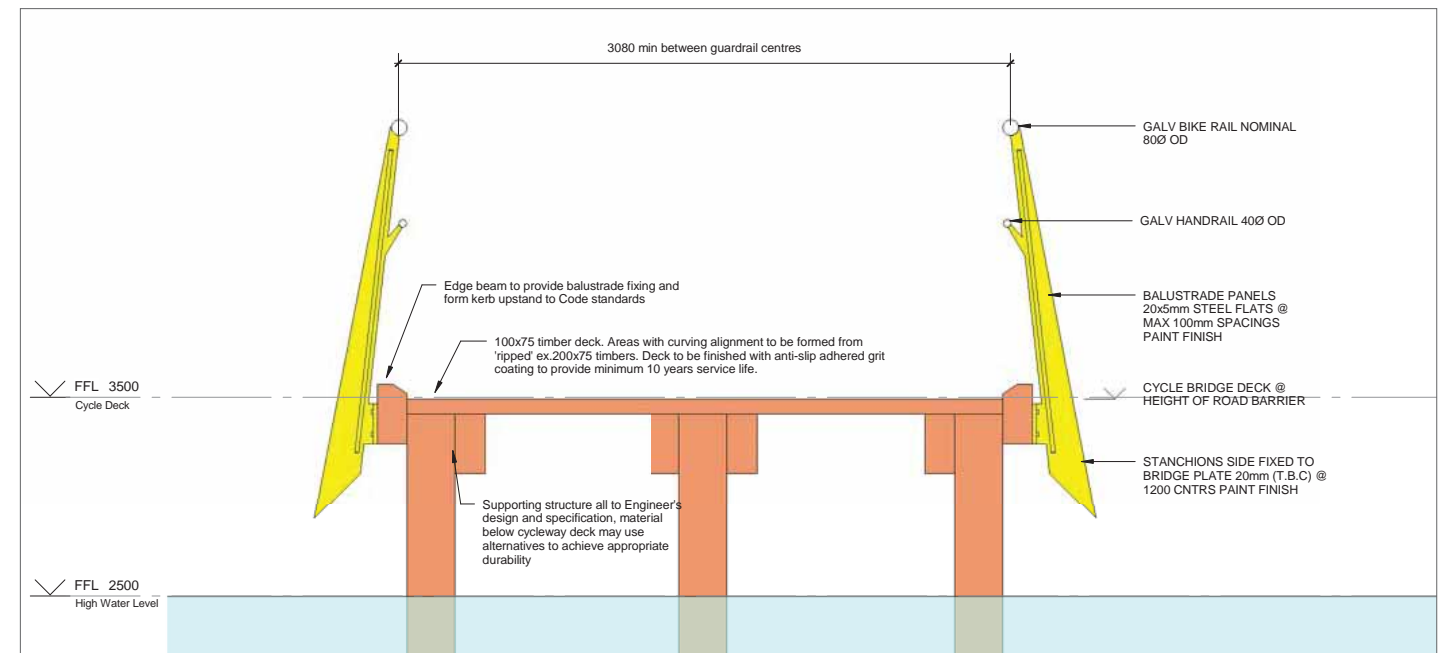


Figure C-3.14: Detail for future cycleway boardwalk under Rosebank off-ramp

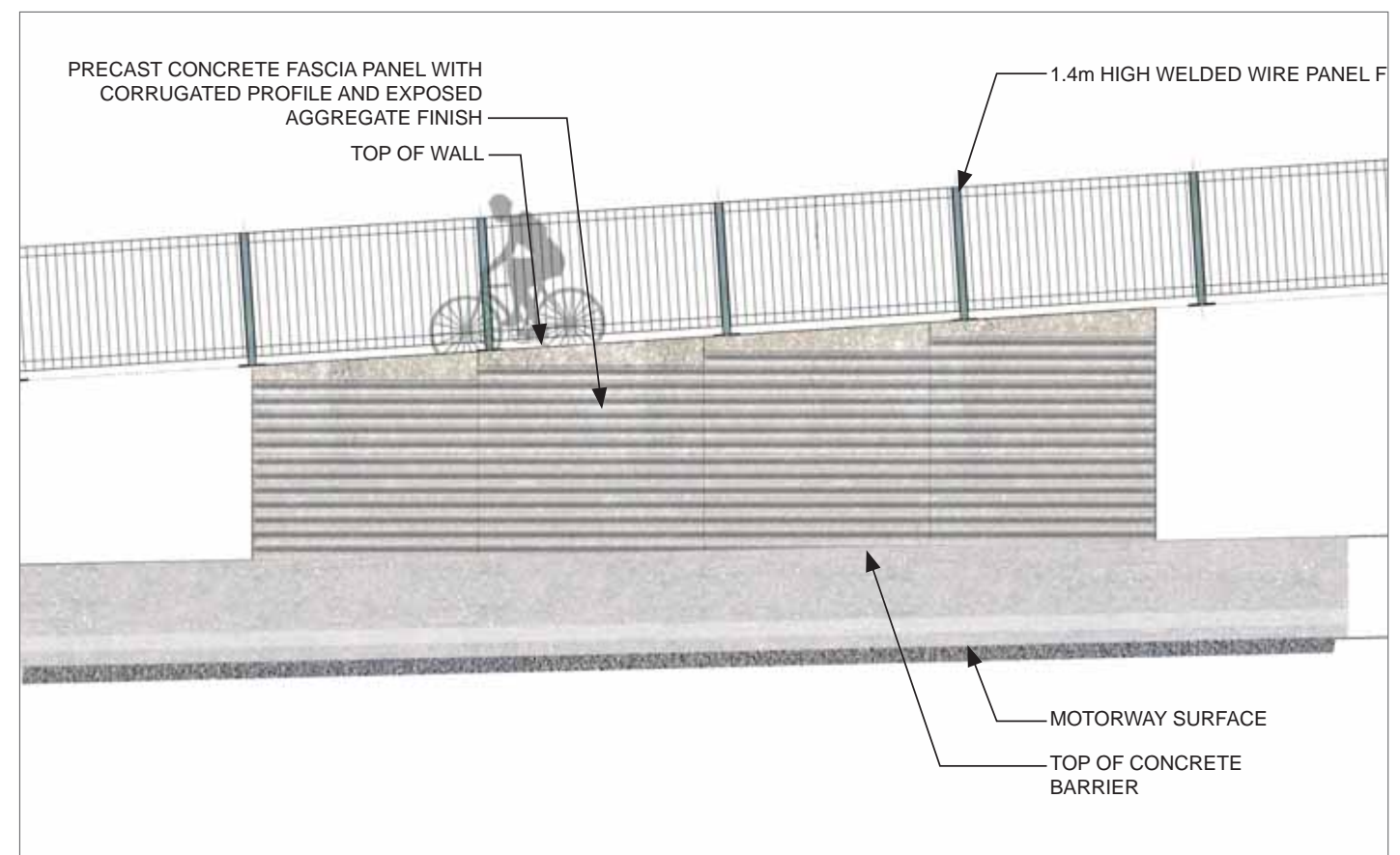


Figure C-3.15: Future retaining wall west of Rosebank ramps

Section C ▶ Sector Design Concepts

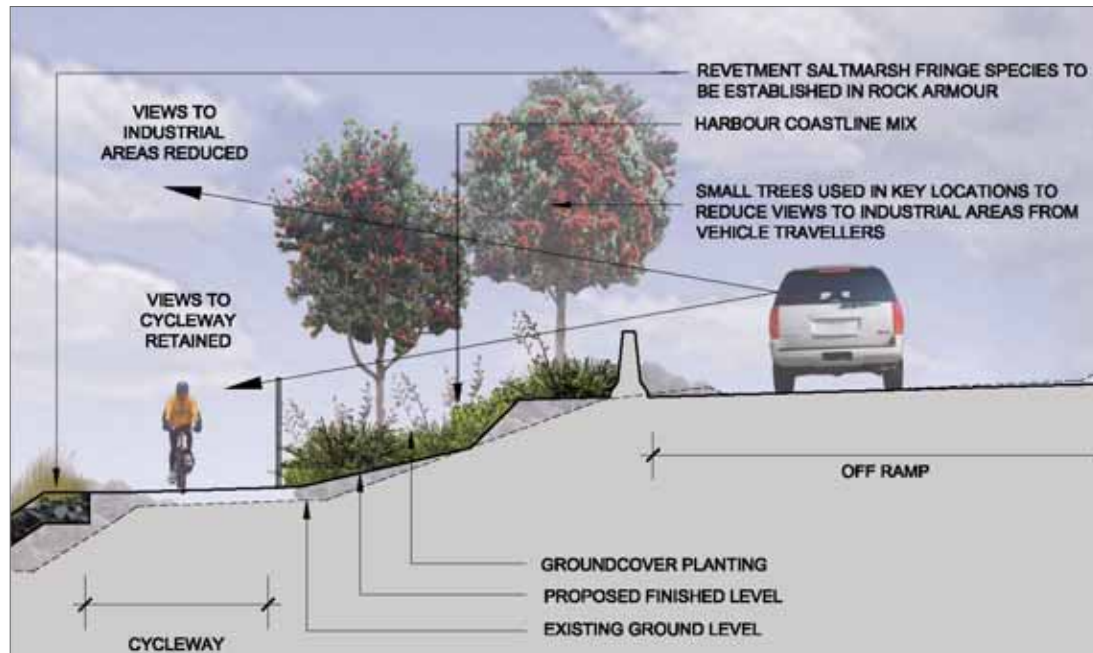


Figure C-3.16: Enlargement of future cross section at Rosebank off-ramp (section C)

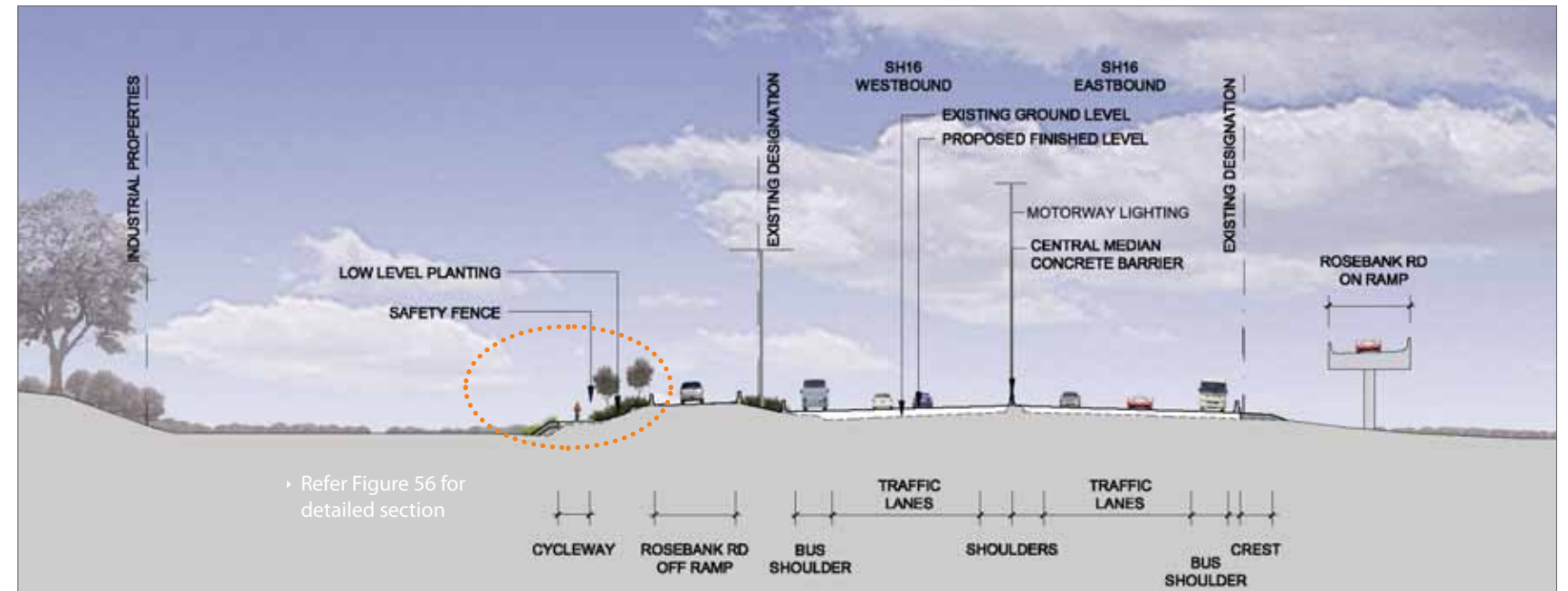


Figure C-3.17: Future cross-section at Rosebank off-ramp (section C)

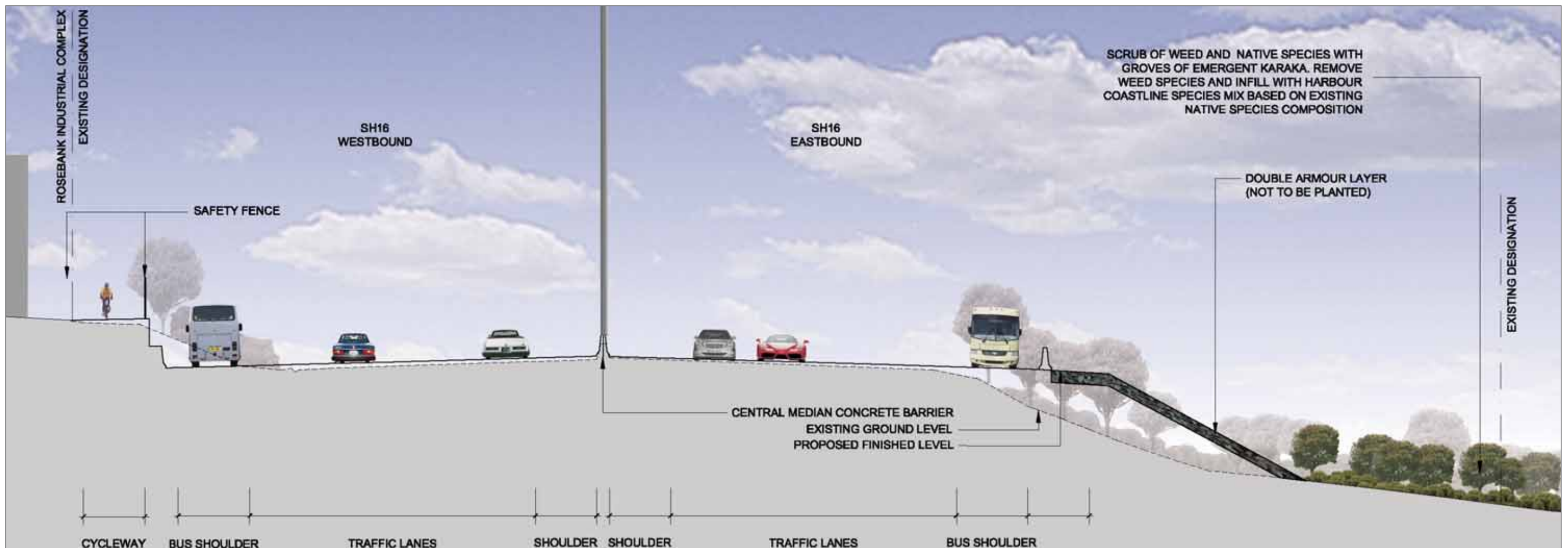


Figure C-3.18: Future cross-section immediately west of Rosebank Road compared with existing arrangement (section B)

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