

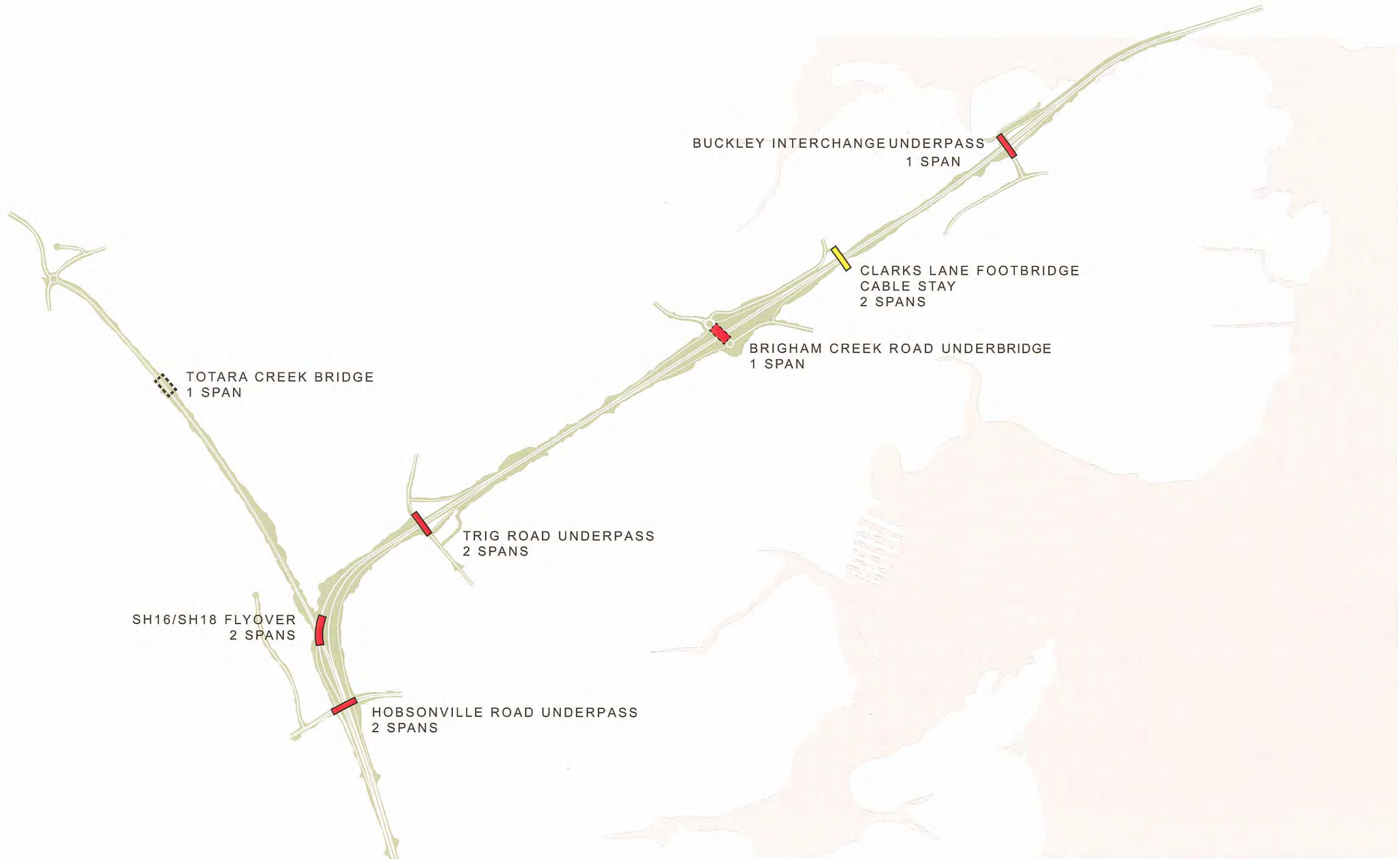
Hardscape Elements



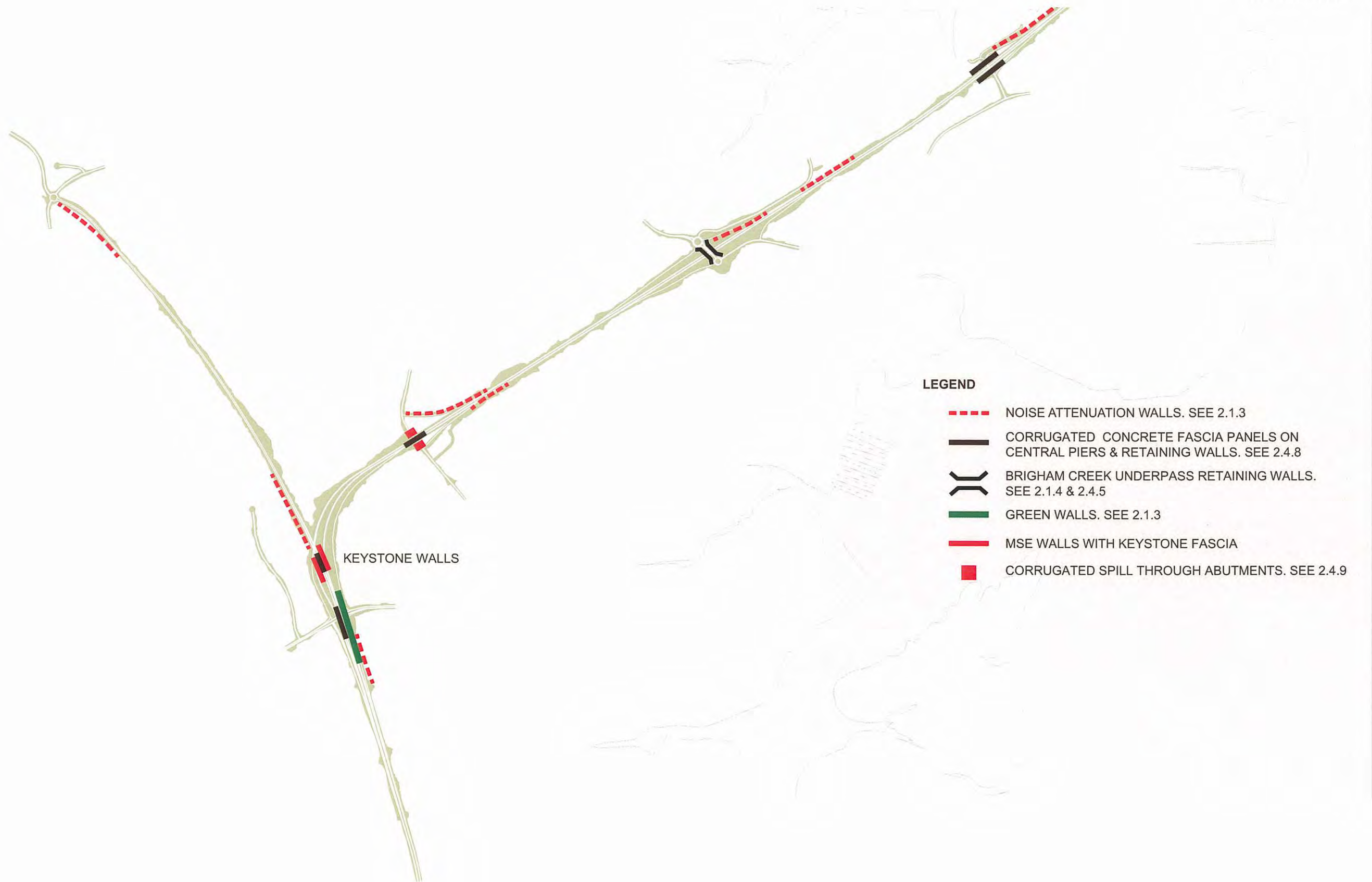
HARDSCAPE ELEMENTS

2.4.1 Structures

BRIDGES



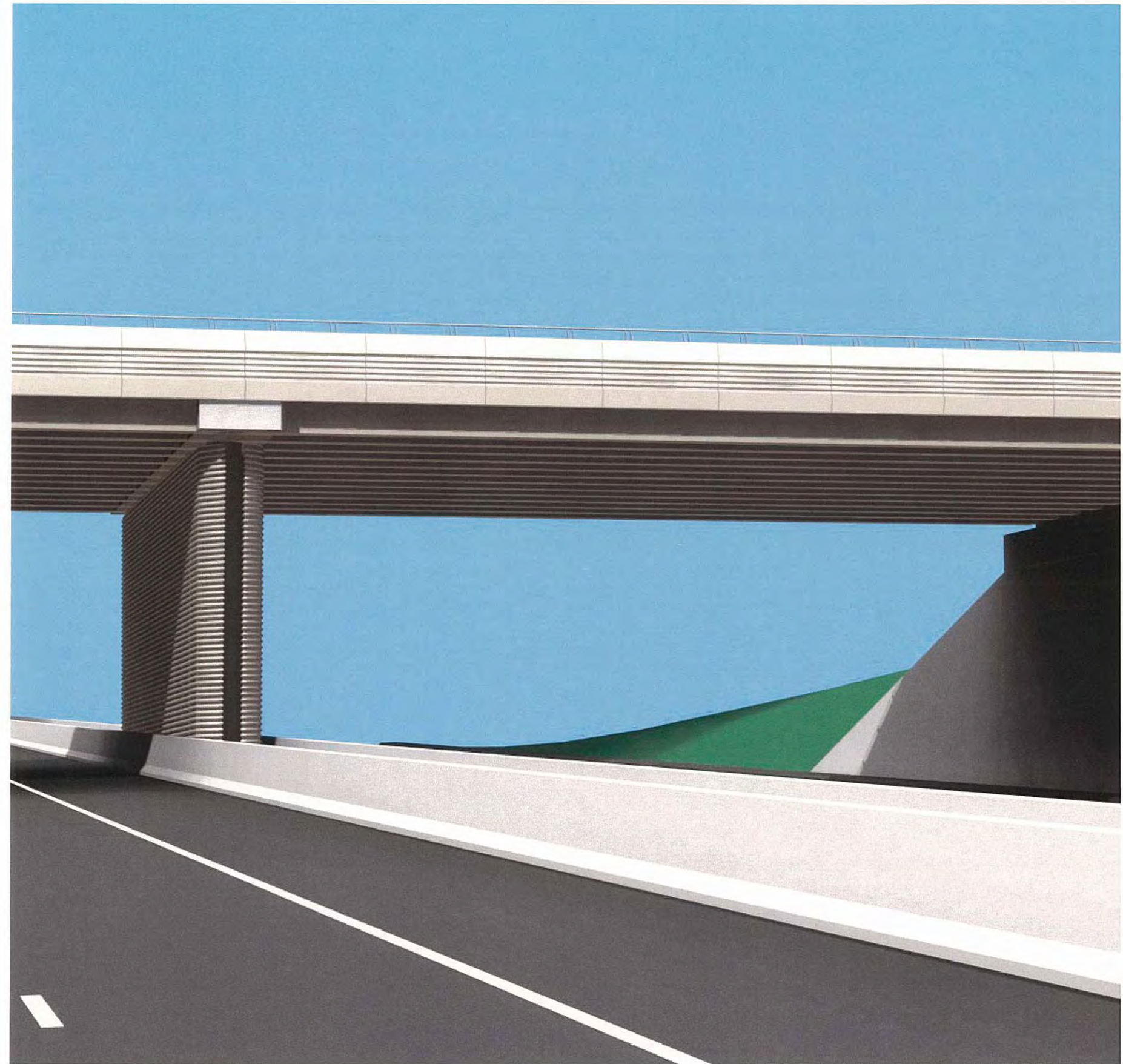
WALLS & ABUTMENTS



HARDSCAPE ELEMENTS

2.4.2 Hobsonville Road Bridge

- Two unequal spans, top-down construction
- Bored piles to central pier clad with precast concrete panels with corrugated surface profile
- Pier cladding wraps around leading edge of pier, with forward tilt to provide dynamic sense of movement
- Gap between wrap around panels provides for vertical sliver of light
- Beam integral with Super Tee girders provides clean soffit to bridge superstructure
- TL-4 precast concrete barriers with softly corrugated profile insert between angled upper and lower faces, and galvanised handrail on paired curved stanchions
- Abutment walls clad in precast profiled slotted panels to provide planted Green Wall as part of SH16 Green Route



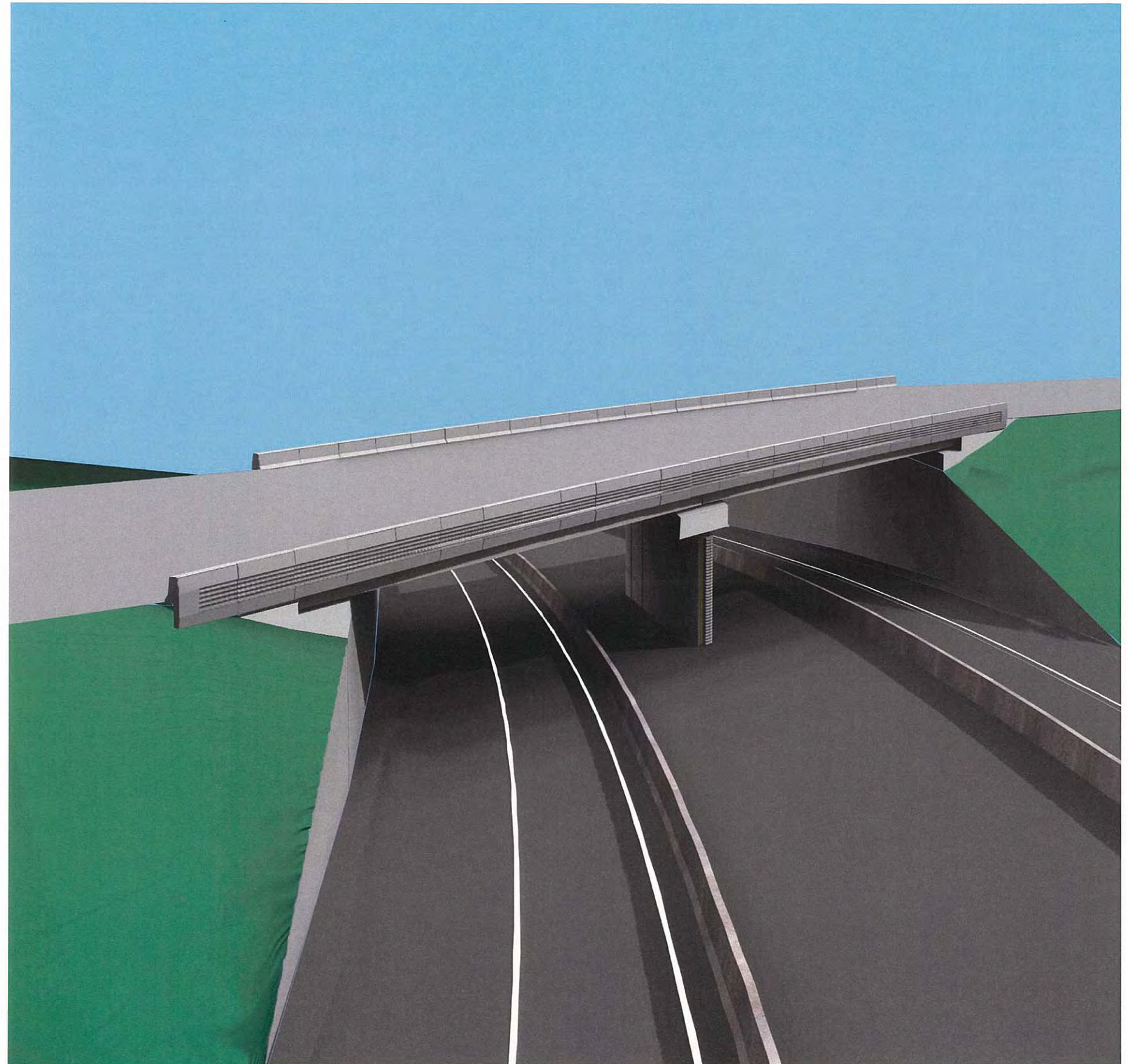
Hobsonville Road - Clad Pier

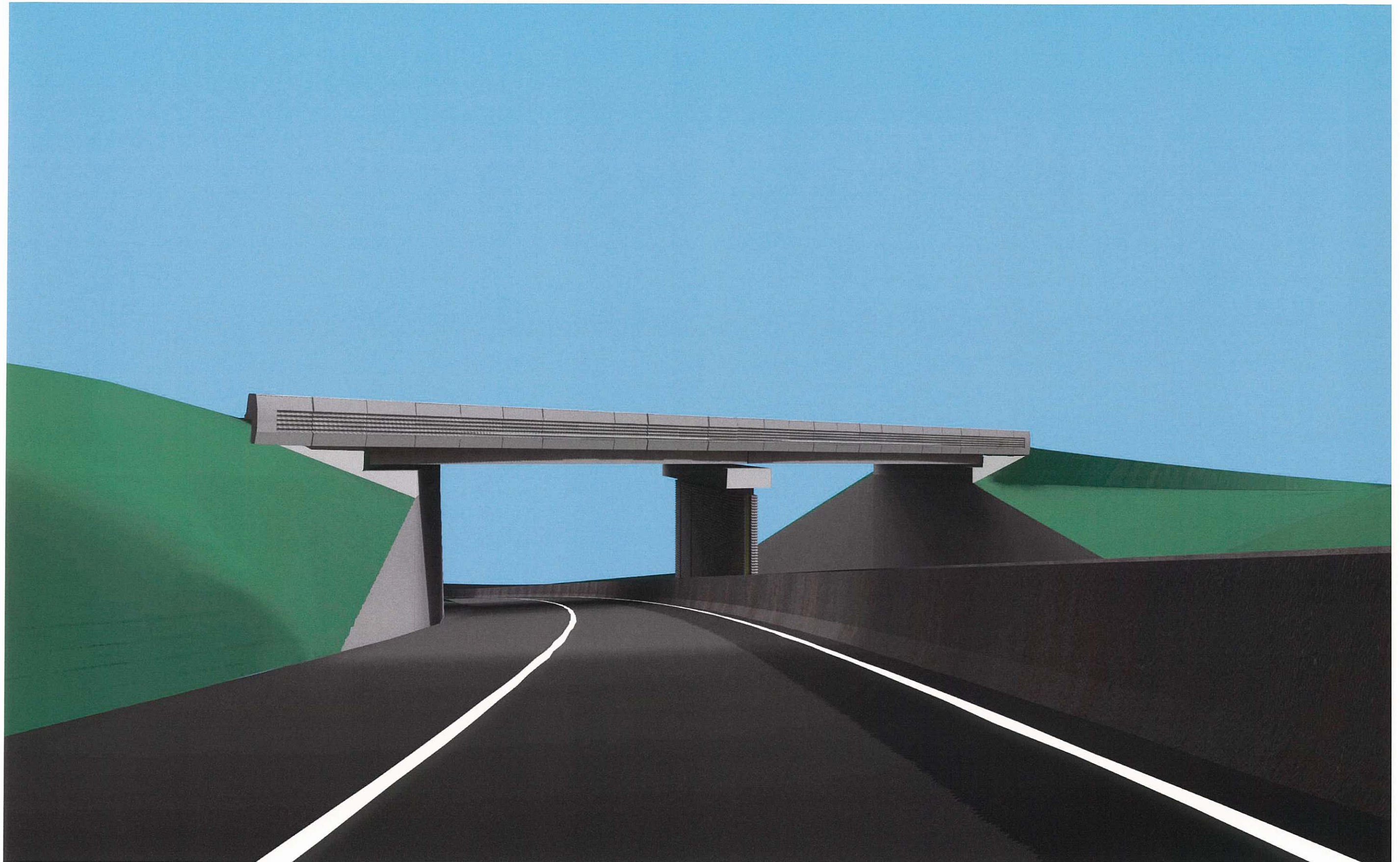


HARDSCAPE ELEMENTS

2.4.3 SH16 / SH18 Flyover

- Two acutely skewed spans
- Central Pier clad with precast concrete panels with corrugated surface profile to match those for top-down construction bridges
- Vertical abutment walls in grey keystone with concrete capping beam to visually tie the wall together
- TL-5 precast concrete barriers with corrugated profile insert as for other barriers
- (W - barriers and road markings on flyover not shown)

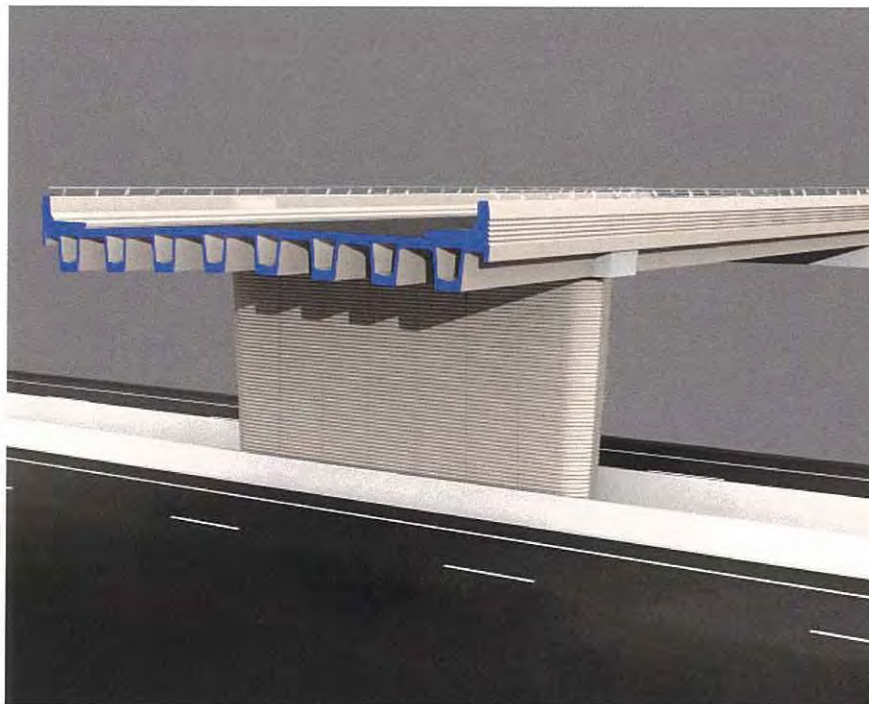




HARDSCAPE ELEMENTS

2.4.4 Trig Road Bridge

- Two equal spans, top-down construction
- Precast concrete panels with corrugated surface profile applied to piles forming central pier
- Leading edge of wrapped pier tilted forward as for Hobsonville Road and Flyover
- Integral headstock beam as for Hobsonville Road provides clean soffit to bridge
- TL-4 barriers common to all road bridges - units at each end with angled termination to corrugated insert to reflect angle of spill through abutments.
- Special 'ripple' profile concrete units pave the spill through abutments, locally pitched at 1:2 under the bridge and merging with gentler batters either side.





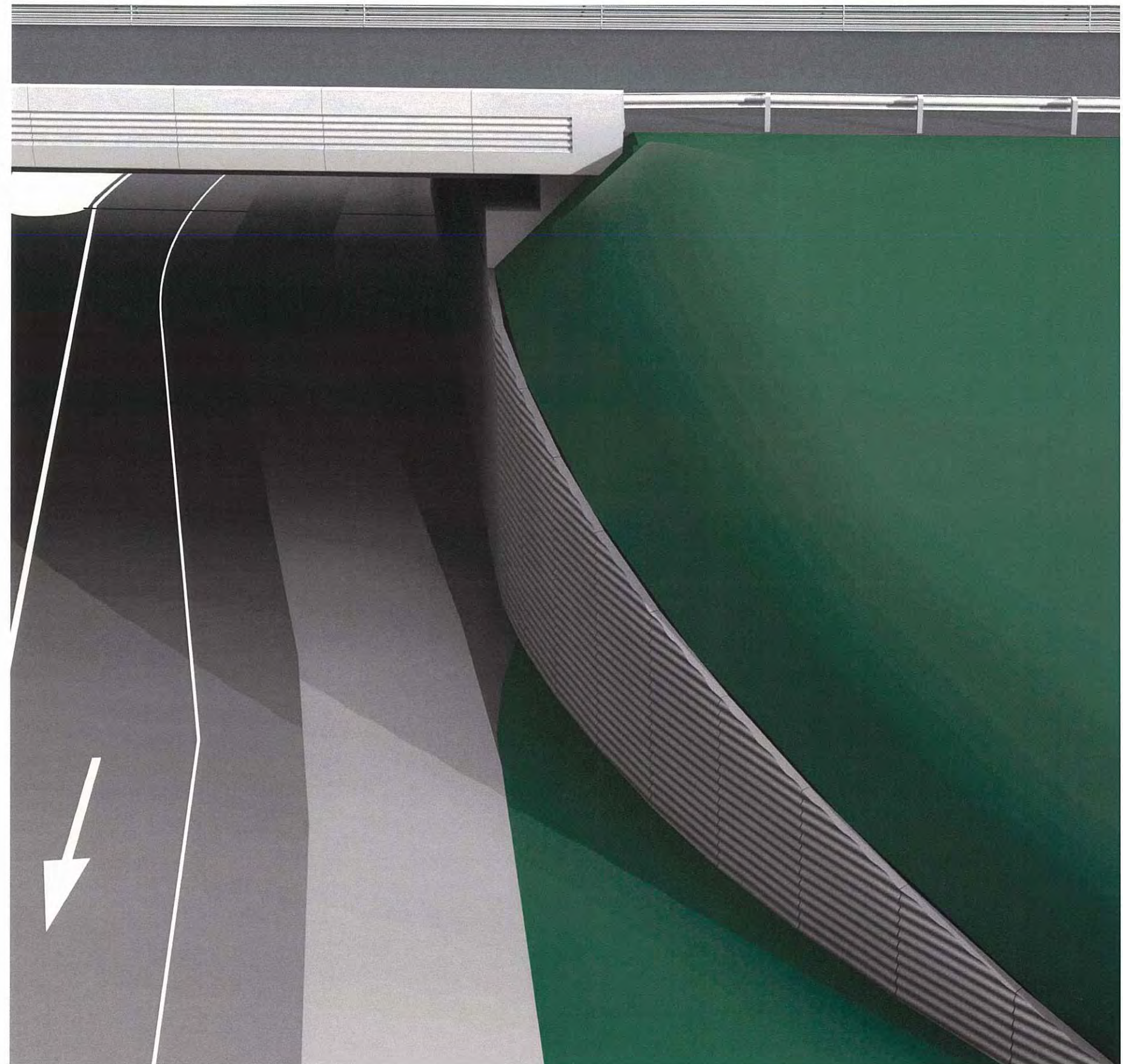
HARDSCAPE ELEMENTS

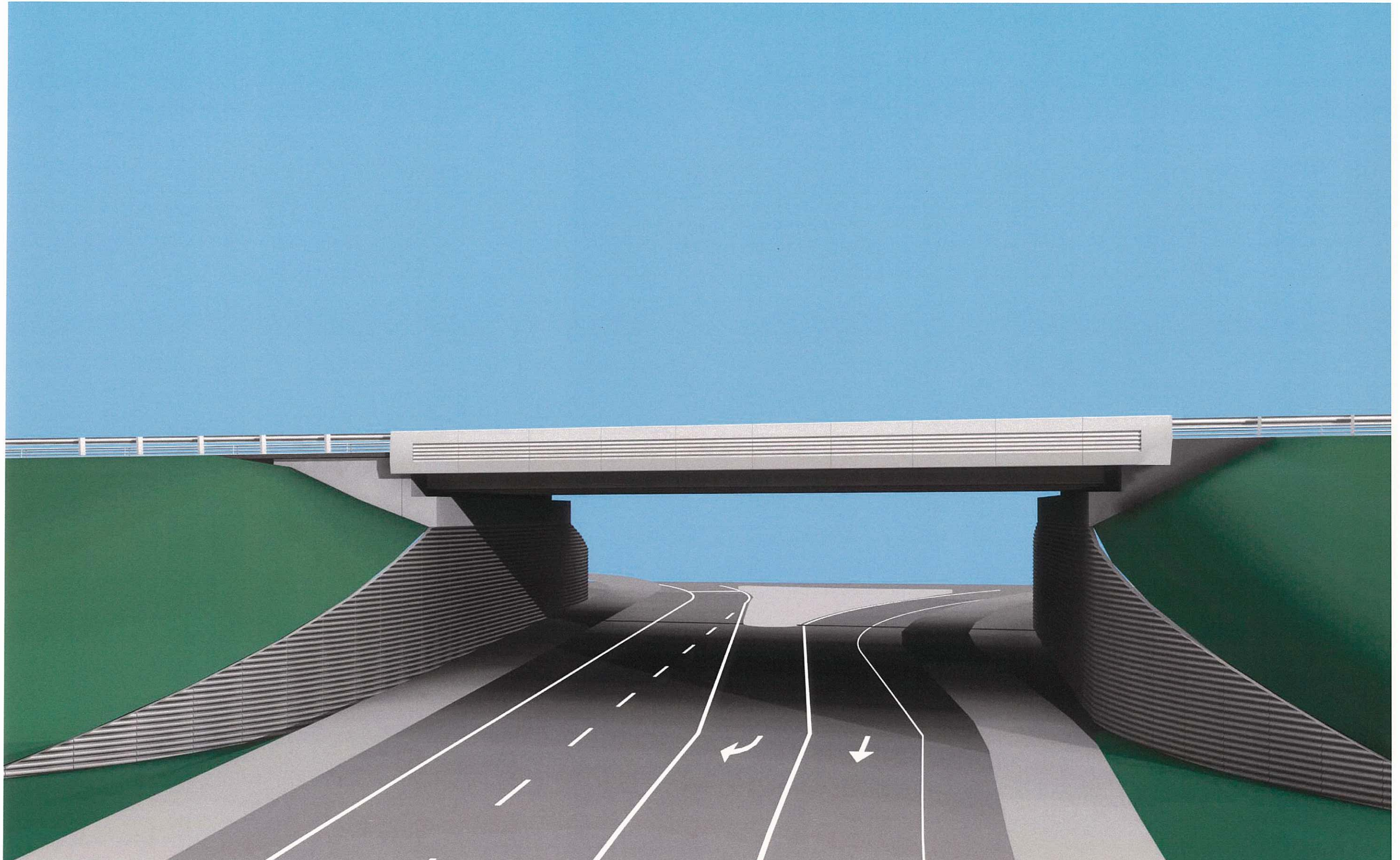
2.4.5 Brigham Creek Underpass

- Single span motorway bridge with TL-4 barriers
- Abutment walls clad with corrugated profile precast concrete units
- Abutment walls extend into landscape in gentle curves, providing strong visual reinforcement of landscape
- Standard flat wall units facet around constant radius curves
- Overall curved effect of walls and underpass provides a 'canvas' for possible artwork

Note:

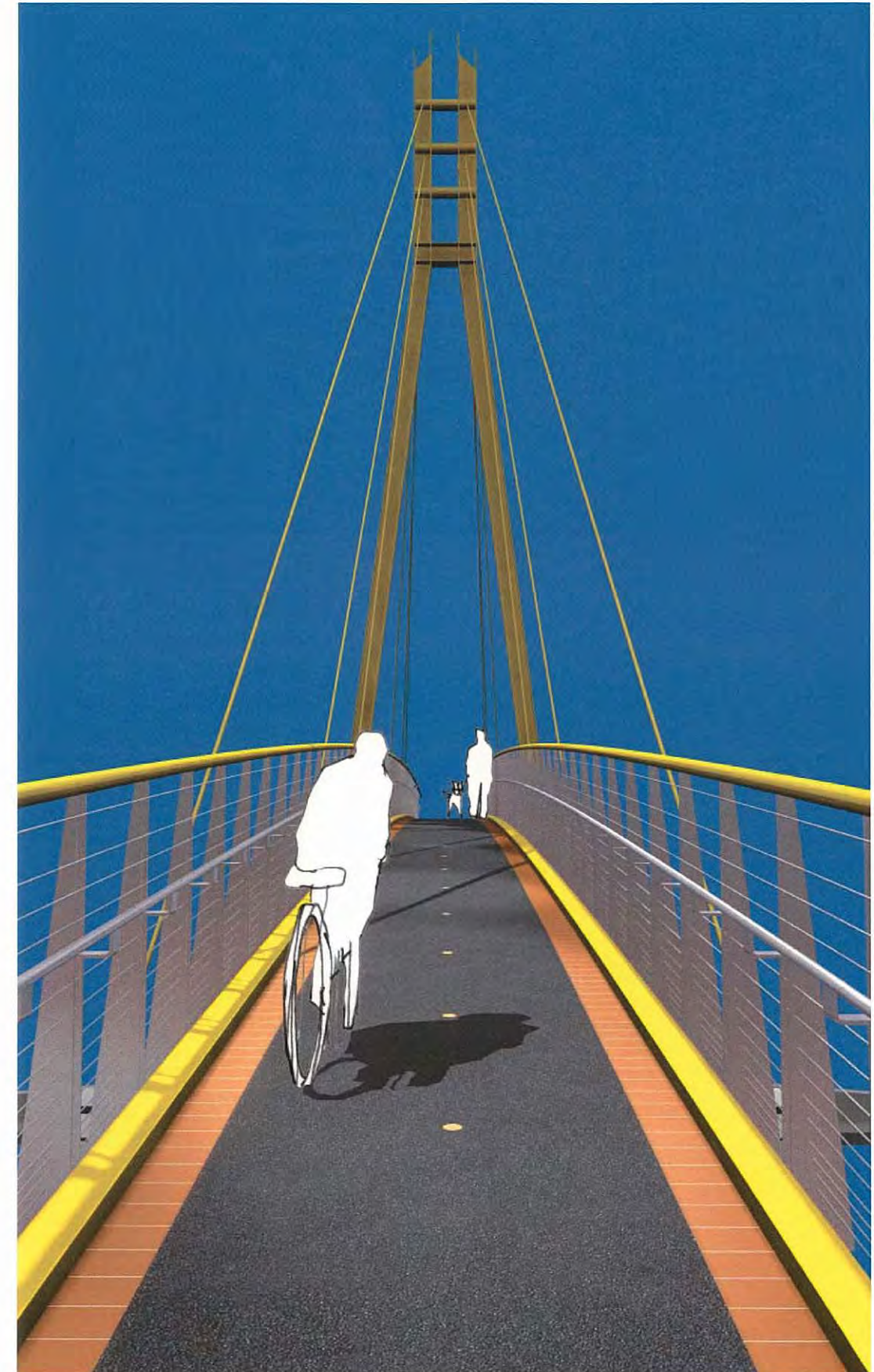
An indicative treatment to the Brigham Creek Underpass fascia panels has been shown for this report as the intention is to start with a 'clean slate' for the selected artist to work in an environment where no preconceived ideas influence the design process or outcomes. This is an important aspect of the artists brief that will give the artist 'ownership' over the design of the walls.





2.4.6 Clarks Lane Footbridge

- Two span cable stayed foot and cycle bridge, provides major visual interest on longest straight section of the SH18 'Gallery Route'
- Central 'A frame' steel I-section pylon, with 'legs' held apart at the top and extending vertically beyond the cable support points to about 23 metres above the motorway level
- Steel box section deck on continuous vertical curve, with angled sides providing elegant slim profile
- Concrete structural topping to deck with finishing screed allowing for exposed aggregate finish and borders of inset clay tiles, carrying on the 'Ceramic Pathway' theme
- Angled RHS edge members of deck provide required kerb upstand, channel rainwater and provide fixing for the angled handrail stanchions
- Inward angled handrail assembly and tensioned horizontal stainless steel cable balustrade provides an elegant and safe barrier for cyclist and pedestrian
- Setout of pylon allows future proofing of bridge - designed to exactly accept a 3m wide (between handrails) deck for safe cycling and walking
- Lighting needs are met by dual function fittings above each cable suspension point which light both the deck and highlight the cables. Yellow LED buttons set in the concrete deck surface provide a central 'dotted line'. Further accent lighting of the deck underside is provided for a distance either side of each cable support point.
- Structural steel paintwork in yellow to work with sodium motorway lighting and provide bold statement during daylight
- Bridge is aligned with Clarks Lane (north) to allow viewing of the bridge on approach and to provide a site for the John Radford artwork commissioned by Waitakere City which references Sinton House. This location will allow the window elements of the sculpture to be looked through by users of the bridge and may be just visible to motorists



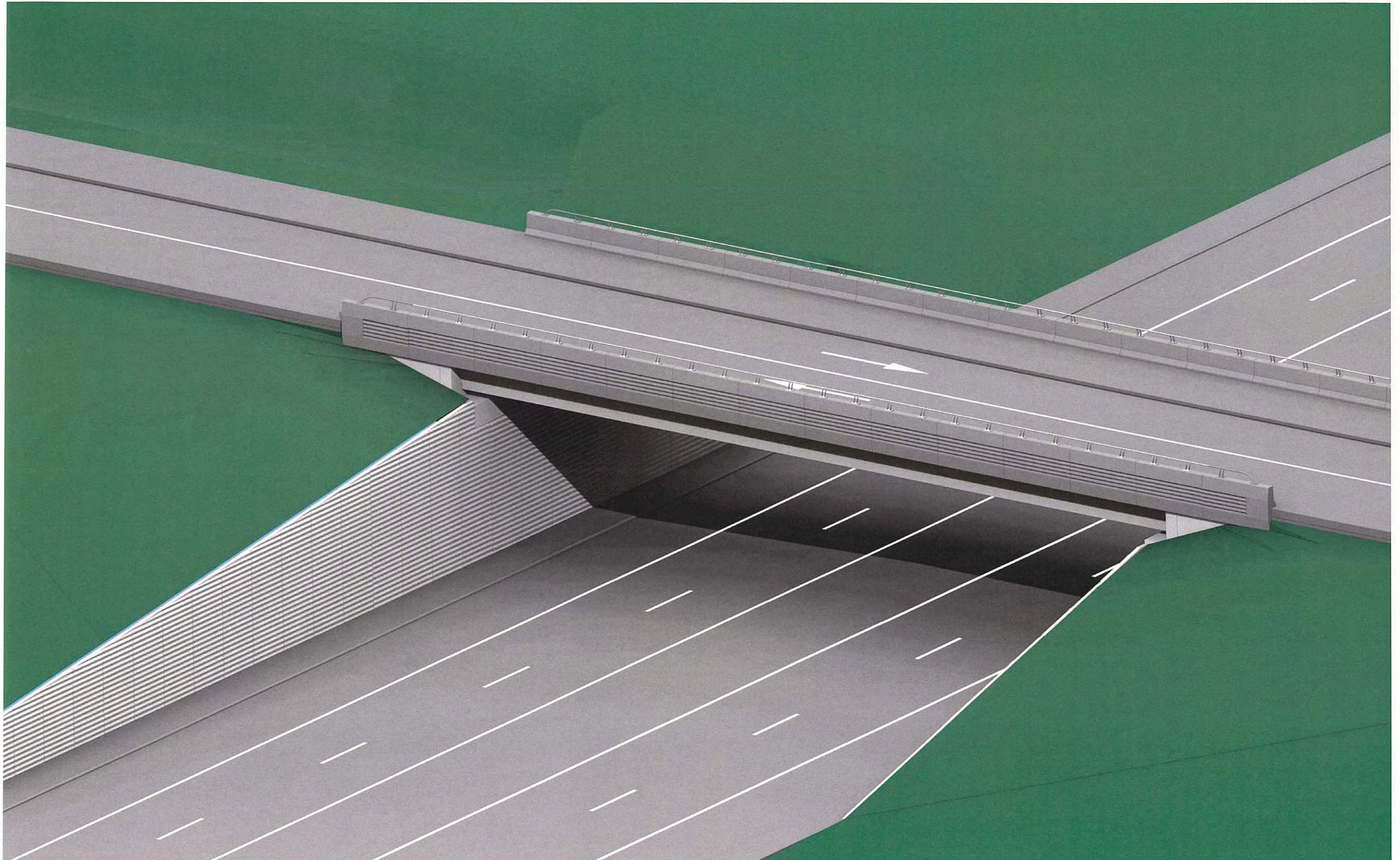


HARDSCAPE ELEMENTS

2.4.7 Buckley Interchange

- Single span bridge with vertical abutments - required by need to keep bridge short to provide adequate sightlines from roundabout.
- TL-4 concrete barriers to same detail as elsewhere, with vertical termination of corrugated insert on final barrier units to reflect vertical abutments.
- Precast concrete abutment wall units with corrugated profile as elsewhere on the Gallery Route
- In contrast to the Brigham Creek Road Underpass the adjacent on and off ramps dictate that the abutment walls fade out parallel to the motorway alignment



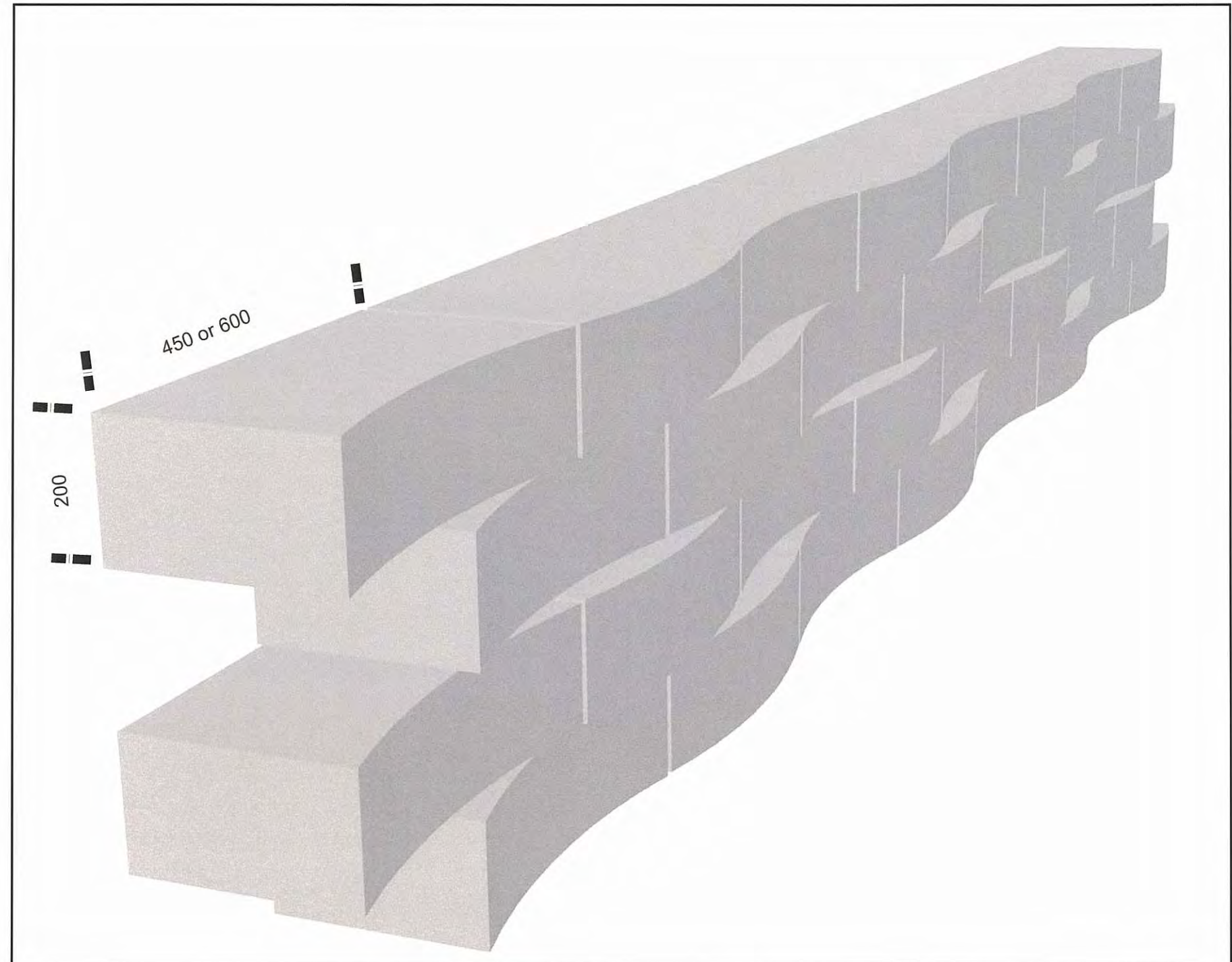


HARDSCAPE ELEMENTS

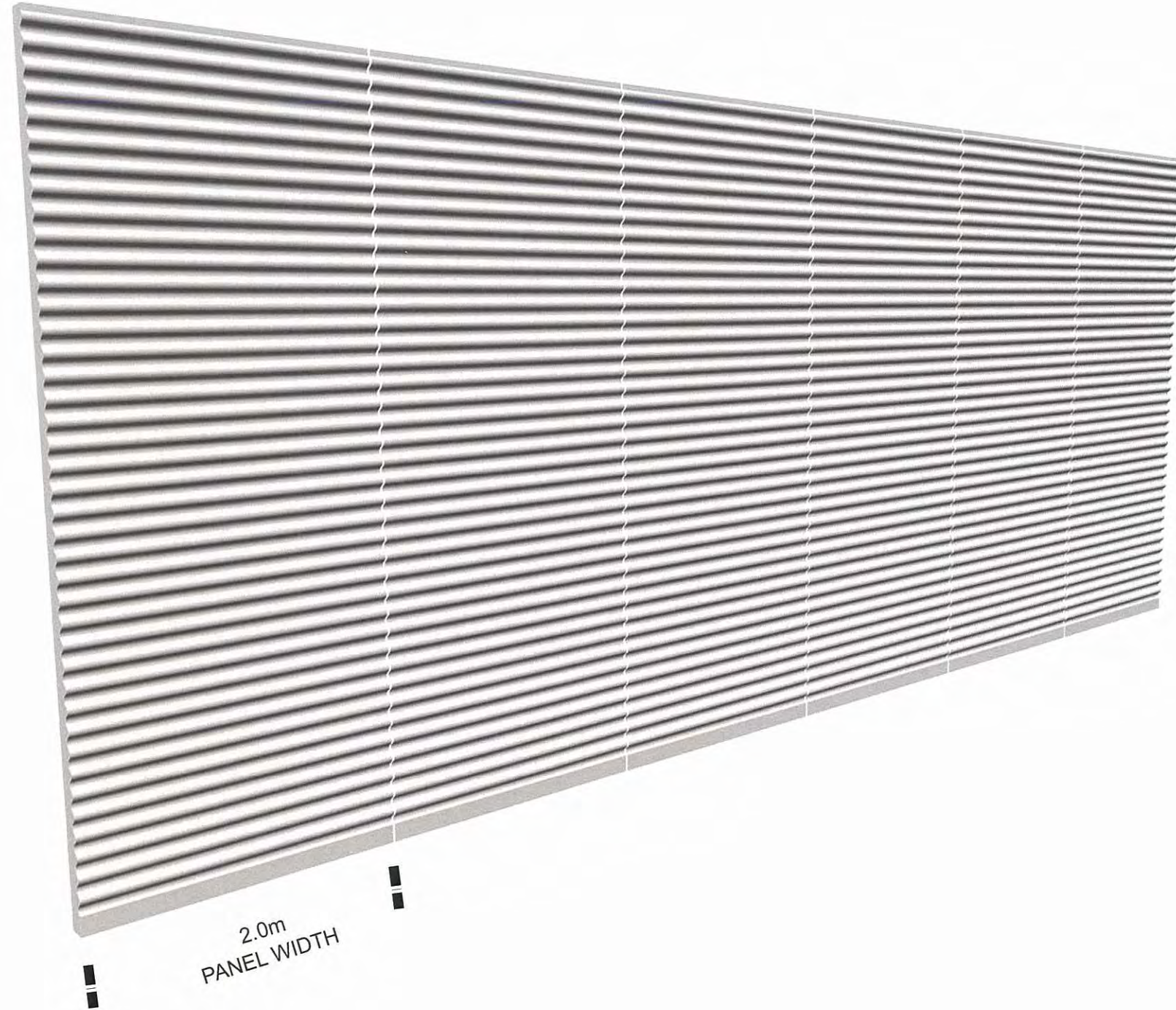
2.4.8 Keystone Walls Under SH16 - SH18 Flyover.

'Wave' form keystone concept

Note: Indicative dimensions and form only. Walls will be developed in conjunction with the manufacturer during the developed design stage.



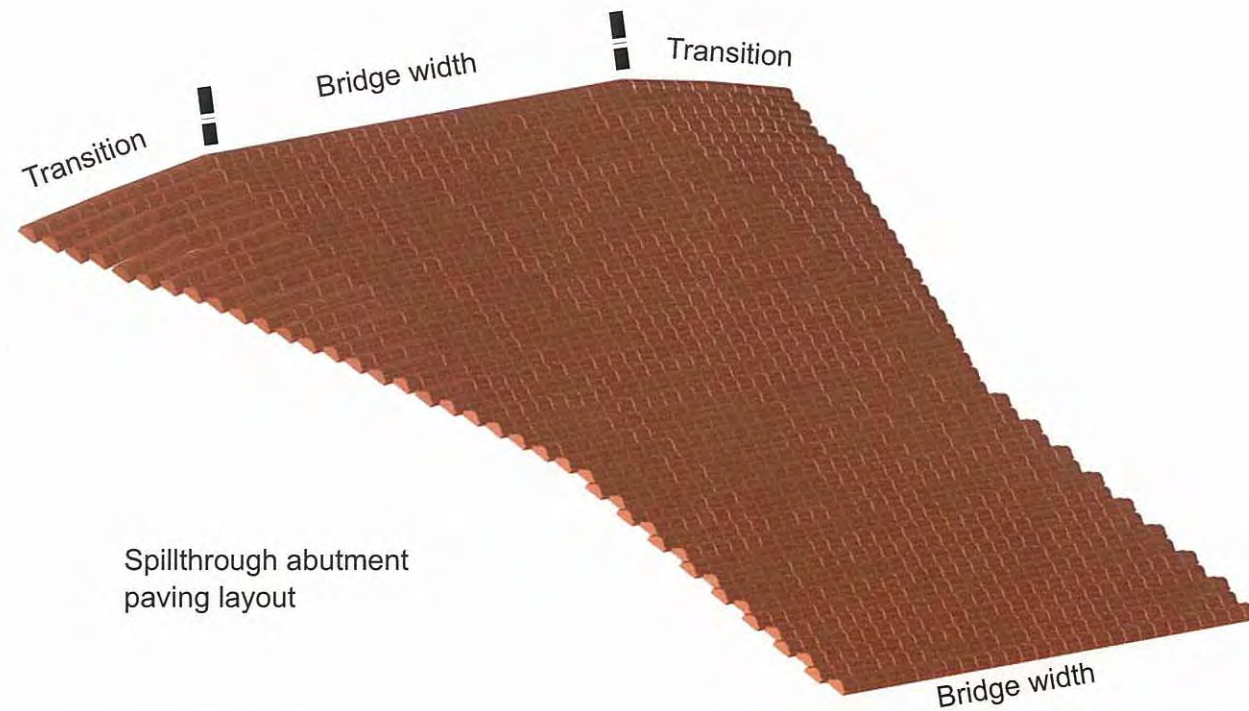
- Corrugated formwork consistent with 'fluid landscape' concept for SH18
- Large gauge corrugations



HARDSCAPE ELEMENTS

2.4.10 Spillthrough Abutment Treatment

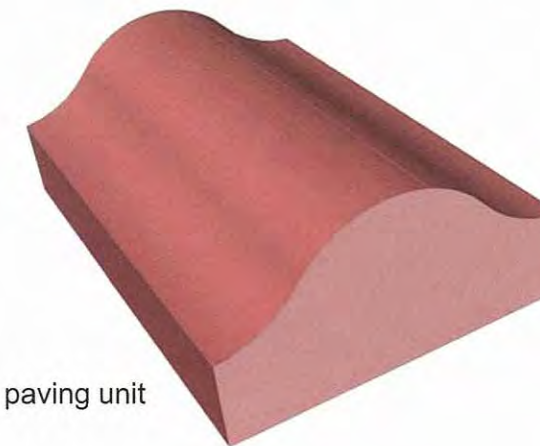
- Wave shaped concrete units form a 2:1 batter slope at the spill through
- Units 'wrap around' transition from 2:1 under bridge to 3:1 general slope
- Terracotta colour to support clay theme of SH18



Spillthrough abutment paving layout



Trig Road Abutment

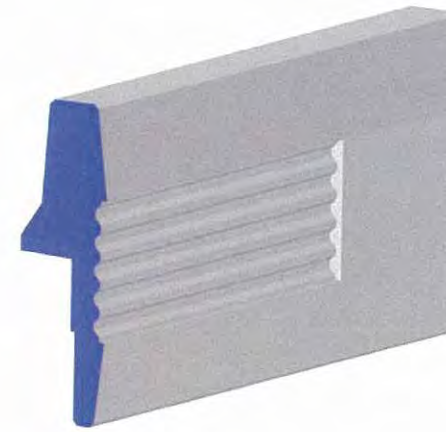


Concrete paving unit

Precast concrete barrier features:

- Same outer profile height, providing cost savings
- Outer profile decorative strip of large amplitude corrugations to fit in with overall design themes
- Termination of corrugations at end units are either vertical or angled to reflect bridge abutment condition
- Steel handrails on twin curved stanchions as needed to suit pedestrian requirements

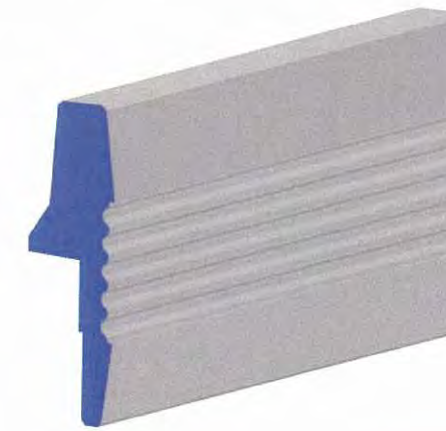
2.4.11 Bridge Barrier Scenarios



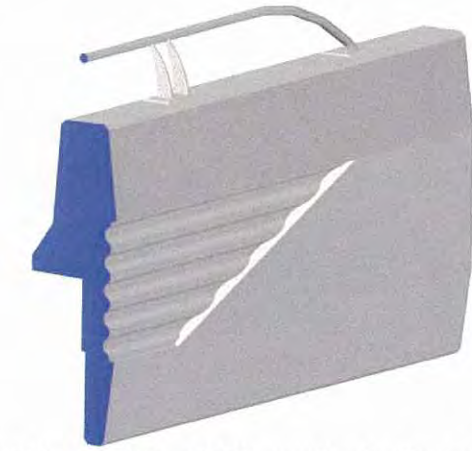
End unit, bridges with vertical abutments



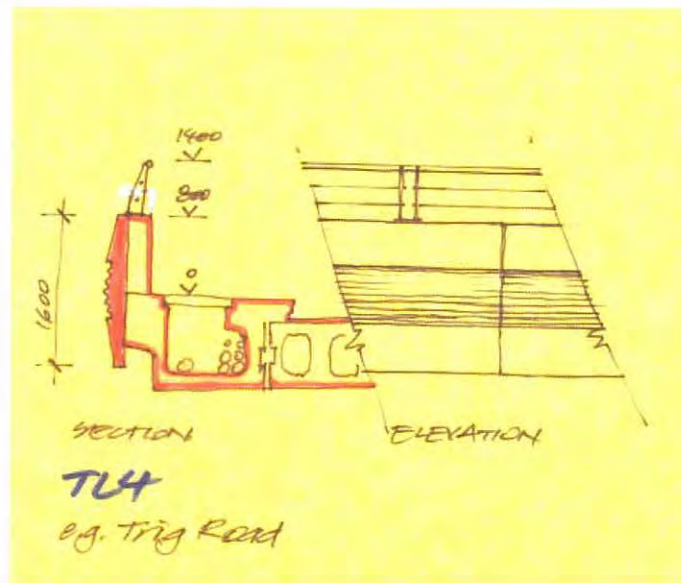
Handrail termination



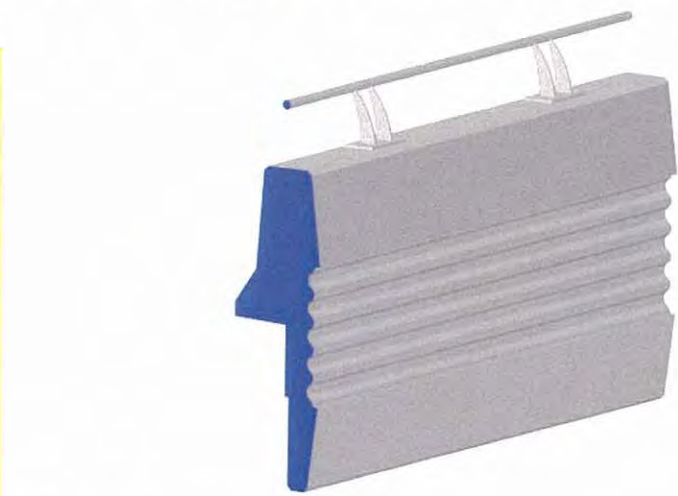
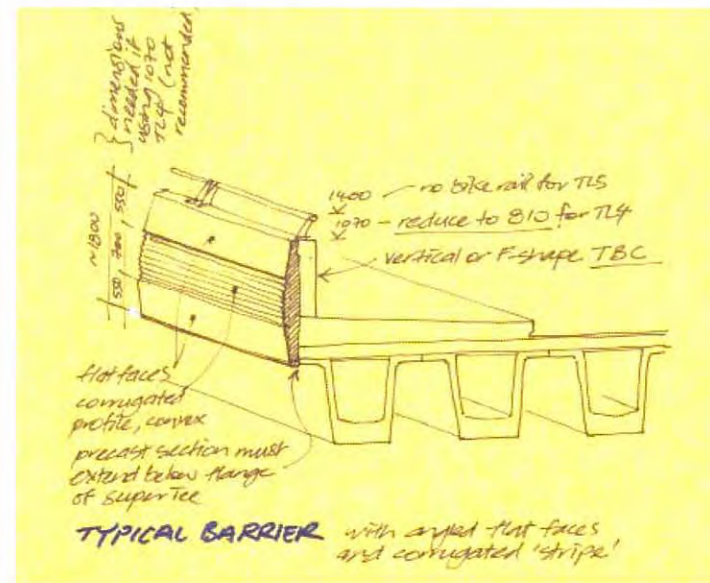
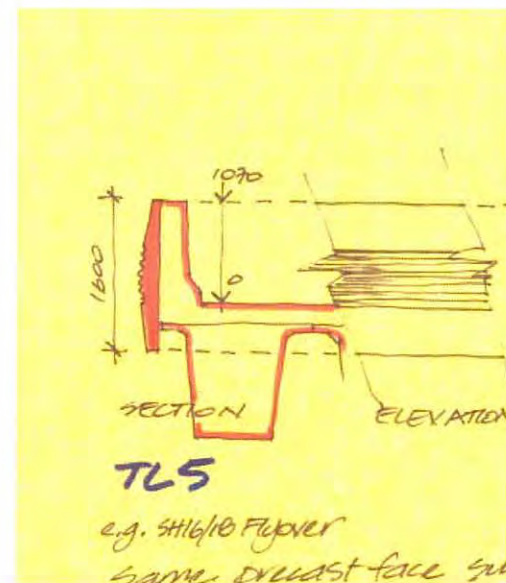
Typical barrier unit



End unit, bridges with spill through abutments



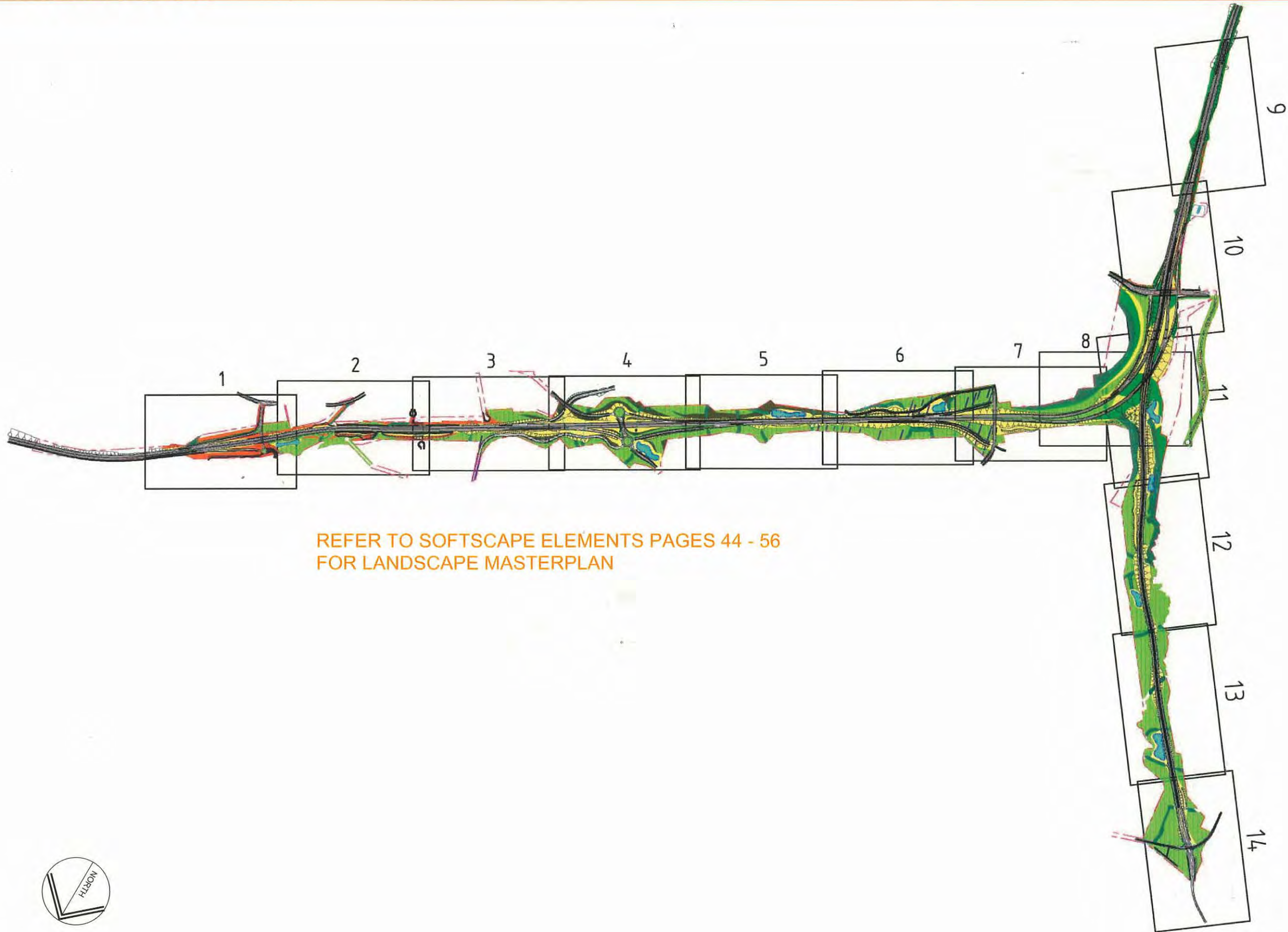
Barrier design process



Typical barrier unit with handrail

Landscape Masterplan





REFER TO SOFTSCAPE ELEMENTS PAGES 44 - 56
FOR LANDSCAPE MASTERPLAN

