5 Visual impact assessment

5.1 Visual setting

5.1.1 Existing Setting

Homebush bay is visually defined by the adjacent foreshores of Wentworth point and Rhodes Peninsula to its east and west respectively. To the south the bay is defined by mangroves to the north of Bicentennial Park. To its north, homebush Bay id visually contained by the norhten bank of the Parramatta River at Meadowbank, which is also extensively covered by mangroves.

Homebush Bay is an extension of the Parramatta River. It is a broad, shallow inlet reaching 2 km south to the Badu Mangroves which lie north of Bicentennial Park. At approximately 1,4 km from the head of the bay, Haslams Creek feeds in from the south-west corner under a bridge at Bennelong Road.

The landscape to the south of Homebush Bay offers views only to walkers and cyclists at strategic lookouts along the shore of the Badu Mangroves. The urban development of Sydney Olympic Park is distanced from the bay by the Brickpit and Haslams Creek such that only tall buildings would have long views, some 2.5 km from the proposed bridge location.

The north shore of the Parramatta River comprises a slope approximately 1 km deep up to the ridge line formed along Victoria Road. Although this rising topography would suggest that there would be vantage points from which to see Homebush Bay, suburban development and trees effectively obscure such views. Views along the length of Homebush Bay can be seen fro a couple of select positions in Meadowbank Park, on the foreshore and between breaks in the mangroves that line the shoreline.

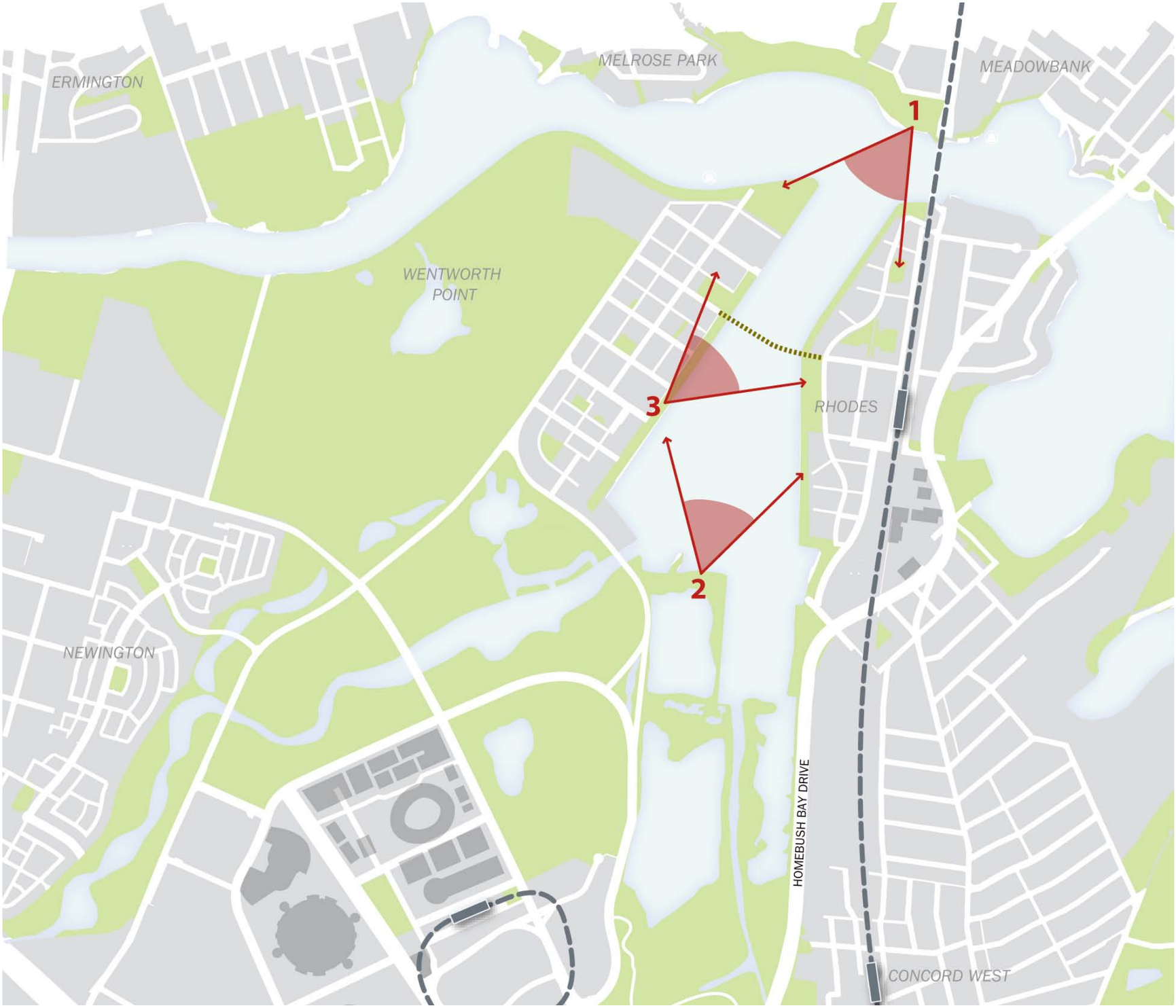
Homebush Bay is defined, to its west and east, by the adjacent foreshores of Wentworth Point and Rhodes Peninsula respectively. At the moment the bridge site is partly adjacent to urban development on the Rhodes side. In the near future it will be flanked by dense residential development along both shorelines.

The Wentworth Point foreshore is a straight seawall about 1.4 km long that will host a pedestrian promenade. Views of the bridge from this promenade, as well as the Rhodes foreshore, will form the principal public perception of the project.

The future character of Homebush Bay will be much more urban than the setting today. Both Rhodes Peninsula and Wentworth Point will be developed with dense residential apartments ranging in height from 5 to 8 storeys overall with numerous taller buildings around 25 storeys. The development of each peninsula will form reciprocal views and backdrop for each other as well as providing many thousands of people with direct and incidental views of the Homebush Bay waterway.

The Homebush Bay Bridge enjoys a high degree of visibility to the local communities it will serve. At the same time it is very difficult to find a vantage point outside this basin where the bridge will be visible at all.

The visual setting for the proposed bridge will be principally the concern of local residents of each peninsula. Nevertheless, the foreshore promenades and adjacent cycle paths will foster movement of visitors and expand the existing recreational cycle infrastructure of Sydney Olympic Park and environs. While the bridge will be a catalyst to expanding the use of the foreshores it will also introduce a new and diverse public interest in the overall setting and be something of a new discovery for most.


ERMINGTON
MELROSE PARK
MEADOWBANK
WENTWORTH POINT
RHODES
1
2
3
NEWINGTON
HOMEBUSH BAY DRIVE
CONCORD WEST

5.2 Key views and vistas

Because the visual setting of the bridge is contained in the ways described above, three photomontages are considered to be representative of the available vantage points. These are illustrated as follows:

- Photomontage 1 - from Meadowbank Park between foreshore mangroves looking south along the reach of the Homebush Bay waterway;
- Photomontage 2 - from the northernmost lookout along the Badu Mangroves cycleway, looking north;
- Photomontage 3 - from the foreshore promenade of Wentworth Point positioned to typify a view that changes while moving toward the bridge.

5.3 Photomontage 1 - Meadowbank Park

5.3.1 Visual Sensitivity

Views from the north are confined to glimpses between foreshore mangroves and might, therefore, be considered of low sensitivity. Nevertheless, the views that are available are also pause points along a public cycleway and pedestrian path and are therefore likely to be places from which the view might be appreciated and pondered.

The current situation affords distant views to the Badu Mangroves 2 km to the south. Beyond the mangrove foreground the core of Sydney Olympic Park is visible 3.5 km away. The Dome of the Showground Exhibition Centre and the ANZ Stadium are iconic landmarks.

5.3.2 Visual Modification

The bridge appears almost a kilometer distant as a low-slung connection between the two shores. While the bridge deck interrupts the view of the Badu Mangroves, their crown is still visible and still creates a foreground to the buildings of Sydney Olympic Park beyond.

5.3.3 Overall Visual Impact

The bridge is settled into its context in a harmonious way. Both abutments are visible, formalizing a visual connection to each shore. The elongated abutment at the Rhodes end makes legible the shallow banks on that side.

The bridge is read from here in almost a perfect elevation, its camber, supports and deck profile visible as a composition. From this direction the sun lights the edge of the deck in the morning with shadows emerging in the afternoon as the sun sweeps away from this north-east orientation.

5.4 Photomontage 2 - Badu Mangroves Lookout

5.4.1 Visual Sensitivity

Views from the south are only available to walkers and cyclists within the Badu Mangroves, from the lookout tower and from Shipwreck lookout.

Prior to construction of the bridge Homebush Bay appears as a long stretch of water reaching towards Meadowbank, 1.9 km away. In the winter the sun bounces off the water surface creating glare.

The open space at the end of Wentworth Point merges visually with the mangroves of Meadowbank beyond, making it hard to distinguish where Wentworth Point ends.

5.4.2 Visual Modification

The bridge will interrupt the view of the Meadowbank foreshore, however, the hills beyond and the ridge line at Victoria Road create a visual setting that informs the perceived scale of the bridge.

The abutments at both ends balance the impression of the bridge and, in elevation, confirms that Wentworth Point connects with Rhodes. Ambiguity about where Wentworth Point ends has been rectified.

5.4.3 Overall Visual Impact

This is a distance view of the bride whereby its form is too remote to register detail with the eye. The bridge is visible yet incidental to the view.

Dense urban development in the near future will serve to diminish the apparent scale of the bridge as an object compared to its early life where it will be read against a flat and featureless industrial backdrop. At the same time, the bridge will become a critical component from residential outlooks, particularly at night.

The bridge will also become an important symbol of integration as each community uses it and gains benefits. At a social level, the bridge will introduce an important social complexity since it will be less obvious that people on the street are residents, as would be the case in peninsula communities. Tis presence of ‘strangers’ in the form of visitors from across the bay and cyclists passing through will introduce an enriching depth to both communities.

5.5 Photomontage 3 - Wentworth Point Foreshore

5.5.1 Visual Sensitivity

This a is a changing view as one progresses along the foreshore. The current situation allows views across to the new, and growing, community of Rhodes Peninsula,along to its northern extreme with Meadowbank beyond appearing as a wooded tree line.

This changing view will present the bridge as an object, its form and detail increasing in importance with proximity. The pedestrian promenades control the viewpoint to a line, whereby the scale of the bridge changes, enlarging and receding as the bridge is approached and walked away from.

5.5.2 Visual Modification

The bridge presents as an element reaching towards Rhodes, its Wentworth Point abutment only visible when closer.

The impact of the whole form is diminished by virtue of this elevation being mostly in the shade. It is defined by reading against the wooded embankments of Meadowbank to the north. The Meadowbank tree line is still visible.

5.5.3 Overall Visual Impact

The bridge will become a marker from which relative distances will be more discernable than today. Each foreshore is long, as a pedestrian experience, and the bridge will serve as a reference for progress, much the same as a headland does to a beach walk.

The lighting poles fixed to the southern side of the bridge add interest and calibrate the length of the bridge as a counter rhythm to its structural supports.

5.6 Photomontage 3 - Wentworth Point Foreshore (Night)

5.6.1 Visual Sensitivity

Homebush Bay at night is dark and generally unaffected by its surroundings. Recent residential development at Rhodes Peninsula is demonstrating that both Rhodes and Wentworth Point will provide pretty nighttime views for each other.

5.6.2 Visual Modification

The bridge at night will define the connection between the two communities by virtue of its lighting poles and feature lighting of its supports. This is an important addition to the night view, a constant presence and reminder of the connectivity, promoting its use and thereby increasing its safety.

5.6.3 Overall Visual Impact

The overall visual impact will be that of an attractive foreground element against the lights of each residential community.

5.7 Impact Summary

Beyond the assessment of visual amenity and impact from these representative views, the following general assessment describes the impact and setting in a holistic sense.

5.7.1 Regional Impact

In light of the visual setting described in 5.1 above it should be noted that the bridge has very little visual impact in its regional setting. Vantage points were sought from Victoria Road, Ryde near St Johns Church where Sydney Olympic Park can be seen, from the slopes of Meadowbank and from Bicentennial Park and Sydney Olympic Park.

The proposed bridge cannot be seen from any of these locations except from tall buildings in Sydney Olympic Park some 2.5 km away.

5.7.2 Local Impact

Within Homebush Bay the proposed bridge would be visible from most points along the east and west foreshores and future built communities, yet only from a few selected points among the mangroves to the north and south.

The bridge will be symbolic of and a functional part of the bay's urban amenity and is expected to be viewed in a positive light through the benefits it delivers.

Having said this, it is also important that the bridge adopts the lowest visual profile possible, minimises unnecessary obstruction and interference with views and becomes a respected and widely liked part of its setting.

In order to achieve this the bridge profile is kept as low as is structurally and functionally possible. The gradients on the bridge are set at acceptable maximums while creating required clearances underneath and the structural depth is minimised.

The number of structural supports in the water has been minimised to suit achievable spans and spacings that allow for planned rowing activities on the waterway. These supports have been offset from the shorelines to create attractive interfaces with pedestrian promenades and to avoid blocking views at the water's edge.

Adjoining land owners at Rhodes and Wentworth Point are generally property developers who see benefits in the bridge and are happy to embrace the visual impact of the bridge as a compositional element in the outlook of planned apartments. Existing and future residents of Wentworth Point and Rhodes Peninsula will see the bridge as a a part of their view and as a positive part of their community.

At night, light spill from deck lighting will be carefully controlled to minimise glare for residents and flood lighting at the points of structural support will dramatise the reflections in the water in an understated aesthetic fashion.

5.7.3 Water Users

Rivercat users will see the bridge while passing the headlands of Homebush Bay on the Parramatta River. It will be at some distance, similar to the view shown in Photomontage 1.

Smaller craft within the bay will experience the bridge at slow speed through necessity of care in shallow water. As an amateur rowing course, the bridge supports have been spaced to optimise competition sized lanes between.

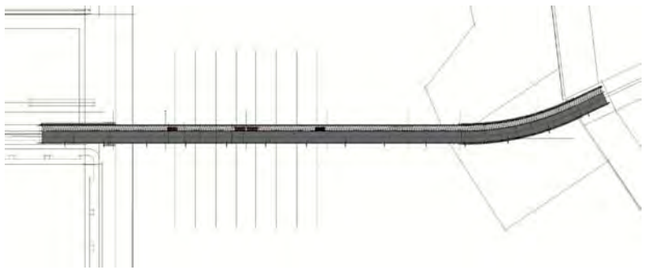
The bridge will help to calibrate perceptions of distance on a long body of water that currently few changes in geographic features and little by way of landmarks.

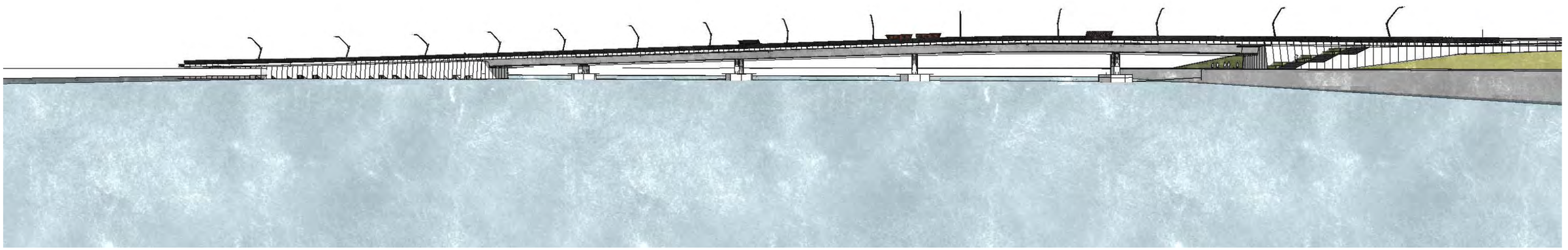
Photomontage 1


Photomontage 2

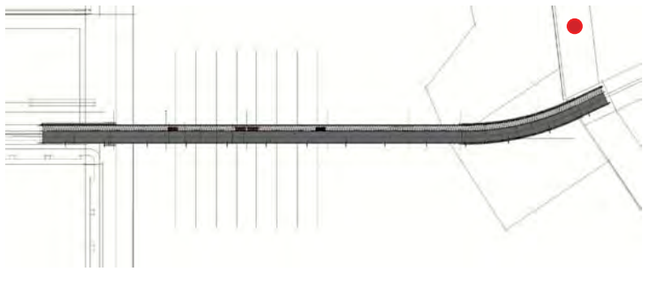
Photomontage 3

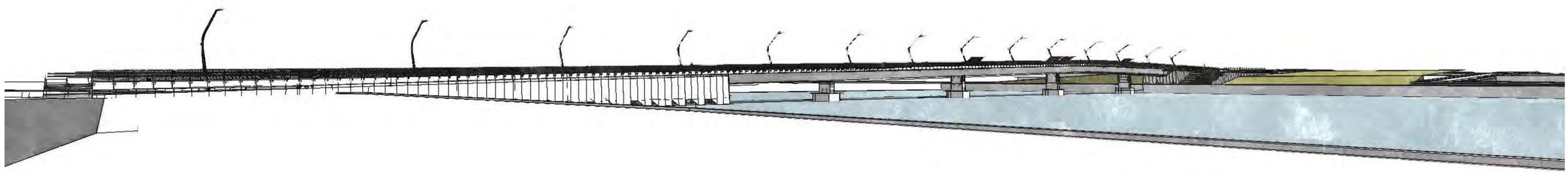
Photomontage 3 (at night)





Schematic View 1





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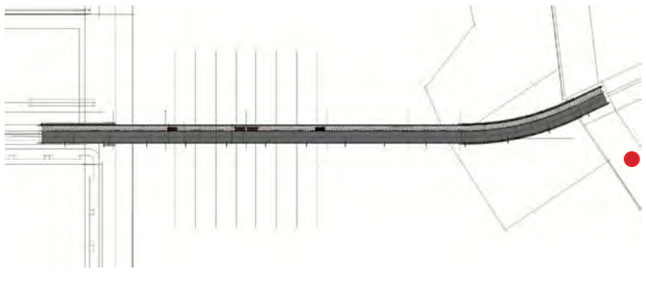

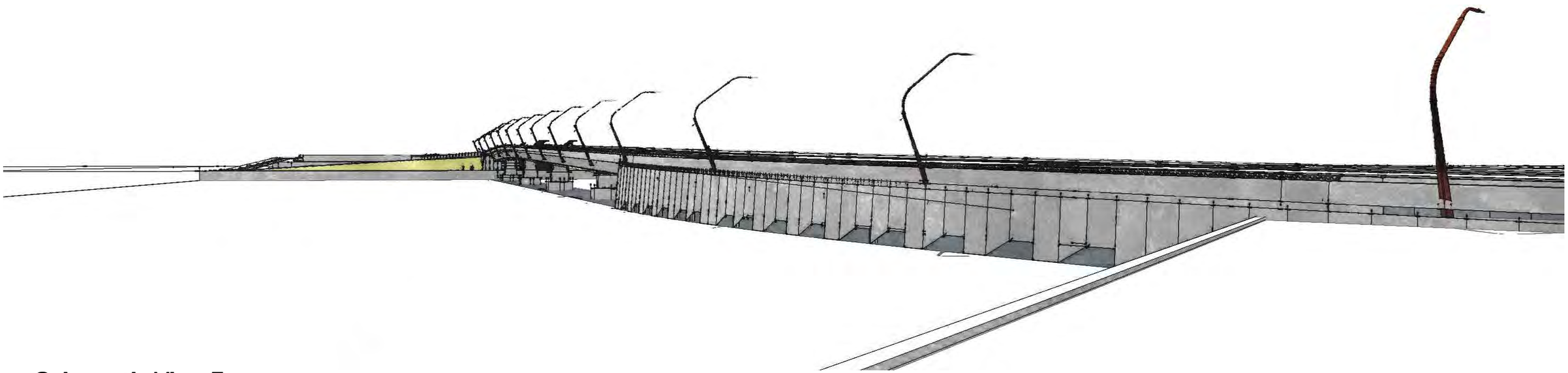

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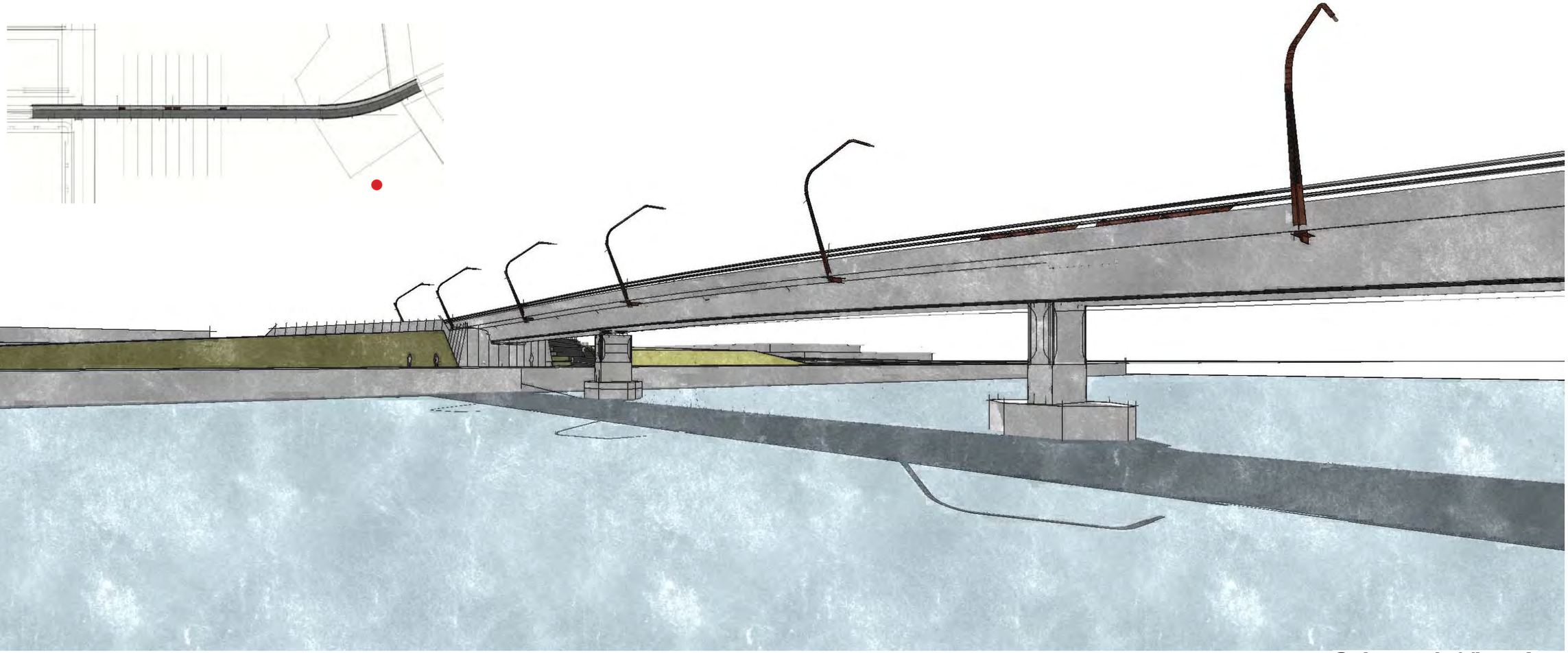

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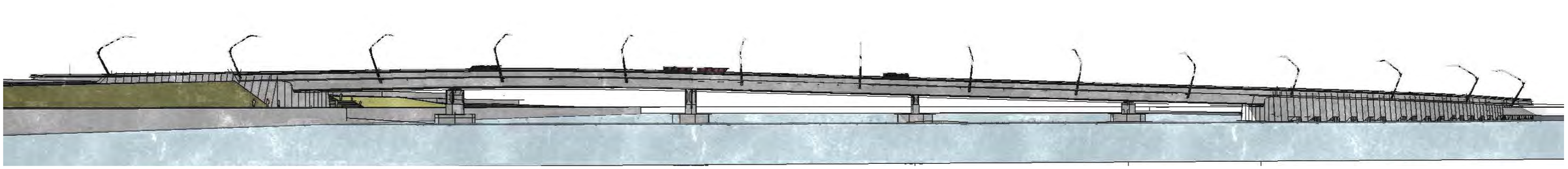

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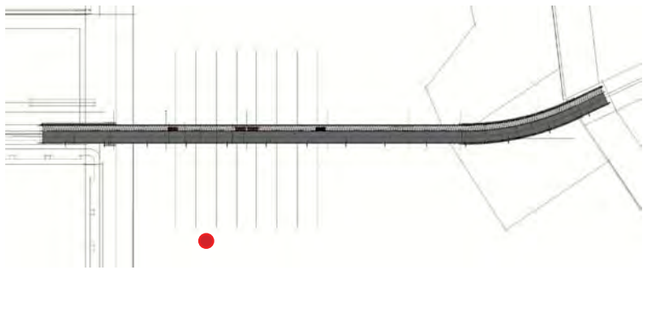

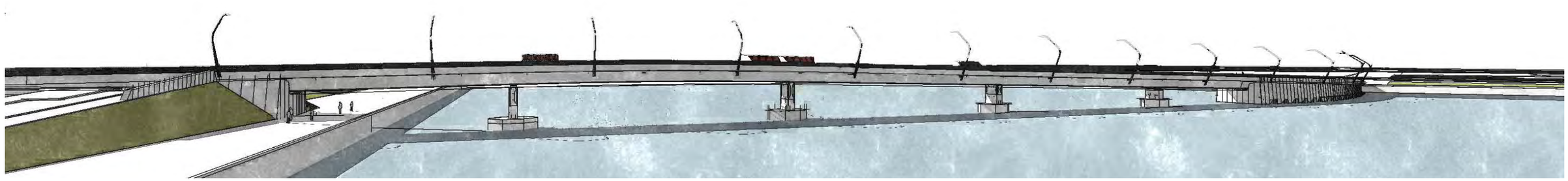

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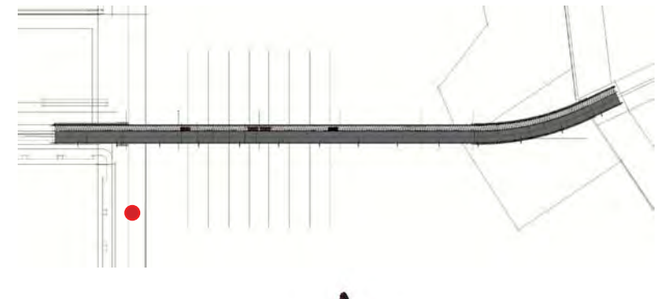
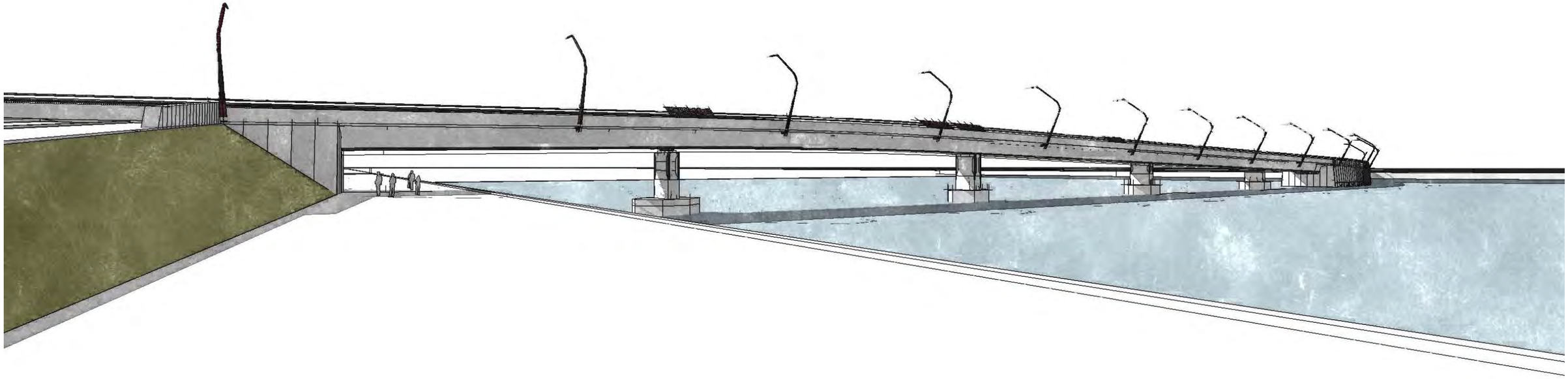
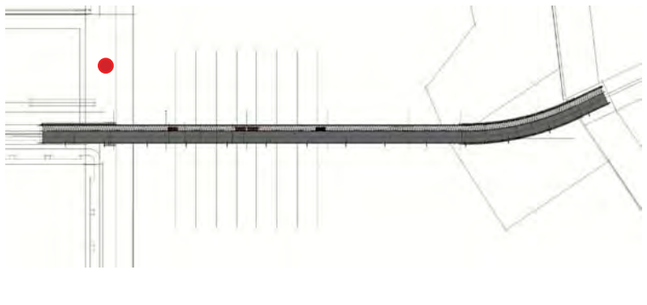
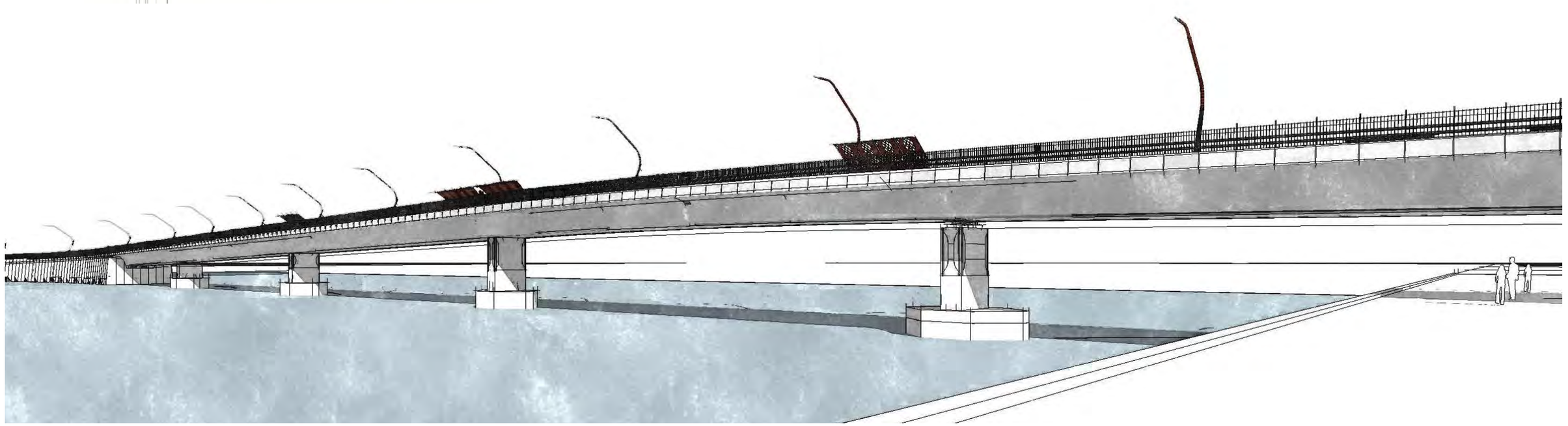




Schematic View 7





Schematic View 8

6 Shadow impact assessment

Shadow impacts from the bridge are minimal and contained to the immediate area of its influence as demonstrated by the shadow diagrams in this report.

6.1 Adjoining properties

There is no shadow impact onto adjoining properties.

6.2 Water uses

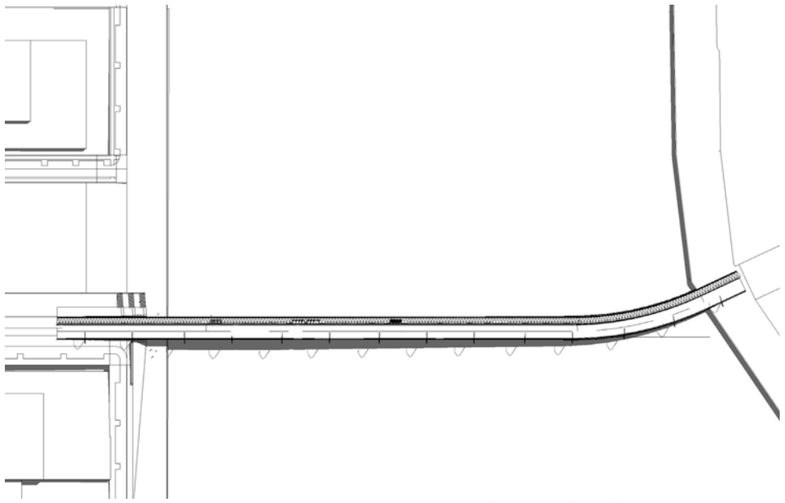
The main body of the bridge's shadow obviously falls on the water body of Homebush Bay. There is no detrimental impact on water activities because of this.

6.3 Open space and foreshore

Along the Rhodes foreshore the bridge abutment is very close to ground level and casts a very slight shadow during the winter.

Along the Wentworth point foreshore the bridge carries over the foreshore boardwalk at a higher level and thereby creates a shadow beneath. This shadow is the width of the bridge and, while it reaches further to the south during the winter, its aggregate width does not change.

The following series of shadow diagrams include a set illustrating the extent of shadowing from the bridge structure as a whole (aerial perspective) as well as a set illustrating the extent of shadowing from the bridge abutment on the Wentworth Point foreshore promenade (perspectives from both the north and south of the bridge).



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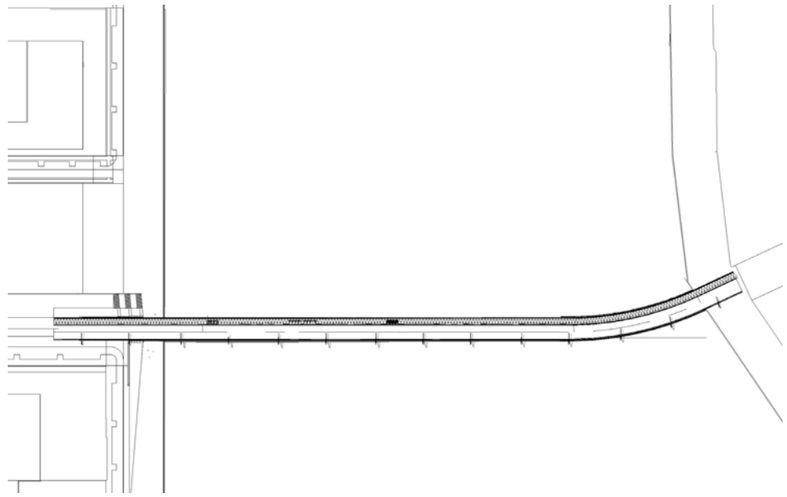

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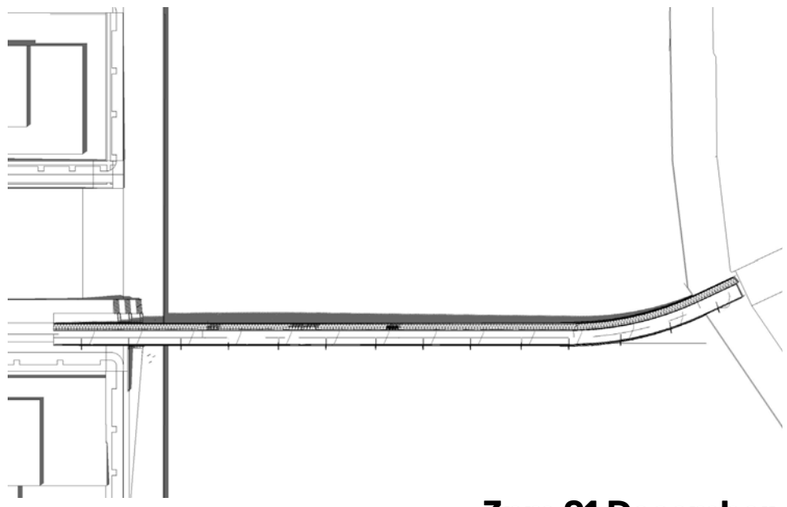

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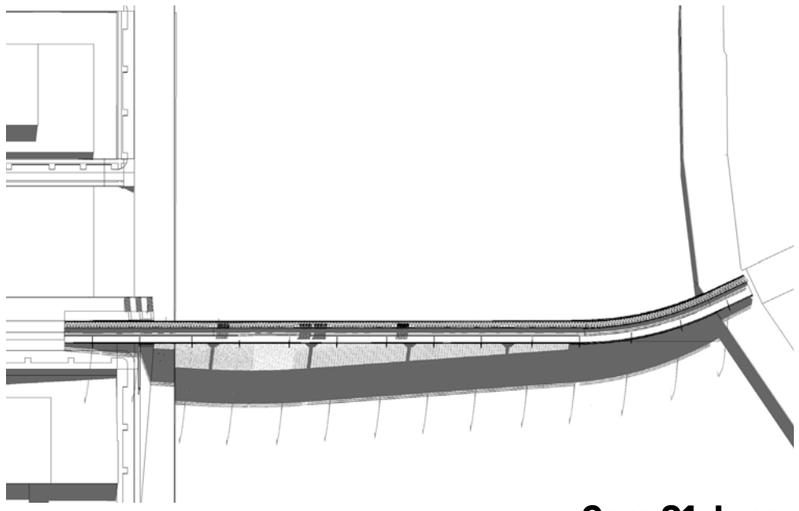

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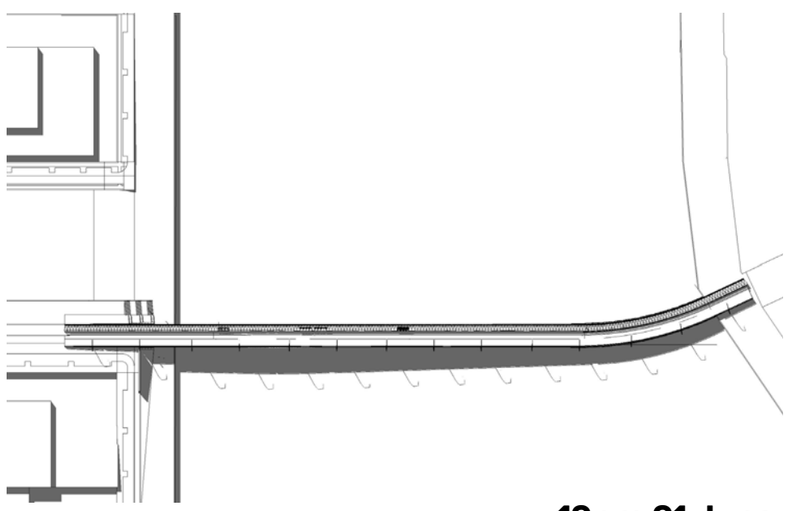

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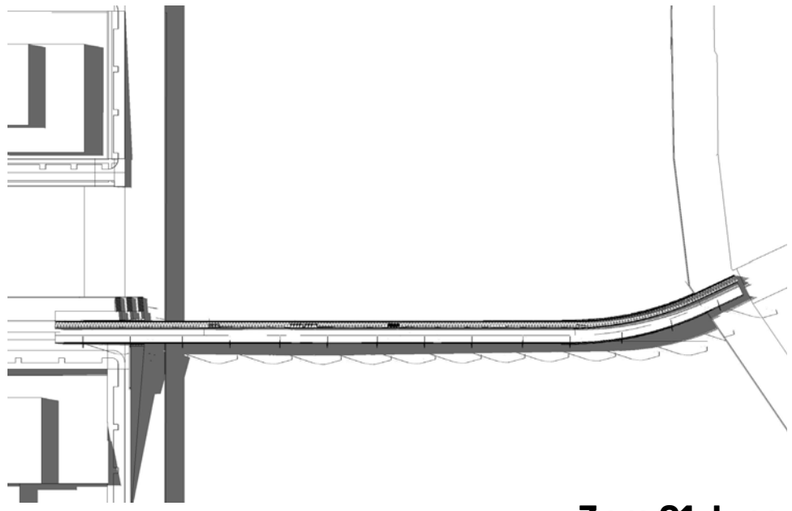

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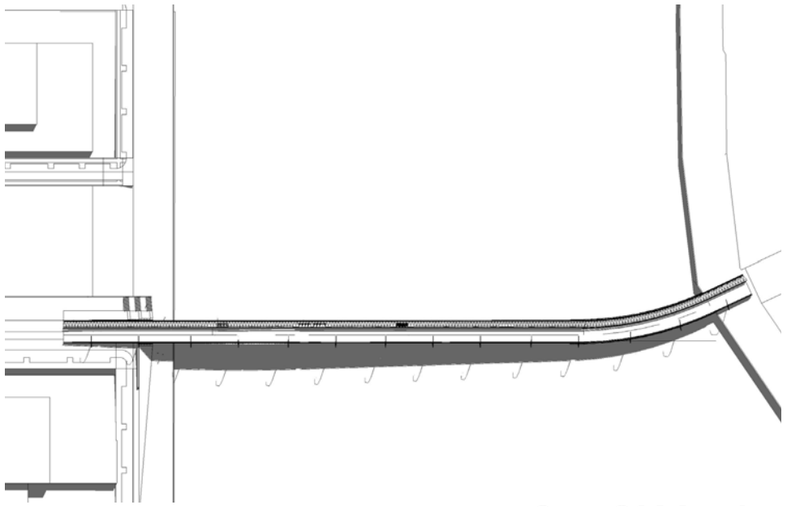

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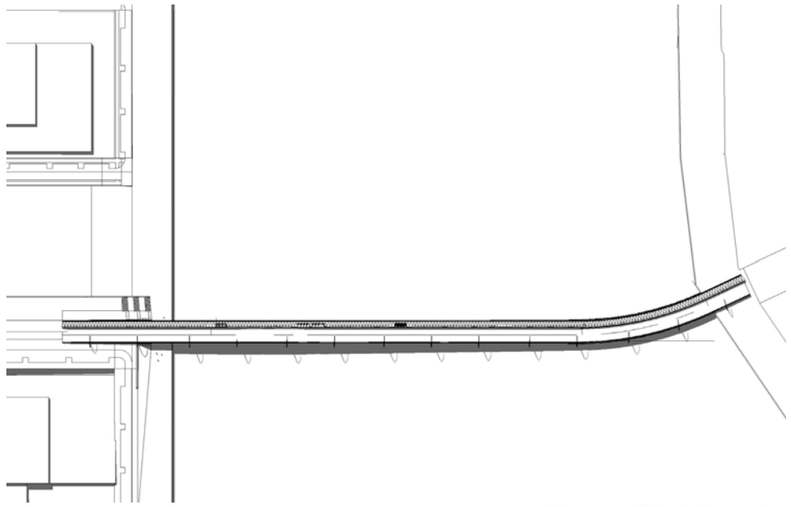

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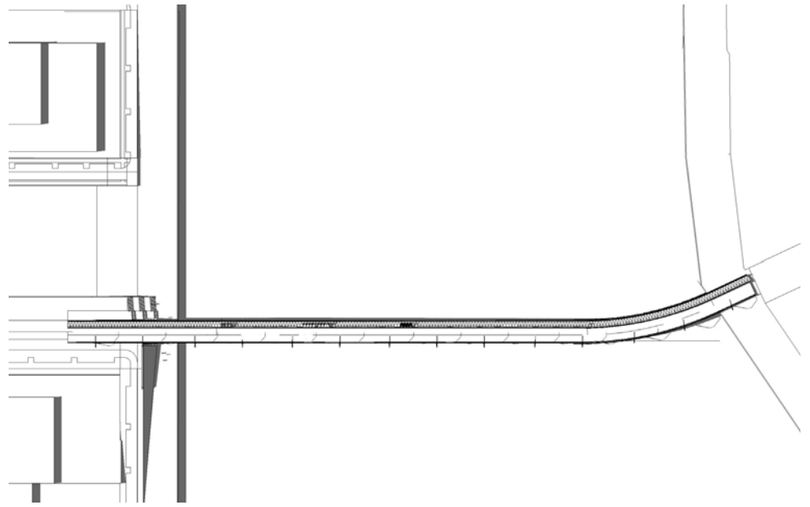

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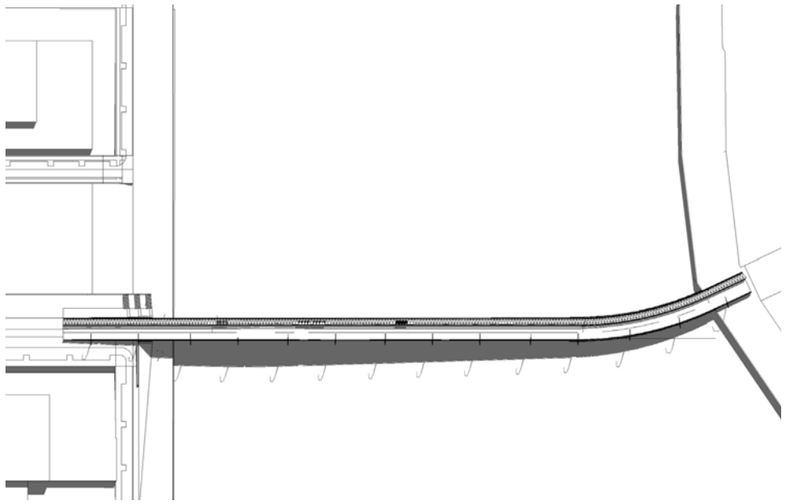

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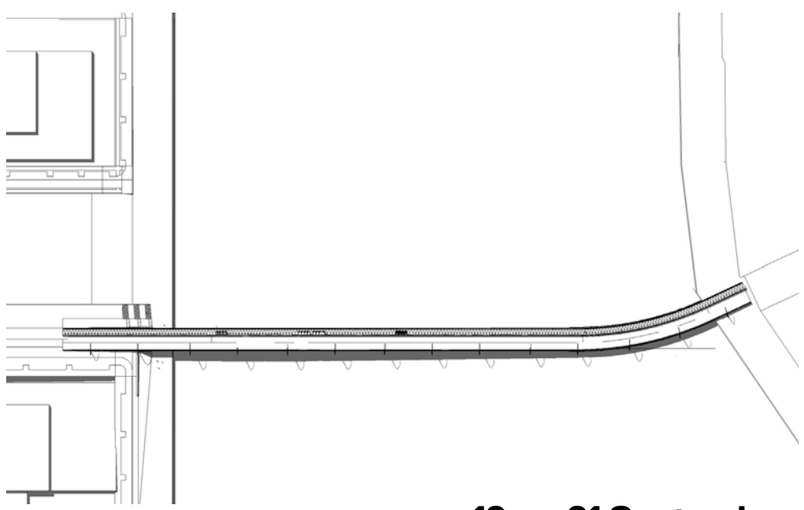

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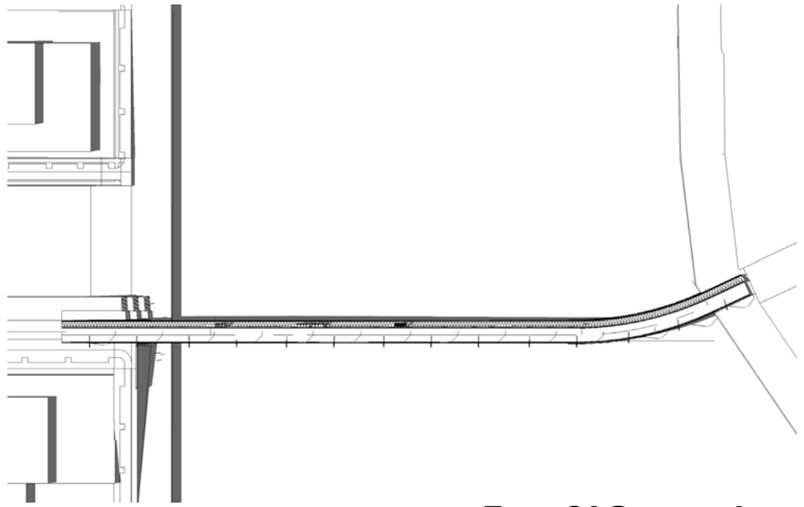

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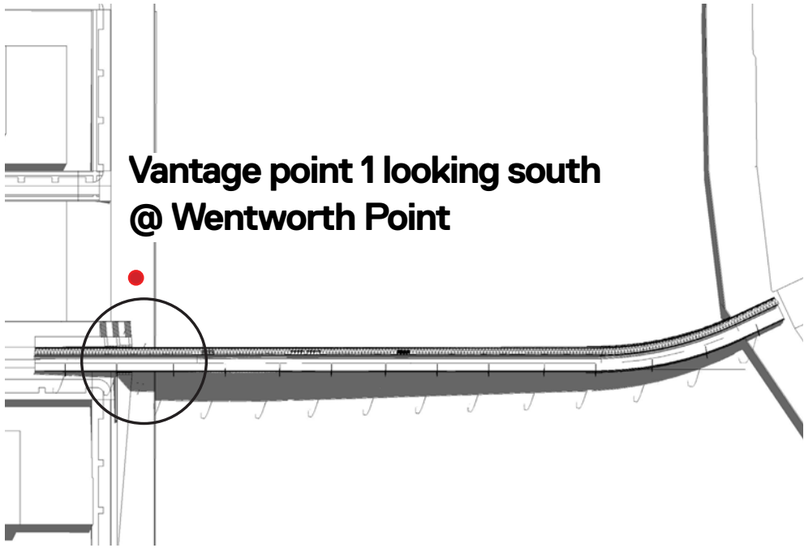
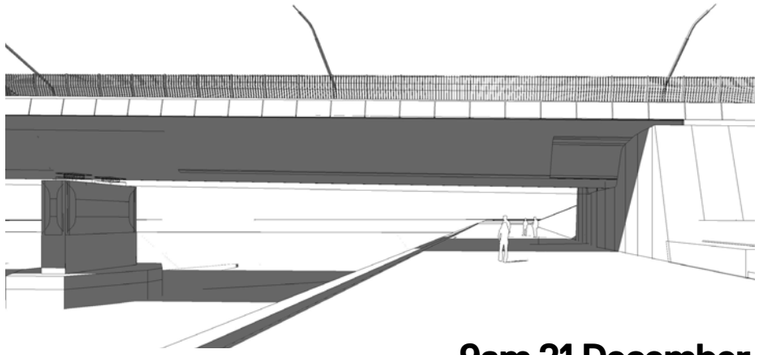


The following perspective views show the shadow impact for December and June under the bridge landing at Wentworth Point.



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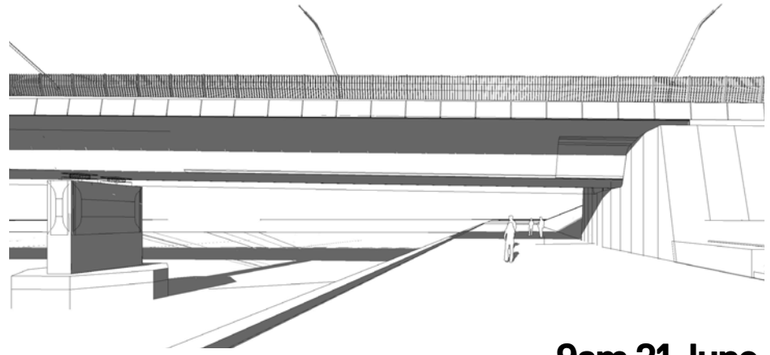

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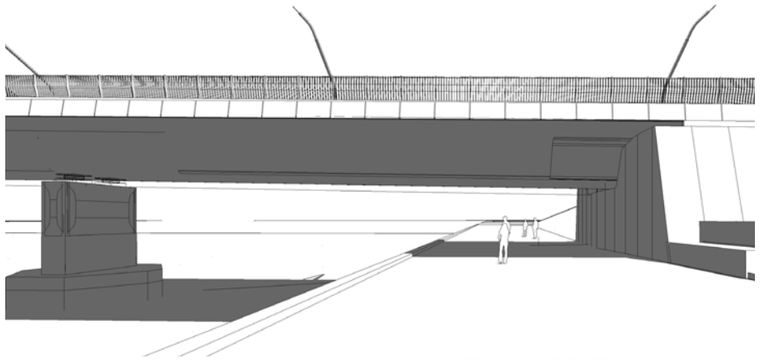

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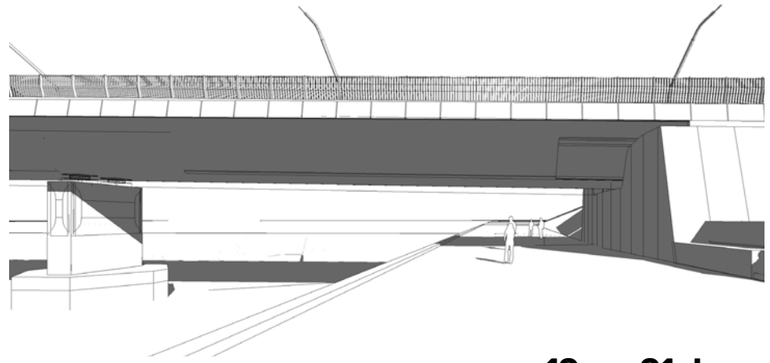

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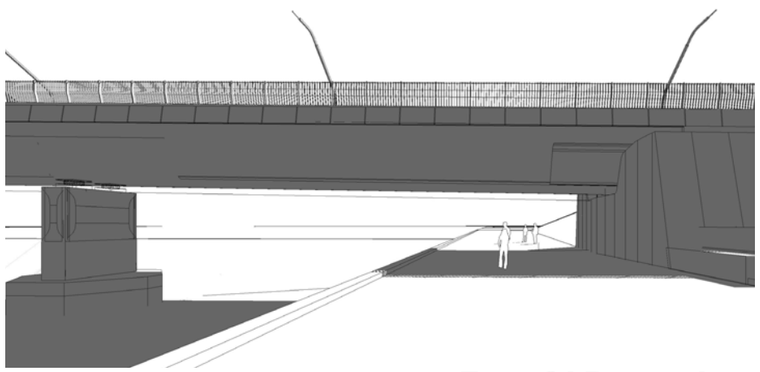

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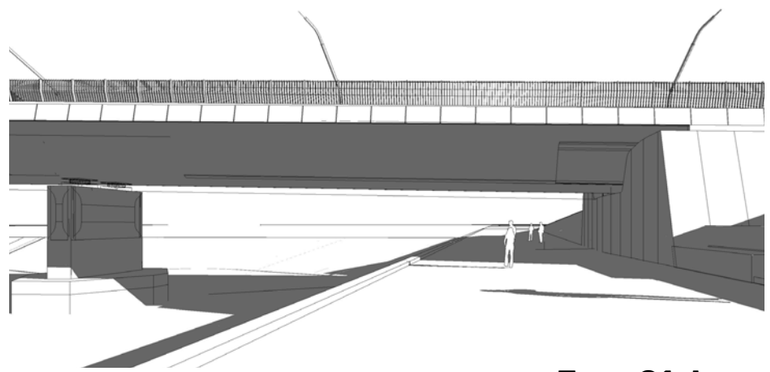

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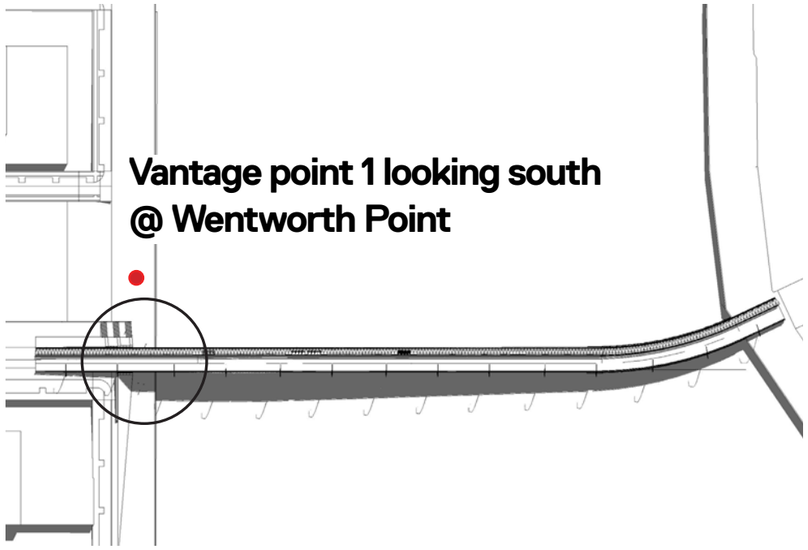
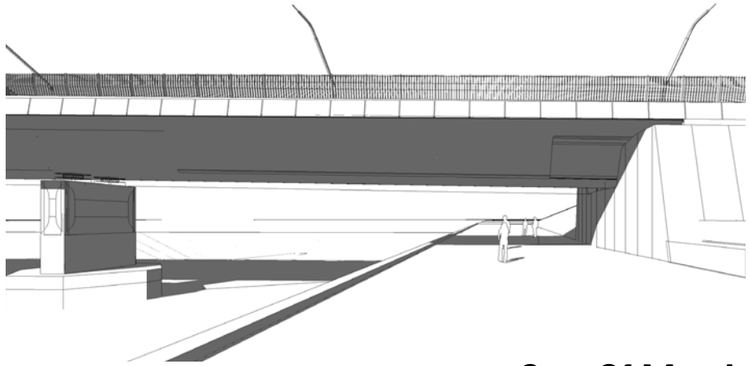


The following perspective views show the shadow impact for March and September under the bridge landing at Wentworth point.



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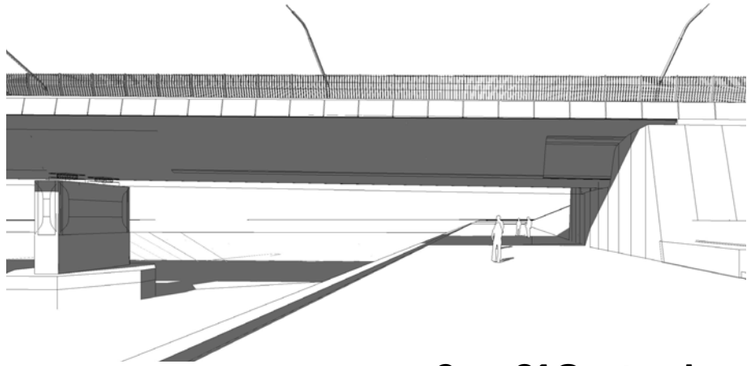

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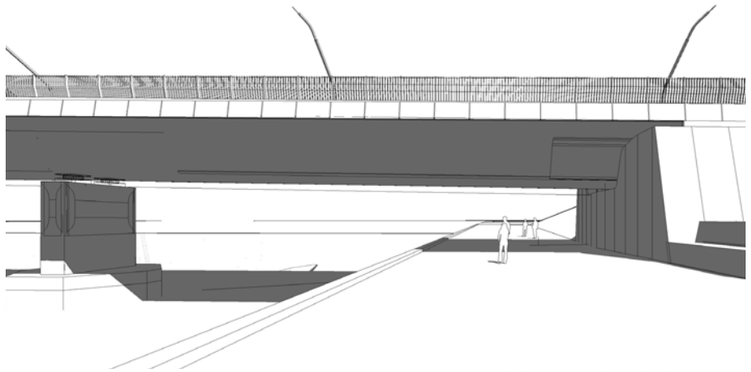

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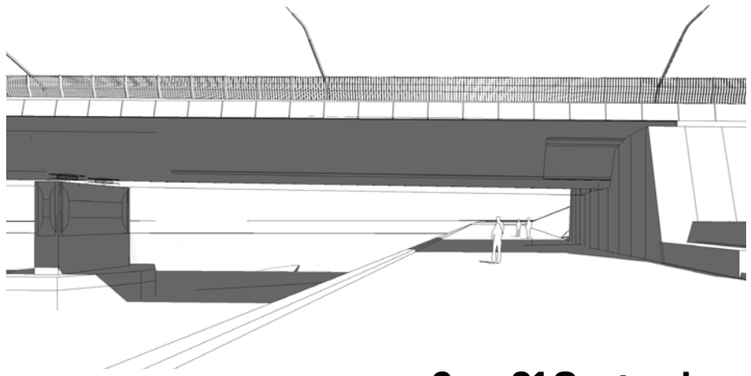

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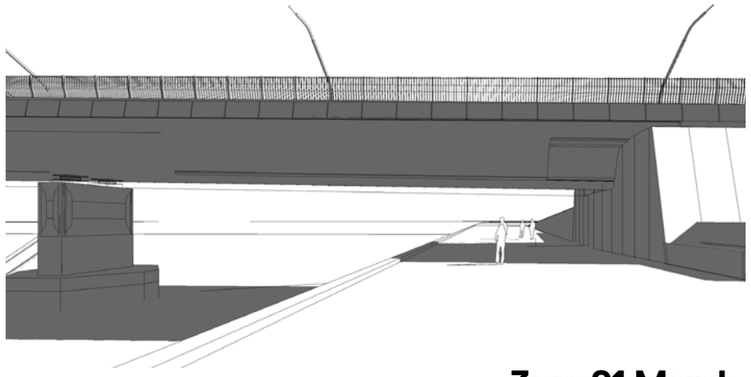

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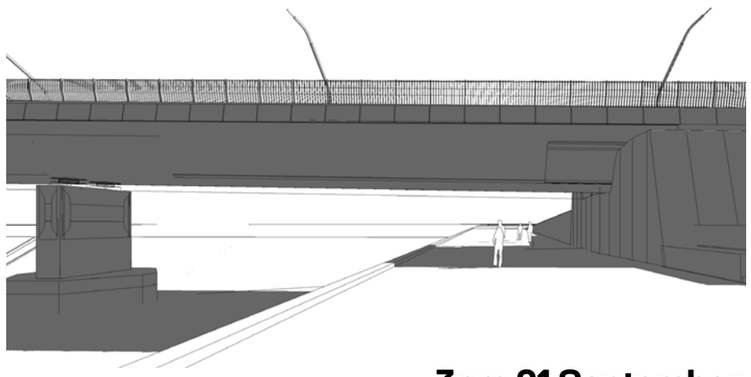

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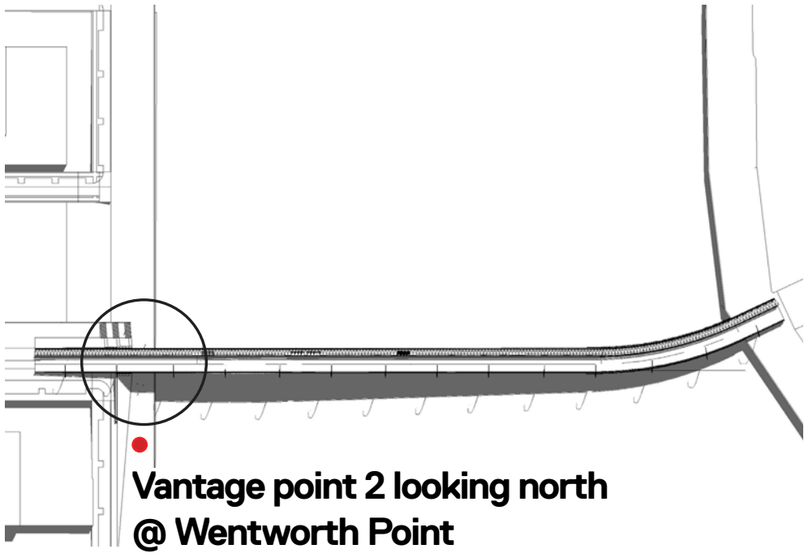
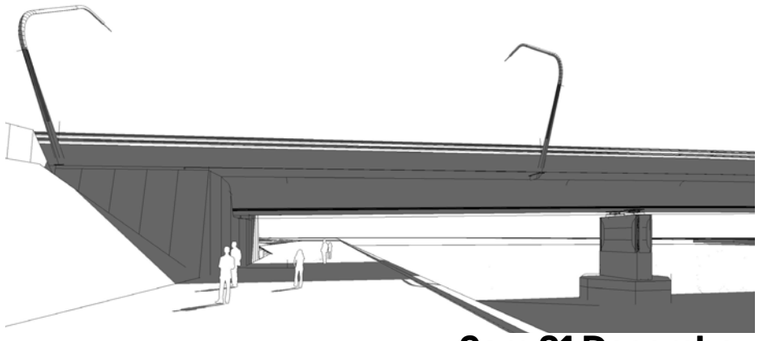


Vantage point 2 looking north
@ Wentworth Point

The following perspective views show the shadow impact for December and June under the bridge landing at Wentworth Point.



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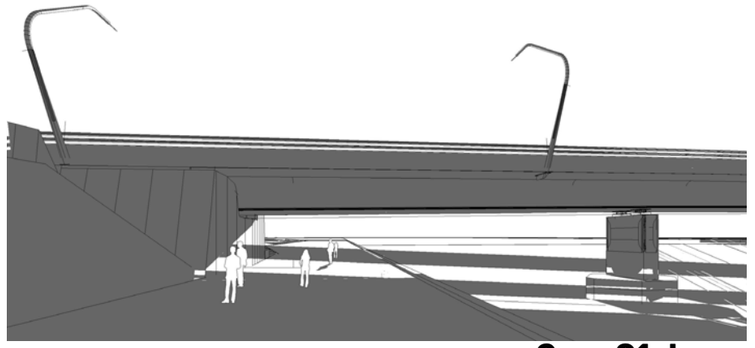

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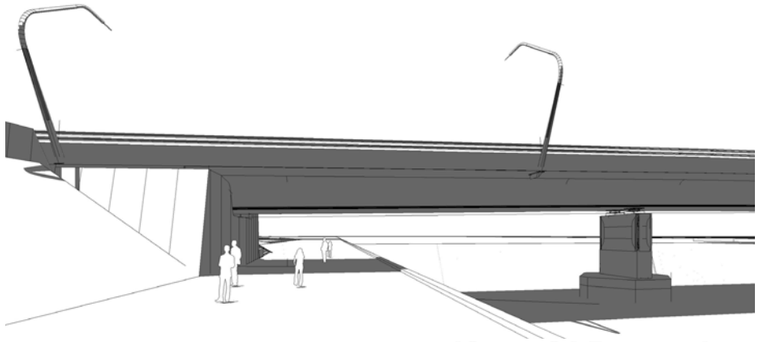

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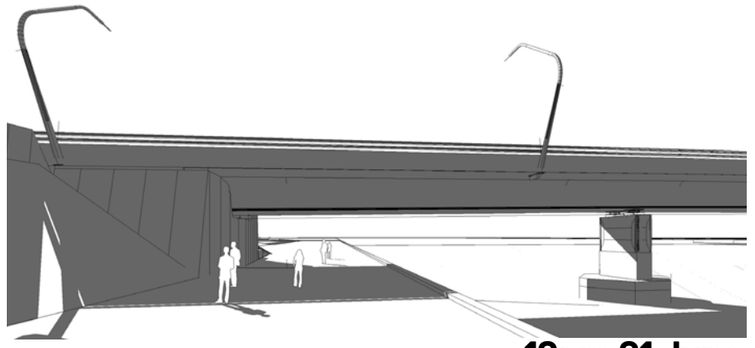

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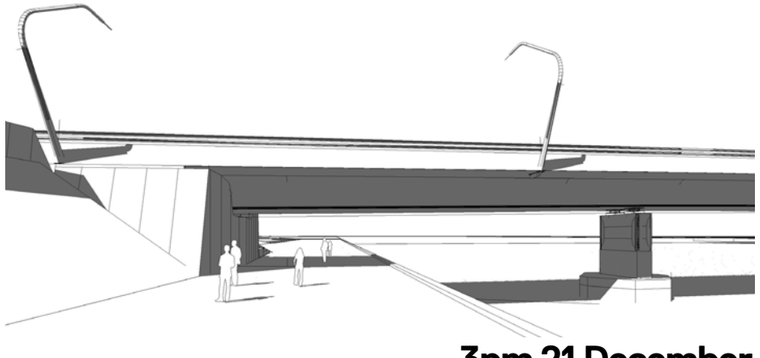

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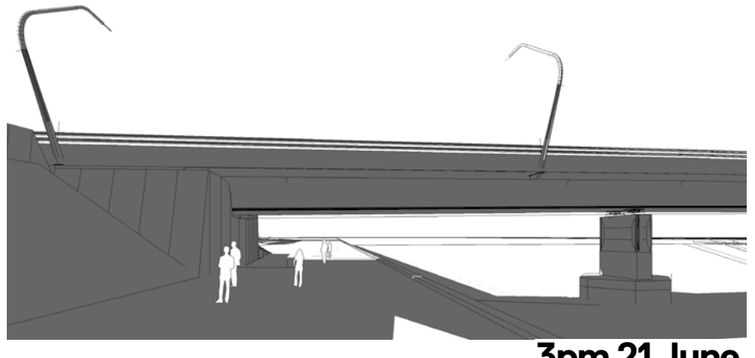

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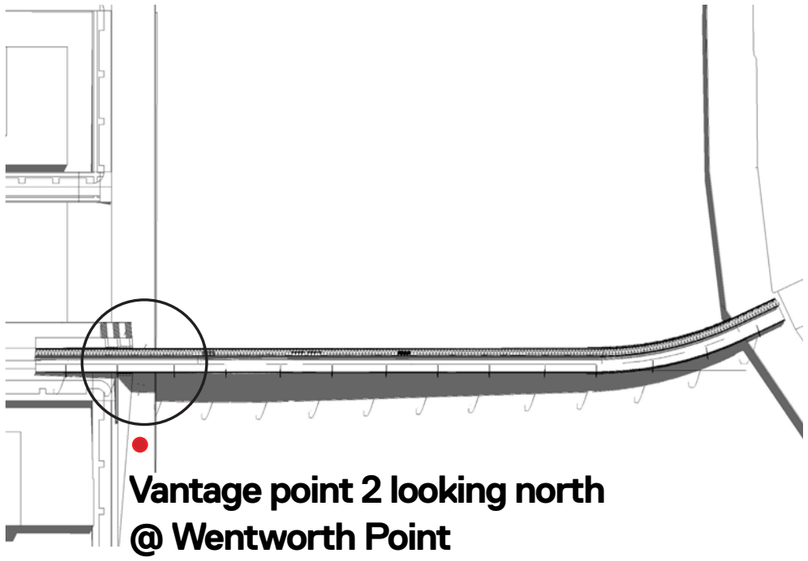

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@ Wentworth Point

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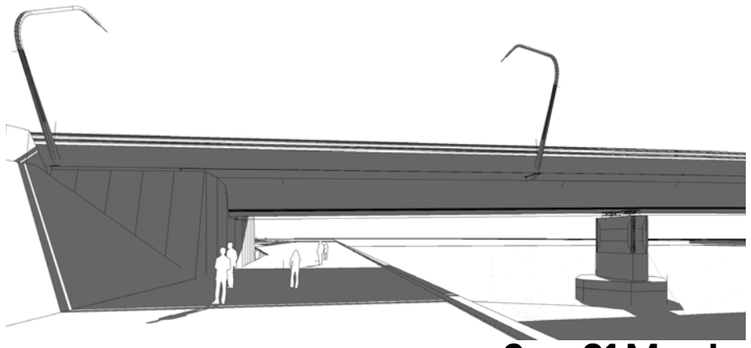

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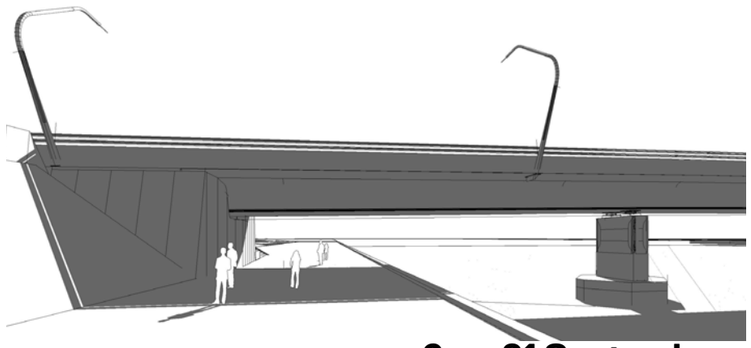

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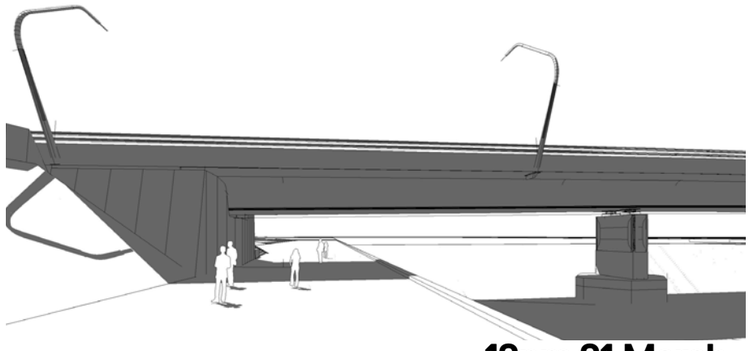

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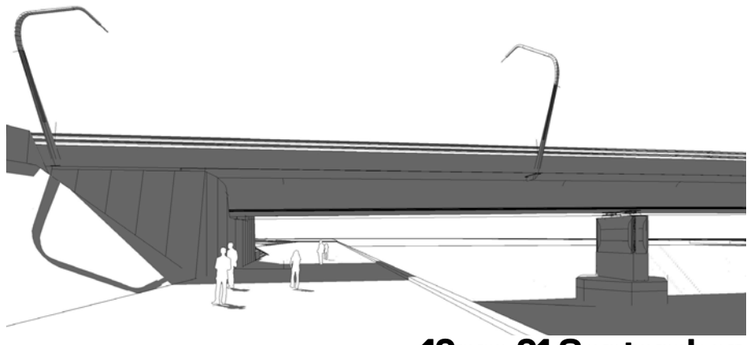

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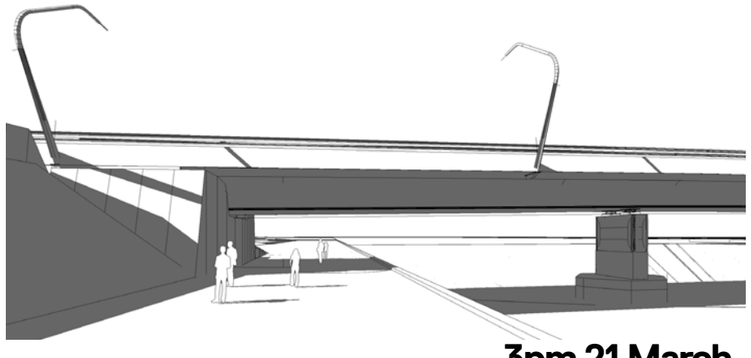

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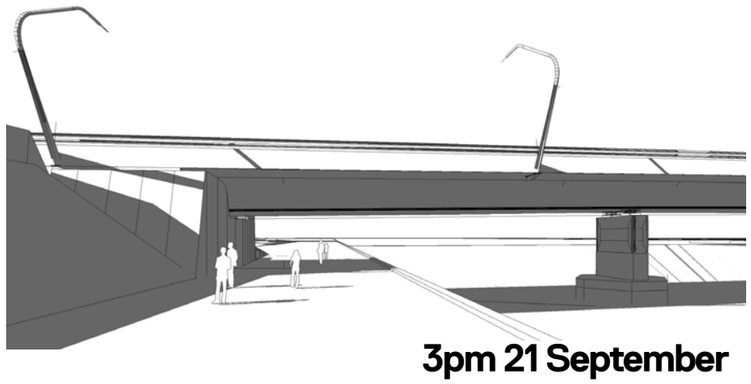

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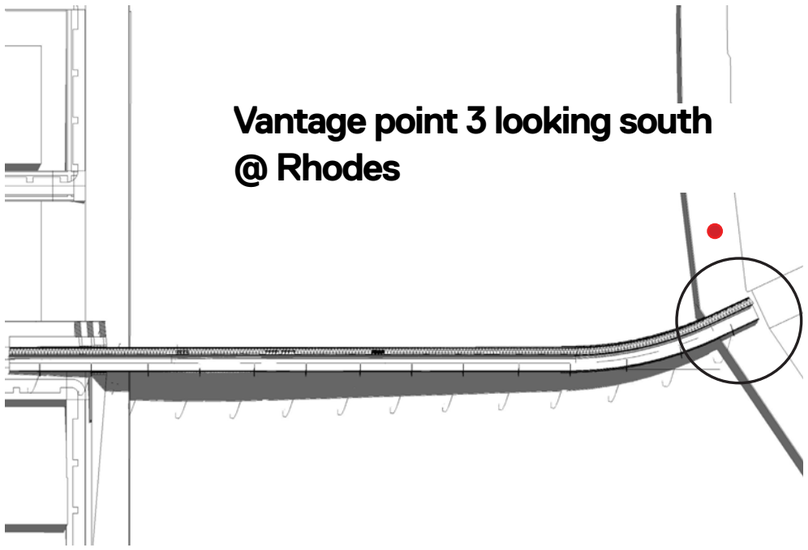
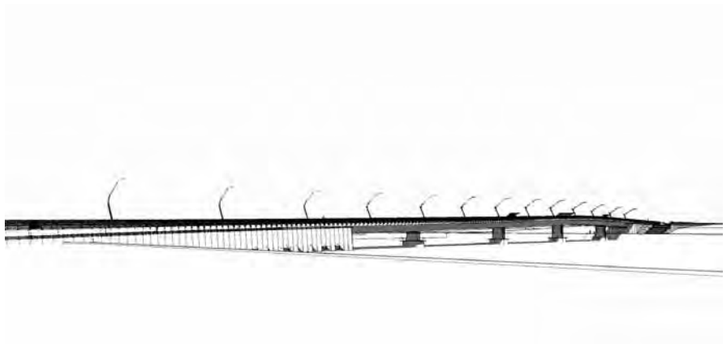


The following perspective views show the shadow impact for December and June at the Rhodes landing.



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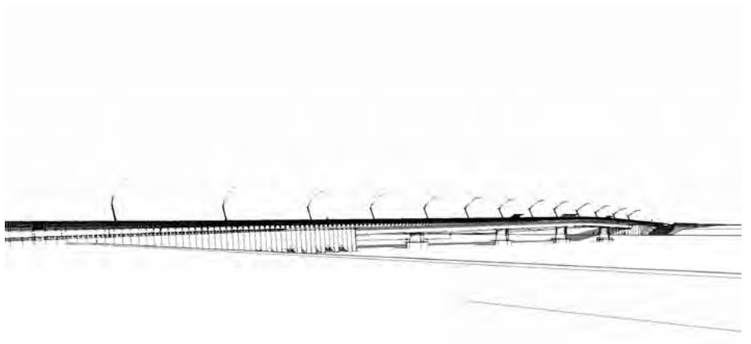

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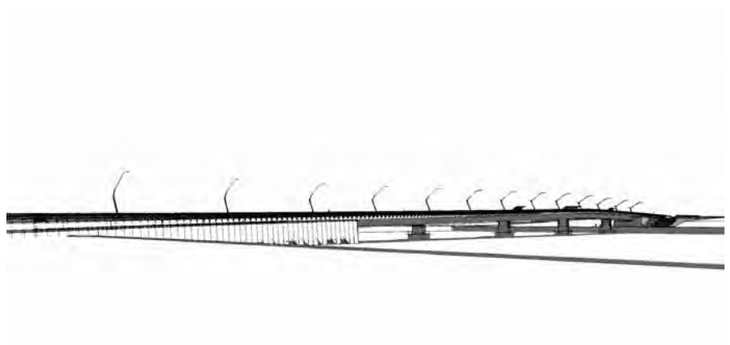

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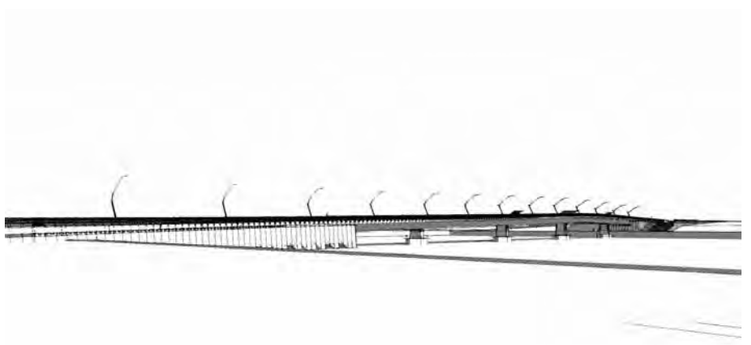

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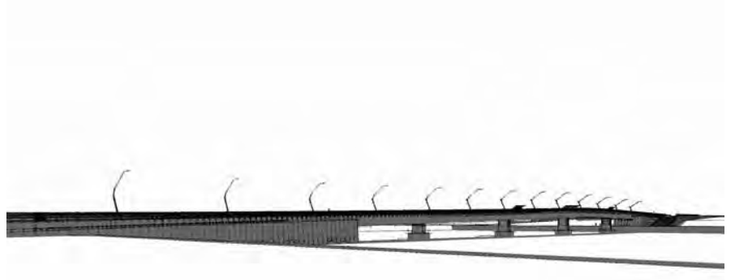

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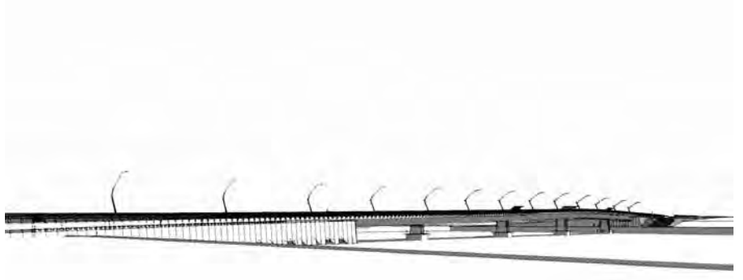

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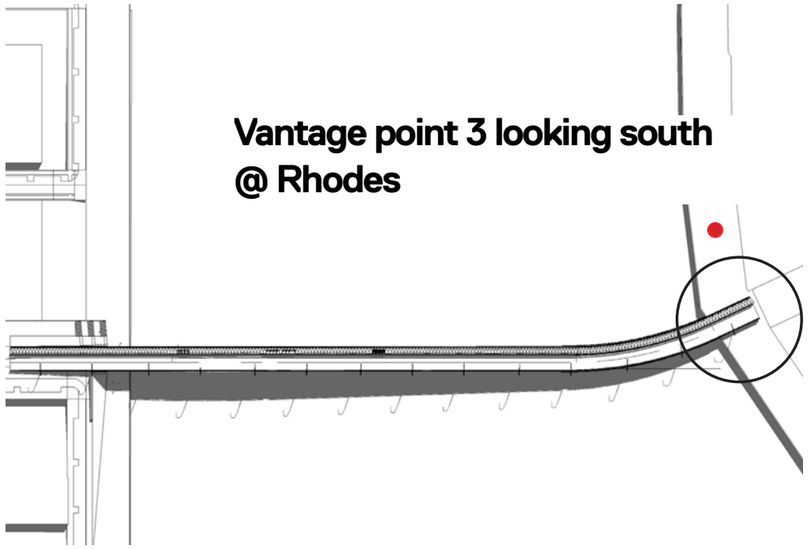
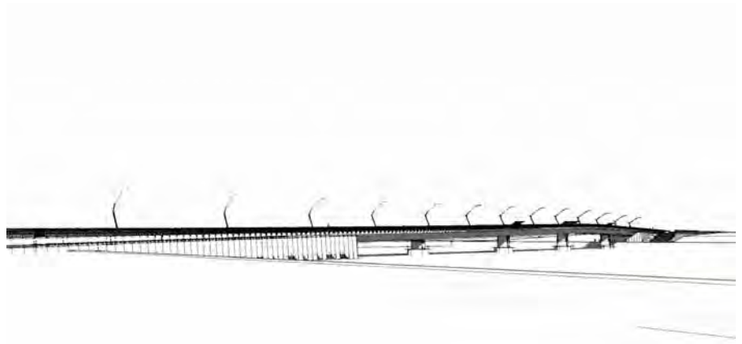


The following perspective views show the shadow impact for March and September at the Rhodes landing.



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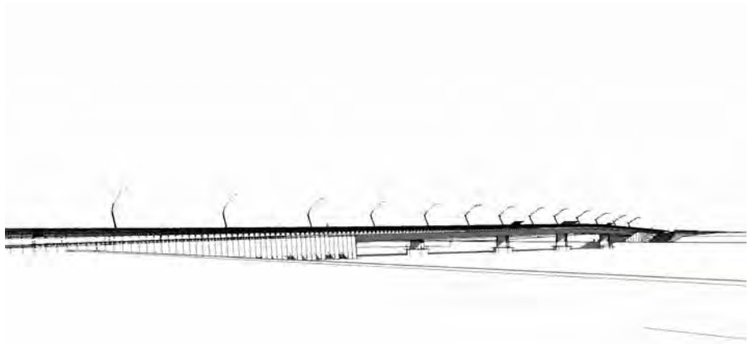

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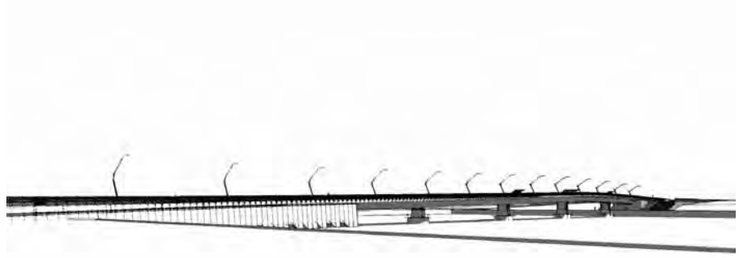

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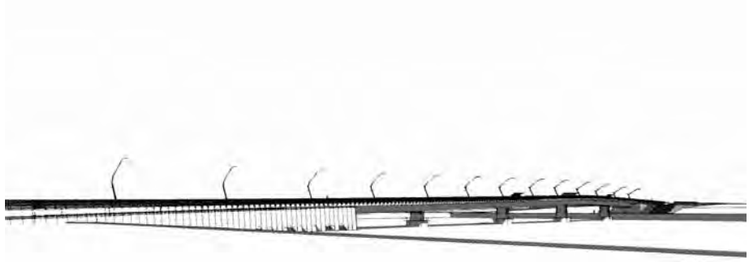

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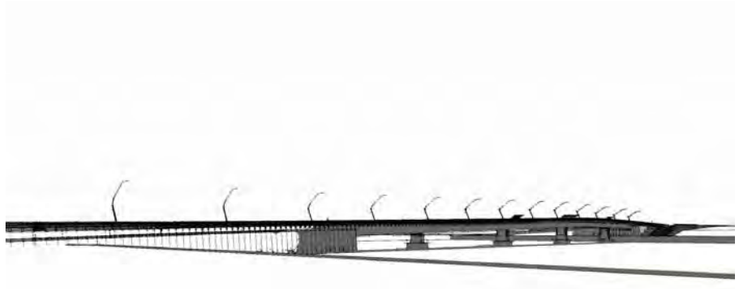

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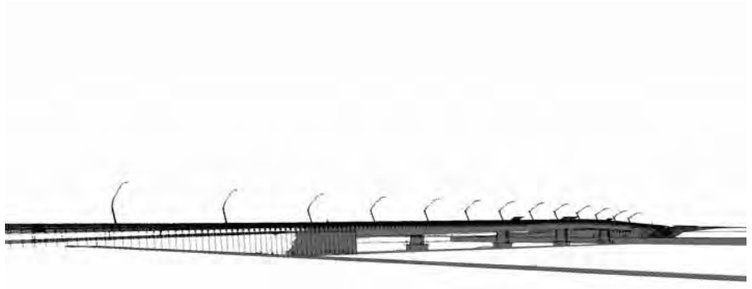

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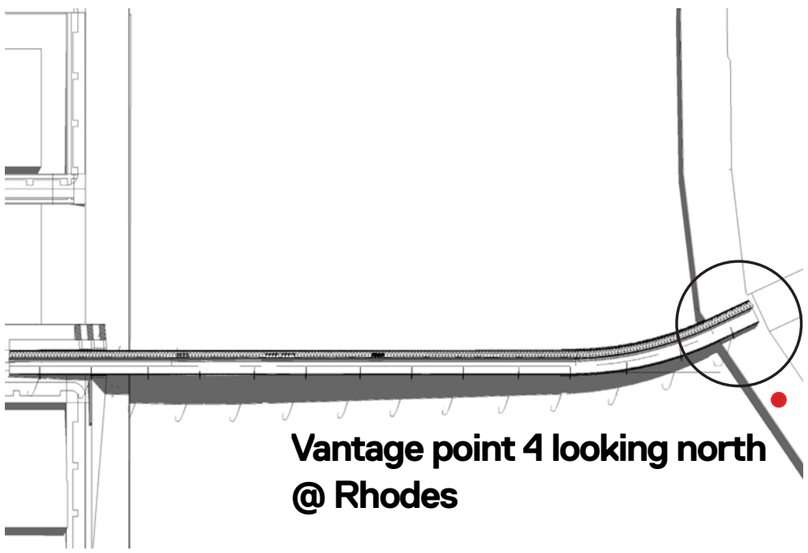
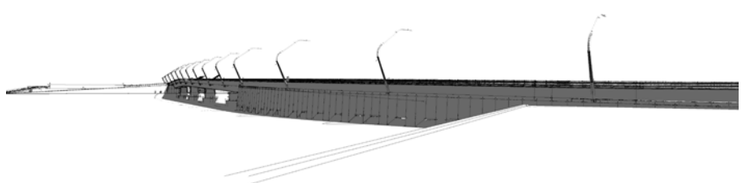


Vantage point 4 looking north
@ Rhodes

The following perspective views show the shadow impact for December and June at the Rhodes landing.



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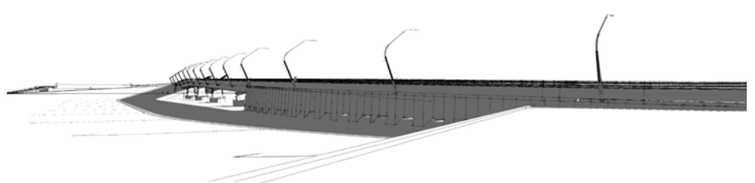

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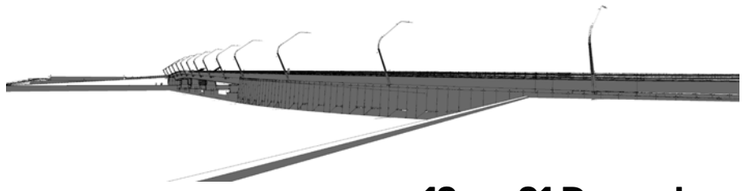

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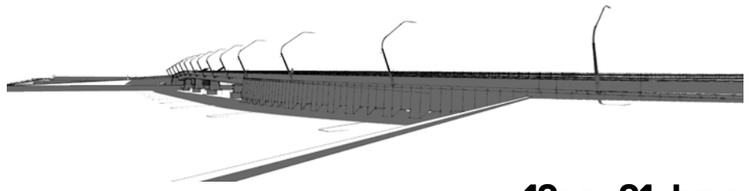

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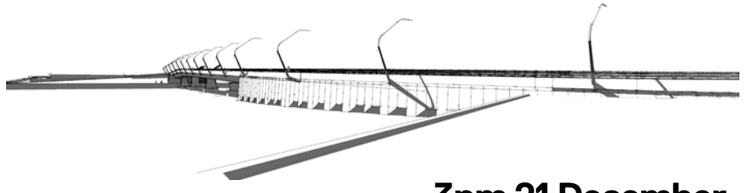

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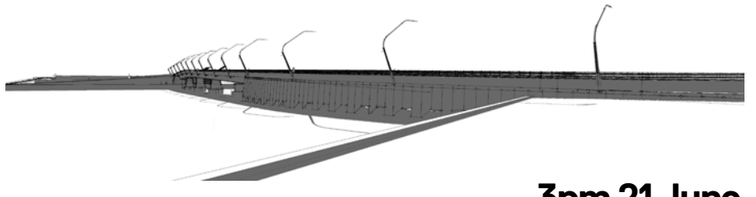

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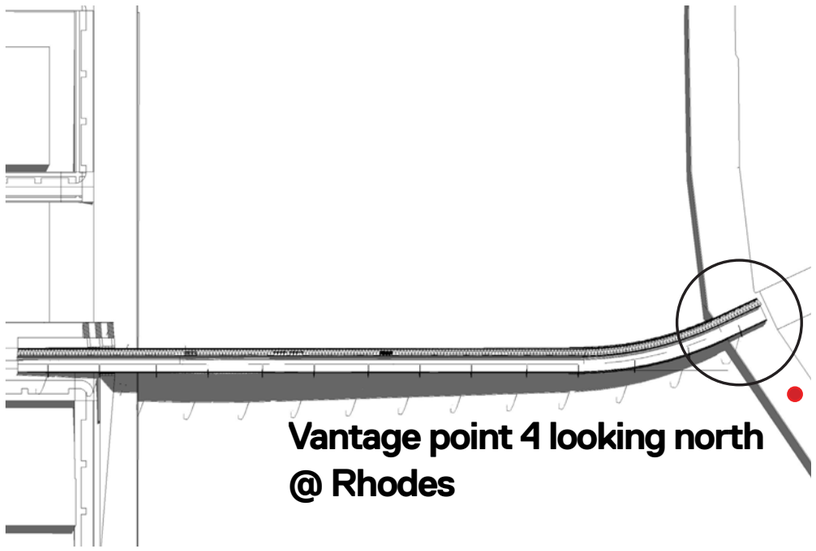

Vantage point 4 looking north
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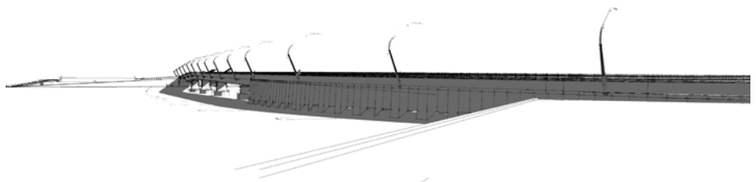

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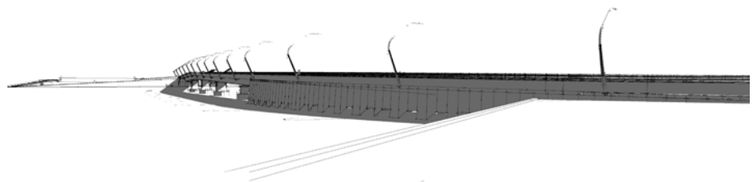

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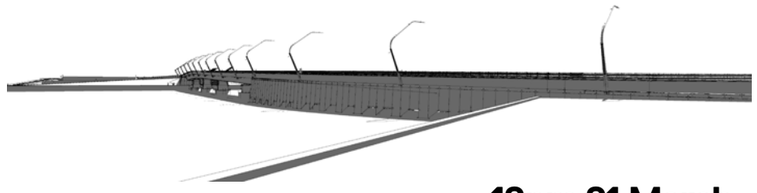

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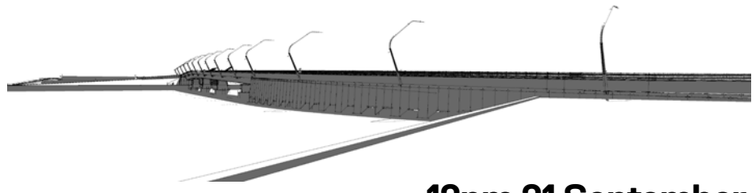

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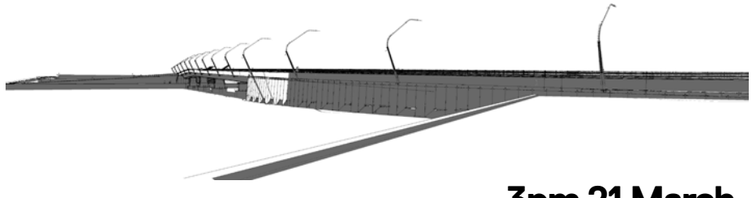

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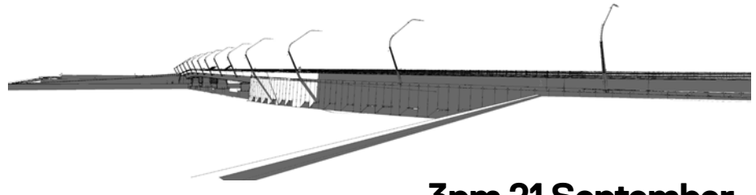

3pm 21 September

7 CPTED

Key issues concerning crime risk and prevention have been identified and addressed accordingly through a number of measures that aim to improve safety through the adoption of crime prevention through environmental design (CPTED) principles. The principles are found in a guideline prepared by the NSW Department of Planning and Infrastructure titled “Crime Prevention and the Assessment of Development Applications” under Section 79C of the Environmental Planning and Assessment Act, 1979.

The four key CPTED principles are:

- Natural surveillance;
- Natural access;
- Territorial reinforcement; and
- Target hardening

7.1 Crime potential

The use of the bridge by cyclists, pedestrians and buses will result in a low level of activity in the evenings especially when bus services cease operating. This might result in increased potential for vandalism and personal threat as there is a low level of activity, direct and close surveillance and supervision provided during these hours, although a high level of visibility over the bridge occurs from elevated apartments and some areas of the public domain.

Solid surfaces and walls may be targeted for vandalism. Selection of anti graffiti materials and finishes, as well as lighting and surveillance of potential vandalism targets may be implemented.

Lighting and landscape treatments will particularly require the maintenance of direct sight lines, good visibility and face cognition at night with the avoidance of conditions that allow concealment and entrapment.

The imposition of changes in level between the foreshore, bridge and landings could also result in spaces providing increased opportunities for vandalism, concealment and entrapment.

Territorial reinforcement between public parks and streets can lead to ambiguity for pedestrians. Transitional areas between the landings and the bridge could result in increased risks for pedestrians at night, as landscaping, retainer walls, ramps and steps may provide opportunities for concealment.

7.2 Design assessment

7.2.1 Natural surveillance

To a varying degree, view lines exist over a considerable distance from residential apartments to the surrounding streetscape, the bridge and surrounds. The illustrative landscape treatments provides for clear sight lines from the street and pedestrian areas as well as along pedestrian routes and bicycle paths. Areas will be well lit with higher lighting levels at potential areas of crime risk to allow recognition of facial features at night in particular.

7.2.2 Natural access

Symbolic and physical barriers such as changes in levels, landscaping, materials and lighting have been utilised to indicate areas nominated for increased levels of activity and casual surveillance, as well as areas where public access is discouraged.

7.2.3 Territorial reinforcement

A sense of place and amenity has been established in the design proposal, with a key distinction of public and transitional realms. This can be established at the landings by the change in design language between bridge, foreshore, park and public streets. This is reinforced by changes in level, landscaping, materials as well as perceived and physical barriers.

The design of these realms also indicates purpose to the intended users of different spaces allowing the community to develop a sense of ownership of the site and surrounds as well as a clear understanding of appropriate behavior.

7.2.4 Target hardening

Targets for vandalism and criminal activity will be minimised through the selection of materials and finishes as well as other active and passive security measures on site. Landscaping elements such as plantings deter access to walls and surfaces which may be targeted for graffiti. These elements communicate a higher level of perceived risk to potential offenders. At night, landscape and bridge lighting increases the visibility of areas that may be targeted for vandalism. Lighting will be implemented through the formal design development process with appropriate risk assessment to be undertaken.

Particular consideration has been given to the incorporation of these principles concerning interrelationships between the bridge and landings as well as with surrounding areas, lighting, legibility and accessibility, ownership and space management, security and safety, as well as minimisation of concealment and entrapment opportunities.

The bridge is proposed to be owned and managed by the Sydney Olympic Park Authority which is experienced and capable of infrastructure management at a high level. Management capabilities include:

- Regular checking of external building elements for graffiti and damage.
- Prompt repair and removal of graffiti.
- General cleaning and maintenance.

The design will carefully consider robust materials that are relatively easy to replace and/or repair if areas are damaged.