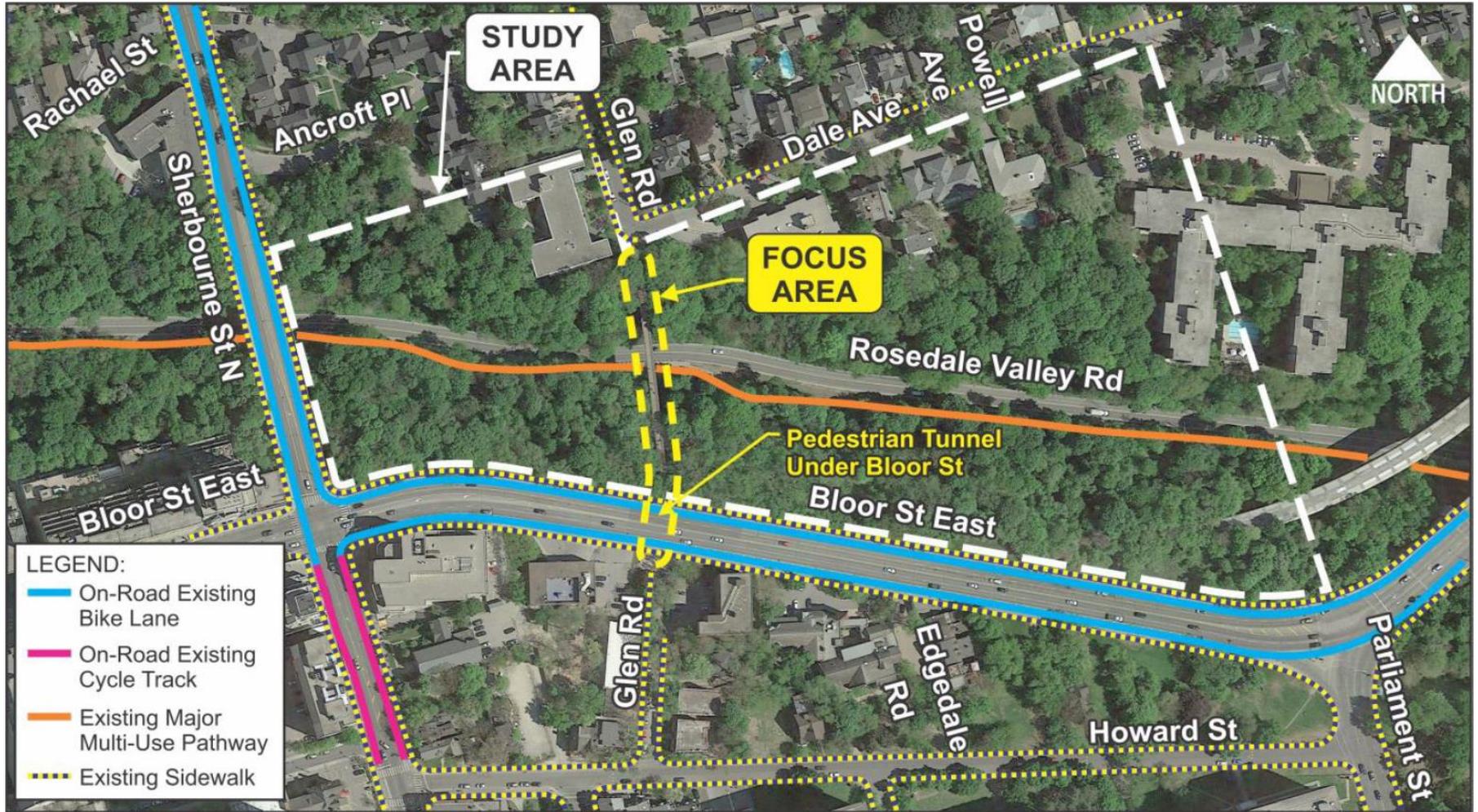


GLEN ROAD PEDESTRIAN BRIDGE & TUNNEL

Design Review Panel - Presentation #2



Background – Site Context



Background – The Environmental Assessment

In December 2017 a Municipal Class Environmental Assessment (EA), including public consultation, concluded. This study determined the preferred design concept for the bridge & tunnel.

The EA recommended that:

- the bridge be replaced in the same location with a similar looking structure
- the tunnel be widened to the west and maintain its current alignment

Background – Cultural Heritage



View south from the Glen Road Bridge towards Howard Street [City of Toronto Archives, Fonds 200, Series 372, Subseries 10, Item 78, March 14, 1913].



Glen Road Bridge between Howard Street and Dale Avenue, looking south from Dale Avenue [Toronto Reference Library, Baldwin S 1-901A, J.V. Salmon, 1951]

- 1884 – First record of bridge over Rosedale Valley
- 1951 – Bridge closed to vehicular traffic; pedestrian use only
- 1973 – Construction of the current pedestrian bridge
- 1992 – Officially renamed as the Morley Callaghan Footbridge
- 2003 – Bridge designated under the Ontario Heritage Act



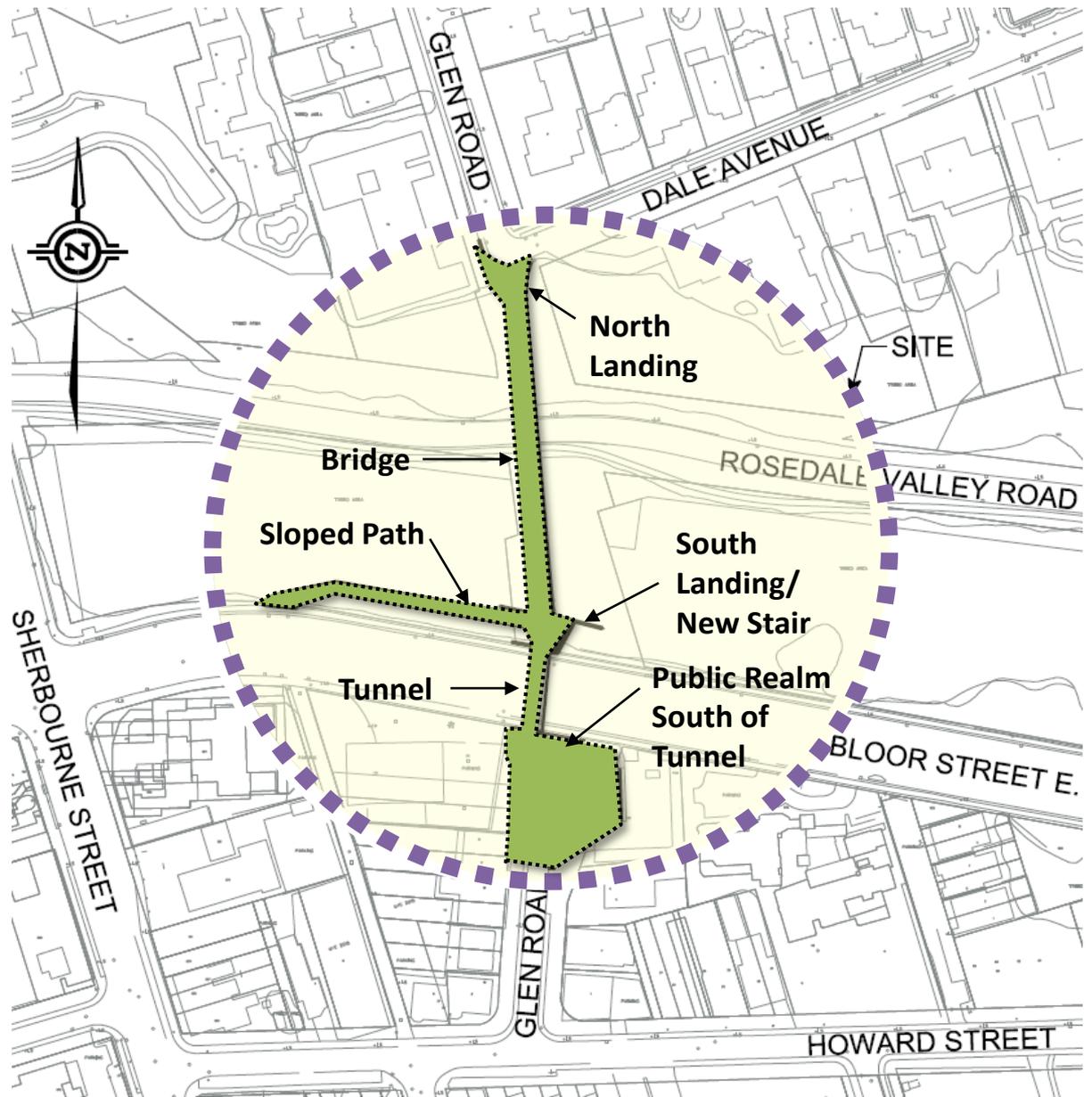
Background – DRP Presentation #1

The EA the project team presented to the DRP on July 18, 2017.

DRP asked the design team to consider:

- ✓ • Improvements to universal accessibility
- ✓ • Extending public realm improvements southward
- ✓ • Slimming the bridge structure
- ✓ • Integrating tunnel and bridge lighting with railing
- ✓ • Softer and indirect lighting in the tunnel ceiling
- ✓ • Importance of public art, not as just as graffiti deterrent, but to create narratives
- Access to Rosedale Valley
- Stronger bridge and tunnel presence from Bloor Street East

Key Plan of Project Scope



Background – Public Art Competition

Economic Development & Culture (EDC) carried out the public art competition for the tunnel site in summer 2019

Five 5 artist proposals were shortlisted for technical and jury review.

The jury selected Inuit artist Couzyn Van Heuvelen's proposal.



Project Scope – Health & Safety

Bridge Barriers

After the completion of the Glen Rd EA, Toronto Public Health and Transportation Services began incorporating suicide prevention measures into state of good repair projects. Bridge barriers have been added to the scope of the Glen Rd Pedestrian bridge.

Project Scope – Health & Safety

Personal Security

Personal safety was a concern for stakeholders during the EA. A *Crime Prevention Through Environmental Design (CPTED)* review has been completed. The public realm design includes strategies to increase:

- lighting
- sight lines
- pedestrian traffic

Transportation Services and Corporate Security are evaluating how to best deliver increased security services & equipment on site. Some components will be included in capital construction, while others may be provided through a separate vendor. Equipment being considered:

- cameras
- emergency poles

Background – Schedule

Consultation

- Virtual Public Event - Fall 2020 (update community on final design, schedule, phasing, construction impacts)

Design & Construction

- 100% detailed design - Fall 2020
- Tender - Winter 2021
- Construction Start - Early spring 2021
- Construction Completion – Summer 2022

View east of existing bridge from Rosedale Valley Road



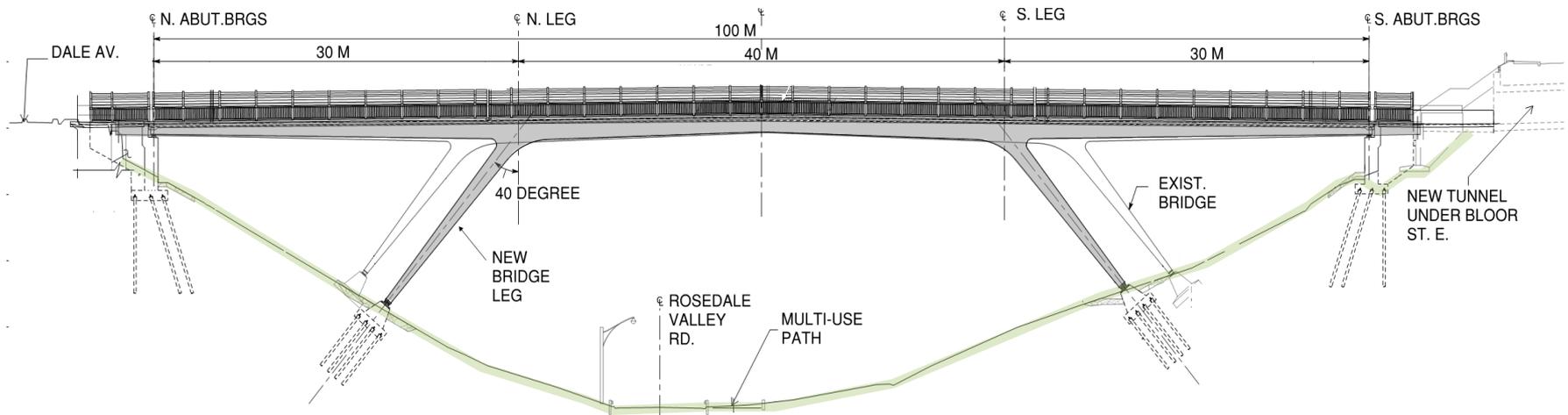
Bridge - Elevation

Design Maintains:

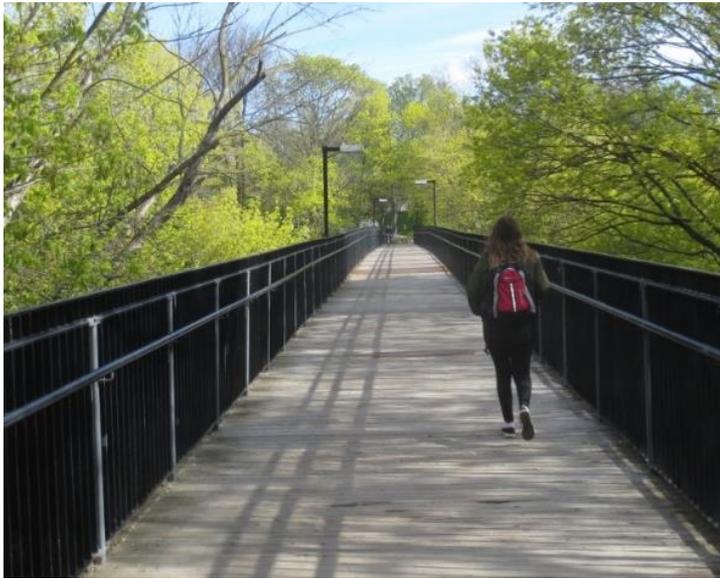
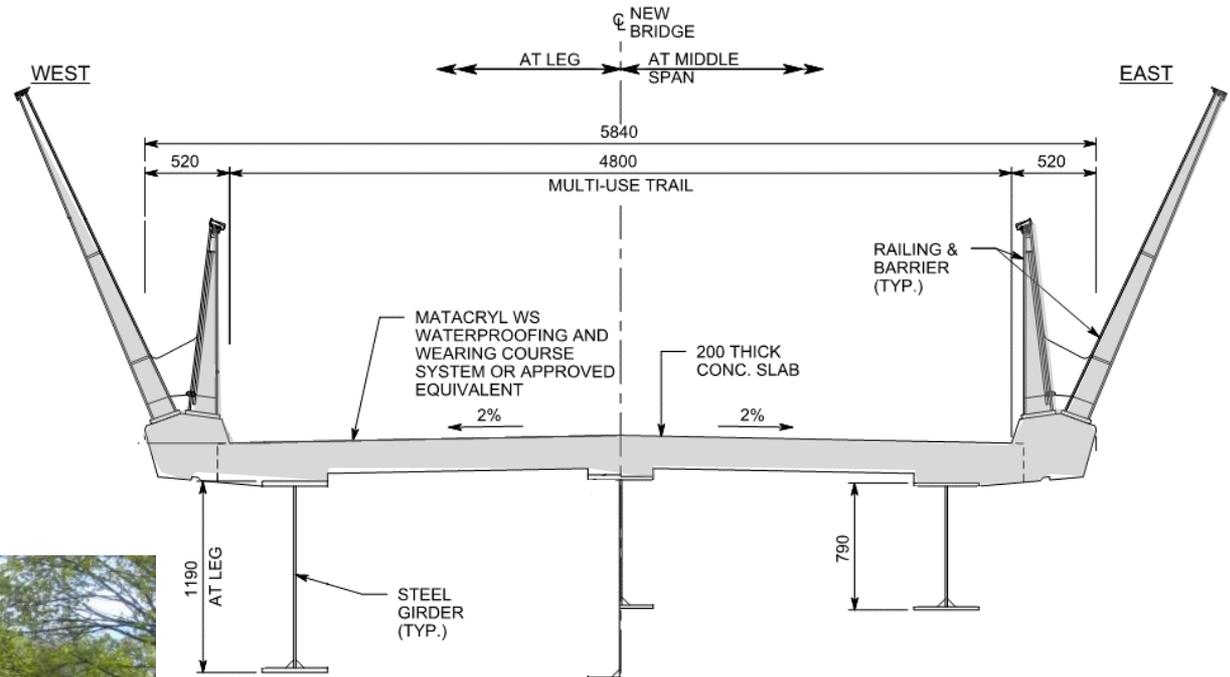
- 2 leg system, tapered leg geometry and girder style

Updated:

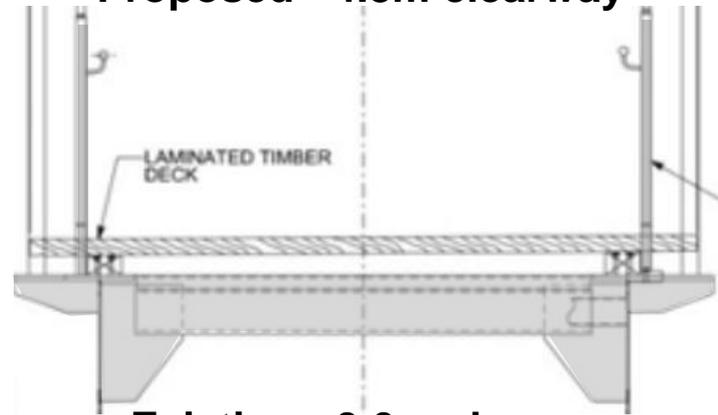
- Third girder added to allow reduction of girder depth
- Girder depth reduced by 350mm at leg tops and 250mm at mid span



Bridge – Cross Section



Proposed - 4.8m clearway



Existing - 3.0m clearway

View north of Existing Pedestrian Tunnel under Bloor St. East from Glen Rd



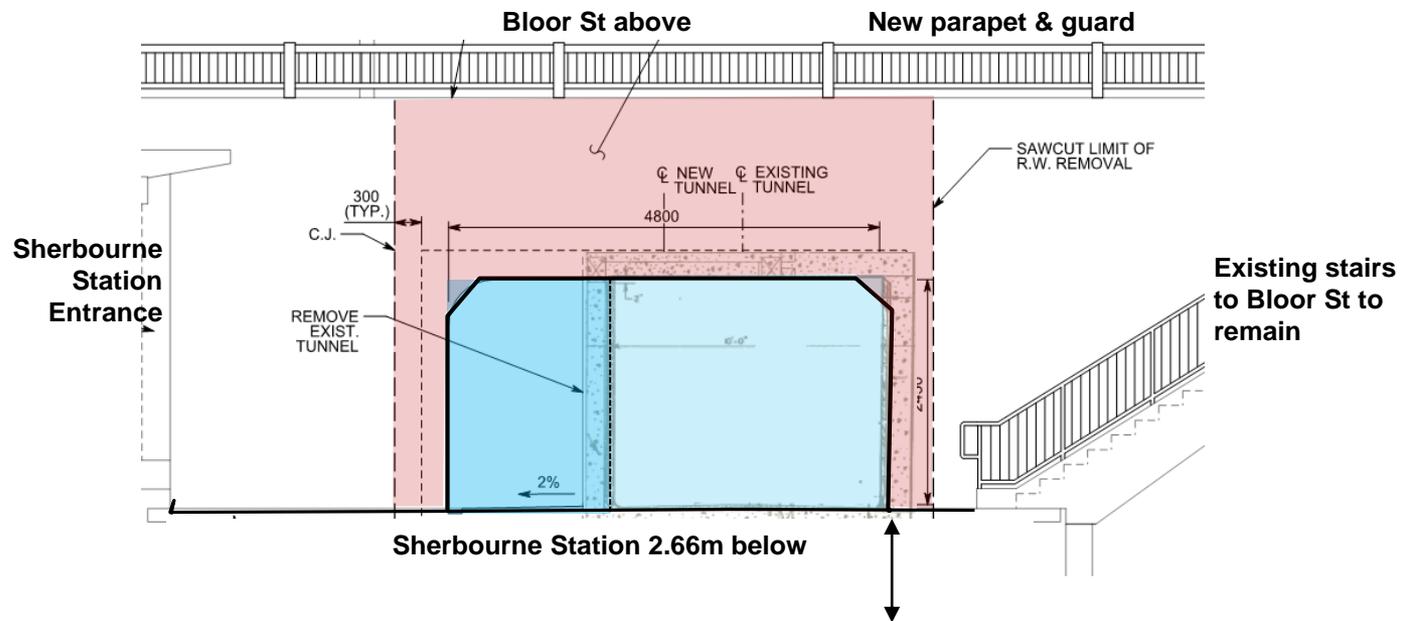
Pedestrian Tunnel under Bloor St. East

Maintained:

- Tunnel widened to west by 1.8 m to achieve 4.8 m clearway
- Tunnel height maintained at 2.45m

Updated:

- Strip lighting to be incorporated into ceiling corner chamfers
- Public art formed into interior tunnel walls



South Elevation of Proposed Pedestrian Tunnel (view north from Glen Rd south of Bloor St)

Rendering from Rosedale Valley Road Looking East



Bridge - Barrier & Railing Design

Suicide Prevention

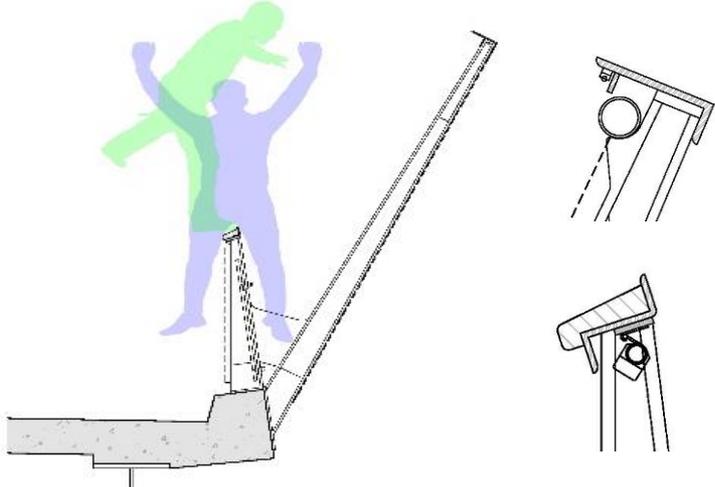
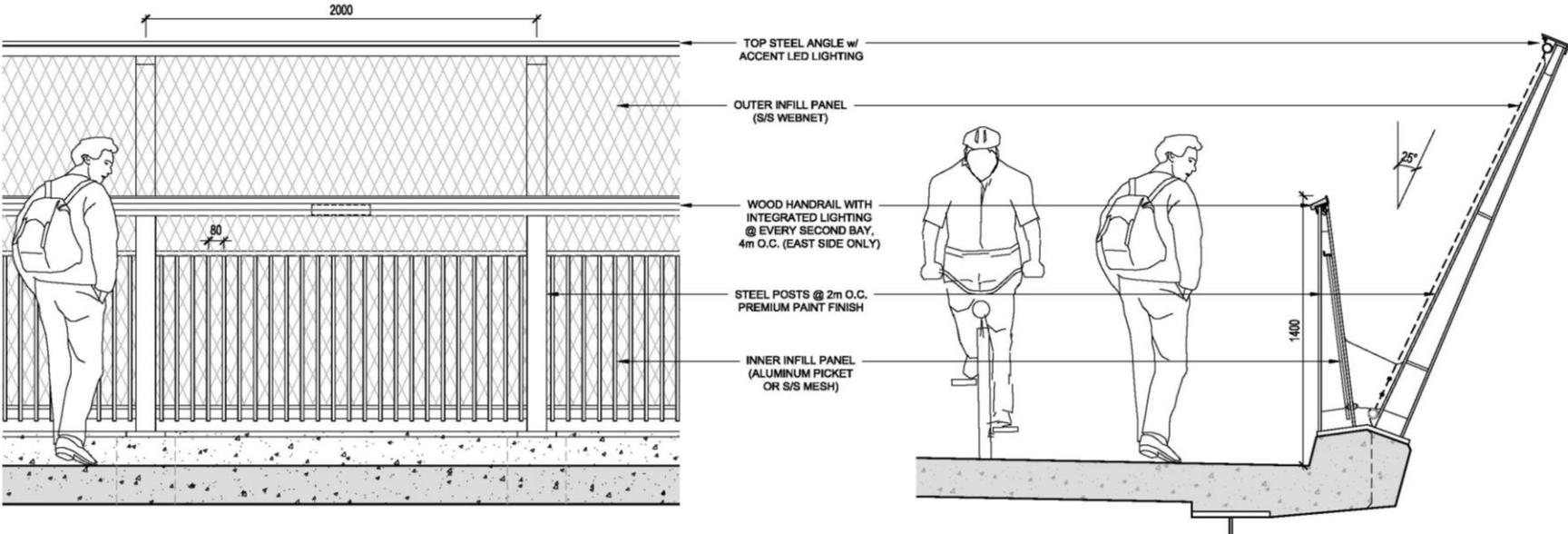
- Many international precedents/guidelines, not standardized; *sufficient height (minimum 2200-2500mm); barrier needs to discourage climbing; ideally no toe or footholds*

Barrier Aesthetic Objectives

- sensitivity to unique context: quiet natural setting, scale & aesthetic of the new structure, community/heritage values
- visually cohesive with other components of the project
- achieve “**a good balance**” between technical and aesthetic objectives

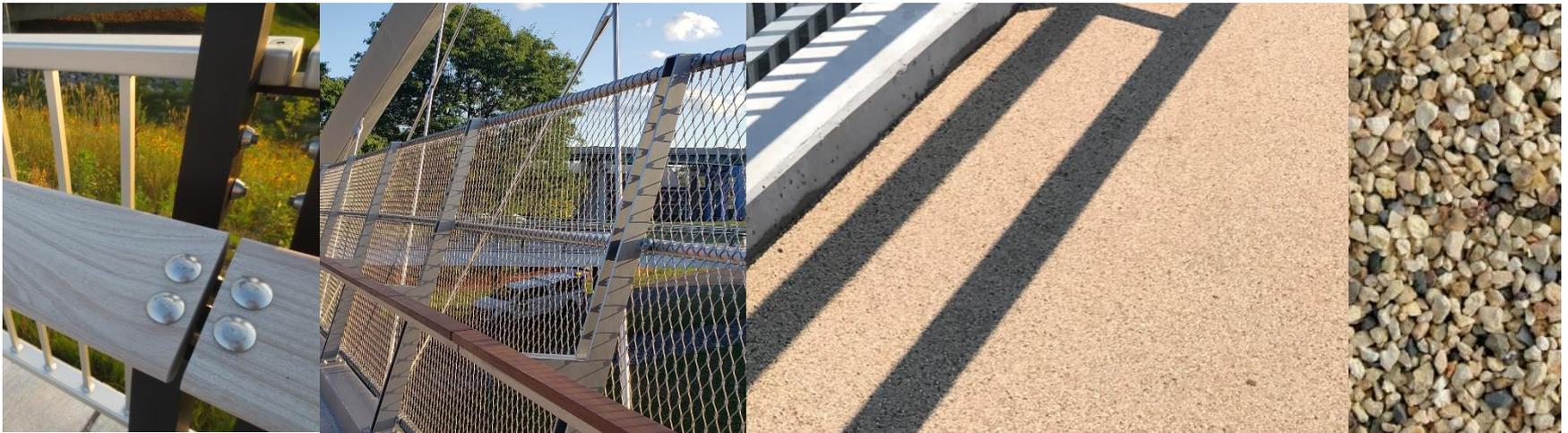


Bridge - Barrier & Railing Design

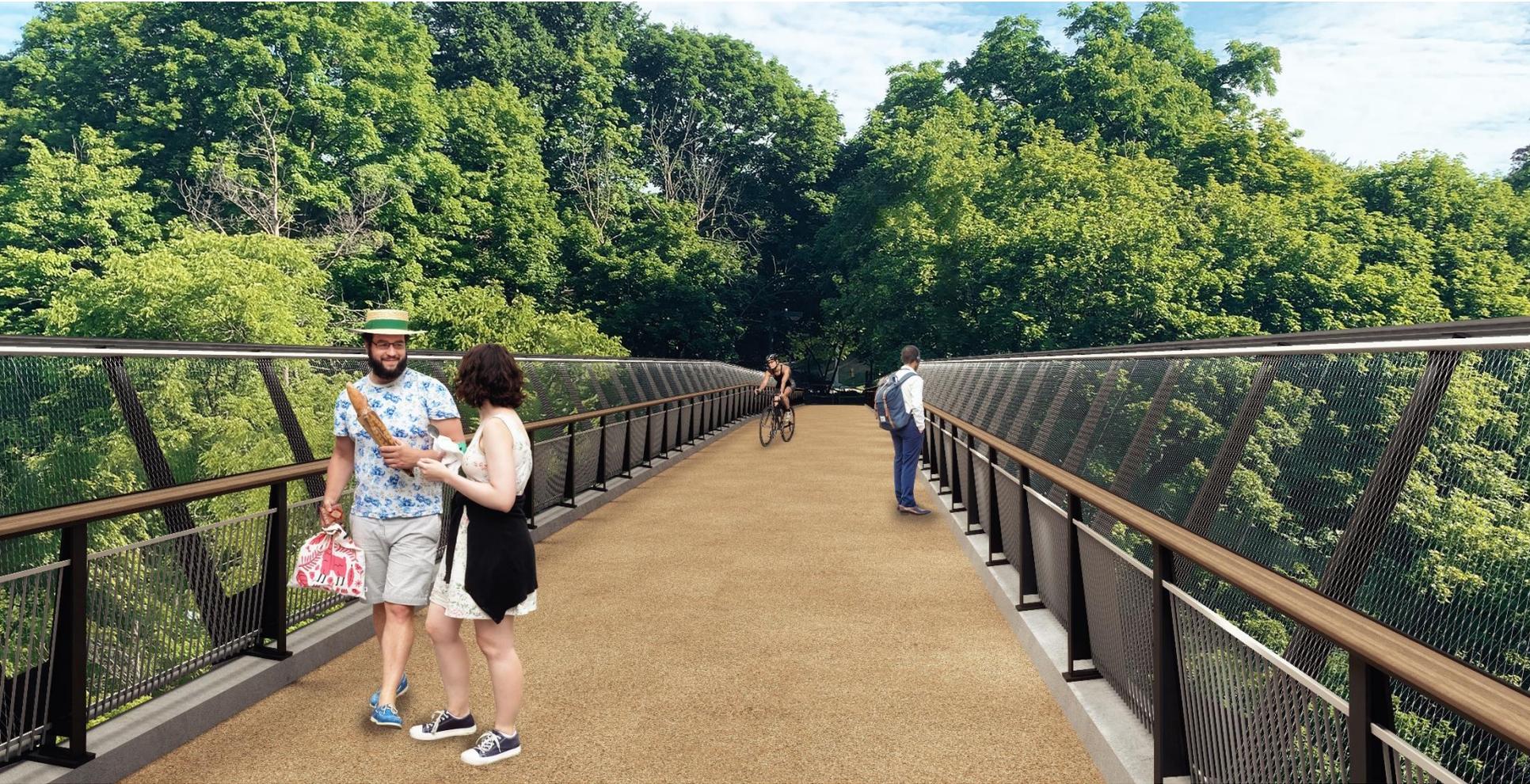


Materiality

- Respond to existing bridge palette
- **Proposed:** Charcoal grey/black paint finish to primary structural steel components; natural metal finish to infill railing panels, durable wood handrail, earth tone deck surfacing

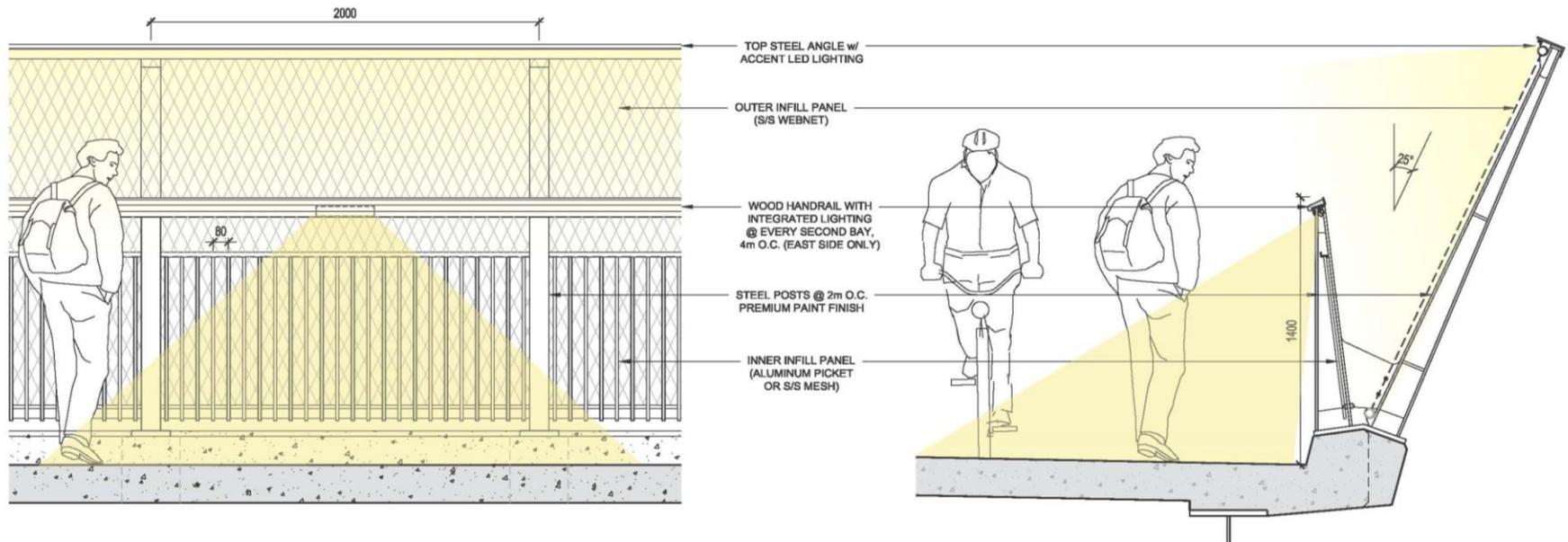


Bridge Rendering – View Crossing Bridge Looking North



Bridge - Lighting

- Primary – linear LED fixtures @ 4m o.c. integrated into handrail
- Secondary Accent – continuous LED strip at top of outer barrier



Bridge Rendering – View Crossing Bridge Looking South



Bridge Rendering – View Approaching Tunnel



Public Art – Concept



- Art concept centred around Inuit stone cut print making, stone carving and the theme of migration
- Tunnel walls illustrate a stone carving wet with paint in the printing process



View looking north from Glen Rd South of Bloor

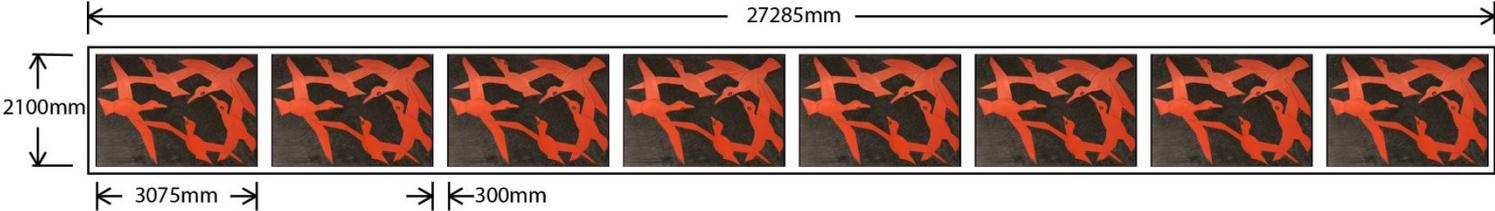
Metal birds silhouettes on the outer tunnel walls continue the shapes and colors used in Inuit printmaking on walls that are not being re-cast.



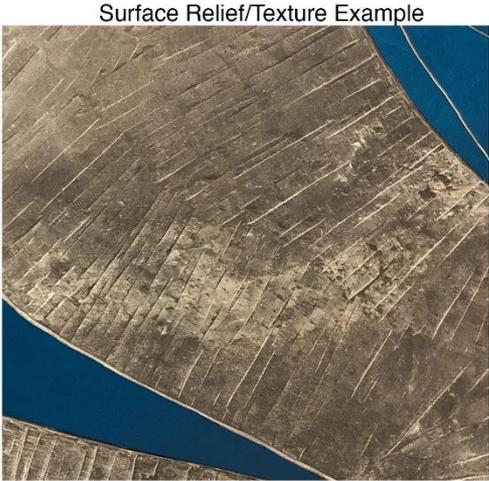
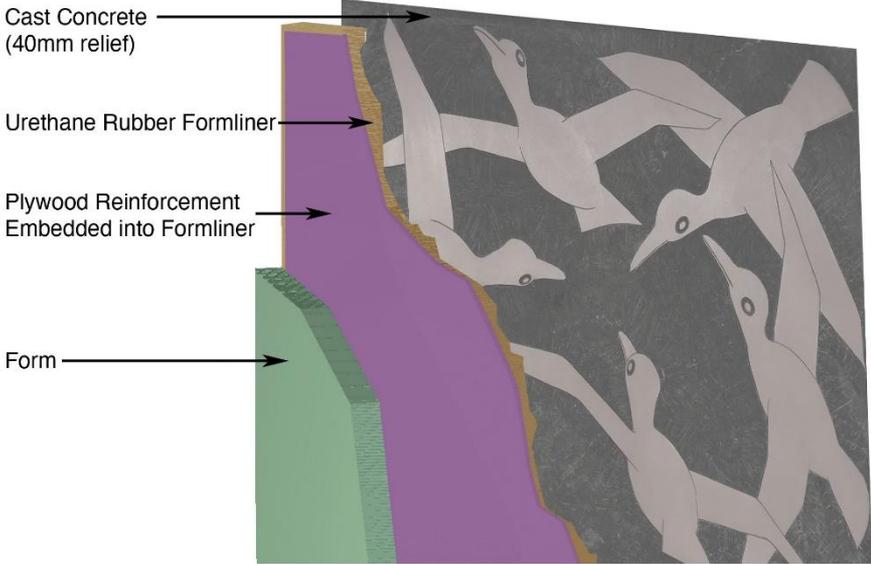
Tunnel Walls



Tunnel Walls



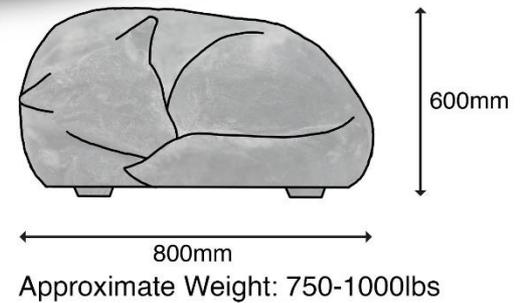
Formliner is adhered to concrete forms prior to pouring. Formliner is made of Vytaflex 60 rubber from Smooth-On. 8 unique formliners, each will be used twice.



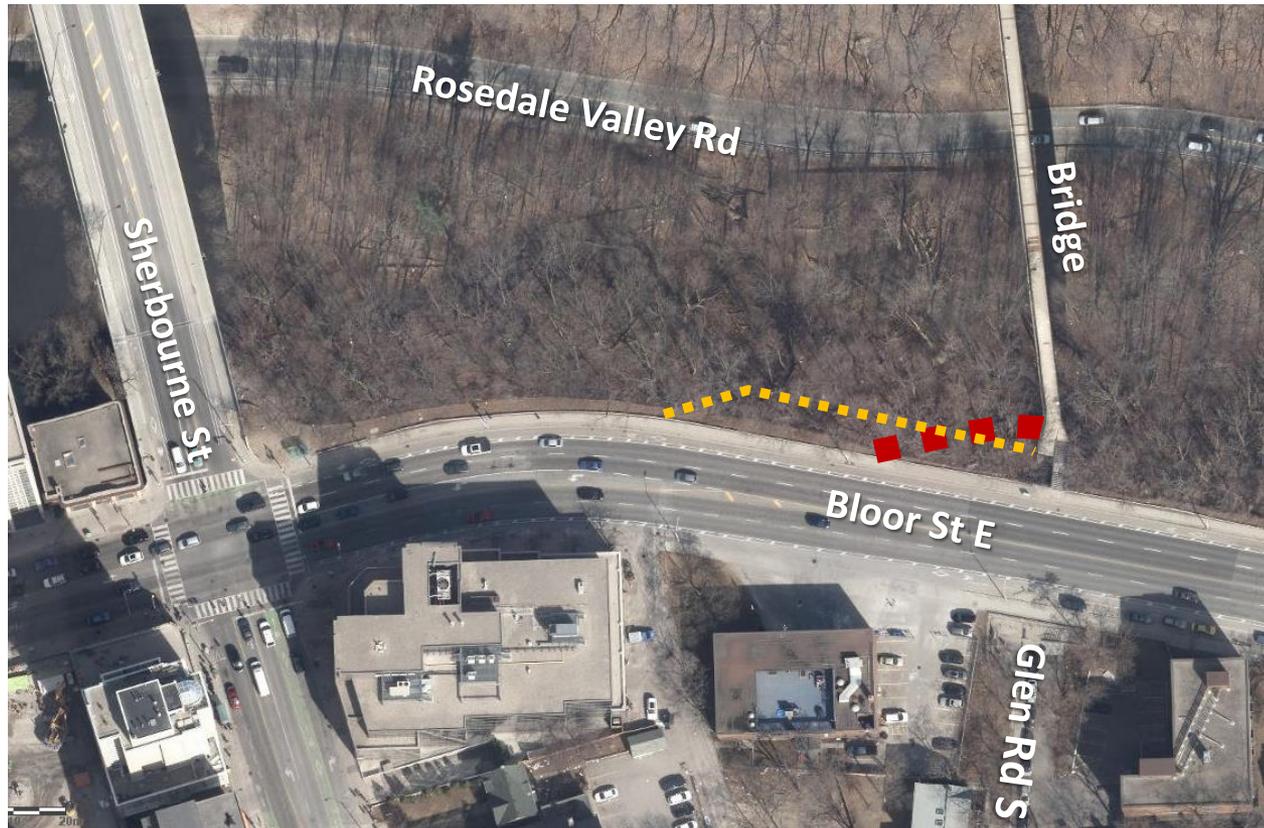
Pre-cast Bollards



Installation Example:



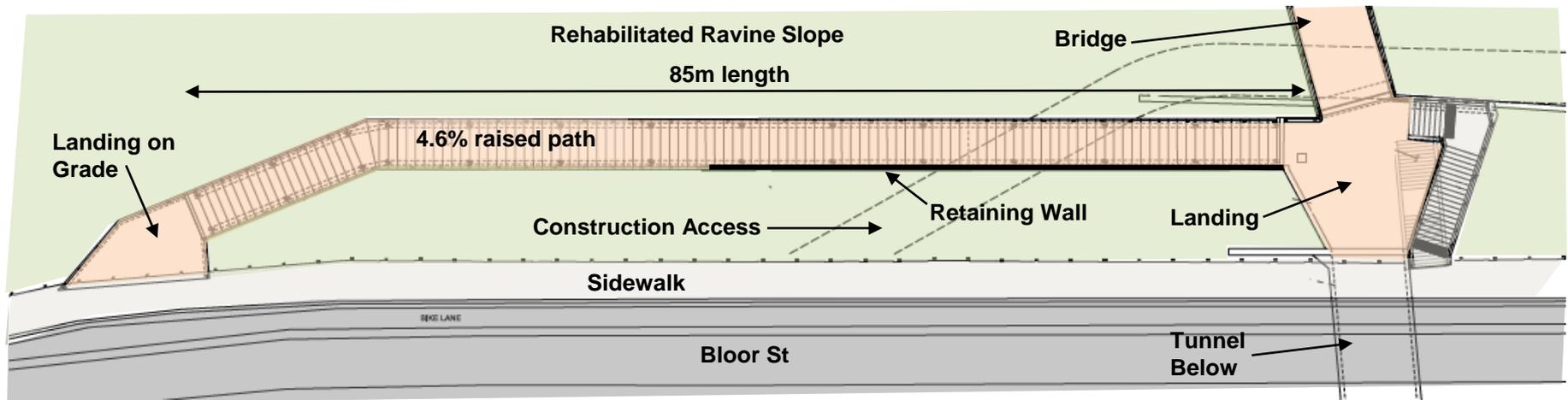
Barrier Free Connection & Stair Replacement



- Construction Access
- Barrier Free Connection

- Construction access road alignment identified in EA unfeasible due to utility conflicts
- Revised alignment has greater impact ravine slope
- Additional disturbance provides opportunity for barrier free connection

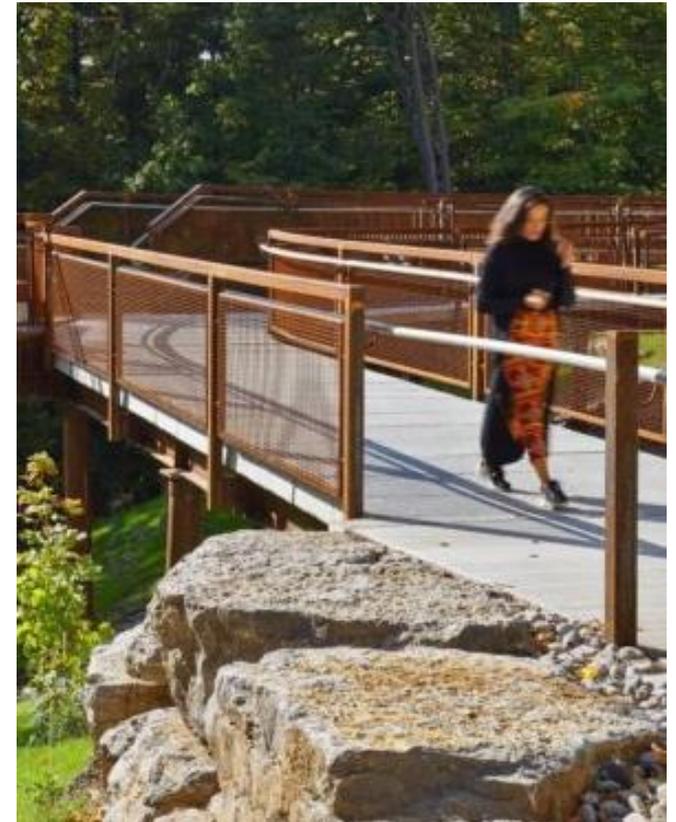
Barrier Free Connection & Stair Replacement



Path Design

- 3.0m width, 4.6% grade
- Straight alignment selected over switchbacks due to:
 - pedestrian origin-destination survey gathered during EA
 - shortest barrier free route to subway platforms via Sherbourne St entrance
 - ease of use for bicycles and mobility devices

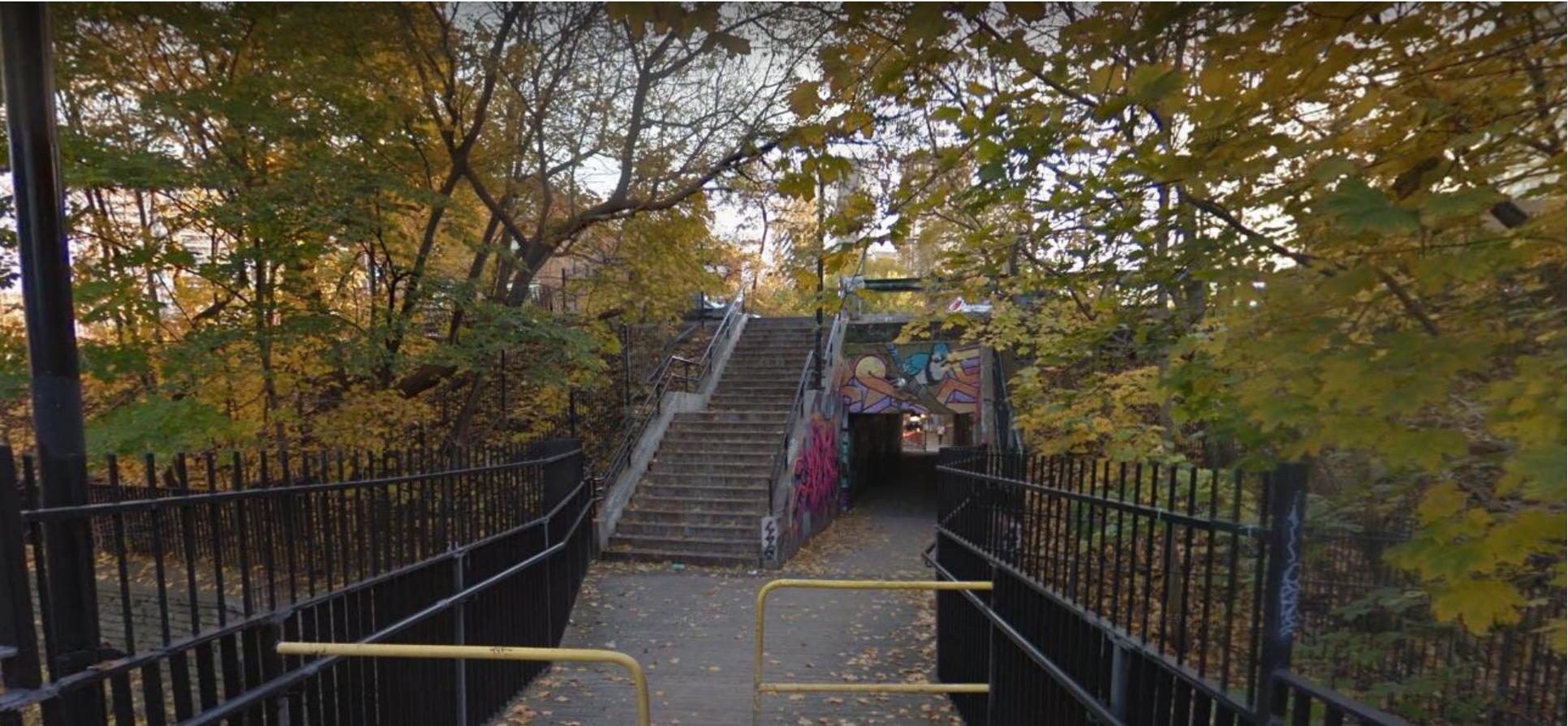
Barrier Free Connection & Stair Replacement



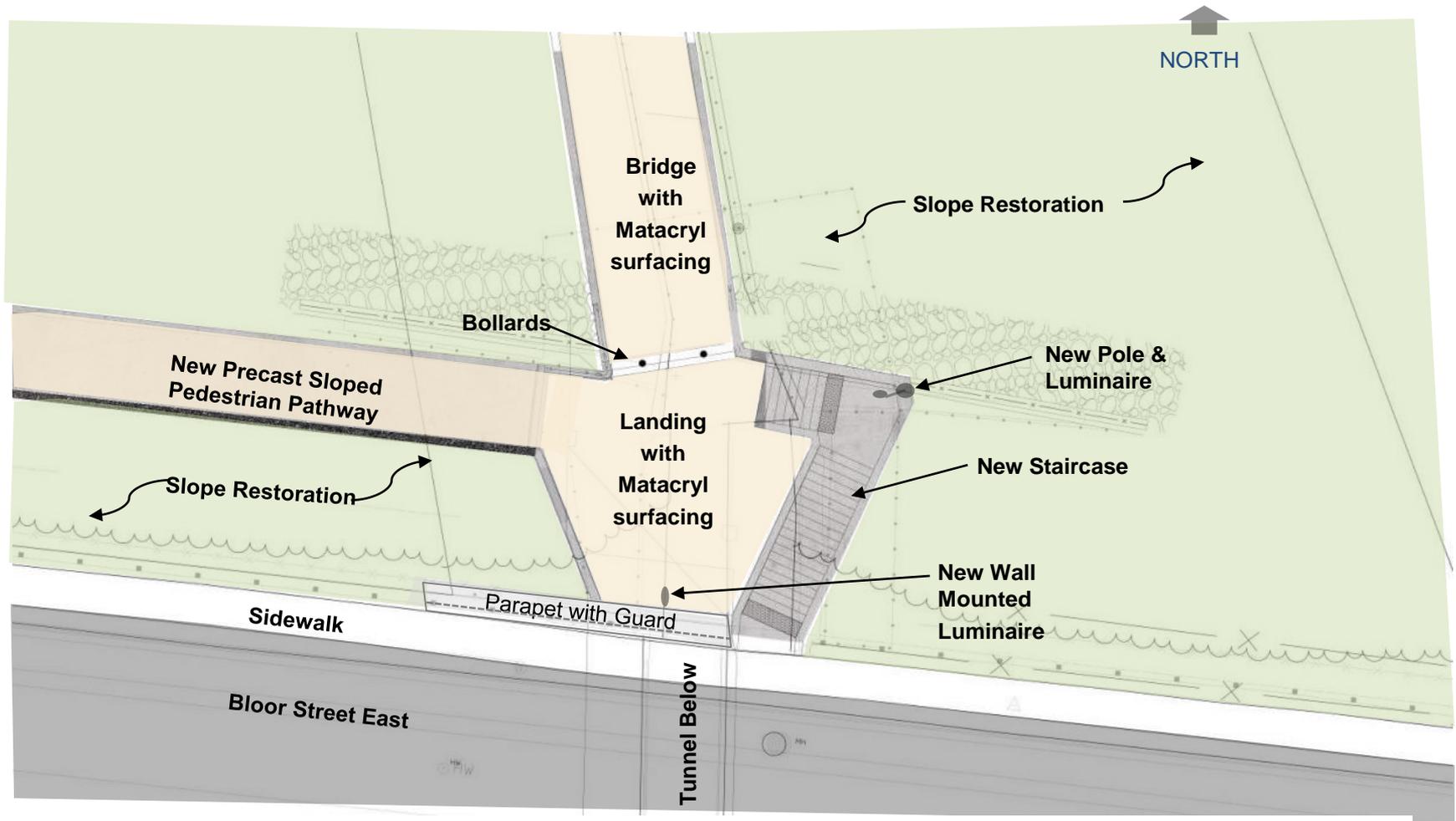
Path Design:

- Elevated path using micropiles and precast concrete decking to limit ravine slope impacts
- Retaining walls needed at southeast end to meet and match bridge landing elevation
- Metal guardrails with vertical pickets painted dark colour and LED strip lighting under handrail are consistent with bridge design and heritage style fencing adjacent to site

Existing South Bridge Landing View from bridge approaching tunnel



South Bridge Landing - Stair, Tunnel & Path Crossroads

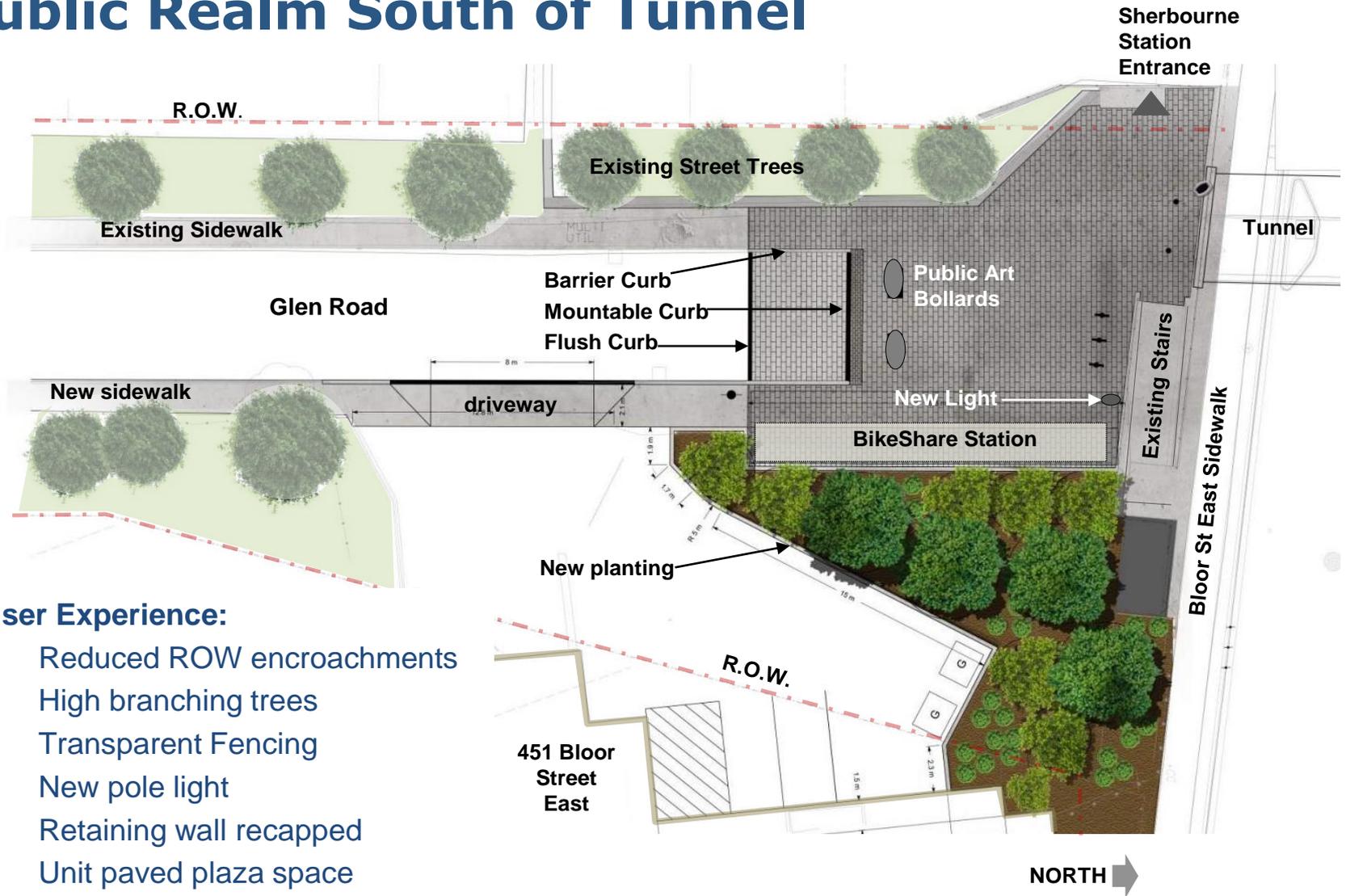


- Increased landing area improves sight lines, accessibility and user experience
- New staircase meeting current codes, angled geometry in keeping with bridge and pathway

Existing Public Realm south of Tunnel View looking north from Glen Rd



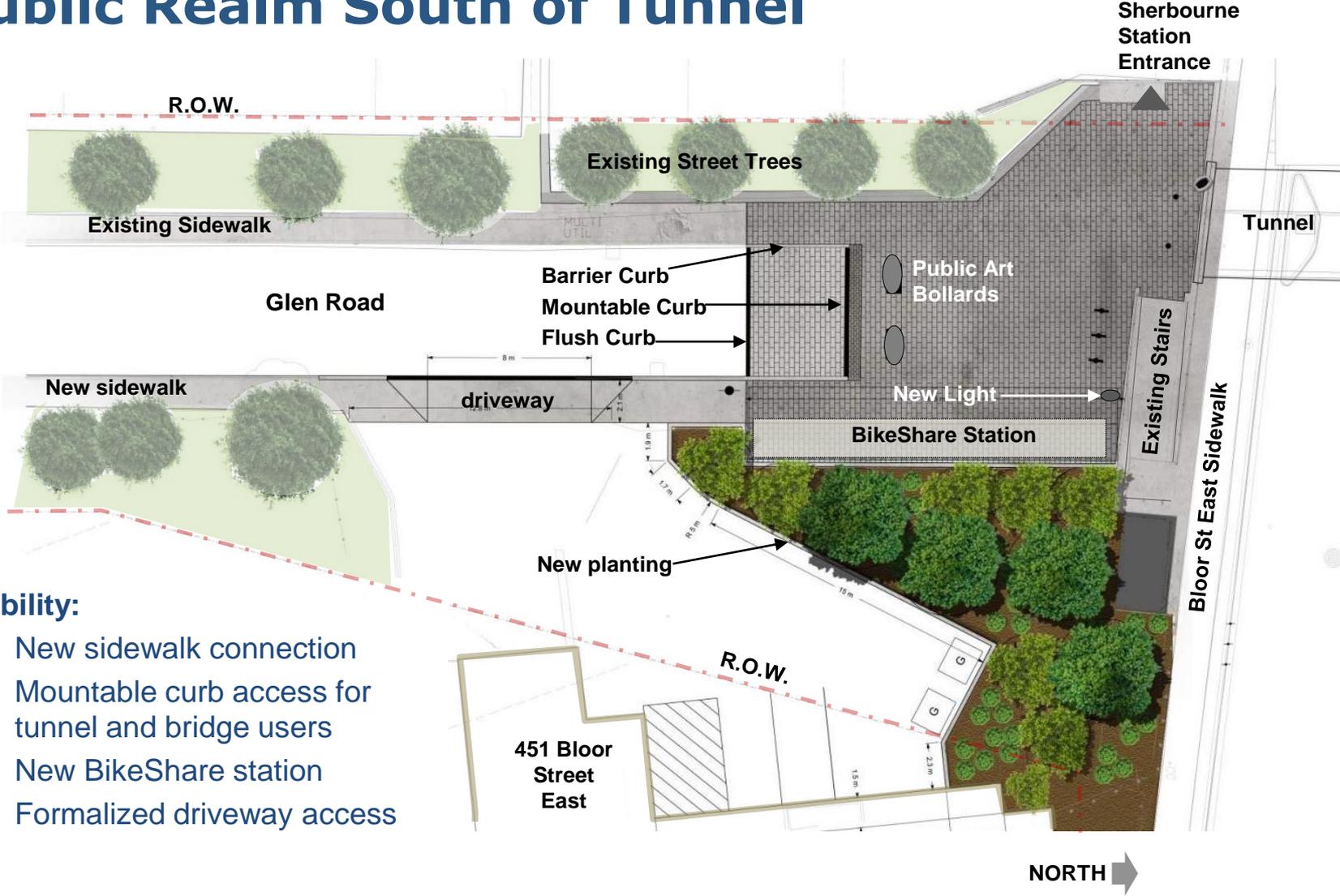
Public Realm South of Tunnel



User Experience:

- Reduced ROW encroachments
- High branching trees
- Transparent Fencing
- New pole light
- Retaining wall recapped
- Unit paved plaza space

Public Realm South of Tunnel



Mobility:

- New sidewalk connection
- Mountable curb access for tunnel and bridge users
- New BikeShare station
- Formalized driveway access

Existing Landing at Glen Rd & Dale Ave View looking south from Glen Rd



Landing at Glen Rd and Dale Ave

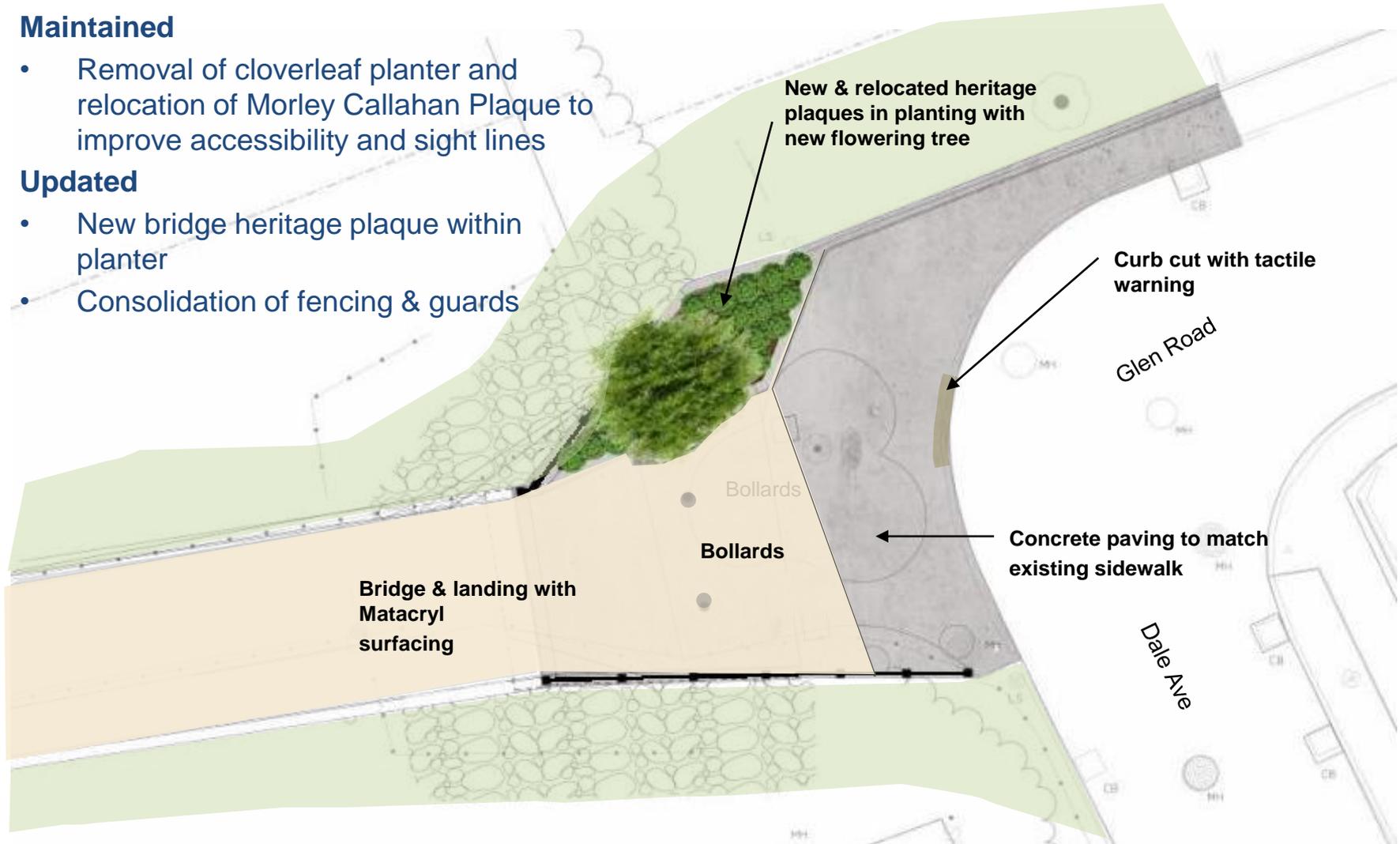


Maintained

- Removal of cloverleaf planter and relocation of Morley Callahan Plaque to improve accessibility and sight lines

Updated

- New bridge heritage plaque within planter
- Consolidation of fencing & guards



Questions

- Does the panel have any feedback on the proposed material palette considering the heritage context and public art?
- Does the panel have any feedback on how to best mitigate conflicts between different bridge & path users on the site, while accommodating accessibility for all ages and abilities?