



**City of Richmond**  
Administration

## Memorandum

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**To:** Development Permit Panel  
**From:** Joyce Chang  
Project Manager, Major Projects Team  
**Date:** May 24, 2006  
**File:** 10-6525-07-04-03/2006-Vol 01  
**Re:** **Canada Line – Operations and Maintenance Centre Memo to Development Permit Panel for May 24, 2006**

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The design of the Operations and Maintenance Centre (OMC) is scheduled for presentation to the Richmond Development Permit Panel on May 24, 2006. The Design Advisory Process (DAP) identified within the Richmond Access Agreement (RAA) exempts the Canada Line project from the normal City of Richmond Development and Building Permits process. The DAP identifies an 8 step process with a 16 week timetable that involves 2 public open houses, 1 presentation to the Richmond Advisory Design Panel (ADP) and 1 presentation to the Richmond Development Permit Panel (DPP) by Canada Line representatives (CLCO).

Richmond cannot require the Canada Line project to comply with the City's preferences regarding the design of fixed facilities for the rapid transit project but the Canada Line project will attempt to address Richmond suggestions and requests. Furthermore, Richmond has agreed to abide by a 16 week review process for proposed fixed facilities within the City in order for the Canada Line project to proceed on schedule.

In general, the design information provided by CLCO, InTransitBC and TransLink regarding the proposed fixed facilities in Richmond (i.e. OMC, Park-n-Ride Facility, Bridgeport, Aberdeen, Lansdowne and Brighthouse Stations) does not provide an equivalent level of design development or detail that is normally provided by all other applicants as part of the normal development review process in the City of Richmond. With the above qualification, Richmond staff have addressed the 4 questions for the OMC that are the subject of this DPP meeting on May 24, 2006.

### Operations and Maintenance Centre (OMC)

1. How does the Operations and Maintenance Centre (OMC) design comply with the Vision adopted by Council for the line at the Council workshop of April 2005?

a) Issue: Achievement of Richmond's Best and Final Offer (BAFO) Design Guidelines:

Comment: Experience has shown that the operation of other transit maintenance facilities is of interest to many individuals and the OMC is an opportunity to encourage and welcome connection with Richmond residents. However, there is no opportunity to view the train yard activities from the perimeter of the site. Provision of a visitors centre or viewing gallery within the OMC is another missed opportunity that would promote the Canada Line project within the community.

b) Issue: Transit Plaza Design

Comment: The proposed maintenance building is huge in scale with little variation of facade materials and an expensive roof with very subtle articulation. Since it is suspected

that this large relatively flat roof will be visible from the Highway 99 viaduct, concern has been expressed that it will attract birds and quickly become an unsightly maintenance issue.

c) Issue: Site Planning

Comment: Chain link fencing with either barred or razor wire is unacceptable as a perimeter treatment and more sophisticated security provisions should be incorporated into the design. The design of the OMC does not provide for a continuous, perimeter landscape treatment and frontage improvements along adjacent road are minimal. The majority of this 7-acre site is to be covered in ballast material (i.e. gravel) and little attention has been given to aesthetic appearance and treatment of the ground plane. The OMC main entry and arrival sequence should consider visitors as well as employees and provide for significant tree planting, landscaped parking areas, pedestrian walkways and bicycle connections to the facility.

2. What OMC design changes have already been made by CLCO and InTransitBC, as result of discussions with Richmond staff?

- Straddle Bents have been eliminated in the West Bridgeport Area.
- Dual guideway has been restored between Bridgeport and Cambie Stations.
- InTransitBC has engaged a landscape architect for the OMC.
- CLCO has realigned the CPR rail line east of Great Canadian Way around the OMC site, which will eliminate the need for the CPR tracks to extend across Great Canadian Way in the future once the spur line to Ebco Industries is retired after 2010.
- CLCO/InTransitBC has transplanted all affected street trees in the West Bridgeport Area or will provide 2 new trees for each tree that is removed.

3. What changes are Richmond staff still seeking to improve the OMC design that could be accommodated easily?

Issues	City of Richmond Specific Requests
1. Viewing Area	<ul style="list-style-type: none"> <li>• Provide an elevated, outside vantage point to view train activities complete with benches, visitor parking spaces and a handicapped accessible route to the location.</li> </ul>
2. Perimeter Fence	<ul style="list-style-type: none"> <li>• Provide higher quality perimeter fence such as a heavy gauge welded wire mesh fence in combination with surveillance cameras and security patrols in lieu of barred or razor wire.</li> <li>• Also consider a continuous perimeter landscape treatment that incorporates layers of plant material as screening to the rail yard.</li> </ul>
3. Ground Plane	<ul style="list-style-type: none"> <li>• Consider the introduction of grass in lieu of gravel ballast where possible in the train yard.</li> </ul>
4. Landscape Plan	<ul style="list-style-type: none"> <li>• Ensure the landscape plan provides the appropriate amount of tree planting in the parking lots according to the City of Richmond design guidelines (i.e. 1 tree per 2 parking stalls).</li> </ul>

4. What changes are Richmond staff still seeking to the OMC design that may be more difficult to accommodate?

Issues	City of Richmond Specific Requests
1. Façade Materials	<ul style="list-style-type: none"> <li>• Label the elevation renderings with the intended siding materials.</li> <li>• Examples of acceptable siding could be glazing, metal siding in combination with pour in place concrete (i.e. tilt-up panels) would be an acceptable method.</li> <li>• Pay greater attention to the composition of façade materials on the sides of the building that have visibility from fronting streets.</li> </ul>
2. Roof	<ul style="list-style-type: none"> <li>• Provide more architectural details in the design of the roof since this will be highly visible from the Highway 99 Viaduct, which is an important gateway to the City of Richmond.</li> <li>• Consider a 'shed roof' form with multiple dormers to add visual interest to the roof.</li> </ul>
3. Viewing Centre	<ul style="list-style-type: none"> <li>• Provide a visitor centre or viewing gallery overlooking the train barn. This would provide a public amenity of significant value to the community and help to promote and popularise the Canada Line project.</li> </ul>

Joyce Chang  
 Project Manager,  
 Major Projects Team  
 (247-4681)

JC:bg

Attachments

# BRIDGEPORT STATION

## DEVELOPMENT PERMIT PANEL SUBMISSION

JUNE 14TH 2006



VIA ARCHITECTURE



# VIA ARCHITECTURE

May 30, 2006

City of Richmond  
Development Permit Panel

## BRIDGEPORT STATION DESIGN RATIONALE

The architectural design response or expression of the Canada Line station located in the Bridgeport area, presented in the accompanying drawings, has emerged as a synthesis of a number of influencing factors. There is a desire for this station to be a part of the expression of the entire Canada Line project, which will be welcoming, modern, efficient, and elegant in its approach to stations both at the larger scale as a building and in the finer grain of the architectural detailing. In addition, there is a desire to define the station as an expression of the particular neighbourhood and contextual condition which will be emerging, and further, there is a desire to fulfil the programmatic requirements of an efficiently functional station.

Bridgeport Station is unique along the Canada Line located at the "knuckle" where the alignment splits into 2 routes, with one route continuing down No3 Road to serve Richmond, and with the other route crossing over the Moray Channel of the Fraser River to serve the Airport. The centre platform will encourage easy transfers. Approximately 18 buses currently driving into downtown Vancouver will be re-routed to this location with the passengers transferring onto the Canada Line. This station, combined with the bus exchange and an associated park-n-ride facility, will be become perceived as the major intermodal transit hub of the region.

The neighbourhood for Bridgeport Station is currently a very heterogeneous mixture of land use and building types, and will be gradually encouraged, through City of Richmond policies, to transform and improve by upgrading the roads, elimination of rail tracks, and increased recreational, commercial and hotel uses. Also to be developed is a series of greenways, pedestrian links, and a series of parks connecting to a more accessible and active river front. This area, over-shadowed by low-flying aircraft, will also feel

more connected to the airport with the direct new transit connection.

Bridgeport Station, combined with the surrounding bus exchange and adjacent park-and-ride facility, will become a major focus of this emerging neighbourhood and the station is intended to be a central focal point or landmark seen from the surrounding streets, and glimpsed from the Oak Street Bridge. The simple linear forms of the building with an elegant curved roof, sitting between the linear concrete guideway beams, will express comfort and enclosure as well as linear movement, and is meant to be understood from afar and up close.

The Canada Line stations will share many system-wide design elements and similar design approaches, although this is to be balanced by each station as a specific local response. Most of the stations will be understood as part of "families" of stations such as the Richmond No. 3 Road cluster of stations. However, the Bridgeport Station is meant to be distinct from the No. 3 Road family with its own unique characteristics and design response since it is in a distinct neighbourhood perceived as different from, and remote from, the commercial district of No 3 Road..

The Bridgeport area has had a long history with river-oriented industrial buildings, and the Bridgeport Station is intended to be evocative of this heritage with a clearly visible steel structure, expressed trusses, metal skin, and simple uncomplicated functional forms. In this language of "skin and bones" there is also an echo of the ships, planes and trains which have been so instrumental in the development of the entire Lower Mainland region. The materials for the Platform Level will be painted steel structural components with standing seam metal roofing. The weather protection walls and guardrails will be frameless glass and the floors, as on all the levels, will be porcelain ceramic tiles. The Mezzanine Level will be mostly frameless glass walls and elevator shafts with exposed concrete guideway beams. At the Grade Level the service rooms will be finished with good quality concrete masonry units and painted metal panels with areas of metal louvers.

The micro climate of the Bridgeport area, and this station in particular—with an exposed platform 13 metres above the ground—has encouraged a design response of the cantilevered roof canopy to express an enveloping and sheltering roof form and an asymmetrical glass enclosure for protection of patrons from the prevailing east and south winds. Protection from wind and wind-driven rain at all levels is provided by glazed walls and overhanging roofs

This emphasis on glazing is an important expression of this station for maximizing views at each level and especially the platform level overlooking the flat landscape of Richmond, glimpses of the Fraser River, possible far views north to the North Shore mountains, and south to Mount Baker. In addition the glazing has an important CPTED function emphasizing transparency, visibility, and surveillance to increase patron security.

The architectural image of this station seen as a form in the landscape and also carried through in the detailing which will be experienced by patrons as they pass through this building, will be strongly characterized by an emphasis on horizontality. The building form has a long extruded horizontal roof and platform form and this is carried through the horizontality of the mezzanine level. This expression continues through the detailing of the glazing and the walls. This horizontal emphasis will connect this station with most or all of the Canada Line stations, it will be symbolic of dynamic transit movement, and it will also be reminiscent of many transit stations from other eras in other cities. It is particularly appropriate to the low horizontal delta landscape of Richmond and even the linear horizontality of the nearby Fraser River.

Functionally this station is intended to be simple and straightforward and easily understood by both arriving and departing patrons. This means that the architecture is intended to be organized in a clear, simple and linear arrangement with everything visible, without hiding places, and with a flow of spaces and circulation that expresses simplicity, clarity and safety.

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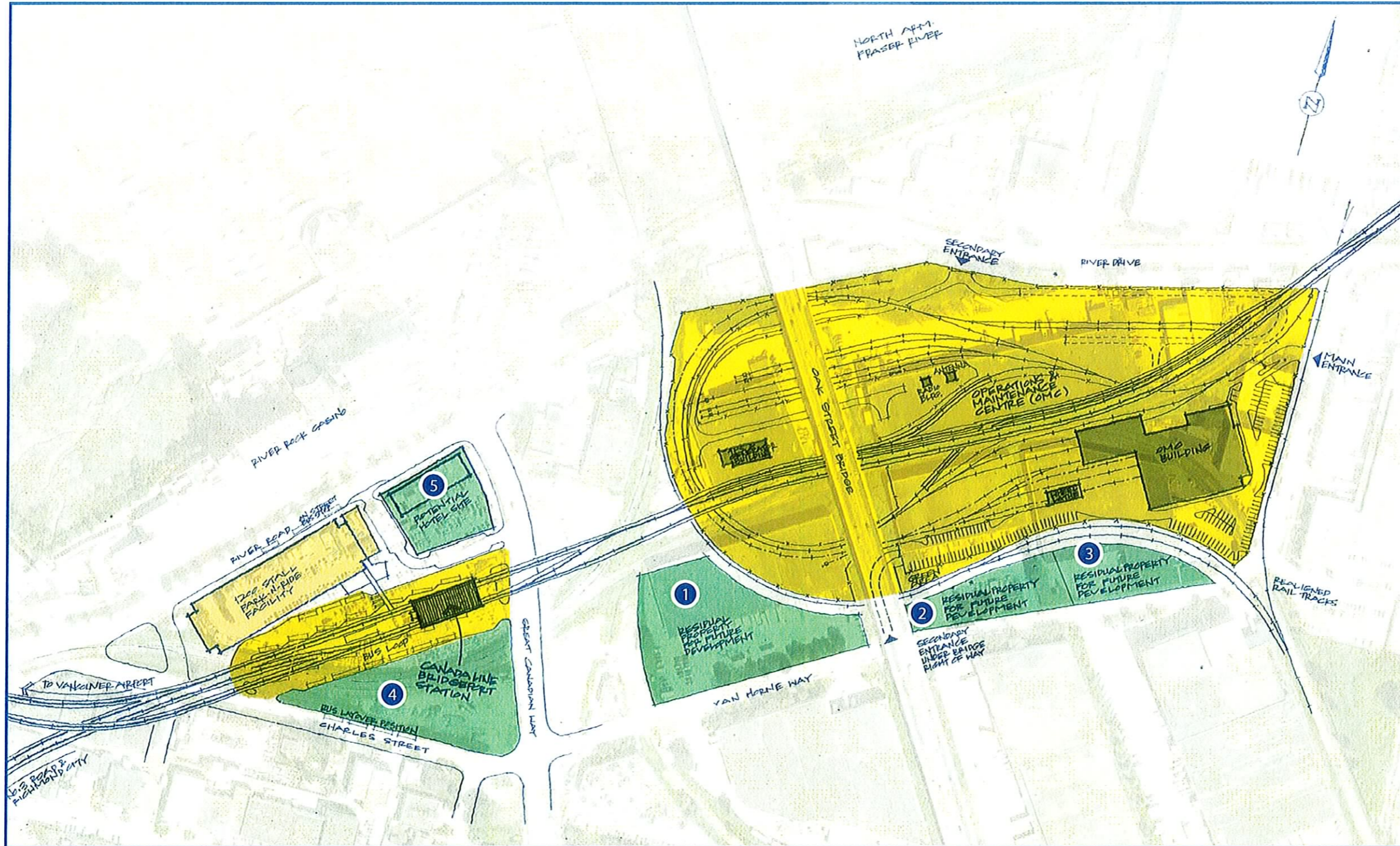


PROFESSIONAL SEAL



## BRIDGEPORT STATION

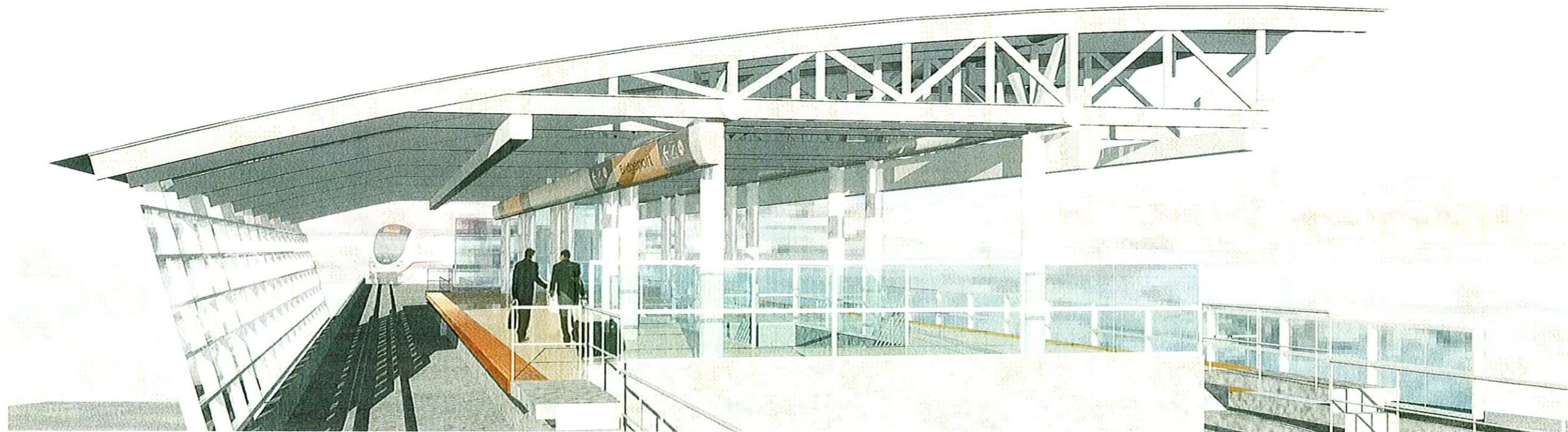
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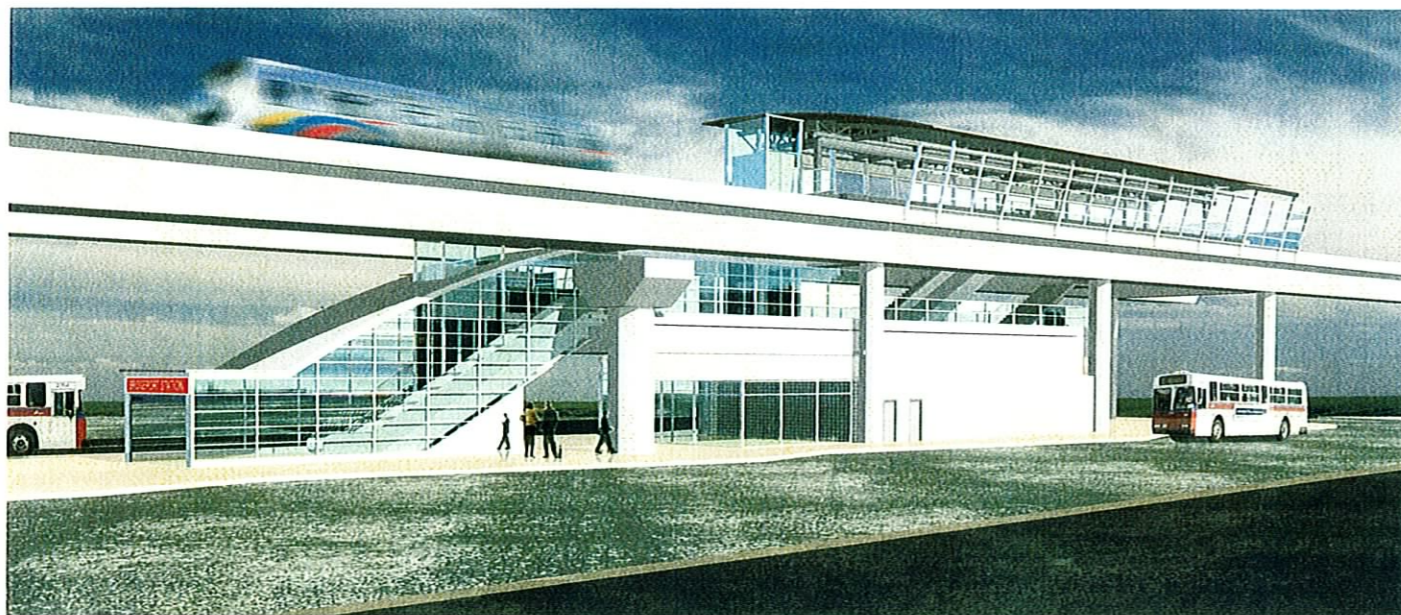
## SITE AREAS

Operations and Maintenance Centre (OMC)	
OMC site	6.95 ha
Residual parcel 1	0.95 ha
Residual parcel 2	0.23 ha
Residual parcel 3	0.34 ha
Bridgeport Station	
Station and bus loop	0.83 ha
Car park	0.49 ha
Residual parcel 4	0.70 ha
Residual parcel 5	0.30 ha

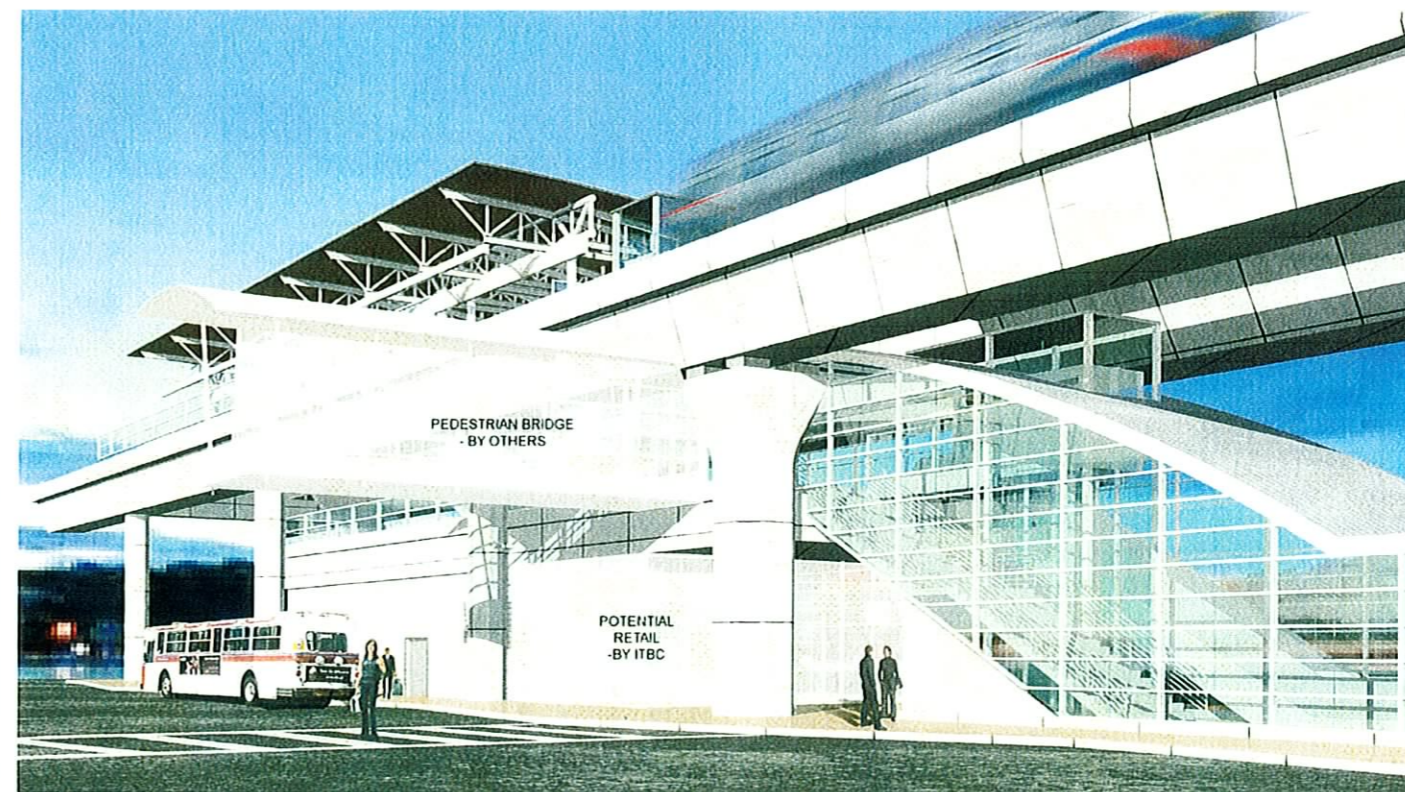




VIEW OF PLATFORM



VIEW FROM SOUTH-EAST



VIEW FROM NORTH-WEST

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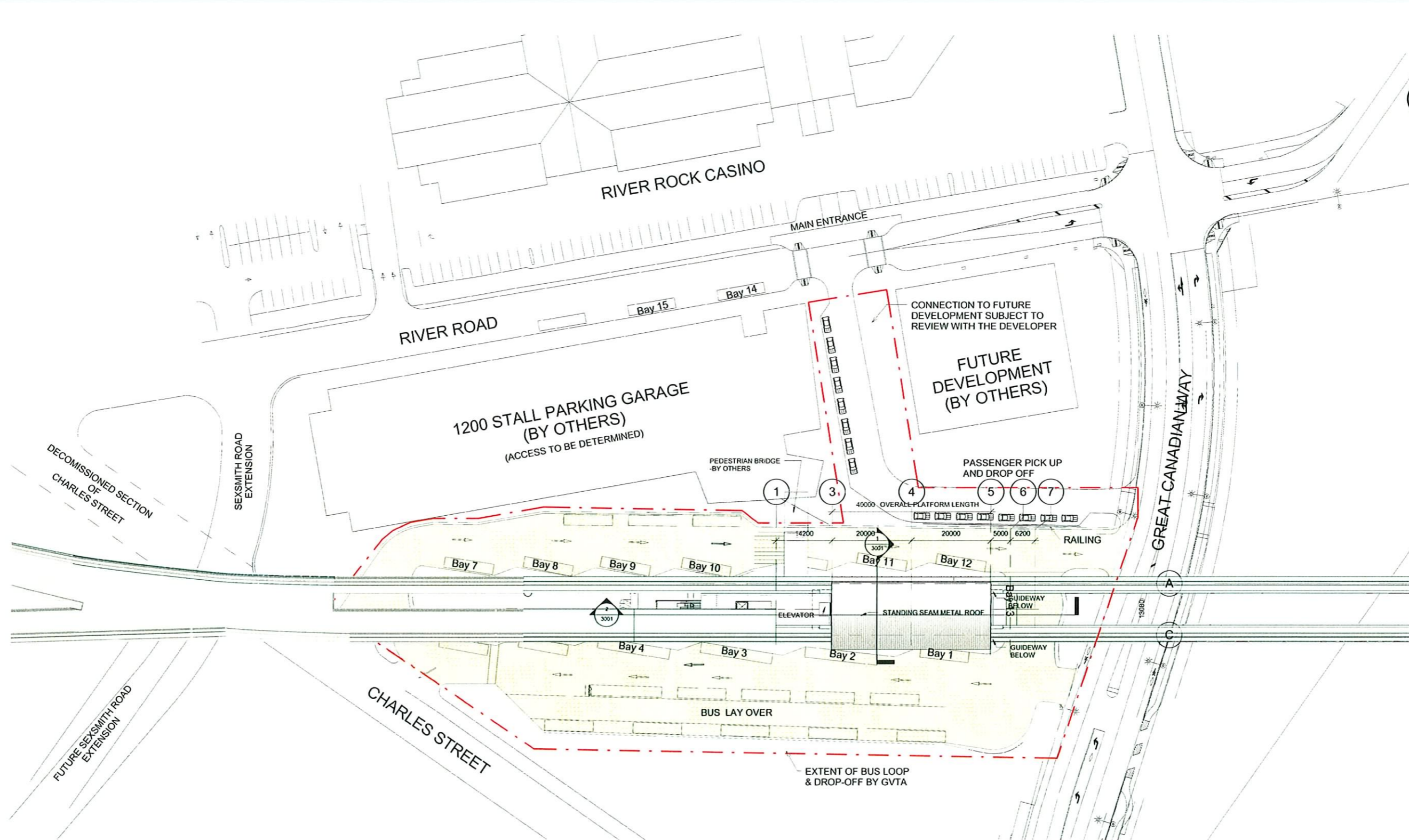
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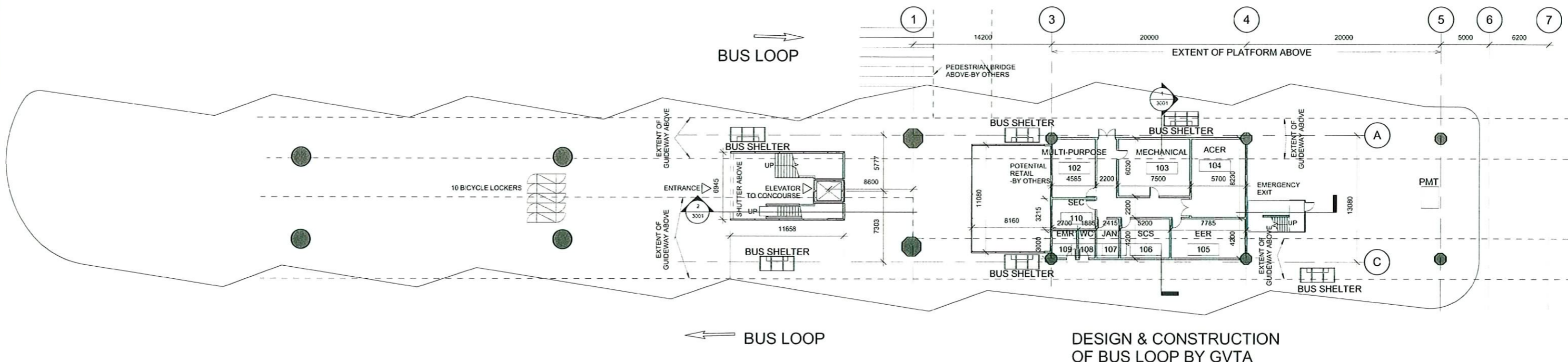
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PROFESSIONAL SEAL

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**SNC-LAVALIN**

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**VIA ARCHITECTURE**

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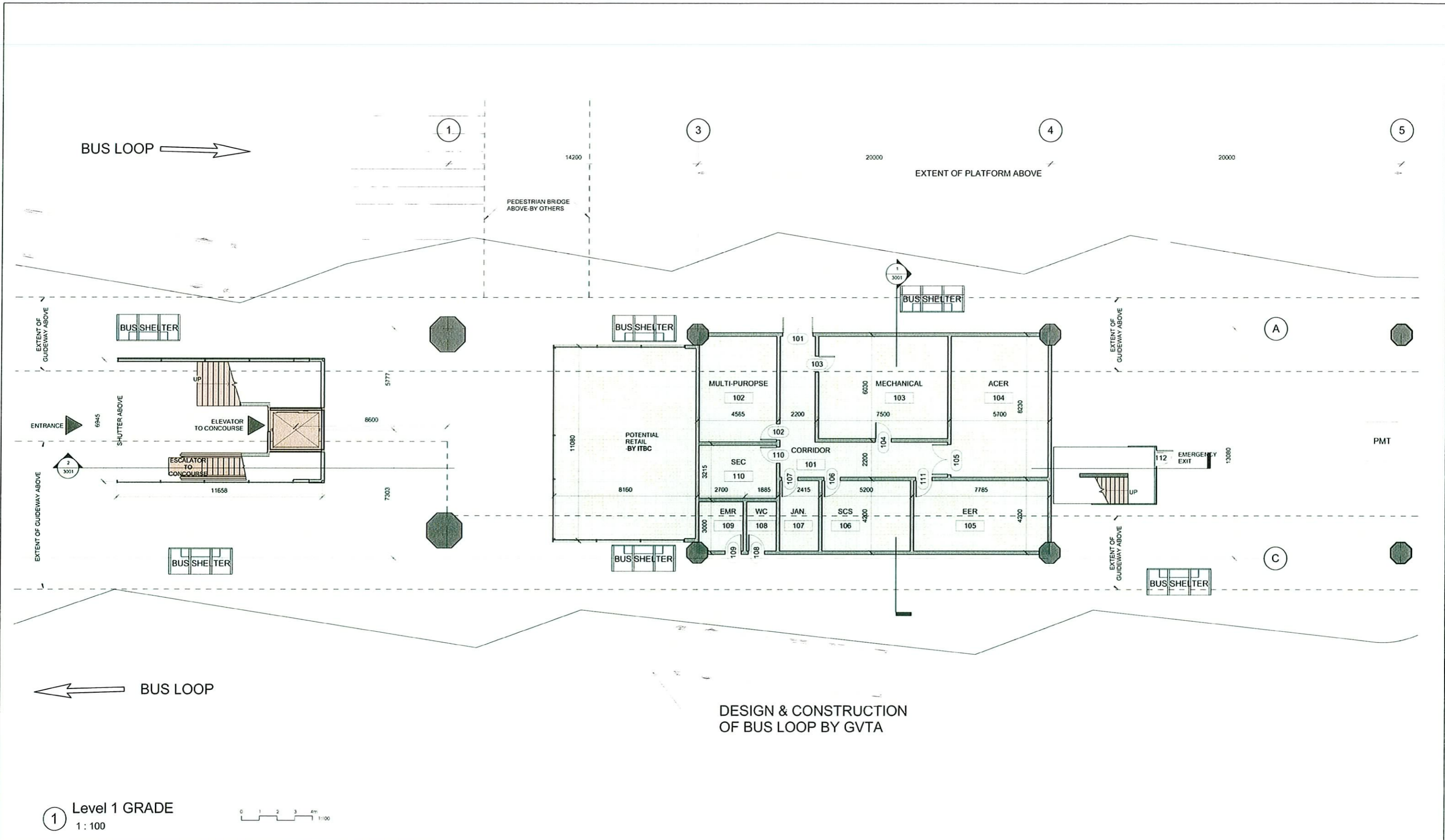
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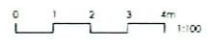
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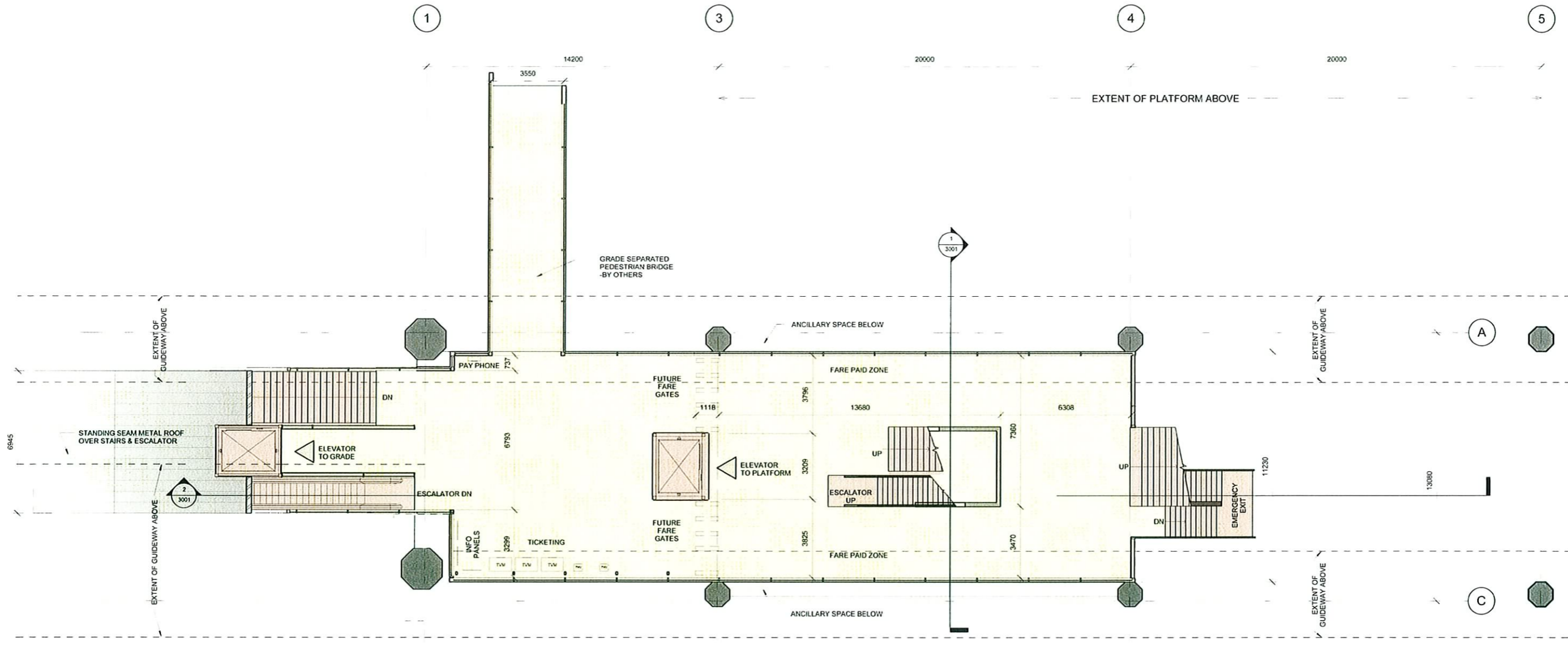
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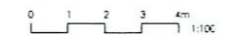
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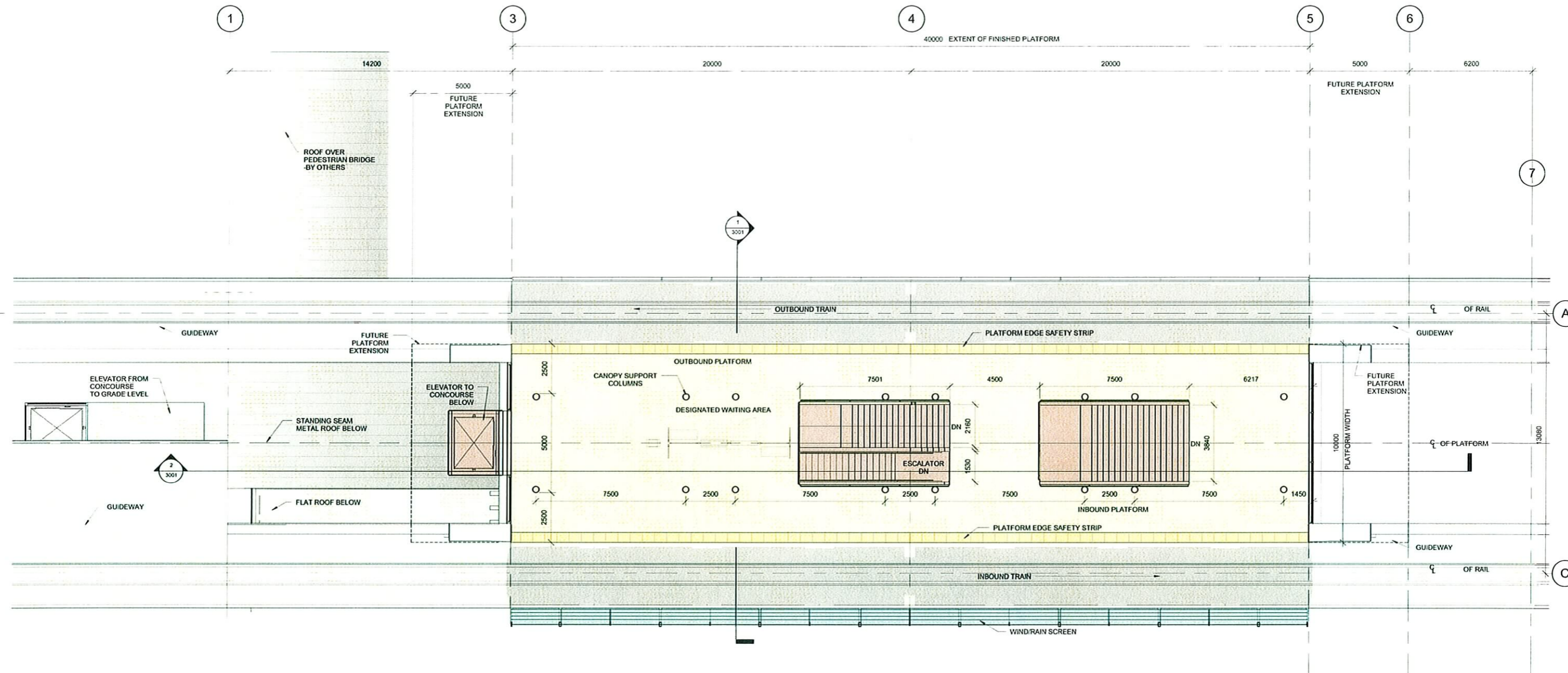
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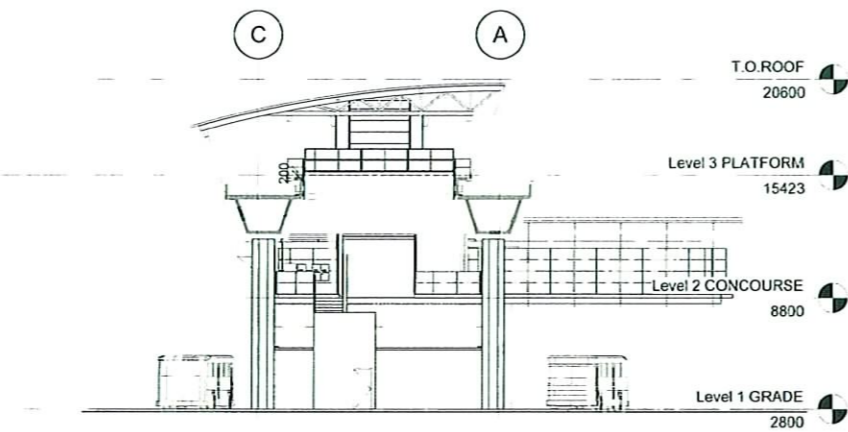
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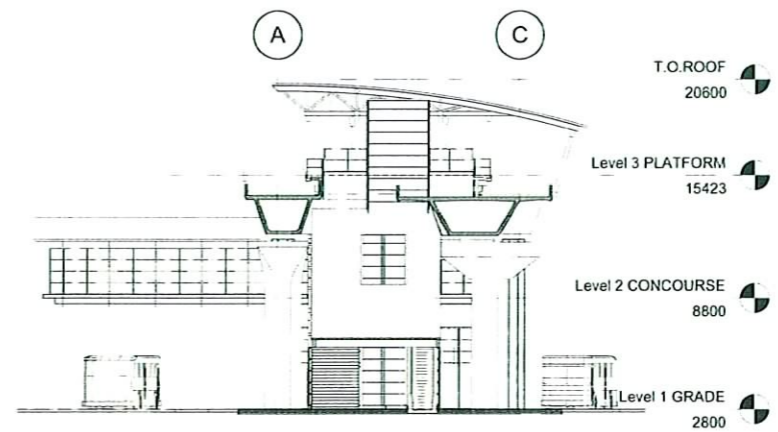
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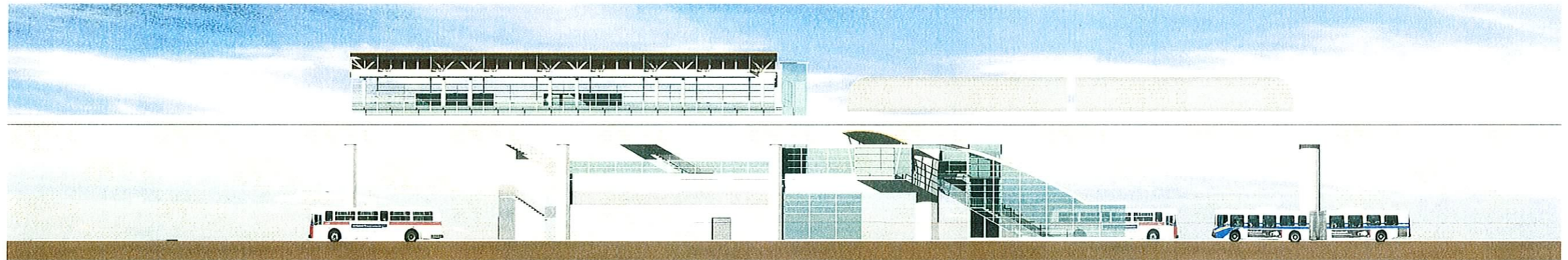
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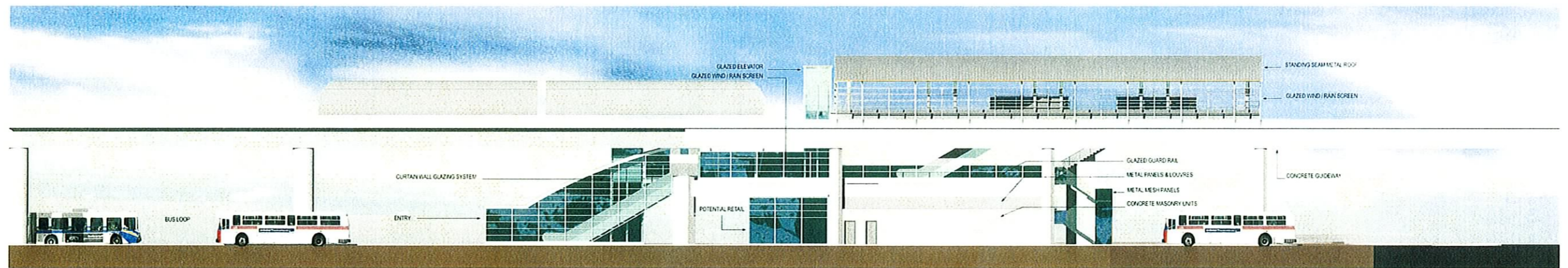
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② West Elevation  
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North Elevation



South Elevation

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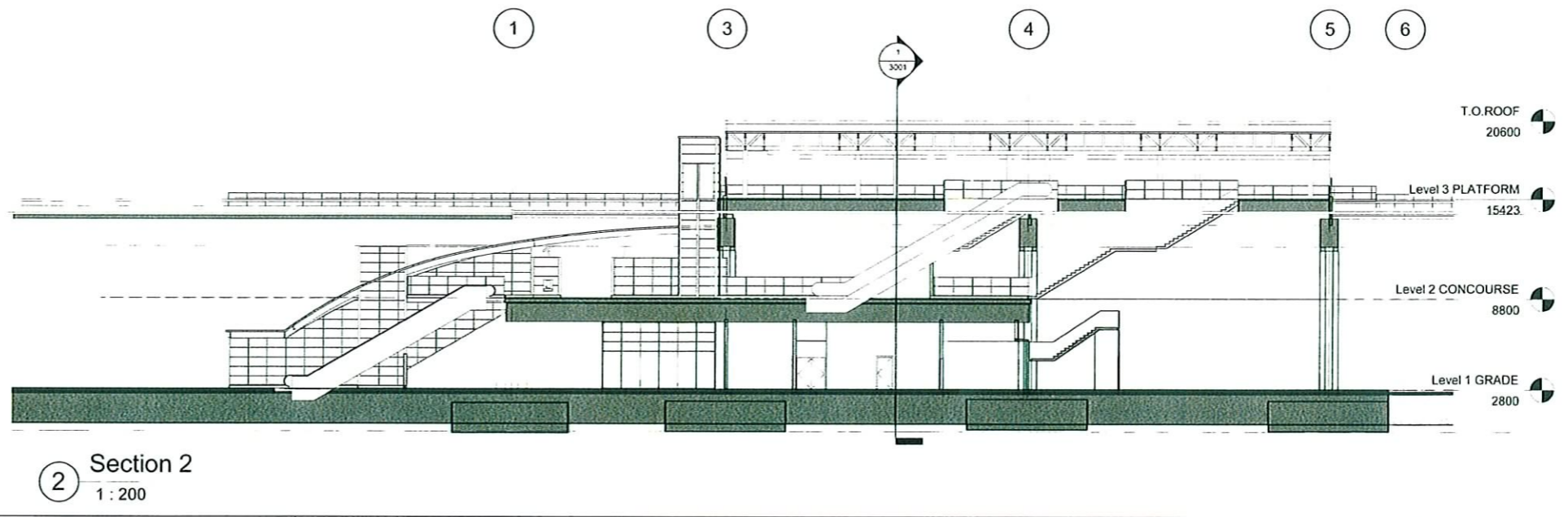
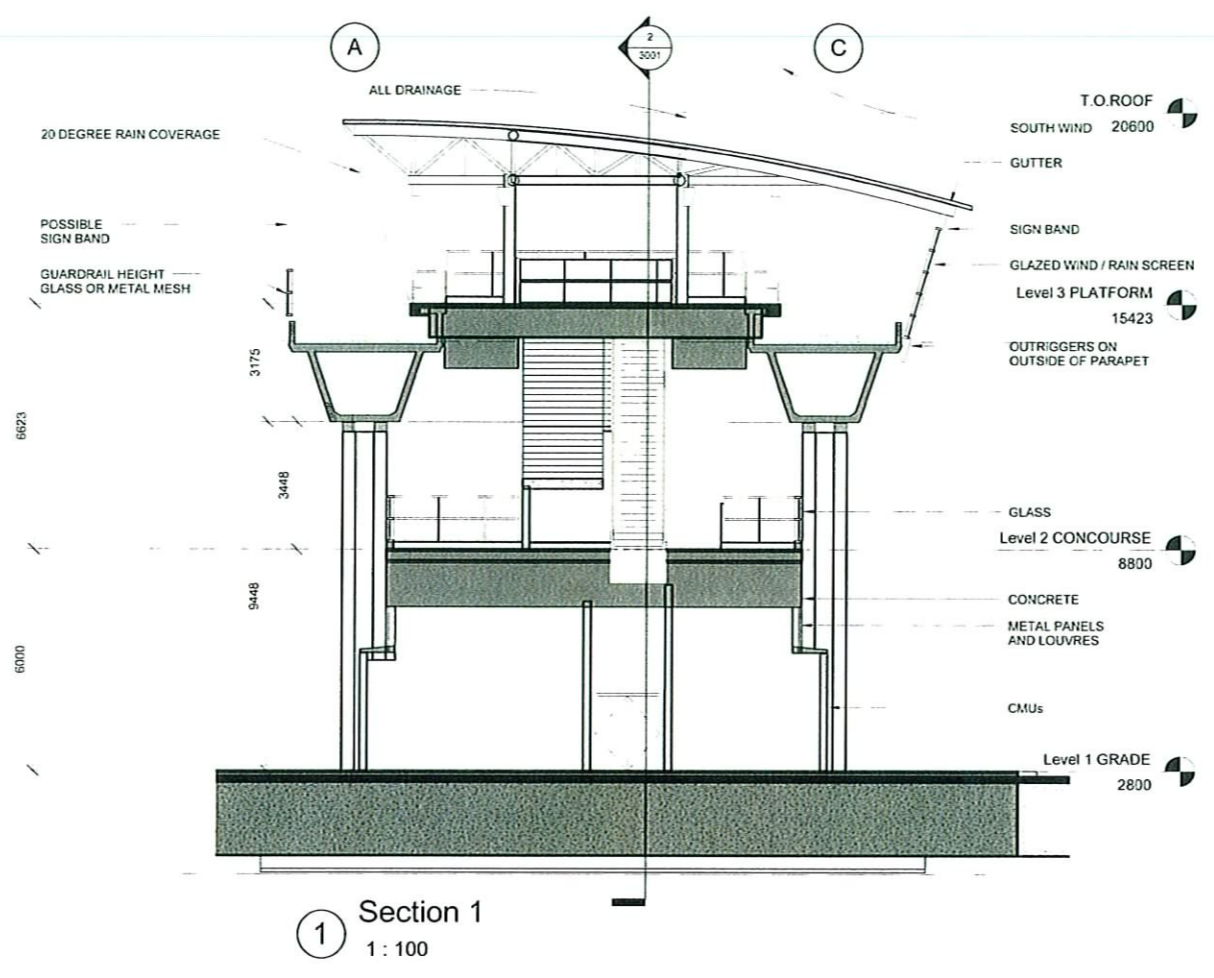


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PROFESSIONAL SEAL



**BRIDGEPORT STATION**  
SECTIONS

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