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VIVANEXT BUS RAPID TRANSIT BAYVIEW AVENUE VIVASTATION PEDESTRIAN ACCESS

The Rapid Transit Public/Private Partnership Steering Committee recommends the adoption of the recommendation contained in the following report dated April 2, 2009, from the Vice President, York Region Rapid Transit Corporation.

1. RECOMMENDATION

It is recommended that:

1. Council receive this report for information.

2. PURPOSE

This report provides a review and recommendations to provide access for passengers with disabilities to the vivaNext station platforms planned for Highway 7 at Bayview Avenue.

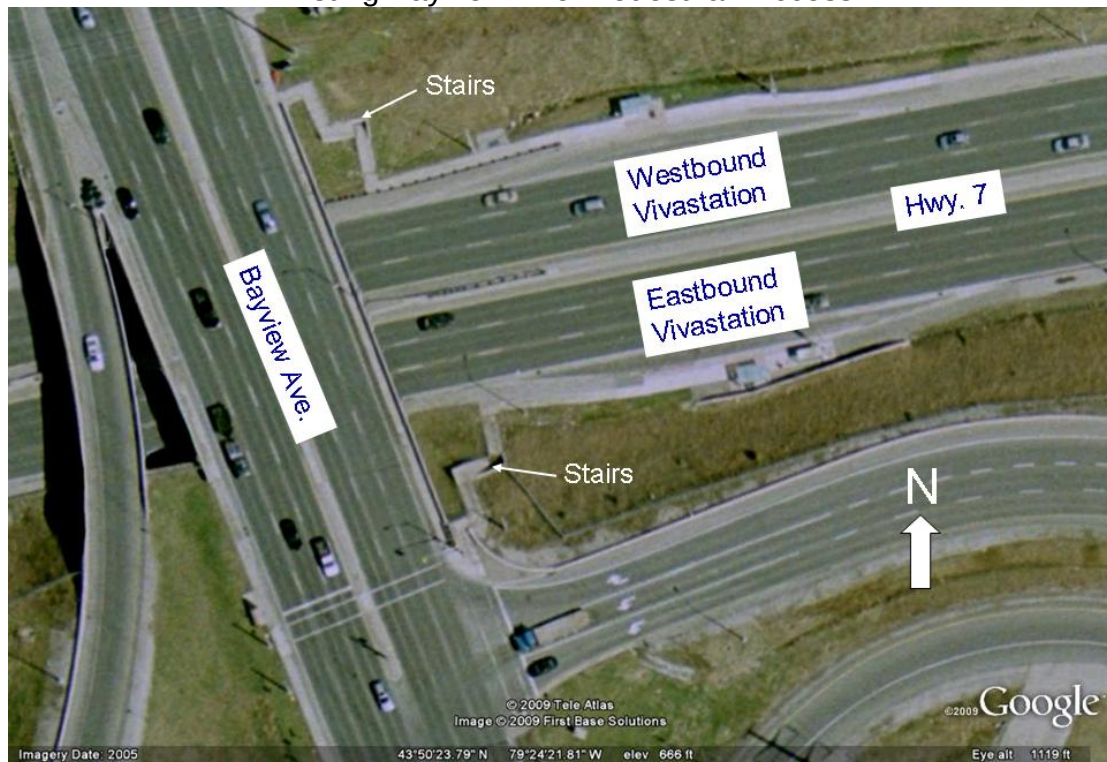
3. BACKGROUND

The preferred EA option for vivaNext along Highway 7 at Bayview Avenue includes curbside vivastations

The existing Bayview Avenue bridge over Highway 7 represents a significant constraint to widening Highway 7 to accommodate Viva rapidways, due to the limited width of the bridge span and the presence of a centre pier. As a result, the preferred option identified in the approved Highway 7 Corridor and Vaughan N-S Link Public Transit Improvements Environmental Assessment was to transition Viva service from the rapidways to mixed traffic operation east and west of the bridge, with a curbside vivastation located at the current Viva Phase 1 stops on the east side of the bridge.

The existing Viva stops are located east of the Bayview Avenue bridge and are currently accessed via concrete stairways, which are also located on the east side of the bridge on both the north and south sides of Highway 7 as illustrated in Figure 1. Approximately 600 Viva riders use this stair access system daily.

Figure 1
Existing Bayview Ave. Pedestrian Access



Ensuring that public transportation stations, stops, equipment, and vehicles are accessible to persons with disabilities is a priority of York Region's Transportation Services

The Accessibility for Ontarians with Disabilities Act, 2005 (AODA) came into effect in June 2005. It applies to both the public and private sectors covering every aspect of life available to the public, except private homes. The goal of the AODA is to ensure that all Ontarians with disabilities have full access to goods, services, facilities, accommodation, employment, building structures, and premises by January 1, 2025. This goal will be achieved through the development, implementation, and enforcement of provincially-set accessibility standards in the areas of customer service, the built environment, information and communications, employment, and transportation. Both public and private sector organizations will be required to implement these standards in increments as they are developed. At this stage no standards have been finalised, and so the applicable Ontario Building Code, and any Municipal requirements are followed. As the vivaNext facilities enter into final design any emerging standards will be followed and the York Region Accessibility Advisory Committee will be consulted for the whole of the Highway 7 from Richmond Hill Centre to Kennedy Road (H3) design.

In 2007, the Region completed an accessibility checklist of 1,500 bus stops along routes deemed to be accessible and started field inspections to ensure these stops meet the needs

of people with different types of disabilities. All Viva rapid transit vehicles are equipped with low floors and a ramp, and the York Region 5th Accessibility Plan requires we ensure universal access for pedestrians and transit customers to the public transportation system. This includes access to bus stops, transit terminals, vehicles, and the sidewalk network that connects to the transit system.

4. ANALYSIS AND OPTIONS

As part of the preliminary engineering of the vivaNext rapidway along Highway 7 from Richmond Hill Centre to Kennedy Road (H3), a review was undertaken to determine the best option for providing access for passengers with disabilities or other mobility impairments to the vivastation. Full passenger accessibility is a committed feature of vivaNext.

The preferred option identified in the EA recommends upgrading the existing curbside Viva Phase 1 stops at Highway 7 and Bayview Avenue for vivaNext operation, but did not deal specifically with the issue of improved pedestrian access. The existing concrete stair system precludes individuals who are unable to ascend and/or descend a stairway, from directly accessing the existing and vivaNext system.

Indirect access to the Bayview stops is inconvenient

Currently, indirect access is provided from the community north of Highway 7 for those who wish to use the westbound platform by using a sidewalk along the Bayview Connector Road, and the north side of Highway 7, a distance of over 600 metres. The eastbound platform is accessed using a similar route, but crossing Highway 7 at the signalized intersection with the Connector Road, and then proceeding along the south side of Highway 7, at a distance of over 650 metres. Access from the community south of Highway 7 is provided by passing over the Bayview Avenue bridge, and then use the Bayview Connector/Highway 7 access described above, for a total distance of over a kilometre.

There are currently no sidewalks on the Bayview connector, requiring pedestrians to walk adjacent to the moving traffic. All of these long distances do not encourage use of the vivastation by passengers who are not able to use the staircases.

Figure 2
Bayview Pedestrian Access



While the cost of work associated with creating a new sidewalk on the Bayview connector was determined, York Consortium 2002 and York Region Rapid Transit Corporation staff does not recommend this solution for pedestrian access because of the distances outlined above.

A ramp and stair system solution for access between Bayview and Highway 7 was examined and is not recommended

Replacement of the existing concrete stair system with a ramp and separate stair system for both the westbound and eastbound platforms has been investigated, and would represent the minimal solution to meet the current building code requirements for accessibility. Due to the elevation difference between Bayview Avenue and Highway 7, ramp lengths would be over 115 metres with 4 switchbacks and a slope of 5%. Such a configuration would not encourage use of the station by passengers with disabilities, and introduce additional maintenance requirements.

The Environmental Assessment for the Highway 407 Transitway is under development. The current preferred alternative for this section of Highway 7 indicates that the Transitway will run between Highway 407 and the south side of Highway 7. Although the alignment is currently at the conceptual level and has not been detailed, if this is carried forward, it would require the removal of the south ramp and stair system when the Transitway is eventually constructed.

Construction of the ramps would require excavation of the existing earth banks behind the vivastation and a retaining wall. Cost of the work associated with this solution is estimated to be approximately \$3,020,000, with an annual maintenance cost of \$7,500.

A combined elevator and stair system is recommended

Replacement of the existing concrete stair system with an elevator system for both the south side and north side of Highway 7 was investigated. It was determined that two freestanding elevator structures with an internal stairway could be built within the existing Highway 7 right-of-way, without impacting the existing bridge.

Based on the conceptual alignment currently available, the Highway 407 Transitway construction should not impact the elevators, leaving the elevators as a one time permanent installation. The elevator structures will be freestanding with a connection to the bridge. Hence, even if reconstruction of the bridge is required it could be done without impact to the elevator structure itself. Prior to final design the assumptions regarding any bridge reconstruction to support the 407 Transitway will be examined in greater detail with the MTO. *Attachment 1* illustrates the proposed look for the elevator and internal stairwell.

Accessibility for Ontarians with Disabilities Act standards are still under development. Due to the onerous configuration of a ramp at this location, it is conceivable that guidelines could prescribe an elevator system as being the only acceptable option for disabled persons at this location.

The elevator and stair solution is preferred since it would:

- a) Encourage the use of the stop by passengers with disabilities.
- b) Reduce potential throw away costs with the implementation of the 407 Transitway.
- c) A significant level of passenger use that further warrants the investment.

Cost of the work associated with this solution is estimated to be approximately \$4,160,000, with an annual maintenance cost of \$13,500. This option has the highest capital and maintenance cost but would encourage the use of the stop by passengers with strollers and wheeled objects and those with stair-related disabilities and challenges.

Richmond Hill / Langstaff Urban Growth Centre may have a potential impact on timing and location

The development of transportation solutions for the Richmond Hill / Langstaff Urban Growth Centre may have a potential impact on the proposed pedestrian access arrangement, those impacts will be re-examined and brought forward for further

consideration. As a result it is possible that either the timing or the location and configuration of the vivaNext station serving Bayview Drive could change.

Prior to the start of construction on H3, staff will confirm the scope of work and the design solution and will bring forward any changes contemplated resulting from the ongoing Richmond Hill and Langstaff Master Plan Studies. Staff will report back to Council during regular monthly updates to indicate the direction of these studies, and unless any changes are evident in the meantime, negotiations for the H3 design build agreement will proceed on the basis of the elevator solution. Should changes be required during the design build phase, they will be dealt with under the change management process. If the results of the studies necessitate a change, then until such changes can be implemented, the vivaNext service along the H3 segment of rapidways could operate with the existing Phase I curb side stations, since the vivaNext stations currently proposed are also curb side.

5. FINANCIAL IMPLICATIONS

The elevator system has been included in the capital budgets submitted to Metrolinx for the H3 rapidways. Subject to spring 2009 Provincial approval of Metrolinx capital budget submission for H3 rapidways, and confirmation of the final recommended design solution for Bayview Avenue and Highway 7 of a combined elevator and stair system as an eligible cost, staff recommends this design solution be carried forward into the final design.

Accessibility Option	Capital Cost	Annual Operating Cost
Ramp and Stairs System	\$3,020,000	\$7,500
Elevator and Stairs System	\$4,160,000	\$13,500

6. LOCAL MUNICIPAL IMPACT

VivaNext is being closely coordinated with local planning and economic development activities along the rapid transit corridors. There are no fiscal impacts to the municipalities for this work. It is quite possible that a coordinated site plan approval will be required with the Town of Markham and Town of Richmond Hill in order to construct these works. Staff will work with both municipalities during the final design period. In addition, staff will work closely with The Regional Accessibility Advisory Committee during the final design.

7. CONCLUSION

The existing stairways are located on the east side of the bridge and on the north and south side of Highway 7, and currently, 600 people are using this stop and stair access system daily. It is expected with the planned development for the Richmond Hill / Langstaff Urban Growth Centre that these numbers will grow significantly.

As part of the vivaNext H3 project, a review was undertaken to determine the best option to provide pedestrian access to the Highway 7 stop at Bayview Avenue for passengers with disabilities and to meet both the Building Code requirements for the new station structure and the Ontarians with Disabilities Act guidelines. The preferred design solution is an elevator and stair system at an estimated capital cost of \$4,160,000, with ongoing annual maintenance costs of \$13,500. The elevator and stair system has been included in the capital budgets submitted to Metrolinx for the H3 corridor. The elevator and stair solution is preferred since it would:

- a) Encourage the use of the stop by passengers with disabilities.
- b) Reduce potential throw away costs with the implementation of the 407 Transitway.
- c) A significant level of passenger use that further warrants the investment.

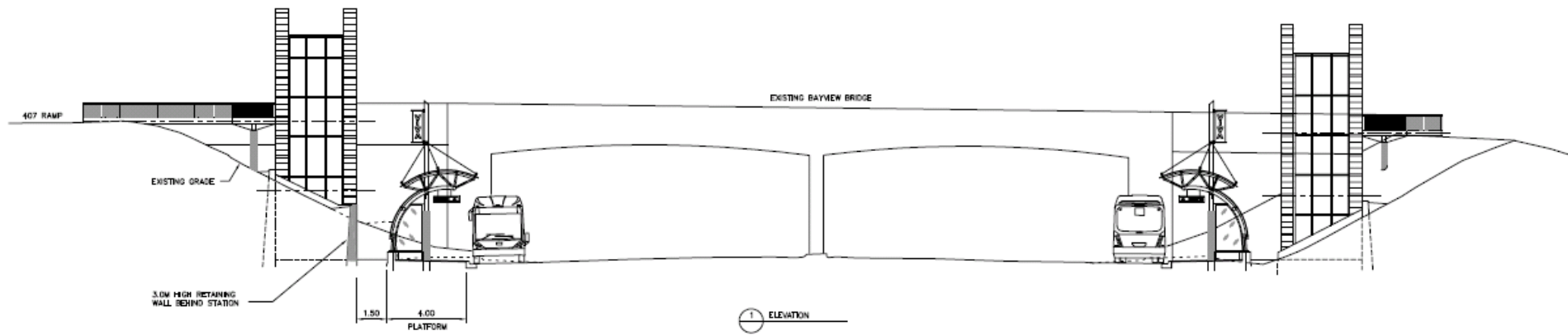
Prior to final design the assumptions regarding any bridge reconstruction to support the 407 Transitway will be examined in greater detail with the Ministry of Transportation Ontario.

The future development of transportation solutions for the Richmond Hill / Langstaff Urban Growth Centre may impact the proposed pedestrian access arrangement. The results of any development will be re-examined and any proposed changes brought forward for further consideration. As a result it is possible that either the timing or the location and configuration of the vivaNext station serving Bayview Drive could change.

For additional information, please contact Mary-Frances Turner, Vice-President, York Region Rapid Transit Corporation at (905) 886-6767 ext. 2226.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included with the agenda for the April 16, 2009 Committee meeting.)



VivaNext Bus Rapid Transit Bayview Avenue Vivastation Pedestrian Access