

Canadian Brownfields Case Study

Garrison Crossing



Birds eye view of bridge looking north

PROJECT SUMMARY

Garrison Crossing is a 101-metre pedestrian and cycling bridge located in Toronto, Ontario, Canada. The \$19.7 million bridge is located to the southwest of downtown, east of Liberty Village and south of Trinity Bellwoods Park. It is Canada's first entirely stainless steel bridge. The two-bridge structure, which spans two rail tracks, provides a vital link between parks in the downtown area of Toronto, allowing pedestrians and cyclists to travel from Trinity Bellwoods Park to the Fort York Grounds. In 2019, Garrison Crossing was a finalist for the Brownie Awards, in the RENEW category.

The southwestern area of downtown Toronto has seen rapid redevelopment in recent years, as former industrial sites are now highly desirable communities like Liberty Village, Trinity Bellwoods, and Cityplace. Given this growth in close proximity to the rail corridors, the bridge was needed to fill a significant gap in access between Fort York and new public spaces in development on Ordnance Street. With major

streets and the rail corridors, there was concern about the lack of safe crossing options for pedestrians and cyclists

Plans for this connection began in the early 2000's, but cost estimates exceeded the city's budget. In 2012, City Council authorized City staff, Build Toronto (now part of CreateTO) and its development partners to integrate the

QUICK FACTS

Location

Toronto, Ontario

Project type

Pedestrian and cycling bridge (101 metres)

Land uses

Open space, recreation

Keywords/special features

Pedestrian bridge, cycling, rail corridor, connectivity, parks, Section 37

Website

www.garrisoncrossingbridge.ca

Project address

10 Ordnance Street, Toronto, Ontario

Developer

Dufferin Construction

Owner

CreateTO

Designed by

Pedelta and DTAH Architecture

Architect

Dufferin Construction

Author

Vanessa Cipriani [in](#)

Editors

Christopher De Sousa, Mabel Mai

Case studies were prepared as a course assignment by students enrolled in PL8312/PLE845: Brownfields & Sustainable Development, School of Urban and Regional Planning, Ryerson University (Winter 2021). Information for the case studies was obtained from online sources, available reports, and, in some cases, site visits and direct communication with stakeholders.

If you are aware of any errors or updates to the case studies, please contact chris.desousa@ryerson.ca.

The opinions expressed in this case study are those of the authors only and do not represent the opinions and views of either Ryerson University, the School of Urban and Regional Planning, or the Canadian Brownfields Network.



bridge within the 7.75 acre area development of Ordnance Triangle. This development is east of Liberty Village, a 43-acre master-planned community with residential, commercial, and retail uses that attracts young professionals. Build Toronto (now CreateTO) oversaw the development. Construction began in 2016 and the bridge opened to the public in the fall of 2019.

Site Characteristics and History

The Garrison Crossing bridge traverses a site at 10 Ordnance St, which is a triangular shaped parcel of land situated east of Ordnance Street and bound to the north by the Kitchener Rail Corridor and to the south by the Lakeshore Rail corridor. The name "Garrison" is a nod to the area's history and proximity to the Fort York National Historic Site, which was a military garrison for the region. It shares a name with Garrison Creek, which was a short 7.7 km stream that flowed southwest into the western part of Toronto Harbour that was diverted underground in the 1870's, and by the 1920's, the creek had been completely buried.

Prior to development, the site was unoccupied apart from access and storage for Metrolinx on a small compound situated beyond the eastern property limit. The site was transferred from crown Land to the City of Toronto in 1913 prior to ownership by several companies beginning in 1929. It was used for industrial purposes from at least 1947 until the late 1980s and has been undeveloped since 1992. The site was considered an enhanced investigation property based on the former use of the Site for industrial purposes as defined by Ontario Regulation 153/04.

There were a number of environmental challenges that the site presented that required a comprehensive environmental investigation. In accordance with the Ministry of the Environment, Build Toronto conducted comprehensive environmental investigations, including environmental site assessments and risk assessments, to ensure proper soil management and risk management measures were established.

In 2008, a Municipal Class Environmental Assessment (EA) was initiated to determine a concept and design, but the bids for the concept and design exceeded the budget.



View of the bridge looking east (Source: CreateTO)

Source: CreateTO

Seven areas of potential environmental concern were identified in associated with the Site:

- Former presence of coal and oil storage in the Northwest corner of the main building
- Presence of subsurface fill across the Site and fill piles
- A railway spur formerly entered the eastern portion of the site and ran along the northern side of the main building
- The presence of railway ties (coated with creosote) stored on the southern portion of the site
- A transformer was formerly located on the

western portion of the site

- The former presence of an incinerator in operation on the western portion of the site between 1892 and 1925
- The former presence of atlas steels limited (a steel cutting facility) at 30 Ordnance Street (immediately northwest of the site)
- Contaminants of concern include metals and inorganics, PHCs F1 TO F4, PCBsb, PAHs, VOCs.

The Ordnance Triangle lands have been approached as a comprehensively planned development. City staff, in collaboration with

Aerial view looking south with future parklands (Source: CreateTO)



Source: CreateTO

Build Toronto and the applicant, have considered, among many matters, the relationship to nearby open spaces, Liberty Village, and Fort York National Historic Site, opportunities to improve pedestrian and vehicle connections, the proximity to the adjacent railway lines, the relationship to the proposed future park space, and connections to existing and proposed cycling infrastructure, including the new Fort York pedestrian and Cycling Bridge.

Cleanup

A Risk Assessment was undertaken for the properties at 10 Ordnance to assess the human health risks and ecological risks associated with contaminants on, in or under the property. Risk Management Measures were implemented to ensure the lands are suitable for parkland use. Remediation included excavation and off-site disposal of soils.

Risk management measures included:

- Soil cover or barrier, including hard cap, fill cap, and fence barriers
- Inspection and maintenance program as long as the contaminants of concern are present on the property
- Soil management plan, including but not limited to provisions for soils excavation, stockpiling, characterization, disposal and record keeping
- A site-specific health and safety plan
- No construction of enclosed buildings unless

certain provisions are met

- Site Plan to be prepared by a Qualified person prior to occupancy describing the property and placement of the barrier to site soils

The Phase I Environmental Site Assessment was completed on January 18, 2015, and the Phase II was submitted on January 17, 2015, with an update on May 15, 2015. A Record of Site Condition was filed on May 25, 2016 to the Environmental Site Registry (RSC #222075).

Community Involvement

The public and local community was engaged in the final bridge design. In early 2015, the first community meeting was held, with further meetings throughout the year. After a Request for Proposals (RFP) process, three potential designs emerged and were presented at a community meeting. Feedback from this process was among the factors considered by an evaluation committee including industry professionals familiar with the city's planning process and the importance and context of surrounding landmarks and communities. The name Garrison Crossing was selected as a nod to area history.

Financing

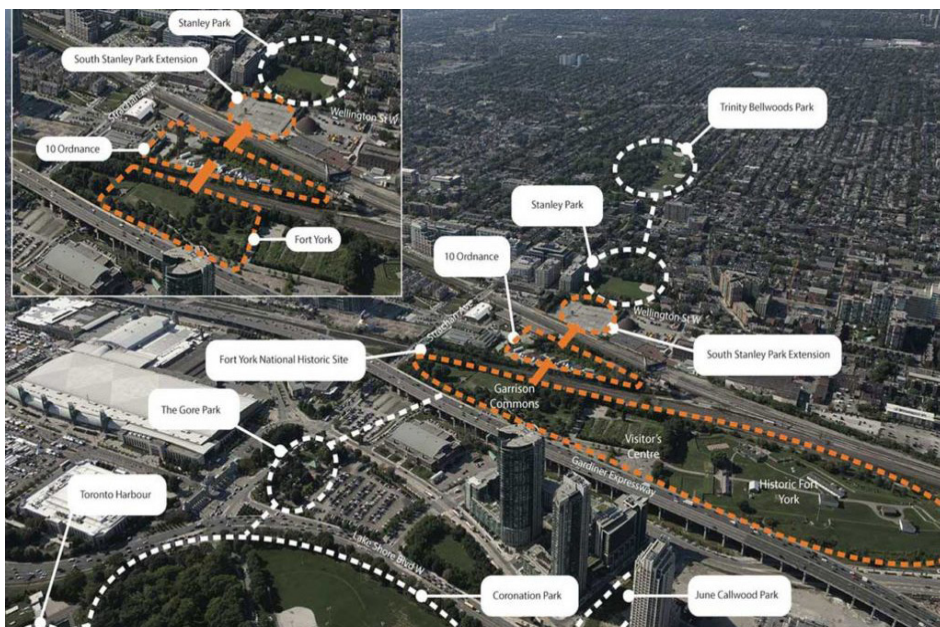
Financing of the bridge was the most significant challenge, and early estimated costs presented a significant barrier to the project's realization. The City rejected the initial lowest cost bid of \$22.8 M and sought to find alternative, lower

cost designs. City staff then identified an opportunity to work with Build Toronto (now CreateTO), which was undertaking a Master Planning process for the Ordnance Triangle lands within which the bridge would be located. In particular, development applications for several developments were being reviewed. This presented an opportunity to create value from the development that would help fund the project. In addition, Section 37 and Section 45 contributions received for several building developments helped to fund the project. These contributions came from developers building projects in the area, in exchange for certain approvals or requirements. The final cost of Garrison Crossing was \$19.7 M.

Lessons Learned

A non-traditional procurement model was used to facilitate the design and construction of Garrison Crossing. The initial cost estimates for the bridge construction exceeded city council's budget. Given these financial restrictions, local transportation needs, and tight timelines, the City and CreateTO opted to use a Design-Build model. In this model, the cost of the bridge is fixed, and companies propose designs to fit within this budget. This allows the Design-Builder the flexibility to determine the appropriate response and detailed design requirements to best deliver the project. In this scenario, private sector expertise is better leveraged to deliver innovative solutions. As well, the private sector company selected to help deliver the project carries more risk and ownership of its completion than it would otherwise in a typical municipal-run process, which benefits the municipality.

This project demonstrated how municipalities can find creative ways to finance projects that help them achieve their planning goals for communities. Developer contributions for projects can be used to enhance the vibrancy and connectivity of communities formerly isolated by edges created by rail corridors. These funds can also be used in other areas of the municipality that are separate from where the development is taking place, in order to ensure equitable access to amenities and public space across the city.



Source: CreateTO

Proposed park network map (Source: CreateTO)

Endnotes

Agenda Item - Naming of Fort York Pedestrian and Cycle Bridge as "Garrison Crossing." (2017, January 17). Toronto and East York Community Council. <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.TE21.26>

Alston Associates Inc. (2014). *Geotechnical Investigation Report 10 Ordinance Avenue, Toronto*. 13–061.

City of Toronto. (2017). *Garrison Common North Secondary Plan*. <https://www.toronto.ca/wp-content/uploads/2017/11/97df-cp-official-plan-SP-14-Garrison.pdf>

Fort York Pedestrian and Cycle Bridge and Ordinance Triangle Master Plan - Status Update. (2013). <https://www.toronto.ca/legdocs/mmis/2014/pw/bgrd/backgroundfile-65548.pdf>

Garrison Creek. (n.d.). Retrieved May 4, 2021, from <http://www.lostrivers.ca/GarrisonCreek.htm>

Garrison Crossing - CreateTO. (n.d.). Retrieved May 4, 2021, from <https://createto.ca/project/garrison-crossing/>

Landau, J. (2015, June 5). Community Meeting Reveals Fort York Pedestrian Bridge Proposals | UrbanToronto. *Urban Toronto*. <https://urbantoronto.ca/news/2015/06/community-meeting-reveals-fort-york-pedestrian-bridge-proposals>

Landau, J. (2018, June 22). Garrison Crossing Soon to Link Two Toronto Neighbourhoods. *Urban Toronto*. <https://urbantoronto.ca/news/2018/06/garrison-crossing-soon-link-two-toronto-neighbourhoods>

Landau, J. (2019, October 1). Garrison Crossing Pedestrian/Cycle Bridge Opens to Public. *Urban Toronto*. <https://urbantoronto.ca/news/2019/10/garrison-crossing-pedestriancycle-bridge-opens-public>

Ministry of the Environment and Climate Change. (2015). *Certificate of Property Use*.

Novakovic, S. (2015, November 24). Fort York Bridge: Winning Entry Stands Out For Low Costs. *Urban Toronto*. <https://urbantoronto.ca/>

[news/2015/11/fort-york-bridge-winning-entry-stands-out-low-costs](https://urbantoronto.ca/news/2015/11/fort-york-bridge-winning-entry-stands-out-low-costs)

Ontario Ministry of the Environment and Climate Change. (2016). *Record of Site Condition # 222075*.

Smith, T., & West, K. S. (2014). *Phase One Environmental Site Assessment, 10 Ordinance Street, Toronto, Ontario*.

The Project - Garrison Crossing. (n.d.). Retrieved May 4, 2021, from <https://garrisoncrossingbridge.ca/the-project/>

WESA. (2014). *Phase Two Environmental Site Assessment for 10 Ordinance Street Toronto, Ontario*.