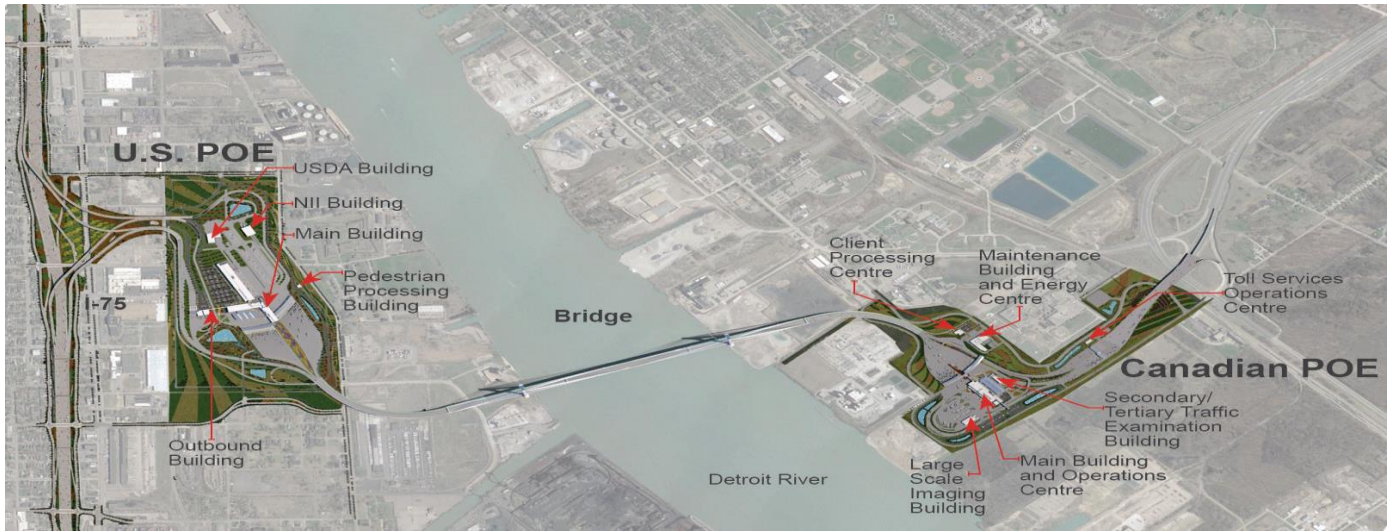


# Gordie Howe International Bridge - Project Highlights



<b>Purpose</b>	Efficient movement of goods and people Redundancy, capacity, system connectivity, improved border processing Positive economic development
<b>Public Partner</b>	Windsor-Detroit Bridge Authority (WDBA)
<b>Private Partner</b>	Bridging North America (BridgingNA)
<b>Location</b>	Windsor, Ontario and Detroit, Michigan
<b>Project Type</b>	Design-Build-Finance-Operate-Maintain (DBFOM)
<b>Infrastructure Type</b>	Border Transportation Infrastructure
<b>Contract Value</b>	\$5.7 Billion (nominal)
<b>Construction Period</b>	2018 to 2024
<b>Length of Project Agreement</b>	36 years: 6 years construction + 30 years operation, maintenance and rehabilitation
<b>Estimated Value for Money (VFM) (Present Value)</b>	\$562.8 million or 10.7%

## Background

There are four major components to the Gordie Howe International Bridge project:

The Gordie Howe International Bridge is a 6-lane cable-stayed bridge, 2.5 kilometres/ 1.5 miles in length with a clear span of 853 metres/0.53 miles. The bridge also incorporates a multi-use path for pedestrians and cyclists that is 3.6 metres/ 11.8 feet wide.

The Canadian Port of Entry is an approximate 53 hectare or 130 acre site and will be the largest Canadian port along the Canada-US border, and one of the largest anywhere in North America. It includes inbound border inspection facilities for both passenger and commercial vehicles, outbound inspection facilities, toll collection facilities, a maintenance facility and parking.

The US Port of Entry has an approximate 68 hectare or 167 acre site and will be one of the largest US ports along the Canada-US border and in North America. It includes US inbound border inspection facilities for both passenger and commercial vehicles, US outbound inspection facilities, commercial exit control booths and parking.

The Michigan Interchange to Interstate-75 consists of primary connecting ramps to and from the US Port of Entry and associated local road improvements that will be required due to the Project. Three kilometres or 1.8 miles of I-75 require modifications to accommodate the ramps connecting to the US POE. This component is a significant piece of construction, consisting of over a dozen roadway and pedestrian bridges ranging in length from 30 to 518 metres or 100 to 1,700 feet.

## Objectives

The Windsor-Detroit Gateway is the busiest commercial land border crossing between Canada and the US and is vital to the economies of Ontario, Michigan, Canada and the United States. Canada is committed to delivering a new border crossing for Windsor-Detroit.

Once complete, the Gordie Howe International Bridge project will facilitate the movement of people, goods and services by ensuring there is sufficient border crossing capacity to handle growth in cross-border trade and traffic, by providing a much-needed crossing alternative.

Overall key objectives of the Gordie Howe International Bridge project include:

- Redundancy
- Capacity
- System connectivity
- Improved border processing
- Public ownership
- Minimize disruption during construction
- Design excellence
- A maintained asset for the long-term
- Delivered on-time, on budget

## Project Scope

The project agreement with Bridging North America contains their requirements to:

- **Design and construct** – lead the design and construction of the project for substantial completion in 2024
- **Finance** – secure sufficient financing to finance the construction and capital costs over the term of the project
- **Operate** – tolling infrastructure and facilitate lane availability
- **Maintain** – provide maintenance, lifecycle repair and renewal of the project for a 30-year service period as per maintenance performance standards in the project agreement
- **Third-Party Certification** – obtain a third-party independent certification that the requirements of the project agreement are met.

## Economic Benefits and Job Creation

The Gordie Howe International Bridge project is generating economic stimulus by creating and supporting jobs. Bridging North America estimates labour will come from Windsor, Detroit and First Nations communities. They anticipate the creation of 2,500 jobs including direct hires, sub-contractors and seconded individuals.

For more information about the Gordie Howe International Bridge project visit [www.wdbridge.com](http://www.wdbridge.com). Follow us on Twitter at [www.twitter.com/GordieHoweBrg](https://www.twitter.com/GordieHoweBrg), like us on Facebook at [www.facebook.com/GordieHoweBridge](https://www.facebook.com/GordieHoweBridge) and connect with us on LinkedIn at [www.linkedin.com/company/wdba-apwd](https://www.linkedin.com/company/wdba-apwd).



## **Bridging North America**

Bridging North America (BridgingNA) is comprised of some of the most recognized leaders in the construction/infrastructure industry which includes North American and international companies.

### **Team Members**

Bridging North America's prime team members include:

- ACS Infrastructure Canada Inc.
- Dragados Canada Inc.
- Fluor Canada Ltd.
- AECON
- AECOM
- RBC Dominion Securities Inc.
- Carlos Fernandez Casado and FHECOR Ingenieros Consultores, S.A. (CFC/FHECOR)
- Moriyama & Teshima
- Smith-Miller+Hawkinson Architects.



BridgingNA partners have significant experience carrying out major infrastructure projects such as the Rt. Hon. Herb Gray Parkway in Windsor, Ontario; New Champlain Bridge Corridor in Montreal, Quebec; Autoroute 30 in Montreal, Quebec; Eglinton Crosstown LRT in Toronto, Ontario; Réseau Express Métropolitain (REM) in Montreal, Quebec; Automated People Mover at LAX Airport, California; Harbour Bridge and Tappan Zee Bridge in New York and San Francisco Oakland Bay Bridge.

### **Local Partners**

BridgingNA recognizes the importance of partnering with local stakeholders, businesses, professional associations, unions, First Nations and educational institutions for the Gordie Howe International Bridge project. These partnerships will help to strengthen the local economy, create jobs and training, and ensure the success of the project during its design, construction and operation.

In addition to partnering with local businesses, BridgingNA is working with local unions on both sides of the border to establish agreements to employ the local labour force.

### **Philosophy/Approach to Work**

Safety is paramount for BridgingNA. BridgingNA is committed to developing a caring, preventive safety culture across our organization. Safety drives the actions of all project employees and we will work to ensure safety for our workforce, the travelling public and all stakeholders involved in the project.

## Workforce Development and Participation

As part of the Community Benefits Plan, a strategy geared toward engaging local workers and businesses will be finalized and implemented by BridgingNA.

With a focus on workforce, training and pre-apprenticeships/apprenticeships, this strategy will ensure opportunities for local workforce development and training occur on both sides of the border and will leverage existing local resources to maximize the opportunities for Windsorites, Detroiters and First Nations.

## Job Opportunities

The Gordie Howe International Bridge project will create jobs on both sides of the border during construction and many permanent jobs in the operation of the crossing. As well, it is expected that thousands of jobs will be created in businesses that will supply goods and raw materials for the project.

BridgingNA anticipates the creation of 2,500 jobs including direct hires, sub-contractors and seconded individuals, as well as significant economic benefits that extend to the whole region.

There will be many jobs for skilled and experienced construction trade workers such as: operating engineers, labourers, carpenters, electricians, landscapers, equipment operators, and truck drivers. There will be business opportunities for local haulage companies and suppliers (i.e. cement, piping, etc), as well. Other employment opportunities will be available for engineering, accounting, quality control, safety, project control and finance.

## Local Offices

WDBA and BridgingNA will establish local project offices in the communities of Windsor and Detroit in the near future. Details about these offices, their location and hours of operation will be posted when available at [www.wdbridge.com](http://www.wdbridge.com).

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## Contract Value Overview

Bridging North America (BridgingNA) has signed a fixed-price contract of approximately \$5.7 billion with Windsor-Detroit Bridge Authority (WDBA) to deliver the Gordie Howe International Bridge project with the bridge expected to open to traffic by the end of 2024.

Through the contract, BridgingNA is responsible to:

- design, build and finance the bridge, the Canadian and US Ports of Entry and the Michigan Interchange
- operate and maintain the bridge and the Canadian and US Ports of Entry for a 30-year period (MDOT will be responsible for the operation and maintenance of the roadway).



The contract value of the project reflects the progress payments to be made during construction, the substantial completion payment and the monthly service payments to be made during operations before inflation adjustments. Payments to BridgingNA are performance-based and these can be withheld by WDBA if BridgingNA does not meet the agreed-to performance standards.

It is anticipated that of the \$5.7 billion contract, \$3.8 billion will be allocated for the design-build phase including financing and \$1.9 billion will be allocated for the operation-maintenance phase including financing.

The public-private partnership (P3) model transfers many project risks to BridgingNA – the private sector. For instance, the contract agreement makes BridgingNA responsible for increases in costs due to design errors and omissions, project management and sub-contractor co-ordination, increases in construction material prices and labour costs, schedule and project completion delays, and other related construction risks.

WDBA's 30-year operation and maintenance agreement with BridgingNA, which includes repair and renewal, will ensure the Gordie Howe International Bridge and Ports of Entry will be kept in excellent working condition over the term of the agreement. For example, if potholes and pavements need repair or the electrical systems need repair or replacement parts, the private sector is responsible to undertake this work. WDBA has built in a 30-year guarantee for these physical features.

### Overall Project Costs

Separate from the contract with Bridging North America, Canada has invested \$559 million from Fiscal Year 2005-2006 to Fiscal Year 2017-2018 (up to March 31, 2018) to get the project to Financial Close and the point where full construction can begin.

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**THINGS TO KNOW ABOUT...**



**Public-Private Partnerships (P3)**

The Gordie Howe International Bridge project is being delivered through a public-private partnership (P3) – a cooperative venture between the public (Windsor-Detroit Bridge Authority) and the private sector (Bridging North America).

**1 PRIVATE-SECTOR EXPERTISE**

The private sector's expertise, efficiencies and innovation in delivering large-scale infrastructure projects are utilized.

**2 RISK TRANSFER**

Risks are appropriately shared between WDBA and Bridging North America. For instance, cost overruns and delays to projects are shifted from the taxpayer to the private sector.

**3 ON TIME & ON BUDGET**

The P3 model requires the private-sector partner to deliver the project on time and on budget and achieve performance standards during the operations period.

**4 PUBLIC OWNERSHIP**

While the private-sector partner shares in the financing of the project, the bridge and other project components remain under public ownership.

**5 LOCAL INVOLVEMENT**

P3s provide the opportunity for local workers, suppliers and companies to be involved in a large-scale infrastructure project and work with international companies.

**6 WHOLE LIFE APPROACH**

A 'whole life' approach is used in the delivery of the project with the private sector having responsibility for the design and delivery of the project and also the long-term operations and maintenance.

**7 COMPETITIVE PROCUREMENT PROCESS**

WDBA conducted a rigorous, open, fair and transparent procurement process overseen by an independent Fairness Monitor to select Bridging North America as the private-sector partner.

**8 RIGHT FOR THIS PROJECT**

The value for money analysis demonstrated that the P3 model for this project results in a savings of approximately \$562.8 million or 10.7% as compared to delivery of the project using traditional procurement methods.

**9 CANADA IS A P3 LEADER**

Canada is a global leader in delivering successful P3s. The Gordie Howe International Bridge project is one of 279 active P3 projects with a combined value of more than \$129 billion underway in Canada today.

Source: SP3CTRUM



# 9 THINGS TO KNOW ABOUT...



## Aesthetics Principles

Aesthetics play an important role in how the Gordie Howe International Bridge will look. Over time a well-designed public facility with good aesthetics develops a special “sense of place” that people look forward to coming back to, boosts civic pride and has strong potential to become an admired landmark within the wider urban context.

### 1 APPROACH

WDBA set specific project goals to be achieved through aesthetics - an **impressive** and **inspiring** new gateway symbol with a **distinctive design** that showcases **functionality, design excellence, sustainability** and **barrier-free** accessibility.

### 2 DESIGN

The design provides a primary aesthetic framework of “contemporary minimalism” reflected through simplicity, clean lines, good proportions, openness, transparency, and lightness.

The bridge towers consist of two legs which will rise from the ground and extend upwards, inclining towards each other, until they meet far above the bridge deck. This simple and elegant form will not be compromised by any cross ties resulting in a striking visual appearance.

### 3 INVITING

Good aesthetics and good functionality will be combined to create spaces that are comfortable, intuitive to use and pleasing to the eye.

### 4 INSPIRATION

Inspiration for the design was found in the waters of the Detroit River with the rolling waves conveying the senses of passage and gateway.

### 5 QUALITY

Given that the project is being designed with a 125-year lifespan, it is important that all components have a high standard of visual and material quality that will stand the test of time both functionally and aesthetically.

### 6 SHAPE

The cable-stayed bridge design is a modern and elegant form with a tower shape inspired by the curvature of a hockey stick in a slap shot – a nod to Gordie Howe.

### 7 WAYFINDING

The design will include visually intuitive wayfinding, understanding that visitors to Ports of Entry may be overwhelmed and looking for simple cues as to where to proceed.

### 8 INSPECTION

Both POEs share certain key design elements such as Primary Inspection canopies that include a gently undulating, rising and falling line, taking their inspiration from the gentle rise and fall of the iconic bridge design.

### 9 LANDSCAPE

Landscaping has been designed to reflect both the slower and faster speeds travellers will experience when driving through the project components and focuses on a Carolinian landscape with native species.



# 9 THINGS TO KNOW ABOUT...



## Construction

The Gordie Howe International Bridge project is being delivered through a public-private partnership (P3) – a cooperative venture between the public sector (Windsor-Detroit Bridge Authority) and the private sector (Bridging North America). Bridging North America will be responsible to design and build the bridge, Canadian and US Ports of Entry and the Michigan

### 1 TIMELINE



Bridging North America (BridgingNA) has presented a 74-month construction schedule to complete the four components of the project.

### 2 START OF CONSTRUCTION



BridgingNA anticipates that they will begin full construction in fall 2018 including design and consultation activities. This stage - called the design-build stage - includes completing design and public and stakeholder consultation.

### 3 CONSTRUCTION ACTIVITIES

The Bridge will be constructed using the balanced cantilever method. This involves constructing the two 220m tall towers on either side of the Detroit River and then building the bridge deck piece by piece outwards over the river until the two 425m long cantilevers meet in the middle. This is made possible by 'balancing' each of the bridge deck cantilevers over the river by an equal cantilever on the opposite side of each tower over land in Ontario and Michigan.

### 4 COMMISSIONING ACTIVITIES

Commissioning and training for the bridge, ports of entry and training by US and Canadian first responders and border agencies will be carried out prior to the bridge opening to traffic.

### 5 ADHERENCE TO SCHEDULE



The public-private partnership (P3) model sees that the private sector is only paid on performance, aligning financial incentives for on-time delivery and for the achievement of performance standards during the useful life of the asset.

### 6 KEEPING YOU INFORMED

WDBA and BridgingNA are committed to keeping residents, business owners and travellers informed of upcoming construction activities.



### 7 MITIGATION

Mitigating the impacts of construction is a regional priority. BridgingNA will implement measures to mitigate construction impacts in accordance with commitments in the approved Federal Screening Report in Canada and the Environmental Impact Statement in the US.

### 8 JOBS

BridgingNA has been meeting with local companies, organizations and unions to discuss opportunities for partnerships and with educational institutions to help develop the next generation of skilled trade workers. BridgingNA anticipates the creation of 2,500 jobs including direct hires, sub-contractors and seconded individuals.

### 9 OPEN TO TRAFFIC



The Gordie Howe International Bridge will open to traffic by the end of 2024.



# 9

## THINGS TO KNOW ABOUT...



### Community Benefits

The Gordie Howe International Bridge project will include a Community Benefits Plan that will have a positive impact on communities in Windsor and Detroit and reflects what our stakeholders have told us is important to them. A detailed community benefits report outlining the approach, proposed initiatives and governance structure is available on [wdbridge.com](http://wdbridge.com). Here are just a few highlights:

#### 1 MANDATE

The mandate to include a Community Benefits Plan as an integral part of the Gordie Howe International Bridge project originates in the Canada-Michigan Crossing Agreement signed in 2012.

#### 2 VISION

Community Benefits Plan will provide economic opportunities in the host communities, contribute positively to workforce, development programs, deliver neighbourhood improvements and ensure clear commitments and accountability from all parties during implementation.

#### 3 DELIVERY

WDBA's private-sector partner, Bridging North America is responsible for delivering all aspects of the signed Gordie Howe International Bridge Project Agreement including a robust Community Benefits Plan. WDBA and the State of Michigan will be directly involved in the delivery of the final plan and will have stringent oversight and accountability. The final plan will be posted online as will quarterly reports.

#### 4 FRAMEWORK

It is important that the Community Benefits Plan reflects what our stakeholders have told us is important to them. Since 2015, more than 230 suggestions from Michigan and Ontario stakeholders have been received for consideration. To help ensure these community priorities are captured, WDBA has developed the I-CARE framework to support the delivery of the Community Benefits Plan.

#### 5 COMPONENTS

The Community Benefits Plan reflects community priorities heard to date and is comprised of two components: the Workforce Development and Participation Strategy and the Neighbourhood Infrastructure Strategy.

#### 6 WORKFORCE DEVELOPMENT

The Workforce Development and Participation Strategy is geared toward engaging businesses and providing employment opportunities. The strategy to be finalized and implemented will centre on workforce, training and pre-apprenticeships/apprenticeships. Consultation will help shape the delivery.

#### 7 NEIGHBOURHOOD INFRASTRUCTURE

The Neighbourhood Infrastructure Strategy is a \$20 million community infrastructure investment that focuses on priorities identified through previous community benefit consultation with communities, businesses, First Nations and other stakeholders in Windsor, ON and Detroit, MI.

#### 8 PUBLIC PARTICIPATION

A Local Community Group composed of stakeholders representing Windsor-Essex County, the community of Delray, greater Detroit area municipalities, bridge user groups, institutions of higher education, economic development organizations and Canadian Indigenous Peoples will be formed to work as informal partners in the implementation of collaborative activities, providing formal linkages into the region and providing input into the implementation of the Community Benefits Plan.

#### 9 CONTINUED CONSULTATION

Further consultation will be undertaken with the community and relevant authorities to discuss proposed initiatives over a six-month period following Financial Close. The Final Community Benefits Plan will be presented to the public in early 2019.







**THINGS TO KNOW ABOUT...**



**Sandwich Street Improvements**

In recognition of Sandwich's role as a gateway community to Canada and in response to public consultation, Windsor-Detroit Bridge Authority (WDBA) is investing in improvements to Sandwich Street as part of the Gordie Howe International Bridge project. This work is estimated to be in the realm of \$12 million. Here are just a few highlights of the work to be undertaken to the Sandwich Street Corridor:

**1 DELIVERY**

WDBA's private-sector partner, Bridging North America, is responsible for delivering all aspects of the signed Gordie Howe International Bridge Project Agreement including improvements to the Sandwich Street Corridor. These improvements are being delivered in addition to the initiatives to be undertaken as part of the Community Benefits Plan. Construction is anticipated to begin in 2020 subject to consultation.

**2 LOCATION**

Approximately 3 km of Sandwich Street from the intersection of Sandwich Street and Ojibway Parkway to the Rosedale Avenue roundabout will see improvements to the current infrastructure.

**3 DESIGN**

Improvements to the Sandwich Street Corridor design will align with the Sandwich Town Community Improvement Plan, Sandwich Heritage Conservation District Plan and Sandwich Town Urban Design Guidelines.

**4 CYCLING FACILITIES**

Cycling facilities including a combination of bike lanes and multi-use trail connections will be incorporated to connect the Sandwich Street Corridor to the Gordie Howe International Bridge multi-use path at the Canadian Port of Entry.

**5 ROAD IMPROVEMENTS**

The Sandwich Street Corridor will be fully re-paved in accordance with municipal standards. All commercial and residential driveway approaches within the municipal right of-way will also be replaced.

**6 STREETSCLAPING**

Attractive streetscaping such as planters, benches, garbage receptacles, etc. will be considered for incorporation into the Sandwich Street Corridor improvements.

**7 ACCESSIBILITY**

All sidewalks within the Sandwich Street Corridor will be replaced and will meet accessibility standards.

**8 INTERSECTION IMPROVEMENTS**

Bump outs will be incorporated at some intersections to enhance pedestrian safety when crossing the roadway. Some intersections within the designated truck route section will also see enhancements to accommodate local truck movements.

**9 CONTINUED CONSULTATION**

Further consultation will be undertaken with the community and relevant authorities to discuss the proposed improvements.





**THINGS TO KNOW ABOUT...**



**Detroit Street Improvements**

In recognition of Southwest Detroit's role as a gateway community to the US and in accordance with requirements set out in the Final Environmental Impact Statement, Windsor-Detroit Bridge Authority (WDBA) is investing in street improvements near the US Port of Entry (POE) for the Gordie Howe International Bridge project. WDBA and the State of Michigan have consulted with residents and the city of Detroit to identify the approach to these improvements. Here are just a few highlights of the work to be undertaken:

**1 DELIVERY**

Bridging North America is responsible for delivering all aspects of the signed Gordie Howe International Bridge Project Agreement including many street improvements near the US POE and the Michigan Interchange. These improvements are being delivered in addition to the initiatives to be undertaken as part of the Community Benefits Plan. MDOT will also provide some improvements. A construction schedule will be announced at a later date.

**2 PEDESTRIAN BRIDGES**

Five new pedestrian bridges will be constructed over Interstate-75 and in some cases, over the service drives to provide easier connections for pedestrians. Each bridge will align with any multi-use trails in the area. Access points include Beard, Waterman, Solvay, Junction and Lansing Streets. The pedestrian bridge identified through the 2008 Environmental Impact Statement at Morrell Street has been moved to Junction Street following extensive community consultation.

**3 JUNCTION STREET**

We heard the importance of maintaining a connection across Interstate-75 at Junction Street for access to the Community Health and Social Services clinic. The new pedestrian bridge will traverse Interstate-75, the service drives and Fort Street to offer safe passage from the north to south sides. Other enhancements will also be included such as new street lighting between the eastbound service drive and Fort Street, landscaped, irrigated buffers along the bridge and vehicle road bridges, and decorative treatments to the retaining walls.

**4 DECORATIVE FENCING**

Decorative security fencing will be provided around the perimeter of the US POE with irrigated landscaping to provide an additional buffer to the community. New decorative security fencing will be installed along the south side of West Jefferson Avenue with irrigated landscaping adjacent to Historic Fort Wayne and meeting State Historic Preservation Office review. This activity will require the removal of the existing fence at Fort Wayne along Jefferson Avenue.

**5 TREES**

A variety of plantings will take place as part of the overall project. Deciduous shade trees will be planted along the parkway between the sidewalk and road every 25 feet between Springwells and Clark Streets. A similar treatment will be provided from the US POE to Interstate-75 crossings at Green, Campbell and Junction Streets, along Jefferson Avenue and along Fort Street between Green and Junction Streets.

**6 CONTINUOUS ACCESSIBLE SIDEWALKS**

A continuous fully accessible sidewalk will be constructed along the City side of the Service Drive and between the Service Drive and I-75 main line to connect the entrance of each pedestrian bridge to the nearest intersection or to a signalized block crossing. Pedestrian countdown signals will be installed at all signalized intersections and mid-block crossings along the service drives and curb extensions may be used to minimize the pedestrian/cyclist crossings at intersections.

**7 GREENWAY**

A greenway will be constructed to connect pedestrians and cyclists from the Gordie Howe International Bridge to the I-75 Freeway crossings at Green Street and the new pedestrian bridge to be installed at Junction Street. Street design will include safe transition points from off-road paths to on-street bike lanes with appropriate wayfinding to make the transitions easy for users.

**8 FORT STREET CYCLE TRACK**

A six-foot protected cycle track will be installed along both sides of Fort Street between Green and Junction Streets. The cycle tracks will be separated from traffic by a minimum three-foot raised buffer. Bicycle signals will also be required at intersections to separate vehicles making left turns or at any two-way cycle tracks that cross Fort Street.

**9 CONTINUED CONSULTATION**

Further consultation will be undertaken with the community and relevant authorities to discuss the proposed improvements.

