



Artistic rendering of the Cherry Street bridge across the Keating Channel



## 4.6

# MOVEMENT AND ACCESS

A key objective of this Framework is the creation of a comprehensive and sustainable transportation system that stitches the Port Lands to the city, achieves a fine-grained street network for easy access, and capitalizes on the water features in the area. Seamless access for all modes will be provided, including maintaining goods movement corridors, but transit and active transportation are prioritized.

Two Environmental Assessment processes established the major street and transit networks for the Port Lands:

- The Port Lands and South of Eastern Transportation and Servicing Master Plan (TSMP) undertaken as an integrated planning process with this Framework; and
- The Lower Don Lands Infrastructure Master Plan (IMP), completed in 2014.

The transportation system established through these two processes provides a robust and resilient network of complete streets with dedicated streetcars on key spines. The streets are generally planned with wide pedestrian clearways



Pedestrians



Cyclists



Streetcar in Dedicated Right-of-Way

and cycling facilities on all major streets. Goods movement was also a key consideration in recognition that portions of the Port Lands will continue to be utilized for port and industrial purposes.

Much like the City's **“Feeling Congested?”** initiative, the future transportation system for the Port Lands:

- Emphasizes the correlation between land use and transportation to the extent possible, given continued port and heavy industrial uses;
- Ensures that streets are complete accommodating all users and uses, including safety and accessibility considerations;
- Promotes walking and cycling as a primary means of moving in and through the area; and
- Supports measures that protect the ability to move goods in and out of the area, including initial exploration of establishing dedicated truck routes to minimize adverse impacts on new communities.

The six signature north-south streets, along with a significant improvements to Commissioners Street and Unwin Avenue are at the core of the transportation system. These streets will contribute to the character and uniqueness of the Port Lands and have been conceived as being destinations unto themselves. As development proceeds, a fine-grained network of local public streets, shared streets, laneways and mid-block connections will also be secured to further enhance permeability in and through the area.

## 4.6.1 Movement and Access Elements

Options need to be provided for how people will move in and through the Port Lands. Simply, more options lead to more and better movement. There are seven mobility and access elements accommodated in this Framework. The needs of each of the elements must be effectively balanced to create great places and experiences for everyone.



### Walking

All trips begin and end on foot. A primary objective of this Framework is to create safe, comfortable and diverse places for pedestrians. Walking is also the most sustainable way of getting around and contributes to healthy and active lifestyles for people.



### Cycling

More and more Torontonians are choosing cycling as a primary means for getting around. Cycling can be a fast, reliable and convenient way to move. The opportunity in the Port Lands is to design the streets with cycling as a key travel mode from the outset to facilitate a cycling culture.



### Taking Transit

People taking transit will make up the largest share of how people will move in and around the Port Lands. Streetcars in dedicated lanes on key spines will be major people-movers bringing people into and out of the Port Lands.



### Driving

Although private vehicle use is not prioritized as a primary means for getting around, people will still drive. Streets will accommodate private vehicles, but be designed to minimize the number of vehicular lanes. Emerging technologies will also be embraced to reduce congestion and contribute to sustainability objectives.



### Shipping

The Port Lands will continue to operate as Toronto's only port. The port is a valuable resource for the city and significantly reduces the numbers of trucks on Toronto's streets.



### Trucking

The reliable and efficient movement of goods into, and out of, the Port Lands is critical to facilitating further economic growth, intensifying industrial uses and supporting continued port operations.



### Ferrying

The Ship Channel, dockwalls adjacent to the Inner Harbour and the Keating Channel provide even more opportunities for moving people in and out of the Port Lands. Extending ferry and water taxi service to key destinations, such as Promontory Park and the Hearn, will provide another sustainable transport alternative.

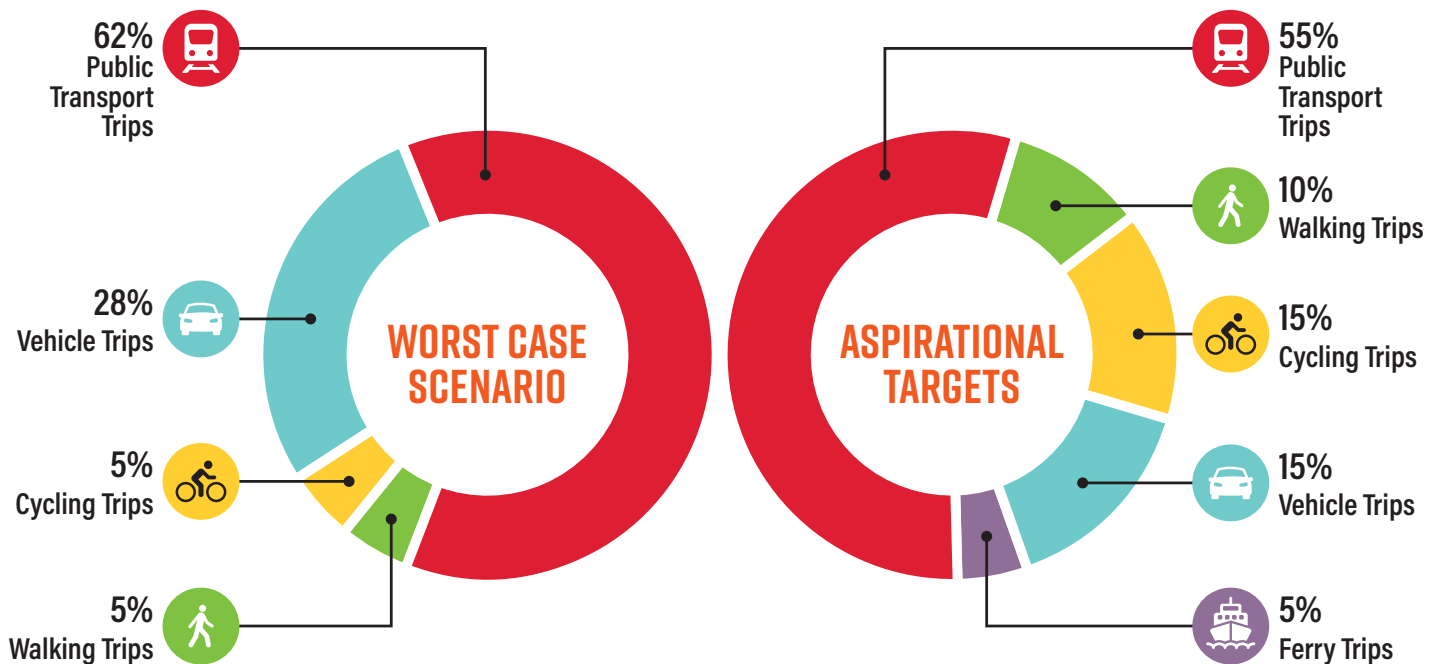
## 4.6.2 Travel Mode Targets

Fundamental changes in travel patterns and demands are needed to ensure that walking, cycling and transit are the dominant modes of movement in the Port Lands. This will also provide a major opportunity to dramatically enhance the liveability and success of the Port Lands' transformation. With the high-quality pedestrian environment and cycling facilities prioritized in the major streets, walking and cycling are envisioned to play a critical role in balancing mode choice.

Transportation modeling was undertaken as part of the TSMP. The modeling was one tool used to inform the development of the street network and analyze current and potential future travel behavior and demands. A worst-case scenario

was modeled to ensure that the overall transportation system would be flexible and could accommodate future unknowns. Transit service was maximized to what's referred to as crush capacities, and pedestrian and cyclist mode shares were minimized to what is being typically achieved elsewhere in the city today. Planning transit usage using crush-capacities is not ideal. If more people can access their destinations by walking and cycling this would reduce pressure on the transit system and contribute to a further mode shift away from the personal automobile. Overall, the long-term objective for the Port Lands is to achieve a target of 85% of all trips to be via sustainable transport modes.

Figure 51: Travel Mode Targets



## 4.6.3 Complete Street Principles

Complete streets are streets that are designed to be safe for all users and consider other uses like sidewalk cafés, street furniture, street trees, utilities and stormwater management. The City's Official Plan speaks to the importance of complete streets and ensuring that streets can perform diverse roles. This includes ensuring that:

- The needs and priorities of the many users and uses are balanced;
- Space for utilities, municipal servicing, trees, landscaping, green infrastructure, way-finding, street furniture and commerce is reserved;
- Active transportation and transit use is facilitated and prioritized;
- Differences in local context and character is reflected;
- Loading and servicing access for buildings is accommodated that minimizes curb cuts on major streets; and
- Streets are sunny and inviting places.

The Central Waterfront Secondary Plan also emphasizes that new streets should be designed to perform various roles. Streets are to act as both lively urban connections as well as traffic arteries. The needs of motorists are to be balanced with efficient transit service and high-quality amenities for pedestrians and cyclists.

In support of these objectives, ten Port Lands specific complete street principles were developed. Overall, the principles will assist in creating a well-functioning street network that is designed to provide a vibrant public realm, safe access and efficient operation for all street activities. Not every street will need to meet all ten principles. Each street in the network is different, has a different character and serves a different role and purpose in the overall network. Although not every street will be required to address each principle, together they create a complete street network.



A residential green street with curb extensions and bioswales and mature tree canopy

## Complete Street Principles:



**Transit Prioritization** through the use of dedicated transit rights-of-ways will improve the reliability of transit routes and convenience for passengers.



**Minimum Lane Widths** will assist in making streets safer and more pedestrian friendly. Narrower pavement widths contribute to safer vehicle speeds.



**Bicycle Lanes + Cycle Tracks** provided on all major streets will create a well-connected, robust and safe cycling network enabling active transportation as a primary means of moving in and through the area.



**Wide Sidewalks** with unobstructed, accessible pedestrian clearways will encourage walking and contribute to the overall vibrancy of in the Port Lands and South of Eastern public realm.



**Accommodation of Goods Movement** to ensure the continued economic vitality of live-industry. Critical goods movement corridors will be designed with suitable conditions for truck access balanced with other complete street objectives.



**Water as a Community Resource** and other greenscape elements will divert stormwater and allow for infiltration while also improving air quality, providing habitat and adding visual interest to an area. Streets celebrate and embrace stormwater as a valuable resource and provide access for LIFE!



**Permeable Surfaces** for roadways and sidewalks will reduce flooding, preserve capacity in storm drains and sewers where provided and add visual interest in the overall street design.



**Street Trees** with adequate room to grow and high-quality soil conditions provide shade, beauty and wildlife habitat. They also reduce air pollution and energy consumption.



**Pedestrian + Cycling Amenities** are important elements to be considered in the design of streets and encourage people to be on our streets. Benches, bike rings, pedestrian-scaled lighting, weather protection, garbage and recycling receptacles and public art, among others, will be provided.



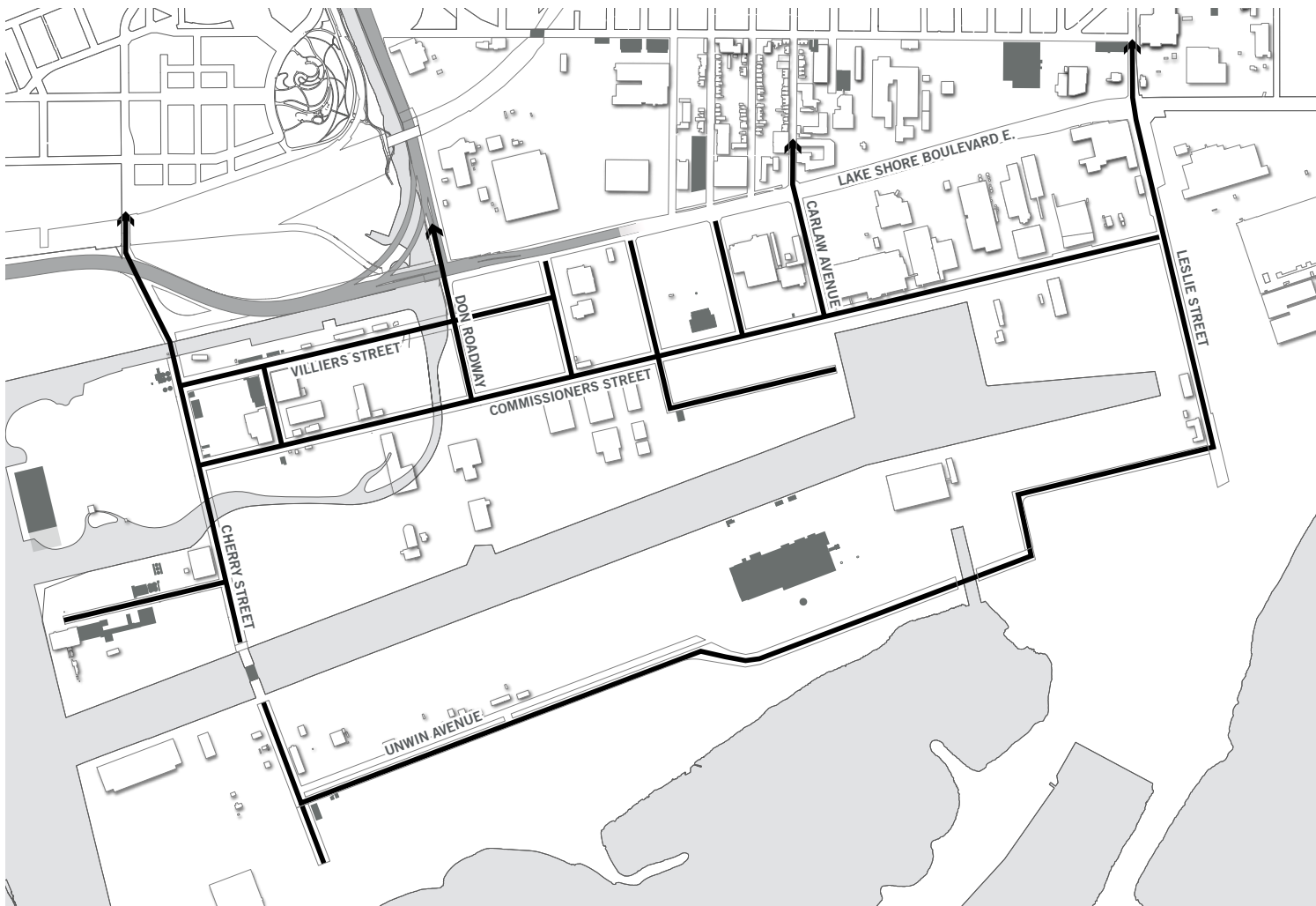
**Innovative Features** such as the port / industrial / infrastructural qualities of the study area will contribute to the character of the area. Other features like electric vehicle charging stations, bicycle and car sharing stations and renewable energy features will contribute to a sustainable future for the area.

## 4.6.4 Street Network and Hierarchy

The existing street network (Figure 52) in the Port Lands reflects its historic industrial and port function. There are currently a limited number of streets that connect with the rest of City and also few streets within and through the Port Lands itself. This results in large blocks that lack permeability. The streets are designed primarily for moving auto traffic. They generally lack pedestrian and cycling amenity. On many streets, there are no sidewalks at all.

The Framework establishes an extended and greatly improved network of public streets with a legible hierarchy of street types, consisting of major streets, local streets, shared streets and laneways (Figure 53). A fine-grained network of different types of streets will provide for improved connectivity and circulation for all users, better integrate with the surrounding city fabric, and ensure a lively, safe and interesting public realm.

**Figure 52: Existing Street Network**





## Major Streets

Major streets are wider streets with higher traffic volumes, transit service, more generous sidewalks, tree plantings and cycling facilities. Typically, they are referred to as either arterial or collector streets.

The major street system in the Port Lands consists of six signature north-south streets – Cherry Street, the Don Roadway, the Broadview Extension, Carlaw Avenue, the Caroline Extension and Leslie Street. Commissioners Street and Unwin Avenue unite the Inner Harbour to Leslie Street. Each of these signature streets use their particular role within the city as a starting point for their experience. They are more than just streets. They are places. The characters of these streets are discussed in more detail in Section 3.

The major street network also includes additional public streets critical for both better connecting the Port Lands and providing needed capacity.

### Munitions Street

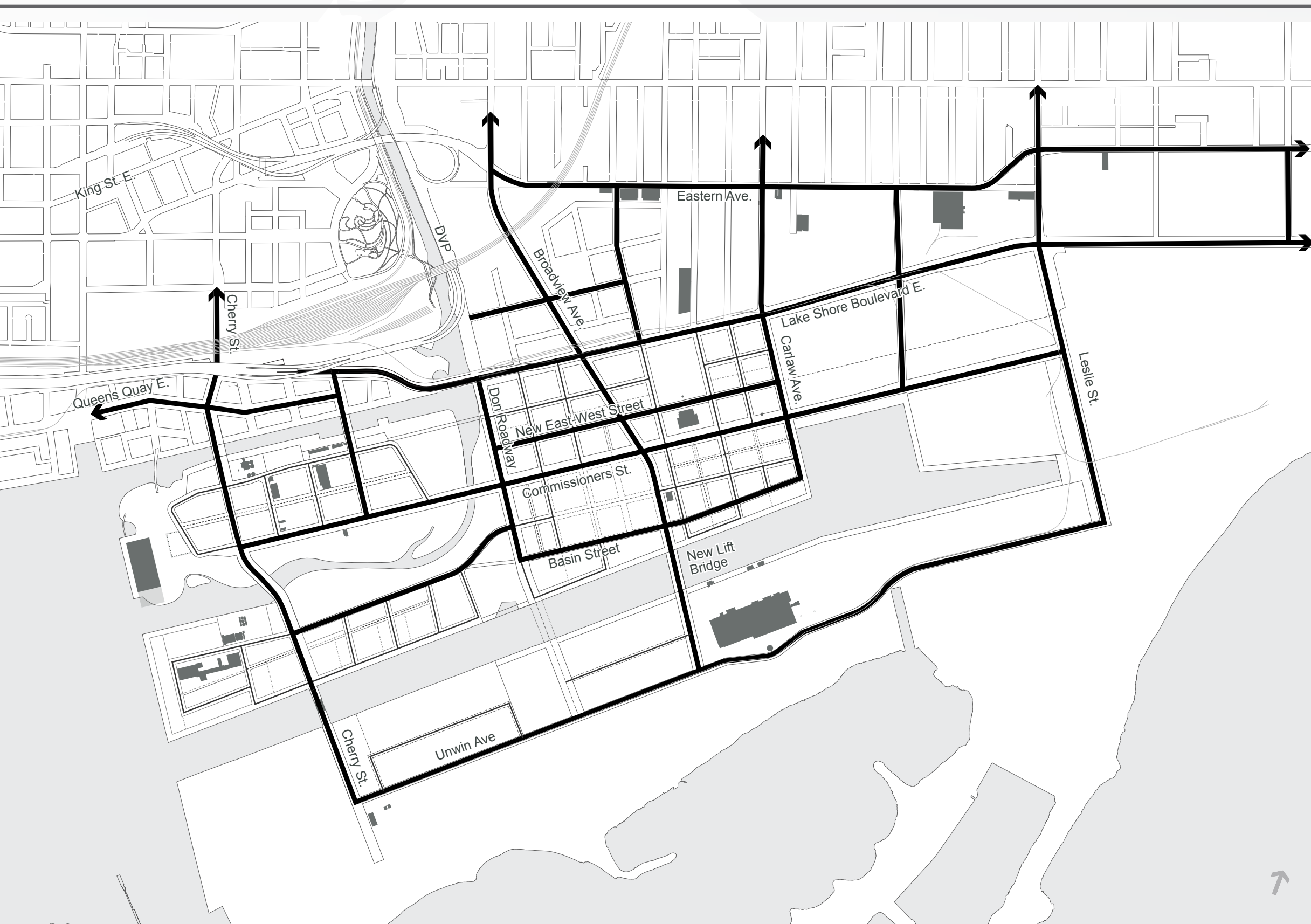
The Munitions Street extension across the Keating Channel completes the network of major north-south streets. This street has been shifted eastward to protect the Toronto Harbour

Commissioners heritage buildings at the terminus of the existing alignment. Timing for connecting the street across the Keating Channel is to be determined. As redevelopment proceeds, monitoring will be required to coordinate the delivery of this connection.

### Basin Street

Basin Street, while not a continuous, direct connection will provide additional network redundancy south of the river and is a much-needed connection from an emergency access and capacity perspective. In the Lower Don Lands, its alignment enables the establishment of high-quality wetlands in the Don Greenway. East of the Don Roadway, Basin Street has been realigned to maintain the existing secure perimeter of Pinewood Toronto Studios. The street has been extended to provide a continuous connection from the Don Roadway to the Turning Basin. Development blocks to the south of the extension are robust, with the ability to accommodate a wide range of uses. The street would have a film-friendly design enabling parking and staging of production vehicles with consideration for “shore power” as part of the street’s design.

Figure 53: Street Network



- Major Streets
- Protected for Future Crossing/Connection
- Local Streets\*
- - - Lane Ways/Shared Streets\*
- · · Mid-Block Pedestrian Connection\*

\*Local Streets, lane ways/shared streets and mid-block pedestrian connections are conceptually shown and will be determined through precinct planning or concept planning



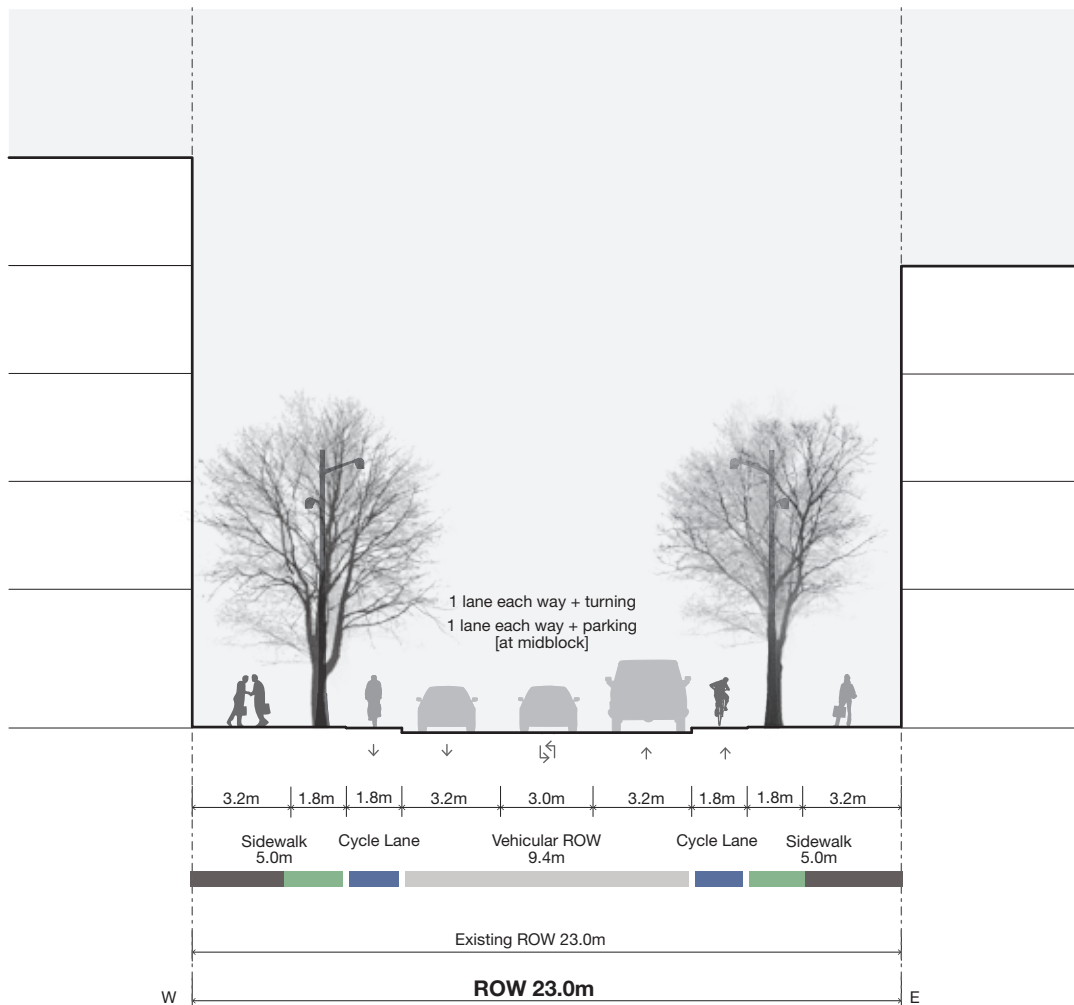
## New East-West Street

An additional east-west connection north of Commissioners Street between the Don Roadway and Carlaw Avenue is also required. This connection provides additional redundancy, contributes to minimizing rights-of-ways for other east-west streets and overall enhances connectivity through the area.

This street would bisect the expanded McCleary Park. It has been located to preserve a large contiguous park space

to accommodate active recreation. It also generally aligns with Centre Street in Villiers Island to create long views to the Inner Harbour/Promontory Park and to the Commissioners Incinerator's stack. Further exploration of this street through the expanded McCleary Park is needed during precinct planning and Phase 3 of the Environmental Assessment process. The street will regardless need to be designed integral to the park, and as a predominantly pedestrian street.

Conceptual Cross-section for the New East-West Street.



## Right-of-Way Widths

The major streets in the Port Lands will be more than just movement corridors. Conceptual cross-sections were developed for all streets as part of the TSMP to ensure sufficient space is allocated to accommodate the functional needs of each street, but also reflect that the streets will shape the experience of the Port Lands. They will provide unique places in which to linger and enjoy, some more so than others.

The right-of-way widths established for each major street are shown on Figure 55 and include the rights-of-ways established through the Lower Don Lands IMP, as revised. Figure 54 highlights how space within key major streets has been apportioned. Commissioners Street, the Broadview Extension, the Don Roadway, Carlaw Avenue and Cherry Street have wider

rights-of-way. This is in part due to the provision of dedicated streetcar service in some of the streets, but they have also been conceived to provide an exceptional public realm with wide pedestrian clearways, linear open spaces, bioswales, open channels and space to grow great trees. The streets also accommodate exceptional cycling amenity with the capability of accommodating multi-use pathways or raised, separated cycle tracks.

The rights-of-way widths also provide flexibility. As the streets progress from conceptual to detailed design, each street's design will be tailored for the particular needs and opportunities created by local context and existing and future uses and users. In all instances, however, the portion of the street allocated to auto traffic has, and will be, minimized.

Figure 54: Rights-of-Way Breakdown

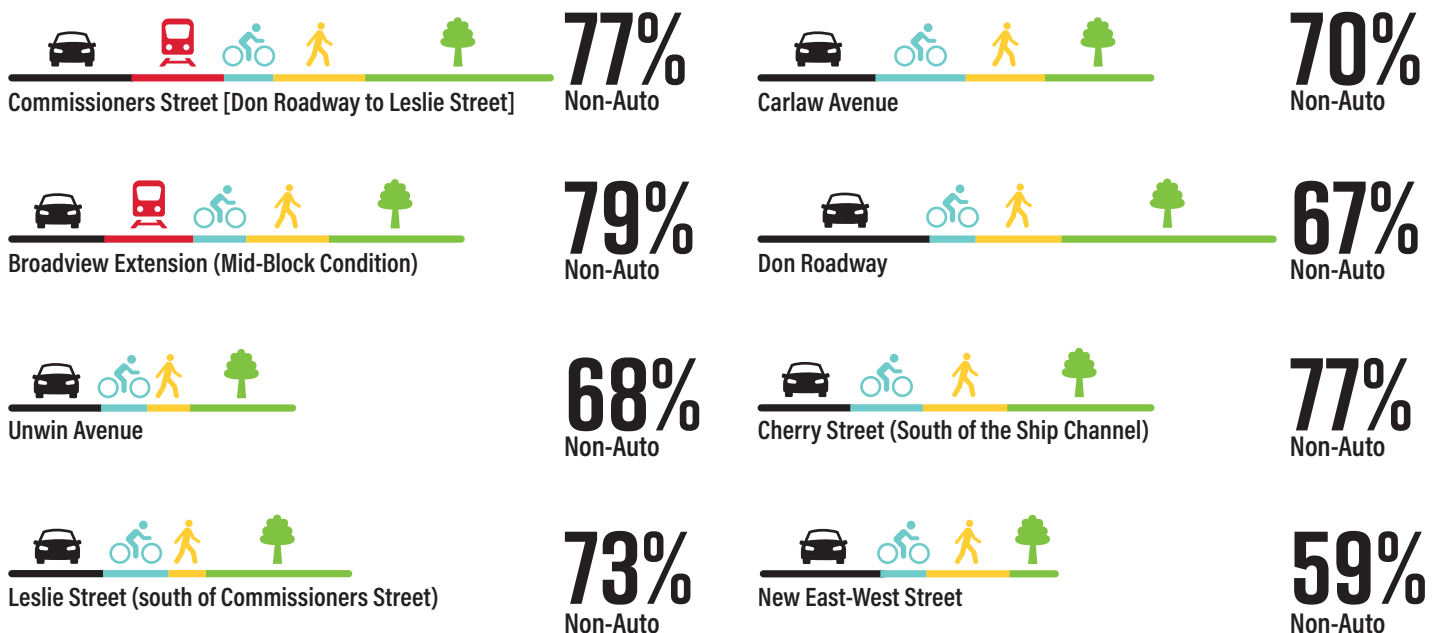
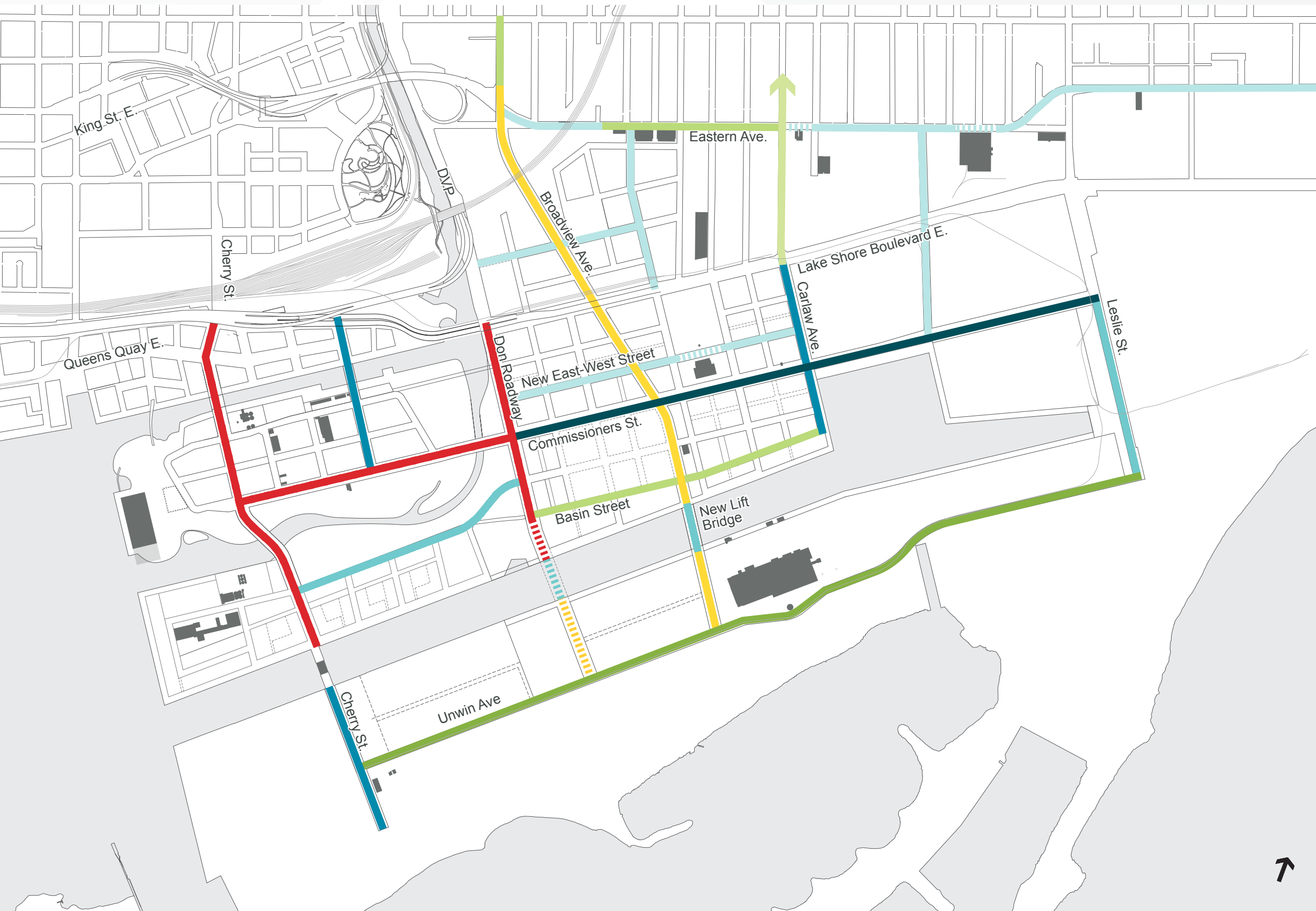


Figure 55: Right-of-Way Widths





## Local Streets

Local streets are narrower streets that provide address, access and amenity for development and uses. They have lower design speeds and generally less vehicular volume. Their primary role is to provide access for buildings. A fine-grained network of local streets improves permeability in and through an area and assists in breaking up larger blocks into more compact, walkable blocks.

Local streets are conceptually shown on Figure 53. The precise location, alignment, design and number of public local streets within any particular district will be determined at the precinct planning stage or through the development review process.

Some districts will have a more fine-grained local street network than others depending on function and character of each individual district. The new mixed-use

communities will have a fine-grained network of streets with a more neighbourhood character. In other districts, such as the South Port district, fewer local streets will be required to enable large tracts of contiguous lands for port functions.

The local streets in the employment clusters should be designed to serve the needs and access requirements of trucks and production vehicles while maintaining a safe pedestrian environment. On-street, curbside freight loading spaces could also be provided, although generally, the preference is for loading to be integral to a site and building.

Local streets are also proposed to be used adjacent to portions of the Ship Channel. This will assist in animating the Ship Channel in all seasons and to provide variety along the two kilometre length of continuous water's edge promenade.

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## Shared Streets, Laneways and Mid-Block Connections

Shared streets are specially designed local streets where pedestrians, cyclists and motorists literally share the street. However, priority is given over to pedestrians and cyclists. The streets are narrow and there are generally no curbs that physically separate the sidewalks from the pavement. Typically, physical barriers and obstacles are used to signal to motorists that pedestrians come first.

The physical barriers and obstacles can include off-set landscaping and street furniture, but a café patio or

ad hoc on-street parking can perform equally as well. This in turn helps to reduce vehicular speeds and cars proceed more cautiously. Shared streets also typically use permeable and decorative pavers, rather than asphalt or concrete, which provides another visual cue that the street is meant to be shared.

Public life can spill out onto the street. Front entrances to buildings line the streets and they provide an intimate and human-scaled environment for pedestrians. They can be closed



temporarily to vehicular traffic and become pedestrian-only spaces for markets, performances and public events. In the Port Lands, a number of shared streets are proposed. Centre Street in Villiers Island, for instance, will be a central, pedestrian-oriented spine lined with mid-rise buildings, providing residents with a public space for socializing and strolling.

Laneways, on the other hand, primarily provide loading and servicing access for buildings. They are provided between buildings within a block, with

the working back sides of buildings fronting onto them. Laneways will be encouraged and pursued since they assist in minimizing curb cuts on other streets that disrupt the pedestrian realm. They are also often used as secondary or even tertiary pedestrian routes. As such, their design is equally important. Ensuring laneways are well lit with space for both vehicles and pedestrians is key. Like a shared street, permeable and decorative pavers can be used to improve the overall character and appearance of the laneway.



Film Friendly Local Street



Neighbourhood Local Street



Water's Edge Street



Artistic Rendering of a Laneway

There are special maintenance considerations for shared streets and laneways, particularly if they include permeable pavers. In the Port Lands, a common material palette for any pavers should be advanced to assist in minimizing maintenance and operational issues for the City. Consultation with City Divisions will be needed on their design to balance the objective of providing high-quality, pedestrian-friendly streets with operational and maintenance considerations.

Blocks will also be further subdivided by midblock connections. Conceptual locations are shown on Figure 53. These provide additional permeability in and through an area. The location of these will be further refined at precinct planning, subject to the following considerations:

- Strategically locating and positioning mid-block connections to work together to form a comprehensive network of linkages with the system of streets;
- Conceiving mid-block connections as part of an overall parks and open space system;
- Ensuring the connections are wide enough to also accommodate the installation of street furniture, lighting and identity features that reinforce the character of the particular district; and
- Ensuring activated building frontages along the edges of mid-block connections for informal surveillance and to provide another level of safety and comfort.

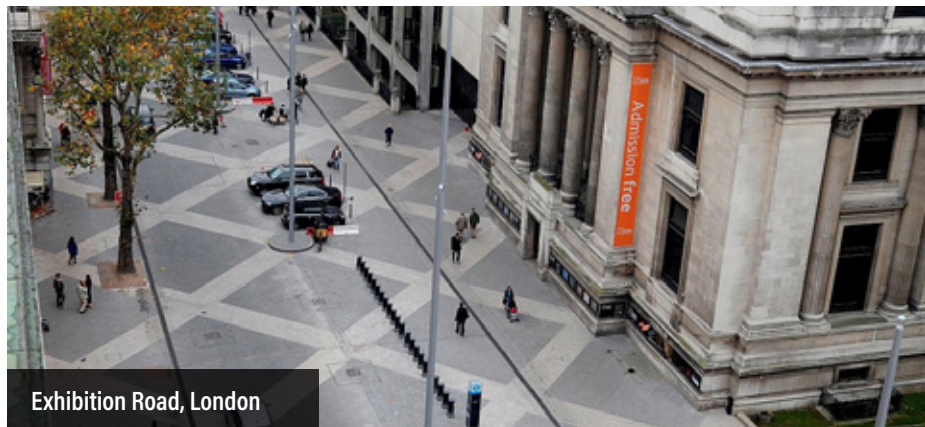
#### Examples of Shared Streets



Market Street, Toronto



Kaptensgatan - a Woonerf in Stockholm, Sweden



Exhibition Road, London



Shared Street, Binghamton

## 4.6.5 The Port Lands by Foot and Bike

The street network was developed with a pedestrian and cyclist first lens. All of the major streets will have wide, unobstructed pedestrian clearways that accommodate people of all ages and abilities. In no instance, should a pedestrian clearway be less than 2.1 metres. On shopping streets, at transit stops and high-streets the pedestrian clearway will be increased to accommodate higher pedestrian volumes. These streets should have a clearway of at least three to four metres.

The cycling network is shown on Figure 56. Priority is being given to raised, separated cycle tracks on major streets, and in particular on high traffic streets or streets that will continue

to support goods movement. These cycle tracks will assist in minimizing conflict between other modes, improve safety and foster a cycling culture.

The plan also identifies optional raised cycle tracks. It may not be practical in all instances to achieve the raised, separated cycle tracks on each street. A series of multi-use paths, trails and the water's edge promenades are also proposed. These will be located in major parks and open spaces such as the Don River and Greenway. The Martin Goodman Trail system will be improved in the Port Lands, particularly on new Cherry and Leslie Streets.

Commissioners Street will also have a multi-use trail integrated within the wide landscaped stormwater feature.

### Examples of Raised, Separated Cycle Tracks



Bastille, Paris



London, England



Boulder, Colorado



Janskerkhof, Utrecht

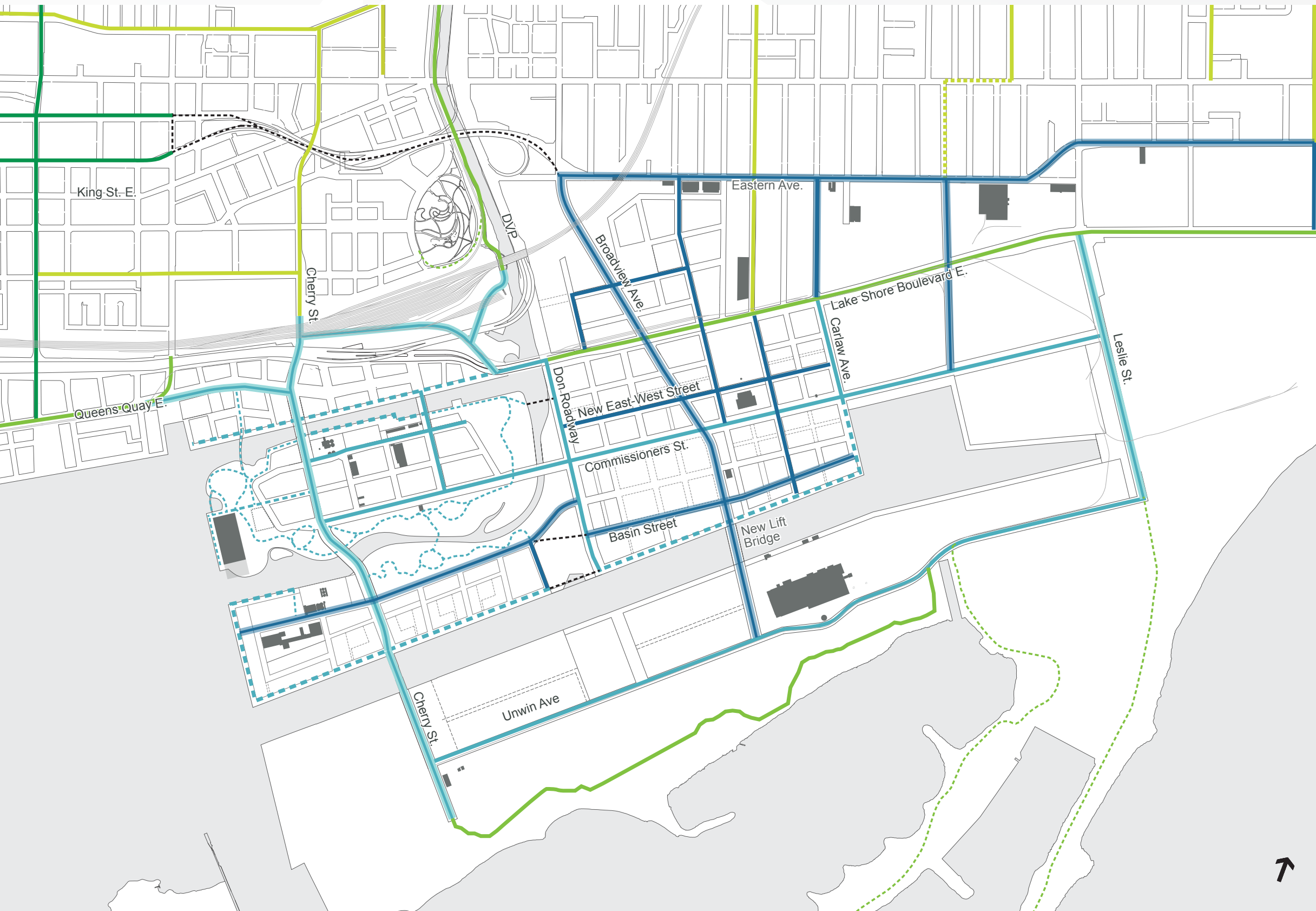


City Quay, Dublin



Cultural Trail, Indianapolis

Figure 56: Cycling Network



PROPOSED/PLANNED FACILITIES

- Priority Raised Cycle Track
- Optional Raised Cycle Track
- Multi-use Trail
- Improved/Realigned Existing Multi-use Trail
- - - Protected for Future Cycling/  
Pedestrian Connection

PROPOSED SCENIC MULTI-USE FACILITIES

- - - Water's Edge Promenade
- ⋯ Trail

EXISTING FACILITIES

- Cycle Track
- Lanes / Sharrows
- Multi-use Trail
- ⋯ Trail



## 4.6.6 The Port Lands by Transit

Transit service is currently limited in the Port Lands to a surface bus route on Carlaw Avenue and along Commissioners Street, with seasonal service to Cherry Beach. **“Feeling Congested?”** reviewed and prioritized transit investment needs in the city. A continuous waterfront transit network, extending from Long Branch in the west and through the Port Lands to Woodbine Avenue, was identified as a priority route to be explored and advanced. Waterfront Transit Reset is currently exploring the full route, using the network established in the Port Lands.

Consistent with the Central Waterfront Secondary Plan, the success of the Port Lands transformation can only be realized with the provision of dedicated higher-order surface transit routes along major streets, supported by improved and expanded bus routes to service employment, port and key destinations. The transit network envisioned for the Port Lands is identified on Figure 57. New streetcar routes will operate in exclusive rights-of-ways on existing and new streets to ensure efficient transit movement. The provision of dedicated streetcar service on Cherry Street and Commissioners Street, connecting to Leslie Street, will also complete the waterfront-wide transit network.

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### Cherry Street Transit

Cherry Street will carry on its role as the primary north-south link within the western Port Lands. In time the service will be extended to the Ship Channel. Streetcar service will mirror the dedicated streetcar established through the West Don Lands, offsetting the dedicated right-of-way on the east side of the street.



Queen's Quay

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### Commissioners Street Transit

The design of the dedicated streetcar lanes on Commissioners Street requires further attention in later design stages. From a strictly operational perspective, dedicated transit service in the centre of a street is preferred. The Lower Don Lands IMP offset the transit service to the south side of the street, adjacent to the naturalized river valley, where it will

have limited interruptions. The location of the transit east of the Don Roadway requires further assessment. Objectives for the location of the service will need to ensure:

- The provision of a wide, stormwater feature integrated as part of an overall public realm concept;

- The optimal configuration for pedestrians and cyclists from Cherry Street to Leslie Street;
- Appropriate conservation of cultural heritage landscapes;
- Reconciliation of existing accesses for sites and buildings to remain along Commissioners Street;
- Recognition of constraints along the length of Commissioners Street, which in some instances may limit the ability to take right-of-way widenings;
- Undergrounding of hydro transmission wires as a prerequisite given the conflicts between the transmission wires and overhead traction wires needed for streetcar service; and
- Recognition of major municipal servicing located under the Commissioners Street right-of-way that will continue to service external areas north of the Port Lands.

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## Broadview Extension Transit

Broadview Avenue north of Queen Street currently provides streetcar service to the Broadview Subway Station and into downtown. The Broadview extension will create a new transit line and city spine through the Unilever Precinct and into the Port Lands.

The extension maximizes transit access by centrally locating the extension across multiple districts – the Unilever Precinct, the McCleary District and the Port Lands. It will also connect multiple destinations along its route, from the Broadview Subway Station, to Riverdale Park, to McCleary Park and Community Hub, and terminating at the Hearn.

The provision of the dedicated streetcar service is anticipated to occur incrementally. Initially, dedicated transit will be advanced from Eastern Avenue to Commissioners Street. In time, streetcar service can be extended further south across the Ship Channel. The necessary right-of-way width to accommodate dedicated transit south of Commissioners Street will be protected for. The new lift bridge across the Ship Channel will also be future-proofed to enable dedicated transit, particularly given the significant investment required for new lift bridges.

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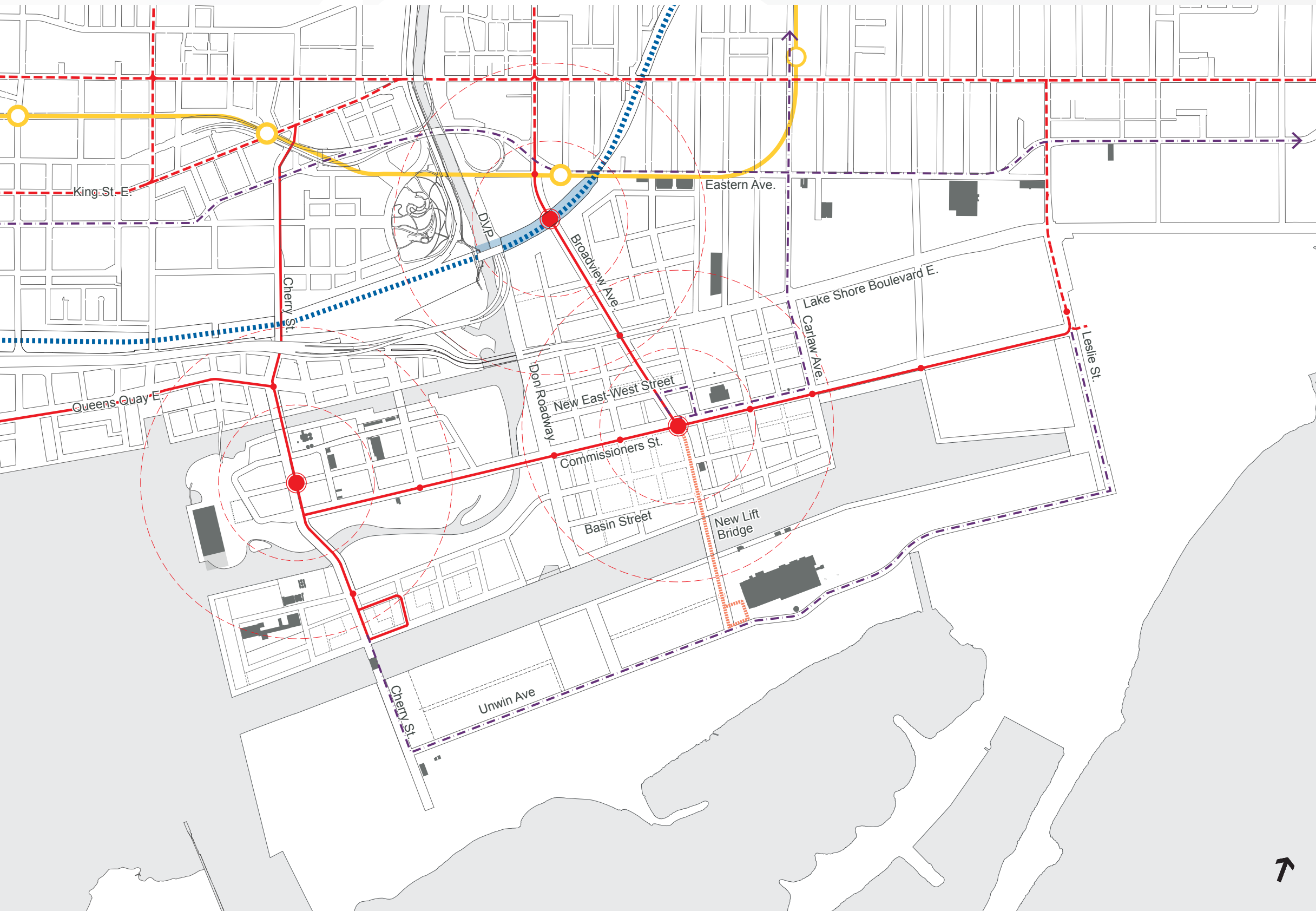
## Bus Service

Streetcar service in dedicated rights-of ways will support considerable residential and employment intensification for portions of the Port Lands. Bus service along key routes, such as the 72 Pape, will continue to

provide transit service into and from the Port Lands.

Lands south of the Ship Channel that will continue to be used for port and industrial purposes do not warrant

Figure 57: Transit Network



- Streetcar in Dedicated ROW
- Streetcar in Mixed-Traffic
- Transit Hub
- Streetcar Stop
- Protected for Future Streetcar in Dedicated ROW
- Future Streetcar Stop
- Relief Line
- SmartTrack/RER
- Bus in Mixed Traffic





streetcars in dedicated rights-of-way. When the Central Waterfront Secondary Plan was originally adopted by Council in 2003, it had been assumed that these lands would likewise be transformed into new live-work communities. The Land Use Direction of this Framework, confirms the need to maintain these lands for port and industrial purposes for the foreseeable future. Improving transit

access for these lands and for the recreational uses to the south, as well as to provide transit service to the Hearn to support this buildings transformation into a major new regional destination, is an important objective of this Framework. Bus service is envisioned along Unwin Avenue that could connect north along Cherry Street and Leslie Street.

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## Transit Hubs

A transit hub in the Port Lands context occurs where there is a convergence of different transit routes and types of service. These hubs would provide seamless access between different routes and are strategically located in proximity to major trip generators. These Transit Hubs will be designed as an integral component of the public realm. Two

transit hubs are identified. The first in Villiers Island at Cherry Street and Centre Street where there is the potential for both bus and streetcar service. The second hub is located at the Broadview extension and Commissioners Street where two streetcar routes converge, along with the continued bus service on Carlaw Avenue.

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## Future Transit Expansion

Through the development of the Framework, the City advanced broader transit system planning. A preferred alignment for the Relief Line Subway was adopted by City Council, which places a station at Broadview and Eastern Avenue, and at Carlaw Avenue and Eastern Avenue.

With the implementation of the Relief Line, there may be the desire to further extend and create new streetcar routes that connect into the Port Lands, such as along Carlaw

Avenue. These will need to be studied in more detail through separate processes, while ensuring that key objectives for Carlaw Avenue and the provision of a wide pedestrian promenade into the Port Lands and along the Turning Basin are still accommodated. Major land use changes south of the Ship Channel would also necessitate revisiting the right-of-way width of Unwin Avenue and would need to be addressed through comprehensive, integrated planning.

## 4.6.7 Bridges

Bridges will be important elements of the overall transportation system, providing connection across the Port Lands' many utilitarian and naturalized waterways. Currently, there are few bridge crossings across the existing waterways and additional connections are required. Additional

bridges will also be needed as part of the renaturalization of the mouth of the Don. Three types of bridges - pedestrian/cycling bridges, fixed bridges and lift bridges - have been identified and locations for the planned crossings are shown on Figure 58.



Bicycle bridge in Denmark

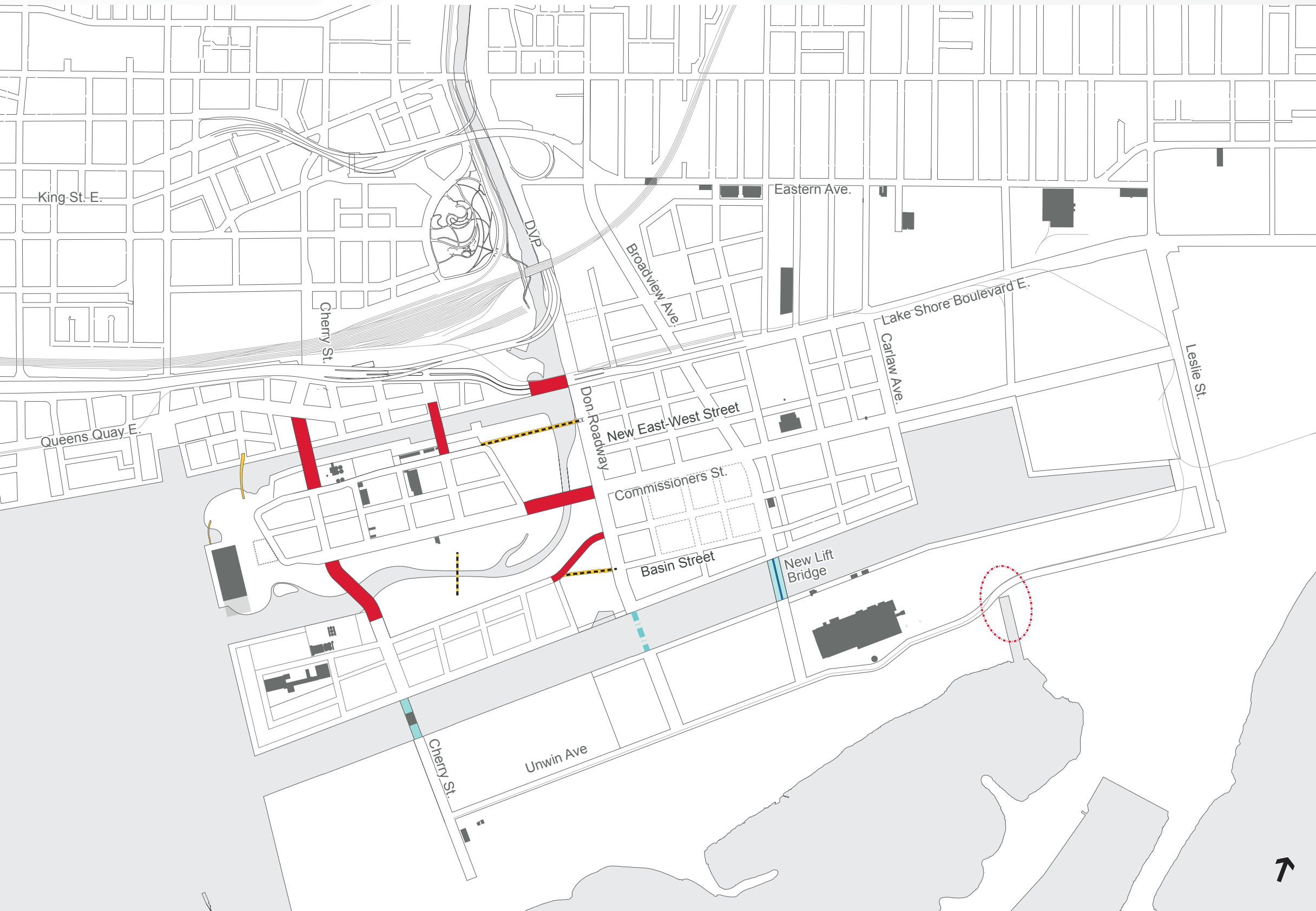
### Pedestrian/Cycling Bridges

The Trinity Street bridge is proposed as a pedestrian/bicycle bridge and will be the primary crossing point of the Martin Goodman Trail into Promontory Park. The result will be a pedestrian corridor, providing a key connection between the Distillery District and the Promontory Park.

With the realignment of Munitions Street, there is no further need for additional pedestrian/cycling crosses across the Keating Channel. The Trinity Street bridge, combined with the fixed bridges across the Ship Channel, and the Don Roadway, provide good porosity with equally spaced crossings - 350 and 400 metres - across the Channel.

Increased connectivity between different districts in the Port Lands is desirable. Providing additional crossings when, and if, funding becomes available will reduce the potential for districts to feel isolated. Crossings will be protected for at Villiers Street, connecting Villiers Island with the McCleary District, at the Basin Street extension, and across the naturalized river valley connecting South River and Villiers Island.

Figure 58: Bridges



- Fixed Bridge
- Pedestrian/Cycling Bridge
- Existing Lift Bridge
- New Lift Bridge
- Crossing type to be Determined at Phase 3 of the Municipal Class EA process
- Protected for Future Cycling/Pedestrian Connection
- Protected for Future Bridge



## Fixed Bridges

There are five new fixed bridges proposed in the Port Lands. The bridges will reflect appropriate levels of utility and design excellence to complement the unique characteristics and qualities of the accompanying river and park system. Space will be provided to accommodate dedicated higher order transit lanes on Cherry Street and Commissioners Street and within the new bridge across the river at Cherry Street.

The relocated bridge at Cherry Street across the Keating Channel will be a key multi-modal gateway entrance into the Port Lands. The height of the new fixed-bridge will also enable small watercraft to enter into the Channel. This bridge, along with the new bridge across the river at Cherry Street, consists of two superstructures accommodating vehicular traffic on one structure and transit and cyclists on the other.

Munitions Street will provide a secondary vehicular access point across the Keating Channel, but also, pedestrian and cycling connections. The Munitions Street bridge will have wide sidewalks and accommodate two lanes for vehicular traffic. All Keating Channel crossings must satisfy flood conveyance and navigational requirements as described in the DMNP EA.

New fixed bridges will also be constructed across the river valley and Don Greenway at two key points:

- Along Commissioners Street across the river valley/Don Greenway; and
- Along the Basin Street extension to the north of the planned high-quality wetlands.

A new bridge may be required as part of the realignment of Unwin Avenue across the Circulating Channel south of the Ship Channel. Currently, Unwin Avenue in this area has hard, 90 degree jogs and a one-lane bailey bridge that crosses the Channel. Conceptual alignments for Unwin Avenue were explored as part of the TSMP and more detailed exploration will occur at Phase 3 of the Municipal Class EA. In particular, a sub-surface utility exploration and life cycle cost analysis needs to be undertaken for three potential options:

- Realign the street to the north of the Circulating Channel which would require relocating existing natural gas infrastructure;
- Fill a portion of the Circulating Channel and locate the street just south of the existing natural gas infrastructure. This option would require reconfiguring the existing outlet from the Port Lands Energy Centre; and
- Construct a new two-lane fixed bridge across the Channel.

## Lift Bridges

The Port Lands is Toronto's only working port with the Ship Channel and slips acting as major goods movement corridors. Currently, there are only two ways to get across the Ship Channel - along Cherry Street with the historic Strauss Trunion Bascule Bridge that needs repairs and via Leslie Street. These existing connections are close to three kilometres apart, and additional connectivity across the Ship Channel is needed.

The Broadview extension, located mid point south of the Ship Channel will provide this additional connectivity while maintaining large, continuous

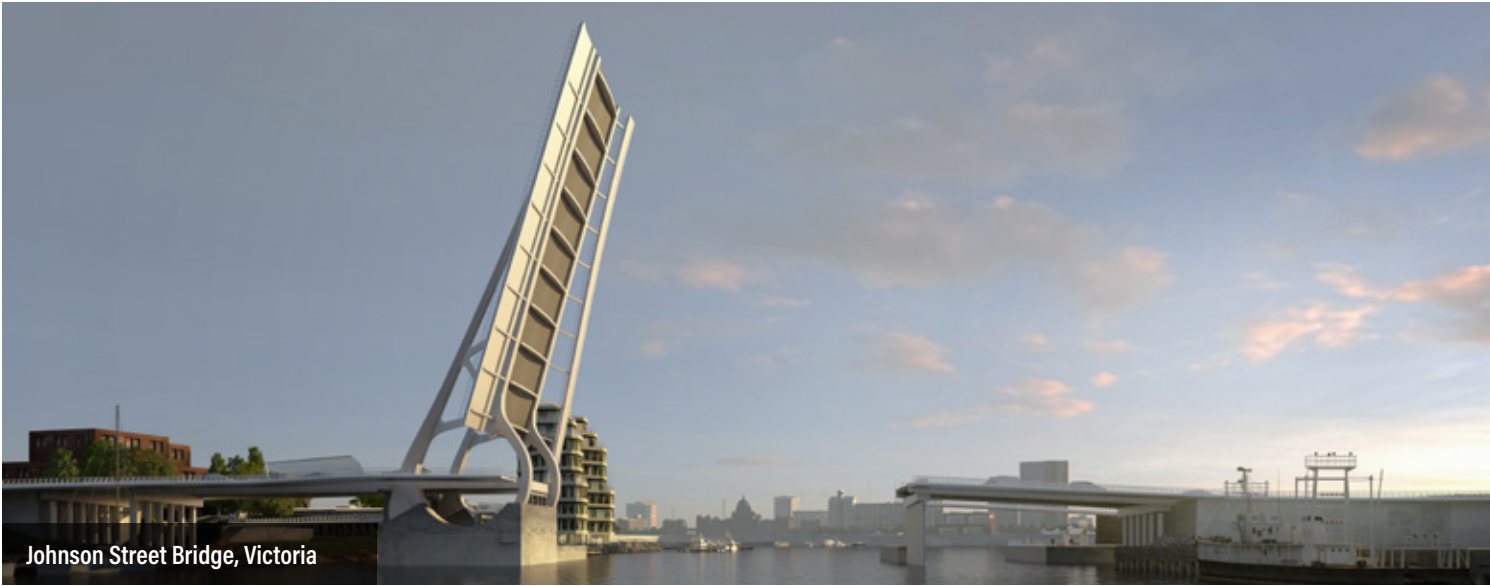
tracts of land for port purposes. An additional connection will be protected for at the Don Roadway with approximately 450 metres spacing between the bridges for vessel navigation.

Through discussions with Ports Toronto and initial evaluation of different types of bridges, it has been determined that any new bridge is required to be a lift bridge. Each lift bridge will be a place unto itself, providing a distinct character and architectural expression that will signify that the Ship Channel is still a working port and contribute to the identity of the Port Lands.

### Examples of Modern Lift Bridges



Valencia Bascule Bridge



Johnson Street Bridge, Victoria



Bascule Bridge, Netherlands



Gateshead Millennium Bridge



## 4.6.8 Water Transportation

The waterways in the Port Lands are a valuable resource with tremendous potential. While the Ship Channel will continue to be used for shipping, it can also act as a new east-west transportation corridor. The Keating Channel can also be capitalized on for a variety of water-based transportation.

One of the objectives of the overall transportation plan for the waterfront is to include the potential for water taxi and/or ferry service links between the Port Lands and other waterfront destinations and Toronto's downtown.

Map D of the Central Waterfront Secondary Plan identifies potential water routes to and into the Port Lands. With the final configuration of the river and maintenance of the

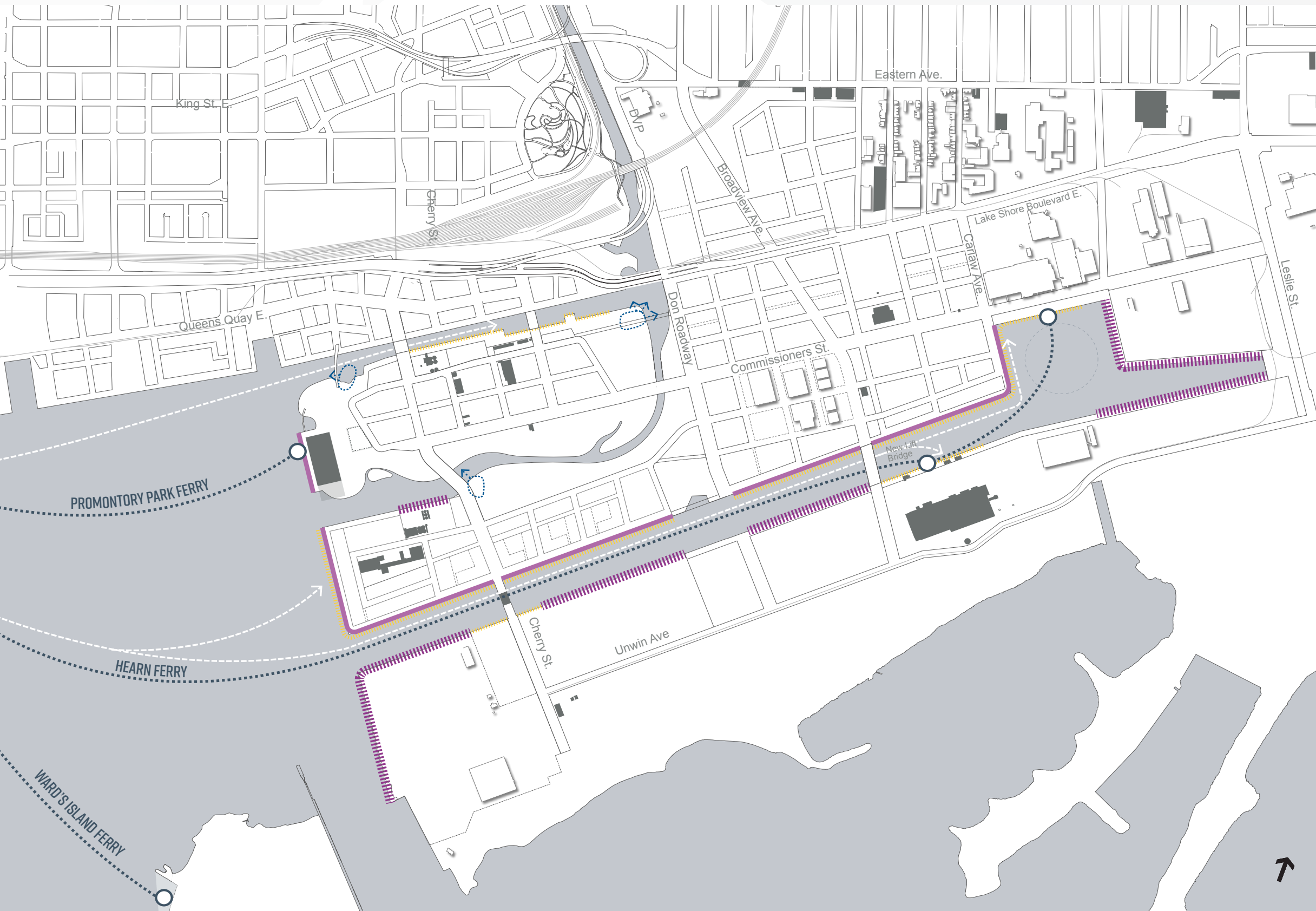
Keating Channel, water routes have been updated and are shown in Figure 59. Additionally, water taxis could provide additional value to the overall transportation network. The potential for water transit should also be considered as part of a further, more detailed study, to achieve the aspirational travel mode targets.

An equally important consideration from a water transportation perspective is the role the Ship Channel will continue to play in shipping. Figure 59 also identifies active dockwalls that will continue to be used for port purposes. In total, approximately 3,000 metres of dockwall will be preserved for port purposes. Additional dockwall area will still have opportunity for mooring and laying-up ships.



Ferries docked at the Ferry Terminal

Figure 59: Water Transport



RECREATIONAL SHIPS/BOATS

Small Ships

Recreational Boat Launch

COMMERCIAL SHIPS

Water Taxes

Ferries

MARITIME TRANSPORT

Working Ships

Laid Up Ships



## 4.6.9 Goods Movement

A number of the existing streets in the Port Lands currently accommodate large volumes of truck traffic. Commissioners Street is currently identified as a major truck route through the Port Lands. Cherry Street and the Don Roadway provide direct and convenient access to Lake Shore Boulevard, the DVP and the Gardiner. Carlaw Avenue and Leslie Street are also frequently used to access the East Port area, and for trucks destined to the Spit where construction rubble continues to be deposited. Continuing to accommodate goods movement is key to the overall transportation system and will ensure operations remain viable such that they can continue to provide the necessary products to build and maintain the city.

Discussions with port and industrial operators occurred throughout the development of this Framework. Site visits were also conducted of some of the operations, including Lafarge's Polson Street operation and Windsor Salt south of the Ship Channel. Some of the key considerations that emerged through these discussions and visits included:

- Unwin Avenue is often used for staging of trucks accessing the salt operations south of the Ship Channel during busy winter months. A service road or on-street parking on Unwin Avenue would be a benefit;
- Trucks are big and obtrusive vehicles. On key routes, lane widths need to be sufficiently wide to accommodate trucks. The City's lane width guidelines identify a minimum of 3.5 metres for lanes on major truck routes;
- Safety considerations associated with pedestrian and cyclists are paramount; and
- Continued access to origins and destinations is needed.

These have been taken into consideration in the development of the overall transportation system for the Port Lands. Safety considerations for pedestrian and cyclists have also been accounted for through the use of priority raised cycle tracks on key routes, as well as the introduction of sidewalks on all streets.

## Dedicated Truck Routes

Based on experience elsewhere in the city where main transportation routes to industrial areas are located through residential areas, truck noise is often cited as one of the most immediate and consistent concerns relating to industrial operations. A nearby example is the South of Eastern area. Through the consultation with residents living within close proximity of the South of Eastern area, truck traffic along Eastern Avenue was cited as a concern.

This is also common in other jurisdictions where port uses are in close proximity to residential uses. As part of the development of the original 2014 Land Use Direction, it was recommended that dedicated truck routes be further explored. The genesis of this idea was in part informed by Official Plan policy directions, and also the East Bay precinct in Sydney, Australia. This area is a major and important port operation for Sydney.

The development of a longer-term plan for this area included the need to identify dedicated truck routes. These were seen to not only benefit nearby residential uses, but also work to provide reliable goods movement routes for port and industrial operations.

Initial discussion with port and industrial operations identified that additional travel time could be considered subject to trucks routes providing reliability and redundancy. High-level transportation modelling was undertaken to assess the additional travel time that could be expected if a dedicated truck route that bypassed future residential areas was introduced. Needless to say, travel times increased, but were within a reasonable amount of delay. While this modelling was useful, additional more detailed analysis and consultation with port and industrial operators is needed to fully establish dedicated routes.



## 4.6.10 Right-Sizing and Adaptable Parking

Right-sizing parking is about striking a balance between parking supply and demand. It is well documented that over-building parking leads to increased automobile ownership, vehicle kilometres traveled, congestion and increased development costs. Further, in the Port Lands, more judicious use of lands is needed. Vast expanses of surface parking are counter to achieving more compact

urban development and negatively impact the public realm. With the aspirational travel mode targets, the long-term vision for the Port Lands is to significantly reduce the reliance on personal vehicles. Parking provided in the near medium-terms may not be needed in the fulsome of time. As such, adaptability of parking structures to accommodate other uses in the future is also key.

Examples of Surface Parking Lots and Structured Parking



Los Angeles Design Centre Multi-functional parking area



Surface parking area

The precise parking provisions needed, and innovative approaches for parking for any precinct or development proposal, will need to be further explored during precinct planning and development review.

Some potential strategies include the elimination of minimum off-street parking requirements and the identification of maximum requirements instead. In transit intensive areas, or where expected residents would not need cars, such as in a seniors' development, parking requirements could be removed entirely. Other strategies could include more efficient methods of providing parking such as mechanical parking lifts. Reductions in parking provisions could also have additional benefit by reducing costs for developers and users, enabling the ability to secure additional community benefits such as contributions towards transit or affordable housing.

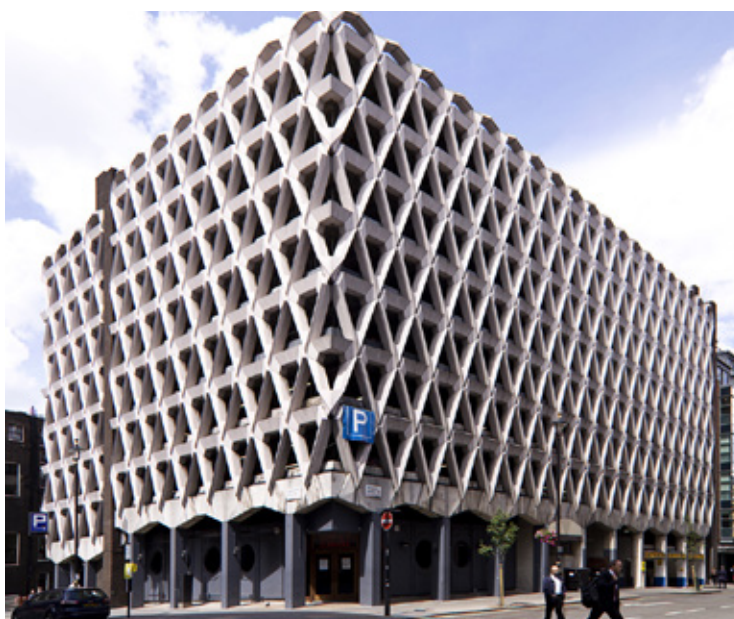
At-grade parking lots, if provided, should be an interim use, designed

to be flexible and multi-functional spaces, providing opportunities for animation and vibrancy including public markets, pop-ups, event spaces and other temporary uses. Shared multi-story parking facilities will be encouraged. Any multi-storeyed parking structures will need to be wrapped with active uses at grade. Additionally, these parking structures should be designed for adaptive re-use.

On-street parking will be accommodated within most streets. On local streets, on-street parking could accommodate visitor parking. On major streets, and in particular high retail streets, on-street parking spaces should be restricted to favour short-term shoppers, visitors and, to a limited extent, loading. On-street parking should also prioritize zero-emission and car-share vehicles by providing dedicated space for these, as well as dedicated spaces for the staging of production vehicles in **PIC** areas of the Port Lands.



The "living" garage in Miami



## 4.6.11 Recommendations

Removing barriers and making connections is a core principle of the Central Waterfront Secondary Plan. For the Port Lands, a robust and resilient transportation system has been identified which elevates active transportation as primary means for getting around. The recommendations below reflect the directions and identifies areas requiring further exploration and consultation.

### STREET NETWORK



The following complete street principles will inform the design of streets in the Port Lands, recognizing that different streets will have different purposes, constraints and character. The overall objective is to create a well-functioning street network that is designed to provide a vibrant public realm, safe access and efficient operation for all street activities:

- Transit will be prioritized, where appropriate, with an emphasis on dedicated transit right-of-ways on key major streets as shown on Figure 57;
- Lane widths will be minimized in consideration of the role and function of an individual street to assist in making streets safer and more pedestrian friendly;
- Raised, physically separated cycle tracks and multi-use pathways will be prioritized on key major streets identified on Figure 56 to create a well-connected, robust and safe cycling network. Raised, separated cycle tracks will be encouraged on all other major streets;
- Wide sidewalks with unobstructed, accessible pedestrian clearways will be provided to encourage walking and contribute to the overall public realm vibrancy of the Port Lands;
- Goods movement will be accommodated to ensure the continued economic vitality of industry. Critical goods movement corridors will be identified and designed with suitable conditions for truck access balanced with other complete street objectives;
- Stormwater and green infrastructure will be integrated in street design to improve air quality, provide habitat corridors and add visual interest;
- Permeable surfaces for roadways and sidewalks will be encouraged and pursued, where possible, to reduce flooding, preserve capacity in storm drains and sewers and add visual interest;



Official Plan Policy Direction



Future Follow-on Work



Continued Consultation





- Street trees and understorey plantings will be provided on all streets with adequate room to grow and suitable soil conditions/techniques;
- Pedestrian and cycling amenities will be provided on all streets, including, but not limited to, bike parking infrastructure, street furniture, pedestrian scaled lighting, weather protection, waste management infrastructure and public art;
- Place-making features, such as, but not limited to, public art, cultural heritage landscapes and sustainability features, will be incorporated in street design to contribute to the character of the area.



New and/or improved segments of the public street network as identified on Figure 53 will be provided to support development and maintain the functional integrity of the transportation system.



The section of street that extends through the extended McCleary Park will be further reviewed during precinct planning and/or during Phases 3 and 4 of the Municipal Class EA process. The design of the street will be integrated into the overall design of the park and prioritize pedestrians.



A potential future extension of the Don Roadway across the Ship Channel to Unwin Avenue will be protected for. Buildings and/or permanent structures will not be permitted to be located where the public street would be located.



A fine grain of local public streets will be required in **Mixed-use Residential** areas to provide address, access and amenity for development. In **PIC Mixed-Use** areas, development will be located and sited to enable the long-term objective of achieving a fine-grained network of local public streets. In other districts, a network of local public streets will be secured as appropriate, and in consideration of land use.



The location, alignment and design of local public streets within a particular district will be determined at the precinct planning stage or during development review where precinct planning does not apply. Considerations for the location and alignment of local public streets will include:

- Alignment with streets in other districts to enhance visual connections and facilitate future physical connections between districts;
- Reinforcement of visual connections between the city and the water, and to provide visual connections of important natural or human-made features; and
- Avoidance of block lengths greater than 150m. Where a block exceeds a length of 150 metres, development will be sited and configured to enable permeability and porosity through the block.



Official Plan Policy Direction



Future Follow-on Work



Continued Consultation



Shared local public streets are specially designed streets where pedestrians, cyclists and motorists share the street. They will be provided in key locations and identified during precinct planning.



Laneways will be provided as appropriate for loading and servicing access for buildings, and to serve as secondary pedestrian and cycling routes. Locations for laneways will be determined during precinct planning or during development review. They will be well lit and will be designed to accommodate both vehicles and pedestrians/cyclists.



The use of permeable materials and the design of shared streets and laneways will ensure a balance between the objective of providing high-quality, pedestrian-friendly, sustainable streets and operational and maintenance considerations.



Streets will be public streets, and owned and maintained by the City. Land conveyed to the City for public streets will be free and clear, above and below grade, of all physical obstructions and easements, encumbrances and encroachments, including surface and subsurface easements.

## TRANSIT



Cherry Street (New), Commissioners Street and Broadview Avenue will have dedicated public transit right-of-ways.



The precise location of a dedicated transit right-of-way within the streets will be determined through the completion of the Environmental Assessment process and identification of a preferred design.



The expansion of bus service within portions of the Port Lands will be encouraged to provide enhanced transit access for employment uses, future destinations and recreational amenity.



Transit hubs will be provided where transit routes converge. These hubs will have a pedestrian friendly design and will be integrated with streetscaping and/or plaza design.



Official Plan Policy Direction



Future Follow-on Work



Continued Consultation

### PEDESTRIANS AND CYCLISTS



A well-connected network of on- and off-street cycling routes will be provided for in accordance with Figure 56. The location and design of these routes and facilities may be further refined at the precinct planning stage or detailed design without the need to amend the Official Plan.



Publicly accessible mid-block connections will supplement the network of streets in the Port Lands. Mid-block connections will:

- Be positioned to form a comprehensive network of linkages with the system of streets;
- Complete pedestrian and cycling linkages;
- Be conceived as part of an overall parks and open space system;
- Be wide enough to accommodate the installation of street furniture, lighting and identity features that reinforce the character of the particular district; and
- Have activated building frontages along the edges for informal surveillance.



Additional pedestrian and cycling bridges across the Don Greenway and the Keating Channel will be protected for as shown on Figure 58 with further assessment to be undertaken to ensure no impacts to flood conveyance or high-quality wetlands.

### GOODS MOVEMENT



Accommodating goods movement in and through the area is required, while ensuring that potential conflicts associated with the mix of **Port** and **Industrial** uses and new mixed-use communities are minimized. Dedicated truck routes that enable convenient and reliable routes for the movement of goods in and through the area will be determined as part of a Port Lands wide Truck Management Strategy in consultation with the Toronto Port Authority, industrial operators and port users.



In **PIC, Light Industrial and Productions, Port** and **Industrial** areas, the design of streets will serve the needs and access requirements and the staging of trucks balanced with maintaining a safe pedestrian environment and minimizing rights-of-way widths and corner radii.



Official Plan Policy Direction



Future Follow-on Work



Continued Consultation

## PARKING AND LOADING



Parking policies and standards developed at precinct planning, through a comprehensive zoning review, or during development review where appropriate, will improve the quality of districts, and strive to reduce congestion and private vehicle trips by encouraging travel by non-auto modes.



Maximum parking standards are to be developed and introduced for all uses permitted in the Port Lands. Minimum parking standards, if provided, will support achievement of shifts to transit and active transportation as primary means of moving in and through the area.



Parking arrangements that make efficient use of space will be encouraged and pursued in all developments, particularly where cars will not be used on a daily basis.



On-street parking will be managed to:

- More efficiently use street parking space and increase turnover and parking availability supporting access to parks and open spaces;
- Provide an adequate amount of short-term, on-street curbside freight loading spaces; and
- Accommodate goods movement, where appropriate, and the staging of production vehicles, particularly in PIC and Light Industrial and Productions districts; and
- Ensure that the movement of trucks can be made safely and efficiently at, or near, intersections or when maneuvering in or out of driveways from adjacent land uses balanced with minimizing curb radii.



Opportunities to provide shared transportation options, such as car-pooling and car-sharing, will be encouraged.



At grade parking lots will generally be prohibited. Parking, to the extent possible, will be accommodated in below-grade parking structures, parking structures internalized within a development, or shared multi-storey parking structures. . Interim at-grade surface parking to temporarily support nearby uses may be permitted. Where consideration is given to at-grade parking, the parking area will:

- Not be located between a building and major public street;
- Be designed as an extension of the public realm; and
- Incorporate sustainable design features.





Structured parking will efficiently use space, have a high-quality design, be faced with active uses at grade on major streets and Priority and Secondary Retail Streets and Frontages. They will be designed to enable adaptive re-use through the provision of a minimum floor to ceiling height of 3.0 metres and flat, level surfaces.



Parking, servicing and loading facilities will be located to:

- Minimize their visual and functional impact on street edges, on surrounding properties, open spaces and pedestrian routes; and
- Located in the interior of development blocks and accessed from laneways or local public streets. Generally, access will not be taken from major public streets identified on Figure 53. Where this is not possible, accesses to sites will be consolidated to minimize interruptions to the public realm.



Complete the Environmental Assessment process, as required, for the major streets identified on Figure 53. Street segments are to be addressed comprehensively. Piecemealing of the Environmental Assessment process for smaller segments of streets is not desirable. The completion of the Environmental Assessment process will be as follows:

- Commissioners Street as a Schedule C project from the Don Roadway to Leslie Street, including coordination with the design for Commissioners Street west of the Don Roadway;
- Broadview Avenue as a Schedule C project from Queen Street to Unwin Avenue;
- Unwin Avenue from Cherry Street to Leslie Street as a Schedule C project; and
- Carlaw Avenue, new East-West Street north of Commissioners Street, Basin Extension and the Caroline Extension as Schedule C projects and completed during precinct planning as an integrated process or as part of a Plan of Subdivision application.



A comprehensive review of goods movement corridors is required following adoption of the Port Lands Planning Framework. This review will include at a minimum:

- Undertaking cordon counts of existing truck traffic to better establish origins and destinations and numbers of trucks coming and going from the Port Lands throughout the day and at key times of the year;
- Refining projections for future heavy truck at all times of the day and taking into consideration the potential for intensification of existing operations and the establishment of new industries;



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Future Follow-on Work



Continued Consultation

- Identifying options for truck routes that would provide redundancy in the network, and potential strategies should a route need to be closed for routine maintenance;
- Completing additional noise testing, as appropriate, to assess and evaluate different dedicated truck routes and impacts on sensitive uses; and
- Developing an overall truck management strategy in partnership with port and industrial users.



Investigate the location of potential water-based transportation stops within the Port Lands, including potential facilities that support ferry, water-taxi and/or human-powered recreational watercraft.



Official Plan Policy Direction



Future Follow-on Work



Continued Consultation