SECTION 3

STRATEGIES AND GUIDELINES

This section of the Precinct Plan describes the strategies and guidelines for directing the change and evolution of Villiers Island. It details the planning and design directions for sustainability and climate positive design, the transportation network, public realm, heritage, activity and uses, built form, and municipal infrastructure. When combined, these strategies and guidelines provide a comprehensive and integrated roadmap to guide public and private investment and development on the Island.

The Plan's strategies and guidelines include the following:

3.1 Climate Positive Precinct

3.2 Mobility, Transportation and Access

3.3 Parks, Open Space and Public Realm

3.4 Heritage

3.5 Activity and Uses

3.6 Built Form

3.7 Municipal Infrastructure

Each section includes descriptive text to explain the planning and design directions, supporting graphics, plans, relevant photos and precedents, and policy directions and guidelines.

3.1 CLIMATE POSITIVE PRECINCT

Villiers Island is planned as Toronto's first climate positive precinct. It will be developed as an innovative 'climate positive' community, demonstrating excellence in carbon reduction and sustainable neighbourhood design.

3.1.1 Climate Positive Framework

Neighbourhood developments that rely on today's standard site and building practices result in buildings largely dependent on carbon-intensive energy sources, the personal automobile and the production of more waste.

The Port Lands Planning Framework sets out an ambitious objective for the Port Lands to be a net zero energy district. The recommended policy directions will foster the conditions needed to reduce emissions to zero and to the extent possible under current legislation. The directions mandate the use of passive design techniques for site and building design, as well as naturalized, low-impact approaches to storm water management. A Port Lands wide low-carbon energy feasibility study is also recommended to be undertaken to explore the optimal way to supply the entire area, including Villiers Island, with low-carbon energy.

Waterfront Toronto aims to advance an even more progressive environmental agenda for Villiers Island, by striving to reduce greenhouse gas emissions below zero, in accordance with the C40 Cities' Climate Positive Development Program. Climate Positive developments aim to significantly reduce overall emissions in the communities in which they are built, by addressing energy use in buildings, transportation fuels, and emissions from waste.

The Climate Positive Framework is a roadmap that leads new developments to achieve net-negative operational greenhouse gas (GHG) emissions associated with energy, waste and transportation.

Villiers Island is one of the 17 inaugural projects included in the C40 Climate Positive Development Program launched by the Clinton Climate Initiative in 2009. It also accounts for local offsets resulting from the preservation, creation, and regeneration of natural parks and green spaces (carbon sinks), as well as the local export of clean energy generated within the new development.

The objective is to develop Villiers Island as an innovative new model for a sustainable 'climate positive' community, while demonstrating excellence in neighbourhood design. The following sections elaborate upon specific aspects of the path to reducing GHG emissions below zero.

By reducing local emissions as much as possible and creating new green spaces that will act as carbon sinks, Villiers Island will play a role in ensuring Toronto can achieve its GHG emissions reduction targets. Additional opportunities for exporting clean energy will be further explored in more detailed planning – such as proposed roof top solar PV in Villiers Island or the potential for a series of low-carbon energy solutions across the Port Lands.

Additionally, Villiers Island will act as a pilot project for innovative greenhouse gas reduction approaches and technologies that can subsequently be employed in other Canadian or International urban developments to minimize or eliminate GHG emissions.

Climate Positive Neighbourhood Design Recommendations

In 2016, Waterfront Toronto commissioned the Villiers Island Climate Positive Assessment to study strategies that would optimally close the emissions reduction gap between the current plan and the Climate Positive target. This study identified six major neighbourhood design recommendations:

- Design to passive house standards with absolute energy targets;
- Optimize the urban form for energy harvesting and conservation;
- Maximize solar photovoltaic (PV) capacity;
- Meet remaining energy demand with district energy including cogeneration;
- Reduce car travel to only 25% of trips, and explore limiting non-electric vehicles; and
- Design with the 'climate positive' goal in mind.

In subsequent sections, this plan outlines implementation considerations for each of these strategies.

3.1.2 Transportation: Active Mobility and Electrification

Mobility on Villiers Island will be as energy efficient as possible, by reducing use of personal vehicles and prioritizing public transit and active mobility. To reduce emissions from transportation, all transportation energy demand should be supplied with non-emitting renewable energy. Electric vehicles are 82% more energy efficient that gas-powered vehicles.

To encourage sustainable transportation choices, the Island will empower residents and visitors to use low-carbon modes of transportation, enabled by proximity to jobs and amenities, frequent and excellent public transit options, and proper active transportation infrastructure, including dedicated cycling routes on New Cherry Street, New Munition Street, and Villiers Street, in addition to trails around the perimeter of Villiers Island, and Centre Street, which is designed as a woonerf with space for pedestrians and cyclists shared street.

To achieve Waterfront Toronto's aspirational Climate Positive status, nearly all personal vehicles at Villiers Island must be electric, supplied with low-carbon electricity from local renewable energy sources and the Ontario grid. This could be achieved through local tools such as priority parking for electric vehicles, robust EV charging infrastructure, and affordable community EV sharing. Although not currently viable in Toronto, restrictions on gasoline- or diesel-powered personal vehicles (such as a congestion charge, with exemptions for electric vehicles) would further reduce transportation emissions, and allow Villiers Island to achieve Climate Positive status.

According to the Villiers Island Climate Positive Assessment, 75% of trips must be made using active transportation or public transit. The long-term objective is to achieve a target of 85% of all trips to be via sustainable (non-personal automobile) transport mode across the Port Lands.

Villiers Island's unique location and context within Toronto's waterfront could also lead to alternative transportation options. For example, two 200-person electric ferries could shuttle people between the western Villiers Island dock and the Jack Layton Ferry Terminal. Public or private ferry services could also service nearby Ward's, Centre, and Hanlan's Islands.

3.1.3 Public Realm: Inspired by Nature

The green space and public realm of Villiers Island will be inspired by nature, and should be designed according to biophilic principles – to design and create public spaces inspired by natural systems, aiming to foster environmental restoration and increase ecological function. The design of the public realm on Villiers Island will seek to emulate biological forms and connect residents and visitors to their natural surroundings.

In addition to enhancing the human experience through improved connection with local natural elements, Villiers Island will employ biomimicry – the imitation of biological forms in design – and green infrastructure to further reduce energy use, material inputs, storm water runoff and noise, and to provide shade, opportunities for urban agriculture, and to improve the microclimate. For example, consistent with the Port Lands Planning Framework, Villiers Island will integrate permeable paving materials, bioswales, green roofs, and natural stormwater channels where possible. The public realm on and adjacent to Villiers Island will carefully consider all impacts on biodiversity, aquatic health and urban forestry.

3.1.4 Buildings: Optimized Built Form and Passive Design

Buildings represent 48% of greenhouse gas emissions in Toronto, and as such, minimizing building energy consumption and optimizing passive solar gain will be essential to achieving the objective of Climate Positive status at Villiers Island.

The Port Lands Planning Framework directs buildings to be design passively, and to meet the minimum requirements in the applicable Toronto Green Standards. On publicly-owned land in the Port Lands, buildings will be required to exceed the Toronto Green Standard's highest performance measures and include new and emerging approaches for advancing a progressive sustainability agenda, and showcasing innovation, in accordance with the Area Specific Policy.

This includes designing buildings with a shape, scale, location, and orientation to both reduce incidences of heat loss and energy demand that minimizes shadowing on other buildings and ensures excellent sunlight conditions in the public realm and daylighting within interior spaces within a block. Additionally, buildings in the Port Lands will incorporate shading strategies or design features applied to south and west façades to reduce solar heat gain in the summer and cooling loads, and should minimize the ratio of windows on a façade. Windows should have a demonstrated ability to minimize heat loss, and should not exceed 50%

of a façade and a minimum sill height should be provided unless otherwise demonstrated through achieving passive design.

Additionally, the City of Toronto Zero Emissions Building Framework prompts new developments to attain higher levels of performance on total energy use intensity, thermal energy demand intensity, and greenhouse gas emissions intensity. The Framework recommends new measures that will help ensure modelled performance targets are realized in practice, including renewable energy generation, district energy connections, air tightness testing requirements, building commissioning requirements, submetering, and building labelling and disclosure of energy consumption.

The current Waterfront Toronto Minimum Green Building Requirements (Version 2.1) also result in higher performance of new buildings on Toronto's waterfront, featuring LEED Gold certification, in-suite sub-metering for all utilities, 50% energy cost savings, 65% reduction in peak heating demand, 30% reduction in peak cooling demand - all compared to the Model National Energy Code for Buildings. Furthermore, Waterfront Toronto is currently updating the MGBR, and will enable and encourage certification of even higher performance standards, such as the Passive House standard. All development occurring on public lands is expected to adhere to Waterfront Toronto Minimum Green Building Requirements, and those developments on private lands are encouraged to also participate.

Waterfront Toronto undertook a study – the Villiers Island Climate Positive Assessment – to compare the emissions profile of the current Minimum Green Building Requirements with a typical Toronto development (a 23% improvement) and described how Villiers Island could reduce local GHG emissions by a further 77% to reach Climate Positive status.

As such, Waterfront Toronto plans to utilize the ultra-efficient Passive House Standard for buildings, which results in absolute thermal and electrical energy demand below 15 kWh/m^2 per year. The lower window-to-wall rations and enhanced insulation of the Standard will dramatically reduce thermal energy demand, which will be further reduced through optimized payout and massing to leverage passive solar gain. Orienting buildings to harness free solar energy is a simple strategy to reduce greenhouse gas emissions from natural gas space heating, while also reducing energy costs. By optimizing the neighbourhood design, and ensuring that buildings are designed passively in accordance with the Port Lands Planning Framework, Villiers Island can reduce heating demand over 95% compared to typical Toronto development.

The City of Toronto's Port Lands Energy Plan also offers guidelines for buildings in the Port Lands, including emphasizing the importance of reducing energy consumption, referencing passive design principles, as well as building-scale renewable energy solutions, such as building-integrated photovoltaics (BIPV), ground-source heating and cooling, small-scale bird-friendly wind turbines, and biomass combined heat and power (CHP).

3.1.5 Energy Infrastructure: Local and Low-Carbon

The Port Lands Energy Plan and Port Lands Planning Framework offer guidelines for achieving 'net zero energy import' for the overall area, which builds upon Council-approved policies in the Official Plan, in support of initiatives that "contribute towards an energy neutral built environment." The Port Lands Energy Plan aims to leverage the unique scale and opportunity of the area, to achieve 'net zero energy' through aggressive energy reduction targets and local low-carbon energy solutions. The Port Lands Planning Framework also calls for a Port Lands wide feasibility study to explore the optimal approach for

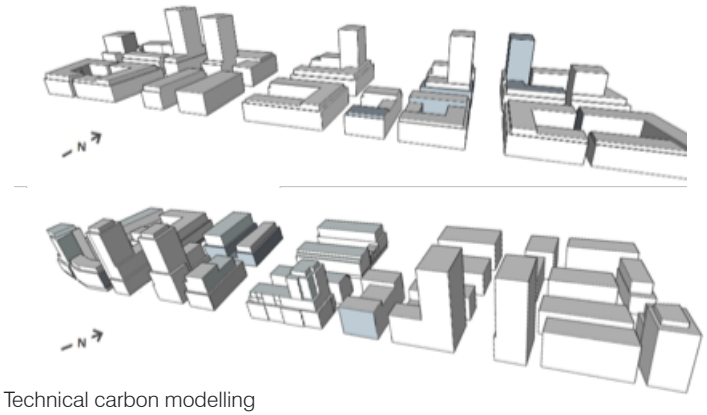


FIGURE 32. Technical carbon modelling

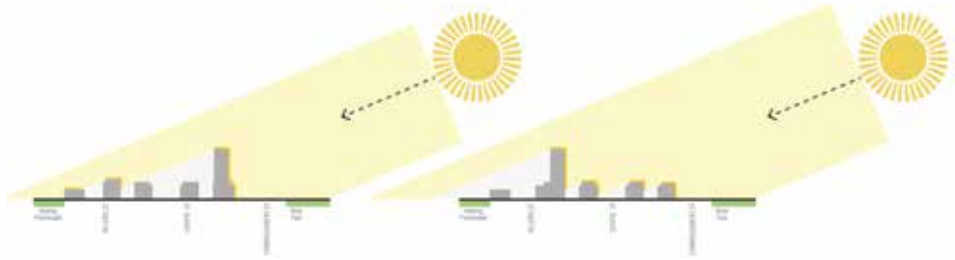


FIGURE 33. Diagram illustrating solar access during the winter months

introducing district energy plans in the Port Lands, which will examine the following:

- Heating, cooling and energy requirements needed for the Port Lands to become a net zero energy district;
- On-site renewable energy generation potential, balanced with other objectives, such as biodiversity and residential amenity;
- Opportunities to harness heating and cooling from existing industrial operations and the physical infrastructure needed;
- Opportunities to link into broader city-wide systems such as Deep Lake Water Cooling;
- Economies of scale associated with precinct scale or Port Lands-wide district energy plants, including the identification of benefits and issues;
- Financial implications to the City and/or impacts to Precinct Business and Implementation plans; and
- Life cycle costs and maintenance and operational requirements.

This overall Port Lands Energy Plan - extending beyond Villiers Island - emphasizes the importance of early infrastructure decisions that will enable a net-zero energy community, including reserving easements for block-scale energy networks and co-location of infrastructure with low-carbon energy solutions. These solutions may include lake water cooling, sewer heat recovery, ground-source heating and cooling, and biomass combined heat and power (CHP) plants. Upcoming design of water and wastewater infrastructure should explore opportunities for heat exchange with water supply mains and pumping stations, as well as heat recovery from sewage pumping stations, sewer lines, and building drains. Additionally, this plan suggests creation of a framework for low-carbon thermal energy network implementation, including partnerships to scale-up private investment that will enable a net-zero energy district.

To achieve Climate Positive status, the total annual neighbourhood energy consumption of 300,000 GJ (versus the current baseline estimate of 430,000 GJ, including gasoline, diesel, electricity, and natural gas) must be supplied by renewable zero-carbon energy sources, which could consist of 210,000 GJ of heat and 60,000 GJ of electricity from a biomass CHP facility, and the remaining 30,000 GJ of electricity supplied by solar PV.

As Villiers Island represents the first major development opportunity within the Port Lands, the energy system and infrastructure should align directly with the Port Lands Energy Plan, and should consider future growth and development in the vicinity. The design of other physical infrastructure such as parks, bridges, and electrical distribution equipment should explore opportunities to co-locate low-carbon energy sources (e.g. ground-source or lake-source piping under parks, bridges as utility corridors, heat recovery from electrical substations) to help achieve a net zero energy district.

3.1.6 Resiliency and Adaptation to Climate Change: Port Lands Flood Protection

Along Toronto's waterfront, and elsewhere around the world, the impacts of climate change are more apparent than ever. Extreme weather events are more frequent and severe, and changes in weather patterns are becoming more evident. To tackle these urgent issues created by climate change, new ways of planning and design need to be considered to reduce the vulnerability of human and natural systems and promote safe, resilient communities.

As described in Section 1.2.6, Waterfront Toronto is undertaking the Port Lands Flood Protection Project – with funding support from City of Toronto and Governments of Ontario and Canada. The Flood Protection Project will protect Villiers Island and the Eastern Waterfront from flooding, allowing the entire area to better adapt to the impacts of climate change. The Port Lands Flood Protection Project will create two new outlets for the Don River, including a wide river valley, that will safely convey flood waters into Lake Ontario, as well as provide new parks, aquatic habitat and infrastructure such as roads, bridges and a transit right-of-way.

Within the neighbourhood, the design may integrate roof-top water storage solutions or green roofs, tree and vegetation plantings, high albedo materials, permeable surfaces, bioswales, and green walls – all solutions that leverage natural systems and human-made vegetative technologies to enhance the resiliency of Villiers Island. Additionally, the passive design approach for new buildings across the Port Lands will help to maintain livable indoor temperatures for longer periods of time under power outages, and will also assist in keeping buildings cool during extreme heat events. The provision of resilient energy infrastructure will also be considered. This includes establishing reception centres during times of power outages and providing reliable multi-residential backup power systems. The establishment of a localized micro-grid to provide power to the Port Lands could operate even if power is disrupted throughout the broader city, and will be further explored through the Port Lands wide district energy feasibility study.

The City of Toronto and Waterfront Toronto are currently developing a decision-making tool for water resource management tools with Ryerson University and the Toronto and Region Conservation Authority, which will be used to evaluate innovative water technologies and strategies for Villiers Island.

3.2 MOBILITY, TRANSPORTATION AND ACCESS

Villiers Island will be developed as a transit-supportive island community, with multiple connections between land and water. A fine-grain street network will support transit, walking and cycling to and within the Island, with links to the city mainland to the north and the Port Lands to the east and south.

3.2.1 Street Network and Hierarchy

Development will be structured by a public street network to promote cycling, transit and pedestrian movement. The fine-grain street and block pattern indicated by Figure 35 will provide access and circulation through Villiers Island with multiple connections to the city and the Port Lands. Street sections are provided on the following pages.

3.2.1.1 Major Streets

Major streets form the primary vehicular, cycling and transit connections through the Island and to the downtown and the Port Lands.

Commissioners Street will form the primary east-west connection through the Port Lands. It will be maintained in its current alignment and widened to accommodate dedicated transit and cycling lanes along River Park.

New Cherry Street will be located to the west of the existing Old Cherry Street alignment. Commissioners Street and New Cherry Street will be designed as complete streets, with transit, cycling, pedestrian and vehicular routes.

New Munition Street will provide a second north-south access point into the Island, with a bridge connection to the north across the Keating Channel. New Munition Street will be located to the east of the existing Munition Street to maintain the Toronto Harbour Commissioners buildings in their existing location.

3.2.1.2 Local Streets

Villiers Island will contain a fine-grain network of local streets, with a variety of street types, each contributing to a sense of place and character of the Island. Local streets will prioritize non-vehicular movement and flow. Local streets include Villiers Street, and a series of short north-south streets, with varying dimensions and characters, as illustrated and described on the following pages.

3.2.1.3 Shared Streets

Centre Street, Trinity Boulevard and Old Cherry Street will be designed as pedestrian-priority shared streets, where pedestrians, cyclists and motorists share the right-of-way. These streets will prioritize pedestrian movement and flow, and incorporate pavers, physical barriers and obstacles to signal to motorists that pedestrians come first. Overtime, vehicular traffic could be restricted on these streets.

The existing Cherry Street is renamed **Old Cherry Street** for the purposes of the Precinct Plan. It will be maintained its current alignment and will become a localized pedestrian-priority street.

Centre Street will be a new east-west street and will function as the 'spine' of the neighbourhood. It will be designed as a pedestrian-priority mews. It will be a curbless street with offset furniture and landscaping. Shared streets are described and illustrated in detail on the following pages.

3.2.2 Transit

Following the LDL MP EA, New Cherry Street and Commissioners Street will provide streetcar transit service, with dedicated right-of-ways, as shown in Figure 34. Buses may provide interim transit connection prior to the full build out of the Island and surrounding area. Figure 34 illustrates the planned transit network in the surrounding area.

There are two planned transit stops, one located at Centre Street and New Cherry Street, and the other at Commissioners Street and New Munition Street, indicated as streetcar platforms in Figure 35. These locations ensure the entire Villiers Island community will be within a 5 minute walking distance of transit.

The New Cherry Street and Centre Street intersection is planned as a transit hub for the Lower Don Lands area with potential bus service connections to the areas south of the Ship Channel.

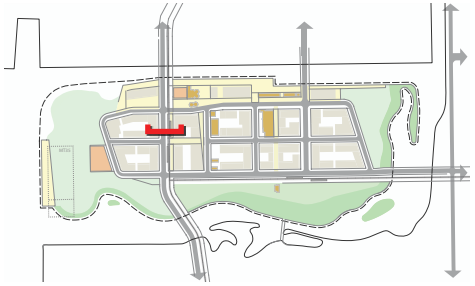
The New Cherry and Centre Street and New Munition and Commissioners Street intersections must ensure safe pedestrian movement from the transit platform and across the intersections and transit lines. The New Cherry-Centre Street intersection should have a pedestrian only activated crossing to ensure safe pedestrian crossing.

Transit hub
Streetcar stop
Streetcar in dedicated ROW
Streetcar in mixed in traffic
Protected for future Streetcar in dedicated ROW
Bus in mixed traffic
Relief Line
SmartTrack / RER

FIGURE 34. Transit context map

Streetcar Route and Platforms
Major Streets
Local Streets
Shared Streets/Mews
Pedestrian Only Street
Trails

FIGURE 35. Proposed street network



Major Street: New Cherry Street

ROW: 40 metres

New Cherry Street will be designed as a complete street, to accommodate a variety of mobility options, including streetcar transit, cycling, walking, and private vehicle use. It will feature separated bike lanes and a dedicated transit way.

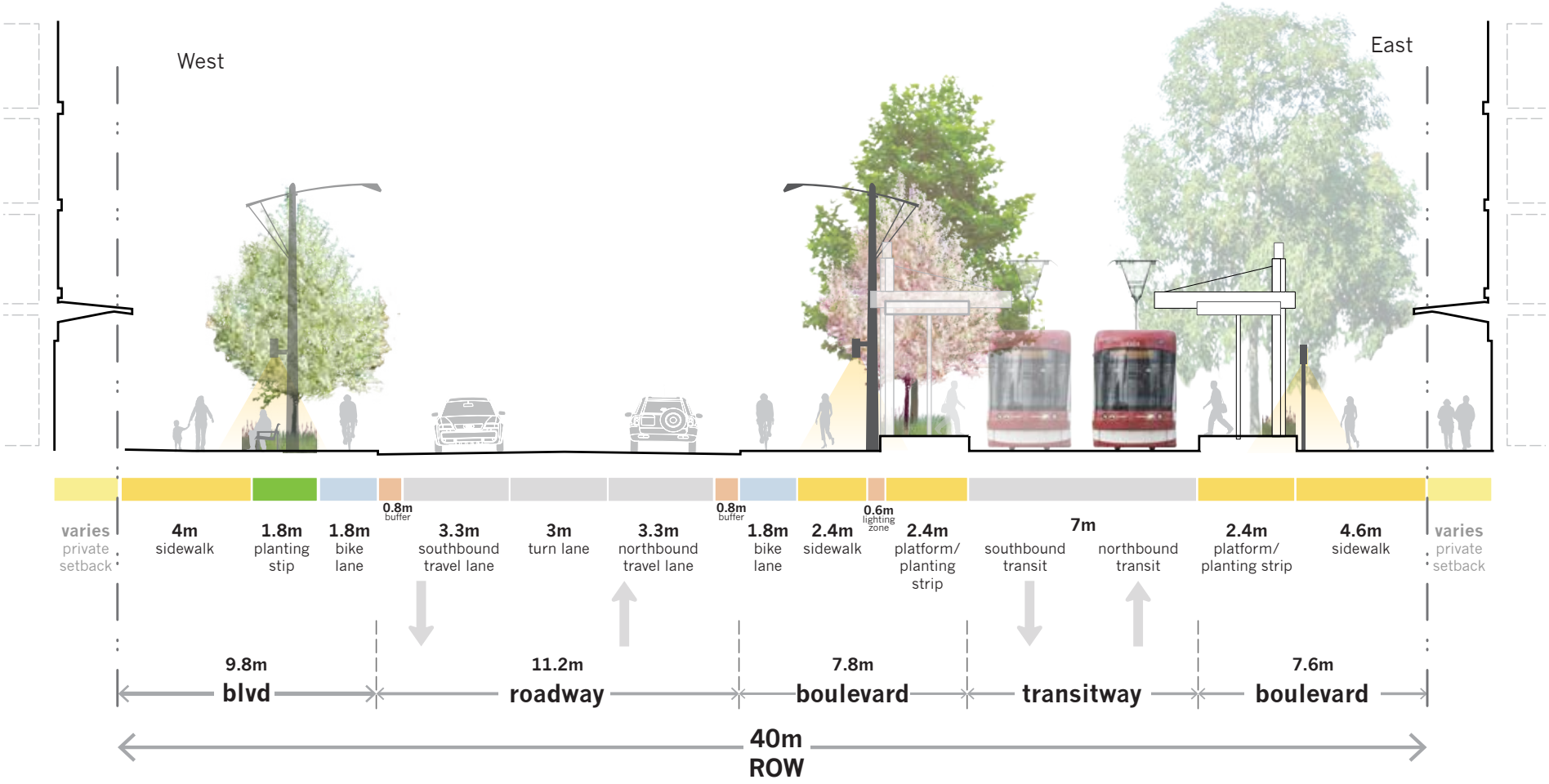
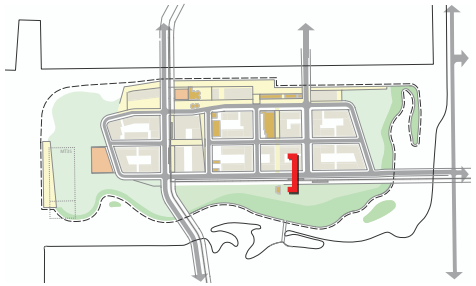


FIGURE 36. New Cherry Street cross section



Major Street: Commissioners Street

ROW: 40 metres

Commissioners Street will be designed as a complete street integrated into the River Park landscape. It will feature a dedicated cycling lane and a pedestrian pathway, located along the southern side of the dedicated transit route. The pedestrian pathway will form the northern edge of the park. Commissioners Street will form the primary east-west cycling route across the Island, and connect through the Port Lands to the east.

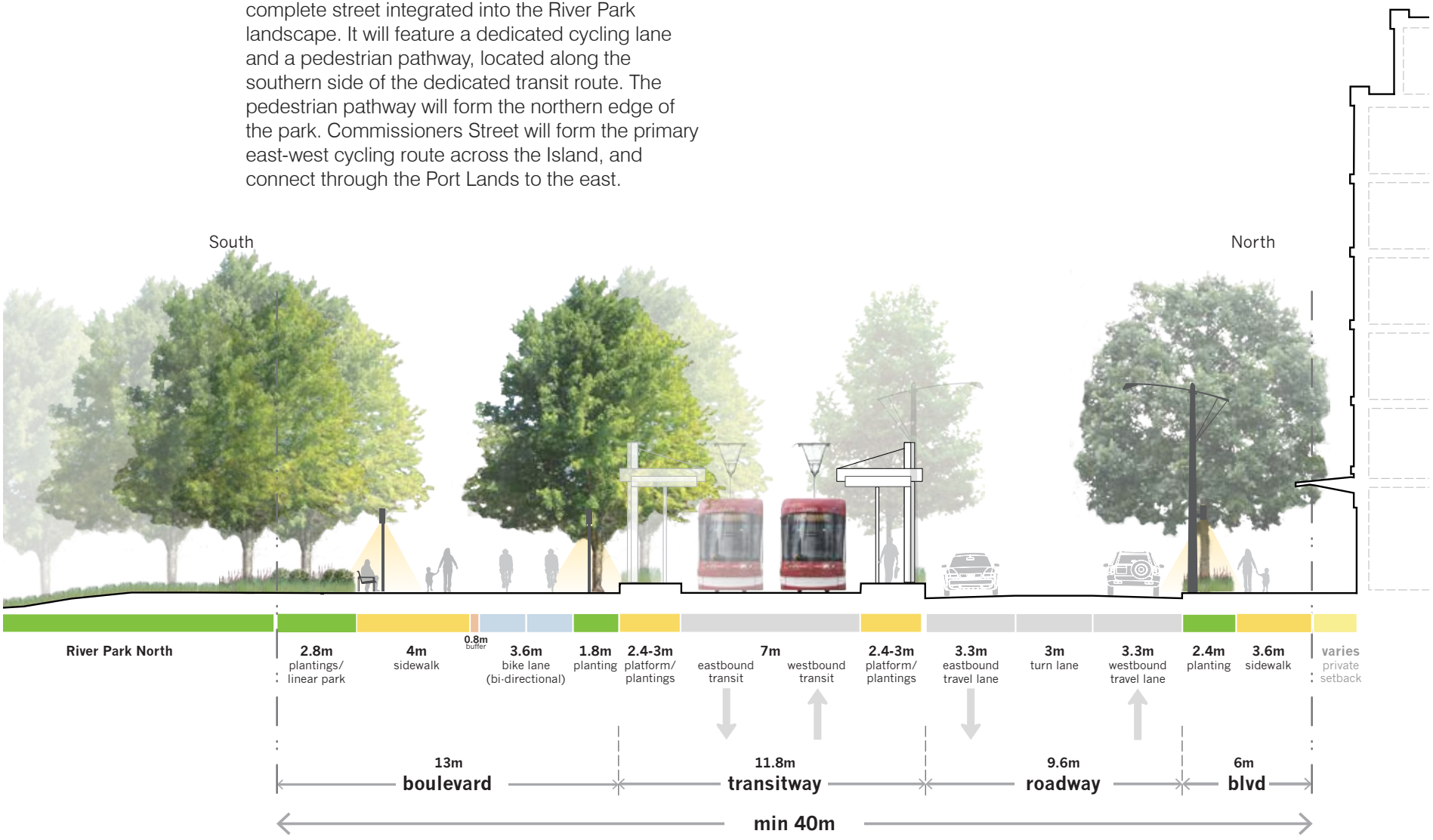
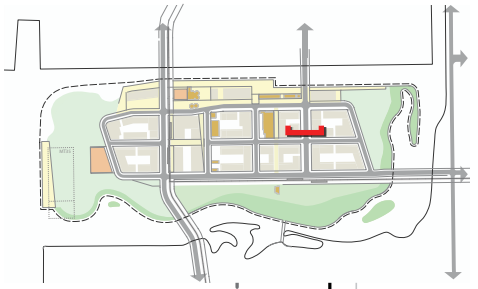


FIGURE 37. Commissioners Street cross section

Major Street: New Munitions Street

ROW: 30 metres

New Munitions Street will provide a second north-south access route into the Island, with a bridge connection across the Keating Channel. It will consist of separated bike lanes, vehicular travel lanes and parking lanes.



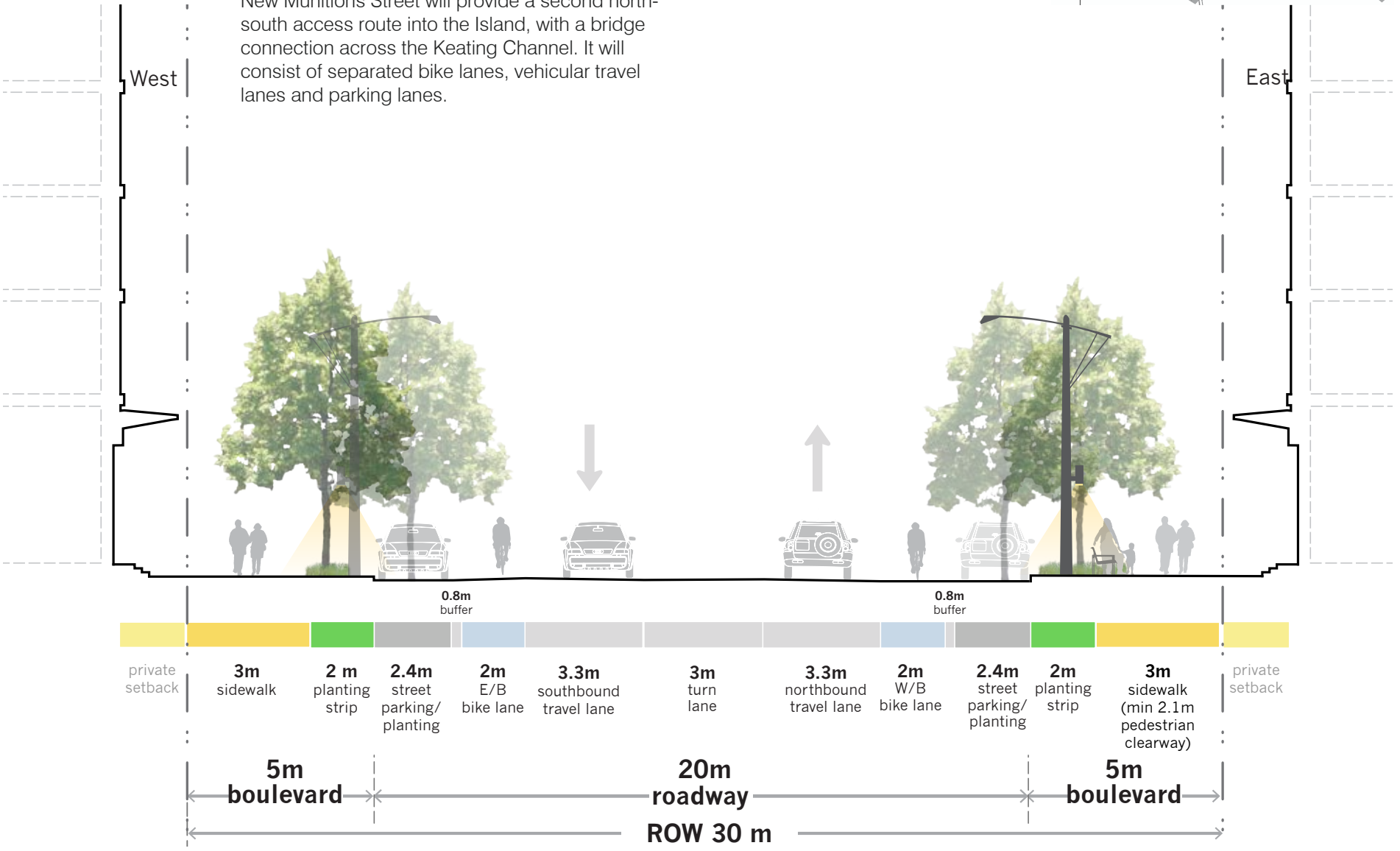
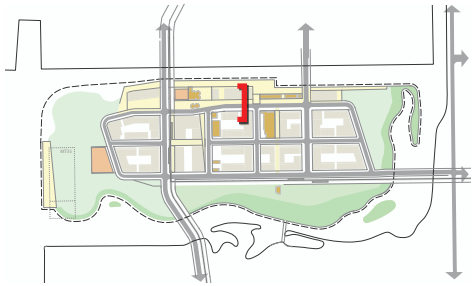


FIGURE 38. New Munition Street cross section



Local Street: Villiers Street

ROW: 32.2 metres

Villiers Street will be an animated, urban street with an asymmetrical character. The right-of-way will accommodate separated cycling lanes. The streetscape will reinterpret the historic scale and function of the existing street, including the existing rail spurs. It will feature an 8-metre wide promenade along the northern side. The promenade will merge with the Keating Channel Promenade at Silos Square to create a dynamic pedestrian experience.

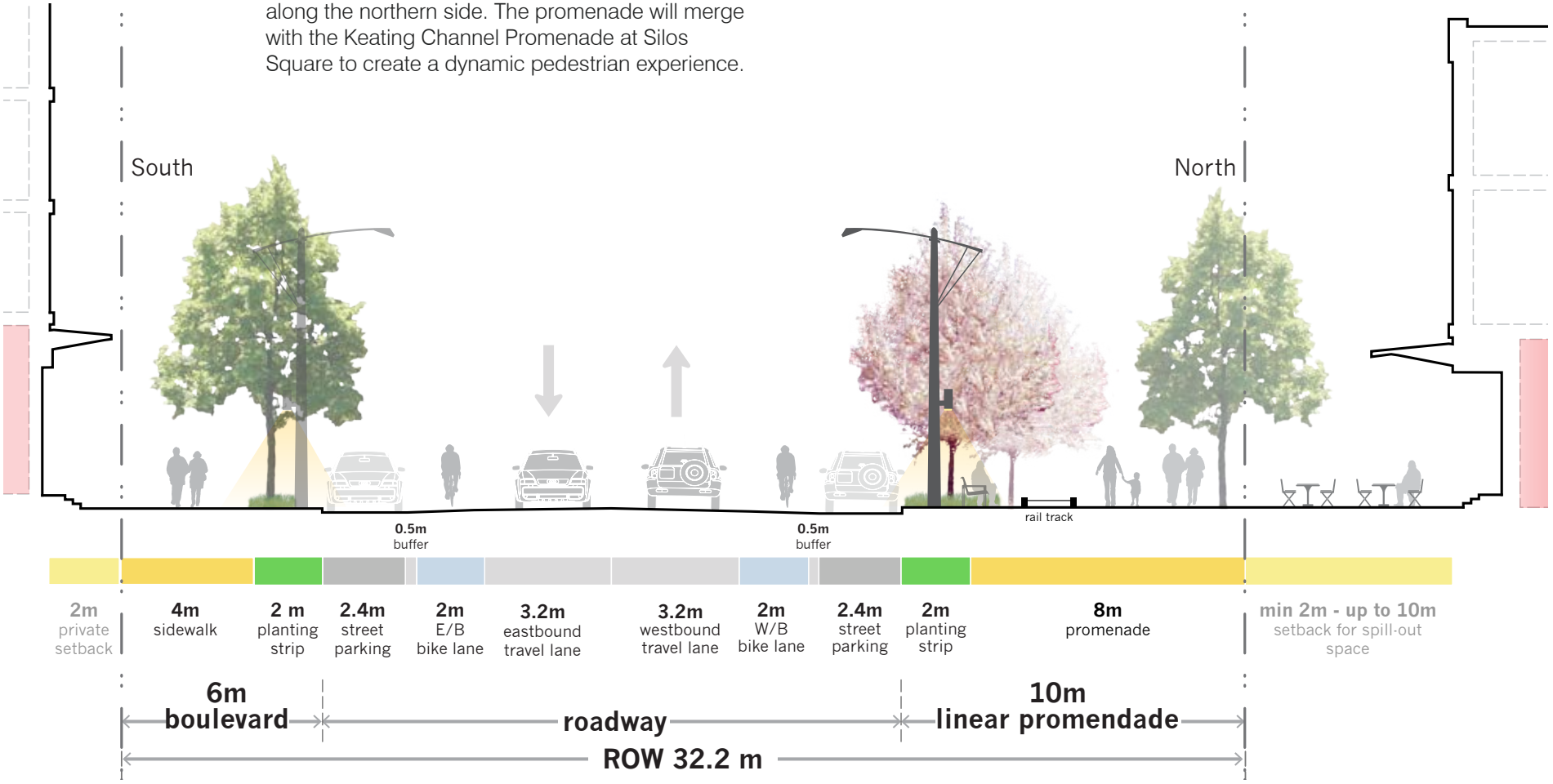
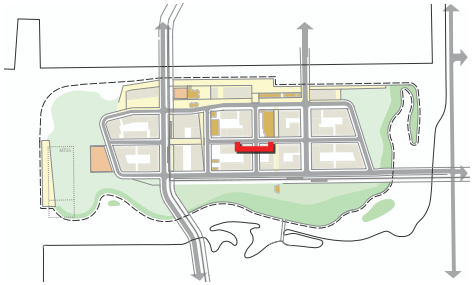


FIGURE 39. Villiers Street cross section



Local Street: Foundry Street

ROW: 20 metres

Foundry Street will be a new north-south local street. It will be designed as an intimate local street and provide connection from Villiers Street to Commissioners Street.

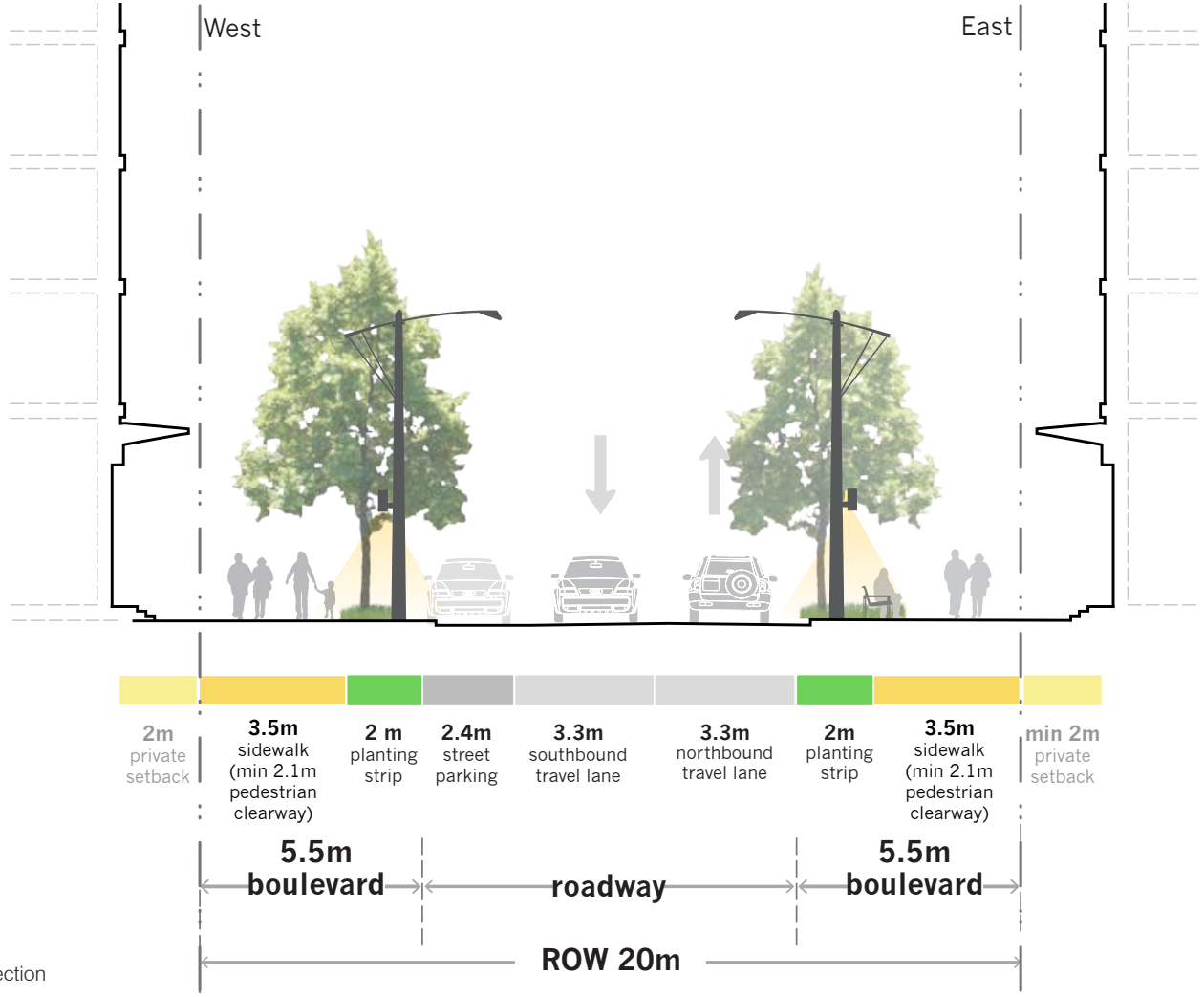
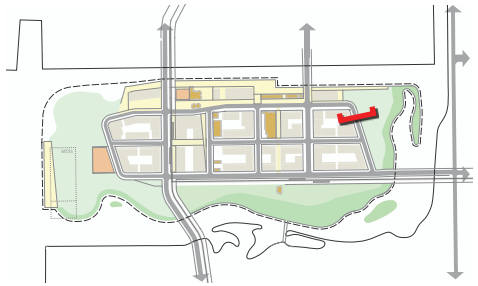


FIGURE 40. Foundry Street cross section



Local Street: Villiers Park Street

ROW: 20 metres

Villiers Park Street will mark the entry into Villiers Park at the eastern end of the Island, and offer a sense of journey and arrival into the park. The paving treatment of Centre Street will be extended across the intersection with Villiers Park Street to highlight the street's interface with Villiers Park.

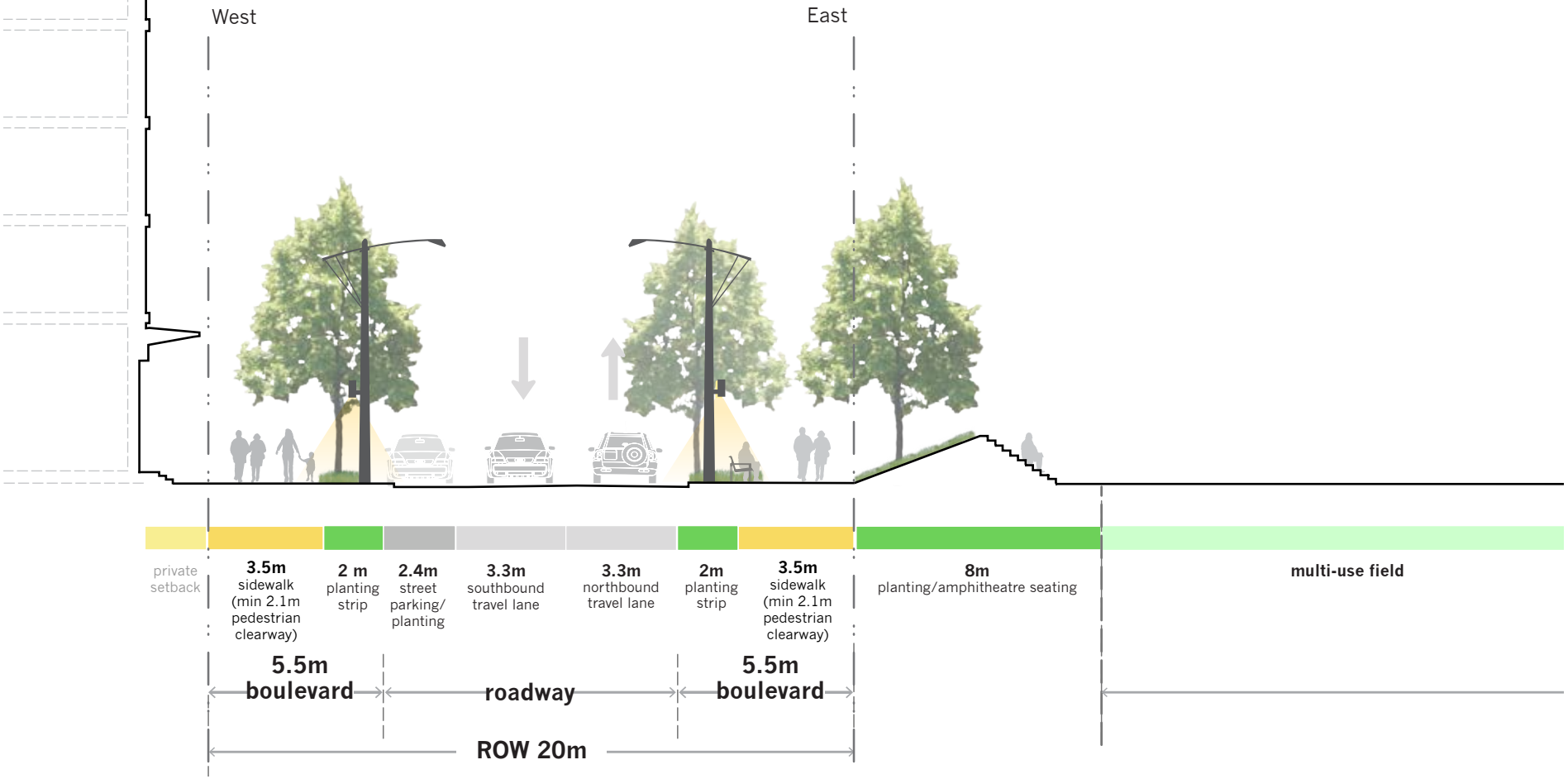


FIGURE 41. Villiers Park Street cross section

Shared Street: Centre Street

ROW: 20 metres

Centre Street will form the east-west spine through the Villiers Island neighbourhood. It will be a special pedestrian-priority mews.

Centre Street will be designed as a curbless street, with bollards and markings, signalling to motorists that pedestrians come first. There should be restricted vehicular traffic through this street, and limited servicing and access to development blocks.

The street will have an asymmetrical character, with a wider pedestrian boulevard along the northern side of the street.

The street paving treatment should be designed with a light palette to reflect sunlight. It should extend across all north-south intersections, creating raised areas at these crossings, with continuity from Promontory Park to Villiers Park. Additional pedestrian-scale elements include informal linear groupings of trees flanking the street length, on-street bicycle and vehicular parking areas, lighting, and street furniture.

During the spring to fall months, the parking lane could be adapted into an extension of the boulevard, with additional seating and landscaping. The street could also be closed to vehicular traffic for festivals and community events.

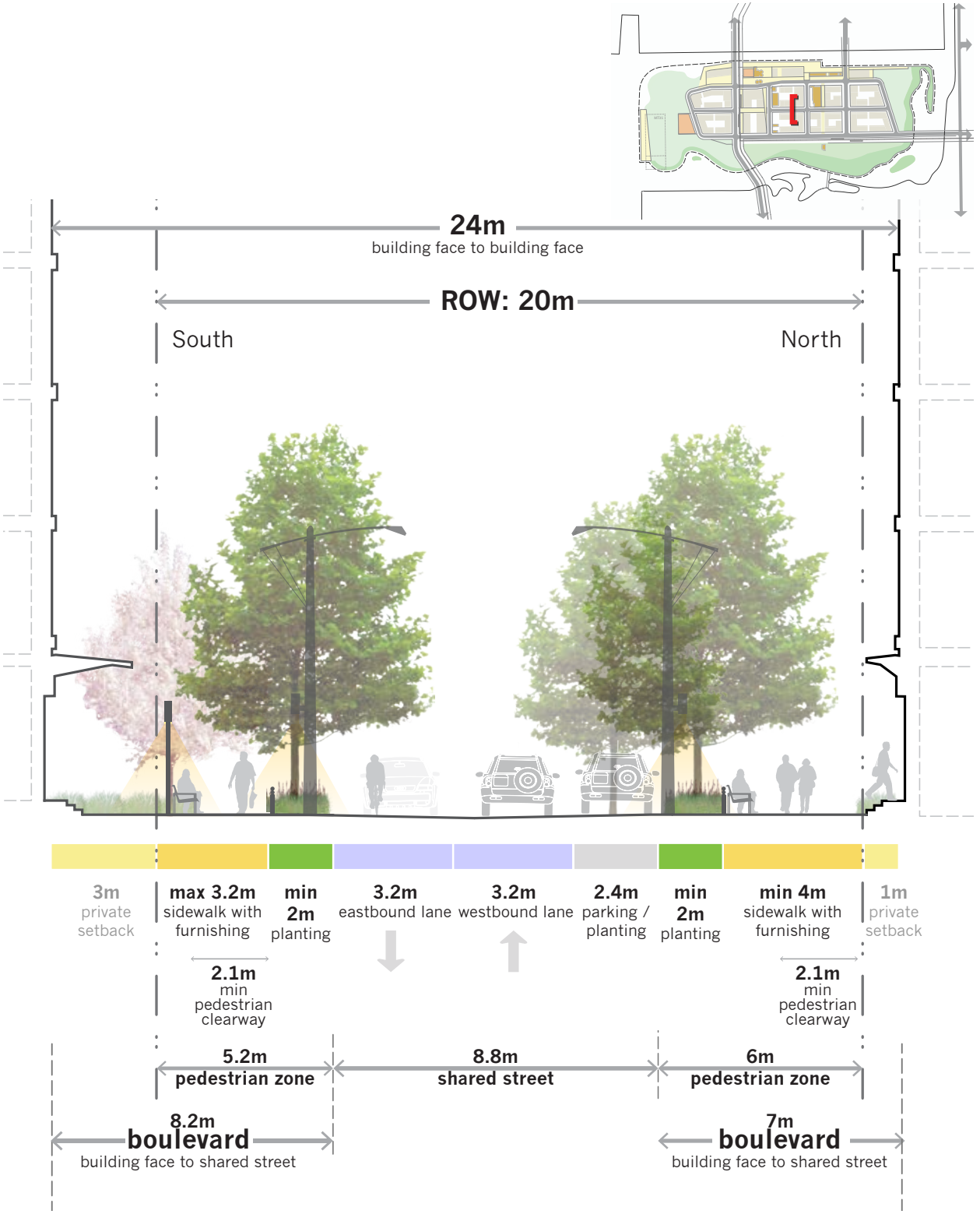


FIGURE 42. Typical Centre Street cross section with parking lane

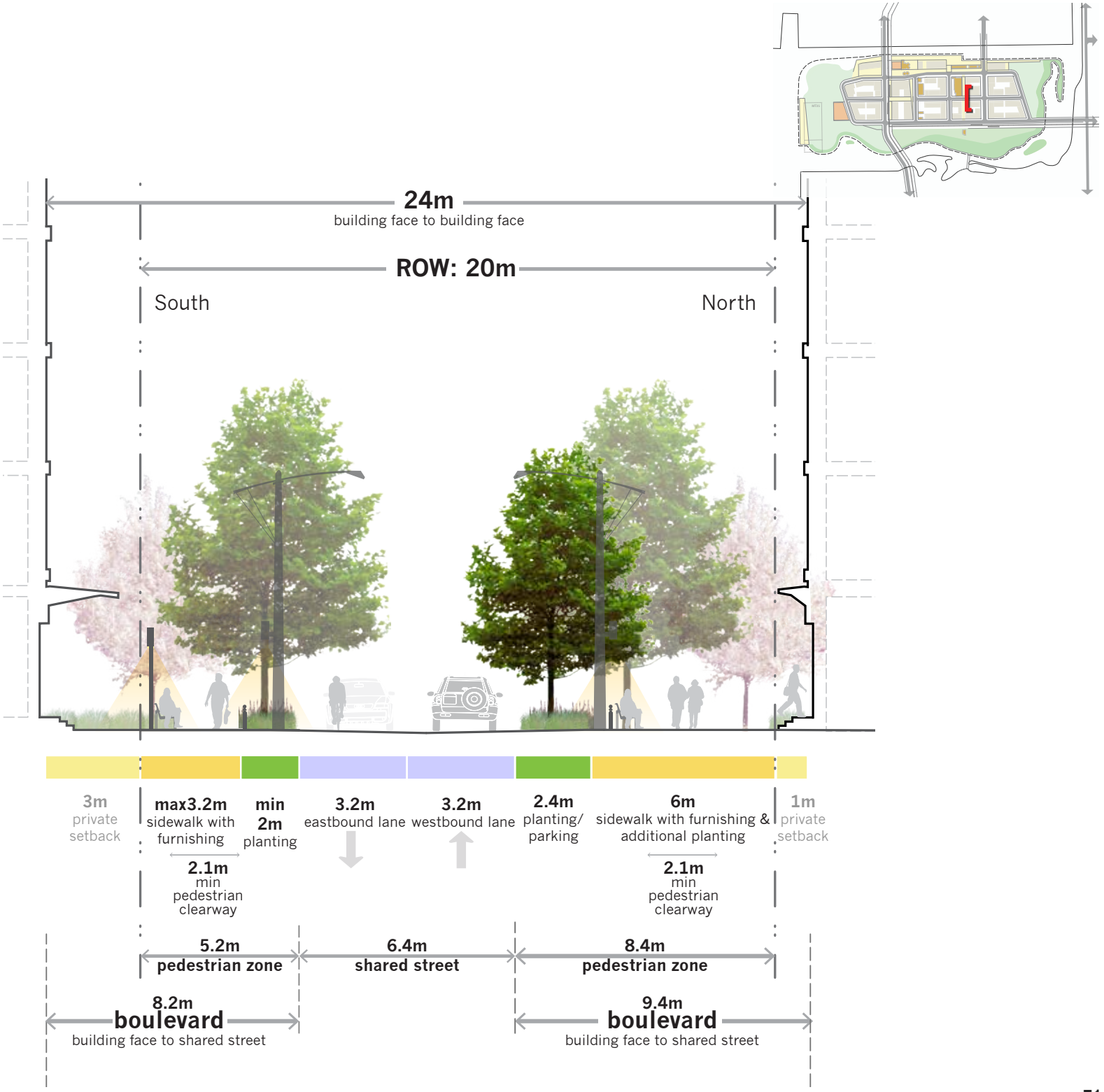


FIGURE 43. Typical Centre Street cross section with wider plantings and boulevard

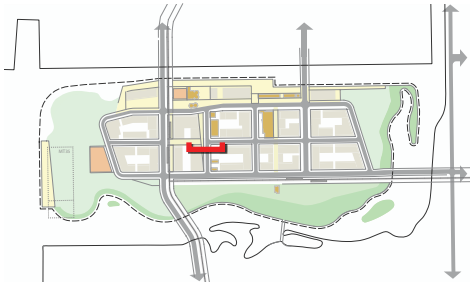
Shared Street: Old Cherry Street

ROW: 20 metres

Old Cherry Street is the original north-south spine of Villiers Island. It will become the primary north-south pedestrian connection through the Island, linking Silos Square and the Keating Channel Promenade to the north, and Commissioners Street and the River Park to the south. Old Cherry Street is also an important view corridor, offering clear and unobstructed views of the Keating Channel, heritage structures and the River Valley.

Through appropriate street lighting, different species of vegetation, and public realm design elements, Old Cherry Street will provide an intimate, human-scale, and safe experience for pedestrians. Plantings and vegetation may reference plantings by the Harbour Commission, including poplar trees. Safety will be achieved through traffic calming measures, including plantings and public realm features, particularly at the crossing points on Villiers Street and Commissioners Street, where heritage and recreational attractions will generate significant foot traffic.

The Old Cherry Street right-of-way dimension allows for seasonal variation. During the spring and summer months, the parking lane could be removed and become an extension of the public sidewalk with space for seating and planting.



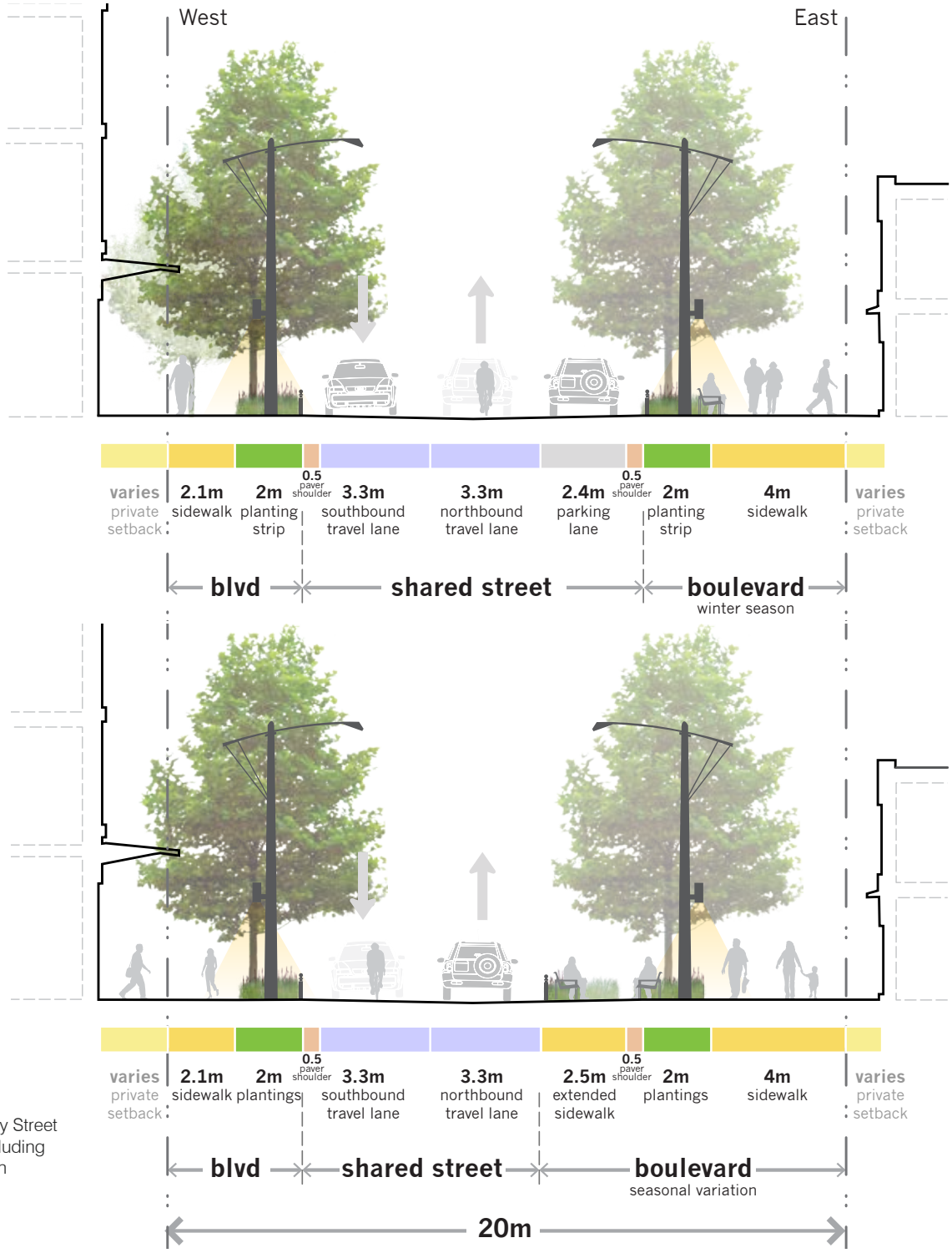
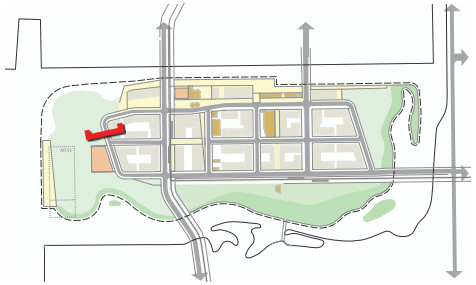


FIGURE 44. Typical Old Cherry Street cross section including seasonal variation

Shared Street: Trinity Boulevard

ROW: 20 metres

Trinity Boulevard forms the gateway into Promontory Park, at the western end of the Island. This new street will offer a sense of arrival to Promontory Park and the Catalytic Use. The western edge of the street together with Overlook Plaza and the Catalytic Use will mark the transition from the street grid to Promontory Park. The street should be designed as an extension of the park landscape to create a welcoming environment.



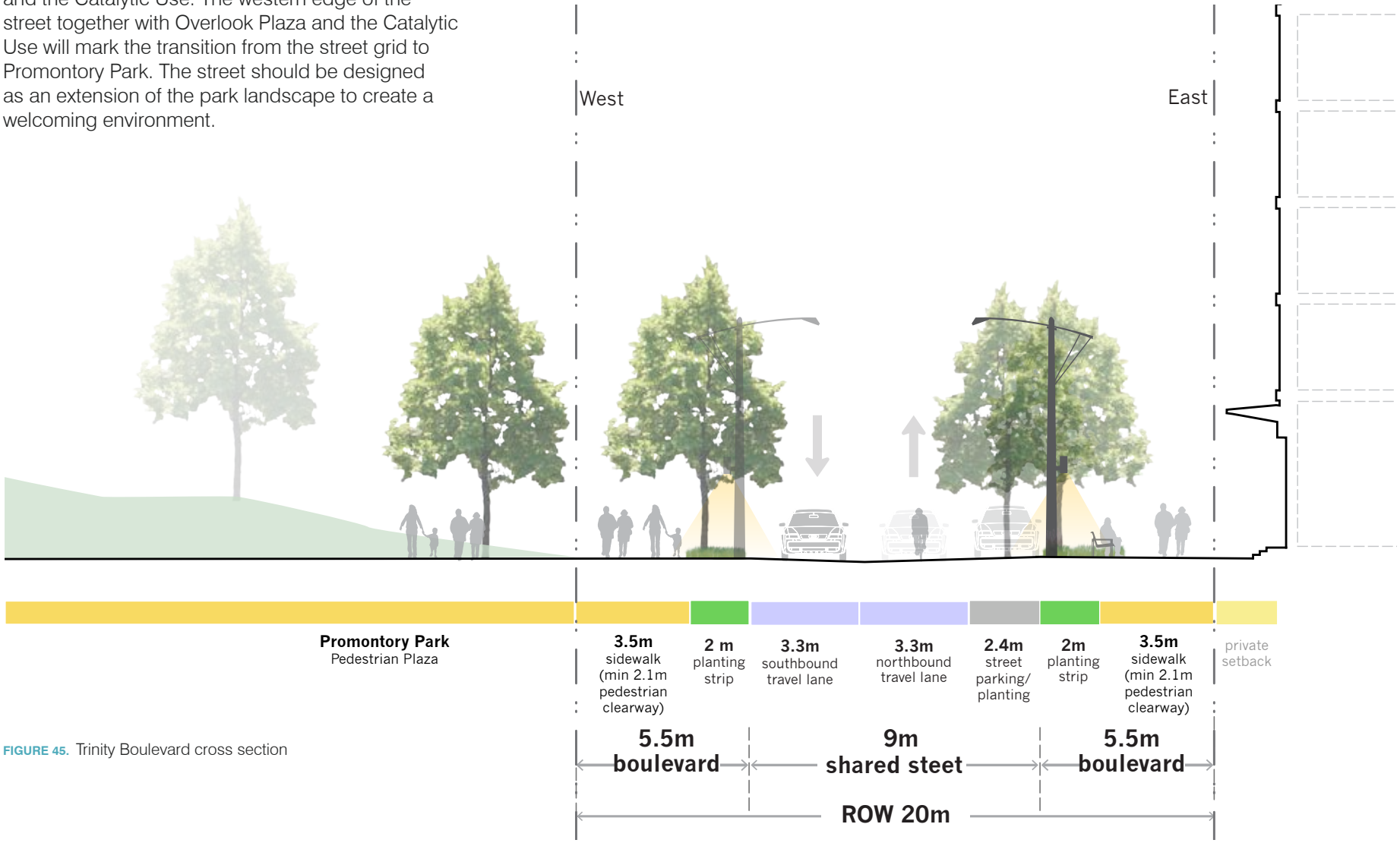


FIGURE 45. Trinity Boulevard cross section

3.2.3 Pedestrian, Cycling Network and Multi-use Trails

The Villiers Island cycling and pedestrian network includes multiple dedicated cycling lanes and multi-use pathways to ensure safe year-round movement for both commuter and recreational users. The pedestrian, cycling and multi-use trail network is shown on Figure 46.

3.2.3.1 Dedicated Cycling Route

As a continuation of the Martin Goodman Waterfront Trail and the Lower Don River Trail systems, cycling routes will connect through to the Island:

- New Cherry and Commissioners Streets will form the primary commuter cycling routes through the Island with connections to surrounding areas, with dedicated cycling lanes; and
- A secondary dedicated separated cycling route will connect into the Island via New Munition Street and Villiers Street.

3.2.3.2 Multi-use Recreational Trails

The Island will also feature a network of recreational trails. A multi-use recreational trail will connect into the Island via the Trinity Street footbridge and link into Promontory Park, and connect River Park and Villiers Park. The recreational trail will connect to the Polson Precinct via a footbridge across River Park and the River Valley. Recreational trails will wrap around the Island, with connections under the Commissioners Street and New Cherry Street bridges. The trail connections under bridges requires close attention in the detailed design process to ensure these connections are safe and inviting.

3.2.3.3 Pedestrian Connections

The entire Island is reachable within a 5 to 10 minute walk. The fine-grain street and block pattern encourages walking and pedestrian activity. Pedestrians will be able to walk along local streets or along the trail network. Streets will be designed with generous sidewalks.

Public Pedestrian-only Promenades and Plazas

- **Keating Channel Promenade -** a generous promenade, with a minimum dimension of 19 metres along the majority of the Promenade, west of New Munition Street and a pedestrian-only zone.
- **Villiers Street Promenade -** The north side of Villiers Street will feature a wide 8 metre promenade, which will be a pedestrian-only zone and reinterpret the current street median and rail tracks. The pedestrian promenade will extend through the northern and southern portion of the Lake Ontario Portland Cement Company Silos structure.
- **Centre Street, between New Cherry Street and Old Cherry Street** - This segment of Centre Street will be a pedestrian-only zone. This area will form the main point of arrival to the Island via transit.
- There are also two planned pedestrian-only pedestrian connections which will be secured as publicly accessible open spaces (POPs): the **Old Munition Street Pedestrian Link** and the **Old Cherry Diagonal Plaza**. These are described in the Public Realm section (Section 3.3.1.5).

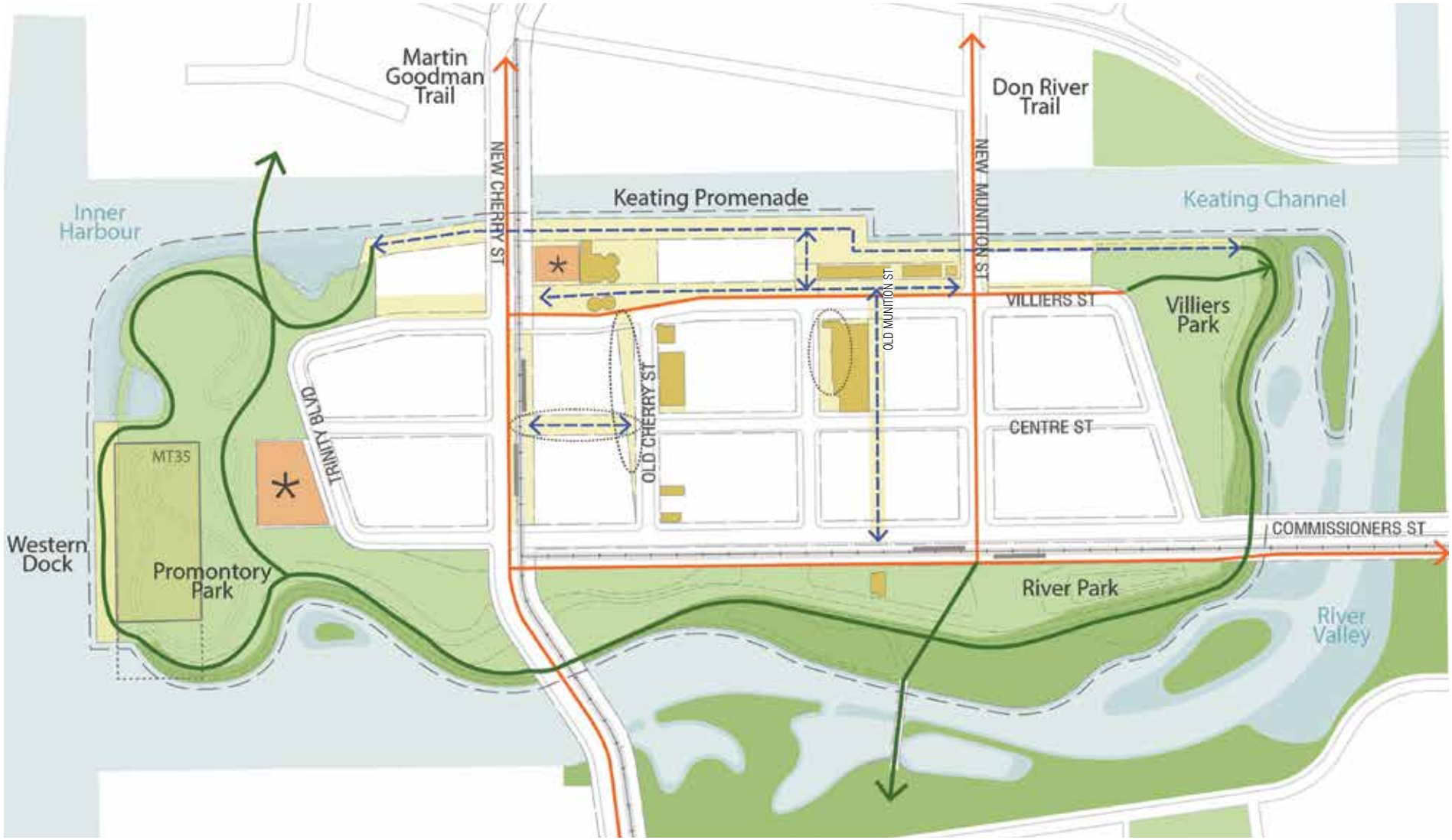


FIGURE 46. Pedestrian, cycling and multi-use trail network

3.2.4 Water Transportation

Villiers Island offers the potential for water-based transportation, including ferries, water taxis and small-craft boat activity. Water-based transportation and opportunities to incorporate electric boat technology will be further explored in future planning and design phases. Potential water based transit is shown on Figure 47.

3.2.4.1 Ferry Access/Water Taxi

There is the potential to expand Toronto's ferry service link to connect the Port Lands to other waterfront destinations. The western dock provides a potential location for ferry service connection to the Jack Layton Ferry Terminal.

A water taxi terminal could also provide a valuable addition to the overall transportation network.

3.2.4.2 Small Boat Craft

The Keating Channel and its existing dockwalls offers potential launching points for small boat activity.

3.2.4.3 Non-motorized Recreational Boat Activity

The naturalized River Valley will provide launching points for non-motorized recreational boat activity, including canoeing and kayaking, with a launch point at the eastern edge of Villiers Park.

IMAGE 19. Precedent for Water Shuttle Access, London, UK

IMAGE 20. Precedent for Small Boat Craft, London

IMAGE 21. Precedent for Kayak launch, Three River water trail, Pittsburgh

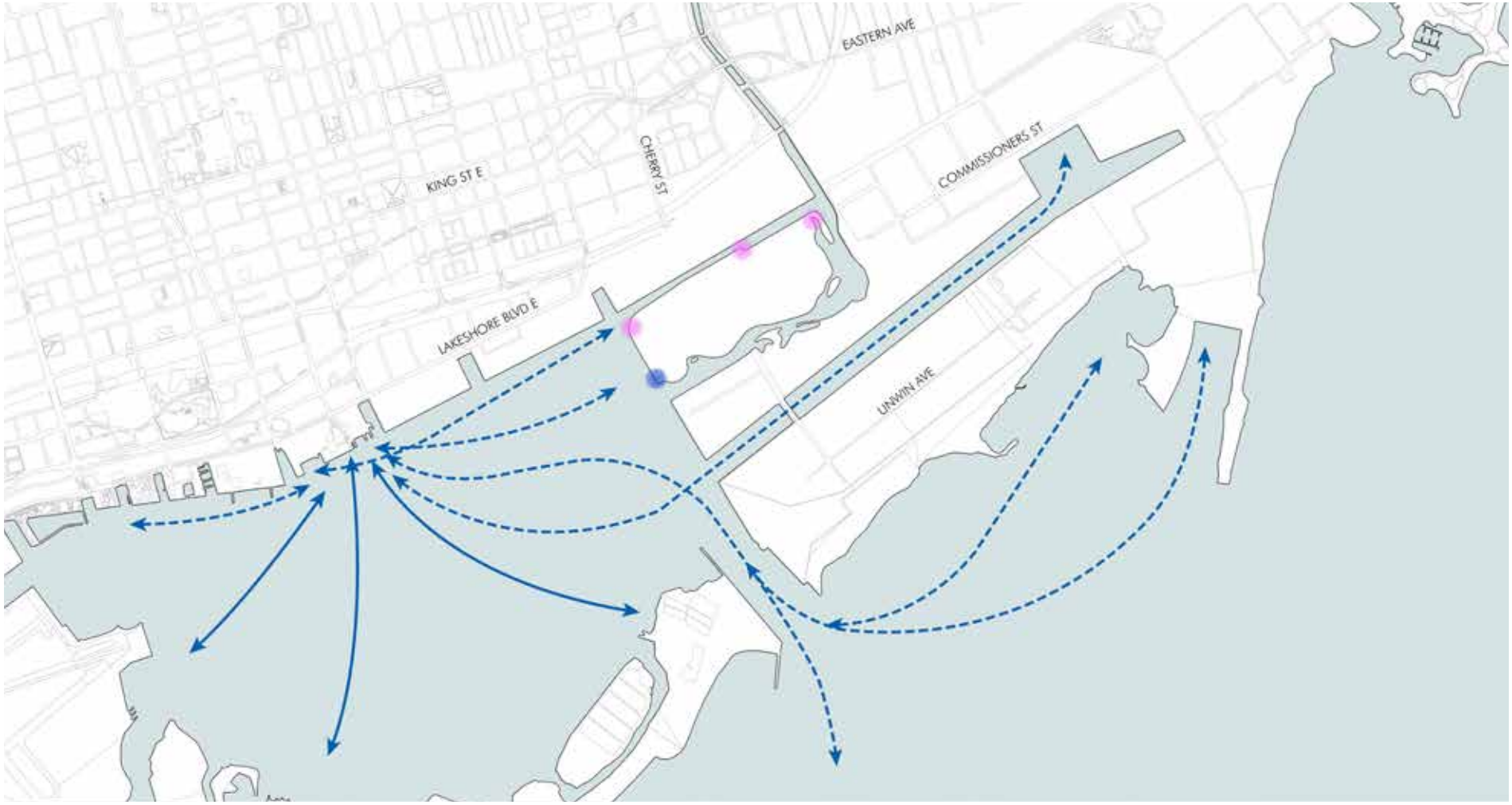


FIGURE 47. Water transportation plan

3.2.5 Parking, Servicing and Loading

Parking, servicing and loading on the Island will be delivered and provided in a sensitive manner to minimize any negative impact on the public realm and promote active transportation as a priority.

3.2.5.1 Laneways and Vehicular Access

Laneways will provide access to loading and servicing for buildings (see Figure 49). The street and block pattern has been designed to ensure all blocks can be accessed via laneways, rather than relying on local streets. All laneways will have a minimum right-of-way of 6 metres.

Shared access and servicing is encouraged to reduce the number of vehicular access points and minimize the potential for pedestrian and vehicular conflicts.

Vehicular access and servicing will be sited to minimize the visual impact of driveways and parking entrances on the street.

3.2.5.2 Vehicular Parking

The long-term vision for Villiers Island is a climate positive island, incorporating low-carbon modes of transportation to significantly reduce the reliance on personal vehicles, incorporate electric and autonomous vehicles, and potentially move to a car free island over time. This Precinct Plan has been designed to minimize the need for automobile transportation. Strategies to minimize vehicular traffic and reduce parking requirements will be further explored during detailed design phases and development review.

On-street Parking

Villiers Street, segments of Centre Street, Old Cherry Street and Trinity Boulevard, and local north-south streets will provide on-street parking. On-street parking will be integrated into the streetscape design.

Below-grade Parking

All private development blocks will deliver underground parking contingent on water-table levels, groundwater conditions and soil remediation. Below-grade parking should be accommodated on two to three levels below each development block.

Given the small size of the Island and the extensive amount of public open space, standalone surface parking is not appropriate.

Above-grade Parking

One to two levels of above-grade parking may be accommodated within the centre of larger blocks. Above grade-parking will be covered by outdoor amenity areas, including central courtyards (see Figure 48).

Above-grade parking should not be visible from public view. Any above-grade parking elements must be wrapped with non-residential or residential uses to reduce negative impacts on the public realm.

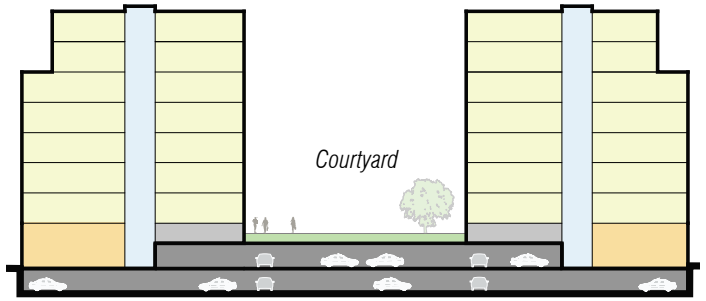


FIGURE 48. Above-grade and below-grade parking diagram

FIGURE 49. Servicing and access plan

3.3 PARKS, OPEN SPACE AND PUBLIC REALM

A green and blue loop with varied parks and open spaces will wrap around the Island, providing different opportunities for people to enjoy the waterfront and the varied river, channel and lakefront edges.

3.3.1 Parks and Open Space Network

As illustrated by Figure 50, the Island will incorporate a comprehensive network of parks and open spaces focused on the diverse waterside edges, including:

1. **Promontory Park,** a large regional-scale destination and signature park overlooking the Inner Harbour;
2. **Villiers Park**, a community-scale park, with active recreational amenities for the local community;
3. **The Keating Promenade**, an urban and highly animated promenade along the historic Keating Channel, featuring a series of plazas including Silos Square; and
4. **River Park,** a naturalized park with recreational trails and programming along the river valley.

The Villiers Island parks system will connect to a larger network of waterfront parks and open spaces along Lake Ontario and the Lower Don Valley trail system.

As described in Section 3.3.1.5, in addition to the public parks and open spaces, there are two publicly accessible open spaces planned for the Island: the Old Cherry Diagonal Plaza and Old Munition Street Pedestrian Link.

Parkland Dedication

Parkland dedication will be provided in accordance with the Port Lands Planning Framework and the Port Lands Official Plan modification.

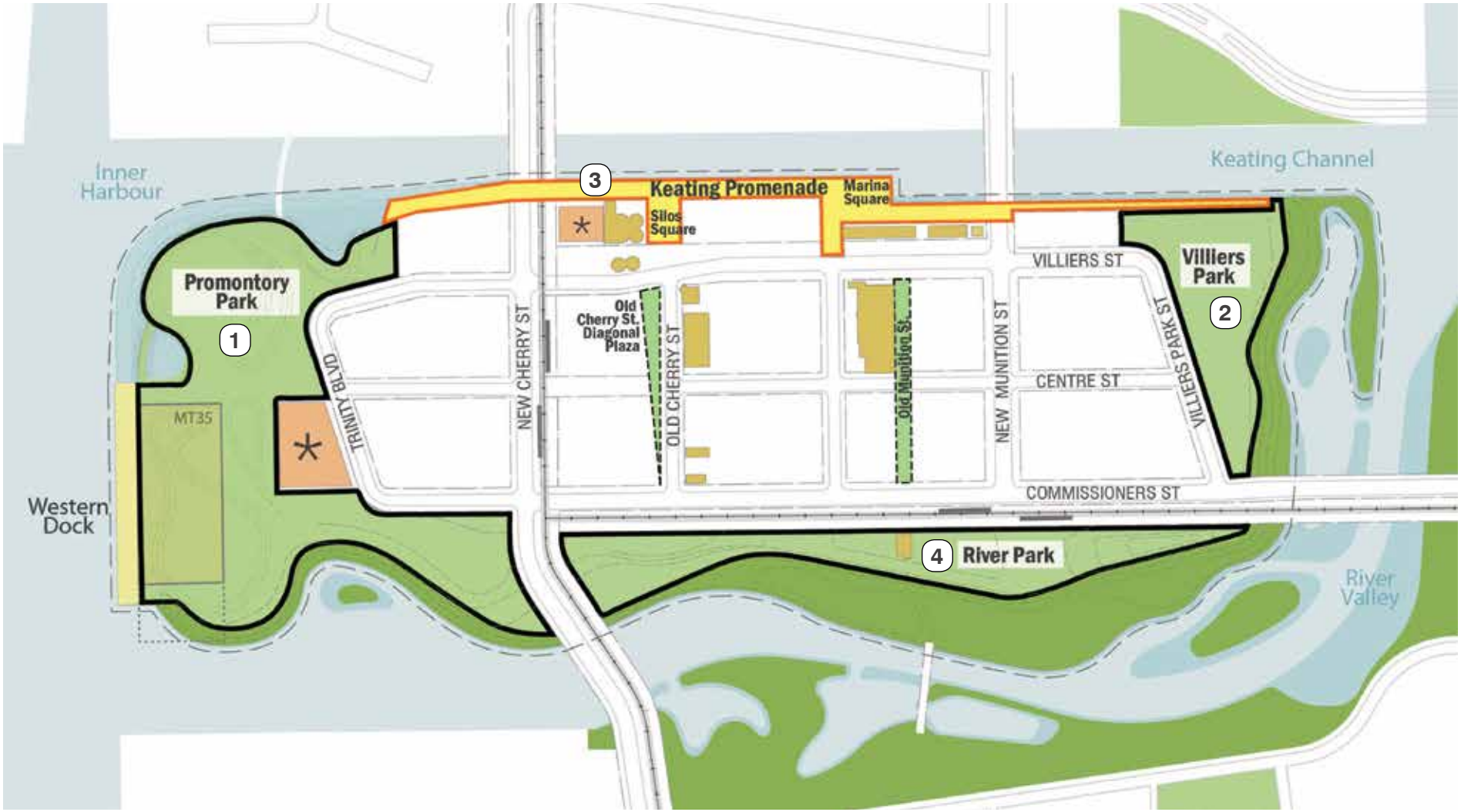


FIGURE 50. Parks and open space network plan

3.3.1.1 Keating Promenade, Silos Square and Marina Plaza

The Keating Promenade will feature a series of plazas and parkettes, with multi-layered promenade areas, connecting the Keating Channel and Villiers Street. This will form a highly animated urban edge of the Island and celebrate the area's industrial heritage. The Promenade will have a strong relationship and connection to the open spaces on the northern edge of the channel in the Keating Channel Precinct (see Figure 52).

Park Size: 1.2 hectares (3.1 acres)

Programming and Features:

- The Keating Promenade edge will include a multi-tiered promenade, with a 19 metre wide promenade along the majority of the Keating Channel length, west of New Munition Street;
- The historic dockwalls will be retained and form a hard edge along the channel;
- Silos Square, an urban square around the Lake Ontario Portland Cement Company Silos, offers the potential for an innovative water garden and series of pathways and boardwalks with connection to Old Cherry Street;
- Interim uses within the Silos, including community activities like exhibition spaces, pop-up shops, and workshops will be permitted;
- Marina Plaza is a hardscape plaza with opportunities for programmable event space and seating and gathering areas associated with an adjacent boat launch; and
- Boat launch off Marina Plaza for small-scale boating.

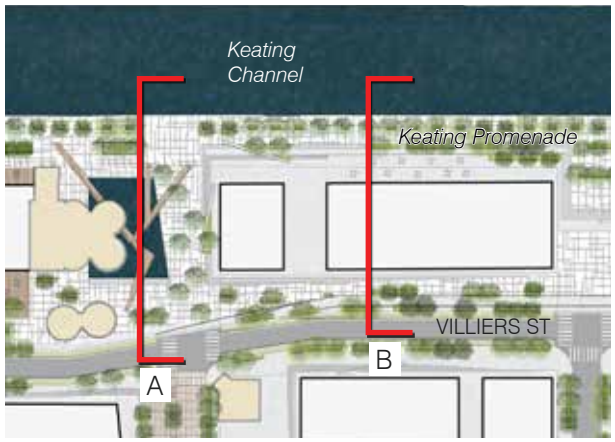


IMAGE 22. Precedent: example of plaza that engages with industrial heritage structures, Auckland, New Zealand

FIGURE 51. Cross Section A - Silos Square

IMAGE 23. Pedestrian Plaza accommodating grade difference, Lincoln Centre, NYC

IMAGE 24. Waterfront Promenade, Brooklyn NYC

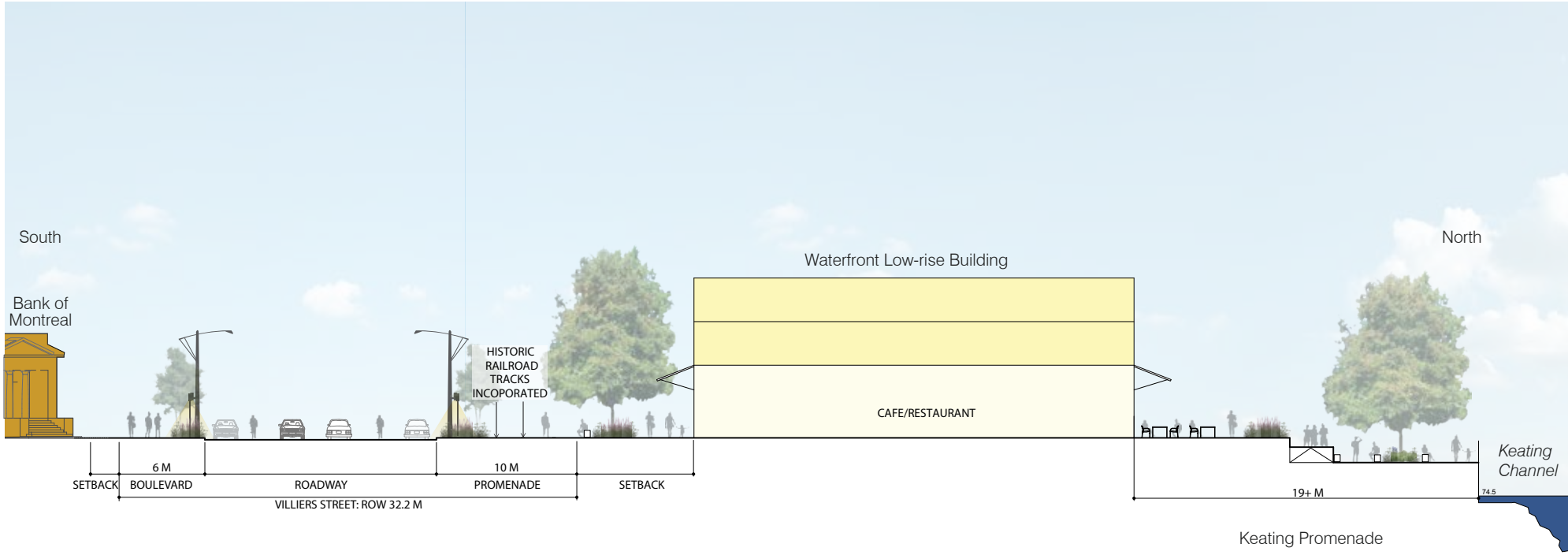


FIGURE 52. Cross Section B - Keating Promenade

3.3.1.2 Promontory Park

Promontory Park will be a regional-scale destination and signature park. The park will be anchored by the Catalytic Use building, and feature an undulating landscape with high and low points offering views across the Inner Harbour. The Catalytic Use building should be integrated with the overall design of the park, to ensure that there are clear views and a strong relationship from the building to the lake. A community centre located to the northeast of the park along the Keating Channel Promenade will contribute to an active park with a variety of recreational amenities and programming.

The park design should celebrate the industrial and natural heritage of the Island, and incorporate remnants of the existing Cousins and Essroc Quays, Marine Terminal Building No. 35 and the western dock. It will feature a lower and upper portion, and feature Overlook Plaza, which will mark the entry from Centre Street and Trinity Boulevard to the western dock and the harbour.

Park Size: 6.4 hectares (15.9 acres)

Programming and Features:

- Continuous multi-use pathways with connection to River Park, the western dock, and the Keating Channel;
- Variety of park programming and amenities including an event space, active recreation areas, public gardens and woodland areas, with year-round amenities;
- Naturalized coves and gravel beaches with water access and potential kayak/boat launching areas;
- The western dock and dockwalls will be retained as a hard edge; and
- Overlook Plaza, a hardscape area associated with the Catalytic Use site, with opportunity for water features and a playground space.

IMAGE 25. Example of outdoor seating , Hafencity Hamburg

IMAGE 26. Extensive lawn surfaces and use of grading in the Olympic Gardens, London, UK

IMAGE 27. Example of naturalized coves in New York

3.3.1.3 River Park

River Park will consist of upper and lower park areas along the river valley, with views across the wetlands to industrial landmarks to the south.

River Park will primarily be a naturalized park with some active recreational amenities, and a place to enjoy nature.

Commissioners Street will form the northern edge of River Park, and the New Munition and Commissioners Street transit stop will provide direct transit connection into the park.

Park Size: 1.7 hectares (4.2 acres)

Programming and Features:

- Lower level recreational multi-pathway along the top of the bank of the river valley, with connection under the New Cherry Street and Commissioners Street bridges with access to Promontory Park and Villiers Park;
- Upper cycling and pedestrian route along Commissioners Street;
- Plaza and playground space and active recreation amenities associated with the historic Fire Hall;
- The Fire Hall should be repurposed with complementary park uses such as restaurants, cafés, museums, and/or indoor recreation space; and
- Upper woodland area and lower river valley and wetlands.

3.3.1.4 Villiers Park

Villiers Park will be a local park at the eastern end of the Island with locally-oriented active recreation. Villiers Park will have a strong relationship and synergy to the school along the Keating Channel Promenade.

The historic Keating Channel dockwall and Promenade will define the northern edge of the area and connect the linear dock wall to the naturalized valley lands. This edge of the park will mark the transition from the historic dockwall to the naturalized river.

Park Size: 1.2 hectares (3 acres)

Programming and Features:

- Multi-use recreational field;
- Kayak and canoe launch;
- Public playground space and viewing area;
- Continuous passive multi-use pathway, with connection to River Valley, below the Commissioners Street bridge;
- Multi-use walkway along Villiers Park Street; and
- Potential stormwater treatment facility along the edge of the Keating Channel Promenade, which should function as a public art/educational feature.

IMAGE 28. Precedent for River Park, London, UK

IMAGE 29. Precedent for Villiers Park, London, UK

3.3.1.5 Mid-block Pedestrian Connections

Mid-block pedestrian connections will contribute to the Island's porous pedestrian environment. Pedestrian connections will reinforce views to the heritage structures and the water's edge, allow for sunlight penetration, and additional pedestrian movement. These connections will be secured as publicly accessible open spaces (POPs) with public easements.

1. **Old Cherry Diagonal Street Plaza:** A small triangular plaza will showcase a view of the Lake Ontario Portland Cement Company Silos, on the west side of Old Cherry Street. This plaza will provide a pedestrian connection between Silos Square and Arrival Plaza at Centre Street.
2. **Old Munition Street Pedestrian Link:** The original alignment of Munition Street will be preserved as a mid-block north-south pedestrian connection, which will be well landscaped and inviting. It will be lined by the Queen's City Foundry building and a new mid-rise building to the east with grade-related units. This pedestrian connection will terminate in a view south of the relocated Fire Hall station in River Park. In order to secure the Pedestrian Link buildings the distance from building face to building face will be 14 to 18 metres.

FIGURE 53. Mid-block pedestrian connections diagram

IMAGE 30. Precedent: Pedestrian plaza in Seattle

IMAGE 31. Precedent: Pedestrian-only linkage, Toronto

3.3.2 Public Art Strategy

Public art plays a vital role in major urban revitalization initiatives around the world. Successful programs infuse the urban experience with enlightening moments of reflection, and weave the co-existence of past, present and future seamlessly into the urban fabric.

As a steward of waterfront revitalization, Waterfront Toronto places a strong emphasis on the quality of the public realm and views the implementation of an inspiring public art program as a critical component of its success. The City of Toronto shares this value and supports the development of comprehensive public art programs for its neighbourhoods, as evidenced in its Central Waterfront Secondary Plan, which cites the importance of "a coordinated Central Waterfront public art program for both public and private developments" (Policy 14).

The Villiers Island Public Art Strategy expresses a vision for building an enduring and meaningful relationship between Torontonians and the new mouth of the Don River. Inspiring models like the West Don Lands and the Council approved plan for East Bayfront demonstrate that planning public art programs at the outset of development facilitates the emergence of thoughtfully curated precincts, offering meaningful and impactful collections for communities and the city as a whole. The priorities identified for Villiers Island are consistent with the goals of the City of Toronto and Waterfront Toronto as outlined in the Precinct Plan and in relation to the current understanding of the public and private development opportunities in the area.

The Public Art Strategy for Villiers Island sets out high level principles and goals, setting the stage for an integrated public art program that will be responsive to the area's changes over time. It provides a framework of priorities and possibilities, allows for the subsequent development of specific and evolving art and programming opportunities, and encourages collaboration between Waterfront Toronto, the City, public and private partners, and stakeholders. It also recognizes artists as key partners in this process, with the intention of benefiting from their unique ability to analyze and question the existing landscape to help re-imagine our future. The Strategy has been informed by consultation with a local community of artists that has been making work in or around this area for several years.

Successful implementation of the Villiers Island Public Art Strategy is predicated on required 1% Public Art contributions for development on public lands and major infrastructure projects, as well as securing pubic art funding form developments on private lands. The intent is that public art contribution funds will be allocated to the appropriate projects identified in this Strategy and will be spent in compliance with the plan as they are received.

The Villiers Island Public Art Strategy proposes three different commission programs that will each function differently to engage artists and the public:

Engagement, Passages and Linkages Programs

This terminology has been chosen in order to develop a strategy for the public art program to connect artists and the public with the changing character of the island at various stages of development. This approach allows for flexibility wherein the criteria of form and media and other site specifics will be determined once more is known about the actual scope of the various sites as well as the possibilities and restrictions of commissioning public art works dictated at the time of implementation. At that point, all relevant partners will be consulted and involved in the various stages of development.

3.4 HERITAGE

Villiers Island holds an important part of Toronto's pre-colonial, industrial and post-industrial history. As the Island transforms into a new mixed-use community at the confluence of Lake Ontario and the Don River, the area's industrial, cultural and natural heritage will become defining qualities and contribute to a sense of place.

3.4.1 Heritage Conservation

This Precinct Plan takes inspiration from the area's industrial and natural heritage. The Precinct Plan adopts a broad scale approach to interpret and commemorate the Island's special and unique heritage.

The streets and blocks plan has been carefully designed to minimize impact on heritage structures and wherever possible, substantially retain and maintain buildings in their existing locations. Through the redevelopment of the Island, heritage structures may be adapted to a new use or conserved, and should become central features of the Island.

3.4.1.1 Heritage Conservation and Mitigation Strategies

Heritage structures illustrated in Figure 54 require a thoughtful conservation strategy to best conserve the structure, while allowing for its adaptive re-use.

Heritage Impact Assessments will be required prior to the alteration of heritage structures, in accordance with the City of Toronto Official Plan and the Port Lands Planning Framework. When a City-owned property on the Heritage Register is sold, leased or transferred to another owner, it will be designated under the *Ontario Heritage Act*. A Heritage Easement Agreement will be secured and monitored, and public access maintained to its heritage attributes, where feasible.

Conservation and mitigation strategies for Listed and Designated heritage structures will be subject to review and approval by the City of Toronto Heritage Preservation Services.

3.4.1.2 Cluster Approach, Heritage and Development

Heritage structures associated with the original Toronto Harbour Commission Plan are concentrated at the centre of the Island, along Old Cherry Street, Villiers Street, and Old Munition Street. The heritage of the Island will be conserved through a cluster approach. Maintaining the current relationships and treating the heritage structures and streetscapes as a cohesive group will aid in the protection of their individual heritage values and attributes and provide an opportunity for the buildings to be reinvigorated through a new plan.

In accordance with the Toronto Official Plan and the Port Lands Planning Framework, the following must be addressed in all development proposals adjacent to or involving a heritage structure.

Heritage structures illustrated on Figure 54 with the exception of the Marine Terminal Building No. 35, will be conserved in their entirety. Heritage structures and industrial assets may be adapted to new uses:

- New buildings must be physically and visually compatible with heritage structures and not negatively impact the heritage structure's cultural values and attributes;
- New development adjacent to or in proximity to a heritage structure will incorporate transitions through appropriate setbacks, stepbacks and other built form and massing techniques. Where tall buildings are permitted, stepping down and tapering of heights and tall building components will be required to reinforce and distinguish the historic character, setting and scale of the resources;
- New development along the east side of Old Cherry Street and north side of Villiers Street should be carefully designed through siting, placing and massing to respect and create a desired street character and legible public realm; and
- Villiers Street, Old Cherry Street, Old Munition Street Pedestrian Link and Keating Channel Promenade should incorporate tailored public realm elements to communicate the area's social and contextual values. Plantings and vegetation may reference plantings by the Harbour Commission. The historic rail tracks will be incorporated in the design of the public realm along Villiers Street.

FIGURE 54. Heritage resources plan

- Relocated Heritage Structures
- 1 Dry Dock Building
- 2 Fire Hall No. 30
- 3 Atlas Crane
- 4 Fork Lift
- Heritage Structures in their original locations
- Heritage Structures Original Entrances
- Grading Challenges
- Historic Keating Dockwall
- Heritage Cluster

3.4.2 Heritage Structures and Flood Works

3.4.2.1 Heritage Structures to be Relocated

Due to the grading requirements and planned alignment of the Don Mouth and the configuration of Commissioners Street and Promontory Park, as set out by the DM NP EA and LDL MP EA, a few heritage structures cannot be maintained in their existing locations.

The Dry Dock Building and Atlas Crane will be relocated out of the flood plain and will have a new context. The Toronto Fire Hall will be shifted southward to allow for transportation infrastructure on Commissioners Street and maintain its context at the southern terminus of Munition Street. Conceptual alternate locations are indicated in Figure 54.

To ensure a strong relationship between the heritage buildings and park programming and detailed landscape design, the final alternate locations will be confirmed at the time of detailed design, and will be subject to a Heritage Impact Assessment.

3.4.2.2 Heritage Structures: Grading Considerations

As part of the flood protection measures, the majority of Villiers Island will need to be re-graded by a minimum of one to three metres, as set out in the DM NP EA. A detailed grading plan will be prepared as part of the detailed design process related to the flood protection and enabling works. Re-grading at heritage buildings and structures should be minimized, wherever possible.

The Harbour Commissioner buildings on Villiers Street, the Queen's City Foundry building and buildings along Old Cherry Street may be retained at their existing grades and be flood protected separately.

The following grading considerations will need to be considered through detailed design:

- **Maintaining the Old Cherry Street buildings at existing grades**: The heritage buildings along the east side of Old Cherry Street may be retained at the existing grades (76.8 m). A series of steps on the west side of Old Cherry Street would create a gathering area to the raised grades and future buildings on the west side.
- **Maintaining portions of the Keating Channel Promenade and Harbour Commission Buildings at existing grades**: The Keating Channel dockwall, east of New Cherry Street to the Don Greenway valley lands will be preserved and retained at its existing grade (76.8 m). This portion of the Keating Channel could be retained at the existing grades as a lower-level promenade, and the Harbour Commission buildings and the northern cluster of the Lake Ontario Portland Cement Company Silos would be retained at existing grades. A series of steps and ramps would be required to mediate the grade change from Villiers Street.
- **Maintaining the Queen's City Foundry building at existing grades**: The Queen's City Foundry building is a large-scale building which would be difficult to lift to meet future grades. This building will be retained through the comprehensive development of the Island, and would need to be flood protected independently. There may be the potential to incorporate a plaza in front of the building to manage the grade change.

3.4.2.3 Marine Terminal Building No.35, Atlas Crane and Western Dock

The Marine Terminal Building No. 35 once occupied the majority of existing Cousins Quay. Due to the flood protection requirements and the future river valley, it would not be possible to retain the Marine Terminal Building No. 35 in its entirety. Due to a substantial fire in the summer of 2017, the majority of the Marine Terminal Building No. 35 burned down.

There are a number of objectives that should be considered when assessing the future of the remnants of the building and the design of Promontory Park:

- Assess the architectural form and expression, siting, structure and functional elements; and
- Assess various views of the building that are considered significant to understand to the importance of Marine Terminal Building No. 35 from a heritage perspective, and its connection to the history of Villiers Island and the broader waterfront.

A plan will be prepared to appropriately integrate the building in the design of Promontory Park. The DMNP EA states that a cultural heritage assessment report will be prepared for property, in collaboration with the City's Heritage Preservation Services. The report will include an assessment of the property's cultural value, the impacts on the property, and potential conservation and mitigation options.

In addition, Atlas Crane will be relocated and incorporated in the design of Promontory Park, and should become a public art feature, along with other industrial assets. The historic western dock will be retained and form the western edge of the dock. Promontory Park offers the potential to bring new life to the Island's industrial and natural heritage, through landscape design and interpretation.

IMAGE 32. Precedent image of industrial heritage integrated with park design, Duisburg-Nord, Germany

3.4.3 Natural Heritage and Indigenous Culture

Through the renaturalization of the Don River and the creation of the Don Mouth river, Villiers Island will establish a new connection between nature and the waterfront.

3.4.3.1 Archaeological Conservation and Management

In 2008, Waterfront Toronto, in partnership with the City of Toronto, completed an Archaeological Conservation and Management Strategy (ACMS) for the Central Waterfront. The ACMS provided additional analysis for areas with archaeological potential and determined the archaeological significance of potential resources.

In accordance with the Port Lands Planning Framework, the 2008 Waterfront Toronto Archaeological Conservation and Management Strategy (ACMS) will serve as the basis for future planning decisions with respect to the archaeological assessment process.

3.4.3.2 Indigenous Culture

The Island's origins as marshland and Indigenous peoples' hunting and fishing lands should be showcased through landscape design, public art and interpretation. The development of Villiers Island should increase awareness of the history and current activity of Indigenous culture. This should include:

- Continued engagement with Indigenous peoples through public realm and detailed design process;
- Increasing public awareness of the history and current activity of First Nations groups such as through integrating the Mississauga's of New Credit First Nations "Moccasin Identifier" project in landscape or trail projects;
- Naming public spaces using traditional names; and
- Including native plantings and rice gardens.

IMAGE 33. Precedent image, Thunder Bay Prince Arthur Landing

IMAGE 34. Precedent image, Thunder Bay Prince Arthur Landing

IMAGE 35. Precedent image, Toronto Trillium Park

3.5 ACTIVITY AND USES

Villiers Island will become a vibrant mixed-use community on Toronto's waterfront - and a place for all people to enjoy. The surrounding areas in the Port Lands, together with the Unilever Precinct to the northeast will have substantial employment uses. In contrast, Villiers Island will be a predominately residential community, complemented by a mix of retail, employment, recreational and cultural uses (see Figure 55).

3.5.1 Mixed-use Residential

The Port Lands Planning Framework identifies the majority of Villiers Island as a Mixed-use Residential district, with a broad range of uses such as residential, office, retail and services, institutional, recreational and cultural activities.

To ensure the Island develops as a complete community, a minimum of 20 percent of the Island's total gross floor area will be non-residential uses, which include employment/commercial uses, destination/catalytic uses, community facilities and retail uses. Employment/commercial uses and community facility and retail uses should concentrate between Old Cherry Street and New Cherry Street and along the Keating Channel Promenade.

3.5.1.1 Employment and Commercial Uses

- **New Cherry Street, east side:** Along New Cherry Street, office and employment uses will be encouraged, taking advantage of the transit gateway on the Island;
- **Old Cherry Street corridor:** Along the Old Cherry Street corridor, small-scale and creative employment uses offer the potential to reactivate and repurpose heritage buildings; and
- **Keating Channel Promenade**: New buildings along the Keating Channel Promenade will be developed with community-uses, or commercial and or small-scale employment uses with retail uses at-grade. The Harbour Commissioner buildings should be restored and repurposed with new commercial uses to activate and animate the Promenade.

3.5.1.2 Retail Uses

Villiers Island will include urban and locally-oriented retail and service uses:

- **Priority Retail Streets and Frontages** are located along Villiers Street and the Keating Promenade, New Cherry Street and Old Cherry Street. Retail uses may include restaurants, cafés, galleries, small-scale grocery stores, studios and other service space. The site at New Cherry Street and Villiers Street is an appropriate location for a supermarket anchor; and
- **Secondary Priority Retail Streets** will be protected for on Centre Street in accordance with the Port Lands Planning Framework. Retail uses should concentrate at the corners of Centre Street-New Munition Street and Centre Street-Foundry Street. Retail uses at the corners may include convenience stores, coffee shops and other locally-oriented retail and service amenities. The design of Centre Street will accommodate the future conversion of live/work spaces into retail uses, ensuring the Street can evolve alongside market demand.

Refer to Section 3.6.5 of this Precinct Plan for further direction on built form guidelines related to retail uses and ground floor animation.

3.5.2 Destination/Catalytic Use

In order to attract visitors from across Toronto and beyond, a special destination will be developed on Villiers Island. Cultural, civic and tourist attractions act as catalysts, drawing people and interest from across the city and contributing to economic development and tourism. The range of uses could include event spaces, cultural centres, institutional/ civic organizations or community hubs.

Catalytic Use/Destination Uses will be located in the following locations:

- **Promontory Park - Catalytic Use**: The site at the edge of Promontory Park is reserved for a destination/catalytic use. This site may host a civic, cultural or educational attraction to draw Toronto residents and visitors to the Island. The building should be integrated with Promontory Park, and designed to showcase views of the Inner Harbour; and
- **Silos - Catalytic Use:** A secondary Catalytic Use site at the Lake Ontario Portland Cement Company Silos is envisioned as a smaller community or institutional use. This building, together with the Lake Ontario Portland Cement Company Silos will mark the gateway into the Island. This building should be designed as part of the adaptive reuse of the historic Silos and integrated with the design of Silos Square.

FIGURE 55. Land use plan with retail frontages

3.5.3 Land Use Implementation Considerations

3.5.3.1 Flood Protection and Land Use

Due to the flood control requirements, residential uses will not be permitted in any buildings that are retained at the existing grades and remain exposed to flooding.

Heritage buildings and any new buildings at existing grades will contain commercial and employment uses and must be flood proofed individually.

Any building to the west of New Cherry Street along the Keating Channel Promenade will need to be set back approximately 25 metres from the dockwall, in order to allow the reconstruction of the dockwall and associated tiebacks and structures.

3.5.3.2 Noise Mitigation and Air Quality

As part of the refinement of the studies to inform the Port Lands Planning Framework, a Noise and Air Quality Feasibility Study was undertaken by Golder Associates on behalf of the City of Toronto.

The study findings indicate that the primary impacts for the Island relate to stationary and impulse noise sources generated by the Cement Terminal at Polson Quay. Source mitigation at the Cement Terminal at Polson Quay and appropriate receptor mitigation will be required prior to rezoning lands for sensitive uses in Villiers Island. Appropriate source and receptor mitigation will be determined through the submission of detailed noise and/or air quality assessments. Any on-site source mitigation proposed at the Cement Terminal on Polson Quay will require the agreement of the operator of the Cement Terminal.

The built form approach described in Section 3.6 has been tailored to reflect the outcomes of the Noise and Air Quality Feasibility Study.

From an air quality perspective, emissions from the Port Lands Energy Centre (PEC) generally limit the height of buildings within the Port Lands, unless measures were taken to reduce emissions at the PEC. Areas closest to the PEC would not be able to exceed 20 storeys in height. Villiers Island would create compliance issues for the PEC if heights exceed 30 storeys. Due to the maximum heights permitted within Villiers Island, air quality related to PEC is not a significant concern.

3.5.4 Affordable Housing Strategy

The objective is to create complete inclusive communities that support a mix of incomes where members have the ability to age in place.

In pursuit of these objectives, provision for the following is essential within Villiers Island:

- Housing units with a range of sizes suitable for families with children;
- Opportunities for aging in place, including housing for seniors and appropriate support services;
- A mix of tenure types;
- A distribution of affordable housing throughout the Island built commensurate with the market housing; and
- A variation of densities and building typologies to reflect diverse building forms.

Similar to other waterfront precincts, the following affordable housing principles will help guide the provision of affordable housing within the Island:

- Deliver affordable rental housing units at the pace of market development;
- Create permanent and long-term affordable rental housing units;
- Utilize a variety of delivery options to achieve a mix of affordable housing types; and
- Provide transparency for requirements and flexibility of the use of different delivery method.

Both the Official Plan and Central Waterfront Secondary Plan (CWSP) support the development of complete communities, including a full range of housing types to support a mix of incomes and people living in their neighbourhoods throughout their lives. The overall goal for the Central Waterfront is that affordable rental housing comprise 20% of all housing units. Affordable rental housing is defined in the Official Plan as housing with total monthly costs that do not exceed the average rent across the City of Toronto for each unit size, as calculated by the Canada Mortgage and Housing Corporation.

In order to meet this objective, a combination of built units, land (equivalent to the land necessary to accommodate 20% of the residential gross floor area), and cash in lieu, will be secured to generate affordable rental housing, with priority given to units and land alone or in combination.

On publicly owned lands a minimum of 20% of units based on total gross floor area can be achieved through the provision of land sufficient to accommodate the units. This equate to roughly 790 units. This can be in the form of mixed-income buildings or stand alone and will be spread across the entire Island and made available commensurate to the market units. Funding and partnerships with affordable housing operators will also need to be secured to build and operate the units. In addition, Waterfront Toronto and the City of Toronto will work towards identifying opportunities to achieve an even higher percentage of affordable housing at deeper subsidies. This includes looking for opportunities to work with the private sector to deliver moderate rental housing opportunities and affordable ownership opportunities as well as working with the City's Affordable Housing Office to establish co-operative housing and rent-geared-to–income housing.

On privately owned lands, the preference will be to provide built units. Options are available to either provide 10% of the total units operated by the developer at a scaling rate or 5% units transferred to the City of Toronto in perpetuity. This equates to roughly 45-92 units. The 20% provision of land is also an option to private land owners, however the City would then be responsible for the bricks and mortar. Cash in lieu is not desirable and will be capped in order to achieve our goals of built units.

The location and timing of delivery of units will be carefully considered and provided during each major phase of development with the lands ready and available commensurate with the development of the market units. For instance, in the first phase of the development, the affordable housing units could be collocated with the community centre. A detailed affordable housing strategy will be developed as part of each phase on private and publicly owned lands.

3.5.5 Community Services and Facilities

Villiers Island will include a range of community services and facilities to meet the needs of the local community and wider area. Figure 57 indicates the conceptual locations and programming for community services and facilities on the Island.

3.5.5.1 School Services: Elementary School

The preferred location for an elementary school is along the Keating Channel Promenade, next to Villiers Park. The play area associated with the school should be located on the roof of the building.

This location provides an opportunity to co-locate the school and community park. The school site will animate the eastern end of the Keating Channel Promenade during the weekday.

Alternate location: As an alternate location, the school site may co-locate with the community centre and pool site and create an integrated community facility.

3.5.5.2 Multi-purpose Community Centre/Pool

A multi-purpose community centre will be located at the foot of New Cherry Street and Villiers Street, with an indoor pool, multi-purpose and gymnasium space.

This facility should be designed with high-quality architecture with a strong relationship to the Keating Channel. The site offers the potential to re-interpret the Essroc Quay, through architectural landscape design.

Alternate location: As an alternate, the community centre could be located together with the Lake Ontario Portland Cement Company Silos, and integrated with the adaptive reuse of Silos Square.

IMAGE 36. Precedent image of Uniliver City, Childcare space, Burnaby, BC

IMAGE 37. Precedent image of Ecole Claude Bernard, Paris, France

3.5.5.3 Childcare Services

There will be a need for at least two licensed non-profit childcare facilities, with a minimum of 62 spaces each. These facilities should be centrally located on the Island and integrated with a mixed-use/residential development.

3.5.5.4 Human Services

There will be at least one human agency service space for the community. This should be located within a mixed-use/residential building and/or co-located with the childcare facility.

3.5.5.5 Emergency Services: Fire Station

A new emergency services fire station is planned for either Villiers Island or the McCleary District. The fire station should be integrated within a larger development. A facility will be held at the northeast corner of New Munition Street and Commissioners Street.

Elementary School	1.5 ha approximate
Building footprint	3,650 sq.m.
Outdoor space	0.040 ha usable play-ground space
Community Centre	3,250 sq.m.
Indoor Pool	6 lanes pool
Multi-purpose space	465 sq.m.
Human Services	1850 sq.m.
Childcare Centre	980 sq.m., 62 spaces
Indoor Space	635 sq.m. Minimum
Outdoor Space	345 sq.m.
Fire Station	930 sq.m.

FIGURE 56. Community services and facilities space requirements

FIGURE 57. Community services and facilities plan

3.6 BUILT FORM

FIGURE 58. 3-dimensional view of the waterfront

Villiers Island in the City Context

Villiers Island holds an important place in the context of Toronto's natural and built landscapes at the intersection between the city, river and lake. Future vantages from Villiers Island looking west across Toronto's Inner Harbour will offer a unique sense of being in two distinct worlds at once: close to Toronto's thriving downtown, yet also intimately linked to the city's broader lake and rivershed setting. Visitors, residents and workers will enjoy its vibrant, beautiful and walkable environment through all seasons. These unique attributes call for a built form strategy that reinforces a distinct island experience, and will set the precinct apart from the surrounding development context.

Building on the direction in the Central Waterfront Secondary Plan and the Port Lands Planning Framework, Villiers Island will have a human-scale mid-rise character with some tall buildings of moderate height strategically located and scaled to the Island. Buildings will be carefully located within the Island to contribute to a high-quality public realm and comfortable pedestrian environment.

The following section details the built form considerations and guidelines for Villiers Island. All development proposals will be reviewed against these guidelines for consistency. The Built Form Framework is divided in the following sections:

3.6.1 Built Form Principles - establishes the overall built form principles which guide development on Villiers Island and address the island's unique qualities and characters as an island community.

3.6.2 Low-rise Buildings - details the direction for buildings up to five storeys.

3.6.3 Base-buildings and Mid-rise Buildings - details the direction for buildings from 1 to 10 storeys including directions on massing and articulation.

3.6.4 Tall Buildings - details the direction for buildings that rise above 10 storeys, including directions regarding tower locations, stepbacks, separation distances and heights.

3.6.5 Grade Level Built Form Guidelines - provides direction regarding the grade-level and relationship to the street and public realm.

3.6.6 Built Form and Micro-Climate Considerations - includes directions regarding sun/shadow and wind impacts.

3.6.7 Views - identifies views that require special consideration.

3.6.8 Density and Development - identifies densities for each of the ten development blocks.

FIGURE 59. Visualization of Villiers Island

3.6.1 Built Form Principles

The built form on Villiers Island will be planned, designed and developed in accordance with the following principles:

01 Create a varied and dynamic built form that contributes to the city and Port Lands skyline and creates visual interest

A variety of building types and scales will contribute to a distinct and dynamic skyline. Together with the evolving Port Lands, the ensemble of the skyline will contribute to the sense of place and identify for Villiers Island within Toronto's waterfront.

02 Reinforce distinct character areas and places in the Island

Villiers Island consists of a collection of special places with different relationships to the water's edge and the public realm.

03 Contribute to spectacular and comfortable all-season parks, open spaces and destinations

Villiers Island will be wrapped with a continuous green loop of parks and open spaces along its four waterside edges. This condition requires special consideration with regards to the public realm and micro-climate conditions.

04 Design the built form to frame and animate streets, parks and open spaces and respond to water edge conditions

To create a lively and animated district with an excellent pedestrian environment, the built form must have a good scale and relationship to street, parks and open spaces. Buildings will define streets and adjacent parks with continuous and strong building edges, with breaks and separation between buildings to allow for pedestrian access, as well as allowing for openness to the sky view.

05 Maintain and celebrate the built, cultural and natural heritage of the Island and surrounding Port Lands

Villiers Island has a special industrial and natural heritage context that will contribute to the identity of the Island as the precinct evolves. New development will establish sensitive transitions in scale, form, material and character to support and complement the heritage structures, define the different character areas and celebrate the history of the Island.

06 Position tall buildings in strategic locations to optimize proximity to transit nodes, define gateways and frame open spaces

Tall buildings will be located in strategic locations with special consideration to how they maintain and frame views in and out of Villiers Island, their contribution to the ensemble of the skyline, while ensuring that they are located, designed and massed to have a positive impact on the surrounding public realm.

07 Showcase views to the water and industrial landmarks

The built form will be designed to enhance views from the city to Villiers Island and views out to the Port Lands and the Inner Harbour. Heritage structures and industrial landmarks in and around Villiers Island including the Lake Ontario Portland Cement Company Silos, and the Hearn Generating Station, Ashbridges Bay and Commissioners Incinerator chimney stacks will continue to be dominant structures and landmarks in the area and remain prominent in the skyline.

08 Leverage passive solar gain and enable daylighting within buildings and open spaces

The location, design and massing of buildings can contribute to achieving climate positive goals by reducing energy demands through passive solar gain, while providing daylighting within interior courtyards.

3.6.2 Low-rise Buildings

Low-rise buildings will be located along the Keating Channel and east side of Old Cherry Street to create a cohesive pedestrian-oriented district. Low-rise buildings heights and locations are indicated on Figure 60 and range from 1 to 5 storeys, as described below. In addition, the Catalytic Use building within Promontory Park will be a low-scale signature building on the waterfront.

All ground floors will have a minimum 5 metre floor-to-floor height; all residential upper storeys will have a 3 metre floor-to-floor height; all commercial storeys will have a minimum 4 metre floor-to-floor height and the Catalytic Use Buildings will have a minimum 5 metre floor-to-floor height.

FIGURE 60. Low-rise buildings

3.6.2.1 Villiers Street North/Keating Promenade

- Buildings along the Keating Channel Promenade, east of New Cherry Street will be a maximum of 3 storeys, up to 15 metres. Buildings will respond the scale of the Harbour Commissioner and Dry Dock buildings, contribute to a high-quality pedestrian experience, and maximize sunlight along the Promenade;
- Buildings along the Keating Channel Promenade should incorporate substantial glazing and function as extensions of the public realm, with patio and spill out opportunities on both the northern and southern façades;
- The building on the east side of New Munition Street along the Keating Channel will be up to 3 storeys and the site for a future school. The school's main entrance should be located on Villiers Street and the northern façade should incorporate substantial glazing, and should include playful and whimsical design elements; and
- There will be one five storey building permitted along the Keating Channel Promenade to the immediate west of New Cherry Street. This site will accommodate a 2-storey community centre, with potential residential/commercial uses

IMAGE 38. Precedent image of Cornell Pollination Centre, Ground floors along the Keating Channel should be designed with substantial glazing and extensions of the public realm.

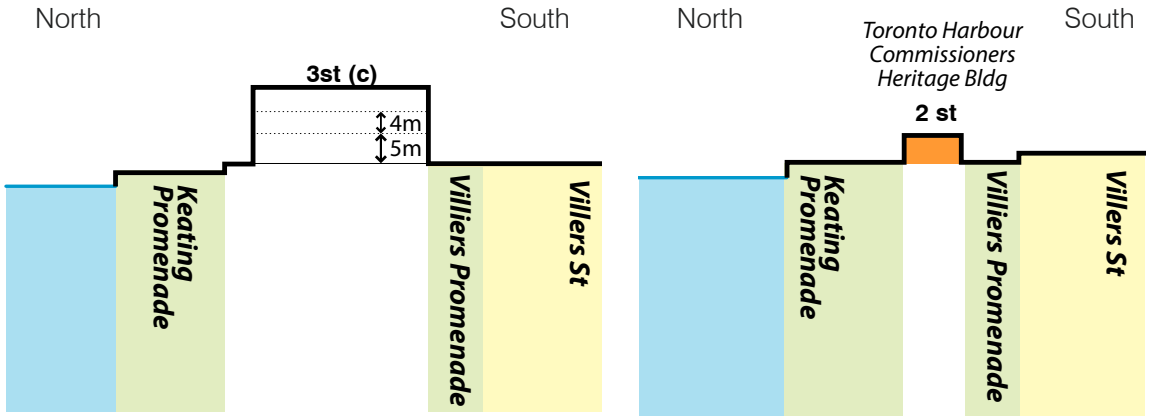


FIGURE 61. Diagram illustrating built form along the Keating Promenade

3.6.2.2 Old Cherry Street, east side

- Infill buildings along the east side of Old Cherry Street will be low-rise in scale, with a maximum height of 3 storeys, up to 15 metres. Buildings will maintain a consistent height and establish a sensitive transition in scale and character to the cluster of heritage along the street; and
- Infill buildings should be contemporary in design, and integrated with, but distinguishable from the heritage structures.

Further guidance related to the relationship between heritage buildings and new development is provided in Section 3.4.

IMAGE 39. Precedent image of Sir John A. MacDonald heritage and new building, Ottawa

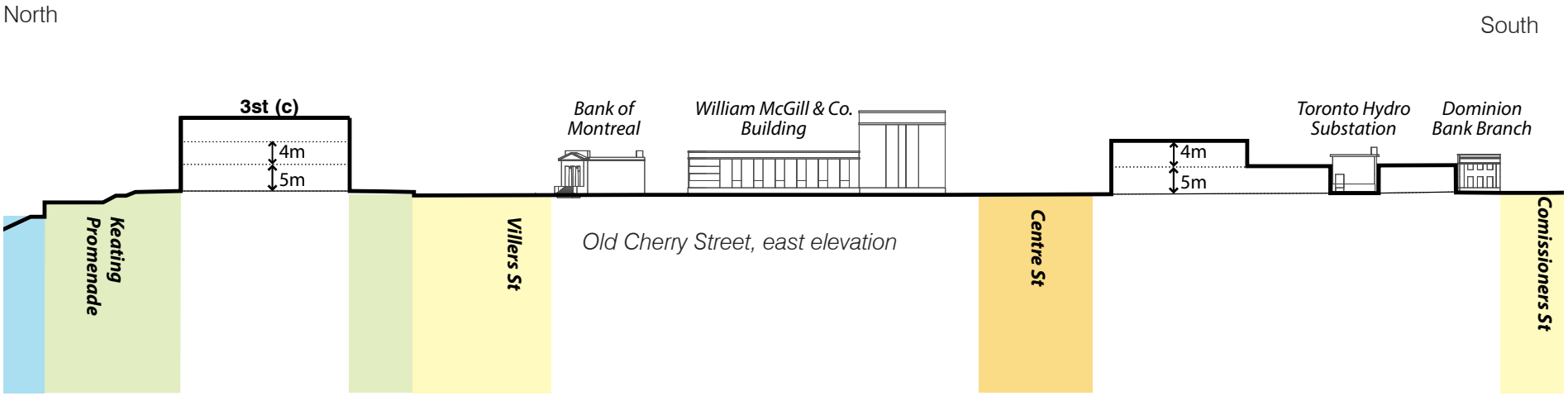


FIGURE 62. Diagram illustrating the built form along the west side of Old Cherry Street

3.6.3 Base Buildings and Mid-rise Buildings

Base and mid-rise buildings on Villiers Island will range from 6 to 10 storeys (19 - 32 metres) and will be the predominant building type of the Island. Base and mid-rise buildings will be designed to frame streets and create a consistent streetwall. Base and mid-rise buildings heights and locations are indicated on Figure 64. Base and mid-rise buildings should be no longer then 85 metres.

Base buildings are the lower portion of a tall building. Base buildings will be no taller than 8 storeys.

The height of base and mid-rise buildings will vary based on the character area and the relationship to heritage, street width and solar orientation. The overall distribution of base and mid-rise buildings on the Island is based on a staggered heights strategy, with lower heights along Commissioners Street and higher base and mid-rise building elements along Villiers Street. One of the opportunities gained from this approach is the potential to leverage passive solar gain on a precinct-wide basis and terrace the heights of buildings down towards River Park.

Mid-rise buildings will incorporate varying stepbacks to reduce the perception of height from the street, create an excellent pedestrian environment and allow for sunlight access and sky views from the public realm.

Stepbacks are an important massing technique to maintain a human scale and allow for a minimum amount of sun on the public realm by stepping upper storeys away from the street edges. Stepbacks can also provide space for outdoor terraces, which can contribute to eyes on the street and contribute to a building's private amenity space.

All building's ground floors will have a minimum 5 metre floor-to-floor height; all residential upper storeys will have a 3 metre floor-to-floor height; all commercial storeys will have a minimum 4 metre floor-to-floor height.

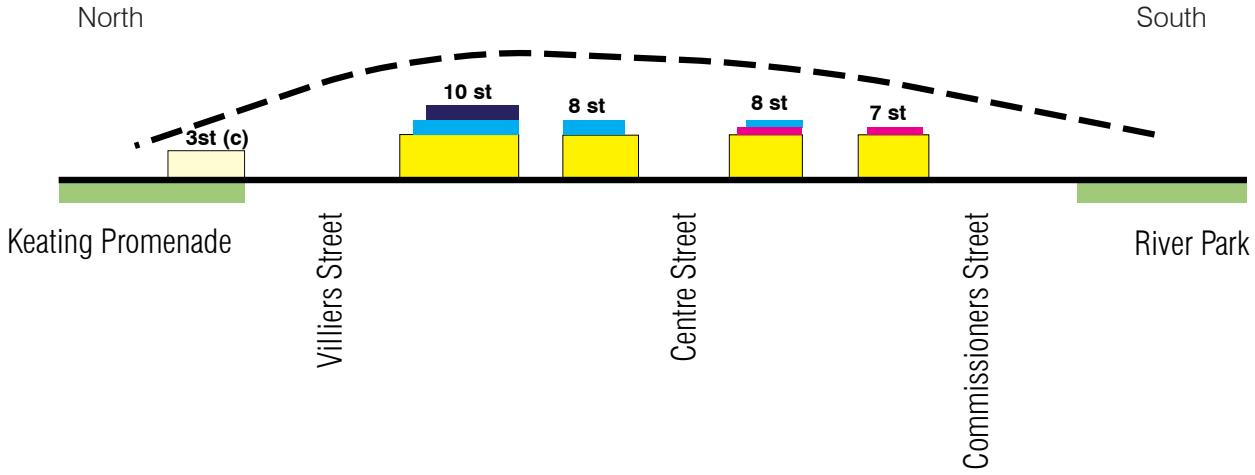


FIGURE 63. Diagram illustrating the base and mid-rise building height in a conceptual north-south cross section of the Island

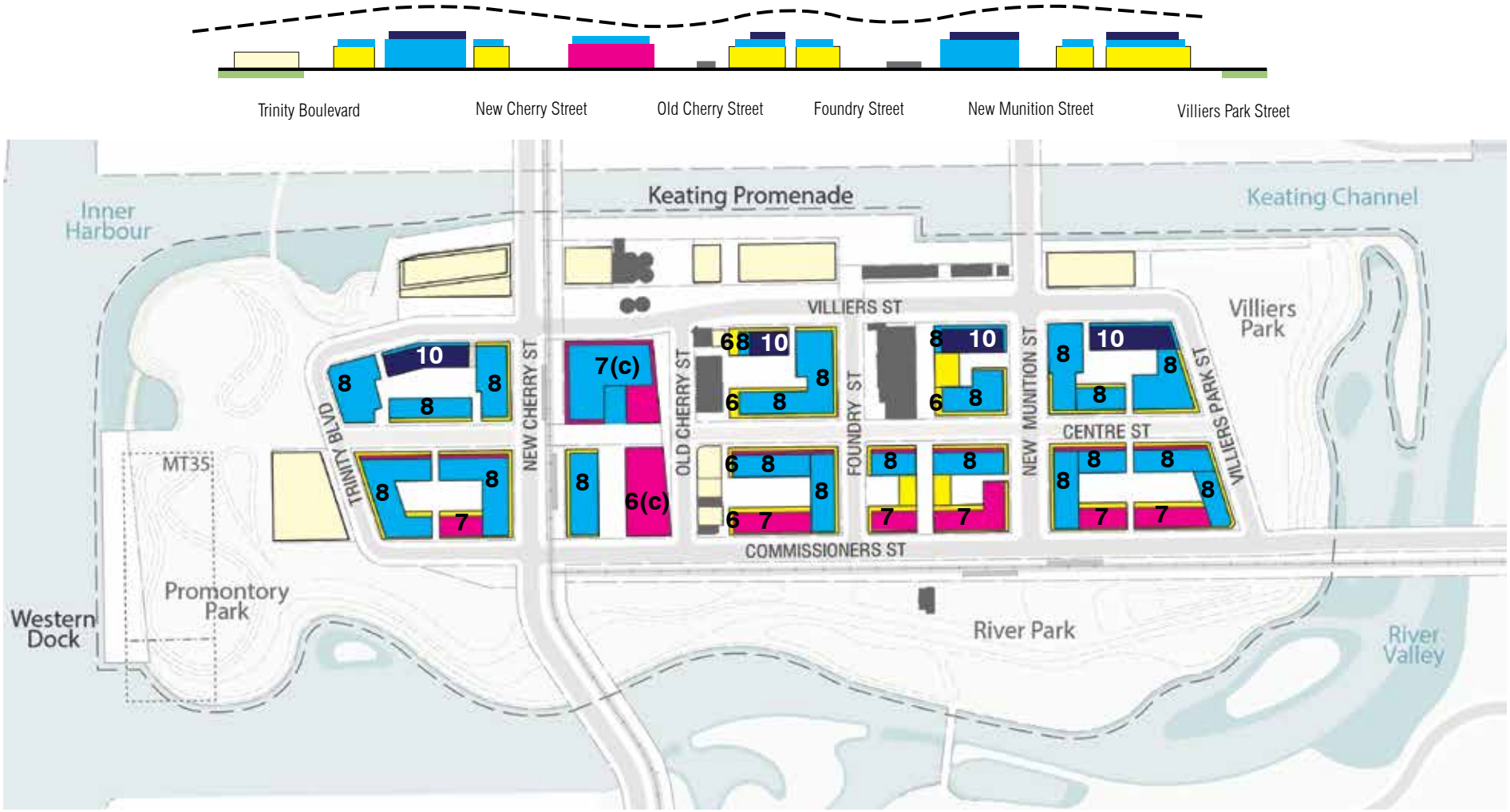


FIGURE 64. Low-rise, base and mid-rise building heights and locations

3.6.3.1 North South Streets – New Cherry Street, New Munition Street and Trinity Boulevard

- Buildings with primary frontage on north-south streets will be permitted up to 8 storeys, and incorporate stepbacks at the 6th storey (see figure 65); and
- The height and scale of buildings fronting north-south streets will relate to the street right-of-way to create a pedestrian-friendly environment and leverage passive solar gain.

3.6.3.2 Old Cherry Street

- Buildings on the west side of Old Cherry Street will be permitted up to 6 to 7 storeys (22 metres);
- Buildings at this scale will relate to the street right-of-way and establish a transition in scale to the low-rise buildings along the east side of Old Cherry Street. These buildings are planned as commercial/office buildings; and
- Buildings to the immediate east of Old Cherry Street, facing east and west streets (Villiers Street, Centre Street, Commissioners Street) will incorporate a significant stepback in height to establish a sensitive transition in scale, as indicated in figure 66. For the portion of a building adjacent to a heritage structure, buildings should be a maximum of 6 storeys. Buildings directly adjacent to heritage structures should transition in height and scale via stepbacks and other massing techniques.

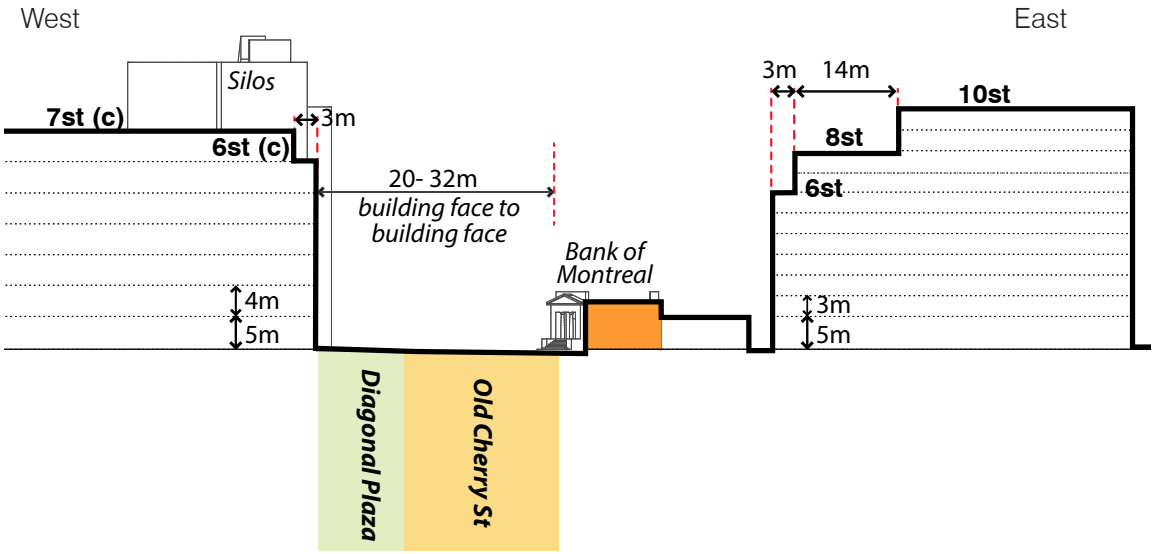


FIGURE 65. Old Cherry Street built form diagram

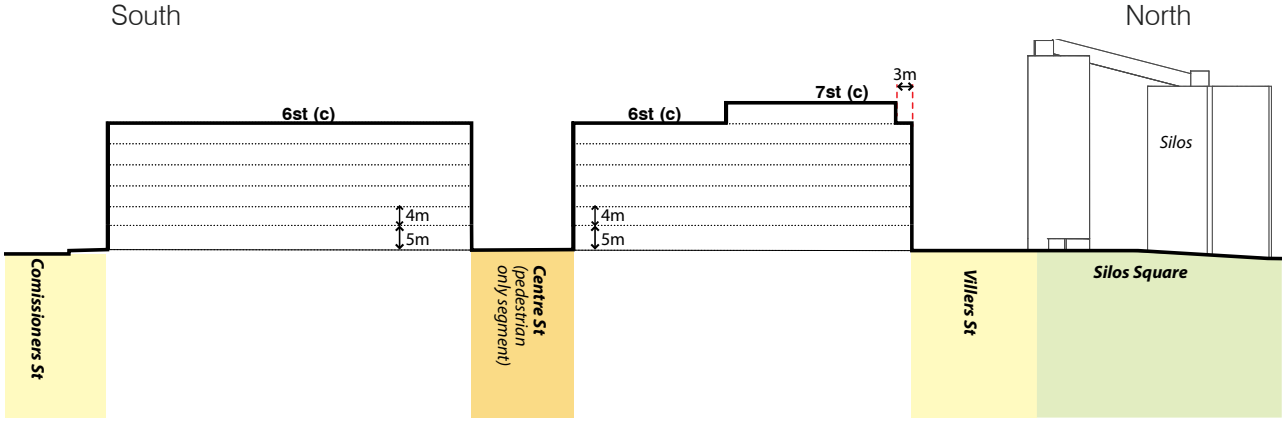


FIGURE 66. Old Cherry Street west side built form diagram

3.6.3.3 Commissioners Street, north side

- Buildings will be permitted up to 7 storeys (22 metres) to frame River Park, and leverage solar gain and minimize shadow impact on internal courtyards and buildings along Centre Street;
- Buildings on Commissioners Street will be encouraged to include variation in height, scale and articulation to establish architectural interest;
- Buildings will incorporate a front stepback at the 6th storey (south façade) with a minimum depth of 1.5 metres. Greater stepback areas are encouraged to create generous south facing terraces facing the River Valley with space for outdoor furniture (see figure 67); and
- Buildings will incorporate a stepback at the 6 storey (north façade) with a minimum depth of 3 metres up to 4.5 metres to minimize shadow impact on internal courtyards and on buildings on Centre Street (see figure 67).

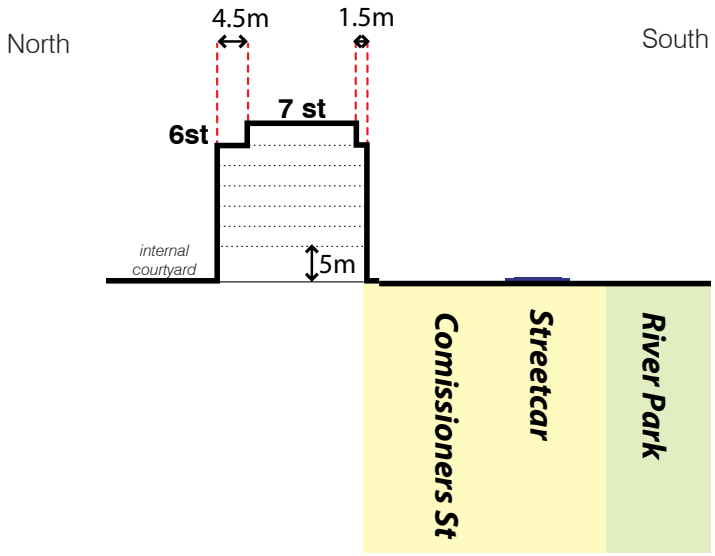


FIGURE 67. Commissioners Street north side built form diagram

IMAGE 40. Precedent: 7 storey tall building with stepback at the 6th storey, Dublin

3.6.3.4 Villiers Street, south side

- Buildings will be permitted up to 8 to 10 storeys, with stepbacks at the 6th or 8th storey, with a depth of 3 metres. The stepback area should incorporate outdoor terraces directly facing the Promenade;
- Base and mid-rise buildings will relate to the street right-of-way and create a comfortable pedestrian condition; and
- Buildings should provide additional stepbacks to minimize the perception of height from the street and the Keating Channel Promenade.

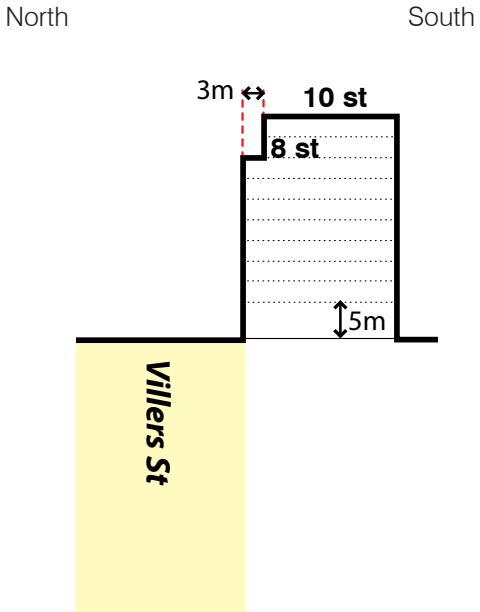


FIGURE 68. Villiers Street south side built form diagram

IMAGE 41. Precedent: 10 storey building that incorporates stepbacks at the 8th storey, Toronto

3.6.3.5 Centre Street

- Buildings will be permitted up to 8 storeys, with stepbacks at the 6th storey. Buildings along Centre Street will incorporate stepbacks and elevated penthouses to create a sense of intimacy and frame the pedestrian-focused street.
- On the north side of Centre Street, base buildings will incorporate a 3 metre wide stepback at the 6th storey; and
- On the south side of Centre Street, base buildings will incorporate two stepbacks at the 6th and 7th storeys, to maximize sunlight on the northern sidewalk area. Additional built form massing approaches should be considered to maximize sunlight on the street.

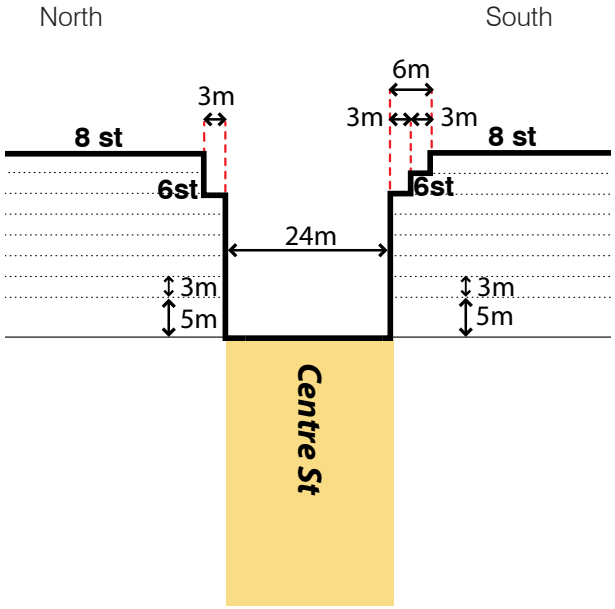


FIGURE 69. Centre Street built form diagram

4.6.3.6 Old Munition Street Pedestrian Link

- Along the Old Munition Street Pedestrian Link, buildings will be up to 6 storeys to create a more intimate residential-type pedestrian-only mews and create a transition in scale to the heritage building at 33 Villiers Street.

IMAGE 42. Precedent image of mid-rise buildings face an intimate pathway that incorporates stormwater measures, Portland OR

3.6.4 Tall Buildings

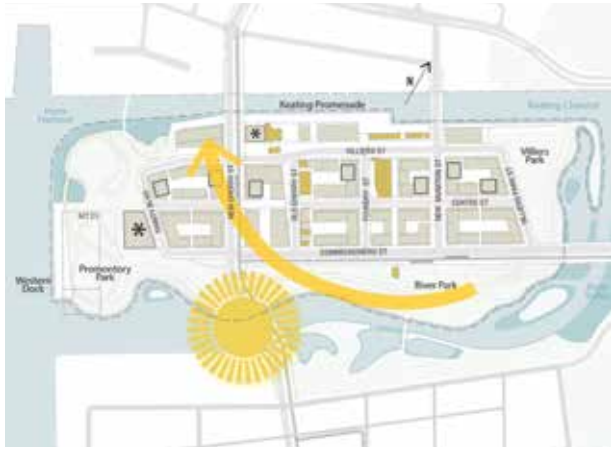
Tall buildings in Villiers Island will only be permitted in strategic locations, and contribute to a varied and interesting skyline and a mix of building types on the Island. The height, location and massing of tall buildings demand careful attention due to the impact tall buildings have on the public realm. Tall buildings within the Villiers Island context are defined as building portions that exceed the maximum heights established in Figure 64 (Low-rise, base and mid-rise building heights and locations).

3.6.4.1 Tall Building Locations

The location, organization and orientation of tall buildings has been carefully considered to balance a number of planning and design considerations:

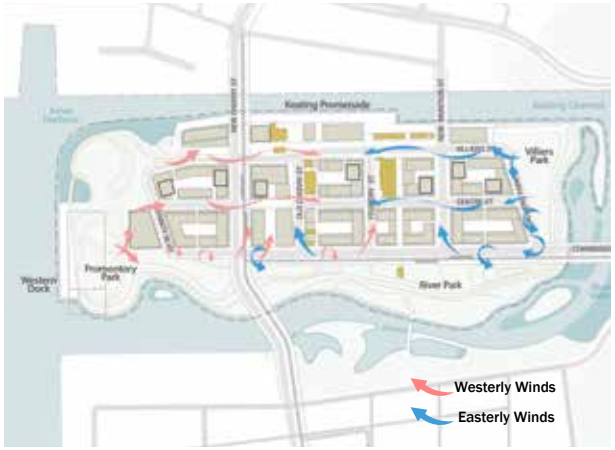
Maximize Sunlight on the Public Realm

Tall buildings will minimize shadow impact on the Island's parks and open spaces and ensure adequate sunlight on the public realm and natural habitat.



Leverage Passive Solar

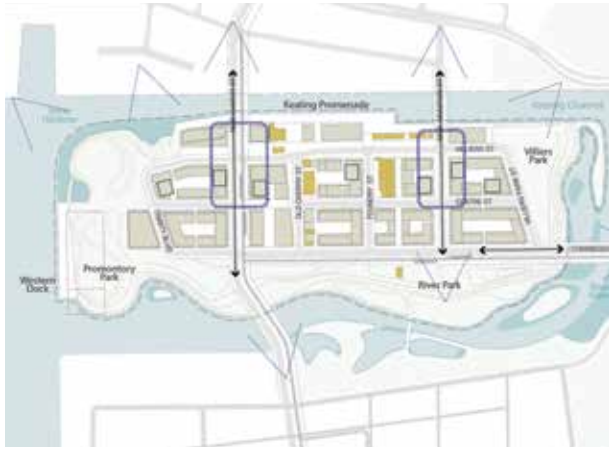
In order to reduce energy demands for buildings, tall buildings will be located strategically on the Island to maximize south facing sunlight exposure, capitalizing on the energy and benefits associated with passive solar gain.



Mitigate Wind Impact

Villiers Island is located in an area subject to strong winds. Tall buildings need to be carefully positioned to minimize wind impacts and create a comfortable public realm.

▼ **FIGURE 70.** Diagrams depicting the planning and design considerations for the location of tall buildings



Define Gateways

Tall buildings will define the two north-south gateways into the Island, along New Cherry Street and New Munition Street.

Proximity to Transit Stops

Tall buildings will be clustered around the New Cherry Street transit stop to ensure people and jobs are located in close proximity to transit.

Transition to Heritage Structures

To provide appropriate transitions in scale and form to the lower-scale heritage structures on the Island, tall buildings are not appropriate within close proximity to heritage structures. Tall buildings are also not appropriate in locations that would block or obstruct views to heritage structures in Villiers Island and the surrounding Port Lands.

The tall building locations on the Island will distinguish the scale and built form between the different character areas in the Island, and also distinguish the Island from the built form character in surrounding areas.

In addition to the considerations discussed on the preceding pages, tall buildings will also be located away from the Cement Terminal on Polson Quay to minimize noise mitigation concerns.

As indicated on Figure 71, tall buildings will be located within the development blocks bounded by Centre Street to the south and Villiers Street to the north. By locating tall buildings within these blocks and staggering their locations, it is possible to minimize shadowing on surroundings buildings. This approach is optimal from a passive solar perspective on a precinct-wide basis and will contribute to reducing energy demands generated by buildings.

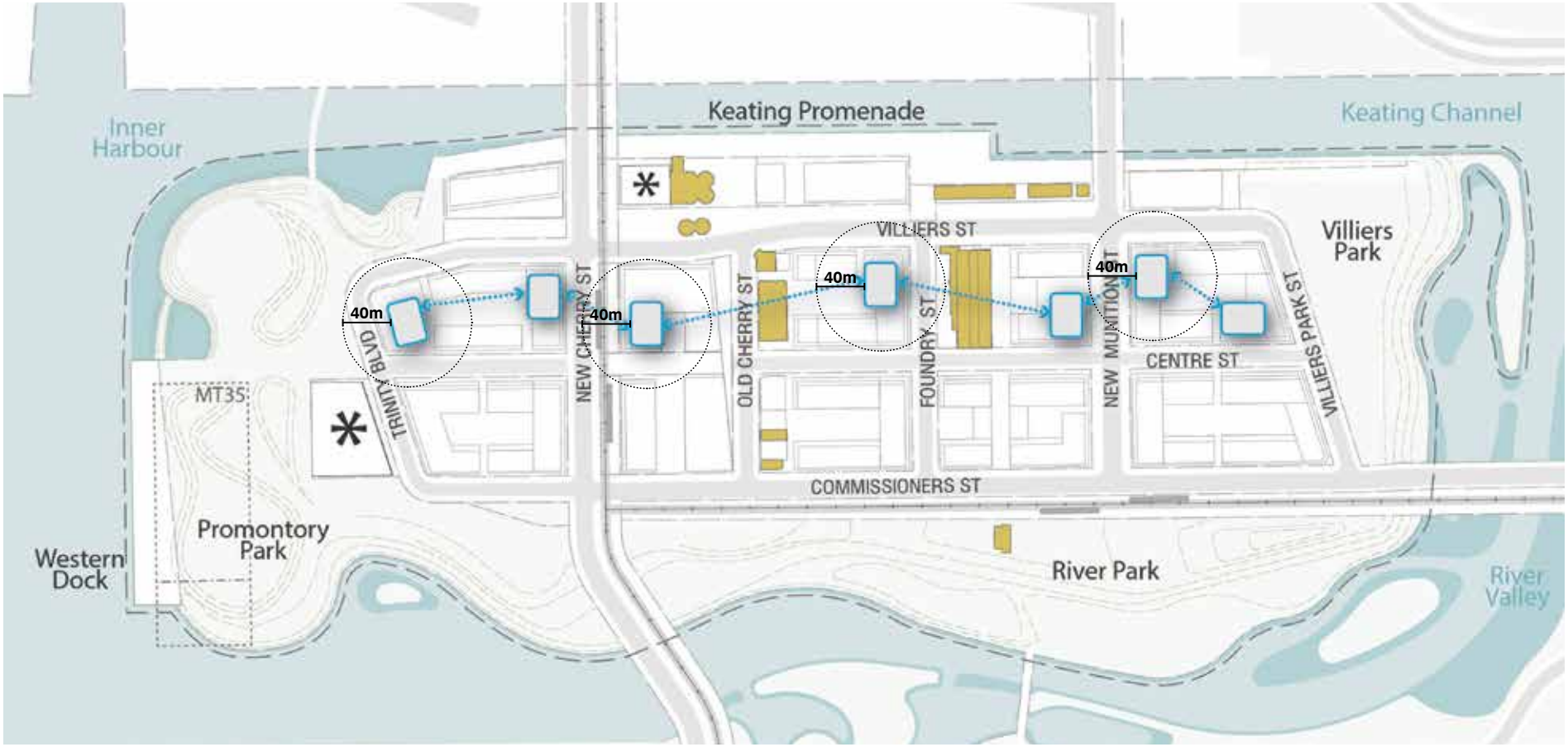


FIGURE 71. Tall building locations and separation

3.6.4.2 Tall Building Separation

Providing minimum distances between tall buildings helps to limit negative impacts on the public realm, and provides for sunlight, sky view and privacy.

To maximize sky view and light penetration, tall buildings will be separated by a minimum of 40 metres (excluding balconies).

This separation distance will ensure that tall buildings are well spaced from each other and do not become the dominant element in the skyline.

In addition, tall buildings will also be staggered on each block. This will ensure that tall buildings do not directly face another building.

3.6.4.3 Tall Building Stepbacks

Tall buildings will be well set back from the base building and the street edge. Tall building stepbacks will mitigate wind impacts, reduce the perception of tall buildings from the street and create a comfortable pedestrian environment.

Tall buildings will be stepped back from the base building frontage by a minimum of:

- 10 metres on the south side of Villiers Street to provide a substantial stepback to the pedestrian-oriented Keating Channel Promenade and heritage structures;
- 6 metres on the north side of Centre Street along the length of the street, to preserve the character of Centre Street as a mid-rise street; and
- At least 3 metres on north-south streets.

3.6.4.4 Tall Building Setback to Heritage Structures

In order to establish a transition in scale to heritage structures within Villiers Island, tall buildings will be separated a minimum of 40 metres from the predominant face of heritage structures.

3.6.4.5 Tall Building Floorplates

Residential tall building floorplates for the portion of a building over 10 storeys will not exceed 750 square metres (excluding balconies). This floorplate size will ensure that daylight penetrates through to the streets and the perceived bulk of the building does not dominate the human-scale quality of the street.

IMAGE 43. Precedent image of residential building with a defined base building and tall element in Vancouver, BC

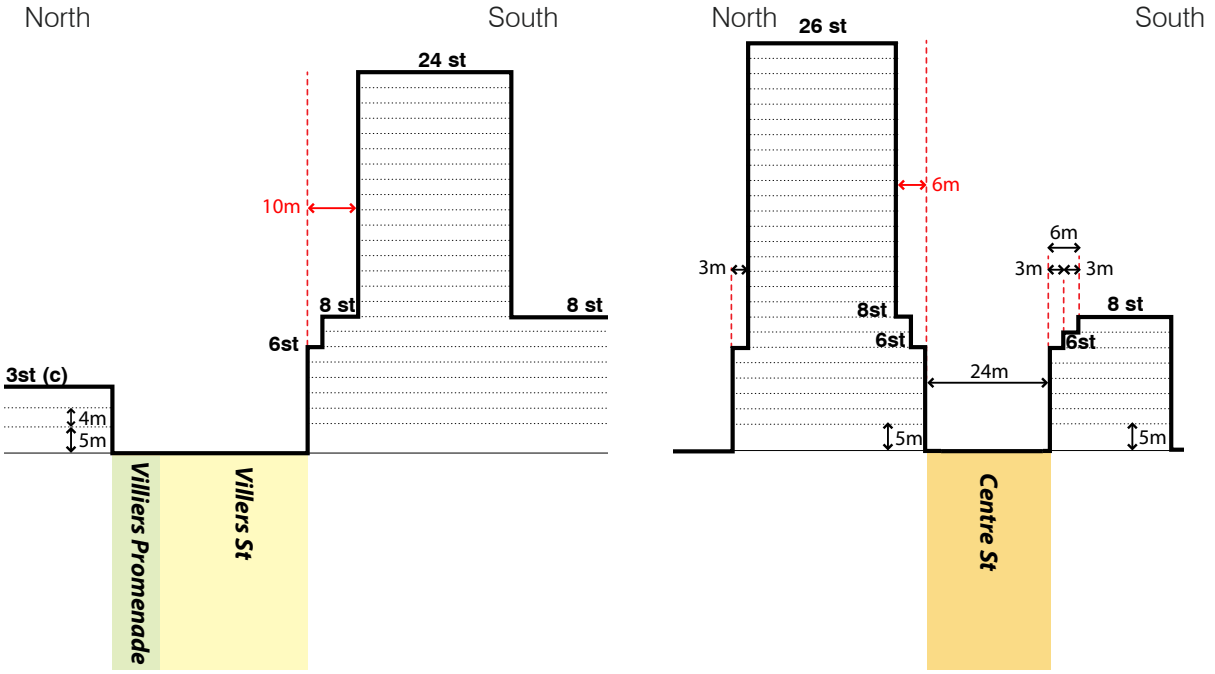


FIGURE 72. Section diagrams illustrating the tall building stepbacks from Villiers Street and from Centre Street

3.6.4.6 Tall Buildings Heights Strategy

The heights of tall buildings in Villiers Island will contribute to an interesting skyline, maintain and enhance view corridors, and minimize shadow impact on parks and open spaces. The majority of tall buildings will be in the low to mid-twenties.

As indicated on Figure 73, four height ranges are appropriate for Villiers Island:

- **Tall 1:** Buildings up to and ranging between 80 and 89 metres (26 and 29 storeys);
- **Tall 2:** Buildings up to and ranging between 68 and 80 metres (22 to 26 storeys);
- **Tall 3**: Buildings up to and ranging between 62 and 68 metres (20 to 22 storeys); and
- **Tall 4:** Buildings up to 50 metres (16 storeys).

TALL 1 – up to 29 storeys (89 metres)

- The tallest element (Tall 1) will be located immediately west of New Cherry Street and south of Villiers Street. This is a highly visible location from downtown and the Central Waterfront and marks the primary gateway into the Island. This location is considered an opportunity site for an architecturally significant landmark building. It will be the tallest element in Villiers Island and frame the New Cherry Street gateway and transit stop.

TALL 2 – up to 26 storeys (80 metres)

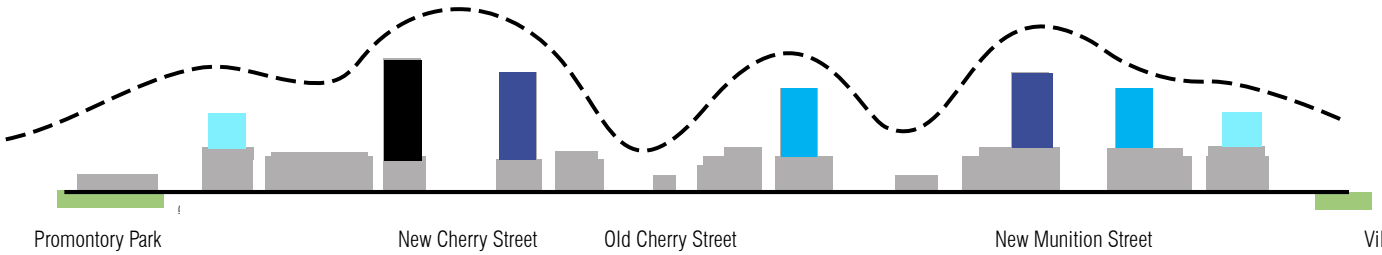
- East side of New Cherry Street - a building will be permitted up to 80 metres (approximately 26 storeys). This building will frame the east side of the New Cherry Street gateway and transit stop; and
- West side of New Munition - a building will be permitted up to 80 metres (approximately 26 storeys). This building will frame the west side of the New Munition Street gateway and will be set back a minimum of40 metres from Queen's City Foundry building.

TALL 3 – up to 24 storeys (74 metres)

- On the west side of Foundry Street, a tall building up 74 metres (24 storeys) will be permitted. The height and form of a tall building in this location must create a sensitive transition in scale to the nearby heritage properties along Old Cherry Street and the Queen's City Foundry building; and
- New Munition Street marks a secondary gateway into the Island, where tall buildings are appropriate. On the east side of New Munition Street, a building up to 24 storeys (74 metres) is permitted.

Tall 4 – up to 16 storeys (50 metres)

- The two ends of the Island, at Trinity Boulevard and Villiers Park Street will be marked with buildings in the range of 50 metres (16 storeys). Buildings at this height will minimize shadow on Promontory Park and the western cove, and Villiers Park.



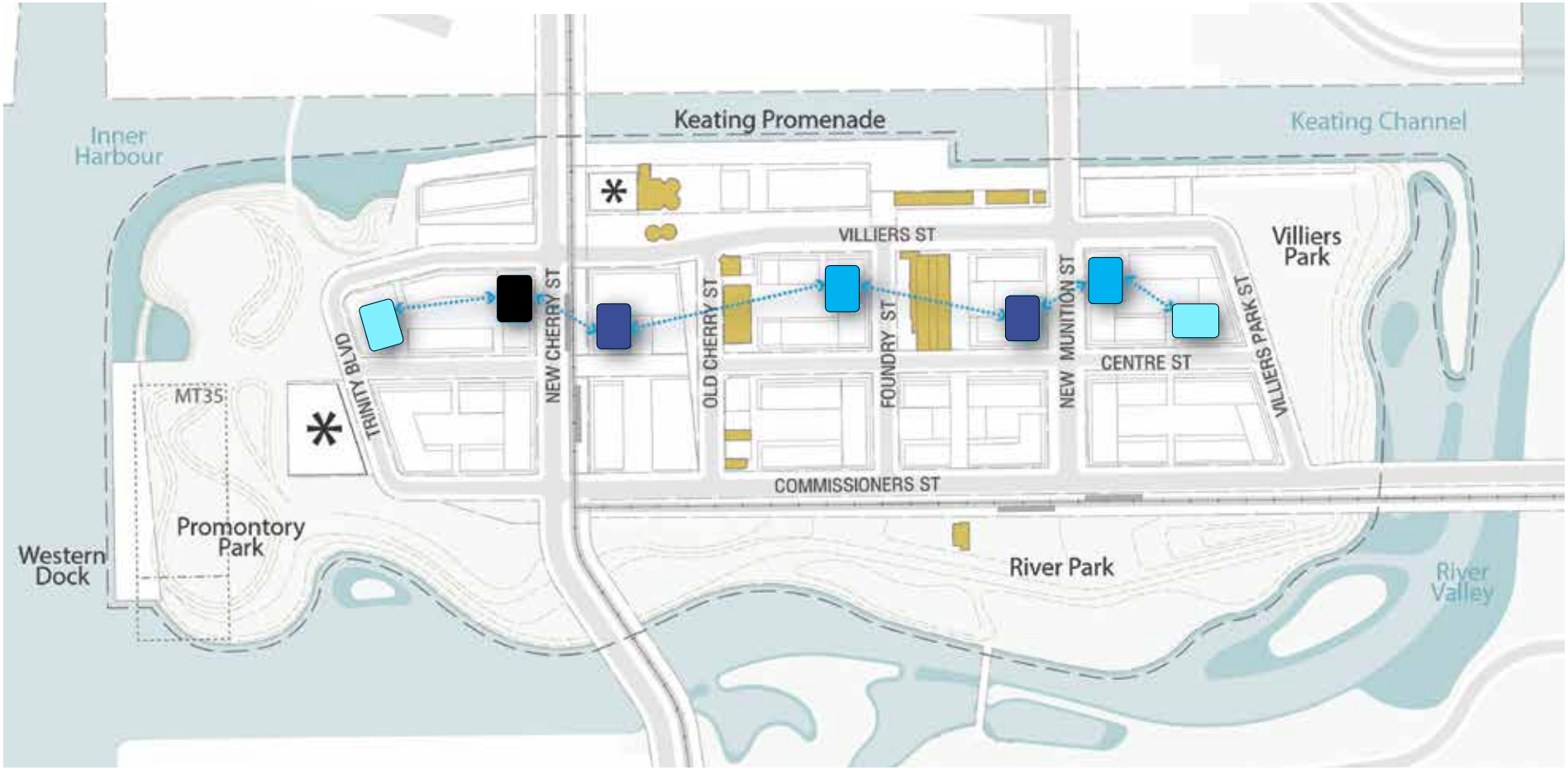


FIGURE 73. Tall building height strategy, plan and section diagram

- Tall 1: up to and ranging between 80m and 89m (26 and 29 storeys);
- Tall 2: up to and ranging between 68 and 80m (22 to 26 storeys)
- Tall 3: up to and ranging between 62 and 74 m (20 to 24 storeys)
- Tall 4: up to 50m (16 storeys).
- Heritage buildings

3.6.5 Grade Level Built Form Guidelines

The first floors of buildings are the main interface between the public and private realms. The ground floor should ensure high-quality dynamic spaces that contribute to vibrant pedestrian environment. Active uses will animate streets, parks and open spaces throughout the Island.

3.6.5.1 Ground Floor Height

All ground floor heights in Villiers Island will be a minimum of 5 metres in height (with the exception of existing heritage buildings). The minimum ground-floor height will create a consistent pedestrian experience, while allowing for flexibility of various ground level uses.

3.6.5.2 Uses At-grade and Ground Floor Animation

Priority Retail Street and Frontages

Villiers Street and the Keating Promenade, Old Cherry Street, New Cherry Street and portions of Trinity Boulevard will contain at-grade street-related retail and service uses, which will animate and active the public realm. Keating Channel has the potential for destination-type retail uses.

Ground floor commercial retail uses will also be encouraged elsewhere on the Island as Secondary Priority Retail Frontages on selected locations along Centre Street.

At-grade retail uses will be designed in accordance with the following guidelines:

- With the exception of residential lobbies and secondary entrances and exits, the ground floor of buildings in these locations will contain only non-residential uses. At-grade residential units in these areas are not appropriate;
- At-grade retail uses should include a minimum of 70% transparent glazing to permit a clear view from the street and include multiple entrances from the street;
- Retail signage should contribute to the architectural character of a building and the heritage of the Island; and
- Retail frontages should be fine-grain and allow for flexibility and adaptability to encourage a diversity of identity and character.

Animated At-grade Frontages

Animated at-grade frontages will be required along all frontages facing parks (along Villiers Park, Commissioners Street and Promontory Park) and along Centre Street west of New Cherry Street (see Figure 74).

Animated at-grade frontages will be designed in accordance with the following guidelines:

- Animated at-grade frontages will include doors, windows and common amenity areas with pedestrian activity fronting and directly accessible from the sidewalk;
- Ground floor façades should be devoted to transparent windows and doors, and visually open to allow maximum visual interaction between the sidewalk and interior spaces; and
- Ground floors will be designed to enable conversion to narrow frontage retail and be a suitable depth to accommodate retail and service uses.

Grade-related Residential and Live/Work Units

In some areas of the Island, grade-related residential units and live/work units are appropriate, including along Centre Street (east of New Cherry Street), and Old Munition Street Pedestrian Link.

Grade-related residential units will be designed in accordance with the following guidelines:

- Incorporate stairs and landscaping within the private setback area to provide a degree of separation and privacy from the street;
- Be designed with flexibility to allow for live/work opportunities and accommodate small-scale commercial, retail and service-related uses;
- Contribute to the overall neighbourhood character of Centre Street and a high-quality public realm.

FIGURE 74. Plan illustrating grade level frontages

3.6.5.3 Setbacks

Setbacks at grade help to expand the public realm and allow for increased space for pedestrian movement. Setbacks provide opportunities for widened pedestrian clearways, landscaping, street furnishings, entrance canopies, terraces and a buffer between the building face and public right-of-way. Setbacks from the front property line will be provided in specific locations to assure additional space for pedestrians, as illustrated by Figure 75.

FIGURE 75. Plan illustrating setbacks

Foundry Street:

- Buildings on Foundry Street will be setback from the public right-of-way by 2 metres on both sides in order to create a 24 metre distance from building face to building face.

Centre Street

- Buildings along Centre Street will have varied setbacks from the public right-of-way with 1 metre on the north side and 3 metres on the south side to achieve a minimum distance of 24 metres from building face to building face; and
- The enhanced setback will ensure that there is a minimum of 5 hours of sunlight on the north side of Centre Street. This setback area will reinforce the mews-like character along Centre Street. It will create space for landscaping/ planting zone between the public right-of-way and the entrance to grade-related use.

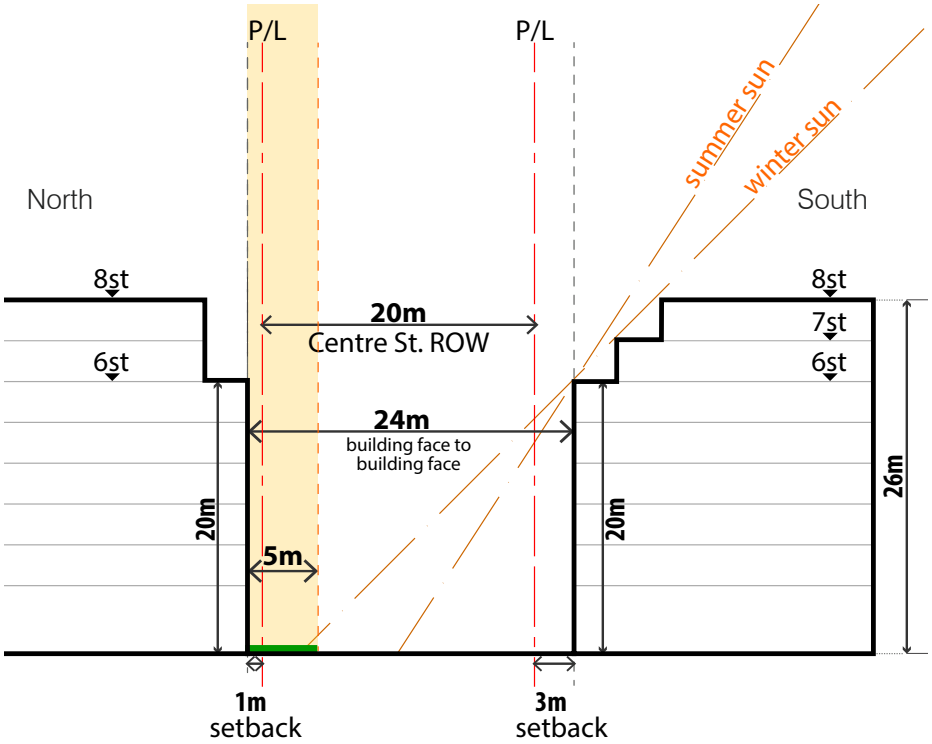


FIGURE 76. Section A: Diagram illustrating the setback along Centre Street

Old Cherry Street, west side:

- Buildings on the west side of Old Cherry will feature a diagonal set back area from the public right-of-way to create a pedestrian plaza in front of the buildings and reveal a view from the Silos Square to the River Valley.

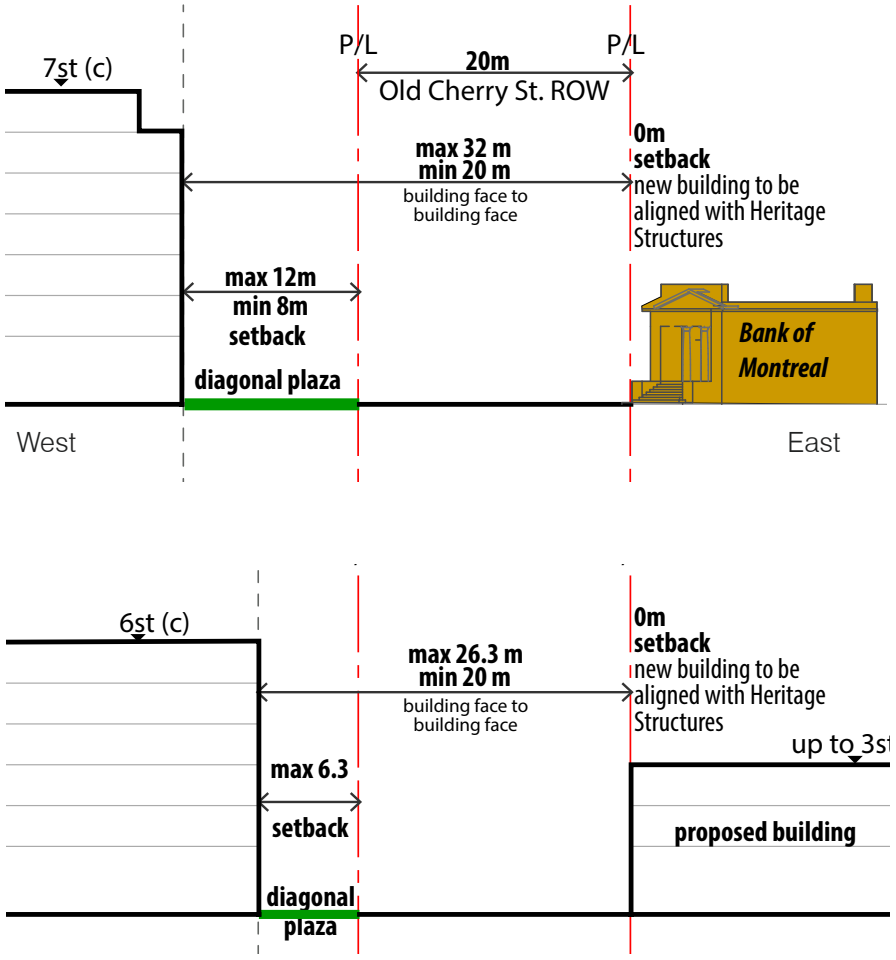


FIGURE 77. Section B1 and B2: Diagrams illustrating the setback along Old Cherry Street

3.6.6 Built Form and Micro-climate Considerations

Development on Villiers Island will contribute to an excellent public realm and pedestrian environment. The built form strategy has been carefully designed to minimize shadow impacts on parks and open spaces and minimize and mitigate pedestrian-level wind impacts.

3.6.6.1 Sun and Shadow

Development will minimize shadow impact on parks, open spaces and the public realm to achieve the following sunlight at the spring and fall equinoxes:

- 7 hours of continuous sunlight on naturalized wetlands (below top of bank), including the naturalized coves along the Keating Channel from 10:18 am;
- 8 hours of continuous sunlight on Promontory Park from 10:18 am;
- 6 hours of continuous sunlight on Villiers Park from 9:18 am;
- 8 hours of continuous sunlight on River Valley Park from 9:18 am;
- Minimal shadow on the Keating Channel Promenade at noon, and 5 hours of continuous sunlight from 1:18 pm;
- 5 hours of continuous sunlight from 1:18 pm with interspersed shadow cast by tall buildings until 3:18 pm on the northern side of Villiers Street;
- 5 hours of continuous sunlight from 12:18 pm along the northern edge of Centre Street; and
- 4 hours of continuous sunlight along Old Cherry Street from 10:18 am.

3.6.6.2 Wind Mitigation

Buildings will be located, massed, oriented and designed to mitigate uncomfortable ground level conditions wherever possible. Villiers Island is located in a highly exposed waterfront area, and wind mitigation is an important component of building massing and design.

RWDI Inc. prepared a Pedestrian Wind Assessment for the Precinct Plan and the built form strategy has been prepared to mitigate wind impacts, wherever possible. The findings indicate that mid-rise buildings with stepbacks typically allow winds to pass over the buildings and thereby protect areas downwind of the buildings. This building type will be the predominant building type in the Island.

During the development and detailed design phase, the following potential solutions for wind mitigation should be considered:

- Where tall buildings are deemed appropriate, base buildings provide important wind control by deflecting wind from tall buildings, thereby keeping the wind above street level. In accordance with Section 3.6.4, the tall building setback distance from the base building will be substantial to maximize the podium's efficacy of wind down wash capture;
- Massing articulation such as chamfered, curved, or re-entrant corners on both tall buildings and highly exposed base-buildings may aid in reducing corner wind accelerations;
- Architectural features should be incorporated such as covered colonnades and large canopies on the base buildings along the east, west and south sides of the Island;
- Measures such as canopies over main entrances and recessing main entrances to protect them from winds;
- Incorporating localized wind screens and trellises on sidewalks, plazas, podiums and terraces; and
- Outdoor roof space may require additional wind mitigation to create comfortable environments. Typical wind mitigation would include tall, transparent parapets or wind screens to deflect winds up above the roof areas; and
- In addition, coniferous trees in the parks surrounding the buildings may minimize wind impacts, particularly along east-west streets such as Commissioners Street and Centre Street.

3.6.7 Views

At the southeast of Toronto's Inner Harbour, Villiers Island will be highly visible from downtown and the Central Waterfront. The location also provides impressive views of the city skyline, the Port Lands industrial heritage and the varied water's edges.

Views contribute to the sense of place, relationship to the city and the waterfront, and heritage character. The placement and heights of buildings and the design of parks and open spaces requires special consideration to maintain and contribute to views.

The Port Lands Planning Framework identifies views of the Port Lands and to the surrounding city. Expanding on the views identified and described in the Port Lands Planing Framework, the heights, location, and placement of buildings in Villiers Island will preserve and enhance views to the focal points and heritage structures, in accordance with Figure 78.

FIGURE 78. Views key map

FIGURE 79. Port Lands Skyline
From: Central Waterfront Promenade, from the foot of Yonge Street to Sherbourne Common (view illustrated from Sugar Beach)

1. Port Lands Skyline

Views to the Port Land's skyline along the Central Waterfront promenade from the foot of Yonge Street to Sherbourne Common will create a symbolic connection between the city and the next area of waterfront revitalization. The City's image will be enriched by the expansion of its skyline in a way that varies dramatically from that of the Downtown Toronto.
The Port Land's skyline will be curated and sculpted to convey the identity of the evolving city district by preserving views to and showcasing the collection of prominent heritage structures and landmarks. These consist of the Commissioners chimneystack, the Hearn and its chimneystack, the Lake Ontario Portland Cement Company Silos and any conserved attributes of Marine Terminal Building No. 35 as determined through a more detailed assessment. New development will be carefully sited and building heights controlled to ensure the landmarks remain dominant within the evolving skyline, with generous sky view surrounding the Hearn's chimneystack.

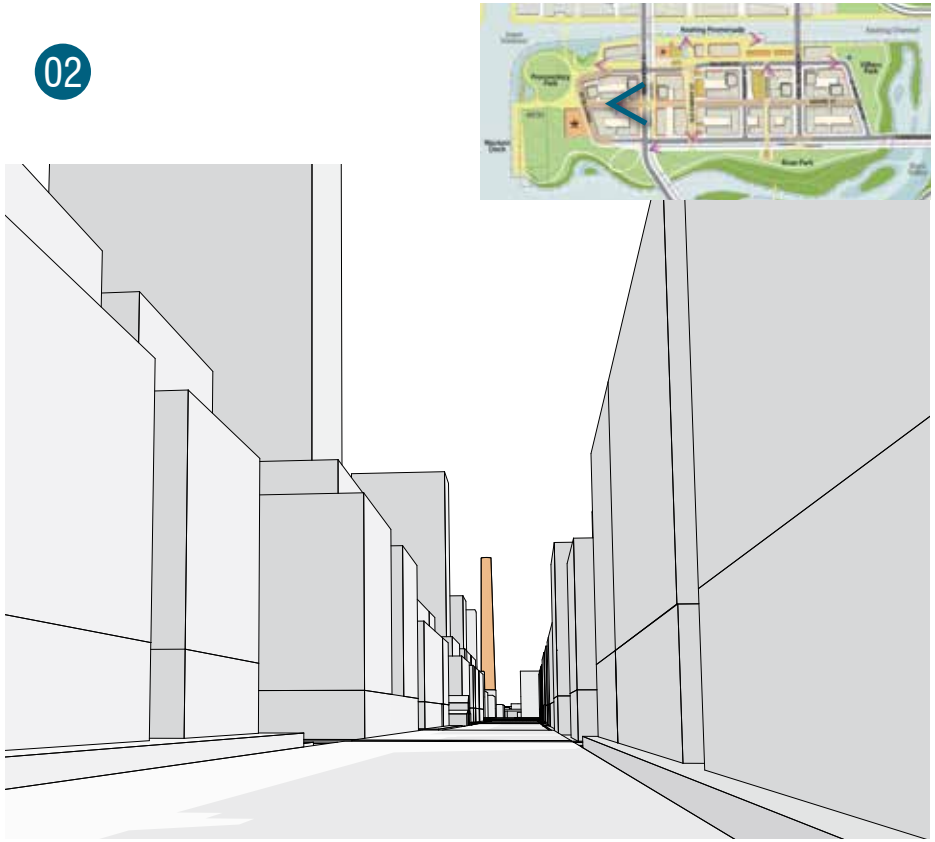


FIGURE 80. Commissioners Stack
From: Centre Street, Western end

2. Commissioners Stack

An intimate, oblique view of the historic Commissioner's Incinerator chimneystack, a totem of the Port Lands, will be achieved by generally aligning Centre Street in Villiers Island and a new east-west street in McCleary District to capture a long view of the chimneystack from the west, while preserving the historic Foundry building in its original location. Sky view will be provided around the chimneystack by stepping back development above a mid-rise height.

FIGURE 81. Villiers Street and Lake Ontario Portland Cement Company Silos
From: Promontory Park, looking east

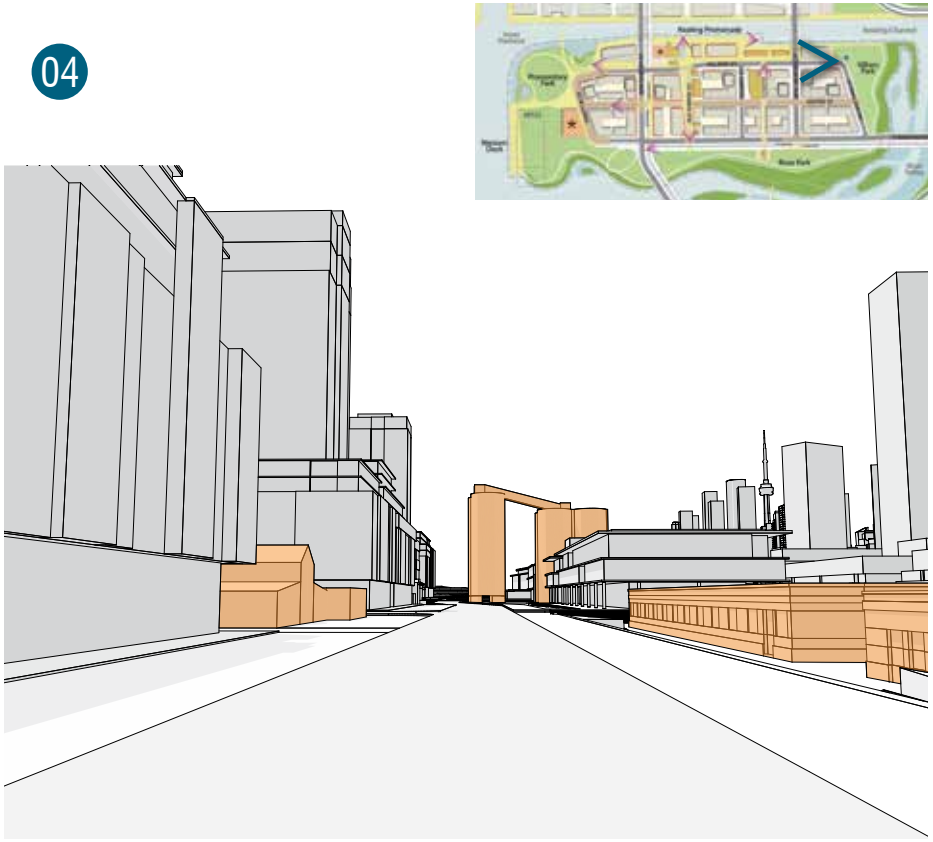


FIGURE 82. Villiers Street, Lake Ontario Portland Cement Company Silos and Harbour Commission Buildings
From: Villiers Park Street, looking west

3 and 4. Portland Cement Company Silos

Views from the east and west along Villiers Street will be dominated by the dramatic scale and prominent location of the Lake Ontario Portland Cement Company Silos at existing Cherry Street, and lined to the north by the historic Toronto Harbour Commissioners buildings. The Silos will be a distinctive centre piece for the street as it evolves into a pedestrian priority retail / recreation destination. Development will frame the view, ensuring that buildings are sited and oriented to maintain the prominence of the silos through setbacks and/or generous stepbacks.