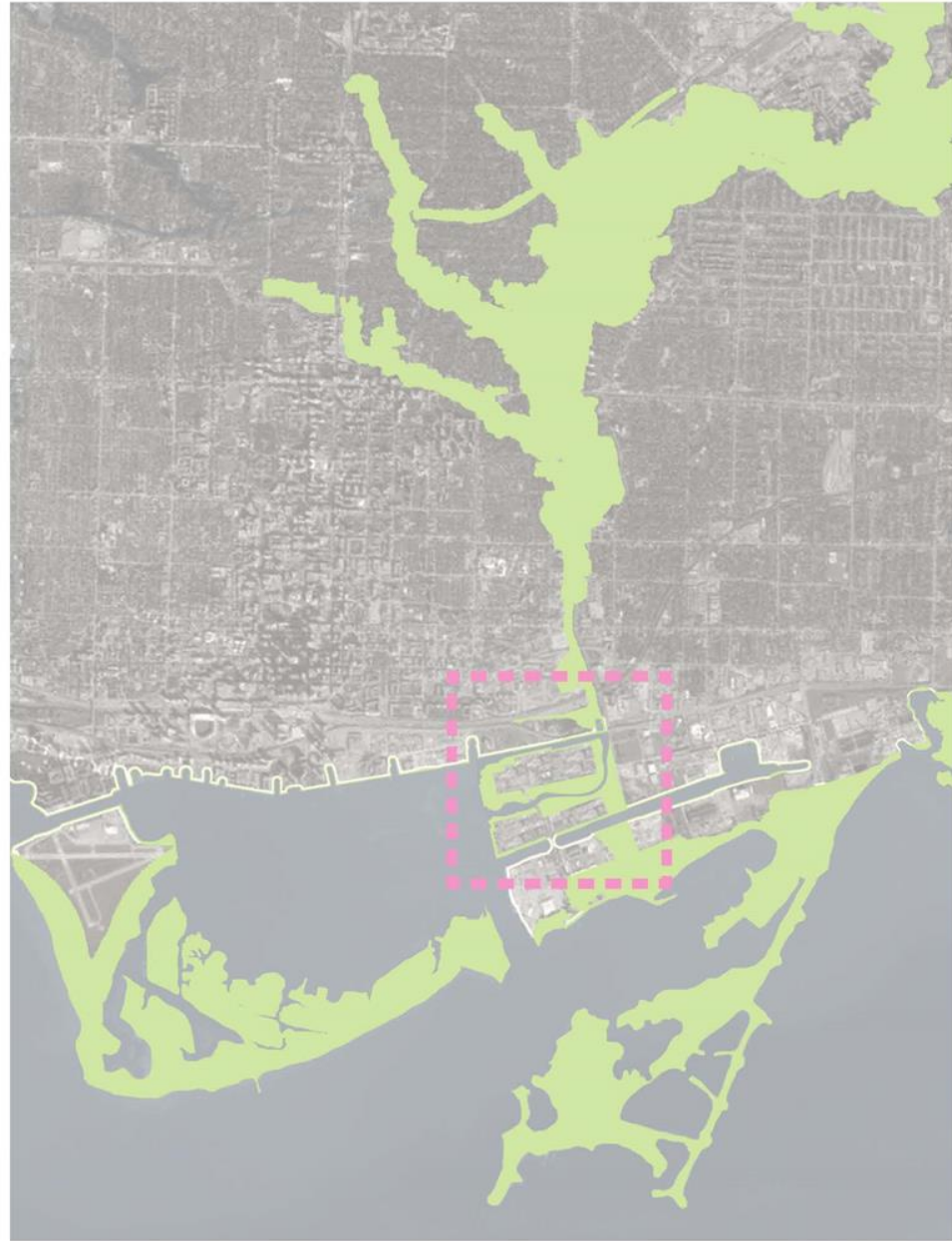


**Don Mouth
Naturalization and
Port Lands Flood
Protection Project
Environmental
Assessment**

&

**Lower Don Lands
Master Plan
Environmental
Assessment Study**

**Public Meeting
July 24, 2013**



Project Study Areas



Need for Flood Protection
Permanent Removal of Flood Risk from 240 ha of Land



Don Mouth Naturalization and Port Lands Flood Protection Project Environmental Assessment (DMNP EA) Study Area



Lower Don Lands Master Plan Environmental Assessment (LDL MP EA) Study Area

Port Lands Acceleration Initiative 2013 Phasing

Phase 1



Flood Protection

- Phase 1 Greenway no longer necessary
- Construct new Keating Channel bridge
- Remove old Keating Channel bridge and abutments

Development

- Raise and fill Cousins and Polson Quay Precincts (including 309 Cherry, excluding Lafarge)
- Realign and reconstruct Cherry Street
- Fill Essroc Quay

Phase 2



Flood Protection

- Construct Greenway
- Construct flood protection landform on First Gulf site
- Construct valley wall feature on east side of Don Roadway
- Modify Eastern Avenue underpass
- Construct sediment and debris management area including lengthening of Lake Shore Boulevard bridge

Development

- Development to Munitions Block
- Film Studio District and lands east of Don Roadway are flood protected

Phase 3



Flood Protection

- Construct Polson Slip bridge
- Construct river valley system, including the low flow channel and flood control weirs

Development

- River Valley Precincts
- Construct Basin Street bridge
- Raise and fill north and south of river valley

Phase 4



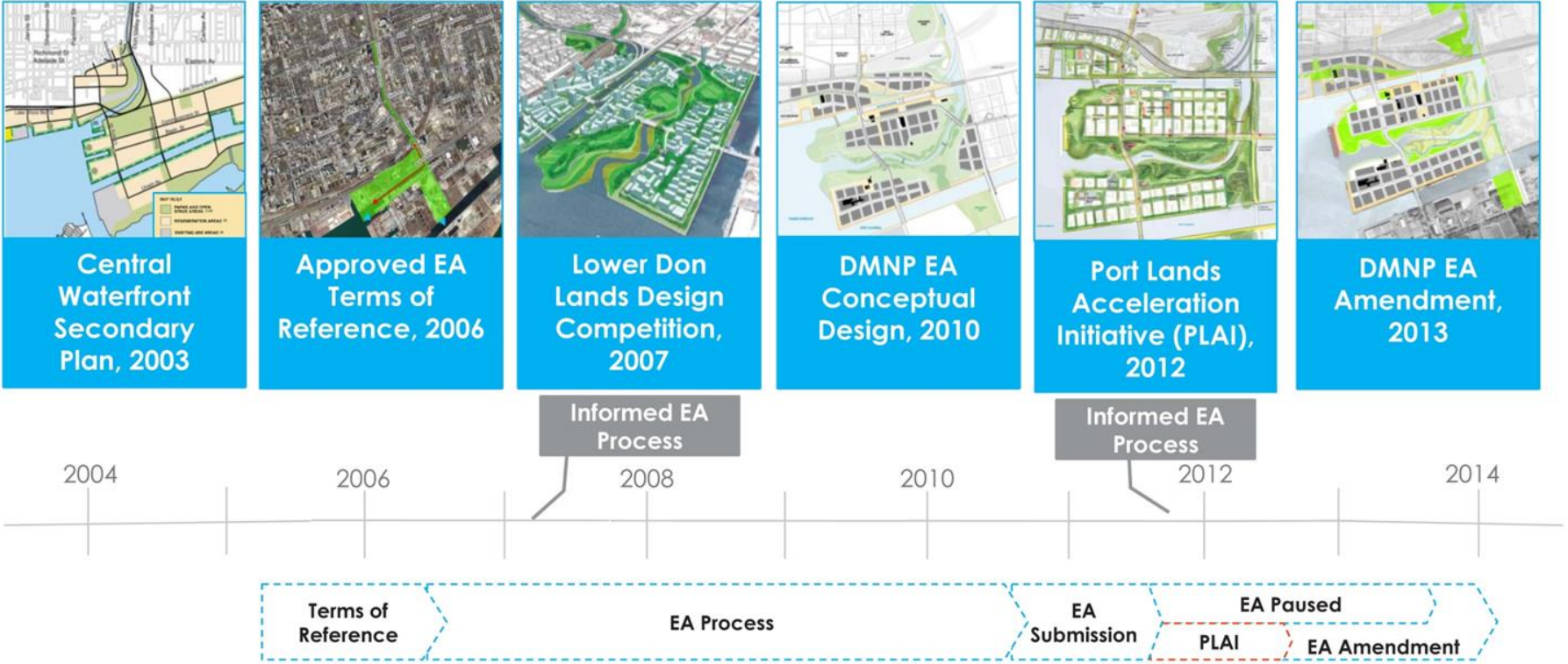
Flood Protection

- None required

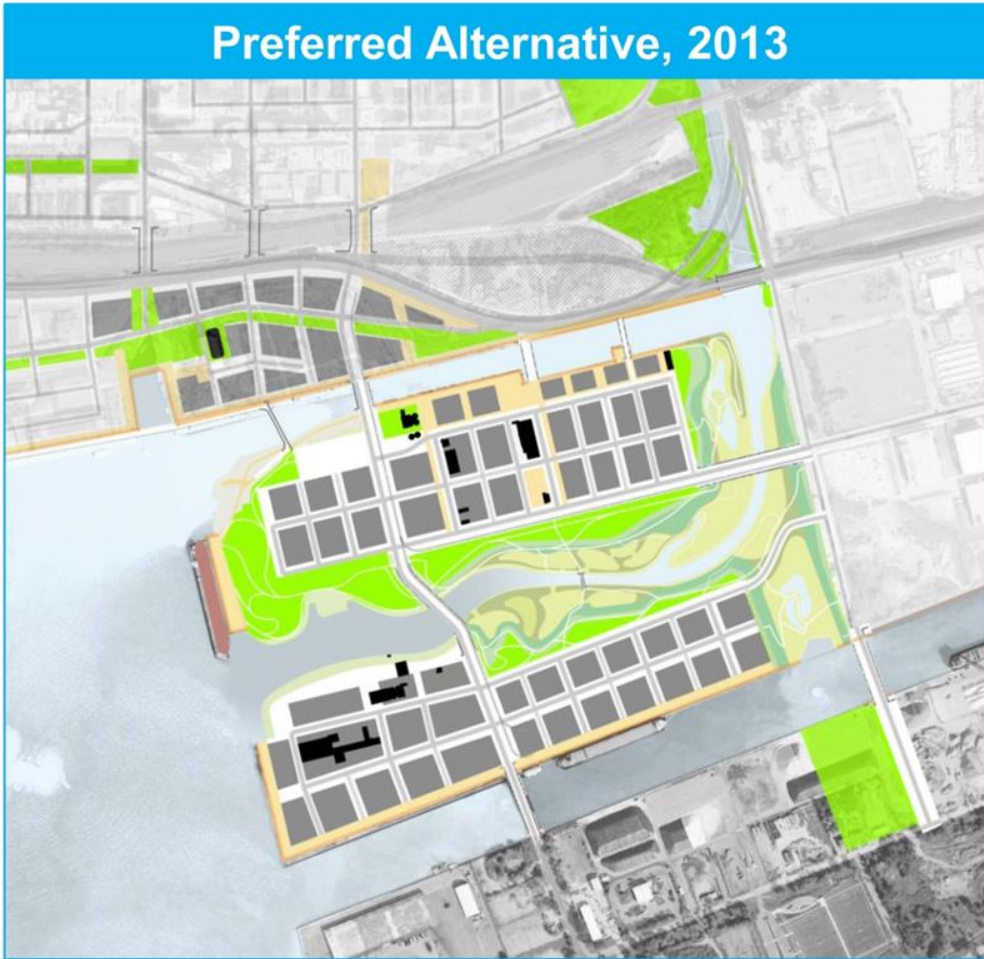
Development

- Naturalize Polson Quay south dockwall

DMNP: Progression of the EA



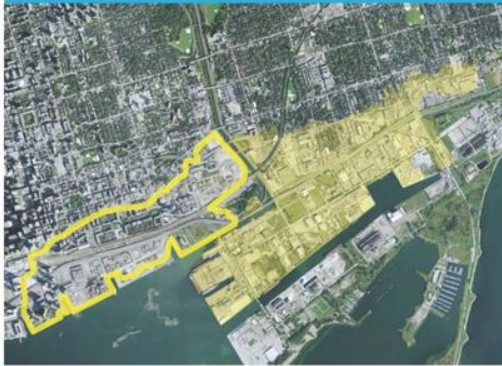
DMNP: Amended Preferred Alternative



- Realignment of the Greenway
- Removal of Inner Harbour Promontories
- Phased Implementation of Flood Protection
- Accommodation of Lafarge During Phasing
- Rationalizing Developable Land and Naturalization

DMNP: Fulfilling the Project Goals

Flood Protection



Permanent removal of flood risk from 240 ha of land

Naturalization



Aquatic Habitat:
14 Hectares

Naturalization (Terrestrial / Wetland):
16 Hectares

Revitalized City Environment



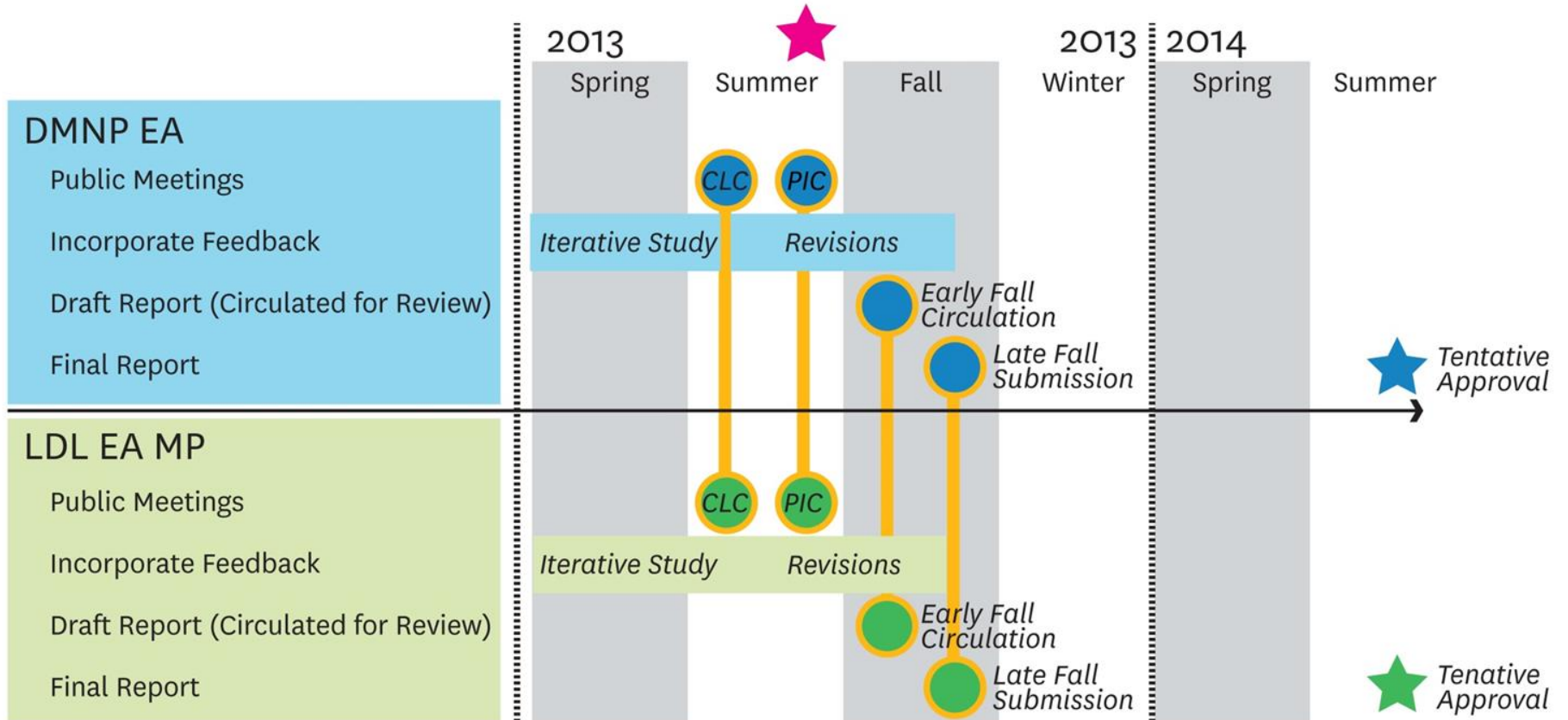
Phased flood protection allows development to proceed in step with completion of the new river valley

DMNP: Overview of the Effects and Mitigation

- Flood Protection**
 - Phased construction of river will progressively remove lands from flood risk without increasing flood risk elsewhere
 - Permanent removal of 240 ha of land from flooding
- Naturalization**
 - Creation of 14 ha of high quality aquatic habitat
 - Creation of 16 ha of naturalized habitat (wetland/terrestrial) which is expected to attract locally significant species
- Recreational and Cultural Opportunities**
 - New river mouth provides greater recreational opportunities than the existing river (e.g., boating, trails, enjoyment of naturalized landscapes)
 - Heritage resources within the footprint of the river valley system will be conserved, relocated, raised, or commemorated

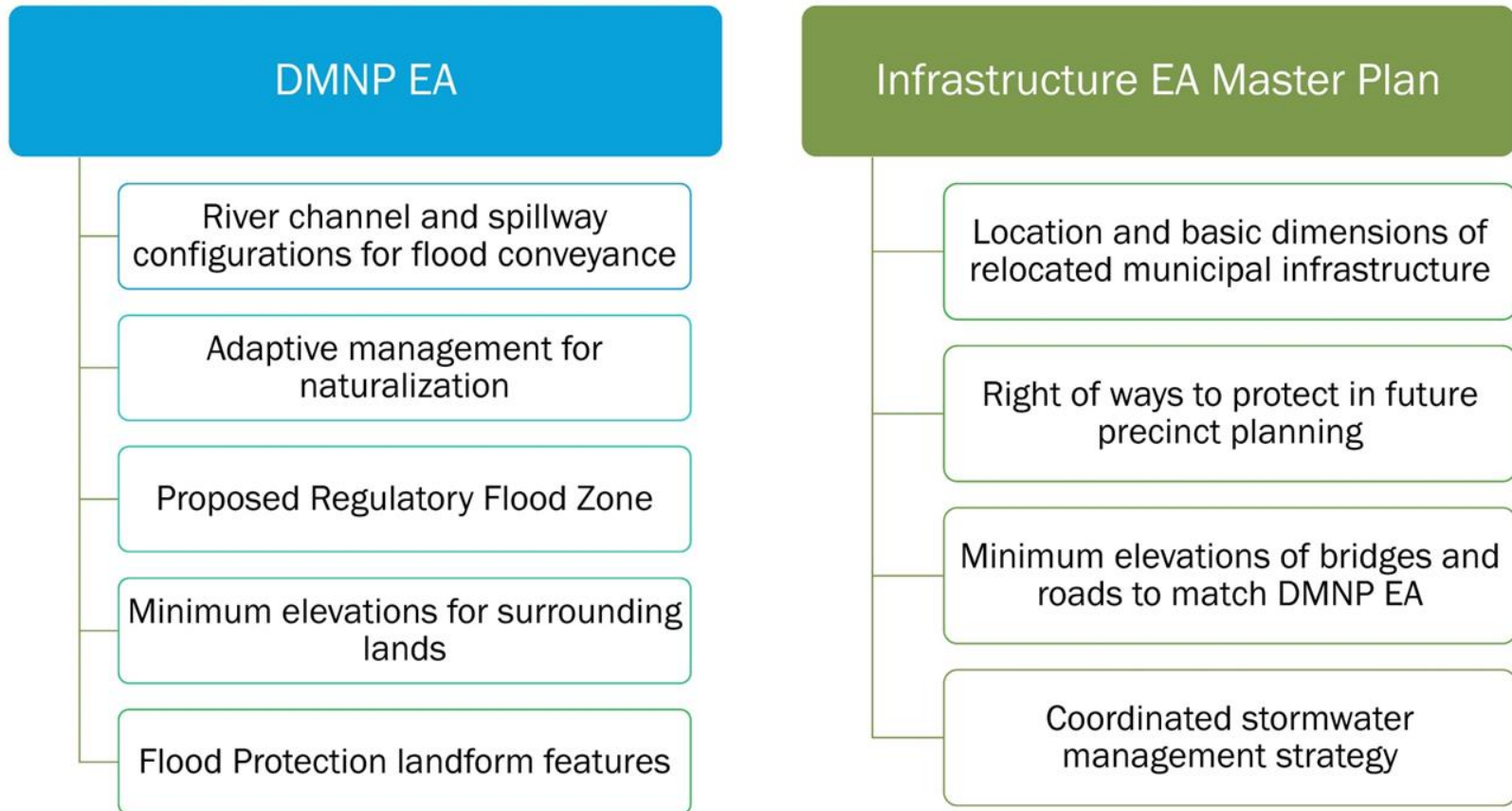
- Operational Management and Constructability**
 - Flood protection minimizes throwaway costs between phases
 - Sediment management uses existing infrastructure where possible and allows for the use of dredgate during lakefilling
 - Design and phasing limits impacts to existing operations and shipping
- Planned Land Use**
 - Nuisance effects on existing/future residents and businesses (e.g., noise, dust, and traffic) due to construction will be mitigated
- Sustainability (Soil Mgmt.)**
 - Excavated soil will be treated and reused on-site where appropriate
 - Remaining soils that must be transported off-site will have minimal effects on traffic, air quality, and noise

Next Steps: Project Schedule



Relationship to the Don Mouth Naturalization and Port Lands Flood Protection EA (DMNP EA)

The EA Addendum to the approved Lower Don Lands Infrastructure EA Master Plan is closely integrated with the DMNP EA. The DMNP EA is being carried out as a separate study but is closely linked to this undertaking, as described below.



Stormwater Management

Approved EA Master Plan

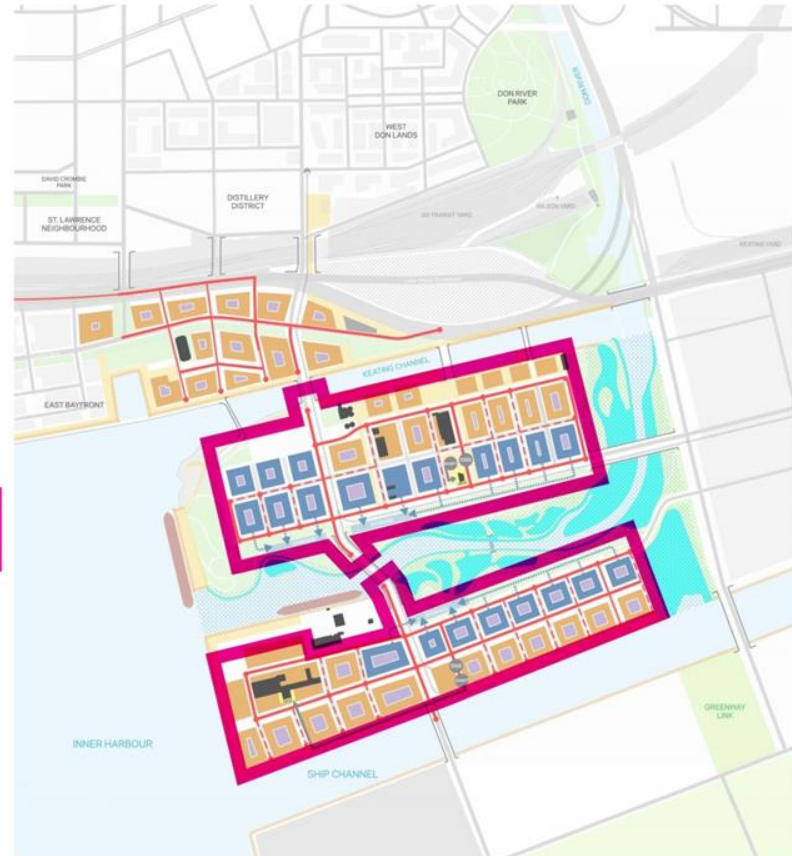


- Roofs of Blocks Drained to High-Quality Wetlands
- Roof of Blocks Used for Street Tree Irrigation and Flushing of Salt Runoff
- Street Runoff Achieves MOE Enhanced Stormwater Quality
- Non-Roof, Non-Road (Private)
- Parkland
- Sewage Wetland
- Riverine Wetland
- Potential Storage
- Storage
- Oil/Grit Separator
- UV Treatment



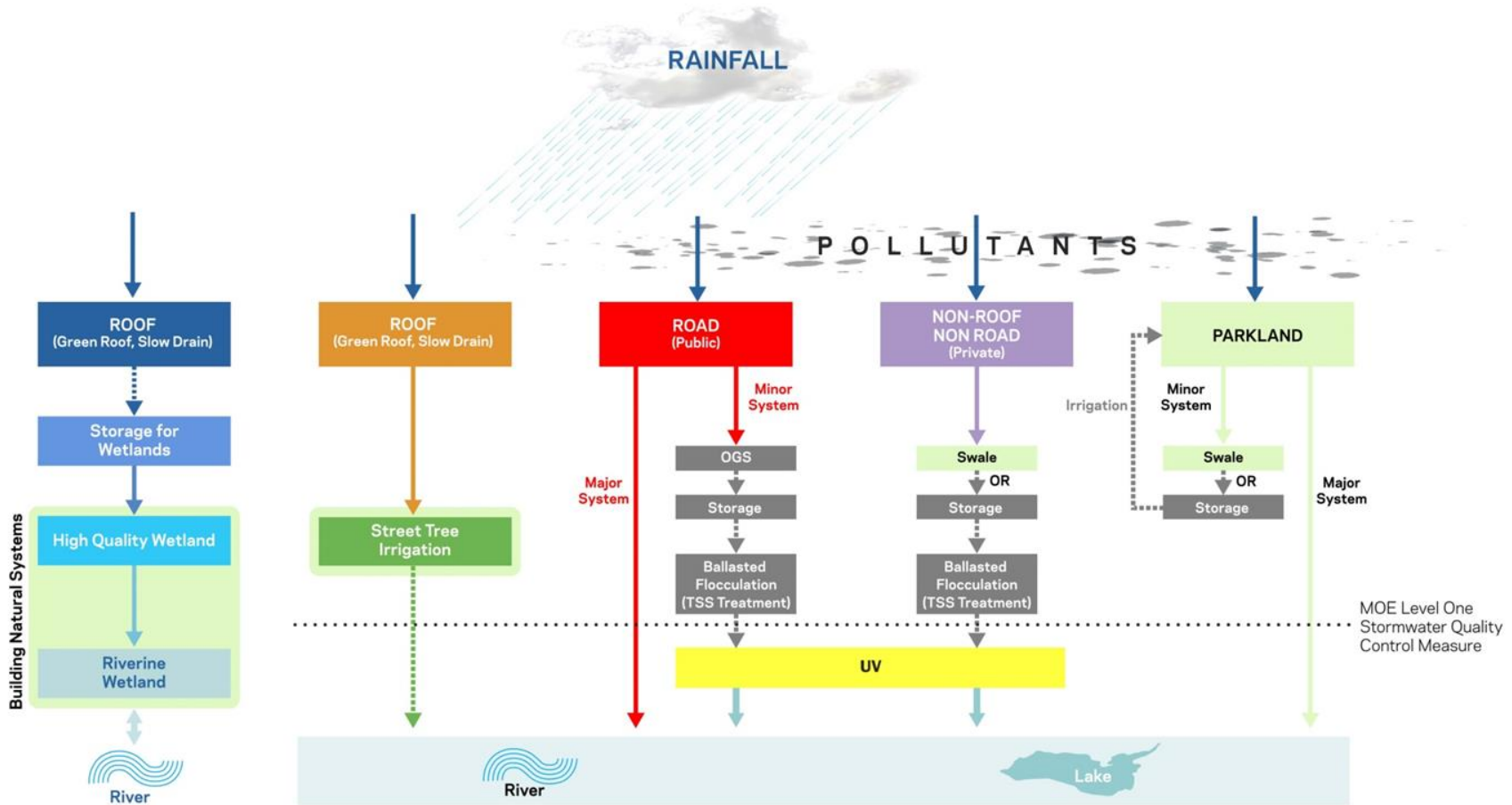
Proposed or Relocated in this Addendum

2013 LDL MP EA Study



- Roofs of Blocks Drained to High-Quality Wetlands
- Roof of Blocks Used for Street Tree Irrigation and Flushing of Salt Runoff
- Street Runoff Achieves MOE Enhanced Stormwater Quality
- Non-Roof, Non-Road (Private)
- Parkland
- Riverine Wetland
- Potential Storage
- Storage
- Oil/Grit Separator
- Storage Tank and Pump Facilities
- Pumped Stormwater
- Stormwater Quality Control Facility (BFF)

Stormwater Management



Sanitary Sewer

Approved EA Master Plan



Proposed or Relocated in this Addendum

- Connection to Existing Sanitary Sewer
- Gravity-Flow Sewer
- Inverted Siphon
- Force Mains for Initial Development
- Alternate Force Main if the LLI at the Cherry Street Outlet Does Not Have Sufficient Capacity as Determined by the Toronto CSO Class EA
- Ⓐ Pump Station
- Potential Future Trunk Sewer for Port Lands if the Toronto CSO Class EA Determines That This Solution Addresses the Operational Needs of the LLI
- Open Space



2013 LDL MP EA Study



- Existing Sanitary Sewer
- Gravity-Flow Sewer
- Inverted Siphon
- Force Mains for Initial Development
- Ⓐ Pump Station
- Potential Future Trunk Sewer for Port Lands if the Toronto CSO Class EA Determines That This Solution Addresses the Operational Needs of the LLI
- Open Space



Water Supply

Approved EA Master Plan



Proposed or Relocated in this Addendum

2013 LDL MP EA Study



- Existing Watermain
- Connection to Existing Watermain
- Proposed 300 mm Diameter Watermain
- Proposed 400 mm Diameter Watermain
- Pipe cap
- Future Watermain and Connection by Others
- Future 300 mm Ø Film Port Watermain That may be Provided by Others and Become Available to Provide Additional Connectivity
- Future 300 mm Ø Watermain on Trinity Street That Will be Provided by Others and could be Connected to, if Required to Improve Connectivity to Lower Don Lands via Trinity Street Underpass
- Open Space



- Existing Watermain
- Connection to Existing Watermain
- Proposed 300 mm Diameter Watermain
- Proposed 400 mm Diameter Watermain
- Pipe cap
- Future Watermain and Connection by Others
- Future 300 mm Ø Film Port Watermain That may be Provided by Others and Become Available to Provide Additional Connectivity
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- Open Space

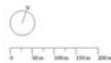


Roads & Bridges

Approved EA Master Plan



- Keating Channel Bridges
- River Bridges
- Portals
- Flood Conveyance Crossings



Complete Phases 3 and 4 of Class EA: Location not Changed from 2010

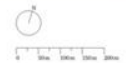


Proposed or Relocated in this Addendum

2013 LDL MP EA Study



- Keating Channel Bridges
- River Bridges
- Portals
- Flood Conveyance Crossings



Transit

Approved EA Master Plan



LRT Stop
 Transit Line



Complete Phases 3 and 4 of Class EA: Location not Changed from 2010



Proposed or Relocated in this Addendum

2013 LDL MP EA Study

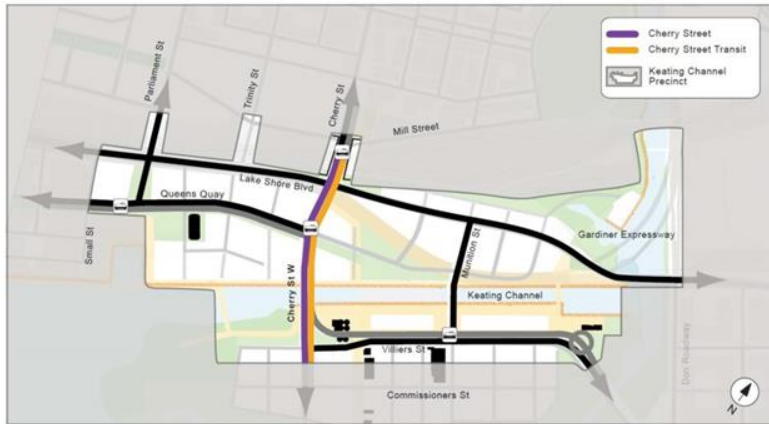


LRT Stop
 Transit Line



Cherry Street – Preferred Street Layout

The design for Cherry St. relies on the evaluation of alternatives originally undertaken in the 2009 Lower Don Lands Infrastructure EA. The 2009 preferred alternative, which aligns with the roadway currently under construction in the West Don Lands to the north, will continue to be used. Street cross sections are shown below.



Cherry Street, between Mill Street and Lake Shore Boulevard, will have two lanes for vehicular traffic, a turning lane at intersections and no parking. A two-way Light Rail Transit (LRT) line runs along the east side of the street in dedicated transit lanes. On-street bicycle lanes are provided on either side of the vehicular traffic lanes. There are 3- to 4-metre sidewalks on both sides of the street.

Between Lake Shore Boulevard and Villiers Street, another 3- to 4-metre sidewalk is added between the bicycle and LRT lanes. In addition, a wide pedestrian-only street runs behind the development along the eastern edge of Cherry Street.

Between Mill St. and Lake Shore Blvd. (facing north)



SIDEWALK	BIKE LANE	SOUTHBOUND TRAVEL	TURN LANE	NORTHBOUND TRAVEL	BIKE LANE	PLATFORM/ PLANTINGS	NORTHBOUND TRANSIT	SOUTHBOUND TRANSIT	PLATFORM/ PLANTINGS	SIDEWALK
3-4m	1.6m	3.3m	3m	3.3m	1.6m	3m	6.7m	6.7m	3m	4m
ROW 32.5-33.5m										

Between Lake Shore Blvd. and Villiers St. (facing north)



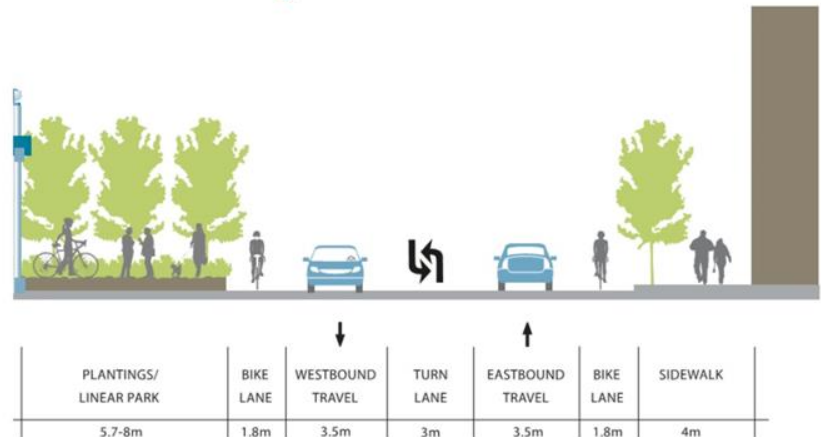
SIDEWALK	BIKE LANE	SOUTHBOUND TRAVEL	TURN LANE	NORTHBOUND TRAVEL	BIKE LANE	SIDEWALK	PLATFORM/ PLANTINGS	NORTHBOUND TRANSIT	SOUTHBOUND TRANSIT	PLATFORM/ PLANTINGS	SIDEWALK
3-4m	1.8m	3.5m	3m	3.5m	1.8m	3-4m	2.4-3m	7m	7m	2.4-3m	3-4m
ROW 34-35.5m											

Villiers Street – Preferred Street Layout

The revised Infrastructure EA Master Plan reverts Villiers Street to a local road rather than a main east-west collector.



Villiers Street runs east-west within the Keating Channel Precinct. On the north side of the street there are two-way dedicated Light Rail Transit (LRT) lanes. Two lanes of vehicular traffic and one shared turning lane, along with two on-street bicycle lanes are separated from the LRT by a wide, landscaped linear park. For pedestrians there are also 4- to 5-metre sidewalks on both sides of the street.



Commissioners Street Cross Section

The 2009 Environmental Study Report :

- Defined a new alignment for Commissioners St. at Villiers St.
- Identified and evaluated three alternative cross sections for Villiers St. between Cherry St. and the Don River crossing, each involving the addition of a two-way dedicated LRT right-of-way, two lanes of traffic, and two on-street bicycle lanes.

The proposed LRT line has since been relocated from Villiers St. to Commissioners St.

Commissioners St. currently serves as the Port Lands' primary east-west roadway, with four vehicle travel lanes.

The previous evaluation, will now be used to determine the final recommended Commissioners St. cross section.

Approved EA Master Plan: Commissioners Street Cross Section Alternatives

Figure 11-20 Cross-section for Villiers Street Alternative 1



Alternative 1:
Dedicated LRT line located on the north side of the vehicle lanes, with a linear park separating the LRT from traffic and 5m wide sidewalks on each side of the roadway.

Figure 11-21 Cross-section for Villiers Street Alternative 2



Alternative 2:
Dedicated LRT line located in the centre of the eastbound and westbound travel lanes, separated by a narrow linear park on both sides. 4m to 5m sidewalks are provided on each side of the roadway.

Figure 11-22 Cross-section for Villiers Street Alternative 3



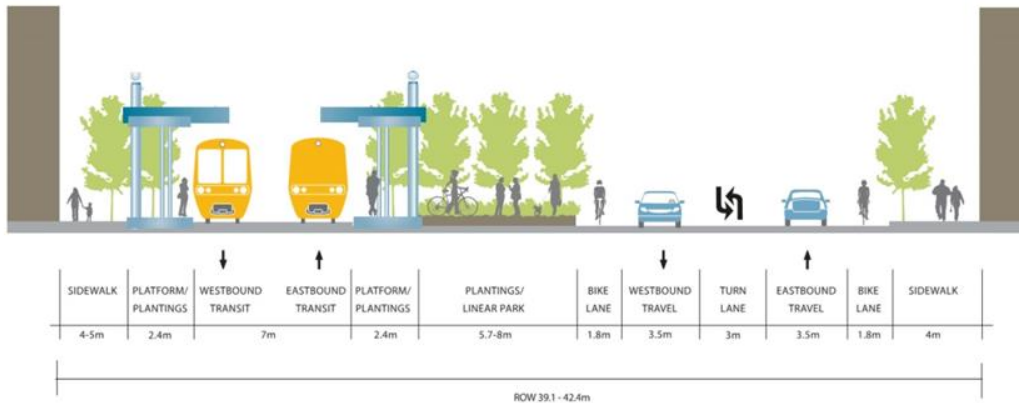
Alternative 3:
Dedicated LRT line located on the south side of the vehicle lanes, with a linear park separating the LRT from traffic and 4m to 5m sidewalks on each side of the roadway.

Commissioners Street Cross Section

Evaluation Summary

The three alternatives were found to have similar degrees of natural environment, sustainability, and municipal services impacts. Two of the alternatives (both with transit on the side of the road allowances) were preferred due to a smaller overall width, and the resulting less impact to property.

Alternative 1 is the preferred alternative as it locates the LRT route on the south side of the reconstructed road allowance. In this configuration, the park land is on the south side of the street, and future development will occur on the north side of the street. This provides direct access for pedestrians, promotes transit priority and reduces future traffic conflicts with direct vehicular access to development blocks.



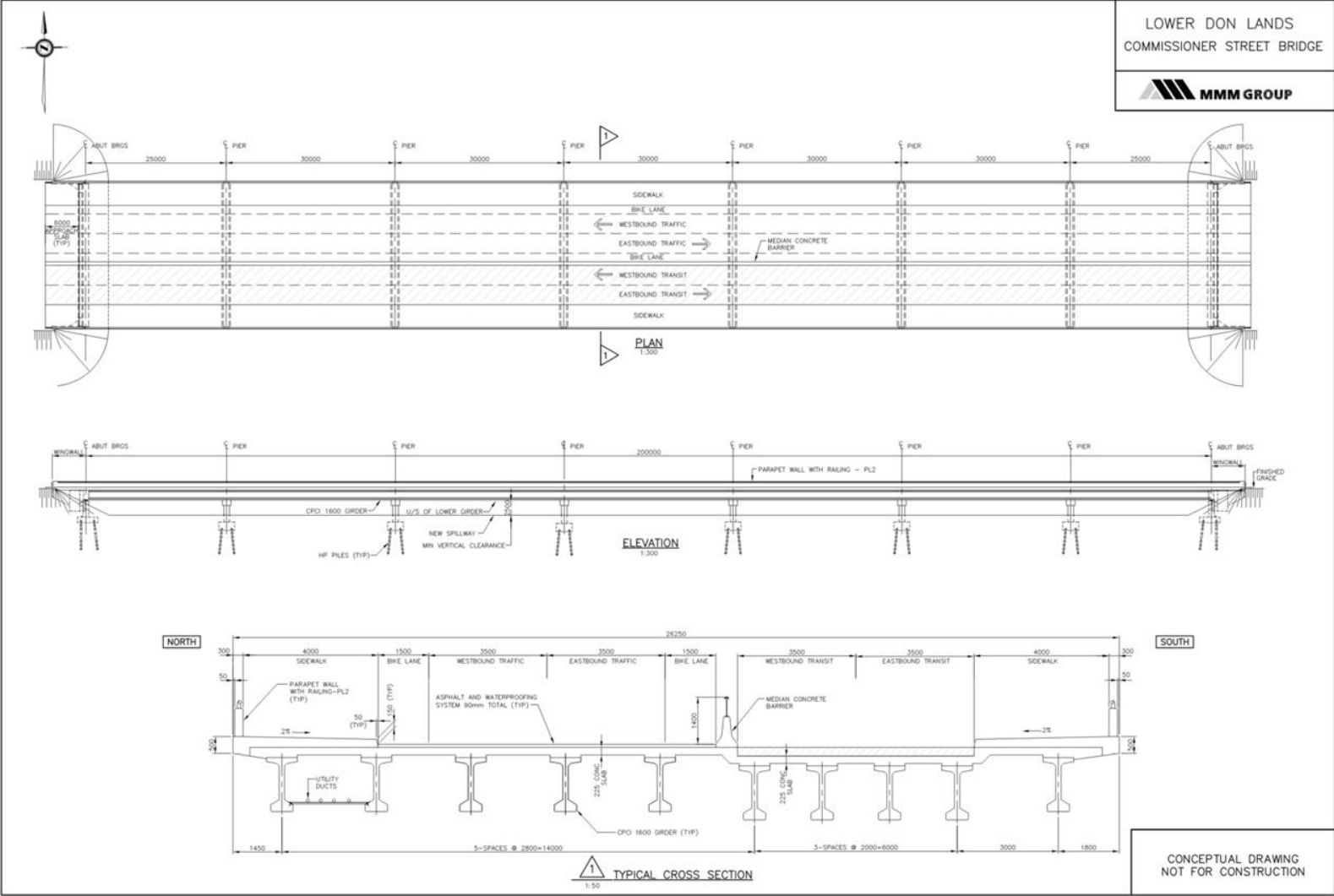
Commissioners Street Preferred Alternative

2013 Modifications

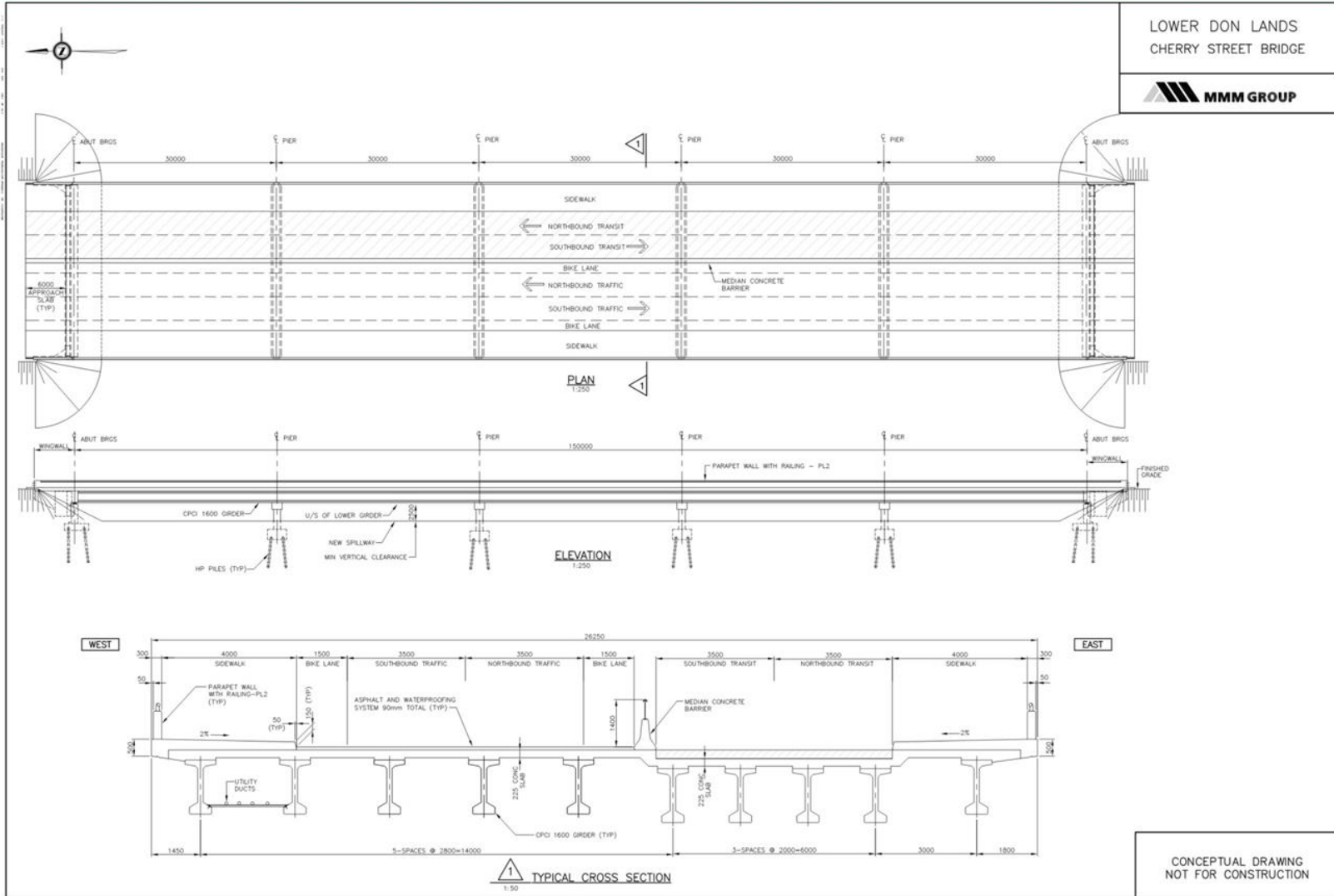
The proposed LRT line has been relocated from Villiers Street to Commissioners Street.

The assessment follows the same logic as that previously carried out for Villiers Street. It favours the mirror image of the original cross section in the new plan. This is the equivalent of Alternative 3 from the previous analysis.

Bridges – Commissioners Street Bridge (minimum requirements)



Bridges - Cherry Street Bridge (minimum requirements)



Basin Street Alternatives

Alternative 1: Bridge

Structure comprised of a deck on piers.



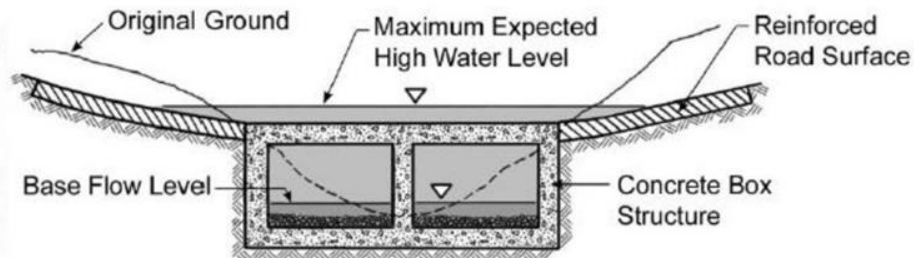
Alternative 2: Causeway and Bridge

Combination of filled embankment and smaller bridges where the water has to pass through – underneath the bridge deck could be completely open or box culverts.



Alternative 3: River Ford

Where the road is built at grade down into the spillway and floods during 1 in 25 year events and is impassable at that time.



VENTED FORD WITH CONCRETE BOX CULVERTS
(High Vent-Area Ratio)

Next Steps

- Integrate stakeholder and agency input
- Confirm the Mitigation Strategy
- Coordinate with DMNP EA
- Complete the EA Master Plan Addendum Environmental Study Report
- Submit the report to the Waterfront Toronto and City of Toronto for approval
- Issue Notice of Completion
- File for 30 Day Public Review



Continued Planning in the Port Lands



Planning Frameworks

- **Port Lands Planning Framework:**
 - High-level framework to articulate the vision for the Port Lands
- **South of Eastern Strategic Direction:**
 - A three-pronged strategy to plan and facilitate investment and economic growth in the South of Eastern area



Port Lands and South of Eastern Class EA

- Addresses arterial and collector streets, including:
 - Planned function and character of Lake Shore Boulevard
 - North-south connections
 - Potential connections across the Ship Channel
 - Transit routes
 - Pedestrian and cycling facilities
- Servicing infrastructure for anticipated development (water, storm and sanitary)



Precinct Planning

- The City and Waterfront Toronto are developing precinct plans for Cousins Quay and the Film Studio Precinct
- The Precinct Plan for Polson Quay is currently on hold
- The Central waterfront Secondary Plan sets out that precinct plans be prepared prior to enacting zoning by-laws
- They establish the location, scale and character of:
 - Blocks and streets
 - Type and amount of development
 - Building heights
 - Parks and Public Spaces; and
 - Community Facilities
- More detailed urban design guidelines are developed

Timelines	Q2 2013	Q3 2013	Q4 2013	Q1 2014
Port Lands Planning Framework / Port Lands and South of Eastern Class EA	Initiation/Background	Vision/Objectives	Alternatives/Analysis SAC CCM SAC CCM	Recommendations SAC CCM
Film Studio Precinct Plan	Initiation/Background	Vision/Objectives	Options/Analysis	Recommendations SAC CCM SAC CCM
Cousins Quay Precinct Plan	Initiation/Analysis	Vision/Objectives DC SAC CCM	Alternatives/Implementation SAC	Recommendations SAC CCM