

Port Lands Flood Protection and Related Infrastructure

Due Diligence and Project Planning

Project Description

Public Presentation to FARM Committee  
Meeting on Thursday, April 9, 2015

Date Presentation Prepared: April 2, 2015

# Context



Port Lands Acceleration Initiative (PLAI 1 and 2) & Don Mouth Naturalization Project (DMNP EA) & Lower Don Lands Masterplan EA (LDL EA)

# PLAI 1 (2011/12)

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- Port Lands Acceleration Initiative (PLAI) re-examined the 2010 Don Mouth Naturalization and Port Lands Flood Protection Project Environmental Assessment (DMNP EA)
- High Level Business and Implementation Plan developed for Port Lands Revitalization (North of the Ship Channel), centred on flood protection requirements
- Order-of-magnitude cost estimates and 30+ year phasing strategy prepared as part of this exercise

# City Council Direction (October 2012)



- **Amend the DMNP EA based on the 2012 “4WS Re-aligned” option and submit to the Ministry of the Environment (MOE) for approval;** Complete
- **Revise the Lower Don Lands (LDL) Master Plan and Keating Channel Precinct Class EA to align with the PLAI direction;** Complete
- Confirm precinct boundaries and initiate precinct planning, inclusive of business and implementation planning, for the Cousins Quay, Polson Quay and Film Studio Precincts Underway
- Protect the proposed valley and stream corridors from encroachment by development; Underway
- Complete a high-level framework plan for the entire Port Lands; Underway

# PLAI 2 (2012-15)

- Response to City Council direction included:
  - DMNP EA and Lower Don Lands EA Master Plan amended to align with PLAI 1
  - Villiers Island precinct plan initiated (led by WT)
  - Framework plan, transportation and servicing master plan, and Film Studio District precinct plan initiated (led by City)
- Cost estimates updated as required to reflect final EA
- BoD approved WT 2.0 Strategic Plan submitted to governments on December 20, 2013 (including Port Lands Flood Protection)
- Preliminary business case for Port Lands Flood Protection prepared for WT by PwC in September 2014

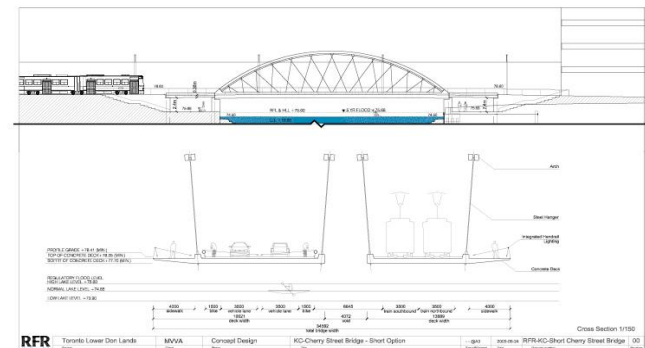
# WT 2.0 Strategic Plan

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- WT proposal to continue tri-government funding and governance model to complete Waterfront Revitalization objectives
- WT to continue as Master Developer, leveraging and utilizing broader public sector agencies (Eligible Recipients) to capitalize on available resources, capabilities and expertise (e.g. TRCA, TPLC, Infrastructure Ontario)
- Roles and responsibilities of all parties to be determined during due diligence process over next twelve months and be documented in Project Charter
- WT 2.0 staffing, process and upgraded technology requirements to be developed and implemented upon total project funding approval

# Phase 1 – Flood Protection



- Complete Essroc Quay lake fill and armoring
- Construct new Keating Channel bridge
- Remove old Keating Channel bridge and abutments



# Enabling Infrastructure



- Re-align Cherry from railway corridor to Commissioners Street
- Install water main connection along Cherry from rail corridor to Commissioners including water main crossing below Keating Channel
- Extend and reconstruct western third of Commissioners in LDL
- Construct temporary sewage pumping station for Cousins Quay
- Construct interim upgrades to existing trunk sewer
- Upgrade dock wall on Cousins Quay west side
- Construct Promontory Park

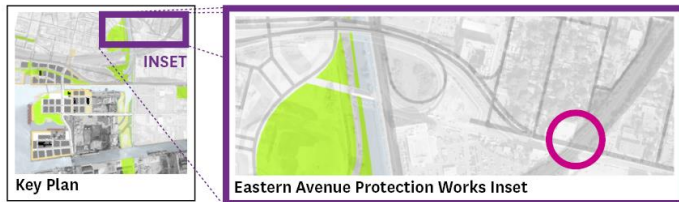


# Phase 2 – Flood Protection

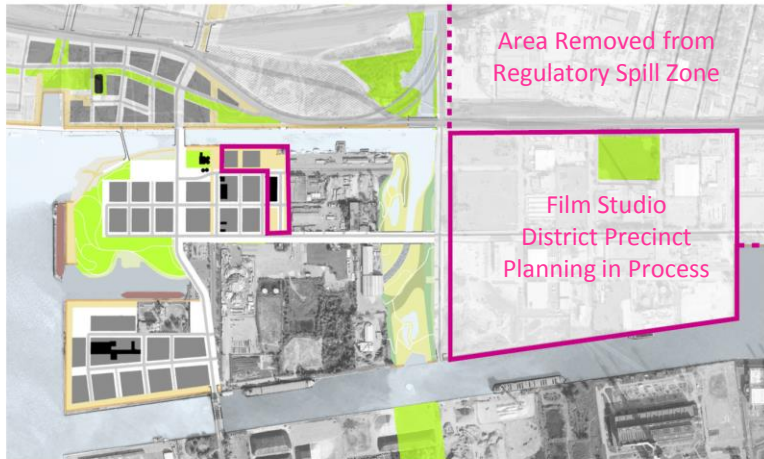


Don Valley Trail bike path over sediment management area

- 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

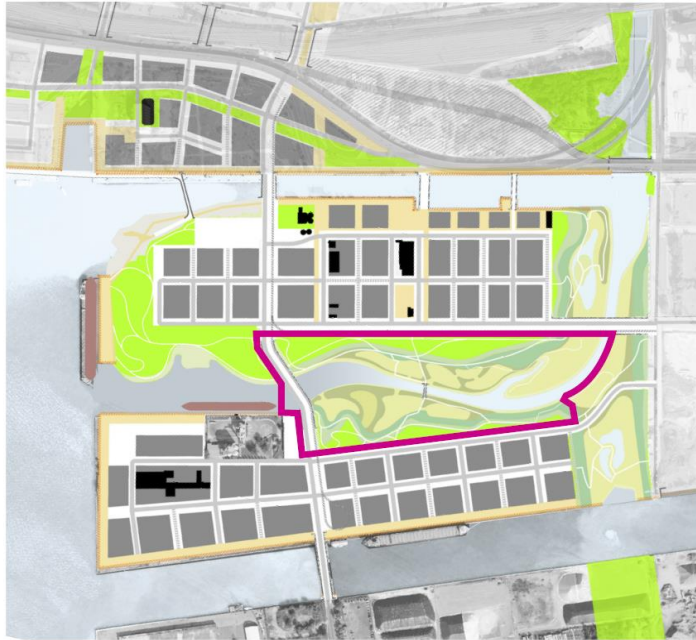


# Enabling Infrastructure



- Partial re-alignment of Lakeshore
- Reconstruct Don Roadway from Lakeshore to ship channel
- Modify Hydro One transmission line on Don Roadway
- Modify Hydro One transmission line on Commissioners
- Reconstruct Commissioners from Don Roadway to Bouchette
- Reconstruct eastern third of Commissioners in LDL
- Extend Lake Shore bridge across Don River
- Extend Rail Spur crossing of Don River
- Reconstruct Toronto Hydro across Don River

# Phase 3 – Flood Protection



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



# Enabling Infrastructure



- Reconstruct central third of Commissioners in LDL
- Complete trunk sanitary sewer on Commissioners
- Realign Cherry from Commissioners to ship channel
- Extend 400 mm water main on Cherry south of Commissioners
- Extend sanitary sewer on Cherry south of Commissioners
- Construct trunk storm water crossing of primary channel

# Phase 4 – Naturalization



- Naturalize Polson Quay south dock wall if Lafarge vacates

# Project Cost Development

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- Project costs developed during PLAI 1 for each phase of flood protection for:
  - Flood protection infrastructure
  - Major roads, municipal trunk services and structures
  - Local roads and municipal services
- Cost estimates derived from WT project benchmarks as well as from multiple expert sources, including:
  - Hanscomb Cost Consultants
  - Aecom Construction and Materials (Contractors)
  - Parsons Brinkerhoff Halsall (Cost Consultants and Engineers)
  - The Sernas Group (Engineers)

# Project Estimate Assumptions



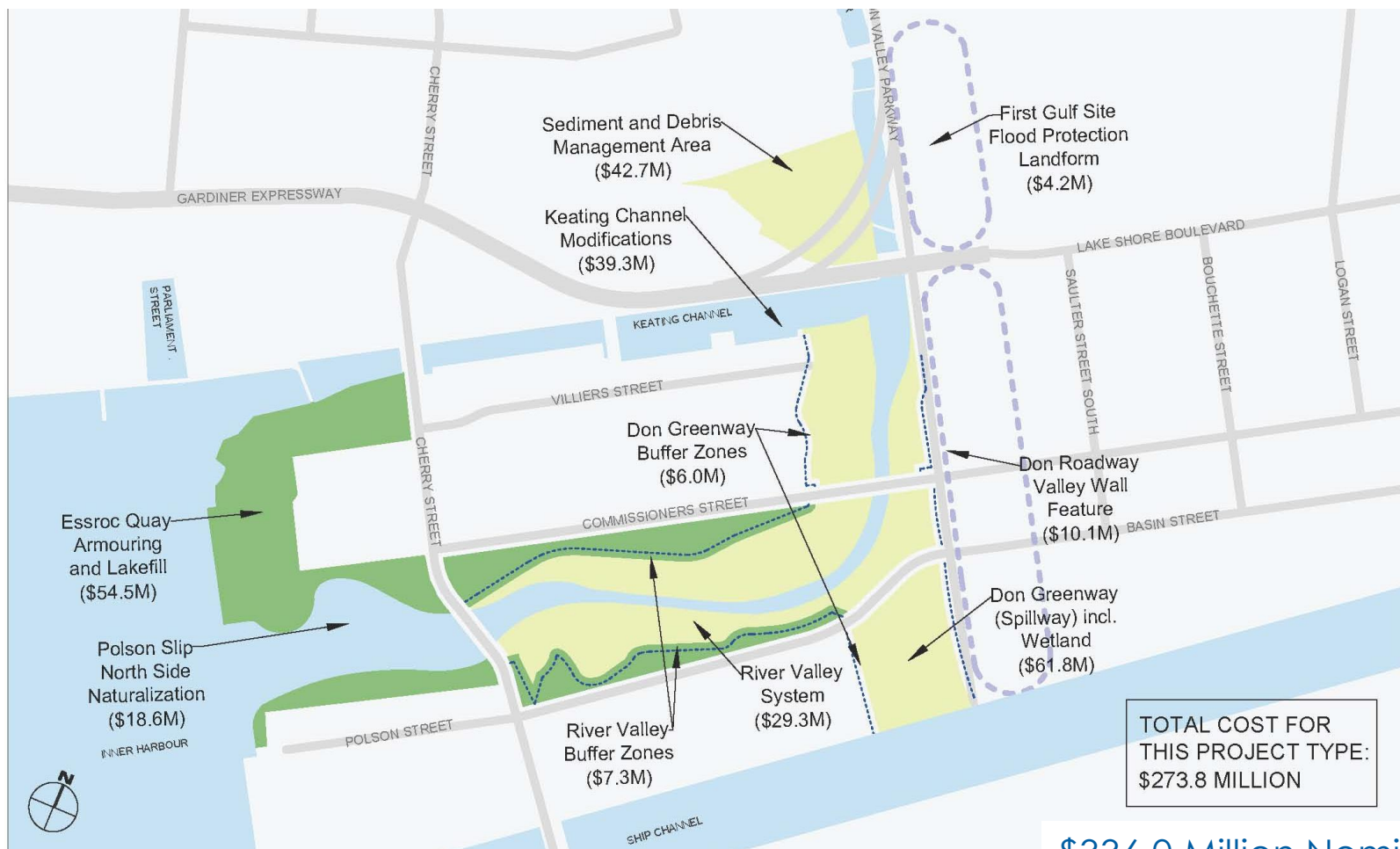
- 15% to 20% applied to hard construction costs for soft costs (consultants, permits, approvals, project management etc.)
- 20% to 25% contingency applied to hard construction costs for unknowns
- Estimate assumes recycling and reuse of excavated soils for lake fill and raising grades
- Estimate excludes local roads and municipal services, soil remediation and re-grading of development lands
- Estimate excludes higher order transit facilities (e.g. LRT)
- Estimates updated from PLAI 1 to PLAI 2 to account for changes in final EA
- Current estimate of **\$975M** is based on \$795M (in 2012 \$) escalated at 2.5% over approximate 10 year schedule



# Flood Protection Earthworks & Lakefill



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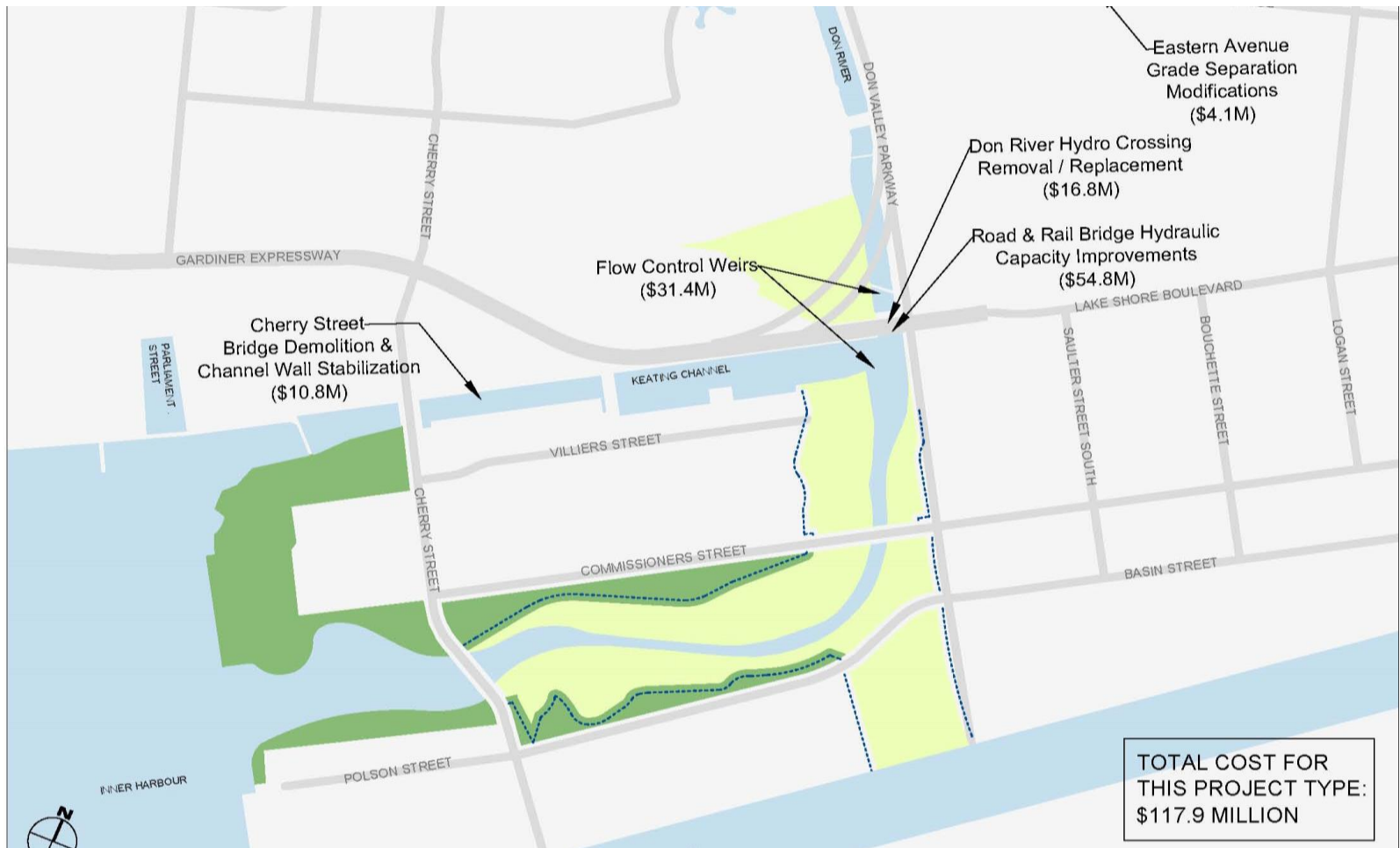


**\$336.0 Million Nominal**

# Flood Protection Structures



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\$145 Million Nominal

# Roads and Municipal Services



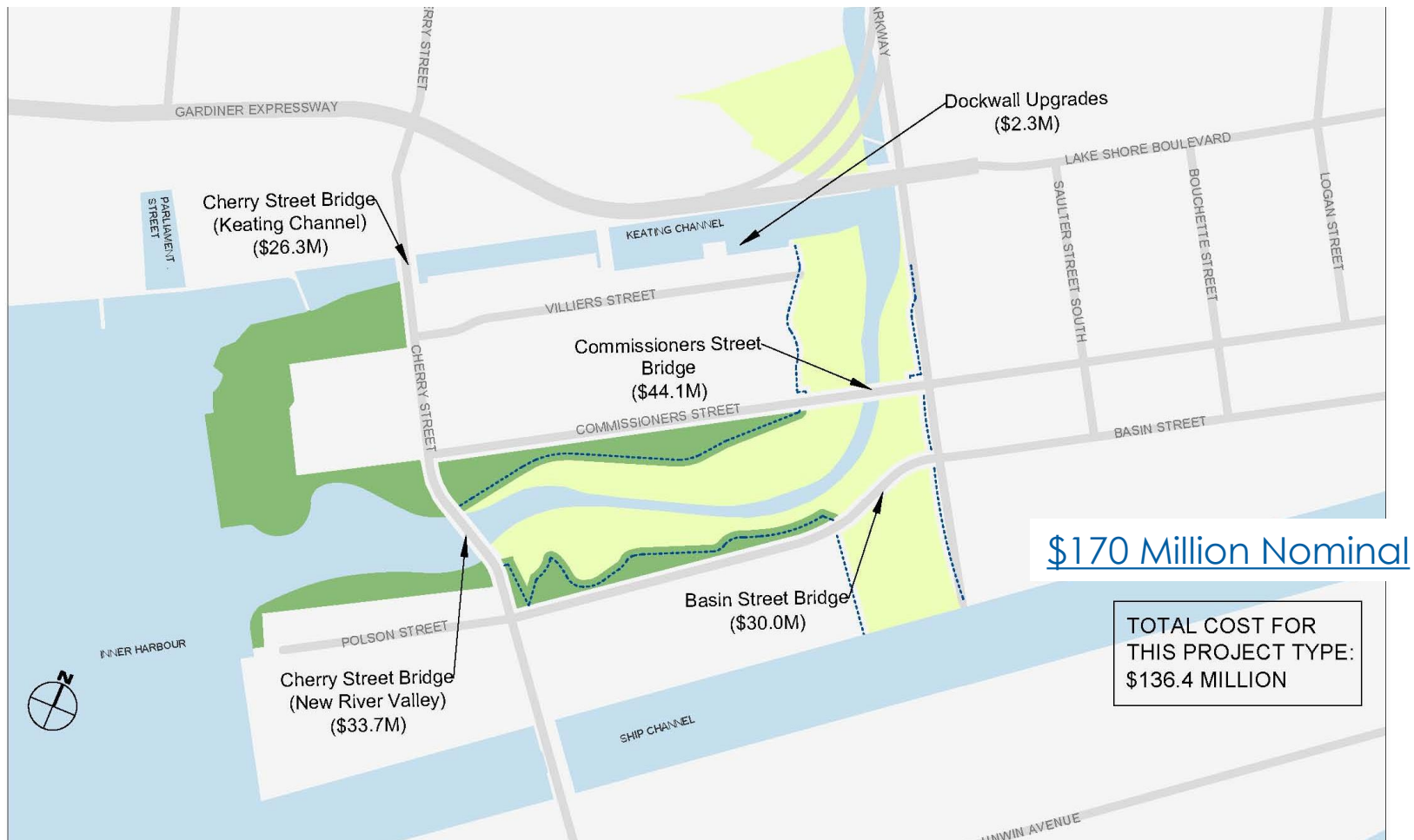
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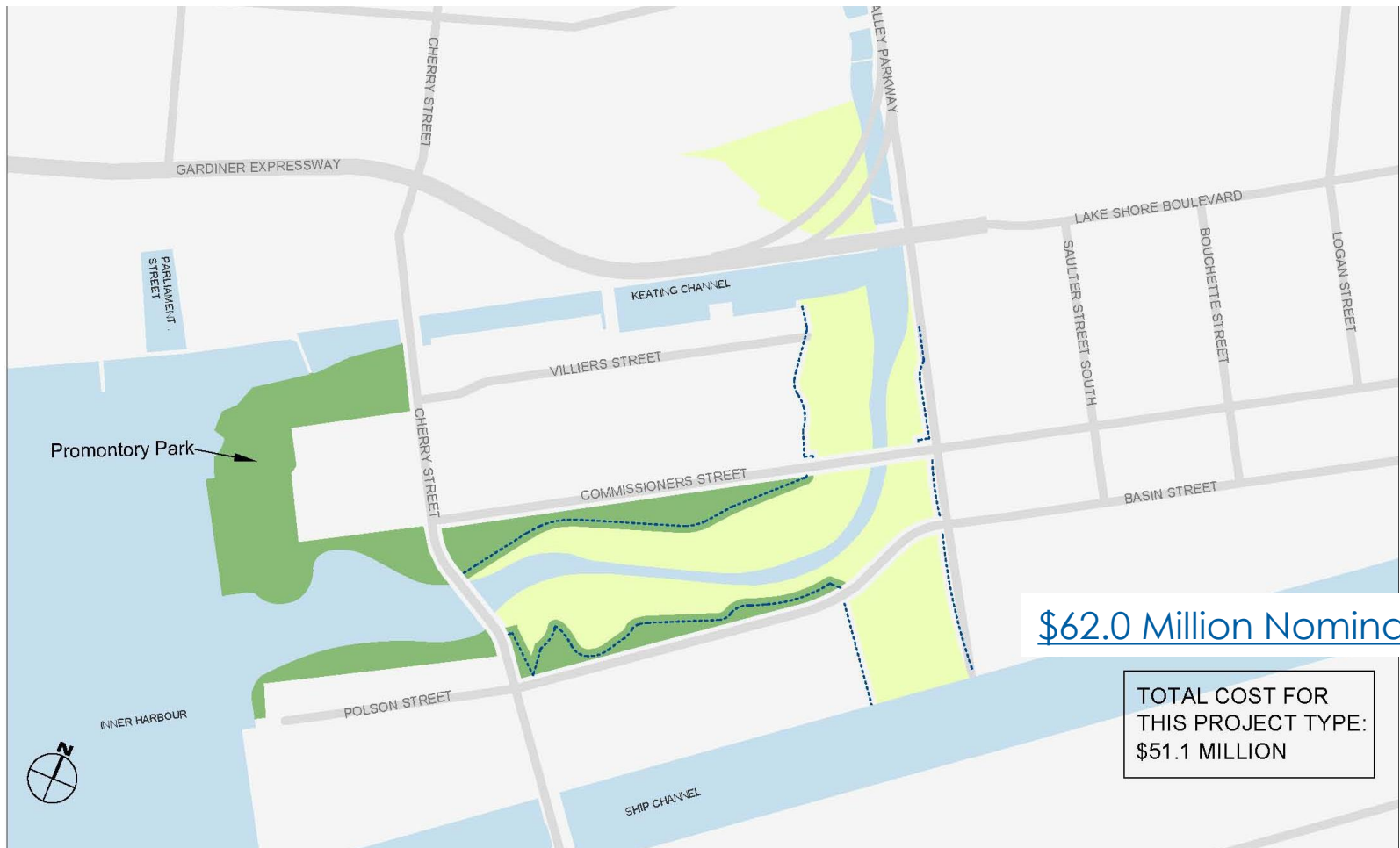
# Bridges and Marine Structures



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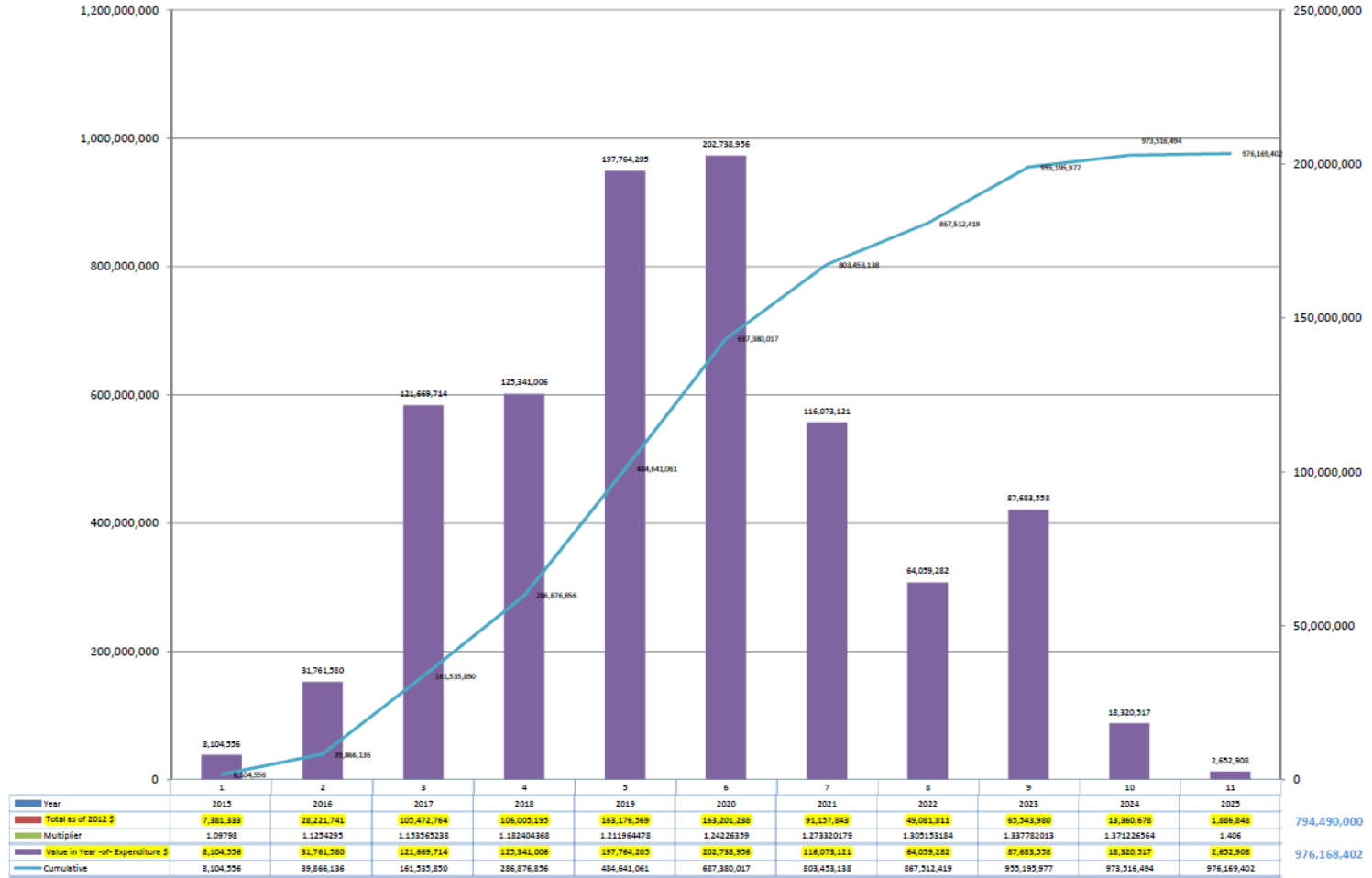


# Public Realm





# Potential Annual Cash Flow



# 2012 \$ Versus Year of Expenditure \$



Project Type	Estimated Cost (2012 \$)	Escalated Cost (Year of Expenditure \$)
Flood Protection Earthworks & Lakefill	\$ 274	\$ 336
Flood Protection Structures	\$ 118	\$ 145
Roads and Municipal Services	\$ 215	\$ 262
Bridges and Marine Structures	\$ 137	\$ 170
Public realm	\$ 51	\$ 62
Grand Total	\$ 795	\$ 975

- All costs rounded to nearest million \$
- Escalation rate assumed to average 2.5% per annum (2015 – 2025)
- Escalated costs based on approximate 10 year project schedule
- Actual costs will vary dependent on final determination of sequencing and construction of project components



# Current Status

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- DMNP and Lower Don Lands Master Plan EA approvals in place as of January 28, 2015
- Forecast Summer 2015 completion for Villiers Island Precinct Plan, Port Lands Framework Plan, Transportation and Servicing Master Plan EA, and Film Studio District Precinct Plan
- Negotiations under way with three orders of government to finalize high level funding commitment implementation of Port Lands Flood Protection and Related Infrastructure
- Detailed project due diligence and execution planning proposed in parallel

# 2015/16 Objectives

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- Fulfil near-term DMNP EA commitments
- Continue commercial, technical and environmental due diligence work to maintain project momentum
- Develop detailed execution plan for implementing flood protection and related infrastructure works
- Finalize tri-government funding commitment

Note: 2015/16 Work Plan forms initial stage of the overall Port Lands Flood Protection implementation plan and is within \$975 million overall project costs

# 2015/16 Scope of Work

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Key project planning deliverables for the next 12-18 months:

- Initial Project Charter for 2015 Scope of Work
- Detailed Program Execution and Implementation Plan
- Base Cost Estimate Update
- Master Program Schedule and Cash Flow Update
- Quantitative Cost/Schedule Risk Analysis
- Procurement Options Analysis and Strategy (including P3/AFP Screening)
- Interface Coordination Requirements (with Related/Adjacent Projects and Maintenance Activities)
- Landowner Engagement
- Confirmation of Funding Sources/Strategy

# 2015/16 Scope of Work

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Environmental due diligence deliverables for the next 12-18 months:

- Compilation of existing subsurface information
- Identification of data gaps/uncertainties
- Development and implementation of field sampling program to meet the data needs of risk based approach
- Development of Conceptual Site Model
- Definition of Risk Assessment/Record of Site Condition (as per O. Reg. 153/04) sites and requirements, based on condition and proposed future function
- Phase 1 and Phase 2 Environmental Site Assessments as required to validate cost estimates

# 2015/16 Scope of Work

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Other due diligence deliverables for the next 12-18 months:

- Permits/Licenses/Approvals Requirements Identification and Strategy for Securing
- Comprehensive Topographic, Bathymetric and Legal Surveys
- Updated Flood Plain Mapping
- Sub-surface Utility Mapping
- Geo-technical Investigation and Assessment
- Dockwall structural assessment

# Project Organization

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- Participating Agencies:
  - Waterfront Toronto
  - City of Toronto
  - Toronto and Region Conservation Authority
  - Toronto Port Lands Company
- Executive Steering Committee established for PLAI 1&2 will continue as joint decision-making body
- Specific roles and responsibilities of each agency for 2015/16 Work Scope completion to be confirmed in Initial Project Charter

# PROJECT COST DETAILS

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## **Commercially Sensitive Information**

To be discussed in the In-Camera session



