



Markham Multi-use Pathway (MUP) (16th Avenue to Bob Hunter Memorial Park)



January 27, 2015
Development Services Committee

Mark Schollen
Schollen & Company Inc.

Purpose of Presentation

- Update Council on status of Phase 1 construction
- Update Council on final design details of MUP & outstanding issues, signage and entry features
- Seek Council authorization to proceed with the tendering and construction work for Phase 2 & 3 subject to budget approval
- Budget update
- Schedule update
- O & M issues
- Public Consultation



Background

- Extensive public consultation process for Class EA study completed over the last four years
- Environmental Assessment approval for MUP in 2012 by Council and MOE
- Council endorsed phasing of MUP in May 2013 and requested staff to report back with final design details
- Further consultation with Community of Liaison Committee (CLC), Milne Working Group (MWVG), CPAC and Accessibility Committees undertaken

Phasing Plan

Key Map



Status - Consultation Process - Design

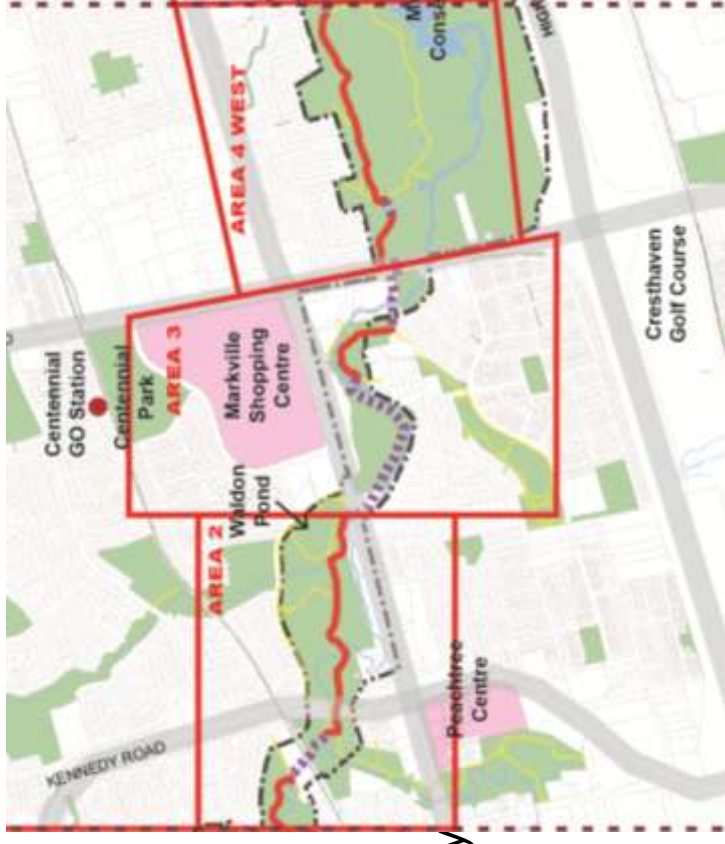
Additional meetings conducted:

Area 2, 3 & 4 (Phase 1)

- Site walk and meeting with Milne Working Group (MWG) - April 29, 2013
- CLC, CPAC, MWG & Accessibility Committee meeting – June 4, 2013
- Site walk – June 12th, 2013 (Accessibility & MWG)
- CLC & MWG Meeting – June 25, 2014

Areas 1,5,6 and 7 (Phase 2 & 3)

- Site walks (Markham Rd to Bob Hunter Memorial Park) to be arranged with Markham Council representatives, CLC, CPAC & rate payers groups in early 2015



Phase 1 – Works Completed To-date:

Area 2, 3 & Portion of Area 4

- Limestone Pathways (1700 m)
- 3 Bridges installed
- Boardwalk and Wooden Stairway Space (340 m)
- Highway 7 Underpass
- GO Underpass
- Accessible parking and pathways (2km - Milne Dam Conservation Park)
- Regulatory and Directional Signage – November 2014
- Lookout /Seating Areas
- Restoration Plantings



Site Photos from Phase 1

Phase 1 Construction Update: 2014 Site Photos



Metrolinx Underpass (Area 2)



Hwy 7 Underpass (Area 3)



Limestone Pathways (Area 3)



Lookout /Seating Area (Area 3)

Phase 1 Construction Update: 2014 Site Photos



35m Span Bridge (Area 3)



14m Span Bridge (Area 4 West)



Limestone Pathways (Area 2)



Boardwalk (Area 4 West)

McCowan Road Crossing Phase 1

Pedestrian signal required to provide safe crossing

- Construction of a pedestrian signal approved by York Region
- Initial design is completed and submitted to the Region for review and approval
- Construction Underway – January/ February 2015
- Signal at Milne Park entrance and relocation of crossing to be reviewed under Region's EA for McCowan Rd Crossing



Phase 2 Works – 2015 (Area 4 East)

Elements to be Constructed

- Accessible trail, parking and boardwalk in Milne Conservation Park
- Limestone Pathways (775m)
- Construction of 5 Bridges
- 1.2 m wide, 344 m long on road trail along Drakefield Road
- Meeting with Drakefield Rd & Willowgate Avenue residents to finalize trail and impacts
- Regulatory and Directional Signage
- Lookout Platform near Milne Dam
- Restoration Plantings



Site Photos from Phase 1

Milne Conservation Park – Accessible Trail/Boardwalk

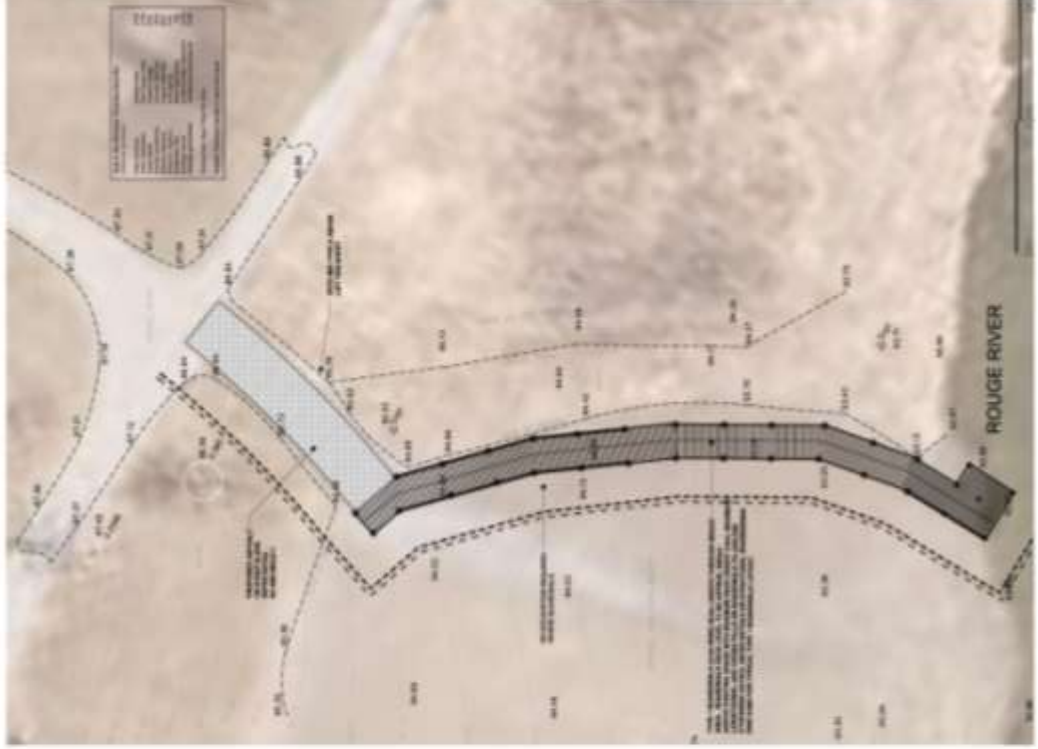


Milne Conservation Park – Accessible Trail/Boardwalk

PARKING LOT PLAN



BOARDWALK PLAN



Phase 2 - Area 4 East

Cost \$2.9M



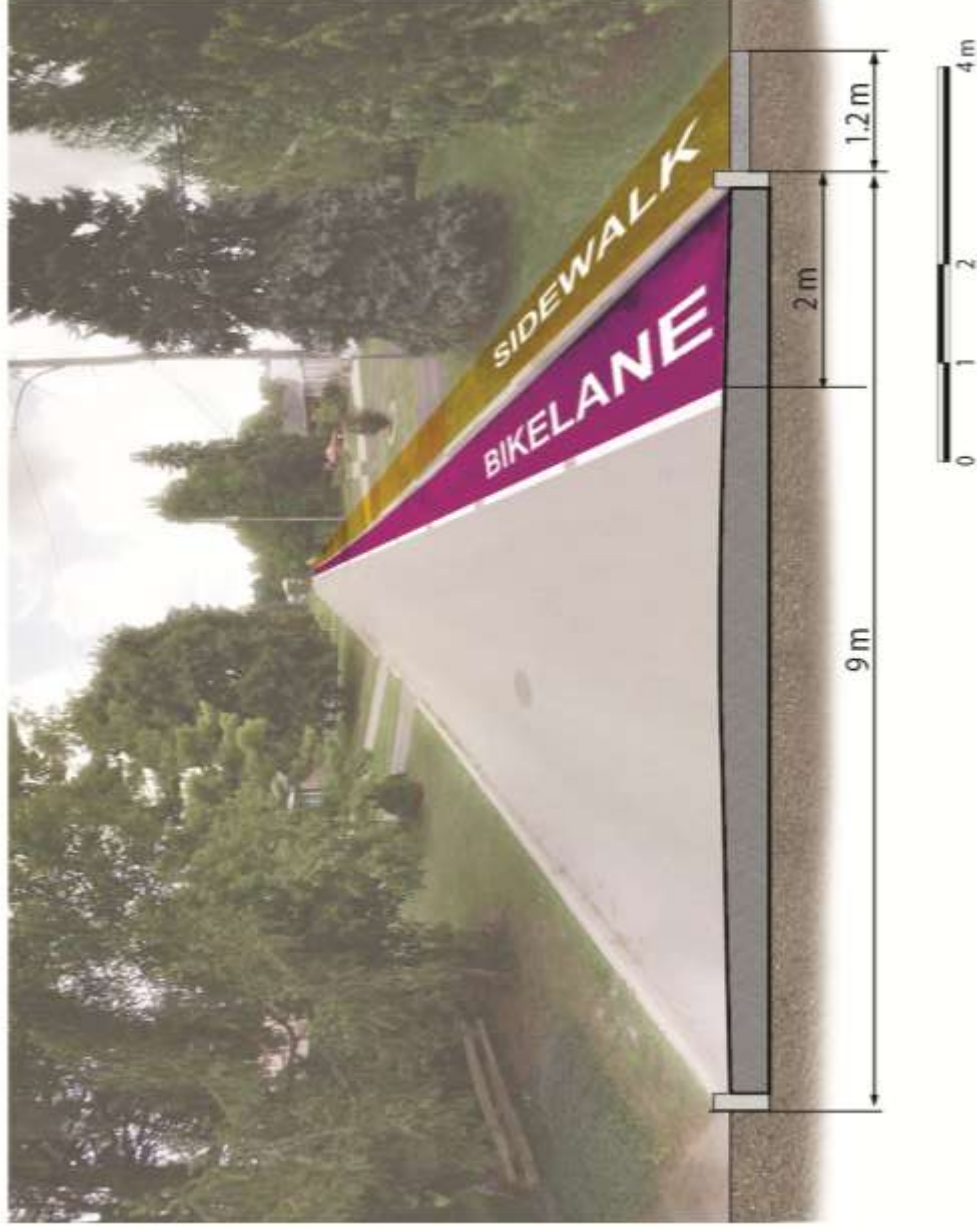
Area 4 – Drakefield Road / Willowgate Road



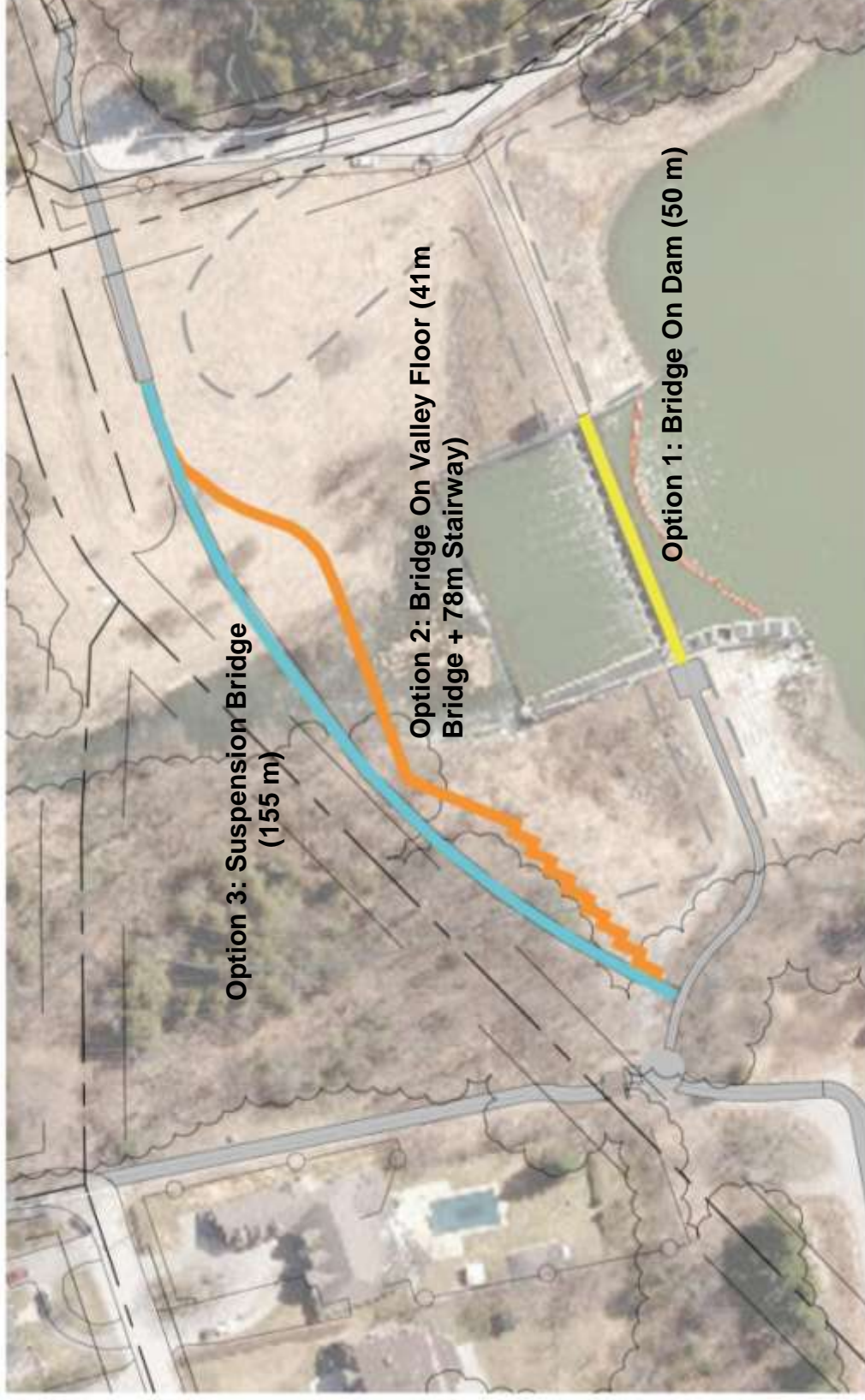
Area 4 – Drakefield Road / Willowgate Road

Proposed on Street Connection Concept

- Safety concern re pedestrians walking on road expressed by consultant
- Meeting with Drakefield Rd and Willowgate Dr residents required to finalize
- Consultant & staff strongly recommending MUP on boulevard

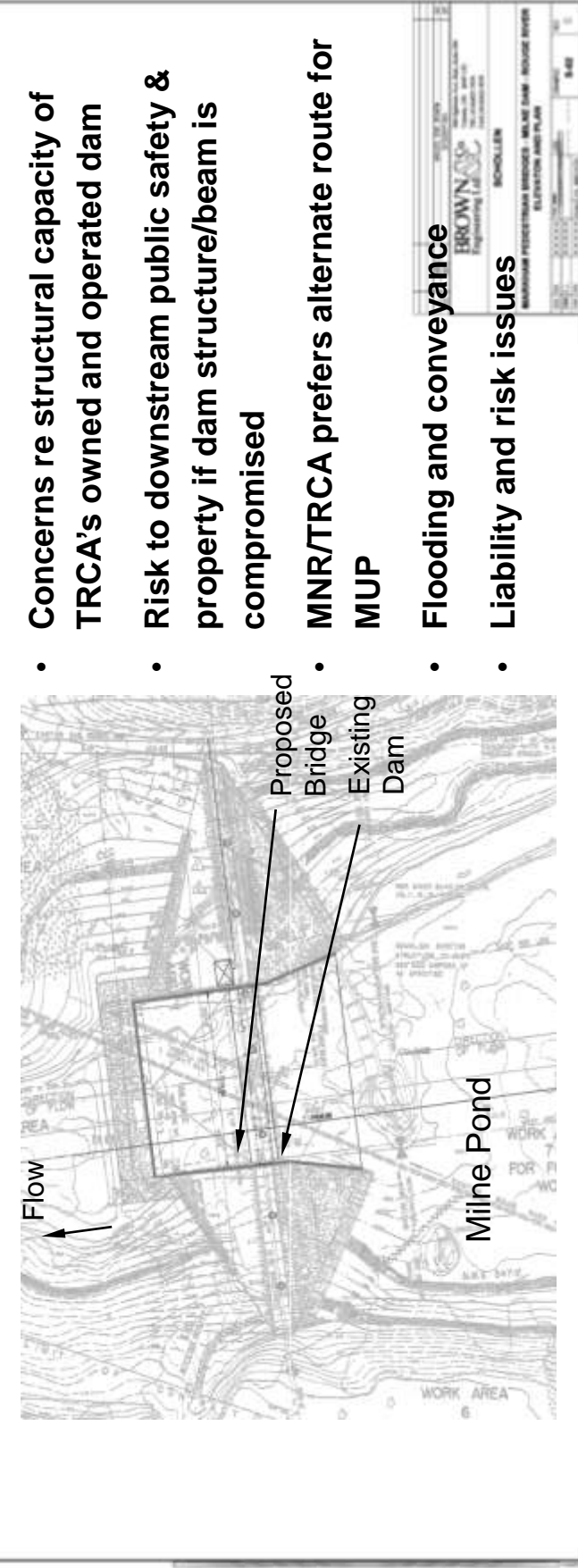
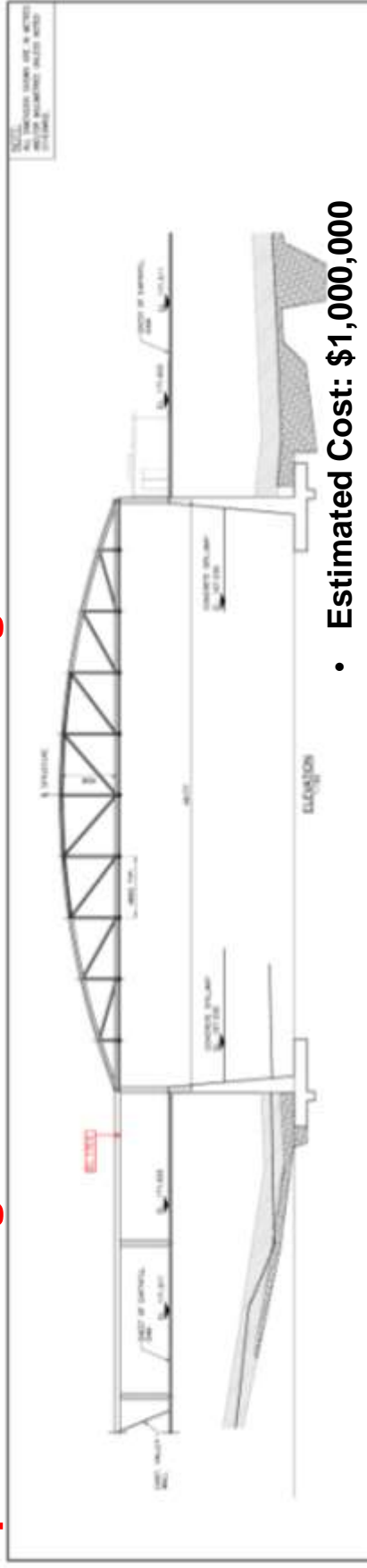


Area 4 – East Milne Dam Crossing Options



Option 1 – Bridge Installed on the Existing Dam

Conceptual Design

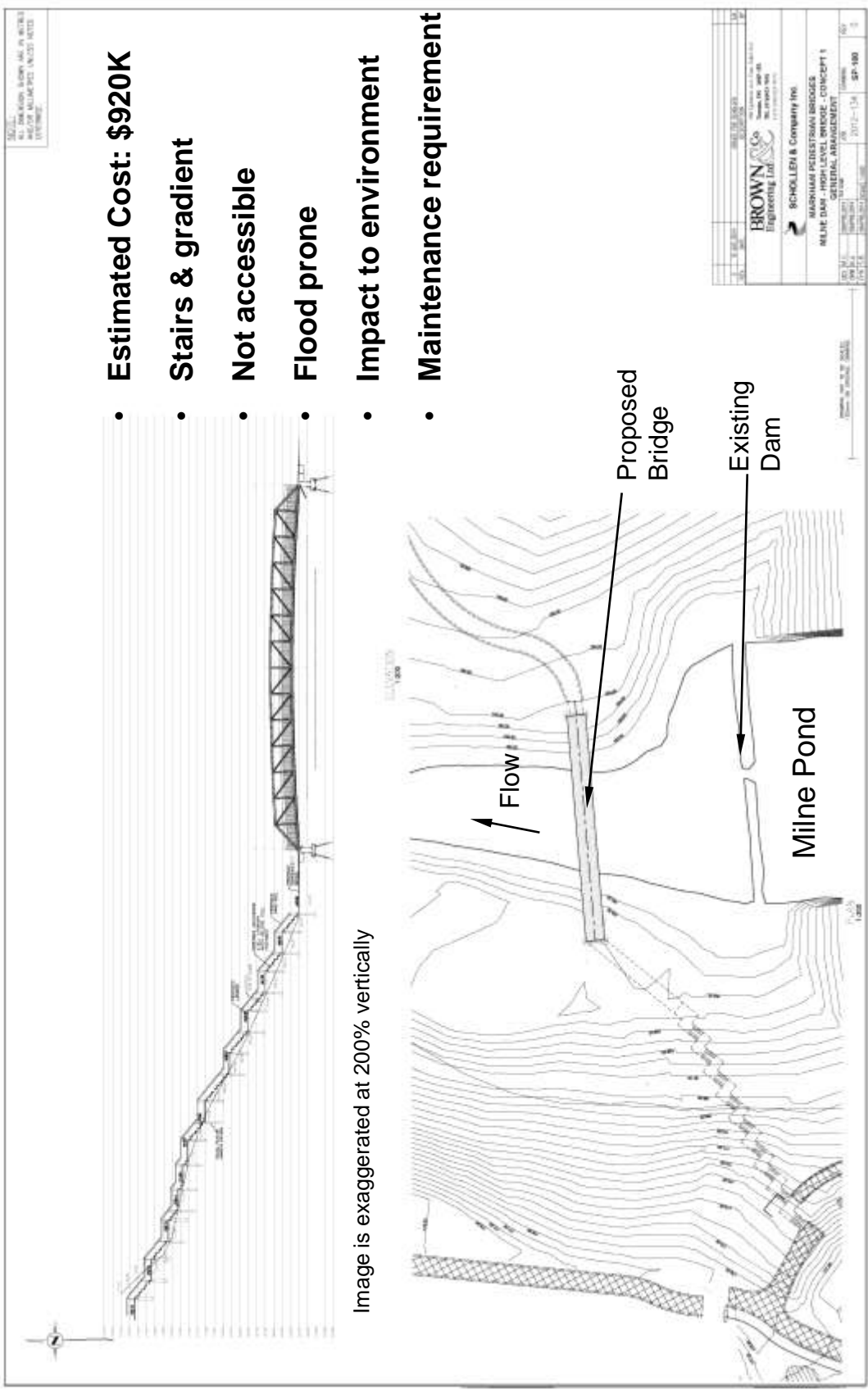


- Estimated Cost: \$1,000,000
- Concerns re structural capacity of TRCA's owned and operated dam
- Risk to downstream public safety & property if dam structure/beam is compromised
- MNR/TRCA prefers alternate route for MUP
- Flooding and conveyance
- Liability and risk issues

NO. 100	DATE	12/15/03
BY	DESIGNED	BROWN/ASC
CHECKED	DRAWN	SCHOLLEN
APPROVED	PROJECT	MILNE DAM - HOUSE RIVER
SCALE	PROJECT NO.	ELEVATION AND PLAN
DATE	PROJECT	1:48

Option 2 – Bridge on the Valley Floor Concept

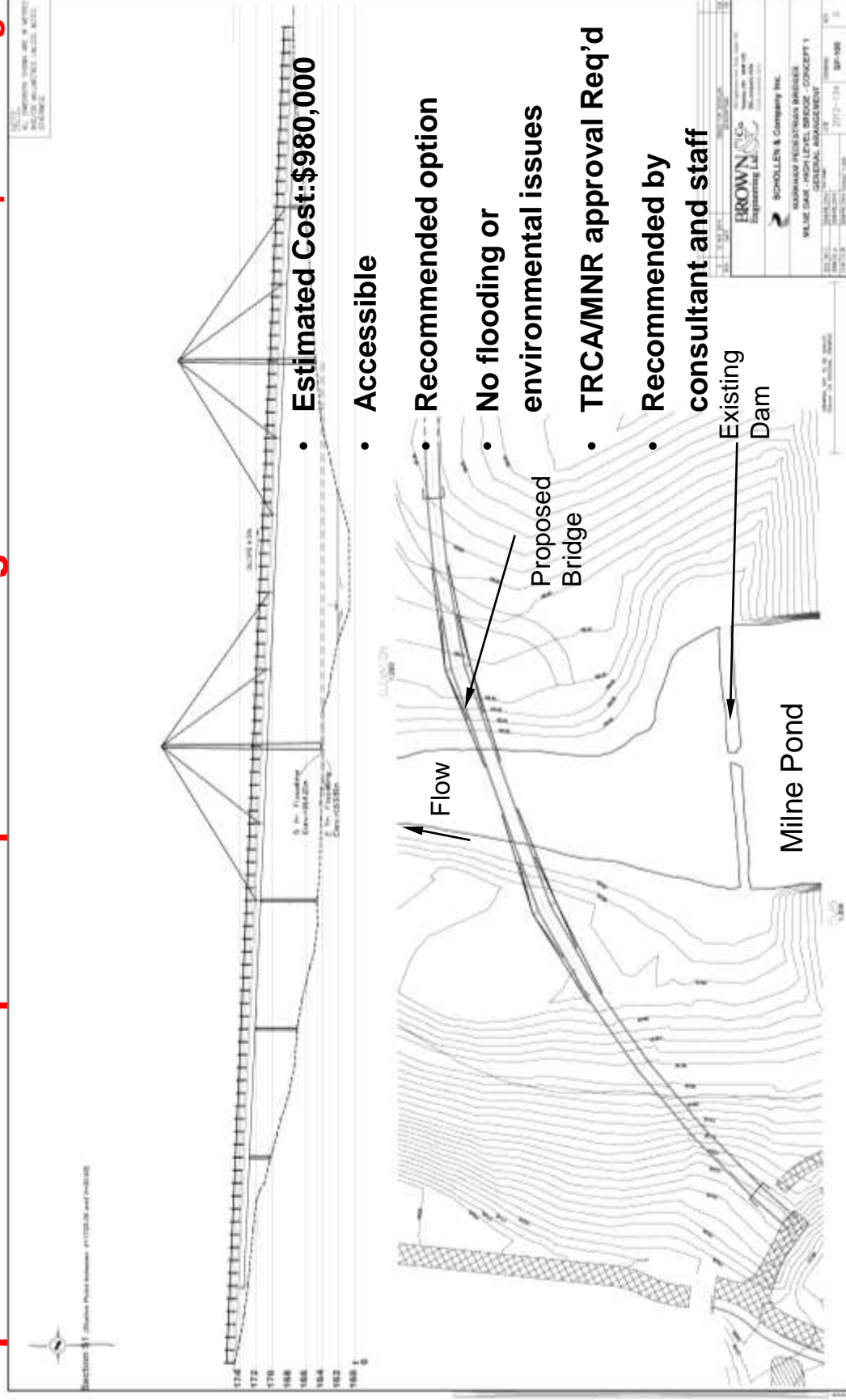
Conceptual Design



- Estimated Cost: \$920K
- Stairs & gradient
- Not accessible
- Flood prone
- Impact to environment
- Maintenance requirement

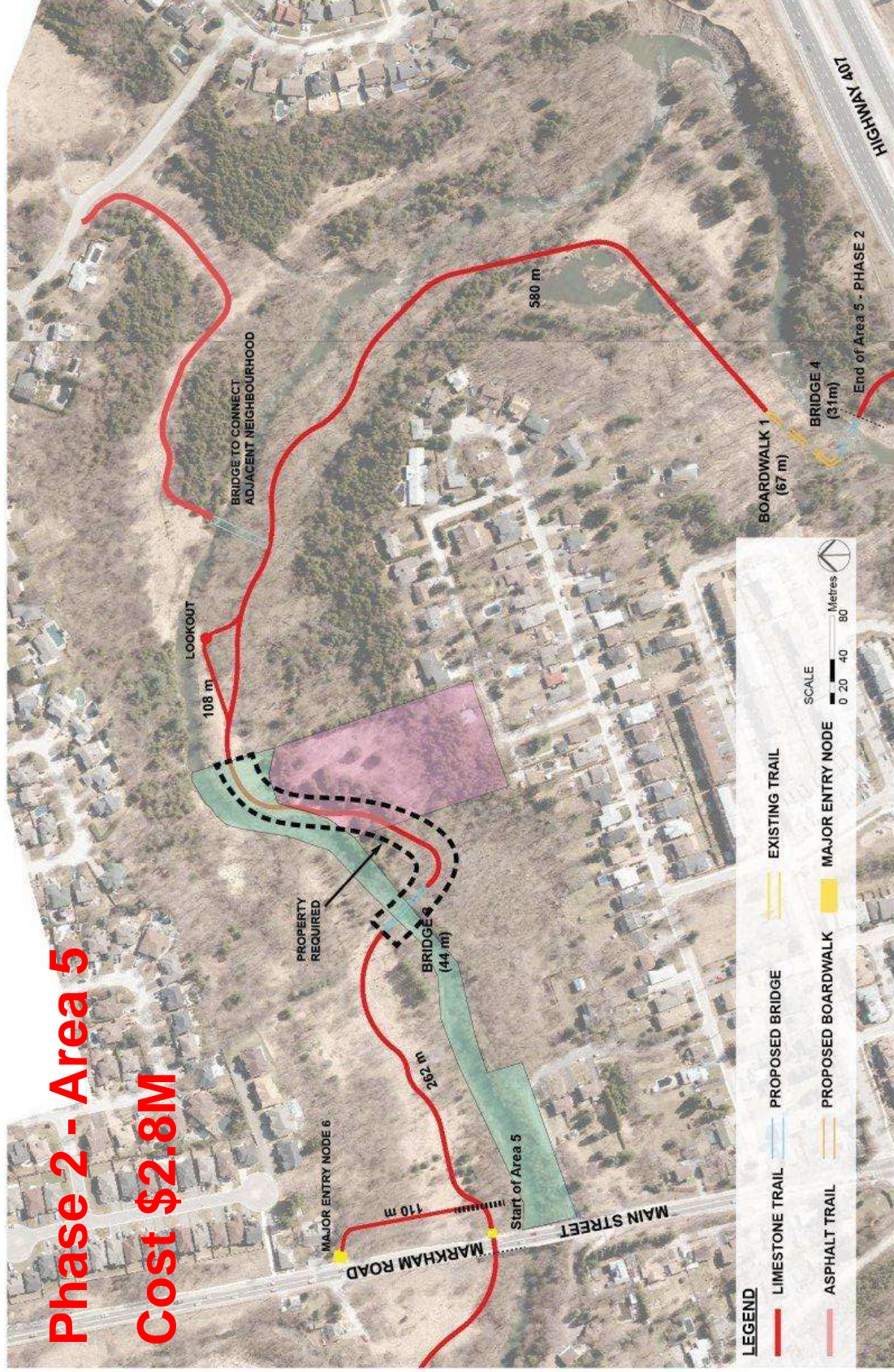
Option 3 – Clear Span Suspension Bridge

Conceptual Design



Markham MUP Design and Construction Details

Phase 2 - Area 5
Cost \$2.8M



Phase 3 & 4 Works– 2016/2017 (Areas 1, 5, 6, and 7)

Elements to be Constructed

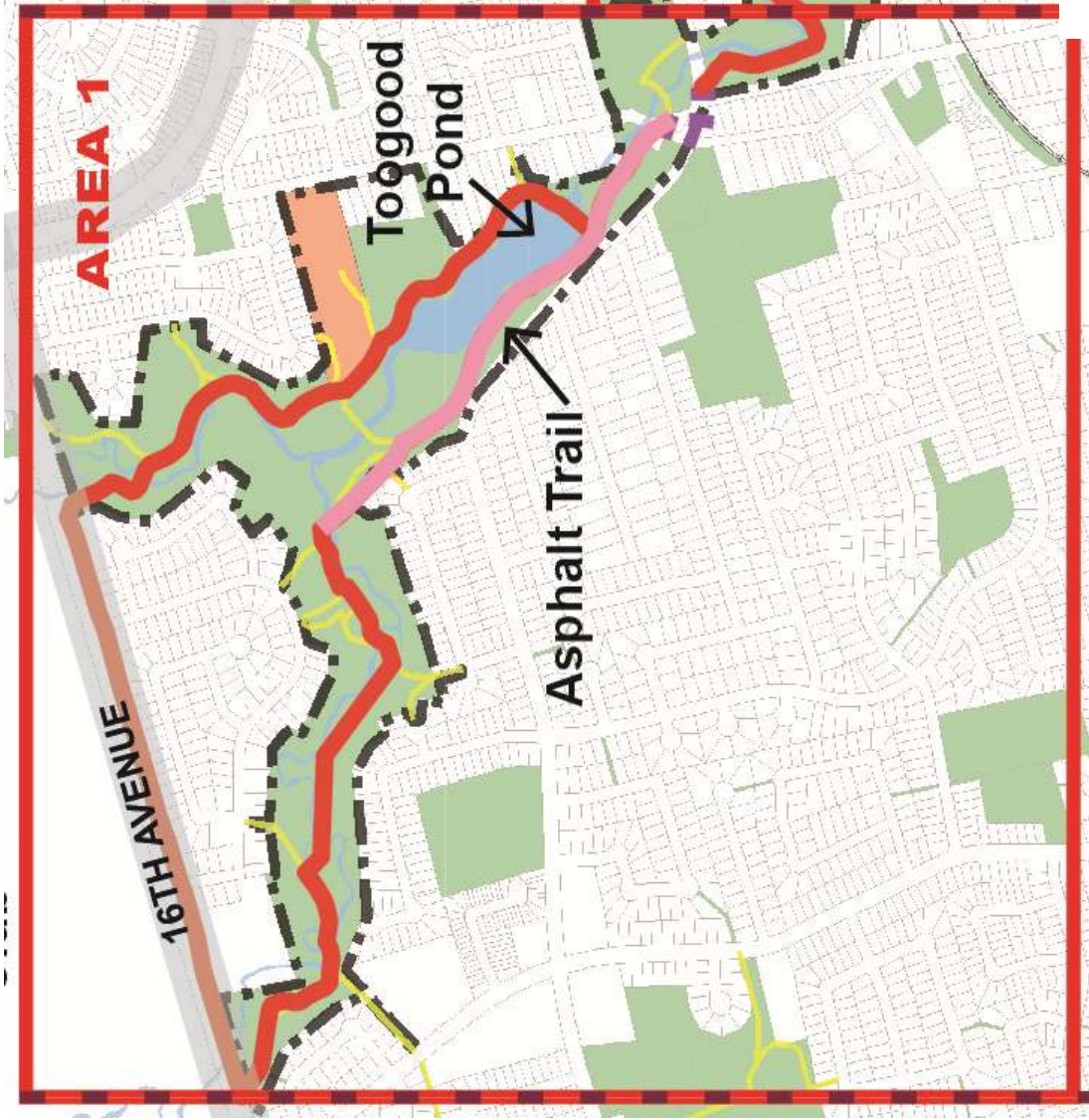
- Upgrade /new limestone Pathways (3,600m)
- Asphalt Pathways – 1328m (487m + 841m)
- Boardwalk (414m)
- Short Section of Stairway (Section crossing 14th Avenue)
- 4 Entry Nodes and 3 Bridges
- Regulatory and Directional Signage
- Restoration Planting and Riverbank Stabilization Works
- Address erosion areas by restoring the land to the natural state



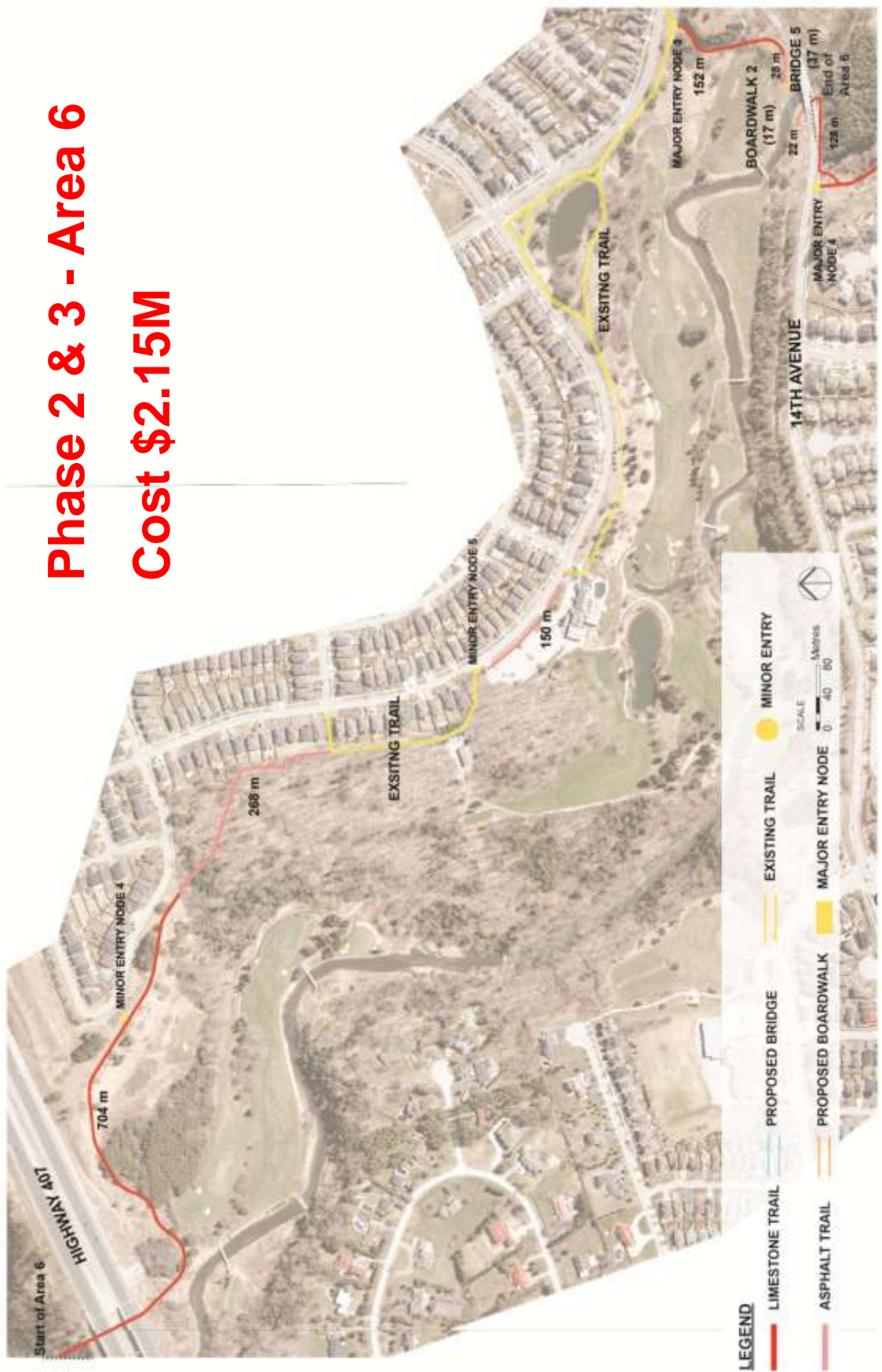
Site Photos from Phase 1

Phase 3 - Area 1

Cost \$0.8M



Phase 2 & 3 - Area 6 Cost \$2.15M



Markham MUP Design and Construction Details

Phase 3 & 4- Area 7

Cost \$4.6M



Building Markham's Future Together – Towards a Sustainable Community

Entry Node Location Map(Area 1 to Area 2)



Entry Node Location Map(Area 3 to Area 4 West)



Entry Node Location Map(Area 4 East to Area 5)



Entry Node Location Map(Area 6)



Entry Node Location Map(Area 7)

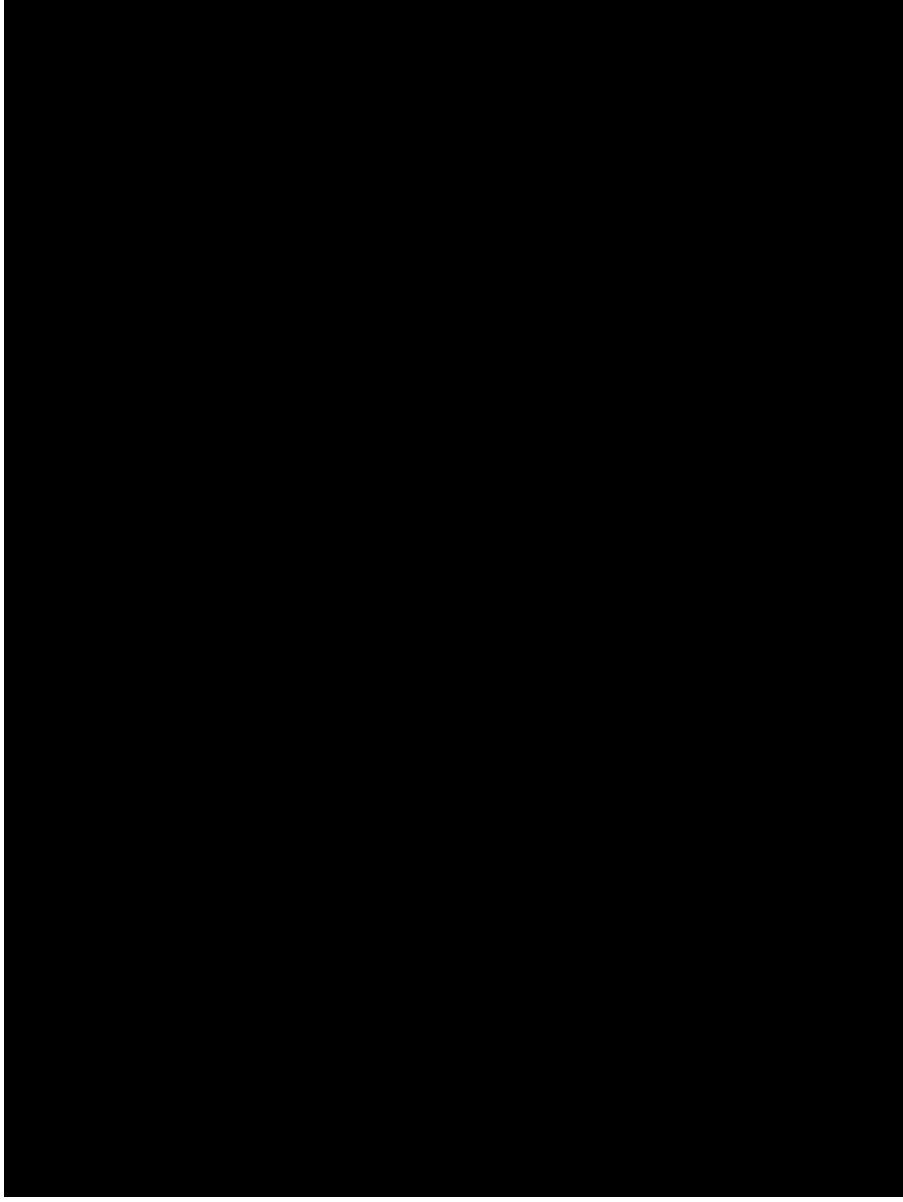


Markham MUP Design and Construction Details

Entry Point Perspective



Entry Point (Spatial Condition)



Animated Entry Node Walking Experience



Entry Node Aerial View



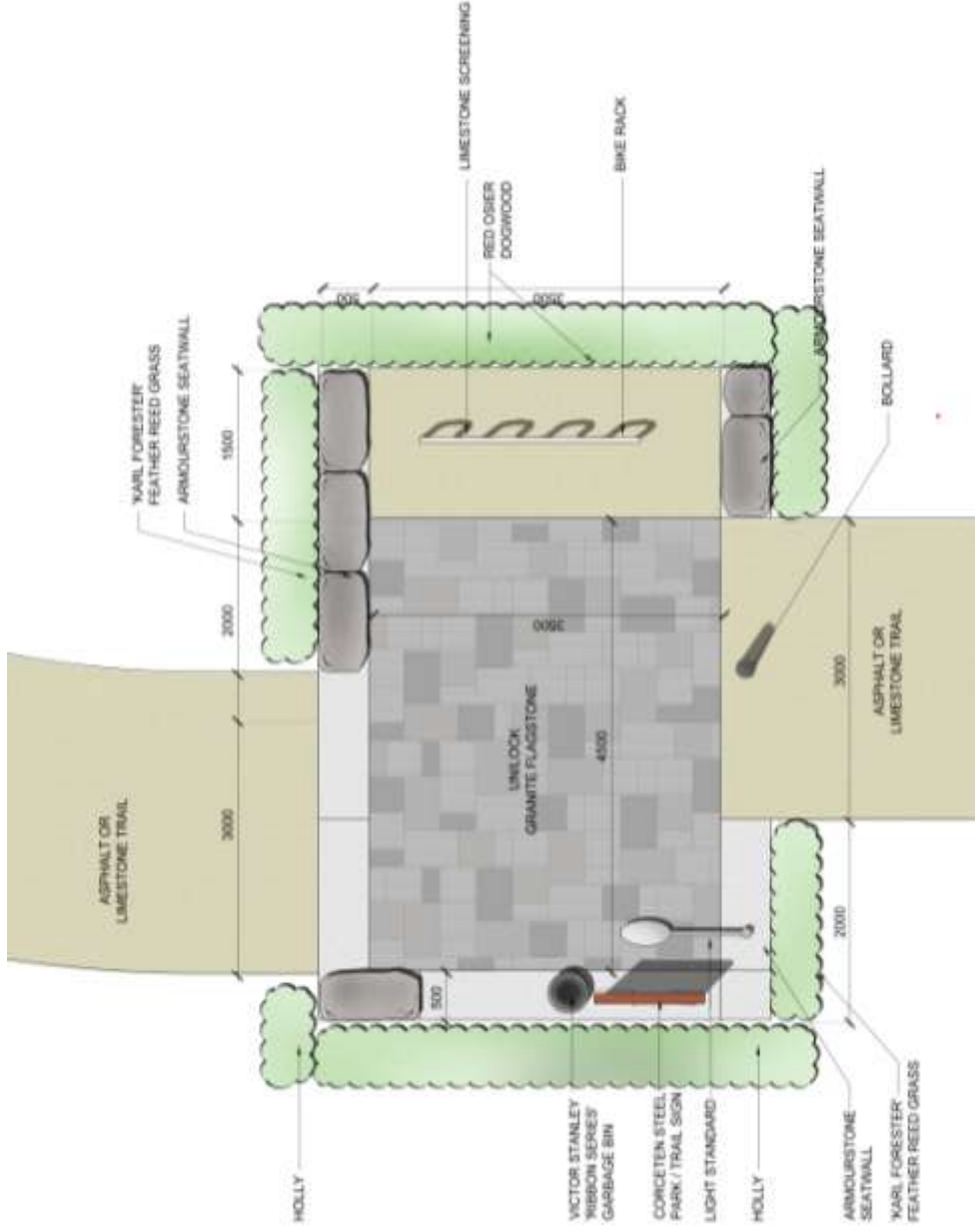
Entry Node Perspective View

Major Entry Node Cost Breakdown



Total Estimated Cost: \$18,000

Entry Point Detail



Major Entry Node Plan

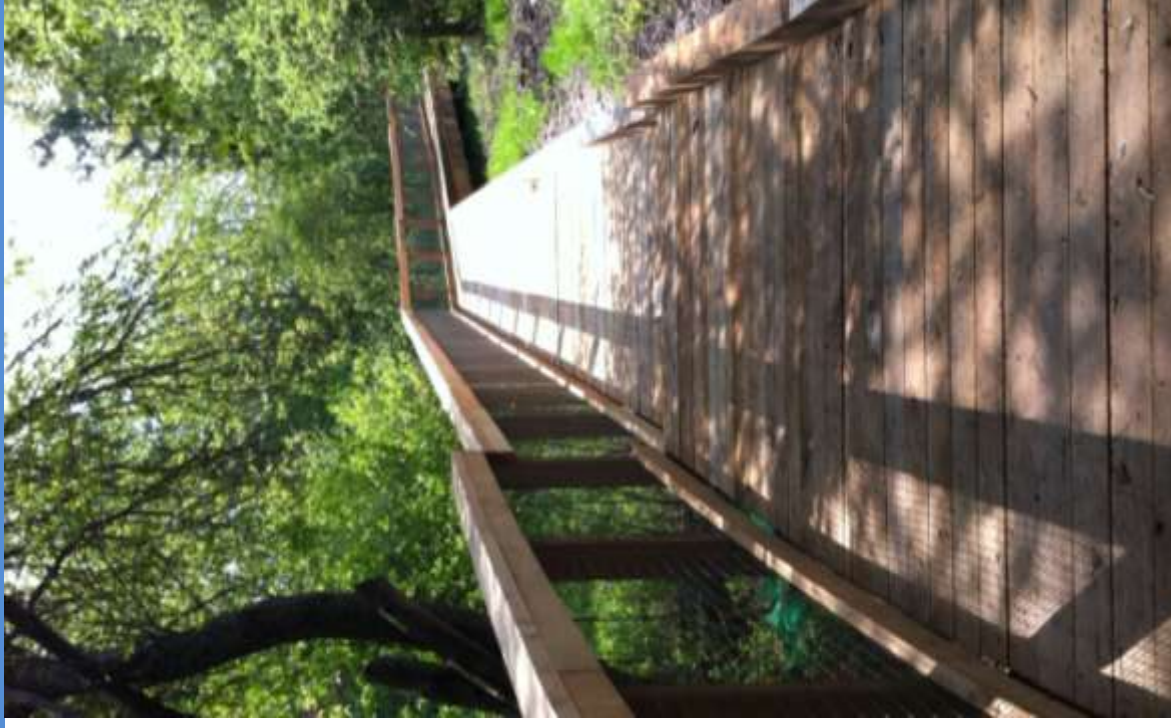
Accessible Trail Design Considerations

- Not all pathways within the study area can be designed to be accessible
- Create accessible pathways where possible and practical
- Select key areas to create accessible pathways and execute them well
- Follow the design criteria outlined in the final Proposed Built Environment Standard (AODA)
- **Signage is Key:** Ensure that signage and mapping/messaging clearly communicates which pathways are accessible so that users can make an informed personal decision about which pathways they will use



Items to be Finalized in 2014 - 2017

- Planting – Detailed planting plan to be finalized for Spring/Fall 2015 installation (Phases 2 & 3)
- Flood vulnerable areas
 - Signage/ gates
 - Detour routes
- Signage/ entrance features
- Points of interest/ educational opportunities
- Property acquisition – early 2015
- Drakefield Road MUP –2015
- Milne Dam Bridge crossing (Suspension Bridge) - 2015
- Donald Cousens Parkway and Railway Fly-Over Bridge – 2016/2017
- Confirmation of main and secondary trail access points (Phases 2 and 3) - 2015
- Maintenance requirements & budget



Budget

- Spent \$2.7M for Phase 1 work. Total cost required for remaining phases 2 to 4 is \$13.4M
- Total required in 2015 is \$6.1M of which \$2.14M is from existing approved budgets #12541 and #14403 and the remaining 2015 required funding of \$3.96M (\$3.61M City's share and \$0.35M from the Region of York) is requested as part of the 2015 capital budget.
- Estimated cost for the remaining work:

Location	Cost	Phase 2 2015	Phase 3 2016	Phase 4 2017
Area 1	\$0.80M		\$0.8M	
Area 2	\$0.09M	\$0.09M		
Area 3	\$0.06M	\$0.06M		
Area 4	\$2.9M	\$2.90M		
Area 5	\$2.8M	\$2.80M		
Area 6	\$2.15M	\$0.25M	\$1.9M	
Area 7	\$4.6M		\$1.2M	\$3.4M
Total	\$13.4M	\$6.1M	\$3.9M	\$3.4M

Phase 3 and 4 (\$7.3M in funding requirements)

- * Funds for Phase 3 and 4 totaling \$7.3M will be requested as part of the 2016 and 2017 capital budget process. The funding split will be 65% Development Charges and 35% Non-Growth DC Reserve

Operations & Maintenance

- Public concern for the capacity of the city to maintain the proposed MUP to high standard
- Engineering /Asset Management and Operations to consider life cycle cost and maintenance costs for trail and associated bridges and boardwalk structures and request re funding requirements
- Future funding be requested as part of the future operating budget process to provide general maintenance costs
- Staff report back to DSC re operation, maintenance and life cycle cost as part of Phase 2 tender award



Next Steps

- **Ongoing communication with agencies including:**
- Cycling and Pedestrian Advisory Committee (CPAC) – January 15 & February 2015
- C.L.C./ Milne Working Group Meeting - February 2015
- Willowdale/Drakefield residents meeting (i.e. Sidewalk) – February 2015
- Councillors as requested – January/February 2015
- Internal Departments
- Parking
- 2015 /2016/2017 Capital Budget submissions
- MTO encroachment permit (*Submitted*)
- CNR crossing agreement (*Submitted*)
- TRCA permit for alteration within floodplain (*3 Permits Applied for*)
- MNR permit (*Completed – No Issues*)

Next Steps Cont'd

- York Region Permit (*Submitted*)
- Easements across private lands/ property acquisition (*2 Properties in -progress*)
- Ministry of Tourism, Culture and Sport (*Underway All Sections*)
- **Finalization of Details and Plans** – January/February 2015
- **Phase 2 tender Period** – Spring 2015
- **Phase 2 construction Period** – Summer 2015/ Summer 2016 (budget and weather dependent)



Markham MUP



Discussion and Questions

Mark Schollen
Schollen & Company Inc.