

C1 - CW (WS)
June 17/13
Item 1

CITY-WIDE STREETSCAPE IMPLEMENTATION MANUAL AND FINANCIAL STRATEGY PLAN

Council Presentation June 17, 2013



Sierra Planning and Management
advice • strategy • implementation

Prepared For:



May 2013

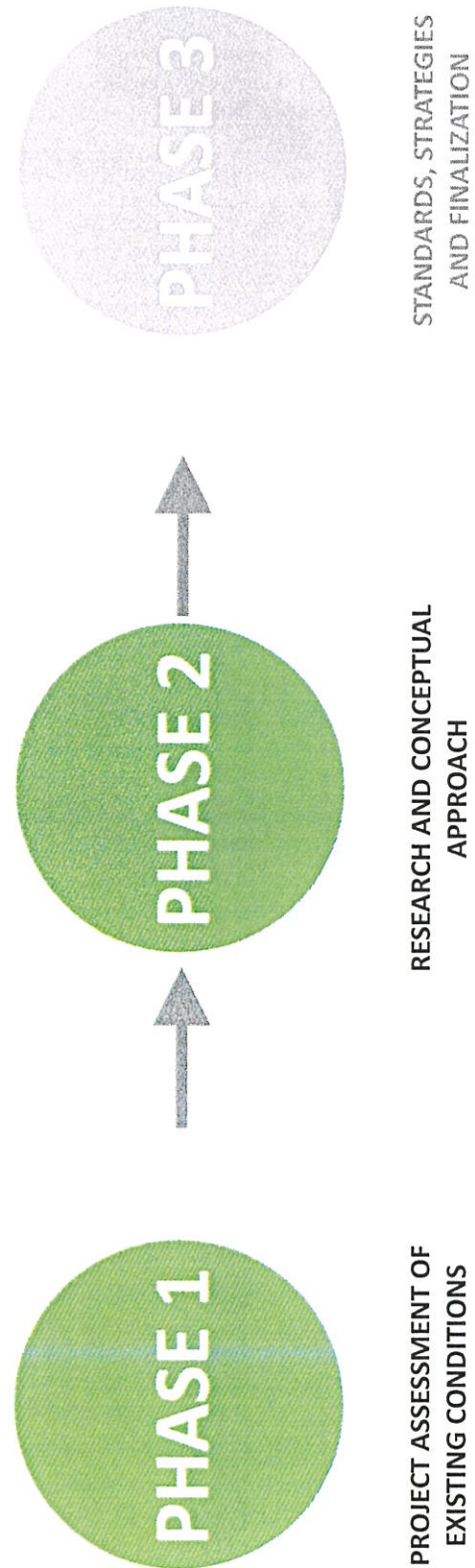


- **Part A: Background and Need**
- **Part B: Proposed Framework**
- **Part C: Questions and Discussion**

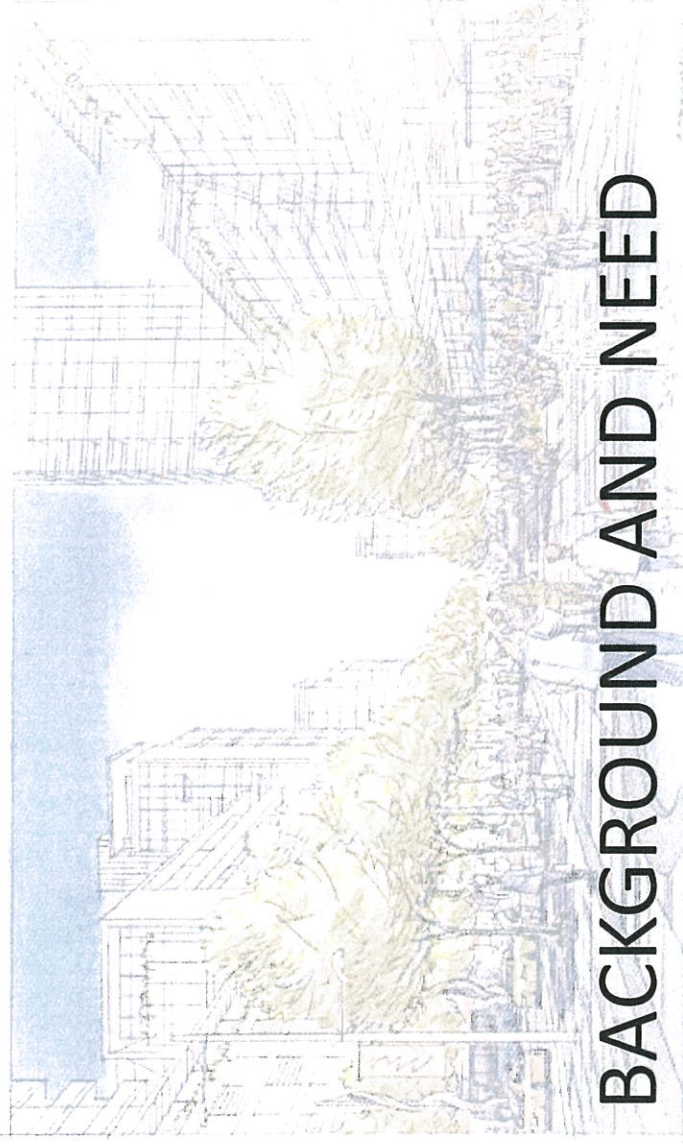


Streetscape Implementation Manual and Financial Strategy Plan

Project Phases



A



BACKGROUND AND NEED





Benefits of Streetscape Investment

- Economic Development and Quality of Life
- Enhanced Value of Surrounding Lands
- Quality of Place and City Building

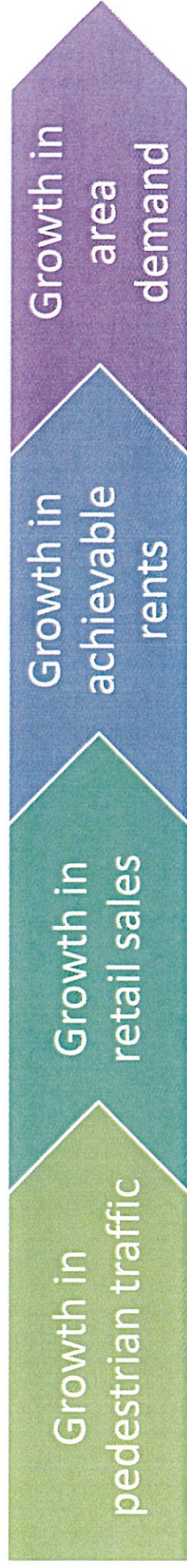


Funding Limitations

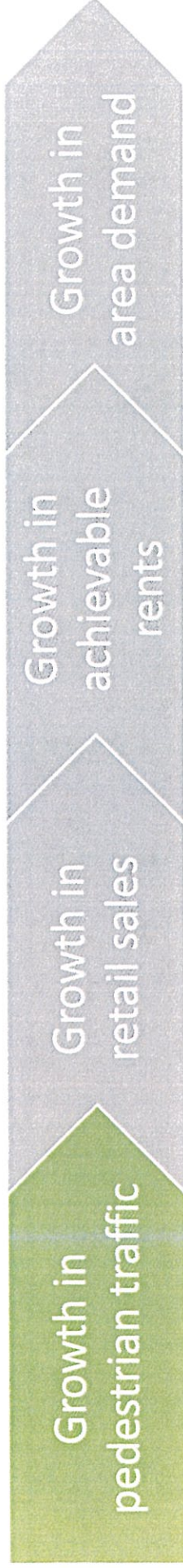
- Current capital available
- Current implementation process
- Current operating budget request process

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Rationale for Streetscape Investment



Rationale for Streetscape Investment



Pedestrians will walk where they feel safe

A study of 141 locations across major US cities indicated streetscape design features can reduce 'walking along roadway' crashes:

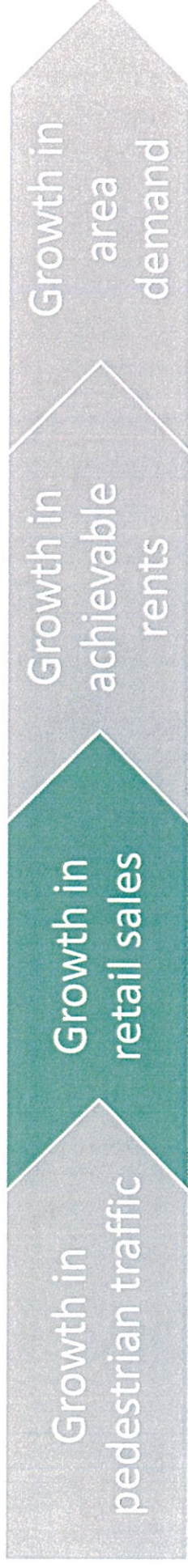
- Wide sidewalks
- Trees and foliage
- Buffer between road and sidewalk
- Lower speed limits

McMahon et. al (1999) 'Analysis of Factors Contributing to "Walking Along Roadway" Crashes' *Transportation Research Record* 1674: 41-48.



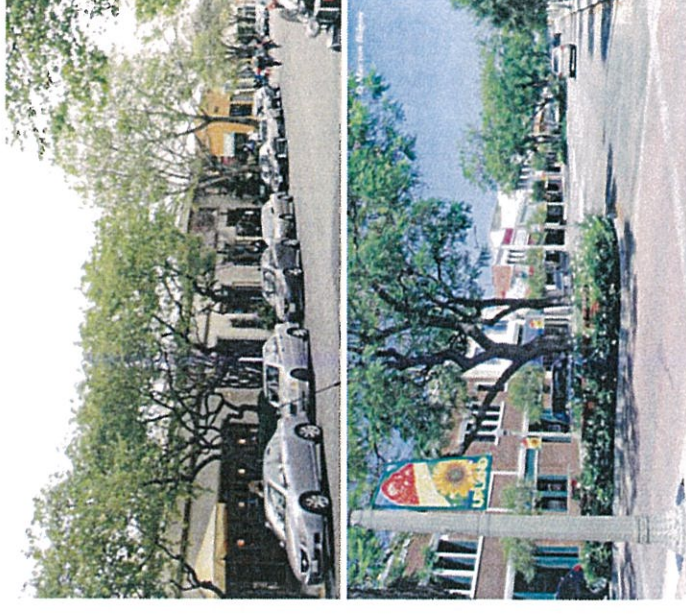
Silver Spring, Alberta

Rationale for Streetscape Investment



- Studies repeatedly show that pedestrians and cyclists stay longer and spend more money at local shops than drivers do
- A study of retailers in eleven German cities found that 8 in 10 retailers within pedestrianized zones typically reported higher sales than comparable businesses in non-pedestrianized districts
- A review of businesses in eight major US cities found that businesses on tree-scaped streets reported on average 20% higher income streams than comparable businesses in similar locations that lacked trees

Clifton et. al (2012) 'Consumer Behaviour and Travel Mode Choices'. *Oregon Transportation Research and Education Consortium*;
Hass-Klau (1993) 'Impact of Pedestrianization and Traffic Calming on Retailing'. *Transport Policy* 1(3): 21-31.; Glatting Jackson & Walkable Cities Inc. (2006) '22 Benefits of Urban Street Trees'



(Top) Fourth Street, Bloomington, IL

Rationale for Streetscape Investment



Streetscaping that leads to growth in retail sales can allow for higher commercial rents

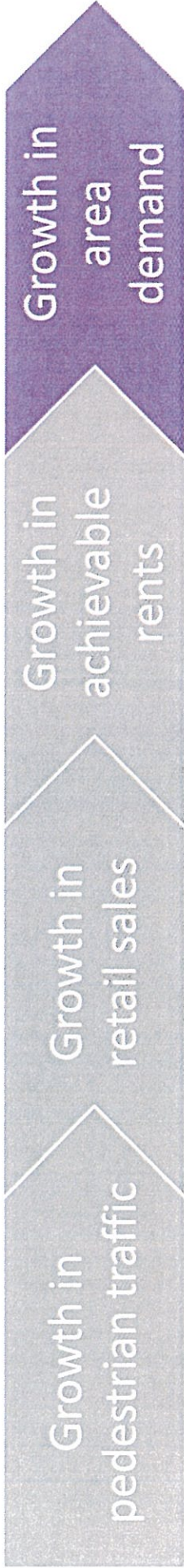
- An analysis of 10 high street shopping districts in London (UK) showed that streetscaping efforts can add at least 5% to retail lease rates

CABE (2007) 'Paved with Gold: The Real Value of Good Street Design'.



Bromley High Street, London Borough of Bromley, UK

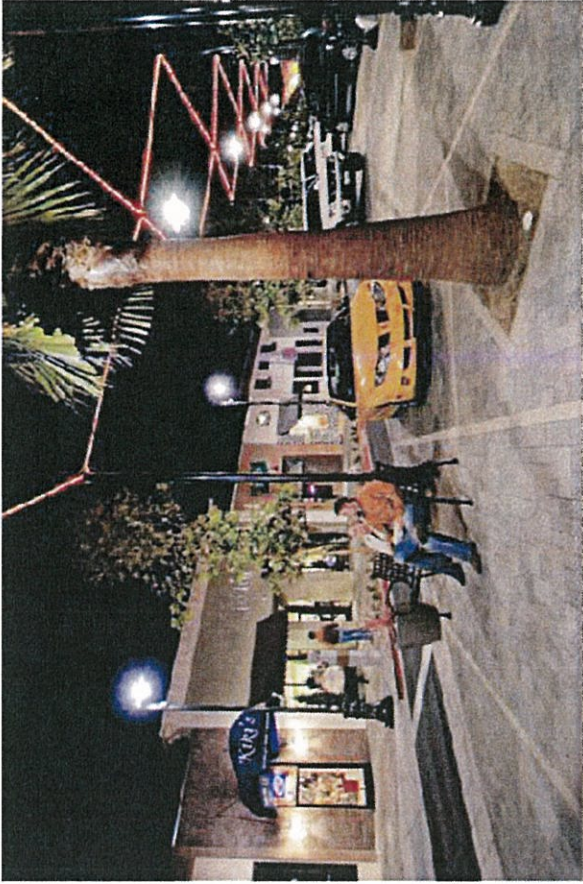
Rationale for Streetscape Investment



Pedestrian and transit-friendly streetscaping has the potential to grow area interest and demand by:

Increasing retail sales that support local businesses	La Jolla Boulevard, San Diego, CA - Installation of bike lanes, median with greenery, tree buffer for sidewalk - Survey of tax receipts of 95 businesses along the corridor showed a 20% boost in sales
Creating demand for new commercial space	Lancaster, LA County, CA - High speed suburban roadway transformed into a narrower roadway with pedestrian facilities and space for community events - Spurred \$125 million in private investment in the area; 40 new businesses opened; 800 new jobs; Sales tax revenue grew by 26%
Raising housing prices in surrounding neighbourhoods	Philadelphia, PA Homes within a ¼ mile of a commercial corridor reported as in ‘excellent condition’ by its users, benefited from a 23% premium in house values; between ¼ to ½ mile, 11% premium.

National Complete Streets Coalition (2012) ‘It’s a Safe Decision: Complete Streets in California’; University of Pennsylvania (2006) ‘Public Investment Strategies: How They Matter for Neighborhoods in Philadelphia’



Rationale for Streetscape Investment

The Bottom Line: Public Investment in the Public Realm” by Ron Palmer



USE IT OR LOSE IT. The public realm is the heart of a city's identity, health, beauty, and quality of life. It is the stage for the public realm. Public sector investment in the public realm is essential to ensure that new cities are created, and existing cities are maintained, in a way that is sustainable for many years to come.

Investments in the public realm are the heart of a city's identity, health, beauty, and quality of life. It is the stage for the public realm. Public sector investment in the public realm is essential to ensure that new cities are created, and existing cities are maintained, in a way that is sustainable for many years to come.



Photo: The City of New York, Department of Parks and Recreation

The Bottom Line
Public investment in the public realm

Public sector investment in the public realm is essential to ensure that new cities are created, and existing cities are maintained, in a way that is sustainable for many years to come.

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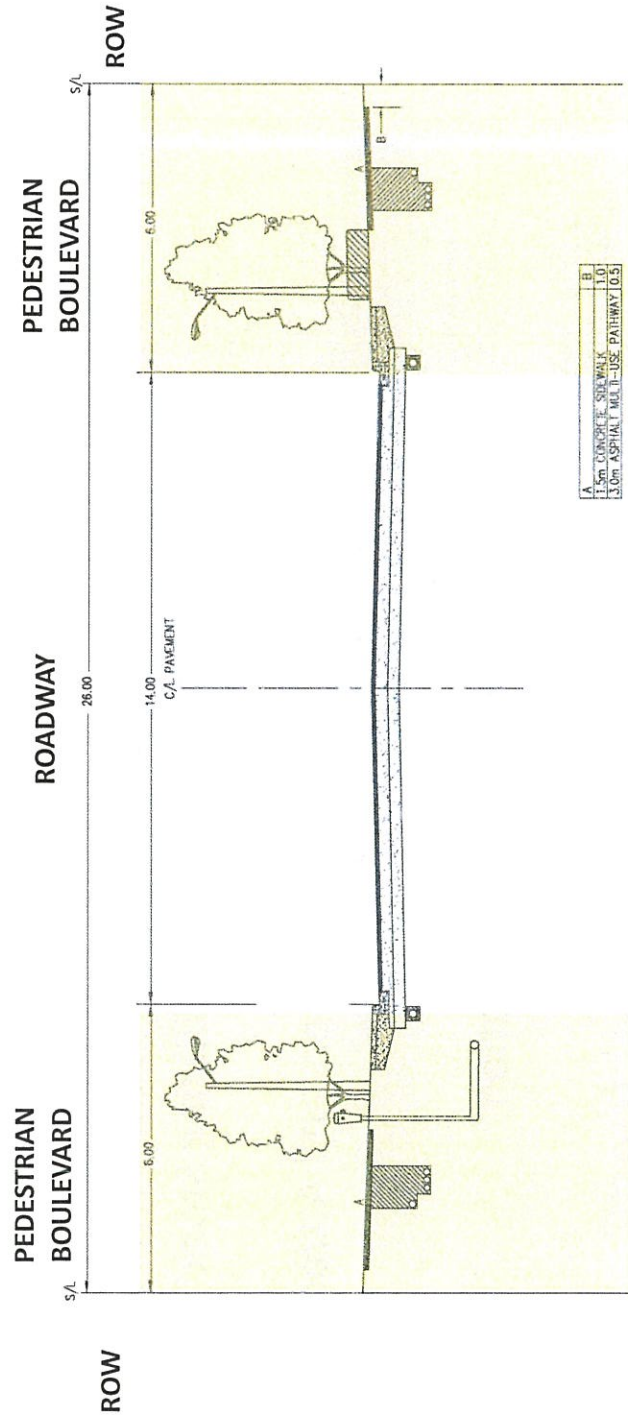
Public sector investment in the public realm is essential to ensure that new cities are created, and existing cities are maintained, in a way that is sustainable for many years to come.

- “Promote Increased Property Values”
- “Promote Reinvestment by the Private Sector in Old and New Building Stock”
- “Maintain Existing Retailers and Attract New Businesses”
- “Enhance a City’s Reputation”

• Relative to a limited funding context \$\$\$

Existing Standards

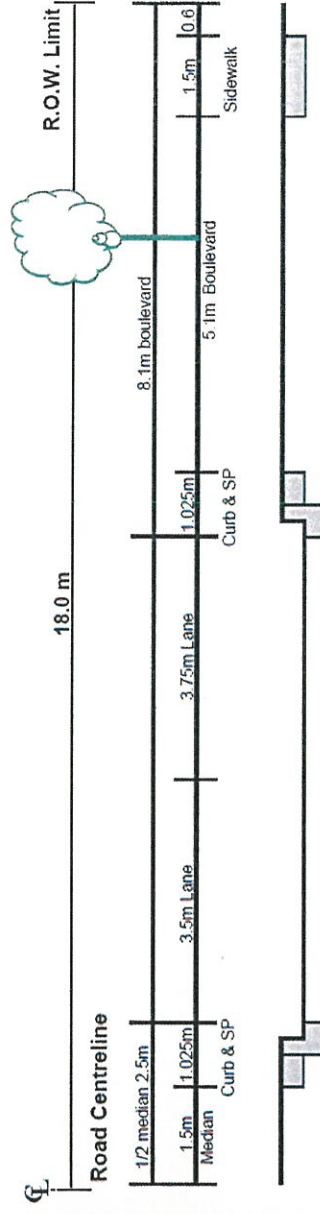
City of Vaughan Typical Engineering Cross
Section for Local Municipal Roads



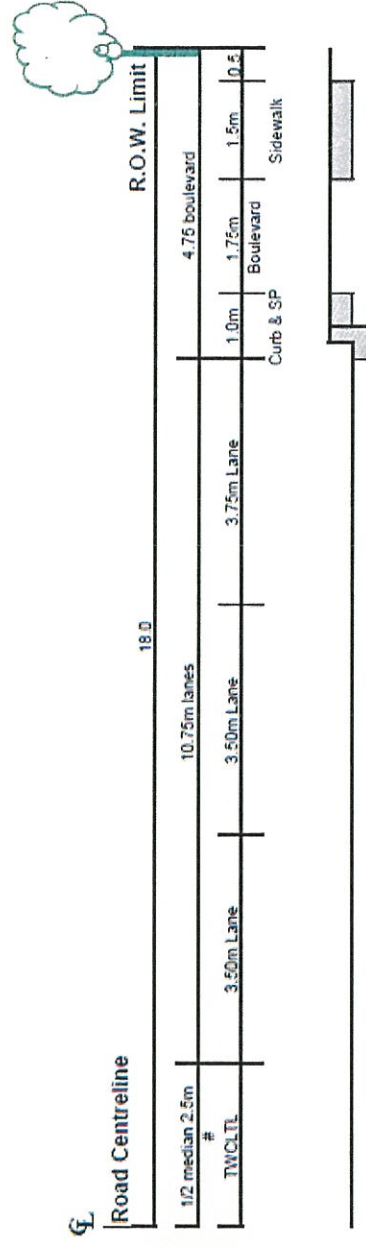
Municipal Engineering Standard Major Collector – 26m ROW

Existing Standards

York Region Typical Cross Section Regional Roads



Regional Standard 4 Lane Cross Section – 36m ROW



Regional Standard 6 Lane Cross Section – 36m ROW

Proposed Intensification Centres and Corridors

Downtown

- Vaughan Metropolitan Centre

Primary Centres

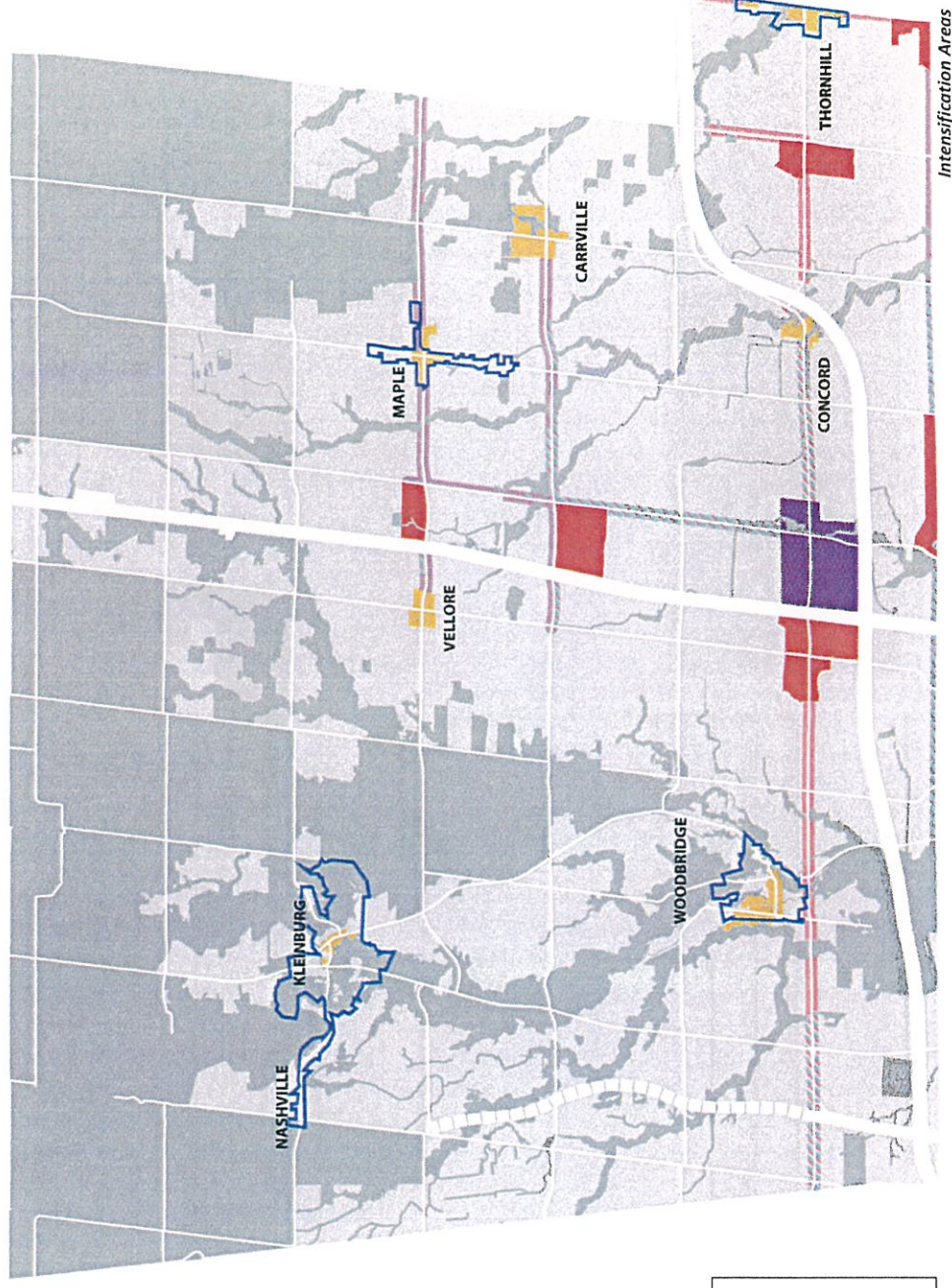
- Steeles West
- South Yonge Street

Local Centres

- Islington Avenue
- Carrville
- Concord

Primary Intensification Corridors

- Major Mackenzie Drive
- Centre Street

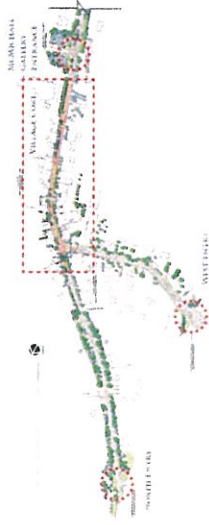


LEGEND

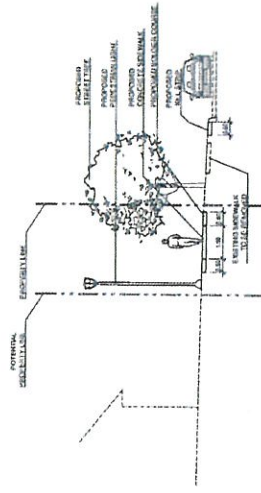
Intensification Areas		Heritage Conservation Districts
	Vaughan Metropolitan Centre (Regional Centre)	
	Primary Centres	
	Local Centres	
	Regional Intensification Corridors	
	Regional Intensification Corridors within Employment Areas	
	Primary Intensification Corridors	
	Primary Intensification Corridors within Employment Areas	

Proposed Streetscape Projects

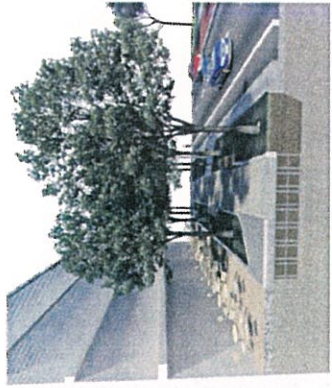
Kleinburg / Islington Avenue



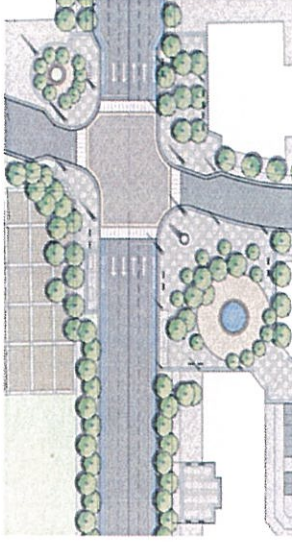
Major Mackenzie



Centre Street



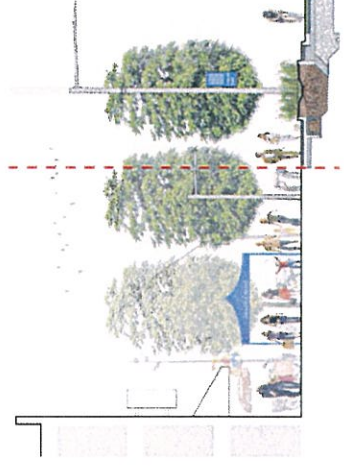
South Yonge Street



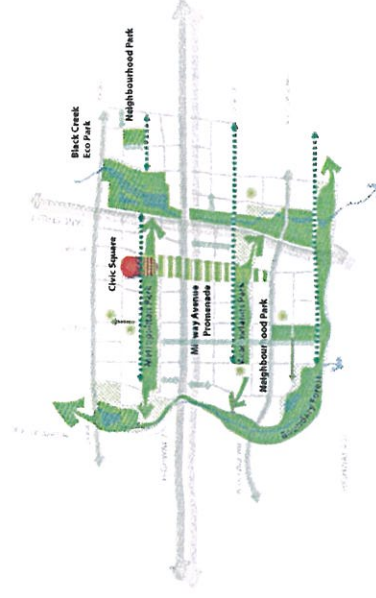
Steeles West



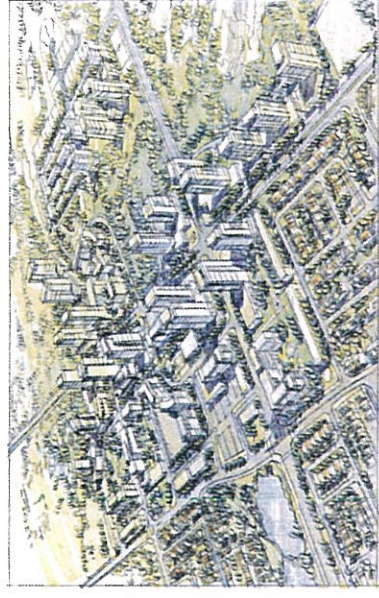
Concord West



Vaughan Metropolitan Centre



Carrville



100



- Frontage Zone
- Pedestrian Clearance Zone
- Amenity Zone
- Continuity Strips
- Roadway / Cycleway
- Median

What have we learned?

Preliminary costs vary – assumptions, methods, components, materials, unit costs, no operations + maintenance or life cycle

		<u>\$ / linear meter</u>
Enhanced ↓	Steeles West	\$1,826 / linear meter
	South Yonge	\$1,773 / linear meter
	Islington	\$1,405 / linear meter
	Major Mackenzie	\$924 / linear meter
Basic	Concord West	\$651 / linear meter
TBD	Centre Street	TBD
	Carrville	TBD
	Vaughan Metropolitan Centre	TBD

* Note – the costing for Steeles West includes storm water management features and rain gardens.

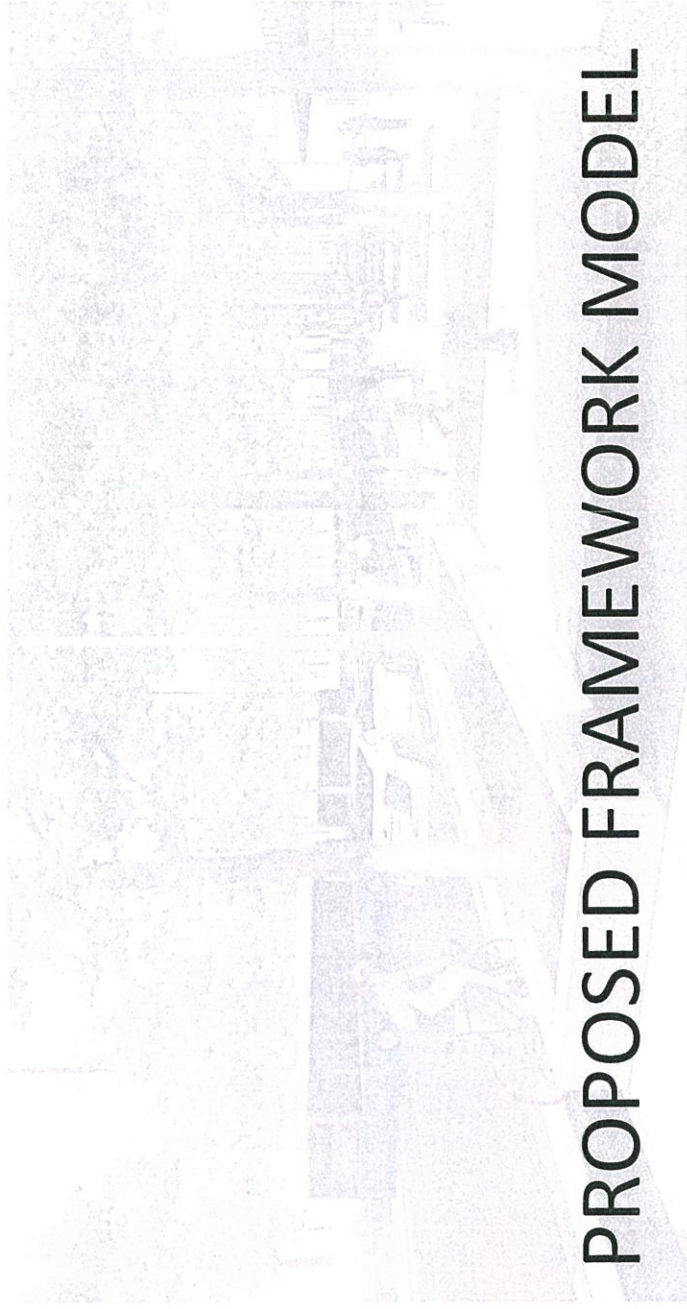


Why there is a need for a more defined streetscape planning, design and financial modeling process...

- Support City-wide identity and economic development objectives
- Establish a City of Vaughan and local design signature and branding
- Consistent approach to streetscape design and implementation
- Consistent and accurate cost figures that illustrate the financial implications of streetscape design projects
- Provide input to the planning and budget process
- Reality check on what the community is able to fund and willing to pay

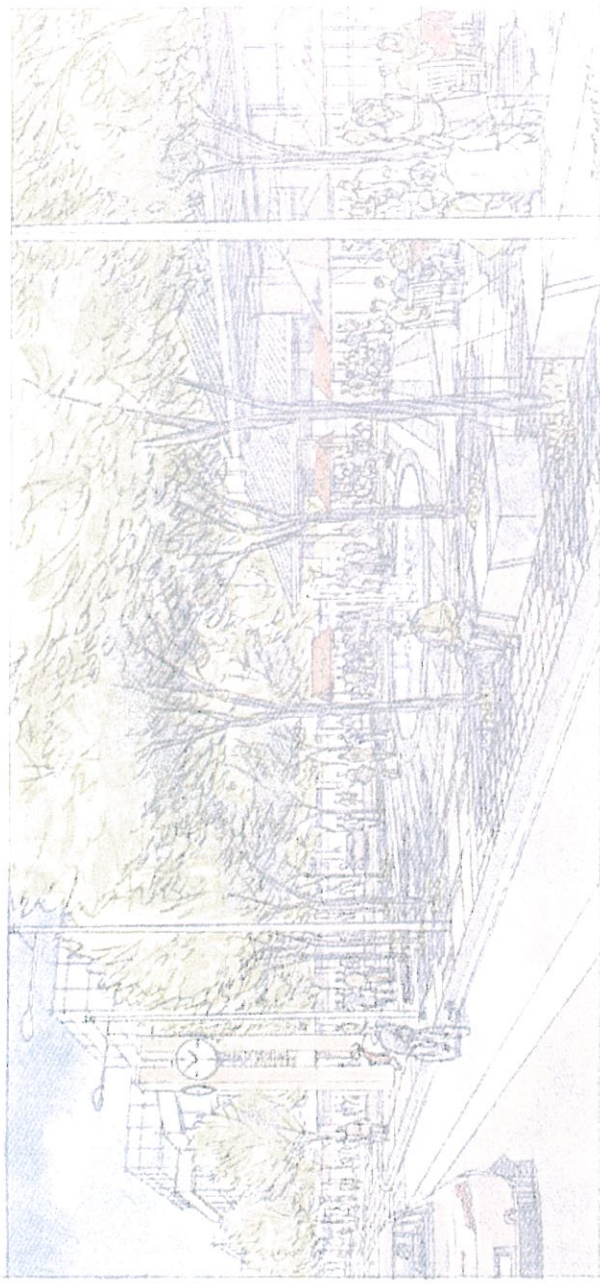
B

PROPOSED FRAMEWORK MODEL

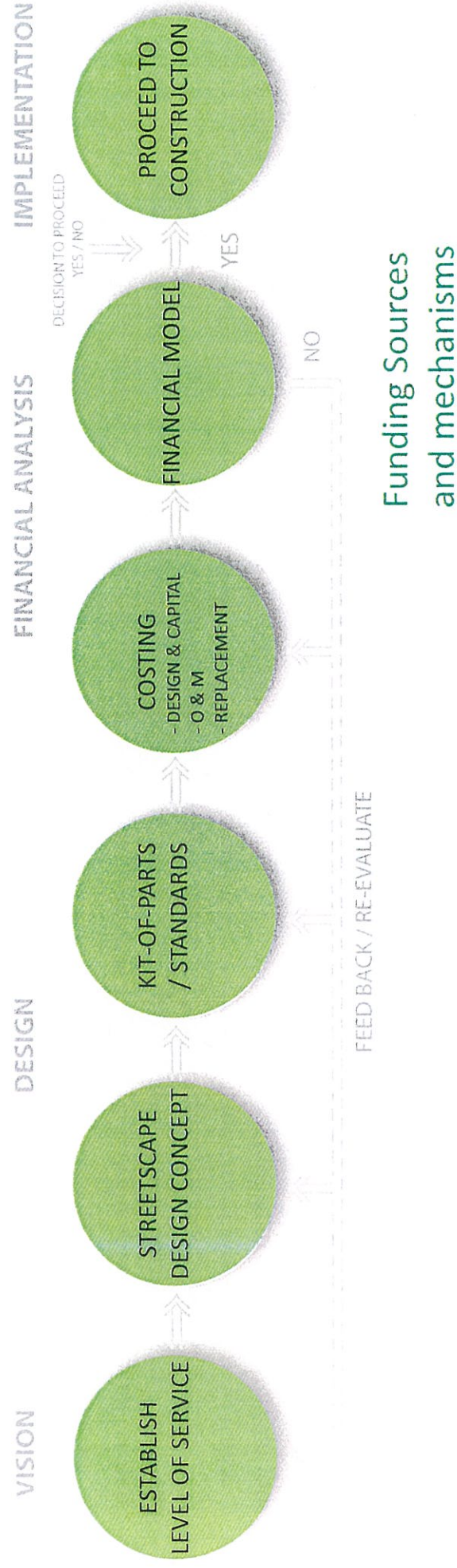


What is the Planning, Design and Financial Model Intended to Do?

- Identify and Evaluate Objectives / Level of Service
- Consistent Planning and Design Method / Protocol
- Develop a Financial Forecasting Tool



Conceptual Framework Diagram



Conceptual Levels of Service

Basic Level of Service



- Low intensity pedestrian traffic
- Standard sidewalk width
- Standard concrete
- Sod and street trees
- Standard street lighting

Enhanced Level of Service



- Street related uses, urban intensity and higher pedestrian traffic
- Materials reflect quality of place
- Greater use of unit paving and accent designs
- Larger pedestrian clearway width (2.0m) for more pedestrian activity
- Street furniture, enhanced tree planting and pedestrian lighting to create a safer, more pedestrian-friendly environment
- LID and sustainability features

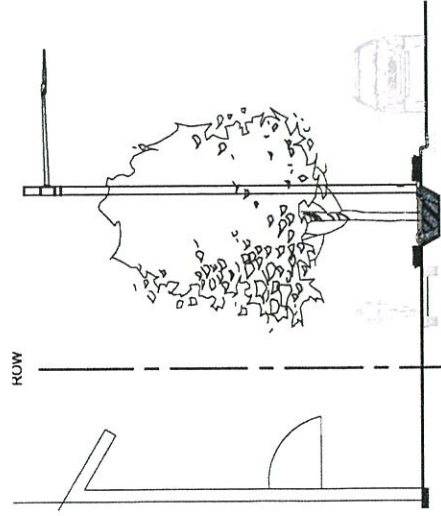
Premium Level of Service



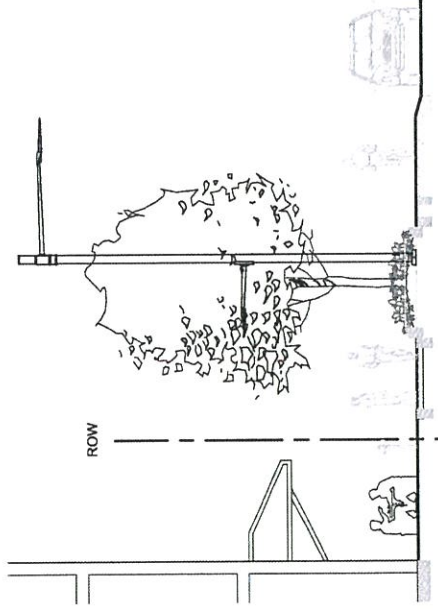
- High urban intensity, special streets
- High quality materials to attract and accommodate higher levels of investment and pedestrian traffic
- Large pedestrian zones with various amenities (planters with shrubs and perennials, street furniture etc.) to create a memorable experience
- Accent lighting to highlight interesting elements
- Tree infrastructure to help street trees survive in a more urban environment
- Special features and public art

Conceptual Levels of Service

Basic Level of Service
Low intensity, residential



Enhanced Level of Service
High intensity, mixed use urban



Premium Level of Service
High intensity, mixed use urban,
special streets

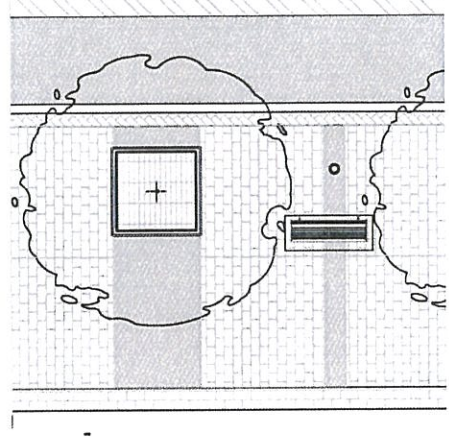
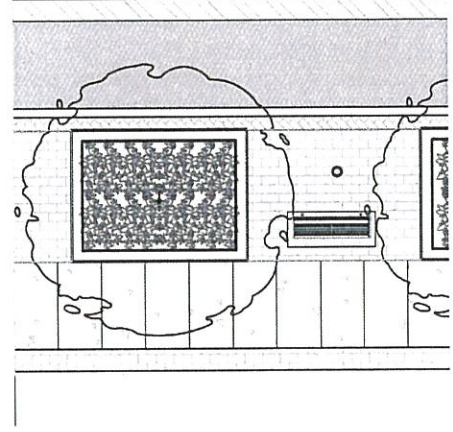
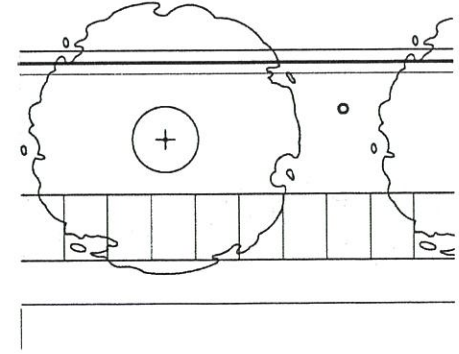
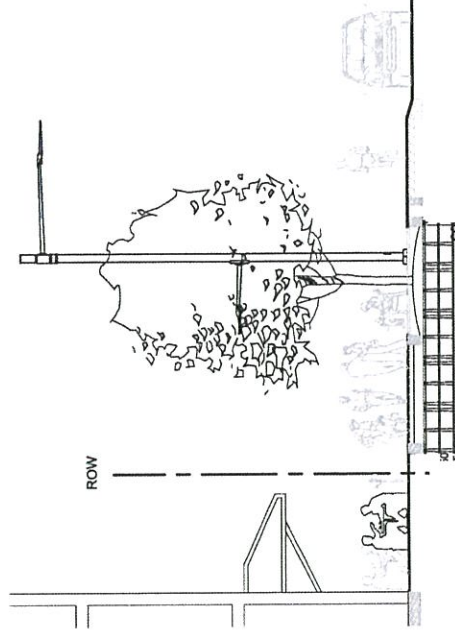
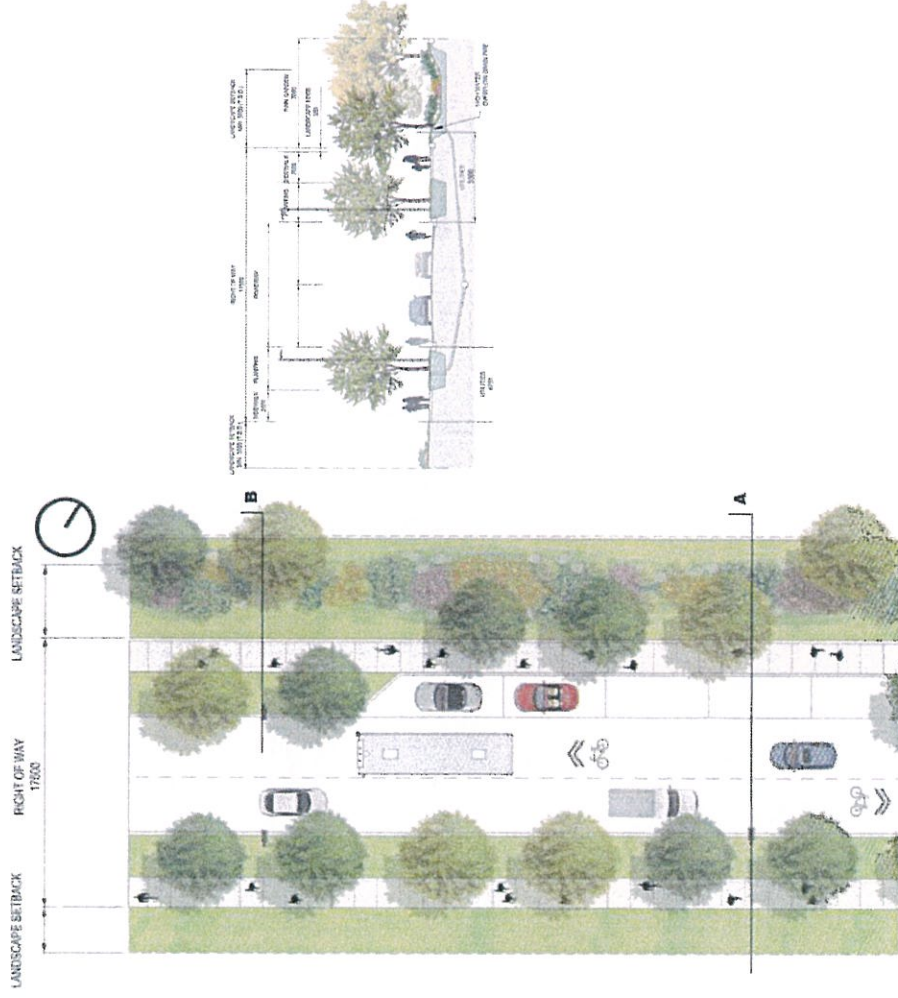


Illustration of a Theoretical Streetscape Project for the Model



- A major, long range streetscape and intensification project to test the financial model
- Allows us to identify issues, anomalies and questions and fix them (“Beta Testing”)
- Ensure that the model reflects real world considerations and situations

Summary of Capital, Operations, Maintenance Costs, Phasing and Construction Schedule

THEORETICAL PROJECT SUMMARY

Phase	Street	Hierarchy	Linear Meters	Total Capital Cost	Capital Cost / linear meter	Total Annual Operation Cost	Operations and Maintenance Cost / linear meter	Year of Construction	Year of Completion	# Years Const.
Phase 1	Street "C"	Minor Collector	200	\$608,120.00	\$3,040.60	\$33,545.00	\$167.73			
	Street "X"	Major Collector	2100	\$2,692,200.00	\$1,282.00	\$80,010.00	\$38.10	2016	2017	2
	Street "G"	Local	1800	\$2,129,580.00	\$1,183.10	\$91,125.00	\$50.63			
Phase 2	Street "S"	Major Arterial	2100	\$3,450,720.00	\$1,643.20	\$163,852.50	\$78.03	2018	2021	4
Phase 3	Street "T"	Major Arterial	320	\$525,824.00	\$1,643.20	\$24,968.00	\$78.03	2022	2023	2
	Street "V"	Major Arterial	320	\$525,824.00	\$1,643.20	\$24,968.00	\$78.03	2024	2025	2
Phase 4	Greenway	Minor Collector	2100	\$5,660,550.00	\$2,695.50	\$546,472.50	\$260.23	2026	2029	4
Phase 5	Street "A"	Local	287.5	\$616,831.25	\$2,145.50	\$56,472.19	\$196.43	2030	2033	4
	Street "A+"	Local	287.5	\$616,831.25	\$2,145.50	\$56,472.19	\$196.43	2034	2037	4
Phase 6	Street "B"	Local	287.5	\$616,831.25	\$2,145.50	\$56,472.19	\$196.43	2038	2041	4
Phase 7	Street "C+"	Local	287.5	\$616,831.25	\$2,145.50	\$56,472.19	\$196.43			
	Street "D"	Local	287.5	\$616,831.25	\$2,145.50	\$56,472.19	\$196.43			
Phase 8	Street "E"	Local	287.5	\$616,831.25	\$2,145.50	\$56,472.19	\$196.43			
	Street "F"	Local	287.5	\$616,831.25	\$2,145.50	\$56,472.19	\$196.43			
	Street "F+"	Local	287.5	\$616,831.25	\$2,145.50	\$56,472.19	\$196.43			
			11240	\$20,527,468.00	\$1,826.29	\$1,416,718.50	\$126.04			25

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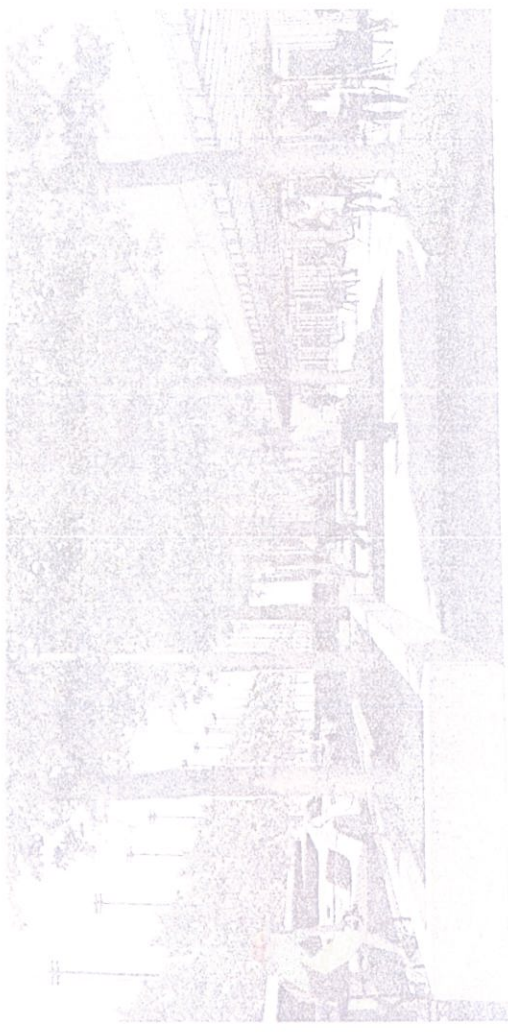
Define Problem Statement

- Purpose: to understand the fiscal implications of adopting different levels of service for streetscape treatment.
- This includes:
 - Original capital costs;
 - Operating costs;
 - Lifecycle/capital replacement costs.



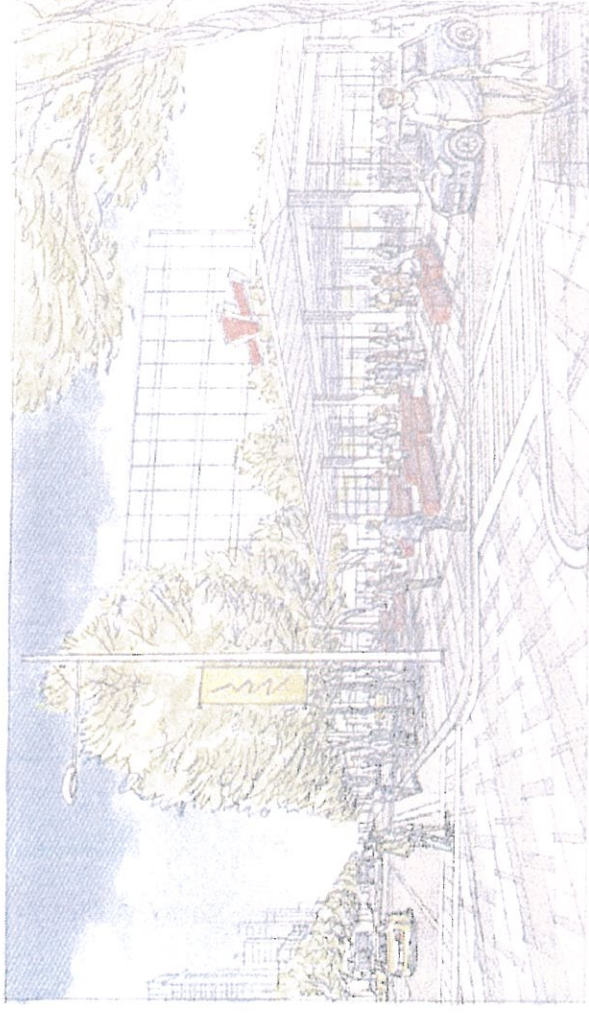
Elements of the Model

- Financial estimate of any individual streetscape project that adheres to a generally defined level of service.
- A “roll-up” of all planned projects which are currently held in abeyance pending the development of the streetscape manual and financial strategy.



Principles of Development of the Model

- A simple and usable model must be a flexible and accurate predictive model.
- Sufficient detail on individual material costs and operating costs is required to arrive at a simple estimate of financial impact from any individual project or the cumulative total for the City at any point in time.

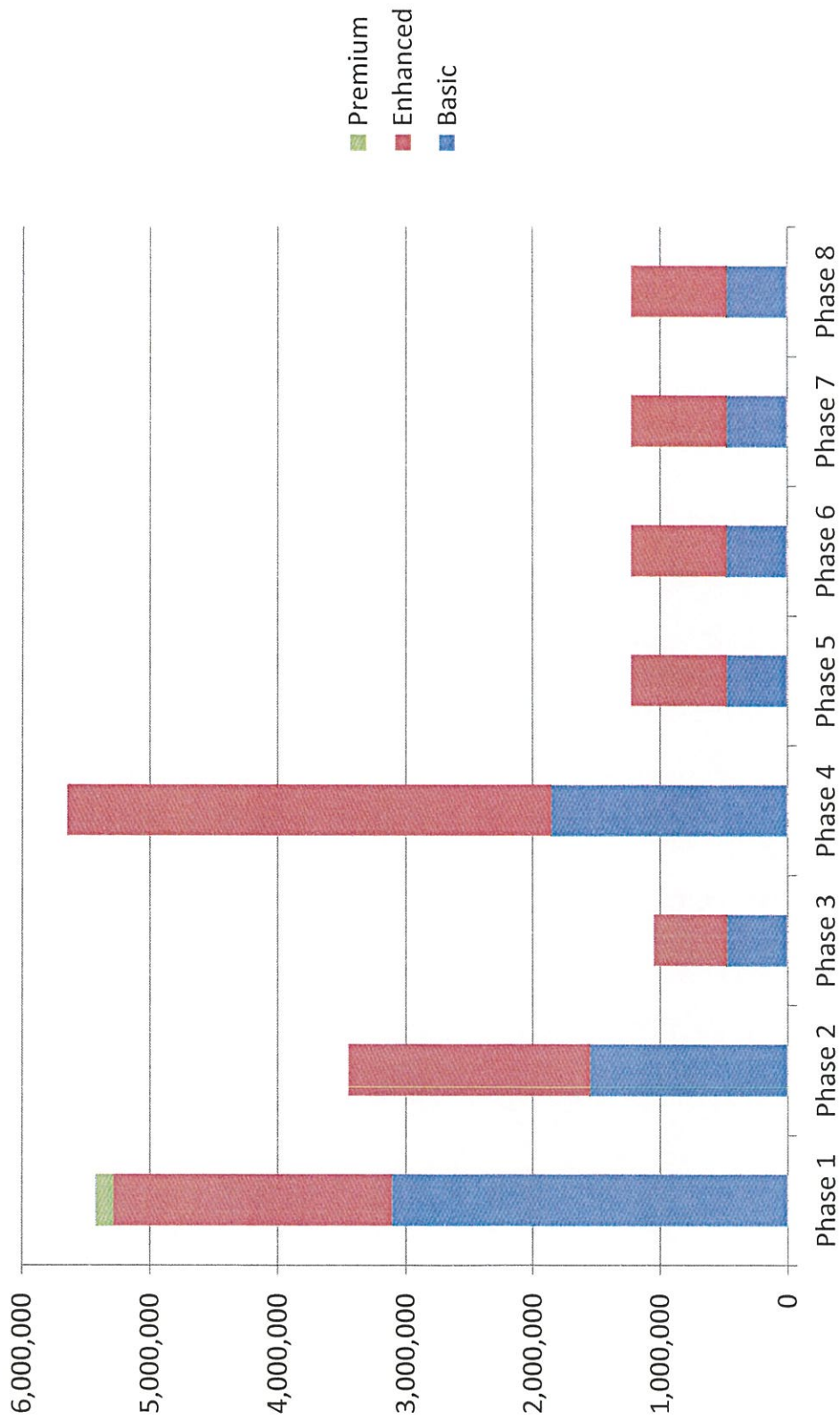


Capital Cost Estimates

Phase	Street Name	SERVICE LEVEL		Enhanced	Premium	Grand Total
		Basic				
Phase 1	Street "C"	273,100		197,500	137,520	608,120
	Street "G"	1,486,080		643,500	0	2,129,580
	Street "X"	1,348,200		1,344,000	0	2,692,200
Phase 2	Street "T"	1,553,790		1,896,930	0	3,450,720
Phase 3	Street "S"	236,768		289,056	0	525,824
	Street "V"	236,768		289,056	0	525,824
Phase 4	Greenway	1,852,200		3,808,350	0	5,660,550
Phase 5	Street "A"	236,325		380,506	0	616,831
	Street "A+"	236,325		380,506	0	616,831
Phase 6	Street "B"	236,325		380,506	0	616,831
	Street "C+"	236,325		380,506	0	616,831
Phase 7	Street "D"	236,325		380,506	0	616,831
	Street "E"	236,325		380,506	0	616,831
Phase 8	Street "F"	236,325		380,506	0	616,831
	Street "F+"	236,325		380,506	0	616,831
Grand Total		8,877,506		11,512,442	137,520	20,527,468

For illustration purposes only

Service Level by Type by Phase



For illustration purposes only

% of Capital Costs by Phase by Service Level

Phase	Basic	Enhanced	Premium
Phase 1	57%	40%	3%
Phase 2	45%	55%	0%
Phase 3	45%	55%	0%
Phase 4	33%	67%	0%
Phase 5	38%	62%	0%
Phase 6	38%	62%	0%
Phase 7	38%	62%	0%
Phase 8	38%	62%	0%
Grand Tot	43%	56%	1%

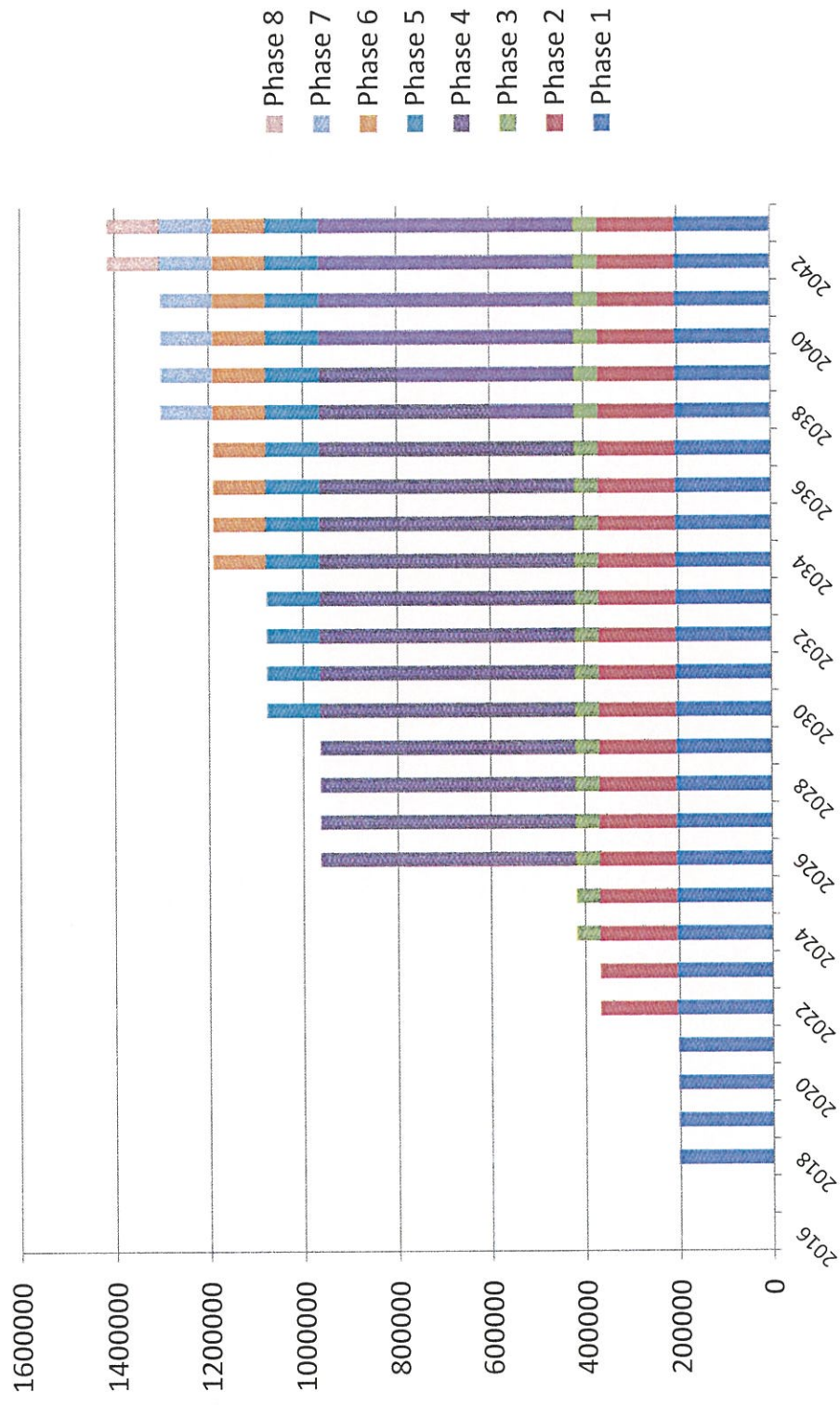
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Phasing

Estimated Start					
Phase	Street Name	Year of		# of years of Construction	Total
		Construction	Construction		
Phase 1	Street "C"	2016		2	608,120
	Street "G"	2016		2	2,129,580
	Street "X"	2016		2	2,692,200
Phase 2	Street "T"	2018		4	3,450,720
Phase 3	Street "S"	2022		2	525,824
	Street "V"	2022		2	525,824
Phase 4	Greenway	2024		2	5,660,550
Phase 5	Street "A"	2026		4	616,831
	Street "A+"	2026		4	616,831
Phase 6	Street "B"	2030		4	616,831
	Street "C+"	2030		4	616,831
Phase 7	Street "D"	2034		4	616,831
	Street "E"	2034		4	616,831
Phase 8	Street "F"	2038		4	616,831
	Street "F+"	2038		4	616,831
Grand Total					20,527,468

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Operating Costs by Year by Phase



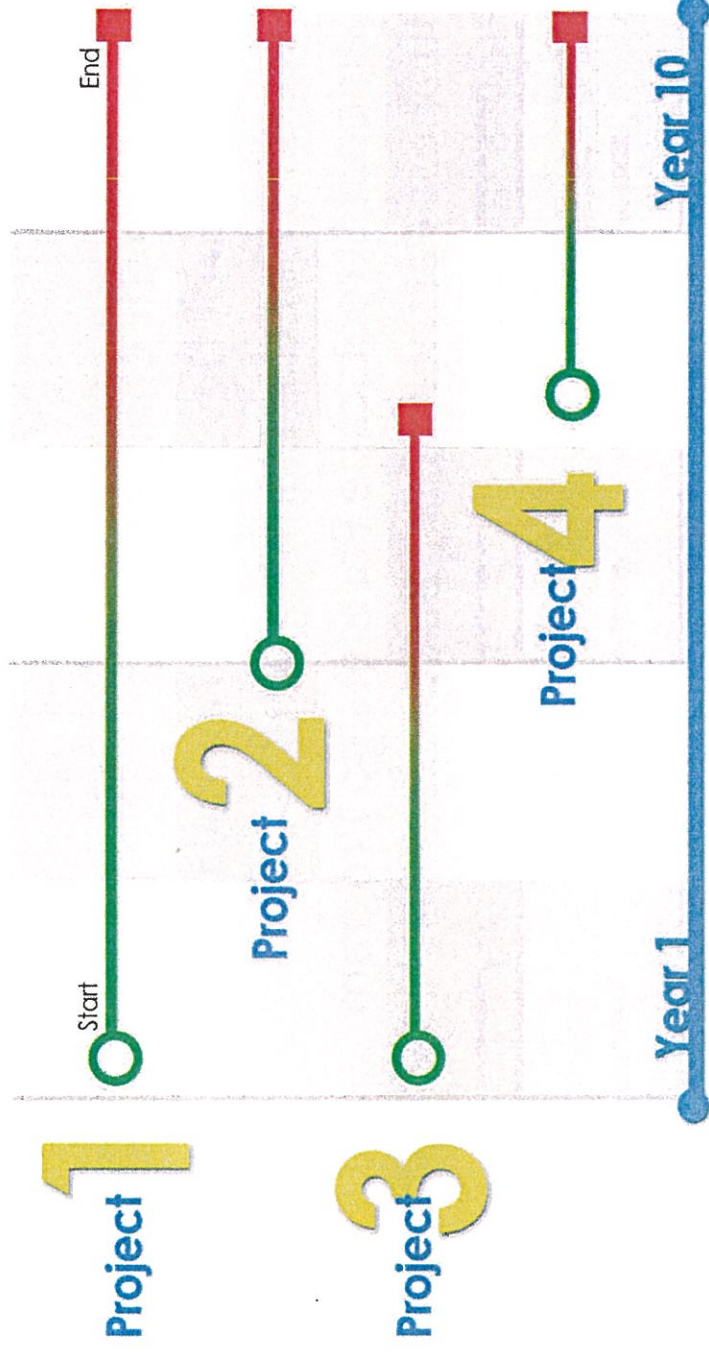
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Total Operating Costs by Year



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Creating a Cumulative Model



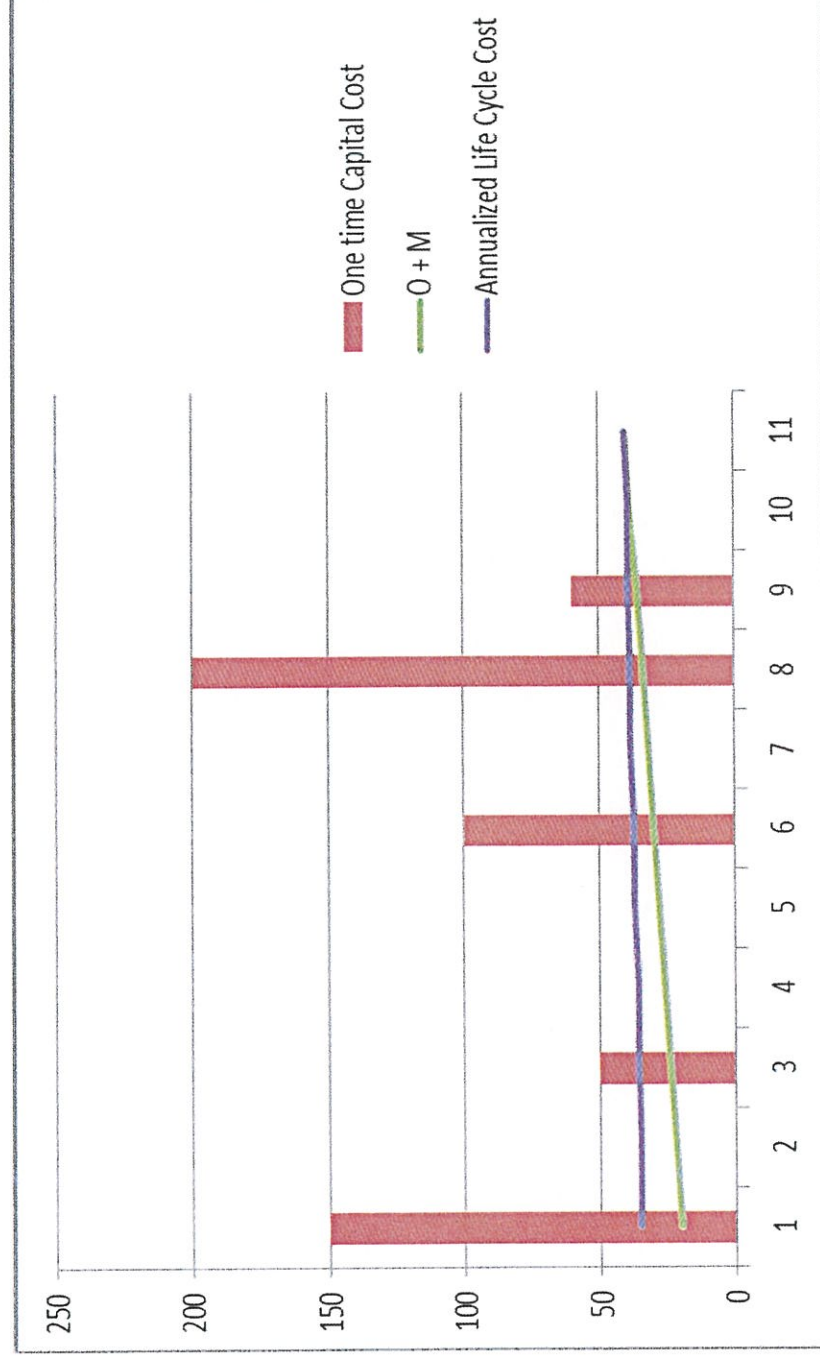
= Cumulative Impact Each Year

For illustration purposes only

Capital Funding Source Schedule (by Project)

- Gas Tax
- Development Charges
- Conditions of Development Approval
- Section 37 of the Planning Act
- Regional Streetscape Partnership Program
- Business Partnerships / BIA's
- Provincial Grants
- Strata Ownership
- Property Tax

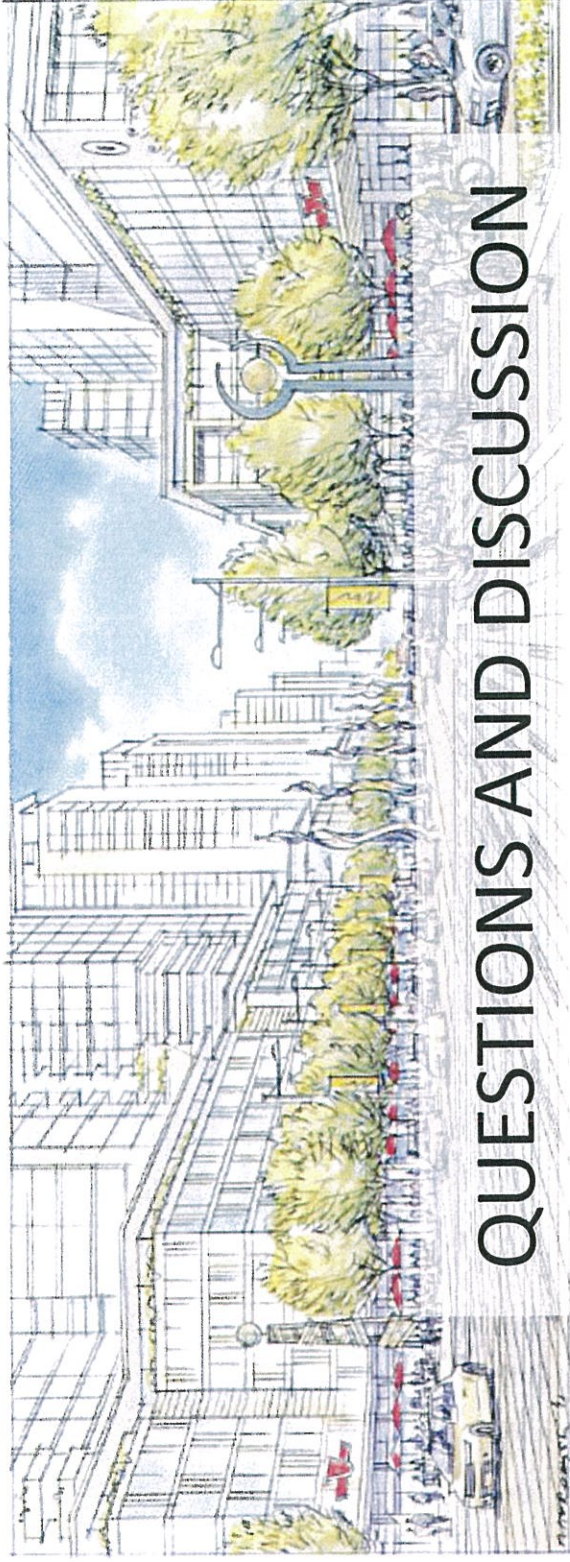
Life Cycle Costs



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Next Steps

- Council Review
- Stakeholder Review
- Staff Review
- Refine and Update
- Complete Phase 3



QUESTIONS AND DISCUSSION

