

Oct 23, 2020

# Port Lands Flood Protection (PLFP)

## Lake Shore Blvd East - Bridge & Public Realm

Design Review Panel

# Lake Shore East Bridge & Public Realm



# Lake Shore Public Realm DRP Reviews



August 2017 Issues ID

Feb 2018 Schematic Design - Vision

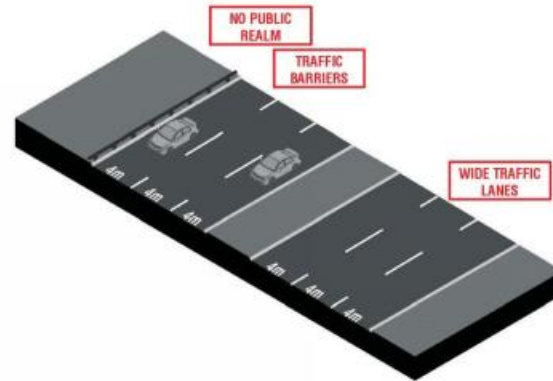
May 2018 Design Development – South Sidewalk & Intersections

April 2019 Design Development - North Side Landscape & Intersections – Full Support

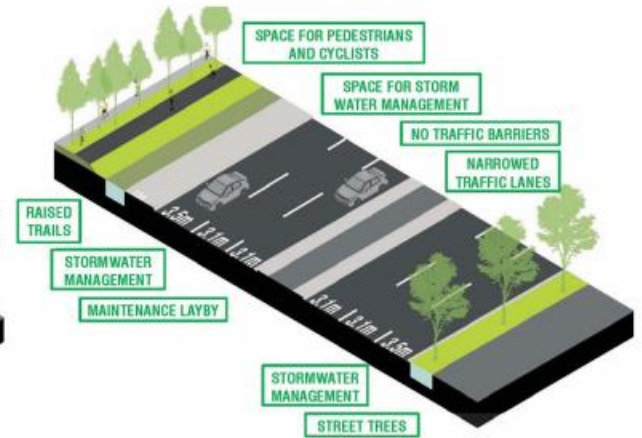
**Oct 2020 Detailed Design of Phase 1 – Don Roadway to Carlaw**

# Lake Shore Public Realm Vision – Objectives

1. Design an **urban civic boulevard** with a distinct **continuous landscape identity**
2. Prioritize **traffic calming** measures and **enhance public realm experience and safety**
3. Improve **East-West connectivity** through rebalanced multimodal mobility
4. Improve **North-South connectivity** through enhanced intersections
5. Design for **sustainable operations and maintenance** for public realm



Typical Existing Condition

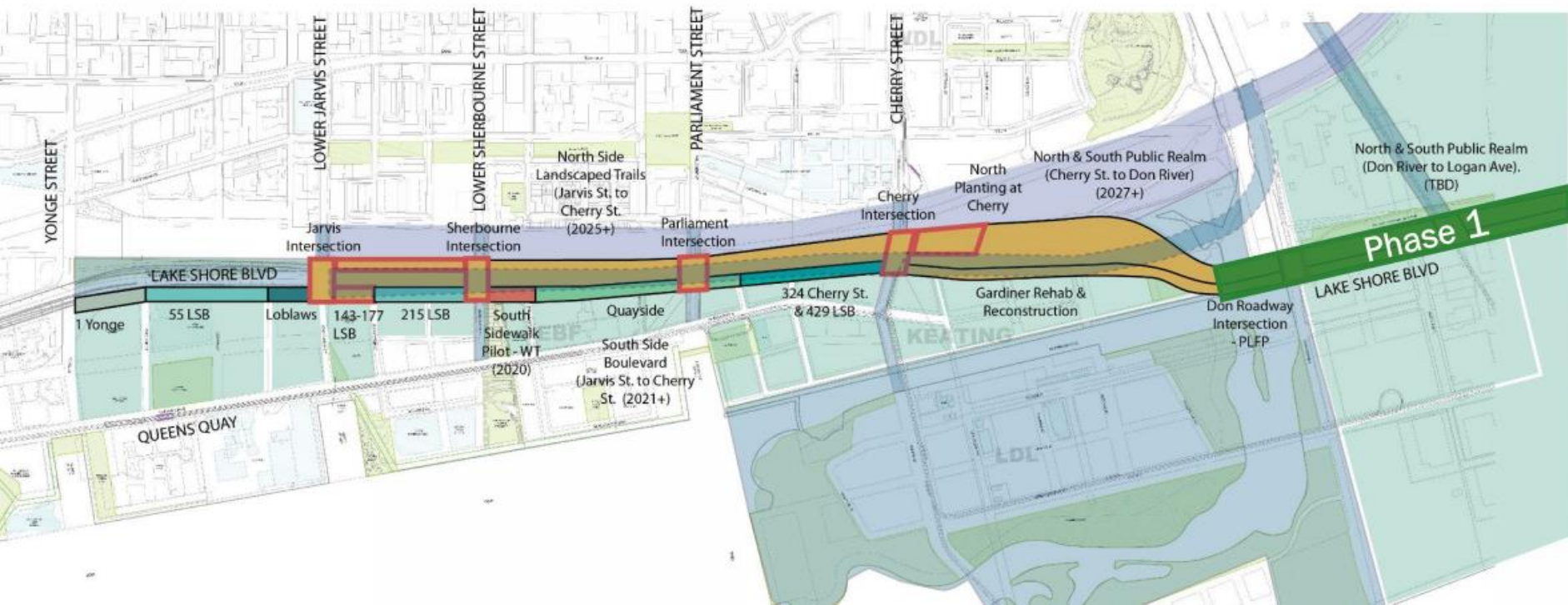


Typical Proposed Condition - West of the Don River

# Lake Shore Public Realm Implementation Plan

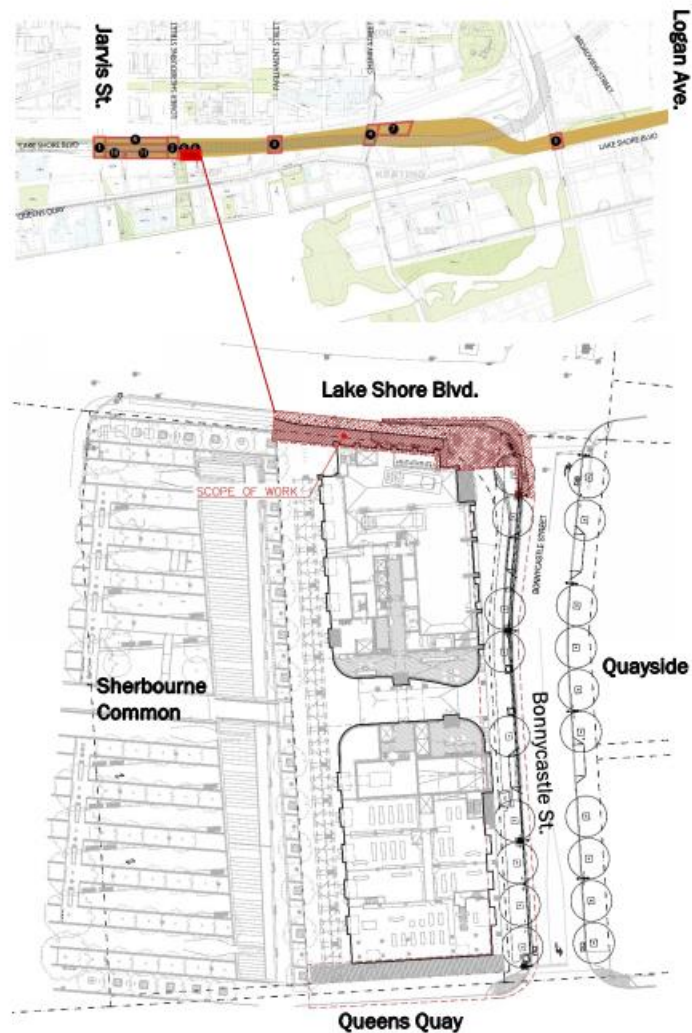


- Lake Shore Public Realm
- Quick Start Projects
- Pilot Project
- Metrolinx Projects
- City / WT Infrastructure Projects
- Private Development
- Development Frontages



# Lake Shore Public Realm - Updates

- **Lake Shore Public Realm Vision & Implementation Plan was approved by MECP in July 2020**
- In partnership with City of Toronto Green Streets, we are **conducting a pilot project to test innovative materials** that can achieve improve the **sustainability of our street plantings** and **management of stormwater**.
- The results will inform the detailed design of Lake Shore Boulevard East corridor and the City's Green Street standards.
- Pilot project is now built and an agreement is underway to deliver additional Quick Start projects ahead of full scale implementation



# Lake Shore Public Realm – Pilot Project



Lake Shore Pilot Project at 12 Bonnycastle St. has reached substantial completion. Improvements include:

- Bioretention planting with stormwater passive irrigation
- Permeable paver and base sidewalk
- Exposed aggregate concrete with sawcut pattern at intersection corner



Bees on Lake Shore!

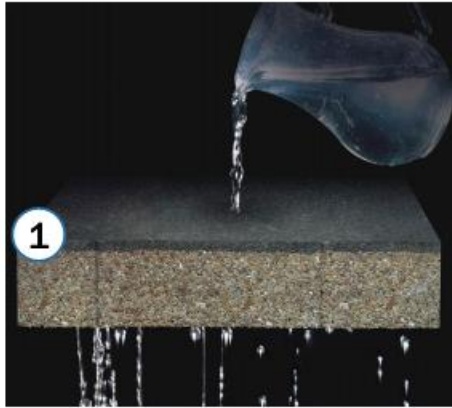


*Bioretention planting and permeable pavers*



*Exposed aggregate concrete corner at Bonnycastle*

# Testing New Non-Standard Materials & Innovations in SWM



1. **HydroPavers – Permeable unit pavers** made of recycled ceramics
2. **Permavoid sub-base** to store stormwater for passive irrigation of planting
3. **Sandblasted and sawcut concrete** with exposed granite aggregate
4. **Salt-phytoremediating plants** – *Armeria maritima* (sea thrift) to take up winter salt out of the soil

The project will be *monitored by TRCA Sustainable Technologies Evaluation Program* to evaluate:

- *stormwater retention and quality improvements*
- *health and reduced maintenance of roadside plantings irrigated with stormwater*
- *performance of non-standard permeable pavers and base*

The findings will inform detailed design and implementation of the whole Lake Shore Blvd. East corridor, and contribute to the City's Green Streets standards development.



# Lake Shore Bridge & Public Realm

**Opportunity:** Integrated design and delivery of two EA scopes as part of PLFP



# PLFP (Don Mouth Naturalization EA)

## Background

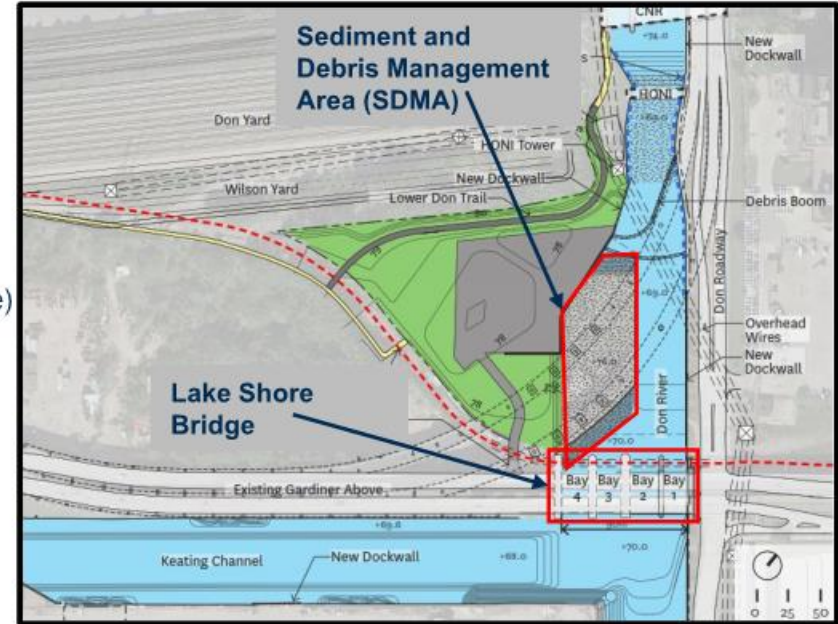


### Goal:

- To create Regulatory Flood Protection, the Don River must be widened and deepened North of Lake Shore to pass flood waters under a lengthened Lake Shore Boulevard crossing

### Scope:

- **Extension of the Lake Shore Bridge with Gardiner Ramps in-place**
- Underpinning of the Gardiner Ramp piers
- Don River widening and deepening
- Sediment and debris removal (SDMA)
- Relocation of primary dredging operations (to north Lake Shore Bridge)
- Construction of flow control weirs/systems
- Complete by December 2023



# Gardiner EA

## Background



### Goal:

- Improve connectivity to City's waterfront
- Support Don Mouth Naturalization and Port Lands Flood Protection Project
- Balance modes of transportation in the corridor

### Scope:

- **Removal of Gardiner ramps from Cherry Street to Logan**
- **Widening of the Lake Shore Bridge, including replacement of pedestrian / bike lanes, upon eventual removal of the Gardiner Piers.**
- **Public Realm Improvement from East of the Lake Shore Bridge to Carlaw.**
- Realignment and reconstruction of Gardiner Expressway east of Jarvis
- Construction of a realigned Gardiner East and Lake Shore Blvd East from Cherry St. to Don Roadway



## PLFP Lake Shore Bridge Base Case Scope

### Waterfront Toronto

- Extension of the Lake Shore Bridge with Gardiner Ramps in-place
- Underpinning of the Gardiner Ramp piers

## Gardiner Hybrid 3 Project Scope

### City of Toronto

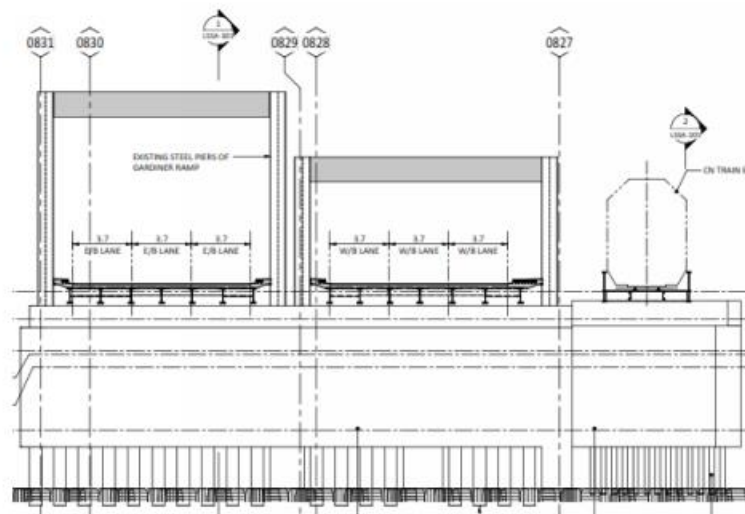
- Widening of the Lake Shore Bridge, including replacement of pedestrian / bike lanes, upon eventual removal of the Gardiner Piers.
- Public Realm Improvement from East of the Lake Shore Bridge to Carlaw.

## Lake Shore Boulevard East Bridge & Public Realm – Accelerated Option

### Combined Scope under Waterfront Toronto

- Extension of Lake Shore Bridge with Gardiner Ramps not in-Place
- Widening of the Lake Shore Bridge, including addition of pedestrian / bike lanes
- Demolition of Gardiner Ramps from West of the Bridge to Logan
- Reconstruction of the Existing two bays of Lake Shore Bridge
- Public Realm Improvement from East of Lake Shore Bridge to Carlaw.

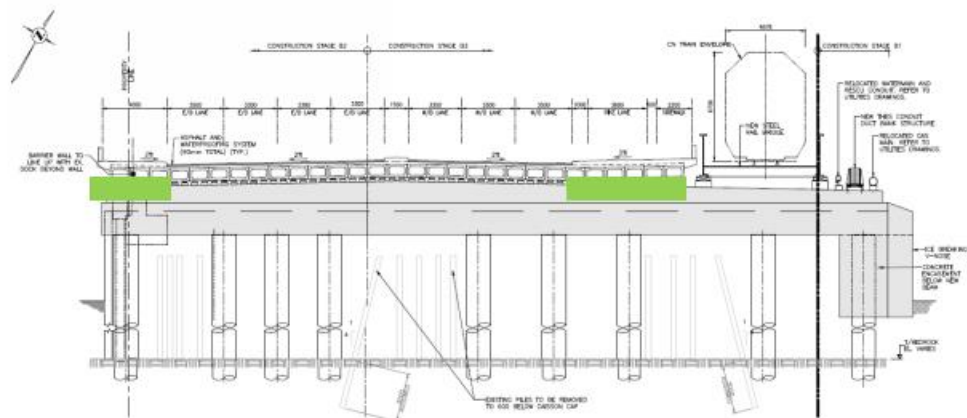
# Lake Shore Bridge at Don River



## Base Case

*Lengthen existing narrow bridge under Gardiner structure & widen later as part of Gardiner EA*

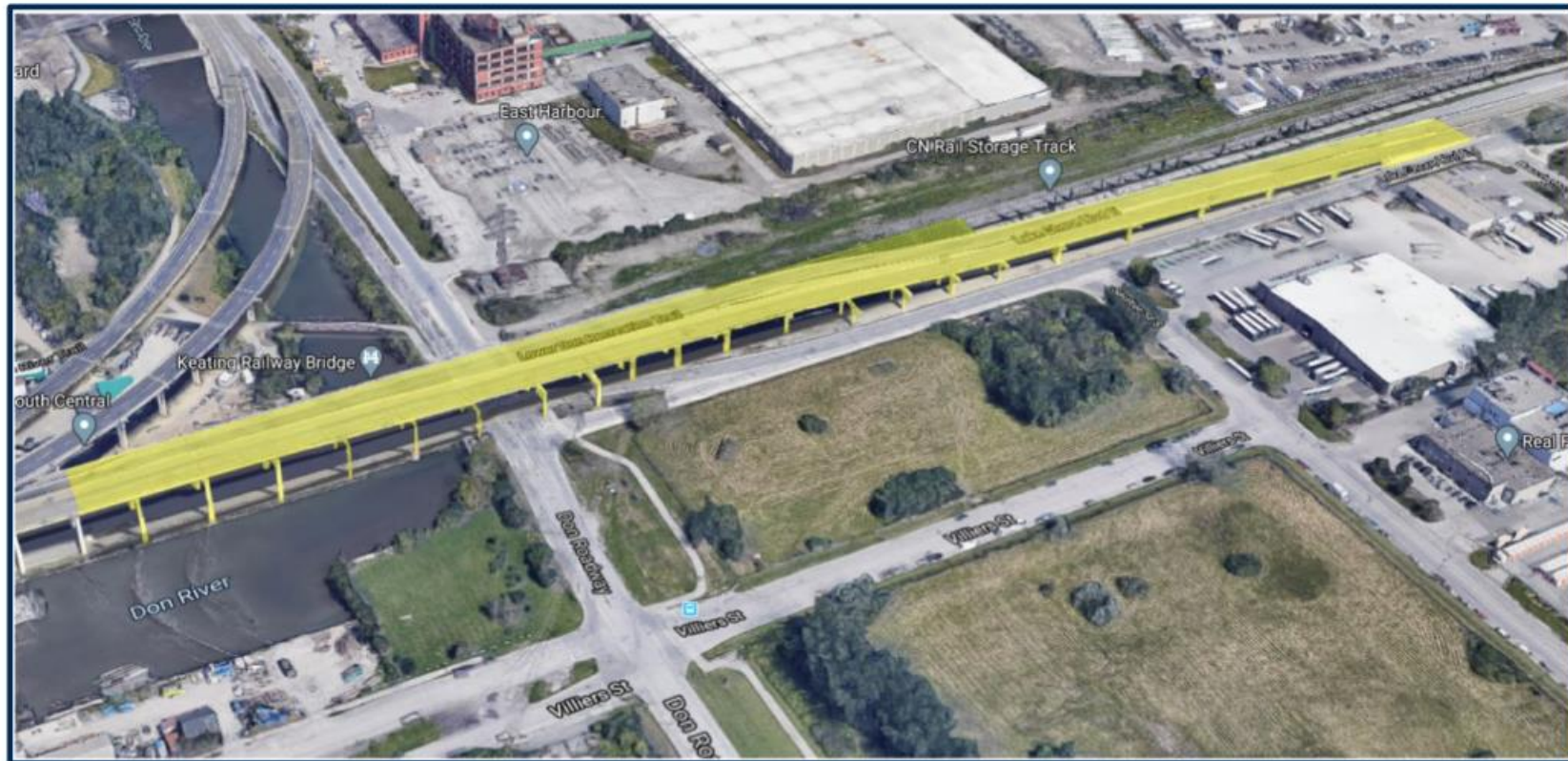
*No ped/bike connectivity on Lake Shore before Gardiner reconstruction*



## Accelerated Option

*Rebuild bridge longer and wider to accommodate sidewalks and bike trail and Deliver final bridge as part of PLFP*

# Accelerated Option – Reconfiguration of Lake Shore East



Gardiner ramps to be removed and road and public realm reconfigured Don Roadway to Carlaw Ave.



# Design Updates



1. Harbor Lead rail spur has been shifted to the center median, and north landscaped trails have taken its place, resulting in generously landscaped trails in north boulevard to Booth Ave.
2. Signalized major intersections at Don Roadway, Booth Ave, and Carlaw Ave., project for Broadview
3. Don Roadway intersection and north side public realm are still being fine tuned
4. Ongoing coordination with adjacent projects and planning studies :
  - a. East Harbour Secondary Plan
  - b. South of Eastern and Port Lands Transportation Servicing Masterplan
  - c. Coxwell Stormwater By-pass Project
  - d. Broadview Avenue Extension EA
  - e. Gardiner East Reconstruction and Lake Shore Blvd. East Realignment
  - f. PLFP – Don Roadway and Flood Protection Landform
  - g. McCleary Precinct development



# Lake Shore Public Realm – DD Review



## Panel Consensus Comments:

- Supportive of the project and appreciate the radical simplicity of the vision
- **Highly supportive of linear park concept and design**
- Supportive of lighting concept
- Speed reduction on Lake Shore is an important foundation to an improved public realm experience
- **Pilot project is a key first step, identify opportunities for additional early implementation projects, i.e. key intersections**
- Consider extending project scope east to Woodbine
- Important for the project to receive City Council approval and Waterfront Toronto should consider a long-term continuity role in the project much like PLFP

# Topics for Panel Consideration



1. Consistency with the public realm plan and cohesive boulevard identity
2. Intersections design and trail transition zones at Don Roadway and Booth
3. Planting strategy & stormwater bioretention approach
4. Landscape treatment of the median and rail spur
5. Protective barrier design for bike trail east of Booth
6. Future proofing approach



# Lakeshore Boulevard East Public Realm - Don River to Carlaw Avenue Design Review Panel

October 21 2020

**WEST 8**

 **The Planning  
Partnership**

**ENTUITIVE**

  
**WATERFRONT**Toronto

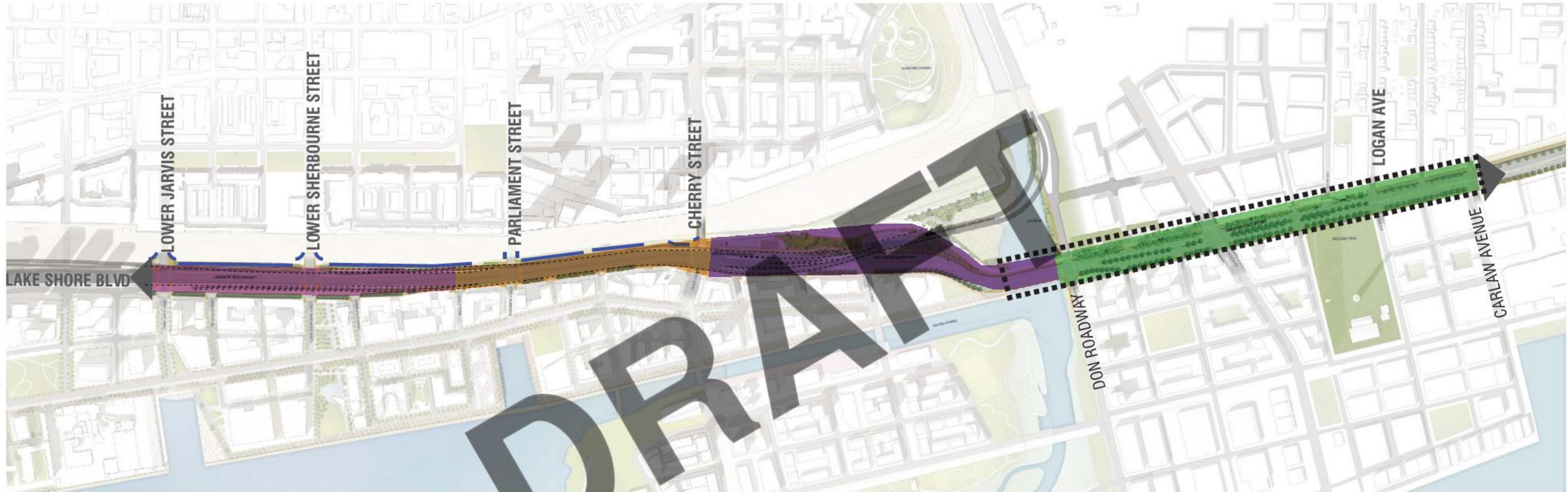
# A New Lake Shore Trail Marks the Old Lake Shore



# Lake Shore Boulevard East: Green Connection, Don River to the Beaches



# The Four Typical Sections of Lake Shore Boulevard East



**ZONE 1 - GRITTY**  
JARVIS STREET TO BONNYCASTLE



**ZONE 2 - NARROW**  
BONNYCASTLE TO CHERRY



**ZONE 3 - INFRASTRUCTURAL/NATURAL**  
CHERRY TO DON ROADWAY



**ZONE 4 - URBAN**  
DON ROADWAY TO CARLAW AVENUE

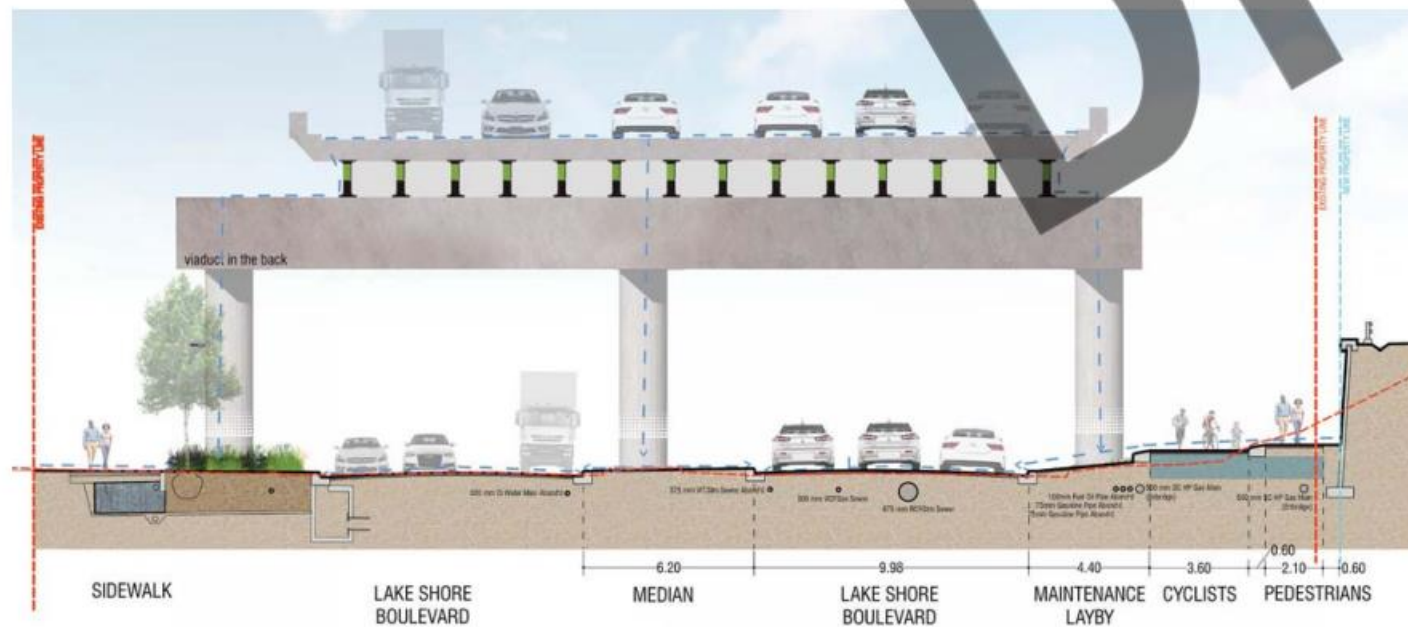


# Typical Sections of Future Lake Shore Boulevard East (West of Don River)

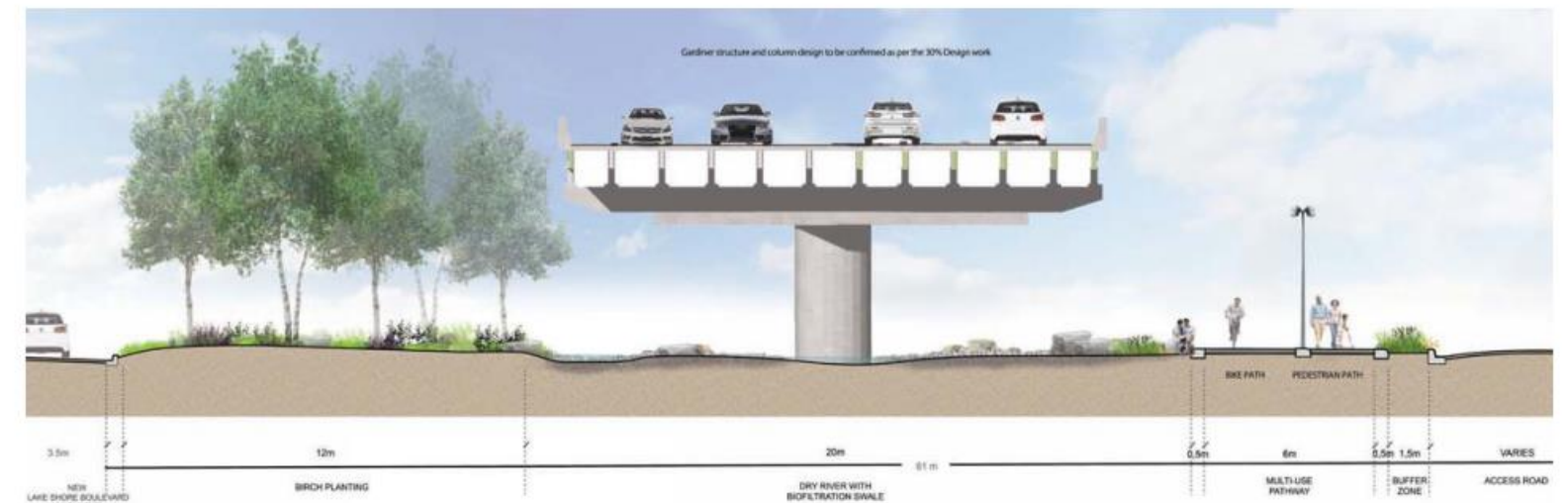
Design Review Panel Presented and Approved April 2019



**ZONE 1 - GRITTY**  
JARVIS STREET TO BONNYCASTLE



**ZONE 2 - NARROW**  
BONNYCASTLE TO CHERRY



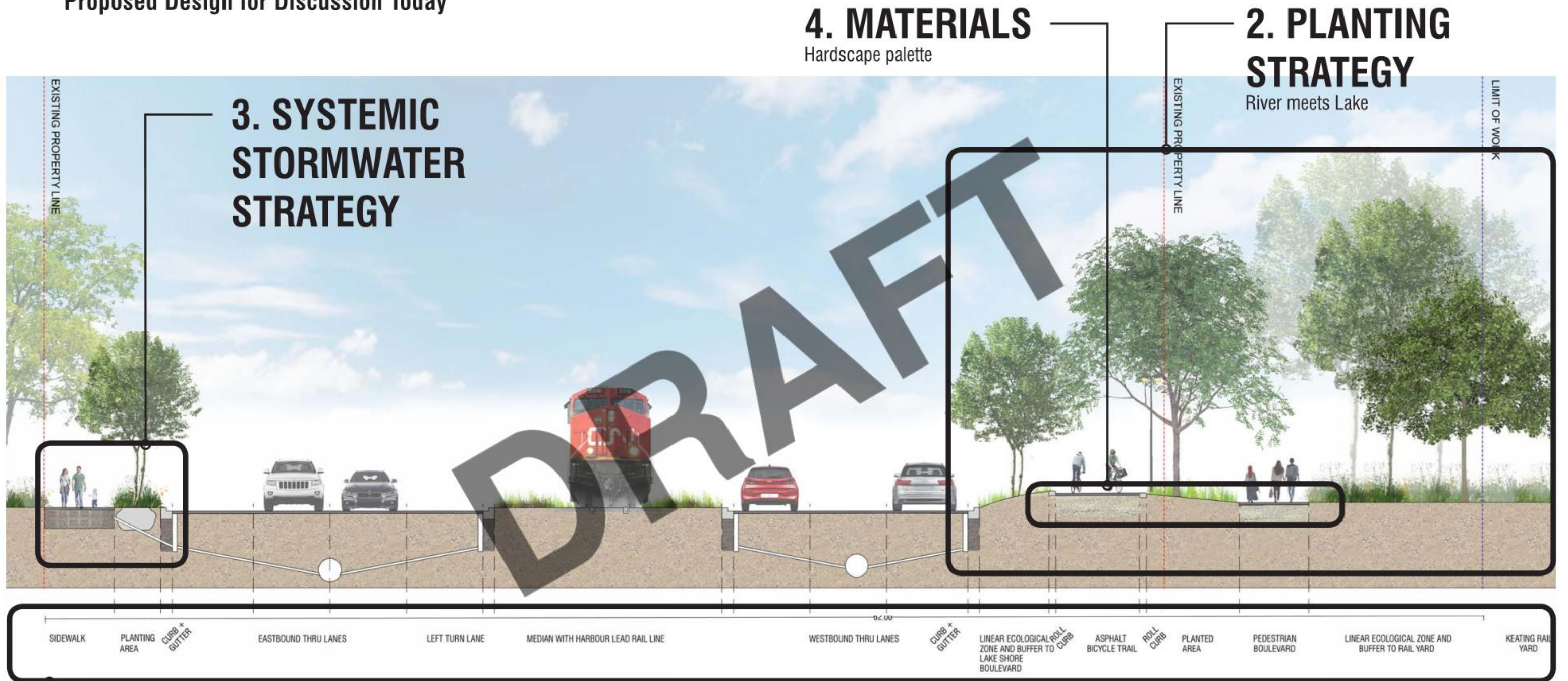
**ZONE 3 - INFRASTRUCTURAL/NATURAL**  
CHERRY TO DON ROADWAY





# Detailed Design Topics

Proposed Design for Discussion Today



# LAKE SHORE BOULEVARD BRIDGE

Over the Don River

SMALL SIDEWALK  
ON NORTH SIDE

TWO BRIDGE  
STRUCTURES

GARDINER RAMP  
TO BE REMOVED

VIEWS OF  
PORTLANDS



# DON RIVER TO LOGAN

Trail between rail & highway ramps



GARDINER RAMP  
TO BE REMOVED

HARBOUR LEAD  
RAIL LINE

# DON ROADWAY TO BOOTH AVENUE : NORTH SIDE

East to West direction of Lakeshore Boulevard



GARDINER RAMP  
TO BE REMOVED

FUTURE  
DEVELOPMENT  
AREA

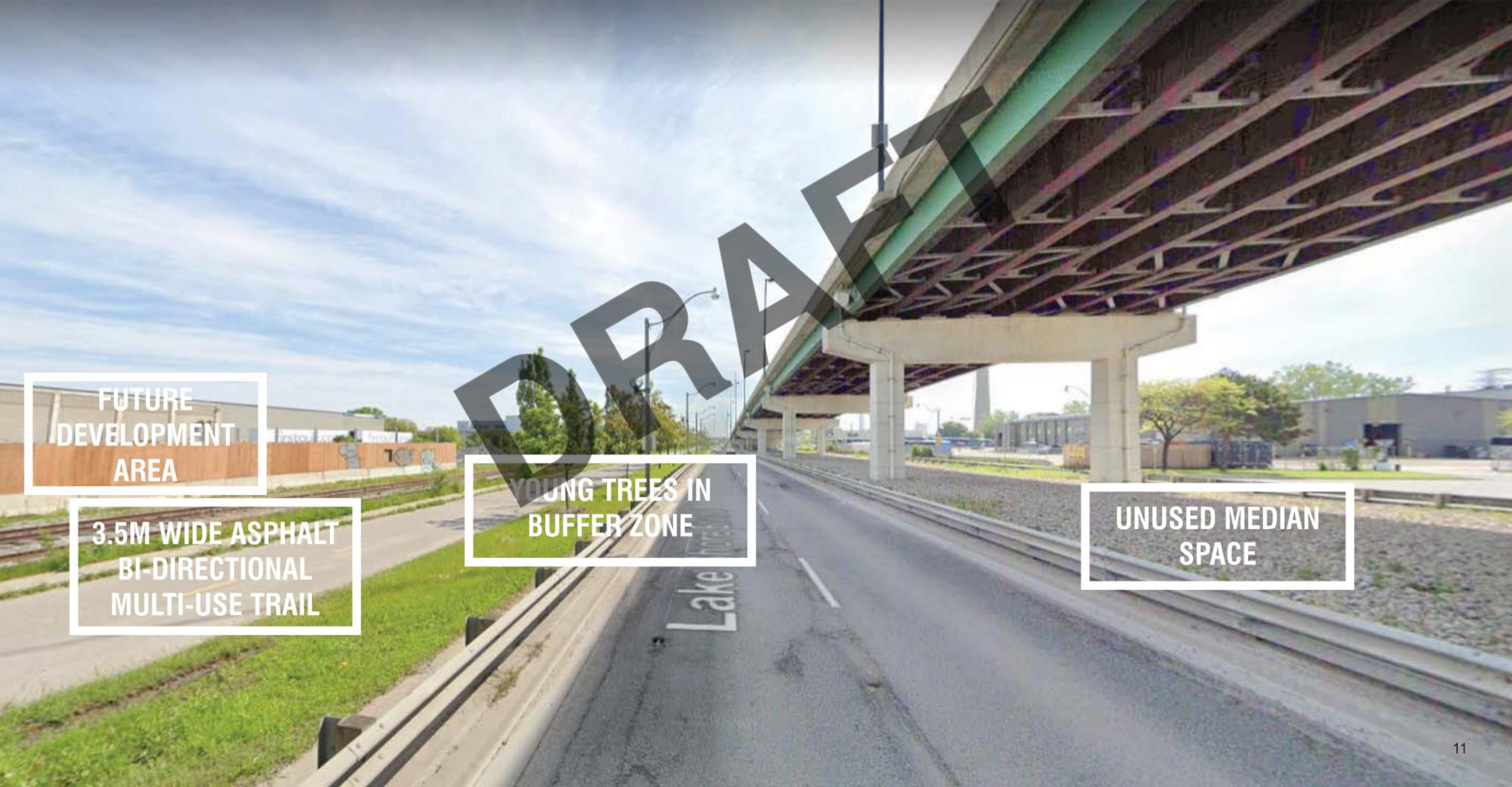
FUTURE  
DEVELOPMENT  
AREA

NO FENCE  
BETWEEN RAIL LINE  
AND MAIN ROAD

RESIDUAL RAIL  
LINE TO BE REMOVED

# DON ROADWAY TO BOOTH AVENUE: NORTH SIDE

East to West direction of Lakeshore Boulevard



FUTURE DEVELOPMENT AREA

3.5M WIDE ASPHALT BI-DIRECTIONAL MULTI-USE TRAIL

YOUNG TREES IN BUFFER ZONE

UNUSED MEDIAN SPACE

# DON ROADWAY TO BOOTH AVENUE : SOUTH SIDE

West to East direction of Lakeshore Boulevard



**GARDINER RAMP  
AND MEDIAN TO  
BE REMOVED**

**NARROW SIDEWALKS  
IMMEDIATELY ADJACENT  
TO ROAD**

# LOGAN AVENUE TO CARLAW AVENUE : NORTH SIDE

East to West direction of Lakeshore Boulevard



FUTURE  
DEVELOPMENT  
AREA

HARBOUR LEAD  
TO BE RELOCATED

POPULAR  
MULTI-USE TRAIL

STRUGGLING  
PLANT LIFE

# LAKESHORE BOULEVARD AFTER CARLAW AVENUE

Where Our Public Realm Project Ties Into

SEPARATED PEDESTRIAN  
SIDEWALK

LINEAR PARK  
ATMOSPHERE

BI-DIRECTIONAL  
CYCLING TRAIL

HARBOUR LEAD LINE  
CROSSES INTO MEDIAN



## Design Principles



# Ecological

**Biodiverse Palette**  
**Maximize Infiltration**



# Balanced

**Pedestrian and  
Cyclist Experience**



# Sensual

**A Landscape Experience  
in the City**

# 1. Space Dedication

Five Zoomed In Areas

**WIDER R.O.W.** - Around 61m  
Don Roadway to Saulter Street

**NARROWER R.O.W.** - Around 45m  
Don Roadway to Saulter Street



**Area 1** - Lakeshore  
Boulevard Bridge

**Area 2** - Don Roadway  
to Saulter Street

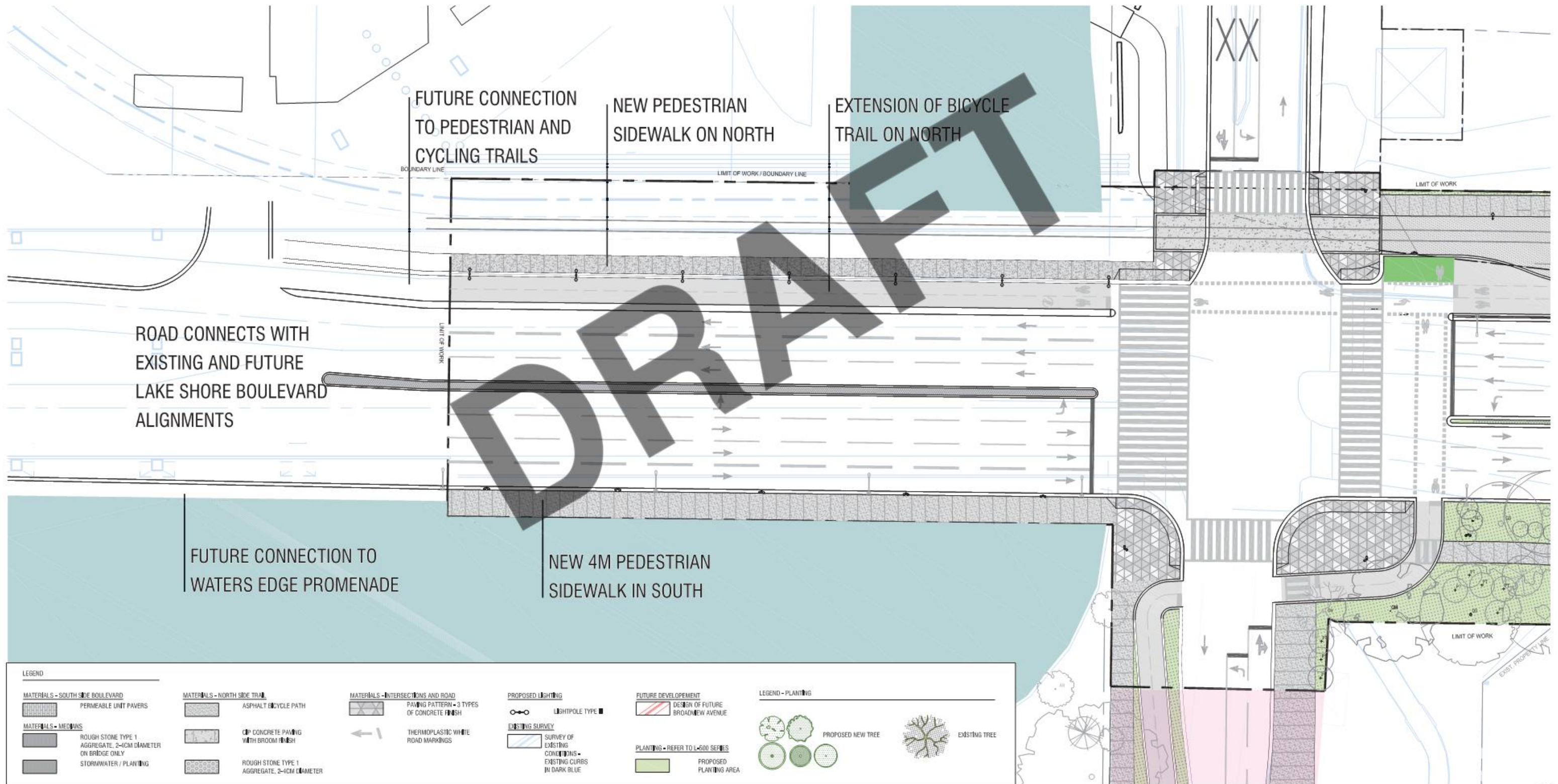
**Area 3** - Saulter Street to  
Bouchette Street

**Area 4** - McCleary Park

**Area 5** - Logan Avenue to  
Carlaw Avenue

# Area 1 - Lakeshore Boulevard Bridge

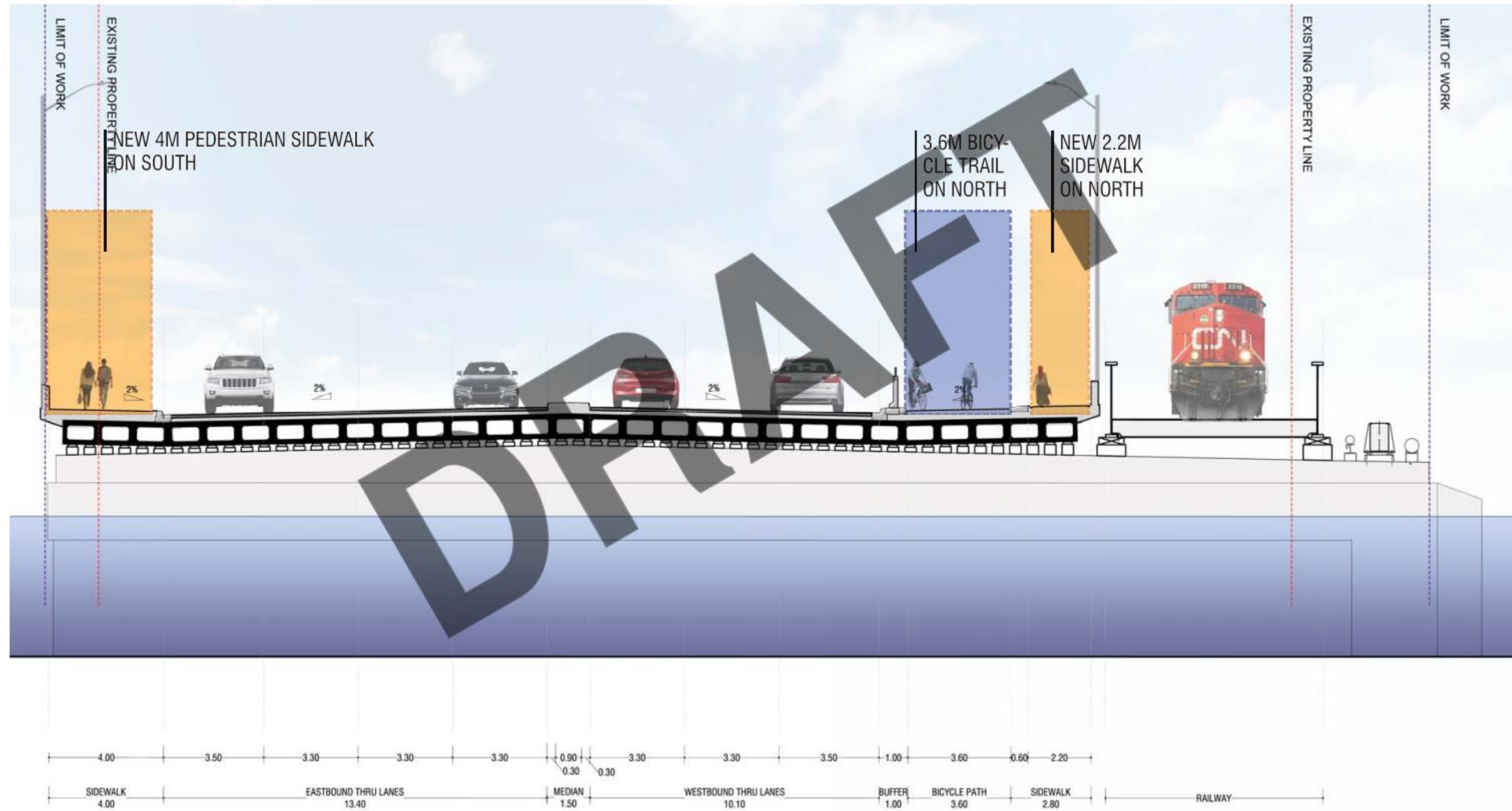
## A Wider Space for Public Realm



Overlay with 90-100% Design Sketch by Portlands Road Team received from Waterfront Toronto

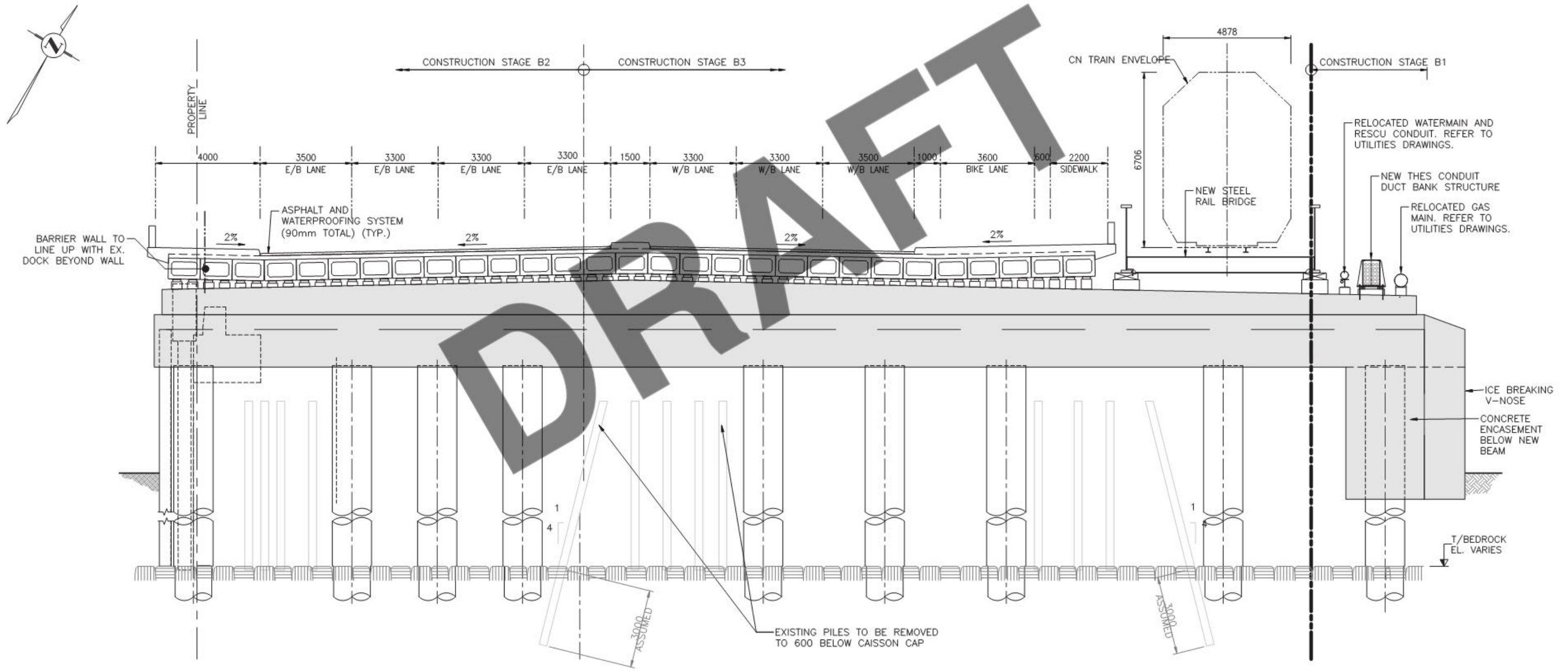
# Area 1 - Lakeshore Boulevard Bridge

## Expanded Public Realm



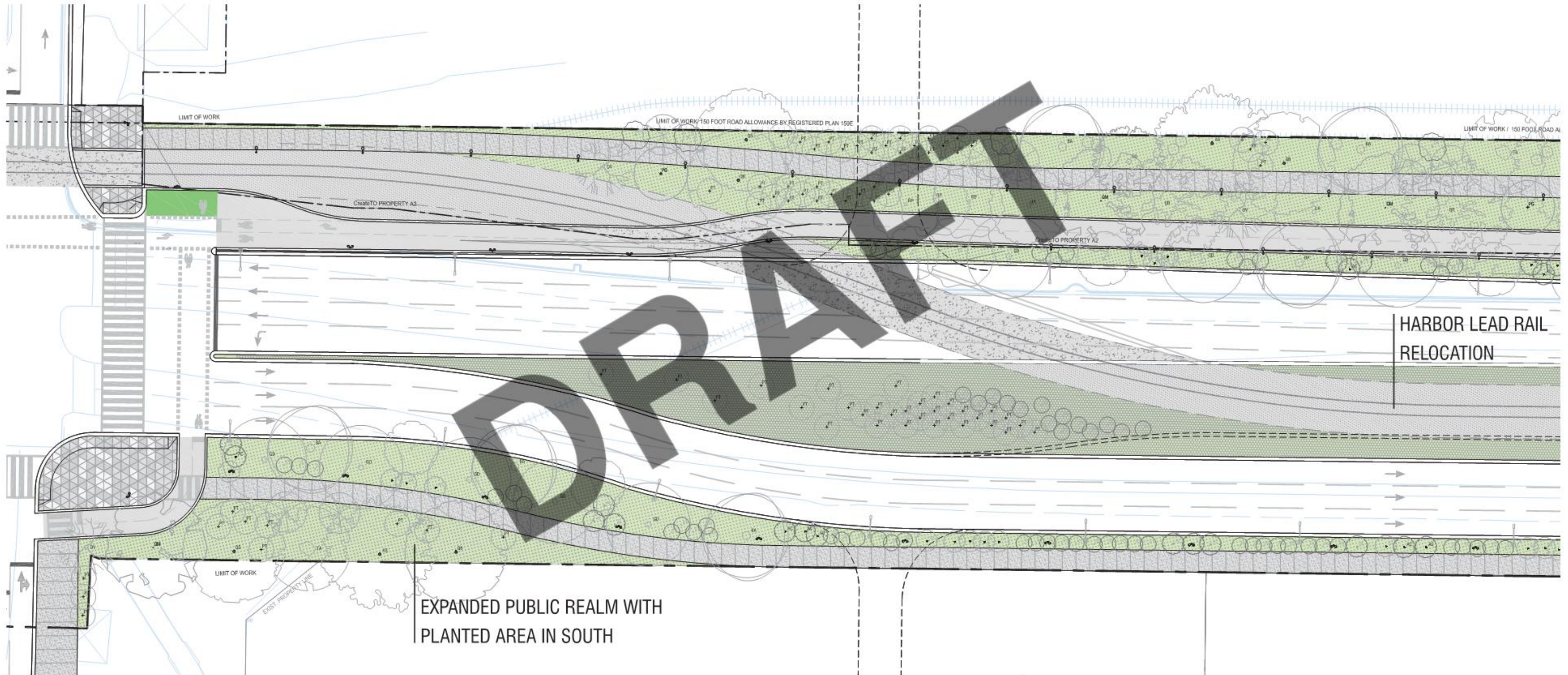
# Area 1 - Lakeshore Boulevard Bridge

## Bridge Details - Section through structural pier



# Area 2 - Don Roadway to Saulter Street

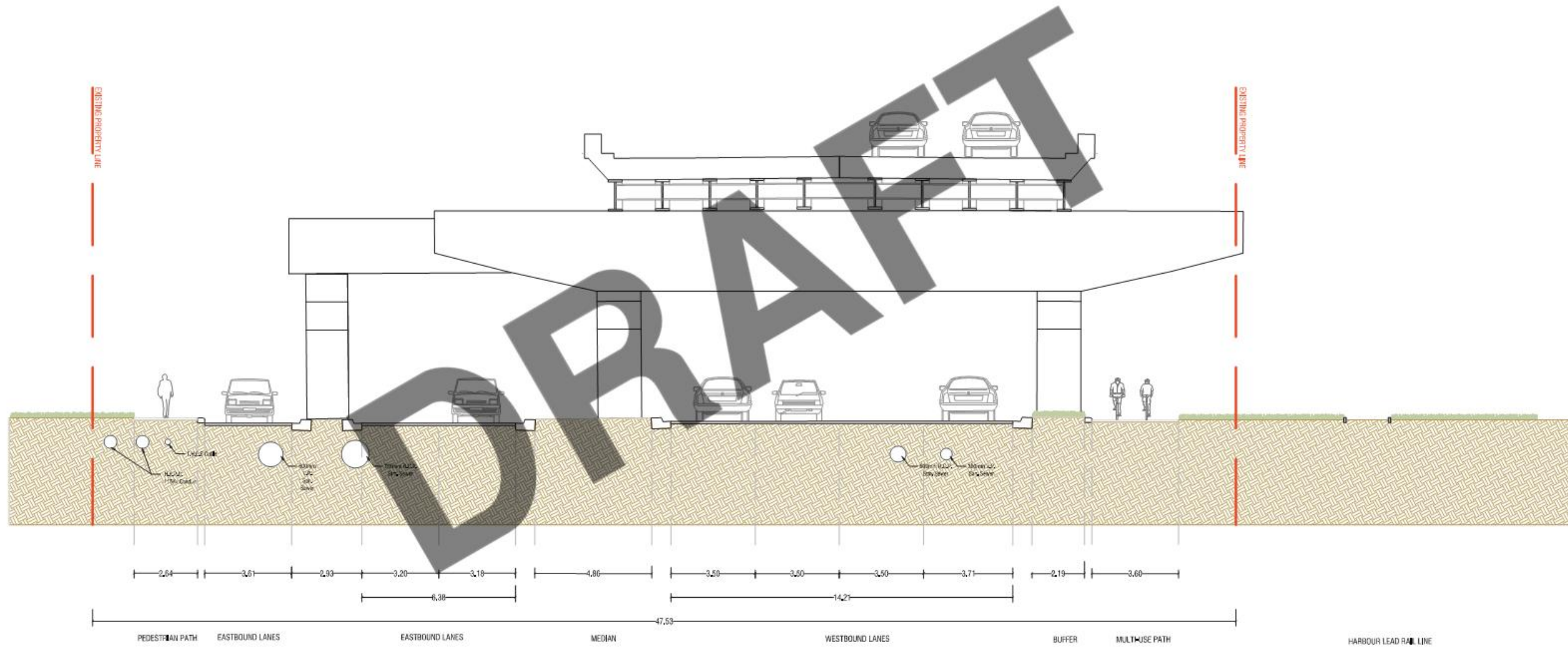
## Transition of Harbor Lead to Center Median



LEGEND		LEGEND - PLANTING	
<b>MATERIALS - SOUTH SIDE BOULEVARD</b>	<b>MATERIALS - NORTH SIDE TRAIL</b>	<b>MATERIALS - INTERSECTIONS AND ROAD</b>	<b>PROPOSED LIGHTING</b>
PERMEABLE UNIT PAVERS	ASPHALT BICYCLE PATH	PAVING PATTERN - 3 TYPES OF CONCRETE FINISH	LIGHTPOLE TYPE ■
<b>MATERIALS - MEDIANS</b>	CI/ CONCRETE PAVING WITH BROOM FINISH	THERMOPLASTIC WHITE ROAD MARKINGS	<b>EXISTING SURVEY</b>
ROUGH STONE TYPE 1 AGGREGATE, 2-4CM DIAMETER ON BRIDGE ONLY	ROUGH STONE TYPE 1 AGGREGATE, 2-6CM DIAMETER		SURVEY OF EXISTING CONDITIONS - EXISTING CURBS IN DARK BLUE
STORMWATER / PLANTING			<b>FUTURE DEVELOPMENT</b>
			DESIGN OF FUTURE BROADVIEW AVENUE
			<b>PLANTING - REFER TO L-500 SERIES</b>
			PROPOSED PLANTING AREA
			PROPOSED NEW TREE
			EXISTING TREE

# Area 2 - Don Roadway to Saulter Street

Existing Condition



# Area 2 - Don Roadway to Saulter Street

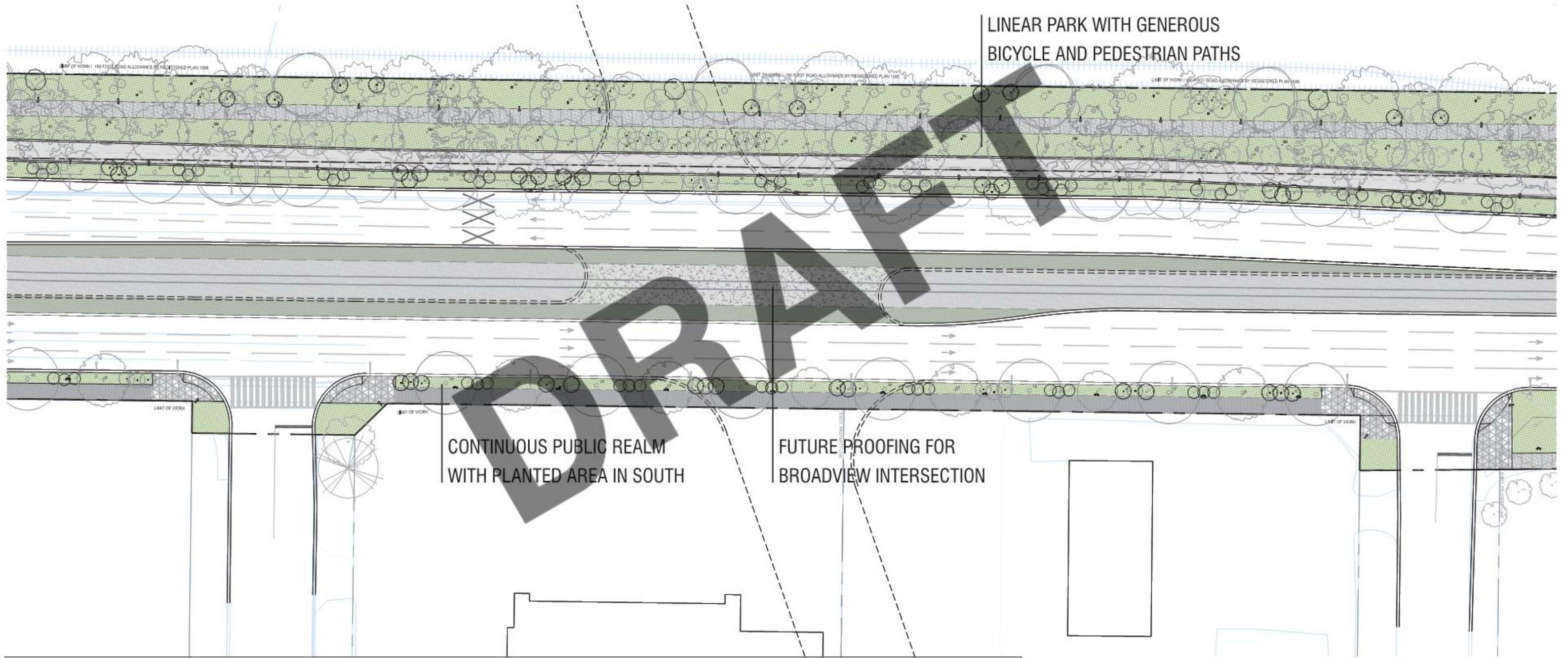
## Transition of Harbor Lead to Center Median





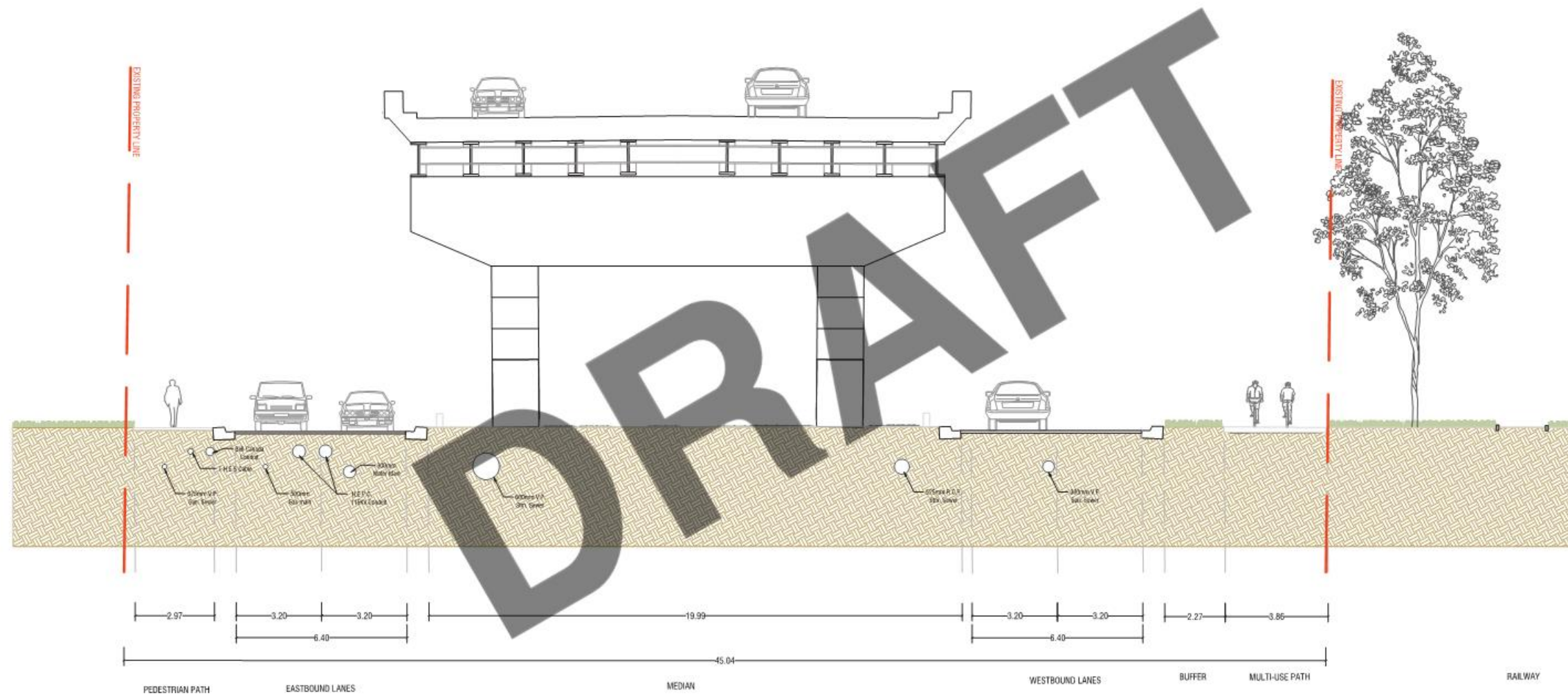
# Area 3 - Saulter Street to Bouchette Street

## Linear Park and Green Scenery



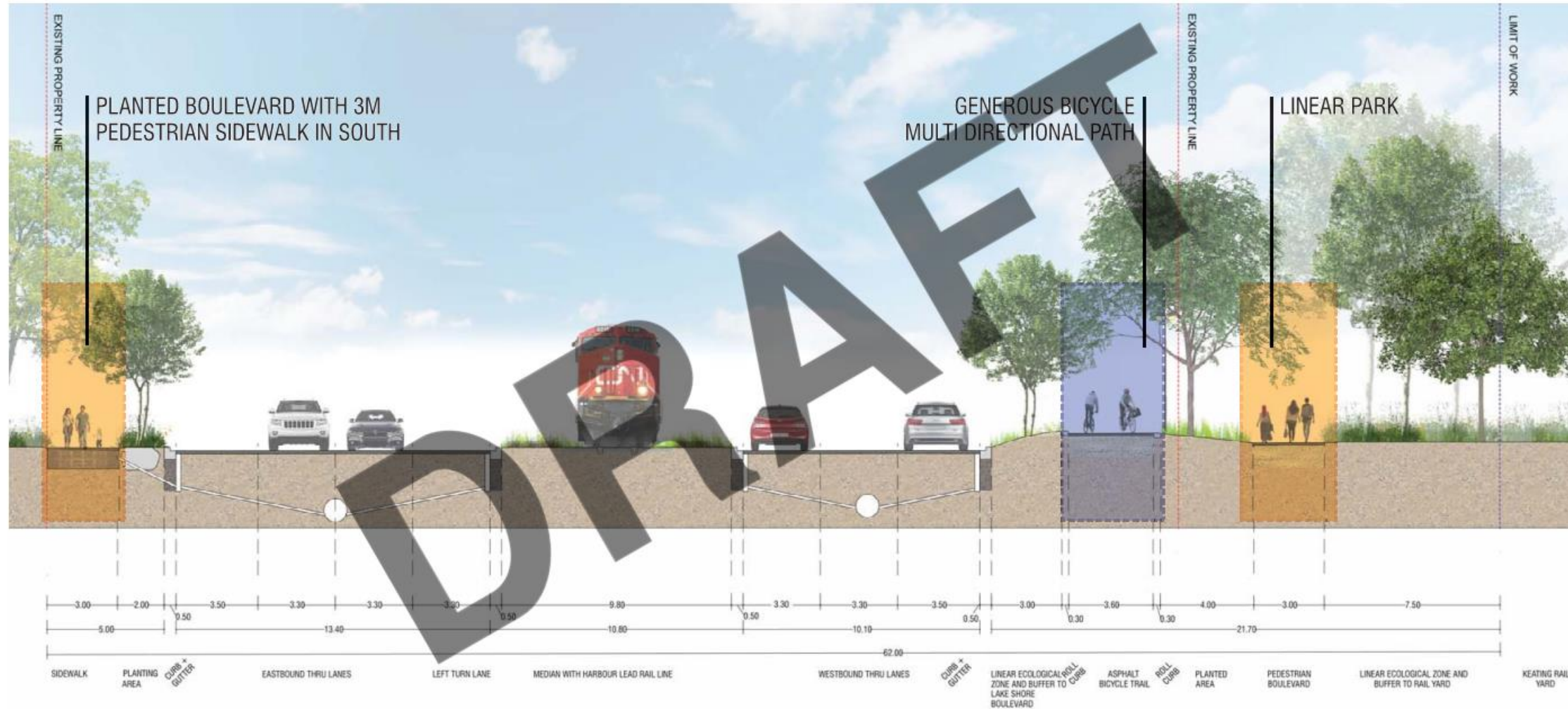
LEGEND		LEGEND - PLANTING	
<b>MATERIALS - SOUTH SIDE BOULEVARD</b>	<b>MATERIALS - NORTH SIDE TRAIL</b>	<b>MATERIALS - INTERSECTIONS AND ROAD</b>	<b>PROPOSED LIGHTING</b>
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			DESIGN OF FUTURE BROADVIEW AVENUE
			<b>PLANTING - REFER TO L-500 SERIES</b>
			PROPOSED NEW TREE
			EXISTING TREE

# Area 3 - Saulter Street to Bouchette Street



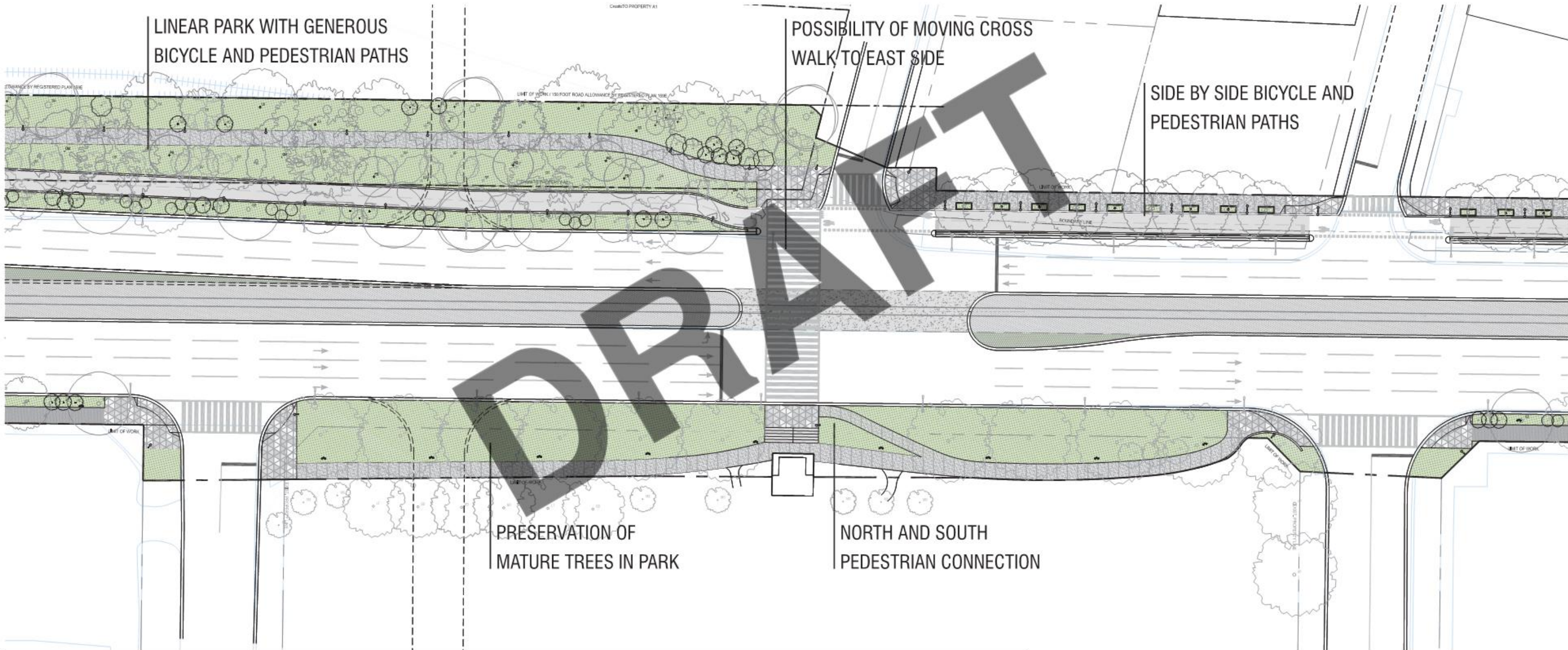
# Area 3 - Saulter Street to Bouchette Street

## Linear Park and Green Scenery



# Area 4 - McCleary Park

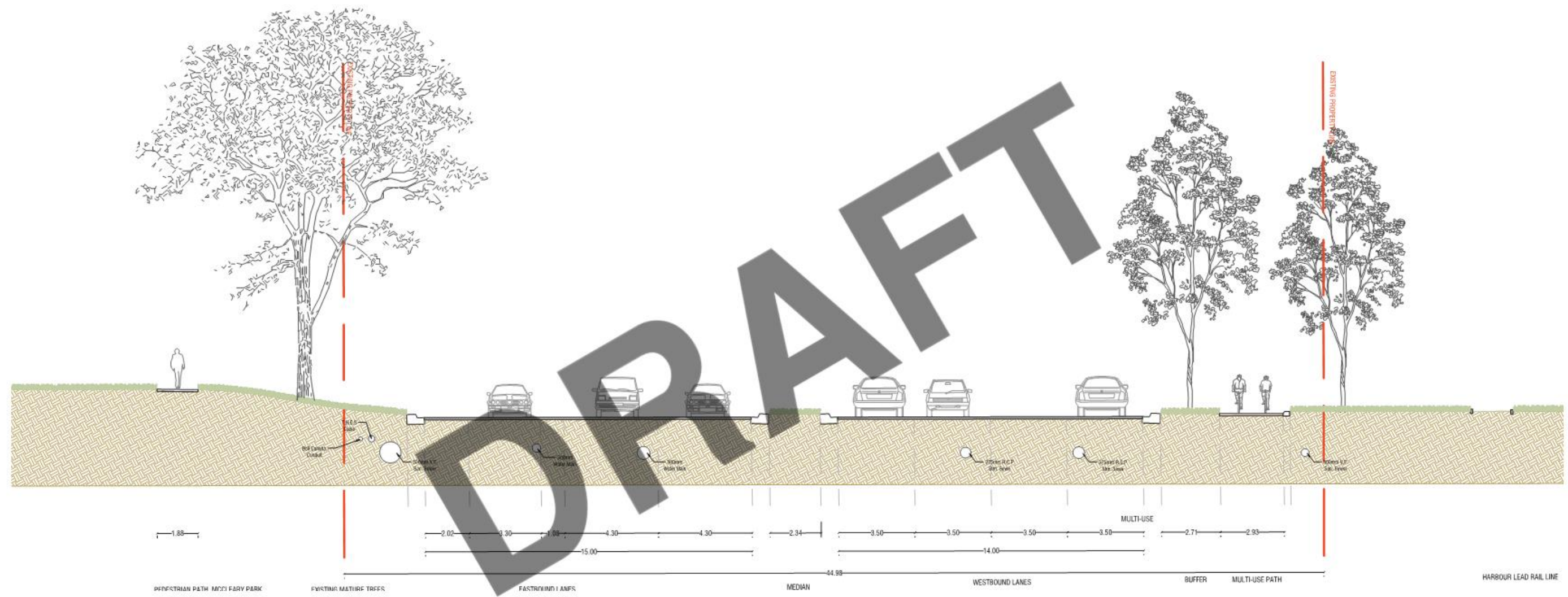
## Transition from Linear Park to Side by Side Trails and Connection to Park



LEGEND		LEGEND - PLANTING	
<b>MATERIALS - SOUTH SIDE BOULEVARD</b>	<b>MATERIALS - NORTH SIDE TRAIL</b>	<b>MATERIALS - INTERSECTIONS AND ROAD</b>	<b>PROPOSED LIGHTING</b>
PERMEABLE UNIT PAVERS	ASPHALT BICYCLE PATH	PAVING PATTERN - 3 TYPES OF CONCRETE FINISH	LIGHTPOLE TYPE
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STORMWATER / PLANTING		<b>FUTURE DEVELOPMENT</b>	<b>LEGEND - PLANTING</b>
		DESIGN OF FUTURE BROADVIEW AVENUE	PROPOSED NEW TREE
		PLANTING - REFER TO L-600 SERIES	EXISTING TREE
		PROPOSED PLANTING AREA	

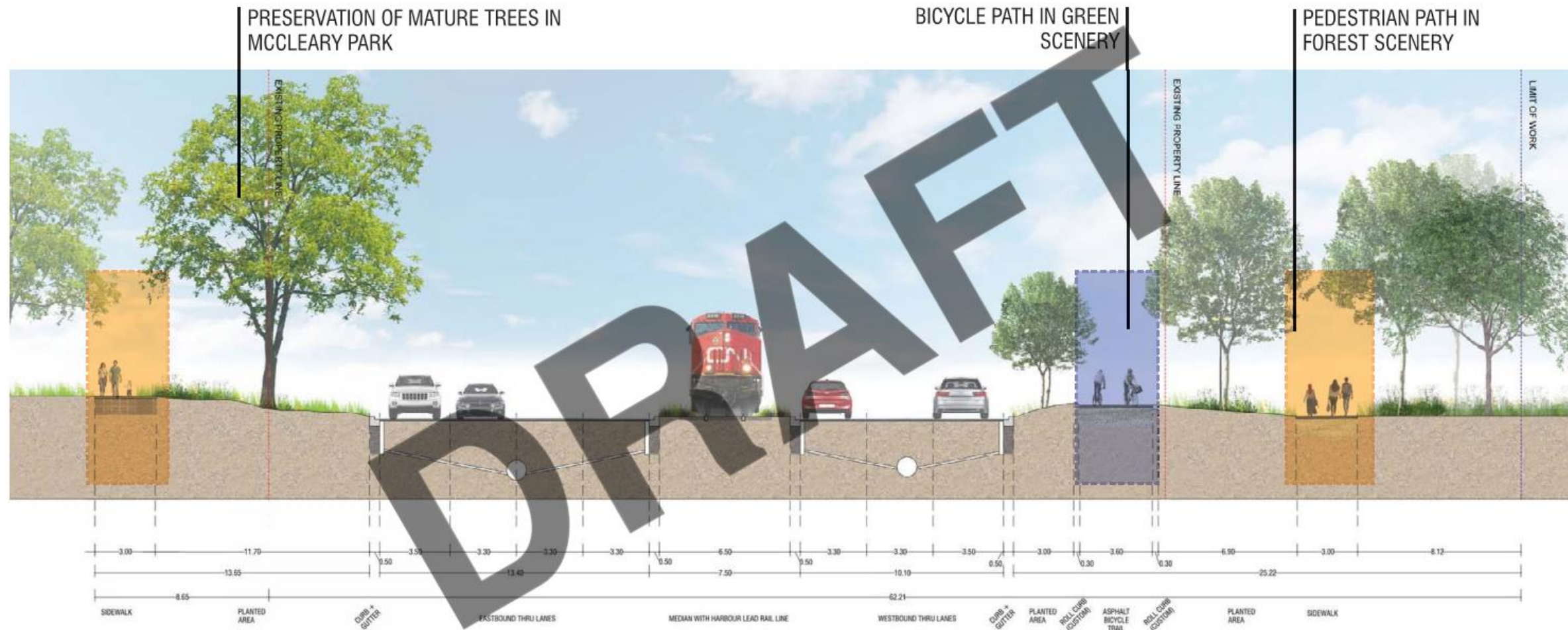
# Area 4 - McCleary Park

## Existing Condition



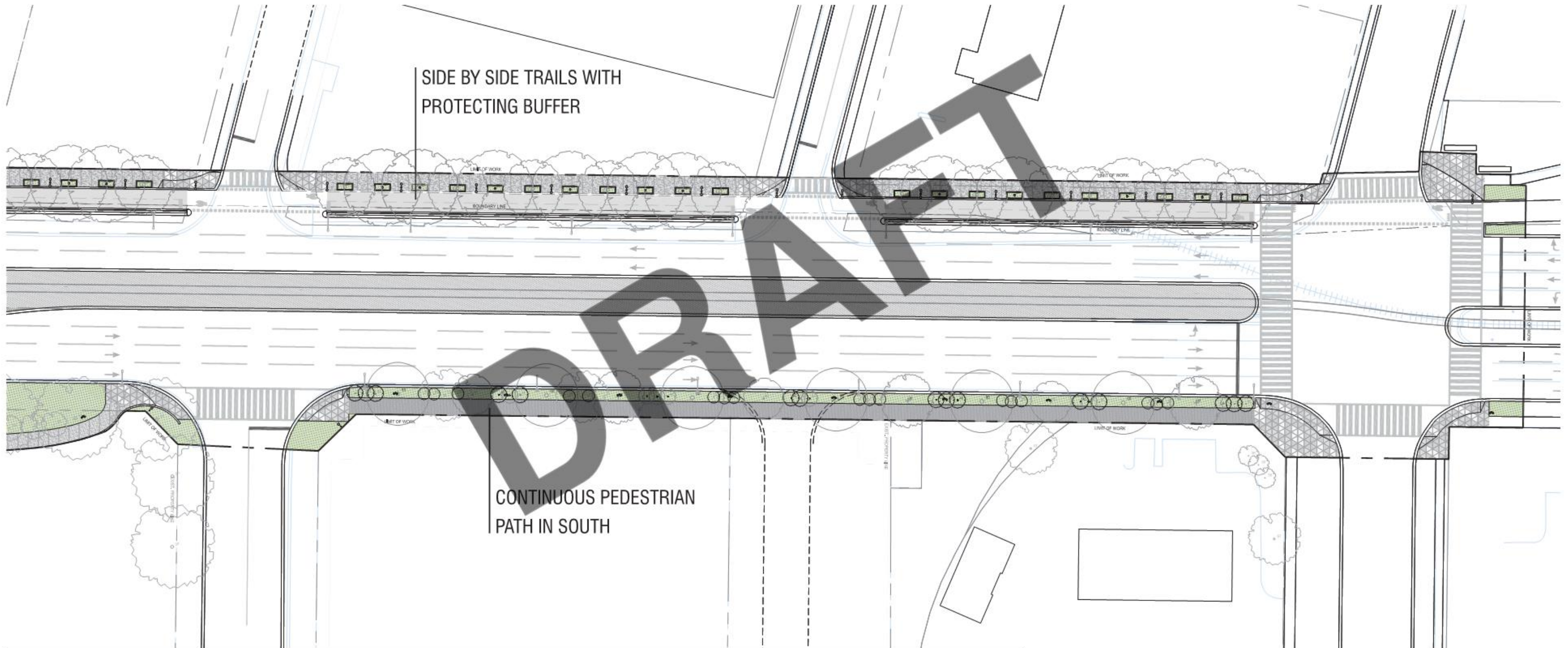
# Area 4 - McCleary Park

Transition from Linear Park to Side by Side Trails and Connection to Park



# Area 5 - Logan Avenue to Carlaw Avenue

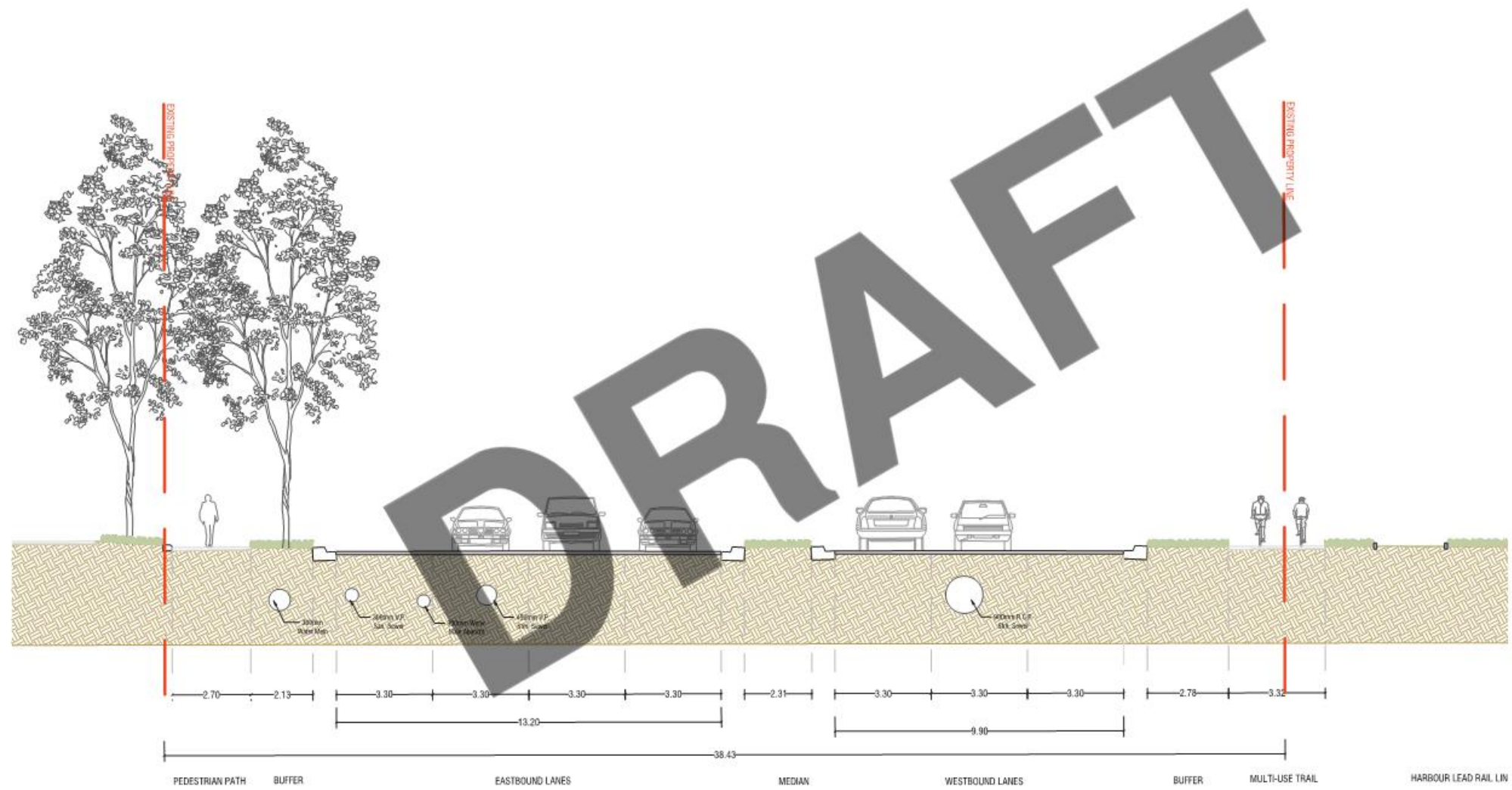
## Protected and Side by Side Trails



LEGEND		LEGEND - PLANTING	
<b>MATERIALS - SOUTH SIDE BOULEVARD</b>	<b>MATERIALS - NORTH SIDE TRAIL</b>	<b>MATERIALS - INTERSECTIONS AND ROAD</b>	<b>PROPOSED LIGHTING</b>
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			<b>PLANTING - REFER TO L-500 SERIES</b>
			PROPOSED PLANTING AREA
			PROPOSED NEW TREE
			EXISTING TREE

# Area 5 - Logan Avenue to Carlaw Avenue

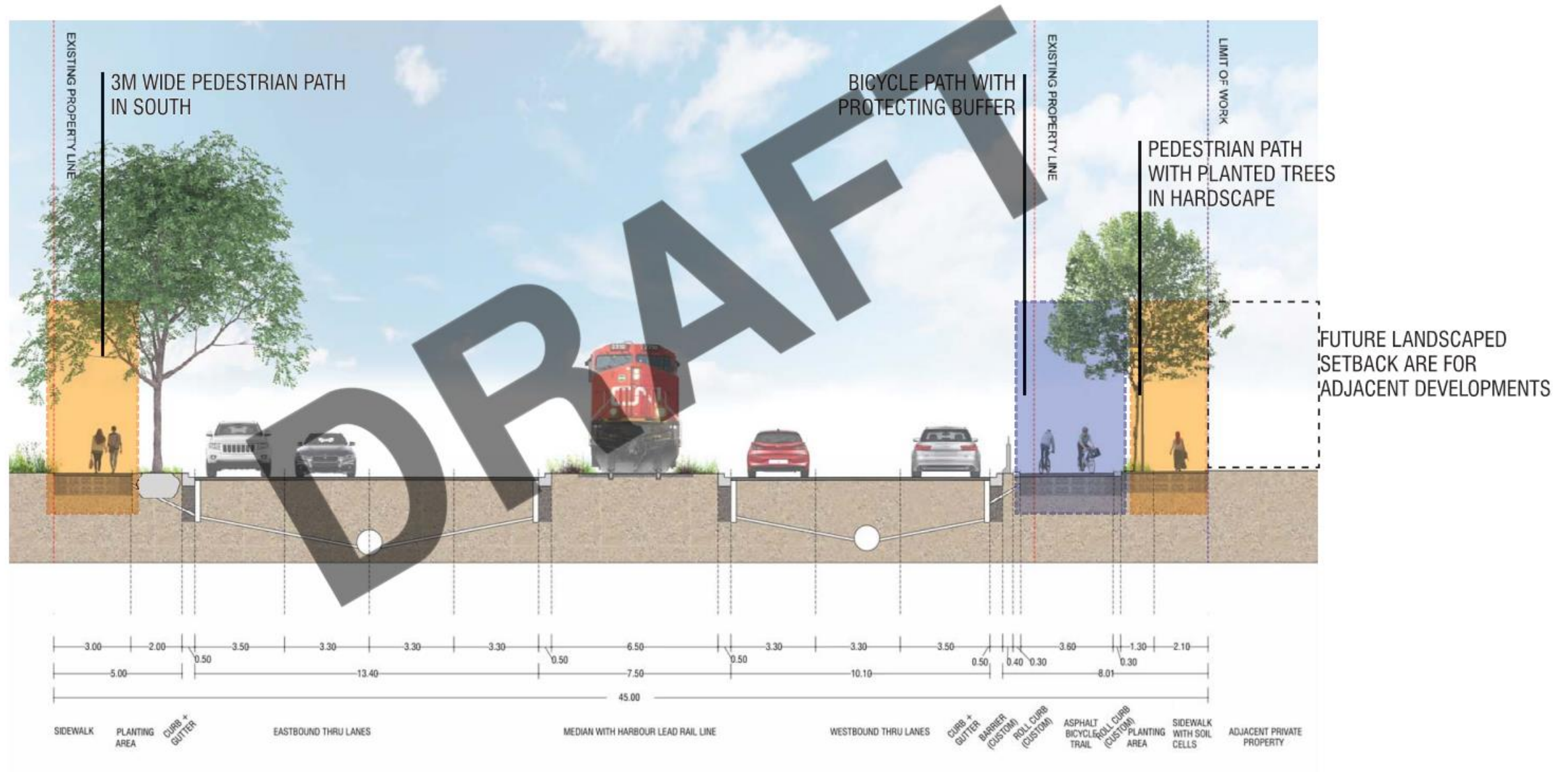
Existing Condition





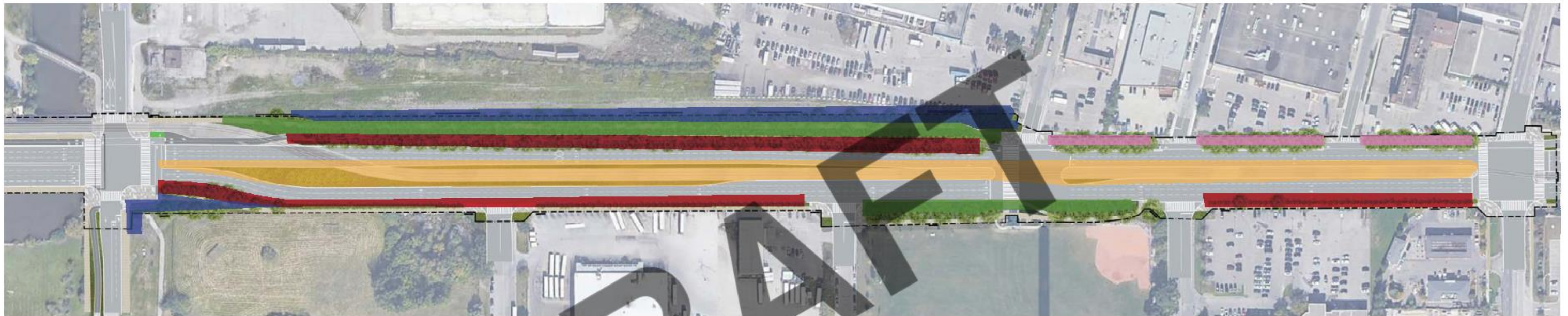
# Area 5 - Logan Avenue to Carlaw Avenue

## Protected and Side by Side Trails



# 2. Planting Strategy

## Typical Planted Areas



### Buffer

- Next to the road
- Wind and salt planted buffer as protection layer
- Limited height planted trees and meadow
- Low maintenance, biodiverse, resilient species
- Access to soil cells

### Forest

- Secondary plan
- Narrow screen buffer
- Edge forest and meadow, lower specimens
- Ravine ecology, medium salt tolerance
- Access to soil cells

### Edge Forest

- Space furthest from road
- Edge Forest
- Dry, Sandy Maple hardwood ecotype
- Requires less salt tolerance
- Most natural

### Formal Streetscape

- In hardscape
- Large planted trees
- Biodiverse, resilient species
- Medium salt tolerance
- Access to soil cells

### Median

- Between roadways
- Salt, wind and snow storage tolerant species
- Low planting to accommodate railroad
- Roadside meadow and grass
- Native species

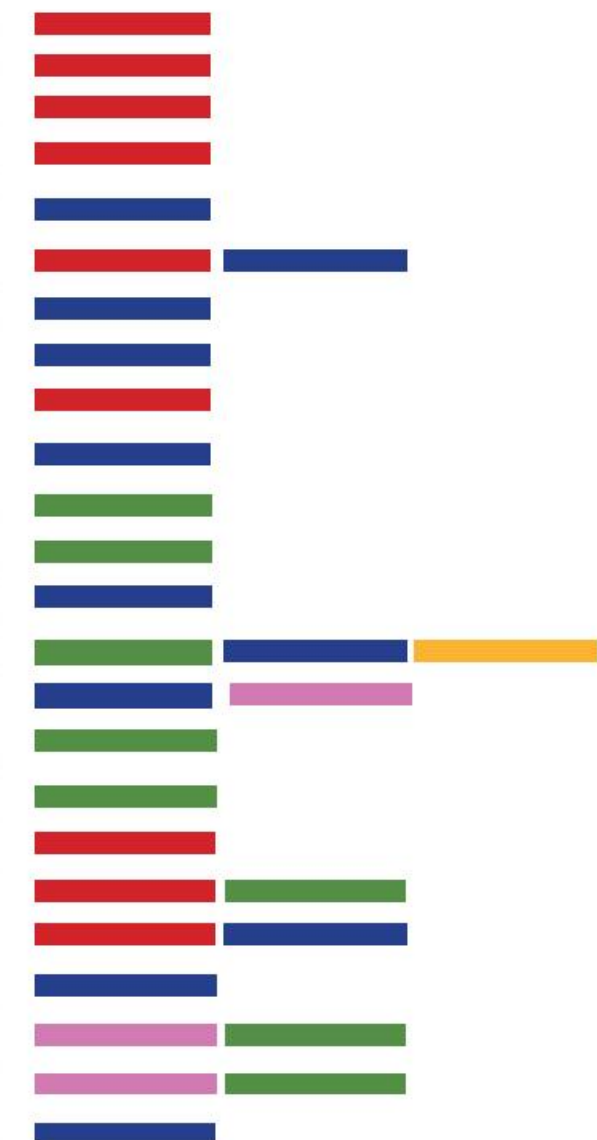
# Planting Strategy

## Ravine meets Lake - Native and Diverse species

### PLANT SCHEDULE

Key	Botanical Name	Common Name	Qty.	Caliper	Spacing	Notes
TREES AND LARGE SHRUBS						
AA	<i>Amelanchier arborea</i>	Downy Serviceberry	33	200cm WB	AS INDICATED	TREE FORM
AC	<i>Amelanchier canadensis</i>	Canadian Serviceberry	46	200cm WB	AS INDICATED	TREE FORM
AG	<i>Alnus glutinosa</i>	Black Alder	17	80MM	AS INDICATED	
AL	<i>Amelanchier laevis</i>	Allegheny Serviceberry	38	200cm WB	AS INDICATED	TREE FORM
AS	<i>Acer saccharinum</i>	Silver Maple	10	90MM	AS INDICATED	
BA	<i>Betula alleghaniensis</i>	Yellow Birch	17	70MM	AS INDICATED	
CA	<i>Cornus alternifolia</i>	Pagoda Dogwood	17	200cm WB	AS INDICATED	TREE FORM
CR	<i>Cornus racemosa</i>	Gray Dogwood	10	200cm WB	AS INDICATED	TREE FORM
GD	<i>Gymnocladus dioica</i>	Kentucky Coffeetree	35	100MM	AS INDICATED	
NS	<i>Nyssa sylvatica</i>	Black Tupelo	4	80MM	AS INDICATED	
OV	<i>Ostrya virginiana</i>	American Hophornbeam	11	70MM	AS INDICATED	
PG	<i>Populus grandidentata</i>	Bigtooth Aspen	11	80MM	AS INDICATED	
PS	<i>Prunus serotina</i>	Black Cherry	6	80MM	AS INDICATED	
PT	<i>Populus tremuloides</i>	Trembling Aspen	149	80MM	AS INDICATED	
QB	<i>Quercus bicolor</i>	Swamp White Oak	28	80MM	AS INDICATED	
QM	<i>Quercus macrocarpa</i>	Burr Oak	11	80MM	AS INDICATED	
QR	<i>Quercus rubra</i>	Red Oak	9	100MM	AS INDICATED	
RG	<i>Rhus glabra</i>	Smooth Sumac	54	5 gal	AS INDICATED	
RP	<i>Robinia pseudoacacia</i>	Black Locust	23	80MM	AS INDICATED	
RT	<i>Rhus typhina</i>	Staghorn Sumac	62	5 gal	AS INDICATED	TREE FORM
TA	<i>Tilia americana</i>	Basswood	7	80MM	AS INDICATED	
UA	<i>Ulmus americana</i> 'Princeton'	Princeton Elm	23	100MM	AS INDICATED	
UX	<i>Ulmus x Triumph</i> 'Morton Glossy'	Triumph Elm	9	100MM	AS INDICATED	
VL	<i>Viburnum lentago</i>	Nannyberry	22	200CM WB	AS INDICATED	TREE FORM

-  Buffer
-  Forest
-  Edge Forest
-  Formal Streetscape
-  Median



# Planting Establishment First 5-10 Years



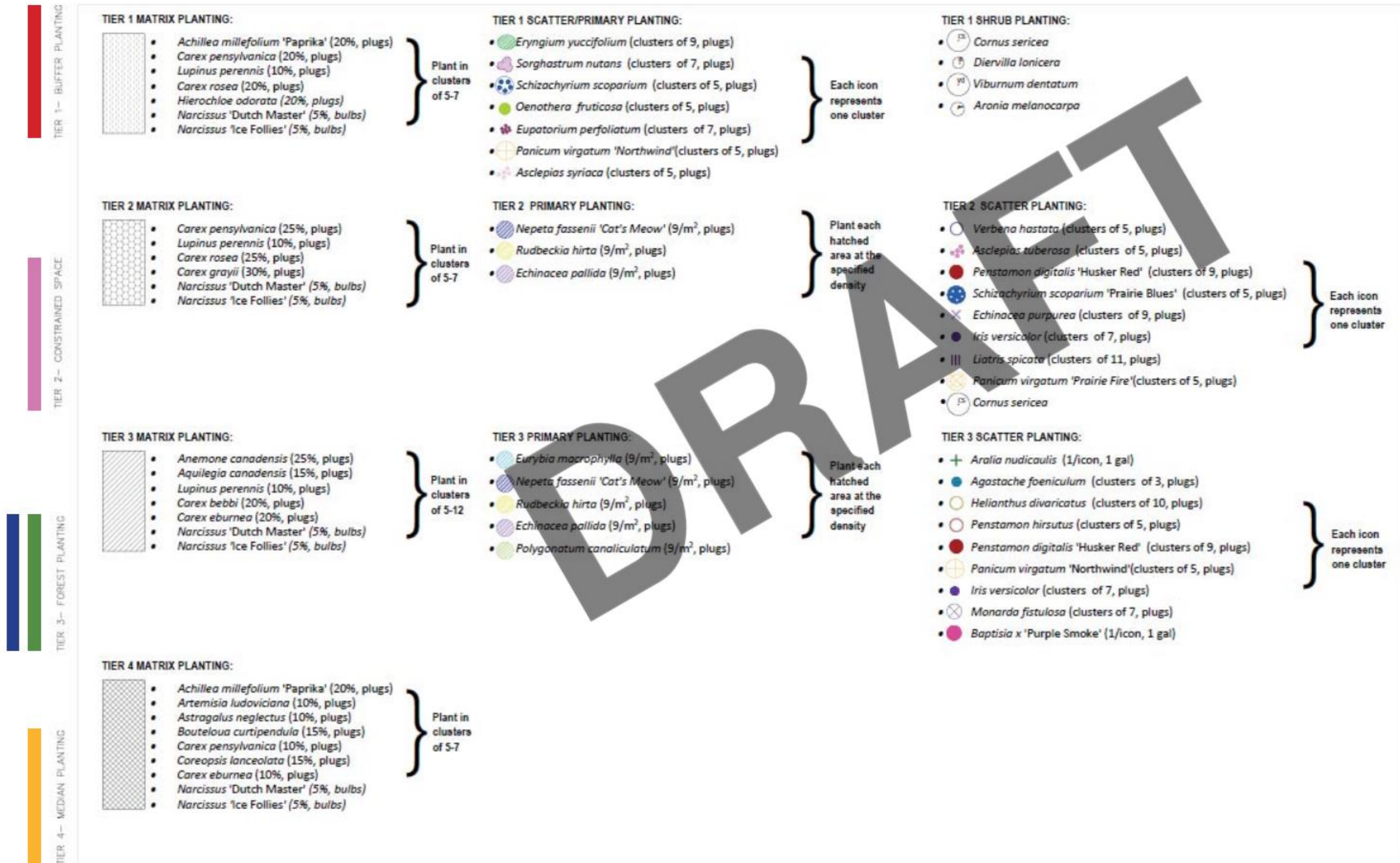
# Future Canopy of Edge Forest

Drifts of understory result of managed succession



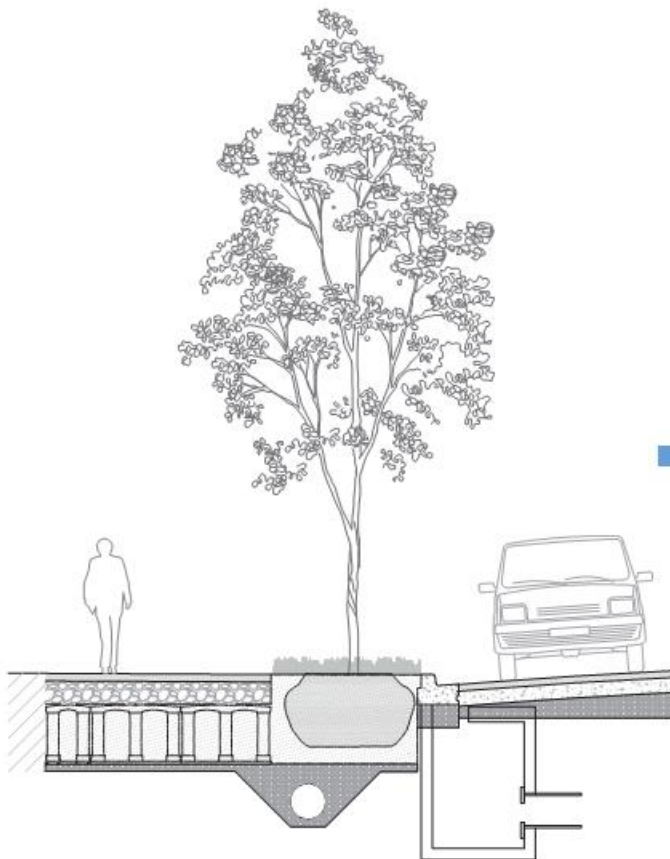
# Planting Strategy

## Ravine meets Lake - Native and Diverse species



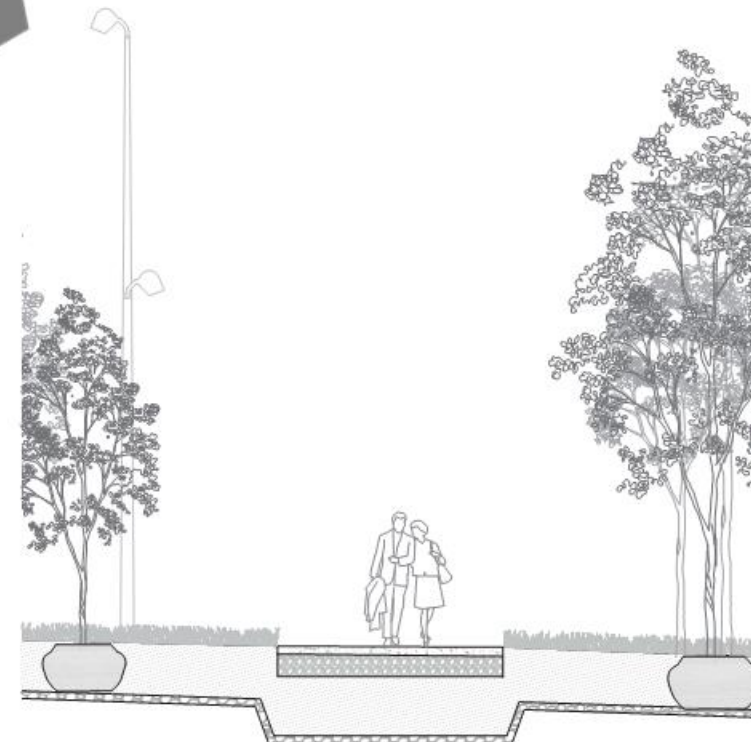
# Planting Strategy

## Structural Soil and Soil Cells



### Soil Cells

- In the most constrained areas
- Under pedestrian / bicycle paths
- Very high volume for storm water infiltration
- Very high amount of space for root growth
- Creates connection between trees' root and fungal communities



### Structural Soil

- In the Linear Park
- Under pedestrian & bicycle paths
- High volume for storm water infiltration
- High amount of space for root growth
- Natural connection between trees' root and fungal communities

# Future Canopy of Edge Forest

Drifts of understory result of managed succession





# Future Canopy of Edge Forest

Drifts of understory result of managed succession



# Future Formal Streetscape with Public Art Opportunities

Mixed elm and oak species

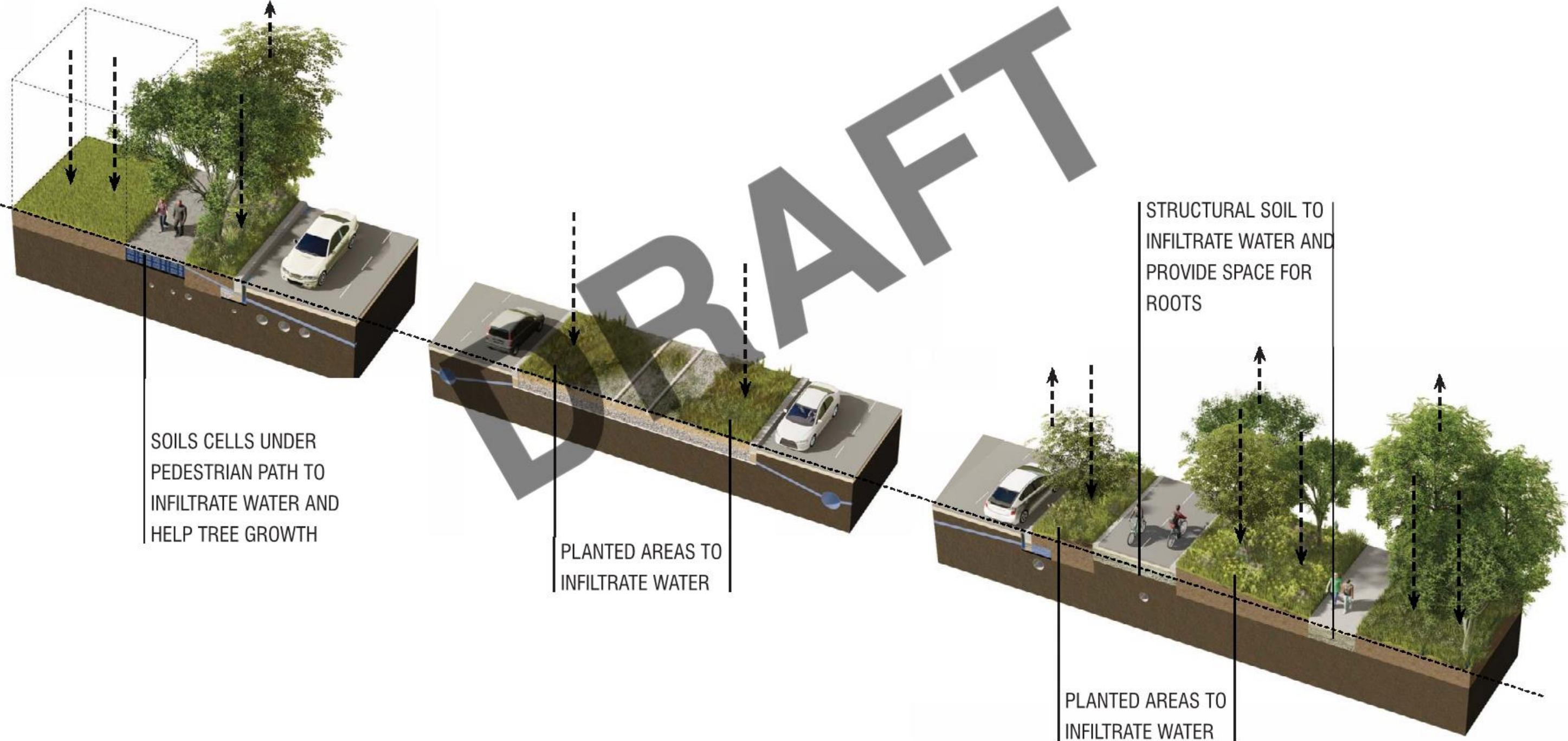


Future  
Landscaped  
Setback Area  
for Adjacent  
Developments

Interim  
Public Art  
Opportunity

# 3. Systemic Approach to Stormwater

Maximize Infiltration and Delay Entry into Existing Storm System



# Systemic Approach to Stormwater

Maximize Infiltration and Delay Entry into Existing Storm System



## South Side - Green Boulevard

### Build-Up

Bio-retention planters tied to existing storm sewer  
Soil Cells for additional storm water storage beneath sidewalk

### Planting

Robust salt, snow, and wind tolerant tree species  
Flowering groundcover and perennial species  
Maximize native species



# Systemic Approach to Stormwater

Maximizing Infiltration and Delay Entry into Existing Storm System



## Median - Meadow

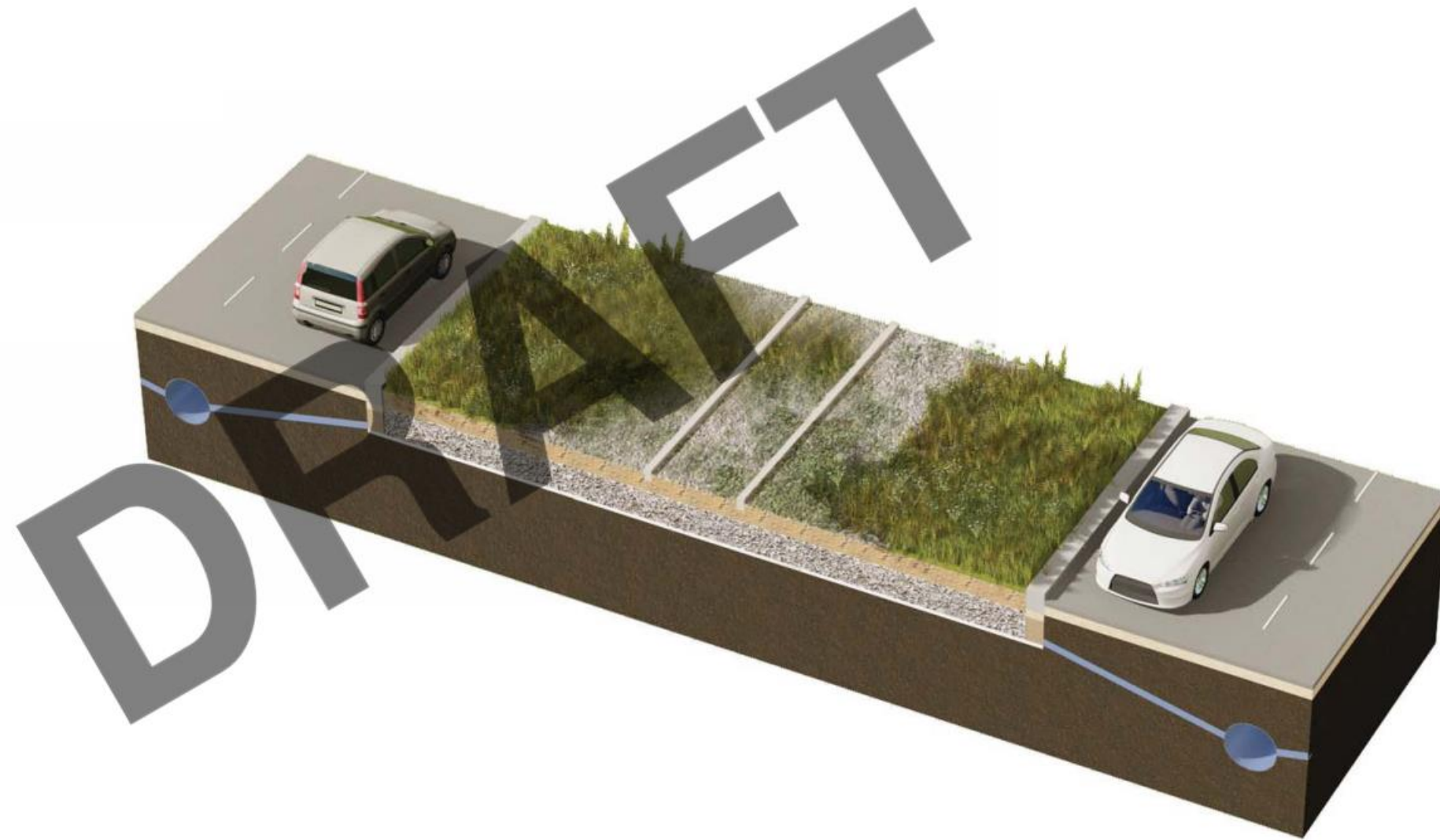
### Build-Up

Open planter tied to existing storm sewer

Railway ballast for Harbour Lead Line

### Planting

Hardy drought, salt, and inundation tolerant plants  
Maximize native species



# Systemic Approach to Stormwater

Maximizing Infiltration and Delay Entry into Existing Storm System



## North Side - Linear Park

### Build-Up

- Cast-in-Place Concrete and asphalt trails
- Structural soil adds soil and water capacity storage beneath pathways
- Open bio-retention planters tied to existing storm sewer
- Possibility of pulling water from the road into planted areas for quality and quantity management

### Planting

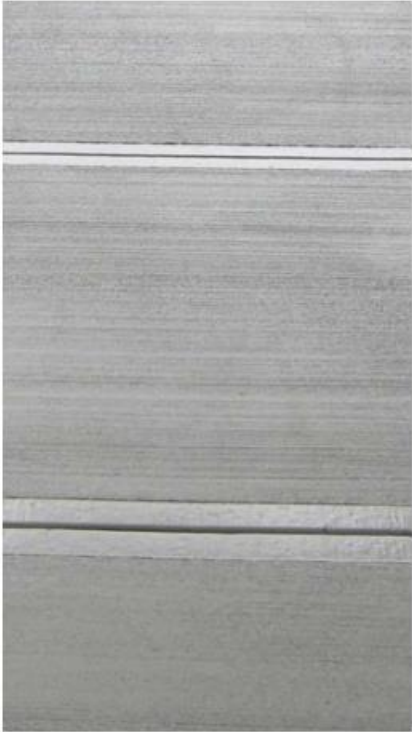
- Robust salt, snow and wind tolerant tree species
- Flowering groundcover and perennial species
- Maximize native species



# 4. Materials

## Hardscape Palette

Cast in Place  
Concrete sidewalk



Biodiverse and  
Managed succession  
Planting



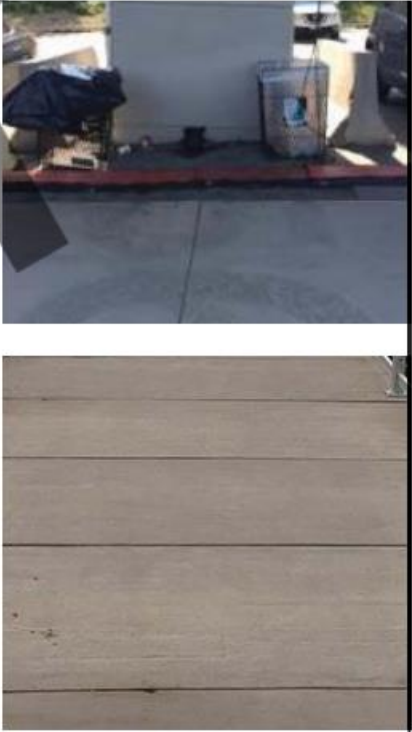
Custom "soft" Curbs  
along Bicycle Path



Soil cells to retain  
water and help tree  
growth



CIP Concrete w/  
Special Saw cuts and  
Finish



Asphalt on raised  
bicycle path

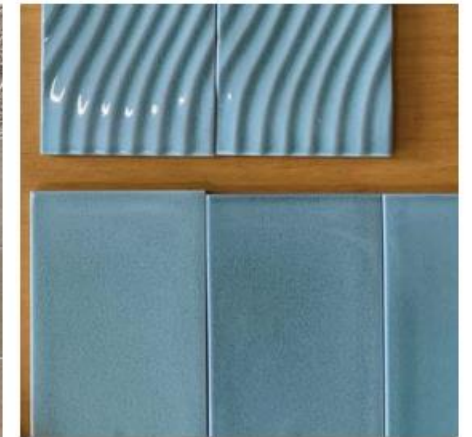


# Barrier Design - Colourful Half Jersey Barrier

Providing Safety, Comfort, and Delight in the Public Realm



Concept: Traffic sign meets Lake Shore Planting



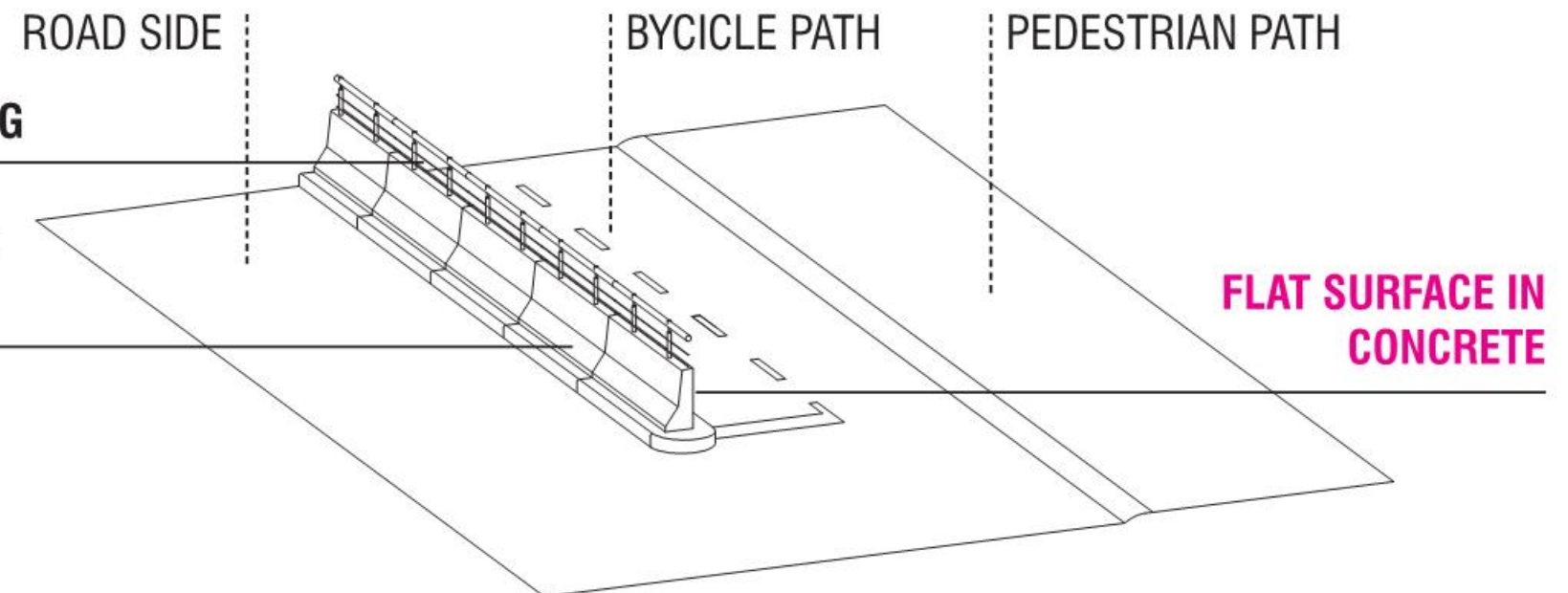
Reference images: tile and special concrete finishes, West 8

## Inlaid Tile Design

Half Jersey barrier in concrete  
Railing in metal  
Flat surface inlaid colourful tiles in abstract pattern reflecting special character of lake shore boulevard

## METAL RAILING

## HALF JERSEY BARRIER



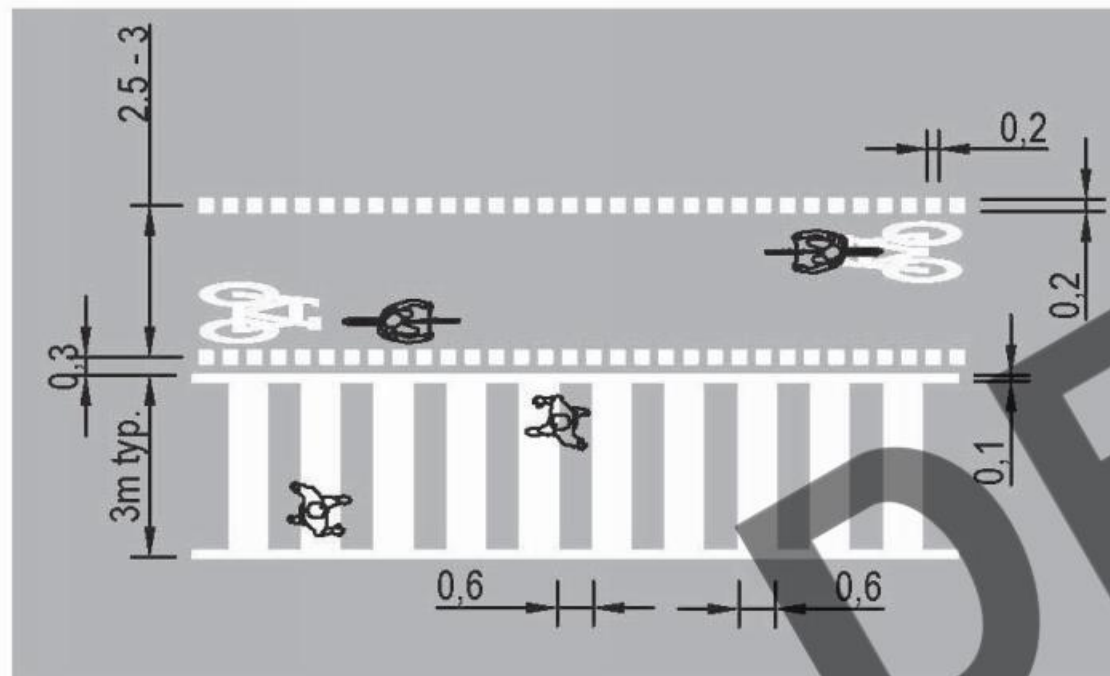


# 5. Intersection Design

## Lake Shore Boulevard Intersection Marking

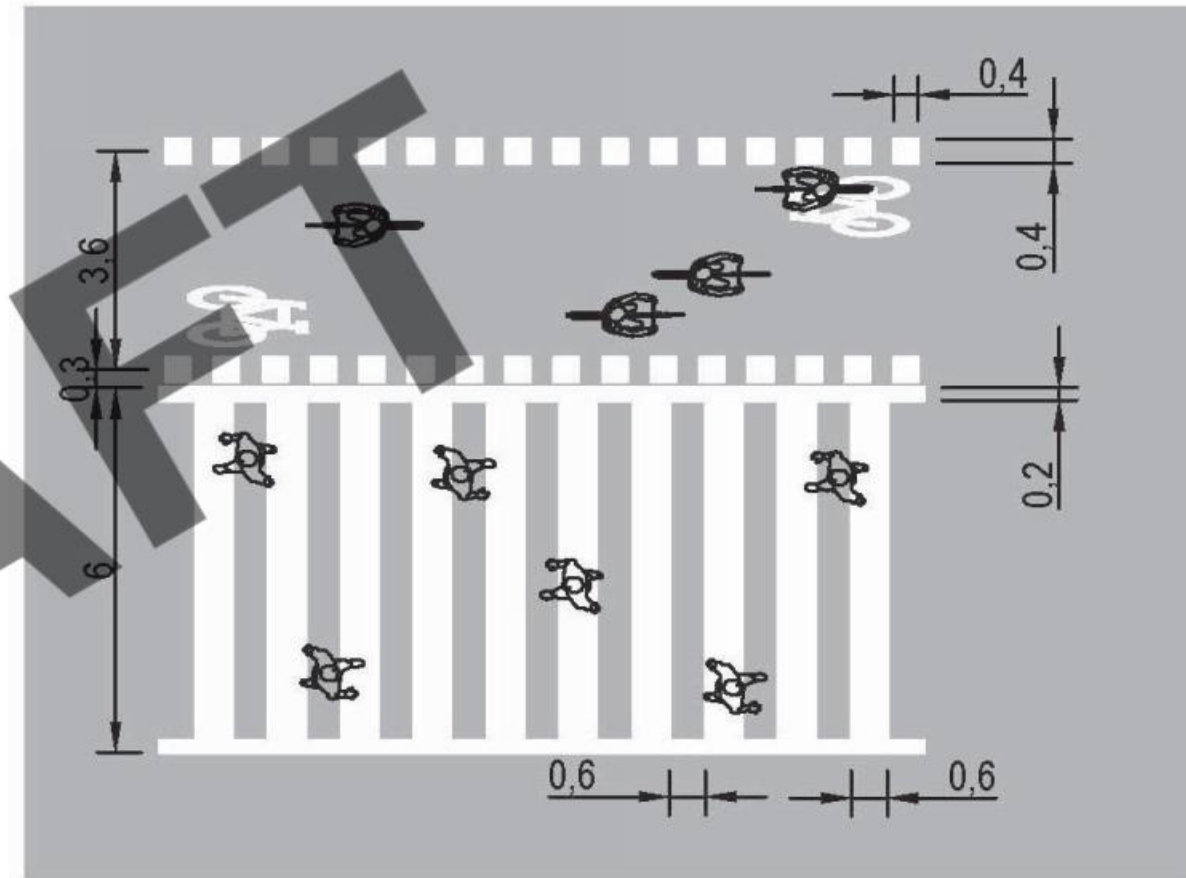


Thermoplastic Application



### TYPICAL CROSSING CONDITION

Pedestrian zebra based on existing condition on Lake Shore Boulevard  
Bi-Directional bicycle cross ride width from Ontario Traffic Manual Book 18  
Elephants' feet dimensions from Cycling Toronto

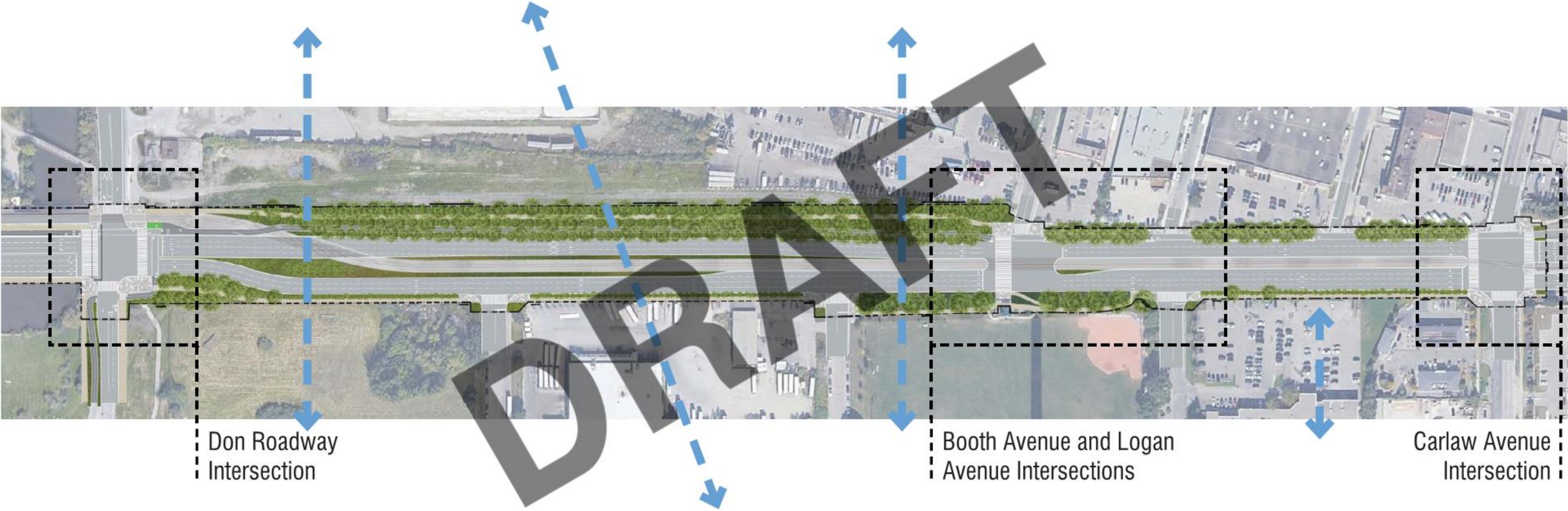


### PROPOSED CROSSING CONDITION

Typical zebra width doubled  
Bi-directional bicycle cross ride wider  
Elephants' feet dimensions from Ontario Traffic Manual Book 18

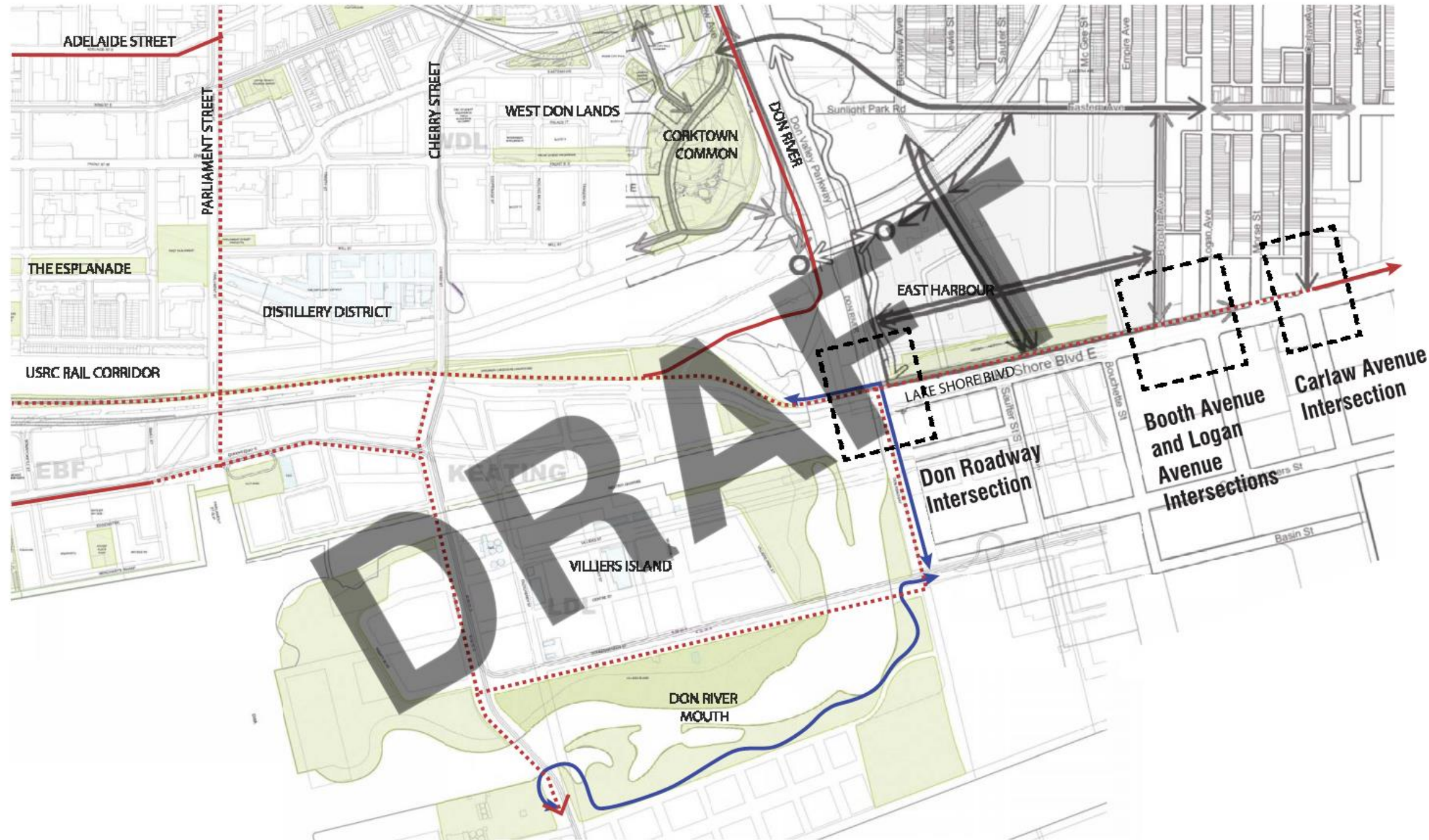
# Intersection Design

## Three Key Intersections in Context of Future Expanded Connectivity



← - - - - - → Future Intersections (per Unilever Precinct Plan)

# Cycling Connections - Existing and Planned



- Lower Don Trail
- Planned Bicycle Network Infrastructure
- Existing Bicycle Network Infrastructure
- Existing Bicycle Network Infrastructure (per Unilever Precinct Secondary Plan)
- Planned Bicycle Network Infrastructure (per Unilever Precinct Secondary Plan)
- Multi-use Path

# Intersection Design - Don Roadway

## Proposed Design



### Key Design Features

Where PLFP cycling trail meets Lake Shore Trail

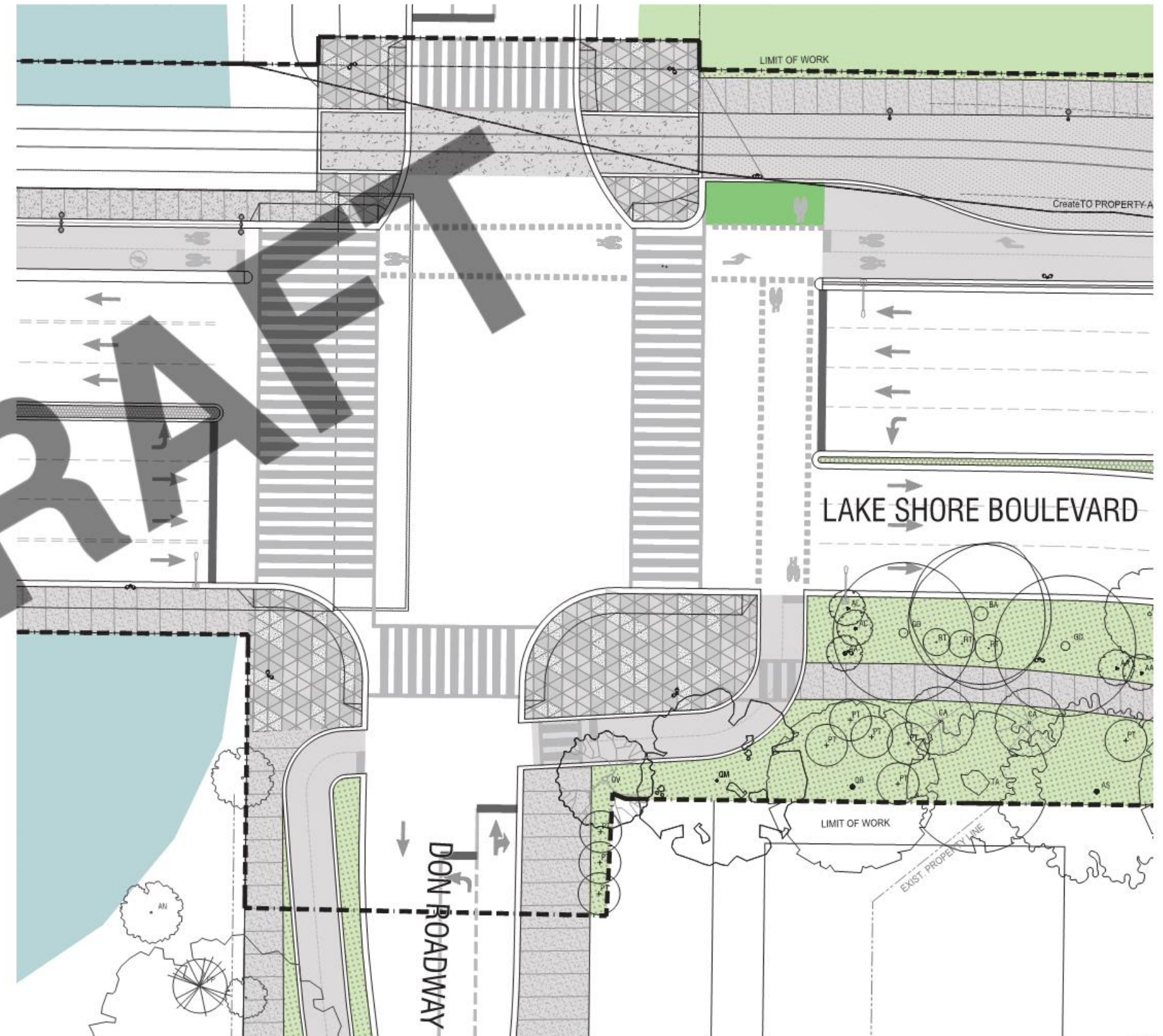
Cyclist stop line in line with vehicular stop line

Cyclist and vehicles at same grade at intersection

Cyclist storage on NE corner

Extra wide pedestrian crossing on west side to accommodate for cyclists who may want to cross dismounted

Pedestrians cross E-W north of Harbour Lead Rail Line to accommodate for extra turning storage for cyclists



# Intersection Design - Booth and Logan Avenue

## Proposed Design



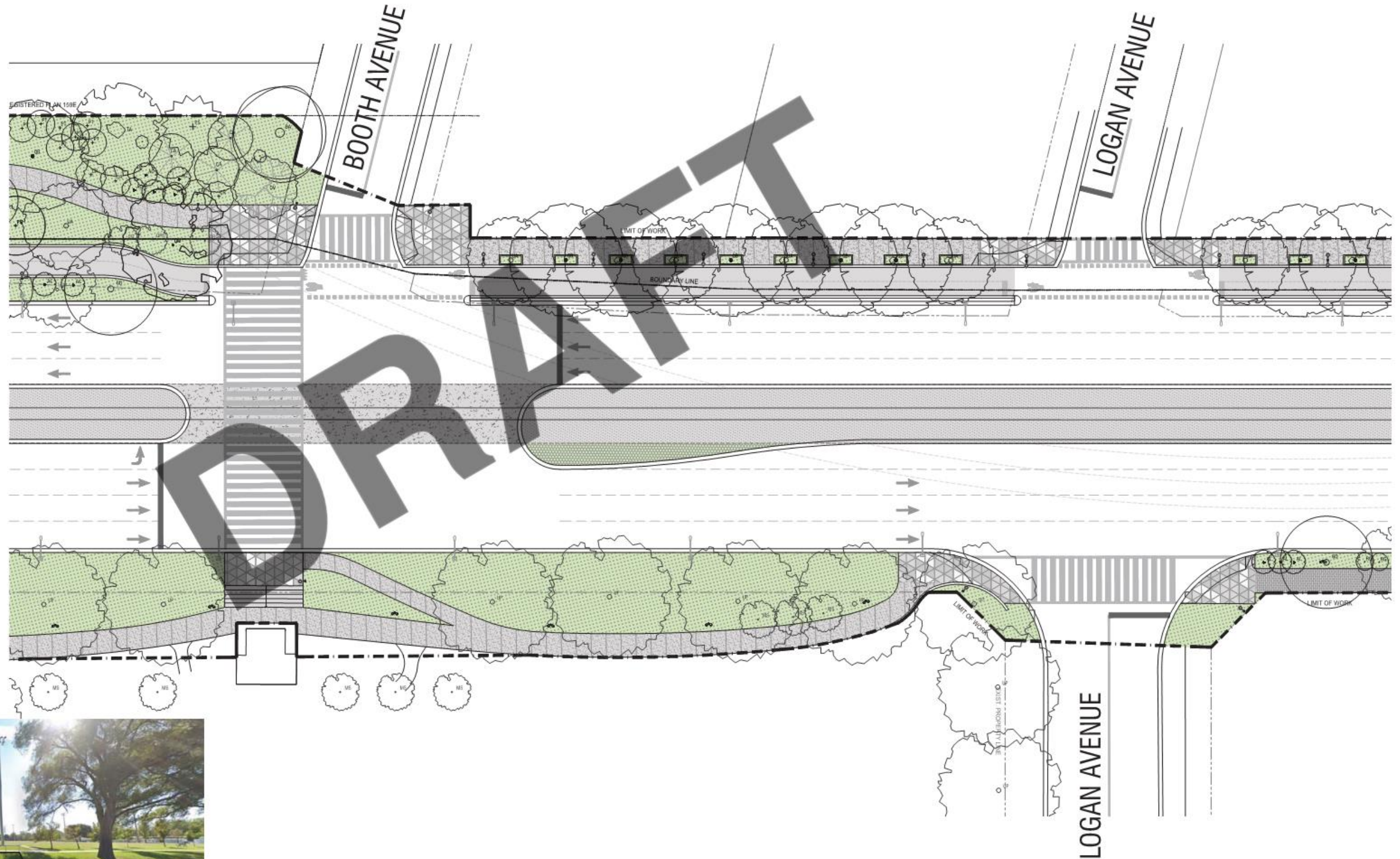
### Key Design Features

Pedestrian crossing North to South at Booth Avenue and McCleary Park

Access to McCleary Park via stair and ramp to preserve mature trees

No cycling crossrides

No controlled intersection or Pedestrian or Cyclist crossings at Logan Avenue



# Intersection Design - Carlaw Avenue

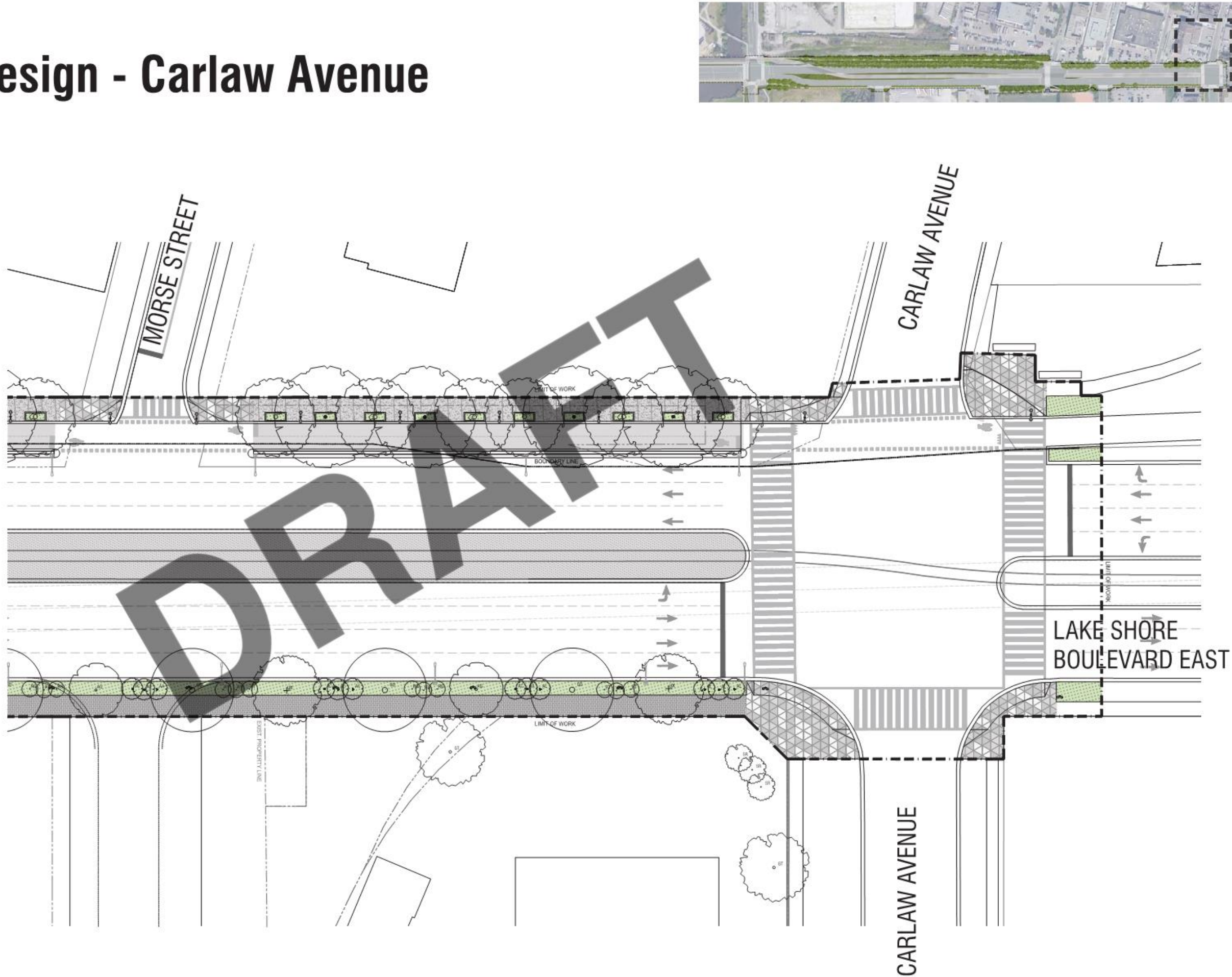
## Proposed Design

### Key Design Features

Existing cycling trail ties into new one with new crossside and intersection modifications

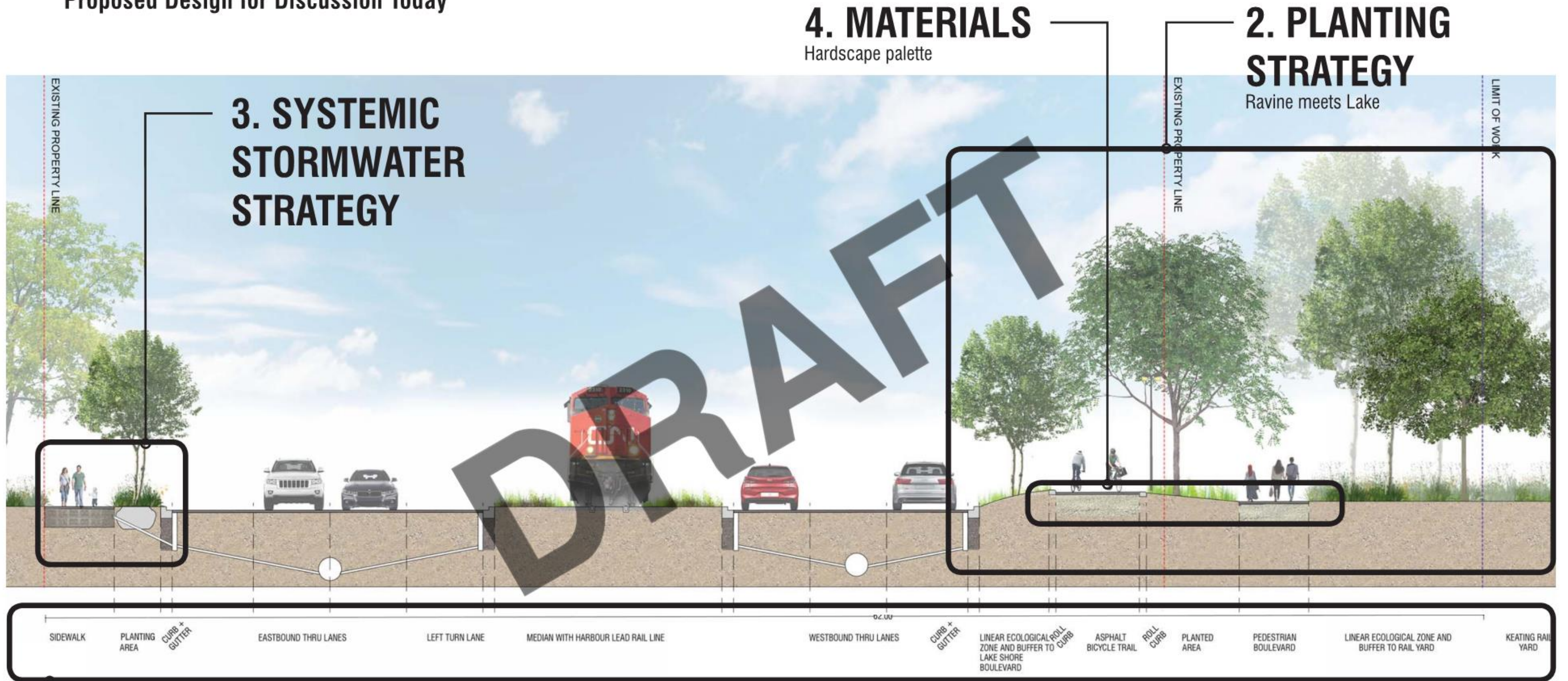
Cyclist and vehicles at same grade at intersection

Harbour Lead Rail Line ties into existing location in median after Carlaw Avenue



# Detailed Design Topics

Proposed Design for Discussion Today



## 4. MATERIALS

Hardscape palette

## 2. PLANTING STRATEGY

Ravine meets Lake

## 3. SYSTEMIC STORMWATER STRATEGY

## 5. INTERSECTION DESIGN

Lakeshore Boulevard Standard Markings  
Circulation  
Ongoing Coordination

## 1. SPACE DEDICATION

Five typical areas for pedestrian and bicycle pathway alignment