



Lake Shore Boulevard East PUBLIC REALM VISION & IMPLEMENTATION PLAN

DESIGN REVIEW PANEL
APRIL 24, 2019



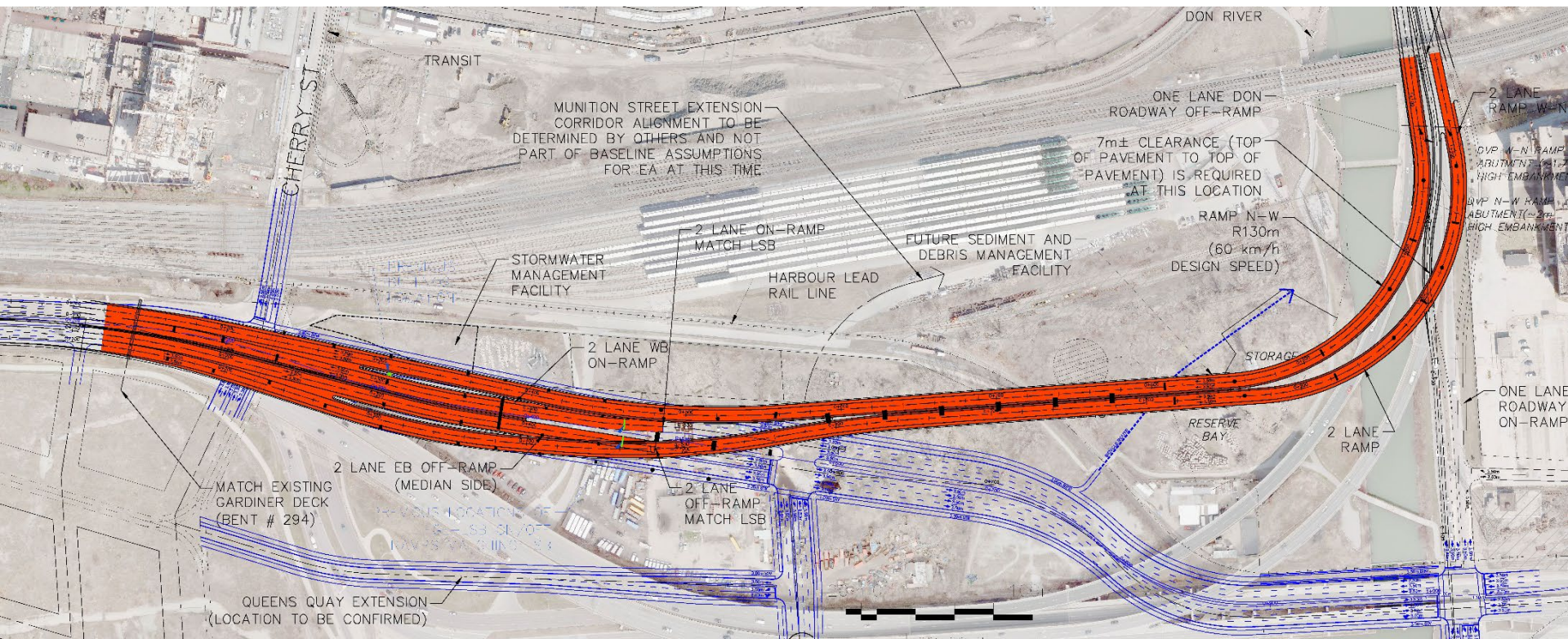
PROJECT BACKGROUND

GARDINER EA & APPROVAL CONDITIONS:

- Improved **pedestrian & cycling network** + enhanced **stormwater management**
- Public Realm **Phasing & Implementation Plan** within **1 year**

CITY COUNCIL DIRECTION:

- Lake Shore Blvd. to be a **balanced multimodal corridor** & continuous landscape identity



SCOPE OF DESIGN WORK

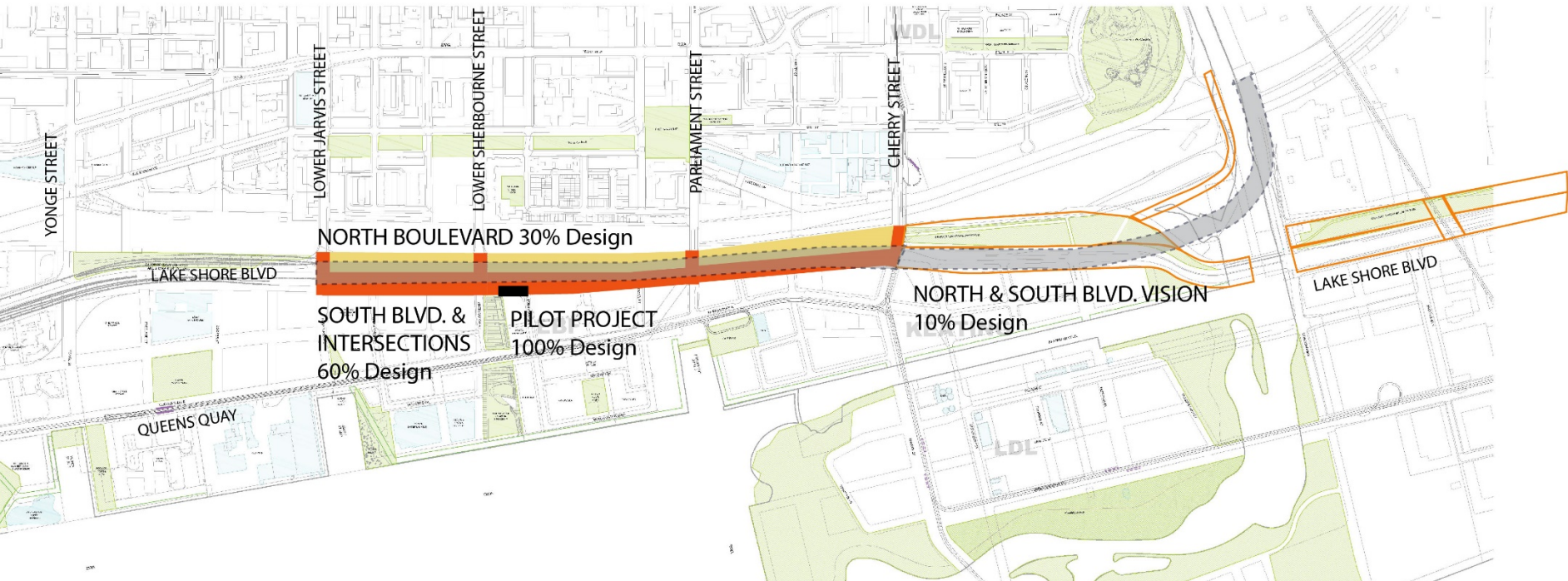
Dillon Consulting and West 8 were retained to advance design of public realm improvements.

Task 1 : Gardiner Public Realm Vision & Implementation Plan (Jarvis to Logan Ave.)

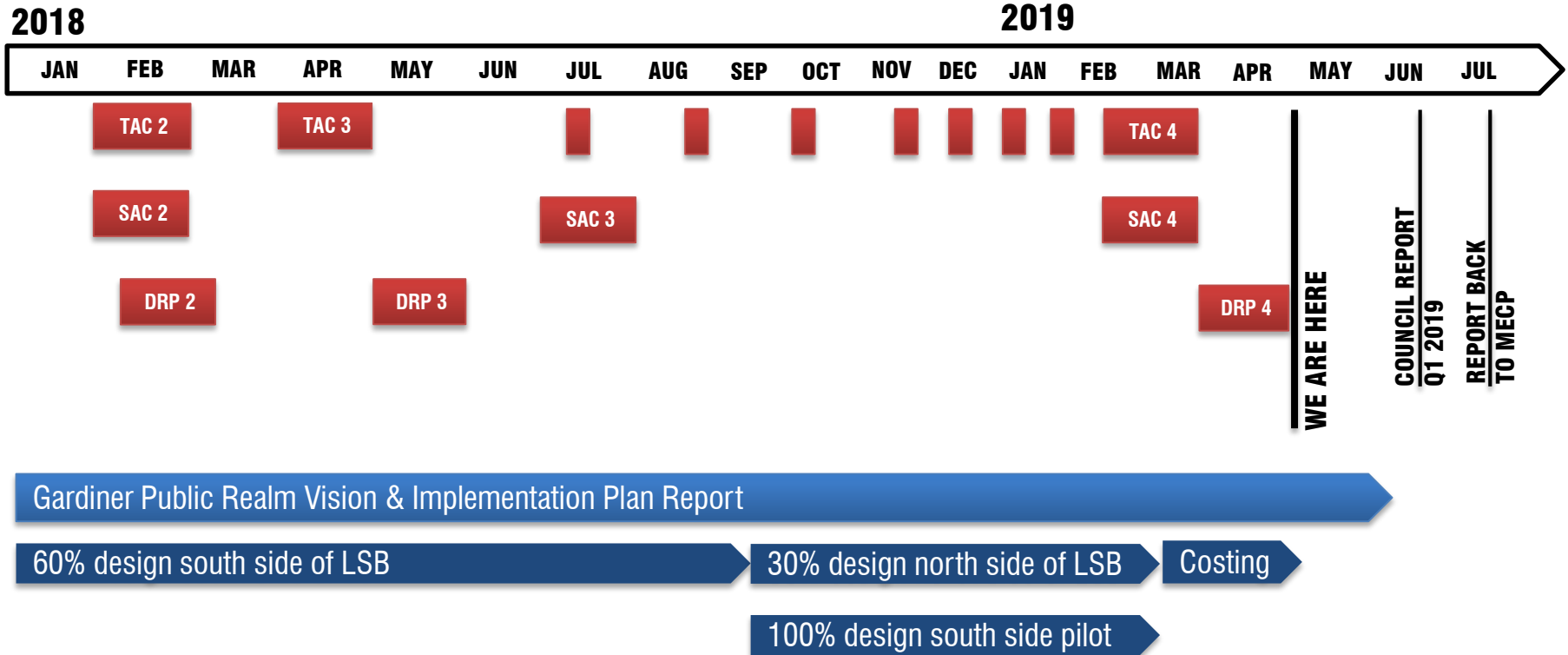
Task 2: 60% design of south boulevard and intersections of Lake Shore Boulevard (Jarvis to Cherry)

Task 3: 100% design of south side pilot project (LSB from Sherbourne Common to Bonnycastle St.)

Task 4: 30% design of north boulevard linear park (LSB from Jarvis to Cherry St.)



PROJECT TIMELINE



IMPLEMENTATION STRATEGY

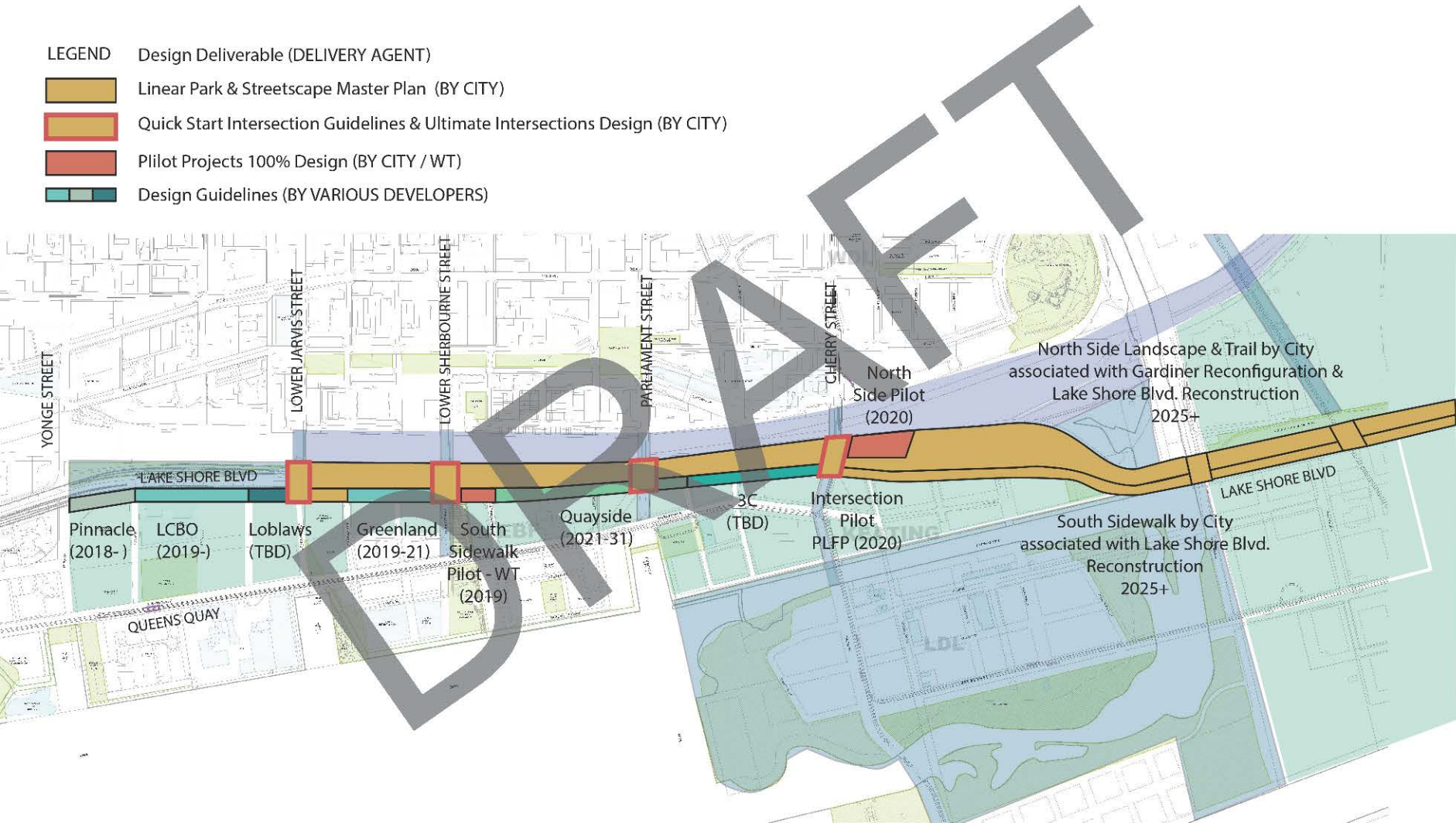
Gardiner East Public Realm Plan

Proponent: City of Toronto / Waterfront Toronto

Design Team: Dillon Consulting, West 8

Review Stage: Design Development

- LEGEND Design Deliverable (DELIVERY AGENT)
- Linear Park & Streetscape Master Plan (BY CITY)
 - Quick Start Intersection Guidelines & Ultimate Intersections Design (BY CITY)
 - Pilot Projects 100% Design (BY CITY / WT)
 - Design Guidelines (BY VARIOUS DEVELOPERS)



* Approximate timelines subject to coordination with other projects

COORDINATION WITH OTHER PROJECTS

GARDINER PUBLIC REALM PROJECT COMPONENTS

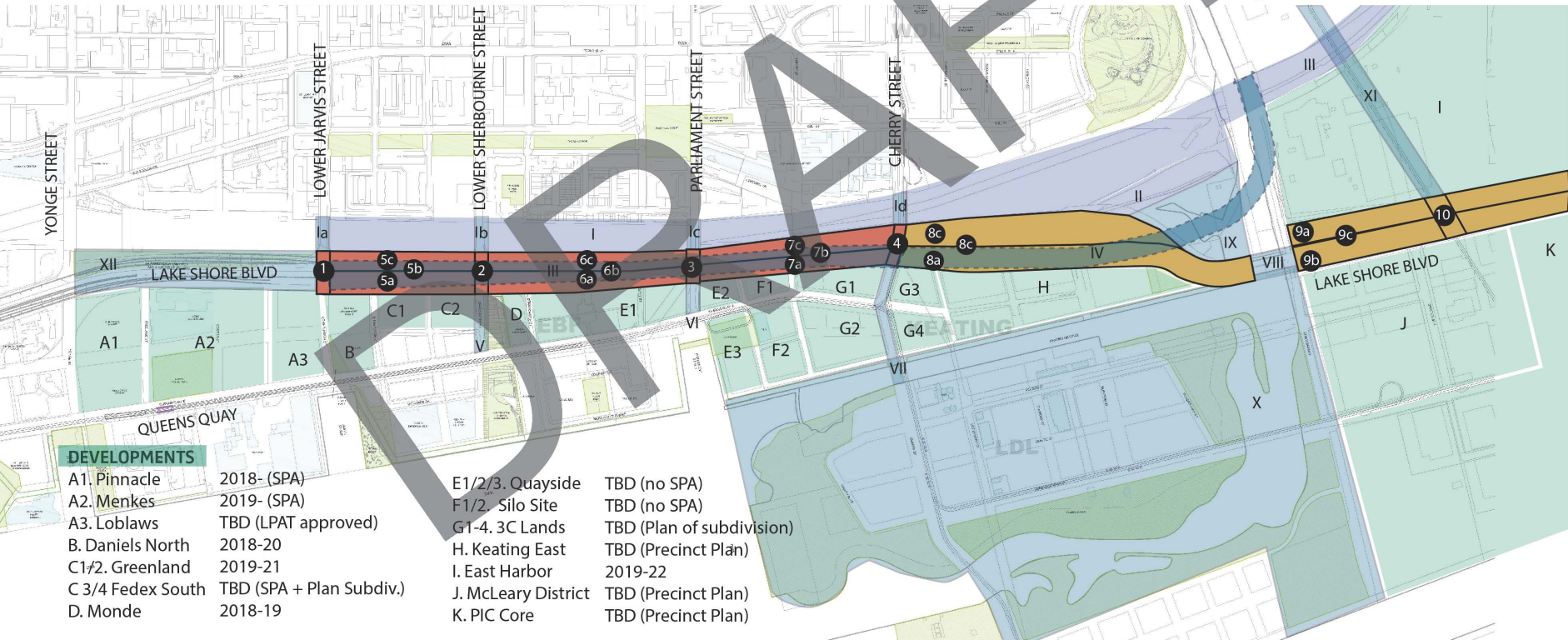
1. Jarvis Intersection	2021
2. Sherbourne Intersection	2022
3. Parliament Intersection	2023
4. Cherry Intersection	2021
5 a.b.c. Jarvis to Sherbourne (South, Median, North)	2021
6 a.b.c. Sherbourne to Parliament (South, Median, North)	2022
7 a.b.c. Parliament to Cherry (South, Median, North)	2023
8 a.b. Cherry to Don River (South, Median, North)	2025+
9 a.b. Don River to Logan Ave (South, Median, North)	2024
10. Broadview Intersection	2024

METROLINX INFRASTRUCTURE PROJECTS:

I. USRC East Enhancements	2020-23
1a. Jarvis Underpass	2023
1b. Sherbourne Underpass	2023
1c. Parliament Underpass	TBD
1d. Cherry Underpass	TBD
II. Wilson Rail Yard	2020-22
III. East Harbour Station	TBD

CITY INFRASTRUCTURE PROJECTS:

III. Gardiner Redecking (Jarvis to Cherry)	2018-2020
IV. Gardiner Expressway Hybrid 3	2021-25
V. Sherbourne St. Realignment	2021
VI. Parliament St. Realignment	2023
VII. Cherry St. Realignment & Bridge	2019-20
VIII. Lake Shore Bridge	2020-23
IX. Sediment Basin	2020-23
X. Port Lands Flood Protection	2018-2023
XI. Broadview Extension	TBD
XII. Lower Yonge	2022-24



DEVELOPMENTS

A1. Pinnacle	2018- (SPA)	E1/2/3. Quayside	TBD (no SPA)
A2. Menkes	2019- (SPA)	F1/2. Silo Site	TBD (no SPA)
A3. Loblaws	TBD (LPAT approved)	G1-4. 3C Lands	TBD (Plan of subdivision)
B. Daniels North	2018-20	H. Keating East	TBD (Precinct Plan)
C1/2. Greenland	2019-21	I. East Harbor	2019-22
C 3/4 Fedex South	TBD (SPA + Plan Subdiv.)	J. McLeary District	TBD (Precinct Plan)
D. Monde	2018-19	K. PIC Core	TBD (Precinct Plan)

COORDINATION WITH METROLINX USRC EAST ENHANCEMENTS & PCCS

A. USRC EAST ENHANCEMENTS

1. Underpass extensions at Jarvis & Sherbourne

- Underpass portals architectural treatment

2. Wilson Yard Expansion

- Lower Don Trail connectivity with Lake Shore trail in coordination with Wilson Yard expansion and Sediment Management Area

3. Cherry St. 'pinch-point' and interface encroachment at other areas of constraint

4. Consistency of design language and planting palette to create a coherent vision on both sides of the corridor



B. PEDESTRIAN & CYCLING CONNECTIVITY STUDY (PCCS)

Metrolinx has funded a separate parallel study of future opportunities for new and improved pedestrian & cycling connections across the rail corridor in this precinct.



COORDINATION WITH PORT LANDS FLOOD PROTECTION

Two areas of overlap with Port Lands Flood Protection:

1. Cherry St. & Lake Shore Blvd. Intersection

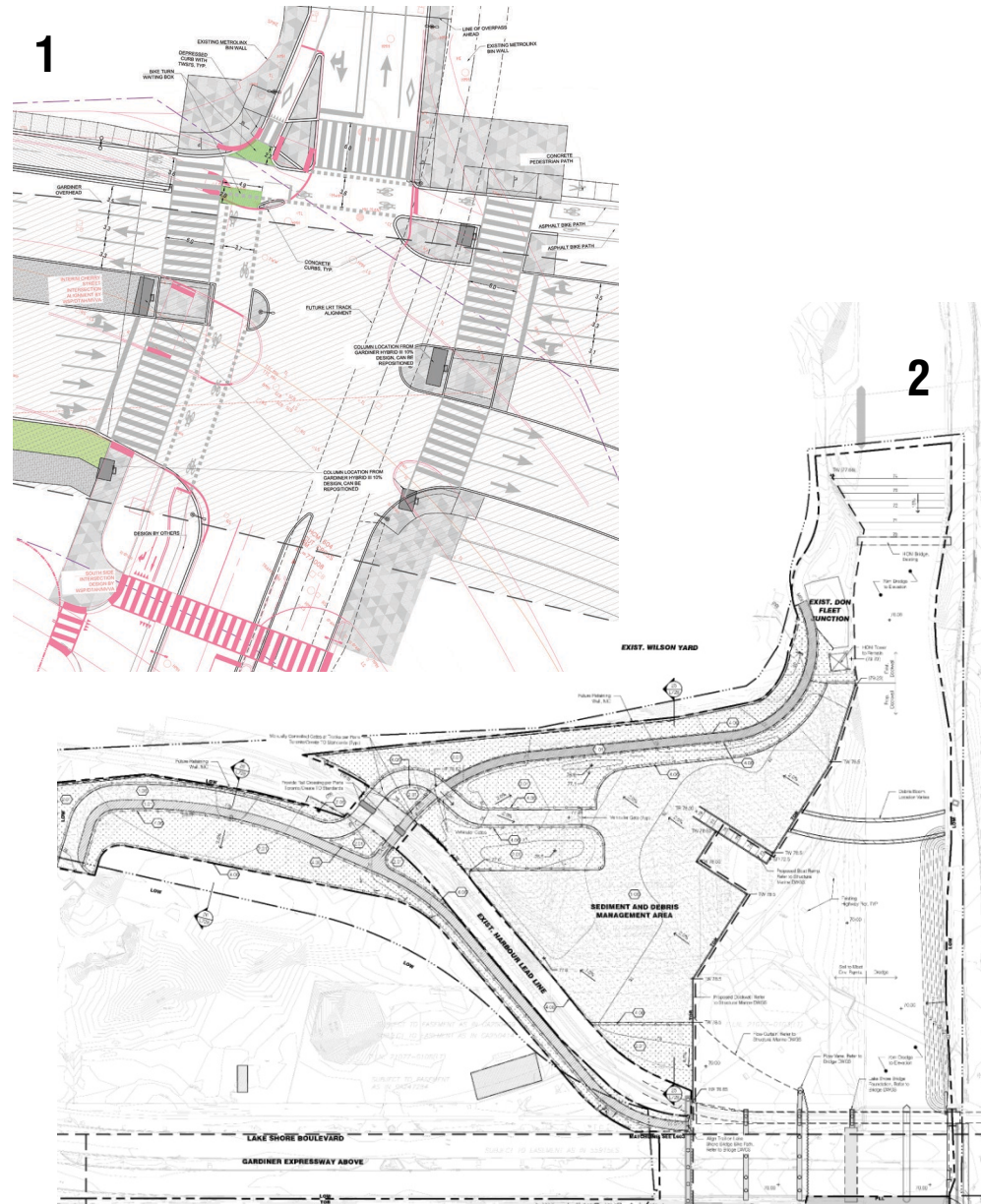
PLFP will deliver an interim condition and Gardiner Public Realm will complete the ultimate condition when Lake Shore Blvd East of Cherry St. is realigned.

2. Sediment Management area & Lower Don Trail connection

Coordination on fence locations, grading, and planting palette. PLFP will deliver interim Lower Don trail connection to LSB.

3. Don Roadway & LSB Intersection

PLFP will deliver an interim condition and Gardiner Public Realm will complete the ultimate condition when Lake Shore Blvd East of Cherry St. is realigned.



ASSUMPTIONS OF FUTURE SITE CONDITIONS & ADJACENT PROJECTS

1. Stormwater Management

- Make **best efforts to manage stormwater on site through LIDs**
- **No planned sewer upgrades** - assume wet landscape during storms, provide controlled ponding areas

2. Gardiner Maintenance

- Provide **maintenance layby to access Gardiner deck** in lieu of north boulevard
- Design all flat hardscape areas (i.e. bike paths) to sustain load of genie lift

3. Utility Coordination

- **Enbridge gas line to be relocated** along with Lake Shore realignment work
- HONI overhead lines to be buried and towers removed, south side lines decommissioned
- Utilities in medians to remain Jarvis-Sherbourne, Bonnycastle to Cherry few or no utilities

4. Metrolinx Coordination

- **Encroachment into USRC property to be allowed** (negotiated by City later)
- Bin wall at Cherry pinch-point to be set back 2m typ & 7m at corner (negotiated by City later)
- Underpasses to be extended to match existing (Jarvis & Sherbourne)

5. Port Lands Flood Protection Coordination

- GPR team to design best ultimate condition of Cherry/Lake Shore intersection
- **PLFP team to deliver parts** that are within budget in interim (pavement markings, curb cuts)

6. Sherbourne Ramp

- Interim condition **redundant ramp stays in place**, may be **removed in future**

7. Traffic Design Speed

- Assume speed to **be reduced to 50km/h, lanes to be narrowed, guard rails removed**
- Design should not preclude **protection at the bents** (i.e. bollards / guards)

LAKE SHORE BOULEVARD PUBLIC REALM DESIGN OBJECTIVES

1. Prioritize **traffic calming** measures and **improve safety**
2. Design an **urban civic boulevard** with a distinct **continuous landscape identity**
3. Improve **East-West connectivity** through rebalanced multimodal mobility
4. Improve **North-South connectivity** across the barriers of the Gardiner Expressway and rail berm, and transform the intersections under the Gardiner into gateways to the Waterfront that express unique identity of each North-South street
5. Design for **sustainable operations and maintenance** for public realm

KEY COMMENTS FROM COMMUNITY STAKEHOLDERS:

1. Need for **improved intersection design** and **safer crossings** especially North-South between existing neighborhoods and the Waterfront across Rail Corridor & Gardiner
2. Aspirations for **programming elements** (i.e. off-leash dog park)
3. **Separated bike & pedestrian trails** preferred

KEY COMMENTS FROM CITY STAFF:

1. **Separated bike & pedestrian trails** preferred wherever possible, short sections of multiuse trail acceptable at areas of constraint, **dismount crossings not acceptable**
2. **Traffic analysis** needed for intersection modifications & signal changes
3. **Unimpeded inspection access** for underside of Gardiner structure required

DRP COMMENTS

May 2018 – Design Development South Side & Intersections

- Generally, very positive reaction and seizing opportunity of this project
- Simple and refreshing design - feels like Lake Shore Boulevard is like entering a different world
- There is some **disagreement on the planting approach** or **the river of pebbles** approach
- **Quality of materials** is important
- Consider **summer vs. winter**
- **Each intersection should have different lighting treatment based on history and identity**
- **Focus more on the corners**
- **Concern over Metrolinx public realm integration** with this project
- Prioritize **lowering the speed limit** in order to **clean up the clutter** of required elements and make it a safer place for pedestrians and cyclists

Feb 2018 – Schematic Design Vision

- The **relationship of the public realm to future development on the south side** of Lake Shore is important
- Consider **integrating public art** into the design
- The **stormwater management should be built into the overall scheme**
- Further **refinement of the materiality and species selection**

QUESTIONS TO THE PANEL

1. Has the design **achieved the stated project objectives**?
2. Although **conditions vary widely** along the corridor, and the character of the project varies from west to east, **does it still feel like a cohesive boulevard identity**?
3. Have we **humanized the intersections sufficiently** to improve the perception of connectivity to the waterfront under the Gardiner?
4. Has the project **seized opportunities for sustainability and innovation** through this unique design challenge?
5. Given the way this public realm vision will be implemented in parts by many delivery agents as opposed to a single project master plan, **how can we ensure consistency and quality are maintained across the corridor**?

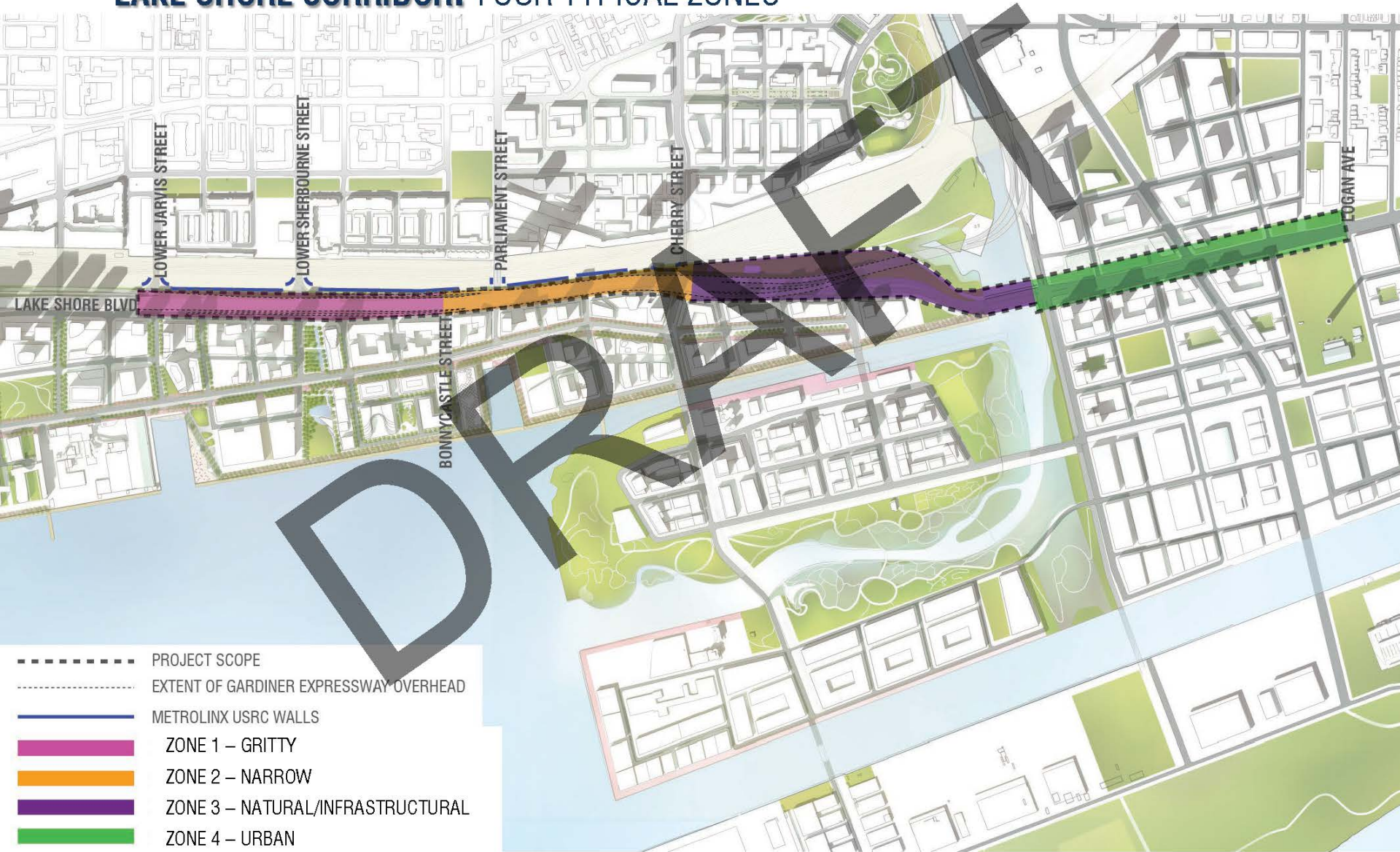
AGENDA

INTRO: PROJECT BACKGROUND

- 1/ LAKE SHORE BOULEVARD VISION & IMPLEMENTATION PLAN**
- 2/ SOUTH SIDEWALK DESIGN GUIDELINES & PILOT PROJECT**
- 3/ NORTH LINEAR PARK & TRAIL MASTER PLAN**
- 4/ STORMWATER MANAGEMENT & ENGINEERING**
- 5/ INTERSECTIONS DESIGN**
- 6/ VISION EAST OF CHERRY STREET**

1/ VISION & IMPLEMENTATION STRATEGY

LAKE SHORE CORRIDOR: FOUR TYPICAL ZONES



A VARIETY OF EXISTING CONDITIONS

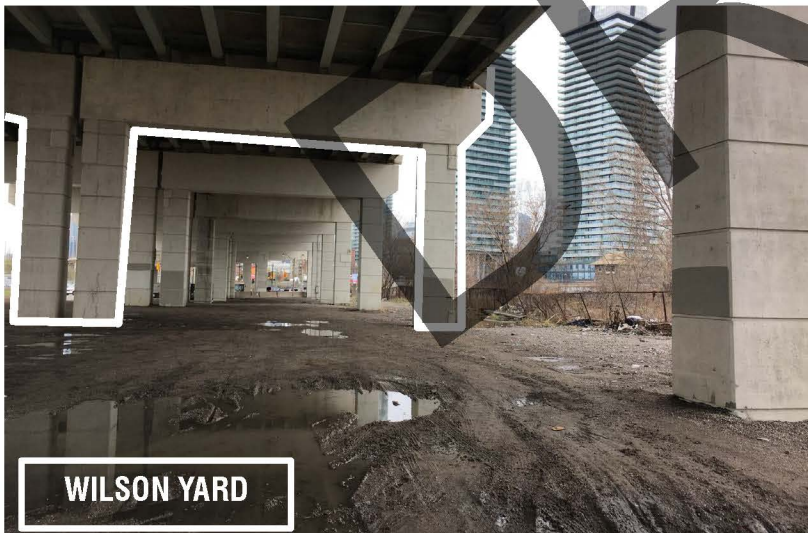
ZONE 1 – GRITTY - JARVIS STREET TO BONNYCASTLE



ZONE 2 – NARROW - BONNYCASTLE TO CHERRY



**ZONE 3 – INFRASTRUCTURAL/NATURAL
CHERRY TO DON RIVER**



ZONE 4 – URBAN - DON RIVER TO LOGAN AVENUE



JARVIS TO CHERRY: SOUTH SIDE BOULEVARD

Lower Jarvis – Lower Sherbourne Looking west

FUTURE GREENLAND DEVELOPMENT

PATCHWORK
PUBLIC REALM

Lower Sherbourne – Parliament Looking east

OUTDATED
LIGHT
STANDARDS

NEW MONDE DEVELOPMENT

PATCHWORK
PUBLIC REALM

JARVIS TO CHERRY: SOUTH SIDE BOULEVARD

Parliament to Cherry St. Looking East

SURFACE
PONDING

MISALIGNED
UTILITIES

MARTIN
GOODMAN TRAIL

FUTURE DEVELOPMENT



JARVIS TO CHERRY: NORTH SIDE BOULEVARD

Lower Jarvis – Sherbourne looking west

ACTIVE
HIGHWAY

RAIL CORRIDOR

UNDERUSED
SPACE

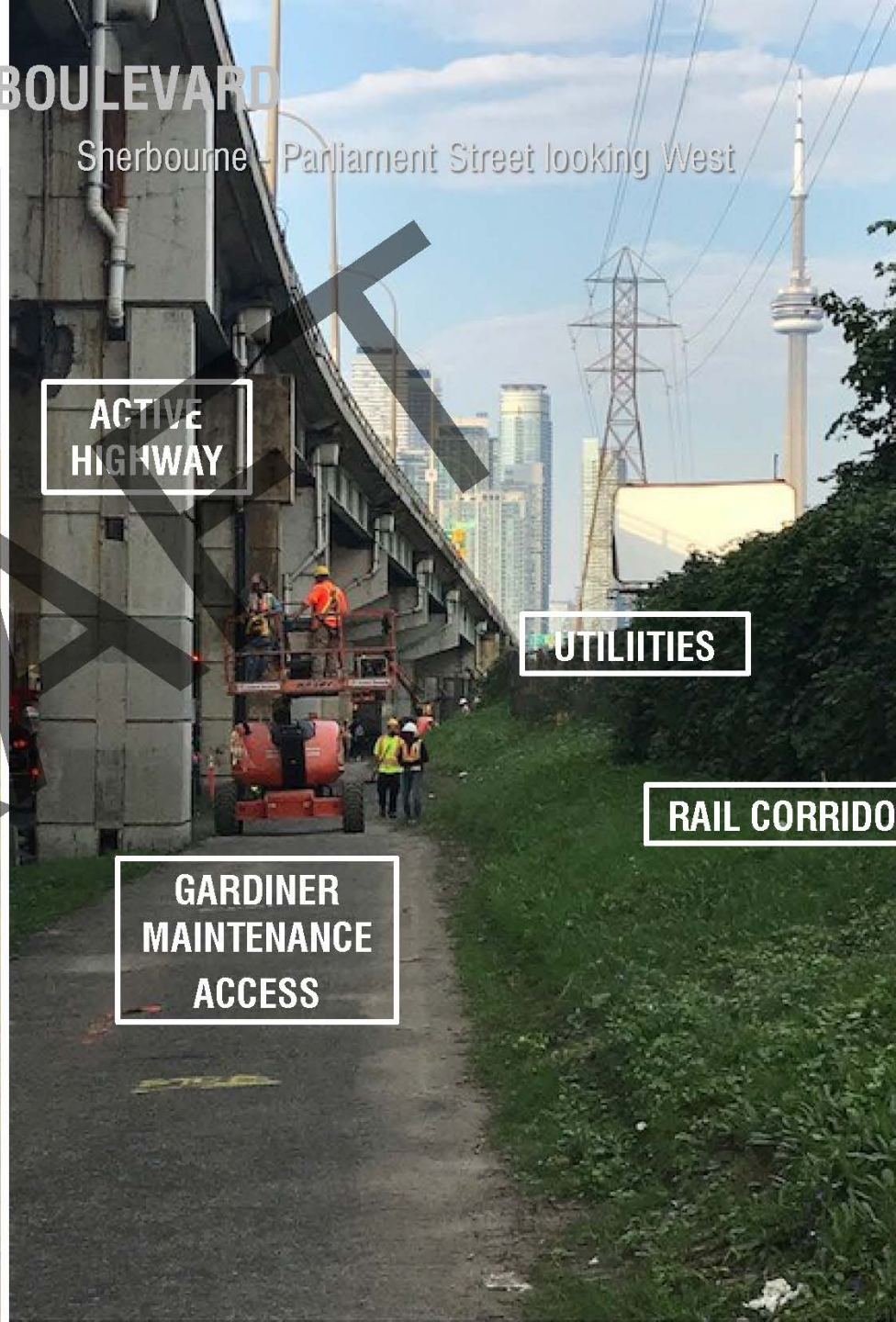
Sherbourne – Parliament Street looking West

ACTIVE
HIGHWAY

UTILITIES

RAIL CORRIDOR

GARDINER
MAINTENANCE
ACCESS



JARVIS TO CHERRY: MEDIANS

Jarvis to Bonnycastle



CHERRY ST. TO DON RIVER: CONFLUENCE OF INFRASTRUCTURE

**GARDINER SECTION
TO BE REBUILT**

**HARBOUR LEAD
RAIL TO REMAIN**



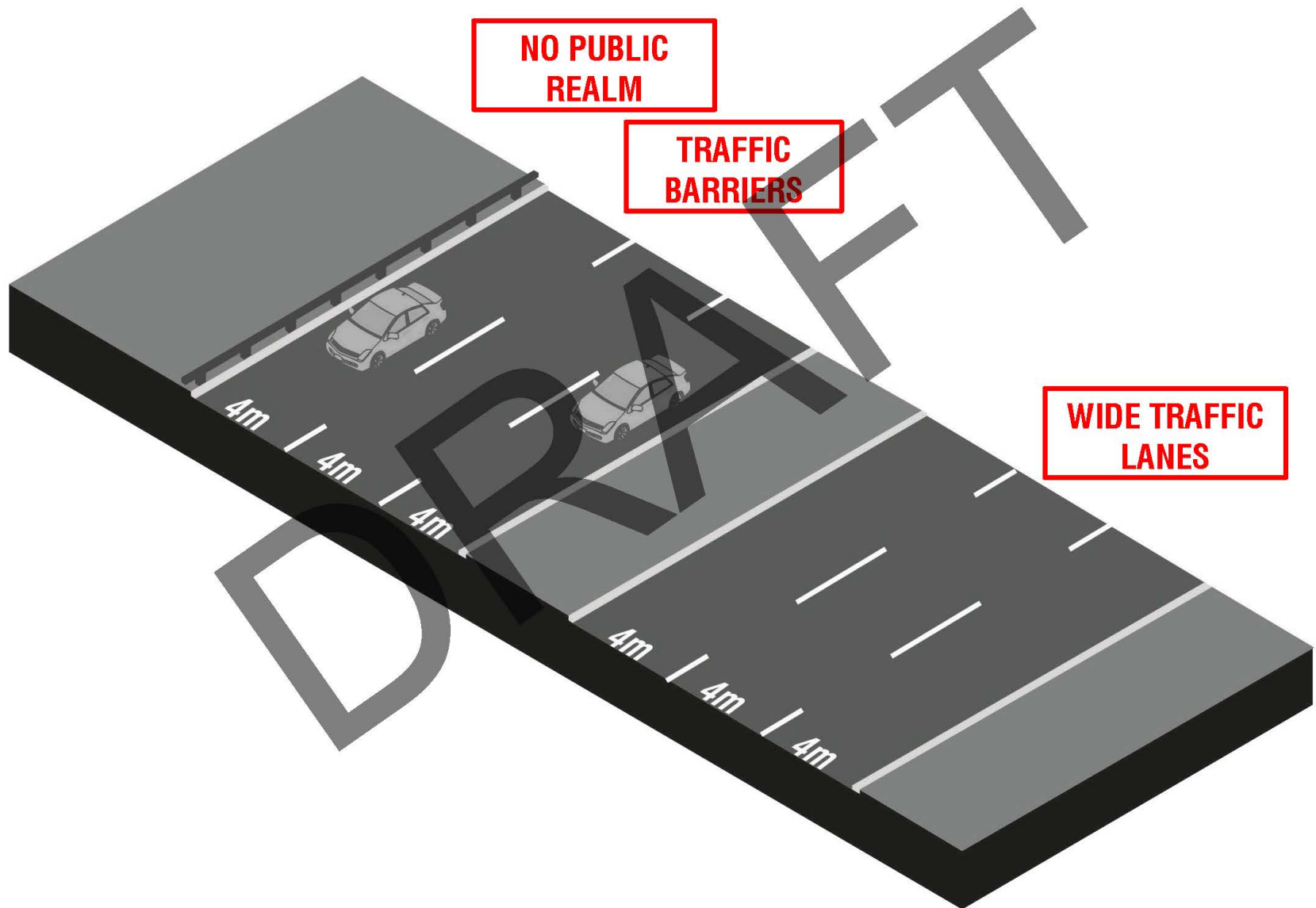
DON RIVER TO LOGAN: TRAIL BETWEEN RAIL & HIGHWAY RAMPS

**GARDINER RAMPS
TO BE REMOVED**

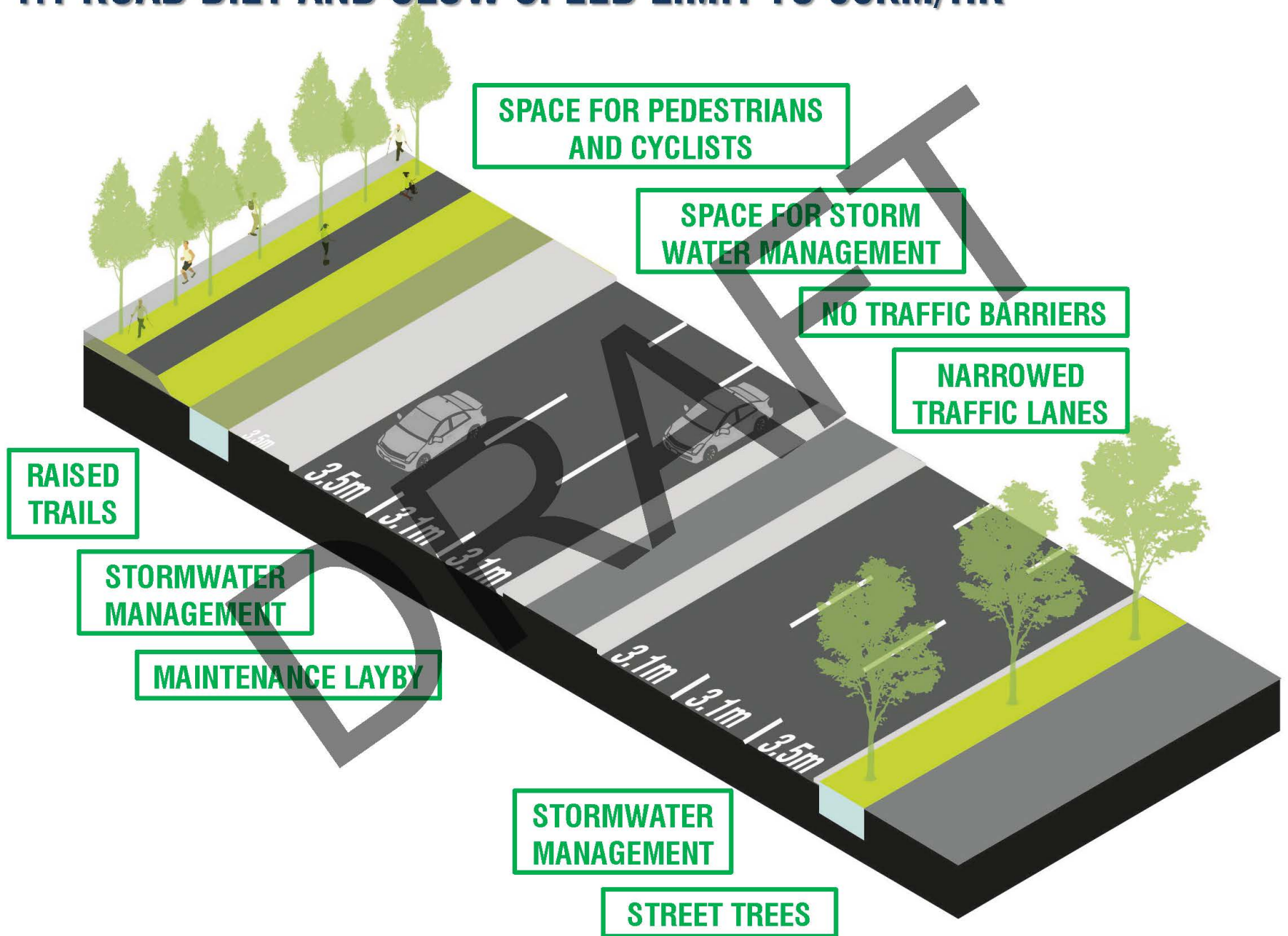
**HARBOUR LEAD
RAIL TO REMAIN**



TYPICAL EXISTING CONDITION

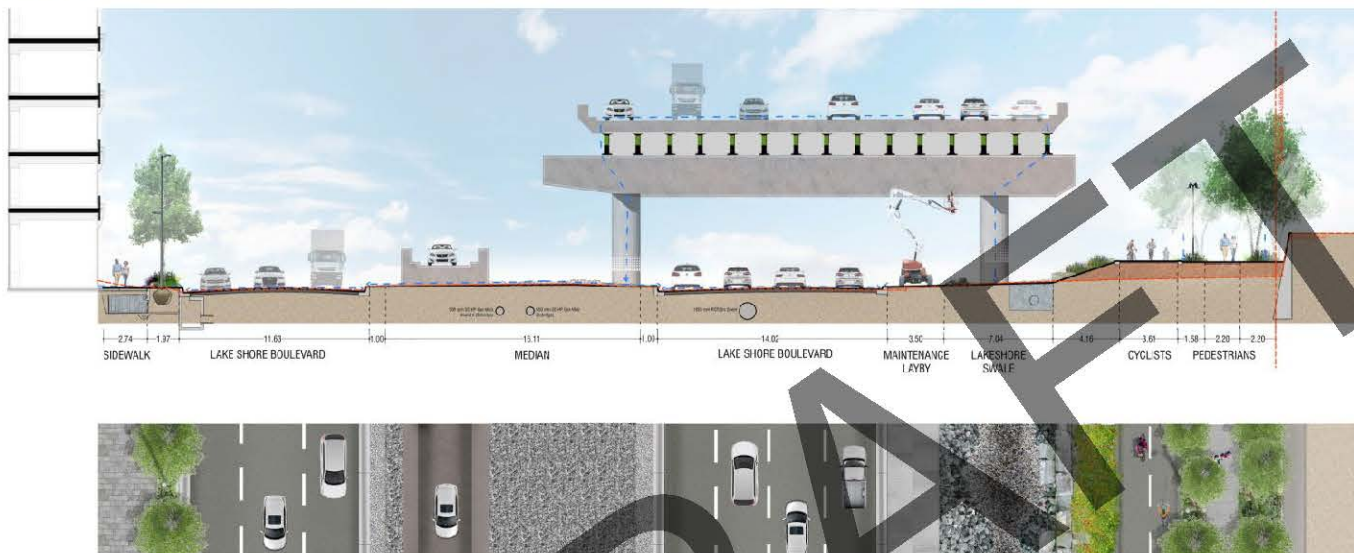


1.1 ROAD DIET AND SLOW SPEED LIMIT TO 50KM/HR

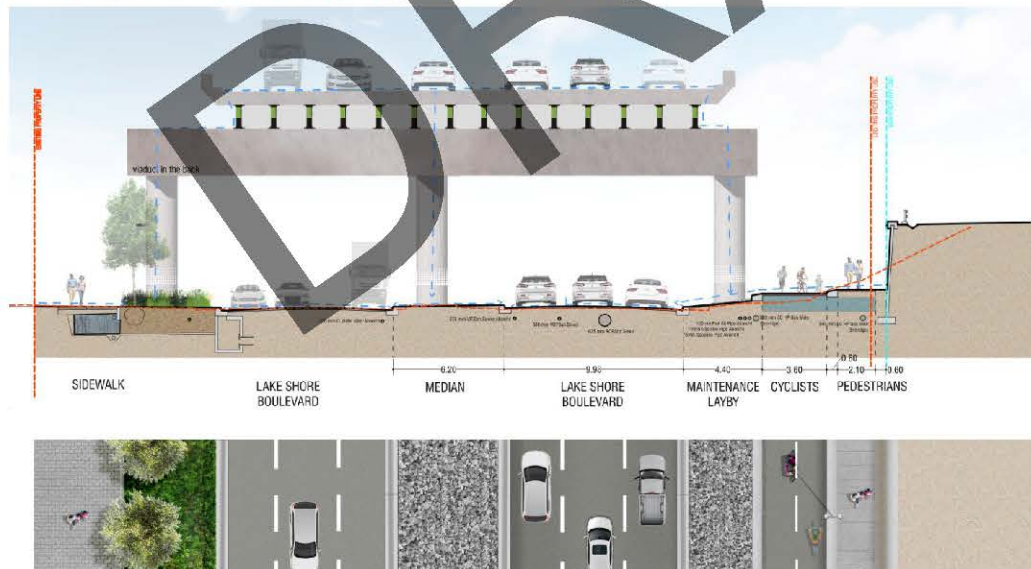


CONTINUOUS LANDSCAPE IDENTITY THROUGH VARIED CONDITIONS

ZONE 1 - JARVIS TO BONNYCASTLE - GRITTY



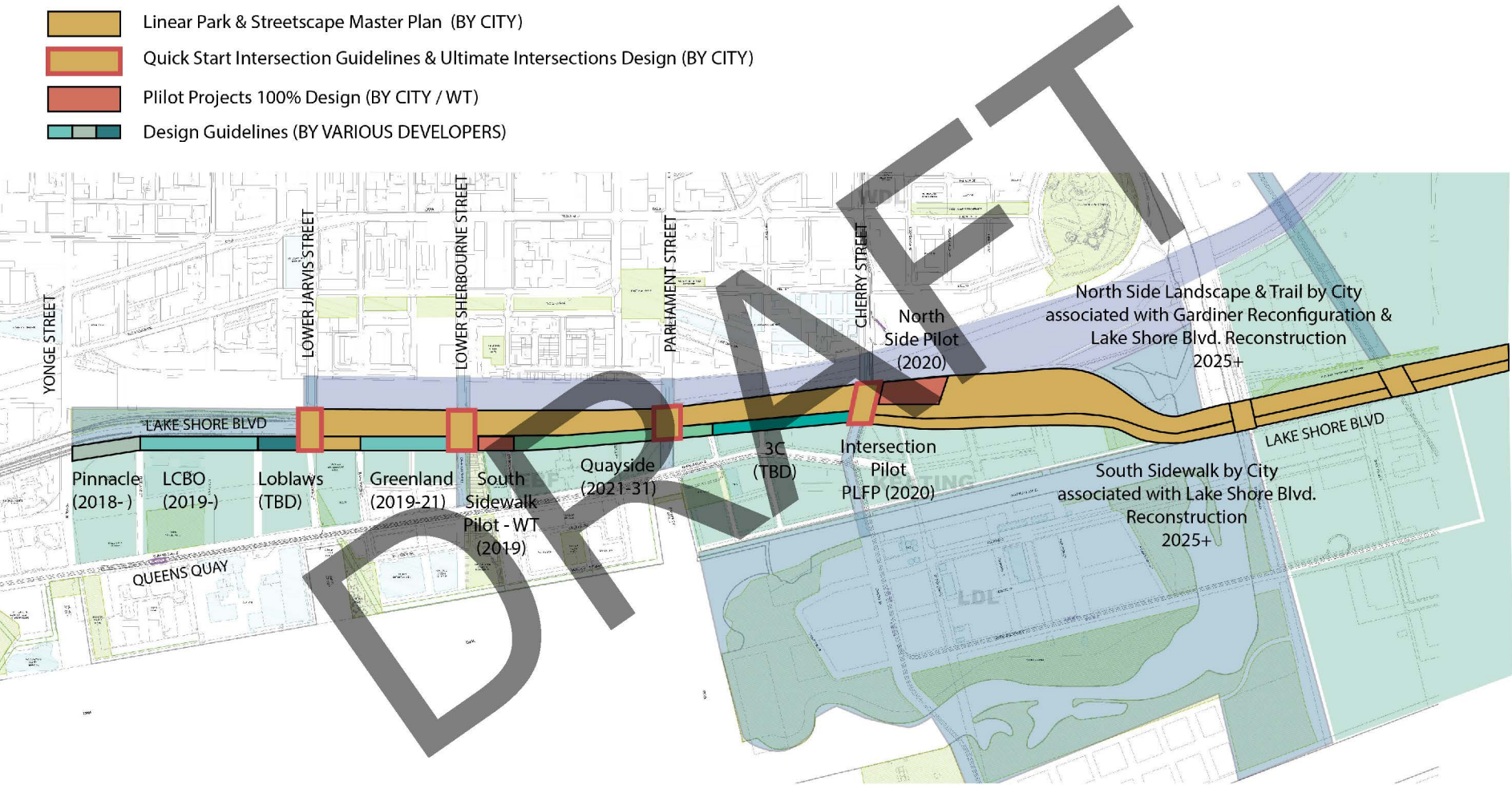
ZONE 2 - BONNYCASTLE TO CHERRY - NARROW



*Depth of utilities is assumed, to be confirmed by field survey.

IMPLEMENTATION STRATEGY

- LEGEND**
- Design Deliverable (DELIVERY AGENT)
 - Linear Park & Streetscape Master Plan (BY CITY)
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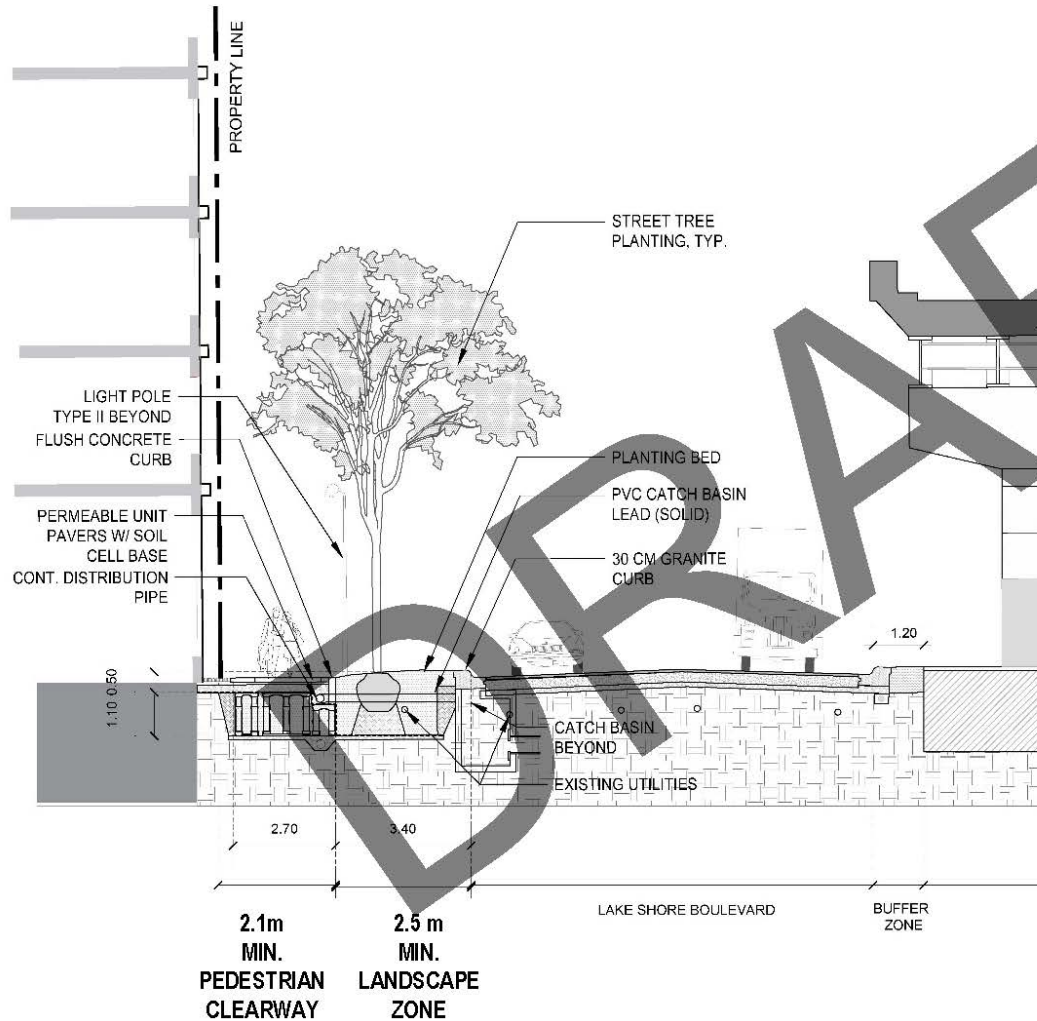
*** Approximate timelines subject to coordination with other projects**

2/ SOUTH SIDEWALK DESIGN GUIDELINES & PILOT PROJECT



SOUTH SIDEWALK DESIGN GUIDELINE

2.1 TYPICAL SECTION



Components:

1. Sidewalk

- permeable pavers
(extended to building face)
- soil cells
(where required for soil volume)
- concrete flush curb

2. Bioretention planter

- groundcover planting
- street trees (where possible)
- connection to nearest CB for
passive stormwater irrigation
- connection to nearest sewer for
drainage
- granite curb

SOUTH SIDEWALK DESIGN GUIDELINES

2.2 TYPICAL MATERIALS PALETTE

Permeable concrete unit pavers



Climate resilient planting



Granite curbs along south side developments



Typical concrete curbs on medians



Stabilized stone as median edge



Rough Natural Stone Aggregate 2-4cm Dia. and 10-20cm Dia.



SOUTH SIDEWALK DESIGN GUIDELINES

2.3 PLANTING STRATEGY

SPECIES DIVERSITY AND SALT TOLERANCE



Mid-block Trees

Shade and disease tolerant Elm varieties

- Ulmus americana "Homestead"
- Ulmus japonica x Wilsoniana "Morton"
- Ulmus americana "Princeton"
- Ulmus americana "Valley Forge"



Diversity at Intersections

Tulip Trees and Oaks

- Liriodendron tulipifera
- Quercus bicolor
- Acer rubrum



Groundcover planting

Salt and shade tolerant perennial species

- Astilbe chinensis "Visions in White" (Chinese astilbe)
- Astilbe "Delft Lace" (Delft Lace astilbe)
- Euribia macrophyllus (native aster)
- Solidago flexicaulis (goldenrod)
- Deschapsia cespitosa (tufted hair grass)

SOUTH SIDEWALK DESIGN GUIDELINES:

2.4 INTEGRATED STORMWATER MANAGEMENT



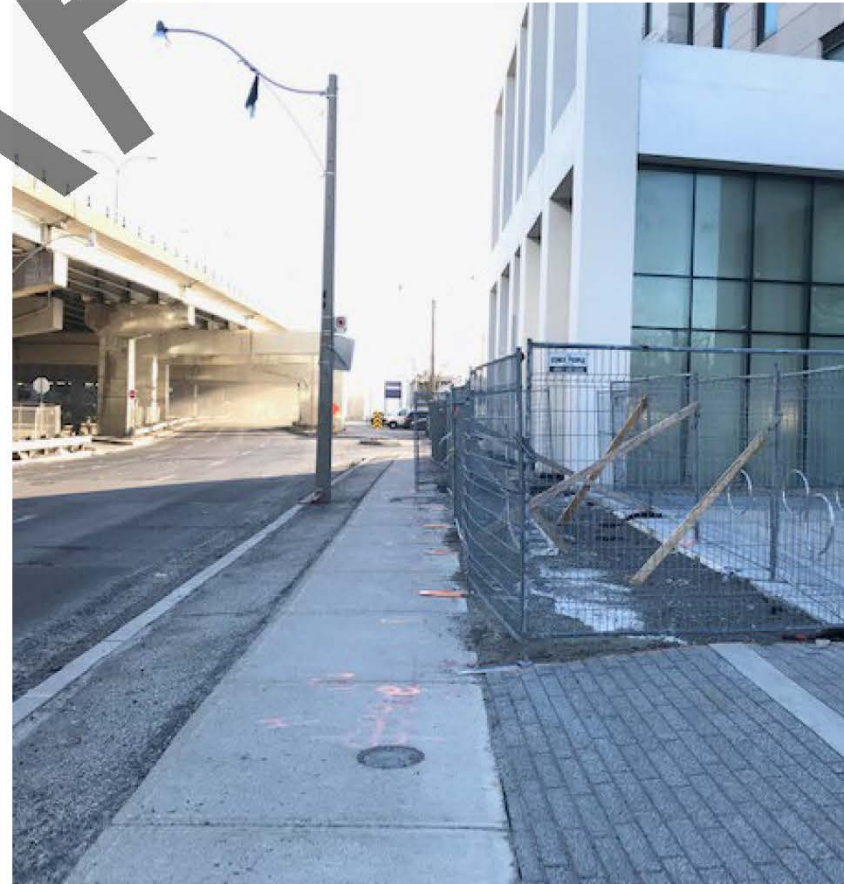
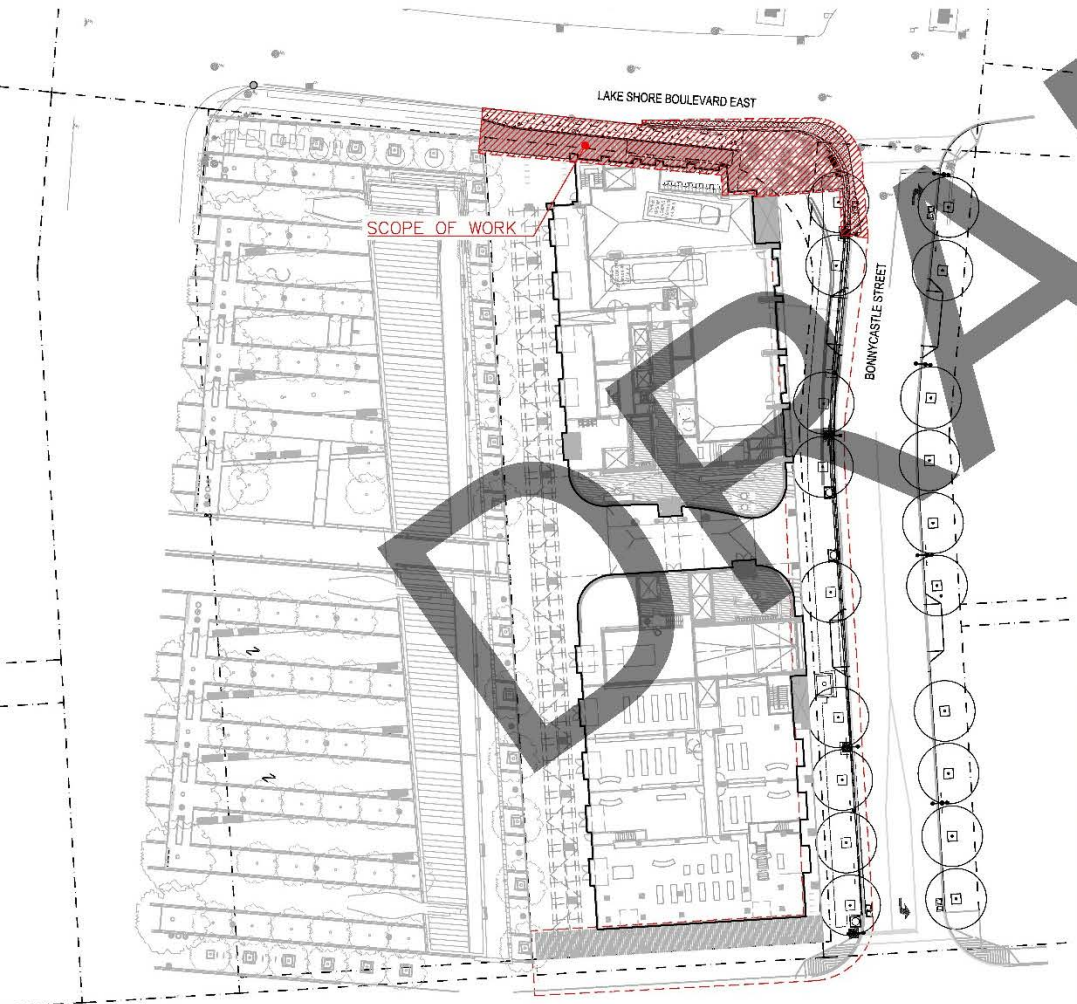
SOUTH SIDEWALK PILOT PROJECT

Opportunity for early implementation in front of Monde Development between Sherbourne Common & Bonnycastle St.

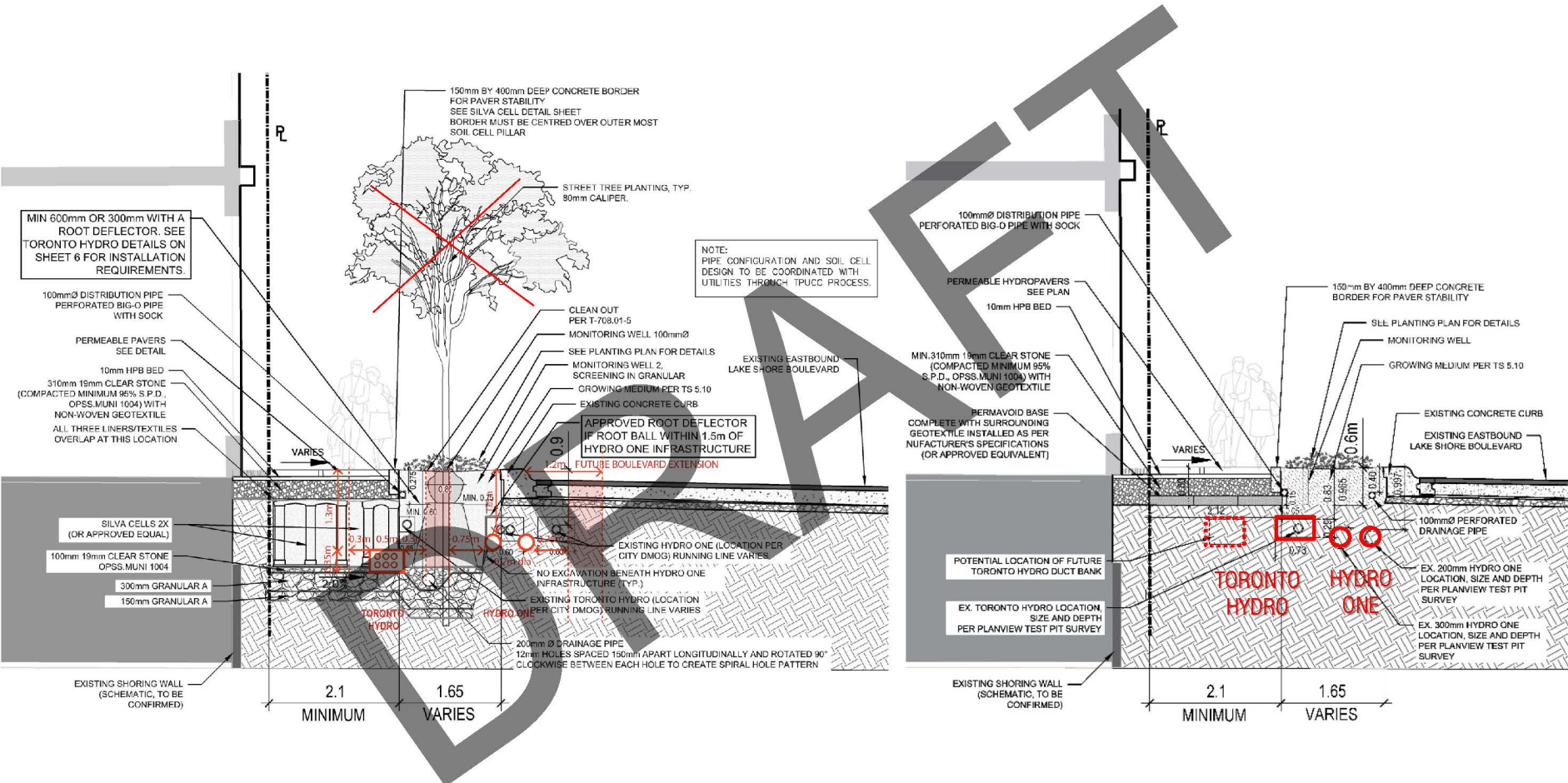


SITE CONSTRAINTS

1. Narrow boulevard area, shaded by tall tower
2. High traffic road, heavily salted in winter
3. Multiple existing underground utilities



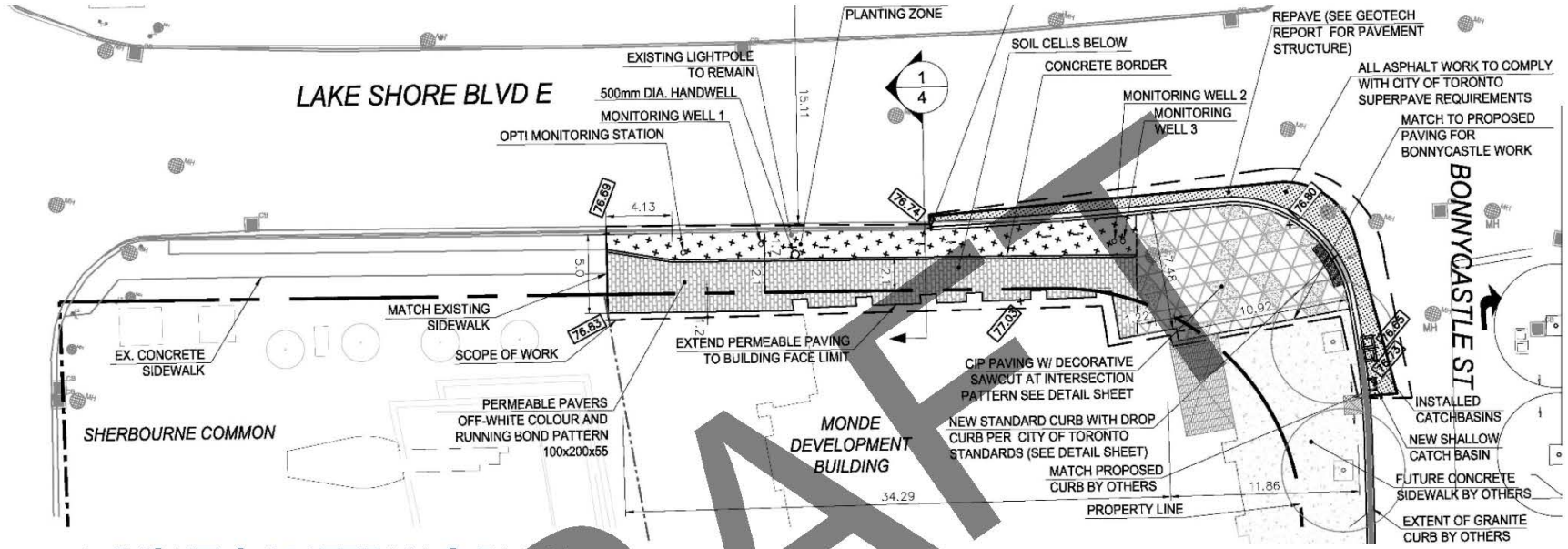
SOUTH SIDEWALK PILOT PROJECT – DESIGN ADAPTATION



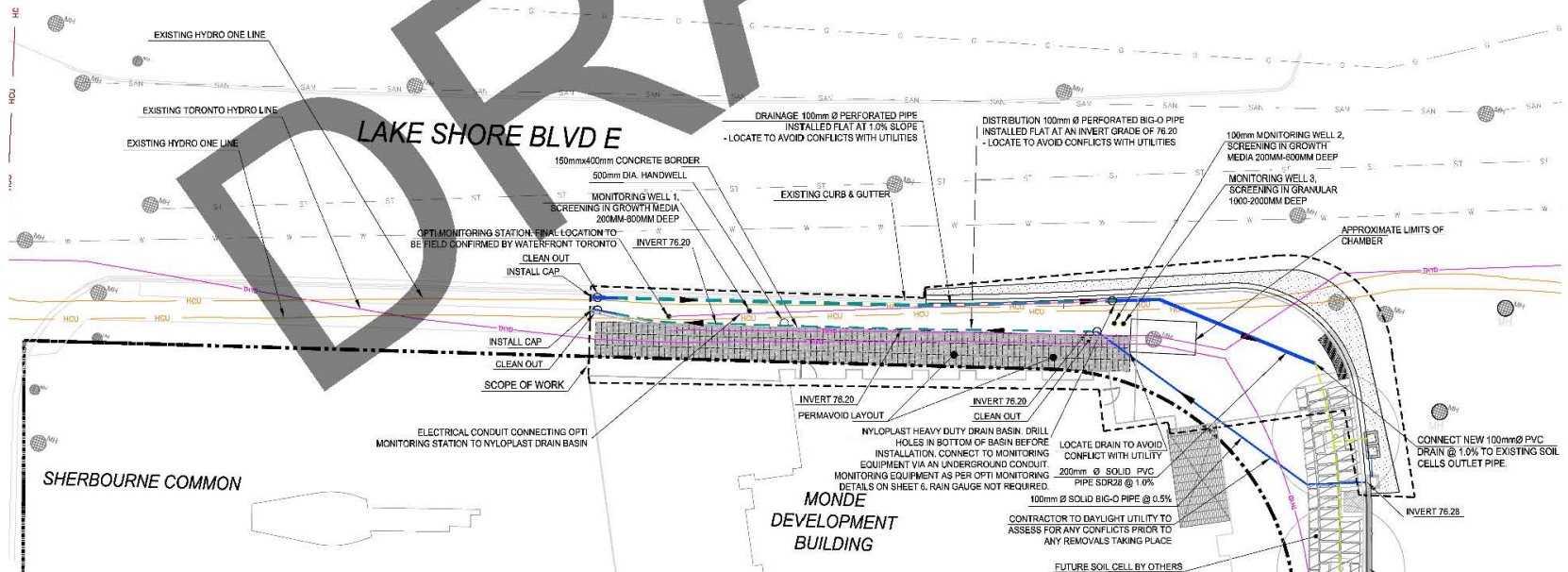
ORIGINAL DESIGN

ADAPTED DESIGN

SOUTH SIDEWALK PILOT PROJECT – DETAILED DESIGN



LAYOUT & MATERIALS PLAN



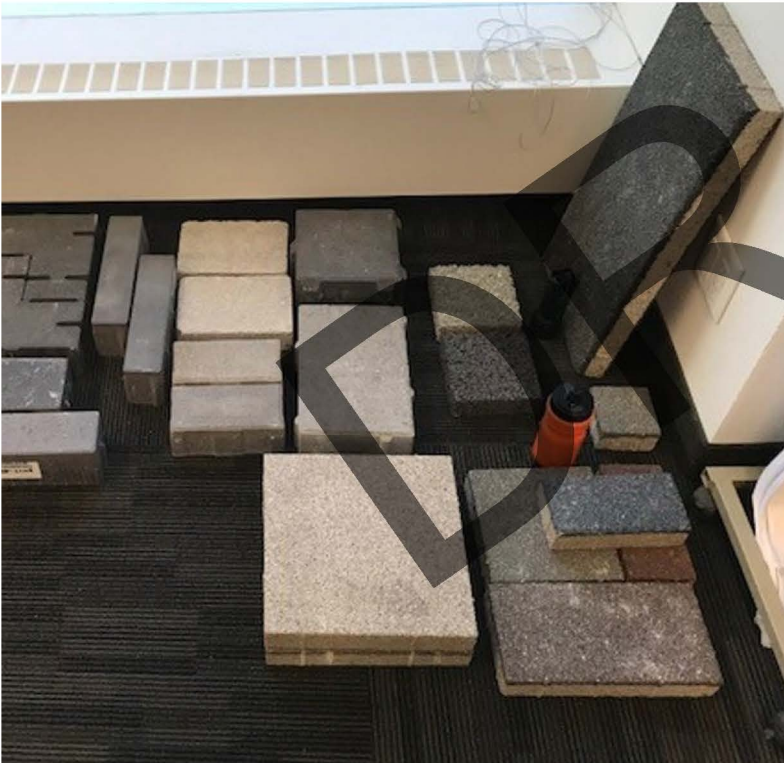
SUBGRADE INFRASTRUCTURE PLAN

SOUTH SIDEWALK PILOT PROJECT - TESTING NEW LID PRODUCTS

HYDROPAVERS PERMEABLE PAVERS

Testing:

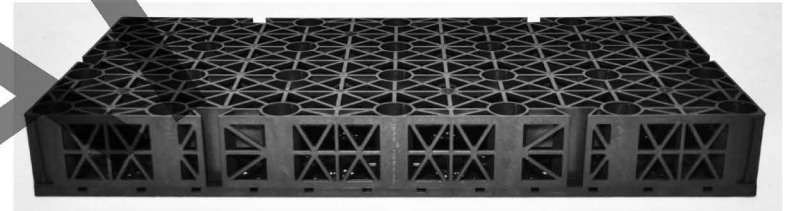
- Structural Performance
- Permeability & Durability over time
- Maintenance requirements



PERMAVOID SUB-BASE

Testing:

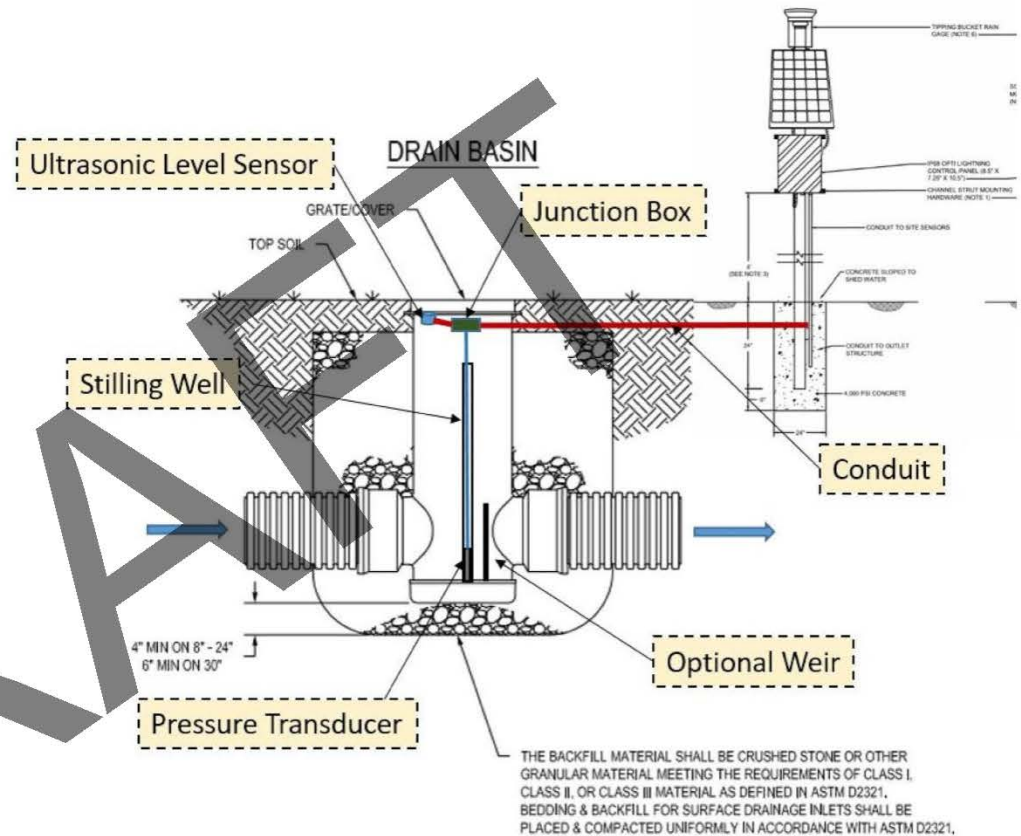
- Structural performance & durability in winter
- Capillary irrigation performance



SOUTH SIDEWALK PILOT PROJECT - MONITORING PLAN

Monitoring over 2 years:

- Water quality improvement
- Stormwater attenuation - reduced peak flows
- Plant health in response to stormwater & salt
- Paver permeability over time, pre- & post-maintenance
- LID maintenance demands

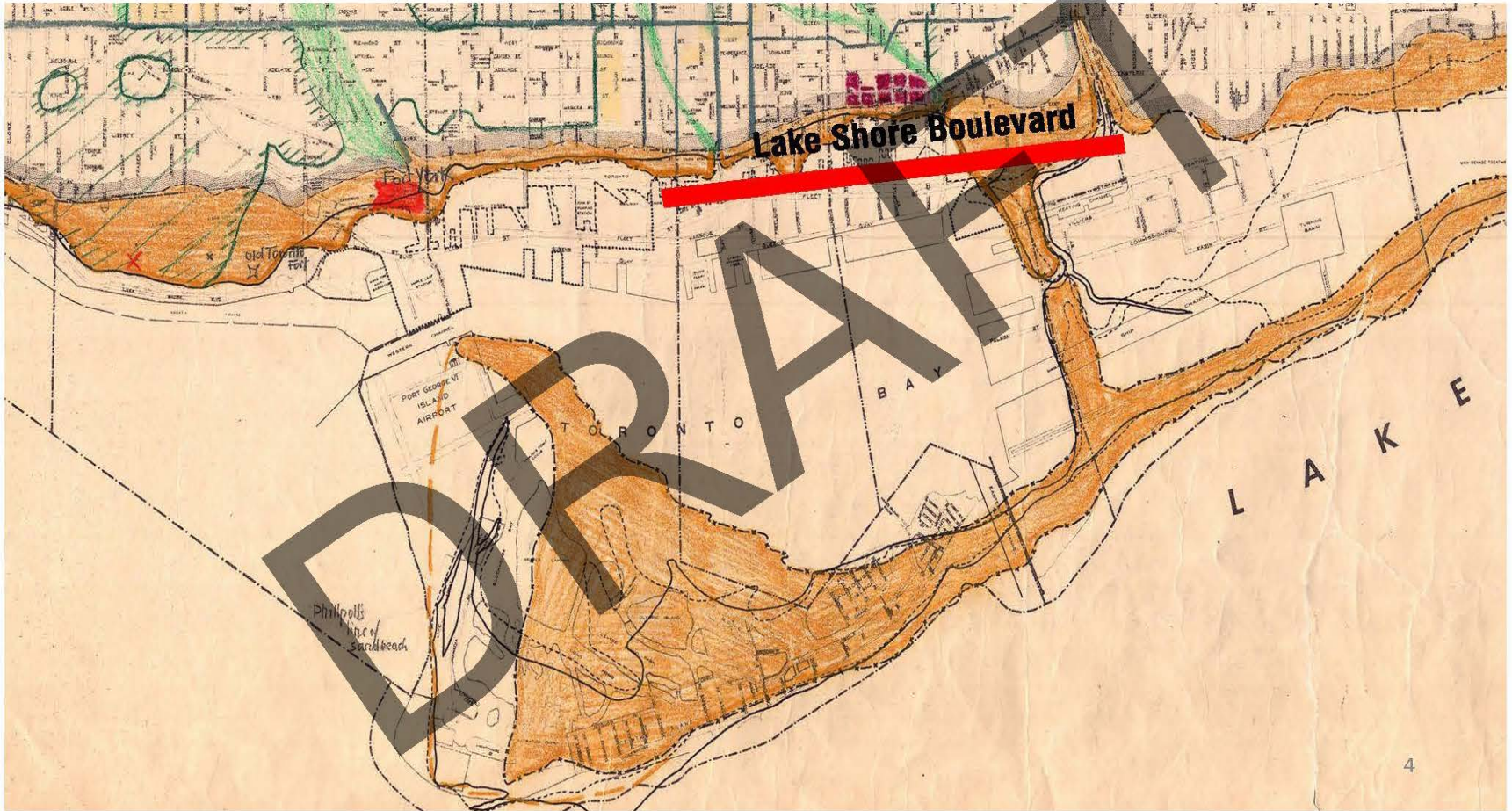


*The monitoring plan was defined in close collaboration with the TRCA **Sustainable Technologies Evaluation Program (STEP)** who will be performing the monitoring work for this Pilot to inform the greater Lake Shore Public Realm project and City of Toronto Green Streets program.

3/ NORTH LINEAR PARK & LAKE SHORE TRAIL MASTER PLAN



A NEW LAKE SHORE TRAIL FOR THE OLD LAKE SHORE

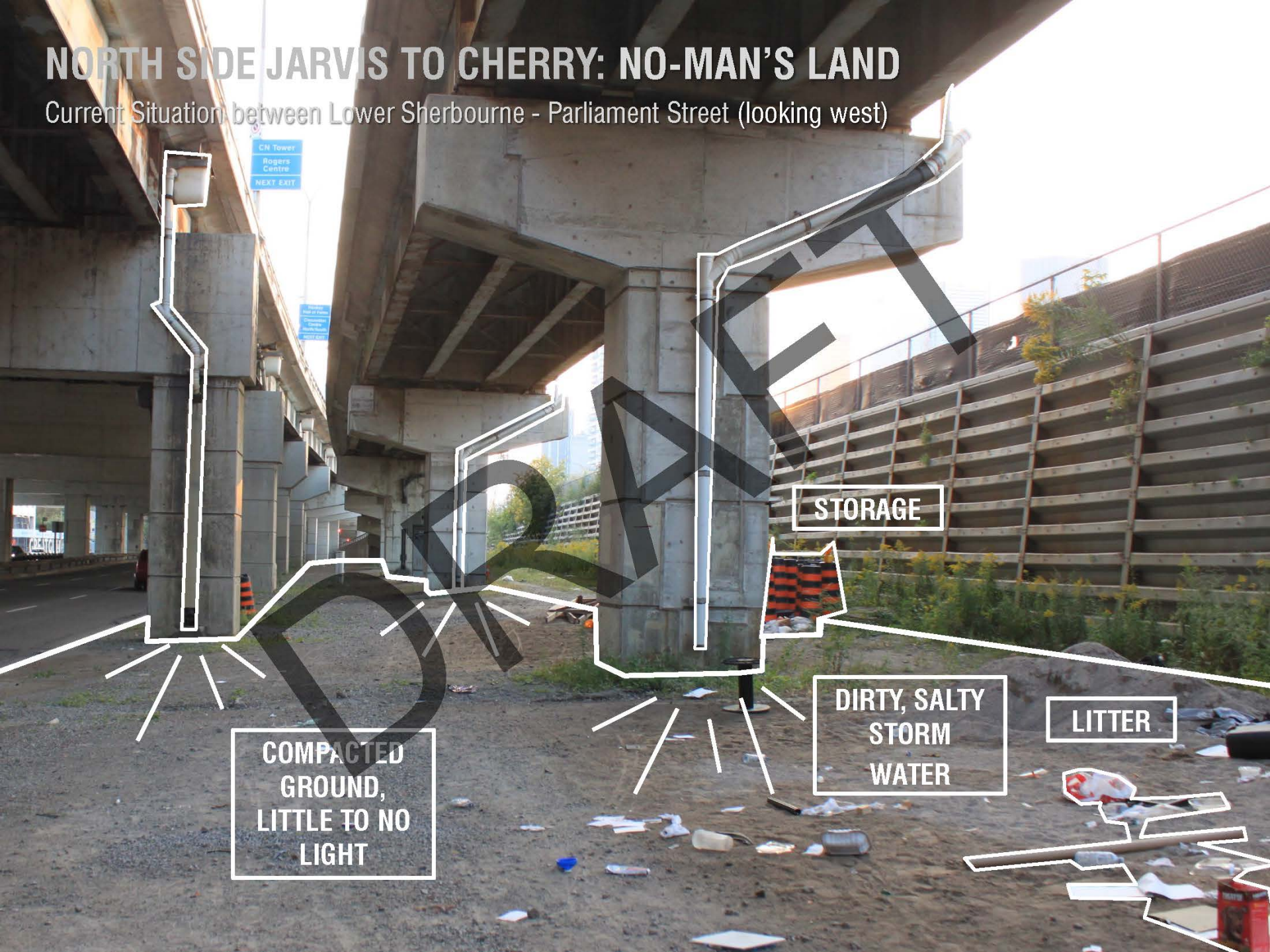


**ENTER AT YOUR
OWN RISK**



NORTH SIDE JARVIS TO CHERRY: NO-MAN'S LAND

Current Situation between Lower Sherbourne - Parliament Street (looking west)



COMPACTED
GROUND,
LITTLE TO NO
LIGHT

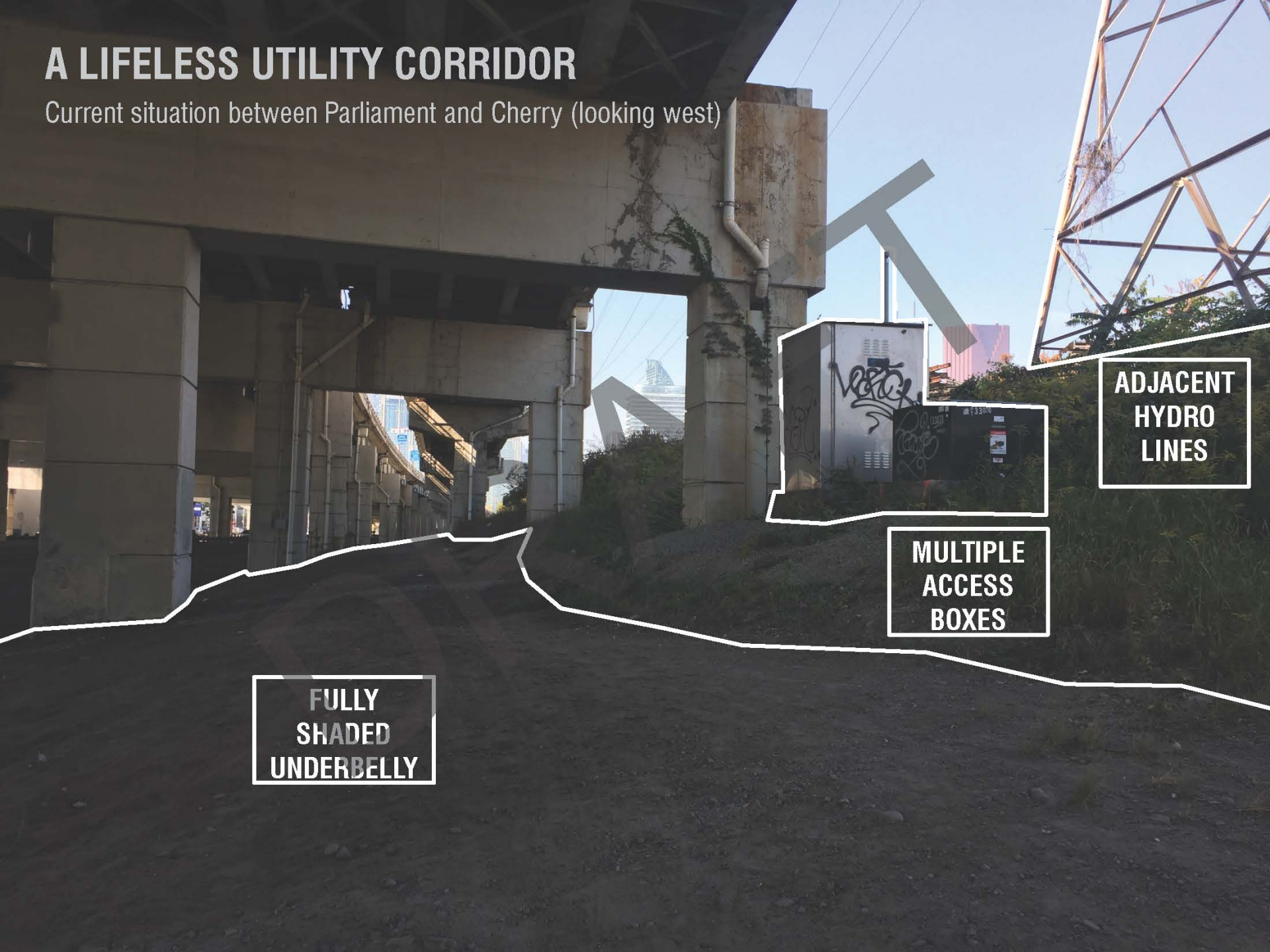
STORAGE

DIRTY, SALTY
STORM
WATER

LITTER

A LIFELESS UTILITY CORRIDOR

Current situation between Parliament and Cherry (looking west)



**FULLY
SHADED
UNDERBELLY**

**MULTIPLE
ACCESS
BOXES**

**ADJACENT
HYDRO
LINES**

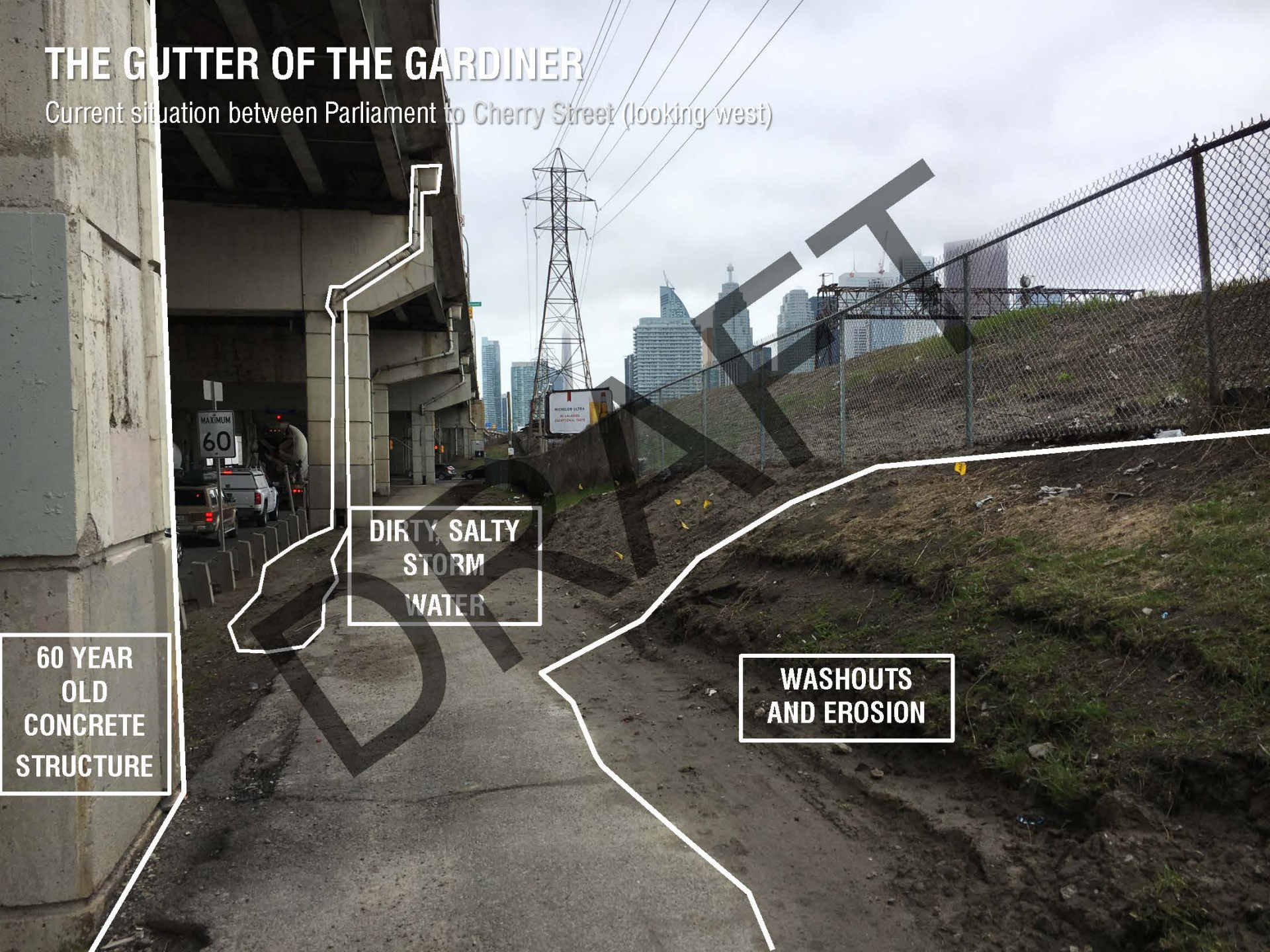
THE GUTTER OF THE GARDINER

Current situation between Parliament to Cherry Street (looking west)

60 YEAR
OLD
CONCRETE
STRUCTURE

DIRTY, SALTY
STORM
WATER

WASHOUTS
AND EROSION



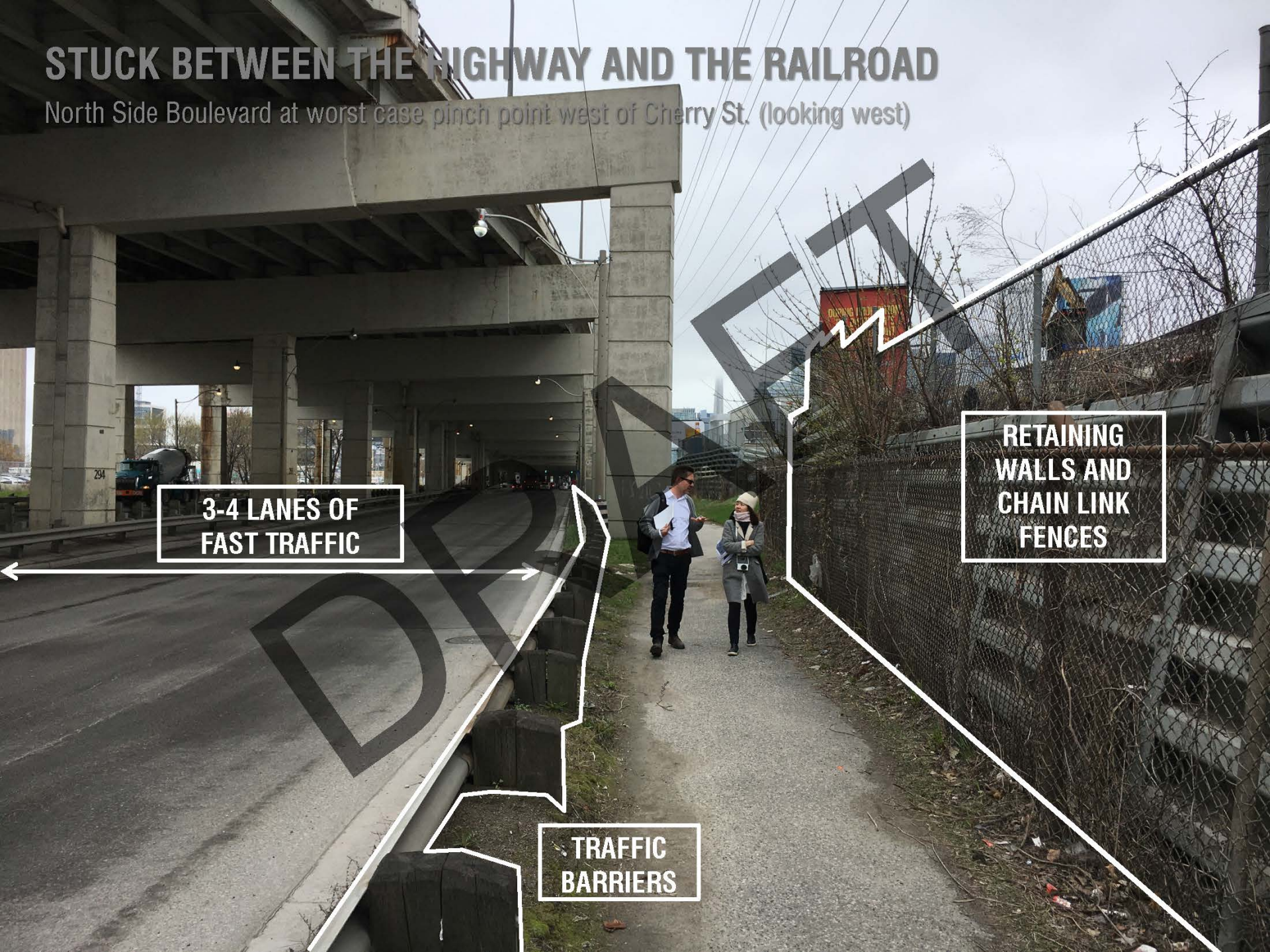
STUCK BETWEEN THE HIGHWAY AND THE RAILROAD

North Side Boulevard at worst case pinch point west of Cherry St. (looking west)

3-4 LANES OF
FAST TRAFFIC

RETAINING
WALLS AND
CHAIN LINK
FENCES

TRAFFIC
BARRIERS



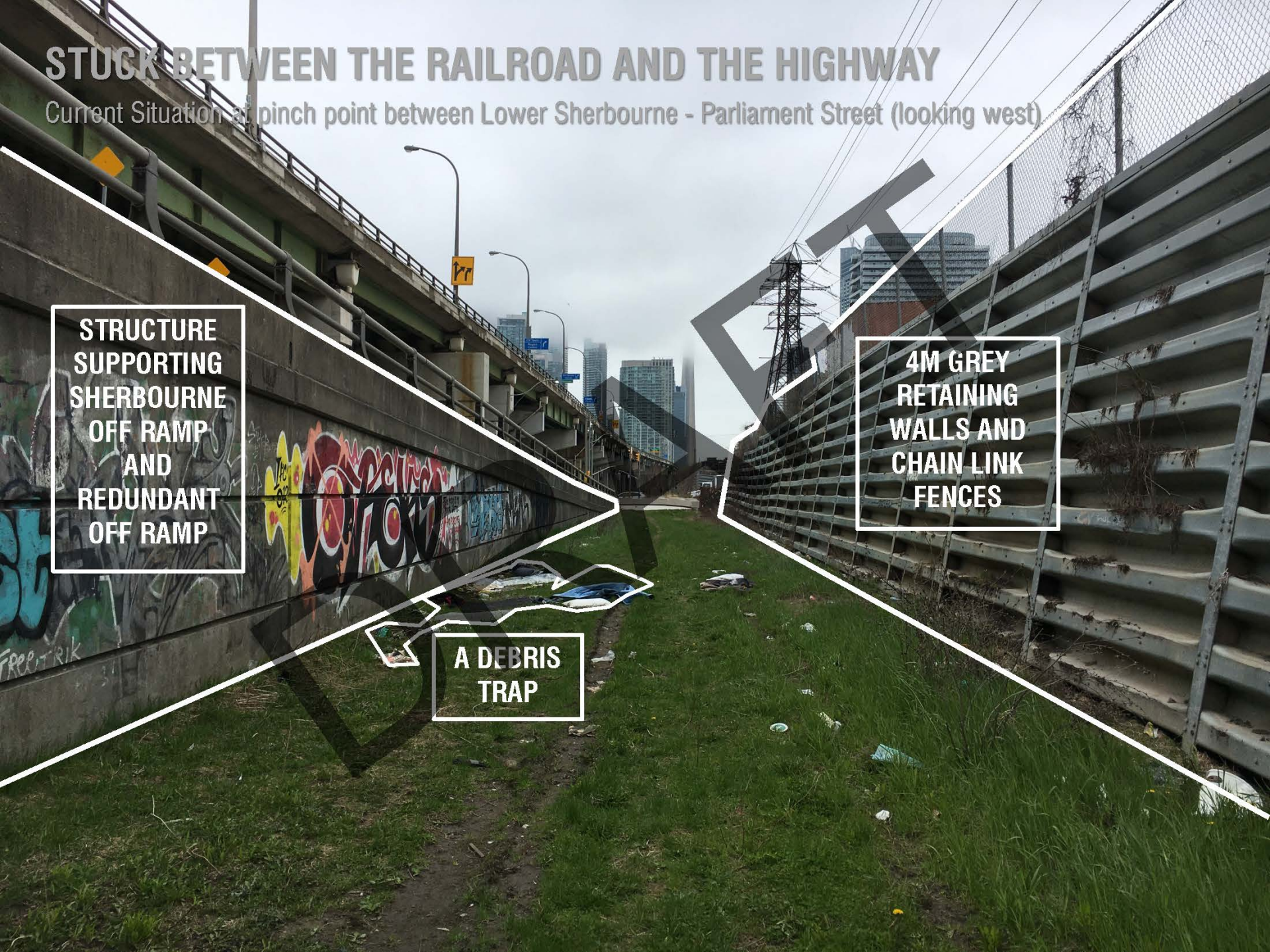
STUCK BETWEEN THE RAILROAD AND THE HIGHWAY

Current Situation at pinch point between Lower Sherbourne - Parliament Street (looking west)

**STRUCTURE
SUPPORTING
SHERBOURNE
OFF RAMP
AND
REDUNDANT
OFF RAMP**

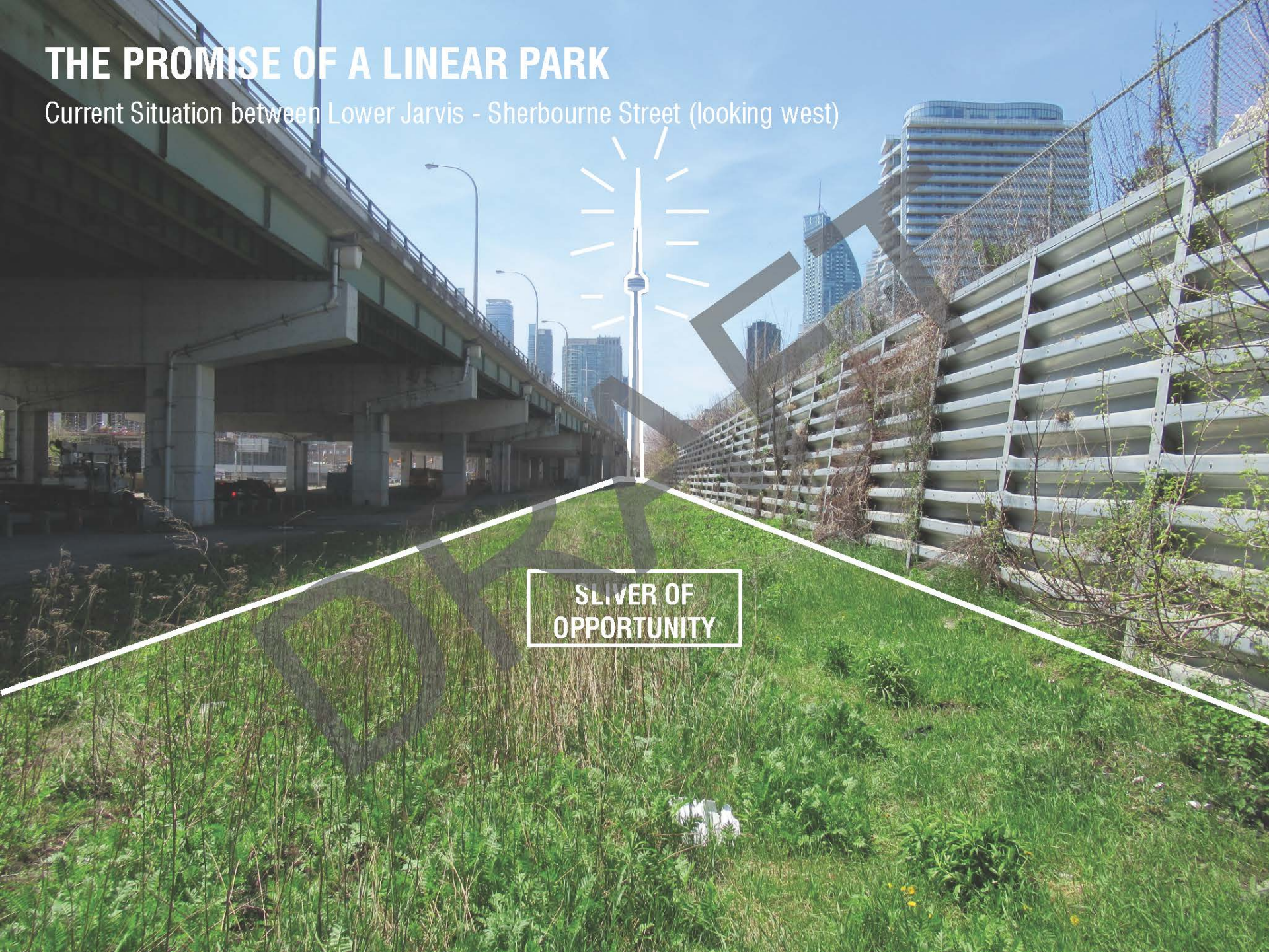
**4M GREY
RETAINING
WALLS AND
CHAIN LINK
FENCES**

**A DEBRIS
TRAP**



THE PROMISE OF A LINEAR PARK

Current Situation between Lower Jarvis - Sherbourne Street (looking west)



**SLIVER OF
OPPORTUNITY**

THE PROMISE OF A LINEAR PARK: LAKE SHORE TRAIL

PIONEER SPECIES EMERGING FROM THE CORRIDOR



BIRCH
VEIL

289

POLLINATOR
PARADISE

THE PROMISE OF A LINEAR PARK: LAKE SHORE TRAIL

A NEW SOIL AND STORMWATER MANAGEMENT PROFILE



*BENT CUFFS ON NORTH SIDE TRAIL MADE OF REFLECTIVE PAINT WITH **BENT NUMBERS** APPROXIMATELY EVERY FOURTH BENT:

JARVIS TO SHERBOURNE 257, 261
SHERBOURNE TO PARLIAMENT 269, 273, 277
PARLIAMENT TO CHERRY 285, 289, 293, ETC. BEYOND

BIRCHES SET AGAINST A RED WALL

METROLINX WALL RECOMMENDATION



*Textural
inspiration:
Gustav Klimt,
Birch Forest I,
1903*



PLANTING STRATEGY - CONSIDERATIONS

OTHER PIONEER/RUDERAL TREE SPECIES CONSIDERED

Populus (tremuloides)

Poplar variety (eg. Quaking Aspen)

- ✓ Moderate salt spray tolerance
- ✓ Moderate salt soil tolerance
- ✓ Height: 6-15m
- ✓ Width: 3-9m
- ✓ Full sun
- ✓ Well drained soil

✗ Brittle branches*

✗ Leaf litter and self-seeding*

* *Unsuitable for planting next to railway*

Salix var. (nigra)

Willow variety (eg. Black)

- ✓ Salt spray tolerant
- ✓ Salt soil tolerant
- ✓ Height: 9-18m
- ✓ Width: 19-18m
- ✓ Full sun to part shade
- ✓ Moist to wet soil

✗ Brittle branches*

* *Unsuitable for planting next to railway*

Fraxinus var. (americana)

Ash Variety (eg. White)

- ✓ High salt spray tolerance
- ✓ Salt soil tolerant
- ✗ Height: 25-30m*
- ✗ Width: 18-24m*
- ✓ Full sun
- ✓ Organic, well drained soil
- ✓ Moderate drought tolerance
- ✓ Urban tolerant

✗ Emerald ash borer

✗ Leaf litter*

* *Unsuitable for planting next to railway*

Betula occidentalis

Water Birch

- ✗ Not salt spray tolerant
- ✗ Not salt soil tolerant
- ✓ Height: 4-12m
- ✓ Width: 4-9m
- ✓ Full sun to part shade
- ✗ Moist to wet soil

Betula lenta

Cherry Birch

- ✗ Not salt spray tolerant
- ✓ Moderate salt soil tolerance
- ✓ Height: 12-15m
- ✓ Width: 12-15m
- ✓ Full sun
- ✗ Moist, well drained soil

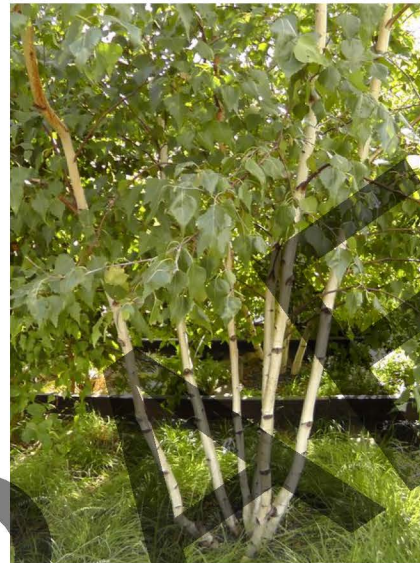
Betula alleghaniensis

Yellow Birch

- ✓ Salt spray tolerant
- ✓ Salt soil tolerant
- ✗ Height: 18-22m
- ✗ Width: 18-22m
- ✓ Full sun to part shade
- ✓ Moist, acidic, well-drained soil

PLANTING STRATEGY – MANAGED SUCCESSION

BIRCHES AND WILDFLOWERS



Betula papyrifera

White Birch

- ✓ Salt spray tolerant
- ✓ Moderate to high salt soil tolerance
- ✓ Height: 20m
- ✓ Width: 15m
- ✓ Full sun
- ✓ Moist to dry sandy or loamy soil

Betula populifolia

Grey Birch

- ✓ Salt spray tolerant
- ✓ Moderate salt soil tolerance
- ✓ Height: 6-12m
- ✓ Width: 3-6m
- ✓ Full sun
- ✓ Moist, well drained soil

Groundcover planting

Native Ontario Wildflower

Seed/Plug Mix

Examples:

Brown eyed susan

Butterfly weed

Common milkweed

Upland White Aster

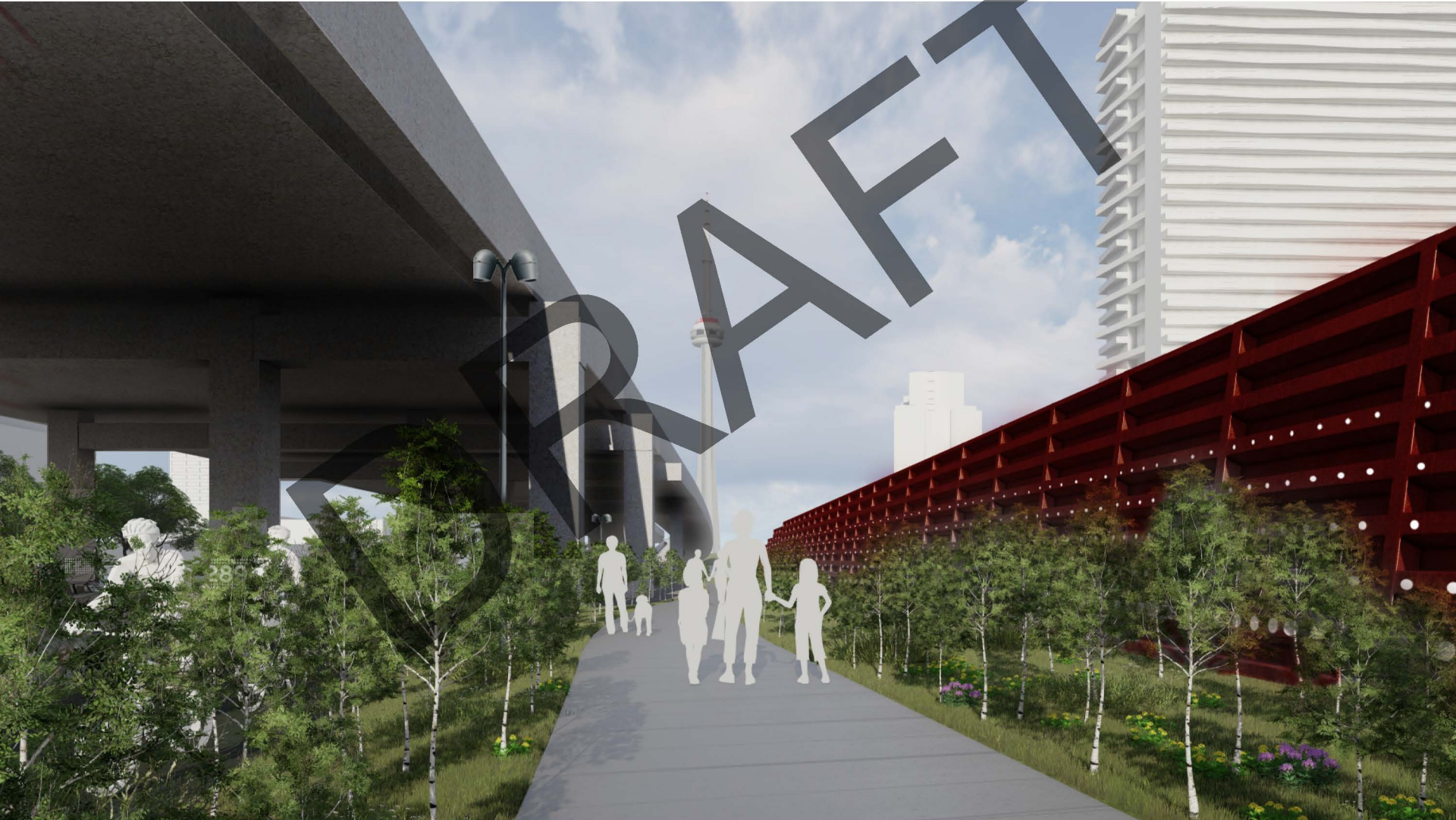
Goldenrod

Virginia Mountain Mint

Verbena

PLANTING STRATEGY

SAPLINGS AT PLANTING YEAR 1



PLANTING STRATEGY

BIRCH TREES THINNED OUT YEAR 10



PLANTING STRATEGY – MANAGED SUCCESSION

LOCAL PRECEDENTS



Eastern Avenue on ramp to DVP



South of Elevated Wetlands

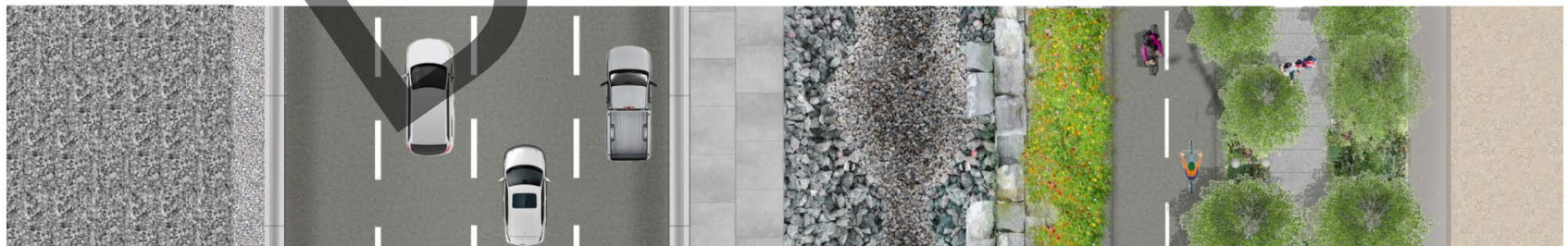
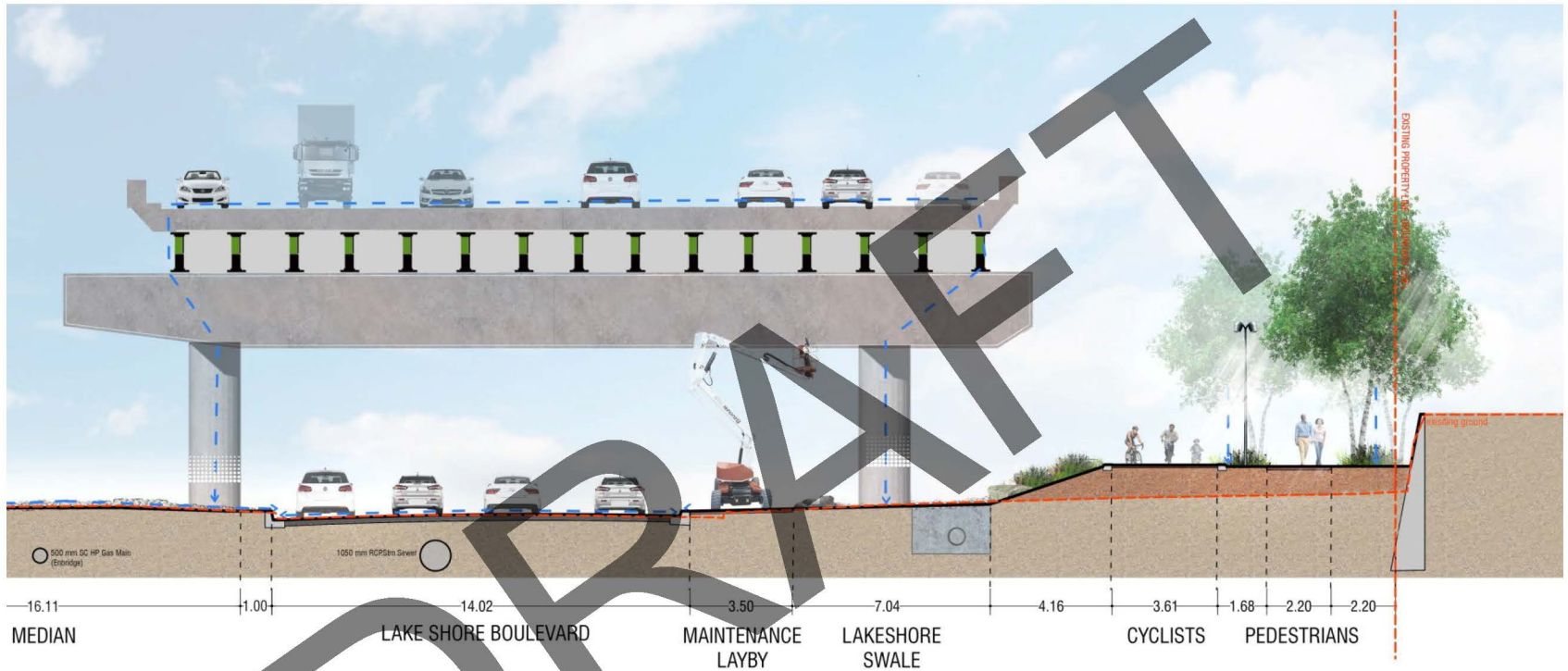
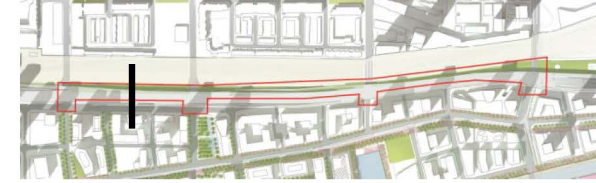


Wards Island Birch Veil



THE PIONEERS' TRAIL

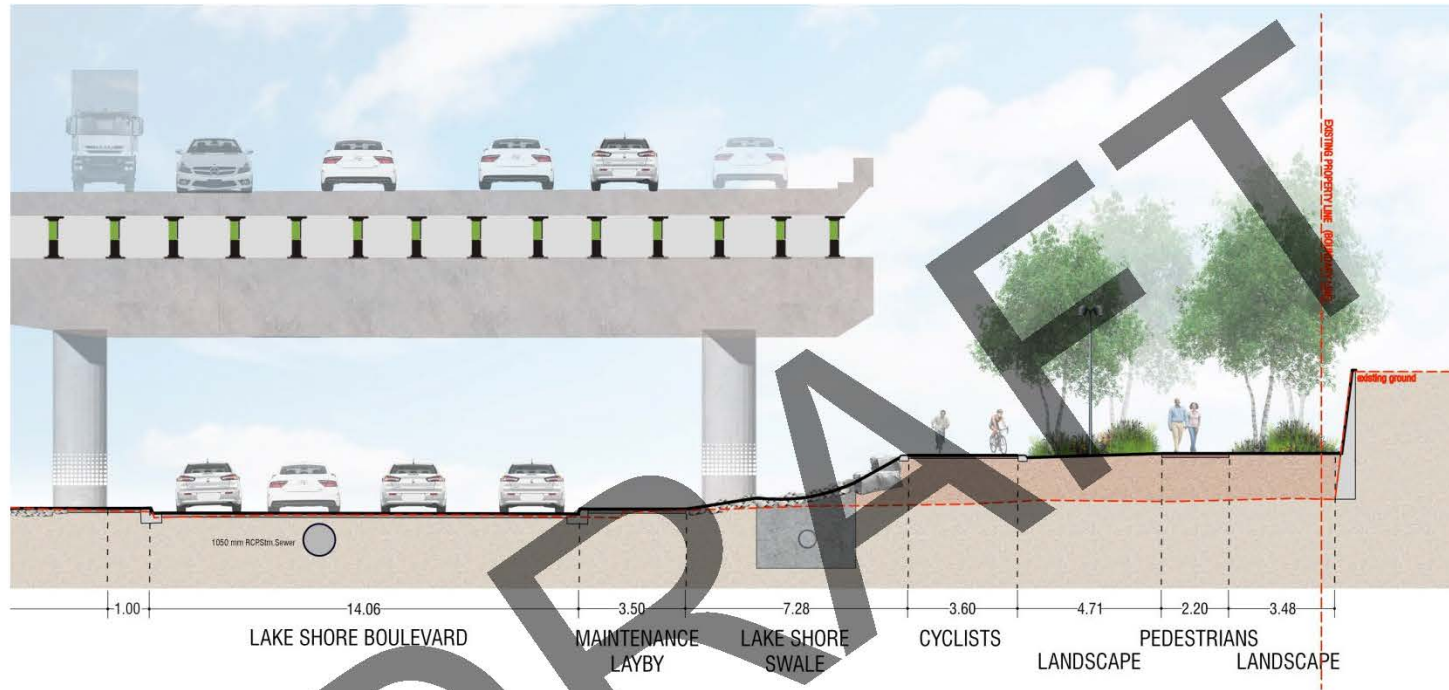
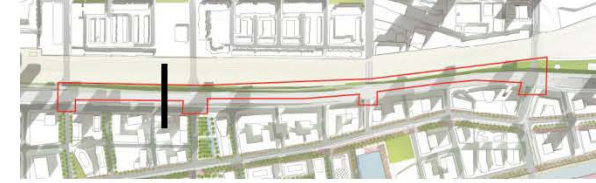
JARVIS TO SHERBOURNE (SECTION A)



*Depth of utilities is assumed, to be confirmed by field survey.

THE PIONEERS' TRAIL

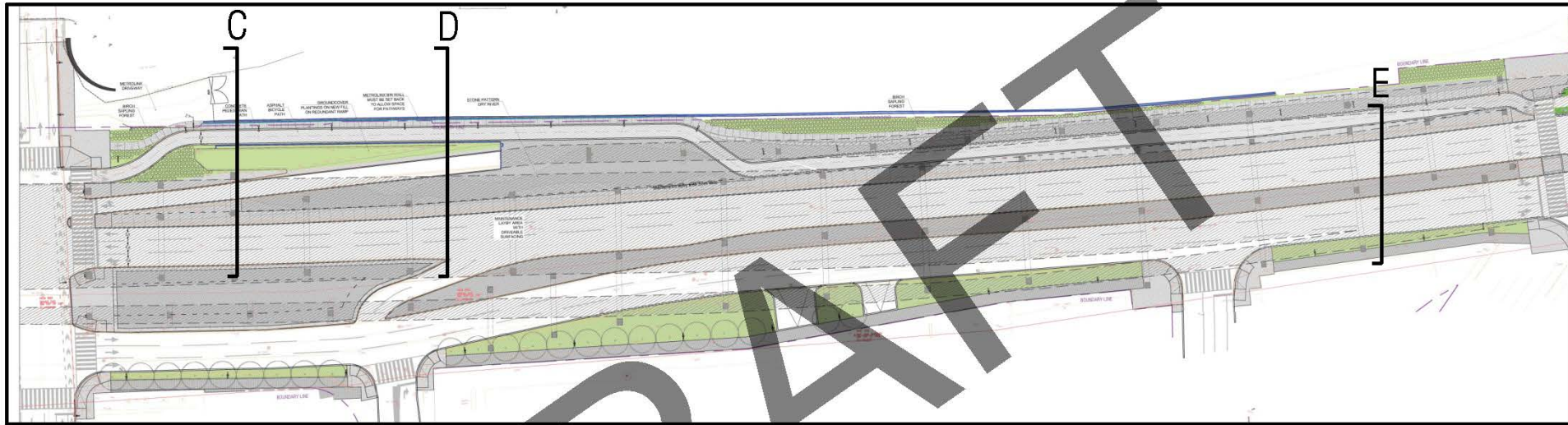
JARVIS TO SHERBOURNE (SECTION B)



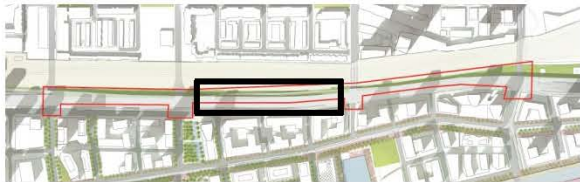
*Depth of utilities is assumed, to be confirmed by field survey.

TRANSITION ZONE - PIONEERS' TRAIL TO ROCKY SHORE

SHERBOURNE TO PARLIAMENT

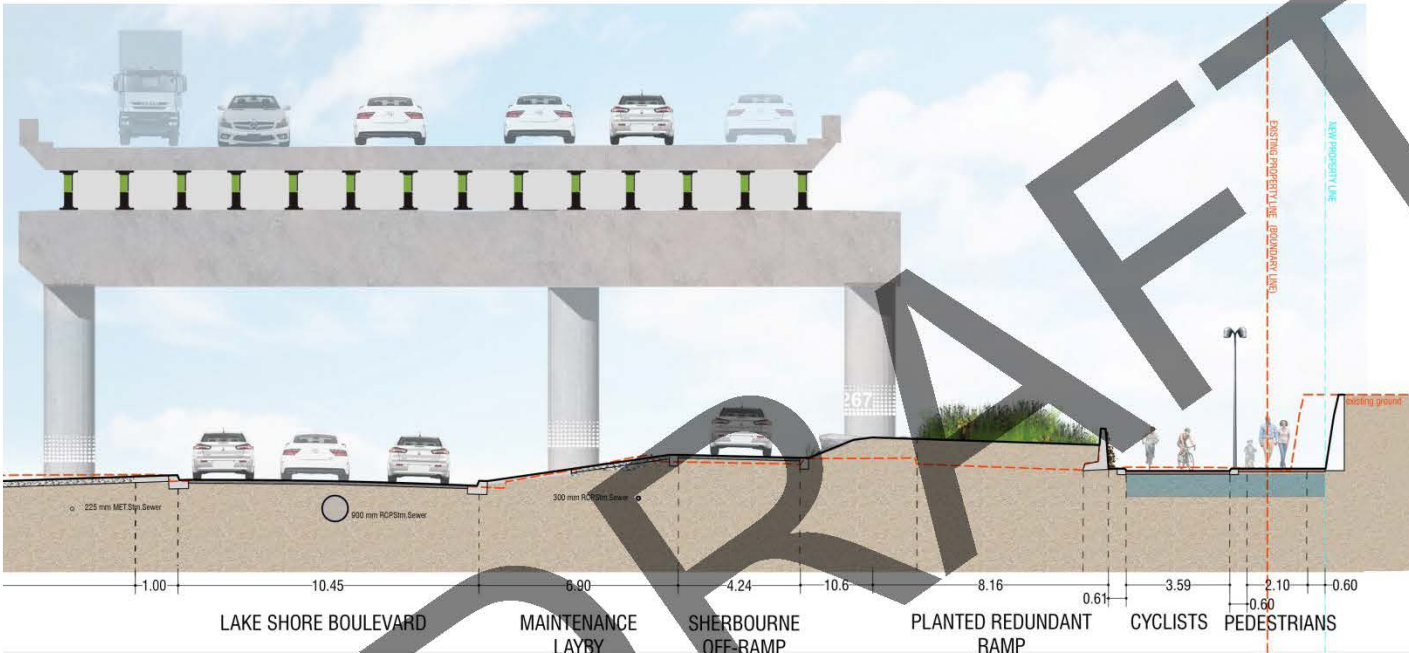
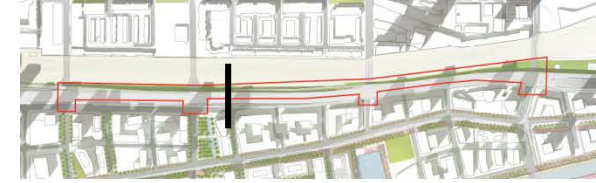


***ASSUMPTION:** Encroachment into USRC land
RECOMMEND: Move Metrolinx bin wall north OR
remove redundant part of Sherbourne ramp to
accommodate pathways



A RECLAIMED REDUNDANT RAMP

SHERBOURNE TO PARLIAMENT (SECTION C)



*Planting area on ramp subject to confirmation of structural analysis to demonstrate the ramp can support weight of additional soil and plants

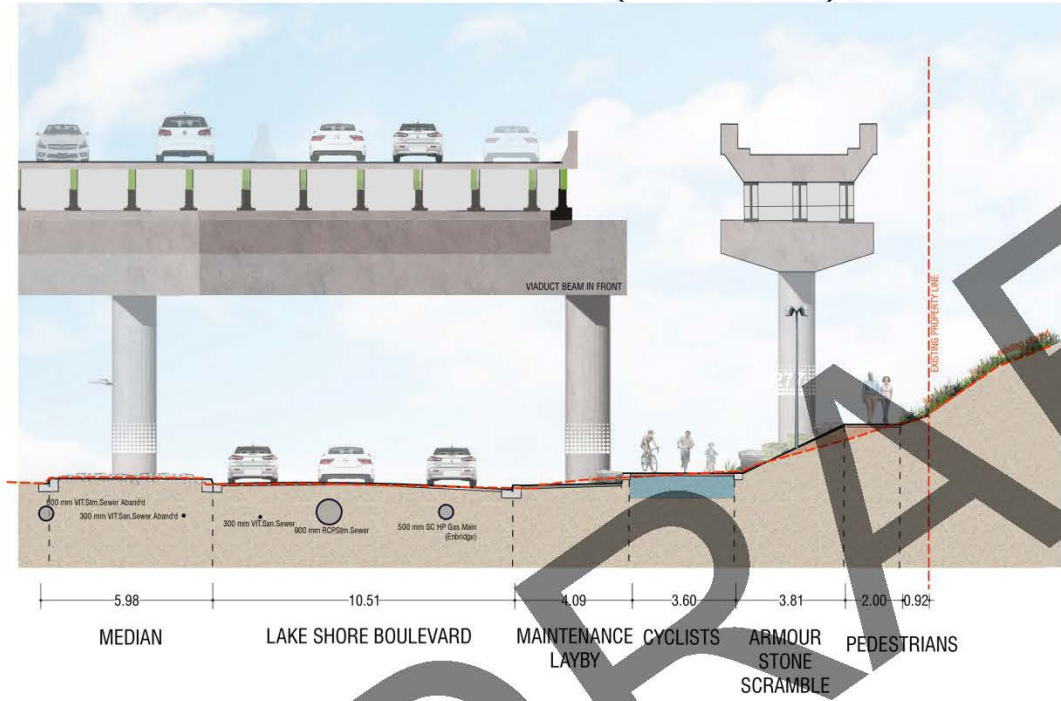
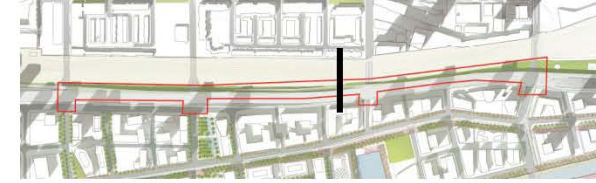
***RECOMMEND:**
SET BACK USRC RETAINING WALL OR REMOVE REDUNDANT RAMP



*Depth of utilities is assumed, to be confirmed by field survey.

ROCKY SHORE

SHERBOURNE TO PARLIAMENT (SECTION E)



DR
RA
FFET

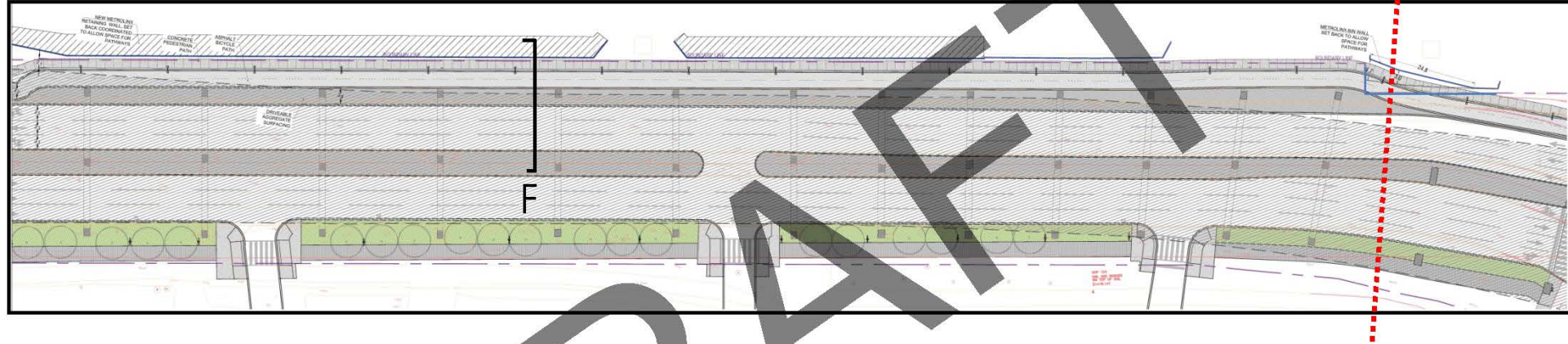


*Depth of utilities is assumed, to be confirmed by field survey.

THE ROCKY SHORE

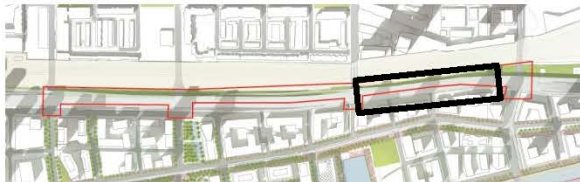
PARLIAMENT TO CHERRY

NEW GARDINER HYBRID III
ALIGNMENT
→



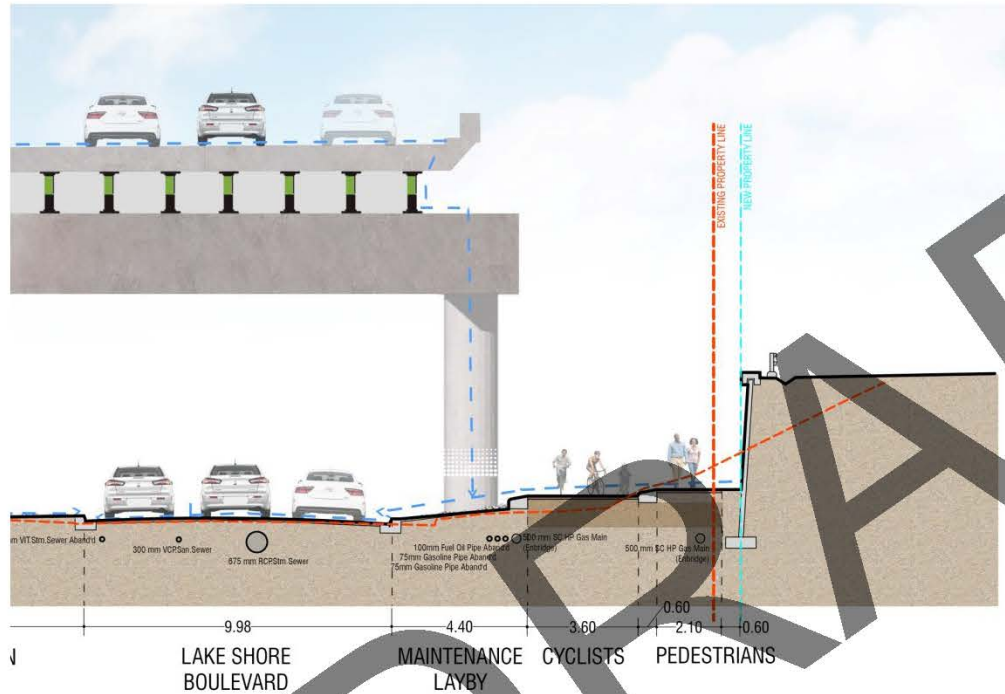
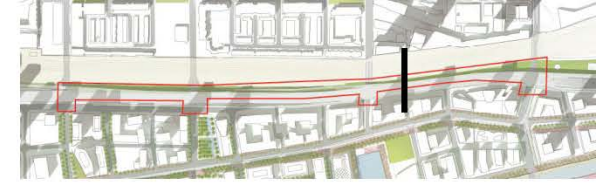
*Assumption: Encroachment into USRC property

DRAFT



THE ROCKY SHORE CONTINUED

PARLIAMENT TO CHERRY (SECTION F)



* NEW METROLINX RETAINING WALL SETBACK HAS BEEN COORDINATED AT THIS LOCATION



*Depth of utilities is assumed, to be confirmed by field survey.

4/ STORMWATER MANAGEMENT & ENGINEERING

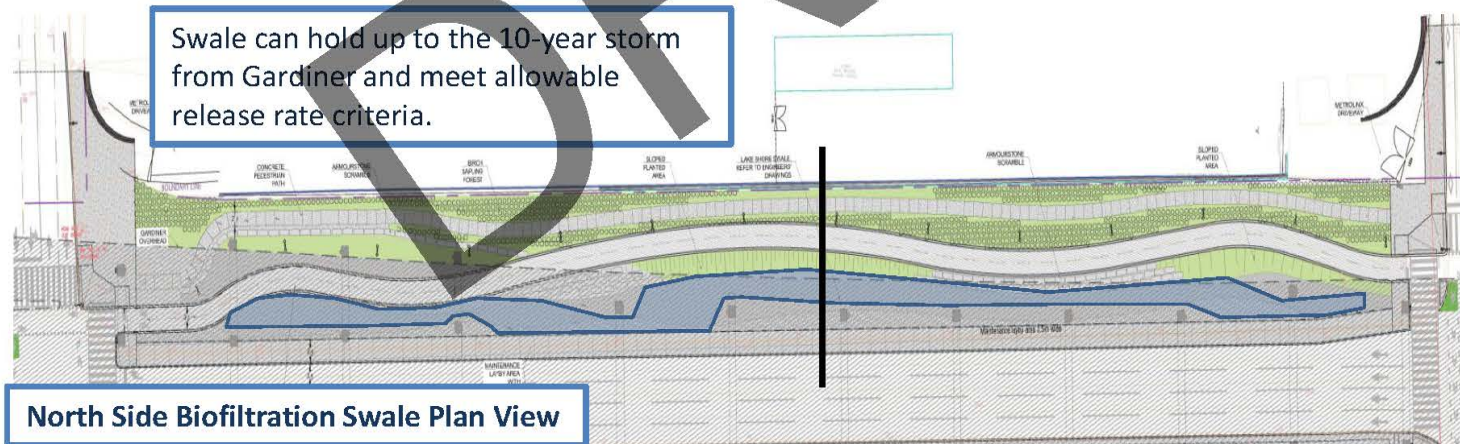
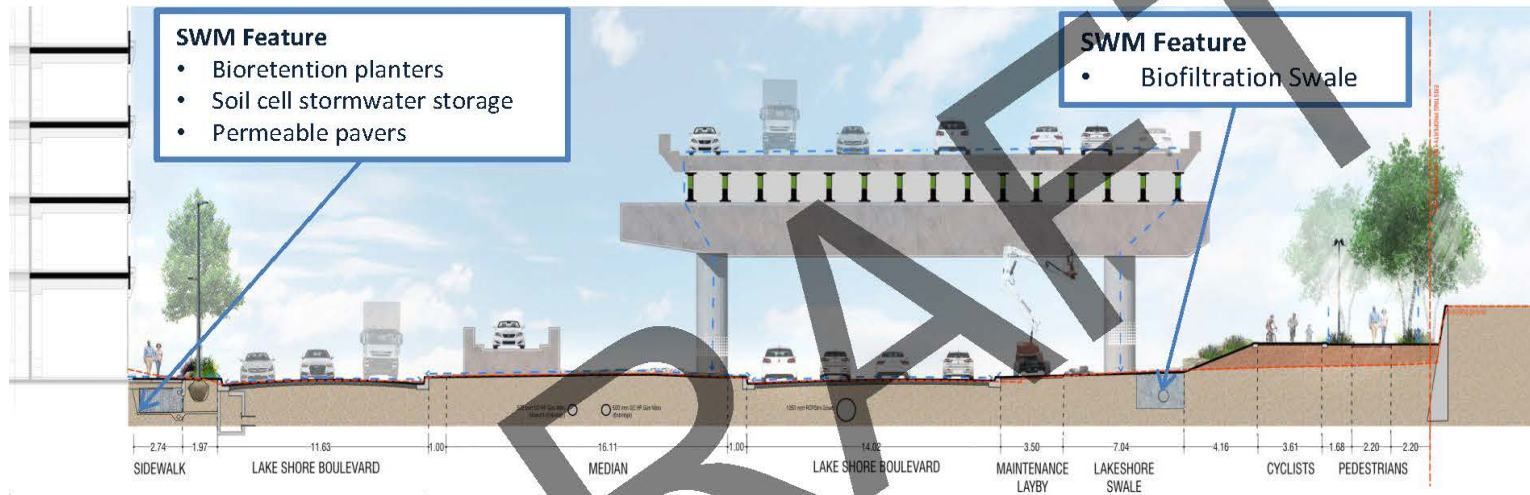
COUNCIL AND MINISTRY DIRECTION: ENHANCED STORMWATER MANAGEMENT & ENHANCED SEDIMENT REMOVAL



EXISTING CONDITIONS: SURFACE PONDING IN CONFLICT WITH PEDESTRIANS

INTEGRATED STORMWATER MANAGEMENT STRATEGY

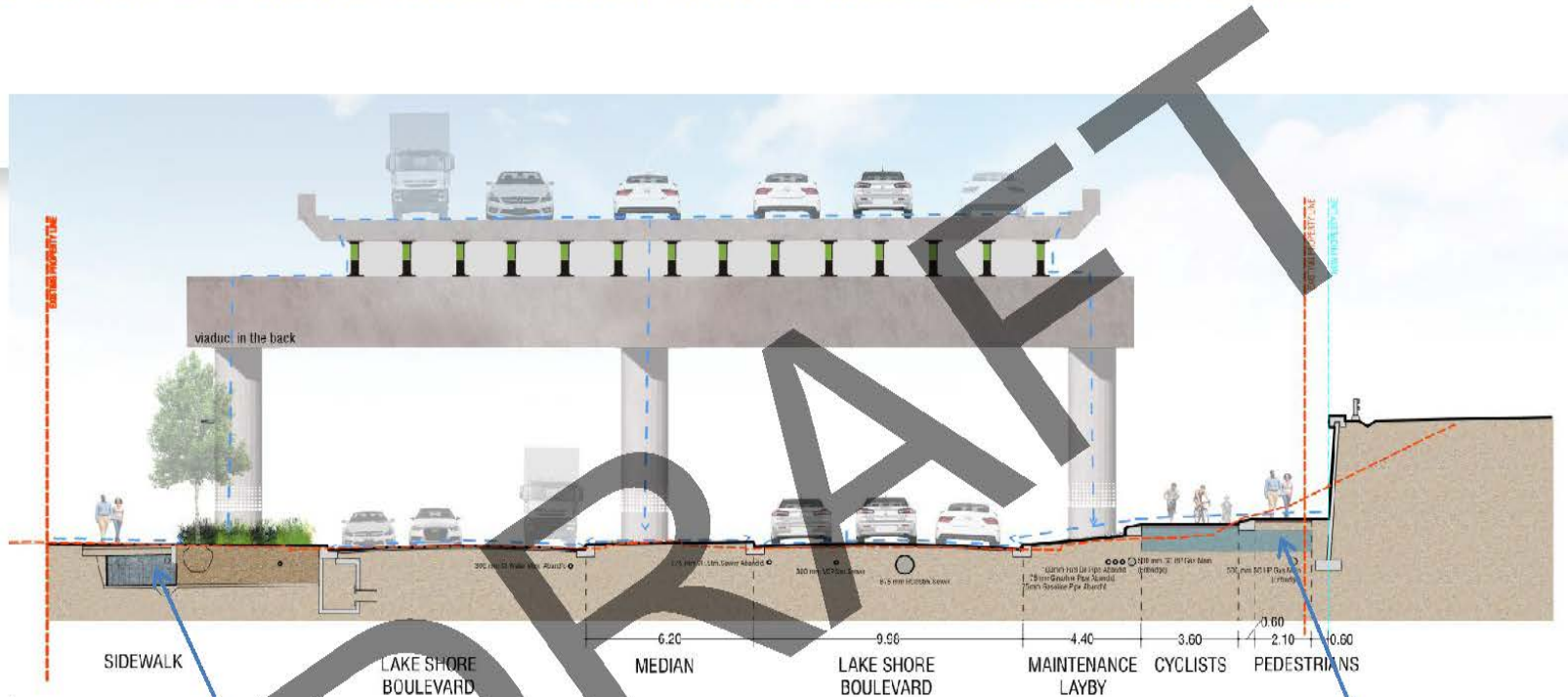
SECTION BETWEEN LOWER JARVIS STREET AND LOWER SHERBOURNE STREET



*Depth of utilities is assumed, to be confirmed by field survey.

INTEGRATED STORMWATER MANAGEMENT STRATEGY

TYPICAL SECTION BETWEEN PARLIAMENT STREET AND CHERRY STREET



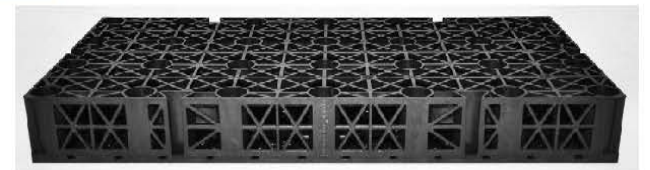
SWM feature

- Bioretention planter with trees
- Soil cell stormwater storage
- Permeable pavers

To manage Gardiner run-off through this section, requires connection to and upgrades to sewer system.

SWM feature

- Permavoid System under trails

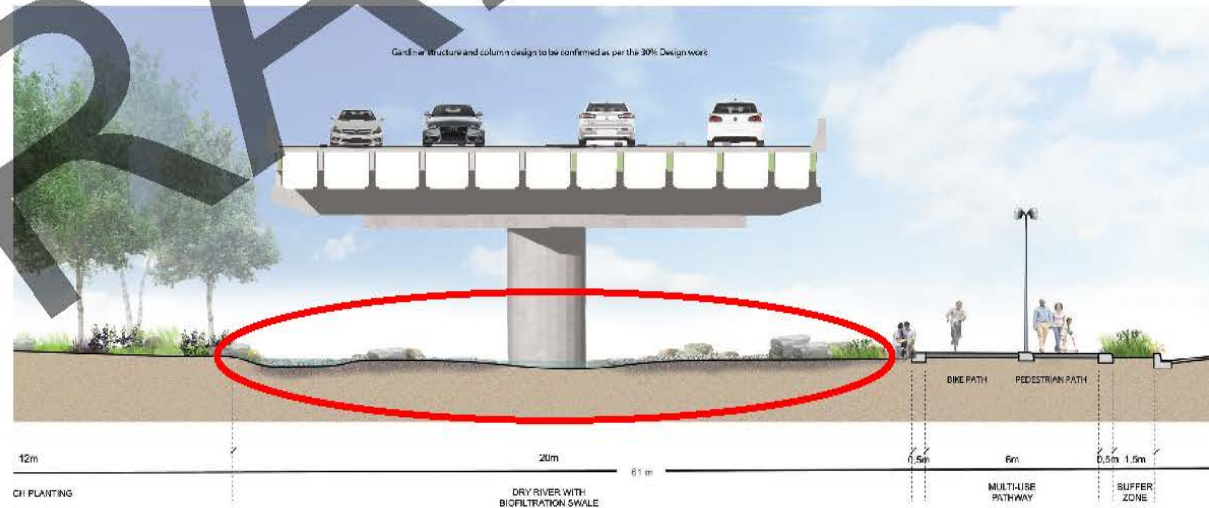


*Depth of utilities is assumed, to be confirmed by field survey.

STORMWATER MANAGEMENT – East of Cherry St.



To manage Gardiner run-off from the new elevated Gardiner, propose a bio-swale that would lie under / adjacent to the expressway. Swale to also be extended along the Harbour Lead rail line.



STORMWATER MANAGEMENT – East of Don River



SWM features

- Open planting area
- Bio-retention planters
- Permavoid system under sidewalk

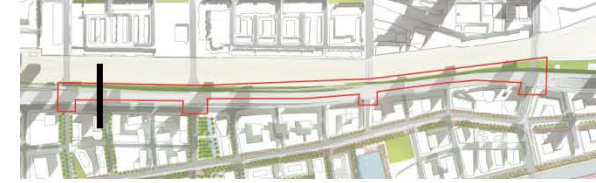


SWM feature

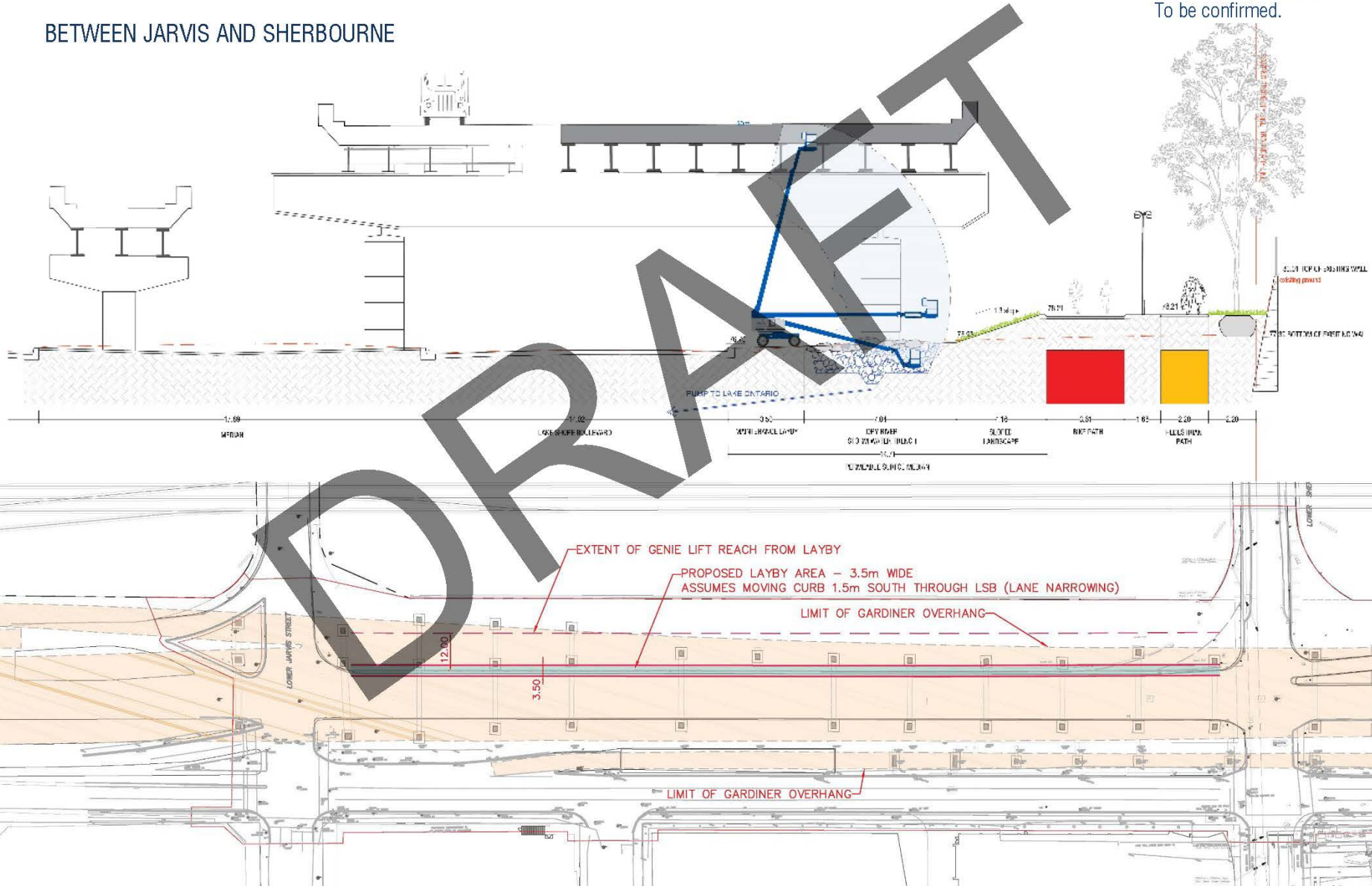
- Open planting area
- Bio-retention planters
- Permavoid system under trail

ENGINEERING CONSIDERATIONS: 1/ GARDINER MAINTENANCE ACCESS

BETWEEN JARVIS AND SHERBOURNE



*All utility depths are assumed.
To be confirmed.

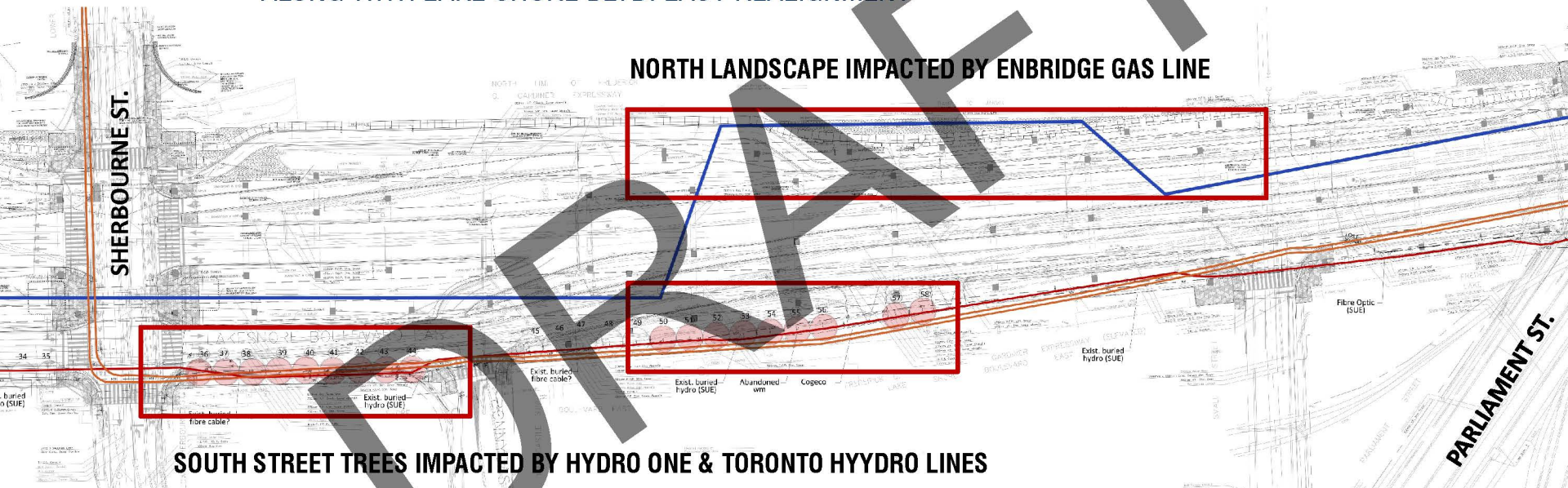


ENGINEERING CONSIDERATIONS: 2/ UTILITY COORDINATION

BETWEEN SHERBOURNE AND PARLIAMENT STREET

NORTH SIDE: ENBRIDGE GAS LINE IN CONFLICT WITH PLANTING, RAISED GRADES AND STORMWATER SWALE

ASSUMPTION: ENBRIDGE GAS LINE IN NORTH BOULEVARD TO BE RELOCATED IN THE FUTURE
ALONG WITH LAKE SHORE BLVD. EAST REALIGNMENT



NORTH LANDSCAPE IMPACTED BY ENBRIDGE GAS LINE

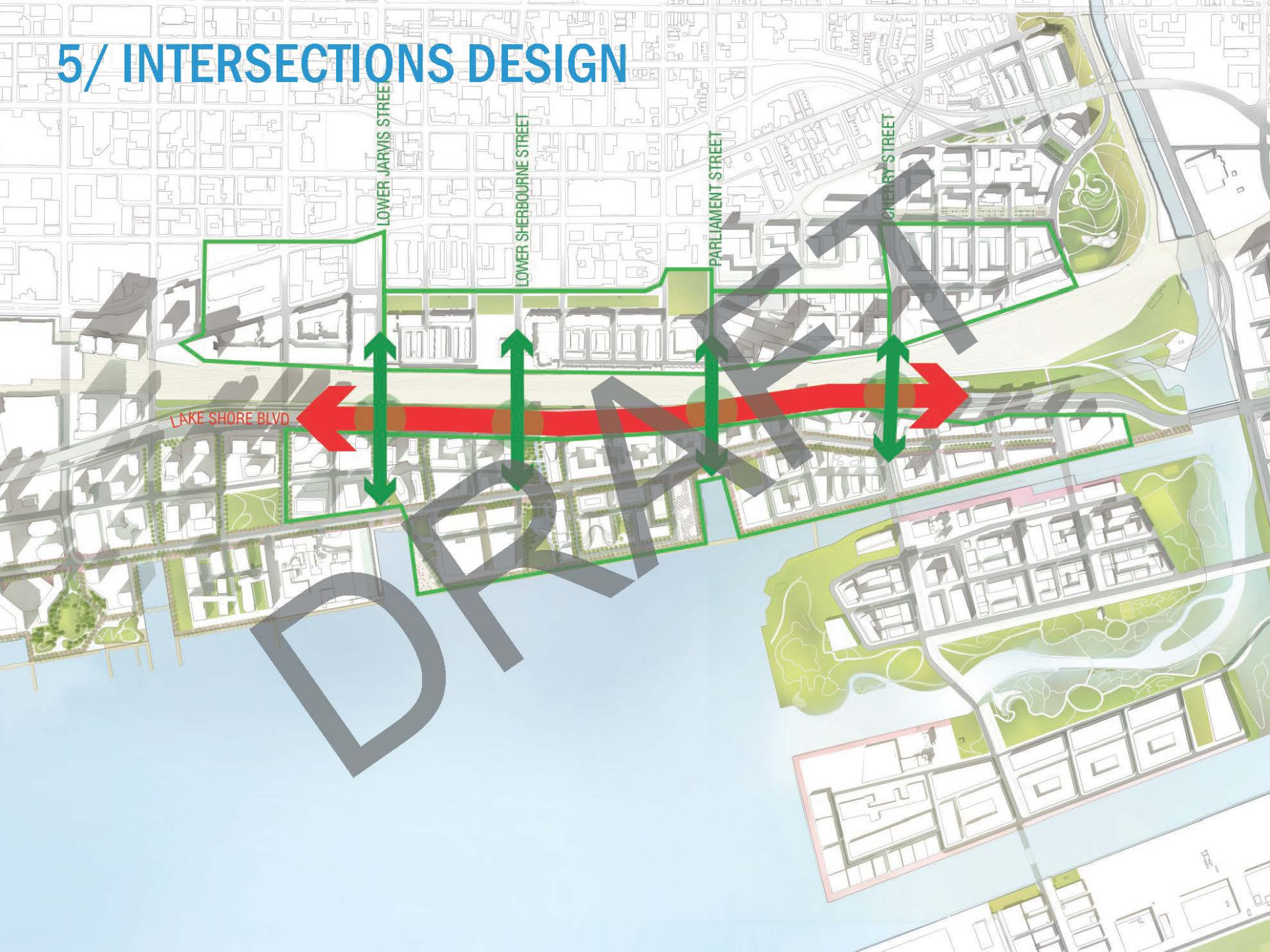
SOUTH STREET TREES IMPACTED BY HYDRO ONE & TORONTO HYDRO LINES

- HYDRO ONE
- TORONTO HYDRO
- ENBRIDGE

SOUTH SIDE: TREES IN CONFLICT WITH HYDRO INFRASTRUCTURE

ASSUMPTION: IMPACTED TREES TO BE PLANTED AFTER CURB RELOCATION & HONI DECOMMISSIONING

5/ INTERSECTIONS DESIGN



LOWER JARVIS STREET

LOWER SHERBOURNE STREET

PARLIAMENT STREET

CHERRY STREET

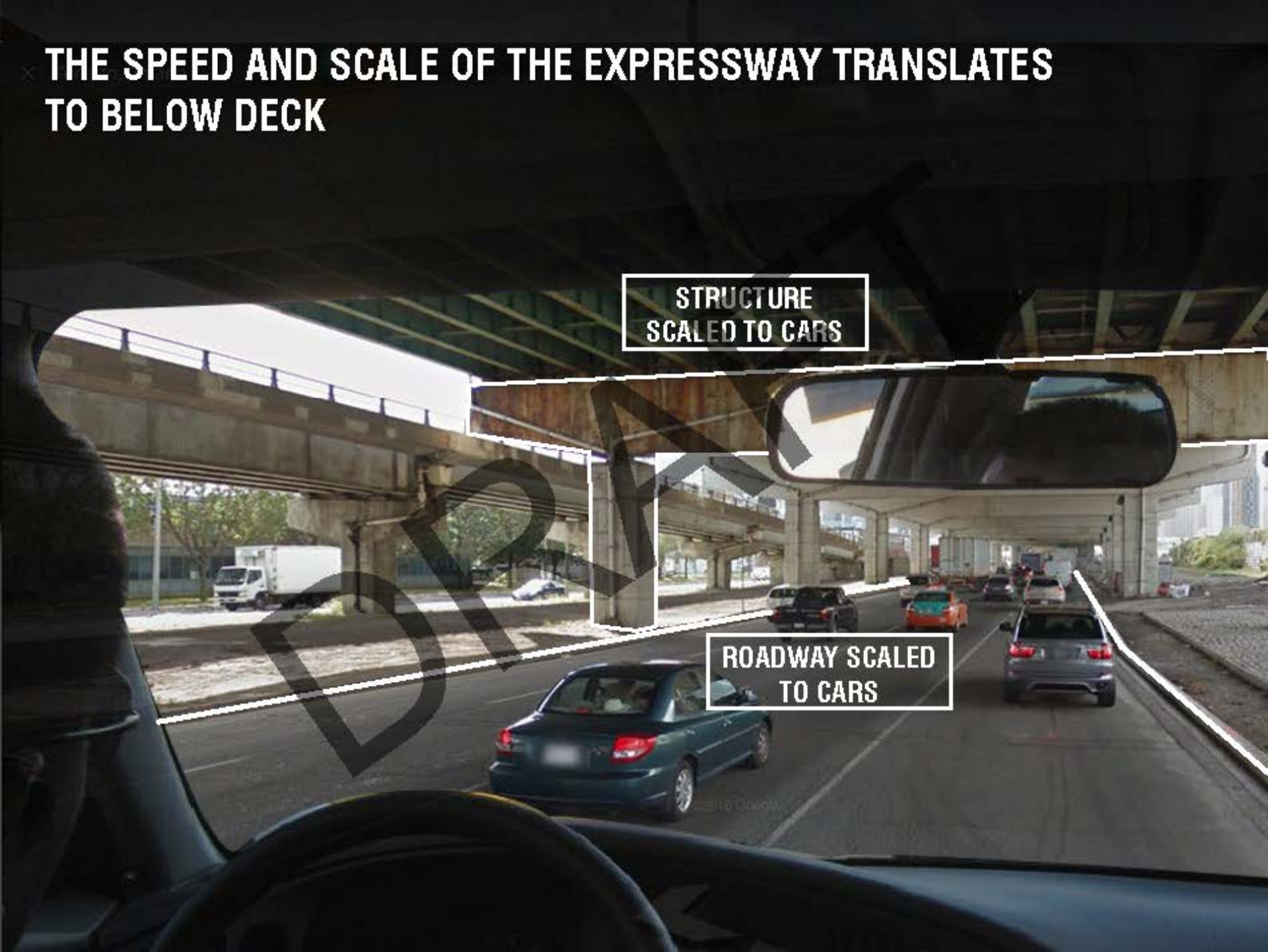
LAKE SHORE BLVD

DRAFT

THE SPEED AND SCALE OF THE EXPRESSWAY TRANSLATES TO BELOW DECK

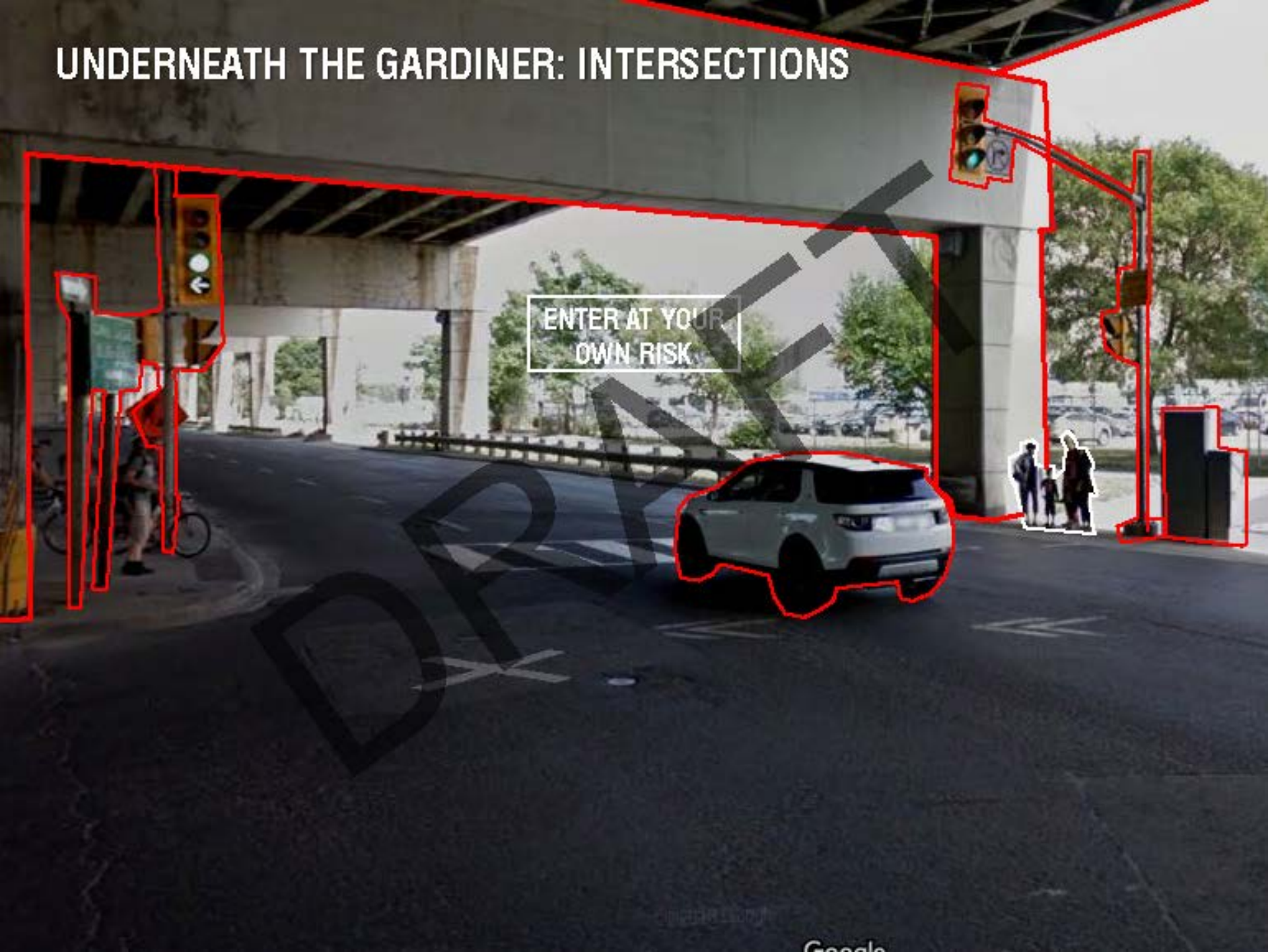
STRUCTURE
SCALED TO CARS

ROADWAY
SCALED
TO CARS



UNDERNEATH THE GARDINER: INTERSECTIONS

ENTER AT YOUR
OWN RISK



PEOPLE IN A CAR-CENTRIC ENVIRONMENT

CURRENT SITUATION AT JARVIS STREET LOOKING SOUTH

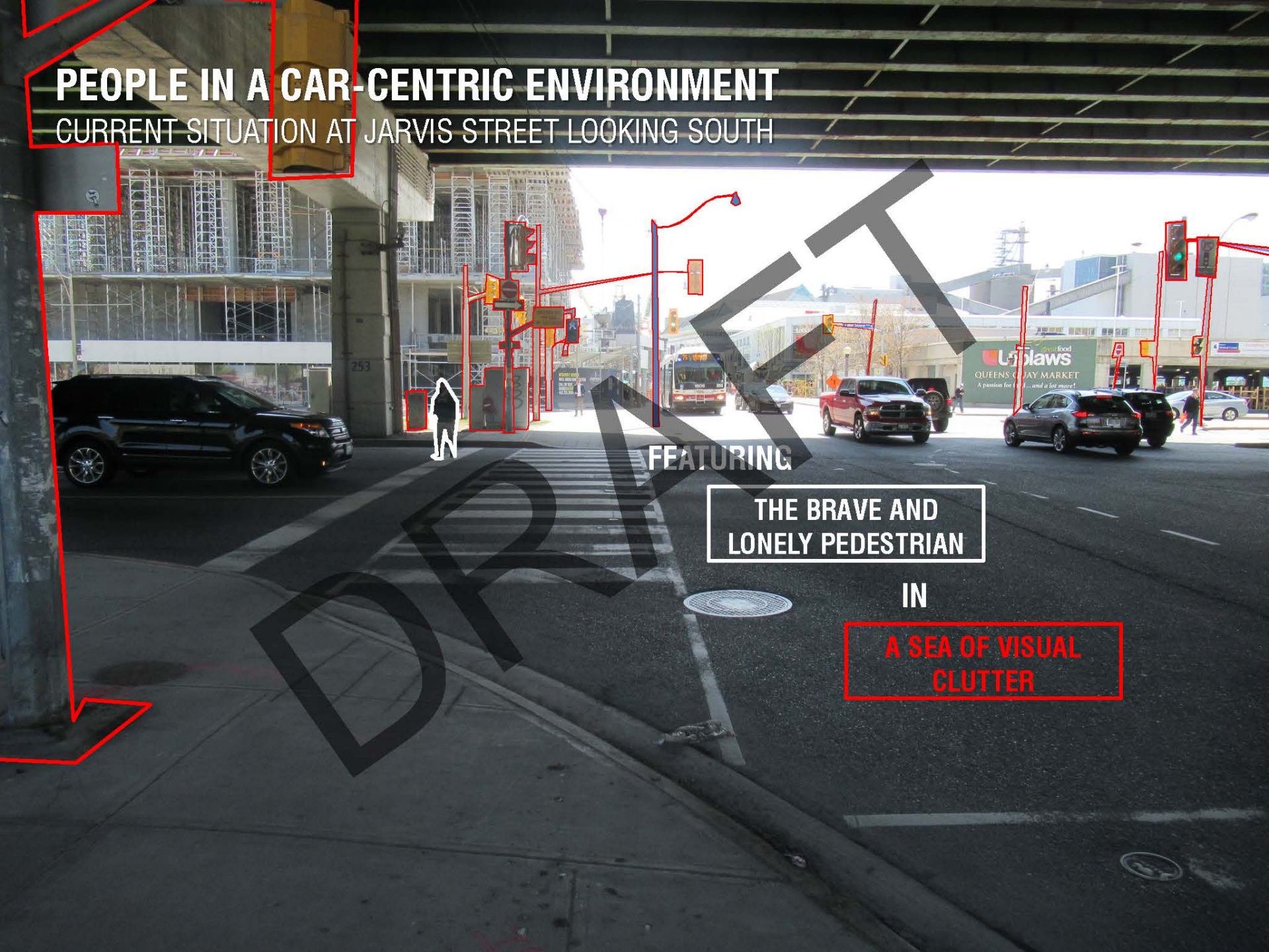
DRAFT

FEATURING

THE BRAVE AND LONELY PEDESTRIAN

IN

A SEA OF VISUAL CLUTTER



PEOPLE ON BIKES IN A CAR-CENTRIC ENVIRONMENT

CURRENT SITUATION AT SHERBOURNE STREET LOOKING NORTHEAST

GARDINER STRUCTURES

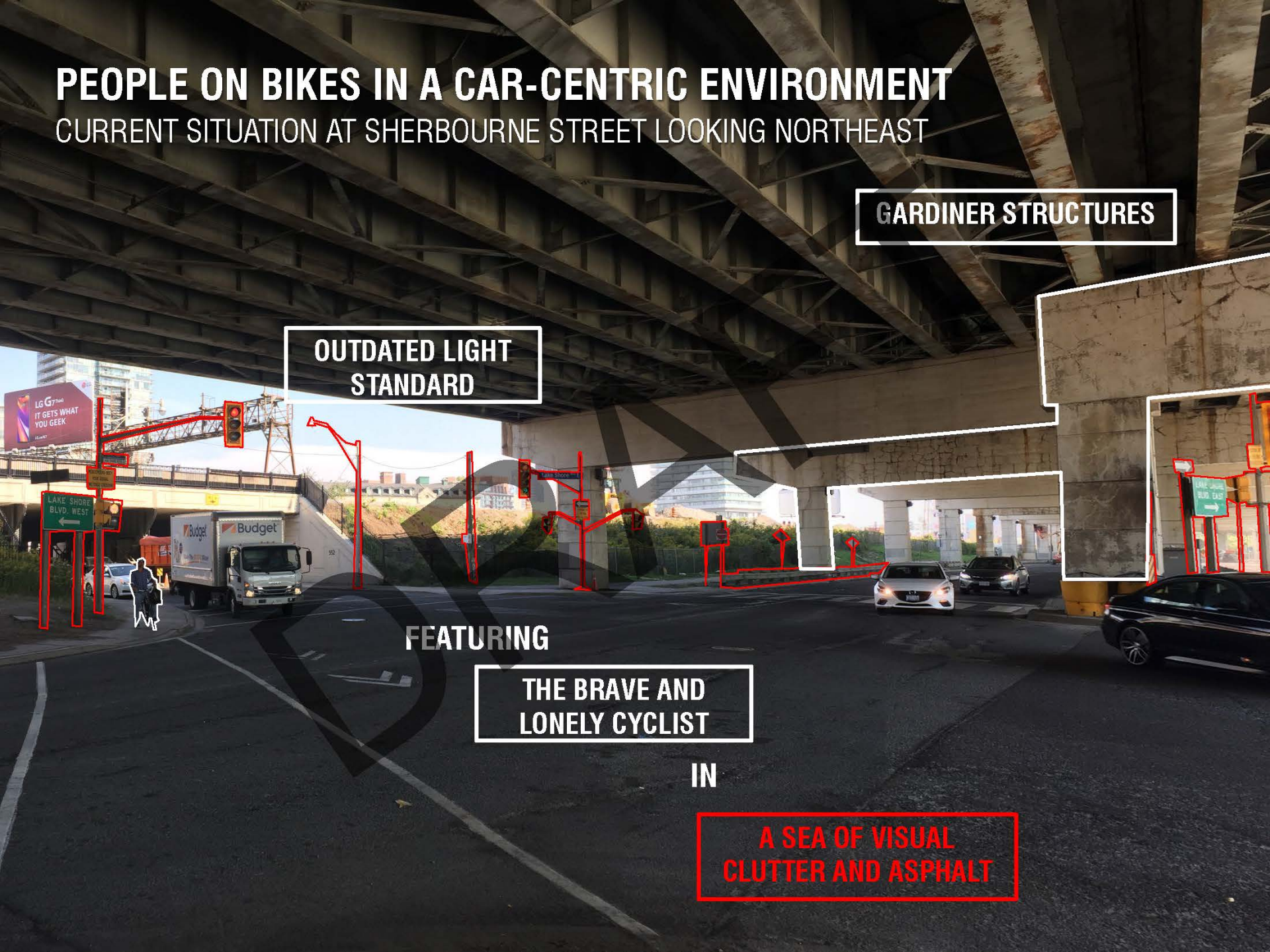
OUTDATED LIGHT
STANDARD

FEATURING

THE BRAVE AND
LONELY CYCLIST

IN

A SEA OF VISUAL
CLUTTER AND ASPHALT



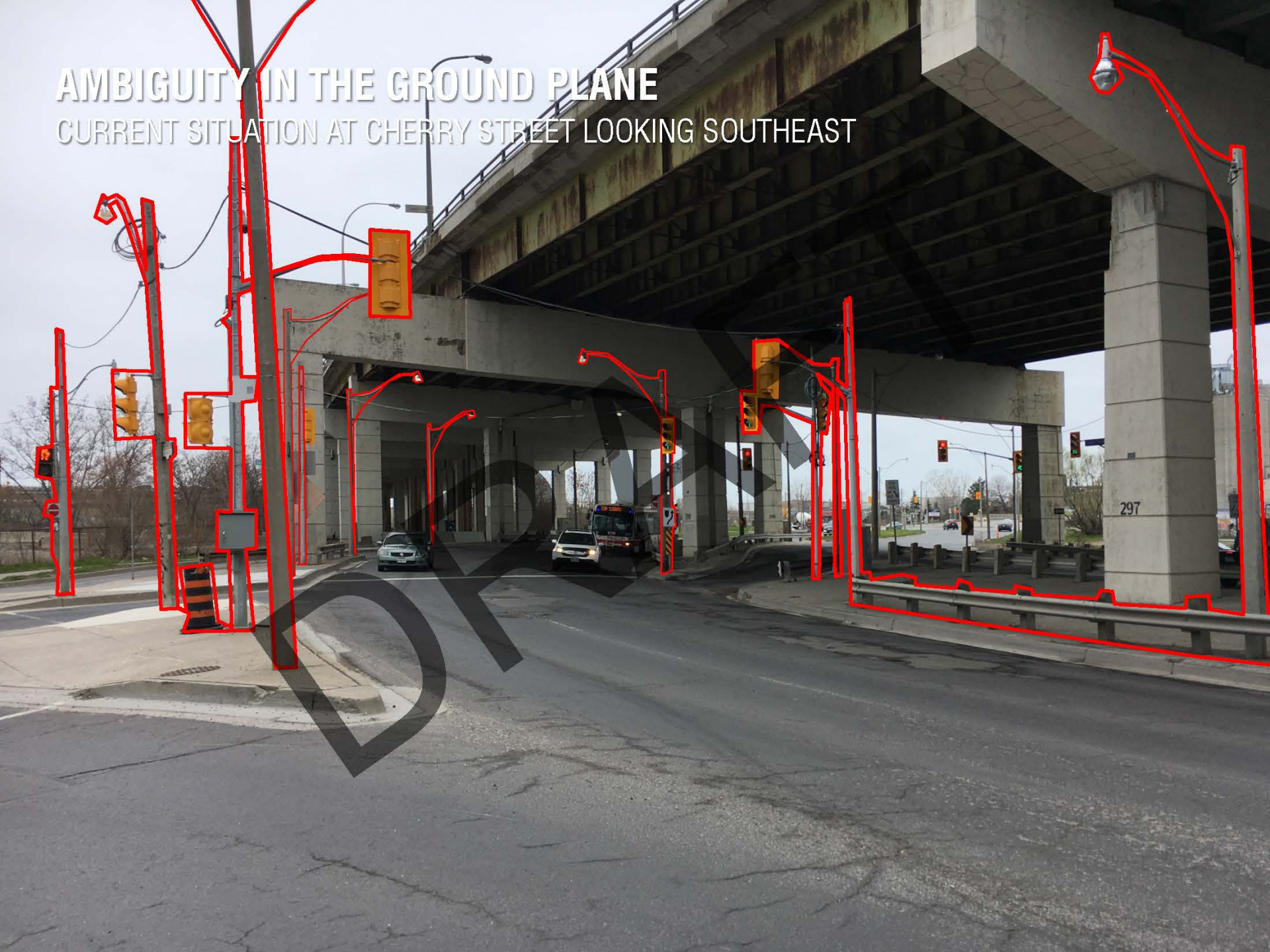
COMPETING ALIGNMENTS

CURRENT SITUATION AT PARLIAMENT STREET LOOKING NORTH



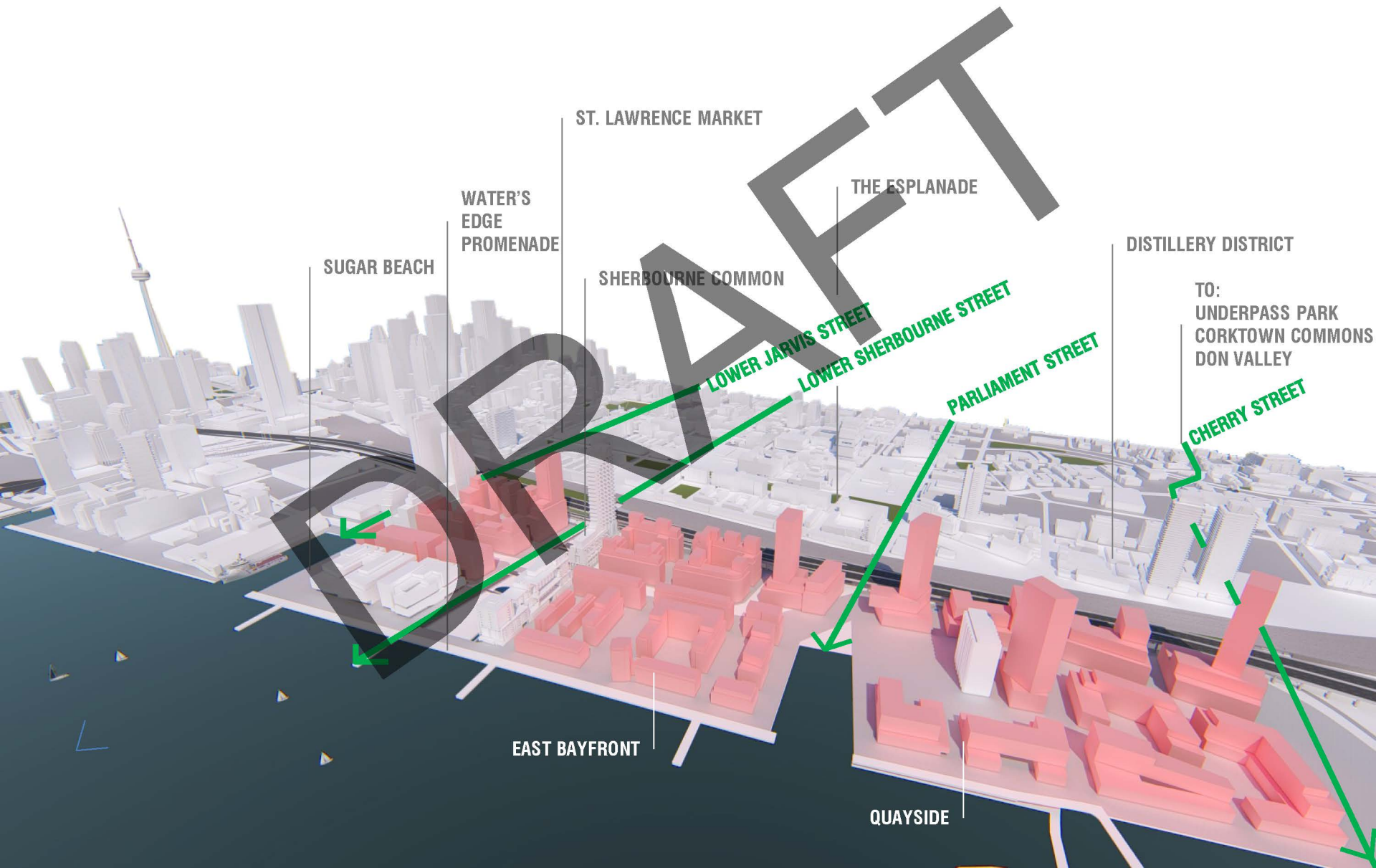
AMBIGUITY IN THE GROUND PLANE

CURRENT SITUATION AT CHERRY STREET LOOKING SOUTHEAST



CONNECTING COMMUNITIES TO THE WATERFRONT

INVEST IN FOUR KEY INTERSECTIONS



ST. LAWRENCE MARKET

THE ESPLANADE

WATER'S
EDGE
PROMENADE

DISTILLERY DISTRICT

SUGAR BEACH

SHERBOURNE COMMON

TO:
UNDERPASS PARK
CORKTOWN COMMONS
DON VALLEY

LOWER JARVIS STREET

LOWER SHERBOURNE STREET

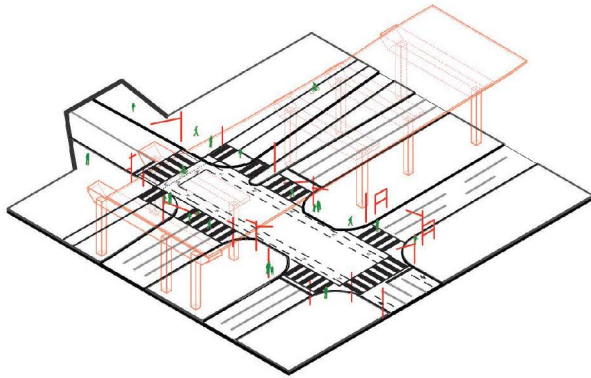
PARLIAMENT STREET

CHERRY STREET

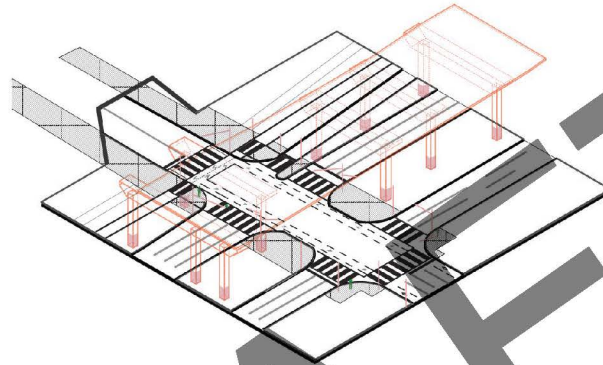
EAST BAYFRONT

QUAYSIDE

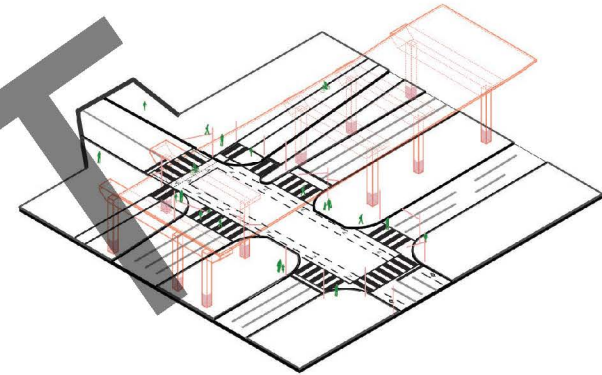
6 STRATEGIES FOR TRANSFORMING THE INTERSECTIONS



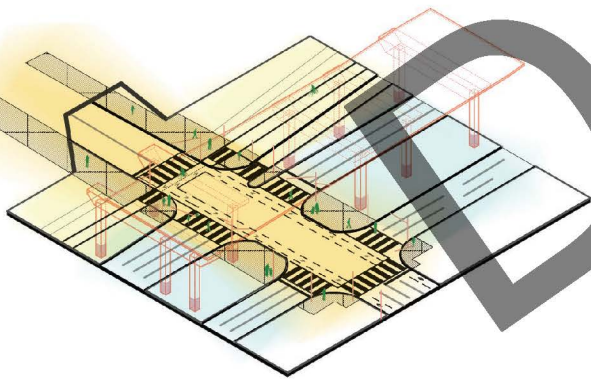
1/ ALIGNMENT AND BOLD MARKINGS



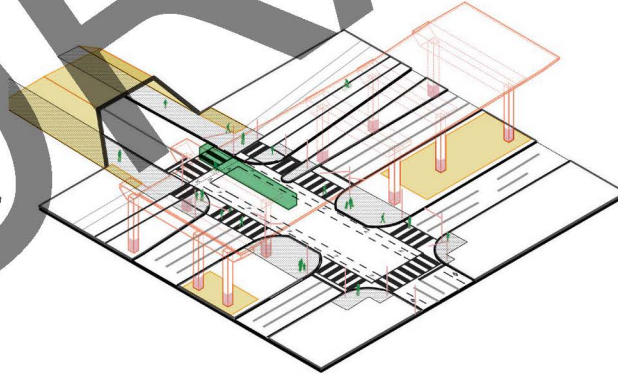
2/ SPECIAL PAVING CORNERS



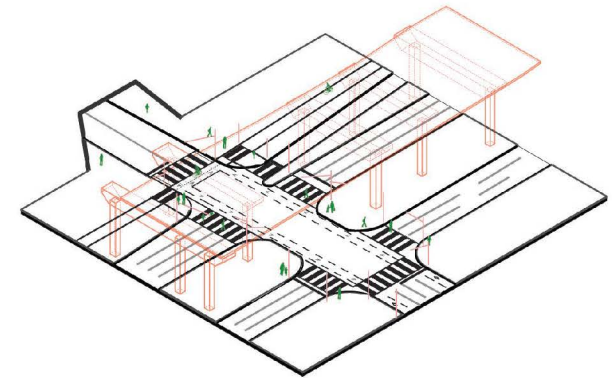
3/ BENT SOCKS



4/ LIGHT TEMPERATURE



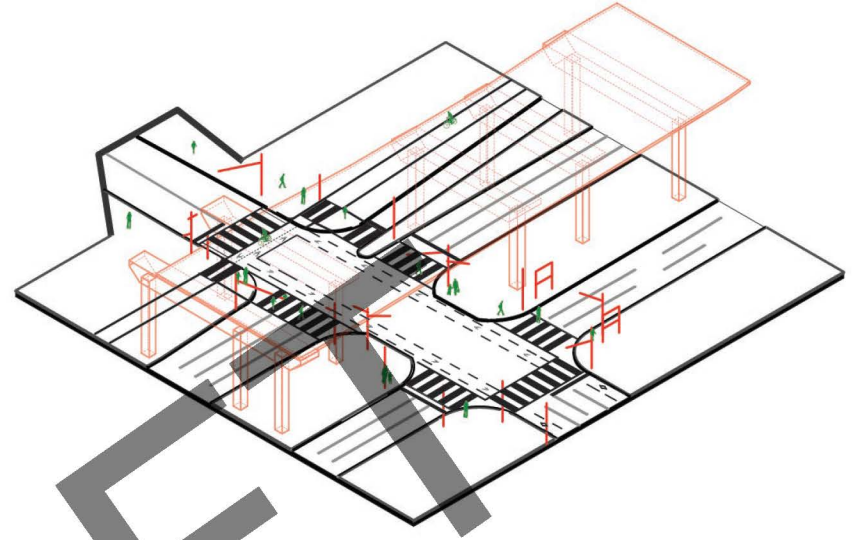
5/ PORTALS & PUBLIC ART



6/ DECLUTTER TRAFFIC SIGNAGE & GUARD RAILS

1/ IMPROVE ALIGNMENT AND GRAPHIC LEGIBILITY

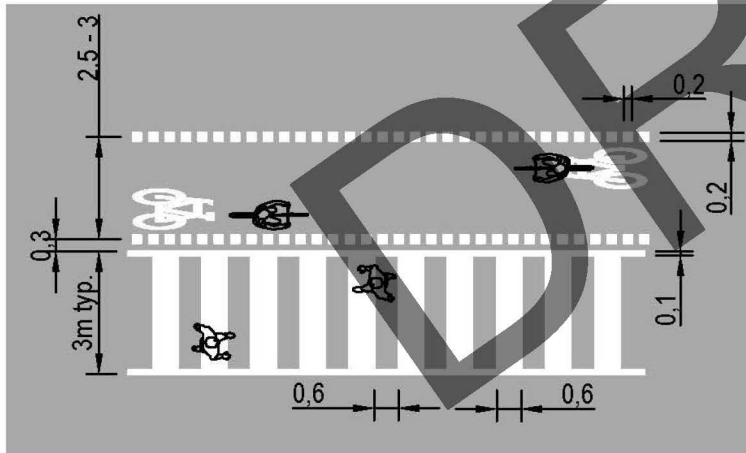
TO EMPHASIZE THE LINEARITY OF THE NORTH-SOUTH STREETS



DESIGN STRATEGY: BOLD PAVEMENT MARKINGS

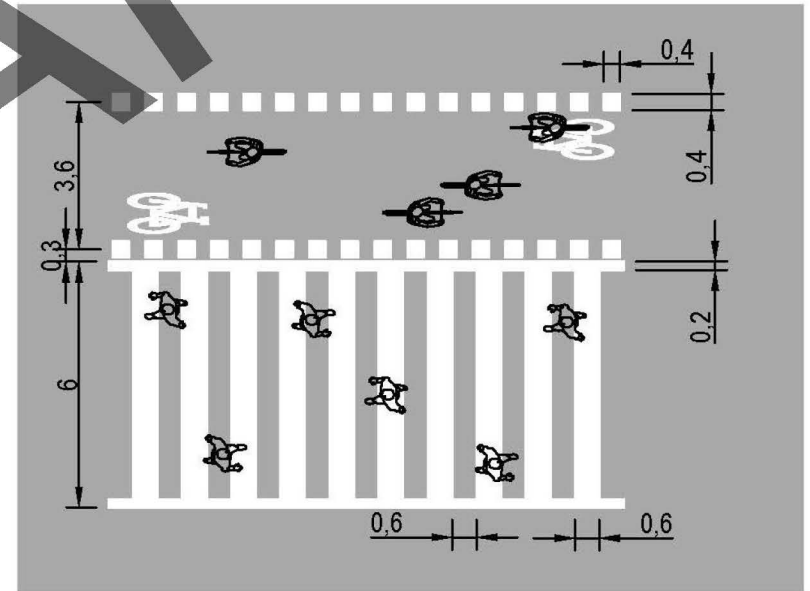


Thermoplastic Application



TYPICAL CROSSING CONDITION

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

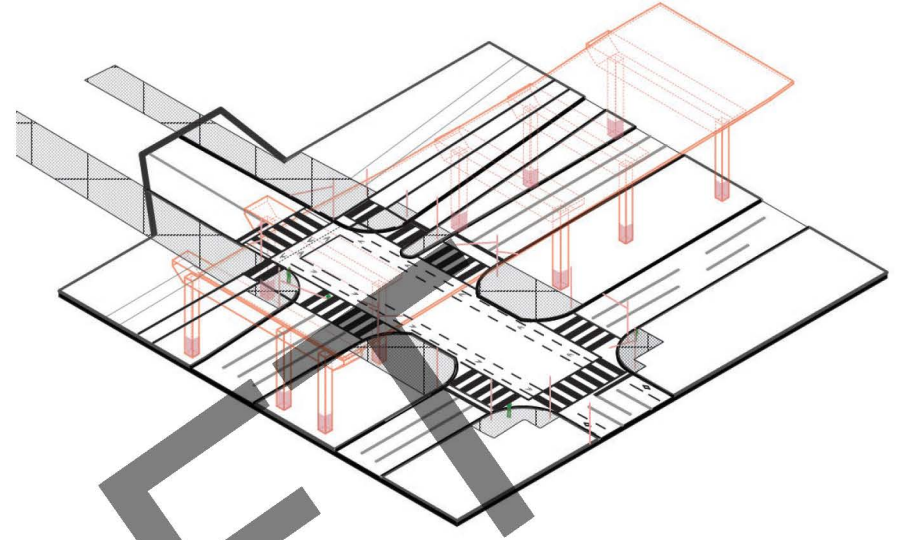


PROPOSED FAT GRAPHICS

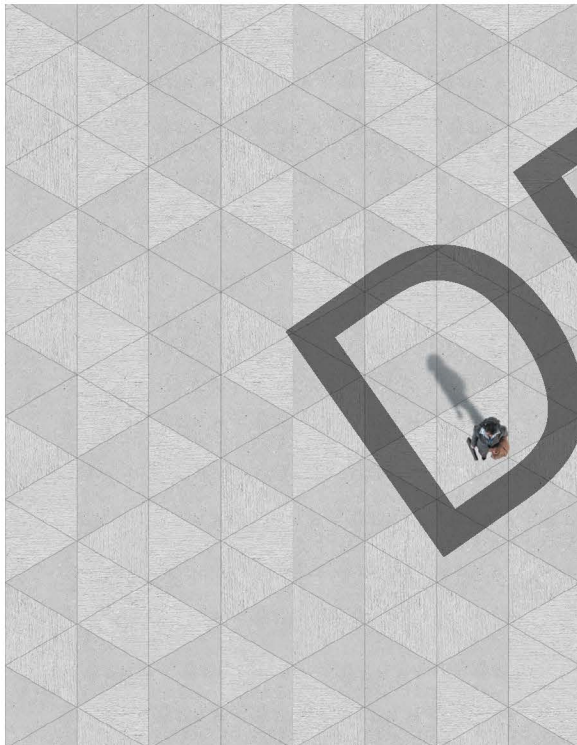
- + Typical zebra width doubled
- + Bi-directional bicycle cross ride wider
- + Elephants' feet dimensions from Ontario Traffic Manual Book 18

2/ ORNAMENT THE PEDESTRIAN REALM WITH DIGNITY

EXTEND SPECIAL PAVING THROUGH UNDERPASSES TO REINFORCE N-S ALIGNMENT



DESIGN STRATEGY: SPECIAL PAVING FINISH AT CORNERS AND MEDIANS



LIGHT
SANDBLAST
FINISH



BROOM FINISH
ONE DIRECTION
(CITY OF
TORONTO
STANDARD)



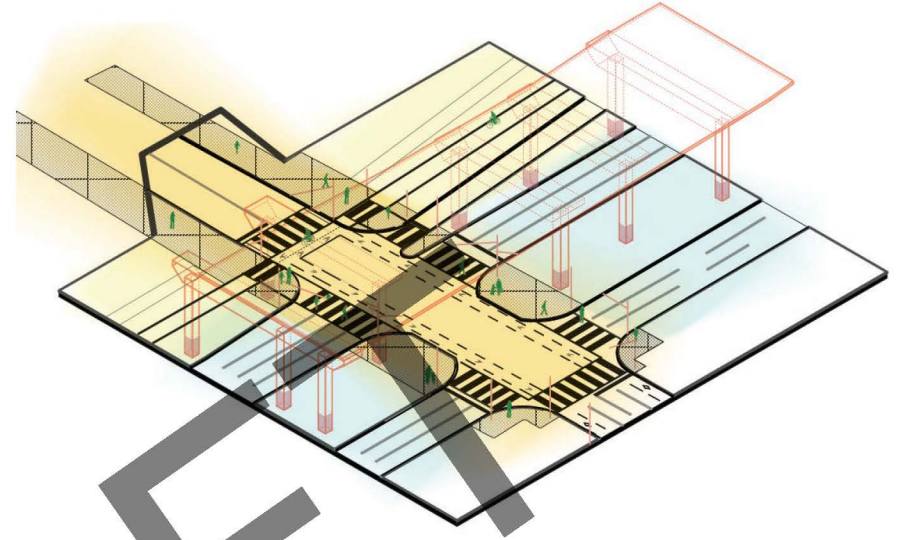
BROOM
FINISH
OPPOSITE
DIRECTION



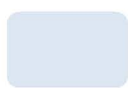

Reference Image:
Yonge Street,
Stabilized pebble
edge adjacent to
pedestrian waiting
areas at medians

3/ TURN THE LIGHTS ON IN THE ROOMS

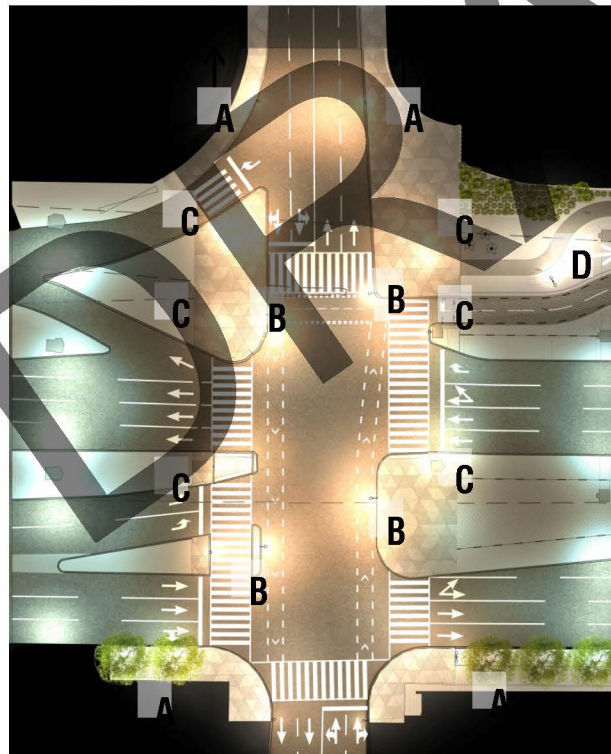
DIFFERENTIATE INTERSECTIONS WITH COLOUR TEMPERATURE



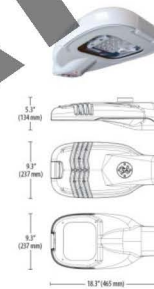
DESIGN STRATEGY: WARM COLOUR TEMPERATURE AT INTERSECTIONS

-  Colour temperature 3500K throughout E-W corridor (cooler)
-  Colour temperature 2800K at intersections (warmer)

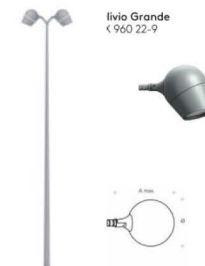
** lighting levels need to be verified in future phases by electrical engineer



LIGHTING FIXTURES NXT SERIES



A + B – Road Lighting

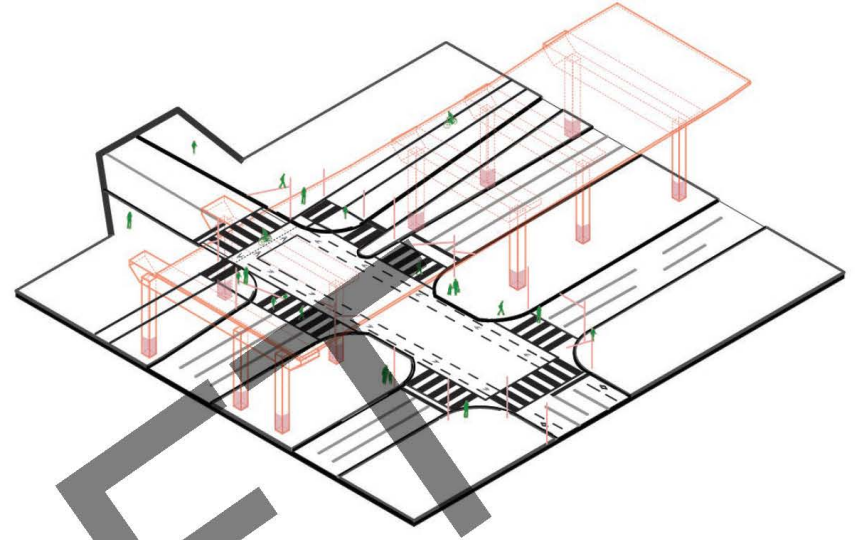


C – Bent mounted pedestrian lighting

D – North Side Trail

4/ ARTICULATE THE GARDINER AT A HUMAN SCALE

GIVE THE BENTS SOCKS



DESIGN STRATEGY: BENT SOCKS AND NUMBERS REFLECTIVE PAINT AT NIGHT

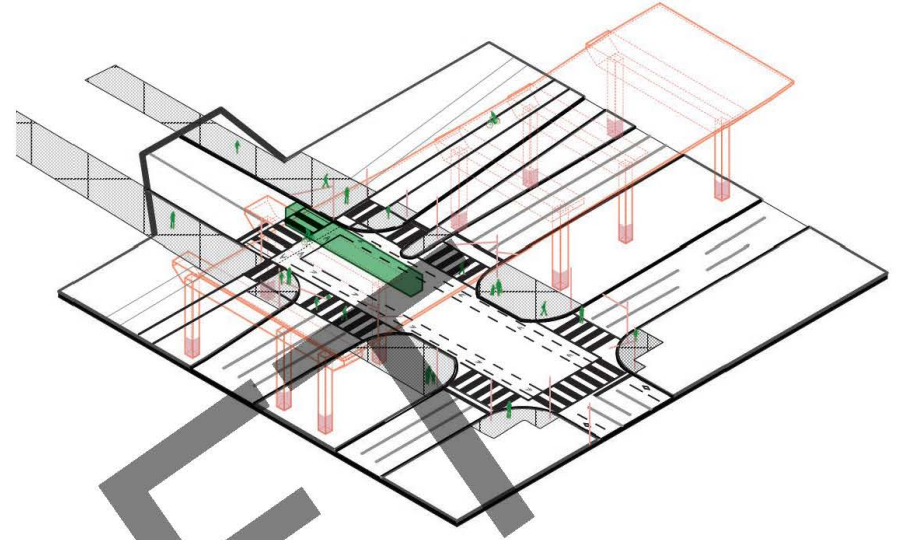


NUMBERS AND SOCKS ON BENTS AT FOUR MAIN INTERSECTIONS:

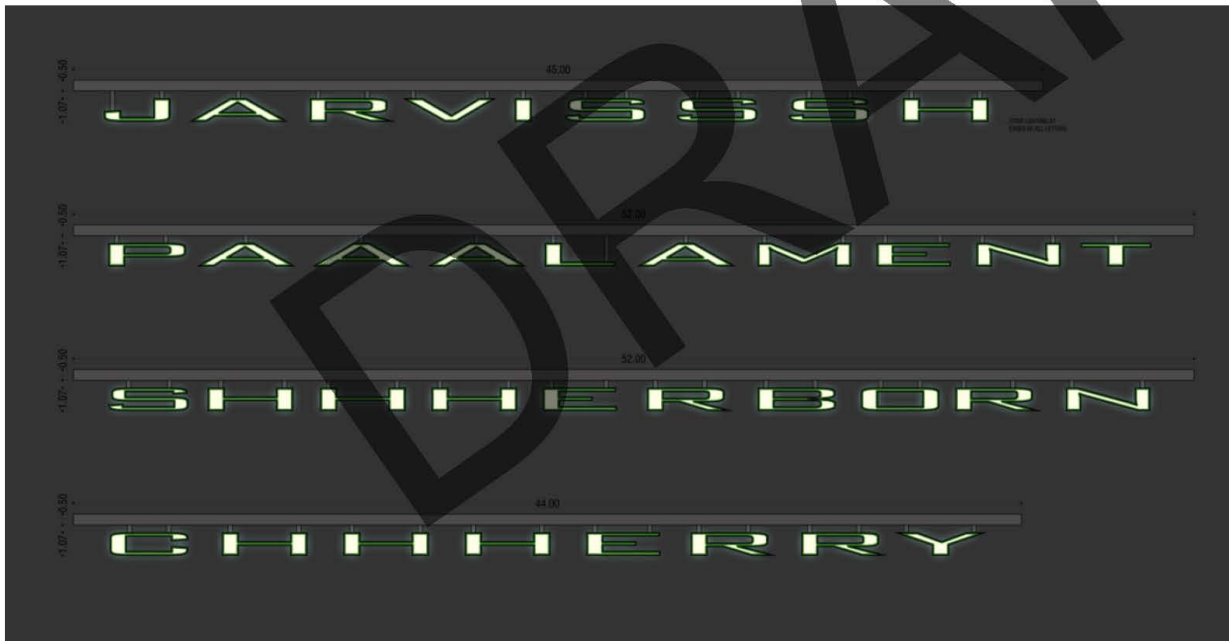
JARVIS	252, 253
SHERBOURNE	264, 265
PARLIAMENT	280, 281
CHERRY	297, 298

5/ ADD ANCHORING PORTAL ELEMENTS

TO CELEBRATE THE UNIQUE IDENTITY OF EACH INTERSECTION



DESIGN STRATEGY: BIG WHISPERS, POETIC NAMES



Construction engineering principle

Collage style graphic ornamentation, Fonts, word art



Iconic gateway text, *Central Station, Rotterdam*

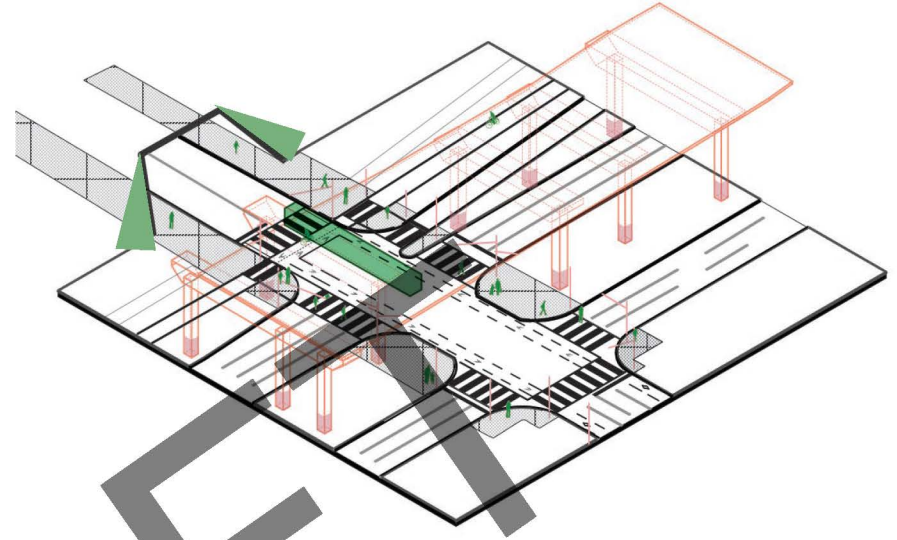
5/ PORTAL ELEMENT: BIG WHISPERS

CELEBRATE THE UNIQUE IDENTITY OF EACH INTERSECTION



5/ COORDINATE PORTAL ELEMENTS

RECOMMENDED UNDERPASS
WING WALL FINISHES



REFERENCE IMAGES



Route du Soleil
Textural concrete part of a linear narrative



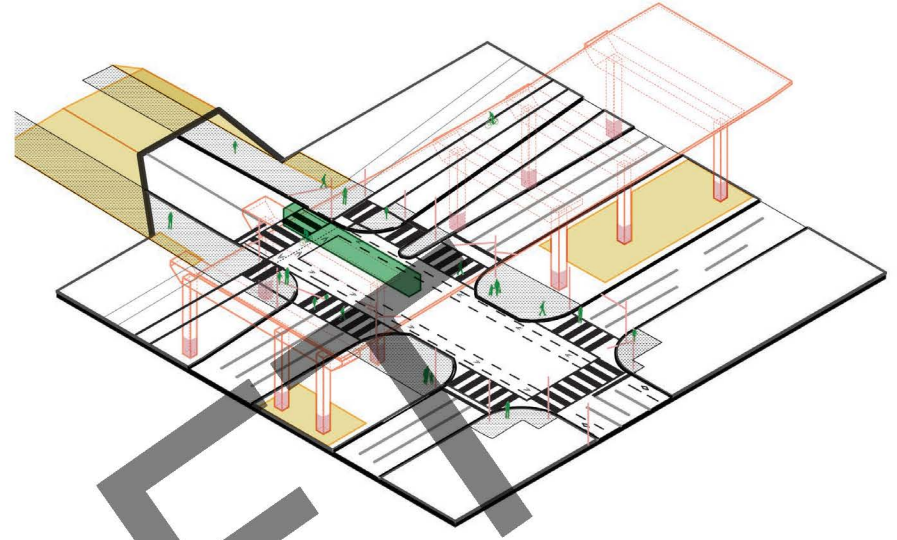
Route du Soleil
Textural concrete part of a linear narrative



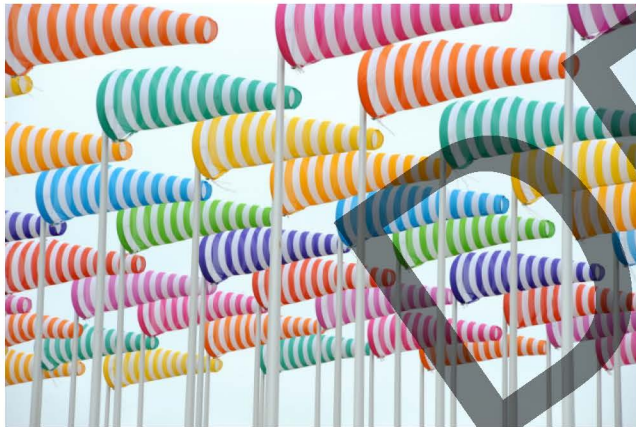
Amsterdam Centraal station
Architectural concrete mouth, delight of the mural on the inside

5/ PUBLIC ART

A FAMILY OF PUBLIC ART INTERVENTIONS
CONNECTED BY THE FORGOTTEN LAKE
SHORE TRAIL



REFERENCE IMAGES



Play on the idea of the lake shore, infrastructure, and spirit of the place
Beaufort 04, Daniel Buren



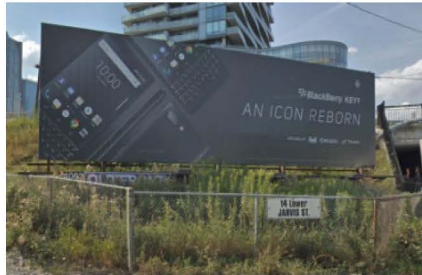
Create a step down in scale between the highway and the streetscape, independent of the structure
SEART Park, Auckland NZ



Human scale with opportunity for interaction, work during night and day
Marbles, Daan Roosegarde

6/ DECLUTTER

A FUTURE DESIGN DEVELOPMENT STUDY ON DECLUTTERING WITH A TRAFFIC ENGINEER, WAYFINDING SPECIALIST, PUBLIC REALM DESIGNER



Billboards



Bollards



Guard rails

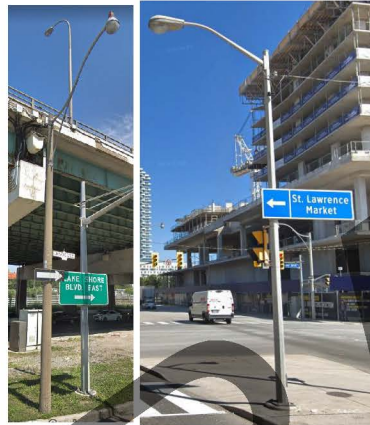


Hanging wires



Duplicate traffic lights and signs

ELIMINATE



Choose one type of pole, light fixture

UNIFY



Combine poles



Choose one type of pole, sign positioning

CONSOLIDATE



Move utility boxes out of line of sight of intersections



Ensure all poles are straight and aligned with intersections, not obstructing circulation pathways and waiting zones

ALIGN

FUTURE VISION: HUMANISED INTERSECTIONS

CROSSING LOWER JARVIS STREET



FUTURE VISION: LOWER JARVIS STREET

ARTIST IMPRESSION



FUTURE VISION: LOWER JARVIS STREET

CROSSING LAKE SHORE BOULEVARD

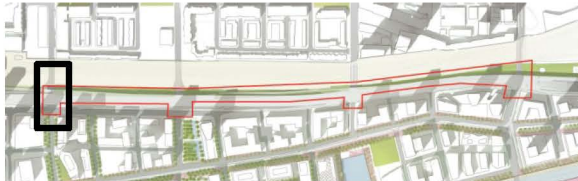
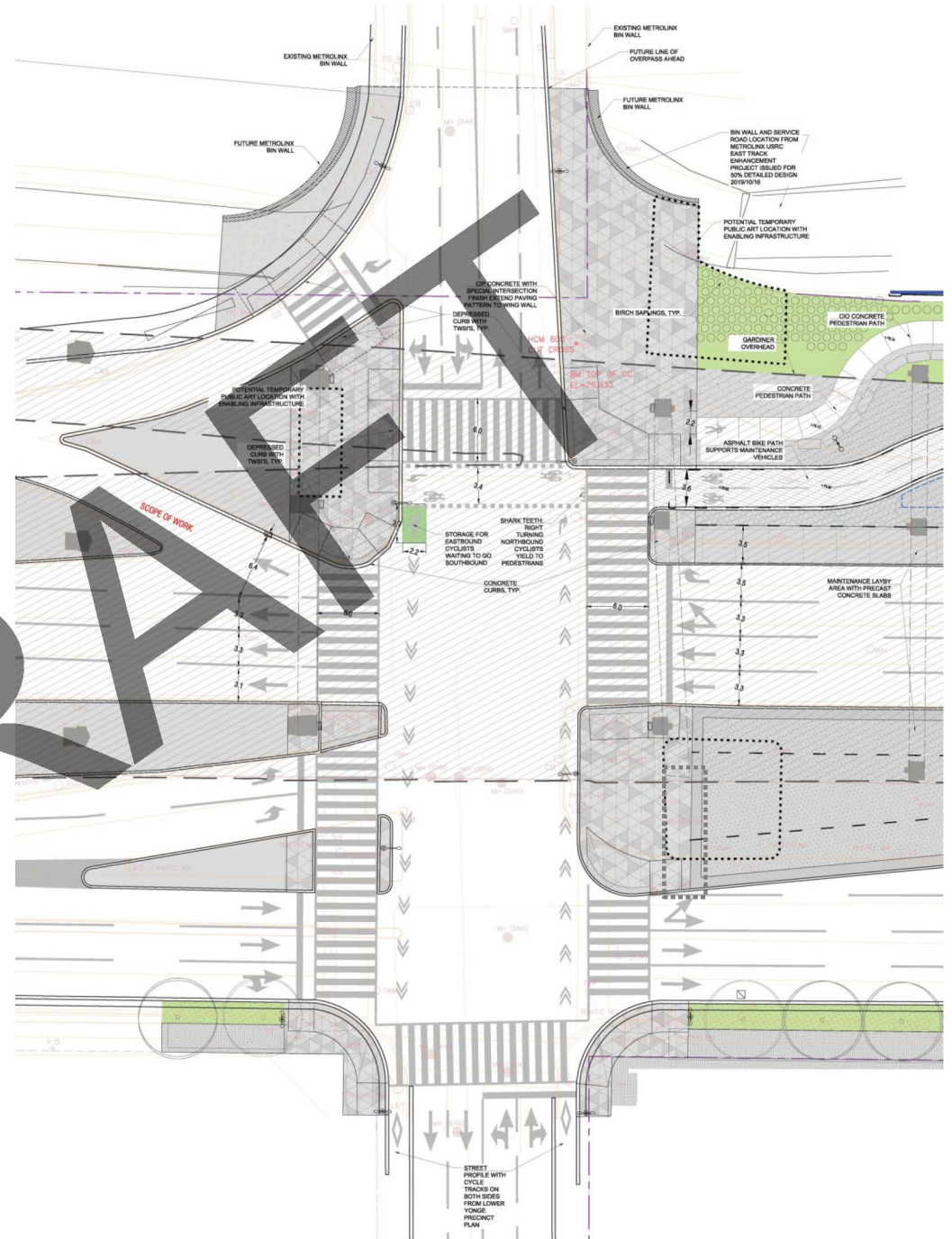


LOWER JARVIS STREET ULTIMATE INTERSECTION PLAN

LEGEND		EXISTING UTILITIES	
LINE AND SYMBOLS			
	BOUNDARY LINE		TRAFFIC LIGHT POLE
	GARDINER DECK OVERHEAD		LIGHT STANDARD
	GRADE BREAK		ROAD SIGN
	GARDINER BRIDGE DECK BENT		FIRE HYDRANT
	SLOPE		GARDINER DOWNSPOUT DRAIN
PROPOSED LIGHTING			
	LIGHTPOLE TYPE I		MAN HOLE
	LIGHTPOLE TYPE II		CATCH BASIN
	LIGHTPOLE TYPE III		BOLLARD
	THERMOPLASTIC WHITE ROAD MARKINGS		WATER VALVE
	ARMOURSTONE "SCRAMBLE"		SURVEY EXISTING CONDITIONS
MATERIALS			
	PERMEABLE CONCRETE UNIT PAVERS (SOUTH SIDE ONLY)		ASPHALT BICYCLE PATH
	CP CONCRETE PAVING WITH BROOM FINISH		PROPOSED PLANTING AREA
	PRECAST CONCRETE SLABS		THERMOPLASTIC BIKE WAITING AREA
	ROUGH STONE TYPE 1 AGGREGATE, 2-4CM DIAMETER		PAVING PATTERN - 3 TYPES OF CONCRETE FINISH
	ROUGH STONE TYPE 2, 10-20CM DIAMETER		
	STABILIZED PEBBLE EDGER		
	BIRCH SAPLINGS		

TRAFFIC ANALYSIS

- Traffic modelling undertaken to determine impact of a WB RT signal control – to provide safer E-W cyclist ride through
- Various signal phasing options were reviewed
- AM peak hour**, determined that sufficient capacity to accommodate the modeled demand.
- PM peak hr.** - can accommodate vehicle volumes on most movements / minor drop in vehicle capacity



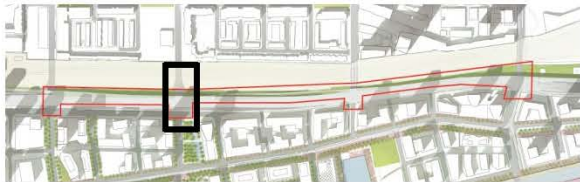
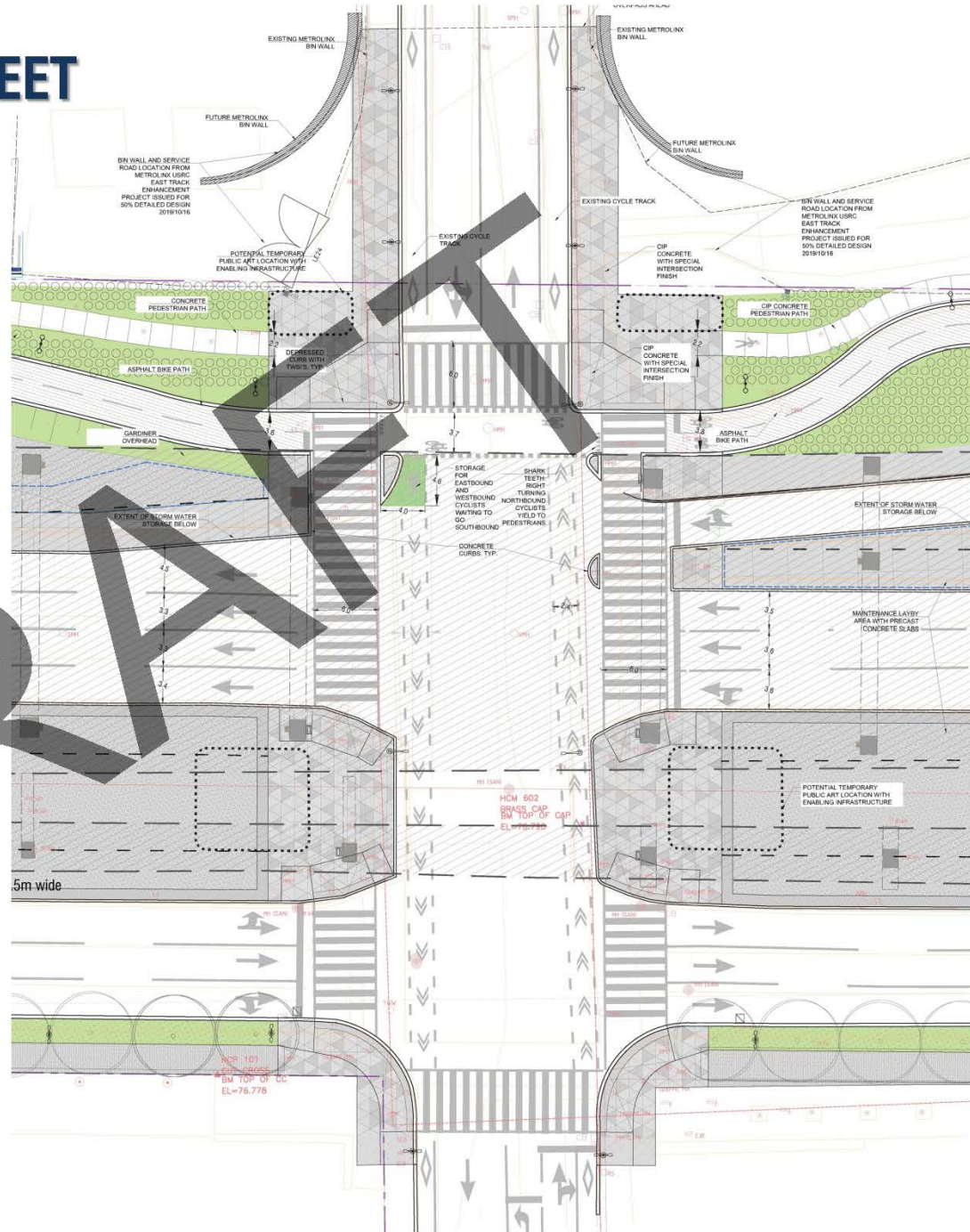
LOWER SHERBOURNE STREET

ULTIMATE INTERSECTION PLAN

LEGEND	
LINE AND SYMBOLS	
	BOUNDARY LINE
	GARDINER DECK OVERHEAD
	GRADE BREAK
	GARDINER BRIDGE DECK BENT
	SLOPE
PROPOSED LIGHTING	
	LIGHTPOLE TYPE I
	LIGHTPOLE TYPE II
	LIGHTPOLE TYPE III
	THERMOPLASTIC WHITE ROAD MARKINGS
	ARMOURSTONE "SCRAMBLE"
	PEDESTRIAN LIGHTING MOUNTED TO GARDINER BENT
MATERIALS	
	PERMEABLE CONCRETE UNIT PAVERS (SOUTH SIDE ONLY)
	CIP CONCRETE PAVING WITH BROOM FINISH
	PRECAST CONCRETE SLABS
	ROUGH STONE TYPE 1 AGGREGATE, 2-4CM DIAMETER
	ROUGH STONE TYPE 2, 10-20CM DIAMETER
	STABILIZED PEBBLE EDGER
	ASPHALT BICYCLE PATH
	PROPOSED PLANTING AREA
	THERMOPLASTIC BIKE WAITING AREA
	PAVING PATTERN - 3 TYPES OF CONCRETE FINISH
	BIRCH SAPLINGS
EXISTING UTILITIES	
	TRAFFIC LIGHT POLE
	LIGHT STANDARD
	ROAD SIGN
	FIRE HYDRANT
	GARDINER DOWNSPOUT DRAIN
	MAN HOLE
	CATCH BASIN
	BOLLARD
	WATER VALVE
	SURVEY EXISTING CONDITIONS

TRAFFIC ANALYSIS

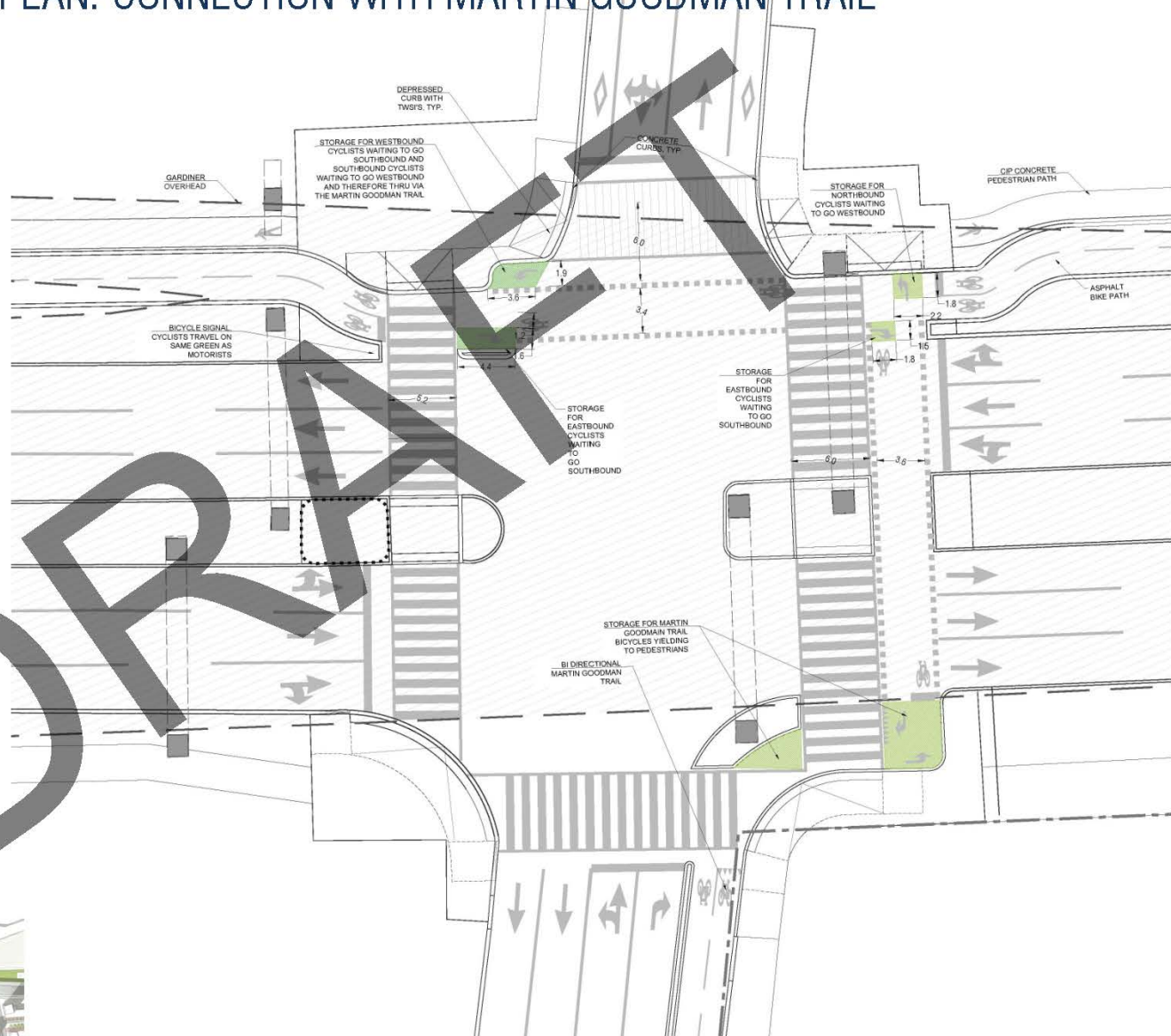
- Traffic modelling undertaken to determine impact of a WB RT signal control – to provide safer E-W cyclist ride through
- Various signal phasing options were reviewed
- AM peak hour**, determined that sufficient capacity to accommodate the modeled demand.
- PM peak hr.** - 20-30% vehicle capacity reduction for some movements.



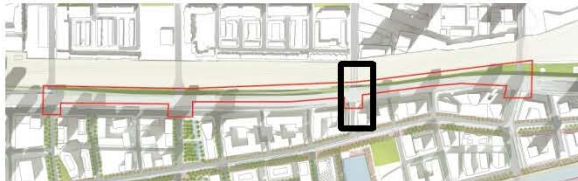
PARLIAMENT STREET

INTERIM INTERSECTION PLAN: CONNECTION WITH MARTIN GOODMAN TRAIL

LEGEND	
LINE AND SYMBOLS	
	BOUNDARY LINE
	GARDINER DECK OVERHEAD
	GRADE BREAK
	GARDINER BRIDGE DECK BENT
	SLOPE
PROPOSED LIGHTING	
	LIGHTPOLE TYPE I
	LIGHTPOLE TYPE II
	LIGHTPOLE TYPE III
	PEDESTRIAN LIGHTING MOUNTED TO GARDINER BENT
MATERIALS	
	PERMEABLE CONCRETE UNIT PAVERS (SOUTH SIDE ONLY)
	CIP CONCRETE PAVING WITH BROOM FINISH
	PRECAST CONCRETE SLABS
	ROUGH STONE TYPE 1 AGGREGATE, 2-4CM DIAMETER
	ROUGH STONE TYPE 2, 10-20CM DIAMETER
	ASPHALT BICYCLE PATH
	PROPOSED PLANTING AREA
	THERMOPLASTIC BICYCLE WAITING AREA
	PAVING PATTERN - 3 TYPES OF CONCRETE FINISH
	THERMOPLASTIC WHITE ROAD MARKINGS
	ARMOURSTONE "SCRAMBLE"
EXISTING UTILITIES	
	TRAFFIC LIGHT POLE
	LIGHT STANDARD
	ROAD SIGN
	FIRE HYDRANT
	GARDINER DOWNSPOUT DRAIN
	MAN HOLE
	CATCH BASIN
	BOLLARD
	WATER VALVE
	SURVEY EXISTING CONDITIONS



DRAFT



CHERRY STREET

ULTIMATE INTERSECTION PLAN

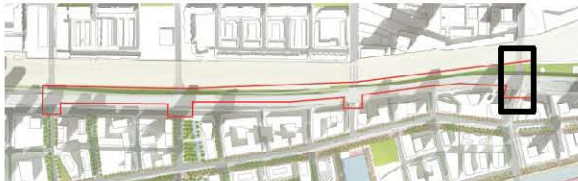
— Lines coordinated with PLFP
Project 90% Detailed Design

LEGEND

LINE AND SYMBOLS	MATERIALS	EXISTING UTILITIES
BOUNDARY LINE	PERMEABLE CONCRETE UNIT	TRAFFIC LIGHT POLE
GARDNER DECK OVERHEAD	CIP CONCRETE PAVING WITH BRUSH FINISH	LIGHT STANDARD
GRADE BREAK	PRECAST CONCRETE SLABS	ROAD SIGN
GARDNER BRIDGE DECK BENT	ROUGH STONE TYPE 1 AGGREGATE, 2-4CM DIAMETER	FIRE HYDRANT
SLOPE	ROUGH STONE TYPE 2, 10-20CM DIAMETER	GARDNER DOWNSPOUT DRAIN
PROPOSED LIGHTING	STABILIZED PEBBLE EDGE	MAN HOLE
LIGHTPOLE TYPE I	ASPHALT BICYCLE PATH	CATCH BASIN
LIGHTPOLE TYPE II	PROPOSED PLANTING AREA	BOLLARD
LIGHTPOLE TYPE III	THERMOPLASTIC BIKE WAITING AREA	WATER VALVE
THERMOPLASTIC WHITE ROAD MARKINGS	PAVING PATTERN - 3 TYPES OF CONCRETE FINISH	SURVEY EXISTING CONDITIONS
ARMOURSTONE "SCRAMBLE"	BIRCH SAPLINGS	



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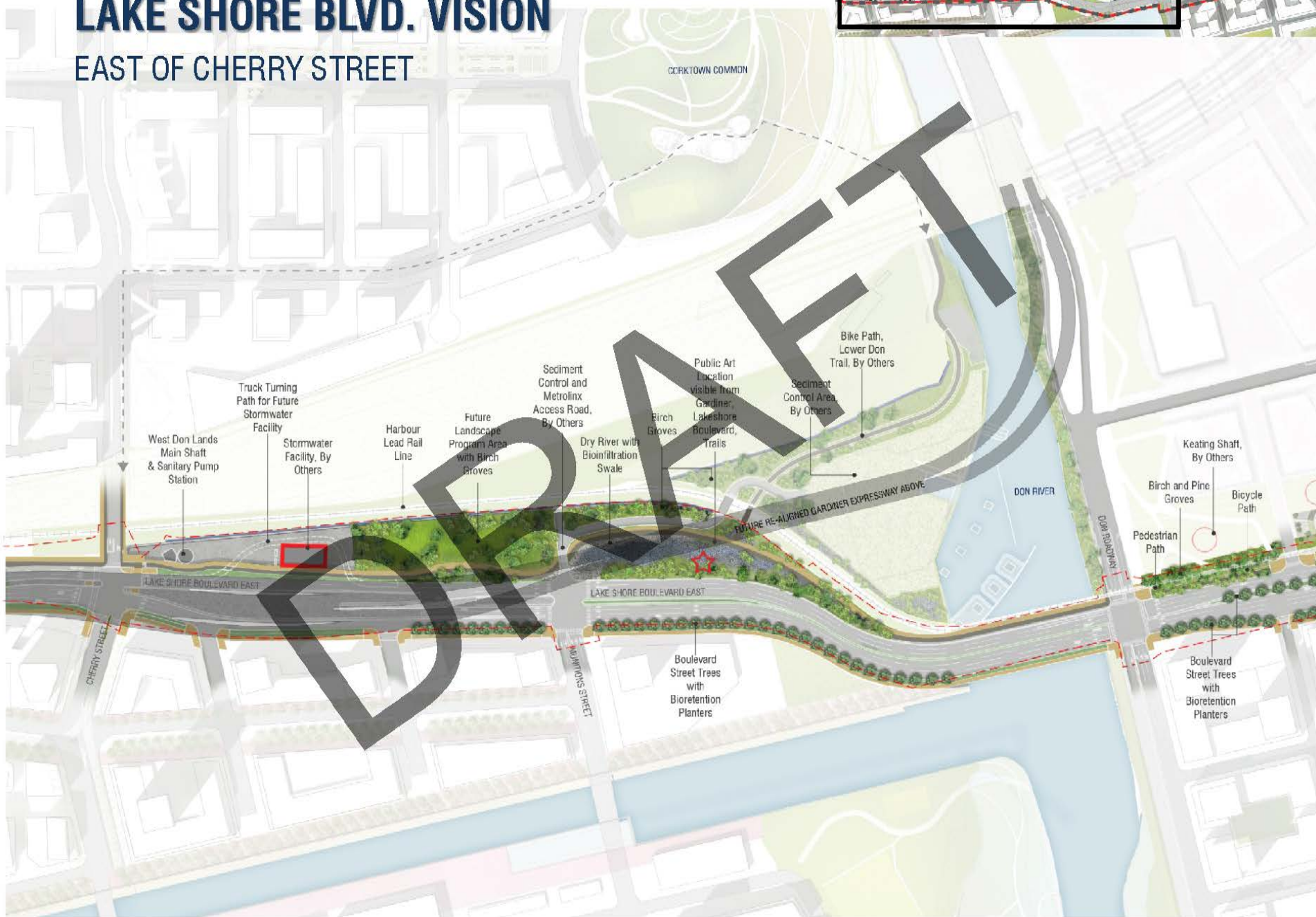


6/ VISION EAST OF CHERRY STREET



LAKE SHORE BLVD. VISION

EAST OF CHERRY STREET



CORKTOWN COMMON

Bike Path,
Lower Don
Trail, By Others

Truck Turning
Path for Future
Stormwater
Facility

West Don Lands
Main Shaft
& Sanitary Pump
Station

Stormwater
Facility, By
Others

Harbour
Lead Rail
Line

Future
Landscape
Program Area
with Birch
Groves

Sediment
Control and
MetroInx
Access Road,
By Others

Dry River with
Bioinfiltration
Swale

Birch
Groves

Public Art
Location
visible from
Gardiner,
Lakeshore
Boulevard,
Trails

Sediment
Control Area,
By Others

DON RIVER

Keating Shaft,
By Others

Birch and Pine
Groves

Bicycle
Path

Pedestrian
Path

FUTURE RE-ALIGNED GARDINER EXPRESSWAY ABOVE

LAKE SHORE BOULEVARD EAST

LAKE SHORE BOULEVARD EAST

Boulevard
Street Trees
with
Bioretention
Planters

Boulevard
Street Trees
with
Bioretention
Planters

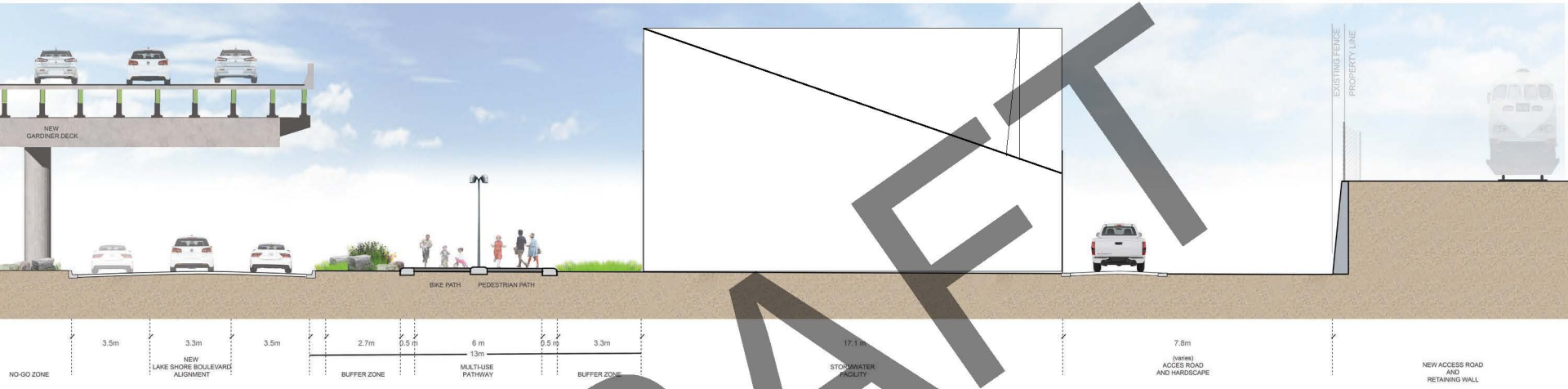
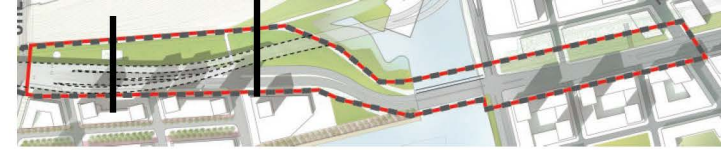
CHERRY STREET

MAURICE STREET

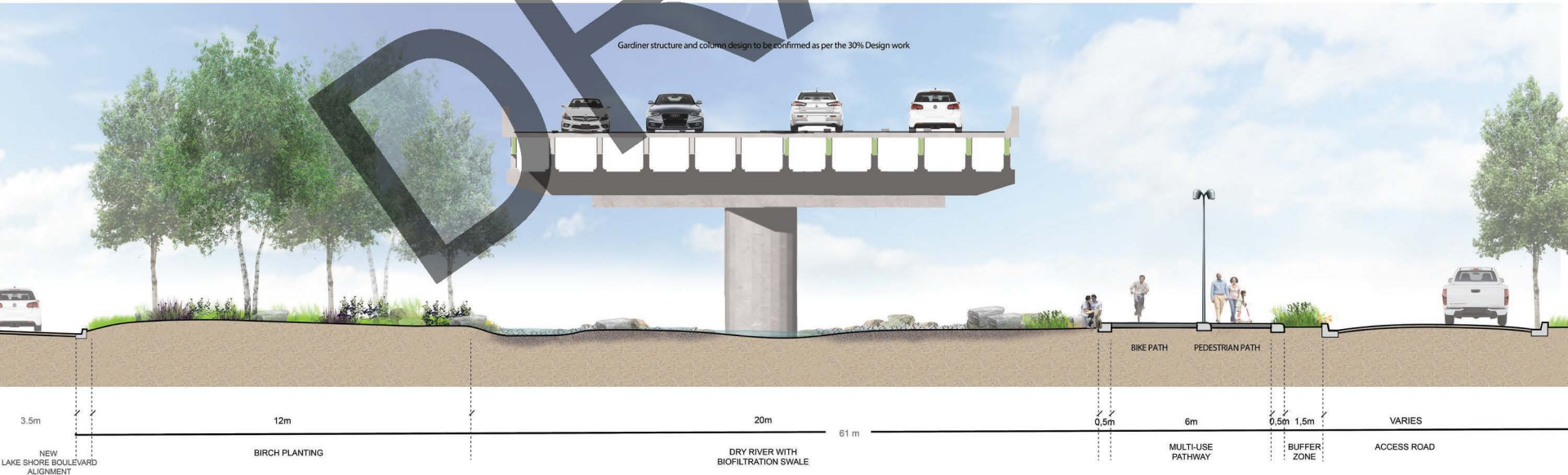
DON ROAD

INFRASTRUCTURAL LINEAR PARK

SECTION H – CHERRY TO DON RIVER



SECTION I – CHERRY TO DON RIVER



LAKE SHORE BLVD. VISION

EAST OF DON RIVER



Keating Shaft,
By Others

Birch and Pine
Groves

Bicycle
Path

Pedestrian
Path

Boulevard
Street Trees
with
Bioretention
Planters

BROADVIEW AVE

LAKE SHORE BOULEVARD EAST

Future
Extension
Intersection

BOOTH AVE

LOGAN AVE

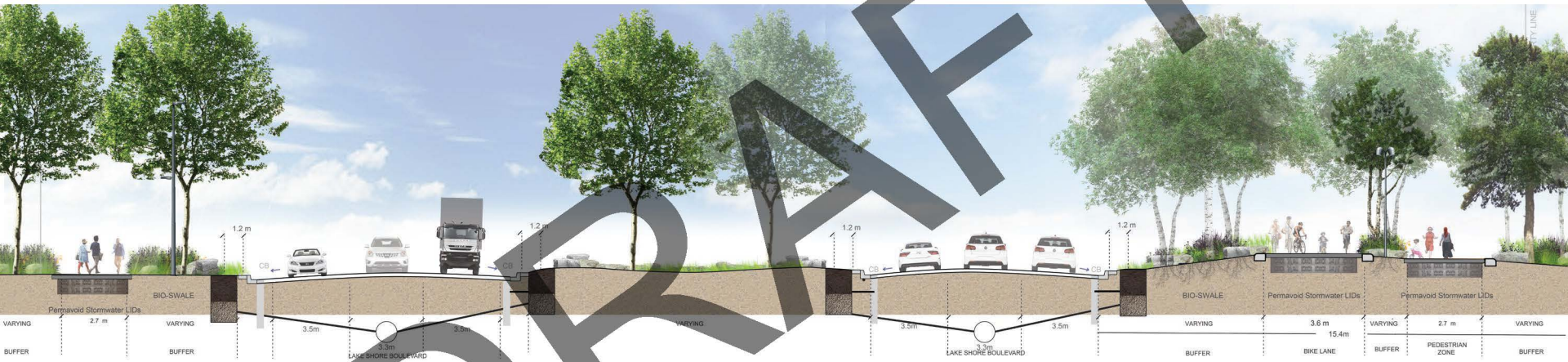
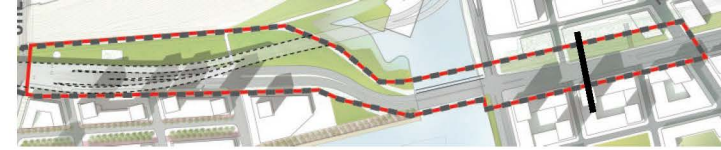
MORSE STREET

MCCLEARY PARK

DRAFT

URBAN BOULEVARD

SECTION J – DON RIVER TO LOGAN AVE.



DRAFT

THANK YOU



WEST 8
Urban Design & Landscape Architecture

QUESTIONS TO THE PANEL

1. Has the design **achieved the stated project objectives**?
2. Although **conditions vary widely** along the corridor, and the character of the project varies from west to east, **does it still feel like a cohesive boulevard identity**?
3. Have we **humanized the intersections sufficiently** to improve the perception of connectivity to the waterfront under the Gardiner?
4. Has the project **seized opportunities for sustainability and innovation** through this unique design challenge?
5. Given the way this public realm vision will be implemented in parts by many delivery agents as opposed to a single project master plan, **how can we ensure consistency and quality are maintained across the corridor**?