Fixing the City : From Coast to Coast

CanU10, Montréal, October 2018

David Gordon – Moderator
Jacob Ritchie – Atlantic Canada
Catherine Boisclair – Québec
John Smit – Eastern Ontario
Lorna Day – Toronto
Alex Taranu – GTA
Ute Maya-Giambattista – Western Ontario
Barbara Myers – Prairies
Joyce Drohan - BC

Is There a Canadian Urbanism?

CanU10, Montréal, October 2018

Dr. David Gordon FCIP RPP AICP

Professor, Queen's School of Urban & Regional Planning

Council for Canadian Urbanism Research Chair

Distinctive Canadian Urbanism

- Evolved over time

- Historical context:
    - Constitutional
    - Political
    - Social
    - Cultural

Parliament Buildings, Ottawa (photo: CanU)

Distinctive Canadian Urbanism

Affected by:

- Landscape

- Climate

Montréal (wikipedia.com)

Why Is It Distinctive?

- Comfortable with contemporary architecture

- Comfortable with density

- Moves towards sustainability

Coal Harbour, Vancouver (CanU)

Benny Farm, Montréal (ArchNewsNow.com)

Why Is It Distinctive?
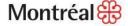
- Community infrastructure

- Partnerships led by the public sector

Apartments

Public School

Gym

Catholic School

Retail

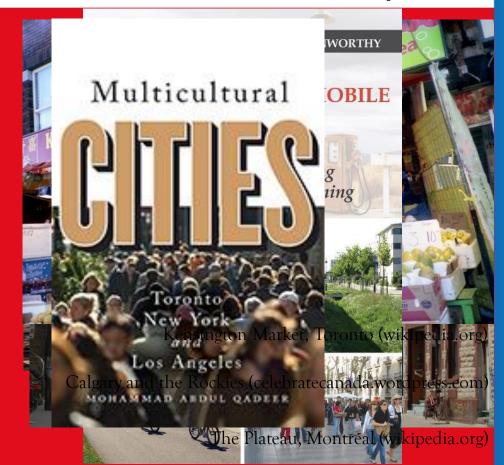St. Lawrence, Toronto (Dave C Crdn)

Distinctly Different From USA & Europe

- Multi-cultural cities
  (Qadeer 2016)

- High Livability /
  Quality of Life
    (Economist 2018; Mercer 2018)

- Two hours' driving
  distance to wilderness

- CBD living never
  abandoned

- Moderate transit use
    (Newman & Kenworthy 2015)

Kensington Market, Toronto (wikipedia.org)

Calgary and the Rockies (celebratecanada.wordpress.com)

The Plateau, Montréal (wikipedia.org)

Distinctively Different from the U.S.?

- Higher transit usage
  [1031 PKT (Can) vs. 577(US)]

- Less car use
  [8495 vs 18,793 PKT/capita]

- Fewer expressways?
  [157 (Can) vs156 (US) m/capita]

- Affected by climate

(2005/6 data from
Newman & Kenworthy 2015)

TTC Streetcar (wikipedia.org)

Vancouver (CanU)

Rideau Canal, Ottawa (wikipedia.org)
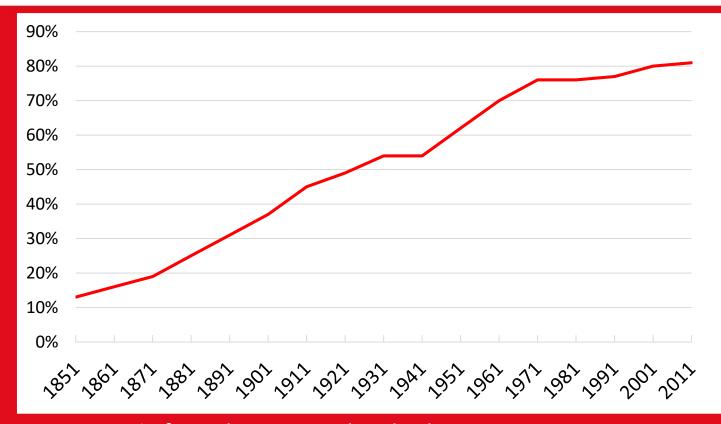
Canada is an Increasingly Urban Society

% of Population Considered Urban (Statistics Canada)

Or is it?

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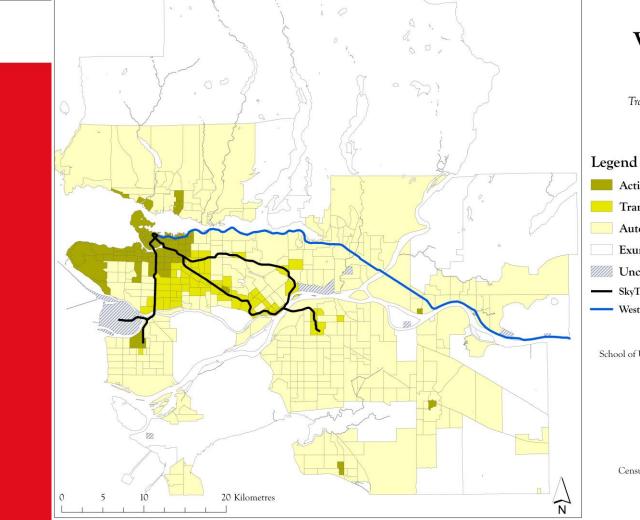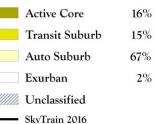
Vancouver 2016

Transportation T9 Method

Legend   Population

Active Core   16%
Transit Suburb   15%
Auto Suburb   67%
Exurban   2%
Unclassified
SkyTrain 2016
West Coast Express 2016

Queen's University
School of Urban & Regional Planning

Principal Investigator:
David Gordon
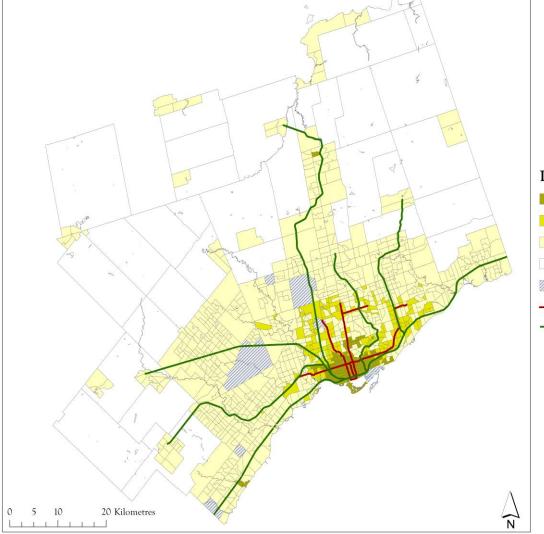
Research Assistants:
Lyra Hindrichs
Shuhong Lin
Chris Willms

Census Tract & Population Data:
2016 Census

0   5   10   20 Kilometres

N

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Toronto
2016

Transportation T9 Method

Legend   Population

Active Core   12%

Transit Suburb   15%

Auto Suburb   70%

Exurban   3%

Unclassified

TTC Subway & LRT 2016

GO Transit 2016

Queen's University
School of Urban & Regional Planning

Principal Investigator:
David Gordon

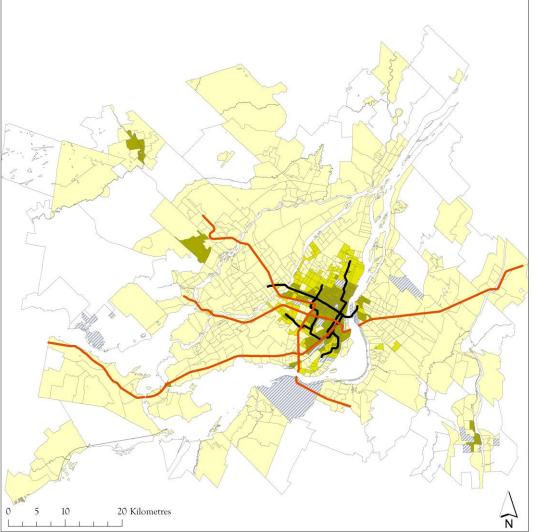Research Assistants:
Lyra Hindrichs
Shuhong Lin
Ben McCauley
Chris Willms
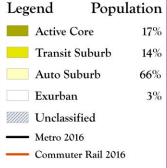
Census Tract & Population Data:
2016 Census

0   5   10   20 Kilometres

N

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LA VILLE
FIXING
THE CITY
CanU10

Montréal

**Montréal
2016**

Transportation T9 Method

Legend   Population

Active Core   17%
Transit Suburb   14%
Auto Suburb   66%
Exurban   3%
Unclassified
Metro 2016
Commuter Rail 2016

Queen's University
School of Urban & Regional Planning

Principal Investigator:
David Gordon

Research Assistants:
Lyra Hindrichs
Chris Willms

Census Tract & Population Data:
2016 Census

0   5   10   20 Kilometres

N

CanU

Percentage of Suburbs, 2016 Census

CMA	2016 Population	Active Core	Transit Suburb	Auto Suburb	Exurban
Calgary	1,392,609	12%	9%	76%	3%
Halifax	403,390	15%	13%	48%	24%
Montréal	4,098,927	17%	14%	66%	3%
Ottawa-Gatineau	1,323,783	15%	9%	62%	14%
Québec	800,296	19%	10%	56%	15%
Toronto	5,928,040	12%	15%	70%	3%
Vancouver	2,463,431	16%	15%	67%	2%
Canada's CMAs	**24,945,123**	**14%**	**12%**	**67%**	**8%**

CMA Suburbs	19,601,652
CA Suburbs	2,621,199
CMA and CA Suburbs	22,222,851
50% Exurban	1,486,183
Total 2016 *Suburb* Pop. (estimated)	**23,709,034**
Total 2016 *National* Pop.	**35,151,728 (67.5% suburban)**
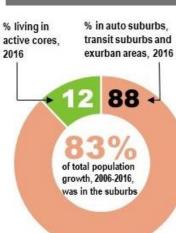
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Montréal

CanU

Cities' Population Growth is in the Suburbs, 2006-2016

% living in active cores, 2016

% in auto suburbs, transit suburbs and exurban areas, 2016

12 **88**

83% of total population growth, 2006-2016, was in the suburbs
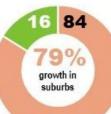
Toronto:
2016 CMA population 5,928,040

- In the '416' area, 82% of the growth is in active cores and transit suburbs.

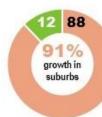- In the '905' area, 99% of growth is in the auto suburb and exurban areas.

17 **83**

84% growth in suburbs

Montréal:
4,098,927

- About 226,000 more people now live off the Island of Montréal than on it.

- On island, 76% of growth is in core and transit areas; off island, 93% of growth is in auto and exurban areas

16 **84**

79% growth in suburbs

Vancouver:
2,463,431

- In City of Vancouver, 96% of growth is in core and transit areas.

- In surrounding region it's opposite: 83% of growth is in auto and exurban areas.

12 **88**

91% growth in suburbs

Calgary:
1,392,609

- Fastest growing CMA in Canada from 2006-16 (29% or 313,000).

- Third-most percentage growth among all CMAs in auto and exurban areas (31%)

15 **85**

74% growth in suburbs

Ottawa-Gatineau:
1,323,783

- In the O-G CMA, more people lived outside the Greenbelt & in Gatineau than inside the Greenbelt.

- Least growth in transit and core areas of any major CMA (10,000 or 3%).

- Fastest growing exurbs among large CMAs (21% of total growth)

8 **92**

90% growth in suburbs

Edmonton:
1,321,426

- Second-fastest growing CMA in Canada from 2006-16 (27% or 283,000)

- Most percentage growth among all CMAs in auto and exurban areas (33%)

Infographic created by Chris Willms
School of Urban and Regional Planning, Queen's University

CMA Growth Rates in Canada

	2006	2016	Share of Growth	
Total Population (33 CMAs)	21,506,000	24,724,000	3,218,000	
Active Core	3,107,000	3,373,000	266,000	8%
Transit Suburbs	2,708,000	2,923,000	215,000	7%
Auto Suburbs	14,100,000	16,524,000	2,424,000	75%
Exurban	1,573,000	1,887,000	314,000	10%

481,000 15%

2,738,000 85%

But what of the Canadian suburbs?

- 67% of all Canadians live in suburbs, mostly built since WW II

- Auto suburbs still growing fast

- Not as many gated communities

…yet

A gated community in Saskatchewan (wikipedia.org)

Don Mills, Toronto (CanU)

Summary: Distinctive Canadian Urbanism?

- Evolved over time

- Affected by landscape

- Affected by climate

- P3s led by public sector

- Mostly suburban

- Evolved within a distinct historical context:

  - Constitutional

  - Political

  - Social

  - Cultural

Fredericton – Co-Location

Saint John – Jelly Bean Houses
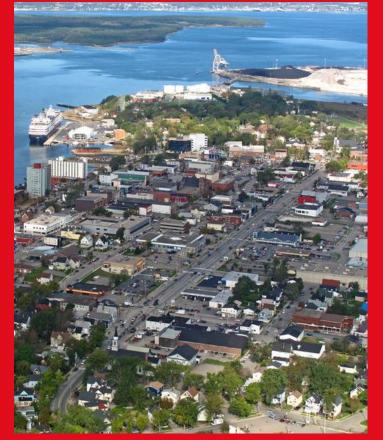
Sydney – Locating Institutions

NSCC Marconi campus to relocate to downtown Sydney

Chris Shannon (chris.shannon@cbpost.com)
Published: Nov 24, 2017 at 8:53 p.m.

The front entrance to NSCC Marconi Campus is shown in this file photo. CAPE BRETON POST PHOTO

SYDNEY, N.S. — The province committed on Friday to relocating the Nova Scotia Community College Marconi campus to downtown Sydney, a massive infrastructure project Premier Stephen McNeil says will become an "economic driver" for the area.

"I don't want this idea sitting on a blueprint. ... This project is moving. We're doing it," McNeil said before being interrupted by applause and then a standing ovation.

During the provincial election campaign in May, McNeil, who was seeking a second mandate for his Liberal government, said he promised to review options for moving the NSCC Marconi campus to the Sydney waterfront.

Halifax – Bus Network Redo

Halifax – Bridge Fix for AAA

Halifax – Bridge Fix for AAA

Halifax – Spring Garden Road
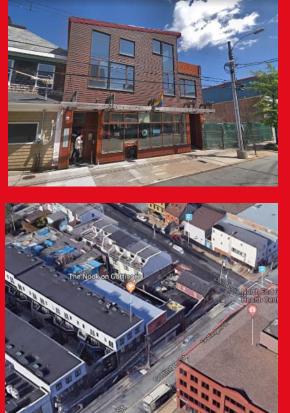
Halifax – Spring Garden Road

Halifax - Gottingen Infill
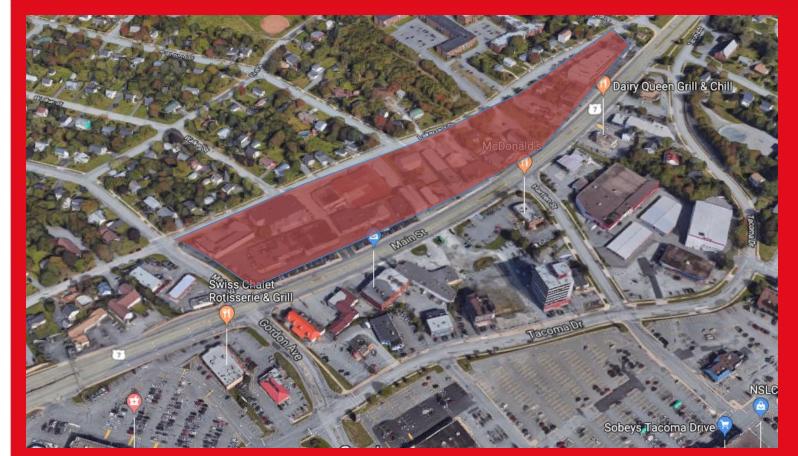
Dartmouth – Breaking a Super Block

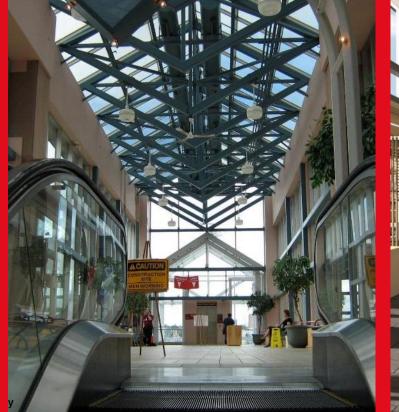# Dartmouth – Breaking a Super Block
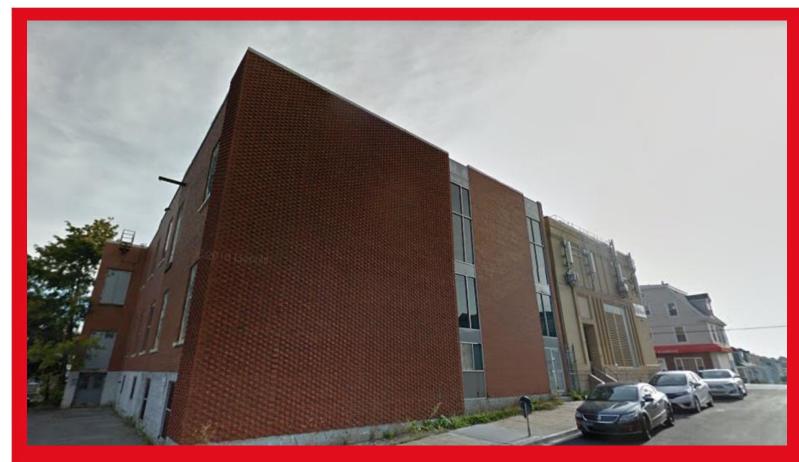
Dartmouth – Bell Lofts
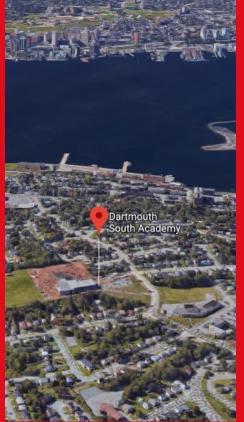
Dartmouth – Bell Lofts

Dartmouth – Ferry Pedway

Dartmouth – Dartmouth South Academy

Halifax – Lemarchant St. Thomas

Dartmouth – Sportsplex

Dartmouth – Sportsplex

Québec (excluding Montréal)

CanU10, Montréal, October 2018

Catherine Boisclair

Coordonnatrice de projet, Vivre en Ville

Québec, QC

Quebec City : New Integrated Transit Network

Tramway

Electric trambus

Reserved bus lanes

Quebec City : New Urban Centers Along The Network

Hamel / Laurentienne urban center

Hamel / Laurentienne urban center

Quebec City : a city-led redevelopment
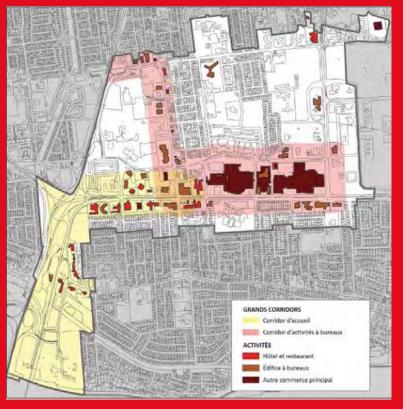
Detailed planning – Plateau centre de Ste-Foy

New proposals – Plateau centre de Ste-Foy

Source : Groupe Dallaire

État actuel - Laurier Québec

Simulation - Laurier Québec

Source : Ville de Québec

Gatineau : Heritage Designation for Museum District

Gatineau : Heritage Designation for Museum District

Source : Brigil, cité par Radio-Canada

Gatineau council votes down $400M development with heritage designation for Museum District

TAYLOR BLEWETT   Updated: August 28, 2018

Brigil unveils revised $400 million Gatineau mixed-use condo hotel Place-des-Peuples, to be build adjacent to the Museum of Civilization. (rendering courtesy Brigil), for 1113 brigil   *RENDERING / COURTESY BRIGIL*

Alliance Ariane – for a Quebec Territorial Planning Policy

Large consensus – a necessary policy
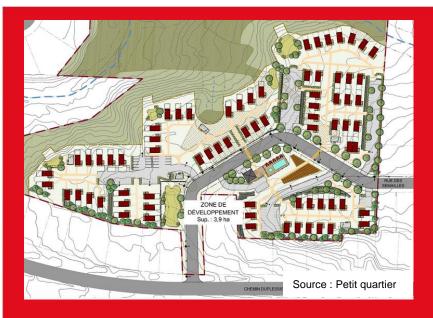
Small is beautiful - tiny houses

Source : Petit quartier

Source : chabotconstruction.ca

Source : larpent.ca

Entire neighbourhoods of tiny houses
Or a way to consolidate existing
neighbourhoods ?

Possible replacement of referendums

Yes In My Backyard Québec – Vivre en Ville
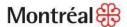
Ouidansmacour.quebec

Yimby.quebec

Yes In My Backyard Québec – Vivre en Ville

Video at Yimby.quebec

Chibougameau - Public Spaces in a Nordic Context

Source : l'Atelier Urbain

Source : Ville de Chibougameau et Groupe A / Annexe U
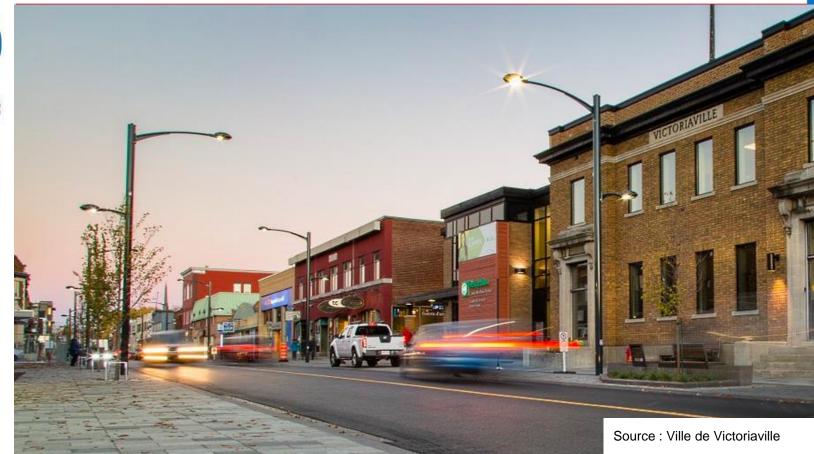
Main Street Refurbishment - Victoriaville

Source : Ville de Victoriaville

Ontario :
Ottawa, NCR, and Kingston

Stitching New into Existing

John Smit, MCIP RPP

Director, Economic Development and Long Range Planning, City of Ottawa

Ottawa's Emerging Western Downtown

The Stage is Being Set
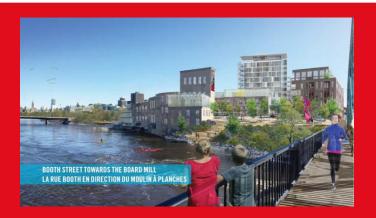
Western Downtown – Zibi (Chadiere Island)

Western Downtown – Lebreton East

Western Downtown – Escarpment District

New Central Library

Western Downtown – Rendezvous Lebreton

Bayview Yards – Innovation Village

900 Albert – Ottawa's Tallest Building

Tunney's Pasture – Redefining an Employment Node

Booth Street Complex – Ottawa's Distillery District

Arts Court – New Life for the Art's Precinct

Greystone Village – New Inner City Community

Wateridge Village – CFB Rockliffe Transformation

NCC SJAM Riverfront Park

Gatineau LRT

- **Gatineau reveals $2.1B LRT plan, eyes 2028 launch**
- **Ambitious plan covers 26 km, includes 2 links to Ottawa's light rail system (CBC June 20, 2018)**

Kingston – Breakwater Park & Gord Downie Pier

FIXING THE CITY

Lorna Day, B.Arch MCIP RPP
Director of Urban Design, City Planning
City of Toronto

VITAL STATS

over **2.6 million** people call Toronto home

every year Toronto grows by **25,000** new residents

50% of the population are immigrants

over **100** languages & dialects spoken

OFFICIAL PLAN URBAN STRUCTURE
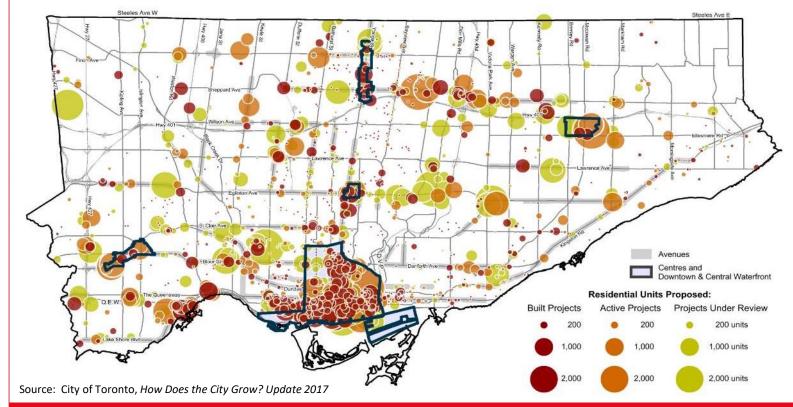
PROPOSED RESIDENTIAL DEVELOPMENT

Source: City of Toronto, *How Does the City Grow? Update 2017*

40% 60%

Photos: E. Sehr.

Toronto Skyline 2006
**Includes under construction and Council Approved buildings

Toronto Skyline 2018
**Includes under construction and Council Approved buildings
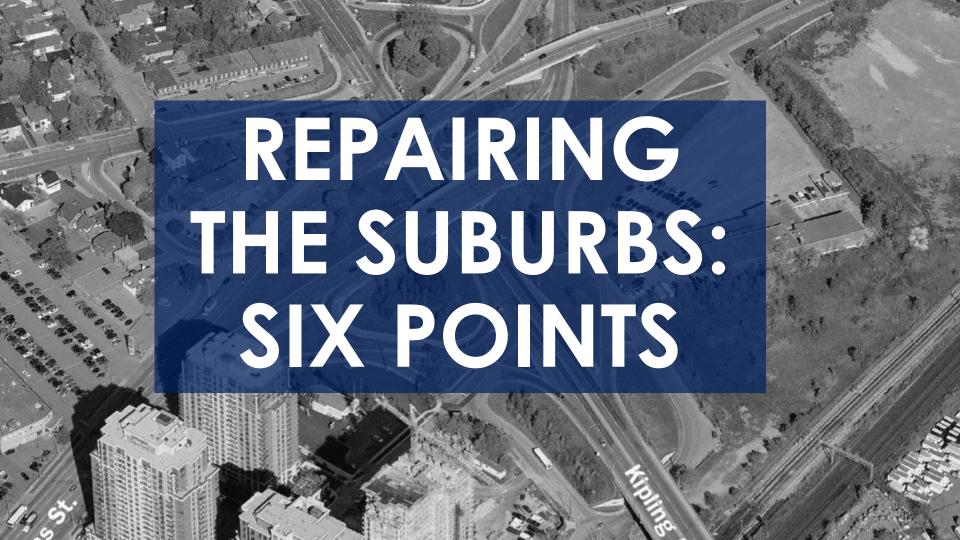
PLANNING COMPLETE COMMUNITIES

TRANSIT NETWORKS

TTC

TOcore: Planning for a Downtown

SCALE 1 –
THE CORE OF OUR CITY FORM
AND CIVIC IMAGINATION

1

SCALE 2 –
HYBRID INTERFACES TO
RENEW DISTRICTS

2

SCALE 3 –
LOCAL PLACES TO AUGMENT
OVER-LOOKED AREAS

3

BERCZY PARK

DESIGN GUIDELINES

Laneway Suite Subordinate to Primary House in Size and Scale

45° Angular Plane at a Height of 4.0m

Green Roofs are Encouraged

Setback Laneway Suite to 2.5m or 3.0m from Centreline of Lane (See Section 31)

Building Height Max. 6.0m

Lane Width Min. 5.0m or 6.0m

Building Depth Max. 10.0m

Separation Distance of Min. 5.0m for Building Height 4.0m or Less / 7.5m for Building Height Over 4.0m

Landscape Rear Yard - Preserve Existing Tree and/or Plant New Tree to the Satisfaction of Urban Forestry

Min. 1.0m Wide and 1-Storey High Clearway

TORONTO COMPLETE STREETS GUIDELINES

MAKING STREETS FOR PEOPLE, PLACEMAKING AND PROSPERITY.

2.2 Flexible Building Design and Construction

2.3 Common Indoor Amenity Spaces

2.3 Common Outdoor Amenity Spaces

2.8 Storage & Utility Needs

2.5 Social Circulation Space

2.1 Building Configuration

2.4 Building Lobby

2.7 Privately Owned Publicly Accessible Space (POPS)

ILLUSTRATION OF AN IDEAL BUILDING
The tower's base building configuration incorporates all of the ingredients that make a family-friendly vertical community.

PLANNING FOR THE VERTICAL CITY

REPAIRING THE SUBURBS: SIX POINTS

DUNDAS STREET CORRIDOR EVOLUTION

LIVABLE CITY
AFFORDABLE
ACCESSIBLE

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Towards complete, healthy, sustainable, resilient, liveable communities in the regional city

Alex Taranu, OAA MRAIC FCIP RPP
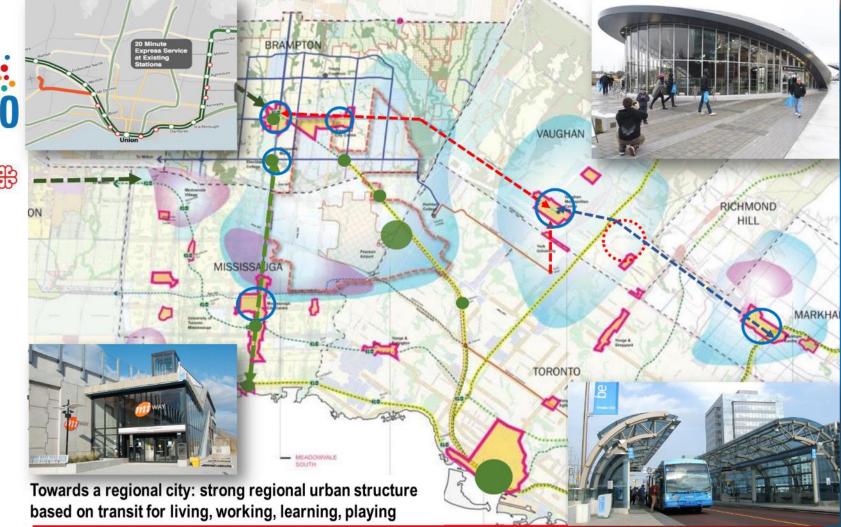
Manager, Arcitectural Design, Planning and Building, City of Brampton

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INNOVATION, NEW ECONOMY

**DOWNTOWN REVITALIZATION/
NEW URBAN CENTRES**

SUSTAINABLE MOBILITY

RESILIENT INFRASTRUCTURE

INFILL AND INTENSIFICATION, TOD

DESIGN WITH NATURE, WATER

SOCIAL BALANCE, DIVERSITY

PUBLIC REALM, PUBLIC SPACE

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Towards a regional city: strong regional urban structure based on transit for living, working, learning, playing

Hurontario LRT:
Metrolinx, Mississauga, Brampton

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Suburban Malls to Mixed-use Urban Centres: Don Mills Centre

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Bramalea Town Revisited

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Strong Public Realm, Complete Streets

CanU

GROW BOLD | **CITY OF Burlington**
2015-2040

Trends – Transit based intensification and urbanization/TOD
Burlington, ON

Active Transportation Connections

Variety of Housing

New Parks & Open Space

Attract Retail and Commercial Uses

Future Public Service Facilities
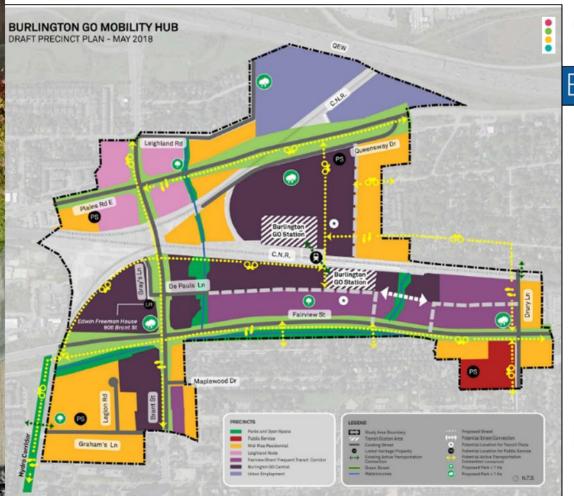
A GTA Municipality With A Firm Urban/Rural Boundary… An innovative Official Plan

Mobility Hubs in Burlington

CITY OF Burlington

Trends – Transit based intensification and urbanization/TOD: Burlington, ON
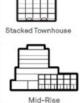
Example of a Draft Precinct Plan

BUILDING TYPES

MID

Includes stacked townhouses and mid-rise buildings (5-11 storeys), which may include non-residential uses.

Stacked Townhouse

Mid-Rise

TALL

Buildings 12+ storeys, typically mixed with other uses

Tallest
20+ storeys

Tall
12-19 storeys

EMPLOYMENT

Includes urban employment uses

Urban Employment

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The Riverwalk: Resilience, Infrastructure Renewal Revitalization

CanU
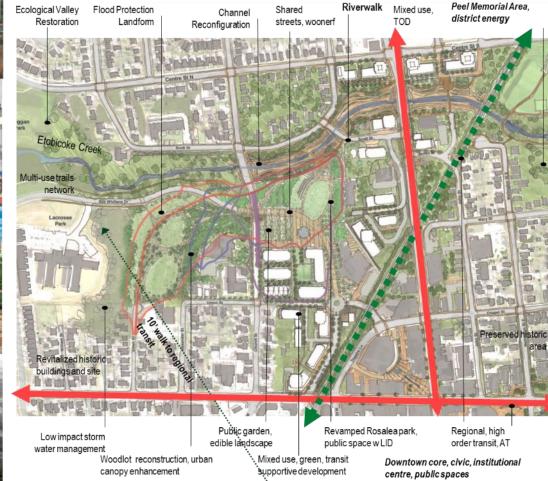
The Riverwalk/Etobicoke Creek Revitalization
Demonstration Project for Climate Change and Sustainability

Ecological Valley Restoration

Flood Protection Landform

Channel Reconfiguration

Shared streets, woonerf

Riverwalk

Mixed use, TOD

Peel Memorial Area, district energy

Etobicoke Creek

Multi-use trails network

10' walk to regional transit

Lacrosse Park

Revitalized historic buildings and site

Preserved historic area

Low impact storm water management

Woodlot reconstruction, urban canopy enhancement

Public garden, edible landscape

Mixed use, green, transit supportive development

Revamped Rosalea park, public space w LID

Regional, high order transit, AT

Downtown core, civic, institutional centre, public spaces

RETISSER LA VILLE FIXING THE CITY CanU10

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The Riverwalk: Revitalization, Resilience, Infrastructure Renewal

Western Ontario : Innovation & Resiliency

Ute Maya-Giambattista

B.Arch, MPL, MCIP, RPP, LEED AP

Principal, SGL Planning & Design Inc.

The Metal Works, Guelph, ON

- 19th Century Industrial Complex

- Live-work relationship with St. Patrick's Ward

- Heritage buildings covered by plant roof

- Fusion Homes / Kilmer Group Builder & Developer

- 5 minute walk to:
  - Mobility Hub, City Hall Square, Historic Core, Employment, Revitalizes City's Active Core Area

The Metal Works, Guelph, ON

- Over 1,000 residents in 5 phases

- Heritage building & restoration

- New urban square & craft distillery, restaurant, offices

- Riverwalk next to Speed River with front facing TH podium & connects City's trail system

- A respectful fit that contributes to urban vitality

Piers 7 & 8 – West Harbour Development, Hamilton

- 15.2ha (37.5 acres)
- Complete mixed use community
- Extension of the passive and active recreational public waterfront open space
- Medium Density 1 & 2 at 60-150u/ha at 3-5 storeys and 150-300u/ha at 4-8 storeys
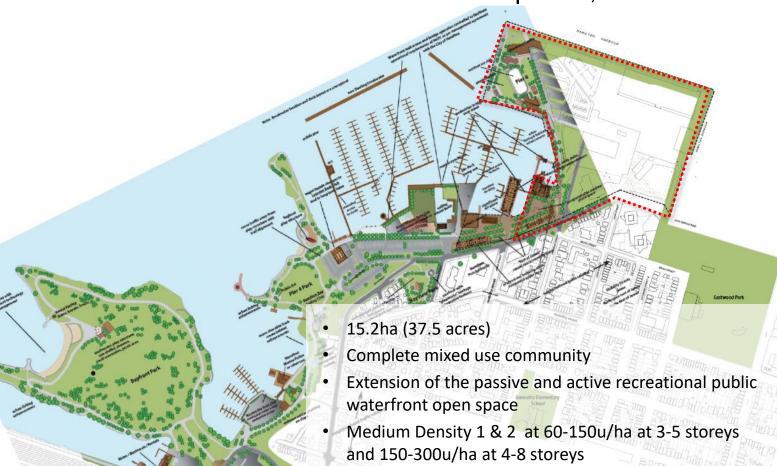
Piers 7 & 8 – West Harbour Development, Hamilton

- 1,227 Residential Units (5% affordable)
- Commercial (Office/Retail) 6,440m2
- Institutional 2,477m2
- 'The Pier' – unique building design and siting, combined with material barriers, to shield occupants and visitors from adjacent industrial nuisances

Piers 7 & 8 – West Harbour Development, Hamilton

- <u>Long-term Goal -</u> Eliminate natural gas consumption – SHARC heat recovery, geothermal, solar photovoltaics
- <u>Public Art Strategy</u> – artists-in-residence, call for ideas, construction hoarding initiative
- <u>Smart Cities Incubator</u> – partnering with Ontario Centres of Excellence to incubate and fund Hamilton-based start-ups focused on intelligent cities and green technologies and invite them to use Pier 8 as a testing grounds and showcase

Back to the River – Thames River City of London

- Revitalization of a five kilometer stretch of the river radiating from the Forks in three directions: north, west and south

Back to the River – Thames River City of London

Everyone's River

River Loops

Bridgetown Banks

Blackfriars Mill Race

Harris Park

The Wading Pool

Massie's Boathouse

Becher Bridge

The Forks

The Fishtail

Penmans Perch

The Ribbon

Victoria's Lookout

Biofilter Wetland

The Overlook

Cricket Pitch Commons

Thames Park

Pebble Beach

The Preserve

The Heath

PROGRAMMING

Summer
- Accessible
- Beach
- Cycling
- Dog Walking
- Fishing
- Picnicing
- Playground
- Water Play
- Water Sports
- Wildlife Viewing

Winter
- Skating
- Skiing
- Snowshoeing
- Tobogganing
- Warming Hut

Year - Round
- Accessible
- Hiking
- Important View
- Parking
- Restuarant
- Washrooms

Back to the River – Thames River City of London

St. Catharines GO Transit Station - Secondary Plan

- 4,000 people and jobs by 2041

- Improve the public realm and support mixed-use, mid-rise intensification

- Balance modes of movement and improve connectivity to the Station and throughout the area

- Protect existing stable neighbourhoods

- Leverage iconic presence of Ridley College and VIA Station buildings

RETISSER LA VILLE FIXING THE CITY

CanU10

Montréal

CanU

St. Catharines GO Transit Station - Secondary Plan
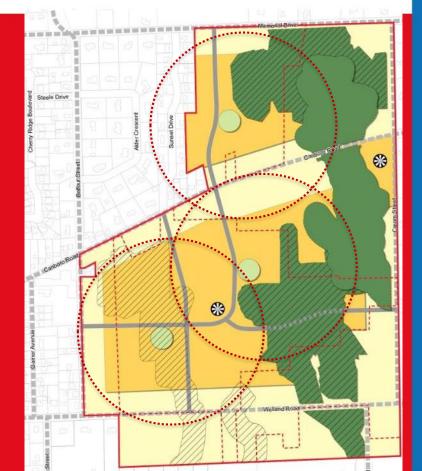
East Fenwick SP – Town of Pelham

- 94.2ha (232.81 acres)
- 2,300 residents/660 units
- 3 distinctive sub-neighbourhoods
- Connected open space system
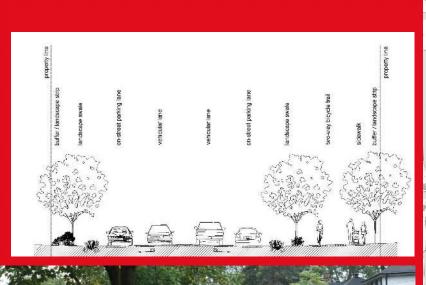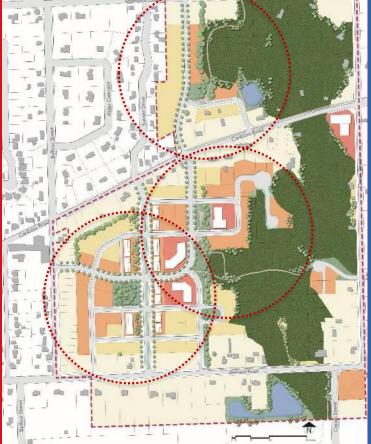
East Fenwick SP – Town of Pelham

Smithville Community Plan - Town of Smithville
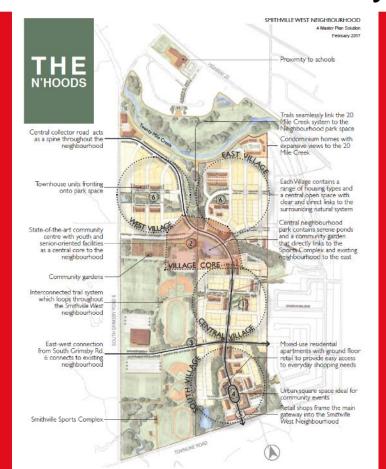
- Located in proximity to Downtown area

- Integrates the Smithville Sports Complex to the existing urban fabrics

- Provides ease of access

- Completes Town's planned trails system along 20 Mile Creek
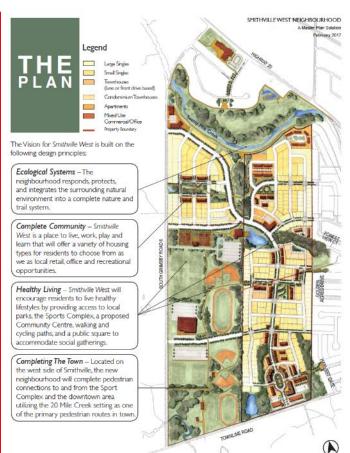
Smithville Community Plan - Town of Smithville

Barbara Myers, MCIP RPP
SvN Architects + Planners Inc., Winnipeg

Winnipeg

Table for 1200

True North Square

Market Lands Competition

Waterfront Drive

62 MacDonald Waterfront Condos

On the Docks
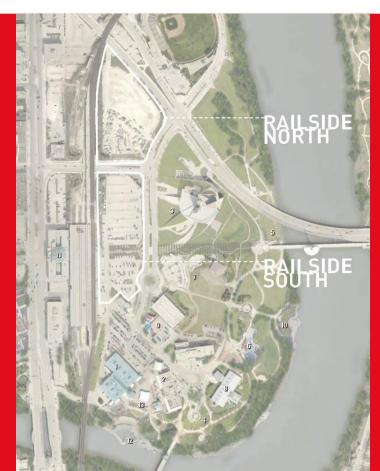
Railside at the Forks

Chair Your Idea

Canada's Diversity Gardens

Canada's Diversity Gardens

Edmonton

Edmonton

Edmonton

Edmonton

Calgary

Parklet

Parklet

Art and Temporary Installations

Urban Animation Programming

Alleyway Activation

Alleyway Activation

Calgary

Calgary is using low cost urban animation projects to enliven underused spaces such as back alleys and on-street parking spaces to test design interventions and as part of longer term public realm investment strategies to engage the public and provide immediate improvements.

Calgary

RETISSER
LA VILLE
FIXING
THE CITY
CanU10

Montréal

CanU

VANCOUVER:

Mid-70'S

BEYOND THE CORE

Today
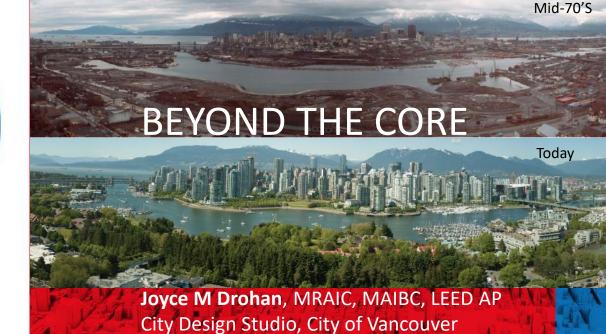
Joyce M Drohan, MRAIC, MAIBC, LEED AP
City Design Studio, City of Vancouver

M O V E : City Core + Broadway Initiatives

M O V E : Broadway Corridor
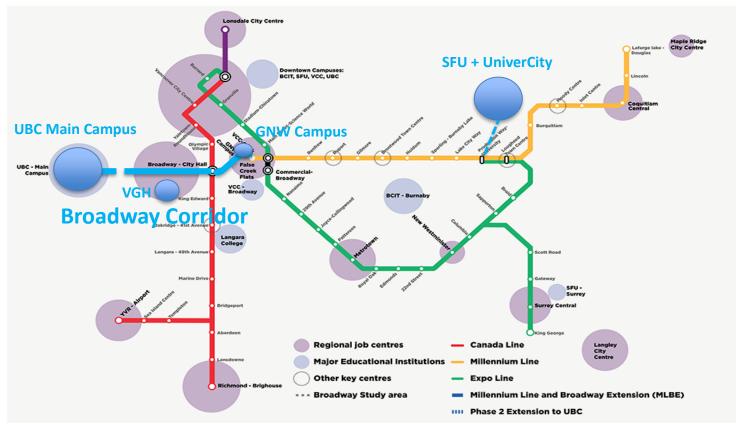
Connecting Job and Innovation Centres in Metro Vancouver
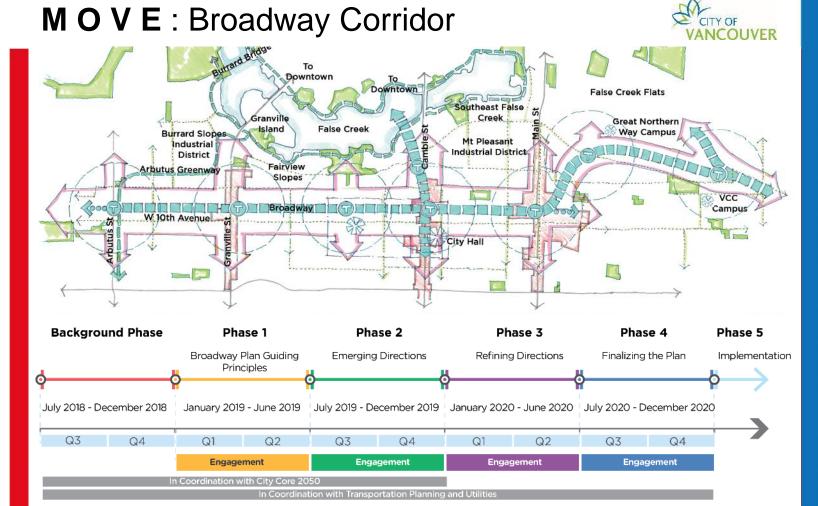
Note: Area of job centres and educational institutions is proportional to the number of jobs or students
Source: Census 2006, YVR 2011 Economic Report, UBC Our Place in the Region 2009, Metro Vancouver 2011 (based on Ministry of Advanced Education, Innovation and Technology 2010)

M O V E : Broadway Corridor

M O V E : Broadway Corridor

10 MINUTE NEIGHBOURHOOD objectives

- *Create additional affordable & rental housing opportunities close to transit*
- *Increase the amount of job space & enhance commercial shopping streets*
- *Improve connectivity & public space opportunities*
- *Secure additional public benefits and amenity*

L I V E : The 'right' supply

| Supportive and Social Housing | Purpose-Built Rental | Condos | Laneways (Rental) | Coach Houses (Strata) | Townhouses |
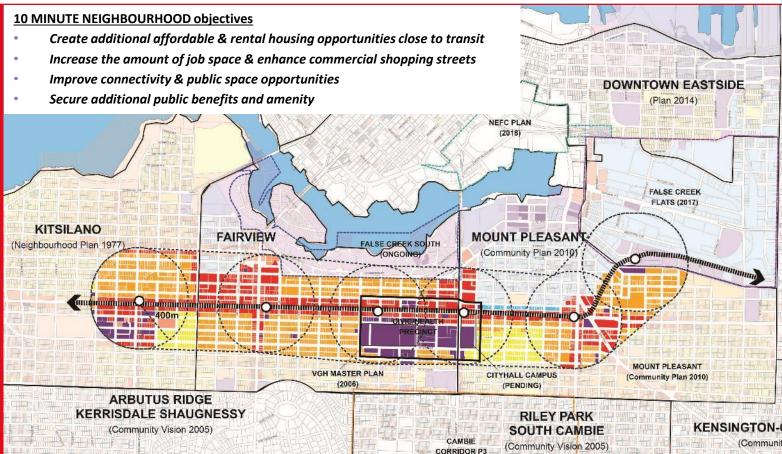
- **72,000 new housing units** over 10 years

- **65% of new housing** will be for renters including:

  › **20,000 purpose-built rental units**

  › **12,000 social, co-op and supportive housing units**

- **10,000 new ground-oriented units** suitable for families with children and downsizing seniors

L I V E

L I V E : Housing strategies

Affordable Housing Delivery

1. **Private Sector Incentives Programs**

2. **Social Housing on City Land:** contributed to partners at discounted or nominal rates

3. **Social Purpose Real Estate Program:** capital grants, development incentives, expedited processing for non-profit affordable housing projects

4. **Inclusionary Housing:** social housing requirements in private developments

Incentives for Secured Market Rental

Rental 100 Program (2012)

1. Density bonus

2. Development Cost Levies waived

3. Parking relaxations

4. Unit size relaxed to 320 sqft

5. Concurrent processing to expedite development approvals

2008 – 2012 = 350 units/yr
2013 – 2017 = 1,100 units/yr

L I V E : Housing strategies

Social Purpose Real Estate Incentive Program

- Support non-profit, co-op, and faith-based partners in expanding and renewing affordable and social housing.

- Develop an incentive program that includes additional density and increases in per-door grants

Temporary Modular Housing

- Goal: **600 units** by Jan 2019

- **Approved & Underway: 406 units**

City Plan

SPATIAL PLANNING - LOCATIONAL CRITERIA

Living Systems

T H R I V E

Living Systems Synergies
- Robust open space network – parks, streets, natural areas
- Green infrastructure opportunities – eg: high infiltration areas
- Green streets, tree canopy, green roofs
- Sea level rise
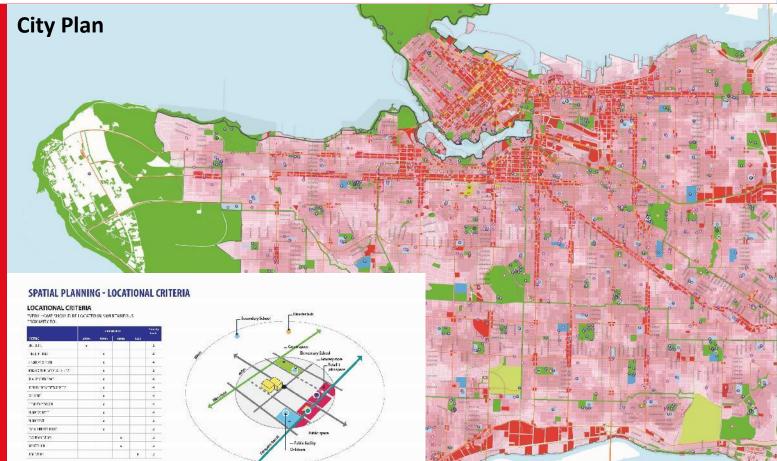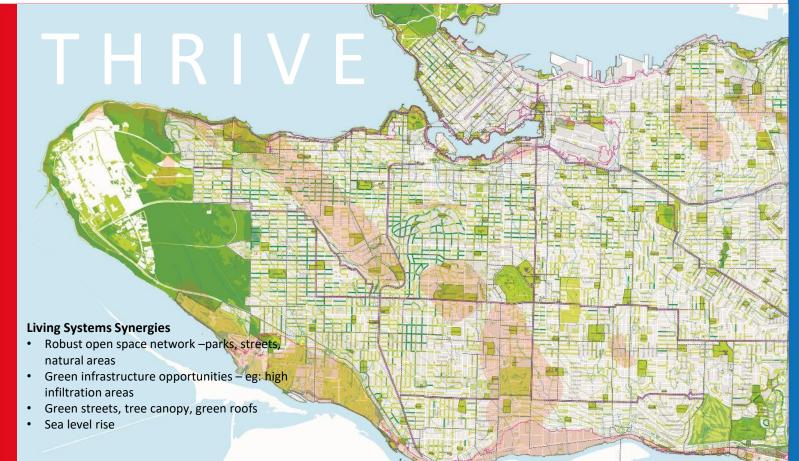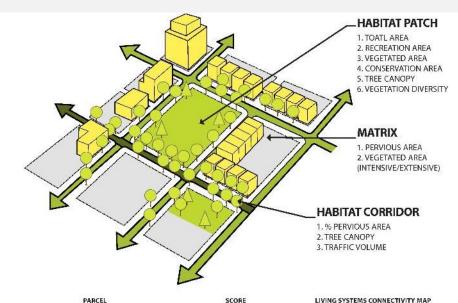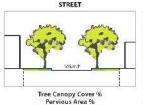
HABITAT CONNECTIVITY

Habitat connectivity can serve as a city-wide meta indicator that provides a strong measure of performance. Habitat connectivity helps to maintain and enhance biodiversity, enhances urban soil and permability to receive rainwater and nutrients, and offers interconnected green spaces suitable for recreation and socializing. Resilience is enhanced through mitigation of urban heat island effect and reduced flooding risk and maintenance of the network can provide high quality jobs for local residents well into the future.

HABITAT PATCH
1. TOATL AREA
2. RECREATION AREA
3. VEGETATED AREA
4. CONSERVATION AREA
5. TREE CANOPY
6. VEGETATION DIVERSITY

MATRIX
1. PERVIOUS AREA
2. VEGETATED AREA
(INTENSIVE/EXTENSIVE)

HABITAT CORRIDOR
1. % PERVIOUS AREA
2. TREE CANOPY
3. TRAFFIC VOLUME

GIS workflow
Weighted Sum Overlay

STREET
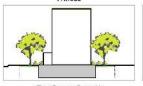
Tree Canopy Cover %
Pervious Area %
Traffic Volume, Speed + Mix

PARK
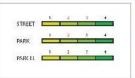
Total Park Area
Recreation/ vegetation/ conservation Area
Tree Canopy Cover %
Vegetation Diversity (Simpson Diversity Index)

PARCEL

Tree Canopy Cover %
Pervious Area %
Onslab Vegetation %

SCORE

STREET 1 2 3 4
PARK 1 2 3 4
PARCEL 1 2 3 4

Scores assigned to each category

LIVING SYSTEMS CONNECTIVITY MAP

Scores summed and overlayed to show potential green corridors & habitat connections
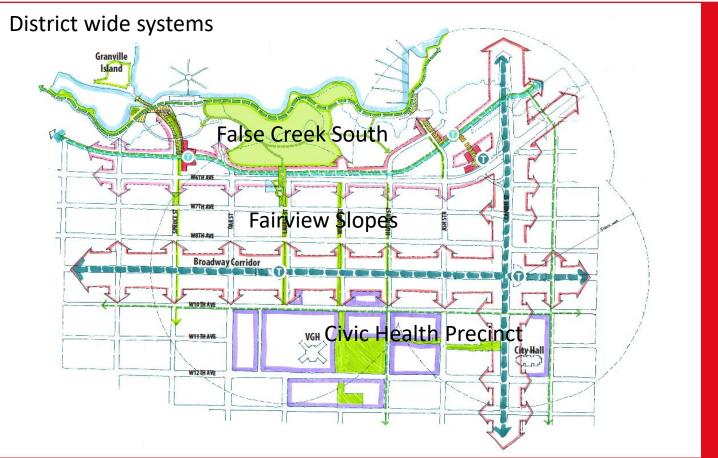
T H R I V E : Living Systems

District wide systems

T H R I V E : C40 Reinventing Cities

SITE

INNOVATION HUB
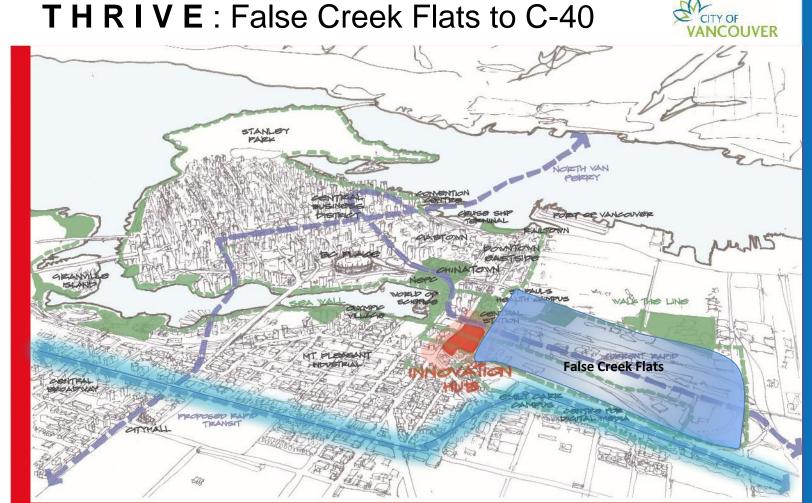
"C40 Cities are leaders in the fight against climate change. As the Chair of C40 I am launching a new global competition called Reinventing Cities, to stimulate zero carbon development across the world's cities and celebrate innovative solutions to environmental and urban challenges. Reinventing Cities will set new standards of carbon-neutral and resilient development and enable the implementation of projects across a wide range of architecture, typology and site-usage."

Anne Hidalgo, Mayor of Paris and C40 Chair

C40 CITIES

Reinventing Cities

T H R I V E : C40 Reinventing Cities

C40 Mandate
- Carbon neutral
- Urban Innovation – new models of mixed use: Arts & Culture, Industry, Technology and diverse housing

T H R I V E : Sea Level Rise

"The Ribbon"
- Flexible, resilient
- Connected to habitat and urban fabric
- Multifunctional – walking, cycling, patios, plantings, etc.

T H R I V E : Assessing performance

T H R I V E : Assessing performance

Southeast False Creek PILOT
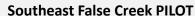
- Flagship sustainable community
- Multiple performance goals
- Evolving assessment tools aligned with resilience targets