

# Council Workshops - Parking & Transportation Demand Management

City of Kelowna, February 2025

By Dale Bracewell, P.Eng. MBA MASc  
Principal, Mobility Foresight



# The Simplicity & Complexity of Parking

- Parking from a driver's perspective
- Parking from a regulator's perspective
- Parking from a decision maker's perspective
- From policy, to planning, to infrastructure, to management, to operations
- Diversity of space needs from regular, to accessible, to visitor
- Mismatch between dynamic demand and fixed supply
- Behavioural and cultural shifts
- Evolving best practices

# Reformation of Parking in Urban Cities

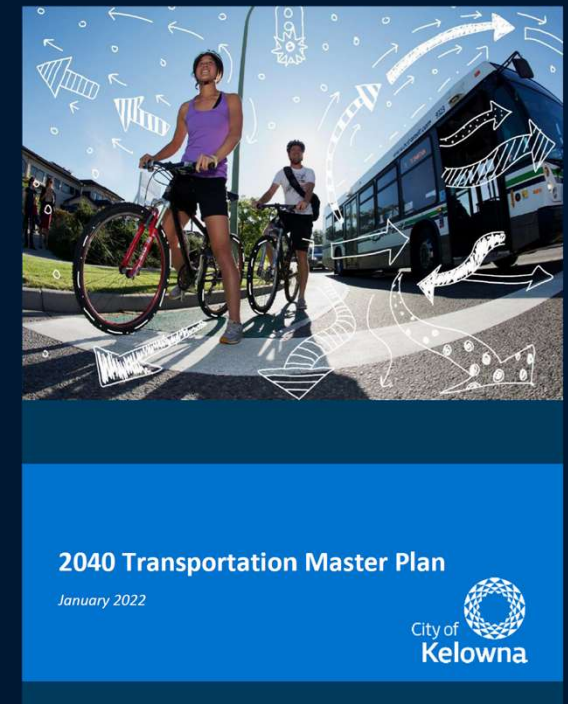
Elimination	of minimum parking (Edmonton, Toronto, Vancouver, Austin)
Creation	of parking maximums (Edmonton, Spokane, Kingston, Saanich)
Integration	of parking with climate and affordable housing goals
Adoption	of technology to improve operations and enforcement
Implementation	of curbside management and pricing strategies
Exploration	of unbundling parking from residential units
Reorientation	of parking revenues to support sustainable modes

# Transportation Master Plan 2040

“Kelowna will be a city with vibrant urban centres where people and places are conveniently connected by diverse transportation options that help us **transition from our car-centric culture.**”

The plan sets ambitious yet achievable 2040 targets:

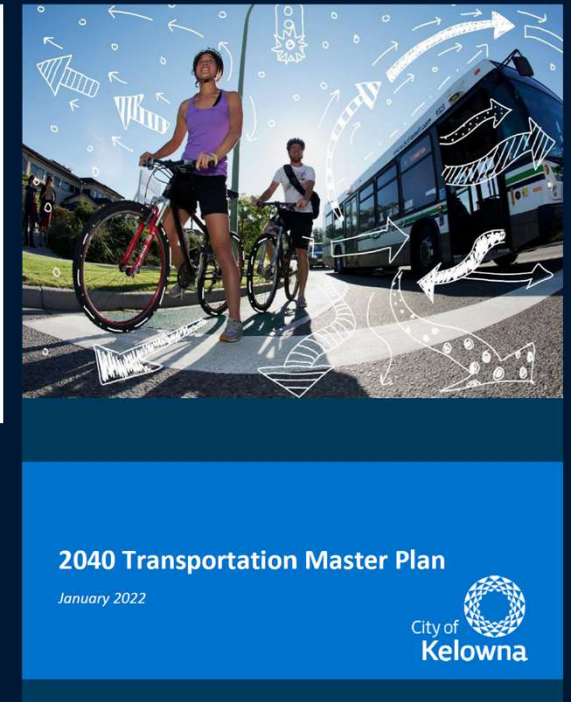
- doubling transit ridership
- quadrupling the number of trips made by bicycle
- reducing the average distance driven/person by 20%



# Transportation Master Plan 2040

## IMPROVE TRAVEL CHOICES:

“Ensure residents and visitors have **access to multiple options** for getting around, so that for any given trip, they can choose the option that best meets their needs.”



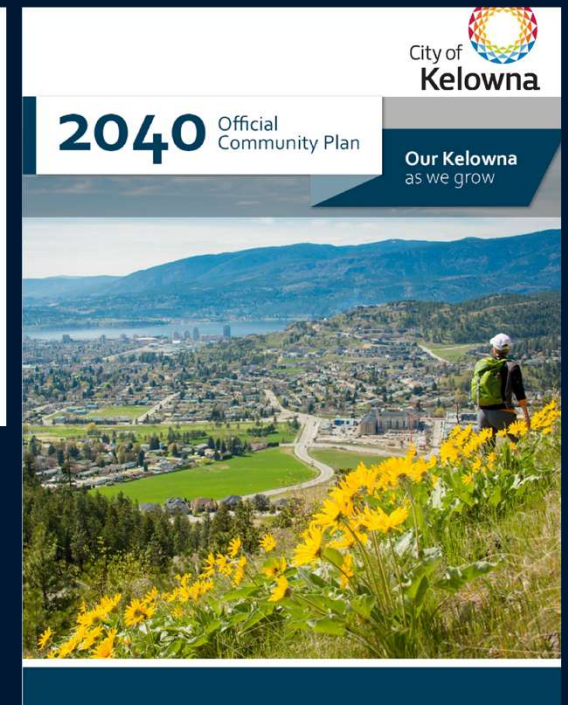
# Official Community Plan 2040

PRIORITIZE  
SUSTAINABLE TRANSPORTATION  
& SHARED MOBILITY:

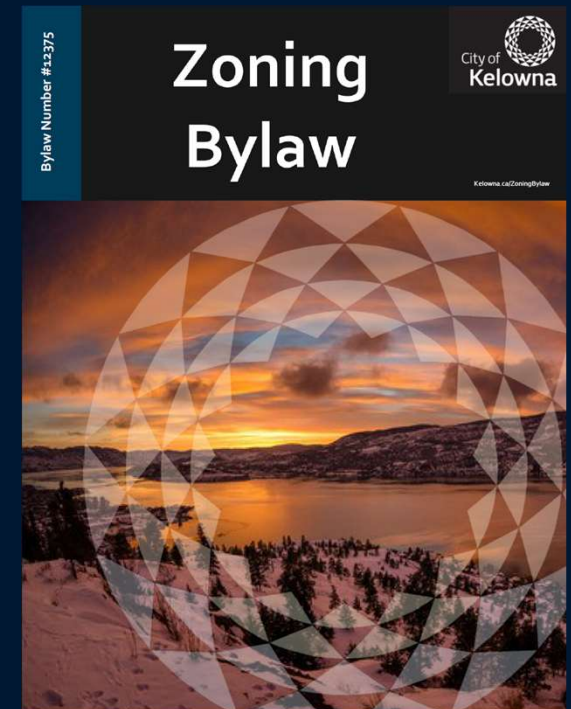
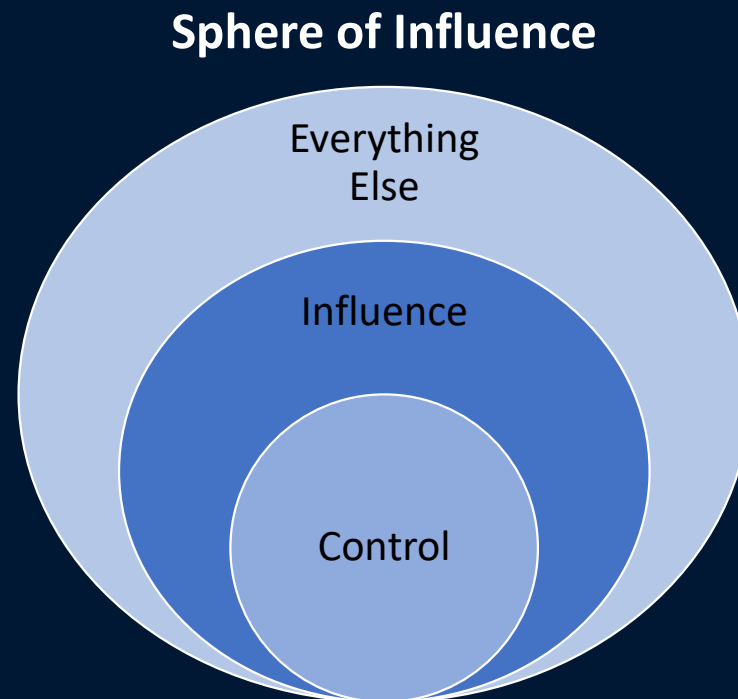
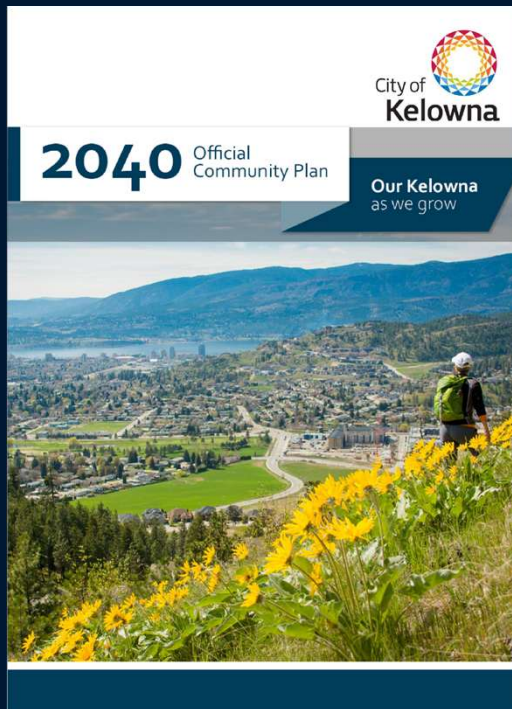
“Embracing different types of **transportation options** is a key goal of Imagine Kelowna.”



Prioritize sustainable  
transportation and  
shared mobility

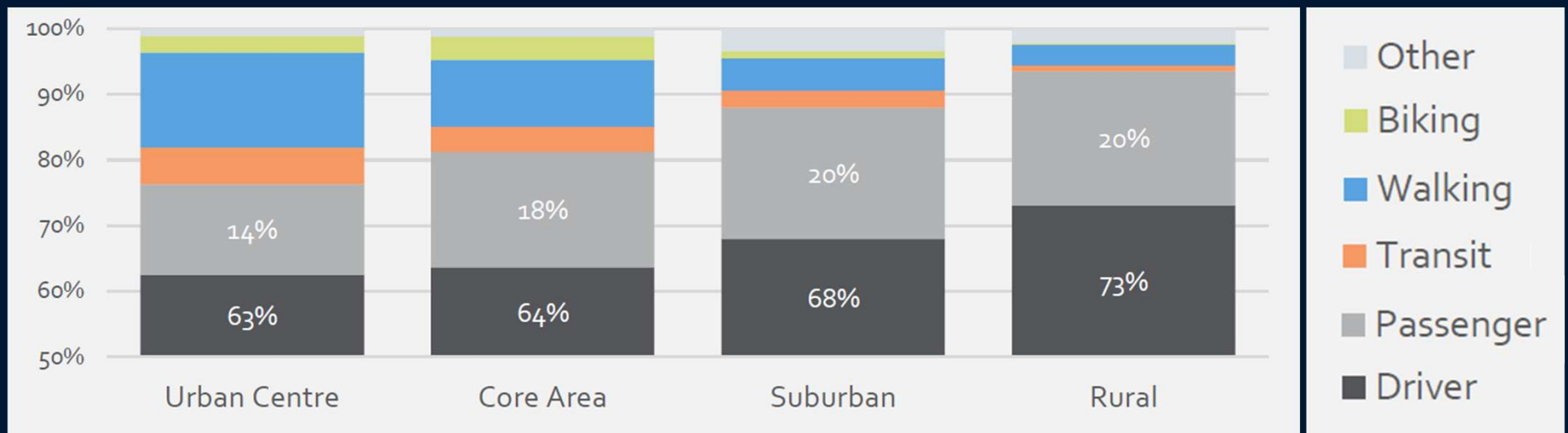


# A Growing City is a Changing City



# A Spectrum of Mode Shift Opportunities

Neighbourhoods in Urban Centres and Core Area will have more opportunity to **shift modes** than in hillside and outlying areas



Share of trips by mode, fall weekday (2018)



# A Spectrum of Mode Shift Opportunities

Neighbourhoods in Urban Centres and Core Area will have more opportunity to **shift modes** than in hillside and outlying areas

Driving Mode Share

	Current (2018)	2040 Target
Citywide	85%	75%
Downtown/Pandosy/Landmark	75%	55%
Midtown	80%	70%
Rutland	85%	75%
Glenmore	90%	85%
The Mission/Southeast Kelowna	90%	90%
North Kelowna	90%	90%
Black Mountain	95%	95%

# Parking as an Ecosystem



- On-Street / Off-Street Parking vs. Public / Private Parking
- Storage for weekday commutes / Storage for weekend leisure
- Increase in parking availability / Increase in time searching for parking
- Pricing of parking to encourage / discourage vehicle as a mode choice
- Interconnectedness of parking with other transportation modes
- Places to refuel vehicles to support reducing greenhouse gas emission
- Places to share vehicles to support reduced car dependency
- Future places for bike parking / micromobility / green infrastructure / patios

# Off-Street Parking – Supply & Demand Benchmarking

- Residential **parking supply** in strata apartments generally exceed parking demand an average of **18%** to **35%** across the region
- Residential **parking demand** is lower near TransLink's Frequent Transit Network

**The Metro Vancouver  
Apartment Parking Study**  
Revised Technical Report

**Metro Vancouver**  
Metropolitan Planning, Environment, and Parks  
September 2012

# Off-Street Parking – Supply & Demand Benchmarking

- Apartment **parking supply** exceeds use across the region
  - For strata apartment buildings, parking supply exceeds utilization by **42%**
  - For market rental apartment buildings, parking supply exceeds utilization by **35%**
- Apartment **parking supply** and use is lower for buildings closer to frequent transit

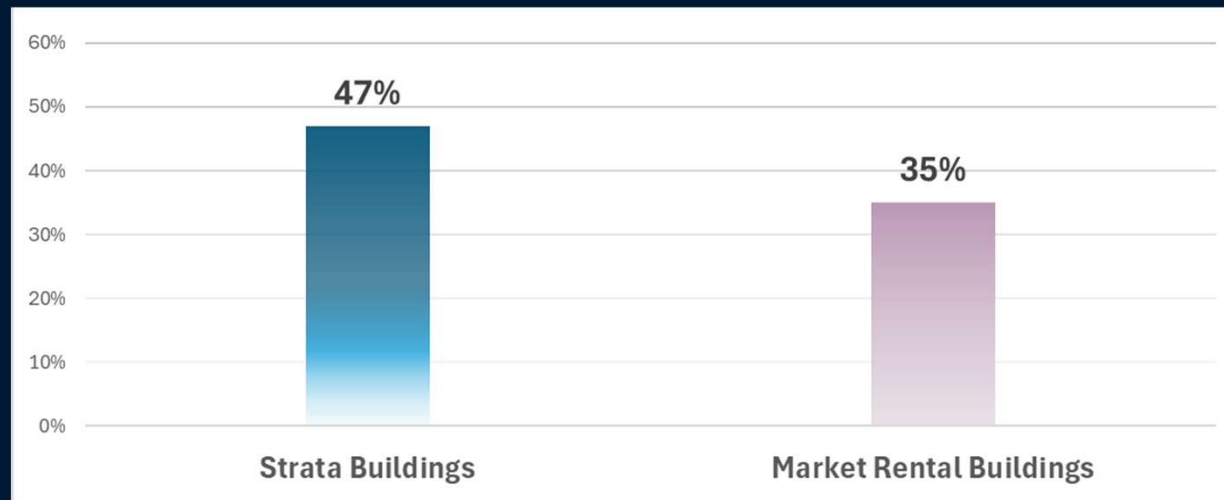
The 2018 Regional Parking Study  
Technical Report

Prepared by TransLink and Metro Vancouver  
March 2019

Regional Planning Committee

# Off-Street Parking – Supply & Demand Benchmarking

“The research reveals that off-street residential parking remains heavily oversupplied from a usage standpoint.”



Source: Regional Parking Strategy – Interim Research Findings and Project Update, Metro Vancouver Regional District Planning Committee, January 9, 2025

# Off-Street Parking – Supply & Demand Benchmarking

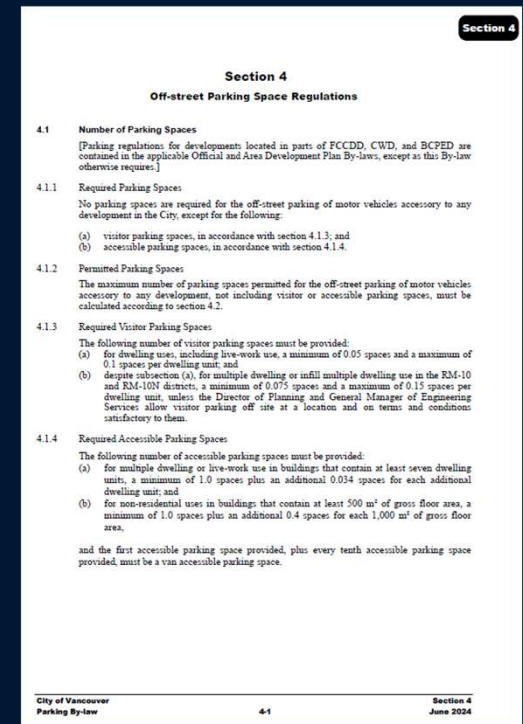
Key findings from new multifamily residential projects outside of the City of Vancouver’s Downtown:

“Parking supply is most dependent on tenure”

“Besides tenure, the provision of parking is most related to proximity to transit than any other factor”

“the availability and price of on-street parking may impact how much off-street parking is constructed”

Source: <https://council.vancouver.ca/20231115/documents/cfsc1.pdf>

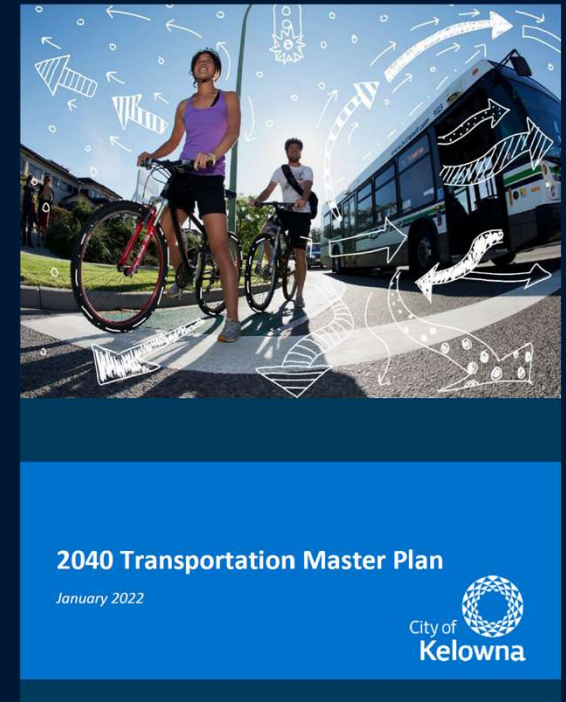


# Off-Street Parking – Why Parking Reductions?

“Traditionally, minimum parking requirements have been set on the principle that businesses and residences need to have enough parking stalls to accommodate their busiest times without spilling over to on-street parking. This leads to an **oversupply** of parking”

“There is an opportunity to **better manage** these parking spaces”

*Source: Kelowna Transportation Master Plan Existing and Future Conditions Technical Report, August 2019*



# Off-Street Parking – Why TDM?



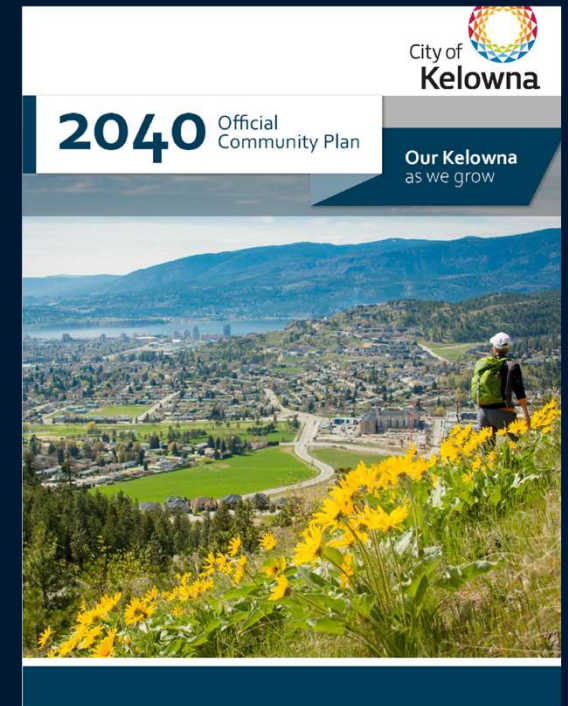


# Off-Street Parking – Reductions & TDM

“Adapt and respond to shifting long-term demand for parking facilities”

Consider parking requirement relaxations where:

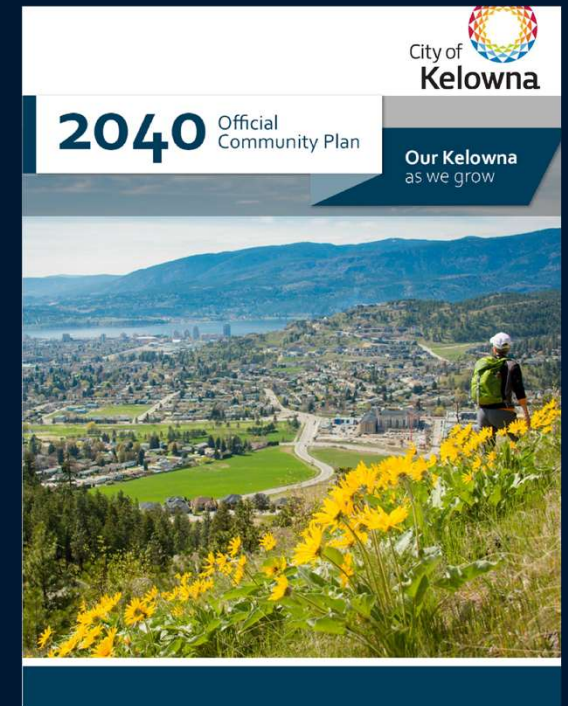
- **Mode share** shifts are anticipated or realized
- A viable car-sharing program is provided
- Additional bicycle parking and end-of-trip facilities



# Off-Street Parking – Reductions & TDM

“Adapt and respond to shifting long-term demand for parking facilities”

Discourage oversupplying parking in **Urban Centres** as it promotes car use and detracts from human scale neighbourhoods and pedestrian vibrancy



# Off-Street Parking – Reductions & TDM Benchmark

## City of Coquitlam:

“introduced in 2012... as voluntary parking reduction options to **encourage sustainable modes**, ensure that future parking demand is managed and accommodated in our growing communities, and support the development community meeting the on-site parking requirements”

City of Coquitlam  
**City-Wide Parking Review Phase 2B – TDM, PIL, and Bike Parking Review**  
January 11, 2021

### TDM & PIL Programs

**Transportation Demand Management (TDM)**  
Measures to encourage people to use sustainable transportation modes in lieu of on-site parking

**Payment In-Lieu (PIL)**  
Cash payment in lieu of on-site parking

f t i y in 3/20 Coquitlam

# Off-Street Parking – Max & Min Number of Spaces

“The minimum and maximum number of off-street vehicle parking spaces required for each use... is specified in Table 8.3”

**Table 8.3 – Required Residential Off-Street Parking Requirements**

Location of Residential Development	Required Parking by Unit Type				Visitor Parking Required <sup>1, 2</sup>
	Studio Units	1 – bedroom Units	2 – bedroom Units	3 – bedroom or more Units	
Dwelling Units within an Urban Centre Zone <sup>5, 8</sup>	Min 0.8 spaces & Max 1.25 spaces per studio	Min 0.9 spaces & Max 1.25 spaces per 1 bedroom	Min 1.0 space & Max 1.5 spaces per 2 bedroom	Min 1.0 space & Max 1.5 spaces per 3 bedroom	Min 0.14 spaces & Max 0.2 spaces per dwelling unit
Dwelling Units within a Village Centre Zone	Min 0.9 spaces & Max 1.25 spaces per studio	Min 1.0 space & Max 1.25 spaces per 1 bedroom	Min 1.1 spaces & Max 1.6 spaces per 2 bedroom	Min 1.4 spaces & Max 2.0 spaces per 3 bedroom	Min 0.14 spaces & Max 0.2 spaces per dwelling unit
Dwelling Units within the MF1 Zone <sup>8</sup>	Min 1.0 space & Max 1.5 spaces per studio <sup>10</sup>	Min 1.0 space & Max 1.5 spaces per 1 bedroom <sup>10</sup>	Min 1.0 space & Max 1.5 spaces per 2 bedroom <sup>10</sup>	Min 1.0 space & Max 2.0 spaces per 3 bedroom <sup>10</sup>	n/a
Dwelling Units for lots fronting a Transit Supportive Corridor <sup>8, 9</sup>	Min 0.9 spaces & Max 1.25 spaces per studio	Min 1.0 space & Max 1.25 spaces per 1 bedroom	Min 1.1 spaces & Max 1.6 spaces per 2 bedroom	Min 1.4 spaces & Max 2.0 spaces per 3 bedroom	Min 0.14 spaces & Max 0.2 spaces per dwelling unit
Dwelling Units for lots within the Core Area <sup>8, 9</sup>	Min 1.0 space & Max 1.25 spaces per studio	Min 1.2 spaces & Max 1.6 spaces per 1 bedroom	Min 1.4 spaces & Max 2.0 spaces per 2 bedroom	Min 1.6 spaces & Max 2.2 spaces per 3 bedroom	Min 0.14 spaces & Max 0.2 spaces per dwelling unit

Zoning Bylaw No. 12375

## 8.2 Off-Street Parking Regulations

# Off-Street Parking – Max & Min Benchmarking

## District of Saanich

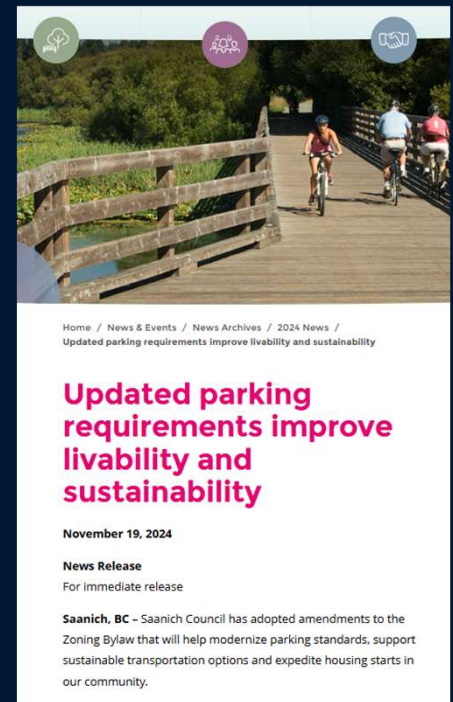
“For 12 units or less, parking **minimums** are lowered to one stall per unit”

“For more than 12 dwelling units current parking minimums... are converted to parking **maximums**”

## City of Surrey

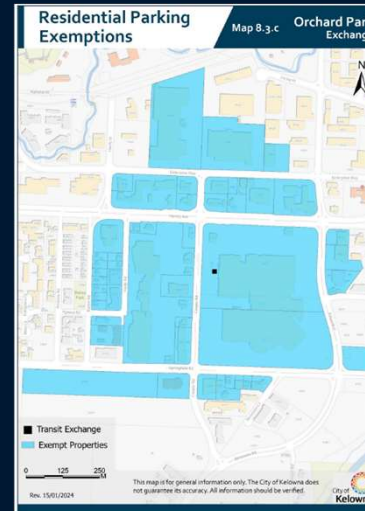
“The new **maximum**, in addition to the **minimum** requirement, effectively establishes a parking requirement range”

Source: [https://www.surrey.ca/sites/default/files/corporate-reports/CR\\_2021-R027.pdf](https://www.surrey.ca/sites/default/files/corporate-reports/CR_2021-R027.pdf)



# Off-Street Parking – Max & Min Number of Spaces

Lots in a **Transit Oriented Area...**  
have no minimum residential parking requirement



# Off-Street Parking – Reduced Number of Spaces

The minimum number of off-street vehicles parking spaces required... may be reduced as per the following incentives (which may be combined):

- Rental Housing: Up to **20%** in an Urban Centre or up to **10%** outside
- Car-Share: Up to **20%** in an Urban Centre, Core Area, or Village Centre
- Bike Parking: Up to **20%** in an Urban Centre, Core Area, or Village Centre (maximum of five parking spaces)

Zoning Bylaw No. 12375

8.2 Off-Street Parking Regulations

# Off-Street Parking – Reduced Number of Spaces

In lieu of providing the required number of off-street parking spaces... a property owner within an **Urban Centre** may pay to the City a sum of money equal to the number of parking spaces not provided...



## Bulletin: Payment in Lieu of Parking Fees 2023-2024

Urban Centre	2023-2024 Rates (June 1 <sup>st</sup> to June 1 <sup>st</sup> )
City Centre (Downtown) Urban Centre	\$37,391.00
Midtown Urban Centre	\$37,391.00
South Pandosy Urban Centre	\$37,391.00
Rutland Urban Centre	\$10,764.00
Capri/Landmark Urban Centre	\$37,391.00



# Off-Street Parking – Reduced Spaces Benchmarking

## City of Coquitlam

- Up to **5%** of the required on-site parking with TDM measures
- An additional **5%** within shoulder area or **10%** within core area with Payment In Lieu, if TDM measures have been secured

City of Coquitlam  
**City-Wide Parking Review Phase 2B – TDM, PIL, and Bike Parking Review**  
January 11, 2021

PIL Program Recommendation  
Parking Stall Value

Allowable Off-street Parking Reduction (%)	TOD Core Area Parking Stall Value	TOD Shoulder Area Parking Stall Value
Up to 5%	\$20,000	\$25,000
5% to 10%	\$30,000	\$35,000
10% to 15%	\$35,000	Not Permitted

f t @ y l 15/20 Coquitlam

# Off-Street Parking – Reduced Spaces Benchmarking

## City of Surrey

- Allow minimum parking requirements to be reduced up to **10%**
- An additional **10%** when TDM measures are provided

## City of Richmond

- May be reduced to a maximum of **20%** where City secures TDM measures

## City of Abbotsford

- The maximum allowable reduction to required off-street parking is **20%**

## City of Kamloops

- Cash-in-lieu parking reductions shall not exceed **10%** of stalls required

# Off-Street Parking – PIL to Fund Sustainable Choices

## Downtown Area Parking Plan and Bylaw Updates (2019)

“Funds collected to satisfy parking space requirements must be placed in a reserve fund for the purpose of providing off-street parking spaces or transportation infrastructure that supports walking, bicycling, public transit...”

Guiding Principles for Parking Management

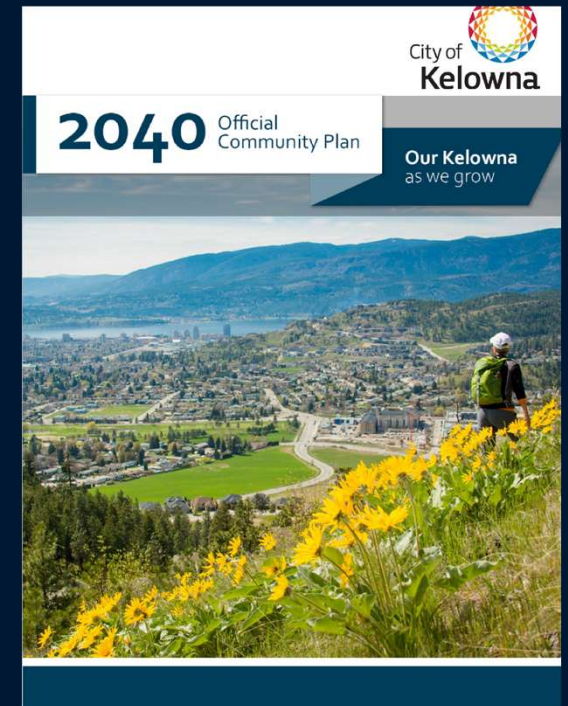
- P FOCUS ON EXCELLENT SHORT-TERM PARKING**  
The City's goal is to provide better short-term public parking and move away from being the primary provider of long-term parking.
- \$ SELF-FUNDED PARKING SYSTEM**  
There are many costs associated with parking: infrastructure, maintenance, equipment, enforcement, upgrades, customer service applications, replacement, land acquisition, management and more. The parking system must continue to pay for itself so taxes are not used for future initiatives or infrastructure.
- CUSTOMER SERVICE AND FAIRNESS**  
Payment options, fair practices and real-time information make parking more accessible, easier to find, eases (or lessens) enforcement and supports active business areas and balanced neighbourhoods.
- WORK WITH INSTITUTIONS, BUSINESSES AND DEVELOPERS**  
Parking policies must coordinate with the private and institutional sectors to ensure efficient and economical ways to address parking and transportation needs.
- SUPPORT A MORE BALANCED TRANSPORTATION SYSTEM**  
Parking is part of the larger transportation picture. We need to get serious about discouraging single-occupant vehicle congestion and encouraging other ways to travel. Inexpensive and plentiful parking will not encourage people to use transit, walk or cycle.

kelowna.ca

# Off-Street Parking – PIL to Fund Sustainable Choices

“Adapt and respond to shifting long-term demand for parking facilities”

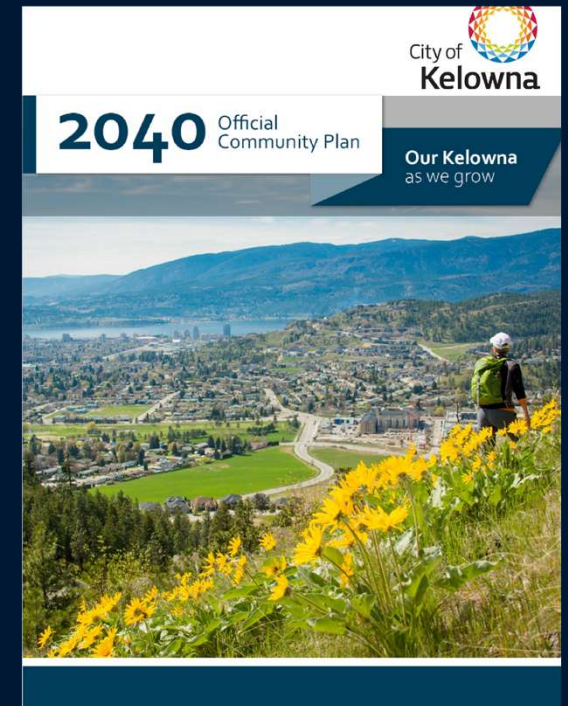
Explore changes to cash-in-lieu parking programs to prioritize funding of **sustainable transportation** options over parking investments to support climate action and **Urban Centre** development



# Off-Street Parking – PIL to Fund Sustainable Choices

“Adapt and respond to shifting long-term demand for parking facilities”

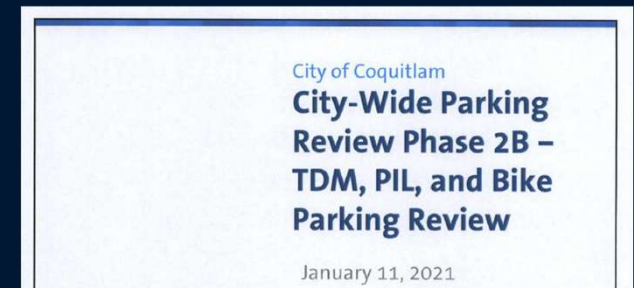
Explore opportunities to expand cash-in-lieu parking program to **Core Area** neighbourhoods to fund **sustainable transportation** priorities and support climate action



# Off-Street Parking – PIL Fund Benchmarking

## City of Coquitlam

- Previous distribution:
  - **80%** towards Off-Street Parking
  - **20%** to Active Transportation modes
- Revised (current) distribution:
  - **50%** towards Off-Street Parking
  - **50%** to Active Transportation modes



Program	Current	Proposed
Requirement	Voluntary program	Voluntary program
Reduction	5 –10% Parking Reduction	Up to 15% Parking Reduction
Parking Stall Value	\$20,000	\$20,000 to \$35,000
Funding	80% Off-street Parking 20% Active Transportation Modes	50% Off-street Parking 50% Active Transportation Modes

17/20 Coquitlam

# Off-Street Parking – PIL Fund Benchmarking

## City of Surrey

- **50%** to the Alternative Transportation Infrastructure Reserve Fund
- **50%** to the Off-Street Parking Reserve Fund

## City of Kamloops

- **100%** into the Public Transportation and Pedestrian Upgrade Reserve

## City of Vancouver *(prior to the elimination of parking minimums)*

- Commercial or industrial PIL funds are directed to... Off-Street Parking
- Residential PIL funds are transferred to... Green Transportation reserve

# Off-Street Parking – Benchmarking Mandatory TDM

## City of Coquitlam


City of Coquitlam  
**City-Wide Parking Review Phase 2B – TDM, PIL, and Bike Parking Review**  
 January 11, 2021

### TDM Recommendations

Program	Current	Proposed
Requirement	Voluntary program	Mandatory program
Reduction	Up to 5% parking reduction	No further parking reduction*
Measure	Value of TDM • \$20,000 per # of reduced stalls	Value of TDM • Residential \$1,100 per DU • Commercial/Office \$1,700 per 100 sq.m GFA
Plan	Voluntary Contribution: • TDM monitoring • Travel information packages • Parking wayfinding signage	Required Contribution: • TDM monitoring • Residential: \$20 per DU • Commercial/Office: \$25 per 100 sq.m GFA • Travel information packages • Parking wayfinding signage

\* Residential parking requirements recently reduced;  
 Commercial/office parking requirements proposed to be reduced.

11/20
Coquitlam



**CITY OF COQUITLAM  
 TRANSPORTATION DEMAND MANAGEMENT  
 GUIDELINES FOR NEW DEVELOPMENTS**  
UPDATE: April 2022



# Off-Street Parking – Benchmarking Mandatory TDM

## City of Coquitlam

Current TDM Measure	Details	Applicable Land Uses			
		Residential Strata	Residential Rental	Commercial	Office
Carshare Memberships	Provide annual carshare memberships and driving credits	✓	✓	✓	✓
Public Transit	Provide subsidized transit passes for residents and employees	✓	✓	✓	✓
Electric Bicycle	Provide an electric bicycle to resident	✓	-	-	-



Carshare complements sustainable travel modes like public transit, walking and cycling, and alleviates potential parking demand in the neighbourhood by reducing vehicle ownership. Future development applicants are required to:

- Arrange with carshare provider to provide memberships to future residential, commercial and/or office units where suitable. Note that currently arrangements with Modo carshare operator has been accepted. Other carshare may be proposed and reviewed by City Staff.
- Consult/discuss with carshare provider to confirm vehicle is provided within neighbourhoods.



Public Transit provides basic mobility service to all others without access to a car. It reduces road congestion and parking demand while encouraging sustainability through alternative travel modes including walking. Future development applicants are required to:

- Arrange with the Compass Group at TransLink to arrange for funds to be used towards subsidized future transit passes.
- Discuss with the Compass to confirm the agreement to distribute funds.



Electric Bicycle (E-Bike) encourages cycling as an active travel mode. It can reduce traffic congestion and demand on parking while promoting health, environmental and economic benefits. Future development applicants are required to:

- Consult with an E-Bike provider to provide an E-Bike to a future resident.

# Off-Street Parking – Benchmarking Mandatory TDM

## City of Vancouver: Summary of TDM Plans

- Plan A – Transit Passes
- Plan B – Bike Infrastructure
- Plan C – Shared Mobility
- Plan D – Unbundled Parking

### Bulletin

Transportation Demand Management for Developments

Effective January 1, 2019  
Last amended June 30, 2024  
Authority: Director of Planning

TDM Plan A Transit Passes	TDM Plan B Bike Infrastructure Package	TDM Plan C Shared Mobility Package	TDM Plan D Unbundled Parking Pilot Program
Monthly transit passes for <u>5 years</u>	<p>40% additional Class A bicycle parking spaces</p> <p>10% additional lockers</p> <p>5% additional oversized bicycle parking spaces</p> <p>Weather-protected Class B bicycle parking spaces</p>	<p>Car share vehicles and spaces for <u>3 years</u></p> <p>Mobi All Access Passes for <u>3 years</u></p> <p>Monthly transit passes for <u>3 years</u></p>	<p>Participate in a <u>pilot program</u> to provide parking spaces for lease only, not to purchase.</p> <p>Applicable only to applicants with strata components.</p>

Source: City of Vancouver @ <https://guidelines.vancouver.ca/bulletins/bulletin-transportation-demand-management-for-developments.pdf>

# Off-Street Parking – Benchmarking Mandatory TDM

## District of Saanich: Summary of TDM Plans

- The measures within each TDM plan were selected based on several factors including:
  - expected density & building form
  - proximity to the active transportation network
  - proximity to frequent transit service



# Off-Street Parking – Benchmarking Mandatory TDM

## District of Saanich: Summary of TDM Plans

- Plan A – Transit
- Plan B – Cycling
- Plan C – Carshare
- Plan D – Unbundled Parking

<b>TDM Plan A – Transit Package</b> <ul style="list-style-type: none"><li>i. Provide one monthly BC Transit pass, through the EcoPASS program or its successor in function for BC Transit, for a minimum of a 3-year term for every dwelling unit; and</li><li>ii. New residents shall be provided with a welcome packet containing tailored marketing information about specific transit routes and schedules associated with the project site.</li></ul>
<b>TDM Plan B – Cycling Package</b> <ul style="list-style-type: none"><li>i. Provide 30% additional Class I bicycle parking spaces above the minimum requirements set out in Table 7.4;</li><li>ii. Provide energized outlets to 50% of Class I bicycle parking spaces; and</li><li>iii. Provide 15% additional non-standard bike parking spaces.</li></ul>
<b>TDM Plan C – Carshare Package</b> <ul style="list-style-type: none"><li>i. Provide membership to a two-way carshare service for every dwelling unit for 3 years; and</li><li>ii. Provide a minimum of one carshare vehicle and exclusive-use parking space for every 50 dwelling units.<ul style="list-style-type: none"><li>a. The property owner shall provide a letter of intent from a two-way carshare vehicle service operator is required with the TDM Plan, indicating their willingness to supply and operate the carshare vehicles on the site upon building occupancy for a period of at least 3 years. The letter should indicate acceptance of the general location, configuration, and accessibility of the carshare vehicle space(s).</li></ul></li></ul>
<b>TDM Plan D – Unbundled Parking Package</b> <ul style="list-style-type: none"><li>i. Unbundle parking from all dwelling units that are to be sold separately from the dwelling units.</li></ul>

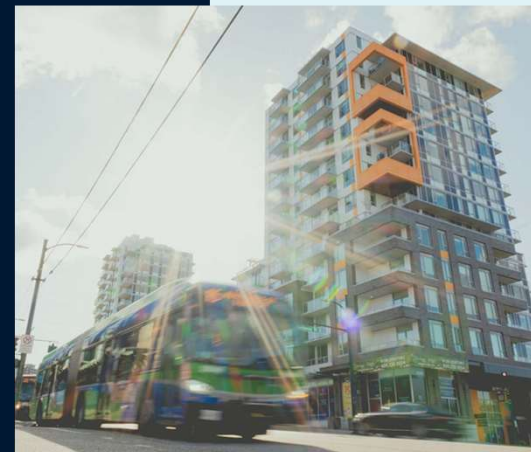
# Off-Street Parking – Benchmarking Mandatory TDM

## District of Saanich: TDM Plan A – Transit Requirements

- Align with BC Transit’s EcoPASS program
- Provide every dwelling unit access to one monthly Adult pass for a minimum 3-year term
- Provide new residents with a transit welcome packet within 30 days of occupancy

### Benefits to Developers

- Reduce development costs from less parking infrastructure
- Lower costs for onsite parking administration and maintenance
- Increase housing affordability
- Contribute towards sustainable/green building ratings
- Increase attractiveness and marketability
- Support the achievement of municipal TDM requirements (if applicable)



### Compass for Developments Program



# Off-Street Parking – Benchmarking Mandatory TDM

## District of Saanich: TDM Plan B - Cycling Requirements

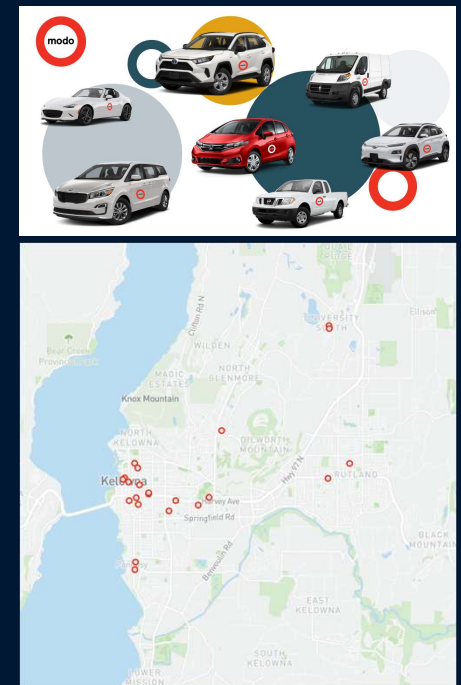
- Provide a secure bicycle repair station, otherwise known as a bike kitchen, within the building



# Off-Street Parking – Benchmarking Mandatory TDM

## District of Saanich: TDM Plan C - Carshare Vehicle Requirements

- Provide membership to a two-way carshare service for every dwelling unit, for the lifetime of the building
- Provide at least the following number of carshare vehicles and corresponding exclusive-use parking spaces:
  - a) One carshare vehicle + parking space... 99 or fewer units
  - b) Two carshare vehicles + parking spaces... 100-149 units
  - c) Three carshare vehicles + parking spaces... 150-199 units
  - d) Four carshare vehicles + parking spaces... over 199 units



# Off-Street Parking – Benchmarking Mandatory TDM

## District of Saanich: TDM Plan D - Unbundled Parking Requirements

- Unbundle parking from all dwelling units that are to be sold or leased separately from the dwelling units
- Inclusive of strata and rental

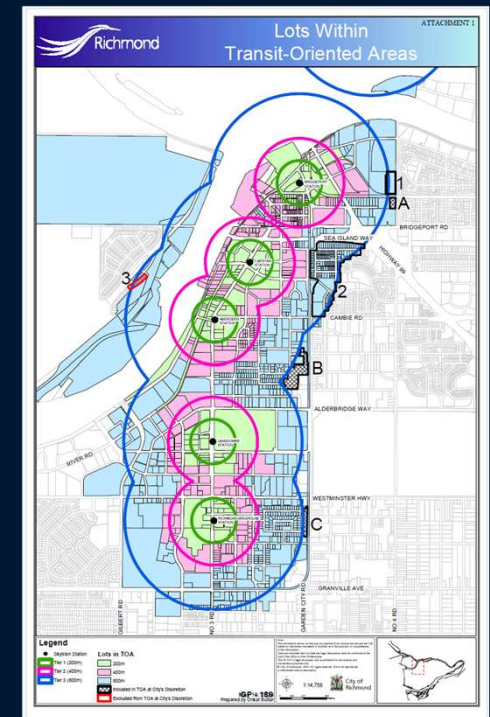




# Off-Street Parking – Benchmarking Mandatory TDM

## City of Richmond

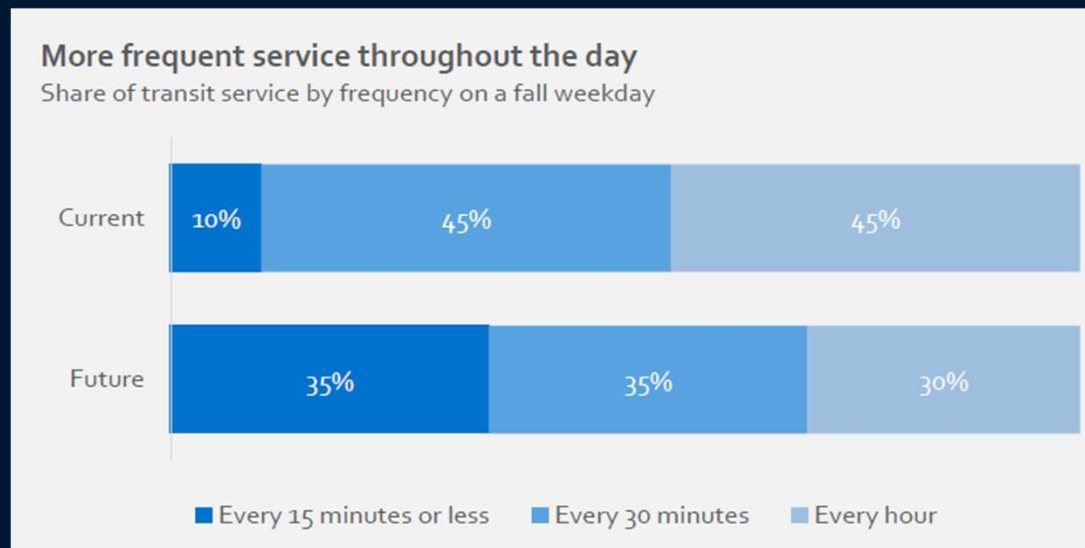
- Mandatory TDM requirements for all residential developments in a Transit Oriented Area (TOA)
- TDMs required in TOAs include:
  - transit passes; car share parking spaces; bicycle parking; bicycle maintenance facility
- Establishing a **TDM Reserve Fund**, reflecting Bill 16
  - Broadens the City's implementation of TDM



# Additional Off-Street Parking Considerations

“Growing around transit corridors is one of the key pillars” (OCP 2040)

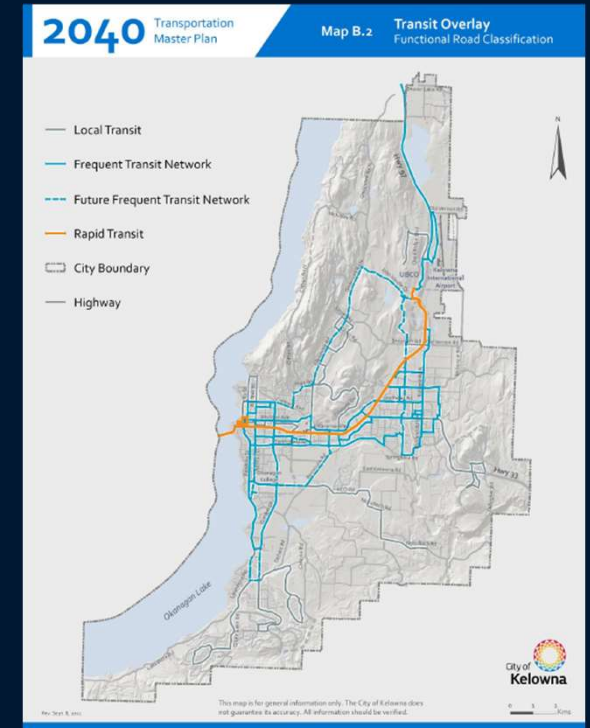
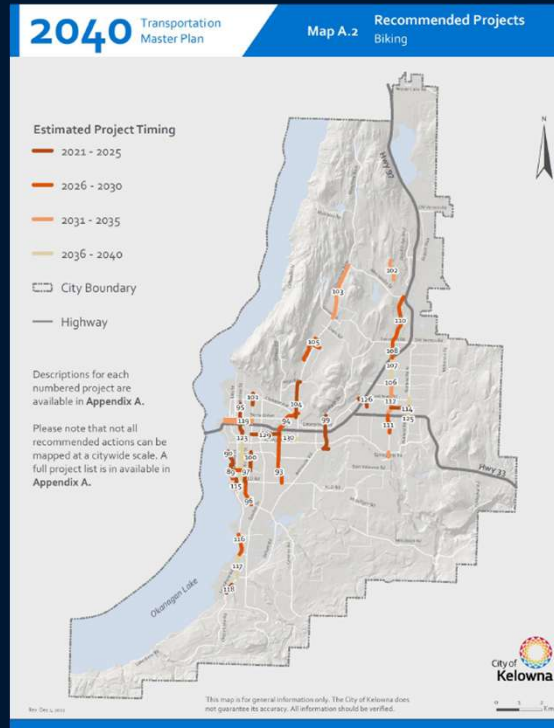
“Frequency of service is a key factor in attracting riders” (TMP 2040)



# Additional Off-Street Parking Considerations

## CITY OF KELOWNA'S 10-YEAR CAPITAL PLAN Building a City of the Future 2025 -2034

Active Transportation	Total Cost
Abbott St	12,919
Bertram St	8,489
Ethel St (Rail Trail - Cawston)	3,877
Leon Ave & Lawrence Ave (Waterfront - Ethel)	15,225
Pandosy Village (Raymer - Abbott)	4,102
Rutland Neighbourhood	2,000
Transit	
Mission Recreation Transit Exchange & Mobility Hub	3,750
Okanagan College Exchange Capacity Expansion	2,300
Orchard Park Exchange	17,449
Rutland Park & Ride, Mobility Hub, Operations Facility	2,992
YLW Transit Hub	3,010





**MOBILITY**  
**FORESIGHT**