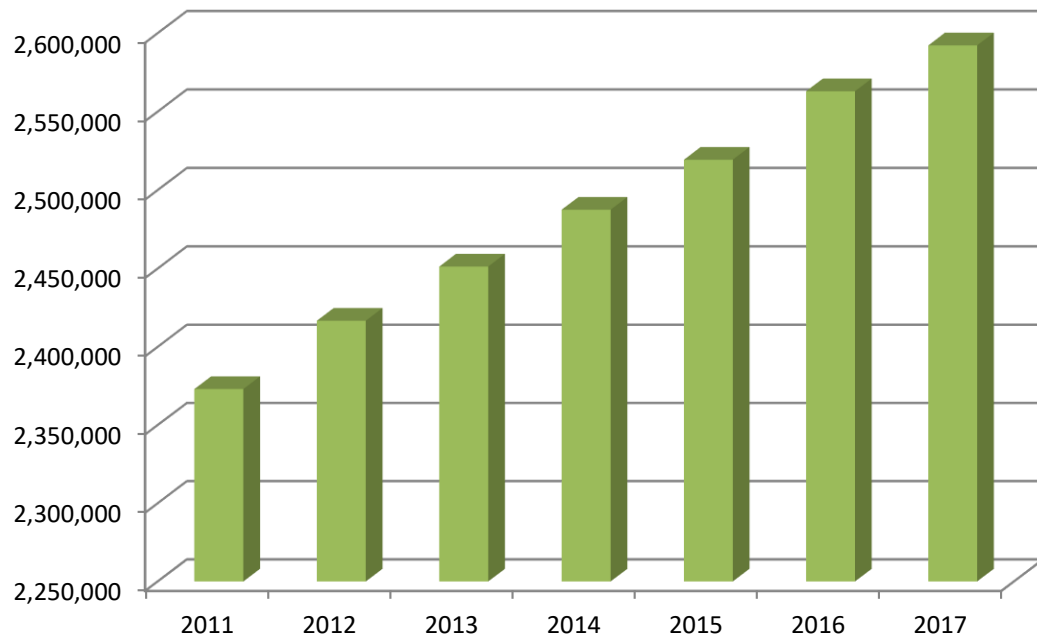




Future Proofing Our Parking Strategy - Parking Design that Embracing the Future -

Metro Vancouver Population

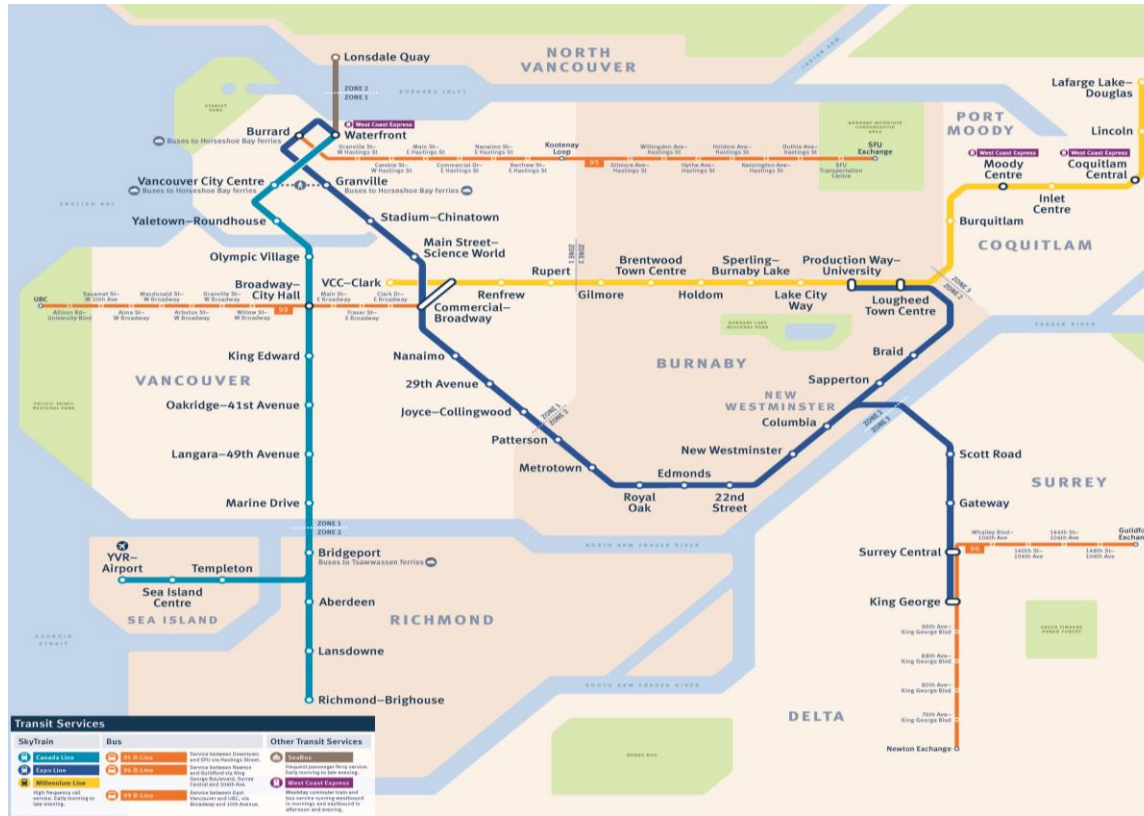


Source: Census Canada



“To live sustainably is to live with less dependency on the automobile”

Metro Vancouver Stations



- 53 SkyTrain Stations
- Many are TOD
- Many are planned to be TOD

Source: translink.ca

Base Bylaw Parking Rates for TOD



Municipality	Residential studio & 1 bedroom (per unit)	Office (per 100 m ²)	Retail (per 100 m ²)
Downtown Vancouver	1.0	0.7	0.7
Burnaby	1.0	2.17	2.17
Coquitlam	1.0	2.50	2.50
New Westminster	1.0	2.00	2.50
Surrey	1.3	1.40 ⁽¹⁾	2.50
Port Moody	1.5	1.85 Plus 1 per tenant	2.70

(1) Updated in 2017

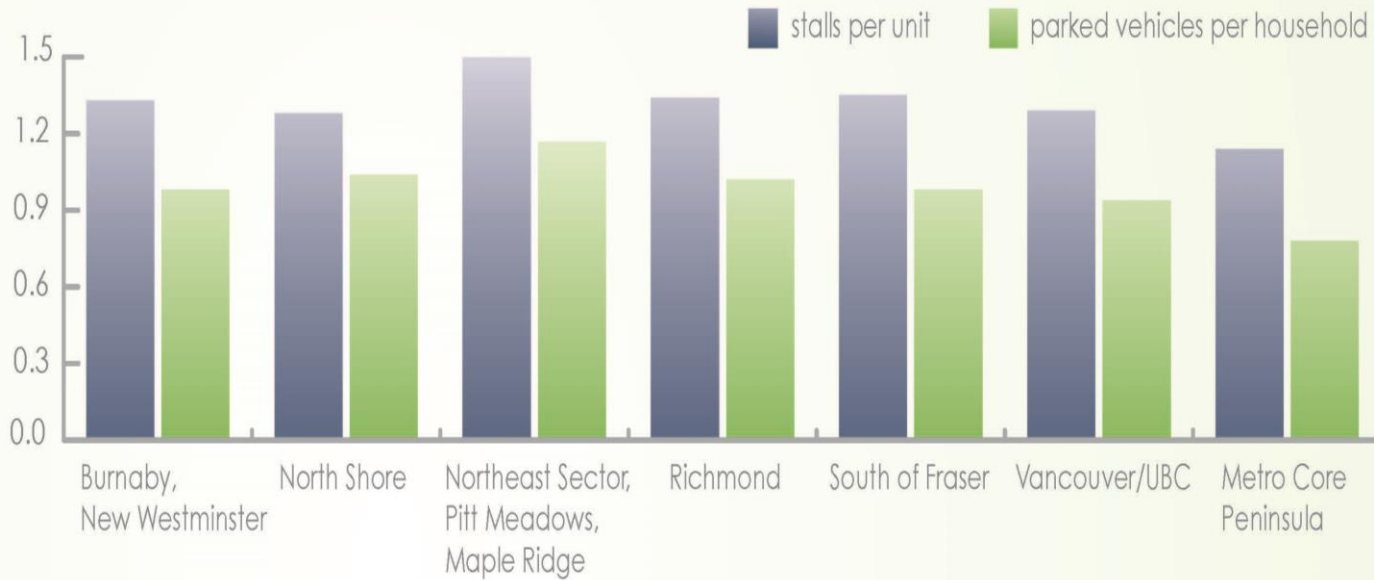
“Current
parking bylaw
does not reflect
today’s
demand -
especially for
TOD sites”

Bylaw Rates for Secured Bike Lockers



Municipality	Residential studio & 1 bedroom (per unit)	Office (per 100 m ²)	Retail (per 100 m ²)
Vancouver	1.25	0.2	0.2
Coquitlam	1.25	0.1 (min 1000m ²)	0.1 (min 1000m ²)
New Westminster	1.25	0.13	0.13
Surrey	1.2	0.06	-

FINDING 1: PARKING SUPPLY EXCEEDS PARKING DEMAND ACROSS THE REGION



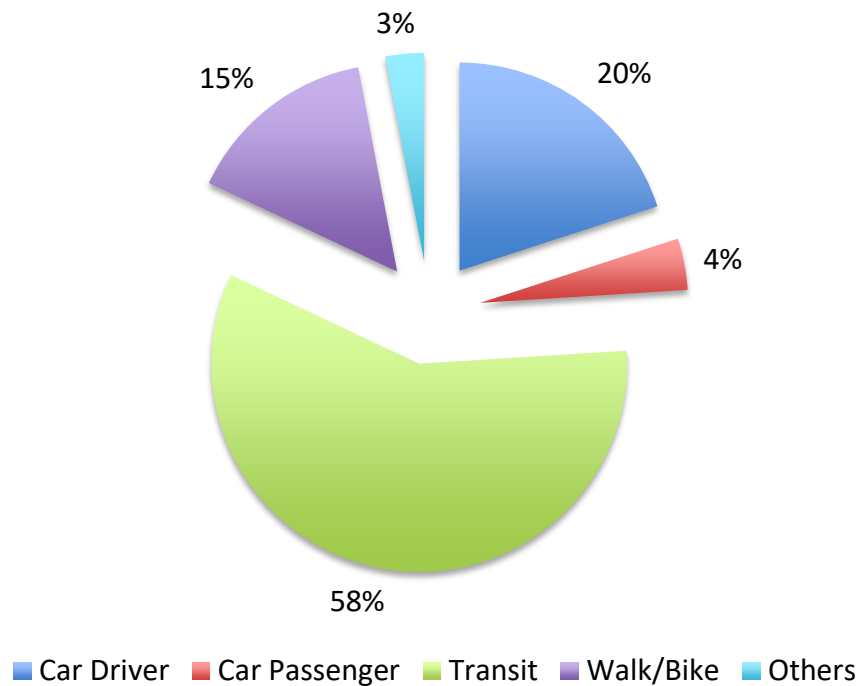
source: Parking Facility Survey

- Parking demand in the range of **18% to 35%** of supply

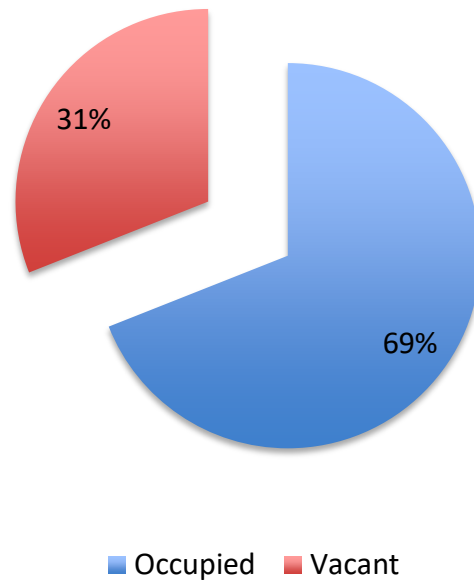
Source: Metro Vancouver Apartment Parking Study September 2012

Office Towers by Burrard Station

Mode Split of 5 Office Towers' Staff



Public Parkade Utilization Within 200m of Burrard Station



Study Example – Typical TOD



Land Uses

- 2,000 residential units
- 40,000 m² office use
- 100,000 m² retail use

**Parking area =
120,000 m²**

**~ 35% total
floor area**

Vehicle Parking Provision

TOTAL = ~ 3,800 Stalls

Bike Parking Provision

TOTAL = ~2,800 Stalls

An Empty Shell



- Too many parking spaces
- Reduce parking demand overtime
- An empty shell that can be converted

Why Own a Car?

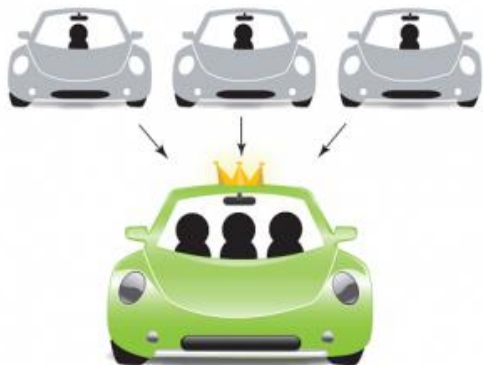


Image: camonix.net



Image: karenklee.com



Image: dailyhive.com



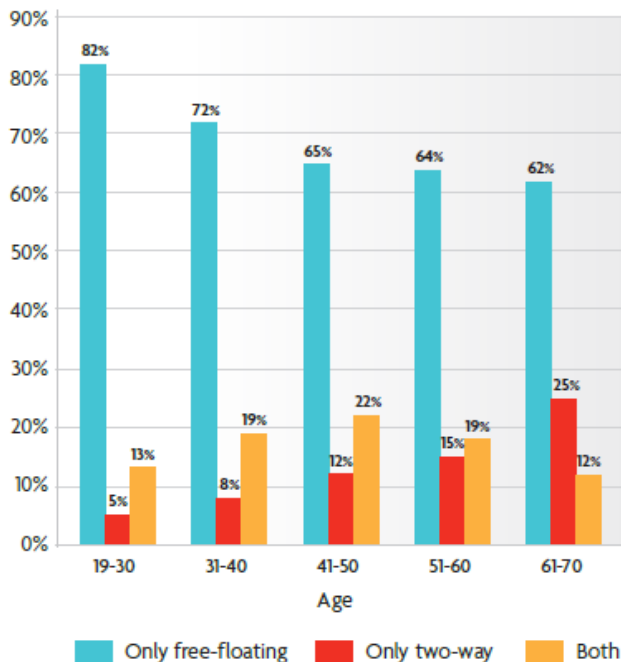
Image: TransLink



Image: City of Surrey

VanCity Car-Share Report January 2018

Figure 3: Age and car-share model membership



Source: Vancity car-share survey, October 2017

- Vancouver has the largest car-sharing fleet in Canada
 - **3,000 vehicles**
- Vancouver has more car-sharing vehicles
 - **per capita in North America**
- The most common reasons for car-sharing:
 - **convenience (95%)**
 - **saving cost (62%)**

Future Technology



Image: IEEE Spectrum



<https://www.giuliobarbieri.it/it/media/icons/green-solutions/evo-bike/bike-sharing.svg>

Image: revolve

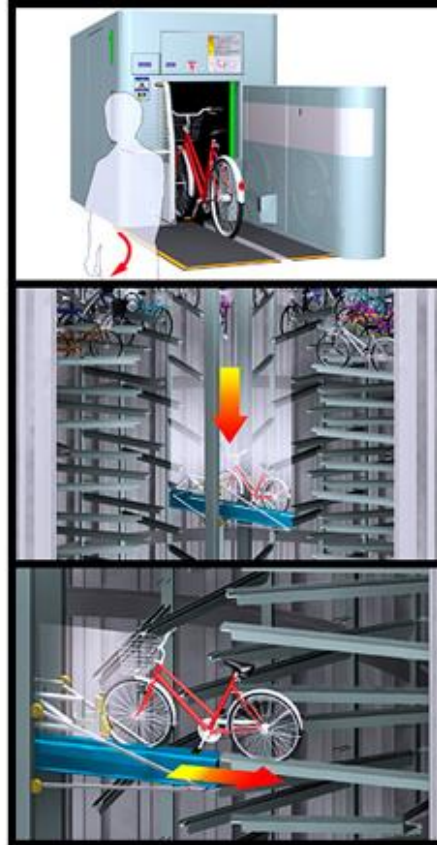
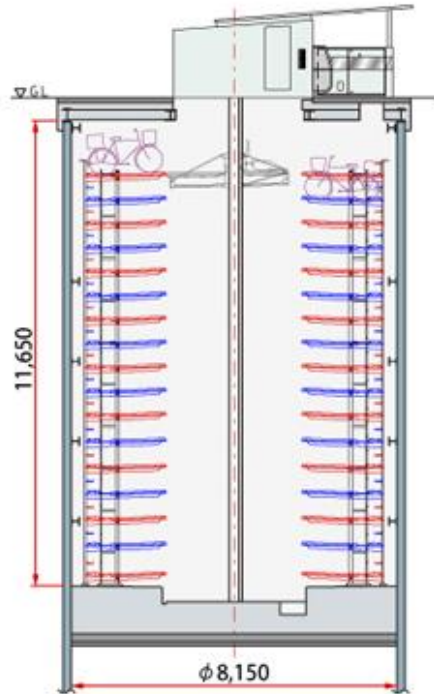
Options for Car Parkade



Options for Car Parkade – cont'd



Bike Silo



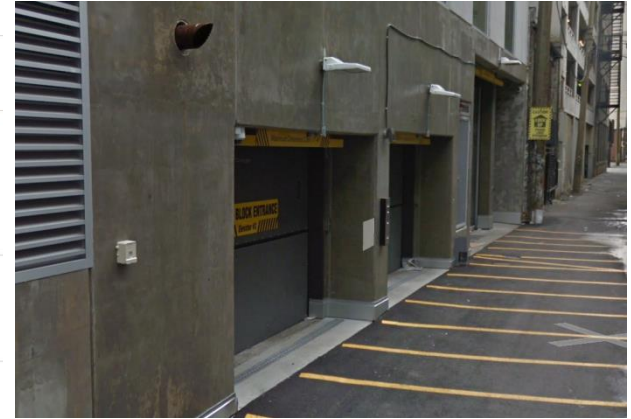
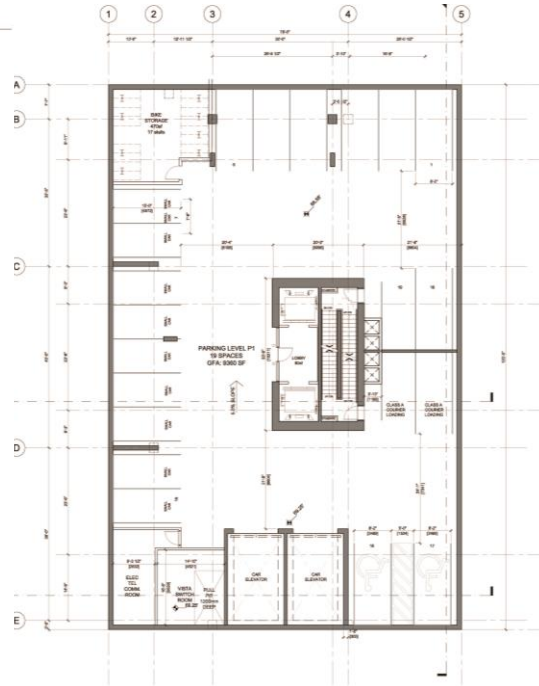
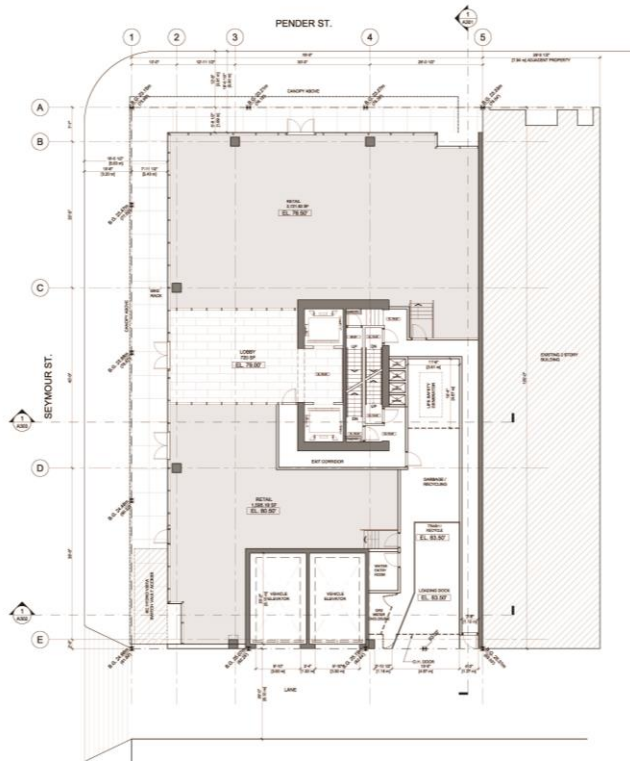
- ✓ 200 bikes per silo
- ✓ 13 seconds retrieving time

Electric Bikes



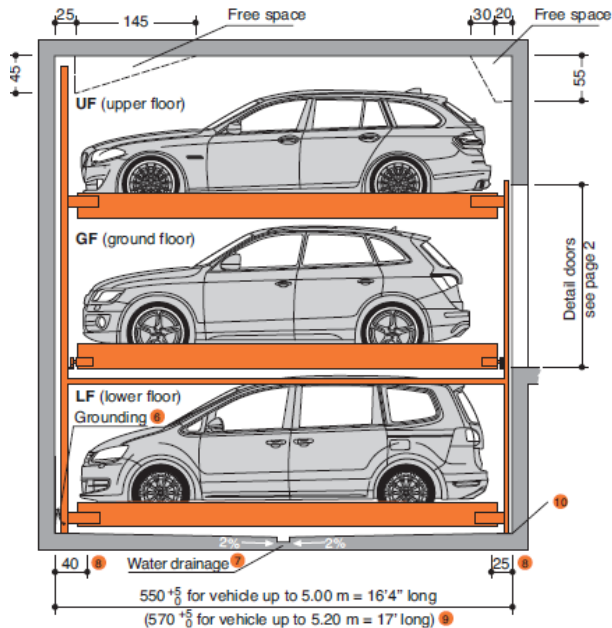
- ✓ Shared
- ✓ Dockless
- ✓ No locker required

Car Elevator



- 2 Car Elevators
- 2 levels underground parkade
- 41 parking spaces

Klaus MultiParking

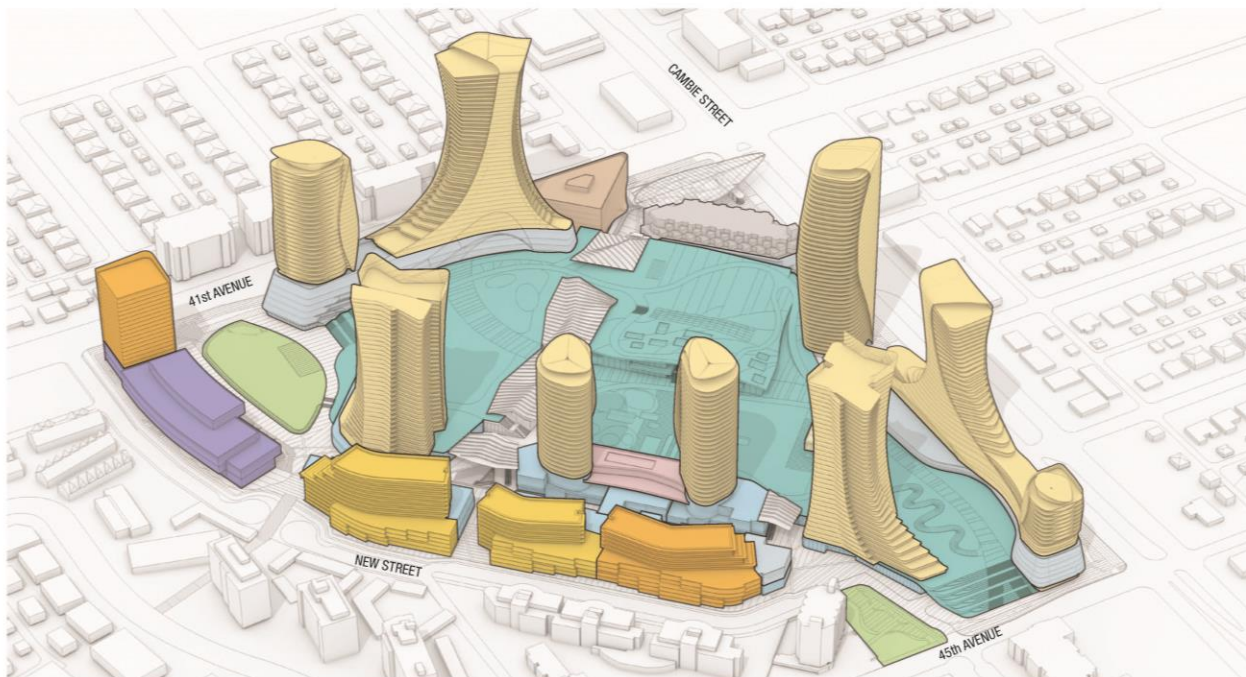


- 6 units + ground floor retail
- 8 parking spaces
- 2 levels underground parkade

Oakridge Redevelopment

Program

- Existing to Remain
- Retail at Grade – Existing / New
- Retail Below Park – Existing / New
- Office – Existing
- Office – New
- Civic Centre
- Residential Market
- Residential Rental
- Residential Non-Market
- Residential Amenity
- Circulation
- Park at Grade
- Up to Park
- Mall Entry
- Parkade Entry



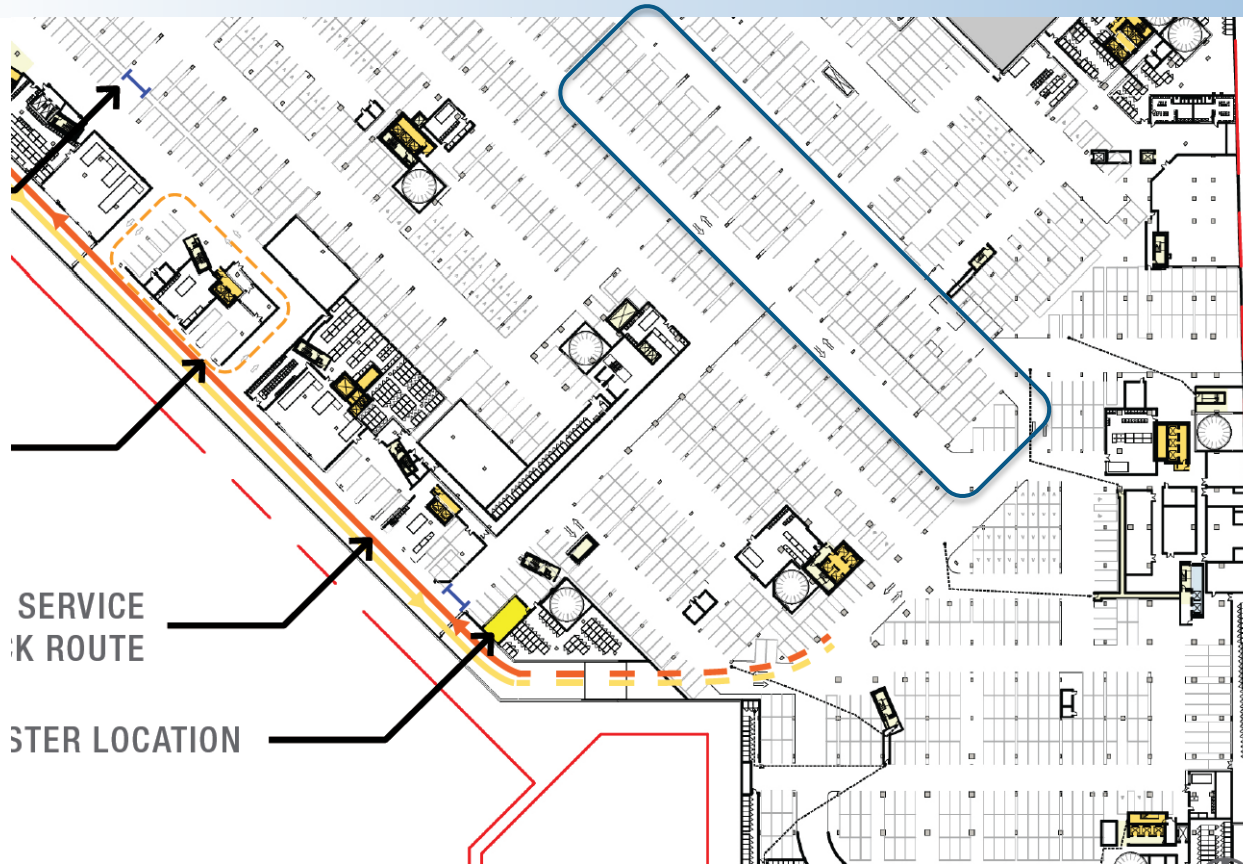
Programmatic Perspective Diagram looking Northeast

All drawings/renderings are approximate and are subject to change.

- 120,000 m² retail
- 40,000 m² office
- 9,000 m² civic centre
- 580 rental + affordable housing
- 2,000 market units

5,000 parking stalls
3,500 bike spaces
4 parking levels

Tandem Parking and Bike Silos



- ✓ Valet operated
- ✓ Unbundled parking
- ✓ Monthly payment
- ✓ 75 Car-club
- ✓ 14 bike silos plus conventional bike lockers

SUMMARY

- ❖ High density developments near TOD
- ❖ Constraints on land availability and value
- ❖ Optimize the land use
- ❖ Innovative solution in parking design
 - ✓ Sufficient parking NOW
 - ✓ Repurpose in the FUTURE
- ❖ Less car-ownership --> less parking





Image: Pinterest



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THANK YOU

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