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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

METRO VANCOUVER REGIONAL DISTRICT
REGIONAL PLANNING COMMITTEE

REGULAR MEETING

Friday, March 8, 2019
9:00 a.m.
28th Floor Committee Room, 4730 Kingsway, Burnaby, British Columbia

REVISED AGENDA[1]

1. ADOPTION OF THE AGENDA

1.1 March 8, 2019 Regular Meeting Agenda
That the Regional Planning Committee adopt the agenda for its regular meeting scheduled for March 8, 2019 as circulated.

2. ADOPTION OF THE MINUTES

2.1 February 1, 2019 Regular Meeting Minutes
That the Regional Planning Committee adopt the minutes of its regular meeting held February 1, 2019 as circulated.

3. DELEGATIONS

3.1 Roderick Louis
Subject: South of the Fraser Densification and Economic Development Planning

4. INVITED PRESENTATIONS

4.1 Ellen Demlow, Regional Epidemiologist, Vancouver Coastal Health
Dr. James Lu, Medical Health Officer, Vancouver Coastal Health
Subject: Social Connection and Health Report: My Health My Community Survey

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Consideration of the Village of Anmore's Amended Regional Context Statement
Designated Speaker: James Stiver, Division Manager of Growth Management and Transportation, Regional Planning
That the MVRD Board accept the Village of Anmore's amended Regional Context Statement as submitted to Metro Vancouver on January 11, 2019.

[1] *Note: Recommendation is shown under each item, where applicable.*

On Table Attachment 2

5.2 Office Development in Metro Vancouver's Urban Centres – 2018 Update

Designated Speakers: Gord Tycho, Senior Planner, Regional Planning, and Eric Aderneck, Consultant

That the MVRD Board:

a) receive for information the consultant report attached to the report dated February 6, 2019, titled "Office Development in Metro Vancouver's Urban Centres - 2018 Update";

b) endorse the recommendations for Metro Vancouver as set out in the report dated February 6, 2019, titled "Office Development in Metro Vancouver's Urban Centres - 2018 Update"; and

c) distribute the report to member jurisdiction Council for information.

5.3 Urban Centres and Frequent Transit Development Area (FTDA) Review

Verbal Update

Designated Speaker: Erin Rennie, Senior Planner, Regional Planning

5.4 Lougheed Corridor Land Use and Monitoring Study – Final Report

Designated Speaker: Erin Rennie, Senior Planner, Regional Planning

That the MVRD Board receive for information the report dated February 19, 2019, titled "Lougheed Corridor Land Use and Monitoring Study – Final Report".

5.5 The 2018 Regional Parking Study – Key Findings

Designated Speaker: Raymond Kan, Senior Planner, Regional Planning

That the MVRD Board:

a) receive for information the report dated February 15, 2019, titled "The 2018 Regional Parking Study – Key Findings"; and

b) write letters to communicate the key findings of the Regional Parking Study, including the attached Technical Report, to the Mayors' Council on Regional Transportation, the TransLink Board of Directors, and member jurisdiction Councils.

5.6 Food Flow: Agri-food Distribution in Metro Vancouver – Scope of Work

Designated Speaker: Theresa Duynstee, Senior Planner, Regional Planning

That the MVRD Board receive for information the report dated February 19, 2019, titled "Food Flow: Agri-food Distribution in Metro Vancouver – Scope of Work".

5.7 2019 Agricultural Land Use Planning Policy Forum

Designated Speaker: Theresa Duynstee, Senior Planner, Regional Planning

That the MVRD Board receive for information the report dated February 15, 2019, titled "2019 Agricultural Land Use Planning Policy Forum".

On Table Attachment 2

5.8 Manager's Report

Designated Speaker: Heather McNell, Director of Regional Planning and Electoral Area Services, Planning and Environment Department

That the Regional Planning Committee receive for information the report dated February 15, 2019, titled "Manager's Report".

6. INFORMATION ITEMS

6.1 Article from The New York Times dated January 24, 2019:
$500 Million Pledge in Bay Area Supports Affordable Housing

6.2 Article from The Planetizen dated February 1, 2019:
Road Pricing Equity Report and Toolkit

6.3 Article from The Globe and Mail dated January 26, 2019:
In the Dark: The Cost of Canada's Data Deficit

6.4 Article from The Globe and Mail dated January 26, 2019:
Flying Blind: Why Does Canada Know So Little About Itself

7. OTHER BUSINESS

8. BUSINESS ARISING FROM DELEGATIONS

9. RESOLUTION TO CLOSE MEETING

Note: The Committee must state by resolution the basis under section 90 of the Community Charter on which the meeting is being closed. If a member wishes to add an item, the basis must be included below.

10. ADJOURNMENT/CONCLUSION

That the Regional Planning Committee adjourn/conclude its regular meeting of March 8, 2019.

Membership:

Coté, Jonathan (C) - New Westminster
Froese, Jack (VC) - Langley Township
Copeland, Dan - Delta
Dueck, Judy - Maple Ridge
Gambioli, Nora - West Vancouver
Guerra, Laurie - Surrey
Hurley, Mike - Burnaby
Kirby-Yung, Sarah - Vancouver
McEwen, John - Anmore
Pollock, Glenn - Port Coquitlam
Steves, Harold - Richmond
Stewart, Richard - Coquitlam
Vagramov, Rob - Port Moody

METRO VANCOUVER REGIONAL DISTRICT
REGIONAL PLANNING COMMITTEE

Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Regional Planning Committee held at 9:03 a.m. on Friday, February 1, 2019 in the 28th Floor Committee Room, 4730 Kingsway, Burnaby, British Columbia.

MEMBERS PRESENT:
Chair, Mayor Jonathan Coté, New Westminster
Vice Chair, Mayor Jack Froese, Langley Township
Councillor Dan Copeland, Delta
Councillor Judy Dueck, Maple Ridge
Councillor Nora Gambioli, West Vancouver
Councillor Laurie Guerra, Surrey
Mayor Mike Hurley, Burnaby (arrived at 9:09 a.m.)
Mayor John McEwen, Anmore
Councillor Sarah Kirby-Yung, Vancouver (arrived at 9:08 a.m.)
Councillor Glenn Pollock, Port Coquitlam
Councillor Harold Steves, Richmond
Mayor Richard Stewart, Coquitlam
Mayor Rob Vagramov, Port Moody (arrived at 9:11 a.m.)

MEMBERS ABSENT:
None.

STAFF PRESENT:
Heather McNell, Director, Regional Planning and Electoral Area Services, Planning and Environment
Carol Mason, Chief Administrative Officer
Janis Knaupp, Legislative Services Coordinator, Board and Information Services

1. ADOPTION OF THE AGENDA

1.1 February 1, 2019 Regular Meeting Agenda

It was MOVED and SECONDED
That the Regional Planning Committee adopt the agenda for its regular meeting scheduled for February 1, 2019 as circulated.

CARRIED

2. ADOPTION OF THE MINUTES

2.1 October 5, 2018 Regular Meeting Minutes

2.2 January 11, 2019 Regular Meeting Minutes

It was MOVED and SECONDED
That the Regional Planning Committee adopt the minutes of its regular meeting held October 5, 2018 and the minutes of its regular meeting held January 11, 2019 as circulated.

CARRIED

3. DELEGATIONS

No items presented.

4. INVITED PRESENTATIONS

No items presented.

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Overview of the Transit-Oriented Affordable Housing Study

Report dated January 14, 2019 from Raymond Kan, Senior Planner, Regional Planning, providing an overview of the *Transit-Oriented Affordable Housing* (TOAH) *Study* prior to the completion of Phase 2 in 2019.

Members were informed about the TOAH *Study* highlighting regional interests, Phase 1 findings, and Phase 2 research components.

9:08 a.m. Councillor Sarah Kirby-Yung arrived at the meeting.
9:09 a.m. Mayor Hurley arrived at the meeting.
9:11 a.m. Mayor Vagramov arrived at the meeting.

Members discussed local government tools needed to preserve existing rental housing near transit and to prevent pressure on low income renters in response to increasing land values. Members were informed about TransLink efforts to explore land capture as a means to identify new funding sources for transit.

Presentation material titled "Overview of the Transit-Oriented Affordable Housing Study" is retained with the February 1, 2019 Regional Planning Committee agenda.

It was MOVED and SECONDED
That the MVRD Board receive for information the report dated January 14, 2019 titled "Overview of the Transit-Oriented Affordable Housing Study".

That the Regional Planning Committee direct staff to work with TransLink to explore how a land value capture system can benefit transit-oriented housing as it relates to the *Transit-Oriented Affordable Housing Study*.

CARRIED

5.2 Long Range Growth Scenarios – Overview and Update

Sean Tynan, Planner, Regional Planning, updated members on long range growth scenarios highlighting project objectives, engagement, process, external forces including advanced automation and technology, climate change, economy and trade, case scenario studies from San Francisco, and next steps.

Presentation material titled "Long Range Growth Scenarios" is retained with the February 1, 2019 Regional Planning Committee agenda.

It was MOVED and SECONDED
That the Regional Planning Committee receive for information the February 1, 2019 presentation from Sean Tynan, Regional Planning, on long range growth scenarios.

CARRIED

5.3 Request for Sanitary Service Connection at 13112 Alouette Road, Maple Ridge

Report dated January 11, 2019 from Sean Tynan, Planner, Regional Planning, seeking MVRD Board concurrence that the City of Maple Ridge's request to extend a sanitary service connection to a new single detached dwelling in the City of Maple Ridge (13112 Alouette Road), is consistent with *Metro 2040*.

Members were informed about the extension of regional sewerage services process as it relates to *Metro 2040*.

Presentation material titled "Extension of Regional Sewerage Services" is retained with the February 1, 2019 Regional Planning Committee agenda.

It was MOVED and SECONDED
That the MVRD Board resolve that the extension of GVS&DD sewerage services to a new single detached dwelling at 13112 Alouette Road in the City of Maple Ridge is consistent with the provisions of *Metro Vancouver 2040: Shaping Our Future.*

CARRIED
Councillor Kirby-Young absent at the vote.

5.4 Request for Sanitary Service Connection at 13176 Alouette Road, Maple Ridge

Report dated January 11, 2019 from Sean Tynan, Planner, Regional Planning, seeking MVRD Board concurrence that the City of Maple Ridge's request to extend a sanitary service connection to a new single detached dwelling in the City of Maple Ridge (13176 Alouette Road), is consistent with *Metro 2040*.

It was MOVED and SECONDED

That the MVRD Board resolve that the extension of the GVS&DD sewerage services to a new detached dwelling at 13176 Alouette Road in the City of Maple Ridge is consistent with *Metro Vancouver 2040: Shaping Our Future.*

CARRIED

Councillor Kirby-Young absent at the vote.

5.5 Manager's Report

Report dated January 23, 2019 from Heather McNell, Director, Regional Planning and Electoral Area Services, Planning and Environment, updating the Regional Planning Committee on the Committee's 2019 work plan, *Regional Industrial Lands Strategy*, and presentations on Metro Vancouver growth projections and *Metro 2040*.

It was MOVED and SECONDED

That the Regional Planning Committee receive for information the report dated January 23, 2019, titled "Manager's Report".

CARRIED

6. INFORMATION ITEMS

It was MOVED and SECONDED

That the Regional Planning Committee receive for information the following Information Items:

6.1 Correspondence re Review of and Update to the RGS Legislation from Ministry of Municipal Affairs and Housing dated December 13, 2018

6.2 The Seattle Times Article: Microsoft Pledges $500 million to Tackle Housing Crisis in Seattle, Eastside dated January 16, 2019

6.3 The City Lab Article: Fast Growing Companies Prefer Vibrant Parts of Cities and Suburbs dated December 18, 2018

CARRIED

7. OTHER BUSINESS

No items presented.

8. BUSINESS ARISING FROM DELEGATIONS

No items presented.

9. RESOLUTION TO CLOSE MEETING

No items presented.

10. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED
That the Regional Planning Committee conclude its regular meeting of February 1, 2019.

CARRIED
(Time: 9:52 a.m.)

_____ _____

Janis Knaupp,
Legislative Services Coordinator

Jonathan Coté, Chair

28374310 FINAL

To: Metro Vancouver Regional Planning Committee,
C/O Ms Janis Knaupp,
Legislative Services Coordinator,
#4730 Kingsway, Burnaby,
BC, Canada, V5H 0C6,
delegations@metrovancouver.org
gvrdsec@metrovancouver.org
604-432-6250
604.432.6284

From: Mr Roderick V. Louis,
FOI S.22 Personal Info
White Rock, BC,
Canada, FOI S.22 Personal Info
FOI S.22 Personal Info

For March 08-2019 meeting

Pls regard this as a request to appear as a Delegation before Metro Vancouver's *Regional Planning Committee* at its March 08-2019 meeting…

http://www.metrovancouver.org/metro2040

The matters I would like to speak to fall within the committee's Terms of Reference, and its "*specific responsibilities*":

> ***"Shaping Growth**- guiding the implementation of the region's growth management framework for the region based on … focusing growth into a network of Urban Centres and along transit corridors, with an aim to supporting the development of complete communities, the protection of important agricultural, industrial and conservation lands and the efficient provision of utilities and transit.*
>
> ***"Complete Communities**- initiating and facilitating coordination and dialogue between Metro Vancouver and agencies within the region that develop land use, housing and transportation plans and policies, and that make investments in the broader transportation network.*
>
> ***"Land use, housing and transportation plans**, policies, investments and actions made or taken by other agencies must be carefully coordinated with the regional growth strategy in order to meet the objectives laid out in Metro 2040."*

As a result of the October-2018 municipal elections in Surrey, all of the incumbent members of city council failed in their attempts at re-election. All but one of the 9 candidates that were elected to council campaigned on a policy platform that opposed the incumbent members of council plans to arbitrarily impose street-car (LRT) line(s) on Surrey and neighboring "South of Fraser" cities.

Shortly thereafter, the regional public transit operator- Translink- cancelled planning to build street-car ("LRT") lines in the South of Fraser sub-region, and commenced planning for the construction of SkyTrain line(s) in the SOF.

For at least the last 2 decades, there has been a significant unmet need for cities within the SOF sub-region to collaboratively (and formally) designate "***densification and economic development hubs***" ("*Urban Centres*", "*Regional City Centres*", and "*Municipal Town Centres*" in Metro Vancouver's planning parlance) that are intended to be connected by a network of SOF SkyTrain lines and stations

One of the worst consequences of this situation is the egregious "urban sprawl" and lack of *economic development focus* that is pervasive throughout the SOF, and especially in the cities of Surrey and (northeast) Delta…

Assuming that current planning that is underway for the building of SkyTrain line(s) in the SOF sub-region continues, and that funding required to build a network of SOF SkyTrain line(s) will be accrue-able, there is a substantial need for locations along the route(s) of to-be-built SOF SkyTrain lines to be expeditiously *formally* designated as ***densification and economic development hubs*** ("*Urban Centres*", "*Regional City Centres*", and "*Municipal Town Centres* ***)…***

Existing limits on maximum building heights and floor area ratios (within these Centres) are needed to be raised significantly from current limits- with this information publicized domestically and intenationally…

In the common situation where "*Urban Centres*", "*Regional City Centres*", and "*Municipal Town Centres"* occupy lands of two or more neighboring SOF cities- such as the ***Scottsdale* area** of Delta and Surrey- both cities' planning departments should be being actively encouraged and assisted by Metro Vancouver to closely coordinate policies & zoning bylaws- and to formally and transparently collaborate with each other…

Main needed objectives for Metro Vancouver

1) To ensure that there is substantial consistency and similarity between neighboring SOF cities' height limit zoning bylaws for and Official Community Plans' designations of "*Urban Centres*", "*Regional City Centres*", and "*Municipal Town Centres*- where these centres occupy lands of two or more neighboring cities… And

2) To ensure that new "*Urban Centres*", "*Regional City Centres*", and "*Municipal Town Centres, and* "*Frequent Transit Development Areas*" with the SOF sub-region are formally identified- and promoted domestically and internationally for investment;

South Surrey's booming-in-commercial-and-residential-developments ***Morgan Heights/ Morgan Crossing/ Grandview Heights*** area provides a good example of a new, defacto ""Urban Centre"/ "Regional City Centre" that should be formally identified as such in MV's planning documents…

Same can be said for the "*city centre*" area of the city of White Rock- where dozens of commercial and residential high-rise towers have replaced and are planned to replace low-rise, low density structures;
==========

Actions requested:

Pass motion today that requests that the Metro Vancouver GVRD Board will facilitate the establishment of a "*South of Fraser*" *densification and economic development planning* mechanism- such as a task force- with a terms of reference that would require the task force:

a) To be comprised of representatives of the cities of Delta, Surrey, White Rock, and Langley, and the Township of Langley;

b) To plan for economic development and densification of specifically designated areas within the SOF that are adjacent to a network of to-be-built SOF SkyTrain lines… lines that will connect existing and to-be-designated SOF "*Urban Centres*", "*Regional City Centres*", and "*Municipal Town Centres;*

c) Meet publicly no less than 4 times annually;

d) Report 4 times annually to MV's Regional Planning Committee and to the MV GVRD Board;
==========

Roderick V. Louis,

To: Regional Planning Committee

From: James Stiver, Division Manager, Growth Management and Transportation, Regional Planning

Date: February 13, 2019 Meeting Date: March 8, 2019

Subject: **Consideration of the Village of Anmore's Amended Regional Context Statement**

RECOMMENDATION

That the MVRD Board accept the Village of Anmore's amended Regional Context Statement as submitted to Metro Vancouver on January 11, 2019.

PURPOSE

To seek MVRD Board acceptance of the Village of Anmore's amended Regional Context Statement in accordance with Section 866 of the *Local Government Act.*

BACKGROUND

The Village of Anmore has submitted an amended Regional Context Statement to Metro Vancouver for consideration (Attachment). The Regional Context Statement seeks to include the Anmore Green Estates site within the Urban Containment Boundary and redesignate the parcel from a Rural regional land use designation to General Urban. Section 448 (2) of the *Local Government Act* stipulates that the MVRD Board must respond by resolution within 120 days after receipt indicating whether or not it accepts the Regional Context Statement. If the Board fails to respond within this period of time, the Regional Context Statement is deemed to be accepted.

The Village Council has also endorsed a resolution requesting the Board of the Greater Vancouver Sewerage and Drainage District (GVS&DD) to support its request to become a member of the GVS&DD and, subject to becoming a member, to expand the sewerage area to include the footprints of the existing 51 homes within the Anmore Green Estates lands for the purpose of connecting to the regional sewerage system. This request will be considered separately by the Liquid Waste Committee and GVS&DD Board.

REGIONAL CONTEXT STATEMENTS

Section 446 of the *Local Government Act* requires that each municipality submit a Regional Context Statement that identifies the relationship between the municipality's Official Community Plan (OCP) and the regional growth strategy, *Metro Vancouver 2040: Shaping our Future* (*Metro 2040*). It is the role of municipalities to adopt Regional Context Statements that specify how the municipality's OCP addresses each of the applicable *Metro 2040* policy actions. When the MVRD Board considers acceptance of a new or amended Regional Context Statement, it is expected that it be "generally consistent" with the goals, strategies, actions, and parcel-based regional land use designations in *Metro 2040*.

VILLAGE OF ANMORE OFFICIAL COMMUNITY PLAN

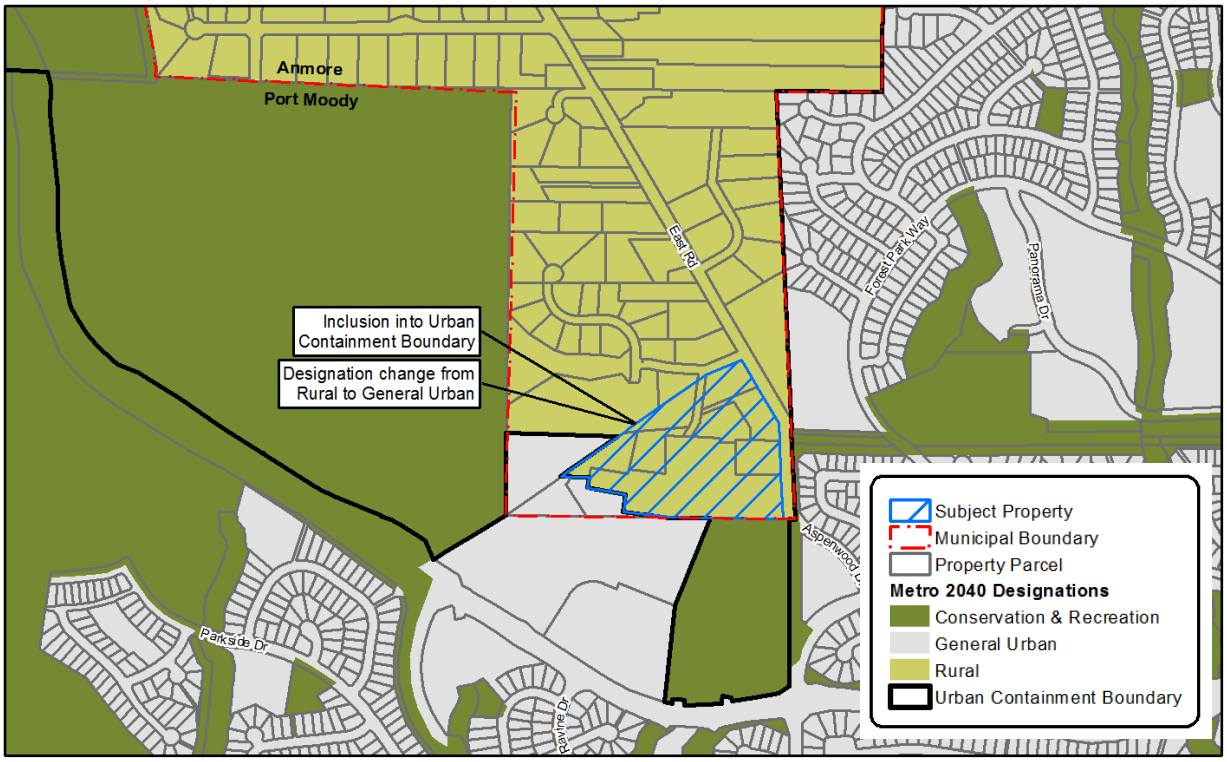
The Village of Anmore is a predominantly rural and semi-rural community in the north eastern portion of the region, outside of the Urban Containment Boundary. As a community, Anmore is not planned or expected to absorb a significant portion of regional growth or connect to urban servicing. The Village's current OCP policies state that the Village will not develop a municipal-wide sewer system in the interest of respecting the rural and semi-rural character of the community where residents rely on private septic system services, as a means of limiting more urban forms of development.

The Village's Regional Context Statement, which forms part of its OCP and was accepted by the MVRD Board in July of 2011, reinforces the limitation of sewer servicing by restricting the extension of regional sewerage servicing by designating the Village primarily with a Rural land use designation in *Metro 2040*. The one exception is the Eagle Mountain Middle School, which is designated General Urban and located within the Urban Containment Boundary in *Metro 2040*.

Anmore Green Estates

Anmore Green Estates is an existing strata development comprising 51 residential units at the southern limits of the Village of Anmore, bordering on the City of Port Moody adjacent to the Eagle Mountain Middle School.

Location Map



The strata operates a communal septic system for the development's residents, as the development is not connected to a municipal sewerage system. In November 2017, in response to a discovered leak from the communal system onto neighbouring properties owned by School District 43 in

Port Moody, the Ministry of Environment and Climate Change Strategy issued a Pollution Abatement Order to Anmore Green Estates that required the preparation of an action plan to address the failure of the system. Through the Winter and Spring of 2018, required engineering work was completed to consider and recommend options to address the issue. Upon completion, the engineering reports recommended that the most viable solution was to connect the development to the GVS&DD sewerage system via Port Moody's collection system. In August 2016 a Minister's Order was issued requiring that the Village of Anmore submit a plan to manage liquid wastes within the Village to the Province for approval. There are many requirements and parties involved in advancing this solution, that go beyond the ability of Anmore Green Estates and the Village of Anmore to address.

Anmore Council Resolution

At its January 8, 2019 meeting, Village of Anmore Council resolved to seek to connect the Anmore Green Estates site to the GVS&DD system, and passed the following resolution:

> *THAT Council:*
>
> *a) Give 1st reading to Village of Anmore Official Community Plan Amendment Bylaw 590-2019;*
>
> *b) Refer Village of Anmore Official Community Plan Amendment Bylaw 590-2019 to the City of Port Moody, the Village of Belcarra and School District No. 43 for comment;*
>
> *c) Submit the proposed amendment to Anmore's Regional Context statement comprised of a regional land use designation change from Rural to General Urban for the Anmore Green Estates property, and a corresponding extension of the Urban Containment Boundary to the Metro Vancouver Board for acceptance; and*
>
> *d) Request the Greater Vancouver Sewerage and Drainage District Board support the Village of Anmore becoming a member of the Greater Vancouver Sewerage and Drainage District and, subject to becoming a member, expand the sewerage area to include the footprints of the existing 51 homes at Anmore Green Estates.*
>
> *AND THAT no further steps be taken until such time as the memorandum of understanding is in place with Anmore Green Estates Strata."*

Timeline of Proposed Amendment

With Anmore Council giving first reading to Bylaw 590-2019 on January 8, 2019, a circulation of notice to neighbouring jurisdictions is now underway. The Village intends to consider further readings of the Bylaw and a public hearing in March 2019. MVRD's consideration of the amended Regional Context Statement and the GVS&DD Board's consideration of support for Anmore's membership in the GVS&DD service area is required to support the Village's application for membership in the GVS&DD to the Ministry of Municipal Affairs and Housing for an Order in Council to amend Metro Vancouver's Letters Patent to include the Village of Anmore. The consideration of acceptance of the amended Regional Context Statement is the first step prior to the Liquid Waste Committee's and GVS&DD Board's consideration of the Village's request to amend the service area, and the other steps noted above involving the City of Port Moody and the Province.

AMENDED REGIONAL CONTEXT STATEMENT

The Village of Anmore staff report states that the rationale for limiting the connections only to Anmore Green Estates, is to only address the environmental and public health concerns related to the development's sewage treatment system and not to provide excess servicing that could accommodate additional development. The General Urban designation for *Metro 2040* is being sought due to:

- the urgency of the need to address the environmental and public health risk of the failing septic system;
- the level of development in the Anmore Green Estates development being significantly different that the semi-rural and rural development densities seen in the other areas of the municipality;
- this is the only site that is intended to be connected to regional sewerage servicing; and
- the number of units and density of the development is existing and the change in land use designation will more appropriately reflect the existing development than the current Rural designation.

The Village has proposed to amend its Regional Context Statement rather than pursuing a Type 2 amendment to *Metro 2040*. A Type 2 amendment is often the required approach to amending the Urban Containment Boundary. However, this approach is consistent with other Regional Context Statements with regional land use designation changes that have been submitted and considered by the MVRD Board, particularly in situations where there are environmental and public health impact concerns or to better align the regional land use designation with an existing land use / development.

Village of Anmore staff reported to Village Council that:

- there are no consequential impacts to this proposed amendment on the intent of *Metro 2040*'s urban containment objectives as the 51 units are existing no new development will result;
- the connection to regional sewer servicing was concluded as the only viable means to address the Ministry's Pollution Abatement Order process to address the public health and environmental risk issues; and
- there is no regional significance to the proposed amendments and a full *Metro 2040* amendment process is not warranted in this case.

For the above reasons, a General Urban designation in *Metro 2040* is appropriate. It should be noted that should Anmore join the GVS&DD, it does set the stage for future consideration of additional sewerage extension requests.

Anmore's Amended Regional Context Statement and Metro 2040

A primary way in which *Metro 2040* reinforces a compact urban area, and protects the region's rural, natural and agricultural areas, is with the introduction and maintenance of the Urban Containment Boundary. To reinforce this objective, *Metro 2040* sets out policies that restrict the extension of sewer servicing into the designated Rural, Conservation and Recreation, and Agricultural areas. While *Metro 2040* includes provisions for the MVRD Board to consider exceptions to this objective in cases where

such a proposed connection would prevent or alleviate a public health or environmental contamination risk, or where a connection has no significant impact on the strategy of urban containment, the Village of Anmore has opted to amend its Regional Context Statement map (Attachment) to adjust the Urban Containment Boundary to encompasses the Anmore Green Estates lands and designate those lands as General Urban.

Anmore Green Estates is an existing development on the edge of the General Urban area, built at urban densities, and dissimilar to the Village's prevailing rural and semi-rural form. Furthermore, the Eagle Mountain Middle School, immediately to the west of the Anmore Green Estates lands, is currently connected to the regional sewerage system and contained within the Urban Containment Boundary; in 2014, an amendment to *Metro 2040* was approved to redesignate those lands to General Urban and adjust the Urban Containment Boundary and a 25 year servicing agreement was entered into with School District 43, rather than by way of membership within GVS&DD, to facilitate the construction of the school. Therefore, the intent of *Metro 2040*'s objectives of urban containment and protecting the region's Rural lands is not negatively impacted by the proposed amendment.

GVS&DD CONSIDERATIONS

In addition to the MVRD Board's consideration of the Regional Context Statement, at their respective meetings in March, 2019 the Liquid Waste Committee and GVS&DD Board will also be considering the Village of Anmore's application to the Province of British Columbia for membership in the GVS&DD.

If the MVRD Board ultimately accepts the Regional Context Statement, the GVS&DD Board will be able to consider the Village of Anmore's application for membership in the GVS&DD with the understanding that the requested extension of sewer servicing will be consistent with the policies of *Metro 2040*. Alternatively, if the Regional Context Statement is not accepted, the GVS&DD Board will need to consider the implications of the Village of Anmore's application for membership in the GVS&DD, as the application for membership and expansion of the sewer area will be in conflict with the policies of *Metro 2040* and will require further consideration by the MVRD Board of the exception provisions of *Metro 2040* to allow the connection of regional sewerage servicing for a public health or environmental contamination reason, or whether such a sewerage extension would have an impact on the intent of the Rural land use designation.

ALTERNATIVES

1. That the MVRD Board accept the Village of Anmore's amended Regional Context Statement as submitted to Metro Vancouver on January 11, 2019.

2. That the GVRD Board not accept the Village of Anmore's Regional Context Statement, indicating the provisions to which the Board objects and the reasons for objection, and request the Village of Anmore amend its Regional Context Statement and re-submit it to the Board for consideration.

FINANCIAL IMPLICATIONS

If the MVRD Board chooses Alternative 1, there are no financial implications to the MVRD related to the acceptance of the Village of Anmore's Regional Context Statement. If the MVRD Board chooses Alternative 2, a dispute resolution process may take place as prescribed in the *Local Government Act*.

The cost for this dispute resolution is prescribed based on the proportion of assessed land values. Metro Vancouver would be responsible for most of the associated costs.

There are financial implications associated with the request for membership in the GVS&DD. These implications will be presented separately in the March 14, 2019 report to the Liquid Waste Committee.

SUMMARY / CONCLUSION

The Village of Anmore is seeking to amend its Regional Context Statement to include the Anmore Green Estates site within the Urban Containment Boundary and to designate it as General Urban. Village Council has also submitted a formal request to the GVS&DD Board seeking support to become a member of the Greater Vancouver Sewerage and Drainage District and to connect the 51 existing residential units of Anmore Green Estates to the regional sewerage system. The requested sewer connection via Port Moody is intended to address the environmental and public health concerns related to the development's failing septic sewage treatment system and not to provide excess servicing capacity that could accommodate additional development.

The proposed General Urban designation and an adjustment to the Urban Containment Boundary is being proposed:

1. to address the urgency of the need to address the environmental and public health risk of the failing septic system;
2. to more accurately reflect that the existing Anmore Green Estates development is a significantly different density and form that the semi-rural and rural development densities seen in the other areas of the municipality; and
3. as this is the only site that is intended to be connected to regional sewerage servicing and it is only to service an existing development.

There are no consequential impacts on the intent of *Metro 2040*'s urban containment objectives as no new development will result. Therefore, staff are recommending Alternative 1, that the MVRD Board accept the Village of Anmore's amended Regional Context Statement to set the stage for the GVS&DD to consider support for Anmore's membership in the GVS&DD, and facilitate the sewer connection to address the Province's Pollution Abatement Order.

Attachment: Correspondence re Village of Anmore Official Community Plan Amendment Bylaw No. 590-2019 from Village of Anmore, dated January 11, 2019 *(orbit doc #28305307)*

28538078

ATTACHMENT

VILLAGE OF
ANMORE

January 11, 2019

Chris Plagnol
Corporate Officer
Metro Vancouver
Metrotower III, 4730 Kingsway
Burnaby, BC V5H 0C6

Dear Mr. Plagnol:

Re: Village of Anmore Official Community Plan Amendment Bylaw No. 590-2019

The Village of Anmore Council recently passed the following resolution at its January 8, 2019 Regular Council meeting:

"THAT Council:

a. ***Give 1st reading to Village of Anmore Official Community Plan Amendment Bylaw 590-2019;***
b. ***Refer Village of Anmore Official Community Plan Amendment Bylaw 590-2019 to the City Port Moody, the Village of Belcarra, and School District No. 43 for comment;***
c. ***Submit the proposed amendment to Anmore's Regional Context Statement comprised of a regional land use designation change from Rural to General Urban for the Anmore Green Estates property, and a corresponding extension of the Urban Containment Boundary to the Metro Vancouver Board for acceptance; and***
d. ***Request the Greater Vancouver Sewerage and Drainage District Board support the Village of Anmore becoming a member of the Greater Vancouver Sewerage and Drainage District and, subject to becoming a member, expand the sewerage area to include the footprints of the existing 51 homes at Anmore Green Estates;***

AND THAT no further steps be taken until such time as the Memorandum of Understanding is in place with Anmore Green Estates Strata."

2697 Sunnyside Road
Anmore, BC V3H 5G9
anmore.com

Attached is a copy of the Official Community Plan Amendment Bylaw, which contains the amendments to the Regional Context Statement, and the accompanying staff report outlining the Village's rationale.

The Village has been working with the appropriate Metro Vancouver staff and they are aware that these requests would be forthcoming. Should there be any further questions on this matter please feel free to contact our Manager of Development Services, Jason Smith, at 604-469-9877 or jason.smith@anmore.com.

Sincerely,

Juli Halliwell
Chief Administrative Officer
T 604-469-9877
juli.halliwell@anmore.com

Attachment: Report to Council dated January 4, 2019

Cc: Carol Mason, Commissioner/Chief Administrative Officer
Neal Carley, General Manager of Planning & Environment
Peter Navratil, General Manager of Liquid Waste
Jessica Beverley, Corporate Solicitor

VILLAGE OF ANMORE

REPORT TO COUNCIL

Date:	January 4, 2019
Submitted by:	Jason Smith, Manager of Development Services
Subject:	Anmore Green Estates – Membership in the Greater Vancouver Sewage and Drainage District, Official Community Plan and Regional Context Statement Amendment

Purpose / Introduction

The purpose of this report is provide Council with the opportunity to initiate the many processes required to connect Anmore Green Estates to the regional sewer system. To connect Anmore Green Estates to the regional sewer system will necessitate becoming a member of the Greater Vancouver Sewage and Drainage District, amending the Village's Official Community Plan and Regional Context Statement

Recommended Option

THAT Council request that staff advise the Anmore Green Estates Strata that the Village of Anmore is willing and ready to proceed with connecting the existing 51 homes at Anmore Green Estates to the Greater Vancouver Sewerage and Drainage District sewerage system; but that the Village will only proceed once there is a Memorandum of Understanding between the Village and the Anmore Green Estates Strata in order to ensure that all parties are equally committed to resolving the sewage treatment issue at Anmore Green Estates.

Background

There has been long standing issues surrounding the treatment of sewage at Anmore Green Estates (AGE). AGE is made up of 51 homes whose sewage is treated by a community septic system and field. The AGE strata operates a community septic system under a permit issued by the Ministry of Environment and Climate Change Strategy (the Ministry). The Ministry is solely responsible for the regulation and enforcement of sewage treatment under this permit.

A Pollution Abatement Order was issued in November 2017 by the Ministry in response to reported leakage of sewage onto the neighbouring school site. This Pollution Abatement Order required the AGE Strata to develop an action plan to address the immediate pollution on the school site and to hire their own engineers to devise a long term solution for treating their sewage.

Through the winter and spring of 2018 the Ministry required the AGE strata to hire a series of engineers to make recommendations and to conduct a peer review. This was a Ministry led process and the Village of Anmore had no jurisdiction to become involved in this process.

In May 2018, the final engineering reports were provided to the Ministry, as well as the peer review. The conclusion of those reports was that, from a strict engineering perspective, the most viable solution was to connect AGE to the Greater Vancouver Sewerage and Drainage District (GVS&DD) system via Port Moody. Those reports did not consider or address the Village's Official Community Plan (OCP), the fact that the Village of Anmore was not a member of GVS&DD, the requirements for membership in the GVS&DD or Metro Vancouver's Regional Growth Strategy. The Village had raised those concerns with the Ministry throughout the winter and spring of 2018 and they were not addressed. The Village, after receiving the final engineering reports and recommendations, asked repeatedly for clarification, through the Ministry, on why on-site solutions were dismissed by the engineers hired by the AGE strata. These requests for clarifications were never addressed by the Ministry or the AGE strata.

Having gotten no further information from the Ministry, the Village of Anmore Council chose to begin consideration of the various processes that would be required to be completed in order to connect AGE to the GVS&DD system. One of the first processes that would need to be undertaken would be to address the Village of Anmore's OCP and Regional Context Statement (RCS) contained within it.

The Village has been in communication, since early December, with representatives from the AGE strata to come to an agreement regarding a Memorandum of Understanding (MOU). The purpose of the MOU is to come to an agreement on the high level of principles of how to move forward with resolving the sewage issues at AGE and that both parties are equally committed. The Village continues to wait to hear back from the AGE strata on whether they are ready to proceed.

Discussion

Current OCP Policy

The current OCP states in Policy MS-7 that "During the time frame of this Plan, the Village will not develop a municipal-wide sewer system." The Village of Anmore Council has interpreted that policy to be an articulation of the Village's longstanding policy that the Village is a semi-

rural community where residents are responsible for treating their own sewage through on-site systems.

The lack of urban level sewer services is a means of preserving the semi-rural character of the Village as this places limits on the density of development. This lack of urban services supports the maximum permitted density in the OCP of 2 units/acre.

Current RCS

The current Regional Context Statement (RCS), which forms part of the Village's OCP, utilizes Metro Vancouver's Regional Growth Strategy (RGS) policies to support Village OCP policies to restrict the expansion of regional sewer services by designating all of the Village with a Rural land use designation in the RGS. The Village believes that the Rural designation is appropriate for the semi-rural densities that the Village anticipates in its OCP and the intent to have development treat its sewage on-site.

The one exception in the RCS is the Eagle Mountain Middle School Site, which is designated General Urban and is located within the Urban Containment Boundary. This site was connected to the GVS&DD system after an amendment to the RGS in 2012 re-designating the site from Rural to General Urban. The rationale for that amendment was that the urban services could only be provided to urban areas.

OCP and RCS Amendments for Anmore Green Estates

The Village of Anmore Council has directed staff to begin the processes to connect AGE to the GVS&DD system. The following outlines the necessary OCP and RCS amendments that are required to facilitate this.

1. Add words in italics to Policy MS-7 "*The Village will join the Greater Vancouver Sewage and Drainage District to accommodate the connection of Anmore Green Estates to the Greater Vancouver Sewage and Drainage District System.* During the time frame of this Plan, the Village will not develop a municipal-wide sewer system" (**Attachment 1**)
2. Amend Map 3: Regional Context Statement Map to change the lots compromising Anmore Green Estates from a Rural regional land use designation to a General Urban regional land use designation and amend the Urban Containment Boundary to include the properties.

Rationale for Amendments

The primary rationale for the amendments to the OCP is to accommodate connection of AGE to regional sewer system. The amendment will not enable any new development and it will simply allow the existing AGE development to address environmental and public health concerns related to the treatment of sewage.

The regional General Urban designation is appropriate because in the Anmore and neighbouring contexts, this is urban level density, the existing density of 4 units/acre at AGE exceeds the semi-rural densities found in the rest of Anmore. These densities and the fact that it will be served by urban level services (both sewer and water) make the General Urban designation appropriate.

The Village wants to make a clear distinction between General Urban and Rural to signal its intent to remain a semi-rural community and support the objectives of the RGS. Designating the AGE site will serve to reinforce that important distinction. This premise is further reinforced by the OCP policies and zoning in place for the surrounding properties that will keep those properties semi-rural and curtail any risk of further urban expansion.

The Village is proposing not to pursue a full RGS Type 2 amendment process to change the regional Urban Containment Boundary and the regional land use from Rural to General Urban. There are several reasons for this choice:

1. There are no consequential impacts to this amendment in terms of development. The amendment is only to allow for the expansion of the regional sewer system to service existing development (51 units) and will not facilitate any new development
2. The connection to the regional sewer system is the only viable means, according to the engineering reports provided to the Village through the Ministry's Pollution Abatement Order process, to address public health and environmental issues created by the sewerage generated at AGE.
3. It is the Village's view, that there is no regional significance to the proposed amendments and that a full RGS amendment process is not warranted in this case and would not be an effective use of public resources.

Public Consultation

Section 475 of the *Local Government Act* requires specific consideration be given to consultation on the proposed amendment:

1. Whether the opportunities for consultation with one or more of the persons, organizations and authorities should be early and ongoing. Given this amendment will only enable AGE to connect to the regional sewer system, that there will be no further development on the site or consideration of expanding the sewer area, and that the AGE strata is fully aware of what is taking place – staff would not recommend any further consultation beyond a mail drop to the community explaining what is taking place at AGE.
2. The Metro Vancouver Board will have a direct say on this matter through consideration of the Village's RCS and therefore staff would not recommend any further consultation with them.
3. The scope and impact of this amendment is very limited and therefore staff do not recommend and consultation with the boards of any regional district that is adjacent to the area covered by the OCP.
4. In terms of consultation with adjacent municipalities, staff recommend sending the amendment to the City of Port Moody, who will have a direct role in the resolving this matter, and to the Village of Belcarra. Given that this amendment will only enable AGE to connect to the regional sewerage system, that there will be no further development on the site or consideration of expanding the sewer area staff do not recommend referring this amendment to any of other local governments.
5. Given that this amendment will only enable AGE to connect to the regional sewerage system, that there will be no further development on the site or consideration of expanding the sewer area, staff do not recommend consultation with First Nations.
6. Staff recommend sending the amendment to School District No. 43 for comment as they will have direct role in resolving this matter. The GVS&DD Board will also be involved through the request to support the Village's request for membership in GVS&DD and the subsequent amendments to the regional Fraser Sewerage Area that they will need to make in order to connect AGE to the regional sewerage system – therefore staff do not recommend consulting with the GVS&DD Board on this matter.
7. Staff do not see the need to consult with the Provincial or Federal governments on this amendment. The impacted provincial ministries will have direct involvement in the connection process and have been consulted on this matter already.

In summary, staff recommend the following consultation plan for this OCP amendment. That a one page issue summary be sent to all residents of Anmore outlining the Village's intent, why it is pursuing this matter and encouraging residents to provide comments to Council. This summary should be delivered through a mail drop, distributed through social media and posted on the Village's website.

The OCP amendment should be referred to the Village of Belcarra, City of Port Moody and School District No. 43 for comment prior to the public hearing.

Process Timelines

Here is an overview of possible timelines, should Council initiate the process at their January 8, 2019 regular Council Meeting:

Item	Agency Responsible	Date	Comments
OCP Amendment 1st Reading	Village of Anmore	January 8, 2019	Refer amendment to neighbouring jurisdictions as outlined
OCP Amendment 2nd Reading	Village of Anmore	March 5, 2019	Set date for public hearing
Public Hearing, possible 4th Reading	Village of Anmore	March 19, 2019	
Regional Planning Committee Review of RCS*	Metro Vancouver Regional District	February 2019	
Acceptance of RCS*	Metro Vancouver Regional District Board	February 22, 2019	
GVS&DD Board motion to support Anmore's membership in GVS&DD*	GVS&DD Board	February 22, 2019	Required to apply to Province for membership

Timeline is subject to the Metro Vancouver Regional District and GVS&DD Boards' scheduling

Once the RCS is accepted and the Village has received GVS&DD Board support for its membership in the GVS&DD, the Village would need to apply to the Ministry of Municipal Affairs and Housing for an Order In Council to be made by Cabinet to officially become a member of the GVS&DD. This process is estimated to take between 3-6 months.

Options

The following options are presented for Council's consideration:

1. THAT Council:
    a. Request, through the Minister of Municipal Affairs and Housing, that the Province of British Columbia make the Village of Anmore a member of the Greater Vancouver Sewage and Drainage District;
    b. Give 1st reading to Village of Anmore Official Community Plan Amendment Bylaw 590, 2019;
    c. Refer Village of Anmore Official Community Plan Amendment Bylaw 590, 2019 to the City Port Moody, the Village of Belcarra, and School District No. 43 for comment;
    d. Submit the proposed amendment to Anmore's Regional Context Statement comprised of a regional land use designation change from Rural to General Urban for the Anmore Green Estates property, and a corresponding extension of the Urban Containment Boundary to the Metro Vancouver Board for acceptance; and
    e. Request the Greater Vancouver Sewerage and Drainage District Board support the Village of Anmore becoming a member of the Greater Vancouver Sewerage and Drainage District and, subject to becoming a member, expand the sewerage area to include the footprints of the existing homes at Anmore Green Estates.

OR

2. THAT Council request that staff advise the Anmore Green Estates Strata that the Village of Anmore is willing and ready to proceed with connecting the existing 51 homes at Anmore Green Estates to the Greater Vancouver Sewerage and Drainage District sewerage system; but that the Village will only proceed once there is a Memorandum of Understanding between the Village and the Anmore Green Estates Strata in order to ensure that all parties are equally committed to resolving the sewage treatment issue at Anmore Green Estates.

OR

3. THAT Council advise staff of how they would like to proceed.

Financial Implications

There will be financial implications for the recommended options. The financial implications of these options should be recoverable through the Memorandum of Understanding (MOU) that the Village is negotiating with the AGE strata. A primary principle of MOU is that all of the costs associated with connecting AGE to the regional sewer system will be paid for by the AGE strata. Therefore staff time, legal fees and any costs for the public hearing will be paid for by the AGE strata.

Attachments:

1. Village of Anmore Official Community Plan Amendment Bylaw 590, 2019

Prepared by:
Jason Smith Manager of Development Services
Reviewed for Form and Content / Approved for Submission to Council:
Chief Administrative Officer's Comment/Concurrence **Chief Administrative Officer**

VILLAGE OF ANMORE

BYLAW NO. 590-2019

A bylaw to amend the Official Community Plan

WHEREAS the *Local Government Act* authorizes a municipality to amend its community plan from time to time;

NOW THEREFORE the Municipal Council of the Village of Anmore, in open meeting assembled, enacts as follows:

1) That this bylaw may be cited for all purposes as "Village of Anmore Official Community Plan Amendment Bylaw No. 590-2019".

2) That Village of Anmore Official Community Plan Bylaw No. 532, 2014 be amended as follows by replacing Policy MS-7 with the following text:

   "The Village will join the Greater Vancouver Sewage and Drainage District to accommodate the connection of Anmore Green Estates to the Greater Vancouver Sewage and Drainage District System. During the time frame of this Plan, the Village will not develop a municipal-wide sewer system"

3) Replace Map 3: Regional Context Statement Map with the map attached as Schedule A to change the lots compromising of the 51 existing homes at Anmore Green Estates from a Rural designation to an Urban designation within the Urban Containment Boundary.

READ a first time the	day of,	2019
READ a second time the	day of,	2019
PUBLIC HEARING HELD the	day of,	2019
READ a third time the	day of,	2019
ADOPTED the	day of,	2019

_____

MAYOR

_____

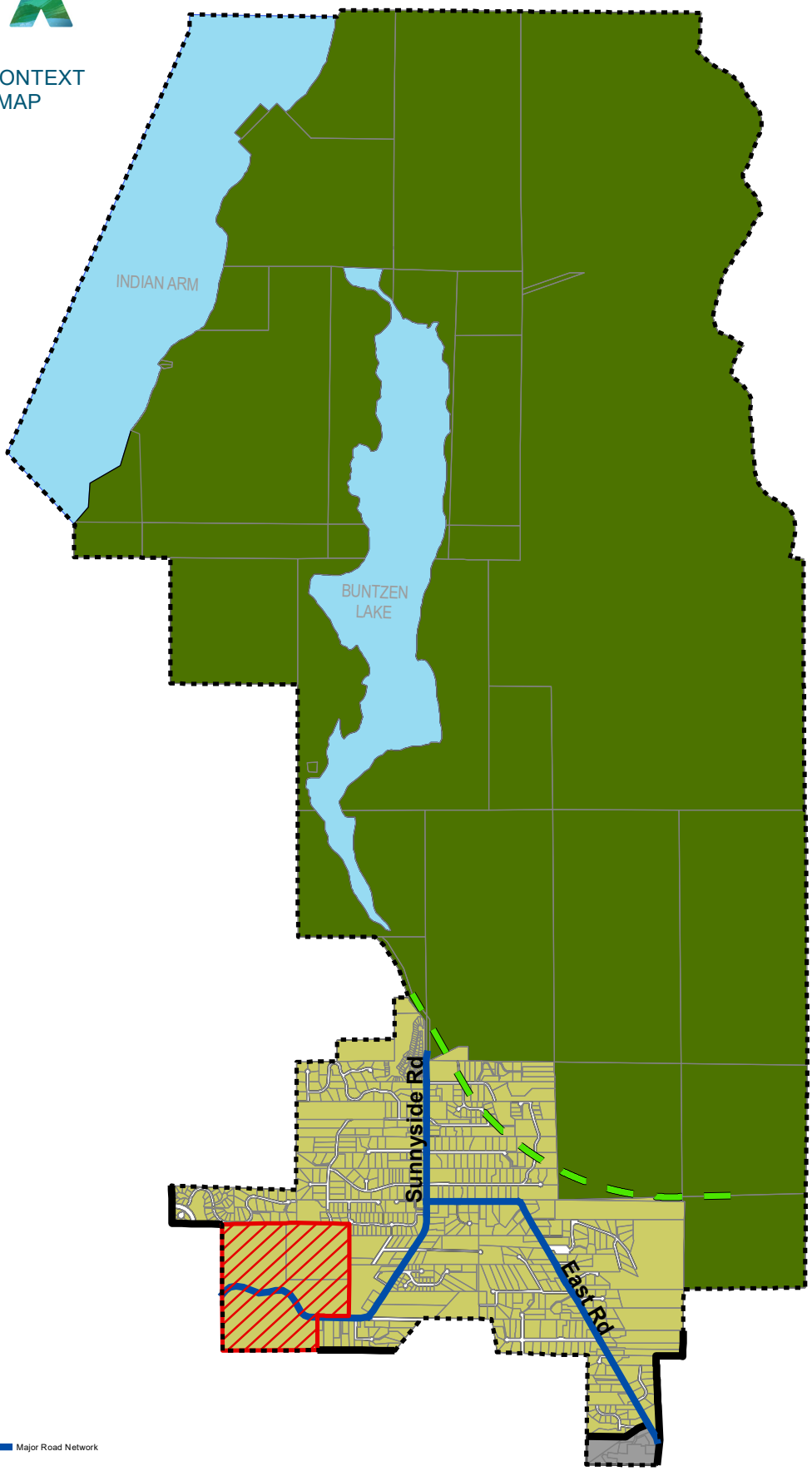
CORPORATE OFFICER

Certified to be a true and correct copy of the "Village of Anmore Official Community Plan Amendment Bylaw No. 590-2019" adopted by the Municipal Council of the Village of Anmore the [DATE] day of [MONTH, YEAR].

CORPORATE OFFICER

VILLAGE OF ANMORE

MAP 3: REGIONAL CONTEXT STATEMENT MAP



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Legend

- General Urban
- Rural
- Conservation & Recreation
- SpecialStudy
- Major Road Network
- Urban Containment Boundary
- Regional Greenway Network
- Municipal Boundary

metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Regional Planning Committee

From: Gord Tycho, Senior Planner, Regional Planning

Date: February 6, 2019 Meeting Date: March 8, 2019

Subject: **Office Development in Metro Vancouver's Urban Centres – 2018 Update**

RECOMMENDATION

That the MVRD Board:

a) receive for information the consultant report attached to the report dated February 6, 2019, titled "Office Development in Metro Vancouver's Urban Centres - 2018 Update";
b) endorse the recommendations for Metro Vancouver as set out in the report dated February 6, 2019, titled "Office Development in Metro Vancouver's Urban Centres - 2018 Update"; and
c) distribute the report to member jurisdiction Council for information.

PURPOSE

To provide the Regional Planning Committee and MVRD Board with the 2018 Office Development in Metro Vancouver's Urban Centres report.

BACKGROUND

The 2018 Office Development in Metro Vancouver's Urban Centres (Office Development) report is an update to the previous report completed in 2015. It explores the factors that influence regional-scale office development and occupancy decisions, identifies challenges and opportunities for office potential in Metro Vancouver's Urban Centres, and identifies key issues and trends affecting office space.

METRO VANCOUVER 2040 CONTEXT

Office space accommodates the growth of businesses and employment within Metro Vancouver's local communities and broader region. Office space is built by developers that respond to the market signals of demand and supply and changes to the local, provincial, national and, in some cases, international economies.

The Metro Vancouver region is forecast to grow by approximately one million people and four hundred thousand jobs by 2041. To protect the region's ability to attract investment and jobs, *Metro Vancouver 2040: Shaping Our Future (Metro 2040)*, the regional growth strategy, establishes regional land use designations and overlays. Office and commercial uses are directed to Urban Centres and Frequent Transit Development Areas, generally located on lands designated General Urban.

The 26 Urban Centres identified by *Metro 2040* are intended as priority locations for employment and services, higher density housing, commercial, cultural, entertainment, institutional, and mixed-uses. Urban Centres are intended to emphasize place-making, an enriched public realm, and promote transit-oriented communities, where transit, cycling, and walking are the preferred modes of transportation. The regional policy direction of *Metro 2040* also responds to office projects developed

outside of Urban Centre locations, such as in suburban office parks, which can have negative impacts on land use and transportation patterns for the region.

UPDATED OFFICE DEVELOPMENT REPORT

A planning consultant, Eric Aderneck, was contracted by Regional Planning to complete an update of the Office Development report that was published in 2015. The purpose of the Office Development report is to explore the factors that influence regional-scale office development and occupancy decisions, identify challenges and opportunities for office potential in Metro Vancouver's Urban Centres, and to identify the key issues and trends affecting office space with a view to better informing government plans and policies with respect to office development in the region.

Methodology and Key Questions

Given that no single source can accurately capture the complexities of office space trends and characteristics throughout the region, the updated data used in the report was obtained by undertaking:

- a review of relevant publications;
- the compilation of a Metro Vancouver regional office building inventory[1]; and,
- in-depth interviews with key industry participants, including investors, developers, brokers, and municipal staff.

The key research questions explored in the Office Development report are:

- What are the regional trends for office development location?
- What are the benefits of locating office space within/outside of urban centres, respectively?
- How are office market trends evolving? and
- What tools do governments have to support office development in urban centres?

Office Market Profile and Regional Characteristics

The Metro Vancouver market, according to industry publications, has approximately 65,000,000 sq.ft. of office inventory[2] and a range of different business sectors. Approximately 8% is defined as Class AAA[3] (top quality), 77% is Class A and B (average quality), and 16% is Class C. Lands designated General Urban by *Metro 2040*, which are intended to accommodate a wide variety of land uses (including commercial), hold 76% of the office inventory in the region. The remainder is located on a variety of *Metro 2040* land use designations, most of which is Mixed Employment (21%). Most office spaces (88%) are located within either Urban Centres or within 400 metres of the Frequent Transit Network bus network or within 800 metres of a rapid transit service. The 17 designated Municipal Town Centres contain relatively limited amounts of office space (i.e. 6% of the region's total).

[1] Office Building Inventory includes all buildings in the region with a minimum 10,000 sq.ft. of office space.
[2] Office Building Inventory totals 80,000,000 sq.ft., as it also includes smaller / institutional buildings.
[3] Office Class is a function of the quality and location of the accommodation.

Sub-regional Characteristics
Compared to other North American markets, the Metro Vancouver market has fewer large head offices and has many smaller-sized office tenants. Each of the regional sub-markets has its own characteristics, i.e.:

- Vancouver (specifically the Central Business District in downtown and surrounding "core") is the business centre for the region and province. Significant numbers of businesses also locate along the Broadway Corridor. Vancouver contains 58% of the region's office market;
- Burnaby represents the next largest market (16%) for office space, with a considerable amount being in the Metrotown area; and
- Surrey (8%), Richmond (8%), North Shore (4%), New Westminster (3%), Langley (2%), and Coquitlam (1%) respectively comprise the remainder of the region's office market inventory.

Office Vacancy Rates
Office vacancy rates in Metro Vancouver have declined over the past three years, to approximately 5% (Q3 2018), and may approach record lows in the near future. Vacancy rates in all of the markets have been dropping and that trend is expected to continue as leasing opportunities diminish. Downtown Vancouver is anticipated to continue with one of the lowest rates seen in North America.

Office Lease
Lease rates have climbed sharply in markets that have space in high demand. Lease rates in downtown Vancouver, already among the highest in Canada, increased in 2018 and are expected to continue to rise through 2019. Lease rates in downtown Vancouver for Class AAA space were averaging $48 per sq.ft. (late 2018) versus $34 per sq.ft. (2014). Growth of lease rates in the suburban markets has been smaller. Tenants seeking large blocks of space will likely need to pre-lease space in the next wave of development or backfill space vacated by tenants who relocate.

New Office Supply
A number of major office development projects are currently underway in the region. The largest wave of new downtown Vancouver office development will have 4.3 million sq.ft. of space delivered by 2022, an almost 20% increase to the current downtown inventory. In the rest of the region, there is another 1 million sq.ft. currently anticipated for delivery between 2020 and 2022.

Office Tenant Considerations
Office tenants are not all the same and variation is observed in business types, accommodation needs, and local characteristics. Some tenants require locations in downtown Vancouver, some serve their local community, and others prefer a business park environment. Some accommodation criteria include: business objectives, space design, amenities, financial, and access.

Office Developer Considerations
The office development process is complex, capital intensive, and high risk. Large office buildings (towers) are constructed all at once (with few exceptions), making the supply of new space very "lumpy". Conversely, low rise buildings can be built and leased in phases to match demand.

There are many different factors that can impact the development viability of sites and the potential for an office component on that site, including: land availability, land cost, construction cost, municipal approvals, and application process cost. The market is the main driver for office building viability. If demand is weak, there will be limited new office space developed. Local government plans directing office space to specific locations will likely not be realized if the market demand does not support that endeavour.

Office Development from a Municipal Perspective
Office development provides space for businesses, which helps to advance municipal objectives such as growing the economy and employment, reducing commuting distances, creating complete communities, and complementing local amenities. Municipal governments, through their economic development and planning functions, can encourage and regulate development in their communities, including directing office development to Urban Centre locations.

Government policies and tools, such as fiscal tools and density bonuses, may have a minor impact on influencing office development decisions in the face of market demand. The regional office market is limited and grows incrementally; downtown Vancouver and the more urban areas of the region are unique sub-markets, making it challenging to attract office development to other Urban Centres throughout the region.

Headquarters and Other Trends
Metro Vancouver has a relatively limited corporate headquarter presence compared to the other cities, adjusted for population. Other noted trends in the Office Development report include:

- There has been significant growth in the tech sector, with large companies occupying large blocks of office space, premium accommodations, and amenities in downtown Vancouver;
- Tenants increasingly prioritize access to rapid transit service and urban amenities. That said, some tenants still prioritize cost and highway accessible areas outside Urban Centres;
- The demand from a range of tenants for space and lease flexibility is being met by the significant growth in co-working facilities;
- Strata development projects are rising relative to conventional lease tenure. The former can make non strata and lease development financially unviable by driving up residual land prices; and
- There is a continued trend towards open concept office with more attention being paid to design to encourage collaboration and achieve space efficiencies.

Future Considerations for Office in Urban Centres
The consultant report identifies a range of future considerations for Metro Vancouver, member jurisdictions and the development community to support the location of office development in Urban Centres. The issues most consistently expressed in interviews and supported by research, and which should be addressed in the shorter term with a relatively high potential for effectiveness, include:

- **Land Use Planning** - Encourage, but not mandate, mixed-use projects with office components. Rather, allow market demand to inform the supply of office development in specific locations.

- **Zoning Definition** - Allow general office uses, rather than overly specific and limiting types of office business uses, which can reduce tenanting flexibility and thus increase risk for office developers.
- **Tenant Permits** - Shorten and simplify the permitting process for basic improvements needed when new office tenants occupy a premise and operate a business.
- **Development Approval Process** - Streamline the development review and approval process, reduce the uncertainties and risks, and manage municipal charges and fees to encourage office development.
- **Municipal Incentives** - Explore financial or regulatory incentives to encourage office development in specific locations.
- **Research** – Undertake further relevant research and prepare case studies, best practices and innovation profiles on topics such as mixed-use development; e.g. identify opportunities to integrate office space into mixed-use projects, and also identify where office components are warranted (or not).

RECOMMENDATIONS FOR METRO VANCOUVER

The consultant's report outlines a number of priority actions based on the research and the interviews undertaken in the process of completing the report. The actions are summarized in terms of those directed to Metro Vancouver, member jurisdictions, developers, and other organizations to encourage and facilitate office development in Urban Centres.

Of the identified actions, staff recommend that the following subset be supported by Metro Vancouver to guide ongoing efforts to encourage office development in Urban Centres:

1. Encourage the Regional Context Statements of member jurisdictions, as they are updated, to include supportive plans and policies that direct investment and encourage office development in Urban Centre locations over out-of-centre locations;
2. Work with member jurisdictions and other stakeholders to consider new policy directions that support the goal of attracting office development to Urban Centres;
3. Continue to collect and share data, statistics and other information resources about Urban Centres that may be of use to the planning efforts of member jurisdictions, business investors, developers and tenants (e.g. update the inventory of office buildings in the region and the Office Development in Metro Vancouver's Urban Centres report regularly);
4. Continue to research and share information on best practices and case studies regarding new and innovative ways that various levels of government and the private sector encourage office development in Urban Centres;
5. Consider new or strengthened policies in *Metro 2040* that better encourage or require office development in Urban Centres as part of the Urban Centre and Frequent Transit Development Area policy review project currently underway;
6. Work closely with TransLink to continue to provide and improve transit infrastructure that supports office and job growth in Urban Centres and, where appropriate, new or improved service to existing office parks that may not be currently well-served with transit; and
7. Continue to support more coordination on economic development issues at the regional level by: collecting, analyzing and sharing data; undertaking research; and convening member jurisdictions to share challenges, opportunities and research in an effort to support and supplement efforts at the municipal level.

In addition, municipalities may find the information and recommendations directed to them to be useful, and as a result, staff are recommending the report be distributed to member jurisdictions.

ALTERNATIVES

That the MVRD Board:

a) receive for information the consultant report attached to the report dated February 6, 2019, titled "Office Development in Metro Vancouver's Urban Centres - 2018 Update";
b) endorse the recommendations for Metro Vancouver as set out in the report dated February 6, 2019, titled "Office Development in Metro Vancouver's Urban Centres - 2018 Update"; and
c) distribute the report to member jurisdiction Council for information.

2. That the MVRD Board receive for information the report dated February 6, 2019, titled "Office Development in Metro Vancouver's Urban Centres - 2018 Update".

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

SUMMARY / CONCLUSION

Office space accommodates the growth of businesses and employment within Metro Vancouver's local communities and broader region. The Office Development in Metro Vancouver's Urban Centres report is an update to the previous report completed in 2015. It explores the factors that influence regional-scale office development and occupancy decisions, identifies challenges and opportunities for office potential in Metro Vancouver's Urban Centres, and identifies key issues and trends affecting office space

The Metro Vancouver market has approximately 65,000,000 sq.ft. of office inventory and a range of different business sectors, with the City of Vancouver containing the majority of the inventory. While office vacancy rates are declining and are now at approximately 5% which is approaching historic lows, a number of major office development projects are currently underway in the region, with most delivery anticipated between 2020 and 2022. The decisions surrounding the development of office space are complex, capital intensive, and high risk, involving factors such as land availability and cost, construction cost and municipal approvals. Government policies, tools and economic development initiatives can influence office development decisions, but the participation by all stakeholders is required to achieve success.

In consideration of the recommendations from the consultant report, staff are recommending that a subset of actions be undertaken by Metro Vancouver to support the efforts of member jurisdictions in encouraging office development in Urban Centres. As a result, staff recommend Alternative 1, that the MVRD Board endorse the recommendations set out in the staff report, and distribute the consultant report to member jurisdictions for information.

Attachment: Office Development in Metro Vancouver's Urban Centres, dated January 2019
(orbit doc #28488422)

Office Development in Metro Vancouver's Urban Centres - 2018 Update

Prepared by:
Eric Aderneck, Planning Consultant
eric@aderneck.ca / 604-721-5528

December 2018

Executive Summary

Advancing Regional Planning Goals

Actions to encourage office development in Urban Centres and areas well served by transit are key elements of the region's regional growth strategy – *Metro Vancouver 2040: Shaping Our Future (Metro 2040*). Regional policy direction in *Metro 2040* responds to office projects developed outside of Urban Centre locations, such as in suburban office parks, which can have negative impacts on land use and transportation patterns for the region.

Office space accommodates growth of businesses and employment within the local community and larger region. These accommodations, in the form of office buildings are built by developers who respond to market signals such as demand and supply.

Focusing office development in Urban Centres benefits the regional transportation system and livability in a number of ways: by supporting the development of complete communities, reducing vehicle commutes and employee transportation costs, protecting lands for other uses, complementing commercial and residential land uses, and increasing the vibrancy and success of Urban Centres.

Planning policy and market forces are partially aligned. Office tenants increasingly appreciate locations that are well served by rapid transit and urban amenities, while still in some cases highway access and suburban sites are desired. There have been significant new office development projects in downtown Vancouver, responding to the strong tenant demand, especially by the growing number of tech companies who need to be located by urban amenities to attract and retain talented workers.

This report explores the factors that influence regional-scale office development and occupancy decisions, and identifies challenges and opportunities for office potential in Metro Vancouver's Urban Centres. The report identifies key issues and trends affecting office space to better inform government plans and policies.

The report was informed through an investigation of the market and planning factors that influence the location, type, and amount of office development and occupancy in Metro Vancouver. Information about the office market and the office development process was gathered through a review of relevant publications, compilation of a comprehensive inventory database of office buildings in the region, and in-depth interviews with experienced industry participants, including major office investors, developers, tenants, and brokers, and municipal planning and economic development staff.[1]

Office Inventory Summary

Based on the comprehensive inventory prepared by Metro Vancouver, at the end of 2018, there were approximately 80 million sq ft of office space in the region located within 1,392 buildings with more than 10,000 sq ft of office space. For clarity, individual buildings with 10,000 sq ft of office space (or less) have been excluded from the inventory, as they are challenging to measure and likely comprise only a small component of the total inventory.

- Approximately half (44% of buildings and 52% of floor area) of the office inventory is located in the City of Vancouver, with other notable sub-regions being Burnaby / New Westminster (18%; 19%), Surrey (12%; 10%), and Richmond (10%; 8%).

[1] Note: The preparation of the earlier version of this report was informed by other interviews at that time, including with office tenants. Comments that are still relevant are retained in the updated version of this report.

- Three-quarters (76%) of the office inventory is located on lands designated *Metro 2040* 'General Urban', which are intended to accommodate a wide variety of land uses including commercial. The remaining office inventory is located on a variety of *Metro 2040* land use designations, most of which (21%) was 'Mixed Employment' lands.
- Most (88%) office space is located within either Urban Centres or within 400 metres of FTN bus / 800 metres of rapid transit service.
- The 55 million sq ft of office space located in the 26 Urban Centres is distributed as follows: the Metro Core (downtown Vancouver and the Broadway Corridor) dominates with a total of 37 million sq ft (67% of Urban Centres); the next largest centres (at less than one-tenth the size) are Metrotown, Surrey City Centre, and Richmond City Centre.
- The 17 Municipal Town Centres contain relatively limited amounts of office space (6% of the region's total), with an average of 290,000 sq ft of office space each.

Recent Office Development Growth

Office development is impacted by many factors, primarily market demand. The office development process (approvals, design, financing, marketing, permitting, construction, and occupancy) is complex and lengthy, and cannot always be fully completed within a single economic / market cycle.

Office building completion rates vary considerably from year-to-year. There was significant office development in the 1990s to 2002. For the 2004-2012 period, development was considerably lower (with the exception of 2009), with another cycle of development peaking in 2015. Part of the significant new office supply in certain markets is due to the lack of development in the preceding period. A number of major projects have advanced, with completions in 2014-2018 (and more expected to 2022), much of it focused in downtown Vancouver.

As of 1990, there was 36 million sq ft of office space in 727 buildings in the region. During the 1990-2018 period, there was a total of 44 million sq ft of office space developed in 665 buildings, which provides for an average of approximately 1.6 million sq ft being developed per year. More than half (55%) of the 44 million sq ft of new inventory was located within 800 metres of rapid transit stations, with 36% located within the Metro Core. Of the new inventory not in Urban Centres (18 million sq ft), 10 million sq ft (57% of total) was proximate to FTN transit service, and 8 million sq ft (43%) was both not in an Urban Centre and not near FTN transit.

A large proportion of existing and new office space in the region is located in the Metro Core, centered in downtown Vancouver, and at other locations with rapid transit service. Smaller Urban Centres are generally attracting only limited office development activity. The data indicates that non-Urban Centre development peaked in the 1990-2009 period. Despite some years with a higher proportion of development in Urban Centre locations, there is not yet a clear long-term trend towards a consistently larger proportion of development occurring in Urban Centres (other than the Metro Core).

Market Trends

A variety of types of office buildings in diverse locations are required for different types of office tenants. The region has relatively few large office tenants (including corporate headquarters) and many smaller ones, which challenges the development of new large-scale office buildings. Although recently there has been significant growth of tech tenants. Ultimately, businesses make their individual decisions and trade-offs about accommodation costs and features.

Market Conditions and Developments

- In the past few years, the office market has been very strong with low vacancy rates and increasing lease rates, spurring considerable new major office developments, especially in downtown Vancouver.
- There has been significant growth in the tech sector, with large companies occupying large blocks of office space, and seeking premium accommodations and amenities found in downtown Vancouver.
- Although there are a number of large high-profile office projects coming to market, there are also smaller or mid-sized office buildings. These buildings serve local areas and may be located throughout the region, not necessarily in Urban Centres or near transit. Demand is limited in smaller Urban Centres with less accessibility and lower levels of transit service.

Tenant Preferences

- Office tenants increasingly prioritize accessibility to rapid transit service and urban amenities, and developers are responding accordingly, which is a change from the more suburban development patterns of the past.
- Not all tenants wish to locate in Urban Centres, as some businesses prioritize highway access or other features, including lower costs.
- Some tenants may prefer an architecturally unique and high-profile building; however, these buildings are less efficient and cost a premium. These businesses seek a high prestige central business district office location (i.e. downtown Vancouver) and are able and willing to pay a premium. Proximity to urban amenities is strongly desired by tech tenants.

Trends

- There has been significant growth in co-working facilities that provide spaces and services to a range of tenant types, namely WeWork and Regus / Spaces, that are responding to the desire for flexibility by business tenants.
- There has been a rise of strata development projects, rather than conventional lease tenure. From a development perspective, strata values can drive up residual land prices to the point where non-strata / lease development is no longer financially viable.
- There is a continued trend towards open concept office design, in order to encourage collaboration and achieve space efficiencies, although with more attention to quality design.

Key Considerations For Office Development

Office market characteristics such as market demand and rental rates, scale, and development potential vary greatly by sub-market. The strengths of the Metro Vancouver regional economy, particularly relating to the office market, include: a 'Vancouver' brand that is well recognized, a boom in the tech sector with large American companies that are locating operations in Vancouver to access an international workforce via Canadian immigration policies, the region being a liveable and desirable place with many amenities, and a strong education system that fosters talent.

Challenges or weaknesses include the high cost of housing and living, as well as high land and construction costs for development, and long and uncertain development approval processes that increase risk for projects.

The main office market of the region, the Vancouver Metro Core comprising downtown Vancouver and the Broadway Corridor, is experiencing strong office demand, which is leading to increasing lease rates and spurring development of additional office space coming to market. This growth is largely driving by demand by expanding tech companies, such as software, that want to be located in the core in order to attract and retain talented employees.

As the population, economic activity and workforce grows in the outer locations, the demand for office space in those areas will also grow. However, this may take a long time, as small communities still have limited scale in terms of population and economic throughput and thus limited office demand. Building new office space in a sub-market without adequate demand may simply steal or re-locate tenants from one part of that sub-market to another, not attract new tenants (i.e. zero-sum).

The best effort to attract tenants to outer Urban Centres may be as a value proposition - lower rents, and offering urban features / amenities but in a different location. However, from a development perspective, construction costs are still high in all locations, and land prices are increasing in all locations. As such, it is difficult to make projects financially viable in outer Urban Centres that experience low office rents and weak office demand. Consequently, most developers are concerned about being 'forced' rather than just 'encouraged' by municipalities to build office space in locations with weak demand, which may lead to long-term vacancies.

Future Considerations For Office In Urban Centres

Based on the research and interviews, the report outlines various actions for consideration by different parties to support office space in Urban Centres. These are organized into two sections in the final chapter of this report: priority actions that can be acted on immediately, and a longer list of other areas for further exploration.

The issues most consistently expressed by interviews and supported by research, and which can be undertaken in the shorter term with relatively high potential of effectiveness are:

- **Development Approval Process** - Streamline the development review / approval process, reduce the uncertainties and risks, and manage municipal charges / fees.
- **Land Use Planning** - Encourage, but do not mandate, mixed-use projects with office components. Rather, allow market demand to inform the supply of office development in specific locations.
- **Zoning Definition** - Allow general office uses, rather than overly specific/limiting types of office business uses, which reduce tenanting flexibility and thus increase risk.

- **Tenant Permits** - Shorten and simplify the permitting process for basic improvements needed when new office tenants occupy a premise and operate a business.
- **Municipal Incentives** - Explore financial or regulatory incentives to encourage office development.
- **Research** - Undertake further relevant research and case studies / best practices / innovation profiles into topics such as mixed-use development, such as identifying opportunities to integrate office space into mixed-use projects, but also identify where office components are warranted (or not).

Developers and tenants want to work with municipalities to build new projects. Generally, the private sector desires municipalities to allow developers the flexibly to build the type of space that is in demand, where warranted, and to allow for high densities to take advantage of 'strong' locations.

In turn, municipalities want to work with developers to build new projects to advance economic goals. Municipalities desire the private sector to, for example, help create spaces for jobs and advance 'complete community' objectives, while also ensuring that development supports infrastructure and amenity investments.

Municipalities in the region continue to make various efforts to attract office development. In some cases, these efforts match market forces, such as in downtown Vancouver where there is strong demand, especially for tech tenants, who seek to locate in areas rich with rapid transit and urban amenities. In other places, market demand is spurring office development at SkyTrain locations that are not necessarily in Urban Centres. In some locations, however, municipalities are encouraging mixed-use development with office space components where developers state that there is very limited office market demand. Where this occurs, some developers feel that this approach introduces office supply in the hopes of generating demand that may or may not materialize.

Nevertheless, as local populations and associated workforces grow, and smaller-scale Urban Centres develop capacity and scale over time, the opportunity for providing local-serving office space will increase in these locations. Substantially, it is market forces rather than government policies that produce office development - potentially prioritizing growth to select areas requires market demand and public sector investment.

Ultimately office development is a large investment decision, with the main factors being: land values, construction costs, and lease rates. There is little that local government can do to significantly impact those factors; other items that municipalities may have influence over are much less impactful.

Table of Contents

1.0 Introduction

1.1 Report Purpose

The purpose of this report[2] is to explore the factors that influence regional-scale office development and occupancy decisions, and identify challenges and opportunities for office potential in Urban Centres. The report is informed through an investigation of the market and planning factors, as well as ongoing trends, which influence the location, type, and amount of office development and occupancy in Metro Vancouver. This research includes detailed analysis of office building development patterns in the region over the past century, and particularly since 1990.

Actions to encourage office development in Urban Centres and areas well-served by transit are key elements of the region's regional growth strategy – *Metro Vancouver 2040: Shaping Our Future (Metro 2040)*. While residential development in the region has been relatively robust in recent years, with a significant amount of this development occurring in Urban Centres, office development has been limited primarily to certain locations. This report includes areas for further exploration and opportunities for Metro Vancouver, its member municipalities, developers and other organizations to work together to advance office development in Urban Centres.

1.2 Methodology and Research Questions

Three main methods were used in preparing this report: information about the office market and the office development process was gathered through a review of relevant publications (See Appendix E: Bibliography); compilation of a comprehensive inventory database of office buildings in the region, and; in-depth interviews with key industry participants, including major office investors, developers, brokers, and municipal staff.

The investigation focused on larger office projects, recognizing that these tend to be the major drivers for new office development and occupation. However, it is recognized that smaller office developers and tenants are also important contributors to office growth.

The following section addresses questions about the state of the office market in Metro Vancouver, planning considerations, office development and tenancy issues and trends, as well as possible actions by the public and private sectors. These research questions are explored and answered in the balance of the report.

1. What are the regional directions and trends for office development location?

Metro 2040, adopted in 2011, directs office development to Urban Centres, continuing the direction established in past regional plans. Focusing office development in Urban Centres benefits the regional transportation system and livability in a number of ways: encouraging transit usage and reducing vehicle commutes and employee transportation costs, protecting lands for other uses such as industrial, complementing commercial and residential land uses, and increasing the vibrancy and success of Urban Centres. It is appropriate for local serving office tenants to be located outside of Urban Centres in Frequent Transit Development Areas and local centres to best serve the needs of neighbouring residents.

Planning policy and market forces are partially aligned. The market appreciates locations that are well served by rapid transit and urban amenities, while still some tenants want highway access with ample parking. In the past, access to highways was a priority for many office tenants, and office developers built accordingly. Increasingly now, office tenants recognize the benefits to their businesses and

[2] This report is an update of the earlier version published in March 2015.

employees of being located near transit (particularly rapid transit stations) and urban amenities in Urban Centre locations.

Specifically, ongoing market trends include:

- The Metro Core (downtown Vancouver and Broadway Corridor) is experiencing significant growth in new supply of large office buildings, and strong demand by tenants (in many cases in the tech sector);
- In other Urban Centres, the supply of new office space is limited or varies;
- Rapid transit station locations are attracting office development, as they can offer the transit accessibility of an Urban Centre, but at lower costs;
- Reflecting market demand, there are relatively few new office parks in the region outside of Urban Centres in locations that have poor transit service and limited amenities; and
- Growth of new forms of office tenure, specifically office strata and co-working.

While rapid transit station accessibility is becoming increasingly desirable, the attractiveness of transit locations is not all the same. Adjacency to a rapid transit station (i.e. SkyTrain) is an improvement over a highway location with limited transit service, but those rapid transit station locations alone do not always provide a mix of supporting land uses and the presence of urban amenities. Urban Centres offer the full range of functions and amenities that stand-alone transit station locations may not provide.

2. What are the benefits of locating office space within Urban Centres?

As stated in *Metro 2040*, Urban Centres are intended to be the region's focal points for concentrated growth and transit service, and priority locations for employment and services, higher density housing, commercial, cultural, entertainment, institutional, and mixed-uses. *Metro 2040* identifies 26 Urban Centres of varying scale, distributed throughout the region.

By locating office space and associated employment in Urban Centres, a number of benefits can be achieved, including:

- Improved access and use of public transit;
- Reduced reliance of vehicle use for commuting and generate less congestion;
- Complementing surrounding retail, residential, and institutional uses;
- Improved access to various amenities for office workers, such as area shops and services;
- Supporting workforce attraction and retention;
- Contributing to surrounding businesses by locating additional employees in the immediate area;
- Contributing to the general vibrancy and success of Urban Centres; and
- Supporting the development of complete communities.

3. What are the problems with locating office space outside of Urban Centres?

Despite longstanding regional policy to direct office growth to Urban Centres, the market pattern during the 1990s was defined by significant new office development locating in suburban office parks outside of Urban Centres, although this has changed more recently.

Typically, these office parks were located in areas far from transit services, and have a much higher proportion of employees who drive to work (90% of employees in office parks, compared to 40% in downtown Vancouver). This dispersed location pattern is challenging from a regional perspective for a number of reasons, particularly with regard to being able to provide an efficient transportation system. Secondly, more driving means more traffic congestion and makes it difficult to meet the region's greenhouse gas emission reduction targets. Thirdly, the creation of office parks came at the expense of the region's limited land supply; often built on land that was once used or designated for industrial

purposes. Finally, locating office jobs and activities in office parks can hamper the growth of the region's Urban Centres. Urban Centres need all types of activities in order to thrive, with employment contributing to their vibrancy and success. For employees, too, being in an Urban Centre is preferable to working in an office park, in terms of both the greater amenities and transportation options. Office tenants are increasingly selecting, and paying a premium for, urban locations in an effort to attract and retain a talented workforce.

4. How are office market trends evolving?

The Metro Vancouver office market is diverse and segmented, and represents a variety of regional locations and different tenant needs. Office development occurs at different types of locations, ranging from the Metro Core to other Regional City Centres, Municipal Town Centres, rapid transit stations, areas with highway access, and elsewhere.

Office tenants increasingly prefer transit-accessible locations; that demand is demonstrated through lower vacancies and higher rents[3]. Businesses are seeking urban locations in order to help attract and retain employees. Responding to the strong demand, numerous major new office developments are currently underway in downtown Vancouver.

Downtown Vancouver, other Urban Centres, SkyTrain stations, urban office parks, and highway-oriented office parks will all continue to serve different types of office markets. However, there is an overall trend towards new developments locating near SkyTrain stations (e.g. Broadway Tech and Marine Gateway in Vancouver, the Brewery District in New Westminster), which fill an important need in the office market.

Despite ongoing and proposed development activity in many markets indicating that transit-accessible locations are increasingly in demand, there remains office parks outside of Urban Centres that are poorly connected to the transit system. These suburban office buildings have been difficult to tenant by landlords, with low rents being one of the main inducements to attract tenants. Although there has been limited office park development in the past decade, these locations can offer larger sites, which allow for greater development options, lower costs, better access to the highway network with ample parking, and other features desired by certain types of office developers and tenants.

Furthermore, office design occupants continue to strive for increased efficiencies in terms of reduced space per worker, which may have transportation impacts in terms of increasing the amount of required parking for a given amount of office floor area (although not increasing parking per worker), transit demand, and building design and the provision of onsite amenities.

5. What tools do governments have to support office development in Urban Centres?

Metro 2040 requires the region's municipalities to prepare Regional Context Statements identifying how local plans will direct office development to Urban Centres. Through Official Community Plans, area plans, zoning and other policies, and as the local approving authority, municipalities can advance this objective. Supplementing market trends, municipalities can approve office development proposals in Urban Centres, and not approve major office development projects in locations outside of Urban Centres. Additionally, in order to encourage office development in desired locations, municipalities can explore reducing barriers and advancing certain tools, such as: pre-zoning land for office use, expediting the development application process, introduce financial and regulatory incentives, and other possible means appropriate for local circumstances.

[3] Jones Lang LaSalle, "Rapid Transit Office Index – Vancouver Research", 2011, 2012, 2013, 2014.

Beyond land use plans and tools, governments at all levels can provide signals to the market about appropriate locations for office development. Providing transportation and other infrastructure at the right locations to support Urban Centre development is important. Businesses want office accommodations that best meet their needs in terms of location, accessibility, facilities, design, amenities, costs, and other criteria. By improving the transit service, urban amenities, and infrastructure offerings in Urban Centres, these locations can become more attractive to office developers and tenants as locations for investment. Decisions by government agencies to situate their office facilities in Urban Centres can also spur further development interest.

1.3 Stakeholder Perspectives

There are a number of different public and private sector stakeholders who influence the development of office space in the region. These groups have different interests and priorities. Government agencies and plans can guide the market and reinforce the benefits of locating office development and jobs in Urban Centres while market trends evolve.

Metro Vancouver, as the regional government, implements the regional growth strategy (*Metro 2040*) so that growth is managed, lands are used efficiently and employment opportunities are distributed appropriately throughout the region, reflecting investments in transportation networks, infrastructure, and centres. This regional goal also means encouraging office development in regionally designated Urban Centres to encourage transit usage, coordinating with other agencies and plans, supporting complementary land uses, and focusing amenities and facilities in the Urban Centres. This development pattern will help support a prosperous and growing economy with office-based employment as an integral part of the functioning of the larger overall economy.

TransLink provides regional transportation services, including transit service and, in conjunction with municipalities, is responsible for the Major Road Network. Transit service supports commuting workers, while the Major Road Network is needed for people and goods movement. TransLink also supports office development in Urban Centres because these areas can be more effectively serviced by transit and more readily accessed by walking and cycling, compared to other locations.

Municipalities wish to attract high-quality development to their communities and are the approving authority for office development projects. From a municipal perspective, office development offers employment opportunities for the resident workforce and taxation revenues for the municipality.

Provincial and Federal Governments advance gateway objectives through the region's transportation system supporting provincial and national economic and trade interests, and invest in major infrastructure. These senior levels of government also encourage and benefit from economic growth through tax revenue and employment levels. Also, government agencies and crown corporations are office space tenants.

Office tenants need space that is functional and affordable, in terms of size and shape, locations, and access/proximate to desired features. Office tenants balance their location preferences and building needs, along with workforce retention and recruitment issues, with financial considerations.

Office developers want to build projects that are successful, profitable, have manageable risks, are acceptable to office tenants, and readily absorbed by the market. Viable developments necessitate balancing the costs and revenues of the project, including land and building construction cost, with land uses, building designs, market demand, and rent levels. Developers want to maximize the potential of a site, such as leasable space, while achieving a reasonable project schedule, approval requirements, and expectations of office tenants.

1.4 Interview Participants

Major office developers, commercial brokers, office tenants, and municipal planning and economic development staff were interviewed to learn about Metro Vancouver's office market. The objective was to gain insight about the nature of the Metro Vancouver office market and sub-markets, location preferences, and the criteria and decision-making process for selecting office locations and developing and occupying office space (see Appendix A for a list of interviewees). The interviews were conducted in November and December 2018[4]. Discussion questions were sent to the interviewees in advance of the meetings (see Appendix B for the questions).

The office developers and commercial brokers interviewed had significant experience developing or leasing large-scale office projects in the region. Office tenants and municipal staff provided additional perspectives. There were four different groups of interviewees:

- **Office developers / landlords -** experience both in the downtown Vancouver market and markets outside of the downtown as well as in other North American cities.
- **Office brokers -** extensive knowledge of the office market with specialized knowledge of Metro Vancouver's multiple sub-markets. The brokers provided a unique perspective because they know both the developer and tenant needs thoroughly and can speak about evolving changes over time.
- **Office tenants** - to learn about the process and criteria tenants use to select an office location.
- **Municipal staff** - provided the municipal perspective, outlining their role in the process of attracting investment and development to their communities and what they have been hearing from businesses and developers. They also provided insight on the experience of policy and tools to encourage office and the development review process.

1.5 *Metro 2040* Context

The Metro Vancouver region is forecast to grow by approximately one million people and four hundred thousand jobs by 2041. To protect the region's ability to attract investment and jobs, *Metro 2040* establishes regional land use designations and overlays. The Urban Containment Boundary limits encroachment into lands designated as 'Agricultural', 'Rural', and 'Conservation & Recreation'. The *Metro 2040* 'Industrial' and 'Mixed Employment' designations protect lands for industrial and employment uses. Office and commercial uses are directed to Urban Centres and Frequent Transit Development Areas, generally located on lands designated 'General Urban'.

Reflecting continuing population, employment, and economic growth on Metro Vancouver's limited land base, focusing development in Urban Centres is an important element of the regional growth strategy. To build vibrant and livable communities, *Metro 2040*'s Strategy 1.2 includes specific policies about office space, including guidelines for the land use and transportation characteristics of Urban Centres and Frequent Transit Development Areas. There are three different types of Urban Centres identified in *Metro 2040*: Metro Core, Regional City Centres, and Municipal Town Centres. (See Appendix D with a summary from 2001 of the perceived strengths and weaknesses of Urban Centres relative to business parks at that time.)

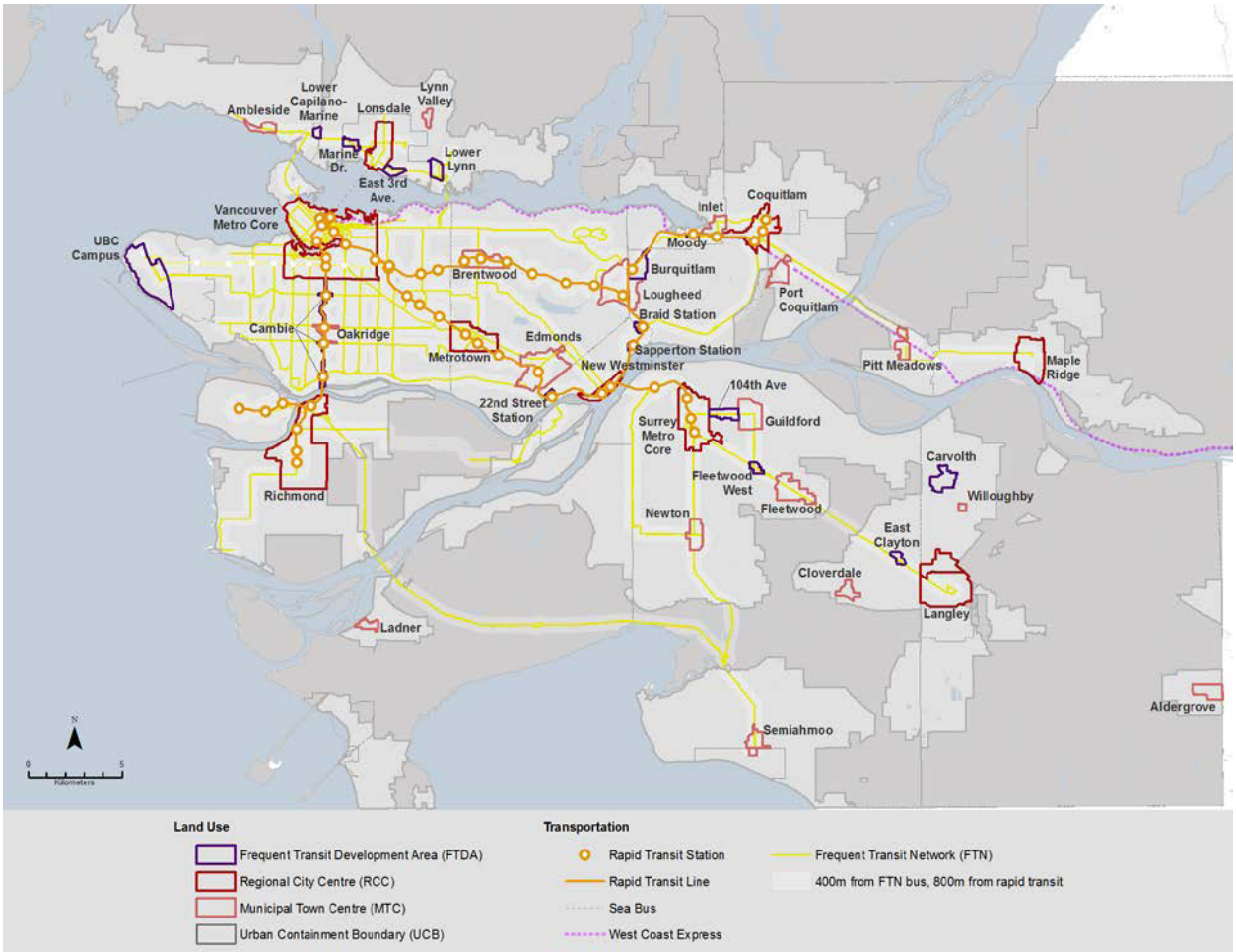
The 26 Urban Centres identified by *Metro 2040* are intended as priority locations for employment and services, higher density housing, commercial, cultural, entertainment, institutional, and mixed-uses. Urban Centres are intended to emphasize place-making, an enriched public realm, and promote transit-oriented communities, where transit, cycling, and walking are the preferred modes of transportation. Orienting growth and development in this way helps to:

[4] Note: The preparation of the earlier version of this report was informed by other interviews at that time, including with office tenants. Comments that are still relevant are retained in the updated version of this report.

- Support an efficient land use pattern and transportation network;
- Protect natural areas, agricultural and industrial land by focusing growth in urban areas;
- Provide jobs close to where people live;
- Create complete communities that are accessible, promote transit, walking and cycling, provide access to a range of housing choices, employment, social and cultural opportunities, parks, greenways and recreational opportunities, and promote healthy living; and
- Expand the opportunities for transit, multiple-occupancy vehicles, cycling and walking, reduce expenditure on transportation, energy use, and greenhouse gas emissions, and improve air quality.

For reference, Map 1.1 shows the locations of Urban Centres as well as the Frequent Transit Network (rail and bus) (FTN) in the region.

Map 1.1: Metro 2040 Urban Centres and Frequent Transit Network



Urban Centre Employment Levels

Employment levels vary greatly between the 26 Urban Centres in Metro Vancouver. Figure 1.1 shows the estimated number of jobs, as well as housing and population, in 2016. Note that these are estimates, and exclude adjustments for both the National Household Survey undercount and 'no fixed workplace'. As can be seen, the Vancouver Metro Core (i.e. Vancouver downtown and Broadway) by far dominates in terms of scale, with 246,000 jobs, while Richmond's City Centre, Burnaby's Metrotown, and Surrey's Metro Centre are the next largest employment centres.

Figure 1.1: Employment, Housing, Population in Urban Centres (2016)

Urban Centres	Employment	Housing	Population
Aldergrove MTC	555	410	835
Ambleside MTC	2,965	3,725	5,355
Brentwood MTC	8,665	6,490	12,420
Cloverdale MTC	1,930	1,065	1,615
Coquitlam RCC	10,955	8,840	16,765
Edmonds MTC	6,950	12,000	26,530
Fleetwood MTC	3,585	3,875	11,280
Guildford MTC	8,435	6,270	14,625
Inlet Centre MTC	3,030	3,710	7,560
Ladner MTC	3,815	2,325	4,385
Langley RCC (Langley City)	11,925	8,135	14,870
Langley RCC (Langley Township)	8,480	935	1,845
Lonsdale RCC	15,060	16,330	28,325
Lougheed MTC (Burnaby)	4,015	7,210	15,575
Lougheed MTC (Coquitlam)	1,935	2,900	5,870
Lynn Valley MTC	1,580	1,070	2,440
Maple Ridge RCC	6,490	5,940	10,680
Metro Core MC	246,665	119,140	188,460
Metrotown RCC	19,060	16,145	29,235
New Westminster Downtown RCC	6,560	7,020	12,290
Newton MTC	4,555	1,160	2,160
Oakridge MTC	3,480	685	1,290
Pitt Meadows MTC	1,450	2,685	5,620
Port Coquitlam MTC	2,685	4,215	8,130
Richmond City Centre RCC	36,455	25,825	54,275
Semiahmoo MTC (Surrey)	2,405	2,705	4,625
Semiahmoo MTC (White Rock)	755	860	1,200
Surrey Metro Centre SMC	21,340	12,065	23,560
Willoughby MTC	195	70	115
Total	**445,975**	**283,805**	**511,935**

Source: Place of Work Employed Labour Force, 2016 National Household Survey
Note: Numbers exclude adjustments for both the National Household Survey undercount and 'no fixed workplace'.

Growth targets for jobs in the region for 2041 are shown in Figure 1.2. Half of all new jobs are directed to Urban Centres, with different Urban Centres anticipated to grow at different rates, plus growth in Frequent Transit Development Areas.

Figure 1.2: Metro Vancouver Employment Targets for Urban Centres

Area	2011 Jobs		2041 Jobs		Growth
Metro Centres	283,000	23%	362,000	21%	79,000
Vancouver Metro Core	*261,000*	*22%*	*313,000*	*18%*	*52,000*
Surrey Metro Centre	*22,000*	*2%*	*49,000*	*3%*	*27,000*
Regional City Centres	132,000	11%	237,000	14%	105,000
Municipal Town Centres	74,000	6%	163,000	9%	89,000
Urban Centres Total	**489,000**	**40%**	**762,000**	**43%**	**273,000**
Frequent Transit Development Areas	TBD		412,000	24%	TBD
All other areas	TBD		579,000	33%	TBD
Metro Vancouver Region	**1,209,000**		**1,753,000**		**491,000**

Source: Metro Vancouver

2.0 Metro Vancouver Office Market Profile and Characteristics

Compared to other North American markets, the Metro Vancouver market has fewer large head offices and has many smaller-sized office tenants. The Metro Vancouver market has a range of different business sectors; a diversified market is considered healthy and beneficial if one particular sector experiences a decline. In the past, the resource sector (e.g. forestry, mining, energy) drove a lot of the office growth in the Vancouver market through both head offices and supporting services such as accounting, finance, and legal firms. More recently, there has been significant growth in the technology sector as a major office tenant type.

2.1 Sub-Regional Profiles

Within the Metro Vancouver region, each of the office sub-markets have different characteristics.

Vancouver, and specifically the Central Business District in downtown and surrounding 'core', is the business centre for the region and the province, with significant numbers of businesses also located along the Broadway Corridor. For greater context, Vancouver contains 58% of the region's office market inventory. Many of the types of businesses located in the Metro Core serve regional and provincial markets. The Metro Core has a much higher percentage of jobs in professional and commercial services and a lower percentage of jobs in retail, in comparison to the rest of the city and the region, and almost all regional centres.[5] This distribution illustrates how very different the Metro Core is from the other sub-markets in the region.

In terms of business headquarters, of the relatively few major headquarters in the region, most are located in downtown Vancouver. Nearly all major tech companies have located in the Vancouver core in order to attract and retain talented employees. The downtown Vancouver market is experiencing a low vacancy rate reflecting strong demand, especially by tech tenants, although the steady supply of new office buildings coming on-stream over a multi-year period may cause vacancy rates to increase. Tenants of the new downtown buildings are expected to be those already in the area that are expanding or want newer premises. This new supply and tenant moves may lead to some increases in vacancies in older buildings in the area.

Outside of downtown Vancouver but still within the City of Vancouver, there is a strong office market along the Broadway corridor. Further to the east, Broadway Tech campus meets the needs of tenants that want to be accessible to downtown Vancouver and the region; it has both good transit service and is accessible to Highway 1. Broadway Tech is also attractive to tenants that need larger building floorplates and prefer low rise buildings. In south Vancouver, the more recent Marine Gateway mixed-use complex contains 260,000 sq ft of office space.

Burnaby is the next largest office market in the region, with a considerable amount of office space located in the Metrotown area, which includes a cluster of office towers around the Metrotown shopping centre. Burnaby also includes a significant amount of office park development located in various parts of the city outside of Burnaby's four Urban Centres (i.e. Metrotown, Brentwood, Lougheed, and Edmonds). Metrotown is viewed as a good office location due to its centrality in the region and its high level of transit service. Some businesses, however, perceive it as having high traffic congestion, which is a drawback for tenants that need to travel frequently to visit sites or clients. Brentwood is seen as a desirable area due to its good transit and road access. There is also a large office component at Canada Way and Willingdon Avenue. More office park development located far from

[5] City of Vancouver, "Employment Make up of Core vs Rest of City and Region, Economy – Structure Step 1: Understanding Yesterday and Today", 2005.

SkyTrain stations is not predicted in Burnaby, because office tenants want the amenities and transit service found in Urban Centre and SkyTrain locations.

New Westminster has a concentration of office space at the Sapperton SkyTrain station ('The Brewery District') and in the downtown (including the Anvil Centre Office Tower). Future office development is anticipated at Braid Station. Although New Westminster's downtown has historically been a centre for office uses, there is also a supply of office space in the 'Uptown' neighbourhood, which provides space for both local and some regional serving tenants. Generally, the downtown offers different types of office development potential (or upgrade of historic buildings) compared to other locations (i.e. Braid, Sapperton) which can offer large sites that can accommodate comprehensive development plans.

Surrey has a variety of office building types distributed throughout the city. The Surrey City Centre area contains few large modern office buildings, although the 2014 relocation of the City Hall to this area spurred additional development interest. Surrey Metro Centre will be a good location for office development in the future, but the area is perceived as lacking amenities, although this is improving. Also noted from some perspectives is that the area does not have good access for many of the region's employees because it is considered to be "on the other side" of the Fraser River and at the end of the SkyTrain line.

Brokers felt that the Surrey City Centre office market will grow, but it will take time. The supply of office space is small, providing limited options to interested tenants. Growth is expected to come from engineering, law, and accounting firms, and perhaps some government offices. A positive feature for this market is that the City of Surrey is perceived as being proactive and supportive of the Surrey City Centre.

Richmond currently has a large proportion of its office stock located outside of its downtown centre. This includes Crestwood office park and other areas to the east of the Richmond Centre. Many of these office parks were built in the 1990s, and in the past decade have experienced high vacancy rates because of difficulties in attracting office tenants to areas with poor access to amenities and transit. Richmond is considered a 'gateway to the region' by some participants, given its proximity to the YVR airport, and has some good tenants located in its office parks. However, for employees who live in the eastern parts of the region such as Coquitlam, Surrey and Langley, Richmond is difficult to conveniently access. Noted drawbacks to locating in downtown Richmond: traffic congestion; not many space choices (currently) for office tenants; the area is mainly zoned for retail use and therefore land prices are too high to justify redevelopment into office.

The North Shore is a very small office market, with a fragmented supply located in many different buildings, some of which are smaller and older. It has few major office tenants other than some government agencies (such as ICBC). There is limited demand for office space in the North Shore area, as major office tenants will tend to locate in other parts of the region that are more accessible to the regional workforce and other desired features. The North Shore, and especially Lonsdale Regional City Centre, is located very close to Vancouver's Central Business District (CBD), so regional-serving office tenants have more location choice in downtown Vancouver compared to the North Shore.

Coquitlam, even with the completion of the Evergreen Rapid Transit Line in 2016, is an area viewed as being located on the edge of the region. It is expected that it will take a long time before any significant office development occurs in this area, which will be supported by the ongoing growth in population, housing and employment in the area.

The rest of the region, including the Langleys, Delta, Maple Ridge / Pitt Meadows, have very small office markets with few major office buildings. Most of these office tenants serve the local population, with the exception of some government and institutional offices.

2.2 Regional Office Market Conditions

Based on a review of current publications and the opinions from stakeholders gathered through the interviews, the Metro Vancouver office market continues to experience a period of extreme strength, driven by strong demand by tech tenants. Most of these types of tenants will only consider a location in the core area, reflecting the preferred location for their employees. These companies have occupied or pre-leased large blocks of space in new office buildings in downtown Vancouver and spurred additional developments that will be completed over the next few years.

According to industry publications at the end of 2018, the total inventory of market office space was estimated at 65 million sq ft. Note that this is the market inventory as tracked by brokerage firms, which excludes some smaller buildings and some non-market buildings such as government / institutional offices, which were included in the Metro Vancouver inventory, as explained in subsequent sections.

According to published market reports[6], the Metro Core (downtown Vancouver and the Broadway Corridor) dominates the region in terms of office space (see Figure 2.1). Nearly half (29.5 million sq ft, or 45%) of the 65 million sq ft total market office inventory in the region is located in downtown Vancouver (CBD, Gastown / Railtown, Yaletown). The Broadway Corridor represents an additional 6.3 million sq ft (10% of regional total). The next largest market is Burnaby, with approximately 10.5 million sq ft or 16% of the regional total, followed by Surrey at 5.2 million sq ft, and Richmond at 5.0 million sq ft. The other sub-markets in the region are relatively small.

The average vacancy rate for the region at the end of 2018 was 5%, down from past periods. Downtown Vancouver had a relatively low vacancy rate (4%), while some other areas experienced notably higher vacancy rates. By historical standards, and compared to other markets in North America, these are very low vacancy rates. Average annual office rental rates per sq ft are highest in downtown Vancouver and the Broadway Corridor. Typically, building operations, maintenance, and property taxes represent an extra 50-60% of accommodation costs for tenants in addition to net rents.

Figure 2.1: Metro Vancouver Office Market Inventory by Sub-Market (Q3 2018)

	Buildings Surveyed	Office Inventory (sq ft)	% of Regional Total	Vacant Space (sq ft)	Vacancy Rate	Wgt. Avg. Asking Net Rents	Asking Gross Rents
Downtown Vancouver	225	29,559,447	45%	1,158,239	3.9%	$ 33.35	$ 52.61
Broadway Corridor	108	6,299,160	10%	227,686	3.6%	$ 26.38	$ 39.48
Broadway Periphery	50	2,207,134	3%	151,786	6.9%	$ 22.71	$ 36.45
Vancouver Sub Total	**383**	**38,065,741**	**58%**	**1,537,711**	**4.0%**		
Burnaby	122	10,478,646	16%	700,410	6.7%	$ 22.66	$ 36.68
Surrey	101	5,192,509	8%	215,719	4.2%	$ 24.14	$ 36.32
Richmond	81	4,968,955	8%	395,577	8.0%	$ 18.61	$ 29.30
North Shore	64	2,571,118	4%	141,208	5.5%	$ 22.59	$ 35.47
New Westminster	40	1,981,154	3%	166,645	8.4%	$ 20.17	$ 29.19
Coquitlam	21	664,032	1%	15,660	2.4%	$ 20.92	$ 37.81
Langley	35	1,448,737	2%	69,536	4.8%	$ 16.30	$ 26.00
Others Sub Total	**464**	**27,305,151**	**42%**	**1,704,755**	**6.2%**		
Metro Vancouver Total	**847**	**65,370,892**	**100%**	**3,242,466**	**5.0%**	**$ 25.85**	**$ 39.55**

Source: Colliers. Office Statistics Q3 2018, Metro Vancouver. 2018

[6] Colliers, "Metro Vancouver Office Market Statistics", Q3 2018.

As for the class (a function of the quality and location of the accommodations) of office space in the region, approximately 77% is Class A and B (average quality). Only 8% is Class AAA (top quality), of which three-quarters is located in downtown Vancouver. Rents for different classes and locations of office space vary accordingly.[7] See Figure 2.2 for a summary of the region's office inventory by class.

Figure 2.2: Metro Vancouver Office Market Inventory by Class (Q3 2018)

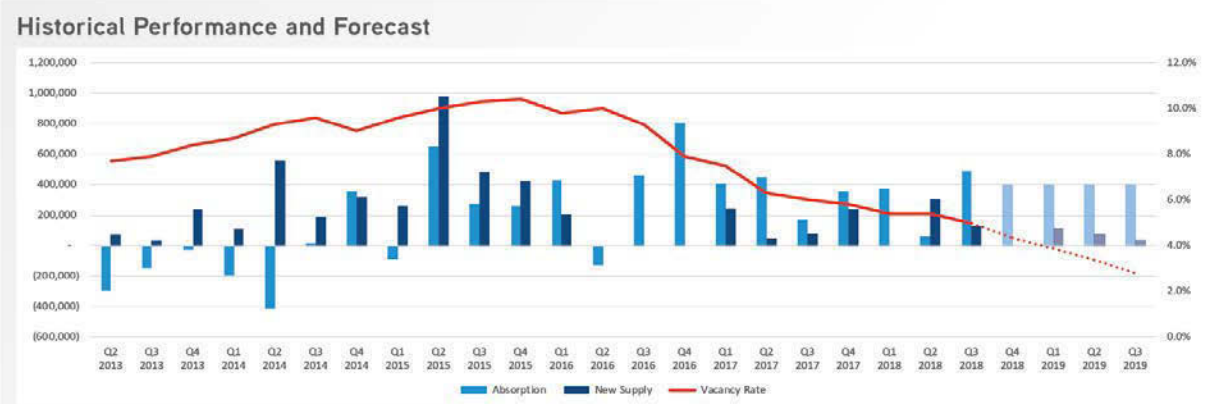
	Class	Buildings Surveyed	Office Inventory (sq ft)	% of Regional Total	Vacancy Rate	Wgt. Avg. Asking Net Rents	Wgt. Avg. Asking Gross Rents
Vancouver Downtown	AAA	8	3,713,546	6%	6.0%	$ 48.00	$ 68.32
	A	26	7,756,504	12%	3.8%	$ 38.97	$ 60.42
	B	90	12,272,743	19%	3.0%	$ 33.75	$ 63.64
	C	101	5,816,654	9%	4.6%	$ 27.67	$ 46.32
	All	**225**	**29,559,447**	**45%**	**3.9%**	**$ 33.35**	**$ 52.61**
Vancouver Broadway	AAA						
	A	36	3,454,895	5%	5.0%	$ 32.15	$ 50.43
	B	48	2,254,714	3%	1.9%	$ 26.51	$ 38.88
	C	24	589,551	1%	1.6%	$ 20.47	$ 29.12
	All	**108**	**6,299,160**	**10%**	**3.6%**	**$ 26.38**	**$ 39.48**
Other Areas	AAA	5	1,300,230	2%	5.3%	$ 34.05	$ 49.24
	A	155	13,958,216	21%	8.3%	$ 23.43	$ 36.50
	B	213	10,360,977	16%	5.2%	$ 19.06	$ 30.27
	C	141	3,892,862	6%	2.4%	$ 15.46	$ 22.18
	All	**514**	**29,512,285**	**45%**	**6.3%**	**$ 21.53**	**$ 32.10**
Metro Vancouver Total	AAA	13	5,013,776	8%	5.8%	$ 36.25	$ 52.25
	A	217	25,169,615	39%	6.5%	$ 27.25	$ 42.42
	B	351	24,888,434	38%	3.8%	$ 24.49	$ 38.70
	C	266	10,299,067	16%	3.6%	$ 23.64	$ 38.30
	All	**847**	**65,370,892**	**100%**	**5.0%**	**$ 25.85**	**$ 39.55**

Source: Colliers International. Office Statistics Q3 2018, Metro Vancouver. 2018
Vancouver Downtown = Downtown Core, Gastown / Railtown, Yaletown
Other Areas = Vancouver - Periphery, Burnaby, Coquitlam, Langley, New Westminster, North Shore, Richmond, Surrey

Space Absorption

Since late 2016, with high levels of space absorption, the office vacancy rate in the region has been on a steady decline from roughly 10% to 5%, as illustrated by Figure 2.3 below.[8]

Figure 2.3: Metro Vancouver Office Market Absorption and Vacancy Rates



Source: Colliers. Office Market Report, Metro Vancouver, Q3 2018. 2018

[7] Colliers, "Metro Vancouver Office Market Statistics", Q3 2018.
[8] Colliers, "Metro Vancouver Office Market Report", Q3 2018.

The absorption of over 0.75 million sq ft in the first half of 2018 was one of the strongest periods on record, and comparable to other peaks in 2006 and 2015 during the last waves of new development.[9]

The healthy demand for office space throughout Metro Vancouver has highlighted shortfalls of new supply in multiple markets.[10] While the development pipeline in Metro Vancouver has typically maintained steady new supply, a gap in product delivery and availability has formed in key markets such as downtown Vancouver, Burnaby, Richmond and, to a lesser extent, Surrey and Vancouver-Broadway.[11]

Despite the recent attention surrounding the tech market, which has had a major influence on vacancy rate, it is expected that lease rates and the overall evolution of Metro Vancouver will continue to grow at a steady pace, due to a healthy economy and job growth. Leasing activity will slow due to a lack of space available. Some relief is expected when the next phase of construction arrives to the market in downtown Vancouver, however much of this space will not be available until 2022.[12]

Vacancy Rates

Office vacancy rates in Metro Vancouver have declined over the past three years, to approximately 5%, and may approach record lows in the near future. Vacancy in all the markets has been tightening and that trend is expected to continue as leasing opportunities grow fewer.[13] The downtown Vancouver vacancy rate is expected to tighten further, maintaining its position as one of the lowest in North America.[14] Also, vacancy in other markets including Burnaby, Richmond and Surrey is expected to continue tightening.[15]

As the downtown market vacancy rate continues to decline and rental rates continue to rise as a result, growing tenants have fewer options for space and will need to be more flexible, especially ones needing large blocks of space, which are rare and are at a premium.[16]

Rental Rates

Lease rates have climbed sharply in markets such as downtown Vancouver that have space in high demand. Rental rates in downtown Vancouver – already among the highest in Canada – increased in 2018 and are expected to continue to rise through 2019, due to a lack of new supply and strong demand.[17] Rental rates in downtown Vancouver for Class AAA space were averaging $48 per sq ft in late 2018, significantly up from $34 per sq ft in 2014[18]. Growth of lease rates in the suburban markets has been more muted. Tenants seeking large blocks of space will likely have few options other than to pre-lease space in the next wave of development or to backfill the space that will be vacated by tenants who relocate.[19]

[9] Avison Young, "Metro Vancouver Office Market Report", Mid-Year 2018.
[10] Avison Young, "Metro Vancouver Office Market Report", Mid-Year 2018.
[11] NAIOP Vancouver, "Office Cost of Business Survey", 2018.
[12] Cushman Wakefield, "Marketbeat Office Report Vancouver", Q3 2018.
[13] Avison Young, "Metro Vancouver Office Market Report", Mid-Year 2018.
[14] CBRE, "Canada Quarterly Statistics", Q3 2018.
[15] NAIOP Vancouver, "Office Cost of Business Survey", 2018.
[16] Jones Lang LaSalle, "Metro Vancouver Office Insight", Q2 2018.
[17] Avison Young, "Metro Vancouver Office Market Report", Mid-Year 2018.
[18] Colliers, "Metro Vancouver Office Market Statistics", Q3 2018; Q3 2014.
[19] Avison Young, "Metro Vancouver Office Market Report", Mid-Year 2018.

2.3 New Office Supply - Significant Developments

A number of major office development projects are currently underway in the region, particularly in downtown Vancouver following limited office construction in the prior decade. Most of the other recent or underway office developments are located in Urban Centres or near rapid transit stations.

This significant new office supply is responding to strong demand, which is driving lease rates higher and spurring investment in office developments.[20] The largest wave of new downtown Vancouver office development will have 4.3 million sq ft of space delivered by 2022 – a nearly 20% increase to the current total downtown inventory.[21] Of that amount, 2.1 million sq ft will be delivered by 2021.[22]

Notable projects in downtown Vancouver include, with expected completion year noted:[23]

- The Offices at Burrard Place, 1281 Hornby St, Reliance Properties / Jim Pattison Developments, 99,000 sq ft, 2019
- Creative Space, 1410 Granville St, Westbank, 37,000 sq ft, 2019
- The Cardero, 620 Cardero St, Bosa Properties / Arpeg Holdings, 45,000 sq ft, 2019
- 402 Dunsmuir Street, Oxford Properties, 147,000 sq ft, 2020
- 400 West Georgia, Westbank / Allied, 353,000 sq ft, 2020
- The Offices at Burrard Place, 1280 Hornby St, Reliance Properties / Jim Pattison Developments, 146,000 sq ft, 2020
- Vancouver Centre II, 753 Seymour Street, GWL Realty, 368,000 sq ft, 2021
- Bosa Waterfront Centre, Bosa Developments, 320 Granville St, 375,000 sq ft, 2021
- 601 West Hastings St, PCI / Greystone, 205,000 sq ft, 2021
- 625 West Hastings St, Uptown Property Group, 120,000 sq ft, 2022
- 1133 Melville St, Oxford Properties, 532,000 sq ft, 2022
- 1090 West Pender Street, Bentall Kennedy, 530,000 sq ft, 2022
- The Post on Georgia, 349 West Georgia St, QuadReal Property, 1,700,000 sq ft, 2022/2023
- 1166 West Pender Street, Reliance Properties, 363,000 sq ft, 2023

In the rest of the region, there is another 1 million sq ft currently under construction.[24] Notable sub-market projects include[25]:

- In Vancouver's Broadway corridor new development continues to break ground, however most of the new office space being delivered in the next two years has already been leased or sold;
- Burnaby, the second largest office market in Metro Vancouver, has only a single project completing in the last half of 2018 with no other deliveries until 2022;
- Richmond, which has not built any new office space for lease in more than a decade (some other buildings have been strata tenure), will have to wait until 2020 for new supply; and
- Surrey has only two projects set to deliver by 2020, one of which is currently 45% pre-leased and the other may be sold as strata office.

[20] Colliers, "Metro Vancouver Office Market Statistics", Q3 2018.
[21] Avison Young, "Metro Vancouver Office Market Report", Mid-Year 2018.
[22] BOMA BC Leasing Guide: Commercial Real Estate Office Space - Patrick Blennerhassett, "THE NEXT PEAKS - More than two million square feet of new office space to tower into Vancouver's skyline by 2021", 2018.
[23] Source: Avison Young Research Department - Vancouver 2018.
[24] Colliers, "Metro Vancouver Office Market Statistics", Q3 2018.
[25] Avison Young, "Metro Vancouver Office Market Report", Mid-Year 2018.

2.4 Office Tenant Types – Growth of Tech Sector

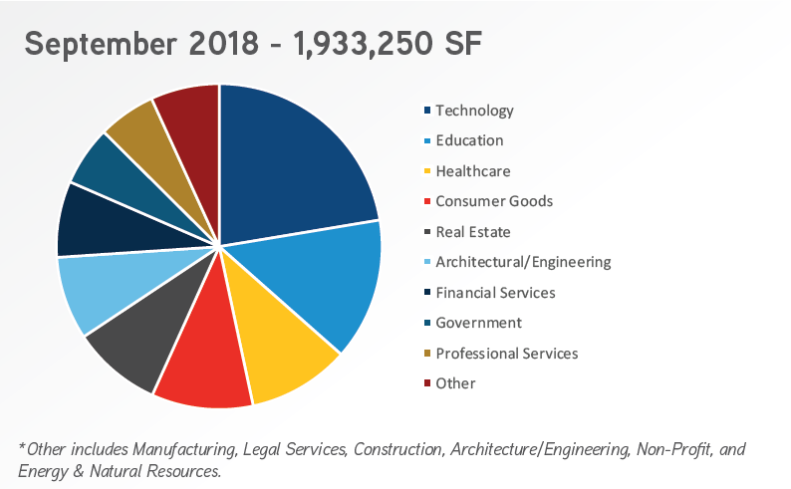
According to brokerage reports, the following sectors made up the bulk of office tenants in 2018. In Q2 2018, technology tenants accounted for 33.5% of office space demand, followed by Education at 12.7% and Professional Services at 8.9%.[26] However, by Q3 2018 Technology demand dropped to 22.4%, due primarily to pre-leasing deals in upcoming supply (see Figure 2.4).[27] The Education sector, which represented less than 1% of tenant demand two years prior increased to 14%.

This sector mix differs from the demand profile in late 2014: Financial Services & Accounting, Tech and Digital Media, and Architecture, Engineering & Construction, and Legal Firms.[28] In 2004 tech companies represented just 8.6% of downtown tenancies, a period when the sector was primarily located in suburban offices with large floorplates.[29]

Major new tenants in the Vancouver market are oriented towards tech, notably:

- "This is the first time where we have seen global Fortune 1000 companies that want to have a presence in Vancouver.... Companies like Amazon, Microsoft, WeWork (the co-working giant) and other big U.S. or international tech firms are hungry for large, local footprints".[30]
- Amazon took about 563,000 sq ft of pre-leased space. The e-commerce giant leased 416,000 sq ft at the old Canada Post building redevelopment, and 147,000 sq ft at 401 West Georgia.[31]
- Kabam will be the lead office tenant for the new Vancouver Centre 2, leasing close to a third of the building's 345,000-square-foot floor space across seven floors.[32]

Figure 2.4: Metro Vancouver Office Space Demand by Sector



Source: Colliers, "Metro Vancouver Office Market Report", Q3 2018

CBRE's 2018 tech-sector report ranks Vancouver the fourth in Canada overall, and top when it comes to value for money in terms of talent.[33] The top Canadian tech talent markets were Toronto, Ottawa, Montreal, Vancouver and Waterloo. These locations possess the strongest combination of attributes

[26] Colliers, "Metro Vancouver Office Market Report", Q2 2018.
[27] Colliers, "Metro Vancouver Office Market Report", Q3 2018.
[28] Avison Young, "Metro Vancouver Office Market Report", Mid-Year 2014.
[29] Business in Vancouver - Peter Mitham, "Vancouver tops for tech talent, but rental costs erode affordability", December 5 2018.
[30] Vancouver Sun - Evan Duggan, "Commercial Real Estate: 'I've never seen demand as high' for Vancouver office space", October 30 2018.
[31] Vancouver Sun - Evan Duggan, "Commercial Real Estate: 'I've never seen demand as high' for Vancouver office space", October 30 2018.
[32] Business in Vancouver - Tanya Commisso, "Mobile game developer to lease seven floors in Vancouver Centre II office tower", November 22 2018.
[33] Business in Vancouver - Peter Mitham, "Vancouver tops for tech talent, but rental costs erode affordability", December 5 2018.

that the technology sector needs to flourish, especially when it comes to a high concentration of tech employment.[34]

The Vancouver tech market trends, as copied from the CBRE report, states:[35]

- Vancouver's digital technology hub is poised for growth with $1.4 billion of investments and 50,000 tech-related jobs being committed over the next 10 years through the Innovation Supercluster Initiative.
- Dubbed as one of the top five Virtual Reality hubs globally, Vancouver has over 200 companies driving its virtual, mixed and augmented reality ecosystem which has increased three-fold over the last five years. It is poised for stronger growth through tax incentives from the provincial government, equal to 17.5% of annual employee wages incurred by these firms.
- The BC government has approved a feasibility study of high-speed rail connecting Vancouver, Seattle and Portland. The rail connection promises to facilitate greater collaboration and stronger economic ties between the three cities in the Cascadia Innovation Corridor.

Perspectives of Interviewees

These tenant trends are reiterated through the results of the interviews:

- The large tech tenants that have entered the market in the past few years represent a significant shift in the dynamics of the downtown Vancouver office market. While Vancouver has relatively few major corporate headquarters, these new tech companies have been taking up large blocks of space, often preferring large floorplates for efficiencies and a new building, and need a downtown Vancouver location to attract and retain young urban talent.
- Large corporate and global professional services firms often want to be located in trophy buildings, however this is less a factor for tech tenants. At the same time, but not receiving the same profile, are the many small office tenants in the market, each taking up 3,000-8,000 sq ft of space.
- Large tech companies are increasingly comfortable with locating in Vancouver, given that it is a known location, an international city, west coast time zone, many amenities, and access to an international workforce. The presence of new large tech companies (such as Amazon, etc) are attracting more tech companies, big and small. Talented workforce wants to live in the region, and although housing prices are high, some workers are satisfied with renting as they may not have expectations about home ownership.

2.5 Average Size of Office Tenants

Compared to other North American markets, Metro Vancouver has relatively few large head offices and is made up of many small and mid-size tenants. Specifically for downtown Vancouver, which contains much of the office businesses in the region (although the mix is different from the rest of the region), the average office tenant size was 7,400 sq ft in 2012 and 7,200 sq ft in 2014, with 54% of all office space occupied by tenants under 20,000 sq ft in size (see Figure 2.5).[36]

[34] CBRE, "2018 Scoring Canadian Tech Talent", 2018.
[35] CBRE, "2018 Scoring Canadian Tech Talent", 2018.
[36] Source: CBRE Research Department – Vancouver, 2012.

Figure 2.5: Distribution of Office Tenant Sizes in Downtown Vancouver (2012)

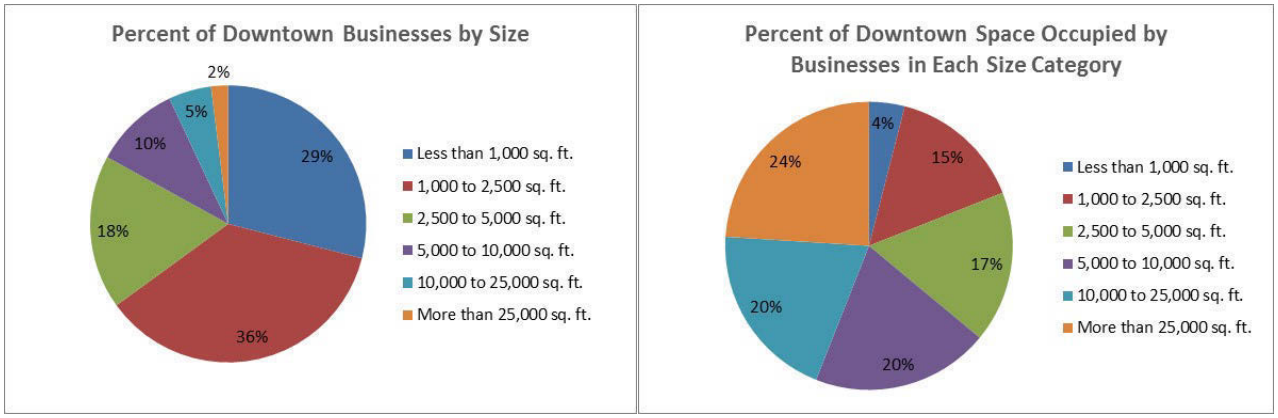
Size Category (sq ft)	Total Floor Area (sq ft)	Percentage of Market
0 - 1,999	1,268,821	5.4%
2,000 - 4,999	3,462,762	14.7%
5,000 - 9,999	4,300,629	18.3%
10,000 - 19,999	3,623,708	15.4%
20,000 - 39,999	2,216,191	9.4%
30,000 - 49,999	2,856,467	12.2%
50,000 - 74,999	2,176,555	9.3%
75,000 - 99,999	1,535,275	6.5%
100,000 - 199,999	1,283,576	5.5%
200,000 +	760,550	3.2%
Total	**23,484,534**	**100%**

Source: CBRE Research Department - Vancouver

According to Colliers in 2012, the average tenant size in downtown Vancouver was 4,500 sq ft, and 11,500 sq ft in suburban areas.[37]

In 2005, the City of Vancouver conducted a survey of businesses in downtown Vancouver[38]. Survey results show that while most businesses occupy small office spaces, the majority of total downtown office space is held by businesses in large spaces. As shown in Figure 2.6, 83% of businesses occupied less than 5,000 sq ft. However, these businesses occupied only about one-third of total downtown office space, with 64% of all office space occupied by businesses with over 5,000 sq ft.

Figure 2.6: City of Vancouver Office Tenant Sizes (2005)



Source: City of Vancouver Survey of Metro Core Businesses, 2005. Business Lease Sizes.

It was estimated that just over 1% of all jobs in Metro Vancouver were in head offices, with an average of 36 employees per head office.[39]

[37] Source: Colliers Research Department – Vancouver, 2012.
[38] City of Vancouver, "Business Space Needs in the Metro Core Today, Land Use and Development – Profile Step 1: Understanding Yesterday and Today", 2006.
[39] City of Vancouver, "Head Offices in Vancouver, Economy – Structure Step 1: Understanding Yesterday and Today", 2006.

2.6 Growth of Co-working in Vancouver

Co-working firms such as WeWork and Regus/Spaces have rapidly become one of the largest tenant types in the Vancouver core. These two companies have been responsible for an inordinate amount of leasing activity since 2017 and in part have accelerated the need for additional office development.[40] Co-working is accommodating the evolving nature of work, and making a very illiquid asset (real estate) liquid and flexible. Co-working is providing space in some cases for no-fixed-address workers who previously worked at home, or other arrangements. Co-working is said to also facilitate and accelerate collaboration, innovation, and synergies between businesses and empowers people to work in interesting places.

Co-working is expanding exponentially around the world, but mostly in cosmopolitan gateway cities, according to one source.[41] As stated by one local office broker: "Vancouver is a phenomenal co-working market. We're a branch-office town, we're not a head-office town, and as a result we've got a tremendous number of entrepreneurs trying to find really interesting space."[42]

WeWork

WeWork entered the Vancouver market in Fall 2017 with its first location at Three Bentall Centre, and has since expanded with another location at Two Bentall Centre. A third location has also opened in Grant Thornton Place on Seymour Street, and another location at Westbank's Main Alley tech campus is scheduled to open in early 2019. A WeWork co-working office location in South Vancouver will be the company's first location outside of the downtown Core, located at Marine Gateway mixed-use complex next to SkyTrain's Marine Drive Station. There is also a longer-term plan to turn the upper levels of the Hudson's Bay Company's flagship store in downtown Vancouver into a WeWork office.[43] WeWork launched a 200-per-cent expansion to their local footprint in 2018, and has plans to double once again in 2019.[44]

Regus / Spaces

Regus is a well-established provider of office space and related business services. 'Spaces' is a separate brand from Regus (both operated by IWG), intended to provide: "Creative Workspaces With A Unique Entrepreneurial Spirit". Spaces Gastown was completed in late 2018; a six-floor co-working space on Hastings Street that can accommodate up to 500 members. Another Spaces location of 80,000 sq ft is being developed on Granville Street, along with another 40,000 sq ft at a new building on Great Northern Way, both set to open in early 2019.[45]

Spaces Gastown is in a former warehouse with Romanesque architecture - it has a modern Dutch-inspired interior with large collaborative areas, team rooms, phone booths, dedicated co-working spaces, fully-equipped meeting rooms and furnished private offices.[46] Spaces goes on to state: "We're also looking at additional amenities as well that help support the members in that real live-work-play environment, whether it's fitness facilities, other types of amenities, directly in that space".[47] Spaces is also taking 120,000 sq ft at the new 400 West Georgia Street tower being developed by Allied and Westbank, which will be completed in 2022[48]. The press release boasts about the type of amenities

[40] Avison Young, "Metro Vancouver Office Market Report", Mid-Year 2018.
[41] RENX - Evan Duggan, "Opinions split on future of booming co-working model", November 15 2018.
[42] BOMA BC Leasing Guide: Commercial Real Estate Office Space - Peter Mitham, "Shared Space - Co-working providers are changing how tenants lease space", 2018.
[43] DailyHive - Kenneth Chan, "WeWork to open a new co-working office at South Vancouver's Marine Gateway", November 2 2018.
[44] Province - Evan Duggan, "Commercial real estate: Co-working just keeps growing", October 2 2018.
[45] Province - Evan Duggan, "Commercial real estate: Co-working just keeps growing", October 2 2018.
[46] Colliers, "SPACES, Amsterdam-born creative workspace, officially opens its first co-working location in Vancouver", September 11 2018.
[47] BOMA BC Leasing Guide: Commercial Real Estate Office Space - Peter Mitham, "Shared Space - Co-working providers are changing how tenants lease space", 2018.
[48] Province - Evan Duggan, "Commercial real estate: Co-working just keeps growing", October 2 2018.

tenants and employees increasingly want: The building features lush living walls, glass floors, operable windows, a number of patios with breathtaking views, a two-storey landscaped rooftop terrace, and a spectacular fresh air lobby designed to resemble a rainforest.[49]

Impacts on the Vancouver Office Market

The wave of co-working operators in downtown Vancouver started in 2017. Co-working brands currently account for about 830,000 sq ft of office space in Vancouver.[50] WeWork claims 261,000 sq ft in downtown Vancouver, while IWG has 446,000 sq ft across Metro Vancouver under the Regus and Spaces banners.[51]

Their business model fills a gap in which tenants want short-term flexibility, and landlords desire stability. According to one broker: "Those two forces are always opposing one another. Co-working steps in the middle and essentially solves it."[52] However, the belief in co-working facilities is not universal: one prominent leaser stated that about half of the industry stakeholders and observers think the rise of co-working brands such as WeWork and Spaces are little more than a fad, while the other half think it is for real.[53]

Perspectives of Interviewees

The growth of co-working office space in the Metro Vancouver market has been significant in the last few years. This has particularly been reflected in the rapid rise of WeWork, and the more established Regus with its newer brand 'Spaces'. Co-working operators provide a flexible space and service to a range of tenant types. Tenants include: i) small businesses that want a professional location and services and socialization offered in a workplace environment, and ii) much larger businesses that take up multiple floors at a time and may require the space for short-term needs, such as a swing site or a specific project. Although there is much attention given to the tech tenant, there is a wide range of business sector types.

Co-working offers tenants, called members, ready-to-go full-service office accommodations, taking care of all details such as furniture, wifi, space planning, support services, reception, etc, that would otherwise have to be managed by the business. The co-working space eliminate the need for companies to invest in real estate, as professional space providers are quicker and nimbler than businesses that are not real estate experts. The tenant pays a premium for these services but with no long-term commitment, the tenant also has the flexibility to grow, contract, or move as their business evolves.

2.7 Growth of Strata Office Tenure

In 2017 and 2018 there were a number of notable strata office projects, partly in response to the low vacancy and strong demand. Purchasing office space can be an investment opportunity for owner-occupiers who are struggling to find space in a tight leasing market. The option to own rather than rent is particularly attractive for companies whose space requirements will remain stable for the foreseeable future.[54]

Bosa Development set in late 2017 an office strata price record in downtown Vancouver with the pre-sale of half of its Waterfront Centre at an average of more than $2,000 per sq ft; the tower will complete

[49] Colliers, "SPACES announces largest North American locations coming to The Well (Toronto) and 400 West Georgia (Vancouver)", September 18 2018.
[50] RENX - Evan Duggan, "Opinions split on future of booming co-working model", November 15 2018.
[51] BOMA BC Leasing Guide: Commercial Real Estate Office Space - Peter Mitham, "Shared Space - Co-working providers are changing how tenants lease space", 2018.
[52] Province - Evan Duggan, "Commercial real estate: Co-working just keeps growing", October 2 2018.
[53] RENX - Evan Duggan, "Opinions split on future of booming co-working model", November 15 2018.
[54] Colliers, "Metro Vancouver Office Market Report", Q3 2018.

in 2021.[55] In other parts of the region, new shell office space sells for more than $1,200 per sq ft. Richmond's new office development is expected to be led by strata projects.[56]

In terms of pricing and demand, one broker states that developers of future downtown Vancouver office strata buildings should not expect to capture the same prices as the high-profile Bosa Waterfront Centre project; the unique project achieved high prices because everything lined up, in terms of the site, the project, and the development.[57]

Meanwhile, Reliance Properties is including 100,000 sq ft of strata in its multi-tower Burrard Place mixed-use complex at Burrard, Hornby, and Drake Streets. In terms of the decision about building strata vs lease office space, the developer states: "It's not so much picking one over the other, it's about balancing the relationship between what we keep and what we sell …. it's a good diversification for the project."[58]

There are differing views about the implication and extent of strata office:

- Strata office space has not yet had a huge impact on the downtown Vancouver office market as almost all new construction continuing to target tenants, despite the early successes of the Bosa Waterfront Centre and Burrard Place.[59]
- This is a clear sign that the definition of an office investor in Metro Vancouver has shifted forever.[60]
- Strata projects will gain a larger profile in the market as land prices influence developers to build strata office as prevailing rental rates are not adequate for development pro formas given land prices.[61]
- Most of the strata office that is being built and sold downtown would likely end up on the leasing market anyway.[62]

Other considerations or implications of strata vs lease tenure:

- As is common in office strata, the owner is responsible for finishing the concrete shell of the space, which can cost up to $180 per sq ft for Class AAA offices.[63]
- Strata unit buyers can set up a so-called nominee company that owns the legal title of the strata unit, which can be used to avoid the property transfer tax when sold at a future date because the company rather than the property is sold and thus no land title change.[64]
- Strata units compared to leases are less flexible to meet the expansion and contraction needs of the tenant, and more difficult to dispose of compared to terminating a lease.[65]

Perspectives of Interviewees

The stratification of commercial space, including office, retail, and industrial, is a growing and relatively new phenomenon in the Metro Vancouver market. Some of the drivers for this trend are a desire for users to be able to own and control their space, and also interest by investors. There have been some

[55] BOMA BC Leasing Guide: Commercial Real Estate Office Space, "Briefs", 2018.
[56] BOMA BC Leasing Guide: Commercial Real Estate Office Space - Frank O'Brien, "Shape-Shifting Office Sector Defines Intelligent Design", 2018.
[57] Vancouver Sun - Evan Duggan, "Waterfront Centre's strata units represent price pinnacle: analysts", December 12 2018.
[58] Vancouver Sun - Evan Duggan, "Waterfront Centre's strata units represent price pinnacle: analysts", December 12 2018.
[59] Avison Young, "Metro Vancouver Office Market Report", Mid-Year 2018.
[60] BOMA BC Leasing Guide: Commercial Real Estate Office Space - Frank O'Brien, "Shape-Shifting Office Sector Defines Intelligent Design", 2018.
[61] Avison Young, "Metro Vancouver Office Market Report", Mid-Year 2018.
[62] Vancouver Sun - Evan Duggan, "Waterfront Centre's strata units represent price pinnacle: analysts", December 12 2018.
[63] BOMA BC Leasing Guide: Commercial Real Estate Office Space, "Briefs", 2018.
[64] BC Business, "On the fence about leasing or buying commercial real estate?", September 28 2018.
[65] BC Business, "On the fence about leasing or buying commercial real estate?", September 28 2018.

recent high profile and high value office strata project sales. However, there is question by some interviewees about the depth of demand for this market.

From a development perspective, high strata values can drive up residual land values to the point where non-strata (lease) development is no longer financially viable. Some critics note that the flexibility to change unit sizes as businesses expand and contract is greatly diminished by stratification as compared to lease tenure of the premise. Strata projects can be dominated by investors who may be less concerned about the management of the property. Furthermore, many businesses do not want to own their space, and thus cannot be accommodated within a strata building.

2.8 International Investment in Real Estate

The Vancouver market is a well-known destination for foreign investment in real estate, both residential and commercial. During the first half of 2018, Vancouver investment sales totalled $5.6 billion; the second highest since 2013, behind only 2017.[66] These values include significant office building transactions.

According to CBRE, Canada's improving macroeconomic conditions and a tight labour market support a positive outlook for the office sector with fundamentals to remain healthy across the country. Specifically for Vancouver and the office market: "Downtown and suburban office yields are expected to remain aggressive as fundamentals look to further improve over the near to mid-term".[67]

Foreign investors tend to invest in premium real estate locations and assets. City size, economic importance, and real estate market liquidity and transparency affect capitalization rates and the level of foreign real estate investment.[68] Significant purchases of commercial real estate assets in the Vancouver market have been made by international investors, making a long-term investment in the future of the City. Some of these transactions have had very high values, and have arguably bid up prices (and driven down capitalization rates). This observation is supported by academic literature.

An analysis[69] of macro-economic variables indicate that as population increases, cap rates decrease because of investors' expectation of rental growth. Conversely, cap rates increase with each increase in the risk premium since investors will demand higher profit for a greater uncertainty of the market. One of the strongest predictors of the cap rate is the location of a property. All else being equal, properties in more central or CBD locations have much lower cap rates than their counterparts in suburban and more peripheral locations. Overall the movements of office cap rates are shaped by submarkets and property characteristics, such as CBD vs suburban location, building age, parcel size, and number of floors.

[66] Business in Vancouver - Peter Mitham, "City's commercial real estate investment headed for record year", September 19 2018.
[67] CBRE, "Canadian Cap Rates & Investment Insights", Q3 2018.
[68] JRER - Pat McAllister, Anupam Nanda, "Do Foreign Buyers Compress Office Real Estate Cap Rates?", 2016.
[69] University of Cambridge - Monica Chuangdumrongsomsuk, Franz Fuerst, "Determinants of Cap Rates in US Office Markets", 2016.

3.0 Office Building Inventory

Metro Vancouver first compiled an office building inventory database for the region in 2012, based on multiple sources, including proprietary databases from brokerage firms, BC Assessment Authority and local municipalities. Data was consolidated as best as possible given the multiple data sources to provide for a comprehensive inventory of the office buildings in the region, although some data gaps, inconsistencies, and limitations may exist. Known buildings that were demolished were removed from the inventory. In late 2018, the database was further enhanced and updated.

The database includes all buildings in the Metro Vancouver region with at least 10,000 sq ft of office space. The database includes some mixed-use buildings with office components over this size threshold. In total, the inventory is larger than most of the published brokerage firm reports because it includes some smaller buildings that are not in published market summaries, and also includes buildings from other sources that are not typically considered 'market' office buildings (such as government or institutional buildings), as well as industrial buildings with accessory office components.

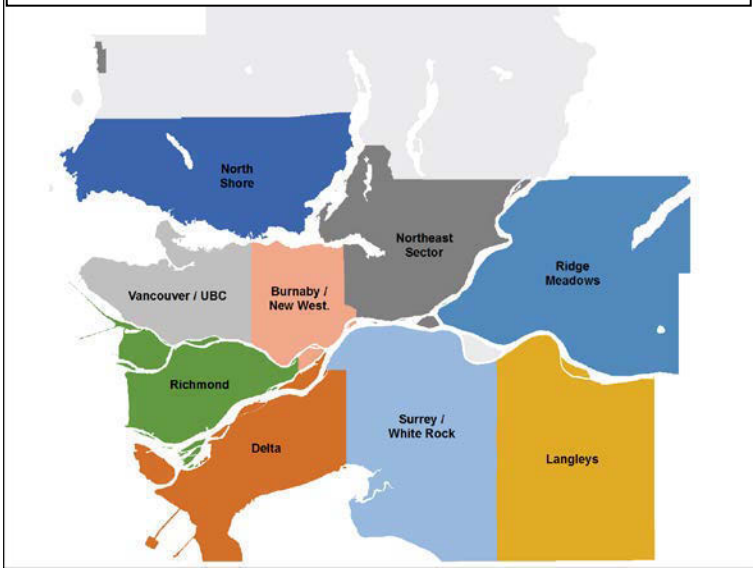
Urban Centre locations are identified in *Metro 2040*; boundaries are defined by the respective member municipalities. To provide for consistency, all numbers in this report have been generated using the confirmed current Urban Centre boundaries.

The Frequent Transit Network (FTN), maintained by TransLink, current as of late 2018, was used for establishing transit service levels (note that the Evergreen Line to Coquitlam was not yet completed at the time of the previous (2015) inventory; the database has been updated to reflect reclassification of buildings at new SkyTrain stations). The FTN comprises bus and rapid transit corridors that provide users with reliable service at least every 15 minutes throughout the day and over the entire week. The FTN provides a network of routes around which municipalities can focus population and job growth. Transit service can be in the form of bus or rapid transit (SkyTrain). The distance for access to FTN is 800 metres (a 10-minute walk) for rapid transit, and 400 metres (a 5-minute walk) for bus, which are considered acceptable walking distances to access these forms of transit. (The amount of office space located near West Coast Express Stations was negligible and not analyzed for this inventory.)

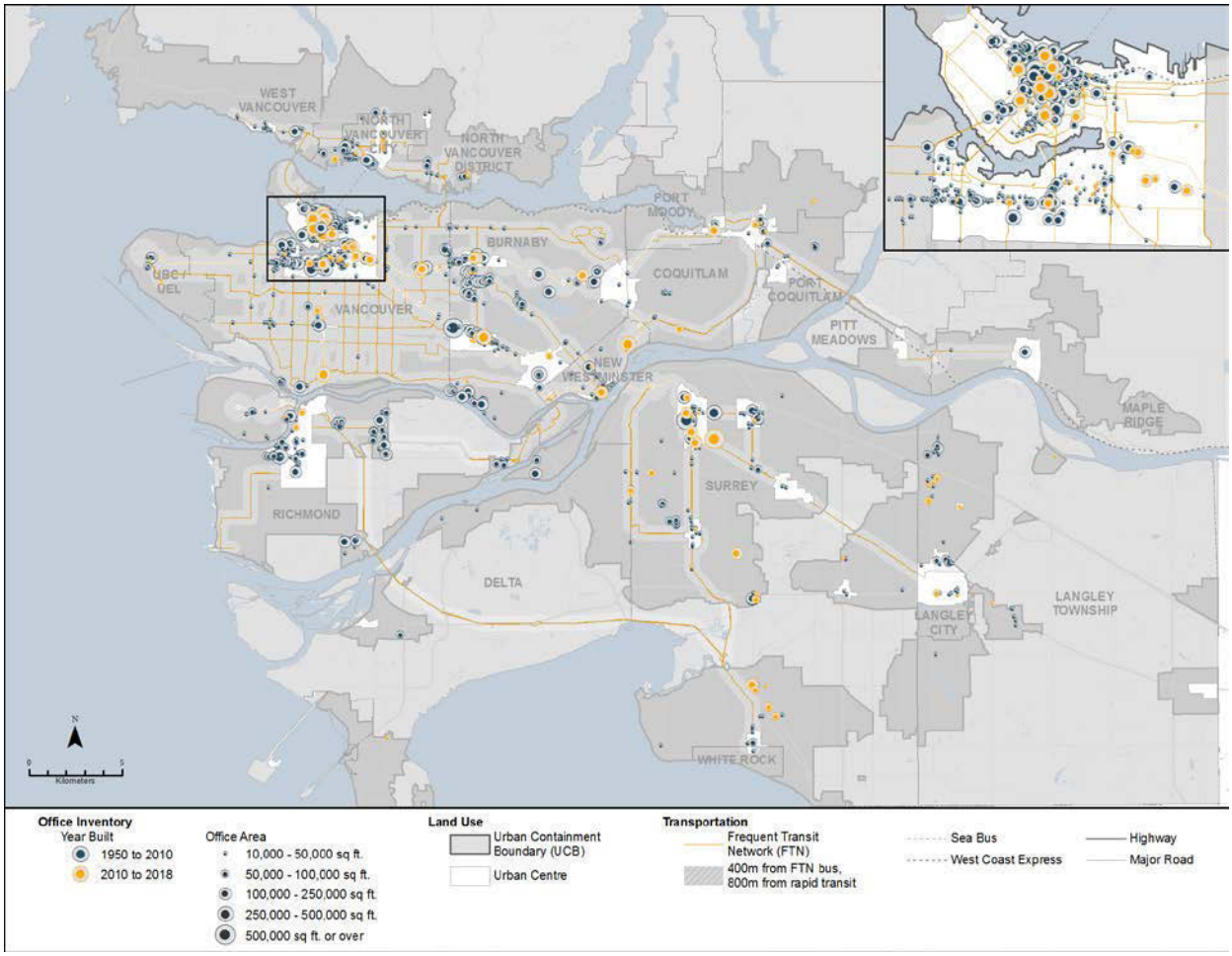
Based on the comprehensive inventory prepared by Metro Vancouver, at the end of 2018, there was approximately 80 million sq ft of office space in the region located within 1,392 buildings with more than 10,000 sq ft of office space. Summary numbers have been rounded. (See Appendix C for supplemental data tables.)

Map 3.1 the sub-regions, and Map 3.2 shows the distribution of office buildings throughout the Metro Vancouver region. The larger the symbol and the greater the number of symbols indicate office building grouping. Larger buildings are concentrated in downtown Vancouver.

Map 3.1: Inventory Distribution by Sub-Region



Map 3.2: Office Building Inventory in Metro Vancouver Map (2018)



3.1 Office Inventory by Sub-Region and Land Use Designation

Figure 3.1 shows the amount of office space within each sub-region, as well as the distribution within the region. Approximately half (44% of buildings and 52% of floor area) of the office inventory was located in Vancouver, with other notable sub-regions being Burnaby / New Westminster (18%; 19%), Surrey (12%; 10%), and Richmond (10%; 8%).

Metro 2040 establishes regional land use designations, including 'General Urban', 'Mixed Employment', and 'Industrial'. Three-quarters (76%) of the office inventory is located on lands designated 'General Urban', which is intended to accommodate a wide variety of land uses including Urban Centres. Of the balance, most (21%) is located on 'Mixed Employment' which can accommodate various commercial uses. A relatively small amount (3%) is located on 'Industrial' lands, which are primarily intended for industrial related activities.

Figure 3.1: Inventory Distribution by Sub-Region Table

Sub-Area	Number	*Distribution*	Sq Ft	*Distribution*	Avg Size
Vancouver/UBC	612	*44%*	41,500,000	*52%*	67,800
Burnaby/New West	251	*18%*	15,400,000	*19%*	61,400
Surrey/White Rock	164	*12%*	8,200,000	*10%*	50,000
Richmond	141	*10%*	6,700,000	*8%*	47,500
North Shore	115	*8%*	4,200,000	*5%*	36,500
Langleys	57	*4%*	1,900,000	*2%*	33,300
Northeast Sector	38	*3%*	1,400,000	*2%*	36,800
Delta	11	*1%*	400,000	*1%*	36,400
Ridge - Meadows	3	*0%*	100,000	*0%*	33,300
Total	**1392**	***100%***	**79,800,000**	***100%***	**57,300**

3.2 Office Building Size

The following Figures 3.2 and 3.3 show the distribution of buildings by office component size. As can be seen, most office buildings are under 100,000 sq ft in size, with the majority of the balance in the 100,000 to 250,000 sq ft range. There are very few buildings over 250,000 sq ft. Of the entire inventory, the average size is 57,000 sq ft and the median size is 31,000 sq ft.

Specifically over the more recent 1990-2018 period, 665 office buildings were constructed with 44 million sq ft. Approximately half (53%) were under 50,000 sq ft, and another 31% were between 50,000 sq ft and 100,000 sq ft. However, smaller buildings under 50,000 sq ft only represented 22% of the total new office space. Some 24 buildings over 250,000 sq ft were built during that period. The buildings over 250,000 sq ft are fewer but much larger, and thus comprise 20% of the total new space for the period. Of this 1990-2018 inventory, the average size is 66,000 sq ft and the median size is 45,000 sq ft, both of which are higher than the older stock.

Figure 3.2: Distribution of Office Buildings by Size - Entire Inventory

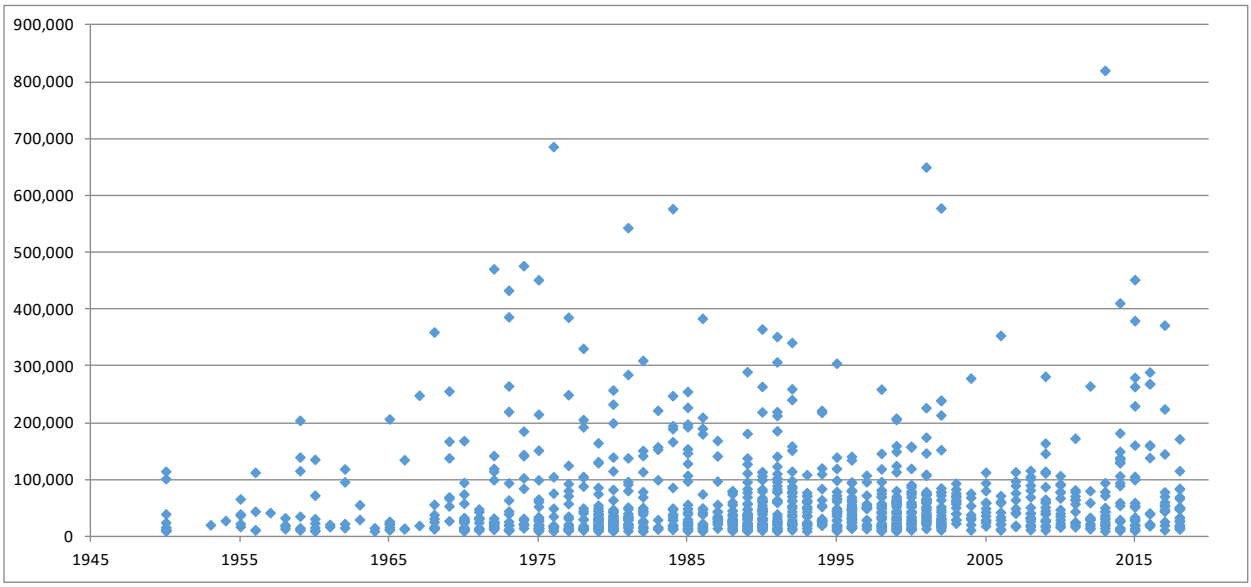
Building Size	Count	%	Sq Ft	%	Avg Size
500,000+	6	0%	3,900,000	5%	642,000
250,000-499,999	37	3%	12,200,000	15%	330,000
100,000-249,999	150	11%	22,700,000	28%	151,000
50,000-99,999	272	20%	18,800,000	24%	69,000
10,000-49,999	927	67%	22,300,000	28%	24,000
Total	**1392**	**100%**	**79,900,000**	**100%**	**57,000**

Figure 3.3: Distribution of Office Buildings by Size - Built 1990-2008

Building Size	Count	%	Sq Ft	%	Avg Size
500,000+	3	0%	2,000,000	5%	683,000
250,000-499,999	21	3%	6,600,000	15%	315,000
100,000-249,999	80	12%	11,800,000	27%	147,000
50,000-99,999	206	31%	14,100,000	32%	68,000
10,000-49,999	355	53%	9,700,000	22%	27,000
Total	**665**	**100%**	**44,200,000**	**100%**	**66,000**

As can be seen in Figure 3.4, in terms of distribution since 1950, there was a pattern of the larger buildings (over 300,000 sq ft) being completed during the 1970s and 1980s, and then resuming again after 2010.

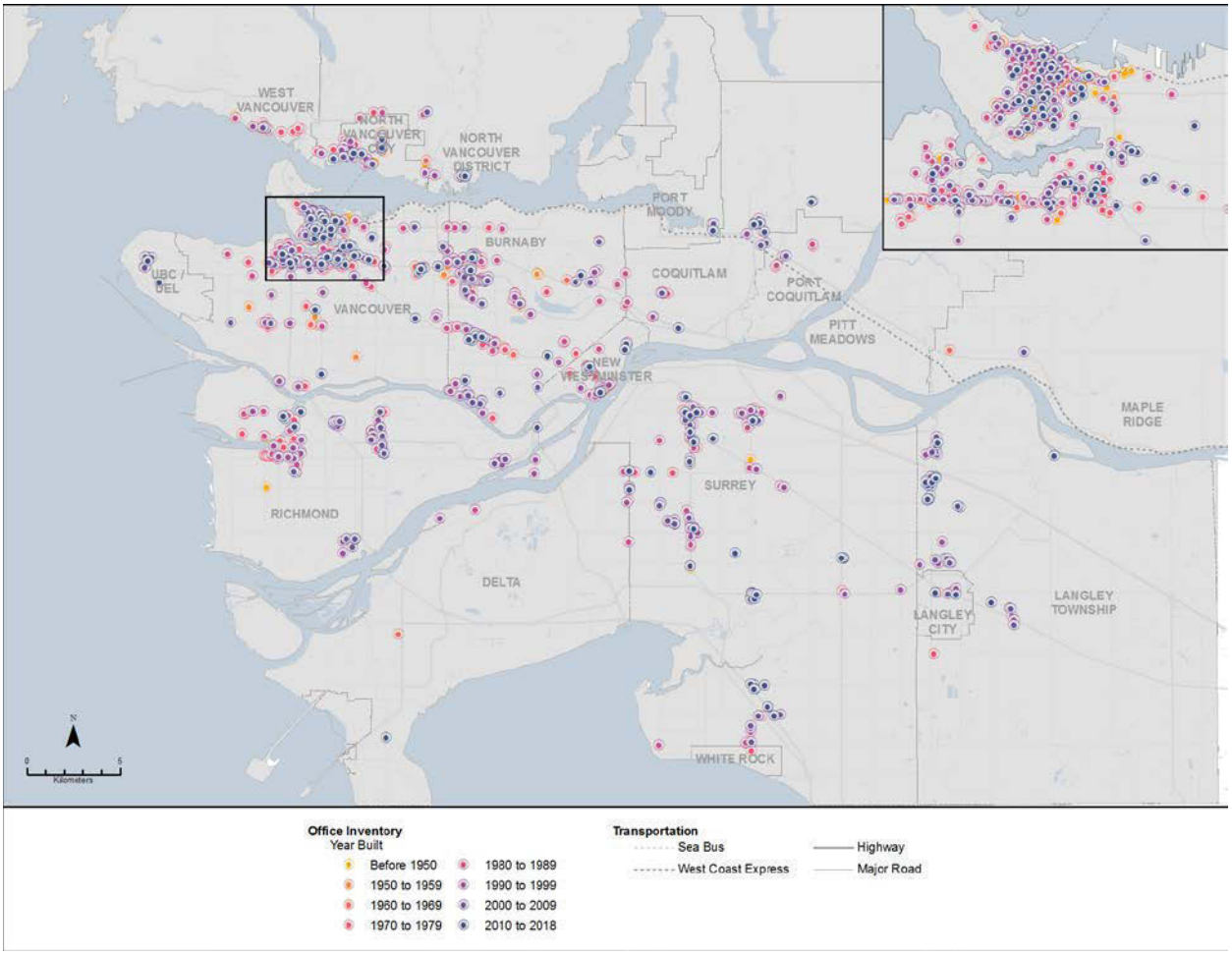
Figure 3.4: Building Year Built by Office Component Size (1950-2018)



3.3 Office Building Inventory Year Built

Based on the available records, the age of the building by year built has been compiled (in the form of completions) (see Map 3.3). Note that in some cases buildings have been substantially renovated. Where building data is available for substantial renovations, the year renovated has replaced the initial year built. For the 80 million sq ft office space inventory, all but approximately 2 million sq ft (2% of the inventory) has known building year built data. Note that the completion of individual large projects can have a significant impact on the results during periods of relatively lower activity and in small markets.

Map 3.3: Inventory by Building Age



Completion rates vary considerably from year to year. Figures 3.5 and 3.6 show the building age distribution, with significant office development in the 1990s to 2002. During the 2004-2012 period, the development of new office projects was considerably lower (with the exception of 2009), with another cycle of development peaking in 2015.

Figure 3.5: Inventory by Period Built (by Decade) by Urban Centre Location

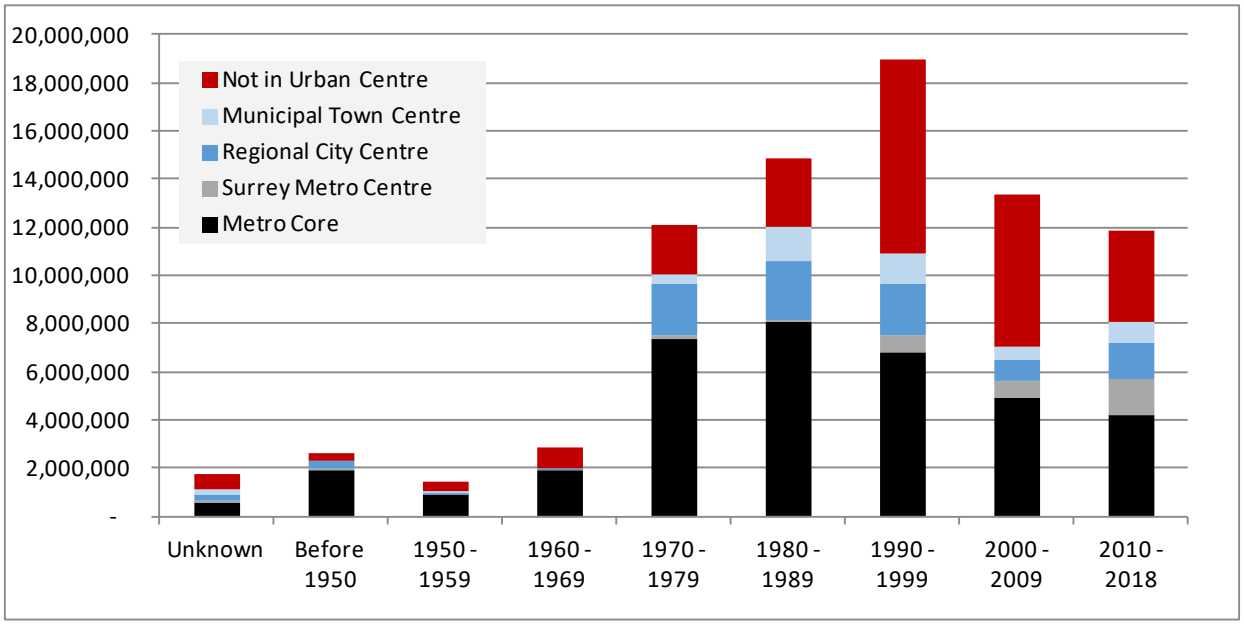
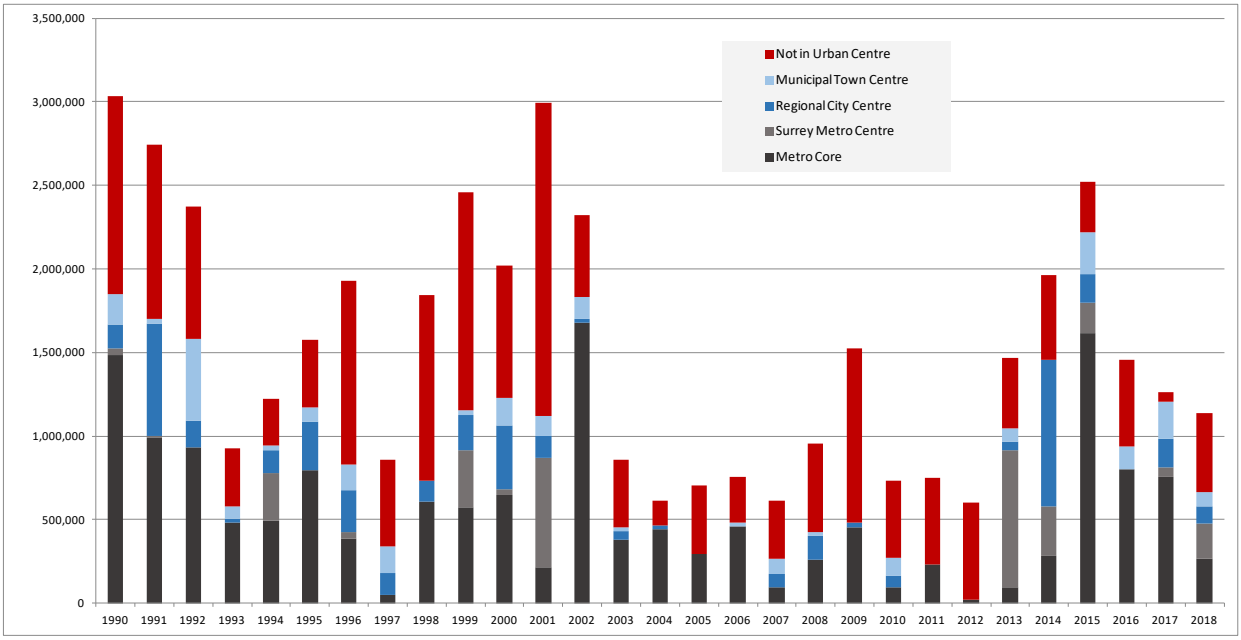


Figure 3.6: Inventory by Period Built (1990-2018) by Urban Centre Location



Office Building Inventory Year Built by Location

Figures 3.7 and 3.8 show the distribution of growth by sub-region as well as the location of the new office by period built. There was a total of 44 million sq ft of office space developed in 665 buildings during the 1990-2018 period, which provides for an average of approximately 1.6 million sq ft per year.

Much of the development since 1970 was within the City of Vancouver, and to a lesser extent Burnaby / New Westminster. More recently, growth rates have been lower, with a higher proportion of development in Burnaby, New Westminster, and Surrey.

Figure 3.7: New Inventory by Sub-Region by Decade

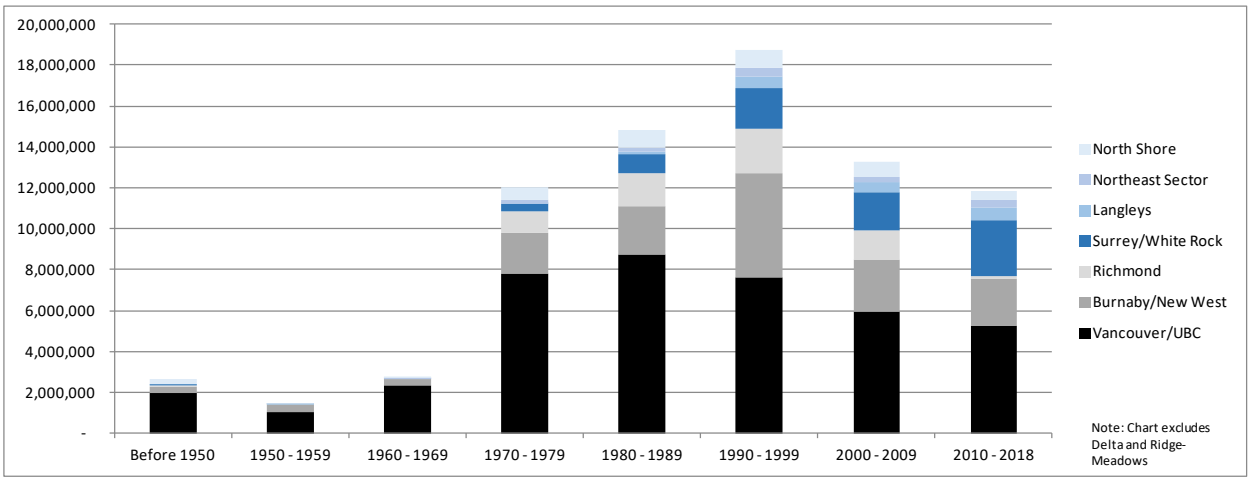
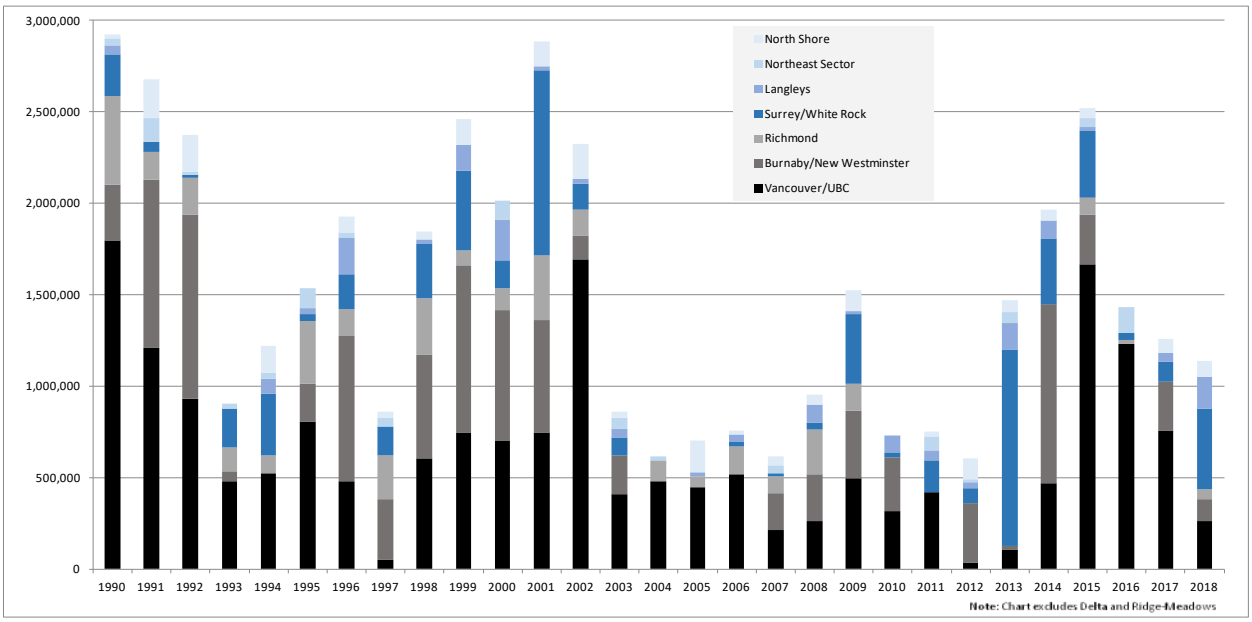


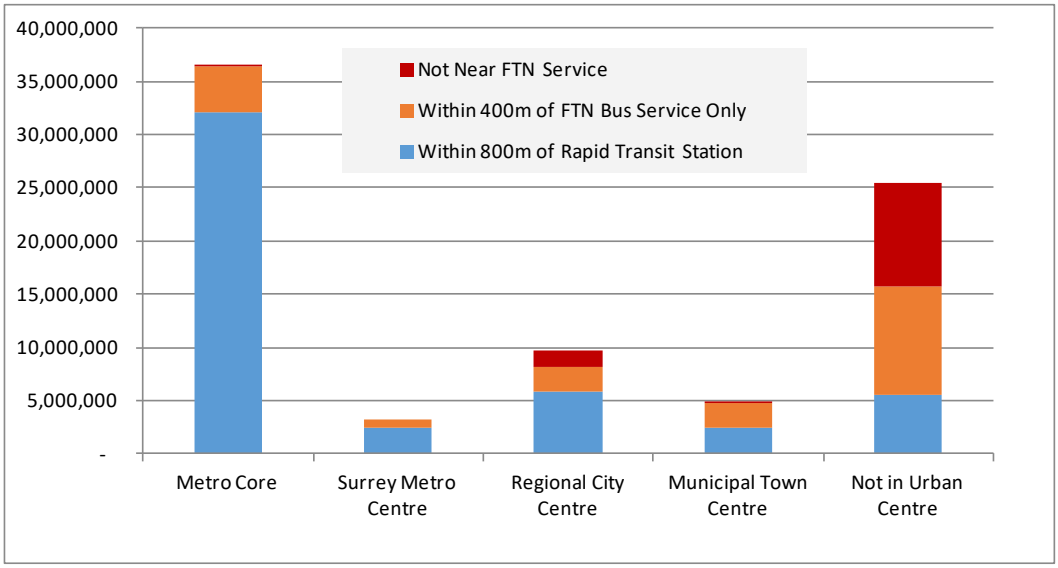
Figure 3.8: New Inventory by Sub-Region (1990-2018)



3.4 Office Inventory Relative to Urban Centres and Transit Service

Figure 3.9 shows the distribution of the office space inventory relative to both Urban Centres and Frequent Transit Network (FTN). Most (88%) office space is located within either Urban Centres or within 400 metres of FTN bus / 800 metres of rapid transit service. Most of the inventory in the Metro Core and the Regional City Centres (88% and 61%, respectively) is within 800 metres of SkyTrain stations, whereas half (50%) of the office space in Municipal Town Centres is near rapid transit. Of the inventory not in Urban Centres (25 million sq ft), 62% is proximate to FTN transit service (bus or rapid transit). Approximately 10 million sq ft (12%) of the total 80 million sq ft inventory is neither in an Urban Centre nor near FTN transit.

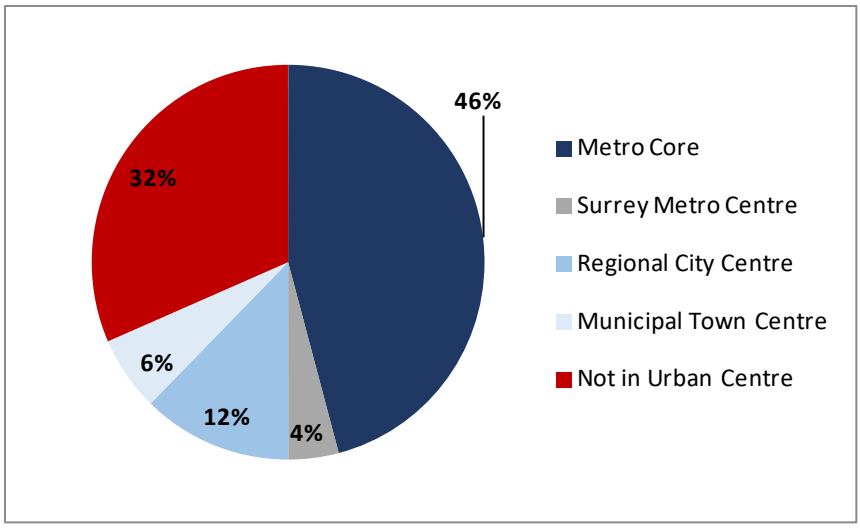
Figure 3.9: Inventory by Urban Centres and Transit Service



Office Inventory Relative to Urban Centres

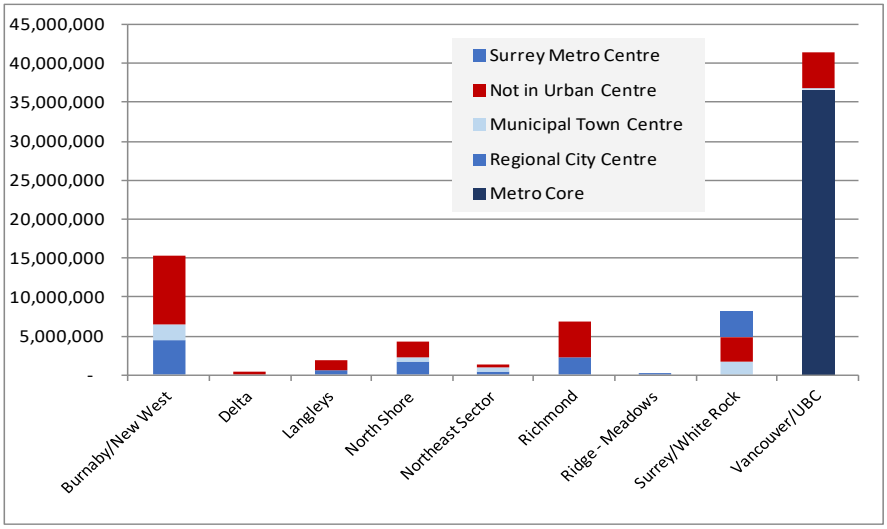
Figures 3.10 and 3.11 show the distribution of office space by sub-region relative to Urban Centre types. Of the total inventory in the region (80 million sq ft), 68% or 55 million sq ft was located in Urban Centres. Nearly two-thirds of this inventory (62%) was located in Metro and Regional City Centres (most of which located within the Metro Core), and only a small amount (6%) was located in Municipal Town Centres. The balance, 32% or 25 million sq ft, was not located in Urban Centres.

Figure 3.10: Inventory by Urban Centre Type (2018)



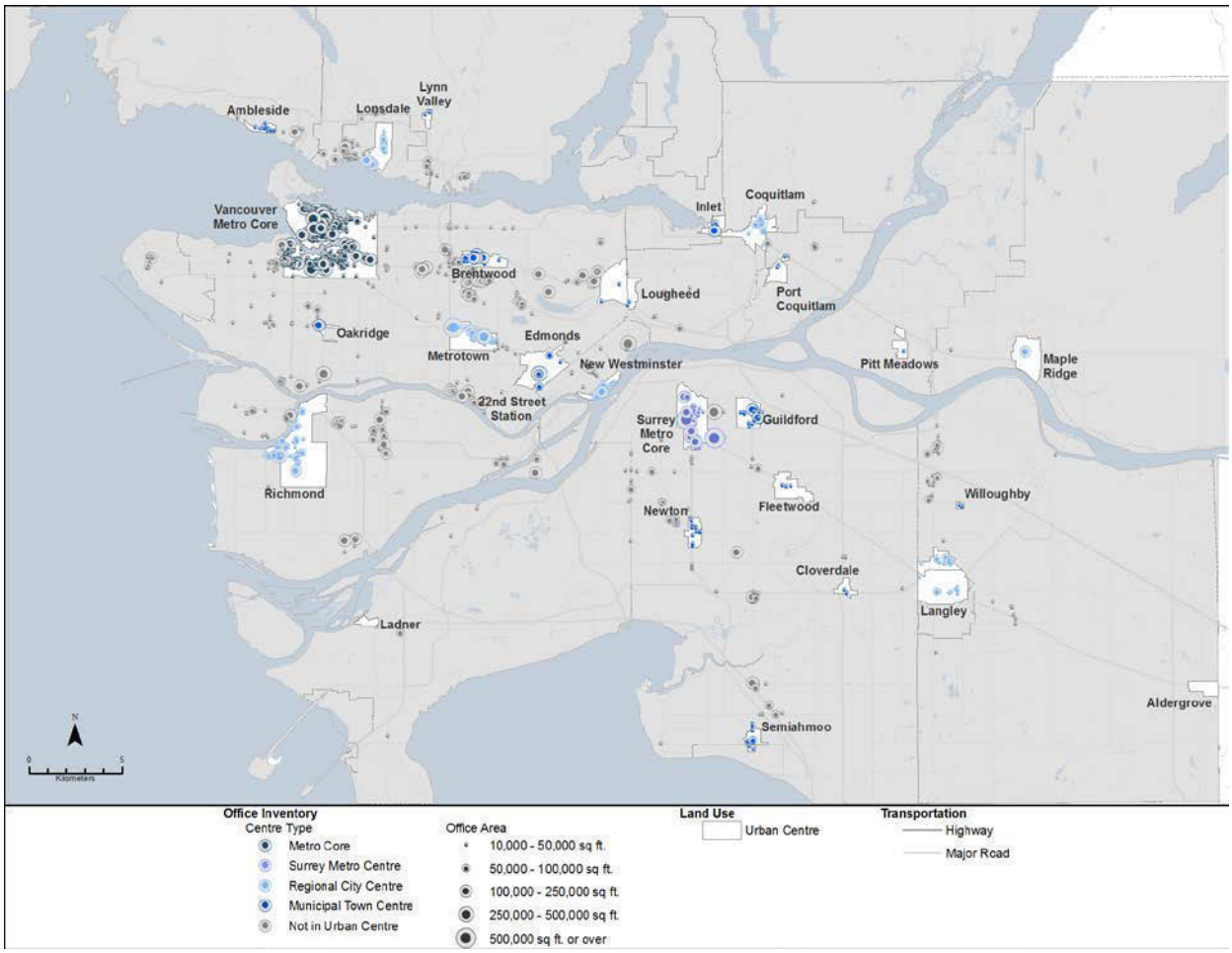
The 55 million sq ft of office space located in the 26 Urban Centres was distributed as follows: the Metro Core (downtown Vancouver and the Broadway Corridor) dominates with a total of 37 million sq ft or 67% of the total office space in Urban Centres in the region. The next largest centres (at less than one-tenth the size) are Metrotown and Surrey City Centre at approx 3 million sq ft each, and Richmond City Centre at 2 million sq ft. The 17 Municipal Town Centres contain relatively limited amounts of office space (6% of the region's total), with an average of 290,000 sq ft of office space each.

Figure 3.11: Inventory by Sub-Region and by Urban Centre Type



Map 3.4 and Figure 3.12 show that for Vancouver, the majority of space is within Urban Centres, whereas for Burnaby/New Westminster, North Shore, Richmond, and Surrey, a significant proportion of office space is not located in Urban Centres.

Map 3.4: Inventory by Urban Centre Map



Office Inventory Relative to Transit Service

Relative to the FTN, some 49 million sq ft (61%) of office space was located within 800 metres (10-minute walk) of a rapid transit station, and 20 million sq ft (25%) located within 400 metres (5-minute walk) of FTN bus. The balance, 12 million sq ft (14%) of office space, was located beyond the FTN service area.

Figure 3.12: Inventory by Transit Service (2018)

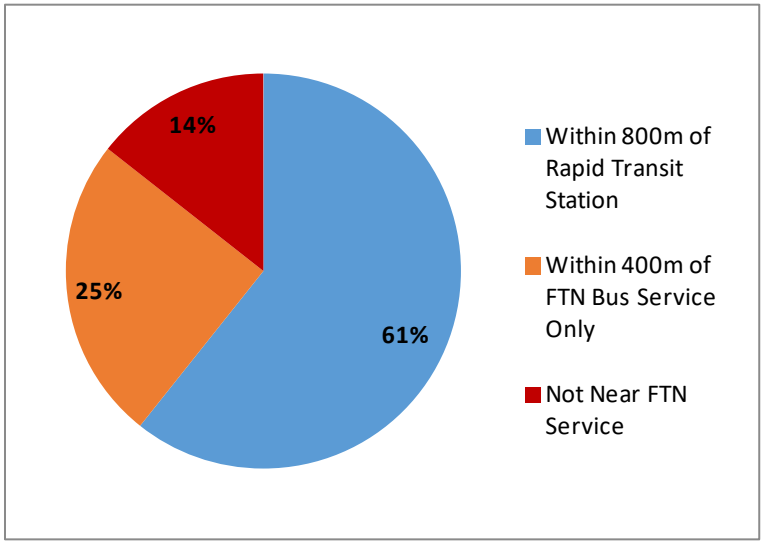
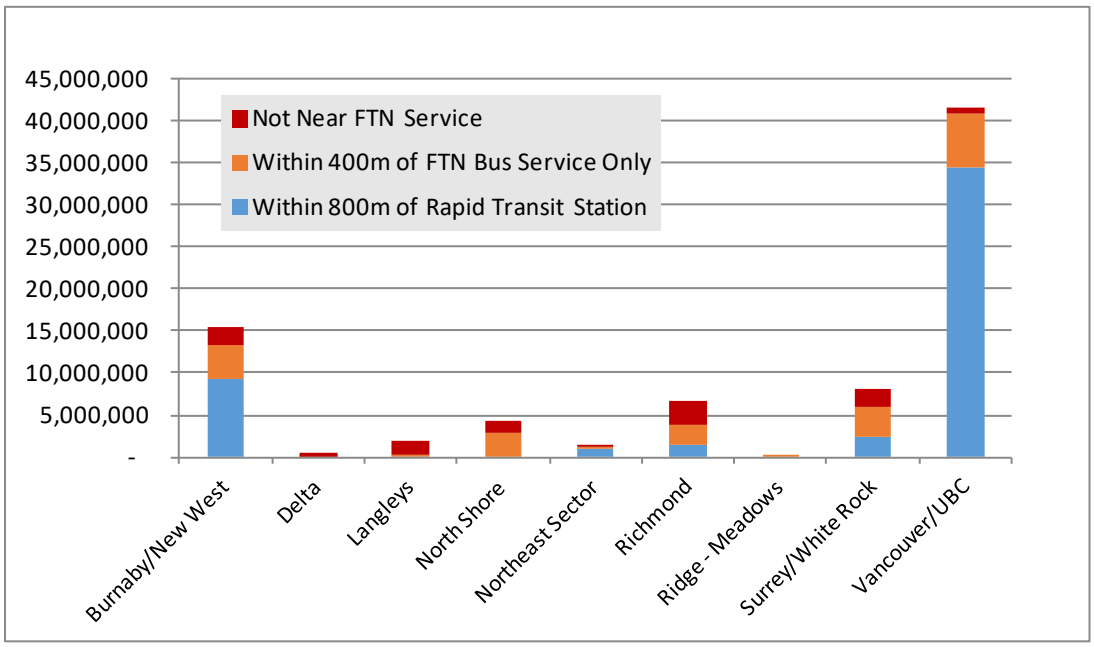


Figure 3.13 shows the distribution of office space by sub-region relative to transit service. Most of the office space in the City of Vancouver is near rapid transit, and the balance is served by FTN bus. For other sub-regions, the proportional amount of office space by rapid transit is lower, and the amount served by FTN bus is higher, as well as the amount of inventory not near FTN service.

Figure 3.13: Inventory by Sub-Region and Transit Service (2018)



3.5 Newer Inventory Relative to Urban Centres and Transit Service

Figures 3.14 to 3.18 show the growth in office space between 1990-2018 relative to both Urban Centres and the FTN. More than half (55%) of the 44 million sq ft of new inventory (built between 1990-2018) was located within 800 metres of rapid transit stations, with 36% located within the Metro Core (all of which having access to FTN transit). Of the new inventory not in Urban Centres (18 million sq ft), 10 million sq ft (57% of total) was proximate to FTN transit service, and 8 million sq ft (43%) was both not in an Urban Centre and not near FTN transit.

Urban Centres

Of the total growth for the 1990-2018 period, 59% was within Urban Centres (compared to 68% for the entire stock). The balance, 41% of new office development was located outside of Urban Centres, with a range of transit service access.

The distribution of office development by Urban Centre type has varied from year to year over the past decades. Despite some years with a higher proportion of development in Urban Centre locations, as indicated based on the data that non-Urban Centre development peaked in the 1990-2009 period, there is not yet a clear long-term trend towards a consistently larger proportion of development occurring in Urban Centres (other than the Metro Core).

Figure 3.14: Growth in Inventory in Urban Centres and by Transit Service (1990-2018)

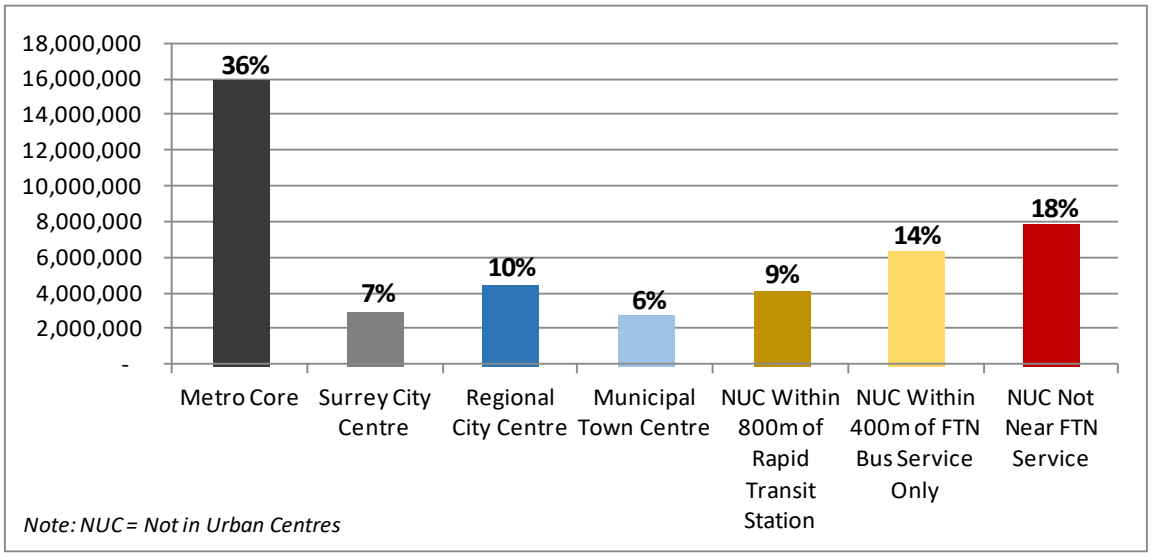
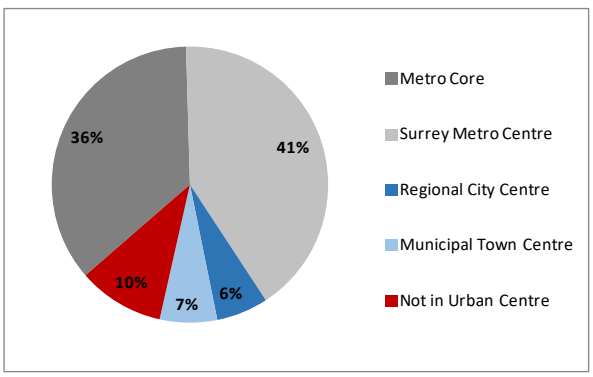


Figure 3.15: Growth by Urban Centre (1990-2018) **Figure 3.16: Growth by Transit Service (1990-2018)**



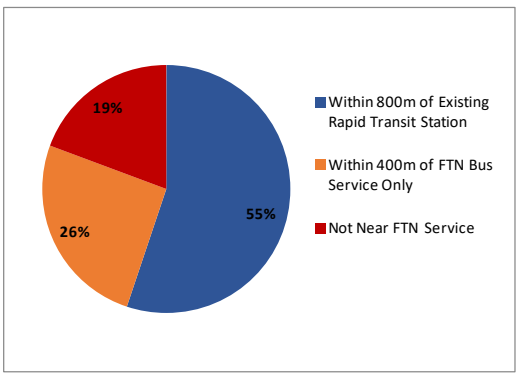


Figure 3.17: Growth of Inventory in Urban Centres (1990-2018)

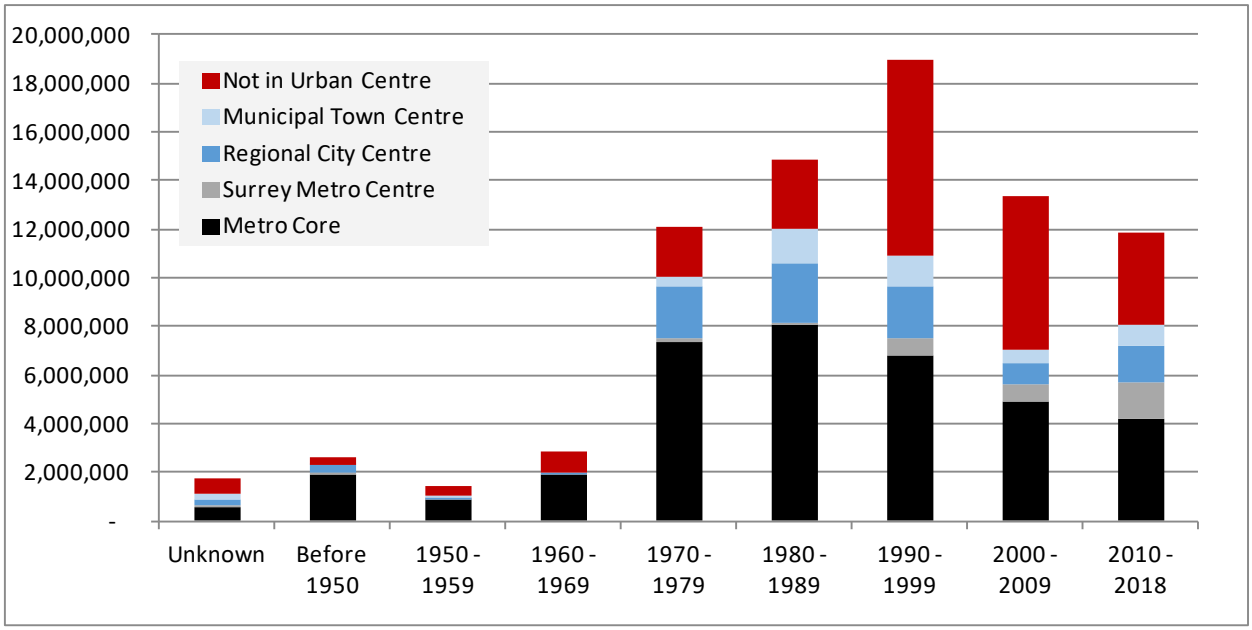
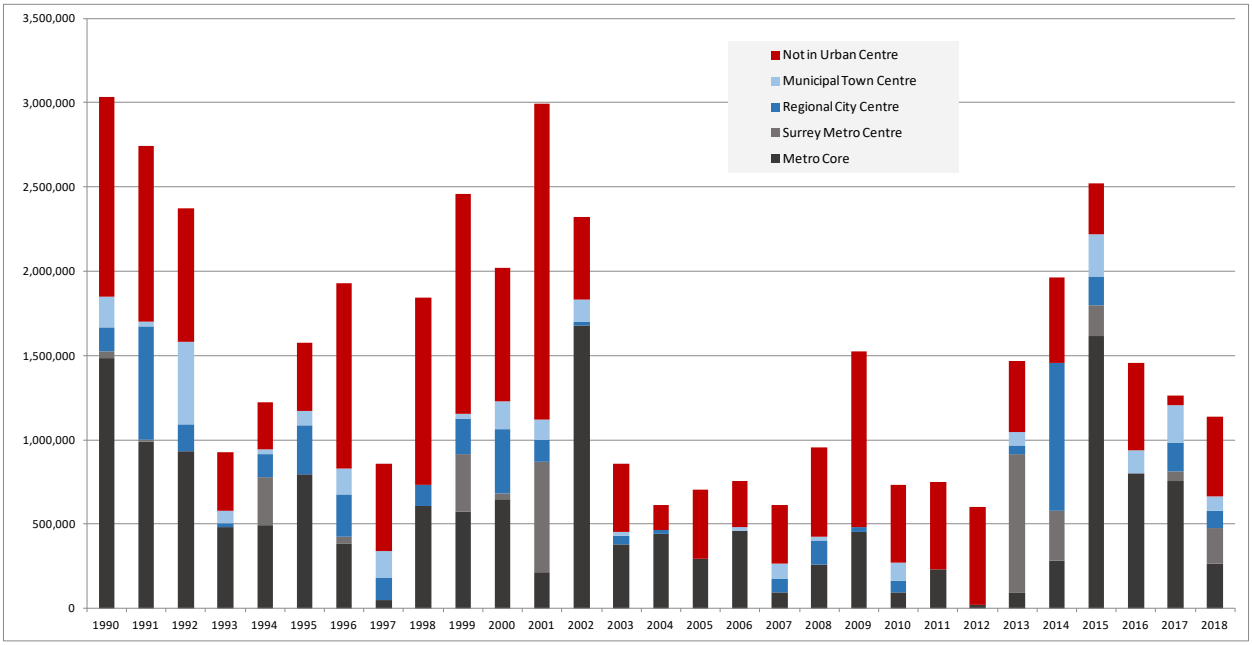


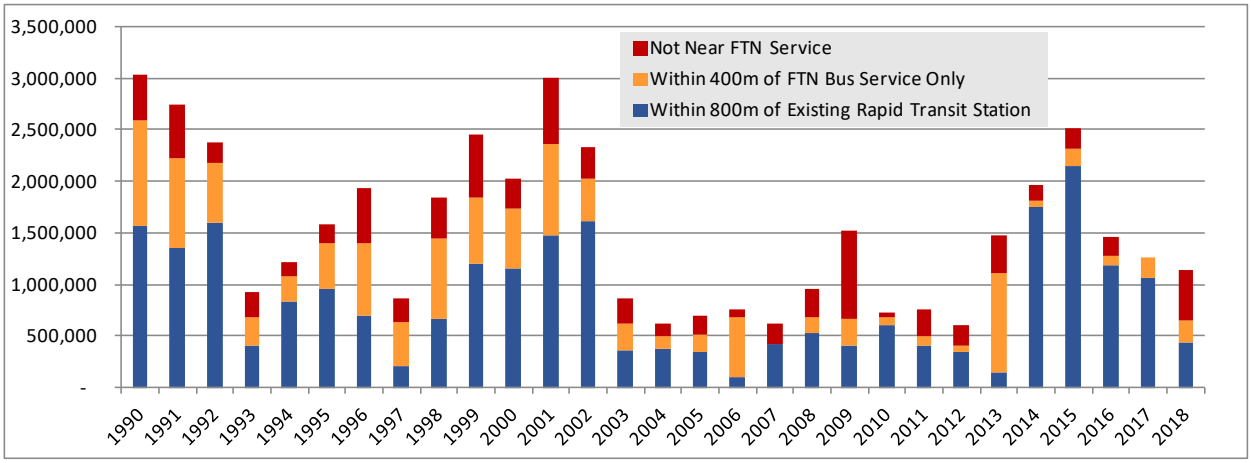
Figure 3.18: Inventory by Year Built and Urban Centre Type (1990-2018)



Frequent Transit Network

Figure 3.19 shows the office space growth in the region between 1990 and 2018 relative to the FTN (rapid transit stations and FTN bus). As can be seen, results vary greatly by year, in some cases reflecting the impact of only a few new buildings completed per period. Of the total growth for the 1990-2018 period, approximately 55% of new office space development was located within 800 metres of rapid transit, and 26% within 400 metres of FTN bus. The balance, 19% of new office development was located in areas not accessible to the FTN. The distribution of office development by FTN type has varied from year to year. Over the past decades, various major projects have been completed which impacted the annual results.

Figure 3.19: Inventory by Year Built and Transit Service (1990-2018)



4.0 Office Tenant Considerations

Office tenants are not all the same; the types of businesses and their accommodation needs vary, as do the sub-sectors and local characteristics. Some tenants need to be located in downtown Vancouver, some tenants serve their local community, and others prefer a business park campus-type environment. The following sections summarize the factors that tenants consider when selecting office space accommodations.

Business Needs

Business (re)location is a significant decision and action by most tenants. Different businesses with different needs are looking for different types of office accommodations. This list of criteria can include the following, with the need to potentially rank them in terms of importance:[70]

Business Objectives

- Employee retention
- Brand value enhancement
- Desire for prestige locations and client accessibility

Space / Design

- Current space needs and potential for future expansion
- Number of employees (range and estimated growth)
- Potential for efficiencies through consolidating multiple office spaces
- Office space and building design features – efficient and large floorplate design

Amenities / Features

- Image/quality/aesthetics
- Building services
- Office hours
- Security and access
- Communications infrastructure

Financial / Transition

- Budget
- Tenant improvement needs
- Timing / availability of space
- Lease terms / structure /renewals
- Cost (lease rate, building management, property taxes) and tenant inducements
- Quality of property management service

Access

- Location
- Parking
- Accessibility – transit, roads, parking, congestion
- Proximity to airport and other regional destinations
- Proximity to employees, customers, suppliers, competitors, other corporate operations

Other

- Green building design features / environmental considerations / LEED Certification
- Signage/naming rights
- Requirement for non-office components (e.g. warehouse, storage, flex space)

[70] Adapted from: Colliers, "Office Leasing Guide", 2016.

4.1 Overview of Tenant Considerations

Workforce Demographics and Residential Location

Workforce demographics and place of residence have a bearing on office site selection. For example, age may influence employee preferences for commuting mode to work. Interviewees reported that older employees are more likely to own and use their vehicles to commute, whereas younger employees may prefer transit and biking. The type of work and pay level may also influence these preferences.

Place of residence of the employees may impact business location decisions as well. Higher income employees may tend to live on the North Shore and west side of Vancouver and thus prefer a downtown Vancouver work location, whereas lower income employees may live in the eastern parts of the region where housing is more affordable, and prefer an work location in Burnaby or Surrey. Companies sometimes use a postal code mapping analysis to determine where employees live within the region.

Common concerns of employees when faced with an office move are whether their commute will change, the design of the new office space, and the amenities available at or near the new workplace. Businesses that are new to the region also consider locations that are within convenient proximity to good neighbourhoods, housing and schools for their workers.

Space Needs, Size of Space and Other Space Functions

The amount and type of office space per employee can vary greatly. For example, senior employees may require larger offices that include private meeting space compared to junior employees who work in cubicles or open concept space. There is an overall industry trend towards using office space more efficiently and increasing the density of employees. Space efficiencies may be through smaller office sizes, more cubicles, open concept design, fewer enclosed offices, and more efficient office design with modern furniture and equipment. Usually associated with this reduction in private office space per employee are larger shared common areas.

Larger businesses generally prefer office buildings with larger floorplates that allow their employees to be spread over fewer numbers of floors. Larger floorplates allow for a more efficient design, such as the need for fewer reception areas, meeting rooms, and common facilities. Some businesses have quasi-industrial or non-office components, such as those that support manufacturing, storage or warehouse functions, which they want in proximity to their office function. These types of businesses may also be satisfied with Class B or C office space, rather than Class A. Such types of office/light industrial flex spaces are less likely to be found in Urban Centres. Therefore, these businesses may favour an office park type building (i.e. flex space) and location (i.e. proximity to highways) to fulfil this need.

Employee Trips and Visitor Traffic

Some businesses have employees who spend their entire day at their office desk, whereas others have employees who often travel for meetings or site visits. The number of visitors to the business also varies depending on the sector. Accordingly, the importance of accessibility and proximity to customers, suppliers, branch offices/stores, and other related functions varies greatly. Accessibility and proximity, therefore, impact whether the business needs a location in an Urban Centre, near transit, or whether they may choose a suburban office park location with highway access. Accordingly, some companies are more likely to pay a premium for a more accessible location than others.

The Value of Prestige Locations

Some businesses want a high prestige central business district office location (i.e. downtown Vancouver) and are able and willing to pay a premium. For example, a large law firm may want a downtown location close to its clients and other businesses. This proximity benefits the company and employees in terms of

meeting time, availability to a larger number of other businesses, and provides more opportunities for face-to-face interactions. Proximity to urban amenities is strongly desired by tech tenants.

Some businesses do not value such characteristics nor have the ability to pay as much. For example, a call centre may not afford higher rents, and does not have clients who visit the office, so a downtown location is not necessary.

Customer Market
Some businesses serve local markets (e.g. medical or dental offices) and wish to be situated near their customer base. These businesses tend to be smaller, and will likely grow at a rate similar to the population growth rate of the immediately surrounding areas. Other businesses serve the regional market and need a location more central (downtown Vancouver, or near major highways), and may grow at faster rates. Some Metro Vancouver businesses deal beyond the region, so airport proximity is important to them.

Surrounding Uses
Some office tenants, especially corporate businesses, are very sensitive to the uses in the surrounding area, and may prefer to locate in a new and clean office-only building or district, rather than having to share a building and facilities (elevator, lobby, parking) with non-office users such as residents and retail shoppers. Requiring mixed-use development in these cases can impose challenges for some office tenants, and may deter some types of businesses.

Tenure and Leases
The nature of tenure itself impacts office markets. It is important to note that most businesses lease rather than own their office accommodations, reflecting the fact that businesses prefer to invest their capital in their business operations rather than in a building. There are relatively few strata office buildings in the region, although that is growing. A lease provides for lower costs and less commitment than ownership.

Businesses often need to make decisions about office relocations 12-18 months before lease expiry because typical lease agreements and renewals require 12 months' notice before the end of the lease. These office tenants must then be able to find a new office accommodation that matches their needs and that is available at the appropriate time. Relocating offices can be a significant decision for tenants as it represents a major disruption in operations, relocating expenses, a new location, and potentially higher operating costs.

Office space is usually leased for terms of five to ten year periods. The tenant must have a reasonable understanding of their office space needs, which reflect their business and staffing needs, over this longer term, and then commit to leasing the space for this period. This can be a challenge for businesses, especially those that expand and contract significantly in response to changes in business or economic cycles. Some businesses may be very sensitive to accommodation costs or may be less established or financially stable, which reduces their ability to incur significant costs or make a commitment to a long-term lease. Co-working operators are filling this need for flexibility, and have grown significantly in the last few years.

For a new office building or complex, there may be concerns by the tenants about being the first tenant in the building. By 'pioneering' a new building or area, while initial tenants may receive leasing incentives, they may be located alone in a building for some time surrounded by temporary vacancies, construction activity, or lacking full amenities.

Business Costs

Tenants are generally sensitive to costs, and this is especially true for branch offices, where the head office is located in another city and makes the final decision about accommodations. According to rough estimates by interviewees, office accommodation costs (e.g. rent, property management and property taxes) are approximately 5% of a business' total operating cost. Staffing costs are usually by far the largest single business cost. However, cost is not the sole deciding factor, and if space is not in a good location, low rent will not justify it. As office space in Urban Centres is usually more expensive (both rent and operating costs) compared to other locations, business tenants are only willing to pay a premium if there is a value or benefit to them. For some businesses, even removing the aspect of cost, an Urban Centre location may not meet their needs as well as an alternative location.

Depending on the tenant needs and the office space, tenant improvements (renovation / customization) of the space must usually be made. This can represent a notable cost to the tenant, sometimes part of which may be reimbursed by the landlord as a tenant improvement inducement.

In some cases cost savings can be generated for a business by consolidating operations into a single site and utilizing a more efficient building design. In these cases, even if the rent is higher per sq ft, if they require less space the extra cost may not be as significant.

Perspectives of Interviewees

For the office buildings themselves, smaller businesses prefer smaller floorplates in order to avoid being one of many tenants on a large floor, while larger businesses want an entire floor for efficiency. Also, there is a range of utility offered by buildings, with some designs focused on architectural interest, while others focused on efficiencies. Ultimately some tenants are willing to pay a premium for unique and high profile spaces that may supplement their corporate branding, while other businesses want a simpler space that effectively meets their needs.

For situations and scales that allow it, businesses may prefer to own or occupy an entire building in order to be in full control of how it is managed and help brand their company. This demand for high-quality office space is spurring new developments, focused in downtown Vancouver, but also in other areas such as Marine Gateway and Surrey City Centre that are served by transit and incorporate amenities.

4.2 Amenities

The market for office space has changed in recent years, with tenants demanding a workplace to appeal to workers. This is particularly the case in a competitive labour market where highly skilled workers are key, such as tech / software (and competition amongst building owners for tech and knowledge-based tenants). Competition in the office market was once primarily determined by location, transit access, and parking availability. While those factors are still important, tenants seem more focused on facilities and amenities in the building.[71]

To attract and retain employees, employers often seek space and buildings that provide key amenities and vibrancy. Because of this trend, interior office build-outs feature open plans with fewer private offices, typically resulting in less area per employee. While these types of workers are often satisfied with more compact workspaces, they seek a more interactive, collaborative and vibrant office environment, rather than isolated individual offices. The common element in these amenities is that they "activate" the spaces by creating opportunities for socialization and the opportunity to work in a wider range of places. Providing activated spaces and many amenities has become a necessity, not a

[71] NAIOP Research Foundation - Richard Peiser, Raymond Torto, "Activating Office Building Common Spaces for Competitive Advantage", 2017.

luxury, in urban buildings and premier suburban buildings, but much less so in buildings where low rent is the priority.[72]

Perspectives of Interviewees

Amenities no longer simply mean a sandwich shop for lunch, rather a range of shops and services, such as restaurants, grocery stores, banks, gyms, entertainment, and other facilities (following the trend set by 745 Thurlow Street, many new office buildings are also providing rooftop decks). It is especially desirable if the facilities are within the same building, highlighting the interest in mixed-use developments. In some cases, older buildings are being retrofitted by landlords in order to stay current and competitive.

4.3 Accessibility and the Value of Locating in Urban Centres or Near Transit

Location is very important to tenants; if the location is poor, it can lead to operating inefficiencies and high staff turnovers. Office locations with poor transit access are often difficult to lease, while locations close to rapid transit tend to have lower vacancy rates and higher rental rates.

Virtually all publications and interviewees stressed the importance of transit accessibility, particularly SkyTrain. Since the 2010 Winter Olympics and construction of the Canada Line, there has been a marked increase in interest and acceptance of SkyTrain for commuting. Office tenants have increasingly prioritized proximity to SkyTrain stations as an important criterion in selecting office accommodations. Light rail is typically preferred over bus, as bus service is seen as less permanent and not as reliable and comfortable as SkyTrain. From the tenant perspective, this means rapid transit, with one interviewee stating that "bus service was not comparable to SkyTrain." Office developers are aware of the trend towards increased tenant appreciation of rapid transit access and are responding accordingly.

In addition to access to transit, developers are cognizant that many employees also walk and bike to work, and are providing more facilities to support cyclists (e.g. locker facilities, secured bike parking). Also, the availability of amenities for employees, such as proximity to shops, restaurants, gyms and recreational facilities are of increasing importance for businesses and workers.

Tenants report that they generally prefer an Urban Centre location because transit accessibility and urban amenities are seen as being very important to employees. However, if cost is important, then sometimes they cannot afford the premium to be in an Urban Centre compared to being in an office park. As there is not an abundance of office space for large businesses in Urban Centres, finding desired large spaces can be a challenge.

Tenants want employees to be able to commute to work with ease, and increasingly want to be located near frequent transit. They note that younger employees have a greater propensity to take transit, and that older employees who are accustomed to driving are not as likely to switch to transit if the employer moves to a location with good transit service. If the location is not near frequent transit service, employers or property managers may invest in a shuttle bus service to transport workers to the nearest transit station or Urban Centre.

In terms of rents, average asking rents are approximately 30% higher near rapid transit vs away from rapid transit[73]. Office tenants are increasingly willing to pay a premium for access to rapid transit stations, or alternatively, may accept lower quality office accommodations if located near rapid transit versus higher quality accommodations without such rapid transit access.

[72] NAIOP Research Foundation - Richard Peiser, Raymond Torto, "Activating Office Building Common Spaces for Competitive Advantage", 2017.
[73] Jones Lang LaSalle, "Rapid Transit Office Index – Vancouver Research", 2011, 2012, 2013, 2014.

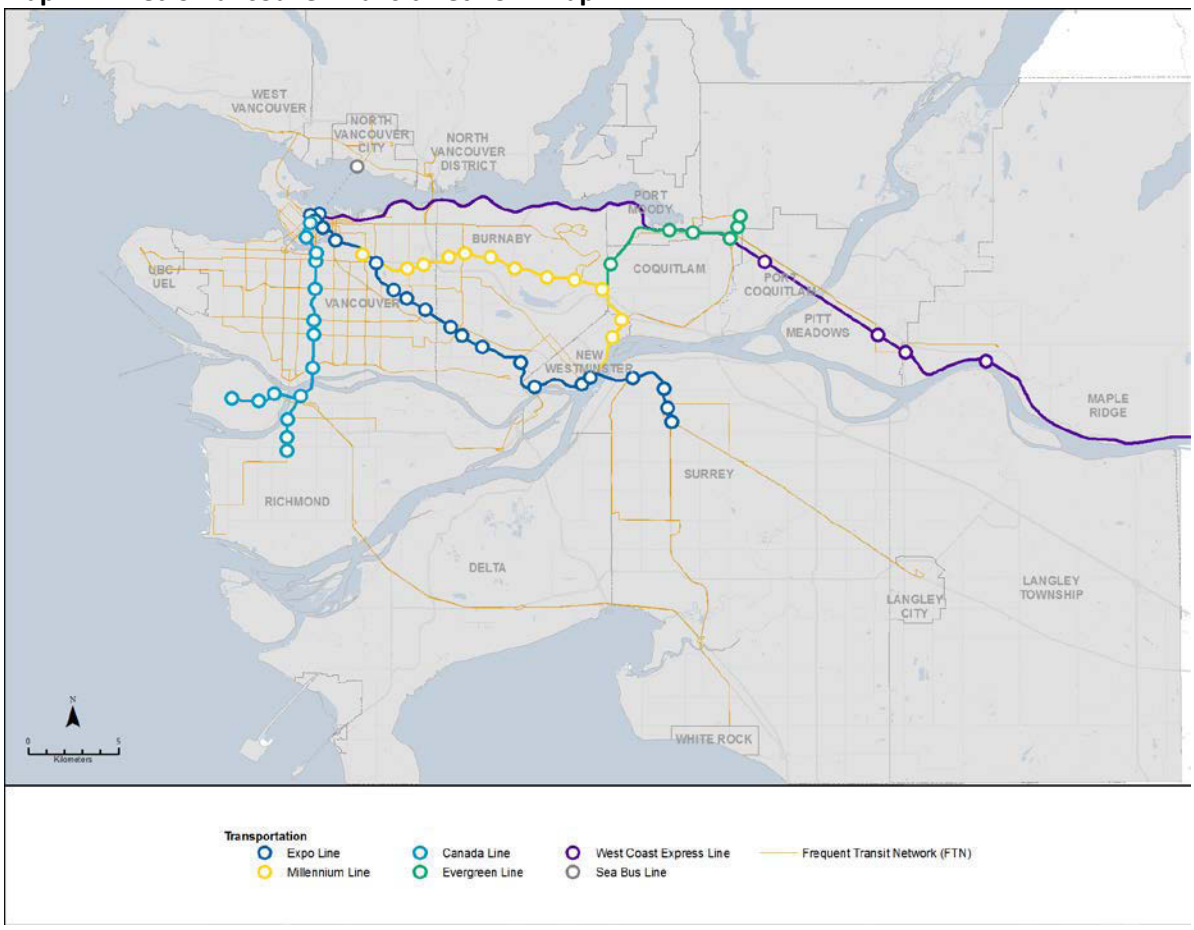
In late 2014[74], a report by Jones Lang LaSalle estimated that 85% of new office supply added to the suburban inventory during the prior 12 months was situated within 500 metres of a rapid transit station. Furthermore, the report noted that the "abundance of new supply in office buildings within 500 metres of rapid transit stations is in response to the increasing demand for such product, however the prevalence of speculative developments has resulted in a significant amount of un-leased space coming to market and a corresponding increase in overall vacancy."

Transit accessible locations mean that there is less need for on-site parking. However, developers caution that because of the greater space efficiencies in new buildings, parking requirements do not necessarily need to be reduced, as there are more workers per sq ft (e.g. some offices accommodate 1 employee per 100-150 sq ft, compared to the previous standards of 1 employee per 200-250 sq ft). Even if an office building is well-served by transit, tenants still expect some level of parking because some employees will continue to drive to work, or use a vehicle during the day for work purposes.

Perspectives of Interviewees

Access to SkyTrain and amenities are ever-more important from the perspective of tenants, with an eye to attracting and retaining employees. A SkyTrain station (network shown on Map 4.1) is often no longer enough – business tenants want to be downtown and in close proximity to more amenities. Furthermore, desired accessibility to SkyTrain can mean less than the standard 400 metres (5-minute) or 800 metres (10-minute) walking distance; while a shorter distance is preferred, it is important to recognize that how long a walk 'feels' can depend on the surrounding environment.

Map 4.1: Metro Vancouver Transit Network Map



[74] Jones Lang LaSalle, "Rapid Transit Office Index – Vancouver Research", 2014.

4.4 Extent of Tenant Movement Between Geographic Areas

Interviewees and the publications expressed differing views about the relationship between the downtown Vancouver office market and that of the rest of the region. While most noted that relatively few tenants move between sub-markets, some stated that with increasingly high prices in the CBD, tenants may be tempted to move to less expensive locations. Conversely, in an effort to attract and retain a skilled workforce, other businesses (especially tech) 'need' to be in the downtown.

Given the limited current supply available in the downtown (especially large blocks of space), some companies are looking elsewhere, including the suburban markets.[75] Demand spillover from the downtown core has strengthened suburban market fundamentals with vacancy contracting and average net asking rents increasing.[76]

The suburban market can offer large blocks of quality space to companies willing to be flexible. Back office employees that are not required to be downtown could be relocated to the suburban markets such as Burnaby, Richmond, and Surrey.[77] In particular, occupier demand continues to be seen in the Surrey and New Westminster submarkets as they achieve generational low vacancies in late 2018.[78] However, with region-wide low vacancy rates, even the suburbs can only offer limited relief.[79]

According to another source[80], as downtown markets continue to thrive, especially in Toronto and Vancouver, where office vacancy rates are amongst the lowest in North America, it is often misconstrued that this is at the expense of suburban markets. Instead, the opposite is observed: Suburban office markets are benefiting from the strength of their downtown counterparts. There has been a noticeable spillover effect as tenants seeking lower rents and newer and larger blocks of space are choosing suburban markets. Some established companies are also moving to the suburbs to attract an older, more experienced workforce.

Perspectives of Interviewees

Tenants moving between sub-markets is relatively rare. Once a business has been operating at a location for a long time, and employees are used to it, it is difficult to change locations. Relatively few businesses consider relocating to outside of the CBD such as to a perimeter of the core, or open a separate location in an outer location to serve local clients and workforce, due to the downtown market being effectively full and higher rental rates. Most businesses that want or need to be downtown are already there and will stay, and most businesses in outer locations also stay put.

Given that there have been very few new suburban office buildings constructed in the last decade, vacancy rates have been declining as space fills up in these buildings due to a generally strong economy. Businesses in those suburban locations, when considering relocating as their leases expire, typically renew at the same location once they fully understand the much higher costs (both net rent and operating) that would be associated with a relocation to say downtown.

A more central location for businesses is best to access the region's workforce - namely Vancouver or Burnaby that is nearly equally accessible from much of the region. Simple geography has resulted in much of Burnaby and downtown Vancouver being the central area and readily accessible via the SkyTrain and highway networks. Ultimately businesses make decisions and tradeoffs about rent costs vs

[75] Jones Lang LaSalle, "Metro Vancouver Office Insight", Q2 2018.
[76] CBRE, "Canada Quarterly Statistics", Q3 2018.
[77] Jones Lang LaSalle, Metro Vancouver Office Insight, Q2 2018.
[78] CBRE, "Canada Quarterly Statistics", Q3 2018.
[79] Cushman Wakefield, "Marketbeat Office Report Vancouver", Q3 2018.
[80] CBRE, "North American Suburban Office Market Trends: A Macro Perspective - Where Are We Now?", Spring 2017.

staffing costs. Some can offer higher salaries in suburban locations if rents are lower, and these locations may be closer to where the workers live.

Additional considerations about the market were expressed by interviewees, a number of which inform the potential, or limit, to attract office developments and tenants to outer Urban Centres:

- As the population, economic activity, and workforce grows in outer locations, the demand for office space in those areas will also grow. As increasing numbers of people move to the suburbs because of housing affordability, many may prefer to work within those communities to have shorter commutes. However, this may take a long time, as small communities / sub-markets still have limited scale and thus limited demand.
- SkyTrain access helps, however in small markets, the impacts of new SkyTrain is limited compared to larger markets, and some areas are still 'at the end of the line', rather than in a more central location on the network. Office businesses want to be by other office businesses, making it difficult to establish new areas.
- There is still a need for suburban office space. Some tenants like a campus feel - low rise and accessible to certain amenities, instead of overly urban and high rise. However, businesses that want / need to be in the CBD are there and will pay for it.
- The existing suburban market is seen as having two different types of tenant groups. First, tech / engineering firms, including some branch offices owned by American companies, which may not be willing to pay more rent. They may realize only after the fact that a suburban location costs them staff turnover. Secondly, local serving non-tech businesses may have a workforce that is more suburban, that appreciates the shorter commute and lower costs.
- For Coquitlam City Centre, there is the potential to densify with multi-residential, but the office market is currently not strong. Small office components in mixed-use buildings with local-serving businesses are more appropriate and realistic under current conditions. No large major tenants are likely to locate there unless locally owned or some other unique reasons. Although Coquitlam has the SkyTrain, it is seen as a branch line at the edge of the system.
- On the North Shore, transportation access is a challenge for constructing new office buildings, and also for office tenants accessing the regional workforce.
- Surrey has the potential to accommodate some smaller local serving firms and satellite offices. Achievement of a critical mass is likely necessary to enable more office development over time.
- A number of interviewed developers commented that if municipalities require the provision of office space where it is not warranted by the market, or the approval process is too arduous, they may simply not build anything at this time, and wait for conditions to change.
- It was also noted that building new office space in a sub-market without adequate demand may simply steal or re-locate tenants from one part of that sub-market to another, not attract new tenants (i.e. zero-sum).
- The best effort to attract tenants to outer Urban Centres may be as a value proposition – i.e. lower rents, and offering urban features / amenities but in a different location. However, from a development perspective, construction costs are still high in all locations, and land prices are increasing; so with low office rents in areas with weak office demand, it is difficult to make suburban office development viable.

5.0 Office Developer Considerations

The office development process is complex, capital intensive, and high risk. There are many different factors that can impact the development viability of sites and the potential for an office component. The decision-making process may be gradual and iterative as the project investigation and feasibility is completed. Preliminary positive signs may encourage the investor / developer to purchase the land and advance a development application; however this can change with market conditions, development costs, and municipal reviews. In some cases, if conditions become too challenging, a project may be deferred, cancelled, or an alternative use or design for the site may be considered.

5.1 Overview of Considerations

Developer Objectives

There are many aspects specific to a developer and investor that are relevant to the nature of an office project. This includes the type and amount of funds available for investment (equity vs. debt), the corporate structure of the development company (i.e. whether they are solely the developer, investor, property manager, or all), risk tolerance, investment profile and objectives, and outlook (long-term vs. short-term). Some developers may prefer to develop and sell a project, whereas others (such as investment pension funds) prefer to develop and hold a project as a long-term investment. The time and price at which a property was purchased impact the financial viability of a project; if the land was acquired a long time ago at a low price, office development may be feasible, but not if the land were acquired at more recent (higher) market price.

Market and Financial Conditions

Market conditions, specifically the demand for new office space, is the main driver for the viability of office buildings. Where and when the demand for office space is weak, there will be limited new office space developed. Local government plans that direct office space to specific locations will not be realized if the market demand is not in place to support a new office building. The market reflects both the macro factors influencing supply and demand in the region, and local area factors for specific sites. Demand is heavily influenced by factors such as the proximity to centres, business areas, highways, and rapid transit, surrounding uses and amenities, and land availability.

Market demand also affects the amount of building pre-leasing that is possible. Pre-leasing (or pre-sales for strata) is usually necessary to obtain project financing in order to proceed with construction. Generally, lenders will not finance a project until an adequate proportion of the building has been pre-leased. Typically, it is challenging for office developers to secure pre-lease commitments (especially in suburban markets), because tenants may not want to commit to a new location in advance of it being built, they have other location choices available, and the relocation process is complex. Thus, tenants may prefer to remain in their current location or move to an existing building. A slow office space absorption period for a new building can mean a financial loss for the investor / developer. In a market such as Metro Vancouver, which has few large corporations, it is difficult to attract new tenants to a yet-constructed building. Instead, developers will seek to bring to market a reasonable amount of office space at a time, which is pre-leased or can be absorbed in a short period.

Large office buildings (towers) are constructed all at once (with only very few exceptions), making the supply of new space very 'lumpy'. Conversely, low rise buildings can be built and leased in phases to match demand. Also, concrete high rises are generally more complex and expensive to design and build, compared to low rise tilt-up buildings. Additionally, the cost of construction materials and labour may change during a development process. For example, the cost of raw materials reflects national or global

economic cycles, with substantial price fluctuations. All of these costs challenge developers when planning and evaluating the financial viability of a project.

Due to these financial challenges and requirements, investors in major office projects are typically pension funds, which can buy sites and hold them for long periods until the market supports a viable development. Institutional investors, such as pension funds, are typically well-financed, diversified, and interested in long-term investments and can wait longer for returns compared to other developers.

Land Availability and Cost

The challenge most cited by developers was the difficulty in acquiring sites for office development. Land costs are very high in the Metro Vancouver region and office development is usually a less profitable form of development and values cannot compete against residential and retail uses. If a municipality's plans allow for a mixture of different land uses on the site, the property will likely be priced by the landowner vendor for the highest and best use, which may preclude the potential to develop office space. For some mixed-use projects the office component may be the lost leader and add little value for the developer.

In Urban Centres the properties are often smaller, thus necessitating a land assembly to create a larger viable development site. These properties usually have existing uses and businesses that may be difficult to move and expensive to assemble. The effort to purchase and assemble the properties from multiple owners (sometimes with individual properties each having multiple parties on title) can be time consuming, challenging, and expensive. Instead, developers prefer a single larger property – these types of sites are usually found in out-of-centre locations, such as industrial areas and greenfield sites.

Construction Costs

High and rising construction costs (both the labour and material components) are a challenge for all developers. According to Altus[81], for Metro Vancouver the per sq ft cost range increased by $5 between 2017 to 2018 for office buildings under five storeys with surface parking (2018: $200-$265 per sq ft) as well as for class A office towers from five to 30 storeys (2018: $270-$340 per sq ft) and 31 to 60 storeys (2018: $295-$390 per sq ft). Noting that high rise buildings can cost about 50% more than low rises to construct, this influences the potential size and location of developments. The impact of rising construction costs is significant and will be one of the key factors contributing to rising rental rates.[82]

Municipal Approvals and Costs

The extent of municipal approval requirements is also a consideration in the development process. The municipal review and design process for a major project often lasts two or more years. The construction period is typically an additional two or more years. Together, this process represents a significant period while the investor is not receiving returns. Further, risks during this period in the form of higher construction costs, difficulty in obtaining municipal approvals, changing economic cycles, or dampening market demand may cause a project to be suspended.

Municipal fees and charges can be in the form of application fees, development cost charges, community amenity contributions, etc. Municipal processes and regulations impact the total development approval time and costs, and add uncertainty and risks to a project. Jurisdictions in which the development requirements are not known at the outset of a development application are more challenging, because the costs are not predictable and are negotiated at the time of development. These

[81] Altus Group, "2018 Canadian Construction Cost Guide", 2018.
[82] Avison Young, "Metro Vancouver Office Market Report", Mid-Year 2018.

municipal processes and costs may lead developers to shift investments to jurisdictions that have a more "business-friendly" environment.

Several developers interviewed suggested that municipal development costs could be made lower around target locations, such as in Urban Centres and at rapid transit stations to encourage office development, or allow mixed-use development where appropriate. They also suggested that in municipalities that charge community amenity contributions, that those be applied only for any residential components, because residential uses generate the need for more community amenities and the profitability from a project to fund those amenities.

5.2 Mixed-Use vs. Stand-Alone Projects

Mixed-use development can provide some benefits because it accommodates a wider range of uses with greater activities. In mixed-use projects, residential uses can help offset the costs and reduce the risk of building the office space. Mixing employment space with other uses is a growing practice; connecting uses with other activities in and around the building can make urban mixed-use locations highly valued.[83]

In a mixed-use development, the retail component can be an amenity to the office component, and the residential component can help support the retail businesses as a customer base. From the perspective of the developers, a mixed-use project (or multi-use where the separate use buildings comprise a complex) with complementary uses, under the right conditions, can provide an opportunity for the residential component (which is typically higher value) to support or cross-subsidize the office component. This may be especially beneficial in suburban markets where it is difficult to pre-lease office space, yet the residential part can be pre-sold to secure the project financing.

However, mixed-use development can also have some drawbacks. Residential and office users have different needs, due to the design requirements for the different users, preferences for floorplate sizes, and separate access facilities (lobby, elevator, parkade) for residents and businesses. Mixed-use projects can impose extra design complications, costs, and inefficiencies that may not be of interest to all developers. Additionally, in some cases requiring an office component where market demand is weak may lead to the office space being vacant and underused for an extended period.

Tenure can also be complex in mixed-use projects, with some parts of a building owned by occupants (condominium apartments) and other parts occupied by rental tenants (retail and office), with different tenures and interests. Mixed-use development should be considered at appropriate locations, reflecting site characteristics and market demand, and not forced into unsuitable locations. In some cases, multi-use development, with different uses in separate proximate buildings may better serve the objective.

There are certain municipalities that are contemplating requiring developers to provide a larger percentage of office space, as part of mixed-use developments, without the consideration of demand in those markets, according to NAIOP (Commercial Real Estate Development Association). While municipalities often want to create more job space, in reality the demand for office space is limited in certain markets and office projects may not be viable.[84]

Perspectives of Interviewees

There are divergent views on the office aspect of mixed-use developments. Some interviewees noted that having a range of uses at a focused location, such as Transit-Oriented Development (TOD), provides

[83] Gensler, "Design Forecast 2014: Top Trends Shaping Design", 2013.
[84] NAIOP Vancouver, "Office Cost of Business Survey", 2018.

for a desirable community. However others reference examples of mixed-use projects executed poorly, such as commercial podiums with ground floor retail and a floor or two of office, with a high rise residential tower above. In such situations, the residential component may be the main driver of the project, and the rest is an 'afterthought' that is 'tagged on', and not given enough attention or consideration. Designing a building with multiple uses within it can be a challenge in terms of optimizing floorplates and column configurations, although offers the potential for shared parking facilities.

Retail is an amenity, and if done well can attract residential and office uses, whereas if done poorly and stratified, which is often associated with lack of cohesive management, it can be a negative attribute of a building. Conversely, a large complex with stand-alone commercial businesses can be designed and managed better, and is typically preferred by corporate office tenants.

There was also a range of views on the appropriateness of municipalities 'forcing' rather than just 'encouraging' and 'supporting' office components in new projects. Most developers are concerned that being required to build office space in a location with weak demand may lead to long-term vacancies, while some other interviewees believed that the office market will fulfil itself once built, yet pre-lease in those locations can be difficult.

If municipalities compel an office component on a site where the developer does not believe there is a market, the outcome may be that the site will not be (re)developed; instead, a phased approach or a smaller scale office component may be a solution. Yet in other locations, some lands are zoned / designated for only employment uses, where office and industrial, potentially combined, may be appropriate; whereas at urban locations by transit, apartment rental residential could also be permitted as part of mixed-use developments, according to some developers. In certain markets, the residential component offsets the office component costs. In those cases, permitting residential uses could be used as a tool to create the employment space desired, that could lead to mixed-use projects that support a complete community.

5.3 Development Risks

Compared to developing other types of projects including office parks, office towers are complex in terms of design, approval, and construction processes. This lengthy process brings risks, because as time passes, the developer faces greater uncertainty; for example, the economy can change, the office market can soften, or construction costs can increase. Although there may be strong demand in (some) Urban Centres, these locations are considered by developers to magnify these challenges because there is more regulatory approval, design review, and public consultation.

As with any investment, if risks are high, investors will require a commensurate high return. Thus for projects to advance which are perceived as higher risk, they will need to offer a significant profit to attract investors and developers, or the project may not proceed. This may attract only a very small number of interested parties, which limits competition and development activity.

Perspectives of Interviewees

Office development risks can be exacerbated in a volatile market or where there are uncertainties associated with the approval process. One noted challenge was finding good available sites in downtown Vancouver to develop, and institutional investors / developers (such as pension funds) being outbid by strata developers, driving up land prices.

In order to arrange project financing, typically pre-leasing commitments are required. Depending on market conditions, these commitments can be difficult to arrange, especially in suburban markets or if the delivery date is uncertain due to the lengthy municipal approval process. Although as one

interviewee noted, over time, Vancouver is becoming less of a pre-lease market, with more developers willing to construct office buildings without pre-leases – this new supply can better accommodate office tenants wanting space with less lead time.

Municipal zoning that allows for a wide range of possible office tenants, or 'general office', is preferred over zones that are much more restrictive and only allow certain specific types of business uses, as this greatly reduces flexibility and thus increases investment risk if tenants change.

Institutional investors/developers are generally not in the market to buy and sell properties, but rather to buy or build properties for long-term investments. Land prices can be driven up by non-institutional developers - merchant developers, who can pay a higher price than institutional ones, as they may have a higher risk tolerance. This financial background also informs decisions about mixed-use developments, where institutional investors want a long-term hold, thus may prefer rental vs strata projects (for both the commercial and residential components).

5.4 Landlord Tenanting Decisions

From a landlord leasing perspective, smaller tech companies have always been viewed as a risky type of tenant, with limited history and financial covenants, and a high likelihood of not renewing their leases (as they are prone to either failing and closing, or booming and outgrowing their space). Instead, larger and established companies are the preferred types of tenants, and in the tech sector, this includes the recognized brands such as Amazon, Microsoft, Apple, etc.

Some tenants may prefer an architecturally unique and high-profile building; however these buildings are less efficient and often cost a premium. From the investor / landlord perspective, they need to consider the long-term utilization and operation of the building, not just current trends.

Helping to fill the need for flexibility are the growing co-working providers (namely, WeWork and Regus / Spaces) that offer businesses a variety of office space accommodation options (which may be needed temporarily as a swing site for a business in between locations or for a specific project). These spaces are available without the requirement for long-term leases, although that flexibility comes at a premium.

Developers have different opinions on co-working operators as a tenant for their buildings; some see it as filling a space and bringing positive activity to the building, while other landlords expressed possible concern with the financial strength of these operators during an economic downturn, and potentially being a competitor with their existing tenants.

6.0 Office Development from the Municipal Perspective

Office development provides space for businesses, which helps to advance municipal objectives, ranging from growing employment within the community, reducing commute distances, complementing local amenities, and growing the economy of the city.

Municipal governments, through their economic development and planning functions, can encourage and regulate development in their communities. This includes promoting the community as a location for investment and directing office development to Urban Centres. Municipal economic development staff may help increase the profile of the community, promote economic opportunities, and share information to attract investment, while planning staff may establish the necessary land use plans and review development applications. In practice, municipal economic development offices may be more interested in attracting development to their municipality in general rather than to specific locations within Urban Centres, while planning staff are more interested in land use planning and integration.

Ideally, government departments work in concert to facilitate desired investment and development, recognizing that there are different types of business tenants requiring different types of office premises. However, the ability of municipal governments to attract business activity is limited, as developers and tenants invest in locations that are desirable from a market perspective, and government policies and tools have a minor impact on influencing these decisions. All of those interviewed recognize that the regional office market is limited and grows incrementally (with downtown Vancouver being a unique sub-market), making it a challenge to attract office development to other Urban Centres.

Some of the planning, regulatory and fiscal tools noted in this report have been used by various municipal governments at different times. As for policy, some plans require a certain amount of a development to be reserved for office or employment space. Another approach are policies that encourage office development, and provide for bonus density in exchange for the provision of office space. A common policy lever is to permit or require office (and retail) space as part of a mixed-use project; but municipal representatives suggest that the office component is sometimes resisted by the developer as office space is not in demand or profitable.

Fiscal incentives have been tried as well. Lowering permitting fees seems to be the easiest tool, compared to the challenges of lowering municipal charges or property taxes. Municipal representatives interviewed noted that lowering Development Cost Charges (DCCs) is no easy matter given the legislative requirements of DCC bylaws. Lowering property taxes for office space or providing "tax holidays" are rarely considered as a tool because provincial legislation would need to be changed to permit this and office is not seen as a use that needs financial assistance in this way. One municipal interviewee noted that overall tax rates in the region are generally competitive compared to other North American jurisdictions, and that businesses rarely request property tax reductions or mention that property tax rates are hindering their location decisions.

Some municipal staff interviewed cited a number of challenges with attracting and growing businesses that occupy office space. These challenges include: high employee housing costs and other costs of living in Metro Vancouver; high business costs; numerous building, development and permitting regulations; lack of supply of local talent; and difficulty in accessing venture capital to grow businesses. In some cases, businesses find it challenging to remain in a municipality as they grow the number of employees or their needs evolve, because they cannot find adequate space.

7.0 The Changing Nature of Office Work

7.1 Corporate Headquarters - Canada and Vancouver

Large office tenants are usually needed to warrant major office development and pre-lease space to finance new office buildings. Other major Canadian cities/regions have many major corporate headquarters consuming large blocks of office space that are able to commit to new office buildings; this is not generally the case in Metro Vancouver, which has more small and mid-sized corporate offices. However recently significant tech companies have entered the Vancouver market and taken up large blocks of office space.

The Importance of Head Offices

The role of head offices and their associated benefits are described in this section, copied from a report focusing on trends in office headquarters and particularly in Vancouver[85]:

> *While head offices only employ a few hundred workers, they generate indirect benefits to the local economy. Their employees are highly-skilled, contribute more to the tax base, and support innovative activities. There is also likely to be additional employment generated by related businesses in the business service industry. The majority of head offices outsource accounting, legal, and advertising services. Expenditures on outsourcing for these three services amount to 65% of the wage bill of head offices, mostly on advertising. Jobs related to head office activities tend to require high skills, pay high wages and contribute strongly to tax revenues. Head office activities are innovative and innovation may generate knowledge spillovers and above-normal profits. Head offices of major corporations can be philanthropic, funding arts, education, and other community programs.*

Further, the following text is taken from a report on office headquarters in British Columbia and Vancouver by Business Council of British Columbia:[86]

> *The choice of head office location carries significance for the company and host jurisdiction alike. Of course, the presence of head offices also matters in a substantive way, not just symbolically. 'Head offices function as centres of command and control for corporations; they are often where key decision-makers are located.'[87] There are sound economic reasons why cities, states and provinces are keen to host the headquarters of large firms. To begin with, head offices bring high paying jobs, both directly but also indirectly because they are an important source of demand for locally provided producer services – e.g., law, accounting, engineering, executive search, etc.[88] Head offices act as anchors to the surrounding community by utilizing local suppliers, providing leadership and sponsorship of charitable organizations and the arts, and helping to establish business clusters of expertise and ideas.[89]*
>
> *Indeed, the evidence suggests that the concentration of numerous head offices in a particular city or region often has a "cluster" effect, as corporate networks are formed, supplier industries develop tight linkages with headquarters operations, and ideas and best practices are shared among business leaders. These kinds of business clusters contribute to the development of vibrant communities.*

[85] University of British Columbia, Sauder School of Business, Competition Policy Review Panel Research Paper Summary - Keith Head, John Ries, "Head Office Location: Implications for Canada", 2008.
[86] Business Council of British Columbia - Jock Finlayson, Karen Graham, "Corporate Headquarters and Head Office Employment in British Columbia: 2006 Update", 2006.
[87] Statistics Canada - John Baldwin, W. Mark Brown, "Foreign Multinationals and Head Office Employment in Canadian Manufacturing Firms", June 2005.
[88] Federal Reserve Bank of Chicago, Economic Perspectives - T. Klier, W. Testa, "Location Trends of Large Company Headquarters During the 1990s", Q2 2002.
[89] International Financial Centre, British Columbia Newsletter - Ian Heine, "The Loss of Head Offices in BC", June 2006.

The presence of a corporate headquarters can have numerous direct and indirect effects on a local economy[90]. They tend to have more higher-paying jobs, and can attract other businesses that serve the corporation's needs and those of its well-paid employees. From the corporation's perspective, there are efficiency gains to be had from sharing services and having a concentration of knowledge.

Headquarter Location Decision Factors

Researchers have identified the main determinants of head office location as[91]:

- International accessibility
- A skilled workforce
- High quality of life to attract international staff
- Low corporate and personal taxes
- Excellent information and communication technology infrastructure
- Well-developed business support services (legal, accounting, public relations)
- Low risk (in terms of crime, exchange rates, regulatory and tax changes)
- Proximity to customers
- Proximity to production operations
- Cost and availability of office space

The probability of receiving new headquarters increases with the number of same-industry headquarters in a region. The presence of specialized intermediate service providers including business services (such as advertising, employment agencies, computer services, legal services, engineering, and management services), and financial services (such as commercial banks, security and commodity brokers) exerts a positive and significant influence on the probability of receiving headquarters investment. However, higher head office wages in a location and higher wages in the intermediate service input sectors deter investment, as do high corporate taxes.[92]

Economic geography theory suggests that the choice of headquarters location is a competition between the corporate need to be in proximity to customers, high-level professional services and infrastructure, and motives for cost and tax savings. Headquarters relocation can thus add value to a firm and falls into a firm's value creation agenda. Moving headquarters entails substantial costs - property acquisition and business interruptions, employee relocation, hiring, and training. A value-maximizing manager should weigh benefits against costs to strategically locate headquarters. However, agency theories suggest that managers, at times, make corporate decisions not to maximize firm value but to extract private benefits.[93]

Corporate Mergers and Acquisitions - Changes to Head Offices

Data indicates that head offices are subject to significant entry, exit, and relocation considerations and implications. A potential implication of corporate mergers with, and acquisitions by, foreign companies is a loss of head offices in Canada, or a loss of the higher-value, strategic planning functions within head offices – this is referred to as a 'hollowing out' of corporate Canada.[94]

[90] Fraser Forum - Hugh MacIntyre, Jason Clemens, Nadeem Esmail, "Corporate headquarters in Canada", January/February 2013.
[91] University of British Columbia, Sauder School of Business, Competition Policy Review Panel Research Paper Summary - Keith Head, John Ries, "Head Office Location: Implications for Canada", 2008.
[92] University of British Columbia, Sauder School of Business, Competition Policy Review Panel Research Paper Summary - Keith Head, John Ries, "Head Office Location: Implications for Canada", 2008.
[93] Queen's University - Paul Calluzzo, Wei Wang, Serena Wu, "Catch Me If You Can: Financial Misconduct around Corporate Headquarters Relocations", 2015.
[94] University of British Columbia, Sauder School of Business, Competition Policy Review Panel Research Paper Summary - Keith Head, John Ries, "Head Office Location: Implications for Canada", 2008.

Although, acquisition by a foreign company does not necessarily result in the loss of head offices. After an acquisition, it may be the case that only the corporate headquarters are consolidated while separate head offices are maintained, or several or all regional head offices are combined. The decision to consolidate or abandon a head office depends on economies of scale, costs of travel, communications, and the shipment of goods. The location of each head office after an acquisition will typically remain or move close to the majority of production and sales units, either in Canada or abroad.[95]

Corporate Headquarters Employment in Canada

There is a fundamental fact about the Metro Vancouver office market – there are few large corporate headquarters and associated office employees. Over the past few decades, mainly due to changes in the resource sectors, which represent a significant number of the headquarter offices in the region, these businesses have closed, consolidated or relocated. Since then, the tech sector has grown, however not necessarily in the form of headquarter operations.

Many new and foreign corporations are attracted to Toronto as a national office location or Calgary as a Western Canada regional office location, rather than necessarily Vancouver. There are a number of factors that challenge Metro Vancouver and British Columbia as a location for office headquarters compared to other Canadian centres, namely higher real estate costs, high costs of doing business, and high housing prices which can impose challenges in relocating and attracting staff.

Based on 2011 census data of the 2,773 head offices in Canada, British Columbia was home to approximately 12% (in line with its share of the national population), while Alberta hosted 15%, Quebec 20%, and Ontario 40%. Quebec slightly underperformed relative to its population, Alberta out-performed, and Ontario performed in line with its share of Canada's population.[96]

Using a different methodology a few years later, when measured as the rate of head offices per 100,000 people, BC punches below its weight at 7.0 head offices per 100,000 people, while Ontario had 8.4 and Alberta had 10.3.[97]

As expected, head offices are concentrated in the leading commercial cities: Metro Toronto accounted for 64% of Ontario's head offices (the lowest of the four major cities), while Metro Vancouver was home to 76% of British Columbia's head offices (highest of the four).[98]

When counting head office employment (as opposed to the number of firms) Metro Vancouver/BC noticeably lags other major provinces and metro areas. BC head office jobs amount to only 7% of the national figure, which is a full 5% points below the province's share of the national population.[99] Most of those offices are small, averaging about 60 people.[100]

Vancouver Headquarters

Over the last 25 years, the Metro Vancouver region has seen the disappearance of some sizable businesses, due to consolidation in industries like mining and forestry, take-overs of large BC-based enterprises, and the occasional relocation of companies to other jurisdictions. This has been offset to a

[95] University of British Columbia, Sauder School of Business, Competition Policy Review Panel Research Paper Summary - Keith Head, John Ries, "Head Office Location: Implications for Canada", 2008.
[96] Business Council of British Columbia, "Canadian Head Office Survey: How Do Metro Vancouver and British Columbia Stack Up?", 2016.
[97] Business Council of British Columbia, "Canadian Head Office Survey: How Do Metro Vancouver and British Columbia Stack Up?", 2016.
[98] Business Council of British Columbia, "Canadian Head Office Survey: How Do Metro Vancouver and British Columbia Stack Up?", 2016.
[99] Business Council of British Columbia, "Canadian Head Office Survey: How Do Metro Vancouver and British Columbia Stack Up?", 2016.
[100] BC Business, "Why some corporate head offices put down roots in Vancouver", August 2 2017.

significant extent by the growth of other BC-based enterprises, which have evolved from small firms to become larger organizations, as well as growth in the tech sector.[101]

Figure 7.1 contains data from 1990, 2000, and 2011, showing the number of corporate headquarters located in Canada's five main corporate centres. Toronto has by far the greatest concentration of corporate headquarters with 32.6% of Canada's top 500 corporations. Calgary ranked second, Montreal third, and Vancouver fourth. According to this source, over the 1990-2011 period, Calgary gained head offices, while Toronto and Montreal lost head offices. Vancouver gained a slight number of head offices during this period.[102]

Figure 7.1: Corporate Headquarter Overview (1990, 2000, 2011)

	1990		2000		2011	
City	# of top 500 HQs	% of top 500 HQs	# of top 500 HQs	% of top 500 HQs	# of top 500 HQs	% of top 500 HQs
Montreal	96	19.2%	92	18.4%	75	15.0%
Toronto	186	37.2%	190	38.0%	163	32.6%
Winnipeg	18	3.6%	18	3.6%	14	2.8%
Calgary	44	8.8%	50	10.0%	81	16.2%
Vancouver	45	9.0%	41	8.2%	52	10.4%

Source: FP Magazine, 1991, 2001, and 2012.

According to a 2014 publication[103] using different study methodology and dates, 95 of Canada's top 500 companies are headquartered in Vancouver. Vancouver, though viewed as Canada's Asian Gateway, was behind the financial and resource hubs of Toronto and Calgary, which had 254 and 132, respectively. According to this data, Metro Vancouver led Canada in increasing (in percentage terms) its head office count between 2004 and 2014 (Figure 7.2), but Vancouver's rising head-office count illustrates that quantity is not the same as size, as few of the largest of the top Canadian companies are located in Vancouver.

Figure 7.2: Head Office Count in Canada (2004, 2014)

Region	2004	2014	Increase
Toronto	175	254	45.1%
Calgary	89	132	49.3%
Vancouver	49	95	93.9%
Montreal	71	79	11.3%
Edmonton	14	24	71.4%
Ottawa	15	14	-6.7%

Source: Financial Post FP500, 2014 Database

Calculating the amount of market office space per population in the major city-regions in Canada indicates that Metro Vancouver has about 25 sq ft of office per resident (up from 23 in 2014), which is lower than Toronto at 31 sq ft and Calgary at 49 sq ft, and also below the average of 29[104] (see Figure 7.3). The lower amount of office space indicates that Metro Vancouver has a relatively limited corporate employment profile compared to the other cities, adjusted for population.

[101] Business Council of British Columbia, "Developing a Stronger Corporate Head Office Cluster", 2017.
[102] Fraser Forum - Hugh MacIntyre, Jason Clemens, Nadeem Esmail, "Corporate headquarters in Canada", January/February 2013.
[103] Business in Vancouver - Frank O'Brien, "Vancouver leads nation in head-office growth", October 20 2014.
[104] Comparison of office market inventories according to brokerage report publications divided by regional populations.

Figure 7.3: Canadian Major Cities Office Space and Population Ratios

Regions	2018 Inventory	2017 Population	Office sq ft per pop.
Toronto	197,792,173	6,346,088	31.2
Montreal	85,086,693	4,138,254	20.6
Vancouver	64,706,860	2,571,262	25.2
Calgary	73,300,041	1,488,841	49.2
Edmonton	31,192,296	1,411,945	22.1
Ottawa	40,868,167	1,040,346	39.3
Average	**82,157,705**	**2,832,789**	**29.0**

Source:
Colliers 2018 Q3 Office Update - National Markets Over 1 Million Population
Census Canada, Annual population estimates by census metropolitan area, July 1, 2017

Vancouver's apparent recent growth in attracting head offices could be a trend, building on the region's strengths such as intellectual capital, technological expertise and access to the expanding Asian economy, and Vancouver's location, climate and beauty.[105] Vancouver may be Canada's priciest city in which to run a business, but some local companies still remain. Although housing costs are high and commercial property taxes are on the rise, some CEOs say the advantages offset those drawbacks.[106]

Vancouver companies tend not to grow to the level of major players in Seattle and Portland. In those cities, large companies pay high salaries and create enormous wealth, which generates spinoff businesses.[107]

Vancouver is facing an office space crunch with declining vacancy rates and rising lease rates. While more supply is on the way, some stakeholders are concerned that the lack of available space will push Vancouver off the radar screens of international companies seeking to expand.[108]

Attracting and Retaining Corporate Headquarters

To encourage further headquarter development, the best policy response is to continue to promote policies aimed at fostering a knowledge-based economy and a competitive business environment, such as investment in education and basic research, R&D promotion, and low corporate taxes. This will benefit the economy as a whole and have the bonus benefit of attracting head offices.[109]

Experience from other jurisdictions can be summarized as a common set of factors (or conditions) that are necessary for a city-region to be successful in attracting new – and growing local – corporate offices. Research suggests that the most important factors are:[110]

- A clear regional vision and well-defined and well-executed investment attraction strategy;
- Aligned leadership by local business and civic leaders, acting as ambassadors for the city-region;
- A competitive overall business environment (tax burden, regulatory complexity, and immigration rules);
- Political and regulatory stability / certainty;

[105] Business in Vancouver - Frank O'Brien, "Vancouver leads nation in head-office growth", October 20 2014.
[106] BC Business, "Why some corporate head offices put down roots in Vancouver", August 2 2017.
[107] BC Business, "Why some corporate head offices put down roots in Vancouver", August 2 2017.
[108] Vancouver Courier - Glen Korstrom, "Large firms are finding it challenging to find appropriate Vancouver office space as vacancy rates decline and lease rates soar", November 21 2018.
[109] Statistics Canada - Desmond Beckstead, Mark Brown, "Insights on the Canadian Economy: Head Office Employment in Canada, 1999 to 2005", 2006.
[110] Business Council of British Columbia, "Canadian Head Office Survey: How Do Metro Vancouver and British Columbia Stack Up?", 2016.

- World-class infrastructure (transport and telecommunications links), a high quality of life, and availability of good educational, health and financial / professional services;
- An effective investment promotion / attraction agency (ideally, a one-stop shop to communicate comparative advantage and facilitate investment); and
- An available skilled workforce.

While Metro Vancouver scores well on some factors known to attract corporate offices (i.e. a high quality of life, solid infrastructure, a skilled workforce), there are several impediments as well, including:[111]

- A fragmented regional governance structure (including over the regional transportation network), which in practice has made it very hard to articulate and promote a clear regional vision that can appeal to local corporate decision-makers as well as to those elsewhere who might consider investing in the region;
- A complex tax structure, which in some respects is nonetheless reasonably competitive against other provinces in Canada;
- A cumbersome immigration system that results in frustrating delays for permanent immigration classes (recent changes appear to be alleviating some of the backlog, and the Provincial Nominee Program has provided welcome and effective relief for some employers and prospective employees);
- A reputation as a high-cost jurisdiction for some sectors, compounded by the perception that Vancouver is "not a city for global business"; and
- A high cost of living, especially for housing, that hurts Metro Vancouver's reputation in the eyes of many businesses and current/prospective employees.

Perspectives of Interviewees

The strengths of the Metro Vancouver regional economy that particularly relate to the office market, as noted by interviewees, include: a 'Vancouver' brand that is well recognized, a boom in the tech sector with large American companies locating facilities in Vancouver to access an international workforce via Canadian immigration policies, the region being a liveable and desirable place with many amenities, and a strong education system that fosters talent.

In terms of challenges or weaknesses of the region, high cost of housing and living were noted by interviewees, as well as high land and construction costs for development, and excessively long and uncertain development approval processes that increase risks for projects.

Although some interviewees noted that while Vancouver is known for high housing prices and office rental rates (by Canadian standards), compared to some other cities from where businesses and employees are moving from, such as San Francisco or New York City, it is not more expensive.

7.2 Suburban Office Obsolescence?

Suburban office parks have lost their luster for a variety of reasons, including a growing preference among younger workers to live (and work) in more dynamic urban centres than in the sometimes staid suburbs. Technological advancement has made the need for many clerical and processing jobs and associated back-end real estate increasingly obsolete.[112]

As the needs of the modern tenant becomes defined as trophy or Class A office space by mass transit and robust amenities, older properties are increasingly challenged to compete, especially 1980s-era

[111] Business Council of British Columbia, "Canadian Head Office Survey: How Do Metro Vancouver and British Columbia Stack Up?", 2016.
[112] New York Times - Nick Corasaniti, "As Office Parks Empty, Towns Turn Vacancies Into Opportunities", May 29 2018.

campus settings. Some outdated properties may still appear attractive to tenants who are very value-conscious or who are seeking a specific type of space.[113]

There are many factors that signify building obsolescence. Some of these types of obsolescence can be cured, such as building upgrades and adding amenities, while others such as location, or building design, cannot. Buildings near the incurably obsolete end of the spectrum are candidates for repurposing - conversion of other uses or redevelopment.[114]

7.3 The Evolution of Employment

According to academics, the expansion of co-working employment has been described as a decentralised yet reflexive global movement.[115] Specifically, it reflects the decline in the number of traditional office workers and an increase in freelance and contract office workers.[116] Co-working spaces can be described as a bottom-up solution for coping with structural changes in the labour market and in the organization of work, particularly the creative industries, and typical for mobile, project-based, freelance and self-employed work that could be carried out 'anywhere' with a computer and Internet access.[117]

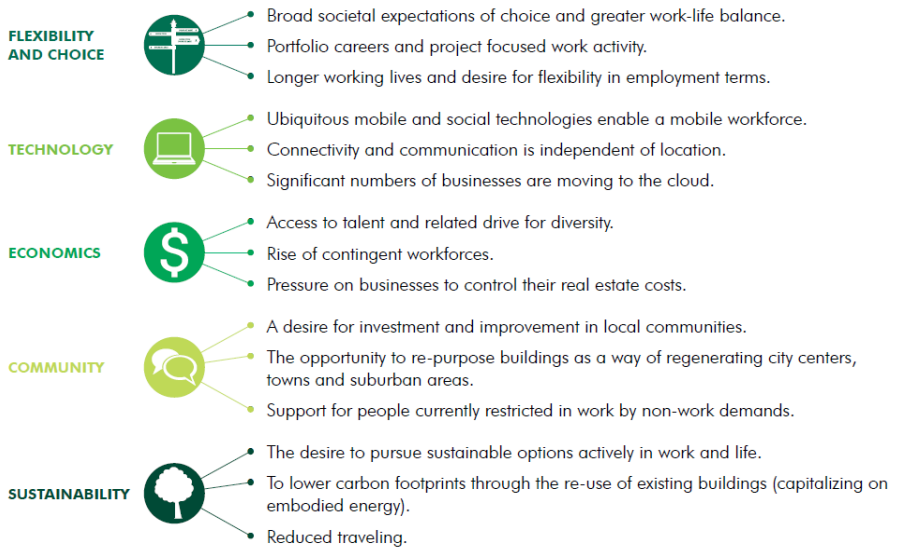
The coworkers are not just 'workers' or 'professionals' – rather, mostly 'non-employee enterprises', meaning individuals who run a self-enterprise with no employees.[118] Within this environment, the so-called 'freedom' afforded by co-working comes at the cost of insecure work, linked to short-term projects and contracts.[119] Working in a shared workspace benefits freelancers and self-employed in a competitive and volatile job market; as stated by one source: "coping with the insecurities and precariousness of creative labour conditions."[120]

People co-work for a broad range of reasons, including its relative cheapness, rental flexibility, the nature of their precarious work, the need for social interaction, the ability to engage in project work collaboration, and a better separation of work and home life.[121] Flexible office space arrangements are particularly attractive to small businesses that have more difficulty acquiring the capital required for traditional leases and are more uncertain about future space needs. These small businesses are propelling increases in office space demand. Job growth in office-using industries—information, financial activities, and professional & business services—is also being increasingly driven by businesses with fewer than 50 employees.[122]

The five broad societal drivers influencing change in the way people are living and working are illustrated in Figure 7.4.

[113] NGKF Newmark Knight Frank, "Suburban Office Obsolescence", 2015.
[114] NGKF Newmark Knight Frank, "Suburban Office Obsolescence", 2015.
[115] City University of London - J. Merkel, "Co-working in the City", 2015.
[116] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.
[117] City University of London - J. Merkel, "Co-working in the City", 2015.
[118] Ephemera Journal - Alessandro Gandini, "The rise of co-working spaces: A literature Review", 2015.
[119] Griffith University - Peter Ross, Susan Ressia, "Neither Office nor Home: Co-working as an Emerging Workplace Choice", 2015.
[120] City University of London - J. Merkel, "Co-working in the City", 2015.
[121] Griffith University - Peter Ross, Susan Ressia, "Neither Office nor Home: Co-working as an Emerging Workplace Choice", 2015.
[122] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.

Figure 7.4: Factors That Will Influence Change



Source: CBRE, The Workshop Global Report, 2013.

7.4 Attracting Employees - The War for Talent

Most work now is fundamentally different than it was in past decades, and the pace of change, fuelled by technology, economic and cultural trends, continues to accelerate. Amid this changing environment, companies must continuously maintain a competitive advantage to retain and attract talent.[123] The majority of workplaces in the past was dull, demotivating and incapable of effectively supporting collaborative or concentrated knowledge work. According to one publication: "In an attempt to create 'one size fits all' what resulted was 'one size fits nobody'".[124] Now, by creating workplace solutions that reflect how people work and what they value, organizations can drive measurable improvements in employee satisfaction and business productivity while reflecting their brands and value.[125]

The evolving nature of work has implications for real estate, creating a new wave of expectations and opportunities. Infusing agility into real estate will help stakeholders embrace change, while supporting the evolving needs of their organizations and employees.[126]

According to CBRE, agile real estate strategies incorporate:[127]

- **Diverse workplace design solutions**, fuelled by technology, to ensure the highest and best use of committed leased or owned space for the given requirements.
- **Flexible space solutions**, solving for requirements that are uncertain, transient or short-term.
- **Experience-led amenities, services and programming**, supported by technology, that offer substantive value to tenants beyond building location.
- **Diverse lease models** that range from long-term traditional leases and short-term turnkey solutions to on-demand, shared workspaces.

For occupiers and landlords, that means a focus on creating environments that enhance the workday experience. Across many industries, companies are adapting to the changing nature of work by

[123] CBRE, "The Agile Advantage", 2018.
[124] CBRE, "FAST FORWARD 2030: The Future of Work and the Workplace", 2014.
[125] CBRE, "The Evolving Workplace How Office Space is Changing", 2014.
[126] CBRE, "The Agile Advantage", 2018.
[127] CBRE, "The Agile Advantage", 2018.

refocusing on a workplace that offers balance, variety, and a sense of purpose. "It's not just about desks, offices, and conference rooms anymore, it's about engagement — specifically a focus on the individual and supporting the uniqueness and value that comes from each person."[128]

From features like coffee bars to green spaces, providing employees with a great workspace is paramount.[129] The newest office designs are offering choices in when and where to work, placing more emphasis on purpose, providing places for social interaction, and adding interactivity that engages people.[130]

Initial Considerations for Occupiers:[131]

- Commit to long-term requirements that are reasonably certain, and explore flexible space solutions for the rest.
- Focus on density and mobility in the workplace over traditional per-seat metrics.
- Design a workplace based on functionality for today and adaptability for the future.
- Invest resources into technology-enabled amenities, services and programming focused on the employee.
- Choose landlords committed to enhancing the overall experience of the building.

Initial Considerations for Owners and Investors:[132]

- Build shared amenity floors that promote efficiency within traditional, tenant-leased environments.
- Provide the technology that tenants need to be successful and employees need to be engaged.
- Commit to the tenant experience journey through amenities, services and bespoke programming.
- Consider flexible space solutions to support evolving tenant demands.

Perspectives of Interviewees

For most businesses, their employees are key. With increasing attention to attracting and retaining talented staff in a competitive environment, especially in the tech sector, businesses are responding by selecting accommodations that have the location and features that employees want. The new and younger workforce, who sees work as a lifestyle and more than just a place to work and get paid, are no longer satisfied with a staid space. Instead, they want to work in a 'cool' place.

Although real estate costs have risen, for most businesses accommodation costs are relatively small compared to staffing cost. Thus, looking holistically, businesses realize that paying a premium for a better location will result in benefits through higher employee satisfaction and retention. That said, for other businesses, perhaps with an older workforce that is accustomed to commuting by car, a downtown location may not be desired or ideal.

7.5 Flexibility - From 'Workplaces' to 'Places To Work'

According to CBRE's view of the future, in the year 2030, reference to the high-performance workplace will no longer refer to only space within the corporate office, although that will still remain a dominant part of where people work. "In 2030, we will think more about 'places to work' rather than the 'workplace'."[133]

[128] Gensler Dialogue ISSUE 31 - Vernon Mays, "The Workplace Is Your Key Recruiting Tool", 2018.
[129] CBRE, "It's Not Just An Office, It's An Experience", 2018.
[130] Gensler Dialogue ISSUE 31 - Vernon Mays, "The Workplace Is Your Key Recruiting Tool", 2018.
[131] CBRE, "The Agile Advantage", 2018.
[132] CBRE, "The Agile Advantage", 2018.
[133] CBRE, "FAST FORWARD 2030: The Future of Work and the Workplace", 2014.

Concepts such as 'the third place' (i.e. working in coffee shops and other public places) and co-working centres (i.e. work centres, often with memberships) could be considered as an extension of a corporation's core workplace. Work has become a consumer experience - youth workers increasingly seek happiness over money.[134]

Scarcity of talent and an increase in the number of freelancers means that companies have to become more flexible about working. Remote work or contract-based work arrangements can help companies attract the right talent and fulfill current needs to remain competitive.[135]

Mobile technology has made "work from anywhere" a reality. The potential benefits of teleworking include increased productivity levels, reduced commuting times and costs (and associated reduced employee stress), a wider pool of potential employees and improved employee job satisfaction linked to a better work/life balance.[136] Recent moves to more outcome-based work are making it possible to further decouple 'work' from a particular 'place'. Businesses have begun to rethink how they make use of their real estate to best facilitate work, by doing 'more with less'.[137]

Lean, agile and authentic corporations will adapt quickly, leverage technology and will have the values, purpose and opportunities that will attract the best talent.[138] The 'Lean concept' overall goal is to free up time and provide more efficient work. This is done by creating a better workflow, visualizing order, reducing deadlines and waste, implementing continuous improvements and increasing flexibility.[139] At the same time, "going to the office" has other important qualities, such as being part of a community of people who exchange ideas and facilitate learning and co-creation, and thus spur innovation. For many workers today, co-working spaces offer the flexibility to combine mobile work with the connectedness and identity found in traditional offices.[140]

The stereotypical co-working space may be the opposite of traditional corporate workspaces, with a focus on technology, socializing, and informal 'play' spaces. However, new more sophisticated co-working spaces now provide concepts more relevant to larger organizations. Activity-based working (ABW) describes a way to design space around different kinds of activities, or 'how' work gets done. In ABW spaces, employees no longer 'own' a particular space but rather select spaces suitable for the work task at hand. ABW offers a range of configurations geared towards different activities: creative team collaboration, meetings, quiet work, reflection, rest, and integrating workspace with hospitality amenities such as cafes.[141]

7.6 Rise of Co-working Operators

Co-working space is commonly a collaborative space in an office-like environment. The space can be in the form of very short office leases, used independently or collaboratively. The intent of co-working spaces includes a sense of community, encouraging greater productivity, providing access for mobile and freelance workers, and offering affordable solutions to start-ups unable to enter into long-term

[134] CBRE, "FAST FORWARD 2030: The Future of Work and the Workplace", 2014.
[135] Altus Group, "Top 10 Real INSIGHTS", 2018.
[136] Griffith University - Peter Ross, Susan Ressia, "Neither Office nor Home: Co-working as an Emerging Workplace Choice", 2015.
[137] University of Sydney, "Co-working Spaces Australia: The new places where people work, businesses grow, and corporates connect", 2017.
[138] CBRE, "FAST FORWARD 2030: The Future of Work and the Workplace", 2014.
[139] Design Organisation and Management / International Design Conference – R. M. Sastre, T. A. Saurin, M. E. S. Echeveste, I. C. de Paula, R. Lucena, "Lean Office: Study On The Applicability Of The Concept In A Design Company", 2018.
[140] University of Sydney, "Co-working Spaces Australia: The new places where people work, businesses grow, and corporates connect", 2017.
[141] University of Sydney, "Co-working Spaces Australia: The new places where people work, businesses grow, and corporates connect", 2017.

leases.[142] The fundamental concept of co-working is: create accessible, fully fitted out, office space on short-term leases.[143]

Co-working has experienced exponential growth and established a global identity in only the last decade.[144] Co-working represents the rise of the real-estate-as-a-service model; real estate is transforming from a space utilization business to a service business.[145] Co-working providers are meeting the need with finished space that removes the hassle that small companies often face when they need to accommodate changing space requirements.[146] By creating an infrastructure for connection, according to one source, co-working individuals report increased happiness and productivity.[147]

Unlike renting space in traditional offices, members of co-working spaces are not required to sign long-term leases, pay any deposits or spend large capital outlays on fit-outs, yet receive the right to use the office space and associated facilities.[148] Co-working spaces are shared working environments in which independent knowledge-workers gather to create knowledge and benefit from it, thereby "working alone, together" – or as one operator terms it: "*Work For Yourself, Not By Yourself!"*[149]

There are suggestions that the co-working phenomenon is the new office market disrupter or the 'Uber' of the office market. The concept is not new, even if the excitement around the concept is. Regus (now IWG) was founded in 1989 and remains the largest provider of flexible office space in terms of floor area. However, the newcomer WeWork (founded in 2010) is arguably the most influential and fastest-growing in the co-working space.[150]

WeWork states: "It's about attracting and retaining talent among an increasingly liquid and digital workforce. We want people to make a life, not just a living."[151] Co-working with open concept work environments, with living-room style common areas and perks such as micro-roasted coffee, craft beer on draft and social events, also appeals to the millennial workforce, which has surpassed the Baby Boomer generation in size.[152]

In the face of long-term work fragmentation and outsourcing, co-working provides knowledge-workers with local communities and greater opportunities for collaboration with those communities.[153] However, simply putting people together in an open office space does not guarantee collaboration between coworker members.[154] Coworkers frequently work alone in a shared space without much

[142] European Real Estate Society - Chris Eves, Dulani Halvitigala, Hera Antoniades, "Co-working Space v. The Traditional Office Space: Challenges and Opportunities in Sydney", 2018.
[143] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.
[144] Cornell University / Cornell Real Estate Review - Daniel Wright, "Match Made in Heaven: Investment Benefits of Co-working Spaces in Historic Sacred Places", 2018.
[145] ULI Urban Land - John Egan, "Co-working Spaces Seen as Key Tenant for Houston Office", December 7 2018.
[146] BOMA BC Leasing Guide: Commercial Real Estate Office Space - Peter Mitham, "Shared Space - Co-working providers are changing how tenants lease space", 2018.
[147] Cornell University / Cornell Real Estate Review - Daniel Wright, "Match Made in Heaven: Investment Benefits of Co-working Spaces in Historic Sacred Places", 2018.
[148] European Real Estate Society - Chris Eves, Dulani Halvitigala, Hera Antoniades, "Co-working Space v. The Traditional Office Space: Challenges and Opportunities in Sydney", 2018.
[149] Griffith University - Peter Ross, Susan Ressia, "Neither Office nor Home: Co-working as an Emerging Workplace Choice", 2015.
[150] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.
[151] ULI Urban Land - Leslie Braunstein, "Inside the Office Space Revolution", October 26 2017.
[152] Altus Group, "Top 10 Real INSIGHTS", 2018.
[153] White Rose Research / Journal of Business and Technical Communication - C. Spinuzzi, Z. Bodrožić, G. Scaratti, et al., "Co-working is about community" but what is "community" in co-working?", 2018.
[154] Griffith University - Peter Ross, Susan Ressia, "Neither Office nor Home: Co-working as an Emerging Workplace Choice", 2015.

interaction, mutual support, or community orientation, which gives co-working hosts a special role in facilitating team work.[155]

Types of Tenants in Co-working Space

Historically, co-working space has been composed of freelancers and entrepreneurs. This is changing as large corporations begin to lease from shared office spaces such as WeWork and Regus. This trend is likely to continue. WeWork believes the majority of large companies will have shared office space by 2020.[156]

Jones Lang LaSalle predicts that co-working will make up 30% of the U.S. office market by 2030. Along those lines, a recent survey by Cushman Wakefield and CoreNet Global found that corporate real estate professionals expect 23% of their global employees to be taking advantage of co-working within the next five years.[157]

According to other research, the percentage of WeWork members who work for companies with more than 100 employees quadrupled from 2010 to 2017; they now account for 12% of members. Over the same time period, freelancers/independent workers' share of memberships decreased from 68% to 39%. In 2017, half of all members worked for companies with fewer than 100 employees. This matches the trend in the broader industry in which freelancers have moved from 55% of all memberships in 2012 down to only 41% in 2017.[158]

Corporate users, which are increasingly the targeted audience of co-working providers, typically cannibalize traditional office space in some form when utilizing co-working space. While the specifics are hard to quantify, researchers have attempted to estimate the magnitude of new demand by applying the professional status of co-working members: 41% are freelancers, 36% are employees of a company, 16% are employers (i.e., entrepreneurs and business owners with staff), and 7% are categorized as "other." Findings imply that approximately 30%-40% of new co-working leases is new net absorption for the market.[159] The co-working opportunities are at a cost for traditional office landlords.

Corporate occupiers can use co-working within their real estate portfolio, either as a provider of space at a single location or, on the other end of the spectrum, as an integrated partner across an entire portfolio. Large business occupiers are considering co-working for several reasons:[160]

- **Flexibility:** Co-working offers companies the option to quickly and easily expand or shrink their office portfolios on the margins. Co-working "swing space" can be used to manage space if a company needs to ramp up hiring or reduce headcount quickly.
- **Talent Attraction/Retention:** Many employees are attracted to the "feel" of a co-working environment. Co-working can be a part of a company's human resources workplace planning which offers employees flexibility to work from outside the traditional, "corporate" office and in a desirable location. With the heightened focus on employee experience in a highly competitive job market, co-working can be a tool in attracting and retaining talent.
- **Cost Savings:** Even at a higher cost per square foot, flexible office space can help reduce overall commercial real estate costs in the long run. With a small, but growing proportion of a global portfolio in co-working, the remaining long-term, traditional leases can be tighter since

[155] City University of London - J. Merkel, "Co-working in the City", 2015.
[156] Cornell University / Cornell Real Estate Review - Daniel Wright, "Match Made in Heaven: Investment Benefits of Co-working Spaces in Historic Sacred Places", 2018.
[157] ULI Urban Land - John Egan, "Co-working Spaces Seen as Key Tenant for Houston Office", December 7 2018.
[158] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.
[159] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.
[160] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.

organizations don't need to allow for as much expansion space that is not utilized or is underutilized for the first several years of the lease term. Co-working allows for the rest of the portfolio to be right-sized.

- **Innovation:** Specific teams or departments can be located in co-working facilities in order to develop a separate culture. These innovation labs can be a strategic tool for collaboration and creativity and/or can be designed to encourage employees to connect with other businesses outside of their organizations that may be future partners or customers.
- **Subleasing:** Corporate occupiers have partnered with real estate services firms or co-working providers to manage and monetize unused space by turning it into co-working space. This can be a creative alternative to leaving a location underutilized or subletting to a single tenant with a traditional sublease structure.

The demand for flexibility is not going to decline. Occupiers will trim space from their traditional lease structures and augment the portfolio with co-working space on the margins.[161]

Location of Co-working Facilities

The analysis indicates the majority of co-working spaces are located either in the heart of the Central Business District or the CBD fringe, with specific locations for the creative industries positioned furthest away from the CBD. In those cases, co-working operators are utilizing premium grade buildings.[162]

In other cases, commercial landlords may consider this as an opportunity to transform difficult to lease premises into co-working vibrant hubs. Instead of negotiating rental discounts with individual tenants, landlords are able to lease these spaces to co-working operators who bring credibility to buildings. As a result, co-working spaces are attractive to landlords with underperforming or underutilised assets located in less desirable areas as they allow landlords to improve office space performance.[163]

Landlords

Historically with the preference to lease spaces to large-scale corporations and professional service firms, landlords have been cautious in welcoming co-working operators into their buildings. However, co-working spaces have the potential to create benefits to landlords that are both tangible and intangible.[164]

Many landlords are being challenged by the co-working practice as it is a new working phenomenon where traditional office space requirements and leasing principles may no longer apply.[165] Landlords may allocate a portion of their portfolio to co-working by developing that expertise internally or by partnering with existing co-working providers.[166]

A co-working model like Spaces or Regus can be considered an amenity to a building, and attract people and other tenants. Yet, while traditional office space is incorporating elements of the co-working environment, many landlords are not embracing it completely. States one office market expert: "Don't underestimate how concerned the landlords are about the tenant profile, because once a building has a

[161] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.
[162] European Real Estate Society - Chris Eves, Dulani Halvitigala, Hera Antoniades, "Co-working Space v. The Traditional Office Space: Challenges and Opportunities in Sydney", 2018.
[163] European Real Estate Society - Chris Eves, Dulani Halvitigala, Hera Antoniades, "Co-working Space v. The Traditional Office Space: Challenges and Opportunities in Sydney", 2018.
[164] European Real Estate Society - Chris Eves, Dulani Halvitigala, Hera Antoniades, "Co-working Space v. The Traditional Office Space: Challenges and Opportunities in Sydney", 2018.
[165] European Real Estate Society - Chris Eves, Dulani Halvitigala, Hera Antoniades, "Co-working Space v. The Traditional Office Space: Challenges and Opportunities in Sydney", 2018.
[166] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.

reputation, it's hard to change. You want to set the tone early on. So the question is, do you want those co-working operators to set the tone of the building?"[167]

According to one publication, the market currently seems to be comfortable with 15%-30% of a building being allocated to a co-working provider with relatively strong credit. Anything above that may be viewed adversely. In the future, the range of comfort may increase as investors and lenders have more experience with significant co-working occupancy.[168]

The lease structure also matters. Profit-sharing leases are also becoming more common and create more potential upside and downside for the building owner. Most co-working companies do not have substantial credit histories and could end up giving back space if membership declines.[169]

While an eventual economic downturn may reduce the demand from co-working among freelancers, entrepreneurs, and small businesses, it also will likely cause large occupiers to think even more seriously about the need for flexibility in their portfolios.[170]

Impacts on Buildings

Co-working practice may also offer lower tenant improvement and fit-out costs as many co-working operators prefer to lease a 'blank canvas' where they are able to rearrange the premises to meet their specific requirements and preferred fit-outs.[171]

There are also hidden costs that landlords need to take into account. Co-working spaces typically experience greater wear and tear due to their higher densities and communal nature — from physical systems such as HVAC and elevators, as well as washrooms, to services such as security and cleaning. The average life of co-working fit-outs is also less than the 10 years typically attributed to standard office fit-outs. All this implies higher property management and maintenance costs for buildings.[172]

To accommodate higher occupant density, many landlords are required to invest substantial capital on building upgrades and expansions before leasing spaces to co-working operators. However, it is difficult to conduct a cost-benefit analysis for such upgrades as there is no quantitative evidence available on the impacts of leasing space to co-working providers.[173]

When introducing co-working spaces into multi-tenanted buildings, landlords need to consider and address several issues such as appropriate tenant mix, compatibility between different end-users, relationships among other tenants and end-users, clarity as to the use of building common areas, and security issues within the building. By leasing office spaces to co-working operators on long-term leases landlords completely lose the control over the end-users of their premises.[174]

[167] BOMA BC Leasing Guide: Commercial Real Estate Office Space - Peter Mitham, "Shared Space - Co-working providers are changing how tenants lease space", 2018.
[168] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.
[169] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.
[170] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.
[171] European Real Estate Society - Chris Eves, Dulani Halvitigala, Hera Antoniades, "Co-working Space v. The Traditional Office Space: Challenges and Opportunities in Sydney", 2018.
[172] Cushman Wakefield, "CO-WORKING and Flexible Office Space", 2018.
[173] European Real Estate Society - Chris Eves, Dulani Halvitigala, Hera Antoniades, "Co-working Space v. The Traditional Office Space: Challenges and Opportunities in Sydney", 2018.
[174] European Real Estate Society - Chris Eves, Dulani Halvitigala, Hera Antoniades, "Co-working Space v. The Traditional Office Space: Challenges and Opportunities in Sydney", 2018.

There are concerns that the co-working practice might have negative implications on the long-term demand for leased office premises and could also reduce the demand for expansion space, resulting in smaller but more stable tenant requirements.[175]

7.7 Office Space Design – Open Concept

Open plan office environments can offer workplace productivity benefits because of the opportunities that they create for interaction and knowledge exchange, but recent research has highlighted noise, distraction and loss of privacy as significant productivity negatives.[176]

There is an ongoing debate about open offices, and the balance between encouraging creativity, interaction and camaraderie, while acknowledging that open offices can encourage employees to avoid one another.[177] Open office is a continuum, explained by one writer, as follows[178]:

- The absolute worst is when you have dozens of people from all different departments in the same room. Sales, marketing, support, administration, programmers, designers, what have you. These departments have very different needs for quiet or concentration or use of phones or open conversation. Mixing them together is peak bad open office design.
- Less bad — but still not great — is to again have dozens of people in the same room, but from largely the same functions or complementary ones. Programmers, designers, writers together. The problem here is that even within the same domain, different people will have very different sensibilities about what's a reasonable level of conversation or interruption.
- And probably least bad is small team rooms of fewer than ten people, preferably fewer than six. Some people who don't like the open office at all might even still enjoy this configuration.

Open-plan office layout is commonly assumed to facilitate communication and interaction between coworkers, promoting workplace satisfaction and team work effectiveness. On the other hand, open-plan layouts are more disruptive due to uncontrollable noise and loss of privacy. According to workplace satisfaction surveys, enclosed private offices clearly outperformed open-plan layouts in most aspects of Indoor Environmental Quality, particularly in acoustics, privacy and proximity issues. Benefits of enhanced 'ease of interaction' were smaller than the penalties of increased noise level and decreased privacy resulting from open-plan office configuration.[179]

Some research results categorically contradict the industry-accepted wisdom that open-plan layout enhances communication between colleagues and improves occupants' overall work environmental satisfaction. Moreover, the increment of overall workspace satisfaction due to the positive impact of ease of interaction in open-plan office layouts failed to offset the decrements by negative impacts of noise and privacy. This implies that even though occupants are satisfied with interactions in open-plan layout, their overall workspace satisfaction will eventually decrease, unless a certain level of privacy and acoustical quality are provided.[180]

Those in enclosed office spaces were more productive due to privacy and limited distractions, and those in open plan spaces were more productive because of their access to informal meeting spaces. The

[175] European Real Estate Society - Chris Eves, Dulani Halvitigala, Hera Antoniades, "Co-working Space v. The Traditional Office Space: Challenges and Opportunities in Sydney", 2018.
[176] Journal of Corporate Real Estate / Sheffield Hallam University - Barry Haynes, Louise Suckley, Nick Nunnington, "Workplace productivity and office type: an evaluation of office occupier differences based on age and gender", 2017.
[177] Harvard Business Review - Rebecca Knight, "Staying Focused in a Noisy Open Office Rebecca Knight", October 11 2018.
[178] Medium Corporation - David Heinemeier Hansson, "The open-plan office is a terrible, horrible, no good, very bad idea", 2018.
[179] University of Sydney - Jungsoo Kim, Richard de Dear, "Workspace satisfaction: The privacy-communication trade-off in open-plan offices", 2013.
[180] University of Sydney - Jungsoo Kim, Richard de Dear, "Workspace satisfaction: The privacy-communication trade-off in open-plan offices", 2013.

productivity of those in enclosed shared offices however suffered more due to crowding and interruptions, although work interactions and knowledge exchange were enhanced from this close proximity. Internal noise and proximity to colleagues had a similar impact on office occupiers regardless of the type of office. With such contrasting results, there is insufficient evidence to suggest that the productivity benefits of open plan office environments outweigh the productivity penalties, according to this research.[181]

Rather than prompting increasingly vibrant face-to-face collaboration, open architecture appeared to trigger a natural human response to socially withdraw from officemates and interact instead over email and instant message.[182] In the open layout, employees interacted face-to-face 72% less. Meanwhile, they emailed and messaged amongst themselves 56% more, sending more messages and longer messages.[183]

Design

Increasingly, architects and designers are designing spaces to do more than simply house innovation-oriented activities. Their goals are also to "create communities," "facilitate collaboration" and "create serendipitous encounters." An amalgamation of views on innovation space included these attributes: "strengthen interactions, communication, and collaboration; open, transparent and contextually responsive."[184]

As stated in one publication: "Through design, architects and business leaders are essentially being asked to re-wire the social, if not organizational culture, as much as to adhere to strict building codes."[185] By having a range of different spaces office occupiers can choose the most appropriate space to best undertake that particular work task.[186]

Regarding space design, it is recommended to provide:[187]

- A variety of workspaces, with an adequate mix of places supporting communication and collaboration and places supporting concentration and privacy, individually and for groups;
- Separations between open communication areas (e.g. Pantries) and working areas;
- Enough acoustic and visual privacy in open environments; sufficient acoustic materials and measures;
- Not too large open spaces, but smaller open zones with a good overview, alternating with enclosed spaces or panels;
- Short distances to places that are frequently needed by employees (e.g. Spaces for ad hoc meetings for 2-4 persons);
- Natural materials and light colours and materials;
- Lots of daylight;
- Appropriate it facilities for different types of activities, including filing; and
- Clear behavioural rules to enable proper use of the workplaces.

[181] Journal of Corporate Real Estate / Sheffield Hallam University - Barry Haynes, Louise Suckley, Nick Nunnington, "Workplace productivity and office type: an evaluation of office occupier differences based on age and gender", 2017.
[182] Royal Society Publishing - Ethan S. Bernstein, Stephen Turban, "The impact of the 'open' workspace on human collaboration", July 2 2018.
[183] Lydia Belanger, "The Surprising Reason Why an Open Office Space May Not Be Great for Your Company", July 25 2018.
[184] Brookings Institution and Project for Public Spaces - Julie Wagner, Dan Watch, "Innovation Spaces: The New Design of Work", 2017.
[185] Brookings Institution and Project for Public Spaces - Julie Wagner, Dan Watch, "Innovation Spaces: The New Design of Work", 2017.
[186] Journal of Corporate Real Estate / Sheffield Hallam University - Barry Haynes, Louise Suckley, Nick Nunnington, "Workplace productivity and office type: an evaluation of office occupier differences based on age and gender", 2017.
[187] Delft University of Technology - Sandra Brunia, Iris De Been, Theo Van der Voordt, "Accommodating new ways of working: lessons from best practices and worst cases", 2016.

Single storey or same floor locations are preferred over multiple storeys as research shows that vertical separation has a more severe effect on separation than horizontal.[188]

Theoretically, providing less space per person can translate into fewer buildings to support the same number of people. Improvement of office space efficiency will contribute to the reduction of resources consumption associated with construction, maintenance and operation of office buildings.[189]

Implementation

When leaders communicate the value of the space beforehand, proactively help workers acclimatize, and give employees leeway to adapt the space, workers are more enthusiastic about the space, have a better sense of how they should use it, and feel more place identity. Survey data reveals that workers who believed the space was designed to foster creativity, increase collaboration, enhance flexibility, and promote communication had more place identity. Place identity affects not only how people feel but also how they perceive the physical features of a space.[190]

In contrast, when workers were not provided with a clear vision of the space beforehand, they were more likely to perceive it as a way to cut costs and express more resistance and dissatisfaction.[191] Cost and efficiency are important, but should not be the driver; rather it's about what will build the most value: "Space is in many ways similar to fashion or technology – things go in and out of style."[192]

Rather than arguing over open vs. closed spaces, practitioners focus on creating the best working environment to support the needs of the specific organization. The idea that 'one size fits all' when it comes to work environments is dead: "The workplace design industry is filled with over-simplified conversation about open vs. closed plan offices."[193]

Companies are responding by shrinking personal space and investing in more collaborative areas. Workplaces typically allot 150 sq ft per person, 33% less than 225 sq ft in 2010. Some workplaces are shrinking to as little 60 sq ft per employee by eliminating assigned desks and designated personal space. "Hotelling" and "hot desking" policies grant employees access to space on an as-needed basis.[194]

By one estimate, companies will achieve over a 50% cost savings (e.g. furniture, power, lighting, materials) using an open office design compared with designing private offices. There are also greater space efficiencies, saving as much as 100 sq ft when converting one private office space to a work-station.[195]

It is expected that as managers take into account lessons from pre- and post-occupancy evaluations, the number of satisfied employees will increase.[196]

Potential Backlash

Companies may be starting to see that squeezing more employees into less space can be counterproductive. At a panel about open space design, one executive stated: "The initial swing was too

[188] Brookings Institution and Project for Public Spaces - Julie Wagner, Dan Watch, "Innovation Spaces: The New Design of Work", 2017.
[189] University of Sydney - Jungsoo Kima, Christhina Candidoa, Leena Thomas, Richard de Dear, "Desk ownership in the workplace: The effect of non-territorial working on employee workplace satisfaction, perceived productivity and health", 2016.
[190] Harvard Business Review - Brandi Pearce, Pamela Hinds, "How to Make Sure People Won't Hate Your New Open Office Plan", January 2018.
[191] Harvard Business Review - Brandi Pearce, Pamela Hinds, "How to Make Sure People Won't Hate Your New Open Office Plan", January 2018.
[192] Work Design Magazine - Bob Fox, "2018 Workplace Trend Predictions", February 15 2018.
[193] Work Design Magazine - Bob Fox, "2018 Workplace Trend Predictions", February 15 2018.
[194] Work Design Magazine - Ari Kepnes, "Working From Home Is Now 'Homing From Work'", October 10 2018.
[195] Brookings Institution and Project for Public Spaces - Julie Wagner, Dan Watch, "Innovation Spaces: The New Design of Work", 2017.
[196] Delft University of Technology - Sandra Brunia, Iris De Been, Theo Van der Voordt, "Accommodating new ways of working: lessons from best practices and worst cases", 2016.

far. People are coming back and adding a little more space."[197] There is a backlash against the one-size-fits-all mindset, and focus on corporate efficiencies that pack more workers into less space.[198] As employee salaries account for the greatest expenses in a business, the penalty resulting from displaced employees is very likely to be more expensive than providing extra workstations.[199]

Perspectives of Interviewees

Open space or open concept design office is being widely implemented, based on the multiple goals of encouraging employee collaboration and using space more efficiently. However, there is also increasing recognition that open concept may not be appropriate for all types of businesses or employees, especially where focused and contemplative work is required, and that how the space is designed and programmed is also important. For a variety of different types of activities, workers need a variety of spaces; ranging from a desk, a private or quiet space, a phone booth for calls, meeting rooms, flex spaces, plus on-site amenities.

There is the risk from the business' perspective of overstating the benefit of open space at the loss of work quality environment, which may lead to higher turnover if poorly implemented. The focus is now more on providing the right types of spaces for employees, and using the space differently, rather than trying to use less space.

Also, open space can actually be expensive to provide, as the outfitting and improvements can be significant, and the requirements for building systems, such as HVAC, higher. Open concept with higher employee densities requires better building systems, commonly found in newer buildings and not old ones with sub-standard systems, thus the demand for new buildings. Higher densities may impact the amount of parking required. Open concept also requires more expensive office furniture.

7.8 Office Space per Employee - Drive for Efficiencies

According to numerous sources,[200] there is an ongoing trend towards less office space per employee. Increasingly, workers do not have private enclosed offices, but instead have cubicles or open offices. Also, more companies are adopting open floor plans in which employees do not have permanently designated space; through hotelling and remote working they use unassigned office space as needed and sometimes also short-term overflow space. With reduced private office space, usually more and larger meeting areas and rooms are required ('collaborative space'). This arrangement, along with more efficient office space planning / design, modern furniture, equipment, technology and other features, allow for less average office space per worker. However, some academics note that stated targets by office space planners are overly ambitious or assume a stable workforce, which is not always the case.[201]

Office space per worker differs by industry sector as well as occupation. Businesses with higher levels of staff turnover can be harder to plan for, while businesses with a more homogeneous workforce are easier to plan. Furthermore, office space planning can be challenged by the growth rate of businesses, and can have 'shadow space' – space leased but not occupied to accommodate changes in space needs for the business as the number of employees change. Optimal office space decisions are harder for longer-term leases in which the amount of office space is fixed while business demands can vary reflecting changing economic and business cycles. Longer term leases prevent businesses from readily downsizing until the lease expires, and thus are generally more likely to have excess capacity and lower

[197] ULI Urban Land - Patrick J. Kiger, "Workplaces May Not Shrink Further, but They May Gain Flexibility", May 3 2018.
[198] New York Times - Steve Lohr, "Don't Get Too Comfortable at That Desk", October 6 2017.
[199] University of Sydney - Jungsoo Kima, Christhina Candidoa, Leena Thomas, Richard de Dear, "Desk ownership in the workplace: The effect of non-territorial working on employee workplace satisfaction, perceived productivity and health", 2016.
[200] CoreNet Global Research - Facilities Management News, "Office Space per worker to drop to 100 sq ft or below for many companies within five years", March 2 2012.
[201] University of San Diego - Norman Miller, "Estimating Office Space per Worker", Draft May 1 2012.

utilization rates. This is further challenged by the fact that workforces are not homogeneous and not all office space is the same and substitutable.[202] The risk of having too little office space must be weighed against the cost of having too much.

Newer office space built to suit is more efficient than older space that has changed tenants (second generation tenants), and larger buildings tend to be more efficient than smaller ones. Thus when businesses move from an older accommodation to a new one, they typically require less total space, especially when operations are consolidated.

Generally, more expensive office real estate markets are likely to press businesses to use space more efficiently, compared to lower cost markets. It is estimated that in the U.S., office rent as a percentage of total business operating costs is approximately 2-3%.[203] Additionally, in some cases, companies are moving from larger suburban offices to smaller urban offices, which may have less space per worker but are efficiently designed and near many amenities that employees value.

Reduced office space requirements per person may have an impact on office space demand. Also impacting office demand are changes in the workforce composition and proportional size of sub-sectors. Nevertheless, no matter the amount of office space required, the type and location of the space is also evolving.

Recent Trends

Large corporations have embarked on a path towards more efficient use of space seeking to achieve higher utilization rates. According to one academic, decreases in total office consumption per worker will take time, and it is likely that more efficient use of space will require many years of transition[204], noting collaborative workspace requirements and management preferences.[205]

Office space per worker peaked near 370 sq ft at the end of 2009, a year or so after the great recession. In the years that followed, leases finally expired and firms were able to downsize space ('shadow inventories') that was no longer needed.[206]

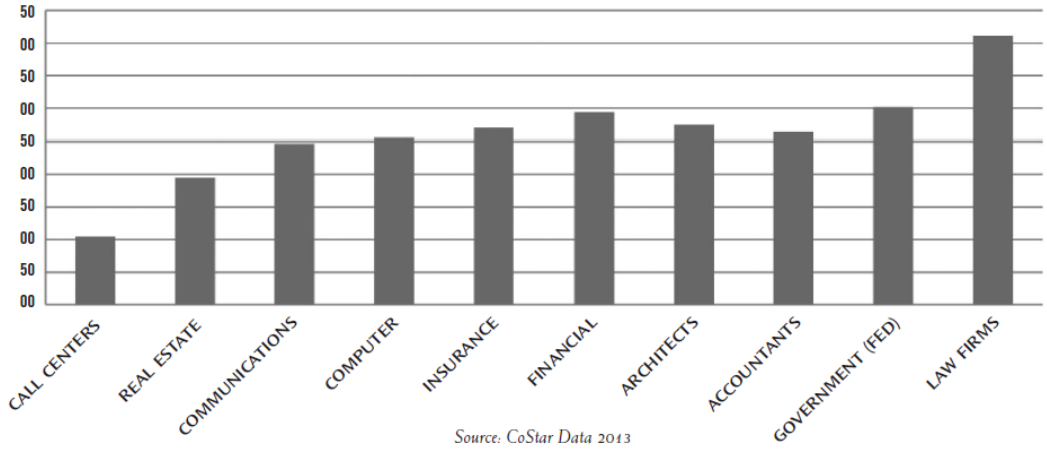
Moving forward, the expectation is that some firms will achieve square footage per worker of less than 100 sq ft, but given the cultural impediments and the challenges of predicting growth rates, figures averaging 150–180 sq ft per worker are more likely to be seen.[207]

Space Utilization by Sector

Significant differences in space per worker by industry should not be surprising. Figure 7.5 shows the typical spread among industry sectors in the U.S.; average footprints have shrunk by 24% from 2003 to 2013.[208]

[202] University of San Diego - Norman Miller, "Estimating Office Space per Worker", Draft May 1 2012.
[203] University of San Diego - Norman Miller, "Estimating Office Space per Worker", Draft May 1 2012.
[204] University of San Diego - Norman Miller, "Changing Trends in Office Space Requirements: Implications for Future Office Demand", 2013.
[205] University of San Diego - Norman Miller, "Workplace trends in office space: implications for future office demand", 2014.
[206] University of San Diego - Norman Miller, "Estimating Office Space per Worker", Draft May 1 2012.
[207] University of San Diego, Real Estate Issues - Norman Miller, "Downsizing and Workplace Trends in the Office Market", 2013.
[208] University of San Diego, Real Estate Issues - Norman Miller, "Downsizing and Workplace Trends in the Office Market", 2013.

Figure 7.5: Office Space per Worker by Industry - Median Square Feet Per Worker 2013



Source: Real Estate Issues - Norman Miller, "Downsizing and Workplace Trends in the Office Market", 2013.

According to CBRE for Canada in 2012[209], the average amount of office space (net leasable floor area) per employee by sub-sector was as follows:

- Call Centres 100 sq ft
- Tech 120 sq ft
- Architecture & Engineering 170 sq ft
- Finance 170 sq ft
- Law Enforcement 200 sq ft
- Social Services 200 sq ft
- Biotech & Science 220 sq ft
- Legal 340 sq ft

The information for the Metro Vancouver market indicates increased efficiencies through desk sharing and telecommuting, resulting in a downward trend in average space per employee from 200 to 150 sq ft.[210]

Potential Future Extent

Office hotelling or sharing models, telecommuting, working in open cubicles facilitated by high speed communication and electronic file storage support the aim of lowering occupancy.[211] The reduction in space per worker is paralleled by a need to retrofit existing space to provide more collaborative team space and healthier, productive environments.[212] Corporations will require more space with more collaborative formats than the corporate real estate planner may anticipate.[213]

Firms retaining a multi-level hierarchy of management, with private dedicated office space configuration as a signal of rank, will find it harder to use space efficiently just as second-generation tenants do not fit as efficiently into any given space as first-generation tenants.[214]

[209] Source: CBRE Research Department – Vancouver, 2012.
[210] Source: CBRE Research Department – Vancouver, 2012.
[211] University of San Diego - Norman Miller, "Changing Trends in Office Space Requirements: Implications for Future Office Demand", 2013.
[212] University of San Diego, Real Estate Issues - Norman Miller, "Downsizing and Workplace Trends in the Office Market", 2013.
[213] University of San Diego - Norman Miller, "Changing Trends in Office Space Requirements: Implications for Future Office Demand", 2013.
[214] University of San Diego - Norman Miller, "Workplace trends in office space: implications for future office demand", 2014.

Other factors beyond the number of employees influence space demand including, but not limited to, workspace utilization levels, relative rent levels and cycles, tenant type, occupant employee turnover, firm growth rates and culture.[215] Temporary office space, using conference rooms, or letting employees work at home, may alleviate some pressure when a firm reaches capacity, but temporary space alternatives are fairly expensive compared with long-term leased space.[216]

One problem for landlords faced with high space utilization tenants is the need for greater parking per 1,000 sq ft of floor space. While traditional models of parking supply suggest three to four cars per 1,000 sq ft, this figure will likely need to be doubled when space per worker is down to 150 sq ft or less.[217] However in a more urban location with transit, this number may differ.

As noted by one academic in multiple publications:

- The long-term observer of corporate real estate planners has perpetually heard discussions on how to do more with less space and bring down real estate occupancy costs.[218]
- Few firms will ever be able to hit their target allocations of space per worker. The reasons are quite straightforward. Firms must anticipate growth and turnover, time to fill positions, and the types of spaces that are required. Seldom can any firm forecast growth rates or unexpected shrinkages of workers so accurately that this alone results in some over-consumption of space relative to average needs.[219]
- Based on reduced space usage, the demise of the office market has been exaggerated, and a continuation of space demand in excess of the targets espoused by some large corporations and space planners is more likely to be seen.[220]
- Overall, we should expect a greater spread of square feet per worker figures over the next several years, as some firms reduce footprints significantly while others maintain current practices with private dedicated space.[221]
- Ultimately, landlords are not selling space but rather productivity, which will command rental premiums.[222]

[215] University of San Diego - Norman Miller, "Workplace trends in office space: implications for future office demand", 2014.
[216] University of San Diego - Norman Miller, "Changing Trends in Office Space Requirements: Implications for Future Office Demand", 2013.
[217] University of San Diego - Norman Miller, "Workplace trends in office space: implications for future office demand", 2014.
[218] University of San Diego - Norman Miller, "Changing Trends in Office Space Requirements: Implications for Future Office Demand", 2013.
[219] University of San Diego - Norman Miller, "Estimating Office Space per Worker", Draft May 1 2012.
[220] University of San Diego, Real Estate Issues - Norman Miller, "Downsizing and Workplace Trends in the Office Market", 2013.
[221] University of San Diego - Norman Miller, "Workplace trends in office space: implications for future office demand", 2014.
[222] University of San Diego, Real Estate Issues - Norman Miller, "Downsizing and Workplace Trends in the Office Market", 2013.

8.0 Future Considerations for Office in Urban Centres

This chapter outlines various actions by different parties to support office space in Urban Centres. These items are organized into two sections: priority actions, and a longer list of other areas for further exploration. All of these items require a combination of technical solutions and political and industry support coordinated between the public and private sectors.

Municipalities in the Metro Vancouver region continue to make various efforts to attract office development. In some cases, these efforts match market forces, such as in downtown Vancouver where there is strong demand, especially for tech tenants, who seek to locations in areas rich with rapid transit and urban amenities. In other places, market demand is spurring office development at SkyTrain locations that are not necessarily in Urban Centres. Elsewhere, however, municipalities are encouraging mixed-use development with office space components in locations where developers state that there is very limited office market demand. Municipalities are, from the developer's perspective, creating supply in the hopes of generating demand.

Municipalities want to attract office investment to their Urban Centres, while developers want to build development that fulfils market demand, and businesses want accommodations in locations that meet their operational needs. Ultimately office development is a large investment decision, with the main factors being: land values, construction costs, and lease rates. Building on the actions identified in this report, and through further discussion by municipal staff, elected officials, and industry representatives, efforts to support office development in Urban Centres can be advanced.

8.1 Priority Actions

The issues most consistently expressed in interviews and supported by research, and which can be undertaken in the shorter term with a relatively high potential of effectiveness, include:

Development Approval Process - Streamline the development review / approval process, reduce the uncertainties and risks, and manage municipal charges / fees.

- By providing a streamlined development application review process and reducing regulatory barriers, the approval process will benefit from less risk, time, and costs for developers. This will encourage investment in municipalities with approval processes that are clear, consistent, predictable, and fair. This recommendation is in response to the challenges developers experience; interviewee suggestions ranged from removing obstacles to development by simplifying the approval process, specifically reducing timelines, costs, uncertainty and associated risks, and having policies that support and permit office space in locations where the demand is present, be it mixed-use projects or stand-alone developments. Also, to readily allow higher densities where appropriate.
- As argued by a number of developers, the supply of office space in Vancouver is constrained by a slow approval process. A quicker approval process would allow for more responsive office developments to fulfil market demand. Projects take a very long time - many years from concept to completion - with approvals taking a significant part of that process, which makes it more difficult to make investment decisions that respond to market signals.

Land Use Planning - Encourage, but do not mandate, mixed-use projects with office components. Rather, allow market demand to inform the supply of office development in specific locations.

- Municipal government plans need to prioritize office development at Urban Centre and FTDA locations and ensure supportive and consistent policy, not at additional locations. Plans that clearly designate "CBDs" in Urban Centres help provide direction on where office development

should go. If sites are designated / zoned for office use only, and this is not consistent with the market, the site may remain undeveloped for a significant time.

- Municipalities can assist office development in Urban Centres by assembling lands in key areas and selling these to developers as prepared sites ready for office development. Also, granting increased development rights for larger sites may encourage land assembly.
- Municipalities can also help by providing the infrastructure, amenities and facilities desired by office businesses and workers. Municipalities can also invest in initiatives that improve downtowns, such as facade clean-up and crime reduction programs, business improvement area associations, and downtown promotional events.

Zoning Definition - Allow general office uses, rather than overly specific/limiting types of office business uses, which reduce tenanting flexibility and thus increase risk.

- Interviewees stressed the importance of municipalities establishing zoning for office uses in priority locations where there is demand for office (following from the above recommendation). Interviewees repeatedly stated that municipal zoning bylaws should not be overly specific about the type of office use permitted; rather allow for general office, which could be used by different types of tenants to provide flexibility as the economy and market evolve. They also suggested flexibility for office zones to allow other ancillary activities.

Tenant Permits - Shorten and simplify the permitting process for basic improvements needed when new office tenants occupy a premise and operate a business.

- The tenant representatives had a number of suggestions for government actions. They requested consultation on government initiatives that could impact businesses (e.g. infrastructure projects that affect access to their business), and asked that governments keep business costs down, have reasonable property tax rates, and improve processes for obtaining business licences.
- In terms of permitting, for office tenants moving into a building, the time to get a permit can be months, for simple tenant improvement and occupancy permits. Building code requirements can trigger costly upgrades that make it difficult to bring space up to new standards. This can be especially troublesome with older buildings. This lengthy, expensive, and cumbersome requirement can be costly for both a landlord and tenant. Accordingly, some tenants decide to stay in their current space rather than move, and others prefer to move to a new building. Cities are encouraged to simplify this permitting system, similar to the City of Vancouver Tenant Improvement Permit System (TIPS) program[223], but applicable to a wider range of buildings.

Municipal Incentives - Explore financial or regulatory incentives to encourage office development.

- Municipalities could offer incentives for office development in Urban Centres, such as providing bonus density, reducing development fees, expediting development review processes, or offering property tax relief for a specific time period. In some cases, a municipality may want to further reduce costs for development in select target areas. There may be lessons learned from some municipal programs with incentives to encourage rental housing in new developments.

Research – Undertake further relevant research and case studies / best practices / innovation profiles into topics such as mixed-use development, such as identifying opportunities to integrate office space into mixed-use projects, but also identify where office components are warranted (or not).

- Interviewees appreciated research and reference publications by Metro Vancouver about office and employment matters. Specific possible additional areas for research: exploring potentially more consistent municipal zoning across the region, and explore how better to achieve a balance and combination of housing and employment growth, with not an undue focus on one or the other, and respecting local market conditions.

[223] TIPS is an alternative permit-issuing process for renovation projects which require a building permit or a development-building permit.

8.2 Other Areas for Exploration

The following are potential areas and actions that could be explored by Metro Vancouver, municipalities, developers, and other organizations to encourage and facilitate office development in Urban Centres. Generally, these initiatives support sound land use planning and policy development, an increase in technical research and information sharing, and a continuing development of partnerships to advance communications. Participation by all stakeholders is required to achieve success. Some of these actions are shorter term while others are longer term, and plans to encourage office development in Urban Centres must recognize market realities and office tenant and developer needs, while advancing both local and regional goals. These actions are organized by the responsible level of government and can be advanced through inter-agency and industry collaboration.

Metro Vancouver

- Advance and implement *Metro 2040* and regional context statements with supportive municipal plans and policies that direct investment to Urban Centres and prevent significant office development in out-of-centre locations.
- Work with municipalities, the development community, and others to consider possible refinements to regional land use policy to best support the goal of attracting office development to Urban Centres.
- Promote the importance of office space in the region as part of a healthy economy supporting prosperity in the form of investment, employment, and taxation. This can be through advancing and implementing *Metro 2040* and ensuring that municipal plans, including regional context statements, official community plans, area plans, and economic strategies, highlight the value of office space to the economy and community.
- Explore regional economic issues and explore advancing initiatives that support economic and employment growth, including office-based businesses, and promote the region as a destination for investment. This can include encouraging efforts by municipalities and the province to retain and attract businesses to the region and office space to Urban Centres through establishing an environment that is conducive to business investment and growth.
- Collect and promote case studies and best practices about ways municipalities and developers can direct office growth to Urban Centres.
- Maintain and share data, statistics, and other information resources about Urban Centres that may be of use for municipalities, business investors, developers, and tenants. Specifically, update the inventory of office buildings in the region and publish summaries of results.
- Encourage, as appropriate, municipalities to:
    - Streamline the development application process – review, costs, time, risk – in general and specifically for office development in Urban Centres. This may include developing guidelines to facilitate a clear and timely review process.
    - Develop incentive programs for office development in Urban Centres. This may include conducting technical research about possible incentives and sharing materials with municipalities to inform them about available tools.
    - Prepare development and design plan/policy guidelines to support office development in Urban Centres. This could include guidelines or templates benefiting municipalities, or hosting education / information sharing events.
- Encourage TransLink to continue to provide improved transit service to Urban Centres, and where appropriate, improved local transit service to connect existing office parks located in urban areas to the FTN.
- Work with TransLink to develop appropriate transportation and land use policies that support the development of office space in Urban Centre locations.

- Work with the provincial and federal governments to encourage them to locate their office accommodations and appropriate facilities in Urban Centre locations.
- Continue to support more coordination on economic issues at the regional level. Activities such as data collection, research, information sharing, and networking were noted and would be of benefit to supplement municipal efforts.

Municipal Governments

- Fostering a business-friendly environment by promoting the importance of office space as part of a healthy economy supporting prosperity in the form of employment and taxation. This can be done through municipal official community plans and area plans as well as economic strategies that respond to the needs for business, specifically office space, and best ways to accommodate this form of development within the community.
- Promote Urban Centres through municipal plans and policies as opportunities for developers and businesses to invest.
- Ensure that official community plan policies and zoning clearly identify and promote the CBD in each Urban Centre. Consider which areas can accommodate large scale region-servicing office uses, and which are local serving office designations.
- Through official community plan or other council policy, not support significant office developments proposed in locations outside of Urban Centres.
- Within the context of overarching municipal and regional goals and objectives, consider reviewing office zoning bylaws to:
    - Ensure that they do not unduly limit office development potential on Urban Centre lands.
    - Pre-zone lands for office uses, or not allow other uses, in select appropriate locations. This would send clear direction to landowners and developers about the desired long-term use for those lands. This could also include establishing higher density zoning or bonus density provisions for office space use or a density transfer program.
    - Allow different forms of office building designs, such as larger floorplate low rise office spaces which may be more in demand and more efficient than smaller floorplates, while respecting local conditions.
    - Ensure requirements for mixed-use buildings with an office component only apply where appropriate.
    - Implement zoning that allows for 'general office' uses, rather than more specific and restrictive types of business uses.
    - Allow only office uses that are accessory to industrial uses in designated industrial areas.
    - Not allow significant office developments in locations outside of Urban Centres.
- Consider specific economic development initiatives to attract office investment; an 'open for business' approach for office development will encourage developers and businesses to consider investments in these communities.
- Invest in infrastructure and facilities/amenities in Urban Centres to attract private sector investments. This could include investments in transportation and other infrastructure and community facilities/amenities that benefit businesses and workers.
- Consider offering greater development rights for larger sites to encourage land assembly for office development.
- Investigate implementing a program that fast-tracks building and occupancy permits for tenants (modelled on the City of Vancouver's "TIPS" program).
- Explore pre-servicing areas to be 'building-permit ready' for office buildings.
- Review property tax rates to support competitive business costs, and consider possible 'property tax holiday' (possibly via a grant) or Tax Increment Financing for new office buildings.

- Support Business Improvement Associations, which may assist with promoting and improving business districts to make Urban Centres more attractive for office tenants.
- Be leaders by locating municipal facilities in Urban Centres. Interviewees noted the City of Surrey's relocation of city hall to Surrey City Centre and the City of New Westminster's civic centre / office tower in their downtown as positive examples.

Provincial / Federal Governments

- Share available data about office and employment lands development and related economic matters, through BC Assessment Authority and BC Stats and other applicable agencies.
- Locate provincial, federal and government agency offices as well as major institutional facilities such as universities and hospitals in Urban Centres.
- Province – assist with review of property tax rates for office space to support competitive business costs. This may include leading a task group of stakeholders to review possible adjustments to property tax rates and policies.
- Province – support economic development initiatives that retain and attract businesses to the region. This may be through working with stakeholders to explore preparing a regional economic strategy and advancing initiatives that support economic and employment growth in the region, including efforts to retain large businesses and grow smaller businesses, and promote the region as a destination for investment.
- Invest in necessary infrastructure and facilities/amenities in Urban Centres to attract private sector investments. This could include investments in transportation and other infrastructure and community facilities/amenities that benefit businesses and workers.
- Develop implementation agreements or memorandums of understanding consistent with *Metro 2040* directing government investments to Urban Centres as well as other supportive actions.
- Province - help with training an educated workforce.
- Federal government - allow increased immigration or at least temporary visas for skilled workers needed by growing businesses.

Development Community

- Share information and research with local governments to foster a better understanding of the development process. This may include periodic meetings to exchange information and ideas between the public and private sectors or other types of special events.
- Development groups, such as NAIOP, ULI, UDI, and BOMA, could work with local governments to prepare municipal plans and policies that are supportive of office development in Urban Centres. This could include sharing expertise about the office development financial and market requirements for land use plans to include viable office space components.
- Work with municipalities and Metro Vancouver to identify and address regulatory barriers and challenges for office development in Urban Centres.
- Explore the potential for mixed-use developments with office components, where appropriate.
- Consider the commuting needs of employees and access via different transportation modes for office development, including the potential for transportation demand management strategies.
- Further explore financial and market viability of development opportunities at Urban Centre locations, especially beyond the Metro Core, rather than non centre locations for office projects.
- Apply lessons from other jurisdictions about office development in Urban Centres to the Metro Vancouver region.
- Promote the benefits of locating in Urban Centres to office developers, tenants, and workers.

Appendix A: List of Interviewees

Organization	Name / Title
Bentall Kennedy	Tony Astles, President - Real Estate Services
Oxford Properties	Chuck We, Vice President - Vancouver Office Ted Mildon, Director - Office Leasing
PCI Developments	Dan Turner, Executive Vice President
Quad Real Property Group	Jeff Rank, Senior Vice President - Leasing
GWL Realty Advisors Inc.	Geoff Heu, Vice President, Development - Western Canada
Avison Young	Andrew Petrozzi, Principal & Vice-President, Research (BC) Glenn Gardner, Principal - Consulting & Advisory, Office Sales & Leasing
Colliers	Rob Chasmar, Senior Vice President
Cushman & Wakefield	Hendrik Zessel, Executive Managing Director & Western Canada Leader
JLL Jones Lang LaSalle	Mark Chambers, Executive Vice President of Office Leasing
Regus	Alex Kanaan, Team Lead Area Sales Manager
WeWork	Michael Harold, Manager of Public Affairs - West
City of Coquitlam	Andrew Merrill, Manager Community Planning
City of Vancouver	Matthew Bourke, Planner III - City-Wide & Regional Planning Michael Naylor, Planner III - Rezoning Centre Chris Clibbon, Planner II - City-Wide & Regional Planning Marten Hansen, Planner I - City-Wide & Regional Planning
Vancouver Economic Commission	Bryan Buggey, Director - Strategic Initiatives and Sector Development James Raymond, Manager - Research & Analysis

Thank you to the interviewees who provided their input for this report.

Eric Aderneck, Planning Consultant, conducted the interviews in November and December 2018.

The preparation of the earlier version of this report was informed by other interviews at that time, including with office tenants. Comments that are still relevant are retained in the updated version of this report.

Appendix B: Interview Discussion Questions

Views on Metro Vancouver Office Market Issues and Trends

1. What are the region's major strengths and weaknesses regarding office development and tenancy?
2. What are the greatest barriers / challenges to growing the corporate office market in the region?
3. What are major trends or issues facing the office development market in Metro Vancouver (such as tenant needs, land and rental values, stratification, co-working / changing nature of work, building and floor plan designs, regulatory, construction costs, etc), and how is this evolving?
4. For office tenants that are moving to Metro Vancouver, where are they moving from, and what are they seeking?
5. For office tenants expanding within the region, do they typically stay in the same geographic area or move, and what are they seeking?
6. Which sub-markets within the region compete against each other, and which do not?
7. To what extend could office development and tenants be guided to other Urban Centres outside of the Vancouver Metro Core?
8. How has the significant new supply of office buildings in the region, particularly in downtown Vancouver, impacted office tenancy?
9. Any notable observations about the sectors and sizes of office tenants seeking accommodations, and the type of desired spaces and features?

Discussion Questions for Developers and Brokers

1. What is the process and considerations / evaluation criteria for selecting a site for an office development, and how might this be evolving (such as area features/amenities, proximity to transit and/or highway network, availability of parking, mixed use vs single use building designs, land values / rent rates, etc)?
2. What are features of a site that are absolute requirements, vs desirable, vs not necessary?
3. What are office tenant key selection criteria (such as accommodation / location / feature)?
4. Has the premium that tenants are willing to pay to locate in Urban Centres / near transit / amenities vs other locations without these features changed over the last five years?
5. What do developers and tenants perceive to be the positive or negative qualities associated with Urban Centres?
6. How does the market differentially consider Urban Centres, SkyTrain stations (current, new, or proposed), or proximity to frequent bus routes?
7. What are challenges or barriers to developing in Urban Centres vs other locations?
8. Could efforts by municipalities to reduce development costs (such as reduced DCCs, application fees, approval processes, etc) or enhance services / amenities have a significant impact on office development decisions?
9. What could municipalities or governments do to encourage office developments in Urban Centres?
10. What if any regional planning research or policy by Metro Vancouver could help support efforts to locate new office development in Urban Centres?

Discussion Questions for City Staff

1. What are some notable municipal experiences or examples (both successes and challenges) to attract office development to the city or more specifically to Urban Centres?
2. What sorts of policies or programs does the city have in place to encourage office development in Urban Centres (or other target locations), and how do developers respond to those?
3. Has there been, or to what extent, a shift (in the last five years) towards more office development occurring in Urban Centre locations vs suburban / highway oriented locations?
4. How do developers consider municipal and regional plans/regulations when selecting an office development site?
5. What if any regional planning research or policy by Metro Vancouver could help support efforts to locate office development in cities and within Urban Centres?

Appendix C: Supplemental Office Inventory Data Tables

Sub-Region	Metro Core / Surrey Centre	Regional City Centre	Municipal Town Centre	Not in Urban Centre	Total
Burnaby/New West	-	4,400,000	2,100,000	8,900,000	**15,400,000**
Delta	-	-	-	400,000	**400,000**
Langleys	-	700,000	-	1,200,000	**1,900,000**
North Shore	-	1,800,000	400,000	2,000,000	**4,200,000**
Northeast Sector	-	500,000	400,000	500,000	**1,400,000**
Richmond	-	2,300,000	-	4,500,000	**6,800,000**
Ridge - Meadows	-	100,000	-	-	**100,000**
Surrey/White Rock	3,300,000	-	1,800,000	3,000,000	**8,100,000**
Vancouver/UBC	36,600,000	-	200,000	4,700,000	**41,500,000**
Total	**39,900,000**	**9,800,000**	**4,900,000**	**25,200,000**	**79,800,000**

Sub-Region	Within 800m of Rapid Transit Station	Within 400m of FTN Bus Service Only	Not Near FTN Service	Total
Burnaby/New West	9,300,000	4,100,000	2,000,000	**15,400,000**
Delta	-	100,000	400,000	**500,000**
Langleys	-	300,000	1,600,000	**1,900,000**
North Shore	-	2,900,000	1,300,000	**4,200,000**
Northeast Sector	900,000	200,000	300,000	**1,400,000**
Richmond	1,500,000	2,300,000	2,900,000	**6,700,000**
Ridge - Meadows	-	100,000	-	**100,000**
Surrey/White Rock	2,400,000	3,500,000	2,300,000	**8,200,000**
Vancouver/UBC	34,400,000	6,400,000	700,000	**41,500,000**
Total	**48,500,000**	**19,900,000**	**11,500,000**	**79,900,000**

	Within 800m of Rapid Transit Station	Within 400m of FTN Bus Service Only	Not Near FTN Service	Total
Metro Core	32,100,000	4,300,000	200,000	**36,600,000**
Surrey Metro Centre	2,400,000	900,000	-	**3,300,000**
Regional City Centre	5,900,000	2,200,000	1,600,000	**9,700,000**
Municipal Town Centre	2,500,000	2,200,000	200,000	**4,900,000**
Not in Urban Centre	5,600,000	10,200,000	9,600,000	**25,400,000**
Total	**48,500,000**	**19,800,000**	**11,600,000**	**79,900,000**

Urban Centre Type	Number	*Distribution*	Sq Ft	*Distribution*	Avg. Size
Metro Core	500	*36%*	36,600,000	*46%*	73,200
Surrey Metro Centre	40	*3%*	3,300,000	*4%*	82,500
Regional City Centre	197	*14%*	9,700,000	*12%*	49,200
Municipal Town Centre	114	*8%*	5,000,000	*6%*	43,900
Not in Urban Centre	541	*39%*	25,300,000	*32%*	46,800
Total	**1392**	***100%***	**79,900,000**	***100%***	**57,400**

Municipality	Number	*Distribution*	Sq Ft	*Distribution*	Avg. Size
City of Burnaby	192	*14%*	12,940,000	*16%*	67,400
City of Coquitlam	27	*2%*	860,000	*1%*	31,900
City of Delta	11	*1%*	430,000	*1%*	39,100
City of Langley	10	*1%*	280,000	*0%*	28,000
City of Maple Ridge	2	*0%*	120,000	*0%*	60,000
City of New Westminste	59	*4%*	2,450,000	*3%*	41,500
City of North Vancouver	74	*5%*	2,920,000	*4%*	39,500
City of Pitt Meadows	1	*0%*	10,000	*0%*	10,000
City of Port Coquitlam	7	*1%*	270,000	*0%*	38,600
City of Port Moody	4	*0%*	280,000	*0%*	70,000
City of Richmond	141	*10%*	6,730,000	*8%*	47,700
City of Surrey	162	*12%*	8,170,000	*10%*	50,400
City of Vancouver	603	*43%*	41,170,000	*52%*	68,300
City of White Rock	2	*0%*	40,000	*0%*	20,000
District of North Vancou	19	*1%*	740,000	*1%*	38,900
District of West Vancouv	22	*2%*	550,000	*1%*	25,000
Township of Langley	47	*3%*	1,600,000	*2%*	34,000
UBC/UEL	9	*1%*	320,000	*0%*	35,600
Total	**1392**	***100%***	**79,880,000**	***100%***	**57,400**

Sub-Region	Unknown	Before 1950	1950 - 1959	1960 - 1969	1970 - 1979	1980 - 1989	1990 - 1999	2000 - 2009	2010 - 2018	Total
Burnaby/New West	170,000	340,000	350,000	300,000	1,990,000	2,350,000	5,100,000	2,510,000	2,280,000	15,390,000
Delta	20,000	-	-	60,000	20,000	90,000	230,000	-	20,000	440,000
Langleys	80,000	-	-	20,000	20,000	90,000	530,000	500,000	660,000	1,900,000
North Shore	190,000	220,000	40,000	100,000	660,000	880,000	880,000	760,000	470,000	4,200,000
Northeast Sector	30,000	-	-	40,000	170,000	170,000	430,000	230,000	340,000	1,410,000
Richmond	250,000	50,000	-	20,000	1,080,000	1,570,000	2,190,000	1,420,000	160,000	6,740,000
Ridge - Meadows	10,000	-	-	10,000	-	-	-	110,000	-	130,000
Surrey/White Rock	300,000	60,000	10,000	-	330,000	990,000	1,970,000	1,870,000	2,680,000	8,210,000
Vancouver/UBC	710,000	1,960,000	1,040,000	2,320,000	7,810,000	8,770,000	7,630,000	5,970,000	5,270,000	41,480,000
Total	**1,760,000**	**2,630,000**	**1,440,000**	**2,870,000**	**12,080,000**	**14,910,000**	**18,960,000**	**13,370,000**	**11,880,000**	**79,900,000**

Municipality	General Urban	Industrial	Mixed Emp	Grand Total
City of Burnaby	5,860,000	430,000	6,650,000	12,940,000
City of Coquitlam	860,000	-	-	860,000
City of Delta	180,000	250,000	-	430,000
City of Langley	280,000	-	-	280,000
City of Maple Ridge	120,000	-	-	120,000
City of New Westminster	2,450,000	-	-	2,450,000
City of North Vancouver	2,040,000	-	880,000	2,920,000
City of Pitt Meadows	10,000	-	-	10,000
City of Port Coquitlam	270,000	-	-	270,000
City of Port Moody	280,000	-	-	280,000
City of Richmond	2,540,000	370,000	3,820,000	6,730,000
City of Surrey	6,230,000	150,000	1,790,000	8,170,000
City of Vancouver	36,900,000	1,350,000	2,910,000	41,170,000
City of White Rock	40,000	-	-	40,000
District of North Vancouver	650,000	80,000	-	740,000
District of West Vancouver	550,000	-	-	550,000
Township of Langley	660,000	70,000	870,000	1,600,000
UBC/UEL	320,000	-	-	320,000
Grand Total	**60,240,000**	**2,700,000**	**16,920,000**	**79,880,000**

Municipality	Within 800m of Existing Rapid Transit Station	Within 400m of FTN Bus Service Only	Not Near FTN Service	Total
City of Burnaby	**7,680,000**	**3,320,000**	**1,950,000**	**12,950,000**
Brentwood MTC	1,360,000	-	-	1,360,000
Edmonds MTC	540,000	70,000	10,000	620,000
Lougheed Burnaby MTC	70,000	-	40,000	110,000
Metrotown	3,080,000	-	-	3,080,000
Not in Urban Centre	2,630,000	3,250,000	1,900,000	7,780,000
City of Coquitlam	**530,000**	**150,000**	**180,000**	**860,000**
Coquitlam Town Centre	500,000	-	-	500,000
Lougheed Coquitlam MTC	20,000	-	-	20,000
Not in Urban Centre	20,000	150,000	180,000	350,000
City of Delta	**-**	**80,000**	**350,000**	**430,000**
Not in Urban Centre	-	80,000	350,000	430,000
City of Langley	**-**	**280,000**	**-**	**280,000**
Langley Town Centre (in Langley City)	-	280,000	-	280,000
City of Maple Ridge	**-**	**120,000**	**-**	**120,000**
Maple Ridge Town Centre	-	110,000	-	110,000
Not in Urban Centre	-	10,000	-	10,000
City of New Westminster	**1,660,000**	**750,000**	**50,000**	**2,460,000**
New Westminster Downtown	1,290,000	-	-	1,290,000
Not in Urban Centre	370,000	750,000	50,000	1,170,000
City of North Vancouver	**-**	**2,260,000**	**660,000**	**2,920,000**
Lonsdale	-	1,800,000	-	1,800,000
Not in Urban Centre	-	460,000	660,000	1,120,000
City of Pitt Meadows	**-**	**10,000**	**-**	**10,000**
Pitt Meadows MTC	-	10,000	-	10,000
City of Port Coquitlam	**60,000**	**50,000**	**160,000**	**270,000**
Port Coquitlam MTC	-	20,000	40,000	60,000
Not in Urban Centre	60,000	20,000	120,000	200,000
City of Port Moody	**280,000**	**-**	**-**	**280,000**
Inlet Centre MTC	280,000	-	-	280,000
City of Richmond	**1,470,000**	**2,310,000**	**2,940,000**	**6,720,000**
Richmond City Centre	390,000	2,310,000	1,750,000	4,450,000
Not in Urban Centre	1,080,000	-	1,190,000	2,270,000
City of Surrey	**2,430,000**	**3,410,000**	**2,320,000**	**8,160,000**
Cloverdale MTC	-	-	30,000	30,000
Fleetwood MTC	-	90,000	-	90,000
Guildford MTC	-	1,060,000	-	1,060,000
Newton MTC	-	410,000	-	410,000
South Surrey MTC (Semiahmoo)	2,430,000	870,000	30,000	3,330,000
Surrey Metro Centre	-	780,000	2,260,000	3,040,000
Not in Urban Centre	-	210,000	-	210,000
City of Vancouver	**34,400,000**	**6,080,000**	**690,000**	**41,170,000**
Metro Core	32,100,000	4,300,000	160,000	36,560,000
Oakridge MTC draft concept	2,120,000	1,770,000	530,000	4,420,000
Not in Urban Centre	180,000	-	-	180,000
City of White Rock	**-**	**40,000**	**-**	**40,000**
White Rock MTC	-	40,000	-	40,000
District of North Vancouver	**-**	**60,000**	**680,000**	**740,000**
Lynn Valley MTC	-	-	80,000	80,000
Not in Urban Centre	-	60,000	600,000	660,000
District of West Vancouver	**-**	**550,000**	**-**	**550,000**
Ambleside MTC	-	330,000	-	330,000
Not in Urban Centre	-	220,000	-	220,000
Township of Langley	**-**	**-**	**1,600,000**	**1,600,000**
Langley Town Centre (in Langley Towr	-	-	410,000	410,000
Willoughby MTC	-	-	1,150,000	1,150,000
Not in Urban Centre	-	-	40,000	40,000
UBC/UEL	**-**	**320,000**	**-**	**320,000**
Not in Urban Centre	-	320,000	-	320,000
Grand Total	**48,515,000**	**19,785,000**	**11,580,000**	**79,880,000**

Appendix D: 2001 Urban Centres Strengths and Weaknesses

The following strengths and weaknesses of Urban Centres relating to business parks were defined in a 2001 report[224], and are copied for reference. Although some of these points are still valid, the recent strong desire for tenants to be located by rapid transit and urban amenities is overpowering the noted weaknesses and driving interest in Urban Centres.

Town Centres' Weaknesses:

Office tenants and developers listed several challenges with the regional town centres including:

- High land costs and high rent levels. This is often due to competition from alternative potential projects such as residential and retail land uses. Business parks have a much lower land cost.
- In the town centres there are few large vacant sites wherein a developer can generate a master planned, phased project, which enjoys economies of scale. In business parks most projects are large scale and master planned and thus efficient and cost effective.
- The regional town centres tend to be in older urban areas, which have been subdivided extensively. This has resulted in numerous small, expensive, and inefficient properties often with outdated improvements, such as an old one or two level retail building on site.
- Limited demand for high-rise, multi-tenant buildings by large tenants. The region and the province simply do not have many very large-scale business tenants, compared to similar and larger cities in North America. Without huge anchor office tenants, who will take five or more floors of an office tower, a high rise project typical of a regional town centre cannot proceed.
- Congested parking, with only 1 or 2 stalls per 1,000 sq ft of space, compared to 3 in business parks.
- Traffic congestion on local arterial roads reduces the regional accessibility of the regional town centres. This is in part due to the locations, which are not on major highways. It is expected that eventually congestion will reduce the convenience of the business parks also and thus make town centres transit connections a more attractive factor when making a location decision.
- Higher property taxes due to the higher land values in some of the regional town centres. This is largely due to the small sized sites and the alternate uses (residential and retail), which are possible on town centre land.
- Undesirable businesses or persons or other bad neighbourhood effects are evident in several town centres. In business parks, tenants are proximate to other similar businesses and do not need to deal with issues related to urban decay or social problems.
- The town centre locations are not ideal for office tenants who serve the entire region, due to the lack of highway access.
- The provision of good transit and the close proximity of retail and services are not as important to major office businesses, as would be expected.
- Proximity to major high-density residential areas is not deemed to be an important locational factor for most office tenants.
- Many of the larger international, high tech businesses have similar single tenant, build to suit, office buildings in every major city in the world. Most of these firms will not compromise their module building design or the need for a highway location and 30 minute access to the international airport. A new, single tenant, build to suit building, within a regional town centre, would be very difficult to develop at a reasonable cost or within a reasonable time frame, or with a flexible ownership plan.
- With the notable exception of the central area, the urban centres offer few measurable benefits to high tech businesses except transit and proximity to services.

Town Centres' Strengths:

Office tenants and developers see several positive characteristics:

- Transit services.
- Residential nearby.
- Convenient services and retail.
- A town centre location tends to be more suitable for local area serving businesses such as accountants and lawyers. The town centres have service areas, which are very similar to the retail trade areas of the regional shopping centres, which anchor the commercial district.

[224] Royal LePage Advisors Inc, "The GVRD Office Market Supply: Demand and Spatial Distribution", 2001.

- The longer-term potential to offer a more attractive and unique urban environment with an ambiance that employees will enjoy and request of the office employer. This already exists in the central area, where locational factors can outweigh the additional costs for some tenants.

Recommended Action Plan

The following measures could be implemented by provincial, regional and local levels of governments, in order to make existing regional town centre locations more attractive. Many of these measures come at a cost (in some cases significant) that would have to be assessed in terms of the benefits that would accrue.

- Provide larger development sites by encouraging site assembly and high-density zoning. In some instances government owned sites are available or for some areas selective road closures could be facilitated, creating large new sites.
- Reduce red tape and speed approvals, in order to reduce developer costs and uncertainty. This would be a critical step in attracting developers as enthusiastic partners in new projects.
- Lower land costs by creating office and employment zoning. Control mixed-use zoning, whereby some sites can only be used for office (rather than high-rise residential). Restricting residential uses would depress land values and make low-rise, build to suit, single tenant, owner occupied buildings possible.
- Reduce the cost of parking by providing municipal parkades, which can be shared by surrounding projects.
- Take actions to lower property taxes in town centres. The most direct course would be to stabilize land values.
- Ensure that the town centres have multiple fibre-optic cable providers. This is a critical locational issue for many high tech firms.
- Major electrical service for high-energy consumption is also important. Some high tech businesses require many times the industry average of 10 watts of electrical power per sq ft.
- Emphasize town centre's traffic links with major highways. This can be done via marketing and by lobbying to ensure that links to the highway network are improved at every opportunity.
- Encourage greater diversity in terms of retail service, recreational opportunities and cultural amenities.
- A high-rise, multi-tenant building, typical of town centres, can cost 40% more per square foot to build than a low-rise business park building. Any actions which reduce the need for large scale, concrete construction would make development more flexible and cost effective.
- The development of large new facilities, such as a hospital, university, library, art or sports complex should be focused in the town centres. This will act to encourage office tenants to locate nearby and make the town centres more attractive.
- Maintain high standards for infrastructure and cleanliness, orderliness, etc. in town centres. It is important that the town centres not be associated with crime or undesirable social problems. Large business tends to locate in areas which are safe and clean and have a pleasant and consistent appearance.
- Improve urban design to reflect a more attractive, pedestrian-oriented, environment. This is critical to efforts which model the town centres as smaller scale versions of the central business district.
- Coordinate lobbying efforts by developers, municipalities and various levels of government. This would be focussed on infrastructure issues such as transit and road improvements and also on the location decision for major institutions. If government incentives are being provided to attract certain businesses into the region, then perhaps the leverage of this benefit can extend to requesting that the business locate in a town centre.
- Any increase to the cost of automobile travel makes transit more attractive, which in turn makes office development in some of the town centres more attractive. Over the longer term traffic congestion will decrease the advantages of business parks and make the town centres a more attractive location option for office tenants.
- Encourage rapid town centre growth, so that they can be large enough to have some of the attractions of the central area and thus become self-sustaining.
- As the supply of vacant business park lands diminishes and costs go up, the virtues of the centrally located town centre development sites will become more apparent.

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Coquitlam

OFFICE OF THE MAYOR
Richard Stewart

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Dear Regional Planning Board:

RE: Office Development in Metro Vancouver's Urban Centres

Further to item 5.2 "Office Development in Metro Vancouver's Urban Centres – 2018 Update" on the agenda for Regional Planning Committee on March 8, 2019, we have concerns with how this report focuses on a market analysis based on past trends and states there is no market for office in Coquitlam's City Centre. This would suggest a significant departure, as it indicates that Metro and the member municipalities are not working to shape growth, but are simply sitting idly by waiting for the market to come to us. This goes against the entire notion of Regional Planning.

As noted in our February 2019 City Centre Commercial and Office Discussion Paper, Coquitlam is taking a leadership role by creating a market for commercial and office development through appropriate policy, land use, and development incentives, in order to foster office development in our City Centre and fulfill our Regional City Centre designation and meet our job creation targets outlined in the Regional Growth Strategy (RGS). In endorsing the RGS, member municipalities were acknowledging that Regional goals and realities would take precedence over the status quo. And in addition, when Coquitlam pushed hard to achieve approval, funding, construction and operation of the Evergreen Line rapid transit to our City Centre, we were committing that the past performance of our City Centre would not be indicative of our future results.

Metro Vancouver's RGS has set a very ambitious employment target for Coquitlam of 94,000 jobs by 2041, which is 47,200 more jobs than the 2011 total of 46,800 jobs (a 100% increase). This employment creation is critical in order to keep pace with Coquitlam's population growth and for Coquitlam to be a complete and balanced community (we are one of the only Metro Vancouver communities that is meeting its regional housing-supply targets).

Currently, about 57% of the office space in Metro Vancouver is concentrated in the City of Vancouver (which has 25% of the region's population). In contrast, while Coquitlam has about 6% of the region's population, it has just 1% of the region's office space. Unless Coquitlam is able to secure a significantly larger share of the region's future office development, it is unlikely that the City can meet its employment

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target. A number of other Metro Vancouver municipalities face the same situation, which has serious implications on the regional transportation network.

Metro Vancouver acknowledges the need for more office development outside of the core, along with the importance of leveraging off the major investments in regional transportation infrastructure, including the Evergreen Extension. The previous 2015 *Office Development in Metro Vancouver's Urban Centres* report states that "focusing office development in Urban Centres benefits the regional transportation system and livability in a number of ways: by supporting the development of complete communities, reducing vehicle commutes and employee transportation costs, protecting lands for other uses, complementing commercial and residential land uses and increasing the vibrancy and success of Urban Centres."

The City strongly believes that Metro Vancouver has a leadership role to play in ensuring that future office development is more appropriately distributed in the region. As such I recommend that this report be referred back to staff in order to provide a more robust analysis using a forward looking lens in order to foster a greater share of office development across the Regional City Centres, rather than locating future office development at the whim of the development industry.

When this report comes forward again I would also recommend two additional actions to the seven identified in the Metro staff report:

8. Outline the tools and best practices member municipalities can utilize to foster a greater share of office development in Regional City Centres; and

9. Metro to take a leadership role in targeting a greater proportion of office development across all Regional City Centres and prepare a robust strategy to assist municipalities to achieve their employment targets in the RGS.

We are very keen to work with Metro Vancouver on tackling the issue of the distribution of office space in the region, to protect both the sustainability and the livability of the region for future generations.

Should you have any questions or require any further information with respect to this matter, please contact me, or contact Jim McIntyre, General Manager Planning and Development at 604-927-3401 or at jmcintyre@coquitlam.ca.

I look forward to tomorrow's discussion.

Best regards,

Richard Stewart
Mayor

c. Council
Jim McIntyre, General Manager Planning and Development
Heather McNell, Director of Regional Planning and Electoral Area Services, Metro Vancouver

metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Regional Planning Committee

From: Erin Rennie, Senior Planner, Regional Planning

Date: February 19, 2019 Meeting Date: March 8, 2019

Subject: **Lougheed Corridor Land Use and Monitoring Study – Final Report**

RECOMMENDATION
That the MVRD Board receive for information the report dated February 19, 2019, titled "Lougheed Corridor Land Use and Monitoring Study – Final Report".

PURPOSE
To inform the Regional Planning Committee and MVRD Board of the proceedings, findings, and next steps of the Lougheed Corridor Land Use and Monitoring Study.

BACKGROUND
As part of the ongoing *Metro Vancouver 2040: Shaping Our Future (Metro 2040)* Urban Centres and Frequent Transit Development Area (FTDA) Policy Review, Metro Vancouver is conducting a series of Frequent Transit Corridor Studies in partnership with TransLink and member jurisdictions. These studies are pilot projects to further the integration of regional land use and transportation planning through support and coordination by Regional Planning staff. The first Frequent Transit Corridor Study (2015-2017) pilot took place on the Marine-Main Corridor (connecting the District and City of North Vancouver, and the District of West Vancouver).

On October 5, 2018, the Regional Planning Committee received a report titled, "Lougheed Land Use and Monitoring Study – Project Initiation" (Reference 1) initiating the second Frequent Transit Corridor Study on the Lougheed corridor (connecting the cities of Coquitlam, Port Coquitlam, Pitt Meadows, and Maple Ridge). The Lougheed Corridor Land Use and Monitoring Study took place between September 2018 and February 2019 and has now concluded. This report describes the Study's process and findings.

STUDY BACKGROUND
There are a number of activities taking place on the Lougheed Corridor that made this an opportune time to conduct a multi-stakeholder corridor study. These include the introduction of a new B-Line bus service on the corridor, the development of a new Pitt Meadows-Maple Ridge Area Transport Plan, TransLink's Long-Term Transit Corridor Study, a number of municipal planning updates and projects, and Ministry of Transportation and Infrastructure highway upgrades along the corridor.

Purpose and Goals
This study was motivated in particular by the pending introduction of the Lougheed B-Line frequent bus service scheduled for September 2019. This investment in frequent transit service in the corridor will bring important mobility benefits to people who live, work, and visit the corridor with the potential to increase transit ridership and transit mode share and to create new development

opportunities. This study was scoped to complement the B-Line introduction by considering how land use and growth on the corridor could be coordinated and planned across municipal boundaries to support the new transit service as well as to better understand how transit service improvement might impact growth and development generally. The purpose of the Study was to further thinking about transit-supportive land use options along the B-Line route and to explore the better integration of growth corridors into regional planning and monitoring.

Partnership

The Study was led by Metro Vancouver in collaboration with TransLink. The project was guided by a Staff Working Group (SWG) with representation drawn from Regional Planning staff, municipal staff from the Cities of Coquitlam, Port Coquitlam, Pitt Meadows, and Maple Ridge, the Katzie, Kwantlen and Kwikwetlem First Nations, the Agricultural Land Commission (ALC), and the Ministry of Transportation and Infrastructure (MOTI).

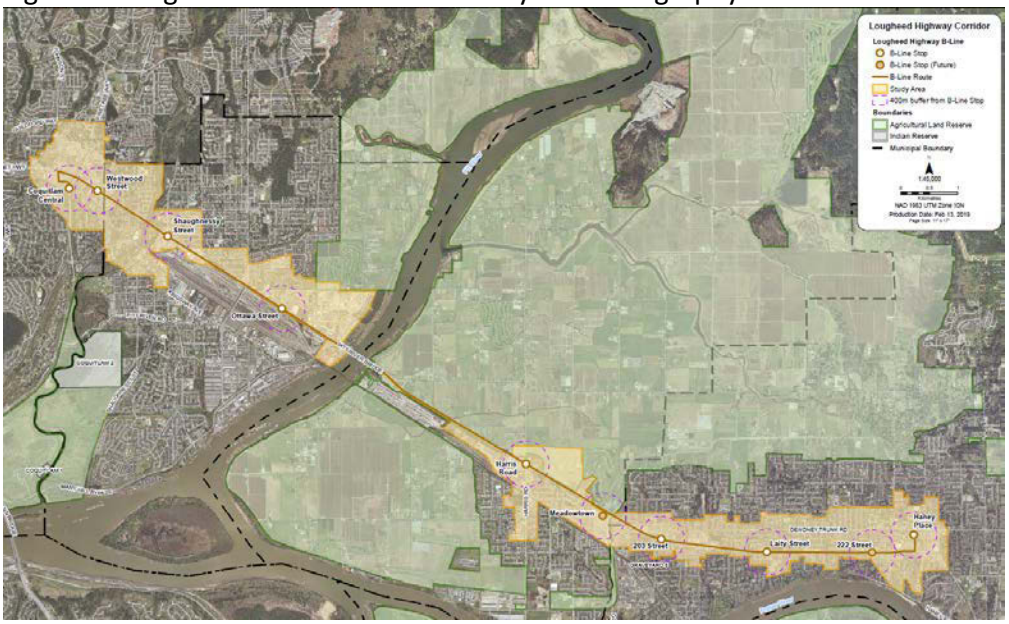
STUDY COMPONENTS AND ANALYSIS

The Study was scoped to integrate into TransLink's Rapid Transit Corridor Study and to feed into the various local community projects. The Study comprised the following five activities designed to further thinking about transit-supportive land use and growth options along the new B-Line route and to explore the better integration of corridors into regional planning and monitoring.

Activity 1: Study Area Development and Site Assessment

Regional Planning staff worked with the SWG to collectively develop a custom study area geography for the corridor (Figure 1). The purpose of the Study Area boundary was to inform future analysis including the monitoring program and the market potential assessment. In general, the study area geography is between 400m and 800m from the corridor right-of-way, it includes most of the area of each designated urban centre, but excludes most industrial, railway and agricultural lands along the corridor.

Figure 1: Lougheed Corridor Custom Study Area Geography



Activity 2: Monitoring Program Development
The monitoring program (Attachment 1) is a service being undertaken by Metro Vancouver to help SWG members observe how land use and transportation patterns change after the introduction of the B-Line. The goals of the program were to: learn about the influence of B-Line on community development patterns and travel behaviour, learn about the better use of corridors for shaping growth, and inform policy and track progress over time.

The SWG identified a list of performance indicators of interest and determined how those indicators could be tracked. Metro Vancouver will track the indicators for the custom corridor study area geography and prepare: regular reports for the partners to use in evaluating their policies and programs including a Baseline Report, an Annual Update with a selection of the agreed-upon indicators, and a Monitoring Report every 5 years.

Activity 3: Market Potential Assessment
Urban Systems was hired to conduct a Market Potential Assessment for the Study Area to help participants understand the likely real estate market impact of the introduction of the B-Line service. The results of the analysis show that there is likely to be a modest impact on population and market potential for residential and commercial real estate in the corridor as a result of the B-Line investment. That impact would be focused primarily on the eastern end of the corridor. A separate analysis to estimate the potential for housing in the corridor also showed that the potential for affordable and non-market housing in the corridor is greater following the introduction of the B-Line as compared to the status quo scenario. The consultant also found that there is unlikely to be regional-scale stand-alone office development in the corridor other than around Coquitlam Regional City Centre, which is heavily influenced by the presence of SkyTrain. Local-serving office potential was therefore included as part of the commercial market potential analysis.

The Market Potential Assessment included a high-level capacity analysis which identified vacant lands in the Study Area by zoning category. These vacant properties represent opportunities for transit-supportive community elements such as: rental housing, non-market housing, pedestrian and cycling connections, employment opportunities, streetscape improvements, parks, and greenspace. More nuanced capacity analysis at the municipal level should be considered to further explore these opportunities.

Urban Systems emphasized that one of the clearest opportunities arising out of the introduction of the new B-Line service is its potential to stimulate and support development of a range of affordable and non-market housing types. It has previously been determined by other studies that the residents of rental and non-market housing are more likely to ride transit and support desired ridership levels as well as less likely to require parking. Municipalities may wish to consider re-evaluating land use and zoning policies in the Study Area relating to provisions for new rental housing, supportive housing for seniors, and other non-market housing types.

Activity 4: Alternative Growth Scenario Process
Metro Vancouver worked with TransLink to model how redirecting growth to the corridor could impact transit ridership for different transit service levels in the long term (i.e. to the year 2050). An Alternative Growth Scenario of trend-forward growth for the corridor plus 20% was conceptualized and analyzed through the Multiple Accounts Evaluation component of TransLink's Lougheed Corridor

Long Term Transit Corridor Study. Additional analysis is required, but generally the results suggest that redirecting growth from elsewhere in the respective municipalities to appropriate locations along the Lougheed Corridor could help to grow transit ridership and in turn support the municipalities' long-term transit ambitions. A corridor profile was prepared as part of this analysis (Attachment 2).

Activity 5: Transit-Supportive Corridor Opportunities
Drawing on established policy and best practices, Metro Vancouver facilitated discussions with the SWG to identify opportunities to enhance the transit-supportive quality of the adjacent communities. These opportunities were geared towards responding to concerns and observations articulated by SWG members over the course of the study.

STUDY FINDINGS
The following findings have emerged through the course of the Lougheed Corridor Study:

- **B-Line investment represents an opportunity to significantly increase the supply of transit-oriented affordable and non-market housing units in this region.** The Urban Systems market potential assessment shows that the market potential for non-market housing is likely to increase as a result of the B-Line investment and at a greater rate than market-rate housing. Locating affordable, non-market and rental housing to the Lougheed Corridor will support ridership on the B-Line since renters and lower-income residents take transit at higher rates than homeowners and people with higher incomes. Stronger ridership numbers on the corridor could support the municipalities' long-term ambitions for higher-order transit options.

- **Office development in the corridor is likely to be local-serving only.** Urban Systems found that there is unlikely to be any market potential for stand-alone office in the Lougheed Corridor as a result of the B-Line, other than in the Coquitlam Regional City Centre area. The market potential for local-serving office was presented as part of the commercial analysis portion of the Market Potential Assessment.

- **Not all locations within 400m of the Frequent Transit Network are appropriate for transit-oriented growth.** Development of the custom corridor study area geography with the SWG demonstrated that not all areas within 400m of the Frequent Transit Network (FTN) are appropriate for transit-oriented growth and higher densities. Many of the lands within a five-minute walk of the Lougheed section of the FTN are designated for agricultural or industrial uses or, are for other reasons, not likely to change or otherwise inappropriate areas for growth. This reflects a recognition that growth will not be uniform across a corridor and regional policy tools need to consider and reflect this. Developing this custom corridor geography could support regional planning and monitoring in the next iteration of the regional growth strategy because the projections and subsequent targets can be set based on a more nuanced understanding of the land uses and local ambitions for the corridor, improving the likelihood that the region will meet its regional corridor growth targets.

- **Redirecting municipal growth to the corridor could increase transit ridership for all potential service types.** An analysis of the Metro Vancouver and Translink Alternative Growth

Scenario demonstrates that one potential approach for increasing transit ridership in the long-term could be to reduce growth opportunities outside a corridor and re-allocate them to appropriate areas along it. Transit ridership growth may support a municipality's ambitions for scaling up transit service levels in the long term. This is consistent with the approach taken by *Metro 2040's* regional growth targets for areas along the Frequent Transit Network.

- **B-Line investment alone is unlikely to cause speculative pressure on adjacent ALR lands.** Urban Systems through their Market Potential Assessment work concluded that the B-Line alone was unlikely to stimulate speculation on Agricultural Land Reserve lands and that land owners are generally more attuned to changes to agricultural land use policy than transit investment.

- **Introduction of a B-Line service in combination with parking standard reductions may help make multi-family development financially viable in areas in the corridor with water table concerns.** Communities located in areas with high water table concerns have noted a difficulty in attracting multi-family development interest because the cost associated with building underground parking. This may be potentially addressed by reducing parking requirements in multi-family buildings within walking distance of a B-Line stop, especially if they are rental or non-market buildings. The Regional Parking Study has demonstrated that parking utilization is lower in apartment buildings along the FTN, especially for rental buildings. Reducing parking requirements for areas within 400m of B-Line stops, especially for rental buildings may support the creation of higher-density nodes close to transit by reducing developer construction costs. This strategy is especially effective when a range of other transportation options are made available, such as reserving spaces for carshare vehicles and secure bicycle parking.

- **B-Line creates a number of opportunities to work towards other local and regional objectives.** The implementation of the Lougheed B-Line transit service has the potential to do more than simply enhance the customer experience for existing transit riders. If communities leverage the B-Line investment and integrate it into other local strategies it has the potential to:
    - Support an increase to the supply of transit-oriented affordable housing;
    - Help increased transit mode share and reduce Greenhouse Gas Emissions;
    - Help increase economic opportunity for all municipalities along the corridor;
    - Support employee recruitment and retention for local employers;
    - Help achieve the regional growth targets for frequent transit corridors.

KEY LEARNINGS FROM REGIONAL PLANNING'S CORRIDOR WORK

The Lougheed Corridor Land Use and Monitoring Study is the second Frequent Transit Corridor Study conducted by Metro Vancouver. Regional Planning staff continue to look for opportunities to improve the approach. Some of the learnings from this study include:

- **The Market Potential Assessment provides a useful analysis.** This assessment helped to project the level of potential development impact that the new service could stimulate, helping participants to understand the likely range of new development resulting from the

transit investment. This supports ongoing planning work that may lead to the identification of new FTDAs or other transit-supportive initiatives throughout the region.

- **The Alternative Growth Scenario process needs to be refined.** This was the first time local partners had an opportunity to suggest alternative growth patterns as an input into the Multiple Accounts Evaluation analysis undertaken by TransLink. Determining what an appropriate alternative growth scenario might be proved to be challenging. It is recommended that future analyses be developed by Regional Planning staff in accordance with established regional growth targets or other established policy.

- **Future studies should go further than analysis by drafting a shared vision for the corridor.** This may encourage a higher degree of engagement among the project participants and clarify the goals and outcomes of a study. Drafting a collective vision for a corridor has been shown to be an effective component of multi-stakeholder corridor studies in other regions in North America.

- **There is a need for additional education on the benefit of B-Line/Bus Rapid Transit to community development.** Generally, the benefits of B-Line and Bus Rapid Transit for enhancing the transit network and achieving community goals and regional targets are not well-understood. Educating all decision-makers on the benefits of B-Line and opportunities to take advantage of those benefits will support the creation of more transit-supportive communities (Reference 4).

IMPLICATIONS FOR *METRO 2040* URBAN CENTRE AND FTDA POLICY REVIEW

Frequent Transit Corridor Studies are pilot projects within the overarching *Metro 2040* Urban Centre and FTDA Policy Review, scoped to help test the further integration of corridors into regional planning and monitoring. The following implications for the Policy Review have emerged from the Lougheed Land Use and Monitoring Study:

- **Defining Urban Centre types should consider floodplain risk.** Concerns about floodplain and high water table constraints to higher-density multi-family development in Urban Centres and corridors raised questions about the identification of regional growth centres in hazard-prone areas, especially given growing climate change risk. In the update to the regional growth strategy, consideration should be given to flood risk when identifying and designating regional growth centres.

- **Urban Centres should be differentiated into 'Urban Centres where growth is directed' and 'Urban Centres not anticipated to grow significantly'**. This could provide helpful clarity around the expectations for different Urban Centre types in the regional growth strategy. It would also help to differentiate the policy intent by Urban Centre type; for example, the policy of directing office development to Urban Centres is not nuanced enough to address different growth expectations or market realities.

- **Policies to encourage inter-municipal corridor coordination.** The update to the regional growth strategy should include a consideration of policies requiring municipalities with

sections of important corridors on the FTN to include policies to coordinate corridor planning efforts with neighbouring municipalities and First Nation communities through their respective Regional Context Statements. This will help to further integrate corridors into regional planning in a more consistent and constructive way.

- **Further differentiate Urban Centres from corridors.** Some municipalities are concerned that corridors may compete with Urban Centres for growth and this has led to a reluctance to identify FTDAs. Policies to address this concern should be considered in the update to the regional growth strategy. That may include further differentiating identification criteria and expectations for different centre and corridor types.

ALTERNATIVES
This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS
There are no financial implications arising from this report. The study was funded from the 2018 Board-approved Regional Planning budget, which allocated $20,000 for corridor studies.

SUMMARY / CONCLUSION
Metro Vancouver led the Lougheed Corridor Land Use and Monitoring Study in partnership with TransLink, the Cities of Coquitlam, Port Coquitlam, Pitt Meadows, Maple Ridge, as well as invited representation from the Katzie, Kwantlen and Kwikwetlem First Nations, the ALC, and MOTI.

The purpose of the Study was to further thinking about transit-supportive land use options along the pending Lougheed B-Line route and to explore the better integration of growth corridors into regional planning and monitoring. The activities of the Study included: Study Area Development and Site Assessment; Monitoring Program Development; a Market Potential Assessment; an Alternative Growth Scenario Process; and discussions of Transit-Supportive Corridor Opportunities.

The Study resulted in a number of findings including the recognition that the introduction of the B-Line on the Lougheed Corridor would drive an increase in both commercial and residential real estate market potential, especially for affordable and non-market residential. The Study's results hold important implications for the *Metro 2040* Urban Centre and FTDA Policy Review including the need to recognize natural hazard risk in identifying and designating growth-oriented Urban Centres, the need for policies to encourage cross-municipal boundary coordination in regional context statements, and the need to further differentiate between Urban Centre types and corridors in the upcoming update to the regional growth strategy.

Attachments *(orbit doc # 28642734):*
1. Lougheed Corridor Monitoring Program Plan
2. Lougheed Corridor Profile

References
1. Lougheed Land Use and Monitoring Study – Project Initiation, Regional Planning Committee Staff Report, October 5, 2018

2. Transit-Oriented Communities: A Primer on Key Concepts, TransLink, 2010
3. Transit-Oriented Communities Design Guidelines, Translink, 2012
4. More Development for Your Transit Dollar: An Analysis of 21 North American Transit Corridors, Institute for Transportation & Development Policy, 2013
5. The Regional Parking Study Draft Technical Report, Metro Vancouver, 2019 (refer to Attachment of Agenda Item 5.5 *The Regional Parking Study – Key Findings*, dated February 15, 2019)

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Metro Vancouver Corridor Monitoring Program Plan:
Lougheed Corridor

Introduction

This monitoring program plan describes how the members of the Lougheed Corridor Land Use and Monitoring Study Staff Working Group will collaborate to monitor the Lougheed Corridor study area in order to observe changes following the implementation of the Lougheed B-Line bus service. This monitoring program will support the further integration of land use and transportation planning in the region by studying how improvements to transit service influence a variety of community and transportation planning outcomes. This monitoring program will help the region to better understand the role that B-Line frequent bus service can play in shaping travel behaviour and development as well as to better understand the role that corridors could play as regional growth structuring tools. The program will benefit the project partners by providing data to support the self-evaluation of local policies that are geared towards creating compact, complete, and transit-supportive communities.

This monitoring program was developed as a component of the Lougheed Corridor Land Use and Monitoring Study. The study's Staff Working Group (SWG) developed the monitoring program collaboratively to support the study as well as local and regional objectives. The Staff Working Group membership was made up of municipal staff from the Cities of Coquitlam, Port Coquitlam, Pitt Meadows, Maple Ridge, TransLink, Metro Vancouver, as well as invited representation from the Katzie First Nation, Kwantlen First Nation, Kwikwetlem First Nation, the Agricultural Land Commission (ALC), and Ministry of Transportation and Infrastructure (MOTI).

Goals and Objectives

Goals

There are three broad goals of the monitoring program

1. **Learn about the influence of B-Line on community development patterns and travel behaviour**
2. **Learn about Growth Corridors**
3. **Inform Policy and Track Progress**

Objectives

Beneath these goals are a number of objectives

1. **Learn about the relationship between B-Line and community development patterns and travel behaviour**
    a. Learn how the introduction of B-Line service in conjunction with associated transit priority measures, influences:
        i. growth and development interest along a corridor,
        ii. goods movement, ridership on other routes, travel times, and congestion,
        iii. transit mode share,
        iv. access to employment opportunities.

2. **Learn about Growth Corridors**

a. Test corridors as a regional tool for focusing regional growth.
b. Pilot approaches for multi-stakeholder corridor-based growth management planning.
c. Understand how planning for growth corridors (as opposed to nodal centres) affects neighbourhood development and identity.

3. **Inform Policy and Track Progress**
    a. Provide data to help partner jurisdictions self-evaluate local policies that are geared towards creating complete, transit-supportive communities.
    b. Collectively monitor progress towards the shared regional vision in *Metro 2040*.

Monitoring Study Area

The Monitoring Study Area (Figure 1) has been identified in partnership with the four affected municipalities and other members of the SWG to reflect the area that may influence or be influenced by the implementation of new frequent transit service in September 2019. It is in this study area that the partners wish to monitor change to better understand the relationship between the B-Line bus service, transportation behaviour, and community development.

The study area includes portions of four *Metro 2040* Urban Centres (areas that are already identified as growth areas in the regional growth strategy and Official Community Plans): Maple Ridge Regional City Centre, Pitt Meadows Municipal Town Centre, Port Coquitlam Municipal Town Centre, and Coquitlam Regional City Centre. The study area includes areas along the corridor in-between the Urban Centres.

In general, the study area consists of a 400 to 800 metre network buffer (5-10 minute walk) around the corridor roadway. In some cases the study area extends beyond 800 metres from the roadway to include destinations that are likely to generate B-Line ridership. Some areas within walking distance from the corridor roadway were excluded from the study area because they either a) have Agricultural or Industrial Land Use Designations in *Metro 2040*, b) are neighbourhoods that are highly unlikely to change following the new B-Line services, or c) have topographical or connectivity issues that would create a barrier to bus stop accessibility. In some instances the corridor is limited to the roadway only because the adjoining lands have been determined to be unsuitable or inappropriate for transit-oriented growth and are unlikely to have a strong land use-transportation relationship.

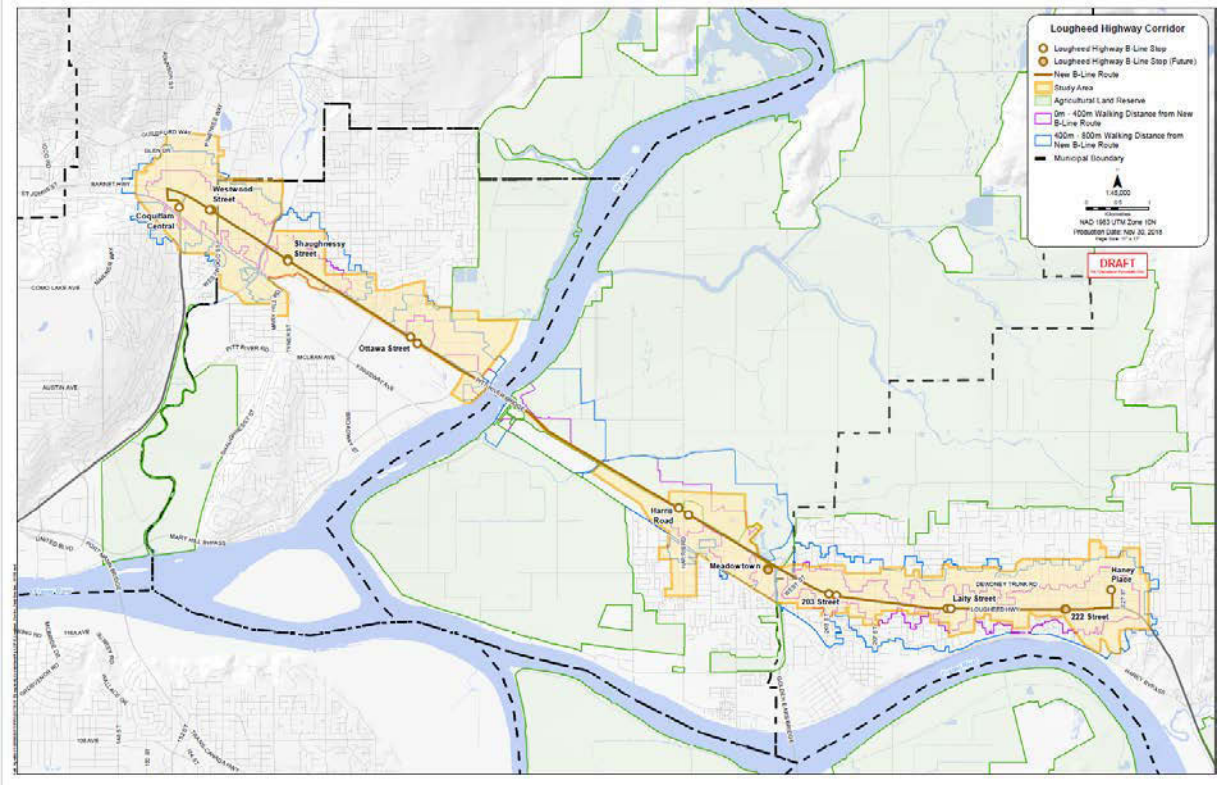


Figure 1: Lougheed Corridor Monitoring Study Area

Corridor Study Area and Neighbourhood Planning

The study area runs through four *Metro 2040* Urban Centres – Maple Ridge Regional City Centre, Pitt Meadows Municipal Town Centre, Port Coquitlam Municipal Town Centre, and Coquitlam Regional City Centre as well as other local planning areas. However, several areas within the study area have not gone through a neighbourhood planning process, meaning the community may not yet have had the opportunity to hold and engagement process and plan for growth in these areas. For this reason, the monitoring study area should not be considered a growth overlay area. However, the partners acknowledge that the new B-Line frequent transit service will likely have an impact on land use, growth, and other community development trends so it is important to begin monitoring efforts now. The study area reflects an estimation of where change to community development patterns and transportation behaviour is anticipated.

Corridor Performance Indicators

Change in the corridor study area will be monitored using the following performance indicators:

- Land Use Change
- Sub-Regional Growth Shares
- Population Distribution by Age Group
- Household Make-up
- Housing Tenure Mix
- Housing Type Mix
- Population Growth
- Dwelling Unit Growth by Tenure
- Dwelling Unit Density
- Presence of Transit-Supportive Housing Policies
- Change in Property Values
- Change in Lease Rates
- Transit service frequency
- Transit service trip time
- Transit service span
- Capacity utilized
- Daily Ridership
- Peak Ridership

- On-Time Performance
- Bus Bunching
- Service Cost per APC Boarding
- Resident Mode Share
- Annual Vehicle Kilometres Travelled per capita
- Traffic Volumes
- Truck Volumes
- Vehicle Occupancy Rates
- Cycling Connectivity
- Pedestrian Connectivity
- Intersection Density
- Employment Growth
- Business Licenses within the Corridor
- Employment Types
- Park Space
- Public Art Installments
- Number of street trees
- Street furniture items

Table 1 attached lists the performance indicators that will make up the Monitoring Pram as well as relevant details including the units and calculation method, the data source or owner, and collection frequency. As the monitoring program evolves, Metro Vancouver may recommend not collecting data on specific performance indicators if the data is unavailable or unreliable for those indicators.

Data Sources

The majority of the data will be collected by Metro Vancouver via a custom Census request. Some measures will be collected and forwarded to Metro Vancouver staff by partners (see Table 1). Metro Vancouver will be responsible for gathering data from project partners. Project partners will be responsible for collecting and submitting the data indicated to Metro Vancouver at the frequencies indicated.

Reporting

The primary purpose of the Lougheed Corridor Monitoring Program is to provide technical data to project partners to support planning work. A secondary purpose is to keep relevant committees appraised of how land use and transportation indicators are changing over time. Reports will be made available to SWG members for review prior to being reported through the Regional Planning Advisory Committee and Regional Planning Committee.

Baseline Report

A baseline report will be developed using 2016 Census data and released to SWG members by as soon as census data is made available to Metro Vancouver staff.

Annual Updates

Annual Corridor Monitoring Updates containing a limited number of performance measures will be prepared by Metro Vancouver and submitted to the SWG for review and discussion on an annual basis. SWG members will identify any revisions, action items, or questions arising from the report. Metro Vancouver will be responsible for revising the Annual Corridor Monitoring Update to reflect SWG input.

5 Year Corridor Monitoring Reports

5 Year Corridor Monitoring Reports containing all performance measures will be prepared by Metro Vancouver and submitted to the SWG for review and discussion. Delivery of the 5 Year Corridor Monitoring Reports will be subject to Statistics Canada Census data availability. Metro Vancouver will incorporate any SWG revisions to the 5 Year Corridor Monitoring Report prior to submitting it to Regional Planning Advisory Committee (RPAC) and Regional Transportation Advisory Committee (RTAC) for information. The 5 Year Corridor Monitoring Report will then be revised to incorporate RPAC and

RTAC input prior to submission to the Regional Planning Committee and Metro Vancouver Board of Directors. Municipalities may also wish to present the 5 Year Corridor Monitoring Reports to their respective Councils.

Urban Centre and FTDA Policy Review

This monitoring program is of interest to Metro Vancouver's ongoing *Metro 2040* Urban Centres and Frequent Transit Development Area Policy Review. Should the monitoring program yield significant findings or conclusions with implications for the Urban Centres and FTDA Policy Review, these will be presented to the SWG for feedback prior to being incorporated into the Policy Review.

Monitoring Team

Metro Vancouver staff will conduct the monitoring and reporting work in consultation and with the support of the project partners. Roles and responsibilities of the team are described in Table 2.

Table 2: Roles and Responsibilities of the Monitoring Team Members

Organization	Responsibilities
Policy and Planning Analyst, Metro Vancouver	Custom census request preparation. Compilation and analysis of data. Data visualization.
Senior Policy and Planning Analyst, Metro Vancouver	Compilation and analysis of data. Data visualization.
Senior Regional Planner, Metro Vancouver	Coordination of data transfer. Managing partner relations. Report preparation.
Division Manager, Growth Management and Transportation	Review project and project sponsorship.
Municipal SWG Members	Gathering and transferring municipal performance data to Metro Vancouver. Review and provide feedback on Corridor Performance Reports.
Senior Planner, TransLink	Transferring TransLink performance data to Metro Vancouver. Review and provide feedback on Corridor Performance Reports.
Senior Planner, TransLink	Review and provide feedback on Corridor Performance Reports.

Monitoring Budget

Metro Vancouver will be responsible for the costs of the custom Census data and the costs of acquiring any other special data. Project partners will contribute staff time in gathering and providing the above-mentioned data to Metro Vancouver.

Program Conclusion

The monitoring and reporting will continue for a period of twenty years following the opening of the Lougheed B-Line Service (September 2019) or until the partners agree to conclude the program. The study area boundaries or measures may be modified with the agreement of the project partners.

Lougheed Corridor Monitoring Program – Performance Indicators Master List

Indicators	**Unit and calculation** *How will we measure this?*	**Data Source and Owner**	***Metro 2040* Performance Program?**	**Collection Frequency**	**Available at corridor level**	***Metro 2040* Policy**
Land Use Measures						
Land Use Change • Designation Change – RGS • Development Capacity Change - OCP	• Hectares of land under each *Metro 2040* designation within the corridor. • Hectares of land by OCP land use designation.	Metro Vancouver land use designation map and municipal OCP land use maps (and neighborhood plans where available).	yes	Annually	yes	Land Use Designations and Overlays 1.2
Sub-regional Growth Shares • Jobs • Dwelling Units	Ratio of jobs and dwelling units in sub-regional General Urban (ha) and corridor geography	Census	yes	5 year	Yes	1.2
Housing Measures						
Population Distribution by Age Group	Proportion of each age group as a percentage of total corridor population	Census	Yes	5 years	Yes	4.1.7.a
Household Make-up	Proportion of non-families, families with kids, and families without kids as a proportion of all households	Census	Yes	5 years	yes	4.1.7.a
Housing Tenure Mix	Percentage of renters and owners living within the corridor	Census	Yes	5 years	yes	4.1.7.a
Housing Type Mix	Percentage of housing units by structural type (house, xplex, low rise, mid-rise, high rise)	Municipality Building Permit Data	Yes	5 years	TBC	4.1
Population growth	New residents as a percent of baseline	Census	Yes	5 years	Yes	1.2.6.b.ii
Dwelling unit growth by tenure	New units as a percent of baseline, broken down by: • Ownership • Rental by income groups (use income groups from *Metro 2040* Housing Demand Estimates Table A.2)	Census (custom cross tabs required)	Yes	5 years	Yes	4.1.7.a.ii
Dwelling Unit Density	Average number of dwelling units per hectare of land with a General Urban designation within the corridor.	Census	yes	5 years	yes	1.2

Indicators	**Unit and calculation** *How will we measure this?*	**Data Source and Owner**	***Metro 2040* Performance Program?**	**Collection Frequency**	**Available at corridor level**	***Metro 2040* Policy**
Transit-Supportive Housing Policies • Family-friendly housing policy • Affordable rental housing policy • TDM Policies • Parking maximum/parking reduction incentive policy • Rental zoning area within corridor study area	Yes/No measure Displayed as number of jurisdictions with these policies out of 4 jurisdictions	Municipalities	no	Annually	n/a	4.1.1, 4.1.7, 4.1.8 RAHS 1.n
Change in Property Values	Price per square meter for: • Residential • Retail • Office	BC Assessment	No	5 years	unknown	4.1
Change in Lease Rates	Lease rates per square meter for: • Residential • Retail • Office	MLS Home Price Index (residential - owner) CMHC (residential - rental) Retail/Office – commercial brokerages Spacelist.ca	No	unknown	unknown	4.2
Transportation Measures- Transit						
Transit service frequency	Buses/hour	TransLink	No	Available quarterly	Yes, with manual calculation	5.1.3
Transit service trip time	Average trip time end to end	TransLink	No	Annual	Yes	5.1.3
Transit service span	Span of service	TransLink	No	Available quarterly	Yes	5.1.3
Capacity utilized	Average daily bus capacity used	TransLink	No	Annual	Yes	5.2
Daily ridership	Average of total boardings/day	TransLink	No	Annual	Yes	5.2
Indicators	**Unit and calculation** *How will we measure this?*	**Data Source and Owner**	***Metro 2040* Performance Program?**	**Collection Frequency**	**Available at corridor level**	***Metro 2040* Policy**

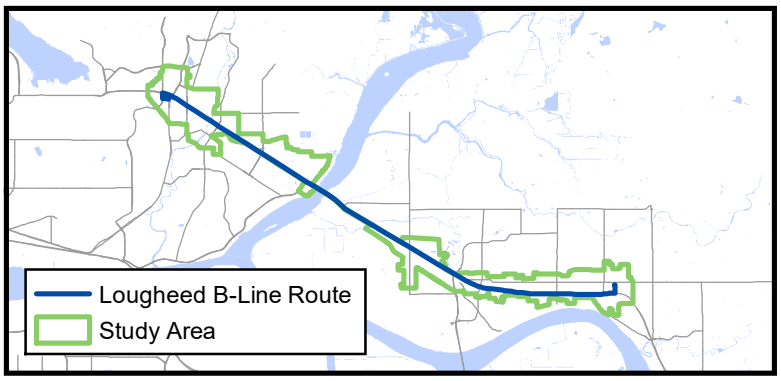
Peak ridership	Average of total boardings during am peak	TransLink	No	Annual	Yes	5.2
On time performance	Number of on-time departures at timing points as a percentage of total departures.	TransLink	no	Annual	Yes	5.2
Bus bunching	The percentage of bus arrivals at timing points within 25 percent of the scheduled headway of another bus arrival.	TransLink	no	Annual	Yes	5.2
Service Cost per APC Boarding	Cost in dollars for each boarding	TransLink	no	Annual	Yes	5.2
Transportation Measures – Single Occupancy Vehicles						
Resident Mode Share	Percent of trips originating in the corridor by mode	Census	yes	5 year	Yes	5.1
Annual Vehicle Kilometres Travelled per capita • Corridor residents • Corridor workers	Annual per capita vehicle kilometres travelled for corridor residents and workers.	Census	Yes	5 year	Yes	5.1
Traffic Volumes	Daily Average Vehicle Volumes at Pitt River Screenline	TransLink Regional Screenline Survey & MOTI Traffic Data Program	no	~every 3 years	No	5.2
Truck Volumes	Total Truck Volumes at Pitt River Screenline 6:00-22:00	TransLink Regional Screenline Survey	no	~every 3 years	No	5.2
Vehicle Occupancy Rates	Average Daily Auto Occupancy 06:00-22:00	TransLink Regional Screenline Survey	no	~every 3 years	No	5.2
Transportation Measures - Active						
Cycling connectivity	Kilometres of bike facility by: • Off-Street Bicycle Route (physical barrier) • On-Street Bicycle Route (no barrier bike lanes, sharrows, etc.)	Municipalities	no	5 year	yes	5.1.6 1.2.6. f.ii
Pedestrian connectivity	Kilometres of sidewalk	Municipalities/MV Orthophoto	no	5 year	yes	5.1.6 1.2.6. f.ii
Intersection Density	Number of intersections per hectare	Metro Vancouver/BC Road Network/MV Orthophoto	no	5 year	yes	5.1.6 1.2.6. f.ii

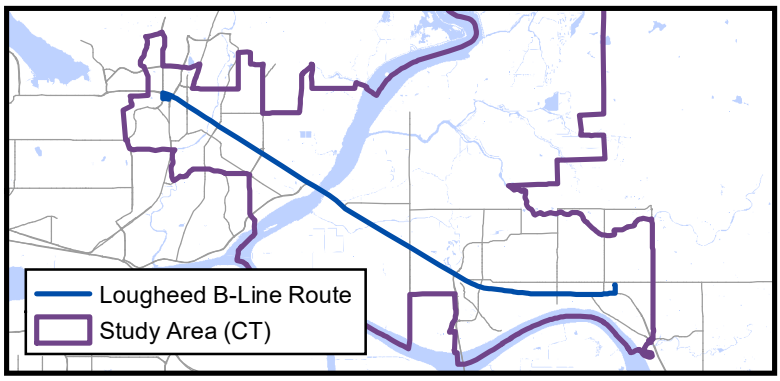
Indicators	**Unit and calculation** *How will we measure this?*	**Data Source and Owner**	***Metro 2040* Performance Program?**	**Collection Frequency**	**Available at corridor level**	***Metro 2040* Policy**
Employment Measures						
Employment growth	Percent of sub-regional employment growth located in corridor	Census	yes	5 year	yes	1.2.1
Business Licenses within the corridor	Number of business licenses within the corridor	Municipalities	No	Annually	Yes	2.1
Employment Types	Total number and growth of employment by sector within the corridor	Census	yes	5 year	Yes	2.1
Urban Design Measures						
Park space	Square metres of park or space within the corridor.	Municipalities	no	Annually	yes	4.2
Public Art Installments	Number of public art pieces within the corridor	Municipalities	no	Annually	yes	4.2
Number of street trees	Number of street trees within the corridor	Municipalities	no	Annually	yes	4.2
Street Furniture	Number of individual street furniture items in public road right of way (needs to be specified)	Municipalities	no	Annually	yes	4.2

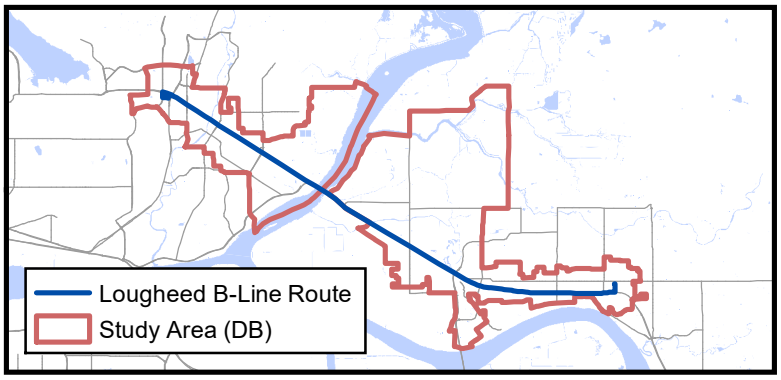
*All Indicators include lands within the Urban Containment Boundary with General Urban or Mixed Employment Land Use designations only

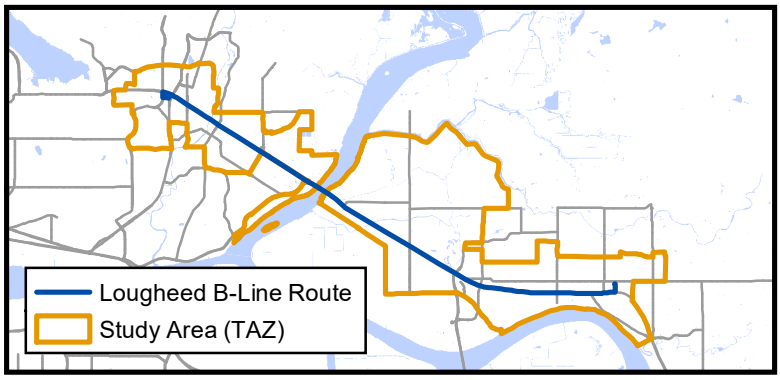
**All housing Indicators exclude heritage residential

Lougheed Corridor - Census 2016 Profile **ATTACHMENT 2**









Corridor Data Summary per Study Area (TAZ)

Population 2016	98,200
Employment 2016	53,000
Land area in hectares*	2800
Population density per hectare*	35.07
Employment density per hectare*	18.93
Route 701 Daily Weekday Boardings per km in 2017	275

* Not including ALR and industrial lands

Socio-economic characteristics per Study Area (DB)

Corridor households that rent	34%
Median household income	$73,214
Average household income	$82,530

Residential Development Profile per Study Area (DB)

Apartment buildings	59%
Single-detached buildings	26%
Other residential buildings	15%

Sustainable Mode Share

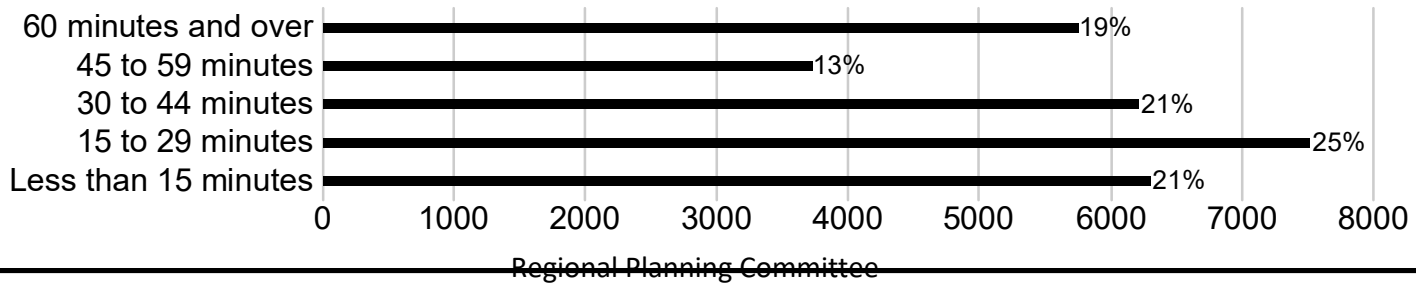
Journey-to-Work for Residents per Study Area (DB)

21% total | 14% transit | 6% walk | 1% bike

Journey-to-Work for Workers per Study Area (CT)

17% total | 13% transit | 5% walk | 1% bike

Commuting duration for the employed labour force per Study Area (DB)



To: Regional Planning Committee

From: Raymond Kan, Senior Planner, Regional Planning

Date: February 15, 2019 Meeting Date: March 8, 2019

Subject: **The 2018 Regional Parking Study – Key Findings**

RECOMMENDATION

That the MVRD Board:

a) receive for information the report dated February 15, 2019, titled "The 2018 Regional Parking Study – Key Findings"; and
b) write letters to share the key findings of the 2018 Regional Parking Study and Technical Report to the Mayors' Council on Regional Transportation, the TransLink Board of Directors, and the Councils of member jurisdictions.

PURPOSE

To communicate the 2018 Regional Parking Study key findings and seek MVRD Board approval to distribute the key findings of the 2018 Regional Parking Study and Technical Report to TransLink and Metro Vancouver's member jurisdictions.

BACKGROUND

The 2018 Regional Parking Study (the Study) was co-led by TransLink and Metro Vancouver to expand the knowledge base of multi-residential (apartment) parking supply and demand in different areas of the region. Preliminary observations from the three phases of data collection were presented to the Regional Planning Committee over three meetings in 2018, and to staff advisory committees. The key findings of the Study have now been finalized and are ready for distribution.

THE REGIONAL PARKING STUDY

The 2018 Regional Parking Study is an update to the 2012 Apartment Parking Study, which was the first regional study of apartment parking supply and demand in Metro Vancouver and, at the time, the largest study ever undertaken in Canada and the United States. In general, these studies provide timely information and data to municipal planning and engineering staff as a consideration during parking bylaw updates, as well as rezoning and development permit reviews. Depending on the type of development, improving the match between supply and demand can also support housing affordability objectives.

Residential parking is a cross-cutting policy issue in *Metro Vancouver 2040: Shaping Our Future* (*Metro 2040*), the regional growth strategy, and TransLink's *Regional Transportation Strategy*. *Metro 2040* encourages municipalities to establish or maintain reduced residential and commercial parking provision in Urban Centres and Frequent Transit Development Areas, while the *Regional Transportation Strategy* recognizes parking management as a form of transportation demand management.

Components of the 2018 Regional Parking Study

The Study collected data on 73 apartment sites across the region during the Fall/Winter 2017, and comprises three components: a Parking Facility Survey, Street Parking Survey, and Household Survey.

Parking Facility Survey

The purpose of the Parking Facility Survey was to capture parking utilization at peak times in a selection of apartment sites throughout the region. Access to 73 apartment sites was granted by the respective strata councils and/or property management companies. Surveyors entered parking facilities to complete the counts generally after 11:00pm on weeknights (i.e. Monday – Thursday) to ensure that the highest parking utilization was being captured. The surveyors also collected information on: the number of residential and visitor parking stalls; the number of parked vehicles; the presence of secured bicycle parking; and the presence of dedicated plug-in electric vehicle chargers.

Street Parking Survey

The 2012 study recognized that a more holistic and systems-based approach toward on-site and street parking is warranted. It was also noted that a limitation of the initial study was the lack of quantitative information on street parking utilization. The purpose of the Street Parking Survey as part of this latest iteration of the Study was to capture parking utilization on the streets within walking distance (~200 metres) of the surveyed apartment sites. Surveys were undertaken on weekdays (i.e. Monday – Thursday) between 6:30pm-8:30pm and 10:00pm-12:00am, and on Saturdays between 6:30pm-8:30pm.

Household Survey

The purpose of the voluntary Household Survey was to obtain additional contextual information about the residents who live in the participating apartment buildings, such as: vehicle ownership; whether they own or rent their dwelling unit and parking stall(s); visitor parking patterns; bicycle parking conditions; interest in purchasing plug-in electric vehicles; willingness to forgo a parking stall; and basic demographic information. Approximately 1,500 completed surveys, both online and hard copy, were returned out of 11,000 households in the survey area.

Project Advisory Group

In addition to consulting with the Regional Planning Advisory Committee and the Regional Transportation Advisory Committee on the Study's scope in 2017, Regional Planning established a Project Advisory Group as a means for local jurisdiction representatives to shape the scope and to review the data analysis. The Project Advisory Group comprised a self-selected group of planners and engineers representing nine local jurisdictions with an interest or expertise is parking issues. The multidisciplinary composition of the Project Advisory Group was in keeping with parking being a cross-cutting issue affecting many aspects of community planning and engineering in the region. The Project Advisory Group has shown interest in TransLink and Metro Vancouver staff to continue to convene the group on a regular basis to address and share knowledge around parking policies and management going forward.

Engagement

A key lesson learned from the 2012 study was the need to engage regularly with staff from member jurisdictions and the Regional Planning Committee. The feedback received has been useful in helping to shape the scope, conduct of the analysis, and the interpretation of the findings of the Study.

Regional Planning staff presented preliminary observations of the component parts of the Study to the following committees in 2018:

- Preliminary Observations of Parking Facility Survey:
  - Regional Planning Advisory Committee – May 11, 2018
  - Regional Planning Committee – June 8, 2018
  - City of Burnaby planning staff – June 21, 2018
  - Regional Transportation Advisory Committee – June 27, 2018
  - Housing Committee – July 13, 2018 (information item; no presentation)

- Preliminary Observations of Street Parking Survey:
  - Regional Planning Advisory Committee – July 13, 2018
  - Regional Transportation Advisory Committee – July 26, 2018
  - Regional Planning Committee – September 7, 2018

- Preliminary Observations of Household Survey
  - Regional Planning Advisory Committee – October 19, 2018
  - Regional Transportation Advisory Committee – November 29, 2018
  - Regional Planning Committee – October 5, 2018

Key Findings

The key findings of the 2018 Regional Parking Study are consistent with those in the 2012 study, with some new insights about street parking. Member jurisdictions and the housing development community will be encouraged to review and engage in a dialogue about the key findings and technical report (Attachment) to supplement local data and contexts as appropriate. It is anticipated that the findings and data will: inform the review of apartment rezoning and development applications; municipal parking bylaw reviews; considering the impacts and needs of rental housing projects; the preparation of area and neighbourhood plans; and street parking management efforts.

The key findings are:

1. **For both rental and strata buildings, apartment parking supply exceeds use across the region**.

Supporting information (based on the Parking Facility Survey and Household Survey):

- For strata apartment buildings, parking supply exceeds utilization by 42 percent;
- For market rental apartment buildings, parking supply exceeds utilization by 35 percent;
- For mixed tenure and mixed rental apartment buildings, parking supply exceeds utilization by 41 percent;
- Parking supply exceeds utilization in strata and rental apartment buildings across the region;

- Parking supply appears to be declining for newer strata and market rental apartment buildings;
- Small strata or market rental units (0 or 1 bedroom units, or unit less than 800 sq.ft.) tend to have at most 1 parked vehicle per unit;
- The smallest market rental units (0-bedroom units or units less than 600 sq.ft.) have the largest oversupply of parking.

2. **Apartment parking supply and use is lower for buildings closer to frequent transit**.

Supporting information (based on the Parking Facility Survey and Household Survey):

- For strata apartment buildings, parking utilization near frequent transit (bus or SkyTrain) ranges 0.86 – 0.97 vehicles per unit, compared to 1.09 for buildings further away;
- For market rental sites, parking utilization near transit (bus or SkyTrain) ranges 0.35 – 0.72 vehicles per unit, compared to 0.99 for sites further away from the FTN;
- Parking supply is lower in buildings close to frequent transit;
- Small strata or rental units (0 or 1 bedroom units) tend to be most responsive to proximity to frequent transit, followed by 2 bedroom units.

3. **Transit use is generally higher where apartment parking use is lower, especially for rental buildings**.

Supporting information (based on the Parking Facility Survey and transit data):

- Transit boardings (bus boardings within 400 metres of the apartments; SkyTrain/SeaBus boardings within 800 metres of the apartments) are higher when apartment residential parking utilization is lower;
- The relationship is stronger for rental apartment sites, than for strata sites.

4. Street parking is complex in mixed-use neighbourhoods. Some of the factors contributing to street parking use include: visitors to non-residential land uses in the evenings; apartment visitors on weekends, holidays, and special occasions; and some apartment residents parking on a nearby street.

Supporting information (based on the Street Parking Survey):

- Generally, street parking utilization is higher in the evenings (weekday or Saturday) than on a weekday late night;
- Out of 65 surveyed street networks, 7 networks experienced high street parking utilization in at least two of the three surveyed time periods. The exceedances typically occur in the evenings. Nearby non-residential trip generators, such as parks, restaurants, and other commercial uses appear to be one factor;
- Apartment visitors typically encounter greater difficulty finding a parking space in the apartment parking facility or nearby street on weekends, holidays, and special occasions;
- Where households reported parking on a nearby street, they typically park within a five-minute walk of their apartment building;

- For rental sites where residential parking is not included in the rent, both apartment residential parking supply and utilization are lower compared to sites where parking is included in the rent. For the former, nearby street parking utilization is also higher, but does not exceed the 85 percent threshold.

5. **The design and capacity of bicycle parking facilities in apartment buildings appear to discourage use by many residents**.

Supporting information (based on the Household Survey):

- About one-third of bicycle-owning households do not use their building's secured bicycle parking facility. The rate of usage is consistent across different building ages. The most frequently cited concerns were risk of damage to or loss of the bicycles, crowded facilities, and adverse perceptions of safety and convenience.

The technical report (Attachment) also contains a 'Looking Ahead' section, which outlines some of the issues, challenges, and opportunities associated with parking regulation and management that haven't been explored as part of the Study. These future considerations include: the implications of ride-hailing on curb management and parking requirements; the opportunities and challenges of shared parking facilities; trends in increasing personal and commercial vehicle sizes; and accessibility needs with an aging population. These issues and others may be explored during the forthcoming updates to the *Regional Transportation Strategy* and *Metro 2040*.

TransLink and Regional Planning will continue to work with the Project Advisory Committee to develop a summary booklet for the Regional Parking Study.

ALTERNATIVES

1. That the MVRD Board:
   a) receive for information the report dated February 15, 2019, titled "The 2018 Regional Parking Study – Key Findings"; and
   b) write letters to share the key findings of the 2018 Regional Parking Study and Technical Report to the Mayors' Council on Regional Transportation, the TransLink Board of Directors, and the Councils of member jurisdictions.

2. That the MVRD Board receive for the information the report dated February 15, 2019, titled "The Regional Parking Study – Key Findings" and provide alternative direction to staff.

FINANCIAL IMPLICATIONS

There are no financial implications associated with either alternative. In 2017, a memorandum of understanding was signed between TransLink and Metro Vancouver setting the project scope, roles, and responsibilities. TransLink is the majority funder of the Regional Parking Study at approximately $100,000 and is responsible for managing the consultant contract. Metro Vancouver contributed $20,000 out of the 2017 MVRD Board-approved Regional Planning budget. All the data analysis and report writing were completed by project staff with guidance provided by the Project Advisory Group.

REGIONAL GROWTH MANAGEMENT IMPLICATIONS

Parking is both a land use and transportation issue. Regional Planning will continue to look for opportunities to undertake research for the benefit of member jurisdictions, including incorporating the study findings in regional planning efforts, such as the Lougheed Corridor Land Use and Monitoring Study and the *Metro 2040* policy reviews. As requested by the Project Advisory Group, TransLink and Regional Planning staff will continue to convene the group on a regular basis to address and share knowledge around parking policies and management going forward.

SUMMARY / CONCLUSION

The 2018 Regional Parking Study is a major planning research initiative that was co-led by TransLink and Metro Vancouver. The Study's findings are consistent with those of the 2012 study, with some new insights about street parking. While the Study's key findings are not exhaustive, the key findings and technical report provide timely information to local municipal planning and engineering staff as a consideration for municipal parking bylaw updates, rezoning and development reviews, developing area and neighbourhood plans, corridor planning efforts, and street parking management efforts. Depending on the type of development, improving the match between supply and demand can also support housing affordability objectives.

Regional Planning has engaged and consulted extensively on the project scope and draft analysis with the Project Advisory Group, comprising local jurisdiction planners and engineers, as well as the Regional Planning Advisory Committee, Regional Transportation Advisory Committee, and the Regional Planning Committee.

The Regional Parking Study provides information to inform ongoing dialogues about integrated land use and transportation, housing affordability, and neighbourhood livability. Given the interest in parking in general, a subsequent deliverable will be a summary booklet to articulate the technical information in a more readily accessible manner. For the reasons of advancing the key findings and technical report to practitioners and policymakers, staff recommend Alternative 1.

Attachment: Regional Parking Study Technical Report

Reference: Regional Parking Studies Webpage

28594978

ATTACHMENT

The 2018 Regional Parking Study

Technical Report

Prepared by TransLink and Metro Vancouver
March 2019

Executive Summary

The 2018 Regional Parking Study is the second regional-scale apartment parking study to be undertaken in the Metro Vancouver region. In a metropolitan area where six out of 10 new housing units built are in apartment buildings, the availability of timely data to inform appropriate apartment parking requirements is likely to continue. An excessive supply of parking represents an inefficient use of land and capital resources, especially in Urban Centres and areas along the Frequent Transit Network, and a missed opportunity to reflect evolving transportation choices and to reduce the cost of housing construction. The Regional Parking Study, a collaborative effort between TransLink and Metro Vancouver, draws out patterns to expand the knowledge base of practitioners and policymakers in member jurisdictions and the development community.

Many of the patterns are consistent with expectations and reflect the success that the region has had in coordinating land use and transportation decisions. The findings also reveal opportunities to 'right size' the amount of parking in apartment buildings for both motorized vehicles and bicycles, and highlight the opportunity to treat on-site and on-street parking as a system.

The findings of the 2018 Regional Parking Study largely corroborate those in the 2012 Apartment Parking Study, and includes new insights about street parking supply and utilization. Apartment parking supply remains excessive relative to observed utilization. Apartment buildings close to frequent transit, whether or bus or SkyTrain, have lower parking supply and utilization. The lower rates of parking utilization are associated with higher transit use as measured by the number of bus boardings near the buildings, and this relationship is stronger for rental apartment sites.

Street parking is inherently complex in mixed-use neighbourhoods. Some of the factors contributing to street parking use include visitors to non-residential land uses, such as restaurants, shops, and parks; apartment visitors on weekends, holidays, and special occasions; and some apartment residents parking on the street. Even with these factors, only a handful of surveyed street networks experienced persistently high street parking utilization.

Finally, the 2018 Regional Parking Study highlights a challenge that remains unchanged from the 2012 Study. The design and capacity of current bicycle parking facilities in apartment buildings are discouraging their use by many residents.

Looking ahead, practitioners and policymakers should be mindful of evolving mobility choices, technology, and consumer preferences, and the potential implications for vehicle ownership, parking demand, and parking requirements in apartment buildings, on streets, and in other building structures. TransLink and Metro Vancouver will continue to look for opportunities to undertake and support research related to parking in accordance to regional policies, and to support the efforts of member jurisdictions to coordinate land use and transportation decisions.

Acknowledgements

TransLink and Metro Vancouver would like to thank the Project Advisory Group for providing expert perspectives and feedback. The Project Advisory Group's sustained interest in the study supports future regional research and the planning needs of member jurisdictions in the Metro Vancouver region on land use and transportation matters.

The 2018 study could not have been completed without the cooperation of the apartment property managers and condominium strata organizations for granting access to the parkades.

Acuere Consulting provided survey services for the parking facility, street parking, and household surveys. Special thanks go to BC Hydro for providing estimates of low electricity-usage apartment units.

All analyses and key findings presented in this technical report were prepared by the project staff at TransLink and Metro Vancouver.

Table of Contents

1. Introduction

Parking is a community issue that time and again evokes strong opinions from residents and businesses alike. When considering new residential development applications, parking is frequently a top concern.

The first region-wide apartment parking study was completed by Metro Vancouver in 2012 and examined the apartment parking supply and utilization in 80 apartment sites distributed throughout the region. While those study findings continue to be referenced, there have been renewed requests from member jurisdictions[1] for updated information on apartment parking, especially for purpose-built rental apartment sites.

With the support of the MVRD Board, Mayors' Council and relevant advisory committees, such as the Regional Planning Advisory Committee and Regional Transportation Advisory Committee, TransLink and Metro Vancouver jointly undertook a second region-wide apartment parking study, as an update to the 2012 study, in 2017 – 2018. The 2018 Regional Parking Study's objectives are to:

a) Expand the knowledge base about parking supply and demand for a sample of apartment sites throughout the region;
b) Document and report out in a user-friendly way that clearly communicates the key findings, potential trends and patterns, and opportunities to inform local practice, in particular for new developments in transit-oriented locations; and,
c) Use the study dataset and analytics to set the stage for potential additional phases of applied policy research or to support other initiatives in the region.

The 2018 Regional Parking Study comprises the following components:

- Three surveys:
  - Parking Facility Survey of parking supply and utilization at over 70 apartment sites
  - Street Parking Survey of parking supply and utilization on streets near the selected apartment sites
  - Household Survey of 1,500 households residing at the selected apartment sites
- Key informant interviews with municipal staff on street parking strategies and tactics.
- Review of current apartment parking supply requirements in local municipal bylaws.

The three surveys were conducted between October 2017 – January 2018 with the assistance of Acuere Consulting Ltd.

[1] In this report, 'member jurisdictions' refer to municipal governments and First Nations jurisdictions.

2. Study Context

This section outlines the policy and planning context for the 2018 Regional Parking Study, and looks back at what was learned in the 2012 Apartment Parking Study.

2.1 Regional Planning and Policy Context

Encouraging compact and complete communities, sustainable transportation choices, and increasing housing affordability are keys to enhancing the economic, environmental, and social sustainability of the region. These objectives are embedded in regional plans and policies. Multi-residential parking is often situated at the intersection of these issues.

Metro 2040: Shaping Our Future

Metro Vancouver 2040: Shaping Our Future (Metro 2040), the regional growth strategy, envisions a transit-oriented region arranged in an interconnected network of Urban Centres and Frequent Transit Development Areas, complemented by viable industrial and agricultural lands, and protected conservation / recreational areas. The majority of the residential growth, a projected additional one million new residents over the next 30 years, will be accommodated primarily in the form of redevelopment within these Urban Centres and Frequent Transit Development Areas.

As the development areas of the region densify, the majority of new residential development will increasingly be in the form of apartments, and less as ground-oriented housing (i.e. single-detached housing forms). Between 2014 and 2018, 59 percent of the housing unit starts in the region were apartments, followed by 20 percent as single-detached dwellings, 13 percent townhouse/ duplex / triplex, and 7 percent as secondary suites.

Metro 2040 encourages municipalities to set out policies in their respective Official Community Plans and Regional Context Statements that establish or maintain reduced residential and commercial parking requirements in Urban Centres and Frequent Transit Development Areas, in coordination with the provision of transit, where appropriate.

Regional Transportation Strategy

TransLink's *Regional Transportation Strategy* identifies parking management as an important way to shift some trips from single-occupancy vehicles and into transit and non-motorized modes. The Strategy also recognizes that parking management is largely a role of local governments. A coordinated effort between local actions and regional objectives is required to achieve the Strategy's targets of having a majority of trips by transit, walking, and cycling, and reducing vehicle kilometres travelled per capita by one-third.

Regional Affordable Housing Strategy

Housing affordability is one of the greatest challenges facing the Metro Vancouver region today. Metro Vancouver's *Regional Affordable Housing Strategy* recognizes that a broader range of housing choices near transit will contribute to more complete, inclusive and healthier communities and expand opportunities for more people to benefit from regional transit investments. A well-housed population is also fundamental to the functioning of the region's economy.

The *Regional Affordable Housing Strategy* identifies parking reduction, in combination with other incentives and policies, as a means of reducing the cost of developing purpose-built rental housing, whether market or non-market, and strata apartments.

2.2 Key Findings from the 2012 Apartment Parking Study

The 2018 Regional Parking Study builds on the 2012 Apartment Parking Study. In the Fall of 2011, Metro Vancouver carried out two regional surveys. In the Parking Facility Survey, the number of parking stalls and parked vehicles in 80 participating apartment sites were counted on weeknights. In the Household Survey component, Metro Vancouver distributed surveys to apartment households to obtain more information about parking habits and preferences. Over 1,500 apartment households responded.

The 2012 key findings were:

- Residential parking supply in strata apartments generally exceed parking demand an average of 18-35 percent across the region.
- Residential parking demand is lower near TransLink's Frequent Transit Network[2]. For apartments near the Frequent Transit Network, the parking demand range was 0.89 – 1.06 vehicles per apartment unit, whereas for apartments further away from the Frequent Transit Network, the parking demand range was 1.10 – 1.25 vehicles per apartment unit.
- Residential parking demand near the Frequent Transit Network bus stops were similar to the demand seen near SkyTrain / SeaBus stations, but the parking supply was higher.
- Vehicle holdings and parking demand for apartment renters were much lower than for owners, consistent with the findings of prior research. In purpose-built market rental sites, the parking demand range was 0.58 - 0.72 vehicles per apartment unit.
- Visitor parking supply may be over supplied. Observed parking demand rates were below 0.1 stall per apartment unit, compared to the typical municipal requirement of 0.2 visitor stall per apartment unit.
- Participation in car share programs was highest in Vancouver (16 percent of surveyed households) and at UBC (15 percent of surveyed households), where car share programs predominantly operate. Households with car share memberships had fewer vehicles than do non-members.
- Proximity to transit was consistently cited by over half of the households surveyed as one of the top three factors when choosing their current home.

The 2012 Study drew out the implications for new apartment development near the Frequent Transit Network. The greatest opportunities for change are new apartment sites near the Frequent Transit Network (generally within 400 metres of a frequent bus stop and/or within 800 metres of a SkyTrain station). High density communities with a robust network of frequent transit services offer the best opportunities to put these findings into practice. For suburban communities lacking the coverage of frequent transit services, these opportunities may be treated as long-term goals.

In the long-run, the benefits of taking action will result in more efficient and livable neighbourhoods in Urban Centres and Frequent Transit Development Areas, improvements to housing affordability and housing choice, and greater use of sustainable transportation choices. The following 'opportunities' were

[2] The Frequent Transit Network is a network of corridors along which transit service (service could be provided by a single route or a combination of routes) is provided at least every 15 minutes in both directions throughout the day and into the evening, every day of the week.

identified and intended to be practical suggestions for local governments and the development community to consider:

1. **Treat On-Site and Street Parking as a System:** A more holistic approach toward parking supply and parking demand management for new apartment projects is warranted. Attention should be paid to the availability, type, and relative permanence of street parking (e.g. free, paid, permit-only, and / or time-limited) and surrounded land uses, in association with any reductions in on-site parking requirements.

2. **Encourage Parking Supply to Match Demand Near the Frequent Transit Network:** Parking requirements should be set based on actual or expected demands with further reductions based on transportation demand management measures or other site-specific conditions.

3. **Encourage Parking Unbundling / Opt-Out:** Selling parking stalls separate from apartments or allowing consumers to opt out of a parking stall will increase choice, and provide the opportunity for consumers without cars to realize some modest improvement in affordability.

4. **Encourage Rental Apartments Near the Frequent Transit Network:** Apartment renters generally have lower parking demands than do owners, and living close to the Frequent Transit Network provides an opportunity to be less reliant on a private vehicle. For these reasons, it makes sense to encourage the development of more rental apartment units close to the Frequent Transit Network.

5. **Encourage Expansion of Car Share Programs where Feasible:** Municipalities and developers should encourage car share providers to expand beyond current operating boundaries to such places as emerging Urban Centres and Frequent Transit Development Areas in suburban areas wherever practical and feasible.

6. **Consider Allowing Amendments to Parking Supply after Pre-Sales:** It is often only after apartment pre-sales that developers have better data to support modifications to residential parking supply. By adapting municipal processes to accommodate amendments before construction, the parking efficiency of new apartment developments can be improved.

7. **Conduct Regular Post-Occupancy Surveys:** Regular and frequent post-occupancy surveys of apartment projects should be conducted to provide timely information on parking demand in recently built and fully-occupied apartment developments. Industry groups, such as the Urban Development Institute and the Urban Land Institute, should be encouraged to contribute resources to these research efforts and support widespread dissemination of the findings.

8. **Coordinating Frequent Transit Network Expansion:** Uncertainties in the future stop or station locations of the Frequent Transit Network, and the staging of expansion, can be addressed effectively through enhanced collaboration and information sharing between TransLink and municipal partners.

2.3 Fall 2012 Supplemental Surveys

In the Fall of 2012, Metro Vancouver commissioned supplemental field surveys on about two dozen apartment sites around the region. Parking facility and street surveys were conducted in four different time periods on a weekday and a Saturday. The summary sheets will be posted on the Metro Vancouver website. Where appropriate, the supplemental surveys have been used to inform the 2018 Study's methodology and analysis.

2.4 Updating the Apartment Parking Study

Since the completion of the 2012 Study, a number of new regional policies and milestones have been introduced. Together, these actions support creating a transit-oriented region through the intensification of land uses close to transit. An update to the regional parking study was warranted on the following grounds:

- Starting in 2012, the region saw a surge in new purpose-built rental completions, a large portion of which came in the form of apartments. Local governments identified a gap in parking data on rental apartment sites.

- In 2014, TransLink adopted the *Regional Transportation Strategy* which sets out ambitious targets to increase non-auto mode share and reduce driving per capita. The Strategy also highlights the role of parking management as a means to achieving the regional targets set out in the plan.

- In 2016, Metro Vancouver adopted an update to the *Regional Affordable Housing Strategy*, which also emphasizes the role of parking reductions to improve the financial viability of apartment development in general.

- In 2016, the Evergreen extension of the Millennium SkyTrain Line opened, thus creating new opportunities for transit-oriented development in the Northeast sector of the region.

- In 2017 and 2018, the Mayors' Council on Regional Transportation approved the first two investment plans to implement the Mayors' Vision for transit expansion in the region. The high level of investment in new rapid transit corridors and new frequent bus lines sets the stage for more transit-oriented development across the region.

- In 2018, the Metro Vancouver Board approved the *Climate 2050 Strategic Framework*, which reaffirms the crucial need to reduce greenhouse gas emissions from on-road vehicles. Transitioning to less carbon-intensive transportation choices will require a combination of actions, including changes to land use and parking policies.

3. Key Findings

Based on the body of analysis in this report, the following key findings have been identified. The key findings are intended to highlight patterns that show a relatively high degree of consistency with expectations, with the 2012 Study, and are generalizable regardless of geography or neighbourhood characteristics. At the same time, there may be other information presented in previous sections that may be useful to practitioners and policymakers, such as information about the few mixed-tenure, mixed rental, or non-market rental sites. Where appropriate, users of this report should supplement the findings with other local data, observations, and experience.

Key Finding #1: For both rental and strata buildings, apartment parking supply exceeds use across the region.

Supporting information:

Based on the Parking Facility Survey:

- For strata apartment buildings, parking supply exceeds utilization by 42 percent;
- For market rental apartment buildings, parking supply exceeds utilization by 35 percent;
- For mixed tenure and mixed rental apartment buildings, parking supply exceeds utilization by 41 percent;
- Parking supply exceeds utilization in strata and rental apartment buildings across the region.
- Parking supply appears to be declining for newer strata and market rental apartment buildings.

Based on the Household Survey:

- Small strata or market rental units (0 or 1 bedroom units, or unit less than 800 sq.ft.) tend to have at most 1 parked vehicle per unit;
- The smallest market rental units (0-bedroom units or units less than 600 sq.ft.) have the largest oversupply of parking.

Key Finding #2: Apartment parking supply and use is lower for buildings closer to frequent transit.

Supporting information:

Based on the Parking Facility Survey:

- For strata apartment buildings, parking utilization near frequent transit (bus or SkyTrain) ranges 0.86 – 0.97 vehicles per unit, compared to 1.09 for buildings further away.
- For market rental sites, parking utilization near transit (bus or SkyTrain) ranges 0.35 – 0.72, compared to 0.99 for sites further away from the FTN.
- Parking supply is lower in buildings close to frequent transit.

Based on the Household Survey:

- Small strata or rental units (0 or 1 bedroom units) tend to be most responsive to proximity to frequent transit, followed by 2 bedroom units.

Key Finding #3: Transit use is generally higher where apartment parking use is lower, especially for rental buildings.

Supporting information:

Based on the Parking Facility Survey and transit ridership data:

- Transit boardings (bus boardings within 400 metres of the apartments; SkyTrain/SeaBus boardings within 800 metres of the apartments) are higher when apartment residential parking utilization is lower.
- The relationship is stronger for rental apartment sites, than for strata sites.

Key Finding #4: Street parking is complex in mixed-use neighbourhoods. Some of the factors contributing to street parking use in mixed-use neighbourhoods include: visitors to non-residential land uses in the evenings; apartment visitors on weekends, holidays, and special occasions; and some apartment residents parking on a nearby street.

Supporting information:

Based on the Street Parking Survey:

- Generally, street parking utilization is higher in the evenings (weekday or Saturday) than on a weekday late night.
- Out of 65 surveyed street networks, 7 networks experienced high street parking utilization in at least two of the three surveyed time periods. The exceedances typically occur in the evenings. Nearby non-residential trip generators, such as parks, restaurants, and other commercial uses appear to be one factor.
- Apartment visitors typically encounter greater difficulty finding a parking space in the apartment parking facility or nearby street on weekends, holidays, and special occasions.
- Where households reported parking on a nearby street, they typically park within a five-minute of their apartment building.
- For rental sites where residential parking is not included in the rent, both apartment residential parking supply and utilization are lower compared to sites where parking is included in the rent. For the former, nearby street parking utilization is also higher, but does not exceed the 85 percent threshold.

Key Finding #5: The design and capacity of current bicycle parking facilities in apartment sites appear to discourage use by many residents.

Supporting information:

Based on the Household Survey:

- About one-third of bicycle-owning households do not use their building's secured bicycle parking facility. The rate of usage is consistent across different building ages. The most frequently cited concerns were risk of damage to or loss of the bicycles, crowded facilities, and adverse perceptions of safety and convenience.

4. Study Methodology

4.1 Project Advisory Group

A Project Advisory Group was established as a means for planning and engineering staff from member jurisdictions to provide detailed input on the study scope, and to review the data analysis and findings. Since it is the role of member jurisdictions to review, implement and update development standards and requirements, it was deemed important to ensure that the final product was framed in a way that is meaningful and useful for practitioners. The Project Advisory Group comprised a mix of planners and transportation engineers representing nine member jurisdictions (a request was originally made to the Regional Planning Advisory Committee and Regional Transportation Advisory Committee for volunteers to participate on the advisory group). The multidisciplinary composition of the Project Advisory Group was aligned with the parking being a cross-cutting land use and transportation issue. The Project Advisory Group reviewed and provided feedback in the preparation of this technical report.

4.2 Apartment Site Selection

The survey sites were selected based on several criteria: representation from across the region; building age; building tenure; and, proximity to TransLink's Frequent Transit Network. While about 200 apartment sites were contacted by project staff, 73 sites ultimately agreed to participate in the 2018 Study.

A concerted effort was made to increase the share and number of sites in the southern and eastern parts of the region in the Study in response to the fast pace of higher density development and improvements to the Frequent Transit Network in those areas. The South of Fraser had the most number of sites, doubling the number in the 2012 Study. The Northeast Sector and Pitt Meadows / Maple Ridge also saw an increase in the number of sites surveyed.

On account of building tenure, the majority of sites are strata ownership. However, many more non-strata buildings participated in the Study, including 12 market rental sites, 7 mixed tenure (strata and rental) sites, 3 mixed rental (market and non-market rental) sites, and 1 non-market rental site. In comparison, the 2012 Study consisted of only 13 non-strata sites. Please note that the three mixed rental sites surveyed in the Study are owned and managed by the Metro Vancouver Housing Corporation.

A balance was struck between studying sites built since the 2012 Study and older sites. Over one-half of the sites were built in 2010 or later. Some sites that are in the older vintage are: three Metro Vancouver Housing Corporation sites built in the 1970/80s, and one market rental site in downtown Vancouver built in the early 1990s (which was also included in the 2012 Study).

Table 1. Apartment Sites by Subregion, Local Jurisdiction, and Tenure

Subregion	Local Jurisdiction	Number of Sites	Strata	Market Rental	Mixed Tenure	Mixed Rental	Non-Market Rental
South of Fraser	Delta	1	1	-	-	-	-
	Langley City	1	-	1	-	-	-
	Langley Township	4	1	3	-	-	-
	Surrey	11	10	-	-	-	-
	White Rock	2	2	-	-	-	-
Vancouver/ UBC	UBC Point Grey	1	1	-	-	-	-
	Vancouver	14	1	4	7	1	1
Northeast Sector+	Coquitlam	6	6	-	-	-	-
	Maple Ridge	1	1	-	-	-	-
	Pitt Meadows	1	1	-	-	-	-
	Port Coquitlam	3	2	-	-	1	
	Port Moody	3	3	-	-	-	-
Burnaby/New Westminster	Burnaby	7	7	-	-	-	-
	New Westminster	3	3	-	-	-	-
North Shore	North Vancouver City	4	4	-	-	-	-
	North Vancouver District	4	2	2	-	-	-
Richmond	Richmond	7	5	2	-	-	-
Total		73	50	12	7	3	1

Table 2. Distribution of Apartment Sites by Year Built

Year Built	Number of Sites	Strata	Market Rental	Mixed Tenure	Mixed Rental	Non-Market Rental
1976-1993	4	-	1	-	3	-
2005-2009	22	19	3	-	-	-
2010-2013	19	14	3	1	-	1
2014-2017	28	17	5	6	-	-

In keeping with the land use and transportation nexus, the vast majority of sites are located within walking distance to the Frequent Transit Network, whether rapid transit or frequent bus. For comparative analysis purposes, 15 sites were chosen further away from current frequent transit service.

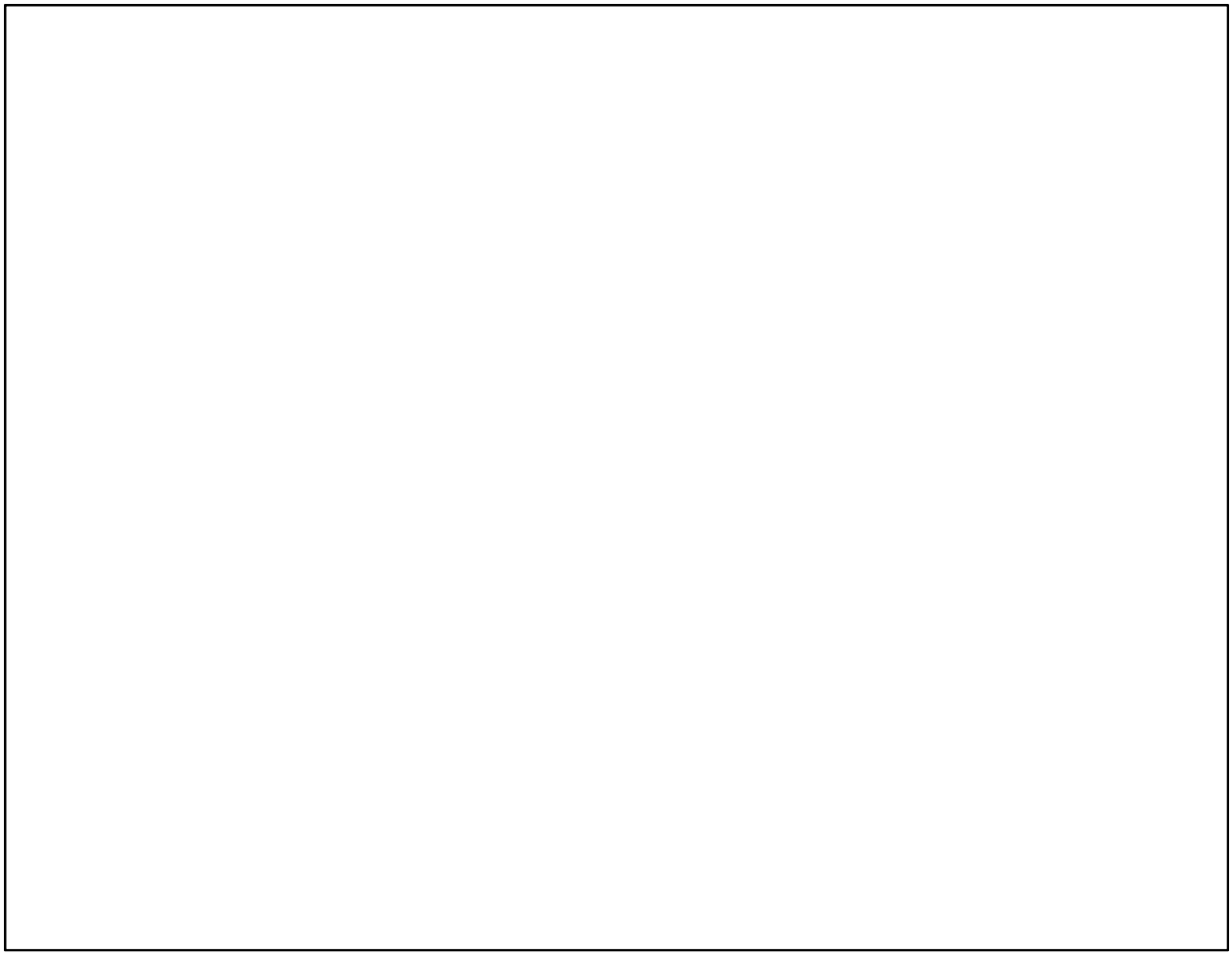


Figure 1. Map of Surveyed Apartment Sites

Table 3. Distribution of Apartment Sites by Proximity to the Frequent Transit Network

Proximity to Frequent Transit Network	Number of Sites	Strata	Market Rental	Mixed Tenure	Mixed Rental	Non-Market Rental
Within 800m of a rapid transit station	30	22	3	4	1	-
Within 400m of a frequent bus corridor only	28	20	3	3	1	1
Away from FTN	15	8	6	-	1	-

4.3 Parking Facility Survey Design and Conduct

The Parking Facility Survey component of the Study was conducted between October 2017 and January 2018 by Acuere Consulting Ltd. The purpose of the Survey was to measure the apartment parking supply and utilization at the selected sites. The surveyors initiated the surveys generally after 11:00PM on a weeknight, Monday through Thursday. Project staff provided Acuere with the appropriate contact person at each site, whether a strata council member, property manager, or on-site caretaker. Acuere was responsible for scheduling and assigning the surveyors. The survey data was transmitted to Metro Vancouver in the Spring of 2018. The data collected included:

Table 4. Parking Facility Survey Data Type

Data	Values
Parking Facility Type	• Residential (enclosed parking or surface parking) • Visitor (enclosed parking or surface parking) • Commercial (enclosed parking or surface parking); commercial parking stalls and utilization were not counted.
Parking Stall Type	• Regular vehicle stall • Tandem stall • Electric vehicle stall • Car Share vehicle stall • Accessible stall • Motorcycle stall • Loading stall • Unmarked space • Other space

It should be noted that commercial parking stalls and utilization were not counted (and would not have been meaningful given the time period of the surveys). In a similar vein, apartment visitor parking is less meaningful given that 'peak' visitor demand is typically in the evenings.

In order to account for potentially unoccupied units during the period of the survey (and minimize the underestimation of parking utilization ratios), data from BC Hydro was obtained on the number of units at each site that consumed 100 kWh or less of electricity per month on average between September 1 – November 30, 2017; for comparative purposes, the threshold of 10 kWh is generally the amount of electricity consumed by a refrigerator. Unoccupied units may be empty for a number of reasons, such as newer buildings where residents have yet to move in, units that are bought as investments but not yet occupied out, or units undergoing renovations. Where data gaps remained, a generalized 'vacancy' factor was assumed.

4.4 Street Parking Survey Design and Conduct

The Street Parking Survey is a new component for the Study. One of the key opportunities identified in the 2012 Study was that a more holistic and systems-based approach toward apartment parking and street parking was warranted. While it may be reasonable to presume an interplay between the two, without survey data, our understanding of the relationship and other neighbourhood factors is limited.

The streets, generally within 200 metres of the selected apartment sites, were surveyed for their parking utilization and the available parking spaces estimated and inventoried. Street parking regulations were also recorded. The surveys were conducted during three time periods: i.e. weekday evening (6:30-8:30PM), weekday late night (11:00PM), and Saturday evening (6:30-8:30PM). These time periods were chosen based in part based on resource availability, the expectation that the evening periods were times when street parking utilization is high, and that the data would generate a clear picture of the interplay between apartment parking and street parking utilization.[3] Approximately 94 percent of the nearly 16,400 parked vehicles were passenger vehicles. The data collected included:

Table 5. Street Parking Survey Data Type

Data	Values
Vehicle Type	• Passenger auto/truck/van (94% of observed parked vehicles) • Motorcycle/scooter, oversized truck/van too large to enter the parking facility, commercial trucks (cube truck, heavy trucks), car share vehicles, RV campers, taxi, police vehicle, ambulance, construction vehicle or equipment, other

Parking Regulation Type	• No restriction
	• Time-restricted no parking: Red circle crossed P (time/day specific)
	• Time-restricted parking: Green circle P (time/day specific)
	• Meter
	• Resident Only
	• Resident Permit
	• Miscellaneous:
	  ○ Loading/passenger only
	  ○ Commercial zone
	  ○ School zone
	  ○ Car share parking only
	  ○ Accessible vehicles only
	  ○ Taxi only
	  ○ Police only
	  ○ Motorcycles only
	  ○ Electric vehicles only

Illegal Parking Type	• Parked in no stopping zone • Parked at bus stop or fire hydrant • Parked too close to stop sign • Parked vehicle extends into driveway/alley • Other

The supply of parking spaces on each street segment was estimated using online aerial photos and validated with select field visits. In total, about 9,300 street parking spaces were estimated, of which 4,300 spaces were designated with some form of parking restriction, and about 5,000 without any parking

[3] In Fall 2012, Metro Vancouver completed supplemental surveys of streets around two dozen apartment sites. Surveys were completed on a weekday and Saturday in four time periods: late morning (11:00AM), afternoon (3:00PM), evening (6:00PM), and late night (11:00PM). Generally, the evening periods saw the highest street parking utilization. The survey consultant was Opus International Consultants.

restrictions. Approximately, 160 kilometres of curbside street segments were surveyed in each of the three time periods.

4.5 Household Survey Design and Conduct

The Household Survey provides supplemental information about the residents who live in the participating apartment sites, such as vehicle ownership, whether they own or rent their unit and parking stall(s), apartment visitor parking patterns, basic demographic information, and other attributes (see Appendix X for the complete survey form). The surveys were mailed out in mid-December 2017 and closed in February 2018.

The survey questions closely mirrored those in the 2012 Study, with several modifications based on input from the Project Advisory Group and others. Invitation letters were individually mailed to all apartment units in the participating buildings. In total, 1,567 responses were received and deemed sufficiently complete to use for data analysis. Respondents were provided with the option of completing the survey online, or completing the paper survey and returning it using an included postage-paid envelope. Nearly two out of three responses originated from residents of Vancouver, Burnaby, Surrey, Coquitlam, and Port Moody.

Table 6. Geographic Distribution of Household Survey Responses

Member Jurisdiction	Completed Responses
Vancouver	368
Burnaby	211
Surrey	202
Coquitlam	147
Port Moody	102
North Vancouver City	99
Richmond	89
North Vancouver District	77
New Westminster	54
White Rock	49
Langley Township	46
Port Coquitlam	44
Delta	31
Maple Ridge	24
Pitt Meadows	9
Total	**1,567**

The mailing addresses used to distribute the survey were assembled through the BC Assessment Authority's website and from property managers, as appropriate. To limit responses to one per apartment unit, each mail-out contained a unique code that was required to submit the survey form. The consultant was responsible for administering the survey and providing an anonymized dataset to project staff.

As with the 2012 Study, the Household Survey dataset was not weighted to match the demographics of the region. As with all surveys, a self-selection bias is a factor that must be considered when interpreting

the data (e.g. residents with a particular interest in parking may be more inclined to complete the survey). The value of the household survey is in supplementing the broad regional or subregional patterns that emerge from the other two survey datasets. The following tables are useful to understand the characteristics of the survey respondent households. Where appropriate, comparative values from the 2012 Study are shown.

Apartment Unit Size Distribution

Households residing in apartment units with two or fewer bedrooms made up 93 percent of the respondents. This proportion is consistent with apartment development trends: between 2001 and 2016, 90 percent of apartment units built had two or fewer bedrooms. In terms of floor area, there is a more even distribution for units at least 600 sq.ft. of floor area. This implies that one-bedroom units come in a variety of sizes, as do two-bedroom units.

Table 7. Apartment Unit Size (Bedrooms) Distribution

Unit Size (Bedrooms)	Responses	2012 Study
0-bedroom units	39 (2%)	4%
1-bedroom units	493 (32%)	30%
2-bedroom units	924 (59%)	57%
3 plus-bedroom units	111 (7%)	8%
Total	1,567	100%

Table 8. Apartment Unit Size Distribution

Unit Size (in Square Feet)	Responses
Less than 600 sq.ft.	256 (16%)
600 – 799 sq.ft.	428 (29%)
800 – 999 sq.ft.	489 (31%)
1000+ sq.ft.	358 (23%)
Unsure	36 (2%)
Total	1,567

Household Size Distribution

The average household size of the survey sample is about 2 persons. According to the 2016 Census, the average household size in apartments of five storeys or higher was 1.7 persons, and in other apartment buildings the household size was 1.9 persons.

Table 9. Household Size Distribution

Household Size	Responses	2012 Study
1 person	492 (31%)	32%
2 persons	751 (48%)	46%
3 persons	214 (14%)	16%
4 or more persons	103 (7%)	7%
No Data	7 (0%)	-
Total	1,567	100%

Tenure Distribution

Owner-occupied households made up two out of three survey responses. This ratio is consistent with the vast majority of apartment sites in the Study being condominiums. For comparison, the 2016 Census counted that 56 percent of apartment dwellers (in buildings built 2011-2016) were owners and 44 percent were renters.

Table 10. Household Tenure Distribution

Household Tenure	Responses	2012 Study
Owner	1,071 (68%)	68%
Renter	464 (30%)	32%
No Data	32 (2%)	-
Total	1,567	100%

Table 11. Building Tenure Distribution

Building Tenure	Responses
Strata	1,185 (76%)
Market Rental	133 (9%)
Mixed Tenure	186 (12%)
Mixed Rental	35 (2%)
Non-Market Rental	28 (1%)
Total	1,567

Proximity to Transit Distribution

The survey sample provides coverage of households residing near the Frequent Transit Network and households who live further away.

Table 12. Frequent Transit Network Proximity Distribution

FTN Proximity	Responses	2012 Study
Within 800m of rapid transit	827 (52%)	51%
Within 400m of frequent bus only	535 (35%)	30%
Away from FTN	205 (13%)	20%
Total	1,567	100%

Vehicles per Household

Generally, the average number of vehicles per household increases with household size and apartment unit size. In addition, vehicle ownership is higher for owners and households residing in strata sites.[4]

Table 13. Vehicle Holdings by Household Size

Household Size	Vehicles
1 person	0.88
2 persons	1.36
3 persons	1.49
4 or more persons	1.49

Table 14. Vehicle Holdings by Unit Size (Bedrooms)

Unit Size (Bedrooms)	Vehicles
0-bedroom units	0.64
1-bedroom units	0.98
2-bedroom units	1.35
3 plus-bedroom units	1.66

Table 15. Vehicle Holdings by Unit Size (Floor Area)

Unit Type	Vehicles
Less than 600 sq.ft.	0.79
600 – 799 sq.ft.	0.98
800 – 999 sq.ft.	1.18
1000+ sq.ft.	1.39

Table 16. Vehicle Holdings by Household Tenure

Household Tenure	Vehicles
Owner	1.32
Renter	1.10

Table 17. Vehicle Holdings by Building Tenure

Building Tenure	Vehicles
Strata	1.30
Market Rental	1.07
Mixed Tenure	1.07
Mixed Rental	1.23
Non-Market Rental	0.54

[4] The lone outlier is the average vehicle holdings in the three mixed rental sites. The three sites are older Metro Vancouver Housing Corporation sites with long-term tenants.

5. Apartment Residential Parking Supply and Utilization Analysis

The following analysis combines the Parking Facility Survey and Household Survey where appropriate. Sample sizes should be taken into consideration when reviewing the information.

5.1 Apartment Residential Parking Supply and Utilization

Broadly, the estimates of apartment parking supply and utilization ratios are consistent with those found in the 2012 Apartment Parking Study. Residential parking supply ratios exceed observed and reported utilization by a measurable amount. For strata sites, the oversupply of parking ranges from 19 percent to 42 percent depending on the survey. For market rental sites, the oversupply ranges from 23 percent to 35 percent. It should be noted that the timing of the parking facility survey may not have captured residents who may be shift workers or temporarily absent from the building. Please see Appendix 5 for supplemental information derived from the Household Survey.

Table 18. Resident Parking by Tenure

	Parking Facility Survey		
Building Tenure (# sites in PFS)	**Stalls per DU (PFS)**	**Parked Vehicles per DU (PFS)**	**Parking Oversupply Estimate**
Strata (n=50)	1.31	0.92	+42%
Market Rental (n=12)	0.97	0.72	+35%
Mixed Tenure (n=7)	0.89	0.63	+41%
Mixed Rental (n=3)	1.47	1.04	+41%
Non-Market Rental (n=1)	0.33	0.14	+136%

Looking at strata sites only, the level of residential parking oversupply is fairly consistent across the region. According to the Parking Facility Survey, the oversupply of parking ranges from 32 percent in the North Shore sites to 58 percent in the Richmond sites.

Table 19. Resident Parking in Strata Sites by Subregion

	Parking Facility Survey		
Strata Sites by Subregion (# sites in PFS)	**Stalls per DU (PFS)**	**Parked Vehicles per DU (PFS)**	**Parking Oversupply Estimate**
Burnaby/NW (n=10)	1.18	0.82	+45%
North Shore (n=6)	1.28	0.97	+32%
Northeast Sector+ (n=13)	1.33	0.98	+36%
Richmond (n=5)	1.29	0.82	+58%
South of Fraser (n=14)	1.46	1.00	+45%
Vancouver/UBC (n=2)	1.15	0.83	+40%

For the combined rental sites, the residential parking is oversupplied across the region.

Table 20. Resident Parking in Rental Sites by Subregion

	Parking Facility Survey		
Rental Sites by Subregion (# sites in PFS)	**Stalls per DU (PFS)**	**Parked Vehicles per DU (PFS)**	**Parking Oversupply Estimate**
North Shore (n=2)	0.87	0.70	+24%
Northeast Sector+ (n=1)	1.47	1.12	+30%
Richmond (n=2)	1.07	0.77	+39%
South of Fraser (n=5)	1.51	1.10	+38%
Vancouver/UBC (n=13)	0.85	0.59	+44%

5.2 Relationship with Apartment Unit Size

At the apartment unit level, using data from the Household Survey, households in strata units and market rental units with 0 or 1 bedroom, or units less than 800 sq.ft., have at most one vehicle to park.

Table 21. Resident Parking in Strata Sites by Unit Size (bedrooms)

Strata Sites (HHS responses)	Stalls per DU (HS)	Parked Vehicles per DU (HS)	Vehicles per DU (HS)	Parking Oversupply Estimate
0-bedroom (n=17)	1.00	0.88	0.88	+14%
1-bedroom (n=320)	1.16	0.94	1.05	+23%
2-bedroom (n=761)	1.44	1.24	1.37	+16%
3 plus-bedroom (n=86)	1.90	1.55	1.69	+23%

Table 22. Resident Parking in Strata Sites by Unit Size (floorspace)

Strata Sites (HHS responses)	Stalls per DU (HS)	Parked Vehicles per DU (HS)	Vehicles per DU (HS)	Parking Oversupply Estimate
Less than 600 sqft (n=126)	1.18	0.96	1.02	+23%
600-799 sqft (n=318)	1.23	1.03	1.16	+19%
800-900 sqft (n=409)	1.37	1.19	1.34	+15%
1000+ sqft (n=314)	1.67	1.39	1.51	+20%

Table 23. Resident Parking in Market Rental Sites by Unit Size (bedrooms)

Market Rental Sites (HHS responses)	Stalls per DU (HS)	Parked Vehicles per DU (HS)	Vehicles per DU (HS)	Parking Oversupply Estimate
0-bedroom (n=15)	0.85	0.47	0.47	+81%
1-bedroom (n=66)	1.02	0.79	1.02	+29%
2-bedroom (n=50)	1.23	1.12	1.26	+10%

Table 24. Resident Parking in Market Rental Sites by Unit Size (floorspace)

Market Rental Sites (HHS responses)	Stalls per DU (HS)	Parked Vehicles per DU (HS)	Vehicles per DU (HS)	Parking Oversupply Estimate
Less than 600 sq.ft. (n=45)	0.95	0.64	0.78	+48%
600-799 sq.ft. (n=35)	0.93	0.77	1.03	+21%
800-999 sq.ft. (n=38)	1.31	1.16	1.32	+13%

5.3 Relationship with Year Built

Parking supply in strata and rental apartment buildings appear to be declining for newer buildings.

Table 25. Resident Parking in Strata Sites by Year Built

Strata Sites (n=50)	Stalls per DU (PFS)	Parked Vehicles per DU (PFS)	Parking Oversupply Estimate
2005-2009 (n=19)	1.31	0.92	+42%
2010-2013 (n=14)	1.43	1.04	+37%
2014-2017 (n=17)	1.26	0.87	+45%

Table 26. Resident Parking in Rental Sites by Year Built

All Rental Sites (n=23)	Stalls per DU (PFS)	Parked Vehicles per DU (PFS)	Parking Oversupply Estimate
2005-2009 (n=3)	1.18	0.82	+44%
2010-2013 (n=5)	0.91	0.64	+42%
2014-2017 (n=11)	0.91	0.66	+38%

Table 27. Resident Parking in Market Rental Sites by Year Built

Market Rental Sites (n=11)	Stalls per DU (PFS)	Parked Vehicles per DU (PFS)	Parking Oversupply Estimate
2005-2009 (n=3)	1.18	0.82	+44%
2010-2013 (n=3)	0.80	0.55	+46%
2014-2017 (n=5)	1.07	0.84	+27%

Table 28. Resident Parking in Market Rental Sites by Year Built (Excluding Vancouver)

Market Rental Sites, Excluding Vancouver (n=8)	Stalls per DU (PFS)	Parked Vehicles per DU (PFS)	Parking Oversupply Estimate
2005-2009 (n=1)	1.54	1.10	+40%
2010-2013 (n=2)	1.27	0.90	+40%
2014-2017 (n=5)	1.07	0.84	+27%

5.4 Relationship with Transit Proximity

Apartment residential parking supply and utilization ratios are inversely related to the level of transit service. As transit service level declines, parking supply and utilization increase (however, parking utilization is at most 1 vehicle per unit as per the Parking Facility Survey).

Table 29. Resident Parking in Strata Sites by Transit

	Parking Facility Survey		
Strata Sites by Proximity to FTN	**Stalls per DU (PFS)**	**Parked Vehicles per DU (PFS)**	**Parking Oversupply Estimate**
Within 800m of rapid transit (n=22)	1.21	0.86	+42%
Within 400m of frequent bus only (n=20)	1.40	0.97	+45%
Away from FTN (n=8)	1.54	1.09	+41%

Table 30. Resident Parking in Market Rental sites by Transit

	Parking Facility Survey		
Market Rental Sites by Proximity to FTN	**Stalls per DU (PFS)**	**Parked Vehicles per DU (PFS)**	**Parking Oversupply Estimate**
Within 800m of rapid transit (n=3)	0.62	0.35	+77%
Within 400m of frequent bus only (n=3)	0.90	0.72	+25%
Away from FTN (n=6)	1.31	0.99	+32%

Table 31. Resident Parking in Mixed Tenure Sites by Transit

	Parking Facility Survey		
Mixed Tenure Sites by Proximity to FTN	**Stalls per DU (PFS)**	**Parked Vehicles per DU (PFS)**	**Parking Oversupply Estimate**
Within 800m of rapid transit (n=4)	0.80	0.60	+33%
Within 400m of frequent bus only (n=3)	1.09	0.70	+56%

5.5 Relationship with Transit Proximity and Unit Size

The results of the Household Survey allow for an analysis of the relationship between parking utilization and proximity to the Frequent Transit Network as a function of apartment unit size. Generally, whether for strata or rental apartment sites, the ratio of parked vehicles to dwelling unit is the lowest for 0 or 1 bedroom units and the largest incremental increase in parking utilization occurs when these apartment units are located further away from the Frequent Transit Network. Strata units with more than two bedrooms appear to be less influenced by proximity to frequent transit. Rental units appear to be more influenced by proximity to rapid transit than to frequent bus. Due to small sample sizes, households in 3-bedroom rental units were excluded from the analysis.

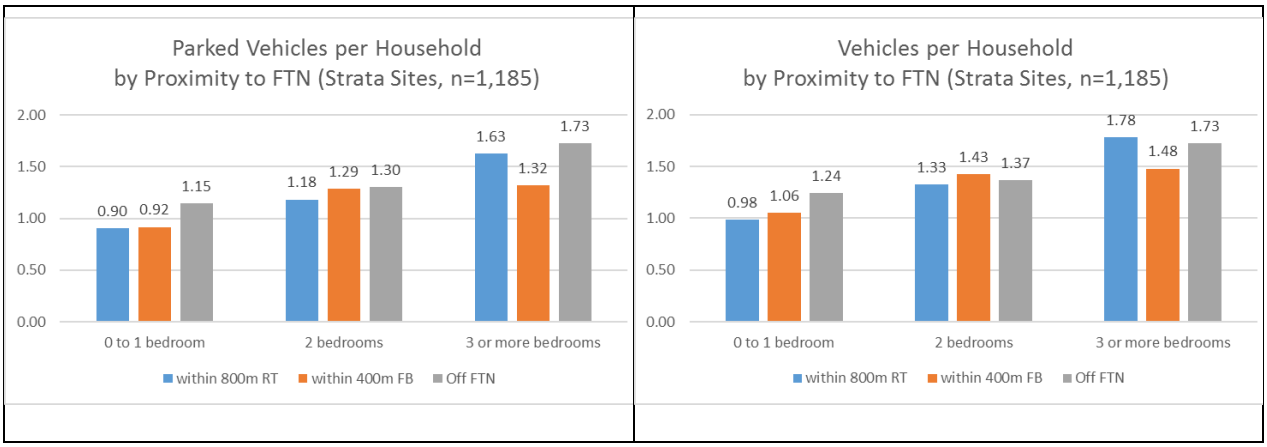


Figure 2. Parking and Vehicle Holdings for Strata Sites by Proximity to the FTN and Unit Size

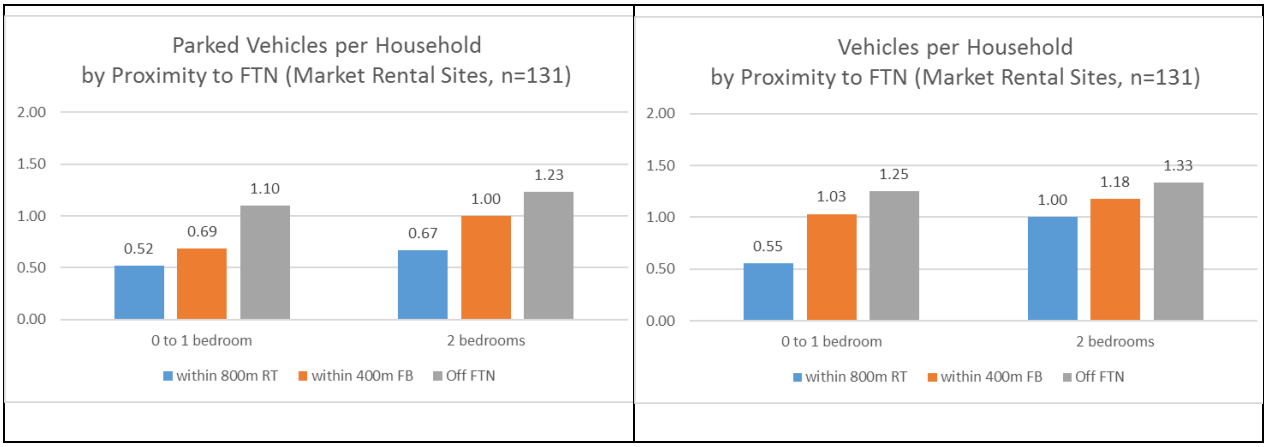


Figure 3. Parking and Vehicle Holdings for Market Rental Sites by Proximity to the FTN and Unit Size

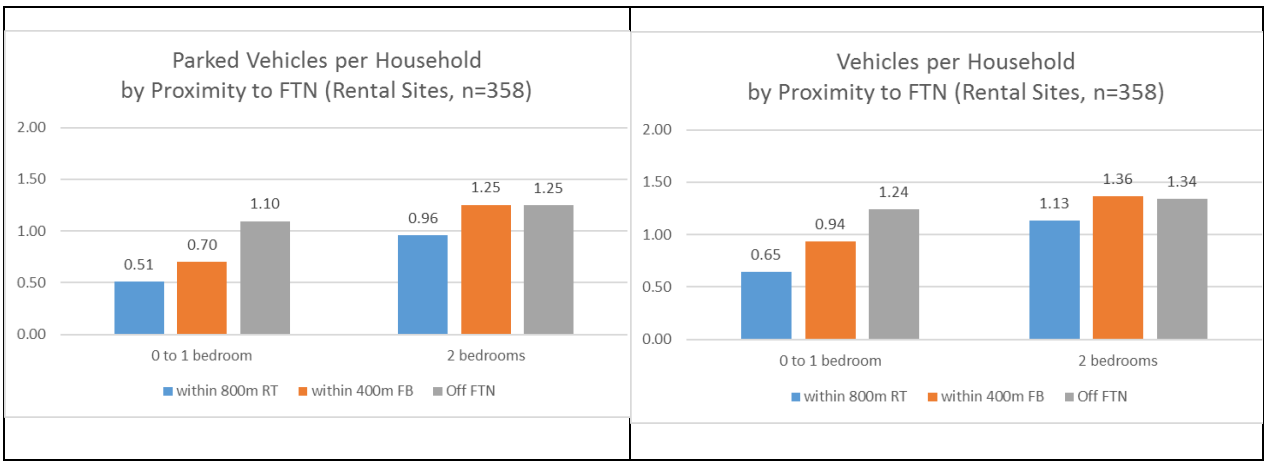


Figure 4. Parking and Vehicle Holdings for Rental Sites by Proximity to the FTN and Unit Size

A recurring interest is the potential impact that sites in the City of Vancouver may have on these patterns. The following charts replicate the charts above but exclude sites in Vancouver and UBC. The charts below indicate that the patterns observed earlier remain intact. Please note that due to small sample sizes,

households in rental units near rapid transit stations, and households in 3-bedroom rental units were excluded from the charts.

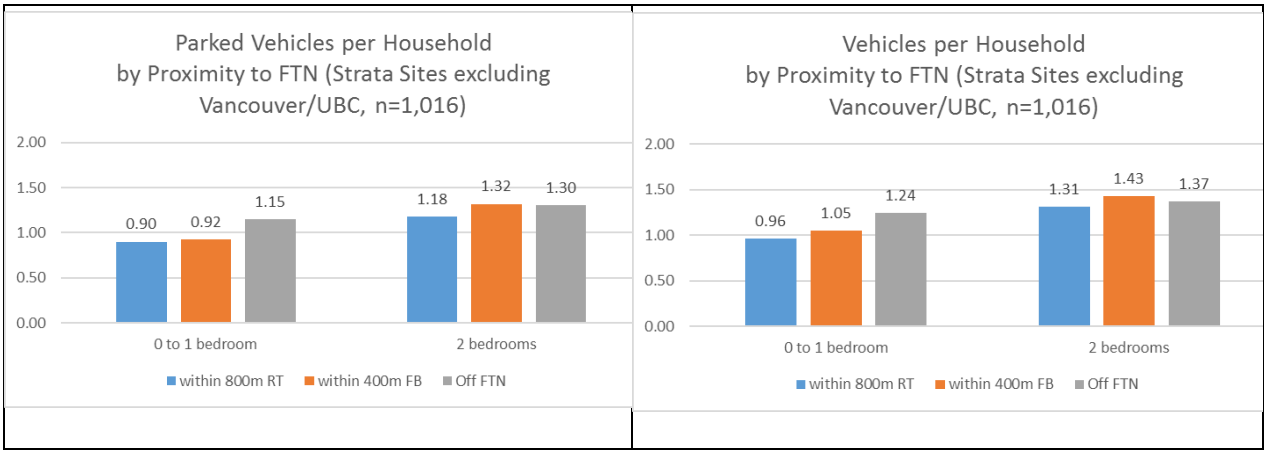


Figure 5. Parking and Vehicle Holdings for Strata Sites (Excluding Vancouver/UBC)

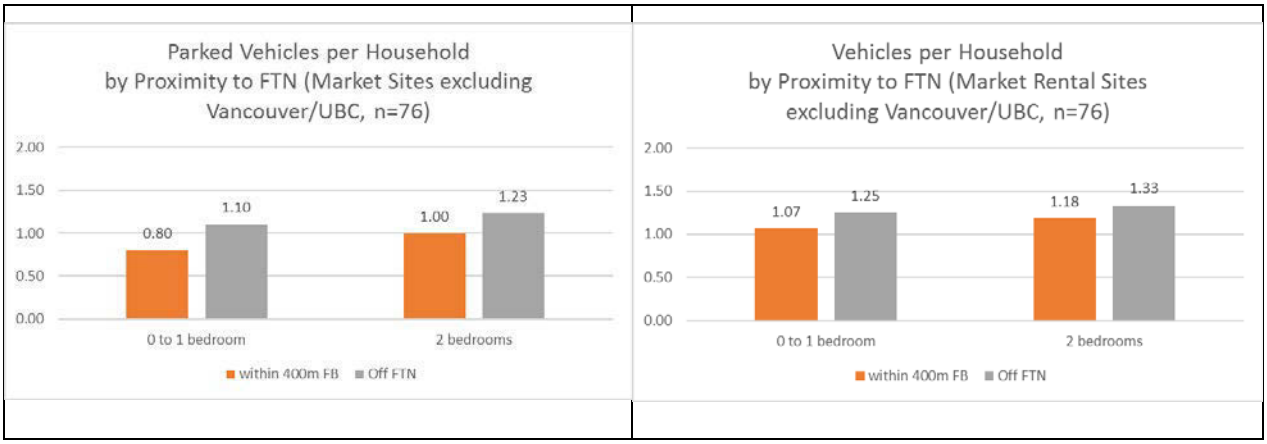


Figure 6. Parking and Vehicle Holdings for Market Rental Sites (Excluding Vancouver)

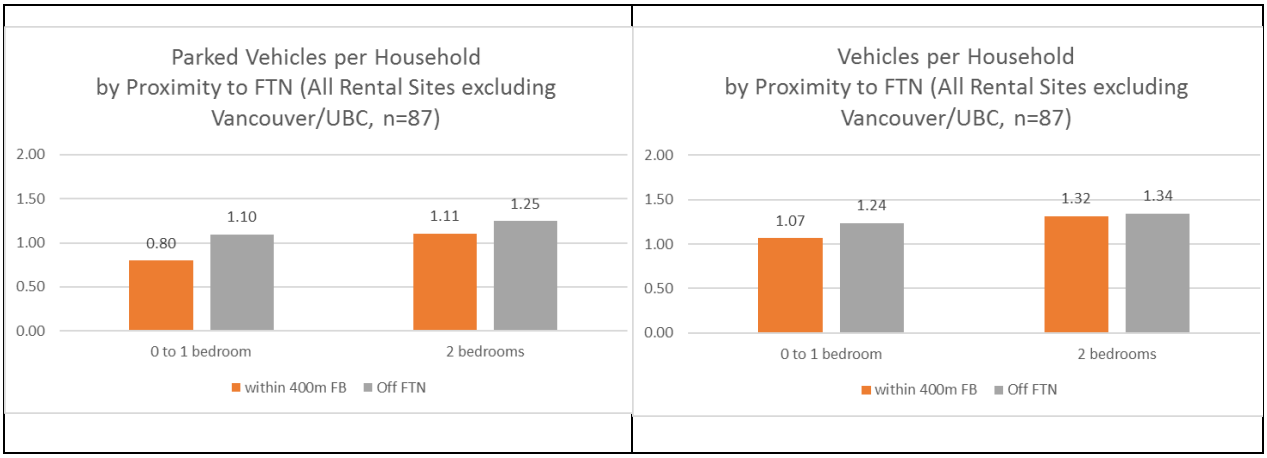


Figure 7. Parking and Vehicle Holdings for Rental Sites (Excluding Vancouver)

5.6 Relationship with Transit Boardings

Lower observed rates of resident parking utilization are generally correlated with higher rates of transit usage as measured by the number of bus boardings within 400 metres and number of SkyTrain and SeaBus boardings within 800 metres of the surveyed apartment sites[5]. The R^2 value of 0.25 suggests that 25 percent of the variance in transit boardings can be explained by apartment parking utilization (the correlation R is 0.50). The strength of the correlation is notable given that other land use and socio-economic variables have not been factored into this analysis.

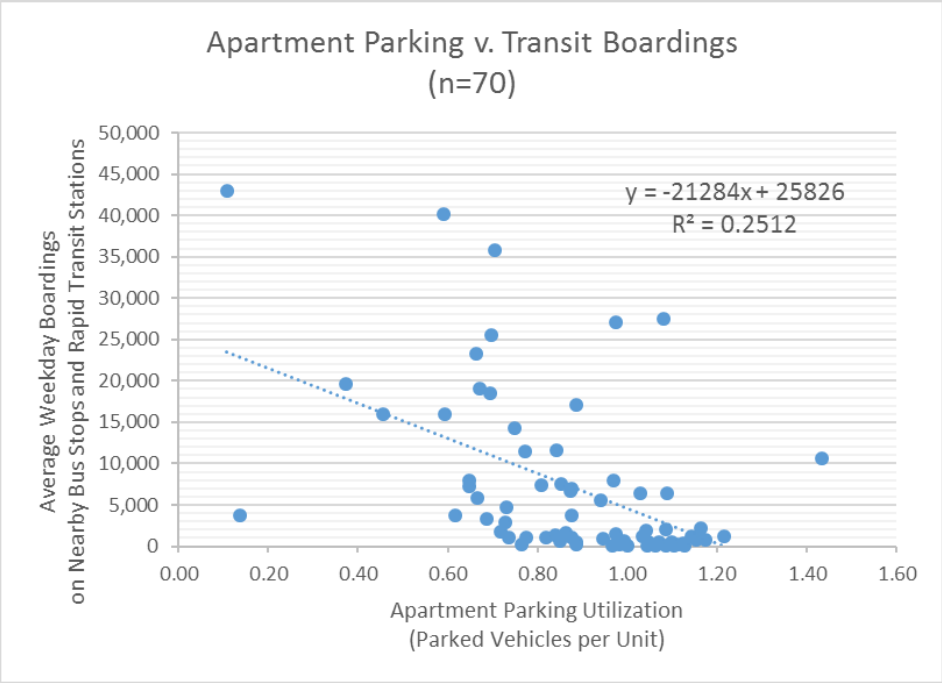


Figure 8. Apartment Parking Utilization and Nearby Transit Boardings

The 'inverse' relationship is much stronger for rental sites compared to strata sites (Figures 9 and 10). In this case, the correlation of apartment utilization and transit boardings for the rental sites is three times stronger than for the strata sites.[6] The patterns complement the transit ridership analysis in the Transit-Oriented Affordable Housing Study which showed renters have higher transit usage rates than do homeowners even after accounting for household income.

To examine the rental sites further, the dataset was split into sites located outside of Vancouver and sites within Vancouver (Figures 11 and 12). While the sample sizes are small, three patterns can be observed. Transit ridership is measurably higher amongst the Vancouver sites and that reflects the greater availability of transit service within the city. Parking utilization is higher outside of Vancouver. And, the

[5] Transit boardings data were not available for bus stops within 400 metres of two strata apartment sites in White Rock; there were no bus stops within 400 metres of one strata site in Richmond.

[6] If the lone non-market rental site in Vancouver was removed from the dataset, then the R^2 value increased to 0.53, indicating that 53 percent of the variance in transit ridership relative to the trendline could be attributed to the parking utilization in the rental sites in the dataset.

charts suggest that the Vancouver sites are likely not inflating the strength of the correlation seen in Figure 9 (rental sites).

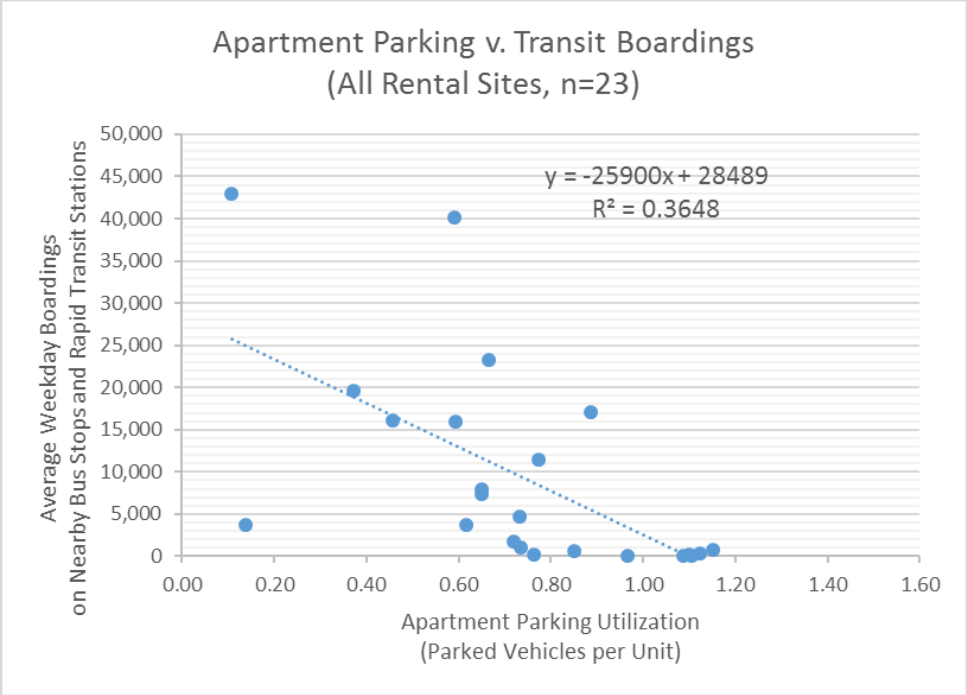


Figure 9. Apartment Parking Utilization for Rental Sites and Nearby Transit Boardings

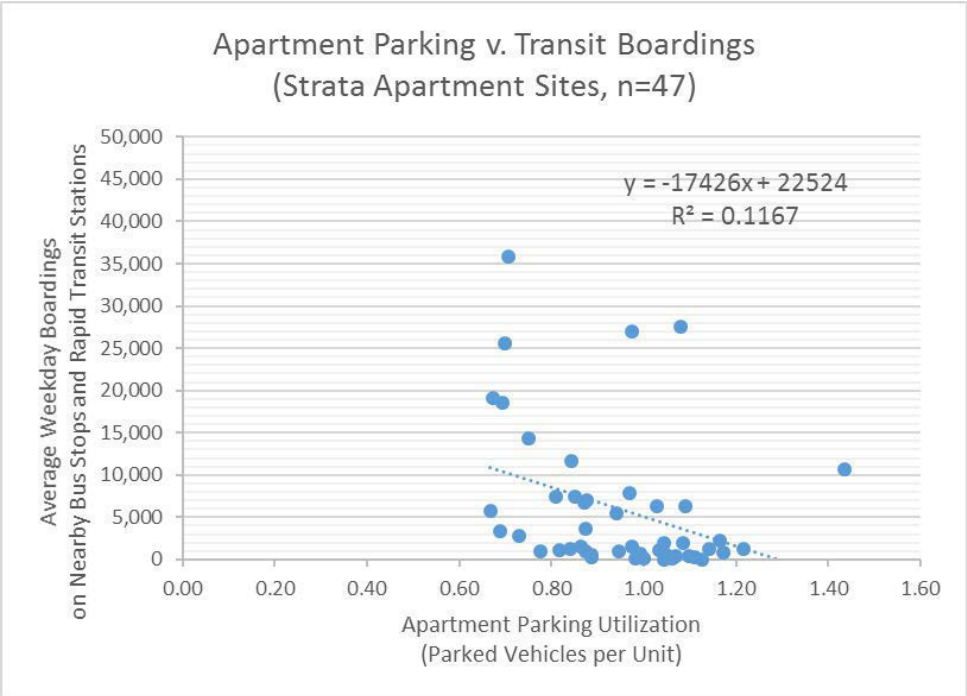


Figure 10. Apartment Parking Utilization for Strata Sites and Nearby Transit Boardings

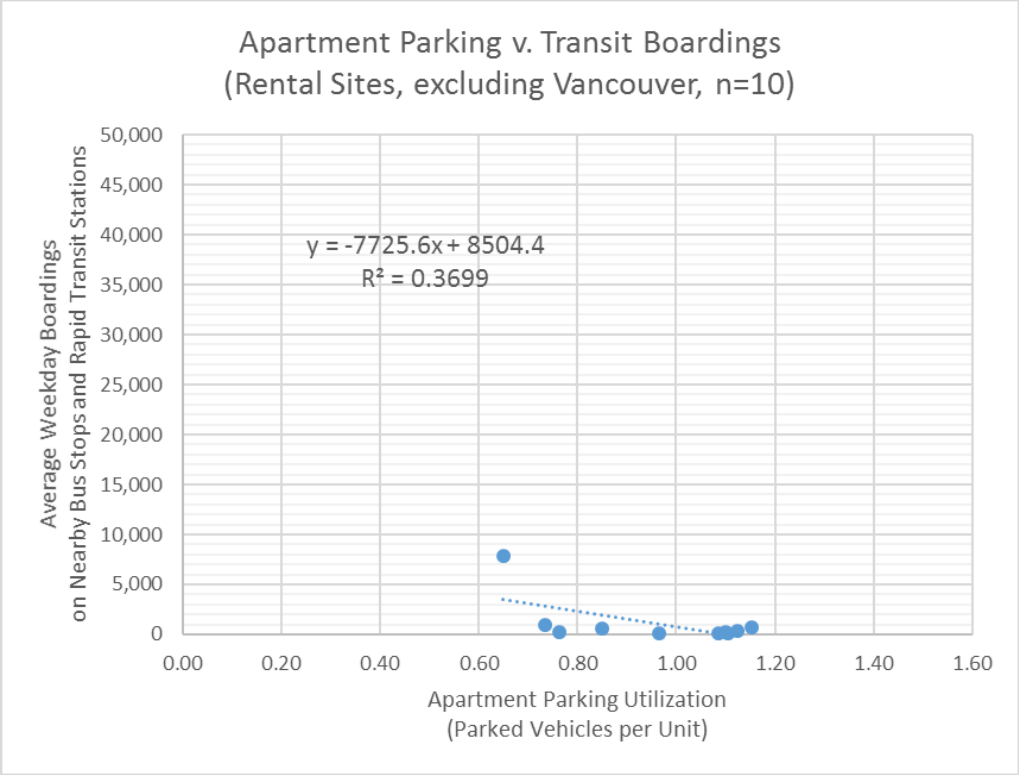


Figure 11. Apartment Parking for Rental Sites (Excluding Vancouver) and Nearby Transit Boardings

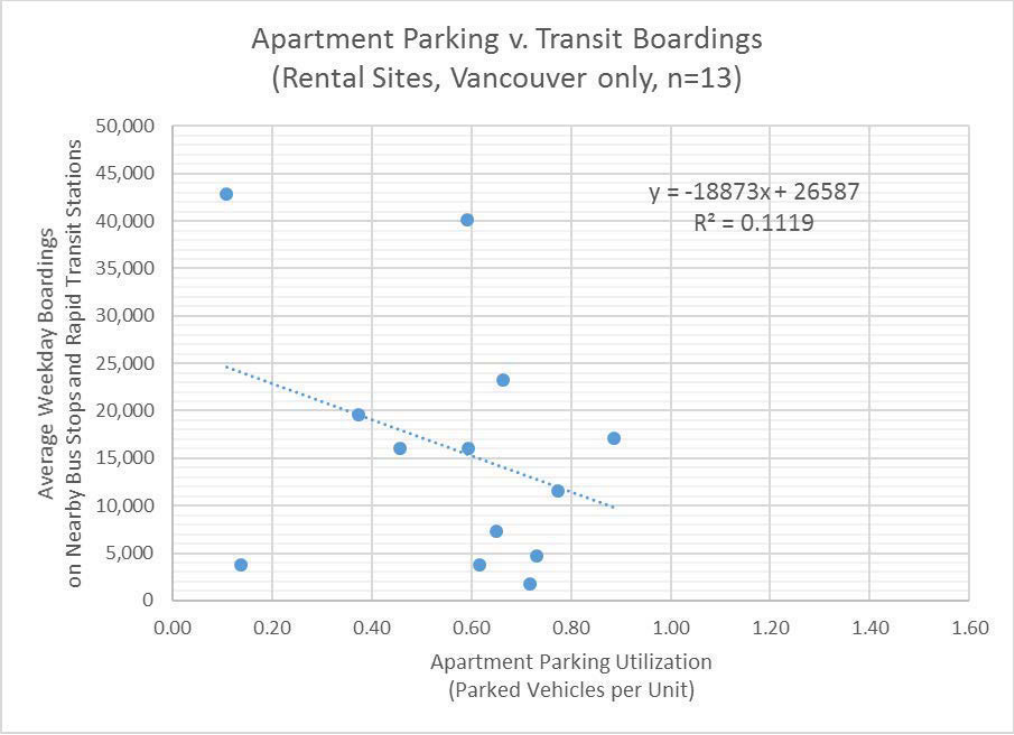


Figure 12. Apartment Parking Utilization for Rental Sites (Vancouver) and Nearby Transit Boardings

6. Street Parking Analysis

The analysis of the Street Parking Survey data was framed around the following questions:

- How does street parking utilization vary by time period?
- What is the relationship between street parking utilization and regulations?
- When do the surveyed street networks experience high street parking utilization?
- What are the potential factors affecting or associated with high street parking utilization?
- What is the relationship between street parking utilization and apartment parking utilization associated with the surveyed street networks?
- What is the relationship between rental apartment sites with optional resident parking and street parking utilization?

It should be noted that the analysis pertains to data collected on 65 street networks associated with the surveyed apartment sites. The patterns that emerged should not be extrapolated to neighbourhoods that are predominantly single-detached neighbourhoods, for example.

6.1 Street Parking Utilization Patterns

Overall, street parking utilization is higher on Saturday evenings than on weekday evenings. This finding is consistent with the expectation that during these time periods, there would typically be more visitors to apartment residents and nearby non-residential land uses. Street parking utilization on weekday late nights was the lowest at 52 percent. This finding is consistent with the expectation that visitors generally vacate these parking spaces to go home as late night approaches.

Table 32. Aggregate Street Parking Utilization by Time Period

Time Period	Total Street Parking Utilization
Weekday Evening	59%
Weekday Late Night	52%
Saturday Evening	65%

The effect of street parking regulations is seen when comparing utilization on weekday evenings and Saturday evenings[7]. Utilization increases the most for parking spaces with no restrictions (for the classification of street parking restrictions, please refer to Section 4.4, Table 5). The higher utilization on streets with restrictions is consistent with municipal practice to respond to relatively high observed parking demand with appropriate street parking restrictions to manage the demand.

Table 33. Aggregate Street Parking Utilization by Presence of Parking Restrictions and Time Period

Street Parking	Weekday Evening	Saturday Evening	Change
No restrictions	56%	63%	+7%
Restrictions	63%	67%	+4%

[7] Because some street parking restrictions are not applicable in the late night period, only the weekday evening and Saturday evening periods were compared.

6.2 High Street Parking Utilization (85% or Higher)

An oft-cited threshold for determining whether street parking spaces are being used optimally is 85 percent. Donald Shoup, a planning professor at UCLA, popularized this threshold in his 2005 book, aptly named, "The High Cost of Free Parking"[8]. The premise is that parking, like any scarce resource, should be regulated and / or priced to ensure that 15 percent of the total parking spaces in a given area are available for parking at any given time. By controlling for the level of parking, excessive congestion and frustration (on the part of drivers looking for parking) can be mitigated.[9] In the Study, street parking utilization was considered 'high' when utilization is at least 85 percent.

In each time period surveyed (i.e. weekday evening, weekday late night, and Saturday evening), the vast majority of street networks experienced less than 85 percent utilization. In fact, Saturday evening saw the largest number of high street parking networks (i.e. 11 out of 65 street networks), followed by the weekday evening (at 7), and weekday late night (at 2).

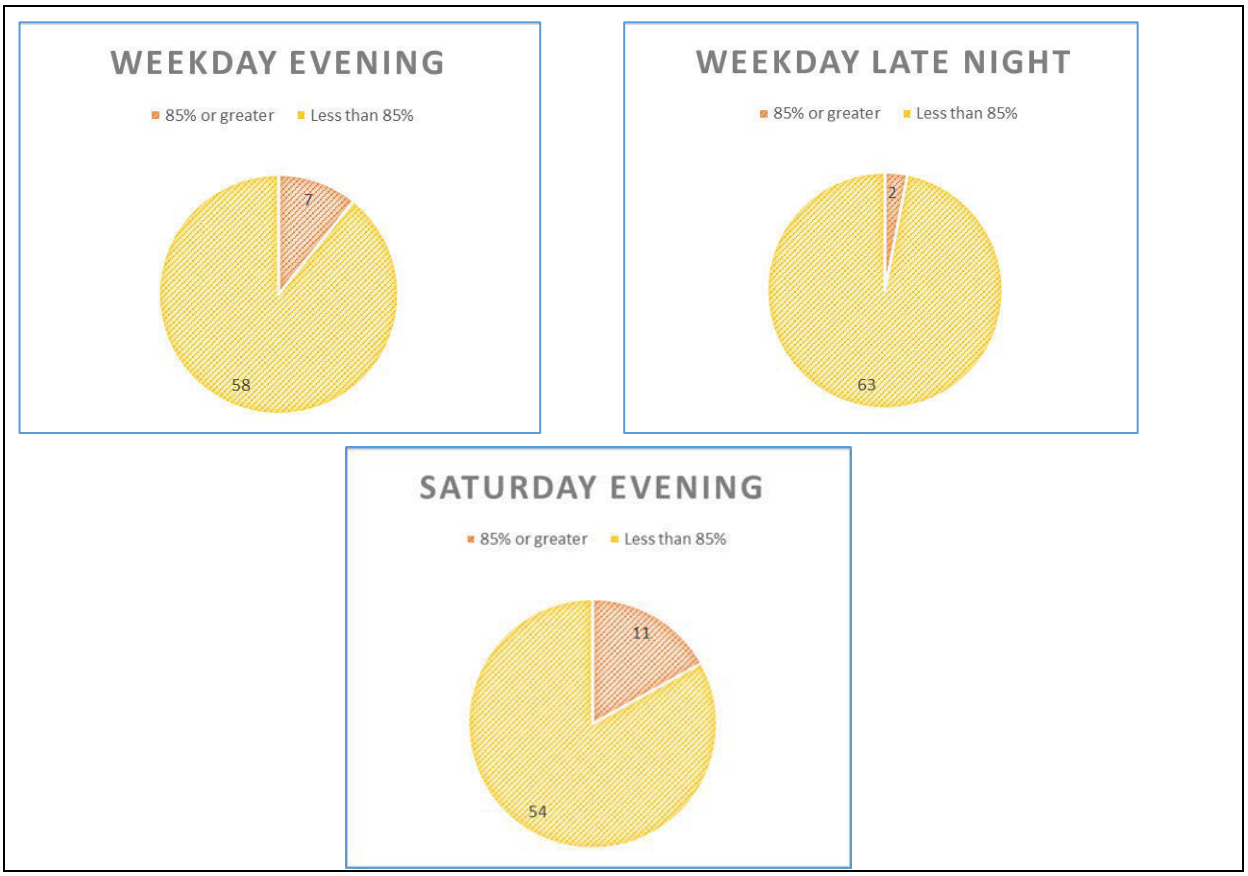


Figure 13. Occurrences and Degree of High Street Parking Utilization

[8] Shoup, D. C., & American Planning Association. (2005). *The high cost of free parking*. Chicago: Planners Press, American Planning Association.

[9] As another example of the use of the 85 percent threshold, the Port of Vancouver uses the threshold when monitoring container throughput and terminal capacity. When throughput exceeds 85 percent, then system efficiency deteriorates exponentially. When throughput approaches 85 percent, capacity expansion of a marine terminal may be warranted.

Looking deeper at the 12 street networks that exceeded 85 percent utilization once only, four street networks saw exceedances on Saturdays only, and one network saw an exceedance on a weekday evening only. Seven street networks experienced high parking utilization on two or three surveyed periods with six exceedances on a weekday evening, two exceedances on a weekday late night, and seven exceedances on a Saturday evening.

These 7 outliers, contrary to initial expectations, are located throughout the region. Based on a high-level qualitative analysis (using orthophotos) of the neighbourhood characteristics of these outliers, non-residential trip generators (e.g. restaurants, retail, parks) appear to be a common land use in these neighbourhoods; and, the overall supply of street parking may be another contributing factor. Further neighbourhood-scale analysis is warranted to develop a detailed understanding of the land use 'drivers' of street parking utilization in these affected areas, the origins of these vehicles, the trip purposes, and the parking duration.

Table 34. Street Networks Parking Exceedances

Exceedance Criteria (85% or higher)	Total Street Networks	Weekday Evening	Weekday Late Night	Saturday Evening
Exceedance in at least one surveyed time period	12	7	2	11
• Exceedance in 2 or 3 surveyed time periods	7	6	2	7
• Exceedance in 1 surveyed time period only	5	1	0	4
Less than 85% in all 3 surveyed time periods	53	58	63	54

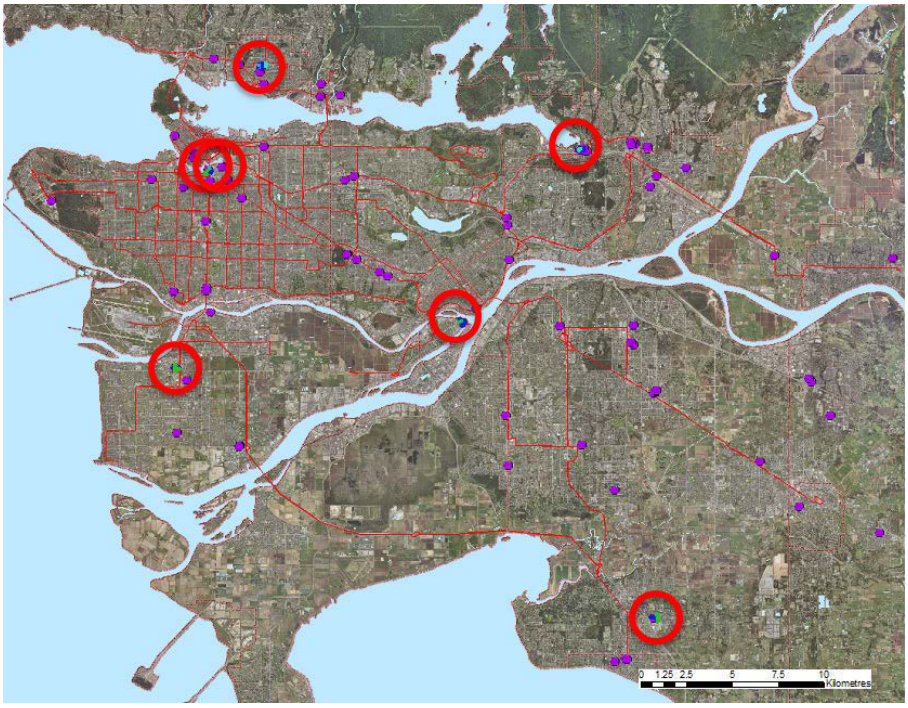


Figure 14. Street Networks with High Parking Use in Two or Three Surveyed Periods

6.3 Street Parking and Apartment Parking Utilization

The surveys did not present any clear patterns between street parking utilization and apartment parking utilization. The majority of surveyed street networks did not exceed 85 percent in any of the three surveyed time periods. For the associated apartment sites, the apartment parking utilization ranged from 39 percent to 84 percent. Five street networks exceeded 85 percent once only, and the associated apartment parking utilization ranged from 51 percent to 79 percent. Finally, seven street networks experienced persistently high utilization, and the associated apartment parking utilization ranged from 60 percent to 81 percent.

Table 35. Street Parking Utilization and Apartment Parking Utilization

Street Parking Utilization	Affected Street Networks	Apartment Parking Utilization Range
High Utilization 85% or higher in two or three surveyed periods	7	60% - 81%
Medium Utilization 85% or higher in one surveyed time period only	5	51% - 79%
Low Utilization Less than 85% in three surveyed time periods	53	39% - 84%

Three street networks had full restrictions; no parking was allowed and no parked vehicles were observed. The three associated apartment sites are located in Langley Township (strata), Port Coquitlam (strata), and Vancouver (market rental). The apartment parking utilization for these sites ranged from 73 percent to 80 percent, situating them towards the upper range of parking utilization relative to the apartment sites surveyed. Further research is warranted.

6.4 Apartment Residents and Visitors Parking on the Street

The potential impact of apartment buildings on nearby street parking is a frequently cited concern. The Household Survey provides some insights. Out of the 1,400 households that reported owning at least one vehicle, just under 300 households indicated that they usually parked on a nearby street, with the vast majority reporting they parked within a five-minute walk from their apartment building (it should be noted once again that the Household Survey does not purport to be a statistical representation of all apartment households in the region).

Table 36. Apartment Residents Parking on the Street

If you usually park on the street, typically how far do you park from your apartment building?	Number of Responses (%)
Less than a 5 minute walk	198 (13%)
Between 5 and 10 minute walk	73 (5%)
More than 10 minute walk	9 (<1%)
N/A	1,149 (81%)
Total	1,429

Apartment visitors typically encounter difficulty finding a parking space in the building's parking facility on weekends, holidays, and special occasions (Figure 15). On these days, there is much more activity in terms of people visiting friends and family living in apartment buildings and people visiting in the vicinity of these apartment sites to patronize restaurants, parks, or other activities. As shown in Figure 16, some apartment visitors end up parking on a nearby street. Further work is warranted to survey apartment visitor parking utilization on weekends and holidays.

Figure 15. Difficulty Finding Visitor Parking in the Building's Parking Facility[10]

Figure 16. Typical Parking Locations for Apartment Visitors

6.5 Street Parking and Optional Parking in Rental Apartment Sites

The findings of the 2012 Study, and the analysis from the 2018 Study, consistently showed that lower residential parking utilization and vehicle ownership are associated with rental apartment sites and smaller apartment unit sizes. However, an oft-cited interest is understanding the actual behaviour should a parking stall be available for an additional charge only. Do the residents end up parking on nearby streets?

[10] The visitor parking questions were multiple-choice questions; respondents could select all the choices that applied.

First, looking at all rental apartment types in the Parking Facility Survey dataset, both residential parking supply and utilization are consistent with expectations. Where a parking stall is not included in the rent, the apartment sites on average have a lower parking supply ratio and utilization ratio. The pattern is the same for market rental sites only.

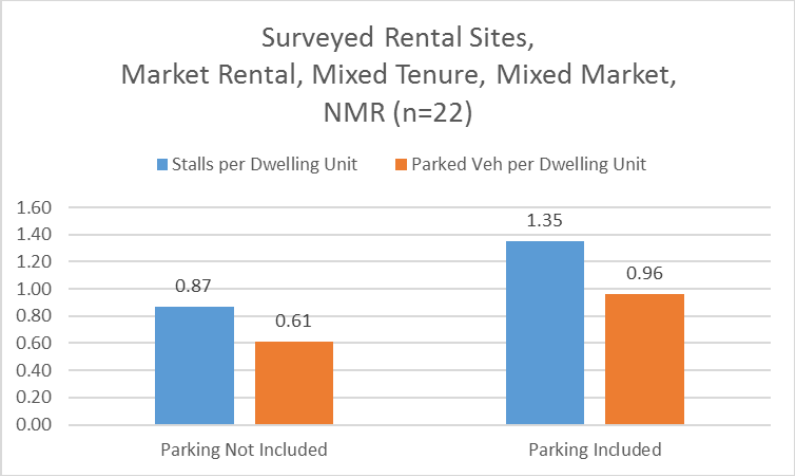


Figure 17. Comparison of Parking Supply and Utilization in Rental Sites

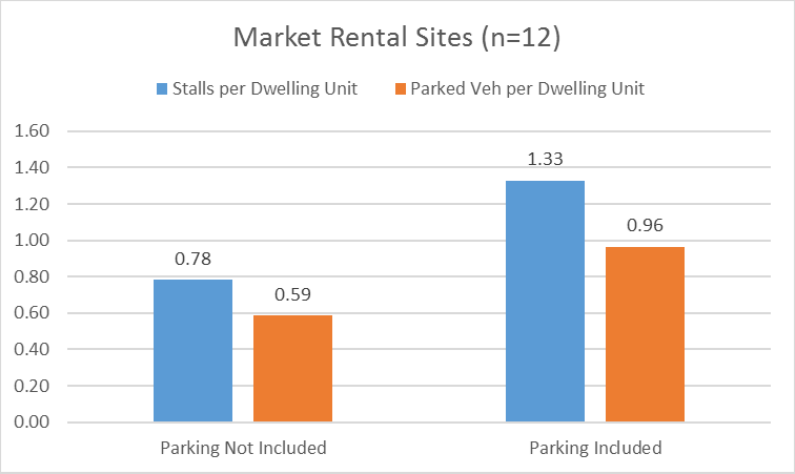


Figure 18. Comparison of Parking Supply and Utilization in Market Rental Sites

The evidence for resident spillover parking is mixed. For non-Vancouver street networks associated with rental sites where resident parking is not included in the rent, the street parking utilization is higher. Regardless, the street parking utilization on average does not approach 85 percent.

For Vancouver street networks associated with rental sites where resident parking is not included in the rent, the street parking utilization differential range is minimal. Interestingly, the relatively higher street parking utilization in Vancouver in the evening is consistent with the relatively higher number of non-residential land uses that generate visitor trips in the city relative to other suburban contexts.

Anecdotal observations from several peer municipal staff in Metro Vancouver suggest that there is a correlation between on-site visitor parking utilization and whether or not the nearby streets have regulations (i.e. where apartment sites tend to have lower facility utilization if the nearby streets are unregulated).

Table 37. Street Parking Utilization Associated with Rental Sites (Excluding Vancouver)

	Non-Vancouver street networks associated with rental apartments where…	
Time Period	**Parking is NOT included in rent**	**Parking is included in rent**
Weekday Evening	44%	41%
Weekday Late Night	49%	42%
Saturday Evening	48%	41%

Table 38. Street Parking Utilization Associated with Rental Sites (Vancouver Only)

	Vancouver street networks associated with rental apartments where…	
Time Period	**Parking NOT included in rent**	**Parking included in rent**
Weekday Evening	72%	73%
Weekday Late Night	55%	55%
Saturday Evening	68%	76%

The following tables show the same information but disaggregated by municipality and time period.

Table 39. Municipal-Level Street Parking Utilization Associated with Rental Sites (Weekday Evening)

All Rental Types	**Weekday Evening, Street Parking Average Utilization**	
Municipality (# street networks)	**Parking NOT included in rent**	**Parking included in rent**
Langley City (1)	-	52%
Langley Township (2)	-	46%
North Vancouver District (2)	51%	-
Port Coquitlam (1)	-	43%
Richmond (2)	26%	-
Surrey (1)	-	9%
Vancouver (13)	72%	73%
Total (22)	68%	52%

Table 40. Municipal-Level Street Parking Utilization Associated with Rental Sites (Weekday Late Night)

All Rental Types	Weekday Late Night, Street Parking Average Utilization	
Municipality (# street networks)	**Parking NOT included in rent**	**Parking included in rent**
Langley City (1)	-	65%
Langley Township (2)	-	41%
North Vancouver District (2)	61%	-
Port Coquitlam (1)	-	41%
Richmond (2)	18%	-
Surrey (1)	-	16%
Vancouver (13)	55%	55%
Total (22)	55%	47%

Table 41. Municipal-Level Street Parking Utilization Associated with Rental Sites (Saturday Evening)

All Rental Types	Saturday Evening, Street Parking Average Utilization	
Municipality (# street networks)	**Parking NOT included in rent**	**Parking included in rent**
Langley City (1)	-	67%
Langley Township (2)	-	40%
North Vancouver District (2)	59%	-
Port Coquitlam (1)	-	37%
Richmond (2)	21%	-
Surrey (1)	-	15%
Vancouver (13)	68%	76%
Total (22)	66%	53%

7. Other Analysis

The Household Survey provides additional information about issues pertinent to apartment residents, such as bicycle parking, interest in plug-in electric vehicles, and willingness to forgo a parking stall.

7.1 Bicycle Parking

For households with bicycles, about one-third do not use their building's secured bicycle parking facility. The rate of usage is consistent across different building ages. The top reasons reported were concerns about the potential for the bicycles to be stolen or damaged, that the bicycle parking facility was too crowded, and adverse perceptions of safety and convenience. These sentiments are consistent with those expressed in the 2012 Study.

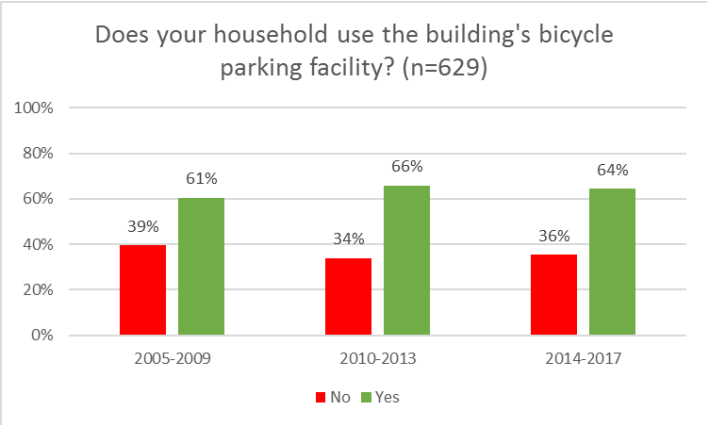


Figure 19. Use the Building's Bicycle Parking Facility by Year Built of Building

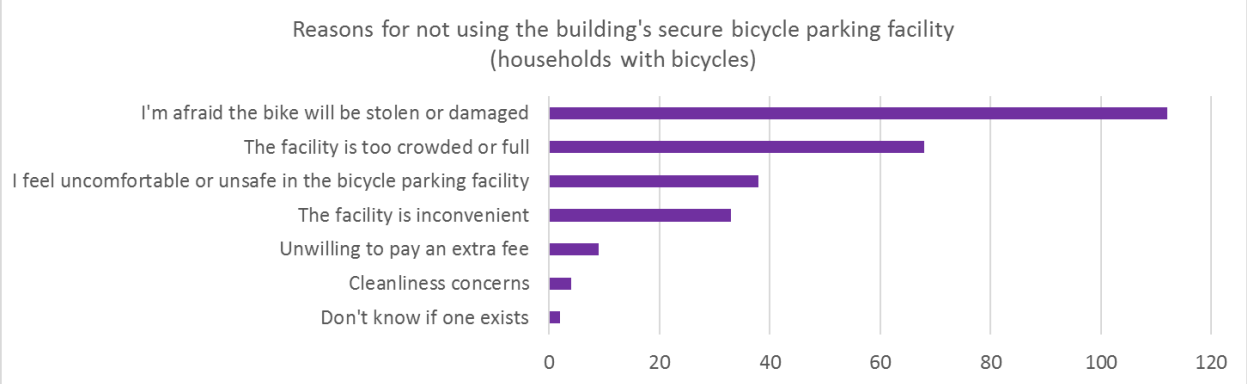


Figure 20. Reasons for Not Using the Building's Bicycle Parking Facility

One way of understanding and appreciating these sentiments is to consider a counterfactual scenario: i.e. what if one in three households in an apartment building chose not to park their car or truck in the building's parking facility for the same reasons. A scenario like this would never become a recurring problem, otherwise the entire apartment development industry would suffer public outrage. These design problems would be mitigated during the planning stage of an apartment project. From a policy and practice perspective, the same care and attention that is paid to accommodating cars and trucks could easily be applied to the provision of convenient, capacious, and secure bicycle parking facilities in new apartment developments.

7.2 Presence of Electric Vehicle Charging Infrastructure

The provision of public electric vehicle charging infrastructure around the region has been increasing steadily. Some municipalities in the region are now requiring new apartment projects to have the electrical infrastructure in place to facilitate installation of charging equipment by building occupants. Other apartment sites are retrofitting their buildings with appropriate electricity capacity and the parking stalls with charging equipment.

The Household Survey shows that the presence of electric vehicle charging appears to be associated with a slightly higher share of residents expressing a likelihood to consider buying a plug-in electric vehicle within the next five years. [11] This is potential evidence that is consistent with prior research indicating that investments or requirements aimed at increasing the availability of home charging infrastructure could have a greater impact on plug-in electric vehicle adoption than those that focus on public charging infrastructure.[12] It should be noted that the effect of self-selection cannot be ruled out – i.e. residents who may already have an interest in buying a plug-in electric vehicle may have chosen an apartment building because of the presence of charging infrastructure.

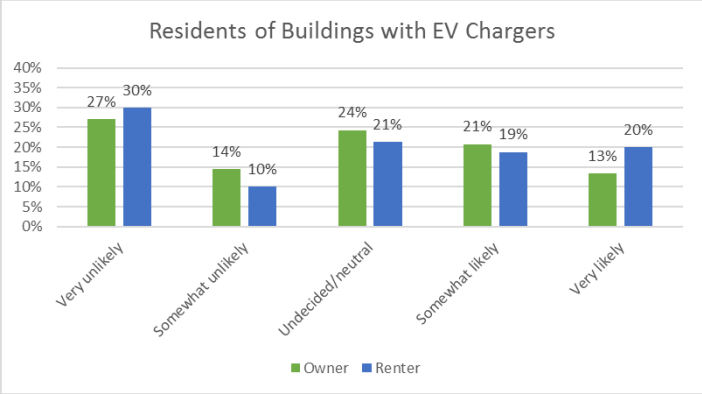


Figure 21. Likelihood to Considering Purchasing a Plug-In Electric Vehicle (Buildings with EV Chargers)

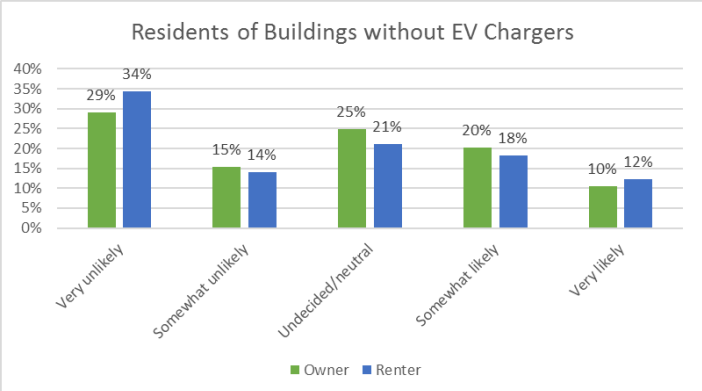


Figure 22. Likelihood to Considering Purchasing a Plug-In Electric Vehicle (Buildings without EV Chargers)

[11] Statistical significance was not evaluated.

[12] Bailey, J., Miele, A., & Axsen, J. (2015). Is awareness of public charging associated with consumer interest in plug-in electric vehicles? *Transportation Research Part D*. Volume 36: 1-9.
Retrieved from www.sciencedirect.com /science/article/pii/S1361920915000103

7.3 Willingness to Forgo a Parking Stall

The Household Survey asks residents if provided the opportunity, would they have purchased or rented their current apartment without a parking stall, if it meant having a lower purchase price or rent. For zero vehicle households, 34 percent would not be willing to make that trade-off. A sizable portion (42 percent) was unsure and 25 percent responded in the positive. Compared to the 2012 Study, there is a decrease in the affirmative (from 36 percent) and increase in the uncertainty (from 30 percent) in the results of the 2018 Study.

For households having at least one vehicle, the response was consistent with the 2012 Study: i.e. a vast majority (83 percent) would not forgo a parking stall.

Table 42. Strata Households and Willingness to Forego Parking Stalls

	Willingness to Forego Parking Stalls		
Household Type (Strata Sites)	**No**	**Maybe/Unsure**	**Yes**
Zero vehicles (n=65)	34%	42%	25%
1 or more vehicles (n=1,120)	83%	14%	3%

For households in other building tenures, the responses were consistent with expectation. Generally, a simple majority of zero vehicle households would be willing to forgo a parking stall. For households with vehicles, a majority answered in the negative.

Table 43. Non-Strata Households and Willingness to Forego Parking Stalls

	Willingness to Forego Parking Stalls		
Household Type (Market Rental, Mixed Tenure, Mixed Rental, Non-Market Rental Sites)	**No**	**Maybe/Unsure**	**Yes**
Zero vehicles (n=68)	21%	25%	54%
1 or more vehicles (n=314)	68%	22%	9%

8. Looking Ahead

Through this Study, a number of opportunities have arisen to expand regional efforts to investigate parking-related matters. These and other opportunities can be expanded and refined. TransLink and Metro Vancouver staff can offer research support as appropriate.

8.1 Shared Use Parking Opportunities

While the opportunities to consolidate parking supplies may face near-term security, wayfinding, and legal difficulties, local governments can explore opportunities to encourage the shared-use of parking. Local governments can explore ways to help building managers make sharing easier and address security (like with third-party apps and security audits). Similarly, local governments, in collaboration with professional architecture, development, and parking associations, can explore how to design 'shared-use' access controls into future parking facilities. These access controls can enable nearby parking demands to be accommodated. The value proposition could be the potential revenue-generating potential for an apartment building's strata or property manager, or group of nearby apartment buildings, for example.

8.2 Mobility Trends, Consumer Preferences, and an Aging Population

Mobility trends can be difficult to forecast. At the top of many people's minds is autonomous vehicles and the implications for vehicle ownership, congestion, and parking demand. Since the impact of self-driving passenger and commercial vehicles may not be witnessed for a number of years, it is worth spending time to think about those transportation services and technology on the road today, such as car sharing and bike sharing. A better of understanding of broader transportation demand management provisions on parking utilization and vehicle ownership can help improve or validate parking requirements in new residential or commercial developments (see, for example, the 2014 Metro Vancouver Car Share Study).

Also, in the near term, the introduction of ride-hailing as a long-term transportation option will necessitate a different approach to allocating, regulating, and managing curb parking spaces, especially in busy corridors where a compendium of transportation modes may converge and create congestion and safety hotspots.

Consumer preference is equally difficult to forecast. Despite greater attention to fluctuating gasoline prices, larger passenger vehicles (i.e. sport utility vehicles and trucks) are increasingly popular with Canadian consumers. With the acceleration of electric vehicle production in recent years, including e-SUVs and up-and-coming e-trucks, the interest and preference for these larger passenger vehicles may increase. Further investigation towards larger parking standard dimensions for these vehicles may be warranted. Similarly, an aging population will necessitate reviews of how accessibility can be better accommodated in new and existing developments.

Local governments may need to investigate the street parking supply and management implications of not only larger passenger vehicles, but also large commercial vehicles owned or operated by apartment residents that cannot be readily accommodated in parking facilities.

Should vehicle ownership decline in absolute terms, the adaptive reuse of parking facilities could be an opportunity for local governments to explore. For example, the reallocation of space to expand and improve bicycle parking facilities can increase resident usage and satisfaction.

8.3 Monitoring and Managing Street Parking Supply and Utilization

The deployment of automated licence plate reading technology is an emerging tool to inventory street parking utilization. Several local governments in the region have deployed the technology. The data can be useful to support local government understanding of the magnitude of parking utilization, and the nature of utilization – whether vehicles are being parked for excessively long periods of time, and whether parked vehicles originate from a nearby home, within the neighbourhood, or elsewhere. The large-scale deployment of this technology may be warranted in order to create an inventory of on-street utilization, various parking regulations across the region, and origin-destination data of parked vehicles when cross-referenced with ICBC vehicle licensing data.

Associated with street parking monitoring is the management of the demand through dynamic pricing. Dynamic street parking pricing based on congestion levels or other criteria may be an opportunity to shape driving demand, but also to promote fair access to a scarce resource (parking) in popular destinations.

8.4 Commercial and Institutional Parking

Commercial and Institutional parking issues (i.e. hospital precincts, place of worship, etc.) remain a consistent interest of local governments. Given the significant trip-attraction that commercial and institutions (e.g. universities, hospitals) create between staff and visitors, it is appropriate to venture further into the utilization of these non-residential (but often mixed-use) land use contexts.

9. Conclusions

The findings of the 2018 Regional Parking Study largely corroborate those in the 2012 Apartment Parking Study, and includes new insights about street parking supply and utilization. Apartment parking supply remains excessive relative to observed utilization. Apartment buildings close to frequent transit, whether or bus or SkyTrain, appear to have lower parking supply and utilization. The lower rates of parking utilization are associated with higher transit use as measured by the number of transit boardings near the buildings, and this relationship is stronger for rental apartment sites.

Street parking is inherently complex. Some of the factors contributing to street parking use include visitors to non-residential land uses, such as restaurants, shops, and parks; apartment visitors on weekends, holidays, and special occasions; and some apartment residents parking on the street. Even with these factors, only a handful of surveyed street networks experienced persistently high street parking utilization (exceeding 85 percent utilization on two or three of the surveyed time periods).

Finally, the 2018 Regional Parking Study highlights a challenge that remains unchanged from the 2012 Study. The design and capacity of current bicycle parking facilities in apartment buildings are discouraging their use by many residents.

The findings reveal opportunities to 'right size' the amount of parking in apartment buildings for both motorized vehicles and bicycles, and highlight the opportunity to treat on-site and on-street parking as a system.

Looking ahead, practitioners and policymakers should be mindful of evolving mobility choices, technology, and consumer preferences, and the potential implications for vehicle ownership, parking demand, and parking requirements in apartment buildings, on streets, and in other building structures. TransLink and Metro Vancouver will continue to look for opportunities to undertake and support research related to parking in accordance with regional policies, and to support the efforts of member jurisdictions to coordinate land use and transportation decisions.

Appendix 1: Apartment Sites

Local Jurisdiction	Building Name	Building Address	Included in Parking Facility Survey	Included in Household Survey
Burnaby	Jewel I	6188 Wilson Ave	Yes	Yes
Burnaby	Jewel II	6168 Wilson Ave	Yes	Yes
Burnaby	MacPherson Walk North	5788 SIDLEY ST	Yes	Yes
Burnaby	Metroplace	6461 Telford Ave	Yes	Yes
Burnaby	Stratus at Solo District	2008 Rosser Ave	Yes	Yes
Burnaby	Tandem	4182 Dawson St	Yes	Yes
Burnaby	V2	5288 Beresford Street	Yes	Yes
Coquitlam	Celadon	3102 Windsor Gate	Yes	Yes
Coquitlam	Cora Towers - 555 Delestre Ave	555 Delestre Ave	Yes	Yes
Coquitlam	Cora Towers - 575 Delestre Ave	575 Delestre Ave	Yes	Yes
Coquitlam	Encore	511 Rochester Ave	Yes	Yes
Coquitlam	Grand Central 1	2978 Glen Drive	Yes	Yes
Coquitlam	Grand Central 2	2968 Glen Drive	Yes	Yes
Coquitlam	Grand Central 3	2975 Atlantic Ave	Yes	Yes
Coquitlam	M Three	1188 Pinetree Way	Yes	Yes
Coquitlam	Thomas House	1150 Kensal Place	Yes	Yes
Delta	Delta Rise	11967 80th Avenue	Yes	Yes
Langley City	Encore Apartments	19899 55A Ave	Yes	Yes
Langley Township	Hawthorne	8915 202 St	Yes	Yes
Langley Township	Lexington Court Apartments	4871 221 Street	Yes	Yes
Langley Township	The Village at Thunderbird Centre	20159 88 Ave	Yes	Yes
Langley Township	Yorkson Grove Rentals	8026 207 Street	Yes	Yes
Maple Ridge	Urbano - 12238 224 St	12238 224 St	Yes	Yes
Maple Ridge	Urbano - 12248 224 St	12248 224 St	Yes	Yes
New Westminster	Anvil	200 KEARY ST	Yes	Yes
New Westminster	Duo B	215 Brookes St	Yes	Yes
New Westminster	Marinus at Plaza 88	888 Carnarvon St	Yes	Yes
New Westminster	Azure 1 at Plaza 88	898 Carnarvon St	Yes	No
New Westminster	Azure 2 at Plaza 88	892 Carnarvon St	Yes	No
North Vancouver City	Mira in the Park	683 VICTORIA PK W	Yes	Yes
North Vancouver City	NOMA	728 West 14th Street	Yes	Yes
North Vancouver City	Orizon	221 3rd St E	Yes	Yes
North Vancouver City	Vista Place - 1301 Civic Place Mews	1301 Civic Place Mews Blvd	Yes	Yes
North Vancouver City	Vista Place - 1303 Civic Place Mews	1303 Civic Place Mews Blvd	Yes	Yes
North Vancouver City	Vista Place - 1305 Civic Place Mews	1305 Civic Place Mews Blvd	Yes	Yes
North Vancouver City	Vista Place - 1309 Civic Place Mews	1309 Civic Place Mews Blvd	Yes	Yes
North Vancouver City	Vista Place - 1313 Civic Place Mews	1313 Civic Place Mews Blvd	Yes	Yes
North Vancouver City	Vista Place - 1317 Civic Place Mews	1317 Civic Place Mews Blvd	Yes	Yes
North Vancouver City	Vista Place - 1320 Chesterfield	1320 CHESTERFIELD AVE	Yes	Yes
North Vancouver City	Vista Place - 1321 Civic Place Mews	1321 Civic Place Mews Blvd	Yes	Yes
North Vancouver City	Vista Place - 1322 Chesterfield	1322 CHESTERFIELD AVE	Yes	Yes
North Vancouver City	Vista Place - 1324 Chesterfield	1324 CHESTERFIELD AVE	Yes	Yes
North Vancouver City	Vista Place - 1325 Civic Place Mews	1325 Civic Place Mews Blvd	Yes	Yes
North Vancouver City	Vista Place - 1326 Chesterfield	1326 CHESTERFIELD AVE	Yes	Yes
North Vancouver City	Vista Place - 1328 Chesterfield	1328 CHESTERFIELD AVE	Yes	Yes

Local Jurisdiction	Building Name	Building Address	Included in Parking Facility Survey	Included in Household Survey
North Vancouver City	Vista Place - 1329 Civic Place Mews	1329 Civic Place Mews Blvd	Yes	Yes
North Vancouver City	Vista Place - 158 13th	158 13TH ST W	Yes	Yes
North Vancouver City	Vista Place - 160 13th	160 13th ST W	Yes	Yes
North Vancouver City	Vista Place - 162 13th	162 13th ST W	Yes	Yes
North Vancouver City	Vista Place - 164 13th	164 13th ST W	Yes	Yes
North Vancouver City	Vista Place - 166 13th	166 13th ST W	Yes	Yes
North Vancouver City	Vista Place - 168 13th	168 13th ST W	Yes	Yes
North Vancouver City	Vista Place - 170 13th	170 13th ST W	Yes	Yes
North Vancouver City	Vista Place - 172 13th	172 13th ST W	Yes	Yes
North Vancouver City	Vista Place - 174 13th	174 13th ST W	Yes	Yes
North Vancouver Dist	Beacon Tower, Seylynn Village	1550 Fern St	Yes	Yes
North Vancouver Dist	Lynn Creek Apartments	1561 Oxford Street	Yes	Yes
North Vancouver Dist	Northwoods Village	2151 Front Street	Yes	Yes
North Vancouver Dist	The Drive	1330 Marine Drive	Yes	Yes
Pitt Meadows	Keystone	12350 Harris Road	Yes	Yes
Port Coquitlam	Meridian Village	3156 Coast Meridian	Yes	Yes
Port Coquitlam	Shaughnessy East	2478 Shaughnessy St	Yes	Yes
Port Coquitlam	Shaughnessy West	2330 Wilson Ave	Yes	Yes
Port Coquitlam	The Shaughnessy	2789 Shaughnessy Street	Yes	Yes
Port Moody	Inglenook	801 Klahanie Drive	Yes	Yes
Port Moody	The Residences at Suter Brook	301 Capilano Rd	Yes	Yes
Port Moody	Tides - 300 Klahanie	300 KLAHANIE DR	Yes	Yes
Port Moody	Tides - 400 Klahanie	400 KLAHANIE DR	Yes	Yes
Port Moody	Tides - 500 Klahanie	500 KLAHANIE DR	Yes	Yes
Richmond	Azalea at the Gardens	10880 No. 5 Rd	Yes	Yes
Richmond	Camellia at the Gardens	10820 No. 5 Road	Yes	Yes
Richmond	Circa Residences	10020 Dunoon Dr	Yes	Yes
Richmond	Magnolia at the Gardens	12339 Steveston Hwy	Yes	Yes
Richmond	Modena - 6600 Cooney	6600 COONEY RD	Yes	Yes
Richmond	Modena - 6611 Eckersley	6611 ECKERSLEY RD	Yes	Yes
Richmond	Parc Riviera - 10033 River Drive	10033 River Drive	Yes	No
Richmond	Parc Riviera - 10155 River Drive	10155 River Drive	Yes	No
Richmond	Parc Riviera - 10119/10133 River Dr	10119/10133 River Drive	Yes	No
Richmond	Parc Riviera - 10011 River Drive	10011 River Drive	Yes	Yes
Richmond	Quintet Tower A	7988 Ackroyd Rd	Yes	No
Richmond	Quintet Tower B	7979 Firbridge Way	Yes	No
Richmond	Quintet Tower C	7733 Firbridge Way	Yes	No
Richmond	Quintet Tower D	7788 Ackroyd Rd	Yes	Yes
Richmond	Quintet Tower E	7888 Ackroyd Rd	Yes	No
Surrey	Ascend	15956 86A Ave	Yes	Yes
Surrey	Calera - 18818 68th	18818 68th Ave	Yes	Yes
Surrey	Calera - 6758 188th	6758 188 St	Yes	Yes
Surrey	Compass - 6815 188 St	6815 188 Street	Yes	Yes
Surrey	Compass - 18755 68 Ave	18755 68 Avenue	Yes	Yes
Surrey	D'Cor B	10455 University Dr	Yes	Yes
Surrey	G3 Residences - 10455 154 St	10455 154 St	Yes	Yes
Surrey	G3 Residences - 10477 154 St	10477 154 St	Yes	Yes

Local Jurisdiction	Building Name	Building Address	Included in Parking Facility Survey	Included in Household Survey
Surrey	G3 Residences - 15388 105 Ave	15388 105 Ave	Yes	Yes
Surrey	Greenwood Townhouses	7247 140 St	Yes	Yes
Surrey	Kingston Gardens I	15243 99 Ave	Yes	Yes
Surrey	Kingston Gardens II	15315 99 Ave	Yes	Yes
Surrey	Kingston Gardens III	9977 154 St	Yes	Yes
Surrey	Kingston Gardens IV	15328 100 Ave	Yes	Yes
Surrey	Lumina	14885 60 Ave	Yes	Yes
Surrey	Monterosso	8695 160 St	Yes	Yes
Surrey	Park Central	14333 104 Ave	Yes	Yes
Surrey	Salus - 6628 120 St	6628 120 Street	Yes	Yes
Surrey	Salus - 6688 120 St	6688 120 Street	Yes	Yes
Surrey	Summit House, Morgan Crossing	15850 26 Ave	Yes	Yes
Surrey	Vernazza	8717 160 St	Yes	Yes
UBC	Keenleyside	5788 Birney Ave	Yes	Yes
Vancouver	600 Drake	600 Drake Street	Yes	Yes
Vancouver	Alexandra	1221 Bidwell St	Yes	Yes
Vancouver	Aria	488 41st Avenue	Yes	Yes
Vancouver	Boheme - 1588 Hastings	1588 Hastings St E	Yes	Yes
Vancouver	Boheme - 411 Woodland	411 Woodland Drive	Yes	Yes
Vancouver	Boheme - 413 Woodland	413 Woodland Drive	Yes	Yes
Vancouver	Boheme - 415 Woodland	415 Woodland Drive	Yes	Yes
Vancouver	Boheme - 417 Woodland	417 Woodland Drive	Yes	Yes
Vancouver	Boheme - 419 Woodland	419 Woodland Drive	Yes	Yes
Vancouver	Boheme - 421 Woodland	421 Woodland Drive	Yes	Yes
Vancouver	Boheme - 423 Woodland	423 Woodland Drive	Yes	Yes
Vancouver	Boheme - 425 Woodland	425 Woodland Drive	Yes	Yes
Vancouver	Bosa False Creek	180 Switchmen Street	Yes	Yes
Vancouver	Compass	123 West 1st Avenue	Yes	Yes
Vancouver	Empire at QE - 4539 Cambie	4539 Cambie St	Yes	Yes
Vancouver	Empire at QE - 505 30th Ave	505 30th Ave W	Yes	Yes
Vancouver	Empire at QE - 508 29th Ave	508 29th Ave W	Yes	No
Vancouver	False Creek Residences	75 West 1st Ave	Yes	Yes
Vancouver	Granville & 70th - 8488 Cornish	8488 Cornish St	Yes	Yes
Vancouver	Granville & 70th - 8555 Granville	8555 Granville St	Yes	Yes
Vancouver	Granville & 70th - 8588 Cornish	8588 Cornish St	Yes	Yes
Vancouver	Lido	110 Switchmen St	Yes	Yes
Vancouver	Linden Tree Place	2304 8 Avenue West	Yes	Yes
Vancouver	Marine Gateway - 488 Marine Dr	488 Marine Dr SW	Yes	Yes
Vancouver	Marine Gateway - 489 Interurban	489 Interurban Way	Yes	Yes
Vancouver	MC2 Apartments - 8103 Nunavut Ln	8103 Nunavut Lane	Yes	Yes
Vancouver	MC2 Apartments - 8105 Nunavut Ln	8105 Nunavut Lane	Yes	Yes
Vancouver	MC2 Apartments - 8107 Nunavut Ln	8107 Nunavut Lane	Yes	Yes
Vancouver	MC2 Apartments - 8109 Nunavut Ln	8109 Nunavut Lane	Yes	Yes
Vancouver	MC2 Apartments - 8111 Nunavut Ln	8111 Nunavut Lane	Yes	Yes
Vancouver	MC2 Apartments - 8115 Nunavut Ln	8115 Nunavut Lane	Yes	Yes
Vancouver	MC2 Apartments - 8117 Nunavut Ln	8117 Nunavut Lane	Yes	Yes
Vancouver	MC2 Apartments - 8119 Nunavut Ln	8119 Nunavut Lane	Yes	Yes

Local Jurisdiction	Building Name	Building Address	Included in Parking Facility Survey	Included in Household Survey
Vancouver	MC2 Apartments	8101 Nunavut Lane	Yes	Yes
Vancouver	MC2 South	8131 Nunavut Lane	Yes	Yes
Vancouver	Mondella	688 17th Ave E	No	Yes
Vancouver	Parcel 5	122 Walter Hardwick Ave	No	Yes
Vancouver	Parcel 9	80 Walter Hardwick Ave	No	Yes
Vancouver	Residences on Seventh	228 East 7th Avenue	Yes	Yes
Vancouver	Sails	1661 Ontario St	Yes	Yes
Vancouver	Strathearn Court - 1873 Spyglass	1873 Spyglass Place	Yes	Yes
Vancouver	Strathearn Court - 1893 Spyglass	1893 Spyglass Place	Yes	Yes
Vancouver	The Rise	485 8th Avenue West	Yes	Yes
Vancouver	The Skyline	1305 West 12th Avenue	Yes	Yes
Vancouver	The Standard	1142 Granville Street	Yes	Yes
White Rock	Miramar Tower A	15152 Russell Ave	Yes	Yes
White Rock	Miramar Tower B	1473 Johnston Road	Yes	Yes
White Rock	Royce	14855 Thrift Ave	Yes	Yes

Appendix 2: Household Survey Form

Metro Vancouver 2017 Regional Parking Study

Metro Vancouver (the Metro Vancouver Regional District) in partnership with TransLink are conducting a study of multi-unit residential buildings regarding vehicle and bike parking usage. Your household has been selected to be part of this important study. The study will provide information to municipalities and developers on the appropriate amount of vehicle and bike parking supply for new multi-unit residential developments. We appreciate your participation, and all responses will be kept confidential. **Please complete by January 31, 2018.**

We recommend completing this questionnaire online at: www.MVParking.ca/survey

If you wish to complete the paper questionnaire, please mail the questionnaire to:
Acuere Consulting
Suite 301 – 4475 Wayburne Drive
Burnaby, BC, V5G 4X4
Attention: "Parking Study"

metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

TRANSLINK

i. **ACCESS CODE** (see introductory letter) ☐☐–☐☐☐☐☐☐–☐☐☐

ii. **Building Name & Address:** _____ **Unit #:**_____

RESIDENT VEHICLE PARKING

1. **How many vehicles does your household own or lease (not including car share program)?** ☐
   (Please include all cars, vans or light trucks that are brought home and parked overnight, but not motorcycles, scooters, or bicycles.)

2. **Where do you usually park your vehicle(s) overnight? Please note number of vehicles:**
   Vehicles in my building's parking facility (parking lot or garage). ☐
   Vehicles in a nearby off-street parking facility (parking lot or garage). ☐
   Number of vehicles I park on the street near my building. ☐
   If you usually park on the street, typically how far do you park from your building?
   ☐ Less than a 5 min walk ☐ Between 5 and 10 min walk ☐ More than 10 min walk

3. **If you OWN your apartment/townhouse, how many of your parking space(s) in the building are:**
   ☐ Included in the unit purchase price ☐ Purchased for an extra fee Purchase cost? $_____ ☐ Rented for an extra fee Cost per month?$_____ ☐ I don't have any parking

4. **If you RENT your apartment/townhouse, how many of your parking space(s) in the building are:**
   ☐ Included in the unit rent ☐ Rented for an extra fee. Cost per month? $_____ ☐ I don't have any parking

5. **How many of your parking spaces in the building do you rent out to other people?** ☐
   How much do you charge per month? $_____

6. **If provided the opportunity, would you have purchased/rented your current apartment/townhouse without a parking stall, if it meant having a lower purchase/rental price for your unit?**
   ☐ Yes ☐ Maybe/unsure ☐ No

Page 1 of 2

Metro Vancouver Regional Parking Study – continued

VISITOR VEHICLE PARKING

7. A. Typically, where do your visitors park? (Select all that apply)

- ☐ In my building's designated visitor parking area
- ☐ In one of the stalls I own/rent in my building
- ☐ On the street near building (paid)
- ☐ On the street near building (free)
- ☐ Nearby parking facility
- ☐ Not applicable – I don't have visitors who need to park at my building (skip to question 8)

B. Typically, when is it difficult for your visitors to find parking in your building's parking facility? (Check all that apply)

- ☐ Weekdays
- ☐ Weekends
- ☐ Holidays and Special Occasions
- ☐ Never
- ☐ Not applicable

BICYCLE PARKING

8. Does your building have secure bike parking? (ie: bike racks in a locked room/cage or bike racks in a designated parking stall)

☐ Yes ☐ No ☐ I don't know

9. A. How many bicycles does your household own? _____If you do not have any bicycles skip to question 10.

B. Does your household use the building's bicycle parking facility?

☐ **Yes**
- ☐ Because it's a good facility
- ☐ Because the strata requires me to

☐ **No (select all that apply)**
- ☐ It's too crowded or full
- ☐ I'm afraid the bike will be stolen or damaged
- ☐ I feel uncomfortable or unsafe in the build's bike parking facility
- ☐ It's inconvenient
- ☐ Other, please specify _____

HOUSEHOLD INFORMATION

10. How many bedrooms are in your apartment/townhouse?

☐ 0 (bachelor/studio) ☐ 1 ☐ 2 ☐ 3 ☐ 4 or more

11. How large is your apartment/townhouse (excluding balcony/patio)?

- ☐ Under 400 sq ft
- ☐ 400-499 sq ft
- ☐ 500-599 sq ft
- ☐ 600-699 sq ft
- ☐ 700-799 sq ft
- ☐ 800-899 sq ft
- ☐ 900-999 sq ft
- ☐ 1,000-1,099 sq ft
- ☐ 1,100-1,199 sq ft
- ☐ 1,200-1,299 sq ft
- ☐ 1,300 and higher sq ft
- ☐ Unsure

12. How many people in your household are within the following groups (note numbers)?

Ages 0-5 years _____ Ages 6-18_____ Ages 19-64_____ Ages 65+_____

13. Metro Vancouver and TransLink are conducting research to better understand the demand for electric vehicles. How likely are you to consider buying a plug-in electric vehicle within the next five years?

☐ Very Unlikely ☐ Somewhat unlikely ☐ Undecided/neutral ☐ Somewhat likely ☐ Very likely

14. Any additional comments:

THANK YOU FOR COMPLETING THE QUESTIONNAIRE!

Page 2 of 2

Appendix 3: Current Municipal Apartment Parking Requirements

Updated September 2018

		Residential Parking Requirements (Stalls per Dwelling Unit)					
Municipality	**Notes**	**0BR**	**1BR**	**2BR**	**3+BR**	**Visitor**	**Link**
Burnaby	Apartments in C8 and C8A Districts (Urban Village Commercial)	1.0				N/A	Bylaw Page 4
	Apartments - Multi family dwellings w/ access via common corridor	1.6				0.25	
	Apartments in RM2s, RM4s, RM5s (Multiple Family Residential Districts)	1.6. Potentially reduced down to 1.1 after application of density bonus				0.25	
	Apartments not for profit housing or gov't assistance	1.5				0.2	
Coquitlam	Apartments (Except purpose- built rental)	1.0 (studio)	1.0	1.5	1.5	0.2	Bylaw Page 7-6
	Apartments with Evergreen Line Core and Shoulder Station Areas	1.0 (studio)	1.0	1.35	1.35		
		0.5 per unit containing a lock-off unit					
	Apartments in non-market housing and below-market rental	1.0					
Delta	Apartments	1.5				0.2	Bylaw Page 306
Langley City	Multi-Unit Residential RM1	N/A	1.5	2.0		0.2	Bylaw Page 21 of Part 1 Admin and Enforcement (page 41/211
	Multi-Unit Residential RM2	1.2		1.4	2.0		
	Multi-Unit Residential RM3			1.3			
	Multi-Unit Residential C1			1.2			
Langley Township	Apartments	1.0	1.5			10% of total parking	Bylaw Page 100-28
Maple Ridge	Multi-Unit Residential RM1	2.0				0.2	Bylaw Page 7
	Multi-Unit Residential RM2 and RM3	1.5					
	Multi-Unit Residential RM4 and RM5	2.0					

		Residential Parking Requirements (Stalls per Dwelling Unit)					
Municipality	**Notes**	**0BR**	**1BR**	**2BR**	**3+BR**	**Visitor**	**Link**
New Westminster	Multi-Unit buildings	1.0	1.2	1.4	1.5	0.2	Bylaw Page 150-1
	Multi-Unit buildings - Downtown	1.0	1.0	1.35		0.1	
	Secured rental Residential Units within 400 m of SkyTrain Stations or FTN	1.0					
	Secured rental Residential Units - Downtown	0.6		0.8			
North Vancouver City	Residential One and Two –Unit Use	1 per dwelling unit				0.1 when >10 spaces are required	Bylaw Page 149/1125 Section 908
	Rental Apartment	0.6					
North Vancouver District	Apartments	1 stall per unit, plus 1 stall per 100m^2 of gross area, to maximum parking minimum of 2.0 stalls				Base includes 0.25	Bylaw Page 66
Pitt Meadows	Apartments not in TC, MC	1.3		1.5		0.2	Bylaw Page 7-1
	Apartments in TC, MC	1.2					
Port Coquitlam	Apartment Less than 6 storeys	1.0	1.3	1.5	2.0	0.2	Bylaw Page 2
	Apartment greater than 6 storeys	1.0				0.1	
Port Moody	Apartment Market Ownership	1.0		1.5		0.2 for the first 100 units 0.1 for each additional unit	Bylaw Page 36, 38
	Market Rental	1.1					
	Below Market Rental	0.9				0.1	
	TOD Areas (Moody Centre and Inlet Centre) – Market Ownership	1.0		1.35		0.2 for the first 100 units 0.1 for each additional unit	
	TOD Areas (Moody Centre and Inlet Centre) – Market Rental	1.0					
	TOD Areas (Moody Centre and Inlet Centre) – Below Market Rental	0.8				0.1	
Richmond	Apartment Housing	1.5				0.2	Bylaw Page 7-5, 7-14
	Affordable Housing Unit	1.0					
	Apartment Housing – City Centre – Zone 1	1.0					
	Apartment Housing – City Centre – Zone 2	1.2					
	Apartment Housing – City Centre – Zone 3	1.4					
	Affordable Housing Unit – City Centre	0.9					

		Residential Parking Requirements (Stalls per Dwelling Unit)					
Municipality	**Notes**	**0BR**	**1BR**	**2BR**	**3+BR**	**Visitor**	**Link**
Surrey	**City Centre:** Multi-Unit Residential Dwelling – Ground Oriented	1.6				0.16	Bylaw Page 5.9
	City Centre: Multi-Unit Residential Dwelling – Non Ground Oriented	0.9 minimum 1.1 maximum				0.1	
	Multi-Unit Residential Dwelling – Ground Oriented	2.0				0.2	
	Multi-Unit Residential Dwelling – Non Ground Oriented	1.3		1.5		0.2	Bylaw Page 5.9
Vancouver	Downtown	0.0 [Except in the West end and Robson North Permit Area (WERNPA)] WERNPA sub-area of, parking for multiple dwellings adheres to City-wide rates.				The lesser of: a) 5% of total residential spaces; and b) 0.05 spaces per dwelling unit, to a maximum of 0.1	Bylaw 4.3.2 Map 2B 4.8.4 4.3.4
	City-Wide - Strata	0.5 / unit with less than 50m^2 GFA 0.6 / unit with greater than 50m^2 plus 1 for each additional 200m^2 GFA No more than 1.5 per unit with greater than 180m^2				0.05 per unit to a max of 0.1	Bylaw 4.2.1.13 4.1.16
	City-Wide – Secured Market Rental	Min per 125m^2 GFA Max space equal to the total number of min number of spaces plus 0.5				0.05 to a max of 0.1	Bylaw 4.5B 4.1.16
West Vancouver	Apartment	A minimum of the greater of 1/unit, or 1 for every 84 sq metres GFA				N/A	Bylaw Page 300-4
White Rock	Apartment	1.2				0.3	Bylaw Page 23
UBC Campus	Market Housing	A maximum of the lesser of 1.0 per 70m^2 of building areas of 1.8 spaces per dwelling unit				0.1	Development Handbook Page 38
UBC Endowment Lands	Apartment	1.6				0.25	Schedule

Appendix 4: Key Informant Interviews on Treating On-Site and Street Parking as a System

Project staff interviewed municipal staff to gather current insights, experience, and tactics to manage and monitor street parking in more systematic ways[13].

It can be difficult finding the right balance between on-site facility and on-street parking for both residents and visitors for apartment buildings and adjacent land uses. Surrounding land uses, such as commercial retail, can generate trips that increase the demand for on-street visitor parking. This can often be in conflict with the demand for residential visitor parking when on-site visitor parking is limited.

Coordinated parking strategies can help mitigate negative outcomes of limited parking supplies through the appropriate use of on-street parking restrictions. By considering both on-site and nearby on-street residential and visitor parking as a system, parking supplies can be controlled for the net benefit of an area and help alleviate the difficulties of finding parking.

Nearby Street Parking

The use of parking policies and regulation, such as pricing, can be adjusted to ensure that there is street curb parking available for businesses, customers and residents in popular areas where current parking utilization is high during most days and times of the week.

Anecdotal observations from several peer municipal staff in Metro Vancouver suggest that there is a correlation between on-site visitor parking utilization and whether or not the nearby streets have regulations (i.e. where apartment sites tend to have lower facility utilization if the nearby streets are unregulated).

By regulating street parking to restrict nearby street parking through a combination of pricing, time limits, on-site parking facility utilization of both residential and visitor parking may increase. Similarly, parking regulations that allow for shared-used of on-street visitor and residential spaces, particularly in during periods when residential spaces are underutilized, can support apartment visitors as well as nearby businesses customers to park in residential permit spaces.

Consolidated Parking

The consistent observation of parking supplies exceeding demand by a wide margin illustrates that many apartment buildings across the region have abundant unused supplies, sometimes in areas experiencing consistently high utilization of street parking. By considering ways to consolidate parking by opening up the unused parking spaces for nearby business and commercial uses can free up space on the street. Cities can also explore with developers if required parking ratios can be met through shared-use parking supplies with adjacent land uses and their existing or new development's parking supply.

Nearby Frequent Transit Services

Across the region, a trends that has continued since the 2012 Apartment Parking Study is the consistent observation that not only does parking supply in apartments exceed parking demand by a wide margin, but that this over supply is further pronounced for locations close to transit than further abroad.

[13] Interviews were conducted in January/February 2019 with staff at Coquitlam, New Westminster, City of North Vancouver, Surrey, and Vancouver.

While many municipal parking policies consider possible reduced residential parking requirements based on proximity to transit, they are currently focused on new apartment developments close to existing and new SkyTrain stations. This study suggests that apartment parking ratios can take into account a development's proximity to frequent bus routes.

Parking Monitoring and Spatial-Temporal Data Analysis

Monitoring parking behaviour and utilization is important component to understanding parking supplies and demand by time period, particularly in areas where parking supplies are limited. Municipalities report deploying monitoring strategies and techniques on an upon-request basis, usually where there are residential complaints around on-street parking constraints. Using digital monitoring techniques, such as Parking App and digital parking meters, as well as Automated License Plate Reading technology, can provide powerful insights without the need for manual monitoring or surveys. These technologies will often capture a vehicle's license plate number, which can be cross-referenced with ICBC data. By proactively monitoring on-street parking supplies throughout a city, and cross-referencing vehicle's registration addresses, municipalities can proactively assign parking regulations in a given area by understanding if local residents are using on-street parking for their parking needs.

Appendix 5: Additional Household Survey Analysis

The following tables, based on the Household Survey, provide supplemental information to Section 5.1 'Apartment Residential Parking Supply and Utilization' and Section 5.4 'Relationship with Transit Proximity'.

Table 44. Resident Parking by Tenure

	Household Survey		
Building Tenure (# responses)	**Stalls per DU (HS)**	**Parked Vehicles per DU (HS)**	**Parking Oversupply Estimate 2**
Strata (n=1,185)	1.39	1.17	+19%
Market Rental (n=133)	1.10	0.89	+23%
Mixed Tenure (n=186)	1.24	0.93	+34%
Mixed Rental (n=35)	1.49	1.09	+37%
Non-Market Rental (n=28)	0.90	0.43	+111%

Table 45. Resident Parking in Strata Sites by Subregion

	Household Survey		
Strata Sites by Subregion (# responses)	**Stalls per DU (HS)**	**Parked Vehicles per DU (HS)**	**Parking Oversupply Estimate 2**
Burnaby/NW (n=265)	1.32	1.09	+21%
North Shore (n=151)	1.42	1.17	+21%
Northeast Sector+ (n=317)	1.34	1.21	+11%
Richmond (n=72)	1.25	1.15	+9%
South of Fraser (n=279)	1.31	1.25	+5%
Vancouver/UBC (n=101)	1.38	1.08	+28%

Table 46. Resident Parking in Rental Sites by Subregion

	Household Survey		
Rental Sites by Subregion (# responses)	**Stalls per DU (HS)**	**Parked Vehicles per DU (HS)**	**Parking Oversupply Estimate 2**
North Shore (n=25)	1.05	0.84	+25%
Northeast Sector+ (n=9)	2.44	1.22	+100%
Richmond (n=17)	1.13	1.12	+1%
South of Fraser (n=49)	1.33	1.29	+3%
Vancouver/UBC (n=282)	1.14	0.81	+41%

Table 47. Resident Parking in Strata Sites by Transit

	Household Survey		
Strata Sites by Proximity to FTN (# responses)	**Stalls per DU (HS)**	**Parked Vehicles per DU (HS)**	**Parking Oversupply Estimate 2**
Within 800m of rapid transit (n=633)	1.26	1.14	+11%
Within 400m of frequent bus only (n=408)	1.33	1.19	+12%
Away from FTN (n=144)	1.36	1.29	+5%

Table 48. Resident Parking in Market Rental sites by Transit

	Household Survey		
Market Rental Sites by Proximity to FTN (# responses)	**Stalls per DU (HS)**	**Parked Vehicles per DU (HS)**	**Parking Oversupply Estimate 2**
Within 800m of rapid transit (n=32)	0.59	0.53	+11%
Within 400m of frequent bus only (n=49)	1.08	0.80	+35%
Away from FTN (n=52)	1.35	1.21	+12%

Table 49. Resident Parking in Mixed Tenure Sites by Transit

	Household Survey		
Mixed Tenure Sites by Proximity to FTN (# responses)	**Stalls per DU (HS)**	**Parked Vehicles per DU (HS)**	**Parking Oversupply Estimate 2**
Within 800m of rapid transit (n=126)	0.99	0.83	+19%
Within 400m of frequent bus only (n=60)	1.23	1.15	+7%

To: Regional Planning Committee

From: Theresa Duynstee, Senior Planner, Regional Planning

Date: February 19, 2019 Meeting Date: March 8, 2019

Subject: **Food Flow: Agri-food Distribution in Metro Vancouver – Scope of Work**

RECOMMENDATION

That the MVRD Board receive for information the report dated February 19, 2019, titled "Food Flow: Agri-food Distribution in Metro Vancouver – Scope of Work".

PURPOSE

To inform the Regional Planning Committee and Board about a project being undertaken by Regional Planning that will define the extent of the agri-food distribution system, the connections to land use policy and transportation infrastructure that are necessary for "food flow" – the movement of food supply across the Metro Vancouver region.

BACKGROUND

The Food Flow: Agri-food Distribution in Metro Vancouver study is underway. The scope of the study is being brought to the Committee and Board's attention for information.

FOOD FLOW SCOPE OF WORK

This report presents the scope of work for a Food Flow: Agri-food Distribution in Metro Vancouver study that is currently underway. There are two key reasons to conduct a study on the regional food flow:

- to learn about the size and location of major food distribution, food storage and food processing businesses in the region; and
- to identify the regional land use designations, utility services and transportation routes that are most critical to support agri-food distribution.

In 2018, the initial phase of work on the Food Flow study began by compiling existing data on the agri-food distribution system into a Geographic Information System (GIS). The database includes the location of major food distributers, food wholesalers, large retail food outlets and other relevant businesses in relation to regional land use designations and transportation corridors in Metro Vancouver. The proposed 2019 work program is also presented for information and discussion.

The extent of the agri-food distribution system that supplies food to over 2.5 million residents in British Columbia's largest metropolitan area is not widely known. This Food Flow study is attempting to improve understanding of the essential infrastructure and services involved in agri-food distribution and identify ways to maintain the resilience of the food flow system through land use, policy development and planning for emergency management.

The overall objectives of the Food Flow study are to:

- share information on the characteristics of the businesses involved in the agri-food distribution system;
- better understand the connection between the agri-food industry, land use zoning and transportation corridors;
- learn about the storage and movement of perishable food in the region;
- consider the extent to which land use plans, zoning bylaws and goods movement transportation policies shape the operation and growth of the agri-food distribution industry in the region; and
- provide a cursory risk assessment of the agri-food distribution system and identify opportunities to enhance food system resilience.

The Food Flow study is intended to identify the important factors contributing to a resilient food system. The results of the study can be used to:

- inform the policy reviews being completed as part of the review and update of *Metro Vancouver 2040: Shaping our Future (Metro 2040);*
- provide an overview of the agri-food distribution system for future emergency planning initiatives;
- consider local government land use policies that help sustain and enhance a resilient agri-food distribution system;
- inform the development of the Regional Industrial Lands Strategy currently underway; and
- profile and incorporate agri-food business ventures into regional and municipal economic development plans, an action in the Regional Food System Action Plan (2016).

Work Completed to Date

In 2018, Licker Geospatial Inc. was hired to start building a food flow database. They developed a GIS map with layers relevant to the agri-food industry and created a database of food related businesses. Some preliminary analysis was also conducted but requires further refinements. The business facilities relevant to food flow were classified into the following eight classes:

1. Food Production – only food crops and livestock
2. Food Processing – food and beverage manufacturing
3. Food Wholesalers – supplying restaurants and retail
4. Food Storage – warehousing of food transported out of region
5. Support Services – such as farm equipment
6. Food Retail – only large grocery stores, supermarkets and specialty food stores
7. Food Distribution – facilities with significant floor area and number of loading bays
8. Institutions – hospitals and university food services

The data used to gather the above information was sourced from: NAICS, Dunn & Bradstreet, BC Assessment, Open Data BC, Agricultural Land Use Inventory (ALUI), Metro Vancouver and Google searches. There were some challenges in categorizing the data into the appropriate classes, especially distinguishing between wholesalers and distributers. Also, some initial data gaps were identified such

as the volume of food being imported / exported, the number of trucks per day / week transporting food, facilities located in the Fraser Valley (Mission, Chilliwack, Abbotsford etc.) and flood risk areas.

2019 Food Flow Work

In 2019, the first step is to further refine the database compiled by the consultants and develop a list of key questions to address. Then, the Food Flow database will be shared with stakeholder groups to further verify the results and consider any significant information gaps.

The 2019 work includes interviews with the private sector to better understand how food is transported and what infrastructure is most vital for perishable foods that may be at risk during emergency situations. There is also interest in better understanding how much food managed by these facilities is imported, exported and transported within or through the region.

Regional Planning staff presented some initial maps from the Food Flow study at the February 15, 2019 Regional Planning Advisory Committee (RPAC) meeting. At the RPAC meeting, opportunities to share data with a similar project being undertaken by the Ministry of Agriculture at a provincial scale were highlighted. In addition, the health authorities were identified as potential sources of data for such studies given their role in permitting food-related businesses. Regional Planning staff will explore these opportunities and additional data sources as part of the 2019 Food Flow study work.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report. The funding for this study was approved under the 2019 budget.

SUMMARY / CONCLUSION

The extent of the regional “food flow” - the movement of the food supply across the Metro Vancouver region is not widely known. Staff have embarked on a study to define the location of agri-food distribution businesses and their connections to land use policy and transportation infrastructure. The first phase of work compiled existing data on the agri-food distribution system. The 2019 work will focus on interviews with the private sector. The results of the study will be used to improve understanding and inform various regional and municipal planning processes.

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metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Regional Planning Committee

From: Theresa Duynstee, Senior Planner, Regional Planning

Date: February 15, 2019 Meeting Date: March 8, 2019

Subject: **2019 Agricultural Land Use Planning Policy Forum**

RECOMMENDATION

That the MVRD Board receive for information the report dated February 15, 2019, titled "2019 Agricultural Land Use Planning Policy Forum".

PURPOSE

To inform the Regional Planning Committee and Board about the BC Agricultural Land Use Planning (AgLUP) Policy Lab and Metro Vancouver's role in co-hosting a one-day policy forum.

BACKGROUND

The BC AgLUP Policy Lab is a new initiative that aims to bring experts and practitioners together to focus on agriculture land use planning (AgLUP) solutions to protect BC's farmland. The BC AgLUP Policy Lab will be introduced at a one-day AgLUP Policy Forum scheduled for April 3, 2019.

Metro Vancouver is co-hosting this forum as an opportunity to leverage expertise in agricultural land use planning and obtain preliminary input into the *Metro 2040* Agriculture Policy Review that will take place later this year.

BC AGLUP POLICY LAB AND THE APRIL POLICY FORUM

Last fall an opportunity arose to work with Dr. David Connell from the University of Northern British Columbia (UNBC), a professional planner and expert on agricultural land use planning, who is developing a BC Agriculture Land Use Planning (AgLUP) Policy Lab. A policy lab is a neutral, expert-centred space for analyzing issues and designing solutions that address intractable policy problems.

The April AgLUP Policy Forum has two objectives: first, to help establish the provincial AgLUP policy lab and second, have an introductory dialogue to support the *Metro 2040* Agriculture Policy Review. The forum will engage experts and practitioners on recent changes to provincial legislation and the most pressing policy issues impacting agricultural land use in the region. The discussions can build capacity and enhance understanding of the policies impacting agricultural land use in the Lower Mainland, as well as gage interest in an on-going provincial policy lab and the future activities/topics that are most beneficial to participants. The provincial policy lab is expected to continue over the next two years in the form of webinars, policy briefs and in-person events using financial support from the Real Estate Foundation of BC, VanCity, Vancouver Foundation and UNBC.

The April policy forum agenda includes presentations on the latest changes to the provincial legislation, as well as the regional district role in agricultural land protection. However, the majority of the agenda will be dedicated to facilitated conversations that create a deeper understanding of agricultural land use policy and planning issues in the Metro Vancouver region. A facilitator will help design and manage the forum, and background materials will be sent out to registrants in advance of

the forum itself. Some of the topics under consideration for the April policy forum include the following:

- The perceived impermanence of agricultural land in the region;
- The size and scale of commercial uses in the ALR and whether a cap on building infrastructure is warranted;
- Under what conditions, if any, should large scale organic waste processing facilities be permitted in the ALR;
- Metrics that can be used to measure compliance of the ALC 50/50 rule;
- The role business licenses and permits on agricultural land can play in regulatory compliance;
- Defining local government bylaws that can potentially impact agricultural land;
- Securing land tenure for new farmers; and
- The policy connection between agricultural land protection and climate adaptation.

Invited participants will have expertise with agricultural land use planning and will include representatives from:

- Agricultural Land Commission;
- Ministry of Agriculture;
- Regional Districts and Municipalities;
- Educational institutions; and
- Land use consulting firms.

In 2019, Metro Vancouver is undertaking a series of policy reviews for *Metro Vancouver 2040: Shaping our Future*, (*Metro 2040*), as preparation for an update to the regional growth strategy. The forum will also provide an opportunity to engage with a wide range of experts about agricultural land planning in the region and generate helpful input prior to the *Metro 2040* Agriculture Policy Review, that takes place later this year.

ALTERNATIVES
This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS
The forum is funded $4,000 from an allocated 2019 Board approved Regional Planning budget.

SUMMARY / CONCLUSION
Metro Vancouver is co-hosting a forum on April 3, 2019 with UNBC to bring experts together to focus on agriculture land use planning (AgLUP) solutions to protect BC's farmland. The forum is the first step to establish a "policy lab" in BC. A policy lab is a neutral, expert-centred space for analyzing issues and designing solutions that address intractable policy problems. The April policy forum will build capacity and enhance understanding of the policies impacting agricultural land use in the Lower Mainland, as well as gage interest in an on-going provincial policy lab and the future activities/topics that are most beneficial to participants.

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To: Regional Planning Committee

From: Heather McNell, Director of Regional Planning and Electoral Area Services
Planning and Environment Department

Date: February 15, 2019 Meeting Date: March 8, 2019

Subject: **Manager's Report**

RECOMMENDATION
That the Regional Planning Committee receive for information the report dated February 15, 2019, titled "Manager's Report".

Regional Planning Committee 2019 Work Plan
The attachment to this report sets out the Committee's Work Plan for 2019. The status of work program elements is indicated as pending, in progress, ongoing or complete. The listing is updated as needed to include new issues that arise, items requested by the Committee, and changes to the schedule.

Equity in Regional Growth Management
Staff are preparing a consultant scope of work to learn how other peer jurisdictions define equity and incorporate notions of equity into land use and transportation planning. The concept of equity is garnering greater attention globally and within the planning profession. There is a growing acknowledgement that the divide between those who have access to resources, power and wealth, and those who do not is growing wider and that land use and transportation planning policy can influence the scope of that divide as well as its directionality.

Regionally, the pressures that impact equity are centred and revealed through public attitudes, perceptions, and experiences around housing affordability, involuntary displacement, transportation infrastructure and service, community amenities, cost of new public infrastructure, population growth, health outcomes, neighbourhood change, access to green spaces, exposure to air pollutants, and a changing climate – all elements of interest in regional growth management.

The background research will inform *Metro 2040* policy reviews as well as other growth management initiatives in the coming years. Staff will present a scope of work to the Regional Planning Committee in May.

Transit-Oriented Affordable Housing Study Phase 3
At its meeting on February 22, 2019, the MVRD Board of Directors approved the allocation of $100,000 from the regional district's Sustainability Innovation Fund to fund Phase 3 of the Transit-Oriented Affordable Housing (TOAH) Study. Phase 2 of the TOAH Study will conclude in April 2019.

The purpose of Phase 3 is to compile the learnings from Phase 1 and Phase 2 and assemble them into an online 'calculator' to enable practitioners and policymakers to better understand how policy and

financial tools can be toggled in different ways to change the financial viability of affordable rental housing development projects. The 'calculator' is an interactive financial pro forma that will be designed to be highly accessible and intuitive to use. The 'calculator' will be a new way of communicating complex information, allowing users to 'learn by doing'. Associated with the 'calculator' is a planned series of workshops for practitioners and a regional summit for policymakers to confront the challenges and solutions to the development of transit-oriented affordable rental housing. Staff will present a draft project scope of work to the Committee in May.

Invitation to *Where Matters*: *Health & Economic Impacts of Where We Live* event
UBC's Health & Community Design Lab, in conjunction with its partners Metro Vancouver, TransLink, City of Vancouver, Vancouver Coastal Health, Fraser Health, and the Real Estate Foundation are unveiling the significant results of: *Where Matters: Health & Economic Impacts of Where We Live* at a full day event on ***May 6, 2019*** at the Creekside Community Centre in Olympic Village in Vancouver.

Attendees will learn about the results of the study and next steps going forward and will participate in the strategy development to leverage the results for policy makers. The study evaluates how levels of land use density, land use mix, connectivity of street networks, and pedestrian design orientation along with improvements in the levels of service for transit, pedestrian, and cycling – relate with observed levels of physical activity, Type II Diabetes, cardiovascular disease, depression, and obesity.

The three aims of the Health and Economic Benefits Study are to:

1. examine how built environment features are related to physical activity behaviours, body mass index, and chronic disease;
2. investigate whether the relationships between the built environment and chronic disease differ by individual age and income; and
3. evaluate whether built environment features are inversely related to healthcare utilization and costs.

The results of the study quantify the physical and mental health (preventing medicine) benefits of walkability, transit access, and green space. Results show significant reductions in obesity, diabetes, hypertension and cardiovascular diseases, stress, sense of community and economic benefits from investments in neighborhood walkability as well as improvements in pedestrian, bike, and transit access and parks and greenspace.

Dr. Lawrence Frank, UBC led the study team in collaboration with Dr. Jat Sandhu, Vancouver Coastal Health. Researchers spatially joined the My Health My Community and the BC Generations Databases with the Regional Walkability Index, transit access, and park access databases. A novel advancement of this study includes the direct link to participants' medical health records creating the ability to measure the healthcare cost implications of contrasting approaches to community design, transportation investment, and the provision of parks and green space.

Metro Vancouver contributed $45,000 to project budget over two years (i.e. 2017 and 2018). The other project funding partners include the Real Estate Foundation of BC ($140,000); the City of

Vancouver ($90,000); TransLink ($45,000); and a grant from the Canadian Institute for Health Research ($280,000).

Registration information will be provided in the next agenda package; this is a hold the date announcement for those interested.

Attachments: Regional Planning Committee 2019 Work Plan

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ATTACHMENT 1

Regional Planning Committee 2019 Work Plan

1st Quarter	Status
Long Range Population, Land Use and Transportation Scenarios – Update (Feb)	Complete
Transit Oriented Affordable Housing Project (TOAH) Phase 2: Revolving Loan Fund, Policy Tools – Draft Findings (Feb)	Complete
Transit Oriented Affordable Housing Project (TOAH) Phase 3: Scoping	In Progress
Lougheed Corridor Study – Final Report (Mar)	In Progress
Regional Parking Study – Final Report and Recommendations (Mar)	In Progress
Office in Urban Centres (2018 Update) – Final Report (Mar)	In Progress
Walkability Surface Dashboard	Pending
2016 Agricultural Land Use Inventory - Results	In Progress
Food Flow – Agri-food Distribution in Metro Vancouver – Update	In Progress
Metro 2040 – Environment Policy Review – Project Initiation (Mar)	In Progress
Metro 2040 – Proposed Amendments and Regional Context Statements	Ongoing
2nd Quarter	
Long Range Population, Land Use and Transportation Scenarios – Final Report (Apr)	Pending
Transit Oriented Affordable Housing Project (TOAH) Phase 2: Revolving Loan Fund, Policy Tools – Final Report (May)	Pending
Health and Economic Benefits of Walkability – Final Report	Pending
Equity in Regional Planning – Project Scope	Pending
Urban Centres and Corridors Dashboard	Pending
Metro 2040 – Agriculture Policy Review – Progress to date	Pending
30-year Financial Plan – Regional Planning Service	Pending
Metro 2040 – Proposed Amendments and Regional Context Statements	Ongoing
3rd Quarter	
Urban Centres and FTDA Policy Review - Update	Pending
Transit Oriented Affordable Housing Project (TOAH) Phase 3: Progress Update	Pending
Metro 2040 - Industrial & Mixed Employment Lands Policy Review: Project Initiation	Pending
Regional Food System Action Plan - Update	Pending
Metro 2040 – Environment Policy Forum - Results	Pending
Metro 2040 – Proposed Amendments and Regional Context Statements	Ongoing
4th Quarter	
Annual Budget and 5-year Financial Plan	Pending
Urban Centres and FTDA Policy Review – Final Report	Pending
Transit Oriented Affordable Housing Project (TOAH) Phase 3: Draft findings	Pending
Equity in Growth Management – Draft Report	Pending
Metro 2040 – Industrial & Mixed Employment Lands Policy Review – Update	Pending
Metro 2040 – Environment Policy Review – Update	Pending
Metro 2040 – Agriculture Policy Review – Update	Pending
Food Flow – Agri-food Distribution in Metro Vancouver – Final Report	Pending
Metro 2040 – Proposed Amendments and Regional Context Statements	Ongoing

Update on the Long Range Growth Scenarios Project

At its February 1, 2019 meeting, the Regional Planning Committee received an overview and update on the Long Range Growth Scenarios Project from Sean Tynan, Planner, Regional Planning. As context, Metro Vancouver and TransLink are co-leading this project to provide input into both an update to *Metro 2040* and the Regional Transportation Strategy.

The objectives of the project are to:

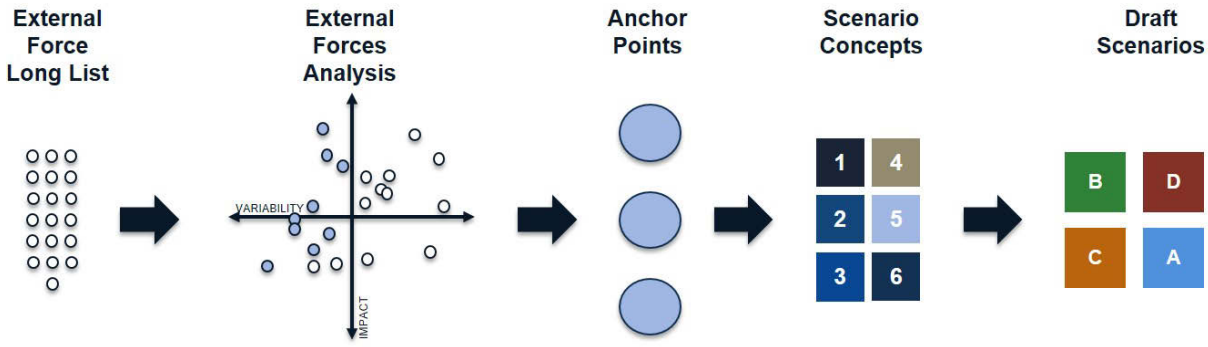
- Build a shared understanding of the Metro Vancouver's population, housing, employment and land use projections and the assumptions that are part of the region's model;
- Identify and explore key drivers of change (external forces) that will impact the future land use and transportation patterns in the region (e.g. climate change, automation); and
- Build a range of plausible futures that explore the opportunities and challenges of those external forces (not selecting a 'preferred' future)

Once the project is completed, the scenarios will be used to test the resiliency of current and future regional plans.

The Committee was notified that the project team was hosting the third workshop in a series of three on February 27, 2019. Over sixty people attended the workshop, representing a mix of member jurisdictions, regional organizations, crown corporations and subject matter experts. First, participants were provided an update on progress since Workshop #2, which was held in October 2018 (the October workshop sought to get feedback on 19 external forces in terms of expected magnitude of change as well as how certain experts are about how each external force will unfold in the region).

Second, participants were asked to provide input and feedback on four draft scenarios in advance of them being presented to the Regional Planning Committee, Board and Mayors' Council. Participants were asked whether they felt the scenarios were plausible and what opportunities and challenges each scenario might present for the region.

Figure 1: Process to Get to Draft Long Range Growth Scenarios



Input from participants included:

- Certain aspects of the four scenarios are plausible, but other aspects are not. For example, including more than one scenario contemplating a population decline or assuming automation will inevitably lead to a significant decrease in jobs;
- Some participants noted that climate change was not evenly considered across the four draft scenarios;
- Many participants expressed an interest in more explicitly considering implications for equity and wealth distribution; and
- Several participants noted an interest in understanding the impacts of the scenarios on housing availability and affordability.

In general, staff observed that participants found it challenging to explore scenarios where today's policy framework is held constant in the face of significant social, economic, technological or environmental change.

Metro Vancouver, TransLink and the project consultant are reviewing the workshop outcomes and working to refine the draft scenarios. Staff anticipate coming back to the Regional Planning Committee at its April 5, 2019 meeting with the draft scenarios for consideration.