

PLANNING AND DEVELOPMENT COMMITTEE

TO: MAYOR AND COUNCILLORS

**SUBJECT: PARKING AND TRANSPORTATION DEMAND MANAGEMENT PLAN
IN THE TRANSIT-ORIENTED DEVELOPMENT AREAS**

RECOMMENDATIONS:

1. **THAT** the Transit-Oriented Development Parking and Transportation Demand Management plan for multi-family residential strata and purpose-built rental within 800m of a SkyTrain Station, as outlined in the report titled “Parking and Transportation Demand Management Plan in the Transit-Oriented Development Areas” dated September 11, 2023, be received for information;

THAT the Transit-Oriented Development Parking and Transportation Demand Management Policy for multi-family residential strata and purpose-built rental within 800m of a SkyTrain Station, as outlined in Section 4.0 of the report, be approved; and

THAT staff implement the Transit-Oriented Development Parking and Transportation Demand Management Policy through the necessary bylaw amendments to be brought forward to Council for consideration.

2. **THAT** staff provide a report on associated costs as related to the Transportation Demand Management Strategy and street parking management; and

THAT staff investigate the feasibility of additional contributions to affordable housing that could be allocated with savings incurred from reduced parking standards.

REPORT

The Planning and Development Committee, at its meeting held on September 11, 2023, received and adopted the attached report establishing a Transit Oriented Development (TOD) parking and Transportation Demand Management (TDM) policy for sites within 800m of SkyTrain Station.

To: Mayor and Councillors
From: Planning and Development Committee
Re: Parking and Transportation Demand Management
Plan in the Transit Oriented Development Areas
2023 September 25 Page 2

Arising from discussion, the Committee recommended Council direct staff to provide further information on associated costs as related to the Transportation Demand Management Strategy and street parking management as well as investigate the feasibility of any savings incurred from reduced parking standards being allocated to affordable housing.

On behalf of the Planning
and Development Committee,

Councillor P. Calendino
Chair

Councillor J. Keithley
Vice Chair

TO: PLANNING AND DEVELOPMENT COMMITTEE (PDC)
FROM: GENERAL MANAGER ENGINEERING
GENERAL MANAGER PLANNING AND DEVELOPMENT
SUBJECT: **PARKING AND TRANSPORTATION DEMAND MANAGEMENT
PLAN IN THE TRANSIT-ORIENTED DEVELOPMENT AREAS**
PURPOSE: To establish a Transit Oriented Development Parking and
Transportation Demand Management policy for sites within 800m of
SkyTrain Stations.

RECOMMENDATIONS

THAT the Transit-Oriented Development Parking and Transportation Demand Management plan for multi-family residential strata and purpose-built rental within 800m of a SkyTrain Station as outlined in the report dated September 11, 2023 be received for information;

THAT the Transit-Oriented Development Parking and Transportation Demand Management Policy for multi-family residential strata and purpose-built rental within 800m of a SkyTrain Station as outlined in Section 4.0 of the report dated September 11, 2023 be approved; and

THAT staff implement the Transit-Oriented Development Parking and Transportation Demand Management Policy through the necessary Bylaw amendments to be brought forward to Council for consideration.

EXECUTIVE SUMMARY

With the evolving mobility trend in the region, the opportunity to review and update City parking policy is important in supporting future Transit-Oriented Development (TOD) neighbourhood growth. An effective Parking Management Policy integrated with Transportation Demand Management (TDM) is needed to help support the City's sustainability goals set out in our Climate Action Framework and Burnaby Transportation Plan.

The review in this report reflects current regulations and practices across the region and detailed analysis of parking utilization within our City's TOD neighbourhoods. The result includes the following staff recommendations:

1. Update residential parking rates in TOD Areas to adjust for dwelling unit types and/or distance from SkyTrain stations:

- a. Multi-Family (Strata) residential rate updated from an overall 1.0 parking stalls per dwelling unit to a rate of 0.40 or 0.45 parking stalls for studio or 1-bedroom units, and 0.90 or 0.95 parking stalls for 2+ bedroom units based on proximity to a SkyTrain station; and,
 - b. Purpose-built (market) rental updated from an overall 0.5 parking space per dwelling unit to 0.30 parking stalls for studio or 1-bedroom units, and 0.75 parking stalls for 2+ bedroom units.
2. Adopt TDM initiatives. Require mandatory TDM incentives that includes transit subsidy and car share memberships/credits for all residential dwelling units in new buildings.
 3. Adopt Bicycle Infrastructure requirements in current Bylaws to encourage bicycle usage for residents.
 4. Require Wayfinding through current Bylaws in new developments to guide access to sustainable transportation.

1.0 POLICY SECTION

The Burnaby Transportation Plan is guided by the City's overall vision and the overarching Sustainability Strategy and Climate Action Framework. This report responds to the strategic goals in the Transportation Plan with the proposed Parking and Transportation Demand Management (TDM) policies supporting the foundation to achieve our city-wide transportation targets towards sustainable modes.

2.0 BACKGROUND

Burnaby has experienced rapid growth over the years and neighbourhoods, particularly those around the Expo and Millennium SkyTrain Line, are evolving into thriving mixed-use urban environments with extensive multi-modal infrastructures. These neighbourhoods are characterized and known as Transit-Oriented Development (TOD) areas capitalizing on active transportation infrastructure and continuing to be influenced by regional rapid transit investments that will help shape the growth and development in the City.

The Burnaby Transportation Plan has set measurable targets for mode split, which aims to have $\frac{3}{4}$ of all trips made by public transit and active transportation by 2050. To achieve this target, our TOD neighbourhoods will need to support a much higher mode shift to overcome predominant auto modes areas. Considering the region-wide mobility trends and evolving parking dynamics, an effective parking management and TDM strategy is fundamental to support future growth and encourage sustainable modes including walking, cycling, and taking transit.

Previously, at the Planning and Development Committee (PDC) meeting in December 2022, staff was directed to review current parking Bylaw requirements to reflect concerns raised during public hearings in that parking requirements at TOD areas may not reflect the potential decrease in demands. This report responds to the request of the Committee. An interim parking policy was brought to Council on June 19, 2023 and

was referred to the July 2023 PDC meeting. The interim parking policy was discussed during the July 2023 PDC meeting, and the Committee recommended Council to reject the policy and directed staff to prepare a Parking Management and TDM report to Council to address parking policy within TODs.

2.1 Current Policies and Bylaw

The requirement for off-street parking is provided in the Burnaby Zoning Bylaw Schedule VIII under Section 800.4. A summary of the parking requirement is detailed in the following Table 1.

Table 1 – Required Off-Street Parking Requirement

Building Use	Required Parking Spaces	Notes
Multi-Family (Strata) Apartments	1.1 spaces per dwelling	<ul style="list-style-type: none"> • inclusive of 0.1 spaces per unit for visitors
Purpose-Built (Market) Rental	0.6 spaces per dwelling	<ul style="list-style-type: none"> • TDM measures required

Note: Minor parking reductions permitted through the General Manager Planning and Development with supporting parking analysis.

3.0 GENERAL INFORMATION

Residential parking requirements in TOD areas are influenced by access to alternative transportation modes particularly buildings located at or near rapid transit stations. For the purpose of this review, the parking rates in TOD were sourced from the information below. The summary of the results for residential strata and market rental are provided in Attachment 1 and 2, respectively.

- (1) Metro Vancouver Municipalities Parking Bylaws: a current review of comparable municipal parking Bylaw rates around rapid transit areas for both strata and rental developments.
- (2) 2018 Regional Parking study: included survey of parking supply and demand in 73 multi-family residential sites across the region, supplemented by on-street parking and household surveys. Of the 73 apartment sites, seven were located in Burnaby. The study was approved by Metro Vancouver in March 2019.
- (3) 2022 Vehicle Ownership Review: A review of ICBC vehicle ownership with further information supplemented by a consultant’s parking database in support of the study.
- (4) 2023 Burnaby Residential Parking Study: a review of parking supply and utilization for buildings around TOD areas.

3.1 Residential Multi-Family (Strata) Parking Rates Summary

The review of strata parking rates is summarized below with further details provided in Attachment 1.

- Comparable Metro Vancouver Zoning Bylaw parking rates vary from 0.75 to 1.40 parking stalls per dwelling units. Rates are dependent on unit type and implies a higher parking rate is required for larger bedroom units.
- 2018 Regional Parking Study confirms average parking utilization rates within 800m proximity to frequent transit varies between 0.86 and 0.97 vehicles per unit compared to 1.09 vehicles per unit for buildings beyond 800m.
- 2022 ICBC data reports from 41 TOD sites (or 8,331 dwelling units) confirms the average registered vehicles per dwelling unit to be 0.74. Within 400m and between 400m and 800m catchment of SkyTrain stations, the parking rate is 0.69 and 0.89 vehicles per dwelling unit, respectively.
- ICBC vehicle ownership reviewed with building statistics further confirms the occupancy of a studio/1-bedroom unit is approximately 0.46 vehicles per dwelling unit and 1.09 vehicles per unit for a 2+ bedroom unit. Lower vehicle ownership is expected for small units. The overall parking rate being 0.73 vehicles per dwelling unit.
- The ongoing Burnaby Residential Parking Study reviewed 3 buildings (tallying 1,266 dwelling units) and confirms the average parking rate to be 0.83 occupied vehicles per dwelling unit.

3.2 Residential Purpose-Built (Market) Rental Parking Rates Summary

The review of strata parking rates is summarized below with further details provided in Attachment 2.

- Comparable Metro Vancouver Zoning Bylaw parking rates vary from 0.60 to 1.30 parking stalls per dwelling units.
- 2018 Regional Parking Study confirms average parking utilization rate for rental units across the region ranged from 0.47 to 1.26 parking stalls per unit. Supply of parking exceeds utilization by 35%.
- 2022 ICBC data reports from 16 TOD sites (tallying 1,970 dwelling units) confirms the average registered vehicles per dwelling unit to be 0.62. Within 400m and between 400m and 800m catchment of SkyTrain stations, the parking rate is 0.57 and 0.59 vehicles per dwelling unit, respectively. This indicates the parking rate is uniformly influenced by the general proximity to SkyTrain stations.
- ICBC vehicle ownership reviewed with building statistics confirms a studio/1-bedroom unit is approximately 0.37 vehicles per dwelling unit while a 2+ bedroom unit will have a 0.88 vehicles per unit. Higher vehicle ownership is expected for 2+ bedrooms. The overall parking rate is 0.59 vehicles per dwelling unit.
- The ongoing Burnaby Residential Parking Study reviewed 3 buildings (or 300 dwelling units) and confirms the average parking rate to be 0.53 occupied vehicles per dwelling unit.

3.3 Transportation Demand Management Review

TDM is a parking management strategy that increases the transportation system efficiency. It focuses primarily on the understanding of how people travel and the influence of travel behavior on infrastructure that reduces single occupancy vehicle trips while encouraging walking, cycling, ridesharing, and using transit. The goal of TDM is to improve sustainability and livability by establishing a better-balanced transportation system as identified in our Transportation Plan.

Studies in Canada and U.S. found that TDM strategies can reduce vehicle usage or parking demand from 5% to 30% depending on the type of measures/programs and proximity to downtown and rapid transit. Providing suitable incentives and tools to support alternative modes and disincentives to using personal vehicles can reduce parking demand and the need to supply dedicated off-street parking at origins and destinations. The opportunity for TDM can be implemented through infrastructure built and programmatic measures.

- *TDM Infrastructure* – active transportation is expected to form a core component of the City’s future mobility network and there is a need to provide consistent levels of amenities in new buildings that align with the City’s long-term goals. Examples of future on-site infrastructure requirements include bicycle parking, bicycle maintenance and end-of-trip facilities, and other active transportation amenities.
- *TDM Programs* – contributions of an expected monetary value provide direct communication and help create consistent expectations for developments to provide measures that further support mode shift. Examples of programmatic measures include transit subsidy passes, car share, bike share, and other measures that support non-auto mobility.

Staff believe that both TDM Infrastructure and Programs are needed to support sustainable benefits and influence further reduction in residential parking requirements.

Current TDM Program

As part of the City’s current rezoning applications, TDM measures are required through all developments within the TOD areas, but they are not tied to or financially correlated to off-street parking reductions. The variation of TDM measures across different projects has created difficulty in assessing the effectiveness of post-occupancy TDM measures. For certain site-specific projects the required Bylaw parking rate is further reduced inconsistently with additional TDM measures required.

A scan of TDM programs in comparable Metro Municipalities is summarized in Attachment 3. A number of municipalities offer TDM programs in lieu of on-site parking reductions. Common TDM measures include transit pass subsidies and car share credits and memberships that would be reviewed on a case-by-case basis as part of the development processes. Vancouver, Coquitlam, and New Westminster currently require

mandatory TDM measures in most of their TOD areas without parking reduction. In their approach, the municipalities’ parking requirement has been ‘right-sized’ to their TOD demand and the set of TDM measures are integrated and required as part of the development.

In this review, it is recognized that TDM programs will support livability and mode shift and promote sustainable growth in future developments.

Bicycle Parking Review

The average demand for bicycle parking ranged between 0.21 to 1.27 parked bikes per dwelling unit, with Burnaby averaging at approximately 0.25 bicycle spaces per dwelling unit based on four sites observed. A summary of residential bicycle parking demand observed within Metro Vancouver is summarized in Attachment 4.

A scan of long-term bike parking requirements per residential dwelling units within Metro Vancouver confirms the range between 1.0 to 2.5 spaces. Long-term bike parking is designed to accommodate residential bicycles within secured, weather protected and well-designed racks. As summarized in Attachment 4, most municipalities have required between 1.2 and 1.5 bicycle spaces per dwelling unit in new developments as a way to encourage higher cycling usage.

Short-term bike parking is needed to support visitors and are located close to primary building entrances. Most municipalities will require new developments to provide for six or more bicycle spaces at each residential building entrance.

4.0 PROPOSED PARKING AND TDM POLICY

Parking requirements within TOD areas are influenced by proximity to rapid transit stations and TDM can encourage reduction in single occupancy vehicle travel and vehicle ownership, thereby encouraging the shift to active modes. Based on the results of the review as described in Section 3.0, staff recommend the following:

- 1. Residential Parking Rates in TOD Areas.** Staff recommends the current parking rates to be reduced as shown in Table 2. The recommended rates reflect the variation in parking demand by proximity to transit and unit type and the reductions (approximately 15%) through TDM program implementation as recommended in this policy. Refer to Attachment 5 for TOD areas.

Table 2: Staff Recommended Residential Parking Rates in TOD Areas

Residential Unit Type	Current Bylaw Rate (space / dwelling unit)	Proposed Bylaw Rate for TOD (space / dwelling unit)	
		within 400m ⁽¹⁾	within 400m and 800m ⁽²⁾
<i>Multi-Family (Strata) Apartments</i>			
Studio / 1 bedroom	1.0	0.40	0.45

2 bedroom +		0.90	0.95
Visitor ⁽³⁾	0.1	0.1	0.1
<i>Purpose-Built (Market) Rental</i>			
Studio / 1 bedroom	0.5	0.30	
2 bedroom +		0.75	
Visitor ⁽³⁾	0.1	0.1	

Note: (1) Catchment area within 400m radius from any SkyTrain station;
 (2) Catchment area within the 400m and 800m radius from any SkyTrain station.
 (3) No change to visitor parking rate

It is acknowledged that with the proposed parking rates, some units will not have an allocated parking stall. Overall, the parking rate for strata and rental is expected to be 0.62 and 0.50 parking spaces per dwelling unit, respectively. Typically, developers will assign and sell parking stalls as part of the larger or 2 bedroom + units and sell the remaining stalls on a first come/first served basis. Staff expect that people who move into the TOD areas will likely own less vehicles, as such not all units will need to have an assigned parking space.

2. TDM Program: Move from ‘negotiated’ to ‘mandatory’ TDM without parking reduction. Staff recommend a mandatory provision of TDM measures for all residential dwelling units in new TOD developments. There would be no further negotiated approach as a result of this new program with the full intent of incentivizing new residents to utilize active modes to reduce vehicle use and corresponding parking demand in order to support the parking reduction in Table 1. The new TDM program will create transparency and consistency for all new applications and provide future residents the equality to access alternative modes of transportation.

The key objective of the TDM program is to provide real value to users to facilitate sustainable transportation, while minimizing the administration burden to the City. Through this review, a suite of TDM program measures including transit subsidy and car share membership and credits (refer to Attachment 6) will be required for all residential units.

3. TDM Bicycle Infrastructure: Staff recommends the following new requirements to the Zoning Bylaw to formalize cycling requirements for new developments.

- Require 2.0 long-term bike parking spaces per dwelling unit for residential land use. The recommendation reflects current new development requirements.
- Require 0.2 short-term visitor bike parking spaces per dwelling unit to be located at the primary building entrance. The recommendation reflects current new development requirements.
- Require provision of bicycle repair and maintenance stations on-site for all multiple residential dwelling uses.

- Require design criteria for accessibility to support bicycle parking access.

4. TDM Wayfinding Infrastructure: Staff recommend on-site signage to help guide users to sustainable transportation facilities and to reduce driver confusion within parking facilities.

Taking into account the recommended parking reduction in Table 1, the requirements for TDM program and infrastructures (items 2, 3, and 4 above) is reasonable in comparison to the cost of a parking stall not provided. The cost of a parking stall construction as detailed in Attachment 7 can average \$70,000. For example, for a 300-dwelling unit building, the total TDM value would be estimated between \$4.5 and \$5.0 million, which is approximately 50% of the total cost of parking stalls not provided.

Next Steps

To ensure the robustness of the City's TDM policy, it will be beneficial to monitor the near and long-term impacts within a Burnaby context. Staff will review the prospect of furthering our understanding on parking dynamics in new buildings, effectiveness of TDM, and travel behaviours that is needed to support future sustainability goals and economic vitality. Staff will also continue to review and expand the City's Parking Management strategy through policy updates that will optimize on-site parking utilization to minimize neighbourhood impact. Further assessment would include permitting the opportunity for shared parking between various land uses; reviewing unit type allocation with reference to parking requirements; allowing commercial use to benefit underutilized residential parking spaces; and managing public street parking demand and supply through curbside management.

Subject to Council feedback, staff will finalize the recommendations in this report and will come back with draft Bylaws and policy changes for Council consideration.

5.0 COMMUNICATION AND COMMUNITY ENGAGEMENT

Not applicable.

6.0 FINANCIAL CONSIDERATIONS

There are no financial considerations related to this report.

Respectfully submitted,

Jozsef Dioszeghy, P.Eng, General Manager Engineering
Edward Kozak, General Manager Planning and Development

ATTACHMENTS

- Attachment 1 – Residential Multi-Family (Strata) Parking Summary
- Attachment 2 – Residential Purpose-Built (Market) Rental Parking Summary
- Attachment 3 – Current TDM Practice
- Attachment 4 – Bicycle Parking Summary
- Attachment 5 – TOD Area Summary
- Attachment 6 – Recommended TDM for New Residential Developments in TOD
- Attachment 7 – Parking Stall Construction Costs Summary

REPORT CONTRIBUTORS

This report was prepared by Kathy Ho, P.Eng., PTOE, Senior Manager, Transportation, and reviewed by Amy Choh, P.Eng., PMP, Director Engineering Transportation and Johannes Schumann, Director Development and Urban Design.

Attachment 1 – Residential Multi-Family (Strata) Parking Summary

Zoning Bylaw in TOD

Location	Studio/1+Bdrm	2+ Bdrm	Visitor
City of New Westminster	0.75	1.0 - 1.25	0.1
City of Coquitlam	0.85	1.25	0.15
City of Surrey	0.9 – 1.1		0.1 – 0.2
City of Richmond	1.0 – 1.4		0.2
City of Port Moody	1	1.35	0.1 – 0.2

Parking Rate Summary by TOD

Location	Number of Buildings	Number of Units	Registered Vehicles per Unit
Brentwood Town Centre	16	4,343	0.78
Edmonds Town Centre	4	903	0.86
Lougheed Town Centre	2	503	0.84
Metrotown Regional Town Centre	13	2,804	0.61
Royal Oak	3	198	0.95
<i>*Average</i>			<i>0.74</i>

* Weighted average based on vehicles registered and number of units assessed

Parking Rate Summary Based on SkyTrain Distance

Distance to SkyTrain	Number of Buildings	Number of Units	Registered Vehicles per Unit
< 400m	25	6,329	0.69
400m to 800m	15	2,277	0.89

Parking Rate Summary Based on Unit Type

Unit Type	Registered Vehicles per Unit
Studio + 1 Bedroom	0.46
2+ Bedroom	1.09

Note: Data based on buildings located in Brentwood, Metrotown, Edmonds and Royal Oak.

Parking Utilization Survey

No. of Buildings (Brentwood)	Total Number of Occupied Residential (Strata) Stalls	Total Number of Residential (Strata) Units	Occupied Stalls / Unit
3	1,054	1,266	0.8325

Attachment 2 – Residential Purpose-Built (Market) Rental Parking Summary

Zoning Bylaw in TOD

Location	Studio/1+Bdrm	2+ Bdrm	Visitor
City of New Westminster	0.6	0.8 - 1.0	0.05
City of Coquitlam	0.75		0.15
City of Surrey	0.65 – 0.90		0.1 – 0.2
City of Richmond	0.8 – 1.3		0.2
City of Port Moody	1.1		0.1 – 0.2

Parking Rate Summary by TOD

Location	Number of Buildings	Number of Units	Registered Vehicles per Unit
Brentwood Town Centre	1	300	0.57
Louhgeed Town Centre	3	432	0.75
Metrotown Regional Town Centre	12	1,238	0.59
*Average			0.62

* Weighted average based on vehicles registered and number of units assessed

Parking Rate Summary Based on SkyTrain Distance

Distance to SkyTrain	Number of Buildings	Number of Units	Registered Vehicles per Unit
< 400m	2	401	0.57
400m to 800m	6	936	0.59

Parking Rate Summary Based on Unit Type

Unit Type	Registered Vehicles per Unit
Studio + 1 Bedroom	0.37
2+ Bedroom	0.88

Note: Data based on buildings located in Brentwood and Metrotown

Parking Utilization Survey

No. of Buildings	Total Number of Occupied Residential (Strata) Stalls	Total Number of Residential (Strata) Units	Occupied Stalls / Unit
3	158	300	0.53

Attachment 3 – Current TDM Practice

Municipality	TDM Policy Type	TDM Requirement	TDM Policy Notes
City of Port Moody	No	Optional	<ul style="list-style-type: none"> TDM framework under review. New policy includes TDM Strategy to be updated in Zoning Bylaw.
City of Vancouver	Parking Bylaw	Downtown Mandatory Outside downtown optional	<ul style="list-style-type: none"> TDM is mandatory downtown Projects must meet a specific point threshold (where vehicle parking is not generally required). Outside of downtown (where parking is required) projects may reduce parking with TDM up to 20% with TDM measures, and up to 10% for projects closest to transit. Rental and social housing double these maximums.
District of North Vancouver	No	Optional	<ul style="list-style-type: none"> TDM policy includes menu of options with associated points for residential and commercial uses. Project may reduce its parking requirements to a prescribed "Base Vehicle Parking Rate". Additional measures available to reach the minimum parking rate including proximity to transit, shared parking, car share, pricing, and unbundled parking. Policy allows for developments to fill in gaps in the cycling and walking network that are not along their site frontage to gain points.
City of New Westminster	Zoning Bylaw	Within FTN proximity	<ul style="list-style-type: none"> TDM measures formally presented in the Zoning Bylaw are mandatory. Recent updates requires for various TDM measures citywide including increased base bicycle parking requirements, end-of-trip facilities, bike maintenance facilities, internal wayfinding
City of Coquitlam	Zoning Bylaw	Required in Evergreen Line Core and Shoulder areas	<ul style="list-style-type: none"> TDM monetary value is based on number of units or floor area times fixed value No additional parking reductions for TDM. TDM measures accepted includes car share, transit passes, and electric bicycles, with alternative opportunities. Mandatory measures for travel info packages and directional wayfinding signage for parking. Policy requires a contribution to TDM monitoring funds with the City conducting monitoring.
City of Richmond	Zoning Bylaw,	Optional, open-ended policy	<ul style="list-style-type: none"> Up to 20% reduction with TDM and parking study. A list of potential TDM measures is provided No implementation guidelines provided. Acceptance of TDM plans is at the discretion of the Director of Transportation.
City of Victoria	No	Informal opportunities provided for parking and trip rate reductions	<ul style="list-style-type: none"> Size depended where staff may recommend a traffic study to be conducted to invest in TDM package or, alternatively, make contributions to streetscape improvements (e.g.: nearby crosswalk upgrade) in addition to any required frontage requirements.

Attachment 4 – Bicycle Parking Summary

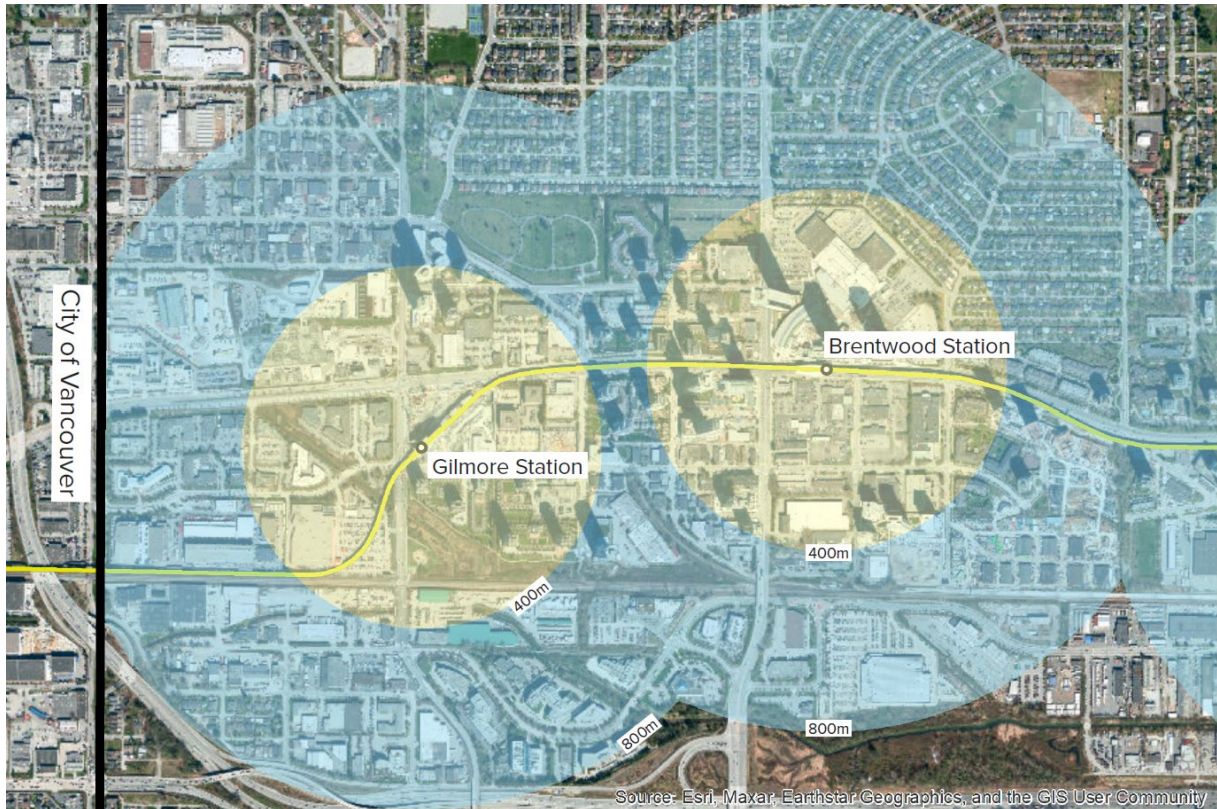
Municipal Bicycle Parking Rate Review

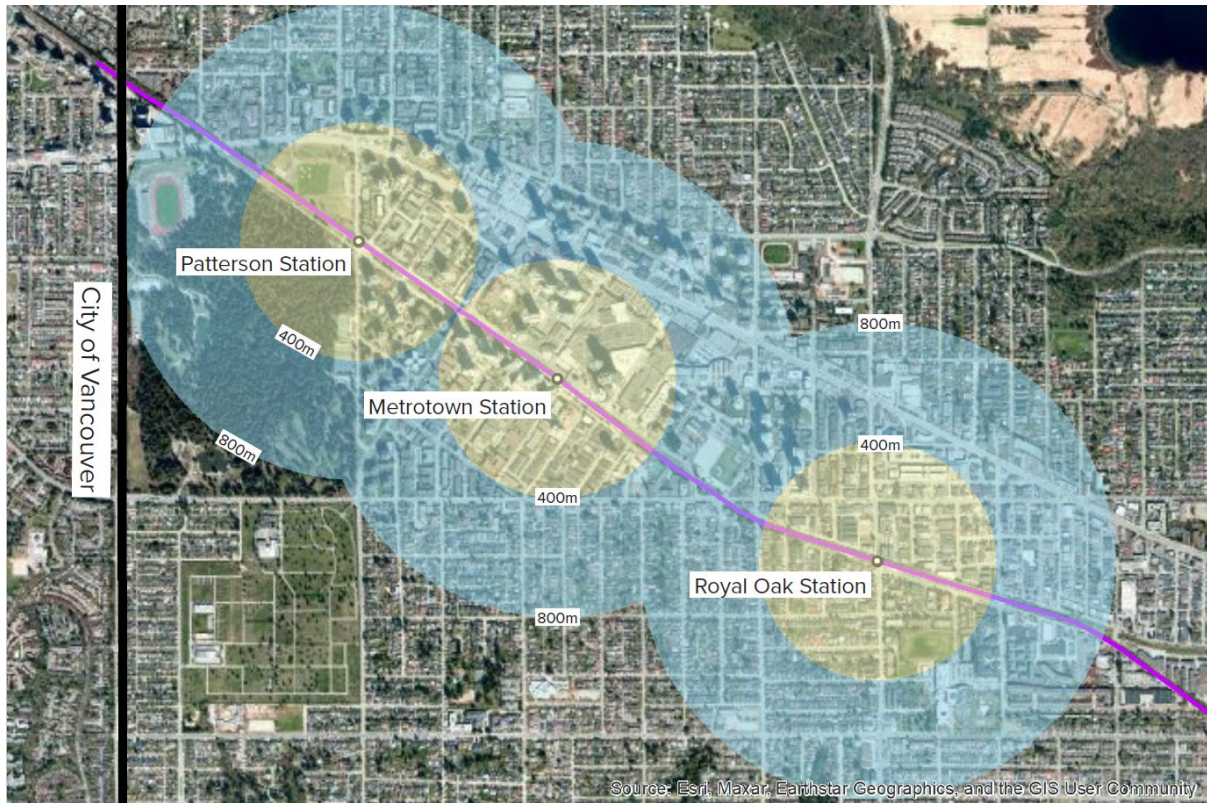
Municipality	Short-Term Rate	Long-Term Rate
City of Burnaby	1 spaces per 5 dwelling units	2 spaces per dwelling unit
City of Coquitlam	<i>Strata</i> : 6 per spaces per 1 building entrance	<i>Strata</i> : 1.25 spaces per dwelling unit
City of New Westminster	<i>Strata</i> : 0-19 units: 2 spaces 20-59 units: 6 spaces 60-99 units: 9 spaces 100 or more units: 12 spaces <i>Affordable / Purpose-Built Rental</i> : 6 spaces for developments with 20 dwelling units or more	<i>Multiple Dwelling</i> : 1.5 spaces per dwelling unit
North Vancouver	<i>Multiple Dwelling</i> : 0-19 units: no requirement 20-59 units: 6 spaces 60 or more units: 6 spaces per every 60 units or part thereof	<i>Multiple Dwelling</i> : 1.5 spaces per dwelling unit
City of North Vancouver	<i>Multiple Dwelling</i> : 0.2 spaces per unit for any development containing 5 or more dwelling units	-
City of Richmond	<i>Multiple Dwelling</i> : 0.2 spaces per dwelling unit	<i>Multiple Dwelling</i> : 1.25 spaces per dwelling unit
City of Surrey	<i>Strata</i> : 6 spaces per multiple unit residential building	<i>Strata</i> : 1.2 spaces per dwelling unit
City of Vancouver	<i>Multiple Dwelling</i> : A minimum of 2 spaces for any development containing at least 20 dwelling units, and one additional space for every additional 20 dwelling units.	<i>Multiple Dwelling</i> : A minimum of 1.5 spaces for every dwelling unit under 65 sqm. A minimum of 2.5 spaces for every dwelling unit over 65 sqm and under 105 sqm. A minimum of 3 spaces for every dwelling unit over 105 sqm.

Observed Bicycle Parking Utilization Survey

Location	Total Number Buildings Observed	Average Bike Ownership Per Unit
Vancouver West	4	1.27
Burnaby (Strata)	2	0.24
Burnaby (Rental)	2	0.21 – 0.29

Attachment 5 – TOD Area Summary





Attachment 6 – Recommended TDM for New Residential Developments in TOD

Proposed Base TDM Package

TDM INITIATIVES	DETAILS	STRATA	RENTAL	ESTIMATE VALUE
Compass Transit Pass Subsidies	<ul style="list-style-type: none"> Provide one 3 year subsidy adult pass for two zone per dwelling unit. 	✓	✓	<ul style="list-style-type: none"> \$5,050 per dwelling unit
Car Share Memberships	<ul style="list-style-type: none"> Provide lifetime memberships to car share organization per dwelling unit 	✓	✓	<ul style="list-style-type: none"> Up to \$500 per dwelling unit
Car Share Driving Credits	<ul style="list-style-type: none"> Provide \$100+ driving credits per dwelling unit 	✓	✓	<ul style="list-style-type: none"> \$100+ per dwelling unit
Car Share Parking Spaces	<ul style="list-style-type: none"> Provide parking spaces for car share vehicles on-site⁽¹⁾ 	✓	✓	<ul style="list-style-type: none"> \$70,000+ per parking space
Car Share EV Charging	<ul style="list-style-type: none"> Construct minimum one EV charging infrastructure with station for car share vehicles on public streets⁽²⁾ Construct minimum one EV Charging Infrastructure with station for car share vehicles on-site⁽³⁾ 	✓	✓	<ul style="list-style-type: none"> On-street: \$45,000+ per station On-site: \$5,000 - \$7,000 per parking space

(1) Preference for car share vehicles to be on-street; Car share vehicles accepted on-site for larger development sites through development review (for i.e. 1 car share vehicles per 100 dwelling units).

(2) To be reviewed with Public EV Charging Strategy; Includes dual port EV Charging station on-street that will be a City Asset.

(3) On-site EV Charging infrastructure for car share to be integrated with future development requirement.

Potential TDM Initiatives Consideration

TDM INITIATIVES	DETAILS	STRATA	RENTAL
TDM Monitoring Program	<ul style="list-style-type: none"> Collect funds to monitor parking demand and mode split 	✓	✓
Micromobility Programs ⁽²⁾	<ul style="list-style-type: none"> Provide credits to public share programs 	✓	✓
Micromobility Space ⁽²⁾	<ul style="list-style-type: none"> Provide SRW space with foundation on-site for public share station with opportunity to charge. 	✓	✓
Share Bike Fleet	<ul style="list-style-type: none"> Provide fleet of bicycles through private programs 		✓

Mobility Service ⁽²⁾	<ul style="list-style-type: none"> • Provide credits for TransLink Compass Cards to access all transportation mobility options 	✓	✓
Ride Share ⁽²⁾	<ul style="list-style-type: none"> • Provide rideshare credits. 	✓	✓

(4) Potential initiatives through future programs

As the Transportation network continues to evolve, the TDM package will need to be reviewed to create opportunities for innovation such as opportunities for mobility hubs. It is necessary to create flexibility in the program and allow projects to respond to changing mobility needs.

Attachment 7 – Parking Stall Construction Costs Summary

Parking Lot Type	Base Price Range/Stall	Additional Cost Variables
Surface	\$12,000 – \$15,000	<ul style="list-style-type: none">• Inefficient layout• Corrosion protection• Roof above Top Level• PV/Green roof• EV Charging
Above Grade	\$24,000 – \$32,000	
Below Grade	\$65,000 – \$75,000	

Note: Unit costs reflects a wide array of variables that could impact parking stall construction, including local ground water conditions. Land value was excluded from analysis. In general, the typical average cost to construct an underground parking stall is approximately \$70,000.