



September 25, 2020
Our File: 13-6480-20/12/1
Doc #: 3830002.v8

VIA EMAIL: kjones@portmoody.ca

Kevin Jones
Senior Development Planner
City of Port Moody
100 Newport Drive
Port Moody BC V3H 5C3

Dear Mr. Jones:

RE: City of Port Moody Official Community Plan Amendment Application for Coronation Park by Wesgroup

Thank you for the opportunity to review and provide preliminary comments regarding the Wesgroup's Official Community Plan (OCP) amendment application for Coronation Park. This letter is a response to your referral on August 26th, 2020 addressed to the City of Coquitlam General Manager of Planning and Development as well as the site plan and renderings received on September 16th, 2020. That material has been reviewed by staff in our Community Planning, Engineering and Public Works, and Parks, Recreation and Culture Departments and represents a staff response that has not yet been considered by Coquitlam.

Please note that Coquitlam Council will not receive a formal staff report on this OCP amendment given its early stage, however, they will be informed of the early consultation made pursuant to Section 475 of the *Local Government Act* and of the associated staff comments. At this time, Coquitlam staff would like to note the following:

Land Use Designation and Urban Design

- The transit-oriented development nature of Wesgroup's Coronation Park development proposal is consistent with the approach of the draft City Centre Area Plan (CCAP) which seeks to create higher densities around rapid transit. The adjacent properties on the east side of Balmoral Drive within Coquitlam, have a proposed designation of High Density Apartment Residential, as identified on Attachment 1 (Schedule A to the draft CCAP). This land use allows for a residential density up to a 5.5 Floor Area Ratio (FAR), with no height limit, through a Comprehensive Development zone based on the RM-6 zone.
- The location of the proposed daycare facility offers a unique alignment with the proposed 'Future Neighbourhood Commercial Node' located on Palmer Avenue, as

identified on Attachment 2 (Schedule C to the draft CCAP). This node encourages small scale commercial uses, such as child care facilities, convenience and grocery stores, coffee shops, restaurants, pharmacies and dry cleaners to support resident's daily shopping needs.

- A Gateway, serving as a landmark entry point has been identified on Barnet Highway east of Coquitlam's municipal border and south of Palmer Avenue, as identified on Attachment 3 (Schedule J to the draft CCAP). It is proposed that future development in this area demonstrate a high degree of design excellence; Port Moody staff may also want to advocate for unique building designs or elements to mark entry into your municipality.

Parks, Recreation and Culture

- A minimum parkland dedication of 0.4 hectares (1.0 acres) is proposed on the parcel north of Palmer Avenue within Coquitlam, as identified on Attachment 4 (Schedule E to the draft CCAP). An adjacent, similar sized park is recommended in Port Moody. Given the close proximity of the two planned park sites, our Parks, Recreation, Culture and Facilities Department requests that joint consideration be given to site planning to ensure a strategically located and connected parks and open space network, minimize shadowing impacts from future development, and ensure that the park space and programming meets the growing needs of the neighbourhood.

Environment

- An unclassified ditch located at the intersection of Balmoral Drive and Palmer Avenue within Coquitlam's municipal boundary, drains south into an unclassified ditch along the north side of Barnet Highway, which drains west into Port Moody, as identified on Attachment 5 (Schedule F of the draft CCAP). Following a 2019 assessment of the Balmoral Drive ditch north of Palmer Avenue completed by a Qualified Environmental Professional (QEP), which classified that area as 'non-fish habitat', we believe that the fish habitat value in the section of the ditch between Palmer Avenue and Barnet Highway may be minimal as well, but may require a minimum 2 metre Streamside Protection and Enhancement Area (SPEA) setback (if non-fish bearing). As the subject site is located adjacent to this ditch, we recommend that the City of Port Moody retain a QEP to determine SPEA setbacks in this area.

Transportation

- A future Collector Street has been identified on Balmoral Drive, as identified on Attachment 6 (Schedule H to the draft CCAP). The frontage and cross-section of this roadway will need to accommodate an inter-municipal Collector road standard and meet a 50 km per hour design speed as per Coquitlam's Subdivision and Development Servicing Bylaw. This road will carry much of the future traffic to and from Barnet Highway via the new Palmer Avenue connection and signalized intersection to the southeast. Traffic calming cannot be constructed along Balmoral Drive given its designation as an inter-municipal Collector roadway.

- At the intersections of Guildford Drive and Palmer Avenue along Balmoral Drive, appropriate configurations and traffic control will be needed to accommodate future traffic volumes. Coordination with Coquitlam's Traffic Operations staff will be required because of the inter-municipal Collector road.
- As per Coquitlam and Port Moody staff discussion made as part of the Joint Municipality Coronation Park Traffic Study, the temporary access to Barnet Highway must be removed once the new signalized intersection at Palmer Avenue and Barnet Highway is operational.

As noted above, these are staff comments and staff will make Coquitlam Council aware of Wesgroup's OCP amendment application for Coronation Park and the associated comments.

We would like to thank you again for the referral. If you have any questions or would like to discuss this further, please contact me at 604-927-3401 or jmcintyre@coquitlam.ca.

Yours truly,

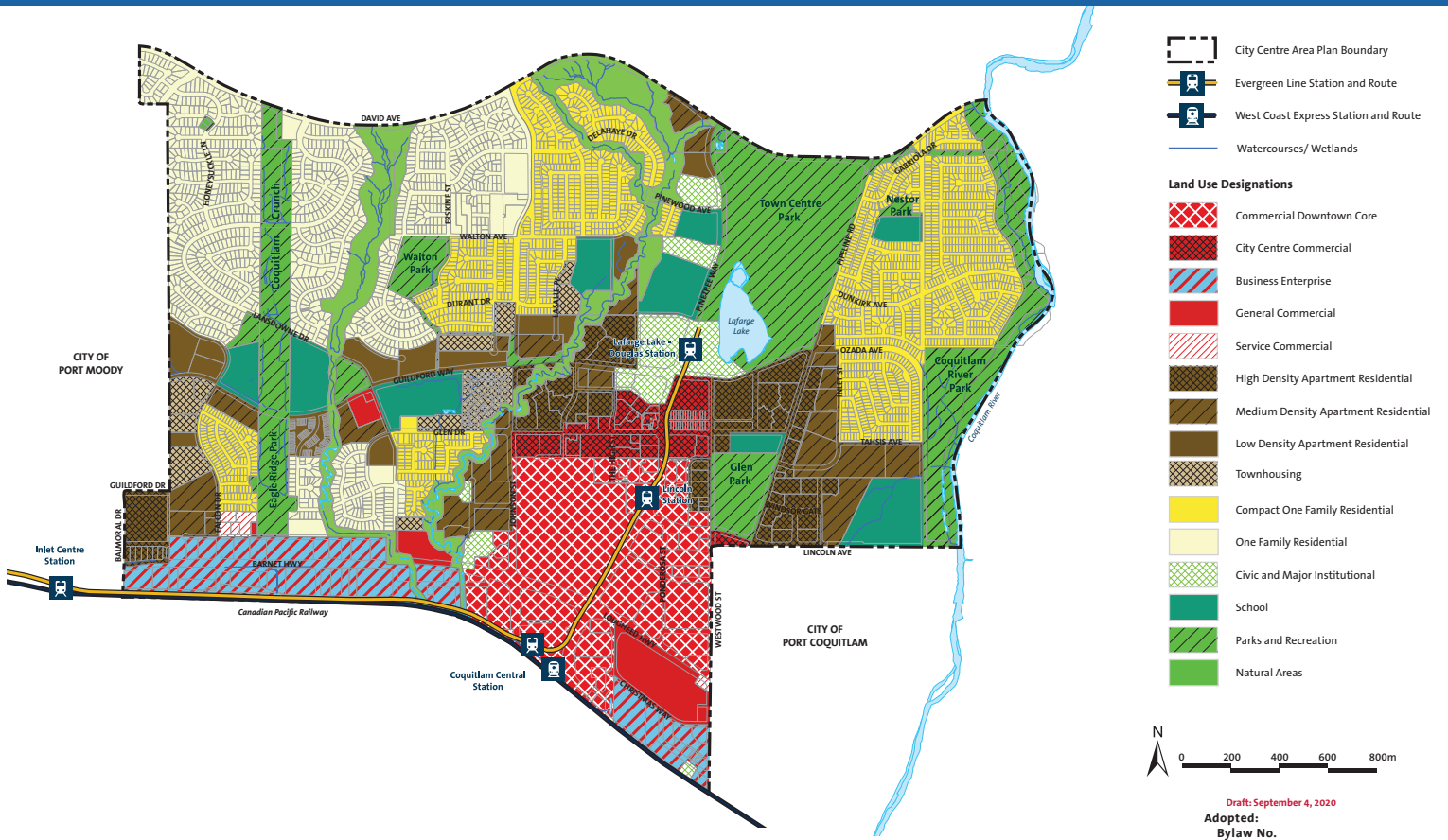

per J.C. McIntyre, M.C.I.P., RPP

General Manager Planning and Development

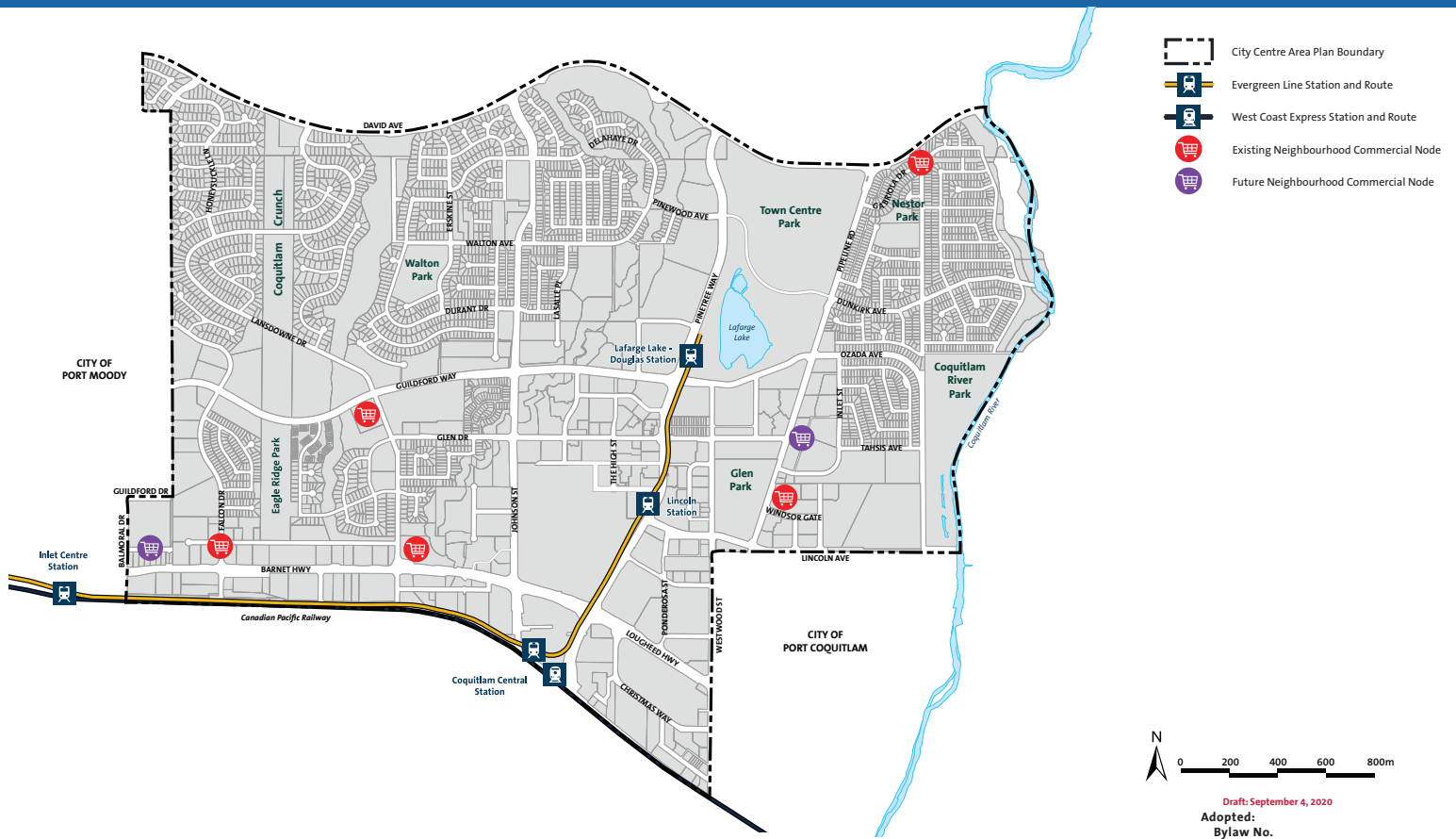
Attachments:

1. Attachment 1 (Schedule A to the draft CCAP) (Doc# 3838680)
2. Attachment 2 (Schedule C to the draft CCAP) (Doc# 3838680)
3. Attachment 3 (Schedule J to the draft CCAP) (Doc# 3838680)
4. Attachment 4 (Schedule E to the draft CCAP) (Doc# 3838680)
5. Attachment 5 (Schedule F to the draft CCAP) (Doc# 3838680)
6. Attachment 6 (Schedule H to the draft CCAP) (Doc# 3838680)

SCHEDULE A LAND USE DESIGNATIONS



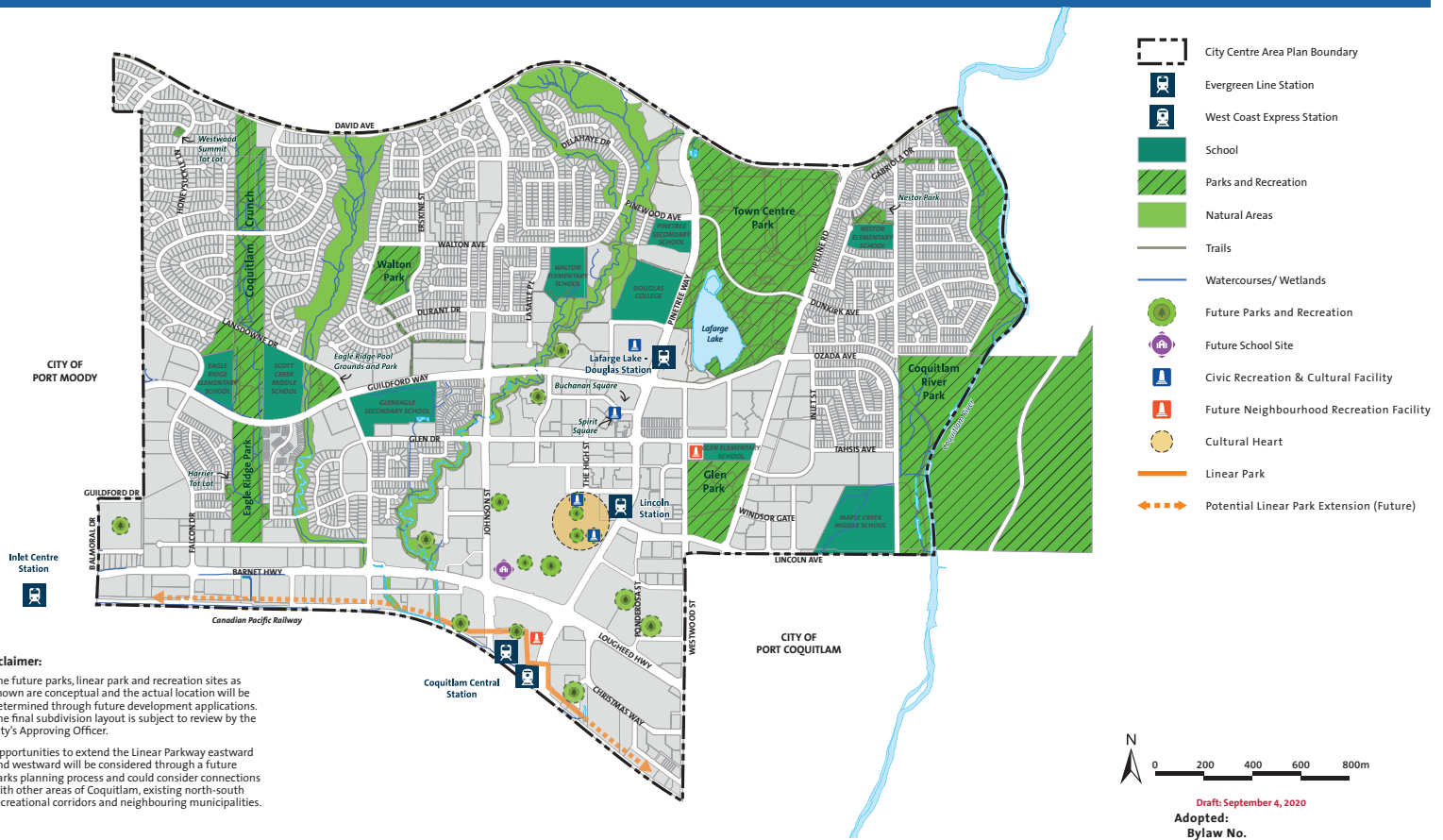
SCHEDULE C NEIGHBOURHOOD COMMERCIAL OVERLAYS



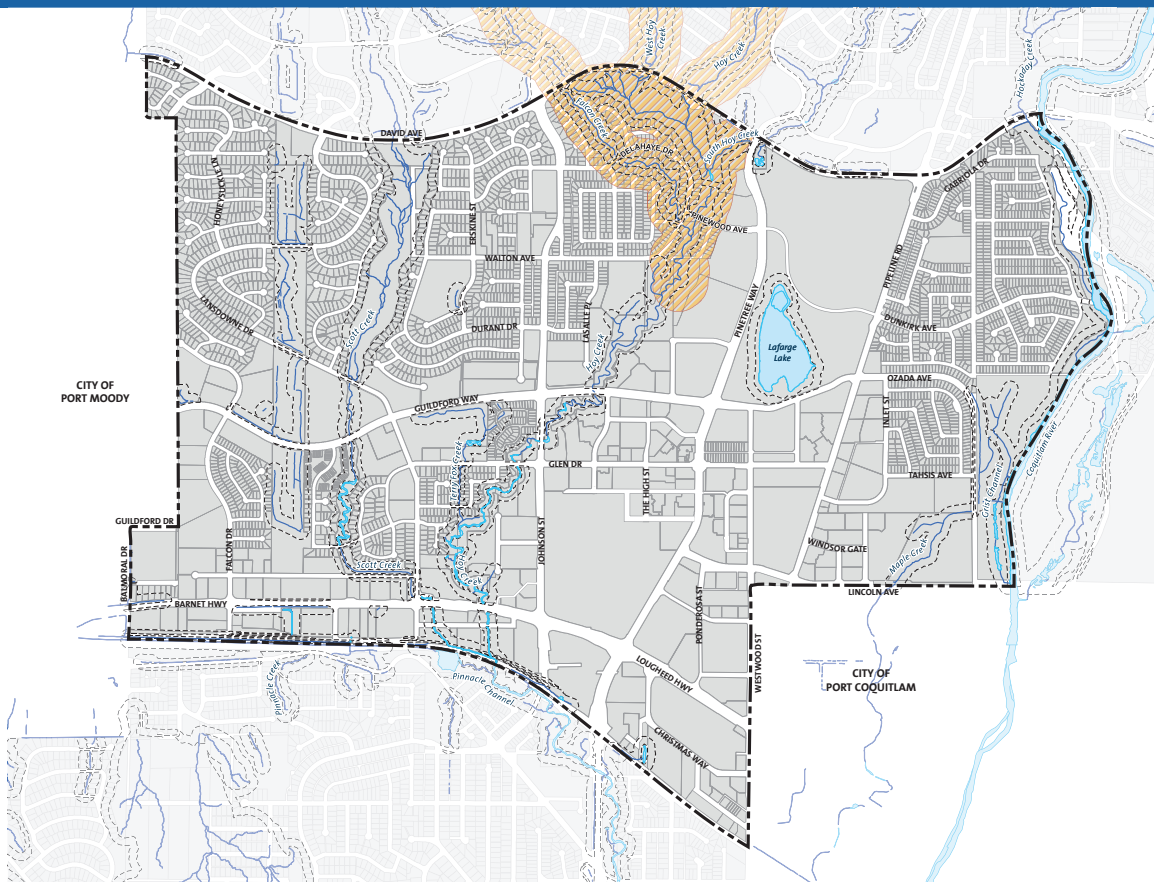
SCHEDULE J GATEWAYS



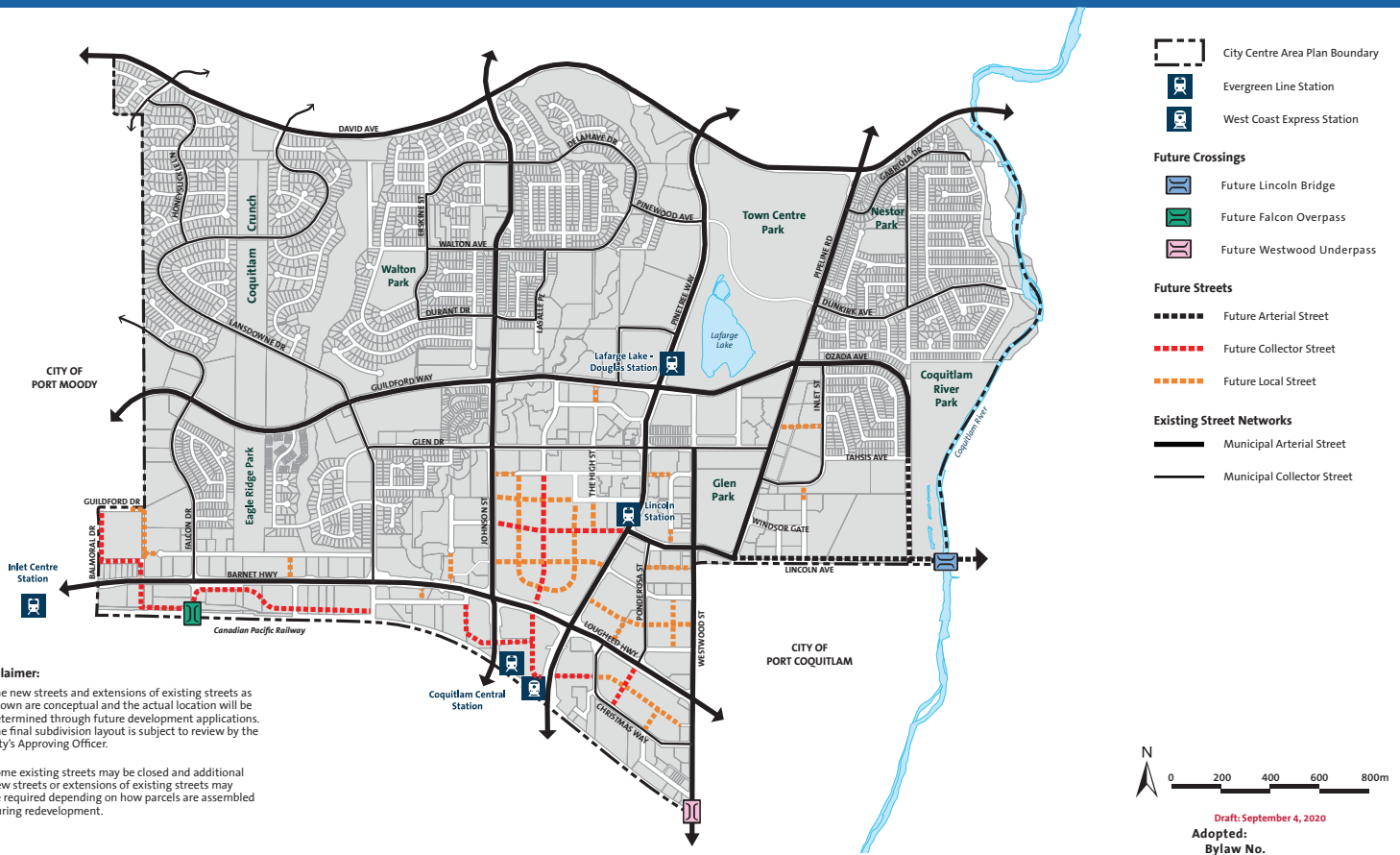
SCHEDULE E PARKS, RECREATION, CULTURE AND SCHOOLS



SCHEDULE F WATERCOURSES AND RIPARIAN AREAS



SCHEDULE H FUTURE STREET NETWORK





SENT VIA EMAIL

October 19, 2020

Senior Development Planner
City of Port Moody
100 Newport Drive
Port Moody, BC V3H 5C3

Dear Mr. Jones,

Re: Port Moody Official Community Plan Amendment Application for Coronation Park

Thank you for the opportunity to provide our comments for this application. The purpose of this letter is to provide health evidence and encourage the City of Port Moody to review the amendment application and future development of Coronation Park with the outlined health outcomes in mind. We encourage planners and developers to consider the health impacts of neighbourhood design in more detail and to continue to devise creative planning solutions to support benefits and mitigate harms.

The current pandemic has highlighted the important role cities play in enabling people to move and interact safely in our communities. The recent poor air quality events have also highlighted the urgency to commit to climate change goals. Fraser Health is committed to supporting cities in establishing and meeting goals for creating communities that provide people with the best opportunity to lead healthy lives.

As indicated within this letter, planning healthy cities has a number of co-benefits that reduce rates of chronic disease in our population¹. Below we have highlighted a few areas that we believe are important for the development of Coronation Park:

- Transportation networks that promote physical activity, social connectedness, and physical distancing
- Mixed-use neighbourhoods that promote wayfinding for all and provide equitable opportunities for physical activity and social connectedness
- Parks and open spaces that promote safe social gatherings, provide shade and heat shelters, as well as the benefits of being in nature
- Mitigating negative impacts of high rises on social connectedness
- Limiting exposure to and reducing air, noise, and light pollution
- Climate change adaptation

The following section provides health data and evidence as well as suggested actions that address each of the highlighted areas.

1. Transportation Networks that Promote Physical Activity, Social Connectedness, and Physical Distancing

Evidence-informed Health Data

When transportation networks are designed to prioritize active transportation, mobility for all residents is encouraged. This leads to improved health outcomes, better physical and mental well-being and greater opportunity for social connectedness.¹ Designing neighbourhoods that support various modalities can increase active transportation. For example, providing sheltered bike racks at bus stations as well as bike share programs have been shown to increase public transit use. Supporting active transportation in a community provides a multitude of health benefits, such as increased social well-being and healthy weights, as well as decreased stress and chances for all-cause mortality.¹

As seen via the current pandemic, public health recommendations have highlighted that COVID-19 transmission risk associated with outdoor activity is very low as long as physical distancing is maintained. Providing safe spaces for people to be physically active outside, allows more people to enjoy the many health benefits associated with the usage of infrastructure for walking and cycling.

Suggested Actions

- Include separated pedestrian and bicycle pathways, pedestrian friendly streetscapes, cycling infrastructure/amenities, appropriate parking allowances, and limited vehicle access.
- Develop a hierarchy of street users in mind, giving the highest priority to walking followed by cycling and public transit over other vehicles.
- Consider pedestrian and bicycle pathways that connect to neighbouring parks and amenities.

2. Mixed-Use Neighbourhoods that Promote Wayfinding for All and Provide Equitable Opportunities for Physical Activity and Social Connectedness

Evidence-informed Health Data

Complete, compact, and walkable neighbourhoods with mixed land use have the ability to increase social interactions and social capital, thereby improving mental health and well-being. Variations in neighbourhood density, availability of public spaces and facilities, and community-level services all influence health through their impact on physical and social contexts and on individual behaviours.⁶ Often times, vulnerable individuals who are disproportionately affected by health burdens could benefit from minor adjustments to the built environment. For example, some best practices could be amended to further benefit individuals with conditions such as dementia or mobility issues by ensuring that urban design is increasingly more inclusive.

The following actions are intended to improve individual's wayfinding within the built environment; these actions encompass a dementia friendly lens and are intended to create safe

and welcoming built environments for all individuals, regardless of age and cognitive or physical ability.

Suggested Actions

- Ensure that sidewalks/pathways are wide enough to allow individuals using mobility aids such as wheelchairs, walkers, and scooters, to travel safely.
- Develop crosswalks that are well marked and have a consistent design, in order to reduce disorientation in vulnerable individuals.
- Encourage clear and easily readable lettering on signage. Preferably, place signage at eye level.¹¹

3. Parks and Open Spaces that Promote Safe Social Gatherings, Provide Shade and Heat Shelters, as well as the Benefits of Being in Nature

Evidence-informed Health Data

There are important relationships between accessible green space and mental health and well-being. Research indicates a strong relationship between exposure to nature and reduced stress levels, chronic disease, as well as depression and anxiety¹. Other benefits also include improved concentration and cognitive functioning. Even a brief interaction with nature, such as a ten-minute walk or a view of green space, can have restorative effects. Access to outdoor spaces also makes it more likely that people will be physically active. In addition, accessing parks and open spaces also increases social well-being by providing places for residents to make new connections and build relationships with friends, family, and neighbours.¹

Suggested Actions

- Include parks and green spaces within a 5-10 minute walk from all residential developments in the neighbourhood.
- Expand green elements (e.g. infiltration gardens) across the built environment, specifically in public open spaces and on streetscapes/boulevards.
- Encourage incorporating spaces for initiatives such as community gardens and roof top gardens.

4. Mitigating Negative Impacts of High-Rises on Social Connectedness

Evidence-informed Health Data

While high-density developments like high-rises can help achieve transit-oriented development concepts and may offer housing that is relatively more affordable, they have also been associated with social isolation and a decrease in mental health especially when living on a high floor⁶. Additionally, evidence suggests people living in high rises and apartments in the Metro Vancouver region are least likely to have positive social connections that in turn could lead to social isolation and a weakened sense of community belonging⁸.

Suggested Action

- Address concerns such as social isolation associated with high-rises in the proposed development by including design guidelines that promote social connectedness.

5. Limiting Exposure to and Reducing Air, Noise, and Light Pollution

Evidence-informed Health Data

Allowing for more density, especially adjacent to major intersections and arterials may expose more people to traffic related air pollution (TRAP) and noise¹. Traffic related air pollution (TRAP) has been linked to respiratory and cardiovascular disease and death⁹. Persistent exposure to environmental noise can also increase the likelihood of heart attacks and high blood pressure⁹. Mixed-use development can also increase the proximity of residential dwellings to commercial developments, which tend to have signage, office buildings lit up in the evening, and other sources of artificial light. Evidence suggests that light pollution can cause disruptions of the circadian clock, which is linked to several medical disorders in humans, including depression, insomnia, cardiovascular disease, and cancer¹⁰.

Suggested Actions

- Include design guidelines that help reduce or mitigate the impact of traffic related air pollution and noise pollution.
- Stipulate design requirements to reduce the exposure to environmental hazards like noise and vehicle emissions for sensitive land uses like childcare centers and housing for vulnerable groups.
- Encourage or establish development design guidelines that limit the exposure of excess artificial light on residential dwelling during nighttime hours.

6. Climate Change Adaptation

Evidence-informed Health Data

Recent evidence indicates that the effects of climate change on health are wide-ranging. Climate change events (e.g. drought, fire, floods) can result in long-term psychological, personal, and societal costs⁵. The following is a list of some of these effects:

- Heat related stress such as heat stroke, dehydration, cardiovascular events, especially in vulnerable populations.
- Reduced air quality from increased wildfires resulting in respiratory symptoms, cardiovascular events, and increased mortality.
- Extreme weather events such as flooding leading to potential exposure to infectious disease⁵.

Measures that mitigate or help adapt to climate change impacts have the potential to reduce unwanted health effects.

Suggested Actions

- Consider the addition of tree canopies (e.g. in the form of urban forests) and other measures to mitigate the heat island effect.
- Consider creating outdoor spaces that in addition to being places to gather are also places to cool down.
- Refer to Port Moody's Climate Action Plan. Consider checking for alignment between the Coronation Park Proposal and the focus areas in the Climate Action Plan.

We appreciate your consideration of our feedback for the OCP amendment application for the Coronation Park development. Municipal governments play a key role in creating healthy communities through careful land use planning which can help improve physical and mental well-being, as well as reduce the risk of chronic diseases. We look forward to ongoing communication and collaboration. If you have any questions, please do not hesitate to contact me directly.

Yours truly,



Dr. Emily Newhouse
Executive Medical Director
Medical Health Officer
Fraser Health



Suzanna Kaptur, M.Sc. (Planning)
Consultant, Healthy Communities
Healthy Built Environment Program
Fraser Health



Tara Abraham, MHA CPHI(C)
Environmental Health Officer
Healthy Built Environment Team
Fraser Health

TA/rc

References

1. Provincial Health Services Authority (2018). Healthy Built Environment Linkages Toolkit <http://www.bccdc.ca/health-professionals/professional-resources/healthy-builtenvironment-linkages-toolkit>
2. Federation of Canadian Municipalities (2020). COVID-19 Street Rebalancing Guide <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/municipalities/street-space>
3. BCCDC (2017). Municipal Heat Response Planning in British Columbia, Canada. <http://www.bccdc.ca/resourcegallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Health-Environment/BC%20Municipal%20Heat%20Response%20Planning.pdf>
4. BCCDC (2017). Developing a Municipal Heat Response Plan: A Guide for Medium-sized Municipalities <http://www.bccdc.ca/resourcegallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/HealthEnvironment/Developing%20a%20municipal%20heat%20response%20plan.pdf>
5. Plan H (2020) <https://planh.ca/take-action/healthy-environments/natural-environments/page/climate-action-public-health>
6. Provincial Health Services Authority (2014), Healthy Built Environment Linkages – A Toolkit for Design, Planning, and Health, Provincial Health Services Authority (www.phsa.ca); at http://www.phsa.ca/Documents/linkagestoolkitrevisedoct16_2014_full1.pdf.
7. Vancouver Foundation (2012), *Connections and Engagement*, Vancouver Foundation (www.vancouverfoundation.ca); at <https://www.vancouverfoundation.ca/sites/default/files/publications/Connections%20and%20Engagement%20Report%202012%20%20CC-BY-4.pdf>.
8. My Health My Community (2016), My Health My Community Atlas, My Health My Community (www.myhealthmycommunity.org); at <http://www.myhealthmycommunity.org/Results/Atlas.aspx>.
9. Fraser Health (2014), Healthy Built Environment Bulletin – Healthy Natural Environments
10. Ron Chepesiuk (2009), “Missing the Dark; Health Effects of Light Pollution”, Environmental Health Perspectives, Vol. 117, No. 1, January 2009, pp. A20-A27.
11. Alzheimer’s Society of BC (2016). Dementia-Friendly Communities Local Government Toolkit. <https://alzheimer.ca/en/bc/Get-involved/dementia-friendly-communities/become-dementia-friendly-municipality/local>

October 23, 2020

File: CR-07-01-PMO

André Boel, City Planner
City of Port Moody
100 Newport Drive
Port Moody, BC V3H 5C3

Dear Mr. Boel:

Port Moody Official Community Plan Amendment Application for Coronation Park

Thank you for the opportunity to review this Official Community Plan amendment application for Coronation Park and provide comments.

The 6-hectare site subject to the above application is entirely within the Inlet Centre Municipal Town Centre and is designated 'General Urban' by *Metro Vancouver 2040: Shaping our Future (Metro 2040)*, the regional growth strategy. It is also located along TransLink's Frequent Transit Network (FTN) and Major Road Network. The application, as proposed, does not require a *Metro 2040* amendment.

The application, comprising a variety of medium to high rise residential buildings, with a small commercial component, a new park and a daycare, is generally consistent with the vision articulated in *Metro 2040* for this area and is supportive of its goals and strategies; in particular, it supports those regional growth policies that encourage transit-oriented, complete communities, promote transit use, cycling and walking, and include affordable rental housing options and important amenities such as park space and child care. While the inclusion of commercial space as part of the project would provide additional opportunities for employment growth within the Town Centre, we note that *Metro 2040* policies support / encourage a greater diversity and mix of uses at this site than that proposed, with a view to creating a more complete community around Inlet Centre Station, and for residents of the broader community.

Metro 2040 policies also support / encourage the following additional considerations related to this proposal:

- tree replacement opportunities within this area, to provide shade / cooling for residents;
- inclusion of green infrastructure features (e.g. green roofs, bioswales, raingardens) to reduce pressure on local stormwater management systems; and
- the use of mitigation strategies to minimize air and noise exposure to the proposed child care facility facing Barnet Highway.

For the purposes of regional growth and utility planning, the proposed changes in assumed growth on this site have been considered and accounted for in previous adjustments by Metro Vancouver. Given the impending advancement of this and other proposed developments in Port Moody's Inlet Centre - Municipal Town Centre, and Metro Vancouver's review of *Metro 2040* that is underway, Regional Planning staff would be pleased to discuss the evolving growth expectations for the Town Centre with Port Moody

planning staff to ensure that the anticipated long-term population, housing and employment growth expectations continue to align with the regional projections for the City.

Given the proposed redevelopment's location and scale, it is recommended that any First Nations with interests in the site, be engaged, particularly with respect to any archaeological studies or other permits as may be required.

Thank you once again for sharing this application with us. We look forward to continuing to work with you and your staff to ensure that the growth planned through this and other Inlet Centre Municipal Town Centre developments align with Port Moody's Regional Context Statement and Metro Vancouver's servicing demand and growth projections.

If you have any questions, please contact me by phone at 604-456-8805 or by email at Alex.Taylor@metrovancover.org.

Sincerely,



for

Alex B. Taylor, MUP, RPP, MCIP
Senior Planner, Regional Planning & Housing Services

SG/JS/at

41502916

Rochelle Meers

From: Ekeli, Stefanie <Stefanie.Ekeli@Translink.ca>
Sent: November-13-20 4:28 PM
To: Kevin Jones
Subject: Coronation Park - TransLink Comments
Attachments: TDM Plans for Development Guidelines Final.pdf.TXT

Hi Kevin,

Thank you for your correspondence dated October 7, 2020 and for the opportunity to provide input on the Official Community Plan (OCP) Amendment application for Coronation Park. We understand the OCP amendment is for the redevelopment of 56 single family lots into a mixed-use development. After reviewing the project material, we have the following comments:

Transportation and Land Use Alignment

The regional transportation goals in TransLink's Regional Transportation Strategy are advanced by land use plans which focus population and jobs in Urban Centres, Frequent Transit Development Areas (FTDAs), and along the Frequent Transit Network (FTN), and which:

- provide sustainable transportation choices;
- support a compact urban area;
- facilitate most trips being possible by walking, cycling and transit; and,
- reduce distances driven.

Given the proposed development's location within a Municipal Town Centre and along the FTN, this high-density mixed-use redevelopment will advance shared regional goals. We further encourage reference to the Transit-Oriented Communities Design Guidelines (TOCDGs), a tool to support the planning and design of communities that integrate land use with sustainable transportation, Metro Vancouver's Transit-Oriented Affordable Housing Study as a means to inform opportunities for transit-oriented affordable rental housing, and the Metro Vancouver 2018 Regional Parking Study. The Transit Passenger Facility Design Guidelines also provide guidance on designing for areas surrounding transit passenger facilities and may be a source of interest for the current development proposal.

Road Network and Sustainable Transportation

Per Provincial legislation, TransLink approval is required for any road alterations that would reduce the capacity of any part of the Major Road Network (MRN) to move people or would prohibit the movement of trucks on any road (other than Provincial highways). Given that Barnet Highway, loco Road, and Guilford Way are part of the (MRN), any temporary or permanent changes that may reduce people-moving capacity (i.e. a temporary access off loco Road) would require TransLink approval.

While we recognize the highway orientation of the road network along the edges of the development site, and that the proposed pedestrian overpass would provide a safe crossing for pedestrian and cyclist traffic to access the FTN, we also note the opportunity to consider the long-term vision for the area's street network. To this end, we encourage review of the TOCDGs when considering both near and long-term road network design, and approaches to advance sustainable modes of travel of the area. As the development progresses, TransLink is interested to have further conversations with the City regarding the pedestrian overpass.

Due to the proposed development's location in Inlet Town Centre and its proximity to the Frequent Transit Network (FTN) high-quality active transportation facilities are an important consideration in supporting shared regional goals. Cycling

and pedestrian improvements provided by the developer could potentially be complemented by other cycling and pedestrian improvements that TransLink might cost-share with the City of Port Moody, in order to provide complete and continuous cycling and walking connections. Please contact us to learn more about TransLink's municipal funding programs.

Adjacent and Integrated Development

TransLink's Adjacent and Integrated Development (AID) program applies to developments adjacent to and/or integrated with TransLink's infrastructure, with the purpose being to manage and protect TransLink's property rights during development and to preserve the safe, secure and uninterrupted operation of the transit system during construction. If the pedestrian overpass comes to fruition, please engage the AID team at AIDreview@translink.ca for any reviews that may be necessary at that time.

Transportation Demand Management

TransLink's TravelSmart team works with municipalities and developers to implement transportation demand management (TDM) plans to enhance more transit usage and sustainable modes of travel. Given the developments proximity to the FTN, we encourage the City to refer to the TDM Plans for Development Guidelines (attached) for the purpose of incorporating TDM plans into the proposed development. Please contact the TravelSmart team at travelsmart@translink.ca to learn more.

Continued Collaboration

Thank you again for the opportunity to provide continued input on Coronation Park OCP Amendment. Please feel free to contact me should you have any questions regarding these comments or wish to discuss further. We look forward to continued coordination and collaboration with the City of Port Moody on this development proposal.

Kind regards,

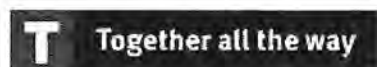
Stefanie Ekeli

Planner, Partner Planning

T: 778.375.7307 | Email: stefanie.ekeli@translink.ca | translink.ca

TransLink

400-287 Nelson's Court, New Westminster, BC, V3L 0E7, Canada

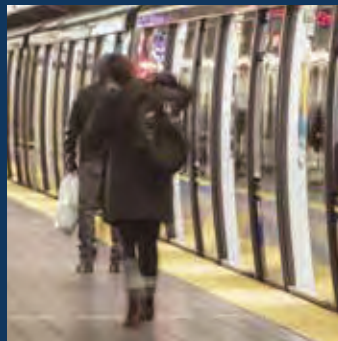


This e-mail and any attachments may contain confidential and privileged information. If you are not the intended recipient, please notify the sender immediately by return e-mail, delete this e-mail and destroy any copies. Any dissemination or use of this information by a person other than the intended recipient is unauthorized and may be illegal.

TransLink TravelSmart

Development TDM Plans

July 2019 Final



Contents

1. Introduction	2
2. Role of TDM Plans	3
3. State of practice	9
4. Municipal practice	13
5. A regional approach	16
6. Appendices	25
1. Summary of municipal TDM-related policies	
2. Results from municipal questionnaire	

1. Introduction

1.1 Purpose of report

TransLink commissioned this report to investigate how it might help municipalities and developers to manage transportation demands generated by development. Where once it was the norm to require parking for developments at a level that assumed most if not all would drive, municipalities are now seeking ways to minimize peak hour traffic congestion and to contribute to regional transportation targets. At the same time, trends of increasingly dense, transit-oriented homes and flexible work spaces are making less car-dependent properties more marketable, as well as cheaper to build.

One way that the transportation demand management (TDM) can be built into developments is through the use of TDM plans. These are agreements between municipalities and developers that effectively trade dedicated parking stalls for amenities and services that stimulate less trips, more transit use, more shared vehicle use and more active transportation. This report also responds to increasing interest from some municipalities in ways in which TransLink could guide or incentivize TDM initiatives in development proposals they are negotiating. To date, these requests have been considered as they arise, and so this report aims to suggest ways in which a more coordinated, efficient and regional approach to TDM plans for development may be achieved.

1.2 Scope

TransLink's TravelSmart is the Metro Vancouver transportation demand management (TDM) initiative. TravelSmart's aim is to provide behaviour change projects that support regional transportation investment and partnership strategies necessary to achieve our shared targets to reduce the dependency on and impacts of single occupancy vehicle (SOV) trips and vehicle kilometres travelled (VKT).

Development TDM plans help to achieve transportation aims by reducing incentives to drive alone created by excessive on-site parking and other vehicle-based infrastructure. They are however tied to the planning process which is a municipal responsibility guided by the Regional Growth Strategy produced by Metro Vancouver. This report can therefore only be a basis for TransLink actions that may contribute to a wider discussion about coordinated development planning in the region.

Acknowledging the wide-range of interests in development, the recommended major steps for this report are to:

- 1) Discuss the initial findings with municipal representatives of the TravelSmart roundtable;
- 2) Produce evidence-based research into the effectiveness for mode shift and vkt reduction of various TDM amenities and services that municipalities could apply locally;
- 3) Engage with developer associations and Metro Vancouver to guide a process that would provide municipalities with advice on the types and intensities of development for TDM Plans.
- 4) Refine a set of proposals for centralized monitoring and evaluation tools that TransLink could create under a partnership-based strategy
- 5) Seek funding and other resources for implementation of the TransLink projects.

2. Role of TDM Plans

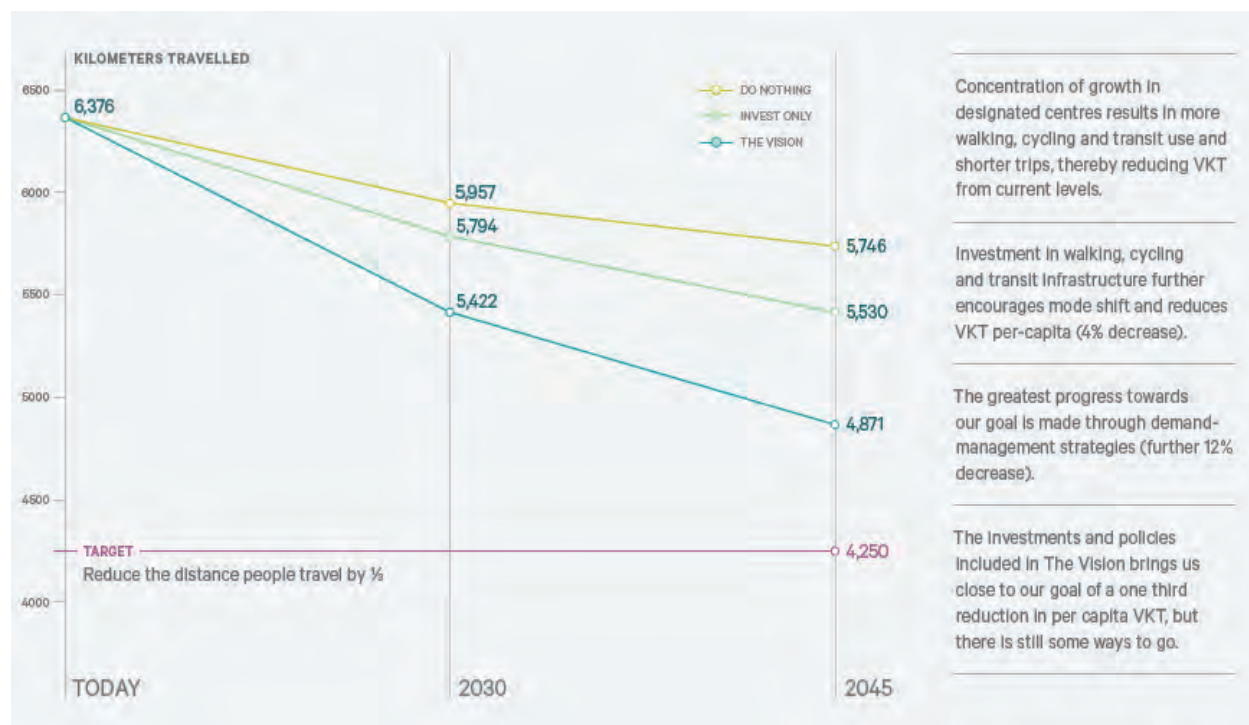
2.1 TDM in regional transportation strategy

TransLink has the regional mandate to prepare and maintain a transportation demand management strategy. This mandate is referenced in the Regional Transportation Strategy (RTS) as one of three key pillars of a plan to reduce driving alone to less than half of all trips and to reduce vehicle kilometres travelled (vkt) by a third over 2011 levels.

The RTS is being delivered under a series of overlapping ten-year investment plans. These investments, described in the Mayors Council's Vision for transportation, have started to show results. From May 2017 to May 2018 transit ridership increased by a record 7.1%, and in addition, there are signs of a gradual reduction in vehicle ownership and congestion as a result of land use policies, and a complex combination of economic, technological and social trends.

These recent changes are encouraging, but still a long way from the scale of change proposed by the RTS. To meet our regional targets, the strategy highlights that demand management including pricing, regulation and behaviour change must deliver three times the impact on vkt that is expected from all the investment in infrastructure and services. The Mayors' vision indicated about 1% of the total budget¹ will be spent on demand management suggesting a huge return on that investment if it is delivered.

Figure 2.1 Projected impact of RTS on vehicle kilometres travelled (vkt) (Mayors' Vision 2017)



¹ 10-year investment plan proposal for PTIF funding included \$74m for TDM including mobility pricing (reduced from \$115m in the original Vision) compared to \$9.5Bn for infrastructure and services. The projected outcome for TDM was 2.3% mode shift and 12% vkt reduction compared to 3.4% mode shift and 4% vkt reduction from infrastructure and services.

Demand management options are being progressed by TransLink in five main ways:

- **Pricing** - The most high-profile action has been the work of the Mobility Pricing Independent Commission which was set up by TransLink in 2017 to investigate two options; point charges (tolls), and distance-based charges. The resulting report provides a compelling vision but estimates a live project is at least 4, and possibly 6 or more, years away and has many political hurdles to cross.
- **Goods movement** – TransLink worked with industry partners to draw up a strategy for enabling critical good movement around and through the region that also moves towards regional transportation aims.
- **New mobility** –the mandate of TransLink’s New Mobility team includes assessing, shaping and encouraging technology-led transportation services to meet the region’s strategic goals. The pathways to a future state are uncertain and at present, new mobility services such as one-way car share, dockless bike share are not widespread in the region, while ridehailing and other micro-mobility options seen in US cities are not yet allowed in the Lower Mainland.
- **Parking regulation** - TransLink and Metro Vancouver also commissioned a joint-study to produce advice for municipalities on good practice in development parking standards. This recognizes that regulating parking supply is a powerful influence on the choice to drive and on vehicle ownership. At this stage it is only an information document and does not seek regional coordination.
- **Behaviour change** – Transportation behaviour change includes education, promotion, outreach and incentives provided under the TravelSmart brand. This is an area where there is a huge body of evidence and a history of local success but limited budgets, few dedicated staff and limited coordination.

This report which considers the role of TDM plans in development, naturally includes two of these areas of work, specifically the importance of parking regulation and the potential of promoting positive behaviour changes as ways to reduce the adverse transportation impacts of new building projects.

2.2 Development in Metro Vancouver

2.2.1 Development policy context

Metro Vancouver has enjoyed a prolonged period of prosperity since the financial crash of 2007/08. In the year to 2017, over 87,000 jobs were created in the region while unemployment in October 2018 stood at just 4.3%, some 1.5% lower than the national average. This economic growth is fueling inward migration. Between the 2011 and 2016 Census years, the region’s population grew by 6.5%. Together with an influx of foreign investment, these factors have boosted the development industry in the Lower Mainland. In 2017 alone, the Canadian Mortgage and Housing Corporation revealed there were about 26,000 new housing starts in the region.

Metro Vancouver is the regional planning authority and produces the Regional Growth Strategy (Metro 2040). This describes land use policies to guide development and the provision of transportation, regional infrastructure and community services. Each municipality has adopted the Regional Growth Strategy and prepared an Official Community Plan (OCP) and Regional Context Statement (RCS) that sets out how local actions will contribute to Metro 2040.

As a consequence of regional strategy, municipalities are working to similar aims for sustainable development and all have OCP policies on managing transportation demands. These policies are

contextualized by the diverse development demands, transportation options and traffic issues found in the municipalities. For these reasons and others, demand management policies are applied in different ways and to different extents across the region.

2.2.2 Development trends and influences

While the scope of this report does not extend to a full examination of development trends, it is helpful to provide some abstracted highlights from Metro Vancouver analysis of major development sectors.

Metro Vancouver Growth Projections Backgrounder, 2018

“From a 2016 base population of 2,570,000, it is anticipated that the population will increase by about 1 million to 3,600,000 by the year 2050.”

Housing development throughout the region is distinctly trending toward increasingly dense multi-unit forms, with apartments comprising about 60% of new housing growth. Many municipalities have revised development plans and allowable densities for various types of more intense housing development in urban centre areas, major transit locations, as well as redevelopment / intensification of existing and new urban neighbourhoods.”

Metro Vancouver Office Development in Metro Vancouver’s Urban Centres, 2015

“45% of the office space in the region is located in the Metro Core (downtown Vancouver and the Broadway Corridor); 51% is located in Vancouver. Other notable, although much smaller, markets include Burnaby, Surrey, and Richmond.

Despite some recent years with a higher proportion of development in Urban Centre and Frequent Transit Network locations, there is not yet a clearly consistent long-term trend towards a substantially higher proportion of development occurring within Urban Centres or near frequent transit service.”

Metro Vancouver Industrial Lands Inventory, 2015

“A notable amount of industrial lands are used for non-industrial purposes. Some municipal plans include ‘mixed employment’ designations and zones that permit a wide range of industrial and commercial uses, which allow for more non-industrial uses in industrial areas, such as retail, office, and other commercial. The conversion of industrial lands continues. From 2010 to 2015, there was a net reduction of 350 ha (865 ac) of industrial lands.”

Alongside these land use considerations the BC Ministry of Advanced Education, Skills and Training produce the Labour Market Outlook. This suggests significant change in the jobs market over the coming years including a huge turnover as Baby Boomers retire, a continuing shift towards part-time working and an acceleration of AI-assistance, robotics or the full automation of many manual jobs.

These trends all point to a rapid and considerable change in urban form and lifestyles in the region over the next generation. An influx of new residents, urban density and a steady transition away from traditional manual industries are hallmarks of developed economies that Metro Vancouver is following. Infrastructure investment alone will not keep pace with forecast demand for travel and demand management programs must step up to harness the potential of new ways of working, episodic life changes and densification to ensure the region can grow sustainably under a new mobility culture where single occupancy vehicle travel is no longer the default for most journeys.

2.3 Development and mobility

2.3.1 Uncertain trends

Mobility demands are both a product of and an influence on land use and development. Some of the trends in development highlighted in the previous section are expected to combine with trends in transportation technology, to significantly change how we travel. However, the influence of technology on society is extremely difficult to predict because of the huge scale and rapid pace of change.

It is certainly possible that denser development near frequent transit and moves away from '9 to 5' work days may help reduce the growth in traffic congestion predicted from the overall growth in the working population. In addition, the rise of on-demand transportation services could increase options to meet mobility demands more efficiently and reduce vehicle ownership.

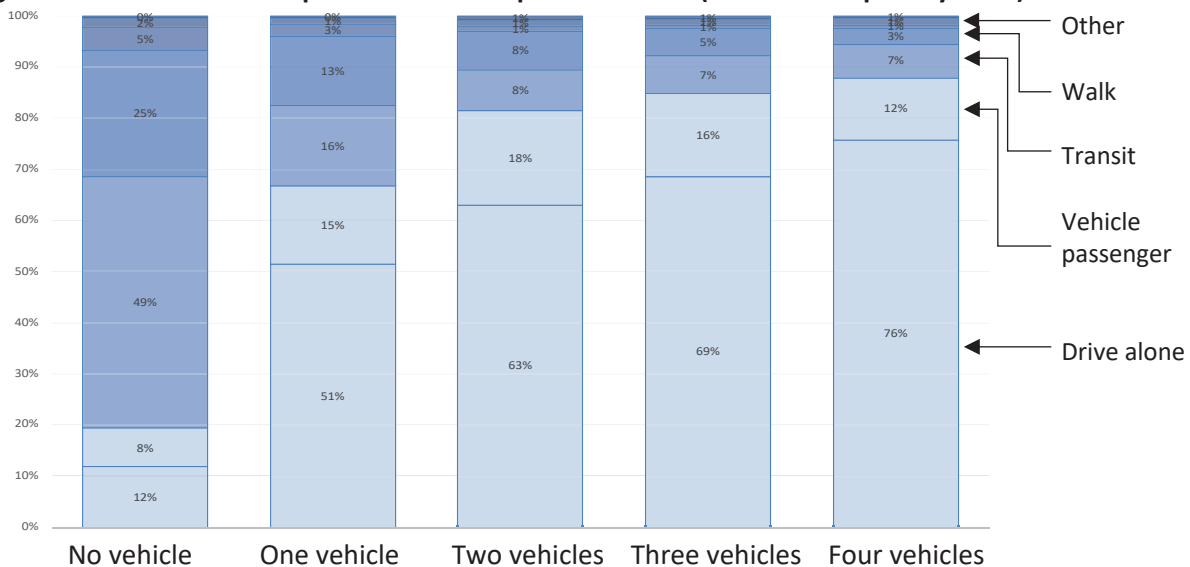
Alternatively, development density could increase congestion if investments in mass transit capacity cannot keep pace or if it is not provided the priority necessary to operate efficiently. New transportation services may also exacerbate this problem by concentrating on profitable vehicle-based options that intentionally compete with transit on price and convenience.

While we can influence them, these trends are global and uncertain, what remains true however is that unless we can decouple our mobility needs from an assumption of personal vehicle ownership, we will see thousands more vehicles on the streets and needing park places.

2.3.2 Decoupling mobility from vehicle ownership

The 2018 Regional Parking study found that apartment parking supply exceeded demand by between 35 and 42%. Given that the Urban Development Institute estimate a parking stall costs between \$20,000 and \$40,000 to build, this indicates at best a huge waste of money. But more worryingly, this suggests parking supply is effectively unregulated representing an open invitation to own and use a vehicle. This last point is important because when a household has access to a vehicle, data shows they become significantly less multi-modal in their travel habits as illustrated below.

Figure 2.1 Mode share compared to vehicles per household (TransLink Trip Diary 2011)



While full data doesn't exist, it is possible that the oversupply seen in apartment parking is replicated for other forms of housing and commercial buildings. This can be assumed because two-thirds of municipalities have historically prescribed minimum parking requirements for all forms of development (see Appendix 1 for summary of municipal policies).

This presumption is beginning to change as municipalities entertain or request lower levels of parking where development is located close to frequent transit and where traffic impact assessments (TIA) predict the development could generate vehicle trips in the peak hours. This also mirrors social changes such as younger generations being unable to afford (rather than being uninterested in) vehicle ownership until later in life. This in turn is leading many people to return to city centres where there is less need to own a vehicle, and consequently to developers seeking reduced parking requirements. Developers are also encouraged to plan sustainable transportation solutions for their buildings by other factors such as earning LEED (Leadership in Energy and Environmental Design) green-building accreditation points under the category of options for "alternative commuting transportation".

While there are a useful combination of 'pushes and pulls' towards reducing transportation impacts from development, more is needed than simply consenting to low levels of parking. For one, unless there are on-street parking controls in the vicinity, the constraint of on-site parking may not deter driving which can then displace parking to other streets. Secondly, without options that provide an alternative for all journey purposes, the need to own, or at least have access to a car, will remain and the development could become unmarketable. To bridge these gaps TDM plans can be agreed to secure the on-site arrangements that allow parking to be reduced while meeting mobility demands so the development remains viable.

2.4 What is a TDM plan?

In its simplest form, a TDM plan is an agreement for a specific site, that describes measures to monitor and mitigate the transportation impacts of a development over time. The plan is between the planning authority, usually a municipality, and the site developer who may in turn transfer responsibility to a tenant or strata council. The plan is governed by policies and bylaws, these are often designed to allow reduced parking requirements or to meet other policy aims such as areas with limited vehicle access, air quality controls or special development status. Plans are usually required in perpetuity by a variety of methods including attachment to deeds, conditions of use or other covenants.

A TDM plan will normally include some form of target against which measures are evaluated. The targets may be one of two forms:

- **Outputs** such as selecting from a menu of pre-scored measures to meet a total determined by land use, intensity of development and other factors, or
- **Outcomes** where a mode share, occupancy level or vehicle distance travelled target is agreed and strategies are proposed to achieve them.

Whichever form of target is used, TDM plans contain three main types of measures:

- **Amenities** – these are the most common category and include a range of essentially one-off infrastructure investments such as bicycle parking and changing facilities, special parking spaces, electric vehicle charging points, wayfinding and transit information, and pedestrian links;

- **Services** – this broad category includes various programmatic investments including car share vehicle contracts, vehicle pools, shuttle buses, bicycle skills, travel training, marketing, support for teleworking (such as child care), parking cash-out and travel subsidies; and
- **Administration** – an important category that describes responsibilities to coordinate, manage and monitor the plan. This may include appointment of a dedicated TDM coordinator, setting up strata council responsibilities and committing to a regular monitoring arrangement.

Generally, developers and municipalities tend towards amenities as offering the easiest and least labour-intensive solution, however this can become something of a ‘box-ticking’ exercise with little ability to assess the value or effectiveness of the plan or to adjust it after occupancy.

Plans are monitored either by the municipality or by the developer. Municipal monitoring may be paid for by the developer or, under an arrangement, by the tenant or strata council. Monitoring is rarely more frequent than yearly due mainly to cost, and may be undertaken by manual intercept surveys, automated processes (such as parking systems) or digitally using survey software.

Ideally, the monitoring process confirms achievement, but it should also allow refinement or identify any need for remedial action up to and including enforcement. Where needed, enforcement can include punitive measures such as bylaw fines and breaches of condition proceedings. Punitive enforcement may always be necessary as a last resort, but more positive alternative approaches pre-empt this with incentivizes such as membership of support networks, such as Transportation Management Associations, or through a program of recognition and rewards that promote achievement and celebrate excellence.

3. State of practice

3.1 Scope of review

TDM plans are commonly required as part of the development process in Europe and Australia but the transferability of practice from these places to Canada is limited due to the different legal framework. Hence, while many aspects of TDM can take a lead from the international community, this review of development TDM plans focuses only on references from North America.

It should also be noted that, while the following references are relevant to the planning system here, they are not necessarily instantly applicable. Most will require changes to policy, by-laws and resourcing to be implemented in Metro Vancouver. Finally, there are numerous individual approaches to TDM for development that are intricately linked to local policy, legislative and circumstantial conditions which prevents direct comparison. The following examples are therefore selected to demonstrate a range of approaches rather than attempt to define 'best practice'.

3.2 Integrated planning: Ottawa's Updated TIA Process

<https://ottawa.ca/en/transportation-impact-assessment-guidelines>

The City of Ottawa recognized that their 2006 traffic impact assessment (TIA) guidelines did not necessarily meet the multiple goals of city mobility. In rethinking the TIA process, Ottawa sought to build-in concepts from complete street design and multimodal level of service review to the process. This produced an approach to TIA planning that delivers mode share targets through TDM.

Ottawa's comprehensive approach involves a multi-step, analytical process to arrive at a plan which includes the full range of off-site and on-site amenities, services and administrative TDM measures. The five main process steps are:

1. **Screening** - determining the need to complete a TIA study.
2. **Scoping** - determining the scope of the TIA study
3. **Forecasting** - preparing forecasts of travel demand in the study area for the horizon year(s) of the development proposal.
4. **Analysis** - assessing the alignment between the transportation features of the proposed development and the City of Ottawa's city-building objectives.
5. **Transportation Impact Assessment Plan** - compiling the final TIA deliverables for the proposed development

Generally, TDM plans are required where proposals would generate more than 60 person-trips during weekday peak hours or where other locational or safety thresholds are met. Guidance for developers preparing the TIA Plan includes a checklist of TDM supportive development design and infrastructure categorized as 'Required', 'Better' or 'Basic' for walking and cycling routes; walking and cycling trip-end facilities, transit, ridesharing, car and bike sharing; parking and other measures. The guidelines also prioritizes measures that the City has determined from internal research is dependably effective.

Insight: Ottawa's approach is a good example of an outcome-based approach which should produce development that is better aligned to conditions and policies. However, the Ottawa approach is also complicated and iterative which may be both potentially unsustainable for a smaller authority and a deterrent to developers in more competitive environments such as exist in Metro Vancouver.

3.3 Mandatory standards: San Francisco's TDM Program

<https://sfplanning.org/project/transportation-demand-management-program>

http://default.sfplanning.org/transportation/tdm/tdm_tool_user_guide.pdf

The primary purpose of San Francisco's TDM program is to reduce vehicle miles traveled (VMT) from new developments. Their TDM Program Standards are enshrined in its Planning Code and required for any residential development over 10 units and any commercial or institutional development over 10,000sqft.

The central idea is to set a TDM target based on a score related to a maximum parking requirement for the land use, plus a scale of points for additional 'accessory' parking spaces proposed by the developer. This resulting target score is then used by the developer to create a TDM Plan from a menu of 26 measures grouped into Active Transportation, Car-share, Delivery, Family, High-Occupancy Vehicles, Communications and Information, Land Use, and Parking. Each measure has a research-backed efficiency score that is based on an assessment of its VMT-reduction potential. The City also publishes a TDM Technical Justification report that explains the background research for these scores.

Developers have significant discretion in how they define a TDM Plan and can use a City-run web tool to determine the relevant target, to enter menu selections and to calculate when the target is reached. Once the City has approved the plan as complete it is entered as condition of approval. The City can also intervene to adjust elements of the TDM program or development in a way that alters the target.

The monitoring regime for San Francisco's TDM plans includes an initial stage where the City visits to confirm the physical amenities are in place before the first occupancy and that the required TDM Coordinator confirms any services and administrative aspects are planned. This visit is paid for by the developer. Once occupied, the TDM Coordinator must submit monitoring forms every 18-months. The City will then conduct a site visit once every three years to meet the TDM Coordinator and confirm all approved measures in TDM Plan continue to be implemented and available.

Insight: The San Francisco model is essentially output-based which gives it the advantage of being relatively simple while the TDM Tool makes it easy for developers to use. The City's research into VMT reduction potential offers a template and data points for a Metro Vancouver equivalent. The use of maximum parking spaces to set base targets is a progressive tactic to use TDM alternatives in place of parking, however, increasing TDM target points for additional parking spaces seems counter-intuitive.

3.4 Guidelines: Hamilton's TDM for Development

<https://d3fpllf1m7bbt3.cloudfront.net/sites/default/files/media/browser/2015-06-05/tdm-guidelines.pdf>

The City of Hamilton approached integrating TDM into development using consultation with the development community. The resulting guidelines offer developers advice on how to prepare TDM plans to offset parking reductions and/ or to reduce parking in-lieu charges. As these guidelines are not prescriptive there is a presumption of negotiation between developers and City staff. The Guidelines describe three levels of TDM plan reporting. These are:

- A simple 1-2 page **TDM Memo** for developments the generate 20-50 peak hours trips;
- A **Standard TDM Report** including measures and predicted effects for developments generating more than 50 trips or those in special planning areas or seeking reductions from the parking requirements; and
- A **Detailed TDM Report** including measures and predicted effects as well as ongoing monitoring for major developments as part of a TIA and those seeking reductions for the parking requirements.

The guidelines describe ‘low priority’ and ‘high priority’ measures including amenities and services for a range of land use types. The relative values of measures are also explained for each land use. Interestingly some measures suggested in the guidelines are not within the City’s current Zoning Bylaw but encouraged as forward-looking approach to bylaw updates. An evaluation check-list is included as an example of what City-staff use to assess the quality of the TDM Plan.

Insight: Hamilton’s approach represents the result of positive industry engagement on City ambitions. The guidelines provide a means for even small developments to contribute in a way that is not complicated or costly and a useful set of common references to help developers select measures. However, the evaluation of plans seems to rely on the expertise and judgement of staff, together with the willingness of developers and may be too onerous to copy here. Nevertheless, Hamilton’s emphasis on engagement and scalability are appropriate to this region and while a more guided approach may be needed to deal with the volume of development, a degree of negotiation could provide flexibility within guidelines to encourage developers to innovate with new mobility services and new trends in living and working.

3.5 TDM Ordinance - Santa Monica ‘s AVR Target

<https://www.smgov.net/Departments/PCD/Transportation/Employers/wtp-overview/>

The City of Santa Monica adopted a TDM Ordinance in 1990 and has developed an innovative approach to TDM for workplaces and non-residential development aimed at reducing congestion and associated air pollution. The key element of the City’s approach is that any employer with more than 10 employees is required to pay an annual transportation fee per employee. Small businesses with less than 50 employees are charged \$16.83 per employee and employers with over 50 employees are charged \$13.25 per employee. These fees are however subject to a scale of discounts if employers can achieve an average vehicle ridership (AVR) of 1.5 or more over several years. A further discount is applied if the employer is a member of the Santa Monica Transportation Management Association (TMA).

Employers and non-residential developers are required to produce Trip Reduction Plans to show how they will meet the AVR target. In addition to using TMA services, plans can include; marketing programs, support strategies such as, guaranteed ride home programs, and subsidies such as, parking cash-out. These plans are covered by detailed annual reporting procedures and significant fines for non-compliance of \$5.00 per employee per day.

Santa Monica’s approach clearly works, after over 25 years of addressing commuting behaviour through the ordinance, only 60% of regulated employees drive alone, while nearly 25% take transit, carpool, or vanpool, and almost 10% bike or walk. This is in stark contrast to the average in California of 74% driving alone to work (US Census 2014).

Insight: Santa Monica’s approach is wholly focused on the outcome, leaving the developer or employer to work out the best way for them to meet the AVR target. Guidance is provided about measures and there is encouragement to join the TMA, but the process is very much incentive-driven rather than guided. While the Santa Monica approach is difficult to imagine in Metro Vancouver now, the recent adoption of region-wide development cost charges (DCC) for transportation investment is very similar in effect. A system of attaching discounts from the DCC for developers who produce TDM Plans could be a long-term incentive strategy for any form of development.

3.6 Specific initiatives

In addition to the example programs, there are many other aspects or initiatives within other programs that are worthy of note:

- **Parking reserves** - Parking reserves are a mechanism that allows reduced parking requirements with land reserved for additional parking should it be required to meet demand. If this space is not required in a certain time it can be converted to profitable use. This technique may provide a means for maximum parking requirements to be introduced with minimal risk or where significant reductions are proposed to be supported by TDM Plans reliant on future accessibility to options.
- **Unbundling parking** – Many TDM strategies require the cost of a parking space to be separated from the cost of renting or buying a property. This prices the parking supply more obviously and encourages a financial assessment of options which will gradually influence the market. Building this into zoning bylaws could help to create the necessary awareness of true costs needed for Mobility Pricing.
- **Parking requirements and FTN** – Parking maximums can be set for developments within the watershed of frequent transit. An example from Portland, Oregon is that parking maximums are set for sites within 500 feet of a bus stop with 20-minute headway or 1,500 feet of a rail station.
- **TDM fund** – Some municipalities require developers to establish a TDM fund which is held and used by the strata council, occupant or TDM coordinator to subsidize transit, fund guaranteed ride home, outreach and information. City's build in clauses that allow them to claim the fund and use it to support TDM aims, in the event that the development fails to do so.
- **TDM bond** - A variant on the fee model is a modest charge applied to every parking space in the development which is held by the City as a guarantee that the TDM Plan will be enacted. If the developer meets their targets in a specified time the fee is returned, but if developer fails, the fund is handed to a TMA to deliver the TDM Plan.
- **TDM tax district** – Some cities are developing bylaws that allow fees to be collected from developers in the same way as parking in-lieu, that is used to fund TDM measures in the form of a small TMA or other service solution rather than held to build public parking. This could be a bylaw change some municipalities could consider in Metro Vancouver.
- **Trip credits** – An alternative way of describing the relative value of TDM measures in a scorecard type menu is to describe them in terms of trips credited to the demand forecast to be generated by the development. In Menlo Park, California, trip credits are used to define the value of different measures and the developer is then tasked with ensuring the measures deliver the assigned trip reduction through reporting.
- **Awards** – while punitive measures such as charges and fines can compel compliance with TDM Plans, other authorities supplement enforcement with incentives such as annual awards and recognition. Arlington Champions is an annual award for excellence with a progressive scale from bronze to platinum that encourages achievement. This approach could be extended to certification in a process similar to LEED status but for TDM compliant developments.

4. Municipal practice

4.1 Municipal TDM policy

Municipal authorities have been part of TransLink TravelSmart since its inception in 2009. This recognizes their responsibility for local street management, development policy and their knowledge of local needs and communities. Municipal commitment to TDM is critical to a successful regional strategy.

In 2016, Steer Davis Gleave conducted a snapshot survey of six municipalities to assess local TDM policy, activities and attitudes. The findings of this survey are summarized in the table below:

Table 4.1 Metro Vancouver Municipal Activities Summary (Steer Davis Gleave 2016)

Policy	Workplaces	Schools	Awareness	TransLink's Role
• Policy basis for TDM established mostly through Official Community Plans and in some cases Transportation Master Plans • Difficulty generating momentum to connect plans and policy with action • Support for carshare, though expansion potential limited based on commercial viability	• Support for internal programming, though transit efforts limited by incentive availability • Limited capacity to engage external employers; businesses self-refer and are generally connected with TravelSmart staff • Future focus primarily on new developments	• High demand for programming; often initial impetus for TDM engagement • Program management can strain resources • A range of delivery models and local partners are used to support efforts • Difficult to maintain behaviour changes without legacy programs	• Community activities primarily in support of partnership agreements • Bike to Work Week is well supported internally • Where capacity exists, focus is on development TDM rather than promotional activities	• Capacity building and facilitation of connections between municipalities • Program funding and support • Region-specific resources and evidence to support programming

Steer Davis Gleave concluded the key challenges for municipalities in 2016 had not changed greatly since the 2013 Regional Transportation Strategy Working Paper (3.210B) that identified TDM challenges as:

- Lack of dedicated staff resources;
- Limited walking, cycling and transit infrastructure/service;
- Lack of a clear mandate for behaviour change; and
- Lack of local and regional evidence.

These practical challenges have not however prevented all municipalities adopting Official Community Plans, Transport Master Plans with policies that support demand management. In addition, some municipalities undertake TDM initiatives from annual budgeting often by integrating them with other objectives such as road safety for Safe Routes to School projects, public health for active transportation promotion, and public events for TDM outreach. With few exceptions, the budgets for these projects are generally small compared to those for traditional transportation infrastructure and operations.

4.2 TDM plans

A desk review of municipal websites (see Appendix 1) revealed most had policies that required or allowed TDM as part of normal development processes such as requests for parking reductions or as part of mitigating traffic impact assessments. It also found three municipalities that provided more specific application or evaluation criteria. Relevant aspects of these are as follows:

- **Corporation of Delta** – The Corporation publishes a simple and clear Green Growth Index which is used to score various aspects of development sustainability including transportation impacts. Thirteen points (from a total of one hundred) are available for transportation amenities including; active transportation routes, bicycle parking and trip-end amenities, electric vehicle charging, car-share parking, location close to transit. The derivation for the scores was not found and no service-type TDM measures are included although they may be allowed. No information was found to indicate any monitoring of demand management effects once amenities are installed.
- **City of New Westminster** – The City produces a series of Sustainability Report Cards for different land uses. This works similar to Delta’s Green Growth Index by using scores against a target to encourage sustainable development amenities. Transportation amenities are limited to electric vehicle charging points, a parking offset of 3 spaces per car share vehicle provided, and trip-end facilities for bicycles. Trip end facilities are defined under a zoning bylaw that sets out related facilities and quality of provision. No indication is given that any service type TDM measures or any future monitoring of TDM effects is expected or undertaken.
- **City of Vancouver** – The City adopted TDM requirements for development as a parking bylaw amendment. TDM plans are required with few exceptions for projects in the Downtown, except residential strata and non-social housing rental in the West End and Robson North Permit Area, and for large site having a total site size over 8,000 m (1.98 acres) or containing more than 45,000 m² (484,375 ft²) of new floor area. Target scores are based on land use, size, and location of the development. The City’s guidance is detailed setting out a menu of measures with quality scores including amenities such as bicycle parking and car share, together with services including parking management, education and promotion, pooling and subsidies. Long-term monitoring is required under conditions that require the developer to pay a sum for City administration and guarantee access for the monitoring to be undertaken.

It should also be noted that **UBC’s** development process is closely tied to the University’s successful overall demand management philosophy and so requires extensive expectations for TDM measures to be built into any development at the Point Grey site.

4.3 Municipal development TDM practices survey

A short online survey was conducted by TransLink amongst all municipalities in April 2019 to further investigate practices and attitudes to TDM for development. Eighteen completed responses were received (full response analysis is included at Appendix 2). Important findings from the survey include:

- **Parking requirements** – 13 of the responding municipalities apply minimum parking requirements in at least some areas which imply no policy regulation parking proposals. However, common variances from these requirements include for locations close the frequent transit network, for sharing parking in mixed use developments, for car sharing services and for sites in downtown

areas. Ten municipalities also permit parking in lieu of parking. In addition, a third of municipalities require a percentage of vehicle parking spaces to be either equipped for disabled drivers, electric vehicle charging or to be shared for visitor use.

- **Application of TDM Plans** – Eight responding municipalities indicated they require TDM plans to support requests for parking offsets, while three (as noted above at 4.2.1) have policies that require TDM Plans for development. A further five indicated that TDM plans are required for some developments on a case-by-case basis. Besides parking offset, only one authority (Vancouver) require TDM plans to respond to traffic impacts, zoning or development metrics.
- **Evaluation of TDM Plans** – Amongst the small number of active municipalities only Vancouver publishes TDM plan guidance. Vancouver is also the only responding municipality to evaluate using a detailed scoring system while the other two active municipalities take a case-by-case approach considering other development merits and impacts. The most commonly accepted TDM measures include car share spaces (3), car share memberships (3), car/van pools (3), travel training (3), bicycle parking & facilities (3), and information and wayfinding (2).
- **Monitoring** – Monitoring attracts fees for developers which from responses, indicates municipalities apply at different points in the development process. The website review indicates only Vancouver has an explicit requirement for developers to pay the city a sum for future TDM Plan monitoring. It is assumed therefore that other charges result from TDM plan evaluation while negotiating a development and as part of application fees. Enforcement is generally not undertaken, except Vancouver, which reflects that other municipalities rely on physical amenities to be agreed and installed as a one-off TDM measure pre-occupation.
- **Attitudes to TDM Plans** – Five municipalities indicated that they either had plans or interest in applying TDM Plans to development. Five had no plans to apply TDM requirements to development, however discussion at the TravelSmart Roundtable qualified this view with the suggestion that several municipalities are constrained by their resources and capacity to research, produce and manage guidance for developers on TDM plans.
- **TransLink TravelSmart role** – Municipalities expressed three areas that they encouraged TransLink to consider supporting, these were a common evaluation model, a means for regional information sharing, and a central system for monitoring. These ideas are in addition to the TransLink's past role providing staff resources and incentives under TravelSmart. Responding to a question about possible incentives, municipalities expressed greatest support for subsidized transit passes, common survey tools and travel training resources while other incentives including site-based outreach, travel guides and campaigns were less favoured. Additionally, municipal respondents encouraged TransLink to consider ways to collect and disseminate best practice, and especially on how to evaluate and apply TDM Plans to developments.

5. A regional approach

5.1 Opportunity

Transportation demand management has an important role to play in meeting regional targets for climate change, congestion relief and liveability. The review has found that development offers a particularly useful opportunity to manage mobility demands both through the design of transportation amenities at the site and by encouraging new behaviours through TDM services.

If development TDM plans are to contribute to regional targets, they will need to create changes in travel behaviour and not simply describe a list of amenities that may enable choice. This then implies outcome-based plans combining amenities, services and administration to ensure they are effective.

5.2 Issues to address

Municipal OCPs provide a good and broadly consistent policy basis for TDM plans. In addition, industry trends suggest many developers are seeking parking reductions and proposing 'green' developments to respond to consumer demand, market conditions and external influences such as LEED accreditation. However, the research suggests most municipalities have not adopted bylaws or other practices that consistently require TDM as part of development proposals. This means that parking supply can be significantly in excess of what is needed and that opportunities are missed to encourage wider transportation choices at suitable developments.

Several underlying problems have been identified in the research:

- A lack of municipal staff and budgets to produce local guidance and to manage a TDM process leading to effective plans for development;
- Uneven access to viable alternatives such as frequent transit and car sharing services across the region;
- Problems obtaining or maintaining incentives such as discounted transit passes;
- Inconsistent or ad hoc TDM standards between municipalities that disincentivize developers;
- A lack of accessible tools or resources to guide and assist developers to produce TDM plans;
- A historic presumption of minimum parking requirements; and
- A general lack of knowledge about TDM effectiveness and techniques in the region.

To meet the levels of demand management needed for regional transportation targets the research suggests action in three critical areas:

1. **Municipal resources** – dedicated TDM staff are rare and the budgets allocated to research, practice and application of TDM are very small. Any program to increase TDM as a part of regional transportation strategy needs to help increase staff and program budgets dedicated to demand management.
2. **Regional policy** – an underlying and longstanding issue identified in multiple studies is that TDM does not have the status of other areas of transportation planning such as traffic engineering, service planning and operations. Guidance is needed to prove the value of TDM to municipal Councils and develop consistency between them.
3. **Regional coordination** – past studies and the most recent questionnaire indicate many municipalities support the idea of TransLink taking a leadership role that will create guidelines and tools to support local initiatives to implement TDM practices.

5.2 Municipal resources

5.2.1 Staffing

No improvement in the use or application of TDM to development seems likely in the near-term without addressing the lack of dedicated staff that exist in most municipalities. While TDM is universally supported, limited resources mean any activity is either delegating to staff with other primary duties or achieved by motivated individuals on an essentially voluntary basis. This means that while there is willingness very limited capacity exists to expand TDM plans to the sophistication and extent demonstrated by leading authorities.

While it may be reasonable to support municipal staffing in the longer-term through development cost charges and other fees associated with TDM plans, there remains a need for start-up resources to enable TDM plans to become established. Some of this start-up can be reduced by the provision of regional guidance (see below) but there remains a financial gap between intent and capacity.

It may be possible for TransLink to bridge this gap by investing in staff resources for a limited time until TDM plans are established and manageable within municipal resources. This could be somewhat similar to BC Hydro's Energy Manager program which co-funds the recruitment of expertise for companies to manage their energy costs. The mechanism for this already exists in the small grants provided by TransLink TravelSmart to municipalities over the past few years. However funding all municipalities would be a significant cost well beyond TravelSmart's current budget.

A more affordable option may be to offer support funding to sub-regional municipalities working in partnership to host and share a staff resource for a period of 1-3 years. Support from municipalities for this idea could be used to justify internal budget commitments by TransLink as a means to meet strategic demand management targets. An example of how this works elsewhere is Transport for London's annual Local Implementation Plan (LIP) funding of sub-regional borough transportation partnerships. Groups such as SELTRANS and SWELTRAC have been provided funding through the LIP process to hire TDM staff who had a dual responsibility to advise the sub-region and to contribute to a London-wide steering group.

5.2.2 Services

To meet outcome objectives for transportation behaviour, the research suggests TDM plans should include a range of services alongside trip-end amenities. As indicated above, TDM services may include car share vehicle contracts, vehicle pools, shuttle buses, bicycle skills, travel training, health and exercise marketing, support for teleworking such as childcare, personal trip reduction such as delivery services, parking cash-out and travel subsidies. These services may be provided or procured directly by the developer or occupant, while others may be supplied free or at cost by the City or another local agency such as a Transportation Management Association (TMA).

A range of TDM services are already available in Metro Vancouver including bicycle training and site evaluations (HUB), car share vehicle contracts (Modo), and more recently bike share services (Ubike etc.). These services are not available everywhere however which leaves some municipalities with fewer options. TransLink provides grant funding to some NGOs and to municipalities to support services such as outreach and events that could be used to support TDM plans if it could be expanded to keep pace with demand. Expansion would need investment that could be funded by development fees, but this implies reasonably complex mechanisms for agreeing and collecting municipal contributions and the allocation of services through third party providers.

A more systematic review of how TDM services are provided in the region may be possible under the new TravelSmart structure. This could produce a more logical split between services that TransLink could provide as part of its regional mandate, and those that are best arranged at the local level by municipalities according to local conditions and needs (see illustrative arrangement in the table below). In any review, the potential of income to support public funding whether from development or other fees will need to be considered as part of a business case. One option to consider, previously raised is whether there is value in TransLink helping to create a Transportation Management Association (TMA) similar to US examples to administer and manage direct services such as van and car pools.

Table 5.1 Illustrative split of responsibilities for TDM services to support development plans

Regionally provided, procured by TransLink	Locally provided, procured with development fees and/or regional grant	Independently provided by a developer or occupant under a TDM Plan
• Compass products • Transit information/ guides • TMA type services – van and car pools, rideshare • Marketing campaigns	• Bike share membership • Bicycle safety training • Resident/ employee travel training	• Car share membership • Parking cash-outs • Shuttle buses* • Child care • Delivery services† • Travel subsidies • Teleworking services

* Private shuttle buses may require an Independent Transit Service license from TransLink

† On-demand delivery services are widely available and may need curbside drop-off management

5.3 Regional policy

TDM plans for development require enabling policies and bylaws that describe their relevance to city objectives and describe the legislative conditions for how they are used in the municipality. Municipal responses to the survey used in this report suggest that production of regional advice on TDM plans for development would be welcomed and could help increase their use by municipalities. It may be useful for template bylaws to be produced as part of this advice to cover how TDM plans will be applied, evaluated and monitored. These aspects are discussed in more detail in the following sections:

5.3.1 Application

TDM plans are not suitable for all development. Some developments may be too small to have a significant impact, or to make preparation of a TDM Plan a reasonable burden on a developer. For these reasons a system of thresholds based on development characteristics should form part of any advice. An example of typical thresholds from the State of Oregon together with potential equivalents and areas for further study are proposed below:

Table 5.3 Development TDM Example Application Thresholds

Type of Threshold	Example Thresholds (Oregon)	Possible Metro Vancouver equivalent/ studies
Geographic	Citywide, regional centres, city districts, employment centres, corridors, multimodal mixed use areas	Equivalent would be Regional Centres (or parts of them) and Metro Vancouver Frequent Transit Development Areas (FTDAs)
Type of Use	Office, institutional, multi-family residential	To be determined locally – likely the same
# of Trips	Based on a traffic impact study, those developments estimated to generate 100+ peak daily trips	Further research needed. Potential focus on AM Peak which is more focused and damaging in Metro Vancouver
# of Employees	Developments expected to house 100+ employees	Further research needed. Note that 95% of businesses in BC are less than 50 employees
# of Residential Units	Developments with 50+ residential units	Further research needed. Vancouver threshold is 11+ units while New Westminster's threshold is 4+ units
Square Footage	Developments that exceed 50,000 square feet	Further research needed. Vancouver threshold is development over 500sqm non-residential floorspace
Parking	Developments that will add more than 20 non-residential parking spaces	Further research needed. Potential advice on thresholds for parking reduction requests. Note: Vancouver include criteria for parking reduction
Land Use Approval	Master plan approval, conditional use permits	To be determined locally, to allow special planning areas such as ToDs

5.3.2 Evaluation

The evaluation of TDM plans first requires a decision on whether the plan should be output or outcome-based. As suggested above, an outcome-based plan will more obviously link the management of development impacts to regional strategy but necessarily requires more complex monitoring, ongoing management and remedial processes than the simplicity of an output-based plan.

It is important to remember that any new TDM advice will be introduced to a region with very limited municipal capacity for new initiatives. For this reason, a hybrid that retains an outcome approach but, uses a menu of measures and a target score similar to an output-based model may be possible With advice covering the following:

- **Setting a target** – A coordinated approach would be to describe targets relative to the regional transportation strategy. For simplicity of monitoring mode share may be the preferred metric. If so, the 2041 sketch target could be used as the benchmark (Metro Core 34% auto and 66% other modes, and the Rest of the Region is 60% auto and 40% other modes²). This target could be used to create interim targets at say 1, 3 and 5 years for the TDM plan by extrapolating from a TIA to the 2041 target;
- **Menu** - A menu of scored TDM measures could be produced through consultation and research into relative effectiveness for mode shift and vkt reduction using examples and available regional data. The menu should include sub-target requirements to select both amenities and services;
- **Plan development** – Advice would include how to guide developers to consider a spread of measures that meet relevant policies and circumstances. This could include prioritization of transit supportive measures close to the FTN and new Rapid Bus corridors. Advice should also confirm how a TDM plan could be configured to contribute to LEED accreditation (American LEED guidance has been produced by the US Green Building Council); and
- **Plan management** – Advice should include options for securing the plan recognizing developers rarely have long-standing direct relationships with their developments. Options to explore could include requirement to nominate a TDM representative as part of a strata council or tenaning agreement, or in larger developments, to appoint a dedicated TDM Coordinator. This person could be empowered to hold and administer TDM plan funds for services and monitoring under the conditions of the consent.

² Regional Transportation Backgrounder #1: Vision, Goals, And Targets

5.3.3 Monitoring

Including outcome expectations in the TDM plan places particular emphasis on effective monitoring. Monitoring tends to be a complex area of TDM in development as it requires ongoing resources and administration. Added to this, for a regional approach, it is necessary to consider how monitoring could be coordinated so that data can be benchmarked, compared and used to both estimate a contribution to regional objectives and to refine the application to and evaluation of TDM plans.

There are two main options for how monitoring could be administered:

- **Developer responsible** – the developer or representative or TDM coordinator would be required to undertake a monitoring survey every year or two. This would be done at their cost and could be subject to enforcement action. A standard template may be needed to simplify the collection process. Requirements for submission, checking and analysis would also need to be described.
- **Municipality responsible** – an alternative option, as used by the City of Vancouver, is to require developers to pay a sum to the municipality and to guarantee site access so the City can undertake its own independent monitoring. This avoids issues of non-compliance, bias or poor practice but requires staff resources or hired surveyors.

In either of the above cases it is also necessary to provide the tools, whether in-person surveys, online reporting applications or other methods for collecting data. A centralized system would have the advantages of reducing municipal costs, allowing standardized reporting and submission protocols, and enabling deeper analysis and data reporting. This data could also potentially be compared to other datasets such as Compass, TransLink Travel Diary and the regional transportation model to develop greater understanding about trip rates for land uses in different areas of the region, mobility behaviour, and the role of TDM in regional forecasting.

TransLink TravelSmart has long used a model survey for businesses that is available online but requires updating and may not be suitable, in its current form, for large-scale sharing and automated data analysis. There are relatively few proprietary options but a UK-company iBase Systems Ltd produce cloud-based software as a service product called TransHub which is a monitoring tool for TDM plans used by some 30% of UK municipalities and, under the name iTrace, by Transport for London. An RFEI for a product that meets Canadian data privacy and data storage may reveal an equivalent option.

The cost of developing a monitoring tool and for its operation, updating and maintenance could be offset by a small proportion of fees collected by municipalities for development TDM plans being ring-fenced for regional coordination.

5.4 Regional coordination

5.4.1 Information network

Municipalities have identified the value of networks for information-sharing that can help them stay in touch with innovation, learn from others and coordinate activity. A regional approach to TDM plans for development may heighten the need to communicate progress, ideas and research to ensure municipalities can introduce programs efficiently.

Ideas that may assist in information sharing include:

- **Research library** – a web-based resource would provide a source for regional and wider research into the business case for TDM, effective techniques and case studies. If a centralized monitoring tool is adopted, annual reports and research projects could also be published on this platform. This will include a new suite of digital tools and resources for businesses on parking management, carpool and other modes and for example, downloadable marketing materials for developers.
- **Review committee** – the process of agreeing regional advice and guidance on TDM plans may produce a residual need and interest in, forming an advisory committee of municipal representatives, TransLink and other stakeholders such as Metro Vancouver and developer associations, with which to keep advice fresh and to reflect the findings from monitoring.

5.4.2 TravelSmart website

TransLink TravelSmart has previously hosted TDM resources on a dedicated microsite, this could be revived as an important potential resource for information, the portal for a monitoring tool, and a centre for obtaining information, educational tools and instruction, or to access regional TDM services.

5.4.3 Recognition and rewards

A network of developments with TDM plans in place allows recognition programs to be established that could incentivise achievement and publicize the work in the region.

At one level, it may be feasible to create an accreditation program similar to LEED where developments reaching certain target scores or monitoring outcomes are certified against a ladder scale of achievements. This could help create a culture of TDM amongst developers and suppliers, as well as providing consumers (tenants and occupiers) a simplified means to understand what a TDM development plan means and what to expect. This does however require administrative systems and credible standards that may be too onerous at least in the near-term.

A simpler option would be to partner with an existing awards program or to create one that encourages developers, TDM coordinators or municipalities to submit or nominate candidates for awards. These awards would recognize achievement against TDM plan objectives but could also include specific policy-led areas such as largest increase in transit ridership, bike-friendly employer or achievements in shared mobility. Some of these awards may suit sponsorship to offset the costs of administration, marketing and event hosting.

5.4.4 Communication plan

An important aspect of the program will be communicating the aims, benefits and processes amongst the development industry. Consultation with development associations such as the Urban Development Institute, Canadian Home Builders Association (HAVAN in Vancouver) and with Metro Vancouver as the regional planning authority, will be important to both gauge reception to the ideas but also to develop communication channels for implementation.

TransLink has considerable expertise in communication and marketing campaigns that could be applied to produce materials and executions to support different stages of a TDM development project. These could include:

- Publication of regional advice for municipalities and for developers
- Promotion of the benefits of TDM plans relative to regional aims
- Information about where to find information and who to contact in municipalities
- Production of travel guides for transit and other modes
- Case study information and video workshops on car and vanpools, parking management, flexible services and shared mobility services

5.5 Summary of recommendations

A regional approach to TDM plans for development has many potential benefits and is a topical issue for many municipalities. TransLink could use its regional TDM mandate to coordinate advice, develop tools and provide resources to help municipalities act on existing OCP policies. The research for this report identified good practice in North America, as well as the beginnings of activity in the region, that suggest a workable approach is possible.

To progress this idea the report suggests several areas for further research, consultation and agreement:

- Development policy is not within TransLink's mandate and it will be important to engage with Metro Vancouver and the municipalities to ensure any advice produced by TransLink is properly defined and supported;
- A formula needs to be agreed that provides the necessary staff and operating budgets to municipalities that will allow increased activity on TDM. This discussion should consider the role of fees to support staffing over time, and potentially a short-term role for regional or sub-regional grant to increase staff resources.
- The application of TDM plans to development requires further research into what thresholds may be appropriate to include in advice. Possible thresholds that require research include one or more from peak hour trips, floorspace, number of employees, number of residential units and number of parking spaces.
- The evaluation of TDM plans requires agreement on an output or outcome-based approach and whether a hybrid is feasible. Some additional research will be necessary to agree effectiveness scores for measures and targets.
- Plan monitoring could be centralized to reduce municipal burden and create potential benefits from data sharing. This however requires consideration for what technology may be available and how the development and maintenance of this tool could be funded sustainably.

Key steps in developing these are to:

- 1) Discuss the initial findings with municipal representatives of the TravelSmart roundtable;
- 2) Produce evidence-based research into the effectiveness for mode shift and vkt reduction of various TDM amenities and services that municipalities could apply locally;
- 3) Engage with developer associations and Metro Vancouver to guide a process that would provide municipalities with advice on the types and intensities of development for TDM Plans.
- 4) Refine a set of proposals for centralized monitoring and evaluation tools that TransLink could create under a partnership-based strategy
- 5) Seek funding and other resources for implementation of the TransLink projects

APPENDICES

APPENDIX 1 – Summary of municipal TDM -related policies

Municipality	Parking Requirements	Development Charges	Bicycle Requirements	Electric Vehicles	Car Share	Other	System
Anmore	Parking standards as stated - neither Min nor Max. Zoning Bylaw No. 568-2017 2. & Amendment Bylaw No. 571-2018	Infrastructure Based	No Ref	No Ref	No Ref	Policy to support active and alternative transport choices	Standard Application
Belcarra	MINIMUM Parking Standards. Zoning Bylaw No. 150	Infrastructure Based plus Density Bonus	No Ref	No Ref	No Ref		Standard Application
Bowen Island	Parking standards as stated - neither Min nor Max. Zoning Bylaw No. 57-2002	Infrastructure Based	Minimum Standards for commercial & community uses requiring at least 20 car parking spaces	No Ref	No Ref	Public EV chargepoint survey recently completed	Standard Application
Burnaby	Parking standards as stated - neither Min nor Max. Zoning Bylaw Schedule VIII	Infrastructure Based plus Community Benefit Bonus / Density Bonus	Minimum Standards for most development plus end of trip facilities in non-residential development. Separate requirements of SFU University	All new development to be EV ready	Some car share companies in the City but no relevant bylaws promoting intro at development level	Go Green program with trip reduction reference, but little detail. CEEP mentions TDMs within the Burnaby Transportation Plan	Standard Application
Coquitlam	MINIMUM Parking Standards. Zoning Bylaw Part 7. Evergreen Line area can reduce parking by TDM measures or payments in lieu	Infrastructure Based plus Density Bonus	Long & Short-Term Minimum Standards. Type and location standards	EV ready development has been proposed to committee but no updated zoning bylaw	Some car share companies in the City but no relevant bylaws promoting intro at development level		Standard Application. Space for TDM info & "green" features
Delta	MINIMUM Parking Standards. Zoning Bylaw No. 7600 - 2017. Cash in lieu in Ladner Core	Infrastructure Based	MINIMUM standards with specific requirements for type and location	All multi-unit or mixed unit with over 6 residential units must provide 20% ev space	Multi-unit or mixed use with more than 8 residential unit, car share MAY be provided	Green Growth Index - points for alt transport, cycle facilities, car share etc.	Standard Application & submission of POINT based the Green Growth Index

Municipality	Parking Requirements	Development Charges	Bicycle Requirements	Electric Vehicles	Car Share	Other	System
Electoral Area A: UEL / UBC	UEL: MAXIMUM residential standards, as stated for other development. Administration Bylaw. UBC: MAXIMUM residential standards, as is for other uses. UBC Development Handbook & UBC Strategic Transportation Plan	UBC - Basic infrastructure. UEL - Basic Infrastructure & Density Bonus	UEL: No Ref UBC MINIMUM Class I & II standards (long & short term)	No Ref in Bylaws but reports and recommendations made, requiring minimum EV install	No Ref however UBC hosts all the Car here services in Vancouver.	UBC has REAP - similar to LEED, gives a point system and "level attained - Gold, Gold Plus . Included in points in provision of bikes, ebikes, ev parking.	UBC Standard Application plus POINTS based REAP. UEL Standard Application
City of Langley	MINIMUM Parking Standards Bylaw No.2100 - 1996	Infrastructure Based	MINIMUM standards Class I (resident / employee) Class II (Visitor / patron). Possible bylaw amendment to include end of trip facilities	No Ref	Ride share referred to in OCP but no formal bylaw ref	Sustainability Framework (2010)- proposing to explore Ride Share & add end of trip cycle facilities to bylaws	Standard Application
Township of Langley	Parking standards as stated - neither Min nor Max.Zoning Bylaw No.2500 Section 100	Infrastructure Based plus Density Bonus	No ref, although suggestions alluded to in 2015 Cycling Plan	No Developer requirements yet, but EV strategy is being undertaken	No Ref	Sustainability charter - currently based on the Township facilities	Standard Application
Lions Bay	Parking standards as stated - neither Min nor Max.Zoning Bylaw No.No.520 - 2017	Basic infrastructure (Density Bonus added 2017?)	No Ref	No Ref	No Ref	Reports referring to future car-sharing and EV policies	Very basic application form on line
Maple Ridge	MINIMUM Parking Standards Bylaw No.4350 - 1990 Payment in lieu available at non-residential sites	Infrastructure Based plus Density Bonus	Long & Short-Term standards as stated	Bylaw amendments in process - likely to be EV roughed in to each parking space	No ref	Has a TDM OCP refs sustainable buildings and green transportation capacity but no ref as to how incorporated into applications.	Standard Application. TIA for larger or increased density dev

Municipality	Parking Requirements	Development Charges	Bicycle Requirements	Electric Vehicles	Car Share	Other	System
New Westminster	Parking standards as stated - neither Min or Max. Zoning Bylaw No.6690 - 2001Reduced possible near RT or provision of end of trip cycle facilities if non-residential	Infrastructure Based plus Density Bonus	MINIMUM Long- & Short-term standards	Ev charging to be provided at new developments	Coop space referred to in Bylaw - may be OOD? Zoning By-law Section 150.74 allows a 3-space parking reduction if a co-op vehicle & space is provided. See also www.modocoop.org .	Sustainability Development Report cards - point based. Refer to provision of coop car space and reception on parking space - dated 2011.	Standard Applications PLUS POINTS on Sustainability Report Cards. TDM plans for larger developments
City of North Vancouver	MINIMUM Parking Standards Zoning Bylaw 1995 No.6700 Div. IV. Reductions available for alternatives or payment in lieu	Infrastructure Based plus Density Bonus	MINIMUM Short Term and Secure (Long Term) standards. Development requiring Secure also require Accessory End Destination Facilities	Proposed policy that all new parking spaces will have ability to support EV charge	See Other also Nov 2018 - shared bike scheme approved	Alternative parking refers to car share provision or A SHARED CAR. Payment in lieu goes to fund creation a municipal parking facility	Standard Application to be submitted with completed Sustainable Development Guideline form, indicating cycle end of trip facilities, Ev charging, car share.
District of North Vancouver	MINIMUM Parking Standards Zoning Bylaw No.3210 - 1965	Infrastructure Based	MINIMUM level 2 (short term) standards. Long Term storage requires EV bike charging	Ev car charging wiring for Level 1 and additional to be provided at all new Multi family, commercial & industrial dev.	No Ref		Standard Application
Pitt Meadows	MINIMUM Parking Standards Zoning Bylaw No.2505 - 2011	Infrastructure Based	MINIMUM Class 1 (Long Term) & Class 2 (Short Term) standards	No ref	No Ref	Sustainability Check List referred to in Pre App Development meetings	Standard Application
Port Coquitlam	MINIMUM Parking Standards Zoning Bylaw No.3630. Some payment in lieu areas	Infrastructure Based plus Density Bonus	MINIMUM Short & Long Term Standards	All new Dev to have EV rough in	No Ref		Standard Application

Municipality	Parking Requirements	Development Charges	Bicycle Requirements	Electric Vehicles	Car Share	Other	System
Port Moody	MINIMUM Parking Standards Bylaw No.2937	Infrastructure Based plus Density Bonus	Long & Short-Term standards as stated	OCP encourages EV in new developments - is this bylaw yet?	Currently 5 modo cars.	Full redevelopment areas require a TDM for rezoning	Standard Application. Requires submission of point based Sustainability (alternate transport, cycle facilities, EV etc.)
Richmond	MINIMUM Parking Standards Bylaw No.8500	Infrastructure Based plus Density Bonus	MINIMUM Class 1 (Long Term) & Class 2 (Short Term) standards	New Dev to be Ev ready	Modo, plus C2C and EVO have airport hubs	CEEP Plan 2017 - Community Energy & Emissions - promotes facilitating car share in new dev. Also, walking, transit, ROLLING & cycling	Standard Application
Surrey	Required Standards	Infrastructure Based plus Density Bonus	Required standards - multi unit residential requires locked storage rooms	EV polices in development	2007 pilot project to allow reduced spaces in larger developments if car sharing vehicles provided - no further info	Surrey Sustainable Development Checklist (SSDC) to be submitted for pre-application meeting - refers to parking, cycles and EV	Standard Application. SSDC to be submitted with app.
Tsawwassen	MINIMUM Parking Standards and Use Planning Act Zoning Reg O.028 - 2009	Off-site levies for development types - fees include going to walking / cycling infrastructure - proposal to provide a 5 min or 400m walking loop of opportunity to 90 - 100% of all residential development	Minimum Cycle Parking Standards A & B. A is secure, rooms, etc. for longer storage at condos, offices etc. B is short stay parking at mall, amenity areas etc.	0.5% car share space	2% electric rough in per 100 spaces at commercial or retail (no rest requirement)		Standard Application. Some require a TIA

Municipality	Parking Requirements	Development Charges	Bicycle Requirements	Electric Vehicles	Car Share	Other	System
Vancouver	MINIMUM Parking Standards Bylaw No.6058 - 019 Payment in lieu permitted in some areas	Infrastructure Based PLUS additional Community Amenity Contributions in certain areas	MINIMUM Class A (Long Term) & Class B (Short Term) standards with End of trip facilities required for larger Class A	Outlet capable of Level 2 charging required at new dev.	Points applied for: Car Share Membership, spaces, cars.	Dev over 8000m2 or providing over 45000m2 of new floor area will require a TDM. All owners of DT Dev except within West End & Robson North Permit Are to provide a TDM with app. These TDM's have MINIMUM points targets a certain % of which MUST be made up by car share. Can also include Transit passes, increased / enhanced cycle facilities, public and or private bike share, walking improvements, way finding signage etc.	Standard application with POINTS System & TDM requirements
District of West Vancouver	MINIMUM Parking Standards Bylaw No. 4662 - 2010	Infrastructure Based (Density bonus ?)	See Other	See Other	See Other	OCP refers to Bicycle end of trip facilities, EV. Reducing parking and car sharing, but no obvious bylaws. Strategic Transportation plan also echoes the above	Standard Application
White Rock	MINIMUM Parking Standards Bylaw No. 2000. Can be reduced by up to 10% by TDM use of COOP or car share	Infrastructure Based plus Density Bonus	States Bicycle parking should be considered and gives standards for Class I (Long Term) & Class II (short Term)	Multi residential units require 1 space per 10 with level 2 then additional 1 space per 10 roughed in	Parking standards reduction by up to 10 % if COOP or Car Share		Standard Application

APPENDIX 2 – Results from municipal questionnaire

Note:

Survey undertaken in March/April 2019 using online 'Checkbox' template. 18 responses received.

Metro Vancouver Municipal Development TDM Survey

TransLink's TravelSmart team is conducting this short survey to investigate current activity around transportation demand management (TDM) plans for developments. The intention is to provide advice and to create regional tools that will help coordinate and increase the effectiveness of TDM as part of the regional transportation strategy.

Throughout this survey the term Transportation Demand Management Plans or TDM plans is used to represent agreements between municipalities and developers that aim to reduce personal vehicle travel, to offset parking requirements and/or to shift mode share to more sustainable options. The survey covers if TDM plans are required, when they are required, how they are evaluated, and what monitoring is undertaken.

We recognize that responding to the survey may require more than one staff member's contribution within an organization. Wherever possible we ask for each organization to coordinate to provide a single reply in order to simplify analysis. If this is not possible please help us to limit the overall number of responses by circulating as narrowly as possible.

The survey should only take about 15-20 minutes to complete, and we would be very grateful for your response before end of day **Thursday April 4th**.

If you have any questions please contact project lead:

James Ranson, Travel Smart Specialist

Transport Demand Management

Phone: 778.375.6629 Email: James.Ranson@translink.ca

1. Please enter the name of your municipality

2. Please enter the name of your organization's TravelSmart Roundtable representative, if any

3. Please enter a name and email for any follow up (if not same as above)

4. What vehicle parking requirements apply to new developments in your municipality?

- ☐ Minimum standards
- ☐ Set standards (neither minimum nor maximum)
- ☐ Maximum standards
- ☐ Varies according to planning area
- ☐ Other:

5. What other general considerations are applied to how variances in vehicle parking requirements at developments are determined? Check all that apply

- ☐ Variance for sites in downtown areas
- ☐ Variance for sites within walkshed of FTN
- ☐ Variance for car sharing vehicles
- ☐ Variance for bicycle parking
- ☐ Variance for parking shared between multiple users/ land uses
- ☐ Variance for street level bike sharing facilities
- ☐ Payment in lieu of parking on site
- ☐ Other:
- ☐ None Of The Above

6. What considerations are applied to specific vehicle requirements for parking variances? Check all that apply

- ☐ Percentage of stalls required for electric vehicle charging
- ☐ Percentage of stalls required for disabled driver vehicles
- ☐ Percentage of stalls required for shared use/ visitor parking
- ☐ Other:
- ☐ None Of The Above

7. Does your municipality have bylaws or policies that require developers to submit Transportation Demand Management (TDM) plans with parking offset requests?

- ☐ Yes
- ☐ No

8. *Does your municipality have bylaws or policies that require developers to submit TDM Plans for proposals?

Note: If you select 'NO' you will proceed to Question 16.

- ☐ Yes (policy)
- ☐ Yes (informally/ case by case)
- ☐ No

9. What eligibility criteria are used to review a development TDM Plan? Please check all that apply.

- ☐ When the developer requests parking offset
- ☐ Municipality determined threshold to mitigate traffic impact on a case-by-case basis
- ☐ Zoning bylaws
- ☐ Development metrics, such as floorspace
- ☐ Other:

10. What guidance is provided to developers on how to prepare a TDM Plan for submission to the municipality? Check all that apply

- ☐ Guidance is published on the municipal website
- ☐ Guidance is provided to developers if TDM plans are required
- ☐ Developers are referred to external guidance
- ☐ No written guidance is provided
- ☐ Other:

11. How are TDM Plans evaluated by the municipality? Check all that apply

- ☐ Using point scores for amenities, initiatives, services against a target
- ☐ Using mode shift scores for amenities, initiatives, services against a target
- ☐ Other scoring system
- ☐ Case-by-case basis
- ☐ Other:

12. Thinking about residential development. What types of initiatives are accepted within TDM Plans? Check all that apply

- ☐ Priced or regulated parking
- ☐ Car share parking spaces
- ☐ Electric vehicle recharging
- ☐ Subsidies (e.g. for transit passes or car share membership)
- ☐ Bicycle parking
- ☐ Bike share
- ☐ Active transportation facilities (showers/ lockers etc)
- ☐ Information and wayfinding
- ☐ Travel training and promotion
- ☐ Other:

13. Thinking about commercial or industrial development. What types of initiatives are accepted within TDM Plans? Check all that apply

- ☐ Priced or regulated parking
- ☐ Car share parking spaces
- ☐ Electric vehicle recharging
- ☐ Car pool/ van pools
- ☐ Subsidies (e.g. for transit passes or car share membership)
- ☐ Bicycle parking
- ☐ Bike share
- ☐ Active transportation facilities (showers/ lockers etc)
- ☐ TDM Coordinator
- ☐ Information and wayfinding
- ☐ Travel training and promotion
- ☐ Other:

14. What monitoring does your municipality have in place for TDM plans? Please check any that apply.

- ☐ Developer is required to survey and report to the City
- ☐ Developer funds, municipality monitors
- ☐ Municipality funds, municipality monitors
- ☐ Monitoring agreed case-by-case
- ☐ No monitoring is required
- ☐ Other:

15. What enforcement does your municipality undertake for non-compliance or under performance of plans?

- ☐ Fines applied
- ☐ Breach of condition/ permission
- ☐ No enforcement is undertaken
- ☐ Other:

16. Does your municipality have any proposals to request/ require TDM Plans as part of the development process?

- ☐ Yes
- ☐ No
- ☐ Other:

17. How could TransLink best support municipalities on TDM Plans for development? Please drag and drop the options into priority order

Providing guidance on where TDM plans may be applicable

Proposing a common evaluation model

Providing guidance on monitoring TDM plans

Creating a central system for monitoring TDM plans/ sharing data

Providing incentive packages (see full list in next question)

Providing a network for information sharing between municipal planners

Other option (see further question below)

18. Considering TransLink's role, what incentives would your municipality find most useful? Please drag and drop the options into priority order

Print/ online transportation guides

Regional marketing campaigns

Events

Site specific outreach

Travel training (transit, cycling)

Rewards and recognition of excellence

Subsidized transit passes

Site surveys/ survey tool

Other option (see question below)

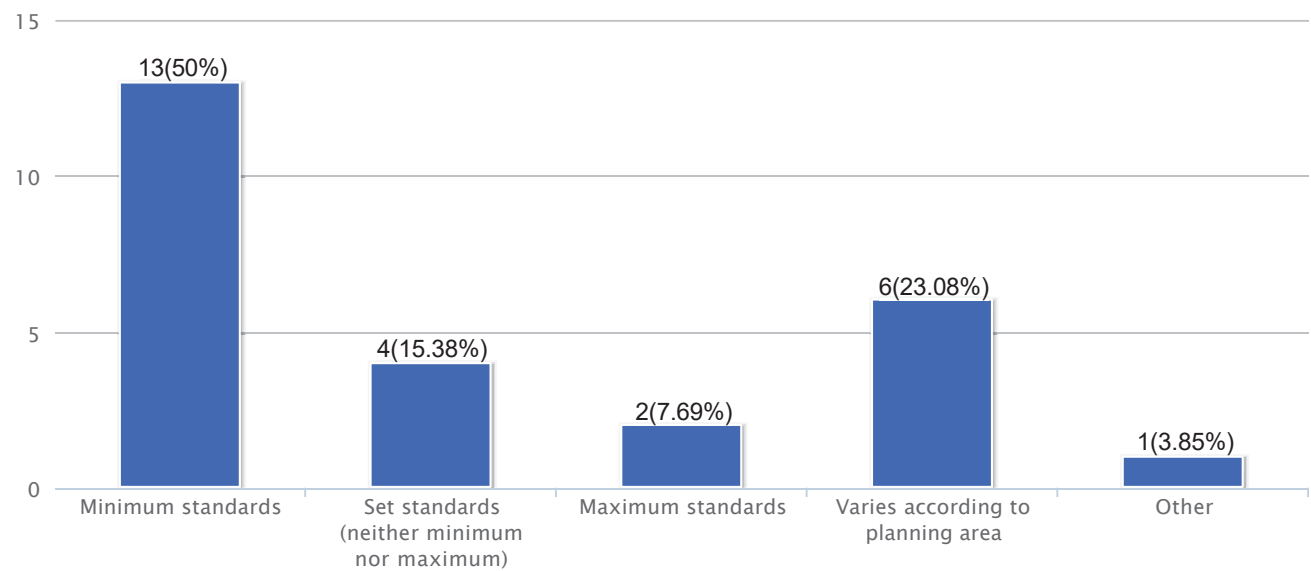
19. What other services or assistance could TransLink provide to TDM Plans for development?

- ☐ Researching best practice
- ☐ Creating a network for TDM coordinators and developers
- ☐ Providing guidelines for TDM application criteria
- ☐ Providing guidelines for TDM evaluation methods
- ☐ Providing regional monitoring guidance
- ☐ Providing centralized monitoring and analysis tools
- ☐ Other:

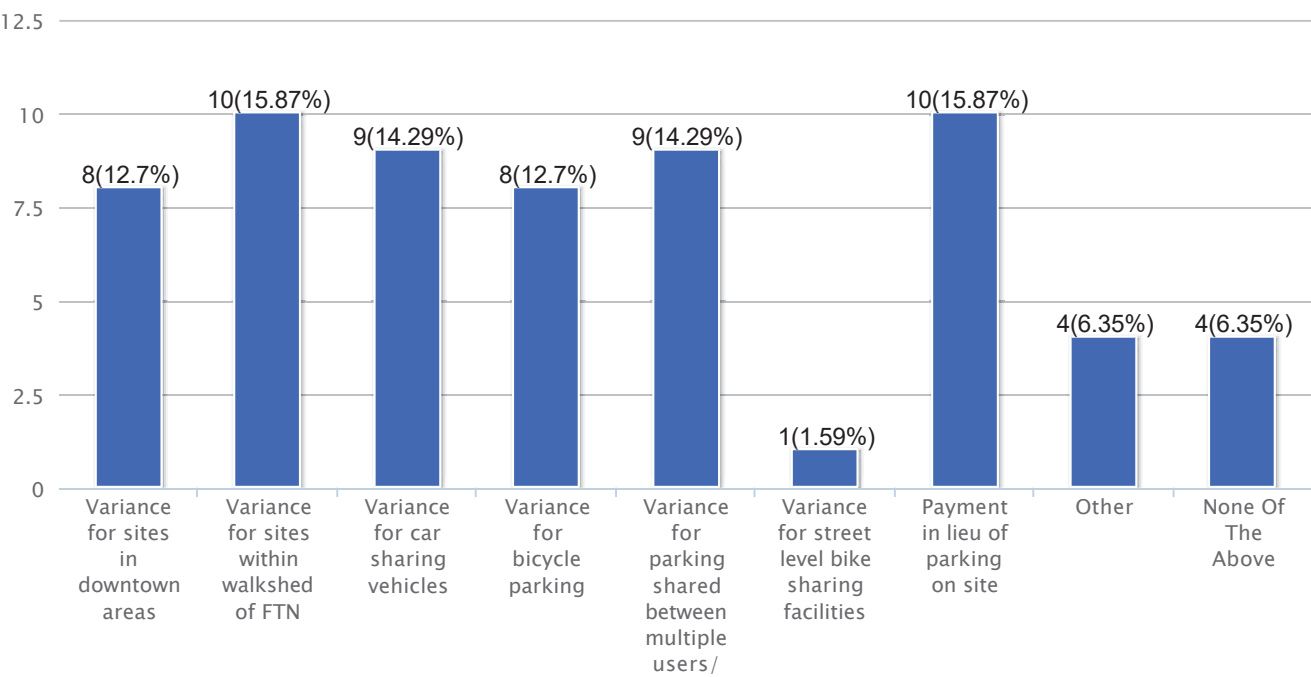
20. Do you have any other comments about TDM Plans for development or TransLink's role in this area?

	Please enter the name of your municipality
	Coquitlam
	Bowen Island Municipality
	City of Surrey
	City of Maple Ridge
	UBC
	City of Vancouver
	District of West Vancouver
	City of Richmond
	District of North Vancouver
	Township of Langley
	City of New Westminster
	City of North Vancouver
	Burnaby
	Corporation of the City of Port Coquitlam
	Port Moody
	Village of Lions Bay
	Langley City
	White Rock

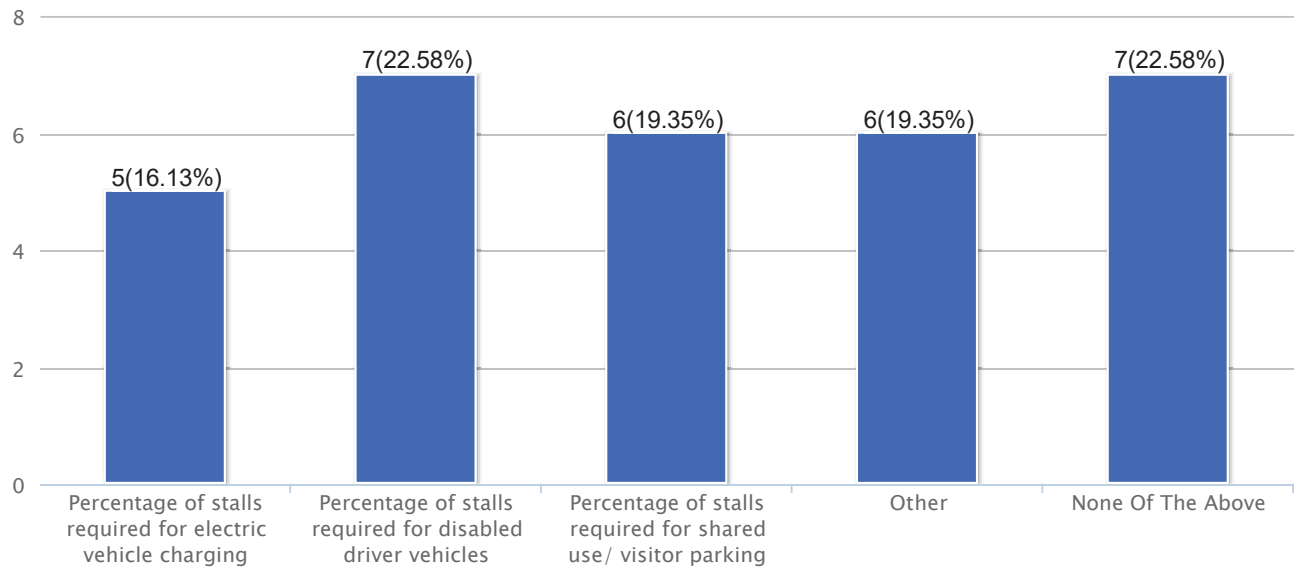
What vehicle parking requirements apply to new developments in your municipality?



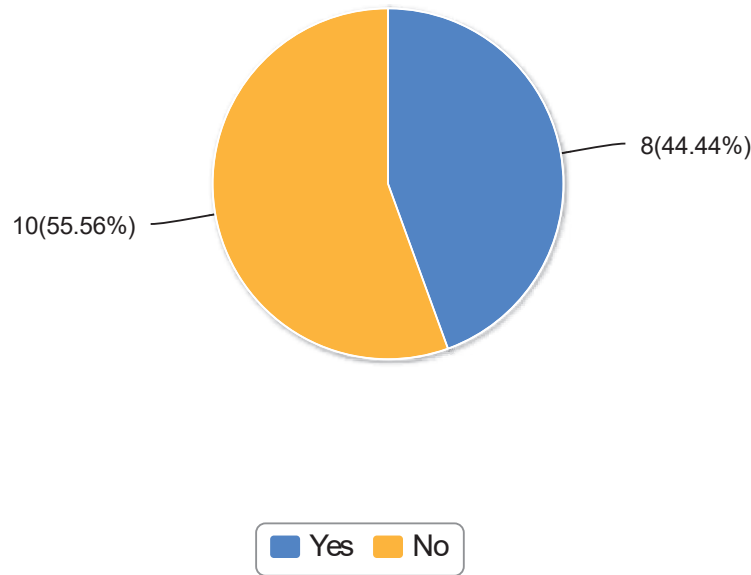
What other general considerations are applied to how variances in vehicle parking requirements at developments are determined? Check all that apply



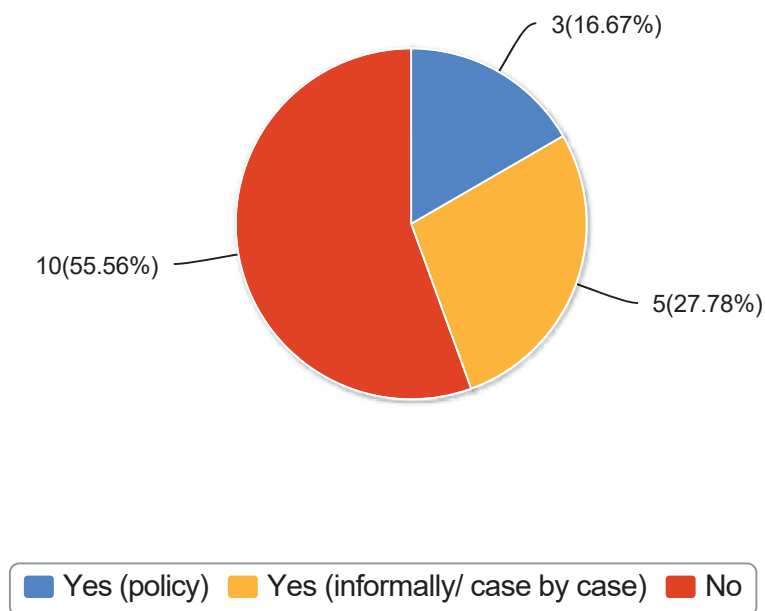
What considerations are applied to specific vehicle requirements for parking variances? Check all that apply



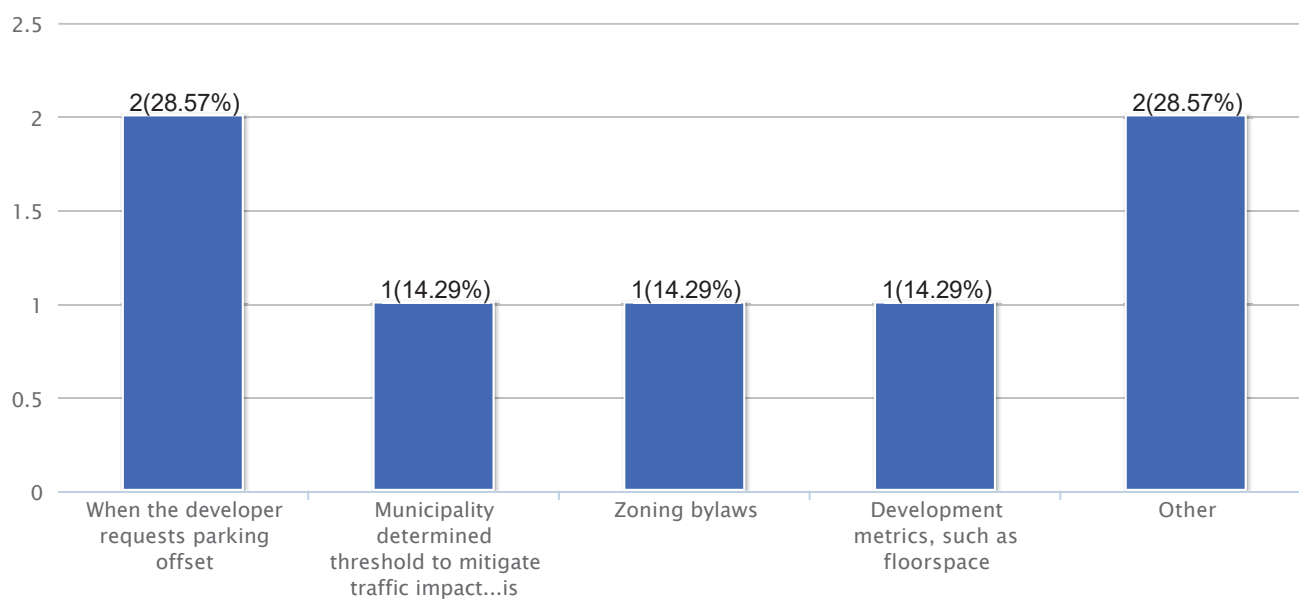
Does your municipality have bylaws or policies that require developers to submit Transportation Demand Management (TDM) plans with parking offset requests?



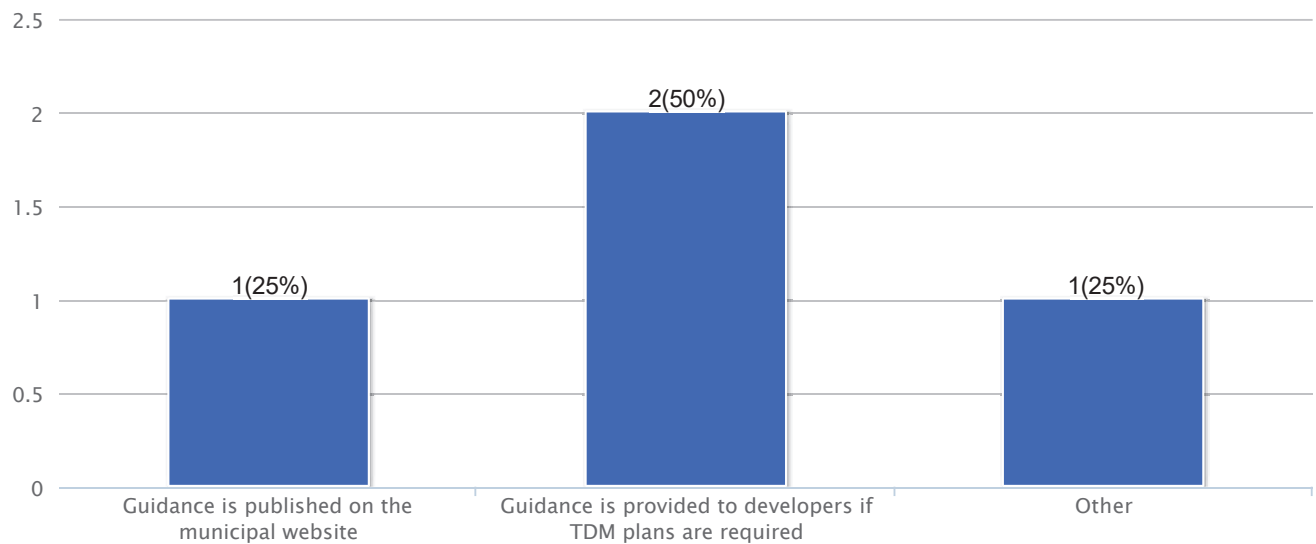
*Does your municipality have bylaws or policies that require developers to submit TDM Plans for proposals?
Note: If you select 'NO' you will proceed to Question 16.



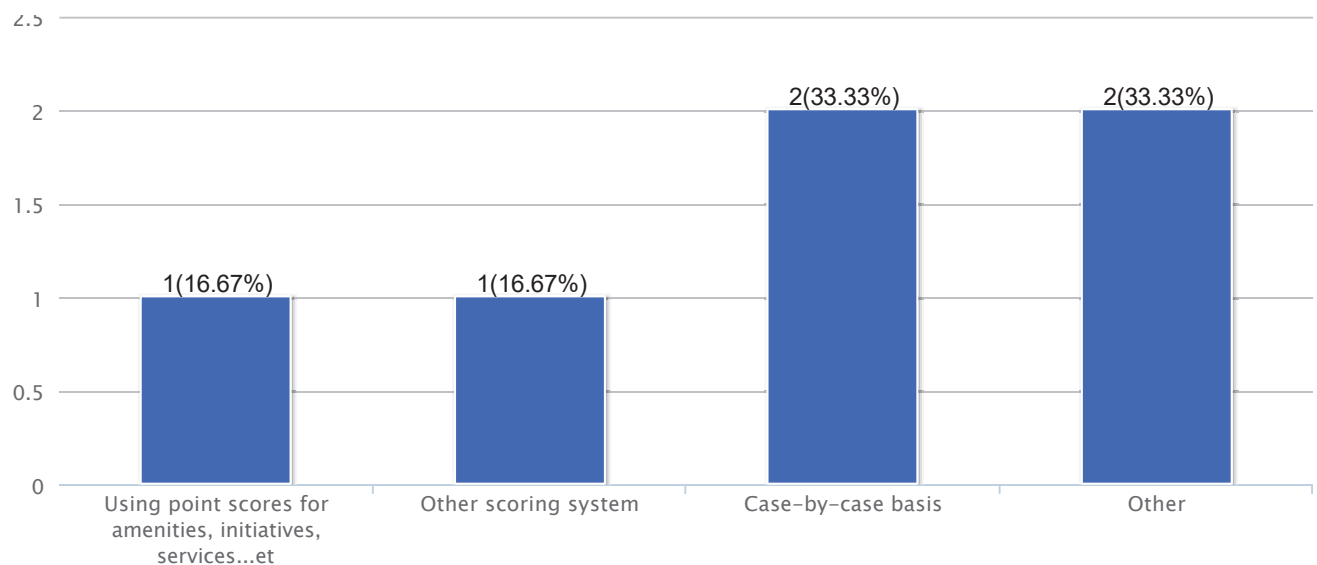
What eligibility criteria are used to review a development TDM Plan? Please check all that apply.



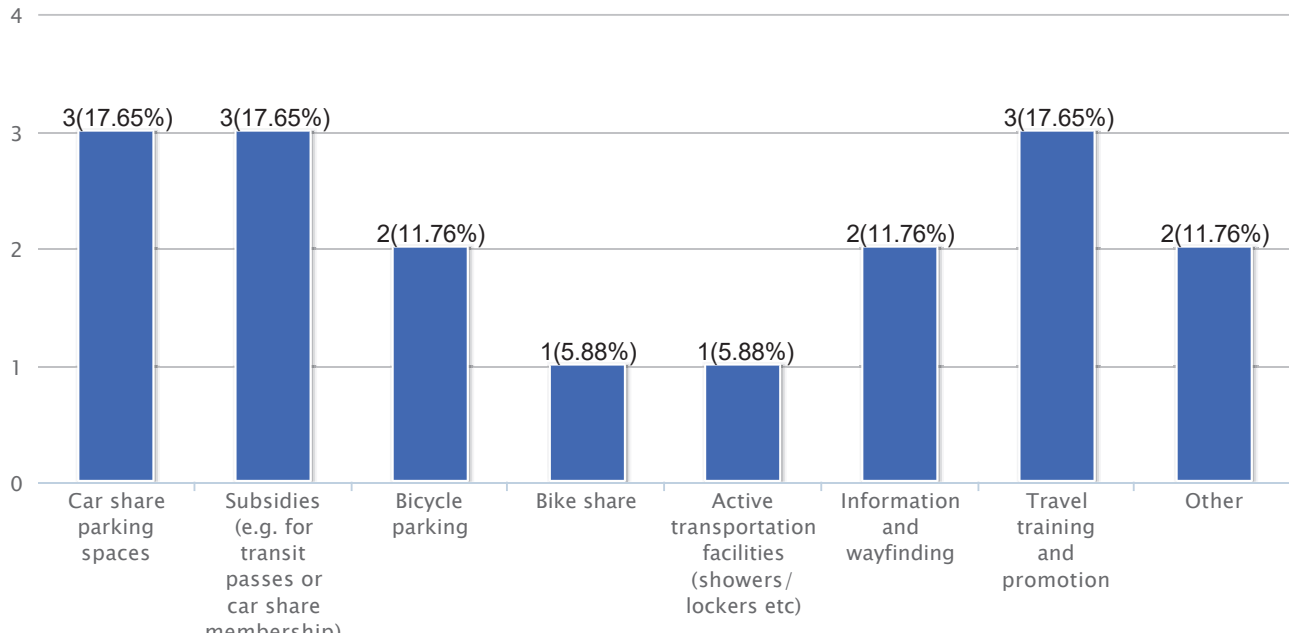
What guidance is provided to developers on how to prepare a TDM Plan for submission to the municipality? Check all that apply



How are TDM Plans evaluated by the municipality? Check all that apply



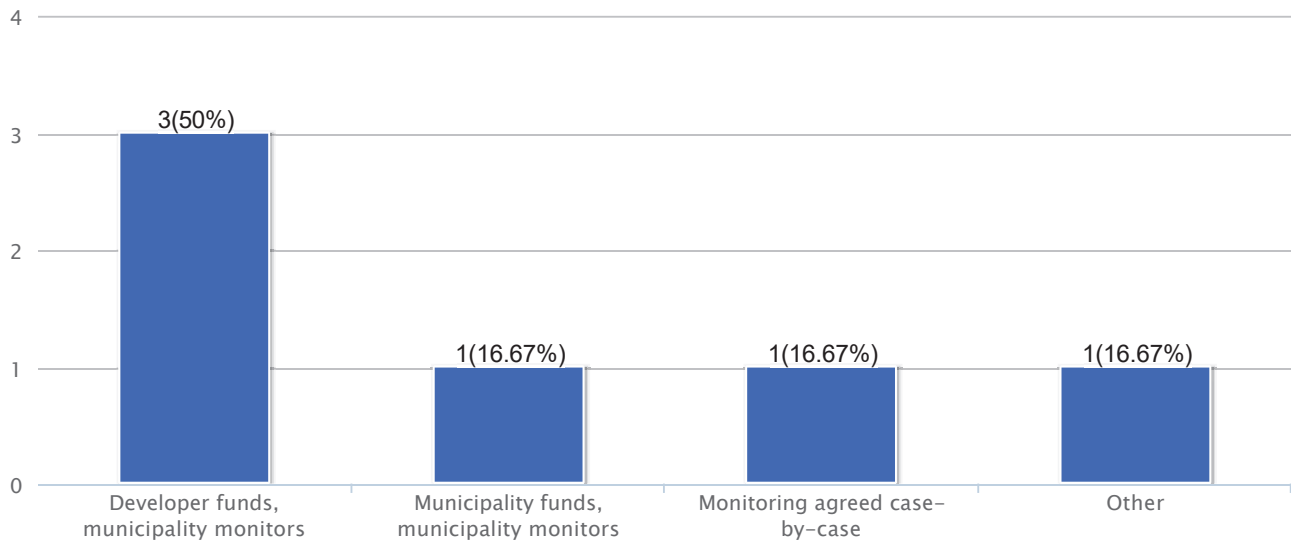
Thinking about residential development. What types of initiatives are accepted within TDM Plans? Check all that apply



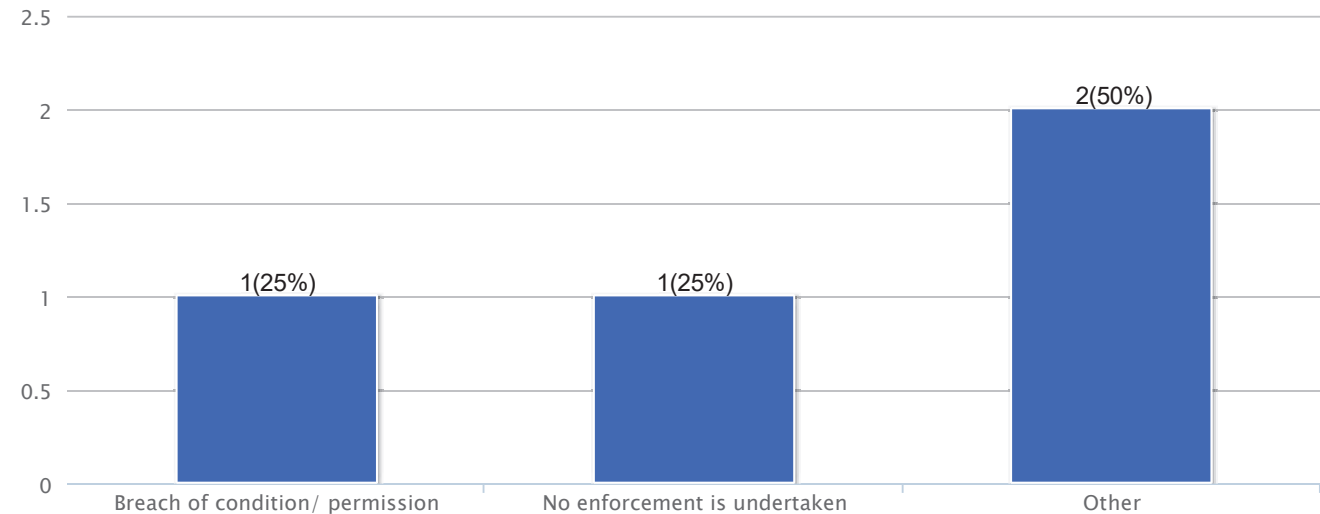
Thinking about commercial or industrial development. What types of initiatives are accepted within TDM Plans? Check all that apply

Answer	Count	Percent
Priced or regulated parking	1	4.76%
Car share parking spaces	3	14.29%
Car pool/ van pools	2	9.52%
Subsidies (e.g. for transit passes or car share membership)	3	14.29%
Bicycle parking	2	9.52%
Bike share	1	4.76%
Active transportation facilities (showers/ lockers etc)	3	14.29%
TDM Coordinator	1	4.76%
Information and wayfinding	2	9.52%
Travel training and promotion	2	9.52%
Other	1	4.76%

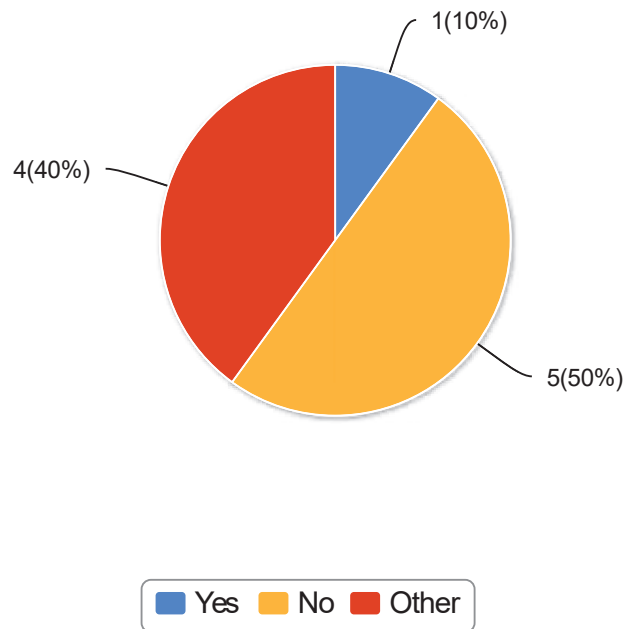
What monitoring does your municipality have in place for TDM plans? Please check any that apply.



What enforcement does your municipality undertake for non-compliance or under performance of plans?



Does your municipality have any proposals to request/ require TDM Plans as part of the development process?



How could TransLink best support municipalities on TDM Plans for development? Please drag and drop the options into priority order

Answer	Total Score	Overall Rank
Proposing a common evaluation model	87	1
Providing a network for information sharing between municipal planners	79	2
Creating a central system for monitoring TDM plans/ sharing data	71	3
Providing incentive packages (see full list in next question)	71	4
Providing guidance on where TDM plans may be applicable	64	5
Providing guidance on monitoring TDM plans	63	6
Other option (see further question below)	41	7

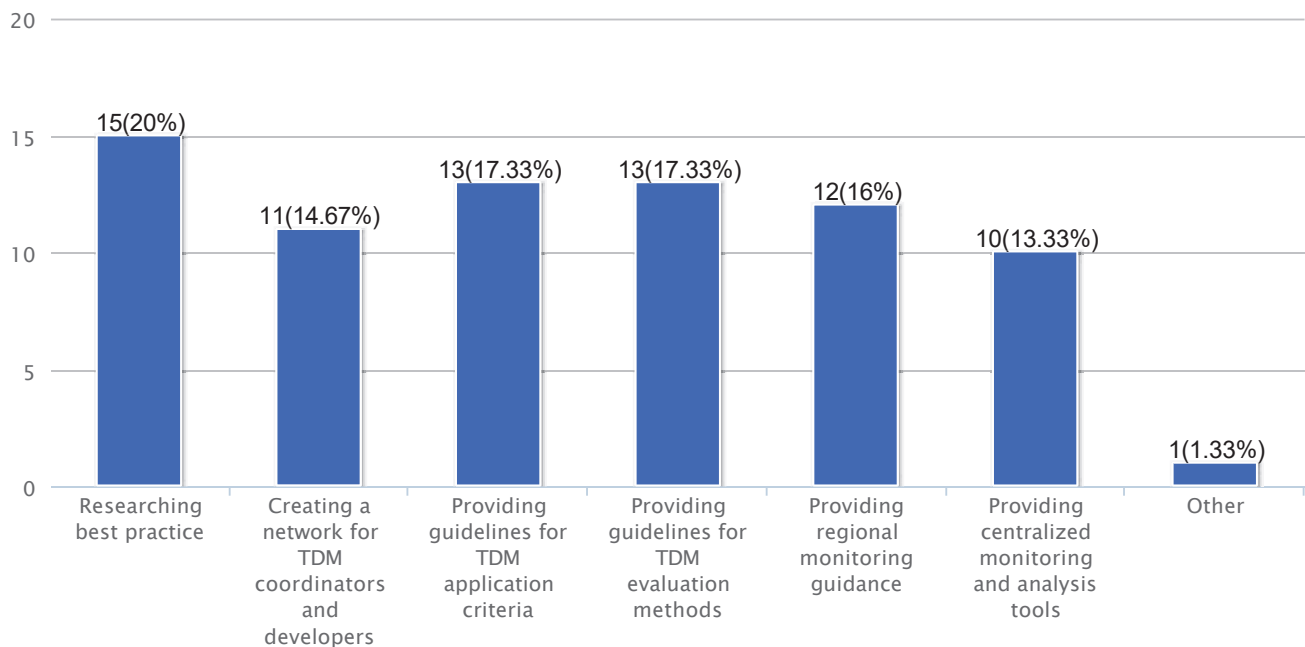
Note: Total Score is a sum of the ranked item options. Top positioned options have higher rank.

Considering TransLink's role, what incentives would your municipality find most useful? Please drag and drop

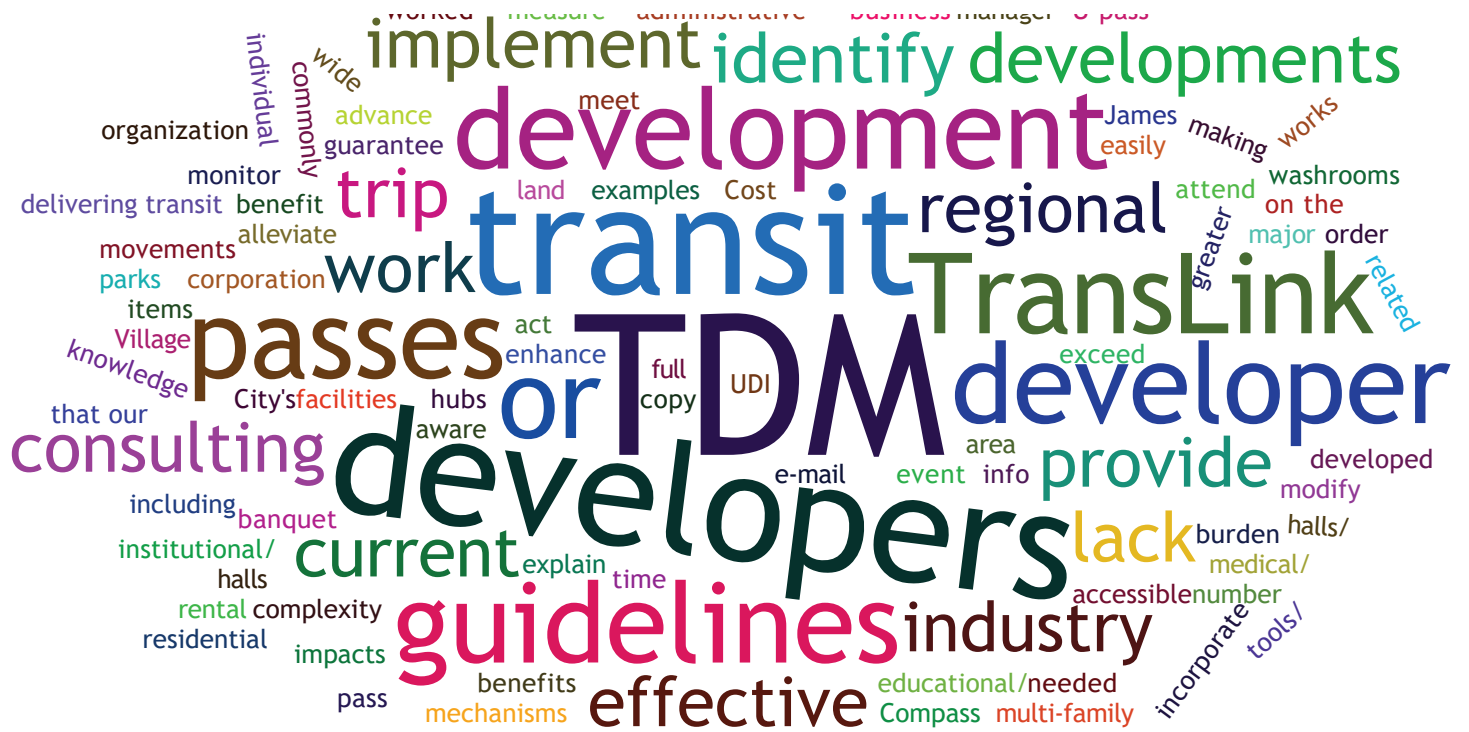
Answer	Total Score	Overall Rank
Subsidized transit passes	136	1
Site surveys/ survey tool	106	2
Travel training (transit, cycling)	103	3
Site specific outreach	96	4
Print/ online transportation guides	92	5
Regional marketing campaigns	80	6
Rewards and recognition of excellence	61	7
Events	51	8
Other option (see question below)	40	9

Note: Total Score is a sum of the ranked item options. Top positioned options have higher rank.

What other services or assistance could TransLink provide to TDM Plans for development?



Do you have any other comments about TDM Plans for development or TransLink's role in this area?



Rochelle Meers

From: Fiona Hood <fhood@twnation.ca>
Sent: September-22-20 9:14 AM
To: Kevin Jones
Cc: Kate Menzies
Subject: Port Moody Official Community Plan Amendment Application for Coronation Park

Dear Kevin Jones,

Tsleil-Waututh Nation (TWN) has received your letter and supporting documents dated August 26, 2020, regarding the Port Moody Official Community Plan Amendment Application for Coronation Park ("the Project"). Projects are reviewed from the perspective of the Tsleil-Waututh Nation's Stewardship Policy (2009).

Tsleil-Waututh Nation takes a precautionary approach when dealing with impacts to TWN cultural heritage. A lack of known or documented archaeological deposits within the Project area does not preclude the possibility of archaeological deposits within the Project footprint. TWN requests that the proponent follows archaeological and environmental best management practices and complies with the Heritage Conservation Act (HCA) and when necessary, as outlined in the HCA, retain an archaeological professional to conduct the appropriate assessments.

With the above concerns taken into consideration, TWN is generally in support of the project but does encourage developing a higher proportion of affordable housing within this plan, particularly housing with a focus on Indigenous singles and families.

Thank you,

Fiona Hood

Referrals Analyst
Treaty, Lands, and Resources Department
Tsleil-Waututh Nation
3178 Alder Court, North Vancouver, V7H 2V6
fhood@twnation.ca

This electronic mail communication may contain privileged and confidential communications and/or work product. If you have received this communication in error or are not the intended recipient, please delete the communication without using, copying or otherwise disseminating it. Please notify the sender that you have received the message in error. Any modification of the contents of this e-mail is strictly prohibited unless expressly authorised by the sender. Thank you.