City of Maple Ridge

ACTIVE TRANSPORTATION ADVISORY COMMITTEE AGENDA

June 26, 2019, 7:00 pm Blaney Room, Maple Ridge City Hall

- 1. CALL TO ORDER
- 2. APPROVAL OF THE AGENDA
- 3. **ADOPTION OF MINUTES** May 29, 2019
- 4. **DELEGATIONS**
- 5. QUESTION PERIOD
- 6. **NEW AND UNFINISHED BUSINESS**
- 6.1. Bicycle Registry Program <u>529 Garage</u>
- 6.2. Process for Road Safety Related issues and correspondence
- 6.3. School Cycling Education
- 6.4. Cycling Resources
- 6.5. Spot Improvements
- 6.6. Update on the City's participation in road safety programs for schools
- 7. CORRESPONDENCE
- 8. **ROUNDTABLE**
- ADJOURNMENT

QUESTION PERIOD

Question Period provides the public with the opportunity to ask questions or make comments on subjects that are of concern to them. Each person will be given 2 minutes to speak. Up to ten minutes in total is allotted for Question Period.

City of Maple Ridge ACTIVE TRANSPORTATION ADVISORY COMMITTEE REGULAR MEETING

The Minutes of the Regular Meeting of the Active Transportation Advisory Committee, held in the Blaney Room, at Maple Ridge City Hall on May 29, 2019 at 7:01 pm.

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COMMITTEE MEMBERS PRESENT

Councillor Ahmed Yousef Council Liaison
Vijay Soparkar, Chair Member at Large
Colette Trudeau School Trustee

Gary Hare, Vice Chair Seniors Community Representative
Jennifer Wright Member at Large - Cycling Representative

Kim McLennan Municipal Advisory Committee on Accessibility and Inclusiveness

Representative

STAFF MEMBERS PRESENT

Purvez Irani Manager of Transportation / Staff Liaison

Amanda Allen Committee Clerk

GUESTS

Councillor Meadus Council Liaison – alternate
Pascale Shaw School Trustee – alternate

<u>ABSENT</u>

Cpl. Steven Martin Ridge Meadows RCMP – Traffic Services

Ineke Boekhorst Downtown Maple Ridge Business Improvement Association

Note: Councillor Yousef chaired the meeting as the presiding member

Note: Jennifer Wright participated via GoToMeeting

1. CALL TO ORDER

2. APPROVAL OF THE AGENDA

R/2019-004

It was moved and seconded

That the agenda for the May 29, 2019 Active Transportation Advisory Committee be approved as circulated.

CARRIED

3. ADOPTION OF THE MINUTES

R/2019-005

It was moved and seconded

That the minutes of the Maple Ridge Active Transportation Advisory Committee meeting dated September 26, 2018 and April 24, 2019 be adopted.

CARRIED

- 4. **DELEGATION** Nil
- 5. **QUESTION PERIOD Nil**
- 6. **NEW AND UNFINISHED BUSINESS**
- 6.1. 2019 Chair and Vice Chair Elections

The staff liaison opened the floor to nominations for a Chair.

R/2019-006

It was moved and seconded

That Vijay Soparkar be elected Chair of the Active Transportation Advisory Committee for 2019.

CARRIED

The staff liaison opened the floor to nominations for a Vice Chair.

R/2019-007

It was moved and seconded

That Gary Hare be elected Vice Chair of the Active Transportation Advisory Committee for 2019.

CARRIED

Note: Vijay Soparkar assumed the Chair.

6.2. Seniors Issues Affecting Active Transportation in Maple Ridge

Gary Hare gave a PowerPoint presentation 'Think Senior' highlighting the importance of safety and senior friendly infrastructure that enables seniors to participate in modes of active transportation. There was discussion on the separation of walk and bikeways from traffic, multi-use pathways and the 'complete street' concept. The staff liaison reviewed the phased plan of the TransLink B Line project.

6.3. Topics for future meetings

There was discussion on potential topics and the following items and concepts were identified:

- Active neighbourhoods;
- Walkability of downtown corridor (224 Street from 124 Avenue to 117 Avenue) for all ages and abilities;
- Safe and secure bicycle parking;
- Identify barriers/challenges for children walking/cycling to school;
- Utilize mapping technology to identify and educate active transportation opportunities for families in proximity to local schools;

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- Partnered education campaigns around behaviours in school zones;
- Walk 30 challenge between communities / schools;

There was discussion on programs that teach children road and cycling safety and the staff liaison will look into City of Maple Ridge participation into such programs and report back at a future meeting.

7. **CORRESPONDENCE - Nil**

8. **ROUNDTABLE**

Members received verbal reports on relevant activities and active transportation topics.

Kim McLennan will bring information on school planning through best practices learned in other communities to a future meeting.

Jennifer Wright will bring information about the in-school HUB program to a future meeting.

9. **ADJOURNMENT** – 8:23 pm.

Vijay Soparkar, Chair	
/aa	





DEVELOPMENT

Designed for Grades 3-6, this specialized curriculum was first developed in 2014 in consultation with **local cycling instruction experts** and **external school-based reviewers**, and in consideration of existing curricula. HUB Cycling reviews the content of the course annually and has made regular updates and improvements to the course to ensure it remains **current** and **effective**.

THE GOAL



To learn safe cycling skills, build confidence riding and experience the joy of cycling.

THE PROGRAM





Our fleet of 18 bicycles accompanies each program (including adaptive bikes). We also ask students to bring their own when possible.

OXOXOXOX

All days are led by HUB Cycling's team of certified cycling instructors.

DAY 1



introduction to cycling safety
(60 minutes)

DAY 2



On-bike cycling skills training on the school ground with simulated traffic scenarios (90 minutes)

LEARNING OUTCOMES

EVALUATION

SKILLS

Riding independently
Using brakes for
control
Left and right turns
Shoulder checking
Hand signals

KNOWLEDGE

equipment
Basic parts of a bike
Meaning of hand
signals
Awareness for other
road users

CONFIDENCE

Can mount, start, stop and dismount their bike Can ride independently and continuously for 1

minute

Teachers are asked to complete an online survey after the course to measure course impact and changes in habits within the school community.

In some cities, additional surveys are administered to evaluate outcomes in more depth.

6.3



RIDE THE ROAD



DEVELOPMENT

Designed for grades 5-7, this **specialized curriculum** was developed in 2010 with the **BC curriculum and Metro Vancouver context in mind**, in consultation with local cycling instruction experts and secondary schools. HUB Cycling reviews the content of the course annually and has made regular updates and improvements to the course to ensure it remains **current** and **effective**.

THE GOAL



To increase students' safe cycling skills and confidence, so they can experience the benefits of biking for transportation.

THE **PROGRAM**

5 x 1

hour of instruction



Our fleet of 12 bicycles accompanies each program (including adaptive bikes). We also ask students to bring their own when possible.

All days are led by HUB Cycling's team of certified cycling instructors.

DAY 1



In-class
introduction to
cycling and
safety

DAY 2



ABC's of bike maintenance on the school yard

DAY 3



Cycling skills training on the school ground

DAY 4



In-class
cycling trivia
game about the
rules of the
road

DAY 5



Neighbourhood road ride around the school community

LEARNING OUTCOMES

AWARENESS

Turning Braking Route planning Gearing Pre-ride checks Road riding

SKILLS

Rules of the road
Importance of visibility
Sharing the road
Positioning
Navigating quiet streets
How to securely lock a
bike

CONFIDENCE

Climbing and descending hills Riding safely as part of a group

EVALUATION

Before and after the course, students complete surveys that measure cycling habits and skills, confidence levels, and knowledge of traffic safety.

Teachers complete an online survey after the course to measure course impact and changes in habits within the school community.

Transportation Design Guidelines:



All Ages and Abilities Cycling Routes

Version 1.1 March, 2017



The City of Vancouver has a vision to make cycling safe, convenient, comfortable and fun for all ages and abilities (AAA), including families with children, seniors, and new riders. An inviting and connected network of low stress "AAA" routes will provide a wide spectrum of the population the option to cycle for most short trips.

This guideline provides 10 "general rules" to consider when designing or designating a route "AAA". It is intended as a living document that will be updated and supplemented periodically as we learn from local projects, research, and other leading cities.



Rule #1:

Build the types of cycling facilities that feel comfortable for all



Many types of traditional bike facilities only appeal to people who are comfortable riding in traffic. However, bikeways on quiet streets, protected bike lanes, and off-street pathways appeal to people who are interested in cycling but concerned for their safety.²

The general approaches to creating AAA cycling routes on city streets are:

- Ensuring low motor vehicle speeds and volumes on local streets, or
- Providing physical separation on busy streets

Rule #2:

Target motor vehicle volume below 500/day (below 50/peak hour)

Reducing the number of interactions between motor vehicles and people cycling can improve safety and comfort. At a volume below 500 vehicles per day, most people cycling will encounter less than one motor vehicle per block in the peak hour.

- On routes with more than 500 vehicles/day (more than 50/hr), consider additional traffic calming or diversion to bring volumes down to the target value.
- Routes with up to 1,000 vehicles/day (100/hr) may be considered AAA after carefully considering speed, parking
- On routes where low motor vehicle volumes are not possible to achieve, separation of bikes from vehicles is needed.





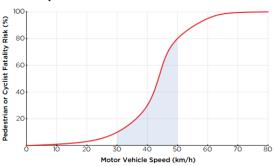


Bikeway

Target motor vehicle speed below 30km/hr median (below 40km/hr 95th percentile)

Slower vehicle speeds reduce the likelihood of a collision by making it easier for drivers to see people cycling and by shortening the distance needed to stop. Slower speeds also reduce the severity and fatality risk in the event of a collision. Along local street bikeways, the posted speed limit is 30km/hr. In order for a shared roadway to be safe and comfortable for people cycling it is important that the speed limit is respected.

Lower Speeds Reduce Risk



Source: Based on data from VicRoads, Australia Found in Victorian Auditor-General's Office

Considerations:

- Traffic calming measures, landscaping, and other design features should be integrated into bikeways to encourage compliance with the posted speed.
- If vehicle speeds cannot be brought below the AAA threshold, separation of bicycles from motor vehicles is recommended.

Rule #4:

Local Street Bikeway

Consider the interplay between parking and roadway width:

- 8m (26ft) allows parking on one side
- 10m (33ft) allows parking on both sides

The roadway widths above allow for a person cycling to pass an oncoming car without feeling squeezed or entering a door zone. It also allows two people cycling side by side to comfortably pass an oncoming cyclist. Providing this width is especially important in areas with high parking occupancy and along busy bike routes.



Too narrow for comfortable passing



Allows for comfortable passing

- Engineering judgement is needed when considering each context. Wider streets provide more comfortable passing and increased cycling capacity, but may also encourage higher vehicle speeds and other undesired effects.
- Where motor vehicle volumes and parking turnover are very low, a minimum roadway width of 9m (30ft) with parking on both sides, or 7m (23ft) with parking on one side, may be considered AAA
- Where parking occupancy is typically less than 40%, an 8m (26ft) street with parking on both sides may be considered Δ Δ Δ





Rule #5:

Protected Bike Lane

Pathway

Design bike lane width for comfortable passing:

- 2.5m (8ft) unidirectional
- 3.0m (10ft) bidirectional

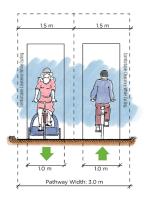
For optimal usability and comfort, protected bike lanes should be wide enough for comfortable passing, allow some degree of conversational cycling, and accommodate all types of wheeled active transportation (skateboards, cargo bikes, etc.). For unidirectional travel, a 2m (6.5ft) bike lane may allow for occasional passing as it can physically fit two standard bicycles. However, 2.5m (8ft) provides some lateral clearance for more comfortable passing and conversational cycling. For comfortable bidirectional travel, the bike lane should be at least 3m (10ft) to accommodate the full comfortable clearance envelope of two cyclists.



Preferred minimum

2.5m unidirectional path

Provides some clearance for passing and conversational cycling



Preferred minimum
3.0m bidirectional path
Provides comfortable
clearance for passing
oncoming cyclist

Considerations:

- Edge conditions must be taken into account when determining appropriate width, as they may add to or subtract from usable width.
- Additional clearance is needed from vertical obstructions such as lamp poles.
- Widths of 4.5m (15ft) bidirectional or 3.0m (10ft) unidirectional are recommended where 2-way bike volumes are expected to be greater than 7500 bikes/day.
- Over short distances or in constrained environments (eg. behind bus stops) narrower lanes may be acceptable taking into account the local context.

Rule #6:

Local Street

Protected Bik Lane

Off-Street

Provide adequate lighting along the entire length of the route

Reliable and consistent lighting can enhance safety and comfort for people biking, especially in the winter months or during inclement weather. Sufficient lighting is of particular importance at intersections.



- Further research is needed to define an "adequate" level of lighting. In the meantime, a subjective review of lighting can be used to determine if a route is AAA.
- Recreational routes without lighting may be considered AAA during daylight hours.
- It is desirable to provide lighting on portions of recreational routes that are used for transportation cycling.





Rule #7:

Protected Bike

Off-Street
Pathway

Create separate spaces for walking and cycling

Shared-use pathways are perceived to be comfortable by many people on bikes and can help to encourage more cycling. However, they tend to have a higher collision risk than bike-only pathways.³ For people walking, shared pathways can be uncomfortable when there are high numbers of people biking at relatively fast speeds.



Separated space is more comfortable for all

Considerations:

- Existing shared-use pathways and public spaces may be considered AAA;
 however, consideration should be given to separating users in busy areas. New pathways should be designed with separated walking and cycling space.
- The type of separation can vary and could be a landscaped buffer, a beveled curb, or a painted line depending on context.

Rule #8:

Local Street

Protected Bike

Off-Street Pathway

Provide smooth and paved travel surfaces

Smooth surfaces are especially important for older adults and people who are new to cycling because rough surfaces are more jarring, less comfortable, and may contribute to falls. Research out of the Netherlands shows a preference for asphalt, followed by concrete, over pavers and other textured surfaces.⁴



Rough surfaces are uncomfortable



Smooth surfaces are comfortable

- Separate pathways should be intuitive. In general, asphalt is the preferred material for cycling and concrete is the preferred material for walking.
- A variety of surface treatments such as saw-cut concrete, textured treatments, or finely crushed aggregate may be considered AAA through plazas, parks, and other context-sensitive areas.
- Where there are abrupt changes in grade, the bicycle facility should be designed to minimize jarring. For example, long ramps and vertical curves should be used where a bike lane transitions from road to sidewalk level





Rule #9:

Local Street Bikeway

Protected Bik

Off-Street

Keep grades below 3% as much as possible

Steep hills can be very challenging, particularly for young riders, seniors, people who are new to cycling, and some people with disabilities. Most people can maintain a speed of 10 km/hr—a speed that helps to maintain balance—on a grade of 4% or less. Other research suggests a grade of 3% or less is desirable for longer distances. For grades between 4% and 8%, people are more likely to weave to maintain balance on a bike. At grades above 8%, speed drops to a point where many people have a hard time keeping their balance and have to dismount.⁵



Some people have to weave to get up steeper hills

- For new bridges and ramps, start with concepts using a 3% grade. If the concepts are not feasible, grades up to 5% may be acceptable.
- Since it is not always possible or practical to avoid a hill, routes with grades up to 5% may be considered AAA and above 5% for short distances:
 - i Less than 500m, for grades between 5% and 7%
 - ii. Less than 150m (about a block), for grades between 7% and 8%
 - iii. Less than 30m, for grades above 8%.
- For routes with grades of 5% or higher:
 - Consider mitigation measures for people riding uphill, such as flat landings at regular intervals (~every 100m) for resting and a wider bike path to accommodate weaving.
 - ii. Consider mitigation measures for people riding downhill, including higher design speeds, improved sightlines, and other safety measures.
 - iii. Sign a flatter alternate route if possible.
 - iv. Identify hills on cycling route maps.

All Ages and Abilities Cycling Routes





Rule #10:

Local Street Bikeway

Protected Bike

Off-Street Pathway

Design intersections thoughtfully to reduce conflicts, increase visibility and provide clear direction of movement

Quality intersection design is essential for the safety and comfort of people regardless of how they travel. Intersection designs should minimize conflicts between people walking, cycling, and driving by heightening visibility, denoting a clear right of way, and facilitating eye contact and awareness of different modes. Intersections should be intuitive and provide directional messaging when needed. The level of intersection treatment required for AAA safety and comfort is context sensitive, depending on many factors. Some potential features are shown below.

Features:



Right turn lanes, or an area for motor vehicles to pull out of the traffic stream, when turning across bike lanes



Separate motor vehicle turn and through bike signal phases at complex intersections or where there are high turn volumes (>150/hr across unidirectional lanes)



Green coloured treatment* and elephants feet at street crossings

*Where bikes have or sometimes have right-of-way over cross traffic



Advance stopping areas to increase visibility of people biking and help accommodate bike turns

- Crossings at major streets with three or more motor vehicle travel lanes (including turn lanes) require a signal. Typically a separate bike signal head is recommended
- Crossings at major streets with two travel lanes require an enhanced treatment such as a median refuge or a signal.
- Crossings at local or equally classified streets should favour the right-of-way of the AAA cycling facility if possible.

⁵ Based on VeloQuebec Planning and Design Guide for Pedestrians and Cyclists (2010) and AustRoad Guide to Road Design (2009)



General rules are intended to have broad application and may not be accurate for every situation. Understanding of the context and using judgement is important wher applying those rules.

² Based on research from multiple sources including the University of British Columbia, Rutgers University The City of Portland, and TransLink

³ Winters et al. "Safe Cycling: How Do Risk Perceptions Compare With Observed Risk (2012)", Canadian Journal of Public Health Nov. 2012, P42-47

⁴ Per CROW Design Manual for Bicycle Traffic (2006) P293

BC Active Transportation Strategy Recommendations

From HUB Cycling, February 2019

CleanBC priority initiative:

"The Province will establish an active transportation strategy with measures to support new infrastructure, education and incentive programs, and safety improvements for people walking, cycling and using other kinds of active transportation."

Active transportation provides more healthy, affordable, equitable, environmentally friendly ways to get around and to support the local economy. The majority of British Columbians use active transportation or want to use it but are held back by inadequate infrastructure, education, awareness, and regulation to protect their safety and to facilitate convenient and viable trips on foot, bike and other human-powered modes.

A range of transportation options should be available to all British Columbians – including those who live in smaller communities, and vulnerable groups such as children, older adults and those with disabilities or low incomes as well as non-drivers – so that everyone can have access to education, employment, shopping, healthcare, recreation, cultural events and social connections. Safe biking and walking routes, good street design and regular transit should be available to all British Columbians so that it is easy to be active and healthy. These can also make it easier for people to be socially connected which is important for mental health.

Active and public transportation facilities are smart investments as they can stimulate local business and tourism in communities of all sizes. These investments can also control rising healthcare costs because regular physical activity keeps people healthier and out of the healthcare system.

HUB Cycling supports all forms of active transportation and believe along with transit, they all complement one another and facilitate further active transportation uptake. Our expertise relates to cycling, so that will remain the focus of our recommendations in this document.

- 1.9 million British Columbians ride a bicycle at least once per year.1
- 2.3 million adults in the province indicate they would ride more if there were protected bike lanes.
- 1.3 million BC residents say walking (23%) or cycling (11%) would be their ideal commute.3
- 2.8 million adults in BC support enhancing cycling infrastructure. 4

Four Pillars of Strategy - HUB Cycling recommendations for pillar language:

- 1. **Building**: Develop a province-wide network of active transportation infrastructure including walking, cycling, wheeling, and end-of-trip facilities, fully integrated with public transit.
- 2. Encourage and Educate: Promote, normalize and incentivize the use of active transportation, deliver programs to raise awareness of active transportation options and ensure systemic access to cycling education for both school age children and adults.
- 3. Safety and Security: Adopt an integrated Vision Zero approach to transportation safety, develop best practice design guidelines for active transportation facilities and review and revise regulations with a focus on preventive safety and equity for active transportation users. Invest in safety, security, and theft deterrent programming.
- 4. Leadership: Lead by example by fully integrating active transportation into B.C's public sector programs and operations, support municipal programs and facilities with comprehensive design guidelines and matching funds and work with the private sector to ensure that all developments support active transportation choices. Implement monitoring, evaluation, reporting and adaptation to measure and make progress on all four pillars.

BUILDING

Infrastructure

- Provide sufficient matching funds to maximize the rapid development of municipal active transportation facilities, recognizing that development of complete networks maximizes the usefulness and value of active transportation investments.
 Increase BikeBC Funding to at least \$100 million/year for next 10 years (\$21 per person per year) to complete the bike network in that time.
- Consider extending BikeBC project timeline eligibility to allow for more meaningful projects.
- Systematically evaluate, prioritize and upgrade Provincial active transportation infrastructure with a focus on resolving network gaps and optimizing user comfort and safety. Include best practice active transportation facilities on all new and reconstructed transportation infrastructure. Include upgrading of active transportation facilities in all rehabilitation projects. Enforce Ministry of Transportation meaningfully fulfilling its commitment to build cycling facilities along with all new and improved highway and bridge infrastructure projects (highway, bridge, etc).

- Identify, build and improve cycle tourism routes throughout the province. Develop a cycle tourism program including but not limited to branded, consistent wayfinding, maps, promotion and incentive opportunities for service providers.
- Measure and acknowledge the potential and real economic value of bike tourism in BC. Cycling tourism's contribution to Oregon's economy amounts to \$400 million USD per year – about \$1.1 million per day.
- Upgrade BikeBC funding criteria to emphasize network connectivity, best practice design guidelines for all ages and abilities, and promotion programs. For example, follow TransLink's example with BICCs funding where higher quality infrastructure is incentivized through eligibility for higher cost sharing amounts. Add BikeBC funding requirement to include minimum 1-5% of budget for promotion, education and/or engagement for each infrastructure project, as is done with TransLink's bicycle cost sharing program. Include and promote eligibility of evaluation and measurement costs such as bicycle counters. Encourage cross-municipal, cross-region connections and collaborations.
- Provide professional support and best practice guidelines to assist smaller communities that don't have sufficient financial and staff resources and expertise.
- Create best practice consistent categorization of cycling facilities to measure existing infrastructure and benchmark improvements. HUB Cycling and TransLink are developing a Benchmarking State of Cycling report for Metro Vancouver that can serve as a template for provincial use later this year.
- Upgrade the expertise of provincial staff, consultants and contractors to best practice active transportation knowledge. Incentivize professional development opportunities.
- Develop consistent wayfinding guidelines and templates for use throughout the Province. See TransLink's wayfinding guidelines for example that could be adopted provincially.
- Support public bike share with appropriate policies, regulations, templates and cost-sharing that facilitate equity and access and emphasize first and last mile trips that do not compete with bike rental shops.
- Update provincial highway design manuals to reflect current best practices in urban and rural communities. Include and incentivize best practice cycle highways in infrastructure guidelines and design manuals for municipalities as well as for Provincial jurisdiction projects. Leverage opportunities for cycle highway use as utilitarian transportation, recreation, and tourism. Cycle highways support the growing popularity of electrification of bicycles and new mobility types that in-

crease the distance possible by active transportation. Norway, whose population is only slightly larger than B.C.'s, is planning to invest \$1.25 billion in Cycling Highways to link suburbs to city centres.

End of Trip Facilities

Enhance BikeBC funding for bike parking and end of trip facilities, including public secure bike parkades, bike stations with end of trip facilities such as lockers, showers, change rooms, electric bike charging, weather protected bike parking, especially at public transit stations and other transportation hubs, and community spaces like schools, libraries, hospitals and community centres. See Not Just Bike Racks report for more information.

Integration with Public Transit

- Invest in improved walking and cycling connections to public transit that allow access to people of all ages and abilities
- Design all transit vehicles to be bicycle accessible and implement policies that allow overflow access to bicycles on busy bicycle routes, such as connecting to and from ferries.
- Work with private transport providers to ensure accommodation for bicycles and mobility aids on taxis, ride sharing and ride hailing services and inter-municipal bus services.

Land Use

- Prioritize and accelerate transportation investments in transit, cycling and walking that encourage development in compact mixed-use communities that enable people to drive less.
- Introduce and promote incentives and policies to encourage high quality cycling and walking networks in new developments.
- Develop land use policies that encourage compact mixed-use communities that enable walking and cycling to be practical transportation choices for the majority of trips.

ENCOURAGE and EDUCATE

Encourage

 Increased, multi-year investment in encouragement programming such as Bike to Work Week and Bike to School Week, Bike to Shop Days, ciclovias or open street events, etc.

- Invest at least \$2/capita/year in promotion, enabling and education for active transportation.
- Invest in events, programs and broadly based public information campaigns to reduce barriers to cycling and improve the safety of active transportation.
- Use marketing to get more people choosing active transportation by making it noticeable & newsworthy, delightful, sociable, participatory, and inclusive.
 See City of Vancouver Active Transportation Promotion and Enabling Reportfor more information.
- Remove PST from electric-assist bicycles. This will help cycling become more accessible to older folks, families with cargo bikes, people traveling long distances
- Set mode share target of 10% cycling for all trip types in BC by 2040.
- Develop or support data collection programs to monitor progress and identify provincial trends of encouragement and education.
- Collect and share data to highlight the estimated impacts and cost-benefit ratios
 of using active transportation (including health and absenteeism benefits from
 increased physical activity, journey ambience impacts, direct road safety impacts
 and the benefits associated with mode shift away from car use: environmental,
 decongestion, indirect road safety and indirect taxation).
- Collect data and evaluate impacts of encouragement and enabling programs including modal shift, greenhouse gas emissions savings, etc.

Educate

- Integrate and invest in systemic cycling education into all elementary schools led by trained cycling instructors, and including adaptive bicycle options for 100% participation including those with mobility challenges.
- Invest at least \$2/capita/year in promotion, enabling and education for active transportation.
- Provide easily accessible adult cycling education, including for newcomers to Canada.
- Require integration of cycling education into driver training and licencing and licence renewals to include new and evolving infrastructure and regulations. Require comprehensive knowledge of rules related to active transportation safety to
 pass driver exam (i.e. safe passing distance, slow speeds, only overtaking when
 enough space to do so).
- Collect data and evaluate impacts of education programs.

SAFETY & SECURITY

- Update the BC Motor Vehicle Act and related regulations to better protect vulnerable road users. See BC Road Safety Law Reform Group Position Paper for full recommendations.
- Clarify legal status and rules re electric bikes / scooters / new mobility devices to indicate where each vehicle goes to maximize safety.
- Strategic enforcement should communicate a fair and data-driven message about road user safety and behaviour. Conditions and contexts that create the most dangerous situations in terms of collisions should be examined, and the highest priority targets for education and enforcement should be the behaviors that result in the most harm.
- Adopt Vision Zero principles in the design, regulation and operation of the transportation system with special focus on the safety of vulnerable road users. Use safe systems approach that is preventive and not only reactive - include nearmiss data to direct investment for improvements.
- Design with security and comfort in mind provide paved, lit and direct routes that are intuitive and convenient.
- Develop active transportation infrastructure design manuals reflecting best practice facilities.
- Update all relevant provincial design manuals, including highway design, subdivision and access control, traffic control, etc. to reflect active transportation best practices
- Review and upgrade road maintenance practices and contracts with a focus on active transportation safety (i.e. frequent sweeping and debris removal)
- Active transportation user safety increases when more people are using active modes. Acknowledge the importance of investing in infrastructure, education, encouragement in increasing active transportation mode share which in turn improves safety.
- Monitor and report frequently on safety data for active transportation users.
 See City of Vancouver Cycling Safety Report and Pedestrian Safety Study for examples of annual reporting.

- Mandate active transportation end-of-trip facilities in all provincial government buildings, including secure bike parking, electric-assist cycle charging stations, showers, lockers, and related amenities like hair dryers, etc.
- Provide orientation and awareness about the above facilities and encourage and incentivize employee participation in active transportation events and programs.
- Integrate active transportation into provincial operations wherever possible and offer cycling education to all employees at least annually.
- Province of BC to encourage and incentivize employee participation in active transportation events such as Bike to Work Week, Commuter Challenge, Bike to Shop Days, etc.
- Province to review and update rules and restrictions affecting cycling amenities
 at multi-family residences, workplaces and educational institutions with a focus
 on ensuring safe, convenient and secure bicycle and mobility aid storage at both
 existing and new developments(eg: strata council regulations, tenancy agreements, building and development regulations, etc.) See Not Just Bike Racks report.
- Encourage and incentivize employees to switch to active transportation for their daily commute (provide free or subsidized public bike share membership, a subsidy or reimbursement to buy a new bicycle, helmet, lock or gear, etc).
- Provide sufficient matching funds to maximize the rapid development of municipal active transportation facilities, recognizing that development of complete networks maximizes the usefulness and value of active transportation investments.
- Develop an Active Transportation unit within the Ministry of Transportation to provide professional planning and policy expertise at the provincial level.
- Develop and promote active transportation facility manuals and best practice guidelines applicable to municipal and private infrastructure.
- Develop and promote planning guidelines that support the development of communities that encourage and facilitate the use of active transportation.
- Implement regular monitoring, evaluation, reporting and adaptation to measure and make progress on all four pillars, including mode share for all trip types at least every 5 years, as well as economic impact of increased active transportation and related tourism.
- Set mode share target of 10% cycling for all trip types in BC by 2040.
- Establish an active transportation advisory council including community groups, government staff, and other relevant stakeholders, that meets regularly to maintain best practice policies, procedures and actions.

- Encourage more inter-ministerial collaboration and communication regarding active transportation building, education, encouragement, safety, and leadership.
- 5. StatsCan
- 6. Andrea O'Brian.
- 7. Ibid.
- 8. Kirk & Co. Consulting Ltd. & Mustel Group, B.C. on the Move: Engagement Summary Report, January 2015, Page 57