



Public Works and Transportation Committee

Council Chambers, City Hall 6911 No. 3 Road Tuesday, May 18, 2021 4:00 p.m.

Pg. # ITEM

MINUTES

PWT-5 Motion to adopt the minutes of the meeting of the Public Works and Transportation Committee held on April 20, 2021.

NEXT COMMITTEE MEETING DATE

June 22, 2021, (tentative date) at 4:00 p.m. in Council Chambers

PLANNING AND DEVELOPMENT DIVISION

1. CYCLING NETWORK PLAN UPDATE - PROPOSED PHASE 1 ENGAGEMENT (File Ref. No. 02 0775 50 6708) (REDMS No. 6614460)

(File Ref. No. 02-0775-50-6708) (REDMS No. 6614460)

PWT-12

See Page **PWT-12** for full report

Designated Speaker: Fred Lin

Pg. # ITEM

STAFF RECOMMENDATION

- (1) That the proposed Phase 1 engagement activities to support the update of the Cycling Network Plan, as described in the report titled "Cycling Network Plan Update – Proposed Phase 1 Engagement," dated April 1, 2021 from the Director, Transportation, be endorsed for implementation; and
- (2) That staff be directed to report back on the results of the Phase 1 engagement.
- 2. TRANSLINK 2021 COST-SHARE PROGRAMS SUPPLEMENTAL APPLICATION

(File Ref. No. 01-0154-04) (REDMS No. 6643926)

PWT-24

See Page **PWT-24** for full report

Designated Speaker: Donna Chan

STAFF RECOMMENDATION

That as described in the report titled "TransLink 2021 Cost-Share Programs – Supplemental Application" dated April 1, 2021 from the Director, Transportation:

- (a) the cycling-related project recommended for cost-sharing as part of the TransLink 2021BICCS Recovery Program be endorsed;
- (b) should the above project receive final approval from TransLink, the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the funding agreements and the Consolidated 5 Year Financial Plan (2021-2025) be updated accordingly; and
- (c) staff be directed to implement the project approved by TransLink and report back as part of the City's proposed applications to TransLink's 2022 Cost-Share Programs.
- 3. SIDEWALK WIDTH STANDARDS FOR MAJOR AND MINOR ARTERIAL ROADS

(File Ref. No. 10-6360-03-01) (REDMS No. 6641372)

PWT-30

See Page **PWT-30** for full report

Designated Speaker: Sonali Hingorani

Pg. #

STAFF RECOMMENDATION

That staff be directed to update the City of Richmond's Engineering Design Specifications to increase the sidewalk width from 1.5m to 2.0m on arterial roadways, as described in the report titled "Sidewalk Width Standards for Major and Minor Arterial Roads" dated April 6, 2021 from the Director, Transportation.

ENGINEERING AND PUBLIC WORKS DIVISION

4. MULTI-FAMILY WATER METER PROGRAM AND WATER CONSERVATION INITIATIVES UPDATE (File Ref. No. 10 6060 02 01) (DEDMS No. 6664046)

(File Ref. No. 10-6060-02-01) (REDMS No. 6664046)

PWT-36

See Page **PWT-36** for full report

Designated Speaker: Jason Ho

STAFF RECOMMENDATION

That staff bring forward options and recommendations for a mandatory Multi-Family Water Meter Program for consideration as part of the 2022 Utility Budgets and Rates report.

PULLED	5.	2020 CLIMATE ACTION REVENUE INCENTIVE PROGRAM AND CORPORATE CARBON NEUTRAL PROGRESS REPORT (File Ref. No. 10-6125-05-01) (REDMS No. 6657682)
PWT-40		See Page PWT-40 for staff memorandum

Pg. # ITEM

6. MANAGER'S REPORT

ADJOURNMENT



Minutes

Public Works and Transportation Committee

Date:	Tuesday, April 20, 2021
Place:	Council Chambers Richmond City Hall
Present:	Councillor Chak Au, Chair Councillor Alexa Loo (via teleconference) Councillor Linda McPhail (via teleconference) Councillor Michael Wolfe (via teleconference)
Also Present:	Councillor Bill McNulty (via teleconference)
Call to Order:	The Chair called the meeting to order at 4:00 p.m.

MINUTES

It was moved and seconded That the minutes of the meeting of the Public Works and Transportation Committee held on March 16, 2021, be adopted as circulated.

CARRIED

NEXT COMMITTEE MEETING DATE

May 18, 2021, (tentative date) at 4:00 p.m. in Council Chambers

PLANNING AND DEVELOPMENT DIVISION

1. ICBC-CITY OF RICHMOND ROAD IMPROVEMENT PROGRAM – 2021 UPDATE

(File Ref. No. 01-0150-20-ICBC1-01) (REDMS No. 6602214)

In reply to queries from Committee, staff noted that (i) the intersection of Odlin Road and No. 4 Road would be added to list of locations for installation of overhead LED street name lights, (ii) the Uninterruptible Power Supply is a backup system in the event of a power outage, is constantly charged by the local power source, and has a standard maintenance cycle with an approximate replacement cycle of 10 years, (iii) ICBC has its own criteria to determine the amount of funding provided to each municipality and Richmond is expected to receive a similar amount as previous years, (iv) installation of pedestrian zone markers at Blair and General Currie Elementary Schools is supported by the Traffic Safety Advisory Committee, and (v) 2015 is the most recent evaluation of the effectiveness of the ICBC Road Improvement Program.

Committee requested that staff inquire about a more recent indicator of success of the ICBC Road Improvement Program and that the public be informed of the value of the program and the reduction of accidents.

It was moved and seconded

- (1) That the list of proposed road safety improvement projects, as described in Attachment 2 of the staff report titled "ICBC-City of Richmond Road Improvement Program – 2021 Update," dated March 2, 2021 from the Director, Transportation be endorsed for submission to the ICBC 2021 Road Improvement Program for consideration of cost-share funding; and
- (2) That should the above applications be successful, the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the cost-share agreements on behalf of the City, and that the Consolidated 5 Year Financial Plan (2021-2025) be amended accordingly.

2. REVIEW OF ACCESSIBLE PARKING SPACES IN STEVESTON VILLAGE

(File Ref. No. 10-6455-03) (REDMS No. 6603884)

It was moved and seconded

That the proposed improvements to provide van accessible parking spaces in Steveston Village, as described in the report titled "Review of Accessible Parking Spaces in Steveston Village," dated March 2, 2021 from the Director, Transportation, be endorsed.

CARRIED

ENGINEERING AND PUBLIC WORKS DIVISION

3. 2020 WINTER RAINFALL AND 2021 FLOOD PROTECTION UPDATE

(File Ref. No. 10-6000-01) (REDMS No. 6645504)

In reply to queries from Committee, staff noted that (i) facts on Richmond's flood protection and dike system are provided on various social media channels, (ii) most service requests are related to maintenance issues, (iii) a separate report on the habitat compensation strategy will be provided in 2021, (iv) infrastructure improvements included dike widening and installation of a multi-use pathway, and there are challenges involved in accommodating the needs of all dike users, (v) the Vancouver Airport Fuel Facility project is intended to be operational in 2022 and the project involves raising their entire waterfront, (vi) the fuel tank farm is contained by its own dike completely independent of the City's flood protection dike, and is typically designed to contain all fuel in the event of tank storage failure, and (vii) the seepage at Britannia Heritage Shipyard is intended to be repaired before the next king tide season.

Committee requested that staff provide a memo on the current status of dikes and plans for the Vancouver Airport Fuel Facility Corporation marine terminal diking system.

It was moved and seconded

That the staff report titled "2020 Winter Rainfall and 2021 Flood Protection Update", dated March 19, 2021 from the Director, Engineering be received for information.

4. AWARD OF CONTRACT 7020Q – SUPPLY AND DELIVERY OF HVAC AIR FILTERS

(File Ref. No. 02-0775-50-7020) (REDMS No. 6563158)

In reply to queries from Committee, staff noted that (i) the contract is for the purchase of air filters, and (ii) multiple parties are invited to engage in the public tendering process and the quotations and number of bids vary.

It was moved and seconded

- (1) That Contract 7020Q Supply and Delivery of HVAC Air Filters be awarded to Dafco Filtration Group Corp., in the amount of \$734,874 for a three-year term as described in the March 15, 2021 report titled "Award of Contract 7020Q – Supply and Delivery of HVAC Air Filters" from the Director, Facilities and Project Development;
- (2) That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to extend the initial three-year term, up to the maximum total term of five years for the amount of \$1,254,576, as described in the March 15, 2021 report titled "Award of Contract 7020Q – Supply and Delivery of HVAC Air Filters" from the Director, Facilities and Project Development; and
- (3) That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to execute the contract and all related documentation with Dafco Filtration Group Corp.

CARRIED

5. WORKS AND SERVICES COST RECOVERY BYLAW UPDATE 2021 AND INTEREST RATE OPTIONS (File Ref. No. 10-6060-01) (REDMS No. 6526540)

It was moved and seconded

- (1) That Option 2, as outlined on Page 4 of the staff report titled "Works and Services Cost Recovery Bylaw Update 2021 and Interest Rate Options," dated March 9, 2021, from the Director, Engineering be adopted as the approach for incorporating interest rates into the Works and Service Cost Recovery Bylaw; and
- (2) That Works and Services Cost Recovery Bylaw No. 8752, Amendment Bylaw No. 10215, be introduced and given first, second, and third readings.

6. MANAGER'S REPORT

(i) Alderbridge Way Flooding

In reply to queries from Committee, staff noted that (i) the fire hydrant could not be shut off until Richmond Fire-Rescue removed the vehicle from the hydrant, (ii) the fire hydrant will be replaced with a compression hydrant, and (iii) the location of the replacement hydrant will be reviewed with Richmond Fire-Rescue.

(ii) Electric Bikes on Trails

In reply to queries from Committee, staff noted that (i) electric bikes are permitted on multi-use trails under the Motor Vehicle Act, (ii) signage indicating shared pathways could be added along the West Dyke Trail, and (iii) an e-scooter proposal including a bylaw will be coming forward in June.

(iii) Metro Vancouver Water Adjustment

Staff noted that (i) Metro Vancouver will be adjusting the pH and alkalinity levels of their water supply in June, (ii) the objective is to reduce corrosion in water distribution pipes while continuing to maintain compliance with Health Canada's drinking water guidelines, (iii) Metro Vancouver will begin to send out notifications to potentially affected customers this month, and (iv) City staff are working with Metro Vancouver to review lists of potentially affected customers and provide further communication if necessary.

In response to queries from Committee, staff noted that (i) there is no health impact to regular users and the adjustment is not intended to affect agricultural groups, (ii) the rationale behind Metro Vancouver implementing this program is to create substantial cost savings across the region, and (iii) Metro Vancouver will reach out to affected businesses in Richmond.

(iv) Traffic calming on Fundy drive

A motion related to traffic calming measures (attached to and forming part of these minutes as Schedule 1) was referenced and it was noted that the matter has been approved by Council and will be moving forward.

ADJOURNMENT

It was moved and seconded *That the meeting adjourn (4:51 p.m.).*

Certified a true and correct copy of the Minutes of the meeting of the Public Works and Transportation Committee of the Council of the City of Richmond held on Tuesday, April 20, 2021.

Councillor Chak Au Chair Shannon Unrau Legislative Services Associate Schedule 1 to the Minutes of the Public Works and Transportation Committee meeting of Richmond City Council held on Tuesday, April 20, 2021.



Minutes

I HEREBY CERTIFY this to be a true and correct copy of an extract from the minutes of the Regular (Open) Council Meeting, held on Monday, April 12, 2021.

Matt O'Halloran, Acting Corporate Officer

Extract From: Regular (Open) Council Meeting Monday, April 12, 2021

1. TRAFFIC CALMING ON FUNDY DRIVE (File Ref. No. 10-6450-09-01) (REDMS No. 6657072)

That staff implement immediate traffic calming on Fundy Drive such as a crosswalk at the entrance to the path just east of Pugwash and installation of a stop sign at Pugwash and to work with the neighbourhood to implement further traffic calming measures adjacent to the park.

ADOPTED ON CONSENT

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Report to Committee

То:	Public Works and Transportation Committee	Date:	April 1, 2021
From:	Lloyd Bie, P.Eng. Director, Transportation	File:	02-0775-50-6708/Vol 01
Re:	Cycling Network Plan Update - Proposed Phase	1 Engag	ement

Staff Recommendation

- 1. That the proposed Phase 1 engagement activities to support the update of the Cycling Network Plan, as described in the report titled "Cycling Network Plan Update - Proposed Phase 1 Engagement," dated April 1, 2021 from the Director, Transportation, be endorsed for implementation; and
- 2. That staff be directed to report back on the results of the Phase 1 engagement.

Yd R.

Lloyd Bie, P.Eng. Director, Transportation (604-276-4131) Att. 2

REPORT CONCURRENCE					
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER			
Communications Parks Services Recreation and Sport Engineering Sustainability & District Energy Policy Planning Development Applications	N N N N N N N N				
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO			

Staff Report

Origin

The Official Community Plan has a target to increase cycling mode share from 1% in 2008 to 10% by 2041. The recently endorsed Community Energy and Emission Plan (CEEP) Strategic Directions intended to guide the revised 2020-2050 CEEP identifies accelerating achievement of this target mode share to 2030. The Council-approved 2018 and 2019 Capital Budgets include funding for the combined update of the City Centre and city-wide (outside of City Centre) existing cycling network plans (the Project). Key deliverables include a prioritised implementation strategy, conceptual designs for cycling facility types, and policy guidance for accommodating emerging micro mobility devices. This report presents the proposed Phase 1 engagement activities to gain feedback from the public and stakeholders regarding issues and opportunities for the existing cycling network.

This report supports Council's Strategic Plan 2018-2022 Strategy #2 A Sustainable and Environmentally Conscious City:

Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.

2.2 Policies and practices support Richmond's sustainability goals.

This report supports Council's Strategic Plan 2018-2022 Strategy #4 An Active and Thriving Richmond:

An active and thriving community characterized by diverse social and wellness programs, services and spaces that foster health and well-being for all.

4.2 Ensure infrastructure meets changing community needs, current trends and best practices.

This report supports Council's Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

Leadership in effective and sustainable growth that supports Richmond's physical and social needs.

6.3 Build on transportation and active mobility networks.

This report supports Council's Strategic Plan 2018-2022 Strategy #8 An Engaged and Informed Community:

Ensure that the citizenry of Richmond is well-informed and engaged about City business and decision-making.

8.1 Increased opportunities for public engagement.

8.2 Ensure citizens are well-informed with timely, accurate and easily accessible communication using a variety of methods and tools.

Analysis

Cycling Network Plan Update Objectives

In 2008, the City updated the City Centre Transportation Plan (CCTP), which was incorporated into the City Centre Area Plan (CCAP, adopted in September 2009). The CCAP identifies a planned network of bike routes within the City Centre. In 2012, the City updated the Official Community Plan (OCP). The OCP identifies the City's cycling-related strategies and policies, a planned city-wide network (outside the City Centre) of major street bike routes and a complementary city-wide network of local street bikeways.

Since the completion of the CCAP and OCP update, Richmond has seen significant change with the arrival of the Canada Line, continued population growth and a consistent high level of development activity. At the same time, there has been an evolution in the design of cycling facilities with greater emphasis on bikeways that are comfortable for all cyclists (e.g., on-street cycle tracks separated from traffic on major streets, off-street paths).

The Project will ensure that the City's cycling network and policies are reflective of the community's current needs, continue to support the City's long-term mobility objectives and reflect best practices with respect to cycling facility planning and design.

Schedule and Process

The Project was initiated in Summer 2020 and is anticipated to be completed later in 2021. The planned schedule and process includes two rounds of engagement with the public (Figure 1):

- Phase 1: Gather perspectives from the community on what is important in their decision to cycle more often, and opportunities to improve the cycling experience and physical cycling network.
- Phase 2: Based on the Round 1 engagement results and technical analysis, present and gather feedback on an updated preliminary cycling network and complementary cycling policies as well as infrastructure priorities.



Figure 1: Planned Schedule and Process for Cycling Network Plan Update

In preparation for the Phase 1 engagement, Project activities to date have focused on a review of the current cycling network comprising (Attachment 1)¹:

- Documentation of the existing conditions (i.e., cycling facility types, comfort level, and ridership).
- Analysis of network connectivity and cycling accessibility to key destinations, including the preliminary identification of gaps.

Phase 1 Engagement

All engagement activities will take place on-line with initiation in late May/early June pending Council approval. Public engagement will be via the City's Let's Talk Richmond site, which will host:

- A survey to identify where and why residents currently ride, and seek comments on what would encourage them to ride more (Attachment 2).
- An interactive map of Richmond showing the existing cycling network, including committed but not yet constructed facilities, where participants can "pin" locations to identify gaps or areas of concern.
- An ideas board where participants can share their comments on and priorities for cycling in Richmond.

With the support of the Richmond School District, a separate simpler and shorter survey will be distributed to students (targeted to Grades 6-9) to identify current levels of cycling to/from school and any barriers to increased cycling. Students will also have the opportunity to use the interactive map and ideas board to provide additional feedback.

An external stakeholder session will also be convened with representatives invited from relevant agencies including the Ministry of Transportation and Infrastructure, TransLink, Vancouver Airport Authority, Richmond School District, ICBC, HUB Cycling, Richmond RCMP, and Vancouver Coastal Health. A separate stakeholder session will be held for members of the Richmond Active Transportation Committee (RATC) and a RATC representative will also be invited to the larger external stakeholder session.

Public awareness of the engagement process will be provided through the City's standard communication tools including social media (Twitter and Facebook), inclusion on the City website, and posting of an advertisement at transit shelters in the City Centre that have a digital panel (Figure 1). The same poster will also be temporarily installed along bike routes across the city.



¹ The existing cycling network depicted and quantified encompasses facilities within the geographic boundary of Richmond. Not all of the cycling facilities shown are located on roads or lands within the City's jurisdiction.

Staff believe these collective measures to engage with the public and stakeholders will reach the majority of the intended audience despite the current inability to conduct traditional in-person open houses and meetings.

Financial Impact

All activities can be accommodated within the existing approved funding sources.

Conclusion

The Phase 1 engagement activities for the public and stakeholders will inform development of a preliminary updated cycling network and prioritized implementation strategy, which will be the focus of Phase 2 engagement in Summer-Fall 2021.

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Fred Lin, P.Eng., PTOE Senior Transportation Engineer (604-247-4627)

Joan Caravan Transportation Planner (604-276-4035)

JC:jc

Att. 1: Cycling Network Plan Update - Existing Network Analysis Summary | Executive Summary

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Executive Summary

This update to the Cycling Network Plan (CNP) sets out to help the City of Richmond respond to its objective of reducing vehicle trips and increasing cycling to 10% of all trips by 2041 by developing an informed vision of the future cycling network and identifying the required steps to achieve it.

Existing Cycling Network

The city's cycling network comprises more than 300 lane-km of cycling facilities, including a mix of facility types. Figure 1 illustrates the composition of Richmond's existing cycling network by facility type. The key characteristics of each facility type are summarized in Table 1.



Figure 1: Proportion of Cycling Facility Types

The Existing Cycling Network map, Figure 2 on the following page, shows the distribution of cycling facilities throughout the city by facility type. Notably, informal cycling routes are not shown.

Table 1: Summary of Cycling Facilities by Key Characteristics

Facility Type	Alignment / Surfaco	Exclusive vs Shared	Treatments
Bike Path	Off-Street / Paved	Exclusive	Uni- or bi-directional lanes separated from traffic by boulevard, or through park / not adjacent to roadway.
Protected Bike Lane	On-Street / Paved	Exclusive	Uni- or bidirectional lanes separated by 0.3-1.0m delineator (bollards, curbs, concrete barriers, planter boxes, etc.)
Muld-Use Path / Greenway	Off-Street / Paved	Shared with pedestrians	Uni- or bi-directional lanes for all active uses and recreation.
Recreational Trail	Off-Street / Unpaved	Shared with pedestrians	Bi directional paths, typically finished with crushed gravel
Bike Lane / Bike-Accessible Shoulder	On-Street/ Paved	Exclusive	Uni directional lane, delineated from traffic with painted line
Neighbourhood Street Bikeway	On-Street / Paved	Shared with traffic on local roads	On-street sharrow markings with directional signage on roadway and street signs
Shared Roadway	On-Street / Paved	Shared with traffic on main roads	On-street sharrow markings with shared roadway signage

Next Steps

An awareness of the current composition and distribution of facilities within the cycling network is essential to inform consultation efforts. As the foundation of many existing cycling trips in the city, the current network actively shapes and informs how users will experience and perceive further cycling meds and will continue to act as a baseline when considering further cycling improvements and their prioritization in subsequent study phases. As the network develops, balancing the needs for enhanced safety and an expanded network will continue to require a combination of facility types to accommodate different users and trips of varying purposes through the city.

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Figure 2: City of Richmond's Existing Cycling Network by Facility Type

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Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Attachment 1 Cont'd

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Cycling Comfort Level

In consultation with City of Richmond staff, and to allow for consistency with the reported data for Metro Vancouver municipalities, this study has adopted the cycling comfort level criteria used within TransLink/HUB's 2019 Benchmorking the Stote of Cycling in Metro Voncouver report. A detailed list of the criteria for cycling comfort by facility type is provided in Appendix A.

Generally, the level of comfort – or conversely, the level of stress – of a given cycling facility depends on its specific design configuration, characteristics of the adjacent traffic (i.e. volume and speed), and user mix. Typically, cyclists are most comfortable when physically separated from other modes, and stress is most significantly impacted by exposure to motor vehicle traffic. Additionally, comfort levels tend to decrease as both traffic speeds and volumes increase.

Comfortable for Very Few	Comfortable for Few	Comfortable for Some	Comfortable for Most
<u>Shared / Adjacent to Traffic</u> with Posted Speed: > 50 km / hr	<u>Shared / Adjacent to Traffic</u> with Posted Speed: ≤ 50 km / hr	Shared / Adjacent to Traffic with Posted Speed: ≤ S0 km/hr	Fully Protected OR Shared / Adjacent to Traffi with
Traffic Volume: ≥ 6,000 vehicles / day	Traffic Volume: < 6,000 vehicles / dəy	Traffic Volume: ≤ 3,000 vehicles per day	Posted Speed: ≤ 30 km/hr Traffic Volume: ≤ 2,000 vehicles per day

Figure 3: Cycling Comfort Level Criteria

Inherent design features of different facility types lend themselves towards lower or higher levels of comfort. Thus, while Figure 4 shows that over 50% of the existing cycling network in Richmond can be classified as 'comfortable for most', the breakdown of comfort level by facility type in Figure 5 highlights that this is primarily accounted for by off-street Recreational Trails and Multi-Use Paths/Greenways.

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Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Next Steps

Public engagement presents an important opportunity to affirm perceptions of comfortable and safe cycling and to gather feedback on the types of facilities and conditions that would be most likely to increase cycling use. This understanding of perceived comfort will be informative when considering which cycling investments should be prioritized.

As limited financial resources are used to build out the network, a balance will need to be achieved between increasing the comfort level of existing facilities and potentially competing desires for an expanded network that makes cycling more accessible and equitable throughout the city.

Cycling Ridership

Recently installed in late 2019, bike counters on River Dr MUP west of No. 4 Road, Railway Greenway MUP at Maple Road, and No. 2 Road MUP south of Steveston Highway provide initial insight Into the daily trends and seasonal usage patterns of cyclists at different locations. Figure 6 to the right shows the average daily cycling volumes from Nov 2019 through Sept 2020 alongside average historical precipitation and temperature data for Richmond.

While the relative cycling rates vary greatly by location (approx. 5-10 times as many average daily cyclists on the Railway Greenway in Mar to Jun 2020), all three locations similarly reflect a seasonal pattern of increased cycling with warmer temperatures and reduced rainfall during the summer months.

Third-party data obtained from Strava affirms the findings of the bike counter data, with a focus on longer distance recreational cycling patterns. Strava's historical trip data supports anecdotal evidence that Richmond remains a popular destination for recreational cyclists, indicating that in a typical (non-pandemic) year nearly one third of active Strava users cycling in Richmond are visitors from other communities. Comparing historical data also indicates a general increase in local recreation during the summer months of the pandemic by users of the Strava platform in Richmond.



Figure 5: Cyclist Comfort Level by Facility Type

The majority of remaining facilities are considered 'comfortable for some' (20%) or 'comfortable for few' (27%). This mainly reflects the shortcomings of conventional bike lanes/bike-accessible shoulders, which may not be viewed as a viable option by many potential users, particularly inexperienced cyclists, youth, and the elderly.

Importantly, facility types are not evenly distributed across the network and may serve different user groups or trip purposes. This is particularly true of Recreational Trails like the Dyke Trail, which offers limited utility for general purpose trips or commuting. The Cycling Connectivity and Accessibility Analysis section begins to unpack some of the challenges of this distribution.

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Figure 6: Avg Monthly Cyclist Volumes and Climate Data (Dec 2019 - Sept 2020) Next Steps

ext Steps

Overall, these initial findings highlight the importance of establishing a reliable dataset to monitor cycling activity in the city. Despite Strava's limitations as an opt-in platform with only a subset of cycling trips, it provides a fine-grained level of cycling data at no cost. Identified trip patterns can better inform development of the future network and investment prioritization.

Continued monitoring of bike counter data as well as expanded installation at other strategic locations into the future will help to better understand cycling patterns as the network evolves. Such an expansion would also enable a decreased reliance on third-party data, which may not continue to be reliable in the long-term and which represents only a subset of cyclists.

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Attachment 1 Cont'd

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Cycling Network Plan Update: Existing Network Analysis Summary | Executive Summary

Network Connectivity and Accessibility Analysis

Network connectivity represents a measure of the relative ease of reaching other locations within the cycling network from a given location. Cycling links with more immediate connections to other facilities or access to potential routes are considered more "connected" to the broader network and olfer greater route choices to move throughout the network. Hence, discontinuous facilities located far from the primary north-south and eastwest spines of the network exhibit low levels of connectivity and require cyclists to use informal routes to reach destinations and other parts of the cycling network from these locations.

While some areas of low connectivity were uncovered, the evaluation identified that even small extensions of the network and formalization of key informal routes could dramatically improve connectivity and cycling route choice throughout the city.

Cycling accessibility to points of interest was also examined. It was found that most commercial and mixed used areas are accessible via the existing cycling network, and all rapid transit stations are located adjacent to cycling facilities. One notable exception is the commercial area adjacent to Highway 99 in North Richmond, and the Cambie Community Centre, which is the only community centre not accessible within 400m of the cycling network.

Special focus was given to cycling accessibility to schools and educational institutions, as students are a key demographic for fostering cycling culture and trips to school by private vehicle could be considerably reduced by increasing student cycling behaviours and safe routes to school. While most secondary and post secondary schools were accessible within 400m of the cycling network, a number of elementary schools were not.

In the school context, comfort levels along the entire journey are critical for students who are less likely to be confident cyclists. These students and their parents are less likely to tolerate higher levels of traffic exposure.

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Next Steps

While most of the identified key destinations (e.g. community centres, schools, libraries, tourist destinations) were found to be located near existing cycling facilities, limited route options and network gaps still limit convenient and direct access to some facilities for many users. This is particularly true for less confident cyclists who may not be comfortable cycling with mixed traffic, even if for a short distance between dedicated cycling facilities and their final destination.

One such group, students, would benefit from the establishment of a more comprehensive neighbourhood street bikeway network and 'safe routes to school' program to address existing gaps and encourage healthy and sustainable travel from a young age.

Looking Ahead

The analysis and findings summarized within this memo will be used as the basis for the first round of public and stakeholder engagement and as a stepping-stone to future phases of work.

While the initial stage of public consultation will be focused on the existing network, the future, planned cycling network will be assessed in the next phase of work alongside the findings and input gathered through public and stakeholder engagement. This will support the prioritization of new and upgraded cycling facilities and will inform conversations about the relative impacts of targeting investments in different areas.

The updated cycling network plan will continue to deliver on the goals of improved cyclist safety, enhanced utility of the active transportation network, and increased attractiveness of cycling as a comfortable and convenient transportation mode in Richmond.

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Attachment 2

Cycling Network Plan Update: Phase 1 Engagement Survey Questions

1. I typically travel by each of the following modes *

	Daily	Weekly	Monthly	Sometimes	Rarely	Never
Walk	0	0	0	0	0	0
Car (driver)	0	0	0	0	0	0
Car (passenger)	0	0	0	0	0	0
Bike	0	0	0	0	0	0
Transit	0	0	0	0	0	0
Other	0	0	0	0	0	0
Please choose one answer per row						

- 2. In 2020 with the start of the pandemic, I travelled by bike *
 - $^{\bigcirc}$ Less than in 2019
 - $^{\bigcirc}$ About the same as in 2019
 - O More than in 2019

Please choose one

- 3. In 2021 and beyond, I plan to go by bike *
 - $^{\bigcirc}\,$ Less than in 2020
 - $^{\bigcirc}$ About the same as in 2020
 - $^{\bigcirc}$ More than in 2020

Please choose one

- 4. I cycle for the following types of trips *
 - School
 - 🗆 Work
 - Daily needs (e.g., groceries, banking, personal appointments, library)
 - To recreational facilities (e.g., parks, fitness centres)
 - For recreation
 - I don't currently cycle
 - □ Other (please specify)
 - Please check all that apply

Attachment 2 Cont'd

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Cycling Network Plan Update: Phase 1 Engagement Survey Questions

- 5. I choose to cycle because *
 - It's fast and convenient
 - It's healthy / good exercise
 - It's better for the environment
 - I don't have access to a car
 - 👻 lt's fun
 - Other
 - Please rank each option
- 6. If you chose "Other" for Question 5, please specify

Please add your comment here...

- 7. I feel comfortable cycling *
 - On trails and off-street paths
 - In bike lanes with physical barriers
 - □ In bike lanes without physical barriers
 - $\hfill\square$ In mixed traffic on neighbourhood streets
 - In mixed traffic on major streets
 - \Box I don't feel comfortable cycling in Richmond
 - Other (please specify)

Please check all that apply

Cycling Network Plan Update: Phase 1 Engagement Survey Questions

- 8. I feel comfortable cycling with my children *
 - On trails and off-street paths
 - □ In bike lanes with physical barriers
 - In bike lanes without physical barriers
 - □ In mixed traffic on neighbourhood streets
 - In mixed traffic on major streets
 - I don't feel comfortable cycling in Richmond
 - I don't have or cycle with children
 - □ Other (please specify)

Please check all that apply

- 9. I would cycle more if *
 - There were more direct bike routes to the places I want to go
 - I had access to a bike
 - I had a secure place to park my bike
 - I had access to changerooms/showers
 - Cycling facilities were physically separated from traffic
 - Other

Please rank each option

10. If you chose "Other" for Question 9, please specify

Please add your comment here...

Cycling Network Plan Update: Phase 1 Engagement Survey Questions

11. I own a bicycle *

O Yes

O No

Please choose one

12. I or a member of my household purchased a bike in 2020 *

O Yes

O No

Please choose one

 I am interested in using a shared bike, electric bike, or electric kick scooter program *

	Not all Interested	Somewhat Uninterested	Unsure	Somewhat Interested	Very Interested	
Shared Bike	0	0	0	0	0	
Shared Electric Bike	0	0	0	0	0	
Shared Electric Kick Scooter	0	0	0	0	0	
Please choose one option per row						

14. The age group I, or the cyclists in my household, belong to is *

2-5 years	6-12 years			
13-18 years	🛛 19-35 years			
36-50 years	🛛 51-64 years			
🛛 65+ years				
lease choose all that apply				

15. My postal code is *

Please add your comment here...

0/255

16. Other thoughts or ideas I would like to share about current cycling conditions in Richmond

PWT – 23

Please add your comment here...

NITES



Report to Committee

То:	Public Works and Transportation Committee	Date:	April 1, 2021
From:	Lloyd Bie, P.Eng. Director, Transportation	File:	01-0154-04/2021-Vol 01
Re:	TransLink 2021 Cost-Share Programs - Supplem	ental Ap	plication

Staff Recommendation

That as described in the report titled "TransLink 2021 Cost-Share Programs – Supplemental Application" dated April 1, 2021 from the Director, Transportation:

- (a) the cycling-related project recommended for cost-sharing as part of the TransLink 2021 BICCS Recovery Program be endorsed;
- (b) should the above project receive final approval from TransLink, the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the funding agreements and the Consolidated 5 Year Financial Plan (2021-2025) be updated accordingly; and
- (c) staff be directed to implement the project approved by TransLink and report back as part of the City's proposed applications to TransLink's 2022 Cost-Share Programs.

Nel 12.

Lloyd Bie, P.Eng. Director, Transportation (604-276-4131) Att. 1

REPORT CONCURRENCE					
ROUTED TO:	Concur	RENCE	CONCURRENCE OF GENERAL MANAGER		
Finance Engineering Roads & Construction		র হ হ	be Erceg		
SENIOR STAFF REPORT REVIEW		INITIALS:	APPROVED BY CAO		

Staff Report

Origin

In January 2021, Council endorsed the submission of several road, bicycle and transit-related improvement projects for funding consideration from TransLink's 2021 capital cost-share programs. In March 2021, TransLink announced a new municipal cost-share program for cycling infrastructure geared towards the rapid implementation of regional Major Bikeway Network corridors and Urban Centre bikeway networks for implementation between July and December 2021. This report seeks Council's endorsement of a project application and authorization to execute the anticipated funding agreement.

This report supports Council's Strategic Plan 2018-2022 Strategy #5 Sound Financial Management:

Accountable, transparent, and responsible financial management that supports the needs of the community into the future.

5.4 Work cooperatively and respectfully with all levels of government and stakeholders while advocating for the best interests of Richmond.

This report supports Council's Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

Leadership in effective and sustainable growth that supports Richmond's physical and social needs.

6.3 Build on transportation and active mobility networks.

Analysis

TransLink 2021 BICCS Recovery Program

The Bicycle Infrastructure Capital Cost-Share (BICCS) Recovery Program will fund new or significantly improved bicycle facilities that provide a high level of comfort for cyclists. Projects must be located within an Urban Centre or along TransLink's regional Major Bikeway Network (see Attachment 1 for Richmond's portion). Projects must be completed by December 2021. Given the compressed timeline, TransLink anticipates that projects will primarily be delivered using a "lighter, quicker, cheaper" approach to infrastructure and that these may be interim designs that could be upgraded in the future to achieve an ultimate design.

One application per municipality is permitted with funding allocated based on a competitive score up to a maximum award of \$1.0 million and up to 100% funding. The total funding available has not been finalized but is estimated to be \$1.5-\$3.0 million.

Upgrade of Existing Bike Lane Infrastructure to include Protection

Based on TransLink's criteria of project eligibility, completion deadline and evaluation metrics, staff have identified the addition of physical protection between an existing painted bike lane and

the adjacent vehicle lane as a feasible project. Such a project will support the following Official Community Plan policies that recognize the importance of protected cycling facilities on major streets to enhance the safety and comfort of cyclists:

selected arterial roads and collectors with higher traffic volumes and speeds have "major street bike routes" that comprise, either on-street bike lanes with physical separation from motor vehicles where possible, or off-street bikeways parallel to the roadway;

continue to update the existing major street bike network to: where feasible, upgrade key segments by providing a physical separation between cyclists and motorists;

The upgrade of existing cycling facilities to include continuous and permanent protection is being implemented as part of the annual capital plan process (Table 1). Note that projects in Table 1 are sample of projects and do not represent the full list of bike lane improvement projects.

Road	Year	Before	Form of Protection	Length
Westminster Hwy (south side): Gilley Road- Smith Cr	2014	Painted Shoulder	Extruded Curb	0.60 km
Westminster Hwy (south side): Nelson Road- McMillan Way	2015	Painted Shoulder	Concrete Barrier	1.65 km
Garden City Road (east side): Alderbridge Way-Alexandra Road (northbound)	2016	Painted Shoulder	One-Way Off-Street Bike Path with Barrier Curb	0.14 km
Westminster Hwy (south side): No. 8 Road- Nelson Road	2018	Painted Shoulder	Concrete Barrier	0.80 km
 No. 3 Road: various locations west side Alderbridge Way-Lansdowne Rd both sides Sea Island Way-Capstan Way west side at Richmond Centre frontage 	Planned: 2021+	Rollover Curb	One-Way Off-Street Bike Path with Barrier Curb	0.37 km 0.25 km 0.47 km
Garden City Road (west side): Lansdowne Road-Westminster Hwy	Planned: 2021	Painted Shoulder	Extruded Curb	0.40 km
Westminster Hwy (south side): No. 6 Road- No. 7 Road	Planned: 2021	Gravel Shoulder	Extruded Curb and Wooden Bollards	1.50 km

Table 1: Recently Completed and Planned Upgrades of Existing Bike Lanes to Provide Protection

Granville Avenue (Garden City Road-Railway Avenue)

For the TransLink program application, staff propose the installation of delineators along both sides of Granville Avenue between Garden City Road and Railway Avenue (approximate length of 3.4 km in each direction). The Granville Avenue cycling corridor meets TransLink's location criteria (i.e., is partially within the City Centre and is part of TransLink's Major Bikeway Network) and was also chosen for the following additional reasons:

- Key east-west bike route that connects the Railway Greenway with the City Centre, as well as two main north-south bike routes Railway Avenue and Garden City Road.
- Observed history of motorists illegally parking in the bike lanes.
- Relatively wide vehicle lanes where road dieting can be implemented to narrow the vehicle lane adjacent to the bike lane to discourage speeding as well as create a buffer zone (0.5m wide) that can safely accommodate a protective device between the bike and vehicle lanes.

• Relatively fewer driveways, particularly on the north side, that enables greater continuity of the protection.

- 4 -

Preliminary discussion with TransLink has confirmed that the project is eligible. The form of protection will comprise plastic delineators similar to those used for the protected bike lanes on River Parkway as these devices:

- Can be easily sourced and installed to fulfil TransLink's program completion requirements.
- Are an industry recommended measure to deter motorists from encroaching into a bike lane.
- Allow provision of an extensive length of protection (3.4 km in each direction) that maximizes funding availability.
- Enable ease of a future upgrade to an ultimate design.



Figure 1: Example of Buffered Bike Lane with Delineator Posts (29th St E, North Vancouver)

The delineators will be centred in a painted buffer zone that will be established by adding another lane line parallel to the existing bike lane line, thereby slightly narrowing the adjacent travel lane (Figure 1). Gaps will remain at driveways and bus stops.

Full width road maintenance on Granville Avenue between Minoru Blvd and Railway Avenue is planned over the next three years starting in 2022; the delineators and line markings will be removed and reinstated as part of this work.

Requested Funding and Estimated Project Cost

The requested City funding for the application to TransLink's 2021 BICCS Recovery cost-share program is \$100,000, which will support the project estimated cost of \$400,000 (Table 2). While a municipality can apply for up to 100% TransLink funding, the City's proposed provision of 25% of the costs will increase the project's competitive score and improve the chances of receiving the full requested funding. Historically, TransLink's competitive-based cost-share programs have been significantly oversubscribed and based on municipal interest expressed to date, staff believe this new program will be similarly oversubscribed.

Project	TransLink Funding ⁽¹⁾	nk Estimated City Funding & Estimate g ⁽¹⁾ Source Project Co				
Granville Avenue (Garden City Road- Railway Avenue): Delineator Protection	\$300,000	\$100,000 (2020 Active Transportation Improvement Program)	\$400,000			

(1) The amount shown represents the maximum funding contribution to be requested from TransLink based on the City's cost estimate for the project. The actual amount invoiced to TransLink follows project completion and is based on incurred costs.

Should the submission be successful, the City would enter into a funding agreement with TransLink. The agreement is a standard form agreement provided by TransLink and includes an indemnity and release in favour of TransLink. Staff recommend that the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the

agreement and the Consolidated 5 Year Financial Plan (2021-2025) be updated accordingly. Should TransLink not provide full funding, the project scope will be reduced to meet the available funding.

Financial Impact

The City's proposed total funding share of \$100,000 can be accommodated within the approved 2020 Active Transportation Improvement Program.

Conclusion

The bike route improvement project proposed for submission to TransLink's BICCS Recovery cost-share program for 2021 will support the goals of a number of City plans and strategies including the Official Community Plan, the Community Energy and Emissions Plan and the Community Wellness Strategy. This report highlights the project to be submitted to TransLink's BICCS Recovery Program and does not represent the full suite of bike lane improvement projects that the City is pursuing.

In addition to maximizing external funding in implementing local cycling improvements, significant benefits for those using sustainable travel modes in terms of upgraded infrastructure that provides safety enhancements will also be achieved should the project be approved by TransLink and Council.

Maven

Joan Caravan Transportation Planner (604-276-4035) JC:jc

fult

Fred Lin, P.Eng., PTOE Senior Transportation Engineer (604-247-4627)

Att. 1: TransLink Major Bikeway Network: Richmond Section

TransLink Major Bikeway Network: Richmond Section





Report to Committee

То:	Public Works and Transportation Committee	Date:	April 6, 2021	
From:	Lloyd Bie, P.Eng. Director, Transportation	File:	10-6360-03-01/2021- Vol 01	
Re:	Sidewalk Width Standards for Major and Minor Arterial Roads			

Staff Recommendation

That staff be directed to update the City of Richmond's Engineering Design Specifications to increase the sidewalk width from 1.5m to 2.0m on arterial roadways, as described in the report titled "Sidewalk Width Standards for Major and Minor Arterial Roads" dated April 6, 2021 from the Director, Transportation.

Yd R.

Lloyd Bie, P.Eng. Director, Transportation (604-276-4131)

Att. 1

REPORT CONCURRENCE					
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER			
Engineering Development Applications Policy Planning Sustainability	য য য য	be Erceg			
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO			

Staff Report

Origin

At the November 30, 2020 meeting of the General Purposes Committee, the following referral was carried:

Staff to evaluate sidewalk width standards and report back with recommendations.

This report responds to the referral.

This report supports Council's Strategic Plan 2018-2022 Strategy #4 An Active and Thriving Richmond:

An active and thriving community characterized by diverse social and wellness programs, services and spaces that foster health and well-being for all.

4.2 Ensure infrastructure meets changing community needs, current trends and best practices.

This report supports Council's Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

Leadership in effective and sustainable growth that supports Richmond's physical and social needs.

6.3 Build on transportation and active mobility networks.

Analysis

Current City Standards for Sidewalk Widths

The City's current standard for new sidewalk construction considers the location and volume of pedestrian activity anticipated to use the facility. New sidewalks within the City Centre, Steveston Village and streets within a 400m radius of a Neighbourhood Centre have a minimum sidewalk width of 2.0m (where site conditions permit) to accommodate the higher number of pedestrians. All other streets have a minimum sidewalk width of 1.5m. These existing standards are minimums and may be wider in high pedestrian activity zones where warranted.

Older road designs typically have a 1.5m sidewalk with an adjacent 0.6m-0.8m utility strip between the sidewalk and curb (Figure 1). Although the combined width may appear to comprise the extent of the pedestrian facility, the utility strip is populated with a variety of infrastructure that impedes pedestrians (e.g., hydrants, street lights, signage, and utility poles) and thus is not calculated as part of the walking area.

City policies and design standards support improvements to the streetscape to foster a walkable community. Accordingly, the upgrade of older road designs pursued as part of a redevelopment or capital project include a new cross-section for road frontages (Figure 2, outside City Centre). Generally, the 0.6m-0.8m utility strip is replaced with a minimum 1.5m landscaped boulevard

behind the road curb that accommodates above-ground utilities and street trees within this buffer strip. The new sidewalk at the appropriate width is relocated to behind the boulevard instead of next to the adjacent travel lane.





Figure 1: Before - Older Design with Utility Strip and 1.5m Sidewalk

Figure 2: After - Current Design with Boulevard/Utility Strip and 1.5m Sidewalk

If a sidewalk is envisioned to accommodate cyclists (i.e., a multi-use path), the minimum width for the shared facility is 3.0m. Cyclists are not legally permitted on sidewalks per the provincial Motor Vehicle Act unless otherwise signed or by bylaw.

Best Practices Review

Staff reviewed the current sidewalk policies of peer municipalities (Table 1).

Municipality	S/W Width Classification	Preferred Width (Minimum Width under Constrained Circumstances)						
Richmond	Area Plans	General		City Centre / Steveston		Within 400m of Neighbourhood Centre		
		1.5m		2.0m		2.0m		
Maple Ridge	General	1	.5m	-		-		
Burnaby	General	1	.5m	-		-		
Municipality	S/W Width Classification	Local Collector		ctor	Arterial		Commercial	
Surrey	Road Type	1	.5m	1.8	m	1.8	m	-
Delta	Road Type	1.	.5m	1.5	m	2.2	m	2.2m
Langley	Road Type	1.5m		1.5m		1.8m		1.8m
Municipality	S/W Width Classification	Single Family	Multi- Family	Single Family	Multi- Family	Single Family	Multi- Family	Commercial
Coquitlam	Land Use / Road Type	1.5m	1.8m	1.5m	2.5m	2.0m	2.0m	-
Vancouver	Land Use / Road Type	1.8m (1.8m)	2.1-2.4m (1.8m)	2.1-2.4m (1.8m)	2.4m (2.1m)	2.1-2.4m (1.8m)	2.4m (2.1m)	3.0-4.0m (2.4m)
Municipality	S/W Width Classification	Single	Family	amily Multi-Family			Commerc	cial
New Westminster	Land Use	1	.5m	1.8m-2.0m		2.5m		

able 1: Comparison of Sidewalk Widt	Standards of Metro	Vancouver Municipalities
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The findings indicate that the City's current sidewalk width standards are generally comparable with other municipalities and appropriate (i.e., the standard is wider for areas with anticipated

higher levels of pedestrian demand). However, there is opportunity for the City to increase sidewalk widths along major and minor arterial roads to better align with prevailing standards in other municipalities.

Recommendation

To support the City's Official Community Plan modal share target for 2041 (18% of trips by walking) and advance achieving this target to 2030 as outlined in the City's Community Energy and Emissions Plan 2020-2050 Directions, staff recommend updating the City's Engineering Design Specifications to increase the standard width of sidewalks on major and minor arterial roadways from 1.5m to 2.0m. Based on staff's observations, the current standard of a 1.5m sidewalk width is functioning adequately; however, the recommended increased width to 2.0m will better:

- allow appropriate pedestrian facilities to be provided in coordination with adjacent land uses redeveloped at higher densities (multi-family and commercial) with correspondingly more residents and higher pedestrian activity,
- align with transit corridors and encourage walking connections to transit facilities, and
- enhanced accessibility for persons in mobility assistive devices.

The revised standard will apply to major and minor arterial roadways outside the City Centre, Steveston Village and streets within a 400m radius of a Neighbourhood Centre with the exception of arterial roadways located adjacent to the Agricultural Land Reserve (Attachment 1).

Proposed Implementation

The recommended standard of 2.0m for new sidewalk construction on major and minor arterial roads will be secured primarily through road dedication via the rezoning process consistent with the current practice for frontage upgrades. The maximum incremental increase in road dedication above and beyond the current frontage requirement for new developments will be up to 0.5m depending on the existing setback behind the road curb and property line. For example, for older arterial road designs, the minimum setback from road curb to property line typically yields a road dedication for frontage upgrades of 1.0m to accommodate a 1.5m sidewalk. Hence, the proposed wider 2.0m sidewalk standard at the same location will require a 1.5m dedication. This modest change is not considered to have a significant impact on development potential although it may result in front yard setback variance requests to off-set the increase road dedication.

Application of the increased width will be context-sensitive and on a case-by-case basis to allow for existing site conditions (e.g., tree preservation). The additional 0.5m width can also be considered as a transportation demand management measure to support a reduction in the required number of on-site parking spaces to be provided.

For arterial roadways where current Planning Policies do not support redevelopment or where rezoning applications are not anticipated (e.g. within the ALR), the recommended sidewalk width will be applied through future City capital projects.

This requirement will apply to all new Rezoning, or Subdivision applications located on major and minor arterial roads submitted after Council endorsement of the recommended sidewalk width standards and the update of the City's Engineering Design Specifications. The requirement will not apply to sidewalk widths approved prior to the update (i.e., the requirements will not apply retroactively to existing sidewalks).

If a Servicing Agreement has already been identified as part of an approved Rezoning application but the Servicing Agreement has not yet been entered into, the City will work with the applicant to achieve the new standard where possible.

If an acceptable rezoning application has been submitted to the City prior to the update of the design standards, City staff will work with the developer to accommodate the additional sidewalk width if possible.

Upon update of the Engineering Design Specifications, an information bulletin will be prepared and posted on the City's website to advise of the new sidewalk width requirements for major and minor arterial roads. Pending Council endorsement, staff will advise the Urban Development Institute of the updated standard.

Future City capital projects will be designed based on the new standard where applicable. The proposed 2.0m sidewalk width is anticipated to result in a thirty percent increase in cost for new sidewalk construction. The next update of the City Development Cost Charges program will incorporate the new standard sidewalk widths.

Financial Impact

None.

Conclusion

The recommended increase to the City's standard sidewalk width for major and minor arterial roads from 1.5m to 2.0m supports multiple City plans and strategies (e.g., Official Community Plan, Community Wellness Strategy, Community Energy and Emissions Plan) to foster a culture of walking for transportation and health, and enhance the pedestrian facility network.

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Sonali Hingorani, P.Eng. Transportation Engineer (604-276-4049) JC:jc

Janavan

Joan Caravan Transportation Planner (604-276-4035)

Att. 1: Major and Minor Arterials where Recommended Revised Sidewalk Widths will Apply

Major and Minor Arterials where Recommended Revised Sidewalk Widths will Apply



Road Classification Map Bylaw 9901 2018/09/04



Report to Committee

Re:	Multi-Family Water Meter Program and Water Co	nservati	ion Initiatives Update
From:	Milton Chan, P.Eng. Director, Engineering	File:	10-6060-02-01/2021- Vol 01
То:	Public Works and Transportation Committee	Date:	April 23, 2021

Staff Recommendation

That staff bring forward options and recommendations for a mandatory Multi-Family Water Meter Program for consideration as part of the 2022 Utility Budgets and Rates report.

R

Milton Chan, P.Eng. Director, Engineering (604-276-4377)

REPORT CONCURRENCE					
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER			
Finance Department Water Services	R	- gh hing			
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO			

Staff Report

Origin

Water metering in the City has been successfully implemented for 100% of single-family residential, industrial, commercial, and institutional (ICI) properties. Water metering provides Richmond residents with an equitable way to pay for drinking water and supports the Official Community Plan objective to pursue water demand management strategies and continue water conservation initiatives.

This report supports the following strategies within Council's Strategic Plan 2018-2022:

Strategy #1 A Safe and Resilient City:

Enhance and protect the safety and well-being of Richmond.

1.2 Future-proof and maintain city infrastructure to keep the community safe.

1.3 Ensure Richmond is prepared for emergencies, both human-made and natural disasters.

Strategy #2 A Sustainable and Environmentally Conscious City:

Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.

2.1 Continued leadership in addressing climate change and promoting circular economic principles.

2.2 Policies and practices support Richmond's sustainability goals.

This report provides an update on the City's water meter program, water conservation initiatives and recommendations for advancing the multi-family water meter program.

Analysis

Water Metering

The key benefits to water metering include equity, conservation, leak detection, improved information for analysis, and reduced load on the sanitary system.

The City currently meters 100% of ICI and single-family properties. Mandatory metering of new multi-family complexes began in 2005, and 316 complexes (16,930 dwelling units) have been metered under this program. Volunteer metering of existing multi-family complexes began in 2010, through which 148 complexes (9,234 dwelling units) have been metered. To date, 50% of multi-family dwellings have been metered through a combination of the volunteer program and mandatory program.

Universal deployment of the fixed base water meter reading network throughout the City was endorsed by Council through the 2017 Capital budget process. The fixed base network covers the entire urban area in Richmond and will ultimately read 97% of Richmond's water meter inventory. The network facilitates automated data collection, reduces costs and carbon emissions associated with reading water meters, allows staff to gather real-time consumption data, assists customers in identifying causes of leaks and water consumption habits, and enhances revenue forecasting to inform the utility budget process. The fixed base network has been deployed and is in the final stages of system optimization.

The population of Richmond has increased by 25% since metering started in 2003; however, total consumption in the City has decreased by approximately 12% (4,500,000 m³) over the same period. By reducing water consumption, the City achieved a cost reduction of over \$10M in Metro Vancouver water and sewer charges in 2020 alone. This is a strong indication that water metering efforts to date are having a positive impact on water conservation and minimizing the need for costly infrastructure upgrades by managing increases in demands.

Water Conservation Initiatives

To further promote reduced water use, the City provides metered customers with water conservation kits, which include low flow showerheads, faucet aerators, toilet fill cycle diverters, toilet leak detection tablets, and educational water conservation tools. In addition, the City has successful programs for toilet rebates, rain barrels, and clothes washer rebates. In 2020, 877 toilet rebates, 154 rain barrels, and 226 clothes washer rebates were provided to Richmond residents. These combined initiatives are estimated to save over 3,500,000 liters of water in 2021 alone.

Multi-Family Water Meter Program

The City subsidizes water meter installations for multi-family complexes by \$100,000 or \$1,200 per unit, whichever is greater.

In 2017, Council endorsed an advanced volunteer multi-family water meter program to encourage a higher rate of adoption. As a part of this advanced program, staff hosted presentations and information sessions to provide more engagement opportunities for residents. The advanced program also included a 5-year guarantee (increased from two years), which ensures that complexes will not pay more than the flat rate during that period. This allows residents time to fix any leaks in their system and adjust their consumption habits without the risk of incurring a higher utility bill.

As of January 2021, 50% of the multi-family dwellings have been metered, 97% of which saved money in 2020, averaging a 46% savings compared to the flat rate.

Table 1 is a tabulation of the multi-family residential inventory and their water metering status as of January 2021.

Туре	Number of Complexes	Number of Units	Number of Complexes Metered	Number of Units Metered	% of Units Metered
Townhouse	618	17,978	282	6,496	36%
Apartment	305	34,466	182	19,668	57%
Total	923	52,444	464	26,164	50%

Table 1. Multi-Family Inventory

While the advanced volunteer program has been successful in providing residents with more information and incentives, the rate of adoption has remained low. An annual average of 2.6 multi-family complexes volunteered for meters since the advanced program started in 2017. At the current rate, it would take over 175 years to meter all multi-family dwellings.

Considering the significant benefits of water metering, it would be prudent to give further consideration to advancing the Multi-Family Water Meter Program towards universal metering. Staff recommend that options to implement a universal multi-family meter program be investigated and that a recommended implementation strategy be brought forward for consideration as a part of the 2022 Budgets and Rates report.

Financial Impact

None at this time. If Council endorses the recommendation, staff will bring forward options along with a recommended implementation strategy for Council consideration as a part of the 2022 Utility Budgets and Rates report.

Conclusion

The City of Richmond continues to be a leader in water conservation through the water meter program, fixed base meter readings, and water conservation initiatives. The ICI and single-family residential sectors are fully metered as well as 50% of the multi-family properties. While the remaining multi-family properties can participate in the volunteer water meter program, the adoption rate has been low. Staff recommend that options and recommendations for a mandatory Multi-Family Water Meter Program be brought forward for consideration as a part of the 2022 Budgets and Rates report.

Jason Ho, P.Eng. Manager, Engineering Planning (604-244-1281)

Old-

Christopher Chan, EIT, PMP Project Manager, Engineering Planning (604-204-8516)

JH:cc



Re:	Cancellation of the Climate Action Rebate Ince	entive Prog	ram (CARIP)
From:	Peter Russell Director, Sustainability and District Energy	File:	10-6000-00/Vol 01
To:	Mayor and Councillors	Date:	May 12, 2021

The purpose of this memorandum is to advise that the Ministry of Municipal Affairs has announced this week that the Climate Action Revenue Incentive Program (CARIP) will be ending effective this year. The City can expect to receive its final grant in the coming months.

The Climate Action Revenue Incentive Program (CARIP) is a program that provides local governments that have signed the B.C. Climate Action Charter an annual grant equal to 100 percent of the carbon taxes the municipality has paid to support operations. The program encourages investment in community climate action. On average, the City receives \$220,000 annually through CARIP.

The announcement also noted that local governments will be required to complete and submit the 2020 Carbon Tax Calculation Form only for 2021 and that the form must be submitted by August 6, 2021.

Given the unexpected and late timing of this announcement, the "2020 Climate Action Revenue Incentive Program and Corporate Carbon Neutral Progress Report" has been removed from the May 18, 2021 Public Works and Transportation Committee agenda. Staff will assess and analyze the new information and bring forward a revised report prior to the August 6 submission deadline.

Peter Russell Director, Sustainability and District Energy (604-276-4130)

pc: SMT

Suzanne Bycraft, Manager, Environmental Programs and Fleet Services

