



Public Works and Transportation Committee

**Anderson Room, City Hall
6911 No. 3 Road**

**Wednesday, February 19, 2020
4:00 p.m.**

Pg. # ITEM

MINUTES

PWT-4

*Motion to adopt the **minutes** of the meeting of the Public Works and Transportation Committee held on January 21, 2020.*



NEXT COMMITTEE MEETING DATE

March 17, 2020, (tentative date) at 4:00 p.m. in the Anderson Room

PLANNING AND DEVELOPMENT DIVISION

1. **REGIONAL HARMONIZATION OF VEHICLE WEIGHT AND DIMENSION LIMITS**

(File Ref. No. 10-6360-00) (REDMS No. 6361233)

PWT-9

See Page PWT-9 for full report

Designated Speaker: Fred Lin

STAFF RECOMMENDATION

That Traffic Bylaw No. 5870, Amendment Bylaw No. 10123, to harmonize municipal vehicle weight and dimension limits and cargo securement requirements with the British Columbia Commercial Transport Regulations and Motor Vehicle Act Regulations, be introduced and given first, second and third reading.



2. **APPLICATION TO 2020/2021 BC ACTIVE TRANSPORTATION INFRASTRUCTURE GRANTS PROGRAM**

(File Ref. No. 01-0150-20-THIG1) (REDMS No. 6379120 v. 4)

PWT-15

[See Page PWT-15 for full report](#)

Designated Speaker: Fred Lin

STAFF RECOMMENDATION

- (1) *That the submission for cost-sharing to the 2020/2021 BC Active Transportation Infrastructure Grants Program for the Garden City Road Pedestrian and Cyclist Enhancements (Lansdowne Road-Westminster Highway) as described in the staff report titled “Application to 2020/2021 BC Active Transportation Infrastructure Grants Program” dated January 13, 2020, from the Director, Transportation be endorsed;*
- (2) *That, should the above application be successful, the Chief Administrative Officer and the General Manager, Planning and Development, be authorized on behalf of the City to execute the funding agreement; and*
- (3) *That the Consolidated 5 Year Financial Plan (2020-2024) be amended accordingly.*



ENGINEERING AND PUBLIC WORKS DIVISION

3. **2020 CLOTHES WASHER REBATE PROGRAM**

(File Ref. No. 10-6000-01) (REDMS No. 6386389 v. 2)

PWT-20

[See Page PWT-20 for full report](#)

Designated Speaker: Jason Ho

STAFF RECOMMENDATION

- (1) *That the City of Richmond partner with BC Hydro to the end of 2020 to offer a combined rebate of \$100 for both spring and fall campaigns, equally cost shared between BC Hydro and the City, for the replacement of inefficient clothes washers with new high efficiency clothes washers; and*
- (2) *That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to execute an agreement, on behalf of the City, with BC Hydro to implement the Clothes Washer Rebate Program.*

4. **CITY OF RICHMOND PARTICIPATION IN THE BC BUILDING ENERGY BENCHMARKING PILOT PROGRAM**

(File Ref. No. 10-6125-07-02) (REDMS No. 6391961 v. 10)

PWT-24

See Page PWT-24 for full report

Designated Speaker: Norm Connolly

STAFF RECOMMENDATION

- (1) *That Council endorse the City’s participation in a voluntary regional building energy benchmarking program, as outlined in the report titled “City of Richmond Participation in the BC Building Energy Benchmarking Pilot Program” from the Director, Sustainability and District Energy, dated January 16, 2020; and*
- (2) *That staff be directed to report back to Council at the conclusion of the pilot program in 2021, on options to establish an energy benchmarking initiative and supportive policies in Richmond, as outlined in the report titled “City of Richmond Participation in the BC Building Energy Benchmarking Pilot Program” from the Director, Sustainability and District Energy, dated January 16, 2020.*

5. **MANAGER’S REPORT**

ADJOURNMENT



Public Works and Transportation Committee

Date: Tuesday, January 21, 2020
Place: Anderson Room
Richmond City Hall
Present: Councillor Chak Au, Chair
Councillor Kelly Greene
Councillor Alexa Loo
Councillor Linda McPhail
Councillor Michael Wolfe
Also Present: Councillor Harold Steves
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 December 18, 2019, be adopted as circulated.

CARRIED

NEXT COMMITTEE MEETING DATE

February 19, 2020, (tentative date) at 4:00 p.m. in the Anderson Room

PLANNING AND DEVELOPMENT DIVISION

1. **RICHMOND ACTIVE TRANSPORTATION COMMITTEE – PROPOSED 2020 INITIATIVES**
(File Ref. No. 01-0100-20-RCYC1) (REDMS No. 6350886 v.3)

In reply to queries from Committee, staff noted that (i) improvements to roadways and sidewalks are part of the road projects, (ii) an inventory of gaps in sidewalks and roadways is currently underway, and (iii) alternate signalling options are being examined for cyclists.

Public Works & Transportation Committee
Tuesday, January 21, 2020

It was moved and seconded

- (1) *That the proposed 2020 initiatives of the Richmond Active Transportation Committee, as outlined in the staff report titled “Richmond Active Transportation Committee - Proposed 2020 Initiatives” dated December 10, 2019 from the Director, Transportation, be endorsed.*
- (2) *That a copy of the report titled “Richmond Active Transportation Committee – Proposed 2020 Initiatives” be forwarded to the Richmond Council-School Board Liaison Committee for information.*

CARRIED

2. TRAFFIC SAFETY ADVISORY COMMITTEE - PROPOSED 2020 INITIATIVES

(File Ref. No. 01-0100-30-TSAD1-01) (REDMS No. 6349593 v.2)

In reply to queries from Committee, staff noted that fences in school zones has not been considered as it is difficult to manage; however can be examined, and the standard toolkit of engineering measures will be applied to all schools and will provide a comprehensive examination of traffic issues that arise at schools.

It was moved and seconded

- (1) *That the proposed 2020 initiatives for the Traffic Safety Advisory Committee, as outlined in the staff report titled “Traffic Safety Advisory Committee - Proposed 2020 Initiatives” dated January 6, 2020 from the Director, Transportation, be endorsed.*
- (2) *That a copy of the above staff report be forwarded to the Richmond Council-School Board Liaison Committee for information.*

CARRIED

ENGINEERING AND PUBLIC WORKS DIVISION

3. IONA ISLAND WASTEWATER TREATMENT PLANT UPGRADE PROJECT

(File Ref. No. 10-6060-04-01) (REDMS No. 6357529 v.3)

Discussion took place on comments on the Iona Island Wastewater Treatment Plant Upgrade Project and it was requested that No. 13 be amended to include both energy recovery and biological recovery from the wastewater treatment process.

2.

Public Works & Transportation Committee
Tuesday, January 21, 2020

In reply to queries from Committee, staff noted that (i) comment No. 3 can be amended to include the McDonald Slough, (ii) Bird Studies Canada can be included in stakeholder engagement events, (iii) investigations into opportunities for biofuel disposal is underway, (iv) federal regulations require that the plant be brought up to standards, and (v) the project completion date is attainable.

It was moved and seconded

That the comments and recommendations on the Metro Vancouver Iona Island Wastewater Treatment Plant Upgrade project, as outlined in the staff report titled "Iona Island Wastewater Treatment Plant Upgrade Project," dated December 11, 2019 from the Acting Director, Engineering be endorsed for submission to Metro Vancouver.

CARRIED

4. REGIONAL FLOOD PROTECTION MANAGEMENT AND GOVERNANCE

(File Ref. No. 10-6060-04-01) (REDMS No. 6361339 v.9)

It was moved and seconded

1. *That the following be endorsed as the City's position on regional flood protection management:*
 - (a) *That flood protection continue to be evaluated and managed at the local government level, currently through the Diking Authority model, with additional support from senior levels of government;*
 - (b) *That dedicated funding for flood protection be established at the Provincial and Federal level, to be used by Diking Authorities, which include local governments, for flood management projects; and*
 - (c) *That the Province require Diking Authorities, which include local governments, to develop and maintain flood risk management plans and strategies for their respective areas so that regional objectives are met.*
2. *That staff communicate the comments and recommendations in the report titled "Regional Flood Protection Management and Governance," dated December 13, 2019, from the Acting Director, Engineering, to regional Diking Authorities, the Fraser Basin Council, and the Province.*

CARRIED

3.

Public Works & Transportation Committee
Tuesday, January 21, 2020

5. **MANAGER'S REPORT**

(i) Canada Line Service Increase

Staff highlighted that the Canada Line has increased its capacity by 15% percent during peak hours and will increase in capacity by 35% by the end of the year.

In reply to a query from Committee, staff noted that (i) concerns regarding the midday closure of the 480 bus has been forwarded to TransLink, (ii) most concerns were with regard to capacity on the Canada Line; however with the recent increase to capacity many concerns should be addressed, and (iii) the 480 bus continues to operate during peak hours.

(ii) Lafarge Canada

In reply to a query from Committee, staff advised that regular meetings take place with Lafarge Canada with regard to various opportunities and initiatives that can be explored, and it was noted that should Committee have any suggestions they can be forwarded to staff for discussions with Lafarge Canada.

(iii) Snow Removal

Staff advised that (i) January 2020 saw the second highest annual snowfall since 2008, (ii) brining and salting of roads were quite successful, (iii) the pauses in the snowfall allowed crews to salt and brine the third priority routes, and (iv) brine capacity will be increased for the next winter season.

In accordance with Section 100 of the Community Charter, Cllr. Greene declared to be in a conflict of interest as her husband works for a technology company that tracks vehicles, and Cllr. Greene left the meeting – 4:23 p.m.

Discussion took place on how to determine which roads had recently been plowed and showing real-time location of snow plows through the Richmond mobile app.

As a result of the discussion, the following **referral motion** was introduced:

It was moved and seconded

That staff examine the feasibility of showing the real-time location of snow plows on the Richmond mobile app.

CARRIED

Cllr. Greene returned to the meeting – 4:24 p.m.

Public Works & Transportation Committee
Tuesday, January 21, 2020

ADJOURNMENT

It was moved and seconded
That the meeting adjourn (4:25 p.m.).

CARRIED

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, January 21, 2020.

Councillor Chak Au
Chair

Sarah Goddard
Legislative Services Coordinator



City of Richmond

Report to Committee

To: Public Works and Transportation Committee
From: Lloyd Bie, P.Eng.
Director, Transportation

Date: January 15, 2020
File: 10-6360-00/Vol 01

Re: Regional Harmonization of Vehicle Weight and Dimension Limits

Staff Recommendation

That Traffic Bylaw No. 5870, Amendment Bylaw No. 10123, to harmonize municipal vehicle weight and dimension limits and cargo securement requirements with the British Columbia Commercial Transport Regulations and Motor Vehicle Act Regulations, be introduced and given first, second and third reading.

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

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Engineering Community Bylaws	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO

Staff Report

Origin

At its November 20, 2019 meeting, the Public Works and Transportation Committee received a report for information regarding prioritised action plans within TransLink's Regional Goods Movement Strategy. As stated in that report, one of the action items is to harmonize municipal truck weight and dimension limits with the provincial BC Commercial Transport Regulations (BC CTR) and BC Motor Vehicle Act Regulations (BC MVAR) for standard vehicles that do not require a permit to travel. This report recommends amendments to Traffic Bylaw No. 5870 to adopt the BC CTR and MVAR regarding cargo securement and vehicle weight and dimension limits by reference.

This report supports Council's Strategic Plan 2018-2022 Strategy #7 A Supported Economic Sector:

Facilitate diversified economic growth through innovative and sustainable policies, practices and partnerships.

7.1 Demonstrate leadership through strategic partnerships, collaborations and exploring innovative and emerging economic practices and technical advancements.

Analysis

Rationale for Regional Harmonization

Traffic Bylaw No. 5870 regulates the weight and dimension (width, height and length) limits of vehicles travelling within the City's street network. Any vehicle exceeding the maximum weight or dimension is required to be reviewed by staff and, if approved, is granted an oversize trip permit.

Similarly, the BC CTR and the BC MVAR regulate vehicle weight and dimension limits and cargo securement requirements on provincial highways. The provisions of the Traffic Bylaw are similar to other municipal bylaws in the region and the provincial regulations. However, there are small inconsistencies in the specified vehicle weights and dimensions between the provincial regulations and municipal bylaws within the region that results in challenges for commercial vehicle operators connecting between, or travelling through, municipalities in the region.

TransLink's Regional Goods Movement Strategy includes the goal of harmonizing truck permitting and regulations with the core actions of:

- (1) Work to harmonize vehicle weights and dimensions regulations across the region, allowing adequate flexibility and mobility for operators while managing potential community impacts.
- (2) Develop a centralized, regional permit system that integrates with the provincial permit system providing a single point of contact for trucking companies operating within Metro Vancouver to obtain all needed permits, including oversize-overweight (OS-OW) vehicle permits.

Action 2 is dependent on Action 1 being in force to lay the foundation to support a regional permitting system. TransLink initiated work on these two items in January 2016 with the

formation of the Commercial Vehicle Staff Working Group, of which the City is a member. Based on the work completed by the Working Group with respect to Action 1, all municipalities in Metro Vancouver are requested to harmonize truck-related definitions and regulations to provide more consistency in an otherwise fragmented regulatory and policy environment. The recommendation is supported by the provincial Commercial Vehicle Safety and Enforcement (CVSE) Branch and industry stakeholders represented by the Port of Vancouver’s Project Cargo Working Group.

Regional harmonization is anticipated to achieve the following benefits:

- improve commercial truck connectivity between municipalities in the region, as well as alignment with provincial and regional enforcement practices, and international standards;
- optimize the City’s current oversize permit approval process in the City by establishing a harmonized baseline for what constitutes a “standard” truck that can operate without special permits and an oversize truck that requires permits, thus better utilizing staff time and resources; and
- help with enforcement efforts through regional consistency of truck-related bylaws.

Proposed Traffic Bylaw Amendments

The provincial regulations prescribe vehicle weight and dimension limits for provincial roadways (Figure 1) as well as cargo securement requirements for “standard” vehicles that do not require an oversize permit. Staff recommend that Traffic Bylaw No. 5870 be amended to create a reference to the BC CTR and MVAR, as amended from time to time. This reference will allow the City’s bylaw to remain updated without requiring additional amendments over time as the provincial regulations evolve, thereby improving the City’s ability to enforce the bylaw and compliance by the trucking industry.

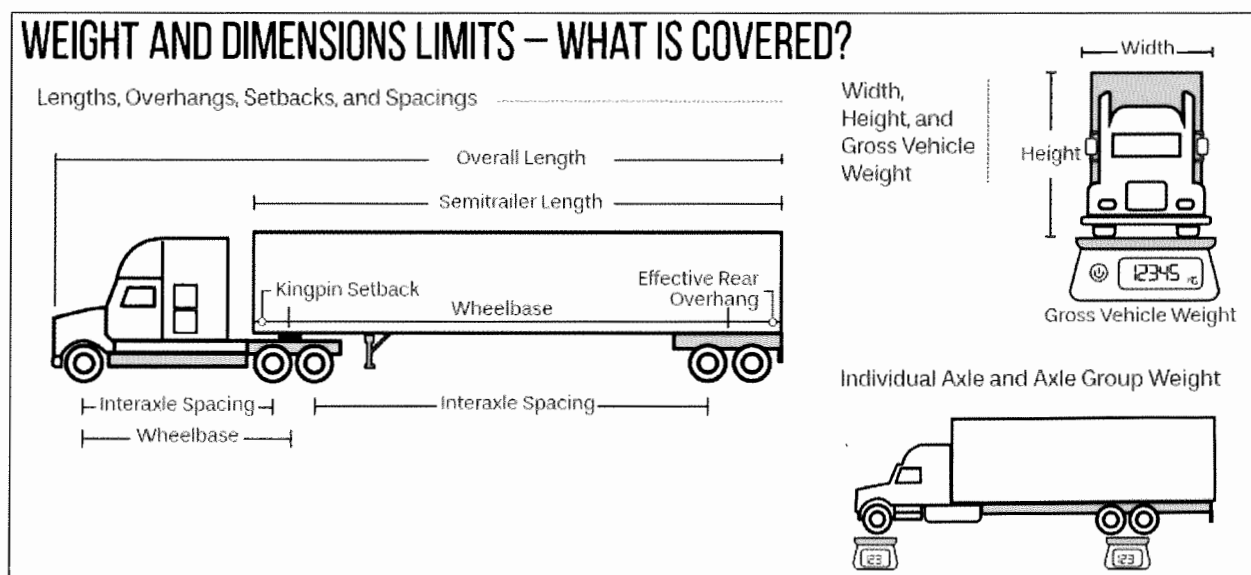


Figure 1: Vehicle Weight and Dimension Limits covered within BC Commercial Transport Regulations

Referencing the BC CTR and MVAR in the Bylaw has the effect of creating a number of redundant sections within Part VI – Size and Weight of Vehicles of the current Bylaw, which will be deleted as part of the proposed amendments as summarized in Table 1. Moreover, a

number of the relevant Bylaw sections were originally adopted many years ago and are now out of date and no longer applicable.

Table 1: Summary of Proposed Changes to Traffic Bylaw No. 5870

Traffic Bylaw: Proposed Deletions	Effect of Adopting Provincial Regulations
Section 19 – Dimension of Vehicles and Loads including Schedules E and F	Bylaw sections covered by: <ul style="list-style-type: none"> • BC CTR: Division 7 (Size and Weight) • BC MVAR: Section 19 • BC MVAR: Division 35 – Cargo Securement
Section 20 – Weights of Vehicles including Schedule G	
Section 21 – Types of Vehicles and Tires	
Section 22 – Speeds of Construction Vehicles	
Section 27 – Spilling of Vehicle Loads on Highways; Securing of Loads	

There is little impact to the City’s operations from these proposed bylaw amendments that, as a first step, support progress towards a regional permitting system for oversize vehicles (Table 2). At this time, staff will continue to review requests and issue permits for oversize vehicles with the only changes being minor modifications to the definition of a standard vehicle (i.e., the threshold for determining whether or not a vehicle require a permit).

Table 2: Summary of Proposed Changes to Definition of a Standard Vehicle

Dimension	Traffic Bylaw: Current Definitions	Effect of Adopting Provincial Regulations	Change
Width	2.6 m	2.6 m	No Change
Height	4.12 m	4.15 m	Increase of 0.03 m
Length: Single Vehicle	10.7 m	12.5 m	Increase of 1.8 m
Length: Combination Vehicle	9.15 m (and up to 18.3 m on certain roads)	14.65 m	Varies (Increase of 5.5 m on most roads)
Weight: Maximum Gross Weight per Axle	9100 kg	9100 kg	No Change

Financial Impact

None.

Conclusion

The proposed Traffic Bylaw amendments support urban freight and economic development both locally and regionally. In turn, the amendments lay the foundation for a future regional permitting system for oversize-overweight vehicles that will streamline the City’s processing of vehicle trip permits and allow a more efficient allocation of staff resources to better support the City’s vision.



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



C. Robertson for
 Bill Dhaliwal
 Supervisor, Traffic Operations
 (604-276-4210)



**Traffic Bylaw No. 5870
Amendment Bylaw No. 10123**

The Council of the City of Richmond enacts as follows:

Traffic Bylaw No. 5870, as amended, is further amended as follows:

1. Sections 19 through 22 be deleted in their entirety and replaced with the following:

19 SIZE, WEIGHT AND LOADING

19.1 Hereby adopted as regulations pursuant to this Bylaw are:

(a) *Motor Vehicle Act Regulations*, B.C. Reg. 26/58:

- (i) Section 19.01;
- (ii) Section 19.02;
- (iii) Section 19.03;
- (iv) Section 19.05; and
- (v) Section 19.06;

all as amended from time to time;

(b) *Motor Vehicle Act Regulations*, B.C. Reg. 26/58, Division 35 Cargo Securement, as amended from time to time; and

(c) *Commercial Transport Regulations*, B.C. Reg. 30/78:

- (i) Division 1 Interpretation;
- (ii) Division 2 Application;
- (iii) Division 7 commencing at Section 7.05 Size and Weight;
- (iv) Division 8 Pilot Cars and Signs; and
- (v) Division 11 Penalties;

all as amended from time to time.

19.2 For the purposes of this Bylaw, wherever in these regulations adopted by this Bylaw, the term “Minister” or “Minister of Transportation and Highways” appears, the term “**General Manager, Engineering & Public Works**” shall be substituted and where the term “Act” appears, the term “Bylaw” shall be substituted.

19.3 No person shall operate a vehicle on a highway in the City contrary to a regulation adopted by this section.

20. [DELETED]

21. [DELETED]

22. [DELETED]

2. Section 27 be deleted in its entirety.

3. Section 37.1 be deleted and replaced with the following:

37.1 Schedules "A", "B", "C", "D", "H", "J", "K.", "L ", "M" and "N"* attached hereto shall form an integral part of this Bylaw.

4. Schedules E, F and G be deleted in their entirety.

5. This Bylaw is cited as "Traffic Bylaw No. 5870, Amendment Bylaw No. 10123."

FIRST READING

SECOND READING

THIRD READING

ADOPTED

CITY OF RICHMOND
APPROVED for content by originating dept. CS
APPROVED for legality by Solicitor LB

MAYOR

CORPORATE OFFICER

Staff Report

Origin

The Province of BC's Active Transportation Infrastructure Grants Program (the Program) is a cost-share program between the Province and local governments to support the construction of new facilities to make it easier and safer for people to walk, ride or roll using active transportation modes. This report presents the proposed submission from the City for consideration of cost-share funding under the Program for the 2020/2021 funding cycle.

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 #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

Garden City Road (Lansdowne Road-Westminster Highway): Bike and Pedestrian Paths

Garden City Road between Lansdowne Road and Westminster Highway is an existing major street bike route. Currently, on the west side, two-way pedestrians and southbound cyclists share a narrow paved shoulder (approximately 1.3 m wide) with no protection from adjacent vehicle traffic in this section (Figure 1).

The Garden City Road Pedestrian and Cyclist Enhancements (Lansdowne Road-Westminster Highway) project to improve this section was approved as part of the 2019 Capital Budget at a total estimated cost of \$1,000,000. The City has secured up to \$500,000 in TransLink grant funding towards the estimated project cost.



Figure 1: Existing Condition on Southbound Garden City Road south of Lansdowne Road

The project will fill in the gap in cycling and pedestrian facilities with the provision of delineated pathways for pedestrians and southbound cyclists that are protected from vehicle traffic by a raised curb (Attachment 1). The project includes alignment of the pathways behind an existing bus stop, plus the provision of a combined bike box and two-stage left-turn queue box at Westminster Highway to facilitate a two-stage westbound to southbound left-turn for cyclists (i.e., for westbound cyclists on Westminster Highway seeking to turn left to southbound Garden City Road). Detailed design of the project is near completion and construction is anticipated to commence in Summer 2020.

Proposed Funding

Table 1 below summarizes the estimated project cost, the internal funding sources and the requested external funding sources. Should the Program application be successful, the City’s funding will be reduced from \$500,000 to \$250,000. Any surplus funding would be returned to the Roads Development Cost Charge and be available for use in future capital projects that will be considered by Council. The City would also enter into a funding agreement with the Province. The agreement is a standard form agreement provided by the Province and includes an indemnity and release in favour of the Province. Staff recommend that the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the agreement on behalf of the City.

Table 1: Funding for Application to 2020/2021 BC Active Transportation Infrastructure Grants Program

Project & Scope	City Portion & Funding Sources ⁽¹⁾	TransLink 2019 Funding	Proposed Province of BC 2020/21 Funding ⁽²⁾	Est. Total Project Cost
Garden City Road (Lansdowne Road-Westminster Hwy): pedestrian and bike paths	2019 Roads DCC (Garden City Road Pedestrian and Cyclist Enhancements: Lansdowne Rd-Westminster Hwy) \$250,000	\$500,000	\$250,000	\$1,000,000

- (1) The City’s actual portion (i.e., balance of remaining estimated cost after external grants) will be determined upon confirmation of the approved amounts to be received from external agencies.
- (2) The amount shown represents the funding contribution to be received from the external agency based on the City’s cost estimate for the project. The actual approved amount may be lower than requested. The actual invoiced amount follows project completion and is based on incurred costs.

Financial Impact

Should the Program application be successful, the City's cost would be reduced from \$500,000 to \$250,000.

Conclusion

The pedestrian and bicycle facility improvement project proposed for submission to the 2020/2021 BC Active Transportation Infrastructure Grants Program supports numerous goals of the City to improve community mobility, reduce greenhouse gas emissions and increase physical activity by encouraging more walking and cycling trips rather than driving. The potential receipt of external funding will enable the City to enhance and expedite the provision of sustainable transportation infrastructure and improve healthy and active travel options for the community.



Joan Caravan
Transportation Planner
(604-276-4035)

JC:lce

Att. 1: Garden City Road Pedestrian and Cyclist Enhancements (Lansdowne Road-Westminster Highway)

Garden City Road Pedestrian and Cyclist Enhancements: (Lansdowne Road-Westminster Highway)



Context Map



Rendering of Proposed Project



City of Richmond

Report to Committee

To: Public Works and Transportation Committee

Date: January 16, 2020

From: Milton Chan, P.Eng.
Acting Director, Engineering

File: 10-6000-01/2020-Vol
01

Re: 2020 Clothes Washer Rebate Program

Staff Recommendation

1. That the City of Richmond partner with BC Hydro to the end of 2020 to offer a combined rebate of \$100 for both spring and fall campaigns, equally cost shared between BC Hydro and the City, for the replacement of inefficient clothes washers with new high efficiency clothes washers; and
2. That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to execute an agreement, on behalf of the City, with BC Hydro to implement the Clothes Washer Rebate Program.

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

REPORT CONCURRENCE		
ROUTED TO: Finance Department Water Services	CONCURRENCE <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	CONCURRENCE OF GENERAL MANAGER
SENIOR STAFF REPORT REVIEW	INITIALS: 	APPROVED BY CAO _____

Staff Report

Origin

BC Hydro and local governments have an interest in encouraging the conservation of water and energy. Through PowerSmart, BC Hydro offers a variety of incentive programs that encourage uptake of energy-efficient technologies, including energy-efficient appliances.

Since 2014, the City has partnered with BC Hydro to implement the Clothes Washer Rebate Program. In 2019, the program offered a rebate of up to \$100, which was equally cost-shared between BC Hydro and the City.

BC Hydro is offering the Clothes Washer Rebate Program again in 2020.

This program supports the 2041 Official Community Plan (OCP), the Corporate Sustainability Framework, as well as the Community Energy and Emissions Plan, which includes “promoting building efficiency through outreach and education and providing incentives for building retrofit action.”

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.

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

2.2 Policies and practices support Richmond's sustainability goals.

Analysis

Clothes Washer Rebate Program

The 2019 Clothes Washer Rebate Program issued 180 rebates at a cost of \$9,000 to the City. Over 1,000 rebates have been issued to date at a total cost of \$75,300 to the City, resulting in annual savings in water and energy of 4,124,000 liters per year and 105,000 kilowatt hours per year, respectively.

2020 Clothes Washer Rebate Program

The proposed 2020 Clothes Washer Rebate Program offered by BC Hydro will run during the spring and fall of this year.

In addition to recommended City participation, BC Hydro will also be seeking industry partners to match their rebate, increasing the total rebate amount for eligible clothes washers.

This year’s program details are as follows:

- The City partners with BC Hydro to offer a combined Clothes Washer Rebate Program. BC Hydro will offer a single tier rebate of \$50 and the City will match this rebate to provide a combined rebate of \$100, for the replacement of an inefficient clothes washer with a new high efficiency clothes washer in the 2020 campaigns.
- The proposed spring campaign will run from April 3 to May 15, 2020 while the fall campaign will run in October and November. The exact dates of the fall campaign are subject to coordination with BC Hydro.

Staff recommend that the City partner with BC Hydro to match rebate offers on high efficiency washing machines for any proposed dates and future extensions that may be requested.

Roles and Responsibilities

The City and BC Hydro roles and responsibilities are outlined in Table 1. BC Hydro will be responsible for carrying out program administration and associated activities, and the City will be responsible for providing matching funding to supplement the BC Hydro rebate and advertising the rebate program within Richmond.

Table 1: City and BC Hydro Roles and Responsibilities

<ul style="list-style-type: none"> • Provide funding to supplement the BC Hydro rebate • Advertise the rebate offer locally 	<ul style="list-style-type: none"> • Answer email and phone inquiries about the program • Receive and process online applications • Provide rebate directly to applicants, and invoice the City for its portion • Provide post campaign reporting to the City
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Financial Impact

Staff recommend that the rebates be funded from the approved Toilet and Clothes Washer Rebate Program. The Toilet and Clothes Washer Rebate Program has an annual budget of \$100,000. The uptake on toilet and washing machine rebates has a high degree of variability. Staff will monitor participation and report back to Council if there is higher than anticipated participation. BC Hydro will be responsible for all costs associated with program administration.

Conclusion

The City has an opportunity to continue partnering with BC Hydro to provide rebate incentives to residents for purchasing efficient clothes washers through the Clothes Washer Rebate Program. Staff recommend that the City continue to participate in this rebate program which provides a combined rebate of \$100 for both spring and fall campaigns, equally shared between BC Hydro and the City, and that rebates be funded from the Toilet and Clothes Washer Rebate Program.



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

JH:jc



Joanne Chow, P.Eng., PMP
Project Manager
(8510)



To: Public Works and Transportation Committee **Date:** January 16, 2020
From: Peter Russell **File:** 10-6125-07-02/2020-
Director, Sustainability and District Energy Vol 01
Re: **City of Richmond Participation in the BC Building Energy Benchmarking Pilot Program**

Staff Recommendation

1. That Council endorse the City’s participation in a voluntary regional building energy benchmarking program, as outlined in the report titled “City of Richmond Participation in the BC Building Energy Benchmarking Pilot Program” from the Director, Sustainability and District Energy, dated January 16, 2020, and;
2. That staff be directed to report back to Council at the conclusion of the pilot program in 2021, on options to establish an energy benchmarking initiative and supportive policies in Richmond, as outlined in the report titled “City of Richmond Participation in the BC Building Energy Benchmarking Pilot Program” from the Director, Sustainability and District Energy, dated January 16, 2020.

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

Att. 2

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Communications	<input checked="" type="checkbox"/>	
Economic Development	<input checked="" type="checkbox"/>	
Policy Planning	<input checked="" type="checkbox"/>	
Building Approvals	<input checked="" type="checkbox"/>	
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO

Staff Report

Origin

At the Regular Council meeting on March 27, 2017, City Council resolved that:

“(1) A resolution be forwarded to the Union of BC Municipalities calling for the province to establish requirements for energy benchmarking of large buildings;”

“(2) A letter be sent to the Chair of Metro Vancouver’s Climate Action Committee calling on Metro Vancouver to lead the development of a regional benchmarking program;”

“(3) The Chief Administrative Officer and the General Manager, Engineering and Public Works be authorized to execute funding and partnership agreements with the Real Estate Foundation of BC and BC Hydro to develop benchmarking policy analysis and automatic data exchange capabilities, and that amendments to the 5 Year Financial Plan (2017-2021) Bylaw be brought forward for up to \$155,000 in expenditures, subject to successful grant applications up to \$140,000 to be covered by grant funding and a \$15,000 City contribution from the Carbon Tax Provision;” and

“(4) Staff be directed to report back to Council options to establish building energy benchmarking policy for larger buildings in Richmond as a pilot measure.”

This report provides an update on items (1), (2), (3), and (4) in the above resolution.

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.

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

Analysis

Energy Benchmarking Overview

Energy benchmarking is the process of regularly tracking energy use in buildings, and comparing energy consumption against historic patterns and future targets. It is considered a core energy management best practice where building owners and managers can use energy benchmarking to understand their buildings’ relative performance against a similar class of buildings. Benchmarking makes it easier to identify opportunities to reduce energy consumption and related costs, as well as assist in evaluating the impact of capital investments and operating decisions. Benchmarking improves energy management and greenhouse gas reductions for existing buildings, and will be identified as a program action in Richmond’s updated Community Energy and Emissions Plan 2020-2050.

The most common platform for energy benchmarking is the free, online tool called ENERGY STAR Portfolio Manager (Portfolio Manager), developed by the US Environmental Protection Agency. Natural Resources Canada began hosting the Canadian version of Portfolio Manager in 2013. Over 9,000 buildings in Canada to date voluntarily benchmark their energy performance, including 20% of commercial floor space in Canada.

The City's Experience with Energy Benchmarking

The public sector in Canada is a strong supporter of benchmarking and the City currently uses Portfolio Manager, and other software tools to measure and assess annual energy performance of 45 buildings.

Buildings accounted for approximately 40% of Richmond's annual greenhouse gas (GHG) emissions, and approximately 60% of overall energy consumption in 2017. In 2014, Council adopted the Community Energy and Emissions Plan (CEEP), which includes Strategy #3 "Improve the Performance of the Existing Building Stock." The 2015 CEEP Update identified mandatory energy benchmarking as a key initiative.

The City also initiated a voluntary program for larger buildings owned and managed by the private sector, called the Richmond Building Energy Challenge. Established in 2014, this friendly competition that reduced energy use and GHG emissions yielded successful results, with overall 12% reduction in overall energy use compared with the baseline year, and 16% reduction in GHG emissions in participating buildings. Seventy five buildings across 12 organizations participated, representing over 5.5 million square feet of property. This pilot program showed the value of benchmarking with respect to improving energy management.

Based upon the positive results of the Richmond Energy Challenge, staff have collaborated with other local government and utility partners since 2016 to explore development of a comprehensive energy benchmarking system in British Columbia.

In support of this, staff proceeded with the following Council-approved actions that were undertaken in 2017-2018, with results summarized below.

UBCM Resolution

(1) A resolution be forwarded to the Union of BC Municipalities calling for the province to establish requirements for energy benchmarking of large buildings;

Council approved the recommendation that a resolution be forwarded to the Lower Mainland Local Government Association of the Union of BC Municipalities calling for the Province to establish requirements for energy benchmarking of large commercial and multi-unit residential buildings (50,000 ft² or greater in total floor area). The rationale for the resolution was that a uniform, provincial requirement would be most impactful in terms of the amount of floor space covered. It would also be simpler to administer than multiple local government requirements.

A copy of the UBCM resolution is included in Attachment 1. This resolution was subsequently endorsed at the 2017 UBCM convention [Resolution B62, 2017 - Passed].

Letter sent to Metro Vancouver Regional District

(2) A letter be sent to the Chair of Metro Vancouver's Climate Action Committee calling on Metro Vancouver to lead the development of a regional benchmarking program;

Council also approved the recommendation that a letter be sent to the Chair of Metro Vancouver's Climate Action Committee calling on Metro Vancouver to lead the development of a regional benchmarking program, in the event that the Province did not establish a benchmarking policy in a timely manner. The rationale was that regional governments are an appropriate entity to manage benchmarking programs and/or establish benchmarking requirements. Metro Vancouver Regional District staff continue to be active supporters of the development and implementation of a regional pilot benchmarking program.

Staff intend to further request that Metro Vancouver take on this role as part of providing consultation input on Metro Vancouver's Climate 2050 Strategy.

BC Hydro Automatic Data Exchange

(3) The Chief Administrative Officer and the General Manager, Engineering and Public Works be authorized to execute funding and partnership agreements with the Real Estate Foundation of BC and BC Hydro to develop benchmarking policy analysis and automatic data exchange capabilities, and that amendments to the 5 Year Financial Plan (2017-2021) Bylaw be brought forward for up to \$155,000 in expenditures, subject to successful grant applications up to \$140,000 to be covered by grant funding and a \$15,000 City contribution from the Carbon Tax Provision.

The City received \$140,000 in funding from Real Estate Foundation of BC and BC Hydro to partially fund development and implementation of an automated data collection tool, enabling BC Hydro to easily sum all electricity accounts within a building, and upload these totals into the ENERGY STAR Portfolio Manager software. The development of this tool was a critical step forward to help facilitate building energy benchmarking in BC. Since 2017, building managers have been able to quickly obtain aggregated electricity consumption data (FortisBC already has this capability) while ensuring data for individual accounts remains confidential. BC municipalities are now well-positioned to implement Building Energy Benchmarking, reporting and disclosure requirements similar to other leading jurisdictions in North America.

BC Energy Benchmarking Pilot Program (2020-2021)

(4) Staff be directed to report back to Council options to establish building energy benchmarking policy for larger buildings in Richmond as a pilot measure.

Further collaborative action to establish a regional energy benchmarking initiative in Metro Vancouver began in 2018, leading to the Building Benchmark BC pilot program that is being launched in 2020. Details on these actions are covered below.

The BC Benchmarking Pilot Program (Building Benchmark BC) has been developed by the OPEN Green Building Society (OPEN) with funding from Natural Resources Canada and BC Hydro, and in partnership with Province, Metro Vancouver Regional District. Staff from Richmond, Vancouver, Burnaby, Surrey and UBC were consulted on the development of the program. The program's primary objective is to promote reductions in building energy use and emissions across BC, by supporting voluntary energy benchmarking and disclosure. Successful implementation of this pilot program would create a compliance tool pathway for future regulation that could be streamlined region-wide or province-wide. Staff view programs that encourage participation in building energy benchmarking are most effective when conducted at a regional or provincial scale.

The program development phase for this project began in 2018 and continued through 2019, with regularly scheduled calls convened by OPEN on behalf of senior government, municipal and utility partners. A key milestone was achieved in 2019, with a successful grant funding submission to Natural Resources Canada, providing the majority of funding for this \$400,000+ initiative. Provincial and local government partners are contributing in-kind staff time to help coordinate local implementation.

The goal of the program is to recruit 2,000 buildings by March 21, 2020 interested in voluntarily participating in Building Benchmark BC (See Attachment 2: Building Benchmark BC – Project Backgrounder). Given the City of Richmond's leadership on energy benchmarking to date, staff believe that there will be significant local participation in Building Benchmark BC during the program period (from now to Spring 2021). With Council approval, staff will work with OPEN and partners to raise awareness and recruit interested multi-residential and commercial buildings in Richmond over 50,000 ft² in floor area to participate.

Staff will report back to Council in 2021 on the outcomes of the Building Benchmark BC pilot, and propose further actions at that time.

Financial Impact

The 2020 operating budget has resources available to support communications and local outreach to building owners and property managers during the pilot period (to March 2021).

Conclusion

Energy benchmarking is the process of tracking and recording a building's energy performance annually and over time. It is based on the fundamental principle that building energy consumption must be measured and monitored before it can be managed effectively. Performance data can help building owners and managers to identify opportunities for operational efficiency improvements and potential energy retrofits of building components and/or systems.

OPEN Green Building Society has convened provincial, utility and regional local government stakeholders as program partners in a significant pilot energy benchmarking initiative in Metro Vancouver, to be publicly launched in January 2020. With Council endorsement for the City of Richmond's participation in the building recruitment phase of this initiative, staff will proceed to

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work with program partners in doing so. Staff will also update Council at the conclusion of the pilot program in 2021 regarding options to establish a long-term regional energy benchmarking initiative in Metro Vancouver and supportive policies in Richmond.



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- Att. 1: 2017 UBCM Resolution by Lower Mainland Local Government Association
- 2: Building Benchmark BC – Project Backgrounder

Attachment 1: 2017 UBCM Resolution by Lower Mainland Local Government Association

Resolution as passed by UBCM:

Resolution as passed by UBCM:

B62

**Provincial Action on Building Energy Benchmarking
City of Richmond**

Whereas as described in the Canada Green Building Council's "Energy Benchmarking, Reporting & Disclosure in Canada: A Guide to a Common Framework," mandatory energy benchmarking and reporting is a low cost, market-based means to enable buildings to reduce energy costs and GHG emissions;

And whereas the Province of BC is a signatory to both the Pan-Canadian Framework on Climate Change and Clean Growth, and the Pacific Coast Climate Leadership Plan, both of which commit the Province to implement benchmarking requirements for larger buildings;

And whereas a provincially administered benchmarking requirement similar to that adopted by the Province of Ontario would be most impactful and administratively simple;

And whereas climate change threatens BC communities, and action in the built environment is necessary to mitigate climate change and realize economic opportunity;

Therefore be it resolved that the Province be requested to develop a requirement that buildings above a size threshold benchmark their energy performance and report this information to the province annually, and that the resulting data be available to local governments to inform their climate policy and programs.

Endorsed by the Lower Mainland Local Government Association

UBCM Resolutions Committee recommendation: Endorse.

Backgrounder: Building Energy Benchmarking What is it, and why does it matter?

- Building energy benchmarking describes a process under which building owners and managers use ENERGY STAR® Portfolio Manager, a software platform maintained by Natural Resources Canada, to measure, report, and disclose their greenhouse emissions.
- In British Columbia, the fossil fuels that are burned in buildings—to provide their occupants with heat and hot water—contribute about 11 percent of the province’s overall greenhouse gas emissions.
- Benchmarking is a critical tool to address climate change. It helps property owners understand how their buildings perform both over time and when compared with similar buildings located elsewhere, and it equips governments with fine-scale data to help them develop more effective and targeted retrofit incentive programs.
- Canadian companies already voluntarily benchmark the energy and emissions of more than 9,000 buildings nationwide.
- Studies by the U.S. Environmental Protection Agency, Urban Land Institute, and the Massachusetts Institute of Technology conclude that benchmarked buildings can capture energy savings of between 7 and 14 percent within four years.
- In 2009, New York City (NYC) passed a bylaw that required owners of buildings larger than 50,000 square feet to measure, report, and disclose the energy consumption of the properties they manage. The city expanded the requirement in 2016.
- NYC data revealed that the city’s multi-family and office towers consume 87 percent of all energy used in buildings, with offices consuming the greater share of the two. The performance data and building information gathered from benchmarking allowed the city to develop effective incentive programs to support office building owners in reducing those emissions.
- Similar programs are in place in Boston, Seattle, Denver, and other cities. In Canada, the City of Edmonton has been benchmarking since 2016, and the Province of Ontario has a regulation for benchmarking large buildings.
- Though participation in **Building Benchmark B.C.** is currently voluntary, many climate and energy experts agree that, to meet greenhouse-gas targets, jurisdictions will begin introducing new regulations targeting existing buildings.